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Addendum

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

*CSEM **01** 00:01:49.1±1.7,37.74N×43.97E,h16^{km}±2^{km},MD3.2, Error ellipse: s-maj=46.6km s-min=6.8km az=93.0*

ISK 01 00:01:49.3,37.73N×43.95E,h21^{km},MD3.2,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	**Hakkari**	0.22	228	*i* PG	Pb	00 01 55.1	+0.3
VANT	**Van**	0.84	329	*e*PG	Pb	00 02 07.2	+2.1
VANB	**Van**	0.97	333	PG	Pb	00 02 08.2	+0.9
VANB				SG	Sb	00 02 21.7	+2.0
BTMT	**Batman**	2.00	284	*e*PN	Pn	00 02 25.5	+3.0

---

*BJI **01** 00:02:07.7,8.98N×93.58E,h21^{km},mB4.9,mb4.6,Ms4.4, Msz3.9*

*NEIC **01** 00:02:07.8±1.8,8.80N×93.66E,h30^{km},mb4.6/10,Error ellipse: s-maj=50.6km s-min=24.8km az=116.0*

ISC 01 00:02:06.1±1.8,**8.7N**±0.2×**93.5E**±0.3,**h30^{km},n14, σ1^{s}18**/14,**mb4.5**/11,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	21.04	354	P	P	00 06 51.0	+0.9
WMQ	**Urumqi**	35.38	353	*e*P	P	00 09 02.0	+0.7
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
AAK	**Ala-Archa**	37.73	337	*e*P	P	00 09 21.8	+0.7
	comp=Z,5.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	43.70	346	*e*P	P	00 10 09.2	-0.9
	comp=Z,3.1nm,0.7s,mb4.2						
CHKZ	**Chkalovo**	48.53	342	*e*P	P	00 10 47.9	-0.4
	comp=Z,7.8nm,0.9s,mb4.7						
KMBO	**Kilima Mbogo**	56.88	263	*e*P	P	00 11 51.6	+0.5
	comp=Z,10.0nm,0.8s,mb4.9						
KMBO				*e*		00 11 56.8	
EIL	**Elat**	58.48	299	P	P	00 12 02.6	+0.5
	comp=Z,5.7nm,0.8s,mb4.7						
LSZ	**Lusaka**	68.93	250	P	P	00 13 08.7	-2.4
	comp=Z,4.4nm,0.9s,mb4.4						
MORC	**Moravsky Berou**	74.36	319	P	P	00 13 47.3	+4.5
	comp=Z,6.9nm,0.9s,mb4.6						
BOSA	**Boshof**	75.46	238	*e*P	P	00 13 51.8	+2.1
	comp=Z,5.3nm,0.7s,mb4.6						
KHC	**Kasperske Hory**	76.91	318	*e*P	P	00 14 01.5	+4.2
NB2	**NORSAR Subarra**	78.73	331	P	P	00 14 05.1	-2.0
	comp=Z,3.6nm,1.0s,mb4.3,baz=96,slow=5.0						
LPG	**La Plagne**	81.61	315	*e*P	P	00 14 22.1	-0.7
	comp=Z,15nm,0.8s,mb4.7						
IMA	**Indian Mountai**	91.14	22	*e*P	P	00 15 09.1	+0.1

---

*BJI **01** 00:05:07.0,2.40N×96.04E,h38^{km},mB5.2,mb5.0,Ms4.3, Msz4.1*

*NEIC **01** 00:05:08.7±0.4,2.67N×95.91E,mb4.7/15,Error ellipse: s-maj=12.6km s-min=8.3km az=70.0*

ISC 01 00:05:07.5±0.5,**2.65N**±0.06×**96.01E**±0.08,**h26^{km}, h26^{km}**±2.3^{km}**:pP-P,n47,σ0^{s}96**/51,**mb5.0**/28,**MS4.2**/6, **7C-1D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	15.97	10	*e*P	P	00 08 50.6	-1.6
	9.7nm,0.4s						
IMP	**Imphal**	22.09	355	*e*P	P	00 09 59.4	-3.1
KMI	**Kunming**	23.26	16	P	P	00 10 16.3	+2.2
KMI				AMB	AMB		
	comp=Z,25nm,1.2s,mb4.5						
KMI	**Kunming**	23.26	16	P	P	00 10 16.3	+2.2
	comp=Z,25nm,1.2s,mb4.5						
GYA	**Guiyang**	25.78	22	⇑*i*P	P	00 10 38.6	+0.3
GYA				AP	pP	00 10 47.8	+1.8
GYA				XP	sP	00 10 51.6	+2.1
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,70nm,4.5s						
GYA				LR	LR		
	comp=N,410nm,16.5s,MS4.2						
GYA				LR	LR		
	comp=E,340nm,15.6s,MS4.2						
GYA				LR	LR		
	comp=Z,680nm,14.3s,MS4.3						
JIRN	**Jiri**	26.58	340	*e*P	P	00 10 46.4	+0.8
	comp=Z,196nm,0.7s,mb5.7						
PKI	**Pulchoki**	26.77	339	*e*P	P	00 10 47.5	+0.1
	comp=Z,55nm,0.8s,mb5.1						
DMN	**Daman**	26.92	338	*e*P	P	00 10 48.9	+0.2
	comp=Z,76nm,0.9s,mb5.2						
KKN	**Kakani**	27.02	339	*e*P	P	00 10 49.9	+0.3
	comp=Z,123nm,0.9s,mb5.5						
LSA	**Lhasa**	27.29	351	P	P	00 10 52.0	-0.1
GKN	**Gorkha**	27.45	338	*e*P	P	00 10 53.7	+0.1
	comp=Z,149nm,1.0s,mb5.5						
KOLN	**Koldanda**	27.65	336	*e*P	P	00 10 55.6	+0.2
	comp=Z,75nm,0.6s,mb5.5						
CD2	**Chengdu**	29.04	14	P	P	00 11 06.7	-1.2
CD2				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.0						
MBWA	**Marble Bar**	33.16	137	P	P	00 11 44.8	+0.6
	comp=Z,8.6nm,0.8s,mb4.7						
XAN	**Xi'an**	33.47	20	P	P	00 11 45.7	-1.1
XAN				AP	pP	00 11 56.9	+2.2
XAN				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
LZH	**Lanzhou**	34.05	11	⇑P	P	00 11 51.2	-0.6
LZH				AP	pP	00 11 57.9	-1.8
LZH				AMB	AMB		
	comp=Z,52nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,169nm,4.0s						
LZH				LR	LR		
	comp=E,196nm,12.3s						
LZH				LR	LR		
	comp=Z,296nm,14.0s,MS4.2						
LZH	**Lanzhou**	34.05	11	⇑P	P	00 11 51.2	-0.6
	comp=Z,52nm,1.2s,mb5.3						
LZH				pP	pP	00 11 57.9	-1.8
LZH				sP	sP	00 12 00.9	-2.2
GTA	**Gaotai**	36.75	5	⇑P	P	00 12 14.5	-0.2
GTA				AP	pP	00 12 21.1	-1.5
GTA				AMB	AMB		
	comp=Z,38nm,0.9s,mb5.2						
GTA				AMB	AMB		
	comp=Z,104nm,6.1s						
GTA				LR	LR		
	comp=N,149nm,13.3s,MS4.2						
GTA				LR	LR		
	comp=E,184nm,13.3s,MS4.2						
GTA				LR	LR		
	comp=Z,210nm,14.4s,MS4.1						
HHC	**Hu-ho-hao-te**	40.53	18	⇑P	P	00 12 47.5	+1.2
HHC				AP	pP	00 12 54.3	+0.1
HHC				XP	sP	00 12 57.9	+0.4
HHC				PP	PP	00 14 26.6	+3.6
HHC				PCP	PcP	00 14 47.0	-2.0
HHC				SCP		00 18 34.8	
HHC				PCS		00 18 38.4	
HHC				S	S	00 18 58.8	+5.3
HHC				XS		00 19 12.0	
HHC				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.7						
HHC				AMB	AMB		
	comp=Z,201nm,2.9s,mb5.2						
HHC				LR	LR		
	comp=N,288nm,21.6s,MS4.4						
HHC				LR	LR		
	comp=E,399nm,18.0s,MS4.4						
HHC				LR	LR		
	comp=Z,320nm,22.0s,MS4.1						
KSH	**Kashi**	40.97	336	*e*P	P	00 12 50.0	+0.1
KSH				*e*AP	pP	00 13 00.7	+2.9
KSH				*e*XP	sP	00 13 04.6	+3.5
KSH				AMB	AMB		
	comp=Z,520nm,5.8s						
BJI	**Beijing**	41.46	24	P	P	00 12 55.3	+1.4
BJI				AP	pP	00 13 01.5	-0.4
BJI				XP	sP	00 13 04.1	-1.1
BJI				S	S	00 19 03.3	-4.0
BJI				SS	SS	00 22 08.3	+1.1
BJI				AMB	AMB		
	comp=Z,96nm,0.8s,mb5.5						
BJI				LR	LR		
	comp=N,320nm,12.8s,MS4.5						
BJI				LR	LR		
	comp=E,345nm,13.1s,MS4.5						
BJI				LR	LR		
	comp=Z,55nm,24.8s						
BJI	**Beijing**	41.46	24	P	P	00 12 55.3	+1.4
	comp=Z,96nm,0.8s,mb5.5						
BJI				pP	pP	00 13 01.5	-0.4
BJI				sP	sP	00 13 04.1	-1.1
BJI				S	S	00 19 03.3	-4.0
BJI				SS	SS	00 22 08.3	+1.1
WMQ	**Urumqi**	41.65	351	⇑*i*P	P	00 12 55.6	+0.1
WMQ				XP	sP	00 13 06.6	-0.1
WMQ				PP	PP	00 14 35.2	+0.3
WMQ				S	S	00 19 10.0	-0.1
WMQ				SS	SS	00 22 10.0	-0.8
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,125nm,16.0s,MS4.2						
WMQ				LR	LR		
	comp=E,214nm,16.0s,MS4.2						
WRAB	**Tennant Creek**	43.81	123	*e*P	P	00 13 14.1	+0.7
	comp=E,6.7nm,0.5s,mb4.6						
WB2	**Warramunga Arr**	43.82	123	⇓*i*P	P	00 13 14.2	+0.8
UCH	**Uchtor**	43.85	337	P	P	00 13 14.5	+1.0
	SNR=17						
TKM2	**Tokmak 2**	44.04	338	P	P	00 13 15.6	+0.7
	SNR=13						
KBK	**Karagaybulak**	44.05	338	P	P	00 13 16.4	+1.4
	SNR=21						
AML	**Almayashu**	44.10	336	P	P	00 13 16.4	+1.0
	SNR=15						
AAK	**Ala-Archa**	44.21	337	P	P	00 13 18.6	+2.3
	SNR=7.1						
AAK	**Ala-Archa**	44.21	337	*e*P	P	00 13 16.4	+0.1
	comp=E,6.1nm,0.7s,mb4.4						
CHMS	**Chumysh**	44.42	338	P	P	00 13 18.3	+0.3
	SNR=6.6						
EKS2	**Erkin-Say**	44.51	337	P	P	00 13 19.9	+1.1
	SNR=13						
USP	**Ospenovka**	44.74	338	P	P	00 13 21.2	+0.5
	SNR=30						
ULN	**Ulaanbaatar**	46.04	10	*e*P	P	00 13 29.9	-0.9
	comp=E,10nm,0.8s,mb4.8						
ULN				*e*	pP	00 13 37.0	-1.8
SNY	**Shenyang**	46.18	29	⇑P	P	00 13 31.1	-0.9
CN2	**Changchun**	48.58	28	*e*P	P	00 13 50.4	-0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
KURK	**Kurchatov**	50.10	346	*e*P	P	00 14 01.9	-0.5
	comp=Z,11nm,0.8s,mb4.9						
CTA	**Charters Tower**	54.21	117	*e*P	P	00 14 34.4	+0.8
	comp=Z,5.2nm,0.8s,mb4.5						
CTAO	**Charters Tower**	54.21	117	*e*P	P	00 14 34.0	+0.4
	comp=Z,10nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	54.98	342	*e*P	P	00 14 37.7	-1.1
	comp=Z,14nm,0.6s,mb5.2						
CHKZ				*e*	pP	00 14 45.5	-1.5
STKA	**Stephens Creek**	55.20	132	*e*P	P	00 14 39.7	-1.0
KMBO	**Kilima Mbogo**	58.87	267	P	P	00 15 06.8	-0.1
	comp=Z,4.7nm,0.9s,mb4.5						
ARU	**Arti**	61.39	337	P	P	00 15 22.3	-1.3
	comp=Z,78nm,1.3s,mb5.7,SNR=9.1						
YAK	**Yakutsk**	64.37	17	*e*P	P	00 15 42.0	-1.3
	comp=Z,77nm,0.8s,mb5.8						
LSZ	**Lusaka**	69.40	253	*e*P	P	00 16 15.0	-0.8
	comp=Z,3.4nm,0.8s,mb4.3						
BOSA	**Boshof**	74.48	239	P	P	00 16 44.3	-1.7
	comp=Z,2.8nm,0.7s,mb4.3						

MEX 01 00:07:54.1±0.8,**14.86N×94.20W,h20^{km}**±999^{km}**,MD4.1, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	2.31	344	*i* P	Pn	00 08 28.3	-3.6
CMIG				*i* S	Sn	00 08 55.4	-4.6
SCX	**San Cristobal**	2.40	39	*e*P	Pn	00 08 31.5	-1.6
SCX				*e*S	Sn	00 08 58.8	-3.3
CCIG	**Comitan**	2.44	54	*i* P	Pn	00 08 30.2	-3.4
CCIG				*i* S	Sn	00 08 58.5	-4.6

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*CSEM **01** 00:28:20.3±0.4,67.86N×20.16E,h2^{km},ML2.4/1,Error ellipse: s-maj=10.9km s-min=9.2km az=83.0,Mining explosion.*

*HEL **01** 00:28:21.9±0.1,67.85N×20.19E,ML1.5,ML2.9(UPP), Explosion*

*UPP **01** 00:28:21.5,67.85N×20.20E,h1^{km},ML2.9,Mining explosion.*

ISC 01 00:28:20.8±0.7,**67.85N**±0.03×**20.2E**±0.1,**n19,σ0^{s}71**/23, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.12	27	*i* P	Pg	00 28 23.9	+0.7
KUA				*i* S	Sg	00 28 25.6	+0.8
NIKU	**Nikkaluokta**	0.44	273	*i* P	Pg	00 28 29.8	+0.2
LANU	**Lannavaara**	0.71	73	*i* P	Pg	00 28 34.6	-0.3
DUNU	**Dundret**	0.74	169	*i* P	Pg	00 28 35.2	-0.5
MASU	**Masugnsbyn**	0.79	119	*i* P	Pg	00 28 36.2	-0.4
MASU	**Masugnsbyn**	0.79	119	P	Pg	00 28 36.2	-0.5
KIF	**Kilpisjarvi**	1.18	11	*e*P	Pb	00 28 43.7	-0.1
KIF				*e*S	Sb	00 28 58.7	-0.8
PAJU	**Pajala**	1.40	125	*e*P	Pb	00 28 46.9	-0.6
PAJU	**Pajala**	1.40	125	P	Pb	00 28 46.8	-0.7
ERTU	**Ertsjaerv**	1.52	148	*e*P	Pn	00 28 48.9	-0.4
KTK1	**Kautokeino**	1.62	43	*e*P	Pn	00 28 50.9	+0.1
SJUU	**Sjulsmark**	2.42	166	*e*P	Pn	00 29 02.9	+0.7
SJUU	**Sjulsmark**	2.42	166	P	Pn	00 29 02.8	+0.6
SGF	**Sodankyl**	2.46	97	*e*P	Pn	00 29 03.1	+0.4
SGF				*e*SG	Sb	00 29 36.6	+0.1
SGF				MSG		00 29 39.9	
	comp=Z,1.1nm,0.2s						
SGF	**Sodankyl**	2.46	97	P	Pn	00 29 03.1	+0.4
SGF				Sg	Sb	00 29 36.5	0.0
	comp=Z,1.1nm,0.2s						
KEV	**Kevo**	3.13	49	*e*SB	Sb	00 29 55.8	-0.2
KEV				MSG		00 29 56.4	
	comp=Z,1.8nm,0.3s						
OUL	**Oulu**	3.60	138	*e*SB	Sb	00 30 10.3	+0.7
KU4	**Oulanka**	3.96	108	*e*S	Sn	00 30 10.2	-1.8
MSF	**Maaselka**	3.99	115	*e*SG	Sb	00 30 22.6	+1.4

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*ATH **01** 00:48:22.3,39.90N×24.01E,h27^{km}±1^{km},MD3.8/15, ML3.7*

*CSEM **01** 00:48:22.8±0.1,39.90N×24.07E,h20^{km},ML3.9,Error ellipse: s-maj=2.0km s-min=1.4km az=91.0*

*THE **01** 00:48:23.1,39.91N×24.01E,h4^{km},ML3.9*

*NEIC **01** 00:48:23.1,39.91N×24.01E,h4^{km},ML3.9(THE), ML3.7(ATH),After THE.*

ISC 01 00:48:22.1±0.4,**39.90N**±0.02×**24.02E**±0.03,**h13^{km}**±3^{km}**, n66,σ0^{s}92**/79,**mb3.4**/1,**11C-9D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAIG	**Paliouri**	0.26	275	*e*Pg	Pg	00 48 28.5	+0.6
PAIG				*e*Sg	Sg	00 48 32.5	+0.7
OUR	**Ouranopolis**	0.43	356	*e*Pg	Pg	00 48 32.0	+1.0
PLG	**Polygyros**	0.65	317	*e*PN	Pg	00 48 34.8	-0.4
PLG				*e*SN	Sg	00 48 43.5	-0.4
AOS	**Alonnisos**	0.74	189	*e*Pg	Pg	00 48 37.0	0.0
LOS	**Limnos**	0.82	87	*e*Pg	Pg	00 48 39.1	+0.6
LOS				*e*Sg	Sg	00 48 50.4	+0.9
XOR	**Xorichti**	0.83	230	*e*Pg	Pg	00 48 38.9	0.0
XOR				*e*Sg	Sg	00 48 50.4	+0.3
NEO	**Neokhori**	0.86	226	⇑*i*PN	Pn	00 48 39.0	-0.6
LIA	**Limnos Island**	0.89	90	*e*PN	Pn	00 48 40.5	+0.3
LIA				*e*SN	Sn	00 48 52.6	-0.3
SOH	**Sokhos**	1.05	331	*e*Pg	Pg	00 48 42.9	-0.3
SOH				*e*Sg	Sg	00 48 57.0	-0.3
THE	**Thessaloniki**	1.09	312	*e*Pg	Pg	00 48 43.3	-0.6
THE				*e*Sg	Sg	00 48 58.1	-0.4
LIT	**Litokhoron**	1.19	280	*e*Pb	Pb	00 48 44.5	+0.5
SRS	**Serrai**	1.26	345	*e*Pb	Pb	00 48 45.6	+0.5
SRS				*e*Sb	Sb	00 49 04.8	+3.8
NVR	**Nevrokopi**	1.45	355	*e*PN	Pn	00 48 48.7	+0.6
LKR	**Lokris**	1.48	213	*e*PB	Pb	00 48 48.5	-0.5
KNT	**Kendrikon**	1.52	326	*e*Pb	Pb	00 48 49.8	+0.2
KNT				*e*Sb	Sb	00 49 11.1	+2.4
AGG	**Agios Georgios**	1.58	237	*e*Pb	Pb	00 48 50.3	-0.3
GRG	**Griva**	1.62	311	*e*Pb	Pb	00 48 51.5	+0.1
RDO	**Rodhopi**	1.70	42	*e*PB	Pb	00 48 51.8	-0.8
MPAR	**Parnis Oros**	1.76	187	*e*PB	Pb	00 48 52.8	-1.0
KZN	**Kozani**	1.77	284	*e*PN	Pn	00 48 54.2	+1.5
VAY	**Valandovo**	1.80	323	*i* Pn	Pn	00 48 54.4	+1.3
VAY				*i* Sn	Sg	00 49 20.9	-1.1
ALN	**Alexandroupoli**	1.84	57	*e*Pb	Pb	00 48 54.5	-0.5
ALN	**Alexandroupoli**	1.84	57	*e*Pb	Pb	00 48 54.5	-0.5
PTL	**Penteli**	1.85	184	*e*PN	Pn	00 48 53.5	-0.4
PRK	**Paraskevi**	1.86	110	*e*PN	Pn	00 48 56.0	+2.0
ATH	**Athens Observa**	1.94	187	*e*PB	Pb	00 48 55.8	-1.1
EVR	**Evrytania**	1.98	241	*e*PB	Pb	00 48 56.2	-1.2
NAIG	**Nisos Aigina**	2.18	191	*e*PN	Pn	00 48 58.4	-0.2
FNA	**Florina**	2.21	294	*e*Pn	Pn	00 48 59.6	+0.7
FNA				*e*Sn	Sn	00 49 28.5	+2.3
JAN	**Janina**	2.46	265	*e*PB	Pb	00 49 05.0	-0.6
LSK	**Leskovik**	2.64	276	*i* Pn	Pn	00 49 06.3	+1.2
SKO	**Skopje**	2.85	317	⇓*i*Pn	Pn	00 49 09.0	+0.9
	comp=Z,0.1nm,0.5s						
APE	**Apeiranthos**	3.07	157	*e*PN	Pn	00 49 10.5	-0.7
ITM	**Ithomi**	3.18	212	*e*PB	Pb	00 49 14.5	-3.5
VLS	**Valsamata**	3.18	238	*e*PN	Pn	00 49 14.0	+1.2
VLI	**Veliai**	3.29	195	*e*PN	Pn	00 49 14.0	-0.4
BARS	**Barje**	3.35	331	⇑*i*Pn	Pn	00 49 15.0	-0.2
QSH	**Qafa e Shtames**	3.52	299	*i* Pn	Pn	00 49 23.4	+5.7
QSH				*i* Sn	Sn	00 50 06.3	+6.7
BOLS	**Boljevac**	4.22	339	⇓*i*Pn	Pn	00 49 27.0	-0.5
BOLS				Sn	Sn	00 50 16.0	-1.1
GRUS	**Gruza**	4.69	329	⇑*i*Pn	Pn	00 49 33.6	-0.6
GRUS				Sn	Sn	00 50 26.8	-2.3
SVIS	**Svilajnac**	4.86	336	⇑*i*Pn	Pn	00 49 34.9	-1.7
DIVS	**Divcibare**	5.16	326	⇑*i*Pn	Pn	00 49 40.1	-0.7
BEO	**Belgrade**	5.58	333	*i*	Sg	00 51 26.9	-1.0
HARR	**Harsova**	5.59	30	⇓P	Pn	00 49 46.6	-0.4
HARR	**Harsova**	5.59	30	⇓P	Pn	00 49 46.6	-0.4
MLR	**Muntele Rosu**	5.76	14	⇑P	Pn	00 49 49.4	0.0
MLR				⇑*i*P	Px	00 49 54.7	
MLR	**Muntele Rosu**	5.76	14	⇑*i*P	Px	00 49 54.7	
MLR	**Muntele Rosu**	5.76	14	⇑P	Pn	00 49 49.3	-0.1
ORI	**Oriolo Calabro**	5.82	274	*e*Pn	Pn	00 49 50.5	+0.4
GRI	**Girifalco**	5.99	262	*e*Pn	Pn	00 49 52.9	+0.3
CFR	**Carcaliu**	6.08	29	⇑*i*P	Pn	00 49 53.8	-0.2
CFR	**Carcaliu**	6.08	29	⇑*i*P	Pn	00 49 53.8	-0.1
VRI	**Vrincioaia**	6.28	18	⇓*i*P	Pn	00 49 58.3	+1.5
VRI	**Vrincioaia**	6.28	18	⇓*i*P	Pn	00 49 58.3	+1.6
TLCR		6.36	32	⇓P	Pn	00 49 56.9	-0.9
TLCR		6.36	32	⇓P	Pn	00 49 56.9	-0.9
SOI	**Samo**	6.47	256	*e*Pn	Pn	00 49 59.5	+0.1
MGR	**Morigerati**	6.50	275	*e*Pn	Pn	00 50 01.6	+1.8
MRLC	**Muro Lucano**	6.58	280	*e*Pn	Pn	00 50 00.1	-0.8
MRLC	**Muro Lucano**	6.58	280	*e*Pn	Pn	00 50 00.1	-0.8
CII	**Carovilli**	7.59	287	*e*Pn	Pn	00 50 14.8	-0.4
BURAR	**Bucovina Array**	7.76	6	⇓P	Pn	00 50 17.1	-0.3
SDI	**San Donato**	7.95	286	*e*Pn	Pn	00 50 19.7	-0.5
SDI	**San Donato**	7.95	286	*e*Pn	Pn	00 50 19.7	-0.5
KHC	**Kasperske Hory**	11.85	325	*e*P	P	00 51 19.5	+5.8
KHC				*e*x	x	00 51 31.0	
NB2	**NORSAR Subarra**	22.59	344	P	P	00 53 24.4	+1.2
	comp=Z,1.0nm,0.7s,mb3.4,baz=148,slow=10						

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*BJI **01** 01:08:01.0,7.98N×93.67E,h17^{km},mB5.3,mb4.9,Ms5.3, Msz5.1*

*NEIC **01** 01:08:02.0±0.2,7.93N×94.07E,mb5.3/70,MS4.7/21, Error ellipse: s-maj=9.3km s-min=6.4km az=47.0*

*HRVD **01** 01:08:02.0±0.2,7.81N×94.21E,h12^{km},MW5.2/64, Centroid moment Tensor Solution. LP body waves: s36,c55;Mantle waves: s64,c123; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.23±.02; M$_{\theta\theta}$-0.62±.02; M$_{\phi\phi}$0.84±.02; M$_{r\theta}$-0.33±.05; M$_{\theta\phi}$0.20±.01; M$_{\phi r}$-0.22±.04; Best double couple: M$_{0}$.872×10^{17} NP1: ϕ_s145°,δ60°,λ-168°. NP2:ϕ_s49°,δ80°,λ-31°. Principal axes: T .934, Plg13°, Azm100°; N -.124, Plg58°, Azm212°; P -.81, Plg29°, Azm3°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **01** 01:08:04.0±2.2,7.91N×93.95E,h33^{km},mb5.5/32, MS4.8/7 Error ellipse: s-maj=13.9km s-min=6.4km az=114.7*

ISC 01 01:08:01.0±0.2,**7.87N**±0.03×**93.97E**±0.03,**h19^{km}, h19^{km}**±1.2^{km}**:pP-P,n268,σ1^{s}27**/277,**mb5.2**/104,**MS4.8**/40, **25C-17D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	6.63	96	P	Pn	01 09 36.0	-4.1
	286nm,0.9s						
NNT	**Nongplab**	7.36	50	P	Pn	01 09 48.5	-1.8
IPM	**Ipoh**	7.74	115	P	Pn	01 09 51.1	-4.5
KGM	**Kluang**	10.98	122	P	P	01 10 37.7	-2.8
CM31	**Chiang Mai Arr**	11.58	24	*e*P	P	01 10 46.5	-2.2
CHG	**Chiang Mai**	11.90	23	⇓P	P	01 10 53.7	+0.7
	42nm,0.8s						
PALK	**Pallekele**	13.17	268	*e*P	P	01 11 07.8	-2.1
	58nm,1.4s						
CHRT	**Chiangrai**	13.19	25	⇑P	P	01 11 12.0	+1.8
	184nm,1.4s						
VIS	**Vishakhapatnam**	14.26	314	*e*P	P	01 11 23.0	-1.4
VIS				*e*		01 11 44.5	
	comp=Z,188nm,1.4s						
VIS				*e*	S	01 13 53.0	-10
MDRS	**Chennai**	14.45	292	*e*P	P	01 11 25.0	-1.8
MDRS				*e*		01 12 46.0	
MDRS				*e*		01 14 35.0	
BWNR	**Bhubaneshwar**	14.66	328	*e*P	P	01 11 29.4	-0.2
BWNR				*e*		01 11 41.5	
	comp=Z,143nm,1.6s						
BWNR				*e*	S	01 14 04.8	-7.7
CAL	**Calcutta**	15.56	340	*e*	P	01 11 48.1	+6.8
CAL				*e*		01 14 51.8	
AGT	**Agartala**	16.13	351	*i*	P	01 11 59.0	+10
IMP	**Imphal**	16.82	360	*e*P	P	01 11 56.1	-1.3
TRD	**Trivandrum**	16.85	273	*e*	P	01 12 07.3	+10
TRD				*e*		01 12 09.3	
	comp=Z,60nm,1.5s						
HYB	**Hyderabad**	17.77	304	*e*P	P	01 12 12.0	+2.7
HYB				*e*S	S	01 15 09.0	-15
HYB	**Hyderabad**	17.77	304	*i* P	P	01 12 12.0	+2.7
	comp=Z,80nm,1.0s						
HYB				*e*		01 15 09.0	
HYB				*e*S	S	01 15 25.0	+0.5
QIZ	**Qiongzhong**	18.99	53	P	P	01 12 24.1	-0.2
QIZ				XP		01 12 32.0	
QIZ				S	S	01 15 51.7	-0.3
QIZ				AMB	AMB		
	comp=Z,1μm,7.7s						
QIZ				LR	LR		
	comp=N,14μm,11.1s						
KMI	**Kunming**	19.09	25	P	P	01 12 27.1	+1.7
KMI				AP		01 12 32.8	
KMI				PP	PP	01 12 46.6	+4.3
KMI				S	S	01 16 05.1	+11
KMI				AMB	AMB		
	comp=Z,73nm,1.7s						
KMI				LR	LR		
	comp=N,4μm,9.3s						
KMI				LR	LR		
	comp=E,3μm,9.8s						
KMI				LR	LR		
	comp=Z,3μm,15.2s						
KMI	**Kunming**	19.09	25	P	P	01 12 27.1	+1.7
	comp=Z,73nm,1.7s						
KMI				pP		01 12 32.8	
KMI				PP	PP	01 12 46.6	+4.3
KMI				PPP	PPP	01 12 55.5	+4.2
KMI				S	S	01 16 05.1	+11
KMI				SS	SS	01 16 33.1	+13
KMI				SSS	SSS	01 16 46.8	+13
MNGI	**Mangalore**	19.49	287	*i* P	P	01 12 31.1	+1.0
MNGI				*i*		01 16 38.2	
COCO	**West Island**	20.13	172	P	P	01 12 34.9	-2.2
	comp=Z,371nm,1.3s						
ALBI	**Allahabad**	20.86	328	*e*P	P	01 12 44.0	-0.7
JIRN	**Jiri**	21.02	340	*e*P	P	01 12 45.2	-1.0
PKI	**Pulchoki**	21.20	339	*e*P	P	01 12 47.2	-0.9
	comp=Z,741nm,1.5s,mb5.8						
DMN	**Daman**	21.35	338	*e*P	P	01 12 49.8	+0.2
	comp=Z,396nm,1.1s,mb5.6						
KAD	**Karad**	21.45	298	*e*P	P	01 12 52.6	+2.0
KAD				*e*		01 12 59.4	
	comp=Z,95nm,1.3s						
KKN	**Kakani**	21.45	339	*e*P	P	01 12 49.9	-0.7

	comp=Z,461nm,1.3s,mb5.7						
LSA	**Lhasa**	**21.88**	**353**	P	**P**	**01 12 52.6**	**-2.2**
LSA				XP		01 13 04.7	
LSA				S	**S**	**01 16 47.4**	**-3.3**
LSA				AMB	AMB		
	comp=Z,60nm,0.7s,mb5.1						
LSA				LR	LR		
	comp=N,1µm,18.7s,MS4.6						
LSA				LR	LR		
	comp=E,2µm,16.1s,MS4.6						
GKN	**Gorkha**	**21.88**	**337**	*e*P	**P**	**01 12 54.6**	**-0.3**
	comp=E,90nm,0.6s,mb5.4						
BHPL	**Bhopal**	**22.04**	**316**	*e*P	**P**	**01 12 58.3**	**+1.8**
BHPL				*e*		01 13 08.7	
	comp=Z,310nm,1.4s						
GYA	**Guiyang**	**22.07**	**32**	P	**P**	**01 12 58.2**	**+1.3**
GYA				S	**S**	**01 17 03.3**	**+8.9**
GYA				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.7						
GYA				AMB	AMB		
	comp=Z,420nm,5.7s						
GYA				LR	LR		
	comp=N,4µm,18.0s,MS5.1						
GYA				LR	LR		
	comp=E,5µm,17.4s,MS5.1						
GYA				LR	LR		
	comp=Z,4µm,15.3s,MS5.0						
KOLN	**Koldanda**	**22.09**	**335**	*e*P	**P**	**01 12 57.2**	**+0.2**
	comp=Z,991nm,1.5s,mb6.0						
KKM	**Kota Kinabalu**	**22.16**	**93**	P	**P**	**01 13 00.1**	**+2.4**
POO	**Poona**	**22.24**	**300**	*e*	**P**	**01 13 04.1**	**+5.5**
POO				*e*		01 13 08.5	
	comp=Z,70nm,1.6s						
POO				*e*	**S**	**01 17 12.0**	**+15**
GZH	**Guangzhou**	**23.98**	**49**	P	**P**	**01 13 20.5**	**+4.9**
GZH				AMB	AMB		
	comp=Z,932nm,5.9s						
GZH				LR	LR		
	comp=N,9µm,14.0s,MS5.5						
GZH				LR	LR		
	comp=E,5µm,13.1s,MS5.5						
GZH				LR	LR		
	comp=Z,5µm,14.9s,MS5.2						
TSM	**Tawau**	**24.03**	**97**	P	**P**	**01 13 20.7**	**+4.5**
CD2	**Chengdu**	**24.68**	**20**	P	**P**	**01 13 23.2**	**+0.8**
CD2				PP	PP	01 13 59.8	+0.9
CD2				S	**S**	**01 17 44.7**	**+4.5**
CD2				XS		01 17 54.0	
CD2				AMB	AMB		
	comp=Z,700nm,7.2s						
CD2				LR	LR		
	comp=N,3µm,13.2s						
CD2				LR	LR		
	comp=Z,3µm,8.7s						
NDI	**New Delhi**	**26.04**	**325**	*e*P	**P**	**01 13 34.0**	**-1.2**
NDI				*e*	**S**	**01 17 55.0**	**-7.9**
AJM	**Ajmer**	**26.07**	**318**	⇑*i*P	**P**	**01 13 37.0**	**+1.5**
DGAR	**Diego Garcia**	**26.28**	**235**	P	**P**	**01 13 31.4**	**-6.2**
DDI	**Dehra Dun**	**26.86**	**328**	*e*	**P**	**01 13 41.9**	**-0.8**
SDNR	**Sundarnagar**	**28.36**	**328**	*e*P	**P**	**01 13 56.8**	**+0.5**
QZH	**Quanzhou**	**29.00**	**51**	*e*P	**P**	**01 14 04.0**	**+1.9**
QZH				S	**S**	**01 18 56.0**	**+5.1**
QZH				LR	LR		
	comp=Z,8µm,13.6s,MS5.5						
XAN	**Xi'an**	**29.47**	**26**	P	**P**	**01 14 04.8**	**-1.5**
XAN				S	**S**	**01 18 55.3**	**-3.0**
XAN				LR	LR		
	comp=N,3µm,13.9s,MS5.1						
XAN				LR	LR		
	comp=E,1µm,16.9s,MS5.1						
XAN				LR	LR		
	comp=Z,3µm,14.5s,MS5.1						
LZH	**Lanzhou**	**29.50**	**16**	⇑P	**P**	**01 14 06.2**	**-0.3**
LZH				AP	pP	01 14 15.3	+3.3
LZH				XP	sP	01 14 19.2	+4.8
LZH				PP	PP	01 15 05.9	+3.4
LZH				*e*S	**S**	**01 19 04.0**	**+5.3**
LZH				AMB	AMB		
	comp=Z,49nm,1.2s,mb5.1						
LZH				AMB	AMB		
	comp=Z,281nm,5.8s						
LZH				LR	LR		
	comp=N,3µm,12.8s						
LZH				LR	LR		
	comp=Z,3µm,14.2s,MS5.1						
LZH	**Lanzhou**	**29.50**	**16**	⇑P	**P**	**01 14 06.2**	**-0.3**
	comp=Z,49nm,1.2s,mb5.1						
LZH				pP	pP	01 14 15.3	+3.3
LZH				sP	sP	01 14 19.2	+4.8
LZH				PP	PP	01 15 05.9	+3.4
LZH				*e*S	**S**	**01 19 04.0**	**+5.3**
LZH				sS		01 19 20.7	
LZH				SS	SS	01 20 46.5	+15
LZH				LR	LR		
	comp=Z,3µm,14.2s,MS5.1						
WHN	**Wuhan**	**29.54**	**38**	⇓P	**P**	**01 14 07.9**	**+0.9**
WHN				S	**S**	**01 19 03.0**	**+3.5**
WHN				LR	LR		
	comp=Z,7µm,12.9s,MS5.5						
GTA	**Gaotai**	**31.84**	**9**	*e*P	**P**	**01 14 27.4**	**+0.3**
GTA				AP	pP	01 14 34.2	+1.6
GTA				XP	sP	01 14 37.4	+2.4
GTA				PP	PP	01 15 30.0	-2.9
GTA				PCP	PcP	01 17 22.6	+4.6
GTA				S	**S**	**01 19 30.3**	**-5.2**
GTA				SCP		01 21 02.2	
GTA				PCS		01 21 06.0	
GTA				SCS	ScS	01 24 58.3	+2.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,107nm,6.1s						
GTA				LR	LR		
	comp=N,997nm,19.0s						
GTA				LR	LR		
	comp=E,1µm,12.6s						
GTA				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
NJ2	**Nanjing**	**33.38**	**40**	*e*P	**P**	**01 14 40.9**	**+0.2**
NJ2				AP	pP	01 14 46.7	+0.6
NJ2				XP	sP	01 14 49.7	+1.2
NJ2				PP	PP	01 15 52.9	+0.3
NJ2				S	**S**	**01 20 01.0**	**+1.4**
NJ2				XS		01 20 12.0	
NJ2				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,1µm,5.4s						
NJ2				LR	LR		
	comp=N,6µm,14.5s,MS5.6						
NJ2				LR	LR		
	comp=E,5µm,10.9s,MS5.6						
NJ2				LR	LR		
	comp=Z,5µm,13.4s,MS5.4						
SSE	**Sheshan**	**34.34**	**44**	*e*P	**P**	**01 14 47.8**	**-1.2**
SSE				AP	pP	01 14 53.9	-0.6
SSE				S	**S**	**01 20 15.7**	**+1.2**
SSE				XS		01 20 26.0	
SSE				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,258nm,6.0s						
SSE				LR	LR		
	comp=N,3µm,15.9s,MS5.2						
SSE				LR	LR		
	comp=E,1µm,15.8s,MS5.2						
SSE				LR	LR		
	comp=Z,2µm,14.5s,MS5.1						
SSE	**Sheshan**	**34.34**	**44**	*e*P	**P**	**01 14 47.8**	**-1.2**
	comp=Z,19nm,0.7s,mb5.1						
SSE				pP	pP	01 14 53.9	-0.6
SSE				S	**S**	**01 20 15.7**	**+1.2**
SSE				sS		01 20 26.0	
SSE				SS	SS	01 23 00.5	+36
SSE				LR	LR		
	comp=Z,2µm,14.5s,MS5.1						
KSH	**Kashi**	**35.41**	**336**	*e*P	**P**	**01 14 57.7**	**-0.3**
KSH				*e*AP	pP	01 15 03.0	-0.5
KSH				*e*XP	sP	01 15 05.5	-0.3
KSH				*e*PP	PP	01 16 15.9	-1.9
KSH				*e*PCP	PcP	01 17 27.7	-0.3
KSH				*e*S	**S**	**01 20 30.0**	**-0.9**
KSH				*e*XS		01 20 40.0	
KSH				*e*SCP		01 21 12.2	
KSH				*e*SS	SS	01 22 45.0	-4.2
KSH				*e*SCS	ScS	01 25 14.0	-0.7
KSH				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.7						
KSH				AMB	AMB		
	comp=Z,270nm,4.2s						
KSH				LR	LR		
	comp=N,910nm,7.0s						
KSH				LR	LR		
	comp=E,950nm,6.6s						
BTO	**Baotou**	**35.60**	**21**	*e*P	**P**	**01 14 58.5**	**-1.1**
WMQ	**Urumqi**	**36.23**	**352**	⇑*i*P	**P**	**01 15 05.0**	**+0.1**
WMQ				XP	sP	01 15 12.0	-0.7
WMQ				PP	PP	01 16 28.0	+0.1
WMQ				S	**S**	**01 20 44.0**	**+0.5**
WMQ				SS	SS	01 23 07.0	-0.8
WMQ				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,65nm,7.0s						
WMQ				LR	LR		
	comp=N,709nm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=E,1µm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,737nm,19.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**36.39**	**23**	*e*P	**P**	**01 15 09.2**	**+2.9**
HHC				AP	pP	01 15 13.6	+1.8
HHC				XP	sP	01 15 16.2	+2.1
HHC				PP	PP	01 16 31.1	+1.1
HHC				PCP	PcP	01 17 34.6	+3.7
HHC				S	**S**	**01 20 48.8**	**+2.8**
HHC				XS		01 20 56.0	
HHC				SS	SS	01 23 12.7	+1.4
HHC				SCS	ScS	01 25 23.3	+3.3
HHC				AMB	AMB		
	comp=Z,24nm,1.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,281nm,5.4s						
HHC				LR	LR		
	comp=N,2µm,13.1s,MS5.2						
HHC				LR	LR		
	comp=E,2µm,14.2s,MS5.2						
HHC				LR	LR		
	comp=Z,1µm,14.4s,MS4.9						
BSY	**Bisya**	**38.29**	**297**	P	**P**	**01 15 27.3**	**+4.9**
	SNR=13						
UCH	**Uchtor**	**38.29**	**336**	P	**P**	**01 15 22.4**	**+0.2**
	SNR=8.3						
MBWA	**Marble Bar**	**38.37**	**139**	P	**P**	**01 15 22.2**	**-0.9**
MBWA				LR	LR		
	comp=Z,928nm,20.0s,MS4.6						
TKM2	**Tokmak 2**	**38.47**	**338**	P	**P**	**01 15 23.7**	**0.0**
	SNR=5.6						
KBK	**Karagaybulak**	**38.48**	**337**	P	**P**	**01 15 24.3**	**+0.4**
	SNR=15						
AML	**Almayashu**	**38.54**	**336**	P	**P**	**01 15 24.6**	**+0.3**
	SNR=24						
AAK	**Ala-Archa**	**38.64**	**337**	P	**P**	**01 15 25.8**	**+0.7**
	SNR=9.8						
AAK	**Ala-Archa**	**38.64**	**337**	⇓*e*P	**P**	**01 15 24.0**	**-1.2**
AAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**38.64**	**337**	*e*P	**P**	**01 15 23.7**	**-1.5**
	comp=Z,26nm,1.1s,mb4.9						
AAK				LR	LR		
	comp=Z,328nm,20.0s,MS4.2						
FRU	**Bishkek**	**38.76**	**337**	*e*P	**P**	**01 15 26.5**	**+0.3**
FRU				pmax	pmax		
	comp=Z,80nm,1.9s,mb5.1						
FRU				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.7						
FRU				MLR	MLR		
	comp=Z,800nm,15.0s						
CHMS	**Chumysh**	**38.85**	**337**	P	**P**	**01 15 26.5**	**-0.5**
	SNR=6.3						
EKS2	**Erkin-Say**	**38.95**	**336**	P	**P**	**01 15 27.9**	**+0.1**
	SNR=11						
USP	**Ospenovka**	**39.18**	**337**	P	**P**	**01 15 29.3**	**-0.4**
	SNR=15						
ASHO	**Ashiyiah**	**39.87**	**299**	P	pP	01 15 42.6	+1.5
	SNR=11						
MKAR	**Makanchi Array**	**40.05**	**348**	*i* P	**P**	**01 15 35.6**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,13nm,0.7s						
WHFO	**Wadi Hawf**	**40.35**	**288**	P	**P**	**01 15 42.1**	**+2.5**
	SNR=11						
ULN	**Ulaanbaatar**	**41.38**	**13**	*i* P	**P**	**01 15 47.7**	**0.0**
ULN	**Ulaanbaatar**	**41.38**	**13**	*e*P	**P**	**01 15 46.7**	**-1.0**
	comp=Z,17nm,1.3s,mb4.5						
ULN				LR	LR		
	comp=Z,922nm,20.0s,MS4.7						
SNY	**Shenyang**	**42.77**	**33**	⇑P	**P**	**01 16 03.8**	**+4.6**
SNY				XP	sP	01 16 14.7	+7.6
SNY				S	**S**	**01 22 23.5**	**+1.6**
SNY				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.6						
SNY				LR	LR		
	comp=N,2µm,13.3s						
SNY				LR	LR		
	comp=Z,2µm,16.1s,MS5.0						
ZAK	**Zakamensk**	**43.08**	**9**	*e*P	**P**	**01 16 00.5**	**-1.1**
ZAK				*e*		01 17 44.1	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
MOY	**Mondy**	**44.04**	**6**	*e*P	**P**	**01 16 13.7**	**+4.3**
TLY	**Talaya**	**44.40**	**9**	*e*P	**P**	**01 16 16.7**	**+4.4**
TLY				*e*S	**S**	**01 22 45.4**	**0.0**
TLY				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.6						
TLY				MLR	MLR		
	comp=Z,750nm,17.0s,MS4.7						
TLY	**Talaya**	**44.40**	**9**	⇑*e*P	**P**	**01 16 12.9**	**+0.6**
KURK	**Kurchatov**	**44.57**	**346**	*i* P	**P**	**01 16 12.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.1						
KURK	**Kurchatov**	**44.57**	**346**	*e*P	**P**	**01 16 12.4**	**-1.3**
	comp=Z,78nm,1.3s,mb5.4						
KURK				LR	LR		
	comp=Z,204nm,20.0s,MS4.0						
MUN	**Mundaring**	**44.96**	**153**	*e*P	**P**	**01 16 17.2**	**+0.1**
	comp=Z,33nm,0.8s,mb5.2						
CN2	**Changchun**	**45.12**	**32**	*e*P	**P**	**01 16 18.5**	**+0.3**
CN2				*e*XP	sP	01 16 26.0	-0.1
CN2				*e*S	**S**	**01 22 56.5**	**+0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,700nm,13.0s,MS5.3						
CN2				LR	LR		
	comp=E,2µm,13.0s,MS5.3						
CN2				LR	LR		
	comp=Z,2µm,13.0s,MS5.1						
KLBR	**Kellerberrin**	**45.35**	**151**	*e*P	**P**	**01 16 20.2**	**-0.1**
	comp=Z,397nm,1.0s,mb6.2						
NWAO	**Narrogin (SRO)**	**46.22**	**153**	*e*P	**P**	**01 16 26.6**	**-0.5**
	comp=Z,42nm,1.0s,mb5.3						
NWAO				LR	LR		
	comp=Z,971nm,19.0s,MS4.8						
NVS	**Novosibirsk**	**47.62**	**352**	*e*P	**P**	**01 16 35.4**	**-2.4**
NVS				*e*S	**S**	**01 23 27.4**	**-4.0**
NVS				pmax	pmax		
	comp=N,59nm,1.3s						
NVS				pmax	pmax		
	comp=E,31nm,1.3s						
NVS				pmax	pmax		
	comp=Z,88nm,1.3s,mb5.6						
NVS				smax			
	comp=N,23nm,1.8s						
NVS				smax			
	comp=E,64nm,1.6s						
MDJ	**Mudanjiang**	**47.90**	**34**	P	**P**	**01 16 42.3**	**+2.1**
MDJ				PP	PP	01 18 31.1	-0.4
MDJ				PCS		01 22 03.2	
MDJ				S	**S**	**01 23 36.8**	**+1.3**
MDJ				SCS	ScS	01 26 32.9	+3.0
MDJ				AMB	AMB		
	comp=Z,23nm,1.7s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,256nm,4.6s						
MDJ				LR	LR		
	comp=N,792nm,12.9s,MS5.2						
MDJ				LR	LR		
	comp=E,2µm,15.9s,MS5.2						
MDJ				LR	LR		
	comp=Z,1µm,14.9s,MS5.0						
WRAB	**Tennant Creek**	**48.40**	**125**	⇓*e*P	**P**	**01 16 41.9**	**-2.5**
WRAB	**Tennant Creek**	**48.40**	**125**	*e*P	**P**	**01 16 44.4**	**0.0**
	comp=Z,79nm,1.3s,mb5.6						
WRAB				LR	LR		
	comp=Z,350nm,19.0s,MS4.4						
WB2	**Warramunga Arr**	**48.41**	**125**	*e*P	**P**	**01 16 42.0**	**-2.4**
BVA0	**Borovoye Array**	**48.94**	**341**	*i* P	**P**	**01 16 46.1**	**-1.9**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
CHKZ	**Chkalovo**	**49.42**	**342**	*i* P	**P**	**01 16 50.7**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.3						
CHKZ	**Chkalovo**	**49.42**	**342**	*e*P	**P**	**01 16 50.5**	**-1.3**
	comp=Z,34nm,1.0s,mb5.3						
ASPA	**Alice Springs**	**50.04**	**130**	*e*P	**P**	**01 16 58.7**	**+1.8**
KLR	**Kul'dur**	**51.97**	**31**	*e*P	**P**	**01 17 12.8**	**+1.5**
KLR				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.2						
BOD	**Bodaibo**	**52.19**	**13**	*e*P	**P**	**01 17 08.0**	**-4.8**
BOD				pmax	pmax		
	comp=Z,41nm,2.0s,mb5.0						
GNI	**Garni**	**54.32**	**314***c*	*i*P	**P**	**01 17 31.1**	**+2.4**
GNI				pmax	pmax		
	comp=Z,42nm,1.8s						
GNI	**Garni**	**54.32**	**314**	P	**P**	**01 17 26.4**	**-2.3**
	comp=Z,61nm,1.4s,mb5.3						
GNI				⇑*i*P	pP	01 17 31.1	-3.3
GNI				LR	LR		
	comp=Z,399nm,19.0s,MS4.5						
CLNS	**Chul'man**	**54.50**	**20**	*e*P	**P**	**01 17 33.4**	**+3.6**
CLNS				pmax	pmax		
	comp=Z,82nm,1.4s,mb5.5						
CLNS				pmax	pmax		
	comp=N,24nm,1.2s						
CLNS				pmax	pmax		
	comp=E,23nm,1.3s						
TI2	**Plekhanov**	**54.93**	**316**	*e*P	**P**	**01 17 33.0**	**-0.3**
SVE	**Sverdlovsk**	**55.34**	**338**	*e*P	**P**	**01 17 30.0**	**-6.0**
SVE				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.8						
PMG	**Port Moresby**	**55.69**	**107**	*i* P	**P**	**01 17 39.9**	**+0.8**
PMG	**Port Moresby**	**55.69**	**107**	*e*P	**P**	**01 17 37.5**	**-1.7**
	comp=Z,46nm,0.8s,mb5.6						
PMG				LR	LR		
	comp=Z,538nm,22.0s,MS4.6						
ARU	**Arti**	**55.83**	**337**	⇑*i*P	**P**	**01 17 35.8**	**-3.7**
ARU				*e*S	**S**	**01 25 19.6**	**-4.3**
ARU				*e*SS	SS	01 29 05.9	-3.8
ARU				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.3						
YSS	**Yuzh-Sakhalins**	**56.89**	**38**	*i* P	**P**	**01 17 51.5**	**+4.2**
KIV	**Kislovodsk**	**57.20**	**318**	*e*P	**P**	**01 17 50.4**	**+0.8**
KIV				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.1						
KIV	**Kislovodsk**	**57.20**	**318**	*e*P	**P**	**01 17 48.4**	**-1.1**
	comp=Z,26nm,0.9s,mb5.3						
KIV				LR	LR		
	comp=Z,121nm,21.0s,MS4.0						
KMBO	**Kilima Mbogo**	**57.25**	**264**	*e*P	**P**	**01 17 51.4**	**+1.1**
	comp=Z,14nm,1.0s,mb4.9						
KMBO				LR	LR		
	comp=Z,975nm,21.0s,MS4.9						
GOF	**Gofitskoye**	**57.42**	**319**	*e*P	**P**	**01 17 55.0**	**+4.0**
GOF				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.3						
MALT	**Malatya**	**58.34**	**310**	*e*P	**P**	**01 17 56.3**	**-1.3**
	comp=Z,14nm,1.2s,mb4.9						
CTA	**Charters Tower**	**58.45**	**119**	*e*P	**P**	**01 17 56.0**	**-2.6**
	comp=Z,9.7nm,1.1s,mb4.8						
CTAO	**Charters Tower**	**58.45**	**119**	*e*P	**P**	**01 17 56.2**	**-2.4**
	comp=Z,23nm,1.2s,mb5.1						
CTAO				LR	LR		
	comp=Z,854nm,20.0s,MS4.9						
SOKR	**Solikamsk**	**58.74**	**339**	⇓*e*P	**P**	**01 17 59.3**	**-0.8**
SOKR				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.9						
SOC	**Sochi**	**59.07**	**317**	*e*P	**P**	**01 18 00.4**	**-2.2**
SOC				*e*		01 18 46.9	
SOC				*e*S	**S**	**01 26 04.7**	**-2.1**
SOC				*e*		01 27 45.9	
SOC				*e*SS	SS	01 30 02.6	-0.1
SOC				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.5						
SOC				pmax	pmax		
	comp=N,39nm,0.9s						
SOC				pmax	pmax		
	comp=E,23nm,1.0s						
EIL	**Elat**	**59.28**	**300**	*e*P	**P**	**01 18 00.5**	**-3.7**
	comp=E,55nm,1.4s,mb5.4						
YAK	**Yakutsk**	**60.05**	**19**	⇓*e*P	**P**	**01 18 08.3**	**-0.8**
YAK				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
YAK	**Yakutsk**	**60.05**	**19**	*e*P	**P**	**01 18 07.4**	**-1.7**
	comp=Z,167nm,1.4s,mb5.9						
YAK				*e*	pP	01 18 12.5	-2.4
YAK				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
STKA	**Stephens Creek**	**60.23**	**134**	*e*P	**P**	**01 18 12.7**	**+2.0**
	comp=Z,10nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**60.23**	**134**	*e*P	**P**	**01 18 09.5**	**-1.3**
STKA				*e*P		01 18 12.7	
SIM	**Simferopol'**	**63.31**	**317**	P	**P**	**01 18 32.0**	**+0.8**
SIM				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
SIM				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.6						
MBAR	**Mbarara**	**63.59**	**265**	⇓*e*P	**P**	**01 18 37.6**	**+4.0**
MBAR	**Mbarara**	**63.59**	**265**	*e*P	**P**	**01 18 35.5**	**+1.9**
	comp=Z,35nm,1.4s,mb5.2						
MBAR				LR	LR		
	comp=Z,282nm,21.0s,MS4.4						
ISP	**Isparta**	**64.31**	**308**	⇑*e*P	**P**	**01 18 42.0**	**+4.1**
ISP	**Isparta**	**64.31**	**308**	*e*P	**P**	**01 18 35.2**	**-2.7**
ISP				⇑*e*P	pP	01 18 42.0	-1.7
MOS	**Moscow**	**64.99**	**329**	*e*P	**P**	**01 18 40.9**	**-1.1**
MOS				pmax	pmax		
	comp=Z,152nm,1.4s,mb5.8						
OBN	**Obninsk**	**65.29**	**328**	⇑*e*P	**P**	**01 18 44.3**	**+0.3**
OBN				*e*		01 21 09.3	
OBN				*e*S	S	01 27 27.0	+1.9
OBN				pmax	pmax		
	comp=Z,106nm,1.2s,mb5.8						
OBN				MLR	MLR		
	comp=Z,600nm,21.0s,MS4.8						
OBN	**Obninsk**	**65.29**	**328**	⇑*e*P	**P**	**01 18 44.4**	**+0.4**
MA2	**Magadan**	**66.85**	**28**	*e*P	**P**	**01 18 55.9**	**+2.1**
MA2				*e*		01 27 38.5	
MA2				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
MA2	**Magadan**	**66.85**	**28**	*e*P	**P**	**01 18 52.8**	**-1.0**
	comp=Z,46nm,1.2s,mb5.4						
MA2				LR	LR		
	comp=Z,707nm,19.0s,MS4.9						
TIXI	**Tiksi**	**67.27**	**11**	⇓*i*P	**P**	**01 18 54.0**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,105nm,1.4s,mb5.7						
TIXI	**Tiksi**	**67.27**	**11**	⇓*e*P	**P**	**01 18 53.0**	**-3.3**
KIS	**Kishinev**	**67.41**	**318**	*e*P	**P**	**01 18 54.0**	**-3.6**
CFR	**Carcaliu**	**67.48**	**316**	⇑*i*P	**P**	**01 18 56.7**	**-1.4**
CFR	**Carcaliu**	**67.48**	**316**	⇑*i*P	**P**	**01 18 56.7**	**-1.4**
HARR	**Harsova**	**67.52**	**315**	⇓*i*P	**P**	**01 18 57.6**	**-0.8**
HARR	**Harsova**	**67.52**	**315**	⇓*i*P	**P**	**01 18 57.6**	**-0.8**
VRI	**Vrincioaia**	**68.58**	**316**	⇑*i*P	**P**	**01 19 06.1**	**+1.1**
VRI	**Vrincioaia**	**68.58**	**316**	⇑*i*P	**P**	**01 19 06.1**	**+1.1**
SEY	**Seymchan**	**69.00**	**25**	*e*P	**P**	**01 19 07.7**	**+0.5**
SEY				*e*		01 28 03.7	
SEY				*e*		01 32 36.9	
SEY				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.2						
SEY				pmax	pmax		
	comp=N,20nm,1.4s						
SEY				pmax	pmax		
	comp=E,60nm,1.9s						
MLR	**Muntele Rosu**	**69.05**	**316**	⇓*i*P	**P**	**01 19 08.3**	**+0.4**
MLR	**Muntele Rosu**	**69.05**	**316**	⇓*i*P	**P**	**01 19 08.3**	**+0.4**
LSZ	**Lusaka**	**69.11**	**250**	*e*P	**P**	**01 19 10.4**	**+1.8**
	comp=E,13nm,1.1s,mb4.8						
LSZ				LR	LR		
	comp=Z,916nm,20.0s,MS5.0						
BURAR	**Bucovina Array**	**69.93**	**318**	⇑P	**P**	**01 19 12.0**	**-1.2**
PUL	**Pulkovo**	**70.13**	**331**	⇓*e*P	**P**	**01 19 16.5**	**+2.3**

PUL				pmax	pmax		
	comp=Z,112nm,1.5s,mb5.6						
PUL				pmax	pmax		
	comp=N,56nm,0.8s						
PUL				pmax	pmax		
	comp=E,69nm,1.0s						
PUL	Pulkovo	70.13	331	*e*P	P	01 19 16.4	+2.2
JOF	Joensuu	70.78	334	*e*p	P	01 19 19.3	+1.2
	comp=E,39nm,1.2s,mb5.2						
JOF	Joensuu	70.78	334	*e*P	P	01 19 19.3	+1.2
JOF				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.2						
BOLS	Boljevac	71.62	314	⇓*i*P	P	01 19 23.0	-0.5
APA	Apatity	71.79	339	⇑*e*P	P	01 19 28.0	+3.9
APA				*i*	pP	01 19 34.5	+4.6
APA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
SKO	Skopje	71.79	312	*e*P	P	01 19 28.0	+3.4
KWP	Kalwaria	71.92	320	*e*P	P	01 19 22.1	-3.1
KWP				*e*	pP	01 19 28.0	-3.0
KOLS	Kolonicke sedl	72.09	319	*i* P	pP	01 19 31.3	-0.7
KOLS	Kolonicke sedl	72.09	319	*i* pP	pP	01 19 31.3	-0.7
SUW	Suwalki	72.41	324	*e*P	P	01 19 26.2	-1.8
	comp=Z,124nm,1.2s,mb5.7						
SUW				*e*P		01 19 29.3	
SUW	Suwalki	72.41	324	*e*P	pP	01 19 29.3	-4.5
CRVS	Cervenica-Dubn	72.62	319	*i* P	pP	01 19 35.0	-0.2
CRVS	Cervenica-Dubn	72.62	319	*i* pP	pP	01 19 35.0	-0.2
KAF	Kangasniemi	72.72	333	*e*p	P	01 19 28.4	-1.3
	comp=Z,43nm,1.1s,mb5.3,baz=133,slow=7.6						
KAF	Kangasniemi	72.72	333	*e*P	P	01 19 28.4	-1.3
KAF				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
PSZ	Piszkesteto	73.53	318	*e*P	P	01 19 33.3	-1.4
	comp=Z,30nm,1.4s,mb5.0						
OJC	Ojcow	73.87	320	*e*P	P	01 19 37.4	+0.8
LBTB	Lobatse	74.09	241	*e*P	P	01 19 38.7	+0.2
	comp=Z,11nm,0.9s,mb4.8						
LBTB				LR	LR		
	comp=Z,891nm,20.0s,MS5.0						
VYHS	Vyhne	74.30	318	*e*P	P	01 19 39.7	+0.6
OKC	Ostrava-Krasne	74.88	319	*e*P	P	01 19 43.3	+0.8
MORC	Moravsky Berou	75.27	319	*e*P	P	01 19 43.1	-1.6
	comp=Z,40nm,1.3s,mb5.2						
ZST	Bratislava	75.42	318	*e*P	P	01 19 48.8	+3.2
BOSA	Boshof	75.44	238	*e*P	P	01 19 46.8	+0.6
	comp=Z,8.4nm,0.6s,mb4.8						
BOSA				LR	LR		
	comp=Z,562nm,21.0s,MS4.8						
GKP	Gorka Klasztor	75.80	323	*e*P	P	01 19 52.6	+4.9
DPC	Dobruska-Polom	76.10	320	*e*P	P	01 19 49.3	-0.1
BILL	Bilibino	76.15	22	*i* P	P	01 19 48.1	-1.3
BILL				pmax	pmax		
	comp=Z,12nm,1.9s,mb4.5						
BILL	Bilibino	76.15	22	*e*P	P	01 19 48.0	-1.3
BILL				*e*pP	pP	01 19 53.2	-2.0
BILL				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
KSP	Ksiaz	76.16	320	*e*P	P	01 19 52.0	+2.3
KSP				*e*pP	pP	01 19 55.0	-0.6
KSP	Ksiaz	76.16	320	*e*P	P	01 19 49.8	+0.1
KSP				*e*	pP	01 19 55.9	+0.4
UPC	Upice	76.31	320	*e*P	P	01 19 52.4	+1.8
ARSA	Arzberg	76.42	317	⇑*i*P	P	01 19 54.8	+3.5
	comp=Z,29nm,1.2s,mb5.1						
PRU	Pruhonice	77.22	319	*e*P	P	01 19 58.1	+2.4
PVCC	Panska Ves	77.23	320	*e*P	pP	01 20 01.2	-0.4
PVCC	Panska Ves	77.23	320	*e*pP	pP	01 20 01.2	-0.4
BRG	Berggiesshubel	77.64	320	*i* P	pP	01 20 03.6	-0.3
BRG				pmax	pmax		
	comp=Z,47nm,1.6s,mb5.2						
BRG	Berggiesshubel	77.64	320	*e*P	P	01 19 54.4	-3.6
	comp=Z,8.5nm,1.6s,mb4.4						
BRG				*i* P	pP	01 20 03.6	-0.3
GEC2	GERESS Array S	77.72	318	*e*P	P	01 19 57.4	-1.0
GEC2				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.2						
GEC2	GERESS Array S	77.72	318	*e*P	P	01 19 57.4	-1.0
	comp=Z,39nm,1.3s,mb5.2						
KHC	Kasperske Hory	77.81	319	*e*P	P	01 19 59.2	+0.3
KHC				pP	pP	01 20 03.5	-1.3
RUE	Ruedersdorf	77.83	322	*e*P	P	01 19 56.3	-2.6
	comp=Z,96nm,1.3s,mb5.6						
PTCC	Patocco-Chiusa	77.88	316	*e*P	P	01 19 59.4	0.0
SNTG	Esanatoglia	78.13	312	*e*P	P	01 20 03.7	+2.9
ARV	Arcevia	78.13	313	*e*P	P	01 20 01.6	+0.8
CLL	Collm	78.26	321	*e*P	P	01 20 04.0	+2.7
CLL				*i*		01 20 06.9	
CLL				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.1						
CLL	Collm	78.26	321	*e*P	P	01 20 04.0	+2.7
	comp=Z,37nm,1.5s,mb5.1						
CLL				*i*		01 20 06.9	
CLL	Collm	78.26	321	P	P	01 20 02.0	+0.7
	comp=Z,logA/T=1.4,mb5.1						
CLL				*i* *PP	pP	01 20 06.9	-0.3
WET	Wettzell	78.27	319	*e*P	P	01 20 00.5	-0.9
WET				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
WET	Wettzell	78.27	319	*e*P	P	01 20 00.5	-0.9
	comp=Z,29nm,1.3s,mb5.0						
FVI	Forni Avoltri	78.28	316	*e*P	P	01 20 01.4	-0.1
RSM	Repubblica di	78.48	313	*e*P	pP	01 20 07.7	-1.0
NKC	Novy Kostel	78.58	320	*e*P	P	01 20 03.7	+0.6
CRE	Caprese Michel	78.85	313	*e*P	P	01 20 07.8	+3.0
SFI	Santa Sofia	78.92	313	*e*P	P	01 20 07.1	+1.9
PGD	Poggio Sodo	79.01	313	*e*P	P	01 20 07.4	+1.7
CTI	Castel Tesino	79.06	315	*e*P	P	01 20 07.1	+1.3
WTTA	Wattenberg	79.07	317	⇓*i*P	P	01 20 06.0	+0.1
	comp=Z,38nm,1.4s,mb5.1						
WATA	Walderalm	79.11	317	⇑*i*P	P	01 20 06.8	+0.7
	comp=Z,24nm,1.1s,mb5.0						
MOX	Moxa	79.11	320	*e*P	P	01 20 09.6	+3.5
MOX				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
MOX				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.9						
MOX	Moxa	79.11	320	*e*P	P	01 20 09.6	+3.5
	comp=Z,40nm,1.6s,mb5.1						
MOX				LR	LR		
	comp=Z,500nm,19.0s,MS4.9						
MOX	Moxa	79.11	320	*i* P	P	01 20 09.6	+3.5
	comp=Z,logA/T=1.4,mb5.1						
MOX				L		02 01 32.0	
VMG	Vicchio	79.14	313	*e*P	P	01 20 06.9	+0.6
FUR	Furstenfeldbru	79.31	317	*e*P	P	01 20 05.7	-1.5
GRA1	Grafenberg Arr	79.36	319	*e*P	P	01 20 06.8	-0.6
	comp=Z,60nm,1.4s,mb5.3						
GRA1				*e*pP	pP	01 20 12.4	-0.9
GRF	Grafenberg Arr	79.36	319	*e*P	P	01 20 06.8	-0.6
GRF				*e**PP	pP	01 20 12.4	-0.9
GRF				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.3						
GRF	Grafenberg Arr	79.36	319	*e*P	P	01 20 06.8	-0.6
	comp=Z,60nm,1.4s,mb5.3						
GRF				*e*pP	pP	01 20 12.4	-0.9
SQTA	Sankt Quirin	79.36	317	⇑*i*P	P	01 20 06.6	-0.9
	comp=Z,16nm,1.0s,mb4.9						
MOTA	Moosalm	79.43	317	⇑*i*P	P	01 20 08.6	+0.8
	comp=Z,19nm,1.2s,mb4.9						
ZCCA	Zocca	79.54	314	*e*P	P	01 20 10.7	+2.1
NB2	NORSAR Subarra	79.65	331	P	P	01 20 07.7	-1.0
	comp=Z,44nm,1.1s,mb5.3,baz=91,slow=5.3						
NB2	NORSAR Subarra	79.65	331	P	P	01 20 07.7	-1.0
	baz=91,slow=5.3						
GSCL	Gusciola	79.82	314	*e*P	P	01 20 12.3	+2.3
CLZ	Clausthal	79.91	321	*e*P	P	01 20 09.3	-1.0
	comp=Z,93nm,1.6s,mb5.5						
BRMO	Bormio	79.94	316	*e*P	P	01 20 10.5	-0.1
DAVA	Damuels	80.26	317	⇑*i*P	P	01 20 13.5	+1.2
	comp=Z,37nm,1.2s,mb5.2						
MUD	Monsted U'grnd	80.62	326	*e*P	pP	01 20 20.4	+0.5
MUD				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
MUD	Monsted U'grnd	80.62	326	*e*P	pP	01 20 20.4	+0.5
	comp=Z,43nm,1.0s						
MUD	Monsted U'grnd	80.62	326	*i* P	pP	01 20 20.4	+0.5
	comp=Z,43nm,1.0s						
VAI	Varese	81.07	315	*e*P	P	01 20 19.2	+2.6
TNS	Taunus Mts	81.14	320	*e*P	P	01 20 16.4	-0.5
BFO	Black Forest	81.28	318	*e*P	P	01 20 17.1	-0.5
BFO				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.1						
BFO	Black Forest	81.28	318	*e*P	P	01 20 17.1	-0.5
	comp=Z,37nm,1.5s,mb5.1						
CDF	Champ du Feu	81.98	318	*e*P	P	01 20 20.8	-0.5
SBF	Sospel	82.11	313	*e*P	P	01 20 21.8	-0.2
	comp=Z,66nm,1.0s,mb5.2						
WTSB	Winterswijk	82.12	321	*e*P	P	01 20 20.4	-1.5
	comp=Z,28nm,1.8s,mb4.9						
HINF	Hinteralfeld	82.29	317	*e*P	P	01 20 22.4	-0.5
LPG	La Plagne	82.50	315	*e*P	P	01 20 24.4	+0.4
LPL	La Plagne	82.51	315	*e*P	P	01 20 24.3	+0.2
MBDF	Montbardon	82.53	314	*e*P	P	01 20 24.8	+0.6
	comp=Z,39nm,1.1s,mb5.0						
BNI	Bardonecchia	82.58	314	P	P	01 20 21.9	-2.5
	comp=Z,30nm,1.3s,mb5.2						
HAU	Haudompre	82.62	317	*e*P	P	01 20 24.1	-0.5
	comp=Z,74nm,1.2s,mb5.3						
HAU				*e*R			
	comp=Z,212nm,18.2s						
FRF	La Foret Royal	82.70	313	*e*P	P	01 20 25.1	0.0
	comp=Z,104nm,1.3s,mb5.4						
HGN	Heimansgroeve	82.72	320	*e*P	pP	01 20 30.6	-0.4
	comp=Z,48nm,2.2s						
CABF	La Chapelle	82.89	316	*e*P	P	01 20 26.3	+0.3
MEZF	Maizieres J'vi	83.45	318	*e*P	P	01 20 28.8	-0.1
GIVF	Givet	83.48	320	*e*P	P	01 20 28.9	-0.1
BAIF	Baives	83.88	320	*e*P	P	01 20 31.2	+0.2
	comp=Z,125nm,1.8s,mb5.4						
VIVF	Saint-Julien-l	84.01	314	*e*P	P	01 20 31.8	0.0
	comp=Z,84nm,1.6s,mb5.3						
SMF	Signal de Mont	84.43	316	*e*P	P	01 20 33.4	-0.5
	comp=Z,42nm,1.1s,mb5.2						
SSF	Saint Saulge	84.62	317	*e*P	P	01 20 34.7	-0.1
	comp=Z,84nm,1.6s,mb5.3						
LASF	Ste Croix	84.67	314	*e*P	P	01 20 35.6	+0.4
	comp=Z,97nm,1.3s,mb5.5						
AVF	Avril sur Loir	84.75	316	*e*P	P	01 20 35.2	-0.3
	comp=Z,58nm,1.5s,mb5.2						
BGF	Bois d'Agland	85.12	316	*e*P	P	01 20 37.6	+0.3
	comp=Z,101nm,1.5s,mb5.4						
HYF	Humbligny	85.18	317	*e*P	P	01 20 38.1	+0.5
SYO	Syowa Base	85.35	197	⇓PcP	PcP	01 20 45.2	+3.6
TCF	Toulx Ste Croi	85.59	316	*e*P	P	01 20 39.7	0.0
	comp=Z,76nm,1.6s,mb5.4						
CAF	Calviac	85.85	315	*e*P	P	01 20 41.3	+0.3
	comp=Z,49nm,1.4s,mb5.2						
MTLF	Montolieu	85.93	313	*e*P	P	01 20 41.6	+0.1
	comp=Z,53nm,1.4s,mb5.3						
RJF	Les Rejaudoux	86.19	315	*e*P	P	01 20 43.1	+0.4
	comp=Z,110nm,1.6s,mb5.5						
RJF				*e*R			
	comp=Z,276nm,22.2s						
TNA	Tin City	86.24	24	*e*P	P	01 20 41.7	-0.8
	comp=Z,14nm,1.1s,mb5.1						
TNA				*e*pP	pP	01 20 46.7	-1.7
LFF	La Frestale	86.78	315	*e*P	P	01 20 46.0	+0.4
	comp=Z,47nm,1.3s,mb5.3						
LDF	La Druitiere	86.86	318	*e*P	P	01 20 45.8	-0.1
	comp=Z,64nm,1.4s,mb5.3						
FLN	La Foliniere	87.07	319	*e*P	P	01 20 46.9	0.0
FLN				*e*R			
	comp=Z,214nm,20.8s						
MFF	Saint Martin d	87.16	316	*e*P	P	01 20 47.2	-0.2
EPF	Esparros	87.33	313	*e*P	P	01 20 49.3	+1.0
	comp=Z,51nm,1.7s,mb5.2						
ETSF	Etsaut	88.01	313	*e*P	P	01 20 52.1	+0.6
	comp=Z,61nm,1.5s,mb5.3						
IMA	Indian Mountai	91.69	22	*e*P	P	01 21 09.4	+1.2
	comp=Z,2.3nm,0.5s,mb4.8						
PWA	Palmer West	95.10	25	*e*P	P	01 21 28.2	+4.2
	comp=Z,13nm,0.6s,mb5.5						
QSPA	South Pole Qui	97.77	180	P	sP	01 21 46.0	+2.4
	comp=Z,7.2nm,1.0s						
TBI	Tubuai	117.44	112	*e*PS	PS	01 37 40.9	-2.1
TBI				*e*LR	LR	02 02 36.1	
	comp=Z,323nm,34.2s						
PV10	Paradox Valley	129.24	23	PKP	PKPdf	01 27 09.1	-3.9
PFO	Pinyon Flat Ob	129.64	33	*e*PKP	PKPdf	01 27 07.3	-6.5
JCT	Junction City	139.64	19	*e*PKP	PKPdf	01 27 28.3	-4.2
PLCA	Paso Flores	144.49	200	*e*PKP	PKPdf	01 27 34.5	-6.1
LPAZ	La Paz	160.62	243	*e*PKP	PKPdf	01 28 04.1	-0.3

IGQ 01 01:27:29.4, 1.35S×81.07W, h15^{km}±6^{km}, mb4.6, 5C-9D, Error ellipse: s-maj=7.1km s-min=4.9km az=22.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.60	60	⇑P	Pb	01 27 41.3	+0.1
JAMA	Jama	1.39	39	P	Pn	01 27 54.8	+0.4
JAMA				S	Sb	01 28 12.3	+0.4
IGUA	Igualata	2.44	93	⇑P	Pn	01 28 11.1	+1.7
IGUA				S	Sn	01 28 41.3	+2.2
CUSU	Cusua	2.59	92	⇓P	Pn	01 28 14.1	+2.5
JUIV	Juive	2.61	92	P	Pn	01 28 13.4	+1.6
ARRY	Arrayan	2.62	93	⇓P	Pn	01 28 13.5	+1.5
ARRY				S	Sn	01 28 43.9	+0.2
RETU	Refugio	2.63	92	P	Pn	01 28 14.8	+2.7
PATA	Patacocha	2.64	93	P	Pn	01 28 14.6	+2.3
ULBA	Ulba	2.66	92	P	Pn	01 28 14.4	+1.7
ULBA				S	Sn	01 28 46.8	+1.9
NAS1	Nasa	2.69	75	⇑P	Pn	01 28 14.6	+1.5
PISA	Pisayambo	2.70	84	P	Pn	01 28 15.1	+2.0
PISA				S	Sn	01 28 45.8	0.0
JUA2	San Juan 2	2.71	65	⇓P	Pn	01 28 14.5	+1.1
TERV	Terraza Guagua	2.73	65	P	Pn	01 28 14.7	+1.1
PINO	Pino	2.73	64	⇓P	Pn	01 28 14.5	+0.8
GGP	Refugio Guagua	2.74	65	P	Pn	01 28 16.8	+3.1
VC1	Cotopaxi 1	2.76	75	⇑P	Pn	01 28 15.7	+1.7
TAMB	Tambo	2.78	76	⇑P	Pn	01 28 15.8	+1.5
YANA	Yana	2.78	64	⇓P	Pn	01 28 15.1	+0.8
ANTI	Antisana	3.04	73	⇓P	Pn	01 28 20.2	+2.1
COTA	Cotacachi	3.21	58	⇓P	Pn	01 28 22.0	+1.7
CAYR	Refugio Cayamb	3.35	66	⇓P	Pn	01 28 25.7	+3.3
CAYR				S	Sn	01 29 05.8	+3.5
CAYA	Cayambe	3.39	65	⇓P	Pn	01 28 26.1	+3.2
CONE	Cono NE Rev Vo	3.66	70	P	Pn	01 28 31.7	+4.9

SKHL 01 01:36:21.3±0.3, 48.92N×131.47E, h8^{km}±1^{km}, mb3.8/2, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	Kul'dur	0.36	31	*e*Pg	Pg	01 36 27.9	-0.7
KLR				*e*Sg	Sg	01 36 32.9	-0.6
GRNR	Gornyy	3.70	58	*e*Pg	Pg	01 37 28.9	-6.3
GRNR				sPg		01 37 32.0	
GRNR				*e*Sg	Sg	01 38 18.0	-6.5
GRNR				A		01 38 21.1	
	66nm,0.5s						
EKMR	Ekimchan	4.26	12	*e*rx	rx	01 37 31.0	
EKMR				*e*Pg	Pg	01 37 38.0	-8.3
EKMR				AMB	AMB	01 37 40.9	
	5.0nm,0.5s						
EKMR				*e*Sg	Sg	01 38 33.8	-9.3
EKMR				A		01 38 41.2	
	20nm,0.7s						
EKMR				A		01 38 41.2	
	23nm,0.7s						
EKMR				A		01 38 41.2	
	11nm,0.7s						
YASR	Yasnyy	4.90	335	*e*Pn	Pn	01 37 34.6	-2.4
YASR				pPn		01 37 38.5	
YASR				*e*Sg	Sg	01 38 54.2	-10
YASR				A		01 38 56.7	
	16nm,0.5s						
YASR				A		01 38 56.7	
	30nm,0.5s						
TEY	Ternei	5.24	136	*e*Sg	Sg	01 39 03.8	-12
ZEA	Zeya	5.50	333	*e*Sg	Sg	01 39 12.8	-12
ZEA				A		01 39 16.4	
	39nm,0.6s						
BMKR	Bomnak	6.02	345	*e*Pn	Pn	01 37 51.2	-1.7
BMKR				*e*Sg	Sg	01 39 29.9	-12
BMKR				A		01 39 34.0	
	34nm,0.5s						
BMKR				A		01 39 34.0	
	26nm,0.5s						
BMKR				A		01 39 34.0	
	14nm,0.5s						
KROS	Kirovskiy	6.19	335	*e*Pn	Pn	01 37 55.0	-0.2
KROS				*e*Sg	Sg	01 39 34.4	-13
KROS				A		01 39 40.3	
	13nm,0.5s						
NKL	Nikolayevsk	7.18	50	*e*Sg	Sg	01 40 05.0	-16
NKL				A		01 40 12.9	
	23nm,0.9s						
TUP	Tupik	9.03	312	*e*Pn	P	01 38 37.4	+2.5
TUP				AMB	AMB	01 38 38.7	
	3.0nm,0.3s						
TUP				*e*Sg	Sg	01 41 03.3	-19
TUP				A		01 41 07.2	
	20nm,1.2s						

*ISK **01** 01:39:44.4, 38.15N×26.82E, h8^{km}, MD3.0*
*ATH **01** 01:39:44.2, 38.12N×26.84E, h19^{km}±4^{km}, MD3.0/3*
CSEM 01 01:39:44.6±0.1, 38.15N×26.85E, h10^{km}, MD3.0, Error ellipse: s-maj=3.7km s-min=2.1km az=114.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.28	33	*i* PG	Pg	01 39 50.6	+0.1
IZM	Izmir	0.41	53	*i* PG	Pg	01 39 53.5	+0.4
IZM				SG	Sg	01 39 59.9	+1.3
SMG	Samos	0.44	181	*e*PB	Pb	01 39 52.8	-1.1
SMG				*e*SB	Sb	01 39 58.5	-1.8
AKS	Akhisar	1.05	46	PG	Pg	01 40 05.3	-0.4
MLSB	Milas	1.13	139	*e*PN	Pn	01 40 06.4	0.0
PRK	Paraskevi	1.19	338	*e*PN	Pn	01 40 07.0	-0.2
PRK				*e*SN	Sn	01 40 24.0	+0.5
APE	Apeiranthos	1.50	225	*e*PN	Pn	01 40 12.0	+0.3
BALB	Balikesir	1.69	28	*e*PN	Pn	01 40 15.5	+1.0
DENT	Denizli	1.77	102	*e*PN	Pn	01 40 16.6	+1.0

*MDD **01** 01:49:42.8±2.1, 36.69N×9.69W, mb3.1/4, Error ellipse: s-maj=16.9km s-min=13.7km az=74.0, PRXIMO*
*CSEM **01** 01:49:44.0±0.4, 36.67N×9.61W, h2^{km}, ML2.8/9, Error ellipse: s-maj=7.1km s-min=4.4km az=55.0*
INMG 01 01:49:43.8±0.8, 36.60N×9.81W, h19^{km}±21^{km}, ML1.7, Error ellipse: s-maj=21.1km s-min=3.9km az=52.0, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	1.28	42	*e*S	Sb	01 50 21.1	-2.1
	5.0nm,0.1s						
PTEO	Sao Teotonio	1.28	42	*e*S	Sb	01 50 21.1	-2.1
	5.0nm,0.1s						
PALC	Alcoutim	2.06	64	*e*Pn	Pn	01 50 15.6	-2.4
PALC				*e*Sn	Sn	01 50 39.4	-3.9
	3.0nm,0.1s						
PALC	Alcoutim	2.06	64	*e*Pn	Pn	01 50 15.6	-2.4
PALC				*e*Sn	Sn	01 50 39.4	-3.9
	3.0nm,0.1s						
EGRO	El Granado	2.08	63	Pn	Pn	01 50 16.2	-2.1
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 50 40.7	-3.3
	1.7nm,0.1s,SNR=7.9						
EGRO	El Granado	2.08	63	Pn	Pn	01 50 16.2	-2.1
	0.4nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 50 40.7	-3.2
	1.7nm,0.1s,SNR=7.9						
PBEJ	Beja	2.10	47	*e*Pn	Pn	01 50 16.2	-2.5
PBEJ				*e*Sn	Sn	01 50 41.0	-3.5
	2.3nm,0.1s						
PBEJ	Beja	2.10	47	*e*Pn	Pn	01 50 16.2	-2.5
PBEJ				*e*Sn	Sn	01 50 41.0	-3.5
	2.3nm,0.1s						
MOE	Montemor	2.24	31	*e*Pn	Pn	01 50 18.7	-2.0
MOE				*e*Sn	Sn	01 50 44.6	-3.5
PLOU	Loures	2.34	13	*e*Sn	Sn	01 50 46.5	-4.1
	4.1nm,0.1s						
PLOU	Loures	2.34	13	*e*Sn	Sn	01 50 46.5	-4.1
	4.1nm,0.1s						
EMIN	Mina Concepcio	2.76	64	Pn	Pn	01 50 25.3	-2.8
	0.1nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	01 50 56.4	-4.8
	0.8nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	2.76	64	Pn	Pn	01 50 25.3	-2.8
	0.1nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	01 50 56.4	-4.8
	0.8nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.09	45	Pn	Pn	01 50 29.6	-3.2
	0.6nm,0.1s,SNR=6.1						
EBAD				Sn	Sn	01 51 04.3	-5.3
	2.0nm,0.1s,SNR=7.9						
ESPR	Espera	3.18	84	Sn	Sn	01 51 06.5	-5.4
	4.7nm,0.3s,SNR=7.9						
ESPR	Espera	3.18	84	Sn	Sn	01 51 06.5	-5.4
	SNR=7.9						
PCBR	Castelo Branco	3.72	29	*e*Sn	Sn	01 51 19.4	-6.1
	1.1nm,0.3s						
PCBR	Castelo Branco	3.72	29	*e*Sn	Sn	01 51 19.4	-6.1
	1.1nm,0.3s						
PVIS	Viseu	4.38	19	*e*Sn	Sn	01 51 35.3	-6.8
	2.0nm,0.1s						
PVIS	Viseu	4.38	19	*e*Sn	Sn	01 51 35.3	-6.8
	2.0nm,0.1s						
EADA	Adamuz	4.45	68	Pn	Pn	01 50 48.6	-3.4
	0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	01 51 37.8	-6.2
	0.2nm,0.1s,SNR=7.9						
EADA	Adamuz	4.45	68	Pn	Pn	01 50 48.7	-3.4
	0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	01 51 37.8	-6.2
	0.2nm,0.1s,SNR=7.9						
ELOB	Lobios	5.43	14	Sn	Sn	01 51 59.9	-8.9
	2.6nm,0.4s,SNR=7.9						
ELOB	Lobios	5.43	14	Sn	Sn	01 51 59.9	-8.8
	SNR=7.9						
ZAI	Zaio	5.96	104	*i* S	Sn	01 52 22.5	+0.5

*NEIC **01** 01:50:12.8±1.0, 17.51S×178.64W, h526^{km}±15^{km}, mb4.3/10, Error ellipse: s-maj=24.8km s-min=11.4km az=149.0*
ISC 01 01:50:11.8±1.5, 17.5S±0.2×178.7W±0.2, h524^{km}±23^{km}, n15, σ0^{s}71/15, mb4.5/11, 6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.56	63	*e*P	P	01 52 05.1	-0.2
CTA	Charters Tower	33.24	260	⇓*i*P	P	01 56 07.2	+0.5
	5.2nm,0.8s,mb4.1						
CTAO	Charters Tower	33.24	260	*e*P	P	01 56 07.1	+0.5
	8.8nm,0.8s,mb4.3						
CNB	Canberra Magne	33.46	232	*e*P	P	01 56 09.5	+1.2
	78nm,0.5s,mb5.5						
STKA	Stephens Creek	38.59	241	⇓*i*P	P	01 56 51.9	+1.3
	7.4nm,0.5s,mb4.5						
WB2	Warramunga Arr	44.42	259	⇓*i*P	P	01 57 36.7	-0.7
WRAB	Tennant Creek	44.43	259	*e*P	P	01 57 36.3	-1.1
	7.9nm,0.7s,mb4.3						
ASPA	Alice Springs	44.64	254	⇓*i*P	P	01 57 39.1	+0.1
KAKA	Kakadu	47.32	269	*e*P	P	01 57 59.9	+0.3
	11nm,0.5s,mb4.7						
FORT	Forrest	49.93	244	⇓*i*P	P	01 58 18.3	-0.8
	85nm,0.6s,mb5.3						
FITZ	Fitzroy Crossi	52.83	260	⇓*i*P	P	01 58 40.2	0.0
	5.2nm,0.5s,mb4.1						
MBWA	Marble Bar	57.91	256	*e*P	P	01 59 14.7	-0.8
	5.0nm,0.3s,mb4.2						
QSPA	South Pole Qui	72.55	180	*e*P	P	02 00 45.7	-0.4
	6.4nm,0.7s,mb4.2						
MCK	McKinley	84.20	13	*e*P	P	02 01 49.1	+0.9
	1.3nm,0.6s,mb3.6						
INK	Inuvik	91.57	15	*e*P	P	02 02 22.6	-0.1
	3.5nm,0.9s,mb4.4						

IGQ 01 01:56:26.8, 1.38S×81.22W, h16^{km}±6^{km}, mb4.6, 8C-5D, Error ellipse: s-maj=6.4km s-min=5.7km az=8.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.75	64	⇑P	Pb	01 56 41.0	0.0
JAMA	Jama	1.50	42	⇑P	Pn	01 56 54.7	+1.4
JAMA				S	Sb	01 57 13.0	+0.4
MAGD	Magdalena	1.94	48	P	Pn	01 57 02.0	+2.4
IGUA	Igualata	2.58	92	⇓P	Pn	01 57 10.0	+1.3
IGUA				S	Sn	01 57 41.8	+1.8
CUSU	Cusua	2.73	91	P	Pn	01 57 13.6	+2.6
JUIV	Juive	2.75	91	P	Pn	01 57 12.6	+1.4
ARRY	Arrayan	2.76	93	⇓P	Pn	01 57 12.7	+1.3
ARRY				S	Sn	01 57 45.0	+0.3
RETU	Refugio	2.77	91	P	Pn	01 57 13.0	+1.6
ULBA	Ulba	2.81	91	⇑P	Pn	01 57 13.8	+1.8

ULBA				S	Sn	01 57 48.4	+2.6
NAS1	**Nasa**	**2.84**	**75**	⇑P	Pn	01 57 14.0	+1.6
PISA	**Pisayambo**	**2.85**	**84**	⇑P	Pn	01 57 14.5	+1.9
JUA2	**San Juan 2**	**2.86**	**66**	⇓P	Pn	01 57 13.8	+1.1
TERV	**Terraza Guagua**	**2.87**	**65**	P	Pn	01 57 13.8	+0.9
PINO	**Pino**	**2.88**	**65**	⇓P	Pn	01 57 13.9	+0.9
VC1	**Cotopaxi 1**	**2.91**	**75**	P	Pn	01 57 15.0	+1.6
JOR1	**San Jorge 1**	**2.92**	**62**	P	Pn	01 57 12.3	-1.3
YANA	**Yana**	**2.93**	**65**	⇑P	Pn	01 57 14.6	+0.9
TAMB	**Tambo**	**2.93**	**77**	P	Pn	01 57 15.4	+1.7
ANTI	**Antisana**	**3.19**	**73**	⇑P	Pn	01 57 19.4	+2.0
COTA	**Cotacachi**	**3.35**	**59**	⇓P	Pn	01 57 22.2	+2.6
CAYR	**Refugio Cayamb**	**3.50**	**67**	P	Pn	01 57 25.1	+3.3
CAYA	**Cayambe**	**3.53**	**66**	⇑P	Pn	01 57 25.5	+3.2
CONE	**Cono NE Rev Vo**	**3.80**	**70**	P	Pn	01 57 30.1	+4.0

NIED ***01*** *01:59:00,24.50N×121.50E,h29^{km},Mw4.8 Best double couple: M$_0$1.89×10^{16} NP1:φ$_s$61°,δ50°,λ-68°. NP2:φ$_s$209°, δ45°,λ-115°.*

JMA ***01*** *01:59:46.0±0.2,24.52N×121.52E,h67^{km},M5.4*

TAP ***01*** *01:59:47.8,24.26N×121.78E,h6^{km},ML5.1*

TAP Felt V J at Nanau, II J at Chiawan, II J at Hualien, II J at Suao, III J at Nanshan, IV J at Nioudou, III J at Neicheng, II J at Hehuanshan, III J at Ilan, II J at Shilin, III J at Sanguang, II J at Tachien, I J at Mucha, II J, I J at Nanjuang, I J at Taipai, I J at Jungli (National Central University), I J at Kuangyinshan, I J at Hsinchu, I J at Liyutan, I J at Sanyi, I J at Tsauling.

BJI ***01*** *01:59:48.8,24.37N×121.69E,h17^{km},mB5.2,mb4.8, ML5.4,Ms5.2,Msz5.0*

MOS ***01*** *01:59:48.6±0.9,24.34N×121.87E,h33^{km},mb5.3/21, MS4.7/9,Error ellipse: s-maj=18.3km s-min=7.5km az=118.0*

HRVD ***01*** *01:59:50.7±0.5,23.95N×121.75E,h24^{km}±1^{km},MW5.0/42, Centroid moment Tensor Solution. LP body waves: s25,c30;Mantle waves: s42,c67; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.27±.24; M$_{θθ}$-2.67±.16; M$_{φφ}$0.39±.16; M$_{rθ}$2.86±.28; M$_{θφ}$-0.48±.11; M$_{φr}$0.72±.23; Best double couple: M$_0$3.872×10^{16} NP1:φ$_s$268°,δ20°, λ100°. NP2:φ$_s$77°,δ70°,λ86°. Principal axes: T 3.644, Plg65°, Azm341°; N .453, Plg4°, Azm78°; P -4.1, Plg25°, Azm170°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***01*** *01:59:50.7±1.0,24.29N×121.78E,h38^{km}±8^{km},mb5.0/48, ML5.2(TAP) Error ellipse: s-maj=8.0km s-min=6.6km az=47.0*

NEIC Felt on Taiwan. Recorded [5 TAP] in Hua-lien and I-lan; [3 TAP] in T'ao-yuan; [2 TAP] in Nan-t'ou, T'ai-chung and T'ai-pei; [1 TAP] in Hsin-chu and Miao-li Counties.

MAN ***01*** *02:00:00.3,20.25N×121.88E,h4^{km}*

ISC 01 01:59:48.3±0.3,**24.31N**±0.01×**121.83E**±0.02,**h28**^{km}±1^{km}, **h26**^{km}±2.3^{km}**:pP-P,n281,**σ**1^{s}26**/331,**mb5.0**/67,**MS4.8**/17, **42C-13D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.14**	**327**	⇑*i*P	**Pb**	**01 59 51.8**	**-1.9**
ENA				S	**Sb**	**01 59 54.7**	**-2.7**
TWC	**Suao**	**0.30**	**4**	⇑*i*P	**Pb**	**01 59 55.0**	**-0.6**
TWD	**Chiawan**	**0.31**	**223**	⇓*i*P	**Pb**	**01 59 53.2**	**-2.5**
TWD				S	**Sb**	**01 59 57.4**	**-3.3**
HWA	**Hwalien**	**0.39**	**212**	P	**Pb**	**01 59 55.1**	**-1.7**
ENTT	**Nioudou**	**0.41**	**324**	⇑*i*P	**Pb**	**01 59 56.6**	**-0.5**
NNS	**Nan Shan**	**0.43**	**288**	⇑*i*P	**Pb**	**01 59 56.5**	**-1.1**
NNS				S	**Sb**	**02 00 01.9**	**-2.0**
TWE	**Neicheng**	**0.44**	**341**	⇑*i*P	**Pb**	**01 59 57.4**	**-0.2**
ILA	**Ilan**	**0.46**	**351**	⇑*i*P	**Pb**	**01 59 58.1**	**+0.1**
ILA				S	**Sb**	**02 00 05.8**	**+1.2**
WHF	**Hehuan Shan**	**0.54**	**253**	P	**Pb**	**01 59 57.5**	**-1.7**
NSK	**Sanguang**	**0.56**	**311**	⇑*i*P	**Pb**	**01 59 59.3**	**-0.3**
TWT	**Tachien**	**0.60**	**265**	⇑*i*P	**Pb**	**01 59 59.6**	**-0.5**
ESL	**Shilin**	**0.61**	**216**	⇑*i*P	**Pb**	**01 59 58.8**	**-1.6**
ESL				S	**Sb**	**02 00 07.2**	**-1.4**
TWA	**Mucha**	**0.71**	**342**	⇑*i*P	**Pb**	**02 00 02.5**	**+0.5**
TWB1	**Santiao Chiao**	**0.71**	**12**	⇑*i*P	**Pb**	**02 00 02.5**	**+0.4**
TATO	**Taipei**	**0.73**	**335**	*e*P	**Pb**	**02 00 02.5**	**+0.1**
TATO				*e*S	**Sb**	**02 00 11.9**	**-0.2**
NWF	**Wu-fen Shan**	**0.76**	**357**	⇑*i*P	**Pb**	**02 00 03.8**	**+0.8**
TAP1	**Taipei**	**0.78**	**339**	⇑P	**Pb**	**02 00 03.9**	**+0.7**
TAP	**Taipei**	**0.79**	**338**	*e*P	**Pb**	**02 00 04.0**	**+0.7**
TAP				S	**Sb**	**02 00 15.0**	**+1.4**
NSTT	**Nanjuang**	**0.82**	**293**	⇑*i*P	**Pb**	**02 00 04.0**	**+0.2**
NSTT				S	**Sb**	**02 00 14.5**	**-0.1**
TWS1	**Kuangyinshan**	**0.87**	**335**	⇑*i*P	**Pb**	**02 00 06.0**	**+1.2**
TWS1				S	**Sb**	**02 00 19.7**	**+3.6**
NCU	**National Centr**	**0.88**	**319**	*e*P	**Pb**	**02 00 05.9**	**+1.0**
NCU				S	**Sb**	**02 00 19.2**	**+2.9**
EHY	**Hungye**	**0.92**	**210**	⇑P	**Pn**	**02 00 03.7**	**-1.8**
EHY				S	**Sb**	**02 00 17.6**	**+0.1**
HSN	**Hsinchu**	**0.92**	**302**	*e*P	**Pn**	**02 00 06.3**	**+0.8**
HSN				S	**Sb**	**02 00 19.1**	**+1.6**
SMLT	**Sun Moon Lake**	**0.95**	**244**	*e*P	**Pn**	**02 00 04.3**	**-1.6**
SMLT				S	**Sb**	**02 00 20.1**	**+1.9**
TWQ1	**Liyutan**	**0.96**	**273**	*e*P	**Pn**	**02 00 06.7**	**+0.6**
TWQ1				S	**Sb**	**02 00 19.4**	**+0.8**
TYC	**Yuchr**	**0.97**	**246**	⇓*i*P	**Pn**	**02 00 05.6**	**-0.6**
TYC				S	**Sb**	**02 00 19.1**	**+0.1**
NSY	**Sanyi**	**0.98**	**277**	*e*P	**Pn**	**02 00 07.1**	**+0.8**
NSY				S	**Sb**	**02 00 20.1**	**+1.0**
TWY	**Chenhua**	**0.99**	**348**	P	**Pn**	**02 00 07.7**	**+1.2**
TCU	**Taichung**	**1.06**	**262**	⇓*i*P	**Pn**	**02 00 08.9**	**+1.4**
TCU				S	**Sb**	**02 00 23.5**	**+2.0**
TWF1	**Yuli**	**1.07**	**207**	*e*P	**Pn**	**02 00 05.8**	**-1.8**
TWF1				S	**Sn**	**02 00 22.1**	**+0.5**
YOJ	**Yonaguni jima**	**1.09**	**82**	P	**Pn**	**02 00 09.4**	**+1.5**
YOJ				S	**Sn**	**02 00 26.7**	**+4.6**
WNT	**Mingjian**	**1.13**	**248**	*e*P	**Pn**	**02 00 09.7**	**+1.2**
WNT				S	**Sn**	**02 00 26.1**	**+2.9**
YUS	**Yu-Shan**	**1.14**	**225**	P	**Pn**	**02 00 08.9**	**+0.3**
YUS				S	**Sn**	**02 00 25.2**	**+1.7**
ALS	**Alishan**	**1.23**	**230**	*e*P	**Pn**	**02 00 09.9**	**+0.1**
ALS				S	**Sn**	**02 00 26.9**	**+1.2**
CHN5	**Tsauling**	**1.27**	**236**	*e*P	**Pn**	**02 00 11.3**	**+0.8**
CHKT	**Chengkung**	**1.27**	**200**	*e*P	**Pn**	**02 00 09.1**	**-1.4**
CHKT				S	**Sn**	**02 00 28.6**	**+1.8**
WGK	**Gukeng**	**1.31**	**242**	*e*P	**Pn**	**02 00 12.6**	**+1.5**
PCYT	**Pengchaiyu**	**1.33**	**9**	*e*P	**Pn**	**02 00 13.0**	**+1.6**
PCYT				S	**Sn**	**02 00 33.2**	**+4.8**
ELDTW	**Lidau**	**1.34**	**214**	*e*P	**Pn**	**02 00 10.2**	**-1.2**
CHN2	**Minshiung**	**1.46**	**238**	*e*P	**Pn**	**02 00 13.8**	**+0.6**
CHN4	**Tsaushan**	**1.48**	**230**	⇑P	**Pn**	**02 00 14.8**	**+1.3**
WTCT	**Ta-ch'eng**	**1.48**	**253**	*e*P	**Pn**	**02 00 14.5**	**+1.0**
WTCT				S	**Sn**	**02 00 35.1**	**+3.1**
STYT	**Tauyuan**	**1.50**	**221**	P	**Pn**	**02 00 14.2**	**+0.4**
STYT				S	**Sn**	**02 00 36.1**	**+3.5**
CHY	**Chiayi**	**1.52**	**238**	*e*P	**Pn**	**02 00 15.8**	**+1.8**
CHY				S	**Sn**	**02 00 35.7**	**+2.7**
WTP	**Ta-pu**	**1.53**	**227**	*e*P	**Pn**	**02 00 14.8**	**+0.6**
WTP				S	**Sn**	**02 00 36.4**	**+3.0**
TWK	**Hsinying**	**1.61**	**230**	⇑P	**Pn**	**02 00 16.6**	**+1.3**
WSF	**Szhu**	**1.61**	**246**	*e*P	**Pn**	**02 00 16.7**	**+1.3**
WSF				S	**Sn**	**02 00 38.9**	**+3.5**
CHN1	**Nanshi**	**1.63**	**227**	*e*P	**Pn**	**02 00 16.2**	**+0.6**
CHN1				S	**Sn**	**02 00 39.7**	**+3.8**
TWG	**Pinlang**	**1.63**	**205**	*e*P	**Pn**	**02 00 13.9**	**-1.8**
TTN	**Taitung**	**1.67**	**202**	*e*P	**Pn**	**02 00 15.4**	**-0.8**
SGST	**Jiashian**	**1.67**	**223**	⇑P	**Pn**	**02 00 17.5**	**+1.3**
IRIF	**Iriomote-Funau**	**1.74**	**89**	P	**Pn**	**02 00 18.4**	**+1.3**
IRIF				*e*S	**Sn**	**02 00 43.3**	**+4.8**
CHN8	**Yiju**	**1.76**	**237**	*e*P	**Pn**	**02 00 18.8**	**+1.2**
CHN8				S	**Sn**	**02 00 42.0**	**+2.7**
CHN3	**Shinhua**	**1.82**	**228**	*e*P	**Pn**	**02 00 18.5**	**+0.2**
HATJ	**Hateruma jima**	**1.82**	**97**	P	**Pn**	**02 00 20.1**	**+1.7**
HATJ				*e*S	**Sn**	**02 00 45.9**	**+5.1**
SCLT	**Jiali**	**1.87**	**233**	*e*P	**Pn**	**02 00 21.5**	**+2.4**
SCLT				S	**Sn**	**02 00 45.1**	**+3.1**
ECL	**Taimali**	**1.88**	**205**	*e*P	**Pn**	**02 00 17.7**	**-1.5**
SSD	**Sandimen**	**1.90**	**215**	*e*P	**Pn**	**02 00 20.0**	**+0.5**
SSD				S	**Sn**	**02 00 46.0**	**+3.3**
TWM1	**Shoushan**	**1.96**	**221**	*e*P	**Pn**	**02 00 22.5**	**+2.2**
JKRS	**Kuro-shima**	**1.99**	**92**	P	**Pn**	**02 00 22.6**	**+1.8**
JKRS				*e*S	**Sn**	**02 00 49.5**	**+4.4**
SGLT	**Jiouru**	**2.00**	**218**	*e*P	**Pn**	**02 00 22.2**	**+1.4**
JIJ	**Ishigaki jima**	**2.11**	**88**	P	**Pn**	**02 00 23.3**	**+0.8**
JIJ				S	**Sn**	**02 00 51.0**	**+2.9**
EAST	**Anshuo**	**2.12**	**205**	*e*P	**Pn**	**02 00 21.0**	**-1.6**
TAW	**Tawu**	**2.12**	**204**	*e*P	**Pn**	**02 00 21.1**	**-1.5**
PNG	**Penghu**	**2.21**	**251**	P	**Pn**	**02 00 23.9**	**0.0**
PNG				S	**Sn**	**02 00 51.6**	**+1.1**
SCZT	**Fangliau**	**2.22**	**210**	*e*P	**Pn**	**02 00 24.1**	**0.0**
WDGT	**Dungji**	**2.24**	**243**	*e*P	**Pn**	**02 00 24.9**	**+0.5**
WDGT				S	**Sn**	**02 00 52.7**	**+1.3**
LAY	**Lan-yu**	**2.27**	**186**	*e*P	**Pn**	**02 00 22.1**	**-2.7**
TWP	**Hsiaoliuchiu**	**2.37**	**215**	*e*P	**Pn**	**02 00 26.3**	**+0.1**
HEN	**Hengchun**	**2.50**	**204**	*e*P	**Pn**	**02 00 30.3**	**+2.2**
TWK1	**Hengchun**	**2.53**	**202**	*e*P	**Pn**	**02 00 27.9**	**-0.6**
TWK1				S	**Sn**	**02 01 01.3**	**+2.5**
JTJ	**Tarama**	**2.64**	**82**	P	**Pn**	**02 00 31.4**	**+1.3**
JTJ				*e*S	**Sn**	**02 01 04.1**	**+2.6**
QZH	**Quanzhou**	**3.01**	**283**	P	**Pn**	**02 00 34.8**	**-0.6**
QZH				S	**Sn**	**02 01 10.0**	**-0.9**
QZH				Smax			
	comp=N,8µm,1.3s						
QZH				Smax			
	comp=E,3µm,0.9s						
QZH				LR	LR		
	comp=N,32µm,4.0s						
QZH				LR	LR		
	comp=E,27µm,10.3s						
QZH				LR	LR		
	comp=Z,33µm,8.9s						
KNM	**Kinmen**	**3.10**	**273**	*e*P	**Pn**	**02 00 37.4**	**+0.9**
JMJ	**Miyako jima 2**	**3.20**	**80**	*e*S	**Sn**	**02 01 17.7**	**+2.1**
JOGS	**Gusukube**	**3.29**	**81**	*e*S	**Sn**	**02 01 20.8**	**+2.8**
BBP	**Basco**	**3.85**	**178**	*e*P	**Pn**	**02 00 44.6**	**-2.7**
JKE	**Kume jima 2**	**4.92**	**65**	P	**Pn**	**02 01 03.8**	**+1.4**
JAGN	**Aguni-jima**	**5.40**	**64**	P	**Pn**	**02 01 12.6**	**+3.5**
SGCP	**Mt. Cagua**	**6.04**	**178**	*e*P	**Pn**	**02 01 14.9**	**-3.3**
JIH	**Iheya**	**6.17**	**63**	P	**Pn**	**02 01 25.5**	**+5.4**
JOW	**Kunigami**	**6.34**	**65**	P	**Pn**	**02 01 22.9**	**+0.4**
APYP	**Conner**	**6.44**	**185**	*e*P	**Pn**	**02 01 22.6**	**-1.3**
ABRA	**Dolores**	**6.71**	**189**	*e*P	**Pn**	**02 01 26.1**	**-1.6**
SSE	**Sheshan**	**6.79**	**355**	⇑P	**Pn**	**02 01 27.5**	**-1.2**
SSE				S	**Sn**	**02 02 49.4**	**+3.5**
SSE				AMB	AMB		
	comp=Z,196nm,0.8s						
SSE				AMB	AMB		
	comp=Z,180nm,8.0s						
SSE				Smax			
	comp=N,343nm,1.2s						
SSE				Smax			
	comp=E,429nm,1.2s						
SSE				LR	LR		
	comp=N,9µm,12.1s						
SSE				LR	LR		
	comp=E,2µm,12.1s						
SSE				LR	LR		
	comp=Z,11µm,13.4s						
SSE	**Sheshan**	**6.79**	**355**	⇑Pn	**Pn**	**02 01 27.5**	**-1.2**
	comp=Z,196nm,0.8s						
SSE				Sn	**Sn**	**02 02 49.4**	**+3.5**
PALP	**Palanan**	**7.23**	**175**	*e*P	**Pn**	**02 01 37.4**	**+2.4**
HKC	**Hong Kong**	**7.31**	**256**	Pn	**Pn**	**02 01 30.0**	**-6.1**
CAUP	**Cauayan**	**7.33**	**180**	*e*P	**Pn**	**02 01 33.5**	**-2.8**
NJ2	**Nanjing**	**8.15**	**342**	*e*P	**P**	**02 01 44.9**	**-2.9**
NJ2				AMB	AMB		
	comp=Z,180nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,1µm,3.5s						
NJ2				Smax			
	comp=N,1µm,1.0s						
NJ2				Smax			
	comp=E,990nm,0.8s						
NJ2				LR	LR		
	comp=N,18µm,8.0s						
NJ2				LR	LR		
	comp=E,11µm,9.6s						
NJ2				LR	LR		
	comp=Z,22µm,10.6s						
WHN	**Wuhan**	**9.09**	**315**	P	**P**	**02 02 00.0**	**-0.9**
WHN				S	**Sn**	**02 03 36.5**	**-6.9**
WHN				Smax			
	comp=N,833nm,1.2s						
WHN				Smax			
	comp=E,2µm,1.5s						
WHN				LR	LR		
	comp=Z,33µm,9.7s						
POLP	**Polilio Island**	**9.53**	**179**	*e*P	**P**	**02 02 04.1**	**-2.9**
LUBP	**Lubang**	**10.62**	**188**	*e*P	**P**	**02 02 11.8**	**-10**
QIZ	**Qiongzhong**	**12.31**	**247**	*e*P	**P**	**02 02 44.1**	**-0.8**
QIZ				S	**S**	**02 05 02.8**	**+0.6**
QIZ				LR	LR		
	comp=N,2µm,16.3s						
QIZ				LR	LR		
	comp=Z,1µm,13.5s						
TIA	**Tai'an**	**12.54**	**342**	*e*P	**P**	**02 02 46.2**	**-1.6**
TIA				LR	LR		
	comp=N,5µm,11.0s						
TIA				LR	LR		
	comp=E,3µm,10.0s						
GYA	**Guiyang**	**13.88**	**282**	⇑*i*P	**P**	**02 03 04.8**	**-0.8**
GYA				S	**S**	**02 05 32.8**	**-6.8**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s						
GYA				AMB	AMB		
	comp=Z,200nm,9.3s						
GYA				LR	LR		
	comp=N,2µm,9.0s						
GYA				LR	LR		
	comp=E,5µm,9.9s						
GYA				LR	LR		
	comp=Z,6µm,11.4s						
KS15	**Wonju Array Si**	**14.08**	**20**	*e*P	**P**	**02 03 08.7**	**+0.4**
XAN	**Xi'an**	**14.86**	**314**	P	**P**	**02 03 19.0**	**+0.6**
XAN				LR	LR		
	comp=N,6µm,11.2s						
XAN				LR	LR		
	comp=E,8µm,10.8s						
XAN				LR	LR		
	comp=Z,2µm,7.6s						
BJI	**Beijing**	**16.39**	**344**	P	**P**	**02 03 39.4**	**+1.3**
BJI				AMB	AMB		
	comp=Z,34nm,1.6s						
BJI				LR	LR		
	comp=N,4µm,12.7s						
BJI				LR	LR		
	comp=E,2µm,11.2s						
BJI				LR	LR		
	comp=Z,2µm,14.2s						
BJI	**Beijing**	**16.39**	**344**	P	**P**	**02 03 39.4**	**+1.3**
	comp=Z,34nm,1.6s						
BJI				S	**S**	**02 06 24.8**	**-14**
CD2	**Chengdu**	**17.30**	**296**	P	**P**	**02 03 49.3**	**-0.3**
CD2				S	**S**	**02 06 57.7**	**-1.8**
CD2				AMB	AMB		
	comp=Z,80nm,1.0s						
CD2				AMB	AMB		
	comp=Z,600nm,3.9s						
CD2				LR	LR		
	comp=N,6µm,7.9s						
CD2				LR	LR		
	comp=Z,6µm,9.6s						
KMI	**Kunming**	**17.36**	**277**	P	**P**	**02 03 51.0**	**+0.6**
KMI				AMB	AMB		
	comp=Z,22nm,1.5s						
KMI				LR	LR		
	comp=N,2µm,10.0s						
KMI				LR	LR		
	comp=E,5µm,9.3s						
KMI				LR	LR		
	comp=Z,6µm,10.1s						
KMI	**Kunming**	**17.36**	**277**	P	**P**	**02 03 51.0**	**+0.6**
	comp=Z,22nm,1.5s						
KMI				S	**S**	**02 07 08.9**	**+8.0**
SNY	**Shenyang**	**17.53**	**4**	⇓P	**P**	**02 03 55.9**	**+3.5**
SNY				AMB	AMB		
	comp=Z,640nm,7.8s						
SNY				LR	LR		
	comp=N,6µm,11.4s						
SNY				LR	LR		
	comp=E,2µm,11.1s						
SNY				LR	LR		
	comp=Z,7µm,11.6s						
HHC	**Hu-ho-hao-te**	**18.60**	**335**	⇑P	**P**	**02 04 08.7**	**+3.0**
HHC				AP		02 04 13.0	
HHC				XP		02 04 15.8	
HHC				AMB	AMB		
	comp=Z,35nm,1.9s						
HHC				AMB	AMB		
	comp=Z,1µm,4.7s						
HHC				LR	LR		
	comp=N,4µm,14.4s						
HHC				LR	LR		
	comp=E,1µm,15.6s						
HHC				LR	LR		
	comp=Z,4µm,16.8s						
BTO	**Baotou**	**19.03**	**331**	*e*P	**P**	**02 04 11.1**	**+0.3**
BTO				LR	LR		
	comp=N,831nm,7.8s						
BTO				LR	LR		
	comp=E,3µm,10.6s						
LZH	**Lanzhou**	**19.44**	**311**	⇑P	**P**	**02 04 15.5**	**-0.1**
LZH				AP		02 04 19.2	
LZH				XP		02 04 22.5	
LZH				PP	PP	02 04 33.2	0.0
LZH				*e*S	**S**	**02 07 46.7**	**-1.1**
LZH				SS	SS	02 08 12.3	-2.1
LZH				AMB	AMB		
	comp=Z,122nm,1.3s						
LZH				AMB	AMB		
	comp=Z,452nm,4.5s						
LZH				LR	LR		
	comp=E,3µm,11.0s						
LZH				LR	LR		
	comp=Z,7µm,13.8s						
LZH	**Lanzhou**	**19.44**	**311**	⇑P	**P**	**02 04 15.5**	**-0.1**
	comp=Z,122nm,1.3s						
LZH				pP		02 04 19.2	
LZH				sP		02 04 22.5	
LZH				PP	PP	02 04 33.2	0.0
LZH				*e*S	**S**	**02 07 46.7**	**-1.1**
LZH				sS		02 07 51.8	
LZH				SS	SS	02 08 12.3	-2.1
CN2	**Changchun**	**19.67**	**8**	*e*P	**P**	**02 04 18.9**	**+0.8**
CN2				*e*XP		02 04 25.8	
CN2				*e*S	**S**	**02 07 55.9**	**+3.2**
CN2				AMB	AMB		
	comp=Z,40nm,1.3s						
CN2				AMB	AMB		
	comp=Z,440nm,3.0s						
CN2				LR	LR		
	comp=N,5µm,13.0s						
CN2				LR	LR		
	comp=E,2µm,13.0s						
CN2				LR	LR		
	comp=Z,5µm,14.0s						
NANT	**Nan**	**20.39**	**259**	P	**P**	**02 04 23.0**	**-2.9**
CHRT	**Chiangrai**	**20.89**	**262**	⇑P	**P**	**02 04 32.5**	**+1.5**
	comp=Z,224nm,1.0s						
MDJ	**Mudanjiang**	**21.23**	**15**	P	**P**	**02 04 34.3**	**0.0**
MDJ				AP		02 04 40.0	
MDJ				XP		02 04 42.7	
MDJ				S	**S**	**02 08 30.9**	**+7.1**
MDJ				XS		02 08 41.2	
MDJ				PCS		02 12 15.4	
MDJ				AMB	AMB		
	comp=Z,26nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,250nm,4.8s						
MDJ				LR	LR		
	comp=N,3µm,14.3s,MS4.8						
MDJ				LR	LR		
	comp=E,759nm,11.0s,MS4.8						
MDJ				LR	LR		
	comp=Z,3µm,15.3s,MS4.8						
CHG	**Chiang Mai**	**21.96**	**260**	⇓P	**P**	**02 04 43.0**	**+1.2**
	comp=Z,23nm,1.0s,mb4.6						
GTA	**Gaotai**	**23.92**	**314**	⇑P	**P**	**02 05 01.7**	**+0.9**
GTA				AP		02 05 05.8	
GTA				XP		02 05 09.0	
GTA				PP	PP	02 05 39.5	+4.7
GTA				AMB	AMB		
	comp=Z,23nm,1.0s,mb4.6						
GTA				AMB	AMB		
	comp=Z,130nm,5.3s						
GTA				LR	LR		
	comp=N,2µm,9.5s						
GTA				LR	LR		
	comp=E,3µm,11.8s						
GTA				LR	LR		
	comp=Z,4µm,11.0s,MS5.2						
KLR	**Kul'dur**	**26.07**	**15**	*e*P	**P**	**02 05 17.4**	**-3.8**
KLR				MLR	MLR		
	comp=E,1µm,13.0s						
KLR				MLR	MLR		
	comp=Z,7µm,13.0s,MS5.4						
ULN	**Ulaanbaatar**	**26.28**	**337**	*c* *i*P	**P**	**02 05 23.1**	**0.0**
ULN	**Ulaanbaatar**	**26.28**	**337**	*e*P	**P**	**02 05 22.4**	**-0.7**
	comp=Z,24nm,0.8s,mb4.8						
LSA	**Lhasa**	**27.81**	**288**	P	**P**	**02 05 37.5**	**+0.2**
LSA				XP	sP	02 05 50.9	+1.8
LSA				LR	LR		
	comp=N,370nm,15.3s,MS4.2						
LSA				LR	LR		
	comp=E,190nm,13.4s,MS4.2						
YSS	**Yuzh-Sakhalins**	**28.12**	**31**	*e*P	**P**	**02 05 38.2**	**-1.7**
YSS				*e*	pP	02 05 47.8	-0.2
YSS				MLR	MLR		
	comp=N,600nm,15.0s,MS4.5						
YSS				MLR	MLR		
	comp=E,800nm,15.0s,MS4.5						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s,MS4.5						
YSS	**Yuzh-Sakhalins**	**28.12**	**31**	*e*P	**P**	**02 05 39.9**	**0.0**
ZAK	**Zakamensk**	**29.75**	**336**	*e*P	**P**	**02 05 54.0**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
TLY	**Talaya**	**30.68**	**338**	*e*P	**P**	**02 06 02.2**	**-0.6**
TLY				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
TLY				MLR	MLR		
	comp=Z,2µm,14.0s,MS4.8						
TLY	**Talaya**	**30.68**	**338**	*e*P	**P**	**02 06 00.2**	**-2.6**
	comp=Z,46nm,1.4s,mb5.1						
MOY	**Mondy**	**31.64**	**335**	*e*P	**P**	**02 06 14.7**	**+3.5**
MOY				pmax	pmax		
	comp=Z,28nm,4.0s						
JIRN	**Jiri**	**32.14**	**284**	*e*P	**P**	**02 06 15.7**	**-0.1**
	comp=Z,26nm,0.7s,mb5.2						
PKI	**Pulchoki**	**32.84**	**284**	*e*P	**P**	**02 06 21.3**	**-0.6**
	comp=Z,39nm,1.0s,mb5.3						
KKN	**Kakani**	**32.94**	**284**	*e*P	**P**	**02 06 22.8**	**0.0**
	comp=Z,99nm,1.3s,mb5.6						
GKN	**Gorkha**	**33.50**	**284**	*e*P	**P**	**02 06 27.4**	**-0.3**
	comp=Z,32nm,0.9s,mb5.3						
BOD	**Bodaibo**	**33.95**	**353**	*e*P	**P**	**02 06 28.9**	**-2.3**
WMQ	**Urumqi**	**34.00**	**313**	P	**P**	**02 06 32.3**	**+0.5**
WMQ				XP	sP	02 06 41.0	-2.6
WMQ				PP	PP	02 07 47.0	+1.1
WMQ				S	**S**	**02 11 56.0**	**+1.9**
WMQ				SS	SS	02 14 03.0	+0.8
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,64nm,6.0s						
WMQ				LR	LR		
	comp=N,488nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=E,875nm,14.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,723nm,14.0s,MS4.6						
KOLN	**Koldanda**	**34.43**	**284**	*e*P	**P**	**02 06 35.3**	**-0.4**
	comp=Z,30nm,0.8s,mb5.3						
YAK	**Yakutsk**	**38.09**	**6**	⇑*e*P	**P**	**02 07 05.1**	**-1.1**
YAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
YAK				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.2						
MKAR	**Makanchi Array**	**38.66**	**316**	*i* P	**P**	**02 07 11.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,11nm,0.6s						
KLP	**Kalpa**	**38.97**	**291**	*e*P	**P**	**02 07 14.2**	**+0.2**
KLP				*e*	pP	02 07 22.4	0.0
	comp=Z,35nm,1.7s						
DDI	**Dehra Dun**	**39.17**	**289**	*e*	**P**	**02 07 15.0**	**-0.6**
PET	**Petropavlovsk**	**39.88**	**34**	*e*P	**P**	**02 07 21.7**	**+0.4**
PET				pmax	pmax		
	comp=Z,55nm,1.7s,mb5.0						
PET				MLR	MLR		
	comp=Z,700nm,16.0s,MS4.6						
NDI	**New Delhi**	**39.99**	**286**	*e*P	**P**	**02 07 20.0**	**-2.5**
SDNR	**Sundarnagar**	**40.07**	**291**	*e*P	**P**	**02 07 24.6**	**+1.6**
AYAN	**Aya Nagar**	**40.09**	**286**	*e*P	**P**	**02 07 21.4**	**-1.8**
AYAN				*e*	pP	02 07 28.4	-3.1
	comp=Z,17nm,0.7s						

SONA	**Sohna**	40.14	286	eP	P	02 07 22.3	-1.4
SONA				e		02 07 27.1	
	comp=Z,16nm,0.8s						
KKR	**Kurukshetra**	40.25	288	eP	P	02 07 25.5	+0.9
KUDL	**Kundal**	40.68	285	eP	P	02 07 25.8	-2.3
HYB	**Hyderabad**	40.89	269	eP	P	02 07 31.0	+1.1
KHET	**Khetri**	41.28	285	eP	P	02 07 31.1	-1.9
KSH	**Kashi**	41.33	303	eP	P	02 07 34.1	+0.8
KSH				eAP	pP	02 07 40.4	-1.2
KSH				eXP	sP	02 07 43.6	-1.5
KSH				ePP	PP	02 09 12.0	+0.3
KSH				ePCP	PcP	02 09 33.5	+1.4
KSH				eSCP		02 13 22.4	
KSH				eS	S	02 13 47.0	+1.3
KSH				eXS		02 13 56.0	
KSH				eSS	SS	02 16 42.5	-2.6
KSH				eSCS	ScS	02 17 35.0	+1.8
KSH				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.4						
KSH				AMB	AMB		
	comp=Z,170nm,6.1s						
KSH				LR	LR		
	comp=N,1µm,15.6s,MS5.2						
KSH				LR	LR		
	comp=E,2µm,14.0s,MS5.2						
PMG	**Port Moresby**	41.65	141	d iP	P	02 07 35.7	-0.5
PMG	**Port Moresby**	41.65	141	eP	P	02 07 34.8	-1.5
	comp=E,21nm,1.0s,mb4.7						
KURK	**Kurchatov**	42.38	320	i P	P	02 07 41.2	-0.6
KURK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.4						
KURK	**Kurchatov**	42.38	320	eP	P	02 07 40.8	-1.0
	comp=Z,9.5nm,0.8s,mb4.5						
AAK	**Ala-Archa**	42.90	307	⇓eP	P	02 07 46.2	0.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
AAK				MLR	MLR		
	comp=Z,1µm,15.0s,MS4.8						
POO	**Poona**	44.86	272	eP	P	02 08 02.5	+0.1
POO				e		02 14 26.0	
WRAB	**Tennant Creek**	45.63	163	i P	P	02 08 06.8	-1.6
WRAB	**Tennant Creek**	45.63	163	eP	P	02 08 05.7	-2.8
	comp=Z,8.0nm,0.8s,mb4.7						
WB2	**Warramunga Arr**	45.64	163	eP	P	02 08 06.8	-1.7
TIXI	**Tiksi**	47.54	3	⇑eP	P	02 08 20.9	-2.0
TIXI				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,1µm,12.0s,MS5.2						
FX1	**Attu Island--F**	47.85	40	P	P	02 08 25.7	+0.1
BVA0	**Borovoye Array**	47.95	320	i P	P	02 08 25.6	-0.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	48.01	321	i P	P	02 08 25.7	-1.0
CHKZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
CHKZ	**Chkalovo**	48.01	321	eP	P	02 08 25.6	-1.1
	comp=Z,20nm,0.6s,mb5.3						
ASPA	**Alice Springs**	49.10	165	eP	P	02 08 36.0	+0.4
CTA	**Charters Tower**	50.13	150	eP	P	02 08 43.3	-0.2
	comp=Z,13nm,0.9s,mb5.0						
CTAO	**Charters Tower**	50.13	150	eP	P	02 08 42.6	-0.9
	comp=Z,48nm,2.0s,mb5.2						
BILL	**Bilibino**	51.37	20	⇑eP	P	02 08 51.1	-1.2
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BILL				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.7						
BILL	**Bilibino**	51.37	20	eP	P	02 08 49.7	-2.6
	comp=Z,8.1nm,0.8s,mb4.7						
SVE	**Sverdlovsk**	54.29	324	eP	P	02 09 10.0	-4.1
ARU	**Arti**	55.36	323	⇓iP	P	02 09 14.2	-7.8
ARU				eS	S	02 16 53.1	-10
ARU				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
SOKR	**Solikamsk**	56.75	327	⇓eP	P	02 09 42.6	+11
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,750nm,19.0s,MS4.8						
STKA	**Stephens Creek**	58.98	160	eP	P	02 09 46.0	-1.9
	comp=Z,9.6nm,1.0s,mb4.8						
TI2	**Plekhanov**	64.90	306	eP	P	02 10 27.6	+0.1
GNI	**Garni**	65.22	305	i P	P	02 10 29.8	+0.3
GNI				pmax	pmax		
	comp=Z,33nm,1.5s						
GNI	**Garni**	65.22	305	eP	P	02 10 29.4	-0.1
	comp=Z,16nm,0.8s,mb5.1						
GOF	**Gofitskoye**	65.52	310	⇑iP	P	02 10 31.5	+0.1
GOF				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.4						
IMA	**Indian Mountai**	65.83	26	eP	P	02 10 32.2	-0.8
	comp=Z,27nm,1.0s,mb5.2						
KIV	**Kislovodsk**	65.97	309	eP	P	02 10 33.0	-1.3
KIV				e		02 13 00.7	
KIV				eS	S	02 19 18.1	-0.4
KIV				pmax	pmax		
	comp=N,27nm,1.0s						
KIV				pmax	pmax		
	comp=E,21nm,1.0s						
KIV				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
KIV				MLR	MLR		
	comp=E,141nm,15.0s						
KIV				MLR	MLR		
	comp=Z,139nm,15.0s,MS4.3						
KIV	**Kislovodsk**	65.97	309	eP	P	02 10 33.6	-0.6
	comp=Z,74nm,1.1s,mb5.6						
MOS	**Moscow**	67.06	322	eP	P	02 10 39.9	-1.2
MOS				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.5						
MSL	**Mosul**	67.35	301	eP	P	02 10 46.5	+3.3
OBN	**Obninsk**	67.77	322	⇑eP	P	02 10 40.6	-4.9
OBN				eS	S	02 19 30.7	-9.3
OBN				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.3						
OBN				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.7						
ERZM	**Erzurum**	67.80	305	i P	P	02 10 46.1	+0.2
SOC	**Sochi**	68.15	309	eP	P	02 10 44.2	-3.9
SOC				e		02 11 02.4	
SOC				ePPP	PPP	02 14 54.8	-2.8
SOC				eS	S	02 19 40.6	-4.1
SOC				eSS	SS	02 24 08.5	-0.5
SOC				pmax	pmax		
	comp=N,42nm,0.8s						
SOC				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.5						
SOC				pmax	pmax		
	comp=E,57nm,1.0s						
MCK	**McKinley**	68.16	29	eP	P	02 10 45.9	-1.9
	comp=E,4.1nm,0.6s,mb4.6						
COLA	**College**	68.41	27	⇓eP	P	02 10 50.3	+1.0
COLA	**College**	68.41	27	eP	P	02 10 48.7	-0.6
	comp=E,6.7nm,0.6s,mb4.8						
JOF	**Joensuu**	68.89	331	ep	P	02 10 50.7	-1.6
KEV	**Kevo**	69.08	338	ep	P	02 10 52.6	-0.8
	comp=E,32nm,1.4s,mb5.1						
KEV	**Kevo**	69.08	338	eP	P	02 10 52.6	-0.8
KEV				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
ANN	**Anapa**	69.46	311	eP	P	02 10 54.7	-1.4
ANN				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.5						
MALT	**Malatya**	70.42	304	⇑iP	P	02 11 03.1	+1.0
MALT	**Malatya**	70.42	304	⇑iP	P	02 11 03.1	+1.0
GZT	**Gaziantep**	71.34	303	i P	P	02 11 08.2	+0.5
KAF	**Kangasniemi**	71.34	330	ep	P	02 11 06.0	-1.2
	baz=78,slow=6.0						
SIM	**Simferopol’**	71.70	312	c eP	P	02 11 09.3	-0.4
SIM				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
SIM				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
BOYT	**Boyabat**	72.15	308	i P	P	02 11 12.3	-0.1
DAWY	**Dawson**	72.16	27	eP	P	02 11 11.6	-0.5
CTKT	**Corum**	72.46	307	i P	P	02 11 13.1	-1.2
INK	**Inuvik**	72.89	22	eP	P	02 11 14.7	-1.6
	comp=Z,12nm,0.9s,mb4.8						
BALT	**Daday**	73.20	308	i P	P	02 11 18.6	-0.1
ELDT	**Eldivan**	73.49	307	i P	P	02 11 20.7	+0.4
KIS	**Kishinev**	74.60	315	eP	P	02 11 23.0	-3.6
SUW	**Suwalki**	75.55	323	eP	P	02 11 31.3	-0.7
CFR	**Carcaliu**	75.65	313	⇑iP	P	02 11 32.6	-0.1
CFR	**Carcaliu**	75.65	313	⇑iP	P	02 11 32.6	-0.1
TIRR	**Tirgusor**	75.71	312	⇑iP	P	02 11 32.0	-1.1
TIRR	**Tirgusor**	75.71	312	⇑iP	P	02 11 32.0	-1.1
ISP	**Isparta**	76.50	306	c iP	P	02 11 36.6	-1.0
BURAR	**Bucovina Array**	76.68	316	⇑iP	P	02 11 38.1	-0.3
ULDT	**Uludag**	76.70	308	i P	P	02 11 38.5	-0.2
MLR	**Muntele Rosu**	76.99	314	⇓iP	P	02 11 40.8	+0.6
MLR	**Muntele Rosu**	76.99	314	⇓iP	P	02 11 40.8	+0.6
KWP	**Kalwaria**	77.47	319	eP	P	02 11 42.7	-0.1
DNZL	**Cakiroluk**	77.64	306	i P	P	02 11 46.0	+2.0
KOLS	**Kolonicke sedl**	78.00	318	i P	P	02 11 45.5	-0.2
NB2	**NORSAR Subarra**	78.39	332	P	P	02 11 46.2	-1.4
	comp=Z,20nm,1.2s,mb4.9,baz=58,slow=5.3						
NB2	**NORSAR Subarra**	78.39	332	P	P	02 11 46.2	-1.4
	baz=58,slow=5.6						
RES	**Resolute Bay**	78.45	9	eP	P	02 11 46.3	-1.4
	comp=Z,12nm,1.0s,mb4.8						
CRVS	**Cervenica-Dubn**	78.51	319	i P	P	02 11 50.4	+1.9
OJC	**Ojcow**	78.96	320	eP	P	02 11 50.8	-0.1
NIE	**Niedzica**	78.99	319	eP	P	02 11 52.0	+0.9
GKP	**Gorka Klasztor**	79.09	324	eP	P	02 11 53.1	+1.5
OKC	**Ostrava-Krasne**	80.08	320	eP	P	02 11 56.9	-0.1
VYHS	**Vyhne**	80.26	319	i P	P	02 11 58.3	+0.3
KSP	**Ksiaz**	80.70	322	eP	P	02 12 00.0	-0.2
DPC	**Dobruska-Polom**	80.91	321	eP	P	02 12 01.2	-0.1
SKO	**Skopje**	81.37	312	i P	P	02 12 04.0	0.0
PRU	**Pruhonice**	82.09	322	eP	P	02 12 07.6	+0.1
CLL	**Collm**	82.31	323	i P	P	02 12 07.6	-1.0
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
CLL	**Collm**	82.31	323	i P	P	02 12 07.6	-1.0
	comp=Z,7.0nm,0.8s,mb4.6						
CLL	**Collm**	82.31	323	P	P	02 12 07.6	-1.0
	comp=Z,logA/T=0.9,mb4.6						
CLL				e*SP	sP	02 12 23.0	+2.6
YKW3	**Yellowknife Ar**	82.58	23	eP	P	02 12 08.7	-1.1
KHC	**Kasperske Hory**	83.05	321	eP	P	02 12 11.8	-0.7
GEC2	**GERESS Array S**	83.12	321	eP	P	02 12 12.5	-0.4
GEC2				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
GEC2	**GERESS Array S**	83.12	321	eP	P	02 12 12.5	-0.4
	comp=Z,12nm,1.1s,mb4.8						
LEGS	**Legarje**	83.55	318	eP	P	02 12 14.9	-0.2
GRA1	**Grafenberg Arr**	84.10	322	eP	P	02 12 18.1	+0.3
	comp=Z,9.0nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	84.10	322	eP	P	02 12 18.1	+0.3
GRF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	84.10	322	eP	P	02 12 18.1	+0.3
	comp=Z,9.0nm,1.1s,mb4.8						
CDF	**Champ du Feu**	86.98	323	eP	P	02 12 31.4	-0.7
GIVF	**Givet**	87.34	325	eP	P	02 12 32.7	-1.1
BAIF	**Baives**	87.69	325	eP	P	02 12 34.3	-1.2
	comp=Z,28nm,1.3s,mb5.0						
MEZF	**Maizieres J’vi**	88.15	324	eP	P	02 12 36.9	-0.8
	comp=Z,19nm,1.0s,mb5.0						
LPG	**La Plagne**	88.91	320	eP	P	02 12 41.6	+0.1
	comp=Z,11nm,0.6s,mb5.0						
LPL	**La Plagne**	88.91	320	eP	P	02 12 40.9	-0.6
	comp=Z,12nm,0.7s,mb5.0						
LON	**Longmire**	88.93	38	P	P	02 12 42.8	+1.3
EDM	**Edmonton**	89.21	30	eP	P	02 12 43.0	+0.3
ETW	**Entiat**	89.25	37	P	P	02 12 43.9	+0.9
MBDF	**Montbardon**	89.33	320	eP	P	02 12 43.5	0.0
	comp=Z,25nm,1.3s,mb5.1						
SBF	**Sospel**	89.42	319	eP	P	02 12 42.6	-1.3
	comp=Z,64nm,1.1s,mb5.6						
EBG	**Ellensburg**	89.53	37	P	P	02 12 45.7	+1.3
ORIF	**Oris-en-Rattie**	89.75	320	eP	P	02 12 44.6	-0.8
	comp=Z,22nm,1.1s,mb5.1						
ORIF				eR			
	comp=Z,246nm,20.0s						
SSF	**Saint Saulge**	89.84	323	eP	P	02 12 44.4	-1.4
	comp=Z,9.1nm,1.0s,mb4.8						
MXC	**Moxie City**	89.88	38	P	P	02 12 47.7	+1.7
SMF	**Signal de Mont**	89.90	323	eP	P	02 12 44.9	-1.2
	comp=Z,32nm,0.9s,mb5.3						
VFP	**Flag Point**	89.96	39	P	P	02 12 48.2	+1.9
AVF	**Avril sur Loir**	90.09	323	eP	P	02 12 45.6	-1.4
	comp=Z,20nm,1.0s,mb5.1						
HYF	**Humbligny**	90.19	324	eP	P	02 12 46.6	-0.8
OD2	**Odessa Site #2**	90.26	36	P	P	02 12 48.6	+0.9
VIVF	**Saint-Julien-l**	90.48	321	eP	P	02 12 47.8	-1.0
BGF	**Bois d’Agland**	90.50	323	eP	P	02 12 47.6	-1.3
NEW	**Newport**	90.57	35	eP	P	02 12 49.8	+0.7
	comp=Z,19nm,0.9s,mb5.4						
LDF	**La Druitiere**	90.83	326	eP	P	02 12 49.4	-0.9
	comp=Z,19nm,1.1s,mb5.0						
TCF	**Toulx Ste Croi**	91.02	323	eP	P	02 12 51.3	0.0
	comp=Z,17nm,1.1s,mb5.0						
BUOR	**Burton Butte**	91.24	42	P	P	02 12 54.0	+1.6
CAF	**Calviac**	91.93	322	eP	P	02 12 55.1	-0.4
	comp=Z,24nm,1.1s,mb5.1						
RJF	**Les Rejaudoux**	92.00	322	eP	P	02 12 55.5	-0.3
	comp=Z,28nm,1.0s,mb5.3						
RJF				eR			
	comp=Z,272nm,18.2s						
MFF	**Saint Martin d**	92.10	324	eP	P	02 12 55.9	-0.3
	comp=Z,77nm,1.8s,mb5.4						
BMO	**Blue Mountains**	92.59	38	eP	P	02 12 59.1	+0.6
	comp=Z,8.3nm,0.7s,mb5.3						
MOD	**Modoc**	92.64	41	eP	P	02 13 00.1	+1.2
	comp=Z,15nm,1.0s,mb5.4						
LFF	**La Frestale**	92.66	322	eP	P	02 12 58.4	-0.4
	comp=Z,57nm,1.5s,mb5.5						
FFC	**Flin Flon**	92.78	24	P	P	02 12 59.0	-0.2
	comp=Z,65nm,0.8s,mb6.1,SNR=13						
FFC	**Flin Flon**	92.78	24	eP	P	02 12 58.4	-0.8
	comp=Z,8.8nm,0.8s,mb5.2						
OHCM	**Honcut**	93.41	44	eP	P	02 13 02.9	+0.4
ETSF	**Etsaut**	94.67	321	eP	P	02 13 07.1	-1.1
CMB	**Columbia Colle**	94.86	45	eP	P	02 13 08.7	-0.5
	comp=Z,4.9nm,0.9s,mb4.9						
SJPF	**Ste Jean**	94.92	322	eP	P	02 13 07.7	-1.6
	comp=Z,43nm,1.4s,mb5.4						
PPT	**Papeete**	95.82	107	eLR	LR	02 43 55.4	
	comp=Z,169nm,23.0s						
TBI	**Tubuai**	98.19	112	eLR	LR	02 45 00.6	
	comp=Z,54nm,29.5s						
EVO	**Evora**	101.80	322	eP	P	02 13 40.1	-0.5
EVO				eR			
	comp=Z,573nm,17.2s						
SYO	**Syowa Base**	109.72	202	⇓PP	PP	02 18 49.9	-2.7
SDV	**Santo Domingo**	144.84	22	ePKP	PKPdf	02 19 23.4	-5.1
OTAV	**Otavalo**	148.67	42	ePKPbc	PKPdf	02 19 35.3	+0.4
LPAZ	**La Paz**	167.72	51	ePKP	PKPdf	02 19 54.7	-2.6

TAP 01 02:00:49.5, 24.28N×121.76E, h12^{km}±1^{km}, ML4.2, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	0.15	353	⇑iP	Pg	02 00 53.8	+0.6
ENA				S	Sg	02 00 56.4	+0.8
TWD	**Chiawan**	0.25	217	P	Pg	02 00 55.5	+0.6
TWD				S	Sg	02 00 59.6	+1.1
TWC	**Suao**	0.34	14	eP	Pg	02 00 56.9	+0.4
TWC				S	Sg	02 01 01.6	+0.3
NNS	**Nan Shan**	0.39	294	eP	Pg	02 00 58.6	+1.1
NNS				S	Sg	02 01 04.3	+1.4
ENTT	**Nioudou**	0.40	334	i P	Pg	02 00 58.6	+0.9
ENTT				S	Sg	02 01 04.3	+1.0
TWE	**Neicheng**	0.45	349	P	Pg	02 00 59.2	+0.5
TWE				S	Sg	02 01 05.5	+0.7
WHF	**Hehuan Shan**	0.47	254	P	Pg	02 01 00.0	+0.9
WHF				S	Sg	02 01 06.7	+1.1
ILA	**Ilan**	0.48	359	eP	Pg	02 01 00.1	+0.8
TWT	**Tachien**	0.53	267	eP	Pb	02 01 01.8	+1.5
NSK	**Sanguang**	0.54	317	eP	Pb	02 01 01.0	+0.7
NSK				S	Sg	02 01 09.0	+1.3
ESL	**Shilin**	0.55	213	eP	Pb	02 01 01.0	+0.4
NWF	**Wu-fen Shan**	0.79	1	eP	Pb	02 01 06.1	+1.5

IGQ 01 02:01:52.1, 1.37S×81.14W, h16^{km}±7^{km}, mb4.1, 3C-4D, Error ellipse: s-maj=15.0km s-min=5.7km az=178.2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	0.67	62	⇑P	Pb	02 02 04.8	-0.2
JAMA	**Jama**	1.44	40	P	Pn	02 02 18.4	+0.7
JAMA				S	Sb	02 02 36.9	+0.8
IGUA	**Igualata**	2.50	93	P	Pn	02 02 33.4	+0.5
CUSU	**Cusua**	2.66	92	P	Pn	02 02 36.8	+1.6
JUIV	**Juive**	2.67	91	P	Pn	02 02 37.2	+1.8
ARRY	**Arrayan**	2.68	93	⇑P	Pn	02 02 36.7	+1.2
RETU	**Refugio**	2.69	92	P	Pn	02 02 37.4	+1.8
ULBA	**Ulba**	2.73	92	P	Pn	02 02 38.4	+2.3
NAS1	**Nasa**	2.76	75	P	Pn	02 02 38.0	+1.4
PISA	**Pisayambo**	2.77	84	P	Pn	02 02 38.1	+1.4
JUA2	**San Juan 2**	2.78	66	P	Pn	02 02 38.6	+1.7
TERV	**Terraza Guagua**	2.80	65	⇓P	Pn	02 02 39.4	+2.3
PINO	**Pino**	2.80	65	P	Pn	02 02 38.0	+0.8
VC1	**Cotopaxi 1**	2.83	75	P	Pn	02 02 39.9	+2.4
JOR1	**San Jorge 1**	2.84	61	⇓P	Pn	02 02 37.7	-0.1
TAMB	**Tambo**	2.85	76	P	Pn	02 02 41.9	+4.1
YANA	**Yana**	2.85	64	P	Pn	02 02 38.6	+0.7
ANTI	**Antisana**	3.11	73	⇑P	Pn	02 02 44.7	+3.1
COTA	**Cotacachi**	3.27	59	⇓P	Pn	02 02 46.0	+2.2
CAYR	**Refugio Cayamb**	3.42	66	P	Pn	02 02 50.0	+4.1
CAYA	**Cayambe**	3.46	66	⇓P	Pn	02 02 50.3	+3.8

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*NEIC **01** 02:05:38.8, 16.72N×95.10W, h102^{km}, MD3.8(MEX), After MEX.*

MEX 01 02:05:38.8±0.9, 16.72N×95.10W, h102^{km}±10^{km}, MD3.8, 1D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	0.43	30	⇓iP	P	02 05 53.2	-1.2
CMIG				i S	S	02 06 03.9	-2.2
HUIG	**Huatulco**	1.35	226	i P	P	02 06 01.4	-2.3
HUIG				i S	S	02 06 20.6	-1.8
TUIG	**Tuzandepetl**	1.46	26	i P	P	02 06 03.3	-1.8
TUIG				i S	S	02 06 22.7	-2.0
OXX	**Oaxaca**	1.59	283	i P	P	02 06 06.2	-0.5
OXX				i S	S	02 06 26.1	-1.4
VHO	**Vista Hermosa**	1.60	283	i P	P	02 06 06.0	-0.8
VHO				i S	S	02 06 25.5	-2.1
EVV	**El Vigia**	1.75	352	i P	P	02 06 16.7	+8.1

MAN 01 02:12:52.9, 9.26N×122.26E, h1^{km}, mb3.6, ML2.3, MS1.8, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAP	**Anini-y**	1.19	345	eP	Pb	02 13 09.0	-6.9
GUIM	**Jordan**	1.39	14	eP	Pb	02 13 18.9	-0.5
GUIM				eS	Sb	02 13 31.2	-6.4
IPIL	**Ipil**	1.50	168	eP	Pn	02 13 20.2	-0.8
CUYO	**Cuyo Island**	2.00	322	eP	Pn	02 13 27.2	-0.9
ENPP	**El Nido**	3.39	305	eP	Pn	02 13 48.7	+0.7

CASC 01 02:27:50.5±1.3, 13.25N×89.76W, h33^{km}±2^{km}, MD3.9, 4C-8D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	0.60	12	⇓eP	P	02 28 02.9	+0.4
SBLS				eS	S	02 28 12.5	+1.4
SNJE	**San Jose**	0.64	13	⇓eP	P	02 28 03.3	+0.4
SNJE				eS	S	02 28 13.4	+1.5
RTR	**El Retiro**	0.66	9	⇓eP	P	02 28 03.7	+0.5
RTR				eS	S	02 28 14.2	+1.7
BOQS	**Boqueron**	0.67	44	⇓eP	P	02 28 03.8	+0.3
BOQS				eS	S	02 28 14.2	+1.4
SNET	**Serv Nac Est T**	0.67	49	eP	P	02 28 03.3	-0.2
LFRS	**El Faro**	0.77	61	⇓eP	P	02 28 05.1	+0.2
LFRS				eS	S	02 28 16.5	+1.0
LFU	**La Fuente**	0.80	51	eP	P	02 28 05.7	+0.4
LFU				eS	S	02 28 17.9	+1.7
LBRS	**Las Brisas**	0.85	55	⇓eP	P	02 28 06.4	+0.4
LBRS				eS	S	02 28 18.5	+1.1
LCBS	**La Ceiba**	0.86	62	⇓eP	P	02 28 06.3	+0.2
LCBS				eS	S	02 28 18.3	+0.6
RBDL	**Robledal**	0.86	4	⇑eP	P	02 28 06.7	+0.5
RBDL				eS	S	02 28 18.9	+1.1
SNVI	**San Vicente**	0.96	68	eP	P	02 28 08.2	+0.5
SNVI				eP		02 28 08.5	
SNVI				eS	S	02 28 21.1	+0.8
SNVI				eS	S	02 28 21.3	+0.9
IXG	**Ixpaco**	1.15	324	⇑eP	P	02 28 09.4	-0.8
IXG				eS	S	02 28 25.0	0.0
MTO2	**Montecristo 2**	1.21	18	eP	P	02 28 11.0	-0.1
MTO2				eS	S	02 28 27.2	+0.6
NBG	**Las Nubes**	1.45	337	⇓eP	P	02 28 15.0	+0.4
NBG				eS	S	02 28 34.7	+2.0
BLLM	**Bellamira**	1.49	82	eP	P	02 28 15.4	+0.2
BLLM				eS	S	02 28 33.4	-0.3
CNCH	**Conchagua**	1.87	89	eP	P	02 28 20.4	-0.3
CNCH				eS	S	02 28 44.8	+1.4
TP2	**Tecpan 2**	1.96	321	⇑eP	P	02 28 22.7	+0.8
TP2				eS	S	02 28 47.9	+2.3
JAT	**Jato**	2.12	300	⇑eP	P	02 28 23.5	-0.6
JAT				eS	S	02 28 49.3	-0.2

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*BJI **01** 02:49:19.5, 4.69N×94.58E, h50^{km}, mB5.2, mb4.9, Ms4.2, Msz4.1*

*MOS **01** 02:49:20.9±0.7, 5.26N×94.73E, h33^{km}, mb5.1/19, Error ellipse: s-maj=21.2km s-min=8.2km az=116.7*

*CSEM **01** 02:49:21.4, 5.35N×94.90E, h33^{km}, mb5.8*

*NEIC **01** 02:49:21.6±0.2, 5.10N×94.59E, h30^{km}, mb4.9/36, Error ellipse: s-maj=10.0km s-min=4.4km az=217.0*

ISC 01 02:49:20.4±0.3, 5.08N±0.05×94.64E±0.05, h32^{km}, h32^{km}±1.4^{km}:pP-P, n131, σ0^{s}82/141, mb4.9/58, MS4.0/8, 21C-7D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	6.30	70	P	Pn	02 50 57.0	+3.4
	300nm,0.9s						
NNT	**Nongplab**	9.00	34	P	P	02 51 35.0	+3.8
CM31	**Chiang Mai Arr**	13.94	17	eP	P	02 52 46.0	+7.8
CHG	**Chiang Mai**	14.28	17	⇑P	P	02 52 48.6	+6.0
	53nm,0.7s						
CHRT	**Chiangrai**	15.53	18	⇓P	P	02 53 05.0	+6.1
	126nm,1.2s						
VIS	**Vishakhapatnam**	16.74	320	eP	P	02 53 16.0	+1.7
VIS				e		02 53 19.1	
	comp=Z,21nm,0.6s						
VIS				eS	S	02 56 17.6	-0.5
BWNR	**Bhubaneshwar**	17.39	331	eP	P	02 53 17.6	-4.8
BWNR				AMb	AMB	02 53 35.7	
	comp=Z,24nm,0.4s						
BWNR				eS	S	02 56 32.6	-0.3
HYB	**Hyderabad**	19.95	309	i P	P	02 53 54.5	+1.6
HYB				eS	S	02 57 22.0	-8.2
JIRN	**Jiri**	23.85	341	eP	P	02 54 31.3	-0.6
	comp=Z,84nm,0.8s,mb5.2						
PKI	**Pulchoki**	24.03	340	eP	P	02 54 32.6	-1.1
	comp=Z,52nm,0.8s,mb5.0						
GYA	**Guiyang**	24.16	27	⇓iP	P	02 54 36.8	+1.8
GYA				S	S	02 58 43.7	-4.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
GYA				AMB	AMB		
	comp=Z,40nm,3.4s						
GYA				LR	LR		
	comp=N,790nm,14.7s,MS4.4						
GYA				LR	LR		
	comp=E,580nm,13.2s,MS4.4						
GYA				LR	LR		
	comp=Z,490nm,12.9s,MS4.2						
DMN	**Daman**	24.17	339	eP	P	02 54 34.6	-0.4
	comp=Z,68nm,0.8s,mb5.1						
KKN	**Kakani**	24.27	339	eP	P	02 54 35.9	-0.1
	comp=Z,72nm,0.8s,mb5.2						
BHPL	**Bhopal**	24.53	319	eP	P	02 54 38.7	+0.1
GKN	**Gorkha**	24.70	338	eP	P	02 54 40.1	0.0
	comp=Z,120nm,0.9s,mb5.4						
LSA	**Lhasa**	24.70	353	P	P	02 54 40.4	+0.2
KOLN	**Koldanda**	24.89	336	eP	P	02 54 42.1	+0.2
	comp=Z,125nm,1.1s,mb5.3						
CD2	**Chengdu**	27.09	17	P	P	02 55 01.4	-0.9
CD2				AMB	AMB		
	comp=Z,24nm,1.0s,mb4.7						
WHN	**Wuhan**	31.40	34	⇓P	P	02 55 41.5	+0.6
XAN	**Xi’an**	31.72	23	P	P	02 55 42.6	-1.1
XAN				AP	pP	02 55 52.8	-0.4
XAN				AMB	AMB		
	comp=Z,27nm,0.8s,mb5.1						

GTA	Gaotai	34.49	7	⇑P	P	02 56 07.3	-0.4
GTA				AP	pP	02 56 17.8	+0.5
GTA				XP	sP	02 56 21.6	+0.2
GTA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
GTA				AMB	AMB		
	comp=Z,221nm,5.3s						
GTA				LR	LR		
	comp=N,113nm,14.4s,MS4.0						
GTA				LR	LR		
	comp=E,159nm,14.8s,MS4.0						
GTA				LR	LR		
	comp=Z,213nm,13.7s,MS4.0						
NJ2	Nanjing	35.12	37	eP	P	02 56 14.0	+0.8
NJ2				AP	pP	02 56 23.6	+0.8
NJ2				XP	sP	02 56 27.6	+0.7
NJ2				PP	PP	02 57 31.8	-0.4
NJ2				S	S	03 01 41.0	-1.9
NJ2				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,2µm,4.7s						
NJ2				LR	LR		
	comp=N,470nm,22.5s						
NJ2				LR	LR		
	comp=E,560nm,10.0s						
NJ2				LR	LR		
	comp=Z,950nm,12.9s						
SSE	Sheshan	35.94	41	eP	P	02 56 18.1	-2.0
SSE				PCP	PcP	02 58 41.5	-5.3
SSE				S	S	03 01 57.6	+2.0
SSE				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,239nm,6.5s						
SSE				LR	LR		
	comp=N,91nm,20.9s,MS3.6						
SSE				LR	LR		
	comp=E,59nm,20.9s,MS3.6						
SSE				LR	LR		
	comp=Z,133nm,21.1s,MS3.7						
SSE	Sheshan	35.94	41	eP	P	02 56 18.1	-2.0
	comp=Z,20nm,0.9s,mb5.0						
SSE				pP	pP	02 56 26.9	-2.8
SSE				PcP	PcP	02 58 41.5	-5.3
SSE				S	S	03 01 57.6	+2.0
SSE				sS		03 02 12.5	
SSE				SS	ScS	03 06 39.0	+5.8
FITZ	Fitzroy Crossi	38.29	128	eP	P	02 56 39.6	-0.3
	comp=Z,12nm,0.6s,mb4.8						
HHC	Hu-ho-hao-te	38.72	21	⇑P	P	02 56 43.7	+0.4
HHC				AP	pP	02 56 52.9	-0.1
HHC				XP	sP	02 56 57.3	+0.3
HHC				S	S	03 02 33.4	-4.3
HHC				AMB	AMB		
	comp=Z,13nm,1.4s,mb4.5						
HHC				AMB	AMB		
	comp=Z,195nm,4.7s						
HHC				LR	LR		
	comp=N,224nm,13.2s,MS4.3						
HHC				LR	LR		
	comp=E,268nm,14.4s,MS4.3						
HHC				LR	LR		
	comp=Z,258nm,14.4s,MS4.2						
WMQ	Urumqi	39.06	352	P	P	02 56 46.0	-0.2
WMQ				XP	sP	02 57 00.0	+0.1
WMQ				PP	PP	02 58 20.0	+0.3
WMQ				S	S	03 02 43.0	0.0
WMQ				SS	SS	03 05 27.0	-1.0
WMQ				AMB	AMB		
	comp=Z,16nm,0.7s,mb4.9						
WMQ				LR	LR		
	comp=N,126nm,16.0s,MS4.1						
WMQ				LR	LR		
	comp=E,195nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,108nm,18.0s,MS3.7						
BJI	Beijing	39.85	26	P	P	02 56 54.0	+1.3
BJI				AMB	AMB		
	comp=Z,32nm,0.9s,mb5.0						
BJI				LR	LR		
	comp=N,125nm,24.7s,MS3.8						
BJI				LR	LR		
	comp=E,90nm,24.7s,MS3.8						
BJI				LR	LR		
	comp=Z,125nm,25.1s,MS3.6						
BJI	Beijing	39.85	26	P	P	02 56 54.0	+1.3
	comp=Z,32nm,0.9s,mb5.0						
BJI				pP	pP	02 56 57.1	-5.3
BJI				sP	sP	02 56 58.5	-7.9
BJI				S		03 03 35.9	
UCH	Uchtor	41.09	337	P	P	02 57 03.8	+0.8
	SNR=18						
TKM2	Tokmak 2	41.29	339	P	P	02 57 01.3	-3.2
	SNR=7.0						
KBK	Karagaybulak	41.30	338	P	P	02 57 05.7	+1.1
	SNR=19						
AML	Almayashu	41.34	336	P	P	02 57 05.9	+1.0
	SNR=20						
AAK	Ala-Archa	41.45	337	P	P	02 57 09.2	+3.4
	SNR=6.7						
AAK	Ala-Archa	41.45	337	⇓eP	P	02 57 05.9	+0.1
AAK				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.5						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.7						
AAK	Ala-Archa	41.45	337	eP	P	02 57 05.9	+0.1
	comp=Z,13nm,0.7s,mb4.7						
KAKA	Kakadu	41.52	116	eP	P	02 57 06.6	-0.2
	comp=Z,7.0nm,0.6s,mb4.5						
EKS2	Erkin-Say	41.75	337	P	P	02 57 10.7	+2.4
	SNR=11						
USP	Ospenovka	41.99	338	P	P	02 57 10.5	+0.2
	SNR=15						
MKAR	Makanchi Array	42.90	348	i P	P	02 57 17.6	-0.1
MKAR				pmax	pmax		
	comp=Z,87nm,1.2s						
ULN	Ulaanbaatar	43.94	12	i P	P	02 57 26.4	+0.3
ULN	Ulaanbaatar	43.94	12	eP	P	02 57 25.3	-0.7
	comp=Z,7.3nm,0.7s,mb4.5						
ZAK	Zakamensk	45.73	8	eP	P	02 57 39.6	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb4.0						
WRAB	Tennant Creek	46.28	124	d iP	P	02 57 45.2	0.0
WRAB	Tennant Creek	46.28	124	⇑iP	P	02 57 45.7	+0.5
	comp=Z,33nm,0.6s,mb5.4						
WB2	Warramunga Arr	46.29	124	⇑iP	P	02 57 45.7	+0.5
TLY	Talaya	47.05	8	i P	P	02 57 51.1	+0.3
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2	Changchun	47.14	30	eP	P	02 57 52.4	+0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
KURK	Kurchatov	47.42	346	d iP	P	02 57 53.1	-0.7
KURK	Kurchatov	47.42	346	⇑iP	P	02 57 53.6	-0.2
	comp=Z,13nm,0.7s,mb5.0						
ASPA	Alice Springs	47.78	128	⇑iP	P	02 57 57.0	0.0
NVS	Novosibirsk	50.46	351	eP	P	02 58 15.3	-1.8
NVS				pmax	pmax		
	comp=N,11nm,0.9s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.2						
BVA0	Borovoye Array	51.77	342	i P	P	02 58 26.1	-1.0
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	Chkalovo	52.26	342	P	P	02 58 30.1	-0.7
CHKZ				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CHKZ	Chkalovo	52.26	342	eP	P	02 58 30.1	-0.7
	comp=Z,35nm,0.7s,mb5.4						
PMG	Port Moresby	54.29	105	eP	P	02 58 45.8	-0.4
	comp=Z,9.2nm,0.5s,mb5.0						
CTA	Charters Tower	56.55	118	eP	P	02 59 02.3	-0.3
	comp=Z,4.0nm,0.9s,mb4.5						
CTAO	Charters Tower	56.55	118	eP	P	02 59 01.8	-0.8
	comp=Z,11nm,1.0s,mb4.8						
GNI	Garni	56.74	315	i P	P	02 59 06.3	+2.6
KMBO	Kilima Mbogo	57.65	265	P	P	02 59 10.1	-0.4
	comp=Z,2.6nm,0.6s,mb4.4						
ARU	Arti	58.64	337	eP	P	02 59 08.6	-8.2
ARU				e		03 00 08.3	
ARU				eS	S	03 07 07.9	-9.2
YSS	Yuzh-Sakhalins	58.69	37	eP	P	02 59 16.8	-0.5
YSS				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.2						
KIV	Kislovodsk	59.72	319	i P	P	02 59 23.1	-1.3
KIV				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.9						
KIV	Kislovodsk	59.72	319	eP	P	02 59 22.9	-1.6
	comp=Z,7.4nm,0.6s,mb4.9						
SOC	Sochi	61.54	317	eP	P	02 59 31.4	-5.5
SOC				e		03 00 12.9	
SOC				ePPP	PPP	03 03 21.6	-1.5
SOC				eS	S	03 07 47.0	-7.6
SOC				e		03 09 17.5	
SOC				eSS	SS	03 11 56.1	-1.3
SOC				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.5						
SOC				pmax	pmax		
	comp=N,13nm,0.5s						
SOC				pmax	pmax		
	comp=E,34nm,0.9s						
YAK	Yakutsk	62.48	18	⇑eP	P	02 59 41.3	-1.6
YAK				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.9						
OBN	Obninsk	67.99	328	P	P	03 00 13.9	-4.6
OBN				eS	S	03 09 22.1	+8.3
OBN				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
TIXI	Tiksi	69.86	11	⇑eP	P	03 00 28.0	-1.7
TIXI				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
CFR	Carcaliu	69.93	316	⇑iP	P	03 00 29.6	-0.9
CFR	Carcaliu	69.93	316	⇑iP	P	03 00 29.6	-1.0
MLR	Muntele Rosu	71.51	316	⇑iP	P	03 00 40.2	0.0
BURAR	Bucovina Array	72.44	318	⇑iP	P	03 00 45.3	-0.4
KWP	Kalwaria	74.47	320	eP	P	03 00 56.9	-0.6
KOLS	Kolonicke sedl	74.62	319	i P	P	03 00 58.9	+0.6
SUW	Suwalki	75.05	325	eP	P	03 00 59.6	-1.1
CRVS	Cervenica-Dubn	75.14	319	i P	P	03 01 02.4	+1.0
NIE	Niedzica	75.97	320	eP	P	03 01 06.5	+0.5
OJC	Ojcow	76.42	320	eP	P	03 01 08.2	-0.3
VYHS	Vyhne	76.81	319	i P	P	03 01 10.4	-0.3
OKC	Ostrava-Krasne	77.42	320	eP	P	03 01 14.3	+0.2
OKC				ex	x	03 01 31.1	
MORC	Moravsky Berou	77.80	320	eP	P	03 01 16.1	-0.1
	comp=Z,6.7nm,0.8s,mb4.6						
ZST	Bratislava	77.92	318	i P	P	03 01 17.2	+0.3
GKP	Gorka Klasztor	78.41	323	eP	P	03 01 19.3	-0.2
BILL	Bilibino	78.49	21	⇓eP	P	03 01 19.1	-0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
DPC	Dobruska-Polom	78.65	320	eP	P	03 01 21.6	+0.8
DPC				ex	x	03 01 38.6	
UPC	Upice	78.86	320	eP	P	03 01 22.5	+0.5
PRU	Pruhonice	79.76	320	eP	P	03 01 27.0	+0.1
PVCC	Panska Ves	79.78	320	eP	P	03 01 27.2	+0.2
BRG	Berggiesshubel	80.20	321	i P	P	03 01 29.7	+0.5
BRG				e		03 01 44.8	
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
BRG	Berggiesshubel	80.20	321	i P	P	03 01 29.7	+0.5
	comp=Z,8.3nm,0.9s,mb4.7						
BRG				e		03 01 44.8	
GEC2	GERESS Array S	80.23	319	eP	P	03 01 29.7	+0.3
GEC2				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
GEC2	GERESS Array S	80.23	319	eP	P	03 01 29.7	+0.3
	comp=Z,11nm,0.8s,mb4.8						
KHC	Kasperske Hory	80.32	319	eP	P	03 01 30.0	+0.1
KHC				ex	x	03 01 44.6	
KBA	Koelnbreinsper	80.37	317	⇑iP	P	03 01 29.8	-0.4
	comp=Z,11nm,1.2s,mb4.7						
WET	Wettzell	80.78	319	eP	P	03 01 32.6	+0.3
WET				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
WET	Wettzell	80.78	319	eP	P	03 01 32.6	+0.3
	comp=Z,5.0nm,0.8s,mb4.5						
CLL	Collm	80.82	321	i P	P	03 01 32.6	+0.1
CLL	Collm	80.82	321	P	P	03 01 32.6	+0.1
NKC	Novy Kostel	81.12	320	eP	P	03 01 34.5	+0.4
WTTA	Wattenberg	81.54	317	⇑iP	P	03 01 36.0	-0.3
	comp=Z,8.3nm,0.6s,mb4.8						
WATA	Walderalm	81.58	317	⇑iP	P	03 01 35.9	-0.7
	comp=Z,4.3nm,0.9s,mb4.4						
MOX	Moxa	81.67	320	eP	P	03 01 37.1	+0.2
MOX	Moxa	81.67	320	i P	P	03 01 37.1	+0.2
FUR	Furstenfeldbru	81.81	318	eP	P	03 01 37.7	0.0
SQTA	Sankt Quirin	81.83	317	⇑iP	P	03 01 37.4	-0.4
	comp=Z,8.3nm,1.0s,mb4.6						
GRA1	Grafenberg Arr	81.89	319	eP	P	03 01 38.8	+0.7
	comp=Z,11nm,0.9s,mb4.8						
GRF	Grafenberg Arr	81.89	319	eP	P	03 01 38.8	+0.7
GRF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
GRF	Grafenberg Arr	81.89	319	eP	P	03 01 38.8	+0.7
	comp=Z,11nm,0.9s,mb4.8						
MOTA	Moosalm	81.90	317	⇑iP	P	03 01 37.7	-0.5
	comp=Z,5.8nm,1.0s,mb4.5						
CLZ	Clausthal	82.48	321	eP	P	03 01 41.4	+0.3
	comp=Z,7.0nm,0.8s,mb4.6						
DAVA	Damuels	82.73	317	⇑iP	P	03 01 42.8	+0.3
	comp=Z,5.6nm,0.8s,mb4.7						
TNS	Taunus Mts	83.69	320	eP	P	03 01 48.3	+0.9
BFO	Black Forest	83.78	318	eP	P	03 01 47.7	-0.2
BFO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
BFO	Black Forest	83.78	318	eP	P	03 01 47.7	-0.2
	comp=Z,4.0nm,0.8s,mb4.6						
CDF	Champ du Feu	84.48	318	eP	P	03 01 51.0	-0.4
LPG	La Plagne	84.93	315	⇑iP	P	03 01 54.1	+0.4
	comp=Z,11nm,0.7s,mb4.8						
LPL	La Plagne	84.94	315	eP	P	03 01 54.0	+0.2
	comp=Z,23nm,0.9s,mb5.0						
FRF	La Foret Royal	85.08	313	eP	P	03 01 54.5	0.0
HAU	Haudompre	85.11	318	⇑iP	P	03 01 54.2	-0.4
	comp=Z,14nm,0.7s,mb4.9						
CABF	La Chapelle	85.34	316	eP	P	03 01 56.0	+0.2
ORIF	Oris-en-Rattie	85.57	315	eP	P	03 01 56.6	-0.3
MEZF	Maizieres J'vi	85.95	318	eP	P	03 01 58.5	-0.3
BAIF	Baives	86.42	320	eP	P	03 02 01.2	+0.2
	comp=Z,36nm,1.1s,mb5.2						
VIVF	Saint-Julien-l	86.43	315	eP	P	03 02 01.1	-0.1
SMF	Signal de Mont	86.89	316	eP	P	03 02 03.0	-0.4
	comp=Z,25nm,1.0s,mb5.1						
AVF	Avril sur Loir	87.21	317	eP	P	03 02 04.2	-0.8
	comp=Z,12nm,0.9s,mb4.8						
BGF	Bois d'Agland	87.58	316	eP	P	03 02 06.9	+0.2
	comp=Z,17nm,1.0s,mb4.9						
LDF	La Druitiere	89.37	319	eP	P	03 02 15.3	+0.1
	comp=Z,17nm,0.9s,mb5.1						
FLN	La Foliniere	89.59	319	eP	P	03 02 16.3	+0.1
IMA	Indian Mountai	94.00	22	eP	P	03 02 37.5	+1.3
JCT	Junction City	142.03	20	ePKP	PKPdf	03 08 45.4	-10

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*NEIC **01** 02:57:43.0±0.7, 23.49S×66.70W, h189^{km}±9^{km}, mb4.7/6, Error ellipse: s-maj=14.8km s-min=9.5km az=96.0*

*GUC **01** 02:57:44.4±1.2, 23.51S×67.15W, h212^{km}±15^{km}, ML5.2*

ISC 01 02:57:42.6±0.7**, 23.53S**±0.05×**66.81W**±0.09**, h201**^{km}±8^{km}**, n24, $\sigma 1^{s}23$/26, mb4.8/3, 9C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.42	296	⇑iP	P	02 58 17.4	+1.3
SPCH				i S	S	02 58 43.5	+1.6
LVC	Limon Verde	2.14	295	⇑iP	P	02 58 24.2	+1.1
LVC				i S	S	02 58 53.9	-0.4
LVC				AMP		02 58 57.5	
	comp=E,2µm,0.5s						
ANCH	Antofagasta	3.31	267	⇑eP	P	02 58 37.4	+0.9
ANCH				i S	S	02 59 16.5	-1.7
ANCH				AMP		02 59 18.0	
	comp=E,7µm,0.4s						
CPN1	Cerro Paranal	3.46	251	⇑iP	P	02 58 39.3	+0.9
CPN1				i S	S	02 59 20.9	-0.6
CPN1				AMP		02 59 22.6	
	comp=E,8µm,0.5s						
CPCH	Copiapo	4.98	219	i P	P	02 58 57.4	0.0
CPCH				i S	S	02 59 54.0	-1.4
VACH	Vallenar	6.15	214	⇑iP	P	02 59 11.6	-0.9
LPAZ	La Paz	7.31	350	eP	P	02 59 26.5	-1.2
SAML	Samuel	14.91	14	eP	P	03 01 02.5	-2.4
	comp=E,20nm,0.7s						
TRQA	Tornquist	15.06	165	eP	P	03 01 06.0	-0.5
	comp=E,20nm,0.6s						
PLCA	Paso Flores	17.44	190	eP	P	03 01 35.0	+0.3
	comp=E,8.6nm,0.5s						
BAO	Brasilia Array	19.38	69	eP	P	03 01 55.1	0.0
RCBR	Riachuelo	34.56	64	eP	P	03 04 12.3	-1.8
	comp=E,16nm,0.5s,mb4.8						
VNA3	Neumayer Olymp	57.54	161	⇑iP	P	03 07 14.1	+1.3
VNA2	Neumayer--Watz	58.10	161	⇑iP	P	03 07 16.4	-0.3
GDL2	Guadalupe Moun	66.03	326	eP	P	03 08 08.6	-1.2
DBIC	Dimbokro	67.49	72	eP	P	03 08 17.2	-2.0
	comp=E,14nm,0.9s,mb4.6						
LPM	Los Pinos Moun	68.86	325	eP	P	03 08 27.6	+0.2
SYO	Syowa Base	73.92	159	⇑P	P	03 08 58.4	+1.5
SYO	Syowa Base	73.92	159	⇑PcP	PcP	03 09 10.4	-1.0
MSU	Marysvale	74.95	325	P	P	03 09 04.7	+1.4
MCMT	McKenzie Canyo	79.95	329	eP	P	03 09 31.7	+1.1
LSZ	Lusaka	88.47	106	eP	P	03 10 15.8	+2.1
	comp=E,28nm,1.2s,mb5.0						
HYB	Hyderabad	147.04	94	eP	PKPdf	03 17 04.0	+4.2
HYB	Hyderabad	147.04	94	i PKP	PKPdf	03 17 04.0	+4.2

KRSC 01 03:01:32.4±1.3**, 52.63N**×**159.28E, h75**^{km}±3^{km}**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.51	247	eP	P	03 01 45.8	0.0
RUS				eS	S	03 01 55.3	-0.6
NLC	Nalytchevo	0.54	4	eP	P	03 01 46.8	+0.6
NLC				eS	S	03 01 57.1	+0.7
PET	Petropavlovsk	0.55	316	i P	P	03 01 46.7	+0.4
PET				eS	S	03 01 56.6	+0.1
UGLR	Uglovaya	0.64	335	i P	P	03 01 48.0	+0.8
UGLR				eS	S	03 01 59.1	+0.9
SPN	Mys Shipunski	0.65	44	eP	P	03 01 48.0	+0.7
SPN				eS	S	03 01 59.0	+0.6
SDLR	Sedlovina	0.69	340	eP	P	03 01 48.4	+0.6
SDLR				eS	S	03 01 59.8	+0.6
SMAR	Somma	0.70	336	eP	P	03 01 48.5	+0.7
SMAR				eS	S	03 02 00.4	+1.1
AVH	Avacha	0.72	333	eP	P	03 01 49.0	+1.0
AVH				eS	S	03 02 01.5	+1.9
KRMR	Karymshinskiy	0.73	286	eP	P	03 01 48.3	+0.1
KRMR				eS	S	03 01 59.9	0.0
GRL	Gorelyy	0.74	264	eP	P	03 01 49.2	+0.9
GRL				eS	S	03 02 01.9	+1.8
KOK	Koryaka	0.77	330	eP	P	03 01 49.7	+1.0
KOK				eS	S	03 02 02.1	+1.4
APC	Apacha	1.32	284	i P	P	03 01 56.0	+0.3
APC				i S	S	03 02 13.4	+0.4
GNL	Ganaly	1.34	323	eP	P	03 01 56.0	+0.1
GNL				eS	S	03 02 13.8	+0.5
PAU	Pauzhetka	1.92	234	i P	P	03 02 04.0	+0.4
PAU				eS	S	03 02 26.6	-0.1
PAU				Smax			
	180nm,0.7s						
TUMR	Tumrok	2.71	11	eP	P	03 02 15.3	+0.6
TUMR				eS	S	03 02 45.9	-0.5
ALID	Alaid	2.91	234	eP	P	03 02 18.6	+1.0
KMNR	Kamenistaya	3.18	10	eP	P	03 02 21.2	-0.2
ESO	Esso	3.32	354	eP	P	03 02 23.7	+0.4
ESO				eS	S	03 03 01.8	+0.1
LGNR	Loginova	3.56	13	eP	P	03 02 27.6	+1.0
LGNR				eS	S	03 03 07.6	0.0
SVLR	Shiveluch	4.11	15	eP	P	03 02 33.8	-0.5
SVLR				eS	S	03 03 21.5	0.0
KBTR	Krutoberegovo	4.14	29	eP	P	03 02 34.5	-0.1
KBTR				eS	S	03 03 20.7	-1.4
KBG	Krutoberegovo	4.15	27	eP	P	03 02 35.3	+0.5
KBG				eS	S	03 03 21.4	-0.9
BKI	Bering	4.72	54	eP	P	03 02 41.5	-1.3
BKI				eS	S	03 03 28.9	-7.8

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*BJI **01** 03:03:55.5, 15.50S×70.50W, h191^{km}, mB5.0*

*NEIC **01** 03:03:55.6±0.7, 15.46S×70.49W, h191^{km}±8^{km}, mb4.5/14, Error ellipse: s-maj=14.6km s-min=10.1km az=62.0*

ISC 01 03:03:56.0±1.0**, 15.3S**±0.1×**70.4W**±0.1**, h207**^{km}±10^{km}**, n32, $\sigma 0^{s}78$/29, mb4.3/11, 1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.42	114	⇓iP	P	03 04 39.8	-0.1
NNA	Nana	7.05	297	Pn	P	03 05 37.7	0.0
	1µm,0.4s,SNR=32						
NNA	Nana	7.05	297	eP	P	03 05 36.7	-0.9
	59nm,0.6s						
LVC	Limon Verde	7.40	169	eP	P	03 05 37.4	-4.8
	68nm,0.3s						
SAML	Samuel	9.50	49	eP	P	03 06 10.1	+0.5
OTAV	Otavalo	17.36	332	eP	P	03 07 48.2	+1.0
	8.8nm,0.4s						
TRQA	Tornquist	23.86	163	P	P	03 08 51.9	+0.1
	6.3nm,0.7s,mb4.3						
SDV	Santo Domingo	24.04	360	eP	P	03 08 53.8	0.0
	6.4nm,0.4s,mb4.6						
MIAR	Mount Ida	54.24	336	eP	P	03 13 01.8	-0.9
	4.0nm,0.5s,mb4.2						
FVM	French Village	56.24	341	eP	P	03 13 15.9	-1.1
CCM	Cathedral Cave	56.57	340	eP	P	03 13 17.7	-1.6
	6.6nm,0.4s,mb4.6						
WMOK	Wichita Mounta	56.59	332	eP	P	03 13 19.5	0.0
	3.8nm,0.4s,mb4.4						
GDL2	Guadalupe Moun	57.34	326	eP	P	03 13 25.3	+0.5
MNTX	Cornudas Mount	57.52	325	eP	P	03 13 25.2	-0.9
	2.9nm,0.6s,mb4.1						
CPRX	Cap Rock	57.72	327	eP	P	03 13 27.7	+0.2
KSU1	Kansas State U	59.40	337	eP	P	03 13 38.4	-0.6
ANMO	Albuquerque	60.56	326	eP	P	03 13 47.5	+0.6
	2.0nm,0.4s,mb4.1						
SDCO	Great Sand Dun	62.22	329	eP	P	03 13 58.8	+0.9
	6.3nm,0.5s,mb4.5						
PV01	Paradox Valley	64.08	327	eP	P	03 14 10.9	+0.7
BW06	Boulder Array	68.05	330	eP	P	03 14 35.6	+0.4
	1.7nm,0.4s,mb4.0						
ULM	Lac du Bonnet	69.01	343	eP	P	03 14 39.6	-1.3
	9.3nm,0.4s,mb4.8						
LOHW	Long Hollow	69.19	330	eP	P	03 14 43.0	+0.8
RRI2	Red Ridge	69.35	329	eP	P	03 14 42.5	-0.6
IMW	Indian Meadow	69.57	330	eP	P	03 14 45.6	+1.1
HLID	Hailey	71.06	328	eP	P	03 14 54.5	+1.1
BMO	Blue Mountains	73.45	327	eP	P	03 15 08.1	+0.5
	2.9nm,0.6s,mb4.1						
FCC	Fort Churchill	76.31	348	eP	P	03 15 22.2	-1.3
EDM	Edmonton	77.57	335	eP	P	03 15 30.4	-0.1
YKW3	Yellowknife Ar	84.95	341	eP	P	03 16 09.1	+0.4
ULN	Ulaanbaatar	147.48	3	ePKPdf	PKPdf	03 23 15.3	+2.8
ULN				ePKPbc	PKPdf	03 23 18.4	+5.8
GTA	Gaotai	154.52	18	ePKP	PKPdf	03 23 29.2	+5.9
GTA				APKP		03 24 16.6	
GTA				XPKP		03 24 33.7	
GTA				PKS	PKS	03 27 02.7	+6.4
GTA				PP	PP	03 27 32.9	+6.1
GTA				SKS	SKS	03 30 14.7	+7.0
GTA				SS	SS	03 46 55.9	+8.5
GTA				PP	PP		
	comp=Z,174nm,8.4s						
GTA				LR	LR		
	comp=N,112nm,13.3s						
GTA				LR	LR		
	comp=E,115nm,16.0s						
GTA				LR	LR		
	comp=Z,121nm,13.7s						
SSE	Sheshan	161.03	328	ePKP	PKPdf	03 23 27.9	-3.6

IGQ 01 04:28:12.2, 0.62S×81.28W, h17^{km}±8^{km}, mb4.2, 5C-4D, Error ellipse: s-maj=14.6km s-min=5.7km az=17.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.84	120	⇑P	Pb	04 28 27.2	-0.9
JAMA	Jama	1.13	71	⇑P	Pb	04 28 33.5	+0.6
JAMA				S	Sb	04 28 47.5	+0.3
MAGD	Magdalena	1.60	70	P	Pn	04 28 42.2	+2.2
JUA2	San Juan 2	2.70	81	⇓P	Pn	04 28 57.0	+1.2
PINO	Pino	2.71	80	⇑P	Pn	04 28 56.5	+0.6
JOR1	San Jorge 1	2.71	77	P	Pn	04 28 55.3	-0.6
TERV	Terraza Guagua	2.71	81	⇓P	Pn	04 28 56.9	+1.0
YANA	Yana	2.75	80	⇓P	Pn	04 28 57.2	+0.7
IGUA	Igualata	2.77	108	P	Pn	04 28 58.5	+1.7
NAS1	Nasa	2.80	90	⇑P	Pn	04 28 59.3	+2.1

VC1	**Cotopaxi 1**	**2.87**	**90**	⇑P	Pn	04 29 00.5	+2.2
JUIV	**Juive**	**2.92**	**106**	P	Pn	04 29 01.8	+2.9
ARRY	**Arrayan**	**2.95**	**107**	P	Pn	04 29 01.1	+1.7
ULBA	**Ulba**	**2.98**	**106**	P	Pn	04 29 01.9	+2.1
COTA	**Cotacachi**	**3.09**	**72**	P	Pn	04 29 02.7	+1.4
ANTI	**Antisana**	**3.12**	**87**	P	Pn	04 29 04.2	+2.5
CAYR	**Refugio Cayamb**	**3.33**	**79**	P	Pn	04 29 08.0	+3.3
CAYA	**Cayambe**	**3.36**	**78**	⇓P	Pn	04 29 08.1	+3.0

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*BJI **01** 04:41:33.8, 12.63N×92.61E, h44^{km}, mB5.3, mb4.8, Ms4.0, Msz3.9*

*MOS **01** 04:41:33.1±1.5, 12.72N×92.43E, h33^{km}, mb5.0/15, Error ellipse: s-maj=23.3km s-min=9.6km az=104.2*

*NEIC **01** 04:41:35.5±0.5, 12.88N×92.54E, h30^{km}, mb4.9/19, Error ellipse: s-maj=11.4km s-min=10.2km az=178.0*

ISC 01 04:41:33.8±0.5, **12.84N**±0.07×**92.41E**±0.05, **h33^{km}, (h31^{km}**±4.7^{km}**:pP-P), n84,** σ**1^{s}06**/89, **mb4.8**/36, **MS4.1**/6, **10C-10D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**8.42**	**48**	*e*P	**P**	**04 43 31.7**	**-4.6**
BWNR	**Bhubaneshwar**	**9.75**	**320**	*e*P	**P**	**04 43 51.5**	**-3.4**
BWNR				*e*S	**S**	**04 45 29.5**	**-15**
BWNR				*e*		04 45 35.9	
	comp=E,984nm,0.3s						
BWNR				*e*		04 45 36.0	
	comp=N,539nm,0.2s						
VIS	**Vishakhapatnam**	**10.02**	**300**	*e*P	**P**	**04 43 56.7**	**-1.8**
VIS				*e*S	**S**	**04 45 38.8**	**-12**
VIS				*e*		04 45 41.7	
	comp=N,283nm,1.3s						
VIS				*e*		04 45 42.3	
	comp=E,204nm,1.6s						
CAL	**Calcutta**	**10.40**	**339**	*e*	**P**	**04 44 10.2**	**+6.3**
MDRS	**Chennai**	**11.86**	**272**	*e*S	**S**	**04 46 22.9**	**-13**
MDRS				*e*		04 50 02.3	
PALK	**Pallekele**	**12.78**	**245**	P	**P**	**04 44 34.2**	**-1.8**
PALK				*e*S	**S**	**04 46 48.1**	**-10**
HYB	**Hyderabad**	**14.13**	**291**	*i* P	**P**	**04 45 00.5**	**+6.7**
HYB				*e*		04 47 19.0	
HYB				*e*S	**S**	**04 47 29.0**	**-1.4**
JIRN	**Jiri**	**15.85**	**339**	*e*P	**P**	**04 45 15.8**	**-0.4**
PKI	**Pulchoki**	**16.06**	**337**	*e*P	**P**	**04 45 18.4**	**-0.4**
	comp=E,50nm,0.5s						
DMN	**Daman**	**16.21**	**336**	*e*P	**P**	**04 45 20.8**	**+0.1**
KKN	**Kakani**	**16.30**	**337**	*e*P	**P**	**04 45 22.4**	**+0.5**
	comp=E,48nm,0.7s						
GKN	**Gorkha**	**16.75**	**335**	*e*P	**P**	**04 45 27.1**	**-0.4**
KOLN	**Koldanda**	**16.99**	**332**	*e*P	**P**	**04 45 29.4**	**-1.1**
	comp=E,124nm,0.7s						
BHPL	**Bhopal**	**17.59**	**308**	*e*P	**P**	**04 45 40.8**	**+2.6**
BHPL				AMb	AMB	04 45 51.8	
	comp=Z,26nm,0.6s						
BHPL				*e*		04 48 39.4	
POO	**Poona**	**18.74**	**290**	*e*P	**P**	**04 45 56.0**	**+3.6**
POO				*i*		04 49 08.0	
GYA	**Guiyang**	**19.05**	**43**	⇓*i*P	**P**	**04 45 55.1**	**-1.0**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
CD2	**Chengdu**	**20.82**	**28**	P	**P**	**04 46 14.0**	**-1.0**
CD2				AMB	AMB		
	comp=Z,21nm,0.8s						
NDI	**New Delhi**	**21.18**	**320**	*e*P	**P**	**04 46 23.0**	**+4.3**
NDI				*e*		04 50 07.0	
DDI	**Dehra Dun**	**21.89**	**325**	*e*	**P**	**04 46 32.0**	**+6.2**
DDI				*e*		04 50 13.0	
LZH	**Lanzhou**	**25.34**	**22**	⇑P	**P**	**04 46 59.7**	**+0.3**
LZH				AP	pP	04 47 10.1	+1.4
LZH				XP	sP	04 47 13.9	+1.4
LZH				AMB	AMB		
	comp=Z,51nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,101nm,4.9s						
LZH				LR	LR		
	comp=N,319nm,13.3s						
LZH				LR	LR		
	comp=Z,443nm,17.0s,MS4.0						
LZH	**Lanzhou**	**25.34**	**22**	⇑P	**P**	**04 46 59.7**	**+0.3**
	comp=Z,51nm,1.3s,mb4.9						
LZH				pP	pP	04 47 10.1	+1.4
LZH				sP	sP	04 47 13.9	+1.4
LZH				PP	PP	04 48 05.0	+27
XAN	**Xi'an**	**25.91**	**33**	P	**P**	**04 47 03.6**	**-1.2**
XAN				AP	pP	04 47 15.0	+0.9
XAN				AMB	AMB		
	comp=Z,31nm,0.7s,mb5.0						
GTA	**Gaotai**	**27.27**	**13**	⇓P	**P**	**04 47 17.8**	**+0.6**
GTA				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,201nm,3.8s						
GTA				LR	LR		
	comp=N,144nm,14.1s,MS3.8						
GTA				LR	LR		
	comp=E,99nm,15.6s,MS3.8						
GTA				LR	LR		
	comp=Z,107nm,12.9s,MS3.6						
NJ2	**Nanjing**	**30.89**	**47**	*e*P	**P**	**04 47 49.4**	**-0.3**
NJ2				AP	pP	04 47 58.9	-0.4
NJ2				XP	sP	04 48 02.9	-0.8
NJ2				PP	PP	04 48 52.6	+0.9
NJ2				S	**S**	**04 52 51.0**	**+0.7**
NJ2				XS		04 53 07.0	
NJ2				AMB	AMB		
	comp=Z,70nm,0.6s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,1µm,5.5s						
NJ2				LR	LR		
	comp=Z,1µm,14.3s,MS4.6						
WMQ	**Urumqi**	**31.14**	**353**	*e*P	**P**	**04 47 52.0**	**+0.2**
SSE	**Sheshan**	**32.14**	**51**	*e*P	**P**	**04 47 56.5**	**-4.2**
SSE				S	**S**	**04 53 10.1**	**+0.3**
SSE				AMB	AMB		
	comp=Z,22nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,128nm,2.8s,mb5.3						
SSE				LR	LR		
	comp=N,60nm,26.5s,MS3.4						
SSE				LR	LR		
	comp=E,86nm,26.6s,MS3.4						
SSE	**Sheshan**	**32.14**	**51**	*e*P	**P**	**04 47 56.5**	**-4.2**
	comp=E,22nm,0.9s,mb5.0						
SSE				pP	pP	04 48 02.6	-7.7
SSE				S	**S**	**04 53 10.1**	**+0.3**
SSE				SS	SS	04 55 31.0	+27
HHC	**Hu-ho-hao-te**	**32.57**	**28**	*e*P	**P**	**04 48 03.9**	**-0.4**
HHC				PP	PP	04 49 16.7	+3.4
HHC				PCP	PcP	04 50 45.4	-5.0
HHC				SCS	ScS	04 58 24.5	-4.1
HHC				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.8						
HHC				LR	LR		
	comp=N,200nm,12.0s,MS4.3						
HHC				LR	LR		
	comp=E,311nm,12.0s,MS4.3						
HHC				LR	LR		
	comp=Z,118nm,13.2s,MS3.8						
AAK	**Ala-Archa**	**33.51**	**336**	c *i*P	**P**	**04 48 13.3**	**+0.9**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
AAK	**Ala-Archa**	**33.51**	**336**	*e*P	**P**	**04 48 13.0**	**+0.6**
	comp=Z,13nm,1.1s,mb4.8						
BJI	**Beijing**	**34.24**	**33**	P	**P**	**04 48 18.6**	**-0.1**
BJI				AMB	AMB		
	comp=Z,15nm,0.7s,mb5.0						
BJI				LR	LR		
	comp=N,269nm,8.5s						
BJI				LR	LR		
	comp=E,268nm,11.2s						
BJI				LR	LR		
	comp=Z,100nm,23.3s						
BJI	**Beijing**	**34.24**	**33**	P	**P**	**04 48 18.6**	**-0.1**
	comp=Z,15nm,0.7s,mb5.0						
BJI				S		04 54 27.6	
MKAR	**Makanchi Array**	**34.91**	**348**	*i* P	**P**	**04 48 24.7**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ULN	**Ulaanbaatar**	**37.00**	**16**	d *i*P	**P**	**04 48 42.2**	**+0.1**
ULN	**Ulaanbaatar**	**37.00**	**16**	*e*P	**P**	**04 48 42.1**	**+0.1**
	comp=Z,4.8nm,0.7s,mb4.4						
ZAK	**Zakamensk**	**38.48**	**11**	*e*P	**P**	**04 48 55.3**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	**39.41**	**346**	*i* P	**P**	**04 49 02.8**	**+0.6**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.3						
KURK	**Kurchatov**	**39.41**	**346**	*e*P	**P**	**04 49 02.3**	**+0.1**
	comp=Z,8.2nm,0.8s,mb4.5						
TLY	**Talaya**	**39.79**	**11**	c *i*P	**P**	**04 49 07.2**	**+1.9**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
CN2	**Changchun**	**41.91**	**36**	*e*P	**P**	**04 49 22.2**	**-0.7**
CN2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.7						
CN2				AMB	AMB		
	comp=Z,500nm,4.0s						
NVS	**Novosibirsk**	**42.52**	**352**	*e*P	**P**	**04 49 25.0**	**-2.8**
BVA0	**Borovoye Array**	**43.77**	**341**	*i* P	**P**	**04 49 38.2**	**+0.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
CHKZ	**Chkalovo**	**44.26**	**342**	*i* P	**P**	**04 49 42.6**	**+0.7**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
CHKZ	**Chkalovo**	**44.26**	**342**	⇓*e*P	**P**	**04 49 42.4**	**+0.6**
	comp=Z,16nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**44.95**	**132**	*e*P	**P**	**04 49 47.9**	**+0.1**
	comp=Z,7.7nm,0.6s,mb4.7						
GNI	**Garni**	**49.82**	**312**	P	**P**	**04 50 25.1**	**-0.6**
	comp=Z,20nm,1.1s,mb5.1						
ARU	**Arti**	**50.69**	**336**	*e*P	**P**	**04 50 23.8**	**-8.3**
KIV	**Kislovodsk**	**52.55**	**316**	*i* P	**P**	**04 50 47.9**	**+1.6**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
KIV	**Kislovodsk**	**52.55**	**316**	P	**P**	**04 50 47.8**	**+1.5**
	comp=Z,14nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**52.57**	**128**	*e*P	**P**	**04 50 46.1**	**-0.7**
	comp=Z,6.8nm,0.5s,mb4.8						
WB2	**Warramunga Arr**	**52.58**	**128**	*e*P	**P**	**04 50 46.8**	**0.0**
MALT	**Malatya**	**54.02**	**308**	*e*P	**P**	**04 50 57.8**	**+0.5**
	comp=Z,10nm,1.3s,mb4.6						
YSS	**Yuzh-Sakhalins**	**54.04**	**41**	⇓*e*P	**P**	**04 50 56.7**	**-0.6**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
SOC	**Sochi**	**54.46**	**315**	*e*P	**P**	**04 50 57.5**	**-2.9**
SOC				*e*		04 51 58.0	
SOC				*e*PPP	PPP	04 54 18.7	+3.2
SOC				*e*S	**S**	**04 58 37.5**	**+2.2**
SOC				*e*		05 00 43.4	
SOC				*e*SS	SS	05 02 21.9	+4.5
SOC				*e*SSS	SSS	05 04 22.2	+6.6
SOC				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.3						
SOC				pmax	pmax		
	comp=N,36nm,0.8s						
SOC				pmax	pmax		
	comp=E,19nm,0.9s						
YAK	**Yakutsk**	**55.91**	**20**	⇓*e*P	**P**	**04 51 09.2**	**-1.4**
YAK				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
ANN	**Anapa**	**56.39**	**316**	*e*P	**P**	**04 51 06.1**	**-8.2**
ANN				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.5						
SIM	**Simferopol'**	**58.70**	**315**	c *e*P	**P**	**04 51 32.5**	**+1.8**
SIM				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
SIM				MLR	MLR		
	comp=Z,900nm,19.0s,MS4.9						
OBN	**Obninsk**	**60.31**	**327**	⇑*e*P	**P**	**04 51 38.7**	**-2.9**
OBN				S	**S**	**04 59 51.6**	**-0.3**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
TIXI	**Tiksi**	**62.75**	**12**	⇓*i*P	**P**	**04 51 56.7**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.2						
CFR	**Carcaliu**	**62.90**	**314**	⇑*i*P	**P**	**04 51 59.9**	**+0.7**
CFR	**Carcaliu**	**62.90**	**314**	⇑*i*P	**P**	**04 51 59.9**	**+0.7**
MLR	**Muntele Rosu**	**64.48**	**314**	⇓*i*P	**P**	**04 52 11.2**	**+1.8**
MLR	**Muntele Rosu**	**64.48**	**314**	⇓*i*P	**P**	**04 52 11.2**	**+1.8**
BURAR	**Bucovina Array**	**65.27**	**317**	⇑*i*P	**P**	**04 52 15.3**	**+0.8**
JOF	**Joensuu**	**65.67**	**334**	*e*p	**P**	**04 52 16.6**	**-0.2**
	comp=Z,9.2nm,0.7s,mb4.9						
JOF	**Joensuu**	**65.67**	**334**	*e*P	**P**	**04 52 16.6**	**-0.2**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
KAF	**Kangasniemi**	**67.63**	**332**	*e*p	**P**	**04 52 29.3**	**+0.1**
OJC	**Ojcow**	**69.12**	**319**	*e*P	**P**	**04 52 39.6**	**+0.9**
KEV	**Kevo**	**69.62**	**340**	*e*p	**P**	**04 52 41.3**	**-0.1**
	comp=Z,28nm,1.6s,mb5.0						
KEV	**Kevo**	**69.62**	**340**	*e*P	**P**	**04 52 41.3**	**-0.1**
KEV				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.0						
MORC	**Moravsky Berou**	**70.54**	**318**	*e*P	**P**	**04 52 47.7**	**+0.4**
	comp=Z,5.3nm,0.8s,mb4.5						
BILL	**Bilibino**	**72.15**	**22**	⇑*e*P	**P**	**04 52 56.7**	**0.0**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BRG	**Berggiesshubel**	**72.88**	**319**	*i* P	**P**	**04 53 02.5**	**+1.2**
BRG				*e*	pP	04 53 11.3	-0.3
BRG				pmax	pmax		
	comp=Z,18nm,1.8s,mb4.7						
BRG	**Berggiesshubel**	**72.88**	**319**	*i* P	**P**	**04 53 02.5**	**+1.2**
	comp=Z,18nm,1.8s,mb4.7						
BRG				*e*	pP	04 53 11.3	-0.3
KHC	**Kasperske Hory**	**73.11**	**318**	*e*P	**P**	**04 53 03.0**	**+0.3**
CLL	**Collm**	**73.48**	**320**	*e**SP	sP	04 53 18.0	-0.8
NB2	**NORSAR Subarra**	**74.60**	**330**	P	**P**	**04 53 11.3**	**+0.2**
	comp=Z,2.4nm,0.6s,mb4.3,baz=91,slow=5.8						
LPG	**La Plagne**	**77.94**	**314**	*e*P	**P**	**04 53 31.4**	**+1.0**
	comp=Z,11nm,0.7s,mb4.6						
SYO	**Syowa Base**	**89.63**	**197**	⇓P	**P**	**04 54 35.8**	**+6.7**
MCK	**McKinley**	**90.60**	**23**	P	**P**	**04 54 34.6**	**+0.8**
	comp=Z,8.5nm,1.1s,mb5.0						
INK	**Inuvik**	**92.71**	**16**	*e*P	**P**	**04 54 43.8**	**+0.4**
	comp=Z,10nm,1.3s,mb5.1						
MSU	**Marysvale**	**123.98**	**23**	*e*PKP	PKPdf	05 00 32.9	+3.6
TRQA	**Tornquist**	**146.08**	**218**	PKPbc	PKPbc	05 01 13.9	+3.0
PLCA	**Paso Flores**	**148.44**	**205**	*e*PKPbc	PKPdf	05 01 21.1	+7.4

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*NEIC **01** 04:54:29.4±1.1, 20.36S×174.84W, h10^{km}, mb4.7/5, Error ellipse: s-maj=45.0km s-min=12.1km az=144.0*

ISC 01 04:54:28.4±1.3, **20.2S**±0.3×**175.0W**±0.2, **h10^{km}, n18,** σ**0^{s}79**/8, **mb4.6**/4, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.96**	**27**	*e*Pn	**Pn**	**04 56 12.8**	**-0.2**
CTAO	**Charters Tower**	**36.34**	**263**	*e*P	**P**	**05 01 35.6**	**+1.0**
	4.1nm,0.8s,mb4.4						
ASPA	**Alice Springs**	**47.34**	**256**	*e*P	**P**	**05 03 04.5**	**-0.1**
WRAB	**Tennant Creek**	**47.44**	**261**	*e*P	**P**	**05 03 04.4**	**-1.0**
	5.8nm,0.9s,mb4.5						
MSU	**Marysvale**	**82.88**	**45**	*e*P	**P**	**05 06 55.7**	**+1.0**
BMO	**Blue Mountains**	**83.34**	**37**	P	**P**	**05 06 57.7**	**+0.7**
	11nm,1.4s,mb4.7						
GDL2	**Guadalupe Moun**	**85.28**	**53**	*e*P	**P**	**05 07 05.8**	**-1.2**
MCK	**McKinley**	**86.09**	**11**	*e*P	**P**	**05 07 10.0**	**-0.3**
	6.7nm,1.1s,mb4.8						
CLL	**Collm**	**148.32**	**350**	*e*PKP1	PKPdf	05 14 17.0	+2.7
UPC	**Upice**	**148.52**	**347**	*e*PKPab	PKPab	05 14 23.3	+2.5
BRG	**Berggiesshubel**	**148.59**	**349**	*i* P	PKPdf	05 14 18.0	+3.3
BRG				*e*		05 14 23.5	
DPC	**Dobruska-Polom**	**148.60**	**346**	*e*PKPbc	PKPdf	05 14 18.8	+4.0
OKC	**Ostrava-Krasne**	**148.63**	**344**	*e*PKPab	PKPab	05 14 28.0	+6.7
PVCC	**Panska Ves**	**148.80**	**348**	*e*PKPbc	PKPdf	05 14 19.1	+4.0
MOX	**Moxa**	**149.17**	**352**	*e*P	PKPdf	05 14 19.4	+3.7
PRU	**Pruhonice**	**149.32**	**348**	*e*PKPbc	PKPdf	05 14 20.8	+4.8
NKC	**Novy Kostel**	**149.45**	**351**	*e*PKPbc	PKPdf	05 14 21.2	+5.0
KHC	**Kasperske Hory**	**150.33**	**349**	*e*PKPbc	PKPdf	05 14 22.1	+4.5
KHC				PKPab	PKPab	05 14 27.0	-1.3

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*NIED **01** 04:56:00, 24.70N×121.80E, h80^{km}, Mw4.3 Best double couple: $M_0 3.59\times10^{15}$ NP1:ϕ_s185°, δ67°, λ65°. NP2:ϕ_s56°, δ33°, λ135°.*

*BJI **01** 04:56:37.8, 24.63N×121.67E, h52^{km}, mB4.9, mb4.4, ML4.3, Ms4.5, Msz3.7*

*JMA **01** 04:56:38.7±0.3, 24.70N×121.83E, h74^{km}, M4.5*

*TAP **01** 04:56:38.9, 24.58N×121.73E, h74^{km}, ML5.0*

TAP Felt II J at Suao, III J at Nanau, I J at Neicheng, II J at Nioudou, I J at Ilan, III J at Nanshan, II J at Sanguang, I J, II J at Chiawan, I J at Kuangyinshan, III J at Hehuanshan, II J at Hualien, III J at Tachien, I J at Jungli (National Central University), II J at Nanjuang, I J at Hsinchu, II J at Shilin, I J at Ryuetan, I J at Mingjian, I J at Alishan, I J at Tsauling, I J at Gukeng, I J at Dacheng, I J at Lidau, I J at Chiayi, I J at Szhu.

*NEIC **01** 04:56:39.0, 24.52N×121.73E, h75^{km}, mb4.4/7, After TAP.*

NEIC Recorded [3 TAP] in Hua-lien, I-lan, Nan-t'ou and T'ai-chung; [2 TAP] in Miao-li and T'ao-yuan; [1 TAP] in Chang-hua, Hsin-chu and T'ai-pei Counties.

*MAN **01** 04:57:29.5, 20.63N×121.54E, h6^{km}*

ISC 01 04:56:38.1±0.2, **24.55N**±0.02×**121.79E**±0.02, **h77^{km}**±2^{km}, **n105,** σ**1^{s}00**/169, **mb4.3**/6, **23C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.08**	**39**	⇓*i*P	**P**	**04 56 49.8**	**+0.6**
ENA	**Nanau**	**0.12**	**202**	⇓*i*P	**P**	**04 56 49.6**	**+0.3**
ENA				S	**S**	**04 56 57.8**	**+0.2**
TWE	**Neicheng**	**0.21**	**327**	⇓*i*P	**P**	**04 56 50.3**	**+0.7**
TWE				S	**S**	**04 56 58.2**	**0.0**
ILA	**Ilan**	**0.22**	**350**	⇓*i*P	**P**	**04 56 50.6**	**+0.9**
ILA				S	**S**	**04 56 59.0**	**+0.6**
ENTT	**Nioudou**	**0.23**	**295**	⇓*i*P	**P**	**04 56 50.1**	**+0.4**
NNS	**Nan Shan**	**0.40**	**255**	⇓*i*P	**P**	**04 56 51.4**	**+0.6**
NNS				S	**S**	**04 56 59.9**	**-0.4**
NSK	**Sanguang**	**0.42**	**288**	⇑*i*P	**P**	**04 56 51.0**	**0.0**
NSK				S	**S**	**04 56 59.6**	**-1.0**
TWA	**Mucha**	**0.47**	**336**	*i* P	**P**	**04 56 51.8**	**+0.3**
TWA				S	**S**	**04 57 01.0**	**-0.4**
TWB1	**Santiao Chiao**	**0.49**	**21**	⇑*i*P	**P**	**04 56 52.3**	**+0.7**
TWB1				S	**S**	**04 57 01.9**	**+0.2**
TWD	**Chiawan**	**0.50**	**201**	⇓P	**P**	**04 56 51.3**	**-0.4**
TWD				S	**S**	**04 57 00.5**	**-1.3**
TATO	**Taipei**	**0.51**	**327**	*e*Pg	**P**	**04 56 51.5**	**-0.3**
NWF	**Wu-fen Shan**	**0.52**	**359**	⇑*i*P	**P**	**04 56 52.6**	**+0.7**
NWF				S	**S**	**04 57 02.6**	**+0.4**
TAP1	**Taipei**	**0.55**	**334**	*e*P	**P**	**04 56 52.2**	**0.0**
TAP1				S	**S**	**04 57 01.7**	**-0.9**
TAP	**Taipei**	**0.56**	**332**	*e*P	**P**	**04 56 52.1**	**-0.2**
TAP				S	**S**	**04 57 02.1**	**-0.6**
HWA	**Hwalien**	**0.59**	**197**	*e*P	**P**	**04 56 52.4**	**-0.2**
HWA				S	**S**	**04 57 01.7**	**-1.6**
WHF	**Hehuan Shan**	**0.62**	**230**	*i* P	**P**	**04 56 53.6**	**+0.6**
TWT	**Tachien**	**0.63**	**243**	P	**P**	**04 56 54.0**	**+1.0**
TWS1	**Kuangyinshan**	**0.65**	**329**	⇑*i*P	**P**	**04 56 53.5**	**+0.3**
TWS1				S	**S**	**04 57 04.0**	**-0.4**
NCU	**National Centr**	**0.69**	**308**	P	**P**	**04 56 53.8**	**+0.1**
NCU				S	**S**	**04 57 04.5**	**-0.7**
NSTT	**Nanjuang**	**0.72**	**277**	⇑P	**P**	**04 56 54.2**	**+0.1**
NSTT				S	**S**	**04 57 05.2**	**-0.6**
TWY	**Chenhua**	**0.75**	**347**	*e*P	**P**	**04 56 54.8**	**+0.4**
TWY				S	**S**	**04 57 06.6**	**+0.3**
HSN	**Hsinchu**	**0.79**	**289**	*e*P	**P**	**04 56 54.6**	**-0.2**
HSN				S	**S**	**04 57 06.2**	**-0.9**
ESL	**Shilin**	**0.80**	**204**	*e*P	**P**	**04 56 53.8**	**-1.1**
ESL				S	**S**	**04 57 05.2**	**-2.1**
NSY	**Sanyi**	**0.95**	**262**	⇑*i*P	**P**	**04 56 57.2**	**+0.6**
NSY				S	**S**	**04 57 10.6**	**+0.2**
TWQ1	**Liyutan**	**0.95**	**258**	⇑*i*P	**P**	**04 56 57.0**	**+0.4**
TWQ1				S	**S**	**04 57 10.1**	**-0.4**
SMLT	**Sun Moon Lake**	**1.05**	**231**	⇑*i*P	**P**	**04 56 58.9**	**+1.1**
SMLT				S	**S**	**04 57 13.4**	**+0.8**
TYC	**Yuchr**	**1.06**	**233**	⇑*i*P	**P**	**04 56 58.9**	**+0.8**
TYC				S	**S**	**04 57 13.7**	**+0.7**
TCU	**Taichung**	**1.09**	**249**	⇑*i*P	**P**	**04 56 58.8**	**+0.4**
TCU				S	**S**	**04 57 12.3**	**-1.2**
PCYT	**Pengchaiyu**	**1.11**	**13**	*i* P	**P**	**04 56 59.4**	**+0.8**
PCYT				S	**S**	**04 57 14.6**	**+0.6**
YOJ	**Yonaguni jima**	**1.11**	**94**	P	**P**	**04 56 58.8**	**+0.1**
YOJ				S	**S**	**04 57 13.8**	**-0.3**
EHY	**Hungye**	**1.12**	**203**	*e*P	**P**	**04 56 57.4**	**-1.4**
EHY				S	**S**	**04 57 12.4**	**-1.8**
WNT	**Mingjian**	**1.21**	**237**	P	**P**	**04 57 00.6**	**+0.7**
WNT				S	**S**	**04 57 16.5**	**+0.2**
TWF1	**Yuli**	**1.27**	**201**	*e*P	**P**	**04 56 59.3**	**-1.4**
TWF1				S	**S**	**04 57 15.8**	**-1.9**
YUS	**Yu-Shan**	**1.30**	**216**	*e*P	**P**	**04 57 02.2**	**+0.9**
YUS				S	**S**	**04 57 19.2**	**+0.8**
ALS	**Alishan**	**1.37**	**221**	⇑*i*P	**P**	**04 57 03.3**	**+1.1**
ALS				S	**S**	**04 57 21.8**	**+1.9**
CHN5	**Tsauling**	**1.39**	**227**	⇑*i*P	**P**	**04 57 03.0**	**+0.6**
WGK	**Gukeng**	**1.41**	**233**	*e*P	**P**	**04 57 03.2**	**+0.5**
WGK				S	**S**	**04 57 21.4**	**+0.6**
CHKT	**Chengkung**	**1.49**	**195**	*e*P	**P**	**04 57 03.4**	**-0.3**
CHKT				S	**S**	**04 57 21.4**	**-1.2**
ELDTW	**Lidau**	**1.52**	**208**	*e*P	**P**	**04 57 03.8**	**-0.4**
ELDTW				S	**S**	**04 57 23.7**	**+0.3**
WTCT	**Ta-ch'eng**	**1.54**	**244**	P	**P**	**04 57 04.1**	**-0.2**
WTCT				S	**S**	**04 57 23.1**	**-0.6**
CHN2	**Minshiung**	**1.57**	**230**	*e*P	**P**	**04 57 05.4**	**+0.6**
CHN2				S	**S**	**04 57 24.9**	**+0.5**
CHN4	**Tsaushan**	**1.62**	**223**	⇑P	**P**	**04 57 06.1**	**+0.7**
CHN4				S	**S**	**04 57 27.9**	**+2.4**
CHY	**Chiayi**	**1.63**	**230**	⇑*i*P	**P**	**04 57 06.0**	**+0.5**
CHY				S	**S**	**04 57 26.0**	**+0.3**
STYT	**Tauyuan**	**1.67**	**215**	P	**P**	**04 57 07.1**	**+1.0**
STYT				S	**S**	**04 57 28.4**	**+1.7**
WTP	**Ta-pu**	**1.68**	**220**	⇑*i*P	**P**	**04 57 06.8**	**+0.6**
WTP				S	**S**	**04 57 28.6**	**+1.6**
WSF	**Szhu**	**1.69**	**238**	*e*P	**P**	**04 57 06.4**	**-0.1**
WSF				S	**S**	**04 57 27.4**	**+0.1**
TWK	**Hsinying**	**1.74**	**223**	*e*P	**P**	**04 57 07.5**	**+0.4**
IRIF	**Iriomote-Funau**	**1.78**	**96**	P	**P**	**04 57 07.4**	**-0.2**
IRIF				S	**S**	**04 57 29.1**	**-0.1**
CHN1	**Nanshi**	**1.78**	**221**	⇑*i*P	**P**	**04 57 08.0**	**+0.4**
CHN1				S	**S**	**04 57 30.3**	**+1.0**
SGST	**Jiashian**	**1.83**	**217**	⇑P	**P**	**04 57 09.0**	**+0.8**
SGST				S	**S**	**04 57 31.4**	**+1.0**
TWG	**Pinlang**	**1.84**	**201**	*e*P	**P**	**04 57 07.2**	**-1.2**
TWG				S	**S**	**04 57 29.5**	**-1.1**
CHN8	**Yiju**	**1.88**	**231**	*e*P	**P**	**04 57 09.0**	**+0.1**
CHN8				S	**S**	**04 57 32.3**	**+0.9**
TTN	**Taitung**	**1.88**	**198**	*e*P	**P**	**04 57 08.2**	**-0.7**
TTN				S	**S**	**04 57 30.2**	**-1.3**
HATJ	**Hateruma jima**	**1.90**	**104**	P	**P**	**04 57 10.0**	**+0.8**
HATJ				S	**S**	**04 57 33.9**	**+1.8**
SCLT	**Jiali**	**2.00**	**227**	P	**P**	**04 57 10.9**	**+0.4**
SCLT				S	**S**	**04 57 34.8**	**+0.4**
JKRS	**Kuro-shima**	**2.04**	**98**	P	**P**	**04 57 11.5**	**+0.3**
JKRS				*e*S	**S**	**04 57 35.9**	**+0.3**
SSD	**Sandimen**	**2.08**	**211**	*e*P	**P**	**04 57 12.7**	**+1.0**
SSD				S	**S**	**04 57 37.9**	**+1.4**
ECL	**Taimali**	**2.09**	**202**	*e*P	**P**	**04 57 10.6**	**-1.1**
ECL				S	**S**	**04 57 33.8**	**-2.7**
TWM1	**Shoushan**	**2.12**	**216**	*e*P	**P**	**04 57 12.7**	**+0.5**
JIJ	**Ishigaki jima**	**2.15**	**94**	P	**P**	**04 57 12.3**	**-0.4**
JIJ				S	**S**	**04 57 37.6**	**-0.6**
PNG	**Penghu**	**2.26**	**245**	⇑*i*P	**P**	**04 57 12.9**	**-1.4**
PNG				S	**S**	**04 57 38.8**	**-2.2**
EAST	**Anshuo**	**2.32**	**202**	*e*P	**P**	**04 57 13.9**	**-1.2**
EAST				S	**S**	**04 57 44.1**	**+1.6**
TAW	**Tawu**	**2.33**	**201**	*e*P	**P**	**04 57 15.7**	**+0.6**
WDGT	**Dungji**	**2.33**	**237**	*e*P	**P**	**04 57 14.1**	**-1.2**
WDGT				S	**S**	**04 57 41.1**	**-1.7**
SCZT	**Fangliau**	**2.42**	**207**	⇑P	**P**	**04 57 17.1**	**+0.7**
SCZT				S	**S**	**04 57 46.3**	**+1.4**
LAY	**Lan-yu**	**2.50**	**185**	*e*P	**P**	**04 57 16.3**	**-1.3**
LAY				S	**S**	**04 57 44.9**	**-2.2**
TWP	**Hsiaoliuchiu**	**2.55**	**211**	*e*P	**P**	**04 57 19.1**	**+0.8**
JTJ	**Tarama**	**2.65**	**87**	P	**P**	**04 57 19.7**	**0.0**
JTJ				S	**S**	**04 57 51.2**	**+0.4**
HEN	**Hengchun**	**2.71**	**201**	*e*P	**P**	**04 57 19.7**	**-0.8**
TWK1	**Hengchun**	**2.74**	**200**	*e*P	**P**	**04 57 21.6**	**+0.7**
QZH	**Quanzhou**	**2.94**	**278**	⇓*i*P	**P**	**04 57 22.1**	**-1.6**
QZH				S	**S**	**04 57 54.0**	**-3.9**
QZH				Smax			
	comp=N,2µm,0.8s						
QZH				Smax			
	comp=E,810nm,0.6s						
KNM	**Kinmen**	**3.06**	**268**	⇑*i*P	**P**	**04 57 25.6**	**+0.1**
KNM				S	**S**	**04 57 59.5**	**-1.5**
JMJ	**Miyako jima 2**	**3.20**	**84**	P	**P**	**04 57 26.8**	**-0.5**
JMJ				*e*S	**S**	**04 58 04.1**	**-0.3**
JOGS	**Gusukube**	**3.30**	**86**	P	**P**	**04 57 29.3**	**+0.6**
JOGS				*e*S	**S**	**04 58 07.0**	**+0.1**
BBP	**Basco**	**4.09**	**178**	*e*P	**P**	**04 57 38.3**	**-1.4**
JKE	**Kume jima 2**	**4.85**	**68**	P	**P**	**04 57 50.7**	**+0.4**
JOW	**Kunigami**	**6.28**	**67**	P	**P**	**04 58 08.3**	**-1.6**
SGCP	**Mt. Cagua**	**6.28**	**178**	*e*P	**P**	**04 58 10.5**	**+0.6**
SSE	**Sheshan**	**6.55**	**355**	*e*P	**P**	**04 58 16.1**	**+2.3**

SSE				S	**S**	**04 59 33.0**	**+5.4**
SSE				AMB	AMB		
	comp=Z,36nm,0.7s						
SSE				AMB	AMB		
	comp=Z,237nm,6.1s						
SSE				Smax			
	comp=N,76nm,0.9s						
SSE				Smax			
	comp=E,80nm,0.9s						
SSE	**Sheshan**	**6.55**	**355**	*e*Pn	**P**	**04 58 16.1**	**+2.3**
	comp=E,36nm,0.7s						
SSE				Sn	**S**	**04 59 33.0**	**+5.4**
APYP	**Conner**	**6.67**	**185**	*e*P	**P**	**04 58 15.9**	**+0.5**
CVP	**Callao Caves**	**6.81**	**180**	*e*P	**P**	**04 58 17.0**	**-0.4**
ABRA	**Dolores**	**6.94**	**189**	*e*P	**P**	**04 58 18.9**	**-0.2**
NJ2	**Nanjing**	**7.91**	**342**	*e*P	**P**	**04 58 30.9**	**-1.7**
NJ2				XP		04 58 51.8	
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,1µm,3.5s						
NJ2				Smax			
	comp=N,50nm,1.0s						
NJ2				Smax			
	comp=E,30nm,0.6s						
NJ2				LR	LR		
	comp=N,11µm,11.0s						
NJ2				LR	LR		
	comp=E,10µm,10.6s						
JAM	**Amami Oshima**	**7.99**	**60**	P	**P**	**04 58 31.2**	**-2.4**
WHN	**Wuhan**	**8.90**	**314**	⇑P	**P**	**04 58 43.1**	**-2.9**
WHN				S	**S**	**05 00 21.5**	**-4.2**
WHN				Smax			
	comp=N,57nm,0.8s						
WHN				Smax			
	comp=E,201nm,1.1s						
QIZ	**Qiongzhong**	**12.38**	**246**	*e*P	**P**	**04 59 35.2**	**+2.2**
GYA	**Guiyang**	**13.79**	**281**	⇑*i*P	**P**	**04 59 52.0**	**+0.5**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
XAN	**Xi'an**	**14.67**	**313**	P	**P**	**05 00 02.1**	**-0.8**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.7s						
CD2	**Chengdu**	**17.17**	**296**	P	**P**	**05 00 34.0**	**-0.4**
CD2				AMB	AMB		
	comp=Z,27nm,1.0s						
KMI	**Kunming**	**17.31**	**276**	P	**P**	**05 00 39.8**	**+3.6**
KMI				AMB	AMB		
	comp=Z,12nm,0.8s						
KMI				LR	LR		
	comp=Z,149nm,8.5s						
KMI	**Kunming**	**17.31**	**276**	P	**P**	**05 00 39.8**	**+3.6**
	comp=Z,12nm,0.8s						
KMI				pP		05 00 55.2	
HHC	**Hu-ho-hao-te**	**18.37**	**335**	*e*P	**P**	**05 00 51.8**	**+2.8**
HHC				AMB	AMB		
	comp=Z,14nm,1.2s						
HHC				AMB	AMB		
	comp=Z,124nm,14.4s						
HHC				LR	LR		
	comp=N,214nm,12.0s						
HHC				LR	LR		
	comp=E,246nm,18.0s						
HHC				LR	LR		
	comp=Z,129nm,9.6s						
LZH	**Lanzhou**	**19.26**	**311**	⇓P	**P**	**05 00 59.8**	**+0.7**
LZH				AP		05 01 08.5	
LZH				XP		05 01 12.7	
LZH				AMB	AMB		
	comp=Z,31nm,1.4s						
LZH	**Lanzhou**	**19.26**	**311**	⇓P	**P**	**05 00 59.8**	**+0.7**
	comp=Z,31nm,1.4s						
LZH				pP		05 01 08.5	
LZH				sP		05 01 12.7	
CN2	**Changchun**	**19.44**	**8**	*e*P	**P**	**05 01 02.5**	**+1.6**
GTA	**Gaotai**	**23.73**	**314**	*e*P	**P**	**05 01 45.4**	**+1.5**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**26.05**	**337**	⇑*e*P	**P**	**05 02 05.1**	**-0.8**
	comp=Z,3.5nm,0.6s,mb4.0						
WMQ	**Urumqi**	**33.81**	**313**	*e*P	**P**	**05 03 15.0**	**+0.2**
CHKZ	**Chkalovo**	**47.80**	**321**	*e*P	**P**	**05 05 07.5**	**-1.9**
	comp=Z,4.2nm,0.6s,mb4.5						
JOF	**Joensuu**	**68.67**	**331**	*e*p	**P**	**05 07 32.8**	**-2.1**
	comp=Z,4.5nm,0.5s,mb4.5						
KEV	**Kevo**	**68.85**	**338**	*e*p	**P**	**05 07 31.9**	**-4.0**
	comp=Z,22nm,1.4s,mb4.8						
MALT	**Malatya**	**70.26**	**304**	*e*P	**P**	**05 07 44.7**	**-0.4**
	comp=Z,2.8nm,0.6s,mb4.3						
DAWY	**Dawson**	**71.96**	**27**	*e*P	**P**	**05 07 53.3**	**-1.6**
SDV	**Santo Domingo**	**144.63**	**22**	*e*PKPdf	PKPdf	05 16 04.8	-1.8

IGQ 01 04:58:16.3, 1.32S×81.21W, h12^{km}±5^{km}, mb4.2, 2C, Error ellipse: s-maj=7.9km s-min=4.6km az=15.2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**0.71**	**68**	⇑P	Pb	04 58 29.3	-0.9
JAMA	**Jama**	**1.45**	**44**	P	Pn	04 58 43.1	+0.6
JAMA				S	Sb	04 59 00.3	-0.8
MAGD	**Magdalena**	**1.90**	**49**	P	Pn	04 58 51.3	+2.4
IGUA	**Igualata**	**2.57**	**94**	P	Pn	04 58 59.8	+1.3
CUSU	**Cusua**	**2.73**	**93**	P	Pn	04 59 02.6	+1.8
JUIV	**Juive**	**2.74**	**92**	P	Pn	04 59 03.0	+2.1
ARRY	**Arrayan**	**2.76**	**94**	P	Pn	04 59 02.2	+1.0
ARRY				S	Sn	04 59 34.2	-0.5
RETU	**Refugio**	**2.76**	**93**	P	Pn	04 59 03.0	+1.8
NAS1	**Nasa**	**2.81**	**76**	P	Pn	04 59 04.5	+2.5
JUA2	**San Juan 2**	**2.83**	**67**	P	Pn	04 59 03.7	+1.5
PISA	**Pisayambo**	**2.83**	**85**	P	Pn	04 59 03.8	+1.5
TERV	**Terraza Guagua**	**2.84**	**66**	P	Pn	04 59 04.3	+1.9
PINO	**Pino**	**2.84**	**66**	P	Pn	04 59 03.1	+0.6
VC1	**Cotopaxi 1**	**2.88**	**76**	P	Pn	04 59 04.9	+1.9
VC1				S	Sn	04 59 40.8	+2.8
JOR1	**San Jorge 1**	**2.88**	**63**	P	Pn	04 59 01.8	-1.2
YANA	**Yana**	**2.90**	**66**	P	Pn	04 59 03.9	+0.8
TAMB	**Tambo**	**2.91**	**78**	P	Pn	04 59 06.2	+2.9
ANTI	**Antisana**	**3.17**	**74**	⇑P	Pn	04 59 10.6	+3.6
COTA	**Cotacachi**	**3.31**	**60**	P	Pn	04 59 11.5	+2.5
COTA				S	Sn	04 59 51.9	+3.2
CAYR	**Refugio Cayamb**	**3.46**	**67**	P	Pn	04 59 15.0	+3.8
CAYA	**Cayambe**	**3.50**	**67**	P	Pn	04 59 15.4	+3.7
CONE	**Cono NE Rev Vo**	**3.77**	**71**	P	Pn	04 59 23.7	+8.1

TAP 01 05:04:39.8, 24.81N×121.88E, h95^{km}, ML3.7, Taiwan

PRU ***01*** *05:16:10.1, 51.44N×16.14E*

WAR 01 05:16:10, 51.47N×16.09E, h1^{km}, ML2.6, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**168**	*e*PG	Pg	05 16 22.0	-0.8
KSP				*e*SG	Sg	05 16 29.0	-2.3
UPC	**Upice**	**0.96**	**183**	*e*PG	Pg	05 16 27.9	-1.4
DPC	**Dobruska-Polom**	**1.13**	**172**	*e*PG	Pg	05 16 30.6	-2.0
DPC				*e*SG	Sg	05 16 45.3	-2.4
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	Pg	05 16 35.2	-1.7
PRU	**Pruhonice**	**1.78**	**214**	*e*PN	Pn	05 16 40.4	-1.7
PRU				*e*PG	Pg	05 16 42.5	-3.0
PRU				*e*x	x	05 16 46.5	
PRU				*e*x	x	05 16 59.0	
PRU				*e*SG	Sg	05 17 06.3	-3.0
CLL	**Collm**	**1.94**	**266**	*e*PG	Pg	05 16 46.0	-2.8
CLL				*e*SG	Sg	05 17 13.0	-1.6
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PG	Pg	05 16 47.6	-4.2
OKC				*e*SG	Sg	05 17 14.6	-5.1
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	Pn	05 16 53.2	-1.0
NKC				*e*PG	Pg	05 16 59.0	-3.3
NKC				*e*SG	Sg	05 17 34.4	-2.8
	14nm,0.3s						
OJC	**Ojcow**	**2.66**	**117**	*e*PG	Pg	05 16 59.0	-4.2
OJC				*e*SG	Sg	05 17 35.0	-3.7
KHC	**Kasperske Hory**	**2.84**	**215**	*e*PN	Pn	05 16 56.1	-1.2
KHC				*e*PG	Pg	05 17 01.8	-4.9
KHC				*e*SN	Sn	05 17 30.1	-2.6
KHC				*e*SG	Sg	05 17 41.2	-3.4
MOA	**Molln**	**3.81**	**199**	⇑*i*PN	Pn	05 17 09.3	-1.8
MOA				*i* SG	Sg	05 18 11.6	-5.3
	3.0nm,0.5s						

LDG ***01*** *05:28:30.2±0.6, 43.78N×13.06W, h10^{km}, Ml3.5/14, Error ellipse: s-maj=10.8km s-min=8.7km az=96.0*

NEIC ***01*** *05:28:31.2, 43.35N×12.92W, MG4.5(MDD), After MDD.*

CSEM ***01*** *05:28:32.5±0.2, 43.69N×12.96W, h40^{km}±5^{km}, ML3.7/22, Error ellipse: s-maj=5.0km s-min=2.3km az=91.0*

INMG ***01*** *05:28:33.1±1.0, 43.49N×13.31W, h10^{km}, ML2.8, Error ellipse: s-maj=6.7km s-min=3.9km az=99.0*

MDD 01 05:28:31.0±1.7**, 43.32N×12.95W, mb4.6**/10**, 5C-2D, Error ellipse: s-maj=15.8km s-min=11.9km az=119.0, PRXIMO, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMAZ	**Mazaricos**	**2.93**	**96**	⇓Pn	Pn	05 29 17.4	-2.3
EMAZ				Sn	Sn	05 29 51.0	-5.2
EMAZ	**Mazaricos**	**2.93**	**96**	⇓Pn	Pn	05 29 17.4	-2.3
	36nm,0.1s,SNR=18						
EMAZ				Sn	Sn	05 29 51.0	-5.2
	30nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**2.93**	**96**	Pn	Pn	05 29 17.4	-2.3
	36nm,0.1s,SNR=18						
EMAZ				Sn	Sn	05 29 51.0	-5.2
	30nm,0.1s,SNR=7.9						
STS	**Santiago**	**3.25**	**96**	⇑Pn	Pn	05 29 22.1	-2.2
	265nm,0.1s,SNR=18						
STS				Sn	Sn	05 30 00.6	-3.6
	5.7nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**3.34**	**109**	Pn	Pn	05 29 23.7	-1.9
EZAM				Sn	Sn	05 30 02.7	-4.0
EZAM	**Zamans**	**3.34**	**109**	Pn	Pn	05 29 23.7	-1.9
	12nm,0.1s,SNR=12						
EZAM				Sn	Sn	05 30 02.7	-4.0
	20nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**3.89**	**110**	⇑Pn	Pn	05 29 31.2	-2.2
ELOB				Sn	Sn	05 30 16.1	-4.3
ELOB	**Lobios**	**3.89**	**110**	⇑Pn	Pn	05 29 31.2	-2.2
	4.9nm,0.1s,SNR=18						
ELOB				Sn	Sn	05 30 16.1	-4.3
	7.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**3.89**	**110**	Pn	Pn	05 29 31.2	-2.2
	4.9nm,0.1s,SNR=18						
ELOB				Sn	Sn	05 30 16.1	-4.3
	7.3nm,0.1s,SNR=7.9						
EINC	**Incio**	**4.16**	**97**	Pn	Pn	05 29 34.2	-3.0
	5.4nm,0.3s,SNR=75						
EINC				Sn	Sn	05 30 20.5	-6.8
	7.7nm,0.1s,SNR=7.9						
EINC	**Incio**	**4.16**	**97**	Pn	Pn	05 29 34.2	-3.0
	5.4nm,0.3s,SNR=75						
EINC				Sn	Sn	05 30 20.5	-6.8
	7.7nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**4.23**	**88**	⇑Pn	Pn	05 29 34.9	-3.3
EPON				Sn	Sn	05 30 21.3	-7.8
EPON	**Pontenova**	**4.23**	**88**	⇑Pn	Pn	05 29 34.9	-3.3
	6.5nm,0.1s,SNR=18						
EPON				Sn	Sn	05 30 21.3	-7.8
	3.3nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**4.23**	**88**	Pn	Pn	05 29 34.9	-3.3
	6.5nm,0.1s,SNR=18						
EPON				Sn	Sn	05 30 21.3	-7.8
	3.3nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**4.37**	**100**	Pn	Pn	05 29 37.8	-2.4
	5.5nm,0.1s,SNR=11						
ERUA				Sn	Sn	05 30 26.4	-6.1
	13nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**4.39**	**116**	*e*Pn	Pn	05 29 38.0	-2.4
PVRL				*e*Sn	Sn	05 30 26.3	-6.7
	20nm,0.1s						
PVRL	**Vila Real**	**4.39**	**116**	*e*Pn	Pn	05 29 38.0	-2.4
PVRL				*e*Sn	Sn	05 30 26.3	-6.7
	20nm,0.1s						
PVIS	**Viseu**	**4.58**	**123**	*e*Pn	Pn	05 29 40.8	-2.3
PVIS				*e*Sn	Sn	05 30 32.0	-5.9
	23nm,0.1s						
PVIS	**Viseu**	**4.58**	**123**	*e*Pn	Pn	05 29 40.8	-2.3
PVIS				*e*Sn	Sn	05 30 32.0	-5.9
	23nm,0.1s						
ECAL	**Calabor**	**4.79**	**105**	Pn	Pn	05 29 43.6	-2.5
	1.1nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	05 30 37.2	-5.9
	9.0nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**4.79**	**105**	Pn	Pn	05 29 43.6	-2.5
	1.1nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	05 30 37.2	-5.9
	9.0nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**4.83**	**106**	*e*Pn	Pn	05 29 44.0	-2.7
PBRG				*e*Sn	Sn	05 30 37.2	-7.0
	11nm,0.1s						
PBRG	**Braganca**	**4.83**	**106**	*e*Pn	Pn	05 29 44.0	-2.7
PBRG				*e*Sn	Sn	05 30 37.2	-7.0
	11nm,0.1s						
MTE	**Manteigas**	**4.98**	**124**	*e*Pn	Pn	05 29 45.9	-3.0
MTE				*e*Sn	Sn	05 30 41.4	-6.6
	10nm,0.2s						
MTE	**Manteigas**	**4.98**	**124**	*e*Pn	Pn	05 29 45.9	-3.0
MTE				*e*Sn	Sn	05 30 41.4	-6.6
	10nm,0.2s						
PLOU	**Loures**	**5.28**	**146**	*e*Pn	Pn	05 29 49.5	-3.6
PLOU				*e*Sn	Sn	05 30 47.5	-8.0
	13nm,0.2s						
PLOU	**Loures**	**5.28**	**146**	Pn	Pn	05 29 49.5	-3.6
PLOU				Sn	Sn	05 30 47.5	-8.0
	6.5nm,0.2s						
PCBR	**Castelo Branco**	**5.38**	**128**	*e*Pn	Pn	05 29 51.5	-3.0
PCBR				*e*Sn	Sn	05 30 50.9	-7.1
	4.5nm,0.2s						
PCBR	**Castelo Branco**	**5.38**	**128**	*e*Pn	Pn	05 29 51.5	-3.0
PCBR				*e*Sn	Sn	05 30 50.9	-7.1
	4.5nm,0.2s						
EARI	**Arriondas**	**5.65**	**88**	Pn	Pn	05 29 54.5	-3.7
	6.0nm,0.1s,SNR=7.9						
EARI				Sn	Sn	05 30 55.2	-10
	1.8nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**5.65**	**88**	Pn	Pn	05 29 54.5	-3.7
	6.0nm,0.1s,SNR=7.9						
EARI				Sn	Sn	05 30 55.2	-10
	1.8nm,0.2s,SNR=7.9						
MOE	**Montemor**	**5.92**	**142**	*e*Pn	Pn	05 29 58.3	-3.9
MOE				*e*Sn	Sn	05 31 02.2	-10
EVO	**Evora**	**6.07**	**140**	*e*Pn	Pn	05 29 59.4	-4.8
EVO				*e*Sn	Sn	05 31 08.8	-6.6
	11nm,0.3s						
EBAD	**Badajoz**	**6.40**	**133**	Pn	Pn	05 30 05.1	-3.7
EBAD				Sn	Sn	05 31 13.8	-10
EBAD	**Badajoz**	**6.40**	**133**	Pn	Pn	05 30 05.1	-3.7
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	05 31 13.8	-10
	4.1nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**6.55**	**142**	*e*Pn	Pn	05 30 07.5	-3.5
PBEJ				*e*Sn	Sn	05 31 17.5	-10
	2.5nm,0.2s						
PBEJ	**Beja**	**6.55**	**142**	Pn	Pn	05 30 07.5	-3.5
PBEJ				Sn	Sn	05 31 17.5	-10
	1.2nm,0.2s						
PTEO	**Sao Teotonio**	**6.61**	**149**	*e*Pn	Pn	05 30 08.0	-3.8
PTEO				*e*Sn	Sn	05 31 18.8	-10
	6.1nm,0.1s						
PTEO	**Sao Teotonio**	**6.61**	**149**	Pn	Pn	05 30 08.0	-3.8
PTEO				Sn	Sn	05 31 18.8	-10
	3.0nm,0.1s						
ELAN	**Lanestosa**	**6.95**	**87**	Pn	Pn	05 30 12.5	-4.1
	2.9nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	05 31 27.7	-10
	0.8nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**6.95**	**87**	Pn	Pn	05 30 12.5	-4.1
	2.9nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	05 31 27.7	-10
	0.8nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**7.08**	**109**	Pn	Pn	05 30 15.7	-2.7
	2.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	05 31 31.5	-9.1
	0.2nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**7.13**	**142**	Pn	Pn	05 30 15.5	-3.6
EGRO				Sn	Sn	05 31 30.1	-12
EGRO	**El Granado**	**7.13**	**142**	Pn	Pn	05 30 15.5	-3.6
	SNR=7.9						
EGRO				Sn	Sn	05 31 30.1	-12
	2.1nm,0.2s,SNR=7.9						
PALC	**Alcoutim**	**7.19**	**143**	*e*Pn	Pn	05 30 15.7	-4.3
PALC				*e*Sn	Sn	05 31 32.5	-11
	7.5nm,0.3s						
PALC	**Alcoutim**	**7.19**	**143**	Pn	Pn	05 30 15.7	-4.3
PALC				Sn	Sn	05 31 32.5	-11
	3.8nm,0.3s						
EMIN	**Mina Concepcio**	**7.32**	**137**	Pn	Pn	05 30 17.9	-3.9
	0.5nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	05 31 35.7	-11
	0.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**8.18**	**126**	Pn	P	05 30 30.1	-3.7
	0.8nm,0.1s,SNR=7.9						
EADA				Sn	Sn	05 31 58.6	-9.4
	SNR=7.9						
EADA	**Adamuz**	**8.18**	**126**	Pn	P	05 30 30.1	-3.7
	0.8nm,0.1s,SNR=7.9						
QUIF	**Quistinic**	**8.25**	**53**	*e*Pn	P	05 30 25.1	-10
QUIF				*e*Sn	Sn	05 31 49.1	-21
	3.5nm,0.3s						
EALK	**Alkurruntz**	**8.35**	**87**	Pn	P	05 30 31.1	-5.2
EALK				Sn	Sn	05 32 02.1	-10
EALK	**Alkurruntz**	**8.35**	**87**	Pn	P	05 30 31.1	-5.2
	0.3nm,0.1s,SNR=7.9						
EALK				Sn	Sn	05 32 02.1	-10
	4.8nm,0.3s,SNR=7.9						
ROSF	**Rostrenen**	**8.41**	**50**	*e*Pn	P	05 30 26.3	-11
ROSF				*e*Sn	Sn	05 31 53.5	-20
	3.0nm,0.2s						
ESPR	**Espera**	**8.43**	**138**	Sn	Sn	05 32 08.1	-6.2
	1.8nm,0.2s,SNR=4.0						
ESPR	**Espera**	**8.43**	**138**	Sn	Sn	05 32 08.1	-6.2
	1.8nm,0.2s,SNR=4.0						
SJPF	**Ste Jean**	**8.56**	**87**	*e*Pn	P	05 30 32.9	-6.3
SJPF				*e*Sn	Sn	05 32 04.8	-13
	1.0nm,0.3s						
SGMF	**Saint Gilles**	**8.77**	**52**	*e*Pn	P	05 30 30.5	-12
SGMF				*e*Sn	Sn	05 32 02.5	-20
	1.9nm,0.2s						
ETSF	**Etsaut**	**9.07**	**88**	*e*Pn	P	05 30 42.2	-4.0
ETSF				*e*Sn	Sn	05 32 17.5	-13
	0.8nm,0.2s						
ESAC	**San Caprasio**	**9.35**	**96**	Pn	P	05 30 46.6	-3.5
	5.8nm,0.1s,SNR=7.9						
ESAC	**San Caprasio**	**9.35**	**96**	Pn	P	05 30 46.6	-3.5
	5.8nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**9.61**	**89**	Pn	P	05 30 49.7	-4.0
	0.5nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**9.61**	**89**	Pn	P	05 30 49.7	-4.0
MFF	**Saint Martin d**	**9.65**	**66**	*e*Pn	P	05 30 44.9	-9.2
MFF				*e*Sn	Sn	05 32 26.9	-18
	1.4nm,0.2s						
EPF	**Esparros**	**9.71**	**87**	*e*Pn	P	05 30 48.9	-6.1
EMOS	**Mosqueruela**	**9.77**	**103**	Pn	P	05 30 53.1	-2.7
	0.1nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**9.77**	**103**	Pn	P	05 30 53.1	-2.7
GRR	**Gorron**	**9.84**	**55**	*e*Pn	P	05 30 46.5	-10
GRR				*e*Sn	Sn	05 32 27.5	-22
	2.4nm,0.2s						
LFF	**La Frestale**	**9.97**	**76**	*e*Pn	P	05 30 50.4	-8.2
FLN	**La Foliniere**	**10.23**	**54**	*e*Pn	P	05 30 51.1	-11
LDF	**La Druitiere**	**10.37**	**55**	*e*Pn	P	05 30 54.6	-9.4
LDF				*e*Sn	S	05 32 40.6	-21
	0.7nm,0.2s						
RJF	**Les Rejaudoux**	**10.55**	**74**	*e*Pn	P	05 30 58.4	-8.2
RJF				*e*Sn	S	05 32 50.5	-16
	1.2nm,0.2s						
CAF	**Calviac**	**10.91**	**76**	*e*Pn	P	05 31 03.6	-7.9
MTLF	**Montolieu**	**11.05**	**85**	*e*Pn	P	05 31 06.5	-6.9
MTLF				*e*Sn	S	05 33 05.4	-14
	0.6nm,0.2s						
TCF	**Toulx Ste Croi**	**11.17**	**69**	*e*Pn	P	05 31 06.8	-8.2
TCF				*e*Sn	S	05 33 03.0	-19
	1.0nm,0.2s						
BGF	**Bois d'Agland**	**11.65**	**68**	*e*Pn	P	05 31 13.0	-8.5
BGF				*e*Sn	S	05 33 12.8	-21
	5.7nm,0.4s						
AVF	**Avril sur Loir**	**12.04**	**68**	*e*Pn	P	05 31 18.5	-8.3
LASF	**Ste Croix**	**12.19**	**81**	*e*Pn	P	05 31 21.0	-7.8

NEIC ***01*** *05:32:21.7, 36.20N×7.63W, MG2.8(MDD), After MDD.*

INMG ***01*** *05:32:23.5±1.1, 36.19N×7.93W, h21^{km}±7^{km}, ML1.6, Error ellipse: s-maj=10.4km s-min=5.5km az=102.0*

CSEM ***01*** *05:32:23.6±0.9, 36.18N×7.59W, h40^{km}, ML2.7/1, Error ellipse: s-maj=19.5km s-min=11.9km az=31.0*

MDD 01 05:32:22.5±2.8**, 36.11N×7.84W, h38^{km}**±40^{km}**, mbLg1.8**/4**, 1C, Error ellipse: s-maj=30.3km s-min=10.9km az=23.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALC	**Alcoutim**	**1.39**	**12**	*e*P	P	05 32 45.0	-0.8
PALC				*e*S	S	05 33 01.9	-1.3
	3.8nm,0.1s						
PALC	**Alcoutim**	**1.39**	**12**	⇑P	P	05 32 45.0	-0.8
PALC				S	S	05 33 01.9	-1.3
	1.9nm,0.1s						
EGRO	**El Granado**	**1.45**	**11**	P	P	05 32 45.9	-0.9
EGRO				S	S	05 33 06.1	+1.3
EGRO	**El Granado**	**1.45**	**11**	P	P	05 32 45.9	-0.9
	0.5nm,0.1s,SNR=7.9						
EGRO				S	S	05 33 02.7	-2.1
	2.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.45**	**11**	P	P	05 32 45.9	-0.9
	0.5nm,0.1s,SNR=7.9						
EGRO				S	S	05 33 06.1	+1.3
	2.3nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**1.60**	**334**	*e*P	P	05 32 47.9	-1.0
PTEO				*e*S	S	05 33 05.7	-2.9
	2.3nm,0.1s						
PTEO	**Sao Teotonio**	**1.60**	**334**	P	P	05 32 47.9	-1.0
PTEO				S	S	05 33 05.7	-2.9
	1.1nm,0.1s						
ESPR	**Espera**	**1.77**	**64**	P	P	05 32 49.7	-1.5
	1.8nm,0.2s,SNR=7.9						
ESPR				S	S	05 33 11.0	-1.8
	4.8nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.77**	**64**	P	P	05 32 49.7	-1.5
	1.8nm,0.2s,SNR=7.9						
ESPR				S	S	05 33 11.0	-1.7
	4.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.90**	**29**	P	P	05 32 51.3	-1.9
	0.2nm,0.1s,SNR=7.9						
EMIN				S	S	05 33 13.1	-3.0
	0.6nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.90**	**29**	P	P	05 32 51.3	-1.8
	0.2nm,0.1s,SNR=7.9						
EMIN				S	S	05 33 13.1	-3.0
	0.6nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**1.92**	**359**	*e*Pn	P	05 32 52.0	-1.3
PBEJ				*e*Sn	S	05 33 13.7	-2.7
	3.3nm,0.2s						
PBEJ	**Beja**	**1.92**	**359**	*e*Pn	P	05 32 52.0	-1.3
PBEJ				*e*Sn	S	05 33 13.7	-2.7
	3.3nm,0.2s						
EBAD	**Badajoz**	**2.73**	**14**	P	P	05 33 04.3	-0.6
EBAD				S	S	05 33 33.7	-3.3
EBAD	**Badajoz**	**2.73**	**14**	P	P	05 33 04.3	-0.6
	0.4nm,0.1s,SNR=7.9						
EBAD				S	S	05 33 33.7	-3.3
	0.3nm,0.1s,SNR=4.0						
EBAD	**Badajoz**	**2.73**	**14**	P	P	05 33 04.3	-0.6
	0.3nm,0.1s,SNR=7.9						
EBAD				S	S	05 33 33.7	-3.3
	0.3nm,0.1s,SNR=4.0						
EADA	**Adamuz**	**3.32**	**51**	P	P	05 33 11.2	-2.2
	0.2nm,0.0s,SNR=7.9						
EADA				S	S	05 33 47.5	-4.6
	0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.32**	**51**	P	P	05 33 11.2	-2.2
	0.2nm,0.0s,SNR=7.9						
EADA				S	S	05 33 47.5	-4.6
	0.8nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**3.74**	**4**	*e*Pn	P	05 33 17.4	-1.9
PCBR				*e*Sn	S	05 33 56.9	-5.8
PVIS	**Viseu**	**4.60**	**359**	*e*Sn	S	05 34 17.2	-7.3

JMA ***01*** *05:54:23.6±0.7, 33.93N×141.86E, h22^{km}, M3.7*

ISC 01 05:54:25.5±2.2**, 34.3N**±0.2×**142.0E**±0.2**, h22^{km}, n8, σ0^{s}82**/12**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.94**	**290**	P	**Pb**	**05 54 42.5**	**-0.3**
BSO3	**Boso 3**	**1.35**	**291**	P	**Pn**	**05 54 48.6**	**-0.6**
BSO3				*e*S	**Sn**	**05 55 07.8**	**+1.2**
BSO4	**Boso 4**	**1.55**	**296**	P	**Pn**	**05 54 52.4**	**+0.3**
JOD2	**Odawara 2**	**2.60**	**292**	P	**Pn**	**05 55 05.8**	**-1.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOD2				eS	Sn	05 55 38.9	+0.4
JAG	**Ashikaga**	2.97	315	P	Pn	05 55 13.6	+1.1
JRY	**Ryogami san**	3.07	304	P	Pn	05 55 14.1	+0.2
JYN	**Shimob**	3.10	293	P	Pn	05 55 14.3	0.0
JYN				eS	Sn	05 55 51.0	-0.1
MAT	**Matsushiro**	3.83	306	P	Pn	05 55 25.2	+0.6
MAT				S	Sn	05 56 08.0	-1.5

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*NEIC **01** 05:55:21.5,48.07S×166.02E,h12^{km},ML3.9(WEL),After WEL.*

ISC 01 05:55:20.1±2.5,**48.0S**±0.1×**165.8E**±0.2,**h26**^{km}±29^{km},**n17,**
σ**1^{s}24**/26,**Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	2.54	35	P	Pn	05 56 00.2	-0.4
WHZ	**Wether Hill Ro**	2.54	35	PN	Pn	05 56 00.2	-0.4
WHZ				SN	Sn	05 56 28.6	-2.4
DCZ	**Deep Cove**	2.66	20	PN	Pn	05 56 01.5	-0.9
DCZ				SN	Sn	05 56 37.4	+3.3
MLZ	**Mavora Lakes**	3.09	32	eP	Pn	05 56 07.7	-0.7
MLZ				S	Sn	05 56 42.9	-2.0
MLZ	**Mavora Lakes**	3.09	32	PN	Pn	05 56 07.7	-0.7
MLZ				SN	Sn	05 56 42.9	-2.0
TUZ	**Tuapeka**	3.29	53	eP	Pn	05 56 13.0	+1.7
TUZ	**Tuapeka**	3.29	53	PN	Pn	05 56 13.0	+1.7
TUZ				SN	Sn	05 56 51.6	+1.4
MSZ	**Milford Sound**	3.61	24	PN	Pn	05 56 16.6	+0.8
EAZ	**Earnscleugh**	3.64	42	eP	Pn	05 56 16.3	0.0
EAZ	**Earnscleugh**	3.64	42	PN	Pn	05 56 16.3	0.0
EAZ				SN	Sn	05 56 58.2	-0.8
WKZ	**Wanaka**	3.84	36	eP	Pn	05 56 19.7	+0.6
WKZ	**Wanaka**	3.84	36	PN	Pn	05 56 19.5	+0.4
WKZ				SN	Sn	05 57 03.8	-0.3
JCZ	**Jackson Bay**	4.40	29	eP	Pn	05 56 27.7	+0.6
JCZ				S	Sn	05 57 19.9	+1.7
JCZ	**Jackson Bay**	4.40	29	PN	Pn	05 56 27.7	+0.6
JCZ				SN	Sn	05 57 19.9	+1.7
ODZ	**Otahua Downs**	4.43	50	eP	Pn	05 56 26.1	-1.4
ODZ	**Otahua Downs**	4.43	50	PN	Pn	05 56 26.1	-1.4
ASPA	**Alice Springs**	35.07	302	eP	P	06 02 12.9	-0.1

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*BJI **01** 06:02:11.8,5.50N×94.80E,h30^{km},mb4.7*
*NEIC **01** 06:02:11.8±0.5,5.51N×94.78E,h30^{km},mb4.9/6,Error ellipse: s-maj=23.9km s-min=10.2km az=218.0*

ISC 01 06:02:10.6±0.6,**5.4N**±0.1×**94.7E**±0.1,**h33**^{km}**,n24,**
σ**0^{s}90**/24,**mb4.7**/13,**3C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	14.06	278	P	P	06 05 29.9	+0.2
JIRN	**Jiri** 9.0nm,0.3s,mb4.7	23.61	341	eP	P	06 07 20.1	+0.5
PKI	**Pulchoki** 6.9nm,0.4s,mb4.4	23.80	339	eP	P	06 07 21.8	+0.4
GYA	**Guiyang**	23.88	27	⇑iP	P	06 07 24.2	+1.9
GYA	comp=Z,10.0nm,0.6s,mb4.4			AMB	AMB		
GUN	**Gumba**	23.95	340	eP	P	06 07 22.9	0.0
KKN	**Kakani**	24.04	339	eP	P	06 07 24.0	+0.2
GKN	**Gorkha**	24.47	338	eP	P	06 07 27.8	-0.2
KOLN	**Koldanda** comp=Z,8.6nm,0.3s,mb4.8	24.67	336	eP	P	06 07 29.9	0.0
XAN	**Xi'an**	31.43	23	P	P	06 08 28.9	-2.4
XAN	comp=Z,11nm,0.8s,mb4.7			AMB	AMB		
GTA	**Gaotai**	34.21	7	eP	P	06 08 54.7	-0.6
GTA				AP	pP	06 09 00.5	-4.4
GTA	comp=Z,8.0nm,0.8s,mb4.7			AMB	AMB		
FITZ	**Fitzroy Crossi** comp=Z,4.7nm,0.6s,mb4.4	38.40	128	eP	P	06 09 30.7	-0.1
UCH	**Uchtor** SNR=8.4	40.87	337	P	P	06 09 52.0	+0.9
TKM2	**Tokmak 2** SNR=7.3	41.06	339	P	P	06 09 53.2	+0.5
KBK	**Karagaybulak** SNR=12	41.07	338	P	P	06 09 53.8	+1.0
AML	**Almayashu** SNR=13	41.12	336	P	P	06 09 54.3	+1.1
USP	**Ospenovka** SNR=10	41.76	338	P	P	06 09 58.7	+0.2
WRAB	**Tennant Creek** comp=Z,7.6nm,0.6s,mb4.8	46.37	124	eP	P	06 10 36.1	+0.2
WB2	**Warramunga Arr**	46.38	124	⇑iP	P	06 10 36.4	+0.4
KURK	**Kurchatov** comp=Z,9.3nm,0.4s,mb5.1	47.17	346	⇑eP	P	06 10 41.5	-0.3
ASPA	**Alice Springs**	47.89	129	eP	P	06 10 48.2	+0.3
CHKZ	**Chkalovo** comp=Z,9.8nm,0.5s,mb5.0	52.02	342	eP	P	06 11 18.1	-0.9
JOF	**Joensuu** comp=Z,14nm,1.6s,mb4.7	73.35	335	ep	P	06 13 39.9	-0.8
KAF	**Kangasniemi** comp=Z,12nm,1.3s,mb4.7	75.28	333	ep	P	06 13 50.6	-1.2
KEV	**Kevo** comp=Z,29nm,1.7s,mb4.9	77.38	341	ep	P	06 14 01.3	-2.3

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*IGQ **01** 06:39:57.3,0.87S×81.20W,h17^{km}±7^{km},mb4.7,Error ellipse: s-maj=14.6km s-min=5.0km az=6.0*
*NEIC **01** 06:40:01.9±0.6,0.94S×80.83W,h10^{km},mb4.4/6,Error ellipse: s-maj=12.4km s-min=9.5km az=45.0*
NEIC Felt at Manta.

ISC 01 06:39:59.7±2.0,**0.90S**±0.06×**81.01W**±0.05,**h2**^{km}±14^{km},
n34,σ**1^{s}09**/36,**mb4.4**/4,**17C-2D,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	0.49	108	⇑P	Pg	06 40 09.4	0.0
JAMA	**Jama**	1.03	52	⇑P	Pb	06 40 19.0	-0.9
JAMA				S	Sb	06 40 33.7	+0.1
MAGD	**Magdalena**	1.49	56	P	Pn	06 40 27.6	0.0
IGUA	**Igualata**	2.44	104	⇑P	Pn	06 40 41.5	+0.2
JUA2	**San Juan 2**	2.50	74	⇑P	Pn	06 40 41.6	-0.5
TERV	**Terraza Guagua**	2.51	73	⇑P	Pn	06 40 41.5	-0.7
PINO	**Pino**	2.52	73	⇑P	Pn	06 40 41.4	-0.9
JOR1	**San Jorge 1**	2.54	69	⇑P	Pn	06 40 40.3	-2.2
NAS1	**Nasa**	2.55	84	⇑P	Pn	06 40 43.4	+0.7
YANA	**Yana**	2.56	72	⇑P	Pn	06 40 42.0	-0.9
CUSU	**Cusua**	2.59	102	P	Pn	06 40 42.8	-0.5
JUIV	**Juive**	2.60	102	⇑P	Pn	06 40 43.7	+0.2
VC1	**Cotopaxi 1**	2.62	84	⇑P	Pn	06 40 44.5	+0.8
RETU	**Refugio**	2.62	102	P	Pn	06 40 44.7	+0.9
ARRY	**Arrayan**	2.62	103	⇑P	Pn	06 40 44.1	+0.3
PISA	**Pisayambo**	2.63	93	P	Pn	06 40 45.2	+1.3
PATA	**Patacocha**	2.65	103	P	Pn	06 40 45.5	+1.4
TAMB	**Tambo**	2.65	86	⇑P	Pn	06 40 44.8	+0.6
OTAV	**Otavalo**	2.80	66	⇑ePn	Pn	06 40 45.0	-1.4
ANTI	**Antisana**	2.88	81	⇑P	Pn	06 40 48.5	+1.0
COTA	**Cotacachi**	2.94	65	⇑P	Pn	06 40 47.7	-0.6
CAYR	**Refugio Cayamb**	3.14	73	⇓P	Pn	06 40 52.7	+1.6
CAYA	**Cayambe**	3.17	72	⇑P	Pn	06 40 52.5	+0.9
CONE	**Cono NE Rev Vo**	3.47	76	⇓P	Pn	06 40 57.3	+1.5
PAYG	**Puerto Ayora**	9.28	271	eP	P	06 42 18.1	+0.6
NNA	**Nana**	11.77	160	eP	P	06 42 48.6	-3.1
NNA				eS	S	06 44 56.5	-8.3
SDV	**Santo Domingo**	14.19	47	P	P	06 43 22.5	-1.6
SDV				e		06 43 30.3	
SAML	**Samuel** 36nm,1.1s	19.46	115	eP	P	06 44 25.4	-5.3
LPAZ	**La Paz** 17nm,1.0s	19.87	141	eP	P	06 44 32.8	-2.5
LVC	**Limon Verde** 20nm,0.8s,mb4.7	24.58	152	P	P	06 45 22.6	+0.1
JCT	**Junction City** 4.4nm,0.7s,mb4.5	35.97	332	P	P	06 47 05.8	+1.7
WMOK	**Wichita Mounta** 4.9nm,1.1s,mb4.2	39.17	337	P	P	06 47 30.5	-0.3
CPRX	**Cap Rock**	40.05	330	eP	P	06 47 39.0	+0.9
ANMO	**Albuquerque** 3.9nm,0.8s,mb4.2	42.88	329	eP	P	06 48 00.3	-1.1

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*NNC **01** 06:51:28.2±17.0,36.97N×69.91E,mpv4.4,Error ellipse: s-maj=282.9km s-min=124.6km az=135.0*

ISC 01 06:51:33.8±0.9,**36.57N**±0.05×**70.9E**±0.1,**h200**^{km}**,n30,**
σ**1^{s}17**/35,**mb4.0**/3,**5C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	5.75	134	eP	P	06 53 00.0	+1.5
THN				eS	S	06 54 04.0	-0.4
AML	**Almayashu** SNR=66	5.97	21	P	P	06 53 02.3	+0.8
PONG	**Pong**	6.24	136	eP	P	06 53 07.0	+2.1
PONG				eS	S	06 54 17.0	+1.2
UCH	**Uchtor** SNR=56	6.32	25	P	P	06 53 06.8	+0.9
KZA	**Kyzart** SNR=13	6.46	30	P	P	06 53 08.2	+0.3
EKS2	**Erkin-Say** SNR=13	6.48	19	P	P	06 53 08.9	+0.8
AAK	**Ala-Archa** 14nm,0.5s	6.67	24	⇑P	P	06 53 11.0	+0.5
AAK	72nm,0.8s			⇓S	S	06 54 24.8	-1.1
AAK	**Ala-Archa** SNR=28	6.67	24	P	P	06 53 10.9	+0.4
KBK	**Karagaybulak** SNR=11	6.84	26	P	P	06 53 14.5	+1.7
BHK	**Bhakra**	6.90	137	eS	S	06 54 28.7	-2.6
ULHL	**Ulahol** SNR=9.5	7.03	35	P	P	06 53 15.2	0.0
CHMS	**Chumysh** SNR=6.8	7.08	24	P	P	06 53 16.5	+0.6
SDNR	**Sundarnagar**	7.15	133	eP	P	06 53 17.8	+1.0
SDNR				eS	S	06 54 34.8	-2.4
USP	**Ospenovka** SNR=7.2	7.25	22	P	P	06 53 17.5	-0.5
TKM2	**Tokmak 2** SNR=37	7.31	28	P	P	06 53 19.2	+0.2
SMLA	**Simla**	7.54	134	⇑iP	P	06 53 37.2	+15
SMLA	414nm,0.5s			i S	S	06 54 56.7	+10
DDI	**Dehra Dun**	8.65	134	eP	P	06 53 39.2	+2.8
DDI				e		06 55 18.1	
NDI	**New Delhi**	9.51	144	eS	S	06 55 25.5	-6.6
MK31	**Makanchi Array** 1.9nm,0.6s,baz=221,slow=16,SNR=32	13.30	36	⇑P	P	06 54 34.0	-1.8
KOLN	**Koldanda** 12nm,0.5s	13.89	126	eP	P	06 54 42.9	-0.4
GKN	**Gorkha** 16nm,0.3s	14.43	122	eP	P	06 54 50.1	+0.1
KKN	**Kakani** 26nm,0.5s	15.00	122	eP	P	06 54 56.3	-0.8
PKI	**Pulchoki** 28nm,0.7s	15.23	122	eP	P	06 54 58.9	-1.0
GUN	**Gumba** 20nm,0.5s	15.34	120	eP	P	06 55 00.4	-0.9
JIRN	**Jiri** 57nm,0.5s	15.71	120	eP	P	06 55 05.3	-0.6
BVA0	**Borovoye Array** 0.5nm,1.1s,baz=161,slow=12,SNR=9.8	16.46	359	⇑P	P	06 55 15.6	+0.8
CHKZ	**Chkalovo** 10.0nm,2.0s	17.11	359	⇑P	P	06 55 21.1	-1.1
JOF	**Joensuu** 3.7nm,0.6s,mb4.1	35.76	330	ep	P	06 58 13.3	-1.6
KAF	**Kangasniemi** 14nm,1.7s,mb4.2	37.51	327	ep	P	06 58 23.3	-6.3
NB2	**NORSAR Subarra** 1.4nm,0.5s,mb3.5,baz=94,slow=7.9	44.26	323	P	P	06 59 23.8	-0.8

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*NEIC **01** 07:31:03.2,15.52N×60.74W,h107^{km},MD3.6(TRN),After TRN.*
*TRN **01** 07:31:04.1,15.46N×60.89W,h112^{km},MD3.6*

ISC 01 07:31:04.2±0.8,**15.43N**±0.04×**61.0W**±0.1,**h126**^{km}±4^{km},
n27,σ**0^{s}99**/40,**2C-12D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DWS	**Wesley**	0.30	297	⇑iP	P	07 31 21.9	0.0
DWS				eS	S	07 31 34.1	-1.3
DSTT	**Stowe**	0.32	236	⇑iP	P	07 31 22.6	+0.7
DSTT				eS	S	07 31 35.2	-0.2
DBCT	**Belle View Cho**	0.34	243	eP	P	07 31 22.9	+0.9
MDN	**Morne-Daniel**	0.37	253	⇓iP	P	07 31 23.0	+0.8
MDN				eS	S	07 31 36.9	+1.1
DSHT	**Scott's Head**	0.40	237	⇓iP	P	07 31 23.0	+0.6
DSHT				eS	S	07 31 36.1	0.0
BBL	**Barber's Block**	0.44	283	⇓iP	P	07 31 22.6	+0.1
BBL				eS	S	07 31 36.0	-0.4
BBL	**Barber's Block**	0.44	283	⇓eP	P	07 31 22.6	+0.1
BBL				eS	S	07 31 36.0	-0.4
MGG	**Marie-Galante**	0.56	330	⇓eP	P	07 31 23.7	+0.5
CRM	**Caravelle**	0.68	171	⇓iP	P	07 31 24.2	+0.1
FDF	**Fort de France**	0.70	190	⇓iP	P	07 31 24.3	+0.1
FDF				i S	S	07 31 38.4	-1.2
DOG	**Dongo Capester**	0.82	317	⇓eP	P	07 31 25.5	+0.3
BCG	**Bois Riant Cap**	0.86	319	eP	P	07 31 26.0	+0.3
SCG	**Saint Claude**	0.86	314	⇓eP	P	07 31 25.9	+0.3
MVM	**Montagne Vaucl**	0.88	172	⇓iP	P	07 31 25.8	0.0
BIM	**Bigot**	0.91	183	⇓eP	P	07 31 26.2	+0.1
BIM				eS	S	07 31 41.6	-1.0
SEG	**Port Louis**	1.07	335	eP	P	07 31 28.3	+0.6
BPA	**Boggy Peak**	1.79	334	i P	P	07 31 35.8	0.0
BPA				eS	S	07 31 58.0	-1.8
NVBH	**Bath Hotel, Ne**	2.27	318	eP	P	07 31 42.8	+0.9
NVBH				eS	S	07 32 13.6	+3.2
CPB	**Codrington**	2.33	341	⇓iP	P	07 31 42.2	-0.5
CPB				eS	S	07 32 09.6	-2.2
STAT	**Sint Eustatius**	2.78	318	eP	P	07 31 54.1	+5.5
STAT				eS	S	07 32 23.5	+1.3
GRHS	**Sauteurs**	3.24	191	i P	P	07 31 54.4	-0.3
STMA	**St. Maarten, A**	3.27	323	eS	S	07 32 30.6	-3.4
GRW	**Mount Saint Ca**	3.31	191	eP	P	07 31 56.4	+0.8
TPR	**Prospect**	4.22	177	eP	P	07 32 09.1	+1.2
TRN	**Trinidad (W)**	4.77	184	eP	P	07 32 16.5	+1.3
TRN				eS	S	07 33 07.7	-2.1
SDV	**Santo Domingo**	11.42	236	eP	P	07 33 43.3	-1.1
MNTX	**Cornudas Mount**	43.44	300	eP	P	07 38 55.1	-1.3

BJI 01 08:01:56.0,22.55N×100.90E,h11^{km},mB4.6,mb4.3,
ML4.5,Ms4.2,Msz3.6,1C,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	3.07	33	P	Pn	08 02 47.9	+2.5
GYA	**Guiyang**	6.53	52	P	Pn	08 03 34.7	+0.2
GYA				PG	Pg	08 03 56.1	-10
GYA				S	Sn	08 04 56.4	+6.6
GYA				SG	Sg	08 05 27.8	-5.8
GYA	comp=N,150nm,1.0s			Smax			
GYA	comp=E,150nm,1.0s			Smax			
GYA	comp=N,3µm,10.8s			LR	LR		
GYA	comp=E,2µm,9.6s			LR	LR		
GYA	comp=Z,660nm,8.7s			LR	LR		
CD2	**Chengdu**	8.71	16	P	P	08 04 03.9	-1.0
CD2	comp=Z,20nm,0.6s			AMB	AMB		
QIZ	**Qiongzhong**	9.07	111	P	P	08 04 09.0	-0.9
QIZ				S	Sn	08 05 48.4	-4.6
QIZ	comp=E,583nm,13.1s			LR	LR		
QIZ	comp=Z,393nm,16.3s			LR	LR		
GTA	**Gaotai**	16.83	357	eP	P	08 05 56.6	+3.4
GTA				AP		08 06 01.9	
GTA				XP		08 06 05.2	
GTA				PP	PP	08 06 10.6	+3.2
GTA				S	S	08 09 01.3	+2.0
GTA				XS		08 09 08.9	
GTA				SS	SS	08 09 21.8	+1.8
GTA	comp=Z,7.0nm,1.1s			AMB	AMB		
GTA	comp=Z,109nm,3.7s			AMB	AMB		
GTA	comp=N,310nm,14.4s			LR	LR		
GTA	comp=E,1µm,14.8s			LR	LR		
GTA	comp=Z,480nm,9.1s			LR	LR		
HHC	**Hu-ho-hao-te**	20.34	24	⇑P	P	08 06 35.4	+0.3
HHC				AP		08 06 43.1	
HHC				XP		08 06 47.9	
HHC				PP	PP	08 06 53.9	-1.6
HHC				S	S	08 10 11.7	-6.0
HHC				XS		08 10 22.5	
HHC				PCP	PcP	08 10 51.3	+3.4
HHC	comp=Z,21nm,1.3s			AMB	AMB		
HHC	comp=Z,111nm,3.9s			AMB	AMB		
HHC	comp=N,333nm,18.0s			LR	LR		
HHC	comp=E,516nm,15.6s			LR	LR		
HHC	comp=Z,370nm,14.4s			LR	LR		
BJI	**Beijing**	21.72	33	P	P	08 06 50.5	+1.3
BJI				AP		08 06 56.4	
BJI				XP		08 06 59.2	
BJI	comp=Z,13nm,1.0s			AMB	AMB		
BJI	comp=N,425nm,15.8s			LR	LR		
BJI	comp=E,335nm,10.6s			LR	LR		
BJI	comp=Z,168nm,19.2s			LR	LR		

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*ATH **01** 08:19:56.5,35.68N×29.52E,h10^{km},MD3.2/3*
*ISK **01** 08:19:58.2,35.85N×29.52E,h33^{km},MD3.3*
*CSEM **01** 08:19:59.1±0.3,35.93N×29.59E,h32^{km}±2^{km},MD3.3, Error ellipse: s-maj=9.6km s-min=3.7km az=164.0*

ISC 01 08:19:57.0±1.4,**35.86N**±0.07×**29.66E**±0.06,**h8**^{km}±7^{km},
n16,σ**1^{s}29**/21,**1D,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	0.29	348	⇓iPG	Pg	08 20 05.4	+2.3
FETY	**Fethiye**	0.90	329	PG	Pg	08 20 14.2	-0.9
FETY				SG	Sg	08 20 26.0	-1.2
ELL	**Elmali**	0.91	13	PG	Pg	08 20 15.2	0.0
ARG	**Arkhangelos**	1.29	286	ePB	Pb	08 20 21.0	-0.2
BCK	**Bucak**	1.76	25	PN	Pn	08 20 28.9	+0.8
DNZL	**Cakiroluk**	1.89	345	i P	Pn	08 20 32.7	+2.8
DNZL				i S	Sn	08 20 55.6	+1.4
DENT	**Denizli**	1.96	345	PN	Pn	08 20 29.9	-1.0
KARP	**Karpathos**	2.06	262	ePN	Pn	08 20 31.0	-1.4
BDRM	**Kayabasi**	2.15	305	i P	Pn	08 20 36.0	+2.2
BDRM				i S	Sn	08 21 00.3	-0.6
AYDN	**Tasoluk**	2.30	322	i P	Pn	08 20 37.3	+1.5
AYDN				i S	Sn	08 21 08.1	+3.6
KONT	**Konya--Tatoy**	3.00	45	PN	Pn	08 20 45.9	+0.1
ALT	**Altintas**	3.21	6	PN	Pn	08 20 48.2	-0.6
AKS	**Akhisar**	3.35	335	ePN	Pn	08 20 49.5	-1.3
KIZT	**Kizilcal**	3.49	30	ePN	Pn	08 20 52.1	-0.7
ESKT	**Eskisehir**	3.77	14	ePN	Pn	08 20 56.1	-0.7
ESKT	**Eskisehir**	3.77	14	i P	Pn	08 20 57.4	+0.6
ESKT				i S	Sn	08 21 40.4	-1.6

NEIC 01 08:21:30.7,53.40N×165.84W,h23^{km},ML3.5(AEIC),
After AEIC.,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	0.60	319	P	Pb	08 21 41.6	-0.8
UNV				S	Sb	08 21 50.0	-0.4
MNAT	**Makushin Natee**	0.70	314	P	Pb	08 21 43.2	-0.9
MNAT				S	Sb	08 21 53.1	-0.2
MGOD	**Makushin Gods**	0.73	303	P	Pb	08 21 43.8	-0.9
AKA	**Akutan**	0.74	3	P	Pb	08 21 43.7	-1.1
AKA				S	Sb	08 21 54.4	-0.1
AKUT	**Akutan**	0.74	3	P	Pb	08 21 43.6	-1.2
AKUT				S	Sb	08 21 54.1	-0.3
MTBL	**Makushin Table**	0.76	319	P	Pb	08 21 44.4	-0.7
MSW	**Makushin Switc**	0.76	313	P	Pb	08 21 44.1	-1.1
AKLV	**Akutan Long Va**	0.77	355	P	Pb	08 21 43.7	-1.6
AKLV				S	Sb	08 21 54.1	-1.2
LVA	**Lava Point**	0.77	351	P	Pb	08 21 44.0	-1.3
AKGG	**Akutan Green G**	0.81	354	P	Pb	08 21 44.8	-1.2

MAN 01 08:39:07.6,10.13N×125.89E,h38^{km},mb4.6,ML3.4,
MS3.3,4C-2D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	0.53	229	⇑eP	P	08 39 19.2	+0.6
SCPH				eS	S	08 39 28.3	+1.9
MSLP	**Maasin**	1.02	270	eP	P	08 39 26.3	+0.8
MSLP				eS	S	08 39 42.0	+3.2
BUTP	**Butuan**	1.18	193	eP	P	08 39 28.6	+0.8
PLP	**Palo**	1.36	319	i P	P	08 39 30.3	-0.2
PLP				eS	S	08 39 48.2	+0.6
BESP	**Borongan**	1.53	343	eP	P	08 39 32.7	-0.1
BESP				eS	S	08 39 53.6	+1.9
OCLP	**Ormoc**	1.56	306	eP	P	08 39 34.2	+0.9
LLP	**Lapu-Lapu**	1.90	276	⇑eP	P	08 39 37.9	-0.3
LLP				eS	S	08 40 00.6	-0.6
BIPH	**Bislig**	1.99	166	⇑eP	P	08 39 38.5	-0.9
BIPH				eS	S	08 40 02.5	-0.8
CGP	**Cagayan de Oro**	2.04	215	⇓eP	P	08 39 39.6	-0.6
CGP				eS	S	08 40 04.8	+0.2
TBP	**Tagbilaran**	2.05	258	eP	P	08 39 40.4	+0.1
TBP				eS	S	08 40 05.6	+0.9
BUKP	**Musuan**	2.38	200	eP	P	08 39 45.2	+0.2
SNPH	**Sibulan**	2.73	254	⇓eP	P	08 39 50.2	+0.2
DCPH	**Dipolog City**	2.94	239	i P	P	08 39 52.4	-0.6
DCPH				i S	S	08 40 26.0	-1.4
MATI	**Mati**	3.18	173	eP	P	08 39 54.4	-2.1
GUIM	**Jordan**	3.29	279	eP	P	08 39 58.1	+0.2
PAGZ	**Pagadian**	3.36	228	eP	P	08 39 57.9	-1.1
RCP	**Roxas**	3.40	295	⇑eP	P	08 39 58.4	-1.1
PVCP	**Virac**	3.84	334	eP	P	08 40 03.9	-1.9

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*ISK **01** 09:07:45.7,38.74N×25.75E,h84^{km},MD3.5*
*ATH **01** 09:07:45.3,38.80N×25.67E,h24^{km}±2^{km},MD3.4/7,ML3.4*
*CSEM **01** 09:07:45.8±0.1,38.77N×25.79E,h20^{km},MD3.5,Error ellipse: s-maj=2.3km s-min=1.9km az=4.0*

ISC 01 09:07:44.9±0.9,**38.78N**±0.03×**25.71E**±0.04,**h4**^{km}±7^{km},
n40,σ**1^{s}09**/52,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.64	43	ePN	Pg	09 07 58.0	+0.2
PRK				eSN	Sg	09 08 07.5	+1.2
AYVA	**Ayvalik**	0.93	55	i P	Pb	09 08 03.7	+0.5
AYVA				i S	Sb	09 08 15.3	-0.5
BOZC	**Bozcaada**	1.10	14	i P	Pb	09 08 06.8	+0.7
BLCB	**Balcova**	1.11	110	PG	Pg	09 08 06.4	-0.8
BLCB				SG	Sg	09 08 22.6	+0.6
LOS	**Limnos**	1.26	337	eP	Pb	09 08 09.9	+1.1
LOS	**Limnos**	1.26	337	eP	Pb	09 08 09.9	+1.1
IZM	**Izmir**	1.27	107	PN	Pn	09 08 08.4	-1.1
KDAG	**Bornova**	1.27	106	i P	Pb	09 08 09.2	0.0
KDAG				i S	Sb	09 08 31.1	+5.4
SMG	**Samos**	1.39	140	ePN	Pn	09 08 12.2	+1.1
SMG				eSN	Sn	09 08 31.0	+1.0
AOS	**Alonnisos**	1.48	286	eP	Pn	09 08 13.4	+1.0
PTL	**Penteli**	1.62	244	ePN	Pn	09 08 14.5	+0.1
CANB	**Canakkale**	1.62	40	ePN	Pn	09 08 14.1	-0.4
AKS	**Akhisar**	1.65	86	PN	Pn	09 08 13.4	-1.4
APE	**Apeiranthos**	1.71	185	PN	Pn	09 08 14.8	-0.9
ATH	**Athens Observa**	1.76	244	ePN	Pn	09 08 16.0	-0.4
LPK	**Lapseki**	1.79	27	PN	Pn	09 08 16.5	-0.4
BALB	**Balikesir**	1.89	62	ePN	Pn	09 08 17.5	-0.8
AYDN	**Tasoluk**	2.04	122	i P	Pn	09 08 20.1	-0.3
AYDN				i S	Sn	09 08 52.0	+5.4
BTOK	**Tokmak**	2.05	61	i P	Pn	09 08 24.6	+4.0
BTOK				i S	Sn	09 08 51.6	+4.6
ALN	**Alexandroupoli**	2.14	7	eP	Pn	09 08 21.0	-0.8
BDRM	**Kayabasi**	2.19	141	i P	Pn	09 08 24.5	+2.0
BDRM				i S	Sn	09 08 54.9	+4.4
SART	**Tekirdag**	2.22	30	i P	Pn	09 08 26.0	+3.0
SART				i S	Sn	09 08 53.4	+2.1
EDC	**Edincik**	2.29	46	PN	Pn	09 08 23.6	-0.4
BNT	**Bandirma**	2.33	47	ePN	Pn	09 08 23.2	-1.3
MRMT	**Marmara Adasi**	2.33	38	ePN	Pn	09 08 23.5	-1.2
RDO	**Rodhopi**	2.37	357	ePN	Pn	09 08 24.5	-0.7
KCT	**Karacabey**	2.53	53	ePN	Pn	09 08 26.3	-1.2
AGG	**Agios Georgios**	2.65	276	eP	Pn	09 08 29.8	+0.7
ORLT	**Orhaneli**	2.77	62	ePN	Pn	09 08 30.6	-0.3
DNZL	**Cakiroluk**	2.84	111	i P	Pb	09 08 40.5	+4.6
DNZL				i S	Sb	09 09 17.8	+6.5

KDZ	Kurdzhali	2.88	356	iP	Pn	09 08 31.5	-1.0
ULDT	Uludag	2.98	62	iP	Pb	09 08 41.7	+3.4
ULDT				iS	Sb	09 09 18.4	+3.1
RZN	Rozhen	3.01	346	iP	Pn	09 08 34.0	-0.3
VLI	Veliai	3.01	228	ePN	Pn	09 08 33.8	-0.5
CTT	Catalca	3.16	41	ePN	Pn	09 08 35.0	-1.4
EDRB	Edirne	3.17	14	ePN	Pn	09 08 34.9	-1.6
KNT	Kendrikon	3.22	319	eP	Pn	09 08 38.2	+0.9
KKB	Krupnik	3.68	328	P	Pn	09 08 43.5	-0.4
ESKT	Eskisehir	4.07	78	iP	Pb	09 09 00.3	+3.5
ESKT				iS	Sb	09 09 51.3	+4.6
VTS	Vitosha	4.26	334	P	Pn	09 08 54.0	+1.9

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*MOS **01** 09:20:51.8±1.2, 20.40S×179.81E, h406^{km}, mb4.8/4, Error ellipse: s-maj=38.5km s-min=17.4km az=115.7*

*BJI **01** 09:21:01.6, 21.48S×179.04W, h588^{km}, mB5.2, mb5.1*

*HRVD **01** 09:21:02.3±0.7, 21.77S×179.35W, h610^{km}±5^{km}, MW5.3/39, Centroid moment Tensor Solution. LP body waves: s39,c51; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.20±.06; $M_{\theta\theta}$-0.45±.10; $M_{\phi\phi}$0.24±.09; $M_{r\theta}$-0.44±.10; $M_{\theta\phi}$-0.40±.10; $M_{\phi r}$-0.97±.08; Best double couple: $M_0$1.205×10^{17} NP1:ϕ_s105°,δ26°,λ168°. NP2: ϕ_s206°,δ85°,λ64°. Principal axes: T 1.198, Plg45°, Azm91°; N .014, Plg26°, Azm209°; P -1.212, Plg35°, Azm318°; nsta1 refers to body waves, cutoff=40s.*

*NEIC **01** 09:21:02.3±0.6, 21.71S×179.46W, h580^{km}±7^{km}, mb5.1/50 Error ellipse: s-maj=8.3km s-min=4.6km az=156.0*

ISC 01 09:20:59.6±0.7**, 21.76S**±0.05×**179.52W**±0.04**, h559**^{km}±9^{km}**, h583**^{km}±7.9^{km}**:pP-P, n336, σ0^{s}93**/196**, mb5.1**/69**, 37C-44D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	7.60	169	eP	P	09 22 56.2	+1.8
RAO				eS	S	09 24 28.6	+2.6
AFI	Afiamalu	10.74	45	eP	P	09 23 25.8	0.0
AFI				eS	S	09 25 21.1	-1.9
DZM	Mont Dzumac	13.03	266	eP	P	09 23 53.8	+4.9
DZM				eS	S	09 26 03.0	-1.9
NOUC	Port Laguerre	13.16	266	eP	P	09 23 54.6	+4.4
NOUC	Port Laguerre	13.16	266	eS	S	09 26 13.2	+5.9
NOUC	Port Laguerre	13.16	266	eP	P	09 23 54.6	+4.4
NOUC				eS	S	09 26 13.2	+5.9
PUZ	Puketiti	16.37	186	SN	S	09 26 59.9	-5.1
PUZ	Puketiti	16.37	186	SN	S	09 26 59.9	-5.1
URZ	Urewera	16.70	189	PN	P	09 24 23.3	-1.6
URZ				SN	S	09 27 04.4	-6.2
URZ	Urewera	16.70	189	PN	P	09 24 23.3	-1.6
URZ				SN	S	09 27 04.4	-6.2
MWZ	Matawai	16.72	188	PN	P	09 24 23.9	-1.2
MWZ				SN	S	09 27 06.1	-4.9
MWZ	Matawai	16.72	188	PN	P	09 24 23.9	-1.2
MWZ				SN	S	09 27 06.1	-4.9
RAR	Rarotonga	18.39	92	eP	P	09 24 40.1	-1.1
	254nm,1.1s						
PWZ	Pawanui	18.47	189	SN	S	09 27 35.4	-5.5
PWZ	Pawanui	18.47	189	SN	S	09 27 35.4	-5.5
MRZ	Mangatainoka R	19.30	191	PN	P	09 24 47.4	-2.3
MRZ				SN	S	09 27 47.1	-7.7
MRZ	Mangatainoka R	19.30	191	PN	P	09 24 47.4	-2.3
MRZ				SN	S	09 27 47.1	-7.7
QRZ	Quartz Range	20.17	198	PN	P	09 24 58.4	+0.7
QRZ	Quartz Range	20.17	198	PN	P	09 24 58.4	+0.7
NNZ	Nelson	20.31	196	PN	P	09 24 59.0	0.0
NNZ	Nelson	20.31	196	PN	P	09 24 59.0	0.0
DSZ	Denniston Nort	21.23	198	PN	P	09 25 07.8	+0.4
DSZ	Denniston Nort	21.23	198	PN	P	09 25 07.8	+0.4
KHZ	Kahutara	21.41	194	PN	P	09 25 07.7	-1.3
KHZ	Kahutara	21.41	194	PN	P	09 25 07.7	-1.3
LTZ	Lake Taylor	22.06	196	PN	P	09 25 13.3	-1.8
LTZ	Lake Taylor	22.06	196	PN	P	09 25 13.3	-1.8
JCZ	Jackson Bay	24.28	201	PN	P	09 25 34.8	-0.2
JCZ	Jackson Bay	24.28	201	PN	P	09 25 34.8	-0.2
TBI	Tubuai	27.79	99	eP	P	09 26 05.9	-0.1
	269nm,0.8s,mb5.9						
TBI				eScP		09 31 47.9	
	192nm,1.2s						
PAE	Paea	28.46	87	eP	P	09 26 10.9	-0.9
	260nm,1.3s,mb5.7						
PAE				eScP		09 31 52.0	
	63nm,0.8s						
PPT	Papeete	28.48	87	eP	P	09 26 11.6	-0.4
	90nm,1.1s,mb5.3						
PPT				eScP		09 31 52.4	
	51nm,1.4s						
RIV	Riverview	28.49	239	eP	P	09 26 14.1	+2.2
TIAR	Tiarei	28.70	87	eP	P	09 26 13.4	-0.5
	331nm,0.9s,mb6.0						
TVO	Taravao	28.74	87	eP	P	09 26 13.5	-0.7
	234nm,0.7s,mb5.9						
MEH	Mehetia	29.82	88	eP	P	09 26 22.6	-0.9
	156nm,1.1s,mb5.5						
CNB	Canberra Magne	30.35	237	⇓iP	P	09 26 30.0	+2.2
	3μm,0.7s						
CNB				eSCP		09 31 59.3	
PMOR	Pomariorio Ree	30.72	83	eP	P	09 26 30.7	-0.5
	391nm,1.2s,mb5.8						
CTA	Charters Tower	31.97	267	⇓iP	P	09 26 43.4	+1.7
	169nm,0.5s,mb5.8						
CTA				ePCP	PcP	09 29 14.5	-0.7
CTA				eSCP		09 32 04.5	
CTA				eSCS	ScS	09 36 06.0	+1.2
CTAO	Charters Tower	31.97	267	⇓iP	P	09 26 43.3	+1.6
	166nm,0.5s,mb5.8						
CTAO				ePcP	PcP	09 29 14.5	-0.7
TOO	Toolangi	34.01	235	⇓iP	P	09 27 00.4	+1.7
	5.3nm,0.6s,mb4.2						
PMG	Port Moresby	34.27	286	⇓iP	P	09 27 02.4	+1.3
	418nm,0.8s,mb6.0						
STKA	Stephens Creek	35.97	245	⇓iP	P	09 27 16.9	+1.9
	81nm,0.5s,mb5.5						
STKA				eS	S	09 32 12.9	-2.7
STKA				eSCP		09 32 18.9	
RKT	Rikitea	41.08	101	eP	P	09 27 56.3	-0.2
	88nm,0.8s,mb5.3						
ASPA	Alice Springs	42.86	258	⇓iP	P	09 28 11.3	+0.7
ASPA				ePCP	PcP	09 29 48.3	-0.9
ASPA				eSCP		09 32 46.2	
ASPA				eS	S	09 33 52.7	-3.0
ASPA				eSCS	ScS	09 37 07.2	-0.2
WB2	Warramunga Arr	43.02	264	⇓iP	P	09 28 12.1	+0.2
WB2				eSCP		09 32 46.6	
WB2				eS	S	09 33 53.2	-4.8
WB2				eSCS	ScS	09 37 09.1	+0.7
WRAB	Tennant Creek	43.02	264	iP	P	09 28 12.0	0.0
WRAB	Tennant Creek	43.02	264	⇓iP	P	09 28 12.1	+0.1
	469nm,0.9s,mb6.0						
KAKA	Kakadu	46.60	273	⇓iP	P	09 28 39.5	-0.1
	228nm,0.4s,mb6.1						
KAKA				eSCP		09 33 00.8	
KAKA				eS	S	09 34 45.9	-2.1
POHA	Pohakuloa	47.46	31	eP	P	09 28 45.5	-0.6
	489nm,0.8s,mb6.1						
FORT	Forrest	47.50	248	⇓iP	P	09 28 45.9	-0.4
	966nm,0.6s						
FORT				eSCP		09 33 04.7	
FORT				eS	S	09 34 56.8	-3.4
FITZ	Fitzroy Crossi	51.46	264	⇓iP	P	09 29 15.9	+0.2
	434nm,1.5s,mb5.6						
FITZ				eS	S	09 35 53.1	-1.0
MBWA	Marble Bar	56.20	259	⇓iP	P	09 29 48.5	-0.5
	297nm,0.7s,mb5.6						
KLBR	Kellerberrin	56.24	246	⇓iP	P	09 29 48.7	-0.5
	2μm,1.0s						
NWAO	Narrogin (SRO)	56.54	244	eP	P	09 29 50.3	-0.9
	82nm,0.9s,mb5.0						
VNDA	Vanda	56.54	185	eP	P	09 29 51.1	+0.5
	7.3nm,0.7s						
MUN	Mundaring	57.51	245	⇓iP	P	09 29 57.7	-0.1
	53nm,0.6s,mb5.0						
MATI	Mati	60.31	292	eP	P	09 30 14.7	-2.1
BUKP	Musuan	61.80	292	eP	P	09 30 27.4	+0.9
BUTP	Butuan	61.86	294	eP	P	09 30 26.4	-0.5
MSLP	Maasin	63.10	294	eP	P	09 30 34.7	-0.1
KEDI	Kedomdong	63.13	271	⇓eP	P	09 30 34.2	-0.8
	162nm,0.6s,mb5.6						
PAGZ	Pagadian	63.23	291	eP	P	09 30 35.3	-0.3
BESP	Borongan	63.36	296	eP	P	09 30 36.3	-0.2
RATI	Rata	63.59	271	⇓eP	P	09 30 37.5	-0.6
	729nm,0.6s						
OCLP	Ormoc	63.77	295	eP	P	09 30 38.6	-0.7
IPIL	Ipil	63.91	291	eP	P	09 30 39.7	-0.4
KELI	Kelakatan	64.73	271	⇓eP	P	09 30 44.9	-0.4
	391nm,0.3s						
SRDI	Scrawed	64.97	271	⇓eP	P	09 30 45.4	-1.4
	149nm,1.0s,mb5.4						
GUIM	Jordan	65.27	294	eP	P	09 30 45.9	-2.8
PVCP	Virac	65.47	297	eP	P	09 30 50.1	+0.2
RCP	Roxas	65.61	295	⇓eP	P	09 30 50.2	-0.5
TSM	Tawau	66.47	285	P	P	09 30 56.8	+0.7
OTRP	Odiongan	66.62	295	eP	P	09 30 55.6	-1.4
CUYO	Cuyo Island	66.72	293	eP	P	09 30 56.6	-1.0
ENPP	El Nido	68.26	292	eP	P	09 31 06.7	-0.3
QSPA	South Pole Qui	68.32	180	⇑iP	P	09 31 06.8	+0.6
	45nm,0.8s,mb5.0						
BATP	Bataraza	68.54	289	eP	P	09 31 09.2	+0.5
KKM	Kota Kinabalu	68.72	286	P	P	09 31 10.1	+0.4
MAJO	Matsushiro	70.39	325	eP	P	09 31 19.0	-0.3
	68nm,0.9s,mb5.2						
MAT	Matsushiro	70.39	325	eP	P	09 31 18.0	-1.3
	60nm,0.9s,mb5.1						
MAT	Matsushiro	70.39	325	P	P	09 31 18.0	-1.3
TATO	Taipei	73.74	306	eP	P	09 31 38.4	-0.3
	185nm,0.8s,mb5.6						
FX1	Attu Island--F	74.59	355	eP	P	09 31 41.5	-1.5
YSS	Yuzh-Sakhalins	76.39	334	eP	P	09 31 52.4	-0.6
YSS				e		09 34 02.6	
YSS				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.9						
YSS	Yuzh-Sakhalins	76.39	334	eP	P	09 31 53.7	+0.7
	comp=Z,28nm,0.6s,mb4.9						
SSE	Sheshan	77.42	311	eP	P	09 31 59.1	+0.3
SSE				AMB	AMB		
	comp=Z,22nm,0.9s,mb4.6						
SSE				AMB	AMB		
	comp=Z,304nm,6.8s						
SSE	Sheshan	77.42	311	eP	P	09 31 59.1	+0.3
	comp=Z,22nm,0.9s,mb4.6						
NJ2	Nanjing	79.60	311	eP	P	09 32 11.6	+1.3
NJ2				AP	pP	09 34 18.8	+8.6
NJ2				XP	sP	09 35 18.4	+12
NJ2				PP	PP	09 35 25.3	+3.8
NJ2				S	S	09 41 18.0	-8.6
NJ2				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,2μm,6.2s						
MAW	Mawson	79.90	200	eP	P	09 32 11.4	+0.3
	comp=Z,5.0nm,0.6s						
HOPS	Hopland	80.25	41	eP	P	09 32 14.2	+0.6
	comp=Z,41nm,0.8s,mb4.8						
MDJ	Mudanjiang	80.74	326	P	P	09 32 16.8	+0.8
MDJ				AP	pP	09 34 17.0	+0.8
MDJ				XP	sP	09 35 15.6	+3.6
MDJ				PP	PP	09 35 32.1	+1.1
MDJ				S	S	09 41 37.0	-0.8
MDJ				XS		09 45 17.7	
MDJ				SS	SS	09 47 09.0	-1.8
MDJ				AMB	AMB		
	comp=Z,39nm,1.3s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,203nm,4.1s						
CMB	Columbia Colle	81.35	43	⇑eP	P	09 32 19.1	-0.2
	comp=Z,34nm,0.9s,mb4.8						
OHCM	Honcut	81.43	42	eP	P	09 32 19.8	+0.2
PFO	Pinyon Flat Ob	81.47	49	eP	P	09 32 20.1	+0.2
	comp=Z,14nm,0.9s,mb4.4						
WDC	Whiskeytown Da	81.55	40	⇑eP	P	09 32 20.5	+0.4
	comp=Z,49nm,1.0s,mb4.9						
IPM	Ipoh	81.93	278	P	P	09 32 23.1	+0.5
OMM	Old Mammoth Mi	82.00	44	eP	P	09 32 22.8	+0.3
YBH	Yreka Blue Hor	82.16	39	eP	P	09 32 23.9	+0.7
	comp=Z,30nm,0.8s,mb4.8						
SNY	Shenyang	82.27	321	⇓P	P	09 32 24.1	+0.4
SNY				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
CN2	Changchun	82.44	323	eP	P	09 32 28.9	+4.3
CN2				eAP	pP	09 34 31.0	+5.6
CN2				eS	S	09 42 01.4	+6.8
CN2				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.1						
CN2				AMB	AMB		
	comp=Z,600nm,3.0s						
WCN	Washoe City	82.49	43	eP	P	09 32 25.5	+0.5
HUMO	Hull Mountain	82.56	38	eP	P	09 32 26.0	+0.8
	comp=Z,36nm,1.0s,mb4.9						
KLR	Kul’dur	82.89	330	eP	P	09 32 24.4	-2.4
MNV	Mina	83.01	44	eP	P	09 32 27.6	0.0
	comp=Z,32nm,1.1s,mb4.8						
MNV				e		09 34 35.1	
LDFC	Landfair	83.20	48	eP	P	09 32 29.1	+0.5
SNG	Songkhla	83.30	280	P	P	09 32 31.0	+1.5
	comp=Z,220nm,0.9s,mb5.7						
TPH	Tonopah	83.41	45	eP	P	09 32 29.7	+0.1
	comp=Z,48nm,1.0s,mb5.0						
NEN	Nelson	83.69	48	eP	P	09 32 31.1	+0.1
MOD	Modoc	83.69	40	eP	P	09 32 30.9	+0.1
	comp=Z,17nm,0.7s,mb4.7						
IRO	Indian Ridge	83.82	38	P	P	09 32 31.8	+0.3
MA2	Magadan	84.62	345	eP	P	09 32 34.8	-0.2
MA2				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.7						
MA2	Magadan	84.62	345	eP	P	09 32 34.3	-0.7
	comp=Z,50nm,1.0s,mb5.0						
TUC	Tucson	84.87	52	⇑eP	P	09 32 37.5	+0.6
	comp=Z,30nm,0.8s,mb4.9						
WVOR	Wild Horse Val	85.00	40	eP	P	09 32 37.5	+0.2
	comp=Z,19nm,0.9s,mb4.6						
VIPM	Ingram Point	85.06	38	P	P	09 32 38.1	+0.6
SYO	Syowa Base	85.19	193	⇓P	P	09 32 37.1	-0.5
BJI	Beijing	85.79	316	P	P	09 32 41.7	+0.5
BJI				S	S	09 42 17.5	-9.3
BJI				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.1						
BJI	Beijing	85.79	316	P	P	09 32 41.7	+0.5
	comp=Z,40nm,0.8s,mb5.1						
BJI				S	S	09 42 17.5	-9.3
FMW	Mount Fremont	85.95	36	P	P	09 32 42.3	+0.5
GYA	Guiyang	86.04	300	⇓iP	P	09 32 43.6	+0.9
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,200nm,5.4s						
NNT	Nongplab	86.20	285	P	P	09 32 46.0	+2.3
EBG	Ellensburg	86.54	36	P	P	09 32 45.1	+0.5
VNA3	Neumayer Olymp	86.98	177	e	P	09 32 46.2	+0.2
VNA3	Neumayer Olymp	86.98	177	⇑iP	P	09 32 45.2	-0.8
VNA3				e		09 32 46.2	
MSU	Marysvale	87.00	46	eP	P	09 32 47.5	+0.6
MSU				e		09 34 56.6	
BMO	Blue Mountains	87.18	39	eP	P	09 32 47.2	-0.4
	comp=Z,13nm,0.8s,mb4.6						
SEY	Seymchan	87.28	348	eP	P	09 32 48.7	+1.1
SEY				e		09 42 25.0	
SEY				eS	S	09 42 40.8	+0.9
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
SEY				smax			
	comp=N,250nm,18.3s						
SEY				smax			
	comp=E,370nm,23.2s						
VNA2	Neumayer--Watz	87.41	177	e	P	09 32 49.4	+1.4
VNA2	Neumayer--Watz	87.41	177	⇑iP	P	09 32 47.9	-0.1
VNA2				e		09 32 49.4	
VNA1	Neumayer--Stat	87.64	177	e	P	09 32 50.6	+1.5
VNA1	Neumayer--Stat	87.64	177	⇑iP	P	09 32 49.4	+0.3
VNA1				e		09 32 50.6	
XAN	Xi’an	87.77	308	P	P	09 32 51.4	+0.8
XAN				AMB	AMB		
	comp=Z,51nm,1.0s,mb5.2						
NANT	Nan	87.81	291	⇓P	P	09 32 50.0	-1.1
TMUT	Trail Mountain	88.05	46	eP	P	09 32 52.4	+0.6
HLID	Hailey	88.20	41	eP	P	09 32 52.8	+0.4
	comp=Z,25nm,0.8s,mb5.0						
SPUT	South Promonto	88.25	44	eP	P	09 32 52.6	-0.1
HVU	Hansel Valley	88.29	43	eP	P	09 32 53.0	+0.1
SRU	San Rafael	88.42	47	eP	P	09 32 53.4	-0.1
SRU				e		09 35 06.6	
DAU	Daniels Canyon	88.58	45	eP	P	09 32 53.6	-0.7
MNTX	Cornudas Mount	88.63	55	⇑eP	P	09 32 54.5	-0.3
	comp=Z,28nm,0.8s,mb5.1						
MNTX				e	pP	09 35 01.5	+4.1
KMI	Kunming	88.66	298	P	P	09 32 56.1	+1.1
KMI				AMB	AMB		
	comp=Z,33nm,1.3s,mb5.0						
KMI	Kunming	88.66	298	P	P	09 32 56.1	+1.1
	comp=Z,33nm,1.3s,mb5.0						
TCUT	Toone Canyon	88.83	45	eP	P	09 32 55.7	+0.3
LPM	Los Pinos Moun	88.88	52	eP	P	09 32 55.8	0.0
LTX	Lajitas	88.93	58	⇑eP	P	09 32 56.5	+0.3
	comp=Z,45nm,1.0s,mb5.2						
HWUT	Hardware Ranch	88.98	44	⇑eP	P	09 32 55.6	-0.6
	comp=Z,16nm,0.6s,mb5.0						
PV10	Paradox Valley	89.07	48	eP	P	09 32 56.2	-0.5
CM31	Chiang Mai Arr	89.20	290	eP	P	09 32 59.2	+1.5
	comp=Z,82nm,0.9s,mb5.6						
HHC	Hu-ho-hao-te	89.22	315	eP	P	09 32 58.3	+1.0
HHC				AMB	AMB		
	comp=Z,44nm,0.9s,mb5.3						
HHC				AMB	AMB		
	comp=Z,156nm,3.6s						
PV01	Paradox Valley	89.28	48	eP	P	09 32 57.4	-0.2
ANMO	Albuquerque	89.30	52	iP	P	09 32 58.1	+0.3
ANMO	Albuquerque	89.30	52	eP	P	09 32 57.5	-0.2
	comp=Z,14nm,0.9s,mb4.8						
ANMO				e		09 35 08.5	
CHG	Chiang Mai	89.34	290	⇓P	P	09 32 59.7	+1.4
	comp=Z,75nm,0.9s,mb5.5						
GDL2	Guadalupe Moun	89.63	55	eP	P	09 32 59.4	0.0
GDL2				e		09 35 07.7	
IMA	Indian Mountai	89.72	10	eP	P	09 32 59.2	+0.2
	comp=Z,1.9nm,0.6s,mb4.1						
MCMT	McKenzie Canyo	89.83	41	eP	P	09 33 00.5	+0.5
RRI2	Red Ridge	90.01	43	eP	P	09 33 01.1	+0.2
BILL	Bilibino	90.14	355	c iP	P	09 33 00.8	0.0
BILL				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s						
BILL	Bilibino	90.14	355	eP	P	09 33 00.4	-0.5
	comp=Z,23nm,0.9s,mb5.0						
TPAW	Teton Pass	90.32	43	eP	P	09 33 02.4	+0.1
CPRX	Cap Rock	90.37	54	eP	P	09 33 02.5	-0.2
SNOW	Snow King Moun	90.43	43	eP	P	09 33 02.9	+0.2
IMW	Indian Meadow	90.53	42	eP	P	09 33 03.3	+0.1
LOHW	Long Hollow	90.60	43	eP	P	09 33 03.4	-0.1
CHMT	Chamberlain Mo	90.68	39	eP	P	09 33 02.9	-0.9
QLMT	Earthquake Lak	90.69	41	eP	P	09 33 04.7	+0.7
QLMT				e		09 35 15.0	
YMR	Madison River	90.90	42	eP	P	09 33 05.5	+0.6
BOZ	Bozeman (W)	90.99	41	eP	P	09 33 05.0	-0.2
	comp=Z,17nm,1.0s,mb4.9						
LKWY	Lake	91.20	42	eP	P	09 33 07.6	+1.4
	comp=Z,6.0nm,0.8s,mb4.6						
SDCO	Great Sand Dun	91.25	50	eP	P	09 33 06.4	-0.3
	comp=Z,12nm,0.8s,mb4.9						
LZH	Lanzhou	92.41	308	⇓P	P	09 33 13.4	+1.4
LZH				AMB	AMB		
	comp=Z,41nm,1.2s,mb5.3						
JCT	Junction City	92.45	58	eP	P	09 33 11.1	-1.2
	comp=Z,8.3nm,0.6s,mb4.9						
YAK	Yakutsk	92.75	339	iP	P	09 33 12.1	-0.8
YAK				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.4						
EDM	Edmonton	93.94	33	eP	P	09 33 17.5	-1.0
LAO	LASA Array	94.78	41	eP	P	09 33 22.5	0.0
	comp=Z,14nm,0.9s,mb5.1						
ULN	Ulaanbaatar	95.39	320	iP	P	09 33 25.3	+0.1
GTA	Gaotai	96.67	310	eP	P	09 33 32.4	+1.2
GTA				AP	pP	09 35 42.3	+7.4
GTA				XP	sP	09 36 36.8	+7.3
GTA				PP	PP	09 37 36.1	-0.5
GTA				SKS	SKS	09 43 11.1	-3.2
GTA				S	S	09 43 57.5	-4.3
GTA				AMB	AMB		
	comp=Z,12nm,1.2s,mb5.0						
GTA				AMB	AMB		
	comp=Z,119nm,5.7s						
ZAK	Zakamensk	98.70	321	eP	P	09 33 39.6	-0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
TIXI	Tiksi	99.59	345	iP	P	09 33 42.3	-1.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb4.1						
AAK	Ala-Archa	115.95	308	iPKIKP	PKPdf	09 38 38.5	-0.5
CHKZ	Chkalovo	118.95	320	ePKP	PKPdf	09 38 43.2	-1.3
SVE	Sverdlovsk	124.20	325	ePKIKP	PKPdf	09 38 54.5	-0.1
ARU	Arti	125.41	325	iPKIKP	PKPdf	09 38 49.6	-7.3
KEV	Kevo	129.42	348	ep	PKPdf	09 39 01.7	-2.6
	comp=Z,24nm,1.1s						
KEV	Kevo	129.42	348	ePKIKP	PKPdf	09 39 01.7	-2.6
KEV				pmax	pmax		
	comp=Z,24nm,1.1s						
JOF	Joensuu	133.87	341	ep	PKPdf	09 39 11.8	-1.0
	comp=Z,8.0nm,0.5s						
JOF	Joensuu	133.87	341	ePKIKP	PKPdf	09 39 11.8	-1.0
JOF				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KAF	Kangasniemi	135.94	343	ep	PKPdf	09 39 16.4	-0.2
	comp=Z,7.0nm,0.6s						
KAF	Kangasniemi	135.94	343	ePKIKP	PKPdf	09 39 16.4	-0.2
KAF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
OBN	Obninsk	137.16	330	⇓iPKHKP		09 39 16.4	
OBN				e		09 42 06.7	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	Kislovodsk	138.78	313	iPKIKP	PKPdf	09 39 27.1	+4.8
NB2	NORSAR Subarra	140.04	352	PKP	PKPdf	09 39 17.2	-6.9
	comp=Z,3.0nm,0.8s,baz=17,slow=2.6						
ERZM	Erzurum	140.90	307	iP	PKPdf	09 39 23.3	-2.9
EZM	Erzurum	140.90	307	P	PKPdf	09 39 23.1	-3.1
SOC	Sochi	140.93	313	iPKIKP		09 39 43.4	
SOC				ePPP	PPP	09 45 44.2	-5.6
SOC				eSSS	SSS	10 05 35.2	-10
VRT	Varto	140.97	306	P	PKPdf	09 39 22.3	-4.0
GUMT	Gumushane	142.13	309	P	PKPdf	09 39 26.8	-1.5
PTK	Pertek	142.65	306	P	PKPdf	09 39 28.7	-0.5
MBAR	Mbarara	143.04	237	ePKP	PKPdf	09 39 29.2	-1.4
ELZG	Elazig	143.06	306	iP	PKPbc	09 39 30.3	+1.7
SUW	Suwalki	143.48	337	ePKP	PKPdf	09 39 29.3	-0.8
MYA	Malataya	143.53	306	P	PKPbc	09 39 31.6	+1.6
MALT	Malatya	143.53	306	ePKP	PKPdf	09 39 30.8	+0.1
MALT				eSKP		09 42 16.4	
SIM	Simferopol’	144.00	318	ePKHKP		09 39 32.7	
SIM				pmax	pmax		
	comp=Z,69nm,0.9s						
SVST	Sivas	144.19	308	iP	PKPdf	09 39 33.7	+1.9
GZT	Gaziantep	144.45	304	iP	PKPdf	09 39 33.9	+1.5
GAZ	Gaziantep	144.77	304	P	PKPdf	09 39 35.4	+2.4
KAHT	Ahir Dag	144.90	305	iP	PKPdf	09 39 35.3	+2.2
BOYT	Boyabat	145.04	312	iP	PKPdf	09 39 35.8	+2.6
BYBT	Boyabat	145.12	312	P	PKPdf	09 39 36.0	+2.6
BNN	Bunyan	145.30	307	P	PKPdf	09 39 36.1	+2.3
YOZ	Yozgat	145.42	309	P	PKPdf	09 39 36.6	+2.6
CTKT	Corum	145.43	311	iP	PKPdf	09 39 37.1	+3.2
BZK	Bozkurt	145.43	313	P	PKPdf	09 39 36.5	+2.6
COBT	Iskenderun	145.68	303	iP	PKPdf	09 39 38.2	+3.7
CORM	Corum	145.71	310	P	PKPdf	09 39 37.8	+3.3
TOS	Tosya	145.80	312	P	PKPdf	09 39 37.8	+3.2
CEYT	Ceyhan	145.94	304	P	PKPdf	09 39 38.0	+3.1
GKP	Gorka Klasztor	146.03	342	ePKP	PKPdf	09 39 37.1	+2.6
GKP				e		09 39 39.9	
BALT	Daday	146.03	313	iP	PKPdf	09 39 38.5	+3.6
AVNT	Avonos	146.05	308	iP	PKPdf	09 39 38.3	+3.2
CANT	Cankiri	146.26	311	P	PKPdf	09 39 39.0	+3.6
ELDT	Eldivan	146.44	311	iP	PKPdf	09 39 39.2	+3.5
NIG	Nigde	146.46	307	P	PKPdf	09 39 39.6	+3.8
SAFT	Safranbolu	146.63	313	P	PKPdf	09 39 39.7	+3.7
KAMT	Kaman	146.67	309	P	PKPdf	09 39 39.6	+3.5
BSEG	Bad Segeberg	147.01	349	ePKIKP	PKPdf	09 39 43.5	+7.4
BSEG	Bad Segeberg	147.01	349	ePKPbc	PKPdf	09 39 39.7	+3.6
BSEG				ePKPab	PKPab	09 39 43.5	-1.6
TLCR		147.05	322	⇑iP	PKPdf	09 39 40.5	+4.0
TLCR		147.05	322	⇑iP	PKPdf	09 39 40.5	+4.0
KWP	Kalwaria	147.09	333	ePKP	PKPdf	09 39 40.6	+4.2
KWP				e		09 39 44.7	
LOD	Lodumlu	147.15	311	P	PKPdf	09 39 41.5	+4.7
MEST	Erdemli	147.29	304	iP	PKPdf	09 39 41.4	+4.3
SGKT	Sivrigoynuk	147.35	312	iP	PKPdf	09 39 41.6	+4.4
BURAR	Bucovina Array	147.42	328	P	PKPdf	09 39 42.0	+5.0
BURAR	Bucovina Array	147.42	328	⇓iP	PKPdf	09 39 41.9	+4.9
CFR	Carcaliu	147.45	322	⇓PKHKP		09 39 41.8	

CFR	Carcaliu	147.45	322	⇓*i*P	PKPdf	09 39 41.3	+4.2
CFR	Carcaliu	147.45	322	⇓*i*P	PKPdf	09 39 41.3	+4.2
TIRR	Tirgusor	147.71	321	⇓*i*P	PKPdf	09 39 41.8	+4.2
TIRR	Tirgusor	147.71	321	⇓*i*P	PKPdf	09 39 41.8	+4.2
OJC	Ojcow	147.78	337	*e*PKP	PKPdf	09 39 42.0	+4.5
KOLS	Kolonicke sedl	147.81	333	*i* PKP	PKPdf	09 39 43.1	+5.5
HARR	Harsova	147.85	322	P	PKPdf	09 39 42.8	+5.0
MDU	Mudurnu	147.98	313	P	PKPdf	09 39 43.2	+5.1
HENT	Hendek	148.03	313	*i* P	PKPdf	09 39 42.7	+4.5
EIL	Elat	148.04	291	*e*PKPbc	PKPdf	09 39 43.4	+4.8
CRVS	Cervenica-Dubn	148.17	333	*i* PKP	PKPdf	09 39 43.7	+5.5
CRVS				*e*		09 39 48.8	
CRVS				*i*		09 42 05.4	
CRVS				*e*		09 42 07.8	
KIZT	Kizilcal	148.18	310	P	PKPdf	09 39 43.7	+5.2
KONT	Konya--Tatoy	148.18	308	P	PKPdf	09 39 42.6	+4.1
NIE	Niedzica	148.23	335	*e*PKP	PKPdf	09 39 43.9	+5.7
CSS	Prodhromos	148.39	302	*e*PKPbc	PKPdf	09 39 43.8	+4.8
KSP	Ksiaz	148.44	341	⇓*e*PKP	PKPdf	09 39 44.0	+5.5
KSP				*e*		09 39 49.9	
KSP				*e*pPKP		09 42 05.2	
KSP	Ksiaz	148.44	341	*e*PKP	PKPdf	09 39 44.1	+5.6
KSP				*e*		09 39 50.0	
MLR	Muntele Rosu	148.46	325	⇓*i*P	PKPdf	09 39 43.6	+4.9
MLR	Muntele Rosu	148.46	325	⇓*i*P	PKPdf	09 39 43.7	+5.0
ESKT	Eskisehir	148.64	311	P	PKPdf	09 39 44.3	+5.1
ESKT	Eskisehir	148.64	311	*i* P	PKPdf	09 39 43.7	+4.5
GPA	Golpazari	148.68	313	*e*P	PKPdf	09 39 44.6	+5.4
OKC	Ostrava-Krasne	148.69	338	*e*PKIKP	PKPdf	09 39 44.7	+5.8
OKC				*e*		09 39 51.4	
OKC	Ostrava-Krasne	148.69	338	*e*PKPAB	PKPab	09 39 51.4	-0.5
SNX	Sinaia	148.78	325	⇓*i*P	PKPdf	09 39 29.0	-10
SNX				⇑P		09 39 45.5	
SNX	Sinaia	148.78	325	⇑*i*P	PKPdf	09 39 45.5	+6.3
UPC	Upice	148.82	341	*e*PKIKP	PKPdf	09 39 45.0	+5.9
UPC				*e*		09 39 51.9	
UPC	Upice	148.82	341	⇑*e*PKPB	PKPdf	09 39 45.0	+5.9
UPC				*e*PKPAB	PKPab	09 39 51.9	-0.5
DPC	Dobruska-Polom	148.86	340	⇑*e*PKPB	PKPdf	09 39 45.4	+6.2
DPC				*e*PKPAB	PKPab	09 39 52.3	-0.3
KECS	Kecovo	148.90	334	*i* PKP	PKPdf	09 39 46.0	+6.7
KECS				*e*		09 39 52.1	
KECS				*i*		09 42 08.0	
CLL	Collm	148.93	345	*i* PKIKP	PKPdf	09 39 45.0	+5.8
CLL				*i*		09 39 51.4	
CLL				*i* *PP		09 42 06.0	
CLL				pmax	pmax		
	comp=Z,53nm,1.1s						
CLL	Collm	148.93	345	⇓*i*PKP1	PKPdf	09 39 45.0	+5.8
CLL				*i* PKP2	PKPab	09 39 51.4	-1.4
CLL				*i* *PPKP		09 42 06.0	
CLL				*e*		09 42 24.0	
MORC	Moravsky Berou	148.95	338	⇓*i*P	PKPdf	09 39 45.4	+6.0
MORC	Moravsky Berou	148.95	338	⇓*i*P	PKPdf	09 39 45.3	+6.0
CLZ	Clausthal	149.00	348	*e*PKPbc	PKPdf	09 39 45.1	+5.8
CLZ				*e*PKPab	PKPab	09 39 51.6	-1.5
BRG	Berggiesshubel	149.08	343	⇓*i*PKIKP	PKPdf	09 39 45.4	+5.9
BRG				*i*		09 39 52.3	
BRG				*PP		09 42 03.8	
BRG				pmax	pmax		
	comp=Z,34nm,0.9s						
BRG	Berggiesshubel	149.08	343	⇓*i*PKP	PKPdf	09 39 45.4	+5.9
BRG				*i*		09 39 52.3	
BRG				*e*		09 39 58.9	
BRG				pPKP		09 42 03.8	
PVCC	Panska Ves	149.22	342	*e*PKIKP	PKPdf	09 39 46.1	+6.3
PVCC				*e*		09 39 53.5	
PVCC	Panska Ves	149.22	342	⇑*e*PKPB		09 39 46.1	
PVCC				*e*PKPAB	PKPab	09 39 53.5	-0.6
ULDT	Uludag	149.54	314	*i* P	PKPdf	09 39 46.7	+6.0
VYHS	Vyhne	149.55	336	*i* PKP	PKPdf	09 39 46.7	+6.3
VYHS				*e*		09 39 55.0	
VYHS				*i*		09 42 10.9	
PSZ	Piszkesteto	149.59	334	*e*PKPbc	PKPdf	09 39 46.5	+6.1
PSZ	Piszkesteto	149.59	334	⇓*e*PKP/p	PKPdf	09 39 46.6	+6.2
KOLL	Kolacno	149.65	336	*i* PKP	PKPdf	09 39 47.4	+6.9
VRAC	Vranov	149.67	339	⇑*i*P	PKPdf	09 39 46.6	+6.1
VRAC	Vranov	149.67	339	⇑*i*P	PKPdf	09 39 46.6	+6.1
PRU	Pruhonice	149.72	342	*e*PKHKP		09 39 47.1	
PRU				*e*		09 39 55.5	
PRU	Pruhonice	149.72	342	⇑*e*PKPB		09 39 47.1	
PRU				*e*PKPAB	PKPab	09 39 55.5	-0.6
PRU				*e*x	x	09 42 08.0	
MOX	Moxa	149.87	346	*e*PKHKP		09 39 47.1	
MOX				*e*		09 39 54.9	
MOX				pmax	pmax		
	comp=Z,23nm,1.1s						
NKC	Novy Kostel	150.06	345	*e*PKHKP		09 39 47.9	
NKC				*e*		09 39 56.7	
NKC	Novy Kostel	150.06	345	⇑*e*PKPB		09 39 47.9	
NKC				*e*PKPAB	PKPab	09 39 56.7	-0.8
BNT	Bandirma	150.24	315	*e*P	PKPdf	09 39 48.0	+6.2
ELL	Elmali	150.44	307	*e*P	PKPdf	09 39 49.0	+6.9
ZST	Bratislava	150.44	337	*e*PKP	PKPdf	09 39 49.2	+7.4
BTOK	Tokmak	150.47	314	*i* P	PKPdf	09 39 48.6	+6.6
DNZL	Cakiroluk	150.70	309	*i* P	PKPdf	09 39 49.8	+7.3
KHC	Kasperske Hory	150.76	342	*e*PKPDF	PKPdf	09 39 43.2	+1.0
KHC				⇑*e*PKPB	PKPdf	09 39 49.6	+7.4
KHC				*e*PKPAB	PKPab	09 39 59.9	-0.6
KHC				*e*pPKP		09 42 02.0	
KHC				*e*x	x	09 42 10.0	
GRA1	Grafenberg Arr	150.85	346	*e*PKPbc	PKPdf	09 39 49.2	+6.9
GRA1				*e*PKPab	PKPab	09 39 59.8	-1.0
GRF	Grafenberg Arr	150.85	346	*e*PKP	PKPdf	09 39 49.2	+6.9
GRF				*e*PKP	PKPab	09 39 59.8	-1.0
TNS	Taunus Mts	150.91	349	*e*PKPbc	PKPdf	09 39 49.5	+7.1
TNS				*e*PKPab	PKPab	09 39 59.4	-1.6
WET	Wettzell	150.94	343	*e*PKP2	PKPab	09 40 00.5	-0.7
GEC2	GERESS Array S	150.98	342	*e*PKPbc	PKPdf	09 39 49.4	+6.9
GEC2				*e*PKPab	PKPab	09 40 00.4	-1.0
AKS	Akhisar	151.04	312	*e*P	PKPdf	09 39 50.2	+7.2
GIVF	Givet	151.50	354	*e*PKP2	PKPab	09 40 02.5	-1.1
RZN	Rozhen	151.53	320	*i* P	PKPdf	09 39 49.0	+5.4
AYDN	Tasoluk	151.55	310	*i* P	PKPdf	09 39 51.7	+8.0
KDAG	Bornova	151.64	312	*i* P	PKPdf	09 39 50.5	+6.7
MOA	Molln	151.70	340	⇑*i*P	PKPdf	09 39 51.2	+7.6
	comp=Z,4.4nm,0.6s						
MOA				*i*		09 40 03.9	
VTS	Vitosha	151.84	323	⇑*i*P	PKPdf	09 39 51.8	+7.8
VTS	Vitosha	151.84	323	*i* P	PKPdf	09 39 52.0	+8.0
VTS	Vitosha	151.84	323	⇑*i*P	PKPdf	09 39 51.8	+7.8
MMB	Musomiste	152.18	321	*i* P	PKPdf	09 39 52.0	+7.6
FUR	Furstenfeldbru	152.26	344	*e*PKIKP	PKPab	09 40 05.8	-1.0
FUR	Furstenfeldbru	152.26	344	*e*PKPbc	PKPdf	09 39 52.8	+8.5
FUR				*e*PKPab	PKPab	09 40 05.8	-1.0
KKB	Krupnik	152.38	322	*i* P	PKPdf	09 39 52.7	+8.0
PERS	Pernice	152.48	338	*i* PKPbc	PKPdf	09 39 52.3	+7.6
BFO	Black Forest	152.75	349	*e*PKIKP	PKPab	09 40 07.3	-1.6
BFO	Black Forest	152.75	349	*e*PKPbc	PKPdf	09 39 53.5	+8.5
BFO				*e*PKPab	PKPab	09 40 07.3	-1.6
CDF	Champ du Feu	152.85	350	⇑*i*PKP2	PKPab	09 40 07.8	-1.5
	comp=Z,34nm,1.1s						
WTTA	Wattenberg	153.00	343	⇓*i*P	PKPdf	09 39 54.1	+8.7
	comp=Z,7.1nm,0.4s						
WTTA				*i*	PKPab	09 40 09.2	-0.7
FLN	La Foliniere	153.04	1	*e*PKP2	PKPab	09 40 06.0	-4.1
MEZF	Maizieres J'vi	153.06	353	⇑*i*PKP2	PKPab	09 40 08.9	-1.3
LJU	Ljubljana	153.20	338	*i* PKPbc	PKPdf	09 39 54.4	+8.6
LJU				*i* PKPab	PKPab	09 40 09.5	-1.3
LDF	La Druitiere	153.22	1	*e*PKP2	PKPab	09 40 07.1	-3.7
SKO	Skopje	153.24	324	*i* PKP	PKPab	09 40 11.0	-0.1
HAU	Haudompre	153.39	351	⇑*i*PKP2	PKPab	09 40 10.1	-1.5
BOJS	Bojanci	153.40	336	*i* PKPbc	PKPdf	09 39 55.1	+9.1
GRR	Gorron	153.41	2	*e*PKP2	PKPab	09 40 07.7	-3.9
HINF	Hinteralfeld	153.50	350	⇑*i*PKP2	PKPab	09 40 10.3	-1.7
SSF	Saint Saulge	154.64	355	⇑*i*PKP2	PKPab	09 40 15.6	-1.2
	comp=Z,36nm,1.0s						
AVF	Avril sur Loir	154.92	355	⇑*i*PKP2	PKPab	09 40 16.4	-1.6
	comp=Z,20nm,1.1s						
SMF	Signal de Mont	155.02	355	⇑*i*PKP2	PKPab	09 40 17.2	-1.3
	comp=Z,35nm,0.9s						
TCF	Toulx Ste Croi	155.49	357	⇑*i*PKP2	PKPab	09 40 19.0	-1.5
LPL	La Plagne	155.75	349	⇑*i*PKP2	PKPab	09 40 21.4	-0.2
	comp=Z,17nm,0.8s						
LPG	La Plagne	155.77	349	⇑*i*PKP2	PKPab	09 40 21.5	-0.2
	comp=Z,17nm,0.8s						
ORIF	Oris-en-Rattie	156.47	350	⇑*i*PKP2	PKPab	09 40 24.2	-0.6
	comp=Z,27nm,0.9s						
VIVF	Saint-Julien-l	156.70	352	*e*PKP2	PKPab	09 40 24.9	-0.8
CAF	Calviac	156.85	357	*e*PKP2	PKPab	09 40 25.4	-1.0
	comp=Z,29nm,1.2s						

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*CSEM **01** 09:27:27.8±0.2, 37.26N×28.60E, h2^{km}, MD3.0, Error ellipse: s-maj=4.8km s-min=3.5km az=103.0*
*ISK **01** 09:27:29.1, 37.27N×28.63E, h13^{km}, MD3.0*
*ATH **01** 09:27:31.3, 37.13N×28.13E, h10^{km}, MD3.0/3*
ISC 01 09:27:27.8±0.6**, 37.22N**±0.03×**28.52E**±0.04**, h2^{km}, n15, σ0^{s}94**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNZL	Cakiroluk	0.63	42	*i* P	Pg	09 27 40.2	-0.2
DNZL				*i* S	Sg	09 27 49.0	+0.2
AYDN	Tasoluk	0.67	311	*i* P	Pg	09 27 40.5	-0.7
AYDN				*i* S	Sg	09 27 48.7	-1.5
DENT	Denizli	0.67	37	*i* PG	Pg	09 27 40.8	-0.4
DENT				*i* SG	Sg	09 27 49.6	-0.6
FETY	Fethiye	0.74	142	PG	Pg	09 27 43.5	+1.0
BDRM	Kayabasi	0.87	260	*i* P	Pg	09 27 44.0	-1.2
BDRM				*i* S	Sg	09 27 57.5	+0.7
ARG	Arkhangelos	1.05	198	*e*PB	Pb	09 27 48.6	+0.2
ELL	Elmali	1.21	113	*e*PN	Pn	09 27 51.7	0.0
MANT	Manisa	1.27	1	*i* P	Pb	09 27 53.1	+1.0
MANT				*i* S	Sb	09 28 08.7	0.0
SMG	Samos	1.42	290	*e*PB	Pb	09 27 53.5	-1.2
IZM	Izmir	1.54	320	PN	Pn	09 27 57.2	+0.8
KDAG	Bornova	1.54	320	*i* P	Pn	09 27 55.8	-0.6
KDAG				*i* S	Sb	09 28 18.4	+1.8
BLCB	Balcova	1.65	315	*e*PN	Pn	09 27 59.5	+1.6
BCK	Bucak	1.67	81	*e*PN	Pn	09 27 57.2	-1.0
AKS	Akhisar	1.75	342	*e*PN	Pn	09 27 59.8	+0.5
KARP	Karpathos	2.00	214	*e*PG	Pg	09 28 04.0	-3.7

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*ATH **01** 09:58:56.3, 38.58N×23.59E, h24^{km}, MD3.0/6, ML2.9*
*CSEM **01** 09:58:56.7±0.1, 38.59N×23.65E, h15^{km}, ML2.9, Error ellipse: s-maj=4.1km s-min=1.8km az=74.0*
*NEIC **01** 09:58:56.3, 38.58N×23.59E, h24^{km}, ML2.9(ATH), After ATH.*
*THE **01** 09:58:59.0, 38.74N×23.75E, h20^{km}, ML3.0*
ISC 01 09:58:55.9±0.8**, 38.57N**±0.04×**23.74E**±0.09**, h24^{km}**±10^{km}**, n10, σ0^{s}84**/15**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAR	Parnis Oros	0.42	180	*e*PB	Pb	09 59 05.1	+0.3
PTL	Penteli	0.53	169	*e*PN	Pn	09 59 07.5	-0.4
PTL				*e*SN	Sn	09 59 15.8	-0.3
ATH	Athens Observa	0.60	182	*e*PN	Pn	09 59 08.5	-0.3
AOS	Alonnisos	0.61	10	*e*Pg	Pb	09 59 08.6	+0.8
AOS				*e*Sg	Sb	09 59 16.2	+0.2
NEO	Neokhori	0.84	331	*e*PN	Pn	09 59 11.6	-0.6
NAIG	Nisos Aigina	0.84	194	*e*PN	Pn	09 59 12.4	+0.2
XOR	Xorichti	0.90	332	*e*Pg	Pb	09 59 12.8	+0.1
XOR				*e*Sg	Sb	09 59 23.5	-0.9
AGG	Agios Georgios	1.19	293	*e*Pg	Pn	09 59 17.8	+0.5
AGG				*e*Sg	Sb	09 59 33.6	+1.0
LIT	Litokhoron	1.81	328	*e*Pb	Pb	09 59 26.0	-2.2
LIT				*e*Sb	Sb	09 59 46.4	-4.1
PLG	Polygyros	1.81	353	*e*PN	Pn	09 59 27.5	+1.3

KRSC 01 10:16:50.4±1.2**, 55.75N**×**162.21E, h39^{km}**±6^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.57	36	*e*P	P	10 17 02.5	+0.4
KBTR				*e*S	S	10 17 11.2	+0.7
KBG	Krutoberegovo	0.58	29	*i* P	P	10 17 02.5	+0.4
KBG				*e*S	S	10 17 11.0	+0.4
KBG				Smax			
	3μm,0.5s						
KBG	Krutoberegovo	0.58	29	*i* P	P	10 17 02.5	+0.4
KBG				*e*S	S	10 17 11.2	+0.6
ZLN	Zelenaya	0.84	289	*e*P	P	10 17 06.6	+0.8
ZLN				*e*S	S	10 17 18.1	+1.0
CIRR	Tsirk	0.90	295	*e*P	P	10 17 07.3	+0.6
CIRR				*e*S	S	10 17 19.4	+0.7
SVLR	Shiveluch	1.00	327	*e*P	P	10 17 09.1	+1.0
SVLR				*e*S	S	10 17 21.8	+0.6
KRSR	Krestovskiy	1.04	298	*e*P	P	10 17 08.8	+0.2
KRSR				*e*S	S	10 17 21.4	-0.7
KLY	Klyuchi	1.04	303	*e*P	P	10 17 07.6	-1.1
KLY				*e*S	S	10 17 19.8	-2.5
KMNR	Kamenistaya	1.11	271	*e*P	P	10 17 10.9	+1.2
KMNR				*e*S	S	10 17 24.6	+0.5
KPT	Kopyto	1.14	282	*e*P	P	10 17 11.1	+1.0
KPT				*e*S	S	10 17 25.0	+0.2
TUMR	Tumrok	1.26	249	*e*P	P	10 17 12.8	+0.9
TUMR				*e*S	S	10 17 29.5	+1.6
KOZ	Kozyrevsk	1.35	284	*e*P	P	10 17 14.8	+1.6
KOZ				*e*S	S	10 17 31.4	+1.2
SRDR	Sredinnyy	1.51	293	*e*P	P	10 17 16.6	+1.2
SRDR				*e*S	S	10 17 35.7	+1.6
ESO	Esso	1.99	277	*e*P	P	10 17 22.0	-0.2
ESO				*e*S	S	10 17 47.8	+1.7
BKI	Bering	2.21	103	*e*P	P	10 17 26.1	+0.7
BKI				*e*S	S	10 17 51.5	-0.2
SPN	Mys Shipunski	2.95	207	*e*P	P	10 17 35.1	-0.9
SPN				*e*S	S	10 18 08.1	-2.4
NLC	Nalytchevo	3.08	214	*e*P	P	10 17 37.7	-0.1
NLC				*e*S	S	10 18 12.4	-1.4
SDLR	Sedlovina	3.15	219	*e*P	P	10 17 39.1	+0.4
SDLR				*e*S	S	10 18 15.6	+0.1
SMAR	Somma	3.19	220	*e*P	P	10 17 39.9	+0.6
SMAR				*e*S	S	10 18 16.3	-0.2
AVH	Avacha	3.21	221	*e*P	P	10 17 39.8	+0.2
AVH				*e*S	S	10 18 16.5	-0.6
GNL	Ganaly	3.22	232	*e*P	P	10 17 40.0	+0.2
GNL				*e*S	S	10 18 16.8	-0.6
UGLR	Uglovaya	3.22	219	*e*P	P	10 17 39.3	-0.5
UGLR				*e*S	S	10 18 15.2	-2.2
KOK	Koryaka	3.23	222	*e*P	P	10 17 39.6	-0.3
KOK				*e*S	S	10 18 16.8	-0.7
PET	Petropavlovsk	3.43	219	*e*P	P	10 17 42.7	-0.1
PET				*e*S	S	10 18 21.3	-1.5
RUS	Russkaya	3.97	215	*e*S	S	10 18 34.0	-2.4
GRL	Gorelyy	4.02	219	*e*P	P	10 17 52.3	+1.1

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*CSEM **01** 10:17:07.1±0.2, 67.16N×20.53E, h2^{km}, ML2.8, Error ellipse: s-maj=8.4km s-min=4.7km az=91.0, Suspected Mining explosion.*
*UPP **01** 10:17:07.1, 67.18N×20.68E, h0^{km}, ML2.8, Suspected Mining explosion.*
HEL 01 10:17:07.6±0.1**, 67.18N**×**20.66E, ML2.8**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	210	*i* P	Pg	10 17 08.8	-0.2
DUNU				*i* S	Sg	10 17 09.9	-0.1
MASU	Masugnsbyn	0.59	61	*i* P	Pg	10 17 18.0	-1.4
KUA	Kurravaara	0.79	351	*i* P	Pg	10 17 21.9	-1.4
NIKU	Nikkaluokta	0.93	319	*e*P	Pg	10 17 24.2	-2.0
NIKU	Nikkaluokta	0.93	319	P	Pg	10 17 24.1	-2.1
PAJU	Pajala	0.97	98	*e*P	Pb	10 17 24.9	-2.1
SJUU	Sjulsmark	1.72	167	*e*P	Pn	10 17 38.1	-0.9
KIF	Kilpisjarvi	1.83	2	*e*P	Pn	10 17 40.3	-0.3
KIF				*e*S	Sn	10 18 05.7	+0.8
KIF	Kilpisjarvi	1.83	2	P	Pn	10 17 40.2	-0.4
KTK1	Kautokeino	2.08	27	*e*P	Pn	10 17 44.2	+0.1
SGF	Sodankyl	2.29	81	*e*P	Pn	10 17 46.9	-0.3
SGF				*e*SG	Sn	10 18 18.0	+1.5
SGF	Sodankyl	2.29	81	P	Pn	10 17 46.8	-0.4
SGF				Sg	Sn	10 18 17.9	+1.4
KEV	Kevo	3.49	39	*e*S	Sn	10 18 44.8	-2.0
KEV	Kevo	3.49	39	S	Sn	10 18 44.7	-2.1
MSF	Maaselka	3.59	107	*e*SG	Sn	10 18 58.4	+9.1

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*ORF **01** 10:28:33.4, 17.16S×176.49W, h30^{km}, mb6.2*
*BJI **01** 10:28:38.8, 20.32S×175.71W, h178^{km}, mB5.5, mb5.4*
*GUC **01** 10:28:39.7±0.0, 20.39S×175.99W, h172^{km}, mb5.1(NEIC)*
*NEIC **01** 10:28:39.8±1.1, 20.40S×175.98W, h172^{km}±10^{km}, mb5.2/45, Error ellipse: s-maj=8.3km s-min=4.7km az=127.0*
*HRVD **01** 10:28:39.8±0.2, 20.55S×175.47W, h229^{km}±1^{km}, MW5.5/73, Centroid moment Tensor Solution. LP body waves: s48,c79; Mantle waves: s73,c136; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.01±.05; $M_{\theta\theta}$-0.50±.05; $M_{\phi\phi}$0.49±.05; $M_{r\theta}$1.14±.05; $M_{\theta\phi}$-0.46±.04; $M_{\phi r}$1.90±.04; Best double couple: $M_0$2.312×10^{17} NP1: ϕ_s297°, δ17°, λ177°. NP2: ϕ_s30°, δ89°, λ73°. Principal axes: T 2.235, Plg43°, Azm283°; N .155, Plg17°, Azm30°; P -2.39, Plg42°, Azm135°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **01** 10:28:43.3±2.1, 18.67S×176.23W, h153^{km}, mb5.4/8, MS5.1/9 Error ellipse: s-maj=34.3km s-min=15.1km az=114.9*
ISC 01 10:28:37.7±1.1**, 20.39S**±0.04×**175.97W**±0.04**, h164^{km}**±11^{km}**, h165^{km}**±2.4^{km}**:pP-P, n436, σ1^{s}04**/261**, mb5.2**/64**, 48C-11D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.59	33	*e*P	P	10 30 26.6	+0.1
AFI				*e*S	S	10 31 45.5	-5.9
RAR	Rarotonga	15.17	96	*e*P	P	10 32 05.0	+0.3
	358nm,1.0s						
DZM	Mont Dzumac	16.48	261	⇑*i*P	P	10 32 26.4	+5.5
NOUC	Port Laguerre	16.62	261	*e*P	P	10 32 27.6	+5.1
OUZ	Omahuta	17.40	210	*e*P	P	10 32 33.9	+2.1
OUZ	Omahuta	17.40	210	PN	P	10 32 33.9	+2.1
OUZ	Omahuta	17.40	210	PN	P	10 32 33.9	+2.1
WCZ	Waipu Caves	17.67	207	*e*P	P	10 32 36.7	+1.8
WCZ	Waipu Caves	17.67	207	PN	P	10 32 36.7	+1.8
WCZ	Waipu Caves	17.67	207	PN	P	10 32 36.7	+1.8
KUZ	Kuaotunu	17.84	202	*e*P	P	10 32 38.4	+1.6
KUZ	Kuaotunu	17.84	202	PN	P	10 32 38.4	+1.6
KUZ	Kuaotunu	17.84	202	PN	P	10 32 38.4	+1.6
MTAZ	Motutapu	18.18	204	P	P	10 32 42.7	+2.3
MTAZ	Motutapu	18.18	204	PN	P	10 32 42.7	+2.3
MTAZ	Motutapu	18.18	204	PN	P	10 32 42.7	+2.3
KAAZ	Kauri Point	18.29	204	P	P	10 32 43.8	+2.2
KAAZ	Kauri Point	18.29	204	PN	P	10 32 43.8	+2.2
KAAZ	Kauri Point	18.29	204	PN	P	10 32 43.8	+2.2
OTAZ	Otara	18.31	204	PN	P	10 32 44.0	+2.1
OTAZ	Otara	18.31	204	PN	P	10 32 44.0	+2.1
PUZ	Puketiti	18.32	195	*e*P	P	10 32 41.2	-0.7
PUZ				S	S	10 35 48.0	-10
PUZ	Puketiti	18.32	195	PN	P	10 32 41.2	-0.7
PUZ				SN	S	10 35 48.8	-8.8
PUZ	Puketiti	18.32	195	PN	P	10 32 41.2	-0.7
PUZ				SN	S	10 35 48.8	-8.8
MKAZ	Moumakai	18.36	203	P	P	10 32 44.1	+1.7
MKAZ	Moumakai	18.36	203	PN	P	10 32 44.1	+1.7
MKAZ	Moumakai	18.36	203	PN	P	10 32 44.1	+1.7
WTAZ	Waiatarua	18.43	205	P	P	10 32 45.2	+2.1
WTAZ	Waiatarua	18.43	205	PN	P	10 32 45.2	+2.0
WTAZ	Waiatarua	18.43	205	PN	P	10 32 45.2	+2.0
MWZ	Matawai	18.75	196	*e*P	P	10 32 45.9	-0.5
MWZ				S	S	10 36 00.7	-5.5
MWZ	Matawai	18.75	196	PN	P	10 32 45.9	-0.5
MWZ				SN	S	10 36 00.7	-5.5
MWZ	Matawai	18.75	196	PN	P	10 32 45.9	-0.5
MWZ				SN	S	10 36 00.7	-5.5
URZ	Urewera	18.79	197	P	P	10 32 44.5	-2.3
URZ	Urewera	18.79	197	PN	P	10 32 44.5	-2.3
URZ				SN	S	10 36 00.1	-6.9
URZ	Urewera	18.79	197	PN	P	10 32 44.5	-2.3
URZ				SN	S	10 36 00.1	-6.9
TOZ	Tahuroa Road	18.80	201	PN	P	10 32 48.4	+1.5
TOZ	Tahuroa Road	18.80	201	PN	P	10 32 48.4	+1.5
KNZ	Kokohu	19.36	195	*e*P	P	10 32 54.3	+1.6
KNZ	Kokohu	19.36	195	PN	P	10 32 54.3	+1.5
KNZ	Kokohu	19.36	195	PN	P	10 32 54.3	+1.5
BKZ	Black Stump Fm	19.81	198	*e*P	P	10 32 55.4	-1.9
BKZ	Black Stump Fm	19.81	198	PN	P	10 32 55.4	-1.9
BKZ	Black Stump Fm	19.81	198	PN	P	10 32 55.4	-1.9
MGZ	Maungaku	19.94	200	P	P	10 32 58.5	-0.2
MGZ	Maungaku	19.94	200	PN	P	10 32 58.1	-0.6
MGZ	Maungaku	19.94	200	PN	P	10 32 58.1	-0.6
NGZ	Ngauruhoe	20.08	199	P	P	10 32 59.5	-0.6
NGZ	Ngauruhoe	20.08	199	PN	P	10 32 59.5	-0.6
NGZ	Ngauruhoe	20.08	199	PN	P	10 32 59.5	-0.6
TUVZ	Tukino	20.15	199	P	P	10 33 00.3	-0.5
TUVZ	Tukino	20.15	199	PN	P	10 33 00.3	-0.5
TUVZ	Tukino	20.15	199	PN	P	10 33 00.3	-0.5
TSZ	Takapari Road	20.79	198	*e*P	P	10 33 06.2	-1.0
TSZ	Takapari Road	20.79	198	PN	P	10 33 06.2	-1.0
TSZ	Takapari Road	20.79	198	PN	P	10 33 06.2	-1.0
WAZ	Wanganui	20.80	200	*e*P	P	10 33 07.9	+0.6
WAZ	Wanganui	20.80	200	PN	P	10 33 07.9	+0.6
WAZ	Wanganui	20.80	200	PN	P	10 33 07.9	+0.6
BFZ	Birch Farm	21.29	196	*e*P	P	10 33 12.0	-0.1
BFZ	Birch Farm	21.29	196	PN	P	10 33 12.0	-0.1
BFZ				SN	S	10 36 54.4	+0.8
BFZ	Birch Farm	21.29	196	PN	P	10 33 12.0	-0.1
BFZ				SN	S	10 36 54.4	+0.8
MRZ	Mangatainoka R	21.45	198	*e*P	P	10 33 12.0	-1.7
MRZ	Mangatainoka R	21.45	198	PN	P	10 33 12.0	-1.7
MRZ				SN	S	10 36 52.3	-4.3
MRZ	Mangatainoka R	21.45	198	PN	P	10 33 12.0	-1.7
MRZ				SN	S	10 36 52.3	-4.3
KIW	Kapiti Island	21.84	199	PN	P	10 33 15.9	-1.6
KIW				SN	S	10 37 01.7	-1.7
KIW	Kapiti Island	21.84	199	PN	P	10 33 15.9	-1.6
KIW				SN	S	10 37 01.7	-1.7
MTW	Mount Morrison	21.94	197	P	P	10 33 18.4	-0.1
MTW	Mount Morrison	21.94	197	PN	P	10 33 18.4	-0.1
MTW				SN	S	10 37 07.9	+2.8
MTW	Mount Morrison	21.94	197	PN	P	10 33 18.4	-0.1
MTW				SN	S	10 37 07.9	+2.8
CAW	Cannon Point	22.02	198	P	P	10 33 19.4	+0.2
CAW	Cannon Point	22.02	198	PN	P	10 33 18.5	-0.7
CAW	Cannon Point	22.02	198	PN	P	10 33 18.5	-0.7
QRZ	Quartz Range	22.61	203	*e*P	P	10 33 25.5	+0.5
QRZ	Quartz Range	22.61	203	PN	P	10 33 24.9	-0.1
QRZ	Quartz Range	22.61	203	PN	P	10 33 24.9	-0.1
NNZ	Nelson	22.65	201	*e*P	P	10 33 24.1	-1.3
NNZ	Nelson	22.65	201	PN	P	10 33 24.1	-1.3
NNZ				SN	S	10 37 21.8	+4.4
NNZ	Nelson	22.65	201	PN	P	10 33 24.1	-1.3
NNZ				SN	S	10 37 21.8	+4.4
TUWZ	Tuamarina	22.66	200	PN	P	10 33 24.9	-0.5
TUWZ	Tuamarina	22.66	200	PN	P	10 33 24.9	-0.5
THZ	Tophouse	23.30	201	*e*P	P	10 33 32.1	+0.4
THZ	Tophouse	23.30	201	PN	P	10 33 32.1	+0.5
THZ	Tophouse	23.30	201	PN	P	10 33 32.1	+0.5
DSZ	Denniston Nort	23.68	203	*e*P	P	10 33 37.1	+1.8
DSZ	Denniston Nort	23.68	203	PN	P	10 33 37.1	+1.8
DSZ	Denniston Nort	23.68	203	PN	P	10 33 37.1	+1.8
KHZ	Kahutara	23.68	200	*e*P	P	10 33 35.0	-0.3
KHZ	Kahutara	23.68	200	PN	P	10 33 35.0	-0.3
KHZ	Kahutara	23.68	200	PN	P	10 33 35.0	-0.3
LTZ	Lake Taylor	24.42	201	P	P	10 33 41.2	-1.1
LTZ	Lake Taylor	24.42	201	PN	P	10 33 41.2	-1.2
LTZ	Lake Taylor	24.42	201	PN	P	10 33 41.2	-1.2
TBI	Tubuai	24.76	102	*e*P	P	10 33 44.8	-0.9
	375nm,1.1s,mb5.8						
TBI				*e*LR	LR	10 39 38.0	
	3μm,81.2s						
PAE	Paea	25.09	88	*e*P	P	10 33 47.6	-1.2
	384nm,1.1s,mb5.8						
PAE				*e*ScP		10 40 38.1	
	124nm,1.3s						
PPT	Papeete	25.11	88	*e*P	P	10 33 48.0	-1.0
	229nm,1.2s,mb5.6						
PPT				*e*ScP		10 40 38.6	
	56nm,1.4s						
PPT	Papeete	25.11	88	*e*LR	LR	10 39 41.5	
	4μm,48.5s						
WVZ	Waitaha Valley	25.22	203	*e*P	P	10 33 49.3	-0.5
WVZ	Waitaha Valley	25.22	203	PN	P	10 33 49.3	-0.6
WVZ	Waitaha Valley	25.22	203	PN	P	10 33 49.3	-0.6
TIAR	Tiarei	25.32	88	*e*P	P	10 33 50.0	-1.0
	554nm,1.1s,mb6.0						
TIAR				*e*pP	pP	10 34 30.7	+6.4
	481nm,1.3s						
TVO	Taravao	25.37	89	*e*P	P	10 33 50.3	-1.2
	212nm,1.0s,mb5.6						
RPZ	Rata Peaks	25.66	202	*e*P	P	10 33 55.4	+1.5
RPZ	Rata Peaks	25.66	202	PN	P	10 33 55.4	+1.4
RPZ	Rata Peaks	25.66	202	PN	P	10 33 55.4	+1.4
FOZ	Fox Glacier	26.04	204	PN	P	10 33 56.0	-1.4
FOZ	Fox Glacier	26.04	204	PN	P	10 33 56.0	-1.4
MEH	Mehetia	26.47	89	*e*P	P	10 34 00.3	-1.3
	128nm,1.3s,mb5.4						

JCZ	Jackson Bay	26.83	205	eP	P	10 34 03.4	-1.2
JCZ	Jackson Bay	26.83	205	PN	P	10 34 03.4	-1.2
JCZ	Jackson Bay	26.83	205	PN	P	10 34 03.4	-1.2
PMOR	Pomariorio Ree	27.26	83	eP	P	10 34 07.0	-1.8
	206nm,1.2s,mb5.6						
WKZ	Wanaka	27.36	204	eP	P	10 34 08.1	-1.4
WKZ	Wanaka	27.36	204	PN	P	10 34 08.1	-1.3
WKZ	Wanaka	27.36	204	PN	P	10 34 08.1	-1.3
MSZ	Milford Sound	27.66	205	PN	P	10 34 14.7	+2.6
MSZ	Milford Sound	27.66	205	PN	P	10 34 14.7	+2.6
CNB	Canberra Magne	33.87	237	⇑iP	P	10 35 06.8	+0.2
	2µm,0.8s						
CTA	Charters Tower	35.40	264	⇑iP	P	10 35 20.3	+0.6
	160nm,0.9s,mb5.7						
CTA				ePCP	PcP	10 37 45.7	-0.6
CTA				eSCP		10 41 13.7	
CTAO	Charters Tower	35.40	264	eP	P	10 35 20.3	+0.6
	288nm,0.8s,mb6.0						
CTAO				e		10 41 13.6	
PMG	Port Moresby	37.18	282	c iP	P	10 35 35.7	+1.0
PMG	Port Moresby	37.18	282	⇑iP	P	10 35 35.8	+1.0
	309nm,0.9s,mb5.9						
TOO	Toolangi	37.50	234	eP	P	10 35 37.6	+0.4
	4.1nm,0.9s						
RKT	Rikitea	38.09	102	eP	P	10 35 41.2	-1.1
	272nm,1.2s,mb5.8						
STKA	Stephens Creek	39.55	244	eP	P	10 35 54.4	+0.1
	65nm,1.1s,mb5.2						
ASPA	Alice Springs	46.40	256	⇑iP	P	10 36 48.8	-0.8
ASPA				i PCP	PcP	10 38 21.4	-0.7
WB2	Warramunga Arr	46.49	261	⇑iP	P	10 36 49.3	-1.0
WB2				ePCP	PcP	10 38 21.7	-0.8
WRAB	Tennant Creek	46.49	262	c iP	P	10 36 49.3	-1.1
WRAB	Tennant Creek	46.49	262	eP	P	10 36 49.2	-1.1
	135nm,0.8s,mb5.6						
KAKA	Kakadu	49.88	270	⇑iP	P	10 37 16.1	-0.4
	56nm,0.3s,mb5.7						
FORT	Forrest	51.09	246	⇓iP	P	10 37 24.2	-1.3
	238nm,0.7s,mb5.9						
GUMO	Guam	51.22	308	⇑iP	P	10 37 26.9	+0.2
	566nm,0.8s,mb6.2						
FITZ	Fitzroy Crossi	54.93	262	⇑iP	P	10 37 53.1	-0.9
	86nm,0.9s,mb5.5						
VNDA	Vanda	58.19	186	eP	P	10 38 16.2	-0.1
	16nm,0.9s,mb4.9						
MBWA	Marble Bar	59.73	257	⇑eP	P	10 38 25.7	-2.0
	52nm,0.6s,mb5.5						
KLBR	Kellerberrin	59.83	245	⇓iP	P	10 38 26.1	-2.1
	786nm,0.8s						
MUN	Mundaring	61.09	244	eP	P	10 38 35.7	-1.0
	50nm,0.8s,mb5.4						
MATI	Mati	62.94	289	eP	P	10 38 47.5	-1.8
BUKP	Musuan	64.41	290	eP	P	10 39 00.2	+1.2
MSLP	Maasin	65.62	292	eP	P	10 39 06.5	-0.3
BESP	Borongan	65.81	294	eP	P	10 39 07.1	-0.8
PAGZ	Pagadian	65.89	289	eP	P	10 39 08.4	0.0
IPIL	Ipil	66.58	288	eP	P	10 39 11.8	-1.0
SNPH	Sibulan	66.68	290	eP	P	10 39 08.0	-5.5
GUIM	Jordan	67.83	291	eP	P	10 39 17.4	-3.2
PVCP	Virac	67.86	295	eP	P	10 39 21.1	+0.3
QSPA	South Pole Qui	69.68	180	⇓iP	P	10 39 30.7	-0.2
	56nm,0.7s,mb5.4						
MAJO	Matsushiro	71.27	322	eP	P	10 39 40.4	-0.8
	63nm,0.7s,mb5.5						
MAT	Matsushiro	71.27	322	eP	P	10 39 41.0	-0.1
	47nm,0.6s,mb5.4						
MAT	Matsushiro	71.27	322	P	P	10 39 40.6	-0.5
SMY	Shemya	73.32	354	eP	P	10 39 49.8	-3.1
	211nm,1.1s,mb5.8						
FX1	Attu Island--F	73.57	353	eP	P	10 39 52.9	-1.4
TATO	Taipei	75.69	304	eP	P	10 40 06.2	-0.8
	136nm,0.9s,mb5.6						
PET	Petropavlovsk	76.35	345	eP	P	10 40 09.6	-0.5
PET				e		10 50 10.7	
PET				MLR	MLR		
	comp=Z,500nm,17.0s						
YSS	Yuzh-Sakhalins	76.67	332	⇑iP	P	10 40 12.0	0.0
YSS				pmax	pmax		
	comp=Z,240nm,1.1s,mb5.7						
YSS	Yuzh-Sakhalins	76.67	332	eP	P	10 40 12.8	+0.9
	comp=Z,275nm,1.0s,mb5.8						
QZH	Quanzhou	77.95	302	⇓iP	P	10 40 20.2	+0.7
QZH				AMB	AMB		
	comp=Z,150nm,1.0s,mb5.6						
CMB	Columbia Colle	78.10	42	eP	P	10 40 19.8	-0.3
	comp=Z,12nm,0.9s,mb4.5						
YBH	Yreka Blue Hor	79.03	38	eP	P	10 40 25.7	+0.7
	comp=Z,14nm,0.8s,mb4.7						
SSE	Sheshan	79.09	309	eP	P	10 40 25.9	+0.3
SSE				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
SSE				AMB	AMB		
	comp=Z,225nm,4.8s						
SSE	Sheshan	79.09	309	eP	P	10 40 25.9	+0.3
	comp=Z,30nm,1.0s,mb4.9						
WCN	Washoe City	79.27	41	eP	P	10 40 27.1	+0.8
MNV	Mina	79.75	42	eP	P	10 40 29.6	+0.7
	comp=Z,13nm,1.1s,mb4.5						
MOD	Modoc	80.53	39	eP	P	10 40 33.2	+0.2
	comp=Z,14nm,0.7s,mb4.7						
NJ2	Nanjing	81.29	309	eP	P	10 40 38.1	+0.8
NJ2				AP	pP	10 41 21.3	+3.4
NJ2				AMB	AMB		
	comp=Z,130nm,0.7s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,2µm,6.8s						
NJ2				LR	LR		
	comp=N,3µm,21.3s						
NJ2				LR	LR		
	comp=E,2µm,22.5s						
NJ2				LR	LR		
	comp=Z,4µm,21.2s						
TUC	Tucson	81.42	51	eP	P	10 40 38.9	+0.9
	comp=Z,9.4nm,1.2s,mb4.3						
MDJ	Mudanjiang	81.54	324	P	P	10 40 39.6	+1.3
MDJ				AP	pP	10 41 19.2	+0.2
MDJ				AMB	AMB		
	comp=Z,106nm,1.2s,mb5.3						
MDJ				AMB	AMB		
	comp=Z,446nm,5.0s						
MDJ				LR	LR		
	comp=N,721nm,10.9s						
MDJ				LR	LR		
	comp=E,1µm,13.6s						
MDJ				LR	LR		
	comp=Z,2µm,13.3s						
WVOR	Wild Horse Val	81.84	39	eP	P	10 40 40.2	+0.3
	comp=Z,12nm,1.0s,mb4.5						
RSO	Redoubt South	82.74	11	eP	P	10 40 43.2	-0.9
SVW2	Sparrevohn	82.85	10	eP	P	10 40 44.4	-0.3
SLKM	Skilak Lake	83.28	12	eP	P	10 40 46.8	0.0
SNY	Shenyang	83.36	319	⇑P	P	10 40 48.2	+0.5
CN2	Changchun	83.39	322	eP	P	10 40 50.5	+2.8
CN2				eAP	pP	10 41 31.0	+2.4
CN2				AMB	AMB		
	comp=Z,110nm,1.2s,mb5.5						
CN2				AMB	AMB		
	comp=Z,1µm,5.0s						
KLR	Kul'dur	83.42	329	⇓iP	P	10 40 45.0	-2.8
KLR				e		10 50 44.0	
KLR				pmax	pmax		
	comp=N,35nm,1.8s						
KLR				pmax	pmax		
	comp=Z,70nm,1.8s,mb5.1						
MXC	Moxie City	83.45	35	P	P	10 40 48.8	+0.8
SPU	Mount Spurr	83.54	11	eP	P	10 40 47.0	-1.1
MVU	Marysvale	83.64	45	eP	P	10 40 50.3	+1.1
	comp=Z,5.6nm,0.9s,mb4.3						
TBM	Table Mountain	83.66	34	P	P	10 40 49.9	+0.8
MSU	Marysvale	83.67	45	eP	P	10 40 50.5	+1.2
SNIWA	Snively Ranch	83.72	35	P	P	10 40 50.4	+1.0
BENWA	Benson Ranch	83.72	35	P	P	10 40 50.5	+1.1
GBL	Gable Mountain	83.91	35	P	P	10 40 51.0	+0.7
WHN	Wuhan	83.92	306	⇑P	P	10 40 51.3	+0.5
WHN				AMB	AMB		
	comp=Z,67nm,1.4s,mb5.2						
WHN				LR	LR		
	comp=Z,5µm,9.2s						
BMO	Blue Mountains	84.06	38	eP	P	10 40 50.8	-0.3
	comp=Z,18nm,1.4s,mb4.6						
ETW	Entiat	84.07	34	P	P	10 40 51.7	+0.6
MA2	Magadan	84.20	344	i P	P	10 40 51.5	+0.1
MA2				pmax	pmax		
	comp=Z,45nm,1.5s,mb5.0						
MA2	Magadan	84.20	344	eP	P	10 40 50.8	-0.7
	comp=Z,33nm,0.7s,mb5.2						
WTV	Waterville	84.33	34	P	P	10 40 52.6	+0.3
PMR	Palmer	84.49	13	eP	P	10 40 52.7	-0.1
	comp=Z,24nm,0.6s,mb5.1						
TMUT	Trail Mountain	84.73	45	eP	P	10 40 55.9	+1.3
DIV	Divide	84.80	14	⇑eP	P	10 40 54.3	-0.1
SML	Sawmill	84.84	13	eP	P	10 40 54.4	-0.2
COYC	Coyhaique	84.93	137	eP	P	10 40 55.6	+0.2
SRU	San Rafael	85.08	45	eP	P	10 40 56.7	+0.3
LENM	Lemitar	85.11	51	P	P	10 40 57.1	+0.5
MNTX	Cornudas Mount	85.14	54	eP	P	10 40 56.9	+0.1
	comp=Z,12nm,0.9s,mb4.6						
LTX	Lajitas	85.40	57	eP	P	10 40 58.0	-0.2
	comp=Z,22nm,1.2s,mb4.8						
LPM	Los Pinos Moun	85.43	51	eP	P	10 40 58.2	0.0
TCUT	Toone Canyon	85.55	43	eP	P	10 40 59.5	+0.9
PV10	Paradox Valley	85.71	46	eP	P	10 41 00.2	+0.8
ANMO	Albuquerque	85.86	50	i P	P	10 41 00.3	+0.1
ANMO	Albuquerque	85.86	50	eP	P	10 41 00.8	+0.5
	comp=Z,5.4nm,0.9s,mb4.3						
TNA	Tin City	85.90	3	⇑eP	P	10 40 59.9	+0.2
PV01	Paradox Valley	85.91	47	eP	P	10 41 01.1	+0.6
GDL2	Guadalupe Moun	86.14	54	eP	P	10 41 02.3	+0.6
MCK	McKinley	86.47	12	⇑iP	P	10 41 02.0	-0.5
	comp=Z,43nm,0.8s,mb5.2						
SEY	Seymchan	86.71	346	eP	P	10 40 58.9	-4.8
SEY				eS	S	10 51 16.6	-8.5
SEY				*SS		10 52 33.1	
SEY				pmax	pmax		
	comp=E,20nm,0.7s						
SEY				pmax	pmax		
	comp=Z,80nm,0.7s,mb5.7						
SEY				pmax	pmax		
	comp=N,20nm,0.6s						
SEY				smax			
	comp=N,900nm,21.8s						
SEY				smax			
	comp=E,370nm,23.2s						
THY	Trims Highway	86.83	13	eP	P	10 41 04.4	+0.2
MENT	Mentasta	86.86	14	eP	P	10 41 04.7	+0.3
CPRX	Cap Rock	86.89	53	eP	P	10 41 06.0	+0.7
BJI	Beijing	87.16	315	P	P	10 41 06.9	+0.5
BJI				AMB	AMB		
	comp=Z,85nm,0.9s,mb5.6						
BJI				LR	LR		
	comp=N,2µm,17.4s						
BJI				LR	LR		
	comp=E,2µm,18.0s						
BJI				LR	LR		
	comp=Z,3µm,16.8s						
BJI	Beijing	87.16	315	P	P	10 41 06.9	+0.5
	comp=Z,85nm,0.9s,mb5.6						
BJI				S		10 45 54.6	
SYO	Syowa Base	87.24	192	⇓pP	pP	10 41 44.8	-2.5
QLMT	Earthquake Lak	87.50	40	eP	P	10 41 08.8	+0.9
CHMT	Chamberlain Mo	87.56	38	eP	P	10 41 08.1	0.0
COLA	College	87.70	12	eP	P	10 41 07.8	-0.6
	comp=Z,44nm,0.8s,mb5.3						
BOZ	Bozeman (W)	87.82	39	eP	P	10 41 09.2	-0.2
	comp=Z,5.5nm,0.8s,mb4.4						
IMA	Indian Mountai	87.83	9	eP	P	10 41 09.4	+0.4
	comp=Z,14nm,0.8s,mb4.8						
VNA3	Neumayer Olymp	88.11	176	e	P	10 41 11.3	+1.1
VNA3	Neumayer Olymp	88.11	176	e	pP	10 41 49.4	-2.1
VNA3	Neumayer Olymp	88.11	176	⇑iP	P	10 41 09.6	-0.6
VNA3				e		10 41 11.3	
VNA3				e	pP	10 41 49.4	-2.1
VNA3				e		10 42 04.1	
VNA2	Neumayer--Watz	88.58	176	e	P	10 41 13.7	+1.3
VNA2	Neumayer--Watz	88.58	176	e	pP	10 41 54.4	+0.6
VNA2	Neumayer--Watz	88.58	176	eP	P	10 41 12.3	-0.1
VNA2				e		10 41 13.7	
VNA2				e	pP	10 41 54.4	+0.6
VNA2				e		10 42 09.0	
VNA1	Neumayer--Stat	88.79	176	⇑iP	P	10 41 16.8	+3.4
DAWY	Dawson	88.84	15	eP	P	10 41 14.1	+0.3
BILL	Bilibino	89.14	353	i P	P	10 41 14.8	-0.3
BILL				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
BILL				MLR	MLR		
	comp=Z,800nm,21.0s						
BILL	Bilibino	89.14	353	eP	P	10 41 14.9	-0.2
	comp=Z,10nm,0.6s,mb4.9						
AMTX	Amarillo	89.33	52	P	P	10 41 16.9	+0.2
	comp=Z,4.5nm,0.7s,mb4.5						
HHC	Hu-ho-hao-te	90.65	314	⇑P	P	10 41 23.5	+0.7
HHC				AMB	AMB		
	comp=Z,36nm,1.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,347nm,3.1s						
HHC				LR	LR		
	comp=N,1µm,11.7s						
HHC				LR	LR		
	comp=E,2µm,11.5s						
HHC				LR	LR		
	comp=Z,1µm,14.4s						
EDM	Edmonton	90.99	32	eP	P	10 41 23.7	-0.4
KMI	Kunming	91.00	296	P	P	10 41 26.0	+1.1
KMI				AMB	AMB		
	comp=Z,52nm,1.0s,mb5.5						
KMI	Kunming	91.00	296	P	P	10 41 26.0	+1.1
	comp=Z,52nm,1.0s,mb5.5						
CLNS	Chul'man	91.43	332	eP	P	10 41 25.7	-0.3
CLNS				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.5						
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.7s						
LAO	LASA Array	91.59	40	eP	P	10 41 27.2	+0.2
	comp=E,13nm,0.8s,mb5.0						
YAK	Yakutsk	92.73	337	i P	P	10 41 31.0	-0.9
YAK				i *PP	pP	10 42 13.9	+0.4
YAK				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.4						
YAK				MLR	MLR		
	comp=Z,400nm,18.0s						
YAK	Yakutsk	92.73	337	i P	P	10 41 31.1	-0.8
DGMT	Dagmar	93.63	39	eP	P	10 41 36.5	+0.2
	comp=Z,12nm,0.9s,mb5.0						
INK	Inuvik	93.68	15	eP	P	10 41 35.4	-0.7
	comp=Z,30nm,1.0s,mb5.4						
ULN	Ulaanbaatar	96.53	319	i P	P	10 41 49.5	0.0
ULN	Ulaanbaatar	96.53	319	eP	P	10 41 49.5	-0.1
	comp=Z,13nm,0.9s,mb5.3						
BOD	Bodaibo	96.96	330	eP	P	10 41 49.2	-2.0
GTA	Gaotai	98.38	309	eP	P	10 42 00.9	+2.7
GTA				AP	pP	10 42 42.7	+3.0
GTA				XP	sP	10 43 00.8	+3.3
GTA				PP	PP	10 46 07.4	+5.1
GTA				SKS	SKS	10 52 21.9	+2.9
GTA				S	S	10 53 12.1	+4.0
GTA				XS		10 54 23.6	
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb5.3						
GTA				AMB	AMB		
	comp=Z,223nm,5.3s						
GTA				LR	LR		
	comp=N,232nm,14.8s						
GTA				LR	LR		
	comp=E,380nm,13.7s						
GTA				LR	LR		
	comp=Z,199nm,18.6s						
TIXI	Tiksi	99.14	345	eP	P	10 42 00.0	-0.9
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.7						
ZAK	Zakamensk	99.76	320	eP	P	10 42 03.6	-0.6
TLY	Talaya	99.99	321	P	P	10 42 06.8	+1.6
	comp=Z,3.3nm,0.9s,mb4.8						
KURK	Kurchatov	115.20	317	ePKP	PKPdf	10 46 58.8	-0.6
TKM2	Tokmak 2	116.93	309	P	PKPdf	10 47 03.1	+0.2
	SNR=8.6						
KBK	Karagaybulak	117.39	308	P	PKPdf	10 47 04.1	+0.3
	SNR=5.1						
CHMS	Chumysh	117.56	309	P	PKPdf	10 47 04.3	+0.2
	SNR=5.9						
UCH	Uchtor	117.69	308	P	PKPdf	10 47 05.4	+1.1
	SNR=6.5						
AAK	Ala-Archa	117.73	308	i PKIKP	PKPdf	10 47 03.4	-1.0
AAK	Ala-Archa	117.73	308	ePKP	PKPdf	10 47 03.4	-1.0
USP	Ospenovka	117.75	309	P	PKPdf	10 47 04.5	+0.1
	SNR=9.2						
EKS2	Erkin-Say	118.26	308	P	PKPdf	10 47 06.2	+0.8
	SNR=5.2						
AML	Almayashu	118.30	308	P	PKPdf	10 47 06.6	+1.0
	SNR=5.7						
ARU	Arti	126.19	326	i PKIKP	PKPdf	10 47 13.2	-7.2
OBN	Obninsk	137.55	333	⇓iPKHKP		10 47 36.9	
OBN				e		10 50 26.3	
OBN				pmax	pmax		
	comp=Z,22nm,1.0s						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s						
OBN	Obninsk	137.55	333	i PKP	PKPdf	10 47 39.4	-2.4
GNI	Garni	140.13	309	i PKHKP		10 47 45.4	
GNI	Garni	140.13	309	i P	PKPdf	10 47 45.5	-1.4
KIV	Kislovodsk	140.23	315	i PKHKP		10 47 45.0	
KIV	Kislovodsk	140.23	315	i P	PKPdf	10 47 45.1	-1.9
HKR	Hakkari	141.60	305	P	PKPdf	10 47 45.6	-4.1
BCA	Borcka	141.93	312	P	PKPdf	10 47 46.4	-3.7
ERZM	Erzurum	142.66	310	i P	PKPdf	10 47 49.7	-1.6
EZM	Erzurum	142.67	310	P	PKPdf	10 47 50.2	-1.1
VRT	Varto	142.81	308	P	PKPdf	10 47 51.0	-0.6
BTMT	Batman	143.13	307	P	PKPbc	10 47 51.0	+0.6
ANN	Anapa	143.21	319	i PKHKP		10 47 49.9	
ANN				pmax	pmax		
	comp=Z,75nm,1.4s						
SUW	Suwalki	143.38	341	ePKP	PKPdf	10 47 50.7	-1.4
BEST	Besiri	143.39	307	i P	PKPbc	10 47 51.7	+0.5
BINT	Bingol	143.66	308	P	PKPbc	10 47 52.8	+0.9
GUMT	Gumushane	143.80	311	P	PKPbc	10 47 53.3	+1.0
EZC	Erzincan	143.83	310	P	PKPbc	10 47 54.5	+2.1
PTK	Pertek	144.45	309	P	PKPbc	10 47 55.9	+1.6
ELZG	Elazig	144.89	309	i P	PKPdf	10 47 57.1	+1.8
SIM	Simferopol'	145.12	322	c ePKIKP	PKPdf	10 47 57.6	+2.1
SIM				pmax	pmax		
	comp=Z,172nm,0.7s						
SIM	Simferopol'	145.12	322	⇑iP	PKPdf	10 47 57.5	+2.0
MYA	Malataya	145.36	309	P	PKPdf	10 47 58.2	+2.1
MALT	Malatya	145.36	309	⇑iP	PKPdf	10 47 57.9	+1.8
URFA	Urfa	145.38	307	P	PKPdf	10 47 58.3	+2.1
DMUB	Kingscourt	145.52	11	eP	PKPdf	10 47 53.0	-2.8
WAR	Warsaw	145.57	341	ePKP	PKPdf	10 47 57.7	+1.7
WAR				ePKPdf	PKPdf	10 47 59.9	+3.9
WAR	Warsaw	145.57	341	ePKP	PKPdf	10 47 57.7	+1.7
WAR				ePKIKP	PKPdf	10 47 59.9	+3.9
GKP	Gorka Klasztor	145.64	346	ePKP	PKPdf	10 47 58.0	+1.9
GKP	Gorka Klasztor	145.64	346	ePKP	PKPdf	10 47 58.0	+1.9
SVST	Sivas	145.85	312	i P	PKPdf	10 48 00.2	+3.4
KVT	Kavak	145.90	314	P	PKPdf	10 48 00.1	+3.2
DCN	Croghan	145.97	12	eP	PKPdf	10 47 54.5	-2.1
DLF	Lyons Farm	146.16	11	eP	PKPdf	10 47 55.0	-1.9
GZT	Gaziantep	146.34	307	i P	PKPdf	10 48 00.9	+3.1
BOYT	Boyabat	146.50	316	i P	PKPdf	10 48 01.0	+3.1
MBAR	Mbarara	146.55	235	ePKPdf	PKPdf	10 48 00.2	+1.4
BYBT	Boyabat	146.56	316	P	PKPdf	10 48 01.8	+3.8
KIS	Kishinev	146.67	329	ePKHKP		10 47 59.0	
GAZ	Gaziantep	146.67	307	P	PKPdf	10 48 01.9	+3.6
KAHT	Ahir Dag	146.76	308	i P	PKPdf	10 48 02.1	+3.7
BZK	Bozkurt	146.81	317	P	PKPdf	10 48 02.1	+3.7
CTKT	Corum	146.96	314	i P	PKPdf	10 48 02.3	+3.7
BNN	Bunyan	147.02	311	P	PKPdf	10 48 02.5	+3.8
IAS	Iasi	147.13	330	PKIKP	PKPdf	10 48 02.2	+3.5
KWP	Kalwaria	147.25	337	ePKP	PKPdf	10 48 02.8	+4.0
KWP				ePKPdf	PKPdf	10 48 05.8	+7.0
KWP	Kalwaria	147.25	337	ePKP	PKPdf	10 48 02.8	+4.0
KWP				ePKIKP	PKPdf	10 48 05.8	+6.9
TOS	Tosya	147.26	316	P	PKPdf	10 48 03.6	+4.5
CORM	Corum	147.27	314	P	PKPdf	10 48 04.2	+5.0
BALT	Daday	147.42	317	i P	PKPdf	10 48 03.1	+3.7
COBT	Iskenderun	147.62	307	i P	PKPdf	10 48 02.8	+2.9
OJC	Ojcow	147.72	341	ePKP	PKPdf	10 48 03.5	+3.9
OJC	Ojcow	147.72	341	ePKP	PKPdf	10 48 03.5	+3.9
CANT	Cankiri	147.74	315	P	PKPdf	10 48 04.8	+4.8
AVNT	Avonos	147.75	311	i P	PKPdf	10 48 03.6	+3.6
CEYT	Ceyhan	147.82	308	P	PKPdf	10 48 05.2	+4.9
HTY	Hatay	147.85	306	P	PKPdf	10 48 04.8	+4.5
BURAR	Bucovina Array	147.87	333	P	PKPdf	10 48 05.2	+5.2
ELDT	Eldivan	147.93	315	i P	PKPdf	10 48 04.2	+4.0
KOLS	Kolonicke sedl	147.99	337	i PKP	PKPdf	10 48 05.2	+5.1
SAFT	Safranbolu	148.03	317	P	PKPdf	10 48 04.9	+4.4
KSP	Ksiaz	148.11	345	ePKP	PKPdf	10 48 01.4	+1.2
KSP				ePKPdf	PKPdf	10 48 05.1	+4.9
KSP				e		10 48 08.6	
KSP				epPKP		10 49 00.7	
KSP	Ksiaz	148.11	345	ePKP	PKPdf	10 48 05.3	+5.0
KSP				ePKIKP	PKPdf	10 48 08.9	+8.7
NIG	Nigde	148.21	310	P	PKPdf	10 48 05.8	+4.9
CLZ	Clausthal	148.22	353	ePKPbc	PKPdf	10 48 04.8	+4.4
CLZ				ePKPab	PKPab	10 48 08.4	-1.2
NIE	Niedzica	148.25	340	ePKP	PKPdf	10 48 05.8	+5.3
NIE	Niedzica	148.25	340	ePKP	PKPdf	10 48 05.8	+5.3
KAMT	Kaman	148.28	313	P	PKPdf	10 48 05.3	+4.4
CRVS	Cervenica-Dubn	148.31	338	i PKP	PKPdf	10 48 06.0	+5.4
CLL	Collm	148.35	349	i PKHKP		10 48 01.4	
CLL				i		10 48 05.3	
CLL				e*PP		10 49 05.0	
CLL				pmax	pmax		
	comp=Z,39nm,1.7s						
CLL	Collm	148.35	349	i PKIKP	PKPdf	10 48 01.4	+0.8
	comp=Z,logA/T=1.4						
CLL				i PKP1	PKPdf	10 48 05.3	+4.7
CLL				i PKP2	PKPab	10 48 09.0	-1.1
CLL				e*PPKP		10 49 05.0	
WTSB	Winterswijk	148.41	357	ePKP	PKPdf	10 48 05.2	+4.5
	comp=Z,105nm,0.8s						
UPC	Upice	148.49	345	ePKPDF	PKPdf	10 48 02.7	+1.8
UPC				⇑ePKPB	PKPdf	10 48 06.5	+5.6
UPC				ePKPAB	PKPab	10 48 10.6	-0.1
OKC	Ostrava-Krasne	148.54	342	ePKPDF	PKPdf	10 48 02.2	+1.2
OKC				⇑ePKPB	PKPdf	10 48 06.4	+5.4
OKC				ePKPAB	PKPab	10 48 11.1	+0.1
DPC	Dobruska-Polom	148.56	345	ePKPDF	PKPdf	10 48 03.0	+2.0
DPC				⇑ePKPB	PKPdf	10 48 06.5	+5.5
DPC				ePKPAB	PKPab	10 48 11.2	+0.2
DPC				AMS	AMS	11 27 10.0	
	comp=Z,500nm,20.5s						
BRG	Berggiesshubel	148.59	348	⇑iPKIKP	PKPdf	10 48 06.1	+5.1
BRG				pmax	pmax		
	comp=Z,52nm,0.8s						
TIRR	Tirgusor	148.61	325	PKP2	PKPab	10 48 11.2	-0.2
ANTO	Ankara	148.66	315	P	PKPdf	10 48 06.3	+4.8
LOD	Lodumlu	148.67	315	P	PKPdf	10 48 07.2	+5.7
HARR	Harsova	148.71	326	PKIKP	PKPdf	10 48 07.1	+5.7
MORC	Moravsky Berou	148.77	343	PKIKP	PKPdf	10 48 06.9	+5.6
MORC	Moravsky Berou	148.77	343	ePKPbc	PKPdf	10 48 06.5	+5.2
PVCC	Panska Ves	148.79	347	ePKPDF	PKPdf	10 48 02.5	+1.2
PVCC				⇑ePKPB	PKPdf	10 48 07.3	+6.0
PVCC				AMS	AMS	11 24 40.0	
	comp=Z,600nm,18.1s						
KECS	Kecovo	149.00	339	i PKP	PKPdf	10 48 07.5	+5.8
KECS				e		10 48 12.4	
MLR	Muntele Rosu	149.14	329	PKIKP	PKPdf	10 48 08.1	+6.1
MEST	Erdemli	149.17	308	i P	PKPdf	10 48 07.2	+4.8
MOX	Moxa	149.22	351	ePKIKP	PKPdf	10 48 07.5	+5.5
MOX				pmax	pmax		
	comp=Z,110nm,1.4s						
MOX				MLR	MLR		
	comp=Z,300nm,20.0s						
PRU	Pruhonice	149.31	347	ePKPDF	PKPdf	10 48 03.6	+1.4
PRU				⇑ePKPB	PKPdf	10 48 08.3	+6.1
PRU				ePKPAB	PKPab	10 48 13.6	-0.5
PRU				AMS	AMS	11 22 40.0	
	comp=Z,400nm,20.3s						
SNX	Sinaia	149.44	329	PKIKP	PKPdf	10 48 09.1	+6.6
VRAC	Vranov	149.45	344	PKIKP	PKPdf	10 48 08.5	+6.1
NKC	Novy Kostel	149.48	349	ePKIKP	PKPdf	10 48 08.7	+6.3
NKC				e		10 48 14.2	
NKC				MLR	MLR		
	comp=Z,600nm,19.4s						
NKC	Novy Kostel	149.48	349	⇑ePKPB	PKPdf	10 48 08.7	+6.3
NKC				ePKPAB	PKPab	10 48 14.2	-0.6
NKC				ex	x	10 57 21.2	
NKC				AMS	AMS	11 26 10.0	
	comp=Z,600nm,19.4s						
VYHS	Vyhne	149.53	340	i PKP	PKPdf	10 48 08.7	+6.2
KOLL	Kolacno	149.59	341	i PKP	PKPdf	10 48 09.2	+6.6
KOLL				e		10 48 15.4	
HGN	Heimansgroeve	149.66	358	ePKP	PKPdf	10 48 08.3	+5.7
	comp=Z,40nm,1.0s						
PSZ	Piszkesteto	149.69	339	PKIKP	PKPdf	10 48 09.0	+6.2
PSZ	Piszkesteto	149.69	339	ePKPbc	PKPdf	10 48 08.6	+5.8
KIZT	Kizilcal	149.76	314	P	PKPdf	10 48 09.3	+6.1
KONT	Konya--Tatoy	149.88	312	P	PKPdf	10 48 09.2	+5.8
TNS	Taunus Mts	150.03	354	ePKIKP	PKPdf	10 48 09.4	+6.2
TNS	Taunus Mts	150.03	354	ePKPbc	PKPdf	10 48 09.4	+6.2

TNS				*e*PKPab	PKPab	10 48 16.1	-0.9
GRA1	**Grafenberg Arr**	**150.21**	**351**	*e*PKPbc	PKPdf	10 48 10.2	+6.7
GRA1				*e*PKPab	PKPab	10 48 16.9	-0.9
GRA1				*e*pPKPbc		10 49 07.0	
GRF	**Grafenberg Arr**	**150.21**	**351**	*e*PKP	PKPdf	10 48 10.2	+6.7
GRF				*e*PKP	PKPdf	10 48 16.9	+13
GRF				pPKPbc		10 49 07.0	
ZST	**Bratislava**	**150.32**	**342**	*i* PKP	PKPdf	10 48 10.7	+7.0
KHC	**Kasperske Hory**	**150.32**	**347**	*e*PKHKP	PKPdf	10 48 05.2	+1.5
KHC				*e*		10 48 10.8	
KHC				*e*		10 48 18.2	
KHC				*e*		10 49 09.5	
KHC				MLR	MLR		
	comp=Z,700nm,18.4s						
KHC	**Kasperske Hory**	**150.32**	**347**	*e*PKPDF	PKPdf	10 48 05.2	+1.5
KHC				⇑*e*PKPB	PKPdf	10 48 10.8	+7.1
KHC				*e*PKPAB	PKPab	10 48 18.2	-0.1
KHC				*e*x	x	10 49 09.5	
KHC				*e*x	x	10 56 50.5	
KHC				AMS	AMS	11 23 10.0	
	comp=Z,700nm,18.4s						
GIVF	**Givet**	**150.35**	**359**	⇑*i*PKP1	PKPdf	10 48 10.3	+6.6
	comp=Z,168nm,0.9s						
BAIF	**Baives**	**150.40**	**360**	⇑*i*PKP1	PKPdf	10 48 10.6	+6.8
	comp=Z,120nm,0.9s						
CSS	**Prodhromos**	**150.40**	**306**	*e*PKPbc	PKPdf	10 48 10.6	+6.3
WET	**Wettzell**	**150.45**	**348**	*e*PKIKP	PKPdf	10 48 10.5	+6.6
WET	**Wettzell**	**150.45**	**348**	*e*PKPbc	PKPdf	10 48 10.5	+6.6
GEC2	**GERESS Array S**	**150.57**	**347**	*e*PKIKP	PKPdf	10 48 10.7	+6.6
GEC2	**GERESS Array S**	**150.57**	**347**	*e*PKPbc	PKPdf	10 48 10.7	+6.6
EIL	**Elat**	**150.58**	**294**	*e*PKPbc	PKPdf	10 48 11.5	+6.8
WLF	**Walferdange**	**150.74**	**357**	*e*PKPbc	PKPdf	10 48 11.5	+7.1
PVL	**Pavlikeni**	**151.08**	**327**	*i* P	PKPdf	10 48 10.0	+5.0
ORLT	**Orhaneli**	**151.09**	**318**	P	PKPdf	10 48 12.4	+7.3
MOA	**Molln**	**151.38**	**346**	⇑*i*P	PKPdf	10 48 12.5	+7.2
STU	**Stuttgart**	**151.38**	**353**	*e*PKPbc	PKPdf	10 48 12.7	+7.4
FLN	**La Foliniere**	**151.46**	**6**	⇑*i*PKP1	PKPdf	10 48 12.4	+7.0
	comp=Z,102nm,0.8s						
ROSF	**Rostrenen**	**151.51**	**10**	*e*PKP1	PKPdf	10 48 12.2	+6.7
	comp=Z,58nm,0.8s						
BNT	**Bandirma**	**151.51**	**320**	P	PKPdf	10 48 12.5	+6.7
ARSA	**Arzberg**	**151.62**	**343**	⇑*i*P	PKPdf	10 48 12.9	+7.2
LDF	**La Druitiere**	**151.67**	**6**	⇑*i*PKP1	PKPdf	10 48 12.7	+7.0
	comp=Z,42nm,0.6s						
FUR	**Furstenfeldbru**	**151.68**	**350**	*e*PKPbc	PKPdf	10 48 13.3	+7.5
FUR				*e*PKPab	PKPab	10 48 23.3	-0.7
SGMF	**Saint Gilles**	**151.70**	**9**	⇑*i*PKP1	PKPdf	10 48 12.8	+7.0
	comp=Z,68nm,0.7s						
DIM	**Dimitrovgrad**	**151.79**	**325**	*i* P	PKPdf	10 48 14.3	+8.2
GRR	**Gorron**	**151.79**	**7**	⇑*i*PKP1	PKPdf	10 48 13.3	+7.4
	comp=Z,98nm,0.7s						
BTOK	**Tokmak**	**151.79**	**318**	*i* P	PKPdf	10 48 13.6	+7.4
BFO	**Black Forest**	**151.91**	**354**	*e*PKIKP	PKPdf	10 48 13.7	+7.6
BFO	**Black Forest**	**151.91**	**354**	*e*PKPbc	PKPdf	10 48 13.7	+7.6
BFO				*e*PKPab	PKPab	10 48 24.2	-0.8
CDF	**Champ du Feu**	**151.92**	**355**	⇑*i*PKP1	PKPdf	10 48 13.9	+7.8
	comp=Z,74nm,0.9s						
QUIF	**Quistinic**	**151.93**	**10**	*e*PKP1	PKPdf	10 48 13.3	+7.1
	comp=Z,40nm,0.9s						
MEZF	**Maizieres J’vi**	**151.94**	**359**	⇑*i*PKP1	PKPdf	10 48 14.2	+8.0
	comp=Z,83nm,0.9s						
PGB	**Panagyurishte**	**152.16**	**327**	*i* P	PKPdf	10 48 13.7	+7.0
KBA	**Koelnbreinsper**	**152.32**	**346**	⇑*i*P	PKPdf	10 48 14.0	+7.2
HAU	**Haudompre**	**152.39**	**357**	⇑*i*PKP1	PKPdf	10 48 14.8	+8.0
	comp=Z,43nm,0.7s						
WATA	**Walderalm**	**152.43**	**349**	⇑*i*P	PKPdf	10 48 14.8	+7.9
AKS	**Akhisar**	**152.44**	**317**	P	PKPdf	10 48 15.2	+8.0
RZN	**Rozhen**	**152.48**	**325**	*i* P	PKPdf	10 48 15.0	+7.8
WTTA	**Wattenberg**	**152.49**	**349**	⇓*i*P	PKPdf	10 48 15.0	+8.0
MOTA	**Moosalm**	**152.50**	**350**	⇓*i*P	PKPdf	10 48 15.3	+8.3
HINF	**Hinteralfeld**	**152.55**	**356**	⇑*i*PKP1	PKPdf	10 48 15.0	+7.9
	comp=Z,22nm,0.7s						
VTS	**Vitosha**	**152.61**	**328**	*i* P	PKPdf	10 48 16.0	+8.7
SQTA	**Sankt Quirin**	**152.61**	**349**	⇓*i*P	PKPdf	10 48 15.6	+8.4
DAVA	**Damuels**	**152.75**	**351**	⇓*i*P	PKPdf	10 48 16.2	+8.8
LJU	**Ljubljana**	**153.00**	**344**	*e*PKPdf	PKPdf	10 48 09.0	+1.3
LJU				*e*PKPbc	PKPdf	10 48 15.0	+7.3
LJU				*e*PKPab	PKPab	10 48 28.2	-1.5
MMB	**Musomiste**	**153.07**	**326**	*i* P	PKPdf	10 48 16.3	+8.3
IZM	**Izmir**	**153.07**	**317**	P	PKPab	10 48 29.8	-0.4
HYF	**Humbligny**	**153.17**	**2**	*e*PKP1	PKPdf	10 48 16.8	+8.9
VOY	**Vojsko**	**153.17**	**345**	*e*PKPdf	PKPdf	10 48 05.3	-2.7
VOY				*e*PKPbc	PKPdf	10 48 15.8	+7.8
KKB	**Krupnik**	**153.20**	**327**	*i* P	PKPdf	10 48 16.5	+8.3
BOJS	**Bojanci**	**153.30**	**342**	*e*PKPdf	PKPdf	10 48 08.8	+0.6
BOJS				*e*PKPbc	PKPdf	10 48 16.9	+8.7
BOJS				*e*PKPab	PKPab	10 48 29.8	-1.2
SSF	**Saint Saulge**	**153.39**	**1**	*e*PKP1	PKPdf	10 48 17.2	+9.0
	comp=Z,60nm,1.0s						
LOS	**Limnos**	**153.46**	**322**	*e*P	PKPab	10 48 31.1	-0.7
SRS	**Serrai**	**153.48**	**325**	*e*P	PKPab	10 48 31.4	-0.5
MFF	**Saint Martin d**	**153.63**	**6**	⇑*i*PKP1	PKPdf	10 48 17.3	+8.7
	comp=Z,31nm,0.9s						
AVF	**Avril sur Loir**	**153.66**	**1**	*e*PKP1	PKPdf	10 48 17.4	+8.8
	comp=Z,22nm,0.9s						
CABF	**La Chapelle**	**153.79**	**357**	⇑*i*PKP1	PKPdf	10 48 18.6	+10
	comp=Z,83nm,1.2s						
KNT	**Kendrikon**	**153.81**	**326**	*e*P	PKPab	10 48 32.6	-0.6
OUR	**Ouranopolis**	**153.82**	**324**	*e*P	PKPab	10 48 33.0	-0.3
SOH	**Sokhos**	**153.82**	**325**	*e*P	PKPab	10 48 32.5	-0.8
BGF	**Bois d’Agland**	**153.88**	**2**	*e*PKP1	PKPdf	10 48 18.1	+9.2
TCF	**Toulx Ste Croi**	**154.13**	**3**	⇑*i*PKP1	PKPdf	10 48 18.4	+9.1
	comp=Z,22nm,0.8s						
THE	**Thessaloniki**	**154.16**	**325**	*e*P	PKPab	10 48 33.7	-1.1
GRG	**Griva**	**154.22**	**327**	*e*P	PKPab	10 48 33.8	-1.1
AOS	**Alonnisos**	**154.66**	**322**	*e*P	PKPab	10 48 36.4	-0.5
LIT	**Litokhoron**	**154.79**	**325**	*e*P	PKPab	10 48 36.6	-0.7
FNA	**Florina**	**154.87**	**328**	*e*P	PKPdf	10 48 11.3	+0.8
XOR	**Xorichti**	**154.92**	**323**	*e*P	PKPab	10 48 37.0	-1.0
SANT	**Santorini**	**155.41**	**315**	*e*PKPab	PKPab	10 48 37.5	-2.6
CAF	**Calviac**	**155.48**	**3**	*e*PKP1	PKPdf	10 48 23.4	+12
AGG	**Agios Georgios**	**155.64**	**324**	*e*P	PKPab	10 48 39.4	-1.6
SBF	**Sospel**	**156.42**	**354**	*e*PKP1	PKPdf	10 48 25.9	+14
GUD	**Guadarrama**	**158.64**	**17**	P	PKPdf	10 48 13.4	-2.0
ESDC	**Sonseca Array**	**159.59**	**18**	P	PKPdf	10 48 13.4	-3.1
EADA	**Adamuz**	**160.78**	**21**	P	PKPdf	10 48 17.4	-0.4
ESPR	**Espera**	**161.45**	**26**	P	PKPdf	10 48 23.0	+4.5
EMIJ	**Mijas**	**162.14**	**24**	P	PKPdf	10 48 18.6	-0.6

CRAAG ***01*** *10:35:14.8, 10.48N×93.88E, Mb5.4*

BJI ***01*** *10:35:15.4, 9.86N×93.87E, h43^{km}, mB5.6, mb5.3, Ms5.2, Msz5.1*

MOS ***01*** *10:35:16.0±1.1, 10.08N×93.95E, h33^{km}, mb5.5/51, MS4.9/14, Error ellipse: s-maj=10.6km s-min=5.6km az=118.0*

NEIC ***01*** *10:35:16.9±0.1, 9.99N×93.96E, mb5.3/114, MS4.7/22, MW5.3, Error ellipse: s-maj=6.1km s-min=4.4km az=216.0, Moment Tensor Solution. s12 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.15; $M_{\theta\theta}$0.61; $M_{\phi\phi}$0.54; $M_{r\theta}$-0.17; $M_{\theta\phi}$0.61; $M_{\phi r}$0.14; Best double couple: $M_0$1.2×10^{17} NP1:ϕ_s216°, δ45°, λ-105°. NP2:ϕ_s57°, δ47°, λ-75°. Principal axes: T 1.18, Plg1°, Azm137°; N .01, Plg11°, Azm227°; P -1.19, Plg79°, Azm43°;*

HRVD ***01*** *10:35:16.9±0.2, 9.99N×94.18E, h12^{km}, MW5.5/65, Centroid moment Tensor Solution. LP body waves: s49,c85;Mantle waves: s65,c137; Half duration: $1^{s}3$ Moment tensor: Scale 10^{17}Nm; M_{rr}-1.64±.03; $M_{\theta\theta}$0.58±.03; $M_{\phi\phi}$1.05±.03; $M_{r\theta}$0.66±.09; $M_{\theta\phi}$0.88±.02; $M_{\phi r}$0.12±.08; Best double couple: $M_0$1.812×10^{17} NP1: ϕ_s24°, δ39°, λ-113°. NP2:ϕ_s232°, δ55°, λ-73°. Principal axes: T 1.8, Plg8°, Azm310°; N .019, Plg14°, Azm42°; P -1.824, Plg74°, Azm189°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CSEM ***01*** *10:35:19.8, 10.82N×93.96E, h33^{km}, mb5.5*

ISC 01 10:35:15.0±0.2**, 9.96N**±0.03×**93.99E**±0.03**, h31**^{km}**,**
h31^{km}±1.2^{km}**:pP-P, n429,** σ**$1^{s}12$**/410**, mb5.3**/151**, MS4.9**/48**,**
32C-22D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**6.21**	**65**	P	**Pn**	**10 36 43.5**	**-3.6**
SNG	**Songkhla**	**7.11**	**112**	P	**Pn**	**10 36 55.0**	**-4.7**
	1µm,1.0s						
NST	**Nakhon Sawan**	**8.26**	**46**	P	**P**	**10 37 12.2**	**-3.5**
CM31	**Chiang Mai Arr**	**9.72**	**29**	*e*P	**P**	**10 37 35.0**	**-1.0**
CHG	**Chiang Mai**	**10.03**	**28**	⇓P	**P**	**10 37 39.3**	**-1.0**
	47nm,1.1s						
NANT	**Nan**	**10.93**	**36**	⇓P	**P**	**10 37 51.0**	**-1.6**
	81nm,1.0s						
VIS	**Vishakhapatnam**	**12.91**	**308**	*e*P	**P**	**10 38 19.6**	**+0.3**
VIS				*e*		10 38 23.0	
	comp=Z,171nm,1.4s						
VIS				*e*S	**S**	**10 40 33.2**	**-10**
BWNR	**Bhubaneshwar**	**12.96**	**323**	*e*P	**P**	**10 38 18.4**	**-1.6**
BWNR				*e*		10 38 20.0	
	comp=Z,241nm,0.8s						
BWNR				*e*S	**S**	**10 40 29.9**	**-14**
PALK	**Pallekele**	**13.41**	**260**	*e*P	**P**	**10 38 26.2**	**+0.3**
PALK				*e*S	**S**	**10 40 45.2**	**-9.5**
CAL	**Calcutta**	**13.64**	**337**	*e*	**P**	**10 38 34.4**	**+5.4**
CAL				*e*		10 41 18.1	
MDRS	**Chennai**	**13.82**	**284**	*e*	**P**	**10 38 30.0**	**-1.4**
MDRS				*e*		10 40 54.0	
MDRS				*e*		10 41 51.0	
AGT	**Agartala**	**14.10**	**350**	⇓*i*	**P**	**10 38 38.0**	**+3.0**
AGT				*i*		10 39 22.0	
SALM	**Salem**	**15.60**	**278**	*e*P	**P**	**10 38 57.0**	**+2.3**
SALM				*e*		10 41 41.0	
SHL	**Shillong**	**15.65**	**353**	*e*P	**P**	**10 38 52.0**	**-3.3**
SHL				*e*		10 41 59.0	
HYB	**Hyderabad**	**16.72**	**298**	⇑*e*P	**P**	**10 39 08.0**	**-0.9**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**10 42 10.0**	**-2.6**
HYB	**Hyderabad**	**16.72**	**298**	⇑*i*P	**P**	**10 39 08.0**	**-0.9**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**10 42 10.0**	**-2.6**
HYB				LR	LR	10 44 26.0	
	comp=Z,5.7nm,26.0s						
TRD	**Trivandrum**	**16.87**	**267**	*e*	**P**	**10 39 17.6**	**+6.8**
TRD				*e*		10 39 19.0	
	comp=Z,62nm,0.7s						
KMI	**Kunming**	**17.23**	**28**	P	**P**	**10 39 17.1**	**+1.9**
KMI				AP		10 39 24.8	
KMI				XP		10 39 29.5	
KMI				PP	PP	10 39 31.8	+2.4
KMI				AMB	AMB		
	comp=Z,125nm,1.3s						
KMI				AMB	AMB		
	comp=Z,2µm,8.4s						
KMI				LR	LR		
	comp=N,5µm,12.2s						
KMI				LR	LR		
	comp=E,2µm,9.6s						
KMI				LR	LR		
	comp=Z,5µm,11.3s						
KMI	**Kunming**	**17.23**	**28**	P	**P**	**10 39 17.1**	**+1.9**
	comp=Z,125nm,1.3s						
KMI				pP		10 39 24.8	
KMI				sP		10 39 29.5	
KMI				PP	PP	10 39 31.8	+2.4
KMI				S	**S**	**10 42 27.0**	**+3.0**
KMI				sS		10 42 39.2	
KMI				SS	SS	10 42 48.8	+3.3
KMI				SSS	SSS	10 43 01.6	+2.4
QIZ	**Qiongzhong**	**17.79**	**58**	P	**P**	**10 39 23.2**	**+1.0**
QIZ				S	**S**	**10 42 38.7**	**+1.8**
QIZ				XS		10 42 51.4	
QIZ				AMB	AMB		
	comp=Z,1µm,10.2s						
QIZ				LR	LR		
	comp=N,4µm,16.2s						
QIZ				LR	LR		
	comp=E,3µm,16.3s						
QIZ				LR	LR		
	comp=Z,6µm,8.6s						
NGP	**Nagpur**	**18.18**	**310**	*e*P	**P**	**10 39 25.2**	**-1.8**
	comp=Z,100nm,1.0s						
NGP				*e*		10 42 44.3	
MNGI	**Mangalore**	**19.02**	**281**	*i*	**P**	**10 39 44.8**	**+7.6**
MNGI				*i*		10 43 23.5	
	comp=Z,118nm,1.6s						
JIRN	**Jiri**	**19.08**	**338**	*e*P	**P**	**10 39 38.3**	**+0.3**
	comp=Z,457nm,1.1s						
ALBI	**Allahabad**	**19.16**	**324**	*e*P	**P**	**10 39 39.0**	**+0.2**
PKI	**Pulchoki**	**19.30**	**336**	*e*P	**P**	**10 39 40.1**	**-0.3**
	comp=Z,615nm,1.3s						
DMN	**Daman**	**19.45**	**336**	*e*P	**P**	**10 39 42.0**	**-0.2**
	comp=Z,253nm,1.0s						
KKN	**Kakani**	**19.55**	**336**	*e*P	**P**	**10 39 42.7**	**-0.5**
	comp=Z,578nm,1.3s						
LSA	**Lhasa**	**19.82**	**353**	P	**P**	**10 39 45.0**	**-1.3**
GKN	**Gorkha**	**19.99**	**335**	*e*P	**P**	**10 39 47.7**	**-0.5**
	comp=Z,615nm,1.1s						
KOLN	**Koldanda**	**20.24**	**332**	*e*P	**P**	**10 39 50.7**	**0.0**
	comp=Z,812nm,1.1s						
GYA	**Guiyang**	**20.33**	**34**	⇑*i*P	**P**	**10 39 51.1**	**-0.5**
GYA				AP		10 40 01.2	
GYA				XP		10 40 04.0	
GYA				PP	PP	10 40 14.0	+1.9
GYA				S	**S**	**10 43 39.7**	**+7.0**
GYA				XS		10 43 53.0	
GYA				AMB	AMB		
	comp=Z,100nm,1.1s						
GYA				AMB	AMB		
	comp=Z,1µm,8.7s						
GYA				LR	LR		
	comp=N,3µm,15.8s,MS4.9						
GYA				LR	LR		
	comp=E,3µm,14.7s,MS4.9						
GYA				LR	LR		
	comp=Z,5µm,14.1s,MS5.0						
GOA	**Goa**	**20.42**	**288**	⇑*i*	**P**	**10 39 59.3**	**+6.7**
	comp=Z,109nm,1.1s						
GOA				*e*		10 43 46.0	
BHPL	**Bhopal**	**20.62**	**312**	*e*P	**P**	**10 39 56.5**	**+1.9**
BHPL				*e*		10 39 58.9	
	comp=Z,152nm,0.8s						
BHPL				*e*		10 43 38.9	
POO	**Poona**	**21.28**	**296**	*e*P	**P**	**10 40 03.6**	**+2.2**
POO				*e*		10 40 05.7	
	comp=Z,122nm,0.9s						
COCO	**West Island**	**22.18**	**173**	*e*P	**P**	**10 40 12.4**	**+2.0**
	comp=Z,212nm,1.0s,mb5.5						
COCO				LR	LR		
	comp=Z,753nm,22.0s,MS4.1						
GZH	**Guangzhou**	**22.65**	**52**	P	**P**	**10 40 18.6**	**+3.5**
GZH				AMB	AMB		
	comp=Z,1µm,6.2s						
GZH				LR	LR		
	comp=N,2µm,10.0s						
GZH				LR	LR		
	comp=E,3µm,9.3s						
GZH				LR	LR		
	comp=Z,3µm,8.1s						
CD2	**Chengdu**	**22.74**	**22**	P	**P**	**10 40 16.0**	**0.0**
CD2				XP		10 40 29.7	
CD2				S	**S**	**10 44 23.1**	**+5.1**
CD2				XS		10 44 34.8	
CD2				SS	SS	10 45 06.6	+5.1
CD2				AMB	AMB		
	comp=Z,290nm,0.8s,mb5.8						
CD2				AMB	AMB		
	comp=Z,2µm,6.1s						
CD2				LR	LR		
	comp=N,4µm,11.4s						
CD2				LR	LR		
	comp=Z,5µm,12.0s,MS5.2						
HKC	**Hong Kong**	**22.91**	**55**	*i* P	**P**	**10 40 20.0**	**+2.3**
LGTI	**Lohaghat**	**23.27**	**328**	*e*	**P**	**10 40 23.3**	**+2.2**
PTH	**Pithoragarh**	**23.37**	**328**	*e*P	**P**	**10 40 21.2**	**-0.8**
KALG	**Kalgarh**	**24.11**	**326**	*e*	**P**	**10 40 17.9**	**-11**
SONA	**Sohna**	**24.16**	**321**	*e*P	**P**	**10 40 31.7**	**+2.0**
AYAN	**Aya Nagar**	**24.30**	**322**	*e*P	**P**	**10 40 32.2**	**+1.1**
NDI	**New Delhi**	**24.39**	**322**	*e*P	**P**	**10 40 32.0**	**0.0**
NDI				*e*S	**S**	**10 44 48.0**	**+1.4**
KUDL	**Kundal**	**24.46**	**320**	*e*P	**P**	**10 40 33.5**	**+0.8**
KUDL				*e*		10 40 37.1	
	comp=Z,81nm,0.9s						
KUDL				*e*		10 45 05.9	
JOSI	**Joshimath**	**24.51**	**329**	*e*P	**P**	**10 40 30.5**	**-2.6**
AJM	**Ajmer**	**24.59**	**314**	⇓*i*P	**P**	**10 40 36.0**	**+2.0**
KHET	**Khetri**	**24.84**	**319**	*e*P	**P**	**10 40 38.2**	**+1.8**
DDI	**Dehra Dun**	**25.13**	**326**	*e*	**P**	**10 40 41.1**	**+2.1**
DDI				*e*S	**S**	**10 45 05.1**	**+6.1**
SDNR	**Sundarnagar**	**26.62**	**326**	*e*P	**P**	**10 40 53.8**	**+0.9**
LZH	**Lanzhou**	**27.51**	**17**	⇓P	**P**	**10 41 01.1**	**+0.2**
LZH				AP	pP	10 41 10.7	+0.8
LZH				XP	sP	10 41 15.0	+1.0
LZH				PP	PP	10 41 49.8	+0.7
LZH				*e*S	**S**	**10 45 39.2**	**+1.1**
LZH				XS		10 45 55.0	
LZH				SS	SS	10 46 58.2	+1.3
LZH				AMB	AMB		
	comp=Z,139nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,473nm,5.1s						
LZH				LR	LR		
	comp=N,2µm,10.2s						
LZH				LR	LR		
	comp=Z,4µm,14.9s,MS5.1						
LZH	**Lanzhou**	**27.51**	**17**	⇓P	**P**	**10 41 01.1**	**+0.2**
	comp=Z,139nm,1.5s,mb5.4						
LZH				pP	pP	10 41 10.7	+0.8
LZH				sP	sP	10 41 15.0	+1.0
LZH				PP	PP	10 41 49.8	+0.7
LZH				*e*S	**S**	**10 45 39.2**	**+1.1**
LZH				sS		10 45 55.0	
LZH				SS	SS	10 46 58.2	+1.3
LZH				LR	LR		
	comp=Z,4µm,14.9s,MS5.1						
PONG	**Pong**	**27.54**	**325**	*e*P	**P**	**10 41 00.0**	**-1.2**
XAN	**Xi’an**	**27.61**	**27**	P	**P**	**10 40 59.5**	**-2.4**
XAN				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.3						
XAN				AMB	AMB		
	comp=Z,420nm,13.4s						
XAN				LR	LR		
	comp=N,2µm,14.2s,MS4.9						
XAN				LR	LR		
	comp=E,2µm,16.6s,MS4.9						
XAN				LR	LR		
	comp=Z,4µm,15.1s,MS5.1						
QZH	**Quanzhou**	**27.73**	**54**	*e*P	**P**	**10 41 03.0**	**0.0**
QZH				S	**S**	**10 45 42.0**	**+0.2**
QZH				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.4						
QZH				LR	LR		
	comp=N,3µm,12.4s,MS5.3						
QZH				LR	LR		
	comp=E,4µm,10.5s,MS5.3						
QZH				LR	LR		
	comp=Z,5µm,15.3s,MS5.2						
THN	**Thein Dam**	**28.02**	**326**	*i* P	**P**	**10 41 05.0**	**-0.6**
THN				*e*		10 45 42.0	
GTA	**Gaotai**	**29.79**	**9**	*e*P	**P**	**10 41 21.1**	**-0.3**
GTA				AP	pP	10 41 30.5	0.0
GTA				XP	sP	10 41 34.6	+0.1
GTA				AMB	AMB		
	comp=Z,72nm,1.0s,mb5.4						
GTA				AMB	AMB		
	comp=Z,556nm,5.7s						
GTA				LR	LR		
	comp=N,947nm,14.1s,MS4.8						
GTA				LR	LR		
	comp=E,1µm,12.6s,MS4.8						
GTA				LR	LR		
	comp=Z,803nm,13.7s,MS4.5						
NJ2	**Nanjing**	**31.82**	**43**	*e*P	**P**	**10 41 39.1**	**-0.3**
NJ2				AP	pP	10 41 48.8	+0.3
NJ2				XP	sP	10 41 53.0	+0.6
NJ2				PP	PP	10 42 45.0	-0.2
NJ2				S	**S**	**10 46 47.0**	**+0.4**
NJ2				XS		10 47 05.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,1µm,3.8s						
NJ2				LR	LR		
	comp=N,3µm,11.3s,MS5.5						
NJ2				LR	LR		
	comp=E,4µm,12.5s,MS5.5						
NJ2				LR	LR		
	comp=Z,6µm,11.2s,MS5.5						
SSE	**Sheshan**	**32.87**	**46**	*e*P	**P**	**10 41 48.3**	**-0.2**
SSE				AP	pP	10 41 57.0	-0.6
SSE				S	**S**	**10 47 03.5**	**+0.6**
SSE				XS		10 47 18.9	
SSE				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
SSE				AMB	AMB		
	comp=Z,411nm,5.0s						
SSE				LR	LR		
	comp=N,3µm,15.8s,MS5.1						
SSE				LR	LR		
	comp=E,1µm,15.7s,MS5.1						
SSE				LR	LR		
	comp=Z,2µm,14.0s,MS5.0						
SSE	**Sheshan**	**32.87**	**46**	*e*P	**P**	**10 41 48.3**	**-0.2**
	comp=Z,16nm,1.0s,mb4.9						
SSE				pP	pP	10 41 57.0	-0.6
SSE				S	**S**	**10 47 03.5**	**+0.6**
SSE				sS		10 47 18.9	
SSE				SS	SS	10 49 20.9	+18
SSE				LR	LR		
	comp=Z,2µm,14.0s,MS5.0						
TIA	**Tai’an**	**33.52**	**35**	*e*P	**P**	**10 41 54.2**	**0.0**
KSH	**Kashi**	**33.54**	**334**	*e*P	**P**	**10 41 54.0**	**-0.3**
KSH				*e*AP	pP	10 42 04.0	+0.6
KSH				*e*XP	sP	10 42 08.3	+1.0
KSH				*e*PP	PP	10 43 06.2	-0.7
KSH				*e*PCP	PcP	10 44 34.8	+0.2
KSH				*e*S	**S**	**10 47 11.3**	**-1.9**
KSH				*e*SCP		10 48 16.3	
KSH				*e*PCS		10 48 23.0	
KSH				*e*SS	SS	10 49 14.8	-3.1
KSH				*e*SCS	ScS	10 52 16.2	+0.8
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				AMB	AMB		
	comp=Z,270nm,4.2s						
BTO	**Baotou**	**33.67**	**22**	*e*P	**P**	**10 41 53.6**	**-1.8**
BTO				S	**S**	**10 47 11.2**	**-4.1**
BTO				AMB	AMB		
	comp=Z,49nm,1.4s,mb5.2						
BTO				LR	LR		
	comp=N,729nm,8.3s						
BTO				LR	LR		
	comp=E,2µm,12.3s						
WMQ	**Urumqi**	**34.18**	**352**	⇓*i*P	**P**	**10 42 00.0**	**+0.2**
WMQ				XP	sP	10 42 13.8	+1.0
WMQ				PP	PP	10 43 15.2	+0.5
WMQ				S	**S**	**10 47 23.0**	**-0.1**
WMQ				SS	SS	10 49 33.0	+0.4
WMQ				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.3						
WMQ				LR	LR		
	comp=N,1µm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=E,1µm,16.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,1µm,17.0s,MS4.7						
HHC	**Hu-ho-hao-te**	**34.48**	**24**	*e*P	**P**	**10 42 02.1**	**-0.3**
HHC				AP	pP	10 42 11.5	0.0
HHC				XP	sP	10 42 15.9	+0.5
HHC				PP	PP	10 43 17.8	-0.8
HHC				PCP	PcP	10 44 34.6	-2.7
HHC				S	**S**	**10 47 29.6**	**+1.9**
HHC				XS		10 47 45.2	
HHC				SCP		10 48 15.1	
HHC				PCS		10 48 24.7	
HHC				SS	SS	10 49 43.8	+4.3
HHC				SCS	ScS	10 52 18.5	-1.8
HHC				AMB	AMB		
	comp=Z,693nm,1.4s,mb6.4						
HHC				LR	LR		
	comp=N,1µm,14.4s,MS4.9						
HHC				LR	LR		
	comp=E,1µm,16.8s,MS4.9						
HHC				LR	LR		
	comp=Z,1µm,15.6s,MS4.8						
WBK	**Wadi Bani Khal**	**35.79**	**295**	P	**P**	**10 42 17.2**	**+3.5**
	SNR=6.1						
BJI	**Beijing**	**35.87**	**30**	P	**P**	**10 42 15.3**	**+1.1**
BJI				S	**S**	**10 47 54.7**	**+5.4**
BJI				AMB	AMB		
	comp=Z,85nm,0.9s,mb5.7						
BJI				LR	LR		
	comp=N,2µm,16.9s,MS5.1						
BJI				LR	LR		
	comp=E,2µm,18.0s,MS5.1						
BJI				LR	LR		
	comp=Z,3µm,16.8s,MS5.1						
BJI	**Beijing**	**35.87**	**30**	P	**P**	**10 42 15.3**	**+1.1**
	comp=Z,85nm,0.9s,mb5.7						
BJI				S	**S**	**10 47 54.7**	**+5.4**
BJI				LR	LR		
	comp=Z,3µm,16.8s,MS5.1						

KZA	**Kyzart**	**35.98**	**336**	P	**P**	**10 42 16.9**	**+1.7**
	SNR=16						
UCH	**Uchtor**	**36.41**	**335**	P	**P**	**10 42 19.1**	**+0.4**
	SNR=38						
JMDO	**Jabal Madar**	**36.51**	**294**	P	**P**	**10 42 22.9**	**+3.2**
	SNR=6.5						
TKM2	**Tokmak 2**	**36.56**	**337**	P	**P**	**10 42 20.1**	**+0.1**
	SNR=17						
KBK	**Karagaybulak**	**36.59**	**336**	P	**P**	**10 42 21.0**	**+0.8**
	SNR=40						
AML	**Almayashu**	**36.67**	**334**	P	**P**	**10 42 21.7**	**+0.8**
	SNR=104						
SMDO	**Samad**	**36.73**	**295**	P	**P**	**10 42 24.8**	**+3.2**
	SNR=23						
AAK	**Ala-Archa**	**36.75**	**336**	P	**P**	**10 42 23.6**	**+2.0**
	SNR=49						
AAK	**Ala-Archa**	**36.75**	**336**	*i*P	**P**	**10 42 21.8**	**+0.2**
AAK				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.3						
AAK	**Ala-Archa**	**36.75**	**336**	*e*P	**P**	**10 42 20.9**	**-0.8**
	comp=Z,87nm,1.0s,mb5.5						
AAK				LR	LR		
	comp=Z,787nm,20.0s,MS4.5						
FRU	**Bishkek**	**36.87**	**336**	*e*P	**P**	**10 42 24.0**	**+1.4**
FRU				*e*		10 42 37.0	
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.1						
FRU				MLR	MLR		
	comp=Z,3μm,18.0s,MS5.1						
CHMS	**Chumysh**	**36.95**	**336**	P	**P**	**10 42 23.2**	**-0.2**
	SNR=22						
EKS2	**Erkin-Say**	**37.07**	**335**	P	**P**	**10 42 25.0**	**+0.7**
	SNR=69						
USP	**Ospenovka**	**37.28**	**336**	P	**P**	**10 42 26.0**	**-0.1**
	SNR=84						
BSY	**Bisya**	**37.41**	**294**	P	**P**	**10 42 31.1**	**+3.7**
	SNR=72						
HOQ	**Hoqain**	**37.52**	**296**	P	**P**	**10 42 31.5**	**+3.3**
	SNR=42						
DL2	**Dalian**	**37.97**	**36**	P	**P**	**10 42 33.0**	**+1.1**
DL2				*e*S	**S**	**10 48 21.9**	**+0.5**
DL2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.1						
DL2				AMB	AMB		
	comp=Z,510nm,5.0s						
DL2				LR	LR		
	comp=N,500nm,11.4s,MS4.9						
DL2				LR	LR		
	comp=E,1μm,14.4s,MS4.9						
DL2				LR	LR		
	comp=Z,800nm,17.6s,MS4.6						
MKAR	**Makanchi Array**	**38.04**	**347**	*i*P	**P**	**10 42 31.6**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,52nm,1.0s						
ARQ	**Araqi**	**38.16**	**295**	P	**P**	**10 42 36.9**	**+3.3**
	SNR=16						
ASHO	**Ashiyiah**	**38.91**	**297**	P	**P**	**10 42 43.4**	**+3.5**
	SNR=23						
BANOM	**Banah**	**39.04**	**299**	P	**P**	**10 42 45.0**	**+4.0**
	SNR=11						
ULN	**Ulaanbaatar**	**39.36**	**14**	*e*P	**P**	**10 42 42.9**	**-0.6**
	comp=Z,28nm,0.9s,mb5.0						
ULN				LR	LR		
	comp=Z,767nm,19.0s,MS4.5						
MBWA	**Marble Bar**	**39.95**	**141**	*e*P	**P**	**10 42 47.0**	**-1.5**
	comp=Z,18nm,1.0s,mb4.8						
MBWA				LR	LR		
	comp=Z,2μm,21.0s,MS4.9						
SNY	**Shenyang**	**41.03**	**34**	⇑P	**P**	**10 42 57.6**	**+0.4**
SNY				XP	sP	10 43 11.4	+1.1
SNY				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.3						
SNY				AMB	AMB		
	comp=Z,540nm,9.7s						
SNY				LR	LR		
	comp=E,2μm,17.5s						
SNY				LR	LR		
	comp=Z,2μm,14.8s,MS5.1						
ZAK	**Zakamensk**	**41.03**	**9**	⇓*i*P	**P**	**10 42 57.3**	**+0.2**
ZAK				*e*		10 44 58.0	
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.88**	**132**	*e*P	**P**	**10 43 03.1**	**-1.4**
	comp=Z,17nm,0.8s,mb4.7						
MOY	**Mondy**	**41.98**	**7**	*e*P	**P**	**10 43 06.2**	**+1.3**
MOY				*e*		10 45 01.6	
MOY				pmax	pmax		
	comp=Z,59nm,3.0s						
TLY	**Talaya**	**42.35**	**9**	P	**P**	**10 43 08.7**	**+0.8**
	comp=Z,213nm,1.1s,mb5.7,SNR=13						
TLY	**Talaya**	**42.35**	**9**	*e*P	**P**	**10 43 08.4**	**+0.5**
TLY				*e*		10 44 56.4	
TLY				*e*S	**S**	**10 49 34.4**	**+7.6**
TLY				*e*SS	SS	10 52 25.7	-4.5
TLY				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.0						
TLY				MLR	MLR		
	comp=Z,661nm,14.0s,MS4.7						
TLY	**Talaya**	**42.35**	**9**	*e*P	**P**	**10 43 08.4**	**+0.5**
	comp=Z,58nm,1.0s,mb5.2						
TLY				LR	LR		
	comp=Z,173nm,20.0s,MS3.9						
KURK	**Kurchatov**	**42.57**	**346**	*i*P	**P**	**10 43 09.5**	**-0.3**
KURK	**Kurchatov**	**42.57**	**346**	*e*P	**P**	**10 43 09.2**	**-0.5**
	comp=Z,59nm,1.0s,mb5.3						
KURK				*e*		10 45 02.5	
IRK	**Irkutsk**	**42.99**	**9**	*e*P	**P**	**10 43 13.9**	**+0.7**
IRK				pmax	pmax		
	comp=Z,56nm,2.6s,mb4.8						
CN2	**Changchun**	**43.37**	**33**	*e*P	**P**	**10 43 17.9**	**+1.5**
CN2				*e*AP	pP	10 43 28.0	+2.4
CN2				*e*S	**S**	**10 49 43.3**	**+1.5**
CN2				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.5						
CN2				AMB	AMB		
	comp=Z,770nm,6.0s						
CN2				LR	LR		
	comp=N,1μm,11.0s,MS5.2						
CN2				LR	LR		
	comp=E,1μm,11.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1μm,15.0s,MS5.0						
NVS	**Novosibirsk**	**45.58**	**351**	*e*P	**P**	**10 43 32.3**	**-1.6**
NVS				pmax	pmax		
	comp=N,16nm,1.0s						
NVS				pmax	pmax		
	comp=E,11nm,1.0s						
NVS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
MDJ	**Mudanjiang**	**46.19**	**35**	P	**P**	**10 43 39.2**	**+0.3**
MDJ				AP	pP	10 43 48.0	-0.2
MDJ				XP	sP	10 43 51.7	-0.3
MDJ				PCP	PcP	10 45 14.3	-0.6
MDJ				PP	PP	10 45 27.7	+0.3
MDJ				PCS		10 49 08.8	
MDJ				S	**S**	**10 50 24.5**	**+2.1**
MDJ				XS		10 50 39.6	
MDJ				SCS	ScS	10 53 32.3	+2.9
MDJ				AMB	AMB		
	comp=Z,23nm,1.5s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,539nm,5.6s						
MDJ				LR	LR		
	comp=N,721nm,12.6s,MS5.1						
MDJ				LR	LR		
	comp=E,1μm,15.2s,MS5.1						
MDJ				LR	LR		
	comp=Z,2μm,12.6s,MS5.2						
MUN	**Mundaring**	**46.80**	**154**	*e*P	**P**	**10 43 43.7**	**-0.2**
	comp=Z,22nm,0.9s,mb5.1						
BVA0	**Borovoye Array**	**46.99**	**341**	*i*P	**P**	**10 43 44.7**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CHKZ	**Chkalovo**	**47.46**	**341**	*e*P	**P**	**10 43 47.8**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,84nm,1.0s,mb5.6						
CHKZ	**Chkalovo**	**47.46**	**341**	*e*P	**P**	**10 43 47.8**	**-1.1**
	comp=Z,84nm,1.0s,mb5.6						
MAJO	**Matsushiro**	**47.90**	**49**	*e*P	**P**	**10 43 53.3**	**+0.8**
	comp=Z,20nm,0.9s,mb5.1						
MAJO				LR	LR		
	comp=Z,722nm,21.0s,MS4.6						
MAT	**Matsushiro**	**47.90**	**49**	P	**P**	**10 43 52.0**	**-0.6**
MAT				S	**S**	**10 50 47.6**	**+0.8**
NWAO	**Narrogin (SRO)**	**48.06**	**153**	*e*P	**P**	**10 43 51.4**	**-2.4**
	comp=Z,27nm,1.0s,mb5.2						
NWAO				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
WRAB	**Tennant Creek**	**49.61**	**127**	*i*P	**P**	**10 44 05.1**	**-0.8**
WRAB	**Tennant Creek**	**49.61**	**127**	*e*P	**P**	**10 44 04.6**	**-1.3**
	comp=Z,29nm,0.8s,mb5.3						
WRAB				LR	LR		
	comp=Z,466nm,20.0s,MS4.5						
WB2	**Warramunga Arr**	**49.61**	**127**	*e*P	**P**	**10 44 05.1**	**-0.9**
WB2				*e*S	**S**	**10 51 12.4**	**+1.4**
BOD	**Bodaibo**	**50.17**	**14**	*e*P	**P**	**10 44 08.4**	**-1.3**
ASPA	**Alice Springs**	**51.37**	**131**	⇑*i*P	**P**	**10 44 17.8**	**-1.5**
FORT	**Forrest**	**52.06**	**142**	*e*P	**P**	**10 44 24.2**	**-0.2**
	comp=Z,159nm,1.1s,mb5.9						
CLNS	**Chul’man**	**52.55**	**21**	*e*P	**P**	**10 44 26.9**	**-0.8**
CLNS				pmax	pmax		
	comp=N,121nm,1.0s						
CLNS				pmax	pmax		
	comp=E,101nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,218nm,1.0s,mb6.0						
CLNS				MLR	MLR		
	comp=N,1μm,13.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,200nm,13.0s,MS5.2						
CLNS				MLR	MLR		
	comp=Z,2μm,13.0s,MS5.3						
GNI	**Garni**	**52.90**	**313**	*i*P	**P**	**10 44 30.7**	**+0.1**
GNI				pmax	pmax		
	comp=Z,90nm,1.6s						
GNI	**Garni**	**52.90**	**313**	*e*P	**P**	**10 44 31.8**	**+1.2**
	comp=Z,110nm,1.1s,mb5.7						
GNI				LR	LR		
	comp=Z,1μm,22.0s,MS4.9						
SVE	**Sverdlovsk**	**53.43**	**338**	*e*P	**P**	**10 44 30.0**	**-4.2**
SVE				*e*	pP	10 44 41.0	-2.6
SVE				*e*		10 45 38.5	
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
TI2	**Plekhanov**	**53.47**	**315**	*e*P	**P**	**10 44 35.8**	**+1.1**
TI2				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.9						
ARU	**Arti**	**53.93**	**337**	⇓*i*P	**P**	**10 44 30.0**	**-7.9**
ARU				*e*S	**S**	**10 51 58.6**	**-11**
ARU				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
ARU				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.3						
ARU				MLR	MLR		
	comp=N,2μm,22.0s,MS5.2						
ARU				MLR	MLR		
	comp=E,2μm,22.0s,MS5.2						
YSS	**Yuzh-Sakhalins**	**55.25**	**39**	⇑*i*P	**P**	**10 44 46.8**	**-1.0**
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**55.25**	**39**	*e*P	**P**	**10 44 48.1**	**+0.4**
	comp=Z,110nm,1.1s,mb5.8						
KIV	**Kislovodsk**	**55.69**	**317**	P	**P**	**10 44 51.2**	**+0.2**
	comp=Z,642nm,0.9s,SNR=17						
KIV	**Kislovodsk**	**55.69**	**317**	*e*P	**P**	**10 44 51.2**	**+0.2**
KIV				*e*		10 46 58.7	
KIV				*i*S	**S**	**10 52 37.7**	**+4.2**
KIV				pmax	pmax		
	comp=N,62nm,0.9s						
KIV				pmax	pmax		
	comp=Z,106nm,0.9s,mb5.9						
KIV				smax			
	comp=N,381nm,2.8s						
KIV				MLR	MLR		
	comp=E,605nm,20.0s						
KIV				MLR	MLR		
	comp=Z,720nm,20.0s,MS4.8						
KIV	**Kislovodsk**	**55.69**	**317**	*e*P	**P**	**10 44 50.5**	**-0.5**
	comp=Z,164nm,1.0s,mb6.0						
KIV				LR	LR		
	comp=Z,242nm,22.0s,MS4.2						
GOF	**Gofitskoye**	**55.88**	**318**	⇓*i*P	**P**	**10 44 52.5**	**+0.3**
GOF				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.6						
PMG	**Port Moresby**	**56.30**	**108**	*e*P	**P**	**10 44 54.9**	**-0.8**
PMG				pmax	pmax		
	comp=Z,59nm,0.9s						
PMG	**Port Moresby**	**56.30**	**108**	*e*P	**P**	**10 44 54.9**	**-0.8**
	comp=Z,59nm,0.9s,mb5.6						
SOKR	**Solikamsk**	**56.82**	**338**	⇑*i*P	**P**	**10 44 57.0**	**-1.8**
SOKR				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,2μm,21.0s,MS5.2						
MALT	**Malatya**	**57.02**	**309**	*e*P	**P**	**10 44 59.0**	**-1.6**
MALT				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
MALT	**Malatya**	**57.02**	**309**	*e*P	**P**	**10 44 59.0**	**-1.6**
	comp=Z,21nm,1.1s,mb5.1						
KMBO	**Kilima Mbogo**	**57.53**	**262**	*e*P	**P**	**10 45 06.2**	**+1.7**
	comp=Z,26nm,1.0s,mb5.2						
KMBO				LR	LR		
	comp=Z,760nm,22.0s,MS4.8						
SOC	**Sochi**	**57.59**	**316**	*e*P	**P**	**10 45 01.5**	**-3.0**
SOC				*e*		10 45 55.5	
SOC				*e*		10 47 05.5	
SOC				*e*PPP	PPP	10 48 28.6	-6.9
SOC				*e*S	**S**	**10 53 01.0**	**+2.5**
SOC				*e*		10 54 48.2	
SOC				*e*SS	SS	10 56 44.1	-6.0
SOC				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
SOC				pmax	pmax		
	comp=N,24nm,0.9s						
SOC				pmax	pmax		
	comp=E,23nm,1.1s						
SOC				MLR	MLR		
	comp=N,1μm,22.0s,MS5.1						
SOC				MLR	MLR		
	comp=Z,1μm,22.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,1μm,23.0s,MS5.1						
YAK	**Yakutsk**	**58.08**	**19**	*e*P	**P**	**10 45 05.8**	**-1.9**
YAK				*e**PP	pP	10 45 14.6	-2.6
YAK				*e*		10 45 58.7	
YAK				*e*		10 47 16.2	
YAK				*e*S	**S**	**10 53 03.1**	**-1.7**
YAK				*e*		10 54 55.2	
YAK				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.7						
YAK				pmax	pmax		
	comp=N,39nm,1.1s						
YAK				pmax	pmax		
	comp=E,29nm,1.0s						
YAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax			
	comp=E,38nm,6.0s						
YAK				smax			
	comp=N,56nm,10.2s						
YAK				MLR	MLR		
	comp=Z,816nm,15.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,443nm,14.0s,MS4.8						
YAK				MLR	MLR		
	comp=E,373nm,14.0s,MS4.8						
YAK	**Yakutsk**	**58.08**	**19**	*e*P	**P**	**10 45 05.7**	**-2.0**
	comp=E,158nm,0.8s,mb6.1						
YAK				LR	LR		
	comp=Z,803nm,22.0s,MS4.8						
EIL	**Elat**	**58.29**	**299**	*e*P	**P**	**10 45 09.1**	**-0.5**
	comp=Z,16nm,1.0s,mb5.0						
CTA	**Charters Tower**	**59.47**	**120**	*e*P	**P**	**10 45 17.1**	**-0.8**
	comp=Z,29nm,1.1s,mb5.2						
CTAO	**Charters Tower**	**59.47**	**120**	*e*P	**P**	**10 45 17.3**	**-0.6**
	comp=Z,64nm,1.1s,mb5.6						
CTAO				LR	LR		
	comp=Z,1μm,21.0s,MS5.0						
STKA	**Stephens Creek**	**61.65**	**134**	*e*P	**P**	**10 45 31.8**	**-0.8**
	comp=Z,28nm,1.0s,mb5.3						
SIM	**Simferopol’**	**61.83**	**316**	*ce*P	**P**	**10 45 33.7**	**0.0**
SIM				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.6						
SIM				MLR	MLR		
	comp=Z,1μm,23.0s,MS5.0						
MOS	**Moscow**	**63.24**	**328**	*e*P	**P**	**10 45 40.5**	**-2.3**
MOS				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.8						
OBN	**Obninsk**	**63.55**	**327**	⇓*i*P	**P**	**10 45 41.4**	**-3.5**
OBN				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.4						
OBN				MLR	MLR		
	comp=Z,1μm,23.0s,MS5.0						
OBN	**Obninsk**	**63.55**	**327**	*i*P	**P**	**10 45 41.5**	**-3.4**
OBN				LR	LR		
	comp=Z,1μm,23.0s,MS5.0						
MBAR	**Mbarara**	**63.80**	**264**	*e*P	**P**	**10 45 49.0**	**+1.8**
	comp=Z,23nm,1.2s,mb5.1						
MBAR				*e*		10 45 55.5	
MBAR				LR	LR		
	comp=Z,117nm,21.0s,MS4.0						
MA2	**Magadan**	**65.00**	**28**	*i*P	**P**	**10 45 53.7**	**-0.6**
MA2				pmax	pmax		
	comp=Z,116nm,1.1s,mb5.8						
MA2	**Magadan**	**65.00**	**28**	*e*P	**P**	**10 45 54.1**	**-0.2**
	comp=Z,121nm,1.0s,mb5.9						
TIXI	**Tiksi**	**65.23**	**12**	⇓*i*P	**P**	**10 45 53.5**	**-2.1**
TIXI				*e*S	S	10 54 30.9	-4.3
TIXI				*e*SS	SS	10 58 41.3	-8.5
TIXI				pmax	pmax		
	comp=N,21nm,1.0s						
TIXI				pmax	pmax		
	comp=Z,139nm,1.0s,mb5.9						
TIXI				pmax	pmax		
	comp=E,12nm,0.8s						
TIXI				pmax	pmax		
	comp=Z,180nm,1.1s,mb6.0						
TIXI				MLR	MLR		
	comp=Z,417nm,18.0s,MS4.7						
TIXI	**Tiksi**	**65.23**	**12**	*i*P	**P**	**10 45 54.2**	**-1.4**
TIRR	**Tirgusor**	**65.70**	**314**	⇑*i*P	**P**	**10 45 57.5**	**-1.5**
TIRR	**Tirgusor**	**65.70**	**314**	⇑*i*P	**P**	**10 45 57.5**	**-1.5**
CFR	**Carcaliu**	**66.02**	**315**	⇑P	**P**	**10 45 59.7**	**-1.3**
CFR	**Carcaliu**	**66.02**	**315**	⇓*i*P	**P**	**10 45 59.8**	**-1.2**
HARR	**Harsova**	**66.08**	**315**	⇑*i*P	**P**	**10 45 59.8**	**-1.5**
HARR	**Harsova**	**66.08**	**315**	⇑*i*P	**P**	**10 45 59.8**	**-1.6**
PET	**Petropavlovsk**	**66.95**	**36**	*e*P	**P**	**10 46 10.2**	**+3.4**
PET				pmax	pmax		
	comp=Z,200nm,15.2s						
PET				pmax	pmax		
	comp=Z,100nm,14.2s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.9						
VRI	**Vrincioaia**	**67.11**	**316**	⇑*i*P	**P**	**10 46 07.7**	**-0.3**
VRI	**Vrincioaia**	**67.11**	**316**	⇑*i*P	**P**	**10 46 07.7**	**-0.3**
TOO	**Toolangi**	**67.48**	**138**	*e*P	**P**	**10 46 10.7**	**+0.2**
	comp=Z,2.3nm,1.0s						
MLR	**Muntele Rosu**	**67.59**	**315**	⇓P	**P**	**10 46 10.3**	**-0.7**
MLR	**Muntele Rosu**	**67.59**	**315**	⇑*i*P	**P**	**10 46 10.7**	**-0.3**
MLR	**Muntele Rosu**	**67.59**	**315**	⇑*i*P	**P**	**10 46 10.7**	**-0.3**
RZN	**Rozhen**	**67.98**	**311**	*i*P	**P**	**10 46 12.3**	**-1.2**
MTUR	**Matau**	**68.17**	**315**	⇑*i*P	**P**	**10 46 14.5**	**-0.2**
MTUR	**Matau**	**68.17**	**315**	⇑*i*P	**P**	**10 46 14.5**	**-0.1**
BURAR	**Bucovina Array**	**68.42**	**317**	⇓P	**P**	**10 46 16.1**	**0.0**
PGB	**Panagyurishte**	**68.48**	**312**	P	**P**	**10 46 15.3**	**-1.3**
MMB	**Musomiste**	**68.71**	**311**	P	**P**	**10 46 17.0**	**-1.0**
JOF	**Joensuu**	**68.92**	**334**	*e*p	**P**	**10 46 17.6**	**-1.4**
	comp=Z,38nm,1.1s,mb5.2						
JOF	**Joensuu**	**68.92**	**334**	*e*P	**P**	**10 46 17.6**	**-1.4**
JOF				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
CNB	**Canberra Magne**	**68.96**	**134**	*e*P	**P**	**10 46 19.5**	**-0.2**
	comp=Z,173nm,0.9s,mb6.0						
VTS	**Vitosha**	**69.19**	**312**	*i*P	**P**	**10 46 20.5**	**-0.5**
KKB	**Krupnik**	**69.21**	**311**	*i*P	**P**	**10 46 19.5**	**-1.6**
LSZ	**Lusaka**	**69.83**	**250**	*e*P	**P**	**10 46 25.7**	**+0.4**
	comp=Z,21nm,0.6s,mb5.2						
LSZ				LR	LR		
	comp=Z,866nm,20.0s,MS5.0						
APA	**Apatity**	**69.86**	**339**	⇑*i*P	**P**	**10 46 24.6**	**0.0**
APA				*i*	pP	10 46 32.5	-1.7
APA				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.4						
APA				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.5						
BOLS	**Boljevac**	**70.22**	**313**	⇑*i*P	**P**	**10 46 26.6**	**-0.6**
KWP	**Kalwaria**	**70.36**	**319**	*e*P	**P**	**10 46 27.2**	**-0.7**
SKO	**Skopje**	**70.44**	**311**	*i*P	**P**	**10 46 27.5**	**-1.1**
KOLS	**Kolonicke sedl**	**70.55**	**318**	*i*P	**P**	**10 46 29.6**	**+0.4**
SUW	**Suwalki**	**70.75**	**324**	*e*P	**P**	**10 46 29.8**	**-0.5**
KAF	**Kangasniemi**	**70.89**	**333**	*e*p	**P**	**10 46 30.2**	**-0.7**
	comp=Z,33nm,1.1s,mb5.2						
KAF	**Kangasniemi**	**70.89**	**333**	*e*P	**P**	**10 46 30.2**	**-0.7**
KAF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
CRVS	**Cervenica-Dubn**	**71.08**	**318**	*i*P	**P**	**10 46 32.7**	**+0.3**
GRUS	**Gruza**	**71.12**	**313**	⇑*i*P	**P**	**10 46 32.4**	**-0.3**
DIVS	**Divcibare**	**71.65**	**313**	⇑*i*P	**P**	**10 46 34.1**	**-1.8**
KECS	**Kecovo**	**71.68**	**318**	*i*P	**P**	**10 46 36.1**	**+0.1**
NIE	**Niedzica**	**71.89**	**319**	*e*P	**P**	**10 46 37.8**	**+0.6**
PSZ	**Piszkesteto**	**72.02**	**317**	*e*P	**P**	**10 46 37.6**	**-0.4**
PSZ				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
PSZ	**Piszkesteto**	**72.02**	**317**	*e*P	**P**	**10 46 37.6**	**-0.4**
	comp=Z,25nm,1.0s,mb5.1						
PSZ	**Piszkesteto**	**72.02**	**317**	⇓*e*PKP/F	**P**	**10 46 37.0**	**-1.0**
PSZ				*i*		10 48 08.9	
OJC	**Ojcow**	**72.30**	**320**	*e*P	**P**	**10 46 39.0**	**-0.6**
VYHS	**Vyhne**	**72.77**	**318**	*i*P	**P**	**10 46 42.3**	**-0.2**
KEV	**Kevo**	**72.84**	**340**	*e*p	**P**	**10 46 41.3**	**-1.1**
	comp=Z,20nm,0.7s,mb5.2						
KEV	**Kevo**	**72.84**	**340**	*e*P	**P**	**10 46 41.3**	**-1.1**
KEV				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
OKC	**Ostrava-Krasne**	**73.33**	**319**	*e*P	**P**	**10 46 46.1**	**+0.4**
MORC	**Moravsky Berou**	**73.71**	**319**	*e*P	**P**	**10 46 47.0**	**-0.9**
MORC				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
MORC	**Moravsky Berou**	**73.71**	**319**	*e*P	**P**	**10 46 47.0**	**-0.9**
	comp=Z,46nm,1.2s,mb5.3						
TIP	**Timpagrande**	**73.90**	**308**	*e*P	**P**	**10 46 47.6**	**-1.6**
BILL	**Bilibino**	**74.22**	**22**	*i*P	**P**	**10 46 48.8**	**-1.7**
BILL				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
BILL				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.9						
SISC	**Sisak**	**74.30**	**314**	*i*PKP	**P**	**10 46 54.0**	**+2.7**
DPC	**Dobruska-Polom**	**74.53**	**320**	*e*P	**P**	**10 46 53.1**	**+0.5**
KSP	**Ksiaz**	**74.58**	**320**	*e*P	**P**	**10 46 52.1**	**-0.8**
KSP				*e*		10 46 53.2	
KSP	**Ksiaz**	**74.58**	**320**	*e*P	**P**	**10 46 53.2**	**+0.3**
UPC	**Upice**	**74.74**	**320**	*e*P	**P**	**10 46 54.6**	**+0.8**
ARSA	**Arzberg**	**74.94**	**316**	⇑*i*P	**P**	**10 46 55.5**	**+0.5**
	comp=Z,15nm,1.1s,mb4.8						
LBTB	**Lobatse**	**75.11**	**241**	*e*P	**P**	**10 46 57.3**	**+0.8**
	comp=Z,62nm,1.1s,mb5.5						
LBTB				LR	LR		
	comp=Z,386nm,19.0s,MS4.7						
PERS	**Pernice**	**75.20**	**316**	*e*P	**P**	**10 46 56.8**	**+0.3**
OBKA	**Obir**	**75.59**	**315**	⇑*i*P	**P**	**10 46 58.7**	**-0.1**
	comp=Z,30nm,1.2s,mb5.1						
FX1	**Attu Island--F**	**75.60**	**38**	*e*P	**P**	**10 46 58.6**	**-0.1**
LJU	**Ljubljana**	**75.60**	**315**	*e*P	**P**	**10 46 59.0**	**+0.2**
LJU				*e*		10 48 08.5	
PVCC	**Panska Ves**	**75.66**	**320**	*e*P	**P**	**10 46 59.8**	**+0.7**
PRU	**Pruhonice**	**75.66**	**319**	*e*P	**P**	**10 47 00.0**	**+0.9**
MOA	**Molln**	**75.80**	**317**	⇑*i*P	**P**	**10 46 59.8**	**-0.1**
	comp=Z,10nm,1.1s,mb4.7						
VOY	**Vojsko**	**76.04**	**315**	*e*P	**P**	**10 47 00.3**	**-1.0**
VOY				*e*		10 47 12.3	
BRG	**Berggiesshubel**	**76.07**	**320**	⇑*i*P	**P**	**10 47 01.9**	**+0.5**
BRG				*i*	pP	10 47 09.8	-1.3
BRG				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
BRG	**Berggiesshubel**	**76.07**	**320**	⇑*i*P	**P**	**10 47 01.9**	**+0.5**
	comp=Z,32nm,1.4s,mb5.1						
BRG				*i*	pP	10 47 09.8	-1.3
GEC2	**GERESS Array S**	**76.19**	**318**	*e*P	**P**	**10 47 01.4**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
GEC2	**GERESS Array S**	**76.19**	**318**	*e*P	**P**	**10 47 01.4**	**-0.7**
	comp=Z,22nm,0.9s,mb5.1						
KHC	**Kasperske Hory**	**76.27**	**318**	*e*P	**P**	**10 47 02.8**	**+0.2**
KHC				x	x	10 48 17.0	
PTCC	**Patocco-Chiusa**	**76.41**	**315**	*e*P	**P**	**10 47 02.7**	**-0.7**
KBA	**Koelnbreinsper**	**76.42**	**316**	⇓*i*P	**P**	**10 47 03.5**	**+0.1**
	comp=Z,20nm,1.0s,mb5.0						
BOSA	**Boshof**	**76.57**	**237**	*e*P	**P**	**10 47 05.6**	**+0.9**

	comp=Z,77nm,0.9s,mb5.6						
BOSA				LR	LR		
	comp=Z,476nm,20.0s,MS4.8						
CLL	Collm	76.67	320	i P	P	10 47 04.6	-0.1
CLL				i		10 47 17.0	
CLL				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
CLL				MLR	MLR		
	comp=Z,700nm,17.0s,MS5.0						
CLL	Collm	76.67	320	i P	P	10 47 04.6	-0.1
	comp=Z,19nm,1.1s,mb4.9						
CLL				i		10 47 17.0	
CLL				LR	LR		
	comp=Z,700nm,17.0s,MS5.0						
CLL	Collm	76.67	320	P	P	10 47 04.6	-0.1
	comp=Z,logA/T=1.2,mb4.9						
CLL				i *SP	sP	10 47 17.0	-0.8
WET	Wettzell	76.73	318	eP	P	10 47 04.6	-0.6
WET				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
WET	Wettzell	76.73	318	eP	P	10 47 04.6	-0.6
	comp=Z,12nm,1.0s,mb4.8						
ARV	Arcevia	76.74	312	eP	P	10 47 05.5	+0.2
SNTG	Esanatoglia	76.75	312	eP	P	10 47 04.7	-0.7
NKC	Novy Kostel	77.01	319	eP	P	10 47 07.7	+1.0
SFI	Santa Sofia	77.52	313	eP	P	10 47 10.6	+0.9
MOX	Moxa	77.55	320	eP	P	10 47 09.9	+0.3
MOX				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
MOX	Moxa	77.55	320	eP	P	10 47 09.9	+0.3
	comp=Z,18nm,1.5s,mb4.8						
MOX	Moxa	77.55	320	i P	P	10 47 09.9	+0.3
	comp=Z,logA/T=1.1,mb4.8						
WTTA	Wattenberg	77.58	316	⇑iP	P	10 47 09.0	-0.9
	comp=Z,26nm,0.9s,mb5.2						
CTI	Castel Tesino	77.60	315	eP	P	10 47 10.1	+0.1
PGD	Poggio Sodo	77.62	313	eP	P	10 47 11.0	+0.8
WATA	Walderalm	77.62	316	⇓iP	P	10 47 09.3	-0.8
	comp=Z,8.7nm,0.9s,mb4.7						
VMG	Vicchio	77.74	313	eP	P	10 47 11.8	+0.9
GRA1	Grafenberg Arr	77.81	319	eP	P	10 47 10.3	-0.8
	comp=Z,283nm,3.1s						
GRF	Grafenberg Arr	77.81	319	eP	P	10 47 10.3	-0.8
GRF				pmax	pmax		
	comp=Z,283nm,3.1s						
GRF	Grafenberg Arr	77.81	319	eP	P	10 47 10.3	-0.8
	comp=Z,283nm,3.1s						
NB2	NORSAR Subarra	77.86	330	P	P	10 47 09.7	-1.4
	comp=Z,32nm,1.1s,mb5.2,baz=92,slow=5.6						
NB2	NORSAR Subarra	77.86	330	P	P	10 47 09.7	-1.4
	baz=92,slow=5.9						
SQTA	Sankt Quirin	77.88	316	⇓iP	P	10 47 10.7	-0.8
	comp=Z,10nm,0.9s,mb4.8						
MOTA	Moosalm	77.94	316	⇑iP	P	10 47 10.9	-1.0
	comp=Z,9.5nm,1.0s,mb4.7						
ZCCA	Zocca	78.13	313	eP	P	10 47 14.9	+2.0
GRFL	Gerfalco	78.19	312	eP	P	10 47 13.0	-0.3
CLZ	Clausthal	78.31	321	eP	P	10 47 13.2	-0.6
	comp=Z,19nm,0.8s,mb5.1						
GSCL	Gusciola	78.41	313	eP	P	10 47 16.0	+1.5
BRMO	Bormio	78.47	315	eP	P	10 47 15.2	+0.4
VALM		78.66	313	P	P	10 47 15.7	-0.2
DAVA	Damuels	78.78	316	⇓iP	P	10 47 16.1	-0.3
	comp=Z,34nm,1.0s,mb5.2						
GRAM		78.78	313	P	P	10 47 16.3	-0.2
SPAK	Spaichingen	79.47	317	eP	P	10 47 20.0	-0.2
TNS	Taunus Mts	79.58	319	eP	P	10 47 20.2	-0.6
VAI	Varese	79.62	315	eP	P	10 47 20.0	-1.1
PGF	Pioggiola	79.67	312	eP	P	10 47 20.3	-1.1
	comp=Z,46nm,1.1s,mb5.0						
BFO	Black Forest	79.77	317	eP	P	10 47 20.8	-1.0
BFO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
BFO	Black Forest	79.77	317	eP	P	10 47 20.8	-1.0
	comp=Z,12nm,1.0s,mb4.8						
PCP	Pian Castagno	79.86	314	P	P	10 47 21.4	-1.0
FELD	Feldberg	80.01	317	eP	P	10 47 23.1	0.0
LANF	Langenberg	80.07	318	eP	P	10 47 23.6	+0.2
FIN	Finale Ligure	80.13	313	eP	P	10 47 23.6	-0.2
ABH	Alteburg	80.18	319	eP	P	10 47 25.4	+1.4
ORX	Oropa	80.18	315	P	P	10 47 22.7	-1.3
LIBD	Limburg	80.26	317	eP	P	10 47 24.8	+0.4
TRAV		80.36	315	P	P	10 47 22.7	-2.3
ROB	Roburent	80.36	313	P	P	10 47 24.6	-0.4
BBS	Basel-Blauen	80.38	317	eP	P	10 47 23.1	-2.0
IMI	Imperia	80.38	313	P	P	10 47 24.5	-0.6
WLS	Welschbruch	80.41	318	eP	P	10 47 25.3	+0.1
CDF	Champ du Feu	80.46	318	eP	P	10 47 24.6	-0.9
	comp=Z,26nm,1.0s,mb4.8						
MONE	Monesi	80.46	313	P	P	10 47 25.5	-0.1
RUP	Ruppelstein	80.51	319	eP	P	10 47 26.1	+0.4
WTSB	Winterswijk	80.51	321	eP	P	10 47 26.4	+0.7
	comp=Z,20nm,0.7s,mb5.1						
ECH	Echery	80.56	317	eP	P	10 47 26.9	+0.9
MOF	Molkenrain	80.60	317	eP	P	10 47 25.3	-0.9
TSUM	Tsumeb	80.64	249	eP	P	10 47 28.6	+1.5
	comp=Z,31nm,1.0s,mb5.2						
TSUM				LR	LR		
	comp=Z,358nm,20.0s,MS4.7						
ENR	Entracque	80.69	313	P	P	10 47 26.4	-0.4
SBF	Sospel	80.71	313	eP	P	10 47 26.4	-0.5
	comp=Z,124nm,1.0s,mb5.5						
RSP	Reno Superiore	80.73	314	P	P	10 47 25.6	-1.3
BHB	Bricherasio	80.75	314	P	P	10 47 25.6	-1.4
STV	Sta Anna Valdi	80.76	313	P	P	10 47 25.1	-2.0
LSD	Ceresole Reale	80.78	315	P	P	10 47 26.8	-0.5
HINF	Hinteralfeld	80.79	317	eP	P	10 47 26.2	-1.0
LOMF	Lomont	80.85	317	eP	P	10 47 25.7	-1.8
FENE	Fenestrelle	80.88	314	P	P	10 47 26.7	-1.1
PZZ	Prazzo	80.89	314	P	P	10 47 27.0	-0.9
LPG	La Plagne	81.06	315	eP	P	10 47 28.7	0.0
	comp=Z,90nm,0.9s,mb5.4						
LPL	La Plagne	81.07	315	eP	P	10 47 28.7	0.0
	comp=Z,98nm,0.9s,mb5.5						
RRL	Cesana Torines	81.08	314	P	P	10 47 28.6	-0.3
MBDF	Montbardon	81.11	314	eP	P	10 47 28.0	-1.0
	comp=Z,53nm,1.0s,mb5.1						
HAU	Haudompre	81.11	317	eP	P	10 47 28.1	-0.8
	comp=Z,56nm,0.9s,mb5.2						
HAU				eR			
	comp=Z,476nm,21.0s						
BNI	Bardonecchia	81.15	314	eP	P	10 47 29.1	-0.1
BNI				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
BNI	Bardonecchia	81.15	314	eP	P	10 47 29.1	-0.1
	comp=Z,50nm,0.9s,mb5.4						
HGN	Heimansgroeve	81.15	320	eP	P	10 47 27.8	-1.3
	comp=Z,20nm,1.4s,mb4.8						
FRF	La Foret Royal	81.31	313	eP	P	10 47 29.8	-0.2
	comp=Z,78nm,1.0s,mb5.3						
THEF	They Montfort	81.33	317	eP	P	10 47 29.7	-0.4
SUR	Sutherland	81.39	235	eP	P	10 47 32.7	+2.0
	comp=Z,35nm,0.8s,mb5.3						
CABF	La Chapelle	81.42	316	eP	P	10 47 29.5	-1.0
	comp=Z,42nm,1.0s,mb5.0						
LMR	La Mourre	81.43	313	eP	P	10 47 30.2	-0.5
	comp=Z,88nm,1.1s,mb5.3						
OG25	Le Caire	81.64	314	eP	P	10 47 31.8	0.0
ORIF	Oris-en-Rattie	81.72	314	eP	P	10 47 31.4	-0.8
	comp=Z,39nm,1.0s,mb5.0						
ORIF				eR			
	comp=Z,538nm,21.2s						
OG05	Jujurieux	81.91	315	eP	P	10 47 33.2	+0.1
GIVF	Givet	81.92	319	eP	P	10 47 32.5	-0.5
MEZF	Maizieres J'vi	81.93	318	eP	P	10 47 32.7	-0.4
SMRF	Simiane la Rot	82.04	313	eP	P	10 47 34.0	+0.2
	comp=Z,58nm,1.1s,mb5.1						
CASM	Ain Smara	82.19	305	P	P	10 47 40.5	+5.7
CTEI	Djebel Teioual	82.28	305	P	P	10 47 37.0	+1.7
BAIF	Baives	82.31	319	eP	P	10 47 34.9	-0.2
	comp=Z,44nm,0.9s,mb5.1						
VIVF	Saint-Julien-l	82.58	314	eP	P	10 47 36.3	-0.3
	comp=Z,69nm,1.2s,mb5.3						
DFRA	Djebel Bou Aff	82.65	306	P	P	10 47 39.0	+1.8
CMER	Merouana	82.74	305	P	P	10 47 40.0	+2.3
SMF	Signal de Mont	82.95	316	eP	P	10 47 37.8	-0.7
	comp=Z,76nm,1.0s,mb5.4						
SET	Setif	83.07	305	P	P	10 47 36.0	-3.4
SSF	Saint Saulge	83.13	316	eP	P	10 47 38.8	-0.6
	comp=Z,25nm,1.0s,mb4.9						
LASF	Ste Croix	83.26	313	eP	P	10 47 40.7	+0.6
	comp=Z,77nm,1.2s,mb5.3						
AVF	Avril sur Loir	83.27	316	eP	P	10 47 39.5	-0.6
	comp=Z,38nm,0.9s,mb5.1						
DRV	Dumont d'Urvil	83.40	163	S	S	10 57 51.0	-7.0
AGO	Saint Agoulin	83.51	316	eP	P	10 47 41.7	+0.3
LBL	Lubilhac	83.54	315	eP	P	10 47 40.8	-0.8
PYM	Petit Puy Mans	83.64	315	eP	P	10 47 42.2	+0.1
BGF	Bois d'Agland	83.64	316	eP	P	10 47 41.8	-0.3
	comp=Z,45nm,0.9s,mb5.3						
TCF	Toulx Ste Croi	84.11	316	eP	P	10 47 44.3	-0.2
	comp=Z,52nm,1.1s,mb5.3						
EJON	La Jonquera	84.18	312	P	P	10 47 47.9	+3.1
	comp=Z,93nm,1.8s,mb5.6						
CAF	Calviac	84.41	314	eP	P	10 47 46.0	0.0
	comp=Z,47nm,1.1s,mb5.2						
MTLF	Montolieu	84.53	313	eP	P	10 47 46.6	0.0
	comp=Z,43nm,0.9s,mb5.3						
ETOS	Mallorca	84.61	309	P	P	10 47 50.1	+3.0
	comp=Z,185nm,1.8s,mb5.9						
RJF	Les Rejaudoux	84.74	315	eP	P	10 47 47.7	+0.1
	comp=Z,87nm,1.2s,mb5.5						
RJF				eR			
	comp=Z,311nm,20.5s						
EMIR	Miracle	85.26	312	P	P	10 47 52.0	+1.8
	comp=Z,51nm,0.9s,mb5.7						
LDF	La Druitiere	85.32	318	eP	P	10 47 50.0	-0.4
	comp=Z,83nm,1.0s,mb5.5						
LFF	La Frestale	85.34	315	eP	P	10 47 50.8	+0.2
	comp=Z,40nm,1.0s,mb5.2						
FLN	La Foliniere	85.53	319	eP	P	10 47 51.1	-0.4
	comp=Z,76nm,1.0s,mb5.6						
FLN				eR			
	comp=Z,607nm,22.5s						
MFF	Saint Martin d	85.67	316	eP	P	10 47 51.9	-0.3
	comp=Z,55nm,0.9s,mb5.5						
EPOB	Poblet	85.68	311	P	P	10 47 53.6	+1.2
	comp=Z,56nm,1.1s,mb5.7						
GRR	Gorron	85.84	318	eP	P	10 47 52.8	-0.2
	comp=Z,48nm,1.2s,mb5.3						
EPF	Esparros	85.94	313	eP	P	10 47 53.5	-0.2
EBIE	Bielsa	86.14	312	P	P	10 47 55.9	+1.2
	comp=Z,19nm,0.9s,mb5.3						
EBR	Ebro Roquetas	86.20	311	eP	P	10 47 57.0	+2.0
ERTA	Horta de San J	86.30	311	P	P	10 47 56.0	+0.5
	comp=Z,58nm,1.9s,mb5.5						
ETSF	Etsaut	86.61	313	eP	P	10 47 57.3	+0.3
	comp=Z,46nm,0.9s,mb5.4						
SGMF	Saint Gilles	86.98	318	eP	P	10 47 58.4	-0.2
	comp=Z,26nm,0.8s,mb5.2						
EMOS	Mosqueruela	87.01	310	P	P	10 48 00.5	+1.6
	comp=Z,36nm,1.0s,mb5.5						
SJPF	Ste Jean	87.05	313	eP	P	10 47 59.0	-0.1
	comp=Z,37nm,1.0s,mb5.3						
EBEN	Beniarda	87.12	309	P	P	10 48 00.3	+0.8
	comp=Z,37nm,1.1s,mb5.5						
EALK	Alkurruntz	87.24	313	P	P	10 48 00.4	+0.4
	comp=Z,21nm,0.9s,mb5.4						
SYO	Syowa Base	87.34	197	⇓P	P	10 48 00.8	+0.9
SYO	Syowa Base	87.34	197	⇓PcP	PcP	10 48 02.2	0.0
SYO	Syowa Base	87.34	197	⇑pP	pP	10 48 10.1	+0.3
ROSF	Rostrenen	87.43	319	eP	P	10 48 00.7	-0.1
	comp=Z,56nm,1.1s,mb5.4						
QUIF	Quistinic	87.45	318	eP	P	10 48 00.3	-0.6
EVIA	Vianos	88.88	309	P	P	10 48 09.6	+1.6
	comp=Z,11nm,0.7s,mb5.3						
EQES	Quesada	89.49	308	P	P	10 48 12.6	+1.7
	comp=Z,34nm,1.0s,mb5.6						
EBER	Berja	89.54	307	P	P	10 48 12.9	+1.8
	comp=Z,61nm,1.4s,mb5.7						
IMA	Indian Mountai	89.76	22	eP	P	10 48 13.5	+2.0
IMA				pmax	pmax		
	comp=Z,85nm,1.1s,mb6.0						
IMA	Indian Mountai	89.76	22	eP	P	10 48 13.3	+1.8
	comp=Z,16nm,1.0s,mb5.3						
SVW2	Sparrevohn	90.97	27	eP	P	10 48 18.3	+1.2
PBRG	Braganca	91.32	313	eP	P	10 48 20.1	+0.9
	comp=Z,27nm,1.3s,mb5.4						
EINC	Incio	91.54	314	P	P	10 48 22.3	+2.0
	comp=Z,28nm,1.0s,mb5.5						
ELOB	Lobios	92.26	313	P	P	10 48 26.3	+2.8
	comp=Z,55nm,1.8s,mb5.6						
MTE	Manteigas	92.27	312	eP	P	10 48 24.6	+1.0
	comp=Z,40nm,1.9s,mb5.4						
MTE				eLQ		11 13 45.4	
MTE				eLR	LR	11 21 08.8	
	comp=Z,358nm,15.0s						
EMIN	Mina Concepcio	92.28	309	P	P	10 48 25.1	+1.4
	comp=Z,21nm,1.1s,mb5.4						
EBAD	Badajoz	92.29	310	P	P	10 48 25.3	+1.5
	comp=Z,22nm,1.0s,mb5.4						
PCBR	Castelo Branco	92.36	311	eP	P	10 48 24.0	-0.1
	comp=Z,31nm,1.4s,mb5.5						
COLA	College	92.47	22	eP	P	10 48 24.4	+0.4
	comp=Z,5.5nm,0.9s,mb4.9						
COLA				LR	LR		
	comp=Z,506nm,22.0s,MS4.9						
SPU	Mount Spurr	92.50	26	eP	P	10 48 25.0	+0.8
EMAZ	Mazaricos	92.62	314	P	P	10 48 27.0	+1.9
	comp=Z,52nm,1.2s,mb5.8						
MCK	McKinley	92.62	23	eP	P	10 48 25.6	+0.9
	comp=Z,16nm,1.0s,mb5.4						
MCK				LR	LR		
	comp=Z,222nm,19.0s,MS4.6						
EZAM	Zamans	92.64	313	P	P	10 48 27.7	+2.4
	comp=Z,7.3nm,0.7s,mb5.2						
EVO	Evora	93.10	310	eP	P	10 48 29.2	+1.7
	comp=Z,57nm,1.4s,mb5.5						
EVO				eR			
	comp=Z,371nm,19.8s						
PBEJ	Beja	93.12	309	eP	P	10 48 26.2	-1.4
	comp=Z,20nm,1.4s,mb5.3						
PWA	Palmer West	93.22	25	eP	P	10 48 28.0	+0.5
	comp=Z,55nm,1.1s,mb5.9						
SML	Sawmill	93.79	25	eP	P	10 48 31.3	+1.2
INK	Inuvik	95.05	16	eP	P	10 48 36.0	+0.3
INK				pmax	pmax		
	comp=Z,17nm,1.1s						
INK	Inuvik	95.05	16	eP	P	10 48 36.0	+0.2
	comp=Z,17nm,1.1s,mb5.4						
RES	Resolute Bay	95.34	2	eP	P	10 48 37.5	+0.5
RES				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.4						
RES	Resolute Bay	95.34	2	eP	P	10 48 37.5	+0.5
	comp=Z,16nm,1.1s,mb5.3						
PPT	Papeete	118.03	105	ePS	PS	11 05 00.4	0.0
PPT				eSS	SS	11 11 35.7	+8.0
PPT				eLR	LR	11 30 09.1	
	comp=Z,540nm,22.8s						
TBI	Tubuai	118.19	111	ePS	PS	11 04 58.9	-2.9
TBI				eSS	SS	11 11 53.7	+24
TBI				eLR	LR	11 30 35.7	
	comp=Z,650nm,32.0s						
MSO	Missoula	118.21	21	ePKP	PKPdf	10 54 00.5	-4.1
CHMT	Chamberlain Mo	118.39	21	ePKP	PKPdf	10 54 01.7	-3.2
ULM	Lac du Bonnet	119.43	7	ePKP	PKPdf	10 54 02.1	-4.7
DGMT	Dagmar	119.65	14	ePKP	PKPdf	10 54 04.0	-3.3
BOZ	Bozeman (W)	120.05	21	ePKIKP	PKPdf	10 54 04.5	-3.6
LAO	LASA Array	120.79	16	ePKP	PKPdf	10 54 07.3	-2.3
QLMT	Earthquake Lak	120.83	21	ePKP	PKPdf	10 54 07.8	-1.9
YFT	Old Faithful	121.36	21	ePKP	PKPdf	10 54 09.4	-1.4
LKWY	Lake	121.42	20	ePKIKP	PKPdf	10 54 10.1	-0.8
RRI2	Red Ridge	122.16	22	ePKP	PKPdf	10 54 09.4	-2.9
TPAW	Teton Pass	122.16	21	ePKP	PKPdf	10 54 10.2	-2.1
LOHW	Long Hollow	122.18	21	ePKP	PKPdf	10 54 09.2	-3.2
SNOW	Snow King Moun	122.26	21	ePKP	PKPdf	10 54 09.9	-2.6
HWUT	Hardware Ranch	123.57	23	ePKP	PKPdf	10 54 12.0	-3.1
MIV	Mineville/With	125.05	349	ePKP	PKPdf	10 54 12.9	-5.0
MDV	Middlebury	125.05	349	ePKP	PKPdf	10 54 13.7	-4.3
NCB	Newcomb	125.27	350	ePKP	PKPdf	10 54 12.8	-5.6
TMUT	Trail Mountain	125.69	24	ePKP	PKPdf	10 54 16.5	-2.8
MVU	Marysvale	125.95	25	ePKP	PKPdf	10 54 17.4	-2.4
MSU	Marysvale	125.95	25	ePKIKP	PKPdf	10 54 17.6	-2.2
TAOE	Nuku Hiva Isla	126.63	94	eLR	LR	11 34 04.7	
GENY	Geneseo	127.00	352	ePKP	PKPdf	10 54 18.1	-3.5
BINY	Binghamton	127.29	351	ePKP	PKPdf	10 54 17.4	-4.9
PV10	Paradox Valley	127.33	23	ePKP	PKPdf	10 54 19.5	-2.9
PV01	Paradox Valley	127.72	22	ePKP	PKPdf	10 54 20.0	-3.3
SSPA	Standing Stone	129.11	352	ePKP	PKPdf	10 54 22.1	-3.7
ACSO	Alum Creek Sta	129.99	357	ePKP	PKPdf	10 54 22.8	-4.7
ANMO	Albuquerque	131.32	22	ePKIKP	PKPdf	10 54 28.0	-2.2
LPM	Los Pinos Moun	131.82	23	ePKP	PKPdf	10 54 28.6	-2.6
CCM	Cathedral Cave	131.99	6	ePKIKP	PKPdf	10 54 27.4	-4.0
WCI	Wyandotte Cave	132.07	0	ePKIKP	PKPdf	10 54 27.8	-3.7
CPRX	Cap Rock	133.99	21	ePKP	PKPdf	10 54 33.3	-2.0
WVT	Waverly	134.13	2	ePKIKP	PKPdf	10 54 31.6	-3.8
GDL2	Guadalupe Moun	134.56	22	ePKP	PKPdf	10 54 33.8	-2.6
MNTX	Cornudas Mount	134.62	23	ePKP	PKPdf	10 54 33.2	-3.3
CPCT	Cooper Cave	134.82	358	ePKP	PKPdf	10 54 33.4	-3.4
UALR	University of	135.11	7	ePKP	PKPdf	10 54 33.1	-4.2
MIAR	Mount Ida	135.17	9	ePKIKP	PKPdf	10 54 34.5	-2.9
LRAL	Lakeview Retre	137.24	1	ePKP	PKPdf	10 54 38.3	-2.9
JCT	Junction City	137.67	18	ePKIKP	PKPdf	10 54 39.3	-2.8
TRQA	Tornquist	144.66	214	ePKP	PKPdf	10 54 48.8	-5.4
PLCA	Paso Flores	146.43	201	ePKP2	PKPab	10 54 56.0	-0.4
TEIG	Tepich	149.93	4	ePKPbc	PKPdf	10 55 05.3	+1.9
SDV	Santo Domingo	155.82	320	ePKPdf	PKPdf	10 55 09.3	-2.7
SAML	Samuel	157.46	271	ePKPdf	PKPdf	10 55 11.0	-3.2
LPAZ	La Paz	161.49	248	ePKIKP	PKPdf	10 55 16.0	-2.5
LPAZ				e		10 55 59.8	
OTAV	Otavalo	167.39	323	ePKPdf	PKPdf	10 55 22.0	-2.0
OTAV				ePKPab	PKPab	10 56 26.8	+0.7

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*ISK **01** 11:11:44.0, 36.59N×27.19E, h5^{km}, MD3.2*
*ATH **01** 11:11:44.0, 37.08N×28.13E, h10^{km}, MD3.1/3*
*CSEM **01** 11:11:44.0, 36.59N×27.19E, h5^{km}, MD3.2, After ISK*
ISC 01 11:11:47.8$\pm$1.3**, 36.85N**$\pm$0.05×**27.51E**$\pm$0.08**, h1**$^{km}\pm9^{km}$**,**
n13, $\sigma 1^{s}19$/19, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.22	345	i P	Pg	11 11 52.3	+0.1
BDRM				i S	Sg	11 11 55.8	+0.7
ARG	Arkhangelos	0.81	142	ePB	Pb	11 12 01.3	-3.0
AYDN	Tasoluk	0.86	20	i P	Pb	11 12 03.6	-1.6
AYDN				i S	Sg	11 12 15.8	-0.6
SMG	Samos	1.01	328	ePB	Pb	11 12 07.5	-0.3
FETY	Fethiye	1.28	99	PN	Pn	11 12 13.0	+0.2
FETY				SN	Sn	11 12 35.5	+4.7
KARP	Karpathos	1.33	192	ePB	Pb	11 12 14.0	+0.6
DNZL	Cakiroluk	1.48	55	i P	Pn	11 12 15.6	-0.1
DNZL				i S	Sb	11 12 38.3	+3.3
DENT	Denizli	1.51	53	PN	Pn	11 12 17.8	+1.6
IZM	Izmir	1.55	353	PN	Pn	11 12 17.1	+0.3
KDAG	Bornova	1.56	353	i P	Pn	11 12 14.6	-2.2
KDAG				i S	Sb	11 12 37.7	+0.3
BLCB	Balcova	1.57	346	ePN	Pn	11 12 17.4	+0.4
MANT	Manisa	1.83	27	i P	Pn	11 12 19.2	-1.5
MANT				i S	Sn	11 12 38.3	-6.6
AKS	Akhisar	2.04	7	PN	Pn	11 12 25.5	+1.8

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*ISK **01** 12:30:24.5, 36.85N×27.44E, h3^{km}, MD3.3*
*ATH **01** 12:30:24.5, 36.88N×27.50E, h28^{km}, MD3.1/4*
*NEIC **01** 12:30:24.5, 36.88N×27.50E, h28^{km}, MD3.1(ATH), After ATH.*
*CSEM **01** 12:30:25.0$\pm$0.2, 36.90N×27.49E, h2$^{km}\pm1^{km}$, MD3.3, Error ellipse: s-maj=9.5km s-min=3.0km az=55.0*
ISC 01 12:30:26.6$\pm$1.0**, 36.80N**$\pm$0.07×**27.32E**$\pm$0.10**, h29**$^{km}\pm15^{km}$**,**
n10, $\sigma 0^{s}85$/12, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	Nisiros	0.24	220	ePB	Pb	12 30 33.5	+0.3
ARG	Arkhangelos	0.87	131	ePN	Pn	12 30 41.0	-2.0
SMG	Samos	0.99	337	ePN	Pn	12 30 43.6	-1.1
KARP	Karpathos	1.25	186	ePN	Pn	12 30 49.5	+1.0
FETY	Fethiye	1.43	96	PN	Pn	12 30 50.5	-0.4
FETY				SN	Sn	12 31 09.9	+1.1
IZM	Izmir	1.60	358	PN	Pn	12 30 54.1	+0.7
BLCB	Balcova	1.60	352	PN	Pn	12 30 53.8	+0.3
DENT	Denizli	1.67	54	PN	Pn	12 30 53.5	-0.9
DENT				SN	Sn	12 31 15.3	+0.3
ELL	Elmali	2.08	91	ePN	Pn	12 31 00.2	-0.1
AKS	Akhisar	2.12	10	ePN	Pn	12 31 01.2	+0.4

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*NIED **01** 12:32:00, 34.00N×137.20E, h400^{km}, Mw4.2 Best double couple: $M_0$2.48×10^{15} NP1:ϕ_s170°, δ70°, λ55°. NP2:ϕ_s53°, δ40°, λ147°.*
*BJI **01** 12:32:54.4, 33.99N×137.42E, h349^{km}, mB5.1, mb4.5*
*MOS **01** 12:32:54.7$\pm$1.1, 33.88N×137.16E, h334^{km}, mb3.8/7, Error ellipse: s-maj=25.6km s-min=14.6km az=86.4*
*NEIC **01** 12:32:56.0$\pm$1.3, 33.92N×137.21E, h333$^{km}\pm10^{km}$, mb3.9/10, Error ellipse: s-maj=23.8km s-min=17.5km az=171.0*
*JMA **01** 12:32:56.2$\pm$0.2, 34.01N×137.18E, h346$^{km}\pm2^{km}$, M3.7*
ISC 01 12:32:56.2$\pm$0.5**, 34.03N**$\pm$0.08×**137.18E**$\pm$0.09**, h346**$^{km}\pm3^{km}$**,**
n42, $\sigma 0^{s}89$/50, mb3.8/12, 8C-1D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	Tokai 2	0.49	100	P	P	12 33 40.0	-0.2
JIE	Ise	0.53	313	⇑P	P	12 33 40.4	+0.1
JIE				S	S	12 34 14.1	-0.8
JAA	Atsumi	0.60	357	⇑P	P	12 33 40.6	+0.2
TK03	Tokai 3	0.67	78	P	P	12 33 41.0	+0.4
TK03				S	S	12 34 17.2	+1.8
TK04	Tokai 4	0.68	58	⇓P	P	12 33 41.0	+0.4
TK04				S	S	12 34 16.8	+1.3
JHMK	Hamakita	0.92	31	P	P	12 33 41.1	-0.3
HMMJ	Hamamatsu 2	0.94	29	⇑P	P	12 33 41.2	-0.3
HMMJ				S	S	12 34 16.1	-0.9
JAO	Obara	1.24	3	⇑P	P	12 33 43.1	+0.3
JAO				S	S	12 34 20.0	+0.6
JEG	Eigenji	1.28	330	⇑P	P	12 33 43.6	+0.5
JWZ	Kozaga	1.31	248	⇑P	P	12 33 42.9	-0.3
JNY	Yasuok	1.44	23	P	P	12 33 43.9	0.0
JNY				S	S	12 34 20.8	-0.5
JGM	Miyama	1.71	347	⇑P	P	12 33 45.8	+0.3
MAJO	Matsushiro	2.65	18	eP	P	12 33 51.5	-1.0
MAT	Matsushiro	2.65	18	eP	P	12 33 52.0	-0.5
MAT				eS	S	12 34 35.0	-1.7
MAT	Matsushiro	2.65	18	P	P	12 33 52.0	-0.5
MAT				S	S	12 34 35.1	-1.6
SNY	Shenyang	13.25	310	⇑P	P	12 35 54.4	+0.5
CN2	Changchun	13.35	320	eP	P	12 35 55.9	+0.8
CN2				AMB	AMB		
	comp=Z,20nm,0.8s						
YSS	Yuzh-Sakhalins	13.58	16	eP	P	12 35 57.5	-0.3
BJI	Beijing	17.79	296	P	P	12 36 41.4	-1.0
BJI				AMB	AMB		
	comp=Z,22nm,0.6s						
BJI	Beijing	17.79	296	P	P	12 36 41.4	-1.0
	comp=Z,22nm,0.6s						
BJI				pP		12 36 50.7	
BJI				sP		12 36 54.5	
XAN	Xi'an	23.39	278	P	P	12 37 36.2	-0.4
XAN				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.0						
ULN	Ulaanbaatar	26.43	311	eP	P	12 38 05.3	+1.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb3.9						
ULN	Ulaanbaatar	26.43	311	eP	P	12 38 05.3	+1.3
	comp=Z,4.4nm,0.5s,mb3.9						
GYA	Guiyang	27.35	262	P	P	12 38 12.2	-0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.2						
GTA	Gaotai	30.28	291	eP	P	12 38 38.1	+0.1
GTA				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.0						
BILL	Bilibino	37.90	17	eP	P	12 39 43.7	+1.6
BILL				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.3						
BILL	Bilibino	37.90	17	eP	P	12 39 43.7	+1.5
	comp=Z,9.6nm,0.5s,mb4.3						
KURK	Kurchatov	45.14	310	P	P	12 40 41.1	+0.4
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.5						
KURK	Kurchatov	45.14	310	P	P	12 40 41.1	+0.5
	comp=Z,2.9nm,0.7s,mb3.5						
CHKZ	Chkalovo	49.89	314	eP	P	12 41 16.3	-0.7
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.2						
CHKZ	Chkalovo	49.89	314	eP	P	12 41 16.3	-0.8
	comp=Z,1.2nm,0.6s,mb3.3						
MCK	McKinley	53.03	32	eP	P	12 41 39.9	-0.1
MCK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
MCK	McKinley	53.03	32	eP	P	12 41 39.9	-0.1
	comp=Z,1.3nm,0.5s,mb3.5						
COLA	College	53.44	31	P	P	12 41 40.0	-3.0
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.7						
COLA	College	53.44	31	P	P	12 41 40.0	-3.0
	comp=Z,2.7nm,0.7s,mb3.7						
WRAB	Tennant Creek	53.73	183	eP	P	12 41 43.9	-1.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb3.9						

WRAB	Tennant Creek	53.73	183	eP	P	12 41 43.9	-1.7
	comp=Z,5.6nm,0.9s,mb3.9						
INK	Inuvik	58.61	26	eP	P	12 42 19.0	-0.2
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	Inuvik	58.61	26	eP	P	12 42 19.0	-0.1
	comp=Z,3.2nm,0.5s,mb4.0						
BOZ	Bozeman (W)	79.26	42	P	P	12 44 24.9	+0.2
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
BOZ	Bozeman (W)	79.26	42	P	P	12 44 24.9	+0.2
	comp=Z,1.1nm,0.7s,mb3.7						
MSU	Marysvale	83.36	48	eP	P	12 44 48.5	+2.5

BJI ***01*** *13:30:16.7, 2.25N×94.91E, h30^{km}, mb4.7*
NEIC ***01*** *13:30:26.5±0.8, 3.12N×94.57E, h30^{km}, mb4.3/9, Error ellipse: s-maj=27.9km s-min=15.0km az=70.0*
ISC 01 13:30:25.8±0.7,**3.22N**±0.10×**94.7E**±0.1,**h33**^{km},**n21**, σ**0^{s}94**/20,**mb4.5**/15,**2C,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	15.70	15	P	P	13 34 08.4	+2.1
	7.4nm,0.5s						
JIRN	Jiri	25.64	342	eP	P	13 35 55.0	+0.7
	16nm,0.7s,mb4.7						
GYA	Guiyang	25.78	25	P	P	13 35 56.2	+0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
PKI	Pulchoki	25.80	341	eP	P	13 35 55.9	0.0
	comp=Z,5.3nm,0.5s,mb4.3						
KKN	Kakani	26.05	341	eP	P	13 35 58.0	-0.1
	comp=Z,15nm,0.8s,mb4.6						
GKN	Gorkha	26.46	340	eP	P	13 36 01.8	-0.2
	comp=Z,10nm,0.4s,mb4.8						
LSA	Lhasa	26.56	353	P	P	13 36 04.0	+1.2
KOLN	Koldanda	26.63	338	eP	P	13 36 03.6	+0.1
	comp=Z,18nm,1.0s,mb4.6						
XAN	Xi’an	33.40	22	P	P	13 37 02.0	-1.5
XAN				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.7						
GTA	Gaotai	36.32	7	eP	P	13 37 28.0	-0.4
GTA				AP	pP	13 37 35.7	-2.5
GTA				XP	sP	13 37 39.1	-3.3
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
AAK	Ala-Archa	43.20	338	eP	P	13 38 25.4	-0.1
	comp=Z,2.5nm,0.8s,mb4.0						
WRAB	Tennant Creek	45.19	122	eP	P	13 38 41.9	+0.1
	comp=Z,8.4nm,0.7s,mb4.7						
WRAB				e	pP	13 38 49.8	-1.9
WB2	Warramunga Arr	45.20	122	eP	P	13 38 42.0	+0.2
ULN	Ulaanbaatar	45.73	12	eP	P	13 38 44.3	-1.4
	comp=Z,1.2nm,0.6s,mb4.0						
KURK	Kurchatov	49.24	347	eP	P	13 39 12.2	-0.9
	comp=Z,3.4nm,0.8s,mb4.4						
CHKZ	Chkalovo	54.06	343	eP	P	13 39 48.5	-0.8
	comp=Z,5.7nm,0.6s,mb4.7						
CTAO	Charters Tower	55.60	117	eP	P	13 40 00.9	-0.1
	comp=Z,3.1nm,0.9s,mb4.3						
MORC	Moravsky Berou	79.28	320	P	P	13 42 30.1	+0.5
	comp=Z,2.1nm,0.8s,mb4.1						
VNA2	Neumayer--Watz	96.99	199	⇑i	P	13 43 56.4	+1.5
VNA3	Neumayer Olymp	97.65	198	⇑i	P	13 43 54.8	-3.1
INK	Inuvik	101.27	16	eP	P	13 44 17.8	+3.5
	comp=Z,1.7nm,0.8s						

CRAAG ***01*** *13:41:51.4, 8.33N×94.16E, Mb5.4*
BJI ***01*** *13:41:51.6, 7.96N×93.95E, h29^{km}, mB5.5, mb4.9, Ms5.1, Msz4.9*
CSEM ***01*** *13:41:53.9, 8.26N×94.39E, h33^{km}, mb5.5*
NEIC ***01*** *13:41:53.2±0.3, 8.11N×94.14E, mb5.2/70, Error ellipse: s-maj=7.9km s-min=7.2km az=215.0*
HRVD ***01*** *13:41:53.2±0.2, 8.08N×94.22E, h12^{km}, MW5.2/60, Centroid moment Tensor Solution. LP body waves: s33,c59;Mantle waves: s60,c113; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.67±.02; $M_{\theta\theta}$0.31±.02; $M_{\phi\phi}$0.36±.02; $M_{r\theta}$0.28±.06; $M_{\theta\phi}$0.55±.02; $M_{\phi r}$0.00±.06; Best double couple: M_0.835×10^{17} NP1:ϕ_s24°, δ42°, λ-120°. NP2:ϕ_s242°, δ55°, λ-66°. Principal axes: T .908, Plg7°, Azm315°; N -.145, Plg20°, Azm47°; P -.763, Plg69°, Azm206°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***01*** *13:41:56.0±0.8, 8.57N×94.06E, h33^{km}, mb5.4/27, MS4.9/14 Error ellipse: s-maj=19.1km s-min=7.3km az=116.1*
ISC 01 13:41:51.2±0.3,**8.05N**±0.04×**94.16E**±0.03,**h18**^{km}, **h18**^{km}±.6^{km}**:pP-P,n232,**σ**1^{s}02**/251,**mb5.1**/96,**MS4.9**/26, **24C-9D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.46	97	P	Pn	13 43 28.0	+0.1
	640nm,1.0s						
CM31	Chiang Mai Arr	11.34	24	eP	P	13 44 35.1	-0.5
CHG	Chiang Mai	11.66	23	⇑P	P	13 44 40.7	+0.8
	30nm,1.0s						
KKTK	Khon Kaen	11.80	45	P	P	13 44 43.0	+1.1
	247nm,0.6s						
VIS	Vishakhapatnam	14.27	313	eP	P	13 45 15.7	+1.0
VIS				e		13 45 19.4	
	comp=Z,47nm,0.3s						
VIS				e		13 47 41.9	
MDRS	Chennai	14.56	291	⇑eP	P	13 45 19.0	+0.5
MDRS				e		13 47 44.0	
MDRS				e		13 48 57.0	
CAL	Calcutta	15.46	339	eP	P	13 45 30.5	+0.3
CAL				e		13 48 34.1	
AGT	Agartala	15.99	350	eP	P	13 45 39.0	+2.0
HYB	Hyderabad	17.83	303	eP	P	13 46 02.0	+1.8
HYB				eS	S	13 49 18.0	+1.9
HYB	Hyderabad	17.83	303	i P	P	13 46 02.0	+1.8
HYB				eS	S	13 49 18.0	+1.9
HYB				LR	LR	13 52 00.0	
	comp=Z,3.9nm,24.0s						
QIZ	Qiongzhong	18.73	53	P	P	13 46 11.8	+0.5
QIZ				eS	S	13 49 35.3	-1.1
QIZ				AMB	AMB		
	comp=Z,843nm,7.0s						
QIZ				LR	LR		
	comp=N,10µm,14.0s						
QIZ				LR	LR		
	comp=Z,2µm,15.4s						
KMI	Kunming	18.85	25	P	P	13 46 14.8	+2.1
KMI				AP		13 46 19.1	
KMI				XP		13 46 21.3	
KMI				PP	PP	13 46 31.5	+2.4
KMI				S	S	13 49 41.0	+2.0
KMI				AMB	AMB		
	comp=Z,33nm,2.0s						
KMI				AMB	AMB		
	comp=Z,1µm,5.3s						
KMI				LR	LR		
	comp=N,2µm,14.0s						
KMI				LR	LR		
	comp=E,2µm,10.3s						
KMI				LR	LR		
	comp=Z,3µm,14.7s						
KMI	Kunming	18.85	25	P	P	13 46 14.8	+2.1
	comp=Z,33nm,2.0s						
KMI				pP		13 46 19.1	
KMI				sP		13 46 21.3	
KMI				PP	PP	13 46 31.5	+2.4
KMI				S	S	13 49 41.0	+2.0
KMI				sS		13 49 47.8	
KMI				SSS	SSS	13 50 19.4	+1.6
NGP	Nagpur	19.55	313	eP	P	13 46 21.4	+0.4
	comp=Z,74nm,1.9s						
NGP				e		13 49 52.7	
MNGI	Mangalore	19.62	286	i P	P	13 46 23.6	+1.8
MNGI				i S	S	13 50 05.7	+9.2
	comp=Z,59nm,1.4s						
COCO	West Island	20.29	172	eP	P	13 46 31.3	+2.4
	comp=Z,100nm,1.0s						
ALBI	Allahabad	20.82	327	eP	P	13 46 33.5	-0.9
JIRN	Jiri	20.91	340	eP	P	13 46 33.9	-1.4
	comp=Z,327nm,1.0s						
PKI	Pulchoki	21.11	338	eP	P	13 46 35.9	-1.4
	comp=Z,336nm,1.0s,mb5.6						
GOA	Goa	21.22	292	e	P	13 46 50.0	+11
GOA				e		13 50 40.8	
DMN	Daman	21.25	337	eP	P	13 46 38.3	-0.5
	comp=Z,392nm,0.9s,mb5.7						
KKN	Kakani	21.35	338	eP	P	13 46 38.3	-1.5
	comp=Z,200nm,0.9s,mb5.5						
KAD	Karad	21.53	297	eP	P	13 46 43.2	+1.6
KAD				e		13 46 47.9	
	comp=Z,28nm,0.4s						
LSA	Lhasa	21.72	353	P	P	13 46 40.0	-3.5
LSA				AP		13 46 52.3	
LSA				XP		13 46 56.0	
LSA				S	S	13 50 40.1	+2.1
LSA				LR	LR		
	comp=N,1µm,25.3s,MS4.3						
LSA				LR	LR		
	comp=E,1µm,21.7s,MS4.3						
LSA				LR	LR		
	comp=Z,2µm,26.1s,MS4.5						
GKN	Gorkha	21.79	337	eP	P	13 46 43.4	-0.8
	comp=Z,271nm,0.8s,mb5.8						
GYA	Guiyang	21.82	31	⇓iP	P	13 46 45.2	+0.7
GYA				AP		13 46 50.1	
GYA				XP		13 46 53.2	
GYA				S	S	13 50 48.8	+8.9
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
GYA				AMB	AMB		
	comp=Z,490nm,6.9s						
GYA				LR	LR		
	comp=N,2µm,14.4s,MS4.9						
GYA				LR	LR		
	comp=E,3µm,14.4s,MS4.9						
GYA				LR	LR		
	comp=Z,3µm,14.1s,MS4.8						
KOLN	Koldanda	22.01	334	eP	P	13 46 46.0	-0.4
	comp=Z,312nm,0.9s,mb5.7						
BHPL	Bhopal	22.05	315	eP	P	13 46 47.4	+0.6
BHPL				e		13 46 54.0	
	comp=Z,70nm,0.7s						
POO	Poona	22.32	300	⇑iP	P	13 46 47.0	-2.5
POO				e		13 51 08.0	
BOM	Bombay	23.36	300	i	P	13 46 59.0	-0.9
	comp=Z,327nm,7.0s						
BOM				e		13 47 01.7	
BOM				e	S	13 51 18.6	+11
GZH	Guangzhou	23.72	49	P	P	13 47 08.7	+5.4
GZH				AMB	AMB		
	comp=Z,946nm,6.2s						
GZH				LR	LR		
	comp=N,2µm,10.3s,MS5.0						
GZH				LR	LR		
	comp=E,3µm,14.6s,MS5.0						
GZH				LR	LR		
	comp=Z,4µm,14.6s,MS5.0						
CD2	Chengdu	24.45	20	P	P	13 47 10.7	+0.4
CD2				S	S	13 51 36.7	+10
CD2				XS		13 51 39.7	
CD2				AMB	AMB		
	comp=Z,150nm,0.8s,mb5.5						
CD2				LR	LR		
	comp=N,5µm,9.6s						
CD2				LR	LR		
	comp=Z,4µm,12.0s,MS5.2						
LGTI	Lohaghat	24.98	330	eP	P	13 47 16.5	+1.0
PTH	Pithoragarh	25.08	330	e	P	13 47 05.6	-11
NDI	New Delhi	26.00	324	eP	P	13 47 24.0	-1.1
DDI	Dehra Dun	26.80	328	e	P	13 47 33.2	+0.8
SDNR	Sundarnagar	28.30	328	eP	P	13 47 46.4	+0.4
QZH	Quanzhou	28.73	51	eP	P	13 47 50.0	0.0
QZH				eS	S	13 52 35.0	-2.0
QZH				LR	LR		
	comp=N,3µm,13.0s,MS5.2						
QZH				LR	LR		
	comp=E,3µm,12.5s,MS5.2						
QZH				LR	LR		
	comp=Z,7µm,12.5s,MS5.4						
XAN	Xi’an	29.22	26	P	P	13 47 53.1	-1.2
XAN				S	S	13 52 40.7	-4.0
XAN				AMB	AMB		
	comp=Z,35nm,1.0s,mb5.0						
XAN				LR	LR		
	comp=N,2µm,13.7s,MS5.0						
XAN				LR	LR		
	comp=E,2µm,13.9s,MS5.0						
XAN				LR	LR		
	comp=E,3µm,14.1s						
LZH	Lanzhou	29.27	16	⇑P	P	13 47 54.9	+0.2
LZH				AP	pP	13 48 00.5	+0.6
LZH				XP	sP	13 48 03.5	+1.3
LZH				eS	S	13 52 46.1	+0.7
LZH				XS		13 52 56.2	
LZH				SS	SS	13 54 15.6	-1.0
LZH				AMB	AMB		
	comp=Z,67nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,197nm,5.2s						
LZH				LR	LR		
	comp=N,2µm,12.3s						
LZH				LR	LR		
	comp=Z,4µm,14.8s,MS5.1						
LZH	Lanzhou	29.27	16	⇑P	P	13 47 54.9	+0.2
	comp=Z,67nm,1.5s,mb5.2						
LZH				pP	pP	13 48 00.5	+0.6
LZH				sP	sP	13 48 03.5	+1.3
LZH				PP	sP	13 48 04.9	+2.7
LZH				eS	S	13 52 46.1	+0.7
LZH				sS		13 52 56.2	
LZH				SS	SS	13 54 15.6	-1.0
WHN	Wuhan	29.28	37	⇑P	P	13 47 55.5	+0.7
WHN				LR	LR		
	comp=Z,4µm,9.3s						
THN	Thein Dam	29.69	327	eP	P	13 47 57.2	-1.3
THN				e		13 51 01.6	
GTA	Gaotai	31.63	8	eP	P	13 48 15.1	-0.4
GTA				AP	pP	13 48 19.6	-1.2
GTA				PP	PP	13 49 18.2	-2.2
GTA				PCP	PcP	13 51 08.4	+0.7
GTA				S	S	13 53 21.6	-1.0
GTA				SCP		13 54 47.8	
GTA				PCS		13 54 51.3	
GTA				SCS	ScS	13 58 46.8	+1.4
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,195nm,3.8s						
GTA				LR	LR		
	comp=N,636nm,12.9s						
GTA				LR	LR		
	comp=E,945nm,20.1s						
GTA				LR	LR		
	comp=Z,560nm,16.4s,MS4.3						
NJ2	Nanjing	33.12	40	eP	P	13 48 29.2	+0.6
NJ2				AP	pP	13 48 35.0	+1.2
NJ2				XP	sP	13 48 38.0	+1.9
NJ2				PP	PP	13 49 40.2	+0.5
NJ2				S	S	13 53 45.0	-0.9
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,1µm,4.7s						
NJ2				LR	LR		
	comp=N,5µm,16.6s						
NJ2				LR	LR		
	comp=E,2µm,22.2s						
NJ2				LR	LR		
	comp=Z,1µm,15.7s,MS4.6						
SSE	Sheshan	34.08	44	eP	P	13 48 36.7	-0.2
SSE				AP	pP	13 48 43.2	+1.0
SSE				XP	sP	13 48 45.4	+0.9
SSE				S	S	13 54 03.8	+3.1
SSE				XS		13 54 14.3	
SSE				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,185nm,4.4s						
SSE				LR	LR		
	comp=N,2µm,15.9s,MS5.0						
SSE				LR	LR		
	comp=E,2µm,15.9s,MS5.0						
SSE				LR	LR		
	comp=Z,2µm,11.9s,MS5.0						
SSE	Sheshan	34.08	44	eP	P	13 48 36.7	-0.2
	comp=Z,13nm,0.9s,mb4.9						
SSE				pP	pP	13 48 43.2	+1.0
SSE				sP	sP	13 48 45.4	+0.9
SSE				S	S	13 54 03.8	+3.1
SSE				sS		13 54 14.3	
SSE				SS	SS	13 56 57.5	+48
KSH	Kashi	35.32	335	eP	P	13 48 47.0	-0.5
KSH				eAP	pP	13 48 53.0	+0.3
KSH				eXP	sP	13 48 56.5	+1.5
KSH				ePP	PP	13 50 05.0	-2.0
KSH				ePCP	PcP	13 51 18.6	+0.6
KSH				eS	S	13 54 17.1	-2.8
KSH				eSCP		13 55 01.4	
KSH				eSS	SS	13 56 32.4	-5.0
KSH				eSCS	ScS	13 59 04.8	+0.2
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
KSH				AMB	AMB		
	comp=Z,210nm,3.1s						
KSH				LR	LR		
	comp=N,2µm,19.6s						
KSH				LR	LR		
	comp=E,1µm,14.3s						
WMQ	Urumqi	36.07	352	P	P	13 48 54.0	+0.2
WMQ				XP	sP	13 49 03.0	+1.7
WMQ				PP	PP	13 50 16.0	-0.1
WMQ				S	S	13 54 31.0	-0.5
WMQ				SS	SS	13 56 53.0	-1.7
WMQ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
WMQ				LR	LR		
	comp=N,878nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=E,1µm,22.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,897nm,20.0s,MS4.5						
HHC	Hu-ho-hao-te	36.15	23	⇓P	P	13 48 55.0	+0.6
HHC				AP	pP	13 49 01.1	+1.4
HHC				XP	sP	13 49 03.4	+1.4
HHC				PP	PP	13 50 21.0	+4.0
HHC				PCP	PcP	13 51 18.8	-1.6
HHC				S	S	13 54 36.6	+4.0
HHC				XS		13 54 47.4	
HHC				SCP		13 55 01.7	
HHC				PCS		13 55 05.3	
HHC				SCS	ScS	13 59 08.7	-0.3
HHC				AMB	AMB		
	comp=Z,31nm,1.8s,mb4.9						
HHC				AMB	AMB		
	comp=Z,385nm,4.2s						
HHC				LR	LR		
	comp=N,912nm,14.2s,MS4.9						
HHC				LR	LR		
	comp=E,1µm,12.4s,MS4.9						
HHC				LR	LR		
	comp=Z,769nm,18.0s						
BJI	Beijing	37.44	28	P	P	13 49 06.8	+1.5
BJI				AP	pP	13 49 17.9	+7.3
BJI				XP	sP	13 49 23.1	+10
BJI				S	S	13 54 53.2	+0.8
BJI				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.9						
BJI				LR	LR		
	comp=N,1µm,18.2s,MS4.9						
BJI				LR	LR		
	comp=E,2µm,18.8s,MS4.9						
BJI				LR	LR		
	comp=Z,683nm,19.9s,MS4.5						
BJI	Beijing	37.44	28	P	P	13 49 06.8	+1.5
	comp=Z,16nm,0.8s,mb4.9						
BJI				pP	pP	13 49 17.9	+7.3
BJI				sP	sP	13 49 23.1	+10
BJI				S	S	13 54 53.2	+0.8
BJI				SS	SS	13 57 44.4	+19
UCH	Uchtor	38.20	336	P	P	13 49 12.7	+1.0
	SNR=10						
KBK	Karagaybulak	38.39	337	P	P	13 49 14.0	+0.7
	SNR=10						
AML	Almayashu	38.45	335	P	P	13 49 14.4	+0.6
	SNR=28						
AAK	Ala-Archa	38.55	337	P	P	13 49 15.8	+1.2
	SNR=12						
AAK	Ala-Archa	38.55	337	c iP	P	13 49 14.4	-0.2
AAK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
AAK	Ala-Archa	38.55	337	eP	P	13 49 14.7	+0.1
	comp=Z,49nm,1.0s,mb5.2						
FRU	Bishkek	38.67	337	eP	P	13 49 17.0	+1.4
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.0						
FRU				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.1						
CHMS	Chumysh	38.76	337	P	P	13 49 16.7	+0.4
	SNR=8.0						
EKS2	Erkin-Say	38.86	336	P	P	13 49 18.3	+1.1
	SNR=8.9						
USP	Ospenovka	39.08	337	P	P	13 49 24.2	+5.1
	SNR=5.3						
MKAR	Makanchi Array	39.92	347	i P	P	13 49 25.1	-0.9
MKAR				pmax	pmax		
	comp=Z,13nm,0.7s						
ULN	Ulaanbaatar	41.16	13	i P	P	13 49 35.8	-0.3
ULN	Ulaanbaatar	41.16	13	eP	P	13 49 35.4	-0.8
	comp=Z,5.7nm,0.7s,mb4.3						
SNY	Shenyang	42.51	33	⇑P	P	13 49 48.9	+1.6
SNY				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
SNY				LR	LR		
	comp=N,2µm,15.2s,MS5.2						
SNY				LR	LR		
	comp=E,2µm,14.2s,MS5.2						
SNY				LR	LR		
	comp=Z,2µm,14.2s,MS5.2						
ZAK	Zakamensk	42.87	9	eP	P	13 49 49.7	-0.5
ZAK				e		13 51 41.8	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
TLY	Talaya	44.19	8	eP	P	13 50 01.1	+0.3
TLY				eS	S	13 56 36.1	+3.4
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,357nm,15.0s,MS4.4						
KURK	Kurchatov	44.44	346	i P	P	13 50 01.6	-1.3
KURK				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
KURK	Kurchatov	44.44	346	eP	P	13 50 01.7	-1.2
	comp=Z,60nm,1.0s,mb5.3						
KURK				e	pP	13 50 08.2	0.0
CN2	Changchun	44.87	32	eP	P	13 50 07.3	+0.9
CN2				eXP	sP	13 50 16.2	+2.3
CN2				eS	S	13 56 43.0	+0.4
CN2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
CN2				AMB	AMB		
	comp=Z,620nm,4.0s						
CN2				LR	LR		
	comp=N,800nm,15.0s,MS5.1						
CN2				LR	LR		
	comp=E,2µm,15.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1µm,15.0s,MS4.9						
NVS	Novosibirsk	47.47	351	i P	P	13 50 25.2	-1.7
NVS				i S	S	13 57 15.5	-4.1
NVS				pmax	pmax		
	comp=N,27nm,1.1s						
NVS				pmax	pmax		
	comp=E,13nm,1.1s						
NVS				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
NVS				smax			
	comp=N,8.0nm,1.0s						
NVS				smax			
	comp=E,3.0nm,1.0s						
MDJ	Mudanjiang	47.65	34	P	P	13 50 28.9	+0.5
MDJ				PCP	PcP	13 51 58.4	+0.1
MDJ				PP	PP	13 52 20.2	+0.8
MDJ				S	S	13 57 25.2	+3.0
MDJ				SCS	ScS	14 00 21.7	+3.1
MDJ				AMB	AMB		
	comp=Z,16nm,1.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,275nm,4.6s						
MDJ				LR	LR		
	comp=N,899nm,14.2s,MS5.0						
MDJ				LR	LR		
	comp=E,476nm,12.7s,MS5.0						

MDJ				LR	LR		
	comp=Z,753nm,15.6s,MS4.8						
WRAB	Tennant Creek	48.35	126	*i* P	P	13 50 33.6	-0.6
WRAB	Tennant Creek	48.35	126	*e*P	P	13 50 32.9	-1.3
	comp=Z,17nm,1.0s,mb5.0						
WB2	Warramunga Arr	48.36	126	*e*P	P	13 50 33.0	-1.2
BVA0	Borovoye Array	48.83	341	P	P	13 50 35.8	-1.6
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CHKZ	Chkalovo	49.31	342	*i* P	P	13 50 39.8	-1.3
CHKZ				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
CHKZ	Chkalovo	49.31	342	*e*P	P	13 50 39.7	-1.4
	comp=Z,82nm,1.0s,mb5.7						
ASPA	Alice Springs	50.01	130	*e*P	P	13 50 46.6	-0.3
KLR	Kul'dur	51.72	31	*e*P	P	13 51 04.7	+5.1
BOD	Bodaibo	51.97	13	*e*P	P	13 51 05.8	+4.5
BOD				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
CLNS	Chul'man	54.26	20	*e*P	P	13 51 17.4	-0.9
CLNS				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
CLNS				pmax	pmax		
	comp=N,12nm,0.9s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
GNI	Garni	54.33	314	*i* P	P	13 51 17.3	-1.7
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
GNI	Garni	54.33	314	P	P	13 51 17.1	-1.9
	comp=Z,57nm,1.1s,mb5.4						
ARU	Arti	55.73	337	⇓*i*P	P	13 51 20.3	-8.8
ARU				*e*S	S	13 59 01.1	-12
ARU				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.3						
ARU				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
ARU				MLR	MLR		
	comp=N,1µm,20.0s,MS5.1						
ARU				MLR	MLR		
	comp=E,1µm,20.0s,MS5.1						
YSS	Yuzh-Sakhalins	56.63	38	*i* P	P	13 51 36.6	+1.0
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
KIV	Kislovodsk	57.20	318*c*	*i*P	P	13 51 39.0	-0.7
KIV				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.3						
KIV				pmax	pmax		
	comp=N,22nm,0.9s						
KIV				pmax	pmax		
	comp=E,15nm,0.8s						
KIV				MLR	MLR		
	comp=N,381nm,19.0s,MS4.7						
KIV				MLR	MLR		
	comp=E,417nm,19.0s,MS4.7						
KIV				MLR	MLR		
	comp=Z,483nm,19.0s,MS4.6						
KIV	Kislovodsk	57.20	318	*e*P	P	13 51 38.9	-0.8
	comp=Z,45nm,0.9s,mb5.5						
KMBO	Kilima Mbogo	57.46	264	*e*P	P	13 51 43.6	+1.6
	comp=Z,24nm,0.8s,mb5.3						
MALT	Malatya	58.36	310	*e*P	P	13 51 47.2	-0.8
	comp=Z,11nm,0.8s,mb4.9						
SOKR	Solikamsk	58.64	339	⇑*i*P	P	13 51 48.2	-1.4
SOKR				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.3						
SOC	Sochi	59.07	316	*e*P	P	13 51 48.3	-4.5
SOC				*e*		13 52 35.8	
SOC				*e*PPP	PPP	13 55 21.4	-8.2
SOC				*e*S	S	13 59 51.6	-5.5
SOC				*e*		14 01 31.4	
SOC				*e*SS	SS	14 03 47.7	-5.3
SOC				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.4						
SOC				pmax	pmax		
	comp=N,26nm,1.0s						
SOC				pmax	pmax		
	comp=E,11nm,0.7s						
EIL	Elat	59.35	300	*e*P	P	13 51 53.6	-1.4
	comp=E,24nm,0.8s,mb5.3						
YAK	Yakutsk	59.82	18	*e*P	P	13 51 55.9	-1.8
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK	Yakutsk	59.82	18	*e*P	P	13 51 55.3	-2.5
	comp=E,49nm,0.8s,mb5.6						
STKA	Stephens Creek	60.21	134	P	P	13 51 59.8	-1.1
SIM	Simferopol'	63.31	316	P	P	13 52 26.7	+5.2
SIM				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.5						
MBAR	Mbarara	63.80	265	*e*P	P	13 52 24.2	-1.0
	comp=Z,12nm,0.9s,mb4.9						
MOS	Moscow	64.94	329	*e*P	P	13 52 29.5	-2.4
MOS				*e*S	S	14 01 07.3	-3.7
MOS				MLR	MLR		
	comp=Z,1µm,20.4s,MS5.1						
OBN	Obninsk	65.24	328	⇑*i*P	P	13 52 30.1	-3.8
OBN				*i*		13 54 57.1	
OBN				*e*S	S	14 01 25.1	+10
OBN				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.4						
OBN				MLR	MLR		
	comp=Z,800nm,20.0s,MS4.9						
OBN	Obninsk	65.24	328	*e*P	P	13 52 29.6	-4.3
	comp=Z,59nm,1.1s,mb5.5						
MA2	Magadan	66.60	28	P	P	13 52 42.9	+0.5
	comp=Z,30nm,1.0s,mb5.3						
TIXI	Tiksi	67.05	11	⇓*i*P	P	13 52 43.2	-2.0
TIXI				*e*S	S	14 01 39.7	+3.1
TIXI				*e*SS	SS	14 05 58.4	+1.0
TIXI				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.5						
KIS	Kishinev	67.40	318	*e*P	P	13 52 45.0	-2.8
CFR	Carcaliu	67.48	316	⇑P	P	13 52 47.2	-1.1
MLR	Muntele Rosu	69.06	316	⇑P	P	13 52 58.1	0.0
LSZ	Lusaka	69.35	250	*e*P	P	13 53 01.8	+1.5
	comp=Z,5.3nm,0.7s,mb4.6						
BURAR	Bucovina Array	69.93	318	⇓P	P	13 53 03.6	+0.2
JOF	Joensuu	70.70	334	*e*p	P	13 53 02.3	-5.5
BOLS	Boljevac	71.63	313	⇑*i*P	P	13 53 12.6	-1.2
APA	Apatity	71.69	339	⇓*e*P	P	13 53 12.8	-0.9
APA				*i*	pP	13 53 18.6	-0.7
APA				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
SKO	Skopje	71.82	311	*e*P	P	13 53 13.0	-1.9
KWP	Kalwaria	71.91	320	*e*P	P	13 53 15.1	-0.2
KOLS	Kolonicke sedl	72.08	319	*e*P	P	13 53 16.0	-0.4
SUW	Suwalki	72.37	324	*e*P	P	13 53 17.2	-0.8
CRVS	Cervenica-Dubn	72.61	319	*i* P	P	13 53 19.7	+0.2
KAF	Kangasniemi	72.64	333	*e*p	P	13 53 19.3	-0.1
	comp=Z,13nm,0.6s,mb5.0						
KAF	Kangasniemi	72.64	333	*e*P	P	13 53 19.3	-0.1
KAF				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
NIE	Niedzica	73.42	319	*e*P	P	13 53 24.6	+0.3
NIE				*e*	pP	13 53 28.4	-1.4
PSZ	Piszkesteto	73.53	318	*e*P	P	13 53 24.1	-0.8
	comp=Z,12nm,0.8s,mb4.9						
PSZ	Piszkesteto	73.53	318	*e*P	P	13 53 24.6	-0.3
OJC	Ojcow	73.85	320	*e*P	P	13 53 26.6	-0.1
VYHS	Vyhne	74.29	318	*i* P	P	13 53 29.1	-0.2
VYHS				*e*	pP	13 53 33.7	-1.2
LBTB	Lobatse	74.35	241	*e*P	P	13 53 31.8	+1.7
	comp=Z,16nm,0.7s,mb5.1						
KEV	Kevo	74.67	341	*e*p	P	13 53 35.6	+4.5
	comp=Z,18nm,0.9s,mb5.0						
KEV	Kevo	74.67	341	*e*P	P	13 53 35.6	+4.5
KEV				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
OKC	Ostrava-Krasne	74.87	319	*e*P	P	13 53 33.3	+0.7
OKC				*e*pP	pP	13 53 38.3	+0.1
MORC	Moravsky Berou	75.25	319	*e*P	P	13 53 34.9	0.0
	comp=Z,25nm,0.9s,mb5.2						
ZST	Bratislava	75.42	318	*i* P	P	13 53 36.1	+0.3
ZST				*i* pP	pP	13 53 41.0	-0.4
BOSA	Boshof	75.70	238	*e*P	P	13 53 38.1	+0.3
	comp=Z,13nm,0.8s,mb4.9						
BILL	Bilibino	75.91	22	*i* P	P	13 53 37.5	-0.7
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BILL	Bilibino	75.91	22	*e*P	P	13 53 36.9	-1.4
	comp=Z,31nm,1.5s,mb5.0						
DPC	Dobruska-Polom	76.08	320	*e*P	P	13 53 40.4	+0.9
DPC				*e**PP	pP	13 53 45.7	+0.6
DPC				MLR	MLR		
	comp=Z,800nm,7.8s						
KSP	Ksiaz	76.14	320	*e*P	P	13 53 39.9	+0.1
KSP				*e*pP	pP	13 53 45.7	+0.3
KSP	Ksiaz	76.14	320	*e*P	P	13 53 39.3	-0.5
UPC	Upice	76.29	320	*e*P	P	13 53 41.4	+0.7
UPC				*e*pP	pP	13 53 46.7	+0.4
ARSA	Arzberg	76.42	317	⇑*i*P	P	13 53 41.9	+0.4
	comp=Z,16nm,1.1s,mb4.9						
PRU	Pruhonice	77.20	319	*e*P	P	13 53 46.4	+0.6
PRU				*e*pP	pP	13 53 52.0	+0.6
PRU				AMS	AMS	14 41 50.0	
	comp=Z,400nm,17.7s						
PVCC	Panska Ves	77.21	320	*e*P	P	13 53 46.4	+0.6
PVCC				*e*pP	pP	13 53 51.8	+0.3
VOY	Vojsko	77.50	315	*e*(P)	P	13 53 47.3	-0.2
VOY				*e*	pP	13 53 52.7	-0.4
BRG	Berggiesshubel	77.63	320	⇑*i*P	P	13 53 48.5	+0.4
BRG				*i*	pP	13 53 54.1	+0.4
BRG				pmax	pmax		
	comp=Z,88nm,2.1s,mb5.3						
BRG	Berggiesshubel	77.63	320	⇑*i*P	P	13 53 48.5	+0.4
	comp=Z,88nm,2.1s,mb5.3						
BRG				*i*	pP	13 53 54.1	+0.4
GEC2	GERESS Array S	77.71	318	*e*P	P	13 53 49.1	+0.5
GEC2				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
GEC2	GERESS Array S	77.71	318	*e*P	P	13 53 49.1	+0.5
	comp=Z,29nm,0.8s,mb5.3						
KHC	Kasperske Hory	77.80	318	*e*P	P	13 53 49.4	+0.3
KHC				*e*pP	pP	13 53 55.1	+0.4
KHC				AMS	AMS	14 43 40.0	
	comp=Z,400nm,15.4s						
RUE	Ruedersdorf	77.80	322	*e*P	P	13 53 48.1	-0.9
	comp=Z,140nm,0.9s,mb5.9						
RUE				*e*	pP	13 53 55.0	+0.3
PTCC	Patocco-Chiusa	77.88	316	*e*P	P	13 53 49.6	0.0
KBA	Koelnbreinsper	77.90	316	⇑*i*P	P	13 53 49.6	-0.1
	comp=Z,17nm,0.9s,mb5.0						
ARV	Arcevia	78.14	313	*e*P	P	13 53 51.3	+0.2
CLL	Collm	78.24	321	⇑*i*P	P	13 53 51.6	+0.2
CLL				*i*	pP	13 53 56.9	-0.2
CLL	Collm	78.24	321	⇑P	P	13 53 51.6	+0.2
CLL				*i* *PP	pP	13 53 56.9	-0.2
CLL				*i*		13 54 16.9	
WET	Wettzell	78.26	318	*e*P	P	13 53 52.2	+0.6
WET				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
WET	Wettzell	78.26	318	*e*P	P	13 53 52.2	+0.6
	comp=Z,18nm,0.8s,mb5.0						
FVI	Forni Avoltri	78.28	316	*e*P	P	13 53 51.8	0.0
NKC	Novy Kostel	78.56	320	*e*P	P	13 53 53.8	+0.5
NKC				*e*pP	pP	13 53 59.2	+0.3
NKC				AMS	AMS	14 43 00.0	
	comp=Z,500nm,19.8s						
SFI	Santa Sofia	78.94	313	*e*P	P	13 53 56.6	+1.1
PGD	Poggio Sodo	79.03	313	*e*P	P	13 53 57.2	+1.2
CTI	Castel Tesino	79.06	315	*e*P	P	13 53 56.7	+0.6
WTTA	Wattenberg	79.07	317	⇑*i*P	P	13 53 56.0	-0.1
	comp=Z,37nm,1.0s,mb5.3						
MOX	Moxa	79.10	320	*e*P	P	13 53 56.6	+0.4
MOX				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
MOX				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.6						
MOX	Moxa	79.10	320	*e*P	P	13 53 56.6	+0.4
	comp=Z,15nm,1.0s,mb4.9						
MOX	Moxa	79.10	320	*i* P	P	13 53 56.6	+0.4
	comp=Z,logA/T=1.2,mb4.9						
MOX				L		14 45 43.0	
WATA	Walderalm	79.11	317	⇑*i*P	P	13 53 55.9	-0.4
	comp=Z,13nm,1.0s,mb4.8						
VMG	Vicchio	79.16	313	*e*P	P	13 53 57.6	+1.0
SEI	Scarperia	79.29	313	*e*P	P	13 53 59.1	+1.7
GRA1	Grafenberg Arr	79.35	319	*e*P	P	13 53 58.5	+0.9
	comp=Z,28nm,0.9s,mb5.2						
GRA1				*e*pP	pP	13 54 03.8	+0.6
GRF	Grafenberg Arr	79.35	319	*e*P	P	13 53 58.5	+0.9
GRF				*e**PP	pP	13 54 03.8	+0.6
GRF				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
GRF				MLR	MLR		
	comp=Z,400nm,21.8s,MS4.7						
GRF	Grafenberg Arr	79.35	319	*e*P	P	13 53 58.5	+0.9
	comp=Z,28nm,0.9s,mb5.2						
GRF				*e*pP	pP	13 54 03.8	+0.6
SQTA	Sankt Quirin	79.36	317	⇑*i*P	P	13 53 57.5	-0.2
	comp=Z,17nm,0.8s,mb5.0						
MOTA	Moosalm	79.43	317	⇓*i*P	P	13 53 57.9	-0.2
	comp=Z,15nm,0.9s,mb4.9						
ZCCA	Zocca	79.56	314	*e*P	P	13 54 00.7	+1.8
NB2	NORSAR Subarra	79.59	331	P	P	13 53 57.5	-1.1
	comp=Z,6.6nm,0.7s,mb4.7,baz=95,slow=5.3						
NAO01	NORSAR Array S	79.74	330	P	P	13 53 58.8	-0.7
	comp=Z,14nm,0.8s,mb4.9						
GSCL	Gusciola	79.84	314	*e*P	P	13 54 01.4	+1.1
CLZ	Clausthal	79.89	321	*e*P	P	13 54 01.0	+0.6
	comp=Z,27nm,0.8s,mb5.2						
BRMO	Bormio	79.94	316	*e*P	P	13 54 01.4	+0.6
TSUM	Tsumeb	80.11	249	*e*P	P	13 54 04.8	+2.5
	comp=Z,5.0nm,0.9s,mb4.4						
DAVA	Damuels	80.26	317	⇓*i*P	P	13 54 02.9	+0.4
	comp=Z,40nm,1.1s,mb5.3						
PGF	Pioggiola	81.06	312	*e*P	P	13 54 05.8	-1.0
TNS	Taunus Mts	81.13	320	*e*P	P	13 54 07.7	+0.7
BFO	Black Forest	81.28	318	*e*P	P	13 54 08.0	+0.2
BFO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
BFO	Black Forest	81.28	318	*e*P	P	13 54 08.0	+0.2
	comp=Z,11nm,0.9s,mb4.8						
FIN	Finale Ligure	81.55	314	*e*P	P	13 54 09.5	+0.1
CDF	Champ du Feu	81.97	318	*e*P	P	13 54 11.1	-0.4
	comp=Z,33nm,0.9s,mb5.0						
SBF	Sospel	82.12	313	*e*P	P	13 54 11.5	-0.9
	comp=Z,89nm,0.8s,mb5.4						
LPG	La Plagne	82.51	315	*e*P	P	13 54 14.8	+0.5
	comp=Z,65nm,0.7s,mb5.4						
LPL	La Plagne	82.52	315	*e*P	P	13 54 13.9	-0.5
	comp=Z,67nm,0.7s,mb5.5						
MBDF	Montbardon	82.55	314	*e*P	P	13 54 13.2	-1.3
	comp=Z,36nm,0.9s,mb5.1						
BNI	Bardonecchia	82.59	314	*e*P	P	13 54 14.8	0.0
	comp=Z,44nm,0.9s,mb5.5						
HAU	Haudompre	82.62	317	*e*P	P	13 54 14.6	-0.2
	comp=Z,56nm,0.8s,mb5.3						
FRF	La Foret Royal	82.72	313	*e*P	P	13 54 14.7	-0.7
LMR	La Mourre	82.83	313	*e*P	P	13 54 15.0	-1.0
CABF	La Chapelle	82.89	316	*e*P	P	13 54 16.5	+0.2
	comp=Z,51nm,1.0s,mb5.2						
ORIF	Oris-en-Rattie	83.16	314	*e*P	P	13 54 17.3	-0.4
	comp=Z,28nm,0.8s,mb5.0						
CASM	Ain Smara	83.43	306	P	P	13 54 20.0	+0.7
MEZF	Maizieres J'vi	83.44	318	*e*P	P	13 54 18.2	-0.9
GIVF	Givet	83.46	320	*e*P	P	13 54 17.6	-1.5
CTEI	Djebel Teioual	83.51	305	P	P	13 54 22.0	+2.2
BAIF	Baives	83.86	320	*e*P	P	13 54 21.5	+0.3
	comp=Z,44nm,0.9s,mb5.3						
DFRA	Djebel Bou Aff	83.89	306	P	P	13 54 28.0	+6.3
VIVF	Saint-Julien-l	84.02	314	*e*P	P	13 54 21.3	-0.8
	comp=Z,28nm,0.9s,mb5.1						
SMF	Signal de Mont	84.43	316	*e*P	P	13 54 23.9	-0.2
	comp=Z,32nm,0.8s,mb5.2						
SSF	Saint Saulge	84.62	317	*e*P	P	13 54 24.2	-0.8
AVF	Avril sur Loir	84.75	316	*e*P	P	13 54 24.7	-1.0
	comp=Z,27nm,1.0s,mb5.0						
SYO	Syowa Base	85.58	197	⇑P	P	13 54 31.2	+1.9
SYO	Syowa Base	85.58	197	⇓PcP	PcP	13 54 35.5	+2.7
CAF	Calviac	85.86	315	*e*P	P	13 54 30.7	-0.6
	comp=Z,29nm,1.0s,mb5.2						
MTLF	Montolieu	85.95	313	*e*P	P	13 54 31.2	-0.6
	comp=Z,18nm,0.9s,mb5.0						
TNA	Tin City	86.00	24	*e*P	P	13 54 31.6	+0.1
RJF	Les Rejaudoux	86.20	315	*e*P	P	13 54 32.7	-0.3
LDF	La Druitiere	86.85	318	*e*P	P	13 54 35.2	-0.9
	comp=Z,39nm,1.0s,mb5.3						
FLN	La Foliniere	87.06	319	*e*P	P	13 54 37.1	0.0
	comp=Z,37nm,1.0s,mb5.3						
MFF	Saint Martin d	87.16	316	*e*P	P	13 54 36.8	-0.8
	comp=Z,28nm,1.0s,mb5.2						
ETSF	Etsaut	88.02	313	*e*P	P	13 54 42.3	+0.4
	comp=Z,31nm,0.9s,mb5.2						
SJPF	Ste Jean	88.47	313	*e*P	P	13 54 42.8	-1.2
	comp=Z,27nm,0.9s,mb5.2						
ROSF	Rostrenen	88.96	319	*e*P	P	13 54 44.8	-1.4
	comp=Z,108nm,1.4s,mb5.7						
IMA	Indian Mountai	91.45	22	*e*P	P	13 54 58.6	+1.2
MCK	McKinley	94.29	23	*e*P	P	13 55 11.0	+0.5
	comp=Z,4.4nm,0.8s,mb4.9						
SML	Sawmill	95.44	25	*e*P	P	13 55 16.2	+0.4
INK	Inuvik	96.82	16	*e*P	P	13 55 22.6	+0.7
	comp=Z,8.2nm,1.0s,mb5.1						
RES	Resolute Bay	97.22	2	*e*P	P	13 55 24.4	+0.7
	comp=Z,5.0nm,0.9s,mb4.9						
MOD	Modoc	121.12	30	PKP	PKPdf	14 00 43.1	-4.2
RRI2	Red Ridge	123.84	22	*e*PKP	PKPdf	14 00 50.9	-1.7
LOHW	Long Hollow	123.88	22	*e*PKP	PKPdf	14 00 50.5	-2.0
SNOW	Snow King Moun	123.95	22	*e*PKP	PKPdf	14 00 51.6	-1.2
SNOW				*e*		14 00 57.7	
MSU	Marysvale	127.58	26	*e*PKP	PKPdf	14 00 59.0	-0.9
PV10	Paradox Valley	129.00	23	PKP	PKPdf	14 01 00.7	-2.0
GDL2	Guadalupe Moun	136.24	23	PKP	PKPdf	14 01 16.1	-0.1
JCT	Junction City	139.41	19	PKP	PKPdf	14 01 20.2	-1.9
BAO	Brasilia Array	142.25	255	P	PKPdf	14 01 26.1	-1.5
PLCA	Paso Flores	144.72	200	*e*PKP	PKPdf	14 01 28.8	-2.5

CASC 01 13:42:50.3±1.7**,10.78N**×**85.37W,h70**^{km}±7^{km}**,MD3.5, 5C-5D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MADN	Villa Maderas	0.64	346	⇓*e*P	P	13 43 04.9	+0.2
MADN				*e*S	S	13 43 14.4	-1.0
SSNN	San Juan del S	0.69	317	⇓*e*P	P	13 43 04.9	-0.3
SSNN				*e*S	S	13 43 16.4	+0.1
CONN	Concepcion	0.82	342	⇓*e*P	P	13 43 06.6	-0.1
APON	Apoyo	1.32	329	*e*P	P	13 43 12.0	-1.4
CRUN	El Crucero	1.50	323	⇑*e*P	P	13 43 15.9	0.0
TICN	Ticuantepe	1.50	326	⇑*e*P	P	13 43 15.8	-0.1
XAVN	Gruta Xavier	1.65	326	*e*P	P	13 43 17.1	-0.7
APYN	Apoyeque	1.73	327	⇓*e*P	P	13 43 18.4	-0.5
APYN				*e*S	S	13 43 42.8	+2.8
COPN	Copaltepe	1.83	319	⇓*e*P	P	13 43 19.8	-0.4
MOMJ	Momotombo	1.98	325	*e*P	P	13 43 21.2	-1.1
MIRN	Miramar	2.11	322	⇑*e*P	P	13 43 23.4	-0.6
LEON	Leon	2.20	318	⇑*e*P	P	13 43 24.9	-0.5
TEL3	Telica 3	2.29	321	⇑*e*P	P	13 43 26.1	-0.6

MOS ***01*** *13:54:34.8±0.8, 9.95N×94.05E, h33^{km}, mb5.4/28, MS5.0/12, Error ellipse: s-maj=17.4km s-min=7.2km az=112.0*

BJI ***01*** *13:54:36.4, 9.86N×93.97E, h56^{km}, mB5.7, mb5.2, Ms5.2, Msz5.0*

HRVD ***01*** *13:54:38.0±0.2, 9.94N×94.10E, h12^{km}, MW5.3/62, Centroid moment Tensor Solution. LP body waves: s32,c49;Mantle waves: s62,c119; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.91±.03; $M_{\theta\theta}$0.62±.03; $M_{\phi\phi}$0.28±.03; $M_{r\theta}$0.40±.09; $M_{\theta\phi}$0.90±.02; $M_{\phi r}$0.14±.09; Best double couple: $M_0$1.223×10^{17} NP1: ϕ_s34°,δ38°,λ-114°. NP2:ϕ_s243°,δ56°,λ-73°. Principal axes: T 1.437, Plg10°, Azm321°; N -.428, Plg14°, Azm54°; P -1.009, Plg73°, Azm199°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***01*** *13:54:38.0±1.2, 9.99N×93.99E, h44^{km}±10^{km}, mb5.1/48 Error ellipse: s-maj=7.0km s-min=5.4km az=206.0*

ISC 01 13:54:34.3±1.0**,9.95N**±0.04×**94.05E**±0.03**,h28**^{km}±6^{km}**, h37**^{km}±1.7^{km}**:pP-P,n206,**σ**1^{s}00**/224**,mb5.1**/72**,MS5.0**/26**, 13C-25D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	Nongplab	6.16	64	P	Pn	13 56 02.0	-3.9
SNG	Songkhla	7.05	112	P	Pn	13 56 16.0	-2.4
	640nm,1.0s						
NST	Nakhon Sawan	8.22	46	P	P	13 56 33.0	-1.7
CM31	Chiang Mai Arr	9.70	29	*e*P	P	13 56 55.2	0.0
CM31				*e*		13 57 02.6	
CHG	Chiang Mai	10.01	28	⇓P	P	13 57 00.3	+0.8
	46nm,1.0s						
KKTK	Khon Kaen	10.64	52	P	P	13 57 07.0	-1.2
VIS	Vishakhapatnam	12.96	308	*e*P	P	13 57 38.1	-1.4
VIS				*e*		13 59 54.2	
VIS				*e*		14 00 00.2	
	comp=E,117nm,1.2s						
VIS				*e*		14 00 00.8	
	comp=N,153nm,1.1s						
MDRS	Chennai	13.88	284	*e*P	P	13 57 50.0	-1.7
MDRS				*e*		14 00 11.0	
AGT	Agartala	14.12	349	⇑*i*	P	13 58 02.0	+7.3
AGT				*i*		13 59 24.0	
HYB	Hyderabad	16.78	298	*e*P	P	13 58 29.0	-0.2
	comp=N,80nm,1.0s						
HYB				*e*S	S	14 01 37.0	+3.4
HYB	Hyderabad	16.78	298	*i* P	P	13 58 29.0	-0.2
	comp=N,286nm,1.7s						
HYB				*e*		14 01 26.0	
HYB				*e*S	S	14 01 37.0	+3.4
TRD	Trivandrum	16.93	267	*e*	P	13 58 41.5	+10
TRD				*e*		13 58 44.1	
	comp=Z,74nm,1.2s						
KMI	Kunming	17.20	28	P	P	13 58 36.2	+1.8
KMI				AP		13 58 44.8	
KMI				XP		13 58 50.5	
KMI				S	S	14 01 52.6	+9.4
KMI				XS		14 02 06.3	
KMI				AMB	AMB		
	comp=Z,77nm,1.7s						
KMI				AMB	AMB		
	comp=Z,2µm,8.5s						
KMI				LR	LR		
	comp=N,5µm,11.1s						
KMI				LR	LR		
	comp=E,2µm,9.0s						
KMI				LR	LR		
	comp=Z,4µm,11.7s						
KMI	Kunming	17.20	28	P	P	13 58 36.2	+1.8
	comp=Z,77nm,1.7s						
KMI				pP		13 58 44.8	
KMI				sP		13 58 50.5	
KMI				S	S	14 01 52.6	+9.4
KMI				sS		14 02 06.3	
QIZ	Qiongzhong	17.74	58	P	P	13 58 43.5	+2.4
QIZ				S	S	14 01 58.4	+2.9
QIZ				AMB	AMB		
	comp=Z,46nm,1.9s						
QIZ				LR	LR		
	comp=N,4µm,10.2s						
QIZ				LR	LR		
	comp=E,4µm,9.6s						
QIZ				LR	LR		
	comp=Z,4µm,9.3s						
MNGI	Mangalore	19.08	281	*i* P	P	13 58 58.9	+1.3
MNGI				*i*		14 02 36.4	
	comp=Z,130nm,1.5s						
JIRN	Jiri	19.11	338	*e*P	P	13 58 58.2	+0.3
	comp=Z,328nm,1.0s						
PKI	Pulchoki	19.33	336	*e*P	P	13 59 00.3	-0.1
	comp=Z,1µm,1.9s						
DMN	Daman	19.49	336	*e*P	P	13 59 02.2	+0.1
	comp=Z,391nm,1.3s						
KKN	Kakani	19.58	336	*e*P	P	13 59 02.4	-0.8
	comp=Z,757nm,1.5s						
LSA	Lhasa	19.84	353	P	P	13 59 05.2	-0.8
LSA				AP		13 59 17.3	
LSA				S	S	14 02 41.7	-0.6
LSA				XS		14 03 04.5	
LSA				AMB	AMB		
	comp=Z,60nm,0.7s						
LSA				AMB	AMB		
	comp=Z,870nm,6.4s						
LSA				LR	LR		
	comp=N,830nm,20.3s						
LSA				LR	LR		
	comp=E,1µm,19.1s						
GKN	Gorkha	20.03	335	*e*P	P	13 59 07.9	-0.1
	comp=E,290nm,0.8s						
KOLN	Koldanda	20.28	332	*e*P	P	13 59 10.8	+0.2
	comp=E,821nm,1.4s						
GYA	Guiyang	20.30	34	⇓*i*P	P	13 59 09.5	-1.3
GYA				AP		13 59 20.2	
GYA				XP		13 59 26.5	
GYA				S	S	14 02 52.2	+0.4

GYA				AMB	AMB		
	comp=Z,120nm,1.3s						
GYA				AMB	AMB		
	comp=Z,1µm,8.3s						
GYA				LR	LR		
	comp=N,2µm,16.5s,MS4.8						
GYA				LR	LR		
	comp=E,2µm,15.6s,MS4.8						
GYA				LR	LR		
	comp=Z,4µm,17.1s,MS4.9						
GOA	**Goa**	**20.48**	**288**	*e*	**P**	**13 59 05.7**	**-7.1**
GOA				*e*		14 03 07.8	
KAD	**Karad**	**20.64**	**293**	*e*P	**P**	**13 59 15.0**	**+0.6**
BHPL	**Bhopal**	**20.68**	**312**	*e*P	**P**	**13 59 16.3**	**+1.5**
BHPL				*e*		13 59 21.7	
	comp=Z,152nm,1.1s						
BHPL				*e*S	**S**	**14 03 06.1**	**+6.8**
POO	**Poona**	**21.34**	**296**	*e*P	**P**	**13 59 23.1**	**+1.6**
POO				*e*		13 59 26.7	
	comp=Z,98nm,0.7s						
POO				*e*		14 03 32.0	
BOM	**Bombay**	**22.39**	**296**	*e*P	**P**	**13 59 35.6**	**+3.6**
BOM				*e*		13 59 36.5	
	comp=Z,360nm,2.0s						
BOM				*i*		14 00 05.1	
BOM				*e*		14 03 19.9	
CD2	**Chengdu**	**22.73**	**22**	P	**P**	**13 59 36.0**	**+0.6**
CD2				S	**S**	**14 03 43.7**	**+6.2**
CD2				AMB	AMB		
	comp=Z,200nm,0.8s,mb5.6						
CD2				LR	LR		
	comp=N,4µm,11.4s						
CD2				LR	LR		
	comp=Z,6µm,13.2s,MS5.2						
NDI	**New Delhi**	**24.43**	**322**	*e*P	**P**	**13 59 51.5**	**-0.5**
NDI				*e*S	**S**	**14 04 09.0**	**+1.9**
AJM	**Ajmer**	**24.64**	**314**	⇓*i*P	**P**	**13 59 56.0**	**+2.0**
DDI	**Dehra Dun**	**25.17**	**326**	*e*S	**S**	**14 04 23.2**	**+3.7**
SDNR	**Sundarnagar**	**26.67**	**326**	*e*P	**P**	**14 00 14.6**	**+1.7**
BHK	**Bhakra**	**26.91**	**325**	*e*P	**P**	**14 00 18.2**	**+3.1**
LZH	**Lanzhou**	**27.50**	**17**	⇓P	**P**	**14 00 20.3**	**-0.1**
LZH				AP	pP	14 00 32.1	+3.4
LZH				XP	sP	14 00 37.5	+5.1
LZH				PP	PP	14 01 09.7	+1.2
LZH				*e*S	**S**	**14 04 57.3**	**-0.5**
LZH				XS		14 05 17.2	
LZH				SS	SS	14 06 17.3	+0.9
LZH				AMB	AMB		
	comp=Z,69nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,316nm,5.2s						
LZH				LR	LR		
	comp=N,2µm,12.2s						
LZH				LR	LR		
	comp=Z,3µm,14.9s,MS5.0						
LZH	**Lanzhou**	**27.50**	**17**	⇓P	**P**	**14 00 20.3**	**-0.1**
	comp=Z,69nm,1.5s,mb5.1						
LZH				pP	pP	14 00 32.1	+3.4
LZH				sP	sP	14 00 37.5	+5.1
LZH				PP	PP	14 01 09.7	+1.2
LZH				*e*S	**S**	**14 04 57.3**	**-0.5**
LZH				sS		14 05 17.2	
LZH				SS	SS	14 06 17.3	+0.9
XAN	**Xi’an**	**27.59**	**27**	P	**P**	**14 00 20.0**	**-1.2**
XAN				AMB	AMB		
	comp=Z,45nm,1.5s,mb4.9						
QZH	**Quanzhou**	**27.68**	**54**	P	**P**	**14 00 22.1**	**-0.1**
QZH				*e*S	**S**	**14 05 00.4**	**-0.4**
QZH				LR	LR		
	comp=N,2µm,8.4s						
QZH				LR	LR		
	comp=E,3µm,11.2s						
QZH				LR	LR		
	comp=Z,5µm,13.4s,MS5.3						
WHN	**Wuhan**	**27.88**	**40**	P	**P**	**14 00 24.5**	**+0.6**
WHN				LR	LR		
	comp=Z,5µm,15.9s,MS5.2						
THN	**Thein Dam**	**28.07**	**326**	⇑*i*P	**P**	**14 00 25.0**	**-0.6**
GTA	**Gaotai**	**29.79**	**9**	*e*P	**P**	**14 00 41.5**	**+0.5**
GTA				AP	pP	14 00 49.9	+0.6
GTA				PP	PP	14 01 38.1	-0.1
GTA				PCP	PcP	14 03 45.3	+1.1
GTA				S	**S**	**14 05 34.2**	**-0.2**
GTA				SS	SS	14 07 07.4	-2.8
GTA				PCS		14 07 26.7	
GTA				AMB	AMB		
	comp=Z,46nm,1.2s,mb5.1						
GTA				AMB	AMB		
	comp=Z,639nm,4.2s						
GTA				LR	LR		
	comp=N,903nm,17.5s,MS4.7						
GTA				LR	LR		
	comp=E,1µm,14.4s,MS4.7						
GTA				LR	LR		
	comp=Z,1µm,13.7s,MS4.7						
NJ2	**Nanjing**	**31.78**	**43**	*e*P	**P**	**14 00 59.1**	**+0.4**
NJ2				AP	pP	14 01 11.0	+4.0
NJ2				XP	sP	14 01 16.4	+5.8
NJ2				PP	PP	14 02 03.5	-0.8
NJ2				S	**S**	**14 06 04.0**	**-1.8**
NJ2				XS		14 06 25.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,4µm,4.3s						
NJ2				LR	LR		
	comp=N,4µm,17.2s,MS5.3						
NJ2				LR	LR		
	comp=E,4µm,13.1s,MS5.3						
NJ2				LR	LR		
	comp=Z,4µm,13.0s,MS5.3						
SSE	**Sheshan**	**32.83**	**46**	*e*P	**P**	**14 01 07.7**	**-0.1**
SSE				AP	pP	14 01 18.9	+2.8
SSE				PP	PP	14 02 20.4	+2.5
SSE				S	**S**	**14 06 22.8**	**+0.7**
SSE				XS		14 06 42.3	
SSE				AMB	AMB		
	comp=Z,36nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,374nm,4.4s						
SSE				LR	LR		
	comp=N,2µm,14.3s,MS5.0						
SSE				LR	LR		
	comp=E,935nm,14.3s,MS5.0						
SSE				LR	LR		
	comp=Z,2µm,14.7s,MS5.0						
SSE	**Sheshan**	**32.83**	**46**	*e*P	**P**	**14 01 07.7**	**-0.1**
	comp=Z,36nm,0.8s,mb5.3						
SSE				PP	PP	14 02 20.4	+2.5
SSE				S	**S**	**14 06 22.8**	**+0.7**
SSE				sS		14 06 42.3	
SSE				SS	SS	14 08 55.1	+34
KSH	**Kashi**	**33.57**	**334**	*e*P	**P**	**14 01 14.4**	**+0.2**
KSH				*e*AP	pP	14 01 25.8	+3.3
KSH				*e*XP	sP	14 01 31.2	+5.1
KSH				*e*PP	PP	14 02 26.4	-0.5
KSH				*e*PCP	PcP	14 03 56.1	+1.7
KSH				*e*S	**S**	**14 06 31.1**	**-2.5**
KSH				*e*SS	SS	14 08 34.1	-4.3
KSH				*e*SCS	ScS	14 11 34.2	-1.3
KSH				AMB	AMB		
	comp=Z,200nm,1.6s,mb5.8						
KSH				AMB	AMB		
	comp=Z,300nm,3.4s						
KSH				LR	LR		
	comp=N,1µm,14.4s						
KSH				LR	LR		
	comp=E,1µm,7.4s						
BTO	**Baotou**	**33.66**	**22**	*e*P	**P**	**14 01 14.1**	**-0.8**
BTO				AMB	AMB		
	comp=Z,48nm,1.7s,mb5.2						
BTO				LR	LR		
	comp=N,685nm,10.4s,MS5.2						
BTO				LR	LR		
	comp=E,2µm,12.0s,MS5.2						
WMQ	**Urumqi**	**34.20**	**352**	P	**P**	**14 01 20.4**	**+0.9**
WMQ				AP	pP	14 01 32.5	+4.6
WMQ				XP	sP	14 01 38.0	+6.5
WMQ				PP	PP	14 02 35.0	+0.5
WMQ				S	**S**	**14 06 43.0**	**-0.2**
WMQ				SS	SS	14 08 53.0	+0.2
WMQ				AMB	AMB		
	comp=Z,45nm,1.0s,mb5.3						
WMQ				LR	LR		
	comp=N,1µm,18.0s,MS4.7						
WMQ				LR	LR		
	comp=E,879nm,17.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,1µm,18.0s,MS4.6						
HHC	**Hu-ho-hao-te**	**34.46**	**24**	⇓*i*P	**P**	**14 01 22.1**	**+0.3**
HHC				AP	pP	14 01 34.4	+4.2
HHC				XP	sP	14 01 39.2	+5.4
HHC				PP	PP	14 02 39.0	+1.1
HHC				PCP	PcP	14 03 52.2	-4.7
HHC				S	**S**	**14 06 52.0**	**+4.7**
HHC				XS		14 07 10.0	
HHC				SCP		14 07 32.8	
HHC				PCS		14 07 39.9	
HHC				AMB	AMB		
	comp=Z,73nm,1.5s,mb5.4						
HHC				AMB	AMB		
	comp=Z,894nm,4.3s						
HHC				LR	LR		
	comp=N,1µm,15.6s,MS5.0						
HHC				LR	LR		
	comp=E,2µm,16.8s,MS5.0						
HHC				LR	LR		
	comp=Z,1µm,12.0s,MS4.9						
BJI	**Beijing**	**35.84**	**30**	P	**P**	**14 01 34.6**	**+1.0**
BJI				AMB	AMB		
	comp=Z,54nm,0.9s,mb5.5						
BJI				LR	LR		
	comp=N,3µm,16.0s,MS5.2						
BJI				LR	LR		
	comp=E,1µm,12.9s,MS5.2						
BJI				LR	LR		
	comp=Z,2µm,21.3s						
BJI	**Beijing**	**35.84**	**30**	P	**P**	**14 01 34.6**	**+1.0**
	comp=Z,54nm,0.9s,mb5.5						
BJI				S	**S**	**14 07 28.7**	**+20**
UCH	**Uchtor**	**36.44**	**335**	P	**P**	**14 01 40.0**	**+1.4**
	SNR=6.9						
KBK	**Karagaybulak**	**36.62**	**336**	P	**P**	**14 01 41.9**	**+1.8**
	SNR=17						
AML	**Almayashu**	**36.70**	**334**	P	**P**	**14 01 41.6**	**+0.8**
	SNR=18						
AAK	**Ala-Archa**	**36.79**	**336**	P	**P**	**14 01 42.7**	**+1.2**
	SNR=11						
AAK	**Ala-Archa**	**36.79**	**336**	*i* P	**P**	**14 01 41.1**	**-0.4**
AAK				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
AAK	**Ala-Archa**	**36.79**	**336**	*e*P	**P**	**14 01 40.1**	**-1.4**
	comp=Z,97nm,1.4s,mb5.4						
FRU	**Bishkek**	**36.90**	**336**	*e*P	**P**	**14 01 43.0**	**+0.5**
FRU				*e*		14 01 54.0	
FRU				pmax	pmax		
	comp=Z,160nm,1.8s,mb5.5						
CHMS	**Chumysh**	**36.99**	**336**	P	**P**	**14 01 44.0**	**+0.8**
	SNR=10						
EKS2	**Erkin-Say**	**37.10**	**335**	P	**P**	**14 01 42.0**	**-2.2**
	SNR=11						
USP	**Ospenovka**	**37.31**	**336**	P	**P**	**14 01 46.4**	**+0.5**
	SNR=6.2						
MKAR	**Makanchi Array**	**38.06**	**347**	*i* P	**P**	**14 01 52.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
ULN	**Ulaanbaatar**	**39.35**	**14**	*d* *i*P	**P**	**14 02 02.7**	**-0.3**
ULN	**Ulaanbaatar**	**39.35**	**14**	⇓*e*P	**P**	**14 02 02.7**	**-0.3**
	comp=Z,15nm,0.7s,mb4.8						
SNY	**Shenyang**	**41.00**	**34**	⇓P	**P**	**14 02 17.4**	**+0.8**
SNY				XP	sP	14 02 32.0	+3.4
SNY				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.2						
SNY				AMB	AMB		
	comp=Z,560nm,8.2s						
SNY				LR	LR		
	comp=N,1µm,16.2s						
SNY				LR	LR		
	comp=Z,1µm,15.3s,MS4.8						
ZAK	**Zakamensk**	**41.03**	**9**	⇑*e*P	**P**	**14 02 16.3**	**-0.4**
ZAK				*e*		14 04 15.0	
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**41.82**	**132**	*e*P	**P**	**14 02 24.7**	**+1.0**
	comp=Z,17nm,1.7s,mb4.4						
MOY	**Mondy**	**41.98**	**6**	*e*P	**P**	**14 02 26.0**	**+1.5**
MOY				*e*		14 04 07.4	
MOY				pmax	pmax		
	comp=Z,35nm,4.2s						
TLY	**Talaya**	**42.35**	**9**	P	**P**	**14 02 29.5**	**+2.0**
	comp=Z,90nm,0.8s,mb5.5,SNR=11						
TLY	**Talaya**	**42.35**	**9**	*i* P	**P**	**14 02 27.7**	**+0.2**
TLY				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.5						
TLY	**Talaya**	**42.35**	**9**	⇓*e*P	**P**	**14 02 28.0**	**+0.5**
	comp=Z,38nm,1.3s,mb4.9						
KURK	**Kurchatov**	**42.59**	**346**	*i* P	**P**	**14 02 29.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
KURK	**Kurchatov**	**42.59**	**346**	*e*P	**P**	**14 02 29.4**	**-0.1**
	comp=Z,19nm,1.2s,mb4.7						
IRK	**Irkutsk**	**42.99**	**9**	*e*P	**P**	**14 02 33.3**	**+0.5**
IRK				*e*	pP	14 02 43.4	+2.2
IRK				*e*		14 04 18.4	
IRK				pmax	pmax		
	comp=Z,59nm,3.9s						
CN2	**Changchun**	**43.34**	**33**	*e*P	**P**	**14 02 37.3**	**+1.5**
CN2				*e*AP	pP	14 02 49.8	+5.6
CN2				*e*S	**S**	**14 09 01.7**	**+0.5**
CN2				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.3						
CN2				AMB	AMB		
	comp=Z,1µm,6.0s						
CN2				LR	LR		
	comp=N,1µm,13.0s,MS5.1						
CN2				LR	LR		
	comp=E,800nm,13.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1µm,14.0s,MS5.0						
NVS	**Novosibirsk**	**45.60**	**351**	*i* P	**P**	**14 02 52.9**	**-0.8**
MDJ	**Mudanjiang**	**46.16**	**35**	P	**P**	**14 02 58.6**	**+0.3**
MDJ				AP	pP	14 03 09.8	+3.0
MDJ				XP	sP	14 03 15.0	+4.7
MDJ				PP	PP	14 04 47.5	+0.8
MDJ				PCS		14 08 28.5	
MDJ				S	**S**	**14 09 42.6**	**+0.8**
MDJ				XS		14 10 02.1	
MDJ				AMB	AMB		
	comp=Z,28nm,2.5s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,588nm,5.0s						
MDJ				LR	LR		
	comp=N,285nm,13.4s,MS4.8						
MDJ				LR	LR		
	comp=E,878nm,17.3s,MS4.8						
MDJ				LR	LR		
	comp=Z,859nm,14.1s,MS4.8						
BVA0	**Borovoye Array**	**47.02**	**341**	*i* P	**P**	**14 03 04.5**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.3						
CHKZ	**Chkalovo**	**47.49**	**341**	*i* P	**P**	**14 03 08.6**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.2						
CHKZ	**Chkalovo**	**47.49**	**341**	*e*P	**P**	**14 03 07.8**	**-0.9**
	comp=Z,24nm,0.6s,mb5.3						
WRAB	**Tennant Creek**	**49.55**	**127**	*i* P	**P**	**14 03 24.8**	**-0.3**
WRAB	**Tennant Creek**	**49.55**	**127**	*e*P	**P**	**14 03 24.0**	**-1.0**
	comp=Z,28nm,0.9s,mb5.3						
WB2	**Warramunga Arr**	**49.56**	**127**	*e*P	**P**	**14 03 24.4**	**-0.7**
WB2				*e*S	**S**	**14 10 30.1**	**+0.1**
KLR	**Kul’dur**	**50.16**	**31**	*e*P	**P**	**14 03 24.7**	**-4.7**
KLR				*e*		14 05 18.0	
KLR				pmax	pmax		
	comp=E,76nm,2.0s						
KLR				pmax	pmax		
	comp=Z,90nm,2.0s,mb5.5						
KLR				MLR	MLR		
	comp=N,1µm,14.0s,MS5.1						
KLR				MLR	MLR		
	comp=E,900nm,14.0s,MS5.1						
KLR				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.3						
ASPA	**Alice Springs**	**51.32**	**131**	*e*P	**P**	**14 03 37.5**	**-1.0**
ASPA				*e*S	**S**	**14 10 55.7**	**+1.4**
CLNS	**Chul’man**	**52.54**	**21**	*e*P	**P**	**14 03 47.5**	**+0.3**
CLNS				*e**PP	pP	14 03 54.8	-1.1
CLNS				*e*		14 05 42.2	
CLNS				*e*PPP	PPP	14 06 53.8	+1.6
CLNS				*e*S	**S**	**14 11 09.7**	**-0.9**
CLNS				*e*SS	SS	14 14 53.9	+6.4
CLNS				pmax	pmax		
	comp=N,36nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.5						
CLNS				pmax	pmax		
	comp=E,34nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,5.0nm,1.0s						
CLNS				smax			
	comp=N,369nm,15.1s						
CLNS				smax			
	comp=Z,127nm,11.0s						
CLNS				smax			
	comp=E,87nm,13.9s						
CLNS				MLR	MLR		
	comp=N,1µm,14.0s,MS5.1						
CLNS				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,200nm,13.0s,MS5.1						
GNI	**Garni**	**52.95**	**313**	*i* P	**P**	**14 03 51.1**	**+0.5**
GNI				pmax	pmax		
	comp=Z,56nm,1.3s						
GNI	**Garni**	**52.95**	**313**	*e*P	**P**	**14 03 51.0**	**+0.5**
	comp=Z,77nm,1.4s,mb5.4						
SVE	**Sverdlovsk**	**53.46**	**338**	⇑*e*P	**P**	**14 03 51.2**	**-2.9**
SVE				*e*		14 04 08.0	
SVE				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7						
SVE				MLR	MLR		
	comp=N,1µm,22.0s,MS5.0						
SVE				MLR	MLR		
	comp=E,1µm,22.0s,MS5.0						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.0						
TI2	**Plekhanov**	**53.52**	**315**	⇑*i*P	**P**	**14 03 54.8**	**+0.1**
TI2				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.6						
ARU	**Arti**	**53.96**	**336**	⇓*i*P	**P**	**14 03 49.7**	**-8.0**
ARU				*e*S	**S**	**14 11 19.5**	**-10**
ARU				*e*SS	SS	14 15 05.5	-5.3
ARU				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.0						
ARU				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.2						
ARU				MLR	MLR		
	comp=N,1µm,21.0s,MS5.1						
ARU				MLR	MLR		
	comp=E,1µm,24.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**55.22**	**39**	⇑*i*P	**P**	**14 04 07.3**	**+0.2**
YSS				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.5						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,1µm,18.0s						
YSS	**Yuzh-Sakhalins**	**55.22**	**39**	*e*P	**P**	**14 04 07.6**	**+0.5**
	comp=E,120nm,1.4s,mb5.7						
KIV	**Kislovodsk**	**55.74**	**317**	P	**P**	**14 04 11.9**	**+1.0**
	comp=E,244nm,1.7s,mb6.0,SNR=9.0						
KIV	**Kislovodsk**	**55.74**	**317**	*d* *i*P	**P**	**14 04 10.1**	**-0.8**
KIV				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.3						
KIV	**Kislovodsk**	**55.74**	**317**	*e*P	**P**	**14 04 09.8**	**-1.1**
	comp=Z,72nm,0.9s,mb5.7						
GOF	**Gofitskoye**	**55.92**	**318**	⇓*i*P	**P**	**14 04 12.0**	**-0.2**
GOF				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.3						
SOKR	**Solikamsk**	**56.85**	**338**	⇓*i*P	**P**	**14 04 17.2**	**-1.5**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
MALT	**Malatya**	**57.08**	**309**	*e*P	**P**	**14 04 19.9**	**-0.7**
	comp=Z,21nm,1.4s,mb5.0						
KMBO	**Kilima Mbogo**	**57.59**	**262**	*e*P	**P**	**14 04 24.6**	**+0.1**
	comp=Z,27nm,1.1s,mb5.2						
SOC	**Sochi**	**57.64**	**316**	*e*P	**P**	**14 04 20.6**	**-3.8**
SOC				*e*		14 05 12.4	
SOC				*e*S	**S**	**14 12 16.7**	**-2.3**
SOC				*e*		14 14 01.3	
SOC				pmax	pmax		
	comp=N,18nm,1.0s						
SOC				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
SOC				pmax	pmax		
	comp=E,11nm,0.7s						
SOC				MLR	MLR		
	comp=Z,638nm,19.0s,MS4.8						
SOC				MLR	MLR		
	comp=N,747nm,22.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,575nm,19.0s,MS4.9						
YAK	**Yakutsk**	**58.07**	**19**	*d* *i*P	**P**	**14 04 26.4**	**-0.8**
YAK				*e**PP	pP	14 04 37.3	+1.4
YAK				*e*		14 05 18.1	
YAK				*e*		14 06 35.5	
YAK				*e*S	**S**	**14 12 24.0**	**-0.4**
YAK				*e*SS	SS	14 16 12.1	-5.3
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
YAK				pmax	pmax		
	comp=E,16nm,1.1s						
YAK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
YAK				pmax	pmax		
	comp=N,3.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
YAK				pmax	pmax		
	comp=E,7.0nm,1.4s						
YAK				smax			
	comp=E,8.0nm,1.8s						
YAK				smax			
	comp=N,3.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,781nm,14.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,446nm,13.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,394nm,15.0s,MS4.9						
YAK	**Yakutsk**	**58.07**	**19**	*e*P	**P**	**14 04 25.8**	**-1.4**
	comp=E,62nm,0.8s,mb5.7						
CTA	**Charters Tower**	**59.41**	**120**	*e*P	**P**	**14 04 37.1**	**0.0**
	comp=E,20nm,1.2s,mb5.0						
CTAO	**Charters Tower**	**59.41**	**120**	⇓*e*P	**P**	**14 04 36.7**	**-0.3**
	comp=E,54nm,1.2s,mb5.5						
ANN	**Anapa**	**59.58**	**316**	*e*P	**P**	**14 04 26.1**	**-12**
ANN				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
STKA	**Stephens Creek**	**61.60**	**134**	*e*P	**P**	**14 04 51.6**	**-0.3**
	comp=Z,11nm,1.1s,mb4.9						
MOS	**Moscow**	**63.28**	**328**	*e*P	**P**	**14 04 59.6**	**-3.1**
MOS				*e*S	**S**	**14 13 27.1**	**-4.0**
MOS				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.6						
MOS				MLR	MLR		
	comp=Z,2µm,21.4s,MS5.2						
OBN	**Obninsk**	**63.60**	**327**	⇑*i*P	**P**	**14 05 00.5**	**-4.3**
OBN				*e*S	**S**	**14 13 45.8**	**+11**
OBN				pmax	pmax		
	comp=Z,25nm,1.7s,mb5.0						
OBN				MLR	MLR		
	comp=Z,800nm,19.0s,MS4.9						
MBAR	**Mbarara**	**63.86**	**264**	*e*P	**P**	**14 05 07.5**	**+0.3**
	comp=Z,10nm,1.2s,mb4.7						
MA2	**Magadan**	**64.98**	**28**	*i* P	**P**	**14 05 13.7**	**0.0**
MA2				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.5						
MA2	**Magadan**	**64.98**	**28**	*e*P	**P**	**14 05 13.6**	**-0.1**
	comp=Z,114nm,1.3s,mb5.7						
TIXI	**Tiksi**	**65.23**	**11**	⇓*i*P	**P**	**14 05 13.2**	**-1.9**
TIXI				*e*S	S	14 13 55.6	+0.6
TIXI				pmax	pmax		
	comp=Z,93nm,1.4s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,398nm,16.0s,MS4.7						
CFR	**Carcaliu**	**66.07**	**315**	⇑*i*P	**P**	**14 05 19.9**	**-1.0**
CFR	**Carcaliu**	**66.07**	**315**	⇑*i*P	**P**	**14 05 19.9**	**-1.0**
MLR	**Muntele Rosu**	**67.64**	**315**	⇓*i*P	**P**	**14 05 31.0**	**0.0**
MLR	**Muntele Rosu**	**67.64**	**315**	⇓*i*P	**P**	**14 05 31.0**	**+0.1**
BURAR	**Bucovina Array**	**68.47**	**317**	⇑P	**P**	**14 05 35.3**	**-0.7**
BURAR	**Bucovina Array**	**68.47**	**317**	⇑*i*P	**P**	**14 05 35.3**	**-0.7**

JOF	Joensuu	68.96	334	ep	P	14 05 35.1	-3.7
LSZ	Lusaka	69.89	250	eP	P	14 05 44.8	-0.4
	comp=Z,9.8nm,0.6s,mb4.9						
APA	Apatity	69.89	339	⇑iP	P	14 05 42.4	-2.0
APA				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
BOLS	Boljevac	70.27	313	⇑iP	P	14 05 46.1	-1.0
KWP	Kalwaria	70.41	319	eP	P	14 05 47.0	-0.9
KAF	Kangasniemi	70.92	333	ep	P	14 05 49.3	-1.5
CRVS	Cervenica-Dubn	71.13	318	i P	P	14 05 52.6	+0.3
NIE	Niedzica	71.94	319	eP	P	14 05 57.9	+0.8
PSZ	Piszkesteto	72.07	317	eP	P	14 05 57.3	-0.6
	comp=Z,36nm,1.5s,mb5.1						
OJC	Ojcow	72.35	320	eP	P	14 05 58.4	-1.1
VYHS	Vyhne	72.82	318	i P	P	14 06 02.0	-0.4
KEV	Kevo	72.87	340	ep	P	14 06 02.0	-0.2
	comp=Z,12nm,0.6s,mb5.0						
KEV	Kevo	72.87	340	eP	P	14 06 02.0	-0.2
KEV				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
OKC	Ostrava-Krasne	73.38	319	eP	P	14 06 06.0	+0.5
MORC	Moravsky Berou	73.76	319	eP	P	14 06 06.5	-1.3
	comp=Z,40nm,1.5s,mb5.1						
BILL	Bilibino	74.21	22	i P	P	14 06 06.1	-3.9
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
DPC	Dobruska-Polom	74.58	320	eP	P	14 06 12.9	+0.4
KSP	Ksiaz	74.63	320	eP	P	14 06 13.0	+0.2
KSP	Ksiaz	74.63	320	eP	P	14 06 12.4	-0.4
UPC	Upice	74.79	320	eP	P	14 06 14.1	+0.4
LBTB	Lobatse	75.16	241	eP	P	14 06 17.7	+1.3
	comp=Z,23nm,1.0s,mb5.1						
LJU	Ljubljana	75.65	315	eP	P	14 06 18.1	-0.6
PVCC	Panska Ves	75.71	320	eP	P	14 06 19.2	+0.2
PRU	Pruhonice	75.71	319	eP	P	14 06 19.2	+0.2
VOY	Vojsko	76.09	315	eP	P	14 06 20.7	-0.5
BRG	Berggiesshubel	76.12	320	eP	P	14 06 21.5	+0.2
BRG				pmax	pmax		
	comp=Z,31nm,1.8s,mb4.9						
BRG	Berggiesshubel	76.12	320	eP	P	14 06 21.5	+0.2
	comp=Z,31nm,1.8s,mb4.9						
KHC	Kasperske Hory	76.32	318	eP	P	14 06 22.8	+0.3
PTCC	Patocco-Chiusa	76.47	315	eP	P	14 06 23.3	-0.1
BOSA	Boshof	76.61	237	eP	P	14 06 25.6	+1.0
	comp=Z,27nm,1.0s,mb5.1						
CLL	Collm	76.72	320	⇓iP	P	14 06 23.5	-1.1
CLL				pmax	pmax		
	comp=Z,68nm,2.2s,mb5.2						
CLL	Collm	76.72	320	⇓iP	P	14 06 23.5	-1.1
	comp=Z,68nm,2.2s,mb5.2						
CLL	Collm	76.72	320	⇓P	P	14 06 23.5	-1.1
	comp=Z,logA/T=1.5,mb5.2						
FVI	Forni Avoltri	76.86	316	eP	P	14 06 26.0	+0.5
NKC	Novy Kostel	77.06	319	eP	P	14 06 27.5	+0.9
SFI	Santa Sofia	77.58	313	eP	P	14 06 30.4	+0.8
MOX	Moxa	77.59	320	eP	P	14 06 27.4	-2.1
MOX				pmax	pmax		
	comp=Z,37nm,1.9s,mb5.0						
MOX	Moxa	77.59	320	eP	P	14 06 27.4	-2.1
	comp=Z,37nm,1.9s,mb5.0						
MOX	Moxa	77.59	320	i P	P	14 06 27.4	-2.1
	comp=Z,logA/T=1.3,mb5.0						
CTI	Castel Tesino	77.65	315	eP	P	14 06 30.3	+0.4
PGD	Poggio Sodo	77.67	313	eP	P	14 06 30.9	+0.8
VMG	Vicchio	77.79	313	eP	P	14 06 32.1	+1.3
NB2	NORSAR Subarra	77.90	330	P	P	14 06 29.6	-1.3
	comp=Z,40nm,1.7s,mb5.1,baz=92,slow=5.8						
PGF	Pioggiola	79.72	312	eP	P	14 06 40.6	-0.7
CDF	Champ du Feu	80.51	318	eP	P	14 06 44.6	-0.8
TSUM	Tsumeb	80.69	249	eP	P	14 06 47.4	+0.5
	comp=Z,7.7nm,1.0s,mb4.6						
SBF	Sospel	80.76	313	eP	P	14 06 46.3	-0.5
HINF	Hinteralfeld	80.84	317	eP	P	14 06 46.3	-0.8
LPG	La Plagne	81.11	315	eP	P	14 06 48.7	+0.1
	comp=Z,48nm,1.1s,mb5.0						
LPL	La Plagne	81.12	315	eP	P	14 06 48.7	+0.1
	comp=Z,27nm,0.6s,mb5.0						
HAU	Haudompre	81.16	317	eP	P	14 06 48.1	-0.7
	comp=Z,85nm,1.5s,mb5.1						
MBDF	Montbardon	81.16	314	eP	P	14 06 49.4	+0.5
	comp=Z,8.4nm,0.7s,mb4.5						
SUR	Sutherland	81.44	235	eP	P	14 06 52.9	+2.3
	comp=Z,33nm,1.1s,mb5.2						
CABF	La Chapelle	81.47	316	eP	P	14 06 50.3	-0.1
	comp=Z,10.0nm,0.6s,mb4.6						
ORIF	Oris-en-Rattie	81.78	314	eP	P	14 06 51.9	-0.2
BAIF	Baives	82.36	319	eP	P	14 06 54.9	-0.1
SMF	Signal de Mont	83.00	316	eP	P	14 06 57.9	-0.5
	comp=Z,12nm,0.6s,mb4.8						
SSF	Saint Saulge	83.18	316	eP	P	14 06 58.8	-0.5
	comp=Z,51nm,1.3s,mb5.1						
AVF	Avril sur Loir	83.32	316	eP	P	14 06 59.5	-0.5
	comp=Z,29nm,1.1s,mb4.9						
BGF	Bois d'Agland	83.69	316	eP	P	14 07 01.5	-0.4
TCF	Toulx Ste Croi	84.17	316	eP	P	14 07 04.3	0.0
TNA	Tin City	84.33	24	eP	P	14 07 05.4	+0.7
RJF	Les Rejaudoux	84.79	315	eP	P	14 07 07.8	+0.3
LDF	La Druitiere	85.37	318	eP	P	14 07 10.1	-0.2
DAG	Danmarks Havn	85.45	348	⇓iP	P	14 07 10.0	-0.1
DAG				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
DAG	Danmarks Havn	85.45	348	⇓iP	P	14 07 10.0	-0.1
	comp=Z,19nm,1.4s,mb5.0						
FLN	La Foliniere	85.58	319	eP	P	14 07 11.1	-0.2
MFF	Saint Martin d	85.72	316	eP	P	14 07 11.9	-0.2
ETSF	Etsaut	86.67	313	eP	P	14 07 17.0	+0.2
	comp=Z,15nm,0.8s,mb5.0						
SYO	Syowa Base	87.35	197	⇓PcP	PcP	14 07 25.8	+3.9
IMA	Indian Mountai	89.75	22	eP	P	14 07 32.9	+1.9
	comp=Z,58nm,1.8s,mb5.6						
SVW2	Sparrevohn	90.95	27	eP	P	14 07 38.6	+1.9
SPU	Mount Spurr	92.48	26	eP	P	14 07 43.8	+0.1
PWA	Palmer West	93.20	25	eP	P	14 07 48.2	+1.2
	comp=Z,24nm,1.1s,mb5.5						
INK	Inuvik	95.04	16	eP	P	14 07 55.9	+0.6
	comp=Z,2.1nm,0.5s,mb4.8						
MCMT	McKenzie Canyo	120.31	22	PKP	PKPdf	14 13 25.7	-2.4
HWUT	Hardware Ranch	123.55	23	ePKP	PKPdf	14 13 31.2	-3.2
MSU	Marysvale	125.94	25	ePKP	PKPdf	14 13 36.8	-2.4
PV10	Paradox Valley	127.31	23	ePKP	PKPdf	14 13 39.0	-2.8
LPM	Los Pinos Moun	131.81	23	PKP	PKPdf	14 13 49.7	-0.8
GDL2	Guadalupe Moun	134.54	22	ePKP	PKPdf	14 13 52.5	-3.3
MIAR	Mount Ida	135.17	9	PKP	PKPdf	14 13 51.5	-5.3
JCT	Junction City	137.66	18	ePKP	PKPdf	14 13 58.5	-3.0
SFJM	Santa Fe	145.40	29	i P	PKPbc	14 14 13.0	+2.0
PPM	Popocatepetl	148.58	23	i P	PKPdf	14 14 22.3	+1.6
TEIG	Tepich	149.93	4	ePKPbc	PKPdf	14 14 24.7	+1.8
SDV	Santo Domingo	155.87	320	ePKPdf	PKPdf	14 14 28.7	-2.7
SDV				ePKPab	PKPab	14 14 55.0	-0.9

PRU ***01*** *13:55:36.0,51.38N×16.17E*

WAR 01 13:55:35.6,51.45N×16.17E,h1^{km},ML2.6,1C,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	173	ePG	Pg	13 55 47.0	-0.8
KSP				eSG	Sg	13 55 55.0	-1.0
UPC	Upice	0.95	186	ePG	Pg	13 55 53.1	-1.4
DPC	Dobruska-Polom	1.10	175	ePG	Pg	13 55 55.9	-1.7
DPC				eSG	Sg	13 56 10.1	-2.3
	38nm,0.3s						
PVCC	Panska Ves	1.37	228	ePG	Pg	13 56 00.7	-2.2
PRU	Pruhonice	1.79	216	ePG	Pg	13 56 07.8	-3.6
PRU				eSG	Sg	13 56 31.4	-3.9
	29nm,0.3s						
CLL	Collm	1.99	267	i PG	Pg	13 56 12.5	-2.8
CLL				i SG	Sg	13 56 39.4	-2.5
OKC	Ostrava-Krasne	2.05	141	ePG	Pg	13 56 13.5	-2.9
OKC				eSG	Sg	13 56 39.8	-3.9
NKC	Novy Kostel	2.66	244	ePN	Pn	13 56 19.1	-1.2
NKC				ePG	Pg	13 56 24.9	-3.7
NKC				eSG	Sg	13 56 59.9	-4.1
	15nm,0.3s						
KHC	Kasperske Hory	2.85	217	ePN	Pn	13 56 21.9	-1.2
KHC				ePG	Pg	13 56 27.2	-5.4
KHC				eSN	Sn	13 56 53.5	-5.1
KHC				eSG	Sg	13 57 04.5	-6.1
MOA	Molln	3.81	200	⇑iPN	Pn	13 56 32.4	-4.3
MOA				i SG	Sg	13 57 36.0	-6.4
	9.9nm,0.6s						

NEIC ***01*** *14:07:03.4,34.95S×70.56W,h1^{km},ML3.4(GUC),After GUC.*

GUC 01 14:07:03.4±0.8,34.95S×70.56W,h1^{km}±2^{km},MD4.2,ML3.4,1C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.51	312	⇓iP	Pg	14 07 13.7	+0.2
SFDO				i S	Sg	14 07 21.8	+1.5
CICH	Cipreses	0.64	10	⇑iP	Pg	14 07 16.4	+0.1
CICH				i S	Sg	14 07 26.3	+1.5
CACH	El Canelo	0.83	358	eP	Pg	14 07 19.7	-0.4
CACH				i S	Sg	14 07 32.2	+1.0
CHCH	Chadas Angostu	1.02	356	eP	Pb	14 07 23.2	-0.3
CHCH				i S	Sb	14 07 38.3	+1.0
LMEL	Las Melosas	1.14	15	⇓iP	Pb	14 07 25.1	-0.5
LMEL				i S	Sb	14 07 42.0	+1.2
LMEL				AMP		14 07 44.2	
	comp=N,880nm,0.2s						
LNV	Longovilo	1.22	324	i P	Pb	14 07 25.7	-1.2
LNV				i S	Sb	14 07 43.5	+0.4
SJCH	San Jose de Ma	1.32	7	eP	Pb	14 07 27.7	-0.9
SJCH				AMP		14 07 50.3	
	comp=N,675nm,0.3s						
PCH	Pirque	1.33	2	eP	Pb	14 07 28.0	-0.9
PCH				i S	Sb	14 07 47.0	+0.7
TACH	Talagante	1.33	346	eP	Pb	14 07 28.0	-0.9
TACH				i S	Sb	14 07 46.7	+0.3
ANTU	Antumapu	1.38	357	eP	Pb	14 07 29.8	+0.1
ANTU				i S	Sb	14 07 48.7	+0.9
ANTU				AMP		14 07 51.4	
	comp=E,1µm,0.5s						
CLCH	Cerro Calan	1.55	1	eP	Pn	14 07 31.9	-0.4
CLCH				i S	Sb	14 07 54.6	+1.8
CLCH				AMP		14 07 56.8	
	comp=E,1µm,0.3s						
FCH	Farellones	1.64	8	⇓iP	Pn	14 07 33.8	+0.3
FCH				i S	Sb	14 07 57.1	+2.0
FCH				AMP		14 08 00.2	
	comp=E,781nm,0.4s						
LCCH	Las Cruces	1.70	330	eP	Pn	14 07 33.7	-0.6
ROCH	El Roble	2.01	349	eP	Pn	14 07 39.4	+0.5
CCHI	Chillan	2.06	216	eP	Pn	14 07 34.0	-5.5
CCHI				i S	Sn	14 08 01.0	-5.2
CCHI				AMP		14 08 06.6	
	comp=E,926nm,0.8s						
JACH	Jahuel	2.27	359	eP	Pn	14 07 43.9	+1.4
JACH				i S	Sn	14 08 14.1	+2.6

CRAAG ***01*** *14:15:45.9,5.29N×94.56E,Mb5.7*

BJI ***01*** *14:15:47.7,5.00N×94.46E,h37^{km},mB5.6,mb5.6,Ms5.1,Msz5.0*

MOS ***01*** *14:15:49.1±0.8,5.31N×94.67E,h33^{km},mb5.8/99,MS4.8/17,Error ellipse: s-maj=9.2km s-min=4.0km az=125.4*

NEIC ***01*** *14:15:49.1±0.1,5.19N×94.56E,mb5.6/116,MS4.8/20,Error ellipse: s-maj=4.8km s-min=3.4km az=213.0*

HRVD ***01*** *14:15:49.1±0.2,4.94N×94.36E,h43^{km}±1^{km},MW5.3/63,Centroid moment Tensor Solution. LP body waves: s49,c90;Mantle waves: s63,c117; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.88±.03; $M_{\theta\theta}$-0.49±.02; $M_{\phi\phi}$-0.39±.03; $M_{r\theta}$0.62±.02; $M_{\theta\phi}$0.55±.02; $M_{\phi r}$-0.35±.03; Best double couple: $M_0$1.178×10^{17} NP1: ϕ_s322°,δ27°,λ106°. NP2:ϕ_s124°,δ64°,λ82°. Principal axes: T 1.134, Plg70°, Azm16°; N .087, Plg7°, Azm128°; P -1.221, Plg18°, Azm220°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BGS ***01*** *14:15:50.6,5.19N×94.56E,h33^{km},mb5.9*

ISC 01 14:15:49.5±0.7**,5.14N**±0.03×**94.53E**±0.03**,h38^{km}**±5^{km}**, h38^{km}**±2.8^{km}**:pP-P,n557,σ0^{s}94**/554**,mb5.6**/163**,MS4.8**/45**,152C-18D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	6.50	95	P	P	14 17 26.6	+1.5
NNT	Nongplab	9.01	34	P	P	14 18 02.0	+1.9
KGM	Kluang	9.30	109	P	P	14 18 04.9	+0.7
NST	Nakhon Sawan	11.82	27	P	P	14 18 41.0	+2.4
KKTK	Khon Kaen	13.78	36	P	P	14 19 07.0	+2.2
	2µm,0.5s						
PALK	Pallekele	13.91	279	eP	P	14 19 06.5	+0.1
PALK				eS	Sx	14 21 24.2	
CM31	Chiang Mai Arr	13.92	18	eP	P	14 19 09.5	+3.0
UBT	Ubonrachathani	14.39	45	P	P	14 19 20.5	+7.7
NANT	Nan	14.85	23	⇑P	P	14 19 19.5	+0.8
VIS	Vishakhapatnam	16.62	320	eP	P	14 19 40.2	-1.2
VIS				e		14 19 44.3	
	comp=Z,113nm,0.5s						
VIS				e		14 22 29.7	
BWNR	Bhubaneshwar	17.29	331	e	P	14 19 43.0	-6.8
BWNR				e		14 22 45.0	
COCO	West Island	17.37	172	eP	P	14 19 50.8	-0.1
	comp=Z,878nm,1.2s						
HYB	Hyderabad	19.83	309	⇑eP	P	14 20 20.0	0.0
HYB				eS	S	14 24 02.0	+5.8
HYB				pmax	pmax		
	comp=Z,120nm,1.0s						
HYB	Hyderabad	19.83	309	⇑eP	P	14 20 20.0	0.0
	comp=Z,120nm,1.0s						
HYB				eS	S	14 24 02.0	+5.8
HYB	Hyderabad	19.83	309	⇑iP	P	14 20 20.0	0.0
	comp=Z,120nm,1.0s						
HYB				eS	S	14 24 00.0	+3.8
QIZ	Qiongzhong	20.34	46	P	P	14 20 24.9	-0.5
QIZ				XP		14 20 38.6	
QIZ				PP	PP	14 20 47.7	+1.5
QIZ				S	S	14 24 06.4	+0.2
QIZ				AMB	AMB		
	comp=Z,61nm,1.1s						
QIZ				LR	LR		
	comp=N,4µm,17.5s						
QIZ				LR	LR		
	comp=Z,4µm,18.1s,MS4.8						
SHL	Shillong	20.47	353	eP	P	14 20 22.2	-4.5
SHL				e		14 24 05.0	
MNGI	Mangalore	20.93	293	i P	P	14 20 33.0	+1.4
MNGI				e		14 24 11.9	
KMI	Kunming	21.37	21	P	P	14 20 37.3	+1.4
KMI				AP		14 20 43.7	
KMI				XP		14 20 46.8	
KMI				PP	PP	14 21 01.8	+1.5
KMI				S	S	14 24 29.0	+3.0
KMI				AMB	AMB		
	comp=Z,169nm,1.0s,mb5.3						
KMI				AMB	AMB		
	comp=Z,631nm,3.1s						
KMI				LR	LR		
	comp=N,2µm,21.0s						
KMI				LR	LR		
	comp=E,2µm,14.7s						
KMI				LR	LR		
	comp=Z,3µm,24.8s,MS4.5						
KMI	Kunming	21.37	21	P	P	14 20 37.3	+1.4
KMI				*SP		14 20 46.8	
KMI						14 21 01.8	
KMI				PPP	PPP	14 21 11.2	+1.4
KMI				S	S	14 24 29.0	+3.0
KMI				SSS	SSS	14 25 18.5	+1.7
KMI				pmax	pmax		
	comp=Z,169nm,1.0s,mb5.3						
KMI				MLR	MLR		
	comp=Z,3µm,24.8s,MS4.5						
KMI	Kunming	21.37	21	P	P	14 20 37.3	+1.4
	comp=Z,169nm,1.0s,mb5.3						
KMI				pP		14 20 43.7	
KMI				sP		14 20 46.8	
KMI				PP	PP	14 21 01.8	+1.5
KMI				PPP	PPP	14 21 11.2	+1.4
KMI				S	S	14 24 29.0	+3.0
KMI				SSS	SSS	14 25 18.5	+1.7
KMI				LR	LR		
	comp=Z,3µm,24.8s,MS4.5						
KKM	Kota Kinabalu	21.60	87	P	P	14 20 42.1	+3.8
LATR	Latur	21.95	308	eP	P	14 20 43.0	+1.2
LATR				e		14 24 30.6	
GOA	Goa	22.79	298	eS	S	14 25 00.2	+8.0
TSM	Tawau	23.28	91	P	P	14 20 56.1	+1.1
KAD	Karad	23.30	303	eP	P	14 20 57.6	+2.5
ALBI	Allahabad	23.47	330	eP	P	14 20 56.0	-0.7
JIRN	Jiri	23.76	341	eP	P	14 20 58.9	-0.6
	comp=Z,1µm,0.9s,mb6.3						
PKI	Pulchoki	23.94	340	eP	P	14 21 00.9	-0.3
	comp=Z,439nm,0.9s,mb5.9						
DMN	Daman	24.08	339	eP	P	14 21 02.3	-0.3
	comp=Z,579nm,0.9s,mb6.0						
GYA	Guiyang	24.16	27	⇑iP	P	14 21 04.3	+0.9
GYA				S	S	14 25 22.6	+6.6
GYA				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,1µm,5.5s						
GYA				LR	LR		
	comp=N,2µm,21.3s,MS4.8						
GYA				LR	LR		
	comp=E,2µm,19.0s,MS4.8						
GYA				LR	LR		
	comp=Z,4µm,21.3s,MS4.8						
POO	Poona	24.18	305	eP	P	14 21 05.2	+1.6
POO				e		14 21 08.8	
	comp=Z,33nm,0.7s						
KKN	Kakani	24.18	340	eP	P	14 21 03.2	-0.4
	comp=Z,770nm,0.8s,mb6.2						
BHPL	Bhopal	24.42	319	eP	P	14 21 07.7	+1.7
BHPL				e		14 21 08.6	
	comp=Z,96nm,0.6s						
BHPL				e		14 25 43.3	
PPR	Puerto Princes	24.43	78	⇓eP	P	14 21 07.3	+1.2
GKN	Gorkha	24.60	339	eP	P	14 21 07.6	-0.1
	comp=Z,992nm,0.9s,mb6.3						
LSA	Lhasa	24.63	353	P	P	14 21 07.7	-0.3
LSA				XP		14 21 24.0	
LSA				LR	LR		
	comp=N,780nm,29.6s						
LSA				LR	LR		
	comp=E,940nm,23.0s						
KOLN	Koldanda	24.79	336	eP	P	14 21 10.0	+0.5
	comp=E,938nm,0.8s,mb6.4						
BOM	Bombay	25.21	305	e	P	14 21 05.7	-7.9
	comp=E,192nm,1.8s,mb5.3						
BOM				i		14 21 22.5	
BOM				eS	S	14 25 40.6	+6.8
DGAR	Diego Garcia	25.31	241	i P	P	14 21 12.1	-2.5
CD2	Chengdu	27.06	18	P	P	14 21 30.0	-0.7
CD2				S	S	14 26 08.4	+4.3
CD2				SS	SS	14 27 21.6	+1.7
CD2				AMB	AMB		
	comp=Z,240nm,0.9s,mb5.7						
CD2				LR	LR		
	comp=N,2µm,12.6s						
CD2				LR	LR		
	comp=Z,2µm,18.0s						
LGTI	Lohaghat	27.70	332	i P	P	14 21 36.0	-0.5
PTH	Pithoragarh	27.79	332	e	P	14 21 28.0	-9.3
NDI	New Delhi	28.60	327	eP	P	14 21 42.0	-2.5
NDI				e		14 28 52.0	
DDI	Dehra Dun	29.47	330	eP	P	14 21 51.2	-1.1
QZH	Quanzhou	30.35	47	P	P	14 22 00.5	+0.3
QZH				eS	S	14 26 57.7	+1.1
QZH				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.5						
QZH				LR	LR		
	comp=N,1µm,15.8s,MS5.2						
QZH				LR	LR		
	comp=E,4µm,15.2s,MS5.2						
QZH				LR	LR		
	comp=Z,4µm,23.5s						
SMLA	Simla	30.57	330	⇑i	sP	14 22 14.2	-3.4
SDNR	Sundarnagar	30.97	330	eP	P	14 22 05.4	-0.2
WHN	Wuhan	31.41	34	⇑P	P	14 22 09.5	0.0
WHN				AMB	AMB		
	comp=Z,176nm,1.0s,mb5.8						
WHN				LR	LR		
	comp=Z,10µm,14.3s,MS5.6						
XAN	Xi'an	31.71	23	P	P	14 22 10.5	-1.6
XAN				AP	pP	14 22 18.4	-4.3
XAN				AMB	AMB		
	comp=Z,372nm,0.8s,mb6.3						
XAN				LR	LR		
	comp=N,1µm,14.6s,MS4.8						
XAN				LR	LR		
	comp=E,1µm,16.1s,MS4.8						
XAN				LR	LR		
	comp=Z,3µm,17.0s,MS5.0						
LZH	Lanzhou	31.97	14	⇑iP	P	14 22 13.0	-1.3
LZH				AP	pP	14 22 20.1	-4.9
LZH				PP	PP	14 23 19.6	-1.4
LZH				eS	S	14 27 22.1	+0.2
LZH				SS	SS	14 29 15.0	-0.4
LZH				AMB	AMB		
	comp=Z,69nm,1.3s,mb5.3						
LZH				AMB	AMB		
	comp=Z,197nm,5.2s						
LZH				LR	LR		
	comp=N,2µm,13.3s						
LZH				LR	LR		
	comp=Z,4µm,16.8s,MS5.1						
LZH	Lanzhou	31.97	14	⇑iP	P	14 22 13.0	-1.3
LZH				*SP	sP	14 22 22.5	-7.4
LZH						14 23 19.6	
LZH				eS	S	14 27 22.1	+0.2
LZH				*SS		14 27 33.8	
LZH				SS	SS	14 29 15.0	-0.4
LZH				pmax	pmax		
	comp=Z,69nm,1.3s,mb5.3						
LZH				MLR	MLR		
	comp=Z,4µm,16.8s,MS5.1						
LZH	Lanzhou	31.97	14	⇑iP	P	14 22 13.0	-1.3
	comp=Z,69nm,1.3s,mb5.3						
LZH				pP	pP	14 22 20.1	-4.9
LZH				sP	sP	14 22 22.5	-7.4
LZH				PP	PP	14 23 19.6	-1.4
LZH				eS	S	14 27 22.1	+0.2
LZH				sS		14 27 33.8	
LZH				SS	SS	14 29 15.0	-0.4
LZH				LR	LR		
	comp=Z,4µm,16.8s,MS5.1						
THN	Thein Dam	32.35	329	⇑iP	P	14 22 15.0	-2.7
THN				e		14 25 18.5	
GTA	Gaotai	34.45	7	⇑iP	P	14 22 35.2	-0.5
GTA				AP	pP	14 22 43.2	-3.2
GTA				XP	sP	14 22 47.3	-4.0
GTA				PP	PP	14 23 51.4	-0.8
GTA				PCP	PcP	14 25 10.7	-0.1
GTA				S	S	14 28 01.2	+0.8
GTA				SCP		14 28 53.2	
GTA				PCS		14 28 55.8	
GTA				SS	SS	14 30 11.6	-0.9
GTA				SCS	ScS	14 32 52.9	0.0
GTA				AMB	AMB		
	comp=Z,187nm,0.8s,mb6.1						
GTA				AMB	AMB		
	comp=Z,265nm,4.2s						
GTA				LR	LR		
	comp=N,968nm,17.9s,MS4.7						
GTA				LR	LR		
	comp=E,693nm,16.7s,MS4.7						
GTA				LR	LR		
	comp=Z,1µm,24.3s						
NJ2	Nanjing	35.14	37	eP	P	14 22 42.1	+0.3
NJ2				AP	pP	14 22 49.4	-3.1
NJ2				XP	sP	14 22 52.8	-4.6
NJ2				PP	PP	14 24 01.1	0.0
NJ2				S	S	14 28 12.0	+0.8
NJ2				XS		14 28 24.0	
NJ2				AMB	AMB		
	comp=Z,520nm,0.9s,mb6.5						
NJ2				AMB	AMB		
	comp=Z,390nm,5.7s						
NJ2				LR	LR		
	comp=N,6µm,13.2s,MS5.6						
NJ2				LR	LR		
	comp=E,5µm,13.2s,MS5.6						
NJ2				LR	LR		
	comp=Z,9µm,12.4s,MS5.7						
SSE	Sheshan	35.97	41	eP	P	14 22 49.5	+0.7
SSE				XP	sP	14 22 58.1	-6.3
SSE				S	S	14 28 26.4	+2.5
SSE				XS		14 28 37.4	
SSE				AMB	AMB		
	comp=Z,56nm,1.1s,mb5.4						
SSE				AMB	AMB		
	comp=Z,433nm,3.3s						
SSE				LR	LR		
	comp=N,1µm,14.5s,MS5.1						
SSE				LR	LR		

	comp=E,2µm,14.5s,MS5.1						
SSE				LR	LR		
	comp=Z,3µm,15.3s,MS5.2						
SSE	**Sheshan**	**35.97**	**41**	*e*P	**P**	**14 22 49.5**	**+0.7**
	comp=Z,56nm,1.1s,mb5.4						
SSE				sP	sP	14 22 58.1	-6.3
SSE				S	**S**	**14 28 26.4**	**+2.5**
SSE				sS		14 28 37.4	
SSE				SS	SS	14 31 05.1	+18
SSE				LR	LR		
	comp=Z,3µm,15.3s,MS5.2						
MBWA	**Marble Bar**	**35.98**	**137**	P	**P**	**14 22 47.8**	**-1.1**
	comp=Z,56nm,1.1s,mb5.4						
MBWA				*e*	pP	14 23 00.4	+0.7
MBWA				LR	LR		
	comp=Z,874nm,20.0s,MS4.5						
TIA	**Tai’an**	**37.24**	**31**	P	**P**	**14 22 59.5**	**0.0**
TIA				AMB	AMB		
	comp=Z,156nm,1.5s,mb5.6						
BTO	**Baotou**	**37.95**	**19**	*e*P	**P**	**14 23 04.5**	**-0.9**
BTO				S	**S**	**14 28 46.1**	**-8.1**
BTO				AMB	AMB		
	comp=Z,47nm,0.6s,mb5.4						
BTO				LR	LR		
	comp=N,394nm,5.0s						
BTO				LR	LR		
	comp=E,1µm,15.3s						
KSH	**Kashi**	**38.11**	**336**	*e*P	**P**	**14 23 06.4**	**-0.3**
KSH				*e*AP	pP	14 23 13.3	-4.2
KSH				*e*XP	sP	14 23 17.5	-4.8
KSH				*e*PP	PP	14 24 36.3	-1.2
KSH				*e*PCP	PcP	14 25 23.4	+1.7
KSH				*e*S	**S**	**14 28 56.2**	**-0.4**
KSH				*e*SCP		14 29 06.1	
KSH				*e*XS		14 29 10.0	
KSH				*e*SS	SS	14 31 31.0	-4.5
KSH				*e*SCS	ScS	14 33 14.3	+1.2
KSH				AMB	AMB		
	comp=Z,200nm,1.6s,mb5.6						
KSH				LR	LR		
	comp=N,690nm,5.6s						
KSH				LR	LR		
	comp=E,510nm,6.8s						
FITZ	**Fitzroy Crossi**	**38.41**	**128**	*e*P	**P**	**14 23 08.6**	**-0.7**
	comp=E,55nm,0.9s,mb5.3						
WBK	**Wadi Bani Khal**	**38.48**	**300**	P	**P**	**14 23 12.3**	**+2.4**
	SNR=19						
HHC	**Hu-ho-hao-te**	**38.70**	**21**	⇑*i*P	**P**	**14 23 11.9**	**+0.4**
HHC				AP	pP	14 23 21.7	-0.6
HHC				XP	sP	14 23 25.3	-1.8
HHC				PP	PP	14 24 44.5	+0.2
HHC				PCP	PcP	14 25 25.2	+1.7
HHC				SCP		14 29 07.0	
HHC				S	**S**	**14 29 08.2**	**+2.6**
HHC				PCS		14 29 11.8	
HHC				XS		14 29 21.5	
HHC				SS	SS	14 31 46.4	-2.0
HHC				SCS	ScS	14 33 14.0	-2.5
HHC				AMB	AMB		
	comp=Z,107nm,1.1s,mb5.5						
HHC				LR	LR		
	comp=N,2µm,19.2s,MS5.1						
HHC				LR	LR		
	comp=E,1µm,16.8s,MS5.1						
HHC				LR	LR		
	comp=Z,2µm,21.6s,MS4.9						
WMQ	**Urumqi**	**38.99**	**352**	⇑*i*P	**P**	**14 23 14.6**	**+0.7**
WMQ				XP	sP	14 23 23.6	-5.9
WMQ				PP	PP	14 24 48.0	+0.4
WMQ				S	**S**	**14 29 12.0**	**+2.1**
WMQ				SS	SS	14 31 56.0	+1.2
WMQ				AMB	AMB		
	comp=Z,177nm,1.0s,mb5.8						
WMQ				LR	LR		
	comp=N,1µm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
JMDO	**Jabal Madar**	**39.15**	**299**	P	**P**	**14 23 17.7**	**+2.2**
	SNR=11						
SMDO	**Samad**	**39.44**	**300**	P	**P**	**14 23 20.5**	**+2.6**
	SNR=13						
BIDO	**Bidbid**	**39.54**	**301**	P	**P**	**14 23 21.5**	**+2.8**
	SNR=15						
BJI	**Beijing**	**39.84**	**26**	P	**P**	**14 23 22.3**	**+1.2**
BJI				AMB	AMB		
	comp=Z,239nm,1.1s,mb5.8						
BJI				LR	LR		
	comp=N,2µm,17.5s,MS5.0						
BJI				LR	LR		
	comp=E,1µm,20.0s,MS5.0						
BJI				LR	LR		
	comp=Z,2µm,22.6s,MS4.8						
BSY	**Bisya**	**40.06**	**300**	P	**P**	**14 23 25.5**	**+2.5**
	SNR=45						
BSY				P		14 23 25.5	
	SNR=45						
HOQ	**Hoqain**	**40.26**	**301**	P	**P**	**14 23 27.4**	**+2.7**
	SNR=22						
ULHL	**Ulahol**	**40.37**	**339**	P	**P**	**14 23 27.0**	**+1.6**
	SNR=6.8						
KZA	**Kyzart**	**40.59**	**338**	P	**P**	**14 23 28.1**	**+0.9**
	SNR=14						
ARQ	**Araqi**	**40.85**	**300**	P	**P**	**14 23 33.0**	**+3.4**
	SNR=10						
UCH	**Uchtor**	**41.00**	**337**	P	**P**	**14 23 31.3**	**+0.6**
	SNR=117						
TKM2	**Tokmak 2**	**41.19**	**339**	P	**P**	**14 23 32.7**	**+0.5**
	SNR=20						
KBK	**Karagaybulak**	**41.20**	**338**	P	**P**	**14 23 33.3**	**+1.1**
	SNR=149						
AML	**Almayashu**	**41.24**	**336**	P	**P**	**14 23 33.4**	**+0.8**
	SNR=142						
AAK	**Ala-Archa**	**41.35**	**338**	P	**P**	**14 23 34.4**	**+0.8**
	SNR=61						
AAK	**Ala-Archa**	**41.35**	**338**	*c i*P	**P**	**14 23 33.0**	**-0.5**
AAK				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.2						
AAK	**Ala-Archa**	**41.35**	**338**	*e*P	**P**	**14 23 33.1**	**-0.4**
	comp=Z,60nm,0.8s,mb5.3						
AAK				LR	LR		
	comp=Z,216nm,22.0s,MS4.0						
FRU	**Bishkek**	**41.48**	**338**	*e*P	**P**	**14 23 35.0**	**+0.5**
FRU				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.1						
CHMS	**Chumysh**	**41.57**	**338**	P	**P**	**14 23 35.2**	**-0.1**
	SNR=33						
DL2	**Dalian**	**41.62**	**32**	P	**P**	**14 23 36.6**	**+0.8**
DL2				*e*S	**S**	**14 29 51.0**	**+1.6**
DL2				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.4						
DL2				LR	LR		
	comp=N,860nm,19.5s,MS4.8						
DL2				LR	LR		
	comp=E,730nm,18.3s,MS4.8						
DL2				LR	LR		
	comp=Z,840nm,21.1s,MS4.6						
KAKA	**Kakadu**	**41.64**	**116**	*e*P	**P**	**14 23 34.9**	**-1.3**
	comp=Z,34nm,0.8s,mb5.0						
EKS2	**Erkin-Say**	**41.66**	**337**	P	**P**	**14 23 36.8**	**+0.8**
	SNR=105						
ASHO	**Ashiyiah**	**41.72**	**302**	P	**P**	**14 23 39.4**	**+2.6**
	SNR=14						
ASHO				P		14 23 39.4	
	SNR=14						
USP	**Ospenovka**	**41.90**	**338**	P	**P**	**14 23 38.2**	**+0.3**
	SNR=42						
MUN	**Mundaring**	**42.30**	**152**	*e*P	**P**	**14 23 42.0**	**+0.5**
	comp=Z,16nm,0.8s,mb4.7						
MUN	**Mundaring**	**42.30**	**152**	*e*P	**P**	**14 23 42.0**	**+0.5**
MUN				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**42.82**	**348**	*i* P	**P**	**14 23 45.7**	**+0.2**
ULN	**Ulaanbaatar**	**43.90**	**12**	⇑*i*P	**P**	**14 23 53.3**	**-1.0**
ULN				*e*		14 25 39.8	
ULN				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.5						
ULN				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
ULN	**Ulaanbaatar**	**43.90**	**12**	⇑*i*P	**P**	**14 23 53.3**	**-1.0**
	comp=Z,72nm,0.8s,mb5.5						
ULN				*e*PcP	PcP	14 25 39.8	-0.6
ULN				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
KS15	**Wonju Array Si**	**44.27**	**39**	*e*P	**P**	**14 23 56.0**	**-1.3**
SNY	**Shenyang**	**44.77**	**31**	⇑P	**P**	**14 24 01.0**	**-0.4**
SNY				XP	sP	14 24 13.1	-3.8
SNY				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.4						
SNY				LR	LR		
	comp=N,2µm,16.5s						
SNY				LR	LR		
	comp=Z,2µm,16.7s,MS5.2						
ZAK	**Zakamensk**	**45.68**	**8**	⇓*i*P	**P**	**14 24 07.4**	**-1.1**
ZAK				*e*		14 25 41.9	
ZAK				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
WRAB	**Tennant Creek**	**46.41**	**124**	⇑*e*P	**P**	**14 24 14.7**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,242nm,0.9s,mb6.1						
WRAB				MLR	MLR		
	comp=Z,385nm,22.0s,MS4.3						
WRAB	**Tennant Creek**	**46.41**	**124**	⇑*e*P	**P**	**14 24 14.7**	**+0.1**
	comp=Z,242nm,0.9s,mb6.1						
WRAB				LR	LR		
	comp=Z,385nm,22.0s,MS4.3						
WB2	**Warramunga Arr**	**46.41**	**124**	⇑*i*P	**P**	**14 24 14.7**	**+0.1**
WB2				*e*S	**S**	**14 30 58.2**	**-0.7**
MOY	**Mondy**	**46.68**	**6**	*e*P	**P**	**14 24 16.0**	**-0.3**
MOY				pmax	pmax		
	comp=Z,40nm,2.1s,mb5.0						
TLY	**Talaya**	**47.00**	**8**	P	**P**	**14 24 18.8**	**0.0**
	comp=Z,364nm,0.8s,mb6.4,SNR=33						
TLY	**Talaya**	**47.00**	**8**	*c i*P	**P**	**14 24 18.5**	**-0.3**
TLY				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
TLY	**Talaya**	**47.00**	**8**	⇑*i*P	**P**	**14 24 18.8**	**-0.1**
	comp=Z,67nm,0.8s,mb5.6						
TLY				*e*PcP	PcP	14 25 49.5	-1.6
TLY				LR	LR		
	comp=Z,254nm,20.0s,MS4.2						
CN2	**Changchun**	**47.15**	**30**	*e*P	**P**	**14 24 20.2**	**+0.1**
CN2				*e*AP	pP	14 24 27.2	-3.9
CN2				*e*S	**S**	**14 31 10.8**	**+1.8**
CN2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,2µm,13.0s,MS5.2						
CN2				LR	LR		
	comp=E,1µm,13.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2µm,14.0s,MS5.1						
KURK	**Kurchatov**	**47.34**	**346**	⇑*i*P	**P**	**14 24 21.7**	**+0.2**
KURK				*e*S	**S**	**14 31 12.3**	**+0.7**
KURK				pmax	pmax		
	comp=Z,159nm,0.8s,mb6.0						
KURK				MLR	MLR		
	comp=Z,186nm,19.0s,MS4.1						
KURK	**Kurchatov**	**47.34**	**346**	⇑*i*P	**P**	**14 24 21.7**	**+0.1**
	comp=Z,159nm,0.8s,mb6.0						
KURK				*e*S	**S**	**14 31 12.3**	**+0.7**
KURK				LR	LR		
	comp=Z,186nm,19.0s,MS4.1						
IRK	**Irkutsk**	**47.64**	**8**	*e*P	**P**	**14 24 23.2**	**-0.7**
IRK				*e*	pP	14 24 34.9	+0.1
IRK				*e*		14 26 13.6	
IRK				pmax	pmax		
	comp=Z,86nm,1.9s,mb5.5						
ASPA	**Alice Springs**	**47.90**	**128**	*e*P	**P**	**14 24 26.1**	**-0.2**
ASPA				*e*S	**S**	**14 31 19.0**	**-1.0**
MDJ	**Mudanjiang**	**49.87**	**32**	P	**P**	**14 24 41.3**	**+0.1**
MDJ				AP	pP	14 24 47.6	-4.6
MDJ				XP	sP	14 24 50.2	-6.6
MDJ				PCP	PcP	14 26 01.3	-0.3
MDJ				PP	PP	14 26 36.3	-0.6
MDJ				S	**S**	**14 31 52.6**	**+5.5**
MDJ				AMB	AMB		
	comp=Z,64nm,1.4s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,663nm,6.4s						
MDJ				LR	LR		
	comp=N,774nm,17.8s,MS5.0						
MDJ				LR	LR		
	comp=E,841nm,16.1s,MS5.0						
MDJ				LR	LR		
	comp=Z,1µm,16.1s,MS5.1						
NVS	**Novosibirsk**	**50.38**	**352**	*i* P	**P**	**14 24 43.4**	**-1.6**
NVS				*i*	pP	14 24 55.5	-0.5
NVS				*i* S	**S**	**14 31 53.7**	**-0.5**
NVS				*i* S	ScS	14 34 26.3	-3.4
NVS				pmax	pmax		
	comp=Z,122nm,1.0s,mb5.9						
NVS				pmax	pmax		
	comp=N,85nm,0.8s						
NVS				pmax	pmax		
	comp=E,60nm,0.7s						
NVS				smax			
	comp=N,69nm,1.8s						
NVS				smax			
	comp=E,36nm,1.8s						
MAT	**Matsushiro**	**50.73**	**46**	*e*P	**P**	**14 24 47.0**	**-0.9**
MAT				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
MAT	**Matsushiro**	**50.73**	**46**	P	**P**	**14 24 47.2**	**-0.7**
BVA0	**Borovoye Array**	**51.69**	**342**	*i* P	**P**	**14 24 53.9**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CHKZ	**Chkalovo**	**52.17**	**342**	⇑*i*P	**P**	**14 24 57.8**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,125nm,0.7s,mb6.0						
CHKZ	**Chkalovo**	**52.17**	**342**	⇑*i*P	**P**	**14 24 57.8**	**-0.7**
	comp=Z,125nm,0.7s,mb6.0						
KLR	**Kul’dur**	**54.04**	**29**	⇓*i*P	**P**	**14 25 09.0**	**-3.5**
KLR				*e*	pP	14 25 20.2	-3.4
KLR				pmax	pmax		
	comp=N,34nm,1.6s						
KLR				pmax	pmax		
	comp=E,57nm,1.6s						
KLR				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.4						
KLR				MLR	MLR		
	comp=N,1µm,14.0s						
KLR				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.3						
BHD	**Baghdad**	**54.31**	**308**	*e*P	**P**	**14 25 13.0**	**-1.7**
PMG	**Port Moresby**	**54.40**	**105**	*e*P	**P**	**14 25 14.2**	**-1.4**
PMG				pmax	pmax		
	comp=Z,36nm,0.8s						
PMG				MLR	MLR		
	comp=Z,325nm,19.0s						
PMG	**Port Moresby**	**54.40**	**105**	*e*P	**P**	**14 25 14.2**	**-1.4**
	comp=Z,36nm,0.8s,mb5.3						
PMG				LR	LR		
	comp=Z,325nm,19.0s,MS4.4						
BOD	**Bodaibo**	**54.71**	**13**	*e*P	**P**	**14 25 15.5**	**-1.7**
BOD				*e*	pP	14 25 28.0	-0.4
BOD				pmax	pmax		
	comp=Z,130nm,1.5s,mb5.7						
BOD				pmax	pmax		
	comp=Z,143nm,2.2s,mb5.6						
HKR	**Hakkari**	**56.33**	**312**	P	**P**	**14 25 28.5**	**-0.7**
MSL	**Mosul**	**56.35**	**311**	*e*P	**P**	**14 25 30.5**	**+1.1**
GNI	**Garni**	**56.63**	**315**	*e*P	**P**	**14 25 29.0**	**-2.3**
GNI	**Garni**	**56.63**	**315**	*i* P	**P**	**14 25 30.6**	**-0.7**
GNI				pmax	pmax		
	comp=Z,48nm,1.0s						
GNI	**Garni**	**56.63**	**315**	*e*P	**P**	**14 25 30.3**	**-1.0**
	comp=Z,78nm,0.9s,mb5.7						
GNI				LR	LR		
	comp=Z,289nm,22.0s,MS4.3						
CTA	**Charters Tower**	**56.67**	**118**	*e*P	**P**	**14 25 31.0**	**-0.8**
	comp=Z,21nm,0.9s,mb5.2						
CTA	**Charters Tower**	**56.67**	**118**	*e*P	**P**	**14 25 31.0**	**-0.8**
CTA				pmax	pmax		
	comp=Z,21nm,0.9s						
CTAO	**Charters Tower**	**56.67**	**118**	*e*P	**P**	**14 25 30.2**	**-1.6**
CTAO				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,899nm,20.0s,MS4.9						
CTAO	**Charters Tower**	**56.67**	**118**	*e*P	**P**	**14 25 30.2**	**-1.6**
	comp=Z,35nm,1.2s,mb5.3						
CTAO				LR	LR		
	comp=Z,899nm,20.0s,MS4.9						
CLNS	**Chul’man**	**56.86**	**19**	*e*P	**P**	**14 25 29.7**	**-3.0**
CLNS				*e*		14 26 25.3	
CLNS				pmax	pmax		
	comp=N,19nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.3						
CLNS				pmax	pmax		
	comp=E,15nm,0.9s						
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
CLNS				pmax	pmax		
	comp=E,12nm,1.1s						
CLNS				MLR	MLR		
	comp=N,1µm,20.0s,MS5.3						
CLNS				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
CLNS				MLR	MLR		
	comp=E,2µm,17.0s,MS5.3						
MTA	**Mtatsminda**	**57.24**	**317**	P	**P**	**14 25 34.6**	**-1.0**
TI2	**Plekhanov**	**57.29**	**317**	⇑*i*P	**P**	**14 25 34.6**	**-1.4**
STKA	**Stephens Creek**	**57.97**	**133**	*e*P	**P**	**14 25 40.6**	**-0.3**
	comp=E,25nm,1.1s,mb5.2						
SVE	**Sverdlovsk**	**58.07**	**339**	⇑*e*P	**P**	**14 25 36.0**	**-5.2**
SVE				*e*	pP	14 25 49.0	-3.5
SVE				*e*		14 26 26.0	
SVE				pmax	pmax		
	comp=Z,220nm,2.0s,mb5.8						
SVE				MLR	MLR		
	comp=N,100nm,18.0s,MS4.1						
SVE				MLR	MLR		
	comp=E,100nm,18.0s,MS4.1						
SVE				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.8						
BTMT	**Batman**	**58.22**	**312**	*e*P	**P**	**14 25 41.5**	**-1.0**
VRT	**Varto**	**58.52**	**313**	*e*P	**P**	**14 25 44.5**	**-0.1**
ARU	**Arti**	**58.54**	**338**	P	**P**	**14 25 43.9**	**-0.6**
	comp=Z,351nm,0.8s,mb6.4,SNR=19						
ARU	**Arti**	**58.54**	**338**	⇑*i*P	**P**	**14 25 36.2**	**-8.3**
ARU				*e*S	**S**	**14 33 34.5**	**-9.3**
ARU				*e*		14 35 22.4	
ARU				pmax	pmax		
	comp=Z,108nm,1.1s,mb5.8						
YSS	**Yuzh-Sakhalins**	**58.71**	**37**	⇑*i*P	**P**	**14 25 44.8**	**-1.0**
YSS				*e*	pP	14 25 57.0	-0.1
YSS				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
YSS				MLR	MLR		
	comp=Z,900nm,16.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,1µm,17.0s						
YSS	**Yuzh-Sakhalins**	**58.71**	**37**	*e*P	**P**	**14 25 45.1**	**-0.8**
	comp=E,98nm,0.9s,mb5.8						
YSS				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
ERZM	**Erzurum**	**58.92**	**314**	*i* P	**P**	**14 25 47.2**	**-0.3**
EZM	**Erzurum**	**58.92**	**314**	P	**P**	**14 25 47.4**	**-0.1**
BINT	**Bingol**	**59.19**	**313**	*e*P	**P**	**14 25 48.9**	**-0.4**
KIV	**Kislovodsk**	**59.60**	**319**	*c i*P	**P**	**14 25 50.5**	**-1.6**
KIV				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.7						
KIV	**Kislovodsk**	**59.60**	**319**	*e*P	**P**	**14 25 50.7**	**-1.4**
	comp=Z,82nm,0.7s,mb5.9						
KIV				LR	LR		
	comp=Z,75nm,22.0s,MS3.8						
GOF	**Gofitskoye**	**59.85**	**320**	⇓*i*P	**P**	**14 25 52.0**	**-1.7**
GOF				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
ELZG	**Elazig**	**60.17**	**312**	*i* P	**P**	**14 25 56.0**	**-0.1**
GUMT	**Gumushane**	**60.47**	**314**	*e*P	**P**	**14 25 57.8**	**-0.2**
MALT	**Malatya**	**60.53**	**311**	*e*P	**P**	**14 25 57.9**	**-0.6**
MALT				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3						
MALT	**Malatya**	**60.53**	**311**	*e*P	**P**	**14 25 57.9**	**-0.7**
	comp=Z,20nm,0.8s,mb5.3						
GZT	**Gaziantep**	**60.89**	**310**	*i* P	**P**	**14 26 00.7**	**-0.3**
GAZ	**Gaziantep**	**61.11**	**310**	P	**P**	**14 26 02.6**	**+0.2**
EIL	**Elat**	**61.13**	**301**	*e*P	**P**	**14 26 02.6**	**-0.1**
	comp=Z,39nm,1.0s,mb5.5						
SOC	**Sochi**	**61.43**	**317**	*e*P	**P**	**14 26 00.6**	**-3.9**
SOC				*e*		14 26 40.0	
SOC				*e*		14 28 21.3	
SOC				*e*PPP	PPP	14 29 50.3	-0.3
SOC				*e*S	**S**	**14 34 19.2**	**-1.9**
SOC				*e*		14 35 44.7	
SOC				*e*SS	SS	14 38 20.0	-3.7
SOC				pmax	pmax		
	comp=N,32nm,0.9s						
SOC				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.8						
SOC				pmax	pmax		
	comp=E,37nm,1.0s						
SOKR	**Solikamsk**	**61.47**	**339**	⇑*i*P	**P**	**14 26 01.9**	**-2.7**
SOKR				*i*	pP	14 26 15.6	-0.2
SOKR				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,470nm,19.0s,MS4.7						
HTY	**Hatay**	**61.65**	**308**	*e*P	**P**	**14 26 03.8**	**-2.3**
COBT	**Iskenderun**	**61.66**	**309**	*i* P	**P**	**14 26 06.7**	**+0.5**
CEYT	**Ceyhan**	**62.19**	**309**	*e*P	**P**	**14 26 10.0**	**+0.4**
YAK	**Yakutsk**	**62.45**	**18**	*c i*P	**P**	**14 26 08.8**	**-2.3**
YAK				pmax	pmax		
	comp=Z,142nm,1.0s,mb6.0						
YAK	**Yakutsk**	**62.45**	**18**	⇑*i*P	**P**	**14 26 08.7**	**-2.4**
	comp=Z,137nm,0.8s,mb6.1						
YAK				LR	LR		
	comp=Z,960nm,22.0s,MS4.9						
TOKT	**Tokat**	**62.54**	**313**	*e*P	**P**	**14 26 11.5**	**-0.5**
BNN	**Bunyan**	**62.62**	**311**	*e*P	**P**	**14 26 11.8**	**-0.7**
NIG	**Nigde**	**63.35**	**310**	*e*P	**P**	**14 26 17.2**	**-0.2**
ANN	**Anapa**	**63.40**	**318**	*e*P	**P**	**14 26 14.0**	**-3.6**
ANN				*e*S	**S**	**14 34 47.7**	**+1.8**
ANN				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.5						
CSS	**Prodhromos**	**63.58**	**307**	*e*P	**P**	**14 26 18.3**	**-0.7**
	comp=Z,149nm,1.3s,mb5.9						
MBAR	**Mbarara**	**63.96**	**267**	*e*P	**P**	**14 26 21.1**	**-0.7**
MBAR				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.5						
MBAR				MLR	MLR		
	comp=Z,282nm,21.0s,MS4.4						
MBAR	**Mbarara**	**63.96**	**267**	*e*P	**P**	**14 26 21.1**	**-0.7**
	comp=Z,64nm,1.2s,mb5.5						
MBAR				LR	LR		
	comp=Z,282nm,21.0s,MS4.4						
KAMT	**Kaman**	**64.36**	**311**	P	**P**	**14 26 23.2**	**-0.7**
TOS	**Tosya**	**64.58**	**313**	*e*P	**P**	**14 26 24.5**	**-0.9**
CANT	**Cankiri**	**64.76**	**313**	*e*P	**P**	**14 26 26.2**	**-0.4**
BZK	**Bozkurt**	**64.86**	**314**	P	**P**	**14 26 26.5**	**-0.7**
ELDT	**Eldivan**	**64.87**	**312**	*i* P	**P**	**14 26 26.1**	**-1.1**
KONT	**Konya--Tatoy**	**65.03**	**310**	*e*P	**P**	**14 26 29.2**	**+0.9**
LOD	**Lodumlu**	**65.20**	**312**	*e*P	**P**	**14 26 27.1**	**-2.4**
SAFT	**Safranbolu**	**65.61**	**313**	*e*P	**P**	**14 26 31.1**	**-1.0**
KIZT	**Kizilcal**	**65.62**	**310**	P	**P**	**14 26 30.9**	**-1.2**
SIM	**Simferopol’**	**65.68**	**317**	*ce*P	**P**	**14 26 31.7**	**-0.7**
SIM				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.7						
ISP	**Isparta**	**66.43**	**309**	*e*P	**P**	**14 26 36.4**	**-0.9**
ISP				pmax	pmax		
	comp=Z,152nm,1.1s,mb5.9						
ISP	**Isparta**	**66.43**	**309**	*e*P	**P**	**14 26 36.4**	**-0.9**
	comp=Z,152nm,1.1s,mb5.9						
MDU	**Mudurnu**	**66.50**	**312**	P	**P**	**14 26 36.5**	**-1.1**
ESKT	**Eskisehir**	**66.55**	**311**	P	**P**	**14 26 37.3**	**-0.6**
ESKT	**Eskisehir**	**66.55**	**311**	*i* P	**P**	**14 26 37.3**	**-0.7**
ELL	**Elmali**	**66.68**	**308**	*e*P	sP	14 26 51.1	-3.4
ALT	**Altintas**	**67.00**	**310**	*e*P	**P**	**14 26 40.2**	**-0.6**
MOS	**Moscow**	**67.60**	**329**	*e*P	**P**	**14 26 42.7**	**-1.6**
MOS				*i*	pP	14 26 56.8	+1.0
MOS				*e*		14 27 11.0	
MOS				*e*S	S	14 35 34.5	-2.6
MOS				pmax	pmax		
	comp=Z,300nm,0.8s,mb6.4						
MOS				pmax	pmax		
	comp=Z,252nm,0.7s,mb6.4						
HRT	**Hereke**	**67.72**	**312**	*e*P	**P**	**14 26 43.8**	**-1.6**
YLV	**Yalova**	**67.89**	**312**	*e*P	**P**	**14 26 44.3**	**-2.1**
OBN	**Obninsk**	**67.89**	**328**	*c i*P	**P**	**14 26 41.7**	**-4.4**
OBN				pmax	pmax		
	comp=Z,126nm,0.8s,mb6.0						
OBN	**Obninsk**	**67.89**	**328**	*e*P	**P**	**14 26 41.4**	**-4.7**
	comp=Z,121nm,0.7s,mb6.0						
ULDT	**Uludag**	**67.97**	**311**	*i* P	**P**	**14 26 46.3**	**-0.6**
SKR	**Severo-Kuril’s**	**68.27**	**37**	*e*P	**P**	**14 26 47.6**	**-1.0**
SKR				*e*		14 26 55.6	
SKR				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.8						
AKS	**Akhisar**	**68.72**	**310**	P	**P**	**14 26 51.0**	**-0.6**

LSZ	Lusaka	68.75	252	eP	P	14 26 52.3	+0.2
LSZ				pmax	pmax		
	comp=Z,71nm,1.3s,mb5.4						
LSZ				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
LSZ	Lusaka	68.75	252	eP	P	14 26 52.3	+0.2
	comp=Z,71nm,1.3s,mb5.4						
LSZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
MA2	Magadan	69.00	27	i P	P	14 26 51.7	-1.3
MA2				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.6						
MA2	Magadan	69.00	27	eP	P	14 26 51.9	-1.1
	comp=Z,58nm,0.8s,mb5.6						
KDAG	Bornova	69.05	309	i P	P	14 26 53.4	-0.3
IZM	Izmir	69.05	309	P	P	14 26 53.8	+0.1
MRMT	Marmara Adasi	69.22	311	eP	P	14 26 51.7	-3.0
TIRR	Tirgusor	69.46	316	P	P	14 26 55.4	-0.6
KIS	Kishinev	69.80	318	eP	P	14 26 55.0	-3.1
KIS				e		14 27 10.0	
KIS				e		14 27 26.0	
CFR	Carcaliu	69.81	316	⇓iP	P	14 26 57.5	-0.7
TIXI	Tiksi	69.82	11	⇑iP	P	14 26 55.9	-1.9
TIXI				pmax	pmax		
	comp=N,21nm,0.8s						
TIXI				pmax	pmax		
	comp=E,14nm,0.8s						
TIXI				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.9						
TIXI				pmax	pmax		
	comp=Z,173nm,0.9s,mb6.0						
TIXI				MLR	MLR		
	comp=Z,768nm,16.0s,MS5.0						
HARR	Harsova	69.84	316	⇓iP	P	14 26 58.0	-0.4
PET	Petropavlovsk	70.52	35	i P	P	14 27 00.3	-2.0
MLR	Muntele Rosu	71.39	316	⇓iP	P	14 27 08.0	+0.3
SNX	Sinaia	71.66	316	P	P	14 27 09.3	0.0
MTUR	Matau	71.95	316	P	P	14 27 10.8	-0.2
SRS	Serrai	72.30	311	eP	P	14 27 11.8	-1.4
BURAR	Bucovina Array	72.32	318	P	P	14 27 13.6	+0.4
BURAR	Bucovina Array	72.32	318	⇓iP	P	14 27 13.7	+0.5
MNK	Minsk	72.41	326	⇑eP	P	14 27 09.0	-4.6
MNK				pmax	pmax		
	comp=Z,280nm,1.0s,mb6.2						
PUL	Pulkovo	72.78	332	⇓eP	P	14 27 15.5	-0.2
PUL				pmax	pmax		
	comp=Z,93nm,0.6s,mb5.9						
VTS	Vitosha	72.81	313	P	P	14 27 15.9	-0.3
KNT	Kendrikon	72.82	311	eP	P	14 27 14.9	-1.5
LIT	Litokhoron	72.98	310	eP	P	14 27 15.5	-1.8
GRG	Griva	73.16	311	eP	P	14 27 16.9	-1.5
LBTB	Lobatse	73.30	242	eP	P	14 27 20.2	+0.7
LBTB				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.4						
LBTB				MLR	MLR		
	comp=Z,928nm,20.0s,MS5.1						
LBTB	Lobatse	73.30	242	eP	P	14 27 20.2	+0.7
	comp=Z,47nm,1.0s,mb5.4						
LBTB				LR	LR		
	comp=Z,928nm,20.0s,MS5.1						
JOF	Joensuu	73.47	335	ep	P	14 27 19.0	-0.7
	comp=Z,55nm,1.1s,mb5.4						
BOLS	Boljevac	73.90	314	⇑iP	P	14 27 21.4	-1.2
SKO	Skopje	74.02	312	i P	P	14 27 21.5	-1.8
SKO				i	pP	14 27 35.5	+0.7
KWP	Kalwaria	74.35	320	eP	P	14 27 25.1	0.0
BOSA	Boshof	74.48	239	eP	P	14 27 26.3	0.0
BOSA				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.4						
BOSA				MLR	MLR		
	comp=Z,768nm,22.0s,MS5.0						
BOSA	Boshof	74.48	239	eP	P	14 27 26.3	0.0
	comp=Z,68nm,1.3s,mb5.4						
BOSA				LR	LR		
	comp=Z,768nm,22.0s,MS5.0						
KOLS	Kolonicke sedl	74.51	319	i P	P	14 27 26.3	+0.3
APA	Apatity	74.53	340	⇑iP	P	14 27 24.5	-1.2
APA				i		14 27 39.0	
APA				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
GRUS	Gruza	74.80	314	⇓iP	P	14 27 25.3	-2.5
SUW	Suwalki	74.94	325	eP	P	14 27 27.6	-0.8
CRVS	Cervenica-Dubn	75.03	319	i P	P	14 27 29.2	+0.2
BEO	Belgrade	75.11	315	⇓iP	P	14 27 24.9	-4.6
NOUC	Port Laguerre	75.19	114	eP	PcP	14 27 41.4	-2.8
DIVS	Divcibare	75.34	314	⇓iP	P	14 27 29.8	-1.1
KAF	Kangasniemi	75.39	333	ep	P	14 27 29.8	-1.0
	comp=Z,30nm,0.9s,mb5.2,baz=105,slow=5.1						
KAF	Kangasniemi	75.39	333	eP	P	14 27 29.8	-1.0
KAF				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
KECS	Kecovo	75.60	319	i P	P	14 27 32.5	+0.2
NIE	Niedzica	75.86	320	⇑eP	P	14 27 34.2	+0.5
PSZ	Piszkesteto	75.91	318	P	P	14 27 34.1	0.0
PSZ	Piszkesteto	75.91	318	eP	P	14 27 33.7	-0.4
	comp=Z,67nm,1.1s,mb5.5						
PSZ	Piszkesteto	75.91	318	⇑iP	P	14 27 33.9	-0.2
MAW	Mawson	75.96	192	eP	P	14 27 35.7	+1.8
MAW				pmax	pmax		
	comp=Z,28nm,0.9s						
MAW	Mawson	75.96	192	eP	P	14 27 35.7	+1.7
	comp=Z,28nm,0.9s,mb5.2						
OJC	Ojcow	76.31	320	eP	P	14 27 36.3	0.0
VYHS	Vyhne	76.69	319	i P	P	14 27 38.5	0.0
KOLL	Kolacno	76.99	319	i P	P	14 27 40.2	0.0
TIP	Timpagrande	77.29	309	eP	P	14 27 41.1	-0.9
OKC	Ostrava-Krasne	77.31	320	eP	P	14 27 42.3	+0.3
OKC				ex	x	14 27 56.5	
KEV	Kevo	77.53	341	ep	P	14 27 41.9	-0.9
MORC	Moravsky Berou	77.69	320	P	P	14 27 44.4	+0.3
MORC	Moravsky Berou	77.69	320	eP	P	14 27 44.0	0.0
	comp=Z,55nm,0.9s,mb5.5						
ZST	Bratislava	77.81	318	i P	P	14 27 45.5	+0.8
SISC	Sisak	78.05	315	i P	P	14 27 48.5	+2.4
VRAC	Vranov	78.25	319	P	P	14 27 47.4	+0.3
GKP	Gorka Klasztor	78.30	323	eP	P	14 27 47.0	-0.3
GKP	Gorka Klasztor	78.30	323	eP	P	14 27 47.0	-0.3
VKA	Vienna	78.33	318	⇑iP	P	14 27 48.1	+0.5
	comp=Z,134nm,1.0s,mb5.8						
VKA	Vienna	78.33	318	⇑iP	P	14 27 48.1	+0.5
VKA				pmax	pmax		
	comp=Z,134nm,1.0s,mb5.8						
BILL	Bilibino	78.47	21	c iP	P	14 27 46.5	-1.5
BILL				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.2						
BILL	Bilibino	78.47	21	eP	P	14 27 46.4	-1.6
	comp=Z,51nm,1.2s,mb5.3						
BILL				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
DPC	Dobruska-Polom	78.53	320	eP	P	14 27 49.3	+0.6
DPC				ex	x	14 28 03.5	
GCIS	Gornji Cirnik	78.60	316	i P	P	14 27 49.2	0.0
KSP	Ksiaz	78.60	321	eP	P	14 27 48.9	-0.1
KSP	Ksiaz	78.60	321	eP	P	14 27 49.5	+0.5
GROS	Grobnik	78.73	316	i P	P	14 27 49.9	+0.1
UPC	Upice	78.75	320	eP	P	14 27 50.3	+0.5
UPC				ex	x	14 28 04.9	
ARSA	Arzberg	78.78	317	⇑iP	P	14 27 50.4	+0.3
	comp=Z,54nm,1.2s,mb5.4						
BOJS	Bojanci	78.84	315	⇑eP	P	14 27 50.3	-0.1
PERS	Pernice	79.01	316	i P	P	14 27 51.6	+0.3
FX1	Attu Island--F	79.06	37	eP	P	14 27 50.9	-0.6
SUR	Sutherland	79.11	236	eP	P	14 27 53.6	+1.4
	comp=Z,19nm,0.9s,mb5.0						
SUR				LR	LR		
	comp=Z,234nm,20.0s,MS4.5						
VISS	Visnje	79.14	316	i P	P	14 27 52.1	0.0
LJU	Ljubljana	79.38	316	⇑eP	P	14 27 53.5	+0.1
LJU				e	pP	14 28 07.3	+2.4
LJU				e		14 28 12.2	
OBKA	Obir	79.39	316	⇑iP	P	14 27 53.7	+0.3
	comp=Z,350nm,3.1s						
TSUM	Tsumeb	79.43	249	eP	P	14 27 55.5	+1.3
	comp=Z,20nm,1.0s,mb5.0						
TSUM				LR	LR		
	comp=Z,665nm,19.0s,MS5.0						
SMY	Shemya	79.61	37	eP	P	14 27 51.3	-3.2
SMY				pmax	pmax		
	comp=Z,179nm,0.8s,mb6.0						
SMY	Shemya	79.61	37	eP	P	14 27 51.3	-3.2
	comp=Z,178nm,0.8s,mb6.0						
PRU	Pruhonice	79.64	320	eP	P	14 27 55.2	+0.5
PRU				ex	x	14 28 09.6	
PVCC	Panska Ves	79.67	320	eP	P	14 27 55.3	+0.5
PVCC				ex	x	14 28 12.0	
MOA	Molln	79.67	318	⇑iP	P	14 27 54.8	-0.1
	comp=Z,255nm,3.0s						
VOJS	Vojsko	79.83	316	i P	P	14 27 55.6	-0.2
PTQR	Pietraquaria	79.99	312	eP	P	14 27 56.5	-0.2
AQU	L'Aquila	80.00	312	eP	P	14 27 57.2	+0.4
BRG	Berggiesshubel	80.09	321	⇑iP	P	14 27 57.4	+0.3
BRG				e	pP	14 28 08.8	+0.1
BRG				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.5						
BRG	Berggiesshubel	80.09	321	⇑iP	P	14 27 57.4	+0.3
	comp=Z,55nm,0.8s,mb5.5						
BRG				i		14 28 00.0	
BRG				e	pP	14 28 08.8	+0.1
GEC2	GERESS Array S	80.11	319	eP	P	14 27 57.6	+0.3
GEC2				pmax	pmax		
	comp=Z,112nm,0.8s,mb5.8						
GEC2	GERESS Array S	80.11	319	eP	P	14 27 57.6	+0.3
	comp=Z,112nm,0.8s,mb5.8						
KHC	Kasperske Hory	80.21	319	eP	P	14 27 57.9	+0.1
KHC				ex	x	14 28 11.8	
PTCC	Patocco-Chiusa	80.21	316	eP	P	14 27 57.8	-0.1
NRCA	Norcia	80.23	312	eP	P	14 27 57.7	-0.3
KBA	Koelnbreinsper	80.25	317	⇑iP	P	14 27 57.6	-0.4
	comp=Z,61nm,1.5s,mb5.3						
KBA	Koelnbreinsper	80.25	317	⇑iP	P	14 27 57.6	-0.4
KBA				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.3						
GMNA	Gemona	80.29	316	eP	P	14 27 58.3	+0.1
RUE	Ruedersdorf	80.31	322	eP	P	14 27 58.3	+0.1
	comp=Z,204nm,0.8s,mb6.1						
SNTG	Esanatoglia	80.37	313	eP	P	14 27 58.9	+0.1
ARV	Arcevia	80.38	313	eP	P	14 27 59.2	+0.4
FSSB	Fossombrone	80.51	313	eP	P	14 27 60.0	+0.5
MNS	Montasola	80.54	312	eP	P	14 27 59.2	-0.5
FVI	Forni Avoltri	80.62	316	eP	P	14 28 00.0	0.0
WET	Wettzell	80.67	319	eP	P	14 28 00.5	+0.3
WET				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.5						
WET	Wettzell	80.67	319	eP	P	14 28 00.5	+0.3
	comp=Z,54nm,0.9s,mb5.5						
CLL	Collm	80.71	321	⇑iP	P	14 28 00.0	-0.4
CLL				e		14 28 06.0	
CLL				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
CLL	Collm	80.71	321	⇑iP	P	14 28 00.0	-0.4
	comp=Z,42nm,0.9s,mb5.4						
CLL				e		14 28 06.0	
CLL	Collm	80.71	321	⇑P	P	14 28 00.0	-0.4
	comp=Z,logA/T=1.7,mb5.4						
CLL				e*PP	pP	14 28 06.0	-6.0
CLL				e	pP	14 28 13.0	+1.0
CLL				e		14 29 35.0	
RSM	Repubblica di	80.75	314	⇑iP	P	14 28 01.8	+1.0
NKC	Novy Kostel	81.00	320	eP	P	14 28 02.3	+0.4
CRE	Caprese Michel	81.10	313	⇑iP	P	14 28 02.9	+0.3
SFI	Santa Sofia	81.19	313	⇑iP	P	14 28 04.3	+1.3
PGD	Poggio Sodo	81.28	313	eP	P	14 28 05.1	+1.6
CTI	Castel Tesino	81.38	316	⇑iP	P	14 28 04.6	+0.6
VMG	Vicchio	81.41	314	eP	P	14 28 05.3	+1.1
WTTA	Wattenberg	81.42	317	⇑iP	P	14 28 03.9	-0.3
	comp=Z,54nm,0.9s,mb5.5						
WTTA	Wattenberg	81.42	317	⇑iP	P	14 28 03.9	-0.3
WTTA				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.5						
WATA	Walderalm	81.47	317	⇑iP	P	14 28 03.9	-0.5
	comp=Z,30nm,0.9s,mb5.2						
WATA	Walderalm	81.47	317	⇑iP	P	14 28 03.9	-0.5
WATA				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
SEI	Scarperia	81.54	314	eP	P	14 28 05.7	+0.8
MOX	Moxa	81.55	320	eP	P	14 28 04.9	+0.1
MOX				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
MOX	Moxa	81.55	320	eP	P	14 28 04.9	+0.1
	comp=Z,43nm,1.0s,mb5.3						
MOX	Moxa	81.55	320	i P	P	14 28 04.9	+0.1
	comp=Z,logA/T=1.6,mb5.3						
FUR	Furstenfeldbru	81.69	318	eP	P	14 28 05.3	-0.3
SQTA	Sankt Quirin	81.71	317	⇑iP	P	14 28 05.4	-0.3
	comp=Z,33nm,0.8s,mb5.3						
SQTA	Sankt Quirin	81.71	317	⇑iP	P	14 28 05.4	-0.3
SQTA				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.3						
GRA1	Grafenberg Arr	81.77	319	eP	P	14 28 06.6	+0.6
	comp=Z,92nm,0.8s,mb5.8						
GRF	Grafenberg Arr	81.77	319	eP	P	14 28 06.6	+0.6
GRF				pmax	pmax		
	comp=Z,92nm,0.8s,mb5.8						
GRF	Grafenberg Arr	81.77	319	eP	P	14 28 06.6	+0.6
GRF				pmax	pmax		
	comp=Z,92nm,0.8s,mb5.8						
GRF	Grafenberg Arr	81.77	319	eP	P	14 28 06.6	+0.6
	comp=Z,92nm,0.8s,mb5.8						
MOTA	Moosalm	81.79	317	⇑iP	P	14 28 05.8	-0.3
	comp=Z,30nm,0.9s,mb5.2						
MOTA	Moosalm	81.79	317	⇑iP	P	14 28 05.8	-0.3
MOTA				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
GRFL	Gerfalco	81.81	313	eP	P	14 28 05.8	-0.5
ZCCA	Zocca	81.82	314	eP	P	14 28 08.1	+1.7
GSCL	Gusciola	82.10	314	eP	P	14 28 08.8	+1.1
SARO	Sassorosso	82.23	314	P	P	14 28 07.5	-0.9
BRMO	Bormio	82.27	316	⇑iP	P	14 28 09.3	+0.7
NB2	NORSAR Subarra	82.29	331	P	P	14 28 07.4	-1.0
	comp=Z,16nm,1.0s,mb4.9,baz=90,slow=5.0						
NB2	NORSAR Subarra	82.29	331	P	P	14 28 07.4	-1.0
NB2				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
NB2	NORSAR Subarra	82.29	331	P	P	14 28 07.4	-1.0
	baz=90,slow=5.3						
VALM		82.34	314	P	P	14 28 08.5	-0.5
CLZ	Clausthal	82.37	321	eP	P	14 28 09.2	+0.2
	comp=Z,76nm,0.9s,mb5.6						
VINC	Vinca	82.41	314	P	P	14 28 08.4	-0.9
HDH	Heidenheim	82.42	318	eP	P	14 28 09.0	-0.3
UBR	Uberruh	82.47	317	⇑eP	P	14 28 09.5	-0.1
GRAM		82.47	314	P	P	14 28 09.3	-0.4
DAVA	Damuels	82.62	317	⇓iP	P	14 28 10.8	+0.4
	comp=Z,52nm,1.0s,mb5.5						
BOB	Bobbio (Coli)	82.92	314	eP	P	14 28 12.8	+0.9
SYO	Syowa Base	82.93	197	⇓P	P	14 28 13.5	+2.0
SYO	Syowa Base	82.93	197	⇓pP	pP	14 28 22.5	-0.7
SYO	Syowa Base	82.93	197	⇑sP	sP	14 28 28.9	+1.6
BUCH	Bad Urach	82.98	318	⇑eP	P	14 28 12.3	+0.1
STU	Stuttgart	83.09	318	eP	P	14 28 13.0	+0.3
STU				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
STU	Stuttgart	83.09	318	eP	P	14 28 13.0	+0.3
	comp=Z,19nm,0.6s,mb5.3						
GUT	Gutenstein	83.14	318	⇑eP	P	14 28 13.0	0.0
PGF	Pioggiola	83.26	312	⇑iP	P	14 28 14.0	+0.3
	comp=Z,45nm,0.8s,mb5.3						
PGF	Pioggiola	83.26	312	⇑iP	P	14 28 14.0	+0.3
PGF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
TOD	Tromm	83.34	319	eP	P	14 28 14.2	+0.2
LBG	Lerchenberg	83.35	318	eP	P	14 28 14.2	+0.1
SPAK	Spaichingen	83.36	318	⇑eP	P	14 28 14.3	+0.2
SWS	Schriesheim	83.41	319	eP	P	14 28 14.5	+0.2
PCP	Pian Castagno	83.56	314	P	P	14 28 14.4	-0.9
TNS	Taunus Mts	83.57	320	eP	P	14 28 15.5	+0.3
BFO	Black Forest	83.66	318	eP	P	14 28 15.4	-0.3
BFO				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.6						
BFO	Black Forest	83.66	318	eP	P	14 28 15.4	-0.3
	comp=Z,41nm,0.8s,mb5.6						
FIN	Finale Ligure	83.81	314	eP	P	14 28 16.7	+0.2
KTD	Kalmit	83.82	319	eP	P	14 28 16.7	+0.3
FELD	Feldberg	83.89	317	⇑eP	P	14 28 16.8	0.0
MCGN	Macugnaga	83.93	316	eP	P	14 28 17.3	+0.2
ORX	Oropa	83.94	315	P	P	14 28 16.0	-1.2
KIZ	Kirchzarten	83.94	318	⇑eP	P	14 28 17.1	0.0
LANF	Langenberg	84.00	319	eP	P	14 28 17.5	+0.1
IMI	Imperia	84.05	313	eP	P	14 28 18.3	+0.5
ROB	Roburent	84.05	314	P	P	14 28 17.6	-0.1
TRAV		84.11	315	P	P	14 28 17.1	-0.9
MONE	Monesi	84.14	314	P	P	14 28 18.2	+0.1
LIBD	Limburg	84.15	318	eP	P	14 28 18.2	0.0
ABH	Alteburg	84.16	320	eP	P	14 28 18.6	+0.5
ABH	Alteburg	84.16	320	eP	P	14 28 18.7	+0.6
NEGI	Negi	84.18	313	P	P	14 28 17.6	-0.8
BBS	Basel-Blauen	84.23	317	eP	P	14 28 18.2	-0.4
BBS	Basel-Blauen	84.23	317	eP	P	14 28 18.5	-0.1
SAOF	Saorge	84.29	314	eP	P	14 28 18.6	-0.3
WLS	Welschbruch	84.31	318	eP	P	14 28 18.7	-0.3
CDF	Champ du Feu	84.36	318	⇑iP	P	14 28 19.1	-0.1
	comp=Z,43nm,0.8s,mb5.3						
CDF	Champ du Feu	84.36	318	⇑iP	P	14 28 19.1	-0.1
CDF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.3						
ENR	Entracque	84.38	314	P	P	14 28 19.4	0.0
SBF	Sospel	84.38	313	⇑iP	P	14 28 19.7	+0.3
	comp=Z,129nm,0.7s,mb5.8						
SBF	Sospel	84.38	313	⇑iP	P	14 28 19.7	+0.3
SBF				pmax	pmax		
	comp=Z,65nm,0.7s,mb5.9						
AUTN	L'Aution	84.38	314	eP	P	14 28 19.9	+0.5
REVF	Revere	84.43	313	eP	P	14 28 19.7	0.0
STV2	Anna di Valdie	84.44	314	P	P	14 28 18.8	-0.9
STV	Sta Anna Valdi	84.44	314	P	P	14 28 18.9	-0.8
ECH	Echery	84.45	318	eP	P	14 28 19.1	-0.5
RSP	Reno Superiore	84.47	315	P	P	14 28 19.4	-0.4
BHB	Bricherasio	84.47	314	P	P	14 28 18.2	-1.7
MOF	Molkenrain	84.47	317	eP	P	14 28 19.4	-0.4
RUP	Ruppelstein	84.48	319	⇑eP	P	14 28 20.3	+0.6
TOUF	Mont Tournerai	84.51	314	eP	P	14 28 20.4	+0.4
LSD	Ceresole Reale	84.53	315	P	P	14 28 20.7	+0.6
MVIF	Mont Vial	84.58	313	eP	P	14 28 19.9	-0.5
PZZ	Prazzo	84.60	314	P	P	14 28 19.5	-1.0
FENE	Fenestrelle	84.61	315	P	P	14 28 20.2	-0.3
HINF	Hinteralfeld	84.66	317	⇑iP	P	14 28 20.3	-0.4
	comp=Z,15nm,0.7s,mb4.9						
HINF	Hinteralfeld	84.66	317	⇑iP	P	14 28 20.3	-0.4
HINF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
LOMF	Lomont	84.70	317	eP	P	14 28 20.6	-0.3
RRL	Cesana Torines	84.81	315	P	P	14 28 20.8	-0.7
LPG	La Plagne	84.81	315	⇑iP	P	14 28 22.2	+0.7
	comp=Z,96nm,0.8s,mb5.7						
LPG	La Plagne	84.81	315	⇑iP	P	14 28 22.2	+0.7
LPG				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.7						
LPL	La Plagne	84.82	315	⇑iP	P	14 28 22.3	+0.7
	comp=Z,119nm,0.8s,mb5.8						
LPL	La Plagne	84.82	315	⇑iP	P	14 28 22.3	+0.7
LPL				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.8						
MBDF	Montbardon	84.82	314	⇑iP	P	14 28 21.4	-0.2
	comp=Z,23nm,0.6s,mb5.2						
MBDF	Montbardon	84.82	314	⇑iP	P	14 28 21.4	-0.2
MBDF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2						
BNI	Bardonecchia	84.88	315	eP	P	14 28 21.6	-0.3
BNI				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.7						
BNI	Bardonecchia	84.88	315	eP	P	14 28 21.6	-0.3
	comp=Z,41nm,0.7s,mb5.7						
KIWB	Kanaga Island	84.95	38	eP	P	14 28 21.3	-0.7
FRF	La Foret Royal	84.96	313	⇑iP	P	14 28 22.7	+0.4
	comp=Z,94nm,0.7s,mb5.7						
FRF	La Foret Royal	84.96	313	⇑iP	P	14 28 22.7	+0.4
FRF				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.7						
HAU	Haudompre	85.00	318	⇑iP	P	14 28 22.3	-0.1
	comp=Z,136nm,0.8s,mb5.8						
HAU	Haudompre	85.00	318	⇑iP	P	14 28 22.3	-0.1
HAU				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.8						
WLF	Walferdange	85.07	319	eP	P	14 28 22.5	-0.2
WLF				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.6						
WLF	Walferdange	85.07	319	eP	P	14 28 22.5	-0.2
	comp=Z,37nm,0.8s,mb5.6						
LMR	La Mourre	85.07	313	⇑iP	P	14 28 23.2	+0.4
	comp=Z,53nm,0.8s,mb5.4						
LMR	La Mourre	85.07	313	⇑iP	P	14 28 23.2	+0.4
LMR				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.4						
CABF	La Chapelle	85.23	316	⇑iP	P	14 28 24.2	+0.6
	comp=Z,70nm,0.8s,mb5.5						
CABF	La Chapelle	85.23	316	⇑iP	P	14 28 24.2	+0.6
CABF				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.5						
THEF	They Montfort	85.23	318	eP	P	14 28 22.9	-0.6
OG25	Le Caire	85.34	314	eP	P	14 28 24.7	+0.6
CASM	Ain Smara	85.41	306	P	P	14 28 26.0	+1.3
ORIF	Oris-en-Rattie	85.45	315	⇑iP	P	14 28 24.9	+0.2
	comp=Z,29nm,0.7s,mb5.2						
ORIF	Oris-en-Rattie	85.45	315	⇑iP	P	14 28 24.9	+0.2
ORIF				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.2						
CTEI	Djebel Teioual	85.49	306	P	P	14 28 27.0	+1.9
OG05	Jujurieux	85.69	316	eP	P	14 28 26.3	+0.5
SMRF	Simiane la Rot	85.72	314	⇑iP	P	14 28 27.0	+1.0
	comp=Z,41nm,0.8s,mb5.4						
MEZF	Maizieres J'vi	85.84	318	⇑iP	P	14 28 26.8	+0.3
	comp=Z,61nm,0.8s,mb5.6						
DFRA	Djebel Bou Aff	85.89	306	P	P	14 28 30.0	+2.9
GIVF	Givet	85.91	320	⇑iP	P	14 28 27.1	+0.3
	comp=Z,44nm,0.8s,mb5.4						
GIVF	Givet	85.91	320	⇑iP	P	14 28 27.1	+0.3
GIVF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.4						
SET	Setif	86.30	306	P	P	14 28 31.0	+2.0
BAIF	Baives	86.30	320	⇑iP	P	14 28 29.3	+0.6
	comp=Z,86nm,0.8s,mb5.8						
BAIF	Baives	86.30	320	⇑iP	P	14 28 29.3	+0.6
BAIF				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.7						
VIVF	Saint-Julien-l	86.31	315	⇑iP	P	14 28 29.4	+0.5
	comp=Z,45nm,0.8s,mb5.5						
VIVF	Saint-Julien-l	86.31	315	⇑iP	P	14 28 29.4	+0.5
VIVF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.4						
SMF	Signal de Mont	86.77	316	⇑iP	P	14 28 31.3	+0.2
	comp=Z,99nm,0.8s,mb5.8						
SMF	Signal de Mont	86.77	316	⇑iP	P	14 28 31.3	+0.2
SMF				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.8						
LASF	Ste Croix	86.94	314	⇑iP	P	14 28 32.8	+0.8
	comp=Z,28nm,0.8s,mb5.3						
SSF	Saint Saulge	86.97	317	⇑iP	P	14 28 32.3	+0.2
	comp=Z,36nm,0.9s,mb5.3						
SSF	Saint Saulge	86.97	317	⇑iP	P	14 28 32.3	+0.2
SSF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.3						
PLDF	La Plantade	86.97	316	eP	P	14 28 32.8	+0.7
AVF	Avril sur Loir	87.10	317	⇑iP	P	14 28 32.9	+0.2
	comp=Z,65nm,0.9s,mb5.5						
AVF	Avril sur Loir	87.10	317	⇑iP	P	14 28 32.9	+0.2
AVF				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.5						
LBL	Lubilhac	87.29	315	eP	P	14 28 34.4	+0.7
AGO	Saint Agoulin	87.31	316	eP	P	14 28 34.2	+0.5
PYM	Petit Puy Mans	87.42	316	eP	P	14 28 34.9	+0.6
BGF	Bois d'Agland	87.46	316	⇑iP	P	14 28 35.1	+0.6
	comp=Z,84nm,0.8s,mb5.7						
BGF	Bois d'Agland	87.46	316	⇑iP	P	14 28 35.1	+0.6
BGF				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.7						
HYF	Humbligny	87.55	317	eP	P	14 28 35.8	+1.0
TCF	Toulx Ste Croi	87.93	316	⇑iP	P	14 28 37.3	+0.6
	comp=Z,28nm,0.9s,mb5.2						
TCF	Toulx Ste Croi	87.93	316	⇑iP	P	14 28 37.3	+0.6
TCF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.2						
CAF	Calviac	88.15	315	⇑iP	P	14 28 38.7	+0.9
	comp=Z,24nm,0.8s,mb5.2						
CAF	Calviac	88.15	315	⇑iP	P	14 28 38.7	+0.9
CAF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.2						
MTLF	Montolieu	88.19	313	⇑iP	P	14 28 38.7	+0.7
	comp=Z,56nm,0.9s,mb5.5						
MTLF	Montolieu	88.19	313	⇑iP	P	14 28 38.7	+0.7
MTLF				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.5						
TNA	Tin City	88.48	24	eP	P	14 28 38.3	-0.6
RJF	Les Rejaudoux	88.50	315	⇑iP	P	14 28 40.4	+0.9
	comp=Z,35nm,0.8s,mb5.4						
RJF	Les Rejaudoux	88.50	315	⇑iP	P	14 28 40.4	+0.9
RJF				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.4						
EMIR	Miracle	88.84	312	P	P	14 28 41.9	+0.7
	comp=Z,1µm,4.7s						
LFF	La Frestale	89.09	315	eP	P	14 28 43.3	+1.0
EPOB	Poblet	89.23	311	P	P	14 28 42.7	-0.3
	comp=Z,304nm,2.5s,mb6.2						

LDF	La Druitiere	89.26	319	⇑iP	P	14 28 43.5	+0.5
	comp=Z,90nm,0.8s,mb5.8						
LDF	La Druitiere	89.26	319	⇑iP	P	14 28 43.5	+0.5
LDF				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.8						
EIBI	Ibiza	89.27	309	P	P	14 28 43.1	-0.2
	comp=Z,791nm,3.7s						
LCP	Cassop	89.31	325	⇑eP	P	14 28 43.9	+0.8
LCP				AMb	AMB	14 28 44.7	
	comp=Z,228nm,0.7s,mb6.6						
FLN	La Foliniere	89.47	319	⇑iP	P	14 28 44.5	+0.5
	comp=Z,119nm,0.8s,mb6.0						
FLN	La Foliniere	89.47	319	⇑iP	P	14 28 44.5	+0.5
FLN				pmax	pmax		
	comp=Z,60nm,0.8s,mb6.0						
HPK	Haverah Park	89.50	324	⇑eP	P	14 28 44.5	+0.5
HPK				AMb	AMB	14 28 46.2	
	comp=Z,245nm,1.1s,mb6.5						
MFF	Saint Martin d	89.51	317	⇑iP	P	14 28 44.7	+0.5
	comp=Z,49nm,0.9s,mb5.5						
MFF	Saint Martin d	89.51	317	⇑iP	P	14 28 44.7	+0.5
MFF				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.5						
KBI1	Birley Grange	89.54	323	⇑eP	P	14 28 44.5	+0.3
KBI1				AMb	AMB	14 28 45.8	
	comp=Z,101nm,0.8s,mb6.2						
LHO	Holmfirth	89.69	324	⇑eP	P	14 28 45.4	+0.5
LHO				AMb	AMB	14 28 46.3	
	comp=Z,83nm,0.8s,mb6.1						
EBR	Ebro Roquetas	89.73	311	eP	P	14 28 45.5	+0.1
KWE	Weaver Farm	89.76	323	⇑eP	P	14 28 45.7	+0.5
KWE				AMb	AMB	14 28 46.7	
	comp=Z,74nm,0.8s,mb6.0						
GRR	Gorron	89.77	318	⇑iP	P	14 28 46.1	+0.7
	comp=Z,61nm,0.8s,mb5.7						
GRR	Gorron	89.77	318	⇑iP	P	14 28 46.1	+0.7
GRR				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.7						
EBIE	Bielsa	89.77	313	P	P	14 28 45.9	+0.4
	comp=Z,479nm,5.3s						
ERTA	Horta de San J	89.83	311	P	P	14 28 46.5	+0.7
	comp=Z,439nm,3.7s						
VNDA	Vanda	90.19	168	eP	P	14 28 47.9	+1.1
VNDA				e	pP	14 29 01.5	+2.9
VNDA				pmax	pmax		
	comp=Z,33nm,1.3s						
VNDA				MLR	MLR		
	comp=Z,753nm,20.0s						
VNDA	Vanda	90.19	168	eP	P	14 28 47.9	+1.1
	comp=Z,32nm,1.3s,mb5.5						
VNDA				e	pP	14 29 01.5	+2.9
VNDA				LR	LR		
	comp=Z,753nm,20.0s,MS5.1						
ESK	Eskdalemuir	90.20	325	eP	P	14 28 47.6	+0.3
ESK				pmax	pmax		
	comp=Z,58nm,0.8s,mb6.0						
ESK	Eskdalemuir	90.20	325	eP	P	14 28 47.6	+0.4
	comp=Z,58nm,0.8s,mb6.0						
ESK	Eskdalemuir	90.20	325	⇑eP	P	14 28 47.8	+0.6
ESK				AMb	AMB	14 28 50.4	
	comp=Z,79nm,1.9s,mb5.7						
DAG	Danmarks Havn	90.21	348	⇓eP	P	14 28 46.0	-0.9
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
DAG	Danmarks Havn	90.21	348	⇓eP	P	14 28 46.0	-0.9
	comp=Z,3.4nm,0.7s,mb4.8						
DAG	Danmarks Havn	90.21	348	⇓iP	P	14 28 46.0	-0.9
	comp=Z,3.4nm,0.7s,mb4.8						
EAU	Auchinoon	90.25	326	eP	P	14 28 48.7	+1.3
EAU				AMb	AMB	14 28 49.0	
	comp=Z,88nm,1.4s,mb5.9						
ETSF	Etsaut	90.26	313	⇑iP	P	14 28 49.1	+1.3
	comp=Z,31nm,0.7s,mb5.4						
ETSF	Etsaut	90.26	313	⇑iP	P	14 28 49.1	+1.3
ETSF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.5						
LRYF	La Roche-sur-Y	90.47	317	eP	P	14 28 49.2	+0.5
EMOS	Mosqueruela	90.51	310	P	P	14 28 50.8	+1.7
	comp=Z,443nm,5.0s						
EBEN	Beniarda	90.52	309	P	P	14 28 49.6	+0.4
	comp=Z,249nm,2.1s,mb6.2						
SJPF	Ste Jean	90.72	313	⇑iP	P	14 28 50.2	+0.2
	comp=Z,61nm,1.2s,mb5.5						
SJPF	Ste Jean	90.72	313	⇑iP	P	14 28 50.2	+0.2
SJPF				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.5						
EALK	Alkurruntz	90.91	313	P	P	14 28 51.2	+0.3
	comp=Z,449nm,5.4s						
SGMF	Saint Gilles	90.91	318	⇑iP	P	14 28 51.2	+0.4
	comp=Z,96nm,1.0s,mb5.8						
SGMF	Saint Gilles	90.91	318	⇑iP	P	14 28 51.2	+0.4
SGMF				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.8						
QUIF	Quistinic	91.37	318	⇑iP	P	14 28 53.1	+0.2
	comp=Z,61nm,0.8s,mb5.7						
QUIF	Quistinic	91.37	318	⇑iP	P	14 28 53.1	+0.2
QUIF				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.7						
ROSF	Rostrenen	91.37	319	⇑iP	P	14 28 53.5	+0.6
	comp=Z,66nm,0.8s,mb5.7						
ROSF	Rostrenen	91.37	319	⇑iP	P	14 28 53.5	+0.6
ROSF				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.7						
ELAN	Lanestosa	92.30	314	P	P	14 28 57.8	+0.5
	comp=Z,390nm,3.7s						
EVIA	Vianos	92.30	309	P	P	14 28 58.5	+1.1
EVIA				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.5						
EVIA	Vianos	92.30	309	P	P	14 28 58.5	+1.1
	comp=Z,22nm,0.8s,mb5.5						
EBER	Berja	92.86	307	P	P	14 29 01.4	+1.4
	comp=Z,114nm,1.4s,mb6.1						
EQES	Quesada	92.87	308	P	P	14 29 00.9	+0.9
	comp=Z,310nm,2.9s,mb6.2						
GUD	Guadarrama	93.25	311	P	P	14 29 02.6	+0.9
GUD				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.8						
GUD	Guadarrama	93.25	311	P	P	14 29 02.6	+0.9
	comp=Z,46nm,1.1s,mb5.8						
ESDC	Sonseca Array	93.26	310	P	P	14 29 02.0	+0.3
	comp=Z,11nm,0.9s,mb5.3						
ESLA	Sonseca Array	93.26	310	eP	P	14 29 01.6	-0.1
	comp=Z,9.5nm,1.3s,mb5.1						
ESLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
EARI	Arriondas	93.56	314	P	P	14 29 02.4	-0.7
	comp=Z,216nm,2.7s,mb6.1						
EADA	Adamuz	93.98	309	P	P	14 29 04.8	-0.3
	comp=Z,125nm,2.6s,mb5.9						
IMA	Indian Mountai	93.99	22	eP	P	14 29 05.6	+1.2
IMA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.6						
IMA	Indian Mountai	93.99	22	eP	P	14 29 05.6	+1.2
	comp=Z,21nm,0.9s,mb5.6						
SVW2	Sparrevohn	94.98	27	eP	P	14 29 09.8	+0.7
EMIN	Mina Concepcio	95.68	309	P	P	14 29 12.5	-0.3
	comp=Z,301nm,4.5s						
SPU	Mount Spurr	96.54	27	eP	P	14 29 16.0	-0.2
COLA	College	96.70	22	i P	P	14 29 15.4	-1.4
MCK	McKinley	96.79	24	eP	P	14 29 16.6	-0.6
MCK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.2						
MCK				MLR	MLR		
	comp=Z,308nm,20.0s,MS4.8						
MCK	McKinley	96.79	24	eP	P	14 29 16.6	-0.7
	comp=Z,7.7nm,0.8s,mb5.2						
MCK				LR	LR		
	comp=Z,308nm,20.0s,MS4.8						
INK	Inuvik	99.49	16	eP	P	14 29 28.9	-0.5
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
INK	Inuvik	99.49	16	eP	P	14 29 28.9	-0.5
	comp=Z,10nm,1.0s,mb5.3						
RES	Resolute Bay	100.10	3	eP	P	14 29 32.5	+0.5
RES				pmax	pmax		
	comp=Z,11nm,0.8s						
RES	Resolute Bay	100.10	3	eP	P	14 29 32.5	+0.4
	comp=Z,11nm,0.8s						
FFC	Flin Flon	118.78	11	ePKIKP	PKPdf	14 34 34.4	+0.6
MSO	Missoula	122.44	23	ePKP	PKPdf	14 34 40.9	-0.2
WVOR	Wild Horse Val	123.88	29	ePKIKP	PKPdf	14 34 45.6	+1.5
ULM	Lac du Bonnet	124.10	8	ePKP	PKPdf	14 34 44.6	+0.4
BOZ	Bozeman (W)	124.31	22	ePKIKP	PKPdf	14 34 45.6	+0.8
MCMT	McKenzie Canyo	124.53	23	ePKP	PKPdf	14 34 47.3	+2.0
HLID	Hailey	124.92	25	ePKP	PKPdf	14 34 47.6	+1.5
QLMT	Earthquake Lak	125.08	22	ePKP	PKPdf	14 34 48.5	+2.2
LAO	LASA Array	125.21	17	ePKP	PKPdf	14 34 48.6	+2.1
YMR	Madison River	125.39	22	ePKP	PKPdf	14 34 48.8	+1.9
YFT	Old Faithful	125.62	22	ePKP	PKPdf	14 34 51.0	+3.7
RRI2	Red Ridge	126.37	23	ePKP	PKPdf	14 34 50.7	+1.9
LOHW	Long Hollow	126.42	23	ePKP	PKPdf	14 34 50.6	+1.7
MNV	Mina	127.11	32	ePKIKP	PKPdf	14 34 52.0	+1.6
HWUT	Hardware Ranch	127.73	25	ePKP	PKPdf	14 34 52.5	+1.0
MVU	Marysvale	129.99	27	ePKP	PKPdf	14 34 58.4	+2.5
MSU	Marysvale	130.00	27	ePKIKP	PKPdf	14 34 58.8	+2.8
SRU	San Rafael	130.25	26	ePKIKP	PKPdf	14 34 58.6	+2.2
PV10	Paradox Valley	131.49	25	ePKP	PKPdf	14 35 01.8	+3.0
ANMO	Albuquerque	135.49	25	ePKIKP	PKPdf	14 35 08.1	+1.8
LPM	Los Pinos Moun	135.97	25	ePKP	PKPdf	14 35 09.0	+1.8
CPRX	Cap Rock	138.22	23	PKP	PKPdf	14 35 14.2	+2.8
MNTX	Cornudas Mount	138.74	26	ePKPpre		14 35 06.0	
JCT	Junction City	142.02	20	ePKHKP		14 35 13.9	
CPUP	Villa Florida	145.84	229	PKPdf	PKPdf	14 35 27.3	+2.3
CJM	Chamela	148.85	38	i P	PKPdf	14 35 35.5	+5.4
SFJM	Santa Fe	149.24	34	i P	PKPdf	14 35 37.0	+6.3
SJG	San Juan	150.05	321	ePKIKP	PKPdf	14 35 38.1	+6.1
SAML	Samuel	157.56	259	ePKP	PKPdf	14 35 44.5	+1.9

MAN 01 14:17:49.4, 16.59N×121.88E, h1km, mb4.4, ML3.2, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAUP	Cauayan	0.35	351	eP	Pg	14 17 59.5	+3.0
CAUP				eS	Sg	14 18 08.7	+7.5
BALP	Baler	0.90	199	eP	Pg	14 18 06.0	-1.3
BALP				eS	Sg	14 18 21.4	+2.2
CVP	Callao Caves	1.11	357	eP	Pb	14 18 10.0	-1.0
CVP				i S	Sb	14 18 27.0	+1.3
BCPH	Baguio City Da	1.26	261	⇑iP	Pb	14 18 15.3	+1.7
BCPH				i S	Sb	14 18 36.0	+5.7
PCPH	Palayan	1.27	216	eP	Pb	14 18 14.0	+0.2
PCPH				eS	Sb	14 18 36.0	+5.5
APYP	Conner	1.40	334	eP	Pb	14 18 15.3	-0.7
APYP				eS	Sb	14 18 38.6	+4.3
ABRA	Dolores	1.53	313	eP	Pn	14 18 18.4	+0.4
ABRA				eS	Sb	14 18 41.7	+3.5
POLP	Polilio Island	1.85	178	eP	Pn	14 18 22.9	+0.3
BOLP	Bolinao	1.90	264	eP	Pn	14 18 26.4	+3.2

MAN 01 14:20:51.9, 16.43N×122.52E, h61km, mb4.5, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	Palanan	0.63	351	eP	P	14 21 07.3	+1.8
PALP				eS	S	14 21 18.6	+3.1
PALP	Palanan	0.63	351	eP	P	14 21 07.1	+1.6
PALP				eS	S	14 21 18.5	+2.9
CAUP	Cauayan	0.84	307	eP	P	14 21 06.2	-1.9
CAUP				eS	S	14 21 15.4	-4.7
CAUP	Cauayan	0.84	307	eP	P	14 21 06.0	-2.0
CAUP				eS	S	14 21 15.3	-4.8
BALP	Baler	1.14	233	eP	P	14 21 13.2	+1.1
BALP	Baler	1.14	233	eP	P	14 21 12.8	+0.7
BALP				eS	S	14 21 28.1	+0.9
CVP	Callao Caves	1.43	332	eP	P	14 21 17.0	+0.8
CVP				i S	S	14 21 34.0	-0.2
BCPH	Baguio City Da	1.87	269	⇑iP	P	14 21 22.2	0.0
BCPH				i S	S	14 21 39.8	-4.7
APYP	Conner	1.88	319	eP	P	14 21 23.0	+0.7
APYP				eS	S	14 21 45.1	+0.4
APYP	Conner	1.88	319	eP	P	14 21 21.9	-0.3
APYP				eS	S	14 21 46.3	+1.5
ABRA	Dolores	2.11	305	eP	P	14 21 26.5	+0.9
ABRA	Dolores	2.11	305	eP	P	14 21 25.0	-0.7
ABRA				eS	rx	14 22 23.9	

MAN 01 14:26:00.5, 18.38N×120.88E, h84km, mb4.0, ML2.7, MS2.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.62	146	eP	P	14 26 17.3	+1.4
APYP				eS	S	14 26 30.1	+2.8
ABRA	Dolores	0.74	192	eP	P	14 26 30.0	+13
ABRA				eS	S	14 26 37.5	+8.1
CAUP	Cauayan	1.69	148	eP	P	14 26 29.6	+0.7
PALP	Palanan	1.97	131	eP	P	14 26 33.2	+0.5

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*NIED **01** 14:33:00, 35.50N×141.20E, h44km, Mw4.4 Best double couple: $M_0 3.77\times10^{15}$ NP1:ϕ_s52°, δ72°, λ117°. NP2:ϕ_s173°, δ32°, λ35°.*
*JMA **01** 14:33:36.3±0.1, 35.52N×141.12E, h32km±1km, M4.4*
JMA Felt II J1.
*BJI **01** 14:33:42.3, 35.50N×140.70E, h71km, mb4.4*
*NEIC **01** 14:33:42.3±2.1, 35.46N×140.70E, h72km±15km, mb4.4/6, Error ellipse: s-maj=28.3km s-min=17.8km az=68.0*
NEIC Recorded [2 JMA] in Chiba and [1 JMA] in Ibaraki Prefectures.

ISC 01 14:33:36.3±1.0, 35.52N±0.04×141.1E±0.1, h38km±7km, n25, $\sigma 0^{s}95$/28, mb4.3/7, 5C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.27	313	⇑P	P	14 33 43.6	-0.5
CHOJ				S	S	14 33 48.5	-1.1
KTR	Katsuura	0.74	240	P	P	14 33 50.4	+0.1
JCN	Nagara	0.74	263	P	P	14 33 51.4	+1.1
BSO2	Boso 2	0.82	201	eS	S	14 34 02.7	+0.3
BSO4	Boso 4	0.82	230	⇑P	P	14 33 51.5	+0.1
BSO3	Boso 3	0.86	214	⇑P	P	14 33 51.9	-0.1
BSO3				eS	S	14 34 04.3	+0.7
BSO1	Boso 1	0.87	187	P	P	14 33 51.6	-0.5
JYT	Yasato	1.02	314	⇑P	P	14 33 54.5	+0.2
JHO	Hitachi	1.17	339	⇑P	P	14 33 56.7	+0.3
JIM2	Oshima 3	1.59	240	P	P	14 34 01.1	-1.3
JAG	Ashikaga	1.62	305	P	P	14 34 03.3	+0.5
JOD2	Odawara 2	1.67	262	P	P	14 34 03.4	-0.1
MAJO	Matsushiro	2.56	294	ePn	P	14 34 17.9	+1.6
MAT	Matsushiro	2.56	294	eP	P	14 34 18.0	+1.7
MAT				eS	S	14 34 58.0	+11
MAT	Matsushiro	2.56	294	P	P	14 34 17.9	+1.6
MAT				S	S	14 34 45.5	-1.0
ULN	Ulaanbaatar	28.03	307	P	P	14 39 24.2	-1.5
	1.3nm,0.5s,mb3.8						
WMQ	Urumqi	41.32	298	eP	P	14 41 19.0	-0.7
KURK	Kurchatov	46.68	309	eP	P	14 42 02.1	-0.7
	6.4nm,0.7s,mb4.7						
AAK	Ala-Archa	51.00	299	eP	P	14 42 35.1	-1.3
	2.0nm,0.8s,mb4.1						
CHKZ	Chkalovo	51.17	314	eP	P	14 42 36.7	-0.7
	3.2nm,0.6s,mb4.4						
WRAB	Tennant Creek	55.52	188	eP	P	14 43 09.2	-0.8
	6.5nm,0.7s,mb4.8						
RES	Resolute Bay	64.13	14	eP	P	14 44 09.1	+0.8
	1.9nm,0.5s,mb4.4						
NB2	NORSAR Subarra	75.49	337	P	P	14 45 18.8	+1.1
	1.2nm,0.6s,mb4.0,baz=41,slow=5.8						
CLL	Collm	82.28	330	P	P	14 45 57.0	+2.1
SAML	Samuel	145.49	46	ePKP	PKPdf	14 53 13.5	+2.6

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*BJI **01** 14:38:38.3, 9.44N×93.94E, h59km, mB5.2, mb4.6, Ms5.0, Msz4.6*
*NEIC **01** 14:38:39.7±1.0, 9.86N×94.04E, h30km, mb4.7/12, Error ellipse: s-maj=21.8km s-min=19.8km az=212.0*

ISC 01 14:38:37.5±2.7, 9.9N±0.1×94.10E±0.09, h23km±18km, n35, $\sigma 0^{s}79$/37, mb4.7/15, MS4.7/2, 2D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	9.72	28	eP	P	14 40 60.0	+0.7
	10.0nm,0.7s						
JIRN	Jiri	19.18	338	eP	P	14 43 03.0	+0.5
	65nm,1.0s						
PKI	Pulchoki	19.40	336	eP	P	14 43 04.8	-0.2
	44nm,0.9s						
DMN	Daman	19.55	336	eP	P	14 43 06.7	-0.1
	34nm,0.7s						
KKN	Kakani	19.64	336	eP	P	14 43 07.1	-0.7
	65nm,1.1s						
LSA	Lhasa	19.90	352	P	P	14 43 09.0	-1.5
GKN	Gorkha	20.09	335	eP	P	14 43 12.3	-0.3
	69nm,0.6s						
GYA	Guiyang	20.32	34	eP	P	14 43 15.0	+0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
KOLN	Koldanda	20.35	332	eP	P	14 43 15.0	-0.2
	comp=Z,107nm,1.0s						
CD2	Chengdu	22.76	22	P	P	14 43 40.3	+0.7
CD2				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.6						
NDI	New Delhi	24.50	322	eP	P	14 43 56.0	-0.6
DDI	Dehra Dun	25.24	326	e	P	14 44 05.7	+2.1
LZH	Lanzhou	27.54	17	⇓P	P	14 44 24.7	0.0
LZH				AMB	AMB		
	comp=Z,35nm,1.5s,mb4.8						
LZH	Lanzhou	27.54	17	⇓P	P	14 44 24.7	0.0
	comp=Z,35nm,1.5s,mb4.8						
LZH				pP	pP	14 44 33.5	+2.1
LZH				sP	sP	14 44 34.9	+0.5
XAN	Xi’an	27.61	27	P	P	14 44 24.8	-0.6
XAN				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.5						
GTA	Gaotai	29.83	9	eP	P	14 44 45.1	-0.3
GTA				PP	PP	14 45 41.5	-1.2
GTA				PCP	PcP	14 47 49.6	+1.1
GTA				S	S	14 49 39.5	0.0
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.6						
GTA				AMB	AMB		
	comp=Z,212nm,4.6s						
GTA				LR	LR		
	comp=N,160nm,14.1s,MS4.1						
GTA				LR	LR		
	comp=E,240nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=Z,151nm,14.4s,MS3.8						
NJ2	Nanjing	31.79	42	eP	P	14 45 03.2	+0.5
NJ2				AP	pP	14 45 12.7	+3.3
NJ2				PP	PP	14 46 09.8	+1.6
NJ2				S	S	14 50 11.0	+0.7
NJ2				AMB	AMB		
	comp=Z,520nm,3.9s						
NJ2				LR	LR		
	comp=N,7µm,13.2s,MS5.6						
NJ2				LR	LR		
	comp=E,5µm,13.6s,MS5.6						
NJ2				LR	LR		
	comp=Z,5µm,15.4s,MS5.3						
SSE	Sheshan	32.83	46	eP	P	14 45 08.5	-3.3
SSE				AMB	AMB		
	comp=Z,19nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,159nm,4.1s						
SSE	Sheshan	32.83	46	eP	P	14 45 08.5	-3.3
	comp=Z,19nm,0.8s,mb5.1						
UCH	Uchtor	36.51	335	P	P	14 45 43.9	+0.7
	SNR=6.1						
KBK	Karagaybulak	36.69	336	P	P	14 45 45.8	+1.2
	SNR=11						
AML	Almayashu	36.77	334	P	P	14 45 46.4	+1.0
	SNR=13						
AAK	Ala-Archa	36.85	336	eP	P	14 45 45.6	-0.4
	comp=Z,7.3nm,0.9s,mb4.5						
CHMS	Chumysh	37.05	336	P	P	14 45 48.1	+0.3
	SNR=5.2						
EKS2	Erkin-Say	37.17	335	P	P	14 45 49.7	+1.0
	SNR=9.6						
USP	Ospenovka	37.38	336	P	P	14 45 50.7	+0.3
	SNR=6.2						
ULN	Ulaanbaatar	39.39	14	eP	P	14 46 07.9	+0.7
	comp=Z,5.9nm,0.7s,mb4.4						
KURK	Kurchatov	42.66	345	P	P	14 46 33.1	-1.0
	comp=Z,6.1nm,0.9s,mb4.3						
CHKZ	Chkalovo	47.56	341	eP	P	14 47 12.3	-0.9
	comp=Z,9.4nm,0.6s,mb5.0						
WRAB	Tennant Creek	49.48	127	eP	P	14 47 29.0	+0.4
	comp=Z,8.3nm,0.8s,mb4.8						
KIV	Kislovodsk	55.81	317	eP	P	14 48 15.2	-0.2
	comp=Z,7.1nm,0.5s,mb5.0						
YAK	Yakutsk	58.10	19	eP	P	14 48 30.1	-1.3
	comp=Z,25nm,0.8s,mb5.3						
BILL	Bilibino	74.24	22	P	P	14 50 14.1	-0.1
	comp=Z,1.2nm,0.7s,mb3.9						
LPG	La Plagne	81.18	315	eP	P	14 50 52.5	-0.5
	comp=Z,10nm,0.7s,mb4.5						
RES	Resolute Bay	95.40	2	eP	P	14 52 00.5	-0.4
	comp=Z,2.3nm,0.9s,mb4.6						

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*CSEM **01** 14:59:49.4±0.1, 56.16N×11.55E, h2km, ML2.2, Error ellipse: s-maj=2.5km s-min=1.7km az=36.0, Mining explosion.*
*BER **01** 14:59:51.6±3.5, 56.22N×11.49E, MD2.7, ML2.7(NAO)*
*NAO **01** 14:59:51.5±3.1, 56.35N×11.25E, ML2.7*
*NEIC **01** 14:59:51.0, 56.22N×11.27E, ML2.7(BER), After BER.*
*UPP **01** 14:59:52.8, 56.22N×11.77E, h0km, ML2.2, Mining explosion.*

ISC 01 14:59:49.2±0.6, 56.29N±0.04×11.52E±0.07, n28, $\sigma 1^{s}22$/37, 1C, Denmark

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COP	Copenhagen	0.80	139	i P	Pg	15 00 04.7	-0.4
MUD	Monsted U’grnd	1.31	278	⇑iP	Pb	15 00 15.4	+1.0
MUD				i S	Sg	15 00 35.9	+3.0
BSD	Bornholm Skovb	2.26	120	i P	Pn	15 00 26.9	-1.4
BSD				i		15 00 29.2	
BSD				eS	Sn	15 00 55.0	-2.2
BSD				eLG		15 01 00.7	
BSD	Bornholm Skovb	2.26	120	i P	Pn	15 00 26.9	-1.4
BSD				eS	Sn	15 00 55.0	-2.2
BLEU	Blekinge	2.40	88	P	Pn	15 00 30.2	0.0
LNKU	Linkoeping	2.91	47	P	Pn	15 00 38.6	+1.1
VSTU	Vaestervik	3.07	61	P	Pn	15 00 40.9	+1.0
SNART	Snartemo	3.11	313	eP	Pn	15 00 40.1	-0.3
ASKU	Askersund	3.16	33	P	Pn	15 00 42.6	+1.5
VIKU	Vikbolandet	3.57	50	P	Pn	15 00 48.8	+1.8
NRAU	Nora	3.79	28	P	Pn	15 00 50.8	+0.8
ESKU	Eskilstuna	3.94	40	P	Pn	15 00 54.9	+2.7
HFS	Hagfors	4.02	16	Pn	Pn	15 00 53.7	+0.3
	baz=204,slow=14						
HFS				Pg	Pg	15 01 04.7	-4.7
	baz=204,slow=14						
HFS				Sn	Sn	15 01 42.0	+0.2
	baz=209,slow=22						
HFS				Lg		15 01 56.9	
	baz=203,slow=37						
HFS	Hagfors	4.02	16	Pg	Pg	15 01 04.7	-4.7
	SNR=8.4						
HFS				Sn	Sn	15 01 42.0	+0.1
	SNR=2.7						
BLS5	Blasjo	4.14	321	eP	Pn	15 00 55.3	+0.2
BLS5				eS	Sn	15 01 43.3	-1.7
NYNU	Nynaeshamn	4.42	49	P	Pn	15 01 00.1	+1.1
ODD1	Odda	4.46	326	eP	Pn	15 00 58.1	-1.5
NC6	NORSAR Subarra	4.47	360	Pn	Pn	15 00 59.4	-0.4
NC6				Sn	Sn	15 01 50.8	-2.5
NC6				Lg		15 02 10.8	
BACU	Backbrunna	4.64	37	P	Pn	15 01 02.6	+0.4
NB2	NORSAR Subarra	4.76	358	Pn	Pn	15 01 03.5	-0.5
NB2				Sn	Sn	15 01 57.4	-3.3
NB2				Lg		15 02 19.1	
FALU	Falun	4.79	27	P	Pn	15 01 04.5	+0.3
NRTU	Norrtaelje	5.08	45	P	Pn	15 01 09.3	+0.9
FLYU	Flymyra	5.11	39	P	Pn	15 01 09.0	+0.2
GRAU	Graesoe	5.49	40	P	Pn	15 01 13.7	-0.4
HEMU	Hemsoen	7.21	25	P	Pn	15 01 38.1	-0.3
FIA0	FINESS Array S	9.13	50	Pn	P	15 02 03.4	-1.8
	baz=256,slow=12						
FIA0	FINESS Array S	9.13	50	Pn	P	15 02 03.3	-1.9
	SNR=7.0						
ARA0	ARCESS Array S	14.67	20	Pn	P	15 03 14.6	-4.9
	baz=208,slow=14						

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*JMA **01** 15:05:23.5±0.5, 33.98N×141.84E, h51km, M3.7*

ISC 01 15:05:23.5±2.3, 34.0N±0.1×141.8E±0.2, h65km±42km, n13, $\sigma 0^{s}39$/15, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.96	313	P	P	15 05 41.1	-0.4
BSO3	Boso 3	1.36	306	P	P	15 05 47.0	0.0
BSO4	Boso 4	1.58	309	P	P	15 05 50.7	+0.7

KTR	Katsuura	1.70	313	P	P	15 05 52.2	+0.6
CHOJ	Chosi	1.88	335	P	P	15 05 53.9	-0.1
JHJ2	Mitsune	1.91	243	P	P	15 05 54.4	0.0
JIM2	Oshima 3	2.12	290	P	P	15 05 57.0	-0.3
JIZS	Izushimoda	2.55	287	P	P	15 06 03.4	-0.1
JIZS				*e*S	S	15 06 33.8	+0.4
JOD2	Odawara 2	2.59	300	P	P	15 06 03.4	-0.7
JYN	Shimob	3.10	300	P	P	15 06 11.1	-0.1
JAG	Ashikaga	3.11	322	P	P	15 06 11.3	0.0
JRY	Ryogami san	3.14	311	P	P	15 06 11.7	-0.1
MAT	Matsushiro	3.91	311	P	P	15 06 23.0	+0.5
MAT				S	S	15 07 07.1	-0.3

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*BJI **01** 15:33:52.2, 30.62N×141.72E, h28^{km}, mB5.1, mb4.5, Ms4.2, Msz3.7*

*MOS **01** 15:33:52.5±1.2, 30.34N×141.45E, h33^{km}, mb4.8/7, Error ellipse: s-maj=35.2km s-min=12.1km az=112.8*

*NEIC **01** 15:33:54.2±1.3, 30.49N×141.78E, mb4.6/7, Error ellipse: s-maj=49.9km s-min=11.1km az=71.0*

ISC 01 15:33:51.9±2.1**, 30.5N**±0.2×**141.9E**±0.3**, h42**^{km}±24^{km}**, h38**^{km}±3.4^{km}**:pP-P, n30,** σ**0**^{s}**.96**/34**, mb4.6**/15**, MS3.9**/2**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAJO	Matsushiro	6.71	334	*e*P	P	15 35 30.7	+0.2
MAT	Matsushiro	6.71	334	*e*P	P	15 35 30.0	-0.5
MAT				*e*S	S	15 36 43.0	-3.6
MAT	Matsushiro	6.71	334	P	P	15 35 30.4	-0.1
MAT				S	S	15 36 43.1	-3.5
YSS	Yuzh-Sakhalins	16.40	2	*e*P	P	15 37 46.0	+5.5
BJI	Beijing	22.94	301	P	P	15 38 53.9	+0.6
BJI				S	S	15 42 54.9	-1.2
BJI				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.5						
BJI				LR	LR		
	comp=N,226nm,10.8s,MS4.2						
BJI				LR	LR		
	comp=E,388nm,10.9s,MS4.2						
BJI				LR	LR		
	comp=Z,118nm,15.9s,MS3.4						
BJI	Beijing	22.94	301	P	P	15 38 53.9	+0.6
	comp=Z,12nm,0.6s,mb4.5						
BJI				S	S	15 42 54.9	-1.2
BTO	Baotou	27.64	300	*e*P	P	15 39 37.2	-0.5
XAN	Xi'an	28.00	286	P	P	15 39 38.6	-2.3
ULN	Ulaanbaatar	31.70	313	*e*P	P	15 40 15.4	+1.7
ULN				*e*	pP	15 40 26.9	+1.8
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
ULN	Ulaanbaatar	31.70	313	*e*P	P	15 40 15.4	+1.7
	comp=Z,6.1nm,0.7s,mb4.5						
ULN				*e*	pP	15 40 26.9	+1.8
BOD	Bodaibo	33.35	333	*e*P	P	15 40 25.4	-2.5
ZAK	Zakamensk	34.89	316	*e*P	P	15 40 42.7	+1.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
GTA	Gaotai	35.31	296	*e*P	P	15 40 45.7	+0.8
GTA				AP	pP	15 40 53.6	-2.9
GTA				XP	sP	15 40 56.9	-4.9
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,182nm,4.6s						
GTA				LR	LR		
	comp=N,146nm,14.5s,MS4.0						
GTA				LR	LR		
	comp=E,143nm,14.8s,MS4.0						
GTA				LR	LR		
	comp=Z,238nm,17.5s,MS4.0						
WMQ	Urumqi	44.40	303	*e*P	P	15 42 00.2	+0.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
NVS	Novosibirsk	47.76	318	*i* P	P	15 42 38.2	+12
JIRN	Jiri	48.31	281	*e*P	P	15 42 31.7	+0.5
	comp=Z,8.9nm,0.4s,mb5.2						
KKN	Kakani	49.04	282	*e*P	P	15 42 36.9	+0.1
	comp=Z,6.9nm,0.7s,mb4.8						
DMN	Daman	49.24	282	*e*P	P	15 42 39.1	+0.7
	comp=Z,3.3nm,0.4s,mb4.7						
GKN	Gorkha	49.52	282	*e*P	P	15 42 40.5	0.0
	comp=Z,4.1nm,0.4s,mb4.8						
KURK	Kurchatov	50.41	313	*e*P	P	15 42 47.4	+0.4
KURK				*e*	pP	15 42 58.9	0.0
KURK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KURK	Kurchatov	50.41	313	*e*P	P	15 42 47.4	+0.3
	comp=Z,13nm,1.0s,mb4.9						
KURK				*e*	pP	15 42 58.9	0.0
KOLN	Koldanda	50.47	282	*e*P	P	15 42 47.8	0.0
	comp=Z,12nm,1.0s,mb4.9						
CTAO	Charters Tower	50.52	175	P	P	15 42 48.3	+0.1
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CTAO	Charters Tower	50.52	175	P	P	15 42 48.3	0.0
	comp=Z,3.0nm,0.8s,mb4.3						
WRAB	Tennant Creek	50.70	189	*e*P	P	15 42 48.8	-0.8
WRAB				*e*	pP	15 43 00.0	-1.5
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
WRAB	Tennant Creek	50.70	189	*e*P	P	15 42 48.8	-0.9
	comp=Z,12nm,0.6s,mb5.0						
WRAB				*e*	pP	15 42 60.0	-1.5
AAK	Ala-Archa	54.11	303	*e*P	P	15 43 14.9	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
AAK	Ala-Archa	54.11	303	*e*P	P	15 43 14.9	+0.1
	comp=Z,4.1nm,0.7s,mb4.5						
CHKZ	Chkalovo	55.15	317	*e*P	P	15 43 21.5	-0.7
CHKZ				*e*	pP	15 43 33.8	-0.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
CHKZ	Chkalovo	55.15	317	*e*P	P	15 43 21.5	-0.7
	comp=Z,1.7nm,0.5s,mb4.3						
CHKZ				*e*	pP	15 43 33.8	-0.5

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*BJI **01** 15:37:53.6, 19.80S×178.20W, h556^{km}, mB5.1, mb4.8*

*NEIC **01** 15:37:53.7±1.4, 19.78S×178.20W, h556^{km}±16^{km}, mb4.8/29, Error ellipse: s-maj=11.5km s-min=8.6km az=69.0*

ISC 01 15:37:53.3±0.7**, 19.88S**±0.04×**178.26W**±0.07**, h567**^{km}±9^{km}**, n227,** σ**0**^{s}**.97**/167**, mb4.8**/35**, 21C-19D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.59	47	*e*P	P	15 39 58.0	0.0
AFI				*e*S	S	15 41 37.2	-0.4
DZM	Mont Dzumac	14.45	259	*e*P	P	15 41 00.4	+3.7
DZM	Mont Dzumac	14.45	259	*e*P	P	15 41 00.4	+3.6
NOUC	Port Laguerre	14.59	259	*e*P	P	15 41 01.4	+3.3
NOUC	Port Laguerre	14.59	259	*e*P	P	15 41 01.4	+3.3
OUZ	Omahuta	16.89	204	*e*P	P	15 41 25.1	+4.8
OUZ	Omahuta	16.89	204	PN	P	15 41 25.1	+4.9
OUZ	Omahuta	16.89	204	PN	P	15 41 25.1	+4.9
MTAZ	Motutapu	17.87	198	P	P	15 41 33.8	+4.1
MTAZ	Motutapu	17.87	198	PN	P	15 41 33.8	+4.2
MTAZ	Motutapu	17.87	198	PN	P	15 41 33.8	+4.2
KAAZ	Kauri Point	17.97	199	P	P	15 41 34.4	+3.8
KAAZ	Kauri Point	17.97	199	PN	P	15 41 34.4	+3.8
KAAZ	Kauri Point	17.97	199	PN	P	15 41 34.4	+3.8
OTAZ	Otara	18.02	198	P	P	15 41 35.0	+3.9
OTAZ	Otara	18.02	198	PN	P	15 41 35.0	+3.9
OTAZ	Otara	18.02	198	PN	P	15 41 35.0	+3.9
MKAZ	Moumakai	18.10	197	P	P	15 41 35.1	+3.3
MKAZ	Moumakai	18.10	197	PN	P	15 41 35.1	+3.3
MKAZ	Moumakai	18.10	197	PN	P	15 41 35.1	+3.3
WTAZ	Waiatarua	18.11	199	P	P	15 41 35.6	+3.7
WTAZ	Waiatarua	18.11	199	PN	P	15 41 35.6	+3.7
WTAZ	Waiatarua	18.11	199	PN	P	15 41 35.6	+3.7
PUZ	Puketiti	18.38	189	*e*P	P	15 41 34.7	+0.3
PUZ	Puketiti	18.38	189	PN	P	15 41 34.7	+0.3
PUZ				SN	S	15 44 31.2	-1.3
PUZ	Puketiti	18.38	189	PN	P	15 41 34.7	+0.3
PUZ				SN	S	15 44 31.2	-1.3
MWZ	Matawai	18.75	190	*e*P	P	15 41 37.3	-0.6
MWZ	Matawai	18.75	190	PN	P	15 41 37.3	-0.6
MWZ				SN	S	15 44 37.5	-1.2
MWZ	Matawai	18.75	190	PN	P	15 41 37.3	-0.6
MWZ				SN	S	15 44 37.5	-1.2
URZ	Urewera	18.75	191	*e*P	P	15 41 37.1	-0.8
URZ	Urewera	18.75	191	PN	P	15 41 36.7	-1.2
URZ	Urewera	18.75	191	PN	P	15 41 36.7	-1.2
MGZ	Maungaku	19.79	194	P	P	15 41 48.2	+0.5
MGZ	Maungaku	19.79	194	PN	P	15 41 48.2	+0.6
MGZ	Maungaku	19.79	194	PN	P	15 41 48.2	+0.6
NGZ	Ngauruhoe	19.95	194	P	P	15 41 49.3	+0.2
NGZ	Ngauruhoe	19.95	194	PN	P	15 41 49.3	+0.2
NGZ	Ngauruhoe	19.95	194	PN	P	15 41 49.3	+0.2
CNZ	Chateau	19.98	194	P	P	15 41 49.5	+0.1
CNZ	Chateau	19.98	194	PN	P	15 41 49.5	+0.1
CNZ	Chateau	19.98	194	PN	P	15 41 49.5	+0.1
TUVZ	Tukino	20.02	194	PN	P	15 41 49.7	-0.1
TUVZ	Tukino	20.02	194	PN	P	15 41 49.7	-0.1
TSZ	Takapari Road	20.71	193	P	P	15 41 55.7	-0.4
TSZ	Takapari Road	20.71	193	PN	P	15 41 55.7	-0.4
TSZ	Takapari Road	20.71	193	PN	P	15 41 55.7	-0.4
MRZ	Mangatainoka R	21.37	193	*e*P	P	15 42 01.0	-1.2
MRZ	Mangatainoka R	21.37	193	PN	P	15 42 01.0	-1.2
MRZ	Mangatainoka R	21.37	193	PN	P	15 42 01.0	-1.2
CAW	Cannon Point	21.91	194	P	P	15 42 06.4	-0.7
CAW	Cannon Point	21.91	194	PN	P	15 42 06.4	-0.7
CAW	Cannon Point	21.91	194	PN	P	15 42 06.4	-0.7
QRZ	Quartz Range	22.31	199	P	P	15 42 11.7	+1.0
QRZ	Quartz Range	22.31	199	PN	P	15 42 11.7	+1.0
QRZ	Quartz Range	22.31	199	PN	P	15 42 11.7	+1.0
NNZ	Nelson	22.43	197	P	P	15 42 11.3	-0.4
NNZ	Nelson	22.43	197	PN	P	15 42 11.3	-0.4
NNZ				SN	S	15 45 34.3	-4.8
NNZ	Nelson	22.43	197	PN	P	15 42 11.3	-0.4
NNZ				SN	S	15 45 34.3	-4.8
TUWZ	Tuamarina	22.48	195	PN	P	15 42 11.3	-0.9
TUWZ	Tuamarina	22.48	195	PN	P	15 42 11.3	-0.9
THZ	Tophouse	23.07	197	*e*P	P	15 42 17.2	-0.3
THZ	Tophouse	23.07	197	PN	P	15 42 16.9	-0.6
THZ	Tophouse	23.07	197	PN	P	15 42 16.9	-0.6
DSZ	Denniston Nort	23.37	199	*e*P	P	15 42 20.5	+0.3
DSZ	Denniston Nort	23.37	199	PN	P	15 42 20.5	+0.3
DSZ	Denniston Nort	23.37	199	PN	P	15 42 20.5	+0.3
KHZ	Kahutara	23.51	195	*e*P	P	15 42 20.5	-1.0
KHZ	Kahutara	23.51	195	PN	P	15 42 20.5	-0.9
KHZ				SN	S	15 45 51.3	-5.0
KHZ	Kahutara	23.51	195	PN	P	15 42 20.5	-0.9
KHZ				SN	S	15 45 51.3	-5.0
LTZ	Lake Taylor	24.19	197	*e*P	P	15 42 26.3	-1.2
LTZ	Lake Taylor	24.19	197	PN	P	15 42 26.3	-1.2
LTZ				SN	S	15 46 01.4	-5.7
LTZ	Lake Taylor	24.19	197	PN	P	15 42 26.3	-1.2
LTZ				SN	S	15 46 01.4	-5.7
WVZ	Waitaha Valley	24.91	199	*e*P	P	15 42 33.9	0.0
WVZ	Waitaha Valley	24.91	199	PN	P	15 42 33.6	-0.3
WVZ	Waitaha Valley	24.91	199	PN	P	15 42 33.6	-0.3
FOZ	Fox Glacier	25.68	200	PN	P	15 42 40.2	-0.5
FOZ	Fox Glacier	25.68	200	PN	P	15 42 40.2	-0.5
LBZ	Lake Benmore	26.27	199	*e*P	P	15 42 44.9	-0.9
LBZ	Lake Benmore	26.27	199	PN	P	15 42 44.9	-0.9
LBZ	Lake Benmore	26.27	199	PN	P	15 42 44.9	-0.9
JCZ	Jackson Bay	26.45	201	P	P	15 42 47.7	+0.3
JCZ	Jackson Bay	26.45	201	PN	P	15 42 47.1	-0.3
JCZ	Jackson Bay	26.45	201	PN	P	15 42 47.1	-0.3
WKZ	Wanaka	27.03	200	*e*P	P	15 42 52.1	-0.4
WKZ	Wanaka	27.03	200	PN	P	15 42 52.1	-0.3
WKZ	Wanaka	27.03	200	PN	P	15 42 52.1	-0.3
MSZ	Milford Sound	27.26	202	PN	P	15 42 55.6	+1.1
MSZ	Milford Sound	27.26	202	PN	P	15 42 55.6	+1.1
EAZ	Earnscleugh	27.30	199	*e*P	P	15 42 54.9	+0.1
EAZ	Earnscleugh	27.30	199	PN	P	15 42 54.9	+0.1
EAZ	Earnscleugh	27.30	199	PN	P	15 42 54.9	+0.1
MLZ	Mavora Lakes	27.77	201	*e*P	P	15 43 00.3	+1.4
MLZ	Mavora Lakes	27.77	201	PN	P	15 42 60.0	+1.1
MLZ	Mavora Lakes	27.77	201	PN	P	15 42 60.0	+1.1
DCZ	Deep Cove	28.23	202	PN	P	15 43 03.5	+0.6
DCZ	Deep Cove	28.23	202	PN	P	15 43 03.5	+0.6
CTA	Charters Tower	33.31	263	⇓*i*P	P	15 43 47.3	+1.0
	106nm,0.4s,mb5.7						
CTAO	Charters Tower	33.31	263	*e*P	P	15 43 47.1	+0.8
	158nm,0.5s,mb5.8						
PMG	Port Moresby	34.97	282	*e*P	P	15 44 01.0	+0.9
	178nm,0.9s,mb5.6						
STKA	Stephens Creek	37.84	243	*e*P	P	15 44 25.2	+1.6
	7.8nm,0.5s,mb4.5						
ASPA	Alice Springs	44.43	256	⇓*i*P	P	15 45 16.4	+0.3
ASPA				*i* S	S	15 51 07.9	-2.7
ASPA				*i* SCS	ScS	15 54 10.8	+1.0
WB2	Warramunga Arr	44.44	261	⇓*i*P	P	15 45 16.0	-0.2
WB2				*e*S	S	15 51 05.7	-5.0
WB2				*e*SCS	ScS	15 54 10.8	+0.9
WRAB	Tennant Creek	44.44	261	*e*P	P	15 45 15.7	-0.5
	47nm,0.5s,mb5.3						
KAKA	Kakadu	47.72	271	⇑*i*P	P	15 45 41.0	-0.3
	48nm,0.6s,mb5.2						
FORT	Forrest	49.32	246	⇑*i*P	P	15 45 52.6	-0.5
	80nm,0.5s,mb5.5						
FITZ	Fitzroy Crossi	52.87	262	⇓*i*P	P	15 46 18.7	-0.3
	30nm,0.4s,mb5.0						
KLBR	Kellerberrin	58.10	245	⇑*i*P	P	15 46 54.4	-0.6
	198nm,0.6s,mb5.5						
NWAO	Narrogin (SRO)	58.43	243	*e*P	P	15 46 56.8	-0.4
	7.8nm,0.8s,mb4.0						
VNDA	Vanda	58.50	185	*e*P	P	15 46 58.1	+1.0
	16nm,0.6s,mb4.4						
MUN	Mundaring	59.37	244	⇑*i*P	P	15 47 03.5	0.0
	14nm,0.5s,mb4.4						
MAT	Matsushiro	69.57	324	*e*P	P	15 48 06.0	-1.5
MAT	Matsushiro	69.57	324	P	P	15 48 06.4	-1.1
QSPA	South Pole Qui	70.18	180	*e*P	P	15 48 11.7	+1.3
	80nm,0.7s,mb5.4						
FX1	Attu Island--F	72.84	355	*e*P	P	15 48 23.8	-2.4
UNV	Unalaska Valle	74.12	7	*e*P	P	15 48 30.8	-2.5
YSS	Yuzh-Sakhalins	75.23	334	*e*P	P	15 48 40.0	+0.3
	32nm,0.6s,mb4.9						
SSE	Sheshan	77.11	310	*e*P	P	15 48 50.4	+0.1
SSE				AMB	AMB		
	comp=Z,22nm,0.7s,mb4.7						
SSE				AMB	AMB		
	comp=Z,232nm,5.9s						
SSE	Sheshan	77.11	310	*e*P	P	15 48 50.4	+0.1
	comp=Z,22nm,0.7s,mb4.7						
NJ2	Nanjing	79.30	310	*e*P	P	15 49 02.3	+0.4
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.0						
MDJ	Mudanjiang	79.88	325	P	P	15 49 05.1	+0.5
MDJ				AP	pP	15 51 05.3	-0.5
MDJ				PP	PP	15 52 16.6	-0.1
MDJ				S	S	15 58 21.4	-0.3
MDJ				AMB	AMB		
	comp=Z,31nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,166nm,3.8s						
CN2	Changchun	81.66	322	*e*P	P	15 49 17.3	+3.5
CN2				*e*S	S	15 58 35.1	-4.5
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
CN2				AMB	AMB		
	comp=Z,410nm,4.0s						
MAW	Mawson	82.06	200	*e*P	P	15 49 16.0	+0.7
	comp=Z,14nm,0.7s,mb4.5						
WVOR	Wild Horse Val	82.81	40	*e*P	P	15 49 20.3	+0.7
	comp=Z,9.0nm,1.0s,mb4.2						
BMO	Blue Mountains	84.99	39	*e*P	P	15 49 30.0	-0.3
	comp=Z,2.7nm,0.8s,mb3.8						
BJI	Beijing	85.28	315	P	P	15 49 31.8	0.0
BJI				S	S	15 59 08.2	-6.4
BJI				AMB	AMB		
	comp=Z,25nm,0.7s,mb4.8						
TNA	Tin City	85.54	4	*e*P	P	15 49 31.4	-1.0
GYA	Guiyang	86.13	300	P	P	15 49 36.7	+0.5
GYA				AP	pP	15 51 33.5	-6.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
MCK	McKinley	86.42	13	*e*P	P	15 49 35.2	-1.5
	comp=Z,6.6nm,0.7s,mb4.4						
MNTX	Cornudas Mount	86.59	55	*e*P	P	15 49 39.5	+1.3
	comp=Z,8.6nm,1.1s,mb4.3						
THY	Trims Highway	86.84	14	*e*P	P	15 49 38.2	-0.4
LTX	Lajitas	86.93	57	*e*P	P	15 49 41.3	+1.4
	comp=Z,12nm,0.9s,mb4.5						
SYO	Syowa Base	87.27	193	⇑P	P	15 49 41.0	+0.5
SYO	Syowa Base	87.27	193	⇓PcP	PcP	15 49 43.5	+1.3
SYO	Syowa Base	87.27	193	⇓PP	PP	15 53 15.3	-1.3
XAN	Xi'an	87.56	307	P	P	15 49 43.3	+0.5
XAN				AMB	AMB		
	comp=Z,32nm,0.8s,mb5.1						
MCMT	McKenzie Canyo	87.64	40	*e*P	P	15 49 43.9	+1.0
COLA	College	87.66	12	*e*P	P	15 49 41.1	-1.4
	comp=Z,30nm,0.7s,mb5.1						
IMA	Indian Mountai	87.68	10	*e*P	P	15 49 42.5	0.0
RRI2	Red Ridge	87.84	42	*e*P	P	15 49 43.5	-0.3
TPAW	Teton Pass	88.14	42	*e*P	P	15 49 45.3	+0.1
CPRX	Cap Rock	88.32	54	*e*P	P	15 49 46.8	+0.5
IMW	Indian Meadow	88.35	42	*e*P	P	15 49 47.1	+0.9
BILL	Bilibino	88.40	354	*e*P	P	15 49 44.0	-1.8
	comp=Z,5.4nm,0.6s,mb4.5						
QLMT	Earthquake Lak	88.51	41	*e*P	P	15 49 47.9	+0.9
HHC	Hu-ho-hao-te	88.75	314	*e*P	P	15 49 48.5	+0.4
HHC				AMB	AMB		
	comp=Z,14nm,1.3s,mb4.6						
VNA3	Neumayer Olymp	88.77	176	⇑*i*P	P	15 49 48.6	+1.0
BOZ	Bozeman (W)	88.80	40	*e*P	P	15 49 48.3	0.0
	comp=Z,12nm,1.3s,mb4.6						
KMI	Kunming	88.85	297	P	P	15 49 49.8	+0.8
KMI				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
KMI	Kunming	88.85	297	P	P	15 49 49.8	+0.8
	comp=Z,20nm,0.8s,mb5.0						
VNA2	Neumayer--Watz	89.21	177	⇓*i*P	P	15 49 51.4	+1.8
VNA1	Neumayer--Stat	89.44	177	⇑*i*P	P	15 49 50.5	-0.2
CM31	Chiang Mai Arr	89.68	290	*e*P	P	15 49 54.0	+1.0
	comp=Z,4.6nm,0.6s,mb4.5						
YAK	Yakutsk	91.45	338	*e*P	P	15 49 58.5	-1.5
	comp=Z,26nm,0.8s,mb5.2						
LZH	Lanzhou	92.20	308	⇓P	P	15 50 03.7	-0.4
LZH				PP	PP	15 53 57.6	+1.5
LZH				AMB	AMB		
	comp=Z,32nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,135nm,5.7s						
LZH	Lanzhou	92.20	308	⇓P	P	15 50 03.7	-0.4
	comp=Z,32nm,1.4s,mb5.2						
LZH				pP	pP	15 52 15.4	+6.6
LZH				sP	sP	15 53 14.8	+10
LZH				PP	PP	15 53 57.6	+1.5
ULN	Ulaanbaatar	94.74	319	*e*P	P	15 50 14.5	-0.9
	comp=Z,2.8nm,0.5s,mb4.7						
NB2	NORSAR Subarra	138.34	353	PKP	PKPdf	15 56 04.4	-10
	comp=Z,0.5nm,0.5s,baz=16,slow=3.1						
MALT	Malatya	143.36	308	*e*PKP	PKPdf	15 56 23.2	-0.3
GKP	Gorka Klasztor	144.59	344	*e*P	PKPdf	15 56 26.9	+1.8
GKP	Gorka Klasztor	144.59	344	*e*PKP	PKPdf	15 56 26.9	+1.8
MBAR	Mbarara	145.04	238	*e*PKPdf	PKPdf	15 56 28.9	+1.8
BSEG	Bad Segeberg	145.38	351	*e*PKPbc	PKPbc	15 56 28.5	+0.9
DMUB	Kingscourt	145.40	9	*e*P	PKPdf	15 56 28.0	+1.5
DCN	Croghan	145.88	10	*e*P	PKPdf	15 56 29.0	+1.7
KWP	Kalwaria	145.92	335	*e*P	PKPdf	15 56 30.2	+2.7
KWP	Kalwaria	145.92	335	*e*PKP	PKPdf	15 56 30.2	+2.7
DLF	Lyons Farm	146.04	9	*e*P	PKPdf	15 56 30.0	+2.4
BURAR	Bucovina Array	146.41	331	⇑*i*P	PKPdf	15 56 32.2	+3.8
OJC	Ojcow	146.50	339	*e*PKP	PKPdf	15 56 31.3	+2.9
CFR	Carcaliu	146.64	325	⇓*i*P	PKPdf	15 56 32.0	+3.2
CFR	Carcaliu	146.64	325	⇓*i*P	PKPdf	15 56 32.0	+3.2
KOLS	Kolonicke sedl	146.65	335	*i* PKP	PKPdf	15 56 32.8	+4.1
CRVS	Cervenica-Dubn	146.99	336	*i* PKP	PKPdf	15 56 33.3	+4.0
NIE	Niedzica	146.99	338	*e*PKP	PKPdf	15 56 33.5	+4.2
KSP	Ksiaz	147.03	343	*e*PKP	PKPdf	15 56 33.4	+4.1
KSP				*e*		15 56 37.0	
KSP				*e*pPKP		15 58 50.5	
KSP	Ksiaz	147.03	343	*e*PKP	PKPdf	15 56 33.6	+4.3
HARR	Harsova	147.07	325	⇑*i*P	PKPdf	15 56 33.8	+4.2
HARR	Harsova	147.07	325	⇑*i*P	PKPdf	15 56 33.8	+4.2
OKC	Ostrava-Krasne	147.37	340	⇑*e*PKPB	PKPdf	15 56 34.2	+4.3
OKC				*e*PKPAB	PKPab	15 56 39.5	-0.2
CLZ	Clausthal	147.40	350	*e*PKPbc	PKPdf	15 56 34.1	+4.2
CLZ				*e*pPKPbc		15 58 51.8	
CLL	Collm	147.41	347	⇓*i*PKP1	PKPdf	15 56 34.1	+4.2
CLL				*i* PKP2	PKPab	15 56 37.7	-2.1
CLL				*i* *PPKP		15 58 51.6	
CLL				*i*		15 58 55.6	
UPC	Upice	147.41	343	⇑*e*PKPB	PKPdf	15 56 34.4	+4.5
UPC				*e*PKPAB	PKPab	15 56 38.5	-1.3
DPC	Dobruska-Polom	147.47	343	⇑*e*PKPB	PKPdf	15 56 34.8	+4.8
DPC				*e*PKPAB	PKPab	15 56 39.2	-0.9
MLR	Muntele Rosu	147.57	327	⇓*i*P	PKPdf	15 56 34.3	+4.0
MLR	Muntele Rosu	147.57	327	⇓*i*P	PKPdf	15 56 34.3	+3.9
BRG	Berggiesshubel	147.60	346	⇓*i*P	PKPdf	15 56 34.7	+4.5
BRG				*i*		15 56 38.8	
MORC	Moravsky Berou	147.62	341	*e*PKPbc	PKPdf	15 56 34.9	+4.6
PVCC	Panska Ves	147.77	345	⇑*e*PKPB	PKPdf	15 56 35.4	+4.9
PVCC				*e*PKPAB	PKPab	15 56 39.7	-1.5
PRU	Pruhonice	148.28	344	⇑*e*PKPB	PKPdf	15 56 36.4	+5.1
PRU				*e*PKPAB	PKPab	15 56 42.2	-1.1
VYHS	Vyhne	148.30	338	*i* PKP	PKPdf	15 56 36.8	+5.4
MOX	Moxa	148.32	348	*e*PKP	PKPdf	15 56 36.7	+5.4
PSZ	Piszkesteto	148.40	336	*e*PKPbc	PKPdf	15 56 36.8	+5.3
PSZ	Piszkesteto	148.40	336	⇓*e*PKP/F	PKPdf	15 56 36.8	+5.3
EIL	Elat	148.41	295	*e*PKPbc	PKPdf	15 56 37.5	+5.3
NKC	Novy Kostel	148.54	347	⇑*e*PKPB	PKPdf	15 56 37.2	+5.5
NKC				*e*PKPAB	PKPab	15 56 42.6	-1.8
SMOL	Smolenice	148.76	340	*i* PKP	PKPdf	15 56 38.7	+6.6
TNS	Taunus Mts	149.26	352	*e*PKPbc	PKPdf	15 56 38.7	+5.9
GRA1	Grafenberg Arr	149.31	348	*e*PKPbc	PKPdf	15 56 38.9	+6.0
GRA1				*e*PKPab	PKPab	15 56 46.2	-1.3
GRF	Grafenberg Arr	149.31	348	*e*PKP	PKPdf	15 56 38.9	+6.0
GRF				*e*PKP	PKPab	15 56 46.2	-1.3
KHC	Kasperske Hory	149.31	345	*e*PKPDF	PKPdf	15 56 34.2	+1.3
KHC				⇑*e*PKPB	PKPdf	15 56 39.2	+6.3
KHC				*e*PKPAB	PKPab	15 56 46.8	-0.7
WET	Wettzell	149.47	346	*e*PKPbc	PKPdf	15 56 39.8	+6.6
WET				*e*PKPab	PKPab	15 56 46.7	-1.5
GEC2	GERESS Array S	149.54	344	*e*PKPbc	PKPdf	15 56 39.3	+6.0
GIVF	Givet	149.75	356	*e*PKP1	PKPdf	15 56 39.8	+6.2
	comp=Z,40nm,0.6s						
BAIF	Baives	149.83	357	*e*PKP1	PKPdf	15 56 40.1	+6.4
	comp=Z,24nm,0.6s						
WLF	Walferdange	150.08	354	*e*PKPbc	PKPdf	15 56 41.3	+7.1
MOA	Molln	150.31	343	⇓*i*P	PKPdf	15 56 41.0	+6.4
MOA				*i*		15 56 52.3	
FUR	Furstenfeldbru	150.75	347	*e*PKPbc	PKPdf	15 56 42.1	+6.9
BFO	Black Forest	151.12	351	*e*PKPbc	PKPdf	15 56 43.0	+7.2
FLN	La Foliniere	151.13	3	*e*PKP1	PKPdf	15 56 42.5	+6.7
	comp=Z,29nm,0.7s						
PERS	Pernice	151.15	341	*i* P	PKPdf	15 56 42.5	+6.6
CDF	Champ du Feu	151.19	352	*e*PKP1	PKPdf	15 56 43.0	+7.2
	comp=Z,7.8nm,0.5s						
KBA	Koelnbreinsper	151.26	343	⇓*i*P	PKPdf	15 56 42.7	+6.7
KBA				*i*		15 56 55.4	
LDF	La Druitiere	151.32	3	*e*PKP1	PKPdf	15 56 42.8	+6.8
	comp=Z,14nm,0.6s						
ROSF	Rostrenen	151.33	7	*e*PKP1	PKPdf	15 56 42.7	+6.7
	comp=Z,23nm,0.7s						
WATA	Walderalm	151.47	346	⇑*i*P	PKPdf	15 56 43.5	+7.2
WATA				*i*		15 56 56.9	
SGMF	Saint Gilles	151.48	6	*e*PKP1	PKPdf	15 56 43.1	+6.8
	comp=Z,23nm,0.7s						
GRR	Gorron	151.49	4	*e*PKP1	PKPdf	15 56 43.5	+7.2
	comp=Z,19nm,0.6s						
WTTA	Wattenberg	151.52	346	⇑*i*P	PKPdf	15 56 43.9	+7.5
WTTA				*i*		15 56 55.8	
MOTA	Moosalm	151.56	347	⇑*i*P	PKPdf	15 56 43.7	+7.3
MOTA				*i*		15 56 55.5	
SQTA	Sankt Quirin	151.66	346	⇓*i*P	PKPdf	15 56 44.1	+7.6
HAU	Haudompre	151.70	353	*e*PKP1	PKPdf	15 56 44.0	+7.4
	comp=Z,6.9nm,0.4s						
QUIF	Quistinic	151.75	7	*e*PKP1	PKPdf	15 56 43.6	+6.9
HINF	Hinteralfeld	151.83	353	*e*PKP1	PKPdf	15 56 43.3	+6.5
DAVA	Damuels	151.87	348	⇑*i*P	PKPdf	15 56 44.9	+8.1
CABF	La Chapelle	153.10	353	*e*PKP1	PKPdf	15 56 48.3	+10
MFF	Saint Martin d	153.31	3	*e*PKP1	PKPdf	15 56 47.4	+8.6
MBDF	Montbardon	154.87	352	*e*PKP1	PKPdf	15 56 51.8	+11
	comp=Z,11nm,0.7s						

IGQ 01 15:42:43.3, 1.62S×81.33W, h12^{km}±13^{km}**, mb4.3, 1C, Error ellipse: s-maj=14.1km s-min=6.5km az=43.1, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.96	54	⇑P	Pb	15 42 59.9	-1.5
HOJA				S	Sb	15 43 14.2	+0.4
IGUA	Igualata	2.69	87	P	Pn	15 43 28.0	+0.8
ARRY	Arrayan	2.87	88	P	Pn	15 43 30.7	+1.0
ARRY				S	Sn	15 44 05.4	+0.8
ULBA	Ulba	2.92	87	P	Pn	15 43 31.6	+1.1
PISA	Pisayambo	2.99	79	P	Pn	15 43 34.0	+2.5
NAS1	Nasa	3.01	71	P	Pn	15 43 35.3	+3.5

VC1	**Cotopaxi 1**	**3.08**	**72**	P	Pn	15 43 35.7	+3.0
PINO	**Pino**	**3.08**	**62**	P	Pn	15 43 33.7	+1.0
TAMB	**Tambo**	**3.10**	**73**	P	Pn	15 43 34.9	+2.0
YANA	**Yana**	**3.13**	**62**	P	Pn	15 43 35.4	+1.9
ANTI	**Antisana**	**3.37**	**70**	P	Pn	15 43 38.0	+1.2
COTA	**Cotacachi**	**3.56**	**57**	P	Pn	15 43 40.0	+0.4
CAYA	**Cayambe**	**3.73**	**63**	P	Pn	15 43 44.6	+2.6

BJI ***01*** *15:54:10.1, 9.77N×93.93E, h42^{km}, mB5.3, mb4.9, Ms4.9, Msz4.6*

MOS ***01*** *15:54:11.8±1.1, 10.07N×94.31E, h39^{km}, mb5.2/20, MS4.4/4, Error ellipse: s-maj=16.4km s-min=8.1km az=106.4*

HRVD ***01*** *15:54:12.0±0.4, 9.96N×94.12E, h12^{km}, MW5.0/52, Centroid moment Tensor Solution. LP body waves: s19,c22;Mantle waves: s52,c86; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.50±.14; $M_{\theta\theta}$1.38±.12; $M_{\phi\phi}$1.12±.13; $M_{r\theta}$0.39±.42; $M_{\theta\phi}$2.63±.10; $M_{\phi r}$-0.19±.38; Best double couple: $M_0$3.261×10^{16} NP1:ϕ_s29°,δ46°, λ-115°. NP2:ϕ_s243°,δ49°,λ-66°. Principal axes: T 3.887, Plg1°, Azm317°; N -1.251, Plg18°, Azm47°; P -2.636, Plg72°, Azm222°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***01*** *15:54:12.0±0.3, 9.96N×94.10E, mb5.0/29 Error ellipse: s-maj=8.3km s-min=7.7km az=166.0*

ISC 01 15:54:10.0±1.2**, 9.99N**±0.04×**94.13E**±0.03**, h26^{km}**±**8^{km}, h24^{km}**±2.0^{km}**:pP-P, n153,** σ1^s**17**/161**, mb4.9**/49**, MS4.5**/17**, 8C-16D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.07**	**64**	P	**Pn**	**15 55 39.8**	**-0.8**
SNG	**Songkhla**	**7.00**	**113**	P	**Pn**	**15 55 52.0**	**-1.5**
	142nm,1.0s						
NST	**Nakhon Sawan**	**8.13**	**45**	P	**P**	**15 56 08.5**	**-1.0**
CM31	**Chiang Mai Arr**	**9.62**	**28**	*e*P	**P**	**15 56 30.8**	**+0.7**
CHG	**Chiang Mai**	**9.94**	**27**	⇑P	**P**	**15 56 35.7**	**+1.3**
	34nm,1.0s						
VIS	**Vishakhapatnam**	**13.00**	**307**	*e*P	**P**	**15 57 12.5**	**-3.3**
VIS				*e*S	**S**	**15 59 28.5**	**-12**
VIS				*e*		15 59 35.4	
	comp=E,88nm,0.9s						
VIS				*e*		15 59 35.5	
	comp=N,126nm,1.0s						
BWNR	**Bhubaneshwar**	**13.02**	**323**	*e*P	**P**	**15 57 12.0**	**-4.1**
BWNR				*e*S	**S**	**15 59 28.4**	**-13**
BWNR				*e*		15 59 29.8	
	comp=E,92nm,0.8s						
BWNR				*e*		15 59 29.8	
	comp=N,33nm,0.4s						
PALK	**Pallekele**	**13.55**	**260**	*e*P	**P**	**15 57 21.3**	**-2.0**
CAL	**Calcutta**	**13.66**	**337**	*e*	**P**	**15 57 28.3**	**+3.6**
CAL				*e*		16 00 22.0	
CAL				*e*		16 01 17.4	
MDRS	**Chennai**	**13.94**	**284**	*e*	**P**	**15 57 28.0**	**-0.5**
MDRS				*e*		16 00 17.0	
HYB	**Hyderabad**	**16.83**	**298**	*e*P	**P**	**15 58 08.0**	**+2.3**
	comp=N,71nm,1.2s						
HYB				*e*S	**S**	**16 01 10.0**	**-0.8**
HYB	**Hyderabad**	**16.83**	**298**	*i* P	**P**	**15 58 08.0**	**+2.3**
	comp=N,71nm,1.2s						
HYB				*e*S	**S**	**16 01 10.0**	**-0.8**
KMI	**Kunming**	**17.13**	**27**	P	**P**	**15 58 13.2**	**+3.7**
KMI				AP		15 58 19.5	
KMI				PP	PP	15 58 29.1	+5.3
KMI				XS		16 01 42.3	
KMI				AMB	AMB		
	comp=Z,57nm,1.4s						
KMI				AMB	AMB		
	comp=Z,720nm,6.1s						
KMI				LR	LR		
	comp=N,1µm,11.7s						
KMI				LR	LR		
	comp=E,848nm,7.1s						
KMI				LR	LR		
	comp=Z,1µm,12.2s						
KMI	**Kunming**	**17.13**	**27**	P	**P**	**15 58 13.2**	**+3.7**
	comp=Z,57nm,1.4s						
KMI				pP		15 58 19.5	
KMI				PP	PP	15 58 29.1	+5.3
KMI				PPP	PPP	15 58 37.5	+5.6
KMI				S	**S**	**16 01 32.4**	**+15**
KMI				sS		16 01 42.3	
KMI				SSS	SSS	16 02 09.2	+17
QIZ	**Qiongzhong**	**17.66**	**58**	P	**P**	**15 58 17.5**	**+1.5**
QIZ				S	**S**	**16 01 30.1**	**+0.5**
QIZ				AMB	AMB		
	comp=Z,492nm,6.9s						
QIZ				LR	LR		
	comp=N,1µm,9.3s						
QIZ				LR	LR		
	comp=E,1µm,9.6s						
QIZ				LR	LR		
	comp=Z,2µm,9.7s						
NGP	**Nagpur**	**18.26**	**309**	*e*P	**P**	**15 58 24.7**	**+1.0**
NGP				*e*		16 01 55.8	
JIRN	**Jiri**	**19.11**	**338**	*e*P	**P**	**15 58 33.4**	**-0.3**
	comp=Z,389nm,1.1s						
MNGI	**Mangalore**	**19.15**	**281**	*i* P	**P**	**15 58 34.0**	**-0.3**
MNGI				*e*S	**S**	**16 02 10.5**	**+7.0**
PKI	**Pulchoki**	**19.32**	**336**	*e*P	**P**	**15 58 35.6**	**-0.7**
	comp=Z,1µm,2.2s						
DMN	**Daman**	**19.48**	**335**	*e*P	**P**	**15 58 37.8**	**-0.3**
	comp=Z,275nm,1.1s						
KKN	**Kakani**	**19.57**	**336**	*e*P	**P**	**15 58 38.6**	**-0.5**
	comp=Z,346nm,1.2s						
LSA	**Lhasa**	**19.81**	**352**	P	**P**	**15 58 40.6**	**-1.1**
GKN	**Gorkha**	**20.02**	**335**	*e*P	**P**	**15 58 43.6**	**-0.4**
	comp=Z,170nm,0.8s						
GYA	**Guiyang**	**20.22**	**34**	⇓*i*P	**P**	**15 58 46.3**	**+0.2**
GYA				AP		15 58 53.5	
GYA				AMB	AMB		
	comp=Z,60nm,1.2s						
GYA				AMB	AMB		
	comp=Z,200nm,2.6s						
GYA				LR	LR		
	comp=N,850nm,15.3s,MS4.4						
GYA				LR	LR		
	comp=E,810nm,14.1s,MS4.4						
GYA				LR	LR		
	comp=Z,2µm,15.3s,MS4.5						
KOLN	**Koldanda**	**20.28**	**332**	*e*P	**P**	**15 58 46.3**	**-0.3**
	comp=Z,301nm,1.1s						
KAD	**Karad**	**20.69**	**293**	*e*P	**P**	**15 58 50.7**	**-0.2**
KAD				*e*		15 58 56.9	
	comp=Z,82nm,1.3s						
BHPL	**Bhopal**	**20.70**	**312**	*e*P	**P**	**15 58 50.5**	**-0.5**
BHPL				*e*		15 58 56.7	
	comp=Z,58nm,1.2s						
BHPL				*e*S	**S**	**16 02 41.3**	**+5.3**
POO	**Poona**	**21.39**	**296**	*e*P	**P**	**15 58 55.7**	**-2.4**
POO				*e*P		15 58 57.0	
POO				*e*		15 59 01.7	
	comp=Z,64nm,1.2s						
CD2	**Chengdu**	**22.66**	**22**	P	**P**	**15 59 12.0**	**+1.3**
CD2				XP		15 59 22.4	
CD2				PP	PP	15 59 41.4	+2.0
CD2				S	**S**	**16 03 12.7**	**+0.2**
CD2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
CD2				AMB	AMB		
	comp=Z,600nm,5.1s						
CD2				LR	LR		
	comp=N,1µm,10.2s						
CD2				LR	LR		
	comp=Z,2µm,12.6s,MS4.7						
LGTI	**Lohaghat**	**23.32**	**328**	*e*P	**P**	**15 59 19.5**	**+2.4**
NDI	**New Delhi**	**24.45**	**322**	*e*P	**P**	**15 59 26.0**	**-2.1**
NDI				*e*S	**S**	**16 03 45.0**	**+1.4**
AJM	**Ajmer**	**24.67**	**314**	⇓*i*P	**P**	**15 59 32.0**	**+1.7**
DDI	**Dehra Dun**	**25.18**	**326**	*e*P	**P**	**15 59 38.0**	**+2.9**
DDI				*e*		16 04 14.7	
SDNR	**Sundarnagar**	**26.68**	**326**	*e*	**P**	**15 59 38.0**	**-11**
LZH	**Lanzhou**	**27.44**	**17**	⇓P	**P**	**15 59 56.9**	**+1.0**
LZH				AP	pP	16 00 04.9	+1.4
LZH				XP	sP	16 00 08.1	+1.1
LZH				PP	PP	16 00 45.0	+1.2
LZH				*e*S	**S**	**16 04 27.5**	**-5.5**
LZH				SS	SS	16 05 50.4	-0.6
LZH				AMB	AMB		
	comp=Z,43nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,197nm,4.9s						
LZH				LR	LR		
	comp=N,2µm,12.3s						
LZH				LR	LR		
	comp=Z,3µm,14.9s,MS5.0						
LZH	**Lanzhou**	**27.44**	**17**	⇓P	**P**	**15 59 56.9**	**+1.0**
	comp=Z,43nm,1.5s,mb4.8						
LZH				pP	pP	16 00 04.9	+1.4
LZH				sP	sP	16 00 08.1	+1.1
LZH				PP	PP	16 00 45.0	+1.2
LZH				*e*S	**S**	**16 04 27.5**	**-5.5**
LZH				sS		16 04 48.1	
LZH				SS	SS	16 05 50.4	-0.6
XAN	**Xi'an**	**27.52**	**27**	P	**P**	**15 59 55.6**	**-1.0**
XAN				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.7						
XAN				LR	LR		
	comp=N,675nm,13.9s,MS4.5						
XAN				LR	LR		
	comp=E,575nm,14.0s,MS4.5						
XAN				LR	LR		
	comp=Z,1µm,15.5s,MS4.6						
WHN	**Wuhan**	**27.80**	**40**	P	**P**	**16 00 00.0**	**+0.8**
THN	**Thein Dam**	**28.08**	**325**	*e*P	**P**	**16 00 01.0**	**-0.7**
THN				*e*S	**S**	**16 04 48.6**	**+5.3**
GTA	**Gaotai**	**29.74**	**9**	*e*P	**P**	**16 00 16.8**	**+0.2**
GTA				AP	pP	16 00 25.0	+0.8
GTA				XP	sP	16 00 28.4	+0.8
GTA				PP	PP	16 01 14.1	+0.5
GTA				PCP	PcP	16 03 22.2	+2.0
GTA				S	**S**	**16 05 10.3**	**+0.5**
GTA				PCS		16 07 03.4	
GTA				AMB	AMB		
	comp=Z,24nm,1.2s,mb4.8						
GTA				AMB	AMB		
	comp=Z,233nm,4.2s						
GTA				LR	LR		
	comp=N,268nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=E,368nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=Z,405nm,12.5s,MS4.3						
NJ2	**Nanjing**	**31.70**	**43**	*e*P	**P**	**16 00 34.5**	**+0.5**
NJ2				AP	pP	16 00 44.0	+2.3
NJ2				XP	sP	16 00 48.0	+3.0
NJ2				PP	PP	16 01 39.9	+0.7
NJ2				S	**S**	**16 05 40.0**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,1µm,4.9s						
NJ2				LR	LR		
	comp=N,1µm,13.6s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,14.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,1µm,14.5s,MS4.8						
SSE	**Sheshan**	**32.75**	**46**	*e*P	**P**	**16 00 43.6**	**+0.5**
SSE				AP	pP	16 00 52.1	+1.3
SSE				S	**S**	**16 06 00.5**	**+3.4**
SSE				XS		16 06 13.7	
SSE				AMB	AMB		
	comp=Z,32nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,32nm,3.1s						
SSE				LR	LR		
	comp=N,768nm,12.9s,MS4.6						
SSE				LR	LR		
	comp=E,214nm,12.9s,MS4.6						
SSE				LR	LR		
	comp=Z,694nm,7.3s						
SSE	**Sheshan**	**32.75**	**46**	*e*P	**P**	**16 00 43.6**	**+0.5**
	comp=Z,32nm,0.8s,mb5.3						
SSE				pP	pP	16 00 52.1	+1.3
SSE				S	**S**	**16 06 00.5**	**+3.4**
SSE				sS		16 06 13.7	
SSE				SS	SS	16 08 21.4	+26
KSH	**Kashi**	**33.57**	**334**	*e*P	**P**	**16 00 49.1**	**-1.1**
KSH				*e*AP	pP	16 00 56.1	-1.8
KSH				*e*XP	sP	16 01 00.7	-0.5
KSH				*e*PP	PP	16 02 02.0	-0.8
KSH				*e*PCP	PcP	16 03 30.1	-0.4
KSH				*e*S	**S**	**16 06 06.6**	**-3.1**
KSH				*e*SCS	ScS	16 11 12.4	+0.6
KSH				AMB	AMB		
	comp=Z,200nm,1.6s,mb5.8						
KSH				AMB	AMB		
	comp=Z,70nm,2.8s,mb5.1						
KSH				LR	LR		
	comp=N,460nm,5.3s						
KSH				LR	LR		
	comp=E,580nm,5.2s						
BTO	**Baotou**	**33.59**	**22**	*e*P	**P**	**16 00 49.1**	**-1.2**
WMQ	**Urumqi**	**34.17**	**352**	*e*P	**P**	**16 00 54.8**	**-0.5**
WMQ				XP	sP	16 01 08.4	+2.1
WMQ				PP	PP	16 02 09.0	-1.1
WMQ				S	**S**	**16 06 17.0**	**-2.0**
WMQ				SS	SS	16 08 25.0	-3.2
WMQ				AMB	AMB		
	comp=Z,15nm,0.8s,mb5.0						
WMQ				LR	LR		
	comp=N,278nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=E,345nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,284nm,16.0s,MS4.1						
HHC	**Hu-ho-hao-te**	**34.39**	**24**	⇓*i*P	**P**	**16 00 58.2**	**+0.9**
HHC				AP	pP	16 01 08.1	+3.1
HHC				XP	sP	16 01 11.9	+3.6
HHC				PP	PP	16 02 19.1	+6.0
HHC				PCP	PcP	16 03 26.2	-6.6
HHC				S	**S**	**16 06 28.4**	**+5.9**
HHC				XS		16 06 47.6	
HHC				SCS	ScS	16 11 11.3	-4.8
HHC				AMB	AMB		
	comp=Z,33nm,1.5s,mb5.0						
HHC				AMB	AMB		
	comp=Z,406nm,5.1s						
HHC				LR	LR		
	comp=N,479nm,16.6s,MS4.5						
HHC				LR	LR		
	comp=E,549nm,13.5s,MS4.5						
HHC				LR	LR		
	comp=Z,487nm,14.4s,MS4.4						
BJI	**Beijing**	**35.77**	**30**	P	**P**	**16 01 10.3**	**+1.3**
BJI				AMB	AMB		
	comp=Z,32nm,0.8s,mb5.3						
BJI				LR	LR		
	comp=N,493nm,18.7s,MS4.5						
BJI				LR	LR		
	comp=E,543nm,19.5s,MS4.5						
BJI				LR	LR		
	comp=Z,270nm,26.6s						
BJI	**Beijing**	**35.77**	**30**	P	**P**	**16 01 10.3**	**+1.3**
	comp=Z,32nm,0.8s,mb5.3						
BJI				pP	pP	16 01 13.5	-3.3
BJI				sP	sP	16 01 14.8	-5.3
BJI				S	**S**	**16 07 00.2**	**+16**
BJI				SS	SS	16 09 47.3	+42
UCH	**Uchtor**	**36.44**	**335**	P	**P**	**16 01 15.4**	**+0.8**
	SNR=9.7						
KBK	**Karagaybulak**	**36.62**	**336**	P	**P**	**16 01 16.7**	**+0.6**
	SNR=14						
AML	**Almayashu**	**36.70**	**334**	P	**P**	**16 01 17.4**	**+0.6**
	SNR=29						
AAK	**Ala-Archa**	**36.78**	**336**	P	**P**	**16 01 18.3**	**+0.9**
	SNR=8.7						
AAK	**Ala-Archa**	**36.78**	**336**	*c* *i*P	**P**	**16 01 17.3**	**-0.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
AAK	**Ala-Archa**	**36.78**	**336**	*e*P	**P**	**16 01 17.0**	**-0.5**
	comp=Z,25nm,1.0s,mb5.0						
FRU	**Bishkek**	**36.90**	**336**	*e*P	**P**	**16 01 19.0**	**+0.5**
FRU				*e*		16 01 30.0	
CHMS	**Chumysh**	**36.98**	**336**	P	**P**	**16 01 19.3**	**+0.2**
	SNR=10						
EKS2	**Erkin-Say**	**37.10**	**335**	P	**P**	**16 01 20.8**	**+0.6**
	SNR=22						
USP	**Ospenovka**	**37.31**	**336**	P	**P**	**16 01 21.8**	**-0.1**
	SNR=20						
ULN	**Ulaanbaatar**	**39.30**	**14**	*d* *i*P	**P**	**16 01 38.6**	**+0.1**
ULN	**Ulaanbaatar**	**39.30**	**14**	*e*P	**P**	**16 01 39.0**	**+0.4**
	comp=Z,16nm,0.9s,mb4.7						
SNY	**Shenyang**	**40.92**	**34**	⇓P	**P**	**16 01 53.1**	**+1.1**
SNY				S	**S**	**16 08 09.3**	**+7.4**
SNY				LR	LR		
	comp=E,950nm,14.7s						
SNY				LR	LR		
	comp=Z,750nm,14.3s,MS4.7						
ZAK	**Zakamensk**	**40.98**	**9**	*e*P	**P**	**16 01 52.9**	**+0.6**
ZAK				*e*		16 03 31.5	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.1						
MOY	**Mondy**	**41.94**	**6**	*e*P	**P**	**16 02 01.3**	**+1.1**
MOY				pmax	pmax		
	comp=Z,22nm,2.5s,mb4.3						
TLY	**Talaya**	**42.29**	**9**	*i* P	**P**	**16 02 04.1**	**+1.0**
TLY				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.4						
TLY	**Talaya**	**42.29**	**9**	*e*P	**P**	**16 02 03.4**	**+0.3**
	comp=Z,16nm,1.1s,mb4.5						
KURK	**Kurchatov**	**42.57**	**345**	*i* P	**P**	**16 02 05.1**	**-0.3**
KURK	**Kurchatov**	**42.57**	**345**	*e*P	**P**	**16 02 05.3**	**-0.2**
	comp=Z,9.7nm,0.9s,mb4.5						
IRK	**Irkutsk**	**42.94**	**9**	*e*P	**P**	**16 02 08.6**	**+0.2**
IRK				pmax	pmax		
	comp=Z,33nm,2.7s,mb4.6						
CN2	**Changchun**	**43.27**	**33**	*e*P	**P**	**16 02 12.0**	**+0.8**
CN2				*e*XP	sP	16 02 23.0	+0.8
CN2				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.8						
CN2				AMB	AMB		
	comp=Z,380nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s,MS4.8						
CN2				LR	LR		
	comp=E,700nm,15.0s,MS4.8						
CN2				LR	LR		
	comp=Z,500nm,17.0s,MS4.5						
NVS	**Novosibirsk**	**45.57**	**351**	*e*P	**P**	**16 02 28.5**	**-1.0**
NVS				*i*		16 04 08.3	
NVS				pmax	pmax		
	comp=N,38nm,2.0s						
NVS				pmax	pmax		
	comp=E,30nm,2.0s						
NVS				pmax	pmax		
	comp=Z,44nm,2.0s,mb5.0						
MDJ	**Mudanjiang**	**46.08**	**35**	P	**P**	**16 02 34.7**	**+1.0**
MDJ				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,303nm,4.8s						
CHKZ	**Chkalovo**	**47.48**	**341**	*e*P	**P**	**16 02 43.6**	**-1.0**
	comp=Z,27nm,1.1s,mb5.1						
WRAB	**Tennant Creek**	**49.52**	**127**	*i* P	**P**	**16 03 00.6**	**-0.3**
WRAB	**Tennant Creek**	**49.52**	**127**	*e*P	**P**	**16 03 00.5**	**-0.3**
	comp=Z,14nm,0.8s,mb5.0						
WB2	**Warramunga Arr**	**49.52**	**127**	*e*P	**P**	**16 03 00.2**	**-0.7**
KLR	**Kul'dur**	**50.09**	**31**	*e*P	**P**	**16 03 02.4**	**-2.5**
BOD	**Bodaibo**	**50.11**	**14**	*e*P	**P**	**16 03 02.5**	**-2.4**
BOD				pmax	pmax		
	comp=Z,47nm,2.7s,mb5.0						
ASPA	**Alice Springs**	**51.29**	**131**	*e*P	**P**	**16 03 13.7**	**-0.6**
CLNS	**Chul'man**	**52.47**	**21**	*e*P	**P**	**16 03 20.7**	**-2.1**
CLNS				*e**PP	pP	16 03 26.9	-3.9
CLNS				*e*		16 04 31.4	
CLNS				*e*S	**S**	**16 10 43.9**	**-2.0**
CLNS				*e*		16 13 07.4	
CLNS				pmax	pmax		
	comp=Z,72nm,1.5s,mb5.4						
CLNS				pmax	pmax		
	comp=N,27nm,1.1s						
CLNS				pmax	pmax		
	comp=E,20nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CLNS				pmax	pmax		
	comp=N,2.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.7s						
CLNS				smax			
	comp=N,68nm,14.5s						
CLNS				smax			
	comp=Z,35nm,12.7s						
CLNS				smax			
	comp=E,14nm,11.0s						
CLNS				MLR	MLR		
	comp=Z,700nm,13.0s,MS4.9						
CLNS				MLR	MLR		
	comp=N,500nm,14.0s,MS4.8						
CLNS				MLR	MLR		
	comp=E,100nm,12.0s,MS4.8						
GNI	**Garni**	**52.98**	**313**	*c* *i*P	**P**	**16 03 34.4**	**+7.6**
GNI				pmax	pmax		
	comp=Z,51nm,1.3s						
SVE	**Sverdlovsk**	**53.45**	**338**	*e*P	**P**	**16 03 26.6**	**-3.4**
SVE				*e*		16 03 36.8	
SVE				*e*		16 05 29.0	
SVE				MLR	MLR		
	comp=N,100nm,21.0s,MS4.0						
SVE				MLR	MLR		
	comp=E,100nm,21.0s,MS4.0						
SVE				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.9						
ARU	**Arti**	**53.96**	**336**	⇑*i*P	**P**	**16 03 28.1**	**-5.6**
ARU				*e*S	**S**	**16 10 58.2**	**-7.9**
ARU				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.7						
YSS	**Yuzh-Sakhalins**	**55.14**	**39**	*i* P	**P**	**16 03 40.8**	**-1.8**
YSS				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.1						
KIV	**Kislovodsk**	**55.77**	**317**	*c* *i*P	**P**	**16 03 46.6**	**-0.5**
KIV				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
KIV	**Kislovodsk**	**55.77**	**317**	*e*P	**P**	**16 03 46.4**	**-0.7**
	comp=Z,91nm,1.0s,mb5.8						
KIV				*e*	pP	16 03 54.3	-0.8
GOF	**Gofitskoye**	**55.94**	**318**	*e*P	**P**	**16 03 54.5**	**+6.1**
SOKR	**Solikamsk**	**56.84**	**338**	⇓*i*P	**P**	**16 03 53.7**	**-0.9**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,7µm,80.0s						
SOC	**Sochi**	**57.66**	**316**	*e*P	**P**	**16 03 59.6**	**-1.0**
SOC				*e*		16 04 55.9	
SOC				*e*		16 06 06.0	
SOC				*e*S	**S**	**16 11 54.3**	**-1.3**
SOC				*e*		16 13 42.0	
SOC				*e*SS	SS	16 15 49.1	+1.7
SOC				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
SOC				pmax	pmax		
	comp=N,7.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,29nm,1.0s						
KMBO	**Kilima Mbogo**	**57.67**	**262**	*e*P	**P**	**16 04 02.7**	**+1.6**
	comp=E,14nm,1.0s,mb5.0						
YAK	**Yakutsk**	**58.01**	**19**	*d* *i*P	**P**	**16 04 01.6**	**-1.2**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,268nm,16.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,154nm,13.0s						
YAK	**Yakutsk**	**58.01**	**19**	⇓*e*P	**P**	**16 04 01.5**	**-1.3**
	comp=N,30nm,0.8s,mb5.4						
CTA	**Charters Tower**	**59.36**	**120**	*e*P	**P**	**16 04 12.6**	**-0.2**
	comp=N,14nm,1.5s,mb4.8						
CTAO	**Charters Tower**	**59.36**	**120**	*e*P	**P**	**16 04 12.5**	**-0.3**
	comp=N,25nm,1.5s,mb5.0						
STKA	**Stephens Creek**	**61.58**	**135**	*e*P	**P**	**16 04 27.3**	**-0.5**
	comp=N,14nm,1.2s,mb5.0						
OBN	**Obninsk**	**63.60**	**327**	*e*P	**P**	**16 04 42.2**	**+1.3**
OBN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.5						
MBAR	**Mbarara**	**63.94**	**264**	*e*P	**P**	**16 04 43.8**	**0.0**
	comp=Z,12nm,1.2s,mb4.8						
MA2	**Magadan**	**64.91**	**28**	*i* P	**P**	**16 04 49.3**	**0.0**
MA2				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.1						
MA2	**Magadan**	**64.91**	**28**	*e*P	**P**	**16 04 49.3**	**0.0**
	comp=Z,33nm,1.0s,mb5.3						
TIXI	**Tiksi**	**65.17**	**11**	*e*P	**P**	**16 04 49.3**	**-1.6**
TIXI				pmax	pmax		

	comp=Z,40nm,1.3s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,121nm,17.0s,MS4.2						
TIRR	Tirgusor	65.77	314	⇓iP	P	16 04 51.6	-3.5
TIRR	Tirgusor	65.77	314	⇓iP	P	16 04 51.6	-3.5
CFR	Carcaliu	66.09	315	⇓iP	P	16 04 56.8	-0.4
CFR	Carcaliu	66.09	315	⇓iP	P	16 04 56.8	-0.3
MLR	Muntele Rosu	67.67	315	⇓iP	P	16 05 06.7	-0.5
BURAR	Bucovina Array	68.49	317	⇑iP	P	16 05 12.7	+0.5
APA	Apatity	69.88	339	⇓iP	P	16 05 22.7	+2.3
APA				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
LSZ	Lusaka	69.97	250	eP	P	16 05 22.3	+0.5
	comp=Z,11nm,0.6s,mb5.0						
KWP	Kalwaria	70.43	319	eP	PcP	16 05 41.9	-3.6
KOLS	Kolonicke sedl	70.62	318	i P	P	16 05 27.8	+2.6
SUW	Suwalki	70.80	324	eP	P	16 05 25.8	-0.4
SUW	Suwalki	70.80	324	eP	P	16 05 25.9	-0.4
CRVS	Cervenica-Dubn	71.15	318	i P	P	16 05 27.8	-0.7
OJC	Ojcow	72.36	320	eP	P	16 05 35.9	+0.2
VYHS	Vyhne	72.84	318	eP	P	16 05 40.5	+2.0
OKC	Ostrava-Krasne	73.39	319	eP	pP	16 05 47.5	-2.4
OKC	Ostrava-Krasne	73.39	319	epP	pP	16 05 47.5	-2.4
MORC	Moravsky Berou	73.78	319	eP	P	16 05 42.6	-1.3
	comp=Z,14nm,1.0s,mb4.9						
BILL	Bilibino	74.14	22c	iP	P	16 05 45.4	-0.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
DPC	Dobruska-Polom	74.60	319	eP	P	16 05 48.6	-0.1
KSP	Ksiaz	74.64	320	eP	P	16 05 48.6	-0.3
KSP				epP	pP	16 05 54.3	-2.8
KSP	Ksiaz	74.64	320	eP	P	16 05 49.3	+0.3
UPC	Upice	74.81	320	eP	P	16 05 51.7	+1.8
LBTB	Lobatse	75.25	241	eP	P	16 05 53.7	+0.8
	comp=Z,34nm,0.9s,mb5.3						
PVCC	Panska Ves	75.73	320	eP	pP	16 06 02.4	-1.0
PVCC	Panska Ves	75.73	320	epP	pP	16 06 02.4	-1.0
PRU	Pruhonice	75.73	319	eP	P	16 05 55.2	0.0
BRG	Berggiesshubel	76.13	320	eP	P	16 05 57.1	-0.3
BRG				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
BRG	Berggiesshubel	76.13	320	eP	P	16 05 57.1	-0.3
	comp=Z,13nm,1.0s,mb4.8						
KHC	Kasperske Hory	76.34	318	eP	P	16 05 59.3	+0.7
BOSA	Boshof	76.70	237	eP	P	16 06 01.5	+0.4
	comp=Z,63nm,1.2s,mb5.4						
CLL	Collm	76.73	320	eP	P	16 06 00.0	-0.8
CLL				e		16 06 16.0	
CLL	Collm	76.73	320	P	P	16 06 00.0	-0.8
CLL				e*PP	pP	16 06 06.0	-3.0
CLL				e		16 06 16.0	
MOX	Moxa	77.61	320	eP	P	16 06 07.2	+1.6
MOX	Moxa	77.61	320	i P	P	16 06 07.2	+1.6
NB2	NORSAR Subarra	77.90	330	P	P	16 06 04.8	-2.2
	comp=Z,11nm,1.1s,mb4.7,baz=91,slow=5.6						
TSUM	Tsumeb	80.78	249	eP	P	16 06 25.3	+1.9
	comp=Z,9.2nm,0.9s,mb4.7						
TSUM				e		16 06 30.6	
LPG	La Plagne	81.13	315	eP	P	16 06 26.3	+1.5
	comp=Z,34nm,0.8s,mb5.0						
BNI	Bardonecchia	81.22	314	eP	P	16 06 26.8	+1.5
	comp=Z,24nm,0.9s,mb5.1						
SUR	Sutherland	81.52	235	eP	P	16 06 29.6	+2.5
	comp=Z,15nm,0.7s,mb5.0						
SYO	Syowa Base	87.41	197	⇑PcP	PcP	16 07 02.9	+4.6
IMA	Indian Mountai	89.68	22	eP	P	16 07 04.8	-2.0
IMA				eP		16 07 08.2	
BOZ	Bozeman (W)	119.97	21	ePKP	PKPdf	16 13 00.0	-3.2
LOHW	Long Hollow	122.10	21	ePKP	PKPdf	16 13 05.1	-2.4
HWUT	Hardware Ranch	123.48	23	ePKP	PKPdf	16 13 06.8	-3.4
MVU	Marysvale	125.86	25	ePKP	PKPdf	16 13 12.9	-2.0
MSU	Marysvale	125.87	25	ePKP	PKPdf	16 13 13.3	-1.6
PV10	Paradox Valley	127.25	23	ePKP	PKPdf	16 13 16.1	-1.4
GDL2	Guadalupe Moun	134.48	22	ePKP	PKPdf	16 13 29.7	-1.7
MNTX	Cornudas Mount	134.53	24	ePKP	PKPdf	16 13 28.6	-3.0
JCT	Junction City	137.60	18	ePKP	PKPdf	16 13 33.6	-3.6
PLCA	Paso Flores	146.51	201	ePKPdf	PKPdf	16 13 51.0	-1.6
TEIG	Tepich	149.88	5	ePKPbc	PKPdf	16 14 02.7	+4.0

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*SFS **01** 16:00:46.0,37.87N×1.77W*

*NEIC **01** 16:00:46.8,37.87N×1.77W,h7^{km},ML3.4(LDG), MN3.1(MDD),After MDD.*

NEIC Felt [II] at Bullas, Lorca and Zarcilla de Ramos.

*INMG **01** 16:00:47.1±1.5,37.86N×1.76W,h12^{km}±3^{km},ML3.1,Error ellipse: s-maj=2.8km s-min=2.0km az=143.0*

*CSEM **01** 16:00:47.5±0.1,37.85N×1.72W,h12^{km},ML3.7/26,Error ellipse: s-maj=2.7km s-min=1.8km az=148.0*

*LDG **01** 16:00:48.5±0.2,37.88N×1.86W,h5^{km},Md3.9/1,Ml3.4/7, Error ellipse: s-maj=5.3km s-min=3.1km az=143.0*

MDD 01 16:00:46.7±0.3**,37.86N×1.78W,h5^{km}**±3^{km}**,mbLg3.0**/28,**1C-2D,Error ellipse: s-maj=3.4km s-min=2.1km az=172.0,PRXIMO II BULLAS,Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	La Murta	0.42	92	⇑Pg	Pg	16 00 54.5	-0.8
	90nm,0.2s,SNR=18						
EMUR				Lg		16 01 00.8	
	2µm,0.3s						
EMUR	La Murta	0.42	92	Pg	Pg	16 00 54.5	-0.8
	90nm,0.2s,SNR=18						
CART	Cartagena	0.67	114	ePg	Pg	16 00 59.4	-0.8
CART				eSg	Sg	16 01 08.1	-1.1
CART	Cartagena	0.67	114	S	Sg	16 01 08.2	-1.0
CART	Cartagena	0.67	114	ePg	Pg	16 00 59.4	-0.8
CART				eSg	Sg	16 01 08.1	-1.1
ENIJ	Nijar	0.95	201	Pg	Pg	16 01 04.4	-1.4
	62nm,0.2s,SNR=27						
ENIJ				Lg		16 01 16.1	
	331nm,0.6s						
EVIA	Vianos	0.96	324	⇓Pg	Pg	16 01 04.1	-1.9
	101nm,0.2s,SNR=18						
EVIA				Lg		16 01 18.2	
	222nm,0.2s						
EQES	Quesada	1.03	267	Pg	Pg	16 01 05.6	-1.6
EQES				Lg		16 01 19.8	
EQES	Quesada	1.03	267	⇓Pg	Pg	16 01 05.7	-1.6
	27nm,0.3s,SNR=18						
EQES				Lg		16 01 19.7	
	432nm,0.3s						
EQES	Quesada	1.03	267	Pg	Pg	16 01 05.6	-1.6
	27nm,0.3s,SNR=89						
EBER	Berja	1.31	223	Pn	Pn	16 01 10.1	-1.6
	79nm,0.4s,SNR=28						
EBER				Sn	Sn	16 01 28.3	-1.4
	123nm,0.4s						
EBER	Berja	1.31	223	Pn	Pn	16 01 10.1	-1.6
	79nm,0.4s,SNR=28						
EBER				Sn	Sn	16 01 28.3	-1.4
	123nm,0.4s						
EBEN	Beniarda	1.48	55	Pn	Pn	16 01 11.3	-2.9
	17nm,0.2s,SNR=40						
EBEN				Sn	Sn	16 01 32.9	-1.2
	56nm,0.4s,SNR=7.5						
EBEN	Beniarda	1.48	55	Pn	Pn	16 01 11.3	-2.9
	17nm,0.2s,SNR=40						
EBEN				Sn	Sn	16 01 32.9	-1.2
	56nm,0.4s,SNR=7.5						
ELUQ	Luque	2.00	262	Pn	Pn	16 01 21.1	-0.5
	13nm,0.4s,SNR=19						
ELUQ				Sn	Sn	16 01 44.0	-3.2
	46nm,0.3s,SNR=12						
ELUQ				Lg		16 01 51.0	
	85nm,0.3s,SNR=8.6						
EADA	Adamuz	2.23	279	Pn	Pn	16 01 23.0	-1.9
	9.2nm,0.3s,SNR=34						
EADA				Pg	Pg	16 01 28.1	-3.2
	17nm,0.1s,SNR=7.9						
EADA				Sn	Sn	16 01 50.3	-2.9
	32nm,0.1s,SNR=5.0						
EADA				Lg		16 01 57.9	
	162nm,0.3s,SNR=7.9						
EADA	Adamuz	2.23	279	Pn	Pn	16 01 23.0	-1.9
	9.2nm,0.3s,SNR=34						
EADA	Adamuz	2.23	279	Pg	Pg	16 01 28.1	-3.2
	SNR=7.9						
EADA				Sn	Sn	16 01 50.3	-2.9
	115nm,0.4s,SNR=5.0						
ESDC	Sonseca Array	2.49	317	Pn	Pn	16 01 26.1	-2.5
	3.3nm,0.3s,baz=127,slow=13,SNR=24						
ESDC				Pg	Pg	16 01 32.3	-4.1
	27nm,0.3s,baz=132,slow=17,SNR=27						
ESDC				Sn	Sn	16 01 54.4	-5.3
	30nm,0.2s,baz=132,slow=24,SNR=15						
ESDC				Lg		16 02 05.3	
	baz=134,slow=29,SNR=7.9						
ESDC	Sonseca Array	2.49	317	Pn	Pn	16 01 26.1	-2.5
	3.3nm,0.3s,SNR=24						
ESDC	Sonseca Array	2.49	317	Pg	Pg	16 01 32.3	-4.1
	27nm,0.3s,SNR=27						
ESLA	Sonseca Array	2.49	317	ePn	Pn	16 01 25.9	-2.6
ESLA	Sonseca Array	2.49	317	ePn	Pn	16 01 25.9	-2.7
EMOS	Mosqueruela	2.70	22	Pn	Pn	16 01 30.1	-1.5
	5.3nm,0.3s,SNR=17						
EMOS				Pg	Pg	16 01 37.1	-3.5
	17nm,0.3s,SNR=19						
EMOS				Sn	Sn	16 02 01.0	-3.9
	34nm,0.6s,SNR=5.0						
EMOS				Lg		16 02 11.9	
	15nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.70	22	Pn	Pn	16 01 30.1	-1.4
	5.3nm,0.3s,SNR=17						
EMOS	Mosqueruela	2.70	22	Pg	Pg	16 01 37.1	-3.5
	20nm,0.4s,SNR=19						
EMOS				Sn	Sn	16 02 01.0	-4.0
	34nm,0.6s,SNR=5.0						
EIBI	Ibiza	2.71	64	Pn	Pn	16 01 28.3	-3.4
	23nm,0.8s,SNR=37						
EIBI				Sn	Sn	16 02 00.3	-5.1
	18nm,0.3s,SNR=7.9						
EIBI	Ibiza	2.71	64	Pn	Pn	16 01 28.3	-3.5
	23nm,0.8s,SNR=37						
EIBI				Sn	Sn	16 02 00.3	-5.0
	SNR=7.9						
EMIJ	Mijas	2.72	242	Pn	Pn	16 01 28.7	-3.2
	SNR=7.9						
EMIJ				Pg	Pg	16 01 35.9	-5.1
	4.3nm,0.2s,SNR=7.9						
EMIJ				Lg		16 02 13.2	
	19nm,0.3s,SNR=7.9						
LIJA	Lijar	3.04	253	i P	Pn	16 01 36.0	-0.5
GUD	Guadarrama	3.33	327	Pn	Pn	16 01 39.1	-1.5
GUD				Pg	Pg	16 01 48.1	-5.2
GUD				Sn	Sn	16 02 17.0	-4.2
GUD				Lg		16 02 29.4	
GUD	Guadarrama	3.33	327	Pn	Pn	16 01 39.1	-1.5
	3.1nm,0.2s,SNR=5.7						
GUD				Pg	Pg	16 01 48.1	-5.2
	17nm,0.3s,SNR=22						
GUD				Sn	Sn	16 02 17.0	-4.2
	65nm,0.3s						
GUD				Lg		16 02 31.0	
	32nm,0.2s,SNR=5.0						
GUD	Guadarrama	3.33	327	Pg	Pg	16 01 48.1	-5.2
	21nm,0.3s,SNR=22						
GUD				Sn	Sn	16 02 17.0	-4.1
	65nm,0.3s						
ESPR	Espera	3.40	254	Pn	Pn	16 01 40.1	-1.4
	13nm,0.6s,SNR=4.7						
ESPR				Sn	Sn	16 02 18.2	-4.5
	15nm,0.3s,SNR=7.9						
ESPR				Lg		16 02 36.2	
	16nm,0.2s,SNR=7.9						
ESPR	Espera	3.40	254	Pn	Pn	16 01 40.1	-1.4
	13nm,0.6s,SNR=4.7						
ESPR				Sn	Sn	16 02 18.2	-4.5
	SNR=7.9						
EBR	Ebro Roquetas	3.44	30	eSN	Sn	16 02 21.0	-2.8
ERTA	Horta de San J	3.50	27	Pn	Pn	16 01 41.2	-1.7
	14nm,0.3s,SNR=23						
ERTA				Sn	Sn	16 02 20.4	-4.8
	8.3nm,0.3s						
ERTA				Lg		16 02 36.3	
	17nm,0.3s,SNR=7.9						
ERTA	Horta de San J	3.50	27	Pn	Pn	16 01 41.2	-1.7
	14nm,0.3s,SNR=23						
ERTA				Sn	Sn	16 02 20.4	-4.8
	16nm,0.4s						
EMIN	Mina Concepcio	3.88	270	Pn	Pn	16 01 45.1	-3.3
	2.8nm,0.3s,SNR=42						
EMIN				Sn	Sn	16 02 29.9	-4.9
	3.9nm,0.1s,SNR=8.0						
EMIN				Lg		16 02 48.5	
	42nm,0.4s,SNR=8.3						
EMIN	Mina Concepcio	3.88	270	Pn	Pn	16 01 45.1	-3.2
	2.8nm,0.3s,SNR=42						
EMIN				Sn	Sn	16 02 29.9	-5.0
	14nm,0.4s,SNR=8.0						
ESAC	San Caprasio	3.98	14	Pn	Pn	16 01 48.3	-1.6
	18nm,0.3s,SNR=5.4						
ESAC				Pg	Pg	16 01 59.9	-6.4
	13nm,0.2s,SNR=7.8						
ESAC				Sn	Sn	16 02 33.1	-4.4
	31nm,0.3s,SNR=4.5						
ESAC				Lg		16 02 52.4	
	49nm,0.4s,SNR=7.9						
ESAC	San Caprasio	3.98	14	Pn	Pn	16 01 48.3	-1.5
	18nm,0.3s,SNR=5.4						
ESAC	San Caprasio	3.98	14	Pg	Pg	16 01 59.9	-6.4
	48nm,0.3s,SNR=7.8						
ESAC				Sn	Sn	16 02 33.1	-4.5
	66nm,0.3s,SNR=4.5						
EPOB	Poblet	4.12	31	Pn	Pn	16 01 49.8	-2.1
	4.7nm,0.3s,SNR=16						
EPOB				Sn	Sn	16 02 35.4	-5.8
	0.8nm,0.4s						
EPOB	Poblet	4.12	31	Pn	Pn	16 01 49.8	-2.0
	4.7nm,0.3s,SNR=16						
EPOB				Sn	Sn	16 02 35.4	-5.7
	6.3nm,0.4s						
EBAD	Badajoz	4.21	284	Pn	Pn	16 01 49.7	-3.4
EBAD				Pg	Pg	16 02 04.2	-6.6
EBAD				Sn	Sn	16 02 38.2	-5.2
EBAD				Lg		16 02 58.4	
EBAD	Badajoz	4.21	284	Pn	Pn	16 01 49.7	-3.4
	5.0nm,0.3s,SNR=6.1						
EBAD				Pg	Pg	16 02 04.2	-6.7
	2.1nm,0.1s,SNR=7.8						
EBAD				Sn	Sn	16 02 38.2	-5.2
	24nm,0.2s,SNR=8.9						
EBAD				Lg		16 03 01.6	
	43nm,0.2s,SNR=7.1						
EBAD	Badajoz	4.21	284	Pn	Pn	16 01 49.7	-3.4
	5.0nm,0.3s,SNR=6.1						
EBAD	Badajoz	4.21	284	Pg	Pg	16 02 04.2	-6.7
	6.0nm,0.3s,SNR=7.8						
EBAD				Sn	Sn	16 02 38.2	-5.2
	12nm,0.3s,SNR=8.9						
ERIP	Rio Piedras	4.38	265	Pn	Pn	16 01 51.7	-3.7
	6.2nm,0.1s,SNR=7.9						
ERIP				Sn	Sn	16 02 41.0	-6.6
	16nm,0.3s,SNR=7.9						
ERIP				Lg		16 03 07.4	
	5.6nm,0.2s,SNR=7.9						
EGRO	El Granado	4.54	268	Pn	Pn	16 01 53.9	-3.8
	SNR=7.9						
EGRO				Sn	Sn	16 02 43.9	-7.7
	7.3nm,0.2s,SNR=7.9						
EGRO	El Granado	4.54	268	Pn	Pn	16 01 53.9	-3.8
	SNR=7.9						
PALC	Alcoutim	4.54	267	eSn	Sn	16 02 44.8	-6.8
	30nm,0.4s						
PALC	Alcoutim	4.54	267	eSn	Sn	16 02 44.8	-6.8
	30nm,0.4s						
EMIR	Miracle	4.78	31	Pn	Pn	16 01 58.1	-3.0
EMIR				Sn	Sn	16 02 52.1	-5.5
EMIR				Lg		16 03 16.4	
EMIR	Miracle	4.78	31	Pn	Pn	16 01 58.1	-3.0
	SNR=7.9						
EMIR				Sn	Sn	16 02 52.1	-5.5
	SNR=7.9						
EMIR				Lg		16 03 19.2	
	SNR=7.9						
EMIR	Miracle	4.78	31	Pn	Pn	16 01 58.1	-3.0
	SNR=7.9						
EMIR				Sn	Sn	16 02 52.1	-5.6
	SNR=7.9						
PBEJ	Beja	4.82	274	ePn	Pn	16 01 58.5	-3.2
PBEJ				eSn	Sn	16 02 52.6	-6.0
PBEJ				eSg	Sg	16 03 15.0	-12
	24nm,0.4s						
PBEJ	Beja	4.82	274	ePn	Pn	16 01 58.5	-3.2
PBEJ				eSn	Sn	16 02 52.6	-6.0
PBEJ				eSg	Sg	16 03 15.0	-12
	24nm,0.4s						
PCBR	Castelo Branco	4.87	296	ePn	Pn	16 01 59.6	-2.8
PCBR				eSn	Sn	16 02 53.9	-6.1
PCBR				eSg	Sg	16 03 17.9	-11
	33nm,0.6s						
PCBR	Castelo Branco	4.87	296	ePn	Pn	16 01 59.6	-2.8
PCBR				eSn	Sn	16 02 53.9	-6.1
PCBR				eSg	Sg	16 03 17.9	-11
	33nm,0.6s						
EVO	Evora	4.96	280	ePn	Pn	16 02 01.5	-2.2
EVO				eSn	Sn	16 02 57.5	-4.7
EVO				eSg	Sg	16 03 23.8	-8.0
	91nm,0.5s						
EBIE	Bielsa	5.04	16	Pn	Pn	16 02 03.1	-1.7
	2.7nm,0.3s,SNR=11						
EBIE				Sn	Sn	16 02 57.2	-7.0
	1.8nm,0.4s						
EBIE				Lg		16 03 26.9	
	SNR=7.9						
EBIE	Bielsa	5.04	16	Pn	Pn	16 02 03.1	-1.7
	2.7nm,0.3s,SNR=11						
EBIE				Sn	Sn	16 02 57.2	-7.0
	41nm,1.3s						
ETSF	Etsaut	5.12	10	ePn	Pn	16 02 04.0	-1.9
ETSF				eSn	Sn	16 02 59.9	-6.3
ETSF				eSg	Sg	16 03 28.5	-8.6
	10.0nm,0.5s						
MTE	Manteigas	5.15	301	ePn	Pn	16 02 03.5	-2.9
MTE				eSn	Sn	16 03 00.8	-6.2
MTE				eSg	Sg	16 03 25.3	-13
	44nm,0.5s						
MTE	Manteigas	5.15	301	ePn	Pn	16 02 03.5	-2.9
MTE				eSn	Sn	16 03 00.8	-6.2
MTE				eSg	Sg	16 03 25.3	-13
	44nm,0.5s						
MOE	Montemor	5.22	279	ePn	Pn	16 02 05.2	-2.2
MOE				eSn	Sn	16 03 01.7	-7.1
MOE				eSg	Sg	16 03 28.4	-12
SJPF	Ste Jean	5.26	4	ePn	Pn	16 02 05.2	-2.8
SJPF				eSn	Sn	16 03 03.6	-6.2
SJPF				eSg	Sg	16 03 33.5	-8.4
	7.1nm,0.4s						
EALK	Alkurruntz	5.36	2	Pn	Pn	16 02 06.3	-3.0
	12nm,0.5s,SNR=11						
EALK				Sn	Sn	16 03 05.3	-6.9
	16nm,0.4s						
EALK				Lg		16 03 36.5	
	9.5nm,0.4s,SNR=7.9						
EPF	Esparros	5.41	17	ePn	Pn	16 02 08.1	-1.9
EPF				eSn	Sn	16 03 07.6	-5.9
EPF				eSg	Sg	16 03 37.5	-9.3
	8.4nm,0.4s						
EPF	Esparros	5.41	17	ePn	Pn	16 02 08.1	-1.9
EPF				eSg	Sg	16 03 37.5	-9.3
	4.2nm,0.4s						
PBRG	Braganca	5.49	317	ePn	Pn	16 02 07.6	-3.5
PBRG				eSn	Sn	16 03 07.3	-8.2
PBRG				eSg	Sg	16 03 35.2	-14
	18nm,0.6s						
PBRG	Braganca	5.49	317	ePn	Pn	16 02 07.6	-3.5
PBRG				eSn	Sn	16 03 07.3	-8.2
PBRG				eSg	Sg	16 03 35.2	-14
	18nm,0.6s						
ELAN	Lanestosa	5.51	347	Pn	Pn	16 02 09.6	-1.8
	1.7nm,0.3s,SNR=8.2						
ELAN				Sn	Sn	16 03 06.7	-9.4
	10nm,0.3s						
ELAN				Lg		16 03 39.9	
	4.5nm,0.2s,SNR=7.9						
ELAN	Lanestosa	5.51	347	Pn	Pn	16 02 09.6	-1.9
	1.7nm,0.3s,SNR=8.2						
PTEO	Sao Teotonio	5.52	269	ePn	Pn	16 02 09.0	-2.6
PTEO				eSn	Sn	16 03 09.2	-7.1
PTEO				eSg	Sg	16 03 36.6	-14
	27nm,0.6s						
PTEO	Sao Teotonio	5.52	269	ePn	Pn	16 02 09.0	-2.6
PTEO				eSn	Sn	16 03 09.2	-7.1
PTEO				eSg	Sg	16 03 36.6	-14
	27nm,0.6s						
PVIS	Viseu	5.54	303	ePn	Pn	16 02 08.2	-3.6
PVIS				eSn	Sn	16 03 07.9	-8.8
PVIS				eSg	Sg	16 03 40.5	-11
	14nm,0.3s						
PVIS	Viseu	5.54	303	Pn	Pn	16 02 08.2	-3.6
PVIS				Sn	Sn	16 03 07.9	-8.8
PVIS				Lg		16 03 40.5	
	7.2nm,0.3s						
ECAL	Calabor	5.58	318	Pn	Pn	16 02 09.2	-3.3
	4.7nm,0.4s,SNR=7.5						
ECAL				Sn	Sn	16 03 08.0	-10
	6.8nm,0.4s						
ECAL				Lg		16 03 41.7	
	18nm,0.4s,SNR=5.2						
ECAL	Calabor	5.58	318	Pn	Pn	16 02 09.2	-3.2
	4.7nm,0.4s,SNR=7.5						
PVRL	Vila Real	5.72	308	eSn	Sn	16 03 14.3	-6.9
PVRL				eSg	Sg	16 03 47.0	-10
	11nm,0.4s						
PVRL	Vila Real	5.72	308	Sn	Sn	16 03 14.3	-6.9
PVRL				Lg		16 03 47.0	
	5.7nm,0.4s						
EARI	Arriondas	6.03	335	Pn	Pn	16 02 16.0	-2.7
	7.4nm,0.7s,SNR=18						
EARI				Sn	Sn	16 03 18.3	-11
	1.4nm,0.3s						
EARI				Lg		16 03 57.6	
	4.5nm,0.4s,SNR=7.9						
EARI	Arriondas	6.03	335	Pn	Pn	16 02 16.0	-2.8
	7.4nm,0.7s,SNR=18						
MTLF	Montolieu	6.26	28	ePn	Pn	16 02 19.5	-2.5
ELOB	Lobios	6.27	312	Pn	Pn	16 02 18.0	-4.3
	6.6nm,0.4s,SNR=13						
ELOB	Lobios	6.27	312	Pn	Pn	16 02 18.0	-4.2
EINC	Incio	6.41	320	Pn	Pn	16 02 20.6	-3.6
	3.3nm,0.4s,SNR=4.6						
EINC				Sn	Sn	16 03 28.9	-10
	12nm,0.5s						
EINC				Lg		16 04 11.0	
	2.1nm,0.2s,SNR=7.9						
EINC	Incio	6.41	320	Pn	Pn	16 02 20.6	-3.6
EPON	Pontenova	6.82	325	Pn	Pn	16 02 24.6	-5.3
	SNR=7.9						
EPON				Sn	Sn	16 03 36.7	-12
	2.1nm,0.2s,SNR=7.9						
EPON				Lg		16 04 22.0	
	13nm,0.4s,SNR=4.5						
LFF	La Frestale	7.32	14	ePn	Pn	16 02 33.7	-3.2
LFF				eSn	Sn	16 03 52.3	-9.0
LFF				eSg	Sg	16 04 37.2	-13
	8.7nm,0.5s						
LASF	Ste Croix	7.53	33	ePn	Pn	16 02 36.8	-3.1
CAF	Calviac	7.62	21	ePn	Pn	16 02 38.5	-2.7
CAF				eSn	Sn	16 03 58.3	-11
CAF				eSg	Sg	16 04 45.7	-15
	2.4nm,0.3s						
RJF	Les Rejaudoux	7.83	17	eSn	Sn	16 04 03.2	-11
RJF				eSg	Sg	16 04 54.6	-13
	7.3nm,0.5s						
SMRF	Simiane la Rot	8.26	40	ePn	P	16 02 46.5	-3.6
LMR	La Mourre	8.34	46	ePn	P	16 02 47.9	-3.3
VIVF	Saint-Julien-l	8.50	33	ePn	P	16 02 50.0	-3.4
MFF	Saint Martin d	8.82	7	ePn	P	16 02 52.7	-5.1
TCF	Toulx Ste Croi	8.93	18	ePn	P	16 02 54.1	-5.2
AVF	Avril sur Loir	9.69	21	ePn	P	16 03 06.1	-3.8
QUIF	Quistinic	10.10	355	ePn	P	16 03 11.1	-4.4
SGMF	Saint Gilles	10.40	357	ePn	P	16 03 15.0	-4.6
ROSF	Rostrenen	10.53	355	ePn	P	16 03 16.3	-5.0

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*NIED **01** 16:15:00,23.90N×121.80E,h32^{km},Mw4.2 Best double couple: $M_0$2.1×10^{15} NP1:ϕ_s206°,δ79°,λ-62°. NP2:ϕ_s316°, δ30°,λ-157°.*

*JMA **01** 16:15:09.2±0.5,23.86N×121.84E,M4.2*

*TAP **01** 16:15:10.9,24.29N×121.75E,h8^{km},ML4.4*

TAP Felt IV J at Nanau, I J at Chiawan, II J at Suao, I J at Hualien, III J at Nanshan, III J at Nioudou, II J at Neicheng, II J at Hehuanshan, I J at Ilan, I J at Sanguang, I J at Tachien, I J at Shilin, I J.

*NEIC **01** 16:15:10.6,24.30N×121.76E,h9^{km},mb4.4/6,ML4.6(TAP), After TAP.*

NEIC Recorded [4 TAP] in Hua-lien and I-lan; [2 TAP] in Nan-t'ou; [1 TAP] in T'ai-chung, T'ai-pei and T'ao-yuan Counties.

*BJI **01** 16:15:11.0,24.42N×121.66E,h5^{km},mB4.9,mb4.2,ML4.6, Ms4.2,Msz4.1*

ISC 01 16:15:10.6±0.4**,24.27N**±0.01×**121.84E**±0.02**,h4^{km}**±2^{km}**, n84,**σ**1^{s}04**/138**,mb4.2**/6**,MS4.1**/1**,11C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.18**	**330**	⇑*i*P	**Pg**	**16 15 14.7**	**+0.5**
ENA				S	**Sg**	**16 15 17.4**	**+0.8**
TWD	**Chiawan**	**0.29**	**229**	⇓*i*P	**Pg**	**16 15 16.5**	**0.0**
TWD				S	**Sg**	**16 15 20.7**	**+0.3**
TWC	**Suao**	**0.34**	**2**	⇑*i*P	**Pg**	**16 15 17.9**	**+0.5**
TWC				S	**Sg**	**16 15 22.5**	**+0.6**
HWA	**Hwalien**	**0.36**	**216**	*e*P	**Pg**	**16 15 18.6**	**+0.7**
ENTT	**Nioudou**	**0.44**	**326**	⇑*i*P	**Pg**	**16 15 19.8**	**+0.3**
NNS	**Nan Shan**	**0.46**	**292**	⇑*i*P	**Pg**	**16 15 19.5**	**-0.2**
NNS				S	**Sg**	**16 15 25.1**	**-0.7**
TWE	**Neicheng**	**0.47**	**341**	⇑*i*P	**Pg**	**16 15 20.4**	**+0.3**
TWE				S	**Sg**	**16 15 26.6**	**+0.2**
ILA	**Ilan**	**0.50**	**350**	⇑*i*P	**Pg**	**16 15 21.2**	**+0.6**
ILA				S	**Sg**	**16 15 28.2**	**+1.0**
WHF	**Hehuan Shan**	**0.54**	**257**	⇑*i*P	**Pg**	**16 15 21.0**	**-0.4**
WHF				S	**Sg**	**16 15 28.2**	**-0.4**
ESL	**Shilin**	**0.59**	**219**	⇑*i*P	**Pg**	**16 15 21.8**	**-0.5**
ESL				S	**Sg**	**16 15 30.4**	**+0.2**
NSK	**Sanguang**	**0.59**	**313**	⇑*i*P	**Pg**	**16 15 22.4**	**-0.1**
NSK				S	**Sg**	**16 15 30.0**	**-0.5**
TWT	**Tachien**	**0.60**	**268**	⇑*i*P	**Pg**	**16 15 22.9**	**+0.2**
TWT				S	**Sg**	**16 15 30.3**	**-0.4**
TWA	**Mucha**	**0.74**	**342**	P	**Pg**	**16 15 25.7**	**+0.2**
TWA				S	**Sg**	**16 15 35.0**	**-0.3**
TWB1	**Santiao Chiao**	**0.75**	**11**	*e*P	**Pg**	**16 15 25.7**	**+0.2**
TWB1				S	**Sg**	**16 15 35.1**	**-0.4**
TATO	**Taipei**	**0.77**	**336**	*e*Pg	**Pg**	**16 15 26.0**	**0.0**
NWF	**Wu-fen Shan**	**0.80**	**356**	⇑*i*P	**Pg**	**16 15 26.9**	**+0.3**
NWF				S	**Sg**	**16 15 36.7**	**-0.4**
TAP1	**Taipei**	**0.82**	**339**	*e*P	**Pg**	**16 15 27.3**	**+0.4**
TAP1				S	**Sg**	**16 15 37.4**	**-0.4**
TAP	**Taipei**	**0.82**	**338**	*e*P	**Pg**	**16 15 27.2**	**+0.2**
TAP				S	**Sg**	**16 15 36.7**	**-1.3**
NSTT	**Nanjuang**	**0.84**	**295**	*e*P	**Pg**	**16 15 27.4**	**-0.1**
NSTT				S	**Sg**	**16 15 37.6**	**-1.1**
EHY	**Hungye**	**0.90**	**212**	*e*P	**Pb**	**16 15 27.0**	**-1.4**
EHY				S	**Sg**	**16 15 41.1**	**+0.6**
TWS1	**Kuangyinshan**	**0.91**	**335**	*e*P	**Pb**	**16 15 29.2**	**+0.6**
TWS1				S	**Sb**	**16 15 40.7**	**-0.2**
NCU	**National Centr**	**0.91**	**320**	*e*P	**Pb**	**16 15 29.0**	**+0.3**
NCU				S	**Sb**	**16 15 40.9**	**-0.1**
SMLT	**Sun Moon Lake**	**0.94**	**246**	⇓P	**Pb**	**16 15 28.8**	**-0.3**
SMLT				S	**Sb**	**16 15 41.5**	**-0.3**
HSN	**Hsinchu**	**0.95**	**304**	*e*P	**Pb**	**16 15 29.9**	**+0.6**
HSN				S	**Sb**	**16 15 42.2**	**+0.1**
TYC	**Yuchr**	**0.97**	**248**	*e*P	**Pb**	**16 15 29.1**	**-0.6**
NSY	**Sanyi**	**0.99**	**279**	*e*P	**Pb**	**16 15 29.9**	**-0.2**
NSY				S	**Sb**	**16 15 43.1**	**-0.2**
TWY	**Chenhua**	**1.02**	**348**	*e*P	**Pb**	**16 15 31.4**	**+0.8**
TWY				S	**Sb**	**16 15 45.1**	**+1.0**
TWF1	**Yuli**	**1.04**	**209**	*e*P	**Pb**	**16 15 29.2**	**-1.7**
TWF1				S	**Sb**	**16 15 45.1**	**+0.4**
TCU	**Taichung**	**1.07**	**264**	*e*P	**Pb**	**16 15 32.7**	**+1.4**
TCU				S	**Sb**	**16 15 46.0**	**+0.5**
YUS	**Yu-Shan**	**1.12**	**226**	P	**Pb**	**16 15 32.2**	**-0.1**
YUS				S	**Sb**	**16 15 48.3**	**+1.2**
WNT	**Mingjian**	**1.13**	**250**	*e*P	**Pb**	**16 15 33.0**	**+0.7**
WNT				S	**Sb**	**16 15 48.6**	**+1.4**
ALS	**Alishan**	**1.21**	**231**	*e*P	**Pb**	**16 15 33.8**	**0.0**
ALS				S	**Sb**	**16 15 50.5**	**+0.8**
CHKT	**Chengkung**	**1.25**	**200**	*e*P	**Pb**	**16 15 32.7**	**-1.6**
CHKT				S	**Sb**	**16 15 50.4**	**-0.3**
CHN5	**Tsauling**	**1.26**	**238**	*e*P	**Pb**	**16 15 34.5**	**-0.1**
CHN5				S	**Sb**	**16 15 52.4**	**+1.4**
WGK	**Gukeng**	**1.30**	**244**	*e*P	**Pb**	**16 15 36.0**	**+0.6**
WGK				S	**Sb**	**16 15 54.2**	**+1.8**
ELDTW	**Lidau**	**1.31**	**215**	*e*P	**Pb**	**16 15 33.8**	**-1.8**
PCYT	**Pengchaiyu**	**1.37**	**9**	*e*P	**Pb**	**16 15 36.7**	**+0.3**
PCYT				S	**Sb**	**16 15 56.6**	**+2.4**
CHN2	**Minshiung**	**1.45**	**240**	*e*P	**Pn**	**16 15 38.3**	**+0.6**
CHN2				S	**Sb**	**16 15 57.9**	**+1.4**
CHN4	**Tsaushan**	**1.46**	**231**	*e*P	**Pn**	**16 15 38.4**	**+0.4**
CHN4				S	**Sb**	**16 15 59.2**	**+2.2**
WTCT	**Ta-ch’eng**	**1.48**	**254**	*e*P	**Pn**	**16 15 38.2**	**+0.1**
WTCT				S	**Sb**	**16 15 58.0**	**+0.6**
STYT	**Tauyuan**	**1.48**	**222**	*e*P	**Pn**	**16 15 37.6**	**-0.6**
STYT				S	**Sb**	**16 15 58.0**	**+0.4**
CHY	**Chiayi**	**1.51**	**240**	*e*P	**Pn**	**16 15 38.9**	**+0.4**
CHY				S	**Sb**	**16 15 59.7**	**+1.4**
WTP	**Ta-pu**	**1.52**	**228**	*e*P	**Pn**	**16 15 38.9**	**+0.2**
WTP				S	**Sb**	**16 15 59.6**	**+1.1**
TWK	**Hsinying**	**1.59**	**231**	*e*P	**Pn**	**16 15 39.7**	**-0.1**
TWK				S	**Sb**	**16 16 01.6**	**+0.9**
TWG	**Pinlang**	**1.61**	**206**	*e*P	**Pn**	**16 15 37.2**	**-2.7**
WSF	**Szhu**	**1.61**	**247**	*e*P	**Pn**	**16 15 40.0**	**0.0**
WSF				S	**Sb**	**16 16 02.1**	**+1.0**
CHN1	**Nanshi**	**1.62**	**228**	*e*P	**Pn**	**16 15 40.4**	**+0.3**
CHN1				S	**Sb**	**16 16 02.1**	**+0.6**
TTN	**Taitung**	**1.64**	**203**	*e*P	**Pn**	**16 15 39.7**	**-0.8**
SGST	**Jiashian**	**1.65**	**224**	*e*P	**Pn**	**16 15 40.3**	**-0.3**
SGST				S	**Sb**	**16 16 04.2**	**+1.8**
IRIF	**Iriomote-Funau**	**1.73**	**88**	P	**Pn**	**16 15 41.6**	**-0.1**
IRIF				*e*S	**Sn**	**16 16 05.2**	**+0.7**
CHN8	**Yiju**	**1.75**	**239**	*e*P	**Pn**	**16 15 41.9**	**-0.1**
CHN3	**Shinhua**	**1.80**	**229**	*e*P	**Pn**	**16 15 42.3**	**-0.4**
HATJ	**Hateruma jima**	**1.81**	**96**	*e*S	**Sn**	**16 16 04.9**	**-1.7**
ECL	**Taimali**	**1.85**	**206**	*e*P	**Pn**	**16 15 40.8**	**-2.7**
SCLT	**Jiali**	**1.86**	**234**	*e*P	**Pn**	**16 15 43.6**	**0.0**
SSD	**Sandimen**	**1.88**	**216**	*e*P	**Pn**	**16 15 43.3**	**-0.6**
SSD				S	**Sn**	**16 16 09.0**	**+0.7**
TWM1	**Shoushan**	**1.94**	**222**	*e*P	**Pn**	**16 15 46.4**	**+1.7**
SGLT	**Jiouru**	**1.98**	**219**	*e*P	**Pn**	**16 15 45.3**	**+0.1**
JKRS	**Kuro-shima**	**1.98**	**91**	P	**Pn**	**16 15 45.8**	**+0.5**
JKRS				*e*S	**Sn**	**16 16 12.7**	**+1.7**
EAST	**Anshuo**	**2.09**	**206**	*e*P	**Pn**	**16 15 44.4**	**-2.5**
TAW	**Tawu**	**2.09**	**205**	*e*P	**Pn**	**16 15 48.3**	**+1.4**
JIJ	**Ishigaki jima**	**2.10**	**87**	P	**Pn**	**16 15 46.8**	**-0.3**
JIJ				*e*S	**Sn**	**16 16 14.4**	**+0.3**
SCZT	**Fangliau**	**2.20**	**211**	*e*P	**Pn**	**16 15 47.5**	**-1.0**
SCZT				S	**Sn**	**16 16 15.9**	**-0.5**
PNG	**Penghu**	**2.20**	**252**	*e*P	**Pn**	**16 15 47.2**	**-1.3**
PNG				S	**Sn**	**16 16 14.7**	**-1.9**
WDGT	**Dungji**	**2.24**	**244**	*e*P	**Pn**	**16 15 48.1**	**-0.9**
WDGT				S	**Sn**	**16 16 16.1**	**-1.3**
LAY	**Lan-yu**	**2.24**	**187**	*e*P	**Pn**	**16 15 45.6**	**-3.5**
TWK1	**Hengchun**	**2.50**	**203**	*e*P	**Pn**	**16 15 51.9**	**-1.0**
JTJ	**Tarama**	**2.63**	**81**	P	**Pn**	**16 15 56.7**	**+2.0**
JTJ				*e*S	**Sn**	**16 16 30.4**	**+2.8**
QZH	**Quanzhou**	**3.03**	**283**	P	**Pn**	**16 15 58.8**	**-1.5**
QZH				S	**Sn**	**16 16 33.2**	**-4.4**
QZH				Smax			
	comp=N,640nm,1.0s						
QZH				Smax			
	comp=E,700nm,0.8s						
KNM	**Kinmen**	**3.11**	**273**	*e*P	**Pn**	**16 15 59.4**	**-2.0**
NJ2	**Nanjing**	**8.19**	**342**	*e*P	**P**	**16 17 08.7**	**-4.4**
NJ2				AP		16 17 11.8	
NJ2				XP		16 17 14.7	
NJ2				S	**Sn**	**16 18 45.9**	**-1.2**
NJ2				XS		16 18 51.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s						
NJ2				AMB	AMB		
	comp=Z,1µm,4.7s						
NJ2				Smax			
	comp=N,230nm,1.0s						
NJ2				Smax			
	comp=E,160nm,0.9s						
NJ2				LR	LR		
	comp=N,4µm,12.9s						
NJ2				LR	LR		
	comp=E,1µm,11.0s						
NJ2				LR	LR		
	comp=Z,1µm,11.0s						
GYA	**Guiyang**	**13.89**	**282**	P	**P**	**16 18 27.6**	**-3.2**
GYA				S	**S**	**16 21 06.6**	**0.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				AMB	AMB		
	comp=Z,210nm,7.2s						
GYA				LR	LR		
	comp=N,450nm,9.6s						
GYA				LR	LR		
	comp=E,560nm,10.2s						
GYA				LR	LR		
	comp=Z,670nm,11.4s						
KMI	**Kunming**	**17.38**	**277**	P	**P**	**16 19 13.0**	**-2.7**
KMI				XP		16 19 21.8	
KMI				PP	PP	16 19 27.4	-2.8
KMI				S	**S**	**16 22 26.5**	**-1.6**
KMI				AMB	AMB		
	comp=Z,3.0nm,1.3s						
KMI				AMB	AMB		
	comp=Z,164nm,4.8s						
KMI				LR	LR		
	comp=N,276nm,9.6s						
KMI				LR	LR		
	comp=E,497nm,11.0s						
KMI				LR	LR		
	comp=Z,549nm,11.6s						
KMI	**Kunming**	**17.38**	**277**	P	**P**	**16 19 13.0**	**-2.7**
	comp=Z,3.0nm,1.3s						
KMI				sP		16 19 21.8	
KMI				PP	PP	16 19 27.4	-2.8
KMI				S	**S**	**16 22 26.5**	**-1.6**
LZH	**Lanzhou**	**19.47**	**311**	*e*P	**P**	**16 19 41.2**	**-0.1**
LZH				AMB	AMB		
	comp=Z,25nm,1.5s						
LZH				AMB	AMB		
	comp=Z,112nm,4.5s						
LZH				LR	LR		
	comp=N,279nm,12.4s						
LZH				LR	LR		
	comp=Z,491nm,15.3s						
LZH	**Lanzhou**	**19.47**	**311**	*e*P	**P**	**16 19 41.2**	**-0.1**
	comp=Z,25nm,1.5s						
LZH				pP		16 19 50.2	
LZH				sP		16 19 54.6	
GTA	**Gaotai**	**23.95**	**314**	*e*P	**P**	**16 20 29.5**	**+2.7**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.3s,mb3.4						
GTA				AMB	AMB		
	comp=Z,109nm,3.9s						
GTA				LR	LR		
	comp=N,270nm,12.9s,MS4.1						
GTA				LR	LR		
	comp=E,292nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=Z,422nm,12.9s,MS4.1						
ULN	**Ulaanbaatar**	**26.31**	**337**	*e*P	**P**	**16 20 46.3**	**-2.8**
	comp=Z,2.5nm,0.6s,mb3.9						
WMQ	**Urumqi**	**34.03**	**313**	*e*P	**P**	**16 21 52.0**	**-5.8**
WRAB	**Tennant Creek**	**45.60**	**163**	P	**P**	**16 23 28.4**	**-5.6**
	comp=Z,2.7nm,0.6s,mb4.3						
CHKZ	**Chkalovo**	**48.04**	**321**	*e*P	**P**	**16 23 48.7**	**-4.2**
	comp=Z,1.8nm,0.5s,mb4.4						
CTAO	**Charters Tower**	**50.09**	**150**	P	**P**	**16 24 06.5**	**-2.6**
	comp=Z,5.6nm,0.9s,mb4.6						
MALT	**Malatya**	**70.44**	**304**	*e*P	**P**	**16 26 25.7**	**-2.6**
	comp=Z,4.5nm,0.7s,mb4.5						
SDV	**Santo Domingo**	**144.87**	**22**	*e*PKPdf	PKPdf	16 34 48.3	-3.9

GUC 01 16:44:05.8±0.7**, 33.14S**×**70.19W, h5**^{km}±3^{km}**, MD3.5, ML2.2, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.21**	**205**	⇑*i*P	Pg	16 44 10.8	+0.7
FCH				*i* S	Sg	16 44 14.5	+1.5
FCH				AMP		16 44 16.9	
	comp=N,1µm,0.1s						
CLCH	**Cerro Calan**	**0.39**	**228**	*e*P	Pg	16 44 14.1	+0.4
CLCH				*i* S	Sg	16 44 20.2	+1.3
CLCH				AMP		16 44 22.6	
	comp=N,367nm,0.1s						
PCH	**Pirque**	**0.56**	**209**	*e*P	Pg	16 44 17.0	+0.1
PCH				*i* S	Sg	16 44 25.9	+1.5
JACH	**Jahuel**	**0.57**	**323**	*e*P	Pg	16 44 17.5	+0.4
RCDM	**Rinconada Maip**	**0.63**	**236**	*e*P	Pg	16 44 17.5	-0.8
LMEL	**Las Melosas**	**0.71**	**181**	*e*P	Pg	16 44 20.2	+0.2
LMEL				*i* S	Sg	16 44 30.4	+0.9
LMEL				AMP		16 44 33.6	
	comp=E,256nm,0.2s						
TACH	**Talagante**	**0.81**	**230**	*e*P	Pg	16 44 21.3	-0.8
CHCH	**Chadas Angostu**	**0.89**	**206**	*e*P	Pb	16 44 23.1	-0.2
CACH	**El Canelo**	**1.04**	**199**	*e*P	Pb	16 44 26.2	+0.4
PACH	**Papudo**	**1.21**	**299**	*e*P	Pb	16 44 28.1	-0.8

NEIC ***01*** *17:12:00.9, 36.03S×70.73W, h1*^{km}*, ML3.7(GUC), After GUC.*

GUC 01 17:12:00.9±0.9**, 36.03S**×**70.73W, h1**^{km}±3^{km}**, MD3.8, ML3.7, 3C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNCH	**Linares**	**0.73**	**284**	⇓*i*P	Pg	17 12 16.3	+0.8
LNCH				*i* S	Sg	17 12 26.7	+1.4
LNCH				AMP		17 12 27.2	
	comp=N,12µm,0.4s						
CCHI	**Chillan**	**1.23**	**242**	⇓*i*P	Pb	17 12 23.3	-1.4
CCHI				*i* S	Sb	17 12 41.5	+0.6
SFDO	**San Fernando**	**1.43**	**351**	⇓*i*P	Pn	17 12 26.1	-2.0
SFDO				*i* S	Sb	17 12 47.2	+0.4
CICH	**Cipreses**	**1.72**	**8**	⇑*i*P	Pn	17 12 31.6	-0.7
CICH				*i* S	Sb	17 12 55.6	+0.3
CACH	**El Canelo**	**1.91**	**3**	⇓*i*P	Pn	17 12 34.6	-0.3
CACH				*i* S	Sn	17 13 00.3	+0.3
CHCH	**Chadas Angostu**	**2.09**	**2**	*i* P	Pn	17 12 37.6	+0.1
CHCH				*i* S	Sn	17 13 05.8	+1.2
LMEL	**Las Melosas**	**2.22**	**11**	*i* P	Pn	17 12 40.6	+1.2
LMEL				*i* S	Sn	17 13 10.0	+2.2
LMEL				AMP		17 13 23.9	
	comp=N,352nm,0.4s						
TACH	**Talagante**	**2.38**	**356**	*e*P	Pn	17 12 42.2	+0.6
TACH				*i* S	Sn	17 13 13.6	+1.7
PCH	**Pirque**	**2.41**	**4**	⇑*i*P	Pn	17 12 43.3	+1.2
PCH				*i* S	Sn	17 13 14.2	+1.5
RCDM	**Rinconada Maip**	**2.54**	**359**	*i* P	Pn	17 12 44.5	+0.6
RCDM				*i* S	Sn	17 13 17.1	+1.3
RCDM				AMP		17 13 22.4	
	comp=E,400nm,0.5s						
CLCH	**Cerro Calan**	**2.63**	**3**	⇑*i*P	Pn	17 12 48.3	+3.0
CLCH				*i* S	Sn	17 13 22.6	+4.2
CLCH				AMP		17 13 36.9	
	comp=N,575nm,0.6s						
LCCH	**Las Cruces**	**2.64**	**345**	⇓*i*P	Pn	17 12 45.7	+0.3
LCCH				*i* S	Sn	17 13 19.9	+1.3
FCH	**Farellones**	**2.72**	**8**	⇓*i*P	Pn	17 12 48.9	+2.3
FCH				*i* S	Sn	17 13 24.5	+3.9
FCH				AMP		17 13 31.0	
	comp=N,360nm,0.5s						
PLCA	**Paso Flores**	**4.70**	**178**	*e*Pn	Pn	17 13 21.8	+7.1

BJI ***01*** *17:14:03.4, 2.84N×94.23E, h24*^{km}*, mB5.2, mb5.1, Ms4.8, Msz4.7*

MOS ***01*** *17:14:04.8±0.8, 2.90N×94.31E, h33*^{km}*, mb5.4/30, MS4.6/4, Error ellipse: s-maj=15.5km s-min=6.7km az=114.6*

NEIC ***01*** *17:14:05.5±0.2, 2.80N×94.23E, mb5.2/59, Error ellipse: s-maj=6.6km s-min=4.8km az=223.0*

HRVD ***01*** *17:14:05.5±0.7, 2.67N×94.21E, h12*^{km}*, MW4.7/33, Centroid moment Tensor Solution. LP body waves: s9,c11;Mantle waves: s33,c50; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm; M*$_{rr}$*1.32±.09; M*$_{\theta\theta}$*-0.81±.07; M*$_{\phi\phi}$*-0.51±.10; M*$_{r\theta}$*-0.50±.31; M*$_{\theta\phi}$*0.87±.07; M*$_{\phi r}$*0.44±.33; Best double couple: M*$_{0}$*1.579×10*^{16} *NP1:*ϕ_s*129°, δ33°, λ89°. NP2:*ϕ_s*311°, δ57°, λ91°. Principal axes: T 1.467, Plg78°, Azm223°; N .223, Plg1°, Azm130°; P -1.69, Plg12°, Azm40°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 17:14:03.8±0.2**, 2.81N**±0.04×**94.26E**±0.03**, h27**^{km}**, h27**^{km}±.7^{km}**:pP-P, n236,** σ**0.**^{s}**98**/242**, mb5.2**/91**, MS4.6**/19**, 54C-18D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**6.97**	**75**	P	**Pn**	**17 15 46.4**	**-0.5**
SNG	**Songkhla**	**7.67**	**55**	P	**Pn**	**17 15 56.0**	**-0.7**
	1µm,1.0s						
KGM	**Kluang**	**9.08**	**95**	P	**P**	**17 16 15.3**	**-0.9**
NST	**Nakhon Sawan**	**14.03**	**24**	P	**P**	**17 17 22.5**	**-0.8**
PALK	**Pallekele**	**14.21**	**289**	*e*P	**P**	**17 17 23.0**	**-2.8**
COCO	**West Island**	**15.12**	**170**	P	**P**	**17 17 37.4**	**-0.2**
	134nm,0.9s						
KKTK	**Khon Kaen**	**15.86**	**32**	P	**P**	**17 17 47.0**	**-0.2**
	1µm,0.5s						
CM31	**Chiang Mai Arr**	**16.21**	**16**	*e*P	**P**	**17 17 50.1**	**-1.5**
	220nm,0.8s						
UBT	**Ubonrachathani**	**16.28**	**40**	P	**P**	**17 17 53.5**	**+1.0**
CHG	**Chiang Mai**	**16.55**	**16**	⇑P	**P**	**17 17 53.7**	**-2.2**
	138nm,1.0s						
NANT	**Nan**	**17.09**	**21**	⇑P	**P**	**17 18 01.0**	**-1.7**
	81nm,1.0s						
TRD	**Trivandrum**	**18.12**	**289**	*e*P	**P**	**17 18 16.9**	**+1.3**
TRD				*e*		17 18 19.6	
	comp=Z,103nm,1.3s						
VIS	**Vishakhapatnam**	**18.29**	**325**	*e*P	**P**	**17 18 14.9**	**-2.8**
VIS				*e*		17 18 21.0	
	comp=Z,141nm,1.3s						
VIS				*e*		17 21 32.6	
BWNR	**Bhubaneshwar**	**19.24**	**335**	*e*P	**P**	**17 18 25.3**	**-3.7**
BWNR				*e*		17 18 30.6	
	comp=Z,47nm,0.7s						
BWNR				*e*		17 21 52.9	
HYB	**Hyderabad**	**21.18**	**314**	⇑*e*P	**P**	**17 18 49.5**	**-0.1**
	comp=Z,100nm,1.0s,mb5.1						
HYB				*e*S	**S**	**17 22 52.0**	**+13**
HYB	**Hyderabad**	**21.18**	**314**	⇑*i*P	**P**	**17 18 49.5**	**-0.1**
	comp=Z,100nm,1.0s,mb5.1						
HYB				*e*S	**S**	**17 22 52.0**	**+13**
MNGI	**Mangalore**	**21.71**	**299**	*i* P	**P**	**17 18 55.9**	**+1.0**
MNGI				*e*		17 23 01.0	
KKM	**Kota Kinabalu**	**22.12**	**81**	P	**P**	**17 19 01.4**	**+2.4**
QIZ	**Qiongzhong**	**22.18**	**42**	P	**P**	**17 18 59.8**	**+0.1**
QIZ				AP		17 19 09.1	
QIZ				XP		17 19 13.5	
QIZ				S	**S**	**17 22 57.4**	**0.0**
QIZ				XS		17 23 11.9	
QIZ				LR	LR		
	comp=E,1µm,16.1s						
QIZ				LR	LR		
	comp=Z,856nm,15.4s,MS4.3						
KMI	**Kunming**	**23.64**	**19**	P	**P**	**17 19 15.7**	**+1.7**
KMI				AP		17 19 24.2	
KMI				XP		17 19 28.6	
KMI				S	**S**	**17 23 25.8**	**+2.4**
KMI				XS		17 23 40.2	
KMI				SS	SS	17 24 16.1	+3.6
KMI				AMB	AMB		
	comp=Z,54nm,1.5s,mb4.8						
KMI				AMB	AMB		
	comp=Z,374nm,6.2s						
KMI				LR	LR		
	comp=N,1µm,11.8s,MS4.7						
KMI				LR	LR		
	comp=E,592nm,10.2s,MS4.7						
KMI				LR	LR		
	comp=Z,1µm,11.4s,MS4.7						
KMI	**Kunming**	**23.64**	**19**	P	**P**	**17 19 15.7**	**+1.7**
	comp=Z,54nm,1.5s,mb4.8						
KMI				pP		17 19 24.2	
KMI				sP		17 19 28.6	
KMI				S	**S**	**17 23 25.8**	**+2.4**
KMI				sS		17 23 40.2	
KMI				SS	SS	17 24 16.1	+3.6
KMI				SSS	SSS	17 24 31.9	+3.2
KAD	**Karad**	**24.42**	**307**	*e*P	**P**	**17 19 21.7**	**0.0**
KAD				*e*P		17 19 23.4	
KAD				AMb	AMB	17 19 28.2	
	comp=Z,49nm,1.4s,mb4.7						
POO	**Poona**	**25.37**	**309**	*e*P	**P**	**17 19 31.0**	**+0.3**
JIRN	**Jiri**	**25.89**	**343**	*e*P	**P**	**17 19 35.9**	**+0.5**
	comp=Z,106nm,0.8s,mb5.4						
PKI	**Pulchoki**	**26.04**	**342**	*e*P	**P**	**17 19 36.6**	**-0.2**
	comp=Z,93nm,1.2s,mb5.2						
DMN	**Daman**	**26.17**	**341**	*e*P	**P**	**17 19 38.0**	**0.0**
	comp=Z,38nm,0.7s,mb5.0						
KKN	**Kakani**	**26.28**	**342**	*e*P	**P**	**17 19 38.6**	**-0.5**
	comp=Z,74nm,0.8s,mb5.3						
GYA	**Guiyang**	**26.35**	**26**	P	**P**	**17 19 39.9**	**+0.2**
GYA				AP	pP	17 19 47.0	-0.7
GYA				XP	sP	17 19 51.1	-0.2
GYA				S	**S**	**17 24 03.0**	**-6.0**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,150nm,5.4s						
GYA				LR	LR		
	comp=N,760nm,16.2s						
GYA				LR	LR		
	comp=E,820nm,10.6s						
GYA				LR	LR		
	comp=Z,830nm,17.6s,MS4.3						
GKN	**Gorkha**	**26.68**	**341**	*e*P	**P**	**17 19 42.8**	**0.0**
	comp=Z,186nm,1.2s,mb5.5						
KOLN	**Koldanda**	**26.83**	**339**	*e*P	**P**	**17 19 44.3**	**+0.2**
	comp=Z,228nm,1.3s,mb5.5						
CD2	**Chengdu**	**29.35**	**17**	P	**P**	**17 20 05.4**	**-1.5**
CD2				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.0						
LGTI	**Lohaghat**	**29.65**	**335**	⇓*i*P	**P**	**17 20 09.3**	**-0.3**
NDI	**New Delhi**	**30.43**	**329**	*e*P	**P**	**17 20 14.5**	**-1.9**
DDI	**Dehra Dun**	**31.37**	**332**	*e*P	**P**	**17 20 26.3**	**+1.5**
SDNR	**Sundarnagar**	**32.87**	**332**	*e*P	**P**	**17 20 38.0**	**+0.2**
WHN	**Wuhan**	**33.50**	**32**	⇑P	**P**	**17 20 43.3**	**0.0**
WHN				S	**S**	**17 26 03.2**	**+0.9**
WHN				LR	LR		
	comp=Z,2µm,12.9s,MS5.0						
XAN	**Xi’an**	**33.95**	**22**	P	**P**	**17 20 45.7**	**-1.5**
XAN				AMB	AMB		
	comp=Z,48nm,1.2s,mb5.3						
XAN				LR	LR		
	comp=N,301nm,11.1s,MS4.5						
XAN				LR	LR		
	comp=E,543nm,13.4s,MS4.5						
XAN				LR	LR		
	comp=Z,877nm,11.1s,MS4.7						
THN	**Thein Dam**	**34.23**	**331**	*e*P	**P**	**17 20 47.7**	**-1.9**
THN				*e*		17 24 20.4	
LZH	**Lanzhou**	**34.28**	**14**	⇑P	**P**	**17 20 52.5**	**+2.5**
LZH				AP	pP	17 21 00.5	+2.4
LZH				XP	sP	17 21 04.2	+2.7
LZH				PP	PP	17 22 08.5	+3.2
LZH				*e*S	**S**	**17 26 18.2**	**+3.9**
LZH				XS		17 26 30.6	
LZH				SS	SS	17 28 28.5	+4.1
LZH				AMB	AMB		
	comp=Z,29nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,263nm,6.2s						
LZH				LR	LR		
	comp=N,2µm,13.0s						
LZH				LR	LR		
	comp=Z,3µm,16.9s,MS5.0						
LZH	**Lanzhou**	**34.28**	**14**	⇑P	**P**	**17 20 52.5**	**+2.5**
	comp=Z,29nm,1.3s,mb5.0						
LZH				pP	pP	17 21 00.5	+2.4
LZH				sP	sP	17 21 04.2	+2.7
LZH				PP	PP	17 22 08.5	+3.2
LZH				*e*S	**S**	**17 26 18.2**	**+3.9**
LZH				sS		17 26 30.6	
LZH				SS	SS	17 28 28.5	+4.1
GTA	**Gaotai**	**36.78**	**7**	⇑*i*P	**P**	**17 21 11.3**	**+0.1**
GTA				AP	pP	17 21 19.0	-0.3
GTA				XP	sP	17 21 22.9	+0.2
GTA				PP	PP	17 22 35.5	-1.3
GTA				PCP	PcP	17 23 34.3	+0.8
GTA				S	**S**	**17 26 50.3**	**-2.6**
GTA				AMB	AMB		
	comp=Z,96nm,0.7s,mb5.7						
GTA				AMB	AMB		
	comp=Z,151nm,5.3s						
GTA				LR	LR		
	comp=N,401nm,11.0s,MS4.5						
GTA				LR	LR		
	comp=E,234nm,10.3s,MS4.5						
GTA				LR	LR		
	comp=Z,361nm,11.0s,MS4.4						
NJ2	**Nanjing**	**37.16**	**36**	*e*P	**P**	**17 21 15.6**	**+1.1**
NJ2				AP	pP	17 21 25.3	+2.7
NJ2				XP	sP	17 21 29.3	+3.3
NJ2				PP	PP	17 22 43.5	+1.8
NJ2				S	**S**	**17 27 00.0**	**+1.2**
NJ2				XS		17 27 16.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,2µm,4.8s						
NJ2				LR	LR		
	comp=N,1µm,11.6s,MS5.1						
NJ2				LR	LR		
	comp=E,1µm,13.5s,MS5.1						

NJ2				LR	LR		
	comp=Z,2µm,19.6s						
FITZ	Fitzroy Crossi	37.25	125	⇑iP	P	17 21 14.5	-0.8
	comp=Z,24nm,0.9s,mb5.0						
FITZ				i PCP	PcP	17 23 35.4	+0.3
SSE	Sheshan	37.91	39	eP	P	17 21 22.1	+1.3
SSE				AP	pP	17 21 29.5	+0.6
SSE				S	S	17 27 13.2	+2.9
SSE				XS		17 27 26.7	
SSE				AMB	AMB		
	comp=Z,25nm,1.3s,mb4.8						
SSE				AMB	AMB		
	comp=Z,153nm,3.8s						
SSE				LR	LR		
	comp=N,386nm,13.1s,MS4.7						
SSE				LR	LR		
	comp=E,578nm,13.1s,MS4.7						
SSE				LR	LR		
	comp=Z,967nm,14.1s,MS4.8						
SSE	Sheshan	37.91	39	eP	P	17 21 22.1	+1.3
	comp=Z,25nm,1.3s,mb4.8						
SSE				pP	pP	17 21 29.5	+0.6
SSE				S	S	17 27 13.2	+2.9
SSE				sS		17 27 26.7	
SSE				SS	SS	17 30 05.6	+19
KSH	Kashi	40.14	338	eP	P	17 21 39.0	-0.3
KSH				eAP	pP	17 21 48.6	+1.2
KSH				eXP	sP	17 21 53.0	+2.2
KSH				ePP	PP	17 23 15.8	+0.5
KSH				ePCP	PcP	17 23 46.0	+2.0
KSH				eSCP		17 27 30.0	
KSH				ePCS		17 27 34.0	
KSH				eS	S	17 27 42.3	-1.5
KSH				eXS		17 27 57.2	
KSH				eSS	SS	17 30 34.5	-1.6
KSH				eSCS	ScS	17 31 42.0	+0.1
KSH				AMB	AMB		
	comp=Z,200nm,1.6s,mb5.6						
KSH				AMB	AMB		
	comp=Z,120nm,3.8s						
KSH				LR	LR		
	comp=N,340nm,5.6s						
KSH				LR	LR		
	comp=E,600nm,6.2s						
KAKA	Kakadu	40.93	113	⇓iP	P	17 21 45.6	-0.3
	comp=E,40nm,0.9s,mb5.0						
HHC	Hu-ho-hao-te	40.96	20	eP	P	17 21 46.1	+0.1
HHC				AP	pP	17 21 55.7	+1.6
HHC				XP	sP	17 22 00.1	+2.6
HHC				PP	PP	17 23 28.8	+5.3
HHC				PCP	PcP	17 23 43.2	-3.4
HHC				SCP		17 27 31.0	
HHC				S	S	17 27 59.8	+3.8
HHC				SCS	ScS	17 31 43.9	-2.8
HHC				AMB	AMB		
	comp=Z,29nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,201nm,5.0s						
HHC				LR	LR		
	comp=N,351nm,19.2s,MS4.6						
HHC				LR	LR		
	comp=E,769nm,19.2s,MS4.6						
HHC				LR	LR		
	comp=Z,520nm,15.6s,MS4.5						
WMQ	Urumqi	41.25	353	P	P	17 21 49.0	+0.7
WMQ				XP	sP	17 22 03.0	+3.1
WMQ				PP	PP	17 23 28.0	+1.4
WMQ				S	S	17 28 01.0	+0.7
WMQ				SS	SS	17 31 00.0	+0.7
WMQ				AMB	AMB		
	comp=Z,29nm,0.9s,mb4.9						
WMQ				LR	LR		
	comp=N,132nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=E,146nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,98nm,18.0s,MS3.7						
BJI	Beijing	42.04	25	P	P	17 21 55.9	+1.0
BJI				AP	pP	17 22 01.9	-1.2
BJI				XP	sP	17 22 04.7	-1.8
BJI				S	S	17 28 20.4	+8.3
BJI				AMB	AMB		
	comp=Z,28nm,1.0s,mb4.8						
BJI				LR	LR		
	comp=N,376nm,11.2s,MS4.6						
BJI				LR	LR		
	comp=E,300nm,10.9s,MS4.6						
BJI				LR	LR		
	comp=Z,328nm,22.4s						
BJI	Beijing	42.04	25	P	P	17 21 55.9	+1.0
	comp=Z,28nm,1.0s,mb4.8						
BJI				pP	pP	17 22 01.9	-1.2
BJI				sP	sP	17 22 04.7	-1.8
BJI				S	S	17 28 20.4	+8.3
ULHL	Ulahol	42.45	340	P	P	17 21 59.4	+1.2
	SNR=5.1						
KZA	Kyzart	42.65	339	P	P	17 22 00.7	+0.8
	SNR=17						
UCH	Uchtor	43.05	338	P	P	17 22 04.3	+1.2
	SNR=52						
KBK	Karagaybulak	43.26	339	P	P	17 22 06.1	+1.3
	SNR=53						
AML	Almayashu	43.27	338	P	P	17 22 06.0	+1.1
	SNR=36						
TKM2	Tokmak 2	43.27	340	P	P	17 22 05.7	+0.8
	SNR=29						
AAK	Ala-Archa	43.41	339	P	P	17 22 06.7	+0.7
	SNR=15						
AAK	Ala-Archa	43.41	339	c iP	P	17 22 05.7	-0.3
AAK				pmax	pmax		
	comp=Z,49nm,1.7s,mb5.0						
AAK	Ala-Archa	43.41	339	⇑eP	P	17 22 05.7	-0.3
	comp=Z,21nm,1.2s,mb4.8						
FRU	Bishkek	43.53	339	eP	P	17 22 09.0	+2.0
FRU				e		17 22 25.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.8s,mb5.2						
CHMS	Chumysh	43.63	339	P	P	17 22 08.5	+0.7
	SNR=13						
EKS2	Erkin-Say	43.69	338	P	P	17 22 09.3	+1.0
	SNR=22						
USP	Ospenovka	43.95	339	P	P	17 22 10.7	+0.3
	SNR=62						
MKAR	Makanchi Array	45.03	348	i P	P	17 22 19.4	+0.3
MKAR				pmax	pmax		
	comp=Z,29nm,0.6s						
WRAB	Tennant Creek	45.38	122	c iP	P	17 22 22.1	-0.1
WRAB	Tennant Creek	45.38	122	⇑eP	P	17 22 22.1	0.0
	comp=Z,156nm,1.2s,mb5.7						
WB2	Warramunga Arr	45.38	122	⇑iP	P	17 22 21.8	-0.4
ULN	Ulaanbaatar	46.22	12	c iP	P	17 22 28.3	-0.2
ULN	Ulaanbaatar	46.22	12	⇑eP	P	17 22 28.3	-0.1
	comp=Z,22nm,0.9s,mb5.1						
ULN				ePcP	PcP	17 24 04.3	0.0
ASPA	Alice Springs	46.70	127	⇑iP	P	17 22 32.6	0.0
SNY	Shenyang	46.90	30	⇑P	P	17 22 33.7	-0.2
SNY				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.1						
ZAK	Zakamensk	48.01	8	⇓iP	P	17 22 42.4	-0.1
ZAK				e		17 24 30.6	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
MOY	Mondy	49.01	6	eP	P	17 22 50.5	+0.3
MOY				pmax	pmax		
	comp=Z,39nm,3.3s						
CN2	Changchun	49.28	30	eP	P	17 22 54.7	+2.3
CN2				eAP	pP	17 23 03.1	+2.3
CN2				eS	S	17 29 59.0	+3.3
CN2				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.0						
CN2				AMB	AMB		
	comp=Z,370nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,11.0s,MS4.8						
CN2				LR	LR		
	comp=E,400nm,11.0s,MS4.8						
CN2				LR	LR		
	comp=Z,400nm,13.0s,MS4.6						
TLY	Talaya	49.33	8	P	P	17 22 53.8	+1.1
	comp=Z,163nm,0.8s,mb6.1,SNR=22						
TLY	Talaya	49.33	8	eP	P	17 22 53.4	+0.7
TLY				e	pP	17 23 02.4	+1.4
TLY				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
TLY				MLR	MLR		
	comp=Z,181nm,14.0s,MS4.2						
TLY	Talaya	49.33	8	⇑iP	P	17 22 53.4	+0.7
	comp=Z,24nm,0.8s,mb5.3						
KURK	Kurchatov	49.53	347	c iP	P	17 22 54.2	0.0
KURK	Kurchatov	49.53	347	⇑iP	P	17 22 54.3	+0.1
	comp=Z,70nm,0.7s,mb5.8						
IRK	Irkutsk	49.97	8	eP	P	17 22 57.2	-0.4
IRK				pmax	pmax		
	comp=Z,49nm,2.3s,mb5.1						
MDJ	Mudanjiang	51.97	32	P	P	17 23 13.3	+0.4
MDJ				AP	pP	17 23 19.6	-1.6
MDJ				XP	sP	17 23 22.2	-2.2
MDJ				PCP	PcP	17 24 25.0	-0.2
MDJ				PP	PP	17 25 11.8	+0.2
MDJ				S	S	17 30 36.6	+3.8
MDJ				SCS	ScS	17 33 01.8	+4.0
MDJ				AMB	AMB		
	comp=Z,24nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,176nm,5.8s						
MDJ				LR	LR		
	comp=N,267nm,6.2s						
MDJ				LR	LR		
	comp=E,475nm,12.0s						
MDJ				LR	LR		
	comp=Z,375nm,11.3s,MS4.7						
NVS	Novosibirsk	52.64	352	i P	P	17 23 16.3	-1.5
NVS				eS	S	17 30 41.6	-0.2
NVS				pmax	pmax		
	comp=Z,74nm,1.2s,mb5.5						
NVS				pmax	pmax		
	comp=N,42nm,0.8s						
NVS				pmax	pmax		
	comp=E,25nm,0.8s						
NVS				smax			
	comp=N,15nm,1.8s						
NVS				smax			
	comp=E,12nm,1.8s						
BVA0	Borovoye Array	53.81	342	i P	P	17 23 25.4	-1.0
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
PMG	Port Moresby	54.08	104	eP	P	17 23 28.0	-0.8
	comp=Z,23nm,1.0s,mb5.1						
CHKZ	Chkalovo	54.30	343	P	P	17 23 29.5	-0.5
CHKZ				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.4						
CTA	Charters Tower	55.84	116	⇑iP	P	17 23 41.4	-0.3
	comp=Z,23nm,0.9s,mb5.2						
CTAO	Charters Tower	55.84	116	eP	P	17 23 40.9	-0.8
	comp=Z,27nm,0.8s,mb5.3						
CTAO				e	pP	17 23 49.7	-0.3
KLR	Kul'dur	56.20	29	⇓iP	P	17 23 41.6	-2.2
KLR				pmax	pmax		
	comp=N,25nm,1.2s						
KLR				pmax	pmax		
	comp=E,47nm,1.2s						
KLR				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.5						
KLR				MLR	MLR		
	comp=N,800nm,13.0s						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.1						
STKA	Stephens Creek	56.61	131	⇑iP	P	17 23 46.5	-0.5
	comp=Z,17nm,0.7s,mb5.2						
BOD	Bodaibo	57.03	12	eP	P	17 23 46.0	-3.7
BOD				pmax	pmax		
	comp=Z,54nm,1.8s,mb5.3						
KMBO	Kilima Mbogo	57.13	267	eP	P	17 23 51.6	+0.6
	comp=Z,25nm,0.9s,mb5.2						
GNI	Garni	58.11	317	d iP	P	17 23 57.7	+0.2
GNI				pmax	pmax		
	comp=Z,23nm,1.3s						
GNI	Garni	58.11	317	eP	P	17 23 56.7	-0.8
	comp=Z,31nm,0.9s,mb5.3						
CLNS	Chul'man	59.13	19	eP	P	17 24 03.9	-0.5
CLNS				e		17 33 51.2	
CLNS				pmax	pmax		
	comp=N,19nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.5						
CLNS				pmax	pmax		
	comp=E,17nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
CLNS				pmax	pmax		
	comp=N,7.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.8						
CLNS				MLR	MLR		
	comp=N,300nm,13.0s,MS4.6						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS4.6						
SVE	Sverdlovsk	60.14	339	⇑iP	P	17 24 07.1	-4.2
SVE				e		17 26 29.5	
SVE				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
ARU	Arti	60.59	338	P	P	17 24 12.6	-1.8
	comp=Z,231nm,1.1s,mb6.2,SNR=25						
ARU	Arti	60.59	338	⇓iP	P	17 24 05.4	-9.0
ARU				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.5						
YSS	Yuzh-Sakhalins	60.73	36	⇑iP	P	17 24 15.0	-0.5
YSS				e	pP	17 24 23.0	-1.0
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
YSS	Yuzh-Sakhalins	60.73	36	i Pr		17 24 16.0	
KIV	Kislovodsk	61.19	320	c iP	P	17 24 17.5	-1.1
KIV				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.4						
KIV	Kislovodsk	61.19	320	eP	P	17 24 17.5	-1.1
	comp=Z,41nm,1.0s,mb5.5						
MALT	Malatya	61.88	312	⇑iP	P	17 24 23.4	0.0
	comp=Z,46nm,1.0s,mb5.6						
EIL	Elat	62.12	302	eP	P	17 24 25.3	+0.2
	comp=Z,21nm,0.8s,mb5.3						
SOC	Sochi	62.97	318	eP	P	17 24 28.1	-2.4
SOC				e		17 25 02.7	
SOC				e		17 26 47.6	
SOC				eS	S	17 32 56.4	-0.8
SOC				e		17 34 17.3	
SOC				eSS	SS	17 37 02.3	-2.6
SOC				eSSS	SSS	17 39 55.4	+5.8
SOC				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.5						
SOC				pmax	pmax		
	comp=N,13nm,0.7s						
SOC				pmax	pmax		
	comp=E,12nm,0.6s						
SOKR	Solikamsk	63.55	340	⇓iP	P	17 24 33.4	-0.7
SOKR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
MBAR	Mbarara	63.59	268	i P	P	17 24 35.0	-0.2
YAK	Yakutsk	64.74	18	c iP	P	17 24 41.0	-0.9
YAK				pmax	pmax		
	comp=Z,107nm,1.0s,mb5.8						
YAK	Yakutsk	64.74	18	eP	P	17 24 40.9	-1.0
	comp=Z,98nm,0.8s,mb5.9						
SIM	Simferopol'	67.21	318	c eP	P	17 24 57.6	-0.4
SIM				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.5						
LSZ	Lusaka	67.78	252	eP	P	17 25 01.7	-0.3
	comp=Z,5.6nm,0.8s,mb4.7						
MOS	Moscow	69.46	330	eP	P	17 25 10.4	-1.3
MOS				pmax	pmax		
	comp=Z,93nm,1.2s,mb5.6						
OBN	Obninsk	69.72	329	⇑iP	P	17 25 08.9	-4.4
OBN				eS	S	17 34 24.5	+5.5
OBN				pmax	pmax		
	comp=Z,52nm,1.5s,mb5.2						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
OBN	Obninsk	69.72	329	eP	P	17 25 08.0	-5.4
	comp=Z,27nm,0.8s,mb5.2						
TIRR	Tirgusor	70.94	316	⇓iP	P	17 25 20.4	-0.5
TIRR	Tirgusor	70.94	316	⇓iP	P	17 25 20.4	-0.5
MA2	Magadan	71.19	27	i P	P	17 25 21.9	-0.3
MA2				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
MA2	Magadan	71.19	27	eP	P	17 25 21.3	-0.9
	comp=Z,38nm,0.8s,mb5.4						
CFR	Carcaliu	71.32	317	⇓iP	P	17 25 22.7	-0.5
CFR	Carcaliu	71.32	317	⇓iP	P	17 25 22.7	-0.5
SANT	Santorini	71.33	307	P	P	17 25 20.6	-2.8
HARR	Harsova	71.33	316	⇑iP	P	17 25 23.0	-0.3
HARR	Harsova	71.33	316	⇑iP	P	17 25 23.0	-0.3
KIS	Kishinev	71.36	319	eP	P	17 25 20.0	-3.4
KIS				e	pP	17 25 30.0	-1.9
KIS				e		17 25 45.0	
ALN	Alexandroupoli	71.78	312	eP	P	17 25 25.0	-1.0
LBTB	Lobatse	71.99	243	⇑eP	P	17 25 27.6	+0.1
	comp=Z,33nm,0.7s,mb5.4						
LBTB				e	pP	17 25 37.7	+1.6
TIXI	Tiksi	72.14	11	⇑iP	P	17 25 26.8	-0.9
TIXI				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,212nm,18.0s,MS4.5						
TIXI	Tiksi	72.14	11	⇑iP	P	17 25 26.9	-0.8
MLR	Muntele Rosu	72.89	317	⇑P	P	17 25 32.5	-0.1
MLR	Muntele Rosu	72.89	317	⇓iP	P	17 25 32.5	-0.1
MLR	Muntele Rosu	72.89	317	⇓iP	P	17 25 32.5	-0.1
BOSA	Boshof	73.06	239	eP	P	17 25 33.4	-0.5
	comp=Z,33nm,1.4s,mb5.1						
OUR	Ouranopolis	73.20	311	eP	P	17 25 40.7	+6.2
SRS	Serrai	73.64	312	eP	P	17 25 35.8	-1.2
SOH	Sokhos	73.76	312	eP	P	17 25 36.1	-1.6
BURAR	Bucovina Array	73.89	319	⇑P	P	17 25 38.6	+0.3
BURAR	Bucovina Array	73.89	319	⇑iP	P	17 25 38.7	+0.4
KNT	Kendrikon	74.16	312	eP	P	17 25 38.5	-1.5
LIT	Litokhoron	74.28	311	eP	P	17 25 38.9	-1.9
GRG	Griva	74.50	312	eP	P	17 25 40.5	-1.5
BOLS	Boljevac	75.33	315	⇑iP	P	17 25 45.8	-0.9
SKO	Skopje	75.38	313	eP	P	17 25 40.0	-7.1
JOF	Joensuu	75.45	335	ep	P	17 25 45.8	-1.2
	comp=Z,20nm,0.9s,mb5.0						
JOF	Joensuu	75.45	335	eP	P	17 25 45.8	-1.2
JOF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
KWP	Kalwaria	75.97	321	eP	P	17 25 50.3	+0.1
KOLS	Kolonicke sedl	76.10	320	i P	P	17 25 51.6	+0.6
KOLS				epP	pP	17 25 59.9	+0.3
APA	Apatity	76.61	340	⇑iP	P	17 25 53.0	-0.4
APA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
CRVS	Cervenica-Dubn	76.62	320	i P	P	17 25 54.0	+0.1
SUW	Suwalki	76.68	325	eP	P	17 25 53.4	-0.7
KECS	Kecovo	77.17	319	i P	P	17 25 57.2	+0.2
KAF	Kangasniemi	77.34	333	ep	P	17 25 56.5	-1.1
	comp=Z,26nm,1.0s,mb5.1						
KAF	Kangasniemi	77.34	333	eP	P	17 25 56.5	-1.1
KAF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
NIE	Niedzica	77.45	320	eP	P	17 25 59.2	+0.7
PSZ	Piszkesteto	77.46	318	eP	P	17 25 58.4	-0.2
	comp=Z,12nm,0.9s,mb4.8						
PSZ	Piszkesteto	77.46	318	⇑iP	P	17 25 58.6	0.0
OJC	Ojcow	77.93	321	eP	P	17 26 01.5	+0.4
VYHS	Vyhne	78.26	319	i P	P	17 26 03.1	+0.2
TSUM	Tsumeb	78.37	250	eP	P	17 26 04.9	+0.7
	comp=Z,16nm,1.0s,mb4.9						
TSUM				e	pP	17 26 13.9	+1.2
OKC	Ostrava-Krasne	78.91	320	eP	P	17 26 06.7	+0.2
OKC				epP	pP	17 26 15.6	+0.5
MORC	Moravsky Berou	79.29	320	eP	P	17 26 08.4	-0.1
	comp=Z,20nm,1.3s,mb4.9						
MORC				e	pP	17 26 17.3	+0.1
ZST	Bratislava	79.36	318	i P	P	17 26 09.3	+0.4
ZST				i pP	pP	17 26 17.7	+0.1
SISC	Sisak	79.51	316	i P	P	17 26 12.8	+3.0
KEV	Kevo	79.63	341	ep	P	17 26 07.7	-2.3
DPC	Dobruska-Polom	80.15	321	eP	P	17 26 14.1	+0.9
DPC				epP	pP	17 26 22.8	+1.0
KSP	Ksiaz	80.23	321	eP	P	17 26 14.1	+0.5
KSP	Ksiaz	80.23	321	eP	P	17 26 14.4	+0.8
ARSA	Arzberg	80.30	317	⇓iP	P	17 26 14.4	+0.4
	comp=Z,96nm,1.6s,mb5.5						
UPC	Upice	80.37	321	eP	P	17 26 14.8	+0.5
UPC				epP	pP	17 26 23.7	+0.7
PERS	Pernice	80.51	317	⇑eP	P	17 26 15.5	+0.3
	comp=Z,53nm,1.0s,mb5.4						
VISS	Visnje	80.62	316	i P	P	17 26 15.8	+0.1
SYO	Syowa Base	80.64	197	⇓P	P	17 26 14.0	-1.4
SYO	Syowa Base	80.64	197	⇓PcP	PcP	17 26 21.6	-0.9
BILL	Bilibino	80.72	21	d iP	P	17 26 16.3	+0.4
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
BILL	Bilibino	80.72	21	eP	P	17 26 16.3	+0.5
	comp=Z,8.2nm,0.8s,mb4.7						
LJU	Ljubljana	80.86	316	⇑iP	P	17 26 17.4	+0.5
OBKA	Obir	80.89	317	⇑iP	P	17 26 17.4	+0.3
	comp=Z,165nm,2.1s,mb5.6						
PRU	Pruhonice	81.24	320	eP	P	17 26 19.6	+0.7
PRU				epP	pP	17 26 28.0	+0.4
PVCC	Panska Ves	81.28	321	eP	P	17 26 19.6	+0.5
PTQR	Pietraquaria	81.33	312	eP	P	17 26 19.8	+0.2
AQU	L'Aquila	81.36	312	eP	P	17 26 20.6	+0.9
NRCA	Norcia	81.60	313	eP	P	17 26 21.0	+0.1
GEC2	GERESS Array S	81.68	319	eP	P	17 26 21.7	+0.5
GEC2				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
GEC2	GERESS Array S	81.68	319	eP	P	17 26 21.7	+0.5
	comp=Z,24nm,0.9s,mb5.1						
PTCC	Patocco-Chiusa	81.70	316	eP	P	17 26 21.9	+0.5
BRG	Berggiesshubel	81.72	321	i P	P	17 26 21.5	+0.1
BRG				e	pP	17 26 28.5	-1.6
BRG				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
BRG	Berggiesshubel	81.72	321	i P	P	17 26 21.5	+0.1
	comp=Z,15nm,1.0s,mb4.9						
BRG				e	pP	17 26 28.5	-1.6
SNTG	Esanatoglia	81.76	313	eP	P	17 26 22.4	+0.7
KBA	Koelnbreinsper	81.76	317	⇑iP	P	17 26 21.6	-0.1
	comp=Z,12nm,1.1s,mb4.8						
ARV	Arcevia	81.78	313	eP	P	17 26 22.6	+0.7
KHC	Kasperske Hory	81.78	319	eP	P	17 26 22.3	+0.5
FSSB	Fossombrone	81.91	314	eP	P	17 26 23.4	+0.9
WET	Wettzell	82.24	319	eP	P	17 26 24.6	+0.5
WET				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
WET	Wettzell	82.24	319	eP	P	17 26 24.6	+0.5
	comp=Z,14nm,1.1s,mb4.8						
CLL	Collm	82.35	321	⇑iP	P	17 26 24.6	0.0
CLL				i	pP	17 26 32.6	-0.7
CLL				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
CLL	Collm	82.35	321	⇑iP	P	17 26 24.6	0.0
	comp=Z,12nm,1.1s,mb4.7						
CLL				i	pP	17 26 32.6	-0.7
CLL	Collm	82.35	321	⇑P	P	17 26 24.6	0.0
	comp=Z,logA/T=1.0,mb4.7						
CLL				i *PP	pP	17 26 32.6	-0.7
SFI	Santa Sofia	82.59	314	eP	P	17 26 27.6	+1.5
NKC	Novy Kostel	82.61	320	eP	P	17 26 26.9	+0.9
VMG	Vicchio	82.81	314	eP	P	17 26 28.4	+1.2
CTI	Castel Tesino	82.86	316	eP	P	17 26 28.1	+0.7
WTTA	Wattenberg	82.94	317	⇑iP	P	17 26 27.6	-0.2
	comp=Z,47nm,1.3s,mb5.4						
WATA	Walderalm	82.98	317	⇑iP	P	17 26 27.7	-0.3
	comp=Z,13nm,1.0s,mb4.9						
MOX	Moxa	83.17	321	eP	P	17 26 29.4	+0.5
MOX				pmax	pmax		
	comp=Z,23nm,1.5s,mb5.0						
MOX	Moxa	83.17	321	eP	P	17 26 29.4	+0.5
	comp=Z,23nm,1.5s,mb5.0						
MOX	Moxa	83.17	321	i P	P	17 26 29.4	+0.5
	comp=Z,logA/T=1.2,mb5.0						
SQTA	Sankt Quirin	83.23	317	⇑iP	P	17 26 29.1	-0.2
	comp=Z,11nm,0.9s,mb4.9						
MOTA	Moosalm	83.30	317	⇑iP	P	17 26 29.4	-0.3
	comp=Z,11nm,1.0s,mb4.8						
GRA1	Grafenberg Arr	83.36	320	eP	P	17 26 30.6	+0.7
	comp=Z,14nm,0.9s,mb5.0						
GRA1				epP	pP	17 26 39.3	+0.7
GRF	Grafenberg Arr	83.36	320	eP	P	17 26 30.6	+0.7
GRF				e*PP	pP	17 26 39.3	+0.7
GRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
GRF	Grafenberg Arr	83.36	320	eP	P	17 26 30.6	+0.7
	comp=Z,14nm,0.9s,mb5.0						
GRF				epP	pP	17 26 39.3	+0.7
BRMO	Bormio	83.76	316	eP	P	17 26 32.9	+0.8
CLZ	Clausthal	84.02	322	eP	P	17 26 33.5	+0.3
	comp=Z,12nm,0.9s,mb5.0						
DAVA	Damuels	84.13	317	⇑iP	P	17 26 34.3	+0.4
	comp=Z,37nm,1.5s,mb5.3						
NB2	NORSAR Subarra	84.18	331	P	P	17 26 33.4	-0.4
	comp=Z,4.8nm,0.8s,mb4.7,baz=97,slow=5.3						
TNS	Taunus Mts	85.17	320	eP	P	17 26 39.3	+0.3

BFO	**Black Forest**	**85.21**	**318**	*e*P	**P**	**17 26 39.7**	**+0.5**
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
BFO	**Black Forest**	**85.21**	**318**	*e*P	**P**	**17 26 39.7**	**+0.5**
	comp=Z,6.0nm,0.9s,mb4.7						
LPG	**La Plagne**	**86.27**	**315**	⇑*i*P	**P**	**17 26 45.0**	**+0.4**
	comp=Z,25nm,1.0s,mb5.1						
VNDA	**Vanda**	**87.98**	**168**	*e*P	**P**	**17 26 53.1**	**+0.9**
	comp=Z,18nm,1.2s,mb5.2						
VNDA				*e*	pP	17 27 01.8	+0.8
QSPA	**South Pole Qui**	**92.75**	**180**	⇓*i*P	**P**	**17 27 16.7**	**+2.4**
	comp=Z,30nm,1.5s,mb5.5						
IMA	**Indian Mountai**	**96.23**	**22**	*e*P	**P**	**17 27 32.6**	**+2.0**
	comp=Z,2.3nm,0.7s,mb4.7						
MCK	**McKinley**	**99.02**	**24**	P	**P**	**17 27 43.0**	**-0.2**
	comp=Z,3.3nm,0.9s,mb4.9						
RES	**Resolute Bay**	**102.42**	**2**	*e*Pdif	Pdif	17 27 58.6	+0.3
	comp=Z,4.7nm,0.9s						
ULM	**Lac du Bonnet**	**126.43**	**8**	*e*PKP	PKPdf	17 33 05.3	-4.1
ULM				*e*		17 33 13.3	
BOZ	**Bozeman (W)**	**126.56**	**22**	*e*PKP	PKPdf	17 33 06.7	-3.1
BOZ				*e*		17 33 14.9	
QLMT	**Earthquake Lak**	**127.32**	**23**	*e*PKP	PKPdf	17 33 09.7	-1.6
MSU	**Marysvale**	**132.18**	**28**	*e*PKP	PKPdf	17 33 18.7	-2.1
MNTX	**Cornudas Mount**	**140.93**	**27**	*e*PKPdf	PKPdf	17 33 33.5	-3.6
GDL2	**Guadalupe Moun**	**140.95**	**25**	*e*PKPpre		17 33 27.7	
MIAR	**Mount Ida**	**142.12**	**11**	*e*PKP	PKPdf	17 33 31.3	-7.7
LTX	**Lajitas**	**143.71**	**27**	*e*PKP	PKPdf	17 33 36.7	-5.2
JCT	**Junction City**	**144.28**	**21**	*e*PKP	PKPdf	17 33 37.7	-5.2
NATX	**Nacogdoches**	**144.59**	**13**	*e*PKP	PKPdf	17 33 39.6	-3.8
LVC	**Limon Verde**	**154.43**	**218**	*e*PKPbc	PKPdf	17 34 05.8	+6.8
SAML	**Samuel**	**156.76**	**254**	*e*PKPab	PKPab	17 34 29.0	-0.4
LPAZ	**La Paz**	**158.11**	**231**	*e*PKPdf	PKPdf	17 34 01.1	-2.9
LPAZ				*e*PKPab	PKPab	17 34 35.4	+0.3

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*CSEM **01** 17:34:37.6±0.5, 37.58N×25.31W, ML2.6, Error ellipse: s-maj=14.0km s-min=4.9km az=176.0, After PDA*

*PDA **01** 17:34:37.6±0.7, 37.58N×25.31W, MD2.2, ML2.6, Error ellipse: s-maj=2.1km s-min=1.3km az=72.0*

SVSA 01 17:34:37.6±0.7,**37.58N**×**25.31W, MD2.2, ML2.6, Error ellipse: s-maj=2.1km s-min=1.3km az=72.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRA1	**Furnas**	**0.17**	**347**	*i* P	Pg	17 34 41.1	+0.1
VIF	**Vila Franca**	**0.20**	**329**	*i* P	Pg	17 34 41.7	+0.1
VIF				*e*S	Sg	17 34 44.6	+0.4
	973nm,0.2s						
PCNG	**Congro**	**0.20**	**340**	*i* P	Pg	17 34 41.5	-0.2
PCNG				*i* S	Sg	17 34 44.9	+0.5
	693nm,0.2s						
PRCH	**Ribeira Ch**	**0.20**	**318**	*i* S	Sg	17 34 44.7	+0.3
	1µm,0.2s						
MIRA	**Miradouro**	**0.21**	**7**	*i* P	Pg	17 34 41.7	-0.1
MIRA				*i* S	Sg	17 34 45.1	+0.5
BART	**Pico Bartolome**	**0.23**	**29**	*e*P	Pg	17 34 42.1	-0.1
BART				*i* S	Sg	17 34 45.9	+0.6
	928nm,0.2s						
LFA	**Lagoa do Fogo**	**0.24**	**325**	*i* P	Pg	17 34 42.4	0.0
MESC	**Monte Escuro**	**0.24**	**334**	*i* P	Pg	17 34 42.3	-0.2
MESC				*i* S	Sg	17 34 46.1	+0.4
PFAD	**Fenais da Ajud**	**0.26**	**358**	*i* P	Pg	17 34 42.5	-0.4
CML	**Cha da Macela**	**0.27**	**316**	*e*P	Pg	17 34 42.6	-0.4
CML				*i* S	Sg	17 34 46.6	0.0
PMAT	**Coroa da Mata**	**0.27**	**332**	*e*P	Pg	17 34 42.7	-0.3
PMAT				*i* S	Sg	17 34 46.8	+0.1
	213nm,0.2s						
PVER	**Pico Vermelho**	**0.28**	**324**	*e*S	Sg	17 34 46.6	-0.2
FAC	**Faja de Cima**	**0.34**	**306**	*e*P	Pg	17 34 44.0	-0.3
FAC				*i* S	Sg	17 34 49.1	+0.3
PSET	**Sete Cidades**	**0.41**	**307**	*e*P	Pg	17 34 45.3	-0.5
PSET				*i* S	Sg	17 34 51.5	+0.2
	337nm,0.2s						
PSAN	**Santo Antonio**	**0.43**	**310**	*e*P	Pg	17 34 45.5	-0.7
PFET	**Feteiras**	**0.45**	**303**	*i* P	Pg	17 34 45.8	-0.8
SET2	**Ginetes**	**0.48**	**304**	*i* P	Pg	17 34 46.4	-0.7
SET4	**Mosteiros**	**0.49**	**308**	*e*P	Pg	17 34 46.4	-1.0
PSMN	**Pico do Norte,**	**0.60**	**161**	*i* P	Pg	17 34 48.5	-1.1
PSMN				*i* S	Sg	17 34 56.5	-1.2

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*MOS **01** 17:40:44.2±0.8, 6.40S×154.67E, h33^{km}, mb5.0/9, Error ellipse: s-maj=18.0km s-min=14.2km az=105.6*

*BJI **01** 17:40:47.7, 6.18S×154.86E, h61^{km}, mB5.5, mb5.1, Ms5.1, Msz4.8*

*NEIC **01** 17:40:49.2±1.7, 6.50S×154.53E, h63^{km}±16^{km}, mb5.1/29, Error ellipse: s-maj=9.4km s-min=9.2km az=69.0*

*HRVD **01** 17:40:49.2±0.1, 6.74S×154.60E, h30^{km}, MW5.5/73, Centroid moment Tensor Solution. LP body waves: s73,c142;Mantle waves: s73,c134; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}2.00±.04; $M_{\theta\theta}$-1.31±.03; $M_{\phi\phi}$-0.68±.03; $M_{r\theta}$1.19±.06; $M_{\theta\phi}$1.16±.03; $M_{\phi r}$-0.79±.06; Best double couple: $M_0$2.54×10^{17} NP1: ϕ_s310°,δ28°,λ94°. NP2:ϕ_s125°,δ62°,λ88°. Principal axes: T 2.442, Plg73°, Azm29°; N .2, Plg2°, Azm126°; P -2.637, Plg17°, Azm217°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 17:40:47.1±0.3,**6.52S**±0.04×**154.57E**±0.05,**h57**^{km}**, h57**^{km}±2.0^{km}**:pP-P, n109,** σ**1^{s}00**/121,**mb5.2**/49,**MS4.9**/15, **4C-2D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.88**	**248**	*i* P	**P**	**17 42 40.9**	**-0.6**
PMG	**Port Moresby**	**7.88**	**248**	*e*P	**P**	**17 42 39.8**	**-1.7**
CTA	**Charters Tower**	**15.72**	**210**	*e*P	**P**	**17 44 27.6**	**+1.1**
	48nm,0.7s						
CTAO	**Charters Tower**	**15.72**	**210**	*e*P	**P**	**17 44 27.5**	**+1.0**
	68nm,0.7s						
NOUC	**Port Laguerre**	**19.19**	**145**	*e*P	**P**	**17 45 08.5**	**-0.6**
NOUC	**Port Laguerre**	**19.19**	**145**	*e*P	**P**	**17 45 08.5**	**-0.6**
DZM	**Mont Dzumac**	**19.25**	**145**	*e*P	**P**	**17 45 09.1**	**-0.6**
KAKA	**Kakadu**	**22.66**	**253**	*e*P	**P**	**17 45 44.0**	**-0.7**
	39nm,0.5s,mb5.1						
WRAB	**Tennant Creek**	**23.73**	**234**	*i* P	**P**	**17 45 56.1**	**+1.1**
WRAB	**Tennant Creek**	**23.73**	**234**	*e*P	**P**	**17 45 55.2**	**+0.2**
	63nm,1.0s,mb5.0						
WB2	**Warramunga Arr**	**23.74**	**234**	*e*P	**P**	**17 45 55.2**	**+0.1**
WB2				*e*S	**S**	**17 50 11.2**	**+8.1**
WB2				*i* SCS	ScS	17 57 03.9	+7.1
ASPA	**Alice Springs**	**26.18**	**227**	*e*P	**P**	**17 46 17.3**	**-1.0**
ASPA				*e*SCS	ScS	17 57 14.1	+7.4
STKA	**Stephens Creek**	**27.99**	**204**	*e*P	**P**	**17 46 33.8**	**-1.0**
	14nm,0.9s,mb4.6						
STKA				*e*S	**S**	**17 51 13.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**30.47**	**245**	*e*P	**P**	**17 46 56.0**	**-0.9**
	23nm,0.6s,mb5.1						
FITZ				*e*S	**S**	**17 51 52.5**	**-0.2**
MBWA	**Marble Bar**	**36.71**	**243**	*e*P	**P**	**17 47 51.0**	**+0.2**
	18nm,0.7s,mb5.0						
KLBR	**Kellerberrin**	**42.47**	**229**	*e*P	**P**	**17 48 39.8**	**+1.3**
	292nm,0.8s,mb6.0						
QZH	**Quanzhou**	**46.95**	**313**	P	**P**	**17 49 15.1**	**+0.7**
QZH				AMB	AMB		
	comp=Z,160nm,0.8s,mb6.0						
SSE	**Sheshan**	**49.17**	**321**	*e*P	**P**	**17 49 32.7**	**+1.1**
SSE				AP	pP	17 49 46.1	-0.5
SSE				XP	sP	17 49 54.0	+0.9
SSE				S	**S**	**17 56 34.1**	**+2.5**
SSE				XS		17 57 00.6	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,235nm,5.5s						
SSE				LR	LR		
	comp=N,673nm,15.8s,MS4.8						
SSE				LR	LR		
	comp=E,496nm,15.8s,MS4.8						
SSE				LR	LR		
	comp=Z,840nm,22.9s						
SSE	**Sheshan**	**49.17**	**321**	*e*P	**P**	**17 49 32.7**	**+1.1**
	comp=Z,20nm,0.8s,mb5.2						
SSE				pP	pP	17 49 46.1	-0.5
SSE				sP	sP	17 49 54.0	+0.9
SSE				S	**S**	**17 56 34.1**	**+2.5**
SSE				sS		17 57 00.6	
SSE				SS	SS	18 00 05.7	+6.5
QIZ	**Qiongzhong**	**50.85**	**301**	P	**P**	**17 49 44.9**	**+0.3**
QIZ				S	**S**	**17 56 54.5**	**-0.6**
QIZ				XS		17 57 21.6	
QIZ				LR	LR		
	comp=E,1µm,21.3s						
QIZ				LR	LR		
	comp=Z,2µm,21.9s,MS5.0						
NJ2	**Nanjing**	**51.28**	**321**	*e*P	**P**	**17 49 48.8**	**+1.1**
NJ2				AP	pP	17 50 04.5	+1.8
NJ2				XP	sP	17 50 11.5	+2.3
NJ2				PP	PP	17 51 47.4	+1.8
NJ2				S	**S**	**17 57 05.0**	**+4.2**
NJ2				XS		17 57 30.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1µm,9.1s						
NJ2				LR	LR		
	comp=N,1µm,20.7s,MS4.9						
NJ2				LR	LR		
	comp=E,630nm,20.7s,MS4.9						
NJ2				LR	LR		
	comp=Z,870nm,25.5s,MS4.7						
WHN	**Wuhan**	**53.31**	**316**	P	**P**	**17 50 02.5**	**-0.3**
YSS	**Yuzh-Sakhalins**	**54.26**	**350**	*e*P	**P**	**17 50 08.5**	**-1.1**
YSS				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.0						
TIA	**Tai'an**	**55.13**	**323**	*e*P	**P**	**17 50 14.6**	**-1.5**
PPT	**Papeete**	**55.54**	**107**	*e*S	**S**	**17 58 05.1**	**+6.5**
PPT				*e*SS	SS	18 01 50.9	+6.9
PPT				*e*LQ		18 04 21.0	
PPT				*e*LR	LR	18 06 32.3	
	comp=Z,1µm,26.2s						
MDJ	**Mudanjiang**	**55.64**	**339**	P	**P**	**17 50 19.7**	**0.0**
MDJ				AP	pP	17 50 33.3	-1.7
MDJ				XP	sP	17 50 39.5	-2.0
MDJ				PCP	PcP	17 51 18.2	-0.3
MDJ				PP	PP	17 52 24.4	-1.3
MDJ				PCS		17 55 18.5	
MDJ				S	**S**	**17 58 03.7**	**+4.0**
MDJ				XS		17 58 27.2	
MDJ				AMB	AMB		
	comp=Z,11nm,1.4s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,511nm,8.0s						
MDJ				LR	LR		
	comp=N,658nm,28.9s,MS4.7						
MDJ				LR	LR		
	comp=E,844nm,33.4s,MS4.7						
MDJ				LR	LR		
	comp=Z,658nm,20.6s						
TBI	**Tubuai**	**56.25**	**114**	*e*S	**S**	**17 58 18.1**	**+10**
TBI				*e*LQ		18 04 36.2	
TBI				*e*LR	LR	18 07 00.0	
	comp=Z,1µm,24.5s,baz=285						
CN2	**Changchun**	**56.58**	**335**	*e*P	**P**	**17 50 27.7**	**+1.3**
CN2				*e*AP	pP	17 50 43.0	+1.2
CN2				*e*S	**S**	**17 58 13.6**	**+1.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,700nm,17.0s,MS5.0						
CN2				LR	LR		
	comp=E,800nm,17.0s,MS5.0						
CN2				LR	LR		
	comp=Z,700nm,19.0s,MS4.8						
GYA	**Guiyang**	**56.83**	**307**	P	**P**	**17 50 29.5**	**+1.1**
GYA				AP	pP	17 50 45.3	+1.5
GYA				XP	sP	17 50 51.5	+1.2
GYA				S	**S**	**17 58 14.2**	**-1.4**
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.3						
GYA				AMB	AMB		
	comp=Z,440nm,8.8s						
GYA				LR	LR		
	comp=N,720nm,20.1s,MS5.0						
GYA				LR	LR		
	comp=E,1µm,20.7s,MS5.0						
GYA				LR	LR		
	comp=Z,2µm,20.4s,MS5.1						
BJI	**Beijing**	**58.29**	**326**	P	**P**	**17 50 37.1**	**-1.4**
BJI				AMB	AMB		
	comp=Z,11nm,0.7s,mb5.0						
BJI				LR	LR		
	comp=N,496nm,17.0s						
BJI				LR	LR		
	comp=E,626nm,23.2s						
BJI				LR	LR		
	comp=Z,889nm,27.5s						
BJI	**Beijing**	**58.29**	**326**	P	**P**	**17 50 37.1**	**-1.4**
	comp=Z,11nm,0.7s,mb5.0						
BJI				P		17 50 37.6	
BJI				S	**S**	**17 58 42.1**	**+7.5**
NANT	**Nan**	**58.74**	**296**	P	**P**	**17 50 41.0**	**-0.9**
KLR	**Kul'dur**	**58.99**	**343**	*e*P	**P**	**17 50 38.5**	**-4.7**
XAN	**Xi'an**	**59.07**	**316**	P	**P**	**17 50 43.7**	**-0.3**
XAN				S	**S**	**17 58 37.7**	**-7.2**
XAN				AMB	AMB		
	comp=Z,14nm,0.8s,mb5.0						
XAN				LR	LR		
	comp=N,440nm,21.2s,MS4.9						
XAN				LR	LR		
	comp=E,760nm,21.3s,MS4.9						
XAN				LR	LR		
	comp=Z,1µm,21.4s,MS5.1						
KMI	**Kunming**	**59.40**	**304**	P	**P**	**17 50 47.2**	**+0.8**
KMI				AP	pP	17 51 00.7	-1.1
KMI				XP	sP	17 51 07.9	-0.5
KMI				S	**S**	**17 58 50.3**	**+1.1**
KMI				SS	SS	18 02 47.2	+0.9
KMI				AMB	AMB		
	comp=Z,75nm,0.9s,mb5.7						
KMI				AMB	AMB		
	comp=Z,320nm,8.4s						
KMI				LR	LR		
	comp=N,441nm,23.6s,MS4.8						
KMI				LR	LR		
	comp=E,717nm,22.5s,MS4.8						
KMI				LR	LR		
	comp=Z,981nm,22.5s,MS4.9						
KMI	**Kunming**	**59.40**	**304**	P	**P**	**17 50 47.2**	**+0.8**
	comp=Z,75nm,0.9s,mb5.7						
KMI				pP	pP	17 51 00.7	-1.1
KMI				sP	sP	17 51 07.9	-0.5
KMI				S	**S**	**17 58 50.3**	**+1.1**
KMI				sS		17 59 15.6	
KMI				SS	SS	18 02 47.2	+0.9
KMI				SSS	SSS	18 05 15.7	0.0
PET	**Petropavlovsk**	**59.41**	**3**	*e*P	**P**	**17 50 52.3**	**+6.2**
PET				*e*		17 52 55.6	
PET				*e*S	**S**	**17 58 55.2**	**+6.2**
PET				pmax	pmax		
	comp=Z,300nm,24.2s						
PET				pmax	pmax		
	comp=Z,200nm,27.6s						
PET				smax			
	comp=N,400nm,17.4s						
PET				MLR	MLR		
	comp=Z,900nm,18.0s,MS4.9						
CM31	**Chiang Mai Arr**	**60.20**	**295**	*e*P	**P**	**17 50 52.7**	**+0.7**
	comp=Z,27nm,0.8s,mb5.3						
CHG	**Chiang Mai**	**60.31**	**296**	⇓P	**P**	**17 50 53.9**	**+1.2**
	comp=Z,18nm,0.9s,mb5.1						
CD2	**Chengdu**	**61.19**	**311**	P	**P**	**17 50 58.7**	**+0.2**
CD2				AMB	AMB		
	comp=Z,72nm,1.0s,mb5.8						
FX1	**Attu Island--F**	**61.24**	**13**	*e*P	**P**	**17 50 57.2**	**-1.3**
HHC	**Hu-ho-hao-te**	**61.46**	**324**	*e*P	**P**	**17 50 57.5**	**-2.7**
HHC				AP	pP	17 51 14.1	-1.6
HHC				XP	sP	17 51 20.8	-1.5
HHC				PCP	PcP	17 51 39.0	-2.5
HHC				PP	PP	17 53 13.7	-4.5
HHC				SCP		17 55 32.3	
HHC				S	**S**	**17 59 13.8**	**-1.6**
HHC				XS		17 59 45.8	
HHC				SCS	ScS	18 00 40.3	-2.4
HHC				SS	SS	18 03 17.9	-0.6
HHC				AMB	AMB		
	comp=Z,453nm,10.7s						
HHC				AMB	AMB		
	comp=Z,453nm,12.7s						
HHC				LR	LR		
	comp=N,495nm,22.5s,MS4.8						
HHC				LR	LR		
	comp=E,524nm,23.7s,MS4.8						
HHC				LR	LR		
	comp=Z,779nm,23.7s,MS4.8						
LZH	**Lanzhou**	**63.68**	**316**	⇑P	**P**	**17 51 15.0**	**-0.1**
LZH				AP	pP	17 51 31.0	+0.3
LZH				XP	sP	17 51 37.8	+0.7
LZH				PP	PP	17 53 37.2	-0.1
LZH				*e*S	**S**	**17 59 42.9**	**-0.5**
LZH				XS		18 00 10.2	
LZH				SS	SS	18 03 51.8	-1.7
LZH				AMB	AMB		
	comp=Z,33nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,124nm,6.2s						
LZH				LR	LR		
	comp=N,439nm,14.9s						
LZH				LR	LR		
	comp=Z,873nm,17.5s,MS5.0						
LZH	**Lanzhou**	**63.68**	**316**	⇑P	**P**	**17 51 15.0**	**-0.1**
	comp=Z,33nm,1.5s,mb5.1						
LZH				pP	pP	17 51 31.0	+0.3
LZH				sP	sP	17 51 37.8	+0.7
LZH				PP	PP	17 53 37.2	-0.1
LZH				*e*S	**S**	**17 59 42.9**	**-0.5**
LZH				sS		18 00 10.2	
LZH				SS	SS	18 03 51.8	-1.7
TAOE	**Nuku Hiva Isla**	**64.67**	**97**	*e*LR	LR	18 10 47.0	
MA2	**Magadan**	**65.95**	**358**	*i* P	**P**	**17 51 27.5**	**-1.8**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MA2	**Magadan**	**65.95**	**358**	*e*P	**P**	**17 51 27.5**	**-1.8**
	comp=Z,16nm,0.7s,mb5.2						
GTA	**Gaotai**	**68.11**	**317**	*e*P	**P**	**17 51 44.1**	**+0.9**
GTA				AP	pP	17 51 59.7	+0.7
GTA				XP	sP	17 52 05.0	-0.1
GTA				PP	PP	17 54 18.6	+2.6
GTA				S	S	18 00 42.2	+5.0
GTA				XS		18 01 08.8	
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,284nm,4.2s						
GTA				LR	LR		
	comp=N,388nm,19.4s,MS4.9						
GTA				LR	LR		
	comp=E,493nm,18.2s,MS4.9						
GTA				LR	LR		
	comp=Z,616nm,19.8s,MS4.8						
ULN	**Ulaanbaatar**	**68.38**	**328**	*i* P	**P**	**17 51 44.0**	**-0.7**
ULN	**Ulaanbaatar**	**68.38**	**328**	*e*P	**P**	**17 51 44.3**	**-0.4**
	comp=Z,15nm,1.0s,mb5.0						
YAK	**Yakutsk**	**71.00**	**348**	*d* *i*P	**P**	**17 51 59.9**	**-0.6**
YAK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
YAK	**Yakutsk**	**71.00**	**348**	*e*P	**P**	**17 52 00.2**	**-0.3**
	comp=Z,26nm,0.8s,mb5.2						
ZAK	**Zakamensk**	**71.87**	**328**	⇑*i*P	**P**	**17 52 05.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BOD	**Bodaibo**	**72.02**	**339**	*e*P	**P**	**17 52 04.9**	**-1.7**
TLY	**Talaya**	**72.44**	**330**	*e*P	**P**	**17 52 09.6**	**+0.4**
TLY				*e*S	S	18 01 21.2	-6.3
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TLY				MLR	MLR		
	comp=Z,504nm,17.0s,MS4.9						
BWNR	**Bhubaneshwar**	**72.61**	**294**	*e*P	**P**	**17 52 10.0**	**-0.8**
BWNR				*e*		17 52 12.7	
	comp=Z,68nm,0.8s						
MOY	**Mondy**	**73.79**	**329**	*e*P	**P**	**17 52 17.5**	**+0.4**
MOY				pmax	pmax		
	comp=Z,36nm,4.3s						
JIRN	**Jiri**	**74.18**	**301**	*e*P	**P**	**17 52 20.7**	**+0.8**
	comp=Z,120nm,0.8s,mb5.9						
VIS	**Vishakhapatnam**	**74.31**	**290**	*e*P	**P**	**17 52 18.6**	**-2.2**
PKI	**Pulchoki**	**74.82**	**301**	*e*P	**P**	**17 52 24.0**	**+0.4**
	comp=Z,145nm,0.9s,mb5.9						
BILL	**Bilibino**	**74.84**	**5**	*i* P	**P**	**17 52 22.5**	**-0.4**
BILL				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
BILL	**Bilibino**	**74.84**	**5**	*e*P	**P**	**17 52 21.8**	**-1.1**
	comp=Z,37nm,0.7s,mb5.4						
KKN	**Kakani**	**74.99**	**301**	*e*P	**P**	**17 52 25.0**	**+0.4**
	comp=Z,190nm,0.8s,mb6.1						
DMN	**Daman**	**75.09**	**301**	*e*P	**P**	**17 52 25.9**	**+0.7**
	comp=Z,344nm,0.9s,mb6.3						
GKN	**Gorkha**	**75.59**	**301**	*e*P	**P**	**17 52 28.4**	**+0.3**
	comp=Z,282nm,0.9s,mb6.2						
KOLN	**Koldanda**	**76.42**	**300**	*e*P	**P**	**17 52 33.0**	**+0.3**
	comp=Z,230nm,0.8s,mb6.2						
TNA	**Tin City**	**76.97**	**15**	*e*P	**P**	**17 52 34.8**	**-0.2**
WMQ	**Urumqi**	**78.19**	**317**	*e*P	**P**	**17 52 42.6**	**+0.4**
WMQ				AP	pP	17 52 59.2	+0.9
WMQ				PP	PP	17 55 41.6	+0.4
WMQ				S	S	18 02 31.0	0.0
WMQ				SS	SS	18 07 35.0	-1.7
WMQ				AMB	AMB		
	comp=Z,27nm,1.0s,mb5.1						
WMQ				LR	LR		
	comp=N,357nm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=E,506nm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,495nm,20.0s,MS4.8						
LGTI	**Lohaghat**	**79.69**	**301**	*e*P	**P**	**17 52 52.3**	**+1.6**
TIXI	**Tiksi**	**79.83**	**352**	*e*P	**P**	**17 52 50.1**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BHPL	**Bhopal**	**80.85**	**295**	*e*P	**P**	**17 52 56.9**	**-0.1**
BHPL				*e*		17 52 58.6	
	comp=Z,70nm,0.8s						
SML	**Sawmill**	**80.96**	**24**	*e*P	**P**	**17 52 56.5**	**-0.3**
IMA	**Indian Mountai**	**81.49**	**19**	*e*P	**P**	**17 53 00.6**	**+1.1**
DDI	**Dehra Dun**	**81.74**	**302**	*e*	**P**	**17 53 03.4**	**+1.9**
MCK	**McKinley**	**81.77**	**22**	*e*P	**P**	**17 52 59.8**	**-1.2**
	comp=Z,12nm,0.8s,mb4.9						
NDI	**New Delhi**	**82.11**	**300**	*e*P	**P**	**17 53 02.5**	**-1.0**
MKAR	**Makanchi Array**	**82.77**	**319**	*i* P	**P**	**17 53 07.3**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,18nm,0.9s						
COLA	**College**	**82.79**	**21**	*c* *i*P	**P**	**17 53 05.6**	**-0.6**
COLA	**College**	**82.79**	**21**	*e*P	**P**	**17 53 05.3**	**-0.9**
	comp=Z,14nm,0.9s,mb5.0						
KAD	**Karad**	**82.81**	**288**	*e*P	**P**	**17 53 07.6**	**+0.4**
KAD				*e*		17 53 10.1	
	comp=Z,55nm,0.9s						
SDNR	**Sundarnagar**	**82.90**	**303**	*e*P	**P**	**17 53 08.8**	**+1.4**
POO	**Poona**	**83.32**	**289**	*e*P	**P**	**17 53 09.7**	**0.0**
QSPA	**South Pole Qui**	**83.45**	**180**	*e*P	**P**	**17 53 10.4**	**+1.1**
	comp=Z,58nm,1.0s,mb5.6						
MAW	**Mawson**	**84.67**	**203**	*e*P	**P**	**17 53 14.2**	**-1.4**
	comp=Z,11nm,0.9s,mb5.0						
NVS	**Novosibirsk**	**84.72**	**327**	*i* P	**P**	**17 53 14.7**	**-1.4**
KSH	**Kashi**	**85.38**	**310**	⇑P	**P**	**17 53 21.0**	**+1.2**
KSH				*e*AP	pP	17 53 39.2	+3.1
KSH				*e*XP	sP	17 53 45.3	+3.2
KSH				*e*SKS	SKS	18 03 37.8	+1.3
KSH				*e*S	S	18 03 45.1	+0.5
KSH				*e*XS		18 04 14.3	
KSH				*e*SS	SS	18 09 28.4	+4.7
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.9						
KSH				AMB	AMB		
	comp=Z,760nm,3.8s						
KSH				LR	LR		
	comp=N,380nm,6.9s						
KSH				LR	LR		
	comp=E,450nm,6.3s						
KURK	**Kurchatov**	**86.20**	**322**	*i* P	**P**	**17 53 23.1**	**-0.4**
KURK	**Kurchatov**	**86.20**	**322**	*e*P	**P**	**17 53 20.7**	**-2.8**
	comp=E,5.5nm,0.9s,mb4.8						
AAK	**Ala-Archa**	**87.12**	**313**	*i* P	**P**	**17 53 29.5**	**+1.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.4						
AAK	**Ala-Archa**	**87.12**	**313**	*e*P	**P**	**17 53 27.9**	**-0.3**
	comp=Z,9.2nm,0.8s,mb5.1						
MTUM	**Tungsten Hills**	**91.42**	**53**	*e*P	**P**	**17 53 48.8**	**+0.2**
MWC	**Mount Wilson**	**91.45**	**56**	*e*P	**P**	**17 53 50.3**	**+1.4**
CHKZ	**Chkalovo**	**91.63**	**324**	*i* P	**P**	**17 53 47.9**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
CHKZ	**Chkalovo**	**91.63**	**324**	*e*P	**P**	**17 53 47.1**	**-2.0**
	comp=Z,9.4nm,1.1s,mb5.0						
BVA0	**Borovoye Array**	**91.66**	**323**	P	**P**	**17 53 48.5**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb4.2						

MNV	Mina	91.87	52	eP	P	17 53 51.2	+0.5
	comp=Z,24nm,1.0s,mb5.5						
DAC	Darwin (Calif)	92.07	54	eP	P	17 53 52.5	+0.8
	comp=Z,31nm,0.9s,mb5.6						
TPH	Tonopah	92.56	52	eP	P	17 53 55.3	+1.4
	comp=Z,13nm,0.9s,mb5.3						
BMN	Battle Mountai	92.81	50	eP	P	17 53 56.5	+1.6
	comp=Z,16nm,1.0s,mb5.4						
BMO	Blue Mountains	93.22	45	eP	P	17 53 56.1	-0.6
	comp=Z,4.8nm,1.1s,mb4.8						
HLID	Hailey	95.18	47	eP	P	17 54 06.4	+0.7
	comp=Z,2.2nm,0.7s,mb4.7						
YKW3	Yellowknife Ar	96.11	28	eP	P	17 54 09.1	-0.3
EDM	Edmonton	96.42	37	eP	P	17 54 11.1	+0.1
ARU	Arti	98.72	326	eP	P	17 54 12.6	-8.8
LSZ	Lusaka	122.64	247	ePKP	PKPdf	17 59 39.3	+2.0
CLL	Collm	125.19	331	e*PPKP		18 00 00.0	
LPAZ	La Paz	132.06	119	ePKP	PKPdf	17 59 56.8	+1.2
SDV	Santo Domingo	135.16	84	ePKP	PKPdf	18 00 02.8	+1.4
BAO	Brasilia Array	148.63	135	P	PKPdf	18 00 27.1	+2.1
BAO				i		18 00 34.1	
BAO				e		18 00 47.6	

NEIC ***01*** *17:48:05.2,37.00N×20.59E,h10^{km},MD3.7(ATH),After ATH.*

CSEM ***01*** *17:48:05.0±0.7,37.10N×20.39E,h10^{km},MD3.7,Error ellipse: s-maj=20.1km s-min=10.6km az=20.0*

ATH 01 17:48:00.3,36.79N×20.28E,h3^{km},MD3.7/5,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	1.38	73	ePN	Pn	17 48 26.5	+0.1
VLS	Valsamata	1.41	10	ePB	Pb	17 48 27.0	+0.1
VLS				eSN	Sn	17 48 46.0	-0.1
VLI	Veliai	2.13	91	ePB	Pb	17 48 38.0	-1.3
VLI	Veliai	2.13	91	ePn	Pn	17 48 39.8	+2.5
KYTH	Kithira	2.28	102	ePN	Pn	17 48 41.5	+2.2
EVR	Evrytania	2.44	29	ePN	Pn	17 48 44.0	+2.3
EVR	Evrytania	2.44	29	ePg	Pg	17 48 44.5	-4.6
CDT	Castel del Mon	5.30	325	ePn	Pn	17 49 19.8	-2.5
SGO	Sicignano	5.41	316	ePn	Pn	17 49 24.1	+0.2
SGO				eSn	Sn	17 50 21.2	-6.4
SGO	Sicignano	5.41	316	ePn	Pn	17 49 24.1	+0.2
SGO				eSn	Sn	17 50 21.2	-6.4
MRLC	Muro Lucano	5.45	318	ePn	Pn	17 49 25.7	+1.4
MRLC	Muro Lucano	5.45	318	ePn	Pn	17 49 25.7	+1.3
MS1	Monte Sant'Ang	5.95	327	ePn	Pn	17 49 29.3	-2.2
STON	Ston	6.39	343	i Pn	Pn	17 49 34.3	-3.4
STON				i Sn	Sn	17 50 40.7	-11
STON	Ston	6.39	343	i Pn	Pn	17 49 34.2	-3.5
STON				i Sn	Sn	17 50 40.6	-11

LDG ***01*** *18:26:31.2±0.3,51.68N×7.96E,h1^{km},Ml2.9/4,Error ellipse: s-maj=4.4km s-min=4.1km az=138.0,Suspected Mining induced.*

NEIC ***01*** *18:26:31.2,51.68N×7.96E,h1^{km},ML2.9(LDG), ML2.3(SZGRF),ML2.2(STR),After LDG.*

BNS ***01*** *18:26:31.7±1.2,51.69N×7.94E,h1^{km}±8^{km},ML2.3*

STR ***01*** *18:26:32.3±1.1,51.56N×8.01E,h5^{km}±1^{km},Ml2.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

UCC ***01*** *18:26:32.0,51.69N×7.94E,h1^{km},ML2.1*

CSEM ***01*** *18:26:32.2±0.2,51.62N×7.83E,h2^{km},ML2.8/3,Error ellipse: s-maj=4.5km s-min=3.1km az=95.0*

BUG ***01*** *18:26:32.0,51.67N×7.74E,h1^{km},ML2.2*

BGR ***01*** *18:26:33.2±0.3,51.60N×7.75E,h1^{km},ML2.3/5,Error ellipse: s-maj=3.3km s-min=3.3km az=174.0*

ISC 01 18:26:31.0±0.3**,51.57N**±0.02×**7.81E**±0.03**,n38,**σ**1^{s}20**/63**, 1C,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHL	Ahlen	0.17	3	Pg	Pg	18 26 34.9	+0.4
BAHL				Sg	Sg	18 26 36.9	+0.1
BUG	Bochum--Univer	0.36	250	⇑iPg	Pg	18 26 40.0	+1.8
BUG				Sg	Sg	18 26 45.8	+2.8
BUG	Bochum--Univer	0.36	250	ePg	Pg	18 26 39.8	+1.6
BUG				eSg	Sg	18 26 46.3	+3.3
BNS	Bensberg	0.72	214	ePg	Pg	18 26 48.0	+2.6
BNS				eSg	Sg	18 27 00.9	+5.8
IBBN	Ibbenburen	0.74	358	ePg	Pg	18 26 46.2	+0.3
	SNR=3.0						
IBBN				eSg	Sg	18 26 55.5	-0.3
	SNR=2.5						
IBBN	Ibbenburen	0.74	358	ePg	Pg	18 26 46.1	+0.2
IBBN				eSg	Sg	18 26 56.1	+0.3
WTSB	Winterswijk	0.74	303	ePg	Pg	18 26 46.5	+0.7
	24nm,0.4s						
WTSB				eSg	Sg	18 26 56.3	+0.5
STB	Steinbach	1.15	212	ePg	Pg	18 26 55.2	+1.3
STB				eSg	Sg	18 27 11.8	+2.6
	60nm,0.5s						
KLL	Kalltalsperre	1.32	226	ePg	Pg	18 26 57.5	+0.1
KLL				eSg	Sg	18 27 16.0	+1.1
	33nm,0.3s						
BGG	Burgeitz	1.39	192	ePg	Pg	18 26 59.5	+0.6
BGG				eSg	Sg	18 27 18.1	+0.7
TNS	Taunus Mts	1.41	163	ePg	Pg	18 27 00.2	+1.1
	SNR=4.1						
TNS				eSg	Sg	18 27 18.3	+0.5
	SNR=3.7						
TNS	Taunus Mts	1.41	163	ePg	Pg	18 26 59.6	+0.5
TNS				eSg	Sg	18 27 20.2	+2.4
HGN	Heimansgroeve	1.43	236	ePg	Pg	18 26 58.6	-0.9
	5.9nm,0.2s,baz=40						
HGN				eSg	Sg	18 27 18.3	-0.2
MEM	Membach	1.48	231	P	Pn	18 27 00.0	+0.9
MEM				S	Sb	18 27 19.8	+1.3
UBBA	Unterbreizbach	1.57	118	eSg	Sg	18 27 23.8	+0.5
	SNR=4.1						
CLZ	Clausthal	1.62	79	ePn	Pn	18 27 01.9	+0.8
	SNR=9.7						
CLZ				eSg	Sg	18 27 25.7	+0.7
	SNR=2.4						
CLZ	Clausthal	1.62	79	ePg	Pg	18 27 01.7	-1.7
ABH	Alteburg	1.69	186	Pg	Pg	18 27 05.1	+0.2
ABH				Sg	Sg	18 27 28.5	+1.1
RUP	Ruppelstein	1.93	195	Pg	Pg	18 27 08.9	-0.6
RUP				Sg	Sg	18 27 36.0	+0.8
TOD	Tromm	2.06	162	Pg	Pg	18 27 10.1	-2.1
WLF	Walferdange	2.17	210	ePg	Pg	18 27 14.3	-0.2
	SNR=1.4						
WLF	Walferdange	2.17	210	S	Sn	18 27 40.7	+3.7
GIVF	Givet	2.39	233	ePn	Pn	18 27 11.3	-0.8
GIVF				eSn	Sn	18 27 41.1	-1.4
GIVF				eSg	Sg	18 27 50.1	-0.6
	21nm,0.4s						
DOU	Dourbes	2.51	235	P	Pn	18 27 14.5	+0.7
DOU				S	Sn	18 27 44.7	-0.9
NEUB	Neuenburg	2.51	97	eSg	Sg	18 27 53.7	-1.0
	SNR=1.9						
MOX	Moxa	2.57	110	ePg	Pg	18 27 22.6	+0.2
	SNR=2.0						
MOX				eSg	Sg	18 27 57.8	+1.1
MOX	Moxa	2.57	110	ePg	Pg	18 27 23.0	+0.6
MOX				eSg	Sg	18 27 57.8	+1.1
BAIF	Baives	2.74	238	eSn	Sn	18 27 49.3	-1.9
BAIF				eSg	Sg	18 28 01.1	-1.0
	5.0nm,0.2s						
WERD	Werda	3.06	110	ePn	Pn	18 27 22.8	+1.3
	SNR=1.9						
GUNZ	Gunzen	3.10	111	ePn	Pn	18 27 23.2	+1.0
	SNR=1.3						
GUNZ				eSg	Sg	18 28 13.5	-0.9
	SNR=1.8						
CDF	Champ du Feu	3.18	186	ePn	Pn	18 27 23.0	-0.2
CDF				eSg	Sg	18 28 14.7	-2.1
	8.1nm,0.6s						
CLL	Collm	3.26	93	eSg	Sg	18 28 19.0	-0.6
	SNR=1.7						
RFYF	Reffroy	3.30	208	ePn	Pn	18 27 23.9	-1.1
MEZF	Maizieres J'vi	3.54	211	ePn	Pn	18 27 27.1	-1.4
HAU	Haudompre	3.69	195	ePn	Pn	18 27 28.8	-1.7
SFTF	Sexfontaines	3.81	209	ePn	Pn	18 27 30.1	-2.1
SSF	Saint Saulge	5.31	214	ePn	Pn	18 27 51.7	-1.9
AVF	Avril sur Loir	5.60	213	ePn	Pn	18 27 55.2	-2.4

BJI ***01*** *18:27:53.6,4.48N×94.61E,h44^{km},mb4.7*

NEIC ***01*** *18:27:57.8±0.8,4.75N×94.16E,h30^{km},mb4.8/6,Error ellipse: s-maj=25.5km s-min=12.3km az=60.0*

ISC 01 18:27:58.6±1.0**,5.2N**±0.2×**94.8E**±0.2**,h33^{km},n26,** σ**1^{s}07**/26**,mb4.6**/16**,1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	13.74	17	eP	P	18 31 19.9	+6.4
	5.3nm,0.3s						
JIRN	Jiri	23.77	341	eP	P	18 33 07.5	-1.6
	6.1nm,0.3s,mb4.5						
GYA	Guiyang	23.95	27	⇑iP	P	18 33 13.0	+2.1
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
PKI	Pulchoki	23.95	339	eP	P	18 33 10.2	-0.7
	comp=Z,9.0nm,0.6s,mb4.4						
DMN	Daman	24.09	338	eP	P	18 33 11.8	-0.5
	comp=Z,7.0nm,0.4s,mb4.5						
KKN	Kakani	24.20	339	eP	P	18 33 12.0	-1.3
	comp=Z,10nm,0.7s,mb4.3						
LSA	Lhasa	24.58	352	P	P	18 33 18.0	+1.0
GKN	Gorkha	24.62	338	eP	P	18 33 17.1	-0.4
	comp=Z,11nm,0.3s,mb4.9						
KOLN	Koldanda	24.82	336	eP	P	18 33 19.4	0.0
	comp=Z,23nm,0.8s,mb4.8						
XAN	Xi'an	31.51	23	P	P	18 34 18.5	-1.4
XAN				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.8						
GTA	Gaotai	34.32	7	eP	P	18 34 43.8	-0.4
GTA				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.8						
UCH	Uchtor	41.03	337	P	P	18 35 41.9	+1.5
	SNR=7.8						
TKM2	Tokmak 2	41.21	338	P	P	18 35 42.8	+0.8
	SNR=7.2						
KBK	Karagaybulak	41.23	338	P	P	18 35 43.6	+1.5
	SNR=22						
AML	Almayashu	41.27	336	P	P	18 35 43.7	+1.3
	SNR=8.8						
AAK	Ala-Archa	41.38	337	P	P	18 35 45.3	+2.0
	SNR=6.1						
AAK	Ala-Archa	41.38	337	eP	P	18 35 43.9	+0.6
	comp=Z,5.0nm,0.5s,mb4.4						
EKS2	Erkin-Say	41.68	337	P	P	18 35 47.0	+1.1
	SNR=5.3						
USP	Ospenovka	41.92	338	P	P	18 35 48.3	+0.5
	SNR=8.6						
ULN	Ulaanbaatar	43.75	12	eP	P	18 36 01.5	-1.1
	comp=Z,2.3nm,0.5s,mb4.2						
WRAB	Tennant Creek	46.22	124	eP	P	18 36 22.8	+0.1
	comp=Z,13nm,0.6s,mb5.0						
WB2	Warramunga Arr	46.22	124	eP	P	18 36 22.8	0.0
KURK	Kurchatov	47.32	346	eP	P	18 36 30.6	-0.4
	comp=Z,7.5nm,0.6s,mb4.8						
CHKZ	Chkalovo	52.17	342	eP	P	18 37 07.2	-0.9
	comp=Z,12nm,0.6s,mb5.0						
JOF	Joensuu	73.50	335	ep	P	18 39 28.4	-1.2
	comp=Z,8.7nm,1.5s,mb4.5						
KAF	Kangasniemi	75.43	333	ep	P	18 39 39.5	-1.2
	comp=Z,11nm,1.7s,mb4.5						

BJI ***01*** *18:33:53.8,4.80S×129.50E,h10^{km},mb4.6*

NEIC ***01*** *18:33:53.8±0.6,4.79S×129.49E,h10^{km},mb4.7/10,Error ellipse: s-maj=21.0km s-min=10.5km az=65.0*

ISC 01 18:33:51.8±0.5**,4.79S**±0.08×**129.5E**±0.1**,h10^{km},n24,** σ**1^{s}28**/23**,mb4.7**/15**,1C-1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	8.41	160	eP	P	18 36 01.3	+4.7
	11nm,0.4s						
FITZ	Fitzroy Crossi	13.74	195	eP	P	18 37 09.2	-0.1
	8.8nm,0.9s						
WRAB	Tennant Creek	15.79	163	eP	P	18 37 34.3	-1.8
WB2	Warramunga Arr	15.80	163	eP	P	18 37 34.4	-1.8
PMG	Port Moresby	18.16	106	⇑eP	P	18 38 04.9	-1.1
	103nm,1.2s						
ASPA	Alice Springs	19.25	168	eP	P	18 38 21.8	+2.6
CTA	Charters Tower	22.34	134	⇓iP	P	18 38 53.2	+1.8
	12nm,0.7s,mb4.4						
CTAO	Charters Tower	22.34	134	eP	P	18 38 53.1	+1.6
STKA	Stephens Creek	29.26	159	eP	P	18 39 58.2	+1.8
	6.0nm,0.9s,mb4.3						
CM31	Chiang Mai Arr	37.91	308	eP	P	18 41 12.9	+1.6
	3.5nm,0.7s,mb4.2						
LZH	Lanzhou	47.21	332	eP	P	18 42 28.0	+1.1
LZH				AP	pP	18 42 35.0	+5.1
LZH				XP	sP	18 42 38.5	+7.4
LZH				AMB	AMB		
	comp=Z,26nm,1.7s,mb4.9						
LZH	Lanzhou	47.21	332	eP	P	18 42 28.0	+1.1
	comp=Z,26nm,1.7s,mb4.9						
LZH				pP	pP	18 42 35.0	+5.1
LZH				sP	sP	18 42 38.5	+7.4
GTA	Gaotai	51.78	331	eP	P	18 43 03.3	+1.3
GTA				AP	pP	18 43 09.3	+4.3
GTA				XP	sP	18 43 12.5	+6.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.3						
JIRN	Jiri	52.74	310	eP	P	18 43 09.7	+0.4
	comp=Z,19nm,1.2s,mb4.9						
PKI	Pulchoki	53.29	310	eP	P	18 43 10.9	-2.5
	comp=Z,17nm,1.2s,mb4.8						
KKN	Kakani	53.50	310	eP	P	18 43 13.9	-1.0
	comp=Z,16nm,1.1s,mb4.9						
GKN	Gorkha	54.09	310	eP	P	18 43 19.4	+0.1
	comp=Z,11nm,0.9s,mb4.8						
KOLN	Koldanda	54.78	309	eP	P	18 43 23.5	-0.9
	comp=Z,13nm,0.9s,mb5.0						
ULN	Ulaanbaatar	56.00	342	eP	P	18 43 32.8	-0.1
	comp=Z,8.7nm,1.2s,mb4.7						
KURK	Kurchatov	70.36	328	eP	P	18 45 07.0	-0.8
	comp=Z,16nm,1.3s,mb4.8						
CHKZ	Chkalovo	76.10	328	eP	P	18 45 40.9	-0.5
	comp=Z,6.3nm,1.1s,mb4.5						
MCK	McKinley	90.55	26	P	P	18 46 55.5	+0.4
	comp=Z,7.7nm,1.3s,mb4.9						
INK	Inuvik	97.03	22	P	P	18 47 24.3	-0.5
	comp=Z,2.5nm,0.8s,mb4.7						
LVC	Limon Verde	147.38	147	ePKPbc	PKPdf	18 53 40.6	+3.3

NEIC ***01*** *18:52:16.9,36.76N×20.28E,h9^{km},MD3.9(ATH), MD4.2(PDG),ML3.9(CSEM),After ATH.*

PDG ***01*** *18:52:17.5±0.3,36.67N×19.87E,h40^{km}±11^{km}*

CSEM ***01*** *18:52:18.4±0.1,36.62N×20.22E,h60^{km},mb3.9/1,Error ellipse: s-maj=2.6km s-min=1.9km az=28.0*

ATH ***01*** *18:52:20.5,36.86N×20.47E,h28^{km},MD3.9/14*

HLW ***01*** *18:52:21.2,36.38N×20.20E,h33^{km},Mb4.2*

ISC 01 18:52:18.6±0.5**,37.02N**±0.03×**20.07E**±0.04**,h10^{km},n87,** σ**1^{s}39**/112**,mb3.8**/1**,7C-8D,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	1.23	20	ePB	Pb	18 52 43.5	+2.0
ITM	Ithomi	1.50	83	⇓iPN	Pn	18 52 43.5	-2.2
VLI	Veliai	2.32	96	ePB	Pn	18 52 55.0	-2.5
EVR	Evrytania	2.34	35	ePB	Pb	18 53 01.0	+0.4
KYTH	Kithira	2.50	106	ePN	Pn	18 52 56.0	-4.0
KYTH	Kithira	2.50	106	ePn	Pn	18 52 56.6	-3.4
AGG	Agios Georgios	2.69	41	eP	Pn	18 53 04.4	+1.7
JAN	Janina	2.71	13	ePN	Pn	18 53 06.0	+3.0
NAIG	Nisos Aigina	2.83	74	ePN	Pn	18 53 02.0	-2.7
LSK	Leskovik	3.16	7	i Pn	Pn	18 53 11.8	+2.4
LSK	Leskovik	3.16	7	ePg	Pn	18 53 11.8	+2.4
PTL	Penteli	3.19	70	ePN	Pn	18 53 04.5	-5.4
PTL	Penteli	3.19	70	ePn	Pn	18 53 07.5	-2.4
SOI	Samo	3.36	290	ePn	Pn	18 53 13.8	+1.5
SOI				eSn	Sn	18 53 52.2	-0.4
SOI	Samo	3.36	290	ePn	Pn	18 53 13.8	+1.6
SOI				eSn	Sn	18 53 52.2	-0.4
NEO	Neokhori	3.38	46	ePN	Pn	18 53 13.0	+0.5
TIP	Timpagrande	3.39	311	ePn	Pn	18 53 14.3	+1.7
TIP	Timpagrande	3.39	311	ePn	Pn	18 53 14.4	+1.8
XOR	Xorichti	3.40	45	eP	Pn	18 53 13.1	+0.2
KZN	Kozani	3.55	22	ePn	Pn	18 53 18.0	+3.1
KZN				eSn	Sn	18 54 01.5	+4.1
MTTG	Motta San Giov	3.61	287	ePn	Pn	18 53 17.5	+1.7
MTTG	Motta San Giov	3.61	287	ePn	Pn	18 53 17.5	+1.6
LIT	Litokhoron	3.62	31	eP	Pn	18 53 18.0	+2.1
LCI	Lecce	3.65	336	ePn	Pn	18 53 18.7	+2.4
LCI	Lecce	3.65	336	ePn	Pn	18 53 18.7	+2.3
AOS	Alonnisos	3.70	53	eP	Pn	18 53 16.6	-0.5
VAM	Vamos	3.71	114	ePb	Pn	18 53 14.5	-2.7
VAM	Vamos	3.71	114	ePN	Pn	18 53 14.0	-3.2
AGST	Augusta-Monte	3.87	275	ePn	Pn	18 53 18.9	-0.7
AGST				eSn	Sn	18 54 03.5	-2.2
AGST	Augusta-Monte	3.87	275	ePn	Pn	18 53 18.9	-0.7
AGST				eSn	Sn	18 54 03.5	-2.1
FNA	Florina	3.90	15	eP	Pn	18 53 21.7	+1.8
PZI	Palazzolo	4.09	272	ePn	Pn	18 53 22.1	-0.6
OHR	Ohrid	4.13	8	i Pn	Pn	18 53 25.6	+2.4
OHR				i Sn	Sn	18 54 15.0	+2.9
PLG	Polygyros	4.27	37	ePN	Pn	18 53 26.0	+0.8
SANT	Santorini	4.38	97	Pn	Pn	18 53 21.7	-5.1
SANT	Santorini	4.38	97	Pn	Pn	18 53 21.7	-5.1
QSH	Qafa e Shtames	4.50	358	i Pn	Pn	18 53 30.2	+1.7
QSH				i Sn	Sn	18 54 20.8	-0.8
QSH	Qafa e Shtames	4.50	358	ePn	Pn	18 53 30.2	+1.7
QSH				i Sn	Sn	18 54 20.8	-0.8
OUR	Ouranopolis	4.51	42	eP	Pn	18 53 30.1	+1.5
OUR	Ouranopolis	4.51	42	P	Pn	18 53 30.1	+1.5
SOH	Sokhos	4.58	33	eP	Pn	18 53 31.1	+1.5
SG1	Sgolgore (BA)	4.64	326	ePn	Pn	18 53 31.1	+0.6
KNT	Kendrikon	4.69	27	eP	Pn	18 53 32.3	+1.1
MGR	Morigerati	4.71	313	ePn	Pn	18 53 34.4	+2.9
MGR	Morigerati	4.71	313	ePn	Pn	18 53 34.4	+2.9
NPS	Neapolis	4.82	110	ePB	Pn	18 53 34.0	+1.0
ULC	Ulcinj	4.98	353	⇓iPn	Pn	18 53 35.7	+0.4
ULC				eSn	Sn	18 54 33.7	+0.1
CDT	Castel del Mon	5.02	325	ePn	Pn	18 53 36.5	+0.7
PUK	Puka	5.02	359	i Pn	Pn	18 53 37.0	+1.1
PUK	Puka	5.02	359	ePn	Pn	18 53 37.0	+1.1
SKO	Skopje	5.06	12	i Pn	Pn	18 53 37.0	+0.6
SKO				i Sn	Sn	18 54 35.0	-0.7
SGO	Sicignano	5.13	315	ePn	Pn	18 53 40.7	+3.3
SGO	Sicignano	5.13	315	ePn	Pn	18 53 40.7	+3.3
MRLC	Muro Lucano	5.17	318	ePn	Pn	18 53 40.9	+3.0
MRLC	Muro Lucano	5.17	318	ePn	Pn	18 53 40.9	+3.0
BUM	Brajici-Budva	5.36	351	⇓iPn	Pn	18 53 40.3	-0.2
BUM				eSn	Sn	18 54 42.1	-0.9
TTG	Podgorica	5.44	354	⇑iPn	Pn	18 53 41.9	+0.1
TTG				eSn	Sn	18 54 44.0	-1.2
HCY	Herceg Novi	5.56	348	⇑iPn	Pn	18 53 43.0	-0.5
HCY				eSn	Sn	18 54 46.4	-1.8
PVY	Plav	5.57	359	⇓iPn	Pn	18 53 44.3	+0.7
PVY				eSn	Sn	18 54 48.4	-0.1
NKY	Niksic	5.85	352	⇓iPn	Pn	18 53 47.1	-0.4
NKY				eSn	Sn	18 54 54.0	-1.4
NKY	Niksic	5.85	352	eSn	Sn	18 54 54.0	-1.4
IVA	Berane	5.85	359	ePn	Pn	18 53 48.6	+1.1
IVA				eSn	Sn	18 54 55.0	-0.4
KARP	Karpathos	5.92	102	ePN	Pn	18 53 41.2	-7.3
KARP	Karpathos	5.92	102	ePn	Pn	18 53 42.0	-6.5
BRY	Bratogost	5.99	349	⇑iPn	Pn	18 53 48.6	-1.0
BRY				eSn	Sn	18 54 57.0	-2.0
STON	Ston	6.12	343	i Pn	Pn	18 53 51.0	-0.4
STON				i Sn	Sn	18 54 57.6	-4.7
UPM	Unac-Piva	6.24	352	⇑iPn	Pn	18 53 53.1	0.0
UPM				eSn	Sn	18 55 03.7	-1.6
PLE	Pljevlja	6.33	356	⇓iPn	Pn	18 53 54.6	+0.4
PLE				eSn	Sn	18 55 05.5	-1.9
CII	Carovilli	6.48	318	eP	Pn	18 53 58.2	+1.8
CII	Carovilli	6.48	318	eP	Pn	18 53 58.2	+1.8
SWA2		8.97	148	P	P	18 54 21.1	-10
SWA1		9.06	147	⇓P	P	18 54 22.5	-10
SWA1				S	Sx	18 55 50.6	
CRES	Cresnjev	9.46	340	ePn	P	18 54 37.2	-0.7
CRES				eSn	Sn	18 56 19.5	-5.9
GOLS	Golise	9.58	341	i Pn	P	18 54 38.6	-1.0
LEGS	Legarje	9.61	340	i Pn	P	18 54 39.2	-0.7
LEGS	Legarje	9.61	340	i P	P	18 54 39.2	-0.8
VOY	Vojsko	10.12	335	ePn	P	18 54 46.3	-0.8
VOY				eSn	S	18 56 34.1	-7.6
PERS	Pernice	10.29	341	⇑iPn	P	18 54 48.4	-1.0
OBKA	Obir	10.34	338	⇑iPN	P	18 54 49.4	-0.6
OBKA				i SN	S	18 56 39.9	-7.1
ARSA	Arzberg	10.77	343	⇑iPN	P	18 54 54.3	-1.6
ARSA				i SN	S	18 56 48.4	-9.1
AWBH		11.42	137	P	P	18 54 55.8	-9.1
VYHS	Vyhne	11.51	356	i PN	P	18 55 04.8	-1.2
MOA	Molln	11.64	340	⇓iPn	P	18 55 07.1	-0.7
MOA				i Sn	S	18 57 10.9	-7.9
CRVS	Cervenica-Dubn	11.92	4	i PN	P	18 55 11.4	-0.2
KOLS	Kolonicke sedl	12.02	7	i PN	P	18 55 12.4	-0.5
KHC	Kasperske Hory	13.00	341	eP	P	18 55 25.0	-1.0
KHC				ex	x	18 57 42.5	
NB2	NORSAR Subarra	24.69	350	P	P	18 57 40.3	-0.3
	2.8nm,0.8s,mb3.8,baz=161,slow=9.3						

NEIC ***01*** *19:05:53.7,36.07S×70.65W,h12^{km},ML3.7(GUC),After GUC.*

GUC 01 19:05:53.7±0.9**,36.07S×70.65W,h12^{km}**±7^{km}**,MD4.2, ML3.7,4D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNCH	Linares	0.80	285	eP	Pb	19 06 09.6	+0.5
LNCH				i S	Sb	19 06 21.0	+1.3
CCHI	Chillan	1.27	245	⇓iP	Pb	19 06 15.6	-1.5
CCHI				i S	Sb	19 06 33.2	-0.1
CCHI				AMP		19 06 36.7	
	comp=N,2μm,0.5s						
SFDO	San Fernando	1.48	348	⇓iP	Pn	19 06 18.4	-1.9
CNCO	Chanco	1.56	282	eP	Pn	19 06 21.1	-0.5
CNCO				i S	Sb	19 06 41.0	-0.8
CICH	Cipreses	1.75	6	⇓iP	Pn	19 06 23.7	-0.5
CICH				i S	Sn	19 06 46.6	+0.1
CACH	El Canelo	1.94	1	eP	Pn	19 06 26.5	-0.5
CACH				i S	Sn	19 06 51.3	-0.2
CHCH	Chadas Angostu	2.13	360	⇓iP	Pn	19 06 29.8	+0.2
LMEL	Las Melosas	2.24	10	eP	Pn	19 06 32.2	+0.9
LMEL				i S	Sn	19 07 01.0	+1.9
LMEL				AMP		19 07 17.4	
	comp=N,839nm,0.4s						
TACH	Talagante	2.42	354	eP	Pn	19 06 34.5	+0.7
TACH				i S	Sn	19 07 04.5	+1.0
PCH	Pirque	2.44	3	eP	Pn	19 06 35.5	+1.5
RCDM	Rinconada Maip	2.57	357	eP	Pn	19 06 36.6	+0.6
RCDM				i S	Sn	19 07 08.9	+1.4
FCH	Farellones	2.75	6	i P	Pn	19 06 40.5	+2.0
PLCA	Paso Flores	4.66	179	eP	Pn	19 07 14.2	+8.5
TRQA	Tornquist	7.21	109	eP	Pn	19 07 42.8	+1.2
TRQA				eS	Sn	19 09 43.7	+39

CSEM ***01*** *19:25:59.6±0.8,45.44N×25.41E,MD3.0/3,Error ellipse: s-maj=8.1km s-min=5.9km az=341.0,After BUC*

NEIC ***01*** *19:26:00.3,45.44N×25.39E,ML3.5(BUC),After BUC.*

BUC 01 19:25:59.3±0.8**,45.45N×25.39E,MD3.0**/3**,11C-7D,Error ellipse: s-maj=7.7km s-min=5.7km az=335.0,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNX	Sinaia	0.13	136	⇑iP	Pg	19 26 01.5	-0.3
SNX				i S	Sg	19 26 04.3	+0.8
SNX	Sinaia	0.13	136	⇑iP	Pg	19 26 01.5	-0.3
SNX				i S	Sg	19 26 04.3	+0.8
MTUR	Matau	0.32	227	⇓iP	Pg	19 26 06.0	+0.3
MTUR				i S	Sg	19 26 11.4	+1.4
MTUR	Matau	0.32	227	⇓iP	Pg	19 26 06.0	+0.3
MTUR				i S	Sg	19 26 11.4	+1.4
MLR	Muntele Rosu	0.39	83	⇑iP	Pg	19 26 07.5	+0.3
MLR				i S	Sg	19 26 13.8	+1.4
MLR	Muntele Rosu	0.39	83	⇑iP	Pg	19 26 07.5	+0.4
MLR				i S	Sg	19 26 13.8	+1.5
VRI	Vrincioaia	1.03	65	⇑iP	Pb	19 26 19.9	+0.2
VRI	Vrincioaia	1.03	65	⇑iP	Pb	19 26 19.9	+0.3
BUC	Bucharest	1.15	154	i S	Sb	19 26 42.0	+5.0
BUC1	Bucharest	1.19	157	i S	Sb	19 26 42.0	+3.8
HARR	Harsova	1.95	112	⇑iP	Pn	19 26 35.7	+1.7
HARR				i S	Sn	19 27 01.6	+2.1
HARR	Harsova	1.95	112	⇑iP	Pn	19 26 35.7	+1.7
HARR				i S	Sn	19 27 01.6	+2.0
CFR	Carcaliu	1.96	97	⇓iP	Pn	19 26 36.7	+2.7
CFR				i S	Sn	19 27 02.0	+2.3
CFR	Carcaliu	1.96	97	⇓iP	Pn	19 26 36.7	+2.6
CFR				i S	Sn	19 27 02.0	+2.3
BURAR	Bucovina Array	2.17	357	⇓P	Pn	19 26 38.3	+1.2
BURAR	Bucovina Array	2.17	357	⇑iP	Pn	19 26 38.0	+0.8
TIRR	Tirgusor	2.36	114	⇑iP	Pn	19 26 40.7	+0.8
TIRR				i S	Sn	19 27 12.8	+2.8

TIRR	**Tirgusor**	2.36	114	⇑iP	Pn	19 26 40.7	+0.8
TIRR				i S	Sn	19 27 12.8	+2.8
TIRR				i S	Sn	19 27 20.5	+10
BZS	**Buzias**	2.66	275	⇓iP	Pn	19 26 46.8	+2.7
BZS				i S	Sn	19 27 20.5	+2.9
BZS	**Buzias**	2.66	275	⇓iP	Pn	19 26 46.8	+2.7
BZS				i S	Sn	19 27 20.5	+3.0

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*NEIC **01** 19:35:07.0±1.0,9.77N×94.00E,h30^{km},mb4.5/6,Error ellipse: s-maj=22.2km s-min=17.7km az=70.0*
*BJI **01** 19:35:07.2,9.80N×94.00E,h30^{km},mb4.3*
ISC 01 19:35:05.2±1.3,**9.8N**±0.1×**94.0E**±0.2,**h30**^{km},**n10, σ0^{s}.65**/10,**mb4.4**/7,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	9.85	28	eP	P	19 37 26.8	-1.2
GYA	**Guiyang**	20.44	34	P	P	19 39 43.5	+0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
LZH	**Lanzhou**	27.66	17	eP	P	19 40 53.4	+0.9
LZH				AP	pP	19 41 03.0	+1.7
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb4.6						
LZH	**Lanzhou**	27.66	17	eP	P	19 40 53.4	+0.9
	comp=Z,25nm,1.5s,mb4.6						
LZH				pP	pP	19 41 03.0	+1.7
LZH				sP	sP	19 41 06.5	+1.3
GTA	**Gaotai**	29.95	9	eP	P	19 41 13.9	+0.8
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.0						
ULN	**Ulaanbaatar**	39.51	14	eP	P	19 42 35.0	+0.1
	comp=Z,1.4nm,0.3s,mb4.2						
KURK	**Kurchatov**	42.74	346	eP	P	19 43 01.3	-0.1
	comp=Z,4.7nm,1.2s,mb4.1						
CHKZ	**Chkalovo**	47.63	341	eP	P	19 43 39.7	-0.8
	comp=Z,2.7nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	49.48	127	eP	P	19 43 55.0	-0.2
	comp=Z,5.1nm,0.6s,mb4.7						
KIV	**Kislovodsk**	55.84	317	eP	P	19 44 42.2	0.0
	comp=Z,5.8nm,0.7s,mb4.7						

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*NIED **01** 19:39:00,24.90N×122.70E,h140^{km},Mw4.1 Best double couple: $M_0 1.4\times10^{15}$ NP1:ϕ_s97°,δ64°,λ-91°. NP2:ϕ_s280°, δ26°,λ-88°.*
*TAP **01** 19:39:06.8,24.85N×122.68E,h122^{km}±1^{km},ML4.7*
*JMA **01** 19:39:07.2±0.2,24.90N×122.68E,h120^{km}±3^{km},M3.5*
ISC 01 19:39:04.4±0.9,**25.1N**±0.1×**122.61E**±0.09,**h127**^{km}±15^{km}, **n18,σ1^{s}.13**/28,**mb4.2**/3,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.70	149	P	P	19 39 25.4	+0.8
YOJ				eS	S	19 39 39.4	-0.6
IRIF	**Iriomote-Funau**	1.25	125	P	P	19 39 30.2	+0.3
IRIF				eS	S	19 39 48.4	-0.7
HATJ	**Hateruma jima**	1.48	132	P	P	19 39 32.9	+0.5
HATJ				eS	S	19 39 52.7	-1.1
JKRS	**Kuro-shima**	1.51	123	P	P	19 39 33.5	+0.6
JKRS				S	S	19 39 53.2	-1.3
JIJ	**Ishigaki jima**	1.56	116	P	P	19 39 33.9	+0.6
JIJ				S	S	19 39 53.3	-2.1
JTJ	**Tarama**	1.94	102	P	P	19 39 39.2	+1.3
JTJ				eS	S	19 40 03.0	-0.4
JMJ	**Miyako jima 2**	2.45	95	P	P	19 39 46.7	+2.2
JMJ				S	S	19 40 15.3	+0.4
JOGS	**Gusukube**	2.56	96	P	P	19 39 48.0	+2.1
JOGS				S	S	19 40 18.2	+0.8
JKE	**Kume jima 2**	3.97	71	P	P	19 40 05.9	+1.2
NAH1	**Naha**	4.72	75	P	P	19 40 16.1	+1.3
JJT2	**Tamagusuku 2**	4.76	76	P	P	19 40 15.8	+0.5
JIH	**Iheya**	5.20	67	P	P	19 40 21.7	+0.5
JOW	**Kunigami**	5.39	70	P	P	19 40 23.4	-0.4
JOW				eS	S	19 41 25.3	+0.1
JTK	**Tokunoshima**	6.30	63	P	P	19 40 35.2	-0.8
JTK				eS	S	19 41 44.9	-2.2
JAM	**Amami Oshima**	7.09	60	P	P	19 40 45.2	-1.6
JOF	**Joensuu**	68.58	331	ep	P	19 49 51.6	-3.5
	5.6nm,1.2s,mb4.3						
KEV	**Kevo**	68.65	338	ep	P	19 49 54.7	-0.7
	50nm,2.2s,mb5.0						
NB2	**NORSAR Subarra**	78.06	332	P	P	19 50 49.5	-0.6
	0.5nm,0.5s,mb3.5,baz=53,slow=5.3						

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*CSEM **01** 19:46:11.9±0.2,37.57N×25.30W,h0^{km},ML3.6,Error ellipse: s-maj=5.0km s-min=3.2km az=53.0,After PDA*
*PDA **01** 19:46:11.9±1.4,37.57N×25.30W,h0^{km}±4^{km},MD3.2, ML3.6,Error ellipse: s-maj=4.1km s-min=2.5km az=76.0*
SVSA 01 19:46:11.9±1.4,**37.57N**×**25.30W,h0**^{km}±4^{km},**MD3.2, ML3.6,Error ellipse: s-maj=4.1km s-min=2.5km az=76.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRA1	**Furnas**	0.18	345	i P	Pg	19 46 15.4	-0.1
VIF	**Vila Franca**	0.21	327	i P	Pg	19 46 15.9	-0.1
VIF				i S	Sg	19 46 19.2	+0.4
	7μm,0.3s						
PCNG	**Congro**	0.21	338	i P	Pg	19 46 15.9	-0.2
PCNG				i S	Sg	19 46 19.3	+0.4
	8μm,0.3s						
PRCH	**Ribeira Ch**	0.21	317	i P	Pg	19 46 15.9	-0.3
PRCH				i S	Sg	19 46 19.1	+0.1
	8μm,0.3s						
MIRA	**Miradouro**	0.21	4	i P	Pg	19 46 16.1	-0.1
BART	**Pico Bartolome**	0.23	26	eP	Pg	19 46 16.4	-0.1
BART				eS	Sg	19 46 20.3	+0.7
	10μm,0.3s						
LFA	**Lagoa do Fogo**	0.25	324	i P	Pg	19 46 16.7	-0.2
MESC	**Monte Escuro**	0.25	332	i P	Pg	19 46 16.6	-0.3
MESC				eS	Sg	19 46 20.6	+0.4
PFAD	**Fenais da Ajud**	0.27	356	i P	Pg	19 46 16.9	-0.4
CML	**Cha da Macela**	0.28	315	i P	Pg	19 46 17.1	-0.4
PMAT	**Coroa da Mata**	0.28	331	i P	Pg	19 46 17.0	-0.5
PMAT				i S	Sg	19 46 21.2	0.0
	2μm,0.2s						
PVER	**Pico Vermelho**	0.28	323	i P	Pg	19 46 17.0	-0.6
FAC	**Faja de Cima**	0.34	306	i P	Pg	19 46 18.4	-0.4
PSET	**Sete Cidades**	0.42	307	eP	Pg	19 46 19.6	-0.7
PSET				eS	Sg	19 46 25.7	-0.2
	3μm,0.3s						
PSAN	**Santo Antonio**	0.44	310	i P	Pg	19 46 19.9	-0.8
PFET	**Feteiras**	0.46	302	i P	Pg	19 46 20.1	-1.0
SET2	**Ginetes**	0.49	304	i P	Pg	19 46 20.6	-1.0
SET4	**Mosteiros**	0.50	308	i P	Pg	19 46 20.8	-1.1
PSMN	**Pico do Norte,**	0.60	162	i P	Pg	19 46 22.7	-1.1
PSMN				i S	Sg	19 46 30.8	-1.0
PSMN	**Pico do Norte,**	0.60	162	i S	Sg	19 46 30.8	-1.0
PFAV	**Pico das Favas**	1.81	309	eP	Pn	19 46 40.3	-4.3
PFAV				i S	Sn	19 47 01.2	-7.4
	121nm,0.3s						
PSCM	**Serra do Cume**	1.82	309	eP	Pn	19 46 40.4	-4.4
PSCM				i S	Sn	19 47 01.5	-7.4
	519nm,0.5s						
RIB2	**Ribeirinha**	1.84	307	eP	Pn	19 46 40.8	-4.2
RIB2				i S	Sn	19 47 02.0	-7.4
	100nm,0.2s						
ADH	**Angra Heroismo**	1.87	306	eS	Sn	19 47 02.9	-7.2
PVNV	**Vila Nova**	1.89	310	i P	Pn	19 46 41.4	-4.3
PVNV				i S	Sn	19 47 03.0	-7.5
	101nm,0.2s						
PPAD	**Pico dos Padre**	1.93	306	eP	Pn	19 46 42.0	-4.3
PPAD				eS	Sn	19 47 04.6	-7.0
	65nm,0.3s						
PBIS	**Biscoitos**	1.95	308	eP	Pn	19 46 42.5	-4.0
PBIS				eS	Sn	19 47 05.0	-7.0
	36nm,0.4s						
ASBA	**Santa Barbara**	1.97	306	eP	Pn	19 46 43.0	-3.8
ASBA				eS	Sn	19 47 05.5	-7.1
	93nm,0.2s						
PSBA	**Serra de Santa**	2.00	307	eP	Pn	19 46 43.0	-4.2
PSBA				eS	Sn	19 47 05.8	-7.4
	212nm,0.3s						
PMAN	**Manadas**	2.44	297	erx	Sn	19 47 18.0	-6.7
PGRA	**Graciosa**	2.56	305	erx	Sn	19 47 20.6	-7.1
ROSA	**Rosais**	2.59	297	eP	Pn	19 46 51.2	-4.5
ROSA				eS	Sn	19 47 20.4	-7.9
STGR	**Santa Cruz**	2.61	306	erx	Sn	19 47 21.1	-7.7
PICO	**Pico**	2.64	292	i P	Pn	19 46 52.1	-4.3
PICO				eS	Sn	19 47 20.9	-8.7
CALA	**Caldeira**	2.87	292	eP	Pn	19 46 55.0	-4.7
CALA				eS	Sn	19 47 26.7	-8.8
PCED	**Cedros**	2.88	292	erx	Sn	19 47 27.1	-8.8

MAN 01 19:50:31.2,13.49N×120.08E,h25^{km},mb4.0,ML2.8, MS2.4,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.29	34	eP	Pb	19 50 38.9	+0.8
LUBP	**Lubang**	0.29	34	eP	Pb	19 50 38.9	+0.8
LUBP				eS	Sb	19 50 43.1	+0.4
SJMP	**San Jose**	1.44	135	eP	Pn	19 50 55.9	-0.1
SJMP				eS	Sn	19 51 14.0	-0.4
BOAC	**Boac**	1.72	91	eP	Pn	19 51 00.4	+0.4

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*PRU **01** 19:54:41.3,50.08N×18.39E*
WAR 01 19:54:40.3,50.07N×18.46E,h1^{km},MW2.5,1D,Location given by Central Institute of Mining, origin time based upon RAC,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	0.17	276	⇓iPg	Pg	19 54 44.5	+0.8
RAC				eSg	Sg	19 54 47.8	+1.8
OKC	**Ostrava-Krasne**	0.31	222	ePG	Pg	19 54 46.5	+0.1
OKC				eSG	Sg	19 54 51.5	+1.1
NIE	**Niedzica**	1.36	118	ePg	Pg	19 55 06.2	-1.3
NIE				eSg	Sg	19 55 25.3	-0.4
DPC	**Dobruska-Polom**	1.40	283	ePG	Pg	19 55 06.3	-2.0
DPC				eSG	Sg	19 55 25.2	-1.8
	24nm,0.3s						
UPC	**Upice**	1.63	287	eSG	Sg	19 55 31.9	-2.7
PRU	**Pruhonice**	2.53	270	eSG	Sg	19 56 00.1	-4.4
KHC	**Kasperske Hory**	3.31	255	ePG	Pg	19 55 41.2	-5.2
KHC				eSG	Sg	19 56 25.5	-5.0
MOA	**Molln**	3.54	233	i SG	Sg	19 56 31.3	-7.0
	1.9nm,0.4s						
NKC	**Novy Kostel**	3.87	275	eSG	Sg	19 56 43.3	-5.8

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*BJI **01** 20:19:58.9,7.89N×93.75E,h21^{km},mB5.3,mb4.6,Ms4.3, Msz3.8*
*NEIC **01** 20:19:59.6±0.6,7.87N×94.02E,mb4.9/25,Error ellipse: s-maj=14.6km s-min=13.6km az=149.0*
ISC 01 20:19:58.3±0.6,**7.94N**±0.08×**94.06E**±0.06,**h17**^{km}, **h17**^{km}±.8^{km}**:pP-P,n92,σ1^{s}.38**/84,**mb4.8**/36,**MS4.0**/5,**1C-7D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	**Songkhla**	6.54	96	P	Pn	20 21 34.0	-2.2
	266nm,0.9s						
NNT	**Nongplab**	7.25	50	P	Pn	20 21 43.8	-2.3
CM31	**Chiang Mai Arr**	11.48	24	eP	P	20 22 44.3	-0.4
CHG	**Chiang Mai**	11.80	23	⇓P	P	20 22 50.5	+1.5
	14nm,0.9s						
VIS	**Vishakhapatnam**	14.28	314	eP	P	20 23 21.8	-0.2
VIS				e		20 23 24.9	
	comp=Z,31nm,0.9s						
VIS				e		20 25 47.2	
BWNR	**Bhubaneshwar**	14.65	328	eP	P	20 23 25.1	-1.8
BWNR				e		20 23 30.1	
	comp=Z,29nm,0.8s						
BWNR				e		20 24 48.4	
HYB	**Hyderabad**	17.81	303	eP	P	20 24 08.0	+0.8
HYB	**Hyderabad**	17.81	303	i P	P	20 24 08.0	+0.8
KMI	**Kunming**	18.99	25	P	P	20 24 23.8	+2.2
KMI				AMB	AMB		
	comp=Z,14nm,1.0s						
KMI	**Kunming**	18.99	25	P	P	20 24 23.8	+2.2
	comp=Z,14nm,1.0s						
JIRN	**Jiri**	20.98	340	eP	P	20 24 42.8	-0.4
	comp=Z,180nm,1.3s						
PKI	**Pulchoki**	21.18	338	eP	P	20 24 45.3	+0.1
	comp=Z,212nm,1.1s,mb5.4						
DMN	**Daman**	21.32	338	eP	P	20 24 46.0	-0.7
	comp=Z,104nm,0.9s,mb5.2						
KKN	**Kakani**	21.42	338	eP	P	20 24 46.5	-1.2
	comp=Z,52nm,0.8s,mb4.9						
KAD	**Karad**	21.50	298	eP	P	20 24 45.7	-2.8
KAD				e		20 24 59.4	
	comp=Z,32nm,1.4s						
LSA	**Lhasa**	21.82	353	P	P	20 24 50.2	-1.5
GKN	**Gorkha**	21.86	337	eP	P	20 24 51.0	-1.1
	comp=Z,51nm,0.7s,mb5.1						
GYA	**Guiyang**	21.97	32	P	P	20 24 57.6	+4.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GYA				LR	LR		
	comp=N,350nm,9.9s						
GYA				LR	LR		
	comp=E,390nm,10.2s						
GYA				LR	LR		
	comp=Z,350nm,11.4s,MS4.0						
BHPL	**Bhopal**	22.06	315	i P	P	20 24 55.7	+1.6
BHPL				e		20 25 01.4	
	comp=E,23nm,0.9s						
KOLN	**Koldanda**	22.07	335	eP	P	20 24 54.4	+0.2
	comp=E,243nm,1.2s,mb5.5						
CD2	**Chengdu**	24.59	20	eP	P	20 25 16.6	-2.2
NDI	**New Delhi**	26.04	325	eP	P	20 25 33.0	+0.4
DDI	**Dehra Dun**	26.85	328	e	P	20 25 42.3	+2.3
XAN	**Xi'an**	29.37	26	P	P	20 26 01.2	-1.6
XAN				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
GTA	**Gaotai**	31.76	8	eP	P	20 26 27.9	+4.1
GTA				AP	pP	20 26 31.5	+2.6
GTA				XP	sP	20 26 34.4	+3.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.2						
GTA				AMB	AMB		
	comp=Z,87nm,3.8s						
GTA				LR	LR		
	comp=N,162nm,16.7s,MS3.9						
GTA				LR	LR		
	comp=E,112nm,13.3s,MS3.9						
GTA				LR	LR		
	comp=Z,138nm,12.2s,MS3.9						
WMQ	**Urumqi**	36.17	352	eP	P	20 27 02.8	+1.0
WMQ				XP	sP	20 27 11.8	+2.7
WMQ				PP	PP	20 28 25.6	+1.1
WMQ				S	S	20 32 41.0	+0.8
WMQ				SS	SS	20 35 05.0	+0.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
WMQ				LR	LR		
	comp=N,104nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=E,162nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,89nm,18.0s,MS3.6						
HHC	**Hu-ho-hao-te**	36.29	23	eP	P	20 27 04.5	+1.7
HHC				AP	pP	20 27 10.8	+2.8
HHC				XP	sP	20 27 15.6	+5.5
HHC				PP	PP	20 28 29.0	+2.9
HHC				PCP	PcP	20 29 29.4	+1.4
HHC				S	S	20 32 46.1	+4.1
HHC				XS		20 32 57.9	
HHC				SCP		20 33 10.9	
HHC				PCS		20 33 15.7	
HHC				SS	SS	20 35 11.8	+5.2
HHC				SCS	ScS	20 37 16.2	-0.9
HHC				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,158nm,3.5s						
HHC				LR	LR		
	comp=N,250nm,14.2s,MS4.3						
HHC				LR	LR		
	comp=E,249nm,15.4s,MS4.3						
HHC				LR	LR		
	comp=Z,131nm,16.6s,MS3.8						
BJI	**Beijing**	37.59	28	P	P	20 27 18.9	+5.2
BJI				AMB	AMB		
	comp=Z,17nm,0.8s,mb4.8						
BJI				LR	LR		
	comp=N,282nm,15.0s,MS4.3						
BJI				LR	LR		
	comp=E,298nm,16.0s,MS4.3						
BJI				LR	LR		
	comp=Z,133nm,43.2s						
UCH	**Uchtor**	38.26	336	P	pP	20 27 24.9	+0.3
	SNR=7.2						
KBK	**Karagaybulak**	38.46	337	P	pP	20 27 26.3	+0.1
	SNR=7.1						
AML	**Almayashu**	38.51	335	P	pP	20 27 27.2	+0.6
	SNR=9.4						
AAK	**Ala-Archa**	38.61	337	P	P	20 27 23.8	+1.4
	SNR=5.9						
AAK	**Ala-Archa**	38.61	337	eP	P	20 27 21.9	-0.5
	comp=Z,13nm,1.1s,mb4.6						
CHMS	**Chumysh**	38.82	337	P	P	20 27 28.8	+4.7
	SNR=5.9						
EKS2	**Erkin-Say**	38.92	336	P	pP	20 27 30.2	+0.1
	SNR=5.5						
USP	**Ospenovka**	39.15	337	P	P	20 27 31.7	+4.9
	SNR=6.2						
ULN	**Ulaanbaatar**	41.29	13	eP	P	20 27 44.5	+0.1
	comp=Z,6.2nm,0.9s,mb4.2						
SNY	**Shenyang**	42.66	33	⇑P	P	20 27 57.9	+2.1
SNY				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.3						
TLY	**Talaya**	44.32	9	P	P	20 28 10.5	+1.4
	comp=Z,3.0nm,0.6s,mb4.2						
KURK	**Kurchatov**	44.53	346	eP	P	20 28 09.5	-1.3
	comp=Z,22nm,0.8s,mb5.0						
CN2	**Changchun**	45.02	32	eP	P	20 28 19.3	+4.5
CN2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	48.37	126	eP	P	20 28 39.8	-1.7
	comp=Z,11nm,0.9s,mb4.9						
CHKZ	**Chkalovo**	49.39	342	eP	P	20 28 47.5	-1.4
	comp=Z,35nm,0.9s,mb5.4						
CHKZ				ePcP	PcP	20 30 15.7	+4.1
GNI	**Garni**	54.34	314	P	P	20 29 24.6	-1.7
	comp=Z,28nm,1.2s,mb5.1						
KIV	**Kislovodsk**	57.22	318	P	P	20 29 44.2	-2.9
	comp=Z,18nm,0.9s,mb5.1						
KMBO	**Kilima Mbogo**	57.35	264	eP	P	20 29 50.7	+2.3
	comp=Z,7.2nm,0.9s,mb4.7						
KMBO				e	pP	20 29 56.5	+2.8
CFR	**Carcaliu**	67.49	316	⇓iP	P	20 30 59.4	+3.8
CFR	**Carcaliu**	67.49	316	⇓iP	P	20 30 59.4	+3.8
MLR	**Muntele Rosu**	69.07	316	⇓iP	P	20 31 05.0	-0.4
MLR	**Muntele Rosu**	69.07	316	⇓iP	P	20 31 05.0	-0.4
BURAR	**Bucovina Array**	69.95	318	⇓P	P	20 31 15.4	+4.7
BURAR	**Bucovina Array**	69.95	318	⇓iP	P	20 31 15.4	+4.7
KWP	**Kalwaria**	71.93	320	eP	P	20 31 27.8	+5.1
KWP	**Kalwaria**	71.93	320	eP	P	20 31 27.8	+5.1
KOLS	**Kolonicke sedl**	72.10	319	i pP	pP	20 31 28.9	-0.2
SUW	**Suwalki**	72.41	324	eP	P	20 31 29.1	+3.7
SUW	**Suwalki**	72.41	324	eP	P	20 31 29.1	+3.7
CRVS	**Cervenica-Dubn**	72.63	319	i pP	pP	20 31 32.2	0.0
KAF	**Kangasniemi**	72.70	333	ep	P	20 31 25.8	-1.2
	comp=Z,16nm,1.0s,mb4.9						
OJC	**Ojcow**	73.88	320	eP	P	20 31 38.6	+4.5
VYHS	**Vyhne**	74.31	318	i pP	pP	20 31 41.3	-0.7
KEV	**Kevo**	74.75	341	ep	P	20 31 42.5	+3.7
	comp=Z,35nm,2.1s,mb4.9						
OKC	**Ostrava-Krasne**	74.89	319	eP	P	20 31 44.9	+4.9
MORC	**Moravsky Berou**	75.28	319	eP	P	20 31 41.2	-1.0
	comp=Z,25nm,1.1s,mb5.1						
MORC				e	pP	20 31 46.8	-0.8
ZST	**Bratislava**	75.43	318	i pP	pP	20 31 47.8	-0.7
BOSA	**Boshof**	75.55	238	eP	P	20 31 45.4	+1.2
	comp=Z,7.0nm,1.0s,mb4.5						
DPC	**Dobruska-Polom**	76.11	320	eP	P	20 31 47.2	+0.3
DPC				epP	pP	20 31 52.2	-0.1
KSP	**Ksiaz**	76.16	320	eP	P	20 31 46.4	-0.8
KSP				epP	pP	20 31 51.7	-0.9
KSP	**Ksiaz**	76.16	320	eP	P	20 31 52.4	+5.2
UPC	**Upice**	76.32	320	eP	P	20 31 53.1	+5.0
PRU	**Pruhonice**	77.23	319	eP	P	20 31 58.5	+5.4
BRG	**Berggiesshubel**	77.65	320	i P	P	20 31 55.2	-0.3
	comp=Z,9.4nm,1.0s,mb4.7						
GEC2	**GERESS Array S**	77.73	318	eP	P	20 31 55.9	0.0
	comp=Z,13nm,1.0s,mb4.8						
KHC	**Kasperske Hory**	77.82	318	eP	P	20 31 56.5	+0.1
KHC				epP	pP	20 32 01.3	-0.5
RUE	**Ruedersdorf**	77.83	322	P	P	20 31 54.8	-1.6
	comp=Z,55nm,0.9s,mb5.5						
RUE				e	pP	20 32 01.4	-0.4
CLL	**Collm**	78.26	321	i P	P	20 32 00.9	+2.1
CLL				eP		20 32 03.0	
CLL	**Collm**	78.26	321	P	P	20 32 01.0	+2.2
WET	**Wettzell**	78.28	318	eP	P	20 31 58.9	0.0
	comp=Z,9.0nm,1.0s,mb4.7						
NKC	**Novy Kostel**	78.58	320	eP	P	20 32 05.0	+4.4
MOX	**Moxa**	79.12	320	eP	P	20 32 08.9	+5.4
	comp=Z,50nm,2.1s,mb5.1						
MOX	**Moxa**	79.12	320	i P	P	20 32 08.9	+5.4
	comp=Z,logA/T=1.4,mb5.1						
GRA1	**Grafenberg Arr**	79.37	319	eP	P	20 32 05.3	+0.4
	comp=Z,14nm,1.0s,mb4.8						
GRA1				epP	pP	20 32 10.6	+0.3
GRF	**Grafenberg Arr**	79.37	319	eP	P	20 32 05.3	+0.4
	comp=Z,14nm,1.0s,mb4.8						
GRF				epP	pP	20 32 10.6	+0.3
NB2	**NORSAR Subarra**	79.64	331	P	P	20 32 04.6	-1.5
	comp=Z,7.9nm,0.8s,mb4.7,baz=92,slow=5.8						
CLZ	**Clausthal**	79.91	321	eP	P	20 32 07.8	0.0
	comp=Z,15nm,0.9s,mb4.9						
TNS	**Taunus Mts**	81.15	320	eP	P	20 32 14.5	+0.1
BFO	**Black Forest**	81.29	318	eP	P	20 32 14.7	-0.4
	comp=Z,6.0nm,1.0s,mb4.5						
LPG	**La Plagne**	82.52	315	eP	P	20 32 22.0	+0.4
	comp=Z,26nm,0.8s,mb5.0						
IMA	**Indian Mountai**	91.59	22	eP	P	20 33 06.3	+1.1
INK	**Inuvik**	96.95	16	P	P	20 33 29.4	-0.3
MDV	**Middlebury**	127.03	348	ePKP	PKPdf	20 39 03.1	-2.6
MDV				e		20 39 08.6	
PLCA	**Paso Flores**	144.58	200	ePKPdf	PKPdf	20 39 35.2	-3.0

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*MOS **01** 20:29:34.0±1.3,0.77N×124.80E,h33^{km},mb5.2/9,Error ellipse: s-maj=48.2km s-min=14.6km az=109.0*
*BJI **01** 20:30:24.4,2.49N×124.50E,h423^{km},mB4.7,mb4.7*
*NEIC **01** 20:30:30.9±2.6,2.96N×123.91E,h423^{km}±35^{km},mb4.9/19, Error ellipse: s-maj=26.1km s-min=9.0km az=66.0*
ISC 01 20:30:27.1±0.4,**2.98N**±0.04×**124.01E**±0.06,**h395**^{km}±4^{km}, **n102,σ1^{s}.13**/110,**mb4.8**/38,**13C-7D,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	4.14	15	⇓eP	P	20 31 41.9	+1.1
MATI	**Mati**	4.53	30	eP	P	20 31 42.9	-1.7
PAGZ	**Pagadian**	4.87	353	eP	P	20 31 48.6	+0.5
BUKP	**Musuan**	4.98	12	eP	P	20 31 49.8	+0.5
IPIL	**Ipil**	4.98	343	eP	P	20 31 49.5	+0.2
BIPH	**Bislig**	5.67	24	eP	P	20 31 56.0	-0.6
BIPH				eS	S	20 33 04.0	-2.8
BUTP	**Butuan**	6.16	15	eP	P	20 32 05.0	+3.1
TSM	**Tawau**	6.26	282	P	P	20 32 01.9	-1.1
MSLP	**Maasin**	7.16	7	eP	P	20 32 13.7	+0.5
GUIM	**Jordan**	7.72	350	eP	P	20 32 19.4	-0.3
OCLP	**Ormoc**	8.04	4	eP	P	20 32 22.2	-1.1
KKM	**Kota Kinabalu**	8.34	292	P	P	20 32 26.2	-0.6
CUYO	**Cuyo Island**	8.36	339	eP	P	20 32 27.0	0.0
BATP	**Bataraza**	8.45	313	eP	P	20 32 26.0	-2.1
BESP	**Borongan**	8.68	9	eP	P	20 32 33.2	+2.5
ENPP	**El Nido**	9.35	331	eP	P	20 32 38.1	-0.3
OTRP	**Odiongan**	9.52	348	eP	P	20 32 40.3	-0.4
BUSP	**Coron**	9.72	337	eP	P	20 32 43.0	0.0
SJMP	**San Jose**	9.84	343	eP	P	20 32 45.0	+0.7
PVCP	**Virac**	10.55	1	eP	P	20 32 53.8	+1.1
LUBP	**Lubang**	11.31	341	eP	P	20 33 02.3	+0.8
POLP	**Polilio Island**	11.85	350	eP	P	20 33 07.9	+0.2
BALP	**Baler**	12.90	349	eP	P	20 33 19.2	-0.4
SCZP	**Santa Cruz**	13.34	343	eP	P	20 33 21.6	-2.8
CAUP	**Cauayan**	14.04	351	eP	P	20 33 34.7	+2.6
ABRA	**Dolores**	14.93	348	eP	P	20 33 40.0	-1.4
APYP	**Conner**	15.03	350	eP	P	20 33 41.4	-1.1
KAKA	**Kakadu**	17.70	152	⇑iP	P	20 34 09.9	+0.3
	105nm,0.4s						
KGM	**Kluang**	20.69	268	P	P	20 34 40.7	+1.8
FITZ	**Fitzroy Crossi**	21.01	176	⇑iP	P	20 34 42.4	+0.4
	92nm,0.3s,mb5.7						
FITZ				eS	S	20 38 16.3	+8.9
IPM	**Ipoh**	22.98	275	P	P	20 35 00.5	-0.1
WRAB	**Tennant Creek**	24.93	156	⇑iP	P	20 35 17.6	-0.6
	51nm,0.4s,mb5.3						
WB2	**Warramunga Arr**	24.94	156	⇑iP	P	20 35 17.7	-0.6
WB2				eS	S	20 39 09.4	-2.7

SSE	Sheshan	28.09	355	eP	P	20 35 45.4	-0.8
SSE				AMB	AMB		
	comp=Z,23nm,0.9s,mb4.5						
SSE				AMB	AMB		
	comp=Z,175nm,5.2s						
SSE	Sheshan	28.09	355	eP	P	20 35 45.4	-0.8
	comp=Z,23nm,0.9s,mb4.5						
ASPA	Alice Springs	28.19	161	⇑iP	P	20 35 47.0	-0.1
ASPA				eS	S	20 40 02.5	-1.0
GYA	Guiyang	28.66	326	⇑iP	P	20 35 52.5	+1.2
GYA				PCP	PcP	20 38 51.2	+0.4
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.6						
WHN	Wuhan	28.89	343	P	P	20 35 55.0	+1.8
CM31	Chiang Mai Arr	28.96	304	eP	P	20 35 53.1	-0.8
	comp=Z,7.5nm,0.7s,mb4.1						
NJ2	Nanjing	29.32	351	eP	P	20 35 58.0	+1.1
NJ2				AMB	AMB		
	comp=Z,2µm,4.9s						
KMI	Kunming	30.07	319	P	P	20 36 05.7	+2.2
KMI				AMB	AMB		
	comp=Z,23nm,0.7s,mb4.6						
KMI	Kunming	30.07	319	P	P	20 36 05.7	+2.2
	comp=Z,23nm,0.7s,mb4.6						
CTA	Charters Tower	31.66	137	⇑iP	P	20 36 18.4	+1.1
	comp=Z,5.6nm,0.9s,mb3.9						
CTAO	Charters Tower	31.66	137	eP	P	20 36 18.2	+0.9
	comp=Z,11nm,0.9s,mb4.2						
CTAO				e		20 37 03.9	
CD2	Chengdu	33.73	328	P	P	20 36 35.7	+0.9
CD2				AMB	AMB		
	comp=Z,61nm,1.2s,mb4.8						
FORT	Forrest	33.79	174	eP	P	20 36 35.7	+0.4
	comp=Z,228nm,0.6s,mb5.7						
XAN	Xi’an	33.95	337	P	P	20 36 36.3	-0.4
XAN				AMB	AMB		
	comp=Z,33nm,1.2s,mb4.5						
KLBR	Kellerberrin	34.89	189	eP	P	20 36 44.6	0.0
	comp=Z,105nm,0.4s,mb5.5						
MUN	Mundaring	35.55	191	eP	P	20 36 50.3	+0.2
	comp=Z,7.9nm,1.2s,mb3.9						
BJI	Beijing	37.56	350	P	P	20 37 07.8	+1.0
LZH	Lanzhou	37.85	333	⇑P	P	20 37 11.0	+1.9
LZH				AMB	AMB		
	comp=Z,97nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,174nm,6.2s						
STKA	Stephens Creek	38.49	156	⇑iP	P	20 37 15.9	+1.5
	comp=Z,35nm,0.3s,mb5.2						
STKA				eS	S	20 42 40.6	-0.4
HHC	Hu-ho-hao-te	39.33	345	eP	P	20 37 22.3	+1.0
HHC				AP	pP	20 38 41.5	+3.7
HHC				PCP	PcP	20 39 19.4	-2.0
HHC				XP	sP	20 39 25.4	+4.1
HHC				S	S	20 42 55.0	+1.6
HHC				XS		20 45 14.8	
HHC				SCS	ScS	20 46 40.1	-3.0
HHC				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.1						
HHC				AMB	AMB		
	comp=Z,128nm,10.7s						
LSA	Lhasa	40.94	314	P	P	20 37 36.1	+1.6
GTA	Gaotai	42.40	332	eP	P	20 37 47.2	+1.0
GTA				PCP	PcP	20 39 31.6	0.0
GTA				PP	PP	20 39 34.2	+1.7
GTA				S	S	20 43 41.0	+2.9
GTA				SS	SS	20 46 58.7	+3.6
GTA				AMB	AMB		
	comp=Z,31nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,145nm,4.2s						
JIRN	Jiri	43.64	308	eP	P	20 37 56.5	+0.3
	comp=Z,66nm,0.3s,mb5.4						
PKI	Pulchoki	44.22	307	eP	P	20 38 00.5	-0.3
	comp=Z,34nm,0.4s,mb5.0						
KKN	Kakani	44.42	308	eP	P	20 38 02.1	-0.3
	comp=Z,47nm,0.4s,mb5.2						
DMN	Daman	44.48	307	eP	P	20 38 02.6	-0.2
	comp=Z,125nm,1.0s,mb5.2						
CNB	Canberra Magne	44.90	150	eP	P	20 38 07.9	+1.8
	comp=Z,482nm,1.2s,mb5.7						
TOO	Toolangi	45.01	156	eP	P	20 38 09.0	+2.1
	comp=Z,0.7nm,0.5s						
GKN	Gorkha	45.02	308	eP	P	20 38 07.1	0.0
	comp=Z,108nm,0.8s,mb5.2						
KOLN	Koldanda	45.75	307	eP	P	20 38 12.7	-0.1
	comp=Z,239nm,0.7s,mb5.6						
ULN	Ulaanbaatar	47.04	344	i P	P	20 38 22.3	-0.2
ZAK	Zakamensk	50.38	343	⇓iP	P	20 38 46.8	-0.9
ZAK				e		20 39 57.8	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TLY	Talaya	51.44	344	i P	P	20 38 55.9	+0.4
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb3.9						
WMQ	Urumqi	51.82	327	eP	P	20 38 59.0	+0.6
WMQ				AMB	AMB		
	comp=Z,32nm,0.8s,mb4.6						
SMLA	Simla	52.24	308	⇑iP	P	20 39 15.6	+14
	comp=Z,13nm,0.3s,mb4.7						
SMLA				i S	S	20 46 10.4	+16
SDNR	Sundarnagar	52.54	308	eP	P	20 39 04.8	+0.9
BOD	Bodaibo	55.25	354	eP	P	20 39 21.8	-1.1
BOD				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.1						
KZA	Kyzart	58.35	319	P	P	20 39 45.6	+1.1
	SNR=7.4						
TKM2	Tokmak 2	58.53	320	P	P	20 39 46.0	+0.3
	SNR=12						
KBK	Karagaybulak	58.83	319	P	P	20 39 48.2	+0.5
	SNR=11						
UCH	Uchtor	58.91	319	P	P	20 39 49.2	+0.9
	SNR=21						
YAK	Yakutsk	59.06	3	d iP	P	20 39 48.2	-0.8
AAK	Ala-Archa	59.11	319	P	P	20 39 50.0	+0.4
	SNR=7.8						
AAK	Ala-Archa	59.11	319	c iP	P	20 39 49.5	-0.1
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.0						
AAK	Ala-Archa	59.11	319	eP	P	20 39 48.5	-1.1
	comp=Z,9.3nm,0.8s,mb4.2						
CHMS	Chumysh	59.11	320	P	P	20 39 50.0	+0.3
	SNR=7.2						
USP	Ospenovka	59.40	320	P	P	20 39 51.2	-0.3
	SNR=15						
AML	Almayashu	59.41	318	P	P	20 39 52.4	+0.8
	SNR=14						
EKS2	Erkin-Say	59.59	319	P	P	20 39 53.1	+0.3
	SNR=14						
MA2	Magadan	60.11	15	i P	P	20 39 53.4	-2.7
MA2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
KURK	Kurchatov	60.94	329	d iP	P	20 40 00.8	-0.8
KURK	Kurchatov	60.94	329	eP	P	20 40 00.8	-0.8
	comp=Z,69nm,0.4s,mb5.4						
NVS	Novosibirsk	61.34	334	i P	P	20 40 01.6	-2.6
NVS				e		20 40 19.7	
NVS				pmax	pmax		
	comp=N,9.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.5						
JMDO	Jabal Madar	66.61	293	P	P	20 40 38.2	-0.3
	SNR=7.5						
CHKZ	Chkalovo	66.68	329	eP	P	20 40 37.2	-1.3
	comp=Z,16nm,0.9s,mb4.6						
BIDO	Bidbid	66.73	294	P	P	20 40 39.1	-0.1
	SNR=11						
SMDO	Samad	66.74	294	P	P	20 40 38.6	-0.8
	SNR=5.3						
ARQ	Araqi	68.17	294	⇑P	P	20 40 47.7	-0.4
TIXI	Tiksi	68.64	2	eP	P	20 40 48.9	-1.3
TIXI				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
BANOM	Banah	68.68	297	⇑P	P	20 40 50.3	-0.8
ARU	Arti	74.12	328	P	P	20 41 21.1	-1.6
	comp=Z,133nm,0.7s,mb5.7,SNR=12						
ARU	Arti	74.12	328	⇓iP	P	20 41 14.0	-8.7
ARU				e		20 41 24.4	
ARU				e		20 51 20.6	
ARU				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
KIV	Kislovodsk	81.69	314	i P	P	20 42 01.2	-2.5
ANN	Anapa	85.48	315	eP	P	20 42 21.9	-0.8
ANN				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.3						
OBN	Obninsk	86.10	325	⇓iP	P	20 42 21.7	-3.7
OBN				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
KMBO	Kilima Mbogo	86.82	269	eP	P	20 42 29.4	-0.4
	comp=Z,18nm,1.2s,mb4.7						
SYO	Syowa Base	90.75	201	⇓P	P	20 42 45.1	-1.8
FINES	FINESS Array B	91.20	332	eP	P	20 42 48.2	-0.9
NB2	NORSAR Subarra	98.23	333	P	P	20 43 18.5	-2.8
	comp=Z,0.6nm,0.7s,mb3.9,baz=73,slow=4.5						

MOS 01 20:45:49.8±2.8, 52.96N×108.62E, h10$^{\text{km}}$, mb4.3/1, 1C, Error ellipse: s-maj=48.1km s-min=16.1km az=50.3, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYVR	Suvo	1.08	49	ePG	Pg	20 46 11.1	-0.4
TRG	Tyrgan	1.39	263	ePG	Pg	20 46 14.7	-2.9
TRG				e		20 46 33.7	
TRG				pmax	pmax		
	comp=Z,48nm,0.2s						
TRG				smax			
	comp=N,580nm,0.2s						
KAB	Kabansk	1.51	234	ePG	Pg	20 46 17.3	-2.7
KAB				e		20 46 37.3	
KAB				pmax	pmax		
	comp=Z,230nm,0.5s						
KAB				smax			
	comp=E,934nm,1.0s						
YOA	Uoyan	3.66	28	⇑iPN	Pn	20 46 53.9	+6.2
YOA				i		20 47 42.4	
YOA				pmax	pmax		
	comp=Z,47nm,0.4s						
YOA				smax			
	comp=N,220nm,0.7s						
SVK	Severo-Muysk	4.31	39	ePN	Pn	20 47 08.7	+12
SVK				e		20 48 04.3	
SVK				pmax	pmax		
	comp=Z,22nm,0.7s						
SVK				smax			
	comp=E,92nm,0.6s						
MOY	Mondy	4.86	258	ePN	Pn	20 47 05.1	+0.4
MOY				e		20 47 16.2	
CRS	Chara	6.82	51	ePG	Pg	20 47 52.6	-13
TUP	Tupik	6.89	73	ePN	Pn	20 47 30.0	-3.4
TUP				e		20 47 52.5	
TUP				eS	Sn	20 48 48.1	-4.6
TUP				e		20 49 22.8	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TUP				smax			
	comp=N,55nm,0.8s						

LDG 01 20:52:54.3±0.9, 42.84N×1.45W, h7$^{\text{km}}$, Md2.5/2, Ml2.2/3, Error ellipse: s-maj=15.2km s-min=8.4km az=52.0

MDD 01 20:52:57.1±0.4, 42.87N×1.33W, mbLg1.7/11, Error ellipse: s-maj=3.5km s-min=2.2km az=40.0, PRXIMO, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJPF	Ste Jean	0.26	17	ePg	Pg	20 53 01.0	-1.3
SJPF				eSg	Sg	20 53 05.2	-0.5
	98nm,0.4s						
LARF	Larrau	0.30	55	P	Pg	20 53 02.6	-0.6
LARF				S	Sg	20 53 07.7	+0.5
EALK	Alkurruntz	0.38	339	Pg	Pg	20 53 04.0	-0.7
	4.3nm,0.3s,SNR=16						
EALK				Lg		20 53 10.0	
	44nm,0.3s						
OSSF	Osses	0.39	7	P	Pg	20 53 04.2	-0.7
OSSF				S	Sg	20 53 10.5	+0.3
ATE	Arette	0.51	64	P	Pg	20 53 06.4	-0.9
ATE				S	Sg	20 53 14.4	+0.4
ETSF	Etsaut	0.56	86	ePg	Pg	20 53 07.0	-1.4
ETSF				eSg	Sg	20 53 13.9	-2.0
	24nm,0.3s						
EBIE	Bielsa	1.10	99	Pg	Pg	20 53 18.1	-1.0
	2.7nm,0.3s,SNR=23						
EBIE				Lg		20 53 33.6	
	8.2nm,0.2s						
EPF	Esparros	1.23	82	ePg	Pg	20 53 19.2	-2.6
EPF				eSg	Sg	20 53 37.8	-0.4
	6.3nm,0.2s						
ESAC	San Caprasio	1.31	151	Pg	Pg	20 53 21.6	-1.7
	39nm,0.3s,SNR=9.7						
ESAC				Lg		20 53 38.9	
	41nm,0.2s						
ELAN	Lanestosa	1.59	284	Pg	Pg	20 53 25.2	-3.7
	2.4nm,0.3s,SNR=7.4						
ELAN				Lg		20 53 48.8	
	5.1nm,0.3s						
ERTA	Horta de San J	2.27	146	Pg	Pg	20 53 40.3	-2.2
	0.6nm,0.1s,SNR=7.9						
ERTA				Lg		20 54 08.6	
	1.1nm,0.3s,SNR=7.9						
EMIR	Miracle	2.32	113	Lg		20 54 12.7	
	4.1nm,0.3s,SNR=7.9						
EPOB	Poblet	2.34	129	Pg	Pg	20 53 40.5	-3.4
	0.9nm,0.2s,SNR=7.9						
EPOB				Lg		20 54 10.3	
	1.0nm,0.2s,SNR=7.9						
LFF	La Frestale	2.55	35	ePg	Pg	20 53 42.4	-5.7
LFF				eSg	Sg	20 54 16.8	-5.4
	3.3nm,0.3s						
EMOS	Mosqueruela	2.58	165	Pg	Pg	20 53 45.3	-3.4
	0.1nm,0.1s,SNR=7.9						
EMOS				Lg		20 54 19.3	
	2.1nm,0.5s,SNR=4.0						
MTLF	Montolieu	2.64	78	eSg	Sg	20 54 20.0	-5.0
	1.3nm,0.3s						

ATH 01 21:11:40.0, 35.61N×29.87E, h10$^{\text{km}}$, MD3.0/3

CSEM 01 21:11:47.6±1.1, 36.10N×29.54E, h30$^{\text{km}}$, MD3.3, Error ellipse: s-maj=31.3km s-min=16.9km az=144.0

ISK 01 21:11:43.4, 35.83N×29.41E, h22$^{\text{km}}$, MD3.3, 1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.35	24	⇓iPB	Pb	21 11 51.2	+0.2
FETY	Fethiye	0.85	342	i PG	Pb	21 12 00.2	+1.0
FETY				SG	Sb	21 12 12.8	+2.6
ELL	Elmali	1.00	24	PG	Pb	21 12 01.5	-0.5
ARG	Arkhangelos	1.11	291	ePB	Pb	21 12 09.0	+5.3
KARP	Karpathos	1.85	262	ePN	Pn	21 12 19.0	+4.7
BCK	Bucak	1.89	30	PN	Pn	21 12 15.9	+1.0
DENT	Denizli	1.94	351	ePN	Pn	21 12 16.5	+0.8
BDRM	Kayabasi	2.00	309	i P	Pn	21 12 18.9	+2.3
BDRM				i S	Sn	21 12 43.9	+2.6
AYDN	Tasoluk	2.20	327	i S	Sn	21 12 45.3	-0.9

CASC 01 21:17:13.2±1.4, 12.70N×88.24W, h33$^{\text{km}}$±8$^{\text{km}}$, MD4.0, 5C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.70	35	⇓eP	P	21 17 26.2	-0.4
CNCH				eS	S	21 17 37.9	+1.7
VSM	San Miguel	0.72	358	⇑eP	P	21 17 27.1	+0.2
VSM				eS	S	21 17 38.9	+2.0
BLLM	Bellamira	0.73	0	eP	P	21 17 26.7	-0.4
BLLM				eS	S	21 17 38.4	+1.2
CAHU	Cacacuatique	1.06	2	eP	P	21 17 30.9	-0.9
CAHU				eS	S	21 17 46.8	+1.3
SNVI	San Vicente	1.07	327	eP	P	21 17 33.4	+1.4
SNVI				eS	S	21 17 46.5	+0.6
CRIN	San Cristobal	1.17	90	eP	P	21 17 34.0	+0.8
CRIN				eS	S	21 17 48.5	+0.3
LCBS	La Ceiba	1.19	323	⇑eP	P	21 17 33.2	-0.3
LCBS				eS	S	21 17 49.9	+1.1
LFRS	El Faro	1.21	319	⇑iP	P	21 17 33.7	-0.2
LFRS				eS	S	21 17 50.2	+0.7
TEL3	Telica 3	1.37	95	⇓eP	P	21 17 36.1	-0.2
TEL3				eS	S	21 17 53.5	+0.2
TELN	Telica	1.38	94	⇑eP	P	21 17 37.3	+1.0
TELN				eS	S	21 17 54.6	+0.9
BOQS	Boqueron	1.44	316	eP	P	21 17 37.3	+0.1
BOQS				eS	S	21 17 56.2	+1.1
MIRN	Miramar	1.52	100	eP	P	21 17 38.5	+0.2
MIRN				eS	S	21 17 57.5	+0.3
MOMJ	Momotombo	1.69	100	⇓eP	P	21 17 40.4	-0.4
MOMJ				eS	S	21 17 59.3	-2.1
COPN	Copaltepe	1.70	108	⇑eP	P	21 17 41.0	+0.2
COPN				eS	S	21 18 01.1	-0.5
SBLS	San Blas	1.75	310	eP	P	21 17 41.9	+0.2
SBLS				eS	S	21 18 04.0	+0.9
SNJE	San Jose	1.76	311	eP	P	21 17 41.6	-0.2
SNJE				eS	S	21 18 04.4	+1.2
APYN	Apoyeque	1.91	104	⇓eP	P	21 17 43.8	-0.1
APYN				eS	S	21 18 07.4	+0.5
RBDL	Robledal	1.98	315	eP	P	21 17 44.2	-0.8
TICN	Ticuantepe	2.08	108	eP	P	21 17 46.6	+0.3

MAN 01 21:24:06.7, 16.39N×119.77E, h1$^{\text{km}}$, mb4.4, ML3.3, MS3.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.14	92	eP	Pg	21 24 12.8	+3.3
SCZP	Santa Cruz	0.62	167	eP	Pg	21 24 18.6	-0.5
BCPH	Baguio City Da	0.78	90	⇑iP	Pg	21 24 22.1	-0.2
BCPH				i S	Sg	21 24 39.3	+6.6
ABRA	Dolores	1.55	36	eP	Pn	21 24 35.6	+0.1
ABRA				eS	Sb	21 24 59.4	+3.6
BALP	Baler	1.85	110	eP	Pn	21 24 39.8	0.0
BALP				eS	Sn	21 25 02.5	-1.8
APYP	Conner	2.04	44	eP	Pn	21 24 43.0	+0.5
APYP				eS	Sn	21 25 08.9	0.0
CAUP	Cauayan	2.05	74	eP	Pn	21 24 44.3	+1.7
CVP	Callao Caves	2.36	56	eP	Pn	21 24 48.0	+0.9

CSEM 01 21:38:07.9, 38.16N×21.85E, h10$^{\text{km}}$, MD3.6/3, After ATH

ATH 01 21:38:01.3, 36.67N×20.29E, h31$^{\text{km}}$, MD3.7/7, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	1.41	68	ePN	Pn	21 38 26.5	+1.3
VLS	Valsamata	1.52	9	ePB	Pb	21 38 27.0	-1.8
VLI	Veliai	2.13	88	ePB	Pb	21 38 37.5	-1.6
VLI	Veliai	2.13	88	ePb	Pb	21 38 39.5	+0.4
EVR	Evrytania	2.54	28	ePB	Pb	21 38 44.0	-2.2
NAIG	Nisos Aigina	2.77	66	ePN	Pn	21 38 46.0	+1.3
AGG	Agios Georgios	2.85	34	eP	Pn	21 38 47.6	+1.8
JAN	Janina	3.01	8	ePN	Pn	21 38 50.0	+1.9
PTL	Penteli	3.16	63	ePN	Pn	21 38 50.0	-0.2
XOR	Xorichti	3.54	40	eP	Pn	21 38 56.3	+0.8
AOS	Alonnisos	3.78	48	eP	Pn	21 38 59.3	+0.3
LIT	Litokhoron	3.84	26	eP	Pn	21 39 01.3	+1.5
FNA	Florina	4.20	11	eP	Pn	21 39 04.7	-0.2
THE	Thessaloniki	4.48	27	eP	Pn	21 39 09.6	+0.7
GRG	Griva	4.59	20	eP	Pn	21 39 11.1	+0.6
OUR	Ouranopolis	4.67	37	eP	Pn	21 39 12.5	+0.9
SOH	Sokhos	4.79	29	eP	Pn	21 39 14.3	+1.0
KNT	Kendrikon	4.92	24	eP	Pn	21 39 15.1	-0.1
LOS	Limnos	4.98	48	eP	Pn	21 39 18.1	+2.1
SRS	Serrai	5.13	29	eP	Pn	21 39 18.5	+0.4
ALN	Alexandroupoli	6.17	45	eP	Pn	21 39 33.2	+0.5
STON	Ston	6.51	343	i Pn	Pn	21 39 34.2	-3.3
STON				i Sn	Sn	21 40 40.6	-11

CSEM 01 21:57:26.5±0.3, 37.82N×44.38E, h10$^{\text{km}}$, MD3.9, Error ellipse: s-maj=7.3km s-min=3.1km az=121.0

ISK 01 21:57:29.1, 37.82N×44.19E, h13$^{\text{km}}$, MD3.9, ML3.9, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	Hakkari	0.43	236	i PG	Pg	21 57 38.0	0.0
VANT	Van	0.89	315	PG	Pg	21 57 47.6	+0.6
TVAN	Van	0.94	319	i P	Pb	21 57 48.3	+1.6
TVAN				i S	Sb	21 58 00.4	+1.6
VANB	Van	1.00	321	i PG	Pg	21 57 48.1	-1.0
BTMT	Batman	2.17	281	PN	Pn	21 58 07.5	+2.1
BTMT				SN	Sn	21 58 36.4	+4.2
BEST	Besiri	2.31	273	i P	Pn	21 58 08.9	+1.4
BEST				i S	Sn	21 58 37.1	+1.0
GNI	Garni	2.36	10	ePN	Pn	21 58 08.4	+0.2
VRT	Varto	2.46	303	PN	Pn	21 58 10.5	+0.8
ERZM	Erzurum	3.03	314	i P	Pn	21 58 25.8	+8.1
ERZM				i S	Sn	21 59 03.3	+9.0
EZM	Erzurum	3.03	314	PN	Pn	21 58 18.5	+0.7
BINT	Bingol	3.09	291	PN	Pn	21 58 19.2	+0.5
DIY	Diyarbakir	3.14	273	PN	Pn	21 58 19.7	+0.4
PTK	Pertek	3.92	287	ePN	Pn	21 58 31.2	+0.8
EZC	Erzincan	3.92	301	ePN	Pn	21 58 36.0	+5.6
URFA	Urfa	4.28	267	ePN	Pn	21 58 36.0	+0.5
GUMT	Gumushane	4.51	307	i PN	Pn	21 58 39.9	+1.2
BHD	Baghdad	4.55	178	ePn	Pn	21 59 02.0	+23
BHD				eSn	Sn	22 00 01.0	+28
BHD				eSb	Sb	22 00 17.0	+33
BHD				eSg	Sg	22 00 32.5	+32
MALT	Malatya	4.57	278	ePN	Pn	21 58 40.4	+0.7
GAZ	Gaziantep	5.59	265	ePN	Pn	21 58 54.9	+1.0

DJA 01 22:13:50.2±1.0, 9.35S×113.45E, h80$^{\text{km}}$, MD4.5/1, ML3.7/2, 2C-5D, Error ellipse: s-maj=23.4km s-min=18.7km az=55.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.10	39	⇓ePg	P	22 14 09.3	-1.4
	118nm,0.2s						
SRDI				⇓eSg	S	22 14 23.4	-2.7
KELI	Kelakatan	1.52	43	⇑ePn	P	22 14 16.1	-0.2
	57nm,0.2s						
KELI				⇓eSn	S	22 14 34.7	-0.9
RATI	Rata	2.15	73	⇓ePn	P	22 14 23.8	-1.0
RATI				⇓eSn	S	22 14 47.9	-2.4
KEDI	Kedomdong	2.77	72	⇑ePn	P	22 14 32.2	-1.2

NEIC 01 22:20:04.4, 41.28N×117.81W, h2$^{\text{km}}$, ML3.6(REN), After REN., Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMN	Battle Mountai	0.96	152	eP	Pb	22 20 22.4	-0.9
WVOR	Wild Horse Val	1.31	332	eP	Pb	22 20 28.5	-0.8
MOD	Modoc	1.97	289	ePn	Pn	22 20 37.9	-1.1
WCN	Washoe City	2.47	218	ePn	Pn	22 20 44.5	-1.7
TPH	Tonopah	3.23	172	Pn	Pn	22 20 56.9	-0.1
TRCR	Troy Canyon	3.39	149	ePn	Pn	22 20 57.4	-1.9
HLID	Hailey	3.40	47	ePn	Pn	22 20 58.3	-1.2
BMO	Blue Mountains	3.59	6	Pn	Pn	22 21 01.8	-0.4
BGU	Big Grassy Mou	3.63	94	ePn	Pn	22 21 00.3	-2.5
YBH	Yreka Blue Hor	3.71	279	ePn	Pn	22 21 01.6	-2.2
CMB	Columbia Colle	3.80	212	ePn	Pn	22 21 03.3	-1.9
HVU	Hansel Valley	3.81	81	ePn	Pn	22 21 03.6	-1.7
MTUM	Tungsten Hills	3.96	189	Pn	Pn	22 21 06.2	-1.2
SPUT	South Promonto	4.04	88	Pn	Pn	22 21 08.5	-0.1
HUMO	Hull Mountain	4.06	291	ePn	Pn	22 21 06.6	-2.3
KHMM	Horse Mountain	4.49	267	Pn	Pn	22 21 15.2	+0.2
KRMB	Red Mountain	4.59	275	Pn	Pn	22 21 17.6	+1.1
HWUT	Hardware Ranch	4.71	84	Pn	Pn	22 21 16.4	-1.6
TCUT	Toone Canyon	4.83	90	Pn	Pn	22 21 17.4	-2.5
ARUT	Antelope Range	4.85	134	Pn	Pn	22 21 20.9	+0.7
JLU	Jordanelle	4.87	96	Pn	Pn	22 21 22.0	+1.7
MPU	Maple Canyon	4.87	103	Pn	Pn	22 21 21.6	+1.3
DAU	Daniels Canyon	5.05	98	Pn	Pn	22 21 23.8	+0.9
MCMT	McKenzie Canyo	5.08	44	ePn	Pn	22 21 21.5	-1.9
MVU	Marysvale	5.12	121	ePn	Pn	22 21 23.7	-0.2
MSU	Marysvale	5.14	121	ePn	Pn	22 21 20.4	-3.7
RRI2	Red Ridge	5.24	65	ePn	Pn	22 21 24.3	-1.3
TMUT	Trail Mountain	5.42	109	Pn	Pn	22 21 27.1	-1.1
TPAW	Teton Pass	5.54	64	ePn	Pn	22 21 28.9	-0.9
SNOW	Snow King Moun	5.67	65	Pn	Pn	22 21 31.9	+0.3
IMW	Indian Meadow	5.71	60	Pn	Pn	22 21 29.8	-2.4
MOOW	Moose Ponds	5.78	62	ePn	Pn	22 21 30.1	-3.1
LOHW	Long Hollow	5.82	64	ePn	Pn	22 21 30.8	-3.0
QLMT	Earthquake Lak	5.87	51	Pn	Pn	22 21 34.6	+0.1
SRU	San Rafael	5.99	109	Pn	Pn	22 21 31.3	-4.8
YFT	Old Faithful	6.03	56	Pn	Pn	22 21 35.9	-0.8
YMR	Madison River	6.06	54	Pn	Pn	22 21 37.3	+0.2
NEN	Nelson	6.08	157	Pn	Pn	22 21 38.2	+0.7
BOZ	Bozeman (W)	6.27	44	Pn	Pn	22 21 38.8	-1.3
BW06	Boulder Array	6.33	74	Pn	Pn	22 21 38.0	-2.9
LKWY	Lake	6.36	56	Pn	Pn	22 21 40.0	-1.4

*BJI **01** 23:02:59.3,7.50N×93.91E,h53^{km},mB4.4,mb4.4,Ms3.7*
*NEIC **01** 23:02:59.6±1.0,7.82N×94.23E,h30^{km},mb4.4/8,Error ellipse: s-maj=25.8km s-min=18.9km az=108.0*

ISC 01 23:03:01.0±3.6,7.9N±0.1×94.2E±0.2,h58^{km}±32^{km},n22,σ1^{s}.11/22,mb4.5/15,1C-1D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	7.18	49	P	P	23 04 44.8	-0.9
CM31	**Chiang Mai Arr**	11.48	23	*e*P	P	23 05 44.4	-0.2
CHG	**Chiang Mai**	11.80	23	⇓P	P	23 05 50.2	+1.3
	15nm,0.7s						
KMI	**Kunming**	18.98	24	P	P	23 07 23.6	+3.1
KMI				AMB	AMB		
	comp=Z,14nm,1.2s						
KMI	**Kunming**	18.98	24	P	P	23 07 23.6	+3.1
	comp=Z,14nm,1.2s						
JIRN	**Jiri**	21.07	340	*e*P	P	23 07 41.6	-0.9
	comp=Z,37nm,0.8s,mb4.8						
PKI	**Pulchoki**	21.26	338	*e*P	P	23 07 43.9	-0.5
	comp=Z,25nm,0.7s,mb4.7						
DMN	**Daman**	21.41	337	*e*P	P	23 07 45.3	-0.6
	comp=Z,22nm,0.7s,mb4.6						
KKN	**Kakani**	21.51	338	*e*P	P	23 07 46.3	-0.6
	comp=Z,29nm,0.8s,mb4.8						
GKN	**Gorkha**	21.95	337	*e*P	P	23 07 51.2	0.0
	comp=Z,23nm,0.7s,mb4.8						
GYA	**Guiyang**	21.95	31	⇑*i*P	P	23 07 54.4	+3.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
KOLN	**Koldanda**	22.16	334	*e*P	P	23 07 53.1	-0.3
	comp=Z,24nm,0.8s,mb4.7						
AAK	**Ala-Archa**	38.70	337	*e*P	P	23 10 21.2	+0.3
	comp=Z,1.5nm,0.7s,mb3.8						
ULN	**Ulaanbaatar**	41.31	13	*e*P	P	23 10 42.9	+0.5
	comp=Z,1.6nm,0.7s,mb3.8						
KURK	**Kurchatov**	44.60	346	*e*P	P	23 11 08.8	-0.3
	comp=Z,14nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	48.24	126	*e*P	P	23 11 36.9	-1.4
	comp=Z,4.5nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	49.47	342	*e*P	P	23 11 47.1	-0.2
	comp=Z,4.6nm,0.9s,mb4.5						
KMBO	**Kilima Mbogo**	57.47	264	*e*P	P	23 12 48.9	+2.1
	comp=Z,5.3nm,1.1s,mb4.5						
JOF	**Joensuu**	70.85	334	*e*p	P	23 14 11.8	-1.5
KAF	**Kangasniemi**	72.80	333	*e*p	P	23 14 25.8	+1.0
BOSA	**Boshof**	75.63	238	*e*P	P	23 14 42.9	+0.9
	comp=Z,8.3nm,1.1s,mb4.6						
NB2	**NORSAR Subarra**	79.74	331	P	P	23 15 02.9	-1.1
	comp=Z,2.4nm,0.8s,mb4.2,baz=92,slow=5.6						

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*ISK **01** 23:08:16.8,38.24N×26.49E,h5^{km},MD3.3*
*CSEM **01** 23:08:18.3±0.1,38.27N×26.59E,h2^{km},MD3.3,Error ellipse: s-maj=4.5km s-min=2.7km az=118.0*
*ATH **01** 23:08:20.8,38.05N×26.84E,h36^{km},MD3.1/3*

ISC 01 23:08:19.8±1.1,38.12N±0.03×26.75E±0.06,h3^{km}±7^{km},n18,σ1^{s}.01/25,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	0.35	40	*i* PG	Pg	23 08 26.9	0.0
SMG	**Samos**	0.41	170	*e*PB	Pb	23 08 29.8	+0.5
IZM	**Izmir**	0.49	55	*i* PG	Pg	23 08 30.0	+0.3
KDAG	**Bornova**	0.50	55	*i* P	Pg	23 08 29.9	+0.1
KDAG				*i* S	Sg	23 08 36.6	+0.2
AYDN	**Tasoluk**	1.00	117	*i* P	Pb	23 08 40.0	+0.6
AYDN				*i* S	Sb	23 08 53.0	+0.3
AKS	**Akhisar**	1.13	47	PN	Pn	23 08 41.4	-1.0
AKS				SN	Sn	23 08 59.2	+0.6
BDRM	**Kayabasi**	1.18	152	*i* P	Pb	23 08 43.2	+0.7
BDRM				*i* S	Sb	23 08 57.7	-0.4
PRK	**Paraskevi**	1.19	342	*e*PB	Pb	23 08 43.5	+0.9
PRK				*e*SN	Sn	23 09 01.0	+0.9
AYVA	**Ayvalik**	1.19	358	*i* P	Pb	23 08 42.8	+0.1
AYVA				*i* S	Sb	23 08 59.6	+1.3
APE	**Apeiranthos**	1.42	223	PN	Pn	23 08 44.3	-2.3
APE	**Apeiranthos**	1.42	223	*e*Pn	Pn	23 08 46.0	-0.6
MANT	**Manisa**	1.47	75	*i* P	Pn	23 08 48.1	+0.8
MANT				*i* S	Sb	23 09 05.2	-1.2
BALB	**Balikesir**	1.76	30	*e*PN	Pn	23 08 49.7	-1.7
DENT	**Denizli**	1.84	101	*e*PN	Pn	23 08 54.7	+2.2
KCT	**Karacabey**	2.48	30	*e*PN	Pn	23 09 00.2	-1.6
ORLT	**Orhaneli**	2.55	40	*e*PN	Pn	23 09 01.9	-0.9
MRMT	**Marmara Adasi**	2.57	15	*e*PN	Pn	23 09 00.9	-2.1
ESKT	**Eskisehir**	3.50	65	*e*PN	Pn	23 09 16.8	+0.7

IGQ 01 23:19:16.2,1.44S×81.31W,h5^{km}±22^{km},mb4.1,1C,Error ellipse: s-maj=21.7km s-min=14.3km az=170.0,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULBA	**Ulba**	2.90	90	P	Pn	23 20 04.8	+0.9
NAS1	**Nasa**	2.94	74	P	Pn	23 20 06.2	+1.7
PISA	**Pisayambo**	2.95	83	P	Pn	23 20 06.7	+2.1
JUA2	**San Juan 2**	2.97	66	P	Pn	23 20 05.7	+0.8
TERV	**Terraza Guagua**	2.98	65	P	Pn	23 20 07.9	+2.8
PINO	**Pino**	2.99	65	P	Pn	23 20 06.0	+0.9
VC1	**Cotopaxi 1**	3.01	75	P	Pn	23 20 08.3	+2.8
TAMB	**Tambo**	3.03	76	P	Pn	23 20 08.0	+2.2
YANA	**Yana**	3.04	64	P	Pn	23 20 05.5	-0.4
ANTI	**Antisana**	3.30	73	P	Pn	23 20 11.4	+1.8
COTA	**Cotacachi**	3.46	59	P	Pn	23 20 14.3	+2.5
CAYR	**Refugio Cayamb**	3.61	66	⇑P	Pn	23 20 16.5	+2.6
CAYR				S	Sn	23 20 57.9	+0.4
CAYA	**Cayambe**	3.64	66	P	Pn	23 20 16.6	+2.2

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*MAN **01** 23:36:21.4,13.03N×124.25E,h1^{km},mb5.0,ML4.0,MS4.0*
MAN BULUSAN SORSOGON III LEGASPI CITY II TABACO ALBAY II LIGNON HILL I.
*BJI **01** 23:36:26.2,12.76N×124.32E,h71^{km},mB4.9,mb4.4,Ms4.1,Msz3.7*
*NEIC **01** 23:36:27.0±0.9,12.76N×123.85E,h50^{km},mb4.6/10,Error ellipse: s-maj=40.3km s-min=17.8km az=66.0*
NEIC Felt [III PIVS] at Bulusan and [II PIVS] at Legaspi and Tabaco, Luzon.

ISC 01 23:36:21.8±1.1,13.08N±0.03×124.35E±0.04,h10^{km}±8^{km},n50,σ1^{s}.31/55,mb4.5/14,MS4.1/3,1C-5D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	0.55	340	*e*P	Pg	23 36 32.2	-0.6
MMPH	**Masbate**	1.01	225	⇓*e*P	Pb	23 36 41.2	+0.3
MMPH				*i* S	Sb	23 36 53.0	-1.0
AUQP	**San Andres**	1.65	279	*e*P	Pn	23 36 53.2	+2.2
BESP	**Borongan**	1.81	144	*e*P	Pn	23 36 53.8	+0.4
PLP	**Palo**	2.00	162	*i* P	Pn	23 36 56.0	0.0
PLP				*i* S	Sn	23 37 22.1	+0.8
GQP	**Guinayangan**	2.03	294	⇓*e*P	Pn	23 36 57.5	+1.0
GQP				*e*S	Sn	23 37 24.3	+2.3
OCLP	**Ormoc**	2.03	173	*e*P	Pn	23 36 57.1	+0.6
RCP	**Roxas**	2.18	226	⇓*e*P	Pn	23 36 58.3	-0.3
OTRP	**Odiongan**	2.38	253	*e*P	Pn	23 37 00.9	-0.6
KALP	**Kalibo**	2.41	235	*e*P	Pn	23 36 56.0	-5.9
BOAC	**Boac**	2.47	279	*e*P	Pn	23 37 02.5	-0.3
LLP	**Lapu-Lapu**	2.77	188	*e*P	Pn	23 37 06.3	-0.8
LLP				*e*S	Sn	23 37 39.1	-1.8
POLP	**Polilio Island**	2.86	305	*e*P	Pn	23 37 10.2	+1.9
MSLP	**Maasin**	2.97	170	*e*P	Pn	23 37 11.1	+1.2
GUIM	**Jordan**	2.99	215	*e*P	Pn	23 37 10.7	+0.6
SJMP	**San Jose**	3.21	259	*e*P	Pn	23 37 13.8	+0.5
SCPH	**Surigao**	3.46	161	⇓*e*P	Pn	23 37 15.9	-1.0
TGY	**Tagaytay City**	3.47	287	⇑*e*P	Pn	23 37 23.8	+6.7
BALP	**Baler**	3.77	315	*e*P	Pn	23 37 19.5	-1.8
CUYO	**Cuyo Island**	3.94	236	*e*P	Pn	23 37 22.8	-0.9
PCPH	**Palayan**	4.00	308	⇓*i*P	Pn	23 37 23.8	-0.8
PCPH				*i* S	Sn	23 38 12.6	+0.5
LUBP	**Lubang**	4.05	280	*e*P	Pn	23 37 28.3	+3.1
BUTP	**Butuan**	4.27	163	*e*P	Pn	23 37 30.8	+2.4
CAUP	**Cauayan**	4.55	328	*e*P	Pn	23 37 31.1	-1.3
SCZP	**Santa Cruz**	5.07	302	*e*P	Pn	23 37 40.5	+0.9
ENPP	**El Nido**	5.16	249	*e*P	Pn	23 37 39.4	-1.7
CVP	**Callao Caves**	5.20	332	*e*P	Pn	23 37 41.0	-0.6
BUKP	**Musuan**	5.21	172	*e*P	Pn	23 37 42.6	+0.9
SGCP	**Mt. Cagua**	5.59	337	*e*P	Pn	23 37 46.4	-0.7
APYP	**Conner**	5.62	328	*e*P	Pn	23 37 49.1	+1.6
ABRA	**Dolores**	5.74	323	*e*P	Pn	23 37 49.4	+0.2
WHN	**Wuhan**	19.68	334	*e*P	P	23 40 55.5	+1.5
GYA	**Guiyang**	21.27	311	P	P	23 41 12.6	+1.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
XAN	**Xi'an**	25.14	329	P	P	23 41 47.0	-1.6
XAN				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.4						
CD2	**Chengdu**	25.98	316	P	P	23 41 55.2	-1.4
BJI	**Beijing**	27.80	346	P	P	23 42 11.7	-1.4
BJI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.1						
BJI				LR	LR		
	comp=N,323nm,14.8s,MS4.1						
BJI				LR	LR		
	comp=E,179nm,15.1s,MS4.1						
BJI				LR	LR		
	comp=Z,150nm,35.8s						
BJI	**Beijing**	27.80	346	P	P	23 42 11.7	-1.4
	comp=Z,5.0nm,0.9s,mb4.1						
BJI				S	PcP	23 45 25.9	-3.8
LZH	**Lanzhou**	29.41	325	*e*P	P	23 42 25.1	-2.6
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,96nm,4.5s						
LZH				LR	LR		
	comp=N,223nm,13.4s						
LZH				LR	LR		
	comp=Z,396nm,17.3s,MS4.1						
LZH	**Lanzhou**	29.41	325	*e*P	P	23 42 25.1	-2.6
	comp=Z,24nm,1.3s,mb4.8						
LZH				pP	pP	23 42 32.1	+1.4
LZH				sP	sP	23 42 35.6	+3.6
HHC	**Hu-ho-hao-te**	29.85	340	*e*P	P	23 42 34.6	+3.1
HHC				AMB	AMB		
	comp=Z,14nm,1.5s,mb4.5						
HHC				AMB	AMB		
	comp=Z,129nm,4.7s						
GTA	**Gaotai**	34.02	325	*e*P	P	23 43 06.8	-1.2
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb4.0						
GTA				AMB	AMB		
	comp=Z,63nm,3.8s						
GTA				LR	LR		
	comp=N,112nm,14.1s,MS4.0						
GTA				LR	LR		
	comp=E,193nm,15.2s,MS4.0						
GTA				LR	LR		
	comp=Z,256nm,15.6s,MS4.1						
WRAB	**Tennant Creek**	34.25	163	*e*P	P	23 43 06.6	-3.6
	comp=Z,5.2nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	37.56	341	*e*P	P	23 43 37.7	-0.3
	comp=Z,9.2nm,0.8s,mb4.6						
AAK	**Ala-Archa**	52.02	314	P	P	23 45 40.5	+6.8
	comp=Z,6.8nm,1.2s,mb4.5						
KURK	**Kurchatov**	52.70	325	*e*P	P	23 45 37.2	-1.4
	comp=Z,46nm,0.9s,mb5.4						
CHKZ	**Chkalovo**	58.42	326	*e*P	P	23 46 17.9	-2.0
	comp=Z,5.1nm,1.0s,mb4.5						
IMA	**Indian Mountai**	74.88	25	*e*P	P	23 48 06.7	+2.5
MCK	**McKinley**	76.93	27	*e*P	P	23 48 15.7	-0.1
	comp=Z,5.5nm,1.0s,mb4.4						
INK	**Inuvik**	82.38	22	*e*P	P	23 48 50.0	+5.0
	comp=Z,6.1nm,1.1s,mb4.4						
RES	**Resolute Bay**	89.07	10	*e*P	P	23 49 18.7	+0.7
	comp=Z,2.0nm,0.8s,mb4.5						

MAN 01 23:50:03.6,12.25N×123.58E,h127^{km},mb4.3,ML3.1,MS2.9,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	0.11	22	*e*P	P	23 50 22.0	+1.0
MMPH				*i* S	S	23 50 34.5	+0.4
RCP	**Roxas**	1.07	230	*e*P	P	23 50 39.5	+12
PLP	**Palo**	1.74	128	*i* P	P	23 50 35.8	+1.1
PLP				*e*S	S	23 51 02.0	+3.7
GQP	**Guinayangan**	1.98	326	⇓*e*P	P	23 50 37.6	0.0
GQP				*e*S	S	23 51 03.7	+0.3

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*IGIL **01** 23:53:54.9,37.90N×1.63W,h24^{km},ML3.9*
*IAG **01** 23:53:56,38.02N×1.70W,h6^{km},Mw3.6,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.15; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$0.16; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.13; $M_{\phi r}$0.02; Best double couple: M_0.261×10^{15} NP1:ϕ_s120°,δ68°,λ-125°. NP2:ϕ_s1°,δ40°,λ-35°. Principal axes: T .264, Plg16°, Azm235°; N -.0076, Plg32°, Azm135°; P -.257, Plg54°, Azm347°;*
*CSEM **01** 23:53:56.8±0.1,37.93N×1.72W,h10^{km},ML3.7/6 Error ellipse: s-maj=2.4km s-min=1.9km az=155.0*
*LDG **01** 23:53:57.0±0.1,37.84N×1.76W,h5^{km},Md4.2/1,Ml3.6/7,Error ellipse: s-maj=3.4km s-min=1.9km az=156.0*
*SFS **01** 23:53:57.0,37.99N×1.71W,h10^{km}*
*INMG **01** 23:53:57.9±1.5,38.04N×1.71W,h18^{km}±4^{km},ML3.5,Error ellipse: s-maj=2.8km s-min=2.5km az=122.0*
*NEIC **01** 23:53:57.3,37.99N×1.71W,h10^{km},ML3.6(LDG),MN3.5(MDD),After MDD.*
NEIC Felt [III] at Alhama de Murcia, Bullas, Caravaca, Cehegin, La Paca, Lorca and Mula.

MDD 01 23:53:57.0±0.2,37.95N×1.73W,h11^{km},mbLg3.4/9,6C-1D,Error ellipse: s-maj=4.2km s-min=2.0km az=8.0,PRXIMO III N MULA LA PACA,Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	0.40	106	⇑Pg	Pg	23 54 04.4	-0.8
	205nm,0.2s,SNR=18						
EMUR				Lg		23 54 10.9	
	2μm,0.3s,SNR=7.9						
EMUR	**La Murta**	0.40	106	Pg	Pg	23 54 04.4	-0.8
	205nm,0.2s,SNR=7.9						
EMUR				Lg		23 54 10.9	
	2μm,0.3s,SNR=7.9						
CART	**Cartagena**	0.68	122	*e*Pg	Pg	23 54 08.9	-1.8
CART	**Cartagena**	0.68	122	⇑P	Pb	23 54 08.7	-1.8
CART				S	Sb	23 54 16.1	-3.5
CART	**Cartagena**	0.68	122	*i* P	Pb	23 54 08.6	-1.8
CART	**Cartagena**	0.68	122	*e*Pg	Pg	23 54 08.9	-1.8
EVIA	**Vianos**	0.92	319	Pg	Pg	23 54 13.9	-1.5
EVIA				Lg		23 54 26.7	
EVIA	**Vianos**	0.92	319	⇓Pg	Pg	23 54 13.9	-1.5
	180nm,0.1s,SNR=18						
EVIA				Lg		23 54 26.7	
	592nm,0.5s,SNR=7.9						
ENIJ	**Nijar**	1.05	202	⇑Pg	Pg	23 54 13.5	-4.5
	51nm,0.2s,SNR=18						
ENIJ				Lg		23 54 25.9	
	389nm,0.3s,SNR=7.9						
EQES	**Quesada**	1.07	262	Pg	Pg	23 54 15.0	-3.5
EQES				Lg		23 54 32.9	
EQES	**Quesada**	1.07	262	⇑Pg	Pg	23 54 14.8	-3.7
	84nm,0.2s,SNR=18						
EQES				Lg		23 54 32.9	
	1μm,0.3s,SNR=7.9						
EQES	**Quesada**	1.07	262	Pg	Pg	23 54 15.4	-3.1
	SNR=7.9						
EQES				Lg		23 54 32.9	
	1μm,0.3s,SNR=7.9						
EBEN	**Beniarda**	1.40	57	Pg	Pg	23 54 21.8	-3.2
EBEN				Lg		23 54 48.3	
EBEN	**Beniarda**	1.40	57	Pg	Pg	23 54 21.8	-3.2
	4.3nm,0.2s,SNR=7.9						
EBEN				Lg		23 54 42.0	
	493nm,0.6s,SNR=7.9						
EBEN	**Beniarda**	1.40	57	Pg	Pg	23 54 21.8	-3.2
	SNR=7.9						
EBEN				Lg		23 54 48.3	
	493nm,0.6s,SNR=7.9						
EBER	**Berja**	1.40	222	⇑Pn	Pn	23 54 19.2	-3.5
	70nm,0.4s,SNR=18						
EBER				Sn	Sn	23 54 41.7	+0.4
	1μm,0.7s,SNR=7.9						
EBER	**Berja**	1.40	222	Pn	Pn	23 54 19.2	-3.4
	70nm,0.4s,SNR=7.9						
EBER				Sn	Sn	23 54 41.7	+0.5
	1μm,0.7s,SNR=7.9						
ELUQ	**Luque**	2.05	260	Pn	Pn	23 54 30.6	-1.3
	38nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	23 54 56.0	-1.8
	154nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	2.09	248	Pn	Pn	23 54 31.6	-0.9
	39nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	23 54 58.0	-0.7
	69nm,0.3s,SNR=7.9						
EADA	**Adamuz**	2.26	276	Pn	Pn	23 54 32.5	-2.5
	11nm,0.2s,SNR=7.9						
EADA				Sn	Sn	23 55 00.0	-3.0
	9.1nm,0.5s,SNR=7.9						
EADA				Lg		23 55 08.7	
	125nm,0.3s,SNR=7.9						
EADA	**Adamuz**	2.26	276	Pn	Pn	23 54 32.5	-2.4
	11nm,0.2s,SNR=7.9						
EADA				Sn	Sn	23 55 00.0	-3.1
	9.1nm,0.5s,SNR=7.9						
EADA				Lg		23 55 08.7	
	136nm,0.2s,SNR=7.9						
EALB	**Alboran**	2.27	208	Pn	Pn	23 54 30.9	-4.1
EALB	**Alboran**	2.27	208	Pn	Pn	23 54 31.3	-3.7
	SNR=7.9						
EALB				Sn	Sn	23 55 00.6	-2.6
	28nm,0.3s,SNR=7.9						
EALB	**Alboran**	2.27	208	Pn	Pn	23 54 30.9	-4.1
	SNR=7.9						
ESDC	**Sonseca Array**	2.45	315	Pn	Pn	23 54 35.6	-2.1
ESDC				Sn	Sn	23 55 11.1	+3.2
ESDC	**Sonseca Array**	2.45	315	Pn	Pn	23 54 35.6	-2.1
	6.3nm,0.3s,baz=128,slow=13,SNR=148						
ESDC				Sn	Sn	23 55 05.0	-3.0
	107nm,0.5s,baz=191,slow=36,SNR=21						
ESDC				Lg		23 55 13.9	
	baz=135,slow=30,SNR=7.9						
ESDC	**Sonseca Array**	2.45	315	Pn	Pn	23 54 35.6	-2.1
	6.3nm,0.3s,SNR=148						
ESDC				Sn	Sn	23 55 05.0	-2.9
	107nm,0.5s,SNR=21						
ESDC				Lg		23 55 13.9	
	SNR=7.9						
ESLA	**Sonseca Array**	2.45	315	*e*Pn	Pn	23 54 35.7	-2.0
ESLA				*e*S	Sn	23 55 11.9	+4.0
ESLA	**Sonseca Array**	2.45	315	*e*Pn	Pn	23 54 35.7	-2.0
ESLA				*e*S	Sn	23 55 11.9	+4.0
EMAL	**Malaga-Limoner**	2.46	242	Pn	Pn	23 54 37.3	-0.5
	SNR=7.9						
EMAL				Sn	Sn	23 55 06.0	-2.1
	SNR=7.9						
EMAL				Lg		23 55 17.6	
	SNR=7.9						
EMOS	**Mosqueruela**	2.60	22	Pn	Pn	23 54 40.1	+0.3
EMOS				Sn	Sn	23 55 06.8	-4.9
EMOS				Lg		23 55 21.4	
EMOS	**Mosqueruela**	2.60	22	Pn	Pn	23 54 40.1	+0.3
	4.1nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	23 55 06.8	-4.9
	36nm,0.5s,SNR=7.9						
EMOS				Lg		23 55 19.1	
	SNR=7.9						
EMOS	**Mosqueruela**	2.60	22	Pn	Pn	23 54 40.1	+0.3
	4.1nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	23 55 06.8	-4.8
	SNR=7.9						
EMOS				Lg		23 55 19.1	
	SNR=7.9						
EIBI	**Ibiza**	2.64	65	Pn	Pn	23 54 38.2	-2.2
	4.0nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	23 55 10.3	-2.3
	20nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	2.64	65	Pn	Pn	23 54 38.2	-2.1
	4.0nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	23 55 10.3	-2.3
	SNR=7.9						
EMIJ	**Mijas**	2.80	241	Pn	Pn	23 54 40.7	-1.9
	7.7nm,0.4s,SNR=7.9						
EMIJ				Pg	Pg	23 54 46.0	-6.8
	24nm,0.4s,SNR=7.9						
EMIJ				Lg		23 55 24.8	
	52nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	2.80	241	Pg	Pg	23 54 46.0	-6.9
	SNR=7.9						
EMIJ				Lg		23 55 28.8	
	SNR=7.9						
LIJA	**Lijar**	3.11	251	⇑P	Pn	23 54 45.4	-1.6
LIJA	**Lijar**	3.11	251	*i* P	Pn	23 54 45.4	-1.6
REAL	**Reales**	3.14	243	*e*P	Pn	23 54 47.1	-0.4
TAF	**Taforalt**	3.18	190	S	Sn	23 55 24.0	-2.4
GUD	**Guadarrama**	3.28	326	Pn	Pn	23 54 48.2	-1.3
GUD				Sn		23 55 39.9	
GUD	**Guadarrama**	3.28	326	Pn	Pn	23 54 48.2	-1.3
	SNR=7.9						
GUD				Pg	Pg	23 54 57.3	-5.3
	15nm,0.2s,SNR=4.7						
GUD				Lg		23 55 40.8	
	33nm,0.2s,SNR=7.9						
EBR	**Ebro Roquetas**	3.34	30	*e*Rs		23 54 50.0	
EBR	**Ebro Roquetas**	3.34	30	*e*SN	Sn	23 55 29.0	-1.5
ERTA	**Horta de San J**	3.40	27	Pn	Pn	23 54 51.3	+0.1
ERTA				Sn	Sn	23 55 30.5	-1.4
ERTA	**Horta de San J**	3.40	27	Pn	Pn	23 54 51.2	+0.1
	SNR=7.9						
ERTA				Sn	Sn	23 55 30.2	-1.6
	27nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	3.40	27	Pn	Pn	23 54 51.2	+0.1
	SNR=7.9						
ERTA				Sn	Sn	23 55 30.2	-1.7
	SNR=7.9						
ESPR	**Espera**	3.46	253	Pn	Pn	23 54 49.7	-2.4
ESPR				Sn	Sn	23 55 30.3	-3.2
ESPR	**Espera**	3.46	253	Pn	Pn	23 54 49.7	-2.4
	4.6nm,0.1s,SNR=7.9						
ESPR				Pg	Pg	23 55 01.7	-4.4
	8.9nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	23 55 30.3	-3.2
	35nm,0.3s,SNR=7.9						
ESPR	**Espera**	3.46	253	Pn	Pn	23 54 49.7	-2.3
	4.6nm,0.1s,SNR=7.9						
ESPR	**Espera**	3.46	253	Pg	Pg	23 55 01.7	-4.4
	SNR=7.9						
ESPR				Sn	Sn	23 55 30.3	-3.2
	SNR=7.9						
SCRT	**Cerro San Cris**	3.78	251	*e*P	Pn	23 54 55.8	-0.8
CNIL	**Conil**	3.80	247	P	Pn	23 54 54.3	-2.6
CNIL	**Conil**	3.80	247	*e*P	Pn	23 54 54.3	-2.6
SFS	**San Fernando**	3.87	249	P	Pn	23 54 56.6	-1.3
SFS	**San Fernando**	3.87	249	*e*P	Pn	23 54 56.6	-1.3
ESAC	**San Caprasio**	3.89	14	Pn	Pn	23 54 58.6	+0.6
ESAC				Sn		23 55 59.9	
ESAC	**San Caprasio**	3.89	14	Pn	Pn	23 54 58.6	+0.6
	SNR=7.9						
ESAC				Pg	Pg	23 55 11.1	-3.5
	37nm,0.3s,SNR=7.9						
ESAC				Lg		23 55 59.9	
	SNR=7.9						
ESAC	**San Caprasio**	3.89	14	Pn	Pn	23 54 58.6	+0.5
	SNR=7.9						
ESAC	**San Caprasio**	3.89	14	Pg	Pg	23 55 11.1	-3.5
	SNR=7.9						
ESAC				Lg		23 55 59.9	
	SNR=7.9						
EMIN	**Mina Concepcio**	3.92	269	Pn	Pn	23 54 54.6	-3.9
	15nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	23 55 39.5	-5.6
	85nm,0.4s,SNR=7.9						
EMIN				Lg		23 56 01.4	
	SNR=7.9						
EMIN	**Mina Concepcio**	3.92	269	Pn	Pn	23 54 54.6	-3.9
	15nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	23 55 39.5	-5.6
	SNR=7.9						
EMIN				Lg		23 56 01.4	
	SNR=7.9						
ETOS	**Mallorca**	3.98	62	Pn	Pn	23 54 58.2	-1.2
	SNR=7.9						
EPOB	**Poblet**	4.03	32	Pn	Pn	23 54 59.8	-0.3
EPOB				Sn	Sn	23 55 45.5	-2.3
EPOB				Lg		23 56 09.1	
EPOB	**Poblet**	4.03	32	Pn	Pn	23 54 59.8	-0.3
	8.9nm,0.3s,SNR=7.9						
EPOB				Sn	Sn	23 55 44.4	-3.5
	9.0nm,0.3s,SNR=7.9						
EPOB				Lg		23 56 02.9	
	SNR=7.9						
EPOB	**Poblet**	4.03	32	Pn	Pn	23 54 59.8	-0.3
	8.9nm,0.3s,SNR=7.9						
EPOB				Sn	Sn	23 55 44.4	-3.4
	SNR=7.9						
EPOB				Lg		23 56 02.9	
	SNR=7.9						
EBAD	**Badajoz**	4.23	283	Pn	Pn	23 54 59.3	-3.7
EBAD				Sn	Sn	23 55 47.2	-5.8
EBAD				Lg		23 56 08.0	

EBAD	**Badajoz**	**4.23**	**283**	Pn	Pn	23 54 59.3	-3.7
	SNR=7.9						
EBAD				Pg	Pg	23 55 12.9	-8.6
	1.9nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	23 55 47.2	-5.8
	68nm,0.2s,SNR=7.9						
EBAD				Lg		23 56 09.7	
	SNR=7.9						
EBAD	**Badajoz**	**4.23**	**283**	Pn	Pn	23 54 59.3	-3.7
	SNR=7.9						
EBAD	**Badajoz**	**4.23**	**283**	Pg	Pg	23 55 12.9	-8.6
	SNR=7.9						
EBAD				Sn	Sn	23 55 47.2	-5.8
	SNR=7.9						
EBAD				Lg		23 56 09.7	
	SNR=7.9						
ERIP	**Rio Piedras**	**4.42**	**264**	Pn	Pn	23 55 00.9	-4.9
	SNR=7.9						
ERIP				Sn	Sn	23 55 50.6	-7.3
	69nm,0.3s,SNR=7.9						
ERIP				Lg		23 56 17.8	
	SNR=7.9						
EGRO	**El Granado**	**4.58**	**267**	Pn	Pn	23 55 04.0	-3.9
EGRO				Sn	Sn	23 55 55.5	-6.4
EGRO				Lg		23 56 19.1	
EGRO	**El Granado**	**4.58**	**267**	Pn	Pn	23 55 04.0	-3.9
	SNR=7.9						
EGRO				Sn	Sn	23 55 54.9	-6.9
	25nm,0.2s,SNR=7.9						
EGRO				Lg		23 56 22.2	
	SNR=7.9						
EGRO	**El Granado**	**4.58**	**267**	Pn	Pn	23 55 04.0	-4.0
	SNR=7.9						
EGRO				Sn	Sn	23 55 54.9	-7.0
	SNR=7.9						
EGRO				Lg		23 56 22.2	
	SNR=7.9						
PALC	**Alcoutim**	**4.58**	**266**	*e*Pn	Pn	23 55 03.5	-4.5
PALC				*e*Sn	Sn	23 55 55.0	-7.0
	78nm,0.6s						
PALC	**Alcoutim**	**4.58**	**266**	Pn	Pn	23 55 03.5	-4.5
PALC				Sn	Sn	23 55 54.6	-7.4
EMIR	**Miracle**	**4.68**	**31**	Sn	Sn	23 55 59.7	-4.7
	SNR=7.9						
EMIR				Lg		23 56 25.1	
	SNR=7.9						
EMIR	**Miracle**	**4.68**	**31**	Sn	Sn	23 56 08.5	+4.1
	SNR=7.9						
EMIR				Lg		23 56 29.4	
	SNR=7.9						
PBEJ	**Beja**	**4.85**	**273**	*e*Pn	Pn	23 55 07.5	-4.3
PBEJ				*e*Sn	Sn	23 56 00.9	-7.8
PBEJ				*e*Sg	Sg	23 56 26.8	-12
	53nm,0.8s						
PBEJ	**Beja**	**4.85**	**273**	Pn	Pn	23 55 07.5	-4.3
PBEJ				Sn	Sn	23 56 01.0	-7.7
PBEJ				Lg		23 56 27.1	
PCBR	**Castelo Branco**	**4.87**	**295**	*e*Pn	Pn	23 55 08.4	-3.6
PCBR				*e*Sn	Sn	23 56 02.7	-6.4
PCBR				*e*Sg	Sg	23 56 26.2	-13
	77nm,0.7s						
EBIE	**Bielsa**	**4.94**	**16**	Pn	Pn	23 55 13.0	-0.1
EBIE				Sn	Sn	23 56 07.9	-3.0
EBIE	**Bielsa**	**4.94**	**16**	Pn	Pn	23 55 13.0	-0.1
	5.8nm,0.3s,SNR=7.9						
EBIE				Sn	Sn	23 56 04.1	-6.7
	SNR=7.9						
EBIE				Lg		23 56 33.0	
	SNR=7.9						
EBIE	**Bielsa**	**4.94**	**16**	Pn	Pn	23 55 13.0	0.0
	5.8nm,0.3s,SNR=7.9						
EBIE				Sn	Sn	23 56 07.9	-3.0
	SNR=7.9						
EBIE				Lg		23 56 37.4	
	SNR=7.9						
EVO	**Evora**	**4.98**	**279**	*e*Pn	Pn	23 55 11.7	-1.9
EVO				*e*Sn	Sn	23 56 07.2	-4.8
EVO				*e*Sg	Sg	23 56 35.2	-7.7
	153nm,0.4s						
ETSF	**Etsaut**	**5.02**	**10**	*e*Pn	Pn	23 55 13.9	-0.3
ETSF				*e*Sn	Sn	23 56 08.4	-4.5
ETSF				*e*Sg	Sg	23 56 37.5	-6.7
	29nm,0.7s						
RESF	**Ens**	**5.10**	**17**	P	Pn	23 55 15.0	-0.3
RESF				S	Sn	23 56 13.9	-1.0
MTE	**Manteigas**	**5.14**	**300**	*e*Pn	Pn	23 55 13.1	-2.7
MTE				*e*Sn	Sn	23 56 09.2	-6.7
MTE				*e*Sg	Sg	23 56 34.0	-14
	68nm,0.3s						
MTE	**Manteigas**	**5.14**	**300**	Pn	Pn	23 55 13.1	-2.7
MTE				Sn	Sn	23 56 09.0	-6.9
MTE				Lg		23 56 35.0	
SJPF	**Ste Jean**	**5.17**	**4**	*e*Pn	Pn	23 55 15.0	-1.3
SJPF				*e*Sn	Sn	23 56 11.8	-4.9
SJPF				*e*Sg	Sg	23 56 41.9	-7.2
	50nm,0.8s						
MOE	**Montemor**	**5.25**	**278**	*e*Pn	Pn	23 55 15.0	-2.3
MOE				*e*Sn	Sn	23 56 11.0	-7.6
MOE				*e*Sg	Sg	23 56 38.6	-13
MOE	**Montemor**	**5.25**	**278**	Pn	Pn	23 55 13.8	-3.5
MOE				*e*Sn	Sn	23 56 11.0	-7.6
EALK	**Alkurruntz**	**5.26**	**2**	Pn	Pn	23 55 17.1	-0.5
EALK				Sn	Sn	23 56 17.5	-1.6
EALK	**Alkurruntz**	**5.26**	**2**	Pn	Pn	23 55 17.1	-0.5
	SNR=7.9						
EALK				Sn	Sn	23 56 15.9	-3.2
	SNR=7.9						
EALK				Lg		23 56 47.4	
	SNR=7.9						
EALK	**Alkurruntz**	**5.26**	**2**	Pn	Pn	23 55 17.1	-0.5
	SNR=7.9						
EALK				Sn	Sn	23 56 17.5	-1.6
LABF	**Labassere**	**5.27**	**15**	P	Pn	23 55 17.6	-0.1
LABF				S	Sn	23 56 17.1	-2.1
EPF	**Esparros**	**5.31**	**17**	*e*Pn	Pn	23 55 17.7	-0.6
EPF				*e*Sn	Sn	23 56 15.3	-4.9
EPF				*e*Sg	Sg	23 56 46.7	-7.2
	47nm,0.8s						
ELAN	**Lanestosa**	**5.43**	**347**	Pn	Pn	23 55 18.7	-1.3
ELAN				Sn	Sn	23 56 21.5	-1.8
ELAN				Lg		23 56 52.1	
ELAN	**Lanestosa**	**5.43**	**347**	Pn	Pn	23 55 18.7	-1.3
	SNR=7.9						
ELAN				Pg	Pg	23 55 41.1	-4.3
	4.8nm,0.3s,SNR=7.9						
ELAN				Sn	Sn	23 56 21.5	-1.8
	SNR=7.9						
ELAN				Lg		23 56 49.8	
	SNR=7.9						
ELAN	**Lanestosa**	**5.43**	**347**	Pn	Pn	23 55 18.7	-1.3
PBRG	**Braganca**	**5.45**	**316**	*e*Pn	Pn	23 55 16.7	-3.5
PBRG				*e*Sn	Sn	23 56 15.8	-7.9
PBRG				*e*Sg	Sg	23 56 42.8	-16
	43nm,0.6s						
ALMR	**Almeirim**	**5.50**	**285**	*e*P	Pn	23 55 15.2	-5.8
ALMR				*e*S	Sn	23 56 12.3	-13
ALMR				*e*S	Sn	23 56 12.4	-13
ALMR				AML	AML	23 56 19.8	
	comp=E,154nm,0.5s						
PVIS	**Viseu**	**5.52**	**302**	*e*Pn	Pn	23 55 18.2	-3.0
PVIS				*e*Sn	Sn	23 56 18.3	-7.2
PVIS				*e*Sg	Sg	23 56 47.5	-13
	comp=E,54nm,0.5s						
PVIS	**Viseu**	**5.52**	**302**	Pn	Pn	23 55 17.2	-4.0
PVIS				Sn	Sn	23 56 17.6	-7.9
PVIS				Lg		23 56 47.5	
ECAL	**Calabor**	**5.54**	**318**	Pn	Pn	23 55 18.2	-3.3
ECAL				Lg		23 56 52.3	
ECAL	**Calabor**	**5.54**	**318**	Pn	Pn	23 55 18.2	-3.2
	comp=E,18nm,0.5s,SNR=7.9						
ECAL				Lg		23 56 52.3	
	SNR=7.9						
ECAL	**Calabor**	**5.54**	**318**	Pn	Pn	23 55 18.2	-3.3
PTEO	**Sao Teotonio**	**5.56**	**268**	*e*Pn	Pn	23 55 17.4	-4.4
PTEO				*e*Sn	Sn	23 56 18.8	-7.7
PTEO				*e*Sg	Sg	23 56 49.1	-13
	comp=E,60nm,0.5s						
PTEO	**Sao Teotonio**	**5.56**	**268**	Pn	Pn	23 55 16.8	-5.0
PTEO				Sn	Sn	23 56 19.1	-7.4
PTEO				Lg		23 56 49.1	
	comp=E,30nm,0.5s						
PVRL	**Vila Real**	**5.69**	**308**	*e*Pn	Pn	23 55 20.2	-3.4
PVRL				*e*Sn	Sn	23 56 21.5	-8.3
PVRL				*e*Sg	Sg	23 56 52.9	-14
	comp=E,30nm,0.6s						
PVRL	**Vila Real**	**5.69**	**308**	Pn	Pn	23 55 20.2	-3.4
PVRL				Sn	Sn	23 56 21.3	-8.5
PVRL				Lg		23 56 52.9	
	comp=E,15nm,0.6s						
EJON	**La Jonquera**	**5.71**	**37**	Pn	Pn	23 55 20.9	-3.0
LIS	**Lisbon**	**5.89**	**280**	*e*P	Pn	23 55 20.1	-6.2
LIS				*e*S	Sn	23 56 21.1	-13
LIS				*e*S	Sn	23 56 21.1	-13
LIS				AML	AML	23 56 30.4	
	comp=E,118nm,0.4s						
PLOU	**Loures**	**5.91**	**281**	*e*Pn	Pn	23 55 23.8	-2.8
PLOU				*e*Sn	Sn	23 56 28.1	-7.0
PLOU				*e*Sg	Sg	23 56 58.7	-15
	comp=E,104nm,0.5s						
EARI	**Arriondas**	**5.96**	**335**	Pn	Pn	23 55 25.6	-1.9
EARI				Lg		23 57 07.1	
EARI	**Arriondas**	**5.96**	**335**	Pn	Pn	23 55 25.6	-1.9
	comp=E,21nm,0.6s,SNR=7.9						
EARI				Sn	Sn	23 56 30.1	-6.5
	SNR=7.9						
EARI				Lg		23 57 07.1	
	comp=E,34nm,0.9s,SNR=7.9						
EARI	**Arriondas**	**5.96**	**335**	Pn	Pn	23 55 25.6	-1.9
ERUA	**La Rua**	**6.07**	**319**	Pn	Pn	23 55 25.9	-3.1
	comp=E,2.9nm,0.3s,SNR=7.9						
ERUA				Lg		23 57 08.3	
	comp=E,12nm,0.9s,SNR=7.9						
MTLF	**Montolieu**	**6.16**	**28**	*e*Pn	Pn	23 55 28.2	-2.1
MTLF				*e*Sg	Sg	23 57 13.0	-9.1
	comp=E,7.3nm,0.5s						
ELOB	**Lobios**	**6.25**	**311**	Pn	Pn	23 55 28.3	-3.1
	SNR=7.9						
ELOB				Sn	Sn	23 56 34.8	-8.8
	comp=E,4.8nm,0.3s,SNR=7.9						
ELOB				Lg		23 57 14.0	
	comp=E,67nm,0.7s,SNR=7.9						
ELOB	**Lobios**	**6.25**	**311**	Pn	Pn	23 55 28.3	-3.1
EINC	**Incio**	**6.37**	**319**	Pn	Pn	23 55 30.2	-3.0
	SNR=7.9						
EINC				Sn	Sn	23 56 37.9	-8.8
	SNR=7.9						
EINC				Lg		23 57 20.1	
	SNR=7.9						
EINC	**Incio**	**6.37**	**319**	Pn	Pn	23 55 30.2	-3.0
EPON	**Pontenova**	**6.77**	**324**	Pn	Pn	23 55 35.9	-2.9
	SNR=7.9						
EPON				Lg		23 57 33.1	
	comp=E,24nm,0.5s,SNR=7.9						
EPON	**Pontenova**	**6.77**	**324**	Pn	Pn	23 55 35.9	-2.9
EZAM	**Zamans**	**6.79**	**310**	Pn	Pn	23 55 32.6	-6.6
	SNR=7.9						
EZAM				Lg		23 57 31.7	
	comp=E,16nm,0.7s,SNR=7.9						
STS	**Santiago**	**7.17**	**316**	Lg		23 57 44.9	
	comp=E,21nm,0.7s,SNR=7.9						
LFF	**La Frestale**	**7.22**	**14**	*e*Pn	Pn	23 55 43.1	-2.1
LFF				*e*Sg	Sg	23 57 46.2	-11
	comp=E,12nm,0.6s						
LASF	**Ste Croix**	**7.43**	**33**	*e*Pn	Pn	23 55 45.5	-2.6
EMAZ	**Mazaricos**	**7.45**	**314**	Lg		23 57 51.5	
	SNR=7.9						
CAF	**Calviac**	**7.53**	**21**	*e*Pn	Pn	23 55 47.4	-2.0
RJF	**Les Rejaudoux**	**7.74**	**17**	*e*Pn	Pn	23 55 49.2	-3.2
RJF				*e*Sn	Sn	23 57 13.1	-7.8
	comp=E,4.2nm,0.4s						
SMRF	**Simiane la Rot**	**8.17**	**40**	*e*Pn	P	23 55 54.6	-3.8
LMR	**La Mourre**	**8.25**	**47**	*e*Pn	P	23 55 55.9	-3.6
FRF	**La Foret Royal**	**8.47**	**46**	*e*Pn	P	23 55 58.8	-3.8
MFF	**Saint Martin d**	**8.72**	**7**	*e*Pn	P	23 56 02.6	-3.5
BGF	**Bois d'Agland**	**9.24**	**20**	*e*Pn	P	23 56 09.6	-3.7
AVF	**Avril sur Loir**	**9.60**	**21**	*e*Pn	P	23 56 14.5	-3.6
SMF	**Signal de Mont**	**9.61**	**24**	*e*Pn	P	23 56 14.7	-3.7
SSF	**Saint Saulge**	**9.89**	**21**	*e*Pn	P	23 56 18.5	-3.6
QUIF	**Quistinic**	**10.02**	**354**	*e*Pn	P	23 56 20.4	-3.5
SGMF	**Saint Gilles**	**10.31**	**357**	*e*Pn	P	23 56 24.5	-3.5
ROSF	**Rostrenen**	**10.44**	**354**	*e*Pn	P	23 56 26.4	-3.3
GRR	**Gorron**	**10.45**	**3**	*e*Pn	P	23 56 26.2	-3.7
LDF	**La Druitiere**	**10.70**	**6**	*e*Pn	P	23 56 29.6	-3.7
FLN	**La Foliniere**	**10.84**	**4**	*e*Pn	P	23 56 31.1	-4.1
BAIF	**Baives**	**12.83**	**17**	*e*Pn	P	23 56 58.5	-3.6
MOX	**Moxa**	**15.85**	**33**	Sg	S	00 00 34.0	-3.5

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*PRU **02** 00:00:57.9, 50.04N×19.12E*

*IPEC **02** 00:00:57.4±0.1, 50.11N×19.14E, h4^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=1.4km s-min=0.7km az=166.0*

*CSEM **02** 00:00:58.0±0.2, 50.11N×19.12E, h2^{km}, ML2.9/1, Error ellipse: s-maj=4.4km s-min=2.8km az=11.0*

WAR 02 00:00:56.8, 50.10N×19.18E, h0^{km}, ML2.6, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.41**	**74**	*e*PG	Pg	00 01 06.0	+0.9
OJC				*e*SG	Sg	00 01 12.0	+1.4
OJC	**Ojcow**	**0.41**	**74**	*e*Pg	Pg	00 01 05.8	+0.7
OJC				*e*Sg	Sg	00 01 11.6	+1.0
RAC	**Raciborz**	**0.63**	**269**	*e*PG	Pg	00 01 10.0	+0.5
RAC				*e*SG	Sg	00 01 18.0	+0.1
RAC	**Raciborz**	**0.63**	**269**	*e*Pg	Pg	00 01 09.7	+0.2
RAC				*e*Sg	Sg	00 01 18.2	+0.3
OKC	**Ostrava-Krasne**	**0.72**	**249**	*e*PG	Pg	00 01 10.9	-0.2
OKC				*e*SG	Sg	00 01 20.5	-0.2
	55nm,0.4s						
NIE	**Niedzica**	**1.01**	**133**	*e*PG	Pg	00 01 17.0	+0.1
NIE				*e*SG	Sg	00 01 31.0	+0.7
LIKS	**Likavka**	**1.06**	**183**	*e*PG	Pg	00 01 18.6	+0.7
LIKS				*i* SG	Sg	00 01 31.8	-0.2
MORC	**Moravsky Berou**	**1.11**	**253**	*e*Pg	Pg	00 01 17.8	-1.1
MORC				*e*Sg	Sg	00 01 32.3	-1.3
KOLL	**Kolacno**	**1.61**	**199**	*i* SG	Sg	00 01 48.6	-1.8
VYHS	**Vyhne**	**1.63**	**188**	*i* PG	Pg	00 01 26.6	-2.7
VYHS				*i* SG	Sg	00 01 48.3	-2.7
VYHS	**Vyhne**	**1.63**	**188**	*e*Pn	Pn	00 01 26.6	-0.2
VYHS				*e*Sg	Sg	00 01 48.2	-2.8
KECS	**Kecovo**	**1.83**	**152**	*e*PG	Pg	00 01 34.8	+1.4
KECS				*i* SG	Sn	00 01 56.4	+2.4
DPC	**Dobruska-Polom**	**1.85**	**279**	*e*PG	Pg	00 01 29.3	-4.4
DPC				*e*SG	Sg	00 01 54.1	-4.3
	55nm,0.7s						
VRAC	**Vranov**	**1.86**	**246**	*e*Pn	Pn	00 01 30.7	+0.6
VRAC				*e*Sg	Sn	00 01 54.0	-0.6
CRVS	**Cervenica-Dubn**	**1.91**	**128**	*i* PG	Pg	00 01 33.8	-1.2
KSP	**Ksiaz**	**1.99**	**293**	*e*PN	Pn	00 01 32.0	+0.1
KSP				*e*PG	Pg	00 01 34.0	-2.5
KSP				*e*(SG)	Sg	00 01 59.0	-3.9
KSP	**Ksiaz**	**1.99**	**293**	*e*Pg	Pg	00 01 33.9	-2.5
KSP				*e*Sg	Sn	00 01 59.4	+1.5
UPC	**Upice**	**2.07**	**282**	*e*SG	Sn	00 02 02.6	+2.6
KRUC	**Moravsky**	**2.09**	**241**	*e*Sg	Sn	00 02 01.6	+1.1
PSZ	**Piszkesteto**	**2.24**	**168**	⇑*i*P	Pn	00 01 40.7	+5.1
PSZ				*e*S	Sn	00 02 03.5	-0.8
KWP	**Kalwaria**	**2.33**	**100**	*e*PG	Pg	00 01 47.0	+3.6
KWP				*e*SG	Sg	00 02 15.0	+0.6
KOLS	**Kolonicke sedl**	**2.33**	**119**	*e*PG	Pg	00 01 42.4	-1.0
ZST	**Bratislava**	**2.35**	**216**	*e*SG	Sn	00 02 09.2	+2.2
PRU	**Pruhonice**	**2.99**	**270**	*e*SG	Sg	00 02 29.3	-7.1
KHC	**Kasperske Hory**	**3.77**	**257**	*e*PN	Pn	00 01 55.5	-1.9
KHC				*e*x	x	00 02 07.0	
KHC				*e*SG	Sg	00 02 56.1	-6.2
KHC	**Kasperske Hory**	**3.77**	**257**	*e*Pn	Pn	00 01 55.5	-1.9
KHC				*e*Sg	Sn	00 02 56.1	+13
MOA	**Molln**	**3.94**	**237**	*i*	Pn	00 02 02.6	+2.7
MOA	**Molln**	**3.94**	**237**	*i* SG	Sg	00 03 02.2	-5.9
	5.9nm,0.6s						
CLL	**Collm**	**4.11**	**289**	*e*SG	Sg	00 03 09.0	-4.5
CLL				*i*		00 03 16.6	

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*FUNV **02** 00:13:34.5, 11.61N×61.90W, h20^{km}, MW2.0*

*NEIC **02** 00:13:37.8, 11.66N×62.16W, h101^{km}, MD3.3(TRN), After TRN.*

TRN 02 00:13:37.8, 11.66N×62.16W, h101^{km}, MD3.3, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRW	**Mount Saint Ca**	**0.70**	**45**	*e*P	P	00 13 55.4	0.0
ITEV	**Isla Los Testi**	**1.00**	**252**	*e*P	P	00 13 56.5	-2.0
ITEV				*e*S	S	00 14 12.8	-1.3
GUIV	**Guiria**	**1.01**	**183**	*e*P	P	00 13 53.0	-5.6
GUIV				*e*S	S	00 14 07.0	-7.3
TRN	**Trinidad (W)**	**1.25**	**143**	⇑*i*P	P	00 14 01.3	-0.3
TRN				*i* S	S	00 14 18.5	-0.9
CRUV	**Carupano**	**1.44**	**227**	*e*S	S	00 14 21.1	-2.0
TPR	**Prospect**	**1.44**	**109**	*e*P	P	00 14 03.6	-0.2
BOT	**Bacolet**	**1.50**	**109**	*e*P	P	00 14 04.1	-0.4
GUNV	**Guanoco**	**1.68**	**207**	*e*S	S	00 14 25.4	-2.8
RIOV	**Rio Grande**	**3.59**	**174**	*e*P	P	00 14 27.1	-5.5
RIOV				*e*S	S	00 15 06.0	-8.1
CAOV	**Caicara del Or**	**5.95**	**224**	*e*S	S	00 16 06.1	-6.1

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*JMA **02** 00:43:11.1±0.1, 24.39N×121.96E, h57^{km}, M2.5*

TAP 02 00:43:10.4, 24.78N×122.09E, h4^{km}±1^{km}, ML3.2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.90**	**111**	P	Pb	00 43 28.6	+0.5
YOJ				S	Sb	00 43 41.4	+1.2
IRIF	**Iriomote-Funau**	**1.56**	**106**	P	Pn	00 43 37.5	-1.5
IRIF				*e*S	Sb	00 43 57.6	-1.8
JKRS	**Kuro-shima**	**1.83**	**107**	P	Pn	00 43 41.4	-1.5
JKRS				*e*S	Sn	00 44 04.2	-2.6
JIJ	**Ishigaki jima**	**1.92**	**102**	P	Pn	00 43 43.1	-1.0
JIJ				*e*S	Sn	00 44 06.6	-2.3

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*BJI **02** 00:52:35.8, 7.51N×94.23E, h18^{km}, mB5.2, mb4.7, Ms4.5, Msz4.1*

*NEIC **02** 00:52:42.1±0.3, 8.17N×94.27E, mb4.9/29, Error ellipse: s-maj=8.6km s-min=8.1km az=128.0*

*HRVD **02** 00:52:42.2±0.6, 8.09N×94.32E, h12^{km}, MW4.8/39, Centroid moment Tensor Solution. LP body waves: s7,c7; Mantle waves: s39,c56; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.51±.09; M$_{\theta\theta}$0.57±.07; M$_{\phi\phi}$0.94±.09; M$_{r\theta}$0.14±.37; M$_{\theta\phi}$0.70±.07; M$_{\phi r}$-0.87±.30; Best double couple: M$_0$1.725×10^{16} NP1:φ$_s$234°,δ36°,λ-60°. NP2: φ$_s$18°,δ59°,λ-110°. Principal axes: T 1.607, Plg12°, Azm123°; N .24, Plg17°, Azm29°; P -1.843, Plg69°, Azm246°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **02** 00:52:44.4±0.7, 8.45N×94.18E, h33^{km}, mb5.1/23 Error ellipse: s-maj=26.1km s-min=7.5km az=119.9*

ISC 02 00:52:41.0±0.4, **8.18N**±0.05×**94.11E**±0.04, **h17^{km}, h17^{km}**±.4^{km}**:pP-P, n132, σ0^{s}94**/143, **mb4.9**/48, **MS4.2**/7, **7C-10D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.53**	**98**	P	**Pn**	**00 54 20.0**	**+1.2**
NNT	**Nongplab**	**7.06**	**51**	P	**Pn**	**00 54 26.8**	**+0.6**
CM31	**Chiang Mai Arr**	**11.24**	**24**	P	**P**	**00 55 18.6**	**-5.6**
CHG	**Chiang Mai**	**11.57**	**23**	⇓P	**P**	**00 55 36.1**	**+7.6**
	16nm,1.0s						
NANT	**Nan**	**12.35**	**31**	P	**P**	**00 55 40.5**	**+1.5**
PALK	**Pallekele**	**13.31**	**267**	P	**P**	**00 55 52.7**	**+0.7**
VIS	**Vishakhapatnam**	**14.14**	**313**	*e*P	**P**	**00 56 00.0**	**-2.9**
VIS				*e*		00 56 08.0	
	comp=Z,33nm,1.0s						
VIS				*e*S	S	00 58 18.8	-22
VIS				*i*		00 58 24.0	
VIS				*e*		00 58 31.6	
MDRS	**Chennai**	**14.46**	**291**	*e*	**P**	**00 56 04.0**	**-3.1**
MDRS				*e*		01 00 02.0	
BWNR	**Bhubaneshwar**	**14.48**	**327**	*e*P	**P**	**00 56 06.2**	**-1.1**
BWNR				*e*		00 58 15.4	
BWNR				*e*		00 58 31.2	
HYB	**Hyderabad**	**17.72**	**303**	*e*P	**P**	**00 56 50.0**	**+1.3**
HYB				*e*S	**S**	**00 59 58.0**	**-5.4**
HYB	**Hyderabad**	**17.72**	**303**	*i* P	**P**	**00 56 50.0**	**+1.3**
HYB				*e*		00 59 58.0	
HYB				*e*S	**S**	**01 00 11.0**	**+7.6**
KMI	**Kunming**	**18.75**	**25**	P	**P**	**00 57 01.4**	**-0.1**
KMI				AP		00 57 05.8	
KMI				XP		00 57 10.0	
KMI				PP	PP	00 57 18.7	+1.0
KMI				S	**S**	**01 00 26.0**	**-0.9**
KMI				AMB	AMB		
	comp=Z,73nm,4.0s						
KMI				LR	LR		
	comp=N,365nm,13.7s						
KMI				LR	LR		
	comp=E,378nm,12.9s						
KMI				LR	LR		
	comp=Z,357nm,14.6s						
KMI	**Kunming**	**18.75**	**25**	P	**P**	**00 57 01.4**	**-0.1**
	comp=Z,0.1nm,4.0s						
KMI				pP		00 57 05.8	
KMI				sP		00 57 10.0	
KMI				PP	PP	00 57 18.7	+1.0
KMI				S	**S**	**01 00 26.0**	**-0.9**
KMI				sS		01 00 32.9	
KMI				SS	SS	01 00 53.5	+1.5
COCO	**West Island**	**20.42**	**172**	P	**P**	**00 57 20.1**	**-0.2**
JIRN	**Jiri**	**20.77**	**340**	*e*P	**P**	**00 57 24.3**	**+0.5**
	comp=Z,314nm,1.3s						
PKI	**Pulchoki**	**20.97**	**338**	*e*P	**P**	**00 57 26.5**	**+0.7**
	comp=Z,161nm,1.0s						
DMN	**Daman**	**21.12**	**337**	*e*P	**P**	**00 57 28.1**	**+0.8**
	comp=Z,165nm,0.9s,mb5.4						
KKN	**Kakani**	**21.21**	**338**	*e*P	**P**	**00 57 28.4**	**+0.1**
	comp=Z,127nm,1.0s,mb5.2						
KAD	**Karad**	**21.43**	**297**	*e*P	**P**	**00 57 35.6**	**+5.1**
KAD				*e*		00 57 38.5	
	comp=Z,23nm,0.8s						
GKN	**Gorkha**	**21.65**	**337**	*e*P	**P**	**00 57 33.0**	**+0.3**
	comp=Z,121nm,0.8s,mb5.4						
GYA	**Guiyang**	**21.74**	**32**	P	**P**	**00 57 34.5**	**+0.9**
GYA				AP		00 57 40.1	
GYA				XP		00 57 43.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,2.8s,mb4.7						
GYA				LR	LR		
	comp=N,160nm,5.3s						
GYA				LR	LR		
	comp=E,280nm,5.2s						
GYA				LR	LR		
	comp=Z,200nm,4.5s						
KOLN	**Koldanda**	**21.87**	**334**	*e*P	**P**	**00 57 35.6**	**+0.7**
	comp=Z,314nm,1.3s,mb5.6						
BHPL	**Bhopal**	**21.92**	**315**	*e*P	**P**	**00 57 35.5**	**0.0**
BHPL				*e*		00 57 43.9	
	comp=Z,75nm,0.8s						
BHPL				*e*		01 01 29.7	
BHPL				*e*S	**S**	**01 01 31.1**	**-0.6**
POO	**Poona**	**22.21**	**300**	*e*P	**P**	**00 57 39.0**	**+0.7**
CD2	**Chengdu**	**24.34**	**20**	P	**P**	**00 58 01.4**	**+2.2**
LGTI	**Lohaghat**	**24.84**	**330**	*e*P	**P**	**00 58 05.5**	**+1.4**
NDI	**New Delhi**	**25.87**	**324**	*e*P	**P**	**00 58 13.0**	**-0.7**
DDI	**Dehra Dun**	**26.67**	**328**	*e*	**P**	**00 58 22.4**	**+1.3**
SDNR	**Sundarnagar**	**28.17**	**328**	*e*P	**P**	**00 58 35.6**	**+0.9**
LZH	**Lanzhou**	**29.16**	**16**	*e*P	**P**	**00 58 44.5**	**+0.9**
LZH				AP	pP	00 58 50.0	+1.3
LZH				XP	sP	00 58 53.1	+2.1
LZH				PP	PP	00 59 38.5	+0.2
LZH				*e*S	**S**	**01 03 34.0**	**+0.3**
LZH				AMB	AMB		
	comp=Z,33nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,142nm,5.3s						
LZH				LR	LR		
	comp=N,957nm,13.2s						
LZH				LR	LR		
	comp=Z,1µm,16.9s,MS4.7						
LZH	**Lanzhou**	**29.16**	**16**	*e*P	**P**	**00 58 44.5**	**+0.9**
	comp=Z,33nm,1.5s,mb4.8						
LZH				pP	pP	00 58 50.0	+1.3
LZH				sP	sP	00 58 53.1	+2.1
LZH				PP	PP	00 59 38.5	+0.2
LZH				*e*S	**S**	**01 03 34.0**	**+0.3**
LZH				sS		01 03 42.5	
LZH				SS	SS	01 05 02.6	-1.4
LZH				LR	LR		
	comp=Z,1µm,16.9s,MS4.7						
GTA	**Gaotai**	**31.51**	**8**	*e*P	**P**	**00 59 05.7**	**+1.3**
GTA				AP	pP	00 59 10.6	+1.1
GTA				XP	sP	00 59 13.2	+1.5
GTA				PP	PP	01 00 09.2	+0.4
GTA				S	**S**	**01 04 12.2**	**+1.5**

GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.4						
GTA				AMB	AMB		
	comp=Z,131nm,3.8s						
GTA				LR	LR		
	comp=N,169nm,15.6s,MS3.9						
GTA				LR	LR		
	comp=E,160nm,19.8s,MS3.9						
GTA				LR	LR		
	comp=Z,159nm,15.2s,MS3.8						
NJ2	Nanjing	33.06	41	eP	P	00 59 17.0	-1.0
NJ2				AP	pP	00 59 22.0	-1.1
NJ2				XP	sP	00 59 25.2	-0.1
NJ2				AMB	AMB		
	comp=Z,420nm,4.6s						
NJ2				LR	LR		
	comp=N,4µm,15.6s,MS5.4						
NJ2				LR	LR		
	comp=E,2µm,13.0s,MS5.4						
SSE	Sheshan	34.03	44	P	P	00 59 23.3	-3.1
SSE				XP	sP	00 59 32.1	-1.6
SSE				S	S	01 04 48.6	-1.3
SSE				XS		01 04 59.3	
SSE				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,228nm,5.5s						
SSE				LR	LR		
	comp=N,108nm,19.0s,MS3.6						
SSE				LR	LR		
	comp=E,44nm,19.1s,MS3.6						
SSE				LR	LR		
	comp=Z,62nm,16.1s,MS3.4						
SSE	Sheshan	34.03	44	P	P	00 59 23.3	-3.1
	comp=Z,16nm,0.8s,mb5.0						
SSE				sP	sP	00 59 32.1	-1.6
SSE				S	S	01 04 48.6	-1.3
SSE				sS		01 04 59.3	
SSE				LR	LR		
	comp=Z,60nm,16.1s,MS3.4						
KSH	Kashi	35.18	335	eP	P	00 59 36.6	+0.4
KSH				eAP	pP	00 59 42.2	+0.9
KSH				eXP	sP	00 59 46.4	+2.9
KSH				ePP	PP	01 00 55.0	-0.3
KSH				ePCP	PcP	01 02 02.6	-4.9
KSH				eS	S	01 05 08.0	+0.3
KSH				eSCP		01 05 50.4	
KSH				eSCS	ScS	01 09 53.1	-0.7
KSH				AMB	AMB		
	comp=Z,100nm,1.9s,mb5.4						
KSH				LR	LR		
	comp=N,250nm,4.7s						
KSH				LR	LR		
	comp=E,310nm,5.0s						
WMQ	Urumqi	35.94	352	P	P	00 59 42.0	-0.6
WMQ				XP	sP	00 59 51.0	+1.1
WMQ				PP	PP	01 01 04.0	-0.3
WMQ				S	S	01 05 19.0	-0.4
WMQ				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.0						
WMQ				LR	LR		
	comp=N,132nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=E,179nm,21.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,138nm,20.0s,MS3.7						
BJI	Beijing	37.35	28	eP	P	00 59 56.8	+2.3
BJI				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.4						
BJI				LR	LR		
	comp=Z,136nm,18.4s,MS3.8						
BJI	Beijing	37.35	28	eP	P	00 59 56.8	+2.3
	comp=Z,8.0nm,1.2s,mb4.4						
BJI				LR	LR		
	comp=Z,140nm,18.4s,MS3.8						
AAK	Ala-Archa	38.41	337c	iP	P	01 00 03.6	+0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
AAK	Ala-Archa	38.41	337	eP	P	01 00 03.0	-0.4
	comp=Z,19nm,1.1s,mb4.7						
MKAR	Makanchi Array	39.78	347	iP	P	01 00 14.8	0.0
MKAR				pmax	pmax		
	comp=Z,22nm,1.0s						
ULN	Ulaanbaatar	41.05	13	iP	P	01 00 25.6	+0.5
ULN	Ulaanbaatar	41.05	13	eP	P	01 00 24.1	-1.1
	comp=Z,5.9nm,1.2s,mb4.1						
KURK	Kurchatov	44.31	346	iP	P	01 00 52.0	+0.3
KURK	Kurchatov	44.31	346	eP	P	01 00 51.3	-0.5
	comp=Z,32nm,1.1s,mb5.0						
KURK				epP	pP	01 00 57.1	+0.2
CN2	Changchun	44.79	32	eP	P	01 00 55.5	-0.2
NVS	Novosibirsk	47.34	351	iP	P	01 01 14.1	-1.6
MDJ	Mudanjiang	47.57	34	P	P	01 01 16.7	-1.0
MDJ				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,119nm,3.3s						
WRAB	Tennant Creek	48.47	126	eP	P	01 01 21.8	-3.2
BVA0	Borovoye Array	48.69	341	iP	P	01 01 25.8	-0.5
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
RAYN	Ar Rayn	48.93	294	P	P	01 01 30.6	+2.1
	comp=Z,153nm,0.8s,mb6.1,SNR=22						
CHKZ	Chkalovo	49.17	342	P	P	01 01 29.6	-0.4
CHKZ				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
CHKZ	Chkalovo	49.17	342	eP	P	01 01 29.2	-0.8
	comp=Z,30nm,1.0s,mb5.3						
CHKZ				epP	pP	01 01 35.2	-0.1
BOD	Bodaibo	51.86	13	eP	P	01 01 49.5	-0.9
GNI	Garni	54.20	314	iP	P	01 02 08.3	+0.3
GNI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GNI	Garni	54.20	314	eP	P	01 02 07.7	-0.3
	comp=Z,22nm,1.4s,mb4.9						
SVE	Sverdlovsk	55.10	338	eP	P	01 02 10.9	-3.5
SVE				pmax	pmax		
	comp=Z,60nm,1.8s,mb5.3						
ARU	Arti	55.60	337	⇑iP	P	01 02 09.7	-8.3
ARU				eS	S	01 09 53.7	-7.4
ARU				eSS	SS	01 13 35.9	-10
ARU				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
KIV	Kislovodsk	57.07	318	iP	P	01 02 27.9	-0.8
KIV				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
KIV	Kislovodsk	57.07	318	eP	P	01 02 27.3	-1.5
KIV				epP	pP	01 02 33.2	-0.9
KMBO	Kilima Mbogo	57.42	263	eP	P	01 02 32.4	+0.7
	comp=Z,16nm,0.9s,mb5.0						
MALT	Malatya	58.24	310	eP	P	01 02 36.0	-1.0
	comp=Z,9.2nm,1.2s,mb4.7						
MALT				epP	pP	01 02 41.2	-1.2
SOKR	Solikamsk	58.50	339	⇑iP	P	01 02 38.1	-0.4
SOKR				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,310nm,22.0s,MS4.4						
EIL	Elat	59.25	300	eP	P	01 02 43.5	-0.6
YAK	Yakutsk	59.72	19	iP	P	01 02 46.0	-0.9
YAK				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
MBAR	Mbarara	63.75	265	eP	P	01 03 15.6	+0.7
	comp=Z,4.8nm,0.8s,mb4.6						
MOS	Moscow	64.80	329	eP	P	01 03 19.5	-1.5
MOS				pmax	pmax		
	comp=Z,65nm,1.4s,mb5.5						
OBN	Obninsk	65.10	328	eP	P	01 03 18.6	-4.4
	comp=Z,63nm,1.4s,mb5.5						
TIXI	Tiksi	66.94	11	⇑iP	P	01 03 33.2	-1.2
TIXI				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
CFR	Carcaliu	67.35	316	⇓iP	P	01 03 36.5	-0.9
CFR	Carcaliu	67.35	316	⇓iP	P	01 03 36.5	-1.0
VRI	Vrincioaia	68.46	316	⇑iP	P	01 03 44.5	+0.1
VRI	Vrincioaia	68.46	316	⇑iP	P	01 03 44.5	+0.1
MLR	Muntele Rosu	68.93	316	⇑P	P	01 03 46.7	-0.6
MLR	Muntele Rosu	68.93	316	⇓iP	P	01 03 47.0	-0.3
MLR	Muntele Rosu	68.93	316	⇓iP	P	01 03 47.0	-0.3
LSZ	Lusaka	69.34	250	eP	P	01 03 49.5	-0.8
	comp=Z,12nm,1.3s,mb4.7						
BURAR	Bucovina Array	69.80	318	⇓P	P	01 03 52.4	-0.1
BURAR	Bucovina Array	69.80	318	⇓iP	P	01 03 52.4	-0.1
JOF	Joensuu	70.56	334	ep	P	01 03 56.1	-0.8
	comp=Z,9.8nm,0.9s,mb4.7						
JOF	Joensuu	70.56	334	eP	P	01 03 56.1	-0.8
JOF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KWP	Kalwaria	71.78	320	eP	P	01 04 04.3	-0.2
KOLS	Kolonicke sedl	71.95	319	iP	P	01 04 06.4	+0.8
KOLS				e		01 04 25.7	
KOLS	Kolonicke sedl	71.95	319	iP	P	01 04 06.4	+0.8
KOLS				epP	pP	01 04 10.0	-1.0
KOLS				e		01 04 25.7	
SUW	Suwalki	72.24	324	eP	P	01 04 06.4	-0.8
CRVS	Cervenica-Dubn	72.48	319	iP	P	01 04 09.6	+0.9
CRVS				epP	pP	01 04 13.8	-0.3
KAF	Kangasniemi	72.50	333	ep	P	01 04 08.2	-0.4
	comp=Z,9.3nm,0.8s,mb4.8,baz=108,slow=5.8						
KAF	Kangasniemi	72.50	333	eP	P	01 04 08.2	-0.4
KAF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
OJC	Ojcow	73.72	320	eP	P	01 04 15.7	-0.2
LIKS	Likavka	74.04	319	eP	P	01 04 19.9	+2.1
VYHS	Vyhne	74.16	318	iP	P	01 04 17.9	-0.6
VYHS				epP	pP	01 04 23.4	-0.5
LBTB	Lobatse	74.36	241	eP	P	01 04 20.2	0.0
	comp=Z,6.0nm,0.6s,mb4.7						
KEV	Kevo	74.54	341	ep	P	01 04 19.5	-0.8
	comp=Z,14nm,0.9s,mb4.9						
KEV	Kevo	74.54	341	eP	P	01 04 19.5	-0.8
KEV				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
OKC	Ostrava-Krasne	74.74	319	eP	P	01 04 21.8	0.0
OKC				epP	pP	01 04 26.8	-0.4
SMOL	Smolenice	75.09	318	eP	P	01 04 23.8	-0.1
MORC	Moravsky Berou	75.12	319	eP	P	01 04 23.3	-0.7
	comp=Z,19nm,1.1s,mb4.9						
MORC				epP	pP	01 04 29.3	-0.1
ZST	Bratislava	75.28	318	iP	P	01 04 25.3	+0.3
ZST				ipP	pP	01 04 31.0	+0.6
BILL	Bilibino	75.82	22	eP	P	01 04 32.5	+4.9
BILL				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
DPC	Dobruska-Polom	75.95	320	eP	P	01 04 29.0	+0.3
DPC				epP	pP	01 04 34.7	+0.5
KSP	Ksiaz	76.01	320	eP	P	01 04 28.7	-0.3
KSP				epP	pP	01 04 34.1	-0.4
KSP	Ksiaz	76.01	320	eP	P	01 04 29.5	+0.4
UPC	Upice	76.16	320	eP	P	01 04 29.8	-0.1
PRU	Pruhonice	77.07	319	eP	P	01 04 35.2	+0.2
PRU				epP	pP	01 04 40.4	-0.1
BRG	Berggiesshubel	77.50	320	iP	P	01 04 37.8	+0.5
BRG				i	pP	01 04 43.0	+0.2
BRG				pmax	pmax		
	comp=Z,36nm,1.8s,mb5.0						
BRG	Berggiesshubel	77.50	320	iP	P	01 04 37.8	+0.5
	comp=Z,36nm,1.8s,mb5.0						
BRG				i	pP	01 04 43.0	+0.2
GEC2	GERESS Array S	77.58	318	eP	P	01 04 38.4	+0.6
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GEC2	GERESS Array S	77.58	318	eP	P	01 04 38.4	+0.6
	comp=Z,7.0nm,0.8s,mb4.6						
KHC	Kasperske Hory	77.67	318	eP	P	01 04 38.3	0.0
KHC				epP	pP	01 04 43.5	-0.3
RUE	Ruedersdorf	77.67	322	eP	P	01 04 36.8	-1.5
RUE				epP	pP	01 04 43.8	+0.1
CLL	Collm	78.10	321	⇓iP	P	01 04 40.4	-0.2
CLL				i	pP	01 04 45.8	-0.3
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CLL	Collm	78.10	321	⇓iP	P	01 04 40.4	-0.2
	comp=Z,10.0nm,1.2s,mb4.6						
CLL				i	pP	01 04 45.8	-0.3
CLL	Collm	78.10	321	⇓P	P	01 04 40.4	-0.2
	comp=Z,logA/T=0.9,mb4.6						
CLL				i *PP	pP	01 04 45.8	-0.3
WET	Wettzell	78.13	318	eP	P	01 04 41.4	+0.6
WET				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
WET	Wettzell	78.13	318	eP	P	01 04 41.4	+0.6
	comp=Z,4.0nm,0.8s,mb4.4						
NKC	Novy Kostel	78.43	320	eP	P	01 04 43.0	+0.5
NKC				epP	pP	01 04 48.0	+0.1
MOX	Moxa	78.97	320	eP	P	01 04 45.3	-0.1
MOX				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
MOX	Moxa	78.97	320	eP	P	01 04 45.3	-0.1
	comp=Z,18nm,1.4s,mb4.8						
MOX	Moxa	78.97	320	iP	P	01 04 45.3	-0.1
	comp=Z,logA/T=1.1,mb4.8						
GRA1	Grafenberg Arr	79.22	319	eP	P	01 04 47.8	+1.0
	comp=Z,10.0nm,0.9s,mb4.8						
GRA1				epP	pP	01 04 53.2	+0.9
GRF	Grafenberg Arr	79.22	319	eP	P	01 04 47.8	+1.0
GRF				e*PP	pP	01 04 53.2	+0.9
GRF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GRF	Grafenberg Arr	79.22	319	eP	P	01 04 47.8	+1.0
	comp=Z,10.0nm,0.9s,mb4.8						
GRF				epP	pP	01 04 53.2	+0.9
NB2	NORSAR Subarra	79.45	331	P	P	01 04 46.5	-1.3
	comp=Z,12nm,0.9s,mb4.8,baz=91,slow=5.6						
CLZ	Clausthal	79.75	321	eP	P	01 04 50.3	+0.7
	comp=Z,9.0nm,0.9s,mb4.7						
TNS	Taunus Mts	81.00	320	eP	P	01 04 56.9	+0.6
BFO	Black Forest	81.15	318	eP	P	01 04 57.2	+0.1
BFO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BFO	Black Forest	81.15	318	eP	P	01 04 57.2	+0.1
	comp=Z,3.0nm,0.8s,mb4.3						
LPG	La Plagne	82.38	315	eP	P	01 05 03.9	+0.3
	comp=Z,25nm,0.7s,mb4.9						
IMA	Indian Mountai	91.35	22	eP	P	01 05 46.6	-0.2
	comp=Z,27nm,1.1s,mb5.5						
JCT	Junction City	139.31	19	PKP	PKPdf	01 12 08.2	-3.7
PLCA	Paso Flores	144.82	200	ePKP	PKPdf	01 12 17.0	-4.3

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*TRN **02** 00:57:25.3, 10.96N×62.32W, h110^{km}, MD3.1*

*NEIC **02** 00:57:25.3, 10.96N×62.32W, h109^{km}, MD3.1(TRN), After TRN.*

*FUNV **02** 00:57:25.2, 10.93N×62.34W, h95^{km}, MW2.8*

ISC 02 00:57:23.5±0.8**, 10.87N**±0.04×**62.42W**±0.04**, h105**^{km}±7^{km}**, n16, σ1^{s}09**/28**, 1C, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.30	139	eP	P	00 57 40.0	+1.1
GUIV				eS	S	00 57 49.2	-1.1
CRUV	Carupano	0.82	256	eP	P	00 57 43.4	+0.6
CRUV				eS	S	00 57 57.5	+0.4
ITEV	Isla Los Testi	0.84	305	eP	P	00 57 43.2	+0.2
ITEV				eS	S	00 57 57.1	-0.5
GUNV	Guanoco	0.87	216	eP	P	00 57 45.2	+1.9
GUNV				eS	S	00 57 59.2	+1.1
TRN	Trinidad (W)	1.03	103	⇑iP	P	00 57 46.3	+1.4
TRN				eS	S	00 58 00.6	-0.5
TPP	Pointe-a-Pierr	1.11	120	eP	P	00 57 48.2	+2.4
TBH	Brigand Hill	1.39	106	eP	P	00 57 49.8	+0.7
GRW	Mount Saint Ca	1.48	30	eP	P	00 57 50.4	+0.2
GRW				eS	S	00 58 09.9	-0.3
GRHS	Sauteurs	1.55	30	eP	P	00 57 50.7	-0.4
GRHS				eS	S	00 58 09.7	-2.0
TPR	Prospect	1.65	79	eP	P	00 57 52.4	+0.1
TPR				eS	S	00 58 13.0	-0.8
BOT	Bacolet	1.70	80	eP	P	00 57 52.9	0.0
PCRV	Puerto La Cruz	2.28	253	eP	P	00 58 01.6	+0.9
RIOV	Rio Grande	2.85	168	eP	P	00 58 08.5	+0.1
RIOV				eS	S	00 58 40.3	-1.8
GURV	El Guri	3.16	192	eP	P	00 58 13.1	+0.5
GURV				eS	S	00 58 48.0	-1.7
MERV	Las Mercedes	4.14	247	eP	P	00 58 26.5	+0.6
MERV				eS	S	00 59 11.8	-1.8
CAOV	Caicara del Or	5.22	228	eP	P	00 58 40.3	-0.2
CAOV				eS	S	00 59 36.9	-3.1

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*NIED **02** 01:10:00, 42.10N×144.00E, h29^{km}, Mw3.9 Best double couple: $M_0$6.83×10^{14} NP1:ϕ_s347°, δ67°, λ75°. NP2:ϕ_s201°, δ27°, λ121°.*

*JMA **02** 01:10:04.6±0.1, 42.13N×143.97E, h56^{km}±2^{km}, M3.7*

*SKHL **02** 01:10:04.8±0.6, 42.08N×143.97E, h61^{km}±14^{km}, mb5.2/1*

ISC 02 01:10:04.3±1.1**, 42.13N**±0.07×**143.99E**±0.07**, h56**^{km}±16^{km}**, n13, σ0^{s}38**/23**, 2C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	0.63	260	P	P	01 10 17.6	0.0
JEM				eS	S	01 10 27.2	-0.2
JCH	Churui	0.67	316	⇓P	P	01 10 18.3	+0.2
JCH				eS	S	01 10 27.8	-0.5
JOB	Onbets	0.78	351	P	P	01 10 19.9	+0.4
JOB				eS	S	01 10 30.4	-0.3
JNBK	Urakawa-nobuka	0.94	280	⇓P	P	01 10 21.7	+0.2
JNBK				eS	S	01 10 34.7	+0.4
JAK	Akkeshi	1.01	31	⇑P	P	01 10 22.7	+0.1
JAK				eS	S	01 10 36.5	+0.4
JAR	Ashorobuto	1.18	352	⇑P	P	01 10 24.9	0.0
JAR				eS	S	01 10 40.1	-0.1
JBT2	Biratori 2	1.37	299	P	P	01 10 27.2	-0.5
JFR	Furan	1.46	315	P	P	01 10 29.5	+0.5
JFR				eS	S	01 10 47.3	+0.1
JNK	Nakash	1.55	20	P	P	01 10 30.0	-0.2
JNK				eS	S	01 10 49.0	-0.3
NEM2	Nemuro 2	1.79	46	P	P	01 10 33.1	-0.3
NEM2				eS	S	01 10 55.4	+0.5
YUK	Yuzh-Kuril'sk	2.34	35	iP	P	01 10 41.5	+0.2
YUK				AMB	AMB	01 10 41.7	
	330nm,0.3s						
YUK				iS	S	01 11 09.5	+0.6
YUK				A		01 11 13.7	
	2µm,1.0s						
YUK				A		01 11 13.7	
	800nm,0.4s						
YUK				A		01 11 15.1	
	1µm,0.5s						
YUK				A		01 11 15.1	
	770nm,0.5s						
KUR	Kuril'sk	4.18	41	eP	P	01 11 06.3	-1.0
KUR				eS	S	01 11 55.0	-0.4
YSS	Yuzh-Sakhalins	4.91	350	erx	rx	01 11 56.8	
YSS				erx	rx	01 12 27.4	

MAN 02 01:17:32.7, 16.19N×119.13E, h1^{km}, mb4.1, ML3.0, MS2.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.77	76	eP	Pg	01 17 47.4	-0.8
BOLP				eS	Sg	01 17 52.8	-5.7
ABRA	Dolores	2.09	46	eP	Pn	01 18 09.6	+0.2
ABRA				eS	Sn	01 18 31.5	-4.9
BALP	Baler	2.40	101	eP	Pn	01 18 14.1	+0.4
APYP	Conner	2.61	50	eP	Pn	01 18 17.4	+0.6
APYP				eS	Sn	01 18 39.2	-10
CAUP	Cauayan	2.69	74	eP	Pn	01 18 19.2	+1.4
TGY	Tagaytay City	2.71	140	⇑eP	Pn	01 18 18.5	+0.3

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*NEIC **02** 01:24:32.7, 35.73S×178.93E, h223^{km}, After WEL.*

WEL 02 01:24:29.9±0.5**, 35.46S×178.84E, h228**^{km}±18^{km}**, ML4.0**/9**, Error ellipse: s-maj=15.0km s-min=12.0km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.15	191	P	P	01 25 12.0	-0.3
MXZ				S	S	01 25 42.5	-2.6
MXZ	Matakaoa Point	2.15	191	PN	P	01 25 12.0	-0.2
MXZ				SN	S	01 25 44.2	-0.8
PUZ	Puketiti	2.65	190	eP	P	01 25 17.1	-0.5
PUZ	Puketiti	2.65	190	PN	P	01 25 17.1	-0.5
PUZ				SN	S	01 25 53.5	-1.1
MWZ	Matawai	3.06	200	PN	P	01 25 22.2	+0.1
MWZ				eSN	S	01 26 03.1	+0.5
URZ	Urewera	3.12	206	P	P	01 25 22.2	-0.6
URZ	Urewera	3.12	206	PN	P	01 25 22.0	-0.8
URZ				SN	S	01 26 03.0	-0.9
KNZ	Kokohu	3.68	194	P	P	01 25 28.4	-1.0
KNZ	Kokohu	3.68	194	ePN	P	01 25 28.4	-1.0
NGZ	Ngauruhoe	4.52	214	ePN	P	01 25 39.9	+0.3
WNVZ	Wahianoa	4.65	213	P	P	01 25 38.8	-2.4
TSZ	Takapari Road	5.13	206	PN	P	01 25 46.1	-1.1
MRZ	Mangatainoka R	5.80	205	eP	P	01 25 53.2	-2.5
MRZ	Mangatainoka R	5.80	205	PN	P	01 25 53.2	-2.5
KIW	Kapiti Island	6.22	209	P	P	01 25 58.4	-2.6
KIW	Kapiti Island	6.22	209	ePN	P	01 25 58.4	-2.6
MTW	Mount Morrison	6.27	204	ePN	P	01 25 57.8	-3.8
CAW	Cannon Point	6.38	207	P	P	01 26 00.0	-3.0
CAW	Cannon Point	6.38	207	ePN	P	01 25 60.0	-3.0
QRZ	Quartz Range	7.31	221	eP	P	01 26 11.9	-3.1
THZ	Tophouse	7.82	215	eP	P	01 26 19.1	-2.5
LTZ	Lake Taylor	8.92	213	eP	P	01 26 31.9	-3.8

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*MOS **02** 01:30:19.7±1.2, 9.98N×94.03E, h33^{km}, mb5.5/38, MS5.0/23, Error ellipse: s-maj=13.1km s-min=5.9km az=116.4*

*BJI **02** 01:30:20.8, 9.96N×93.75E, h49^{km}, mB5.6, mb4.9, Ms5.3, Msz5.0*

*NEIC **02** 01:30:22.3±1.0, 9.96N×93.96E, h40^{km}±9^{km}, mb5.2/88, MS5.0/14, MW5.3, Error ellipse: s-maj=6.5km s-min=4.8km az=222.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.23; $M_{\theta\theta}$0.14; $M_{\phi\phi}$1.10; $M_{r\theta}$-0.17; $M_{\theta\phi}$0.40; $M_{\phi r}$-0.19; Best double couple: $M_0$1.3×10^{17} NP1: ϕ_s196°, δ40°, λ-97°. NP2:ϕ_s24°, δ51°, λ-85°. Principal axes: T 1.26, Plg5°, Azm110°; N 0, Plg4°, Azm201°; P -1.26, Plg83°, Azm328°;*

*HRVD **02** 01:30:22.3±0.2, 9.93N×94.06E, h12^{km}, MW5.5/62, Centroid moment Tensor Solution. LP body waves: s54,c98;Mantle waves: s62,c116; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.57±.05; $M_{\theta\theta}$0.84±.04; $M_{\phi\phi}$0.72±.05; $M_{r\theta}$1.38±.12; $M_{\theta\phi}$1.55±.04; $M_{\phi r}$-0.16±.12; Best double couple: $M_0$2.484×10^{17} NP1: ϕ_s17°, δ42°, λ-140°. NP2:ϕ_s254°, δ65°, λ-56°. Principal axes: T 2.544, Plg13°, Azm320°; N -.119, Plg31°, Azm58°; P -2.425, Plg56°, Azm210°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 01:30:19.9±0.2**, 9.91N**±0.03×**93.96E**±0.03**, h33**^{km}**, (h31**^{km}±1.5^{km}**:pP-P), n348, σ1^{s}20**/349**, mb5.2**/117**, MS5.0**/43**, 19C-25D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	Nongplab	6.26	64	P	P	01 31 49.0	-3.3
SNG	Songkhla	7.12	112	P	P	01 32 02.0	-2.4
	636nm,1.0s						
NST	Nakhon Sawan	8.31	46	P	P	01 32 15.5	-5.5
	218nm,0.5s						
CM31	Chiang Mai Arr	9.78	29	eP	P	01 32 39.5	-1.8
	45nm,0.8s						
CHG	Chiang Mai	10.08	28	⇓P	P	01 32 47.9	+2.3
	51nm,0.9s						
KKTK	Khon Kaen	10.74	53	P	P	01 32 55.5	+0.9
	370nm,0.9s						
NANT	Nan	10.99	36	P	P	01 32 57.5	-0.5
CHRT	Chiangrai	11.39	29	⇓P	P	01 33 04.5	+1.1
	263nm,1.0s						
VIS	Vishakhapatnam	12.91	308	eP	P	01 33 23.5	-0.4
VIS				eS	S	01 35 37.2	-10
VIS				e		01 35 43.0	
	comp=N,241nm,0.7s						
VIS				e		01 35 43.1	
	comp=E,202nm,0.8s						
BWNR	Bhubaneshwar	12.98	324	eP	P	01 33 22.6	-2.1
BWNR				eS	S	01 35 36.1	-13
BWNR				e		01 35 42.4	
	comp=E,367nm,0.6s						
BWNR				e		01 35 42.4	
	comp=N,157nm,0.8s						
PALK	Pallekele	13.37	260	eP	P	01 33 28.2	-1.6
	comp=N,49nm,1.2s						
CAL	Calcutta	13.67	337	eP	P	01 33 35.2	+1.3
CAL				e		01 36 34.8	
CAL				e		01 36 36.2	
MDRS	Chennai	13.80	284	eP	P	01 33 36.0	+0.4
MDRS				e		01 35 59.0	
MDRS				e		01 36 58.0	
MDRS				e		01 42 27.0	
AGT	Agartala	14.14	350	⇓iP	P	01 33 42.0	+2.0
AGT				i		01 35 18.0	
HYB	Hyderabad	16.72	298	⇑eP	P	01 34 17.5	+4.2
	comp=N,275nm,1.4s						
HYB				e		01 37 12.0	

HYB				*e*S	**S**	**01 37 23.0**	**+6.0**
HYB	**Hyderabad**	**16.72**	**298**	⇑*i*P	**P**	**01 34 17.5**	**+4.2**
	comp=N,275nm,1.4s						
HYB				*e*		01 37 12.0	
HYB				*e*S	**S**	**01 37 23.0**	**+6.0**
HYB				LR	LR	01 39 32.0	
	comp=N,7.1nm,20.0s						
KMI	**Kunming**	**17.28**	**28**	⇑P	**P**	**01 34 22.7**	**+2.3**
KMI				AP		01 34 30.1	
KMI				XP		01 34 36.0	
KMI				PP	PP	01 34 37.0	+2.2
KMI				S	**S**	**01 37 34.3**	**+4.5**
KMI				XS		01 37 52.3	
KMI				AMB	AMB		
	comp=Z,42nm,1.5s						
KMI				AMB	AMB		
	comp=Z,1µm,5.5s						
KMI				LR	LR		
	comp=N,5µm,14.6s						
KMI				LR	LR		
	comp=E,4µm,19.3s						
KMI				LR	LR		
	comp=Z,4µm,13.2s						
KMI	**Kunming**	**17.28**	**28**	⇑P	**P**	**01 34 22.7**	**+2.3**
	comp=Z,42nm,1.5s						
KMI				pP		01 34 30.1	
KMI				sP		01 34 36.0	
KMI				PP	PP	01 34 37.0	+2.2
KMI				S	**S**	**01 37 34.3**	**+4.5**
KMI				sS		01 37 52.3	
KMI				SS	SS	01 37 57.7	+6.3
QIZ	**Qiongzhong**	**17.84**	**58**	P	**P**	**01 34 28.4**	**+1.0**
QIZ				AP		01 34 36.1	
QIZ				S	**S**	**01 37 43.2**	**+0.6**
QIZ				XS		01 37 56.5	
QIZ				AMB	AMB		
	comp=Z,1µm,6.7s						
QIZ				LR	LR		
	comp=N,5µm,16.9s						
QIZ				LR	LR		
	comp=E,3µm,18.1s						
QIZ				LR	LR		
	comp=Z,4µm,15.2s						
NGP	**Nagpur**	**18.18**	**310**	*e*P	**P**	**01 34 32.8**	**+1.2**
	comp=Z,9µm,18.7s						
NGP				*e*		01 37 47.6	
MNGI	**Mangalore**	**19.00**	**281**	*i* P	**P**	**01 34 43.6**	**+2.1**
MNGI				*i*		01 38 23.7	
	comp=Z,192nm,1.6s						
JIRN	**Jiri**	**19.12**	**339**	*e*P	**P**	**01 34 42.7**	**-0.2**
	comp=Z,1µm,1.7s						
ALBI	**Allahabad**	**19.18**	**325**	*e*	**P**	**01 34 42.0**	**-1.6**
PKI	**Pulchoki**	**19.33**	**337**	*e*P	**P**	**01 34 45.0**	**-0.3**
	comp=Z,1µm,1.7s						
DMN	**Daman**	**19.48**	**336**	*e*P	**P**	**01 34 46.7**	**-0.3**
	comp=Z,630nm,1.4s						
KKN	**Kakani**	**19.58**	**336**	*e*P	**P**	**01 34 47.1**	**-0.9**
	comp=Z,703nm,1.3s						
LSA	**Lhasa**	**19.87**	**353**	P	**P**	**01 34 47.8**	**-3.3**
LSA				AP		01 34 56.5	
LSA				S	**S**	**01 38 27.2**	**-0.7**
LSA				LR	LR		
	comp=N,2µm,27.0s						
LSA				LR	LR		
	comp=E,3µm,31.9s						
GKN	**Gorkha**	**20.02**	**335**	*e*P	**P**	**01 34 51.5**	**-1.3**
	comp=E,1µm,1.4s						
KOLN	**Koldanda**	**20.27**	**333**	*e*P	**P**	**01 34 55.3**	**-0.1**
	comp=E,743nm,1.4s						
GYA	**Guiyang**	**20.39**	**34**	⇑*i*P	**P**	**01 34 56.4**	**-0.2**
GYA				AP		01 35 05.6	
GYA				XP		01 35 09.4	
GYA				S	**S**	**01 38 47.6**	**+9.4**
GYA				AMB	AMB		
	comp=Z,30nm,1.3s						
GYA				AMB	AMB		
	comp=Z,250nm,3.4s						
GYA				LR	LR		
	comp=N,3µm,17.3s,MS4.9						
GYA				LR	LR		
	comp=E,2µm,14.3s,MS4.9						
GYA				LR	LR		
	comp=Z,5µm,17.6s,MS4.9						
GOA	**Goa**	**20.40**	**288**	*e*	**P**	**01 35 07.1**	**+10**
	comp=Z,154nm,2.0s						
GOA				*e*		01 38 54.8	
KAD	**Karad**	**20.57**	**293**	*e*	**P**	**01 34 59.1**	**+0.5**
KAD				*e*		01 35 07.4	
	comp=Z,153nm,1.7s						
KAD				*e*		01 38 52.8	
BHPL	**Bhopal**	**20.63**	**312**	*e*	**P**	**01 34 59.9**	**+0.7**
BHPL				*e*		01 35 08.0	
	comp=Z,171nm,1.5s						
BHPL				*e*		01 38 42.6	
POO	**Poona**	**21.27**	**296**	*e*	**P**	**01 35 05.4**	**-0.3**
POO				*e*		01 35 12.7	
	comp=Z,122nm,1.4s						
POO				*e*		01 39 05.5	
COCO	**West Island**	**22.14**	**173**	*e*P	**P**	**01 35 16.9**	**+2.5**
	comp=Z,242nm,1.1s,mb5.5						
CD2	**Chengdu**	**22.80**	**22**	⇓*i*P	**P**	**01 35 20.9**	**-0.1**
CD2				XP		01 35 35.3	
CD2				PP	PP	01 35 49.7	-0.6
CD2				S	**S**	**01 39 27.9**	**+4.5**
CD2				XS		01 39 42.9	
CD2				AMB	AMB		
	comp=Z,200nm,0.6s,mb5.7						
CD2				AMB	AMB		
	comp=Z,2µm,4.9s						
CD2				LR	LR		
	comp=N,5µm,16.9s						
CD2				LR	LR		
	comp=Z,5µm,13.8s,MS5.1						
LGTI	**Lohaghat**	**23.29**	**328**	⇑*i*	**P**	**01 35 27.7**	**+1.9**
PTH	**Pithoragarh**	**23.39**	**329**	*e*	**P**	**01 35 17.0**	**-10**
PTH				*e*		01 39 26.4	
NDI	**New Delhi**	**24.41**	**322**	*e*	**P**	**01 35 36.0**	**-0.6**
NDI				*i*		01 37 16.5	
NDI				*e*S	**S**	**01 39 59.0**	**+7.6**
AJM	**Ajmer**	**24.61**	**315**	⇓*i*	**P**	**01 35 40.0**	**+1.4**
PONG	**Pong**	**27.55**	**325**	*e*	**P**	**01 36 08.0**	**+2.0**
LZH	**Lanzhou**	**27.57**	**17**	⇓P	**P**	**01 36 05.7**	**-0.4**
LZH				AP	pP	01 36 15.4	-0.1
LZH				XP	sP	01 36 19.5	-0.2
LZH				*e*S	**S**	**01 40 43.2**	**-0.2**
LZH				XS		01 40 59.1	
LZH				SS	SS	01 42 02.8	+0.1
LZH				AMB	AMB		
	comp=Z,197nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,533nm,5.4s						
LZH				LR	LR		
	comp=N,4µm,13.2s						
LZH				LR	LR		
	comp=Z,4µm,16.5s,MS5.1						
LZH	**Lanzhou**	**27.57**	**17**	⇓P	**P**	**01 36 05.7**	**-0.4**
	comp=Z,197nm,1.5s,mb5.5						
LZH				pP	pP	01 36 15.4	-0.1
LZH				sP	sP	01 36 19.5	-0.2
LZH				PP	PP	01 36 48.0	-6.4
LZH				*e*S	**S**	**01 40 43.2**	**-0.2**
LZH				sS		01 40 59.1	
LZH				SS	SS	01 42 02.8	+0.1
LZH				LR	LR		
	comp=Z,4µm,16.5s,MS5.1						
XAN	**Xi’an**	**27.67**	**28**	P	**P**	**01 36 05.4**	**-1.6**
XAN				S	**S**	**01 40 46.9**	**+1.9**
XAN				AMB	AMB		
	comp=Z,17nm,1.4s,mb4.5						
XAN				LR	LR		
	comp=N,2µm,18.9s,MS5.0						
XAN				LR	LR		
	comp=E,3µm,19.1s,MS5.0						
XAN				LR	LR		
	comp=Z,3µm,14.8s,MS5.0						
WHN	**Wuhan**	**27.97**	**40**	*e*P	**P**	**01 36 10.0**	**+0.2**
WHN				LR	LR		
	comp=Z,5µm,16.4s,MS5.2						
THN	**Thein Dam**	**28.05**	**326**	*e*	**P**	**01 36 08.4**	**-2.0**
THN				*e*		01 40 56.0	
GTA	**Gaotai**	**29.84**	**9**	*e*P	**P**	**01 36 26.2**	**-0.1**
GTA				AP	pP	01 36 33.0	-2.9
GTA				PP	PP	01 37 21.8	-2.2
GTA				PCP	PcP	01 39 32.0	+2.8
GTA				S	**S**	**01 41 16.8**	**-2.9**
GTA				SS	SS	01 42 49.2	-7.0
GTA				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,497nm,4.2s						
GTA				LR	LR		
	comp=N,1µm,19.8s,MS4.7						
GTA				LR	LR		
	comp=E,1µm,18.6s,MS4.7						
GTA				LR	LR		
	comp=Z,2µm,23.2s,MS4.7						
NJ2	**Nanjing**	**31.88**	**43**	*e*P	**P**	**01 36 45.9**	**+1.5**
NJ2				AP	pP	01 36 54.1	0.0
NJ2				XP	sP	01 36 57.1	-1.3
NJ2				PP	PP	01 37 53.1	+2.6
NJ2				S	**S**	**01 41 53.0**	**+1.2**
NJ2				XS		01 42 09.0	
NJ2				AMB	AMB		
	comp=Z,720nm,4.5s						
NJ2				LR	LR		
	comp=N,4µm,18.6s,MS5.4						
NJ2				LR	LR		
	comp=E,5µm,15.0s,MS5.4						
NJ2				LR	LR		
	comp=Z,5µm,11.7s,MS5.4						
TIY	**Taiyuan**	**32.30**	**28**	PR		01 36 45.0	
TIY				S	**S**	**01 42 00.0**	**+1.6**
TIY				LR	LR		
	comp=N,3µm,14.0s						
TIY				LR	LR		
	comp=Z,968nm,11.0s,MS4.8						
SSE	**Sheshan**	**32.92**	**46**	P	**P**	**01 36 52.9**	**-0.7**
SSE				S	**S**	**01 42 08.6**	**+0.4**
SSE				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,299nm,4.8s						
SSE				LR	LR		
	comp=N,3µm,15.7s,MS5.2						
SSE				LR	LR		
	comp=E,2µm,15.7s,MS5.2						
SSE				LR	LR		
	comp=Z,2µm,14.3s,MS5.0						
SSE	**Sheshan**	**32.92**	**46**	P	**P**	**01 36 52.9**	**-0.7**
	comp=Z,16nm,0.8s,mb5.0						
SSE				sP	sP	01 36 57.4	-10
SSE				S	**S**	**01 42 08.6**	**+0.4**
SSE				sS		01 42 13.9	
SSE				LR	LR		
	comp=Z,2µm,14.3s,MS5.0						
KSH	**Kashi**	**33.57**	**334**	*e*P	**P**	**01 36 59.0**	**0.0**
KSH				*e*AP	pP	01 37 09.2	+0.5
KSH				*e*XP	sP	01 37 13.0	0.0
KSH				*e*PP	PP	01 38 11.0	-0.8
KSH				*e*PCP	PcP	01 39 41.5	+2.3
KSH				*e*S	**S**	**01 42 16.6**	**-1.4**
KSH				*e*XS		01 42 36.8	
KSH				*e*SCP		01 43 21.2	
KSH				*e*SS	SS	01 44 21.0	-2.1
KSH				*e*SCS	ScS	01 47 20.0	+0.2
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				AMB	AMB		
	comp=Z,320nm,4.2s						
KSH				LR	LR		
	comp=N,5µm,24.3s						
KSH				LR	LR		
	comp=E,2µm,17.0s						
TIA	**Tai’an**	**33.58**	**35**	P	**P**	**01 36 57.4**	**-1.8**
TIA				LR	LR		
	comp=N,1µm,14.7s,MS4.9						
TIA				LR	LR		
	comp=E,1µm,14.2s,MS4.9						
BTO	**Baotou**	**33.73**	**22**	*e*P	**P**	**01 36 58.1**	**-2.3**
BTO				S	**S**	**01 42 20.2**	**-0.3**
BTO				AMB	AMB		
	comp=Z,31nm,1.5s,mb5.0						
BTO				LR	LR		
	comp=N,602nm,6.4s						
BTO				LR	LR		
	comp=E,2µm,12.6s						
WMQ	**Urumqi**	**34.22**	**352**	P	**P**	**01 37 04.2**	**-0.4**
WMQ				AP	pP	01 37 14.0	-0.3
WMQ				XP	sP	01 37 18.0	-0.6
WMQ				PP	PP	01 38 19.0	-0.9
WMQ				S	**S**	**01 42 27.0**	**-1.1**
WMQ				SS	SS	01 44 37.0	-1.1
WMQ				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,131nm,8.0s						
WMQ				LR	LR		
	comp=N,2µm,18.0s,MS5.0						
WMQ				LR	LR		
	comp=E,2µm,18.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,2µm,17.0s,MS5.0						
HHC	**Hu-ho-hao-te**	**34.53**	**24**	*e*P	**P**	**01 37 07.1**	**-0.2**
HHC				PP	PP	01 38 22.7	-1.3
HHC				PCP	PcP	01 39 42.0	0.0
HHC				S	**S**	**01 42 36.2**	**+3.2**
HHC				SS	SS	01 44 48.8	+3.5
HHC				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,550nm,4.5s						
HHC				LR	LR		
	comp=N,1µm,16.6s,MS5.0						
HHC				LR	LR		
	comp=E,2µm,17.8s,MS5.0						
HHC				LR	LR		
	comp=Z,2µm,23.7s						
BJI	**Beijing**	**35.92**	**30**	*e*P	**P**	**01 37 19.4**	**+0.2**
BJI				S	**S**	**01 42 55.7**	**+1.2**
BJI				AMB	AMB		
	comp=Z,24nm,1.1s,mb5.0						
BJI				AMB	AMB		
	comp=Z,776nm,4.6s						
BJI				LR	LR		
	comp=N,3µm,16.6s,MS5.2						
BJI				LR	LR		
	comp=E,3µm,19.1s,MS5.2						
BJI				LR	LR		
	comp=Z,3µm,19.6s,MS5.0						
BJI	**Beijing**	**35.92**	**30**	*e*P	**P**	**01 37 19.4**	**+0.2**
	comp=Z,24nm,1.1s,mb5.0						
BJI				PP	PP	01 38 47.1	+6.0
BJI				S	**S**	**01 42 55.7**	**+1.2**
BJI				SS	SS	01 45 36.8	+19
BJI				LR	LR		
	comp=Z,3µm,19.6s,MS5.0						
KZA	**Kyzart**	**36.01**	**336**	P	**P**	**01 37 20.4**	**+0.5**
	SNR=8.5						
AAA	**Alma-Ata**	**36.40**	**339**	*e*P	**P**	**01 37 24.0**	**+0.9**
AAA				*e*S	**S**	**01 43 04.0**	**+2.3**
AAA				MLR	MLR		
	comp=Z,800nm,20.0s,MS4.5						
UCH	**Uchtor**	**36.44**	**335**	P	**P**	**01 37 24.2**	**+0.8**
	SNR=16						
TKM2	**Tokmak 2**	**36.59**	**337**	P	**P**	**01 37 28.1**	**+3.3**
	SNR=12						
KBK	**Karagaybulak**	**36.62**	**336**	P	**P**	**01 37 25.5**	**+0.4**
	SNR=24						
AML	**Almayashu**	**36.70**	**334**	P	**P**	**01 37 26.3**	**+0.7**
	SNR=30						
AAK	**Ala-Archa**	**36.78**	**336**	P	**P**	**01 37 26.6**	**+0.3**
	SNR=18						
AAK	**Ala-Archa**	**36.78**	**336**	*d i*P	**P**	**01 37 25.7**	**-0.7**
AAK				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.1						
AAK	**Ala-Archa**	**36.78**	**336**	*e*P	**P**	**01 37 25.0**	**-1.4**
	comp=Z,99nm,1.4s,mb5.5						
FRU	**Bishkek**	**36.90**	**336**	*e*P	**P**	**01 37 28.0**	**+0.6**
FRU				pmax	pmax		
	comp=Z,120nm,1.8s,mb5.4						
CHMS	**Chumysh**	**36.99**	**336**	P	**P**	**01 37 28.1**	**0.0**
	SNR=17						
EKS2	**Erkin-Say**	**37.10**	**335**	P	**P**	**01 37 29.7**	**+0.6**
	SNR=20						
USP	**Ospenovka**	**37.31**	**336**	P	**P**	**01 37 30.6**	**-0.2**
	SNR=23						
BSY	**Bisya**	**37.40**	**295**	P	**P**	**01 37 35.2**	**+3.4**
	SNR=30						
BSY				P		01 37 35.2	
	SNR=30						
HOQ	**Hoqain**	**37.51**	**296**	P	**P**	**01 37 35.8**	**+3.1**
	SNR=12						
DL2	**Dalian**	**38.02**	**36**	⇑P	**P**	**01 37 39.3**	**+2.4**
DL2				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.0						
DL2				LR	LR		
	comp=E,1µm,14.5s						
DL2				LR	LR		
	comp=Z,860nm,18.4s,MS4.6						
MKAR	**Makanchi Array**	**38.08**	**347**	*i* P	**P**	**01 37 36.1**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,26nm,1.0s						
ASHO	**Ashiyiah**	**38.90**	**297**	P	**P**	**01 37 46.9**	**+2.7**
	SNR=31						
ASHO				P		01 37 46.9	
	SNR=31						
ULN	**Ulaanbaatar**	**39.41**	**14**	*i* P	**P**	**01 37 46.0**	**-2.3**
ULN	**Ulaanbaatar**	**39.41**	**14**	*e*P	**P**	**01 37 47.8**	**-0.5**
	comp=Z,36nm,1.4s,mb4.9						
WHFO	**Wadi Hawf**	**39.74**	**286**	P	**P**	**01 37 54.0**	**+2.7**
	SNR=18						
MBWA	**Marble Bar**	**39.93**	**141**	*e*P	**P**	**01 37 52.5**	**-0.4**
	comp=Z,48nm,1.3s,mb5.1						
MBWA				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
ZAK	**Zakamensk**	**41.08**	**9**	*e*P	**P**	**01 38 02.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.4						
SNY	**Shenyang**	**41.09**	**34**	⇓P	**P**	**01 38 04.4**	**+2.2**
SNY				S	**S**	**01 44 07.1**	**-5.5**
SNY				AMB	AMB		
	comp=Z,70nm,2.2s,mb4.9						
SNY				AMB	AMB		
	comp=Z,440nm,5.0s						
SNY				LR	LR		
	comp=N,2µm,17.1s						
SNY				LR	LR		
	comp=Z,2µm,14.7s,MS5.0						
FITZ	**Fitzroy Crossi**	**41.87**	**132**	*e*P	**P**	**01 38 09.4**	**+0.4**
	comp=Z,14nm,0.8s,mb4.6						
MOY	**Mondy**	**42.03**	**7**	*e*P	**P**	**01 38 10.0**	**+0.1**
MOY				*e*		01 39 57.3	
MOY				pmax	pmax		
	comp=Z,50nm,2.1s,mb4.8						
TLY	**Talaya**	**42.40**	**9**	P	**P**	**01 38 13.8**	**+0.9**
	comp=Z,88nm,1.1s,mb5.3,SNR=12						
TLY	**Talaya**	**42.40**	**9**	*e*P	**P**	**01 38 13.8**	**+0.9**
TLY				*e*		01 39 51.6	
TLY				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.7						
TLY				MLR	MLR		
	comp=Z,728nm,17.0s,MS4.6						
TLY	**Talaya**	**42.40**	**9**	*e*P	**P**	**01 38 12.4**	**-0.5**
	comp=Z,30nm,1.4s,mb4.7						
KURK	**Kurchatov**	**42.61**	**346**	*i* P	**P**	**01 38 14.0**	**-0.6**
KURK	**Kurchatov**	**42.61**	**346**	*e*P	**P**	**01 38 13.7**	**-0.9**
	comp=Z,23nm,1.1s,mb4.8						
KURK				LR	LR		
	comp=Z,1µm,22.0s,MS4.7						
IRK	**Irkutsk**	**43.04**	**9**	*e*P	**P**	**01 38 18.8**	**+0.7**
IRK				*e*		01 40 03.7	
IRK				pmax	pmax		
	comp=Z,56nm,2.2s,mb4.9						
CN2	**Changchun**	**43.43**	**33**	⇓P	**P**	**01 38 23.2**	**+1.8**
CN2				*e*AP	pP	01 38 32.8	+1.5
CN2				*e*S	**S**	**01 44 48.5**	**+1.5**
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
CN2				AMB	AMB		
	comp=Z,600nm,5.0s						
CN2				LR	LR		
	comp=N,2µm,17.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,17.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
NVS	**Novosibirsk**	**45.62**	**351**	*e*P	**P**	**01 38 36.4**	**-2.5**
NVS				*i*		01 40 11.7	
NVS				*i* S	**S**	**01 45 19.0**	**+0.6**
NVS				pmax	pmax		
	comp=Z,36nm,1.5s,mb5.1						
NVS				pmax	pmax		
	comp=N,36nm,1.3s						
NVS				pmax	pmax		
	comp=E,18nm,1.3s						
NVS				smax			
	comp=N,34nm,2.5s						
NVS				smax			
	comp=E,14nm,2.5s						
MDJ	**Mudanjiang**	**46.25**	**35**	P	**P**	**01 38 43.6**	**-0.3**
MDJ				AP	pP	01 38 52.5	-1.3
MDJ				PP	PP	01 40 31.4	-1.1
MDJ				S	**S**	**01 45 30.2**	**+2.7**
MDJ				XS		01 45 45.0	
MDJ				AMB	AMB		
	comp=Z,23nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,422nm,3.8s						
MDJ				LR	LR		
	comp=N,651nm,14.3s,MS5.1						
MDJ				LR	LR		
	comp=E,1µm,14.3s,MS5.1						
MDJ				LR	LR		
	comp=Z,2µm,14.3s,MS5.1						
MUN	**Mundaring**	**46.77**	**154**	*e*P	**P**	**01 38 47.0**	**-1.2**
	comp=Z,22nm,1.0s,mb5.0						
BVA0	**Borovoye Array**	**47.02**	**341**	*i* P	**P**	**01 38 48.4**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
CHKZ	**Chkalovo**	**47.50**	**341**	P	**P**	**01 38 52.4**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.3						
CHKZ	**Chkalovo**	**47.50**	**341**	*e*P	**P**	**01 38 52.3**	**-1.3**
	comp=Z,40nm,1.0s,mb5.3						
NWAO	**Narrogin (SRO)**	**48.03**	**153**	*e*P	**P**	**01 38 53.8**	**-4.4**
RAYN	**Ar Rayn**	**48.12**	**293**	P	**P**	**01 39 00.6**	**+1.7**
	comp=Z,397nm,0.9s,SNR=69						
WRAB	**Tennant Creek**	**49.60**	**127**	*i* P	**P**	**01 39 10.2**	**-0.2**
WRAB	**Tennant Creek**	**49.60**	**127**	*e*P	**P**	**01 39 08.8**	**-1.6**
	comp=Z,50nm,0.9s,mb5.5						
WB2	**Warramunga Arr**	**49.61**	**127**	*e*P	**P**	**01 39 08.8**	**-1.6**
WB2				*e*S	**S**	**01 46 17.4**	**+2.2**
BOD	**Bodaibo**	**50.23**	**14**	*e*P	**P**	**01 39 13.0**	**-1.7**
BOD				pmax	pmax		
	comp=Z,61nm,1.8s,mb5.3						
KLR	**Kul’dur**	**50.25**	**32**	*e*P	**P**	**01 39 13.9**	**-1.0**
KLR				*e*		01 41 16.5	
KLR				*e*S	**S**	**01 46 23.5**	**-0.2**
KLR				pmax	pmax		
	comp=N,75nm,2.4s						
KLR				pmax	pmax		
	comp=E,120nm,2.4s						
KLR				pmax	pmax		
	comp=Z,150nm,2.4s,mb5.6						
BHD	**Baghdad**	**51.05**	**305**	*e*P	**P**	**01 39 20.5**	**-0.8**
ASPA	**Alice Springs**	**51.36**	**131**	*e*P	**P**	**01 39 23.8**	**+0.1**
ASPA				*e*S	**S**	**01 46 43.9**	**+4.5**
FORT	**Forrest**	**52.04**	**142**	*e*P	**P**	**01 39 29.2**	**+0.5**
	comp=Z,135nm,1.0s,mb5.8						
CLNS	**Chul’man**	**52.61**	**21**	*e*P	**P**	**01 39 32.3**	**-0.3**
CLNS				*e*		01 40 36.2	
CLNS				*e*		01 41 31.0	
CLNS				*e*PPP	PPP	01 42 36.9	-1.2
CLNS				*e*S	**S**	**01 47 06.2**	**+10**
CLNS				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
CLNS				pmax	pmax		
	comp=N,66nm,1.2s						
CLNS				pmax	pmax		
	comp=E,61nm,1.3s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
CLNS				pmax	pmax		
	comp=E,11nm,1.2s						
CLNS				smax			
	comp=E,6.0nm,0.8s						
CLNS				smax			
	comp=N,5.0nm,0.7s						
CLNS				smax			
	comp=Z,4.0nm,0.7s						
CLNS				MLR	MLR		
	comp=N,673nm,13.0s,MS4.9						
CLNS				MLR	MLR		
	comp=E,262nm,13.0s,MS4.9						

CLNS				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.2						
GNI	**Garni**	**52.91**	**313**	*i* P	**P**	**01 39 35.5**	**+0.4**
GNI				pmax	pmax		
	comp=Z,67nm,1.7s						
GNI	**Garni**	**52.91**	**313**	*e*P	**P**	**01 39 35.2**	**+0.1**
	comp=Z,259nm,1.4s,mb6.0						
GNI				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
MTA	**Mtatsminda**	**53.43**	**315**	P	**P**	**01 39 38.7**	**-0.3**
SVE	**Sverdlovsk**	**53.46**	**338**	⇓*e*P	**P**	**01 39 35.0**	**-3.9**
SVE				*e*S	**S**	**01 47 13.0**	**+5.4**
SVE				pmax	pmax		
	comp=Z,90nm,2.0s,mb5.3						
SVE				MLR	MLR		
	comp=N,2µm,22.0s,MS5.2						
SVE				MLR	MLR		
	comp=E,2µm,22.0s,MS5.2						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.2						
TI2	**Plekhanov**	**53.48**	**315**	⇑*i*P	**P**	**01 39 40.6**	**+1.3**
TI2				*e*S	**S**	**01 47 15.2**	**+7.2**
TI2				*i* S	**S**	**01 47 15.2**	**+7.2**
TI2				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
DUS	**Dusheti**	**53.64**	**316**	P	**P**	**01 39 40.3**	**-0.2**
ARU	**Arti**	**53.96**	**337**	⇑*i*P	**P**	**01 39 34.6**	**-8.1**
ARU				*e*		01 41 39.4	
ARU				*e*S	**S**	**01 47 04.3**	**-10**
ARU				*e*SS	SS	01 50 48.8	-6.4
ARU				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.0						
ARU				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.5						
ARU				MLR	MLR		
	comp=N,3µm,22.0s,MS5.4						
ARU				MLR	MLR		
	comp=E,2µm,23.0s,MS5.4						
AKH	**Akhalkalaki**	**54.24**	**314**	P	**P**	**01 39 47.6**	**+2.7**
ONI	**Oni**	**54.69**	**316**	P	**P**	**01 39 48.2**	**0.0**
ERZM	**Erzurum**	**55.27**	**312**	*i* P	**P**	**01 39 53.3**	**+0.8**
YSS	**Yuzh-Sakhalins**	**55.31**	**39**	⇑*e*P	**P**	**01 39 52.0**	**-0.6**
YSS				S	**S**	**01 47 43.0**	**+10**
YSS				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.6						
YSS				MLR	MLR		
	comp=N,800nm,14.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,500nm,14.0s,MS5.0						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**55.31**	**39**	*e*P	**P**	**01 39 52.2**	**-0.4**
YSS				LR	LR		
	comp=Z,938nm,19.0s,MS4.9						
KIV	**Kislovodsk**	**55.71**	**317**	P	**P**	**01 39 55.1**	**-0.4**
	comp=Z,450nm,1.0s,SNR=19						
KIV	**Kislovodsk**	**55.71**	**317**	*d i*P	**P**	**01 39 54.9**	**-0.6**
KIV				*e*		01 41 56.1	
KIV				*i* S	**S**	**01 47 42.3**	**+4.3**
KIV				*e*SS	SS	01 51 19.0	-4.3
KIV				pmax	pmax		
	comp=N,54nm,1.0s						
KIV				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.7						
KIV				smax			
	comp=N,437nm,2.5s						
KIV				smax			
	comp=E,226nm,2.5s						
KIV				MLR	MLR		
	comp=N,728nm,21.0s,MS4.9						
KIV				MLR	MLR		
	comp=E,893nm,21.0s,MS4.9						
KIV				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.9						
KIV	**Kislovodsk**	**55.71**	**317**	*e*P	**P**	**01 39 54.9**	**-0.6**
	comp=Z,78nm,1.0s,mb5.7						
KIV				LR	LR		
	comp=Z,279nm,22.0s,MS4.3						
GOF	**Gofitskoye**	**55.89**	**318**	*i* P	**P**	**01 39 59.0**	**+2.2**
GOF				*i*	pP	01 40 08.0	+1.1
PMG	**Port Moresby**	**56.32**	**108**	*e*P	**P**	**01 40 00.1**	**-0.2**
	comp=Z,40nm,0.8s,mb5.5						
PMG				LR	LR		
	comp=Z,858nm,20.0s,MS4.8						
SOKR	**Solikamsk**	**56.85**	**338**	⇓*i*P	**P**	**01 40 06.5**	**+3.0**
SOKR				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
SOKR				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.5						
MALT	**Malatya**	**57.03**	**309**	*e*P	**P**	**01 40 03.6**	**-1.5**
	comp=Z,15nm,1.0s,mb5.0						
GZT	**Gaziantep**	**57.46**	**308**	*i* P	**P**	**01 40 07.7**	**-0.5**
KMBO	**Kilima Mbogo**	**57.49**	**262**	*e*P	**P**	**01 40 09.7**	**+1.0**
	comp=Z,118nm,1.7s,mb5.6						
SOC	**Sochi**	**57.60**	**316**	*e*P	**P**	**01 40 08.3**	**-0.8**
SOC				*e*		01 40 59.6	
SOC				*e*		01 42 15.4	
SOC				*e*S	**S**	**01 48 04.4**	**+1.4**
SOC				*e*		01 49 52.6	
SOC				*e*SSS	SSS	01 54 16.8	+4.6
SOC				pmax	pmax		
	comp=N,31nm,1.0s						
SOC				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.4						
SOC				pmax	pmax		
	comp=E,52nm,1.2s						
SOC				MLR	MLR		
	comp=N,1µm,23.0s,MS5.1						
SOC				MLR	MLR		
	comp=Z,2µm,23.0s,MS5.1						
SOC				MLR	MLR		
	comp=E,1µm,21.0s,MS5.1						
KAHT	**Ahir Dag**	**58.06**	**308**	*i* P	**P**	**01 40 09.6**	**-2.8**
YAK	**Yakutsk**	**58.14**	**19**	*e*P	**P**	**01 40 09.5**	**-3.0**
YAK				*e*		01 41 02.8	
YAK				*e*S	**S**	**01 48 13.1**	**+3.3**
YAK				*e*		01 50 00.7	
YAK				*e*SS	SS	01 52 05.4	+2.4
YAK				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.4						
YAK				pmax	pmax		
	comp=N,21nm,1.2s						
YAK				pmax	pmax		
	comp=E,19nm,1.2s						
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
YAK				smax			
	comp=N,4.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,835nm,17.0s,MS4.9						
YAK				MLR	MLR		
	comp=N,471nm,15.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,490nm,14.0s,MS4.9						
YAK	**Yakutsk**	**58.14**	**19**	*e*P	**P**	**01 40 10.1**	**-2.4**
	comp=E,101nm,1.0s,mb5.8						
EIL	**Elat**	**58.28**	**299**	*e*P	**P**	**01 40 12.9**	**-1.1**
	comp=E,37nm,1.3s,mb5.2						
CTA	**Charters Tower**	**59.47**	**120**	*e*P	**P**	**01 40 22.5**	**+0.1**
	comp=E,21nm,1.2s,mb5.0						
CTAO	**Charters Tower**	**59.47**	**120**	*e*P	**P**	**01 40 21.3**	**-1.1**
	comp=E,47nm,1.3s,mb5.3						
CTAO				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
ANN	**Anapa**	**59.54**	**316**	*e*P	**P**	**01 40 23.2**	**+0.7**
ANN				*e*S	**S**	**01 48 31.5**	**+3.2**
ANN				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
AVNT	**Avonos**	**59.86**	**309**	*i* P	**P**	**01 40 24.0**	**-0.9**
VOR	**Voronezh**	**60.83**	**324**	P	**P**	**01 40 29.7**	**-1.5**
VOR				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.7						
ELDT	**Eldivan**	**61.30**	**311**	*i* P	**P**	**01 40 31.7**	**-2.9**
BALT	**Daday**	**61.55**	**312**	*i* P	**P**	**01 40 36.4**	**+0.1**
STKA	**Stephens Creek**	**61.64**	**134**	*e*P	**P**	**01 40 36.9**	**-0.1**
	comp=Z,26nm,1.1s,mb5.3						
SIM	**Simferopol’**	**61.84**	**316**	*e*P	**P**	**01 40 36.1**	**-2.1**
SIM				*e*S	**S**	**01 48 53.0**	**-4.8**
SIM				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
SIM				MLR	MLR		
	comp=Z,1µm,23.0s,MS5.0						
ISP	**Isparta**	**63.06**	**307**	*i* P	**P**	**01 40 45.5**	**-0.9**
ESKT	**Eskisehir**	**63.06**	**309**	*i* P	**P**	**01 40 43.1**	**-3.3**
MOS	**Moscow**	**63.26**	**328**	*e*P	**P**	**01 40 45.9**	**-1.6**
MOS				*e*		01 41 22.4	
MOS				*e*		01 43 03.1	
MOS				*e*S	**S**	**01 49 17.2**	**+1.9**
MOS				pmax	pmax		
	comp=Z,86nm,1.5s,mb5.7						
MOS				MLR	MLR		
	comp=Z,2µm,22.5s,MS5.3						
MOS				MLR	MLR		
	comp=N,2µm,20.7s						
OBN	**Obninsk**	**63.58**	**327**	*e*P	**P**	**01 40 44.0**	**-5.6**
	comp=N,94nm,1.4s,mb5.6						
OBN				LR	LR		
	comp=Z,419nm,22.0s,MS4.6						
MBAR	**Mbarara**	**63.76**	**264**	*i* P	**P**	**01 40 52.2**	**+0.8**
MBAR	**Mbarara**	**63.76**	**264**	*e*P	**P**	**01 40 51.4**	**-0.1**
	comp=Z,23nm,1.0s,mb5.2						
ULDT	**Uludag**	**64.46**	**310**	*i* P	**P**	**01 40 52.7**	**-2.8**
MA2	**Magadan**	**65.06**	**28**	*i* P	**P**	**01 40 58.9**	**-0.2**
MA2				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.5						
MA2	**Magadan**	**65.06**	**28**	*e*P	**P**	**01 40 57.8**	**-1.3**
	comp=Z,53nm,1.0s,mb5.5						
TIXI	**Tiksi**	**65.29**	**12**	⇓*i*P	**P**	**01 40 58.2**	**-2.2**
TIXI				*e*S	S	01 49 40.0	-0.1
TIXI				*e*SS	SS	01 53 52.8	-2.1
TIXI				*e*SSS	SSS	01 56 40.7	-6.7
TIXI				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,490nm,16.0s,MS4.8						
TIXI	**Tiksi**	**65.29**	**12**	*i* P	**P**	**01 40 58.3**	**-2.1**
KIS	**Kishinev**	**65.91**	**317**	*e*P	**P**	**01 41 02.0**	**-2.7**
KIS				*e*	pP	01 41 14.0	-1.1
KIS				MLR	MLR		
	comp=Z,1µm,10.0s,MS5.3						
KIS				MLR	MLR		
	comp=Z,500nm,20.0s						
CFR	**Carcaliu**	**66.03**	**315**	⇑*i*P	**P**	**01 41 04.6**	**-1.0**
BUC1	**Bucharest**	**67.38**	**314**	P	**P**	**01 41 16.1**	**+2.1**
TOO	**Toolangi**	**67.47**	**138**	*e*P	**P**	**01 41 16.2**	**+1.5**
	comp=Z,1.5nm,0.9s						
MLR	**Muntele Rosu**	**67.61**	**315**	⇓*i*P	**P**	**01 41 14.8**	**-0.6**
MTUR	**Matau**	**68.18**	**315**	P	**P**	**01 41 18.6**	**-0.5**
BURAR	**Bucovina Array**	**68.43**	**317**	⇓P	**P**	**01 41 20.3**	**-0.3**
JOF	**Joensuu**	**68.95**	**334**	*e*p	**P**	**01 41 18.0**	**-5.5**
	comp=Z,24nm,1.0s,mb5.1						
JOF	**Joensuu**	**68.95**	**334**	*e*P	**P**	**01 41 18.0**	**-5.5**
JOF				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
VTS	**Vitosha**	**69.20**	**312**	P	**P**	**01 41 24.2**	**-1.2**
VAY	**Valandovo**	**69.56**	**310**	*i* P	**P**	**01 41 26.0**	**-1.6**
LSZ	**Lusaka**	**69.79**	**250**	*e*P	**P**	**01 41 29.8**	**+0.4**
	comp=Z,41nm,1.3s,mb5.2						
APA	**Apatity**	**69.89**	**339**	⇑*i*P	**P**	**01 41 32.0**	**+2.8**
APA				*i*		01 41 39.6	
APA				*i*		01 41 51.0	
APA				*e*		01 51 04.0	
APA				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
APA				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
BOLS	**Boljevac**	**70.22**	**313**	⇓*i*P	**P**	**01 41 32.7**	**+1.1**
KWP	**Kalwaria**	**70.38**	**319**	*e*P	**P**	**01 41 31.6**	**-0.9**
KWP				*e*		01 41 38.0	
SKO	**Skopje**	**70.45**	**311**	*e*P	**P**	**01 41 31.0**	**-2.1**
KOLS	**Kolonicke sedl**	**70.57**	**318**	*e*P	**P**	**01 41 35.4**	**+1.8**
KOLS				*e*pP	pP	01 41 45.3	+1.4
SUW	**Suwalki**	**70.76**	**324**	*e*P	**P**	**01 41 33.0**	**-1.7**
KAF	**Kangasniemi**	**70.91**	**333**	*e*p	**P**	**01 41 35.8**	**+0.3**
	comp=Z,21nm,0.9s,mb5.1						
KAF	**Kangasniemi**	**70.91**	**333**	*e*P	**P**	**01 41 35.8**	**+0.3**
KAF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
CRVS	**Cervenica-Dubn**	**71.10**	**318**	*i* P	**P**	**01 41 37.4**	**+0.6**
DIVS	**Divcibare**	**71.66**	**313**	⇑*i*P	**P**	**01 41 41.1**	**+0.8**
NIE	**Niedzica**	**71.90**	**319**	*e*P	**P**	**01 41 41.2**	**-0.4**
PSZ	**Piszkesteto**	**72.03**	**317**	P	**P**	**01 41 44.6**	**+2.2**
PSZ	**Piszkesteto**	**72.03**	**317**	*e*P	**P**	**01 41 40.6**	**-1.8**
	comp=Z,16nm,1.1s,mb4.9						
OJC	**Ojcow**	**72.31**	**320**	*e*P	**P**	**01 41 43.0**	**-1.0**
VYHS	**Vyhne**	**72.79**	**318**	*i* P	**P**	**01 41 47.8**	**+0.9**
VYHS				*i*		01 41 53.1	
KEV	**Kevo**	**72.87**	**340**	*e*p	**P**	**01 41 47.9**	**+0.9**
	comp=Z,25nm,1.0s,mb5.1						
KEV	**Kevo**	**72.87**	**340**	*e*P	**P**	**01 41 47.9**	**+0.9**
KEV				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
SRO2	**Moca**	**73.03**	**317**	*i* P	**P**	**01 41 51.3**	**+2.9**
SRO2	**Moca**	**73.03**	**317**	*i*	**P**	**01 41 51.3**	**+2.9**
SRO	**Srobarova**	**73.09**	**317**	*i* P	**P**	**01 41 52.0**	**+3.3**
SRO	**Srobarova**	**73.09**	**317**	*i*	**P**	**01 41 52.0**	**+3.3**
OKC	**Ostrava-Krasne**	**73.34**	**319**	*e*P	**P**	**01 41 49.5**	**-0.7**
SMOL	**Smolenice**	**73.72**	**318**	*i* P	**P**	**01 41 55.8**	**+3.4**
MORC	**Moravsky Berou**	**73.73**	**319**	P	**P**	**01 41 52.6**	**+0.2**
MORC	**Moravsky Berou**	**73.73**	**319**	*e*P	**P**	**01 41 51.4**	**-1.0**
	comp=Z,29nm,1.1s,mb5.1						
ZST	**Bratislava**	**73.92**	**317**	*i* P	**P**	**01 41 53.5**	**-0.1**
BILL	**Bilibino**	**74.28**	**22**	*i* P	**P**	**01 41 53.4**	**-1.8**
BILL				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
BILL	**Bilibino**	**74.28**	**22**	*e*P	**P**	**01 41 54.1**	**-1.1**
	comp=Z,9.2nm,1.1s,mb4.6						
BILL				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
DPC	**Dobruska-Polom**	**74.55**	**320**	*e*P	**P**	**01 41 56.9**	**-0.2**
DPC				AMS	AMS	02 22 20.0	
	comp=Z,500nm,16.8s						
KSP	**Ksiaz**	**74.59**	**320**	*e*P	**P**	**01 41 57.0**	**-0.4**
KSP				*e*		01 41 59.5	
KSP				*e*pP	pP	01 42 08.0	+0.3
KSP				*e*S	S	01 51 31.0	+1.6
KSP				LR	LR		
	comp=Z,1µm,24.0s,MS5.1						
KSP	**Ksiaz**	**74.59**	**320**	*e*P	**P**	**01 41 59.0**	**+1.6**
KSP				*e*		01 42 03.6	
UPC	**Upice**	**74.75**	**320**	*e*P	**P**	**01 41 58.2**	**-0.1**
ARSA	**Arzberg**	**74.95**	**316**	⇑*i*P	**P**	**01 41 59.3**	**-0.2**
	comp=Z,28nm,1.8s,mb4.9						
DOBS	**Dobrina**	**74.95**	**315**	*e*P	**P**	**01 42 00.9**	**+1.3**
LBTB	**Lobatse**	**75.06**	**241**	*e*P	**P**	**01 42 00.6**	**-0.1**
	comp=Z,38nm,0.9s,mb5.3						
LBTB				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
BOJS	**Bojanci**	**75.09**	**314**	*e*P	**P**	**01 41 59.9**	**-0.5**
PERS	**Pernice**	**75.21**	**316**	*e*P	**P**	**01 42 02.3**	**+1.3**
VISS	**Visnje**	**75.39**	**315**	*e*P	**P**	**01 42 01.8**	**-0.3**
OBKA	**Obir**	**75.60**	**315**	⇓*i*P	**P**	**01 42 03.0**	**-0.3**
	comp=Z,26nm,1.2s,mb5.0						
LJU	**Ljubljana**	**75.61**	**315**	*e*P	**P**	**01 42 05.5**	**+2.1**
LJU				*i* PcP	PcP	01 42 10.1	-6.4
PVCC	**Panska Ves**	**75.68**	**320**	*e*P	**P**	**01 42 03.1**	**-0.5**
PVCC				AMS	AMS	02 19 50.0	
	comp=Z,700nm,18.9s						
PRU	**Pruhonice**	**75.68**	**319**	*e*P	**P**	**01 42 02.9**	**-0.7**
PRU				AMS	AMS	02 18 00.0	
	comp=Z,700nm,22.2s						
VOJS	**Vojsko**	**76.06**	**315**	*e*P	**P**	**01 42 04.7**	**-1.2**
BRG	**Berggiesshubel**	**76.08**	**320**	*i* P	**P**	**01 42 08.2**	**+2.3**
BRG				*e*	pP	01 42 17.5	+1.3
BRG				pmax	pmax		
	comp=Z,53nm,1.7s,mb5.2						
BRG	**Berggiesshubel**	**76.08**	**320**	*i* P	**P**	**01 42 08.2**	**+2.3**
	comp=Z,53nm,1.7s,mb5.2						
BRG				*i*		01 42 12.2	
BRG				*e*	pP	01 42 17.5	+1.3
GEC2	**GERESS Array S**	**76.20**	**318**	*e*P	**P**	**01 42 06.4**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
GEC2	**GERESS Array S**	**76.20**	**318**	*e*P	**P**	**01 42 06.4**	**-0.2**
	comp=Z,9.0nm,0.9s,mb4.7						
RUE	**Ruedersdorf**	**76.23**	**322**	*e*P	**P**	**01 42 05.1**	**-1.6**
	comp=Z,47nm,1.0s,mb5.4						
KHC	**Kasperske Hory**	**76.29**	**318**	*e*P	**P**	**01 42 06.0**	**-1.1**
KHC				AMS	AMS	02 17 10.0	
	comp=Z,700nm,20.3s						
PTCC	**Patocco-Chiusa**	**76.42**	**315**	*e*P	**P**	**01 42 07.1**	**-0.9**
BOSA	**Boshof**	**76.51**	**237**	*e*P	**P**	**01 42 09.1**	**+0.3**
	comp=Z,47nm,1.0s,mb5.4						
CLL	**Collm**	**76.69**	**320**	⇑*i*P	**P**	**01 42 10.1**	**+0.8**
CLL				*i*		01 42 15.5	
CLL				*i*	pP	01 42 19.6	-0.1
CLL				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
CLL				MLR	MLR		
	comp=Z,800nm,20.3s,MS5.0						
CLL	**Collm**	**76.69**	**320**	⇑*i*P	**P**	**01 42 10.1**	**+0.8**
	comp=Z,30nm,1.5s,mb5.0						
CLL				*i*		01 42 15.5	
CLL				*i*	pP	01 42 19.6	-0.1
CLL				LR	LR		
	comp=Z,800nm,20.3s,MS5.0						
CLL	**Collm**	**76.69**	**320**	⇑P	**P**	**01 42 10.1**	**+0.8**
	comp=Z,logA/T=1.3,mb5.0						
CLL				*i*		01 42 15.5	
CLL				*i* *PP	pP	01 42 19.6	-0.1
CLL				*e*PP	PP	01 45 03.0	-0.4
WET	**Wettzell**	**76.75**	**318**	*e*P	**P**	**01 42 09.5**	**-0.2**
WET				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WET	**Wettzell**	**76.75**	**318**	*e*P	**P**	**01 42 09.5**	**-0.2**
	comp=Z,7.0nm,1.0s,mb4.5						
FVI	**Forni Avoltri**	**76.82**	**316**	*e*P	**P**	**01 42 09.8**	**-0.4**
NKC	**Novy Kostel**	**77.03**	**319**	*e*P	**P**	**01 42 14.3**	**+3.0**
NKC				AMS	AMS	02 18 50.0	
	comp=Z,700nm,21.8s						
SFI	**Santa Sofia**	**77.53**	**313**	*e*P	**P**	**01 42 15.5**	**+1.3**
MOX	**Moxa**	**77.56**	**320**	*e*P	**P**	**01 42 15.5**	**+1.2**
MOX				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.0						
MOX				MLR	MLR		
	comp=Z,600nm,21.0s,MS4.9						
MOX	**Moxa**	**77.56**	**320**	*e*P	**P**	**01 42 15.5**	**+1.2**
	comp=Z,32nm,1.6s,mb5.0						
MOX				LR	LR		
	comp=Z,600nm,21.0s,MS4.9						
MOX	**Moxa**	**77.56**	**320**	*i* P	**P**	**01 42 15.5**	**+1.2**
	comp=Z,logA/T=1.3,mb5.0						
MOX				QM		02 20 18.0	
MOX				RM		02 21 49.0	
WTTA	**Wattenberg**	**77.59**	**316**	⇑*i*P	**P**	**01 42 13.7**	**-0.8**
	comp=Z,33nm,1.3s,mb5.1						
CTI	**Castel Tesino**	**77.61**	**315**	*e*P	**P**	**01 42 14.2**	**-0.5**
PGD	**Poggio Sodo**	**77.62**	**313**	*e*P	**P**	**01 42 16.0**	**+1.2**
WATA	**Walderalm**	**77.63**	**316**	⇑*i*P	**P**	**01 42 13.6**	**-1.1**
	comp=Z,14nm,1.1s,mb4.8						
VMG	**Vicchio**	**77.75**	**313**	*e*P	**P**	**01 42 16.2**	**+0.7**
FUR	**Furstenfeldbru**	**77.82**	**317**	*e*P	**P**	**01 42 15.0**	**-0.7**
GRA1	**Grafenberg Arr**	**77.83**	**319**	*e*P	**P**	**01 42 15.9**	**+0.2**
	comp=Z,20nm,1.1s,mb5.0						
GRF	**Grafenberg Arr**	**77.83**	**319**	*e*P	**P**	**01 42 15.9**	**+0.2**
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
GRF	**Grafenberg Arr**	**77.83**	**319**	*e*P	**P**	**01 42 15.9**	**+0.2**
	comp=Z,20nm,1.1s,mb5.0						
NB2	**NORSAR Subarra**	**77.88**	**330**	P	**P**	**01 42 14.4**	**-1.4**
	comp=Z,25nm,1.1s,mb5.1,baz=93,slow=5.6						
NB2	**NORSAR Subarra**	**77.88**	**330**	P	**P**	**01 42 14.4**	**-1.4**
	baz=93,slow=5.6						
SQTA	**Sankt Quirin**	**77.89**	**316**	⇓*i*P	**P**	**01 42 14.8**	**-1.3**
	comp=Z,29nm,1.4s,mb5.0						
MOTA	**Moosalm**	**77.95**	**316**	⇓*i*P	**P**	**01 42 15.2**	**-1.3**
	comp=Z,18nm,1.1s,mb4.9						
CLZ	**Clausthal**	**78.33**	**321**	*e*P	**P**	**01 42 18.2**	**-0.2**
	comp=Z,12nm,0.9s,mb4.8						
GSCL	**Gusciola**	**78.42**	**313**	*e*P	**P**	**01 42 21.4**	**+2.3**
BRMO	**Bormio**	**78.48**	**316**	*e*P	**P**	**01 42 19.3**	**-0.1**
DAVA	**Damuels**	**78.79**	**316**	⇑*i*P	**P**	**01 42 20.8**	**-0.3**
	comp=Z,40nm,1.3s,mb5.2						
TOD	**Tromm**	**79.40**	**319**	*e*P	**P**	**01 42 25.6**	**+1.3**
TNS	**Taunus Mts**	**79.60**	**319**	*e*P	**P**	**01 42 25.2**	**-0.2**
VAI	**Varese**	**79.63**	**315**	*e*P	**P**	**01 42 24.6**	**-1.1**
BFO	**Black Forest**	**79.78**	**317**	*e*P	**P**	**01 42 25.7**	**-0.7**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BFO	**Black Forest**	**79.78**	**317**	*e*P	**P**	**01 42 25.7**	**-0.7**
	comp=Z,6.0nm,1.0s,mb4.5						
FELD	**Feldberg**	**80.03**	**317**	*e*P	**P**	**01 42 27.6**	**-0.1**
LANF	**Langenberg**	**80.09**	**318**	*e*P	**P**	**01 42 27.9**	**-0.1**
ABH	**Alteburg**	**80.20**	**319**	*e*P	**P**	**01 42 28.7**	**+0.1**
LIBD	**Limburg**	**80.28**	**317**	*e*P	**P**	**01 42 28.8**	**-0.3**
CDF	**Champ du Feu**	**80.47**	**318**	*e*P	**P**	**01 42 29.1**	**-1.0**
	comp=Z,33nm,1.2s,mb4.8						
MAW	**Mawson**	**80.48**	**192**	*e*P	**P**	**01 42 30.3**	**+0.5**
RUP	**Ruppelstein**	**80.52**	**319**	*e*P	**P**	**01 42 30.6**	**+0.2**
ECH	**Echery**	**80.57**	**317**	*e*P	**P**	**01 42 30.7**	**+0.1**
TSUM	**Tsumeb**	**80.59**	**249**	*e*P	**P**	**01 42 31.9**	**+0.6**
	comp=Z,14nm,0.9s,mb4.9						
HINF	**Hinteralfeld**	**80.80**	**317**	*e*P	**P**	**01 42 30.8**	**-1.1**
LOMF	**Lomont**	**80.86**	**317**	*e*P	**P**	**01 42 33.0**	**+0.8**
LPG	**La Plagne**	**81.07**	**315**	*e*P	**P**	**01 42 33.2**	**-0.1**
	comp=Z,92nm,1.1s,mb5.3						
LPL	**La Plagne**	**81.08**	**315**	*e*P	**P**	**01 42 33.2**	**-0.2**
	comp=Z,134nm,1.0s,mb5.5						
HAU	**Haudompre**	**81.13**	**317**	*e*P	**P**	**01 42 32.6**	**-1.0**
	comp=Z,60nm,1.1s,mb5.1						
HAU				*e*R			
	comp=Z,672nm,21.2s						
BNI	**Bardonecchia**	**81.16**	**314**	*e*P	**P**	**01 42 34.8**	**+1.0**
	comp=Z,20nm,0.8s,mb5.1						
SUR	**Sutherland**	**81.34**	**235**	*e*P	**P**	**01 42 35.7**	**+0.7**
	comp=Z,34nm,0.9s,mb5.3						
CABF	**La Chapelle**	**81.43**	**316**	*e*P	**P**	**01 42 34.9**	**-0.3**
	comp=Z,38nm,1.0s,mb5.0						
ORIF	**Oris-en-Rattie**	**81.73**	**314**	*e*P	**P**	**01 42 36.5**	**-0.3**
	comp=Z,27nm,1.0s,mb4.8						
ORIF				*e*R			
	comp=Z,634nm,22.2s						
MEZF	**Maizieres J’vi**	**81.94**	**318**	*e*P	**P**	**01 42 37.2**	**-0.6**
BAIF	**Baives**	**82.33**	**319**	*e*P	**P**	**01 42 39.4**	**-0.4**
	comp=Z,50nm,1.2s,mb5.0						
VIVF	**Saint-Julien-l**	**82.59**	**314**	*e*P	**P**	**01 42 40.8**	**-0.4**
SMF	**Signal de Mont**	**82.96**	**316**	*e*P	**P**	**01 42 42.2**	**-0.8**
	comp=Z,53nm,1.1s,mb5.2						
SSF	**Saint Saulge**	**83.14**	**316**	*e*P	**P**	**01 42 43.3**	**-0.6**
PLDF	**La Plantade**	**83.20**	**315**	*e*P	**P**	**01 42 44.0**	**-0.3**
AVF	**Avril sur Loir**	**83.28**	**316**	*e*P	**P**	**01 42 43.9**	**-0.8**
	comp=Z,73nm,1.4s,mb5.2						
AGO	**Saint Agoulin**	**83.53**	**316**	*e*P	**P**	**01 42 45.7**	**-0.3**
BGF	**Bois d’Agland**	**83.65**	**316**	*e*P	**P**	**01 42 46.2**	**-0.4**
HYF	**Humbligny**	**83.70**	**317**	*e*P	**P**	**01 42 46.5**	**-0.3**
TCF	**Toulx Ste Croi**	**84.13**	**316**	*e*P	**P**	**01 42 48.7**	**-0.3**
	comp=Z,44nm,1.3s,mb5.1						
CAF	**Calviac**	**84.42**	**314**	*e*P	**P**	**01 42 50.5**	**0.0**
MTLF	**Montolieu**	**84.54**	**313**	*e*P	**P**	**01 42 51.1**	**-0.1**
	comp=Z,79nm,1.3s,mb5.4						
LDF	**La Druitiere**	**85.34**	**318**	*e*P	**P**	**01 42 54.5**	**-0.5**
	comp=Z,70nm,1.2s,mb5.4						
DAG	**Danmarks Havn**	**85.46**	**348**	⇓*e*P	**P**	**01 42 54.6**	**-0.4**
DAG				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.1						
DAG	**Danmarks Havn**	**85.46**	**348**	⇓*e*P	**P**	**01 42 54.6**	**-0.4**
	comp=Z,19nm,1.3s,mb5.1						
DAG	**Danmarks Havn**	**85.46**	**348**	⇓*i*P	**P**	**01 42 54.6**	**-0.4**
	comp=Z,19nm,1.3s,mb5.1						
FLN	**La Foliniere**	**85.54**	**319**	*e*P	**P**	**01 42 55.5**	**-0.5**
	comp=Z,78nm,1.2s,mb5.5						
FLN				*e*R			
	comp=Z,701nm,23.0s						
MFF	**Saint Martin d**	**85.69**	**316**	*e*P	**P**	**01 42 56.3**	**-0.4**
	comp=Z,70nm,1.2s,mb5.5						
GRR	**Gorron**	**85.86**	**318**	*e*P	**P**	**01 42 57.3**	**-0.2**
	comp=Z,126nm,1.7s,mb5.6						
SYO	**Syowa Base**	**87.28**	**197**	⇓P	**P**	**01 43 08.4**	**+4.4**
SYO	**Syowa Base**	**87.28**	**197**	⇓pP	pP	01 43 19.2	+4.6
QUIF	**Quistinic**	**87.46**	**318**	*e*P	**P**	**01 43 04.7**	**-0.7**
EVIA	**Vianos**	**88.88**	**309**	P	**P**	**01 43 12.7**	**+0.3**
ENIJ	**Nijar**	**88.99**	**307**	P	**P**	**01 43 13.3**	**+0.4**
	comp=Z,13nm,0.8s,mb5.3						
EQES	**Quesada**	**89.49**	**308**	P	**P**	**01 43 17.2**	**+1.9**
	comp=Z,25nm,1.3s,mb5.4						
EBER	**Berja**	**89.54**	**307**	P	**P**	**01 43 18.9**	**+3.3**
	comp=Z,83nm,1.9s,mb5.7						
GUD	**Guadarrama**	**89.71**	**311**	P	**P**	**01 43 16.9**	**+0.6**
	comp=Z,6.6nm,0.9s,mb5.0						
ESDC	**Sonseca Array**	**89.78**	**310**	P	**P**	**01 43 17.3**	**+0.7**
	comp=Z,12nm,1.3s,mb5.0						
IMA	**Indian Mountai**	**89.82**	**22**	*e*P	**P**	**01 43 17.9**	**+1.7**
	comp=Z,1.3nm,0.7s,mb4.4						
ELUQ	**Luque**	**90.47**	**308**	P	**P**	**01 43 22.6**	**+2.7**
	comp=Z,9.7nm,1.0s,mb5.1						
EADA	**Adamuz**	**90.58**	**309**	P	**P**	**01 43 21.3**	**+0.9**
	comp=Z,43nm,1.6s,mb5.5						
EMIJ	**Mijas**	**91.09**	**307**	P	**P**	**01 43 24.1**	**+1.3**
	comp=Z,13nm,0.7s,mb5.4						
ESPR	**Espera**	**91.87**	**308**	P	**P**	**01 43 28.7**	**+2.3**
	comp=Z,12nm,1.2s,mb5.1						
SUMG	**Summit**	**92.13**	**347**	*e*P	**P**	**01 43 27.7**	**+0.9**
	comp=Z,31nm,1.3s,mb5.5						
EMIN	**Mina Concepcio**	**92.28**	**309**	P	**P**	**01 43 30.5**	**+2.2**
	comp=Z,8.4nm,0.9s,mb5.1						
INK	**Inuvik**	**95.10**	**16**	*e*P	**P**	**01 43 39.8**	**-0.7**

	comp=Z,4.1nm,0.9s,mb4.9						
RES	Resolute Bay	95.39	2	eP	P	01 43 41.5	-0.1
	comp=Z,16nm,1.2s,mb5.3						
MSO	Missoula	118.27	21	ePKPdf	PKPdf	01 49 04.5	+0.5
ULM	Lac du Bonnet	119.48	7	ePKPdf	PKPdf	01 49 06.4	+0.1
BOZ	Bozeman (W)	120.10	20	ePKPdf	PKPdf	01 49 08.8	+1.1
LAO	LASA Array	120.84	16	ePKPdf	PKPdf	01 49 11.1	+2.1
QLMT	Earthquake Lak	120.88	21	ePKPdf	PKPdf	01 49 11.4	+2.2
YMR	Madison River	121.19	21	ePKPdf	PKPdf	01 49 12.3	+2.5
YFT	Old Faithful	121.42	21	ePKPdf	PKPdf	01 49 11.6	+1.4
LKWY	Lake	121.47	20	ePKPdf	PKPdf	01 49 12.1	+1.8
IMW	Indian Meadow	121.87	21	ePKPdf	PKPdf	01 49 13.3	+2.3
MOOW	Moose Ponds	122.07	21	ePKPdf	PKPdf	01 49 13.2	+1.7
RRI2	Red Ridge	122.21	22	ePKPdf	PKPdf	01 49 13.5	+1.8
LOHW	Long Hollow	122.24	21	ePKPdf	PKPdf	01 49 13.8	+1.9
SNOW	Snow King Moun	122.31	21	ePKPdf	PKPdf	01 49 14.3	+2.3
MNV	Mina	123.34	30	ePKPdf	PKPdf	01 49 14.2	+0.1
HWUT	Hardware Ranch	123.62	23	ePKPdf	PKPdf	01 49 15.6	+1.1
JLU	Jordanelle	124.53	23	ePKPdf	PKPdf	01 49 16.9	+0.6
TRCR	Troy Canyon	124.64	28	ePKPdf	PKPdf	01 49 18.9	+2.2
MIV	Mineville/With	125.09	349	ePKPdf	PKPdf	01 49 19.1	+1.7
TMUT	Trail Mountain	125.74	24	ePKPdf	PKPdf	01 49 20.9	+2.2
PHWY	Pilot Hill	126.00	18	ePKPdf	PKPdf	01 49 20.5	+1.3
MVU	Marysvale	126.00	25	ePKPdf	PKPdf	01 49 22.1	+2.9
MSU	Marysvale	126.01	25	ePKPdf	PKPdf	01 49 22.1	+2.9
PV10	Paradox Valley	127.39	23	ePKPdf	PKPdf	01 49 23.9	+2.0
PV01	Paradox Valley	127.78	22	ePKPdf	PKPdf	01 49 24.7	+2.0
SDCO	Great Sand Dun	129.22	20	ePKPdf	PKPdf	01 49 30.2	+4.7
ACSO	Alum Creek Sta	130.04	357	ePKPdf	PKPdf	01 49 27.6	+0.7
ANMO	Albuquerque	131.38	22	ePKPdf	PKPdf	01 49 31.5	+1.9
TUC	Tucson	131.82	28	ePKPdf	PKPdf	01 49 32.7	+2.2
LPM	Los Pinos Moun	131.88	23	ePKPdf	PKPdf	01 49 32.8	+2.2
WMOK	Wichita Mounta	133.99	15	PKPdf	PKPdf	01 49 33.2	-1.4
CPRX	Cap Rock	134.04	21	ePKPdf	PKPdf	01 49 36.6	+1.8
GDL2	Guadalupe Moun	134.62	22	ePKPdf	PKPdf	01 49 37.3	+1.5
MNTX	Cornudas Mount	134.68	23	ePKPdf	PKPdf	01 49 37.6	+1.7
MIAR	Mount Ida	135.22	9	ePKPdf	PKPdf	01 49 36.4	-0.5
JCT	Junction City	137.72	18	ePKPdf	PKPdf	01 49 40.9	-0.7
TRQA	Tornquist	144.60	214	ePKPdf	PKPdf	01 49 53.3	-0.2
SFJM	Santa Fe	145.48	29	i P	PKPdf	01 49 57.0	+1.5
PLCA	Paso Flores	146.37	202	ePKPdf	PKPdf	01 49 58.6	+2.1
PPM	Popocatepetl	148.65	23	i P	PKPdf	01 50 04.5	+3.8
PPM				i P		01 50 05.0	
SDV	Santo Domingo	155.84	320	ePKPdf	PKPdf	01 50 12.9	+1.7
LPAZ	La Paz	161.44	248	ePKPdf	PKPdf	01 50 20.0	+2.2
OTAV	Otavalo	167.40	323	ePKPdf	PKPdf	01 50 25.1	+1.8

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*NEIC **02** 01:39:45.3, 15.77N×98.52W, MD3.8(MEX), After MEX.*

MEX 02 01:39:45.1±0.9**, 15.70N×98.55W, h8^{km}**±32^{km}**, MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.80	30	i P	Pb	01 39 58.3	-2.4
PNIG				i S	Sb	01 40 08.9	-2.6
ACX	Acapulco	1.75	312	eP	Pn	01 40 12.0	-4.0
ACX				i S	Sn	01 40 34.0	-4.7
VHO	Vista Hermosa	2.21	52	i P	Pn	01 40 20.1	-2.5
VHO				i S	Sn	01 40 45.8	-4.7
OXX	Oaxaca	2.23	52	eP	Pn	01 40 21.5	-1.3
OXX				i S	Sn	01 40 50.0	-0.7
PPM	Popocatepetl	3.35	359	eP	Pn	01 40 42.0	+3.2
PPM				i S	Sn	01 41 23.0	+3.8
CMIG	Matias Romero	3.78	68	eP	Pn	01 40 43.5	-1.4
CMIG				i S	Sn	01 41 27.7	-2.4
CMIG	Matias Romero	3.78	68	eP	Pn	01 40 42.4	-2.5
CMIG				i S	Sn	01 41 23.7	-6.4

MAN 02 01:45:41.1, 6.22N×124.80E, h32^{km}, mb4.4, ML3.2, MS3.0, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.84	20	⇑eP	Pn	01 45 56.8	0.0
KCP				i S	Sn	01 46 08.6	+0.5
CTBH	Cotabato--PC H	1.14	331	⇑iP	Pn	01 46 01.0	-0.1
CTBH				i S	Sn	01 46 22.5	+6.8
BUKP	Musuan	1.67	9	eP	Pn	01 46 08.1	-0.6
BUKP				eS	Sn	01 46 26.9	-2.4
PAGZ	Pagadian	2.15	319	eP	Pn	01 46 15.2	-0.3
PAGZ				eS	Sn	01 46 39.8	-1.5
CGP	Cagayan de Oro	2.23	357	⇓eP	Pn	01 46 17.2	+0.5
BIPH	Bislig	2.50	38	⇓eP	Pn	01 46 28.5	+8.0
DCPH	Dipolog City	2.75	329	i P	Pn	01 46 25.0	+0.8
DCPH				i S	Sn	01 46 54.9	-1.8
ZMPH	Zamboanga City	2.81	285	⇓iP	Pn	01 46 24.6	-0.4
SNPH	Sibulan	3.47	334	eP	Pn	01 46 49.0	+15
TBP	Tagbilaran	3.58	345	i P	Pn	01 46 39.8	+4.0

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*LDG **02** 02:09:14.3±0.2, 43.20N×15.51E, h10^{km}, Ml4.1/18, Error ellipse: s-maj=6.0km s-min=3.1km az=77.0*
*PDG **02** 02:09:15.1±1.8, 43.18N×15.23E, h2^{km}±1^{km}*
*MOS **02** 02:09:15.0±1.0, 43.24N×15.12E, h10^{km}, mb3.5/1, Error ellipse: s-maj=5.4km s-min=3.5km az=130.6*
*NEIC **02** 02:09:16.0, 43.16N×15.43E, h10^{km}, MD3.7(PDG), MD3.6(ROM), ML4.2(VIE), ML4.1(LDG), After ROM.*
*ZUR_RM **02** 02:09:16, 43.16N×15.43E, h4^{km}, Mw4.2/16, Moment Tensor Solution. s16 Moment tensor: Scale 10^{15}Nm; M$_{rr}$1.55; M$_{\theta\theta}$-1.35; M$_{\phi\phi}$-0.20; M$_{r\theta}$-1.18; M$_{\theta\phi}$0.61; M$_{\phi r}$-0.28; Best double couple: M$_0$1.99×10^{15} NP1:ϕ$_s$273°,δ64°,λ71°. NP2:ϕ$_s$131°,δ32°,λ123°. Principal axes: T 2.072, Plg66°, Azm149°; N -.165, Plg17°, Azm282°; P -1.907, Plg17°, Azm17°;*
*CSEM **02** 02:09:16.2±0.1, 43.21N×15.34E, h10^{km}, ML3.8/9 Error ellipse: s-maj=1.6km s-min=1.1km az=128.0*
*ROM **02** 02:09:16.0±0.3, 43.16N×15.43E, h10^{km}, MD3.6/15, ML3.8/9, Error ellipse: s-maj=3.6km s-min=1.8km az=90.0*
*STR **02** 02:09:23.1±1.8, 43.63N×14.71E, h5^{km}±1^{km}, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 02 02:09:16.0±0.3**, 43.09N**±0.02×**15.09E**±0.03**, h10^{km}, n191, σ1^{s}36**/68**, 14C-12D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	1.45	240	ePN	Pg	02 09 45.0	+0.1
RGNG	Rignano Grg	1.46	165	ePN	Pn	02 09 41.3	-1.3
RGNG	Rignano Grg	1.46	165	ePn	Pn	02 09 41.3	-1.2
NRCA	Norcia	1.48	261	ePN	Pg	02 09 44.6	-0.9
NRCA	Norcia	1.48	261	ePn	Pg	02 09 44.6	-0.8
CII	Carovilli	1.49	203	ePN	Pg	02 09 45.3	-0.4
CII	Carovilli	1.49	203	ePn	Pg	02 09 45.3	-0.4
MS1	Monte Sant'Ang	1.52	155	ePn	Pn	02 09 43.7	+0.3
FGMS	Monte Sant'Ang	1.52	155	ePN	Pn	02 09 43.8	+0.4
FGMS	Monte Sant'Ang	1.52	155	ePn	Pn	02 09 43.8	+0.4
SNTG	Esanatoglia	1.58	277	ePN	Pg	02 09 46.0	-1.6
	883nm,0.7s						
SNTG	Esanatoglia	1.58	277	ePn	Pg	02 09 46.0	-1.7
SNTG	Esanatoglia	1.58	277	ePn	Pg	02 09 46.0	-1.6
	883nm,0.7s						
ARV	Arcevia	1.62	285	ePN	Pg	02 09 46.4	-2.0
	310nm,0.6s						
ARV	Arcevia	1.62	285	ePn	Pg	02 09 46.4	-2.0
ARV	Arcevia	1.62	285	ePn	Pg	02 09 46.4	-2.0
	310nm,0.6s						
PTQR	Pietraquaria	1.65	230	ePN	Pg	02 09 47.8	-1.1
PTQR	Pietraquaria	1.65	230	ePn	Pg	02 09 47.8	-1.1
SDI	San Donato	1.68	215	ePN	Pg	02 09 48.4	-1.1
FSSB	Fossombrone	1.79	290	ePN	Pn	02 09 48.8	+1.6
	521nm,0.7s						
FSSB	Fossombrone	1.79	290	ePn	Pn	02 09 48.8	+1.5
FSSB	Fossombrone	1.79	290	ePn	Pn	02 09 48.8	+1.6
	521nm,0.7s						
MNS	Montasola	1.91	249	ePN	Pn	02 09 51.5	+2.5
	383nm,0.7s						
MNS	Montasola	1.91	249	ePn	Pn	02 09 51.5	+2.5
	383nm,0.7s						
STON	Ston	1.93	96	i Pn	Pn	02 09 45.9	-3.3
STON				i Sn	Sn	02 10 11.5	-2.1
STON	Ston	1.93	96	i Pn	Pn	02 09 45.8	-3.4
STON				i Sn	Sn	02 10 11.5	-2.1
CRE	Caprese Michel	2.35	284	ePN	Pn	02 09 57.8	+2.5
MRLC	Muro Lucano	2.35	173	ePN	Pn	02 09 54.5	-0.8
MRLC	Muro Lucano	2.35	173	ePn	Pn	02 09 54.5	-0.8
BOJS	Bojanci	2.41	3	i Pn	Pn	02 09 56.0	-0.1
BOJS				eSn	Sn	02 10 26.7	+0.7
	comp=Z,405nm,0.5s						
BOJS	Bojanci	2.41	3	Pn	Pn	02 09 56.0	-0.2
SFI	Santa Sofia	2.50	290	ePN	Pn	02 09 59.8	+2.4
BRY	Bratogost	2.54	93	⇓iPn	Pn	02 09 57.8	-0.2
BRY				eSn	Sn	02 10 30.2	+1.0
SG1	Sgolgore (BA)	2.54	152	ePn	Pn	02 09 57.5	-0.5
SISC	Sisak	2.55	21	i Pn	Pn	02 10 00.8	+2.7
SISC	Sisak	2.55	21	i Pn	Pn	02 10 00.8	+2.7
PGD	Poggio Sodo	2.58	289	ePN	Pn	02 10 01.1	+2.6
HCY	Herceg Novi	2.59	103	⇑iPn	Pn	02 09 58.7	0.0
HCY				eSn	Sn	02 10 32.2	+1.8
HCY	Herceg Novi	2.59	103	⇑iPn	Pn	02 09 58.7	0.0
HCY				eSn	Sn	02 10 32.2	+1.7
VMG	Vicchio	2.72	290	ePN	Pn	02 10 03.2	+2.6
	comp=Z,389nm,0.6s						
VMG	Vicchio	2.72	290	ePn	Pn	02 10 03.2	+2.6
VMG	Vicchio	2.72	290	ePn	Pn	02 10 03.2	+2.6
	comp=Z,389nm,0.6s						
TRI	Trieste	2.78	340	ePN	Pn	02 10 00.9	-0.6
	comp=Z,286nm,0.6s						
TRI	Trieste	2.78	340	ePn	Pn	02 10 00.9	-0.6
	comp=Z,286nm,0.6s						
UPM	Unac-Piva	2.80	86	⇓iPn	Pn	02 10 00.9	-0.7
UPM				eSn	Sn	02 10 36.2	+0.5
NKY	Niksic	2.88	94	⇓iPn	Pn	02 10 01.7	-1.1
NKY				eSn	Sn	02 10 38.2	+0.3
SEI	Scarperia	2.88	291	ePN	Pn	02 10 05.1	+2.3
	comp=Z,456nm,0.5s						
SEI	Scarperia	2.88	291	ePn	Pn	02 10 05.1	+2.3
SEI	Scarperia	2.88	291	ePn	Pn	02 10 05.1	+2.3
	comp=Z,456nm,0.5s						
JAVS	Javornik	2.90	346	i Pn	Pn	02 10 02.4	-0.7
JAVS				eSn	Sn	02 10 36.3	-1.9
JAVS	Javornik	2.90	346	i Pn	Pn	02 10 02.3	-0.7
JAVS				eSn	Sn	02 10 36.3	-2.0
BUM	Brajici-Budva	2.92	104	⇓iPn	Pn	02 10 03.1	-0.2
BUM				eSn	Sn	02 10 39.8	+1.0
LJU	Ljubljana	2.98	352	i P	Pn	02 10 04.3	+0.1
LJU				e		02 10 41.1	
LJU	Ljubljana	2.98	352	i Pn	Pn	02 10 04.3	+0.1
LJU				ePg	Pg	02 10 12.5	-3.0
LJU				eSn	Sn	02 10 41.1	+0.8
LJU				eSg	Sg	02 10 53.6	-1.6
VOY	Vojsko	3.06	344	ePn	Px	02 10 04.6	
VOY				eSn	Sx	02 10 43.8	
TTG	Podgorica	3.14	101	⇓iPn	Px	02 10 05.0	
TTG				eSn	Sx	02 10 45.2	
TTG	Podgorica	3.14	101	⇓iPn	Px	02 10 05.0	
TTG				eSn	Sx	02 10 45.2	
PLE	Pljevlja	3.15	84	⇓iPn	Px	02 10 05.4	
PLE				eSn	Sx	02 10 44.7	
ULC	Ulcinj	3.27	109	⇑iPn	Px	02 10 07.9	
ULC				eSn	Sx	02 10 48.6	
CADS	Cadrg	3.28	343	i Pn	Px	02 10 07.9	
ROBS	Robic	3.35	341	i Pn	Px	02 10 08.5	
PII	Pisa	3.39	282	ePN	Px	02 10 11.7	
PII					Sx		
	comp=Z,100nm,0.6s						
PII	Pisa	3.39	282	ePn	Px	02 10 11.7	
	comp=Z,100nm,0.6s						
OBKA	Obir	3.44	354	⇓iPN	Px	02 10 10.4	
OBKA				i SN	Sx	02 10 51.9	
OBKA				i SG	Sx	02 11 10.0	
	comp=Z,336nm,0.8s						
GMNA	Gemona	3.45	338	ePN	Px	02 10 10.2	
GMNA	Gemona	3.45	338	ePn	Px	02 10 10.2	
KOGS	Kog	3.46	13	i Pn	Px	02 10 09.3	
KOGS				eSn	Sx	02 10 43.8	
GSCL	Gusciola	3.50	293	ePN	Px	02 10 13.6	
GSCL					Sx		
	comp=Z,65nm,0.8s						
GSCL	Gusciola	3.50	293	ePn	Px	02 10 13.6	
IVA	Berane	3.53	92	⇓iPn	Px	02 10 11.3	
IVA				eSn	Sx	02 10 54.0	
PTCC	Patocco-Chiusa	3.54	340	ePN	Px	02 10 11.0	
PTCC					Sx		
	comp=Z,248nm,0.8s						
PTCC	Patocco-Chiusa	3.54	340	ePn	Px	02 10 11.0	
PTCC	Patocco-Chiusa	3.54	340	ePn	Px	02 10 11.0	
	comp=Z,248nm,0.8s						
PERS	Pernice	3.54	0	i Pn	Px	02 10 11.7	
PERS	Pernice	3.54	0	ePn	Px	02 10 11.7	
PERS	Pernice	3.54	0	i Pn	Px	02 10 11.7	
VLC	Villacollemand	3.58	289	ePn	Px	02 10 13.2	
VLC	Villacollemand	3.58	289	ePn	Px	02 10 13.2	
PVY	Plav	3.62	96	⇑iPn	Px	02 10 12.6	
PVY				eSn	Sx	02 10 56.2	
RHK1	Bakonya	3.68	34	eP	Px	02 10 11.1	
RHK1				eS	Sx	02 10 54.1	
	comp=Z,9.3nm,1.1s						
DIVS	Divcibare	3.70	73	⇑iPn	Px	02 10 12.5	
DIVS				Sg	Sx	02 11 07.8	
CTI	Castel Tesino	3.84	321	ePN	Px	02 10 15.6	
CTI					Sx		
	comp=Z,209nm,0.9s						
CTI	Castel Tesino	3.84	321	eP	Px	02 10 15.7	
CTI	Castel Tesino	3.84	321	ePn	Px	02 10 15.6	
	comp=Z,209nm,0.9s						
PKSM	Moragy	4.02	38	eP	Px	02 10 16.3	
SAL	Salo	4.13	309	ePN	Px	02 10 20.0	
PKS9	Tamasi	4.17	32	eP	Px	02 10 20.5	
GRUS	Gruza	4.17	77	e	Sx	02 11 03.1	
ARSA	Arzberg	4.17	4	⇑iPN	Px	02 10 19.4	
ARSA				i SN	Sx	02 11 09.2	
KBA	Koelnbreinsper	4.17	343	⇑iPN	Px	02 10 20.4	
KBA				i SN	Sx	02 11 10.4	
PGF	Pioggiola	4.51	265	ePn	Px	02 10 25.7	
SCE	Schlegeis	4.62	330	⇑iPn	Px	02 10 26.9	
GENL	Genova Univers	4.63	289	P	Px	02 10 26.3	
GENL	Genova Univers	4.63	289	P	Px	02 10 26.3	
SOP	Sopron	4.71	12	⇑eP	Px	02 10 27.0	
SOP				eS	Sx	02 11 19.4	
MOA	Molln	4.79	353	⇑iPN	Px	02 10 29.0	
MOA				i SN	Sx	02 11 24.9	
SKO	Skopje	4.82	101	ePn	Px	02 10 20.0	
SKO				i	Sx	02 10 44.4	
WTTA	Wattenberg	4.83	331	⇑iPN	Px	02 10 30.1	
WTTA				i SN	Sx	02 11 27.4	
PKSG		4.89	27	⇑eP	Px	02 10 28.1	
WATA	Walderalm	4.92	331	⇑iPN	Px	02 10 31.0	
WATA				i SN	Sx	02 11 30.1	
PCP	Pian Castagno	4.96	289	P	Px	02 10 30.7	
SQTA	Sankt Quirin	4.96	328	⇓iPN	Px	02 10 32.0	
SQTA				i SN	Sx	02 11 30.8	
BOLS	Boljevac	5.05	79	e	Sx	02 11 54.5	
MOTA	Moosalm	5.10	328	⇓iPN	Px	02 10 33.6	
MOTA				i SN	Sx	02 11 33.8	
FIN	Finale Ligure	5.12	285	P	Px	02 10 33.6	
SRO1	Iza	5.17	24	ePN	Px	02 10 29.0	
SRO1				e	Sx	02 10 56.7	
SRO1	Iza	5.17	24	eSN	Px	02 11 23.1	
SRO1				e	Sx	02 12 10.4	
SRO1	Iza	5.17	24	ePn	Px	02 10 29.0	
SRO1				eSn	Sx	02 11 23.1	
SRO2	Moca	5.22	25	i PN	Px	02 10 33.3	
SRO2				e	Sx	02 10 58.7	
SRO2	Moca	5.22	25	i Pn	Px	02 10 33.3	
SRO2				eSn	Sx	02 11 25.1	
SRO	Srobarova	5.24	25	i SG	Sx	02 12 06.4	
SRO	Srobarova	5.24	25	i Pn	Px	02 10 33.9	
SRO				eSn	Sx	02 11 24.0	
ZST	Bratislava	5.29	15	i PN	Px	02 10 34.8	
ZST				e	Sx	02 12 20.7	
IMI	Imperia	5.30	281	P	Px	02 10 36.7	
IMI	Imperia	5.30	281	P	Px	02 10 36.7	
ROB	Roburent	5.37	285	P	Px	02 10 36.5	
MONE	Monesi	5.42	283	P	Px	02 10 38.0	
MONE	Monesi	5.42	283	P	Px	02 10 38.0	
NEGI	Negi	5.43	281	P	Px	02 10 38.8	
NEGI	Negi	5.43	281	P	Px	02 10 38.8	
DAVA	Damuels	5.58	321	⇓iPN	Px	02 10 40.4	
DAVA				i SN	Sx	02 11 46.4	
SBF	Sospel	5.63	280	ePn	Px	02 10 41.7	
SBF				eSn	Sx	02 11 44.5	
	comp=Z,49nm,0.6s						
SMOL	Smolenice	5.66	16	ePN	Px	02 10 39.9	
SMOL				i SN	Sx	02 11 36.3	
ENR	Entracque	5.68	284	P	Px	02 10 42.2	
ORX	Oropa	5.70	299	P	Px	02 10 39.0	
STV2	Anna di Valdie	5.75	284	P	Px	02 10 42.1	
STV2	Anna di Valdie	5.75	284	P	Px	02 10 42.1	
STV	Sta Anna Valdi	5.75	284	P	Px	02 10 43.0	
TOUF	Mont Tournerai	5.78	282	P	Px	02 10 41.5	
TRAV		5.80	297	P	Px	02 10 40.6	
TRAV		5.80	297	P	Px	02 10 40.6	
GEC2	GERESS Array S	5.83	351	ePn	Px	02 10 42.4	
GEC2				eSn	Sx	02 11 47.6	
PSZ	Piszkesteto	5.89	33	⇑iPB	Px	02 10 42.9	
PSZ				eSB	Sx	02 11 48.4	
BHB	Bricherasio	5.92	290	P	Px	02 10 44.2	
PZZ	Prazzo	5.95	286	P	Px	02 10 43.9	
VYHS	Vyhne	6.00	25	ePN	Px	02 10 44.0	
VYHS				i SN	Sx	02 11 49.7	
VYHS	Vyhne	6.00	25	i	Sx	02 12 34.6	
RSP	Reno Superiore	6.00	293	P	Px	02 10 43.8	
FENE	Fenestrelle	6.10	291	P	Px	02 10 46.0	
FENE	Fenestrelle	6.10	291	P	Px	02 10 46.0	
KHC	Kasperske Hory	6.13	351	ePN	Px	02 10 46.3	
KHC				eSN	Sx	02 11 53.9	
KHC				x	x	02 12 08.5	
KHC				x	x	02 12 26.5	
SURF	Saint Ours	6.15	286	P	Px	02 10 50.2	
LSD	Ceresole Reale	6.17	295	P	Px	02 10 46.1	
LSD	Ceresole Reale	6.17	295	P	Px	02 10 46.0	
FRF	La Foret Royal	6.18	277	ePn	Px	02 10 49.8	
FRF				eSn	Sx	02 11 57.7	
	comp=Z,23nm,0.7s						
MBDF	Montbardon	6.23	288	ePn	Px	02 10 48.6	
MBDF				eSn	Sx	02 11 56.9	
	comp=Z,55nm,0.8s						
WET	Wettzell	6.25	347	ePn	Px	02 10 47.8	
WET				eSn	Sx	02 11 56.9	
RRL	Cesana Torines	6.26	290	P	Px	02 10 48.6	
LMR	La Mourre	6.28	275	ePn	Px	02 10 50.7	
BNI	Bardonecchia	6.37	291	eP	Px	02 10 46.6	
BNI				pmax	pmax		
	comp=Z,15nm,0.8s						
BNI	Bardonecchia	6.37	291	ePn	Px	02 10 46.6	
	comp=Z,14nm,0.8s						
LPG	La Plagne	6.45	295	ePn	Px	02 10 52.8	
LPG				eSn	Sx	02 12 04.6	
	comp=Z,49nm,0.5s						
LPL	La Plagne	6.47	295	ePn	Px	02 10 51.8	
LPL				eSn	Sx	02 12 04.6	
	comp=Z,32nm,0.4s						
GDM	Grand'Maison	6.79	291	P	Px	02 10 58.5	
ORIF	Oris-en-Rattie	6.89	289	ePn	Px	02 10 57.9	
ORIF				eSn	Sx	02 12 13.6	
	comp=Z,28nm,0.6s						
FELD	Feldberg	6.91	316	P	Px	02 10 55.7	
PRU	Pruhonice	6.91	357	ePN	Px	02 10 56.6	
PRU				eSN	Sx	02 12 13.2	
SMRF	Simiane la Rot	6.97	281	ePn	Px	02 10 59.9	
GRN	Grenoble	7.06	291	P	Px	02 11 01.3	
BFO	Black Forest	7.06	320	ePn	Px	02 11 00.4	
BFO				eSn	Sx	02 12 16.3	
OKC	Ostrava-Krasne	7.07	16	eSN	Sx	02 12 18.4	
CABF	La Chapelle	7.30	302	ePn	Px	02 11 02.5	
CABF				eSn	Sx	02 12 22.6	
	comp=Z,18nm,0.6s						
CRVS	Cervenica-Dubn	7.31	35	i	Px	02 11 39.9	
CRVS				e	Sx	02 13 39.7	
MOF	Molkenrain	7.34	313	P	Px	02 11 03.7	
MOF				S	Sx	02 12 27.5	
NKC	Novy Kostel	7.37	347	ePN	Px	02 11 03.2	
NKC				eSN	Sx	02 12 24.1	
HINF	Hinteralfeld	7.47	312	ePn	Px	02 11 04.5	
HINF				eSn	Sx	02 12 25.1	
	comp=Z,39nm,0.7s						
ECH	Echery	7.56	315	S	Sx	02 12 29.6	
WLS	Welschbruch	7.59	317	P	Px	02 11 06.3	
CDF	Champ du Feu	7.63	317	ePn	Px	02 11 06.9	
CDF				eSn	Sx	02 12 27.9	
	comp=Z,38nm,0.9s						
KOLS	Kolonicke sedl	7.69	38	eSN	Sx	02 12 34.2	
KOLS				i		02 13 45.1	
VIVF	Saint-Julien-l	7.72	287	ePn	Px	02 11 09.9	
VIVF				eSn	Sx	02 12 33.1	
	comp=Z,31nm,0.9s						
BRG	Berggiesshubel	7.82	355	eP	Px	02 11 09.5	
BRG				e		02 12 37.5	
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRG	Berggiesshubel	7.82	355	ePn	Px	02 11 09.5	
	comp=Z,5.5nm,1.1s						
BRG				e		02 12 24.7	
BRG				e		02 12 37.5	
BRG				e		02 13 29.9	
HAU	Haudompre	7.86	312	ePn	Px	02 11 09.9	
HAU				eSn	Sx	02 12 34.7	
	comp=Z,30nm,0.4s						
MOX	Moxa	7.92	344	ePn	Px	02 11 10.5	
MOX				eSn	Sx	02 12 36.6	
MOX				eSg	Sx	02 13 27.5	
MOX	Moxa	7.92	344	i P	Px	02 11 10.5	
MOX				S	Sx	02 12 36.0	
MOX				Sg	Sx	02 13 28.0	
THEF	They Montfort	8.19	312	P	Px	02 11 14.3	
CLL	Collm	8.34	351	ePn	Px	02 11 18.0	
CLL				eSn	Sx	02 12 46.0	
CLL				i Sg	Sx	02 13 41.2	
CLL	Collm	8.34	351	ePN	Px	02 11 18.0	
CLL				eSN	Sx	02 12 46.0	
CLL				e		02 13 04.0	
CLL				i SG	Sx	02 13 41.2	
CLL				eL		02 13 54.0	
PLDF	La Plantade	8.69	293	P	Px	02 11 21.3	
SMF	Signal de Mont	8.74	298	ePn	Px	02 11 21.6	
SMF				eSn	Sx	02 12 56.8	
	comp=Z,39nm,0.5s						
MEZF	Maizieres J'vi	8.86	311	ePn	Px	02 11 22.5	
MEZF				eSn	Sx	02 12 57.9	
	comp=Z,24nm,0.7s						
PYM	Petit Puy Mans	9.05	291	P	Px	02 11 28.0	
SSF	Saint Saulge	9.11	300	ePn	Px	02 11 26.6	
SSF				eSn	Sx	02 13 05.1	
	comp=Z,15nm,0.5s						
AVF	Avril sur Loir	9.11	298	ePn	Px	02 11 26.5	
AVF				eSn	Sx	02 13 05.4	
	comp=Z,13nm,0.7s						
BGF	Bois d'Agland	9.37	296	ePn	Px	02 11 31.0	
BGF				eSn	Sx	02 13 11.7	
	comp=Z,40nm,0.5s						
CAF	Calviac	9.57	286	ePn	Px	02 11 33.9	
TCF	Toulx Ste Croi	9.72	294	ePn	Px	02 11 35.0	
TCF				eSn	Sx	02 13 19.7	
	comp=Z,6.7nm,0.4s						
RJF	Les Rejaudoux	10.00	287	ePn	Px	02 11 39.5	
APE	Apeiranthos	10.00	123	i P	Px	02 11 34.3	
KIV	Kislovodsk	20.00	78	i P	Px	02 13 37.2	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						

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*BJI **02** 02:30:17.5, 13.66N×145.35E, h138^{km}, mB6.0, mb5.7*
*MOS **02** 02:30:24.7±1.6, 14.15N×144.71E, h154^{km}, mb5.5/62, Error ellipse: s-maj=7.9km s-min=5.2km az=95.7*
*NEIC **02** 02:30:25.9±0.1, 14.08N×144.72E, mb5.5/91, MW6.2, Error ellipse: s-maj=4.9km s-min=3.8km az=108.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-0.05; M$_{\theta\theta}$-0.18; M$_{\phi\phi}$0.23; M$_{r\theta}$0.64; M$_{\theta\phi}$-2.34; M$_{\phi r}$0.08; Best double couple: M$_0$2.4×10^{18} NP1:ϕ$_s$182°, δ75°,λ-3°. NP2:ϕ$_s$273°,δ87°,λ-165°. Principal axes: T 2.43, Plg9°, Azm47°; N .01, Plg75°, Azm282°; P -2.44, Plg12°, Azm138°;*
NEIC Felt [VII] at Tamuning; [V] at Agana Heights, Hagatna, Talofofo and Santa Rita; [IV] at Barrigada and Yigo, Guam. Felt [III] on Rota, Saipan and Tinian.
*HRVD **02** 02:30:25.9±0.1, 13.86N×144.81E, h159^{km}, MW6.3/79, Centroid moment Tensor Solution. LP body waves: s79,c194;Mantle waves: s79,c303; Half duration: 3^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.33±.02; M$_{\theta\theta}$-0.21±.02; M$_{\phi\phi}$0.53±.02; M$_{r\theta}$1.07±.01; M$_{\theta\phi}$-2.93±.02; M$_{\phi r}$-0.08±.01; Best double couple: M$_0$3.146×10^{18} NP1: ϕ$_s$183°,δ70°,λ-3°. NP2:ϕ$_s$274°,δ87°,λ-160°. Principal axes: T 3.285, Plg12°, Azm47°; N -.278, Plg69°, Azm281°; P -3.007, Plg16°, Azm141°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 02 02:30:24.3±0.1**, 14.04N**±0.02×**144.78E**±0.02**, h155^{km}, h155^{km}**±1.1^{km}**:pP-P, n630, σ1^{s}28**/534**, mb5.5**/147**, 49C-28D,**

Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	0.45	169	⇑iP	P	02 30 48.4	+2.0
GUMO				eS	S	02 31 05.2	+1.8
SARN	**Sarigan**	2.81	20	⇑iP	P	02 31 14.8	+4.6
BIPH	**Bislig**	18.98	254	eP	P	02 34 37.0	+0.7
	5µm,1.5s						
SCPH	**Surigao**	19.34	259	⇑eP	P	02 34 40.6	+0.6
BUTP	**Butuan**	19.43	257	eP	P	02 34 41.3	+0.3
PLP	**Palo**	19.54	264	eP	P	02 34 43.3	+1.2
MSLP	**Maasin**	19.86	261	eP	P	02 34 46.8	+1.4
OCLP	**Ormoc**	19.91	264	eP	P	02 34 46.1	+0.2
PVCP	**Virac**	20.04	271	eP	P	02 34 49.2	+2.1
DAV	**Davao City (W)**	20.10	252	eP	P	02 34 50.0	+2.2
BUKP	**Musuan**	20.30	255	eP	P	02 34 49.2	-0.6
KCP	**Kidapawan**	20.57	252	⇓eP	P	02 34 55.2	+2.7
LLP	**Lapu-Lapu**	20.68	262	⇑eP	P	02 34 54.9	+1.3
TBP	**Tagbilaran**	20.92	260	eP	P	02 34 55.4	-0.6
AUQP	**San Andres**	21.49	271	eP	P	02 35 05.4	+3.8
SNPH	**Sibulan**	21.60	260	eP	P	02 35 04.5	+1.7
	2µm,0.8s,mb6.2						
RCP	**Roxas**	21.63	266	⇑eP	P	02 35 03.5	+0.5
GQP	**Guinayangan**	21.68	272	eP	P	02 35 17.4	+14
GQP	**Guinayangan**	21.68	272	⇓eP	P	02 34 51.9	-12
PALP	**Palanan**	21.75	281	eP	P	02 35 05.6	+1.5
PAGZ	**Pagadian**	21.88	256	eP	P	02 35 06.4	+0.9
GUIM	**Jordan**	21.94	264	eP	P	02 35 04.9	-1.2
KALP	**Kalibo**	22.00	266	eP	P	02 35 12.0	+5.3
POLP	**Polilio Island**	22.14	275	eP	P	02 35 08.2	+0.3
OTRP	**Odiongan**	22.22	268	eP	P	02 35 08.4	-0.4
BOAC	**Boac**	22.29	271	eP	P	02 35 11.8	+2.3
CAUP	**Cauayan**	22.31	280	eP	P	02 35 12.1	+2.5
CVP	**Callao Caves**	22.38	282	⇑eP	P	02 35 11.5	+1.2
BALP	**Baler**	22.49	277	eP	P	02 35 13.4	+2.1
BBP	**Basco**	22.69	289	eP	P	02 35 16.6	+3.1
APYP	**Conner**	22.95	283	eP	P	02 35 17.0	+1.1
SJMP	**San Jose**	23.09	269	eP	P	02 35 19.0	+1.7
TGY	**Tagaytay City**	23.13	273	⇑eP	P	02 35 19.5	+1.8
MAJO	**Matsushiro**	23.17	346	eP	P	02 35 17.2	-0.7
MAJO				pmax	pmax		
	comp=Z,273nm,0.9s,mb5.7						
MAJO	**Matsushiro**	23.17	346	eP	P	02 35 17.2	-0.7
	comp=Z,273nm,0.9s,mb5.7						
MAT	**Matsushiro**	23.17	346	eP	P	02 35 17.0	-0.9
MAT				eS	S	02 39 13.0	-1.4
MAT				pmax	pmax		
	comp=Z,300nm,1.0s,mb5.7						
MAT				MLR	MLR		
	comp=Z,22µm,20.0s						
MAT	**Matsushiro**	23.17	346	eP	P	02 35 17.0	-0.9
	comp=Z,300nm,1.0s,mb5.7						
MAT				eS	S	02 39 13.0	-1.4
MAT				LR	LR		
	comp=Z,22µm,20.0s						
MAT	**Matsushiro**	23.17	346	P	P	02 35 17.0	-0.9
MAT				S	S	02 39 14.0	-0.4
PMG	**Port Moresby**	23.41	174	P	P	02 35 19.6	-0.8
PMG				S	S	02 39 18.7	+0.1
CUYO	**Cuyo Island**	23.42	265	eP	P	02 35 21.9	+1.5
ABRA	**Dolores**	23.43	282	eP	P	02 35 21.5	+0.9
LUBP	**Lubang**	23.82	272	eP	P	02 35 24.4	+0.1
BUSP	**Coron**	24.03	268	eP	P	02 35 26.7	+0.3
SCZP	**Santa Cruz**	24.09	277	eP	P	02 35 28.4	+1.4
BOLP	**Bolinao**	24.11	279	eP	P	02 35 22.5	-4.5
TATO	**Taipei**	24.46	300	P	P	02 35 30.8	+0.4
ENPP	**El Nido**	24.90	266	eP	P	02 35 32.8	-1.7
PPR	**Puerto Princes**	25.83	263	i P	P	02 35 44.9	+1.7
QZH	**Quanzhou**	26.92	298	P	P	02 35 52.0	-1.0
QZH				XP	sP	02 36 43.6	+0.6
QZH				eS	S	02 40 19.6	+2.9
QZH				LR	LR		
	comp=N,17µm,10.0s						
QZH				LR	LR		
	comp=E,10µm,10.1s						
QZH				LR	LR		
	comp=Z,19µm,14.4s						
BATP	**Bataraza**	26.94	262	eP	P	02 35 52.8	-0.6
SSE	**Sheshan**	27.53	312	P	P	02 35 58.7	+0.1
SSE				AP	pP	02 36 28.2	-2.5
SSE				XP	sP	02 36 47.9	-0.8
SSE				S	S	02 40 26.7	+0.2
SSE				AMB	AMB		
	comp=Z,128nm,0.7s,mb5.8						
SSE				AMB	AMB		
	comp=Z,856nm,8.3s						
SSE				LR	LR		
	comp=N,4µm,14.4s						
SSE				LR	LR		
	comp=E,4µm,14.4s						
SSE				LR	LR		
	comp=Z,5µm,12.7s						
SSE	**Sheshan**	27.53	312	P	P	02 35 58.7	+0.1
	comp=Z,128nm,0.7s,mb5.8						
SSE				pP	pP	02 36 28.2	-2.5
SSE				sP	sP	02 36 47.9	-0.8
SSE				S	S	02 40 26.7	+0.2
SSE				sS		02 41 19.5	
SSE				ScP		02 42 42.7	
SSE				LR	LR		
	comp=Z,5µm,12.7s						
KS15	**Wonju Array Si**	27.75	330	eP	P	02 36 00.0	-0.5
TSM	**Tawau**	28.24	253	P	P	02 36 04.6	-0.5
KKM	**Kota Kinabalu**	29.20	257	P	P	02 36 12.3	-1.4
KAKA	**Kakadu**	29.25	205	⇑iP	P	02 36 11.3	-2.8
	comp=Z,79nm,0.6s,mb5.6						
KAKA				eSCP		02 42 43.0	
NJ2	**Nanjing**	29.72	312	eP	P	02 36 18.5	+0.3
NJ2				XP	sP	02 37 10.3	+1.6
NJ2				S	S	02 40 58.0	-3.3
NJ2				XS		02 41 59.0	
NJ2				AMB	AMB		
	comp=Z,3µm,5.2s						
NJ2				LR	LR		
	comp=N,15µm,17.6s						
NJ2				LR	LR		
	comp=E,12µm,11.2s						
NJ2				LR	LR		
	comp=Z,13µm,16.4s						
YUK	**Yuzh-Kuril’sk**	29.91	2	eP	P	02 36 17.5	-2.2
YUK				e		02 37 12.0	
YUK				S	S	02 40 58.0	-6.2
YUK				pmax	pmax		
	comp=Z,3µm,5.0s						
YUK				pmax	pmax		
	comp=Z,180nm,0.6s,mb6.0						
YUK				pmax	pmax		
	comp=Z,4µm,5.0s						
YUK				smax			
	comp=E,4µm,11.0s						
VLA	**Vladivostok**	31.03	342	⇑iP	P	02 36 33.0	+3.4
VLA				i	pP	02 37 02.0	-0.5
VLA				i		02 37 42.0	
VLA				i S	S	02 41 24.0	+2.2
VLA				pmax	pmax		
	comp=Z,3µm,7.0s						
VLA				pmax	pmax		
	comp=Z,2µm,6.0s						
VLA				smax			
	comp=E,6µm,13.0s						
VLA				MLR	MLR		
	comp=Z,20µm,16.0s						
VLA				MLR	MLR		
	comp=N,2µm,17.0s						
VLA				MLR	MLR		
	comp=E,3µm,17.0s						
GZH	**Guangzhou**	31.08	291	P	P	02 36 30.1	-0.1
GZH				AMB	AMB		
	comp=Z,889nm,9.3s						
GZH				LR	LR		
	comp=N,22µm,20.8s						
GZH				LR	LR		
	comp=E,8µm,17.7s						
GZH				LR	LR		
	comp=Z,9µm,32.0s						
DL2	**Dalian**	32.12	325	P	P	02 36 39.7	+0.6
DL2				AP	pP	02 37 11.0	-1.2
DL2				XP	sP	02 37 29.5	-0.6
DL2				PP	PP	02 37 50.7	-0.4
DL2				PCP	PcP	02 39 25.2	+0.7
DL2				S	S	02 41 43.3	+4.6
DL2				SCP		02 42 53.3	
DL2				AMB	AMB		
	comp=Z,200nm,0.9s,mb5.8						
DL2				AMB	AMB		
	comp=Z,560nm,4.6s						
WHN	**Wuhan**	32.45	305	⇓P	P	02 36 43.0	+0.9
WHN				S	S	02 41 46.1	+2.0
WHN				LR	LR		
	comp=N,4µm,23.9s						
WHN				LR	LR		
	comp=E,25µm,26.0s						
WHN				LR	LR		
	comp=Z,13µm,18.6s						
YSS	**Yuzh-Sakhalins**	32.86	357	P	P	02 36 45.3	-0.1
YSS				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.3						
YSS	**Yuzh-Sakhalins**	32.86	357	eP	P	02 36 43.1	-2.3
	comp=Z,62nm,1.2s,mb5.2						
MDJ	**Mudanjiang**	33.11	340	P	P	02 36 47.6	0.0
MDJ				AP	pP	02 37 17.6	-3.3
MDJ				XP	sP	02 37 37.3	-1.5
MDJ				PP	PP	02 38 03.4	-0.5
MDJ				S	S	02 41 51.9	-2.3
MDJ				SCP		02 42 55.0	
MDJ				AMB	AMB		
	comp=Z,59nm,0.9s,mb5.3						
MDJ				AMB	AMB		
	comp=Z,2µm,4.0s						
MDJ				LR	LR		
	comp=E,16µm,20.7s						
MDJ				LR	LR		
	comp=Z,11µm,17.5s						
TIA	**Tai’an**	33.18	317	P	P	02 36 48.3	+0.1
TIA				S	S	02 41 55.8	+0.5
TIA				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.0						
TIA				AMB	AMB		
	comp=Z,1µm,8.0s						
TIA				LR	LR		
	comp=N,9µm,15.0s						
TIA				LR	LR		
	comp=E,5µm,15.0s						
SNY	**Shenyang**	33.24	330	⇑P	P	02 36 48.1	-0.6
SNY				S	S	02 41 56.1	-0.1
SNY				SS	SS	02 44 11.6	+1.9
SNY				AMB	AMB		
	comp=Z,70nm,1.6s,mb5.1						
SNY				AMB	AMB		
	comp=Z,1µm,7.4s						
SNY				LR	LR		
	comp=N,10µm,13.7s						
SNY				LR	LR		
	comp=Z,7µm,19.6s						
QIZ	**Qiongzhong**	33.82	283	P	P	02 36 54.2	+0.3
QIZ				AP	pP	02 37 27.5	+0.2
QIZ				PP	PP	02 38 13.9	+1.2
QIZ				S	S	02 42 03.9	-1.5
QIZ				XS		02 43 03.9	
QIZ				AMB	AMB		
	comp=Z,48nm,1.0s,mb5.2						
QIZ				AMB	AMB		
	comp=Z,669nm,7.3s						
CTA	**Charters Tower**	33.94	178	⇓iP	P	02 36 53.7	-1.1
	comp=Z,163nm,0.6s,mb5.9						
CTA				eS	S	02 42 07.0	-0.2
CTA				eSCP		02 42 57.2	
CTA	**Charters Tower**	33.94	178	⇓iP	P	02 36 53.7	-1.1
CTA				eS	S	02 42 07.0	-0.2
CTA				pmax	pmax		
	comp=Z,163nm,0.6s						
CTAO	**Charters Tower**	33.94	178	⇓eP	P	02 36 53.9	-0.9
CTAO				pmax	pmax		
	comp=Z,245nm,0.8s,mb6.0						
CTAO	**Charters Tower**	33.94	178	⇓eP	P	02 36 53.9	-1.0
	comp=Z,244nm,0.8s,mb6.0						
CN2	**Changchun**	33.97	335	⇓P	P	02 36 54.4	-0.5
CN2				eS	S	02 42 06.1	-1.3
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
CN2				AMB	AMB		
	comp=Z,2µm,7.0s						
WRAB	**Tennant Creek**	35.28	197	eP	P	02 37 04.4	-1.8
WRAB				pmax	pmax		
	comp=Z,477nm,0.6s,mb6.3						
WRAB	**Tennant Creek**	35.28	197	eP	P	02 37 04.3	-1.9
	comp=Z,477nm,0.6s,mb6.3						
WB2	**Warramunga Arr**	35.29	197	⇓iP	P	02 37 04.3	-2.0
WB2				epP	pP	02 37 55.5	+16
WB2				eS	S	02 42 23.6	-4.3
WB2				eSCP		02 43 03.7	
WB2				eSCS	ScS	02 46 49.7	-17
BJI	**Beijing**	36.05	321	eP	P	02 37 12.8	+0.4
BJI				AP	pP	02 37 44.5	-1.7
BJI				XP	sP	02 38 02.7	-1.6
BJI				PP	PP	02 38 38.6	-0.6
BJI				S	S	02 42 39.3	0.0
BJI				SCP		02 43 05.4	
BJI				XS		02 43 40.0	
BJI				AMB	AMB		
	comp=Z,179nm,0.8s,mb5.8						
BJI				AMB	AMB		
	comp=Z,2µm,4.1s						
BJI	**Beijing**	36.05	321	eP	P	02 37 12.8	+0.4
BJI				*PP	pP	02 37 44.5	-1.7
BJI				*SP	sP	02 38 02.7	-1.6
BJI						02 38 38.6	
BJI				S	S	02 42 39.3	0.0
BJI				*SS		02 43 40.0	
BJI				pmax	pmax		
	comp=Z,179nm,0.8s,mb5.8						
BJI	**Beijing**	36.05	321	eP	P	02 37 12.8	+0.4
	comp=Z,179nm,0.8s,mb5.8						
BJI				pP	pP	02 37 44.5	-1.7
BJI				sP	sP	02 38 02.7	-1.6
BJI				PP	PP	02 38 38.6	-0.6
BJI				S	S	02 42 39.3	0.0
BJI				ScP		02 43 05.4	
BJI				sS		02 43 40.0	
BJI				SS	SS	02 45 32.2	+19
KEDI	**Kedomdong**	36.20	233	⇓eP	P	02 37 12.3	-1.7
KEDI				eS	S	02 42 36.7	-5.1
KEDI				pmax	pmax		
	comp=Z,615nm,0.6s,mb6.4						
KEDI	**Kedomdong**	36.20	233	⇓eP	P	02 37 12.3	-1.7
	comp=Z,615nm,0.6s,mb6.4						
KEDI				eS	S	02 42 36.7	-5.1
KLR	**Kul’dur**	36.70	346	⇓iP	P	02 37 14.5	-3.3
KLR				e	pP	02 37 47.5	-4.1
KLR				e		02 38 04.5	
KLR				e		02 39 17.5	
KLR				eS	S	02 42 41.5	-7.6
KLR				e		02 43 44.0	
KLR				pmax	pmax		
	comp=N,2µm,7.5s						
KLR				pmax	pmax		
	comp=E,3µm,7.5s						
KLR				pmax	pmax		
	comp=Z,3µm,7.5s						
KLR				smax			
	comp=N,2µm,14.0s						
KLR				smax			
	comp=E,4µm,14.0s						
RATI	**Rata**	36.79	234	⇓eP	P	02 37 16.0	-3.0
	comp=E,942nm,0.6s,mb6.6						
RATI				eS	S	02 42 47.4	-3.5
FITZ	**Fitzroy Crossi**	37.10	211	eP	P	02 37 20.0	-1.5
	comp=E,210nm,0.6s,mb5.9						
FITZ				eS	S	02 42 52.7	-2.8
FITZ				eSCS	ScS	02 47 19.9	+3.2
KELI	**Kelakatan**	37.31	235	⇓eP	P	02 37 22.5	-0.9
	comp=E,1µm,1.0s,mb6.5						
GYA	**Guiyang**	37.70	295	⇑iP	P	02 37 27.8	+1.3
GYA				AP	pP	02 38 00.6	+0.2
GYA				XP	sP	02 38 16.8	-1.9
GYA				PP	PP	02 38 58.4	+0.7
GYA				S	S	02 43 10.9	+6.4
GYA				SCS	ScS	02 47 23.3	+3.3
GYA				AMB	AMB		
	comp=Z,140nm,0.9s,mb5.6						
GYA				AMB	AMB		
	comp=Z,920nm,6.7s						
GYA				LR	LR		
	comp=N,9µm,14.5s						
GYA				LR	LR		
	comp=E,6µm,13.6s						
GYA				LR	LR		
	comp=Z,8µm,17.2s						
SRDI	**Scrawed**	37.75	235	⇓eP	P	02 37 25.1	-1.9
SRDI				pmax	pmax		
	comp=Z,192nm,1.0s,mb5.7						
SRDI	**Scrawed**	37.75	235	⇓eP	P	02 37 25.1	-1.9
	comp=Z,192nm,1.0s,mb5.7						
XAN	**Xi’an**	38.05	308	P	P	02 37 30.4	+1.0
XAN				AMB	AMB		
	comp=Z,72nm,0.8s,mb5.3						
XAN				AMB	AMB		
	comp=Z,1µm,10.2s						
XAN				LR	LR		
	comp=N,14µm,17.7s						
XAN				LR	LR		
	comp=E,11µm,22.0s						
XAN				LR	LR		
	comp=Z,7µm,31.7s						
ASPA	**Alice Springs**	38.95	196	⇓iP	P	02 37 36.2	-0.7
ASPA				eS	S	02 43 18.9	-4.6
ASPA				eSCS	ScS	02 47 31.0	+3.7
HHC	**Hu-ho-hao-te**	39.38	319	⇑iP	P	02 37 41.4	+1.1
HHC				AP	pP	02 38 14.8	+0.4
HHC				PP	PP	02 39 19.9	+3.6
HHC				PCP	PcP	02 39 47.2	+1.2
HHC				SCP		02 43 16.8	
HHC				S	S	02 43 33.4	+3.7
HHC				PCS		02 43 35.8	
HHC				XS		02 44 33.8	
HHC				SCS	ScS	02 47 28.0	-1.6
HHC				AMB	AMB		
	comp=Z,89nm,1.0s,mb5.3						
HHC				AMB	AMB		
	comp=Z,2µm,4.1s						
HHC				LR	LR		
	comp=N,6µm,19.0s						
HHC				LR	LR		
	comp=E,8µm,18.9s						
HHC				LR	LR		
	comp=Z,9µm,20.1s						
BTO	**Baotou**	40.24	318	eP	P	02 37 48.3	+0.9
BTO				AMB	AMB		
	comp=Z,218nm,0.9s,mb5.8						
BTO				LR	LR		
	comp=N,1µm,6.9s						
BTO				LR	LR		
	comp=E,5µm,17.1s						
PET	**Petropavlovsk**	40.43	13	i P	P	02 37 48.1	-0.6
PET				pmax	pmax		
	comp=Z,65nm,1.5s,mb5.0						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
KKTK	**Khon Kaen**	40.51	279	P	P	02 37 51.0	+1.2
	comp=Z,741nm,0.6s,mb6.5						
KMI	**Kunming**	40.97	292	⇑P	P	02 37 54.9	+1.5
KMI				AP	pP	02 38 26.1	-1.6
KMI				PP	PP	02 39 32.1	-0.6
KMI				S	S	02 43 51.7	-1.7
KMI				XS		02 44 55.1	
KMI				AMB	AMB		
	comp=Z,61nm,1.0s,mb5.2						
KMI				AMB	AMB		
	comp=Z,646nm,4.8s						
KMI				LR	LR		
	comp=N,17µm,22.2s						
KMI				LR	LR		
	comp=E,5µm,18.9s						
KMI				LR	LR		
	comp=Z,7µm,14.3s						
KMI	**Kunming**	40.97	292	⇑P	P	02 37 54.9	+1.5
KMI				*PP	pP	02 38 26.1	-1.6
KMI				*SP	sP	02 38 43.5	-2.5
KMI						02 39 32.1	
KMI						02 39 54.7	
KMI				S	S	02 43 51.7	-1.7
KMI				*SS		02 44 55.1	
KMI				SS	SS	02 46 55.1	-1.2
KMI				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.2						
KMI				MLR	MLR		
	comp=Z,7µm,14.3s						
KMI	**Kunming**	40.97	292	⇑P	P	02 37 54.9	+1.5
	comp=Z,61nm,1.0s,mb5.2						
KMI				pP	pP	02 38 26.1	-1.6
KMI				sP	sP	02 38 43.5	-2.5
KMI				PP	PP	02 39 32.1	-0.6
KMI				PcP	PcP	02 39 54.7	+3.5
KMI				PcS		02 43 47.5	
KMI				S	S	02 43 51.7	-1.7
KMI				sS		02 44 55.1	
KMI				SS	SS	02 46 55.1	-1.2
KMI				LR	LR		
	comp=Z,7µm,14.3s						
CD2	**Chengdu**	41.19	301	P	P	02 37 55.7	+0.4
CD2				AP	pP	02 38 28.3	-1.2
CD2				XP	sP	02 38 46.9	-0.9
CD2				PP	PP	02 39 33.7	-1.4
CD2				S	S	02 43 56.4	-0.2
CD2				XS		02 44 58.6	
CD2				SS	SS	02 47 04.6	+4.2
CD2				AMB	AMB		
	comp=Z,210nm,1.0s,mb5.7						
CD2				AMB	AMB		
	comp=Z,1µm,9.0s						
CD2				LR	LR		
	comp=N,8µm,14.4s						
CD2				LR	LR		
	comp=Z,8µm,13.2s						
NOUC	**Port Laguerre**	41.65	149	eP	P	02 37 59.5	+0.2
NOUC	**Port Laguerre**	41.65	149	eP	P	02 37 59.5	+0.2
DZM	**Mont Dzumac**	41.70	149	eP	P	02 38 00.2	+0.6
KGM	**Kluang**	42.67	258	P	P	02 38 08.8	+1.2
LZH	**Lanzhou**	42.68	308	⇑P	P	02 38 08.5	+1.1
LZH				AP	pP	02 38 43.2	+1.4
LZH				PP	PP	02 39 52.0	+1.3
LZH				S	S	02 44 18.1	-0.2
LZH				XS		02 45 19.5	
LZH				AMB	AMB		
	comp=Z,597nm,1.5s,mb6.0						
LZH				AMB	AMB		
	comp=Z,2µm,7.2s						
LZH				LR	LR		
	comp=N,4µm,13.4s						
LZH				LR	LR		
	comp=Z,6µm,17.0s						
LZH	**Lanzhou**	42.68	308	⇑P	P	02 38 08.5	+1.1
LZH				*PP	pP	02 38 43.2	+1.4
LZH				*SP	sP	02 39 01.5	+1.6
LZH						02 39 52.0	
LZH				S	S	02 44 18.1	-0.2
LZH				*SS		02 45 19.5	
LZH				SS	SS	02 47 26.0	-1.1
LZH				pmax	pmax		
	comp=Z,597nm,1.5s,mb6.0						
LZH				MLR	MLR		
	comp=Z,6µm,17.0s						
LZH	**Lanzhou**	42.68	308	⇑P	P	02 38 08.5	+1.1
	comp=Z,597nm,1.5s,mb6.0						
LZH				pP	pP	02 38 43.2	+1.4
LZH				sP	sP	02 39 01.5	+1.6
LZH				PP	PP	02 39 52.0	+1.3
LZH				S	S	02 44 18.1	-0.2
LZH				sS		02 45 19.5	
LZH				SS	SS	02 47 26.0	-1.1
LZH				LR	LR		
	comp=Z,6µm,17.0s						
MBWA	**Marble Bar**	42.76	216	eP	P	02 38 06.1	-2.2
	comp=Z,107nm,0.8s,mb5.5						
NST	**Nakhon Sawan**	43.13	278	P	P	02 38 11.0	-0.3
	comp=Z,110nm,0.6s,mb5.7						
CHRT	**Chiangrai**	43.34	284	⇓P	P	02 38 14.0	+1.1
NNT	**Nongplab**	43.81	274	P	P	02 38 18.0	+1.3
SNG	**Songkhla**	43.89	266	P	P	02 38 17.5	+0.1
	comp=Z,440nm,1.0s,mb6.0						
IPM	**Ipoh**	44.12	262	P	P	02 38 19.5	+0.3
CHG	**Chiang Mai**	44.13	283	⇓P	P	02 38 19.8	+0.5
	comp=Z,45nm,0.8s,mb5.2						
CM31	**Chiang Mai Arr**	44.14	282	eP	P	02 38 17.9	-1.4
	comp=Z,37nm,0.7s,mb5.1						
FX1	**Attu Island--F**	44.83	24	eP	P	02 38 23.1	-1.3
CLNS	**Chul’man**	45.34	345	eP	P	02 38 28.2	-0.2
CLNS				e*PP	pP	02 39 01.5	-1.6
CLNS				e		02 40 02.6	
CLNS				e		02 40 12.3	
CLNS				eS	S	02 44 54.6	-1.7

CLNS				*e*SS	SS	02 48 12.4	-3.3
CLNS				pmax	pmax		
	comp=N,40nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=E,33nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.4						
CLNS				pmax	pmax		
	comp=N,60nm,0.9s						
CLNS				pmax	pmax		
	comp=E,69nm,0.9s						
CLNS				smax			
	comp=N,95nm,1.3s						
CLNS				smax			
	comp=Z,48nm,1.6s						
CLNS				smax			
	comp=E,34nm,1.2s						
MA2	**Magadan**	**45.68**	**4**	P	**P**	**02 38 30.2**	**-0.8**
MA2				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.1						
MA2	**Magadan**	**45.68**	**4**	*e*P	**P**	**02 38 29.9**	**-1.1**
	comp=Z,49nm,0.8s,mb5.2						
STKA	**Stephens Creek**	**45.75**	**184**	⇓*i*P	**P**	**02 38 30.0**	**-2.0**
	comp=Z,278nm,0.8s,mb5.9						
STKA				*e*SCP		02 43 44.4	
STKA				*e*S	**S**	**02 44 58.3**	**-4.3**
ULN	**Ulaanbaatar**	**45.97**	**325**	*c* *i*P	**P**	**02 38 34.1**	**+0.6**
ULN	**Ulaanbaatar**	**45.97**	**325**	⇑*i*P	**P**	**02 38 34.2**	**+0.7**
GTA	**Gaotai**	**46.82**	**311**	⇑P	**P**	**02 38 41.2**	**+1.0**
GTA				AP	pP	02 39 14.7	-0.4
GTA				PCP	PcP	02 40 07.6	-3.5
GTA				PP	PP	02 40 34.6	+2.9
GTA				SCP		02 43 48.1	
GTA				S	**S**	**02 45 24.7**	**+7.1**
GTA				AMB	AMB		
	comp=Z,136nm,1.1s,mb5.5						
GTA				AMB	AMB		
	comp=Z,1µm,4.9s						
GTA				LR	LR		
	comp=N,9µm,20.2s						
GTA				LR	LR		
	comp=E,5µm,22.1s						
GTA				LR	LR		
	comp=Z,5µm,18.6s						
FORT	**Forrest**	**47.37**	**200**	*e*P	**P**	**02 38 43.2**	**-1.5**
	comp=Z,1µm,0.8s,mb6.5						
FORT				*e*S	**S**	**02 45 17.9**	**-7.6**
RIV	**Riverview**	**47.98**	**173**	*e*P	**P**	**02 38 50.2**	**+0.8**
KIWB	**Kanaga Island**	**48.47**	**31**	*e*P	**P**	**02 38 51.9**	**-1.0**
SEY	**Seymchan**	**49.13**	**5**	*e*P	**P**	**02 38 58.1**	**+0.3**
SEY						02 40 26.0	
SEY						02 40 51.2	
SEY				*e*S	**S**	**02 45 52.5**	**+2.9**
SEY				*e*PS	PS	02 46 11.2	-17
SEY				*e*SS	SS	02 49 16.8	-2.7
SEY				pmax	pmax		
	comp=N,40nm,0.9s						
SEY				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.6						
SEY				MLR	MLR		
	comp=Z,8µm,20.0s						
SEY				MLR	MLR		
	comp=N,4µm,22.0s						
SEY				MLR	MLR		
	comp=E,900nm,12.0s						
YAK	**Yakutsk**	**49.13**	**351**	*c* *i*P	**P**	**02 38 56.3**	**-1.5**
YAK				*i* *PP	pP	02 39 31.0	-2.1
YAK				*e*		02 40 12.9	
YAK				*i*		02 40 51.2	
YAK				*i* S	**S**	**02 45 45.1**	**-4.6**
YAK				*i* *SS		02 46 47.9	
YAK				*e*		02 48 26.6	
YAK				pmax	pmax		
	comp=Z,330nm,0.9s,mb6.0						
YAK				pmax	pmax		
	comp=N,134nm,1.1s						
YAK				pmax	pmax		
	comp=E,32nm,0.9s						
YAK				pmax	pmax		
	comp=Z,72nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,73nm,1.1s						
YAK				pmax	pmax		
	comp=E,41nm,1.0s						
YAK				smax			
	comp=E,77nm,1.2s						
YAK				smax			
	comp=N,68nm,1.1s						
YAK	**Yakutsk**	**49.13**	**351**	*e*P	**P**	**02 38 56.7**	**-1.1**
	comp=N,131nm,0.7s,mb5.7						
GSTR	**Great Sitkin T**	**49.16**	**31**	*e*P	**P**	**02 38 59.4**	**+1.2**
CNB	**Canberra Magne**	**49.27**	**175**	*e*P	**P**	**02 38 58.9**	**-0.4**
	comp=N,2µm,0.9s						
ZAK	**Zakamensk**	**49.42**	**326**	⇑*i*P	**P**	**02 39 00.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,42nm,1.2s,mb4.9						
BOD	**Bodaibo**	**49.47**	**339**	*e*P	**P**	**02 38 58.6**	**-1.9**
BOD				*e*	pP	02 39 35.0	-0.7
BOD				pmax	pmax		
	comp=Z,148nm,4.4s						
BOD				pmax	pmax		
	comp=Z,307nm,3.1s						
IRK	**Irkutsk**	**49.93**	**329**	*e*P	**P**	**02 39 05.1**	**+1.1**
IRK				*e*	pP	02 39 39.6	+0.3
IRK				*e*		02 41 54.2	
IRK				*e*		02 45 51.1	
IRK				pmax	pmax		
	comp=Z,168nm,2.7s,mb5.2						
TLY	**Talaya**	**49.93**	**328**	P	**P**	**02 39 04.5**	**+0.4**
	comp=Z,460nm,0.9s,mb6.1,SNR=53						
TLY	**Talaya**	**49.93**	**328**	*e*P	**P**	**02 39 04.2**	**+0.1**
TLY				*e*	pP	02 39 39.4	0.0
TLY				*e*		02 40 54.2	
TLY				*e*S	**S**	**02 46 02.2**	**+1.3**
TLY				*e*SS	ScS	02 48 37.0	+0.9
TLY				*e*SSS	SS	02 49 28.5	-4.4
TLY				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.4						
TLY				MLR	MLR		
	comp=Z,5µm,17.0s						
TLY	**Talaya**	**49.93**	**328**	*e*P	**P**	**02 39 04.2**	**+0.1**
	comp=Z,39nm,0.9s,mb5.0						
ATKA	**Atka Island**	**50.16**	**32**	P	**P**	**02 39 03.0**	**-2.8**
SHL	**Shillong**	**50.79**	**292**	*e*P	**P**	**02 39 10.5**	**-0.4**
SHL				*e*S	**S**	**02 46 12.0**	**-1.1**
AGT	**Agartala**	**51.31**	**289**	⇑*i*P	**P**	**02 39 17.0**	**+2.1**
AGT				*i*		02 41 42.0	
MOY	**Mondy**	**51.33**	**326**	*e*P	**P**	**02 39 14.7**	**+0.1**
MOY				*e*	pP	02 39 51.0	+0.9
MOY				pmax	pmax		
	comp=Z,153nm,1.9s,mb5.3						
TOO	**Toolangi**	**51.33**	**179**	⇓*i*P	**P**	**02 39 14.8**	**-0.1**
	comp=Z,24nm,0.7s,mb4.9						
TOO	**Toolangi**	**51.33**	**179**	⇓*i*P	**P**	**02 39 14.8**	**-0.1**
TOO				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.9						
LSA	**Lhasa**	**51.72**	**297**	P	**P**	**02 39 18.7**	**+0.8**
LSA				S	**S**	**02 46 21.8**	**-4.0**
LSA				AMB	AMB		
	comp=Z,110nm,0.7s,mb5.6						
LSA				AMB	AMB		
	comp=Z,670nm,7.4s						
LSA				LR	LR		
	comp=N,6µm,25.7s						
LSA				LR	LR		
	comp=E,3µm,21.1s						
MUN	**Mundaring**	**53.32**	**210**	*e*P	**P**	**02 39 27.1**	**-2.6**
	comp=E,68nm,0.5s,mb5.6						
MUN				*e*S	**S**	**02 46 44.9**	**-2.6**
MUN	**Mundaring**	**53.32**	**210**	*e*P	**P**	**02 39 27.1**	**-2.6**
MUN				*e*S	**S**	**02 46 44.9**	**-2.6**
MUN				pmax	pmax		
	comp=Z,68nm,0.5s,mb5.6						
NIKO	**Nikolski**	**53.35**	**33**	*e*P	**P**	**02 39 27.8**	**-1.9**
NWAO	**Narrogin (SRO)**	**53.61**	**209**	P	**P**	**02 39 30.2**	**-1.6**
NWAO				pmax	pmax		
	comp=Z,40nm,0.7s						
NWAO	**Narrogin (SRO)**	**53.61**	**209**	*e*P	**P**	**02 39 28.7**	**-3.1**
	comp=Z,40nm,0.7s,mb5.2						
CAL	**Calcutta**	**54.01**	**288**	*e*	**P**	**02 39 37.4**	**+2.6**
CAL				*e*		02 43 56.2	
COCO	**West Island**	**54.19**	**244**	*e*P	**P**	**02 39 35.7**	**-0.6**
	comp=Z,132nm,0.8s,mb5.7						
KIP	**Kipapa**	**54.74**	**74**	*e*P	**P**	**02 39 41.5**	**+1.3**
KIP				pmax	pmax		
	comp=Z,476nm,0.8s,mb6.3						
KIP	**Kipapa**	**54.74**	**74**	*e*P	**P**	**02 39 41.5**	**+1.3**
	comp=Z,476nm,0.8s,mb6.3						
HON	**Honolulu**	**54.75**	**74**	P	**P**	**02 39 42.0**	**+1.7**
HON	**Honolulu**	**54.75**	**74**	*e*P	**P**	**02 39 41.5**	**+1.2**
UNV	**Unalaska Valle**	**55.00**	**33**	*e*P	**P**	**02 39 39.1**	**-2.6**
	comp=Z,293nm,0.8s,mb6.1						
BILL	**Bilibino**	**55.74**	**10**	*c* *i*P	**P**	**02 39 45.0**	**-1.8**
BILL				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.4						
BILL	**Bilibino**	**55.74**	**10**	*e*P	**P**	**02 39 44.0**	**-2.8**
	comp=Z,54nm,0.8s,mb5.4						
JIRN	**Jiri**	**55.95**	**294**	*e*P	**P**	**02 39 48.2**	**-0.7**
	comp=Z,223nm,1.0s,mb6.0						
HKL	**Haleakala**	**56.41**	**74**	*e*P	**P**	**02 39 54.4**	**+2.2**
BWNR	**Bhubaneshwar**	**56.45**	**285**	*i* P	**P**	**02 39 49.6**	**-2.9**
BWNR				AMb	AMB	02 40 19.1	
	comp=Z,58nm,1.1s,mb5.3						
PKI	**Pulchoki**	**56.64**	**294**	*e*P	**P**	**02 39 52.8**	**-1.0**
	comp=Z,68nm,0.6s,mb5.7						
TAU	**Tasmania Unive**	**56.71**	**178**	P	**P**	**02 39 53.6**	**-0.4**
TAU				pmax	pmax		
	comp=Z,380nm,1.0s,mb6.2						
TAU	**Tasmania Unive**	**56.71**	**178**	*e*P	**P**	**02 39 53.3**	**-0.7**
	comp=Z,377nm,1.0s,mb6.2						
KKN	**Kakani**	**56.76**	**294**	*e*P	**P**	**02 39 53.0**	**-1.6**
	comp=Z,129nm,0.8s,mb5.8						
WMQ	**Urumqi**	**56.77**	**313**	*i* P	**P**	**02 39 54.6**	**+0.2**
WMQ				AP	pP	02 40 32.0	+1.4
WMQ				PP	PP	02 42 04.0	+0.2
WMQ				S	**S**	**02 47 33.0**	**-0.2**
WMQ				AMB	AMB		
	comp=Z,145nm,1.0s,mb5.8						
WMQ				LR	LR		
	comp=N,10µm,20.0s						
WMQ				LR	LR		
	comp=E,4µm,18.0s						
WMQ				LR	LR		
	comp=Z,5µm,20.0s						
DMN	**Daman**	**56.91**	**294**	*e*P	**P**	**02 39 54.7**	**-0.9**
	comp=Z,133nm,0.7s,mb5.9						
KIH	**Kanekii**	**56.95**	**76**	⇑*e*P	**P**	**02 39 57.7**	**+1.7**
WCZ	**Waipu Caves**	**57.03**	**151**	*e*P	**P**	**02 39 57.3**	**+1.0**
WCZ	**Waipu Caves**	**57.03**	**151**	PN	**P**	**02 39 56.8**	**+0.5**
WCZ	**Waipu Caves**	**57.03**	**151**	PN	**P**	**02 39 56.8**	**+0.5**
DAH	**Dandelion**	**57.06**	**76**	⇑*e*P	**P**	**02 39 57.6**	**+0.9**
FALS	**False Pass**	**57.07**	**33**	P	**P**	**02 39 56.1**	**-0.2**
RCO	**Red Cone**	**57.09**	**76**	⇑*e*P	**P**	**02 39 58.0**	**+1.0**
SWH	**Southwest Rift**	**57.11**	**76**	⇑*e*P	**P**	**02 39 58.2**	**+1.1**
MWH	**Mokuaweoweo**	**57.11**	**76**	⇑*e*P	**P**	**02 39 58.8**	**+1.7**
POHA	**Pohakuloa**	**57.16**	**75**	*e*P	**P**	**02 39 58.5**	**+1.1**
WOH	**Wood Valley**	**57.22**	**76**	⇑*e*P	**P**	**02 39 58.9**	**+1.0**
AIN	**Ainahou**	**57.25**	**76**	⇑*e*P	**P**	**02 39 59.0**	**+1.0**
MLH	**Mauna Loa**	**57.31**	**76**	⇑*e*P	**P**	**02 39 59.6**	**+1.1**
GKN	**Gorkha**	**57.33**	**294**	*e*P	**P**	**02 39 56.7**	**-1.9**
	comp=Z,292nm,0.8s,mb6.2						
GAMB	**Gambell**	**58.09**	**21**	P	**P**	**02 40 01.4**	**-2.0**
KOLN	**Koldanda**	**58.25**	**294**	*e*P	**P**	**02 40 04.0**	**-1.0**
	comp=Z,201nm,0.8s,mb6.0						
TIXI	**Tiksi**	**58.38**	**354**	*e*P	**P**	**02 40 02.9**	**-2.4**
TIXI				*e*		02 42 13.0	
TIXI				*e*S	**S**	**02 47 52.0**	**-1.9**
TIXI				*e*SS	SS	02 51 41.9	-8.3
TIXI				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.2						
TIXI	**Tiksi**	**58.38**	**354**	*i* P	**P**	**02 40 02.8**	**-2.5**
SDPT	**Sand Point**	**58.81**	**33**	*e*P	**P**	**02 40 06.7**	**-1.8**
	comp=Z,584nm,1.0s,mb6.4						
VIS	**Vishakhapatnam**	**59.01**	**282**	*i* P	**P**	**02 40 05.0**	**-5.4**
VIS				*e*		02 40 13.5	
VIS				*e*S	**S**	**02 47 58.4**	**-4.3**
VIS				*e*		03 01 49.3	
	comp=Z,1µm,17.0s						
VIS	**Vishakhapatnam**	**59.01**	**282**	*e*P	**P**	**02 40 09.2**	**-1.2**
VIS				*e*		02 40 13.5	
VIS				AMb	AMB	02 40 14.2	
	comp=Z,42nm,1.1s,mb5.2						
VIS				*e*S	**S**	**02 47 59.4**	**-3.3**
VIS				*e*		03 01 49.3	
	comp=Z,1µm,17.0s						
ALBI	**Allahabad**	**59.89**	**291**	*e*P	**P**	**02 40 13.0**	**-3.3**
RATZ	**Rangitukua**	**60.07**	**152**	*e*P	**P**	**02 40 18.1**	**+0.7**
RATZ	**Rangitukua**	**60.07**	**152**	PN	**P**	**02 40 18.1**	**+0.7**
RATZ	**Rangitukua**	**60.07**	**152**	PN	**P**	**02 40 18.1**	**+0.7**
MGZ	**Maungaku**	**60.08**	**153**	*e*P	**P**	**02 40 18.1**	**+0.7**
MGZ	**Maungaku**	**60.08**	**153**	PN	**P**	**02 40 18.1**	**+0.7**
MGZ	**Maungaku**	**60.08**	**153**	PN	**P**	**02 40 18.1**	**+0.7**
URZ	**Urewera**	**60.20**	**151**	*e*P	**P**	**02 40 17.1**	**-1.1**
URZ	**Urewera**	**60.20**	**151**	PN	**P**	**02 40 16.6**	**-1.7**
URZ	**Urewera**	**60.20**	**151**	PN	**P**	**02 40 16.6**	**-1.7**
CNZ	**Chateau**	**60.24**	**153**	PN	**P**	**02 40 19.8**	**+1.3**
CNZ	**Chateau**	**60.24**	**153**	PN	**P**	**02 40 19.8**	**+1.3**
NGZ	**Ngauruhoe**	**60.25**	**153**	P	**P**	**02 40 18.9**	**+0.3**
NGZ	**Ngauruhoe**	**60.25**	**153**	PN	**P**	**02 40 18.9**	**+0.3**
NGZ	**Ngauruhoe**	**60.25**	**153**	PN	**P**	**02 40 18.9**	**+0.3**
QRZ	**Quartz Range**	**60.34**	**156**	*e*P	**P**	**02 40 19.0**	**-0.2**
QRZ	**Quartz Range**	**60.34**	**156**	PN	**P**	**02 40 19.0**	**-0.2**
QRZ	**Quartz Range**	**60.34**	**156**	PN	**P**	**02 40 19.0**	**-0.2**
TUVZ	**Tukino**	**60.35**	**153**	PN	**P**	**02 40 19.3**	**+0.1**
TUVZ	**Tukino**	**60.35**	**153**	PN	**P**	**02 40 19.3**	**+0.1**
MWZ	**Matawai**	**60.46**	**151**	*e*P	**P**	**02 40 19.2**	**-0.8**
MWZ	**Matawai**	**60.46**	**151**	PN	**P**	**02 40 19.2**	**-0.8**
MWZ	**Matawai**	**60.46**	**151**	PN	**P**	**02 40 19.2**	**-0.8**
TNA	**Tin City**	**60.46**	**21**	*e*P	**P**	**02 40 16.9**	**-2.7**
	comp=Z,19nm,0.7s,mb5.0						
NNZ	**Nelson**	**61.01**	**156**	*e*P	**P**	**02 40 22.9**	**-0.8**
NNZ	**Nelson**	**61.01**	**156**	PN	**P**	**02 40 22.9**	**-0.8**
NNZ	**Nelson**	**61.01**	**156**	PN	**P**	**02 40 22.9**	**-0.8**
MKAR	**Makanchi Array**	**61.11**	**316**	*i* P	**P**	**02 40 23.9**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,126nm,1.0s						
LGTI	**Lohaghat**	**61.20**	**296**	*e*P	**P**	**02 40 25.5**	**+0.4**
THZ	**Tophouse**	**61.28**	**156**	*e*P	**P**	**02 40 24.8**	**-0.8**
THZ	**Tophouse**	**61.28**	**156**	PN	**P**	**02 40 24.8**	**-0.7**
THZ	**Tophouse**	**61.28**	**156**	PN	**P**	**02 40 24.8**	**-0.7**
MRZ	**Mangatainoka R**	**61.46**	**154**	*e*P	**P**	**02 40 25.0**	**-1.8**
MRZ	**Mangatainoka R**	**61.46**	**154**	PN	**P**	**02 40 25.0**	**-1.7**
MRZ	**Mangatainoka R**	**61.46**	**154**	PN	**P**	**02 40 25.0**	**-1.7**
BHW	**Baring Head**	**61.78**	**155**	P	**P**	**02 40 26.8**	**-2.1**
BHW	**Baring Head**	**61.78**	**155**	PN	**P**	**02 40 26.8**	**-2.0**
BHW	**Baring Head**	**61.78**	**155**	PN	**P**	**02 40 26.8**	**-2.0**
MTW	**Mount Morrison**	**61.84**	**154**	P	**P**	**02 40 27.6**	**-1.7**
MTW	**Mount Morrison**	**61.84**	**154**	PN	**P**	**02 40 27.6**	**-1.7**
MTW	**Mount Morrison**	**61.84**	**154**	PN	**P**	**02 40 27.6**	**-1.7**
LTZ	**Lake Taylor**	**61.92**	**157**	*e*P	**P**	**02 40 28.8**	**-1.0**
LTZ	**Lake Taylor**	**61.92**	**157**	PN	**P**	**02 40 28.8**	**-0.9**
LTZ	**Lake Taylor**	**61.92**	**157**	PN	**P**	**02 40 28.8**	**-0.9**
MSWZ	**Moikau Station**	**61.94**	**154**	P	**P**	**02 40 28.4**	**-1.6**
MSWZ	**Moikau Station**	**61.94**	**154**	PN	**P**	**02 40 28.4**	**-1.6**
MSWZ	**Moikau Station**	**61.94**	**154**	PN	**P**	**02 40 28.4**	**-1.6**
KHZ	**Kahutara**	**62.09**	**156**	*e*P	**P**	**02 40 28.6**	**-2.3**
KHZ	**Kahutara**	**62.09**	**156**	PN	**P**	**02 40 28.1**	**-2.8**
KHZ	**Kahutara**	**62.09**	**156**	PN	**P**	**02 40 28.1**	**-2.8**
MSZ	**Milford Sound**	**62.10**	**161**	PN	**P**	**02 40 31.4**	**+0.4**
MSZ	**Milford Sound**	**62.10**	**161**	PN	**P**	**02 40 31.4**	**+0.4**
RPZ	**Rata Peaks**	**62.28**	**159**	*e*P	**P**	**02 40 30.5**	**-1.7**
RPZ	**Rata Peaks**	**62.28**	**159**	PN	**P**	**02 40 30.5**	**-1.7**
RPZ	**Rata Peaks**	**62.28**	**159**	PN	**P**	**02 40 30.5**	**-1.7**
NVS	**Novosibirsk**	**62.35**	**325**	*i* P	**P**	**02 40 30.6**	**-1.9**
NVS				*i* S	**S**	**02 48 44.1**	**-0.5**
NVS				pmax	pmax		
	comp=N,137nm,1.4s						
NVS				pmax	pmax		
	comp=E,232nm,1.4s						
NVS				pmax	pmax		
	comp=Z,281nm,1.4s,mb5.9						
NVS				smax			
	comp=N,72nm,1.9s						
NVS				smax			
	comp=E,62nm,1.9s						
DCZ	**Deep Cove**	**62.60**	**162**	PN	**P**	**02 40 32.6**	**-1.6**
DCZ	**Deep Cove**	**62.60**	**162**	PN	**P**	**02 40 32.6**	**-1.6**
DDI	**Dehra Dun**	**63.09**	**297**	*e*P	**P**	**02 40 33.4**	**-4.3**
PALK	**Pallekele**	**63.18**	**271**	*e*P	**P**	**02 40 35.8**	**-2.7**
	comp=E,21nm,1.2s,mb4.8						
HYB	**Hyderabad**	**63.56**	**283**	⇑*e*P	**P**	**02 40 41.0**	**-0.1**
HYB				*e*	pP	02 41 19.5	+1.5
HYB				*e*S	**S**	**02 49 02.0**	**+1.6**
HYB				*e*		02 50 08.0	
HYB	**Hyderabad**	**63.56**	**283**	⇑*i*P	**P**	**02 40 41.0**	**-0.1**
	comp=E,46nm,0.8s,mb5.4						
HYB				*e*PcP	PcP	02 41 19.5	+3.6
HYB				*e*S	**S**	**02 49 02.0**	**+1.6**
HYB				*e*sS		02 50 08.0	
KDAK	**Kodiak Island**	**63.74**	**32**	*e*P	**P**	**02 40 38.1**	**-3.4**
	comp=E,73nm,1.0s,mb5.5						
BHPL	**Bhopal**	**64.01**	**289**	*i* P	**P**	**02 40 42.9**	**-1.0**
KURK	**Kurchatov**	**64.19**	**320**	*i* P	**P**	**02 40 43.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,209nm,1.2s,mb5.8						
KURK	**Kurchatov**	**64.19**	**320**	*e*P	**P**	**02 40 43.3**	**-1.3**
	comp=Z,169nm,0.9s,mb5.9						
AAA	**Alma-Ata**	**64.40**	**311**	*e*P	**P**	**02 40 44.0**	**-2.1**
RSO	**Redoubt South**	**64.43**	**29**	*e*P	**P**	**02 40 44.0**	**-2.0**
KSH	**Kashi**	**64.91**	**307**	*e*P	**P**	**02 40 47.0**	**-2.4**
KSH				*e*XP	sP	02 41 42.0	-1.4
KSH				*e*SCP		02 45 06.0	
KSH				*e*PCS		02 45 24.2	
KSH				*e*SCS	ScS	02 50 24.7	-0.3
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.6						
KSH				AMB	AMB		
	comp=Z,830nm,7.8s						
KSH				LR	LR		
	comp=N,4µm,13.4s						
KSH				LR	LR		
	comp=E,4µm,11.9s						
TKM2	**Tokmak 2**	**65.36**	**311**	P	**P**	**02 40 52.6**	**+0.3**
	SNR=32						
KZA	**Kyzart**	**65.57**	**310**	P	**P**	**02 40 55.2**	**+1.6**
	SNR=25						
SLKM	**Skilak Lake**	**65.64**	**29**	P	**P**	**02 40 51.6**	**-2.2**
SLKM	**Skilak Lake**	**65.64**	**29**	*e*P	**P**	**02 40 51.1**	**-2.7**
KBK	**Karagaybulak**	**65.83**	**311**	P	**P**	**02 40 55.6**	**+0.3**
	SNR=31						
FIB	**Fire Island**	**65.84**	**29**	P	**P**	**02 40 53.7**	**-1.3**
FIB	**Fire Island**	**65.84**	**29**	*e*P	**P**	**02 40 52.5**	**-2.5**
IMA	**Indian Mountai**	**65.88**	**23**	*e*P	**P**	**02 40 54.0**	**-1.2**
IMA				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
IMA	**Indian Mountai**	**65.88**	**23**	*e*P	**P**	**02 40 54.0**	**-1.2**
	comp=Z,15nm,1.1s,mb4.7						
CHMS	**Chumysh**	**65.99**	**311**	P	**P**	**02 40 56.4**	**+0.1**
	SNR=20						
FRU	**Bishkek**	**66.08**	**311**	⇓*e*P	**P**	**02 40 58.0**	**+1.1**
FRU				*e*	pP	02 41 34.0	-0.1
FRU				*e*		02 49 30.0	
FRU				*i*		02 50 18.0	
FRU				pmax	pmax		
	comp=Z,110nm,2.0s,mb5.3						
UCH	**Uchtor**	**66.13**	**310**	P	**P**	**02 40 58.6**	**+1.4**
	SNR=44						
AAK	**Ala-Archa**	**66.16**	**311**	P	**P**	**02 40 57.8**	**+0.4**
	SNR=15						
AAK	**Ala-Archa**	**66.16**	**311**	P	**P**	**02 40 57.7**	**+0.3**
AAK				pmax	pmax		
	comp=Z,137nm,1.5s,mb5.6						
AAK	**Ala-Archa**	**66.16**	**311**	*e*P	**P**	**02 40 55.8**	**-1.6**
	comp=Z,16nm,0.8s,mb4.9						
USP	**Ospenovka**	**66.19**	**311**	P	**P**	**02 40 57.7**	**+0.2**
	SNR=5.7						
PMR	**Palmer**	**66.44**	**28**	*e*P	**P**	**02 40 56.3**	**-2.5**
PMR				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.4						
PMR	**Palmer**	**66.44**	**28**	*e*P	**P**	**02 40 56.3**	**-2.5**
	comp=Z,41nm,0.7s,mb5.4						
EKS2	**Erkin-Say**	**66.69**	**311**	P	**P**	**02 41 01.1**	**+0.4**
	SNR=22						
AML	**Almayashu**	**66.73**	**310**	P	**P**	**02 41 02.2**	**+1.2**
	SNR=28						
SML	**Sawmill**	**66.86**	**28**	P	**P**	**02 40 59.5**	**-1.9**
SML	**Sawmill**	**66.86**	**28**	*e*P	**P**	**02 40 58.9**	**-2.6**
MCK	**McKinley**	**67.08**	**26**	P	**P**	**02 41 00.0**	**-2.8**
MCK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
MCK	**McKinley**	**67.08**	**26**	*e*P	**P**	**02 40 59.0**	**-3.8**
	comp=Z,19nm,1.1s,mb4.8						
KAD	**Karad**	**67.71**	**283**	*e*P	**P**	**02 41 06.6**	**-0.9**
KAD				AMb	AMB	02 41 10.1	
	comp=Z,37nm,0.8s,mb5.2						
EYAK	**Cordova Ski Ar**	**67.81**	**30**	*e*P	**P**	**02 41 05.6**	**-1.8**
COLA	**College**	**67.83**	**25**	*e*P	**P**	**02 41 05.2**	**-2.2**
COLA				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
COLA	**College**	**67.83**	**25**	*e*P	**P**	**02 41 05.2**	**-2.2**
	comp=Z,18nm,0.6s,mb5.0						
POO	**Poona**	**67.86**	**284**	*i* P	**P**	**02 41 04.1**	**-4.3**
POO				AMb	AMB	02 41 09.8	
	comp=Z,51nm,1.0s,mb5.2						
DIV	**Divide**	**67.91**	**29**	*e*P	**P**	**02 41 06.7**	**-1.3**
	comp=Z,69nm,0.5s,mb5.6						
THY	**Trims Highway**	**68.38**	**27**	*e*P	**P**	**02 41 09.7**	**-1.1**
CHKZ	**Chkalovo**	**69.44**	**322**	*i* P	**P**	**02 41 16.7**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,124nm,1.1s,mb5.5						
CHKZ	**Chkalovo**	**69.44**	**322**	*e*P	**P**	**02 41 15.8**	**-1.7**
	comp=Z,54nm,0.9s,mb5.3						
BVA0	**Borovoye Array**	**69.53**	**322**	*i* P	**P**	**02 41 17.9**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
DAWY	**Dawson**	**71.28**	**27**	*e*P	**P**	**02 41 26.6**	**-1.8**
PPT	**Papeete**	**71.97**	**114**	*e*P	**P**	**02 41 36.1**	**+2.9**
	comp=Z,70nm,1.3s,mb5.2						
PPT	**Papeete**	**71.97**	**114**	*e*LR	LR	03 02 35.0	
	comp=Z,6µm,32.8s						
PAE	**Paea**	**72.00**	**114**	*e*P	**P**	**02 41 35.7**	**+2.3**
	comp=Z,136nm,1.0s,mb5.6						
TIAR	**Tiarei**	**72.17**	**114**	*e*P	**P**	**02 41 36.9**	**+2.5**
	comp=Z,214nm,0.9s,mb5.9						
TIAR				*e*pP	pP	02 42 13.4	+1.2
	comp=Z,267nm,1.1s						
TVO	**Taravao**	**72.33**	**114**	*e*P	**P**	**02 41 38.0**	**+2.7**
	comp=Z,98nm,1.0s,mb5.5						
PMOR	**Pomariorio Ree**	**72.57**	**111**	*e*P	**P**	**02 41 38.8**	**+1.9**
	comp=Z,109nm,1.1s,mb5.5						
INK	**Inuvik**	**73.99**	**23**	P	**P**	**02 41 41.9**	**-2.2**
INK				pmax	pmax		
	comp=Z,81nm,0.9s						
INK	**Inuvik**	**73.99**	**23**	*e*P	**P**	**02 41 41.7**	**-2.4**
	comp=Z,81nm,0.9s,mb5.5						
TBI	**Tubuai**	**74.26**	**119**	*e*P	**P**	**02 41 48.9**	**+2.3**
	comp=Z,317nm,1.1s,mb5.9						
TBI				*e*LR	LR	03 03 44.2	
	comp=Z,2µm,38.5s						
SVE	**Sverdlovsk**	**75.18**	**326**	⇑*i*P	**P**	**02 41 47.8**	**-3.3**
SVE				*e*		02 42 04.0	
SVE				*e*	pP	02 42 27.0	-2.3
SVE				*e*		02 42 45.0	
SVE				*e*S	S	02 51 10.0	-5.4
SVE				*e*PS	PS	02 52 00.0	-15
SVE				*e*SSS	SSS	02 59 30.0	+3.5
SVE				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.5						
ARU	**Arti**	**76.35**	**325**	P	**P**	**02 41 57.9**	**+0.2**
	comp=Z,407nm,1.0s,mb6.0,SNR=20						
ARU	**Arti**	**76.35**	**325**	⇑*i*P	**P**	**02 41 50.2**	**-7.5**
ARU				*e*		02 42 04.0	
ARU				*e*S	S	02 51 19.4	-8.9
ARU				*e*		02 51 59.2	
ARU				pmax	pmax		
	comp=Z,86nm,1.2s,mb5.3						
ARU				MLR	MLR		
	comp=Z,4µm,18.0s						
ARU				MLR	MLR		
	comp=N,3µm,22.0s						
ARU				MLR	MLR		
	comp=E,2µm,18.0s						
SOKR	**Solikamsk**	**77.01**	**329**	⇑*i*P	**P**	**02 41 59.8**	**-1.5**
SOKR				*i* S	S	02 51 32.7	-2.6
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,4µm,18.0s						
OCWA	**Octopus Mounta**	**80.45**	**43**	*e*P	**P**	**02 42 20.7**	**+0.5**
	comp=Z,100nm,0.7s,mb5.5						
DRV	**Dumont d'Urvil**	**80.55**	**182**	P	**P**	**02 42 14.0**	**-6.3**
PGC	**Sidney**	**80.76**	**42**	*e*P	**P**	**02 42 21.8**	**-0.1**
	comp=Z,202nm,0.9s,mb5.8						
KEBM	**Edson Butte**	**81.24**	**48**	*e*P	**P**	**02 42 25.6**	**+1.1**
KEBM				*e*pP	pP	02 43 06.7	+3.6
KBO	**Bosley Butte**	**81.44**	**49**	*e*P	**P**	**02 42 27.3**	**+1.8**
KBO				*e*pP	pP	02 43 06.5	+2.3
MPOR	**Mary's Peak**	**81.48**	**46**	P	**P**	**02 42 26.4**	**+0.7**
COR	**Corvallis**	**81.64**	**46**	P	**P**	**02 42 26.8**	**+0.3**
COR				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.5						

COR	**Corvallis**	**81.64**	**46**	*e*P	**P**	**02 42 26.5**	**0.0**
	comp=Z,113nm,0.8s,mb5.5						
KHMM	**Horse Mountain**	**82.07**	**50**	*e*P	**P**	**02 42 29.9**	**+1.1**
KHMM				*e*pP	pP	02 43 10.4	+2.9
SSOR	**Sweet Springs**	**82.17**	**46**	P	**P**	**02 42 29.5**	**+0.2**
HOQ	**Hoqain**	**82.23**	**292**	P	**P**	**02 42 30.7**	**+0.7**
	SNR=20						
HUMO	**Hull Mountain**	**82.28**	**48**	*e*P	**P**	**02 42 30.1**	**+0.3**
	comp=Z,66nm,0.9s,mb5.3						
HUMO				*e*pP	pP	02 43 08.8	+0.2
HBO	**Huckleberry Mo**	**82.48**	**47**	P	**P**	**02 42 30.9**	**+0.1**
YKW3	**Yellowknife Ar**	**82.48**	**27**	*e*P	**P**	**02 42 28.8**	**-1.6**
YKW3				*e*pP	pP	02 43 08.8	-0.4
YBH	**Yreka Blue Hor**	**82.64**	**49**	*e*P	**P**	**02 42 32.1**	**+0.4**
YBH				*e**PP	pP	02 43 11.8	+1.3
YBH				pmax	pmax		
	comp=Z,116nm,0.9s						
YBH	**Yreka Blue Hor**	**82.64**	**49**	*e*P	**P**	**02 42 32.0**	**+0.3**
	comp=Z,116nm,0.9s,mb5.6						
YBH				*e*pP	pP	02 43 11.8	+1.3
BANOM	**Banah**	**82.65**	**295**	P	**P**	**02 42 35.8**	**+3.7**
	SNR=11						
BUOR	**Burton Butte**	**82.87**	**48**	P	**P**	**02 42 33.4**	**+0.5**
TBM	**Table Mountain**	**82.94**	**43**	P	**P**	**02 42 33.1**	**0.0**
HOPS	**Hopland**	**82.95**	**52**	*e*P	**P**	**02 42 33.6**	**+0.3**
	comp=Z,87nm,1.0s,mb5.4						
HOPS				*e*pP	pP	02 43 13.6	+1.4
ARQ	**Araqi**	**82.99**	**292**	P	**P**	**02 42 35.4**	**+1.5**
	SNR=23						
WDC	**Whiskeytown Da**	**83.01**	**50**	*e*P	**P**	**02 42 34.0**	**+0.4**
WDC				*e**PP	pP	02 43 13.7	+1.2
WDC				pmax	pmax		
	comp=Z,74nm,0.9s,mb5.4						
WDC	**Whiskeytown Da**	**83.01**	**50**	*e*P	**P**	**02 42 34.0**	**+0.4**
	comp=Z,74nm,0.9s,mb5.4						
WDC				*e*pP	pP	02 43 13.7	+1.2
EBG	**Ellensburg**	**83.02**	**44**	P	**P**	**02 42 33.8**	**+0.3**
ASHO	**Ashiyiah**	**83.12**	**294**	P	**P**	**02 42 37.1**	**+2.6**
	SNR=10						
LBCM	**Butte Creek Ri**	**83.84**	**50**	P	**P**	**02 42 38.1**	**+0.3**
OHCM	**Honcut**	**84.08**	**51**	*e*P	**P**	**02 42 39.0**	**-0.1**
RES	**Resolute Bay**	**84.14**	**13**	*e*P	**P**	**02 42 37.2**	**-1.3**
RES				*e**PP	pP	02 43 15.8	-1.7
RES				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.2						
RES	**Resolute Bay**	**84.14**	**13**	*e*P	**P**	**02 42 37.2**	**-1.3**
	comp=Z,40nm,0.8s,mb5.2						
RES				*e*pP	pP	02 43 15.8	-1.7
OD2	**Odessa Site #2**	**84.14**	**43**	P	**P**	**02 42 38.8**	**-0.4**
MOD	**Modoc**	**84.36**	**48**	*e*P	**P**	**02 42 40.4**	**0.0**
	comp=Z,69nm,0.8s,mb5.4						
MOD				*e*pP	pP	02 43 17.3	-2.1
HSP	**Hornsund**	**84.50**	**350**	*e*P	**P**	**02 42 40.6**	**+0.2**
SAO	**San Andreas Ge**	**84.70**	**54**	*e*P	**P**	**02 42 42.6**	**+0.4**
SAO				*e**PP	pP	02 43 21.9	+0.7
SAO				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
SAO	**San Andreas Ge**	**84.70**	**54**	*e*P	**P**	**02 42 42.6**	**+0.4**
	comp=Z,60nm,1.0s,mb5.3						
SAO				*e*pP	pP	02 43 21.9	+0.7
NEW	**Newport**	**84.95**	**42**	P	**P**	**02 42 42.8**	**-0.4**
NEW				pmax	pmax		
	comp=Z,110nm,0.9s						
NEW	**Newport**	**84.95**	**42**	*e*P	**P**	**02 42 42.7**	**-0.5**
	comp=Z,113nm,0.9s,mb5.6						
APA	**Apatity**	**85.02**	**339**	⇓*i*P	**P**	**02 42 45.0**	**+1.9**
APA				*i*		02 52 52.0	
APA				*e*S	S	02 53 04.0	+6.7
APA				*e*SS	SS	02 58 43.0	+5.9
APA				pmax	pmax		
	comp=Z,77nm,1.5s,mb5.2						
LRV	**Little Rabbit**	**85.12**	**54**	*e*P	**P**	**02 42 45.0**	**+0.7**
CMB	**Columbia Colle**	**85.22**	**52**	*e*P	**P**	**02 42 44.8**	**0.0**
CMB				*e**PP	pP	02 43 25.0	+1.2
CMB				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.2						
CMB	**Columbia Colle**	**85.22**	**52**	*e*P	**P**	**02 42 44.8**	**0.0**
	comp=Z,45nm,0.8s,mb5.2						
CMB				*e*pP	pP	02 43 25.0	+1.2
WCN	**Washoe City**	**85.39**	**51**	P	**P**	**02 42 46.7**	**+1.1**
WCN				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.4						
WCN	**Washoe City**	**85.39**	**51**	*e*P	**P**	**02 42 46.0**	**+0.4**
	comp=Z,76nm,0.9s,mb5.4						
BJO	**Bjornoya**	**85.40**	**347**	*e*P	**P**	**02 42 49.6**	**+4.8**
BJO				*e*pP	pP	02 43 25.9	+2.1
BJO				*e*SKSa		02 52 50.8	
BJO				AMS	AMS	03 21 36.8	
	comp=Z,1µm,23.5s						
WVOR	**Wild Horse Val**	**85.43**	**48**	*e*P	**P**	**02 42 45.8**	**+0.1**
WVOR				*e**PP	pP	02 43 25.8	+1.0
WVOR				pmax	pmax		
	comp=Z,206nm,2.0s,mb5.5						
WVOR	**Wild Horse Val**	**85.43**	**48**	*e*P	**P**	**02 42 45.8**	**+0.1**
	comp=Z,206nm,2.0s,mb5.5						
WVOR				*e*pP	pP	02 43 25.8	+1.1
BJO1	**Bjornoya**	**85.44**	**347**	*e*P	**P**	**02 42 49.6**	**+4.6**
BJO1				LR	LR		
	comp=Z,1384µm,23.5s						
BMO	**Blue Mountains**	**85.73**	**45**	*e*P	**P**	**02 42 46.8**	**-0.3**
BMO				*e**PP	pP	02 43 26.9	+0.7
BMO				pmax	pmax		
	comp=Z,145nm,0.9s,mb5.7						
BMO	**Blue Mountains**	**85.73**	**45**	*e*P	**P**	**02 42 46.8**	**-0.3**
	comp=Z,145nm,0.9s,mb5.7						
BMO				*e*pP	pP	02 43 26.9	+0.7
MAK	**Makhachkala**	**85.79**	**313**	P	**P**	**02 42 45.0**	**-2.4**
MAK				*i* S	S	02 53 04.0	-1.3
MAK				*i* PS		02 53 57.0	
MAK				smax			
	comp=N,3µm,9.0s						
MAK				smax			
	comp=E,2µm,9.0s						
MAK				MLR	MLR		
	comp=Z,4µm,14.0s						
MAK				MLR	MLR		
	comp=N,4µm,16.0s						
MAK				MLR	MLR		
	comp=E,4µm,14.0s						
EDM	**Edmonton**	**85.84**	**36**	P	**P**	**02 42 46.7**	**-0.7**
EDM	**Edmonton**	**85.84**	**36**	*e*P	**P**	**02 42 46.6**	**-0.8**
KEV	**Kevo**	**86.07**	**342**	*e*p	**P**	**02 42 46.8**	**-1.4**
	comp=E,14nm,0.5s,mb5.0						
KEV	**Kevo**	**86.07**	**342**	*e*P	**P**	**02 42 46.8**	**-1.4**
KEV				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
OMM	**Old Mammoth Mi**	**86.39**	**52**	*e*P	**P**	**02 42 51.0**	**+0.5**
OMM				*e*pP	pP	02 43 33.0	+3.3
ARE0	**ARCESS Array S**	**86.64**	**342**	*e*P	**P**	**02 42 50.2**	**-0.7**
ARE0				*e*pP	pP	02 43 35.1	+5.0
RKT	**Rikitea**	**86.71**	**115**	*e*P	**P**	**02 42 54.8**	**+2.4**
	comp=Z,91nm,1.0s,mb5.6						
WALA	**Waterton Lakes**	**86.77**	**40**	*e*P	**P**	**02 42 52.8**	**+0.8**
	comp=Z,68nm,0.9s,mb5.5						
WALA				*e*pP	pP	02 43 32.5	+1.3
MNV	**Mina**	**86.82**	**51**	P	**P**	**02 42 53.1**	**+0.6**
MNV				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.5						
MNV	**Mina**	**86.82**	**51**	*e*P	**P**	**02 42 52.8**	**+0.3**
	comp=Z,86nm,1.0s,mb5.5						
BMN	**Battle Mountai**	**86.98**	**49**	P	**P**	**02 42 54.7**	**+1.5**
BMN				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
BMN	**Battle Mountai**	**86.98**	**49**	*e*P	**P**	**02 42 53.8**	**+0.5**
	comp=Z,30nm,0.8s,mb5.2						
BMN				*e*pP	pP	02 43 34.6	+2.2
ABTO	**Aybut**	**87.28**	**287**	P	**P**	**02 42 58.0**	**+2.9**
	SNR=5.4						
MSO	**Missoula**	**87.43**	**42**	*e*P	**P**	**02 42 54.7**	**-0.5**
	comp=Z,14nm,0.9s,mb4.8						
TPH	**Tonopah**	**87.62**	**51**	*e*P	**P**	**02 42 57.1**	**+0.7**
TPH				*e**PP	pP	02 43 37.1	+1.5
TPH				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.6						
TPH	**Tonopah**	**87.62**	**51**	*e*P	**P**	**02 42 57.1**	**+0.7**
	comp=Z,99nm,1.0s,mb5.6						
TPH				*e*pP	pP	02 43 37.1	+1.5
DAC	**Darwin (Calif)**	**87.83**	**53**	*e*P	**P**	**02 42 58.2**	**+0.8**
DAC				*e**PP	pP	02 43 38.2	+1.5
DAC				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.3						
DAC	**Darwin (Calif)**	**87.83**	**53**	*e*P	**P**	**02 42 58.2**	**+0.8**
	comp=Z,60nm,1.1s,mb5.3						
DAC				*e*pP	pP	02 43 38.2	+1.6
CHMT	**Chamberlain Mo**	**87.85**	**42**	*e*P	**P**	**02 42 56.3**	**-0.9**
JOF	**Joensuu**	**87.86**	**335**	*e*p	**P**	**02 42 53.7**	**-3.2**
	comp=Z,18nm,0.7s,mb5.0						
MOS	**Moscow**	**87.89**	**327**	*e*P	**P**	**02 42 58.3**	**+1.1**
MOS				*e*	pP	02 43 35.1	-1.4
MOS				*e*		02 46 20.8	
MOS				*e*PPP	PPP	02 48 20.5	-6.1
MOS				*e*S	S	02 53 24.4	-0.4
MOS				*e*PS	PS	02 55 02.6	+11
MOS				*e*		02 59 12.2	
MOS				pmax	pmax		
	comp=Z,133nm,1.5s,mb5.5						
MWC	**Mount Wilson**	**88.01**	**55**	*e*P	**P**	**02 42 58.3**	**0.0**
MWC				*e**PP	pP	02 43 38.3	+0.7
DUS	**Dusheti**	**88.02**	**313**	P	pP	02 43 42.6	+5.1
MTA	**Mtatsminda**	**88.08**	**312**	P	**P**	**02 42 58.2**	**-0.2**
MTA				S	S	02 53 10.3	-17
TI2	**Plekhanov**	**88.09**	**312**	*e*P	**P**	**02 42 59.2**	**+0.7**
TI2				*i* S	S	02 53 15.2	-12
HLID	**Hailey**	**88.09**	**46**	*e*P	**P**	**02 42 58.8**	**+0.3**
	comp=Z,73nm,0.8s,mb5.6						
GOF	**Gofitskoye**	**88.28**	**316**	⇓*i*P	**P**	**02 43 02.0**	**+2.7**
GOF				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.2						
TRO	**Tromso**	**88.47**	**344**	*e*P	**P**	**02 42 56.3**	**-3.3**
TRO				MLR	MLR		
	comp=Z,1745µm,23.5s						
TRO	**Tromso**	**88.47**	**344**	*e*P	**P**	**02 42 57.4**	**-2.3**
TRO				*e*SKSa		02 53 11.3	
TRO				AMS	AMS	03 24 39.5	
	comp=Z,2µm,11.9s						
GNI	**Garni**	**88.56**	**311**	*i* P	**P**	**02 43 00.7**	**-0.1**
GNI				pmax	pmax		
	comp=Z,12nm,1.9s						
OBN	**Obninsk**	**88.69**	**327**	*e*P	**P**	**02 42 57.2**	**-3.8**
	comp=Z,114nm,1.1s,mb5.7						
ONI	**Oni**	**88.76**	**314**	P	**P**	**02 43 02.0**	**+0.3**
ONI				S	S	02 53 14.3	-19
MCMT	**McKenzie Canyo**	**88.78**	**44**	*e*P	**P**	**02 43 02.0**	**+0.4**
TRCR	**Troy Canyon**	**88.78**	**51**	*e*P	**P**	**02 43 03.1**	**+1.3**
DAG	**Danmarks Havn**	**88.84**	**356**	⇑*i*P	**P**	**02 43 00.6**	**-0.7**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
DAG	**Danmarks Havn**	**88.84**	**356**	⇑*i*P	**P**	**02 43 00.6**	**-0.7**
	comp=Z,5.5nm,0.7s,mb4.6						
KIV	**Kislovodsk**	**88.86**	**315**	*e*P	**P**	**02 43 00.9**	**-1.2**
KIV				*e*		02 46 30.3	
KIV				*e*		02 53 26.7	
KIV				pmax	pmax		
	comp=N,16nm,1.0s						
KIV				pmax	pmax		
	comp=E,18nm,1.0s						
KIV				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**88.86**	**315**	*e*P	**P**	**02 43 00.7**	**-1.4**
	comp=Z,32nm,1.0s,mb5.2						
BOZ	**Bozeman (W)**	**89.32**	**43**	P	**P**	**02 43 04.2**	**0.0**
BOZ				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.3						
BOZ	**Bozeman (W)**	**89.32**	**43**	*e*P	**P**	**02 43 04.0**	**-0.2**
	comp=Z,19nm,0.5s,mb5.3						
PFO	**Pinyon Flat Ob**	**89.46**	**56**	*e*P	**P**	**02 43 05.7**	**+0.5**
PFO				*e**PP	pP	02 43 45.4	+0.8
PFO				pmax	pmax		
	comp=Z,126nm,1.0s,mb5.8						
PFO	**Pinyon Flat Ob**	**89.46**	**56**	*e*P	**P**	**02 43 05.7**	**+0.5**
	comp=Z,126nm,1.0s,mb5.8						
PFO				*e*pP	pP	02 43 45.4	+0.8
BAR	**Barrett**	**89.55**	**57**	*e*P	**P**	**02 43 05.9**	**+0.3**
BAR				*e*pP	pP	02 43 45.2	+0.2
QLMT	**Earthquake Lak**	**89.73**	**44**	*e*P	**P**	**02 43 07.3**	**+1.2**
PUL	**Pulkovo**	**89.75**	**333**	⇓*e*P	**P**	**02 43 05.7**	**-0.1**
PUL				*e*		02 53 33.8	
PUL				*e*SP	tx	02 55 27.9	
PUL				pmax	pmax		
	comp=N,43nm,0.8s						
PUL				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.5						
PUL				pmax	pmax		
	comp=E,24nm,0.7s						
PUL				MLR	MLR		
	comp=Z,3µm,19.0s						
PUL				MLR	MLR		
	comp=N,1µm,20.0s						
PUL				MLR	MLR		
	comp=E,4µm,16.0s						
HVU	**Hansel Valley**	**89.80**	**47**	P	**P**	**02 43 08.0**	**+1.5**
HVU	**Hansel Valley**	**89.80**	**47**	*e*P	**P**	**02 43 07.3**	**+0.8**
BGU	**Big Grassy Mou**	**89.89**	**48**	*e*P	**P**	**02 43 07.2**	**+0.2**
YMR	**Madison River**	**90.09**	**44**	*e*P	**P**	**02 43 09.1**	**+1.2**
YMR				*e*pP	pP	02 43 49.1	+1.8
LDFC	**Landfair**	**90.11**	**54**	*e*P	**P**	**02 43 08.9**	**+0.8**
LDFC				*e*pP	pP	02 43 45.4	-2.2
SPUT	**South Promonto**	**90.18**	**47**	*e*P	**P**	**02 43 09.1**	**+0.8**
SPUT				*e*pP	pP	02 43 48.8	+1.0
YFT	**Old Faithful**	**90.26**	**44**	*e*P	**P**	**02 43 11.0**	**+2.4**
YNR	**Norris Junctio**	**90.27**	**44**	*e*P	**P**	**02 43 10.7**	**+2.0**
KAF	**Kangasniemi**	**90.28**	**336**	*e*p	**P**	**02 43 05.6**	**-2.7**
	comp=E,12nm,0.5s,mb5.1,baz=58,slow=4.4						
KAF	**Kangasniemi**	**90.28**	**336**	*e*P	**P**	**02 43 05.6**	**-2.7**
KAF				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.1						
RRI2	**Red Ridge**	**90.30**	**45**	*e*P	**P**	**02 43 09.6**	**+0.7**
IMW	**Indian Meadow**	**90.37**	**44**	*e*P	**P**	**02 43 10.1**	**+0.9**
IMW				*e*pP	pP	02 43 48.7	+0.1
TPAW	**Teton Pass**	**90.50**	**45**	*e*P	**P**	**02 43 10.3**	**+0.5**
LKWY	**Lake**	**90.51**	**44**	*e*P	**P**	**02 43 12.5**	**+2.7**
LKWY				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.7						
LKWY	**Lake**	**90.51**	**44**	*e*P	**P**	**02 43 12.5**	**+2.7**
	comp=Z,66nm,0.9s,mb5.7						
MOOW	**Moose Ponds**	**90.56**	**45**	*e*P	**P**	**02 43 10.2**	**+0.2**
GCMT	**Greycliff**	**90.57**	**42**	*e*P	**P**	**02 43 11.7**	**+1.6**
ARUT	**Antelope Range**	**90.57**	**51**	P	**P**	**02 43 11.5**	**+1.2**
ARUT	**Antelope Range**	**90.57**	**51**	*e*P	**P**	**02 43 10.7**	**+0.5**
NOQ	**North Oquirrh**	**90.63**	**48**	*e*P	**P**	**02 43 11.1**	**+0.6**
NOQ				*e*pP	pP	02 43 51.6	+1.6
WUWY	**Wally Ulrich**	**90.63**	**45**	*e*P	**P**	**02 43 10.9**	**+0.5**
AHID	**Auburn Hatcher**	**90.65**	**46**	*e*P	**P**	**02 43 11.0**	**+0.5**
	comp=Z,78nm,1.0s,mb5.7						
SNOW	**Snow King Moun**	**90.65**	**45**	*e*P	**P**	**02 43 11.1**	**+0.6**
LOHW	**Long Hollow**	**90.70**	**45**	*e*P	**P**	**02 43 11.1**	**+0.3**
HWUT	**Hardware Ranch**	**90.71**	**47**	*e*P	**P**	**02 43 10.9**	**+0.1**
	comp=Z,17nm,0.4s,mb5.4						
BHD	**Baghdad**	**90.87**	**305**	*e*P	pP	02 43 53.0	+1.7
BHD				*e*S	S	02 53 26.0	-27
MSL	**Mosul**	**90.97**	**308**	*e*P	**P**	**02 43 18.5**	**+6.3**
TCUT	**Toone Canyon**	**90.98**	**47**	*e*P	**P**	**02 43 12.4**	**+0.3**
SOC	**Sochi**	**91.02**	**315**	*e*P	**P**	**02 43 09.0**	**-3.2**
SOC				*e*SP	SP	02 55 34.1	+27
SOC				pmax	pmax		
	comp=N,14nm,0.8s						
SOC				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOC				pmax	pmax		
	comp=E,13nm,0.9s						
ERZM	**Erzurum**	**91.10**	**312**	*i* P	**P**	**02 43 10.1**	**-2.6**
JLU	**Jordanelle**	**91.12**	**48**	*e*P	**P**	**02 43 13.0**	**+0.2**
MPU	**Maple Canyon**	**91.19**	**48**	*e*P	**P**	**02 43 13.2**	**+0.1**
MPU				*e*pP	pP	02 43 54.3	+1.7
MVU	**Marysvale**	**91.26**	**50**	*e*P	**P**	**02 43 14.2**	**+0.7**
	comp=E,34nm,0.9s,mb5.4						
MSU	**Marysvale**	**91.28**	**50**	P	**P**	**02 43 14.3**	**+0.7**
MSU	**Marysvale**	**91.28**	**50**	*e*P	**P**	**02 43 14.2**	**+0.7**
DAU	**Daniels Canyon**	**91.33**	**48**	P	**P**	**02 43 14.3**	**+0.6**
DAU	**Daniels Canyon**	**91.33**	**48**	*e*P	**P**	**02 43 14.1**	**+0.3**
FFC	**Flin Flon**	**91.48**	**32**	P	**P**	**02 43 13.2**	**-0.9**
	comp=E,156nm,1.1s,mb6.0,SNR=31						
FFC	**Flin Flon**	**91.48**	**32**	P	**P**	**02 43 13.6**	**-0.5**
FFC				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
FFC	**Flin Flon**	**91.48**	**32**	*e*P	**P**	**02 43 13.1**	**-0.9**
	comp=Z,30nm,1.0s,mb5.3						
TMUT	**Trail Mountain**	**91.74**	**49**	*e*P	**P**	**02 43 16.4**	**+0.8**
BEST	**Besiri**	**91.84**	**310**	*i* P	**P**	**02 43 19.0**	**+2.9**
VNDA	**Vanda**	**91.91**	**176**	*e*P	**P**	**02 43 16.1**	**+0.5**
VNDA				*e**PP	pP	02 43 56.1	+1.0
VNDA				pmax	pmax		
	comp=Z,106nm,1.1s						
VNDA	**Vanda**	**91.91**	**176**	*e*P	**P**	**02 43 16.1**	**+0.5**
	comp=Z,106nm,1.1s,mb5.8						
VNDA				*e*pP	pP	02 43 56.0	+0.9
ANN	**Anapa**	**92.11**	**317**	*e*P	**P**	**02 43 18.6**	**+1.4**
ANN				*e*	pP	02 44 00.5	+3.8
ANN				*e*		02 53 37.5	
ANN				S	S	02 54 11.9	+8.8
ANN				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
SRU	**San Rafael**	**92.30**	**49**	P	**P**	**02 43 18.9**	**+0.7**
SRU	**San Rafael**	**92.30**	**49**	*e*P	**P**	**02 43 18.2**	**0.0**
LAO	**LASA Array**	**92.44**	**41**	*e*P	**P**	**02 43 18.3**	**-0.4**
	comp=Z,186nm,0.9s,mb6.1						
SBA	**Scott Base**	**92.57**	**175**	P	**P**	**02 43 21.7**	**+3.1**
SBA				pmax	pmax		
	comp=Z,260nm,1.5s,mb6.1						
SBA	**Scott Base**	**92.57**	**175**	*e*P	**P**	**02 43 21.4**	**+2.8**
	comp=Z,165nm,1.3s,mb6.0						
DGMT	**Dagmar**	**92.97**	**38**	*e*P	**P**	**02 43 20.3**	**-0.7**
	comp=Z,28nm,0.8s,mb5.5						
FCC	**Fort Churchill**	**93.20**	**27**	P	**P**	**02 43 20.9**	**-1.0**
FCC				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
FCC	**Fort Churchill**	**93.20**	**27**	*e*P	**P**	**02 43 20.4**	**-1.5**
	comp=Z,27nm,1.0s,mb5.3						
ELZG	**Elazig**	**93.32**	**311**	*i* P	**P**	**02 43 22.9**	**-0.1**
PV10	**Paradox Valley**	**93.64**	**49**	*e*P	**P**	**02 43 24.9**	**+0.5**
MALT	**Malatya**	**93.80**	**311**	*e*P	**P**	**02 43 24.6**	**-0.5**
MALT				pmax	pmax		
	comp=Z,27nm,1.8s,mb5.1						
MALT	**Malatya**	**93.80**	**311**	*e*P	**P**	**02 43 24.6**	**-0.5**
	comp=Z,27nm,1.8s,mb5.1						
NSS	**Namsos**	**93.89**	**341**	AMS	AMS	03 24 20.0	
	comp=Z,2µm,25.7s						
PV01	**Paradox Valley**	**94.08**	**49**	*e*P	**P**	**02 43 26.7**	**+0.3**
SIM	**Simferopol’**	**94.22**	**318**	*e*P	**P**	**02 43 27.0**	**+0.2**
SIM				*e*		02 47 13.0	
SIM				*e*S	S	02 54 21.0	-0.3
SIM				pmax	pmax		
	comp=Z,400nm,15.0s						
SIM				MLR	MLR		
	comp=Z,2µm,17.0s						
TUC	**Tucson**	**94.40**	**55**	*e*P	**P**	**02 43 29.0**	**+1.1**
TUC				*e**PP	pP	02 44 09.0	+1.5
TUC				pmax	pmax		
	comp=Z,2µm,1.8s						
TUC	**Tucson**	**94.40**	**55**	*e*P	**P**	**02 43 29.0**	**+1.0**
	comp=Z,2µm,1.8s						
TUC				*e*pP	pP	02 44 09.0	+1.6
GZT	**Gaziantep**	**94.78**	**310**	*i* P	**P**	**02 43 18.9**	**-11**
PHWY	**Pilot Hill**	**95.09**	**45**	*e*P	**P**	**02 43 31.2**	**+0.3**
SUW	**Suwalki**	**96.06**	**330**	*e*P	**P**	**02 43 34.2**	**-0.7**
SDCO	**Great Sand Dun**	**96.47**	**49**	*e*P	**P**	**02 43 37.7**	**+0.5**
	comp=Z,12nm,0.9s,mb5.2						
ELDT	**Eldivan**	**96.53**	**314**	*i* P	**P**	**02 43 34.7**	**-2.7**
NB2	**NORSAR Subarra**	**96.61**	**339**	P	**P**	**02 43 35.7**	**-1.6**
	comp=Z,12nm,1.0s,mb5.2,baz=47,slow=4.5						
NB2	**NORSAR Subarra**	**96.61**	**339**	P	**P**	**02 43 35.7**	**-1.6**
NB2				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.2						
NB2	**NORSAR Subarra**	**96.61**	**339**	P	**P**	**02 43 35.7**	**-1.6**
	baz=46,slow=4.4						
KIS	**Kishinev**	**96.61**	**322**	*e*P	**P**	**02 43 47.0**	**+9.3**
KIS				*e*		02 47 35.0	
KIS				*e*		02 49 38.0	
KIS				MLR	MLR		
	comp=N,2µm,19.0s						
KIS				MLR	MLR		
	comp=E,2µm,19.0s						
KIS				MLR	MLR		
	comp=Z,3µm,19.0s						
KIS				MLR	MLR		
	comp=Z,900nm,19.0s						
LENM	**Lemitar**	**96.73**	**52**	*e*P	**P**	**02 43 35.3**	**-3.3**
ANMO	**Albuquerque**	**96.83**	**52**	P	**P**	**02 43 39.2**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,12nm,0.8s						
ANMO	**Albuquerque**	**96.83**	**52**	*e*P	**P**	**02 43 39.1**	**+0.2**
	comp=Z,16nm,0.9s,mb5.3						
ULM	**Lac du Bonnet**	**96.92**	**34**	*e*P	**P**	**02 43 37.0**	**-2.1**
	comp=Z,20nm,1.3s,mb5.3						
LPM	**Los Pinos Moun**	**96.94**	**52**	*e*P	**P**	**02 43 38.3**	**-1.2**
KWP	**Kalwaria**	**98.75**	**326**	*e*P	**P**	**02 43 47.7**	**+0.4**
MNTX	**Cornudas Mount**	**98.90**	**54**	*e*P	**P**	**02 43 48.8**	**+0.3**
	comp=Z,13nm,0.9s,mb5.3						
KOLS	**Kolonicke sedl**	**99.37**	**326**	*e*P	**P**	**02 43 49.0**	**-1.2**
KOLS	**Kolonicke sedl**	**99.37**	**326**	PDIF	**P**	**02 43 49.0**	**-1.2**
KOLS				*e*		02 43 53.7	
KOLS				*e*		02 44 35.6	
GDL2	**Guadalupe Moun**	**99.50**	**53**	*e*Pdif	**P**	**02 43 51.5**	**+0.3**
CPRX	**Cap Rock**	**99.56**	**53**	*e*Pdif	**P**	**02 43 52.1**	**+0.7**
CRVS	**Cervenica-Dubn**	**99.83**	**326**	*e*P	**P**	**02 43 51.1**	**-1.1**
CRVS				*e*		02 44 43.0	
CRVS	**Cervenica-Dubn**	**99.83**	**326**	PDIF	**P**	**02 43 51.1**	**-1.1**
CRVS				*e*		02 43 57.1	
CRVS				*e*		02 44 43.0	
CRVS				*e*PP	PP	02 47 57.7	-2.8
CRVS				*e*		02 57 25.8	
CRVS				*e*		03 00 39.7	
COP	**Copenhagen**	**99.88**	**335**	*i* P	PP	02 48 01.1	+0.3
	comp=Z,30nm,0.9s						
COP				*i*		02 54 16.4	
	comp=Z,1µm,19.0s						
AMTX	**Amarillo**	**100.45**	**50**	*e*Pdif	P	02 43 55.6	+0.2
	comp=Z,28nm,1.3s						
OKC	**Ostrava-Krasne**	**101.03**	**328**	AMS	AMS	03 32 10.0	
	comp=Z,4µm,18.3s						
LTX	**Lajitas**	**101.18**	**56**	P	P	02 44 00.6	+1.8
LTX				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LTX	**Lajitas**	**101.18**	**56**	*e*Pdif	P	02 43 58.8	0.0
	comp=Z,9.7nm,0.9s						
PSZ	**Piszkesteto**	**101.25**	**326**	P	P	02 43 59.1	+0.5
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PSZ	**Piszkesteto**	**101.25**	**326**	*e*Pdif	P	02 43 58.2	-0.4
	comp=Z,9.6nm,0.9s						
VYHS	**Vyhne**	**101.48**	**327**	*e*P	P	02 43 59.6	0.0
VYHS				*e*		02 57 43.5	
VYHS	**Vyhne**	**101.48**	**327**	PDIF	P	02 43 59.6	0.0
VYHS				*e*		02 44 03.1	
VYHS				*e*		02 44 54.0	
VYHS				*e*		02 48 01.3	
VYHS				*e*		02 48 47.7	
VYHS				*e*		02 57 43.5	
DPC	**Dobruska-Polom**	**101.64**	**329**	*e*PP	PP	02 48 06.9	-7.4
DPC				AMS	AMS	03 30 10.0	
	comp=Z,4µm,19.7s						
KSU1	**Kansas State U**	**102.14**	**44**	*e*Pdif	Pdif	02 44 02.1	-0.6
PVCC	**Panska Ves**	**102.38**	**330**	AMS	AMS	03 31 40.0	
	comp=Z,3µm,18.5s						
CLL	**Collm**	**102.61**	**331**	*e*P	Pdif	02 44 08.0	+3.5
CLL				*e*		02 48 20.0	
CLL				*e*S	S	02 55 29.0	-2.7
CLL				MLR	MLR		
	comp=Z,4µm,18.6s						
CLL	**Collm**	**102.61**	**331**	*e*P	Pdif	02 44 08.0	+3.5
CLL				*e*PP	PP	02 48 20.0	-1.7
CLL				*e*S	S	02 55 29.0	-2.7
CLL				*e*PKKP	tx	03 00 28.0	
CLL				LR	LR		
	comp=Z,4µm,18.6s						
CLL	**Collm**	**102.61**	**331**	P	Pdif	02 44 08.0	+3.5
CLL				*e*PP	PP	02 48 20.0	-1.7
CLL				*e**PPP		02 48 55.0	
CLL				*i* *SPP		02 49 12.5	
CLL				*e*PPP	PPP	02 50 33.0	-2.5
CLL				*e*S	S	02 55 29.0	-2.7
CLL				*e*SPP	SPP	02 57 56.0	-7.8
CLL				*e*		02 58 53.0	
CLL				*e*SS	SS	03 02 52.0	+5.3
CLL				*e**SSS		03 03 48.0	
CLL				*e*		03 07 36.0	
PRU	**Pruhonice**	**102.75**	**330**	*e*PP	PP	02 48 19.0	-3.8
PRU				*e*x	x	02 48 50.4	
PRU				AMS	AMS	03 31 40.0	
	comp=Z,4µm,19.9s						
NKC	**Novy Kostel**	**103.59**	**331**	AMS	AMS	03 32 30.0	
	comp=Z,3µm,17.0s						
SKO	**Skopje**	**103.72**	**320**	*e*P	Px	02 44 47.5	
SKO				*i*		02 44 55.0	
JCT	**Junction City**	**103.77**	**53**	P	Pdif	02 44 11.6	+1.5
JCT				pmax	pmax		
	comp=Z,18nm,1.0s						
JCT	**Junction City**	**103.77**	**53**	*e*Pdif	Pdif	02 44 10.0	-0.2
	comp=Z,18nm,1.1s						
KHC	**Kasperske Hory**	**103.78**	**329**	*e*pP		02 44 46.0	
KHC				x	x	02 45 12.5	

KHC				*e*PP	PP	02 48 29.0	-1.3
KHC				*e*x	x	02 49 01.9	
KHC				*e*PKKP	PKKP	03 00 19.0	+30
KHC				AMS	AMS	03 31 30.0	
	comp=Z,4µm,20.8s						
MOA	**Molln**	**104.28**	**328**	⇓*i*P	PP	02 48 30.8	-3.3
	comp=Z,12nm,1.1s						
WTSB	**Winterswijk**	**104.88**	**335**	*e*PKP	Px	02 49 10.1	
	comp=Z,100nm,3.0s						
KBA	**Koelnbreinsper**	**105.25**	**328**	⇑*i*P	PP	02 48 34.0	-7.7
	comp=Z,26nm,1.4s						
BOJS	**Bojanci**	**105.25**	**326**	*e*Pdiff	Pdif	02 44 20.2	+3.9
JAVS	**Javornik**	**105.65**	**327**	*e*Pdiff	Pdif	02 44 20.8	+2.7
WTTA	**Wattenberg**	**106.00**	**329**	⇑*i*P		02 48 31.8	
	comp=Z,19nm,1.6s						
HGN	**Heimansgroeve**	**106.14**	**334**	*e*PKP		02 49 14.6	
	comp=Z,95nm,3.6s						
CCM	**Cathedral Cave**	**106.27**	**43**	*e*PKiKP		02 48 28.8	
FVM	**French Village**	**106.85**	**43**	PKPdf		02 48 31.6	
GIVF	**Givet**	**107.10**	**334**	*e*PKIKP		02 48 34.4	
KMBO	**Kilima Mbogo**	**107.28**	**273**	*e*PKiKP		02 48 37.0	
CDF	**Champ du Feu**	**107.28**	**332**	*e*PKIKP		02 48 35.0	
HINF	**Hinteralfeld**	**107.91**	**332**	*e*PKIKP		02 48 35.7	
	comp=Z,12nm,0.8s						
HAU	**Haudompre**	**108.00**	**332**	*e*PKIKP		02 48 35.8	
MEZF	**Maizieres J'vi**	**108.21**	**333**	*e*PKIKP		02 48 36.5	
SYO	**Syowa Base**	**108.45**	**202**	⇑Pdiff	Pdif	02 44 29.6	-0.2
SYO	**Syowa Base**	**108.45**	**202**	⇓pPdiff		02 45 10.5	
BLO	**Bloomington**	**108.67**	**40**	*e*PKiKP		02 48 35.9	
CABF	**La Chapelle**	**109.15**	**331**	*e*PKIKP		02 48 38.4	
	comp=Z,38nm,1.2s						
WCI	**Wyandotte Cave**	**109.37**	**41**	*e*PKiKP		02 48 37.5	
LPL	**La Plagne**	**109.64**	**330**	*e*PKIKP		02 48 38.5	
LPG	**La Plagne**	**109.65**	**330**	*e*PKIKP		02 48 38.7	
	comp=Z,31nm,1.0s						
SSF	**Saint Saulge**	**109.99**	**333**	*e*PKIKP		02 48 38.7	
	comp=Z,19nm,1.0s						
SMF	**Signal de Mont**	**110.15**	**332**	*e*PKIKP	PKPdf	02 48 40.6	+3.3
MBDF	**Montbardon**	**110.19**	**329**	*e*PKIKP	PKPdf	02 48 40.5	+3.1
AVF	**Avril sur Loir**	**110.26**	**333**	*e*PKIKP	PKPdf	02 48 40.5	+3.0
FLN	**La Foliniere**	**110.31**	**336**	*e*PKIKP	PKPdf	02 48 40.0	+2.4
	comp=Z,12nm,0.6s						
SBF	**Sospel**	**110.48**	**328**	*e*PKIKP	PKPdf	02 48 41.4	+3.4
ORIF	**Oris-en-Rattie**	**110.49**	**330**	*e*PKIKP	PKPdf	02 48 39.3	+1.3
	comp=Z,11nm,0.7s						
PGF	**Pioggiola**	**110.59**	**327**	*e*PKIKP	PKPdf	02 48 41.5	+3.2
	comp=Z,38nm,0.7s						
BGF	**Bois d'Agland**	**110.66**	**333**	*e*PKIKP	PKPdf	02 48 41.6	+3.3
	comp=Z,19nm,0.9s						
GRR	**Gorron**	**110.76**	**336**	*e*PKIKP	PKPdf	02 48 40.3	+1.8
	comp=Z,24nm,0.9s						
FRF	**La Foret Royal**	**111.10**	**329**	*e*PKIKP	PKPdf	02 48 41.4	+2.2
VIVF	**Saint-Julien-l**	**111.11**	**331**	*e*PKIKP	PKPdf	02 48 41.3	+2.1
TCF	**Toulx Ste Croi**	**111.15**	**333**	*e*PKIKP	PKPdf	02 48 41.0	+1.7
	comp=Z,19nm,0.8s						
SMRF	**Simiane la Rot**	**111.33**	**330**	*e*PKIKP	PKPdf	02 48 42.7	+3.0
	comp=Z,36nm,0.8s						
SGMF	**Saint Gilles**	**111.52**	**337**	*e*PKIKP	PKPdf	02 48 41.4	+1.5
	comp=Z,26nm,0.9s						
ROSF	**Rostrenen**	**111.72**	**338**	*e*PKIKP	PKPdf	02 48 43.6	+3.3
	comp=Z,22nm,0.9s						
MFF	**Saint Martin d**	**111.91**	**335**	*e*PKIKP	PKPdf	02 48 42.0	+1.3
	comp=Z,38nm,1.0s						
LRAL	**Lakeview Retre**	**111.94**	**45**	*e*PKiKP		02 48 42.3	
LASF	**Ste Croix**	**112.09**	**331**	*e*PKIKP	PKPdf	02 48 42.9	+1.8
	comp=Z,52nm,1.0s						
NCB	**Newcomb**	**112.20**	**29**	*e*PKiKP		02 48 42.6	
RJF	**Les Rejaudoux**	**112.22**	**333**	*e*PKIKP	PKPdf	02 48 43.9	+2.5
	comp=Z,19nm,1.0s						
MIV	**Mineville/With**	**112.44**	**29**	*e*PKiKP		02 48 43.1	
MYNC	**Murphy**	**112.67**	**42**	*e*PKIKP	PKPdf	02 48 43.7	+1.2
MDV	**Middlebury**	**112.67**	**29**	*e*PKiKP		02 48 43.0	
HNH	**Hanover**	**113.31**	**28**	*e*PKiKP		02 48 45.0	
MTLF	**Montolieu**	**113.42**	**331**	*e*PKIKP	PKPdf	02 48 46.6	+2.8
MBAR	**Mbarara**	**113.45**	**276**	*e*PKIKP	PKPdf	02 48 46.7	+2.1
BLA	**Blacksburg**	**113.63**	**38**	*e*PKIKP	PKPdf	02 48 44.6	+0.2
MVL	**Millersville**	**114.03**	**34**	*e*PKiKP		02 48 45.5	
GOGA	**Godfrey**	**114.11**	**43**	*e*PKIKP	PKPdf	02 48 47.1	+1.6
SDMD	**Soldier's Deli**	**114.19**	**34**	PKP	PKPdf	02 48 45.2	-0.2
EPF	**Esparros**	**114.53**	**332**	*e*PKIKP	PKPdf	02 48 48.5	+2.5
	comp=Z,48nm,1.1s						
HRV	**Harvard--Oak R**	**114.57**	**29**	*e*PKIKP	PKPdf	02 48 47.9	+1.7
CBN	**Corbin**	**114.73**	**36**	*e*PKiKP		02 48 48.3	
WES	**Weston**	**114.78**	**29**	*e*PKIKP	PKPdf	02 48 47.8	+1.2
EBIE	**Bielsa**	**114.89**	**332**	P	PKPdf	02 48 52.1	+5.3
ETSF	**Etsaut**	**115.04**	**333**	*e*PKIKP	PKPdf	02 48 48.9	+1.8
	comp=Z,67nm,1.1s						
ERTA	**Horta de San J**	**116.15**	**331**	P	PKPdf	02 48 52.7	+3.5
EARI	**Arriondas**	**116.67**	**336**	P	PKPdf	02 48 56.4	+6.2
EMOS	**Mosqueruela**	**116.99**	**331**	P	PKPdf	02 48 55.0	+4.1
EPON	**Pontenova**	**117.40**	**337**	P	PKPdf	02 48 53.8	+2.3
EINC	**Incio**	**118.05**	**337**	P	PKPdf	02 48 56.1	+3.3
ERUA	**La Rua**	**118.20**	**337**	PKIKP	PKPdf	02 48 56.1	+3.0
STS	**Santiago**	**118.30**	**338**	PKIKP	PKPdf	02 48 55.0	+1.7
ECAL	**Calabor**	**118.42**	**336**	P	PKPdf	02 48 58.3	+4.8
GUD	**Guadarrama**	**118.44**	**333**	PKIKP	PKPdf	02 48 56.1	+2.5
DWPF	**Disney**	**118.70**	**47**	PKPdf	PKPdf	02 48 55.5	+1.1
LSZ	**Lusaka**	**118.84**	**260**	*e*PKIKP	PKPdf	02 48 56.8	+1.8
ELOB	**Lobios**	**119.00**	**337**	P	PKPdf	02 48 55.0	+0.2
ESDC	**Sonseca Array**	**119.15**	**333**	P	PKPdf	02 48 56.9	+1.9
ESLA	**Sonseca Array**	**119.15**	**333**	*e*PKPdf	PKPdf	02 48 56.4	+1.4
SNAA	**Sanae**	**119.20**	**191**	*e*	PKPdf	02 48 57.6	+3.2
SNAA	**Sanae**	**119.20**	**191**	*e*		02 49 38.5	
SNAA	**Sanae**	**119.20**	**191**	*e*		02 49 53.9	
SNAA	**Sanae**	**119.20**	**191**	*e*		02 49 56.8	
SNAA	**Sanae**	**119.20**	**191**	⇑*i*PKIKP	PKPdf	02 48 55.4	+1.0
SNAA				*e*		02 49 38.5	
SNAA				*e*		02 49 53.9	
SNAA	**Sanae**	**119.20**	**191**	⇑*i*PKPdf	PKPdf	02 48 55.4	+1.0
SNAA				*e*		02 48 57.6	
SNAA				*e*		02 49 38.5	
SNAA				*e*		02 49 53.9	
SNAA				*e*		02 49 56.8	
SNAA				*e*		02 52 17.8	
EVIA	**Vianos**	**119.32**	**331**	PKIKP	PKPdf	02 48 57.2	+1.8
MTE	**Manteigas**	**120.06**	**336**	*e*PKPdf	PKPdf	02 48 58.7	+1.9
MTE				*i* -		03 00 05.6	
MTE				*e*-		03 28 37.0	
MTE	**Manteigas**	**120.06**	**336**	*e*PKPdf	PKPdf	02 48 57.3	+0.5
EQES	**Quesada**	**120.25**	**331**	P	PKPdf	02 48 58.3	+1.1
ENIJ	**Nijar**	**120.50**	**330**	PKIKP	PKPdf	02 49 00.6	+2.9
VNA2	**Neumayer--Watz**	**120.65**	**190**	*e*	PKPdf	02 49 01.7	+4.5
VNA2	**Neumayer--Watz**	**120.65**	**190**	*e*		02 49 42.7	
VNA2	**Neumayer--Watz**	**120.65**	**190**	*e*		02 49 58.1	
VNA2	**Neumayer--Watz**	**120.65**	**190**	*e*		02 50 00.9	
VNA2	**Neumayer--Watz**	**120.65**	**190**	⇑*i*P	PKPdf	02 48 59.5	+2.3
VNA2				*e*		02 49 01.7	
VNA2				*e*		02 49 42.7	
VNA2				*e*		02 49 58.1	
VNA2				*e*		02 50 00.9	
VNA2				*e*		02 52 20.9	
VNA2				*e*		02 52 23.8	
EADA	**Adamuz**	**120.66**	**332**	P	PKPdf	02 49 00.6	+2.5
VNA3	**Neumayer Olymp**	**120.75**	**189**	*e*	PKPdf	02 49 01.5	+4.1
VNA3	**Neumayer Olymp**	**120.75**	**189**	*e*		02 49 42.7	
VNA3	**Neumayer Olymp**	**120.75**	**189**	*e*		02 49 56.3	
VNA3	**Neumayer Olymp**	**120.75**	**189**	*e*		02 49 59.0	
VNA3	**Neumayer Olymp**	**120.75**	**189**	⇑*i*P	PKPdf	02 48 59.3	+1.9
VNA3				*e*		02 49 01.5	
VNA3				*e*		02 49 42.7	
VNA3				*e*		02 49 56.3	
VNA3				*e*		02 49 59.0	
VNA3				*e*		02 52 20.0	
VNA3				*e*		02 52 23.5	
EBER	**Berja**	**120.89**	**330**	P	PKPdf	02 49 01.9	+3.4
VNA1	**Neumayer--Stat**	**121.03**	**190**	*e*	PKPdf	02 49 01.5	+3.5
VNA1	**Neumayer--Stat**	**121.03**	**190**	⇑*i*PKPdf	PKPdf	02 49 00.3	+2.3
VNA1				*e*		02 49 01.5	
EBAD	**Badajoz**	**121.23**	**334**	P	PKPdf	02 48 59.5	+0.3
EVO	**Evora**	**121.83**	**335**	*e*PKIKP	PKPdf	02 49 02.1	+1.8
	comp=Z,91nm,1.1s						
EMIN	**Mina Concepcio**	**121.92**	**334**	P	PKPdf	02 49 02.8	+2.4
PLOU	**Loures**	**121.99**	**336**	*e*PKPdf	PKPdf	02 49 03.2	+2.6
EMIJ	**Mijas**	**122.05**	**331**	P	PKPdf	02 49 05.1	+4.3
LBTB	**Lobatse**	**122.06**	**249**	*e*PKIKP	PKPdf	02 49 02.4	+1.4
ESPR	**Espera**	**122.30**	**332**	P	PKPdf	02 49 02.8	+1.6
BOSA	**Boshof**	**122.37**	**245**	*e*PKIKP	PKPdf	02 49 03.2	+1.7
EGRO	**El Granado**	**122.46**	**334**	P	PKPdf	02 49 05.1	+3.6
PTEO	**Sao Teotonio**	**122.97**	**335**	*e*PKPdf	PKPdf	02 49 04.8	+2.3
PTEO				*i* -		02 49 08.7	
JTS	**JuntasAbangare**	**125.07**	**67**	*e*PKIKP	PKPdf	02 49 09.0	+1.8
ADH	**Angra Heroismo**	**127.06**	**352**	*e*LR	LR	03 30 20.0	
TSUM	**Tsumeb**	**129.29**	**257**	*e*PKPdf	PKPdf	02 49 16.6	+1.4
OTAV	**Otavalo**	**134.92**	**75**	*e*PKPpre		02 49 18.7	
SJG	**San Juan**	**135.83**	**45**	*e*PKPpre		02 49 17.1	
SJG				*e*PKPdf	PKPdf	02 49 29.1	+1.6
SJG				*e*SKPbc		02 52 45.6	
SDV	**Santo Domingo**	**138.12**	**59**	*e*PKPpre		02 49 21.3	
SDV				*e*PKPdf	PKPdf	02 49 34.0	+2.2
SDV				*e*pPKPdf		02 50 12.5	
SDV				*e*PP	PP	02 52 20.8	-5.0
SDV				*e*SKPbc		02 52 53.7	
PLCA	**Paso Flores**	**139.32**	**138**	*e*PKHKP		02 49 24.2	
PLCA				*e*		02 49 34.5	
FDF	**Fort de France**	**141.59**	**43**	*e*P	PKPdf	02 49 36.2	-1.8
CLCH	**Cerro Calan**	**142.61**	**127**	*e*P	PKPdf	02 49 38.1	-1.2
FCH	**Farellones**	**142.83**	**127**	*e*P	PKPdf	02 49 39.1	-0.6
DBIC	**Dimbokro**	**143.52**	**302**	*e*PKIKP	PKPdf	02 49 40.0	-1.4
TLL	**Tololo Astrono**	**143.52**	**122**	*e*P	PKPbc	02 49 40.9	+1.2
ZON	**Zonda**	**144.76**	**125**	*e*PKIKP	PKPdf	02 49 45.0	+1.9
ARE	**Arequipa**	**144.95**	**99**	*e*PKIKP	PKPdf	02 49 47.0	+3.2
ARE				*e*		02 50 28.0	
TRQA	**Tornquist**	**146.31**	**140**	*e*PKPdf	PKPdf	02 49 47.5	+2.0
LVC	**Limon Verde**	**146.96**	**110**	*e*PKPdf	PKPdf	02 49 50.7	+3.7
LPAZ	**La Paz**	**148.17**	**98**	*e*PKIKP	PKPdf	02 49 51.2	+2.0
TRIS	**Tristan da Cun**	**149.29**	**218**	*e*PKPbc	PKPdf	02 49 58.1	+7.7
LPA	**La Plata**	**150.82**	**139***c*	*e*PKP	PKPdf	02 50 04.0	+11
LPA				*e*PP	PP	02 53 38.0	-2.3
CAM4	**Nova Friburgo**	**169.18**	**141**	*e*P	PKPdf	02 50 15.0	+1.8
CAM4				*i*		02 50 18.7	
CAM4				*i*		02 51 29.7	
CAM4				*i*		02 51 32.3	

GUC 02 03:27:49.1±0.8,33.15S×72.10W,h15^{km}±4^{km},MD3.7, ML2.4,1C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCH	**Las Cruces**	**0.55**	**127**	⇑*i*P	Pb	03 27 59.6	-0.3
LCCH				*i* S	Sb	03 28 07.1	-0.1
PACH	**Papudo**	**0.82**	**43**	*i* S	Sb	03 28 15.1	-0.1
TACH	**Talagante**	**1.09**	**118**	⇓*i*P	Pb	03 28 08.3	-0.9
TACH				*i* S	Sb	03 28 22.5	-0.6
RCDM	**Rinconada Maip**	**1.13**	**108**	*e*P	Pb	03 28 08.6	-1.3
RCDM				*i* S	Sb	03 28 23.7	-0.5
RCDM				AMP		03 28 26.5	
	comp=E,148nm,0.1s						
PTCH	**Petorca**	**1.32**	**48**	*e*P	Pb	03 28 12.3	-0.8
PTCH				*i* S	Sb	03 28 29.7	+0.1
PTCH				AMP		03 28 34.1	
	comp=E,142nm,0.2s						
CLCH	**Cerro Calan**	**1.33**	**101**	*e*P	Pn	03 28 12.6	-0.7
CLCH				*i* S	Sb	03 28 30.2	+0.3
CLCH				AMP		03 28 33.1	
	comp=N,92nm,0.7s						
JACH	**Jahuel**	**1.35**	**70**	*i* P	Pn	03 28 12.2	-1.3
JACH				*i* S	Sb	03 28 30.3	-0.1
PCH	**Pirque**	**1.41**	**110**	*e*P	Pn	03 28 13.6	-0.7
PCH				*i* S	Sb	03 28 32.2	+0.1
CHCH	**Chadas Angostu**	**1.44**	**123**	*e*P	Pn	03 28 13.9	-0.9
CHCH				*i* S	Sb	03 28 33.0	0.0
FCH	**Farellones**	**1.52**	**97**	⇓*i*P	Pn	03 28 15.6	-0.4
FCH				*i* S	Sb	03 28 35.8	+0.3
FCH				AMP		03 28 39.6	
	comp=N,86nm,0.5s						

IGQ 02 04:12:03.8,0.81S×81.29W,h11^{km}±3^{km},mb4.1,2C-1D, Error ellipse: s-maj=6.0km s-min=4.6km az=136.5,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.78**	**108**	⇓P	Pb	04 12 18.0	-0.9
HOJA				S	Sb	04 12 29.0	-0.2
MAGD	**Magdalena**	**1.69**	**64**	P	Pn	04 12 34.9	+1.4
IGUA	**Igualata**	**2.73**	**104**	P	Pn	04 12 50.3	+1.8
TERV	**Terraza Guagua**	**2.76**	**77**	P	Pn	04 12 50.5	+1.6
PINO	**Pino**	**2.76**	**76**	P	Pn	04 12 49.3	+0.5
YANA	**Yana**	**2.81**	**76**	P	Pn	04 12 49.1	-0.4
NAS1	**Nasa**	**2.82**	**86**	P	Pn	04 12 52.6	+2.9
VC1	**Cotopaxi 1**	**2.89**	**87**	P	Pn	04 12 53.1	+2.4
ARRY	**Arrayan**	**2.92**	**104**	⇑P	Pn	04 12 52.2	+1.2
TAMB	**Tambo**	**2.92**	**88**	P	Pn	04 12 53.3	+2.1
ULBA	**Ulba**	**2.95**	**102**	P	Pn	04 12 53.6	+2.0
ANTI	**Antisana**	**3.15**	**83**	⇑P	Pn	04 12 56.6	+2.3
ANTI				S	Sn	04 13 33.0	+0.7
COTA	**Cotacachi**	**3.17**	**69**	P	Pn	04 12 59.0	+4.4
CAYR	**Refugio Cayamb**	**3.39**	**76**	P	Pn	04 12 59.7	+2.0
CAYA	**Cayambe**	**3.42**	**75**	P	Pn	04 12 60.0	+1.8

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*MOS **02** 04:29:32.4±1.3,8.52N×93.77E,h33^{km},mb5.1/7,Error ellipse: s-maj=32.9km s-min=13.0km az=93.9*

*BJI **02** 04:29:41.5,9.72N×93.73E,h46^{km},mB5.3,mb4.8,Ms4.5, Msz4.1*

*NEIC **02** 04:29:46.3±1.8,9.92N×93.96E,h47^{km}±15^{km},mb4.7/21, Error ellipse: s-maj=12.1km s-min=10.0km az=198.0*

ISC 02 04:29:42.5±0.4,9.84N±0.05×94.03E±0.04,h34^{km}, h34^{km}±1.0^{km}:pP-P,n91,$\sigma 1^{s}08$/95,mb4.7/33,MS4.2/6, 12C-6D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.22**	**63**	P	**P**	**04 31 12.3**	**-2.0**
SNG	**Songkhla**	**7.03**	**112**	P	**P**	**04 31 23.0**	**-2.7**
	148nm,0.8s						
NST	**Nakhon Sawan**	**8.30**	**45**	P	**P**	**04 31 41.8**	**-1.6**
	131nm,0.6s						
CM31	**Chiang Mai Arr**	**9.79**	**29**	*e*P	**P**	**04 32 03.6**	**-0.6**
CHG	**Chiang Mai**	**10.11**	**28**	⇑P	**P**	**04 32 08.7**	**+0.3**
	15nm,1.0s						
NANT	**Nan**	**11.00**	**35**	P	**P**	**04 32 21.5**	**+0.9**
HYB	**Hyderabad**	**16.81**	**298**	*e*P	**P**	**04 33 38.0**	**+1.0**
HYB				*e*S	**S**	**04 36 40.0**	**-1.7**
HYB	**Hyderabad**	**16.81**	**298**	*i* P	**P**	**04 33 38.0**	**+1.0**
HYB				*e*S	**S**	**04 36 40.0**	**-1.7**
KMI	**Kunming**	**17.30**	**27**	P	**P**	**04 33 46.0**	**+2.9**
KMI				AP		04 33 53.0	
KMI				XP		04 33 58.1	
KMI				PP	PP	04 34 01.0	+3.4
KMI				S	**S**	**04 36 54.7**	**+1.9**
KMI				XS		04 37 08.9	
KMI				SS	SS	04 37 16.3	+1.8
KMI				AMB	AMB		
	comp=Z,20nm,1.1s						
KMI				AMB	AMB		
	comp=Z,172nm,3.9s						
KMI				LR	LR		
	comp=N,344nm,22.0s						
KMI				LR	LR		
	comp=E,535nm,31.1s						
KMI				LR	LR		
	comp=Z,299nm,13.5s						
KMI	**Kunming**	**17.30**	**27**	P	**P**	**04 33 46.0**	**+2.9**
	comp=Z,20nm,1.1s						
KMI				pP		04 33 53.0	
KMI				sP		04 33 58.1	
KMI				PP	PP	04 34 01.0	+3.4
KMI				S	**S**	**04 36 54.7**	**+1.9**
KMI				sS		04 37 08.9	
KMI				SS	SS	04 37 16.3	+1.8
JIRN	**Jiri**	**19.20**	**338**	*e*P	**P**	**04 34 06.1**	**-0.2**
	comp=Z,58nm,1.0s						
PKI	**Pulchoki**	**19.42**	**336**	*e*P	**P**	**04 34 08.6**	**-0.1**
	comp=Z,62nm,1.0s						
KKN	**Kakani**	**19.66**	**336**	*e*P	**P**	**04 34 11.0**	**-0.4**
	comp=Z,94nm,1.1s						
LSA	**Lhasa**	**19.94**	**353**	P	**P**	**04 34 13.7**	**-0.7**
GKN	**Gorkha**	**20.11**	**335**	*e*P	**P**	**04 34 15.9**	**-0.4**
	comp=Z,117nm,0.9s						
KOLN	**Koldanda**	**20.36**	**333**	*e*P	**P**	**04 34 18.7**	**-0.2**
	comp=Z,81nm,0.9s						
GYA	**Guiyang**	**20.39**	**34**	⇓*i*P	**P**	**04 34 19.5**	**+0.3**
GYA				AP		04 34 28.2	
GYA				XP		04 34 32.5	
GYA				S	**S**	**04 37 57.7**	**-3.2**
GYA				AMB	AMB		
	comp=Z,80nm,1.4s						
GYA				LR	LR		
	comp=N,190nm,4.0s						
GYA				LR	LR		
	comp=E,180nm,4.8s						
GYA				LR	LR		
	comp=Z,250nm,5.7s						
CD2	**Chengdu**	**22.83**	**22**	P	**P**	**04 34 44.4**	**+0.6**
CD2				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.9						
LZH	**Lanzhou**	**27.60**	**17**	⇓P	**P**	**04 35 28.7**	**-0.2**
LZH				AP	pP	04 35 38.2	-0.3
LZH				XP	sP	04 35 42.3	-0.5
LZH				PP	PP	04 36 17.5	0.0
LZH				*e*S	**S**	**04 40 07.2**	**+0.8**
LZH				XS		04 40 22.5	
LZH				SS	SS	04 41 25.6	-0.5
LZH				AMB	AMB		
	comp=Z,35nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,121nm,4.7s						
LZH				LR	LR		
	comp=N,838nm,12.2s						
LZH				LR	LR		
	comp=Z,1µm,14.8s,MS4.6						
LZH	**Lanzhou**	**27.60**	**17**	⇓P	**P**	**04 35 28.7**	**-0.2**
	comp=Z,35nm,1.3s,mb4.8						
LZH				pP	pP	04 35 38.2	-0.3
LZH				sP	sP	04 35 42.3	-0.5
LZH				PP	PP	04 36 17.5	0.0
LZH				*e*S	**S**	**04 40 07.2**	**+0.8**
LZH				sS		04 40 22.5	
LZH				SS	SS	04 41 25.6	-0.5
LZH				LR	LR		
	comp=Z,1µm,14.8s,MS4.6						
XAN	**Xi'an**	**27.69**	**27**	P	**P**	**04 35 28.2**	**-1.5**
XAN				AMB	AMB		
	comp=Z,14nm,1.3s,mb4.4						
WHN	**Wuhan**	**27.97**	**40**	*e*P	**P**	**04 35 32.0**	**-0.3**
GTA	**Gaotai**	**29.89**	**9**	*e*P	**P**	**04 35 49.4**	**+0.1**
GTA				AP	pP	04 35 59.0	0.0
GTA				XP	sP	04 36 02.8	-0.7
GTA				PP	PP	04 36 46.5	-0.7
GTA				PCP	PcP	04 38 53.1	+1.3
GTA				S	**S**	**04 40 43.7**	**+0.8**
GTA				XS		04 40 58.2	
GTA				SS	SS	04 42 20.3	+0.4
GTA				SCP		04 42 28.7	
GTA				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,163nm,4.6s						
GTA				LR	LR		
	comp=N,183nm,12.9s						
GTA				LR	LR		
	comp=E,127nm,17.9s						
GTA				LR	LR		
	comp=Z,109nm,15.2s,MS3.6						
NJ2	**Nanjing**	**31.87**	**42**	*e*P	**P**	**04 36 07.3**	**+0.4**
NJ2				AP	pP	04 36 18.1	+1.4
NJ2				XP	sP	04 36 20.3	-0.9
NJ2				PP	PP	04 37 11.2	-1.8
NJ2				S	**S**	**04 41 13.2**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=N,800nm,22.3s						
NJ2				LR	LR		
	comp=E,710nm,10.7s						
NJ2				LR	LR		
	comp=Z,820nm,18.4s,MS4.4						
SSE	**Sheshan**	**32.91**	**46**	P	**P**	**04 36 17.9**	**+1.9**
SSE				XP	sP	04 36 30.6	+0.3
SSE				S	**S**	**04 41 32.8**	**+2.4**
SSE				XS		04 41 47.0	
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,207nm,4.5s						
SSE				LR	LR		
	comp=N,77nm,23.2s,MS3.4						
SSE				LR	LR		
	comp=E,52nm,23.2s,MS3.4						
SSE				LR	LR		
	comp=Z,129nm,23.2s,MS3.6						
SSE	**Sheshan**	**32.91**	**46**	P	**P**	**04 36 17.9**	**+1.9**
	comp=Z,26nm,0.7s,mb5.3						
SSE				sP	sP	04 36 30.6	+0.3
SSE				S	**S**	**04 41 32.8**	**+2.4**
SSE				sS		04 41 47.0	
SSE				LR	LR		
	comp=Z,130nm,23.2s,MS3.6						
WMQ	**Urumqi**	**34.30**	**352**	*e*P	**P**	**04 36 27.7**	**0.0**
WMQ				AP	pP	04 36 37.5	-0.1
WMQ				XP	sP	04 36 41.5	-0.5
WMQ				PP	PP	04 37 43.0	-0.3
WMQ				S	**S**	**04 41 51.0**	**-0.7**
WMQ				SS	SS	04 44 01.0	-1.3
WMQ				AMB	AMB		
	comp=Z,15nm,0.8s,mb5.0						
HHC	**Hu-ho-hao-te**	**34.56**	**24**	⇓P	**P**	**04 36 30.7**	**+0.7**
HHC				AP	pP	04 36 40.2	+0.3
HHC				XP	sP	04 36 44.3	0.0
HHC				PP	PP	04 37 51.3	+4.5
HHC				PCP	PcP	04 38 58.8	-5.7
HHC				XS		04 42 21.4	
HHC				SCP		04 42 40.3	
HHC				PCS		04 42 46.3	
HHC				SCS	ScS	04 46 45.6	-1.8
HHC				AMB	AMB		
	comp=Z,26nm,1.1s,mb5.1						
HHC				LR	LR		
	comp=N,229nm,15.4s,MS4.2						
HHC				LR	LR		
	comp=E,194nm,11.8s,MS4.2						
HHC				LR	LR		
	comp=Z,192nm,17.8s						
BJI	**Beijing**	**35.94**	**30**	*e*P	**P**	**04 36 42.8**	**+1.0**
BJI				AMB	AMB		
	comp=Z,18nm,0.9s,mb5.0						
BJI	**Beijing**	**35.94**	**30**	*e*P	**P**	**04 36 42.8**	**+1.0**
	comp=Z,18nm,0.9s,mb5.0						
UCH	**Uchtor**	**36.52**	**335**	P	**P**	**04 36 47.5**	**+0.8**
	SNR=5.2						
AML	**Almayashu**	**36.79**	**334**	P	**P**	**04 36 49.7**	**+0.8**
	SNR=18						
AAK	**Ala-Archa**	**36.87**	**336**	P	**P**	**04 36 50.5**	**+0.9**
	SNR=5.7						
AAK	**Ala-Archa**	**36.87**	**336***c*	*i*P	**P**	**04 36 49.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**36.87**	**336**	*e*P	**P**	**04 36 49.2**	**-0.4**
	comp=Z,11nm,1.1s,mb4.6						
FRU	**Bishkek**	**36.99**	**336**	*e*P	**P**	**04 36 51.5**	**+0.9**
CHMS	**Chumysh**	**37.07**	**336**	P	**P**	**04 36 51.5**	**+0.2**
	SNR=6.6						
EKS2	**Erkin-Say**	**37.19**	**335**	P	**P**	**04 36 53.2**	**+0.9**
	SNR=9.2						
USP	**Ospenovka**	**37.40**	**336**	P	**P**	**04 36 54.3**	**+0.2**
	SNR=10						
ULN	**Ulaanbaatar**	**39.46**	**14**	*i* P	**P**	**04 37 11.3**	**+0.2**
ULN	**Ulaanbaatar**	**39.46**	**14**	*e*P	**P**	**04 37 11.4**	**+0.3**
	comp=Z,9.8nm,0.9s,mb4.5						
ZAK	**Zakamensk**	**41.13**	**9**	*e*P	**P**	**04 37 25.0**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.7						
TLY	**Talaya**	**42.45**	**9**	*e*P	**P**	**04 37 37.1**	**+1.3**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.2						
KURK	**Kurchatov**	**42.69**	**346**	*i* P	**P**	**04 37 37.3**	**-0.5**
KURK	**Kurchatov**	**42.69**	**346**	*e*P	**P**	**04 37 36.5**	**-1.3**
	comp=Z,6.3nm,1.0s,mb4.3						
CN2	**Changchun**	**43.44**	**33**	*e*P	**P**	**04 37 44.3**	**+0.3**
CN2				*e*AP	pP	04 37 54.2	+0.2
CN2				*e*S	**S**	**04 44 10.3**	**+0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,700nm,13.0s,MS4.9						
CN2				LR	LR		
	comp=E,600nm,13.0s,MS4.9						
CN2				LR	LR		
	comp=Z,800nm,14.0s,MS4.8						
NVS	**Novosibirsk**	**45.69**	**351**	*i* P	**P**	**04 38 00.3**	**-1.6**
CHKZ	**Chkalovo**	**47.58**	**341**	*e*P	**P**	**04 38 16.0**	**-0.8**
	comp=Z,3.8nm,1.1s,mb4.3						
RAYN	**Ar Rayn**	**48.21**	**293**	P	**P**	**04 38 23.5**	**+1.4**
	comp=Z,84nm,0.8s,mb5.8,SNR=11						

WRAB	Tennant Creek	49.51	127	iP	P	04 38 30.2	-1.9
WRAB	Tennant Creek	49.51	127	eP	P	04 38 32.0	-0.2
	comp=Z,10nm,0.9s,mb4.9						
BOD	Bodaibo	50.27	14	eP	P	04 38 35.5	-2.0
GNI	Garni	53.00	313	iP	P	04 38 59.4	+1.1
GNI				pmax	pmax		
	comp=Z,11nm,1.0s						
GNI	Garni	53.00	313	eP	P	04 38 59.0	+0.7
	comp=Z,23nm,1.3s,mb5.0						
ARU	Arti	54.05	337	eP	P	04 38 56.1	-10
YSS	Yuzh-Sakhalins	55.31	39	⇑eP	P	04 39 15.0	-0.1
KIV	Kislovodsk	55.80	317	c iP	P	04 39 18.7	0.0
KIV				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
KIV	Kislovodsk	55.80	317	eP	P	04 39 18.0	-0.7
	comp=Z,28nm,1.1s,mb5.2						
SOC	Sochi	57.70	316	eP	P	04 39 27.0	-5.2
SOC				e		04 40 16.8	
SOC				e		04 41 36.6	
SOC				ePPP	PPP	04 42 56.5	-7.4
SOC				eS	S	04 47 23.8	-2.9
SOC				e		04 49 17.5	
SOC				eSS	SS	04 51 13.8	-4.8
SOC				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
SOC				pmax	pmax		
	comp=N,20nm,0.9s						
SOC				pmax	pmax		
	comp=E,20nm,1.0s						
YAK	Yakutsk	58.17	19	iP	P	04 39 34.3	-1.0
YAK				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
CTAO	Charters Tower	59.37	120	eP	P	04 39 45.2	+1.0
	comp=Z,7.4nm,1.1s,mb4.6						
STKA	Stephens Creek	61.54	134	eP	P	04 39 58.3	-0.5
MOS	Moscow	63.36	328	eP	P	04 40 05.8	-4.8
MOS				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.7						
CFR	Carcaliu	66.13	315	⇑iP	P	04 40 27.6	-1.0
CFR	Carcaliu	66.13	315	⇑iP	P	04 40 27.6	-1.0
MLR	Muntele Rosu	67.70	315	⇑iP	P	04 40 38.5	0.0
MLR	Muntele Rosu	67.70	315	⇑iP	P	04 40 38.5	0.0
BURAR	Bucovina Array	68.53	317	⇑iP	P	04 40 42.7	-1.0
KWP	Kalwaria	70.48	319	P	P	04 40 54.7	-0.8
	comp=Z,24nm,1.4s,mb4.9						
PSZ	Piszkesteto	72.13	317	P	P	04 41 09.3	+3.9
	comp=Z,3.5nm,0.9s,mb4.3						
BILL	Bilibino	74.31	22	iP	P	04 41 15.8	-2.1
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
LBTB	Lobatse	75.10	241	eP	P	04 41 25.0	+1.7
	comp=Z,3.8nm,0.7s,mb4.4						
BRG	Berggiesshubel	76.18	320	eP	P	04 41 28.6	-0.3
BRG				i		04 41 34.7	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BRG	Berggiesshubel	76.18	320	eP	P	04 41 28.6	-0.3
	comp=Z,3.0nm,1.2s,mb4.1						
BRG				i		04 41 34.7	
BOSA	Boshof	76.54	237	eP	P	04 41 32.5	+1.0
	comp=Z,3.8nm,0.6s,mb4.5						
NB2	NORSAR Subarra	77.97	330	P	P	04 41 37.6	-1.2
	comp=Z,4.5nm,1.1s,mb4.3,baz=91,slow=5.6						
LPG	La Plagne	81.16	315	eP	P	04 41 56.1	-0.2
	comp=Z,18nm,0.9s,mb4.7						
SUR	Sutherland	81.36	235	eP	P	04 41 58.8	+1.1
	comp=Z,12nm,0.9s,mb4.8						
SYO	Syowa Base	87.25	197	⇓P	P	04 42 20.7	-5.6
SYO	Syowa Base	87.25	197	⇓P	P	04 42 29.2	+2.9
SYO	Syowa Base	87.25	197	⇑PcP	PcP	04 42 32.5	+3.7
RES	Resolute Bay	95.45	2	eP	P	04 43 05.4	+1.0
	comp=Z,3.2nm,0.9s,mb4.8						
VNA2	Neumayer--Watz	102.98	199	e	Pdif	04 43 49.0	+11
VNA2	Neumayer--Watz	102.98	199	⇑iP	Pdif	04 43 42.0	+3.6
VNA2				e		04 43 49.0	
VNA3	Neumayer Olymp	103.66	199	e	Pdif	04 43 49.3	+7.9
VNA3	Neumayer Olymp	103.66	199	⇑iP	Pdif	04 43 42.0	+0.6
VNA3				e		04 43 49.3	
PV10	Paradox Valley	127.42	23	ePKPdf	PKPdf	04 48 47.9	+3.4
TUC	Tucson	131.84	28	ePKPdf	PKPdf	04 48 56.6	+3.5
MIAR	Mount Ida	135.27	9	ePKPdf	PKPdf	04 49 00.7	+1.3
JCT	Junction City	137.76	18	ePKPdf	PKPdf	04 49 07.0	+2.9
PLCA	Paso Flores	146.34	201	ePKPdf	PKPdf	04 49 21.2	+2.4

MAN 02 05:25:50.5, 16.37N×119.57E, h9^{km}, mb4.0, ML2.8, MS2.5, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.33	88	eP	Pg	05 25 57.9	+0.5
BOLP				eS	Sg	05 26 03.4	+1.4
SCZP	Santa Cruz	0.68	151	eP	Pb	05 26 03.7	-0.3
ABRA	Dolores	1.68	41	eP	Pn	05 26 19.9	-0.4
BALP	Baler	2.03	108	eP	Pn	05 26 25.2	-0.1
APYP	Conner	2.19	47	eP	Pn	05 26 27.1	-0.4
CVP	Callao Caves	2.53	58	⇑eP	Pn	05 26 31.5	-1.0

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*BJI **02** 05:55:18.2, 7.00S×107.80E, h15^{km}, mB5.1, mb4.7, Ms5.2, Msz4.9*

*NEIC **02** 05:55:18.2±0.4, 7.04S×107.82E, h15^{km}, mb4.8/17, Error ellipse: s-maj=12.9km s-min=9.4km az=216.0*

NEIC One person killed and several injured; many buildings damaged or destroyed; power outages occurred in Garut. Felt [IV] at Garut and [III] at Pangalengan, Pelabuhan and Soreang.

*DJA **02** 05:55:18.6±0.3, 7.18S×107.57E, h15^{km}, MD5.1/2, Error ellipse: s-maj=24.8km s-min=5.3km az=16.0*

ISC 02 05:55:15.8±0.3, 7.07S±0.06×107.68E±0.05, h10^{km}, n47, σ1^{s}62/47, mb4.8/18, MS5.0/3, 2C-6D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	Lembang	0.25	345	ePn	Pn	05 55 23.6	-1.4
PACI	Pancar Gunung	0.90	302	ePn	Pn	05 55 33.6	-0.7
KALI	Kaliastana	1.02	268	ePn	Pn	05 55 34.0	-2.0
PULI	Pulasari	1.84	293	ePn	Pn	05 55 51.3	+3.5
SRDI	Scrawed	6.55	103	⇓eP	Pn	05 56 56.6	+2.0
	105nm,1.0s						
SRDI				eS	Sn	05 58 01.8	-8.4
SRDI	Scrawed	6.55	103	⇓ePn	Pn	05 56 55.6	+1.0
KELI	Kelakatan	6.84	100	⇓eP	Pn	05 57 03.1	+4.4
	162nm,0.4s						
RATI	Rata	7.95	102	⇓eP	Pn	05 57 15.7	+1.5
	326nm,0.3s						
RATI				eS	Sn	05 58 34.2	-11
RATI	Rata	7.95	102	⇓ePn	Pn	05 57 15.9	+1.7
KEDI	Kedomdong	8.47	100	⇑eP	P	05 57 25.3	+3.8
	61nm,0.5s						
KEDI	Kedomdong	8.47	100	⇑ePn	P	05 57 23.0	+1.5
KEDI	Kedomdong	8.47	100	ePg	P	05 57 26.3	+4.8
KEDI				eSn	Sn	05 59 00.8	+2.7
COCO	West Island	11.84	244	eP	P	05 58 07.4	-0.4
	68nm,1.1s						
MBWA	Marble Bar	18.22	141	eP	P	05 59 28.4	-2.3
FITZ	Fitzroy Crossi	20.65	124	eP	P	05 59 57.0	-1.3
	76nm,0.8s						
KAKA	Kakadu	25.01	105	eP	P	06 00 40.3	-1.3
	41nm,0.8s,mb5.0						
QIZ	Qiongzhong	26.02	5	P	P	06 00 56.2	+5.2
QIZ				S	S	06 05 25.4	+5.9
QIZ				LR	LR		
	comp=E,3µm,17.6s						
NWAO	Narrogin (SRO)	27.21	162	eP	P	06 01 00.6	-1.3
WRAB	Tennant Creek	28.85	119	eP	P	06 01 15.0	-1.8
	comp=E,60nm,1.3s,mb5.2						
WB2	Warramunga Arr	28.86	119	eP	P	06 01 15.0	-1.8
ASPA	Alice Springs	30.10	126	eP	P	06 01 27.5	-0.4
GYA	Guiyang	33.34	358	P	P	06 01 58.6	+2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CTAO	Charters Tower	39.55	113	eP	P	06 02 49.0	0.0
	comp=Z,22nm,1.0s,mb4.8						
STKA	Stephens Creek	40.09	133	eP	P	06 02 52.4	-0.9
	comp=Z,35nm,0.6s,mb5.3						
LZH	Lanzhou	43.08	355	eP	P	06 03 19.8	+2.0
LZH				AP	pP	06 03 30.1	+9.3
LZH				XP	sP	06 03 34.2	+12
LZH				PP	PP	06 05 05.6	+5.3
LZH				AMB	AMB		
	comp=Z,27nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,102nm,5.2s						
LZH				LR	LR		
	comp=N,2µm,15.0s						
LZH				LR	LR		
	comp=Z,2µm,17.8s,MS5.1						
LZH	Lanzhou	43.08	355	eP	P	06 03 19.8	+2.0
	comp=Z,27nm,1.5s,mb4.8						
LZH				pP	pP	06 03 30.1	+9.3
LZH				sP	sP	06 03 34.2	+12
LZH				PP	PP	06 05 05.6	+5.3
LZH				LR	LR		
	comp=Z,2µm,17.8s,MS5.1						
GTA	Gaotai	46.82	352	eP	P	06 03 45.8	-1.9
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
GTA				AMB	AMB		
	comp=Z,157nm,6.5s						
GTA				LR	LR		
	comp=N,894nm,17.9s,MS5.0						
GTA				LR	LR		
	comp=E,1µm,20.2s,MS5.0						
GTA				LR	LR		
	comp=Z,1µm,19.4s,MS4.9						
BJI	Beijing	47.53	9	eP	P	06 03 53.7	+0.4
BJI				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.5						
BJI				LR	LR		
	comp=N,698nm,16.5s,MS5.1						
BJI				LR	LR		
	comp=E,2µm,16.5s,MS5.1						
BJI				LR	LR		
	comp=Z,752nm,15.6s,MS4.8						
BJI	Beijing	47.53	9	eP	P	06 03 53.7	+0.4
	comp=Z,4.0nm,0.9s,mb4.5						
BJI				S	Sx	06 11 03.5	
BJI				SS	SS	06 14 38.1	+29
BJI				LR	LR		
	comp=Z,750nm,15.6s,MS4.8						
ULN	Ulaanbaatar	54.70	359	eP	P	06 04 44.9	-2.6
	comp=Z,2.8nm,0.7s,mb4.4						
YSS	Yuzh-Sakhalins	62.14	26	P	P	06 05 37.1	-2.4
KURK	Kurchatov	62.80	340	eP	P	06 05 38.4	-5.4
	comp=Z,3.4nm,0.9s,mb4.5						
CHKZ	Chkalovo	68.11	337	eP	P	06 06 14.6	-3.3
	comp=Z,5.0nm,0.7s,mb4.7						
SBA	Scott Base	76.85	169	P	P	06 07 09.5	+0.3
MBAR	Mbarara	76.97	271	eP	P	06 07 11.7	+0.6
	comp=Z,8.4nm,1.0s,mb4.6						
LSZ	Lusaka	78.07	256	eP	P	06 07 17.4	+0.3
	comp=Z,4.6nm,0.7s,mb4.5						
EIL	Elat	78.69	302	eP	P	06 07 19.2	-1.0
	comp=Z,15nm,1.0s,mb4.9						
LBTB	Lobatse	79.90	246	eP	P	06 07 29.3	+2.5
BOSA	Boshof	80.02	242	eP	P	06 07 29.8	+2.3
	comp=Z,14nm,1.5s,mb4.7						
CSS	Prodhromos	81.37	307	eP	P	06 07 35.8	+1.3
	comp=Z,23nm,0.8s,mb5.2						
QSPA	South Pole Qui	82.92	180	⇓iP	P	06 07 43.2	+1.6
	comp=Z,9.7nm,0.8s,mb4.9						
TSUM	Tsumeb	87.80	251	eP	P	06 08 09.8	+2.7
	comp=Z,3.5nm,0.8s,mb4.6						
SNAA	Sanae	89.66	197	P	P	06 08 16.5	+1.6
PV10	Paradox Valley	134.50	41	PKPdf	PKPdf	06 14 37.5	-0.4
JCT	Junction City	145.27	44	ePKPdf	PKPdf	06 14 55.2	-2.3
MIAR	Mount Ida	146.36	33	ePKPdf	PKPdf	06 14 58.8	-0.4
OTAV	Otavalo	170.86	138	ePKPdf	PKPdf	06 15 28.6	+0.6

MEX 02 06:02:43.2±0.4, 16.54N×95.90W, h30^{km}±18^{km}, MD3.5, 2C, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.79	195	⇑iP	Pn	06 02 55.9	-2.5
HUIG				iS	Sb	06 03 06.0	-2.9
OXX	Oaxaca	0.96	304	eP	Pn	06 02 58.0	-2.7
OXX				iS	Sn	06 03 10.0	-3.4
VHO	Vista Hermosa	0.96	304	⇑iP	Pn	06 02 58.7	-2.0
VHO				iS	Sn	06 03 10.4	-3.1

IGQ 02 06:24:44.9, 1.59S×81.20W, h11^{km}±6^{km}, mb4.2, 4C-3D, Error ellipse: s-maj=9.6km s-min=7.4km az=137.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.85	51	⇑P	Pb	06 25 00.7	-0.4
MAGD	Magdalena	2.08	43	P	Pn	06 25 22.5	+2.3
IGUA	Igualata	2.57	88	⇑P	Pn	06 25 28.8	+1.6
IGUA				S	Sn	06 26 00.1	+1.5
JUIV	Juive	2.74	87	P	Pn	06 25 30.9	+1.3
ARRY	Arrayan	2.75	88	P	Pn	06 25 30.9	+1.1
ARRY				S	Sn	06 26 05.0	+1.7
RETU	Refugio	2.76	87	P	Pn	06 25 31.5	+1.6
ULBA	Ulba	2.80	87	P	Pn	06 25 32.3	+1.8
PISA	Pisayambo	2.87	79	P	Pn	06 25 34.0	+2.5
NAS1	Nasa	2.89	71	P	Pn	06 25 34.1	+2.3
VC1	Cotopaxi 1	2.95	71	⇑P	Pn	06 25 35.6	+2.9
TERV	Terraza Guagua	2.96	62	P	Pn	06 25 33.5	+0.8
PINO	Pino	2.96	61	⇓P	Pn	06 25 33.5	+0.7
TAMB	Tambo	2.97	73	P	Pn	06 25 36.6	+3.7
YANA	Yana	3.01	61	⇓P	Pn	06 25 33.9	+0.4
ANTI	Antisana	3.25	70	P	Pn	06 25 39.6	+2.8
COTA	Cotacachi	3.44	56	⇓P	Pn	06 25 41.7	+2.0
CAYR	Refugio Cayamb	3.57	64	P	Pn	06 25 45.1	+3.7
CAYA	Cayambe	3.61	63	⇑P	Pn	06 25 45.5	+3.5
CONE	Cono NE Rev Vo	3.87	67	P	Pn	06 25 51.0	+5.4

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*BJI **02** 06:28:33.1, 7.78S×145.51E, h35^{km}, mB5.7, mb5.6, Ms5.2, Msz5.0*

*NEIC **02** 06:28:36.7±0.1, 7.48S×145.04E, mb5.7/38, MS5.3/113, MW5.6, Error ellipse: s-maj=5.8km s-min=4.1km az=111.0, Moment Tensor Solution. s5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.55; $M_{\theta\theta}$-2.87; $M_{\phi\phi}$0.31; $M_{r\theta}$0.63; $M_{\theta\phi}$-0.32; $M_{\phi r}$1.23; Best double couple: $M_0$3.1×10^{17} NP1:ϕ_s285°, δ41°, λ124°. NP2:ϕ_s63°, δ57°, λ64°. Principal axes: T 3.13, Plg67°, Azm281°; N -.12, Plg22°, Azm78°; P -3.01, Plg8°, Azm171°;*

*HRVD **02** 06:28:36.7±0.1, 7.52S×145.15E, h19^{km}, MW5.5/74, Centroid moment Tensor Solution. LP body waves: s64,c112;Mantle waves: s74,c159; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}2.20±.04; $M_{\theta\theta}$-2.23±.03; $M_{\phi\phi}$0.03±.04; $M_{r\theta}$0.75±.07; $M_{\theta\phi}$-0.27±.03; $M_{\phi r}$1.05±.09; Best double couple: $M_0$2.567×10^{17} NP1: ϕ_s281°, δ37°, λ122°. NP2:ϕ_s63°, δ59°, λ68°. Principal axes: T 2.698, Plg68°, Azm289°; N -.258, Plg18°, Azm75°; P -2.437, Plg11°, Azm169°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **02** 06:28:37.7±0.7, 7.18S×145.09E, h33^{km}, mb5.9/39, MS5.2/50 Error ellipse: s-maj=14.0km s-min=7.9km az=107.4*

ISC 02 06:28:35.0±0.2, 7.52S±0.03×145.03E±0.04, h24^{km}, h24^{km}±1.2^{km}:pP-P, n407, σ1^{s}07/227, mb5.7/81, MS5.2/134, 31C-20D, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.82	132	eP	Pn	06 29 18.7	-1.0
CTAO	Charters Tower	12.55	175	eP	P	06 31 36.3	+1.1
CTAO				pmax	pmax		
	comp=Z,153nm,1.0s						
CTAO	Charters Tower	12.55	175	eP	P	06 31 36.3	+1.1
	comp=Z,153nm,1.0s						
KAKA	Kakadu	13.43	246	eP	P	06 31 44.1	-2.7
	comp=Z,264nm,0.6s						
WRAB	Tennant Creek	16.11	219	P	P	06 32 21.3	-0.6
WRAB				pmax	pmax		
	comp=Z,320nm,0.8s						
WRAB	Tennant Creek	16.11	219	eP	P	06 32 21.1	-0.8
	comp=Z,321nm,0.8s						
WB2	Warramunga Arr	16.12	219	⇑iP	P	06 32 21.2	-0.8
ASPA	Alice Springs	19.29	212	⇑iP	P	06 33 01.7	+0.6
GUMO	Guam	20.97	360	P	P	06 33 17.7	-1.4
GUMO				pmax	pmax		
	comp=Z,590nm,1.3s						
GUMO	Guam	20.97	360	eP	P	06 33 16.8	-2.2
	comp=Z,589nm,1.4s						
GUMO				LR	LR		
	comp=Z,3µm,19.0s,MS4.7						
FITZ	Fitzroy Crossi	21.61	239	⇑iP	P	06 33 25.2	-0.4
	comp=Z,172nm,0.9s,mb5.5						
DAV	Davao City (W)	24.21	306	eP	P	06 33 54.0	+2.7
STKA	Stephens Creek	24.45	187	⇓iP	P	06 33 54.7	+1.3
	comp=Z,158nm,1.3s,mb5.3						
NOUC	Port Laguerre	25.11	128	eP	P	06 33 58.9	-1.0
NOUC	Port Laguerre	25.11	128	eP	P	06 33 58.9	-1.0
PAGZ	Pagadian	26.43	305	eP	P	06 34 12.5	+0.3
CNB	Canberra Magne	27.95	172	eP	P	06 34 27.1	+1.2
	comp=Z,931nm,1.1s,mb6.3						
MBWA	Marble Bar	27.95	238	eP	P	06 34 24.6	-1.4
	comp=Z,63nm,1.5s,mb5.0						
MBWA				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
FORT	Forrest	28.07	212	⇑iP	P	06 34 26.4	-0.6
	comp=Z,207nm,0.8s,mb5.8						
GUIM	Jordan	28.70	309	eP	P	06 34 30.9	-1.9
CUYO	Cuyo Island	30.07	307	eP	P	06 34 42.6	-2.5
SJMP	San Jose	30.96	310	eP	P	06 34 51.9	-1.1
PPR	Puerto Princes	31.33	303	eP	P	06 34 56.7	+0.6
ENPP	El Nido	31.55	306	eP	P	06 34 55.7	-2.4
BATP	Bataraza	31.61	300	eP	P	06 34 57.0	-1.6
KKM	Kota Kinabalu	31.75	294	P	P	06 34 57.5	-2.4
TAU	Tasmania Unive	35.31	177	PFAKE		06 35 40.0	+10
TAU				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
NWAO	Narrogin (SRO)	36.10	222	P	P	06 35 37.2	0.0
NWAO				pmax	pmax		
	comp=Z,150nm,1.6s						
NWAO	Narrogin (SRO)	36.10	222	eP	P	06 35 36.2	-1.0
	comp=Z,146nm,1.6s,mb5.7						
NWAO				LR	LR		
	comp=Z,7µm,22.0s,MS5.4						
MUN	Mundaring	36.22	224	eP	P	06 35 37.6	-0.6
	comp=Z,40nm,1.3s,mb5.2						
MUN	Mundaring	36.22	224	eP	P	06 35 37.6	-0.6
MUN				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
TATO	Taipei	39.61	325	PFAKE		06 36 20.0	+13
TATO				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
RAO	Raoul Island	41.00	127	PFAKE		06 36 30.0	+12
RAO				LR	LR		
	comp=Z,4µm,22.0s,MS5.2						
QZH	Quanzhou	41.28	322	⇑iP	P	06 36 21.1	+0.7
QZH				S	S	06 42 36.2	+3.3
QZH				AMB	AMB		
	comp=Z,180nm,1.0s,mb5.7						
QZH				AMB	AMB		
	comp=Z,1µm,3.0s						
QZH				LR	LR		
	comp=N,1µm,4.7s						
QZH				LR	LR		
	comp=E,1µm,11.8s						
QZH				LR	LR		
	comp=Z,6µm,29.6s						
KGM	Kluang	42.68	281	P	P	06 36 33.6	+1.5
AFI	Afiamalu	42.86	102	P	P	06 36 34.1	+0.5
AFI				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.7						
AFI	Afiamalu	42.86	102	eP	P	06 36 33.5	-0.1
	comp=Z,157nm,0.9s,mb5.7						
AFI				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
GZH	Guangzhou	43.42	315	P	P	06 36 40.4	+2.4
GZH				S	S	06 43 12.5	+8.1
GZH				LR	LR		
	comp=N,736nm,16.8s,MS5.0						
GZH				LR	LR		
	comp=E,1µm,17.7s,MS5.0						
GZH				LR	LR		
	comp=Z,2µm,20.5s,MS4.9						
QIZ	Qiongzhong	43.57	308	P	P	06 36 39.8	+0.5
QIZ				AP	pP	06 36 47.1	+0.7
QIZ				S	S	06 43 07.8	+1.1
QIZ				AMB	AMB		
	comp=Z,156nm,1.4s,mb5.5						
QIZ				LR	LR		
	comp=N,726nm,18.2s,MS4.8						
QIZ				LR	LR		
	comp=E,881nm,17.5s,MS4.8						
QIZ				LR	LR		
	comp=Z,1µm,18.6s,MS4.9						
MAJO	Matsushiro	44.29	352	P	P	06 36 43.2	-1.7
MAJO				pmax	pmax		
	comp=Z,130nm,1.2s,mb5.5						
MAJO	Matsushiro	44.29	352	eP	P	06 36 42.7	-2.2
	comp=Z,127nm,1.2s,mb5.5						
MAJO				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
MAT	Matsushiro	44.29	352	eP	P	06 36 43.0	-1.9
MAT				eS	S	06 43 13.0	-3.9
MAT				pmax	pmax		
	comp=Z,111nm,1.5s,mb5.4						
MAT				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
MAT	Matsushiro	44.29	352	eP	P	06 36 43.0	-1.9
	comp=Z,111nm,1.5s,mb5.4						
MAT				eS	S	06 43 13.0	-3.9
MAT				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
MAT	Matsushiro	44.29	352	P	P	06 36 43.1	-1.8
MAT				S	S	06 43 13.0	-3.9
SSE	Sheshan	44.67	330	P	P	06 36 48.1	+0.1
SSE				AP	pP	06 36 57.1	+2.0
SSE				XP	sP	06 37 00.9	+2.9
SSE				S	S	06 43 23.9	+1.5
SSE				XS		06 43 40.9	
SSE				AMB	AMB		
	comp=Z,181nm,1.1s,mb5.8						
SSE				AMB	AMB		
	comp=Z,273nm,4.6s						
SSE				LR	LR		
	comp=N,848nm,32.8s,MS4.6						
SSE				LR	LR		
	comp=E,787nm,33.0s,MS4.6						
SSE				LR	LR		
	comp=Z,1µm,24.0s						
SSE	Sheshan	44.67	330	P	P	06 36 48.1	+0.1
	comp=Z,181nm,1.1s,mb5.8						
SSE				pP	pP	06 36 57.1	+2.0
SSE				sP	sP	06 37 00.9	+2.9
SSE				S	S	06 43 23.9	+1.5
SSE				sS		06 43 40.9	
SSE				SS	SS	06 46 48.2	+14
SSE				LR	LR		
	comp=Z,1µm,24.0s,MS4.7						
IPM	Ipoh	45.52	284	P	P	06 36 55.7	+0.7
NJ2	Nanjing	46.61	329	eP	P	06 37 04.6	+1.2
NJ2				AP	pP	06 37 11.3	+0.8
NJ2				XP	sP	06 37 14.2	+0.8
NJ2				PP	PP	06 38 55.2	+2.4
NJ2				S	S	06 43 55.0	+4.8
NJ2				XS		06 44 05.0	
NJ2				AMB	AMB		
	comp=Z,1µm,5.8s						
NJ2				LR	LR		
	comp=N,3µm,28.6s,MS5.2						
NJ2				LR	LR		
	comp=E,2µm,28.5s,MS5.2						
NJ2				LR	LR		
	comp=Z,3µm,26.9s,MS5.2						
KS15	Wonju Array Si	47.51	341	eP	P	06 37 10.7	+0.2
COCO	West Island	47.66	260	PFAKE		06 37 20.0	+8.0
COCO				LR	LR		
	comp=Z,408nm,20.0s,MS4.4						
WHN	Wuhan	47.93	324	⇓P	P	06 37 15.5	+1.6
WHN				S	S	06 44 11.7	+2.8
WHN				AMB	AMB		
	comp=Z,96nm,1.0s,mb5.8						
WHN				LR	LR		
	comp=Z,5µm,40.6s,MS5.2						
KKTK	Khon Kaen	48.02	300	⇓P	P	06 37 15.9	+1.2
	comp=Z,432nm,0.6s,mb6.7						
ERM	Erimo	49.32	358	PFAKE		06 37 40.0	+16
ERM				LR	LR		
	comp=Z,7.0nm,21.0s						
NST	Nakhon Sawan	50.08	298	P	P	06 37 31.0	+0.4
	comp=Z,46nm,1.0s,mb5.5						
GYA	Guiyang	50.26	314	⇑iP	P	06 37 32.9	+1.1
GYA				AP	pP	06 37 40.3	+1.3
GYA				XP	sP	06 37 43.5	+1.7
GYA				PP	PP	06 39 28.9	+0.8
GYA				S	S	06 44 48.9	+7.4
GYA				XS		06 44 59.4	
GYA				SS	SS	06 48 16.3	+4.3

GYA				AMB	AMB		
	comp=Z,170nm,1.3s,mb5.9						
GYA				AMB	AMB		
	comp=Z,440nm,7.3s						
GYA				LR	LR		
	comp=N,670nm,21.3s,MS4.8						
GYA				LR	LR		
	comp=E,790nm,21.9s,MS4.8						
GYA				LR	LR		
	comp=Z,1µm,20.1s,MS4.8						
NANT	**Nan**	**50.93**	**301**	P	**P**	**06 37 37.5**	**+0.5**
DL2	**Dalian**	**51.04**	**337**	P	**P**	**06 37 42.8**	**+5.2**
DL2				S	**S**	**06 44 54.4**	**+2.3**
DL2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
DL2				AMB	AMB		
	comp=Z,400nm,3.0s						
DL2				LR	LR		
	comp=N,470nm,14.5s,MS4.8						
DL2				LR	LR		
	comp=E,350nm,13.9s,MS4.8						
DL2				LR	LR		
	comp=Z,680nm,27.1s						
CHRT	**Chiangrai**	**52.19**	**302**	⇑P	**P**	**06 37 47.0**	**+0.5**
	comp=Z,247nm,1.3s,mb6.0						
CM31	**Chiang Mai Arr**	**52.28**	**300**	*e*P	**P**	**06 37 48.4**	**+1.2**
	comp=Z,9.6nm,0.6s,mb4.9						
CM31				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
KMI	**Kunming**	**52.41**	**310**	⇑P	**P**	**06 37 49.5**	**+1.4**
KMI				AP	pP	06 37 56.5	+1.2
KMI				XP	sP	06 38 01.5	+3.4
KMI				S	**S**	**06 45 15.2**	**+4.1**
KMI				SS	SS	06 48 51.1	+3.5
KMI				AMB	AMB		
	comp=Z,116nm,1.4s,mb5.6						
KMI				AMB	AMB		
	comp=Z,369nm,3.1s						
KMI				LR	LR		
	comp=N,953nm,23.8s,MS4.9						
KMI				LR	LR		
	comp=E,1µm,25.7s,MS4.9						
KMI				LR	LR		
	comp=Z,2µm,33.4s						
KMI	**Kunming**	**52.41**	**310**	⇑P	**P**	**06 37 49.5**	**+1.4**
KMI				*SP	sP	06 38 01.5	+3.4
KMI				S	**S**	**06 45 15.2**	**+4.1**
KMI				*SS		06 45 26.6	
KMI				SS	SS	06 48 51.1	+3.5
KMI				pmax	pmax		
	comp=Z,116nm,1.4s,mb5.6						
KMI				MLR	MLR		
	comp=Z,2µm,33.4s,MS4.8						
KMI	**Kunming**	**52.41**	**310**	⇑P	**P**	**06 37 49.5**	**+1.4**
	comp=Z,116nm,1.4s,mb5.6						
KMI				pP	pP	06 37 56.5	+1.2
KMI				sP	sP	06 38 01.5	+3.4
KMI				PP	PP	06 39 55.9	+8.0
KMI				S	**S**	**06 45 15.2**	**+4.1**
KMI				sS		06 45 26.6	
KMI				SS	SS	06 48 51.1	+3.5
KMI				LR	LR		
	comp=Z,2µm,33.4s,MS4.8						
SNY	**Shenyang**	**52.89**	**340**	⇓P	**P**	**06 37 51.2**	**-0.3**
SNY				S	**S**	**06 45 17.4**	**+0.1**
SNY				SS	SS	06 49 00.1	+4.6
SNY				LR	LR		
	comp=N,1µm,29.6s						
SNY				LR	LR		
	comp=Z,1µm,40.7s						
XAN	**Xi'an**	**53.64**	**323**	P	**P**	**06 37 56.8**	**-0.3**
XAN				S	**S**	**06 45 30.5**	**+2.8**
XAN				AMB	AMB		
	comp=Z,39nm,1.4s,mb5.1						
XAN				LR	LR		
	comp=N,693nm,27.2s,MS4.8						
XAN				LR	LR		
	comp=E,868nm,23.3s,MS4.8						
XAN				LR	LR		
	comp=Z,1µm,24.7s,MS4.9						
MDJ	**Mudanjiang**	**53.73**	**346**	P	**P**	**06 38 02.1**	**+4.5**
MDJ				AP	pP	06 38 06.5	+1.7
MDJ				XP	sP	06 38 09.8	+2.2
MDJ				PP	PP	06 39 59.5	-0.6
MDJ				SCP		06 42 59.1	
MDJ				S	**S**	**06 45 33.1**	**+4.4**
MDJ				AMB	AMB		
	comp=Z,17nm,0.9s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,345nm,3.6s						
MDJ				LR	LR		
	comp=N,1µm,26.8s,MS4.9						
MDJ				LR	LR		
	comp=E,707nm,26.8s,MS4.9						
MDJ				LR	LR		
	comp=Z,2µm,23.7s,MS5.1						
CN2	**Changchun**	**54.07**	**343**	*e*P	**P**	**06 38 02.5**	**+2.4**
CN2				*e*XP	sP	06 38 13.5	+3.4
CN2				*e*S	**S**	**06 45 37.1**	**+3.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,1µm,18.0s,MS5.1						
CN2				LR	LR		
	comp=E,800nm,18.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**54.26**	**358**	*e*P	**P**	**06 38 01.0**	**-0.5**
YSS				*e*S	**S**	**06 45 36.0**	**+0.1**
YSS				*e*PS	PS	06 45 48.0	-1.6
YSS				pmax	pmax		
	comp=E,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
YSS				MLR	MLR		
	comp=E,500nm,18.0s						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**54.26**	**358**	⇓*i*P	**P**	**06 37 59.5**	**-2.0**
YSS				LR	LR		
	comp=Z,756nm,20.0s,MS4.8						
BJI	**Beijing**	**54.31**	**333**	P	**P**	**06 38 00.9**	**-1.0**
BJI				S	**S**	**06 45 37.2**	**+0.6**
BJI				AMB	AMB		
	comp=Z,111nm,1.5s,mb5.6						
BJI				LR	LR		
	comp=N,1µm,25.2s,MS5.1						
BJI				LR	LR		
	comp=E,2µm,21.3s,MS5.1						
BJI				LR	LR		
	comp=Z,1µm,32.4s						
BJI	**Beijing**	**54.31**	**333**	P	**P**	**06 38 00.9**	**-1.0**
	comp=Z,111nm,1.5s,mb5.6						
BJI				S	**S**	**06 45 37.2**	**+0.6**
BJI				SS	SS	06 49 06.1	-12
BJI				LR	LR		
	comp=Z,1µm,32.4s,MS4.8						
CD2	**Chengdu**	**54.96**	**316**	P	**P**	**06 38 07.0**	**+0.1**
CD2				AMB	AMB		
	comp=Z,364nm,1.4s,mb6.2						
HHC	**Hu-ho-hao-te**	**57.12**	**330**	⇑P	**P**	**06 38 22.0**	**-0.3**
HHC				AP	pP	06 38 29.4	-0.1
HHC				XP	sP	06 38 32.4	+0.1
HHC				PCP	PcP	06 39 15.2	-1.5
HHC				PP	PP	06 40 28.6	-2.1
HHC				SCP		06 43 07.3	
HHC				PCS		06 43 14.4	
HHC				S	**S**	**06 46 18.1**	**+4.0**
HHC				XS		06 46 29.9	
HHC				SCS	ScS	06 48 05.9	-0.5
HHC				SS	SS	06 50 07.9	+3.5
HHC				AMB	AMB		
	comp=Z,78nm,1.4s,mb5.5						
HHC				AMB	AMB		
	comp=Z,696nm,3.8s						
HHC				LR	LR		
	comp=N,939nm,24.9s,MS4.9						
HHC				LR	LR		
	comp=E,849nm,22.5s,MS4.9						
HHC				LR	LR		
	comp=Z,1µm,24.9s,MS5.0						
KLR	**Kul'dur**	**57.69**	**350**	*e*P	**P**	**06 38 21.5**	**-4.6**
KLR				*e*S	**S**	**06 46 21.0**	**-0.4**
KLR				*e*SS	SS	06 50 07.5	-5.9
KLR				pmax	pmax		
	comp=Z,1µm,11.0s						
KLR				MLR	MLR		
	comp=E,600nm,14.0s						
KLR				MLR	MLR		
	comp=Z,700nm,14.0s,MS4.9						
LZH	**Lanzhou**	**58.11**	**321**	⇑P	**P**	**06 38 29.8**	**+0.6**
LZH				AP	pP	06 38 37.5	+0.9
LZH				XP	sP	06 38 41.2	+2.0
LZH				PP	PP	06 40 40.8	+1.1
LZH				*e*S	**S**	**06 46 28.7**	**+1.5**
LZH				SS	SS	06 50 22.4	+2.0
LZH				AMB	AMB		
	comp=Z,107nm,1.5s,mb5.7						
LZH				AMB	AMB		
	comp=Z,576nm,6.2s						
LZH				LR	LR		
	comp=N,2µm,14.8s						
LZH				LR	LR		
	comp=Z,2µm,17.9s,MS5.4						
LZH	**Lanzhou**	**58.11**	**321**	⇑P	**P**	**06 38 29.8**	**+0.6**
LZH				*SP	sP	06 38 41.2	+2.0
LZH						06 40 40.8	
LZH				*e*S	**S**	**06 46 28.7**	**+1.5**
LZH				*SS		06 46 42.1	
LZH				SS	SS	06 50 22.4	+2.0
LZH				pmax	pmax		
	comp=Z,107nm,1.5s,mb5.7						
LZH				MLR	MLR		
	comp=Z,2µm,17.9s,MS5.4						
LZH	**Lanzhou**	**58.11**	**321**	⇑P	**P**	**06 38 29.8**	**+0.6**
	comp=Z,107nm,1.5s,mb5.7						
LZH				pP	pP	06 38 37.5	+0.9
LZH				sP	sP	06 38 41.2	+2.0
LZH				PP	PP	06 40 40.8	+1.1
LZH				*e*S	**S**	**06 46 28.7**	**+1.5**
LZH				sS		06 46 42.1	
LZH				SS	SS	06 50 22.4	+2.0
LZH				LR	LR		
	comp=Z,2µm,17.9s,MS5.4						
DRV	**Dumont d'Urvil**	**59.16**	**182**	P	**P**	**06 38 37.0**	**+0.9**
DRV				S	**S**	**06 46 41.0**	**+0.6**
DRV				L		06 53 00.0	
DRV				R		06 57 00.0	
AGT	**Agartala**	**61.05**	**302**	⇑*i*P	**P**	**06 38 52.0**	**+2.3**
AGT				*i*		06 39 36.0	
PET	**Petropavlovsk**	**61.41**	**9**	*e*P	**P**	**06 38 44.4**	**-7.3**
PET	**Petropavlovsk**	**61.41**	**9**	PFAKE		06 39 00.0	+8.3
PET				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
GTA	**Gaotai**	**62.68**	**322**	⇑P	**P**	**06 39 01.0**	**+0.6**
GTA				AP	pP	06 39 08.4	+0.7
GTA				XP	sP	06 39 11.8	+1.4
GTA				PP	PP	06 41 20.8	+0.7
GTA				S	**S**	**06 47 24.3**	**-1.4**
GTA				AMB	AMB		
	comp=Z,54nm,1.8s,mb5.4						
GTA				AMB	AMB		
	comp=Z,598nm,4.9s						
GTA				LR	LR		
	comp=N,531nm,19.4s,MS4.8						
GTA				LR	LR		
	comp=E,496nm,20.9s,MS4.8						
GTA				LR	LR		
	comp=Z,783nm,25.1s,MS4.8						
KIP	**Kipapa**	**62.83**	**61**	*e*P	**P**	**06 39 01.2**	**-0.4**
KIP				pmax	pmax		
	comp=Z,774nm,1.5s,mb6.6						
KIP	**Kipapa**	**62.83**	**61**	*e*P	**P**	**06 39 01.2**	**-0.4**
	comp=Z,774nm,1.5s,mb6.6						
CAL	**Calcutta**	**63.02**	**300**	*e*P	**P**	**06 39 03.9**	**+1.2**
CAL				*e*		06 41 35.5	
CASY	**Casey**	**63.29**	**195**	*e*P	**P**	**06 39 03.8**	**-0.2**
	comp=Z,292nm,1.1s,mb6.3						
CASY				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
LSA	**Lhasa**	**63.61**	**308**	P	**P**	**06 39 05.0**	**-1.7**
LSA				XP	sP	06 39 19.7	+3.0
LSA				S	**S**	**06 47 34.1**	**-3.4**
LSA				XS		06 48 02.7	
LSA				SCS	ScS	06 48 57.5	+2.7
LSA				LR	LR		
	comp=N,230nm,25.1s,MS4.7						
LSA				LR	LR		
	comp=E,670nm,25.1s,MS4.7						
PAE	**Paea**	**64.35**	**106**	*e*P	**P**	**06 39 11.9**	**+0.2**
	comp=E,258nm,1.3s,mb6.1						
PPT	**Papeete**	**64.35**	**106**	*e*P	**P**	**06 39 12.2**	**+0.5**
	comp=E,90nm,1.3s,mb5.6						
PPT	**Papeete**	**64.35**	**106**	*e*LQ		06 55 52.7	
PPT				*e*LR	LR	06 58 34.1	
	comp=E,4µm,26.0s,baz=273						
BWNR	**Bhubaneshwar**	**64.44**	**297**	*e*P	**P**	**06 39 12.0**	**-0.3**
BWNR				*e*		06 39 15.8	
	comp=Z,60nm,1.3s						
ULN	**Ulaanbaatar**	**64.52**	**333**	⇓*i*P	**P**	**06 39 10.9**	**-1.4**
ULN				LR	LR		
	comp=Z,762nm,20.0s,MS4.9						
TIAR	**Tiarei**	**64.57**	**106**	*e*P	**P**	**06 39 13.6**	**+0.4**
	comp=Z,529nm,1.2s,mb6.5						
TBI	**Tubuai**	**64.60**	**112**	*e*P	**P**	**06 39 13.6**	**+0.3**
	comp=Z,422nm,1.4s,mb6.3						
TBI				*e*LQ		06 55 51.9	
TBI				*e*LR	LR	06 58 37.4	
	comp=Z,1µm,24.2s						
TVO	**Taravao**	**64.66**	**106**	*e*P	**P**	**06 39 14.3**	**+0.5**
	comp=Z,203nm,1.1s,mb6.1						
SMY	**Shemya**	**64.92**	**19**	PFAKE		06 39 30.0	+15
SMY				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
MEH	**Mehetia**	**65.79**	**106**	*e*P	**P**	**06 39 21.1**	**+0.1**
	comp=Z,159nm,1.1s,mb6.0						
PALK	**Pallekele**	**65.81**	**281**	*e*P	**P**	**06 39 21.9**	**+0.7**
	comp=Z,58nm,1.6s,mb5.4						
PALK				LR	LR		
	comp=Z,102nm,21.0s						
VIS	**Vishakhapatnam**	**65.88**	**293**	*e*P	**P**	**06 39 20.6**	**-1.0**
VIS				*e*S	S	06 48 05.2	-0.5
VIS	**Vishakhapatnam**	**65.88**	**293**	*e*P	**P**	**06 39 20.6**	**-1.0**
VIS				*e*	pP	06 39 27.6	-1.3
	comp=Z,35nm,1.3s						
VIS				*e*S	S	06 48 05.2	-0.5
PMOR	**Pomariorio Ree**	**66.00**	**103**	*e*P	**P**	**06 39 22.9**	**+0.5**
	comp=Z,237nm,1.2s,mb6.1						
CLNS	**Chul'man**	**66.23**	**348**	*e*P	**P**	**06 39 22.8**	**-0.3**
CLNS				*e*		06 39 51.2	
CLNS				*e*		06 41 48.8	
CLNS				*e*PPP	PPP	06 43 22.9	-3.7
CLNS				*e*S	S	06 48 14.5	+5.2
CLNS				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
CLNS				pmax	pmax		
	comp=N,56nm,1.6s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				smax			
	comp=N,11nm,1.3s						
CLNS				smax			
	comp=Z,3.0nm,0.6s						
CLNS				smax			
	comp=E,13nm,1.5s						
CLNS				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
CLNS				MLR	MLR		
	comp=N,200nm,16.0s,MS4.5						
CLNS				MLR	MLR		
	comp=E,100nm,12.0s,MS4.5						
JIRN	**Jiri**	**66.73**	**304**	*e*P	**P**	**06 39 26.6**	**-0.3**
	comp=E,248nm,1.3s,mb6.1						
MA2	**Magadan**	**67.03**	**3**	⇑*i*P	**P**	**06 39 25.5**	**-2.7**
MA2				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
GUN	**Gumba**	**67.08**	**304**	*e*P	**P**	**06 39 29.3**	**+0.2**
	comp=Z,248nm,1.0s,mb6.2						
PKI	**Pulchoki**	**67.34**	**304**	*e*P	**P**	**06 39 30.6**	**-0.1**
	comp=Z,313nm,1.5s,mb6.1						
KIWB	**Kanaga Island**	**67.42**	**24**	*e*P	**P**	**06 39 30.2**	**-0.7**
KKN	**Kakani**	**67.53**	**304**	*e*P	**P**	**06 39 31.8**	**-0.1**
	comp=Z,343nm,1.4s,mb6.2						
DMN	**Daman**	**67.60**	**304**	*e*P	**P**	**06 39 33.0**	**+0.6**
	comp=Z,351nm,1.3s,mb6.2						
ZAK	**Zakamensk**	**68.05**	**333**	⇑*i*P	**P**	**06 39 34.6**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.5						
GKN	**Gorkha**	**68.13**	**304**	*e*P	**P**	**06 39 35.6**	**-0.1**
	comp=Z,467nm,1.5s,mb6.3						
TLY	**Talaya**	**68.81**	**334**	P	**P**	**06 39 39.1**	**-0.4**
	comp=Z,223nm,1.2s,mb6.0,SNR=28						
TLY	**Talaya**	**68.81**	**334**	*e*P	**P**	**06 39 39.4**	**-0.1**
TLY				*e*S	S	06 48 33.2	-7.1
TLY				*e*SS	SS	06 53 03.4	-3.8
TLY				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.5						
TLY				MLR	MLR		
	comp=Z,763nm,21.0s,MS4.9						
TLY	**Talaya**	**68.81**	**334**	*e*P	**P**	**06 39 39.6**	**+0.2**
KOLN	**Koldanda**	**68.90**	**303**	*e*P	**P**	**06 39 40.4**	**-0.1**
	comp=Z,438nm,1.5s,mb6.2						
IRK	**Irkutsk**	**68.94**	**335**	*e*P	**P**	**06 39 39.9**	**-0.4**
IRK				pmax	pmax		
	comp=Z,92nm,3.1s						
TRD	**Trivandrum**	**69.69**	**282**	*e*	**P**	**06 39 38.8**	**-6.7**
TRD				*e*		06 39 49.0	
	comp=Z,69nm,1.5s						
BOD	**Bodaibo**	**69.82**	**343**	*e*P	**P**	**06 39 42.2**	**-3.3**
BOD				pmax	pmax		
	comp=Z,93nm,2.9s,mb5.2						
MOY	**Mondy**	**69.98**	**333**	*e*P	**P**	**06 39 46.0**	**-0.6**
MOY				pmax	pmax		
	comp=Z,136nm,1.8s,mb5.6						
HYB	**Hyderabad**	**70.17**	**291**	*e*P	**P**	**06 39 47.5**	**-0.9**
HYB	**Hyderabad**	**70.17**	**291**	*i* P	**P**	**06 39 47.5**	**-0.9**
YAK	**Yakutsk**	**70.35**	**352**	*e*P	**P**	**06 39 45.3**	**-3.4**
YAK				*e**PP	pP	06 39 54.3	-1.8
YAK				*e*		06 42 22.9	
YAK				*e*PPP	PPP	06 43 59.5	-7.3
YAK				*e*S	S	06 48 59.9	+1.6
YAK				*e**SS		06 49 17.5	
YAK				*e*		06 49 49.4	
YAK				*e*SS	SS	06 53 25.1	-5.7
YAK				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
YAK				pmax	pmax		
	comp=N,11nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
YAK				smax			
	comp=N,425nm,11.6s						
YAK				smax			
	comp=Z,186nm,13.1s						
YAK				smax			
	comp=E,176nm,13.2s						
YAK	**Yakutsk**	**70.35**	**352**	*e*P	**P**	**06 39 48.1**	**-0.6**
YAK				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
SBA	**Scott Base**	**71.21**	**175**	PFAKE		06 40 10.0	+16
SBA				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
WMQ	**Urumqi**	**72.68**	**320**	⇑*i*P	**P**	**06 40 03.0**	**0.0**
WMQ				AP	pP	06 40 09.0	-1.4
WMQ				PP	PP	06 42 47.0	+0.2
WMQ				S	S	06 49 26.0	+0.5
WMQ				SS	SS	06 54 07.0	-0.4
WMQ				AMB	AMB		
	comp=Z,78nm,1.2s,mb5.5						
WMQ				LR	LR		
	comp=N,654nm,22.0s,MS4.9						
WMQ				LR	LR		
	comp=E,426nm,22.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,587nm,22.0s,MS4.8						
UNV	**Unalaska Valle**	**73.45**	**28**	*e*P	**P**	**06 40 03.9**	**-3.4**
UNV				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
TAOE	**Nuku Hiva Isla**	**73.95**	**97**	*e*LR	LR	07 03 02.7	
KAD	**Karad**	**74.20**	**290**	*e*P	**P**	**06 40 10.5**	**-1.8**
KAD				*e*		06 40 15.1	
	comp=Z,44nm,0.8s						
DDI	**Dehra Dun**	**74.33**	**304**	*e*P	**P**	**06 40 13.0**	**+0.1**
NDI	**New Delhi**	**74.52**	**302**	*e*P	**P**	**06 40 12.0**	**-2.0**
POO	**Poona**	**74.79**	**291**	⇓*i*P	**P**	**06 40 15.0**	**-0.8**
	comp=Z,30nm,1.0s,mb5.2						
SDNR	**Sundarnagar**	**75.59**	**305**	*e*P	**P**	**06 40 20.2**	**+0.1**
BHK	**Bhakra**	**76.01**	**305**	*e*P	**P**	**06 40 22.5**	**0.0**
AJM	**Ajmer**	**76.07**	**300**	⇑*i*P	**P**	**06 40 21.0**	**-2.0**
PONG	**Pong**	**76.56**	**305**	*e*P	**P**	**06 40 26.0**	**+0.4**
BILL	**Bilibino**	**76.86**	**8**	P	**P**	**06 40 26.3**	**-0.2**
BILL				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.2						
BILL	**Bilibino**	**76.86**	**8**	*e*P	**P**	**06 40 26.1**	**-0.5**
	comp=Z,44nm,1.3s,mb5.2						
BILL				LR	LR		
	comp=Z,540nm,20.0s,MS4.9						
MKAR	**Makanchi Array**	**77.43**	**321**	*i* P	**P**	**06 40 30.0**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,441nm,2.1s						
RKT	**Rikitea**	**77.92**	**112**	*e*P	**P**	**06 40 33.7**	**+0.4**
	comp=Z,97nm,1.0s,mb5.7						
KSH	**Kashi**	**78.94**	**313**	⇑P	**P**	**06 40 40.1**	**+1.5**
KSH				*e*AP	pP	06 40 48.0	+1.9
KSH				*e*XP	sP	06 40 51.5	+2.9
KSH				*e*PP	PP	06 43 40.1	+0.8
KSH				*e*S	S	06 50 36.0	+1.7
KSH				*e*SKS	SKS	06 50 45.3	-10
KSH				*e*XS		06 50 55.5	
KSH				*e*SS	SS	06 55 44.6	+1.9
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.7						
KSH				LR	LR		
	comp=N,500nm,6.0s						
KSH				LR	LR		
	comp=E,450nm,6.2s						
ULHL	**Ulahol**	**79.67**	**315**	P	**P**	**06 40 43.8**	**+1.4**
	SNR=28						
TIXI	**Tiksi**	**79.72**	**355**	⇓*i*P	**P**	**06 40 41.1**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,442nm,19.0s,MS4.8						
TIXI	**Tiksi**	**79.72**	**355**	⇑*i*P	**P**	**06 40 39.1**	**-3.0**
TIXI				LR	LR		
	comp=Z,507nm,19.0s,MS4.9						
MAW	**Mawson**	**80.11**	**203**	*e*P	**P**	**06 40 45.2**	**+0.9**
	comp=Z,28nm,1.0s,mb5.1						
MAW	**Mawson**	**80.11**	**203**	*e*P	**P**	**06 40 45.2**	**+0.9**
MAW				pmax	pmax		
	comp=Z,28nm,1.0s						
KZA	**Kyzart**	**80.31**	**315**	P	**P**	**06 40 47.5**	**+1.6**
	SNR=198						
TKM2	**Tokmak 2**	**80.35**	**316**	P	**P**	**06 40 46.5**	**+0.5**
	SNR=72						
NVS	**Novosibirsk**	**80.50**	**329**	*i* P	**P**	**06 40 44.8**	**-1.8**
NVS				*i* S	S	06 50 51.4	+1.1
NVS				pmax	pmax		
	comp=N,80nm,1.9s						
NVS				pmax	pmax		
	comp=E,116nm,1.9s						
NVS				pmax	pmax		
	comp=Z,176nm,1.9s,mb5.7						
NVS				smax			
	comp=N,16nm,2.3s						
NVS				smax			
	comp=E,58nm,2.3s						
TNA	**Tin City**	**80.62**	**18**	*e*P	**P**	**06 40 46.7**	**-0.4**
	comp=E,50nm,1.1s,mb5.4						
TNA				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
KBK	**Karagaybulak**	**80.71**	**315**	P	**P**	**06 40 48.5**	**+0.6**
	SNR=11						
UCH	**Uchtor**	**80.87**	**315**	P	**P**	**06 40 50.0**	**+1.2**
	SNR=118						
CHMS	**Chumysh**	**80.96**	**316**	P	**P**	**06 40 49.9**	**+0.6**
	SNR=64						
FRU	**Bishkek**	**81.00**	**315**	⇑*i*P	**P**	**06 40 50.0**	**+0.5**
FRU				*i*		06 41 08.0	
FRU				pmax	pmax		
	comp=Z,240nm,1.7s,mb5.8						
AAK	**Ala-Archa**	**81.02**	**315**	P	**P**	**06 40 50.8**	**+1.2**
	SNR=65						
AAK	**Ala-Archa**	**81.02**	**315**	P	**P**	**06 40 50.0**	**+0.4**
AAK				pmax	pmax		

	comp=Z,156nm,1.3s,mb5.8						
AAK	**Ala-Archa**	81.02	315	*e*P	P	06 40 49.6	0.0
	comp=Z,145nm,1.3s,mb5.8						
AAK				LR	LR		
	comp=Z,162nm,22.0s,MS4.3						
USP	**Ospenovka**	81.22	316	P	P	06 40 51.5	+0.9
	SNR=28						
KURK	**Kurchatov**	81.26	324	P	P	06 40 50.4	-0.3
KURK				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.7						
KURK	**Kurchatov**	81.26	324	*e*P	P	06 40 50.3	-0.4
	comp=Z,141nm,1.5s,mb5.7						
KURK				LR	LR		
	comp=Z,230nm,21.0s,MS4.5						
AML	**Almayashu**	81.42	315	P	P	06 40 53.0	+1.2
	SNR=139						
EKS2	**Erkin-Say**	81.53	315	P	P	06 40 52.8	+0.5
	SNR=104						
KDAK	**Kodiak Island**	82.15	29	*e*P	P	06 40 54.6	-0.6
	comp=Z,146nm,1.2s,mb5.8						
KDAK				LR	LR		
	comp=Z,427nm,20.0s,MS4.8						
QSPA	**South Pole Qui**	82.46	180	*e*P	P	06 40 57.2	+0.8
	comp=Z,168nm,1.1s,mb5.9						
RSO	**Redoubt South**	83.33	26	*e*P	P	06 41 00.9	-0.3
SLKM	**Skilak Lake**	84.47	27	P	P	06 41 06.6	-0.3
SLKM	**Skilak Lake**	84.47	27	*e*P	P	06 41 06.0	-0.9
FIB	**Fire Island**	84.78	26	P	P	06 41 08.6	+0.2
FIB	**Fire Island**	84.78	26	*e*P	P	06 41 08.0	-0.5
FIB				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
PMR	**Palmer**	85.41	26	*e*P	P	06 41 10.9	-0.7
PMR				pmax	pmax		
	comp=Z,144nm,1.3s,mb5.9						
PMR	**Palmer**	85.41	26	*e*P	P	06 41 10.9	-0.7
	comp=Z,144nm,1.3s,mb5.9						
IMA	**Indian Mountai**	85.66	21	*e*P	P	06 41 13.6	+0.8
IMA				pmax	pmax		
	comp=Z,104nm,1.3s,mb5.9						
IMA	**Indian Mountai**	85.66	21	*e*P	P	06 41 13.6	+0.8
	comp=Z,104nm,1.3s,mb5.9						
SML	**Sawmill**	85.85	26	P	P	06 41 13.9	+0.1
SML	**Sawmill**	85.85	26	*e*P	P	06 41 13.6	-0.2
MCK	**McKinley**	86.40	24	P	P	06 41 15.6	-0.9
MCK				pmax	pmax		
	comp=Z,100nm,1.1s,mb6.0						
MCK	**McKinley**	86.40	24	*e*P	P	06 41 15.4	-1.1
	comp=Z,105nm,1.1s,mb6.0						
MCK				LR	LR		
	comp=Z,986nm,22.0s,MS5.2						
DIV	**Divide**	86.71	27	*e*P	P	06 41 17.9	-0.1
	comp=Z,431nm,1.2s,mb6.6						
DIV				LR	LR		
	comp=Z,4µm,21.0s,MS5.7						
BVA0	**Borovoye Array**	86.84	324	*i* P	P	06 41 18.5	-0.4
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
CHKZ	**Chkalovo**	86.90	325	*i* P	P	06 41 18.1	-1.1
CHKZ				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.3						
COLA	**College**	87.30	23	*e*P	P	06 41 19.8	-1.0
COLA				pmax	pmax		
	comp=Z,138nm,1.1s,mb6.1						
COLA	**College**	87.30	23	*e*P	P	06 41 19.8	-1.0
	comp=Z,138nm,1.1s,mb6.1						
THY	**Trims Highway**	87.58	25	*e*P	P	06 41 22.6	+0.4
MENT	**Mentasta**	88.27	26	*e*P	P	06 41 25.8	+0.3
SYO	**Syowa Base**	88.51	200	⇓P	P	06 41 24.2	-2.3
SYO	**Syowa Base**	88.51	200	⇑PcP	PcP	06 41 27.3	-1.2
SYO	**Syowa Base**	88.51	200	⇓pP	pP	06 41 33.3	-0.8
DAWY	**Dawson**	90.46	25	*e*P	P	06 41 36.1	+0.3
SIT	**Sitka**	90.65	33	PFAKE		06 41 50.0	+13
SIT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SVE	**Sverdlovsk**	93.17	327	⇑*e*P	P	06 41 44.0	-4.4
SVE				*e*		06 45 32.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.8						
INK	**Inuvik**	93.77	22	P	P	06 41 50.5	-0.4
INK				pmax	pmax		
	comp=Z,48nm,1.2s						
INK	**Inuvik**	93.77	22	*e*P	P	06 41 50.2	-0.8
	comp=Z,48nm,1.2s,mb5.8						
ARU	**Arti**	94.25	326	⇓*i*P	P	06 41 44.4	-9.0
ARU				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.6						
ARU				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.0						
ARU				MLR	MLR		
	comp=N,100nm,18.5s,MS4.9						
ARU				MLR	MLR		
	comp=E,400nm,18.0s,MS4.9						
SOKR	**Solikamsk**	95.53	329	⇑*i*P	P	06 41 58.6	-0.6
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,880nm,24.0s,MS5.2						
HOPS	**Hopland**	96.14	52	PFAKE		06 42 10.0	+7.5
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
COR	**Corvallis**	96.40	46	PFAKE		06 42 10.0	+6.4
COR				LR	LR		
	comp=Z,265nm,20.0s,MS4.7						
HUMO	**Hull Mountain**	96.51	48	PFAKE		06 42 20.0	+16
HUMO				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
YBH	**Yreka Blue Hor**	96.63	49	PFAKE		06 42 20.0	+15
YBH				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
WDC	**Whiskeytown Da**	96.67	50	*e*P	P	06 42 04.8	-0.1
WDC				pmax	pmax		
	comp=Z,39nm,1.5s,mb5.6						
WDC				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.5						
WDC	**Whiskeytown Da**	96.67	50	*e*P	P	06 42 04.8	-0.1
	comp=Z,39nm,1.5s,mb5.6						
WDC				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
SAO	**San Andreas Ge**	97.26	54	PFAKE		06 42 20.0	+12
SAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
OHCM	**Honcut**	97.40	51	*e*P	P	06 42 08.3	+0.2
LASM	**Arnica Sink**	97.47	49	P	P	06 42 09.4	+1.0
CROR	**Criterion Ridg**	98.07	46	P	P	06 42 11.5	+0.5
CMB	**Columbia Colle**	98.18	53	PFAKE		06 42 20.0	+8.3
CMB				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
WRW	**Wenatchee Ridg**	98.26	43	P	P	06 42 12.3	+0.4
TBM	**Table Mountain**	98.43	43	P	P	06 42 13.4	+0.8
MOD	**Modoc**	98.43	49	PFAKE		06 42 20.0	+7.2
MOD				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
WCN	**Washoe City**	98.73	51	*e*P	P	06 42 14.8	+0.6
WCN				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.5						
WCN	**Washoe City**	98.73	51	*e*P	P	06 42 14.8	+0.6
	comp=Z,14nm,1.0s,mb5.5						
WTV	**Waterville**	98.88	43	P	P	06 42 14.9	+0.3
EPH	**Ephrata**	99.11	43	P	P	06 42 16.2	+0.5
H2OWA	**Water**	99.21	44	P	P	06 42 17.0	+0.8
WRD	**Warden**	99.41	44	P	P	06 42 17.6	+0.6
VNA2	**Neumayer--Watz**	99.57	189	⇑*i*P	P	06 42 23.5	+6.2
VNA3	**Neumayer Olymp**	99.62	188	⇑*i*P	P	06 42 19.0	+1.5
WVOR	**Wild Horse Val**	99.69	48	*e*P	P	06 42 18.6	+0.1
WVOR				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.2						
WVOR				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.5						
WVOR	**Wild Horse Val**	99.69	48	*e*P	P	06 42 18.6	+0.1
	comp=Z,12nm,1.1s,mb5.2						
WVOR				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
VNA1	**Neumayer--Stat**	99.95	189	⇑*i*P	P	06 42 16.6	-2.4
MNV	**Mina**	99.95	52	PFAKE		06 42 30.0	+10
MNV				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
DAC	**Darwin (Calif)**	100.33	55	PFAKE		06 42 30.0	+8.4
DAC				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
TPH	**Tonopah**	100.68	53	PFAKE		06 42 30.0	+6.9
TPH				LR	LR		
	comp=Z,690nm,20.0s,MS5.2						
BMO	**Blue Mountains**	100.68	46	P	P	06 42 23.2	+0.3
BMO				pmax	pmax		
	comp=Z,14nm,1.2s						
BMO	**Blue Mountains**	100.68	46	*e*Pdif	P	06 42 22.7	-0.2
	comp=Z,14nm,1.3s						
BMO				LR	LR		
	comp=Z,821nm,20.0s,MS5.2						
BMN	**Battle Mountai**	100.72	50	PFAKE		06 42 30.0	+6.8
BMN				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
NEW	**Newport**	100.78	42	PFAKE		06 42 30.0	+6.7
NEW				LR	LR		
	comp=Z,784nm,20.0s,MS5.2						
PFO	**Pinyon Flat Ob**	101.19	57	PFAKE		06 42 40.0	+15
PFO				LR	LR		
	comp=Z,307nm,21.0s,MS4.8						
GNI	**Garni**	102.66	309	PFAKE		06 42 40.0	+8.1
GNI				LR	LR		
	comp=Z,256nm,21.0s,MS4.7						
HLID	**Hailey**	102.78	47	PFAKE		06 42 40.0	+7.7
HLID				LR	LR		
	comp=Z,955nm,20.0s,MS5.3						
MSO	**Missoula**	102.98	44	PFAKE		06 42 40.0	+6.9
MSO				LR	LR		
	comp=Z,853nm,21.0s,MS5.2						
CHMT	**Chamberlain Mo**	103.45	44	*e*Pdif	Pdif	06 42 35.7	+0.6
KIV	**Kislovodsk**	104.06	313	PFAKE		06 42 50.0	+12
KIV				LR	LR		
	comp=Z,138nm,22.0s,MS4.5						
MVU	**Marysvale**	104.61	52	PFAKE		06 42 50.0	+9.5
MVU				LR	LR		
	comp=Z,807nm,20.0s,MS5.3						
BOZ	**Bozeman (W)**	104.66	45	*e*P	Pdif	06 42 40.7	+0.2
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,793nm,19.0s,MS5.3						
BOZ	**Bozeman (W)**	104.66	45	*e*Pdif	Pdif	06 42 40.7	+0.2
	comp=Z,9.0nm,1.4s						
BOZ				LR	LR		
	comp=Z,793nm,19.0s,MS5.3						
PMSA	**Palmer Station**	104.71	168	PFAKE		06 42 50.0	+10
PMSA				LR	LR		
	comp=Z,945nm,20.0s,MS5.3						
HWUT	**Hardware Ranch**	104.97	49	PFAKE		06 42 50.0	+8.0
HWUT				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
AHID	**Auburn Hatcher**	105.24	48	PFAKE		06 47 10.0	
AHID				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
LKWY	**Lake**	105.61	46	PFAKE		06 47 10.0	
LKWY				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
TUC	**Tucson**	105.95	59	PFAKE		06 47 10.0	
TUC				LR	LR		
	comp=Z,908nm,21.0s,MS5.3						
BW06	**Boulder Array**	106.38	48	PFAKE		06 47 10.0	
BW06				LR	LR		
	comp=Z,988nm,20.0s,MS5.4						
OBN	**Obninsk**	106.66	325	PFAKE		06 47 10.0	
OBN				LR	LR		
	comp=Z,250nm,21.0s,MS4.7						
KMBO	**Kilima Mbogo**	107.47	266	PFAKE		06 47 10.0	
KMBO				LR	LR		
	comp=Z,570nm,21.0s,MS5.1						
LAO	**LASA Array**	108.28	43	PFAKE		06 47 10.0	
LAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
FFC	**Flin Flon**	109.30	34	PFAKE		06 47 20.0	
FFC				LR	LR		
	comp=Z,229nm,19.0s,MS4.8						
DGMT	**Dagmar**	109.33	41	PFAKE		06 47 20.0	
DGMT				LR	LR		
	comp=Z,590nm,20.0s,MS5.2						
ANMO	**Albuquerque**	109.43	56	PFAKE		06 47 20.0	
ANMO				LR	LR		
	comp=Z,626nm,19.0s,MS5.2						
SDCO	**Great Sand Dun**	109.95	53	PFAKE		06 47 20.0	
SDCO				LR	LR		
	comp=Z,838nm,20.0s,MS5.3						
RSSD	**Black Hills**	110.20	46	PFAKE		06 47 20.0	+11
RSSD				LR	LR		
	comp=Z,1.0nm,20.0s						
MNTX	**Cornudas Mount**	110.56	59	*e*PKiKP		06 47 07.7	
MNTX				LR	LR		
	comp=Z,967nm,19.0s,MS5.4						
BR131	**Keskin Array S**	111.20	310	PFAKE		06 47 20.0	+8.5
BR131				LR	LR		
	comp=Z,425nm,22.0s,MS5.0						
BOSA	**Boshof**	111.78	235	PFAKE		06 47 20.0	+7.2
BOSA				LR	LR		
	comp=Z,789nm,20.0s,MS5.3						
LTX	**Lajitas**	112.20	61	PFAKE		06 47 20.0	+6.3
LTX				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
LBTB	**Lobatse**	112.80	239	PFAKE		06 47 20.0	+5.0
LBTB				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
AMTX	**Amarillo**	113.34	55	PFAKE		06 47 20.0	+4.1
AMTX				LR	LR		
	comp=Z,837nm,19.0s,MS5.3						
LSZ	**Lusaka**	113.46	250	PFAKE		06 47 30.0	+14
LSZ				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
SUR	**Sutherland**	113.74	230	PFAKE		06 47 30.0	+13
SUR				LR	LR		
	comp=Z,400nm,19.0s,MS5.0						
MBAR	**Mbarara**	113.99	266	PFAKE		06 47 30.0	+12
MBAR				LR	LR		
	comp=Z,100nm,20.0s,MS4.4						
ULM	**Lac du Bonnet**	114.15	38	PFAKE		06 47 30.0	+13
ULM				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
CBKS	**Cedar Bluff**	114.29	51	PFAKE		06 47 30.0	+12
CBKS				LR	LR		
	comp=Z,5.0nm,19.0s						
JCT	**Junction City**	115.44	60	*e*PKIKP	PKPdf	06 47 16.4	-3.6
JCT				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.5						
NB2	**NORSAR Subarra**	116.59	337	PKPdf	PKPdf	06 47 17.3	-4.2
	comp=Z,2.7nm,0.8s,baz=45,slow=1.9						
KOLS	**Kolonicke sedl**	116.84	322	*e*PKP	PKPdf	06 47 19.9	-2.4
KOLS				*e*		06 47 25.0	
CRVS	**Cervenica-Dubn**	117.35	322	*e*PKIKP	PKPdf	06 47 22.9	-0.3
CRVS	**Cervenica-Dubn**	117.35	322	*e*	PKPdf	06 47 22.9	-0.3
EYMN	**Ely**	117.64	39	PFAKE		06 47 30.0	+6.2
EYMN				LR	LR		
	comp=Z,888nm,21.0s,MS5.4						
OJC	**Ojcow**	117.84	324	*e*PKP	PKPdf	06 47 21.2	-2.9
NIE	**Niedzica**	117.85	323	⇓*e*PKP	PKPdf	06 47 22.1	-2.1
KONO	**Kongsberg**	118.08	336	PFAKE		06 47 30.0	+5.6
KONO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
PSZ	**Piszkesteto**	118.69	321	*e*PKIKP	PKPdf	06 47 23.5	-2.4
HKT	**Hockley**	118.92	60	PFAKE		06 47 40.0	+13
HKT				LR	LR		
	comp=Z,260nm,20.0s,MS4.9						
VYHS	**Vyhne**	119.11	322	*e*PKP	PKPdf	06 47 23.5	-3.2
VYHS				*e*PP	PP	06 48 51.0	+3.8
NATX	**Nacogdoches**	119.62	58	PFAKE		06 47 40.0	+12
NATX				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
SRO	**Srobarova**	119.71	322	*e*PKP	PKPdf	06 47 24.9	-2.9
SKO	**Skopje**	119.71	314	*i*	PKPdf	06 47 24.0	-4.0
DPC	**Dobruska-Polom**	119.80	325	*e*PKP	PKPdf	06 47 25.4	-2.5
UPC	**Upice**	119.91	325	*e*PKP	PKPdf	06 47 25.5	-2.6
MIAR	**Mount Ida**	119.98	54	*e*PKIKP	PKPdf	06 47 25.5	-3.2
MIAR				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.5						
DIVS	**Divcibare**	120.02	317	⇑*i*(P)	PKPdf	06 47 25.7	-2.8
ZST	**Bratislava**	120.29	322	*e*PKP	PKPdf	06 47 25.7	-3.3
PVCC	**Panska Ves**	120.71	326	*e*PKP	PKPdf	06 47 27.0	-2.8
BRG	**Berggiesshubel**	120.89	326	*i* PKIKP	PKPdf	06 47 27.1	-3.0
BRG				*i*		06 47 33.2	
BRG				pmax	pmax		
	comp=Z,32nm,1.3s						
CCM	**Cathedral Cave**	120.95	50	PKIKP	PKPdf	06 47 26.7	-3.9
CCM	**Cathedral Cave**	120.95	50	*e*PKPdf	PKPdf	06 47 26.2	-4.3
CCM				LR	LR		
	comp=Z,149nm,20.0s,MS4.6						
PRU	**Pruhonice**	120.98	325	*e*PKP	PKPdf	06 47 27.4	-2.9
BSEG	**Bad Segeberg**	121.15	331	*e*PKIKP	PKPdf	06 47 27.5	-3.0
CLL	**Collm**	121.19	327	*i* PKIKP	PKPdf	06 47 27.2	-3.5
CLL				pmax	pmax		
	comp=Z,33nm,1.3s						
CLL				MLR	MLR		
	comp=Z,800nm,17.6s,MS5.4						
CLL	**Collm**	121.19	327	⇑*i*PKIKP	PKPdf	06 47 27.2	-3.5
	comp=Z,logA/T=1.4						
FVM	**French Village**	121.59	50	PKIKP	PKPdf	06 47 27.9	-3.9
FVM	**French Village**	121.59	50	*e*PKPdf	PKPdf	06 47 27.5	-4.3
ARSA	**Arzberg**	121.66	322	⇓*i*P	PKPdf	06 47 28.5	-3.2
TSUM	**Tsumeb**	121.82	242	PFAKE		06 47 40.0	+7.4
TSUM				LR	LR		
	comp=Z,915nm,21.0s,MS5.4						
PLCA	**Paso Flores**	121.89	149	PFAKE		06 47 40.0	+7.7
PLCA				LR	LR		
	comp=Z,435nm,20.0s,MS5.1						
KHC	**Kasperske Hory**	121.95	325	⇓*i*PKIKP	PKPdf	06 47 27.8	-4.4
KHC	**Kasperske Hory**	121.95	325	*e*PKP	PKPdf	06 47 28.8	-3.4
GEC2	**GERESS Array S**	122.01	324	*e*PKIKP	PKPdf	06 47 29.3	-3.0
NKC	**Novy Kostel**	122.04	326	*e*PKP	PKPdf	06 47 29.5	-2.8
GOLS	**Golise**	122.13	321	*i* PKP	PKPdf	06 47 29.6	-3.0
MOA	**Molln**	122.15	323	⇓*i*P	PKPdf	06 47 29.4	-3.2
MOX	**Moxa**	122.28	327	*e*PKIKP	PKPdf	06 47 29.9	-2.9
MOX				pmax	pmax		
	comp=Z,30nm,1.6s						
MOX				MLR	MLR		
	comp=Z,500nm,20.0s,MS5.2						
MOX	**Moxa**	122.28	327	*i* P	PKPdf	06 47 29.9	-2.9
	comp=Z,logA/T=1.3						
MOX				L		07 46 10.0	
CLZ	**Clausthal**	122.30	329	*e*PKPdf	PKPdf	06 47 30.3	-2.4
WET	**Wettzell**	122.34	325	*e*PKIKP	PKPdf	06 47 30.1	-2.8
GRA1	**Grafenberg Arr**	123.00	326	*e*PKPdf	PKPdf	06 47 31.3	-2.8
GRF	**Grafenberg Arr**	123.00	326	*e*PKIKP	PKPdf	06 47 31.3	-2.8
GRF	**Grafenberg Arr**	123.00	326	*e*PKIKP	PKPdf	06 47 31.3	-2.8
GRFO	**Grafenberg**	123.00	326	*e*PKPdf	PKPdf	06 47 31.2	-2.9
KBA	**Koelnbreinsper**	123.06	322	⇓*i*P	PKPdf	06 47 30.7	-3.6
OXF	**Oxford**	123.33	54	PFAKE		06 47 40.0	+4.8
OXF				LR	LR		
	comp=Z,908nm,20.0s,MS5.4						
USIN	**University of**	123.68	49	*e*PKPdf	PKPdf	06 47 31.7	-4.1
FUR	**Furstenfeldbru**	123.75	324	*e*PKIKP	PKPdf	06 47 33.1	-2.6
WATA	**Walderalm**	123.99	323	⇓*i*P	PKPdf	06 47 33.0	-3.2
WTTA	**Wattenberg**	123.99	323	⇑*i*P	PKPdf	06 47 32.9	-3.3
WTSB	**Winterswijk**	124.03	330	*e*PKP	PKPdf	06 47 33.2	-3.0
	comp=Z,29nm,1.6s						
BLO	**Bloomington**	124.12	47	*e*PKIKP	PKPdf	06 47 32.7	-4.0
TNS	**Taunus Mts**	124.21	328	*e*PKIKP	PKPdf	06 47 33.9	-2.7
MOTA	**Moosalm**	124.27	324	⇓*i*P	PKPdf	06 47 33.3	-3.4
SQTA	**Sankt Quirin**	124.27	323	⇓*i*P	PKPdf	06 47 33.6	-3.1
TOD	**Tromm**	124.36	327	PKIKP	PKPdf	06 47 32.9	-4.0
WCI	**Wyandotte Cave**	124.61	48	*e*PKIKP	PKPdf	06 47 33.8	-3.9
WCI				MLR	MLR		
	comp=Z,302nm,22.0s,MS4.9						
ABH	**Alteburg**	124.88	328	PKP	PKPdf	06 47 34.3	-3.6
AAM	**Ann Arbor**	124.94	43	PFAKE		06 47 50.0	+12
AAM				LR	LR		
	comp=Z,780nm,19.0s,MS5.4						
DAVA	**Damuels**	125.01	324	⇓*i*P	PKPdf	06 47 35.4	-2.8
BRMO	**Bormio**	125.14	323	*e*PKP	PKPdf	06 47 35.7	-2.8
HGN	**Heimansgroeve**	125.19	329	*e*PKP	PKPdf	06 47 35.1	-3.3
	comp=Z,27nm,1.6s						
RUP	**Ruppelstein**	125.24	328	PKIKP	PKPdf	06 47 34.5	-4.0
LANF	**Langenberg**	125.26	327	PKP	PKPdf	06 47 36.0	-2.6
LANF	**Langenberg**	125.26	327	PKIKP	PKPdf	06 47 35.4	-3.2
BFO	**Black Forest**	125.33	326	*e*PKIKP	PKPdf	06 47 35.5	-3.3
LRAL	**Lakeview Retre**	125.66	55	*e*PKPdf	PKPdf	06 47 35.7	-4.2
LRAL				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
FELD	**Feldberg**	125.77	326	PKP	PKPdf	06 47 35.2	-4.4
WLS	**Welschbruch**	125.83	326	PKP	PKPdf	06 47 36.6	-3.1
WLS	**Welschbruch**	125.83	326	PKIKP	PKPdf	06 47 35.6	-4.1
CDF	**Champ du Feu**	125.87	326	*e*PKIKP	PKPdf	06 47 35.7	-4.1
	comp=Z,69nm,1.5s						
ECH	**Echery**	126.05	326	PKP	PKPdf	06 47 36.9	-3.2
ECH	**Echery**	126.05	326	PKIKP	PKPdf	06 47 35.9	-4.2
ESK	**Eskdalemuir**	126.05	338	PFAKE		06 47 50.0	+10
ESK				LR	LR		
	comp=Z,218nm,19.0s,MS4.8						
GIVF	**Givet**	126.16	329	*e*PKIKP	PKPdf	06 47 36.8	-3.5
	comp=Z,109nm,1.3s						
ACSO	**Alum Creek Sta**	126.25	45	PFAKE		06 47 50.0	+9.3
ACSO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
MOF	**Molkenrain**	126.27	326	PKP	PKPdf	06 47 37.3	-3.2
MOF	**Molkenrain**	126.27	326	PKIKP	PKPdf	06 47 35.9	-4.6
BBS	**Basel-Blauen**	126.27	325	PKIKP	PKPdf	06 47 35.7	-4.8
SCHQ	**Schefferville**	126.38	22	PFAKE		06 47 50.0	+9.5
SCHQ				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
VAI	**Varese**	126.41	323	*e*PKIKP	PKPdf	06 47 37.5	-3.3
HINF	**Hinteralfeld**	126.44	326	*e*PKIKP	PKPdf	06 47 36.8	-4.0
	comp=Z,110nm,1.3s						
BAIF	**Baives**	126.50	330	*e*PKIKP	PKPdf	06 47 37.5	-3.4
BOB	**Bobbio (Coli)**	126.56	322	*e*PKIKP	PKPdf	06 47 38.8	-2.4
HAU	**Haudompre**	126.61	326	*e*PKIKP	PKPdf	06 47 37.3	-3.9
	comp=Z,82nm,1.2s						
HAU				*e*R			
	comp=Z,559nm,22.2s						
THEF	**They Montfort**	126.68	327	PKP	PKPdf	06 47 38.1	-3.2
THEF	**They Montfort**	126.68	327	PKIKP	PKPdf	06 47 37.3	-4.0
LOMF	**Lomont**	126.72	326	PKP	PKPdf	06 47 38.6	-2.8
MCGN	**Macugnaga**	126.82	324	*e*PKP	PKPdf	06 47 39.0	-2.6
TEIG	**Tepich**	126.94	70	PFAKE		06 47 50.0	+7.5
TEIG				LR	LR		
	comp=Z,304nm,19.0s,MS5.0						
MEZF	**Maizieres J'vi**	127.02	328	*e*PKIKP	PKPdf	06 47 38.7	-3.2
CABF	**La Chapelle**	127.56	325	*e*PKIKP	PKPdf	06 47 39.7	-3.4
	comp=Z,118nm,1.2s						
LPG	**La Plagne**	127.80	324	*e*PKIKP	PKPdf	06 47 40.4	-3.2
	comp=Z,38nm,1.2s						
LPL	**La Plagne**	127.80	324	*e*PKIKP	PKPdf	06 47 40.2	-3.4
	comp=Z,52nm,1.3s						
TRQA	**Tornquist**	128.14	153	PFAKE		06 47 50.0	+5.5
TRQA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
GOGA	**Godfrey**	128.37	53	PFAKE		06 47 50.0	+4.9
GOGA				LR	LR		
	comp=Z,956nm,21.0s,MS5.5						
GENY	**Geneseo**	128.55	40	*e*PKPdf	PKPdf	06 47 40.5	-4.6
MCWV	**Mont Chateau**	128.68	44	PFAKE		06 47 50.0	+4.5
MCWV				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
SSF	**Saint Saulge**	128.72	327	*e*PKIKP	PKPdf	06 47 41.8	-3.5
	comp=Z,86nm,1.3s						
SMF	**Signal de Mont**	128.79	326	*e*PKIKP	PKPdf	06 47 41.7	-3.8
	comp=Z,152nm,1.4s						
AVF	**Avril sur Loir**	128.97	327	*e*PKIKP	PKPdf	06 47 41.9	-3.9
	comp=Z,51nm,1.4s						
HYF	**Humbligny**	129.06	328	*e*PKIKP	PKPdf	06 47 43.0	-3.0
BLA	**Blacksburg**	129.31	47	PFAKE		06 47 50.0	+3.2
BLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
SMRF	**Simiane la Rot**	129.34	323	*e*PKIKP	PKPdf	06 47 42.9	-3.7
VIVF	**Saint-Julien-l**	129.37	324	*e*PKIKP	PKPdf	06 47 43.0	-3.6
	comp=Z,108nm,1.4s						
BGF	**Bois d'Agland**	129.39	327	*e*PKIKP	PKPdf	06 47 43.1	-3.5
LDF	**La Druitiere**	129.60	331	*e*PKIKP	PKPdf	06 47 43.1	-3.9
	comp=Z,48nm,1.2s						
FLN	**La Foliniere**	129.66	331	*e*PKIKP	PKPdf	06 47 43.3	-3.8
	comp=Z,94nm,1.3s						
FLN				*e*R			
	comp=Z,436nm,22.8s						
JSC	**Jenkinsville**	129.80	51	*e*PKIKP	PKPdf	06 47 44.2	-3.6
TCF	**Toulx Ste Croi**	129.90	327	*e*PKIKP	PKPdf	06 47 44.2	-3.4
	comp=Z,116nm,1.3s						
BINY	**Binghamton**	130.00	40	PFAKE		06 48 00.0	+12
BINY				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
GRR	**Gorron**	130.10	331	*e*PKIKP	PKPdf	06 47 44.4	-3.5
	comp=Z,62nm,1.4s						
NCB	**Newcomb**	130.11	37	PFAKE		06 48 00.0	+12
NCB				LR	LR		
	comp=Z,836nm,20.0s,MS5.4						
JTS	**JuntasAbangare**	130.58	83	PFAKE		06 48 00.0	+10
JTS				LR	LR		
	comp=Z,133nm,20.0s,MS4.6						
MDV	**Middlebury**	130.71	36	*e*PKPdf	PKPdf	06 47 45.2	-4.0
CAF	**Calviac**	130.82	326	*e*PKIKP	PKPdf	06 47 45.2	-4.2
	comp=Z,112nm,1.6s						
RJF	**Les Rejaudoux**	130.89	326	*e*PKIKP	PKPdf	06 47 45.5	-4.0
	comp=Z,161nm,1.8s						
RJF				*e*R			
	comp=Z,681nm,22.8s						
MFF	**Saint Martin d**	130.94	329	*e*PKIKP	PKPdf	06 47 46.0	-3.6
	comp=Z,84nm,1.4s						
SGMF	**Saint Gilles**	131.00	332	*e*PKIKP	PKPdf	06 47 46.0	-3.6
	comp=Z,57nm,1.3s						
CBN	**Corbin**	131.06	45	PFAKE		06 48 00.0	+10
CBN				LR	LR		

	comp=Z,1µm,20.0s,MS5.5						
NHSC	**New Hope**	**131.07**	**52**	PFAKE		06 48 00.0	+10
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
ROSF	**Rostrenen**	**131.28**	**332**	*e*PKIKP	PKPdf	06 47 45.8	-4.4
	comp=Z,135nm,1.8s						
LFF	**La Frestale**	**131.55**	**326**	*e*PKIKP	PKPdf	06 47 47.7	-3.1
DWPF	**Disney**	**131.62**	**59**	PFAKE		06 48 00.0	+8.6
DWPF				LR	LR		
	comp=Z,182nm,19.0s,MS4.8						
MTLF	**Montolieu**	**131.69**	**324**	*e*PKIKP	PKPdf	06 47 46.9	-4.2
HRV	**Harvard--Oak R**	**132.54**	**37**	PFAKE		06 48 00.0	+7.2
HRV				LR	LR		
	comp=Z,943nm,19.0s,MS5.5						
WES	**Weston**	**132.76**	**37**	PFAKE		06 48 00.0	+6.8
WES				LR	LR		
	comp=Z,972nm,22.0s,MS5.5						
ETSF	**Etsaut**	**133.57**	**325**	*e*PKIKP	PKPdf	06 47 51.7	-2.9
	comp=Z,23nm,0.9s						
SJPF	**Ste Jean**	**133.81**	**326**	*e*PKIKP	PKPdf	06 47 51.7	-3.3
	comp=Z,62nm,1.3s						
NNA	**Nana**	**134.08**	**115**	*e*PKPdf	PKPdf	06 47 54.7	-1.5
NNA				LR	LR		
	comp=Z,120nm,20.0s,MS4.6						
LVC	**Limon Verde**	**135.27**	**133**	*e*PKPdf	PKPdf	06 47 56.5	-1.9
LVC				LR	LR		
	comp=Z,735nm,20.0s,MS5.4						
OTAV	**Otavalo**	**136.05**	**97**	*e*PKP	PKPdf	06 47 57.7	-2.3
OTAV				LR	LR		
	comp=Z,357nm,20.0s,MS5.1						
ESLA	**Sonseca Array**	**137.61**	**324**	PFAKE		06 48 10.0	+7.9
ESLA				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
PBRG	**Braganca**	**137.68**	**328**	*e*PKPdf	PKPdf	06 48 00.8	-1.4
PVRL	**Vila Real**	**138.57**	**329**	*e*PKPdf	PKPdf	06 47 59.4	-4.5
PVIS	**Viseu**	**139.07**	**328**	*e*PKPdf	PKPdf	06 47 56.9	-7.9
PCBR	**Castelo Branco**	**139.47**	**327**	*e*PKPdf	PKPdf	06 48 02.7	-2.8
LPAZ	**La Paz**	**139.55**	**126**	*e*PKHKP		06 47 54.8	
LPAZ				*e*		06 48 04.0	
LPAZ				MLR	MLR		
	comp=Z,919nm,21.0s						
EVO	**Evora**	**140.69**	**326**	*e*PKIKP	PKPdf	06 48 05.3	-2.5
	comp=Z,58nm,1.2s						
EVO				*e*R			
	comp=Z,430nm,22.0s						
PALC	**Alcoutim**	**141.13**	**324**	*e*PKPdf	PKPdf	06 48 01.4	-7.2
PTEO	**Sao Teotonio**	**141.79**	**325**	*e*PKPdf	PKPdf	06 48 03.6	-6.1
SDV	**Santo Domingo**	**144.68**	**85**	*e*PKPdf	PKPdf	06 48 11.3	-4.1
SDV				LR	LR		
	comp=Z,831nm,22.0s,MS5.5						
SJG	**San Juan**	**147.88**	**68**	PKIKP	PKPdf	06 48 17.8	-2.8
SJG	**San Juan**	**147.88**	**68**	*e*PKPbc	PKPdf	06 48 19.3	-1.3
SJG				LR	LR		
	comp=Z,535nm,21.0s,MS5.3						
DBIC	**Dimbokro**	**150.11**	**270**	*e*PKIKP	PKPdf	06 48 20.8	-3.6
DBIC				*e*		06 48 27.0	
DBIC				MLR	MLR		
	comp=Z,872nm,21.0s						
RCBR	**Riachuelo**	**166.71**	**176**	PFAKE		06 48 50.0	+6.0
RCBR				LR	LR		
	comp=Z,1µm,22.0s						

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*CSEM **02** 07:11:13.4,35.53N×4.25E,ML3.6,After ALG*

CRAAG 02 07:11:13.4,35.53N×4.25E,Ml3.6,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CKHR	**Kef el Ahmar**	**1.14**	**64**	P	Pb	07 11 34.0	-1.7
SET	**Setif**	**1.15**	**54**	P	Pb	07 11 35.0	-0.9
CMER	**Merouana**	**1.35**	**86**	P	Pb	07 11 40.0	+0.7
ABA	**Alger-Bouzarea**	**1.60**	**323**	P	Pn	07 11 42.4	-0.8
DFRA	**Djebel Bou Aff**	**1.67**	**52**	P	Pn	07 11 46.0	+2.0
CASM	**Ain Smara**	**1.96**	**68**	P	Pn	07 11 50.0	+1.7

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*NEIC **02** 07:17:43.7,18.80N×104.25W,h18^{km},MD3.7(MEX),After MEX.*

MEX 02 07:17:43.7±0.8**,18.80N×104.25W,h18**^{km}±20^{km}**,MD3.7, 1D,Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	**Colima**	**0.65**	**54**	⇓*i*P	Pb	07 17 54.2	-2.1
COLM				*i* S	Sb	07 18 02.3	-2.6
CJM	**Chamela**	**1.02**	**313**	*i* P	Pb	07 17 59.7	-2.8
CJM				*i* S	Sb	07 18 11.7	-3.8
CGX	**Ciudad Guzman**	**1.13**	**38**	*i* P	Pb	07 18 01.5	-2.9
CGX				*i* S	Sb	07 18 15.0	-3.7
SFJM	**Santa Fe**	**2.03**	**34**	*i* P	Pn	07 18 15.0	-2.6
SFJM				*i* S	Sn	07 18 40.0	-2.7

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*NIED **02** 07:43:00,40.40N×142.20E,h53^{km},Mw3.9 Best double couple: $M_0$9.03×10^{14} NP1:ϕ_s121°,δ85°,λ143°. NP2: ϕ_s215°,δ53°,λ7°.*

*JMA **02** 07:43:21.9±0.1,40.35N×142.14E,h33^{km}±1^{km},M4.2 Broadband fault plane solution: P waves. NP1:ϕ_s195°, δ29°,λ-8°. NP2:ϕ_s292°,δ86°,λ-119°. Principal axes: T Plg35°, Azm47°; N Plg29°, Azm294°; P Plg42°, Azm175°;*

JMA Felt III J1.

ISC 02 07:43:21.2±1.7**,40.40N**±0.06×**142.2E**±0.1**,h29**^{km}±8^{km}**,n8,** σ**0**^{s}**33**/14**,5C-1D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JANG	**Nango**	**0.48**	**268**	⇑P	**Pb**	**07 43 31.9**	**+0.6**
JANG				S	**Sb**	**07 43 38.7**	**+0.5**
JTH	**Tanohata**	**0.51**	**206**	⇑P	**Pb**	**07 43 31.6**	**0.0**
JTH				S	**Sb**	**07 43 38.2**	**-0.6**
JKZ	**Kuzumaki**	**0.75**	**237**	⇑P	**Pb**	**07 43 35.7**	**+0.1**
JKZ				S	**Sb**	**07 43 45.4**	**-0.2**
JTM	**Tenmabayashi**	**0.91**	**296**	⇓P	**Pn**	**07 43 38.2**	**0.0**
JTM				S	**Sb**	**07 43 49.8**	**-0.4**
JOM	**Ohasama**	**1.13**	**216**	⇑P	**Pn**	**07 43 41.2**	**-0.2**
JAH	**Hinai**	**1.18**	**260**	⇑P	**Pn**	**07 43 42.2**	**+0.2**
JAH				S	**Sn**	**07 43 57.1**	**-0.1**
JOT	**Ohata**	**1.29**	**320**	P	**Pn**	**07 43 43.6**	**-0.1**
JOT				S	**Sn**	**07 43 59.8**	**-0.3**
MAT	**Matsushiro**	**4.94**	**220**	P	**Pn**	**07 44 36.1**	**+0.6**

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*BJI **02** 08:09:14.0,21.33N×144.34E,h131^{km},mB5.1,mb4.7*

*NEIC **02** 08:09:14.7±1.3,21.26N×144.42E,h138^{km}±12^{km}, mb4.7/34,Error ellipse: s-maj=8.9km s-min=5.7km az=96.0*

ISC 02 08:09:14.8±1.1**,21.16N**±0.04×**144.50E**±0.05**,h149**^{km}±9^{km}**,** **h139**^{km}±4.1^{km}**:pP-P,n105,**σ**1**^{s}**05**/103**,mb4.6**/42**,5C-2D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**7.54**	**177**	*e*P	**P**	**08 11 03.6**	**+0.6**
JOD2	**Odawara 2**	**14.83**	**342**	P	**P**	**08 12 38.1**	**0.0**
JRY	**Ryogami san**	**15.59**	**343**	P	**P**	**08 12 46.2**	**-1.4**
JGF	**Kuroka**	**15.69**	**338**	P	**P**	**08 12 50.3**	**+1.5**
MAJO	**Matsushiro**	**16.28**	**342**	*e*P	**P**	**08 12 53.8**	**-2.3**
	11nm,0.4s						
MAT	**Matsushiro**	**16.28**	**342**	*e*P	**P**	**08 12 55.0**	**-1.1**
	112nm,2.0s						
MAT	**Matsushiro**	**16.28**	**342**	P	**P**	**08 12 55.0**	**-1.1**
MAT	**Matsushiro**	**16.28**	**342**	P	**P**	**08 12 56.9**	**+0.8**
JYA	**Atsumi**	**17.86**	**348**	P	**P**	**08 13 16.7**	**+1.7**
JTM	**Tenmabayashi**	**19.78**	**352**	P	**P**	**08 13 35.1**	**-0.2**
JOT	**Ohata**	**20.37**	**353**	P	**P**	**08 13 41.1**	**-0.2**
JEM	**Erimo**	**20.82**	**357**	P	**P**	**08 13 47.2**	**+1.4**
KS15	**Wonju Array Si**	**21.69**	**322**	P	**P**	**08 13 50.5**	**-3.9**
JSH	**Shimam**	**21.74**	**351**	P	**P**	**08 13 55.8**	**+0.9**
JEW	**Eniwo**	**21.77**	**354**	P	**P**	**08 13 55.9**	**+0.8**
ASAJ	**Asahikawa**	**22.95**	**356**	P	**P**	**08 14 08.2**	**+1.6**
SSE	**Sheshan**	**23.11**	**300**	P	**P**	**08 14 07.2**	**-1.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
SSE				AMB	AMB		
	comp=Z,40nm,3.5s						
SSE	**Sheshan**	**23.11**	**300**	P	**P**	**08 14 07.2**	**-1.1**
	comp=Z,20nm,0.6s,mb4.7						
NJ2	**Nanjing**	**25.30**	**301**	*e*P	**P**	**08 14 28.5**	**-0.6**
NJ2				AP	pP	08 14 58.1	-1.6
NJ2				XP	sP	08 15 14.3	-2.8
NJ2				PP	PP	08 15 15.5	+2.1
NJ2				S	**S**	**08 18 42.0**	**+0.3**
NJ2				XS		08 19 34.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=N,670nm,14.2s						
NJ2				LR	LR		
	comp=E,710nm,18.2s						
NJ2				LR	LR		
	comp=Z,850nm,14.8s						
MDJ	**Mudanjiang**	**26.44**	**336**	P	**P**	**08 14 39.7**	**+0.2**
MDJ				AP	pP	08 15 05.4	-4.9
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,124nm,3.4s						
CN2	**Changchun**	**27.58**	**329**	*e*P	**P**	**08 14 50.1**	**+0.2**
PMG	**Port Moresby**	**30.49**	**175**	P	**P**	**08 15 12.2**	**-3.9**
	comp=Z,13nm,0.7s,mb4.8						
BJI	**Beijing**	**30.60**	**314**	*e*P	**P**	**08 15 11.7**	**-5.1**
BJI				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.2						
BJI	**Beijing**	**30.60**	**314**	*e*P	**P**	**08 15 11.7**	**-5.1**
	comp=Z,4.0nm,0.8s,mb4.2						
KAKA	**Kakadu**	**35.69**	**200**	*e*P	**P**	**08 16 00.3**	**-0.4**
	comp=Z,23nm,0.8s,mb4.9						
LZH	**Lanzhou**	**38.37**	**302**	*e*P	**P**	**08 16 23.5**	**+0.5**
LZH				AP	pP	08 16 54.5	-1.3
LZH				XP	sP	08 17 10.5	-3.0
LZH				PP	PP	08 17 58.6	+2.6
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,98nm,5.2s						
LZH	**Lanzhou**	**38.37**	**302**	*e*P	**P**	**08 16 23.5**	**+0.5**
	comp=Z,24nm,1.3s,mb4.7						
LZH				pP	pP	08 16 54.5	-1.3
LZH				sP	sP	08 17 10.5	-3.0
LZH				PP	PP	08 17 58.6	+2.6
KMI	**Kunming**	**38.49**	**284**	P	**P**	**08 16 24.0**	**-0.1**
KMI				AP	pP	08 16 55.9	-1.1
KMI				S	**S**	**08 22 09.8**	**+1.8**
KMI				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.4						
KMI				LR	LR		
	comp=N,193nm,12.8s						
KMI				LR	LR		
	comp=E,391nm,17.0s						
KMI				LR	LR		
	comp=Z,199nm,31.6s						
KMI	**Kunming**	**38.49**	**284**	P	**P**	**08 16 24.0**	**-0.1**
	comp=Z,12nm,1.1s,mb4.4						
KMI				pP	pP	08 16 55.9	-1.1
KMI				sP	sP	08 17 14.8	+0.2
KMI				S	**S**	**08 22 09.8**	**+1.8**
KMI				LR	LR		
	comp=Z,200nm,31.6s						
ULN	**Ulaanbaatar**	**40.15**	**321**	*e*P	**P**	**08 16 39.3**	**+1.7**
	comp=Z,2.9nm,0.6s,mb4.1						
CTAO	**Charters Tower**	**41.03**	**177**	*e*P	**P**	**08 16 44.1**	**-1.0**
	comp=Z,2.4nm,0.5s,mb4.1						
WRAB	**Tennant Creek**	**42.03**	**194**	*e*P	**P**	**08 16 53.2**	**-0.1**
	comp=Z,34nm,0.5s,mb5.2						
WB2	**Warramunga Arr**	**42.04**	**194**	⇑*i*P	**P**	**08 16 53.5**	**+0.1**
GTA	**Gaotai**	**42.18**	**306**	*e*P	**P**	**08 16 55.0**	**+0.7**
GTA				AP	pP	08 17 27.2	-0.3
GTA				XP	sP	08 17 43.0	-1.9
GTA				PCP	PcP	08 18 50.3	+4.0
GTA				SCP		08 22 26.2	
GTA				PCS		08 22 39.6	
GTA				S	**S**	**08 23 00.2**	**-2.3**
GTA				XS		08 23 57.3	
GTA				SS	SS	08 26 06.9	-2.3
GTA				SCS	ScS	08 26 42.4	+4.3
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb3.8						
GTA				AMB	AMB		
	comp=Z,164nm,4.2s						
GTA				LR	LR		
	comp=N,113nm,13.7s						
GTA				LR	LR		
	comp=E,90nm,17.9s						
GTA				LR	LR		
	comp=Z,467nm,22.7s						
FITZ	**Fitzroy Crossi**	**43.17**	**207**	⇑*i*P	**P**	**08 17 03.2**	**+0.6**
	comp=Z,38nm,0.6s,mb5.2						
ASPA	**Alice Springs**	**45.74**	**194**	⇓*i*P	**P**	**08 17 23.0**	**0.0**
NIKO	**Nikolski**	**47.68**	**36**	*e*P	**P**	**08 17 35.6**	**-2.1**
MBWA	**Marble Bar**	**48.52**	**211**	*e*P	**P**	**08 17 45.1**	**+0.4**
	comp=Z,10nm,0.6s,mb4.6						
BILL	**Bilibino**	**48.81**	**11**	*e*P	**P**	**08 17 45.1**	**-1.2**
	comp=Z,24nm,0.9s,mb4.8						
WMQ	**Urumqi**	**51.86**	**310**	*e*P	**P**	**08 18 11.6**	**+1.8**
STKA	**Stephens Creek**	**52.81**	**183**	*e*P	**P**	**08 18 15.4**	**-1.6**
JIRN	**Jiri**	**53.08**	**289**	*e*P	**P**	**08 18 19.5**	**+0.4**
	comp=Z,9.3nm,0.5s,mb4.8						
GUN	**Gumba**	**53.33**	**290**	*e*P	**P**	**08 18 20.7**	**-0.2**
	comp=Z,6.1nm,0.3s,mb4.9						
KKN	**Kakani**	**53.87**	**290**	*e*P	**P**	**08 18 25.1**	**+0.3**
	comp=Z,7.8nm,0.3s,mb4.9						
TNA	**Tin City**	**53.96**	**22**	*e*P	**P**	**08 18 23.4**	**-1.6**
	comp=Z,11nm,1.5s,mb4.4						
FORT	**Forrest**	**54.00**	**198**	⇓*i*P	**P**	**08 18 25.4**	**-0.4**
	comp=Z,63nm,0.5s,mb5.6						
DMN	**Daman**	**54.04**	**289**	*e*P	**P**	**08 18 26.6**	**+0.5**
	comp=Z,6.6nm,0.4s,mb4.8						
KOLN	**Koldanda**	**55.35**	**290**	*e*P	**P**	**08 18 36.2**	**+0.6**
	comp=Z,5.3nm,0.3s,mb4.8						
KURK	**Kurchatov**	**58.70**	**317**	*e*P	**P**	**08 18 57.5**	**-1.4**
	comp=Z,5.0nm,0.5s,mb4.6						
IMA	**Indian Mountai**	**59.51**	**25**	*e*P	**P**	**08 19 03.3**	**-1.0**
	comp=Z,32nm,1.1s,mb5.1						
NWAO	**Narrogin (SRO)**	**59.76**	**206**	*e*P	**P**	**08 19 05.5**	**-0.9**
	comp=Z,4.8nm,0.7s,mb4.4						
SML	**Sawmill**	**60.80**	**30**	*e*P	**P**	**08 19 11.1**	**-2.0**
MCK	**McKinley**	**60.88**	**28**	*e*P	**P**	**08 19 11.6**	**-2.0**
COLA	**College**	**61.57**	**27**	*e*P	**P**	**08 19 16.4**	**-1.8**
DAWY	**Dawson**	**65.11**	**28**	*e*P	**P**	**08 19 40.5**	**-0.9**
INK	**Inuvik**	**67.57**	**23**	*e*P	**P**	**08 19 55.0**	**-1.8**
	comp=Z,9.7nm,0.7s,mb4.6						
YKW3	**Yellowknife Ar**	**76.33**	**28**	*e*P	**P**	**08 20 47.2**	**-1.3**
MPOR	**Mary's Peak**	**76.82**	**47**	P	**P**	**08 20 52.6**	**+1.0**
RES	**Resolute Bay**	**77.31**	**14**	*e*P	**P**	**08 20 53.5**	**-0.3**
	comp=Z,11nm,0.9s,mb4.5						
HBO	**Huckleberry Mo**	**77.86**	**48**	P	**P**	**08 20 57.9**	**+0.4**
EBG	**Ellensburg**	**78.10**	**44**	P	**P**	**08 20 59.2**	**+0.5**
SNIWA	**Snively Ranch**	**78.83**	**45**	P	**P**	**08 21 03.2**	**+0.6**
KEV	**Kevo**	**79.25**	**342**	*e*p	**P**	**08 21 01.2**	**-3.2**
	comp=Z,12nm,1.0s,mb4.5						
LTIM	**Timbered Crate**	**79.28**	**50**	P	**P**	**08 21 05.6**	**+0.4**
ARE0	**ARCESS Array S**	**79.81**	**342**	*e*P	**P**	**08 21 07.9**	**+0.5**
OHCM	**Honcut**	**79.87**	**52**	*e*P	**P**	**08 21 06.2**	**-2.2**
MOD	**Modoc**	**79.88**	**49**	*e*P	**P**	**08 21 08.3**	**-0.1**
	comp=Z,7.3nm,0.9s,mb4.3						
EDM	**Edmonton**	**80.29**	**37**	*e*P	**P**	**08 21 10.2**	**-0.1**
BMO	**Blue Mountains**	**80.93**	**45**	*e*P	**P**	**08 21 13.9**	**0.0**
	comp=Z,12nm,0.8s,mb4.6						
CMB	**Columbia Colle**	**81.11**	**53**	*e*P	**P**	**08 21 15.0**	**0.0**
	comp=Z,17nm,0.8s,mb4.7						
JOF	**Joensuu**	**81.32**	**335**	*e*p	**P**	**08 21 14.3**	**-1.2**
	comp=Z,5.4nm,0.5s,mb4.4						
MNV	**Mina**	**82.62**	**52**	*e*P	**P**	**08 21 23.2**	**+0.4**
	comp=Z,15nm,1.2s,mb4.6						
TPH	**Tonopah**	**83.44**	**52**	*e*P	**P**	**08 21 27.4**	**+0.5**
	comp=Z,7.9nm,0.9s,mb4.4						
KAF	**Kangasniemi**	**83.72**	**335**	*e*p	**P**	**08 21 26.0**	**-1.7**
	comp=Z,3.1nm,0.7s,mb4.2,baz=53,slow=4.8						
QLMT	**Earthquake Lak**	**84.80**	**44**	*e*P	**P**	**08 21 34.6**	**+1.0**
YMR	**Madison River**	**85.17**	**44**	*e*P	**P**	**08 21 36.9**	**+1.5**
YNR	**Norris Junctio**	**85.33**	**44**	*e*P	**P**	**08 21 38.5**	**+2.3**
YFT	**Old Faithful**	**85.34**	**44**	*e*P	**P**	**08 21 38.8**	**+2.5**
RRI2	**Red Ridge**	**85.49**	**45**	*e*P	**P**	**08 21 38.0**	**+1.0**
IMW	**Indian Meadow**	**85.51**	**45**	*e*P	**P**	**08 21 38.2**	**+1.1**
FFC	**Flin Flon**	**85.63**	**32**	P	**P**	**08 21 37.7**	**+0.3**
	comp=Z,171nm,0.7s,mb5.9,SNR=24						
FFC	**Flin Flon**	**85.63**	**32**	*e*P	**P**	**08 21 37.7**	**+0.3**
	comp=Z,32nm,1.0s,mb5.0						
TPAW	**Teton Pass**	**85.67**	**45**	*e*P	**P**	**08 21 38.9**	**+0.9**
PFO	**Pinyon Flat Ob**	**85.69**	**56**	*e*P	**P**	**08 21 38.4**	**+0.2**
	comp=Z,9.3nm,1.1s,mb4.4						
LOHW	**Long Hollow**	**85.85**	**45**	*e*P	**P**	**08 21 39.4**	**+0.6**
HWUT	**Hardware Ranch**	**86.06**	**47**	*e*P	**P**	**08 21 40.0**	**+0.2**
	comp=Z,15nm,0.9s,mb4.7						
TCUT	**Toone Canyon**	**86.37**	**47**	*e*P	**P**	**08 21 41.7**	**+0.3**
JLU	**Jordanelle**	**86.56**	**48**	*e*P	**P**	**08 21 42.7**	**+0.4**
MPU	**Maple Canyon**	**86.67**	**48**	*e*P	**P**	**08 21 43.2**	**+0.4**
MSU	**Marysvale**	**86.92**	**50**	*e*P	**P**	**08 21 44.6**	**+0.6**
FCC	**Fort Churchill**	**86.98**	**26**	*e*P	**P**	**08 21 43.3**	**-0.5**
	comp=Z,2.3nm,0.4s,mb4.4						
TMUT	**Trail Mountain**	**87.28**	**49**	*e*P	**P**	**08 21 45.7**	**0.0**
SRU	**San Rafael**	**87.83**	**49**	*e*P	**P**	**08 21 48.6**	**+0.1**
PV10	**Paradox Valley**	**89.20**	**49**	*e*P	**P**	**08 21 55.4**	**+0.5**
PV01	**Paradox Valley**	**89.64**	**49**	*e*P	**P**	**08 21 57.1**	**+0.2**
NB2	**NORSAR Subarra**	**89.88**	**339**	P	**P**	**08 21 56.5**	**-1.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=43,slow=4.6						
TUC	**Tucson**	**90.57**	**55**	*e*P	**P**	**08 22 02.6**	**+1.1**
SDCO	**Great Sand Dun**	**91.97**	**48**	*e*P	**P**	**08 22 08.3**	**+0.5**
	comp=Z,2.5nm,0.8s,mb4.3						
WMOK	**Wichita Mounta**	**98.17**	**48**	*e*P	**P**	**08 22 35.4**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.5						
VNA2	**Neumayer--Watz**	**127.56**	**191**	⇑*i*P	PKPdf	08 28 10.0	+8.4
VNA3	**Neumayer Olymp**	**127.69**	**190**	⇑*i*P	PKPdf	08 28 09.1	+7.2
VNA1	**Neumayer--Stat**	**127.95**	**191**	⇑*i*P	PKPdf	08 28 09.0	+6.6
PLCA	**Paso Flores**	**144.49**	**131**	*e*PKPdf	PKPdf	08 28 34.6	+1.2
LPAZ	**La Paz**	**148.76**	**87**	*e*PKPbc	PKPdf	08 28 46.3	+5.1
TRQA	**Tornquist**	**151.62**	**132**	*e*PKPbc	PKPdf	08 28 53.0	+8.1

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*OMAN **02** 08:16:42.5,28.66N×52.01E,h30^{km},Error ellipse: s-maj=72.1km s-min=9.2km az=326.0*

*CSEM **02** 08:16:44.4±0.4,28.47N×52.42E,h40^{km},ML3.7/1,Error ellipse: s-maj=13.2km s-min=7.6km az=80.0*

*THR **02** 08:16:46.5±0.7,28.79N×53.03E,h15^{km}±19^{km},ML3.1*

ISC 02 08:16:40.1±1.0**,28.58N**±0.06×**52.22E**±0.09**,h10**^{km}**,n11,** σ**1**^{s}**05**/15**,3C-2D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**0.73**	**113**	*i* PG	**Pg**	**08 16 56.3**	**+1.4**
GHIR				*e*SG	**Sg**	**08 17 04.0**	**-0.7**
GHIR				AML	AML	08 17 15.1	
	comp=N,3µm,0.4s						
GHIR	**Ghir-Karzin**	**0.73**	**113**	*i* Pg	**Pg**	**08 16 56.3**	**+1.4**
	SNR=91						
GHIR				*e*Sg	**Sg**	**08 17 04.1**	**-0.6**
	comp=N,3µm,0.4s,SNR=91						
BNDS	**Bandar-Abbas**	**3.69**	**108**	*e*PN	**Pn**	**08 17 37.1**	**-1.2**
BNDS				AML	AML	08 18 42.1	
	comp=N,49nm,0.6s						
NASN	**Na'in**	**4.24**	**7**	*e*PN	**Pn**	**08 17 50.1**	**+3.8**
NASN				SN	**Sn**	**08 18 35.7**	**-0.8**
NASN				AML	AML	08 18 41.3	
	comp=N,18nm,0.4s						
NASN	**Na'in**	**4.24**	**7**	*e*Pn	**Pn**	**08 17 50.1**	**+3.8**
	SNR=52						
NASN				Sn	**Sn**	**08 18 35.7**	**-0.8**
	comp=N,18nm,0.4s,SNR=52						
BANOM	**Banah**	**4.49**	**125**	⇑P	**Pn**	**08 17 51.3**	**+1.4**
	SNR=23						
BSY	**Bisya**	**7.34**	**141**	⇓P	**Pn**	**08 18 30.4**	**+0.4**
	SNR=13						
BSYO	**Bisya**	**7.37**	**141**	P	**Pn**	**08 18 30.4**	**-0.1**
	SNR=13						
SMDO	**Samad**	**7.60**	**135**	⇓P	**Pn**	**08 18 33.4**	**-0.3**
	SNR=14						
RBK	**Rabkut**	**11.17**	**170**	⇑P	**P**	**08 19 22.3**	**-0.7**
ABTO	**Aybut**	**11.21**	**175**	⇑P	**P**	**08 19 23.2**	**-0.4**

IGQ 02 08:25:16.1,1.55S×80.99W,h11^{km}±8^{km}**,mb4.0,4C-1D, Error ellipse: s-maj=9.2km s-min=8.3km az=51.8,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**0.67**	**42**	⇑P	Pb	08 25 28.4	-0.9
HOJA				S	Sb	08 25 37.6	-0.5
MAGD	**Magdalena**	**1.91**	**40**	P	Pn	08 25 50.2	+1.3
ARRY	**Arrayan**	**2.54**	**89**	⇑P	Pn	08 25 58.6	+0.7
ARRY				S	Sn	08 26 29.9	+0.9
RETU	**Refugio**	**2.55**	**88**	P	Pn	08 25 58.8	+0.8
PISA	**Pisayambo**	**2.65**	**79**	P	Pn	08 26 02.0	+2.5
NAS1	**Nasa**	**2.67**	**70**	P	Pn	08 26 02.4	+2.5
VC1	**Cotopaxi 1**	**2.74**	**71**	⇑P	Pn	08 26 04.3	+3.5
PINO	**Pino**	**2.75**	**60**	⇓P	Pn	08 26 01.6	+0.6
TAMB	**Tambo**	**2.76**	**72**	P	Pn	08 26 04.3	+3.3
YANA	**Yana**	**2.81**	**60**	P	Pn	08 26 01.1	-0.7
ANTI	**Antisana**	**3.03**	**69**	⇑P	Pn	08 26 07.9	+3.0
COTA	**Cotacachi**	**3.25**	**55**	P	Pn	08 26 09.2	+1.2
CAYR	**Refugio Cayamb**	**3.37**	**62**	P	Pn	08 26 13.0	+3.4
CAYA	**Cayambe**	**3.41**	**62**	P	Pn	08 26 13.3	+3.1
CONE	**Cono NE Rev Vo**	**3.66**	**66**	P	Pn	08 26 19.3	+5.5

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*NEIC **02** 08:43:24.8,15.58N×95.77W,h20^{km},MD4.1(MEX),After MEX.*

MEX 02 08:43:24.8±0.8**,15.58N×95.77W,h20**^{km}±43^{km}**,MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.37**	**300**	*i* P	Pb	08 43 31.0	-1.7
HUIG				*i* S	Sb	08 43 36.0	-2.0
CMIG	**Matias Romero**	**1.73**	**29**	*e*P	Pn	08 43 50.7	-3.5
CMIG				*i* S	Sn	08 44 10.5	-5.4
VHO	**Vista Hermosa**	**1.75**	**328**	*i* P	Pn	08 43 51.6	-2.9
VHO				*i* S	Sn	08 44 12.0	-4.3
OXX	**Oaxaca**	**1.75**	**329**	*i* P	Pn	08 43 52.0	-2.5
OXX				*i* S	Sn	08 44 13.0	-3.4
CCIG	**Comitan**	**3.57**	**78**	*i* P	Pn	08 44 15.7	-4.7
CCIG				*i* S	Sn	08 44 58.5	-4.0
ACX	**Acapulco**	**4.18**	**288**	*e*P	Pn	08 44 25.0	-4.2
PPM	**Popocatepetl**	**4.41**	**322**	*e*P	Pn	08 44 32.0	-0.4
PPM				*i* S	Sn	08 45 19.2	-4.6

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*CSEM **02** 08:58:35.7±0.1,37.79N×1.78W,h8^{km},ML3.0/5,Error ellipse: s-maj=2.2km s-min=1.6km az=162.0*

*SFS **02** 08:58:36.0,37.84N×1.76W,h11^{km}*

MDD 02 08:58:36.1±0.3**,37.85N×1.78W,h6**^{km}±5^{km}**,mbLg2.4**/12**, 1C,Error ellipse: s-maj=4.6km s-min=2.5km az=175.0, PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	**0.43**	**91**	⇑Pg	Pg	08 58 43.9	-0.8
	3.9nm,0.2s,SNR=18						
EMUR				Lg		08 58 50.3	
	193nm,0.3s,SNR=5.0						
EMUR	**La Murta**	**0.43**	**91**	Pg	Pg	08 58 43.9	-0.8
	3.9nm,0.2s,SNR=18						
CART	**Cartagena**	**0.67**	**113**	P	Pg	08 58 49.1	-0.4
CART				S	Sg	08 58 57.6	-1.0
CART	**Cartagena**	**0.67**	**113**	*e*P	Pg	08 58 49.2	-0.4
CART				*i* S	Sg	08 58 57.6	-1.0
ENIJ	**Nijar**	**0.94**	**201**	Pg	Pg	08 58 51.8	-3.1
	9.0nm,0.2s,SNR=6.4						
ENIJ				Lg		08 59 07.2	
	48nm,0.4s,SNR=8.5						
EVIA	**Vianos**	**0.97**	**325**	Pg	Pg	08 58 53.6	-1.9
	58nm,0.4s,SNR=57						
EVIA				Lg		08 59 08.2	
	146nm,0.3s,SNR=5.0						
EQES	**Quesada**	**1.02**	**268**	Pg	Pg	08 58 55.4	-1.1
	2.6nm,0.1s,SNR=48						
EQES				Lg		08 59 09.6	
	126nm,0.4s,SNR=5.0						
EQES	**Quesada**	**1.02**	**268**	Pg	Pg	08 58 55.4	-1.1
	2.6nm,0.1s,SNR=48						
EBER	**Berja**	**1.29**	**223**	Pg	Pg	08 58 59.7	-2.3
	4.2nm,0.3s,SNR=13						
EBER				Lg		08 59 18.7	
	20nm,0.5s,SNR=5.0						
EBER	**Berja**	**1.29**	**223**	Pg	Pg	08 58 59.7	-2.3
	4.2nm,0.3s,SNR=13						
EBEN	**Beniarda**	**1.49**	**55**	Pn	Pn	08 59 01.4	-2.2
	2.6nm,0.2s,SNR=9.1						
EBEN				Lg		08 59 23.9	
	14nm,0.3s,SNR=5.0						
EBEN	**Beniarda**	**1.49**	**55**	Pn	Pn	08 59 01.4	-2.2
	2.6nm,0.2s,SNR=9.1						
ELUQ	**Luque**	**1.99**	**262**	Pg	Pg	08 59 12.2	-3.7
	2.6nm,0.2s,SNR=4.0						
ELUQ				Sn	Sn	08 59 35.9	-0.4
	21nm,0.4s,SNR=5.0						
ELOJ	**Sierra Loja**	**2.01**	**250**	Pg	Pg	08 59 11.9	-4.3
	2.0nm,0.3s,SNR=7.9						
ELOJ				Lg		08 59 39.2	

	2.0nm,0.2s,SNR=4.0						
EADA	**Adamuz**	**2.23**	**279**	Pn	Pn	08 59 12.4	-1.8
	2.1nm,0.2s,SNR=12						
EADA				Pg	Pg	08 59 17.6	-3.0
	3.4nm,0.2s,SNR=12						
EADA				Sn	Sn	08 59 38.9	-3.4
	8.9nm,0.1s,SNR=5.0						
EADA				Lg		08 59 46.6	
	6.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.23**	**279**	Pn	Pn	08 59 12.4	-1.8
	2.1nm,0.2s,SNR=12						
EADA	**Adamuz**	**2.23**	**279**	Pg	Pg	08 59 17.6	-3.0
	3.4nm,0.2s,SNR=12						
EADA				Sn	Sn	08 59 38.9	-3.5
	8.9nm,0.1s,SNR=5.0						
ESDC	**Sonseca Array**	**2.50**	**318**	Pn	Pn	08 59 16.0	-1.9
	1.0nm,0.1s,baz=126,slow=13,SNR=22						
ESDC				Pg	Pg	08 59 22.0	-3.9
	4.7nm,0.1s,baz=134,slow=17,SNR=8.0						
ESDC				Sn	Sn	08 59 44.3	-4.8
	3.9nm,0.2s,baz=131,slow=24,SNR=14						
ESDC				Lg		08 59 53.5	
	12nm,0.4s,baz=134,slow=29,SNR=7.9						
ESDC	**Sonseca Array**	**2.50**	**318**	Pn	Pn	08 59 16.0	-2.0
	1.0nm,0.1s,slow=13,SNR=22						
ESDC	**Sonseca Array**	**2.50**	**318**	Pg	Pg	08 59 22.0	-3.9
	4.7nm,0.1s,slow=17,SNR=8.0						
ESDC				Sn	Sn	08 59 44.3	-4.8
	3.9nm,0.2s,slow=24,SNR=14						
EMOS	**Mosqueruela**	**2.71**	**22**	Pn	Pn	08 59 19.2	-1.8
	1.4nm,0.4s,SNR=7.9						
EMOS				Sn	Sn	08 59 52.3	-2.3
	2.0nm,0.3s,SNR=4.0						
EMOS				Lg		09 00 02.0	
	3.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.71**	**22**	Pn	Pn	08 59 19.2	-1.8
	1.4nm,0.4s,SNR=7.9						
EMOS				Sn	Sn	08 59 52.3	-2.3
	2.0nm,0.3s,SNR=4.0						
GUD	**Guadarrama**	**3.34**	**327**	Pg	Pg	08 59 37.5	-5.3
	2.7nm,0.2s,SNR=4.0						
ERTA	**Horta de San J**	**3.51**	**27**	Pn	Pn	08 59 30.6	-1.8
	2.9nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	09 00 11.3	-3.5
	2.3nm,0.2s,SNR=7.9						
ERTA				Lg		09 00 24.6	
	0.8nm,0.1s,SNR=4.0						
ERTA	**Horta de San J**	**3.51**	**27**	Pn	Pn	08 59 30.6	-1.8
	2.9nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	09 00 11.3	-3.5
	2.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.87**	**270**	Pn	Pn	08 59 35.0	-2.6
	0.5nm,0.1s,SNR=10.0						
EMIN				Sn	Sn	09 00 18.4	-5.5
	3.2nm,0.3s,SNR=8.2						
EMIN				Lg		09 00 37.3	
	6.9nm,0.5s,SNR=5.0						
EMIN	**Mina Concepcio**	**3.87**	**270**	Pn	Pn	08 59 35.0	-2.5
	0.5nm,0.1s,SNR=10.0						
EMIN				Sn	Sn	09 00 18.4	-5.6
	3.2nm,0.3s,SNR=8.2						
ESAC	**San Caprasio**	**4.00**	**14**	Lg		09 00 42.1	
	14nm,0.3s,SNR=4.0						
EBAD	**Badajoz**	**4.21**	**284**	Sn	Sn	09 00 27.4	-5.2
	3.4nm,0.2s,SNR=7.9						
EBAD				Lg		09 00 50.5	
	SNR=5.0						
EBAD	**Badajoz**	**4.21**	**284**	Sn	Sn	09 00 27.4	-5.2
	3.4nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**4.53**	**268**	Pn	Pn	08 59 42.3	-4.6
	0.9nm,0.1s,SNR=4.0						
EGRO				Sn	Sn	09 00 34.7	-5.9
	2.4nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.53**	**268**	Pn	Pn	08 59 42.3	-4.6
	0.9nm,0.1s,SNR=4.0						
EBIE	**Bielsa**	**5.05**	**16**	Pn	Pn	08 59 52.1	-2.2
	0.6nm,0.4s,SNR=4.0						

MOS ***02*** *09:04:22.8±1.2, 5.22N×94.97E, h33^{km}, mb5.3/23, Error ellipse: s-maj=19.2km s-min=7.5km az=111.4*

CSEM ***02*** *09:04:25.1, 5.87N×95.25E, h33^{km}, mb5.5*

BJI ***02*** *09:04:25.9, 5.12N×94.47E, h59^{km}, mB5.3, mb4.9, Ms4.9, Msz4.6*

NEIC ***02*** *09:04:27.7±0.2, 5.27N×94.50E, mb5.1/63, Error ellipse: s-maj=6.9km s-min=4.7km az=222.0*

HRVD ***02*** *09:04:27.7±0.3, 5.17N×94.41E, h32^{km}, MW5.2/59, Centroid moment Tensor Solution. LP body waves: s49,c73;Mantle waves: s59,c99; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.15±.21; $M_{\theta\theta}$-1.17±.13; $M_{\phi\phi}$-2.98±.16; $M_{r\theta}$3.52±.18; $M_{\theta\phi}$2.54±.11; $M_{\phi r}$-3.61±.21; Best double couple: $M_0$6.737×10^{16} NP1:ϕ_s334°,δ21°, λ105°. NP2:ϕ_s138°,δ69°,λ84°. Principal axes: T 6.465, Plg65°, Azm38°; N .545, Plg5°, Azm140°; P -7.009, Plg24°, Azm232°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 09:04:25.9±0.8**, 5.23N**±0.03×**94.51E**±0.03**, h44**^{km}±6^{km}**, h46**^{km}±1.1^{km}**:pP-P, n227,** $\sigma 1\overset{s}{.}03$/235**, mb5.1**/90**, MS4.5**/26**, 28C-15D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	**6.37**	**72**	P	**P**	**09 05 59.0**	**-0.6**
	610nm,1.0s						
NNT	**Nongplab**	**8.95**	**35**	P	**P**	**09 06 38.0**	**+2.6**
NST	**Nakhon Sawan**	**11.76**	**28**	P	**P**	**09 07 14.7**	**+0.9**
	46nm,0.6s						
KKTK	**Khon Kaen**	**13.72**	**36**	P	**P**	**09 07 49.0**	**+8.9**
	556nm,0.8s						
CM31	**Chiang Mai Arr**	**13.84**	**18**	*e*P	**P**	**09 07 44.3**	**+2.7**
	7.8nm,0.3s						
PALK	**Pallekele**	**13.88**	**279**	*e*P	**P**	**09 07 41.3**	**-0.7**
	28nm,0.7s						
CHG	**Chiang Mai**	**14.18**	**17**	⇓P	**P**	**09 07 48.1**	**+2.1**
	92nm,0.9s						
UBT	**Ubonrachathani**	**14.35**	**45**	P	**P**	**09 07 56.0**	**+7.8**
NANT	**Nan**	**14.78**	**24**	P	**P**	**09 07 57.0**	**+3.1**
CHRT	**Chiangrai**	**15.43**	**19**	⇓P	**P**	**09 08 04.5**	**+2.2**
	263nm,1.0s						
VIS	**Vishakhapatnam**	**16.55**	**320**	*e*P	**P**	**09 08 15.7**	**-0.8**
VIS				*e*		09 08 25.3	
	comp=Z,81nm,1.5s						
VIS				*e*		09 11 03.3	
BWNR	**Bhubaneshwar**	**17.20**	**331**	*e*P	**P**	**09 08 22.1**	**-2.6**
BWNR				*e*		09 08 34.0	
	comp=Z,120nm,0.4s						
BWNR				*e*		09 11 17.3	
SALM	**Salem**	**17.34**	**293**	*e*P	**P**	**09 08 29.0**	**+2.5**
SALM				*e*		09 11 21.0	
COCO	**West Island**	**17.46**	**172**	*e*P	**P**	**09 08 28.7**	**+0.8**
	comp=Z,397nm,1.4s						
CAL	**Calcutta**	**18.22**	**341**	*e*	**P**	**09 08 45.8**	**+8.4**
CAL				*e*		09 12 46.8	
HYB	**Hyderabad**	**19.76**	**309**	*e*P	**P**	**09 08 55.0**	**-0.1**
	comp=Z,60nm,1.0s						
HYB				*e*S	**S**	**09 12 33.0**	**+2.8**
HYB	**Hyderabad**	**19.76**	**309**	*i* P	**P**	**09 08 55.0**	**-0.1**
	comp=Z,60nm,1.0s						
HYB				*e*		09 12 20.0	
HYB				*e*S	**S**	**09 12 33.0**	**+2.8**
QIZ	**Qiongzhong**	**20.29**	**46**	P	**P**	**09 09 01.1**	**+0.4**
QIZ				XP		09 09 17.2	
QIZ				PP	PP	09 09 22.2	+0.5
QIZ				S	**S**	**09 12 40.4**	**-0.4**
QIZ				XS		09 12 57.1	
QIZ				SS	SS	09 13 10.3	-1.3
QIZ				LR	LR		
	comp=N,2µm,17.7s,MS4.6						
QIZ				LR	LR		
	comp=E,2µm,16.4s,MS4.6						
QIZ				LR	LR		
	comp=Z,2µm,18.2s,MS4.5						
SHL	**Shillong**	**20.38**	**353**	*e*P	**P**	**09 09 01.0**	**-0.6**
SHL				*e*		09 12 09.0	
KMI	**Kunming**	**21.30**	**21**	⇑P	**P**	**09 09 12.2**	**+1.2**
KMI				AP		09 09 20.7	
KMI				XP		09 09 30.1	
KMI				PP	PP	09 09 39.9	+4.4
KMI				S	**S**	**09 13 04.6**	**+4.5**
KMI				XS		09 13 20.3	
KMI				AMB	AMB		
	comp=Z,40nm,1.9s,mb4.4						
KMI				AMB	AMB		
	comp=Z,262nm,3.1s						
KMI				LR	LR		
	comp=N,925nm,19.7s,MS4.3						
KMI				LR	LR		
	comp=E,1µm,20.5s,MS4.3						
KMI				LR	LR		
	comp=Z,1µm,21.9s,MS4.3						
KMI	**Kunming**	**21.30**	**21**	⇑P	**P**	**09 09 12.2**	**+1.2**
	comp=Z,40nm,1.9s,mb4.4						
KMI				pP		09 09 20.7	
KMI				sP		09 09 30.1	
KMI				PP	PP	09 09 39.9	+4.4
KMI				S	**S**	**09 13 04.6**	**+4.5**
KMI				sS		09 13 20.3	
KMI				SS	SS	09 13 41.1	+5.1
KMI				LR	LR		
	comp=Z,1µm,21.9s,MS4.3						
LATR	**Latur**	**21.89**	**308**	*e*	**P**	**09 09 25.0**	**+8.1**
LATR				*e*		09 13 09.0	
KAD	**Karad**	**23.24**	**303**	*e*P	**P**	**09 09 34.2**	**+3.9**
KAD				AMb	AMB	09 09 43.3	
	comp=Z,23nm,1.2s,mb4.5						
BATP	**Bataraza**	**23.38**	**80**	*e*P	**P**	**09 09 29.5**	**-2.2**
ALBI	**Allahabad**	**23.39**	**330**	*e*P	**P**	**09 09 36.0**	**+4.3**
JIRN	**Jiri**	**23.67**	**341**	*e*P	**P**	**09 09 33.5**	**-0.9**
	comp=Z,112nm,0.7s,mb5.4						
PKI	**Pulchoki**	**23.85**	**340**	*e*P	**P**	**09 09 36.5**	**+0.4**
	comp=Z,31nm,0.5s,mb5.0						
DMN	**Daman**	**23.99**	**339**	*e*P	**P**	**09 09 38.0**	**+0.5**
	comp=Z,55nm,0.7s,mb5.1						
GUN	**Gumba**	**24.00**	**341**	*e*P	**P**	**09 09 36.8**	**-0.8**
	comp=Z,54nm,0.4s,mb5.3						
KKN	**Kakani**	**24.09**	**340**	*e*P	**P**	**09 09 37.7**	**-0.8**
	comp=Z,33nm,0.5s,mb5.0						
GYA	**Guiyang**	**24.10**	**28**	⇑*i*P	**P**	**09 09 40.0**	**+1.5**
GYA				AP		09 09 51.6	
GYA				XP		09 09 57.4	
GYA				S	**S**	**09 13 55.7**	**+5.5**
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,360nm,4.6s						
GYA				LR	LR		
	comp=N,1µm,20.1s,MS4.5						
GYA				LR	LR		
	comp=E,1µm,17.1s,MS4.5						
GYA				LR	LR		
	comp=Z,2µm,21.3s,MS4.5						
POO	**Poona**	**24.11**	**305**	*e*P	**P**	**09 09 41.0**	**+2.2**
POO				*i*		09 14 09.0	
BHPL	**Bhopal**	**24.34**	**319**	*e*P	**P**	**09 09 40.4**	**-0.6**
BHPL				*e*		09 09 49.4	
	comp=Z,36nm,1.1s						
PPR	**Puerto Princes**	**24.43**	**78**	*e*P	**P**	**09 09 43.7**	**+1.8**
GKN	**Gorkha**	**24.52**	**339**	*e*P	**P**	**09 09 42.4**	**-0.3**
	comp=Z,29nm,0.3s,mb5.3						
LSA	**Lhasa**	**24.55**	**353**	P	**P**	**09 09 42.0**	**-0.9**
KOLN	**Koldanda**	**24.70**	**336**	*e*P	**P**	**09 09 44.2**	**-0.3**
	comp=Z,143nm,0.9s,mb5.5						
ENPP	**El Nido**	**25.35**	**75**	*e*P	**P**	**09 09 51.9**	**+1.2**
CD2	**Chengdu**	**26.99**	**18**	P	**P**	**09 10 04.7**	**-1.0**
CD2				PP	PP	09 10 50.2	-2.2
CD2				S	**S**	**09 14 39.9**	**+1.7**
CD2				AMB	AMB		
	comp=Z,90nm,0.6s,mb5.5						
CD2				LR	LR		
	comp=N,930nm,12.6s						
CD2				LR	LR		
	comp=Z,790nm,18.0s						
SJMP	**San Jose**	**27.24**	**73**	*e*P	**P**	**09 10 07.2**	**-1.0**
NDI	**New Delhi**	**28.52**	**327**	*e*P	**P**	**09 10 17.0**	**-2.6**
DDI	**Dehra Dun**	**29.39**	**330**	*e*	**P**	**09 10 25.8**	**-1.5**
SDNR	**Sundarnagar**	**30.89**	**330**	*e*	**P**	**09 10 47.0**	**+6.4**
WHN	**Wuhan**	**31.36**	**34**	*e*P	**P**	**09 10 44.0**	**-0.8**
XAN	**Xi’an**	**31.64**	**23**	P	**P**	**09 10 45.4**	**-1.8**
XAN				AMB	AMB		
	comp=Z,29nm,0.8s,mb5.2						
XAN				LR	LR		
	comp=N,697nm,17.7s,MS4.4						
XAN				LR	LR		
	comp=E,436nm,19.0s,MS4.4						
XAN				LR	LR		
	comp=Z,1µm,19.9s,MS4.6						
LZH	**Lanzhou**	**31.89**	**14**	⇑P	**P**	**09 10 48.1**	**-1.3**
LZH				AP	pP	09 11 01.2	0.0
LZH				XP	sP	09 11 05.3	-1.5
LZH				PP	PP	09 11 52.0	-3.9
LZH				*e*S	**S**	**09 15 55.2**	**-0.8**
LZH				XS		09 16 15.4	
LZH				SS	SS	09 17 49.8	+0.4
LZH				AMB	AMB		
	comp=Z,56nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,158nm,5.6s						
LZH				LR	LR		
	comp=N,957nm,13.1s						
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.7						
LZH	**Lanzhou**	**31.89**	**14**	⇑P	**P**	**09 10 48.1**	**-1.3**
	comp=Z,56nm,1.5s,mb5.2						
LZH				pP	pP	09 11 01.2	0.0
LZH				sP	sP	09 11 05.3	-1.5
LZH				PP	PP	09 11 52.0	-3.9
LZH				*e*S	**S**	**09 15 55.2**	**-0.8**
LZH				sS		09 16 15.4	
LZH				SS	SS	09 17 49.8	+0.4
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.7						
THN	**Thein Dam**	**32.27**	**329**	*e*P	**P**	**09 10 52.0**	**-0.7**
THN				*e*		09 11 19.2	
GTA	**Gaotai**	**34.37**	**7**	⇑P	**P**	**09 11 09.9**	**-0.9**
GTA				AP	pP	09 11 21.0	-1.7
GTA				XP	sP	09 11 26.7	-1.6
GTA				PP	PP	09 12 25.7	-1.4
GTA				PCP	PcP	09 13 43.9	-2.2
GTA				S	**S**	**09 16 34.7**	**+0.3**
GTA				XS		09 16 53.4	
GTA				SCP		09 17 27.2	
GTA				SS	SS	09 18 45.5	-0.9
GTA				SCS	ScS	09 21 27.5	0.0
GTA				AMB	AMB		
	comp=Z,21nm,1.5s,mb4.8						
GTA				AMB	AMB		
	comp=Z,174nm,4.2s						
GTA				LR	LR		
	comp=N,425nm,21.3s						
GTA				LR	LR		
	comp=E,349nm,31.2s						
GTA				LR	LR		
	comp=Z,587nm,24.7s,MS4.2						
NJ2	**Nanjing**	**35.09**	**38**	*e*P	**P**	**09 11 17.2**	**+0.2**
NJ2				AP	pP	09 11 29.1	+0.1
NJ2				XP	sP	09 11 33.1	-1.5
NJ2				PP	PP	09 12 35.3	-1.2
NJ2				S	**S**	**09 16 48.0**	**+2.4**
NJ2				XS		09 17 08.0	
NJ2				AMB	AMB		
	comp=Z,1µm,7.0s						
NJ2				LR	LR		
	comp=N,3µm,12.4s,MS5.2						
NJ2				LR	LR		
	comp=E,2µm,15.5s,MS5.2						
NJ2				LR	LR		
	comp=Z,4µm,12.8s,MS5.4						
SSE	**Sheshan**	**35.91**	**41**	P	**P**	**09 11 23.2**	**-0.9**
SSE				XP	sP	09 11 39.4	-2.2
SSE				S	**S**	**09 16 59.8**	**+1.4**
SSE				XS		09 17 18.6	
SSE				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,264nm,4.7s						
SSE				LR	LR		
	comp=N,605nm,17.5s,MS4.6						
SSE				LR	LR		
	comp=E,633nm,17.2s,MS4.6						
SSE				LR	LR		
	comp=Z,1µm,14.6s,MS4.9						
SSE	**Sheshan**	**35.91**	**41**	P	**P**	**09 11 23.2**	**-0.9**
	comp=Z,16nm,0.7s,mb5.1						
SSE				sP	sP	09 11 39.4	-2.2
SSE				S	**S**	**09 16 59.8**	**+1.4**
SSE				sS		09 17 18.6	
SSE				LR	LR		
	comp=Z,1µm,14.6s,MS4.9						
MBWA	**Marble Bar**	**36.05**	**137**	*e*P	**P**	**09 11 25.2**	**-0.1**
	comp=Z,85nm,1.6s,mb5.4						
MBWA				LR	LR		
	comp=Z,499nm,19.0s,MS4.3						
FITZ	**Fitzroy Crossi**	**38.48**	**128**	*e*P	**P**	**09 11 44.7**	**-0.9**
	comp=Z,37nm,0.8s,mb5.2						
HHC	**Hu-ho-hao-te**	**38.63**	**21**	⇑P	**P**	**09 11 47.0**	**+0.3**
HHC				AP	pP	09 11 59.4	+0.7
HHC				XP	sP	09 12 04.3	+0.1
HHC				PP	PP	09 13 21.7	+2.5
HHC				PCP	PcP	09 13 54.8	-4.1
HHC				SCP		09 17 39.9	
HHC				S	**S**	**09 17 44.6**	**+4.9**
HHC				XS		09 18 06.0	
HHC				SCS	ScS	09 21 49.9	-1.2
HHC				AMB	AMB		
	comp=Z,24nm,1.5s,mb4.7						
HHC				AMB	AMB		
	comp=Z,185nm,3.0s						
HHC				LR	LR		
	comp=N,988nm,20.1s,MS4.8						
HHC				LR	LR		
	comp=E,845nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=Z,970nm,20.1s,MS4.6						
WMQ	**Urumqi**	**38.90**	**352**	⇑*i*P	**P**	**09 11 48.7**	**-0.2**
WMQ				AP	pP	09 12 01.0	0.0
WMQ				XP	sP	09 12 06.3	-0.1
WMQ				PP	PP	09 13 22.5	+0.1
WMQ				S	**S**	**09 17 43.0**	**-0.8**
WMQ				SS	SS	09 20 27.0	-1.6
WMQ				AMB	AMB		
	comp=Z,35nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,63nm,8.0s						
WMQ				LR	LR		
	comp=N,449nm,16.0s,MS4.7						
WMQ				LR	LR		
	comp=E,717nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,485nm,16.0s,MS4.4						
KZA	**Kyzart**	**40.51**	**338**	P	pP	09 12 15.4	+1.1
	SNR=6.5						
UCH	**Uchtor**	**40.91**	**337**	P	**P**	**09 12 06.3**	**+0.6**
	SNR=12						
TKM2	**Tokmak 2**	**41.11**	**339**	P	**P**	**09 12 07.1**	**-0.1**
	SNR=19						
KBK	**Karagaybulak**	**41.12**	**338**	P	**P**	**09 12 08.2**	**+0.9**
	SNR=10						
AML	**Almayashu**	**41.16**	**336**	P	**P**	**09 12 08.2**	**+0.6**
	SNR=24						
AAK	**Ala-Archa**	**41.27**	**337**	⇓*i*P	**P**	**09 12 06.5**	**-2.0**
AAK				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.4						
AAK	**Ala-Archa**	**41.27**	**337**	*e*P	**P**	**09 12 08.3**	**-0.2**
	comp=Z,6.2nm,0.6s,mb4.4						
AAK				LR	LR		
	comp=Z,125nm,19.0s,MS3.8						
FRU	**Bishkek**	**41.39**	**338**	*e*P	**P**	**09 12 11.0**	**+1.5**
FRU				*i*	pP	09 12 23.0	+1.3
FRU				pmax	pmax		
	comp=Z,160nm,1.9s,mb5.3						
FRU				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.4						
CHMS	**Chumysh**	**41.48**	**338**	P	pP	09 12 22.3	-0.2
	SNR=5.3						
EKS2	**Erkin-Say**	**41.57**	**337**	P	**P**	**09 12 11.6**	**+0.6**
	SNR=11						
KAKA	**Kakadu**	**41.69**	**116**	*e*P	**P**	**09 12 12.8**	**+0.4**
	comp=Z,18nm,0.5s,mb5.0						
USP	**Ospenovka**	**41.81**	**338**	P	**P**	**09 12 12.9**	**-0.1**
	SNR=9.5						
MKAR	**Makanchi Array**	**42.73**	**348**	*i* P	**P**	**09 12 20.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,24nm,0.8s						
NWAO	**Narrogin (SRO)**	**43.65**	**152**	P	**P**	**09 12 30.1**	**+1.9**
NWAO				LR	LR		
	comp=Z,366nm,20.0s,MS4.3						
ULN	**Ulaanbaatar**	**43.82**	**12**	⇓*i*P	**P**	**09 12 23.7**	**-5.7**
ULN	**Ulaanbaatar**	**43.82**	**12**	*e*P	**P**	**09 12 28.3**	**-1.0**
	comp=Z,5.0nm,0.6s,mb4.4						
KS15	**Wonju Array Si**	**44.21**	**39**	*e*P	**P**	**09 12 34.0**	**+1.3**
SNY	**Shenyang**	**44.71**	**31**	⇑P	**P**	**09 12 35.4**	**-1.2**
SNY				AMB	AMB		
	comp=Z,20nm,1.8s,mb4.7						
SNY				AMB	AMB		
	comp=Z,170nm,5.5s						
SNY				LR	LR		
	comp=N,820nm,17.8s						
SNY				LR	LR		
	comp=Z,1µm,17.4s,MS4.8						
ZAK	**Zakamensk**	**45.60**	**8**	*e*P	**P**	**09 12 42.9**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
WRAB	**Tennant Creek**	**46.47**	**124**	⇓*i*P	**P**	**09 12 48.8**	**-2.0**
WRAB	**Tennant Creek**	**46.47**	**124**	*e*P	**P**	**09 12 50.5**	**-0.3**
	comp=Z,78nm,0.8s,mb5.7						
WRAB				LR	LR		
	comp=Z,187nm,21.0s,MS4.0						
WB2	**Warramunga Arr**	**46.47**	**124**	⇑*i*P	**P**	**09 12 50.6**	**-0.3**
MOY	**Mondy**	**46.60**	**6**	*e*P	**P**	**09 12 50.7**	**-0.7**
MOY				pmax	pmax		
	comp=Z,31nm,3.8s						
TLY	**Talaya**	**46.92**	**8**	P	**P**	**09 12 54.3**	**+0.4**
	comp=Z,67nm,1.1s,mb5.5,SNR=9.4						
TLY	**Talaya**	**46.92**	**8**	*e*P	**P**	**09 12 54.1**	**+0.2**
TLY				*e*S	**S**	**09 19 57.2**	**+16**
TLY				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.9						
TLY				MLR	MLR		
	comp=Z,506nm,19.0s,MS4.5						
TLY	**Talaya**	**46.92**	**8**	*e*P	**P**	**09 12 54.1**	**+0.1**
	comp=Z,4.5nm,0.8s,mb4.5						
CN2	**Changchun**	**47.08**	**31**	*e*P	**P**	**09 12 56.2**	**+0.9**
CN2				*e*XP	sP	09 13 12.7	-0.1
CN2				*e*S	**S**	**09 19 44.2**	**+0.9**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,500nm,14.0s,MS4.6						
KURK	**Kurchatov**	**47.25**	**346**	⇓*i*P	**P**	**09 12 54.7**	**-1.9**
KURK	**Kurchatov**	**47.25**	**346**	*e*P	**P**	**09 12 56.2**	**-0.4**
	comp=Z,47nm,1.0s,mb5.4						
KURK				*e*pP	pP	09 13 08.5	-0.3
ASPA	**Alice Springs**	**47.97**	**128**	*e*P	**P**	**09 13 02.1**	**-0.5**
ASPA				*e*S	**S**	**09 19 56.2**	**+0.1**
MDJ	**Mudanjiang**	**49.80**	**33**	P	**P**	**09 13 15.6**	**-0.8**
MDJ				AP	pP	09 13 29.2	+0.5
MDJ				XP	sP	09 13 32.8	-1.2
MDJ				PP	PP	09 15 10.6	-1.4
MDJ				S	**S**	**09 20 22.6**	**+1.1**
MDJ				XS		09 20 42.3	
MDJ				AMB	AMB		
	comp=Z,23nm,1.4s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,121nm,3.8s						
MDJ				LR	LR		
	comp=E,533nm,18.9s						
MDJ				LR	LR		
	comp=Z,660nm,15.5s,MS4.8						
NVS	**Novosibirsk**	**50.30**	**352**	*i* P	**P**	**09 13 17.9**	**-2.2**
NVS				pmax	pmax		
	comp=N,36nm,0.9s						
NVS				pmax	pmax		
	comp=E,19nm,0.9s						
NVS				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.5						
RAYN	**Ar Rayn**	**50.54**	**296**	P	**P**	**09 13 23.3**	**+1.0**
	comp=Z,64nm,1.3s,mb5.4,SNR=9.1						
MAT	**Matsushiro**	**50.69**	**46**	P	**P**	**09 13 22.0**	**-1.3**
	comp=Z,19nm,1.2s,mb4.9						
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.7						
MAT	**Matsushiro**	**50.69**	**46**	P	**P**	**09 13 22.8**	**-0.5**
BVA0	**Borovoye Array**	**51.60**	**342**	*i* P	**P**	**09 13 28.8**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
CHKZ	**Chkalovo**	**52.09**	**342**	*i* P	**P**	**09 13 32.7**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						

CHKZ	**Chkalovo**	52.09	342	*e*P	P	09 13 32.7	-0.9
	comp=Z,11nm,0.6s,mb5.0						
KLR	**Kul'dur**	53.98	29	*e*P	P	09 13 44.2	-3.5
KLR				pmax	pmax		
	comp=Z,72nm,2.0s,mb5.3						
KLR				pmax	pmax		
	comp=E,45µm,2.0s						
KLR				MLR	MLR		
	comp=N,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,600nm,14.0s,MS4.8						
PMG	**Port Moresby**	54.44	105	*e*P	P	09 13 50.4	-1.2
	comp=Z,20nm,1.0s,mb5.0						
PMG				LR	LR		
	comp=Z,284nm,19.0s,MS4.4						
BOD	**Bodaibo**	54.63	13	*e*P	P	09 13 48.6	-3.7
GNI	**Garni**	56.55	315*c*	*i*P	P	09 14 05.3	-1.2
GNI				pmax	pmax		
	comp=Z,19nm,1.3s						
GNI	**Garni**	56.55	315	*e*P	P	09 14 06.2	-0.3
	comp=Z,11nm,0.9s,mb4.9						
GNI				LR	LR		
	comp=Z,230nm,22.0s,MS4.2						
CTA	**Charters Tower**	56.72	118	*e*P	P	09 14 08.4	+0.5
	comp=Z,13nm,0.9s,mb5.0						
CTAO	**Charters Tower**	56.72	118	*e*P	P	09 14 07.5	-0.5
	comp=Z,37nm,1.2s,mb5.3						
CTAO				LR	LR		
	comp=Z,541nm,21.0s,MS4.6						
TI2	**Plekhanov**	57.21	317	*e*P	P	09 14 12.0	+0.9
KMBO	**Kilima Mbogo**	57.54	265	*e*P	P	09 14 14.6	+0.8
	comp=Z,12nm,1.0s,mb4.9						
KMBO				*e*pP	pP	09 14 29.5	+3.1
SVE	**Sverdlovsk**	57.98	339⇑	*e*P	P	09 14 14.6	-1.7
SVE				*e*	pP	09 14 27.5	-1.4
SVE				pmax	pmax		
	comp=Z,72nm,2.3s,mb5.3						
SVE				MLR	MLR		
	comp=E,100nm,20.0s						
SVE				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.9						
STKA	**Stephens Creek**	58.04	133	*e*P	P	09 14 16.2	-0.9
	comp=Z,13nm,0.9s,mb5.0						
ARU	**Arti**	58.46	338⇓	*i*P	P	09 14 22.8	+3.2
ARU				*e*		09 15 10.8	
ARU				*e*		09 16 27.2	
ARU				*e*S	S	09 22 22.0	+4.2
ARU				*e*SS	SS	09 26 14.3	+2.1
ARU				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.3						
YSS	**Yuzh-Sakhalins**	58.65	37	*e*P	P	09 14 21.5	+0.4
YSS				*e*	pP	09 14 38.1	+4.4
KIV	**Kislovodsk**	59.52	319	*e*P	P	09 14 26.5	-0.7
KIV				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
KIV	**Kislovodsk**	59.52	319	*e*P	P	09 14 24.6	-2.6
	comp=Z,9.5nm,0.6s,mb5.0						
MALT	**Malatya**	60.46	311	*e*P	P	09 14 34.2	+0.5
	comp=Z,4.7nm,0.8s,mb4.6						
SOC	**Sochi**	61.35	317	*e*P	P	09 14 36.2	-3.5
SOC				*e*		09 15 19.4	
SOC				*e*		09 17 01.4	
SOC				*e*S	S	09 22 56.7	+1.4
SOC				*e*SSS	SSS	09 29 46.7	+9.2
SOC				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
SOC				pmax	pmax		
	comp=N,5.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.5s						
MBAR	**Mbarara**	63.95	267	*e*P	P	09 14 57.5	0.0
	comp=E,8.1nm,1.0s,mb4.7						
MOS	**Moscow**	67.52	329	*e*P	P	09 15 15.7	-3.8
MOS				*e*		09 17 43.2	
MOS				*e*S	S	09 24 08.0	-3.2
MOS				pmax	pmax		
	comp=Z,57nm,0.7s,mb5.7						
OBN	**Obninsk**	67.80	328	*e*P	P	09 15 15.5	-5.7
	comp=Z,32nm,0.5s,mb5.6						
LSZ	**Lusaka**	68.76	251	*e*P	P	09 15 28.4	+0.5
	comp=Z,12nm,0.9s,mb4.8						
MA2	**Magadan**	68.93	27	*e*P	P	09 15 24.9	-3.3
MA2				pmax	pmax		
	comp=Z,34nm,1.7s,mb5.0						
TIRR	**Tirgusor**	69.38	316⇓	*i*P	P	09 15 30.1	-1.1
TIRR	**Tirgusor**	69.38	316⇓	*i*P	P	09 15 30.1	-1.2
CFR	**Carcaliu**	69.74	316⇑	*i*P	P	09 15 32.8	-0.7
CFR	**Carcaliu**	69.74	316⇑	*i*P	P	09 15 32.8	-0.6
TIXI	**Tiksi**	69.74	11⇓	*i*P	P	09 15 29.0	-4.0
TIXI				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.2						
VRI	**Vrincioaia**	70.86	317⇓	*i*P	P	09 15 40.4	+0.2
VRI	**Vrincioaia**	70.86	317⇓	*i*P	P	09 15 40.4	+0.2
MLR	**Muntele Rosu**	71.32	316	⇑P	P	09 15 42.6	-0.4
MLR	**Muntele Rosu**	71.32	316⇓	*i*P	P	09 15 43.1	+0.1
MLR	**Muntele Rosu**	71.32	316⇓	*i*P	P	09 15 43.1	+0.1
BURAR	**Bucovina Array**	72.25	318⇑	*i*P	P	09 15 48.3	-0.1
LBTB	**Lobatse**	73.32	242	*e*P	P	09 15 55.6	+0.3
	comp=Z,19nm,1.0s,mb5.0						
LBTB				*e*pP	pP	09 16 06.8	-1.4
LBTB				LR	LR		
	comp=Z,619nm,20.0s,MS4.9						
JOF	**Joensuu**	73.38	335	*e*p	P	09 15 55.7	+0.9
	comp=Z,16nm,0.9s,mb4.9						
JOF	**Joensuu**	73.38	335	*e*P	P	09 15 55.7	+0.9
JOF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
KWP	**Kalwaria**	74.28	320	P	P	09 15 55.4	-4.9
	comp=Z,41nm,1.4s,mb5.2						
KOLS	**Kolonicke sedl**	74.43	319	*e*P	P	09 16 01.9	+0.7
KOLS				*e*	pP	09 16 11.2	-3.0
BOSA	**Boshof**	74.51	239	*e*P	P	09 16 02.5	+0.3
	comp=Z,44nm,1.5s,mb5.2						
BOSA				*e*pP	pP	09 16 15.8	+0.7
SUW	**Suwalki**	74.86	325	*e*P	P	09 16 02.2	-1.4
SUW	**Suwalki**	74.86	325	*e*P	P	09 16 02.2	-1.3
CRVS	**Cervenica-Dubn**	74.95	319	*e*P	P	09 16 09.5	+5.3
CRVS				*e*	sP	09 16 21.8	-0.2
CRVS	**Cervenica-Dubn**	74.95	319	*e*	P	09 16 09.5	+5.3
CRVS				*e*sP	sP	09 16 21.8	-0.2
KAF	**Kangasniemi**	75.30	333	*e*p	P	09 16 08.0	+2.0
	comp=Z,10nm,0.8s,mb4.8						
KAF	**Kangasniemi**	75.30	333	*e*P	P	09 16 08.0	+2.0
KAF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
KECS	**Kecovo**	75.53	319	*e*P	P	09 16 14.8	+7.3
KECS	**Kecovo**	75.53	319	*e*	P	09 16 14.8	+7.3
NIE	**Niedzica**	75.78	320	*e*P	P	09 16 09.4	+0.5
PSZ	**Piszkesteto**	75.84	318	*e*P	P	09 16 08.2	-1.1
	comp=Z,51nm,1.6s,mb5.2						
PSZ	**Piszkesteto**	75.84	318⇑	*e*P	P	09 16 08.8	-0.5
OJC	**Ojcow**	76.23	320	*e*P	P	09 16 11.1	-0.4
VYHS	**Vyhne**	76.61	319	*i* P	P	09 16 13.0	-0.7
SRO	**Srobarova**	76.88	318	*e*P	P	09 16 16.8	+1.6
OKC	**Ostrava-Krasne**	77.23	320	*e*P	P	09 16 16.9	-0.3
OKC				*e*pP	pP	09 16 30.8	+0.7
KEV	**Kevo**	77.44	341	*e*p	P	09 16 18.4	+0.5
	comp=Z,13nm,0.8s,mb4.9						
KEV	**Kevo**	77.44	341	*e*P	P	09 16 18.4	+0.5
KEV				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
MORC	**Moravsky Berou**	77.61	320	*e*P	P	09 16 17.9	-1.4
	comp=Z,45nm,1.6s,mb5.2						
ZST	**Bratislava**	77.73	318	*e*P	P	09 16 20.1	+0.2
ZST				*e*pP	pP	09 16 34.2	+1.3
BILL	**Bilibino**	78.40	21⇑	*i*P	P	09 16 18.5	-4.7
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
DPC	**Dobruska-Polom**	78.46	320	*e*P	P	09 16 24.3	+0.4
DPC				*e*pP	pP	09 16 37.0	+0.1
KSP	**Ksiaz**	78.53	321	*e*P	P	09 16 24.0	-0.2
KSP				*e*pP	pP	09 16 37.4	+0.1
KSP	**Ksiaz**	78.53	321	*e*P	P	09 16 25.1	+0.8
UPC	**Upice**	78.67	320	*e*P	P	09 16 25.7	+0.7
UPC				*e*pP	pP	09 16 40.3	+2.2
ARSA	**Arzberg**	78.70	317⇑	*i*P	P	09 16 25.3	0.0
	comp=Z,21nm,1.1s,mb5.0						
SUR	**Sutherland**	79.15	236	*e*P	P	09 16 29.7	+1.7
	comp=Z,30nm,1.0s,mb5.2						
SUR				*e*pP	pP	09 16 42.8	+1.7
OBKA	**Obir**	79.32	316⇑	*i*P	P	09 16 27.6	-1.1
	comp=Z,22nm,1.4s,mb4.9						
TSUM	**Tsumeb**	79.44	249	*e*P	P	09 16 30.4	+0.5
	comp=Z,3.5nm,0.9s,mb4.3						
TSUM				*e*pP	pP	09 16 43.0	+0.1
TSUM				*e*sP	sP	09 16 47.2	-0.6
PRU	**Pruhonice**	79.57	320	*e*P	P	09 16 31.5	+1.6
PRU				*e*pP	pP	09 16 43.5	+0.5
PVCC	**Panska Ves**	79.59	320	*e*P	P	09 16 30.2	+0.1
PVCC				*e*pP	pP	09 16 44.1	+1.0
MOA	**Molln**	79.60	318⇑	*i*P	P	09 16 29.9	-0.3
	comp=Z,16nm,1.2s,mb4.8						
VOY	**Vojsko**	79.74	316	*e*P	P	09 16 29.3	-1.7
VOY				*e*	pP	09 16 43.7	-0.3
BRG	**Berggiesshubel**	80.01	321	*i* P	P	09 16 32.7	+0.4
BRG				*e*	pP	09 16 46.7	+1.3
BRG				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
BRG	**Berggiesshubel**	80.01	321	*i* P	P	09 16 32.7	+0.4
	comp=Z,30nm,1.5s,mb5.0						
BRG				*e*	pP	09 16 46.7	+1.3
KHC	**Kasperske Hory**	80.13	319	*e*P	P	09 16 32.7	-0.3
KHC				*e*pP	pP	09 16 46.2	+0.1
PTCC	**Patocco-Chiusa**	80.14	316	*e*P	P	09 16 33.2	+0.1
KBA	**Koelnbreinsper**	80.18	317⇑	*i*P	P	09 16 32.7	-0.6
	comp=Z,26nm,1.1s,mb5.1						
RUE	**Ruedersdorf**	80.23	322	*e*P	P	09 16 33.1	-0.4
	comp=Z,30nm,0.8s,mb5.3						
CLL	**Collm**	80.63	321	*i* P	P	09 16 35.1	-0.5
CLL				*i*	sP	09 16 53.1	-0.4
CLL				pmax	pmax		
	comp=Z,34nm,1.8s,mb5.0						
CLL	**Collm**	80.63	321	*i* P	P	09 16 35.1	-0.5
	comp=Z,34nm,1.8s,mb5.0						
CLL				*i*	sP	09 16 53.1	-0.4
CLL	**Collm**	80.63	321	P	P	09 16 35.1	-0.5
	comp=Z,logA/T=1.3,mb5.0						
CLL				*i* *SP	sP	09 16 53.1	-0.4
NKC	**Novy Kostel**	80.93	320	*e*P	P	09 16 36.0	-1.2
NKC				*e*pP	pP	09 16 50.9	+0.6
SFI	**Santa Sofia**	81.11	313	*e*P	P	09 16 40.0	+1.7
CTI	**Castel Tesino**	81.31	316	*e*P	P	09 16 40.5	+1.3
VMG	**Vicchio**	81.33	314	*e*P	P	09 16 41.0	+1.5
WTTA	**Wattenberg**	81.35	317⇑	*i*P	P	09 16 39.0	-0.5
	comp=Z,26nm,1.0s,mb5.1						
WATA	**Walderalm**	81.39	317⇑	*i*P	P	09 16 38.9	-0.8
	comp=Z,24nm,1.4s,mb4.9						
MOX	**Moxa**	81.48	320	*e*P	P	09 16 40.0	0.0
MOX				pP	pP	09 16 56.0	+2.9
SQTA	**Sankt Quirin**	81.64	317⇑	*i*P	P	09 16 40.3	-0.7
	comp=Z,41nm,1.5s,mb5.1						
GRA1	**Grafenberg Arr**	81.70	319	*e*P	P	09 16 41.5	+0.3
	comp=Z,22nm,0.9s,mb5.1						
GRA1				*e*pP	pP	09 16 54.3	0.0
GRF	**Grafenberg Arr**	81.70	319	*e*P	P	09 16 41.5	+0.3
GRF				*e**PP	pP	09 16 54.3	0.0
GRF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
GRF	**Grafenberg Arr**	81.70	319	*e*P	P	09 16 41.5	+0.3
	comp=Z,22nm,0.9s,mb5.1						
GRF				*e*pP	pP	09 16 54.3	0.0
MOTA	**Moosalm**	81.71	317⇑	*i*P	P	09 16 40.8	-0.6
	comp=Z,19nm,1.1s,mb4.9						
BRMO	**Bormio**	82.20	316	*e*P	P	09 16 44.2	+0.4
NB2	**NORSAR Subarra**	82.20	331	P	P	09 16 44.5	+0.9
	comp=Z,5.3nm,0.9s,mb4.5,baz=92,slow=5.3						
DAVA	**Damuels**	82.55	317⇑	*i*P	P	09 16 45.5	-0.1
	comp=Z,24nm,1.2s,mb5.1						
SYO	**Syowa Base**	83.00	197	⇓P	P	09 16 49.4	+1.9
SYO	**Syowa Base**	83.00	197	⇑PcP	PcP	09 16 54.5	+1.9
PGF	**Pioggiola**	83.19	312	*e*P	P	09 16 49.0	0.0
	comp=Z,216nm,1.8s,mb5.6						
CDF	**Champ du Feu**	84.29	318	*e*P	P	09 16 54.0	-0.5
	comp=Z,16nm,0.9s,mb4.8						
SBF	**Sospel**	84.30	313	*e*P	P	09 16 54.5	-0.1
	comp=Z,53nm,0.9s,mb5.3						
HINF	**Hinteralfeld**	84.59	317	*e*P	P	09 16 55.2	-0.8
LPG	**La Plagne**	84.74	315	*e*P	P	09 16 57.1	+0.3
	comp=Z,35nm,0.9s,mb5.2						
LPL	**La Plagne**	84.75	315	*e*P	P	09 16 57.1	+0.3
	comp=Z,55nm,0.9s,mb5.4						
MBDF	**Montbardon**	84.75	314	*e*P	P	09 16 56.2	-0.7
	comp=Z,50nm,1.1s,mb5.2						
HAU	**Haudompre**	84.92	318	*e*P	P	09 16 57.2	-0.4
	comp=Z,40nm,0.8s,mb5.3						
HAU				*e*R			
	comp=Z,134nm,18.5s						
CABF	**La Chapelle**	85.16	316	*e*P	P	09 16 59.0	+0.2
ORIF	**Oris-en-Rattie**	85.38	315	*e*P	P	09 16 59.4	-0.6
ORIF				*e*R			
	comp=Z,211nm,21.0s						
BAIF	**Baives**	86.23	320	*e*P	P	09 17 04.2	+0.2
VIVF	**Saint-Julien-l**	86.24	315	*e*P	P	09 17 04.3	+0.1
SMF	**Signal de Mont**	86.70	316	*e*P	P	09 17 06.1	-0.3
	comp=Z,29nm,0.9s,mb5.2						
SSF	**Saint Saulge**	86.90	317	*e*P	P	09 17 07.6	+0.3
AVF	**Avril sur Loir**	87.02	317	*e*P	P	09 17 07.7	-0.3
	comp=Z,35nm,1.1s,mb5.2						
TCF	**Toulx Ste Croi**	87.85	316	*e*P	P	09 17 12.1	+0.1
TNA	**Tin City**	88.41	24	*e*P	P	09 17 13.9	-0.2
	comp=Z,6.5nm,1.2s,mb4.7						
RJF	**Les Rejaudoux**	88.43	315	*e*P	P	09 17 15.2	+0.5
RJF				*e*R			
	comp=Z,126nm,22.3s						
LDF	**La Druitiere**	89.18	319	*e*P	P	09 17 18.4	+0.2
FLN	**La Foliniere**	89.40	319	*e*P	P	09 17 19.3	0.0
	comp=Z,66nm,1.1s,mb5.6						
FLN				*e*R			
	comp=Z,131nm,19.0s						
MFF	**Saint Martin d**	89.44	317	*e*P	P	09 17 19.6	+0.1
GRR	**Gorron**	89.69	318	*e*P	P	09 17 21.0	+0.3
SGMF	**Saint Gilles**	90.83	318	*e*P	P	09 17 26.1	+0.1
ROSF	**Rostrenen**	91.29	319	*e*P	P	09 17 28.3	+0.1
	comp=Z,53nm,1.2s,mb5.4						
IMA	**Indian Mountai**	93.92	22	*e*P	P	09 17 40.5	+0.8
	comp=Z,115nm,1.7s,mb6.0						
INK	**Inuvik**	99.42	16	*e*P	P	09 18 05.2	+0.5
RES	**Resolute Bay**	100.01	3	*e*Pdif	P	09 18 06.0	-1.3
LAO	**LASA Array**	125.14	17	*e*PKPdf	PKPdf	09 23 25.2	+3.2
SNOW	**Snow King Moun**	126.42	23	*e*PKPdf	PKPdf	09 23 26.4	+1.9
MNV	**Mina**	127.05	32	*e*PKPdf	PKPdf	09 23 28.5	+2.6
MSU	**Marysvale**	129.94	27	*e*PKPdf	PKPdf	09 23 34.5	+3.1
PV10	**Paradox Valley**	131.42	25	*e*PKPdf	PKPdf	09 23 35.8	+1.5
WMOK	**Wichita Mounta**	138.32	17	*e*PKPpre		09 23 39.3	
MIAR	**Mount Ida**	139.71	10	*e*PKPdf	PKPdf	09 23 53.2	+3.6
PLCA	**Paso Flores**	142.19	199	*e*PKPdf	PKPdf	09 23 54.0	+0.2
LPAZ	**La Paz**	159.73	236	*e*PKPdf	PKPdf	09 24 23.2	+2.6

NEIC ***02*** *09:09:30.6, 32.03S×71.55W, h29^{km}, ML3.2(GUC), After GUC.*

GUC 02 09:09:30.6±0.7**, 32.03S×71.55W, h29^{km}**±3^{km}**, MD4.0, ML3.2, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILCH	**Illapel**	0.51	39	*e*P	Pb	09 09 41.2	+0.2
ILCH				*i* S	Sb	09 09 48.8	+0.7
ILCH				AMP		09 09 49.2	
	comp=E,5µm,0.2s						
PTCH	**Petorca**	0.57	114⇑	*i*P	Pb	09 09 42.0	-0.1
PTCH				*i* S	Sb	09 09 50.0	0.0
JACH	**Jahuel**	1.04	129	*e*P	Pn	09 09 49.5	+0.1
JACH				*i* S	Sn	09 10 03.0	+0.1
ROCH	**El Roble**	1.04	155	*e*P	Pn	09 09 49.3	-0.2
ROCH				*i* S	Sn	09 10 04.4	+1.3
LCCH	**Las Cruces**	1.44	181	*e*P	Pn	09 09 55.3	+0.1
RCDM	**Rinconada Maip**	1.58	157	*e*P	Pn	09 09 57.5	+0.3
RCDM				AMP		09 10 20.3	
	comp=E,370nm,0.1s						
CLCH	**Cerro Calan**	1.61	148	*e*P	Pn	09 09 58.0	+0.5
CLCH				*i* S	Sn	09 10 18.1	+0.6
CLCH				AMP		09 10 20.3	
	comp=E,646nm,0.7s						
FCH	**Farellones**	1.67	141	*e*P	Pn	09 09 58.8	+0.4
FCH				*i* S	Sn	09 10 19.6	+0.5
FCH				AMP		09 10 20.8	
	comp=E,215nm,0.2s						
PCH	**Pirque**	1.81	152⇓	*i*P	Pn	09 10 01.1	+0.7
TLL	**Tololo Astrono**	1.96	19	*e*P	Pn	09 10 03.7	+1.1
TLL				*i* S	Sn	09 10 28.9	+2.5
TLL				AMP		09 10 32.9	
	comp=E,213nm,0.2s						
CHCH	**Chadas Angostu**	2.04	159	*e*P	Pn	09 10 04.8	+1.0
LMEL	**Las Melosas**	2.14	148	*e*P	Pn	09 10 06.1	+1.0
LMEL				*i* S	Sn	09 10 33.0	+2.1
LMEL				AMP		09 10 38.9	
	comp=N,353nm,0.1s						

NEIC ***02*** *09:41:29.0, 31.04S×69.33W, h149^{km}, MD3.8(GUC), After GUC.*

GUC 02 09:41:29.0±0.8**, 31.04S×69.33W, h149^{km}**±16^{km}**, MD3.8, ML3.9, 1C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	1.54	304⇑	*i*P	P	09 42 00.3	+1.0
TLL				*i* S	S	09 42 23.2	+0.7
TLL				AMP		09 42 26.0	
	comp=N,757nm,0.5s						
ILCH	**Illapel**	1.68	249	*e*P	P	09 42 00.9	+0.1
ILCH				*i* S	S	09 42 25.0	-0.3
ILCH				AMP		09 42 29.6	
	comp=N,861nm,0.1s						
PTCH	**Petorca**	1.83	228	*e*P	P	09 42 02.6	+0.1
PTCH				*i* S	S	09 42 27.6	-0.6
PTCH				AMP		09 42 32.5	
	comp=N,859nm,0.2s						
JACH	**Jahuel**	1.96	213	*e*P	P	09 42 04.5	+0.5
PACH	**Papudo**	2.34	230	*e*P	P	09 42 08.4	-0.2
ROCH	**El Roble**	2.40	216	*e*P	P	09 42 09.7	+0.3
FCH	**Farellones**	2.43	199	*e*P	P	09 42 10.6	+0.8
FCH				*i* S	S	09 42 41.7	+0.8
FCH				AMP		09 42 49.3	
	comp=E,294nm,0.4s						
CLCH	**Cerro Calan**	2.57	203	*e*P	P	09 42 11.7	+0.2
CLCH				*i* S	S	09 42 43.7	-0.3
CLCH				AMP		09 42 48.2	
	comp=E,371nm,0.4s						
VACH	**Vallenar**	2.75	333	*e*P	P	09 42 14.0	+0.2
VACH				*i* S	S	09 42 47.1	-0.9
VACH				AMP		09 42 48.5	
	comp=N,1µm,0.3s						
RCDM	**Rinconada Maip**	2.75	207	*e*P	P	09 42 13.6	-0.2
RCDM				*i* S	S	09 42 48.1	+0.1
RCDM				AMP		09 42 48.8	
	comp=E,298nm,0.2s						
PCH	**Pirque**	2.77	201	*e*P	P	09 42 13.8	-0.2
CPCH	**Copiapo**	3.77	346	*e*P	P	09 42 26.6	-0.5
TRQA	**Tornquist**	9.26	141	*e*P	P	09 43 36.4	-3.7
	comp=E,7.9nm,0.6s						

CSEM ***02*** *10:03:55.1±0.5, 27.67N×17.83W, h37^{km}±15^{km}, mb4.1/5, Error ellipse: s-maj=9.4km s-min=4.7km az=177.0, After MDD*

MDD 02 10:03:55.1±0.5**, 27.67N×17.83W, h37^{km}**±15^{km}**, mbLg2.4/**5**, 1C, Error ellipse: s-maj=9.4km s-min=4.7km az=177.0, PRXIMO TT_MODEL: CANARY, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGOM	**La Gomera**	0.73	49	⇑P	P	10 04 07.7	-1.4
	11nm,0.0s,SNR=18						
EGOM				S	S	10 04 17.1	-2.1
	52nm,0.1s,SNR=26						
EGOM	**La Gomera**	0.73	49	P	P	10 04 07.7	-1.3
	11nm,0.0s,SNR=18						
EGOM				S	S	10 04 17.1	-2.1
	52nm,0.1s,SNR=26						
EHIG	**Higuera**	0.88	2	P	P	10 04 09.3	-1.8
	6.7nm,0.0s,SNR=7.9						
EHIG				S	S	10 04 20.6	-2.3
	17nm,0.1s,SNR=6.3						
EHIG	**Higuera**	0.88	2	P	P	10 04 09.3	-1.8
	6.7nm,0.0s,SNR=7.9						
EHIG				S	S	10 04 20.6	-2.3
	17nm,0.1s,SNR=6.3						
CHIO	**Chio**	1.06	58	P	P	10 04 11.2	-2.5
	14nm,0.1s,SNR=4.0						
CHIO				S	S	10 04 23.7	-3.8
	24nm,0.1s,SNR=7.9						
CCAN	**Las Canadas**	1.22	63	P	P	10 04 15.8	-0.1
	0.5nm,0.1s,SNR=7.9						
CCAN				S	S	10 04 28.5	-3.0
	2.5nm,0.1s,SNR=9.0						
EBAJ	**Bajamar**	1.57	56	P	P	10 04 21.4	+0.3
	0.2nm,0.1s,SNR=4.0						
EBAJ				S	S	10 04 37.3	-3.1
	1.3nm,0.1s,SNR=7.9						
EOSO	**Osorio**	2.06	78	S	S	10 04 48.2	-4.4
	0.6nm,0.1s,SNR=4.0						

NEIC ***02*** *10:40:52.1, 27.02S×69.55W, h119^{km}, After GUC.*

GUC 02 10:40:52.1±1.0**, 27.02S×69.55W, h119^{km}**±12^{km}**, ML4.4, 2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	**Copiapo**	0.79	245⇓	*i*P	P	10 41 12.0	-0.2
CPCH				*i* S	S	10 41 27.6	+0.2
VACH	**Vallenar**	1.88	214	*e*P	P	10 41 24.1	-0.3
VACH				*i* S	S	10 41 49.2	+0.3
VACH				AMP		10 41 51.1	
	comp=E,5µm,0.1s						
CPN1	**Cerro Paranal**	2.51	342⇓	*i*P	P	10 41 33.8	+1.1
CPN1				*i* S	S	10 42 04.2	+0.8
CPN1				AMP		10 42 08.6	
	comp=N,2µm,0.3s						
TLL	**Tololo Astrono**	3.32	199	*e*P	P	10 41 41.7	-1.8
TLL				*i* S	S	10 42 20.9	-1.8
TLL				AMP		10 42 25.0	
	comp=N,361nm,0.5s						
ANCH	**Antofagasta**	3.42	347	*e*P	P	10 41 44.1	-0.8
SPCH	**San Pedro de A**	4.28	17	*e*P	P	10 41 56.4	0.0
SPCH				*i* S	S	10 42 46.0	+0.3
LVC	**Limon Verde**	4.43	8	*e*P	P	10 41 57.5	-1.0
LVC				*i* S	S	10 42 47.7	-1.7

NEIC ***02*** *11:09:30.4, 16.60N×94.81W, h87^{km}, MD3.8(MEX), After MEX.*

MEX 02 11:09:30.4±1.7**, 16.60N×94.81W, h87^{km}**±18^{km}**, MD3.8, 1C-1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	0.49	352⇓	*i*P	P	11 09 43.3	-1.6
CMIG				*i* S	S	11 09 53.6	-2.1
HUIG	**Huatulco**	1.50	237	*i* P	P	11 09 53.6	-2.8
HUIG				*i* S	S	11 10 14.1	-1.6
OXX	**Oaxaca**	1.90	285	*i* P	P	11 10 00.7	-0.9
OXX				*i* S	S	11 10 24.2	-0.5
VHO	**Vista Hermosa**	1.90	285⇑	*i*P	P	11 10 00.5	-1.3
VHO				*i* S	S	11 10 23.4	-1.4
CCIG	**Comitan**	2.58	97	*i* P	P	11 10 11.6	+0.5
CCIG				*i* S	S	11 10 36.3	-5.2

NEIC ***02*** *11:17:03.8, 32.16S×71.74W, h27^{km}, ML3.0(GUC), After GUC.*

GUC 02 11:17:03.8±0.5**, 32.16S×71.74W, h27^{km}**±2^{km}**, MD4.0, ML3.0, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	0.46	146⇓	*i*P	Pb	11 17 13.1	-0.3
PACH				*i* S	Sb	11 17 20.3	+0.4
ROCH	**El Roble**	1.02	143	*e*P	Pn	11 17 22.2	-0.2
ROCH				*i* S	Sb	11 17 36.4	+0.7
JACH	**Jahuel**	1.10	119	*i* P	Pn	11 17 23.2	-0.4
JACH				*i* S	Sn	11 17 38.1	0.0
LCCH	**Las Cruces**	1.32	174	*e*P	Pn	11 17 26.5	-0.3
LCCH				*i* S	Sn	11 17 43.7	+0.1
RCDM	**Rinconada Maip**	1.54	150	*e*P	Pn	11 17 30.4	+0.5
RCDM				*i* S	Sn	11 17 50.4	+1.1
RCDM				AMP		11 17 52.0	
	comp=E,237nm,0.1s						
CLCH	**Cerro Calan**	1.60	141	*e*P	Pn	11 17 31.3	+0.6
CLCH				*i* S	Sn	11 17 52.3	+1.7
CLCH				AMP		11 17 58.0	
	comp=E,295nm,0.3s						
FCH	**Farellones**	1.69	134	*e*P	Pn	11 17 32.5	+0.5
FCH				*i* S	Sn	11 17 54.6	+1.7
FCH				AMP		11 17 57.6	
	comp=E,251nm,0.2s						
PCH	**Pirque**	1.79	145	*e*P	Pn	11 17 34.2	+0.8
PCH				*i* S	Sn	11 17 57.5	+2.1
CHCH	**Chadas Angostu**	1.99	153	*e*P	Pn	11 17 37.1	+0.8
LMEL	**Las Melosas**	2.12	143	*e*P	Pn	11 17 38.9	+0.6

LMEL				*i* S	Sn	11 18 05.9	+1.9
LMEL				AMP		11 18 16.1	
	comp=N,154nm,0.2s						
TLL	**Tololo Astrono**	**2.14**	**22**	*e*P	Pn	11 17 39.5	+1.0
TLL				*i* S	Sn	11 18 06.9	+2.5
TLL				AMP		11 18 13.9	
	comp=E,253nm,0.5s						

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*NEIC **02** 11:22:53.5, 32.16S×71.74W, h24^{km}, ML2.8(GUC), After GUC.*

GUC 02 11:22:53.5±0.8**, 32.16S×71.74W, h24**^{km}±4^{km}**, MD3.8, ML2.8, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.45**	**146**	⇓*i*P	Pb	11 23 02.9	0.0
PACH				*i* S	Sb	11 23 10.0	+0.8
JACH	**Jahuel**	**1.10**	**118**	⇑*i*P	Pn	11 23 13.0	-0.5
JACH				*i* S	Sb	11 23 27.8	+0.2
RCDM	**Rinconada Maip**	**1.54**	**150**	*e*P	Pn	11 23 19.7	-0.1
RCDM				*i* S	Sn	11 23 39.8	+0.6
RCDM				AMP		11 23 41.8	
	comp=E,176nm,0.1s						
CLCH	**Cerro Calan**	**1.59**	**141**	*e*P	Pn	11 23 21.1	+0.5
CLCH				*i* S	Sn	11 23 42.2	+1.7
CLCH				AMP		11 23 47.8	
	comp=E,169nm,0.4s						
FCH	**Farellones**	**1.68**	**134**	*e*P	Pn	11 23 22.4	+0.5
FCH				*i* S	Sn	11 23 44.8	+2.0
FCH				AMP		11 23 47.2	
	comp=E,199nm,0.2s						
PCH	**Pirque**	**1.78**	**145**	*e*P	Pn	11 23 23.6	+0.2
CHCH	**Chadas Angostu**	**1.99**	**153**	*e*P	Pn	11 23 26.9	+0.7
LMEL	**Las Melosas**	**2.12**	**143**	*e*P	Pn	11 23 29.0	+0.9
LMEL				*i* S	Sn	11 23 56.0	+2.1
TLL	**Tololo Astrono**	**2.14**	**22**	*e*P	Pn	11 23 29.9	+1.4
TLL				*i* S	Sn	11 23 56.9	+2.4
TLL				AMP		11 24 03.8	
	comp=E,137nm,0.4s						

TAP 02 11:31:50.8, 21.61N×121.67E, h114^{km}**, ML3.6, Taiwan region**

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*HLW **02** 12:39:46.5, 35.02N×24.71E, h33^{km}, Mb3.3*
*CSEM **02** 12:39:46.6±0.1, 34.68N×24.33E, h15^{km}, MD3.6, Error ellipse: s-maj=5.9km s-min=2.6km az=68.0*
*ATH **02** 12:39:48.7, 34.87N×24.23E, h14^{km}±2^{km}, MD3.6/8*
*NEIC **02** 12:39:48.7, 34.87N×24.23E, h14^{km}, MD3.6(ATH), After ATH.*

ISC 02 12:39:46.7±1.0**, 34.72N**±0.05×**24.3E**±0.1**, h20**^{km}±12^{km}**, n13, σ1**^{s}.**34**/16**, 2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.19**	**309**	*e*PG	**Pb**	**12 39 52.0**	**+0.2**
VAM	**Vamos**	**0.69**	**355**	*e*PB	**Pb**	**12 39 59.3**	**-0.6**
VAM				*e*SB	**Sb**	**12 40 07.0**	**-2.0**
NPS	**Neapolis**	**1.23**	**63**	*e*PG	**Pb**	**12 40 11.6**	**+2.5**
KYTH	**Kithira**	**1.86**	**327**	*e*PG	**Pn**	**12 40 21.1**	**+3.2**
VLI	**Veliai**	**2.27**	**332**	*e*PN	**Pn**	**12 40 26.0**	**+2.1**
KARP	**Karpathos**	**2.51**	**70**	*e*PB	**Pb**	**12 40 31.0**	**+0.1**
APE	**Apeiranthos**	**2.56**	**23**	*e*PN	**Pn**	**12 40 28.0**	**0.0**
SLUM		**3.31**	**166**	P	**Pn**	**12 40 39.6**	**+0.9**
SLUM				S	**Sn**	**12 41 17.8**	**-0.1**
MGER	**Gerania Oros**	**3.36**	**346**	*e*PN	**Pn**	**12 40 38.0**	**-1.4**
SWA2		**5.55**	**169**	⇓P	**Pn**	**12 41 09.9**	**-0.4**
SWA1		**5.57**	**167**	⇓P	**Pn**	**12 41 10.7**	**-0.1**
SWA1				S	**Sn**	**12 42 11.9**	**-3.0**
SWA1		**5.57**	**167**	P	**Pn**	**12 41 10.6**	**-0.1**
CSS	**Prodhromos**	**7.45**	**86**	*e*P	**Pn**	**12 41 29.6**	**-7.5**
	101nm,0.6s						

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*CSEM **02** 12:42:39.8±0.9, 41.17N×39.16E, h32^{km}±14^{km}, MD2.8, Error ellipse: s-maj=34.5km s-min=10.1km az=53.0, After ISK*

ISK 02 12:42:39.8, 41.17N×39.16E, h32^{km}**, MD2.8, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**0.75**	**161**	PG	Pn	12 42 54.2	+0.1
GUMT				SG	Sb	12 43 04.8	+0.5
BCA	**Borcka**	**1.87**	**81**	PN	Pn	12 43 10.4	+0.2
BCA				*e*SN	Sn	12 43 32.6	-0.4
EZM	**Erzurum**	**2.10**	**126**	PN	Pn	12 43 13.6	+0.1

IGQ 02 13:08:22.8, 0.75S×80.01W, h28^{km}±5^{km}**, mb4.0, 1C-1D, Error ellipse: s-maj=7.3km s-min=3.8km az=175.8, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAGD	**Magdalena**	**0.71**	**19**	P	Pb	13 08 37.3	+0.7
TERV	**Terraza Guagua**	**1.52**	**68**	P	Pn	13 08 49.8	+1.4
PINO	**Pino**	**1.52**	**67**	P	Pn	13 08 49.5	+1.0
GGP	**Refugio Guagua**	**1.52**	**68**	P	Pn	13 08 52.0	+3.5
NAS1	**Nasa**	**1.54**	**86**	P	Pn	13 08 51.5	+2.8
IGUA	**Igualata**	**1.56**	**118**	P	Pn	13 08 50.5	+1.5
IGUA				S	Sn	13 09 12.8	+4.3
YANA	**Yana**	**1.57**	**67**	⇓P	Pn	13 08 50.0	+0.8
YANA				S	Sn	13 09 12.1	+3.3
VC1	**Cotopaxi 1**	**1.61**	**86**	P	Pn	13 08 52.6	+2.8
TAMB	**Tambo**	**1.64**	**88**	P	Pn	13 08 53.8	+3.5
PISA	**Pisayambo**	**1.65**	**101**	P	Pn	13 08 53.3	+2.9
CUSU	**Cusua**	**1.68**	**114**	P	Pn	13 08 53.2	+2.5
JUIV	**Juive**	**1.69**	**114**	P	Pn	13 08 52.5	+1.6
RETU	**Refugio**	**1.71**	**114**	P	Pn	13 08 53.6	+2.4
ARRY	**Arrayan**	**1.73**	**116**	P	Pn	13 08 53.2	+1.7
ULBA	**Ulba**	**1.75**	**114**	P	Pn	13 08 53.9	+2.1
COTA	**Cotacachi**	**1.99**	**57**	P	Pn	13 08 56.8	+1.6
CAYR	**Refugio Cayamb**	**2.14**	**69**	P	Pn	13 09 01.6	+4.1
CAYA	**Cayambe**	**2.18**	**68**	⇑P	Pn	13 09 01.1	+3.1

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*NEIC **02** 13:17:39.7, 31.94N×116.22W, h7^{km}, ML4.1(PAS), After PAS.*

ECX 02 13:17:40.0±0.5**, 31.92N×116.14W, h11**^{km}±5^{km}**, MD4.0, ML4.1, 10C-3D, Fault plane solution: NP1:**φ$_s$340°**,** δ80°**,** λ-90°.**, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDX	**Rancho Dowling**	**0.17**	**86**	⇑*e*P	Pg	13 17 43.8	-0.1
RDX				*e*S	Sg	13 17 46.6	+0.3
RDX				⇑*e*		13 17 47.4	
	comp=E,37µm,0.5s						
ENX	**Ensenada**	**0.45**	**265**	⇑*e*P	Pg	13 17 48.0	-1.1
ENX				*e*S	Sg	13 17 54.3	-0.9
ENX				⇓*e*		13 18 01.0	
	comp=E,16µm,0.6s						
ECNX	**Esteban Cantu**	**0.47**	**236**	⇑*e*P	Pg	13 17 48.5	-1.0
ECNX				⇑*e*P		13 17 48.0	
ECNX				*e*S	Sg	13 17 54.3	-1.6
ECNX				*e*S	Sg	13 17 55.1	-0.8
PBX	**Punta Banda**	**0.53**	**250**	⇑*e*P	Pg	13 17 49.5	-1.2
PBX				*e*S	Sg	13 17 56.8	-1.0
PBX				⇓*e*		13 17 59.3	
	comp=N,17µm,0.5s						
CBX	**Cerro Bola**	**0.59**	**312**	⇑*e*P	Pb	13 17 50.5	-1.4
CBX				*e*S	Sg	13 17 58.4	-1.6
RMX	**La Rumorosa**	**0.68**	**5**	⇓*e*P	Pb	13 17 52.2	-1.2
RMX				*e*S	Sb	13 18 01.5	-1.2
YUH	**Yuha Desert**	**0.75**	**14**	⇑*e*P	Pb	13 17 53.4	-1.2
CPBX	**Cerro Prieto**	**0.87**	**55**	⇑*e*P	Pb	13 17 56.0	-0.7
CPBX				*e*S	Sb	13 18 09.6	+1.5
BAR	**Barrett**	**0.88**	**330**	*e*P	Pb	13 17 54.2	-2.7
SPX	**San Pedro Mart**	**1.05**	**146**	⇑*e*P	Pb	13 17 58.5	-1.2
SPX				*e*S	Sb	13 18 12.3	-1.0
PFO	**Pinyon Flat Ob**	**1.71**	**351**	*e*P	Pn	13 18 08.2	-1.8
MWC	**Mount Wilson**	**2.80**	**326**	*e*Pn	Pn	13 18 23.4	-2.4
GVA	**Apache Junctio**	**4.13**	**68**	Pn	Pn	13 18 41.8	-2.8
DAC	**Darwin (Calif)**	**4.51**	**345**	P	Pn	13 18 46.2	-3.8
TUC	**Tucson**	**4.56**	**84**	*e*Pn	Pn	13 18 46.1	-4.6
OMM	**Old Mammoth Mi**	**6.15**	**338**	*e*Pn	Pn	13 19 10.9	-2.2
TPH	**Tonopah**	**6.20**	**352**	*e*Pn	Pn	13 19 12.2	-1.7
MNV	**Mina**	**6.70**	**346**	P	Pn	13 19 25.2	+4.3
MVU	**Marysvale**	**7.31**	**25**	Pn	Pn	13 19 24.9	-4.6
	comp=N,1.5nm,0.4s						
MSU	**Marysvale**	**7.33**	**25**	Pn	Pn	13 19 25.0	-4.7
LENM	**Lemitar**	**8.02**	**71**	Pn	P	13 19 34.6	-4.7
SRU	**San Rafael**	**8.51**	**31**	*e*Pn	P	13 19 40.0	-6.2
PV10	**Paradox Valley**	**8.68**	**40**	*e*Pn	P	13 19 41.8	-6.7
PV01	**Paradox Valley**	**8.77**	**43**	Pn	P	13 19 46.0	-3.8
MNTX	**Cornudas Mount**	**9.16**	**89**	*e*Pn	P	13 19 51.2	-3.9

IGQ 02 13:17:45.6, 0.88S×81.19W, h7^{km}±6^{km}**, mb4.0, 2C, Error ellipse: s-maj=21.5km s-min=7.1km az=142.2, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.66**	**105**	⇑P	Pg	13 17 57.9	-1.0
TERV	**Terraza Guagua**	**2.67**	**75**	P	Pn	13 18 31.7	+1.8
PINO	**Pino**	**2.67**	**75**	P	Pn	13 18 30.5	+0.7
NAS1	**Nasa**	**2.72**	**85**	P	Pn	13 18 32.7	+2.2
YANA	**Yana**	**2.72**	**74**	P	Pn	13 18 31.1	+0.6
VC1	**Cotopaxi 1**	**2.79**	**85**	P	Pn	13 18 35.7	+4.2
ARRY	**Arrayan**	**2.80**	**103**	P	Pn	13 18 32.9	+1.3
ARRY				S	Sn	13 19 07.0	+0.9
TAMB	**Tambo**	**2.82**	**86**	P	Pn	13 18 37.6	+5.7
ANTI	**Antisana**	**3.05**	**82**	P	Pn	13 18 38.2	+2.9
CAYR	**Refugio Cayamb**	**3.30**	**74**	⇑P	Pn	13 18 41.9	+3.2
CAYA	**Cayambe**	**3.33**	**74**	P	Pn	13 18 41.4	+2.2

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*BJI **02** 13:22:36.8, 8.32N×94.06E, h20^{km}, mB5.2, mb4.7, Ms5.0, Msz4.8*
*MOS **02** 13:22:36.5±1.8, 7.97N×93.89E, h33^{km}, mb5.2/25, MS4.8/8, Error ellipse: s-maj=17.9km s-min=7.3km az=113.3*
*NEIC **02** 13:22:37.2±0.3, 8.32N×94.31E, mb5.0/45, MS4.5/1, Error ellipse: s-maj=10.6km s-min=8.6km az=54.0*
*HRVD **02** 13:22:37.2±0.2, 8.09N×94.27E, h12^{km}, MW5.1/60, Centroid moment Tensor Solution. LP body waves: s32,c51;Mantle waves: s60,c112; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.01±.14; M$_{\theta\theta}$0.86±.13; M$_{\phi\phi}$1.15±.16; M$_{r\theta}$0.15±.37; M$_{\theta\phi}$5.38±.11; M$_{\phi r}$0.31±.39; Best double couple: M$_0$5.391×10^{16} NP1: φ$_s$89°, δ86°, λ0°. NP2:φ$_s$179°, δ90°, λ-176°. Principal axes: T 6.398, Plg2°, Azm314°; N -2.017, Plg86°, Azm185°; P -4.384, Plg3°, Azm44°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 13:22:36.2±0.3**, 8.18N**±0.04×**94.26E**±0.03**, h22**^{km}**, h22**^{km}±1.3^{km}**:pP-P, n215, σ1**^{s}.**24**/234**, mb5.0**/68**, MS4.8**/22**, 14C-12D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.38**	**99**	P	**Pn**	**13 24 07.0**	**-4.4**
	540nm,0.9s						
NNT	**Nongplab**	**6.94**	**50**	P	**Pn**	**13 24 19.4**	**+0.1**
NST	**Nakhon Sawan**	**9.40**	**37**	P	**P**	**13 24 51.6**	**-1.9**
CM31	**Chiang Mai Arr**	**11.18**	**24**	*e*P	**P**	**13 25 16.1**	**-1.9**
	54nm,1.2s						
CHG	**Chiang Mai**	**11.51**	**23**	⇑P	**P**	**13 25 24.7**	**+2.3**
	30nm,1.2s						
NANT	**Nan**	**12.27**	**30**	P	**P**	**13 25 35.5**	**+2.8**
UBT	**Ubonrachathani**	**12.65**	**55**	P	**P**	**13 25 42.0**	**+4.1**
CHRT	**Chiangrai**	**12.79**	**24**	⇓P	**P**	**13 25 37.5**	**-2.2**
	147nm,1.2s						
PALK	**Pallekele**	**13.47**	**267**	*e*P	**P**	**13 25 48.0**	**-0.6**
VIS	**Vishakhapatnam**	**14.25**	**313**	*e*P	**P**	**13 26 00.2**	**+1.2**
VIS				*e*		13 26 12.4	
	comp=Z,144nm,0.9s						
VIS				*e*S	**S**	**13 28 29.8**	**-7.6**
BWNR	**Bhubaneshwar**	**14.56**	**327**	*e*P	**P**	**13 26 00.6**	**-2.5**
BWNR				*e*		13 26 14.9	
	comp=Z,199nm,1.0s						
BWNR				*e*		13 28 31.4	
MDRS	**Chennai**	**14.60**	**291**	*e*	**P**	**13 26 12.0**	**+8.4**
MDRS				*e*		13 28 26.0	
MDRS				*e*		13 29 26.0	
CAL	**Calcutta**	**15.37**	**339**	*e*	**P**	**13 26 05.5**	**-8.2**
CAL				*e*		13 29 18.4	
SALM	**Salem**	**16.19**	**284**	*e*P	**P**	**13 26 29.0**	**+4.8**
SALM				*e*		13 29 12.0	
SHL	**Shillong**	**17.43**	**353**	*e*P	**P**	**13 26 35.0**	**-4.9**
SHL				*e*		13 30 01.0	
HYB	**Hyderabad**	**17.84**	**302**	*e*P	**P**	**13 26 49.0**	**+4.1**
HYB				*e*S	**S**	**13 30 10.0**	**+9.3**
HYB	**Hyderabad**	**17.84**	**302**	*i* P	**P**	**13 26 45.0**	**+0.1**
HYB				*e*S	**S**	**13 30 03.0**	**+2.3**
QIZ	**Qiongzhong**	**18.57**	**53**	P	**P**	**13 26 55.0**	**+1.0**
QIZ				*e*S	**S**	**13 30 17.1**	**-0.1**
QIZ				XS		13 30 31.2	
QIZ				AMB	AMB		
	comp=Z,474nm,7.9s						
QIZ				LR	LR		
	comp=N,7µm,13.9s						
KMI	**Kunming**	**18.69**	**25**	⇑P	**P**	**13 27 00.1**	**+4.7**
KMI				XP		13 27 06.2	
KMI				PP	PP	13 27 11.3	0.0
KMI				S	**S**	**13 30 21.3**	**+1.5**
KMI				XS		13 30 32.5	
KMI				SS	SS	13 30 42.9	-1.8
KMI				AMB	AMB		
	comp=Z,41nm,1.4s						
KMI				AMB	AMB		
	comp=Z,493nm,3.8s						
KMI				LR	LR		
	comp=N,2µm,14.4s						
KMI				LR	LR		
	comp=E,3µm,17.5s						
KMI				LR	LR		
	comp=Z,2µm,12.5s						
KMI	**Kunming**	**18.69**	**25**	⇑P	**P**	**13 27 00.1**	**+4.7**
	comp=Z,41nm,1.4s						
KMI				sP		13 27 06.2	
KMI				PP	PP	13 27 11.3	0.0
KMI				S	**S**	**13 30 21.3**	**+1.5**
KMI				sS		13 30 32.5	
KMI				SS	SS	13 30 42.9	-1.8
NGP	**Nagpur**	**19.54**	**313**	*e*	**P**	**13 27 09.1**	**+3.7**
NGP				*e*		13 30 42.9	
MNGI	**Mangalore**	**19.68**	**286**	*i* P	**P**	**13 27 08.3**	**+1.4**
MNGI				*i* S	**S**	**13 30 48.9**	**+6.9**
COCO	**West Island**	**20.40**	**173**	*e*P	**P**	**13 27 17.5**	**+2.9**
	comp=Z,228nm,1.0s						
ALBI	**Allahabad**	**20.76**	**327**	*e*P	**P**	**13 27 17.0**	**-1.3**
JIRN	**Jiri**	**20.82**	**339**	*e*P	**P**	**13 27 12.6**	**-6.3**
PKI	**Pulchoki**	**21.02**	**338**	*e*P	**P**	**13 27 15.2**	**-5.8**
GUN	**Gumba**	**21.16**	**339**	*e*P	**P**	**13 27 14.6**	**-7.7**
DMN	**Daman**	**21.17**	**337**	*e*P	**P**	**13 27 16.1**	**-6.4**
	comp=Z,388nm,1.2s,mb5.6						
KKN	**Kakani**	**21.27**	**338**	*e*P	**P**	**13 27 16.1**	**-7.3**
	comp=Z,226nm,1.2s,mb5.4						
KAD	**Karad**	**21.56**	**297**	*e*P	**P**	**13 27 28.1**	**+1.7**
KAD				*e*		13 27 35.0	
	comp=Z,60nm,1.3s						
LSA	**Lhasa**	**21.60**	**353**	P	**P**	**13 27 24.2**	**-2.6**
LSA				AP		13 27 32.7	
LSA				XP		13 27 37.0	
LSA				S	**S**	**13 31 20.0**	**0.0**
LSA				AMB	AMB		
	comp=Z,150nm,4.3s						
LSA				LR	LR		
	comp=N,580nm,23.8s						
LSA				LR	LR		
	comp=E,1µm,29.5s						
GYA	**Guiyang**	**21.66**	**31**	⇑*i*P	**P**	**13 27 26.0**	**-1.4**
GYA				AP		13 27 35.0	
GYA				XP		13 27 39.1	
GYA				S	**S**	**13 31 26.9**	**+5.8**
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
GYA				AMB	AMB		
	comp=Z,460nm,5.4s						
GYA				LR	LR		
	comp=N,3µm,14.4s,MS5.0						
GYA				LR	LR		
	comp=E,3µm,13.2s,MS5.0						
GYA				LR	LR		
	comp=Z,2µm,19.2s						
GKN	**Gorkha**	**21.71**	**336**	*e*P	**P**	**13 27 19.4**	**-8.5**
	comp=Z,257nm,1.0s,mb5.6						
KOLN	**Koldanda**	**21.93**	**334**	*e*P	**P**	**13 27 21.7**	**-8.4**
BHPL	**Bhopal**	**22.02**	**315**	*e*P	**P**	**13 27 32.8**	**+1.8**
BHPL				*e*		13 27 40.1	
	comp=Z,75nm,1.3s						
BHPL				*e*		13 31 27.4	
POO	**Poona**	**22.34**	**299**	*e*P	**P**	**13 27 35.3**	**+1.1**
POO				*e*		13 27 42.9	
	comp=Z,57nm,1.2s						
POO				*i*		13 31 52.0	
CD2	**Chengdu**	**24.29**	**20**	⇓*i*P	**P**	**13 27 58.0**	**+4.7**
CD2				AMB	AMB		
	comp=Z,90nm,0.7s,mb5.3						
CD2				AMB	AMB		
	comp=Z,320nm,3.3s						
CD2				LR	LR		
	comp=N,3µm,10.2s						
CD2				LR	LR		
	comp=Z,3µm,10.8s,MS5.0						
LGTI	**Lohaghat**	**24.92**	**330**	*e*P	**P**	**13 28 00.0**	**+0.7**
NDI	**New Delhi**	**25.95**	**324**	*e*P	**P**	**13 28 09.0**	**-0.1**
NDI				*e*		13 32 51.0	
DDI	**Dehra Dun**	**26.75**	**328**	*e*P	**P**	**13 28 16.5**	**+0.2**
DDI				*e*		13 33 02.0	
SDNR	**Sundarnagar**	**28.25**	**328**	*e*P	**P**	**13 28 30.2**	**+0.3**
QZH	**Quanzhou**	**28.58**	**51**	*e*P	**P**	**13 28 34.1**	**+1.1**
QZH				*e*S	**S**	**13 33 17.0**	**-1.5**
QZH				LR	LR		
	comp=N,2µm,9.3s						
QZH				LR	LR		
	comp=E,4µm,13.2s						
QZH				LR	LR		
	comp=Z,6µm,14.4s,MS5.3						
LZH	**Lanzhou**	**29.12**	**16**	*e*P	**P**	**13 28 37.9**	**+0.1**
LZH				AP	pP	13 28 47.0	+2.7
LZH				XP	sP	13 28 51.2	+4.1
LZH				PP	PP	13 29 34.2	+1.9
LZH				*e*S	**S**	**13 33 25.4**	**-1.7**
LZH				XS		13 33 41.3	
LZH				SS	SS	13 34 55.0	-2.2
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,173nm,5.3s						
LZH				LR	LR		
	comp=N,1µm,12.7s						
LZH				LR	LR		
	comp=Z,2µm,16.9s,MS4.7						
LZH	**Lanzhou**	**29.12**	**16**	*e*P	**P**	**13 28 37.9**	**+0.1**
	comp=Z,42nm,1.5s,mb5.0						
LZH				pP	pP	13 28 47.0	+2.7
LZH				sP	sP	13 28 51.2	+4.1
LZH				PP	PP	13 29 34.2	+1.9
LZH				*e*S	**S**	**13 33 25.4**	**-1.7**
LZH				sS		13 33 41.3	
LZH				SS	SS	13 34 55.0	-2.2
LZH				LR	LR		
	comp=Z,2µm,16.9s,MS4.7						
THN	**Thein Dam**	**29.64**	**327**	*e*	**P**	**13 28 46.8**	**+4.3**
GTA	**Gaotai**	**31.49**	**8**	*e*P	**P**	**13 28 59.5**	**+0.8**
GTA				AP	pP	13 29 07.7	+2.5
GTA				XP	sP	13 29 12.3	+4.2
GTA				PP	PP	13 29 59.3	-3.7
GTA				PCP	PcP	13 31 57.6	+6.0
GTA				S	**S**	**13 34 07.2**	**+2.8**
GTA				XS		13 34 20.1	
GTA				SCP		13 35 36.9	
GTA				SCS	ScS	13 39 30.4	+1.9
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.4						
GTA				AMB	AMB		
	comp=Z,99nm,6.5s						
GTA				LR	LR		
	comp=N,627nm,18.3s,MS4.5						
GTA				LR	LR		
	comp=E,660nm,14.4s,MS4.5						
GTA				LR	LR		
	comp=Z,556nm,18.6s,MS4.3						
NJ2	**Nanjing**	**32.96**	**41**	*e*P	**P**	**13 29 14.1**	**+2.5**
NJ2				AP	pP	13 29 25.6	+7.4
NJ2				PP	PP	13 30 24.8	+2.6
NJ2				S	**S**	**13 34 29.0**	**+1.6**
NJ2				XS		13 34 46.0	
NJ2				AMB	AMB		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=N,2µm,18.4s,MS5.1						
NJ2				LR	LR		
	comp=E,2µm,16.9s,MS5.1						
NJ2				LR	LR		
	comp=Z,2µm,12.8s,MS4.9						
SSE	**Sheshan**	**33.92**	**44**	P	**P**	**13 29 16.0**	**-4.0**
	comp=Z,27nm,0.7s,mb5.3						
SSE				sP	sP	13 29 28.6	-0.8
SSE				PcP	PcP	13 31 51.9	-6.4
SSE				S	**S**	**13 34 42.6**	**+0.3**
SSE				sS		13 34 56.7	
SSE				SS	SS	13 37 11.6	+22
SSE				LR	LR		
	comp=Z,1µm,12.8s,MS4.8						
BTO	**Baotou**	**35.21**	**21**	*e*P	**P**	**13 29 30.5**	**-0.5**
KSH	**Kashi**	**35.24**	**335**	*e*P	**P**	**13 29 30.6**	**-0.7**
KSH				*e*AP	pP	13 29 40.7	+2.9
KSH				*e*XP	sP	13 29 44.7	+4.1
KSH				*e*PP	PP	13 30 47.5	-3.1
KSH				*e*PCP	PcP	13 32 03.5	+1.4
KSH				*e*S	**S**	**13 34 59.0**	**-3.8**
KSH				*e*XS		13 35 15.0	
KSH				*e*SCP		13 35 44.2	
KSH				*e*PCS		13 35 46.8	
KSH				*e*SS	SS	13 37 12.3	-7.6
KSH				*e*SCS	ScS	13 39 46.3	-1.7
KSH				AMB	AMB		
	comp=Z,50nm,2.2s,mb5.1						
KSH				LR	LR		
	comp=N,1µm,18.4s,MS4.9						
KSH				LR	LR		
	comp=E,1µm,15.0s,MS4.9						
WMQ	**Urumqi**	**35.96**	**352**	P	**P**	**13 29 37.0**	**-0.3**
WMQ				AP	pP	13 29 47.0	+3.1
WMQ				XP	sP	13 29 51.0	+4.3
WMQ				PP	PP	13 30 58.0	-1.1
WMQ				S	**S**	**13 35 11.0**	**-2.8**
WMQ				SS	SS	13 37 33.0	-3.3
WMQ				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
WMQ				LR	LR		
	comp=N,524nm,16.0s,MS4.7						
WMQ				LR	LR		
	comp=E,945nm,15.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,573nm,12.0s,MS4.6						
HHC	**Hu-ho-hao-te**	**35.99**	**23**	*e*P	**P**	**13 29 40.0**	**+2.4**
HHC				AP	pP	13 29 49.8	+5.7
HHC				XP	sP	13 29 53.6	+6.7
HHC				PP	PP	13 31 03.7	+4.2
HHC				PCP	PcP	13 32 01.7	-2.5
HHC				S	**S**	**13 35 21.9**	**+7.6**
HHC				SCP		13 35 45.6	
HHC				SCS	ScS	13 39 48.5	-3.5
HHC				AMB	AMB		
	comp=Z,22nm,1.2s,mb5.0						
HHC				AMB	AMB		
	comp=Z,122nm,4.0s						
HHC				LR	LR		
	comp=N,1µm,15.4s,MS4.9						
HHC				LR	LR		
	comp=E,1µm,15.4s,MS4.9						
HHC				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
BJI	**Beijing**	**37.28**	**28**	*e*P	**P**	**13 29 51.1**	**+2.7**
BJI				S	**S**	**13 35 39.5**	**+5.5**
BJI				AMB	AMB		
	comp=Z,26nm,1.1s,mb5.0						
BJI				AMB	AMB		
	comp=Z,179nm,2.6s,mb5.4						
BJI				LR	LR		
	comp=N,725nm,19.4s,MS4.8						
BJI				LR	LR		
	comp=E,1µm,20.3s,MS4.8						
BJI				LR	LR		
	comp=Z,868nm,19.8s,MS4.5						
BJI	**Beijing**	**37.28**	**28**	*e*P	**P**	**13 29 51.1**	**+2.7**
	comp=Z,26nm,1.1s,mb5.0						
BJI				S	**S**	**13 35 39.5**	**+5.5**
BJI				SS	SS	13 38 30.3	+25

BJI				LR	LR		
	comp=Z,870nm,19.8s,MS4.5						
ULHL	Ulahol	37.47	338	P	P	13 29 51.0	+1.0
	SNR=5.2						
KZA	Kyzart	37.70	337	P	P	13 29 53.9	+2.0
	SNR=9.0						
UCH	Uchtor	38.12	336	P	P	13 29 55.4	-0.1
	SNR=7.5						
TKM2	Tokmak 2	38.29	338	P	P	13 30 03.8	+7.0
	SNR=5.5						
KBK	Karagaybulak	38.31	337	P	P	13 29 58.0	+0.9
	SNR=8.1						
AML	Almayashu	38.38	335	P	P	13 29 57.6	0.0
	SNR=15						
AAK	Ala-Archa	38.47	336	P	P	13 29 59.2	+0.9
	SNR=8.9						
AAK	Ala-Archa	38.47	336	⇓iP	P	13 29 58.1	-0.3
AAK				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
AAK	Ala-Archa	38.47	336	eP	P	13 29 57.0	-1.3
	comp=Z,30nm,1.2s,mb4.9						
FRU	Bishkek	38.59	337	eP	P	13 30 06.0	+6.6
FRU				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.8						
EKS2	Erkin-Say	38.78	336	P	P	13 30 01.2	+0.2
	SNR=8.6						
USP	Ospenovka	39.00	337	P	P	13 30 03.0	+0.1
	SNR=7.4						
MKAR	Makanchi Array	39.81	347	i P	P	13 30 09.0	-0.5
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ULN	Ulaanbaatar	41.01	13	i P	P	13 30 20.8	+1.5
ULN	Ulaanbaatar	41.01	13	eP	P	13 30 17.3	-2.1
	comp=Z,5.3nm,0.8s,mb4.2						
ZAK	Zakamensk	42.73	9	eP	P	13 30 27.5	-5.9
ZAK				e		13 32 23.6	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MOY	Mondy	43.70	6	eP	P	13 30 47.4	+6.1
MOY				pmax	pmax		
	comp=Z,23nm,4.2s						
TLY	Talaya	44.05	8	eP	P	13 30 46.1	+2.0
TLY				eS	S	13 37 18.3	+3.7
TLY				pmax	pmax		
	comp=Z,15nm,2.3s,mb4.3						
TLY				MLR	MLR		
	comp=Z,281nm,14.0s,MS4.3						
TLY	Talaya	44.05	8	eP	P	13 30 41.3	-2.8
KURK	Kurchatov	44.34	346	⇓iP	P	13 30 45.1	-1.4
KURK	Kurchatov	44.34	346	eP	P	13 30 42.6	-3.9
	comp=Z,16nm,0.9s,mb4.7						
CN2	Changchun	44.71	32	eP	P	13 30 49.8	+0.2
CN2				eAP	pP	13 30 58.8	+2.6
CN2				eS	S	13 37 22.9	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s,MS4.6						
CN2				LR	LR		
	comp=E,400nm,13.0s,MS4.6						
CN2				LR	LR		
	comp=Z,500nm,14.0s,MS4.6						
NWAO	Narrogin (SRO)	46.37	153	eP	P	13 31 01.1	-1.8
	comp=Z,16nm,0.9s,mb5.0						
NVS	Novosibirsk	47.36	351	i P	P	13 31 10.2	-0.2
NVS				eS	S	13 37 55.6	-6.4
NVS				pmax	pmax		
	comp=Z,43nm,1.7s,mb5.1						
NVS				pmax	pmax		
	comp=N,38nm,1.6s						
NVS				pmax	pmax		
	comp=E,20nm,1.6s						
NVS				smax			
	comp=N,26nm,2.4s						
NVS				smax			
	comp=E,19nm,2.8s						
MDJ	Mudanjiang	47.49	34	P	P	13 31 12.7	+1.1
MDJ				AP	pP	13 31 20.5	+2.2
MDJ				XP	sP	13 31 26.2	+5.3
MDJ				PP	PP	13 33 03.0	+0.7
MDJ				S	S	13 38 03.9	-0.1
MDJ				XS		13 38 21.2	
MDJ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,140nm,3.1s						
MDJ				LR	LR		
	comp=E,641nm,15.3s						
MDJ				LR	LR		
	comp=Z,827nm,16.3s,MS4.8						
WRAB	Tennant Creek	48.35	126	eP	P	13 31 17.0	-1.6
	comp=Z,11nm,0.8s,mb4.9						
WB2	Warramunga Arr	48.35	126	⇓iP	P	13 31 17.2	-1.4
BVA0	Borovoye Array	48.74	341	i P	P	13 31 19.7	-1.4
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
MAT	Matsushiro	48.87	48	PCP	PcP	13 32 53.4	+6.3
RAYN	Ar Rayn	49.07	294	P	P	13 31 24.2	+0.1
	comp=Z,188nm,1.1s,mb6.0,SNR=16						
CHKZ	Chkalovo	49.22	342	i P	P	13 31 24.0	-0.8
CHKZ				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
CHKZ	Chkalovo	49.22	342	eP	P	13 31 23.7	-1.1
ASPA	Alice Springs	50.02	130	eP	P	13 31 29.6	-1.8
KLR	Kul’dur	51.56	31	eP	P	13 31 44.3	+1.5
KLR				eS	S	13 39 03.5	+2.9
KLR				MLR	MLR		
	comp=N,900nm,15.0s						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.1						
CLNS	Chul’man	54.11	20	eP	P	13 32 03.6	+2.0
CLNS				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=N,13nm,1.2s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.1s						
GNI	Garni	54.31	314	eP	P	13 32 00.9	-2.4
GNI				pmax	pmax		
	comp=Z,13nm,1.3s						
GNI	Garni	54.31	314	eP	P	13 31 59.8	-3.5
	comp=Z,74nm,1.4s,mb5.4						
SVE	Sverdlovsk	55.16	338	eP	P	13 32 06.0	-3.3
SVE				e	pP	13 32 13.3	-2.8
SVE				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SVE				MLR	MLR		
	comp=N,600nm,20.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,500nm,20.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
PMG	Port Moresby	55.51	107	eP	P	13 32 13.2	+0.8
ARU	Arti	55.65	337	⇓iP	P	13 32 05.2	-7.7
ARU				e		13 33 04.9	
ARU				eS	S	13 39 47.4	-8.5
ARU				e		13 41 50.5	
ARU				eSS	SS	13 43 33.0	-8.2
ARU				eSSS	SSS	13 45 40.4	-6.1
ARU				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
ARU				MLR	MLR		
	comp=N,600nm,20.0s,MS4.8						
ARU				MLR	MLR		
	comp=E,600nm,20.0s,MS4.8						
ARU				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
YSS	Yuzh-Sakhalins	56.47	38	eP	P	13 32 20.0	+1.1
YSS				e		13 32 29.0	
KIV	Kislovodsk	57.17	318	⇑iP	P	13 32 22.3	-1.6
KIV				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.1						
KIV	Kislovodsk	57.17	318	eP	P	13 32 22.0	-1.9
	comp=Z,49nm,1.4s,mb5.3						
KMBO	Kilima Mbogo	57.58	263	eP	P	13 32 27.9	+0.7
	comp=Z,44nm,1.0s,mb5.4						
MALT	Malatya	58.35	310	eP	P	13 32 29.2	-3.1
	comp=Z,16nm,1.5s,mb4.8						
SOKR	Solikamsk	58.55	339	⇓iP	P	13 32 33.0	-0.4
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
SOKR				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.0						
SOC	Sochi	59.04	316	eP	P	13 32 33.0	-4.0
SOC				e		13 33 20.2	
SOC				e		13 34 45.0	
SOC				eS	S	13 40 37.5	-3.2
SOC				e		13 42 19.3	
SOC				eSS	SS	13 44 31.4	-5.2
SOC				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
SOC				pmax	pmax		
	comp=N,7.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.5s						
EIL	Elat	59.38	300	eP	P	13 32 35.8	-3.7
	comp=E,45nm,1.5s,mb5.3						
YAK	Yakutsk	59.67	18	eP	P	13 32 40.8	-0.3
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
STKA	Stephens Creek	60.23	134	eP	P	13 32 43.9	-1.5
	comp=Z,5.8nm,1.0s,mb4.6						
MBAR	Mbarara	63.90	265	eP	P	13 33 10.5	+0.1
	comp=Z,31nm,1.4s,mb5.1						
MOS	Moscow	64.88	329	eP	P	13 33 15.3	-0.6
MOS				e		13 33 46.1	
MOS				pmax	pmax		
	comp=Z,80nm,0.7s,mb5.9						
MOS				MLR	MLR		
	comp=Z,800nm,18.9s,MS4.9						
OBN	Obninsk	65.18	328	eP	P	13 33 13.9	-4.0
TIXI	Tiksi	66.91	11	eP	P	13 33 26.7	-2.0
TIXI				eS	S	13 42 20.7	+1.9
TIXI				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,404nm,17.0s,MS4.7						
CFR	Carcaliu	67.46	316	⇓iP	P	13 33 32.1	-0.4
CFR	Carcaliu	67.46	316	⇓iP	P	13 33 32.2	-0.4
VRI	Vrincioaia	68.56	316	⇑iP	P	13 33 40.0	+0.5
VRI	Vrincioaia	68.56	316	⇑iP	P	13 33 40.0	+0.5
MLR	Muntele Rosu	69.03	316	⇓iP	P	13 33 41.7	-0.7
MLR	Muntele Rosu	69.03	316	⇓iP	P	13 33 41.7	-0.7
LSZ	Lusaka	69.48	250	eP	P	13 33 46.2	+0.7
	comp=Z,12nm,1.2s,mb4.7						
MNK	Minsk	69.77	325	eP	P	13 33 42.0	-4.7
BURAR	Bucovina Array	69.90	318	⇑P	P	13 33 47.0	-0.6
BURAR	Bucovina Array	69.90	318	⇑iP	P	13 33 47.0	-0.6
JOF	Joensuu	70.62	334	ep	P	13 33 49.8	-2.0
	comp=Z,19nm,0.9s,mb5.0						
JOF	Joensuu	70.62	334	eP	P	13 33 49.8	-2.0
JOF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
APA	Apatity	71.60	339	⇑iP	P	13 33 58.1	+0.5
APA				i	pP	13 34 03.5	-1.0
APA				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
APA				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.1						
BOLS	Boljevac	71.61	313	⇑iP	P	13 33 56.9	-1.2
KWP	Kalwaria	71.87	320	P	P	13 33 58.8	-0.8
	comp=Z,6.9nm,0.6s,mb4.8						
KOLS	Kolonicke sedl	72.05	319	eP	P	13 34 00.5	-0.1
SUW	Suwalki	72.33	324	eP	P	13 34 01.4	-0.7
KAF	Kangasniemi	72.57	333	ep	P	13 34 02.4	-1.0
	comp=Z,16nm,0.9s,mb4.9,baz=104,slow=5.7						
KAF	Kangasniemi	72.57	333	eP	P	13 34 02.4	-1.0
KAF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
CRVS	Cervenica-Dubn	72.58	319	eP	P	13 34 05.9	+2.2
CRVS				epP	pP	13 34 12.9	+2.3
NIE	Niedzica	73.39	319	eP	P	13 34 09.1	+0.6
PSZ	Piszkesteto	73.50	317	eP	P	13 34 07.7	-1.5
	comp=Z,31nm,1.4s,mb5.0						
PSZ	Piszkesteto	73.50	317	eP	P	13 34 09.1	0.0
OJC	Ojcow	73.82	320	eP	P	13 34 11.1	+0.2
VYHS	Vyhne	74.26	318	eP	P	13 34 12.0	-1.5
VYHS				epP	pP	13 34 18.4	-2.1
LBTB	Lobatse	74.49	241	eP	P	13 34 15.8	+0.4
	comp=Z,21nm,1.0s,mb5.0						
KEV	Kevo	74.58	341	ep	P	13 34 14.6	-0.4
	comp=Z,25nm,0.9s,mb5.1						
KEV	Kevo	74.58	341	eP	P	13 34 14.6	-0.4
KEV				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
OKC	Ostrava-Krasne	74.83	319	eP	P	13 34 16.5	-0.3
OKC				epP	pP	13 34 22.7	-1.1
MORC	Moravsky Berou	75.22	319	eP	P	13 34 18.1	-0.9
	comp=Z,32nm,1.2s,mb5.1						
ZST	Bratislava	75.39	318	eP	P	13 34 18.1	-1.9
ZST				esP	sP	13 34 26.2	-3.2
BILL	Bilibino	75.76	22	⇓iP	P	13 34 21.9	+0.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BILL	Bilibino	75.76	22	eP	P	13 34 22.0	+0.2
	comp=Z,1.9nm,0.6s,mb4.2						
BOSA	Boshof	75.85	238	eP	P	13 34 23.2	+0.2
	comp=Z,23nm,1.4s,mb4.9						
DPC	Dobruska-Polom	76.05	320	eP	P	13 34 23.4	-0.3
DPC				epP	pP	13 34 30.1	-0.6
KSP	Ksiaz	76.10	320	eP	P	13 34 23.0	-1.0
KSP				epP	pP	13 34 29.2	-1.8
KSP	Ksiaz	76.10	320	eP	P	13 34 23.9	-0.1
UPC	Upice	76.26	320	eP	P	13 34 25.9	+1.0
UPC				epP	pP	13 34 31.0	-0.9
BOJS	Bojanci	76.51	315	eP	P	13 34 25.8	-0.6
PERS	Pernice	76.65	316	eP	P	13 34 27.8	+0.7
VISS	Visnje	76.81	315	eP	P	13 34 28.2	+0.1
PRU	Pruhonice	77.17	319	eP	P	13 34 29.8	-0.2
PRU				epP	pP	13 34 35.7	-1.3
PVCC	Panska Ves	77.18	320	eP	P	13 34 30.3	+0.3
PVCC				epP	pP	13 34 36.3	-0.7
VOY	Vojsko	77.47	315	eP	P	13 34 31.4	-0.4
VOY				e	pP	13 34 37.2	-1.6
BRG	Berggiesshubel	77.59	320	eP	P	13 34 33.1	+0.8
BRG				i	pP	13 34 38.7	-0.6
BRG				pmax	pmax		
	comp=Z,46nm,1.5s,mb5.2						
BRG	Berggiesshubel	77.59	320	eP	P	13 34 33.1	+0.8
	comp=Z,46nm,1.5s,mb5.2						
BRG				i	pP	13 34 38.7	-0.6
GEC2	GERESS Array S	77.68	318	eP	P	13 34 28.0	-4.8
GEC2				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
GEC2	GERESS Array S	77.68	318	eP	P	13 34 28.0	-4.8
	comp=Z,9.0nm,0.9s,mb4.7						
RUE	Ruedersdorf	77.76	322	eP	P	13 34 33.8	+0.6
KHC	Kasperske Hory	77.77	318	eP	P	13 34 33.0	-0.3
KHC				epP	pP	13 34 39.1	-1.2
PTCC	Patocco-Chiusa	77.86	316	eP	P	13 34 32.9	-0.9
CLL	Collm	78.20	321	⇑iP	P	13 34 35.8	+0.2
CLL				i	pP	13 34 41.5	-1.1
CLL				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
CLL	Collm	78.20	321	⇑iP	P	13 34 35.8	+0.2
	comp=Z,23nm,1.4s,mb4.9						
CLL				i	pP	13 34 41.5	-1.1
CLL	Collm	78.20	321	⇑P	P	13 34 35.8	+0.2
	comp=Z,logA/T=1.2,mb4.9						
CLL				i *PP	pP	13 34 41.5	-1.1
WET	Wettzell	78.22	318	eP	P	13 34 31.0	-4.8
WET				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
WET	Wettzell	78.22	318	eP	P	13 34 31.0	-4.8
	comp=Z,7.0nm,0.9s,mb4.6						
FVI	Forni Avoltri	78.25	316	eP	P	13 34 36.2	+0.2
NKC	Novy Kostel	78.53	320	eP	P	13 34 37.8	+0.4
SFI	Santa Sofia	78.92	313	eP	P	13 34 41.3	+1.6
PGD	Poggio Sodo	79.01	313	eP	P	13 34 40.7	+0.5
CTI	Castel Tesino	79.04	315	eP	P	13 34 40.2	-0.2
MOX	Moxa	79.06	320	eP	P	13 34 41.1	+0.7
MOX				pmax	pmax		
	comp=Z,41nm,1.7s,mb5.1						
MOX	Moxa	79.06	320	eP	P	13 34 41.1	+0.7
	comp=Z,41nm,1.7s,mb5.1						
MOX	Moxa	79.06	320	i P	P	13 34 41.1	+0.7
	comp=Z,logA/T=1.4,mb5.1						
MOX				pP	pP	13 34 48.0	+0.6
VMG	Vicchio	79.14	313	eP	P	13 34 41.7	+0.8
SEI	Scarperia	79.27	313	eP	P	13 34 43.4	+1.7
FUR	Furstenfeldbru	79.28	317	eP	P	13 34 36.4	-5.2
GRA1	Grafenberg Arr	79.31	319	eP	P	13 34 37.4	-4.4
	comp=Z,13nm,0.8s,mb4.9						
GRA1				epP	pP	13 34 43.0	-5.8
GRF	Grafenberg Arr	79.31	319	eP	P	13 34 37.4	-4.4
GRF				e*PP	pP	13 34 43.0	-5.8
GRF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
GRF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
GRF	Grafenberg Arr	79.31	319	eP	P	13 34 37.4	-4.4
	comp=Z,13nm,0.8s,mb4.9						
GRF				epP	pP	13 34 43.0	-5.8
NB2	NORSAR Subarra	79.52	331	P	P	13 34 41.0	-1.6
	comp=Z,27nm,1.1s,mb5.1,baz=95,slow=5.0						
NB2	NORSAR Subarra	79.52	331	P	P	13 34 41.0	-1.6
	baz=95,slow=5.1						
GRFL	Gerfalco	79.57	312	eP	P	13 34 43.2	0.0
NAO01	NORSAR Array S	79.67	330	P	P	13 34 44.1	+0.6
	comp=Z,7.8nm,0.7s,mb4.8						
GSCL	Gusciola	79.82	314	eP	P	13 34 45.4	+0.8
CLZ	Clausthal	79.85	321	eP	P	13 34 39.9	-4.7
	comp=Z,10.0nm,0.8s,mb4.8						
BRMO	Bormio	79.92	316	eP	P	13 34 45.9	+0.8
SUR	Sutherland	80.60	235	eP	P	13 34 51.0	+2.0
	comp=Z,24nm,1.2s,mb5.0						
STU	Stuttgart	80.66	318	P	P	13 34 47.9	-1.0
SPAK	Spaichingen	80.95	317	eP	P	13 34 51.2	+0.7
VAI	Varese	81.05	315	eP	P	13 34 51.5	+0.4
TNS	Taunus Mts	81.09	320	eP	P	13 34 46.6	-4.6
BFO	Black Forest	81.25	318	eP	P	13 34 46.8	-5.3
BFO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BFO	Black Forest	81.25	318	eP	P	13 34 46.8	-5.3
	comp=Z,5.0nm,0.9s,mb4.4						
FELD	Feldberg	81.48	317	eP	P	13 34 53.7	+0.4
FIN	Finale Ligure	81.53	314	eP	P	13 34 52.9	-0.8
LANF	Langenberg	81.56	318	eP	P	13 34 54.6	+0.9
ABH	Alteburg	81.69	319	eP	P	13 34 50.5	-3.8
ECH	Echery	82.03	318	eP	P	13 34 54.9	-1.2
MOF	Molkenrain	82.07	317	eP	P	13 34 53.0	-3.4
LOMF	Lomont	82.31	317	eP	P	13 34 57.7	+0.1
LPG	La Plagne	82.48	315	eP	P	13 34 57.7	-0.9
	comp=Z,34nm,0.8s,mb5.0						
BNI	Bardonecchia	82.57	314	eP	P	13 34 59.0	0.0
	comp=Z,36nm,1.4s,mb5.2						
THEF	They Montfort	82.81	318	eP	P	13 34 56.8	-3.4
TNA	Tin City	85.84	24	P	P	13 35 11.7	-3.3
	comp=Z,6.9nm,1.3s,mb4.7						
IMA	Indian Mountai	91.29	22	eP	P	13 35 42.2	+1.2
	comp=Z,35nm,0.8s,mb5.7						
VNDA	Vanda	93.21	168	P	P	13 35 51.8	+2.2
MCK	McKinley	94.13	23	eP	P	13 35 59.5	+5.5
	comp=Z,4.1nm,1.2s,mb4.7						
INK	Inuvik	96.67	16	eP	P	13 36 06.1	+0.5
	comp=Z,13nm,1.4s,mb5.2						
RES	Resolute Bay	97.09	2	eP	P	13 36 09.0	+1.6
	comp=Z,5.4nm,0.9s,mb5.0						
MSU	Marysvale	127.43	26	ePKPdf	PKPdf	13 41 40.2	-4.2
PV10	Paradox Valley	128.84	24	ePKPdf	PKPdf	13 41 46.8	-0.3
JCT	Junction City	139.26	19	ePKPdf	PKPdf	13 42 03.0	-3.6
PLCA	Paso Flores	144.88	200	ePKPdf	PKPdf	13 42 12.2	-4.0
SFJM	Santa Fe	146.82	31	eP	PKPbc	13 42 22.0	+4.7
PPM	Popocatepetl	150.09	25	eP	PKPdf	13 42 25.0	-0.4
TEIG	Tepich	151.66	5	ePKPbc	PKPdf	13 42 32.3	+4.5

*ATH **02** 13:35:41.0, 36.77N×20.16E, h37^{km}, MD3.7/7*
*CSEM **02** 13:35:41.1, 36.83N×20.15E, h30^{km}, MD3.7/7, After ATH*
ISC 02 13:35:37.6±1.4**, 36.71N**±0.09×**20.05E**±0.08**, h10^{km}, n14,**
σ**0^{s}76**/18**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	1.53	16	ePB	Pb	13 36 06.1	+0.6
VLS				eSN	Sn	13 36 24.9	-0.2
ITM	Ithomi	1.57	72	ePB	Pb	13 36 06.2	-0.1
RLS	Riolos of Patr	1.75	39	ePB	Pb	13 36 10.3	+0.8
RLS				eSN	Sn	13 36 30.7	-0.2
VLI	Veliai	2.32	89	ePB	Pb	13 36 18.5	-0.6
EVR	Evrytania	2.60	32	ePB	Pb	13 36 23.5	-0.5
MGER	Gerania Oros	2.86	63	ePN	Pn	13 36 24.0	-0.1
NAIG	Nisos Aigina	2.94	68	ePN	Pn	13 36 25.0	-0.2
NAIG	Nisos Aigina	2.94	68	ePn	Pn	13 36 27.5	+2.3
SKO	Skopje	5.36	11	i P	Sn	13 37 57.0	-5.3
	comp=Z,0.0nm,0.8s						
BOJS	Bojanci	9.50	339	ePn	P	13 37 56.8	-0.7
BOJS				eSn	Sn	13 39 35.6	-10
VISS	Visnje	9.89	338	ePn	P	13 38 03.3	+0.4
CEY	Cerknica	9.96	337	i Pn	P	13 38 04.7	+0.8
JAVS	Javornik	10.22	336	ePn	P	13 38 07.9	+0.6
JAVS				eSn	S	13 39 52.3	-11
PERS	Pernice	10.58	341	i Pn	P	13 38 10.7	-1.6

*CSEM **02** 13:41:48.3±0.1, 44.20N×9.15E, h10^{km}, ML2.8, Error*
ellipse: s-maj=2.5km s-min=1.4km az=3.0
*ROM **02** 13:41:49.0±0.1, 44.20N×9.12E, h5^{km}, MD2.8/3, ML1.9/4,*
Error ellipse: s-maj=1.8km s-min=0.7km az=0.0
*NEIC **02** 13:41:50.1, 44.29N×9.15E, h9^{km}, MD2.8(ROM),*
ML2.8(GEN), After GEN.
*GEN **02** 13:41:50.1, 44.29N×9.15E, h9^{km}, ML2.8*
ISC 02 13:41:49.1±0.6**, 44.25N**±0.05×**9.15E**±0.02**, h11^{km}**±5^{km}**,**
n51, σ**0^{s}58**/71**, 1C, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENL	Genova Univers	0.20	320	P	Pg	13 41 54.2	+0.7
GENL				S	Sg	13 41 56.6	+0.3
GENL	Genova Univers	0.20	320	P	Pg	13 41 54.2	+0.7
GENL				S	Sg	13 41 56.6	+0.2
PCP	Pian Castagno	0.52	304	P	Pg	13 41 59.6	0.0
PCP				S	Sg	13 42 06.1	-0.5
PCP	Pian Castagno	0.52	304	P	Pg	13 41 59.6	0.0
BOB	Bobbio (Coli)	0.56	23	ePG	Pg	13 42 01.5	+1.2
BOB				SG	Sg	13 42 11.9	+4.0
BOB	Bobbio (Coli)	0.56	23	ePg	Pg	13 42 01.5	+1.2
BOB				eSg	Sg	13 42 11.9	+4.0
FIN	Finale Ligure	0.68	267	ePG	Pg	13 42 02.9	+0.2
	77nm,0.4s						
FIN	Finale Ligure	0.68	267	ePg	Pg	13 42 02.9	+0.2
FIN	Finale Ligure	0.68	267	P	Pb	13 42 03.1	+0.7
GRAM		0.70	70	P	Pb	13 42 03.0	+0.1
GRAM				S	Sb	13 42 11.5	-0.8
GRAM		0.70	70	P	Pb	13 42 03.0	+0.1
GRAM				S	Sb	13 42 11.5	-0.8
VINC	Vinca	0.73	99	P	Pb	13 42 03.9	+0.4
VINC				S	Sb	13 42 13.1	-0.1
VINC	Vinca	0.73	99	P	Pb	13 42 03.8	+0.4
VINC	Vinca	0.73	99	P	Pb	13 42 03.8	+0.4
VINC				S	Sb	13 42 13.1	-0.1
VINC				S	Sb	13 42 13.1	-0.1
VALM		0.80	83	P	Pb	13 42 04.7	+0.2
VALM				S	Sb	13 42 15.0	-0.1
VALM		0.80	83	P	Pb	13 42 04.7	+0.2
VALM				S	Sb	13 42 15.0	0.0
SARO	Sassorosso	0.91	94	P	Pb	13 42 06.7	+0.4
SARO				S	Sb	13 42 18.1	-0.1
SARO	Sassorosso	0.91	94	P	Pb	13 42 06.7	+0.3
SARO	Sassorosso	0.91	94	P	Pb	13 42 06.7	+0.3
SARO				S	Sb	13 42 18.1	-0.1
SARO				S	Sb	13 42 18.1	-0.1
ROB	Roburent	0.92	273	P	Pb	13 42 06.9	+0.3
ROB				S	Sb	13 42 18.4	-0.2
ROB	Roburent	0.92	273	P	Pb	13 42 06.9	+0.3
ROB				S	Sb	13 42 18.4	-0.1
IMI	Imperia	0.97	250	ePG	Pg	13 42 07.7	-0.8
	23nm,0.4s						
IMI	Imperia	0.97	250	ePg	Pg	13 42 07.7	-0.8
IMI	Imperia	0.97	250	P	Pb	13 42 07.5	+0.1
IMI				S	Sb	13 42 20.0	0.0
MONE	Monesi	1.02	261	P	Pb	13 42 08.7	+0.5
MONE				S	Sb	13 42 21.6	+0.2
MONE	Monesi	1.02	261	P	Pb	13 42 08.7	+0.5
MONE				S	Sb	13 42 21.6	+0.2
GSCL	Gusciola	1.04	84	ePG	Pg	13 42 10.2	+0.3
GSCL	Gusciola	1.04	84	ePg	Pg	13 42 10.2	+0.3
BDI	Bagni Di Lucca	1.06	100	ePG	Pg	13 42 10.6	+0.2
	16nm,0.3s						
BDI	Bagni Di Lucca	1.06	100	ePg	Pg	13 42 10.7	+0.3
BDI	Bagni Di Lucca	1.06	100	ePg	Pg	13 42 10.6	+0.2
	16nm,0.3s						
NEGI	Negi	1.12	249	P	Pb	13 42 10.1	+0.1
ENR	Entracque	1.24	269	P	Pb	13 42 12.2	+0.1
ENR	Entracque	1.24	269	P	Pb	13 42 12.2	+0.1
STV2	Anna di Valdie	1.31	270	P	Pb	13 42 13.1	-0.2
STV2	Anna di Valdie	1.31	270	P	Pb	13 42 13.1	-0.1
STV	Sta Anna Valdi	1.31	270	P	Pb	13 42 13.0	-0.3
STV	Sta Anna Valdi	1.31	270	P	Pb	13 42 13.0	-0.3
DOI	San Damiano	1.38	281	ePN	Pn	13 42 15.0	+0.5

	23nm,0.3s						
DOI	**San Damiano**	**1.38**	**281**	*e*Pg	**Pg**	**13 42 15.0**	**-1.7**
BHB	**Bricherasio**	**1.47**	**294**	P	**Pn**	**13 42 15.8**	**+0.1**
BHB	**Bricherasio**	**1.47**	**294**	P	**Pn**	**13 42 15.8**	**+0.1**
PZZ	**Prazzo**	**1.49**	**280**	P	**Pn**	**13 42 15.5**	**-0.5**
PZZ	**Prazzo**	**1.49**	**280**	P	**Pn**	**13 42 15.5**	**-0.4**
TRAV		**1.60**	**322**	P	**Pn**	**13 42 17.4**	**-0.2**
TRAV		**1.60**	**322**	P	**Pn**	**13 42 17.4**	**-0.2**
ORX	**Oropa**	**1.61**	**329**	P	**Pn**	**13 42 17.7**	**+0.1**
ORX	**Oropa**	**1.61**	**329**	P	**Pn**	**13 42 17.7**	**0.0**
RSP	**Reno Superiore**	**1.62**	**304**	P	**Pn**	**13 42 17.8**	**0.0**
RSP	**Reno Superiore**	**1.62**	**304**	P	**Pn**	**13 42 17.8**	**0.0**
BAD	**Bernadia**	**3.51**	**54**	⇑*i*Pg	**Pg**	**13 42 57.3**	**-1.8**
BAD				*i* Sg		13 42 59.0	

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*CSEM **02** 13:52:13.7±1.0, 37.74N×44.25E, h8^{km}, MD3.6, Error ellipse: s-maj=23.6km s-min=12.1km az=121.0*

ISK 02 13:52:16.0, 37.76N×44.06E, h8^{km}, MD3.6, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.31**	**236**	*i* PG	Pg	13 52 22.5	+0.1
VANB	**Van**	**0.99**	**328**	PG	Pg	13 52 35.9	0.0
VANB				SG	Sg	13 52 49.4	+0.2
MSL	**Mosul**	**1.66**	**208**	*e*Pn	Pn	13 52 55.0	+9.4
MSL				*i* Sb	Sb	13 53 10.5	+3.2
MSL				*i* Sg	Sg	13 53 11.5	+0.3
BTMT	**Batman**	**2.08**	**283**	PN	Pn	13 52 54.2	+2.5
VRT	**Varto**	**2.42**	**305**	*e*PN	Pn	13 52 57.8	+1.3
GNI	**Garni**	**2.45**	**12**	*e*PN	Pn	13 52 56.9	0.0
PTK	**Pertek**	**3.85**	**289**	*e*PN	Pn	13 53 16.5	-0.3
MALT	**Malatya**	**4.49**	**279**	*e*PN	Pn	13 53 27.1	+1.2

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*BJI **02** 14:00:49.2, 8.90S×116.40E, h117^{km}, mB4.9, mb4.7*
*NEIC **02** 14:00:49.3±0.6, 8.94S×116.38E, h117^{km}±6^{km}, mb4.8/26, Error ellipse: s-maj=10.3km s-min=7.1km az=221.0*
NEIC Felt [IV] at Mataram. Also felt [III] at Denpasar, Bali.
*DJA **02** 14:00:51.8±0.7, 8.68S×116.05E, h123^{km}±5^{km}, MD4.6/3, Error ellipse: s-maj=31.3km s-min=7.4km az=153.0*

ISC 02 14:00:49.4±0.5**, 9.08S**±0.05×**116.21E**±0.04**, h137**^{km}±4^{km}**, n95, σ1^{s}15**/99**, mb4.8**/36**, 9C-17D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	**0.60**	**351**	⇑*i*P	**P**	**14 01 09.6**	**-0.8**
KEDI				*i* pP		14 01 10.0	
KEDI	**Kedomdong**	**0.60**	**351**	⇑*i*Pn	**P**	**14 01 09.6**	**-0.8**
	4μm,0.2s						
KEDI	**Kedomdong**	**0.60**	**351**	⇑*i*P	**P**	**14 01 10.0**	**-0.4**
RATI	**Rata**	**0.76**	**298**	⇓*i*P	**P**	**14 01 10.8**	**-0.6**
	6μm,0.2s						
RATI	**Rata**	**0.76**	**298**	⇓*i*Pn	**P**	**14 01 10.8**	**-0.6**
	6μm,0.2s						
KELI	**Kelakatan**	**1.91**	**297**	⇓*i*P	**P**	**14 01 23.1**	**+0.1**
	5μm,0.2s						
KELI	**Kelakatan**	**1.91**	**297**	⇓*i*Pn	**P**	**14 01 23.1**	**+0.1**
	5μm,0.2s						
SRDI	**Scrawed**	**2.13**	**286**	⇓*i*P	**P**	**14 01 25.9**	**+0.1**
SRDI				*i* pP		14 01 26.2	
SRDI	**Scrawed**	**2.13**	**286**	⇓*i*P	**P**	**14 01 25.9**	**+0.1**
	5μm,0.3s						
SRDI	**Scrawed**	**2.13**	**286**	⇓*i*Pn	**P**	**14 01 25.9**	**+0.1**
	5μm,0.3s						
TRT	**Tretes**	**3.79**	**291**	*e*P	**P**	**14 01 48.0**	**+0.4**
MKS	**Makassar**	**5.02**	**40**	*e*P	**P**	**14 02 04.0**	**+0.1**
MBWA	**Marble Bar**	**12.48**	**165**	*e*P	**P**	**14 03 37.1**	**-6.1**
	3.5nm,0.3s						
FITZ	**Fitzroy Crossi**	**12.81**	**135**	*e*P	**P**	**14 03 44.1**	**-3.5**
	568nm,1.3s						
FITZ				*e*S	**S**	**14 05 57.9**	**-10**
KAKA	**Kakadu**	**16.34**	**104**	*e*P	**P**	**14 04 29.2**	**-3.1**
	213nm,0.6s						
KAKA				*e*S	**S**	**14 07 19.2**	**-9.3**
KGM	**Kluang**	**16.93**	**310**	P	**P**	**14 04 41.4**	**+1.8**
BATP	**Bataraza**	**17.83**	**5**	*e*P	**P**	**14 04 52.7**	**+2.3**
PPR	**Puerto Princes**	**18.90**	**8**	*e*P	**P**	**14 05 02.4**	**+0.3**
BUKP	**Musuan**	**19.02**	**28**	*e*P	**P**	**14 05 05.0**	**+1.7**
COCO	**West Island**	**19.29**	**259**	*e*P	**P**	**14 05 09.3**	**+3.2**
	240nm,0.8s						
IPM	**Ipoh**	**20.33**	**311**	P	**P**	**14 05 17.4**	**+0.6**
GUIM	**Jordan**	**20.58**	**18**	*e*P	**P**	**14 05 21.4**	**+2.1**
WRAB	**Tennant Creek**	**20.58**	**124**	*e*P	**P**	**14 05 17.8**	**-1.6**
	108nm,0.8s						
WB2	**Warramunga Arr**	**20.59**	**124**	⇓*i*P	**P**	**14 05 18.5**	**-0.9**
WB2				*i*		14 05 28.4	
WB2				*e*S	**S**	**14 08 58.2**	**+1.5**
BUSP	**Coron**	**21.32**	**11**	*e*P	**P**	**14 05 26.1**	**-0.5**
SJMP	**San Jose**	**21.95**	**13**	*e*P	**P**	**14 05 36.2**	**+3.3**
ASPA	**Alice Springs**	**22.28**	**133**	⇓*i*P	**P**	**14 05 36.6**	**+0.6**
ASPA				*e*		14 05 46.1	
ASPA				*e*S	**S**	**14 09 34.1**	**+7.0**
BESP	**Borongan**	**22.50**	**24**	*e*P	**P**	**14 05 39.7**	**+1.4**
MUN	**Mundaring**	**22.78**	**180**	*e*P	**P**	**14 05 41.9**	**+1.0**
	22nm,0.9s,mb4.6						
MUN				*e*S	**S**	**14 09 45.1**	**+9.3**
BOAC	**Boac**	**23.08**	**14**	*e*P	**P**	**14 05 45.1**	**+1.1**
NWAO	**Narrogin (SRO)**	**23.75**	**178**	*e*P	**P**	**14 05 50.2**	**0.0**
	28nm,0.9s,mb4.8						
FORT	**Forrest**	**24.25**	**155**	*e*P	**P**	**14 05 56.1**	**+1.1**
	74nm,0.7s,mb5.3						
FORT				*e*S	Sx	14 10 21.0	
SCZP	**Santa Cruz**	**24.97**	**8**	*e*P	**P**	**14 06 03.3**	**+1.4**
PMG	**Port Moresby**	**30.54**	**93**	P	**P**	**14 06 52.3**	**-0.2**
CTA	**Charters Tower**	**31.01**	**114**	*e*P	**P**	**14 06 56.8**	**+0.4**
	11nm,0.8s,mb4.6						
CM31	**Chiang Mai Arr**	**32.24**	**328**	*e*P	**P**	**14 07 07.5**	**+0.4**
	5.7nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**32.70**	**138**	*e*P	**P**	**14 07 10.8**	**-0.2**
	4.7nm,0.5s,mb4.5						
TATO	**Taipei**	**34.24**	**9**	*e*P	**P**	**14 07 23.6**	**-0.6**
GUMO	**Guam**	**36.28**	**52**	*e*P	**P**	**14 07 39.9**	**-1.7**
	100nm,0.7s,mb5.5						
GYA	**Guiyang**	**36.52**	**346**	P	**P**	**14 07 44.9**	**+1.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
PALK	**Pallekele**	**38.94**	**294**	*e*P	**P**	**14 08 03.9**	**+0.1**
	comp=Z,20nm,0.9s,mb4.8						
NJ2	**Nanjing**	**40.98**	**3**	*e*P	**P**	**14 08 22.0**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.1						
CD2	**Chengdu**	**41.52**	**344**	P	**P**	**14 08 25.0**	**0.0**
CD2				AMB	AMB		
	comp=Z,38nm,0.6s,mb5.2						
LSA	**Lhasa**	**45.49**	**329**	P	**P**	**14 08 57.4**	**+0.5**
HYB	**Hyderabad**	**45.59**	**305**	⇓*e*P	**P**	**14 08 58.0**	**+0.2**
	comp=Z,50nm,1.0s,mb5.1						
HYB	**Hyderabad**	**45.59**	**305**	⇓*i*P	**P**	**14 08 58.0**	**+0.2**
	comp=Z,50nm,1.0s,mb5.1						
JIRN	**Jiri**	**46.68**	**322**	*e*P	**P**	**14 09 06.5**	**+0.2**
	comp=Z,75nm,0.6s,mb5.5						
GUN	**Gumba**	**47.05**	**322**	*e*P	**P**	**14 09 09.1**	**-0.1**
	comp=Z,70nm,0.7s,mb5.4						
PKI	**Pulchoki**	**47.09**	**322**	*e*P	**P**	**14 09 08.8**	**-0.7**
	comp=Z,34nm,0.7s,mb5.1						
DMN	**Daman**	**47.30**	**321**	*e*P	**P**	**14 09 10.8**	**-0.4**
	comp=Z,54nm,0.8s,mb5.2						
KKN	**Kakani**	**47.33**	**322**	*e*P	**P**	**14 09 10.8**	**-0.6**
	comp=Z,23nm,0.7s,mb4.9						
KS15	**Wonju Array Si**	**47.55**	**13**	P	**P**	**14 09 10.5**	**-2.5**
GKN	**Gorkha**	**47.88**	**321**	*e*P	**P**	**14 09 15.0**	**-0.6**
	comp=Z,45nm,0.4s,mb5.4						
KOLN	**Koldanda**	**48.36**	**320**	*e*P	**P**	**14 09 18.5**	**-0.9**
	comp=Z,41nm,0.6s,mb5.3						
BJI	**Beijing**	**48.87**	**360**	*e*P	**P**	**14 09 23.2**	**0.0**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.2						
BJI	**Beijing**	**48.87**	**360**	*e*P	**P**	**14 09 23.2**	**0.0**
	comp=Z,6.0nm,0.9s,mb4.2						
KAD	**Karad**	**49.12**	**302**	*e*P	**P**	**14 09 24.0**	**-1.4**
MAJO	**Matsushiro**	**49.87**	**23**	*e*P	**P**	**14 09 28.4**	**-2.4**
POO	**Poona**	**49.99**	**303**	⇓*i*P	**P**	**14 09 31.0**	**-1.0**
	comp=Z,30nm,1.0s,mb4.9						
GTA	**Gaotai**	**50.59**	**344**	*e*P	**P**	**14 09 36.9**	**+0.6**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.9						
NDI	**New Delhi**	**53.16**	**316**	*e*P	**P**	**14 09 51.5**	**-4.2**
NDI				*e*		14 17 08.0	
MDJ	**Mudanjiang**	**54.80**	**12**	P	**P**	**14 10 07.5**	**+0.1**
MDJ				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,146nm,3.2s						
SDNR	**Sundarnagar**	**55.12**	**319**	*e*P	**P**	**14 10 09.0**	**-1.0**
THN	**Thein Dam**	**56.54**	**319**	*e*P	**P**	**14 10 17.0**	**-3.1**
ULN	**Ulaanbaatar**	**57.27**	**353**	*e*P	**P**	**14 10 25.2**	**+0.2**
	comp=Z,3.4nm,0.8s,mb4.2						
KSH	**Kashi**	**61.07**	**325**	*e*P	**P**	**14 10 51.0**	**-0.3**
KSH				AMB	AMB		
	comp=Z,50nm,7.2s						
KZA	**Kyzart**	**63.22**	**327**	P	**P**	**14 11 05.7**	**+0.1**
	SNR=7.0						
TKM2	**Tokmak 2**	**63.62**	**328**	P	**P**	**14 11 07.2**	**-0.9**
	SNR=6.4						
KBK	**Karagaybulak**	**63.78**	**327**	P	**P**	**14 11 09.1**	**-0.1**
	SNR=8.0						
AAK	**Ala-Archa**	**64.01**	**327**	P	**P**	**14 11 10.2**	**-0.5**
	SNR=5.2						
AAK	**Ala-Archa**	**64.01**	**327**	*e*P	**P**	**14 11 07.5**	**-3.1**
	comp=Z,5.3nm,0.7s,mb4.5						
AML	**Almayashu**	**64.11**	**326**	P	**P**	**14 11 11.0**	**-0.4**
	SNR=6.4						
WBK	**Wadi Bani Khal**	**64.29**	**300**	⇑P	**P**	**14 11 12.1**	**-0.8**
EKS2	**Erkin-Say**	**64.42**	**327**	P	**P**	**14 11 12.9**	**-0.4**
	SNR=8.9						
JMDO	**Jabal Madar**	**64.94**	**300**	⇑P	**P**	**14 11 16.3**	**-0.8**
	SNR=16						
SMDO	**Samad**	**65.24**	**300**	⇓P	**P**	**14 11 18.6**	**-0.4**
	SNR=21						
BIDO	**Bidbid**	**65.35**	**301**	⇓P	**P**	**14 11 19.5**	**-0.2**
	SNR=14						
BSY	**Bisya**	**65.85**	**300**	⇓P	**P**	**14 11 22.3**	**-0.6**
	SNR=10						
HOQ	**Hoqain**	**66.07**	**301**	⇑P	**P**	**14 11 23.9**	**-0.4**
	SNR=7.9						
ARQ	**Araqi**	**66.65**	**300**	⇑P	**P**	**14 11 26.9**	**-1.0**
WHFO	**Wadi Hawf**	**67.23**	**294**	⇑P	**P**	**14 11 30.8**	**-0.8**
	SNR=17						
ABTO	**Aybut**	**67.48**	**293**	⇑P	**P**	**14 11 33.0**	**-0.2**
	SNR=14						
ASHO	**Ashiyiah**	**67.54**	**301**	⇓P	**P**	**14 11 33.1**	**-0.4**
	SNR=8.8						
KURK	**Kurchatov**	**67.89**	**335**	*e*P	**P**	**14 11 33.7**	**-1.5**
	comp=Z,4.2nm,0.6s,mb4.3						
VNDA	**Vanda**	**72.34**	**171**	*e*P	**P**	**14 12 02.9**	**+1.2**
	comp=Z,4.7nm,0.8s,mb4.3						
SBA	**Scott Base**	**73.37**	**170**	*e*P	**P**	**14 12 04.4**	**-3.2**
	comp=Z,33nm,1.3s,mb4.9						
CHKZ	**Chkalovo**	**73.44**	**334**	*e*P	**P**	**14 12 07.3**	**-1.1**
	comp=Z,8.5nm,0.7s,mb4.6						
RAYN	**Ar Rayn**	**76.28**	**297**	P	**P**	**14 12 25.1**	**-0.1**
	comp=Z,143nm,0.7s,mb5.7,SNR=20						
QSPA	**South Pole Qui**	**80.91**	**180**	⇓*i*P	**P**	**14 12 51.6**	**+2.3**
	comp=Z,11nm,1.0s,mb4.4						
MBAR	**Mbarara**	**85.44**	**270**	*e*P	**P**	**14 13 14.3**	**+0.6**
	comp=Z,4.8nm,0.7s,mb4.3						
LSZ	**Lusaka**	**85.76**	**255**	*e*P	**P**	**14 13 17.6**	**+2.5**
	comp=Z,22nm,1.0s,mb4.8						
MALT	**Malatya**	**86.13**	**310**	*e*P	**P**	**14 13 18.4**	**+1.9**
	comp=Z,10nm,0.9s,mb4.6						
BOSA	**Boshof**	**86.55**	**242**	*e*P	**P**	**14 13 21.3**	**+2.6**
	comp=Z,24nm,0.8s,mb5.1						
LBTB	**Lobatse**	**86.77**	**245**	*e*P	**P**	**14 13 22.8**	**+3.0**
	comp=Z,32nm,0.8s,mb5.2						
OXF	**Oxford**	**145.47**	**39**	*e*PKPdf	PKPdf	14 20 14.3	+2.6

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*NEIC **02** 14:09:38.7, 36.86N×20.41E, h39^{km}, MD3.4(ATH), After ATH.*
*CSEM **02** 14:09:38.7, 36.86N×20.41E, h39^{km}, MD3.5/4, After ATH*

ATH 02 14:09:38.7, 36.86N×20.41E, h39^{km}, MD3.4/4**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**1.25**	**75**	*e*PB	P	14 10 01.0	+1.0
VLS	**Valsamata**	**1.32**	**6**	*e*PB	P	14 10 01.5	+0.4
VLS				*e*SN	S	14 10 20.1	+2.4
VLI	**Veliai**	**2.03**	**93**	*e*PN	P	14 10 12.5	+1.3
EVR	**Evrytania**	**2.33**	**28**	*e*PB	P	14 10 19.0	+3.5

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*BJI **02** 14:11:45.5, 6.70S×145.07E, h27^{km}, mB5.4, mb5.1, Ms5.1, Msz4.9*
*NEIC **02** 14:11:47.4±0.3, 6.65S×144.64E, mb5.1/27, MS4.9/1, Error ellipse: s-maj=12.7km s-min=7.2km az=85.0*
*MOS **02** 14:11:47.5±0.9, 6.69S×144.96E, h33^{km}, mb5.5/18, MS4.8/7, Error ellipse: s-maj=25.6km s-min=12.6km az=104.1*
*HRVD **02** 14:11:47.4±0.2, 6.63S×144.61E, h12^{km}, MW5.4/65, Centroid moment Tensor Solution. LP body waves: s42,c68;Mantle waves: s65,c119; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.05±.03; $M_{\theta\theta}$0.36±.02; $M_{\phi\phi}$-1.41±.02; $M_{r\theta}$0.02±.08; $M_{\theta\phi}$0.55±.02; $M_{\phi r}$0.31±.06; Best double couple: $M_0$1.351×10^{17} NP1:ϕ_s153°, δ40°, λ74°. NP2:ϕ_s353°, δ52°, λ103°. Principal axes: T 1.101, Plg78°, Azm312°; N .504, Plg10°, Azm166°; P -1.6, Plg6°, Azm74°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 14:11:48.1±0.3**, 6.71S**±0.04×**144.75E**±0.07**, h33^{km}, (h11^{km}±5.3^{km}:pP-P), n118, σ1^{s}14**/132**, mb5.2**/62**, MS4.9**/25**, 9C-10D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.59**	**138**	*e*P	**P**	**14 12 42.6**	**-0.2**
CTA	**Charters Tower**	**13.38**	**174**	*e*P	**P**	**14 14 59.2**	**+0.9**
	26nm,0.9s						
CTA				*i* S	Sx	14 17 53.9	
CTAO	**Charters Tower**	**13.38**	**174**	*e*P	**P**	**14 14 59.1**	**+0.9**
	67nm,1.1s						
KAKA	**Kakadu**	**13.52**	**243**	*e*P	**P**	**14 14 55.3**	**-4.9**
	118nm,0.4s						
WRAB	**Tennant Creek**	**16.57**	**217**	⇓*e*P	**P**	**14 15 41.1**	**+1.4**
WB2	**Warramunga Arr**	**16.58**	**217**	*e*P	**P**	**14 15 38.2**	**-1.6**
WB2				*e*S	**S**	**14 18 50.0**	**+7.9**
ASPA	**Alice Springs**	**19.82**	**211**	*e*P	**P**	**14 16 18.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**21.80**	**237**	*e*P	**P**	**14 16 37.5**	**-1.8**
	100nm,1.0s,mb5.2						
FITZ				*e*S	**S**	**14 20 35.7**	**+2.3**
DAV	**Davao City (W)**	**23.52**	**305**	*e*P	**P**	**14 17 02.0**	**+5.6**
ARMA	**Armidale**	**24.46**	**166**	*e*P	**P**	**14 17 09.6**	**+4.2**
STKA	**Stephens Creek**	**25.21**	**186**	*e*P	**P**	**14 17 15.7**	**+3.1**
	20nm,0.8s,mb4.7						
MBWA	**Marble Bar**	**28.14**	**237**	*e*P	**P**	**14 17 37.5**	**-2.2**
	9.6nm,0.9s,mb4.4						
TATO	**Taipei**	**38.79**	**325**	*e*P	**P**	**14 19 10.8**	**-0.8**
	304nm,1.1s,mb5.9						
QZH	**Quanzhou**	**40.48**	**322**	P	**P**	**14 19 26.6**	**+1.0**
QZH				S	**S**	**14 25 35.2**	**+3.3**
QZH				LR	LR		
	comp=Z,2μm,14.6s,MS5.2						
QIZ	**Qiongzhong**	**42.86**	**307**	P	**P**	**14 19 45.2**	**-0.2**
QIZ				S	**S**	**14 26 06.8**	**-0.5**
QIZ				AMB	AMB		
	comp=Z,272nm,6.5s						
QIZ				LR	LR		
	comp=N,776nm,16.6s,MS4.8						
QIZ				LR	LR		
	comp=E,783nm,18.1s,MS4.8						
QIZ				LR	LR		
	comp=Z,1μm,17.0s,MS4.9						
MAJO	**Matsushiro**	**43.46**	**352**	*e*P	**P**	**14 19 47.9**	**-2.1**
	comp=Z,34nm,1.2s,mb5.0						
MAT	**Matsushiro**	**43.46**	**352**	*e*P	**P**	**14 19 53.0**	**+3.0**
	comp=Z,15nm,1.0s,mb4.7						
MAT				*e*S	**S**	**14 26 19.0**	**+3.2**
MAT				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
MAT	**Matsushiro**	**43.46**	**352**	P	**P**	**14 19 53.1**	**+3.1**
MAT				S	**S**	**14 26 19.0**	**+3.2**
SSE	**Sheshan**	**43.83**	**330**	P	**P**	**14 19 53.5**	**+0.4**
SSE				AP	pP	14 19 59.9	-3.1
SSE				PCS		14 25 32.4	
SSE				S	**S**	**14 26 24.2**	**+2.9**
SSE				XS		14 26 34.9	
SSE				AMB	AMB		
	comp=Z,58nm,1.4s,mb5.1						
SSE				LR	LR		
	comp=N,443nm,16.1s,MS5.0						
SSE				LR	LR		
	comp=E,1μm,16.1s,MS5.0						
SSE				LR	LR		
	comp=Z,1μm,16.8s,MS4.8						
SSE	**Sheshan**	**43.83**	**330**	P	**P**	**14 19 53.5**	**+0.4**
	comp=Z,58nm,1.4s,mb5.1						
SSE				pP	pP	14 19 59.9	-3.1
SSE				PcS		14 25 32.4	
SSE				S	**S**	**14 26 24.2**	**+2.9**
SSE				sS		14 26 34.9	
SSE				LR	LR		
	comp=Z,1μm,16.8s,MS4.8						
NJ2	**Nanjing**	**45.77**	**329**	*e*P	**P**	**14 20 09.6**	**+0.9**
NJ2				AP	pP	14 20 14.1	-4.5
NJ2				XP	sP	14 20 16.2	-6.5
NJ2				PP	PP	14 21 56.6	+0.4
NJ2				S	**S**	**14 26 52.0**	**+2.8**
NJ2				XS		14 27 01.0	
NJ2				AMB	AMB		
	comp=Z,110nm,1.1s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,670nm,7.3s						
NJ2				LR	LR		
	comp=N,2μm,18.2s,MS5.2						
NJ2				LR	LR		
	comp=E,2μm,22.6s,MS5.2						
NJ2				LR	LR		
	comp=Z,3μm,16.2s						
KS15	**Wonju Array Si**	**46.66**	**341**	*e*P	**P**	**14 20 13.6**	**-1.9**
WHN	**Wuhan**	**47.12**	**323**	*e*P	**P**	**14 20 19.5**	**+0.2**
WHN				S	**S**	**14 27 16.5**	**+8.1**
WHN				LR	LR		
	comp=Z,3μm,21.8s,MS5.1						
NST	**Nakhon Sawan**	**49.46**	**297**	P	**P**	**14 20 37.0**	**-0.6**
	comp=Z,62nm,1.0s,mb5.6						
GYA	**Guiyang**	**49.50**	**313**	⇓*i*P	**P**	**14 20 38.6**	**+0.8**
GYA				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.9						
GYA				AMB	AMB		
	comp=Z,250nm,7.7s						
GYA				LR	LR		
	comp=N,890nm,19.2s,MS4.9						
GYA				LR	LR		
	comp=E,800nm,22.2s,MS4.9						
GYA				LR	LR		
	comp=Z,630nm,20.0s,MS4.6						
TIA	**Tai'an**	**49.95**	**331**	*e*P	**P**	**14 20 39.6**	**-1.5**
DL2	**Dalian**	**50.20**	**336**	P	**P**	**14 20 44.1**	**+1.1**
DL2				S	**S**	**14 28 00.8**	**+9.4**
DL2				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.0						
DL2				LR	LR		
	comp=N,330nm,19.2s,MS4.6						
DL2				LR	LR		
	comp=E,520nm,21.4s,MS4.6						
DL2				LR	LR		
	comp=Z,600nm,20.0s,MS4.6						
CHRT	**Chiangrai**	**51.52**	**302**	⇓P	**P**	**14 20 54.0**	**+0.8**
	comp=Z,260nm,1.0s,mb6.1						
CM31	**Chiang Mai Arr**	**51.63**	**300**	*e*P	**P**	**14 20 54.2**	**+0.1**
	comp=Z,33nm,0.8s,mb5.3						
KMI	**Kunming**	**51.68**	**309**	⇑P	**P**	**14 20 54.5**	**+0.1**
KMI				S	**S**	**14 28 14.8**	**+2.8**
KMI				SS	SS	14 31 50.8	+4.4
KMI				AMB	AMB		
	comp=Z,28nm,1.6s,mb4.9						
KMI				AMB	AMB		
	comp=Z,316nm,5.4s						
KMI				LR	LR		
	comp=N,989nm,24.1s,MS4.9						
KMI				LR	LR		
	comp=E,759nm,24.1s,MS4.9						
KMI				LR	LR		
	comp=Z,828nm,22.6s,MS4.7						
KMI	**Kunming**	**51.68**	**309**	⇑P	**P**	**14 20 54.5**	**+0.1**
	comp=Z,28nm,1.6s,mb4.9						
KMI				sP	sP	14 21 00.9	-7.5
KMI				PP	PP	14 22 58.6	+5.9
KMI				S	**S**	**14 28 14.8**	**+2.8**
KMI				sS		14 28 20.2	
KMI				SS	SS	14 31 50.8	+4.4
KMI				LR	LR		
	comp=Z,830nm,22.6s,MS4.7						
CHG	**Chiang Mai**	**51.78**	**300**	⇑P	**P**	**14 20 54.9**	**-0.3**
	comp=Z,34nm,1.1s,mb5.2						
XAN	**Xi'an**	**52.84**	**322**	P	**P**	**14 21 01.7**	**-1.2**
XAN				S	**S**	**14 28 30.5**	**+2.8**
XAN				AMB	AMB		
	comp=Z,31nm,1.3s,mb5.1						
XAN				LR	LR		
	comp=N,415nm,21.9s,MS4.7						
XAN				LR	LR		
	comp=E,586nm,22.8s,MS4.7						
XAN				LR	LR		
	comp=Z,918nm,24.1s,MS4.7						
MDJ	**Mudanjiang**	**52.88**	**346**	P	**P**	**14 21 02.0**	**-1.1**
MDJ				AP	pP	14 21 08.3	-4.8
MDJ				XP	sP	14 21 11.7	-5.4
MDJ				PP	PP	14 23 04.4	+0.3
MDJ				S	**S**	**14 28 33.9**	**+5.7**
MDJ				SCS	ScS	14 30 49.9	+3.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,198nm,4.2s						
MDJ				LR	LR		
	comp=N,536nm,18.1s,MS4.8						
MDJ				LR	LR		
	comp=E,436nm,16.9s,MS4.8						
MDJ				LR	LR		
	comp=Z,758nm,19.3s,MS4.8						
CN2	**Changchun**	**53.22**	**343**	⇑P	**P**	**14 21 05.4**	**-0.2**
CN2				*e*S	**S**	**14 28 34.9**	**+2.1**
CN2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
CN2				AMB	AMB		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,1μm,19.0s,MS5.0						
CN2				LR	LR		
	comp=E,800nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**53.45**	**358**	*e*P	**P**	**14 21 10.8**	**+3.5**
YSS				S	**S**	**14 28 45.0**	**+9.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
YSS				MLR	MLR		
	comp=N,800nm,16.0s						
YSS				MLR	MLR		
	comp=Z,800nm,16.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**53.45**	**358**	*e*P	**P**	**14 21 07.0**	**-0.3**
	comp=Z,4.3nm,0.5s,mb4.6						
BJI	**Beijing**	**53.46**	**333**	*e*P	**P**	**14 21 06.7**	**-0.8**
BJI				S	**S**	**14 28 32.5**	**-3.7**
BJI				SS	SS	14 32 18.9	+3.1
BJI				AMB	AMB		
	comp=Z,69nm,1.7s,mb5.3						
BJI				LR	LR		
	comp=N,742nm,22.6s,MS5.0						
BJI				LR	LR		
	comp=E,1μm,18.8s,MS5.0						
BJI				LR	LR		
	comp=Z,906nm,27.4s						
BJI	**Beijing**	**53.46**	**333**	*e*P	**P**	**14 21 06.7**	**-0.8**
	comp=Z,69nm,1.7s,mb5.3						
BJI				S	**S**	**14 28 32.5**	**-3.7**
BJI				SS	SS	14 32 18.9	+3.1
BJI				LR	LR		
	comp=Z,910nm,27.4s,MS4.7						
CD2	**Chengdu**	**54.19**	**316**	P	**P**	**14 21 12.6**	**-0.4**
CD2				PP	PP	14 23 15.3	-0.9
CD2				S	**S**	**14 28 53.0**	**+6.8**
CD2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
CD2				LR	LR		
	comp=N,1μm,14.4s						
CD2				LR	LR		
	comp=Z,1μm,18.0s,MS5.0						
HHC	**Hu-ho-hao-te**	**56.29**	**330**	⇓P	**P**	**14 21 27.9**	**-0.1**
HHC				PCP	PcP	14 22 22.5	-2.6
HHC				PP	PP	14 23 34.8	-0.1
HHC				SCP		14 26 24.2	
HHC				S	**S**	**14 29 18.3**	**+4.2**
HHC				SCS	ScS	14 31 15.6	+4.6
HHC				SS	SS	14 33 05.7	+4.5
HHC				AMB	AMB		
	comp=Z,33nm,1.7s,mb5.1						
HHC				AMB	AMB		
	comp=Z,202nm,4.3s						

HHC				LR	LR		
	comp=N,642nm,16.6s,MS5.0						
HHC				LR	LR		
	comp=E,702nm,16.6s,MS5.0						
HHC				LR	LR		
	comp=Z,940nm,19.0s,MS4.9						
KLR	Kul'dur	56.85	350	*e*P	P	14 21 28.0	-3.9
KLR				MLR	MLR		
	comp=N,600nm,15.0s,MS4.9						
KLR				MLR	MLR		
	comp=E,500nm,15.0s,MS4.9						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.0						
BTO	Baotou	56.88	329	*e*P	P	14 21 29.9	-2.4
BTO				AMB	AMB		
	comp=Z,18nm,1.2s,mb5.0						
LZH	Lanzhou	57.31	321	⇑P	P	14 21 35.0	-0.4
LZH				*e*S	S	14 29 29.1	+1.5
LZH				SS	SS	14 33 19.7	+1.3
LZH				AMB	AMB		
	comp=Z,54nm,1.4s,mb5.4						
LZH				AMB	AMB		
	comp=Z,125nm,6.2s						
LZH				LR	LR		
	comp=N,877nm,15.2s						
LZH				LR	LR		
	comp=Z,1µm,17.9s,MS5.1						
LZH	Lanzhou	57.31	321	⇑P	P	14 21 35.0	-0.4
	comp=Z,54nm,1.4s,mb5.4						
LZH				pP	pP	14 21 36.8	-8.8
LZH				sP	sP	14 21 38.0	-11
LZH				*e*PP	PP	14 23 33.2	-11
LZH				*e*S	S	14 29 29.1	+1.5
LZH				sS		14 29 34.6	
LZH				SS	SS	14 33 19.7	+1.3
LZH				LR	LR		
	comp=Z,1µm,17.9s,MS5.1						
GTA	Gaotai	61.88	322	*e*P	P	14 22 05.7	-1.0
GTA				AP	pP	14 22 12.3	-4.6
GTA				XP	sP	14 22 16.0	-4.7
GTA				PP	PP	14 24 25.0	-0.2
GTA				S	S	14 30 33.1	+6.6
GTA				XS		14 30 48.0	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.7						
GTA				AMB	AMB		
	comp=Z,313nm,8.4s						
GTA				LR	LR		
	comp=N,416nm,22.0s						
GTA				LR	LR		
	comp=E,604nm,16.3s						
GTA				LR	LR		
	comp=Z,527nm,21.5s,MS4.7						
LSA	Lhasa	62.89	308	P	P	14 22 14.2	+0.5
ULN	Ulaanbaatar	63.68	333	⇓*i*P	P	14 22 18.8	+0.2
ULN	Ulaanbaatar	63.68	333	*e*P	P	14 22 18.2	-0.4
	comp=Z,24nm,1.1s,mb5.1						
PALK	Pallekele	65.38	281	*e*P	P	14 22 31.0	+0.9
	comp=Z,38nm,1.2s,mb5.3						
CLNS	Chul'man	65.39	348	*e*P	P	14 22 29.7	+0.2
CLNS				*e*		14 23 00.8	
CLNS				*e*		14 24 52.6	
CLNS				*e*PPP	PPP	14 26 23.0	-6.9
CLNS				*e*S	S	14 31 15.0	+5.2
CLNS				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.4						
CLNS				pmax	pmax		
	comp=N,48nm,1.4s						
CLNS				pmax	pmax		
	comp=E,14nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
CLNS				pmax	pmax		
	comp=N,11nm,1.1s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
CLNS				smax			
	comp=E,5.0nm,1.1s						
CLNS				smax			
	comp=N,4.0nm,0.9s						
CLNS				smax			
	comp=Z,3.0nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
CLNS				MLR	MLR		
	comp=N,300nm,17.0s,MS4.7						
CLNS				MLR	MLR		
	comp=E,100nm,12.0s,MS4.7						
JIRN	Jiri	66.05	304	*e*P	P	14 22 33.9	-0.3
	comp=E,88nm,1.3s,mb5.6						
MA2	Magadan	66.24	3	*e*P	P	14 22 34.9	0.0
GUN	Gumba	66.39	304	*e*P	P	14 22 36.2	-0.2
	comp=E,349nm,1.7s,mb6.1						
PKI	Pulchoki	66.66	304	*e*P	P	14 22 38.2	+0.1
	comp=E,182nm,1.5s,mb5.9						
KKN	Kakani	66.84	304	*e*P	P	14 22 39.0	-0.2
	comp=E,84nm,0.9s,mb5.8						
DMN	Daman	66.92	304	*e*P	P	14 22 39.4	-0.3
	comp=E,93nm,0.9s,mb5.8						
ZAK	Zakamensk	67.21	333	⇑*i*P	P	14 22 41.0	-0.1
ZAK				*e*		14 23 13.0	
ZAK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
GKN	Gorkha	67.45	304	*e*P	P	14 22 42.5	-0.6
	comp=Z,171nm,1.4s,mb5.9						
TLY	Talaya	67.96	334	P	P	14 22 46.7	+0.8
	comp=Z,108nm,1.6s,mb5.6,SNR=22						
TLY	Talaya	67.96	334	*e*P	P	14 22 46.2	+0.3
TLY				*e*PS	PS	14 32 08.0	-1.9
TLY				*e*		14 32 44.8	
TLY				pmax	pmax		
	comp=Z,48nm,1.7s,mb5.2						
TLY	Talaya	67.96	334	*e*P	P	14 22 46.0	+0.1
	comp=Z,53nm,1.5s,mb5.3						
IRK	Irkutsk	68.09	335	*e*P	P	14 22 46.7	0.0
IRK				pmax	pmax		
	comp=Z,49nm,2.0s,mb5.2						
KOLN	Koldanda	68.23	303	*e*P	P	14 22 47.3	-0.6
	comp=Z,61nm,0.9s,mb5.6						
BOD	Bodaibo	68.97	343	*e*P	P	14 22 49.9	-2.1
BOD				pmax	pmax		
	comp=Z,63nm,2.0s,mb5.2						
MOY	Mondy	69.14	333	*e*P	P	14 22 53.9	+0.7
MOY				pmax	pmax		
	comp=Z,83nm,2.1s,mb5.3						
YAK	Yakutsk	69.52	352	*e*P	P	14 22 55.5	+0.2
YAK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
SEY	Seymchan	69.69	4	*e*P	P	14 22 56.2	-0.1
SEY				*e*		14 23 19.3	
SEY				*e*		14 27 05.4	
SEY				*e*		14 32 10.2	
SEY				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
SEY				pmax	pmax		
	comp=N,10.0nm,0.8s						
SEY				pmax	pmax		
	comp=E,20nm,1.1s						
VNDA	Vanda	71.35	176	*e*P	P	14 23 06.5	+0.3
	comp=E,6.9nm,1.1s,mb4.5						
WMQ	Urumqi	71.88	320	P	P	14 23 10.0	+0.1
WMQ				PP	PP	14 25 51.0	-0.4
WMQ				SS	SS	14 37 07.0	+1.4
WMQ				AMB	AMB		
	comp=Z,41nm,1.0s,mb5.3						
WMQ				LR	LR		
	comp=N,456nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=E,357nm,20.0s,MS4.8						
DDI	Dehra Dun	73.65	304	*e*P	P	14 23 21.0	+0.4
KAD	Karad	73.65	290	*e*P	P	14 23 20.0	-0.9
NDI	New Delhi	73.85	302	*e*P	P	14 23 19.5	-2.3
POO	Poona	74.23	291	⇑*i*P	P	14 23 24.0	-0.2
	comp=E,71nm,1.5s,mb5.4						
BILL	Bilibino	76.11	8	⇓*i*P	P	14 23 33.6	-0.4
BILL				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
BILL	Bilibino	76.11	8	*e*P	P	14 23 32.8	-1.2
	comp=Z,24nm,1.3s,mb5.0						
THN	Thein Dam	76.19	306	*e*P	P	14 23 34.0	-1.2
MKAR	Makanchi Array	76.63	321	*i* P	P	14 23 37.1	-0.3
MKAR				pmax	pmax		
	comp=Z,89nm,1.8s						
KSH	Kashi	78.19	313	⇑P	P	14 23 47.5	+1.3
KSH				*e*AP	pP	14 23 52.9	-3.7
KSH				*e*XP	sP	14 23 56.1	-4.1
KSH				*e*PP	PP	14 26 44.6	-0.4
KSH				*e*S	S	14 33 41.0	+3.8
KSH				*e*SKS	SKS	14 33 56.4	+3.6
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.7						
KSH				AMB	AMB		
	comp=Z,250nm,3.4s						
KSH				LR	LR		
	comp=N,280nm,5.6s						
KSH				LR	LR		
	comp=E,330nm,5.6s						
TIXI	Tiksi	78.90	355	⇑*i*P	P	14 23 48.5	-1.0
TIXI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,600nm,21.0s,MS4.9						
KZA	Kyzart	79.54	315	P	P	14 23 55.2	+1.6
	SNR=34						
TKM2	Tokmak 2	79.57	316	P	P	14 23 54.2	+0.5
	SNR=17						
NVS	Novosibirsk	79.67	329	*i* P	P	14 23 52.6	-1.3
NVS				*e*		14 24 05.2	
NVS				*e*S	S	14 33 55.8	+3.4
NVS				pmax	pmax		
	comp=N,29nm,1.5s						
NVS				pmax	pmax		
	comp=E,44nm,1.5s						
NVS				pmax	pmax		
	comp=Z,53nm,1.5s,mb5.2						
NVS				pmax	pmax		
	comp=N,10.0nm,1.8s						
NVS				pmax	pmax		
	comp=Z,20nm,1.8s,mb4.8						
NVS				pmax	pmax		
	comp=E,14nm,2.0s						
NVS				smax			
	comp=N,65nm,3.1s						
NVS				smax			
	comp=E,116nm,2.8s						
KBK	Karagaybulak	79.94	315	P	P	14 23 58.8	+3.1
	SNR=6.3						
TNA	Tin City	79.95	18	*e*P	P	14 23 57.7	+2.5
	comp=E,4.3nm,0.7s,mb4.5						
UCH	Uchtor	80.11	315	P	P	14 23 58.0	+1.4
	SNR=24						
FRU	Bishkek	80.23	315	*e*P	P	14 23 58.0	+0.8
FRU				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
AAK	Ala-Archa	80.25	315	P	P	14 23 57.1	-0.3
	SNR=5.3						
AAK	Ala-Archa	80.25	315	⇓*i*P	P	14 23 56.9	-0.4
AAK				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
AAK				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.9						
AAK	Ala-Archa	80.25	315	*e*P	P	14 23 56.6	-0.8
	comp=Z,21nm,1.2s,mb5.0						
KURK	Kurchatov	80.44	324	*d i*P	P	14 23 58.3	+0.1
KURK	Kurchatov	80.44	324	*e*P	P	14 23 57.8	-0.4
	comp=Z,36nm,1.0s,mb5.3						
USP	Ospenovka	80.45	316	P	P	14 23 58.8	+0.4
	SNR=26						
AML	Almayashu	80.66	315	P	P	14 24 00.8	+1.3
	SNR=25						
EKS2	Erkin-Say	80.76	315	P	P	14 24 00.4	+0.3
	SNR=25						
QSPA	South Pole Qui	83.27	180	*e*P	P	14 24 13.0	+0.7
	comp=Z,29nm,1.0s,mb5.3						
IMA	Indian Mountai	85.01	21	*e*P	P	14 24 23.9	+2.6
	comp=Z,32nm,1.2s,mb5.3						
MCK	McKinley	85.78	24	*e*P	P	14 24 25.6	+0.6
	comp=Z,19nm,1.3s,mb5.2						
BVA0	Borovoye Array	86.03	324	*i* P	P	14 24 26.5	0.0
BVA0				pmax	pmax		
	comp=Z,12nm,2.2s,mb4.7						
CHKZ	Chkalovo	86.08	325	*i* P	P	14 24 26.2	-0.6
CHKZ				pmax	pmax		
	comp=Z,30nm,2.1s,mb5.2						
CHKZ	Chkalovo	86.08	325	*e*P	P	14 24 25.8	-0.9
	comp=Z,21nm,1.1s,mb5.3						
COLA	College	86.67	23	*e*P	P	14 24 27.8	-1.6
COLA	College	86.67	23	*e*P	P	14 24 27.5	-1.9
	comp=Z,5.4nm,0.8s,mb4.8						
SYO	Syowa Base	89.16	200	⇓P	P	14 24 42.3	+1.0
DAWY	Dawson	89.86	25	*e*P	P	14 24 43.4	-1.3
SVE	Sverdlovsk	92.34	327	*e*P	P	14 24 55.5	-0.9
SVE				*e*		14 25 04.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.5						
SVE				MLR	MLR		
	comp=N,100nm,20.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,300nm,20.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,500nm,20.0s,MS5.0						
INK	Inuvik	93.13	22	*e*P	P	14 25 01.4	+1.6
	comp=Z,5.4nm,1.1s,mb4.9						
ARU	Arti	93.43	326	⇓*i*P	P	14 24 52.3	-9.0
ARU				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.4						
ARU				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.9						
ARU				MLR	MLR		
	comp=N,200nm,17.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,300nm,19.0s,MS4.9						
BMO	Blue Mountains	100.33	46	*e*Pdif	P	14 25 34.8	+1.8
	comp=E,4.6nm,1.3s						
RES	Resolute Bay	104.20	14	*e*Pdif	Pdif	14 25 54.2	+4.7
SUR	Sutherland	114.04	230	*e*PKiKP		14 30 27.4	
WMOK	Wichita Mounta	115.50	55	*e*PKPdf	PKPdf	14 30 29.9	+2.6
MIAR	Mount Ida	119.74	54	*e*PKPdf	PKPdf	14 30 40.5	+4.9
KHC	Kasperske Hory	121.13	325	*e*PKPdf	PKPdf	14 30 37.5	-0.3
PLCA	Paso Flores	122.73	149	*e*PKPdf	PKPdf	14 30 44.5	+3.3
LPAZ	La Paz	140.24	125	*e*PKPdf	PKPdf	14 31 18.0	+3.3
SDV	Santo Domingo	144.89	84	*e*PKPdf	PKPdf	14 31 24.4	+1.4
SJG	San Juan	147.83	67	*e*PKPbc	PKPdf	14 31 34.1	+6.4

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*PRU **02** 14:22:57.3, 51.46N×16.13E*

WAR 02 14:22:56.9, 51.54N×16.13E, h1^{km}, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	172	*e*PG	Pg	14 23 10.0	-1.0
KSP				*e*SG	Sg	14 23 19.0	-1.5
UPC	Upice	1.04	184	*e*PG	Pg	14 23 15.8	-1.9
DPC	Dobruska-Polom	1.20	174	*e*PG	Pg	14 23 18.5	-2.4
DPC				*e*SG	Sg	14 23 34.0	-2.9
PVCC	Panska Ves	1.42	225	*e*PG	Pg	14 23 23.0	-2.2
PRU	Pruhonice	1.85	214	*e*PG	Pg	14 23 30.5	-3.4
PRU				*e*SG	Sg	14 23 54.0	-4.7
CLL	Collm	1.97	264	*e*PG	Pg	14 23 33.0	-3.3
CLL				*i* SG	Sg	14 23 59.1	-3.5
OKC	Ostrava-Krasne	2.13	142	*e*SG	Sg	14 24 02.9	-5.1
OJC	Ojcow	2.67	118	*e*PN	Pn	14 23 38.0	-3.8
OJC				*e*PG	Pg	14 23 47.0	-3.3
OJC				*e*SG	Sg	14 24 24.0	-1.9
NKC	Novy Kostel	2.68	242	*e*SG	Sg	14 24 21.2	-4.8
KHC	Kasperske Hory	2.92	215	*e*PG	Pg	14 23 49.5	-5.6
KHC				*e*SG	Sg	14 24 27.9	-6.1

ISC 02 14:44:49.4±2.2**, 6.9S**±0.1×**154.3E**±0.4**, h200^{km}, n13, σ0ˢ30**/13**, mb4.6**/4**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	15.25	210	*e*P	P	14 48 15.9	-0.1
	20nm,0.7s						
KAKA	Kakadu	22.25	253	*e*P	P	14 49 30.1	-0.4
	13nm,0.6s,mb4.6						
WB2	Warramunga Arr	23.27	234	*e*P	P	14 49 41.3	+0.8
ASPA	Alice Springs	25.71	227	*e*P	P	14 50 03.2	0.0
STKA	Stephens Creek	27.54	204	*e*P	P	14 50 19.6	-0.2
	4.6nm,0.8s,mb4.2						
FITZ	Fitzroy Crossi	30.03	246	*e*P	P	14 50 41.9	-0.1
	13nm,0.9s,mb4.6						
JIRN	Jiri	74.09	301	*e*P	P	14 56 05.9	+0.1
	22nm,0.7s						
GUN	Gumba	74.43	301	*e*P	P	14 56 08.0	+0.2
	55nm,0.7s						
PKI	Pulchoki	74.73	301	*e*P	P	14 56 09.4	-0.1
	35nm,0.9s,mb5.0						
KKN	Kakani	74.90	301	*e*P	P	14 56 10.3	-0.2
	29nm,0.8s						
DMN	Daman	75.00	301	*e*P	P	14 56 11.3	+0.3
	79nm,0.9s						
GKN	Gorkha	75.51	301	*e*P	P	14 56 13.8	-0.1
	54nm,0.9s						
KOLN	Koldanda	76.33	301	*e*P	P	14 56 18.2	-0.2
	32nm,0.7s						

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*NEIC **02** 14:53:10.4, 46.73S×165.10E, h12^{km}, ML4.4(WEL), After WEL.*

WEL 02 14:53:11.5±0.6**, 46.64S×164.94E, h33^{km}, ML4.4**/5**, 1D, Error ellipse: s-maj=7.8km s-min=6.7km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	1.93	54	PN	Pn	14 53 39.0	-3.6
DCZ				SN	Sn	14 54 02.0	-3.9
WHZ	Wether Hill Ro	2.21	71	P	P	14 53 45.0	-1.5
WHZ				S	S	14 54 10.9	-2.1
WHZ	Wether Hill Ro	2.21	71	PN	Pn	14 53 45.0	-1.7
WHZ				SN	Sn	14 54 10.8	-2.4
MLZ	Mavora Lakes	2.59	61	P	P	14 53 50.1	-1.9
MLZ				S	S	14 54 21.3	-1.4
MLZ	Mavora Lakes	2.59	61	⇓PN	Pn	14 53 50.1	-2.0
MLZ				SN	Sn	14 54 19.6	-3.2
MSZ	Milford Sound	2.87	48	PN	Pn	14 53 53.3	-2.8
MSZ				SN	Sn	14 54 24.6	-5.2
TUZ	Tuapeka	3.32	80	*e*P	P	14 54 00.1	-2.2
TUZ	Tuapeka	3.32	80	PN	Pn	14 54 00.1	-2.3
TUZ				SN	Sn	14 54 37.3	-4.0
EAZ	Earnscleugh	3.35	67	*e*P	P	14 54 01.0	-1.8
EAZ	Earnscleugh	3.35	67	PN	Pn	14 54 01.0	-1.9
EAZ				SN	Sn	14 54 39.5	-2.6
WKZ	Wanaka	3.38	59	*e*P	P	14 54 02.5	-0.6
WKZ	Wanaka	3.38	59	PN	Pn	14 54 01.9	-1.4
WKZ				SN	Sn	14 54 39.8	-2.9
JCZ	Jackson Bay	3.71	48	*e*P	P	14 54 05.4	-2.5
JCZ	Jackson Bay	3.71	48	PN	Pn	14 54 05.2	-2.9
JCZ				SN	Sn	14 54 46.5	-4.7
ODZ	Otahua Downs	4.29	70	*e*P	P	14 54 12.1	-4.0
ODZ	Otahua Downs	4.29	70	PN	Pn	14 54 12.1	-4.1
ODZ				SN	Sn	14 54 59.3	-6.5
LBZ	Lake Benmore	4.32	60	*e*P	P	14 54 13.2	-3.3
LBZ	Lake Benmore	4.32	60	PN	Pn	14 54 13.2	-3.5
LBZ				SN	Sn	14 54 59.5	-7.0
FOZ	Fox Glacier	4.55	49	PN	Pn	14 54 17.3	-2.6
FOZ				SN	Sn	14 55 08.3	-4.1
RPZ	Rata Peaks	5.21	58	*e*P	P	14 54 24.7	-4.5
RPZ	Rata Peaks	5.21	58	PN	Pn	14 54 24.7	-4.6
RPZ				SN	Sn	14 55 21.1	-7.9
WVZ	Waitaha Valley	5.44	51	*e*P	P	14 54 28.1	-4.3
WVZ	Waitaha Valley	5.44	51	PN	Pn	14 54 27.9	-4.6
WVZ				SN	Sn	14 55 25.8	-9.0
LTZ	Lake Taylor	6.49	56	*e*P	P	14 54 41.4	-5.7
LTZ	Lake Taylor	6.49	56	PN	Pn	14 54 41.4	-5.8
DSZ	Denniston Nort	6.94	48	*e*P	P	14 54 48.1	-5.4
DSZ	Denniston Nort	6.94	48	PN	Pn	14 54 47.9	-5.7
THZ	Tophouse	7.51	52	*e*P	P	14 54 55.0	-6.4
THZ	Tophouse	7.51	52	PN	Pn	14 54 55.0	-6.6
QRZ	Quartz Range	7.99	46	*e*P	P	14 55 02.8	-5.2
QRZ	Quartz Range	7.99	46	PN	Pn	14 55 02.4	-5.9
NNZ	Nelson	8.15	51	*e*P	P	14 55 06.1	-4.1
NNZ	Nelson	8.15	51	PN	P	14 55 06.1	-4.2

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*BJI **02** 14:58:07.3, 6.37N×90.33E, h19^{km}, mB5.3, mb4.8, Ms4.9, Msz4.7*

*NEIC **02** 14:58:08.6±0.3, 6.43N×90.38E, mb5.0/39, MS4.4/1, Error ellipse: s-maj=8.3km s-min=6.8km az=220.0*

*HRVD **02** 14:58:08.6±0.3, 6.47N×90.37E, h14^{km}±1^{km}, MW5.1/64, Centroid moment Tensor Solution. LP body waves: s31,c42;Mantle waves: s64,c124; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.46±.17; $M_{\theta\theta}$-2.06±.14; $M_{\phi\phi}$2.52±.18; $M_{r\theta}$-1.16±.34; $M_{\theta\phi}$-5.52±.16; $M_{\phi r}$0.32±.32; Best double couple: $M_0$6.096×10^{16} NP1: ϕ_s11°,δ79°,λ-1°. NP2:ϕ_s101°,δ90°,λ-169°. Principal axes: T 6.329, Plg8°, Azm236°; N -.47, Plg79°, Azm104°; P -5.862, Plg8°, Azm327°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **02** 14:58:09.7±1.1, 6.58N×90.53E, h33^{km}, mb5.2/25, MS4.6/4 Error ellipse: s-maj=23.7km s-min=8.1km az=116.8*

ISC 02 14:58:07.1±0.3**, 6.40N**±0.04×**90.34E**±0.04**, h18^{km}, h18^{km}±.7^{km}:pP-P, n168, σ1ˢ09**/189**, mb4.9**/66**, MS4.7**/20**, 9C-13D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	9.61	276	*e*P	P	15 00 24.0	-3.8
	30nm,0.9s						
MDRS	Chennai	11.95	304	*e*P	P	15 00 59.0	-0.8
MDRS				*e*		15 02 52.0	
MDRS				*e*		15 03 54.0	
SALM	Salem	13.07	294	*e*P	P	15 01 13.0	-1.8
SALM				*e*S	S	15 03 25.0	-16
VIS	Vishakhapatnam	13.17	329	*e*P	P	15 01 12.6	-3.5
VIS				*e*S	S	15 03 24.0	-19
VIS				*e*		15 03 41.1	
	comp=E,104nm,0.8s						
VIS				*e*		15 03 43.0	
	comp=N,142nm,1.0s						
NST	Nakhon Sawan	13.31	45	P	P	15 01 12.5	-5.3
TRD	Trivandrum	13.44	280	*e*	P	15 01 11.8	-7.8
TRD				*e*S	S	15 03 39.0	-10
TRD				*e*		15 03 43.0	
	comp=N,89nm,0.3s						
TRD				*e*		15 03 43.1	
	comp=E,115nm,0.2s						
BWNR	Bhubaneshwar	14.50	343	*e*	P	15 01 27.4	-6.2
BWNR				*e*		15 01 29.1	
	comp=Z,93nm,0.3s						
BWNR				*e*		15 03 59.1	
CM31	Chiang Mai Arr	14.63	34	*e*P	P	15 01 31.9	-3.4
	comp=Z,96nm,1.3s						
CHG	Chiang Mai	14.91	33	⇑P	P	15 01 35.6	-3.4
	comp=Z,40nm,0.8s						
KKTK	Khon Kaen	15.71	50	⇓P	P	15 01 49.5	+0.1
	comp=Z,617nm,0.9s						
HYB	Hyderabad	15.89	315	*i* P	P	15 01 51.0	-0.8
	comp=Z,60nm,1.0s						
HYB				*e*		15 04 20.0	
HYB				*e*S	S	15 04 45.0	-2.5
NANT	Nan	15.93	38	P	P	15 01 50.6	-1.6
	comp=Z,156nm,1.3s						
CHRT	Chiangrai	16.23	34	⇓P	P	15 01 53.5	-2.5
	comp=Z,176nm,1.3s						
MNGI	Mangalore	16.62	294	*i* P	P	15 02 04.9	+3.9
MNGI				*i*		15 04 50.7	
AGT	Agartala	17.41	3	⇑*i*P	P	15 02 12.0	+1.2
AGT				*i*		15 03 07.0	
LATR	Latur	17.98	313	*e*P	P	15 02 22.0	+4.0
LATR				*e*		15 05 23.0	
NGP	Nagpur	18.29	324	*e*P	P	15 02 21.1	-0.8
	comp=Z,295nm,1.6s						
NGP				*e*		15 05 30.3	
GOA	Goa	18.55	300	*e*	P	15 02 37.4	+12
	comp=Z,115nm,1.6s						
GOA				*e*		15 05 45.5	
SHL	Shillong	19.12	4	*e*P	P	15 02 33.0	+1.1
SHL				*e*		15 05 55.0	
KAD	Karad	19.15	306	*e*P	P	15 02 31.3	-1.0
KAD				*i*		15 05 48.3	
COCO	West Island	19.56	161	*e*P	P	15 02 38.0	+1.0
	comp=Z,171nm,1.3s						
POO	Poona	20.09	308	*e*P	P	15 02 39.8	-3.0
POO				*e*		15 02 50.4	
	comp=Z,64nm,1.2s						
BHPL	Bhopal	20.86	325	*e*P	P	15 02 50.8	0.0
BHPL				*e*		15 03 02.2	
	comp=Z,83nm,1.4s						
BHPL				*e*		15 06 49.4	
BOM	Bombay	21.11	308	*e*P	P	15 02 55.6	+2.3
BOM				*e*		15 06 38.2	
JIRN	Jiri	21.51	350	*e*P	P	15 02 56.8	-0.5
	comp=Z,469nm,1.5s,mb5.7						

PKI	**Pulchoki**	**21.57**	**348**	*e*P	**P**	**15 02 57.4**	**-0.5**
	comp=Z,423nm,1.5s,mb5.7						
DMN	**Daman**	**21.67**	**347**	*e*P	**P**	**15 02 58.9**	**0.0**
	comp=Z,298nm,1.4s,mb5.5						
GUN	**Gumba**	**21.81**	**349**	*e*P	**P**	**15 02 59.8**	**-0.5**
KKN	**Kakani**	**21.81**	**348**	*e*P	**P**	**15 03 00.1**	**-0.2**
	comp=Z,202nm,1.3s,mb5.4						
KMI	**Kunming**	**22.08**	**31**	P	**P**	**15 03 03.0**	**0.0**
KMI				AP		15 03 08.2	
KMI				XP		15 03 09.4	
KMI				PP	PP	15 03 32.8	+3.6
KMI				S	**S**	**15 07 00.2**	**-0.4**
KMI				SS	SS	15 07 42.5	+2.6
KMI				AMB	AMB		
	comp=Z,15nm,1.5s,mb4.2						
KMI				AMB	AMB		
	comp=Z,128nm,3.1s						
KMI				LR	LR		
	comp=N,2µm,18.8s,MS4.6						
KMI				LR	LR		
	comp=E,1µm,17.6s,MS4.6						
KMI				LR	LR		
	comp=Z,1µm,19.1s,MS4.4						
KMI	**Kunming**	**22.08**	**31**	P	**P**	**15 03 03.0**	**0.0**
	comp=Z,15nm,1.5s,mb4.2						
KMI				pP		15 03 08.2	
KMI				sP		15 03 09.4	
KMI				PP	PP	15 03 32.8	+3.6
KMI				S	**S**	**15 07 00.2**	**-0.4**
KMI				sS		15 07 07.8	
KMI				SS	SS	15 07 42.5	+2.6
KMI				LR	LR		
	comp=Z,1µm,19.1s,MS4.4						
GKN	**Gorkha**	**22.16**	**347**	*e*P	**P**	**15 03 03.6**	**-0.2**
	comp=Z,393nm,1.4s,mb5.6						
KOLN	**Koldanda**	**22.20**	**344**	*e*P	**P**	**15 03 04.0**	**-0.2**
	comp=Z,370nm,1.4s,mb5.6						
DGAR	**Diego Garcia**	**22.51**	**233**	*e*P	**P**	**15 03 07.0**	**-0.5**
	comp=Z,278nm,1.3s,mb5.5						
QIZ	**Qiongzhong**	**22.76**	**55**	P	**P**	**15 03 09.8**	**-0.1**
QIZ				S	**S**	**15 07 12.8**	**-0.2**
QIZ				LR	LR		
	comp=N,1µm,13.8s,MS4.6						
QIZ				LR	LR		
	comp=E,1µm,15.8s,MS4.6						
QIZ				LR	LR		
	comp=Z,1µm,17.5s,MS4.4						
GYA	**Guiyang**	**25.30**	**36**	⇓*i*P	**P**	**15 03 35.5**	**+1.1**
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,240nm,4.6s						
GYA				LR	LR		
	comp=N,1µm,17.4s,MS4.5						
GYA				LR	LR		
	comp=E,910nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=Z,1µm,17.4s,MS4.5						
NDI	**New Delhi**	**25.41**	**332**	*e*P	**P**	**15 03 34.0**	**-1.4**
NDI				*e*		15 08 52.0	
DDI	**Dehra Dun**	**26.45**	**336**	*e*P	**P**	**15 03 45.5**	**+0.4**
DDI				*e*		15 08 39.5	
CD2	**Chengdu**	**27.44**	**26**	P	**P**	**15 03 53.0**	**-1.1**
CD2				AMB	AMB		
	comp=Z,139nm,1.4s,mb5.3						
SDNR	**Sundarnagar**	**27.93**	**335**	*e*	**P**	**15 04 04.6**	**+6.0**
LZH	**Lanzhou**	**32.04**	**21**	*e*P	**P**	**15 04 34.7**	**-0.3**
LZH				AP	pP	15 04 38.0	-2.4
LZH				PP	PP	15 05 40.5	-1.1
LZH				*e*S	**S**	**15 09 45.6**	**+0.8**
LZH				SS	SS	15 11 38.0	+0.2
LZH				AMB	AMB		
	comp=Z,45nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,177nm,5.2s						
LZH				LR	LR		
	comp=N,1µm,13.3s						
LZH				LR	LR		
	comp=Z,2µm,17.0s,MS4.8						
LZH	**Lanzhou**	**32.04**	**21**	*e*P	**P**	**15 04 34.7**	**-0.3**
	comp=Z,45nm,1.3s,mb5.1						
LZH				pP	pP	15 04 38.0	-2.4
LZH				sP	sP	15 04 39.4	-3.4
LZH				PP	PP	15 05 40.5	-1.1
LZH				*e*S	**S**	**15 09 45.6**	**+0.8**
LZH				sS		15 09 50.8	
LZH				SS	SS	15 11 38.0	+0.2
LZH				LR	LR		
	comp=Z,2µm,17.0s,MS4.8						
XAN	**Xi’an**	**32.44**	**30**	P	**P**	**15 04 35.8**	**-2.7**
XAN				S	**S**	**15 09 47.2**	**-3.9**
XAN				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.1						
XAN				LR	LR		
	comp=N,1µm,18.8s,MS4.6						
XAN				LR	LR		
	comp=E,387nm,19.7s,MS4.6						
XAN				LR	LR		
	comp=Z,1µm,19.7s,MS4.7						
WHN	**Wuhan**	**32.94**	**40**	*e*P	**P**	**15 04 44.5**	**+1.6**
WHN				S	**S**	**15 10 02.0**	**+3.1**
WHN				LR	LR		
	comp=Z,2µm,16.3s,MS4.9						
GTA	**Gaotai**	**33.96**	**13**	*e*P	**P**	**15 04 51.2**	**-0.5**
GTA				AP	pP	15 04 54.7	-2.4
GTA				PP	PP	15 06 06.6	+1.1
GTA				S	**S**	**15 10 16.3**	**+1.7**
GTA				XS		15 10 23.4	
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.3						
GTA				AMB	AMB		
	comp=Z,110nm,3.8s						
GTA				LR	LR		
	comp=N,399nm,18.0s,MS4.5						
GTA				LR	LR		
	comp=E,663nm,18.7s,MS4.5						
GTA				LR	LR		
	comp=Z,453nm,20.3s,MS4.2						
KSH	**Kashi**	**35.42**	**341**	*e*P	**P**	**15 05 04.0**	**-0.2**
KSH				*e*AP	pP	15 05 09.7	0.0
KSH				*e*XP	sP	15 05 14.3	+2.3
KSH				*e*PP	PP	15 06 23.0	-1.1
KSH				*e*PCP	PcP	15 07 34.4	+0.2
KSH				*e*S	**S**	**15 10 37.1**	**-0.2**
KSH				*e*XS		15 10 46.0	
KSH				*e*SCP		15 11 19.3	
KSH				*e*SS	SS	15 12 51.3	-4.4
KSH				*e*SCS	ScS	15 15 22.1	+1.2
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
KSH				AMB	AMB		
	comp=Z,120nm,4.0s						
KSH				LR	LR		
	comp=N,740nm,10.8s,MS5.0						
KSH				LR	LR		
	comp=E,2µm,15.6s,MS5.0						
NJ2	**Nanjing**	**36.86**	**43**	*e*P	**P**	**15 05 16.6**	**+0.1**
NJ2				AP	pP	15 05 21.6	-0.3
NJ2				XP	sP	15 05 23.5	-0.7
NJ2				PP	PP	15 06 42.9	+0.5
NJ2				S	**S**	**15 11 01.0**	**+1.5**
NJ2				XS		15 11 10.0	
NJ2				AMB	AMB		
	comp=Z,1µm,5.8s						
NJ2				LR	LR		
	comp=N,2µm,14.4s						
NJ2				LR	LR		
	comp=E,1µm,19.4s						
NJ2				LR	LR		
	comp=Z,2µm,12.5s,MS5.0						
WMQ	**Urumqi**	**37.34**	**357**	*e*P	**P**	**15 05 21.0**	**+0.6**
WMQ				XP	sP	15 05 28.0	-0.1
WMQ				PP	PP	15 06 49.0	+0.9
WMQ				S	**S**	**15 11 07.0**	**+0.2**
WMQ				SS	SS	15 13 38.0	-0.8
WMQ				AMB	AMB		
	comp=Z,27nm,0.8s,mb5.1						
WMQ				LR	LR		
	comp=N,1µm,20.0s,MS4.7						
WMQ				LR	LR		
	comp=E,846nm,22.0s,MS4.7						
SSE	**Sheshan**	**37.92**	**46**	P	**P**	**15 05 24.4**	**-0.9**
SSE				AP	pP	15 05 30.1	-0.7
SSE				XP	sP	15 05 33.3	+0.2
SSE				S	**S**	**15 11 17.4**	**+1.7**
SSE				XS		15 11 28.0	
SSE				AMB	AMB		
	comp=Z,25nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,145nm,5.1s						
SSE				LR	LR		
	comp=N,600nm,12.8s,MS4.7						
SSE				LR	LR		
	comp=E,578nm,12.8s,MS4.7						
SSE				LR	LR		
	comp=Z,793nm,12.6s,MS4.7						
SSE	**Sheshan**	**37.92**	**46**	P	**P**	**15 05 24.4**	**-0.9**
	comp=Z,25nm,0.8s,mb5.0						
SSE				pP	pP	15 05 30.1	-0.7
SSE				sP	sP	15 05 33.3	+0.2
SSE				S	**S**	**15 11 17.4**	**+1.7**
SSE				sS		15 11 28.0	
SSE				LR	LR		
	comp=Z,790nm,12.6s,MS4.7						
KZA	**Kyzart**	**37.97**	**342**	P	**P**	**15 05 27.0**	**+1.3**
	SNR=7.3						
UCH	**Uchtor**	**38.34**	**341**	P	**P**	**15 05 30.1**	**+1.3**
	SNR=13						
BTO	**Baotou**	**38.35**	**24**	*e*P	**P**	**15 05 32.4**	**+3.6**
AML	**Almayashu**	**38.53**	**340**	P	**P**	**15 05 31.4**	**+1.1**
	SNR=31						
KBK	**Karagaybulak**	**38.59**	**342**	P	**P**	**15 05 31.9**	**+1.0**
	SNR=18						
TKM2	**Tokmak 2**	**38.63**	**343**	P	**P**	**15 05 31.6**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**38.71**	**341**	P	**P**	**15 05 33.2**	**+1.3**
	SNR=8.7						
AAK	**Ala-Archa**	**38.71**	**341**	⇓*i*P	**P**	**15 05 32.6**	**+0.7**
AAK				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.6						
AAK	**Ala-Archa**	**38.71**	**341**	*e*P	**P**	**15 05 31.7**	**-0.2**
	comp=Z,29nm,1.2s,mb4.9						
FRU	**Bishkek**	**38.85**	**341**	⇓*e*P	**P**	**15 05 40.0**	**+6.9**
FRU				*e*		15 05 55.0	
FRU				pmax	pmax		
	comp=Z,80nm,2.1s,mb5.1						
FRU				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.5						
EKS2	**Erkin-Say**	**38.97**	**340**	P	**P**	**15 05 35.0**	**+0.9**
	SNR=12						
HHC	**Hu-ho-hao-te**	**39.20**	**26**	*e*P	**P**	**15 05 40.9**	**+4.9**
HHC				XP	sP	15 05 48.3	+4.6
HHC				PCP	PcP	15 07 45.6	-0.1
HHC				SCP		15 11 33.0	
HHC				SCS	ScS	15 15 45.4	+3.2
HHC				AMB	AMB		
	comp=Z,32nm,1.5s,mb4.8						
HHC				AMB	AMB		
	comp=Z,266nm,3.5s						
HHC				LR	LR		
	comp=N,810nm,15.4s,MS4.8						
HHC				LR	LR		
	comp=E,778nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=Z,508nm,17.8s,MS4.4						
USP	**Ospenovka**	**39.28**	**342**	P	**P**	**15 05 36.7**	**0.0**
	SNR=17						
MBWA	**Marble Bar**	**39.78**	**134**	*e*P	**P**	**15 05 40.5**	**-0.5**
	comp=Z,21nm,1.2s,mb4.7						
BJI	**Beijing**	**40.74**	**31**	*e*P	**P**	**15 05 49.3**	**+0.6**
BJI				PP	PP	15 07 23.2	-2.7
BJI				S	**S**	**15 12 05.1**	**+7.1**
BJI				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.2						
BJI				LR	LR		
	comp=N,821nm,22.9s,MS4.7						
BJI				LR	LR		
	comp=E,910nm,20.9s,MS4.7						
BJI				LR	LR		
	comp=Z,1µm,23.1s,MS4.7						
BJI	**Beijing**	**40.74**	**31**	*e*P	**P**	**15 05 49.3**	**+0.6**
	comp=Z,9.0nm,1.5s,mb4.2						
BJI				PP	PP	15 07 23.2	-2.7
BJI				S	**S**	**15 12 05.1**	**+7.1**
BJI				SS	SS	15 15 15.4	+21
BJI				LR	LR		
	comp=Z,1µm,23.1s,MS4.7						
MKAR	**Makanchi Array**	**40.84**	**352**	*i* P	**P**	**15 05 48.8**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,11nm,1.0s						
FITZ	**Fitzroy Crossi**	**42.50**	**126**	*e*P	**P**	**15 06 02.9**	**-0.5**
	comp=Z,31nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**43.71**	**16**	⇓*i*P	**P**	**15 06 13.6**	**+0.7**
ULN	**Ulaanbaatar**	**43.71**	**16**	*e*P	**P**	**15 06 12.2**	**-0.7**
	comp=Z,21nm,1.1s,mb4.8						
ZAK	**Zakamensk**	**45.16**	**12**	*e*P	**P**	**15 06 25.3**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
KURK	**Kurchatov**	**45.24**	**350**	⇑*i*P	**P**	**15 06 24.8**	**-0.4**
KURK	**Kurchatov**	**45.24**	**350**	*e*P	**P**	**15 06 24.4**	**-0.8**
	comp=Z,27nm,1.4s,mb4.9						
MOY	**Mondy**	**45.98**	**9**	*e*P	**P**	**15 06 37.7**	**+6.7**
MOY				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
TLY	**Talaya**	**46.46**	**11**	*e*P	**P**	**15 06 41.2**	**+6.4**
TLY				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
TLY				MLR	MLR		
	comp=Z,485nm,20.0s,MS4.5						
TLY	**Talaya**	**46.46**	**11**	P	**P**	**15 06 35.1**	**+0.3**
	comp=Z,11nm,1.1s,mb4.7						
NWAO	**Narrogin (SRO)**	**46.72**	**148**	*e*P	**P**	**15 06 36.9**	**-0.3**
	comp=Z,11nm,1.0s,mb4.7						
CN2	**Changchun**	**48.31**	**34**	*e*P	**P**	**15 06 49.6**	**+0.1**
CN2				*e*XP	sP	15 06 55.6	-1.6
CN2				*e*S	**S**	**15 13 48.0**	**+0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,800nm,16.0s,MS5.0						
CN2				LR	LR		
	comp=E,800nm,16.0s,MS5.0						
CN2				LR	LR		
	comp=Z,1µm,17.0s,MS4.9						
NVS	**Novosibirsk**	**48.64**	**355**	*i* P	**P**	**15 06 50.3**	**-1.5**
NVS				*e**PP	pP	15 07 08.2	+11
NVS				*e*S	**S**	**15 13 48.4**	**-3.5**
NVS				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.1						
NVS				pmax	pmax		
	comp=N,32nm,1.6s						
NVS				pmax	pmax		
	comp=E,13nm,1.6s						
NVS				smax			
	comp=N,23nm,2.4s						
NVS				smax			
	comp=E,16nm,2.0s						
BVA0	**Borovoye Array**	**49.27**	**344**	P	**P**	**15 06 55.2**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
CHKZ	**Chkalovo**	**49.79**	**345**	*i* P	**P**	**15 06 59.1**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
WRAB	**Tennant Creek**	**50.58**	**122**	⇑*i*P	**P**	**15 07 05.9**	**-1.3**
WRAB	**Tennant Creek**	**50.58**	**122**	*e*P	**P**	**15 07 06.0**	**-1.2**
	comp=Z,13nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**50.59**	**122**	*e*P	**P**	**15 07 05.2**	**-2.0**
MDJ	**Mudanjiang**	**51.16**	**35**	P	**P**	**15 07 10.6**	**-0.7**
MDJ				AP	pP	15 07 17.0	+0.2
MDJ				XP	sP	15 07 20.2	+1.2
MDJ				S	**S**	**15 14 30.6**	**+3.6**
MDJ				XS		15 14 37.1	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,192nm,3.6s						
MDJ				LR	LR		
	comp=N,205nm,24.6s,MS4.3						
MDJ				LR	LR		
	comp=E,324nm,23.3s,MS4.3						
MDJ				LR	LR		
	comp=Z,331nm,18.8s,MS4.4						
ASPA	**Alice Springs**	**51.96**	**127**	*e*P	**P**	**15 07 16.2**	**-1.5**
KMBO	**Kilima Mbogo**	**53.52**	**264**	*e*P	**P**	**15 07 30.1**	**+0.7**
	comp=Z,18nm,1.3s,mb4.8						
TI2	**Plekhanov**	**53.56**	**318**	*e*P	**P**	**15 07 29.0**	**-0.3**
BOD	**Bodaibo**	**54.50**	**15**	*e*P	**P**	**15 07 36.1**	**+0.2**
BOD				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.1						
SVE	**Sverdlovsk**	**55.45**	**341**	*e*P	**P**	**15 07 41.0**	**-1.9**
SVE				*e*		15 07 51.7	
SVE				*e*		15 19 11.0	
SVE				pmax	pmax		
	comp=Z,72nm,1.6s,mb5.5						
SVE				MLR	MLR		
	comp=N,400nm,16.0s,MS4.6						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.6						
SVE				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.7						
ARU	**Arti**	**55.85**	**339**	⇓*i*P	**P**	**15 07 36.9**	**-8.8**
ARU				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
ARU				MLR	MLR		
	comp=N,500nm,19.0s,MS4.7						
ARU				MLR	MLR		
	comp=E,300nm,19.0s,MS4.7						
ARU				MLR	MLR		
	comp=Z,700nm,19.0s,MS4.8						
KIV	**Kislovodsk**	**55.94**	**320**	⇑*i*P	**P**	**15 07 45.8**	**-0.8**
KIV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KIV	**Kislovodsk**	**55.94**	**320**	*e*P	**P**	**15 07 43.3**	**-3.3**
	comp=Z,21nm,1.0s,mb5.1						
CLNS	**Chul’man**	**57.15**	**22**	*e*P	**P**	**15 07 59.4**	**+4.3**
CLNS				pmax	pmax		
	comp=N,18nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.3						
CLNS				pmax	pmax		
	comp=E,14nm,1.0s						
PMG	**Port Moresby**	**58.75**	**105**	*e*P	**P**	**15 08 05.3**	**-1.5**
	comp=E,22nm,0.9s,mb5.2						
SOKR	**Solikamsk**	**58.87**	**341**	⇓*i*P	**P**	**15 08 04.4**	**-2.7**
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,430nm,18.0s,MS4.6						
ANN	**Anapa**	**59.70**	**319**	*e*P	**P**	**15 08 03.2**	**-10**
ANN				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.5						
YSS	**Yuzh-Sakhalins**	**60.27**	**39**	*e*P	**P**	**15 08 23.0**	**+6.1**
YAK	**Yakutsk**	**62.61**	**20**	*e*P	**P**	**15 08 35.8**	**+3.3**
YAK				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.4						
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.2s						
MOS	**Moscow**	**64.42**	**330**	*e*P	**P**	**15 08 47.4**	**+3.0**
MOS				*e*		15 09 21.3	
CFR	**Carcaliu**	**66.04**	**317**	⇓*i*P	**P**	**15 08 56.8**	**+1.8**
VRI	**Vrincioaia**	**67.18**	**317**	⇓*i*P	**P**	**15 09 03.1**	**+0.8**
VRI	**Vrincioaia**	**67.18**	**317**	⇓*i*P	**P**	**15 09 03.1**	**+0.8**
MLR	**Muntele Rosu**	**67.62**	**317**	⇑*i*P	**P**	**15 09 05.7**	**+0.7**
MLR	**Muntele Rosu**	**67.62**	**317**	⇑*i*P	**P**	**15 09 05.7**	**+0.6**
BURAR	**Bucovina Array**	**68.63**	**319**	⇑P	**P**	**15 09 11.4**	**0.0**
BURAR	**Bucovina Array**	**68.63**	**319**	⇑*i*P	**P**	**15 09 11.4**	**0.0**
TIXI	**Tiksi**	**69.43**	**12**	⇓*i*P	**P**	**15 09 15.2**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
LBTB	**Lobatse**	**70.24**	**241**	*e*P	**P**	**15 09 21.6**	**0.0**
	comp=Z,11nm,1.2s,mb4.7						
JOF	**Joensuu**	**70.58**	**335**	*e*p	**P**	**15 09 21.5**	**-1.5**
	comp=Z,9.0nm,0.8s,mb4.8						
JOF	**Joensuu**	**70.58**	**335**	*e*P	**P**	**15 09 21.5**	**-1.5**
JOF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KWP	**Kalwaria**	**70.73**	**320**	*e*P	**P**	**15 09 22.9**	**-1.2**
KOLS	**Kolonicke sedl**	**70.85**	**320**	*i* P	**P**	**15 09 25.9**	**+1.0**
KOLS				*e*pP	pP	15 09 31.1	+0.5
CRVS	**Cervenica-Dubn**	**71.37**	**319**	*e*P	**P**	**15 09 29.7**	**+1.7**
CRVS				*e*pP	pP	15 09 35.1	+1.4
SUW	**Suwalki**	**71.52**	**325**	*e*P	**P**	**15 09 27.6**	**-1.2**
	comp=Z,45nm,1.1s,mb5.3						
BOSA	**Boshof**	**71.62**	**237**	*e*P	**P**	**15 09 29.5**	**-0.4**
	comp=Z,14nm,1.1s,mb4.8						
PSZ	**Piszkesteto**	**72.20**	**318**	*e*P	**P**	**15 09 33.4**	**+0.4**
KAF	**Kangasniemi**	**72.40**	**334**	*e*p	**P**	**15 09 31.2**	**-2.8**
	comp=Z,14nm,0.9s,mb4.9,baz=356,slow=4.2						
KAF	**Kangasniemi**	**72.40**	**334**	*e*P	**P**	**15 09 31.2**	**-2.8**
KAF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
OJC	**Ojcow**	**72.69**	**321**	*e*P	**P**	**15 09 35.4**	**-0.5**
VYHS	**Vyhne**	**73.00**	**319**	*e*P	**P**	**15 09 38.4**	**+0.7**
VYHS				*i* pP	pP	15 09 44.0	+0.5
OKC	**Ostrava-Krasne**	**73.67**	**320**	*e*P	**P**	**15 09 41.2**	**-0.4**
OKC				*e*pP	pP	15 09 47.6	+0.3
MORC	**Moravsky Berou**	**74.05**	**320**	*e*P	**P**	**15 09 44.2**	**+0.5**
	comp=Z,32nm,1.7s,mb5.0						
ZST	**Bratislava**	**74.09**	**318**	*e*P	**P**	**15 09 45.5**	**+1.4**
DPC	**Dobruska-Polom**	**74.91**	**320**	*e*P	**P**	**15 09 49.7**	**+0.9**
DPC				*e*pP	pP	15 09 55.4	+0.9
UPC	**Upice**	**75.13**	**320**	*e*P	**P**	**15 09 50.6**	**+0.6**
UPC				*e*pP	pP	15 09 57.1	+1.3
PRU	**Pruhonice**	**76.00**	**320**	*e*P	**P**	**15 09 56.5**	**+1.5**
PRU				*e*pP	pP	15 10 01.4	+0.7
PVCC	**Panska Ves**	**76.05**	**320**	*e*P	**P**	**15 09 55.2**	**0.0**
PVCC				*e*pP	pP	15 10 02.0	+1.0
GEC2	**GERESS Array S**	**76.42**	**319**	*e*P	**P**	**15 09 58.2**	**+0.8**
GEC2				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
GEC2	**GERESS Array S**	**76.42**	**319**	*e*P	**P**	**15 09 58.2**	**+0.8**
	comp=Z,12nm,0.9s,mb4.8						
BRG	**Berggiesshubel**	**76.48**	**321**	*e*P	**P**	**15 09 58.4**	**+0.7**
BRG				*i*	pP	15 10 04.0	+0.6
BRG				pmax	pmax		
	comp=Z,43nm,1.7s,mb5.1						
BRG	**Berggiesshubel**	**76.48**	**321**	*e*P	**P**	**15 09 58.4**	**+0.7**
	comp=Z,43nm,1.7s,mb5.1						
BRG				*i*	pP	15 10 04.0	+0.6
KHC	**Kasperske Hory**	**76.53**	**319**	*e*P	**P**	**15 09 58.1**	**+0.1**
KHC				*e*pP	pP	15 10 04.5	+0.8
WET	**Wettzell**	**76.99**	**319**	*e*P	**P**	**15 10 01.5**	**+1.0**
WET				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
WET	**Wettzell**	**76.99**	**319**	*e*P	**P**	**15 10 01.5**	**+1.0**
	comp=Z,12nm,1.1s,mb4.7						
CLL	**Collm**	**77.12**	**321**	*i* P	**P**	**15 10 01.6**	**+0.4**
CLL				*i*	pP	15 10 07.4	+0.4
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CLL	**Collm**	**77.12**	**321**	*i* P	**P**	**15 10 01.6**	**+0.4**
	comp=Z,10.0nm,1.2s,mb4.6						
CLL				*i*	pP	15 10 07.4	+0.4
CLL	**Collm**	**77.12**	**321**	P	**P**	**15 10 01.6**	**+0.4**
	comp=Z,logA/T=0.9,mb4.6						
CLL				*i* *PP	pP	15 10 07.4	+0.4
CLL				*i*		15 10 19.1	
NKC	**Novy Kostel**	**77.37**	**320**	*e*P	**P**	**15 10 03.3**	**+0.7**
NKC				*e*pP	pP	15 10 09.3	+0.9
MOX	**Moxa**	**77.93**	**320**	*e*P	**P**	**15 10 06.1**	**+0.4**
MOX				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
MOX	**Moxa**	**77.93**	**320**	*e*P	**P**	**15 10 06.1**	**+0.4**
	comp=Z,36nm,1.6s,mb5.0						
MOX	**Moxa**	**77.93**	**320**	*i* P	**P**	**15 10 06.1**	**+0.4**
	comp=Z,logA/T=1.4,mb5.1						
GRA1	**Grafenberg Arr**	**78.11**	**319**	*e*P	**P**	**15 10 08.0**	**+1.3**
	comp=Z,14nm,0.8s,mb4.9						
GRA1				*e*pP	pP	15 10 14.3	+1.8
GRF	**Grafenberg Arr**	**78.11**	**319**	*e*P	**P**	**15 10 08.0**	**+1.3**
GRF				*e**PP	pP	15 10 14.3	+1.8
GRF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
GRF	**Grafenberg Arr**	**78.11**	**319**	*e*P	**P**	**15 10 08.0**	**+1.3**
	comp=Z,14nm,0.8s,mb4.9						
GRF				*e*pP	pP	15 10 14.3	+1.8
CLZ	**Clausthal**	**78.80**	**321**	*e*P	**P**	**15 10 11.2**	**+0.8**
	comp=Z,14nm,0.7s,mb5.0						
BILL	**Bilibino**	**78.84**	**22**	⇓*i*P	**P**	**15 10 11.1**	**+0.7**
BILL				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
BILL	**Bilibino**	**78.84**	**22**	*e*P	**P**	**15 10 10.8**	**+0.5**
	comp=Z,10nm,1.1s,mb4.7						
NB2	**NORSAR Subarra**	**79.17**	**331**	P	**P**	**15 10 11.3**	**-0.9**
	comp=Z,6.8nm,1.0s,mb4.5,baz=91,slow=4.8						
TNS	**Taunus Mts**	**79.93**	**320**	*e*P	**P**	**15 10 17.6**	**+1.0**
BFO	**Black Forest**	**79.94**	**318**	*e*P	**P**	**15 10 17.2**	**+0.5**
BFO				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
BFO	**Black Forest**	**79.94**	**318**	*e*P	**P**	**15 10 17.2**	**+0.5**
	comp=Z,11nm,1.1s,mb4.7						
CDF	**Champ du Feu**	**80.65**	**318**	*e*P	**P**	**15 10 20.1**	**-0.3**

LPG	La Plagne	80.98	315	eP	P	15 10 22.3	0.0
LPL	La Plagne	81.00	315	eP	P	15 10 22.4	+0.1
HAU	Haudompre	81.27	317	eP	P	15 10 23.4	-0.3
	comp=Z,33nm,1.0s,mb4.9						
CABF	La Chapelle	81.44	316	eP	P	15 10 25.2	+0.6
	comp=Z,83nm,1.2s,mb5.2						
SMF	Signal de Mont	82.99	316	eP	P	15 10 32.5	-0.2
SSF	Saint Saulge	83.21	317	eP	P	15 10 33.9	+0.1
CAF	Calviac	84.31	314	eP	P	15 10 40.3	+0.8
RJF	Les Rejaudoux	84.67	315	eP	P	15 10 41.9	+0.6
	comp=Z,87nm,1.5s,mb5.4						
LFF	La Frestale	85.25	315	eP	P	15 10 44.7	+0.6
MFF	Saint Martin d	85.74	316	eP	P	15 10 46.4	-0.1
SJPF	Ste Jean	86.82	313	eP	P	15 10 53.1	+1.1
ROSF	Rostrenen	87.67	318	eP	P	15 10 55.4	-0.5
MCK	McKinley	97.28	23	eP	P	15 11 41.5	+1.5
	comp=Z,5.3nm,1.3s,mb4.8						
INK	Inuvik	99.42	15	ePdif	P	15 11 53.7	+4.2
	comp=Z,7.5nm,1.2s,mb5.1						
MSU	Marysvale	130.66	23	ePKPdf	PKPdf	15 17 27.3	+5.6

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*CSEM **02** 15:04:53.8±0.5, 37.15N×24.43W, h5^{km}, ML2.8, Error ellipse: s-maj=9.8km s-min=6.3km az=104.0, After PDA*

*PDA **02** 15:04:53.8±1.6, 37.15N×24.43W, h5^{km}, MD2.6, ML2.8, Error ellipse: s-maj=19.4km s-min=11.9km az=34.0*

SVSA 02 15:04:53.8±1.6**, 37.15N×24.43W, h5^{km}, MD2.6, ML2.8, Error ellipse: s-maj=19.4km s-min=11.9km az=34.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSMN	Pico do Norte,	0.53	255	i P	Pg	15 05 01.9	-2.5
PSMN				i S	Sg	15 05 07.7	-3.7
BART	Pico Bartolome	0.86	317	eS	Sb	15 05 18.1	-4.4
	113nm,0.3s						
MIRA	Miradouro	0.93	314	i P	Pb	15 05 09.5	-2.5
MIRA				i S	Sb	15 05 20.4	-4.1
FRA1	Furnas	0.95	309	i S	Sb	15 05 20.8	-4.2
PCNG	Congro	0.99	309	eS	Sb	15 05 22.5	-3.7
	54nm,0.2s						
PFAD	Fenais da Ajud	0.99	315	eS	Sb	15 05 22.4	-3.9
VIF	Vila Franca	1.00	307	i S	Sb	15 05 21.8	-4.8
	57nm,0.3s						
PRCH	Ribeira Ch	1.02	305	eS	Sb	15 05 22.1	-4.9
	103nm,0.3s						
MESC	Monte Escuro	1.03	309	i P	Pb	15 05 10.1	-3.7
MESC				i S	Sb	15 05 22.4	-5.1
LFA	Lagoa do Fogo	1.05	307	i P	Pb	15 05 10.3	-3.7
PMAT	Coroa da Mata	1.06	309	erx		15 05 23.9	
CML	Cha da Macela	1.09	305	eS	Sb	15 05 23.5	-5.5
PSET	Sete Cidades	1.23	304	eS	Sb	15 05 27.0	-6.2
	94nm,0.4s						
PSAN	Santo Antonio	1.25	305	erx		15 05 29.7	
SET2	Ginetes	1.30	303	erx		15 05 31.5	

WEL 02 15:11:32.1±0.2**, 39.93S×174.15E, h111^{km}±2^{km}, ML3.7**/7**, 4C-2D, Error ellipse: s-maj=1.4km s-min=0.8km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DFE	Dawson Falls	0.60	357	PN	P	15 11 49.8	-0.2
NRZ	Ngariki Road	0.61	344	PN	P	15 11 49.8	-0.3
NRZ				SN	S	15 12 03.8	+0.2
NEZ	North Egmont	0.66	357	PN	P	15 11 50.2	-0.2
NEZ				SN	S	15 12 03.3	-0.9
RAEZ	Rainy Point	0.67	17	PN	P	15 11 50.2	-0.2
RAEZ				SN	S	15 12 03.8	-0.6
WAZ	Wanganui	0.67	75	PN	P	15 11 50.9	+0.4
WAZ				SN	S	15 12 06.4	+2.0
NWEZ	Newall Road	0.69	342	PN	P	15 11 50.5	-0.2
PKE	Pukeiti	0.74	350	PN	P	15 11 50.7	-0.5
PKE				SN	S	15 12 03.8	-1.7
KIW	Kapiti Island	1.10	148	PN	P	15 11 54.8	0.0
KIW				SN	S	15 12 10.4	-1.4
WNVZ	Wahianoa	1.27	62	PN	P	15 11 54.4	-2.4
WNVZ				SN	S	15 12 13.0	-2.3
DRZ	Dome Shelter	1.28	60	PN	P	15 11 57.1	+0.3
DRZ				SN	S	15 12 16.1	+0.7
FWVZ	Far West T-bar	1.28	59	PN	P	15 11 56.5	-0.4
FWVZ				SN	S	15 12 14.7	-0.8
WPVZ	Whakapapa	1.30	57	PN	P	15 11 56.4	-0.7
WPVZ				SN	S	15 12 16.2	+0.2
CNZ	Chateau	1.31	57	PN	P	15 11 56.4	-0.8
MRZ	Mangatainoka R	1.32	124	⇓PN	P	15 11 56.9	-0.5
MRZ				SN	S	15 12 14.6	-1.8
TUVZ	Tukino	1.34	61	PN	P	15 11 57.0	-0.5
TUVZ				SN	S	15 12 16.8	+0.1
MOVZ	Moawhango	1.35	68	PN	P	15 11 56.5	-1.1
MOVZ				SN	S	15 12 14.8	-2.1
NGZ	Ngauruhoe	1.35	57	PN	P	15 11 56.8	-0.9
NGZ				SN	S	15 12 16.6	-0.4
MRW	Makara Radio	1.37	162	⇑PN	P	15 11 57.9	0.0
MRW				SN	S	15 12 15.8	-1.5
CAW	Cannon Point	1.37	149	⇓PN	P	15 11 57.9	-0.1
CAW				SN	S	15 12 16.0	-1.4
WTVZ	West Tongariro	1.38	54	PN	P	15 11 57.1	-1.0
WTVZ				SN	S	15 12 17.4	-0.2
TSZ	Takapari Road	1.40	96	PN	P	15 11 57.5	-0.8
OTVZ	Oturere	1.40	57	PN	P	15 11 57.7	-0.6
OTVZ				SN	S	15 12 17.5	-0.5
NNZ	Nelson	1.41	204	⇑PN	P	15 11 58.0	-0.4
NNZ				SN	S	15 12 17.4	-0.9
MGZ	Maungaku	1.42	50	PN	P	15 11 57.9	-0.7
WEL	Wellington	1.44	161	PN	P	15 11 58.5	-0.2
WEL				eSN	S	15 12 17.0	-1.7
TUWZ	Tuamarina	1.51	186	PN	P	15 11 59.0	-0.6
TUWZ				SN	S	15 12 18.6	-1.6
HIZ	Hauiti	1.52	22	PN	P	15 11 58.2	-1.5
QRZ	Quartz Range	1.53	234	⇑PN	P	15 11 58.5	-1.3
QRZ				SN	S	15 12 18.9	-1.7
BHW	Baring Head	1.58	160	PN	P	15 11 59.9	-0.5
BHW				SN	S	15 12 19.2	-2.5
MTW	Mount Morrison	1.60	140	PN	P	15 12 00.3	-0.5
MTW				SN	S	15 12 20.2	-2.0
MSWZ	Moikau Station	1.71	151	PN	P	15 12 01.5	-0.5
MSWZ				SN	S	15 12 22.0	-2.4
PAWZ	Paruwai Farm	1.75	147	PN	P	15 12 02.0	-0.5
PAWZ				SN	S	15 12 23.1	-2.1
BFZ	Birch Farm	1.77	116	PN	P	15 12 01.9	-0.9
BFZ				SN	S	15 12 23.8	-2.0
BSWZ	Blackbirch Sta	1.79	186	PN	P	15 12 02.8	-0.3
BSWZ				eSN	S	15 12 24.4	-1.8
BKZ	Black Stump Fm	1.97	68	PN	P	15 12 03.5	-1.8
BKZ				SN	S	15 12 27.8	-2.2
THZ	Tophouse	2.06	207	PN	P	15 12 05.6	-0.8
THZ				SN	S	15 12 31.9	-0.3
PWZ	Pawanui	2.09	94	PN	P	15 12 06.3	-0.6
KHZ	Kahutara	2.53	190	⇑PN	P	15 12 11.5	-1.3
KHZ				SN	S	15 12 42.2	-1.1
DSZ	Denniston Nort	2.54	224	PN	P	15 12 11.2	-1.7
LTZ	Lake Taylor	3.18	206	PN	P	15 12 19.0	-2.6

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*JMA **02** 15:16:01.5±0.4, 23.17N×121.66E, h62^{km}*

TAP 02 15:16:00.3, 23.21N×121.54E, h36^{km}±1^{km}, ML3.4, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.83	47	P	P	15 16 30.8	+0.9
YOJ				eS	S	15 16 52.1	-0.1
HATJ	Hateruma jima	2.24	67	P	P	15 16 35.8	0.0
HATJ				S	S	15 17 01.6	-0.9
IRIF	Iriomote-Funau	2.30	60	P	P	15 16 37.1	+0.5
IRIF				S	S	15 17 04.3	+0.4
JKRS	Kuro-shima	2.48	65	P	P	15 16 39.6	+0.4
JKRS				eS	S	15 17 08.6	0.0
JIJ	Ishigaki jima	2.65	64	P	P	15 16 41.1	-0.4
JIJ				eS	S	15 17 10.9	-1.9
JTJ	Tarama	3.23	63	eS	S	15 17 26.5	-1.0

MAN 02 15:33:56.2, 13.94N×120.48E, h107^{km}, mb3.7, ML2.5, MS2.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.30	228	eP	P	15 34 13.2	+1.4
LUBP				eS	S	15 34 25.6	+2.2
SJMP	San Jose	1.59	157	eP	P	15 34 24.9	+0.4
SJMP				eS	S	15 34 46.1	+0.5
BUSP	Coron	1.94	188	eP	P	15 34 28.8	0.0
BUSP				eS	S	15 34 53.5	+0.3
ENPP	El Nido	2.90	201	eP	P	15 34 41.8	0.0

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*JMA **02** 16:31:17.4±0.1, 38.89N×141.66E, h64^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s42°, δ3°, λ135°. NP2: ϕ_s177°, δ88°, λ88°. Principal axes: T Plg47°, Azm85°; N Plg2°, Azm177°; P Plg43°, Azm269°;*

JMA Felt I J1.

ISC 02 16:31:17.9±1.8**, 38.88N**±0.06×**141.7E**±0.1**, h59^{km}**±11^{km}**, n7, σ0^{s}29**/13**, 6C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.20	3	⇑P	P	16 31 27.3	+0.1
OFUJ				S	S	16 31 34.3	+0.2
JMK	Ichinoseki	0.35	283	⇑P	P	16 31 28.3	-0.1
JMK				eS	S	16 31 36.1	0.0
JIO	Ouri	0.48	210	⇑P	P	16 31 29.6	-0.1
JIO				eS	S	16 31 38.4	+0.1
JOM	Ohasama	0.66	335	⇑P	P	16 31 31.4	-0.2
JOM				eS	S	16 31 41.7	-0.2
JOU	Okura	0.93	237	⇑P	P	16 31 34.9	-0.2
JOU				eS	S	16 31 47.5	-0.5
JYK	Kaneyama	1.01	273	⇑P	P	16 31 36.0	-0.3
JYK				eS	S	16 31 50.4	+0.5
MAT	Matsushiro	3.59	231	P	P	16 32 13.1	+0.6

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*PRU **02** 16:34:14.1, 50.16N×19.10E*

WAR 02 16:34:12.5, 50.16N×19.31E, h0^{km}, ML2.5, 1C-2D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.32	80	⇓iPG	Pg	16 34 18.4	-0.5
OJC				⇓iSG	Sg	16 34 23.1	0.0
OKC	Ostrava-Krasne	0.82	247	ePG	Pg	16 34 27.2	-1.7
OKC				eSG	Sg	16 34 39.3	-0.5
	50nm,0.5s						
NIE	Niedzica	0.99	139	ePg	Pg	16 34 31.5	-0.7
NIE				eSg	Sg	16 34 46.5	+1.1
LIKS	Likavka	1.12	187	eSN	Sn	16 34 52.4	+0.8
KOLL	Kolacno	1.69	201	eSN	Sn	16 35 06.9	+0.8
VYHS	Vyhne	1.70	191	ePN	Pn	16 34 41.9	-1.7
VYHS				eSN	Sn	16 35 05.3	-1.0
KECS	Kecovo	1.85	155	eSN	Sn	16 35 12.1	+2.0
CRVS	Cervenica-Dubn	1.89	131	ePN	Pn	16 34 47.8	+1.6
CRVS				eSN	Sn	16 35 13.0	+2.0
DPC	Dobruska-Polom	1.93	277	ePG	Pg	16 34 44.8	-6.2
DPC				eSG	Sg	16 35 10.8	-5.9
	20nm,0.3s						
KSP	Ksiaz	2.04	291	ePn	Pn	16 34 49.5	+1.0
KSP				ePg	Pg	16 34 51.8	-1.5
KSP				eSn	Sn	16 35 16.3	+1.3
KSP				eSg	Sg	16 35 18.8	-1.8
UPC	Upice	2.14	281	eSG	Sg	16 35 17.8	-6.0
PSZ	Piszkesteto	2.28	170	⇑e	Pn	16 34 55.2	+3.3
PRU	Pruhonice	3.08	269	eSG	Sg	16 35 46.3	-8.7
KHC	Kasperske Hory	3.87	257	ePN	Pn	16 35 11.0	-3.4
KHC				ePG	Pg	16 35 26.0	-3.7
KHC				eSG	Sg	16 36 14.6	-6.6

IGQ 02 16:37:26.6, 0.87S×81.59W, h12^{km}±9^{km}, mb4.4, 2C-5D, Error ellipse: s-maj=12.7km s-min=7.9km az=147.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	1.05	100	⇓P	Pb	16 37 44.5	-1.8
IGUA	Igualata	3.01	102	P	Pn	16 38 16.8	+1.7
PINO	Pino	3.06	77	P	Pn	16 38 15.9	+0.1
TERV	Terraza Guagua	3.06	77	⇓P	Pn	16 38 19.2	+3.4
YANA	Yana	3.11	76	P	Pn	16 38 16.9	+0.5
NAS1	Nasa	3.12	86	P	Pn	16 38 17.9	+1.3
NAS1				S	Sn	16 38 51.9	-2.3
RETU	Refugio	3.19	100	P	Pn	16 38 21.3	+3.6
VC1	Cotopaxi 1	3.19	86	⇓P	Pn	16 38 19.5	+1.9
ARRY	Arrayan	3.19	101	P	Pn	16 38 18.4	+0.7
ARRY				S	Sn	16 38 57.2	+1.2
PISA	Pisayambo	3.21	93	P	Pn	16 38 19.7	+1.9
TAMB	Tambo	3.22	87	P	Pn	16 38 19.7	+1.6
ULBA	Ulba	3.23	100	⇑P	Pn	16 38 19.6	+1.4
ANTI	Antisana	3.45	83	⇑P	Pn	16 38 22.8	+1.5
ANTI				S	Sn	16 39 03.3	+0.8
COTA	Cotacachi	3.46	70	P	Pn	16 38 22.4	+1.0
CAYR	Refugio Cayamb	3.69	76	⇓P	Pn	16 38 27.1	+2.5
CAYA	Cayambe	3.71	75	⇓P	Pn	16 38 27.2	+2.2
CONE	Cono NE Rev Vo	4.02	79	P	Pn	16 38 33.2	+3.7

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*ISK **02** 16:39:35.7, 38.81N×39.00E, h5^{km}, MD3.7*

*CSEM **02** 16:39:35.7, 38.81N×39.00E, h5^{km}, MD3.7, After ISK*

ISC 02 16:39:37.6±0.4**, 38.78N**±0.03×**39.01E**±0.03**, h5^{km}, n31, σ1^{s}32**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	Elazig	0.29	185	i P	Pg	16 39 42.8	-0.7
ELZG				i S	Sg	16 39 49.4	+2.1
PTK	Pertek	0.32	70	i PG	Pg	16 39 42.7	-1.3
MYA	Malataya	0.65	225	PG	Pg	16 39 48.9	-1.7
MALT	Malatya	0.66	225	PG	Pg	16 39 48.8	-2.0
EZC	Erzincan	1.15	33	PG	Pg	16 39 55.0	-5.5
EZC				SG	Sg	16 40 10.3	-5.5
BINT	Bingol	1.16	85	PN	Pn	16 39 58.1	-2.3
DIY	Diyarbakir	1.30	133	PN	Pn	16 40 02.4	-0.1
URFA	Urfa	1.35	187	PN	Pn	16 40 03.1	-0.1
GUMT	Gumushane	1.71	12	PN	Pn	16 40 08.2	-0.2
GZT	Gaziantep	1.83	219	i P	Pn	16 40 12.2	+2.1
GZT				i S	Sn	16 40 36.5	+2.6
SVST	Sivas	1.88	302	i P	Pn	16 40 11.7	+0.9
SVST				i S	Sn	16 40 37.8	+2.7
BEST	Besiri	1.99	116	i P	Pn	16 40 12.0	-0.3
BEST				i S	Sn	16 40 39.4	+1.6
BHD				e		16 41 49.0	
VRT	Varto	1.99	79	PN	Pn	16 40 11.9	-0.5
BTMT	Batman	2.03	106	PN	Pn	16 40 11.4	-1.5
KAHT	Ahir Dag	2.04	236	i P	Pn	16 40 13.3	+0.2
KAHT				i S	Sn	16 40 43.0	+3.8
EZM	Erzurum	2.14	58	PN	Pn	16 40 14.2	-0.3
ERZM	Erzurum	2.14	58	i P	Pn	16 40 16.0	+1.5
ERZM				i S	Sn	16 40 43.8	+2.1
GAZ	Gaziantep	2.15	222	ePN	Pn	16 40 14.8	+0.2
TOKT	Tokat	2.45	310	ePN	Pn	16 40 18.3	-0.6
BNN	Bunyan	2.48	273	ePN	Pn	16 40 19.2	-0.1
YOZ	Yozgat	2.99	288	ePN	Pn	16 40 26.2	-0.5
COBT	Iskenderun	3.15	225	i P	Pg	16 40 38.0	-2.5
COBT				i S	Sg	16 41 18.2	-4.2
AVNT	Avonos	3.25	271	i P	Pn	16 40 30.2	-0.1
AVNT				i S	Sg	16 41 22.4	-3.4
NIG	Nigde	3.52	260	ePN	Pn	16 40 33.3	-0.9
CORM	Corum	3.67	294	ePN	Pn	16 40 36.1	-0.1
CTKT	Corum	3.74	301	i P	Pn	16 40 38.5	+1.2
MSL	Mosul	4.09	126	e	Px	16 40 52.5	
BOYT	Boyabat	4.11	311	i P	Pb	16 40 51.6	+1.4
KAMT	Kaman	4.17	280	ePN	Pn	16 40 42.7	-0.6
BALT	Daday	5.11	304	i P	Pb	16 41 06.7	-0.7

IGQ 02 16:49:52.3, 1.45S×81.60W, h12^{km}±10^{km}, mb4.1, Error ellipse: s-maj=10.4km s-min=6.0km az=72.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	1.12	69	P	Pb	16 50 12.6	-0.5
HOJA				S	Sb	16 50 26.9	-0.6
IGUA	Igualata	2.96	91	P	Pn	16 50 40.4	+0.4
ARRY	Arrayan	3.14	91	P	Pn	16 50 43.7	+1.1
ARRY				S	Sn	16 51 22.0	+1.6
ULBA	Ulba	3.19	90	P	Pn	16 50 44.3	+1.0
NAS1	Nasa	3.22	75	P	Pn	16 50 47.3	+3.5
TERV	Terraza Guagua	3.25	67	P	Pn	16 50 46.4	+2.2
PINO	Pino	3.25	67	P	Pn	16 50 45.1	+0.9
VC1	Cotopaxi 1	3.29	76	P	Pn	16 50 47.3	+2.6
YANA	Yana	3.30	66	P	Pn	16 50 45.6	+0.8
TAMB	Tambo	3.31	77	P	Pn	16 50 46.6	+1.5
ANTI	Antisana	3.58	74	P	Pn	16 50 51.5	+2.7
COTA	Cotacachi	3.71	61	P	Pn	16 50 52.2	+1.5
CAYR	Refugio Cayamb	3.87	68	P	Pn	16 50 56.2	+3.2

CASC 02 18:37:48.8±1.8**, 13.22N×89.75W, h36^{km}**±315^{km}**, MD3.8, 3C-9D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	San Blas	0.62	11	⇓eP	P	18 38 01.5	+0.4
SBLS				eS	S	18 38 11.2	+1.1
SNJE	San Jose	0.66	12	⇓eP	P	18 38 01.9	+0.3
SNJE				eS	S	18 38 12.3	+1.5
RTR	El Retiro	0.68	9	⇓eP	P	18 38 02.3	+0.4
RTR				eS	S	18 38 13.5	+2.1
SNET	Serv Nac Est T	0.68	48	eP	P	18 38 03.3	+1.3
SNET				eS	S	18 38 11.9	+0.4
BOQS	Boqueron	0.69	42	⇓eP	P	18 38 02.1	+0.1
BOQS				eS	S	18 38 12.3	+0.7
LFRS	El Faro	0.78	59	⇓eP	P	18 38 03.3	0.0
LFRS				eS	S	18 38 13.8	-0.1
LFU	La Fuente	0.81	50	eP	P	18 38 04.0	+0.2
LFU				eS	S	18 38 15.2	+0.5
LBRS	Las Brisas	0.86	53	⇓eP	P	18 38 04.6	+0.2
LBRS				eS	S	18 38 16.8	+0.8
LCBS	La Ceiba	0.87	60	⇓eP	P	18 38 04.5	-0.1
RBDL	Robledal	0.89	4	⇑eP	P	18 38 05.3	+0.5
RBDL				eS	S	18 38 18.0	+1.3
SNVI	San Vicente	0.97	66	eP	P	18 38 06.3	+0.2
SNVI				eS	S	18 38 19.4	+0.6
IXG	Ixpaco	1.17	324	⇓eP	P	18 38 08.1	-0.7
IXG				eS	S	18 38 23.9	0.0
MTO2	Montecristo 2	1.23	18	⇓eP	P	18 38 09.9	+0.2
MTO2				eS	S	18 38 26.4	+1.0
VSM	San Miguel	1.45	82	eP	P	18 38 13.4	+0.4
VSM				eS	S	18 38 32.5	+1.5
NBG	Las Nubes	1.48	337	⇑eP	P	18 38 13.7	+0.4
NBG				eS	S	18 38 34.9	+3.3
BLLM	Bellamira	1.49	81	eP	P	18 38 13.5	0.0
BLLM				eS	S	18 38 31.7	-0.2
CAHU	Cacacuatique	1.59	70	eP	P	18 38 14.9	-0.1
CAHU				eS	S	18 38 35.5	+0.9
FUG	Fuego 3	1.61	319	⇑eP	P	18 38 15.0	-0.3
FUG				eS	S	18 38 35.3	+0.2
CNCH	Conchagua	1.87	88	eP	P	18 38 18.8	-0.1
CNCH				eS	S	18 38 42.0	+0.5
JAT	Jato	2.13	301	eP	P	18 38 22.8	+0.1
JAT				eS	S	18 38 48.8	+0.6

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*CSEM **02** 18:38:49.6±0.2, 37.83N×1.76W, h2^{km}, ML2.8/6, Error ellipse: s-maj=3.5km s-min=2.9km az=151.0*

*SFS **02** 18:38:49.0, 37.85N×1.76W*

MDD 02 18:38:49.8±0.3**, 37.84N×1.75W, h5^{km}**±6^{km}**, mbLg2.3**/12**, 1C, Error ellipse: s-maj=4.5km s-min=2.7km az=173.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	La Murta	0.40	89	⇑Pg	Pg	18 38 57.3	-0.5
	33nm,0.4s,SNR=18						
EMUR				Lg		18 39 02.2	
	159nm,0.6s,SNR=5.0						
EMUR	La Murta	0.40	89	Pg	Pg	18 38 57.3	-0.6
	33nm,0.4s,SNR=18						
EMUR				Lg		18 39 02.2	
	159nm,0.6s,SNR=5.0						
CART	Cartagena	0.64	112	P	Pg	18 39 02.0	-0.7
CART				S	Sg	18 39 08.6	-2.6
CART	Cartagena	0.64	112	eP	Pg	18 39 02.0	-0.7
ENIJ	Nijar	0.94	203	Pg	Pg	18 39 07.9	-0.6
	6.5nm,0.2s,SNR=6.2						
ENIJ				Lg		18 39 19.8	
	23nm,0.4s,SNR=8.4						
EVIA	Vianos	1.00	324	Pg	Pg	18 39 08.2	-1.4
	22nm,0.3s,SNR=24						
EVIA				Lg		18 39 21.8	
	33nm,0.3s,SNR=5.0						
EQES	Quesada	1.05	269	Pg	Pg	18 39 08.5	-2.2
	7.9nm,0.1s,SNR=41						
EQES				Lg		18 39 22.8	
	57nm,0.3s,SNR=5.0						
EQES	Quesada	1.05	269	Pg	Pg	18 39 08.5	-2.2
	7.9nm,0.1s,SNR=41						
EBER	Berja	1.30	224	Pg	Pg	18 39 13.4	-2.4
	14nm,0.5s,SNR=13						
EBER				Lg		18 39 31.0	
	89nm,0.7s,SNR=5.0						
EBER	Berja	1.30	224	Pg	Pg	18 39 13.4	-2.4
	14nm,0.5s,SNR=13						
EBEN	Beniarda	1.48	54	Pg	Pg	18 39 15.8	-3.6
	3.4nm,0.4s,SNR=7.9						
EBEN				Lg		18 39 36.9	
	31nm,0.8s,SNR=5.8						
EBEN	Beniarda	1.48	54	Pg	Pg	18 39 15.8	-3.5
	3.4nm,0.4s,SNR=7.9						
ELUQ	Luque	2.02	263	Pn	Pn	18 39 23.3	-1.6
	1.9nm,0.3s,SNR=7.9						
ELUQ				Sn	Sn	18 39 49.2	-1.6
	12nm,0.4s,SNR=8.5						
EADA	Adamuz	2.26	279	Pn	Pn	18 39 26.0	-2.3
	0.4nm,0.1s,SNR=12						
EADA				Sn	Sn	18 39 53.6	-3.3
	4.7nm,0.1s,SNR=4.0						
EADA				Lg		18 40 00.7	
	4.9nm,0.1s,SNR=4.0						
EADA	Adamuz	2.26	279	Pn	Pn	18 39 26.0	-2.3
	0.4nm,0.1s,SNR=12						
EADA				Sn	Sn	18 39 53.6	-3.3
	4.7nm,0.1s,SNR=4.0						
ESDC	Sonseca Array	2.52	317	Pn	Pn	18 39 31.2	-0.9
	0.3nm,0.1s,baz=144,slow=12,SNR=4.0						
ESDC				Pg	Pg	18 39 36.1	-4.0
	4.4nm,0.3s,baz=129,slow=16,SNR=11						
ESDC				Sn	Sn	18 39 57.1	-6.5
	0.5nm,0.1s,baz=126,slow=17,SNR=7.9						
ESDC				Lg		18 40 06.8	
	5.1nm,0.2s,baz=134,slow=29,SNR=12						
ESDC	Sonseca Array	2.52	317	Pn	Pn	18 39 31.2	-0.9
	0.3nm,0.1s,SNR=4.0						
ESDC	Sonseca Array	2.52	317	Pg	Pg	18 39 36.1	-4.0
	4.4nm,0.3s,SNR=11						
EMOS	Mosqueruela	2.71	21	Pn	Pn	18 39 32.3	-2.6
	2.1nm,0.5s,SNR=7.9						
EMOS				Pg	Pg	18 39 40.2	-3.8
	3.6nm,0.6s,SNR=7.9						
EMOS				Sn	Sn	18 40 05.0	-3.5
	5.5nm,0.8s,SNR=7.9						
EMOS				Lg		18 40 15.6	
	13nm,0.8s,SNR=4.0						
EMOS	Mosqueruela	2.71	21	Pn	Pn	18 39 32.3	-2.6
	2.1nm,0.5s,SNR=7.9						
EMOS	Mosqueruela	2.71	21	Pg	Pg	18 39 40.2	-3.8
	3.6nm,0.6s,SNR=7.9						
EMOS				Sn	Sn	18 40 05.0	-3.5
	5.5nm,0.8s,SNR=7.9						
GUD	Guadarrama	3.37	327	Pn	Pn	18 39 42.4	-1.8
	0.4nm,0.3s,SNR=7.9						
GUD				Pg	Pg	18 39 51.1	-5.9
	1.6nm,0.4s,SNR=7.9						
GUD				Sn	Sn	18 40 20.4	-4.7
	1.3nm,0.4s,SNR=7.9						
GUD				Lg		18 40 33.3	
	4.6nm,0.3s,SNR=8.8						
GUD	Guadarrama	3.37	327	Pg	Pg	18 39 51.1	-5.9
	1.6nm,0.4s,SNR=7.9						
GUD				Sn	Sn	18 40 20.4	-4.7
	1.3nm,0.4s,SNR=7.9						
ERTA	Horta de San J	3.51	27	Pn	Pn	18 39 45.0	-1.1
	0.5nm,0.1s,SNR=4.0						
ERTA				Sn	Sn	18 40 25.3	-3.4
	3.1nm,0.5s,SNR=7.9						
ERTA	Horta de San J	3.51	27	Pn	Pn	18 39 45.0	-1.2
	0.5nm,0.1s,SNR=4.0						
ERTA				Sn	Sn	18 40 25.3	-3.4
	3.1nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.90	271	Pn	Pn	18 39 48.3	-3.4
	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	18 40 32.6	-5.9
	4.7nm,0.4s,SNR=11						
EMIN				Lg		18 40 49.2	
	4.3nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	3.90	271	Pn	Pn	18 39 48.3	-3.4

	0.5nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	18 40 32.6	-5.9
	4.7nm,0.4s,SNR=11						
EBAD	**Badajoz**	**4.24**	**284**	Pn	Pn	18 39 53.2	-3.4
	0.3nm,0.1s,SNR=7.9						
EBAD				Pg	Pg	18 40 06.6	-7.8
	0.6nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	18 40 40.6	-6.6
	4.2nm,0.3s,SNR=10						
EBAD				Lg		18 40 59.9	
	3.5nm,0.3s,SNR=5.0						

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*NSSP **02** 18:50:32.7, 39.32N×44.52E, h7^{km}, ML3.2*
*ISK **02** 18:50:41.3, 39.29N×44.54E, h48^{km}, MD3.7*
*CSEM **02** 18:50:41.3, 39.29N×44.54E, h48^{km}, MD3.7, After ISK*
ISC 02 18:50:40.3±1.3**, 39.33N**±0.06×**44.5E**±0.1**, h10^{km}, n14,**
σ**1^{s}13**/19**, 1D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNI	**Garni**	**0.84**	**12**	PG	**Pg**	**18 50 57.9**	**+0.7**
VNNZ	**Vanand**	**0.94**	**326**	⇓P	**Pb**	**18 50 54.4**	**-3.8**
VNNZ				S	**Sb**	**18 51 06.6**	**-3.9**
VANB	**Van**	**1.14**	**231**	PN	**Pn**	**18 51 01.4**	**-0.9**
VANB				SN	**Sn**	**18 51 16.4**	**-1.6**
TVAN	**Van**	**1.17**	**228**	*i* P	**Pb**	**18 51 01.5**	**-0.7**
TVAN				*i* S	**Sb**	**18 51 19.2**	**+1.9**
VANT	**Van**	**1.24**	**225**	*e*PN	**Pn**	**18 51 04.1**	**+0.3**
KARS	**Kars**	**1.69**	**320**	PN	**Pn**	**18 51 10.1**	**0.0**
HKR	**Hakkari**	**1.85**	**199**	*e*PN	**Pn**	**18 51 11.4**	**-0.9**
VRT	**Varto**	**2.32**	**266**	PN	**Pn**	**18 51 18.4**	**-0.8**
ERZM	**Erzurum**	**2.50**	**284**	P	**Pn**	**18 51 21.7**	**0.0**
ERZM				S	**Sn**	**18 51 59.7**	**+7.2**
EZM	**Erzurum**	**2.50**	**284**	PN	**Pn**	**18 51 21.6**	**-0.1**
BTMT	**Batman**	**2.62**	**245**	*e*PN	**Pn**	**18 51 25.1**	**+1.7**
BEST	**Besiri**	**2.92**	**242**	P	**Pn**	**18 51 29.6**	**+2.0**
BEST				S	**Sn**	**18 52 07.9**	**+4.8**
BINT	**Bingol**	**3.16**	**263**	*e*PN	**Pn**	**18 51 30.2**	**-1.0**
EZC	**Erzincan**	**3.66**	**278**	*e*PN	**Pn**	**18 51 43.0**	**+4.8**

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*MOS **02** 19:02:44.2±1.4, 4.69N×95.06E, h33^{km}, mb4.8/9, Error ellipse: s-maj=34.5km s-min=13.1km az=104.1*
ISC 02 19:02:46.5±0.9**, 5.0N**±0.2×**95.6E**±0.2**, h33^{km}, n39,**
σ**1^{s}12**/40**, mb4.6**/19**, 3C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIRN	**Jiri**	**24.29**	**339**	*e*P	**P**	**19 08 03.1**	**+1.0**
	17nm,0.5s,mb4.7						
PKI	**Pulchoki**	**24.50**	**338**	*e*P	**P**	**19 08 04.3**	**+0.2**
	9.5nm,0.6s,mb4.4						
DMN	**Daman**	**24.65**	**337**	*e*P	**P**	**19 08 05.8**	**+0.2**
	11nm,0.7s,mb4.5						
KKN	**Kakani**	**24.74**	**338**	*e*P	**P**	**19 08 06.2**	**-0.3**
	22nm,1.1s,mb4.6						
GKN	**Gorkha**	**25.18**	**337**	*e*P	**P**	**19 08 11.1**	**+0.4**
	9.6nm,0.3s,mb4.9						
KOLN	**Koldanda**	**25.41**	**335**	*e*P	**P**	**19 08 12.9**	**+0.1**
	43nm,0.7s,mb5.1						
ULHL	**Ulahol**	**40.94**	**338**	P	**P**	**19 10 27.8**	**+0.2**
	SNR=16						
KZA	**Kyzart**	**41.17**	**337**	P	**P**	**19 10 30.7**	**+1.2**
	SNR=12						
UCH	**Uchtor**	**41.59**	**336**	P	**P**	**19 10 34.1**	**+1.1**
	SNR=27						
TKM2	**Tokmak 2**	**41.76**	**338**	P	**P**	**19 10 35.3**	**+0.9**
	SNR=27						
KBK	**Karagaybulak**	**41.78**	**337**	P	**P**	**19 10 35.9**	**+1.3**
	SNR=36						
AML	**Almayashu**	**41.85**	**335**	P	**P**	**19 10 36.3**	**+1.2**
	SNR=34						
AAK	**Ala-Archa**	**41.94**	**337**	P	**P**	**19 10 37.5**	**+1.6**
	SNR=12						
AAK	**Ala-Archa**	**41.94**	**337**	⇓*i*P	**P**	**19 10 35.4**	**-0.5**
AAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.7						
CHMS	**Chumysh**	**42.15**	**337**	P	**P**	**19 10 38.4**	**+0.8**
	SNR=10						
EKS2	**Erkin-Say**	**42.26**	**336**	P	**P**	**19 10 39.5**	**+1.1**
	SNR=19						
USP	**Ospenovka**	**42.48**	**337**	P	**P**	**19 10 40.8**	**+0.5**
	SNR=47						
MKAR	**Makanchi Array**	**43.24**	**347**	*i* P	**P**	**19 10 46.2**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ULN	**Ulaanbaatar**	**43.85**	**11**	*e*P	**P**	**19 10 52.1**	**+0.7**
WRAB	**Tennant Creek**	**45.40**	**124**	*e*P	**P**	**19 11 05.3**	**+1.1**
WB2	**Warramunga Arr**	**45.41**	**124**	*e*P	**P**	**19 11 04.6**	**+0.4**
ZAK	**Zakamensk**	**45.72**	**7**	*e*P	**P**	**19 10 58.4**	**-7.9**
ZAK				*e*		19 12 38.4	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5						
ASPA	**Alice Springs**	**46.94**	**129**	*e*P	**P**	**19 11 16.4**	**+0.2**
KURK	**Kurchatov**	**47.78**	**345**	*c* *i*P	**P**	**19 11 22.2**	**-0.3**
NVS	**Novosibirsk**	**50.73**	**351**	*e*P	**P**	**19 11 42.7**	**-2.4**
NVS				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.4						
NVS				pmax	pmax		
	comp=N,6.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.8s						
BVA0	**Borovoye Array**	**52.20**	**341**	*i* P	**P**	**19 11 55.2**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**52.68**	**342**	*i* P	**P**	**19 11 59.0**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
KLR	**Kul'dur**	**53.67**	**29**	*e*P	**P**	**19 12 06.2**	**-1.0**
SVE	**Sverdlovsk**	**58.63**	**338**	*e*P	**P**	**19 12 40.2**	**-2.5**
ARU	**Arti**	**59.13**	**337**	⇓*i*P	**P**	**19 12 36.4**	**-10**
ARU				*e*S	**S**	**19 20 38.4**	**-11**
ARU				*e*SSS	SSS	19 27 06.4	-5.3
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KIV	**Kislovodsk**	**60.46**	**319**	*c* *i*P	**P**	**19 12 50.9**	**-4.6**
KIV				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.8						
ANN	**Anapa**	**64.27**	**318**	*e*P	**P**	**19 13 10.7**	**-10**
ANN				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.4						
TIXI	**Tiksi**	**69.79**	**11**	⇓*i*P	**P**	**19 13 54.7**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
JOF	**Joensuu**	**74.09**	**335**	*e*p	**P**	**19 14 17.7**	**-3.2**
	comp=Z,3.5nm,0.7s,mb4.4						
JOF	**Joensuu**	**74.09**	**335**	*e*P	**P**	**19 14 17.7**	**-3.2**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
KAF	**Kangasniemi**	**76.04**	**333**	*e*p	**P**	**19 14 30.0**	**-2.0**
	comp=Z,2.7nm,0.6s,mb4.3,baz=105,slow=5.3						
KAF	**Kangasniemi**	**76.04**	**333**	*e*P	**P**	**19 14 30.0**	**-2.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BILL	**Bilibino**	**78.24**	**21**	⇑*i*P	**P**	**19 14 44.2**	**0.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
NB2	**NORSAR Subarra**	**82.97**	**331**	P	**P**	**19 15 06.7**	**-2.7**
	comp=Z,1.7nm,0.8s,mb4.1,baz=92,slow=5.6						

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*CSEM **02** 19:08:18.5, 35.61N×4.49E, ML3.6, After ALG*
CRAAG 02 19:08:18.5, 35.61N×4.49E, Ml3.6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CKHR	**Kef el Ahmar**	**0.93**	**64**	P	Pg	19 08 34.5	-2.5
SET	**Setif**	**0.95**	**51**	P	Pg	19 08 35.0	-2.4
CMER	**Merouana**	**1.15**	**89**	P	Pb	19 08 42.5	+1.5
EMHD	**Djebel Mahouad**	**1.38**	**296**	P	Pb	19 08 43.0	-1.8
DFRA	**Djebel Bou Aff**	**1.46**	**50**	P	Pn	19 08 45.5	-0.7
ABA	**Alger-Bouzarea**	**1.67**	**316**	P	Pn	19 08 48.5	-0.7
CASM	**Ain Smara**	**1.75**	**68**	P	Pn	19 08 53.0	+2.7
CKFL	**Kef-Lekhel**	**1.98**	**66**	P	Pn	19 08 54.5	+0.9
EBNR	**Beni Rached**	**2.49**	**287**	P	Pn	19 08 50.0	-11
ECHA	**Ech Chlef**	**2.59**	**283**	P	Pn	19 08 52.0	-10
ETRT	**Tiaret**	**2.61**	**266**	P	Pn	19 08 57.0	-5.6
EANR	**'Ain N'Sour**	**2.77**	**278**	P	Pn	19 08 55.0	-10

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*BJI **02** 19:17:13.5, 60.00N×153.10W, h121^{km}, mB4.8, mb4.5*
*NEIC **02** 19:17:18.5, 60.01N×153.08W, h122^{km}, mb3.7/1, After AEIC.*
NEIC Felt [II] at Anchorage.
ISC 02 19:17:17.0±0.3**, 60.04N**±0.02×**153.03W**±0.06**, h122^{km},**
n81, σ**1^{s}01**/96**, mb4.7**/2**, 1C, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INE	**Iliamna NE**	**0.03**	**317**	P	**P**	**19 17 34.6**	**+0.8**
IVS	**Iliamna South**	**0.04**	**218**	P	**P**	**19 17 34.5**	**+0.8**
IVS				S	**S**	**19 17 49.2**	**+2.9**
ILIM	**Iliamna**	**0.05**	**42**	P	**P**	**19 17 34.5**	**+0.7**
ILW	**Iliamna West**	**0.06**	**288**	P	**P**	**19 17 34.4**	**+0.6**
OPT	**Oil Point**	**0.40**	**195**	P	**P**	**19 17 35.5**	**+0.8**
OPT				S	**S**	**19 17 48.5**	**+0.3**
RSO	**Redoubt South**	**0.44**	**18**	P	**P**	**19 17 36.1**	**+1.1**
RDN	**Redoubt North**	**0.49**	**15**	P	**P**	**19 17 36.4**	**+1.1**
NCT	**North Crescent**	**0.52**	**5**	P	**P**	**19 17 36.5**	**+1.1**
NCT				S	**S**	**19 17 50.7**	**+1.3**
DFR	**Drift River**	**0.58**	**17**	P	**P**	**19 17 36.8**	**+1.0**
AUE	**Augustine Isla**	**0.71**	**194**	P	**P**	**19 17 37.1**	**+0.5**
AUW	**Augustine West**	**0.71**	**199**	P	**P**	**19 17 37.4**	**+0.7**
AUI	**Augustine Isla**	**0.74**	**196**	P	**P**	**19 17 37.4**	**+0.5**
HOM	**Homer**	**0.80**	**118**	P	**P**	**19 17 38.9**	**+1.4**
HOM				S	**S**	**19 17 54.1**	**+1.1**
NNL	**Ninilchik**	**0.87**	**89**	P	**P**	**19 17 40.3**	**+2.1**
XLV	**Seldovia**	**0.89**	**131**	P	**P**	**19 17 38.9**	**+0.5**
XLV				S	**S**	**19 17 55.1**	**+0.7**
CNPM	**China Poot**	**1.04**	**119**	P	**P**	**19 17 40.8**	**+0.8**
CNPM				S	**S**	**19 17 58.3**	**+1.2**
MCNL	**McNeil River**	**1.09**	**218**	P	**P**	**19 17 40.2**	**-0.2**
MCNL				S	**S**	**19 17 57.5**	**-0.4**
NKA	**Nikishka**	**1.13**	**51**	P	**P**	**19 17 43.6**	**+2.7**
SPU	**Mount Spurr**	**1.24**	**22**	*e*P	**P**	**19 17 42.9**	**+0.9**
CKN	**Chakachatna No**	**1.26**	**19**	P	**P**	**19 17 43.4**	**+1.1**
CRP	**Crater Peak**	**1.30**	**19**	P	**P**	**19 17 44.1**	**+1.4**
SYI	**Shuyak Island**	**1.47**	**167**	P	**P**	**19 17 44.6**	**-0.1**
SYI				S	**S**	**19 18 05.0**	**-0.7**
SLKM	**Skilak Lake**	**1.48**	**70**	P	**P**	**19 17 45.3**	**+0.6**
SLKM				S	**S**	**19 18 06.5**	**+0.7**
STLK	**Strandline Lak**	**1.57**	**21**	P	**P**	**19 17 46.9**	**+1.1**
STLK				S	**S**	**19 18 09.1**	**+1.4**
VOGL	**Vogel Lake**	**1.60**	**52**	P	**P**	**19 17 48.1**	**+2.0**
SVW2	**Sparrevohn**	**1.65**	**311**	P	**P**	**19 17 46.3**	**-0.4**
KAHC	**Katmai Hardscr**	**1.73**	**217**	P	**P**	**19 17 47.2**	**-0.5**
SEW	**Seward**	**1.80**	**86**	P	**P**	**19 17 48.6**	**+0.1**
SEW				S	**S**	**19 18 11.4**	**-0.9**
FIB	**Fire Island**	**1.80**	**50**	P	**P**	**19 17 50.0**	**+1.4**
FIB				S	**S**	**19 18 15.0**	**+2.5**
KAIC	**Katmai Ikaglui**	**1.88**	**214**	P	**P**	**19 17 49.1**	**-0.3**
KAWH	**Katmai**	**1.90**	**209**	P	**P**	**19 17 49.1**	**-0.6**
RC01	**Rabbit Creek A**	**1.94**	**56**	P	**P**	**19 17 50.6**	**+0.4**
MGLS	**Mageik LS**	**2.19**	**214**	P	**P**	**19 17 53.4**	**0.0**
PWA	**Palmer West**	**2.23**	**42**	P	**P**	**19 17 54.2**	**+0.2**
PWA				S	**S**	**19 18 23.0**	**+0.9**
KDAK	**Kodiak Island**	**2.28**	**174**	P	**P**	**19 17 53.1**	**-1.5**
KDAK				S	**S**	**19 18 21.1**	**-2.1**
CAHL	**Cahill**	**2.32**	**211**	P	**P**	**19 17 54.9**	**-0.3**
PMR	**Palmer**	**2.46**	**49**	P	**P**	**19 17 56.4**	**-0.7**
PMR				S	**S**	**19 18 26.1**	**-1.3**
PWL	**Port Wells**	**2.47**	**69**	P	**P**	**19 17 56.5**	**-0.7**
KNK	**Knik Glacier**	**2.63**	**57**	P	**P**	**19 17 58.8**	**-0.6**
GHO	**Glory Hole Cre**	**2.65**	**47**	P	**P**	**19 17 58.9**	**-0.7**
CUT	**Chulitna**	**2.72**	**28**	P	**P**	**19 18 00.5**	**0.0**
SML	**Sawmill**	**2.90**	**50**	P	**P**	**19 18 02.0**	**-0.8**
TT01	**Tatalina**	**3.21**	**335**	P	**P**	**19 18 06.2**	**-0.9**
HIN	**Hinchinbrook I**	**3.28**	**81**	P	**P**	**19 18 06.7**	**-1.2**
SCM	**Sheep Creek Mo**	**3.31**	**55**	P	**P**	**19 18 07.4**	**-1.0**
MID	**Middleton Isla**	**3.44**	**97**	*e*P	**P**	**19 18 10.2**	**0.0**
EYAK	**Cordova Ski Ar**	**3.66**	**79**	P	**P**	**19 18 12.2**	**-0.8**
TRF	**Thorofare Moun**	**3.66**	**20**	P	**P**	**19 18 12.7**	**-0.4**
KTH	**Kantishna Hill**	**3.66**	**15**	P	**P**	**19 18 12.7**	**-0.4**
DIV	**Divide**	**3.74**	**70**	P	**P**	**19 18 13.1**	**-1.1**
RND	**Reindeer**	**3.92**	**29**	P	**P**	**19 18 16.0**	**-0.6**
MCK	**McKinley**	**4.18**	**26**	P	**P**	**19 18 19.6**	**-0.5**
KAIM	**Kayak Island**	**4.33**	**88**	P	**P**	**19 18 22.1**	**0.0**
PAX	**Paxson**	**4.66**	**48**	P	**P**	**19 18 26.1**	**-0.5**
GLB	**Gilahina Butte**	**4.74**	**69**	P	**P**	**19 18 26.5**	**-1.1**
THY	**Trims Highway**	**4.84**	**42**	P	**P**	**19 18 29.5**	**+0.5**
NEA	**Nenana**	**4.91**	**20**	P	**P**	**19 18 29.1**	**-0.8**
DDM	**Donnelly Dome**	**5.06**	**39**	P	**P**	**19 18 32.8**	**+0.9**
MLY	**Manley**	**5.12**	**11**	P	**P**	**19 18 31.7**	**-1.0**
HDA	**Harding Lake**	**5.22**	**30**	P	**P**	**19 18 33.1**	**-0.9**
CCB	**Clear Creek Bu**	**5.22**	**26**	P	**P**	**19 18 32.9**	**-1.2**
MENT	**Mentasta**	**5.32**	**53**	*e*P	**P**	**19 18 35.3**	**-0.1**
BALM	**Baldy**	**5.37**	**75**	P	**P**	**19 18 35.2**	**-0.9**
COLA	**College**	**5.41**	**24**	P	**P**	**19 18 35.6**	**-1.0**
IL1	**Eielson Array**	**5.54**	**28**	P	**P**	**19 18 37.1**	**-1.2**
DOT	**Dot Lake**	**5.58**	**46**	P	**P**	**19 18 37.8**	**-1.1**
YAH	**Yahtse**	**5.64**	**82**	P	**P**	**19 18 40.2**	**+0.6**
CTGM	**Chitina Glacie**	**5.85**	**76**	P	**P**	**19 18 43.2**	**+0.6**
IM3	**Indian Mountai**	**5.97**	**357**	P	**P**	**19 18 43.4**	**-0.8**
IMA	**Indian Mountai**	**6.06**	**357**	*e*P	**P**	**19 18 46.0**	**+0.6**
BCA3	**Beaver Creek A**	**6.17**	**56**	P	**P**	**19 18 45.5**	**-1.4**
PNL	**Peninsula**	**6.88**	**87**	P	**P**	**19 18 56.0**	**-0.6**
COLD	**Coldfoot**	**7.32**	**9**	P	**P**	**19 19 00.7**	**-1.9**
DAWY	**Dawson**	**7.56**	**52**	P	**P**	**19 19 05.2**	**-0.8**
BM3	**Burnt Mountain**	**8.28**	**23**	P	**P**	**19 19 13.2**	**-2.4**
WHY	**Whitehorse**	**9.02**	**78**	P	**P**	**19 19 24.3**	**-1.0**
SIT	**Sitka**	**9.72**	**100**	*e*P	**P**	**19 19 34.3**	**-0.3**
	29nm,0.7s						
INK	**Inuvik**	**11.81**	**37**	⇑*e*P	**P**	**19 20 03.4**	**+1.0**
	0.9nm,0.4s						
HLID	**Hailey**	**28.48**	**108**	P	**P**	**19 23 01.3**	**-1.0**
MDJ	**Mudanjiang**	**46.86**	**287**	P	**P**	**19 25 31.7**	**-4.3**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,187nm,3.2s						
SSE	**Sheshan**	**61.57**	**283**	P	**P**	**19 27 20.2**	**-3.1**
SSE				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,59nm,4.0s						

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*JMA **02** 19:43:04.7±0.2, 24.92N×121.83E, h15^{km}, M2.9*
*TAP **02** 19:43:04.8, 24.33N×121.75E, h6^{km}, ML3.6*
TAP Felt IV J at Nanau, I J at Nioudou.
ISC 02 19:43:05.6±0.2**, 24.34N**±0.01×**121.82E**±0.02**, h6^{km}, n60,**
σ**0^{s}87**/93**, 7C-5D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.12**	**322**	⇓*i*P	**Pg**	**19 43 08.0**	**-0.2**
ENA				S	**Sg**	**19 43 09.5**	**-0.4**
TWC	**Suao**	**0.27**	**5**	⇑*i*P	**Pg**	**19 43 11.3**	**+0.1**
TWC				S	**Sg**	**19 43 15.2**	**+0.4**
TWD	**Chiawan**	**0.33**	**219**	⇑*i*P	**Pg**	**19 43 11.7**	**-0.5**
TWD				S	**Sg**	**19 43 16.2**	**-0.4**
ENTT	**Nioudou**	**0.38**	**323**	⇓*i*P	**Pg**	**19 43 13.2**	**-0.1**
ENTT				S	**Sg**	**19 43 18.1**	**-0.3**
HWA	**Hwalien**	**0.41**	**209**	P	**Pg**	**19 43 13.6**	**-0.2**
TWE	**Neicheng**	**0.41**	**340**	⇓*i*P	**Pg**	**19 43 13.8**	**0.0**
TWE				S	**Sg**	**19 43 18.2**	**-1.1**
NNS	**Nan Shan**	**0.42**	**284**	⇓*i*P	**Pg**	**19 43 13.5**	**-0.6**
NNS				S	**Sg**	**19 43 18.9**	**-0.9**
ILA	**Ilan**	**0.43**	**351**	*e*P	**Pg**	**19 43 14.4**	**+0.1**
ILA				S	**Sg**	**19 43 20.4**	**+0.3**
NSK	**Sanguang**	**0.54**	**309**	⇓*i*P	**Pg**	**19 43 16.2**	**-0.3**
NSK				S	**Sg**	**19 43 22.9**	**-0.8**
WHF	**Hehuan Shan**	**0.54**	**250**	⇑*i*P	**Pg**	**19 43 15.6**	**-0.9**
WHF				S	**Sg**	**19 43 23.1**	**-0.6**
TWT	**Tachien**	**0.59**	**262**	*i* P	**Pg**	**19 43 17.1**	**-0.4**
TWT				S	**Sg**	**19 43 25.1**	**-0.4**
ESL	**Shilin**	**0.63**	**214**	⇑*i*P	**Pg**	**19 43 17.0**	**-1.2**
ESL				S	**Sg**	**19 43 25.3**	**-1.3**
TWA	**Mucha**	**0.68**	**341**	*e*P	**Pg**	**19 43 19.3**	**+0.2**
TWA				S	**Sg**	**19 43 27.9**	**-0.3**
TWB1	**Santiao Chiao**	**0.69**	**13**	*e*P	**Pg**	**19 43 18.8**	**-0.5**
TWB1				S	**Sg**	**19 43 28.5**	**-0.1**
NWF	**Wu-fen Shan**	**0.73**	**357**	*e*P	**Pg**	**19 43 20.4**	**+0.1**
NWF				S	**Sg**	**19 43 29.7**	**-0.4**
TAP1	**Taipei**	**0.75**	**339**	*e*P	**Pg**	**19 43 20.5**	**-0.1**
TAP1				S	**Sg**	**19 43 30.1**	**-0.5**
TAP	**Taipei**	**0.76**	**338**	*e*P	**Pg**	**19 43 20.5**	**-0.2**
TAP				S	**Sg**	**19 43 30.3**	**-0.5**
NSTT	**Nanjuang**	**0.80**	**292**	*e*P	**Pb**	**19 43 21.5**	**-0.1**
NSTT				S	**Sg**	**19 43 31.5**	**-0.9**
TWS1	**Kuangyinshan**	**0.84**	**334**	*e*P	**Pb**	**19 43 22.8**	**+0.5**
TWS1				S	**Sb**	**19 43 35.6**	**+2.0**
NCU	**National Centr**	**0.85**	**318**	*e*P	**Pb**	**19 43 22.8**	**+0.3**
HSN	**Hsinchu**	**0.90**	**301**	*e*P	**Pb**	**19 43 23.5**	**+0.2**
HSN				S	**Sb**	**19 43 36.3**	**+0.9**
EHY	**Hungye**	**0.94**	**209**	*e*P	**Pb**	**19 43 22.6**	**-1.4**
SMLT	**Sun Moon Lake**	**0.95**	**242**	⇑*i*P	**Pb**	**19 43 23.7**	**-0.5**
SMLT				S	**Sb**	**19 43 35.7**	**-1.2**
TWY	**Chenhua**	**0.96**	**348**	*e*P	**Pb**	**19 43 25.3**	**+1.1**
TWY				S	**Sb**	**19 43 39.1**	**+2.2**
NSY	**Sanyi**	**0.97**	**275**	*e*P	**Pb**	**19 43 24.7**	**+0.3**
NSY				S	**Sb**	**19 43 38.0**	**+0.7**
TYC	**Yuchr**	**0.98**	**244**	⇑*i*P	**Pb**	**19 43 24.0**	**-0.6**
TYC				S	**Sb**	**19 43 35.7**	**-1.8**
TCU	**Taichung**	**1.06**	**260**	*e*P	**Pb**	**19 43 27.0**	**+1.0**
TWF1	**Yuli**	**1.09**	**206**	*e*P	**Pb**	**19 43 24.7**	**-1.8**
YOJ	**Yonaguni jima**	**1.09**	**83**	P	**Pb**	**19 43 26.0**	**-0.5**
YOJ				*e*S	**Sb**	**19 43 41.5**	**+0.7**
WNT	**Mingjian**	**1.13**	**247**	*e*P	**Pb**	**19 43 28.2**	**+1.0**
WNT				S	**Sb**	**19 43 44.2**	**+2.1**
YUS	**Yu-Shan**	**1.16**	**224**	*e*P	**Pb**	**19 43 27.2**	**-0.5**
ALS	**Alishan**	**1.24**	**229**	*e*P	**Pb**	**19 43 28.9**	**-0.1**
CHN5	**Tsauling**	**1.28**	**235**	⇑*i*P	**Pb**	**19 43 30.2**	**+0.5**
CHN5				S	**Sb**	**19 43 47.4**	**+1.1**
CHKT	**Chengkung**	**1.30**	**199**	*e*P	**Pb**	**19 43 29.4**	**-0.7**
CHKT				S	**Sb**	**19 43 48.4**	**+1.5**
WGK	**Gukeng**	**1.32**	**241**	*e*P	**Pb**	**19 43 31.1**	**+0.6**
WGK				S	**Sb**	**19 43 48.5**	**+1.0**
ELDTW	**Lidau**	**1.36**	**213**	*e*P	**Pb**	**19 43 30.3**	**-0.7**
CHN2	**Minshiung**	**1.47**	**237**	*e*P	**Pn**	**19 43 33.3**	**+0.6**
WTCT	**Ta-ch'eng**	**1.48**	**252**	*e*P	**Pn**	**19 43 33.1**	**+0.2**
CHN4	**Tsaushan**	**1.49**	**229**	*e*P	**Pn**	**19 43 33.9**	**+0.8**
STYT	**Tauyuan**	**1.52**	**220**	*e*P	**Pn**	**19 43 33.1**	**-0.4**
STYT				S	**Sb**	**19 43 54.2**	**+0.9**
CHY	**Chiayi**	**1.53**	**237**	*e*P	**Pn**	**19 43 34.5**	**+0.9**
WTP	**Ta-pu**	**1.55**	**226**	*e*P	**Pn**	**19 43 34.7**	**+0.8**
WSF	**Szhu**	**1.62**	**245**	*e*P	**Pn**	**19 43 33.1**	**-1.7**
TWK	**Hsinying**	**1.62**	**229**	*e*P	**Pn**	**19 43 35.6**	**+0.7**
CHN1	**Nanshi**	**1.65**	**226**	*e*P	**Pn**	**19 43 36.2**	**+0.9**
TWG	**Pinlang**	**1.66**	**205**	*e*P	**Pn**	**19 43 34.6**	**-0.8**
SGST	**Jiashian**	**1.69**	**223**	*e*P	**Pn**	**19 43 36.5**	**+0.7**
IRIF	**Iriomote-Funau**	**1.74**	**90**	P	**Pn**	**19 43 35.8**	**-0.8**
IRIF				*e*S	**Sn**	**19 43 58.5**	**-0.9**
CHN8	**Yiju**	**1.77**	**237**	*e*P	**Pn**	**19 43 36.7**	**-0.4**
CHN3	**Shinhua**	**1.83**	**227**	*e*P	**Pn**	**19 43 38.6**	**+0.7**
HATJ	**Hateruma jima**	**1.83**	**98**	P	**Pn**	**19 43 38.8**	**+0.8**
HATJ				*e*S	**Sn**	**19 44 03.1**	**+1.4**
SCLT	**Jiali**	**1.89**	**233**	*e*P	**Pn**	**19 43 34.8**	**-3.9**
ECL	**Taimali**	**1.91**	**205**	*e*P	**Pn**	**19 43 39.2**	**+0.2**
SSD	**Sandimen**	**1.92**	**215**	*e*P	**Pn**	**19 43 40.0**	**+0.8**
TWM1	**Shoushan**	**1.98**	**221**	*e*P	**Pn**	**19 43 42.2**	**+2.2**
JKRS	**Kuro-shima**	**2.00**	**92**	P	**Pn**	**19 43 40.1**	**-0.2**
JKRS				*e*S	**Sn**	**19 44 05.8**	**-0.1**
JIJ	**Ishigaki jima**	**2.12**	**89**	P	**Pn**	**19 43 41.5**	**-0.5**
JIJ				*e*S	**Sn**	**19 44 07.0**	**-2.0**
EAST	**Anshuo**	**2.14**	**205**	*e*P	**Pn**	**19 43 42.7**	**+0.3**
SCZT	**Fangliau**	**2.25**	**210**	*e*P	**Pn**	**19 43 45.5**	**+1.6**
WDGT	**Dungji**	**2.25**	**242**	*e*P	**Pn**	**19 43 43.5**	**-0.4**

ISC 02 20:09:34.3±5.1**, 36.1N**±0.2×**69.6E**±0.5**, h150^{km}**±39^{km}**, n15,**
σ**0^{s}58**/16**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**6.26**	**124**	*e*P	**P**	**20 11 05.5**	**+0.1**
THN				*e*S	**S**	**20 12 16.5**	**+0.3**
AML	**Almayashu**	**6.80**	**27**	P	**P**	**20 11 12.6**	**0.0**
	SNR=25						
UCH	**Uchtor**	**7.20**	**31**	P	**P**	**20 11 18.2**	**+0.2**
	SNR=8.4						
EKS2	**Erkin-Say**	**7.29**	**25**	P	**P**	**20 11 19.3**	**0.0**
	SNR=12						
AAK	**Ala-Archa**	**7.53**	**29**	P	**P**	**20 11 22.9**	**+0.5**
	SNR=6.4						
SDNR	**Sundarnagar**	**7.68**	**125**	*e*P	**S**	**20 12 46.2**	**-4.0**
CHMS	**Chumysh**	**7.94**	**29**	P	**P**	**20 11 28.0**	**+0.1**
	SNR=7.0						
USP	**Ospenovka**	**8.08**	**26**	P	**P**	**20 11 29.0**	**-0.7**
	SNR=22						
TKM2	**Tokmak 2**	**8.22**	**33**	P	**P**	**20 11 31.4**	**-0.2**
	SNR=7.3						
KOLN	**Koldanda**	**14.51**	**121**	*e*P	**P**	**20 12 52.8**	**-0.6**
	3.3nm,0.2s						
GKN	**Gorkha**	**15.10**	**118**	*e*P	**P**	**20 13 00.3**	**-0.5**
	14nm,0.4s						
DMN	**Daman**	**15.66**	**118**	*e*P	**P**	**20 13 07.7**	**-0.2**
	7.5nm,0.4s						
KKN	**Kakani**	**15.68**	**118**	*e*P	**P**	**20 13 07.8**	**-0.3**
	8.2nm,0.5s						
PKI	**Pulchoki**	**15.90**	**118**	*e*P	**P**	**20 13 12.1**	**+1.2**
JIRN	**Jiri**	**16.41**	**116**	*e*P	**P**	**20 13 17.8**	**+0.6**
	9.4nm,0.3s						

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*CSEM **02** 20:11:01.8±0.1, 37.78N×25.33W, h2^{km}, ML2.9, Error ellipse: s-maj=5.2km s-min=3.1km az=170.0, After PDA*
*PDA **02** 20:11:01.8±0.9, 37.78N×25.33W, h2^{km}±1^{km}, MD2.7, ML2.9, Error ellipse: s-maj=1.9km s-min=1.3km az=172.0*
SVSA 02 20:11:01.8±0.9**, 37.78N×25.33W, h2^{km}**±1^{km}**, MD2.7, ML2.9, Error ellipse: s-maj=1.9km s-min=1.3km az=172.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRA1	**Furnas**	**0.04**	**208**	*i* P	Pg	20 11 03.5	+0.8
MIRA	**Miradouro**	**0.04**	**81**	*i* P	Pg	20 11 03.7	+1.0
PCNG	**Congro**	**0.05**	**257**	*i* P	Pg	20 11 03.5	+0.6
PCNG				*i* S	Sg	20 11 04.9	+1.3
PFAD	**Fenais da Ajud**	**0.06**	**7**	*i* P	Pg	20 11 03.8	+0.8
MESC	**Monte Escuro**	**0.09**	**279**	*i* P	Pg	20 11 04.3	+0.7
MESC				*i* S	Sg	20 11 06.5	+1.6
VIF	**Vila Franca**	**0.09**	**248**	*i* P	Pg	20 11 04.4	+0.8
VIF				*i* S	Sg	20 11 06.5	+1.6
	4µm,0.3s						
PMAT	**Coroa da Mata**	**0.12**	**289**	*i* P	Pg	20 11 04.6	+0.5
LFA	**Lagoa do Fogo**	**0.12**	**267**	*i* P	Pg	20 11 04.9	+0.7
PRCH	**Ribeira Ch**	**0.13**	**246**	*i* P	Pg	20 11 05.0	+0.6
PRCH				*i* S	Sg	20 11 07.3	+1.2
	4µm,0.2s						
BART	**Pico Bartolome**	**0.13**	**91**	*e*P	Pg	20 11 05.1	+0.7
BART				*e*S	Sg	20 11 07.7	+1.5
	2µm,0.4s						
PVER	**Pico Vermelho**	**0.14**	**277**	*i* P	Pg	20 11 05.1	+0.4
CML	**Cha da Macela**	**0.17**	**267**	*i* P	Pg	20 11 05.7	+0.5
FAC	**Faja de Cima**	**0.25**	**269**	*i* P	Pg	20 11 07.7	+0.9
PDA	**Ponta Delgada**	**0.26**	**263**	*i* P	Pg	20 11 08.0	+0.9
PSET	**Sete Cidades**	**0.31**	**278**	*e*P	Pg	20 11 08.3	+0.3
PSET				*e*S	Sg	20 11 13.4	+1.3
	902nm,0.4s						
PSAN	**Santo Antonio**	**0.32**	**283**	*i* P	Pg	20 11 08.6	+0.4
PFET	**Feteiras**	**0.36**	**276**	*i* P	Pg	20 11 09.3	+0.2
SET2	**Ginetes**	**0.38**	**280**	*i* P	Pg	20 11 09.6	+0.2
SET4	**Mosteiros**	**0.38**	**285**	*e*P	Pg	20 11 09.6	+0.2
PSMN	**Pico do Norte,**	**0.80**	**165**	*e*S	Sg	20 11 26.6	-1.9
PFAV	**Pico das Favas**	**1.66**	**305**	*e*S	Sb	20 11 48.4	-5.8
	30nm,0.3s						
PSCM	**Serra do Cume**	**1.68**	**304**	*e*P	Pn	20 11 28.5	-3.9
PSCM				*e*S	Sb	20 11 48.1	-6.6
	70nm,0.4s						
RIB2	**Ribeirinha**	**1.70**	**302**	*e*S	Sb	20 11 49.0	-6.3
	38nm,0.3s						
PVNV	**Vila Nova**	**1.74**	**305**	*e*S	Sn	20 11 49.9	-6.4
	15nm,0.2s						
PPAD	**Pico dos Padre**	**1.79**	**301**	*e*S	Sn	20 11 51.1	-6.6
	22nm,0.4s						
ASBA	**Santa Barbara**	**1.83**	**302**	*e*S	Sn	20 11 52.9	-5.7
	25nm,0.3s						

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*PRU **02** 20:16:04.1, 51.50N×16.06E*
WAR 02 20:16:03.5, 51.56N×16.10E, h1^{km}, MW2.5, Location given by Rudna mine, origin time based upon KSP, MW from OJC, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**170**	*e*Pg	Pg	20 16 16.7	-1.3
KSP				*e*Sg	Sg	20 16 26.2	-1.4
UPC	**Upice**	**1.05**	**183**	*e*PG	Pg	20 16 22.7	-1.8
DPC	**Dobruska-Polom**	**1.22**	**173**	*e*PG	Pg	20 16 25.3	-2.5
DPC				*e*SG	Sg	20 16 40.9	-3.1
	27nm,1.0s						
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	Pg	20 16 29.5	-2.2
PRU	**Pruhonice**	**1.86**	**213**	*e*PG	Pg	20 16 37.0	-3.6
PRU				*e*SG	Sg	20 17 00.9	-4.4
CLL	**Collm**	**1.96**	**264**	*e*PG	Pg	20 16 38.0	-4.5

CLL				*i*		20 16 43.0	
CLL				*e*SG	Sg	20 17 04.0	-4.6
OKC	**Ostrava-Krasne**	**2.16**	**142**	*e*SG	Sg	20 17 11.1	-4.2
NKC	**Novy Kostel**	**2.67**	**242**	*e*SG	Sg	20 17 28.1	-4.1
OJC	**Ojcow**	**2.70**	**118**	*e*Pg	Pg	20 16 55.2	-2.2
OJC				*e*Sg	Sg	20 17 30.2	-3.1
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PG	Pg	20 16 55.8	-5.9
KHC				*e*SN	Sn	20 17 24.5	-3.6
KHC				*e*SG	Sg	20 17 35.1	-5.5

OTT 02 20:27:22.2±0.4**,52.74N**×**67.30W,MN2.8**/7**,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**2.11**	**7**	PN	Pn	20 27 57.9	-1.4
SCHQ				SN	Sn	20 28 25.2	-1.4
SCHQ				Trac		20 28 27.3	
	comp=Z,15nm,0.1s						
MNQ	**Manicouagan**	**2.40**	**203**	PN	Pn	20 28 03.5	+0.2
MNQ				SG	Sg	20 28 37.6	-4.3
MNQ				Trac		20 28 38.8	
	comp=Z,19nm,0.2s						
SMQ	**Clarke City**	**2.55**	**171**	PN	Pn	20 28 04.5	-1.0
SMQ				SN	Sn	20 28 32.9	-4.9
SMQ				Trac		20 28 41.1	
	comp=Z,21nm,0.2s						
ICQ	**Pointe Anglais**	**3.23**	**180**	PN	Pn	20 28 13.8	-1.3
ICQ				SG	Sg	20 29 02.2	-7.4
ICQ				Trac		20 29 05.1	
	comp=Z,9.8nm,0.2s						
CNQ	**Baie Comeau**	**3.48**	**188**	PN	Pn	20 28 18.4	-0.3
CNQ				SN	Sn	20 28 58.8	-2.5
CNQ				Trac		20 29 10.9	
	comp=Z,6.3nm,0.2s						
GSQ	**Grosses Roches**	**3.84**	**178**	PN	Pn	20 28 22.8	-1.1
GSQ				Trac		20 29 27.0	
	comp=Z,7.5nm,0.2s						
LG4Q	**La Grande 4**	**4.18**	**285**	PN	Pn	20 28 24.4	-4.4
LG4Q				PG	Pg	20 28 33.5	-12
LG4Q				Trac		20 29 35.6	
	comp=Z,7.9nm,0.2s						
LMQ	**La Malbaie**	**5.55**	**202**	PN	Pn	20 28 44.5	-3.6
LMN	**Caledonia Moun**	**7.09**	**166**	PN	Pn	20 29 05.7	-4.1
DRLN	**Deer Lake**	**7.10**	**116**	PN	Pn	20 29 05.8	-4.1
VLDQ	**Val d'Or**	**7.97**	**238**	PN	Pn	20 29 17.9	-4.1
VIMO	**Victor Mine**	**9.97**	**277**	PN	P	20 29 43.2	-6.5
SILO	**Sutton Inlier**	**10.61**	**286**	PN	P	20 29 51.3	-7.1

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*NEIC **02** 20:37:48.4,31.50S×68.95W,h150^{km},MD3.1(GUC),After GUC.*

GUC 02 20:37:48.4±1.1**,31.50S**×**68.95W,h150^{km},MD3.1,ML3.5, 4C-1D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTCH	**Petorca**	**1.85**	**245**	⇑*i*P	P	20 38 22.0	-0.1
PTCH				*i* S	S	20 38 47.9	-0.2
PTCH				AMP		20 38 49.9	
	comp=E,383nm,0.2s						
ILCH	**Illapel**	**1.90**	**265**	*i* P	P	20 38 23.0	+0.3
ILCH				*i* S	S	20 38 48.9	-0.2
ILCH				AMP		20 38 55.2	
	comp=N,274nm,0.2s						
TLL	**Tololo Astrono**	**2.08**	**309**	*i* P	P	20 38 25.5	+0.7
TLL				*i* S	S	20 38 54.0	+1.2
TLL				AMP		20 38 58.4	
	comp=N,345nm,0.5s						
FCH	**Farellones**	**2.15**	**212**	*i* P	P	20 38 26.3	+0.6
FCH				*i* S	S	20 38 56.2	+1.9
FCH				AMP		20 38 57.8	
	comp=E,163nm,0.3s						
CLCH	**Cerro Calan**	**2.32**	**215**	⇑*i*P	P	20 38 28.1	+0.3
CLCH				*i* S	S	20 38 58.4	+0.3
CLCH				AMP		20 39 05.0	
	comp=E,189nm,0.4s						
PACH	**Papudo**	**2.35**	**243**	⇑*i*P	P	20 38 27.9	-0.4
PACH				*i* S	S	20 38 57.7	-1.1
RCDM	**Rinconada Maip**	**2.53**	**218**	*i* P	P	20 38 30.5	0.0
RCDM				*i* S	S	20 39 02.6	0.0
RCDM				AMP		20 39 05.2	
	comp=N,239nm,0.1s						
TACH	**Talagante**	**2.73**	**218**	⇑*i*P	P	20 38 32.5	-0.5
TACH				*i* S	S	20 39 06.8	-0.2
CHCH	**Chadas Angostu**	**2.82**	**210**	*i* P	P	20 38 33.9	-0.3
CHCH				*i* S	S	20 39 09.4	+0.3
CACH	**El Canelo**	**2.96**	**208**	*i* P	P	20 38 36.5	+0.6
CICH	**Cipreses**	**3.07**	**203**	*i* P	P	20 38 37.9	+0.5
SFDO	**San Fernando**	**3.56**	**209**	⇓*i*P	P	20 38 43.1	-0.6
SFDO				*i* S	S	20 39 25.3	-0.9

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*BJI **02** 20:41:02.3,6.72N×92.78E,h23^{km},mB5.2,mb5.0,Ms4.8, Msz4.5*

*NEIC **02** 20:41:05.1±0.2,6.83N×92.84E,mb5.0/45,Error ellipse: s-maj=6.6km s-min=4.7km az=224.0*

*MOS **02** 20:41:05.3±1.0,6.85N×92.78E,h33^{km},mb5.3/28,Error ellipse: s-maj=16.1km s-min=7.1km az=114.2*

*HRVD **02** 20:41:05.1±0.6,6.54N×92.83E,h15^{km}±1^{km},MW4.8/42, Centroid moment Tensor Solution. LP body waves: s18,c20;Mantle waves: s42,c58; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.60±.15; M$_{\theta\theta}$-0.35±.09; M$_{\phi\phi}$-1.25±.11; M$_{r\theta}$1.43±.38; M$_{\theta\phi}$0.40±.07; M$_{\phi r}$-0.40±.31; Best double couple: M$_0$2.045×10^{16} NP1:φ$_s$352°,δ30°, λ129°. NP2:φ$_s$128°,δ67°,λ70°. Principal axes: T 2.364, Plg62°, Azm6°; N -.636, Plg19°, Azm136°; P -1.725, Plg19°, Azm233°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 20:41:02.9±0.2**,6.75N**±0.03×**92.81E**±0.03**,h18^{km}, h18^{km}**±.9^{km}**:pP-P,n236,**σ0^{s}.99/241**,mb5.1**/76**,MS4.4**/17**, 25C-27D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	**Songkhla**	**7.77**	**86**	P	**Pn**	**20 42 57.0**	**-0.9**
	140nm,1.0s						
NNT	**Nongplab**	**8.96**	**49**	P	**P**	**20 43 14.8**	**+0.3**
NST	**Nakhon Sawan**	**11.41**	**38**	P	**P**	**20 43 44.0**	**-4.2**
PALK	**Pallekele**	**12.02**	**273**	*e*P	**P**	**20 43 54.1**	**-2.4**
CM31	**Chiang Mai Arr**	**13.08**	**27**	*e*P	**P**	**20 44 10.1**	**-0.6**
CM31				*e*		20 44 14.8	
CHG	**Chiang Mai**	**13.39**	**26**	⇓P	**P**	**20 44 17.1**	**+2.3**
	104nm,1.0s						
KKTK	**Khon Kaen**	**13.67**	**45**	P	**P**	**20 44 20.0**	**+1.5**
	494nm,0.9s						
MDRS	**Chennai**	**13.87**	**298**	*e*P	**P**	**20 44 20.0**	**-1.1**
MDRS				*e*		20 46 30.0	
MDRS				*e*		20 46 42.0	
NANT	**Nan**	**14.23**	**32**	P	**P**	**20 44 28.0**	**+2.1**
VIS	**Vishakhapatnam**	**14.29**	**321**	*e*P	**P**	**20 44 25.6**	**-1.1**
VIS				*e*		20 44 33.0	
	comp=Z,78nm,1.0s						
VIS				*e*		20 46 53.9	
CHRT	**Chiangrai**	**14.70**	**27**	⇓P	**P**	**20 44 33.0**	**+1.0**
	comp=Z,166nm,1.2s						
BWNR	**Bhubaneshwar**	**15.08**	**334**	*e*	**P**	**20 44 30.2**	**-6.8**
BWNR				*e*		20 44 36.2	
	comp=Z,31nm,0.6s						
BWNR				*e*		20 47 10.9	
SALM	**Salem**	**15.21**	**290**	*e*P	**P**	**20 44 39.0**	**+0.2**
SALM				*e*		20 47 20.0	
TRD	**Trivandrum**	**15.80**	**277**	*e*P	**P**	**20 44 45.6**	**-0.8**
TRD				*e*		20 44 53.6	
	comp=Z,87nm,1.7s						
TRD				*e*		20 47 30.1	
CAL	**Calcutta**	**16.28**	**345**	*e*P	**P**	**20 44 55.5**	**+3.0**
CAL				*e*		20 47 19.3	
CAL				*e*S	**S**	**20 47 50.2**	**-2.0**
AGT	**Agartala**	**17.10**	**355**	⇓*i*P	**P**	**20 45 01.0**	**-1.8**
AGT				*i*		20 46 31.0	
HYB	**Hyderabad**	**17.49**	**309**	*i* P	**P**	**20 45 09.0**	**+1.3**
HYB				*e*		20 48 09.0	
HYB				*e*S	**S**	**20 48 25.0**	**+4.9**
SHL	**Shillong**	**18.73**	**357**	*e*P	**P**	**20 45 21.0**	**-2.0**
COCO	**West Island**	**19.24**	**168**	*e*P	**P**	**20 45 29.4**	**+0.3**
NGP	**Nagpur**	**19.55**	**318**	*e*P	**P**	**20 45 33.7**	**+1.1**
	comp=Z,135nm,1.7s						
NGP				*e*		20 49 02.6	
LATR	**Latur**	**19.62**	**308**	*e*P	**P**	**20 45 33.4**	**0.0**
LATR				*e*		20 49 43.5	
KMI	**Kunming**	**20.59**	**26**	⇑P	**P**	**20 45 44.3**	**+0.5**
KMI				AP		20 45 50.3	
KMI				XP		20 45 51.9	
KMI				PP	PP	20 46 07.9	+2.7
KMI				S	**S**	**20 49 31.6**	**+3.4**
KMI				XS		20 49 41.1	
KMI				SS	SS	20 50 03.5	+4.5
KMI				AMB	AMB		
	comp=Z,79nm,1.0s						
KMI				AMB	AMB		
	comp=Z,230nm,3.1s						
KMI				LR	LR		
	comp=N,783nm,14.1s,MS4.5						
KMI				LR	LR		
	comp=E,940nm,11.9s,MS4.5						
KMI				LR	LR		
	comp=Z,711nm,12.7s,MS4.2						
KMI	**Kunming**	**20.59**	**26**	⇑P	**P**	**20 45 44.3**	**+0.5**
	comp=Z,79nm,1.0s						
KMI				pP		20 45 50.3	
KMI				sP		20 45 51.9	
KMI				PP	PP	20 46 07.9	+2.7
KMI				S	**S**	**20 49 31.6**	**+3.4**
KMI				sS		20 49 41.1	
KMI				SS	SS	20 50 03.5	+4.5
KMI				LR	LR		
	comp=Z,710nm,12.7s,MS4.2						
KAD	**Karad**	**20.99**	**302**	*e*P	**P**	**20 45 48.6**	**+0.7**
KAD				*e*		20 49 32.2	
JIRN	**Jiri**	**21.72**	**344**	*e*P	**P**	**20 45 55.8**	**+0.6**
	comp=Z,446nm,1.0s,mb5.9						
POO	**Poona**	**21.86**	**304**	*e*P	**P**	**20 45 56.0**	**-0.6**
POO				*e*		20 49 51.0	
PKI	**Pulchoki**	**21.86**	**342**	*e*P	**P**	**20 45 57.0**	**+0.4**
	comp=Z,288nm,1.0s,mb5.6						
DMN	**Daman**	**21.99**	**341**	*e*P	**P**	**20 45 58.3**	**+0.4**
	comp=Z,236nm,1.0s,mb5.6						
BHPL	**Bhopal**	**22.09**	**320**	*e*P	**P**	**20 46 00.2**	**+1.4**
BHPL				*e*		20 49 48.3	
KKN	**Kakani**	**22.11**	**342**	*e*P	**P**	**20 45 58.9**	**-0.2**
	comp=Z,250nm,1.0s,mb5.6						
GKN	**Gorkha**	**22.51**	**341**	*e*P	**P**	**20 46 03.3**	**+0.2**
	comp=Z,600nm,1.2s,mb5.9						
KOLN	**Koldanda**	**22.65**	**338**	*e*P	**P**	**20 46 05.5**	**+0.9**
	comp=Z,449nm,1.4s,mb5.7						
LSA	**Lhasa**	**22.88**	**356**	P	**P**	**20 46 04.3**	**-2.5**
LSA				XP		20 46 16.1	
LSA				LR	LR		
	comp=N,220nm,13.2s,MS4.2						
LSA				LR	LR		
	comp=E,470nm,12.7s,MS4.2						
BOM	**Bombay**	**22.89**	**304**	*e*	**P**	**20 46 02.6**	**-4.4**
BOM				*e*		20 50 11.9	
GYA	**Guiyang**	**23.63**	**32**	⇑*i*P	**P**	**20 46 14.8**	**+0.7**
GYA				AP		20 46 19.0	
GYA				XP		20 46 22.1	
GYA				AMB	AMB		
	comp=Z,50nm,1.1s,mb4.9						
GYA				AMB	AMB		
	comp=Z,300nm,4.6s						
GYA				LR	LR		
	comp=N,760nm,14.4s,MS4.6						
GYA				LR	LR		
	comp=E,1μm,14.1s,MS4.6						
GYA				LR	LR		
	comp=Z,990nm,14.7s,MS4.4						
LGTI	**Lohaghat**	**25.49**	**334**	*e*P	**P**	**20 46 33.0**	**+1.0**
CD2	**Chengdu**	**26.13**	**22**	⇑*i*P	**P**	**20 46 36.7**	**-1.2**
CD2				S	**S**	**20 51 08.7**	**+2.3**
CD2				XS		20 51 13.9	
CD2				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.2						
CD2				AMB	AMB		
	comp=Z,370nm,9.3s						
CD2				LR	LR		
	comp=N,1μm,12.3s						
CD2				LR	LR		
	comp=Z,1μm,11.4s,MS4.6						
NDI	**New Delhi**	**26.32**	**328**	*e*P	**P**	**20 46 38.5**	**-1.2**
DDI	**Dehra Dun**	**27.23**	**331**	*e*P	**P**	**20 46 48.2**	**+0.2**
LZH	**Lanzhou**	**30.90**	**18**	⇓P	**P**	**20 47 19.7**	**-1.1**
LZH				AP	pP	20 47 24.5	-1.6
LZH				XP	sP	20 47 27.2	-1.3
LZH				*e*PP	PP	20 48 21.8	-0.8
LZH				*e*S	**S**	**20 52 23.0**	**+0.2**
LZH				XS		20 52 31.2	
LZH				AMB	AMB		
	comp=Z,41nm,1.4s,mb5.1						
LZH				AMB	AMB		
	comp=Z,126nm,5.6s						
LZH				LR	LR		
	comp=N,958nm,12.7s						
LZH				LR	LR		
	comp=Z,2μm,15.9s,MS4.8						
LZH	**Lanzhou**	**30.90**	**18**	⇓P	**P**	**20 47 19.7**	**-1.1**
	comp=Z,41nm,1.4s,mb5.1						
LZH				pP	pP	20 47 24.5	-1.6
LZH				sP	sP	20 47 27.2	-1.3
LZH				*e*PP	PP	20 48 21.8	-0.8
LZH				*e*S	**S**	**20 52 23.0**	**+0.2**
LZH				sS		20 52 31.2	
LZH				SS	SS	20 53 37.3	-29
LZH				LR	LR		
	comp=Z,2μm,15.9s,MS4.8						
XAN	**Xi'an**	**30.98**	**27**	P	**P**	**20 47 19.4**	**-2.1**
XAN				AMB	AMB		
	comp=Z,34nm,0.9s,mb5.2						
XAN				LR	LR		
	comp=N,629nm,14.0s,MS4.5						
XAN				LR	LR		
	comp=E,464nm,12.4s,MS4.5						
XAN				LR	LR		
	comp=Z,777nm,13.6s,MS4.5						
WHN	**Wuhan**	**31.13**	**38**	*e*P	**P**	**20 47 22.0**	**-0.9**
GTA	**Gaotai**	**33.12**	**10**	⇑P	**P**	**20 47 39.6**	**-0.6**
GTA				AP	pP	20 47 44.1	-1.5
GTA				XP	sP	20 47 47.4	-0.5
GTA				PP	PP	20 48 49.4	-1.9
GTA				PCP	PcP	20 50 23.9	+0.5
GTA				S	**S**	**20 52 59.3**	**+1.9**
GTA				XS		20 53 05.5	
GTA				SCP		20 54 06.0	
GTA				SS	SS	20 55 01.8	+3.3
GTA				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.7						
GTA				AMB	AMB		
	comp=Z,119nm,3.8s						
GTA				LR	LR		
	comp=N,262nm,13.8s,MS4.3						
GTA				LR	LR		
	comp=E,331nm,13.8s,MS4.3						
GTA				LR	LR		
	comp=Z,291nm,15.0s,MS4.1						
NJ2	**Nanjing**	**34.98**	**41**	*e*P	**P**	**20 47 56.2**	**-0.1**
NJ2				AP	pP	20 48 02.9	+1.2
NJ2				XP	sP	20 48 05.4	+1.4
NJ2				PP	PP	20 49 14.4	-0.2
NJ2				S	**S**	**20 53 28.0**	**+1.7**
NJ2				XS		20 53 37.0	
NJ2				AMB	AMB		
	comp=Z,1μm,5.0s						
NJ2				LR	LR		
	comp=N,1μm,21.6s						
NJ2				LR	LR		
	comp=E,1μm,16.0s						
NJ2				LR	LR		
	comp=Z,2μm,20.4s,MS4.8						
SSE	**Sheshan**	**35.94**	**44**	P	**P**	**20 48 04.3**	**-0.2**
SSE				XP	sP	20 48 13.1	+0.9
SSE				S	**S**	**20 53 37.3**	**-4.0**
SSE				XS		20 53 54.1	
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,130nm,5.7s						
SSE				LR	LR		
	comp=N,435nm,10.5s,MS4.7						
SSE				LR	LR		
	comp=E,545nm,10.2s,MS4.7						
SSE				LR	LR		
	comp=Z,720nm,12.6s,MS4.6						
SSE	**Sheshan**	**35.94**	**44**	P	**P**	**20 48 04.3**	**-0.2**
	comp=Z,20nm,0.8s,mb5.1						
SSE				sP	sP	20 48 13.1	+0.9
SSE				S	**S**	**20 53 37.3**	**-4.0**
SSE				sS		20 53 54.1	
SSE				LR	LR		
	comp=Z,720nm,12.6s,MS4.6						
KSH	**Kashi**	**35.97**	**338**	*e*P	**P**	**20 48 05.0**	**+0.4**
KSH				*e*AP	pP	20 48 10.4	+0.4
KSH				*e*XP	sP	20 48 13.6	+1.3
KSH				*e*PP	PP	20 49 27.3	+0.8
KSH				*e*PCP	PcP	20 50 31.3	-0.2
KSH				*e*S	**S**	**20 53 41.8**	**+0.3**
KSH				*e*XS		20 53 51.4	
KSH				*e*SCP		20 54 15.6	
KSH				*e*SS	SS	20 56 05.2	+1.2
KSH				*e*SCS	ScS	20 58 20.3	+0.6
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
KSH				AMB	AMB		
	comp=Z,110nm,3.8s						
KSH				LR	LR		
	comp=N,380nm,9.9s						
KSH				LR	LR		
	comp=E,420nm,10.5s						
TIA	**Tai'an**	**36.81**	**34**	*e*P	**P**	**20 48 11.4**	**-0.4**
BTO	**Baotou**	**37.06**	**22**	*e*P	**P**	**20 48 10.9**	**-2.9**
WMQ	**Urumqi**	**37.19**	**354**	P	**P**	**20 48 14.0**	**-0.9**
WMQ				XP	sP	20 48 21.0	-1.6
WMQ				PP	PP	20 49 41.0	-1.1
WMQ				S	**S**	**20 53 59.0**	**-1.3**
WMQ				SS	SS	20 56 28.0	-3.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
WMQ				LR	LR		
	comp=N,214nm,18.0s,MS4.3						
WMQ				LR	LR		
	comp=E,401nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,215nm,17.0s,MS4.0						
ULHL	**Ulahol**	**38.27**	**340**	P	**P**	**20 48 24.7**	**+0.7**
	SNR=27						
KZA	**Kyzart**	**38.47**	**339**	P	**P**	**20 48 27.0**	**+1.3**
	SNR=34						
UCH	**Uchtor**	**38.87**	**338**	P	**P**	**20 48 30.3**	**+1.3**
	SNR=62						
KBK	**Karagaybulak**	**39.09**	**339**	P	**P**	**20 48 32.3**	**+1.5**
	SNR=87						
TKM2	**Tokmak 2**	**39.09**	**340**	P	**P**	**20 48 31.3**	**+0.5**
	SNR=30						
AML	**Almayashu**	**39.09**	**337**	P	**P**	**20 48 32.5**	**+1.6**
	SNR=7.7						
BJI	**Beijing**	**39.22**	**29**	*e*P	**P**	**20 48 32.0**	**+0.1**
BJI				PP	PP	20 50 06.6	+0.7
BJI				S	**S**	**20 54 39.1**	**+8.1**
BJI				AMB	AMB		
	comp=Z,26nm,1.3s,mb4.8						
BJI				LR	LR		
	comp=N,500nm,14.9s,MS4.6						
BJI				LR	LR		
	comp=E,378nm,15.8s,MS4.6						
BJI				LR	LR		
	comp=Z,150nm,22.3s						
BJI	**Beijing**	**39.22**	**29**	*e*P	**P**	**20 48 32.0**	**+0.1**
	comp=Z,26nm,1.3s,mb4.8						
BJI				PP	PP	20 50 06.6	+0.7
BJI				S	**S**	**20 54 39.1**	**+8.1**
BJI				SS	SS	20 57 43.7	+27
BJI				LR	LR		
	comp=Z,150nm,22.3s,MS3.8						
AAK	**Ala-Archa**	**39.23**	**338**	P	**P**	**20 48 33.3**	**+1.3**
	SNR=39						
AAK	**Ala-Archa**	**39.23**	**338**	*c i*P	**P**	**20 48 32.1**	**+0.1**
AAK				pmax	pmax		
	comp=Z,106nm,1.7s,mb5.3						
AAK	**Ala-Archa**	**39.23**	**338**	*e*P	**P**	**20 48 31.7**	**-0.3**
	comp=Z,63nm,1.0s,mb5.3						
FRU	**Bishkek**	**39.36**	**339**	⇑*e*P	**P**	**20 48 34.0**	**+0.9**
FRU				pmax	pmax		
	comp=Z,80nm,1.8s,mb5.2						
CHMS	**Chumysh**	**39.45**	**339**	P	**P**	**20 48 34.3**	**+0.4**
	SNR=25						
EKS2	**Erkin-Say**	**39.52**	**338**	P	**P**	**20 48 35.7**	**+1.4**
	SNR=55						
USP	**Ospenovka**	**39.78**	**339**	P	**P**	**20 48 37.2**	**+0.7**
	SNR=74						
FITZ	**Fitzroy Crossi**	**40.74**	**128**	*e*P	**P**	**20 48 44.0**	**-0.7**
	comp=Z,11nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	**40.91**	**349**	*i* P	**P**	**20 48 42.7**	**-3.1**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	**Makanchi Array**	**40.91**	**349**	*i* P	**P**	**20 48 42.8**	**-3.0**
ULN	**Ulaanbaatar**	**42.73**	**14**	⇓*i*P	**P**	**20 49 00.4**	**-0.3**
ULN	**Ulaanbaatar**	**42.73**	**14**	*e*P	**P**	**20 48 59.7**	**-1.1**
	comp=Z,3.6nm,0.8s,mb4.2						
ZAK	**Zakamensk**	**44.36**	**10**	⇑*i*P	**P**	**20 49 13.2**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.9						
MUN	**Mundaring**	**44.52**	**151**	*e*P	**P**	**20 49 16.6**	**+1.1**
	comp=Z,12nm,0.7s,mb4.8						
MOY	**Mondy**	**45.28**	**7**	*e*P	**P**	**20 49 21.7**	**+0.4**
MOY				*e*		20 51 02.3	
MOY				pmax	pmax		
	comp=Z,22nm,2.0s,mb4.6						
KURK	**Kurchatov**	**45.39**	**347**	⇑*i*P	**P**	**20 49 21.8**	**-0.3**
KURK	**Kurchatov**	**45.39**	**347**	*e*P	**P**	**20 49 21.5**	**-0.6**
	comp=Z,18nm,1.4s,mb4.7						
TLY	**Talaya**	**45.67**	**9**	P	**P**	**20 49 25.2**	**+0.8**
	comp=Z,42nm,1.2s,mb5.2,SNR=9.1						
TLY	**Talaya**	**45.67**	**9**	*e*P	**P**	**20 49 24.9**	**+0.5**
TLY				*e*S	**S**	**20 56 14.6**	**+8.9**
TLY				pmax	pmax		
	comp=Z,21nm,2.1s,mb4.7						
TLY				MLR	MLR		
	comp=Z,145nm,15.0s,MS4.0						
TLY	**Talaya**	**45.67**	**9**	*e*P	**P**	**20 49 25.0**	**+0.7**
	comp=Z,7.2nm,1.1s,mb4.5						
IRK	**Irkutsk**	**46.32**	**10**	*e*P	**P**	**20 49 29.5**	**0.0**
IRK				pmax	pmax		
	comp=Z,26nm,1.8s,mb4.9						
CN2	**Changchun**	**46.68**	**32**	⇓P	**P**	**20 49 32.8**	**+0.4**
CN2				*e*XP	sP	20 49 39.8	-0.3
CN2				*e*S	**S**	**20 56 21.1**	**+0.9**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CN2				AMB	AMB		
	comp=Z,400nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,500nm,14.0s,MS4.6						
WRAB	**Tennant Creek**	**48.72**	**124**	⇓*i*P	**P**	**20 49 48.6**	**-0.1**
WRAB	**Tennant Creek**	**48.72**	**124**	*e*P	**P**	**20 49 47.7**	**-1.0**
	comp=Z,14nm,0.8s,mb5.0						
WB2	**Warramunga Arr**	**48.73**	**124**	*e*P	**P**	**20 49 48.3**	**-0.5**
MDJ	**Mudanjiang**	**49.47**	**34**	P	**P**	**20 49 54.2**	**0.0**
MDJ				AP	pP	20 49 58.9	-0.8
MDJ				PP	PP	20 51 49.6	+0.6
MDJ				S	**S**	**20 57 07.2**	**+7.7**
MDJ				AMB	AMB		
	comp=Z,19nm,0.9s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,87nm,4.0s						
MDJ				LR	LR		
	comp=N,134nm,13.8s,MS4.1						
MDJ				LR	LR		
	comp=E,75nm,15.1s,MS4.1						
MDJ				LR	LR		
	comp=Z,105nm,16.5s,MS3.9						
ASPA	**Alice Springs**	**50.24**	**128**	*e*P	**P**	**20 49 59.8**	**-0.5**
FORT	**Forrest**	**50.32**	**140**	*e*P	**P**	**20 50 01.7**	**+0.8**
	comp=Z,122nm,0.7s,mb6.0						
KLR	**Kul'dur**	**53.52**	**31**	*e*P	**P**	**20 50 21.3**	**-3.4**
KLR				MLR	MLR		
	comp=N,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,600nm,13.0s,MS4.8						
BOD	**Bodaibo**	**53.54**	**14**	*e*P	**P**	**20 50 22.8**	**-1.9**
BOD				pmax	pmax		
	comp=Z,53nm,1.9s,mb5.2						
GNI	**Garni**	**54.28**	**315**	*c i*P	**P**	**20 50 28.8**	**-1.6**
GNI				pmax	pmax		
	comp=Z,26nm,1.0s						
GNI	**Garni**	**54.28**	**315**	*e*P	**P**	**20 50 30.2**	**-0.2**
	comp=Z,27nm,1.0s,mb5.1						
TI2	**Plekhanov**	**54.95**	**317**	*i* P	**P**	**20 50 34.6**	**-0.7**

TI2				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
CLNS	**Chul'man**	**55.94**	**21**	eP	**P**	**20 50 41.8**	**-0.4**
CLNS				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.3						
CLNS				pmax	pmax		
	comp=N,17nm,0.9s						
CLNS				pmax	pmax		
	comp=E,14nm,0.9s						
SVE	**Sverdlovsk**	**55.96**	**339**	⇑eP	**P**	**20 50 41.9**	**-0.5**
SVE				e		20 50 54.5	
SVE				e		20 51 41.7	
SVE				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.8						
SVE				MLR	MLR		
	comp=N,100nm,16.0s						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.3						
KMBO	**Kilima Mbogo**	**55.99**	**264**	eP	**P**	**20 50 44.1**	**+0.9**
	comp=Z,5.7nm,1.1s,mb4.5						
KMBO				LR	LR		
	comp=Z,252nm,21.0s,MS4.3						
ARU	**Arti**	**56.41**	**338**	P	**P**	**20 50 44.5**	**-1.1**
	comp=Z,242nm,0.9s,SNR=18						
ARU	**Arti**	**56.41**	**338**	⇑iP	**P**	**20 50 37.3**	**-8.3**
ARU				eS	**S**	**20 58 22.4**	**-11**
ARU				e		21 00 21.6	
ARU				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.4						
ERZM	**Erzurum**	**56.58**	**314**	i P	**P**	**20 50 47.5**	**+0.5**
KIV	**Kislovodsk**	**57.27**	**319**	P	**P**	**20 50 51.3**	**-0.6**
	comp=Z,186nm,0.9s,mb6.1,SNR=9.6						
KIV	**Kislovodsk**	**57.27**	**319**	eP	**P**	**20 50 50.8**	**-1.1**
KIV				eS	**S**	**20 58 47.2**	**+2.1**
KIV				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3						
KIV				pmax	pmax		
	comp=N,22nm,1.1s						
KIV	**Kislovodsk**	**57.27**	**319**	eP	**P**	**20 50 50.7**	**-1.2**
	comp=N,36nm,1.1s,mb5.3						
GOF	**Gofitskoye**	**57.52**	**320**	eP	**P**	**20 50 50.0**	**-3.6**
GOF				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.2						
ELZG	**Elazig**	**57.83**	**312**	i P	**P**	**20 50 56.2**	**+0.3**
MALT	**Malatya**	**58.19**	**311**	eP	**P**	**20 50 58.1**	**-0.3**
	comp=Z,12nm,1.3s,mb4.8						
YSS	**Yuzh-Sakhalins**	**58.48**	**38**	eP	**P**	**20 51 02.0**	**+1.7**
GZT	**Gaziantep**	**58.55**	**310**	i P	**P**	**20 51 00.9**	**0.0**
EIL	**Elat**	**58.84**	**301**	eP	**P**	**20 51 03.4**	**+0.3**
	comp=Z,35nm,1.3s,mb5.2						
CTAO	**Charters Tower**	**58.93**	**118**	eP	**P**	**20 51 03.4**	**-0.5**
SOC	**Sochi**	**59.09**	**317**	eP	**P**	**20 51 02.2**	**-2.4**
SOC				e		20 51 56.9	
SOC				e		20 53 14.0	
SOC				ePPP	PPP	20 54 35.6	-5.9
SOC				eS	**S**	**20 59 12.1**	**+3.1**
SOC				pmax	pmax		
	comp=Z,41nm,1.8s,mb5.2						
SOC				pmax	pmax		
	comp=N,23nm,1.7s						
SOC				pmax	pmax		
	comp=E,29nm,1.8s						
SOKR	**Solikamsk**	**59.37**	**340**	⇓iP	**P**	**20 51 05.9**	**-0.4**
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
STKA	**Stephens Creek**	**60.31**	**133**	eP	**P**	**20 51 13.0**	**-0.2**
	comp=Z,13nm,0.8s,mb5.0						
ANN	**Anapa**	**61.06**	**318**	eP	**P**	**20 51 17.5**	**-0.6**
ANN				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.5						
YAK	**Yakutsk**	**61.47**	**19**	eP	**P**	**20 51 19.2**	**-1.5**
YAK				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
CTKT	**Corum**	**61.56**	**313**	i P	**P**	**20 51 19.8**	**-1.8**
BOYT	**Boyabat**	**61.71**	**314**	i P	**P**	**20 51 21.0**	**-1.6**
MBAR	**Mbarara**	**62.35**	**266**	eP	**P**	**20 51 27.6**	**+0.4**
ELDT	**Eldivan**	**62.52**	**312**	i P	**P**	**20 51 27.5**	**-0.5**
BALT	**Daday**	**62.84**	**313**	i P	**P**	**20 51 29.7**	**-0.3**
ESKT	**Eskisehir**	**64.20**	**311**	i P	**P**	**20 51 38.4**	**-0.7**
MOS	**Moscow**	**65.35**	**329**	eP	**P**	**20 51 44.1**	**-2.1**
MOS				e		20 52 13.4	
MOS				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.5						
OBN	**Obninsk**	**65.62**	**328**	⇑iP	**P**	**20 51 43.2**	**-4.8**
KDAG	**Bornova**	**66.71**	**309**	i P	**P**	**20 51 55.6**	**+0.4**
TIRR	**Tirgusor**	**67.11**	**315**	⇓iP	**P**	**20 51 57.1**	**-0.6**
TIRR	**Tirgusor**	**67.11**	**315**	⇓iP	**P**	**20 51 57.1**	**-0.6**
CFR	**Carcaliu**	**67.47**	**316**	⇓iP	**P**	**20 51 59.5**	**-0.5**
CFR	**Carcaliu**	**67.47**	**316**	⇓iP	**P**	**20 51 59.5**	**-0.5**
HARR	**Harsova**	**67.50**	**316**	⇓iP	**P**	**20 51 59.3**	**-0.9**
HARR	**Harsova**	**67.50**	**316**	⇓iP	**P**	**20 51 59.3**	**-0.9**
LSZ	**Lusaka**	**67.65**	**251**	eP	**P**	**20 52 01.7**	**+0.2**
	comp=Z,8.8nm,0.9s,mb4.8						
MA2	**Magadan**	**68.37**	**28**	eP	**P**	**20 52 04.2**	**-1.1**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
MA2	**Magadan**	**68.37**	**28**	eP	**P**	**20 52 04.4**	**-0.9**
	comp=Z,21nm,0.9s,mb5.2						
TIXI	**Tiksi**	**68.59**	**12**	⇑iP	**P**	**20 52 05.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
VRI	**Vrincioaia**	**68.59**	**317**	⇓iP	**P**	**20 52 07.5**	**+0.5**
MLR	**Muntele Rosu**	**69.05**	**316**	⇓iP	**P**	**20 52 10.2**	**+0.4**
BURAR	**Bucovina Array**	**69.99**	**318**	⇓P	**P**	**20 52 15.1**	**-0.3**
BURAR	**Bucovina Array**	**69.99**	**318**	⇓iP	**P**	**20 52 15.1**	**-0.3**
JOF	**Joensuu**	**71.29**	**335**	ep	**P**	**20 52 20.9**	**-2.2**
	comp=Z,11nm,0.7s,mb4.9						
JOF	**Joensuu**	**71.29**	**335**	eP	**P**	**20 52 20.9**	**-2.2**
JOF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
BOLS	**Boljevac**	**71.55**	**314**	⇓iP	**P**	**20 52 24.6**	**-0.4**
KWP	**Kalwaria**	**72.03**	**320**	eP	**P**	**20 52 27.5**	**-0.2**
KWP	**Kalwaria**	**72.03**	**320**	eP	**P**	**20 52 27.6**	**-0.2**
SVIS	**Svilajnac**	**72.15**	**314**	eP	**P**	**20 52 28.4**	**-0.2**
KOLS	**Kolonicke sedl**	**72.18**	**319**	eP	**P**	**20 52 28.5**	**-0.1**
APA	**Apatity**	**72.43**	**340**	⇑iP	**P**	**20 52 29.4**	**-0.4**
APA				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
LBTB	**Lobatse**	**72.55**	**241**	eP	**P**	**20 52 32.1**	**+0.8**
	comp=Z,15nm,1.1s,mb4.8						
LBTB				epP	pP	20 52 38.3	+1.3
SUW	**Suwalki**	**72.64**	**325**	eP	**P**	**20 52 29.7**	**-1.6**
CRVS	**Cervenica-Dubn**	**72.70**	**319**	eP	**P**	**20 52 34.3**	**+2.6**
KAF	**Kangasniemi**	**73.18**	**333**	ep	**P**	**20 52 31.7**	**-2.6**
	comp=Z,17nm,1.0s,mb4.9,baz=106,slow=5.6						
KAF	**Kangasniemi**	**73.18**	**333**	eP	**P**	**20 52 31.7**	**-2.6**
KAF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
NIE	**Niedzica**	**73.53**	**319**	eP	**P**	**20 52 36.4**	**-0.1**
PSZ	**Piszkesteto**	**73.58**	**318**	⇑eP	**P**	**20 52 36.5**	**-0.4**
OJC	**Ojcow**	**73.98**	**320**	eP	**P**	**20 52 39.0**	**-0.1**
VYHS	**Vyhne**	**74.36**	**318**	i P	**P**	**20 52 41.1**	**-0.3**
SRO	**Srobarova**	**74.62**	**318**	eP	**P**	**20 52 43.0**	**+0.1**
OKC	**Ostrava-Krasne**	**74.98**	**320**	eP	**P**	**20 52 44.6**	**-0.4**
MORC	**Moravsky Berou**	**75.36**	**320**	eP	**P**	**20 52 46.8**	**-0.3**
	comp=Z,25nm,1.4s,mb5.0						
KEV	**Kevo**	**75.45**	**341**	ep	**P**	**20 52 45.9**	**-1.4**
	comp=Z,19nm,0.9s,mb5.0						
KEV	**Kevo**	**75.45**	**341**	eP	**P**	**20 52 45.9**	**-1.4**
KEV				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
ZST	**Bratislava**	**75.47**	**318**	eP	**P**	**20 52 48.1**	**+0.3**
DPC	**Dobruska-Polom**	**76.21**	**320**	eP	**P**	**20 52 52.6**	**+0.7**
KSP	**Ksiaz**	**76.28**	**321**	eP	**P**	**20 52 52.5**	**+0.2**
KSP	**Ksiaz**	**76.28**	**321**	eP	**P**	**20 52 52.7**	**+0.4**
UPC	**Upice**	**76.42**	**320**	eP	**P**	**20 52 53.5**	**+0.4**
ARSA	**Arzberg**	**76.44**	**317**	⇑iP	**P**	**20 52 53.8**	**+0.5**
	comp=Z,23nm,1.4s,mb4.9						
PRU	**Pruhonice**	**77.31**	**320**	eP	**P**	**20 52 58.1**	**0.0**
MOA	**Molln**	**77.33**	**317**	⇑iP	**P**	**20 52 58.2**	**-0.1**
	comp=Z,11nm,1.2s,mb4.7						
PVCC	**Panska Ves**	**77.34**	**320**	eP	**P**	**20 52 58.8**	**+0.6**
PVCC				epP	pP	20 53 04.9	+0.9
BILL	**Bilibino**	**77.61**	**22**	⇓iP	**P**	**20 52 59.3**	**-0.1**
BILL				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
BILL	**Bilibino**	**77.61**	**22**	eP	**P**	**20 52 58.8**	**-0.5**
	comp=Z,36nm,1.5s,mb5.1						
BRG	**Berggiesshubel**	**77.77**	**320**	i P	**P**	**20 53 00.9**	**+0.3**
BRG				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
BRG	**Berggiesshubel**	**77.77**	**320**	i P	**P**	**20 53 00.9**	**+0.3**
	comp=Z,16nm,1.1s,mb4.9						
GEC2	**GERESS Array S**	**77.78**	**318**	eP	**P**	**20 53 01.1**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
GEC2	**GERESS Array S**	**77.78**	**318**	eP	**P**	**20 53 01.1**	**+0.4**
	comp=Z,11nm,0.9s,mb4.8						
PTCC	**Patocco-Chiusa**	**77.87**	**316**	eP	**P**	**20 53 01.3**	**+0.1**
KHC	**Kasperske Hory**	**77.88**	**319**	⇑iP	**P**	**20 53 01.3**	**+0.1**
KHC	**Kasperske Hory**	**77.88**	**319**	eP	**P**	**20 53 01.2**	**0.0**
KBA	**Koelnbreinsper**	**77.91**	**317**	⇑iP	**P**	**20 53 01.5**	**+0.1**
	comp=Z,18nm,1.1s,mb4.9						
GMNA	**Gemona**	**77.94**	**316**	eP	**P**	**20 53 01.8**	**+0.2**
ARV	**Arcevia**	**78.04**	**313**	eP	**P**	**20 53 02.6**	**+0.4**
FSSB	**Fossombrone**	**78.16**	**313**	eP	**P**	**20 53 03.3**	**+0.4**
FVI	**Forni Avoltri**	**78.27**	**316**	eP	**P**	**20 53 03.5**	**+0.1**
WET	**Wettzell**	**78.34**	**319**	eP	**P**	**20 53 04.2**	**+0.5**
WET				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
WET	**Wettzell**	**78.34**	**319**	eP	**P**	**20 53 04.2**	**+0.5**
	comp=Z,12nm,1.1s,mb4.7						
CLL	**Collm**	**78.39**	**321**	⇓iP	**P**	**20 53 04.1**	**+0.1**
CLL				i	pP	20 53 09.9	+0.2
CLL				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
CLL	**Collm**	**78.39**	**321**	⇓iP	**P**	**20 53 04.1**	**+0.1**
	comp=Z,23nm,1.4s,mb4.9						
CLL				i	pP	20 53 09.9	+0.2
CLL	**Collm**	**78.39**	**321**	⇓P	**P**	**20 53 04.1**	**+0.1**
	comp=Z,logA/T=1.2,mb4.9						
CLL				i *PP	pP	20 53 09.9	+0.2
CLL				e		20 53 45.0	
NKC	**Novy Kostel**	**78.67**	**320**	eP	**P**	**20 53 06.2**	**+0.6**
SFI	**Santa Sofia**	**78.84**	**313**	eP	**P**	**20 53 08.1**	**+1.4**
PGD	**Poggio Sodo**	**78.93**	**313**	eP	**P**	**20 53 08.6**	**+1.5**
CTI	**Castel Tesino**	**79.04**	**315**	eP	**P**	**20 53 08.3**	**+0.7**
VMG	**Vicchio**	**79.06**	**313**	eP	**P**	**20 53 09.2**	**+1.4**
WTTA	**Wattenberg**	**79.08**	**317**	⇑iP	**P**	**20 53 07.7**	**-0.2**
	comp=Z,23nm,1.1s,mb5.0						
WATA	**Walderalm**	**79.13**	**317**	⇑iP	**P**	**20 53 07.7**	**-0.4**
	comp=Z,15nm,1.1s,mb4.8						
MOX	**Moxa**	**79.23**	**320**	eP	**P**	**20 53 09.1**	**+0.5**
MOX				pmax	pmax		
	comp=Z,39nm,1.9s,mb5.0						
MOX	**Moxa**	**79.23**	**320**	eP	**P**	**20 53 09.1**	**+0.5**
	comp=Z,39nm,1.9s,mb5.0						
MOX	**Moxa**	**79.23**	**320**	i P	**P**	**20 53 09.1**	**+0.5**
	comp=Z,logA/T=1.3,mb5.0						
FUR	**Furstenfeldbru**	**79.36**	**318**	eP	**P**	**20 53 09.7**	**+0.4**
SQTA	**Sankt Quirin**	**79.37**	**317**	⇑iP	**P**	**20 53 09.4**	**0.0**
	comp=Z,17nm,1.1s,mb4.9						
GRA1	**Grafenberg Arr**	**79.44**	**319**	eP	**P**	**20 53 10.5**	**+0.7**
	comp=Z,9.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**79.44**	**319**	eP	**P**	**20 53 10.5**	**+0.7**
GRF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**79.44**	**319**	eP	**P**	**20 53 10.5**	**+0.7**
	comp=Z,9.0nm,0.9s,mb4.7						
MOTA	**Moosalm**	**79.45**	**317**	⇑iP	**P**	**20 53 09.4**	**-0.4**
	comp=Z,11nm,1.1s,mb4.7						
ZCCA	**Zocca**	**79.48**	**314**	eP	**P**	**20 53 11.9**	**+1.8**
GSCL	**Gusciola**	**79.75**	**314**	eP	**P**	**20 53 12.9**	**+1.3**
BRMO	**Bormio**	**79.93**	**316**	eP	**P**	**20 53 13.1**	**+0.7**
CLZ	**Clausthal**	**80.05**	**321**	eP	**P**	**20 53 13.2**	**+0.2**
	comp=Z,6.0nm,0.8s,mb4.6						
NB2	**NORSAR Subarra**	**80.05**	**331**	P	**P**	**20 53 11.7**	**-1.1**
	comp=Z,6.3nm,0.8s,mb4.6,baz=97,slow=5.0						
DAVA	**Damuels**	**80.28**	**317**	⇑iP	**P**	**20 53 14.7**	**+0.4**
	comp=Z,29nm,1.2s,mb5.1						
VAI	**Varese**	**81.05**	**315**	eP	**P**	**20 53 18.1**	**-0.3**
TNS	**Taunus Mts**	**81.24**	**320**	eP	**P**	**20 53 19.8**	**+0.5**
BFO	**Black Forest**	**81.33**	**318**	eP	**P**	**20 53 19.8**	**0.0**
BFO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BFO	**Black Forest**	**81.33**	**318**	eP	**P**	**20 53 19.8**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.4						
FIN	**Finale Ligure**	**81.47**	**314**	eP	**P**	**20 53 21.1**	**+0.5**
LPG	**La Plagne**	**82.47**	**315**	eP	**P**	**20 53 26.1**	**+0.3**
	comp=Z,20nm,0.8s,mb4.8						
SYO	**Syowa Base**	**83.95**	**197**	⇓P	**P**	**20 53 32.6**	**-0.3**
SYO	**Syowa Base**	**83.95**	**197**	⇓PcP	PcP	20 53 38.0	+0.7
SYO	**Syowa Base**	**83.95**	**197**	⇓pP	pP	20 53 41.3	+2.6
TNA	**Tin City**	**87.73**	**24**	eP	**P**	**20 53 51.2**	**-0.4**
	comp=Z,6.0nm,0.8s,mb4.9						
ESLA	**Sonseca Array**	**90.92**	**310**	eP	**P**	**20 54 07.9**	**+0.7**
IMA	**Indian Mountai**	**93.15**	**22**	eP	**P**	**20 54 18.1**	**+1.3**
	comp=Z,53nm,1.0s,mb5.9						
COLA	**College**	**95.86**	**22**	eP	**P**	**20 54 30.6**	**+1.2**
COLA	**College**	**95.86**	**22**	eP	**P**	**20 54 29.7**	**+0.3**
MSO	**Missoula**	**121.60**	**21**	ePKP	PKPdf	20 59 57.2	-2.6
MOD	**Modoc**	**122.91**	**29**	ePKP	PKPdf	21 00 00.9	-1.4
LKWY	**Lake**	**124.81**	**20**	ePKP	PKPdf	21 00 05.8	-0.3
RRI2	**Red Ridge**	**125.55**	**21**	ePKP	PKPdf	21 00 05.7	-1.9
LOHW	**Long Hollow**	**125.57**	**21**	ePKP	PKPdf	21 00 05.8	-1.8
SNOW	**Snow King Moun**	**125.65**	**21**	ePKP	PKPdf	21 00 06.2	-1.5
HWUT	**Hardware Ranch**	**126.95**	**23**	ePKP	PKPdf	21 00 08.2	-2.0
MVU	**Marysvale**	**129.32**	**25**	ePKP	PKPdf	21 00 13.7	-1.2
MSU	**Marysvale**	**129.33**	**25**	ePKP	PKPdf	21 00 13.8	-1.2
PV10	**Paradox Valley**	**130.72**	**23**	ePKP	PKPdf	21 00 17.1	-0.5
ANMO	**Albuquerque**	**134.71**	**22**	ePKP	PKPdf	21 00 23.7	-1.5
LPM	**Los Pinos Moun**	**135.21**	**23**	ePKP	PKPdf	21 00 25.1	-1.0
GDL2	**Guadalupe Moun**	**137.95**	**22**	ePKP	PKPdf	21 00 29.3	-2.0
JCT	**Junction City**	**141.06**	**17**	ePKPdf	PKPdf	21 00 34.8	-2.2

WEL 02 20:42:13.5±0.4, 36.49S×177.68E, h33^{km}, ML3.5/2, Error ellipse: s-maj=3.7km s-min=3.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.18**	**155**	P*	Pb	20 42 33.4	-1.9
MXZ				S*	Sb	20 42 47.7	-2.6
MXZ				S*	Sb	20 42 48.1	-2.2
PUZ	**Puketiti**	**1.65**	**164**	PN	Pn	20 42 39.2	-1.4
PUZ				SN	Sn	20 42 58.7	-2.0
PUZ				SN	Sn	20 42 59.3	-1.5
URZ	**Urewera**	**1.82**	**194**	P*	Pb	20 42 42.8	-3.3
URZ				S*	Sb	20 43 04.1	-4.6
MWZ	**Matawai**	**1.85**	**184**	P*	Pb	20 42 42.5	-4.0
MWZ				S*	Sb	20 43 03.1	-6.3
MWZ				S*	Sb	20 43 03.2	-6.1
KNZ	**Kokohu**	**2.53**	**180**	PN	Pn	20 42 49.8	-3.4
KNZ				eSN	Sn	20 43 16.1	-7.1

MAN 02 20:55:14.4, 13.54N×120.58E, h76^{km}, mb3.5, ML2.2, MS1.6, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.38**	**301**	eP	P	20 55 28.7	+1.8
LUBP				eS	S	20 55 39.1	+2.9
SJMP	**San Jose**	**1.19**	**154**	eP	P	20 55 36.6	+0.6
SJMP				eS	S	20 55 53.1	+1.0
BUSP	**Coron**	**1.57**	**194**	eP	P	20 55 41.2	+0.2
ENPP	**El Nido**	**2.58**	**206**	eP	P	20 55 55.2	+0.2

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*NNC **02** 20:55:50.4±40.0, 39.13N×80.65E, mpv3.8, Error ellipse: s-maj=1007.3km s-min=315.5km az=28.0*

ISC 02 20:55:49.1±3.0, 36.7N±0.1×72.3E±0.4, h151^{km}±44^{km}, n17, σ0^{s}77/17, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.50**	**11**	P	**P**	**20 57 09.1**	**-0.8**
	SNR=27						
UCH	**Uchtor**	**5.75**	**17**	P	**P**	**20 57 13.6**	**+0.3**
	SNR=9.7						
KZA	**Kyzart**	**5.81**	**22**	P	**P**	**20 57 15.3**	**+1.2**
	SNR=8.9						
EKS2	**Erkin-Say**	**6.03**	**10**	P	**P**	**20 57 16.1**	**-1.0**
	SNR=15						
AAK	**Ala-Archa**	**6.13**	**15**	⇑P	**P**	**20 57 18.3**	**-0.2**
	5.7nm,0.5s						
AAK				⇑S	**S**	**20 58 27.1**	**-0.8**
	15nm,0.5s						
AAK	**Ala-Archa**	**6.13**	**15**	P	**P**	**20 57 18.8**	**+0.3**
	SNR=12						
CHMS	**Chumysh**	**6.54**	**16**	P	**P**	**20 57 23.6**	**-0.2**
	SNR=12						
TKM2	**Tokmak 2**	**6.68**	**21**	P	**P**	**20 57 28.0**	**+2.1**
	SNR=7.5						
USP	**Ospenovka**	**6.74**	**14**	P	**P**	**20 57 26.5**	**-0.2**
	SNR=8.4						
SMLA	**Simla**	**6.90**	**143**	⇑iP	Px	20 57 41.1	
SMLA				i S	Sx	20 58 56.6	
	1µm,0.3s						
KOLN	**Koldanda**	**13.08**	**130**	eP	**P**	**20 58 49.5**	**-0.6**
	4.4nm,0.3s						
GKN	**Gorkha**	**13.58**	**126**	eP	**P**	**20 58 56.3**	**-0.1**
	8.5nm,0.3s						
KKN	**Kakani**	**14.14**	**125**	eP	**P**	**20 59 03.3**	**-0.2**
	7.4nm,0.5s						
DMN	**Daman**	**14.15**	**126**	eP	**P**	**20 59 03.6**	**0.0**
	7.3nm,0.4s						
PKI	**Pulchoki**	**14.37**	**126**	eP	**P**	**20 59 07.4**	**+0.9**
	4.2nm,0.2s						
JIRN	**Jiri**	**14.83**	**124**	eP	**P**	**20 59 11.7**	**-0.5**
	13nm,0.4s						
BVA0	**Borovoye Array**	**16.35**	**356**	P	**P**	**20 59 31.1**	**+0.2**
	0.8nm,1.8s,baz=164,slow=11,SNR=9.8						

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*TEH **02** 21:31:04.9, 38.17N×42.41E, h10^{km}, Mn3.6*
*ISK **02** 21:31:13.0, 37.82N×43.90E, h4^{km}, MD4.1*
*CSEM **02** 21:31:17.4±0.2, 37.95N×43.68E, h20^{km}, MD4.1, Error ellipse: s-maj=4.7km s-min=3.6km az=49.0*

ISC 02 21:31:15.1±0.5, 37.83N±0.03×43.76E±0.06, h4^{km}, n24, σ1^{s}02/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.25**	**184**	i PG	**Pg**	**21 31 19.0**	**-1.2**
VANT	**Van**	**0.68**	**334**	PG	**Pg**	**21 31 29.2**	**+0.4**
VANB	**Van**	**0.82**	**339**	i PG	**Pg**	**21 31 29.7**	**-1.8**
VANB				i SG	**Sg**	**21 31 42.7**	**+0.2**
MSL	**Mosul**	**1.63**	**200**	i Pn	**Pn**	**21 31 46.5**	**+1.7**
MSL				i Pg	**Pg**	**21 31 48.5**	**+0.9**
MSL				i Sb	**Sb**	**21 32 06.5**	**+0.3**
MSL				i Sg	**Sg**	**21 32 07.5**	**-1.8**
BTMT	**Batman**	**1.83**	**282**	PN	**Pn**	**21 31 48.6**	**+0.9**
VRT	**Varto**	**2.18**	**307**	ePN	**Pn**	**21 31 52.9**	**+0.2**
GNI	**Garni**	**2.44**	**18**	ePN	**Pn**	**21 31 54.5**	**-1.9**
BINT	**Bingol**	**2.78**	**293**	ePN	**Pn**	**21 32 01.2**	**0.0**
EZM	**Erzurum**	**2.79**	**319**	ePN	**Pn**	**21 32 01.5**	**0.0**
DIY	**Diyarbakir**	**2.80**	**272**	ePN	**Pn**	**21 32 00.7**	**-0.8**
PTK	**Pertek**	**3.60**	**289**	ePN	**Pn**	**21 32 12.9**	**0.0**
EZC	**Erzincan**	**3.63**	**303**	ePN	**Pn**	**21 32 18.3**	**+5.0**
IDHR	**Dehrash**	**3.77**	**145**	Pn	**Pn**	**21 32 15.3**	**-0.1**
URFA	**Urfa**	**3.94**	**266**	ePN	**Pn**	**21 32 18.4**	**+0.6**
IVIS	**Veys**	**4.14**	**142**	Pn	**Pn**	**21 32 18.4**	**-2.1**
IGHG	**Ghaleghazi**	**4.17**	**146**	Pn	**Pn**	**21 32 21.0**	**+0.1**
MALT	**Malatya**	**4.24**	**278**	ePN	**Pn**	**21 32 22.8**	**+0.8**
MYA	**Malataya**	**4.24**	**278**	ePN	**Pn**	**21 32 21.8**	**-0.2**
GUMT	**Gumushane**	**4.24**	**310**	ePN	**Pn**	**21 32 21.9**	**-0.1**
BHD	**Baghdad**	**4.58**	**174**	ePn	**Pn**	**21 32 43.0**	**+16**
BHD				eSn	**Sn**	**21 33 34.0**	**+13**
BHD				eSg	**Sg**	**21 33 58.0**	**+11**
GAZ	**Gaziantep**	**5.25**	**265**	ePN	**Pn**	**21 32 36.5**	**+0.2**
IGZV	**Gazvin**	**5.36**	**104**	Pn	**Pn**	**21 32 39.7**	**+1.9**
IRAZ	**Razeghan**	**5.52**	**114**	Lg		21 34 31.8	
IRAZ	**Razeghan**	**5.52**	**114**	Pn	**Pn**	**21 32 41.1**	**+1.0**

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*CSEM **02** 21:50:15.5±0.3, 37.80N×44.01E, h10^{km}, MD3.9, Error ellipse: s-maj=6.8km s-min=3.4km az=109.0*

ISK 02 21:50:17.1, 37.80N×43.85E, h7^{km}, MD3.9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.24**	**201**	i PG	Pg	21 50 22.4	+0.3
VANT	**Van**	**0.74**	**331**	i PG	Pg	21 50 33.0	+1.2
VANB	**Van**	**0.87**	**336**	i PG	Pg	21 50 33.2	-1.3
VANB				i SG	Sg	21 50 46.6	+0.5
MSL	**Mosul**	**1.63**	**202**	i Pn	Pn	21 50 50.0	+3.6
MSL				i Sb	Sb	21 51 10.0	+2.3
MSL				i Sg	Sg	21 51 11.0	-0.3
BTMT	**Batman**	**1.90**	**283**	PN	Pn	21 50 52.0	+1.7
VRT	**Varto**	**2.25**	**307**	PN	Pn	21 50 56.3	+1.0
GNI	**Garni**	**2.44**	**16**	PN	Pn	21 50 58.5	+0.4
BINT	**Bingol**	**2.85**	**293**	ePN	Pn	21 51 04.5	+0.6
EZM	**Erzurum**	**2.86**	**318**	ePN	Pn	21 51 04.7	+0.7
DIY	**Diyarbakir**	**2.87**	**273**	ePN	Pn	21 51 04.6	+0.5
PTK	**Pertek**	**3.67**	**289**	ePN	Pn	21 51 16.5	+1.0
EZC	**Erzincan**	**3.70**	**303**	ePN	Pn	21 51 21.0	+5.0
URFA	**Urfa**	**4.01**	**266**	ePN	Pn	21 51 20.4	+0.1
MALT	**Malatya**	**4.31**	**278**	ePN	Pn	21 51 25.2	+0.6
GUMT	**Gumushane**	**4.31**	**309**	ePN	Pn	21 51 25.8	+1.2
MYA	**Malataya**	**4.31**	**279**	ePN	Pn	21 51 24.8	+0.2
BHD	**Baghdad**	**4.54**	**174**	ePn	Pn	21 51 48.0	+20
BHD				eSn	Sn	21 52 41.0	+19
BHD				eSg	Sg	21 53 02.0	+14
GAZ	**Gaziantep**	**5.32**	**265**	ePN	Pn	21 51 39.3	+0.5

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*THR **02** 23:26:50.0±0.7, 37.77N×43.37E, h14^{km}±9^{km}, ML4.1*
*ISK **02** 23:26:52.4, 37.71N×43.63E, h6^{km}, MD4.3, ML4.5*
*TIF **02** 23:26:52.3, 37.73N×43.61E, h15^{km}±4^{km}*
*MOS **02** 23:26:53.4±1.0, 37.77N×43.73E, h10^{km}, mb4.6/20, Error ellipse: s-maj=11.3km s-min=4.4km az=132.0*
*NEIC **02** 23:26:54.0±0.8, 37.72N×43.85E, h10^{km}, mb4.5/21, Error ellipse: s-maj=11.6km s-min=6.6km az=136.0*
*ZUR_RM **02** 23:26:54, 37.72N×43.85E, h24^{km}, Mw4.6/10, Moment Tensor Solution. s10 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.42; M$_{\theta\theta}$-0.60; M$_{\phi\phi}$1.02; M$_{r\theta}$-0.18; M$_{\theta\phi}$-0.03; M$_{\phi r}$-0.03; Best double couple: M$_0$.87×10^{16} NP1:ϕ_s39°, δ69°, λ-24°. NP2:ϕ_s138°, δ67°, λ-157°. Principal axes: T 1.027, Plg1°, Azm89°; N -.313, Plg58°, Azm181°; P -.714, Plg32°, Azm358°;*
*CSEM **02** 23:26:57.7, 37.79N×43.15E, h10^{km}, mb4.7*

ISC 02 23:26:52.7±0.3, 37.71N±0.02×43.78E±0.03, h10^{km}, n176, σ1^{s}21/194, mb4.4/21, 9C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.13**	**194**	i PG	**Pg**	**23 26 56.0**	**+0.1**
HKR	**Hakkari**	**0.13**	**194**	Pg	**Pg**	**23 26 55.9**	**0.0**
VANT	**Van**	**0.80**	**337**	i PG	**Pg**	**23 27 06.8**	**-2.0**
MSL	**Mosul**	**1.52**	**202**	i Pn	**Pn**	**23 27 24.0**	**+3.9**
MSL				i Pg	**Pg**	**23 27 26.0**	**+2.9**
MSL				i Sb	**Sb**	**23 27 44.0**	**+4.3**
MSL				i Sg	**Sg**	**23 27 45.0**	**+1.7**
MAKU	**Maku**	**1.79**	**23**	ePG	**Pg**	**23 27 24.3**	**-4.2**
MAKU				AML	AML	23 27 52.5	
	comp=E,1µm,0.7s						
MAKU				AML	AML	23 27 56.0	
	comp=N,1µm,0.6s						
BTMT	**Batman**	**1.88**	**286**	PN	**Pn**	**23 27 25.3**	**+0.1**
BTMT				SN	**Sn**	**23 27 51.2**	**+2.1**
VRT	**Varto**	**2.27**	**309**	i PN	**Pn**	**23 27 30.7**	**-0.2**
VRT	**Varto**	**2.27**	**309**	Pn	**Pn**	**23 27 30.6**	**-0.3**
VNNZ	**Vanand**	**2.39**	**1**	⇓iP	**Pn**	**23 27 31.6**	**-1.0**
AKSZ	**Araks**	**2.48**	**2**	⇓iP	**Pn**	**23 27 32.6**	**-1.3**
PAAR	**P'arak'ar**	**2.50**	**11**	⇓iP	**Pn**	**23 27 32.7**	**-1.5**
PAAR				i S	**Sn**	**23 28 04.0**	**-1.0**
GNI	**Garni**	**2.55**	**17**	PN	**Pn**	**23 27 35.7**	**+0.8**
GNI	**Garni**	**2.55**	**17**	d iP	**Pn**	**23 27 38.7**	**+3.8**
GNI	**Garni**	**2.55**	**17**	⇓iP	**Pn**	**23 27 38.8**	**+3.9**
ARUZ	**Aruch**	**2.58**	**5**	⇓iP	**Pn**	**23 27 34.0**	**-1.4**
ARUZ				i S	**Sn**	**23 28 07.6**	**+0.5**
ARUZ				eSS	SS	23 28 12.9	-5.7
AMBZ	**Amberd**	**2.70**	**8**	⇓iP	**Pn**	**23 27 35.9**	**-1.2**
AMBZ				i S	**Sn**	**23 28 12.9**	**+2.7**
DIY	**Diyarbakir**	**2.82**	**275**	PN	**Pn**	**23 27 37.3**	**-1.4**
BINT	**Bingol**	**2.84**	**295**	PN	**Pn**	**23 27 38.5**	**-0.5**
EZM	**Erzurum**	**2.90**	**320**	PN	**Pn**	**23 27 39.8**	**0.0**
LEN	**Leninakan**	**3.06**	**1**	eP	**Pn**	**23 27 50.0**	**+7.9**
LEN				eS	**Sn**	**23 28 27.0**	**+7.9**
GRMI	**Germi**	**3.42**	**70**	ePN	**Pn**	**23 27 49.1**	**+1.8**
PTK	**Pertek**	**3.65**	**290**	PN	**Pn**	**23 27 49.4**	**-1.1**
EZC	**Erzincan**	**3.71**	**305**	ePN	**Pn**	**23 27 55.8**	**+4.4**
EZC	**Erzincan**	**3.71**	**305**	P	**Pn**	**23 27 55.7**	**+4.3**
SNGE	**Sanandaj**	**3.88**	**131**	ePN	**Pn**	**23 27 55.8**	**+2.0**
SNGE				eSG	**Sg**	**23 28 59.4**	**-2.6**
SNGE				AML	AML	23 29 18.3	
	comp=N,284nm,0.7s						
SNGE				AML	AML	23 29 19.1	
	comp=E,338nm,0.7s						
SNGE	**Sanandaj**	**3.88**	**131**	ePn	**Pn**	**23 27 55.8**	**+2.0**
	SNR=52						
SNGE				eSg	**Sg**	**23 28 59.4**	**-2.6**
	comp=E,338nm,0.7s,SNR=90						

URFA	Urfa	3.95	268	ePN	Pn	23 27 53.9	-0.8
MTA	Mtatsminda	4.06	11	P	Pn	23 27 57.5	+1.2
MTA				S	Sg	23 29 01.2	-6.6
TI2	Plekhanov	4.09	10	i P	Pn	23 27 57.4	+0.6
MALT	Malatya	4.27	280	ePN	Pn	23 27 57.5	-1.8
MYA	Malataya	4.27	280	ePN	Pn	23 27 57.7	-1.7
MYA	Malataya	4.27	280	P	Pn	23 27 57.6	-1.8
GUMT	Gumushane	4.33	311	ePN	Pn	23 27 59.9	-0.3
DUS	Dusheti	4.43	9	P	Pn	23 28 03.7	+2.0
BHD	Baghdad	4.45	174	ePn	Pn	23 28 11.5	+10
BHD				ePb	Pb	23 28 20.5	+10
BHD				eSn	Sn	23 29 04.0	+10
BHD				eSb	Sb	23 29 16.0	+11
BHD				i Sg	Sg	23 29 26.5	+5.5
ONI	Oni	4.88	357	P	Pn	23 28 14.7	+6.8
ONI				S	Sg	23 29 34.7	-0.4
GAZ	Gaziantep	5.25	266	ePN	Pn	23 28 12.6	-0.7
GAZ	Gaziantep	5.25	266	Pn	Pn	23 28 12.5	-0.8
KIV	Kislovodsk	6.30	353	i P	Pn	23 28 28.0	0.0
KIV				pmax	pmax		
	comp=Z,33nm,1.7s						
KIV				MLR	MLR		
	comp=Z,500nm,14.0s						
HTY	Hatay	6.33	258	ePN	Pn	23 28 28.4	+0.1
BNN	Bunyan	6.35	283	ePN	Pn	23 28 28.0	-0.7
BNN	Bunyan	6.35	283	Pn	Pn	23 28 27.9	-0.8
CEYT	Ceyhan	6.44	266	ePN	Pn	23 28 28.4	-1.5
SOC	Sochi	6.63	334	eP	Pn	23 28 32.3	-0.4
SOC				e		23 29 44.5	
SOC				pmax	pmax		
	comp=N,27nm,1.2s						
SOC				pmax	pmax		
	comp=Z,31nm,1.2s						
SOC				pmax	pmax		
	comp=E,9.0nm,1.3s						
SOC				MLR	MLR		
	comp=Z,376nm,15.0s						
SOC				MLR	MLR		
	comp=N,583nm,16.0s						
SOC				MLR	MLR		
	comp=E,298nm,14.0s						
SOC	Sochi	6.63	334	eP	Pn	23 28 32.7	0.0
DAMV	Damavand	6.90	105	ePN	Pn	23 28 37.7	+1.2
SHGR	Shooshtar-Gavs	6.94	142	ePN	Pn	23 28 36.4	-0.7
HWQ	Hawqa	7.21	244	ePN	Pn	23 28 39.9	-1.0
NIG	Nigde	7.26	276	ePN	Pn	23 28 40.6	-0.9
GOF	Gofitskoye	7.37	356	⇓iP	Pn	23 28 46.0	+3.0
GOF				pmax	pmax		
	comp=Z,56nm,1.4s						
CORM	Corum	7.55	292	ePN	Pn	23 28 44.1	-1.4
BHL	Bhannes	7.61	243	ePN	Pn	23 28 45.6	-0.8
KAMT	Kaman	8.06	285	ePN	P	23 28 51.2	-1.5
MATL	Matirih	8.07	241	ePN	P	23 28 46.0	-6.7
NASN	Na'in	8.86	121	ePN	P	23 29 04.9	+1.2
SIM	Simferopol'	10.25	318	eP	P	23 29 20.0	-2.9
SIM				eS	S	23 31 10.0	-9.0
ISP	Isparta	10.51	275	i P	P	23 29 21.2	-5.3
APE	Apeiranthos	14.53	273	i P	P	23 30 16.3	-4.0
BANOM	Banah	15.83	134	⇑P	P	23 30 33.8	-3.5
	SNR=5.8						
KMPD	K-Podol'skiy	16.62	316	P	P	23 30 47.0	-0.2
KIEV	Kiev	16.62	326	P	P	23 30 47.0	-0.3
ASHO	Ashiyiah	16.68	138	⇑P	P	23 30 44.5	-3.6
	SNR=12						
ARQ	Araqi	18.02	139	⇑P	P	23 31 01.0	-4.0
	SNR=8.0						
OBN	Obninsk	18.09	347	eP	P	23 31 04.4	-1.2
MOS	Moscow	18.51	349	eP	P	23 31 15.3	+4.5
MOS				pmax	pmax		
	comp=Z,37nm,1.1s						
BSY	Bisya	18.86	138	⇓P	P	23 31 11.2	-4.0
	SNR=10						
BSYO	Bisya	18.89	138	P	P	23 31 11.2	-4.4
	SNR=10						
BSYO	Bisya	18.89	138	P	P	23 31 11.2	-4.4
	SNR=10						
DIVS	Divcibare	19.05	297	⇓i(P)	P	23 31 17.6	+0.2
SMDO	Samad	19.06	136	⇓P	P	23 31 14.9	-2.8
	SNR=16						
KOLS	Kolonicke sedl	19.19	313	eP	P	23 31 20.4	+1.4
KOLS				e		23 32 44.2	
KWP	Kalwaria	19.28	315	eP	P	23 31 19.1	-0.9
JMDO	Jabal Madar	19.64	137	⇑P	P	23 31 21.7	-2.7
	SNR=7.6						
CRVS	Cervenica-Dubn	19.65	312	eP	P	23 31 25.0	+0.7
PSZ	Piszkesteto	20.20	308	P	P	23 31 29.6	-0.7
PKSM	Moragy	20.47	302	P	P	23 31 32.0	-1.1
NIE	Niedzica	20.55	312	eP	P	23 31 31.3	-2.6
VYHS	Vyhne	21.07	309	i P	P	23 31 38.1	-1.2
VYHS	Vyhne	21.07	309	P	P	23 31 38.9	-0.4
ARU	Arti	21.18	23	⇓iP	P	23 31 31.2	-9.1
ARU				eSS	S	23 35 36.2	+5.3
ARU				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.3						
OJC	Ojcow	21.21	314	eP	P	23 31 38.3	-2.4
WHFO	Wadi Hawf	21.57	153	⇑P	P	23 31 42.2	-2.4
	SNR=29						
SUW	Suwalki	21.59	326	eP	P	23 31 45.1	+0.6
JAVC	Velka Javorina	21.93	309	P	P	23 31 50.4	+2.5
ABTO	Aybut	21.93	155	⇑P	P	23 31 45.7	-2.5
	SNR=16						
OKC	Ostrava-Krasne	22.01	312	eP	P	23 31 52.8	+4.1
RBK	Rabkut	22.11	153	⇑P	P	23 31 47.7	-2.3
	SNR=18						
KOGS	Kog	22.14	302	ePn	P	23 31 51.6	+1.6
SVE	Sverdlovsk	22.17	25	eP	P	23 31 51.0	+0.7
MORC	Moravsky Berou	22.34	311	P	P	23 31 53.8	+1.8
MORC	Moravsky Berou	22.34	311	eP	P	23 31 52.2	+0.1
BOJS	Bojanci	22.62	299	i Pn	P	23 31 56.2	+1.4
VRAC	Vranov	22.75	309	P	P	23 31 57.3	+1.3
VRAC	Vranov	22.75	309	eP	P	23 31 56.7	+0.7
KRUC	Moravsky	22.78	309	P	P	23 31 57.2	+0.9
ARSA	Arzberg	22.81	304	P	P	23 31 57.8	+1.2
PERS	Pernice	22.94	302	ePn	P	23 31 59.2	+1.3
DPC	Dobruska-Polom	23.29	312	eP	P	23 32 00.0	-1.3
DPC	Dobruska-Polom	23.29	312	P	P	23 32 02.1	+0.8
UPC	Upice	23.53	312	eP	P	23 32 02.7	-0.9
VOY	Vojsko	23.65	300	ePn	P	23 32 04.7	-0.1
VOY				e		23 32 11.2	
MOA	Molln	23.79	305	P	P	23 32 06.3	+0.2
AAK	Ala-Archa	23.91	68	P	P	23 32 07.0	-0.3
AAK				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.2						
AAK	Ala-Archa	23.91	68	P	P	23 32 07.0	-0.4
	comp=Z,13nm,1.4s,mb4.2						
AAK	Ala-Archa	23.91	68	P	P	23 32 07.0	-0.3
	comp=Z,13nm,1.4s,mb4.2						
ROBS	Robic	23.95	300	ePn	P	23 32 08.4	+0.6
FRU	Bishkek	24.00	68	eP	P	23 32 15.0	+6.7
PTCC	Patocco-Chiusa	24.09	301	eP	P	23 32 09.8	+0.8
PTCC	Patocco-Chiusa	24.09	301	eP	P	23 32 09.8	+0.7
KBA	Koelnbreinsper	24.22	302	P	P	23 32 11.4	+1.0
PRU	Pruhonice	24.23	310	eP	P	23 32 10.6	+0.2
PRU	Pruhonice	24.23	310	P	P	23 32 12.5	+2.1
PVCC	Panska Ves	24.40	311	eP	P	23 32 11.9	-0.1
CHKZ	Chkalovo	24.41	41	eP	P	23 32 11.7	-0.5
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
CHKZ	Chkalovo	24.41	41	eP	P	23 32 11.7	-0.5
	comp=Z,3.1nm,0.7s,mb3.9						
CHKZ	Chkalovo	24.41	41	eP	P	23 32 11.6	-0.6
	comp=Z,3.1nm,0.7s,mb3.9						
KHC	Kasperske Hory	24.57	307	eP	P	23 32 13.7	0.0
KHC				e		23 32 17.0	
KHC	Kasperske Hory	24.57	307	⇑iP	P	23 32 14.3	+0.6
KHC	Kasperske Hory	24.57	307	eP	P	23 32 13.7	0.0
KHC				pP		23 32 17.0	
BRG	Berggiesshubel	24.89	311	i P	P	23 32 15.5	-1.3
BRG				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.2						
BRG	Berggiesshubel	24.89	311	i P	P	23 32 15.5	-1.3
	comp=Z,13nm,1.5s,mb4.2						
WET	Wettzell	25.01	307	P	P	23 32 17.1	-0.9
CTI	Castel Tesino	25.20	300	eP	P	23 32 20.2	+0.4
NKC	Novy Kostel	25.59	309	P	P	23 32 25.0	+1.6
NKC	Novy Kostel	25.59	309	eP	P	23 32 22.3	-1.1
CLL	Collm	25.60	312	i P	P	23 32 22.0	-1.5
CLL				i		23 32 29.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.2						
CLL	Collm	25.60	312	i P	P	23 32 22.0	-1.5
	comp=Z,10.0nm,1.2s,mb4.2						
CLL				i		23 32 29.0	
CLL	Collm	25.60	312	P	P	23 32 22.0	-1.5
	comp=Z,logA/T=0.9,mb4.2						
CLL				i		23 32 29.0	
BRMO	Bormio	26.14	300	eP	P	23 32 29.5	+1.0
BRMO	Bormio	26.14	300	eP	P	23 32 29.5	+1.0
GRA1	Grafenberg Arr	26.20	308	eP	P	23 32 28.3	-0.8
	comp=Z,13nm,1.0s,mb4.4						
GRF	Grafenberg Arr	26.20	308	eP	P	23 32 28.3	-0.8
GRF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
GRF	Grafenberg Arr	26.20	308	eP	P	23 32 28.3	-0.8
GRF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
GRF	Grafenberg Arr	26.20	308	eP	P	23 32 28.3	-0.8
	comp=Z,13nm,1.0s,mb4.4						
MOX	Moxa	26.22	310	eP	P	23 32 30.0	+0.8
PGF	Pioggiola	26.91	291	eP	P	23 32 37.4	+1.7
	comp=Z,21nm,0.8s,mb4.4						
PGF	Pioggiola	26.91	291	eP	P	23 32 37.4	+1.7
PGF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.4						
KURK	Kurchatov	27.88	51	⇑iP	P	23 32 50.0	+5.6
SBF	Sospel	28.04	294	eP	P	23 32 46.9	+1.0
	comp=Z,34nm,1.0s,mb4.6						
SBF	Sospel	28.04	294	eP	P	23 32 46.9	+1.0
SBF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
MBDF	Montbardon	28.52	296	eP	P	23 32 51.3	+1.0
	comp=Z,7.0nm,0.8s,mb4.2						
MBDF	Montbardon	28.52	296	eP	P	23 32 51.3	+1.0
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LPG	La Plagne	28.56	298	eP	P	23 32 51.6	+1.0
	comp=Z,9.5nm,0.9s,mb4.2						
LPG	La Plagne	28.56	298	eP	P	23 32 51.6	+1.0
LPG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
LPL	La Plagne	28.58	298	eP	P	23 32 51.6	+0.8
	comp=Z,5.6nm,0.6s,mb4.2						
LPL	La Plagne	28.58	298	eP	P	23 32 51.6	+0.8
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
FRF	La Foret Royal	28.61	294	eP	P	23 32 51.9	+0.8
	comp=Z,70nm,1.5s,mb4.9						
FRF	La Foret Royal	28.61	294	eP	P	23 32 51.9	+0.8
FRF				pmax	pmax		
	comp=Z,35nm,1.5s,mb4.9						
HINF	Hinteralfeld	28.69	302	eP	P	23 32 51.3	-0.4
CABF	La Chapelle	29.09	300	eP	P	23 32 55.6	+0.2
	comp=Z,14nm,0.8s,mb4.4						
CABF	La Chapelle	29.09	300	eP	P	23 32 55.6	+0.2
CABF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
MEZF	Maizieres J'vi	29.97	304	eP	P	23 33 05.2	+2.0
VIVF	Saint-Julien-l	30.02	296	eP	P	23 33 04.3	+0.6
SMF	Signal de Mont	30.64	300	eP	P	23 33 09.0	-0.2
	comp=Z,19nm,1.0s,mb4.6						
SMF	Signal de Mont	30.64	300	eP	P	23 33 09.0	-0.2
SMF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
BAIF	Baives	30.72	306	eP	P	23 33 09.4	-0.4
	comp=Z,5.2nm,0.7s,mb4.2						
BAIF	Baives	30.72	306	eP	P	23 33 09.4	-0.4
BAIF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
SSF	Saint Saulge	30.89	301	eP	P	23 33 11.3	-0.1
SSF				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
SSF	Saint Saulge	30.89	301	eP	P	23 33 11.3	-0.1
	comp=Z,5.2nm,1.1s,mb4.3						
AVF	Avril sur Loir	30.98	300	eP	P	23 33 11.8	-0.4
	comp=Z,12nm,0.9s,mb4.4						
AVF	Avril sur Loir	30.98	300	eP	P	23 33 11.8	-0.4
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
BGF	Bois d'Agland	31.32	300	eP	P	23 33 15.5	+0.3
	comp=Z,9.4nm,0.8s,mb4.3						
BGF	Bois d'Agland	31.32	300	eP	P	23 33 15.5	+0.3
BGF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	31.76	299	eP	P	23 33 19.0	0.0
RJF	Les Rejaudoux	32.25	297	eP	P	23 33 24.0	+0.7
LFF	La Frestale	32.81	297	eP	P	23 33 28.7	+0.5
	comp=Z,17nm,0.9s,mb4.7						
LFF	La Frestale	32.81	297	eP	P	23 33 28.7	+0.5
LFF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MFF	Saint Martin d	33.38	300	eP	P	23 33 33.2	0.0
FLN	La Foliniere	33.65	304	eP	P	23 33 36.9	+1.5
GRR	Gorron	33.88	303	eP	P	23 33 38.4	+0.9
SJPF	Ste Jean	34.37	293	eP	P	23 33 42.0	+0.2
SGMF	Saint Gilles	35.01	303	eP	P	23 33 47.8	+0.6
	comp=Z,53nm,1.1s,mb5.1						
SGMF	Saint Gilles	35.01	303	eP	P	23 33 47.8	+0.6
SGMF				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
QUIF	Quistinic	35.42	302	eP	P	23 33 51.7	+1.0
	comp=Z,17nm,0.9s,mb4.7						
QUIF	Quistinic	35.42	302	eP	P	23 33 51.7	+1.0
QUIF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
ROSF	Rostrenen	35.49	303	eP	P	23 33 52.3	+1.0

IGQ 02 23:40:48.5, 1.43S×81.18W, h28^{km}±2^{km}, mb4.4, 3C, Error ellipse: s-maj=10.0km s-min=2.1km az=13.8, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.74	60	⇑P	Pb	23 41 02.5	-0.2
SALI	Salinas	0.78	166	⇑P	Pb	23 41 03.5	+0.1
SALI				S	Sb	23 41 13.0	-0.6
IGUA	Igualata	2.54	91	⇑P	Pn	23 41 29.9	+1.0
CUSU	Cusua	2.70	90	P	Pn	23 41 33.3	+2.2
JUIV	Juive	2.72	90	P	Pn	23 41 33.1	+1.8
ARRY	Arrayan	2.73	92	P	Pn	23 41 31.9	+0.4
RETU	Refugio	2.74	91	P	Pn	23 41 34.2	+2.6
NAS1	Nasa	2.82	74	P	Pn	23 41 37.1	+4.4
PISA	Pisayambo	2.82	83	P	Pn	23 41 35.1	+2.3
TERV	Terraza Guagua	2.86	64	P	Pn	23 41 35.4	+2.0
TERV				S	Sn	23 42 14.6	+7.3
PINO	Pino	2.87	64	P	Pn	23 41 34.6	+1.1
VC1	Cotopaxi 1	2.89	74	P	Pn	23 41 38.4	+4.7
VC1				S	Sn	23 42 18.6	+11
TAMB	Tambo	2.91	76	P	Pn	23 41 38.8	+4.8
YANA	Yana	2.92	64	P	Pn	23 41 35.2	+1.1
ANTI	Antisana	3.17	72	P	Pn	23 41 41.4	+3.6
CAYR	Refugio Cayamb	3.48	66	P	Pn	23 41 46.9	+4.7
CONE	Cono NE Rev Vo	3.79	69	P	Pn	23 41 52.3	+5.8

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*CNRM **02** 23:43:14.9, 35.10N×2.67W, h13^{km}, MD3.1*
*MDD **02** 23:43:17.2±0.7, 34.95N×2.84W, h6^{km}±5^{km}, mbLg2.1/5, Error ellipse: s-maj=6.3km s-min=4.6km az=10.0, PRXIMO*
*NEIC **02** 23:43:18.3, 35.00N×3.06W, h3^{km}, MG3.1(MDD), After MDD.*
*CSEM **02** 23:43:18.6±0.2, 35.15N×3.13W, h10^{km}, MD3.1, Error ellipse: s-maj=4.7km s-min=2.8km az=140.0*
ISC 02 23:43:16.2±1.1**, 34.96N**±0.05×**2.82W**±0.05**, h13**^{km}±6^{km}**, n24, σ1^{s}17**/40**, 1C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	0.06	80	P	Pb	23 43 18.0	-0.8
ZAI				S	Sb	23 43 21.0	+0.5
EMLI	Melilla	0.36	343	P	Pg	23 43 24.1	+0.5
	18nm,0.1s,SNR=18						
EMEL	Melilla	0.36	342	⇑P	Pg	23 43 24.1	+0.4
	18nm,0.1s,SNR=18						
EMEL				S	Sg	23 43 27.9	-0.7
	151nm,0.1s,SNR=9.8						
TOU	Touzarine	0.77	270	i P	Pb	23 43 30.5	-0.4
TOU				i S	Sb	23 43 43.0	+2.0
MPAL	Palemas	0.96	286	P	Pb	23 43 42.0	+7.9
MPAL				S	Sb	23 44 00.5	+14
EALB	Alboran	0.99	350	P	Pb	23 43 35.7	+0.9
	2.6nm,0.1s,SNR=7.9						
EALB				S	Sb	23 43 49.0	+1.5
	20nm,0.3s,SNR=7.9						
EALB	Alboran	0.99	350	P	Pb	23 43 35.7	+0.9
	2.6nm,0.1s,SNR=7.9						
EALB				S	Sb	23 43 49.0	+1.4
	20nm,0.3s,SNR=7.9						
EBER	Berja	1.94	358	P	Pn	23 43 49.7	+0.5
	3.9nm,0.6s,SNR=7.2						
EBER				S	Sn	23 44 11.4	-2.1
	14nm,0.5s,SNR=7.9						
EBER	Berja	1.94	358	P	Pn	23 43 49.7	+0.5
	3.9nm,0.6s,SNR=7.2						
EBER				S	Sn	23 44 11.4	-2.2
	SNR=7.9						
EMIJ	Mijas	2.26	316	P	Pn	23 43 52.3	-1.5
	0.7nm,0.1s,SNR=6.1						
EMIJ				S	Sn	23 44 17.3	-4.4
	0.9nm,0.2s,SNR=7.9						
EQES	Quesada	2.84	356	P	Pn	23 44 03.7	+1.5
EQES				S	Sn	23 44 38.0	+1.4
EQES	Quesada	2.84	356	P	Pn	23 44 03.7	+1.5
	2.2nm,0.3s,SNR=16						
EQES				S	Sn	23 44 36.6	-0.1
	2.7nm,0.3s,SNR=7.5						
EQES	Quesada	2.84	356	P	Pn	23 44 03.7	+1.5
	2.2nm,0.3s,SNR=16						
EQES				S	Sn	23 44 38.0	+1.3
	2.7nm,0.3s,SNR=7.5						
EMUR	La Murta	3.15	23	P	Pn	23 44 06.9	+0.4
	3.0nm,0.3s,SNR=4.0						
EMUR	La Murta	3.15	23	P	Pn	23 44 06.9	+0.4
	3.0nm,0.3s,SNR=4.0						
EADA	Adamuz	3.50	337	P	Pn	23 44 11.7	+0.1
	1.4nm,0.4s,SNR=4.8						
EADA				S	Sn	23 44 49.5	-3.8
	1.9nm,0.4s,SNR=7.9						
EADA	Adamuz	3.50	337	P	Pn	23 44 11.6	+0.1
EADA				S	Sn	23 44 49.5	-3.7
	SNR=7.9						
EMIN	Mina Concepcio	4.18	313	P	Pn	23 44 19.5	-1.8
	1.5nm,0.9s,SNR=8.8						
EMIN	Mina Concepcio	4.18	313	P	Pn	23 44 19.5	-1.8
	1.5nm,0.9s,SNR=8.8						
ESDC	Sonseca Array	4.79	349	P	Pn	23 44 29.9	0.0
ESDC	Sonseca Array	4.79	349	P	Pn	23 44 29.9	+0.1
	0.3nm,0.3s,baz=172,slow=14,SNR=5.2						
ESDC	Sonseca Array	4.79	349	P	Pn	23 44 29.9	0.0
	0.3nm,0.3s,SNR=5.2						
EBAD	Badajoz	5.07	320	P	Pn	23 44 32.1	-1.6
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	23 45 26.0	-6.8
	0.7nm,0.3s,SNR=7.9						
EBAD	Badajoz	5.07	320	P	Pn	23 44 32.1	-1.6
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	23 45 26.0	-6.8

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*NIED **02** 23:53:00, 23.90N×121.70E, h5^{km}, Mw4.7 Best double couple: M$_0$1.15×10^{16} NP1:ϕ_s66°, δ83°, λ91°. NP2:ϕ_s235°, δ7°, λ79°.*
*JMA **02** 23:53:04.6±0.3, 23.91N×121.75E, h4^{km}, M4.7*
*NEIC **02** 23:53:06.7±1.2, 24.26N×121.68E, h10^{km}, mb4.3/5, ML4.8(TAP), Error ellipse: s-maj=27.8km s-min=15.1km az=83.0*
NEIC Recorded [4 TAP] in Hua-lien and I-lan; [2 TAP] in Nan-t'ou; [1 TAP] in T'ai-chung and T'ao-yuan Counties.
*TAP **02** 23:53:07.5, 24.25N×121.79E, h6^{km}, ML4.6*
TAP Felt IV J at Nanau, I J at Chiawan, II J at Suao, III J at Nanshan, III J at Nioudou, II J at Neicheng, II J at Hehuanshan, II J at Ilan, I J at Shilin, I J at Sanguang, I J at Tachien.
*BJI **02** 23:53:11.9, 24.72N×121.47E, h10^{km}, mB4.7, mb4.3, ML4.8, Ms4.3, Msz4.1*
ISC 02 23:53:06.3±0.4**, 24.24N**±0.01×**121.84E**±0.02**, h1**^{km}±3^{km}**, n90, σ1^{s}03**/135**, mb4.4**/6**, MS3.9**/1**, 12C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.21	335	⇑iP	Pg	23 53 11.1	+0.6
ENA				S	Sg	23 53 14.1	+0.8
TWD	Chiawan	0.27	235	⇓iP	Pg	23 53 12.2	+0.4
TWD				S	Sg	23 53 16.5	+1.1
HWA	Hwalien	0.34	220	eP	Pg	23 53 14.5	+1.5
TWC	Suao	0.37	1	⇑iP	Pg	23 53 14.4	+0.6
NNS	Nan Shan	0.47	296	⇑iP	Pg	23 53 15.7	0.0
NNS				S	Sg	23 53 21.6	-0.4
ENTT	Nioudou	0.47	328	⇑iP	Pg	23 53 16.1	+0.3
TWE	Neicheng	0.51	342	⇑iP	Pg	23 53 16.8	+0.4
TWE				S	Sg	23 53 23.1	-0.1
ILA	Ilan	0.53	351	⇑iP	Pg	23 53 17.5	+0.6
ILA				S	Sg	23 53 25.2	+1.1
WHF	Hehuan Shan	0.53	260	⇑iP	Pg	23 53 16.7	-0.3
ESL	Shilin	0.56	222	eP	Pg	23 53 17.6	0.0
TWT	Tachien	0.61	272	⇑iP	Pg	23 53 18.7	+0.3
TWT				S	Sg	23 53 26.5	0.0
NSK	Sanguang	0.62	315	⇑iP	Pg	23 53 18.7	0.0
NSK				S	Sg	23 53 26.5	-0.5
TWA	Mucha	0.78	343	P	Pg	23 53 22.0	+0.1
TWA				S	Sg	23 53 31.8	-0.4
TWB1	Santiao Chiao	0.78	10	P	Pg	23 53 21.9	0.0
TWB1				S	Sg	23 53 32.7	+0.4
TATO	Taipei	0.80	337	eP	Pg	23 53 21.8	-0.6
NWF	Wu-fen Shan	0.83	356	⇑iP	Pg	23 53 23.1	+0.2
NWF				S	Sg	23 53 33.4	-0.6
TAP1	Taipei	0.85	340	eP	Pg	23 53 23.4	+0.1
TAP1				S	Sg	23 53 34.0	-0.5
TAP	Taipei	0.85	339	eP	Pg	23 53 23.5	+0.1
TAP				S	Sg	23 53 33.4	-1.4
NSTT	Nanjuang	0.86	297	eP	Pb	23 53 23.3	-0.5
NSTT				S	Sg	23 53 34.2	-0.7
EHY	Hungye	0.87	213	eP	Pb	23 53 22.4	-1.5
SMLT	Sun Moon Lake	0.93	248	P	Pb	23 53 24.6	-0.3
SMLT				S	Sb	23 53 36.7	-0.9
NCU	National Centr	0.94	321	eP	Pb	23 53 25.6	+0.4
NCU				S	Sb	23 53 38.6	+0.7
TWS1	Kuangyinshan	0.94	336	eP	Pb	23 53 25.4	+0.2
TWS1				S	Sb	23 53 37.2	-0.8
TYC	Yuchr	0.96	250	eP	Pb	23 53 24.6	-0.8
HSN	Hsinchu	0.97	306	eP	Pb	23 53 26.0	+0.3
HSN				S	Sb	23 53 39.3	+0.4
NSY	Sanyi	1.00	280	eP	Pb	23 53 26.5	+0.3
NSY				S	Sb	23 53 39.9	+0.2
TWF1	Yuli	1.01	210	eP	Pb	23 53 25.0	-1.4
TWY	Chenhua	1.06	348	eP	Pb	23 53 27.4	+0.3
TWY				S	Sb	23 53 42.5	+1.1
TCU	Taichung	1.07	265	eP	Pb	23 53 28.0	+0.7
TCU				S	Sb	23 53 42.7	+1.1
YOJ	Yonaguni jima	1.09	78	P	Pb	23 53 28.6	+0.9
YOJ				S	Sb	23 53 46.0	+3.7
YUS	Yu-Shan	1.10	228	eP	Pb	23 53 27.8	-0.1
YUS				S	Sb	23 53 43.1	+0.5
WNT	Mingjian	1.11	252	eP	Pb	23 53 28.7	+0.6
WNT				S	Sb	23 53 45.5	+2.5
ALS	Alishan	1.19	233	eP	Pb	23 53 29.3	-0.1
ALS				S	Sb	23 53 46.2	+1.0
CHKT	Chengkung	1.21	201	eP	Pb	23 53 28.7	-1.1
CHKT				S	Sb	23 53 46.3	+0.4
ELDTW	Lidau	1.29	216	eP	Pb	23 53 29.1	-2.0
WGK	Gukeng	1.29	245	eP	Pb	23 53 30.7	-0.4
WGK				S	Sb	23 53 49.9	+1.8
PCYT	Pengchaiyu	1.40	9	eP	Pb	23 53 32.7	-0.3
PCYT				S	Sb	23 53 52.0	+0.6
CHN2	Minshiung	1.43	241	eP	Pn	23 53 33.2	-0.3
CHN4	Tsaushan	1.44	233	eP	Pn	23 53 34.1	+0.4
CHN4				S	Sb	23 53 54.3	+1.8
STYT	Tauyuan	1.46	223	⇓P	Pn	23 53 33.3	-0.6
STYT				S	Sb	23 53 53.0	+0.1
CHY	Chiayi	1.49	241	eP	Pn	23 53 34.7	+0.3
CHY				S	Sb	23 53 53.2	-0.7
WTP	Ta-pu	1.50	229	eP	Pn	23 53 34.1	-0.3
WTP				S	Sb	23 53 54.1	+0.1
TWK	Hsinying	1.57	232	eP	Pn	23 53 35.7	+0.2
TWK				S	Sb	23 53 57.6	+1.4
TWG	Pinlang	1.58	207	eP	Pn	23 53 33.2	-2.4
CHN1	Nanshi	1.59	229	eP	Pn	23 53 35.4	-0.5
CHN1				S	Sb	23 53 57.9	+1.0
WSF	Szhu	1.60	248	eP	Pn	23 53 35.4	-0.5
SGST	Jiashian	1.63	225	eP	Pn	23 53 36.7	+0.4
SGST				S	Sb	23 53 59.6	+1.8
IRIF	Iriomote-Funau	1.73	86	P	Pn	23 53 37.4	-0.4
IRIF				S	Sn	23 54 01.3	+0.5
CHN8	Yiju	1.73	240	eP	Pn	23 53 37.6	-0.3
HATJ	Hateruma jima	1.80	95	P	Pn	23 53 38.1	-0.8
HATJ				eS	Sn	23 54 02.9	+0.1
ECL	Taimali	1.82	207	eP	Pn	23 53 36.2	-2.9
SCLT	Jiali	1.84	235	eP	Pn	23 53 39.3	-0.1

SSD	**Sandimen**	**1.85**	**217**	*e*P	**Pn**	**23 53 39.1**	**-0.4**
SSD				S	**Sn**	**23 54 03.6**	**-0.4**
TWM1	**Shoushan**	**1.92**	**223**	*e*P	**Pn**	**23 53 41.5**	**+1.0**
JKRS	**Kuro-shima**	**1.98**	**90**	P	**Pn**	**23 53 41.6**	**+0.2**
JKRS				S	**Sn**	**23 54 08.1**	**+0.9**
EAST	**Anshuo**	**2.06**	**206**	*e*P	**Pn**	**23 53 40.2**	**-2.3**
JIJ	**Ishigaki jima**	**2.10**	**86**	P	**Pn**	**23 53 42.9**	**-0.3**
JIJ				S	**Sn**	**23 54 09.5**	**-0.9**
SCZT	**Fangliau**	**2.17**	**211**	*e*P	**Pn**	**23 53 43.5**	**-0.6**
PNG	**Penghu**	**2.19**	**253**	*e*P	**Pn**	**23 53 44.5**	**0.0**
LAY	**Lan-yu**	**2.20**	**187**	*e*P	**Pn**	**23 53 41.5**	**-3.1**
WDGT	**Dungji**	**2.22**	**244**	*e*P	**Pn**	**23 53 44.2**	**-0.6**
TWP	**Hsiaoliuchiu**	**2.32**	**216**	*e*P	**Pn**	**23 53 47.2**	**+0.9**
HEN	**Hengchun**	**2.44**	**205**	*e*P	**Pn**	**23 53 49.3**	**+1.3**
TWK1	**Hengchun**	**2.47**	**203**	*e*P	**Pn**	**23 53 47.4**	**-1.0**
JTJ	**Tarama**	**2.64**	**81**	P	**Pn**	**23 53 52.2**	**+1.4**
JTJ				S	**Sn**	**23 54 26.1**	**+2.1**
QZH	**Quanzhou**	**3.04**	**284**	⇑*i*P	**Pn**	**23 53 53.6**	**-2.9**
QZH				S	**Sn**	**23 54 29.4**	**-4.7**
QZH				Smax			
	comp=N,5µm,1.8s						
QZH				Smax			
	comp=E,860nm,0.8s						
QZH				LR	LR		
	comp=Z,4µm,9.4s						
KNM	**Kinmen**	**3.11**	**274**	*e*P	**Pn**	**23 53 57.0**	**-0.5**
JMJ	**Miyako jima 2**	**3.20**	**79**	*e*S	**Sn**	**23 54 39.4**	**+1.3**
SSE	**Sheshan**	**6.86**	**355**	P	**Pn**	**23 54 46.7**	**-3.9**
SSE				AMB	AMB		
	comp=Z,62nm,0.9s						
SSE				AMB	AMB		
	comp=Z,70nm,5.3s						
SSE				LR	LR		
	comp=N,1µm,11.9s						
SSE				LR	LR		
	comp=E,429nm,12.0s						
SSE				LR	LR		
	comp=Z,2µm,10.7s						
SSE	**Sheshan**	**6.86**	**355**	P	**Pn**	**23 54 46.7**	**-3.9**
	comp=Z,62nm,0.9s						
SSE				S	**Sn**	**23 56 24.0**	**+14**
NJ2	**Nanjing**	**8.22**	**342**	*e*P	**P**	**23 55 04.6**	**-5.0**
NJ2				AP		23 55 08.1	
NJ2				XP		23 55 10.2	
NJ2				S	**Sn**	**23 56 39.0**	**-5.3**
NJ2				XS		23 56 44.0	
NJ2				AMB	AMB		
	comp=Z,460nm,5.0s						
NJ2				Smax			
	comp=N,470nm,1.0s						
NJ2				Smax			
	comp=E,420nm,1.2s						
NJ2				LR	LR		
	comp=N,840nm,10.6s						
NJ2				LR	LR		
	comp=E,810nm,11.0s						
NJ2				LR	LR		
	comp=Z,990nm,10.8s						
WHN	**Wuhan**	**9.15**	**315**	*e*P	**P**	**23 55 18.0**	**-4.5**
WHN				S	**Sn**	**23 56 54.8**	**-13**
WHN				LR	LR		
	comp=N,1µm,11.1s						
WHN				LR	LR		
	comp=E,3µm,6.9s						
WHN				LR	LR		
	comp=Z,4µm,10.1s						
GYA	**Guiyang**	**13.90**	**282**	P	**P**	**23 56 24.2**	**-2.8**
GYA				S	**S**	**23 58 49.5**	**-14**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
GYA				LR	LR		
	comp=N,2µm,7.2s						
GYA				LR	LR		
	comp=E,1µm,9.0s						
GYA				LR	LR		
	comp=Z,1µm,10.8s						
KS15	**Wonju Array Si**	**14.14**	**20**	P	**P**	**23 56 27.8**	**-2.3**
XAN	**Xi'an**	**14.91**	**314**	P	**P**	**23 56 38.4**	**-1.8**
XAN				AMB	AMB		
	comp=Z,4.0nm,1.7s						
XAN				LR	LR		
	comp=N,345nm,7.8s						
XAN				LR	LR		
	comp=E,737nm,11.2s						
XAN				LR	LR		
	comp=Z,1µm,11.1s						
BJI	**Beijing**	**16.46**	**344**	*e*P	**P**	**23 57 01.6**	**+1.4**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.8s						
BJI				LR	LR		
	comp=N,518nm,14.2s						
BJI				LR	LR		
	comp=Z,250nm,15.7s						
BJI	**Beijing**	**16.46**	**344**	*e*P	**P**	**23 57 01.6**	**+1.4**
	comp=Z,8.0nm,0.8s						
CD2	**Chengdu**	**17.34**	**297**	*e*P	**P**	**23 57 12.8**	**+1.4**
LZH	**Lanzhou**	**19.50**	**311**	*e*P	**P**	**23 57 34.8**	**-2.9**
LZH				AP		23 57 42.5	
LZH				XP		23 57 46.0	
LZH				AMB	AMB		
	comp=Z,23nm,1.3s						
LZH				AMB	AMB		
	comp=Z,103nm,5.2s						
LZH				LR	LR		
	comp=N,667nm,14.7s						
LZH				LR	LR		
	comp=Z,973nm,15.4s						
CHRT	**Chiangrai**	**20.89**	**262**	⇑P	**P**	**23 57 55.0**	**+2.3**
	comp=Z,129nm,1.2s						
MDJ	**Mudanjiang**	**21.29**	**15**	P	**P**	**23 57 57.1**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,111nm,3.7s						
GTA	**Gaotai**	**23.97**	**314**	*e*P	**P**	**23 58 21.6**	**-1.6**
GTA				AP		23 58 27.4	
GTA				XP		23 58 30.8	
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.1						
GTA				AMB	AMB		
	comp=Z,102nm,4.6s						
GTA				LR	LR		
	comp=N,250nm,17.7s,MS3.9						
GTA				LR	LR		
	comp=E,245nm,16.5s,MS3.9						
GTA				LR	LR		
	comp=Z,302nm,17.9s,MS3.8						
ULN	**Ulaanbaatar**	**26.34**	**337**	*e*P	**P**	**23 58 40.9**	**-4.7**
	comp=Z,4.8nm,0.8s,mb4.2						
LSA	**Lhasa**	**27.84**	**288**	P	**P**	**23 59 00.0**	**+0.5**
TLY	**Talaya**	**30.75**	**338**	P	**P**	**23 59 19.1**	**-6.2**
	comp=Z,3.6nm,0.6s,mb4.5						
BHPL	**Bhopal**	**40.54**	**278**	*e*P	**P**	**00 00 44.4**	**-4.6**
BHPL				*e*		00 00 51.0	
	comp=Z,47nm,1.7s						
KURK	**Kurchatov**	**42.44**	**320**	*e*P	**P**	**00 00 59.2**	**-5.1**
WRAB	**Tennant Creek**	**45.56**	**163**	*e*P	**P**	**00 01 28.2**	**-1.7**
CHKZ	**Chkalovo**	**48.07**	**321**	*e*P	**P**	**00 01 44.5**	**-4.7**
	comp=Z,4.9nm,0.8s,mb4.7						
NB2	**NORSAR Subarra**	**78.46**	**332**	P	**P**	**00 05 09.2**	**-1.0**
	comp=Z,2.7nm,0.8s,mb4.4,baz=59,slow=5.6						

TAP 02 23:53:38.7,24.30N×121.79E,h15^{km}±1^{km},ML3.8, Taiwan

MOS ***02*** *23:55:41.8±2.5,7.06N×95.32E,h33^{km},mb5.1/10, MS4.3/5,Error ellipse: s-maj=32.0km s-min=10.3km az=117.5*

ISC 02 23:55:48.1±3.4,8.2N±0.1×94.33E±0.09,h23^{km}±22^{km},n71, σ1^{s}00/73,mb4.9/32,MS4.3/5,6C-3D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.32**	**99**	P	**Pn**	**23 57 22.0**	**-0.4**
	328nm,0.9s						
NNT	**Nongplab**	**6.88**	**50**	P	**Pn**	**23 57 31.6**	**+1.3**
VIS	**Vishakhapatnam**	**14.29**	**313**	*e*P	**P**	**23 59 10.3**	**-1.1**
VIS				*e*		23 59 21.7	
	comp=Z,61nm,1.0s						
VIS				*e*S	**S**	**00 01 39.3**	**-11**
BWNR	**Bhubaneshwar**	**14.58**	**326**	*e*P	**P**	**23 59 12.5**	**-2.7**
BWNR				*e*		23 59 20.5	
	comp=Z,67nm,1.6s						
BWNR				*e*S	**S**	**00 01 39.6**	**-17**
CAL	**Calcutta**	**15.38**	**339**	*e*	**P**	**23 59 29.9**	**+4.3**
CAL				*e*		00 02 33.7	
SHL	**Shillong**	**17.43**	**353**	*e*P	**P**	**23 59 48.0**	**-3.6**
HYB	**Hyderabad**	**17.89**	**302**	*e*P	**P**	**23 59 58.0**	**+0.6**
HYB				*e*S	**S**	**00 03 19.0**	**+5.4**
JIRN	**Jiri**	**20.83**	**339**	*e*P	**P**	**00 00 30.3**	**-0.5**
	comp=Z,252nm,1.3s						
PKI	**Pulchoki**	**21.04**	**337**	*e*P	**P**	**00 00 32.7**	**-0.2**
	comp=Z,298nm,1.5s,mb5.4						
DMN	**Daman**	**21.19**	**337**	*e*P	**P**	**00 00 34.0**	**-0.5**
	comp=Z,92nm,1.0s,mb5.1						
KKN	**Kakani**	**21.28**	**337**	*e*P	**P**	**00 00 35.2**	**-0.2**
	comp=Z,54nm,1.0s,mb4.8						
KAD	**Karad**	**21.61**	**297**	*e*P	**P**	**00 00 44.4**	**+5.6**
GKN	**Gorkha**	**21.72**	**336**	*e*P	**P**	**00 00 39.5**	**-0.4**
	comp=Z,321nm,1.4s,mb5.6						
KOLN	**Koldanda**	**21.95**	**334**	*e*P	**P**	**00 00 42.3**	**+0.2**
	comp=Z,38nm,0.8s,mb4.9						
POO	**Poona**	**22.39**	**299**	*e*P	**P**	**00 00 48.0**	**+1.5**
POO				*e*		00 05 28.0	
LGTI	**Lohaghat**	**24.94**	**330**	*e*P	**P**	**00 01 13.5**	**+2.1**
NDI	**New Delhi**	**25.98**	**324**	*e*P	**P**	**00 01 20.0**	**-1.2**
DDI	**Dehra Dun**	**26.77**	**327**	*e*	**P**	**00 01 32.5**	**+4.1**
SDNR	**Sundarnagar**	**28.27**	**327**	*e*P	**P**	**00 01 43.4**	**+1.4**
AAK	**Ala-Archa**	**38.48**	**336**	⇑*i*P	**P**	**00 03 10.6**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
FRU	**Bishkek**	**38.60**	**337**	*e*P	**P**	**00 03 19.0**	**+7.7**
ZAK	**Zakamensk**	**42.71**	**8**	*e*P	**P**	**00 03 50.3**	**+5.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.6						
KURK	**Kurchatov**	**44.34**	**346**	⇑*i*P	**P**	**00 03 59.0**	**+0.6**
NVS	**Novosibirsk**	**47.35**	**351**	*e*P	**P**	**00 04 24.3**	**+2.1**
NVS				pmax	pmax		
	comp=N,29nm,1.9s						
NVS				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.8						
NVS				pmax	pmax		
	comp=E,8.0nm,1.8s						
KLR	**Kul'dur**	**51.51**	**31**	*e*P	**P**	**00 05 03.0**	**+8.8**
BOD	**Bodaibo**	**51.79**	**13**	*e*P	**P**	**00 04 55.5**	**-0.7**
TI2	**Plekhanov**	**54.95**	**316**	*e*P	**P**	**00 05 21.8**	**+2.0**
SVE	**Sverdlovsk**	**55.17**	**338**	⇓*e*P	**P**	**00 05 27.3**	**+6.1**
SVE				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.4						
SVE				MLR	MLR		
	comp=N,300nm,22.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,200nm,22.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.5						
ARU	**Arti**	**55.67**	**337**	⇓*i*P	**P**	**00 05 21.4**	**-3.4**
ARU				*e*		00 06 25.8	
ARU				*e*SS	SS	00 17 04.4	+11
ARU				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.9						
ARU				MLR	MLR		
	comp=N,200nm,20.0s,MS4.3						
ARU				MLR	MLR		
	comp=E,200nm,20.0s,MS4.3						
ARU				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.5						
KIV	**Kislovodsk**	**57.20**	**318**	*e*P	**P**	**00 05 35.0**	**-1.0**
KIV				pmax	pmax		
	comp=N,7.0nm,1.2s						
KIV				pmax	pmax		
	comp=E,6.0nm,1.2s						
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
KIV				MLR	MLR		
	comp=Z,105nm,21.0s,MS3.9						
KIV				MLR	MLR		
	comp=N,71nm,18.0s						
SOKR	**Solikamsk**	**58.57**	**339**	⇑*i*P	**P**	**00 05 50.2**	**+4.9**
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,420nm,21.0s,MS4.5						
MOS	**Moscow**	**64.90**	**329**	*e*P	**P**	**00 06 33.6**	**+5.7**
MOS				*e*		00 06 54.4	
MOS				pmax	pmax		
	comp=Z,53nm,1.5s,mb5.3						
OBN	**Obninsk**	**65.21**	**328**	*b* *i*P	**P**	**00 06 31.2**	**+1.3**
OBN				*e*		00 22 31.9	
OBN				pmax	pmax		
	comp=Z,45nm,1.7s,mb5.2						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.4						
TIXI	**Tiksi**	**66.88**	**11**	⇑*i*P	**P**	**00 06 38.4**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.7						
OJC	**Ojcow**	**73.85**	**320**	*e*P	**P**	**00 07 22.4**	**-0.5**
OJC	**Ojcow**	**73.85**	**320**	*e*PX		00 07 22.4	
OKC	**Ostrava-Krasne**	**74.87**	**319**	*e*P	**P**	**00 07 28.4**	**-0.4**
OKC				*e*x	x	00 07 35.4	
BILL	**Bilibino**	**75.72**	**22**	⇑*i*P	**P**	**00 07 27.5**	**-5.8**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
DPC	**Dobruska-Polom**	**76.08**	**320**	*e*P	**P**	**00 07 35.6**	**-0.1**
DPC				*e*x	x	00 07 41.5	
UPC	**Upice**	**76.29**	**320**	*e*P	**P**	**00 07 39.9**	**+3.0**
PRU	**Pruhonice**	**77.20**	**319**	*e*P	**P**	**00 07 43.7**	**+1.7**
PRU				*e*x	x	00 07 48.6	
PVCC	**Panska Ves**	**77.21**	**320**	*e*P	**P**	**00 07 40.8**	**-1.2**
PVCC				*e*x	x	00 07 48.7	
BRG	**Berggiesshubel**	**77.62**	**320**	*e*P	**P**	**00 07 47.0**	**+2.7**
BRG				*i*		00 07 50.9	
BRG				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.9						
KHC	**Kasperske Hory**	**77.80**	**318**	*e*P	**P**	**00 07 45.3**	**0.0**
KHC				*e*x	x	00 07 51.8	
CLL	**Collm**	**78.23**	**321**	*e*P	**P**	**00 07 54.0**	**+6.4**
CLL	**Collm**	**78.23**	**321**	P	**P**	**00 07 54.0**	**+6.4**
GRF	**Grafenberg Arr**	**79.35**	**319**	*e*P	**P**	**00 07 54.7**	**+1.0**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
NB2	**NORSAR Subarra**	**79.54**	**331**	P	**P**	**00 07 53.5**	**-1.1**
	comp=Z,16nm,1.2s,mb4.8,baz=91,slow=5.6						
CDF	**Champ du Feu**	**81.98**	**318**	*e*P	**P**	**00 08 07.1**	**-0.6**
	comp=Z,9.5nm,0.8s,mb4.5						
SBF	**Sospel**	**82.15**	**313**	*e*P	**P**	**00 08 08.2**	**-0.5**
	comp=Z,58nm,1.1s,mb5.1						
HINF	**Hinteralfeld**	**82.30**	**317**	*e*P	**P**	**00 08 09.8**	**+0.5**
LPG	**La Plagne**	**82.52**	**315**	*e*P	**P**	**00 08 10.7**	**+0.1**
	comp=Z,26nm,0.9s,mb5.0						
LPL	**La Plagne**	**82.53**	**315**	*e*P	**P**	**00 08 10.7**	**+0.1**
	comp=Z,21nm,0.8s,mb4.9						
MBDF	**Montbardon**	**82.56**	**314**	*e*P	**P**	**00 08 09.9**	**-0.9**
	comp=Z,42nm,1.3s,mb5.0						
HAU	**Haudompre**	**82.62**	**317**	*e*P	**P**	**00 08 10.4**	**-0.6**
	comp=Z,37nm,1.1s,mb5.0						
HAU				*e*R			
	comp=Z,109nm,20.8s						
FRF	**La Foret Royal**	**82.74**	**313**	*e*P	**P**	**00 08 11.4**	**-0.3**
	comp=Z,77nm,1.5s,mb5.2						
CABF	**La Chapelle**	**82.90**	**316**	*e*P	**P**	**00 08 12.5**	**0.0**
	comp=Z,27nm,1.2s,mb4.9						
ORIF	**Oris-en-Rattie**	**83.18**	**314**	*e*P	**P**	**00 08 14.1**	**+0.1**
ORIF				*e*R			
	comp=Z,124nm,22.2s						
MEZF	**Maizieres J'vi**	**83.45**	**318**	*e*P	**P**	**00 08 15.1**	**-0.2**
GIVF	**Givet**	**83.46**	**320**	*e*P	**P**	**00 08 15.1**	**-0.2**
BAIF	**Baives**	**83.86**	**320**	*e*P	**P**	**00 08 17.3**	**0.0**
	comp=Z,35nm,1.1s,mb5.1						
VIVF	**Saint-Julien-l**	**84.04**	**314**	*e*P	**P**	**00 08 18.1**	**-0.3**
SMF	**Signal de Mont**	**84.44**	**316**	*e*P	**P**	**00 08 19.8**	**-0.6**
	comp=Z,20nm,1.1s,mb4.9						
SSF	**Saint Saulge**	**84.63**	**317**	*e*P	**P**	**00 08 20.9**	**-0.4**
AVF	**Avril sur Loir**	**84.76**	**316**	*e*P	**P**	**00 08 21.4**	**-0.5**
	comp=Z,26nm,1.2s,mb4.9						
BGF	**Bois d'Agland**	**85.13**	**316**	*e*P	**P**	**00 08 23.9**	**+0.1**
TCF	**Toulx Ste Croi**	**85.60**	**316**	*e*P	**P**	**00 08 26.1**	**-0.1**
CAF	**Calviac**	**85.88**	**315**	*e*P	**P**	**00 08 27.7**	**+0.1**
RJF	**Les Rejaudoux**	**86.21**	**315**	*e*P	**P**	**00 08 29.3**	**+0.1**
	comp=Z,36nm,1.2s,mb5.2						
RJF				*e*R			
	comp=Z,160nm,22.0s						
LDF	**La Druitiere**	**86.85**	**318**	*e*P	**P**	**00 08 32.1**	**-0.2**
FLN	**La Foliniere**	**87.06**	**319**	*e*P	**P**	**00 08 33.1**	**-0.2**
	comp=Z,50nm,1.4s,mb5.3						
FLN				*e*R			
	comp=Z,146nm,17.2s						

OTT 02 23:58:02.7±0.1,64.67N×110.66W,h1^{km},MN2.8/15, Blast, Ekati Mine, Nt Mining explosion.,Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKTN	**Ekati Mine**	**0.04**	**32**	PG	Pg	23 58 03.3	-0.2
LDGN	**Lac de Gras No**	**0.06**	**77**	PG	Pg	23 58 04.4	+0.5
DVKN	**Diavik Mine**	**0.22**	**136**	PG	Pg	23 58 06.7	-0.4
DVKN				SG	Sg	23 58 10.8	+0.8
DVKN				Trac		23 58 11.5	
	comp=Z,65nm,0.1s						
ACKN	**Achilles Lake**	**0.34**	**344**	PG	Pg	23 58 08.9	-0.6
ACKN				SG	Sg	23 58 13.8	-0.3
ACKN				Trac		23 58 15.2	
	comp=Z,79nm,0.1s						
LGSN	**Lac de Gras So**	**0.40**	**145**	PG	Pg	23 58 10.1	-0.7
LGSN				SG	Sg	23 58 16.1	-0.1
LGSN				Trac		23 58 18.0	
	comp=Z,47nm,0.1s						
YMBN	**Yamba Lake**	**0.43**	**300**	PG	Pg	23 58 10.3	-1.0
YNEN	**Yamba Lake Nor**	**0.46**	**339**	PG	Pg	23 58 11.0	-0.8
YNEN				SG	Sg	23 58 18.1	+0.2
YNEN				Trac		23 58 19.2	
	comp=Z,72nm,0.1s						
GLWN	**Glow Worm Lake**	**0.57**	**83**	PG	Pg	23 58 13.4	-0.8
GLWN				SG	Sg	23 58 21.6	-0.2
GLWN				Trac		23 58 22.9	
	comp=Z,46nm,0.1s						
NODN	**Nodinka Narrow**	**0.72**	**191**	PG	Pg	23 58 15.6	-1.5
NODN				SG	Sg	23 58 25.1	-1.6
NODN				Trac		23 58 27.1	
	comp=Z,70nm,0.2s						
MLON	**Marlo Lake**	**0.77**	**154**	PG	Pg	23 58 16.7	-1.5
MLON				SG	Sg	23 58 27.0	-1.5
MLON				Trac		23 58 29.5	
	comp=Z,30nm,0.1s						
BOXN	**Box Lake**	**0.91**	**153**	PG	Pg	23 58 19.4	-1.6
BOXN				SG	Sg	23 58 32.0	-1.2
BOXN				Trac		23 58 34.0	
	comp=Z,22nm,0.1s						
CAMN	**Camsell Lake**	**0.94**	**187**	PG	Pg	23 58 19.8	-1.8
CAMN				SG	Sg	23 58 33.0	-1.1
CAMN				Trac		23 58 34.4	
	comp=Z,26nm,0.1s						
MGTN	**Margaret Lake**	**1.09**	**154**	PG	Pg	23 58 22.6	-1.9
MGTN				SG	Sg	23 58 36.0	-2.9
MGTN				Trac		23 58 39.0	
	comp=Z,78nm,0.1s						
LUPN	**Lupin Mine**	**1.11**	**347**	PG	Pg	23 58 22.8	-2.0
LUPN				SG	Sg	23 58 37.8	-1.7
LUPN				Trac		23 58 43.6	
	comp=Z,59nm,0.1s						
GBLN	**Grizzly Bear L**	**1.12**	**246**	PG	Pg	23 58 22.7	-2.3
GBLN				SG	Sg	23 58 38.5	-1.4
GBLN				Trac		23 58 40.2	
	comp=Z,157nm,0.2s						
SNPN	**Snap Lake**	**1.16**	**186**	PG	Pg	23 58 23.6	-2.2
SNPN				SG	Sg	23 58 38.4	-2.9
SNPN				Trac		23 58 45.0	
	comp=Z,194nm,0.1s						
IHLN	**Indian Hill La**	**1.37**	**184**	PG	Pg	23 58 27.1	-3.0
IHLN				SG	Sg	23 58 44.7	-3.6
IHLN				Trac		23 58 48.1	
	comp=Z,19nm,0.1s						
KNDN	**Kennady Lake**	**1.41**	**152**	PG	Pg	23 58 28.0	-2.8
KNDN				SG	Sg	23 58 46.1	-3.5
KNDN				Trac		23 58 49.6	
	comp=Z,43nm,0.2s						
CTLN	**Castor Lake**	**2.33**	**267**	PN	Pn	23 58 41.7	-1.0
CTLN				SN	Sn	23 59 13.0	+0.6
CTLN				Trac		23 59 17.3	
	comp=Z,15nm,0.2s						
YKW3	**Yellowknife Ar**	**2.75**	**222**	PN	Pn	23 58 45.8	-3.0
YKW3				SN	Sn	23 59 20.4	-2.9
YKW3				SG	Sg	23 59 27.4	-7.1
YKW3				Trac		23 59 29.6	
	comp=Z,2.7nm,0.1s						
GALN	**Gameti Lake**	**2.94**	**262**	PN	Pn	23 58 49.5	-2.1
GALN				SN	Sn	23 59 25.5	-2.5
GALN				Trac		23 59 41.0	
	comp=Z,16nm,0.2s						
INK	**Inuvik**	**9.80**	**302**	PN	P	00 00 22.6	-5.1
INK				SN	Sn	00 02 07.9	-12
FCC	**Fort Churchill**	**9.82**	**119**	PN	P	00 00 24.0	-3.9
FCC				SN	Sn	00 02 05.3	-15
RES	**Resolute Bay**	**11.39**	**21**	PN	P	00 00 44.0	-5.4
RES				SN	S	00 02 46.0	-13

CSEM ***03*** *00:16:30.6±0.3,38.05N×26.24W,h1^{km},ML2.8,Error ellipse: s-maj=32.4km s-min=2.1km az=31.0,After PDA*

PDA ***03*** *00:16:30.6±1.2,38.05N×26.24W,h1^{km}±3^{km},MD3.2, ML2.8,Error ellipse: s-maj=6.5km s-min=1.0km az=36.0*

SVSA 03 00:16:30.6±1.2,38.05N×26.24W,h1^{km}±3^{km},MD3.2, ML2.8,Error ellipse: s-maj=6.5km s-min=1.0km az=36.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SET4	**Mosteiros**	**0.39**	**116**	*i* P	Pg	00 16 37.8	-0.5
SET2	**Ginetes**	**0.40**	**121**	*i* P	Pg	00 16 38.1	-0.4
PFET	**Feteiras**	**0.42**	**123**	*i* P	Pg	00 16 38.3	-0.7
PSAN	**Santo Antonio**	**0.45**	**116**	*i* P	Pg	00 16 38.7	-0.8
PSET	**Sete Cidades**	**0.46**	**119**	*i* P	Pg	00 16 38.8	-1.1
PSET				*e*S	Sg	00 16 45.6	-0.4
	450nm,0.3s						
PSET	**Sete Cidades**	**0.46**	**119**	*e*S	Sg	00 16 45.6	-0.4
	450nm,0.3s						
FAC	**Faja de Cima**	**0.54**	**120**	*i* P	Pg	00 16 40.4	-0.9
FAC				*i* S	Sg	00 16 47.8	-0.7
PDA	**Ponta Delgada**	**0.54**	**123**	*e*S	Sg	00 16 47.0	-1.7
CML	**Cha da Macela**	**0.61**	**117**	*i* P	Pg	00 16 41.1	-1.7
CML				*i* S	Sg	00 16 49.9	-1.0
PVER	**Pico Vermelho**	**0.62**	**113**	*i* P	Pg	00 16 41.3	-1.7
PVER				*i* S	Sg	00 16 49.9	-1.4
PVER	**Pico Vermelho**	**0.62**	**113**	*i* S	Sg	00 16 49.9	-1.4
PMAT	**Coroa da Mata**	**0.65**	**111**	*i* P	Pg	00 16 41.7	-1.8
PMAT				*i* S	Sg	00 16 50.2	-1.9
	625nm,0.2s						
PMAT	**Coroa da Mata**	**0.65**	**111**	*i* S	Sg	00 16 50.2	-1.9
	625nm,0.2s						
LFA	**Lagoa do Fogo**	**0.66**	**115**	*i* P	Pg	00 16 41.9	-1.8
MESC	**Monte Escuro**	**0.67**	**112**	*i* P	Pg	00 16 42.1	-2.0
MESC				*i* S	Sg	00 16 51.1	-1.9
PRCH	**Ribeira Ch**	**0.68**	**118**	*e*P	Pg	00 16 42.3	-1.8
PRCH				*i* S	Sg	00 16 51.5	-1.6
	466nm,0.1s						
PRCH	**Ribeira Ch**	**0.68**	**118**	*e*P	Pg	00 16 42.3	-1.8
PRCH				*i* S	Sg	00 16 51.5	-1.6
	466nm,0.1s						
VIF	**Vila Franca**	**0.70**	**115**	*e*P	Pg	00 16 42.8	-1.7
VIF				*i* S	Sg	00 16 51.6	-2.2
	133nm,0.2s						
VIF	**Vila Franca**	**0.70**	**115**	*e*P	Pg	00 16 42.8	-1.7
VIF				*i* S	Sg	00 16 51.6	-2.2
	133nm,0.2s						
PCNG	**Congro**	**0.72**	**113**	*e*P	Pg	00 16 43.9	-1.1
PCNG				*e*S	Sg	00 16 53.3	-1.3
	142nm,0.2s						
PCNG	**Congro**	**0.72**	**113**	*e*P	Pg	00 16 43.9	-1.1
PCNG				*e*S	Sg	00 16 53.3	-1.3
	142nm,0.2s						
PFAD	**Fenais da Ajud**	**0.75**	**106**	*e*P	Pg	00 16 44.1	-1.5
PFAD				*e*S	Sg	00 16 53.1	-2.5
FRA1	**Furnas**	**0.76**	**113**	*e*P	Pg	00 16 44.7	-1.0
FRA1				*e*S	Sg	00 16 54.1	-1.7
MIRA	**Miradouro**	**0.80**	**109**	*i* P	Pg	00 16 45.0	-1.6
MIRA				*e*S	Sg	00 16 54.8	-2.4
BART	**Pico Bartolome**	**0.89**	**107**	*e*P	Pg	00 16 44.7	-3.6
BART				*e*S	Sg	00 16 56.4	-3.7
	132nm,0.2s						
BART	**Pico Bartolome**	**0.89**	**107**	*e*P	Pg	00 16 44.7	-3.6
BART				*e*S	Sg	00 16 56.4	-3.7
	132nm,0.2s						
PFAV	**Pico das Favas**	**0.94**	**315**	*e*P	Pb	00 16 45.9	-3.5
PFAV				*i* S	Sg	00 16 57.3	-4.6
	54nm,0.2s						
PFAV	**Pico das Favas**	**0.94**	**315**	*e*P	Pb	00 16 45.9	-3.5
PFAV				*i* S	Sg	00 16 57.3	-4.6
	54nm,0.2s						
PSCM	**Serra do Cume**	**0.95**	**314**	*i* P	Pb	00 16 46.0	-3.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM				*e*S	Sg	00 16 57.7	-4.6
	131nm,0.3s						
PSCM	**Serra do Cume**	**0.95**	**314**	*i* P	Pb	00 16 46.0	-3.6
PSCM				*e*S	Sg	00 16 57.7	-4.6
	131nm,0.3s						
RIB2	**Ribeirinha**	**0.97**	**311**	*e*P	Pb	00 16 46.3	-3.5
RIB2				*i* S	Sg	00 16 58.0	-4.8
	64nm,0.1s						
RIB2	**Ribeirinha**	**0.97**	**311**	*e*P	Pb	00 16 46.3	-3.5
RIB2				*i* S	Sg	00 16 58.0	-4.8
	64nm,0.1s						
ADH	**Angra Heroismo**	**0.99**	**308**	*e*S	Sb	00 16 59.0	-4.7
PVNV	**Vila Nova**	**1.02**	**315**	*i* P	Pb	00 16 47.0	-3.7
PVNV				*i* S	Sb	00 16 59.1	-5.2
	56nm,0.1s						
PPAD	**Pico dos Padre**	**1.05**	**309**	*e*P	Pb	00 16 47.5	-3.8
PPAD				*e*S	Sb	00 17 00.6	-4.8
	45nm,0.2s						
PPAD	**Pico dos Padre**	**1.05**	**309**	*e*P	Pb	00 16 47.5	-3.8
PPAD				*e*S	Sb	00 17 00.6	-4.8
	45nm,0.2s						
PBIS	**Biscoitos**	**1.07**	**312**	*e*S	Sb	00 17 01.0	-4.9
	15nm,0.2s						
PBIS	**Biscoitos**	**1.07**	**312**	*e*S	Sb	00 17 01.0	-4.9
	15nm,0.2s						
ASBA	**Santa Barbara**	**1.09**	**308**	*e*P	Pb	00 16 48.5	-3.4
ASBA				*i* S	Sb	00 17 01.7	-4.7
	81nm,0.1s						
PSMN	**Pico do Norte,**	**1.40**	**138**	*e*S	Sb	00 17 09.0	-6.4
PMAN	**Manadas**	**1.57**	**292**	*e*S	Sb	00 17 12.3	-8.1
	32nm,0.2s						
ROSA	**Rosais**	**1.71**	**294**	*e*P	Pn	00 16 57.3	-4.5
ROSA				*e*S	Sb	00 17 16.6	-8.0
PICO	**Pico**	**1.78**	**285**	*e*P	Pn	00 16 57.8	-5.0
PICO				*e*S	Sn	00 17 17.6	-8.7
HOR	**Horta**	**1.94**	**285**	*e*S	Sn	00 17 21.6	-8.9
CALA	**Caldeira**	**2.01**	**286**	*e*P	Pn	00 17 01.4	-4.6
CALA				*e*S	Sn	00 17 23.6	-8.6
PCED	**Cedros**	**2.02**	**287**	*e*P	Pn	00 17 01.2	-5.0
PCED				*e*S	Sn	00 17 23.5	-9.0
	22nm,0.3s						

CASC 03 00:33:20.7±3.4**, 12.40N**×**87.63W, h160^{km}**±18^{km}**, MD4.2, 7C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.64**	**62**	⇑*e*P	P	00 33 43.8	-0.4
CRIN				*e*S	S	00 34 03.9	+1.5
LEON	**Leon**	**0.72**	**89**	⇑*i*P	P	00 33 44.3	-0.4
TEL3	**Telica 3**	**0.79**	**78**	*e*P	P	00 33 44.4	-0.7
TEL3				*e*S	S	00 34 04.2	+0.4
TELN	**Telica**	**0.81**	**76**	*e*P	P	00 33 44.4	-0.7
TELN				*e*S	S	00 34 06.1	+2.1
CNCH	**Conchagua**	**0.89**	**347**	⇑*e*P	P	00 33 44.3	-1.4
MIRN	**Miramar**	**0.90**	**88**	⇓*e*P	P	00 33 45.4	-0.4
CNGN	**Cerro Negro**	**0.92**	**84**	*e*P	P	00 33 45.5	-0.4
CNGN				*e*S	S	00 34 07.4	+2.1
COPN	**Copaltepe**	**1.04**	**102**	*e*P	P	00 33 47.1	+0.2
COPN				*e*S	S	00 34 05.6	-1.4
MOMJ	**Momotombo**	**1.07**	**90**	⇓*e*P	P	00 33 46.6	-0.5
BLLM	**Bellamira**	**1.19**	**330**	⇑*e*P	P	00 33 47.6	-0.6
BLLM				*e*S	S	00 34 11.5	+2.0
VSM	**San Miguel**	**1.20**	**328**	⇑*e*P	P	00 33 47.9	-0.5
APYN	**Apoyeque**	**1.26**	**98**	*e*P	P	00 33 48.8	-0.2
XAVN	**Gruta Xavier**	**1.30**	**101**	*e*P	P	00 33 49.2	-0.1
XAVN				*e*S	S	00 34 12.1	+0.6
MGAN	**Managua**	**1.38**	**101**	*e*S	S	00 34 11.0	-1.8
TICN	**Ticuantepe**	**1.42**	**105**	*e*P	P	00 33 50.3	-0.1
TICN				*e*S	S	00 34 11.4	-2.1
CAHU	**Cacacuatique**	**1.47**	**337**	*e*P	P	00 33 49.7	-1.3
SNVI	**San Vicente**	**1.68**	**316**	⇓*e*P	P	00 33 53.9	+0.6
SNVI				*e*S	S	00 34 17.9	-0.4
LCBS	**La Ceiba**	**1.81**	**314**	⇑*e*P	P	00 33 55.0	+0.4
LCBS				*e*S	S	00 34 20.5	-0.2
LFRS	**El Faro**	**1.85**	**311**	⇑*e*P	P	00 33 55.7	+0.7
LFRS				*e*S	S	00 34 22.3	+0.8
LBRS	**Las Brisas**	**1.91**	**314**	*e*P	P	00 33 56.6	+0.9
BOQS	**Boqueron**	**2.08**	**310**	*e*P	P	00 33 59.0	+1.3
BOQS				*e*S	S	00 34 28.8	+2.6
SBLS	**San Blas**	**2.41**	**307**	*e*P	P	00 34 03.0	+1.3
SBLS				*e*S	S	00 34 34.3	+1.1
RTR	**El Retiro**	**2.46**	**307**	*e*P	P	00 34 03.8	+1.5
RTR				*e*S	S	00 34 33.0	-1.3
MTO2	**Montecristo 2**	**2.60**	**320**	*e*P	P	00 34 04.2	+0.1
VCR	**Vista de Mar**	**2.99**	**139**	*e*S	S	00 34 46.8	+0.7
JCR	**Jicaral**	**3.54**	**135**	*e*P	P	00 34 18.3	+2.3
JCR				*e*S	S	00 34 58.5	-0.2
LCR2	**La Lucha 2**	**4.43**	**126**	*e*P	P	00 34 29.3	+1.6
LCR2				*e*S	S	00 35 20.6	+1.3
URSC	**Urasca**	**4.56**	**124**	*e*P	P	00 34 30.0	+0.6
URSC				*e*S	S	00 35 27.5	+5.2
BUS	**Buena Vista**	**4.74**	**126**	*e*P	P	00 34 35.4	+3.7

CSEM ***03*** *00:47:03.8±0.1, 35.00N×3.73W, h5^{km}, ML2.7/1, Error ellipse: s-maj=2.7km s-min=1.6km az=115.0*
MDD ***03*** *00:47:05.5±0.5, 35.01N×3.85W, mbLg2.2/9, Error ellipse: s-maj=6.0km s-min=2.7km az=42.0, PRXIMO*
NEIC ***03*** *00:47:05.4, 34.99N×3.84W, MG3.3(MDD), After MDD.*
CNRM ***03*** *00:47:05.8, 35.06N×3.79W, h6^{km}, MD3.3*
INMG ***03*** *00:47:06.3±0.8, 35.11N×3.88W, ML2.0, Error ellipse: s-maj=4.8km s-min=2.1km az=180.0*
ISC 03 00:47:04.3±0.3**, 35.05N**±0.02×**3.89W**±0.03**, h5^{km}, n36, σ1^{s}25**/69**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOU	**Touzarine**	**0.14**	**129**	P	**Pg**	**00 47 07.0**	**-0.3**
TOU				S	**Sg**	**00 47 09.5**	**+0.3**
TOU	**Touzarine**	**0.14**	**129**	*i* P	**Pg**	**00 47 07.0**	**-0.3**
MPAL	**Palemas**	**0.18**	**345**	P	**Pg**	**00 47 09.5**	**+1.6**
MPAL				S	**Sg**	**00 47 13.5**	**+3.1**
MPAL	**Palemas**	**0.18**	**345**	*i* P	**Pg**	**00 47 09.5**	**+1.6**
EMEL	**Melilla**	**0.80**	**72**	P	**Pg**	**00 47 19.7**	**-0.6**
	60nm,0.2s,SNR=12						
EMEL				S	**Sg**	**00 47 31.3**	**+0.3**
	164nm,0.1s,SNR=7.9						
EMLI	**Melilla**	**0.81**	**72**	P	**Pb**	**00 47 19.7**	**-0.7**
	60nm,0.2s,SNR=12						
EMLI				S	**Sg**	**00 47 31.3**	**+0.1**
	164nm,0.1s,SNR=7.9						
ZAI	**Zaio**	**0.94**	**95**	*i* P	**Pb**	**00 47 21.0**	**-1.7**
ZAI				*i* S	**Sb**	**00 47 34.0**	**-1.3**
TZK	**Tazeka**	**0.99**	**194**	*i* P	**Pb**	**00 47 24.5**	**+0.9**
TZK				*i* S	**Sb**	**00 47 38.5**	**+1.8**
EALB	**Alboran**	**1.13**	**38**	P	**Pb**	**00 47 25.9**	**0.0**
	23nm,0.3s,SNR=6.1						
EALB				S	**Sb**	**00 47 40.7**	**+0.1**
	50nm,0.4s,SNR=6.9						
EALB	**Alboran**	**1.13**	**38**	P	**Pb**	**00 47 25.9**	**0.0**
	23nm,0.3s,SNR=6.1						
EALB				S	**Sb**	**00 47 40.7**	**0.0**
	50nm,0.4s,SNR=6.9						
DKH	**Dar Kharkhour**	**1.28**	**290**	*e*P	**Pb**	**00 47 30.0**	**+1.5**
EMIJ	**Mijas**	**1.67**	**335**	P	**Pn**	**00 47 33.8**	**-0.7**
	0.8nm,0.1s,SNR=4.0						
EMIJ				S	**Sn**	**00 47 55.8**	**-0.7**
	3.8nm,0.2s,SNR=5.6						
MIF	**Mishlifen**	**1.98**	**215**	*e*P	**Pn**	**00 47 39.0**	**+0.2**
MIF				*i* S	**Sn**	**00 48 03.0**	**-1.3**
EBER	**Berja**	**2.01**	**23**	P	**Pn**	**00 47 39.1**	**-0.1**
EBER				S	**Sn**	**00 48 05.2**	**+0.1**
EBER	**Berja**	**2.01**	**23**	P	**Pn**	**00 47 39.1**	**-0.1**
	2.1nm,0.3s,SNR=6.2						
EBER				S	**Sn**	**00 48 05.2**	**+0.1**
	17nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.01**	**23**	P	**Pn**	**00 47 39.2**	**-0.1**
EBER				S	**Sn**	**00 48 05.2**	**+0.1**
	17nm,0.3s,SNR=7.9						
CZD	**Col de Zad**	**2.23**	**206**	*e*P	**Pn**	**00 47 43.0**	**+0.6**
CZD				*i* S	**Sn**	**00 48 10.5**	**-0.2**
ESPR	**Espera**	**2.42**	**319**	P	**Pn**	**00 47 46.7**	**+1.6**
ESPR				S	**Sn**	**00 48 17.9**	**+2.5**
ESPR	**Espera**	**2.42**	**319**	P	**Pn**	**00 47 46.7**	**+1.6**
	0.5nm,0.2s,SNR=5.2						
ESPR				S	**Sn**	**00 48 16.7**	**+1.3**
	2.8nm,0.3s,SNR=7.9						
ESPR	**Espera**	**2.42**	**319**	P	**Pn**	**00 47 46.7**	**+1.6**
	0.5nm,0.2s,SNR=5.2						
ESPR				S	**Sn**	**00 48 17.9**	**+2.5**
	2.8nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**2.52**	**353**	P	**Pn**	**00 47 49.1**	**+2.5**
	2.9nm,0.3s,SNR=7.9						
ELUQ				S	**Sn**	**00 48 19.4**	**+1.3**
	1.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.82**	**13**	P	**Pn**	**00 47 52.4**	**+1.5**
	2.7nm,0.4s,SNR=12						
EQES				S	**Sn**	**00 48 26.4**	**+0.7**
	6.3nm,0.3s,SNR=4.0						
EQES	**Quesada**	**2.82**	**13**	P	**Pn**	**00 47 52.4**	**+1.5**
	2.7nm,0.4s,SNR=12						
EQES				S	**Sn**	**00 48 26.4**	**+0.7**
	6.3nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**3.16**	**350**	P	**Pn**	**00 47 55.4**	**-0.3**
EADA				S	**Sn**	**00 48 37.0**	**+2.8**
EADA	**Adamuz**	**3.16**	**350**	P	**Pn**	**00 47 55.4**	**-0.3**
	0.9nm,0.3s,SNR=5.6						
EADA				S	**Sn**	**00 48 35.4**	**+1.2**
	1.7nm,0.4s,SNR=4.0						
EADA	**Adamuz**	**3.16**	**350**	P	**Pn**	**00 47 55.4**	**-0.3**
	0.9nm,0.3s,SNR=5.6						
EADA				S	**Sn**	**00 48 37.0**	**+2.8**
	1.7nm,0.4s,SNR=4.0						
EMIN	**Mina Concepcio**	**3.52**	**321**	P	**Pn**	**00 48 00.2**	**-0.6**
	1.1nm,0.4s,SNR=8.3						
EMIN				S	**Sn**	**00 48 41.4**	**-2.0**
	SNR=7.9						
EMIN	**Mina Concepcio**	**3.52**	**321**	P	**Pn**	**00 48 00.2**	**-0.6**
	1.1nm,0.4s,SNR=8.3						
EMIN				S	**Sn**	**00 48 41.4**	**-2.0**
	SNR=7.9						
PALC	**Alcoutim**	**3.77**	**311**	*e*Pn	**Pn**	**00 48 04.0**	**-0.3**
PALC				*e*Sn	**Sn**	**00 48 47.2**	**-2.5**
	3.0nm,0.5s						
PALC	**Alcoutim**	**3.77**	**311**	*e*Pn	**Pn**	**00 48 04.0**	**-0.3**
PALC				*e*Sn	**Sn**	**00 48 47.2**	**-2.5**
	3.0nm,0.5s						
PBEJ	**Beja**	**4.37**	**314**	*e*Pn	**Pn**	**00 48 12.8**	**0.0**
PBEJ				*e*Sn	**Sn**	**00 49 02.1**	**-2.7**
EBAD	**Badajoz**	**4.46**	**327**	P	**Pn**	**00 48 13.4**	**-0.9**
	0.9nm,0.4s,SNR=5.1						
EBAD				S	**Sn**	**00 49 05.5**	**-1.8**
	1.4nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.46**	**327**	P	**Pn**	**00 48 13.4**	**-0.8**
	0.9nm,0.4s,SNR=5.1						
EBAD				S	**Sn**	**00 49 05.5**	**-1.8**
	1.4nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.61**	**359**	P	**Pn**	**00 48 15.8**	**-0.5**
	0.3nm,0.3s,baz=179,slow=14,SNR=7.8						
ESDC				S	**Sn**	**00 49 08.0**	**-3.1**
	SNR=7.9						
ESDC	**Sonseca Array**	**4.61**	**359**	P	**Pn**	**00 48 15.8**	**-0.5**
ESDC				S	**Sn**	**00 49 08.0**	**-3.1**
PTEO	**Sao Teotonio**	**4.63**	**304**	*e*Pn	**Pn**	**00 48 16.8**	**+0.2**
PTEO				*e*Sn	**Sn**	**00 49 08.3**	**-3.2**

IGQ 03 00:54:17.1, 0.95S×**81.33W, h11^{km}**±5^{km}**, mb4.1, 4C, Error ellipse: s-maj=6.8km s-min=4.9km az=42.1, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.79**	**97**	⇑P	Pb	00 54 31.2	-1.2
HOJA				S	Sb	00 54 42.9	+0.1
SALI	**Salinas**	**1.27**	**165**	P	Pb	00 54 40.4	-0.2
IGUA	**Igualata**	**2.74**	**101**	P	Pn	00 55 03.3	+1.5
TERV	**Terraza Guagua**	**2.83**	**74**	P	Pn	00 55 05.0	+1.9
PINO	**Pino**	**2.83**	**74**	P	Pn	00 55 03.5	+0.3
NAS1	**Nasa**	**2.87**	**84**	P	Pn	00 55 05.1	+1.4
YANA	**Yana**	**2.88**	**73**	P	Pn	00 55 04.4	+0.6
CUSU	**Cusua**	**2.89**	**100**	P	Pn	00 55 06.8	+2.9
JUIV	**Juive**	**2.90**	**99**	P	Pn	00 55 06.4	+2.2
ARRY	**Arrayan**	**2.93**	**101**	⇑P	Pn	00 55 05.4	+0.9
ARRY				S	Sn	00 55 39.7	-0.3
VC1	**Cotopaxi 1**	**2.94**	**84**	P	Pn	00 55 08.7	+4.0
PISA	**Pisayambo**	**2.94**	**92**	P	Pn	00 55 06.9	+2.1
TAMB	**Tambo**	**2.97**	**85**	⇑P	Pn	00 55 08.0	+2.8
ANTI	**Antisana**	**3.21**	**81**	⇑P	Pn	00 55 11.0	+2.5
CAYR	**Refugio Cayamb**	**3.46**	**74**	P	Pn	00 55 15.2	+3.2

ISC 03 01:37:46.1±0.7**, 10.11N**±0.10×**94.33E**±0.06**, h33^{km}, n25, σ0^{s}95**/30**, mb4.8**/1**, 3C-3D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	**Nongplab**	**5.84**	**65**	P	**P**	**01 39 13.3**	**+0.6**
SNG	**Songkhla**	**6.87**	**115**	P	**P**	**01 39 27.0**	**-0.1**
	140nm,0.9s						
NST	**Nakhon Sawan**	**7.91**	**45**	P	**P**	**01 39 42.0**	**+0.4**
BWNR	**Bhubaneshwar**	**13.04**	**322**	*e*P	**P**	**01 40 46.7**	**-5.1**
BWNR				*e*S	**S**	**01 42 59.4**	**-17**
BWNR				*e*		01 43 05.8	
	comp=N,33nm,0.3s						
BWNR				*e*		01 43 06.5	
	comp=E,43nm,0.2s						
VIS	**Vishakhapatnam**	**13.08**	**307**	*e*P	**P**	**01 40 47.0**	**-5.3**
VIS				*e*S	**S**	**01 43 02.7**	**-15**
VIS				*e*		01 43 11.3	
	comp=N,45nm,0.9s						
VIS				*e*		01 43 13.5	
	comp=E,37nm,1.2s						
MDRS	**Chennai**	**14.11**	**283**	*e*P	**P**	**01 40 59.0**	**-6.9**
MDRS				*e*		01 43 55.0	
MDRS				*e*		01 44 34.0	
HYB	**Hyderabad**	**16.95**	**297**	*e*P	**P**	**01 41 44.0**	**+1.6**
HYB				*e*S	**S**	**01 44 48.0**	**-0.5**
JIRN	**Jiri**	**19.07**	**337**	*e*P	**P**	**01 42 08.7**	**+0.1**
	comp=E,11nm,0.5s						
PKI	**Pulchoki**	**19.30**	**335**	*e*P	**P**	**01 42 10.9**	**-0.2**
	comp=E,22nm,0.6s						
KKN	**Kakani**	**19.54**	**335**	*e*P	**P**	**01 42 13.4**	**-0.4**
	comp=E,10nm,0.4s						
GKN	**Gorkha**	**20.00**	**334**	*e*P	**P**	**01 42 18.5**	**-0.3**
	comp=E,59nm,0.4s						
KOLN	**Koldanda**	**20.26**	**332**	*e*P	**P**	**01 42 21.0**	**-0.6**
	comp=E,152nm,1.2s						
BHPL	**Bhopal**	**20.77**	**311**	*e*P	**P**	**01 42 25.2**	**-1.6**
BHPL				*e*		01 42 28.8	
	comp=Z,31nm,1.3s						
BHPL				*e*S	**S**	**01 46 18.0**	**+6.1**
POO	**Poona**	**21.52**	**295**	*e*P	**P**	**01 42 29.0**	**-5.5**
NDI	**New Delhi**	**24.47**	**321**	*e*P	**P**	**01 43 03.0**	**-0.5**
NDI				*e*S	**S**	**01 47 20.0**	**+1.2**
DDI	**Dehra Dun**	**25.19**	**325**	*e*P	**P**	**01 43 10.5**	**+0.1**
DDI				*e*		01 47 43.5	
BSY	**Bisya**	**37.65**	**294**	⇑P	**P**	**01 45 01.0**	**+0.9**
	SNR=8.3						
ARQ	**Araqi**	**38.39**	**295**	⇓P	**P**	**01 45 05.2**	**-1.1**
ASHO	**Ashiyiah**	**39.13**	**297**	⇑P	**P**	**01 45 14.1**	**+1.7**
	SNR=5.6						
BANOM	**Banah**	**39.26**	**299**	⇓P	**P**	**01 45 15.1**	**+1.7**
WHFO	**Wadi Hawf**	**40.04**	**286**	⇑P	**P**	**01 45 20.1**	**+0.1**
	SNR=15						
ABTO	**Aybut**	**40.44**	**285**	⇓P	**P**	**01 45 23.7**	**+0.3**
WB2	**Warramunga Arr**	**49.44**	**127**	*e*P	**P**	**01 46 34.8**	**-0.6**
KHC	**Kasperske Hory**	**76.38**	**318**	*e*P	**P**	**01 49 26.5**	**-7.4**
LPG	**La Plagne**	**81.19**	**315**	*e*P	**P**	**01 49 58.0**	**-2.2**
	comp=Z,32nm,1.2s,mb4.8						

ISK ***03*** *01:44:45.8, 36.96N×27.71E, h7^{km}, MD3.5*
CSEM ***03*** *01:44:47.9±0.2, 37.06N×27.84E, h12^{km}, MD3.5, Error ellipse: s-maj=4.5km s-min=3.1km az=38.0*
ATH ***03*** *01:44:49.1, 36.99N×27.71E, h27^{km}±3^{km}, MD3.3/4*
NEIC ***03*** *01:44:49.1, 36.99N×27.71E, h27^{km}, MD3.3(ATH), After ATH.*
ISC 03 01:44:47.1±1.1**, 37.00N**±0.03×**27.80E**±0.05**, h5^{km}**±8^{km}**, n29, σ0^{s}91**/35**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.30**	**356**	*i* PG	**Pg**	**01 44 53.1**	**0.0**
MLSB				SG	**Sg**	**01 44 58.4**	**+1.3**
AYDN	**Tasoluk**	**0.67**	**5**	*i* P	**Pg**	**01 45 00.0**	**-0.4**
AYDN				*i* S	**Sg**	**01 45 09.1**	**-0.2**
ARG	**Arkhangelos**	**0.82**	**161**	*e*PB	**Pb**	**01 45 05.1**	**+1.7**
ARG				*e*SN	**Sn**	**01 45 18.1**	**+0.4**
SMG	**Samos**	**1.05**	**313**	*e*PN	**Pn**	**01 45 08.6**	**+0.3**
FETY	**Fethiye**	**1.09**	**109**	PN	**Pn**	**01 45 07.8**	**-1.1**
DNZL	**Cakiroluk**	**1.21**	**55**	*i* P	**Pb**	**01 45 09.0**	**-1.1**
DNZL				*i* S	**Sb**	**01 45 26.9**	**+1.0**
DENT	**Denizli**	**1.24**	**52**	PN	**Pn**	**01 45 10.3**	**-0.7**
IZM	**Izmir**	**1.46**	**343**	*e*PN	**Pn**	**01 45 14.2**	**-0.1**
KDAG	**Bornova**	**1.47**	**343**	*i* P	**Pn**	**01 45 13.5**	**-0.8**
KDAG				*i* S	**Sb**	**01 45 34.5**	**+1.2**
BLCB	**Balcova**	**1.51**	**337**	PN	**Pn**	**01 45 14.1**	**-0.9**
MANT	**Manisa**	**1.61**	**22**	*i* P	**Pn**	**01 45 15.9**	**-0.4**
MANT				*i* S	**Sb**	**01 45 37.9**	**+0.5**
KSL	**Kastellorizon**	**1.67**	**120**	*e*PN	**Pn**	**01 45 19.5**	**+2.4**
ELL	**Elmali**	**1.71**	**98**	*e*PN	**Pn**	**01 45 17.8**	**0.0**
APE	**Apeiranthos**	**1.82**	**273**	*e*PN	**Pn**	**01 45 19.5**	**+0.2**
AKS	**Akhisar**	**1.88**	**0**	PN	**Pn**	**01 45 19.4**	**-0.8**
SANT	**Santorini**	**1.98**	**252**	Pn	**Pn**	**01 45 17.1**	**-4.6**
SANT	**Santorini**	**1.98**	**252**	Pn	**Pn**	**01 45 17.1**	**-4.6**
BCK	**Bucak**	**2.27**	**77**	*e*PN	**Pn**	**01 45 26.6**	**+0.7**
ANTB	**Antalya**	**2.29**	**92**	*e*PN	**Pn**	**01 45 26.2**	**+0.2**
ISP	**Isparta**	**2.32**	**68**	*e*PN	**Pn**	**01 45 27.4**	**+1.0**
ISP	**Isparta**	**2.32**	**68**	*e*Pn	**Pn**	**01 45 26.8**	**+0.3**
ISP	**Isparta**	**2.32**	**68**	*e*Pn	**Pn**	**01 45 26.8**	**+0.4**
BALB	**Balikesir**	**2.64**	**1**	*e*PN	**Pn**	**01 45 30.2**	**-0.9**
DST	**Dursunbey**	**2.69**	**14**	*e*PN	**Pn**	**01 45 31.6**	**-0.1**
ALT	**Altintas**	**2.75**	**41**	*e*PN	**Pn**	**01 45 32.9**	**+0.2**
ESKT	**Eskisehir**	**3.48**	**43**	*e*PN	**Pn**	**01 45 43.7**	**+0.6**
KIZT	**Kizilcal**	**3.73**	**59**	*e*PN	**Pn**	**01 45 46.8**	**+0.2**
CSS	**Prodhromos**	**4.92**	**113**	*e*Pn	**Pn**	**01 46 01.4**	**-2.1**
MALT	**Malatya**	**8.53**	**78**	*e*Pn	**P**	**01 46 52.6**	**-1.6**

DJA 03 02:26:03.1±1.0**, 8.49S**×**114.60E, h104^{km}**±8^{km}**, MD5.7**/4**, ML3.4**/2**, 2C-4D, Error ellipse: s-maj=37.9km s-min=9.6km az=9.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELI	**Kelakatan**	**0.29**	**339**	⇓*i*Pn	P	02 26 18.3	+0.1
SRDI	**Scrawed**	**0.45**	**271**	⇓*i*Pn	P	02 26 18.5	-0.6
	11nm,0.3s						
SRDI				⇓*i*Sn	S	02 26 29.8	-1.3
RATI	**Rata**	**0.95**	**104**	⇑*i*Pn	P	02 26 23.7	+0.1
	124nm,0.2s						
RATI				⇑*i*Sn	S	02 26 37.8	-1.2
KEDI	**Kedomdong**	**1.50**	**90**	*e*Pn	P	02 26 28.8	-1.2
	14nm,0.3s						
KEDI				⇓*i*Sn	S	02 26 47.6	-2.5

NIED ***03*** *02:41:00, 34.00N×142.60E, h8^{km}, Mw4.3 Best double couple: M$_0$3.35×10^{15} NP1:φ$_s$162°, δ74°, λ-122°. NP2: φ$_s$48°, δ35°, λ-28°.*
JMA ***03*** *02:41:39.1±0.3, 33.95N×142.58E, h59^{km}, M4.3*
ISC 03 02:41:36.8±1.7**, 34.07N**±0.07×**142.63E**±0.08**, h10^{km}**±12^{km}**, n25, σ0^{s}79**/30**, mb4.8**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.49**	**294**	P	**Pn**	**02 42 04.1**	**+0.4**
BSO1				S	**Sb**	**02 42 23.0**	**+0.1**
BSO2	**Boso 2**	**1.69**	**294**	S	**Sn**	**02 42 28.4**	**-0.2**
BSO3	**Boso 3**	**1.90**	**293**	P	**Pn**	**02 42 10.4**	**+0.8**
BSO3				*e*S	**Sn**	**02 42 33.6**	**-0.2**
BSO4	**Boso 4**	**2.11**	**297**	P	**Pn**	**02 42 13.8**	**+1.2**
BSO4				S	**Sn**	**02 42 39.6**	**+0.6**
CHOJ	**Chosi**	**2.19**	**319**	P	**Pn**	**02 42 14.9**	**+1.2**
CHOJ				S	**Sn**	**02 42 41.2**	**+0.1**
JHJ2	**Mitsune**	**2.54**	**249**	P	**Pn**	**02 42 18.2**	**-0.5**
JIM2	**Oshima 3**	**2.73**	**285**	P	**Pn**	**02 42 20.5**	**-0.9**
JOD2	**Odawara 2**	**3.15**	**293**	P	**Pn**	**02 42 27.0**	**-0.5**
JAG	**Ashikaga**	**3.51**	**313**	P	**Pn**	**02 42 32.7**	**+0.2**
JRY	**Ryogami san**	**3.63**	**303**	P	**Pn**	**02 42 34.3**	**+0.1**
JYN	**Shimob**	**3.65**	**294**	P	**Pn**	**02 42 34.6**	**0.0**
JMM	**Marumori**	**4.07**	**339**	P	**Pn**	**02 42 40.0**	**-0.6**
MAT	**Matsushiro**	**4.38**	**306**	P	**Pn**	**02 42 44.3**	**-0.6**
MAT				S	**Sn**	**02 43 36.0**	**-0.7**
JIE	**Ise**	**4.92**	**275**	P	**Pn**	**02 42 51.9**	**-0.7**
JMK	**Ichinoseki**	**5.01**	**347**	P	**Pn**	**02 42 52.9**	**-0.9**
JGM	**Miyama**	**5.13**	**290**	P	**Pn**	**02 42 56.4**	**+0.9**
JYK	**Kaneyama**	**5.17**	**340**	P	**Pn**	**02 42 56.0**	**-0.2**
JIRN	**Jiri**	**48.36**	**278**	*e*P	**P**	**02 50 20.8**	**+0.1**
	22nm,0.5s,mb5.4						
KKN	**Kakani**	**49.05**	**279**	*e*P	**P**	**02 50 25.6**	**-0.4**
	12nm,0.8s,mb5.0						
DMN	**Daman**	**49.27**	**279**	*e*P	**P**	**02 50 23.6**	**-4.1**
GKN	**Gorkha**	**49.50**	**280**	*e*P	**P**	**02 50 30.4**	**+0.9**
	7.1nm,0.5s,mb5.0						
KOLN	**Koldanda**	**50.44**	**280**	*e*P	**P**	**02 50 33.5**	**-3.1**
	14nm,1.1s,mb4.9						
WB2	**Warramunga Arr**	**54.28**	**190**	*e*P	**P**	**02 51 04.4**	**-1.1**
ASPA	**Alice Springs**	**58.01**	**189**	*e*P	**P**	**02 51 33.6**	**+1.4**
NB2	**NORSAR Subarra**	**77.30**	**338**	P	**P**	**02 53 33.4**	**+0.8**
	1.4nm,0.7s,mb4.0,baz=40,slow=5.6						

IGQ 03 02:43:28.8, 0.69S×**81.04W, h9^{km}**±8^{km}**, mb4.6, 6C-4D, Error ellipse: s-maj=11.1km s-min=4.3km az=35.9, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.61**	**126**	⇑P	Pg	02 43 40.2	-0.9
SALI	**Salinas**	**1.49**	**178**	⇑P	Pn	02 43 56.4	+0.4
JUA2	**San Juan 2**	**2.48**	**79**	P	Pn	02 44 12.1	+2.0
PINO	**Pino**	**2.49**	**78**	⇓P	Pn	02 44 11.4	+1.1
TERV	**Terraza Guagua**	**2.49**	**78**	P	Pn	02 44 11.8	+1.6
IGUA	**Igualata**	**2.53**	**108**	P	Pn	02 44 11.7	+0.8
YANA	**Yana**	**2.53**	**77**	P	Pn	02 44 11.9	+1.1
NAS1	**Nasa**	**2.56**	**89**	⇓P	Pn	02 44 13.3	+2.0
VC1	**Cotopaxi 1**	**2.64**	**89**	⇑P	Pn	02 44 14.8	+2.4
CUSU	**Cusua**	**2.67**	**106**	⇓P	Pn	02 44 15.2	+2.4
TAMB	**Tambo**	**2.67**	**90**	P	Pn	02 44 14.8	+1.9
JUIV	**Juive**	**2.68**	**106**	P	Pn	02 44 14.2	+1.2
PISA	**Pisayambo**	**2.68**	**98**	P	Pn	02 44 15.2	+2.2
RETU	**Refugio**	**2.70**	**106**	⇓P	Pn	02 44 16.1	+2.7
ARRY	**Arrayan**	**2.71**	**108**	⇑P	Pn	02 44 14.1	+0.6
PATA	**Patacocha**	**2.73**	**107**	P	Pn	02 44 16.4	+2.7
ANTI	**Antisana**	**2.89**	**85**	⇑P	Pn	02 44 18.6	+2.6
CAYR	**Refugio Cayamb**	**3.11**	**77**	⇑P	Pn	02 44 22.9	+3.7
CAYR				S	Sn	02 45 05.0	+8.0
CONE	**Cono NE Rev Vo**	**3.45**	**80**	P	Pn	02 44 28.1	+4.1

MDD ***03*** *03:19:59.8±2.0, 36.81N×11.08W, mb3.8/2, Error ellipse: s-maj=17.6km s-min=14.4km az=62.0, PRXIMO*
NEIC ***03*** *03:19:59.6, 36.81N×11.10W, MG3.7(MDD), After MDD.*
CSEM ***03*** *03:20:00.3±0.3, 36.64N×11.06W, h10^{km}, ML2.8/11, Error ellipse: s-maj=6.5km s-min=5.6km az=37.0*
INMG 03 03:20:00.6±1.0**, 36.79N**×**11.11W, h2^{km}**±32^{km}**, ML1.9, Error ellipse: s-maj=35.2km s-min=4.1km az=60.0, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**2.05**	**68**	*e*Pn	Pn	03 20 34.0	-2.5
PTEO				*e*Sn	Sn	03 20 59.1	-3.8
	4.7nm,0.3s						
PTEO	**Sao Teotonio**	**2.05**	**68**	*e*Pn	Pn	03 20 34.0	-2.5
PTEO				*e*Sn	Sn	03 20 59.1	-3.8
	4.7nm,0.3s						
PLOU	**Loures**	**2.61**	**36**	*e*Pn	Pn	03 20 41.9	-2.5
PLOU				*e*Sn	Sn	03 21 12.8	-4.2
	7.4nm,0.3s						
PLOU	**Loures**	**2.61**	**36**	*e*Pn	Pn	03 20 41.9	-2.5
PLOU				*e*Sn	Sn	03 21 12.8	-4.2
	7.4nm,0.3s						
MOE	**Montemor**	**2.79**	**51**	*e*Pn	Pn	03 20 44.1	-3.0
MOE				*e*Sn	Sn	03 21 16.7	-5.1
PBEJ	**Beja**	**2.86**	**63**	*e*Pn	Pn	03 20 45.0	-3.1
PBEJ				*e*Sn	Sn	03 21 18.3	-5.3
	1.9nm,0.1s						
PBEJ	**Beja**	**2.86**	**63**	*e*Pn	Pn	03 20 45.0	-3.1
PBEJ				*e*Sn	Sn	03 21 18.3	-5.3
	1.9nm,0.1s						
PALC	**Alcoutim**	**2.98**	**76**	*e*Pn	Pn	03 20 46.8	-3.0
PALC				*e*Sn	Sn	03 21 21.8	-4.8
	2.1nm,0.1s						
PALC	**Alcoutim**	**2.98**	**76**	*e*Pn	Pn	03 20 46.8	-3.0
PALC				*e*Sn	Sn	03 21 21.8	-4.8
	2.1nm,0.1s						
EGRO	**El Granado**	**2.99**	**75**	Pn	Pn	03 20 47.2	-2.7
	0.7nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	03 21 20.9	-5.9
	1.3nm,0.1s,SNR=4.0						
EGRO	**El Granado**	**2.99**	**75**	Pn	Pn	03 20 47.2	-2.7
	0.7nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	03 21 20.9	-5.9
	1.3nm,0.1s,SNR=4.0						

EMIN	**Mina Concepcio**	3.67	73	Pn	Pn	03 20 56.2	-3.4
EMIN				Sn	Sn	03 21 38.1	-6.0
EMIN	**Mina Concepcio** 1.2nm,0.2s,SNR=20	3.67	73	Pn	Pn	03 20 56.2	-3.4
EMIN	0.1nm,0.0s,SNR=7.9			Sn	Sn	03 21 38.1	-6.0
EMIN	**Mina Concepcio** 1.2nm,0.2s,SNR=20	3.67	73	Pn	Pn	03 20 56.2	-3.4
EMIN	0.1nm,0.0s,SNR=7.9			Sn	Sn	03 21 38.1	-6.0
EBAD	**Badajoz**	3.79	58	P	Pn	03 20 58.1	-3.2
EBAD				Sn	Sn	03 21 40.8	-6.3
EBAD				S	Sn	03 21 41.7	-5.4
EBAD	**Badajoz** 0.7nm,0.1s,SNR=10	3.79	58	Pn	Pn	03 20 58.1	-3.2
EBAD	1.1nm,0.4s,SNR=6.8			Sn	Sn	03 21 40.8	-6.3
EBAD	**Badajoz** 0.7nm,0.1s,SNR=10	3.79	58	Pn	Pn	03 20 58.1	-3.2
EBAD	1.1nm,0.4s,SNR=6.8			Sn	Sn	03 21 40.8	-6.3
PCBR	**Castelo Branco**	4.18	42	*e*Pn	Pn	03 21 03.1	-3.7
PCBR	1.2nm,0.3s			*e*Sn	Sn	03 21 50.3	-6.5
PCBR	**Castelo Branco**	4.18	42	*e*Pn	Pn	03 21 03.1	-3.7
PCBR	1.2nm,0.3s			*e*Sn	Sn	03 21 50.3	-6.5
ESPR	**Espera** 2.4nm,0.2s,SNR=4.0	4.22	87	Pn	Pn	03 21 03.2	-4.1
ESPR	6.6nm,0.4s,SNR=7.9			Sn	Sn	03 21 50.7	-7.2
ESPR	**Espera** 2.4nm,0.2s,SNR=4.0	4.22	87	Pn	Pn	03 21 03.2	-4.1
ESPR	6.6nm,0.4s,SNR=7.9			Sn	Sn	03 21 50.7	-7.1
MTE	**Manteigas**	4.56	37	*e*Pn	Pn	03 21 08.2	-4.0
MTE				*e*Sn	Sn	03 21 59.0	-7.6
PVIS	**Viseu** 3.3nm,0.1s	4.66	32	*e*Sn	Sn	03 22 01.5	-7.5
PVIS	**Viseu** 1.6nm,0.1s	4.66	32	Sn	Sn	03 22 01.5	-7.5
PVRL	**Vila Real** 2.1nm,0.1s	5.20	29	*e*Sn	Sn	03 22 14.4	-8.3
PVRL	**Vila Real** 1.1nm,0.1s	5.20	29	Sn	Sn	03 22 14.4	-8.3
EADA	**Adamuz** 0.5nm,0.1s,SNR=8.3	5.38	73	Pn	Pn	03 21 19.6	-4.2
EADA	1.3nm,0.2s,SNR=7.9			Sn	Sn	03 22 18.9	-8.2
EADA	**Adamuz** 0.5nm,0.1s,SNR=8.3	5.38	73	Pn	Pn	03 21 19.6	-4.1
EADA	1.3nm,0.2s,SNR=7.9			Sn	Sn	03 22 18.9	-8.2
ELOB	**Lobios** 0.2nm,0.1s,SNR=7.9	5.60	24	Pn	Pn	03 21 22.4	-4.4
ELOB	0.8nm,0.1s,SNR=7.9			Sn	Sn	03 22 23.1	-10
ELOB	**Lobios** 0.2nm,0.1s,SNR=7.9	5.60	24	Pn	Pn	03 21 22.4	-4.4
PBRG	**Braganca** 0.9nm,0.3s	6.05	33	*e*Sn	Sn	03 22 34.5	-9.4
PBRG	**Braganca** 0.4nm,0.3s	6.05	33	Sn	Sn	03 22 34.5	-9.4
ESDC	**Sonseca Array** 0.3nm,0.3s,baz=246,slow=12,SNR=5.7	6.32	61	Pn	Pn	03 21 32.4	-4.7
ESDC	0.3nm,0.2s,baz=248,slow=23,SNR=4.0			Sn	Sn	03 22 41.9	-8.8
ESDC	**Sonseca Array** 0.3nm,0.3s,SNR=5.7	6.32	61	Pn	Pn	03 21 32.4	-4.7
ESDC	0.3nm,0.2s,SNR=4.0			Sn	Sn	03 22 41.9	-8.9

MAN 03 03:50:32.0,12.11N×125.81E,h13^{km},mb4.2,ML3.0, MS2.8,1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	0.63	216	*e*P	Pb	03 50 44.2	-0.1
BESP				*e*S	Sb	03 50 51.7	-1.0
PLP	**Palo**	1.25	221	*i* P	Pb	03 50 52.9	-2.0
PLP				*i* S	Sb	03 51 04.5	-6.1
OCLP	**Ormoc**	1.58	228	*e*P	Pn	03 51 00.1	+0.1
MMPH	**Masbate**	2.15	277	*e*P	Pn	03 51 09.0	+0.9
MSLP	**Maasin**	2.18	206	*e*P	Pn	03 51 09.5	+1.0
PVCP	**Virac**	2.19	313	*e*P	Pn	03 51 08.2	-0.5
SCPH	**Surigao**	2.34	188	⇓*e*P	Pn	03 51 10.1	-0.7
GUIM	**Jordan**	3.49	245	*e*P	Pn	03 51 26.4	-0.7
OTRP	**Odiongan**	3.71	274	*e*P	Pn	03 51 29.7	-0.7
BUKP	**Musuan**	4.27	190	*e*P	Pn	03 51 26.7	-12
PAGZ	**Pagadian**	4.87	210	*e*P	Pn	03 51 47.0	+0.3

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*PRU **03** 03:51:25.5,50.22N×19.01E*

WAR 03 03:51:24.8,50.24N×19.07E,h0^{km},ML2.6,1C-2D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.47	92	⇓*i*PG	Pg	03 51 34.4	+0.3
OJC				⇓*i*SG	Sg	03 51 41.3	+0.9
RAC	**Raciborz**	0.58	255	*e*PG	Pg	03 51 37.0	+0.5
RAC				*e*SG	Sg	03 51 46.0	+1.7
OKC	**Ostrava-Krasne**	0.72	236	*e*PG	Pg	03 51 38.7	-0.4
NIE	**Niedzica**	1.15	135	*e*PG	Pg	03 51 46.0	-1.7
NIE				*e*SG	Sg	03 52 03.0	0.0
VYHS	**Vyhne**	1.75	185	*i* PN	Pn	03 51 55.6	-1.0
VYHS				*e*SN	Sn	03 52 18.5	-1.4
DPC	**Dobruska-Polom**	1.77	275	*e*PG	Pg	03 51 55.9	-4.2
DPC				*e*SG	Sg	03 52 19.2	-4.4
KSP	**Ksiaz**	1.87	290	*e*Pn	Pn	03 51 57.6	-0.7
KSP				*e*Pg	Pg	03 51 59.7	-2.5
KSP				*e*Sg	Sg	03 52 24.4	-2.8
SMOL	**Smolenice**	2.03	213	*e*SN	Sn	03 52 28.8	+1.8
CRVS	**Cervenica-Dubn**	2.05	130	*e*PN	Pn	03 52 03.6	+2.7
CRVS				*e*SN	Sn	03 52 29.3	+1.8
PSZ	**Piszkesteto**	2.38	167	⇑*e*P	Pn	03 52 05.9	+0.3
PSZ				*e*S	Sn	03 52 40.0	+4.1
KWP	**Kalwaria**	2.43	103	*e*Pn	Pn	03 52 10.1	+3.8
KWP				*e*Sn	Sn	03 52 44.4	+7.3
KWP				*e*Sg	Sg	03 52 52.7	+7.1
KOLS	**Kolonicke sedl**	2.46	121	*e*PN	Pn	03 52 07.5	+0.8
KOLS				*e*PG	Pg	03 52 14.4	+0.5
KOLS				*e*SN	Sn	03 52 42.9	+5.0
PRU	**Pruhonice**	2.93	267	*e*PG	Pg	03 52 16.8	-6.4
PRU				*e*SG	Sg	03 52 56.5	-5.7
KHC	**Kasperske Hory**	3.73	255	*e*PN	Pn	03 52 23.0	-1.9
KHC				*e*x	x	03 52 30.1	
KHC				*e*SG	Sg	03 53 22.6	-6.5
CLL	**Collm**	4.00	288	*e*SG	Sg	03 53 34.0	-3.9

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*NEIC **03** 03:59:47.8,14.35N×94.26W,h16^{km},mb4.2/1, MD4.0(MEX),After MEX.*

MEX 03 03:59:47.9±0.8**,14.36N×94.26W,h16^{km}**±28^{km}**,MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	2.27	308	*i* P	Pn	04 00 21.7	-3.7
HUIG				*i* S	Sn	04 00 47.2	-6.1
CMIG	**Matias Romero**	2.78	348	*e*P	Pn	04 00 29.7	-3.0
CMIG				*i* S	Sn	04 01 00.9	-5.3
CCIG	**Comitan**	2.80	47	*i* P	Pn	04 00 28.9	-4.1
CCIG				*i* S	Sn	04 01 01.8	-5.0
SCX	**San Cristobal**	2.84	33	*i* P	Pn	04 00 30.2	-3.3
SCX				*i* S	Sn	04 01 04.5	-3.1
VHO	**Vista Hermosa**	3.60	319	*i* P	Pn	04 00 41.9	-2.5
VHO				*i* S	Sn	04 01 22.9	-4.0
VHO	**Vista Hermosa**	3.60	319	*i* P	Pn	04 00 41.1	-3.2
VHO				*i* S	Sn	04 01 22.0	-4.9
OXX	**Oaxaca**	3.60	319	*i* P	Pn	04 00 43.0	-1.3
OXX				*i* S	Sn	04 01 23.0	-3.9
OXX	**Oaxaca**	3.60	319	*i* P	Pn	04 00 42.5	-1.8
OXX				*i* S	Sn	04 01 23.0	-3.9
PPM	**Popocatepetl**	6.28	319	*e*P	Pn	04 01 19.4	-2.9
PPM				*i* S	Sn	04 02 26.1	-8.2
TEIG	**Tepich** 23nm,0.3s	8.17	44	*e*Pn	P	04 01 39.2	-9.4
AMTX	**Amarillo** 4.7nm,0.5s	21.51	343	*e*P	P	04 04 36.1	-2.1

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*NEIC **03** 04:10:39.3,36.72N×21.35E,h22^{km},ML3.8(ATH),After ATH.*

*CSEM **03** 04:10:39.8±0.1,36.78N×21.31E,h20^{km},ML3.8,Error ellipse: s-maj=4.5km s-min=2.0km az=9.0*

ATH 03 04:10:39.1,36.73N×21.35E,h20^{km}±4^{km}**,MD3.8**/9**,ML3.8, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	0.64	46	*e*PB	Pb	04 10 51.3	-0.2
VLI	**Veliai**	1.27	90	*e*PN	Pn	04 11 04.0	+2.0
KYTH	**Kithira**	1.43	108	*e*PN	Pn	04 11 05.5	+1.3
VLS	**Valsamata**	1.57	338	*e*PN	Pn	04 11 08.0	+1.8
NAIG	**Nisos Aigina**	1.99	58	*e*PN	Pn	04 11 14.0	+1.7
NAIG	**Nisos Aigina**	1.99	58	*e*Pn	Pn	04 11 15.0	+2.7
EVR	**Evrytania**	2.21	9	*e*PN	Pn	04 11 17.6	+2.2
ATH	**Athens Observa**	2.26	56	*e*PB	Pb	04 11 18.0	-1.0
MPAR	**Parnis Oros**	2.37	53	*e*PB	Pb	04 11 20.1	-0.8
PTL	**Penteli**	2.40	56	*e*PN	Pn	04 11 18.5	+0.4
SOI	**Samo**	4.42	289	*e*Pn	Pn	04 11 42.5	-4.4
SOI	**Samo**	4.42	289	*e*Pn	Pn	04 11 42.5	-4.4
SKO	**Skopje**	5.24	1	*e*Pn	Pn	04 12 00.5	+2.1
MGR	**Morigerati**	5.68	309	*e*Pn	Pn	04 12 00.1	-4.5
SGO	**Sicignano**	6.08	311	*e*Pn	Pn	04 12 07.5	-2.9
SGO	**Sicignano**	6.08	311	*e*Pn	Pn	04 12 07.4	-2.9
MRLC	**Muro Lucano**	6.09	313	*e*Pn	Pn	04 12 08.8	-1.7
MRLC	**Muro Lucano**	6.09	313	*e*Pn	Pn	04 12 08.8	-1.7
SDI	**San Donato**	7.68	313	*e*Pn	Pn	04 12 28.1	-4.6
SDI	**San Donato**	7.68	313	*e*Pn	Pn	04 12 28.1	-4.6
NRCA	**Norcia**	8.79	316	*e*Pn	P	04 12 44.8	-3.5
NRCA	**Norcia**	8.79	316	*e*Pn	P	04 12 44.8	-3.4

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*ATH **03** 04:13:01.9,38.76N×25.68E,h29^{km}±6^{km},MD3.5/10, ML3.5*

*ISK **03** 04:13:02.4,38.77N×25.68E,h26^{km},MD3.5*

*NEIC **03** 04:13:02.1,38.77N×25.68E,h30^{km},ML3.5(ATH),After ATH.*

*CSEM **03** 04:13:03.5±0.1,38.76N×25.76E,h30^{km},ML3.5,Error ellipse: s-maj=2.6km s-min=1.5km az=138.0*

ISC 03 04:13:02.7±0.4**,38.79N**±0.03×**25.71E**±0.04**,h26^{km},n37, σ0^{s}90**/43**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.63	44	⇑*i*PB	**Pb**	**04 13 14.4**	**-0.7**
PRK				*e*SN	**Sn**	**04 13 25.8**	**+0.7**
AYVA	**Ayvalik**	0.92	55	*i* P	**Pb**	**04 13 19.7**	**-0.2**
AYVA				*i* S	**Sb**	**04 13 30.9**	**-0.9**
BOZC	**Bozcaada**	1.08	14	*i* P	**Pn**	**04 13 21.8**	**-0.6**
BOZC				*i* S	**Sb**	**04 13 34.7**	**-1.7**
BLCB	**Balcova**	1.12	111	*i* PN	**Pn**	**04 13 23.0**	**+0.1**
BLCB				SN	**Sn**	**04 13 38.2**	**+0.7**
EZN	**Ezine**	1.14	24	*i* PN	**Pn**	**04 13 23.2**	**0.0**
IZM	**Izmir**	1.28	107	*i* PN	**Pn**	**04 13 25.3**	**+0.2**
KDAG	**Bornova**	1.28	107	*i* P	**Pn**	**04 13 25.2**	**+0.1**
KDAG				*i* S	**Sn**	**04 13 40.0**	**-1.6**
SMG	**Samos**	1.40	140	*e*PN	**Pn**	**04 13 28.5**	**+1.7**
CANB	**Canakkale**	1.61	40	PN	**Pn**	**04 13 30.5**	**+0.5**
PTL	**Penteli**	1.63	244	*e*PN	**Pn**	**04 13 30.7**	**+0.5**
PTL	**Penteli**	1.63	244	*e*Pn	**Pn**	**04 13 31.1**	**+0.9**
AKS	**Akhisar**	1.64	86	*i* PN	**Pn**	**04 13 30.5**	**+0.1**
MPAR	**Parnis Oros**	1.68	248	*e*PN	**Pn**	**04 13 31.7**	**+0.8**
APE	**Apeiranthos**	1.72	185	*i* PN	**Pn**	**04 13 31.2**	**-0.3**
APE	**Apeiranthos**	1.72	185	*e*Pb	**Pb**	**04 13 31.5**	**-2.0**
ATH	**Athens Observa**	1.77	243	*e*PB	**Pb**	**04 13 31.5**	**-2.8**
BALB	**Balikesir**	1.89	63	*e*PN	**Pn**	**04 13 34.0**	**+0.1**
AYDN	**Tasoluk**	2.04	123	*i* P	**Pn**	**04 13 39.7**	**+3.6**
AYDN				*i* S	**Sn**	**04 14 07.2**	**+6.1**
EDC	**Edincik**	2.28	46	*i* PN	**Pn**	**04 13 39.6**	**+0.1**
BNT	**Bandirma**	2.32	47	*i* PN	**Pn**	**04 13 40.1**	**+0.1**
MFT	**Murefte**	2.33	31	*e*PN	**Pn**	**04 13 40.8**	**+0.6**
RDO	**Rodhopi**	2.36	357	*e*PN	**Pn**	**04 13 41.0**	**+0.4**
DST	**Dursunbey**	2.41	69	*e*PN	**Pn**	**04 13 41.8**	**+0.5**
KCT	**Karacabey**	2.52	53	*i* PN	**Pn**	**04 13 43.5**	**+0.6**
ORLT	**Orhaneli**	2.77	62	*e*PN	**Pn**	**04 13 47.0**	**+0.6**
DENT	**Denizli**	2.81	111	*e*PN	**Pn**	**04 13 47.1**	**+0.1**
KDZ	**Kurdzhali**	2.87	356	*i* P	**Pn**	**04 13 47.0**	**-0.9**
RZN	**Rozhen**	2.99	346	*i* P	**Pn**	**04 13 49.0**	**-0.7**
VLI	**Veliai**	3.02	228	*e*PN	**Pn**	**04 13 50.5**	**+0.5**
DIM	**Dimitrovgrad**	3.26	358	*i* P	**Pn**	**04 13 53.0**	**-0.4**
KYTH	**Kithira**	3.29	221	*e*PN	**Pn**	**04 13 53.9**	**+0.1**
BADT	**Buyukada**	3.33	51	*e*PN	**Pn**	**04 13 55.2**	**+0.7**
ALT	**Altintas**	3.44	84	*e*PN	**Pn**	**04 13 55.4**	**-0.6**
VAM	**Vamos**	3.59	200	*e*PN	**Pn**	**04 13 57.0**	**-1.1**
KKB	**Krupnik**	3.67	328	*i* P	**Pn**	**04 14 00.0**	**+0.7**
PGB	**Panagyurishte**	3.94	343	*i* P	**Pn**	**04 14 03.0**	**0.0**
VTS	**Vitosha**	4.25	334	*i* P	**Pn**	**04 14 10.0**	**+2.5**

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*BJI **03** 04:27:50.7,20.29S×66.90E,h25^{km},mB5.1,mb4.9,Ms5.1, Msz4.9*

*NEIC **03** 04:27:52.8±0.2,20.22S×67.45E,h10^{km},mb5.1/41,Error ellipse: s-maj=6.8km s-min=6.1km az=190.0*

*HRVD **03** 04:27:52.8±0.3,20.12S×67.38E,h12^{km},MW5.2/63, Centroid moment Tensor Solution. LP body waves: s41,c61;Mantle waves: s63,c105; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.59±.18; $M_{\theta\theta}$6.33±.17; $M_{\phi\phi}$-5.73±.17; $M_{r\theta}$0.97±.42; $M_{\theta\phi}$-2.96±.16; $M_{\phi r}$1.11±.46; Best double couple: $M_0$6.889×10^{16} NP1: ϕ_s148°,δ78°,λ-5°. NP2:ϕ_s239°,δ85°,λ-168°. Principal axes: T 7.082, Plg5°, Azm13°; N -.38, Plg77°, Azm259°; P -6.696, Plg12°, Azm104°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **03** 04:27:54.6±1.8,20.07S×67.33E,h33^{km},mb5.0/9 Error ellipse: s-maj=27.6km s-min=13.3km az=98.0*

ISC 03 04:27:51.2±0.3**,20.18S**±0.05×**67.49E**±0.05**,h10^{km}, (h17^{km}**±2.5^{km}**:pP-P),n150,**σ**0^{s}95**/141**,mb5.0**/63**,MS4.9**/11**, 21C-8D,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia** 282nm,1.2s	13.57	21	*e*P	**P**	**04 31 06.1**	**-0.3**
PALK	**Pallekele** 45nm,1.6s,mb5.0	30.21	27	P	**P**	**04 34 05.5**	**+1.1**
KMBO	**Kilima Mbogo** 13nm,1.0s,mb4.8	35.11	299	*e*P	**P**	**04 34 47.3**	**+0.3**
KMBO				*e*		04 34 53.8	
LSZ	**Lusaka** 11nm,0.8s,mb4.6	37.69	271	*e*P	**P**	**04 35 07.9**	**-0.9**
LBTB	**Lobatse** 50nm,1.2s,mb5.1	38.87	255	*e*P	**P**	**04 35 17.9**	**-0.7**
HYB	**Hyderabad** 60nm,1.0s,mb5.3	38.90	17	*e*P	**P**	**04 35 19.0**	**0.0**
HYB	**Hyderabad** 60nm,1.0s,mb5.3	38.90	17	*i* P	**P**	**04 35 19.0**	**0.0**
POO	**Poona**	38.97	10	*e*	**P**	**04 35 20.0**	**+0.5**
BOSA	**Boshof** 14nm,0.8s,mb4.7	39.21	249	*e*P	**P**	**04 35 20.7**	**-0.7**
RBK	**Rabkut**	39.65	340	⇑P	**P**	**04 35 26.3**	**+1.1**
SHAO	**Shalim**	39.71	342	⇓P	**P**	**04 35 26.8**	**+1.1**
ABTO	**Aybut**	39.81	339	⇓P	**P**	**04 35 26.8**	**+0.2**
SUR	**Sutherland** 212nm,1.7s,mb5.6	43.28	244	*e*P	**P**	**04 35 54.0**	**-0.9**
BSY	**Bisya** SNR=6.5	43.83	346	⇑P	**P**	**04 35 59.2**	**-0.2**
SMDO	**Samad**	43.95	347	⇑P	**P**	**04 36 00.1**	**-0.2**
ARQ	**Araqi** SNR=5.5	44.55	346	⇓P	**P**	**04 36 04.7**	**-0.6**
NWAO	**Narrogin (SRO)** 16nm,1.3s,mb4.8	45.89	117	P	**P**	**04 36 15.0**	**-0.8**
ASHO	**Ashiyiah** SNR=7.8	45.96	345	⇓P	**P**	**04 36 15.8**	**-0.7**
TSUM	**Tsumeb** 13nm,1.1s,mb4.8	46.86	262	*e*P	**P**	**04 36 22.7**	**-0.9**
BANOM	**Banah**	47.09	346	⇑P	**P**	**04 36 22.8**	**-2.6**
MAW	**Mawson** 38nm,0.9s,mb5.4	47.51	182	*e*P	**P**	**04 36 28.5**	**+0.4**
MBWA	**Marble Bar** 63nm,1.4s,mb5.5	48.70	101	*e*P	**P**	**04 36 37.5**	**-0.5**
MBWA				*e*		04 36 44.7	
CM31	**Chiang Mai Arr** 23nm,1.0s,mb5.2	49.25	41	*e*P	**P**	**04 36 42.6**	**+0.3**
CM31				*e*		04 36 51.3	
KOLN	**Koldanda** 132nm,1.3s,mb5.8	50.15	19	*e*P	**P**	**04 36 49.5**	**+0.5**
DMN	**Daman** 63nm,1.1s,mb5.6	50.47	20	*e*P	**P**	**04 36 51.8**	**+0.3**
PKI	**Pulchoki** 30nm,0.9s,mb5.2	50.53	21	*e*P	**P**	**04 36 51.7**	**-0.3**
GKN	**Gorkha** 69nm,1.1s,mb5.5	50.69	20	*e*P	**P**	**04 36 53.5**	**+0.4**
KKN	**Kakani** 65nm,1.1s,mb5.5	50.70	20	*e*P	**P**	**04 36 53.5**	**+0.3**
JIRN	**Jiri** 45nm,1.0s,mb5.3	50.88	22	*e*P	**P**	**04 36 54.9**	**+0.3**
THN	**Thein Dam**	52.90	9	⇑*i*P	**P**	**04 37 08.4**	**-1.4**
FITZ	**Fitzroy Crossi** 24nm,0.8s,mb5.3	54.73	98	*e*P	**P**	**04 37 23.9**	**+0.5**
KMI	**Kunming**	56.59	39	P	**P**	**04 37 41.4**	**+4.6**
KMI				S	**S**	**04 45 31.9**	**+5.2**
KMI	comp=Z,16nm,1.4s,mb4.9			AMB	AMB		
KMI	comp=N,482nm,16.7s,MS4.7			LR	LR		
KMI	comp=E,399nm,21.0s,MS4.7			LR	LR		
KMI	comp=Z,553nm,17.9s,MS4.7			LR	LR		
KMI	**Kunming** comp=Z,16nm,1.4s,mb4.9	56.59	39	P	**P**	**04 37 41.4**	**+4.6**
KMI				S	**S**	**04 45 31.9**	**+5.2**
KMI				sS		04 45 37.8	
KMI	comp=Z,550nm,17.9s,MS4.7			LR	LR		
EIL	**Elat** comp=Z,14nm,1.0s,mb4.9	58.64	327	P	**P**	**04 37 51.4**	**+0.2**
GYA	**Guiyang**	59.94	41	⇑*i*P	**P**	**04 37 59.9**	**-0.3**
GYA				S	**S**	**04 46 12.3**	**+1.7**
GYA	comp=Z,10.0nm,1.1s,mb4.8			AMB	AMB		
GYA	comp=Z,50nm,3.1s			AMB	AMB		
GYA	comp=N,1µm,5.3s			LR	LR		
GYA	comp=E,3µm,7.5s			LR	LR		
GYA	comp=Z,850nm,8.3s			LR	LR		
ASPA	**Alice Springs**	61.21	107	*e*P	**P**	**04 38 09.0**	**+0.1**
AML	**Almayashu** SNR=5.2	62.26	5	P	**P**	**04 38 15.2**	**-0.5**
WB2	**Warramunga Arr**	62.38	102	*e*P	**P**	**04 38 23.3**	**+6.5**
WRAB	**Tennant Creek**	62.38	102	⇑*i*P	**P**	**04 38 17.3**	**+0.5**
WRAB	**Tennant Creek** comp=Z,26nm,1.0s,mb5.3	62.38	102	*e*P	**P**	**04 38 16.7**	**-0.1**
WRAB				*e*		04 38 23.5	
KAKA	**Kakadu** comp=Z,14nm,0.8s,mb5.2	62.41	94	*e*P	**P**	**04 38 17.0**	**-0.1**
ULHL	**Ulahol** SNR=7.0	62.63	7	P	**P**	**04 38 17.4**	**-0.7**
EKS2	**Erkin-Say** SNR=6.2	62.79	5	P	**P**	**04 38 19.4**	**+0.2**
AAK	**Ala-Archa** SNR=5.3	62.83	6	P	**P**	**04 38 19.5**	**0.0**
AAK	**Ala-Archa**	62.83	6	*c i*P	**P**	**04 38 17.5**	**-1.9**
AAK	comp=Z,20nm,1.7s,mb5.0			pmax	pmax		
AAK	**Ala-Archa** comp=Z,16nm,1.2s,mb5.0	62.83	6	*e*P	**P**	**04 38 17.8**	**-1.6**
TKM2	**Tokmak 2** SNR=7.8	63.22	7	P	**P**	**04 38 21.2**	**-0.8**
USP	**Ospenovka** SNR=6.0	63.45	6	P	**P**	**04 38 22.7**	**-0.9**
GNI	**Garni** comp=Z,55nm,1.2s,mb5.5	63.65	341	*e*P	**P**	**04 38 24.1**	**-0.9**
MALT	**Malatya** comp=Z,12nm,1.2s,mb4.8	64.26	335	*e*P	**P**	**04 38 25.3**	**-3.7**
SNAA	**Sanae**	64.83	199	⇑*i*P	**P**	**04 38 30.8**	**-1.3**
SNAA	**Sanae**	64.83	199	*e*	**P**	**04 38 36.0**	**+3.9**
SNAA	**Sanae**	64.83	199	*e*	**P**	**04 38 37.5**	**+5.4**
SNAA	**Sanae**	64.83	199	⇓*i*P	**P**	**04 38 31.3**	**-0.8**
SNAA	**Sanae** comp=Z,96nm,1.1s,mb5.7	64.83	199	*e*P	**P**	**04 38 30.4**	**-1.7**
LZH	**Lanzhou**	65.68	32	⇑P	**P**	**04 38 37.6**	**-0.6**
LZH				*e*PP	PP	04 41 05.7	+0.6
LZH				*e*S	S	04 47 23.5	+1.0
LZH	comp=Z,32nm,1.5s,mb5.1			AMB	AMB		
LZH	comp=Z,135nm,6.0s			AMB	AMB		
LZH	comp=N,614nm,15.0s			LR	LR		
LZH	comp=Z,753nm,17.9s,MS4.9			LR	LR		
LZH	**Lanzhou** comp=Z,32nm,1.5s,mb5.1	65.68	32	⇑P	**P**	**04 38 37.6**	**-0.6**
LZH				pP	pP	04 38 40.8	-0.5
LZH				sP	sP	04 38 42.3	-0.1
LZH				*e*PP	PP	04 41 05.7	+0.6
LZH				*e*S	S	04 47 23.5	+1.0
LZH				sS		04 47 30.6	
LZH				SS	rx	04 49 39.7	
LZH	comp=Z,750nm,17.9s,MS4.9			LR	LR		
VNA2	**Neumayer--Watz**	66.15	200	⇑*i*P	**P**	**04 38 41.4**	**+0.8**
VNA2	**Neumayer--Watz**	66.15	200	*e*	**P**	**04 38 45.4**	**+4.8**
VNA2	**Neumayer--Watz**	66.15	200	*e*	**P**	**04 38 46.9**	**+6.3**
WMQ	**Urumqi**	66.32	16	P	**P**	**04 38 42.0**	**-0.1**
WMQ				XP	sP	04 38 49.0	+2.6
WMQ				PP	PP	04 41 10.0	-0.4
WMQ				S	S	04 47 30.0	-0.2
WMQ				SS	SS	04 51 48.0	0.0
WMQ	comp=N,1µm,20.0s,MS5.1			LR	LR		
WMQ	comp=E,287nm,20.0s,MS5.1			LR	LR		
WMQ	comp=Z,412nm,20.0s,MS4.6			LR	LR		
VNA1	**Neumayer--Stat**	66.40	201	⇑*i*P	**P**	**04 38 37.2**	**-5.0**
VNA1	**Neumayer--Stat**	66.40	201	*e*	**P**	**04 38 42.3**	**+0.1**
VNA1	**Neumayer--Stat**	66.40	201	*e*	**P**	**04 38 43.6**	**+1.4**
STKA	**Stephens Creek**	66.48	117	P	**P**	**04 38 41.9**	**-1.5**
GTA	**Gaotai**	66.53	27	⇑P	**P**	**04 38 43.8**	**+0.2**
GTA				AP	pP	04 38 50.7	+4.0
GTA				XP	sP	04 38 54.0	+6.2
GTA				PP	PP	04 41 14.9	+2.8
GTA				S	S	04 47 37.8	+4.9
GTA				XS		04 47 51.5	
GTA	comp=Z,15nm,1.0s,mb5.0			AMB	AMB		
GTA	comp=Z,92nm,4.2s			AMB	AMB		
GTA	comp=N,389nm,14.4s,MS4.9			LR	LR		
GTA	comp=E,306nm,13.3s,MS4.9			LR	LR		
GTA	comp=Z,338nm,17.1s,MS4.6			LR	LR		
XAN	**Xi’an**	66.81	37	P	**P**	**04 38 44.4**	**-1.0**
XAN				AP	pP	04 38 51.4	+2.9
XAN	comp=Z,14nm,1.0s,mb5.0			AMB	AMB		
VNA3	**Neumayer Olymp**	66.92	200	⇑*i*P	**P**	**04 38 41.8**	**-3.7**
VNA3	**Neumayer Olymp**	66.92	200	*e*	**P**	**04 38 46.2**	**+0.7**
VNA3	**Neumayer Olymp**	66.92	200	*e*	**P**	**04 38 47.8**	**+2.3**
WHN	**Wuhan**	67.61	43	⇓P	**P**	**04 38 51.0**	**+0.4**
KIV	**Kislovodsk**	67.75	341	*e*P	**P**	**04 38 48.7**	**-2.5**
KIV				*e*		04 39 15.4	
KIV				*e*S	S	04 47 43.2	-4.2
KIV				*e*SS	SS	04 52 03.5	-6.6
KIV	comp=Z,16nm,1.1s,mb5.0			pmax	pmax		
KIV	**Kislovodsk** comp=Z,24nm,1.0s,mb5.2	67.75	341	*e*P	**P**	**04 38 48.8**	**-2.4**
SOC	**Sochi**	68.38	339	*e*P	**P**	**04 38 51.6**	**-3.5**
SOC				*e*		04 39 16.8	
SOC				*e*		04 41 20.1	
SOC				*e*PPP	PPP	04 42 59.4	-6.2
SOC				*e*S	S	04 47 51.3	-3.6
SOC				*e*		04 48 46.0	
SOC				*e*SS	SS	04 52 11.0	-8.9
SOC	comp=Z,21nm,1.2s,mb5.0			pmax	pmax		
SOC	comp=N,10.0nm,0.6s			pmax	pmax		
QSPA	**South Pole Qui** comp=N,22nm,1.0s,mb5.0	69.93	180	*e*P	**P**	**04 39 04.1**	**0.0**
KURK	**Kurchatov**	71.26	7	*c i*P	**P**	**04 39 11.6**	**-1.0**
KURK	**Kurchatov** comp=N,21nm,1.2s,mb4.9	71.26	7	*e*P	**P**	**04 39 07.0**	**-5.6**
NJ2	**Nanjing**	71.52	44	*e*P	**P**	**04 39 15.8**	**+1.3**
NJ2				AP	pP	04 39 20.5	+2.9
NJ2				XP	sP	04 39 22.9	+4.2
NJ2				S	S	04 48 35.0	+3.1

NJ2				XS		04 48 44.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,360nm,5.0s						
NJ2				LR	LR		
	comp=N,1µm,24.0s,MS5.2						
NJ2				LR	LR		
	comp=E,800nm,19.4s,MS5.2						
NJ2				LR	LR		
	comp=Z,570nm,19.0s,MS4.9						
SIM	Simferopol’	71.60	336	*e*P	P	04 39 14.6	-0.1
SIM				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SSE	Sheshan	72.49	46	P	P	04 39 22.8	+2.5
SSE				XP	sP	04 39 36.1	+12
SSE				S	S	04 48 46.9	+3.9
SSE				XS		04 49 03.3	
SSE				SS	SS	04 53 28.2	+4.3
SSE				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,98nm,3.6s						
SSE				LR	LR		
	comp=N,303nm,29.1s,MS4.8						
SSE				LR	LR		
	comp=E,612nm,29.1s,MS4.8						
SSE				LR	LR		
	comp=Z,396nm,25.2s,MS4.6						
SSE	Sheshan	72.49	46	P	P	04 39 22.8	+2.5
	comp=Z,17nm,0.8s,mb5.0						
SSE				sP	sP	04 39 36.1	+12
SSE				S	S	04 48 46.9	+3.9
SSE				sS		04 49 03.3	
SSE				SS	SS	04 53 28.2	+4.3
SSE				LR	LR		
	comp=Z,400nm,25.2s,MS4.6						
CTAO	Charters Tower	73.19	106	P	P	04 39 25.0	+0.3
	comp=Z,8.5nm,0.9s,mb4.7						
HHC	Hu-ho-hao-te	73.22	33	⇑P	P	04 39 24.6	+0.2
HHC				AP	pP	04 39 28.8	+1.2
HHC				XP	sP	04 39 32.0	+3.3
HHC				PCP	PcP	04 39 41.5	+0.3
HHC				PP	PP	04 42 09.6	0.0
HHC				S	S	04 48 48.8	-2.5
HHC				SKS	SKS	04 49 24.4	-6.2
HHC				SCS	ScS	04 49 27.9	-1.5
HHC				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.7						
HHC				AMB	AMB		
	comp=Z,106nm,5.2s						
HHC				LR	LR		
	comp=N,167nm,13.0s,MS4.7						
HHC				LR	LR		
	comp=E,210nm,13.0s,MS4.7						
HHC				LR	LR		
	comp=Z,311nm,14.2s,MS4.7						
CHKZ	Chkalovo	73.59	2	*e*P	P	04 39 23.1	-3.2
	comp=Z,9.9nm,1.1s,mb4.7						
BJI	Beijing	75.14	37	P	P	04 39 39.9	+4.3
BJI				S	S	04 49 12.7	0.0
BJI				LR	LR		
	comp=N,950nm,23.9s,MS5.3						
BJI				LR	LR		
	comp=E,1µm,22.6s,MS5.3						
BJI				LR	LR		
	comp=Z,2µm,23.9s,MS5.2						
NVS	Novosibirsk	75.92	9	*i* P	P	04 39 37.9	-1.7
NVS				pmax	pmax		
	comp=N,17nm,1.5s						
NVS				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.7						
NVS				pmax	pmax		
	comp=E,9.0nm,1.6s						
ULN	Ulaanbaatar	76.46	26	⇓*i*P	P	04 39 43.1	+0.3
ULN	Ulaanbaatar	76.46	26	*e*P	P	04 39 42.3	-0.5
	comp=E,11nm,1.1s,mb4.7						
ARU	Arti	76.68	355	⇑*i*P	P	04 39 35.4	-8.5
ARU				*e*		04 39 48.4	
ARU				*e*		04 49 42.4	
ARU				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
SVE	Sverdlovsk	76.92	356	⇑*e*P	P	04 39 44.2	-1.0
ZAK	Zakamensk	77.03	23	*e*P	P	04 39 45.6	-0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
PMG	Port Moresby	77.18	95	⇑*i*P	P	04 39 50.0	+2.5
PMG	Port Moresby	77.18	95	P	P	04 39 44.1	-3.4
	comp=Z,27nm,0.9s,mb5.2						
TLY	Talaya	78.23	22	*e*P	P	04 39 53.7	+1.1
TLY				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
OBN	Obninsk	79.49	343	⇓*e*P	P	04 39 55.6	-3.8
OBN				*e*		04 40 03.6	
OBN				*e*		04 40 09.2	
OBN						04 42 57.0	
OBN				*e*		04 44 45.7	
OBN				*e*S	S	04 50 03.0	+3.6
OBN				pmax	pmax		
	comp=Z,27nm,1.7s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.6						
KOLS	Kolonicke sedl	79.71	332	*e*P	P	04 40 01.1	+0.4
KOLS				*e*sP	sP	04 40 07.9	+3.0
KWP	Kalwaria	80.03	332	*e*P	P	04 40 02.1	-0.3
KWP				*e*PcP	PcP	04 40 10.3	0.0
CRVS	Cervenica-Dubn	80.05	331	*e*P	pP	04 40 07.5	+1.8
CRVS	Cervenica-Dubn	80.05	331	*e*pP	pP	04 40 07.5	+1.8
SRO	Srobarova	80.76	329	*e*P	P	04 40 14.2	+7.9
SRO	Srobarova	80.76	329	*e*	P	04 40 14.2	+7.9
VYHS	Vyhne	80.98	330	*e*P	P	04 40 06.9	-0.5
VYHS				*e*		04 40 15.1	
ZST	Bratislava	81.61	329	*e*P	P	04 40 17.1	+6.4
ZST	Bratislava	81.61	329	*e*	P	04 40 17.1	+6.4
OKC	Ostrava-Krasne	82.24	330	*e*P	P	04 40 13.6	-0.4
PGF	Pioggiola	82.43	321	*e*P	P	04 40 16.0	+0.9
	comp=Z,79nm,1.4s,mb5.2						
MORC	Moravsky Berou	82.48	330	*e*P	P	04 40 15.4	+0.2
	comp=Z,9.9nm,1.2s,mb4.6						
CN2	Changchun	82.85	38	⇑P	P	04 40 17.1	-0.2
CN2				*e*S	S	04 50 35.1	+0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,500nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,800nm,19.0s,MS5.1						
SUW	Suwalki	83.11	335	P	P	04 40 18.5	+0.1
	comp=Z,25nm,0.9s,mb5.2						
SUW				*e*pP	pP	04 40 26.1	+4.5
SUW	Suwalki	83.11	335	*e*P	P	04 40 22.3	+3.9
SUW				*e*pP	pP	04 40 26.1	+4.5
GUMO	Guam	83.13	73	*e*P	P	04 40 15.2	-4.1
	comp=Z,489nm,1.4s						
UPC	Upice	83.70	330	*e*P	P	04 40 22.6	+1.1
KHC	Kasperske Hory	83.98	328	*i* P	P	04 40 20.5	-2.4
KHC	Kasperske Hory	83.98	328	*e*P	P	04 40 25.1	+2.2
PRU	Pruhonice	84.06	329	*e*P	P	04 40 30.1	+6.8
PVCC	Panska Ves	84.40	329	*e*P	P	04 40 32.5	+7.5
BRG	Berggiesshubel	84.93	329	*e*P	P	04 40 35.3	+7.7
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
MBDF	Montbardon	85.01	321	*e*P	P	04 40 28.9	+0.7
	comp=Z,17nm,1.2s,mb4.8						
NKC	Novy Kostel	85.25	328	*e*P	P	04 40 35.4	+6.2
SMRF	Simiane la Rot	85.30	320	*e*P	P	04 40 30.3	+0.7
	comp=Z,54nm,1.2s,mb5.3						
LPG	La Plagne	85.46	322	*e*P	P	04 40 31.2	+0.8
	comp=Z,30nm,1.4s,mb4.9						
GRF	Grafenberg Arr	85.53	327	*e*P	P	04 40 38.4	+7.8
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.8						
ORIF	Oris-en-Rattie	85.64	321	*e*P	P	04 40 32.3	+1.0
CLL	Collm	85.67	329	*e*P	P	04 40 39.0	+7.7
CLL	Collm	85.67	329	*e*	P	04 40 39.0	+7.7
MDJ	Mudanjiang	85.76	39	P	P	04 40 31.9	0.0
MDJ				PP	PP	04 43 51.1	-1.7
MDJ				S	S	04 51 05.5	+2.4
MDJ				SS	SS	04 56 43.8	+0.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,67nm,3.9s						
MDJ				LR	LR		
	comp=N,768nm,33.3s,MS4.9						
MDJ				LR	LR		
	comp=E,389nm,35.6s,MS4.9						
MDJ				LR	LR		
	comp=Z,797nm,32.1s,MS4.9						
HINF	Hinteralfeld	86.72	324	*e*P	P	04 40 37.6	+1.0
BOD	Bodaibo	86.77	23	*e*P	P	04 40 34.4	-2.2
MAJO	Matsushiro	87.33	50	P	P	04 40 39.5	-0.3
	comp=Z,18nm,0.8s,mb5.3						
CAF	Calviac	87.93	320	*e*P	P	04 40 42.5	0.0
MEZF	Maizieres J’vi	88.11	324	*e*P	P	04 40 44.4	+1.2
AVF	Avril sur Loir	88.14	322	*e*P	P	04 40 43.8	+0.3
SSF	Saint Saulge	88.20	322	*e*P	P	04 40 44.6	+0.9
	comp=Z,5.6nm,0.8s,mb4.6						
BGF	Bois d’Agland	88.31	321	*e*P	P	04 40 45.6	+1.3
RJF	Les Rejaudoux	88.45	320	*e*P	P	04 40 46.0	+1.0
	comp=Z,12nm,0.9s,mb4.8						
TCF	Toulx Ste Croi	88.55	321	*e*P	P	04 40 46.5	+1.1
LFF	La Frestale	88.74	319	*e*P	P	04 40 46.8	+0.4
	comp=Z,55nm,1.2s,mb5.5						
KLR	Kul’dur	89.51	36	*e*P	P	04 40 43.5	-6.4
MFF	Saint Martin d	90.11	320	*e*P	P	04 40 53.7	+0.9
	comp=Z,14nm,1.1s,mb4.9						
ROSF	Rostrenen	92.80	321	*e*P	P	04 41 06.1	+1.0
TIXI	Tiksi	100.52	16	*e*P	P	04 41 38.7	-1.1
TIXI				*e*SS	SS	05 00 15.4	+2.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
IMA	Indian Mountai	126.98	20	*e*PKPdf	PKPdf	04 46 57.7	-0.4
EDM	Edmonton	147.01	1	*e*PKPdf	PKPdf	04 47 33.9	-1.1
EDM				*e*PKPbc	PKPdf	04 47 35.4	+0.5
ULM	Lac du Bonnet	147.22	340	*e*PKPdf	PKPdf	04 47 33.6	-1.8
ULM				*e*PKPbc	PKPdf	04 47 34.8	-0.6
DGMT	Dagmar	150.99	349	*e*PKPbc	PKPdf	04 47 45.8	+4.4
LAO	LASA Array	153.06	350	*e*PKPbc	PKPdf	04 47 50.7	+6.2
CHMT	Chamberlain Mo	153.32	1	*e*PKPbc	PKPdf	04 47 50.3	+5.5
MSO	Missoula	153.39	2	*e*PKPbc	PKPdf	04 47 50.3	+5.4
MSU	Marysvale	161.72	359	*e*PKPdf	PKPdf	04 47 56.2	+0.9
JCT	Junction City	164.61	314	*e*PKPdf	PKPdf	04 47 58.4	0.0
JCT				*e*PKPbc	PKPdf	04 48 05.9	+7.4

NNC ***03*** *04:34:35.6±2.3, 42.97N×72.88E, mpv3.0, Error ellipse: s-maj=28.0km s-min=12.2km az=27.0*

KNET ***03*** *04:34:37.5±1.0, 42.92N×73.04E, ml2.5, Error ellipse: s-maj=5.7km s-min=2.9km az=111.0*

ISC 03 04:34:34.7±1.7**, 43.02N**±0.07×**72.6E**±0.1**, h33^{km}, n11, σ1^{s}11**/21**, 11C-8D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKS2	Erkin-Say	0.94	112	⇑P	P	04 34 49.8	-1.7
	16nm,0.1s,SNR=42						
AML	Almayashu	1.20	137	P	P	04 34 54.6	-0.6
	12nm,0.1s,SNR=52						
AML				⇓S	S	04 35 08.8	-1.8
	49nm,0.2s						
USP	Ospenovka	1.42	79	⇓P	P	04 34 58.4	0.0
	20nm,0.1s,SNR=55						
USP				⇑S	S	04 35 15.3	-0.8
	140nm,0.2s						
AAK	Ala-Archa	1.45	105	⇑P	P	04 34 59.0	+0.2
	3.3nm,0.2s						
AAK				⇓S	S	04 35 16.2	-0.7
	15nm,0.3s						
AAK	Ala-Archa	1.45	105	P	P	04 34 59.1	+0.3
	18nm,0.1s,SNR=19						
AAK				⇓S	S	04 35 16.4	-0.5
	46nm,0.2s						
CHMS	Chumysh	1.58	90	⇓P	P	04 35 00.9	+0.1
	24nm,0.2s,SNR=30						
CHMS				⇑S	S	04 35 20.0	-0.3
	61nm,0.1s						
UCH	Uchtor	1.62	118	⇑P	P	04 35 02.0	+0.7
	7.1nm,0.1s,SNR=11						
UCH				⇓S	S	04 35 21.9	+0.7
	38nm,0.3s						
KBK	Karagaybulak	1.77	101	⇑P	P	04 35 04.4	+1.0
	21nm,0.1s,SNR=27						
KBK				⇑S	S	04 35 26.2	+1.3
	115nm,0.2s						
KZA	Kyzart	2.18	115	⇑P	P	04 35 12.4	+3.1
	14nm,0.2s,SNR=18						
KZA				⇓S	S	04 35 39.8	+4.5
	27nm,0.2s						
ULHL	Ulahol	2.80	105	⇑P	P	04 35 21.6	+3.4
	5.6nm,0.2s,SNR=13						
ULHL				⇑S	S	04 35 57.2	+6.1
	20nm,0.4s						
MK05	Makanchi Array	7.85	58	⇑Pn	Pn	04 36 28.6	-0.9
	0.4nm,0.5s,baz=238,slow=14						
MK05				⇓Sn	Sn	04 37 58.2	-0.1
	0.5nm,0.6s,baz=242,slow=27						

BJI ***03*** *04:51:15.5, 5.51N×93.22E, h34^{km}, mB5.3, mb5.3, Ms5.1, Msz4.9*

MOS ***03*** *04:51:15.7±1.0, 5.63N×93.34E, h33^{km}, mb5.6/49, MS4.8/23, Error ellipse: s-maj=11.0km s-min=5.8km az=112.6*

NEIC ***03*** *04:51:17.3±0.1, 5.62N×93.25E, h30^{km}, mb5.3/103, MS5.0/48, Error ellipse: s-maj=6.1km s-min=3.9km az=222.0*

HRVD ***03*** *04:51:17.3±0.2, 5.57N×93.25E, h35^{km}±1^{km}, MW5.5/69, Centroid moment Tensor Solution. LP body waves: s51,c102;Mantle waves: s69,c136; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.33±.05; $M_{\theta\theta}$-1.44±.04; $M_{\phi\phi}$1.12±.05; $M_{r\theta}$-0.90±.07; $M_{\theta\phi}$-2.00±.04; $M_{\phi r}$0.41±.08; Best double couple: $M_0$2.585×10^{17} NP1: ϕ_s17°,δ67°,λ7°. NP2:ϕ_s285°,δ84°,λ157°. Principal axes: T 2.512, Plg21°, Azm239°; N .15, Plg66°, Azm91°; P -2.658, Plg12°, Azm333°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CSEM ***03*** *04:51:21.0, 6.60N×93.25E, h33^{km}, mb5.5*

ISC 03 04:51:17.2±0.6**, 5.56N**±0.03×**93.30E**±0.02**, h45**^{km}±5^{km}**, h45**^{km}±2.0^{km}**:pP-P, n403, σ1^{s}10**/390**, mb5.3**/142**, MS4.9**/81**, 42C-45D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	7.45	77	P	P	04 53 05.0	-1.0
	1µm,1.0s						
SNG	Songkhla	7.45	77	P	P	04 53 05.0	-1.0
	1µm,1.0s						
IPM	Ipoh	7.76	97	P	P	04 53 09.8	-0.5
NNT	Nongplab	9.44	42	P	P	04 53 33.5	0.0
KGM	Kluang	10.60	109	P	P	04 53 48.1	-1.4
NST	Nakhon Sawan	12.08	33	P	P	04 54 10.0	+0.5
PALK	Pallekele	12.63	278	*e*P	P	04 54 15.3	-1.6
	27nm,0.6s						
PALK				*e*S	Sx	04 56 10.3	
CM31	Chiang Mai Arr	13.95	23	*e*P	P	04 54 34.2	-0.1
	335nm,0.9s						
CM31				*e*		04 54 42.4	
KKTK	Khon Kaen	14.21	40	PG	P	04 54 39.0	+1.3
KKTK				SG	Px	04 54 44.0	
CHG	Chiang Mai	14.28	22	⇓P	P	04 54 38.4	-0.2
	150nm,1.0s						
CHG				S	S	04 57 19.2	+2.9
MDRS	Chennai	14.88	301	⇑*e*P	P	04 54 45.0	-1.4
VIS	Vishakhapatnam	15.52	322	*e*P	P	04 54 52.4	-2.4
VIS				*e*		04 57 30.2	
CHRT	Chiangrai	15.56	23	⇑P	P	04 54 56.5	+1.3
	1µm,1.2s						
SALM	Salem	16.10	293	*e*P	P	04 55 04.0	+1.9
SALM				*e*		04 57 46.0	
BWNR	Bhubaneshwar	16.36	334	*e*P	P	04 55 01.9	-3.4
BWNR				*e*		04 57 48.6	
CAL	Calcutta	17.55	345	*i* P	P	04 55 19.2	-1.1
CAL				*e*		04 58 46.9	
COCO	West Island	17.98	169	*e*P	P	04 55 25.3	-0.5
	1µm,1.4s						
AGT	Agartala	18.32	354	⇓*i*P	P	04 55 29.0	-0.9
AGT				*i*		04 58 05.0	
HYB	Hyderabad	18.62	310	*e*P	P	04 55 32.0	-1.6
	380nm,1.0s						
HYB				*e*		04 55 50.0	
HYB				*e*		04 58 40.0	
HYB				*e*S	S	04 58 58.0	+1.7
HYB	Hyderabad	18.62	310	*i* P	P	04 55 32.0	-1.6
	950nm,1.4s						
HYB				*e*		04 55 50.0	
HYB				*e*		04 58 40.0	
HYB				*e*S	S	04 58 58.0	+1.7
HYB				LR	LR	05 02 52.0	
	3.4nm,18.0s						
BOK	Bokaro	19.48	339	*e*P	P	04 55 43.3	0.0
BOK				*e*		04 59 08.1	
SHL	Shillong	19.94	356	*e*P	P	04 55 45.0	-3.2
	720nm,1.0s						
SHL				*e*S	S	04 59 23.0	-2.0
MNCY	Minicoy	20.29	279	⇑*i*P	P	04 55 54.0	+2.0
MNCY				*i*		04 57 58.0	
LATR	Latur	20.74	309	*e*P	P	04 55 57.0	+0.4
LATR				*e*		04 59 35.0	
QIZ	Qiongzhong	20.96	49	P	P	04 55 59.4	+0.5
QIZ				XP		04 56 11.1	
QIZ				PP	PP	04 56 23.1	+0.8
QIZ				S	S	04 59 47.8	+2.9
QIZ				XS		04 59 57.8	
QIZ				LR	LR		
	comp=N,3µm,14.7s						
QIZ				LR	LR		
	comp=Z,3µm,17.2s,MS4.8						
KMI	Kunming	21.45	24	⇑P	P	04 56 05.9	+2.1
KMI				AP		04 56 12.9	
KMI				XP		04 56 15.3	
KMI				PP	PP	04 56 31.7	+2.9
KMI				S	S	04 59 59.5	+5.3
KMI				XS		05 00 06.5	
KMI				SS	SS	05 00 34.3	+3.1
KMI				AMB	AMB		
	comp=Z,194nm,1.0s,mb5.4						
KMI				AMB	AMB		
	comp=Z,233nm,3.1s						
KMI				LR	LR		
	comp=N,2µm,21.7s,MS4.7						
KMI				LR	LR		
	comp=E,2µm,20.0s,MS4.7						
KMI				LR	LR		
	comp=Z,2µm,30.0s						
KMI	Kunming	21.45	24	⇑P	P	04 56 05.9	+2.1
	comp=Z,194nm,1.0s,mb5.4						
KMI				pP		04 56 12.9	
KMI				sP		04 56 15.3	
KMI				PP	PP	04 56 31.7	+2.9
KMI				S	S	04 59 59.5	+5.3
KMI				sS		05 00 06.5	
KMI				SS	SS	05 00 34.3	+3.1
KMI				LR	LR		
	comp=Z,2µm,30.0s,MS4.4						
GOA	Goa	21.52	299	*e*	P	04 56 13.4	+8.9
GOA				*e*		05 00 08.6	
SLGI	Shiliguri	21.53	348	*e*	P	04 56 09.9	+5.4
KAD	Karad	22.04	304	*e*P	P	04 56 09.2	-0.5
KAD				*e*		04 56 13.1	
	comp=Z,353nm,1.2s						
GTK	Gangtok	22.11	349	*e*P	P	04 56 06.0	-4.3
GTK				*e*		05 00 02.0	
KKM	Kota Kinabalu	22.80	88	P	P	04 56 19.4	+2.0
POO	Poona	22.94	306	⇓*i*P	P	04 56 20.0	+1.4
	comp=Z,250nm,1.2s,mb5.5						
POO				*e*S	S	05 00 29.0	+7.7
JIRN	Jiri	22.99	344	*e*P	P	04 56 20.1	+1.0
	comp=Z,1µm,1.3s,mb6.1						
PKI	Pulchoki	23.14	342	*e*P	P	04 56 21.6	+1.1
	comp=Z,583nm,1.2s,mb5.9						
DMN	Daman	23.27	341	*e*P	P	04 56 22.9	+1.1
	comp=Z,1µm,1.3s,mb6.1						
BHPL	Bhopal	23.30	321	*e*P	P	04 56 22.3	+0.2
BHPL				*e*		04 56 27.2	
	comp=Z,185nm,0.4s						
BHPL				*e*S	S	05 00 33.3	+5.6
KKN	Kakani	23.38	342	*e*P	P	04 56 23.8	+0.9
	comp=Z,758nm,1.1s,mb6.1						
KKN				*e*S	S	05 00 44.8	+16
GKN	Gorkha	23.79	341	*e*P	P	04 56 27.6	+0.8
	comp=Z,916nm,0.8s,mb6.3						
KOLN	Koldanda	23.93	338	*e*P	P	04 56 28.2	0.0
	comp=Z,2µm,1.5s,mb6.3						
BOM	Bombay	23.97	305	*e*P	P	04 56 31.8	+3.2
BOM				*e*		05 00 56.1	
LSA	Lhasa	24.09	355	P	P	04 56 30.1	+0.4
LSA				AP		04 56 38.6	
LSA				S	S	05 00 45.9	+4.6
LSA				SCP		05 03 42.6	
LSA				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.2						
LSA				AMB	AMB		
	comp=Z,920nm,5.1s						
LSA				LR	LR		
	comp=N,1µm,33.2s,MS4.7						
LSA				LR	LR		
	comp=E,4µm,34.1s,MS4.7						
JHNI	Jhansi	24.32	326	*e*P	P	04 56 32.0	0.0
JHNI				*e*		05 00 01.0	
GYA	Guiyang	24.39	30	⇓*i*P	P	04 56 33.5	+0.9
GYA				AP		04 56 39.5	
GYA				XP		04 56 42.6	
GYA				S	S	05 00 47.9	+1.5
GYA				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,260nm,4.4s						
GYA				LR	LR		
	comp=N,3µm,19.2s,MS5.0						
GYA				LR	LR		
	comp=E,2µm,15.3s,MS5.0						
GYA				LR	LR		
	comp=Z,3µm,19.2s,MS4.8						
DGAR	Diego Garcia	24.47	238	*e*P	P	04 56 34.8	+1.2
	comp=Z,501nm,1.3s,mb5.8						
DGAR				LR	LR		
	comp=Z,778nm,21.0s,MS4.2						
TSM	Tawau	24.52	92	P	P	04 56 46.6	+13
BATP	Bataraza	24.52	81	*e*P	P	04 56 36.3	+2.2
SRDI	Scrawed	25.03	124	⇑*i*P	P	04 56 41.5	+2.5
KELI	Kelakatan	25.18	123	⇑*i*P	P	04 56 45.0	+4.6
PPR	Puerto Princes	25.54	79	⇓*i*P	P	04 56 45.8	+2.0
BHV	Bhavnagar	26.04	310	*e*P	P	04 56 52.0	+3.6
RATI	Rata	26.32	122	⇑*i*P	P	04 56 52.0	+1.0
ENPP	El Nido	26.44	76	*e*P	P	04 56 55.0	+2.9
KEDI	Kedomdong	26.69	121	⇓*i*P	P	04 56 54.5	+0.1
KEDI				⇑*i*pP	pP	04 56 56.9	-9.2
LGTI	Lohaghat	26.77	334	⇓*i*P	P	04 56 55.7	+0.7
PTH	Pithoragarh	26.87	334	*e*P	P	04 56 55.0	-0.9
PTH				*e*		05 01 59.0	
CD2	Chengdu	27.06	20	⇑*i*P	P	04 56 57.1	-0.6
CD2				PP	PP	04 57 45.6	+0.9
CD2				S	S	05 01 28.1	-2.5
CD2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,570nm,5.0s						
CD2				LR	LR		
	comp=N,2µm,16.8s						
CD2				LR	LR		
	comp=Z,2µm,18.0s,MS4.6						
BUSP	Coron	27.33	75	*e*P	pP	04 57 13.2	+1.2
AJM	Ajmer	27.38	321	⇑*i*P	P	04 57 01.0	+0.3
NDI	New Delhi	27.59	328	*e*P	P	04 57 01.0	-1.5
NDI				*e*		05 02 23.0	
LUBP	Lubang	27.76	71	*e*P	P	04 57 11.3	+7.2
DDI	Dehra Dun	28.51	332	*e*P	P	04 57 10.3	-0.4
DDI				*e*		05 02 30.5	
ABRA	Dolores	29.36	64	*e*P	P	04 57 19.6	+1.2
GUIM	Jordan	29.42	78	*e*P	P	04 57 17.2	-1.8
BALP	Baler	29.53	68	*e*P	P	04 57 20.2	+0.2
APYP	Conner	29.91	64	*e*P	P	04 57 26.6	+3.3
PAGZ	Pagadian	29.96	84	*e*P	P	04 57 26.6	+2.8
BHK	Bhakra	30.20	330	*e*P	P	04 57 25.9	+0.1
PONG	Pong	30.87	330	*e*P	P	04 57 32.0	+0.3
QZH	Quanzhou	30.98	49	*e*P	P	04 57 36.0	+3.2
QZH				S	S	05 02 30.0	-3.0
QZH				LR	LR		
	comp=N,1µm,11.2s,MS5.3						
QZH				LR	LR		
	comp=E,5µm,16.0s,MS5.3						
QZH				LR	LR		
	comp=Z,6µm,17.7s,MS5.3						
THN	Thein Dam	31.37	331	*e*P	P	04 57 33.0	-3.1

OCLP	**Ormoc**	**31.44**	**78**	*e*P	**P**	**04 57 45.9**	**+9.0**
WHN	**Wuhan**	**31.78**	**36**	P	**P**	**04 57 39.5**	**-0.2**
WHN				S	**S**	**05 02 45.3**	**-0.2**
WHN				LR	LR		
	comp=Z,4µm,15.6s,MS5.2						
XAN	**Xi'an**	**31.83**	**25**	P	**P**	**04 57 38.3**	**-1.8**
XAN				S	**S**	**05 02 42.4**	**-3.8**
XAN				AMB	AMB		
	comp=Z,81nm,0.7s,mb5.7						
XAN				LR	LR		
	comp=N,2µm,18.7s,MS4.9						
XAN				LR	LR		
	comp=E,2µm,19.7s,MS4.9						
XAN				LR	LR		
	comp=Z,4µm,19.5s,MS5.0						
LZH	**Lanzhou**	**31.89**	**16**	⇓P	**P**	**04 57 40.2**	**-0.4**
LZH				AP	pP	04 57 46.3	-6.3
LZH				XP	sP	04 57 49.5	-8.8
LZH				PP	PP	04 58 46.5	-0.7
LZH				S	**S**	**05 02 49.5**	**+2.3**
LZH				XS		05 03 00.4	
LZH				SS	SS	05 04 42.5	+1.9
LZH				AMB	AMB		
	comp=Z,108nm,1.4s,mb5.5						
LZH				AMB	AMB		
	comp=Z,413nm,6.2s						
LZH				LR	LR		
	comp=N,3µm,13.0s						
LZH				LR	LR		
	comp=Z,5µm,17.0s,MS5.3						
LZH	**Lanzhou**	**31.89**	**16**	⇓P	**P**	**04 57 40.2**	**-0.4**
	comp=Z,108nm,1.4s,mb5.5						
LZH				pP	pP	04 57 46.3	-6.3
LZH				sP	sP	04 57 49.5	-8.8
LZH				PP	PP	04 58 46.5	-0.7
LZH				S	**S**	**05 02 49.5**	**+2.3**
LZH				sS		05 03 00.4	
LZH				SS	SS	05 04 42.5	+1.9
LZH				LR	LR		
	comp=Z,5µm,17.0s,MS5.3						
GTA	**Gaotai**	**34.21**	**9**	*e*P	**P**	**04 58 00.2**	**-0.5**
GTA				PP	PP	04 59 13.2	-3.1
GTA				PCP	PcP	05 00 42.0	+5.1
GTA				S	**S**	**05 03 15.1**	**-8.1**
GTA				XS		05 03 39.8	
GTA				SCP		05 04 19.6	
GTA				SCS	ScS	05 08 19.7	+1.9
GTA				AMB	AMB		
	comp=Z,114nm,0.8s,mb5.8						
GTA				AMB	AMB		
	comp=Z,222nm,5.3s						
GTA				LR	LR		
	comp=N,1µm,22.0s,MS4.6						
GTA				LR	LR		
	comp=E,744nm,23.2s,MS4.6						
GTA				LR	LR		
	comp=Z,1µm,21.7s,MS4.6						
NJ2	**Nanjing**	**35.57**	**39**	*e*P	**P**	**04 58 12.9**	**+0.5**
NJ2				AP	pP	04 58 20.5	-4.0
NJ2				XP	sP	04 58 23.2	-7.0
NJ2				PP	PP	04 59 34.8	+1.2
NJ2				S	**S**	**05 03 49.0**	**+4.7**
NJ2				XS		05 04 00.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,540nm,12.0s						
NJ2				LR	LR		
	comp=N,4µm,18.3s,MS5.4						
NJ2				LR	LR		
	comp=E,5µm,22.0s,MS5.4						
NJ2				LR	LR		
	comp=Z,3µm,21.3s,MS5.0						
MBWA	**Marble Bar**	**37.12**	**136**	*e*P	**P**	**04 58 24.8**	**-0.7**
	comp=Z,24nm,0.9s,mb5.0						
MBWA				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
WBK	**Wadi Bani Khal**	**37.22**	**301**	⇑P	**P**	**04 58 28.7**	**+2.4**
	SNR=7.6						
KSH	**Kashi**	**37.25**	**338**	PR		04 58 26.8	
KSH				*e*AP	pP	04 58 32.3	-6.3
KSH				*e*XP	sP	04 58 36.3	-7.9
KSH				*e*PP	PP	04 59 52.4	-1.9
KSH				*e*PCP	PcP	05 00 46.4	+0.5
KSH				*e*S	**S**	**05 04 11.3**	**+1.4**
KSH				*e*SCP		05 04 32.4	
KSH				*e*SS	SS	05 06 39.6	-3.1
KSH				*e*SCS	ScS	05 08 37.8	+3.4
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.6						
KSH				AMB	AMB		
	comp=Z,400nm,2.6s,mb5.8						
KSH				LR	LR		
	comp=N,2µm,21.1s,MS5.0						
KSH				LR	LR		
	comp=E,2µm,20.6s,MS5.0						
TIA	**Tai'an**	**37.53**	**32**	*e*P	**P**	**04 58 28.0**	**-0.9**
JMDO	**Jabal Madar**	**37.87**	**300**	⇑P	**P**	**04 58 33.7**	**+1.8**
BTO	**Baotou**	**37.98**	**21**	*e*P	**P**	**04 58 32.6**	**0.0**
BTO				S	**S**	**05 04 20.8**	**-0.3**
BTO				AMB	AMB		
	comp=Z,41nm,1.1s,mb5.1						
BTO				LR	LR		
	comp=N,406nm,6.1s						
BTO				LR	LR		
	comp=E,1µm,15.0s						
SMDO	**Samad**	**38.17**	**301**	⇑P	**P**	**04 58 36.5**	**+2.2**
	SNR=5.9						
WMQ	**Urumqi**	**38.42**	**353**	⇑*i*P	**P**	**04 58 37.3**	**+1.1**
WMQ				XP	sP	04 58 46.3	-7.6
WMQ				PP	PP	05 00 08.5	+0.4
WMQ				S	**S**	**05 04 31.0**	**+3.2**
WMQ				SS	SS	05 07 11.0	+1.8
WMQ				AMB	AMB		
	comp=Z,176nm,1.0s,mb5.8						
WMQ				AMB	AMB		
	comp=Z,78nm,6.0s						
WMQ				LR	LR		
	comp=N,1µm,18.0s,MS5.3						
WMQ				LR	LR		
	comp=E,4µm,16.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,2µm,16.0s,MS4.9						
HHC	**Hu-ho-hao-te**	**38.76**	**22**	⇓*i*P	**P**	**04 58 39.9**	**+0.9**
HHC				AP	pP	04 58 46.9	-4.3
HHC				XP	sP	04 58 50.5	-6.2
HHC				PP	PP	05 00 13.4	+1.3
HHC				PCP	PcP	05 00 53.7	+3.2
HHC				S	**S**	**05 04 34.0**	**+1.1**
HHC				SCP		05 04 36.4	
HHC				PCS		05 04 41.1	
HHC				XS		05 04 47.0	
HHC				SS	SS	05 07 16.3	-0.4
HHC				SCS	ScS	05 08 47.5	+4.4
HHC				AMB	AMB		
	comp=Z,66nm,1.2s,mb5.2						
HHC				AMB	AMB		
	comp=Z,330nm,4.1s						
HHC				LR	LR		
	comp=N,1µm,20.1s,MS5.0						
HHC				LR	LR		
	comp=E,2µm,17.8s,MS5.0						
HHC				LR	LR		
	comp=Z,2µm,26.1s						
BSY	**Bisya**	**38.79**	**300**	⇑P	**P**	**04 58 42.0**	**+2.6**
	SNR=18						
HOQ	**Hoqain**	**38.99**	**301**	⇑P	**P**	**04 58 43.7**	**+2.6**
	SNR=8.1						
ULHL	**Ulahol**	**39.55**	**340**	P	**P**	**04 58 45.9**	**+0.3**
	SNR=54						
FITZ	**Fitzroy Crossi**	**39.64**	**127**	⇓*i*P	**P**	**04 58 45.7**	**-0.8**
	comp=Z,56nm,1.5s,mb5.1						
KZA	**Kyzart**	**39.75**	**339**	P	**P**	**04 58 47.9**	**+0.7**
	SNR=82						
BJI	**Beijing**	**40.03**	**28**	P	**P**	**04 58 50.4**	**+0.8**
BJI				PP	PP	05 00 31.5	+5.8
BJI				S	**S**	**05 04 52.6**	**+0.6**
BJI				SS	SS	05 07 47.1	+2.6
BJI				AMB	AMB		
	comp=Z,23nm,0.9s,mb4.9						
BJI				AMB	AMB		
	comp=Z,220nm,4.1s						
BJI				LR	LR		
	comp=N,1µm,22.1s,MS4.9						
BJI				LR	LR		
	comp=E,1µm,22.3s,MS4.9						
BJI				LR	LR		
	comp=Z,2µm,22.1s,MS4.8						
BJI	**Beijing**	**40.03**	**28**	P	**P**	**04 58 50.4**	**+0.8**
	comp=Z,23nm,0.9s,mb4.9						
BJI				PP	PP	05 00 31.5	+5.8
BJI				S	**S**	**05 04 52.6**	**+0.6**
BJI				SS	SS	05 07 47.1	+2.6
BJI				LR	LR		
	comp=Z,2µm,22.1s,MS4.8						
UCH	**Uchtor**	**40.15**	**338**	P	**P**	**04 58 51.5**	**+0.9**
	SNR=170						
KBK	**Karagaybulak**	**40.36**	**339**	P	**P**	**04 58 53.4**	**+1.0**
	SNR=141						
TKM2	**Tokmak 2**	**40.37**	**340**	P	**P**	**04 58 52.8**	**+0.4**
	SNR=103						
AML	**Almayashu**	**40.37**	**337**	P	**P**	**04 58 53.5**	**+1.1**
	SNR=15						
ASHO	**Ashiyiah**	**40.46**	**302**	P	**P**	**04 58 55.8**	**+2.5**
	SNR=10						
WHFO	**Wadi Hawf**	**40.50**	**291**	⇑P	**P**	**04 58 55.7**	**+2.0**
	SNR=7.6						
AAK	**Ala-Archa**	**40.51**	**339**	P	**P**	**04 58 54.6**	**+1.1**
	SNR=76						
AAK	**Ala-Archa**	**40.51**	**339**	*e*P	**P**	**04 58 53.2**	**-0.3**
AAK				*e*		05 00 26.1	
AAK				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.4						
AAK	**Ala-Archa**	**40.51**	**339**	*e*P	**P**	**04 58 53.1**	**-0.4**
	comp=Z,113nm,1.0s,mb5.5						
AAK				*e*PP	PP	05 00 26.1	-4.4
FRU	**Bishkek**	**40.64**	**339**	⇓*i*P	**P**	**04 58 56.0**	**+1.4**
FRU				*i*		05 00 32.0	
FRU				pmax	pmax		
	comp=Z,380nm,2.0s,mb5.7						
FRU				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.9						
CHMS	**Chumysh**	**40.73**	**339**	P	**P**	**04 58 55.8**	**+0.4**
	SNR=39						
EKS2	**Erkin-Say**	**40.80**	**338**	P	**P**	**04 58 56.9**	**+0.9**
	SNR=13						
USP	**Ospenovka**	**41.06**	**339**	P	**P**	**04 58 58.3**	**+0.3**
	SNR=23						
DL2	**Dalian**	**41.94**	**34**	P	**P**	**04 59 10.2**	**+4.8**
DL2				S	**S**	**05 05 18.6**	**-1.9**
DL2				XS		05 05 41.8	
DL2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
DL2				AMB	AMB		
	comp=Z,290nm,3.8s						
DL2				LR	LR		
	comp=E,560nm,21.6s						
DL2				LR	LR		
	comp=Z,620nm,35.7s						
MK02	**Makanchi Array**	**42.13**	**349**	P	**P**	**04 59 06.9**	**0.0**
MK02				pmax	pmax		
	comp=Z,95nm,0.8s,mb5.5						
KAKA	**Kakadu**	**42.92**	**115**	⇑*i*P	**P**	**04 59 12.3**	**-1.5**
	comp=Z,20nm,0.6s,mb5.0						
MUN	**Mundaring**	**43.25**	**151**	⇓*i*P	**P**	**04 59 16.7**	**+0.5**
	comp=Z,17nm,0.8s,mb4.8						
KLBR	**Kellerberrin**	**43.70**	**149**	*e*P	**P**	**04 59 20.0**	**+0.2**
	comp=Z,264nm,1.1s,mb5.9						
ULN	**Ulaanbaatar**	**43.76**	**13**	*d* *i*P	**P**	**04 59 18.2**	**-2.0**
ULN	**Ulaanbaatar**	**43.76**	**13**	*e*P	**P**	**04 59 19.1**	**-1.0**
	comp=Z,47nm,0.9s,mb5.2						
ULN				LR	LR		
	comp=Z,646nm,20.0s,MS4.5						
NWAO	**Narrogin (SRO)**	**44.52**	**151**	*e*P	**P**	**04 59 26.3**	**-0.2**
	comp=Z,88nm,1.6s,mb5.3						
NWAO				*e*	pP	04 59 38.5	-0.3
NWAO				LR	LR		
	comp=Z,865nm,19.0s,MS4.7						
KS15	**Wonju Array Si**	**44.72**	**40**	*e*P	**P**	**04 59 28.0**	**0.0**
KS15				*e*	pP	04 59 42.6	+2.3
SNY	**Shenyang**	**45.06**	**32**	⇓P	**P**	**04 59 30.0**	**-0.6**
SNY				S	**S**	**05 06 04.3**	**-1.4**
SNY				LR	LR		
	comp=N,1µm,18.9s,MS4.9						
SNY				LR	LR		
	comp=E,740nm,15.9s,MS4.9						
SNY				LR	LR		
	comp=Z,2µm,16.5s,MS5.0						
ZAK	**Zakamensk**	**45.45**	**9**	⇑*i*P	**P**	**04 59 33.6**	**0.0**
ZAK				*e*		05 01 12.6	
ZAK				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.9						
MOY	**Mondy**	**46.40**	**7**	*e*P	**P**	**04 59 42.0**	**+0.9**
MOY				pmax	pmax		
	comp=Z,38nm,2.4s,mb4.9						
KURK	**Kurchatov**	**46.65**	**347**	⇓*i*P	**P**	**04 59 40.2**	**-2.9**
KURK	**Kurchatov**	**46.65**	**347**	*e*P	**P**	**04 59 42.3**	**-0.8**
	comp=Z,206nm,1.0s,mb6.0						
KURK				LR	LR		
	comp=Z,242nm,21.0s,MS4.1						
TLY	**Talaya**	**46.77**	**9**	P	**P**	**04 59 45.4**	**+1.4**
	comp=Z,193nm,0.9s,mb6.0,SNR=13						
TLY	**Talaya**	**46.77**	**9**	*e*P	**P**	**04 59 45.1**	**+1.1**
TLY				*e*S	**S**	**05 06 31.8**	**+1.9**
TLY				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
TLY				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.8						
TLY	**Talaya**	**46.77**	**9**	*e*P	**P**	**04 59 44.8**	**+0.8**
	comp=Z,43nm,1.0s,mb5.3						
TLY				LR	LR		
	comp=Z,298nm,20.0s,MS4.2						
IRK	**Irkutsk**	**47.41**	**9**	*e*P	**P**	**04 59 48.8**	**-0.2**
IRK				*e*S	**S**	**05 06 44.9**	**+5.9**
IRK				pmax	pmax		
	comp=Z,65nm,2.2s,mb5.2						
CN2	**Changchun**	**47.42**	**32**	⇑P	**P**	**04 59 49.1**	**-0.2**
CN2				*e*XP	sP	04 59 58.6	-8.4
CN2				*e*S	**S**	**05 06 41.9**	**+2.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,21.0s,MS4.8						
CN2				LR	LR		
	comp=E,700nm,21.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,21.0s,MS4.8						
WRAB	**Tennant Creek**	**47.66**	**123**	⇓*i*P	**P**	**04 59 51.1**	**-0.3**
WRAB	**Tennant Creek**	**47.66**	**123**	*e*P	**P**	**04 59 50.8**	**-0.6**
	comp=Z,224nm,0.9s,mb6.2						
WRAB				LR	LR		
	comp=Z,327nm,21.0s,MS4.3						
WB2	**Warramunga Arr**	**47.66**	**123**	⇓*i*P	**P**	**04 59 50.5**	**-1.0**
WB2				*e*S	**S**	**05 06 40.9**	**-2.2**
FORT	**Forrest**	**49.10**	**140**	*e*P	**P**	**05 00 02.8**	**+0.3**
	comp=Z,118nm,0.7s,mb6.0						
ASPA	**Alice Springs**	**49.12**	**128**	⇓*i*P	**P**	**05 00 02.3**	**-0.4**
ASPA				*e*S	**S**	**05 07 09.4**	**+5.9**
RAYN	**Ar Rayn**	**49.31**	**296**	P	**P**	**05 00 04.0**	**-0.2**
	comp=Z,118nm,1.0s,mb5.9,SNR=10						
NVS	**Novosibirsk**	**49.80**	**352**	*i* P	**P**	**05 00 06.1**	**-1.4**
NVS				*i* *PP	pP	05 00 19.0	-0.9
NVS				*i* S	**S**	**05 07 10.8**	**-1.7**
NVS				pmax	pmax		
	comp=Z,153nm,1.1s,mb5.9						
NVS				pmax	pmax		
	comp=N,140nm,1.4s						
NVS				pmax	pmax		
	comp=E,60nm,1.1s						
NVS				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.1						
NVS				pmax	pmax		
	comp=N,57nm,2.0s						
NVS				pmax	pmax		
	comp=E,35nm,2.0s						
NVS				smax			
	comp=N,115nm,1.8s						
NVS				smax			
	comp=E,50nm,1.5s						
MDJ	**Mudanjiang**	**50.18**	**33**	P	**P**	**05 00 10.5**	**-0.1**
MDJ				AP	pP	05 00 17.7	-5.3
MDJ				PCP	PcP	05 01 28.2	-1.4
MDJ				PP	PP	05 02 05.8	-1.1
MDJ				SCP		05 05 23.6	
MDJ				PCS		05 05 25.9	
MDJ				S	**S**	**05 07 21.2**	**+3.3**
MDJ				XS		05 07 33.7	
MDJ				SCS	ScS	05 10 00.7	+6.0
MDJ				SS	SS	05 10 55.4	+7.0
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,74nm,4.8s						
MDJ				LR	LR		
	comp=N,647nm,29.5s,MS4.6						
MDJ				LR	LR		
	comp=E,584nm,28.8s,MS4.6						
MDJ				LR	LR		
	comp=Z,797nm,32.2s,MS4.5						
BVA0	**Borovoye Array**	**50.91**	**342**	P	**P**	**05 00 14.7**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MAJO	**Matsushiro**	**51.33**	**47**	*e*P	**P**	**05 00 19.4**	**0.0**
	comp=Z,29nm,0.9s,mb5.2						
MAJO				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
MAT	**Matsushiro**	**51.33**	**47**	P	**P**	**05 00 18.6**	**-0.8**
MAT				S	**S**	**05 07 37.8**	**+3.9**
CHKZ	**Chkalovo**	**51.41**	**343**	*i* P	**P**	**05 00 18.9**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,174nm,1.0s,mb5.9						
CHKZ	**Chkalovo**	**51.41**	**343**	*e*P	**P**	**05 00 18.8**	**-0.9**
	comp=Z,299nm,1.0s,mb6.2						
BHD	**Baghdad**	**53.09**	**308**	*e*P	**P**	**05 00 31.0**	**-1.6**
KLR	**Kul'dur**	**54.29**	**30**	*e*P	**P**	**05 00 38.0**	**-3.2**
KLR				*e*		05 02 50.0	
KLR				*e*S	**S**	**05 08 13.0**	**-1.0**
KLR				smax			
	comp=N,1µm,10.0s						
KLR				smax			
	comp=E,600nm,10.0s						
KLR				MLR	MLR		
	comp=N,900nm,14.0s						
KLR				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.1						
BOD	**Bodaibo**	**54.58**	**13**	⇑*i*P	**P**	**05 00 42.2**	**-1.0**
BOD				*e*	pP	05 00 54.7	-1.1
BOD				*e*		05 08 14.8	
BOD				pmax	pmax		
	comp=Z,61nm,1.9s,mb5.3						
BOD				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.6						
MSL	**Mosul**	**55.15**	**311**	*e*P	**P**	**05 00 51.5**	**+3.8**
GNI	**Garni**	**55.47**	**316**	*e*P	**P**	**05 00 49.4**	**-0.5**
	comp=Z,107nm,1.5s,mb5.7						
GNI				LR	LR		
	comp=Z,421nm,21.0s,MS4.5						
PMG	**Port Moresby**	**55.70**	**105**	*e*P	pP	05 01 06.7	+2.1
PMG	**Port Moresby**	**55.70**	**105**	*e*P	**P**	**05 00 52.3**	**+0.4**
	comp=Z,55nm,1.0s,mb5.5						
PMG				LR	LR		
	comp=Z,630nm,21.0s,MS4.7						
TI2	**Plekhanov**	**56.15**	**318**	⇑*i*P	**P**	**05 00 53.4**	**-1.4**
KMBO	**Kilima Mbogo**	**56.36**	**265**	*e*P	**P**	**05 00 57.4**	**+0.7**
	comp=Z,38nm,1.1s,mb5.3						
KMBO				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
CLNS	**Chul'man**	**56.88**	**20**	*e*P	**P**	**05 00 59.8**	**0.0**
CLNS				*e**PP	pP	05 01 09.9	-2.6
CLNS				*e*PS	PS	05 09 04.6	-2.6
CLNS				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.7						
CLNS				pmax	pmax		
	comp=N,45nm,1.0s						
CLNS				pmax	pmax		
	comp=E,35nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
SVE	**Sverdlovsk**	**57.24**	**339**	⇓*i*P	**P**	**05 01 02.0**	**-0.4**
SVE				*e*	pP	05 01 15.0	-0.1
SVE				*e*		05 03 10.0	
SVE				*e*PPP	PPP	05 04 30.0	-2.0
SVE				*e*S	**S**	**05 08 57.0**	**+3.9**
SVE				*e*		05 10 44.0	
SVE				pmax	pmax		
	comp=Z,310nm,1.6s,mb6.1						
SVE				MLR	MLR		
	comp=N,600nm,20.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,500nm,20.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
ARU	**Arti**	**57.69**	**338**	P	**P**	**05 01 04.5**	**-1.0**
	comp=Z,508nm,1.0s,SNR=40						
ARU	**Arti**	**57.69**	**338**	⇓*i*P	**P**	**05 00 56.2**	**-9.3**
ARU				*e*		05 01 53.9	
ARU				*e*		05 10 44.9	
ARU				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.7						
ARU				MLR	MLR		
	comp=N,900nm,23.0s,MS4.9						
ARU				MLR	MLR		
	comp=Z,1µm,23.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,400nm,21.0s,MS4.9						
CTAO	**Charters Tower**	**57.95**	**118**	*e*P	**P**	**05 01 06.2**	**-1.6**
	comp=E,31nm,1.1s,mb5.3						
CTAO				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
KIV	**Kislovodsk**	**58.48**	**319**	P	**P**	**05 01 10.9**	**-0.3**
	comp=Z,242nm,1.1s,mb6.1,SNR=14						
KIV	**Kislovodsk**	**58.48**	**319**	*d* *i*P	**P**	**05 01 10.5**	**-0.7**
KIV				*e*		05 02 06.1	
KIV				*e*		05 03 24.3	
KIV				*e*S	**S**	**05 09 09.3**	**-0.2**
KIV				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.4						
KIV				MLR	MLR		
	comp=Z,245nm,20.0s,MS4.3						
KIV	**Kislovodsk**	**58.48**	**319**	*e*P	**P**	**05 01 10.8**	**-0.4**
	comp=Z,70nm,1.2s,mb5.6						
KIV				*e*	pP	05 01 28.1	+4.2
KIV				LR	LR		
	comp=Z,93nm,21.0s,MS3.9						
GOF	**Gofitskoye**	**58.74**	**320**	*e*P	**P**	**05 01 11.0**	**-2.0**
YSS	**Yuzh-Sakhalins**	**59.11**	**37**	*e*P	**P**	**05 01 14.2**	**-1.4**
YSS				*e*	pP	05 01 30.3	+2.0
YSS				*e*		05 09 20.0	
YSS				MLR	MLR		
	comp=Z,900nm,20.0s,MS4.9						
YSS				MLR	MLR		
	comp=E,1µm,18.0s						
YSS	**Yuzh-Sakhalins**	**59.11**	**37**	*e*P	**P**	**05 01 15.0**	**-0.5**
	comp=E,69nm,1.0s,mb5.6						
YSS				LR	LR		
	comp=Z,888nm,20.0s,MS4.9						
STKA	**Stephens Creek**	**59.15**	**132**	⇓*i*P	**P**	**05 01 15.7**	**-0.4**
	comp=Z,17nm,0.9s,mb5.1						
MALT	**Malatya**	**59.34**	**312**	*e*P	**P**	**05 01 16.0**	**-1.2**
MALT				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.2						
MALT	**Malatya**	**59.34**	**312**	*e*P	**P**	**05 01 16.0**	**-1.3**
	comp=Z,38nm,1.5s,mb5.2						
EIL	**Elat**	**59.87**	**301**	*e*P	**P**	**05 01 21.3**	**+0.3**
	comp=Z,20nm,0.9s,mb5.2						
SOC	**Sochi**	**60.29**	**318**	*e*P	**P**	**05 01 20.1**	**-3.6**
SOC				*e*		05 02 08.9	
SOC				*e*		05 03 30.9	
SOC				*e*S	**S**	**05 09 24.6**	**-8.4**
SOC				*e*		05 11 07.2	
SOC				*e*SSS	SSS	05 16 04.2	-2.1
SOC				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.3						
SOC				pmax	pmax		
	comp=N,19nm,1.0s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.9s						
SOKR	**Solikamsk**	**60.65**	**340**	⇓*i*P	**P**	**05 01 23.8**	**-2.1**
SOKR				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.8						
SOKR				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
CSS	**Prodhromos**	**62.35**	**307**	*e*P	**P**	**05 01 35.0**	**-2.7**
	comp=Z,62nm,1.2s,mb5.6						
YAK	**Yakutsk**	**62.44**	**18**	*d* *i*P	**P**	**05 01 36.8**	**-1.1**
YAK				*e**PP	pP	05 01 47.8	-2.9
YAK				*e*		05 02 22.6	
YAK				*e*S	**S**	**05 09 58.6**	**-1.4**
YAK				*e*		05 11 16.5	
YAK				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,16nm,1.3s						

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YAK                               smax
      comp=E,15nm,1.2s
YAK                               smax
      comp=Z,5.0nm,1.0s
YAK                               smax
      comp=N,20nm,1.3s
YAK                               MLR     MLR
      comp=N,435nm,19.0s,MS4.8
YAK                               MLR     MLR
      comp=E,401nm,19.0s,MS4.8
YAK                               MLR     MLR
      comp=Z,590nm,19.0s,MS4.8
YAK   Yakutsk           62.44  18 eP      P       05 01 35.4 -2.5
      comp=Z,109nm,0.8s,mb6.0
YAK                               LR      LR
      comp=Z,1µm,19.0s,MS5.1
MBAR  Mbarara           62.76 266  P      P       05 01 37.5 -3.3
MBAR                              pmax    pmax
      comp=Z,32nm,1.2s,mb5.3
MBAR  Mbarara           62.76 266  P      P       05 01 37.5 -3.3
      comp=Z,32nm,1.2s,mb5.3
SIM   Simferopol'       64.54 318d iP     P       05 01 51.7 -0.3
SIM                               pmax    pmax
      comp=Z,30nm,0.9s,mb5.3
SIM                               MLR     MLR
      comp=Z,680nm,24.2s,MS4.8
ISP   Isparta           65.22 309c iP     P       05 01 56.3 -0.2
ISP   Isparta           65.22 309 eP      P       05 01 55.4 -1.1
      comp=Z,38nm,1.0s,mb5.4
MOS   Moscow            66.62 329κ iP     P       05 02 04.1 -1.0
MOS                               e       pP      05 02 15.2 -2.9
MOS                               e               05 04 32.3
MOS                               pmax    pmax
      comp=Z,120nm,1.6s,mb5.7
OBN   Obninsk           66.89 329κ iP     P       05 02 02.2 -4.6
OBN                               e       pP      05 02 10.3 -9.5
OBN                               i               05 02 21.1
OBN                               e               05 12 04.5
OBN                               SS      SS      05 15 08.0 -7.3
OBN                               pmax    pmax
      comp=Z,123nm,1.7s,mb5.7
OBN                               MLR     MLR
      comp=Z,800nm,23.0s,MS4.9
OBN   Obninsk           66.89 329 eP      P       05 02 01.6 -5.2
      comp=Z,106nm,1.2s,mb5.7
OBN                               LR      LR
      comp=Z,190nm,21.0s,MS4.3
LSZ   Lusaka            67.72 251 eP      P       05 02 12.7  0.0
      comp=Z,42nm,1.2s,mb5.3
LSZ                               LR      LR
      comp=Z,1µm,20.0s,MS5.2
CFR   Carcaliu          68.67 316⇑iP      P       05 02 17.9 -0.1
CFR   Carcaliu          68.67 316⇑iP      P       05 02 17.9 -0.2
KIS   Kishinev          68.67 318 eP      P       05 02 15.0 -3.1
KIS                               e       pP      05 02 33.0 +1.9
KIS                               e               05 06 26.0
KIS                               e               05 11 12.0
KIS                               MLR     MLR
      comp=Z,400nm,17.0s,MS4.7
HARR  Harsova           68.69 316⇑iP      P       05 02 18.0 -0.2
HARR  Harsova           68.69 316⇑iP      P       05 02 18.0 -0.2
MA2   Magadan           69.19  27 eP      P       05 02 19.7 -1.3
MA2                               e               05 04 58.4
MA2                               eS      S       05 11 19.4 -2.8
MA2                               pmax    pmax
      comp=Z,20nm,0.9s,mb5.0
MA2                               pmax    pmax
      comp=N,7.0nm,0.8s
MA2                               pmax    pmax
      comp=E,10.0nm,1.2s
MA2                               MLR     MLR
      comp=Z,900nm,21.0s,MS5.0
MA2   Magadan           69.19  27 eP      P       05 02 19.6 -1.4
MA2                               e       pP      05 02 31.7 -2.4
MA2                               LR      LR
      comp=Z,602nm,20.0s,MS4.8
TIXI  Tiksi             69.65  11 eP      P       05 02 21.6 -2.1
TIXI                              eS      S       05 11 22.4 -5.1
TIXI                              pmax    pmax
      comp=Z,43nm,0.7s,mb5.5
TIXI                              MLR     MLR
      comp=Z,644nm,16.0s,MS5.0
MLR   Muntele Rosu      70.24 316⇓iP      P       05 02 28.0 +0.3
MLR   Muntele Rosu      70.24 316⇓iP      P       05 02 28.0 +0.3
PET   Petropavlovsk     70.89  36 eP      P       05 02 32.1 +0.6
PET                               MLR     MLR
      comp=Z,900nm,21.0s,MS5.0
BURAR Bucovina Array    71.20 318 ⇓P      P       05 02 33.3 -0.1
BURAR Bucovina Array    71.20 318⇓iP      P       05 02 33.3 -0.2
SEY   Seymchan          71.36  24 eP      P       05 02 31.1 -3.1
SEY                                               05 02 49.9
SEY                                               05 12 12.4
SEY                               pmax    pmax
      comp=Z,50nm,1.0s,mb5.4
SEY                               pmax    pmax
      comp=N,20nm,0.9s
SEY                               pmax    pmax
      comp=E,20nm,0.9s
SEY                               MLR     MLR
      comp=Z,3µm,21.0s,MS5.6
SEY                               MLR     MLR
      comp=N,2µm,24.0s
SEY                               MLR     MLR
      comp=E,1µm,17.0s
MNK   Minsk             71.38 326 eP      P       05 02 31.0 -3.4
PUL   Pulkovo           71.83 332 eP      P       05 02 36.5 -0.5
PUL                               pmax    pmax
      comp=N,25nm,0.5s
PUL                               pmax    pmax
      comp=Z,87nm,0.5s,mb5.9
PUL                               pmax    pmax
      comp=E,33nm,0.4s
PUL                               MLR     MLR
      comp=Z,860nm,21.0s,MS5.0
PUL                               MLR     MLR
      comp=E,2µm,28.0s
LBTB  Lobatse           72.41 242 eP      P       05 02 41.3 +0.3
      comp=E,40nm,1.0s,mb5.3
LBTB                              LR      LR
      comp=Z,906nm,20.0s,MS5.0
JOF   Joensuu           72.57 335 ep      P       05 02 39.7 -1.6
      comp=Z,45nm,0.7s,mb5.5
JOF   Joensuu           72.57 335 eP      P       05 02 39.7 -1.6
JOF                               pmax    pmax
      comp=Z,45nm,0.7s,mb5.5
BOLS  Boljevac          72.73 314⇓iP      P       05 02 41.9 -0.7
CASY  Casey             72.75 173 PFAKE           05 02 50.0 +7.7
CASY                              LR      LR
      comp=Z,1µm,19.0s,MS5.2
SKO   Skopje            72.83 312 i P     pP      05 02 58.0 +1.7
KWP   Kalwaria          73.25 320 eP      P       05 02 45.3 -0.3
KWP                               epP     pP      05 02 55.4 -3.3
KWP                               ePcP    PcP     05 03 02.7 +0.6
KWP                               MLR     MLR     05 39 44.3
      comp=Z,500nm,21.7s,MS4.8
KOLS  Kolonicke sedl    73.39 319 i P     P       05 02 47.3 +0.9
KOLS                              e               05 02 54.2
BOSA  Boshof            73.66 238 eP      P       05 02 48.4  0.0
      comp=Z,143nm,1.6s,mb5.7
BOSA                              e       pP      05 03 00.8 -0.7
BOSA                              LR      LR
      comp=Z,798nm,22.0s,MS5.0
APA   Apatity           73.71 340⇑iP      P       05 02 47.0 -0.9
APA                               i               05 03 05.5
APA                               pmax    pmax
      comp=Z,78nm,1.0s,mb5.6
APA                               MLR     MLR
      comp=Z,1µm,18.0s,MS5.2
SUW   Suwalki           73.89 325 eP      P       05 02 48.3 -0.9
SUW                               e*PP    pP      05 02 58.3 -4.0
SUW                               e       pP      05 03 06.2 +3.9
SUW   Suwalki           73.89 325 eP      P       05 02 48.3 -0.9
SUW                               epP     pP      05 02 58.4 -4.0
SUW                               ePcP    PcP     05 03 06.2 +1.4
SUW                               MLR     MLR     05 31 53.6
      comp=Z,400nm,30.2s,MS4.5
CRVS  Cervenica-Dubn    73.91 319 eP      P       05 02 50.4 +0.9
KAF   Kangasniemi       74.46 333 ep      P       05 02 50.9 -1.5
      comp=Z,14nm,0.5s,mb5.2,baz=106,slow=5.5
KAF   Kangasniemi       74.46 333 eP      P       05 02 50.9 -1.5
KAF                               pmax    pmax
      comp=Z,14nm,0.5s,mb5.2
KECS  Kecovo            74.48 319 eP      P       05 02 53.2 +0.4
NIE   Niedzica          74.74 320 eP      P       05 02 53.4 -0.9
PSZ   Piszkesteto       74.78 318 eP      P       05 02 53.7 -0.8
PSZ                               e       pP      05 03 10.4 +2.8
PSZ                               pmax    pmax
      comp=Z,27nm,1.0s,mb5.1
PSZ   Piszkesteto       74.78 318 eP      P       05 02 53.7 -0.8
      comp=Z,27nm,1.0s,mb5.1
PSZ                               e       pP      05 03 10.4 +2.8
WAR   Warsaw            74.79 323 eP      P       05 02 53.4 -1.1
WAR                               ePcP    PcP     05 03 08.4 -0.3
OJC   Ojcow             75.20 320 eP      P       05 02 56.6 -0.3
VYHS  Vyhne             75.57 319 i P     P       05 02 58.7 -0.3
VYHS                              ePP     PP      05 05 53.1 +2.5
SRO   Srobarova         75.82 318 eP      P       05 03 01.6 +1.1
MAW   Mawson            76.12 192 eP      P       05 03 03.7 +2.0
      comp=Z,31nm,1.0s,mb5.2
MAW                               LR      LR
      comp=Z,826nm,21.0s,MS5.0
OKC   Ostrava-Krasne    76.20 320 eP      P       05 03 02.3 -0.3
OKC                               epP     pP      05 03 15.9 +0.2
OKC                               AMS     AMS     05 41 00.0
      comp=Z,300nm,25.1s
SMOL  Smolenice         76.50 318 eP      P       05 03 04.7 +0.4
MORC  Moravsky Berou    76.58 320 eP      P       05 03 04.3 -0.4
MORC                              pmax    pmax
      comp=Z,34nm,1.0s,mb5.2
MORC  Moravsky Berou    76.58 320 eP      P       05 03 04.3 -0.4
      comp=Z,34nm,1.1s,mb5.2
ZST   Bratislava        76.67 318 eP      P       05 03 05.7 +0.4
ZST                               e       pP      05 03 17.5 -0.9
KEV   Kevo              76.73 341 ep      P       05 03 03.2 -2.0
      comp=Z,17nm,0.6s,mb5.2
KEV   Kevo              76.73 341 eP      P       05 03 03.2 -2.0
KEV                               pmax    pmax
      comp=Z,17nm,0.6s,mb5.2
ARE0  ARCESS Array S    77.15 340 eP      P       05 03 07.4 -0.2
ARE0                              e       pP      05 03 20.8 +0.1
VKA   Vienna            77.20 318⇑iP      P       05 03 08.3  0.0
GKP   Gorka Klasztor    77.23 323 eP      P       05 03 08.0 -0.3
GKP                               ePcP    PcP     05 03 17.7 -1.5
GKP                               MLR     MLR     05 40 52.9
      comp=Z,700nm,23.0s,MS4.9
KSP   Ksiaz             77.50 321 eP      P       05 03 09.6 -0.3
KSP                               epP     pP      05 03 26.8 +3.8
KSP   Ksiaz             77.50 321 eP      P       05 03 10.6 +0.7
KSP                               epP     pP      05 03 17.1 -5.9
KSP                               ePcP    PcP     05 03 24.0 +3.6
KSP                               MLR     MLR     05 43 33.5
      comp=Z,600nm,21.8s,MS4.9
ARSA  Arzberg           77.64 317⇑iP      P       05 03 11.2 +0.5
      comp=Z,43nm,1.4s,mb5.2
UPC   Upice             77.64 320 eP      P       05 03 11.2 +0.5
UPC                               epP     pP      05 03 26.2 +2.4
PERS  Pernice           77.86 316⇓iP      P       05 03 12.3 +0.4
PERS                              i               05 03 52.5
PERS                              e               05 04 14.4
LJU   Ljubljana         78.22 316⇓iP      P       05 03 14.4 +0.5
      comp=Z,70nm,1.0s,mb5.5
OBKA  Obir              78.24 316⇑iP      P       05 03 14.1 +0.1
      comp=Z,26nm,1.0s,mb5.1
SUR   Sutherland        78.34 235 eP      P       05 03 16.2 +1.3
      comp=Z,192nm,1.3s,mb5.9
SUR                               LR      LR
      comp=Z,123nm,19.0s,MS4.3
TSUM  Tsumeb            78.42 249 eP      P       05 03 16.9 +1.3
      comp=Z,26nm,0.9s,mb5.2
TSUM                              LR      LR
      comp=Z,692nm,20.0s,MS5.0
BILL  Bilibino          78.53  22⇑iP      P       05 03 15.5 +0.3
BILL                              pmax    pmax
      comp=Z,21nm,1.3s,mb4.9
BILL  Bilibino          78.53  22 eP      P       05 03 15.2  0.0
      comp=Z,22nm,1.0s,mb5.0
BILL                              LR      LR
      comp=Z,1µm,20.0s,MS5.3
PRU   Pruhonice         78.53 320 eP      P       05 03 16.0 +0.5
PRU                               epP     pP      05 03 27.6 -1.1
PRU                               AMS     AMS     05 39 40.0
      comp=Z,300nm,23.5s
MOA   Molln             78.54 318⇑iP      P       05 03 15.6  0.0
      comp=Z,19nm,1.2s,mb4.9
PVCC  Panska Ves        78.56 320 eP      P       05 03 15.9 +0.2
PVCC                              AMS     AMS     05 41 30.0
      comp=Z,300nm,20.6s
VOY   Vojsko            78.66 316 eP      P       05 03 15.7 -0.6
VOY                               e       pP      05 03 31.2 +1.7
VOY                               e               05 03 49.3
BSD   Bornholm Skovb    78.82 325 i P     P       05 03 16.0 -1.0
BSD                               pmax    pmax
      comp=Z,43nm,0.9s,mb5.4
BSD   Bornholm Skovb    78.82 325 i P     P       05 03 16.0 -1.0
      comp=Z,43nm,0.9s,mb5.4
GEC2  GERESS Array S    78.99 319 eP      P       05 03 18.5 +0.4
GEC2                              pmax    pmax
      comp=Z,46nm,1.0s,mb5.4
GEC2  GERESS Array S    78.99 319 eP      P       05 03 18.5 +0.4
      comp=Z,46nm,1.0s,mb5.4
BRG   Berggiesshubel    78.99 321 i P     P       05 03 18.1 +0.1
BRG                               i       pP      05 03 32.0 +0.8
BRG                               pmax    pmax
      comp=Z,28nm,1.0s,mb5.2
BRG   Berggiesshubel    78.99 321 i P     P       05 03 18.1 +0.1
      comp=Z,28nm,1.0s,mb5.1
BRG                               i       pP      05 03 32.0 +0.8
PTCC  Patocco-Chiusa    79.06 316 eP      P       05 03 18.7 +0.1
KHC   Kasperske Hory    79.09 319⇓iP      P       05 03 18.9 +0.3
KHC   Kasperske Hory    79.09 319 eP      P       05 03 18.2 -0.4
KHC                               epP     pP      05 03 31.8  0.0
KBA   Koelnbreinsper    79.11 317⇓iP      P       05 03 18.7 -0.1
      comp=Z,13nm,0.9s,mb4.9
ARV   Arcevia           79.20 313 eP      P       05 03 19.8 +0.5
RUE   Ruedersdorf       79.23 322 eP      P       05 03 19.1 -0.2
      comp=Z,92nm,1.1s,mb5.6
FSSB  Fossombrone       79.33 313 eP      P       05 03 20.5 +0.5
FVI   Forni Avoltri     79.47 316 eP      P       05 03 20.8 +0.1
WET   Wettzell          79.55 319 eP      P       05 03 21.5 +0.4
WET                               pmax    pmax
      comp=Z,25nm,1.1s,mb5.1
WET   Wettzell          79.55 319 eP      P       05 03 21.5 +0.4
      comp=Z,25nm,1.1s,mb5.1
RSM   Repubblica di     79.57 314 eP      P       05 03 22.3 +1.0
CLL   Collm             79.61 321⇓iP      P       05 03 21.4  0.0
CLL                               e       pP      05 03 35.0 +0.4
CLL                               pmax    pmax
      comp=Z,19nm,1.1s,mb4.9
CLL   Collm             79.61 321⇓iP      P       05 03 21.4  0.0
      comp=Z,19nm,1.1s,mb4.9
CLL                               e       pP      05 03 35.0 +0.4
CLL   Collm             79.61 321 ⇓P      P       05 03 21.4  0.0
      comp=Z,logA/T=1.2,mb4.9
CLL                               e*SP    sP      05 03 35.0 -4.6
NKC   Novy Kostel       79.89 320 eP      P       05 03 22.8 -0.1
NKC                               epP     pP      05 03 35.1 -1.1
NKC                               AMS     AMS     05 40 10.0
SFI   Santa Sofia       80.01 313 eP      P       05 03 25.1 +1.4
CTI   Castel Tesino     80.22 316 eP      P       05 03 25.5 +0.7
VMG   Vicchio           80.23 314 eP      P       05 03 26.1 +1.2
COP   Copenhagen        80.28 325 i P     P       05 03 25.4 +0.5
COP                               i       pP      05 03 43.4 +5.3
COP                               pmax    pmax
      comp=Z,26nm,0.7s,mb5.3
COP   Copenhagen        80.28 325 i P     P       05 03 25.4 +0.5
      comp=Z,26nm,0.7s,mb5.3
COP                               i       pP      05 03 43.4 +5.3
WTTA  Wattenberg        80.28 317⇑iP      P       05 03 24.6 -0.5
      comp=Z,45nm,1.0s,mb5.3
WATA  Walderalm         80.33 317⇓iP      P       05 03 24.6 -0.7
      comp=Z,23nm,1.1s,mb5.0
SEI   Scarperia         80.37 314 eP      P       05 03 26.5 +0.9
MOX   Moxa              80.45 320 eP      P       05 03 26.4 +0.5
MOX                               e       pP      05 03 39.6 +0.5
MOX                               pmax    pmax
      comp=Z,38nm,1.6s,mb5.1
MOX                               MLR     MLR
      comp=Z,300nm,22.0s,MS4.6
MOX   Moxa              80.45 320 eP      P       05 03 26.4 +0.5
      comp=Z,38nm,1.6s,mb5.1
MOX                               e       pP      05 03 39.6 +0.5
MOX                               LR      LR
      comp=Z,300nm,22.0s,MS4.6
MOX   Moxa              80.45 320 i P     P       05 03 26.4 +0.5
      comp=Z,logA/T=1.4,mb5.1
MOX                               pP      pP      05 03 40.0 +0.9
MOX                               L               05 43 10.0
FUR   Furstenfeldbru    80.56 318 eP      P       05 03 26.7 +0.2
SQTA  Sankt Quirin      80.57 317⇑iP      P       05 03 26.1 -0.5
      comp=Z,20nm,0.9s,mb5.0
MOTA  Moosalm           80.65 317⇑iP      P       05 03 26.7 -0.3
      comp=Z,17nm,1.0s,mb4.9
ZCCA  Zocca             80.65 314 eP      P       05 03 28.9 +1.8
GRA1  Grafenberg Arr    80.66 319 eP      P       05 03 28.0 +1.0
      comp=Z,37nm,1.0s,mb5.3
GRA1                              epP     pP      05 03 42.3 +2.1
GRA1                              LR      LR
      comp=Z,300nm,20.4s,MS4.6
GRF   Grafenberg Arr    80.66 319 eP      P       05 03 28.0 +1.0
GRF                               e*PP    pP      05 03 42.3 +2.1
GRF                               pmax    pmax
      comp=Z,37nm,1.0s,mb5.3
GRF                               MLR     MLR
      comp=Z,300nm,20.4s,MS4.6
GRF   Grafenberg Arr    80.66 319 eP      P       05 03 28.0 +1.0
      comp=Z,37nm,1.0s,mb5.3
GRF                               epP     pP      05 03 42.3 +2.1
GRF                               LR      LR
      comp=Z,300nm,20.4s,MS4.6
BRMO  Bormio            81.12 316 eP      P       05 03 30.1 +0.6
CLZ   Clausthal         81.28 321 eP      P       05 03 30.5 +0.3
      comp=Z,23nm,0.9s,mb5.1
NB2   NORSAR Subarra    81.32 331  P      P       05 03 29.0 -1.3
      comp=Z,23nm,0.9s,mb5.1,baz=94,slow=5.6
NB2   NORSAR Subarra    81.32 331  P      P       05 03 29.0 -1.3
      baz=94,slow=5.9
DAVA  Damuels           81.48 317⇑iP      P       05 03 31.6 +0.2
      comp=Z,41nm,1.1s,mb5.3
PGF   Pioggiola         82.07 312 eP      P       05 03 34.2 -0.3
      comp=Z,73nm,1.3s,mb5.2
MUD   Monsted U'grnd    82.15 326⇓iP      P       05 03 35.5 +0.9
MUD                               pmax    pmax
      comp=Z,24nm,0.8s,mb5.2
MUD   Monsted U'grnd    82.15 326⇓iP      P       05 03 35.5 +0.9
      comp=Z,24nm,0.8s,mb5.2
TOD   Tromm             82.23 319 eP      P       05 03 33.3 -1.9
TNS   Taunus Mts        82.46 320 eP      P       05 03 37.0 +0.6
BFO   Black Forest      82.53 318 eP      P       05 03 36.7 -0.1
BFO                               pmax    pmax
      comp=Z,16nm,1.0s,mb5.0
BFO   Black Forest      82.53 318 eP      P       05 03 36.7 -0.1
      comp=Z,16nm,1.0s,mb5.0
FIN   Finale Ligure     82.64 314 eP      P       05 03 37.6 +0.2
FELD  Feldberg          82.75 317 eP      P       05 03 36.4 -1.5
LANF  Langenberg        82.88 319 eP      P       05 03 36.4 -2.1
SYO   Syowa Base        82.96 197 ⇑PcP    PcP     05 03 47.9 +4.3
LIBD  Limburg           83.02 318 eP      P       05 03 36.7 -2.6
SBF   Sospel            83.20 313 eP      P       05 03 40.2 -0.1
      comp=Z,71nm,1.0s,mb5.4
CDF   Champ du Feu      83.23 318 eP      P       05 03 39.9 -0.4
      comp=Z,24nm,1.1s,mb4.9
ECH   Echery            83.31 318 eP      P       05 03 39.2 -1.6
RUP   Ruppelstein       83.36 319 eP      P       05 03 39.2 -1.7
HINF  Hinteralfeld      83.53 317 eP      P       05 03 42.8 +0.9
LOMF  Lomont            83.55 317 eP      P       05 03 39.6 -2.4
LPG   La Plagne         83.65 315 eP      P       05 03 42.8 +0.3
      comp=Z,41nm,1.0s,mb5.2
MBDF  Montbardon        83.66 314 eP      P       05 03 41.9 -0.7
      comp=Z,15nm,0.8s,mb4.9
LPL   La Plagne         83.66 315 eP      P       05 03 42.9 +0.3
      comp=Z,58nm,1.0s,mb5.4
FRF   La Foret Royal    83.78 313 eP      P       05 03 43.3 +0.1
      comp=Z,110nm,1.4s,mb5.5
HAU   Haudompre         83.86 318 eP      P       05 03 43.1 -0.5
      comp=Z,58nm,1.0s,mb5.3
HAU                               eR
      comp=Z,212nm,23.0s
LMR   La Mourre         83.89 313 eP      P       05 03 43.7 -0.1
CABF  La Chapelle       84.08 316 eP      P       05 03 44.9 +0.2
      comp=Z,35nm,1.0s,mb5.1
THEF  They Montfort     84.10 318 eP      P       05 03 42.5 -2.2
ORIF  Oris-en-Rattie    84.28 314 eP      P       05 03 46.2 +0.4
      comp=Z,16nm,0.9s,mb4.9
ORIF                              eR
      comp=Z,341nm,19.8s
SMRF  Simiane la Rot    84.54 314 eP      P       05 03 47.9 +0.8
MEZF  Maizieres J'vi    84.71 318 eP      P       05 03 47.7 -0.1
GIVF  Givet             84.79 320 eP      P       05 03 48.1 -0.1
VIVF  Saint-Julien-l    85.14 314 eP      P       05 03 50.0  0.0
      comp=Z,110nm,1.8s,mb5.4
BAIF  Baives            85.19 320 eP      P       05 03 50.3 +0.1
      comp=Z,21nm,0.9s,mb5.0
SMF   Signal de Mont    85.62 316 eP      P       05 03 52.1 -0.3
      comp=Z,49nm,1.2s,mb5.3
LASF  Ste Croix         85.77 314 eP      P       05 03 53.7 +0.6
PLDF  La Plantade       85.82 316 eP      P       05 03 50.6 -2.7
SSF   Saint Saulge      85.83 317 eP      P       05 03 53.5 +0.2
      comp=Z,33nm,1.3s,mb5.1
AVF   Avril sur Loir    85.95 316 eP      P       05 03 53.8 -0.1
      comp=Z,24nm,1.0s,mb5.1
AGO   Saint Agoulin     86.15 316 eP      P       05 03 52.1 -2.9
PYM   Petit Puy Mans    86.26 315 eP      P       05 03 52.6 -2.9
BGF   Bois d'Agland     86.31 316 eP      P       05 03 56.0 +0.3
      comp=Z,74nm,1.3s,mb5.4
HYF   Humbligny         86.40 317 eP      P       05 03 56.5 +0.3
TCF   Toulx Ste Croi    86.77 316 eP      P       05 03 58.4 +0.4
      comp=Z,25nm,1.2s,mb5.0
CAF   Calviac           86.99 315 eP      P       05 03 59.6 +0.5
      comp=Z,13nm,1.1s,mb4.8
MTLF  Montolieu         87.01 313 eP      P       05 03 59.7 +0.5
      comp=Z,19nm,1.0s,mb5.0
RJF   Les Rejaudoux     87.34 315 eP      P       05 04 01.4 +0.6
      comp=Z,16nm,0.9s,mb5.0
RJF                               eR
      comp=Z,266nm,22.9s
LFF   La Frestale       87.92 315 eP      P       05 04 04.2 +0.6
      comp=Z,88nm,1.5s,mb5.5
LDF   La Druitiere      88.13 318 eP      P       05 04 04.6 +0.1
      comp=Z,28nm,1.0s,mb5.1
FLN   La Foliniere      88.35 319 eP      P       05 04 05.5  0.0
      comp=Z,29nm,0.9s,mb5.2
FLN                               eR
      comp=Z,372nm,21.8s
MFF   Saint Martin d    88.37 316 eP      P       05 04 05.7 +0.1
EPF   Esparros          88.41 313 eP      P       05 04 06.1 +0.2
TNA   Tin City          88.61  24 eP      P       05 04 06.4 +0.1
      comp=Z,11nm,0.8s,mb5.2
TNA                               e       pP      05 04 19.6 -0.2
GRR   Gorron            88.64 318 eP      P       05 04 06.9  0.0
      comp=Z,57nm,1.4s,mb5.4
ETSF  Etsaut            89.08 313 eP      P       05 04 08.9 -0.2
      comp=Z,30nm,1.3s,mb5.2
SJPF  Ste Jean          89.54 313 eP      P       05 04 10.9 -0.4
      comp=Z,36nm,1.4s,mb5.2
DAG   Danmarks Havn     89.54 348⇑eP      P       05 04 10.5 -0.1
DAG                               pmax    pmax
      comp=Z,4.0nm,0.7s,mb4.9
DAG   Danmarks Havn     89.54 348⇑eP      P       05 04 10.5 -0.1
      comp=Z,4.1nm,0.7s,mb4.9
DAG   Danmarks Havn     89.54 348⇑iP      P       05 04 10.5 -0.1
      comp=Z,4.1nm,0.7s,mb4.9
SGMF  Saint Gilles      89.78 318 eP      P       05 04 12.4 +0.1
      comp=Z,42nm,1.2s,mb5.3
QUIF  Quistinic         90.24 318 eP      P       05 04 14.3 -0.1
VNDA  Vanda             90.85 168 eP      P       05 04 20.4 +3.7
VNDA                              pmax    pmax
      comp=Z,15nm,1.1s
VNDA  Vanda             90.85 168 eP      P       05 04 20.4 +3.7
      comp=Z,15nm,1.1s,mb5.2
ESLA  Sonseca Array     92.06 310 eP      P       05 04 23.5 +0.4
      comp=Z,4.2nm,1.2s,mb4.6
ESLA                              LR      LR
      comp=Z,2µm,21.0s,MS5.6
IMA   Indian Mountai    94.07  22 eP      P       05 04 32.9 +1.3
IMA                               e       pP      05 04 46.4 +1.3
IMA                               pmax    pmax
      comp=Z,64nm,1.0s,mb6.0
IMA   Indian Mountai    94.07  22 eP      P       05 04 33.4 +1.8
      comp=Z,3.5nm,0.7s,mb4.9
SVW2  Sparrevohn        95.17  27 eP      P       05 04 37.3 +0.5
QSPA  South Pole Qui    95.48 180 PFAKE           05 04 50.0  +12
QSPA                              LR      LR
      comp=Z,893nm,20.0s,MS5.2
COLA  College           96.78  22 i P     P       05 04 48.9 +4.9
COLA  College           96.78  22 PFAKE           05 05 00.0  +16
COLA                              LR      LR
      comp=Z,497nm,20.0s,MS5.0
MCK   McKinley          96.90  23 eP      P       05 04 43.8 -0.8
      comp=Z,14nm,1.5s,mb5.2
MCK                               LR      LR
      comp=Z,372nm,19.0s,MS4.9
RES   Resolute Bay      99.73   2 eP      P       05 04 58.1 +0.9
RES                               e               05 05 06.4
RES                               pmax    pmax
      comp=Z,13nm,1.1s,mb5.3
```

RES	Resolute Bay	99.73	2	eP	P	05 04 58.1	+0.9
	comp=Z,13nm,1.1s,mb5.3						
RES				e		05 05 06.4	
TBI	Tubuai	117.17	113	eLR	LR	05 45 55.1	
	comp=Z,385nm,29.8s						
PPT	Papeete	117.50	107	eLR	LR	05 45 53.2	
	comp=Z,444nm,24.5s						
SCHQ	Schefferville	117.59	347	PFAKE		05 10 10.0	+12
SCHQ				LR	LR		
	comp=Z,576nm,20.0s,MS5.2						
PMSA	Palmer Station	118.73	191	PKPdf	PKPdf	05 09 58.5	-1.8
NEW	Newport	120.13	23	PFAKE		05 10 20.0	+17
NEW				LR	LR		
	comp=Z,324nm,19.0s,MS5.0						
HUMO	Hull Mountain	121.85	31	ePKPdf	PKPdf	05 10 09.7	+2.8
MSO	Missoula	122.52	22	ePKPdf	PKPdf	05 10 09.3	+1.2
MOD	Modoc	123.70	30	ePKPdf	PKPdf	05 10 13.4	+2.9
ULM	Lac du Bonnet	123.85	7	ePKPdf	PKPdf	05 10 11.6	+1.0
WVOR	Wild Horse Val	124.10	28	ePKIKP	PKPdf	05 10 14.1	+2.8
BOZ	Bozeman (W)	124.37	21	ePKIKP	PKPdf	05 10 13.9	+2.2
HLID	Hailey	125.06	24	ePKPdf	PKPdf	05 10 16.0	+2.9
HLID				LR	LR		
	comp=Z,489nm,19.0s,MS5.2						
QLMT	Earthquake Lak	125.15	21	ePKPdf	PKPdf	05 10 17.5	+4.3
LAO	LASA Array	125.17	16	ePKPdf	PKPdf	05 10 16.0	+2.8
YMR	Madison River	125.45	21	ePKPdf	PKPdf	05 10 17.2	+3.4
LKWY	Lake	125.74	21	ePKIKP	PKPdf	05 10 18.1	+3.7
MOOW	Moose Ponds	126.33	21	ePKPdf	PKPdf	05 10 18.0	+2.4
RRI2	Red Ridge	126.46	22	ePKPdf	PKPdf	05 10 18.3	+2.5
TPAW	Teton Pass	126.48	22	ePKPdf	PKPdf	05 10 18.8	+2.9
LOHW	Long Hollow	126.50	21	ePKPdf	PKPdf	05 10 18.3	+2.4
CMB	Columbia Colle	126.51	33	PFAKE		05 10 30.0	+14
CMB				LR	LR		
	comp=Z,299nm,19.0s,MS5.0						
SNOW	Snow King Moun	126.57	22	ePKPdf	PKPdf	05 10 18.8	+2.7
TAOE	Nuku Hiva Isla	126.91	97	eLR	LR	05 50 25.6	
BW06	Boulder Array	127.61	21	PFAKE		05 10 30.0	+12
BW06				LR	LR		
	comp=Z,507nm,22.0s,MS5.2						
HWUT	Hardware Ranch	127.85	24	ePKPdf	PKPdf	05 10 21.1	+2.5
HWUT				LR	LR		
	comp=Z,426nm,19.0s,MS5.2						
RSSD	Black Hills	128.14	16	PFAKE		05 10 30.0	+11
RSSD				LR	LR		
	comp=Z,3.0nm,22.0s						
TPH	Tonopah	128.14	31	PFAKE		05 10 30.0	+11
TPH				LR	LR		
	comp=Z,359nm,20.0s,MS5.0						
TRCR	Troy Canyon	128.74	29	ePKPdf	PKPdf	05 10 22.3	+1.9
MVU	Marysvale	130.18	26	ePKPdf	PKPdf	05 10 27.4	+4.3
MSU	Marysvale	130.18	26	eP	PKPdf	05 10 26.7	+3.6
NEN	Nelson	131.22	31	ePKPdf	PKPdf	05 10 29.2	+4.0
ISCO	Idaho Springs	131.61	20	PFAKE		05 10 40.0	+14
ISCO				LR	LR		
	comp=Z,393nm,19.0s,MS5.1						
PV10	Paradox Valley	131.61	24	ePKPdf	PKPdf	05 10 29.5	+3.6
SDCO	Great Sand Dun	133.49	21	PFAKE		05 10 40.0	+11
SDCO				LR	LR		
	comp=Z,625nm,21.0s,MS5.3						
ANMO	Albuquerque	135.61	23	ePKPdf	PKPdf	05 10 36.9	+3.5
ANMO				LR	LR		
	comp=Z,382nm,20.0s,MS5.1						
WMOK	Wichita Mounta	138.33	15	PFAKE		05 10 50.0	+12
WMOK				LR	LR		
	comp=Z,356nm,19.0s,MS5.1						
MNTX	Cornudas Mount	138.89	25	ePKPdf	PKPdf	05 10 44.1	+4.6
TRQA	Tornquist	140.61	211	PFAKE		05 11 00.0	+18
TRQA				LR	LR		
	comp=Z,539nm,19.0s,MS5.3						
LTX	Lajitas	141.66	24	ePKPdf	PKPdf	05 10 49.6	+5.0
LTX				LR	LR		
	comp=Z,530nm,20.0s,MS5.3						
JCT	Junction City	142.03	19	ePKPpre		05 10 39.5	
JCT				ePKPdf	PKPdf	05 10 50.0	+4.9
PLCA	Paso Flores	142.10	200	PFAKE		05 11 00.0	+15
PLCA				LR	LR		
	comp=Z,484nm,19.0s,MS5.3						
PPM	Popocatepetl	152.85	25	eP	PKPdf	05 11 09.7	+6.7
LVC	Limon Verde	155.86	224	ePKP	PKPdf	05 11 16.4	+9.5
LVC				LR	LR		
	comp=Z,395nm,19.0s,MS5.3						
LPAZ	La Paz	158.90	238	ePKPdf	PKPdf	05 11 09.8	-1.2
LPAZ				LR	LR		
	comp=Z,359nm,21.0s,MS5.2						
JTS	JuntasAbangare	164.16	354	PFAKE		05 11 30.0	+14
JTS				LR	LR		
	comp=Z,102nm,20.0s						
NNA	Nana	168.35	236	PFAKE		05 11 30.0	+10
NNA				LR	LR		
	comp=Z,152nm,20.0s						

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*CASC **03** 05:27:08.2±2.1, 14.97N×93.20W, h33^{km}±999^{km}, MD4.4*
*NEIC **03** 05:27:11.4, 14.94N×93.15W, h33^{km}, MD4.1(MEX), After MEX.*
*MEX **03** 05:27:11.4±0.9, 14.96N×93.18W, h16^{km}±40^{km}, MD4.1*
ISC 03 05:27:08.4±0.6**, 14.93N**±0.07×**93.16W**±0.05**, h59**^{km}±41^{km}**, n18, σ0$\overset{s}{.}$87**/30**, 1C-2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	1.60	112	⇓eP	P	05 27 34.3	-0.7
JAT				eS	S	05 27 55.1	+0.5
CCIG	Comitan	1.67	36	i P	P	05 27 36.1	+0.1
CCIG				i S	S	05 27 56.0	-0.2
SCX	San Cristobal	1.86	16	i P	P	05 27 40.3	+1.7
SCX				i S	S	05 28 01.0	0.0
SCX	San Cristobal	1.86	16	i P	P	05 27 40.0	+1.4
SCX				i S	S	05 28 01.0	0.0
TP2	Tecpan 2	2.08	94	eP	P	05 27 41.5	-0.1
CMIG	Matias Romero	2.71	323	eP	P	05 27 50.4	-0.2
CMIG				i S	S	05 28 20.1	-2.2
IXG	Ixpaco	2.73	106	⇑eP	P	05 27 50.0	-0.9
IXG				eS	S	05 28 23.3	+0.5
RBDL	Robledal	3.46	103	eP	P	05 28 01.4	+0.2
RTR	El Retiro	3.56	106	eP	P	05 28 02.2	-0.3
RTR				eS	S	05 28 44.7	+1.0
SBLS	San Blas	3.60	107	⇓eP	P	05 28 02.5	-0.6
SNJE	San Jose	3.61	107	eP	P	05 28 04.6	+1.4
BOQS	Boqueron	3.95	107	eP	P	05 28 07.6	-0.4
BOQS				eS	S	05 28 56.8	+3.3
OXX	Oaxaca	4.04	302	i P	P	05 28 10.0	+0.8
OXX				i S	S	05 28 55.0	-0.7
VHO	Vista Hermosa	4.04	302	eP	P	05 28 09.8	+0.5
VHO				i S	S	05 28 57.2	+1.5
LFU	La Fuente	4.10	106	eP	P	05 28 10.3	+0.1
LFRS	El Faro	4.18	108	eP	P	05 28 10.8	-0.5
LFRS				eS	S	05 28 58.0	-1.4
LCBS	La Ceiba	4.25	107	eP	P	05 28 12.0	-0.3
LCBS				eS	S	05 29 01.3	+0.2
SNVI	San Vicente	4.39	107	eP	P	05 28 13.5	-0.8

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*NEIC **03** 05:33:09.8, 43.45N×15.86E, h10^{km}, MD3.3(ROM), ML3.5(SZGRF), After ROM.*
*ROM **03** 05:33:09.8±1.5, 43.45N×15.86E, h10^{km}, MD3.3/5, ML2.9/4, Error ellipse: s-maj=11.6km s-min=9.7km az=90.0*
*CSEM **03** 05:33:15.1±0.1, 43.23N×15.30E, h10^{km}, ML2.9/4, Error ellipse: s-maj=4.0km s-min=2.3km az=114.0*
ISC 03 05:33:14.7±0.5**, 43.19N**±0.03×**15.31E**±0.06**, h10**^{km}**, n35, σ1$\overset{s}{.}$23**/45**, 3C-1D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RGNG	Rignano Grg	1.53	172	ePN	Pn	05 33 40.4	-1.9
AQU	L'Aquila	1.63	240	ePn	Pn	05 33 45.2	+1.5
AQU	L'Aquila	1.63	240	ePn	Pn	05 33 45.2	+1.5
CII	Carovilli	1.64	207	ePN	Pn	05 33 44.6	+0.7
CII	Carovilli	1.64	207	ePn	Pn	05 33 44.6	+0.7
NRCA	Norcia	1.65	258	ePN	Pn	05 33 43.8	-0.2
	47nm,0.5s						
NRCA	Norcia	1.65	258	ePn	Pn	05 33 43.8	-0.1
NRCA	Norcia	1.65	258	ePn	Pn	05 33 43.8	-0.2
	47nm,0.5s						
SNTG	Esanatoglia	1.73	273	ePN	Pn	05 33 44.8	-0.4
SNTG	Esanatoglia	1.73	273	ePn	Pn	05 33 44.8	-0.4
ARV	Arcevia	1.75	281	ePN	Pn	05 33 45.2	-0.3
	46nm,0.6s						
ARV	Arcevia	1.75	281	ePn	Pn	05 33 45.2	-0.2
ARV	Arcevia	1.75	281	ePn	Pn	05 33 45.2	-0.3
	46nm,0.6s						
STON	Ston	1.78	99	i Pn	Pn	05 33 44.8	-1.2
STON				i Sn	Sn	05 34 10.2	+1.4
STON	Ston	1.78	99	i Pn	Pn	05 33 44.7	-1.2
STON				i Sn	Sn	05 34 10.2	+1.4
SDI	San Donato	1.85	217	ePN	Pn	05 33 47.1	+0.3
	80nm,0.3s						
SDI	San Donato	1.85	217	ePn	Pn	05 33 47.1	+0.3
SDI	San Donato	1.85	217	ePn	Pn	05 33 47.1	+0.3
	80nm,0.3s						
MNS	Montasola	2.09	248	ePN	Pn	05 33 51.9	+1.5
	81nm,0.8s						
MNS	Montasola	2.09	248	ePn	Pn	05 33 51.9	+1.5
MNS	Montasola	2.09	248	ePn	Pn	05 33 51.9	+1.5
	81nm,0.8s						
VOY	Vojsko	3.02	341	ePn	Pn	05 34 03.3	-0.2
VOY				e		05 34 10.2	
VOY				eSn	Sn	05 34 42.3	+2.2
OBKA	Obir	3.36	351	⇑iPN	Pn	05 34 09.1	+0.7
OBKA				i SN	Sn	05 34 51.3	+2.4
PKSM	Moragy	3.84	37	eS	Sn	05 35 01.8	+0.7
ARSA	Arzberg	4.06	2	⇑iPN	Pn	05 34 18.6	+0.2
ARSA				i SN	Sn	05 35 08.0	+1.4
KBA	Koelnbreinsper	4.13	341	⇓iPN	Pn	05 34 19.4	+0.1
KBA				i SN	Sn	05 35 08.8	+0.5
MOA	Molln	4.72	351	⇑iPN	Pn	05 34 28.0	+0.3
MOA				i SN	Sn	05 35 23.6	+0.5
ZST	Bratislava	5.16	13	ePB	Pn	05 34 30.9	-3.1
GEC2	GERESS Array S	5.77	349	ePn	Pn	05 34 41.5	-1.0
GEC2				eSn	Sn	05 35 47.4	-2.1
VYHS	Vyhne	5.85	24	i PB	Pn	05 34 44.3	+0.6
KHC	Kasperske Hory	6.06	349	ePN	Pn	05 34 45.3	-1.4
KHC				x	x	05 34 54.5	
KHC				eSN	Sn	05 35 51.1	-5.8
WET	Wettzell	6.19	345	ePn	Pn	05 34 46.8	-1.7
WET				eSn	Sn	05 35 57.1	-3.0
PRU	Pruhonice	6.82	356	ePN	Pn	05 34 56.7	-0.7
TANN	Tannenbergstha	7.49	346	ePn	Pn	05 35 05.7	-1.0
KOLS	Kolonicke sedl	7.51	38	ePB	Pn	05 35 11.3	+4.2

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*TRN **03** 05:40:20.1, 10.76N×62.38W, h28^{km}, MD3.4*
*NEIC **03** 05:40:20.1, 10.76N×62.38W, h28^{km}, MD3.4(TRN), After TRN.*
*FUNV **03** 05:40:20.0, 10.83N×62.34W, h58^{km}, MW2.9*
ISC 03 05:40:18.7±0.5**, 10.74N**±0.04×**62.43W**±0.03**, h72**^{km}±7^{km}**, n17, σ1$\overset{s}{.}$05**/33**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.22	115	eP	P	05 40 29.7	+0.1
GUIV				eS	S	05 40 36.4	-1.4
GUNV	Guanoco	0.77	221	eP	P	05 40 36.4	+1.7
GUNV				eS	S	05 40 48.5	+1.9
CRUV	Carupano	0.80	265	eP	P	05 40 35.7	+0.6
CRUV				eS	S	05 40 47.3	+0.1
ITEV	Isla Los Testi	0.92	311	eP	P	05 40 36.7	+0.1
ITEV				eS	S	05 40 48.9	-1.0
TRN	Trinidad (W)	1.01	95	eP	P	05 40 38.2	+0.5
TRN				eS	S	05 40 50.7	-1.2
TPP	Pointe-a-Pierr	1.05	114	eP	P	05 40 39.6	+1.5
TPP				eS	S	05 40 51.5	-1.2
TBH	Brigand Hill	1.36	101	eP	P	05 40 43.2	+0.7
GRW	Mount Saint Ca	1.60	28	eP	P	05 40 45.5	-0.1
GRW				eS	S	05 41 05.7	+0.3
TPR	Prospect	1.68	75	eP	P	05 40 46.8	+0.1
TPR				eS	S	05 41 07.5	+0.2
BOT	Bacolet	1.73	76	eP	P	05 40 47.4	0.0
BOT				eS	S	05 41 08.4	0.0
ORIV	Oritupano	1.92	210	eP	P	05 40 51.5	+1.6
ORIV				eS	S	05 41 14.4	+1.5
PCRV	Puerto La Cruz	2.24	256	eP	P	05 40 55.0	+0.5
PCRV				eS	S	05 41 20.9	-0.1
RIOV	Rio Grande	2.72	167	eP	P	05 41 01.0	-0.2
RIOV				eS	S	05 41 31.4	-1.7
CUPV	Cœpira	3.38	259	eP	P	05 41 11.4	+1.1
CUPV				eS	S	05 41 47.8	-1.6
MERV	Las Mercedes	4.09	249	eP	P	05 41 20.9	+0.6
MERV				eS	S	05 42 05.3	-2.0
CAOV	Caicara del Or	5.13	229	eP	P	05 41 34.3	-0.4
CAOV				eS	S	05 42 30.2	-3.0
BAUV	El Baul	5.81	253	eP	P	05 41 43.3	-0.8
BAUV				eS	S	05 42 44.1	-6.1

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*CSEM **03** 06:26:03.8±0.6, 29.93N×50.78E, h6^{km}±6^{km}, ML3.4, Error ellipse: s-maj=7.1km s-min=3.9km az=37.0*
*TEH **03** 06:26:07.4, 29.89N×50.95E, h10^{km}, Mn3.4*
*THR **03** 06:26:09.7±0.4, 30.36N×50.76E, h18^{km}±24^{km}, ML3.4*
ISC 03 06:26:07.7±3.2**, 30.09N**±0.09×**50.95E**±0.08**, h22**^{km}±40^{km}**, n16, σ1$\overset{s}{.}$02**/20**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	Borojen	1.69	9	Pn	Pn	06 26 40.1	+3.7
IMOK	Mook	1.85	124	Pn	Pn	06 26 39.0	+0.3
ISRV	Sarvestan	2.00	110	Pn	Pn	06 26 40.4	-0.5
SHGO	Shushtar	2.73	318	ePN	Pn	06 26 50.3	-1.0
SHGR	Shooshtar-Gavs	2.73	318	ePN	Pn	06 26 50.3	-1.0
SHGR				eSG	Sn	06 27 25.4	+1.3
SHGR				AML	AML	06 27 47.9	
	comp=N,209nm,0.4s						
SHGR	Shooshtar-Gavs	2.73	318	ePn	Pn	06 26 50.3	-1.0
	SNR=52						
SHGR				eSg	Sn	06 27 25.4	+1.4
	comp=N,209nm,0.4s,SNR=91						
NASN	Na'in	3.13	30	ePN	Pn	06 26 58.8	+1.8
IKOM	Komasi	5.01	325	Pn	Pn	06 27 25.5	+1.8
IRAZ	Razeghan	5.37	351	Pn	Pn	06 27 29.8	+1.1
IRAZ				Sn	Sn	06 28 30.5	-0.2
IDMV	Damavand	5.55	9	Pn	Pn	06 27 31.5	+0.3
DAMV	Damavand	5.59	9	ePN	Pn	06 27 31.0	-0.8
DAMV				AML	AML	06 28 36.5	
	comp=N,16nm,0.4s						
IVIS	Veys	5.62	323	Pn	Pn	06 27 32.2	-0.1
IFIR	Firoozkooh	5.74	15	Pn	Pn	06 27 34.0	+0.1
IFIR				Sn	Sn	06 28 38.9	-1.1
IAFJ	Afjeh	5.79	6	Pn	Pn	06 27 34.5	-0.1
SNGE	Sanandaj	5.85	330	ePN	Pn	06 27 33.7	-1.7
SNGE				AML	AML	06 28 47.7	
	comp=N,24nm,0.5s						
IDHR	Dehrash	6.01	321	Pn	Pn	06 27 37.2	-0.5

ISC 03 06:34:31.7±2.6**, 3.93S**±0.09×**135.2E**±0.2**, h66**^{km}±24^{km}**, n12, σ0$\overset{s}{.}$94**/15**, mb5.2**/2**, 2D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	9.15	197	eP	P	06 36 43.9	+0.6
	59nm,0.4s						
KAKA				eS	S	06 38 19.3	-6.5
WB2	Warramunga Arr	15.94	183	eP	P	06 38 11.2	-2.1
WB2				eS	S	06 40 58.5	-9.2
CTA	Charters Tower	19.31	147	⇓iP	P	06 38 54.3	+0.1
	41nm,0.9s						
ASPA	Alice Springs	19.66	184	⇓iP	P	06 39 00.5	+2.5
ASPA				eS	S	06 42 30.6	-0.3
FORT	Forrest	27.55	193	eP	P	06 40 18.1	+3.5
	48nm,0.7s,mb5.1						
JIRN	Jiri	56.74	307	eP	P	06 44 11.5	+0.1
	28nm,0.7s						
GUN	Gumba	57.09	307	eP	P	06 44 14.1	+0.2
	55nm,0.7s						
PKI	Pulchoki	57.32	306	eP	P	06 44 15.0	-0.5
KKN	Kakani	57.52	306	eP	P	06 44 16.7	-0.2
	37nm,0.8s						
DMN	Daman	57.58	306	eP	P	06 44 17.3	-0.1
	56nm,0.9s						
GKN	Gorkha	58.13	306	eP	P	06 44 21.2	+0.1
	34nm,0.7s						
KOLN	Koldanda	58.87	306	eP	P	06 44 26.3	0.0
	28nm,0.8s,mb5.4						

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*CSEM **03** 06:40:06.8±0.1, 35.19N×3.97W, h10^{km}, MD2.8, Error ellipse: s-maj=3.4km s-min=3.0km az=19.0*
*MDD **03** 06:40:08.7±0.5, 35.16N×3.93W, h6^{km}±3^{km}, mbLg1.9/5, Error ellipse: s-maj=6.1km s-min=3.1km az=70.0, PRXIMO*
*CNRM **03** 06:40:08.5, 35.19N×3.82W, h3^{km}, MD2.8*
*NEIC **03** 06:40:09.6, 35.20N×3.94W, h9^{km}, MG3.5(MDD), After MDD.*
ISC 03 06:40:07.7±0.6**, 35.19N**±0.03×**4.00W**±0.04**, h9**^{km}±4^{km}**, n21, σ0$\overset{s}{.}$99**/35**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.05	56	P	Pg	06 40 10.0	+0.3
MPAL				S	Sg	06 40 12.0	+0.9
MPAL	Palemas	0.05	56	i P	Pg	06 40 10.0	+0.3
TOU	Touzarine	0.31	139	P	Pg	06 40 12.5	-1.5
TOU				S	Sg	06 40 16.5	-1.7
TOU	Touzarine	0.31	139	i P	Pg	06 40 12.5	-1.5
EMEL	Melilla	0.86	83	P	Pb	06 40 24.2	-0.1
	30nm,0.1s,SNR=7.9						
EMEL				S	Sb	06 40 36.0	+0.4
	112nm,0.2s,SNR=4.0						
EMLI	Melilla	0.86	83	P	Pb	06 40 24.2	-0.2
	30nm,0.1s,SNR=7.9						
EMLI				S	Sb	06 40 36.0	+0.2
	112nm,0.2s,SNR=4.0						
EALB	Alboran	1.08	46	P	Pb	06 40 28.1	0.0
	6.2nm,0.2s,SNR=7.9						
EALB				S	Sb	06 40 42.6	+0.5
	8.9nm,0.1s,SNR=7.9						
EALB	Alboran	1.08	46	P	Pb	06 40 28.1	0.0
	6.2nm,0.2s,SNR=7.9						
EALB				S	Sb	06 40 42.6	+0.5
	8.9nm,0.1s,SNR=7.9						
TZK	Tazeka	1.11	188	i P	Pb	06 40 30.0	+1.4
TZK				i S	Sb	06 40 44.0	+1.0
EMIJ	Mijas	1.51	335	P	Pn	06 40 36.0	+1.1
	0.4nm,0.2s,SNR=7.9						
EMIJ				S	Sb	06 40 54.2	-0.2
	2.1nm,0.2s,SNR=7.9						
EBER	Berja	1.92	28	P	Pn	06 40 40.0	-0.9
	0.5nm,0.1s,SNR=7.9						
EBER				S	Sn	06 41 04.5	-0.9
	1.3nm,0.2s,SNR=7.9						
EBER	Berja	1.92	28	P	Pn	06 40 40.0	-0.9
	0.5nm,0.1s,SNR=7.9						
EBER				S	Sn	06 41 04.5	-0.9
	1.3nm,0.2s,SNR=7.9						
EQES	Quesada	2.71	16	P	Pn	06 40 54.4	+2.2
EQES				S	Sn	06 41 25.9	+0.6
EQES	Quesada	2.71	16	P	Pn	06 40 50.4	-1.8
	0.4nm,0.1s,SNR=7.9						
EQES				S	Sn	06 41 25.9	+0.6
	1.1nm,0.2s,SNR=7.9						
EQES	Quesada	2.71	16	S	Sn	06 41 25.9	+0.6
	1.1nm,0.2s,SNR=7.9						
EADA	Adamuz	3.00	351	P	Pn	06 40 57.8	+1.4
	0.3nm,0.2s,SNR=4.0						
EADA	Adamuz	3.00	351	P	Pn	06 40 57.8	+1.4
	0.3nm,0.2s,SNR=4.0						
EMIN	Mina Concepcio	3.35	321	P	Pn	06 41 00.9	-0.4
	0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	06 41 39.9	-1.7
	0.3nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.35	321	P	Pn	06 41 00.9	-0.4
	0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	06 41 39.9	-1.8
EBAD	Badajoz	4.30	327	P	Pn	06 41 14.2	-0.6
	0.3nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.30	327	P	Pn	06 41 14.2	-0.5

IGQ 03 06:41:12.4, 1.49S×81.53W, h10^{km}±7^{km}, mb4.6, 2C-1D, Error ellipse: s-maj=10.3km s-min=5.2km az=166.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	Salinas	0.87	142	⇓P	Pb	06 41 28.6	-0.6
HOJA	Cerro de Hojas	1.07	66	⇑P	Pb	06 41 32.3	-0.4
IGUA	Igualata	2.89	90	P	Pn	06 41 59.9	+0.5
IGUA				S	Sn	06 42 36.2	+1.7
CUSU	Cusua	3.04	89	P	Pn	06 42 03.1	+1.5
JUIV	Juive	3.06	89	P	Pn	06 42 05.0	+3.2
ARRY	Arrayan	3.07	90	⇑P	Pn	06 42 02.2	+0.2
ARRY				S	Sn	06 42 38.5	-0.7
RETU	Refugio	3.08	89	P	Pn	06 42 04.2	+2.1
NAS1	Nasa	3.17	74	P	Pn	06 42 05.9	+2.5
PISA	Pisayambo	3.17	82	P	Pn	06 42 05.4	+2.0
PISA				S	Sn	06 42 43.2	+1.5
JUA2	San Juan 2	3.19	67	P	Pn	06 42 05.1	+1.5
TERV	Terraza Guagua	3.20	66	P	Pn	06 42 04.6	+0.7
PINO	Pino	3.21	66	P	Pn	06 42 04.8	+0.9
VC1	Cotopaxi 1	3.23	75	P	Pn	06 42 07.0	+2.6
TAMB	Tambo	3.25	76	P	Pn	06 42 07.0	+2.4
YANA	Yana	3.25	65	P	Pn	06 42 05.1	+0.5
ANTI	Antisana	3.52	73	P	Pn	06 42 10.1	+1.7
CAYR	Refugio Cayamb	3.82	67	P	Pn	06 42 15.7	+3.0
CONE	Cono NE Rev Vo	4.13	70	P	Pn	06 42 25.9	+8.8

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*ISK **03** 07:18:12.8, 37.77N×43.88E, h23^{km}, MD4.0, ML4.1*
*THR **03** 07:18:14.4±0.7, 37.78N×43.57E, h14^{km}±9^{km}, ML3.4*
*CSEM **03** 07:18:15.1±0.1, 37.80N×43.61E, h15^{km}, ML3.9/2, Error ellipse: s-maj=3.3km s-min=2.3km az=10.0*
ISC 03 07:18:13.1±0.5**, 37.77N**±0.03×**43.89E**±0.04**, h13**^{km}±4^{km}**, n32, σ0$\overset{s}{.}$98**/44**, 5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	Hakkari	0.23	212	i PG	Pg	07 18 19.1	+0.9
HKR				i SG	Sg	07 18 22.6	+1.0
VANT	Van	0.78	330	i PG	Pg	07 18 29.4	+0.4
TVAN	Van	0.85	333	i P	Pb	07 18 30.0	+0.7
TVAN				i S	Sb	07 18 42.1	+1.7
VANB	Van	0.92	334	i PG	Pg	07 18 29.9	-1.7
VANB				i SG	Sg	07 18 43.2	-0.7
MSL	Mosul	1.61	204	i Pn	Pn	07 18 46.5	+5.0
MSL				i Pg	Px	07 18 48.0	
MSL				i Sb	Sx	07 19 06.5	
MSL				i Sg	Sx	07 19 07.5	
MAKU	Maku	1.70	21	ePG	Pg	07 18 47.2	0.0
MAKU				AML	AML	07 19 16.6	
	comp=N,242nm,0.4s						
BTMT	Batman	1.95	283	i PN	Pn	07 18 47.6	+1.2
BEST	Besiri	2.08	274	i P	Pn	07 18 48.8	+0.5
BEST				i S	Sn	07 19 15.8	+1.6
VRT	Varto	2.30	307	PN	Pn	07 18 50.9	-0.5
GNI	Garni	2.47	15	PN	Pn	07 18 53.2	-0.6
BINT	Bingol	2.90	293	ePN	Pn	07 18 58.7	-1.2
ERZM	Erzurum	2.91	318	i P	Pn	07 19 03.3	+3.2
ERZM				i S	Sg	07 19 49.8	-0.2
EZM	Erzurum	2.91	318	ePN	Pn	07 18 59.6	-0.5
GRMI	Germi	3.31	70	ePN	Pn	07 19 11.5	+5.6
GRMI				eSG	Sg	07 20 05.2	+1.6
GRMI				AML	AML	07 20 17.1	
	comp=E,41nm,0.7s						
GRMI	Germi	3.31	70	ePn	Pn	07 19 11.5	+5.6
	SNR=52						
GRMI				eSg	Sg	07 20 05.2	+1.6
	comp=E,41nm,0.7s,SNR=90						
PTK	Pertek	3.71	289	ePN	Pn	07 19 11.0	-0.5
EZC	Erzincan	3.75	303	ePN	Pn	07 19 16.0	+3.9
SNGE	Sanandaj	3.86	133	ePN	Pn	07 19 18.6	+5.0
SNGE				eSG	Sg	07 20 20.1	-1.5
SNGE				AML	AML	07 20 39.6	
	comp=E,128nm,0.7s						
SNGE	Sanandaj	3.86	133	ePn	Pn	07 19 18.6	+5.0
	SNR=52						
SNGE				eSg	Sg	07 20 20.1	-1.6
	comp=E,128nm,0.7s,SNR=90						
ELZG	Elazig	3.94	282	i P	Pn	07 19 14.9	+0.2
ELZG				i S	Sg	07 20 17.5	-6.8
URFA	Urfa	4.04	267	ePN	Pn	07 19 15.1	-1.1
MYA	Malataya	4.35	279	ePN	Pn	07 19 20.1	-0.5
GUMT	Gumushane	4.36	309	ePN	Pn	07 19 20.1	-0.6
BHD	Baghdad	4.51	175	eP	Pn	07 19 11.0	-12
BHD				eS	Sn	07 20 06.0	-10
GZT	Gaziantep	5.05	267	i P	Pn	07 19 28.9	-1.6
GZT				i S	Sg	07 20 53.0	-8.2
GAZ	Gaziantep	5.35	266	ePN	Pn	07 19 34.3	-0.4
BANOM	Banah	15.81	135	⇓P	P	07 21 57.4	+0.2
ASHO	Ashiyiah	16.66	138	P	P	07 22 07.5	-0.5
ASHO	Ashiyiah	16.66	138	⇓P	P	07 22 07.5	-0.5
WHFO	Wadi Hawf	21.59	154	⇓P	P	07 23 05.1	+0.3
	SNR=18						
ABTO	Aybut	21.95	155	⇓P	P	07 23 08.6	+0.2
	SNR=11						
RBK	Rabkut	22.13	153	⇓P	P	07 23 10.6	+0.5
	SNR=10						

*CSEM **03** 07:19:01.1±0.7,38.67N×29.44W,ML2.0,Error ellipse: s-maj=17.1km s-min=11.9km az=64.0,After PDA*
*PDA **03** 07:19:01.1±0.7,38.67N×29.44W,MD3.1,ML2.0,Error ellipse: s-maj=17.1km s-min=11.9km az=64.0*
SVSA 03 07:19:01.1±0.7,38.67N×29.44W,MD3.1,ML2.0,Error ellipse: s-maj=17.1km s-min=11.9km az=64.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	0.58	94	*e*P	Pg	07 19 11.3	-1.3
PCED				*e*S	Sg	07 19 19.1	-1.2
	17nm,0.1s						
	17nm,0.1s						
CALA	**Caldeira**	0.58	99	*e*P	Pg	07 19 11.4	-1.3
CALA				*e*S	Sg	07 19 19.2	-1.3
HOR	**Horta**	0.65	103	*e*P	Pg	07 19 12.6	-1.4
HOR				*e*S	Sg	07 19 20.8	-1.9
PICO	**Pico**	0.81	102	*e*P	Pg	07 19 14.9	-2.4
PICO				*e*S	Sg	07 19 25.6	-2.5
ROSA	**Rosais**	0.94	87	*e*S	Sg	07 19 28.1	-4.1
PMAN	**Manadas**	1.05	92	*e*S	Sb	07 19 30.9	-5.2
	19nm,0.4s						

MAN 03 07:31:59.5,8.03N×125.98E,h45^{km},mb4.9,ML3.8,MS3.8, 1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	0.92	261	*e*P	P	07 32 15.9	-0.3
BUKP				*e*S	S	07 32 30.3	+1.8
BUTP	**Butuan**	1.00	339	*e*P	P	07 32 17.7	+0.5
MATI	**Mati**	1.11	166	*e*P	P	07 32 19.1	+0.2
CGP	**Cagayan de Oro**	1.34	288	⇓*e*P	P	07 32 21.5	-0.7
CGP				*i* S	S	07 32 39.9	+0.8
KCP	**Kidapawan**	1.35	221	⇓*e*P	P	07 32 23.9	+1.6
KCP				*i* S	S	07 32 44.5	+5.3
SCPH	**Surigao**	1.81	344	⇓*e*P	P	07 32 28.8	+0.1
PAGZ	**Pagadian**	2.58	266	*e*P	P	07 32 44.0	+4.3
DCPH	**Dipolog City**	2.66	282	⇑*i*P	P	07 32 41.4	+0.5
DCPH				*i* S	S	07 33 07.5	-4.6
TBP	**Tagbilaran**	2.67	308	*e*P	P	07 32 38.7	-2.2
TBP				*i* S	S	07 33 13.2	+1.0
SNPH	**Sibulan**	3.01	296	*e*P	P	07 32 45.1	-0.8
IPIL	**Ipil**	3.39	266	*e*P	P	07 32 51.9	+0.7
BESP	**Borongan**	3.59	351	*e*P	P	07 32 55.8	+1.8

IGQ 03 07:42:41.5,1.38S×81.33W,h25^{km}±3^{km},mb4.5,2C-4D, Error ellipse: s-maj=7.7km s-min=2.9km az=6.7,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	0.84	67	⇑P	Pb	07 42 57.2	-0.3
SALI	**Salinas**	0.87	157	⇓P	Pb	07 42 58.4	+0.5
SALI				S	Sb	07 43 08.6	-0.6
IGUA	**Igualata**	2.69	92	P	Pn	07 43 25.0	+0.7
IGUA				S	Sn	07 43 58.5	+2.1
CUSU	**Cusua**	2.85	91	P	Pn	07 43 27.8	+1.3
JUIV	**Juive**	2.86	91	P	Pn	07 43 27.3	+0.6
ARRY	**Arrayan**	2.87	93	⇓P	Pn	07 43 27.2	+0.4
RETU	**Refugio**	2.88	91	P	Pn	07 43 28.4	+1.5
NAS1	**Nasa**	2.94	75	⇓P	Pn	07 43 30.6	+2.7
PISA	**Pisayambo**	2.96	84	P	Pn	07 43 30.0	+1.9
TERV	**Terraza Guagua**	2.97	66	P	Pn	07 43 29.4	+1.2
PINO	**Pino**	2.98	66	⇓P	Pn	07 43 29.4	+1.1
VC1	**Cotopaxi 1**	3.01	76	P	Pn	07 43 31.5	+2.6
YANA	**Yana**	3.03	66	P	Pn	07 43 29.9	+0.9
TAMB	**Tambo**	3.04	77	P	Pn	07 43 31.6	+2.4
ANTI	**Antisana**	3.30	74	⇑P	Pn	07 43 35.2	+2.3
ANTI				S	Sn	07 44 18.6	+6.9
CAYR	**Refugio Cayamb**	3.60	67	P	Pn	07 43 41.2	+4.1
CONE	**Cono NE Rev Vo**	3.91	71	P	Pn	07 43 48.0	+6.5

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*CSEM **03** 07:54:41.6±0.1,40.24N×29.02E,h5^{km},MD2.8,Error ellipse: s-maj=2.5km s-min=1.6km az=130.0*
ISK 03 07:54:41.7,40.24N×29.01E,h5^{km},MD2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORLT	**Orhaneli**	0.21	205	*i* PG	Pg	07 54 46.8	+0.7
ORLT				*i* SG	Sg	07 54 49.4	+0.5
YLV	**Yalova**	0.43	40	PG	Pg	07 54 50.4	+0.2
KCT	**Karacabey**	0.50	273	PG	Pg	07 54 52.2	+0.5
DST	**Dursunbey**	0.70	205	*e*PG	Pg	07 54 55.8	+0.1
HRT	**Hereke**	0.77	40	*e*PG	Pg	07 54 56.7	-0.4
ISK	**Istanbul-Kandi**	0.83	2	*e*PG	Pg	07 54 58.0	-0.2
BNT	**Bandirma**	0.84	278	*e*PG	Pg	07 54 58.5	-0.1
EDC	**Edincik**	0.89	277	*e*PG	Pg	07 54 58.5	-0.9
GPA	**Golpazari**	0.99	87	*e*PG	Pg	07 55 01.6	0.0
ALT	**Altintas**	1.46	144	*e*PN	Pn	07 55 09.1	+0.4
AKS	**Akhisar**	1.64	215	*e*PN	Pn	07 55 12.3	+0.8

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*NEIC **03** 07:56:43.7,35.44N×25.71E,h29^{km},MD3.2(ATH),After ATH.*
*CSEM **03** 07:56:43.7,35.44N×25.71E,h29^{km},MD3.2/6,After ATH*
ATH 03 07:56:43.6,35.37N×25.71E,h34^{km}±3^{km},MD3.6/7,1D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	0.13	217	⇓*i*PB	P	07 56 49.5	-0.2
SANT	**Santorini**	1.02	349	*e*Pg	P	07 57 02.2	+0.6
SANT				*e*Sg	S	07 57 15.2	+0.4
SANT	**Santorini**	1.02	349	*e*Sg	S	07 57 15.2	+0.3
KARP	**Karpathos**	1.20	81	*e*PN	P	07 57 06.0	+1.9
VAM	**Vamos**	1.23	272	*e*PN	P	07 57 06.5	+1.9
APE	**Apeiranthos**	1.70	355	*e*PN	P	07 57 12.5	+1.2
ARG	**Arkhangelos**	2.14	66	*e*PN	P	07 57 19.5	+1.9
KYTH	**Kithira**	2.35	293	*e*PB	P	07 57 24.5	+3.8
KYTH	**Kithira**	2.35	293	*e*Pb	P	07 57 25.0	+4.3
VLI	**Veliai**	2.62	302	*e*PN	P	07 57 26.5	+2.0

IGQ 03 07:58:26.5,1.35S×81.30W,h29^{km}±2^{km},mb4.6,7C-3D, Error ellipse: s-maj=5.0km s-min=2.3km az=19.1,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	0.81	68	⇑P	Pb	07 58 41.8	-0.2
SALI	**Salinas**	0.88	160	P	Pn	07 58 43.1	0.0
IGUA	**Igualata**	2.66	93	P	Pn	07 59 09.3	+0.8
CUSU	**Cusua**	2.82	92	⇑P	Pn	07 59 12.1	+1.3
JUIV	**Juive**	2.83	91	P	Pn	07 59 12.1	+1.1
ARRY	**Arrayan**	2.85	93	⇓P	Pn	07 59 11.9	+0.7
RETU	**Refugio**	2.85	92	⇑P	Pn	07 59 12.9	+1.6
PATA	**Patacocha**	2.87	93	P	Pn	07 59 13.4	+2.0
PATA				S	Sn	07 59 46.0	+0.6
NAS1	**Nasa**	2.91	76	P	Pn	07 59 13.6	+1.5
PISA	**Pisayambo**	2.93	84	⇑P	Pn	07 59 14.1	+1.8
TERV	**Terraza Guagua**	2.94	67	P	Pn	07 59 14.0	+1.6
PINO	**Pino**	2.94	66	⇑P	Pn	07 59 13.8	+1.2
VC1	**Cotopaxi 1**	2.98	76	⇑P	Pn	07 59 15.1	+2.0
YANA	**Yana**	2.99	66	⇓P	Pn	07 59 14.6	+1.4
TAMB	**Tambo**	3.00	77	P	Pn	07 59 15.5	+2.1
ANTI	**Antisana**	3.26	74	⇑P	Pn	07 59 19.3	+2.2
CAYR	**Refugio Cayamb**	3.56	68	⇓P	Pn	07 59 25.2	+3.9
CAYR				S	Sn	08 00 08.7	+5.7
CONE	**Cono NE Rev Vo**	3.87	71	P	Pn	07 59 30.4	+4.6

IGQ 03 08:45:36.1,1.38S×81.26W,h21^{km}±4^{km},mb4.2,1C-3D, Error ellipse: s-maj=9.1km s-min=3.1km az=9.3,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	0.78	65	⇑P	Pb	08 45 50.5	-0.3
SALI	**Salinas**	0.84	162	⇓P	Pb	08 45 52.2	+0.3
SALI				S	Sb	08 46 02.2	-0.4
IGUA	**Igualata**	2.62	92	P	Pn	08 46 19.2	+1.2
IGUA				S	Sn	08 46 52.0	+2.5
CUSU	**Cusua**	2.77	91	P	Pn	08 46 22.0	+1.7
JUIV	**Juive**	2.79	91	P	Pn	08 46 20.7	+0.2
ARRY	**Arrayan**	2.80	93	⇓P	Pn	08 46 21.0	+0.3
NAS1	**Nasa**	2.88	75	P	Pn	08 46 23.2	+1.5
PISA	**Pisayambo**	2.89	84	P	Pn	08 46 23.7	+1.8
TERV	**Terraza Guagua**	2.91	66	P	Pn	08 46 24.2	+1.9
PINO	**Pino**	2.91	65	⇓P	Pn	08 46 23.7	+1.4
VC1	**Cotopaxi 1**	2.94	76	P	Pn	08 46 25.8	+3.1
YANA	**Yana**	2.96	65	P	Pn	08 46 23.6	+0.6
TAMB	**Tambo**	2.97	77	P	Pn	08 46 26.5	+3.4
ANTI	**Antisana**	3.23	73	P	Pn	08 46 29.5	+2.7
CAYR	**Refugio Cayamb**	3.53	67	P	Pn	08 46 35.7	+4.7

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*BJI **03** 08:48:38.1,19.30S×69.10W,h110^{km},mB4.7*
*NEIC **03** 08:48:38.2±0.3,19.31S×69.12W,mb4.7/46,MD4.4(GUC), Error ellipse: s-maj=12.3km s-min=5.5km az=71.0*
NEIC Felt [III] at Parinacota; [II] at Arica, Codpa and Esquina.
*GUC **03** 08:48:48.5±1.2,20.58S×69.40W,h179^{km}±60^{km},MD4.4, ML4.6*
*LDG **03** 08:49:00.5±1.0,19.54S×66.87W,h200^{km},Mb4.8/12, Ms3.1/1,Error ellipse: s-maj=58.8km s-min=34.7km az=81.0*
ISC 03 08:48:36.5±0.2**,19.29S**±0.04×**69.15W**±0.07**,h110^{km}, h110^{km}±.9^{km}:pP-P,n98,**σ1§**23**/94,**mb4.7**/46**,5C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	3.14	18	*e*Pn	**P**	**08 49 29.4**	**+3.9**
LVC	**Limon Verde**	3.31	176	*e*P	**P**	**08 49 28.0**	**+0.3**
LVC				*i* S	**S**	**08 49 57.6**	**-8.9**
LVC				AMP		08 50 39.7	
	comp=N,1μm,0.6s						
ARE	**Arequipa**	3.59	321	⇑*i*P	**P**	**08 49 31.6**	**+0.1**
ARE				*e*S	**S**	**08 49 57.3**	**-16**
SPCH	**San Pedro de A**	3.71	166	*e*P	**P**	**08 49 34.4**	**+1.4**
SPCH				AMP		08 50 57.1	
	comp=E,3μm,0.7s						
ANCH	**Antofagasta**	4.52	195	*e*P	**P**	**08 49 41.5**	**-2.6**
ANCH				*i* S	**S**	**08 50 22.4**	**-14**
CPN1	**Cerro Paranal**	5.43	192	*e*P	**P**	**08 49 53.5**	**-2.9**
NNA	**Nana**	10.37	313	*e*P	**P**	**08 50 57.8**	**-5.7**
	comp=E,28nm,0.7s						
FCH	**Farellones**	14.02	184	*e*P	**P**	**08 51 51.7**	**+0.4**
CLCH	**Cerro Calan**	14.10	185	*e*P	**P**	**08 51 55.7**	**+3.3**
TRQA	**Tornquist**	19.71	163	*e*P	**P**	**08 52 58.8**	**-0.8**
	comp=E,51nm,1.0s						
BAO	**Brasilia Array**	20.51	83	*e*P	**P**	**08 53 07.8**	**-0.1**
BAO				*i*		08 53 11.0	
PLCA	**Paso Flores**	21.40	183	*e*P	**P**	**08 53 16.4**	**-0.3**
	comp=E,68nm,1.0s,mb4.9						
OTAV	**Otavalo**	21.45	334	*e*P	**P**	**08 53 20.1**	**+2.7**
	comp=E,7.3nm,0.7s,mb4.1						
CAM4	**Nova Friburgo**	25.02	102	⇑*i*P	**P**	**08 53 52.1**	**+0.1**
CAM4				*i*		08 53 56.1	
CAM4				*i*		08 54 02.0	
CAM4				*i*	pP	08 54 13.9	-1.6
CAM3	**Guarapari**	26.93	98	*e*P	**P**	**08 54 09.6**	**0.0**
CAM3				*i*		08 54 16.7	
PAYG	**Puerto Ayora**	27.77	309	P	**P**	**08 54 18.1**	**+0.6**
	comp=E,23nm,1.0s,mb4.7						
SDV	**Santo Domingo**	28.04	357	*e*P	**P**	**08 54 18.3**	**-1.4**
	comp=E,15nm,0.9s,mb4.5						
JTS	**JuntasAbangare**	33.27	331	*e*P	**P**	**08 55 01.7**	**-4.0**
	comp=E,22nm,1.2s,mb4.9						
RCBR	**Riachuelo**	35.02	72	*e*P	**P**	**08 55 21.4**	**+0.8**
	comp=E,50nm,0.6s,mb5.5						
TEIG	**Tepich**	43.52	333	*e*P	**P**	**08 56 31.5**	**+0.4**
OXF	**Oxford**	56.87	340	*e*P	**P**	**08 58 10.1**	**-2.2**
	comp=E,29nm,1.2s,mb5.2						
JCT	**Junction City**	57.60	329	*e*P	**P**	**08 58 16.6**	**-0.9**
	comp=E,7.2nm,0.8s,mb4.8						
JCT				*e*pP	pP	08 58 43.7	-0.5
JCT				*e*sP	sP	08 58 56.7	+0.2
WVT	**Waverly**	57.89	342	*e*P	**P**	**08 58 17.3**	**-2.1**
	comp=E,11nm,0.8s,mb5.0						
WVT				*e*pP	pP	08 58 44.7	-1.5
MIAR	**Mount Ida**	58.36	336	*e*P	**P**	**08 58 21.8**	**-1.0**
	comp=E,13nm,1.1s,mb4.9						
MIAR				*e*pP	pP	08 58 49.5	0.0
FVM	**French Village**	60.38	341	*e*P	**P**	**08 58 35.3**	**-1.3**
FVM				*e*pP	pP	08 59 02.5	-1.1
FVM				*e*sP	sP	08 59 16.5	+0.7
ACSO	**Alum Creek Sta**	60.60	348	*e*P	**P**	**08 58 36.5**	**-1.6**
	comp=E,18nm,1.0s,mb5.0						
ACSO				*e*pP	pP	08 59 03.5	-1.6
WMOK	**Wichita Mounta**	60.67	332	*e*P	**P**	**08 58 36.5**	**-2.1**
	comp=E,3.8nm,0.9s,mb4.4						
CCM	**Cathedral Cave**	60.71	340	*e*P	**P**	**08 58 36.9**	**-1.9**
	comp=E,5.6nm,0.7s,mb4.7						
CCM				*e*pP	pP	08 59 03.8	-2.0
GDL2	**Guadalupe Moun**	61.31	326	*e*P	**P**	**08 58 42.6**	**-0.3**
GDL2				*e*pP	pP	08 59 09.4	-0.6
GDL2				*e*sP	sP	08 59 21.8	-0.4
MNTX	**Cornudas Mount**	61.46	325	*e*P	**P**	**08 58 42.0**	**-2.0**
	comp=E,6.9nm,1.1s,mb4.6						
MNTX				*e*pP	pP	08 59 09.2	-1.9
MNTX				*e*sP	sP	08 59 21.4	-1.9
ALLY	**Alegheny Colle**	61.48	351	P	**P**	**08 58 41.0**	**-3.0**
ALLY				*e*pP	pP	08 59 10.6	-0.4
VNA2	**Neumayer--Watz**	62.80	161	⇑*i*P	**P**	**08 58 52.2**	**-0.2**
MDV	**Middlebury**	63.09	357	*e*P	**P**	**08 58 53.8**	**-0.9**
MDV				*e*pP	pP	08 59 21.1	-0.7
KSU1	**Kansas State U**	63.52	336	*e*P	**P**	**08 58 56.1**	**-1.5**
LPM	**Los Pinos Moun**	64.14	326	*e*P	**P**	**08 59 01.8**	**+0.1**
LPM				*e*pP	pP	08 59 28.9	0.0
LPM				*e*sP	sP	08 59 40.7	-0.3
SNAA	**Sanae**	64.43	161	⇑*i*P	**P**	**08 59 03.1**	**+0.2**
SNAA	**Sanae**	64.43	161	*e*P	**P**	**08 59 02.9**	**0.0**
	comp=E,38nm,0.7s,mb5.3						
ANMO	**Albuquerque**	64.54	327	*e*P	**P**	**08 59 04.0**	**-0.3**
	comp=E,2.2nm,0.8s,mb4.0						
ANMO				*e*pP	pP	08 59 30.7	-0.8
ANMO				*e*sP	sP	08 59 43.7	+0.1
SDCO	**Great Sand Dun**	66.24	329	*e*P	**P**	**08 59 15.0**	**-0.1**
	comp=E,16nm,1.1s,mb4.8						
SDCO				*e*sP	sP	08 59 42.5	-12
SDCO				*e*sP	sP	08 59 54.2	-0.3
PV01	**Paradox Valley**	68.07	327	*e*P	**P**	**08 59 26.5**	**0.0**
PV01				*e*pP	pP	08 59 54.5	+0.4
PV01				*e*sP	sP	09 00 06.3	+0.4
PV10	**Paradox Valley**	68.49	327	*e*P	**P**	**08 59 29.3**	**+0.1**
PFO	**Pinyon Flat Ob**	69.29	319	*e*P	**P**	**08 59 34.6**	**+0.4**
	comp=E,3.8nm,0.8s,mb4.3						
SRU	**San Rafael**	69.81	327	*e*P	**P**	**08 59 37.7**	**+0.5**
SRU				*e*pP	pP	09 00 03.5	-1.4
SRU				*e*sP	sP	09 00 16.0	-0.7
EYMN	**Ely**	69.86	344	*e*P	**P**	**08 59 36.3**	**-1.1**
	comp=E,15nm,1.1s,mb4.7						
MSU	**Marysvale**	70.24	325	*e*P	**P**	**08 59 41.1**	**+1.3**
MSU				*e*pP	pP	09 00 01.4	-6.1
MVU	**Marysvale**	70.25	325	*e*P	**P**	**08 59 40.8**	**+0.9**
	comp=E,12nm,1.3s,mb4.6						
MVU				*e*pP	pP	09 00 09.4	+1.8
MVU				*e*sP	sP	09 00 21.1	+1.7
ARUT	**Antelope Range**	70.41	324	*e*P	**P**	**08 59 42.2**	**+1.4**
ARUT				*e*pP	pP	09 00 09.8	+1.3
ARUT				*e*sP	sP	09 00 22.5	+2.2
QSPA	**South Pole Qui**	70.89	180	⇓*i*P	**P**	**08 59 44.2**	**+1.2**
	comp=E,9.2nm,0.5s,mb4.9						
JLU	**Jordanelle**	71.39	327	*e*P	**P**	**08 59 47.2**	**+0.6**
JLU				*e*pP	pP	09 00 14.4	0.0
HWUT	**Hardware Ranch**	72.20	328	*e*P	**P**	**08 59 51.6**	**+0.1**
	comp=E,4.6nm,0.7s,mb4.4						
HWUT				*e*pP	pP	09 00 16.1	-3.2
TPH	**Tonopah**	72.76	322	*e*P	**P**	**08 59 55.9**	**+1.1**
ULM	**Lac du Bonnet**	73.15	342	*e*P	**P**	**08 59 55.8**	**-1.0**
	comp=E,5.1nm,0.6s,mb4.5						
ULM				*e*pP	pP	09 00 23.3	-1.4
TPAW	**Teton Pass**	73.31	330	*e*P	**P**	**08 59 58.9**	**+1.1**
RRI2	**Red Ridge**	73.38	329	*e*P	**P**	**08 59 59.3**	**+1.0**
RRI2				*e*pP	pP	09 00 27.1	+0.8
RRI2				*e*sP	sP	09 00 39.8	+1.7
MOOW	**Moose Ponds**	73.40	330	*e*P	**P**	**08 59 59.1**	**+0.6**
OMM	**Old Mammoth Mi**	73.50	321	*e*P	**P**	**09 00 00.4**	**+1.3**
OMM				*e*pP	pP	09 00 27.2	+0.1
OMM				*e*sP	sP	09 00 39.3	+0.4
IMW	**Indian Meadow**	73.61	330	*e*P	**P**	**09 00 00.5**	**+0.9**
IMW				*e*pP	pP	09 00 28.9	+1.2
IMW				*e*sP	sP	09 00 40.8	+1.3
LAO	**LASA Array**	73.70	334	*e*P	**P**	**09 00 00.2**	**+0.1**
	comp=E,9.5nm,1.0s,mb4.5						
LAO				*e*pP	pP	09 00 29.3	+1.2
LAO				*e*sP	sP	09 00 41.3	+1.3
SCHQ	**Schefferville**	73.85	1	*e*P	**P**	**08 59 58.9**	**-1.9**
	comp=E,5.2nm,0.9s,mb4.3						
LKWY	**Lake**	73.86	331	*e*P	**P**	**09 00 03.3**	**+2.2**
	comp=E,14nm,0.9s,mb4.7						
LKWY				*e*pP	pP	09 00 30.7	+1.6
LKWY				*e*sP	sP	09 00 43.7	+2.8
LRV	**Little Rabbit**	73.96	319	*e*P	**P**	**09 00 03.8**	**+1.9**
LRV				*e*sP	sP	09 00 42.0	+0.2
DGMT	**Dagmar**	74.36	337	*e*P	**P**	**09 00 03.9**	**0.0**
	comp=E,11nm,0.7s,mb4.7						
DGMT				*e*pP	pP	09 00 32.3	+0.4
QLMT	**Earthquake Lak**	74.54	330	*e*P	**P**	**09 00 06.6**	**+1.6**
QLMT				*e*pP	pP	09 00 34.4	+1.3
CMB	**Columbia Colle**	74.60	320	*e*P	**P**	**09 00 05.9**	**+0.3**
	comp=E,3.1nm,0.9s,mb4.0						
CMB				*e*sP	sP	09 00 45.5	0.0
HLID	**Hailey**	75.06	328	*e*P	**P**	**09 00 09.4**	**+1.4**
	comp=E,7.9nm,0.8s,mb4.5						
HLID				*e*pP	pP	09 00 38.0	+1.9
HLID				*e*sP	sP	09 00 49.3	+1.3
BMO	**Blue Mountains**	77.45	327	*e*P	**P**	**09 00 22.3**	**+1.0**
	comp=E,10nm,0.9s,mb4.6						
BMO				*e*pP	pP	09 00 50.1	+0.5
SYO	**Syowa Base**	78.64	160	⇑P	**P**	**09 00 28.7**	**+1.3**
VNDA	**Vanda**	78.97	190	P	**P**	**09 00 30.4**	**+1.2**
FCC	**Fort Churchill**	80.44	347	*e*P	**P**	**09 00 36.3**	**-1.0**
	comp=E,13nm,1.3s,mb4.6						
FCC				*e*pP	pP	09 01 06.8	+1.2
TSUM	**Tsumeb**	80.90	107	*e*P	**P**	**09 00 41.4**	**+0.9**
	comp=E,10nm,0.8s,mb4.7						
EVO	**Evora**	81.15	44	*e*P	**P**	**09 00 39.6**	**-1.9**
	comp=E,10.0nm,0.5s,mb4.6						
EDM	**Edmonton**	81.68	335	*e*P	**P**	**09 00 43.4**	**-0.5**
EDM				*e*pP	pP	09 01 12.6	+0.3
EDM				*e*sP	sP	09 01 25.1	+0.5
ESLA	**Sonseca Array**	84.43	45	*e*P	**P**	**09 01 03.1**	**+5.0**
	comp=E,2.1nm,1.0s,mb3.9						
LBTB	**Lobatse**	86.15	115	*e*P	**P**	**09 01 08.3**	**+1.4**
	comp=E,30nm,1.6s,mb5.0						
MAW	**Mawson**	86.50	163	P	**P**	**09 01 06.0**	**-1.6**
	comp=E,9.5nm,0.9s,mb4.7						
SJPF	**Ste Jean**	87.92	43	*e*P	**P**	**09 01 22.9**	**+7.8**
	comp=E,7.3nm,0.5s,mb4.7						
ETSF	**Etsaut**	88.25	43	*e*P	**P**	**09 01 25.7**	**+9.0**
	comp=E,12nm,0.8s,mb4.7						
YKW3	**Yellowknife Ar**	89.09	341	*e*P	**P**	**09 01 20.7**	**+0.6**
YKW3				*e*pP	pP	09 01 49.3	+0.2
MFF	**Saint Martin d**	90.26	40	*e*P	**P**	**09 01 34.7**	**+8.7**
	comp=E,10nm,0.7s,mb4.8						
BORG	**Borgarnes**	91.41	19	*e*P	**P**	**09 01 30.4**	**-0.6**
	comp=E,357nm,1.5s						
TCF	**Toulx Ste Croi**	91.56	41	*e*P	**P**	**09 01 40.0**	**+7.9**
	comp=E,7.7nm,0.6s,mb4.8						
SSF	**Saint Saulge**	92.70	41	*e*P	**P**	**09 01 45.6**	**+8.2**
	comp=E,6.1nm,0.6s,mb4.8						
SMRF	**Simiane la Rot**	92.73	44	*e*P	**P**	**09 01 45.0**	**+7.5**
SMF	**Signal de Mont**	92.73	41	*e*P	**P**	**09 01 45.6**	**+8.1**
	comp=E,12nm,0.7s,mb5.0						
LMR	**La Mourre**	93.09	45	*e*P	**P**	**09 01 46.3**	**+7.1**
FRF	**La Foret Royal**	93.27	45	*e*P	**P**	**09 01 47.1**	**+7.1**
	comp=E,34nm,0.9s,mb5.4						
ORIF	**Oris-en-Rattie**	93.31	43	*e*P	**P**	**09 01 47.1**	**+6.9**
	comp=E,5.8nm,0.5s,mb4.9						
SBF	**Sospel**	93.92	45	*e*P	**P**	**09 01 50.5**	**+7.6**
PGF	**Pioggiola**	94.47	47	*e*P	**P**	**09 01 52.3**	**+6.8**
	comp=E,46nm,1.1s,mb5.4						
CDF	**Champ du Feu**	95.58	41	*e*P	**P**	**09 01 58.9**	**+8.5**
INK	**Inuvik**	98.80	340	*e*P	**P**	**09 02 04.7**	**+0.1**
	comp=E,1.3nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	134.71	212	*e*P	PKPdf	09 07 44.8	+1.7
TLY	**Talaya**	147.19	8	*e*PKPbc	PKPdf	09 08 11.1	+6.8
WMQ	**Urumqi**	148.78	33	*e*PKP	PKPdf	09 08 14.0	+6.9
MDJ	**Mudanjiang**	150.31	332	PKP	PKPdf	09 08 09.9	+0.4
ULN	**Ulaanbaatar**	151.33	5	*e*PKPdf	PKPdf	09 08 13.1	+2.3
ULN				*e*PKPbc	PKPdf	09 08 19.8	+8.9
CN2	**Changchun**	152.67	337	*e*PKP	PKPdf	09 08 15.8	+2.8
LZH	**Lanzhou**	162.17	19	*e*PKP	PKPdf	09 08 23.5	-1.3
LZH				APKP		09 08 53.8	
LZH				XPKP		09 09 06.2	
LZH				LR	LR		
	comp=N,197nm,18.0s						
LZH				LR	LR		
	comp=Z,296nm,20.2s						

CASC 03 09:43:46.6±1.8**,14.18N×91.14W,h105^{km}±9^{km},MD4.1, 3C-3D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	0.39	48	⇓*e*P	P	09 44 01.9	-0.5
JAT	**Jato**	0.50	286	⇑*e*P	P	09 44 03.1	0.0
JAT				*e*S	S	09 44 16.1	+0.6
PCG	**Pacaya**	0.56	68	*e*P	P	09 44 03.8	+0.2
PCG				*e*S	S	09 44 18.4	+2.2
IXG	**Ixpaco**	0.67	91	⇓*e*P	P	09 44 03.6	-0.7
IXG				*e*S	S	09 44 17.2	-0.5
NBG	**Las Nubes**	0.87	62	⇓*e*P	P	09 44 07.0	+0.6
NBG				*e*S	S	09 44 23.0	+1.8
RBDL	**Robledal**	1.41	93	⇑*e*P	P	09 44 12.1	-0.4
RBDL				*e*S	S	09 44 32.3	+0.3
RTR	**El Retiro**	1.48	101	*e*P	P	09 44 13.2	-0.2
RTR				*e*S	S	09 44 35.8	+2.4
SBLS	**San Blas**	1.51	103	*e*P	P	09 44 14.3	+0.6
SBLS				*e*S	S	09 44 35.1	+1.1
SNJE	**San Jose**	1.52	102	*e*P	P	09 44 14.1	+0.2
SNJE				*e*S	S	09 44 35.5	+1.3
MTO2	**Montecristo 2**	1.74	83	*e*P	P	09 44 16.4	-0.1
BOQS	**Boqueron**	1.86	104	*e*P	P	09 44 18.1	0.0
BOQS				*e*S	S	09 44 42.7	+1.2
LFU	**La Fuente**	2.02	102	*e*P	P	09 44 19.9	-0.1
LBRS	**Las Brisas**	2.08	102	*e*P	P	09 44 20.6	-0.4
LBRS				*e*S	S	09 44 45.7	-0.9
LFRS	**El Faro**	2.10	105	*e*P	P	09 44 21.3	+0.1
LFRS				*e*S	S	09 44 48.5	+1.6
LCBS	**La Ceiba**	2.17	104	⇑*e*P	P	09 44 22.5	+0.4
LCBS				*e*S	S	09 44 50.3	+1.7
SNVI	**San Vicente**	2.31	104	*e*P	P	09 44 24.4	+0.4
SNVI				*e*S	S	09 44 53.3	+1.3

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*NEIC **03** 10:12:37.6±1.3,51.52N×16.20E,h5^{km},ML3.1(SZGRF), ML3.1(VIE),Error ellipse: s-maj=16.6km s-min=9.9km az=213.0*
*PRU **03** 10:12:38.4,51.50N×16.12E*
*BGR **03** 10:12:39.1±0.7,51.45N×16.14E,h1^{km},ML3.1/7,Error ellipse: s-maj=8.9km s-min=6.7km az=163.0*
*CSEM **03** 10:12:39.3±0.1,51.45N×16.15E,h2^{km},ML3.4/3,Error ellipse: s-maj=1.9km s-min=1.2km az=15.0*
WAR 03 10:12:38.3,51.54N×16.13E,h1^{km},ML3.0,2C-2D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.71	172	⇓*i*Pg	Pg	10 12 51.2	-1.2
KSP				*e*		10 12 58.3	
KSP				*e*Sg	Sg	10 13 00.4	-1.5
KSP	**Ksiaz**	0.71	172	*e*PG	Pg	10 12 51.0	-1.4
KSP				*e*SG	Sg	10 13 00.0	-1.9
KSP	**Ksiaz**	0.71	172	⇓*i*Pg	Pg	10 12 51.2	-1.2
KSP				*e*Sg	Sg	10 13 00.4	-1.5
UPC	**Upice**	1.04	184	*e*PG	Pg	10 12 57.3	-1.7
DPC	**Dobruska-Polom**	1.20	174	*e*PG	Pg	10 13 00.0	-2.2
DPC				*e*SG	Sg	10 13 15.3	-2.9
	65nm,0.7s						
PVCC	**Panska Ves**	1.42	225	*e*PG	Pg	10 13 03.7	-2.9
BRG	**Berggiesshubel**	1.53	245	*e*Pg	Pg	10 13 06.3	-2.6
BRG				*e*Sg	Sg	10 13 27.3	-2.0
BRG	**Berggiesshubel**	1.53	245	*i* Pg	Pg	10 13 06.0	-2.9
BRG				*i* Sg	Sg	10 13 27.4	-1.9
RUE	**Ruedersdorf**	1.73	304	*e*Pn	Pn	10 13 10.6	+0.9
RUE	**Ruedersdorf**	1.73	304	*e*Pn	Pn	10 13 10.6	+0.9
PRU	**Pruhonice**	1.85	214	*e*PN	Pn	10 13 09.5	-2.0
PRU				*e*PG	Pg	10 13 11.7	-3.6
PRU				*e*x	x	10 13 28.6	
PRU				*e*SG	Sg	10 13 36.1	-3.9
PRU	**Pruhonice**	1.85	214	*e*Pg	Pg	10 13 11.7	-3.6
PRU				*e*Sg	Sg	10 13 36.1	-3.9
RAC	**Raciborz**	1.96	137	*e*P	Pn	10 13 15.0	+2.0
RAC				*e*S	Sn	10 13 40.0	+1.4
CLL	**Collm**	1.97	264	*e*Pn	Pn	10 13 13.9	+0.7
CLL				*e*Sg	Sg	10 13 40.9	-3.0
CLL	**Collm**	1.97	264	*i* Pn	Pn	10 13 10.8	-2.4

CLL				i Pg	Pg	10 13 14.0	-3.7
CLL				i Sg	Sg	10 13 40.3	-3.7
CLL	Collm	1.97	264	i PN	Pn	10 13 10.8	-2.4
CLL				i PG	Pg	10 13 14.0	-3.7
CLL				i		10 13 18.1	
CLL				i SG	Sg	10 13 40.3	-3.7
CLL				i		10 13 46.4	
MORC	Moravsky Berou	1.98	153	ePn	Pn	10 13 11.1	-2.3
MORC	Moravsky Berou	1.98	153	ePn	Pn	10 13 11.1	-2.2
MORC	Moravsky Berou	1.98	153	ePg	Pg	10 13 14.8	-3.1
MORC				eSg	Sg	10 13 36.4	-7.9
OKC	Ostrava-Krasne	2.13	142	ePG	Pg	10 13 17.3	-3.6
OKC				eSG	Sg	10 13 43.9	-5.5
VRAC	Vranov	2.26	172	ePn	Pn	10 13 16.0	-1.3
VRAC				eSg	Sg	10 13 47.3	-6.1
TANN	Tannenbergstha	2.58	245	ePn	Pn	10 13 20.9	-1.0
TANN				eSg	Sg	10 13 59.8	-4.4
WERD	Werda	2.65	247	ePn	Pn	10 13 21.7	-1.2
OJC	Ojcow	2.67	118	ePN	Pn	10 13 19.0	-4.2
OJC				i PG	Pg	10 13 28.7	-3.0
OJC				eSG	Sg	10 14 03.7	-3.6
OJC	Ojcow	2.67	118	ePn	Pn	10 13 19.4	-3.8
OJC				i Pg	Pg	10 13 28.7	-3.0
OJC				eSg	Sg	10 14 02.8	-4.5
OJC	Ojcow	2.67	118	i Pg	Pg	10 13 28.7	-3.0
OJC				eSg	Sg	10 14 02.8	-4.5
NKC	Novy Kostel	2.68	242	ePG	Pg	10 13 27.4	-4.3
NKC				eSG	Sg	10 14 04.7	-2.7
	70nm,0.4s						
GUNZ	Gunzen	2.68	245	ePn	Pn	10 13 23.8	+0.5
KHC	Kasperske Hory	2.92	215	ePN	Pn	10 13 24.6	-2.1
KHC				ePG	Pg	10 13 30.8	-5.7
KHC				eSG	Sg	10 14 09.3	-6.1
KHC	Kasperske Hory	2.92	215	ePg	Pg	10 13 30.8	-5.7
KHC				eSg	Sg	10 14 09.3	-6.1
MOX	Moxa	2.99	254	eSg	Sg	10 14 14.1	-3.6
NOTT	Nottersdorf	3.08	237	ePn	Pn	10 13 28.0	-1.1
NOTT				eSg	Sg	10 14 14.5	-6.5
GEC2	GERESS Array S	3.12	211	ePn	Pn	10 13 28.4	-1.2
GEC2				eSg	Sg	10 14 15.8	-6.3
GEC2	GERESS Array S	3.12	211	ePn	Pn	10 13 28.4	-1.2
GEC2				eSg	Sg	10 14 15.8	-6.3
SMOL	Smolenice	3.15	164	eSG	Sg	10 14 19.1	-3.9
ZST	Bratislava	3.41	169	ePG	Pg	10 13 41.9	-4.4
ZST				eSG	Sg	10 14 27.4	-4.4
NIE	Niedzica	3.41	127	eP	Pb	10 13 39.3	-0.1
NIE				eS	Sb	10 14 25.1	+3.5
VYHS	Vyhne	3.51	149	ePG	Pg	10 13 44.2	-4.3
VYHS				eSG	Sg	10 14 32.6	-2.7
GRA1	Grafenberg Arr	3.63	241	Sg	Sg	10 14 33.8	-5.5
GRF	Grafenberg Arr	3.63	241	eSg	Sg	10 14 33.8	-5.5
MOA	Molln	3.89	199	⇑iPN	Pn	10 13 38.6	-1.9
MOA				i SG	Sg	10 14 41.5	-6.3
	15nm,0.5s						
ARSA	Arzberg	4.31	186	⇑iPN	Pn	10 13 44.5	-2.1
ARSA				i SG	Sb	10 14 52.5	+4.7
	18nm,0.8s						
CRVS	Cervenica-Dubn	4.32	126	ePG	Pb	10 13 59.0	+4.1

ROM ***03*** *10:20:08.7±0.3, 46.31N×13.62E, h10^{km}, MD2.3/3, ML1.5/4, Error ellipse: s-maj=2.0km s-min=1.8km az=90.0*

NEIC ***03*** *10:20:09.7±0.5, 46.29N×13.61E, h10^{km}, MD2.3(ROM), ML2.5(VIE), ML1.9(LJU), Error ellipse: s-maj=9.3km s-min=4.6km az=191.0*

NEIC Felt at Bovec and Drezniske Ravne.

LJU ***03*** *10:20:09.6, 46.31N×13.61E, h7^{km}, ML1.7*

CSEM ***03*** *10:20:09.2±0.1, 46.32N×13.57E, h10^{km}, ML2.6/5, Error ellipse: s-maj=2.5km s-min=1.4km az=21.0*

ISC 03 10:20:09.7±0.3**, 46.32N**±0.02×**13.62E**±0.02**, h7^{km}, n40, σ0§67**/75**, 5C-9D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROBS	Robic	0.10	228	⇓iPg	Pg	10 20 11.9	-0.3
ROBS				i Sg	Sg	10 20 13.4	-0.4
	comp=Z,604nm,0.1s						
ROBS	Robic	0.10	228	⇓iPg	Pg	10 20 11.9	-0.3
ROBS				i Sg	Sg	10 20 13.4	-0.4
	comp=Z,604nm,0.1s						
CADS	Cadrg	0.12	137	⇓iPg	Pg	10 20 12.4	0.0
CADS				i Sg	Sg	10 20 14.5	+0.3
	comp=Z,130nm,0.1s						
CADS	Cadrg	0.12	137	⇓iPg	Pg	10 20 12.4	0.0
CADS				i Sg	Sg	10 20 14.5	+0.3
	comp=Z,130nm,0.1s						
DRE	Drenchia	0.14	174	⇓iPg	Pg	10 20 12.6	-0.2
DRE				i Sg	Sg	10 20 14.9	0.0
LSR	Lussari	0.17	338	⇓iPg	Pg	10 20 13.2	-0.2
LSR				eSg	Sg	10 20 16.2	+0.3
PTCC	Patocco-Chiusa	0.21	296	ePG	Pg	10 20 13.6	-0.4
PTCC				SG	Sg	10 20 16.7	-0.2
	comp=Z,54nm,0.2s						
PTCC	Patocco-Chiusa	0.21	296	ePg	Pg	10 20 13.6	-0.5
PTCC				eSg	Sg	10 20 16.7	-0.2
PTCC	Patocco-Chiusa	0.21	296	ePg	Pg	10 20 13.6	-0.4
PTCC				eSg	Sg	10 20 16.7	-0.2
COLI	Coloredo	0.25	223	⇓iPg	Pg	10 20 14.6	-0.3
COLI				i Sg	Sg	10 20 18.5	+0.2
GORS	Gorjuse	0.26	89	i Pg	Pg	10 20 14.9	-0.1
GORS				i Sg	Sg	10 20 19.5	+0.9
	comp=Z,89nm,0.1s						
GMNA	Gemona	0.27	262	ePG	Pg	10 20 16.1	+0.8
GMNA				SG	Sg	10 20 21.3	+2.3
	comp=Z,130nm,0.2s						
GMNA	Gemona	0.27	262	ePg	Pg	10 20 16.1	+0.8
GMNA				eSg	Sg	10 20 21.3	+2.3
GMNA	Gemona	0.27	262	ePg	Pg	10 20 16.1	+0.8
GMNA				eSg	Sg	10 20 21.3	+2.3
BAD	Bernadia	0.27	254	⇓iPg	Pg	10 20 14.7	-0.7
BAD				i Sg	Sg	10 20 19.1	0.0
VOJS	Vojsko	0.34	147	⇓iPg	Pg	10 20 16.3	-0.3
VOJS				i Sg	Sg	10 20 21.9	+0.7
BOO	Bordano	0.36	271	⇑iPg	Pg	10 20 16.5	-0.5
PLRO	Paularo	0.40	306	⇑iPg	Pg	10 20 17.8	-0.1
PLRO				eSg	Sg	10 20 23.9	+0.6
MPRI	Monte Prat	0.45	261	⇑iPg	Pg	10 20 17.8	-0.9
MPRI				eSg	Sg	10 20 25.8	+1.1
ZOU	Zoufplan	0.51	299	⇑iPg	Pg	10 20 19.4	-0.6
ZOU				i Sg	Sg	10 20 27.5	+0.7
JAVS	Javornik	0.52	144	i Pg	Pg	10 20 19.4	-0.8
JAVS				eSg	Sg	10 20 27.8	+0.6
	comp=Z,9.0nm,0.1s						
JAVS	Javornik	0.52	144	i Pg	Pg	10 20 19.4	-0.8
JAVS				eSg	Sg	10 20 27.8	+0.6
	comp=Z,9.0nm,0.1s						
TRI	Trieste	0.61	171	ePG	Pg	10 20 20.7	-1.3
TRI				SG	Sg	10 20 30.5	+0.2
	comp=Z,17nm,0.3s						
TRI	Trieste	0.61	171	ePg	Pg	10 20 20.7	-1.3
TRI				eSg	Sg	10 20 30.5	+0.3
TRI	Trieste	0.61	171	ePg	Pg	10 20 20.7	-1.3
TRI				eSg	Sg	10 20 30.5	+0.2
FVI	Forni Avoltri	0.65	296	ePG	Pg	10 20 22.2	-0.5
FVI				SG	Sg	10 20 31.8	+0.5
	comp=Z,19nm,0.3s						
FVI	Forni Avoltri	0.65	296	ePg	Pg	10 20 22.2	-0.5
FVI				eSg	Sg	10 20 31.8	+0.5
FVI	Forni Avoltri	0.65	296	ePg	Pg	10 20 22.2	-0.5
FVI				eSg	Sg	10 20 31.8	+0.5
OBKA	Obir	0.67	73	⇑iPG	Pg	10 20 22.8	-0.4
OBKA				i SG	Sg	10 20 32.8	+0.7
	comp=Z,8.7nm,0.1s						
CEY	Cerknica	0.80	135	i Sg	Sg	10 20 36.8	+0.2
	comp=Z,4.0nm,0.1s						
CEY	Cerknica	0.80	135	i Sg	Sg	10 20 36.8	+0.2
	comp=Z,4.0nm,0.1s						
PDKS	Podkum	0.99	104	i Pg	Pg	10 20 29.0	-0.5
PDKS				i Sg	Sg	10 20 43.2	+0.5
	comp=Z,4.0nm,0.1s						
PDKS	Podkum	0.99	104	i Pg	Pg	10 20 29.0	-0.5
PDKS				i Sg	Sg	10 20 43.2	+0.5
	comp=Z,4.0nm,0.1s						
VISS	Visnje	0.99	121	ePg	Pg	10 20 28.9	-0.6
VISS				eSg	Sg	10 20 43.6	+0.9
	comp=Z,11nm,0.2s						
VISS	Visnje	0.99	121	ePg	Pg	10 20 28.9	-0.6
VISS				eSg	Sg	10 20 43.7	+0.9
	comp=Z,11nm,0.2s						
LEGS	Legarje	1.23	107	i Pg	Pg	10 20 33.9	-0.5
LEGS				i Sg	Sg	10 20 51.3	+0.5
	comp=Z,6.0nm,0.2s						
LEGS	Legarje	1.23	107	i Pg	Pg	10 20 33.9	-0.5
LEGS				i Sg	Sg	10 20 51.3	+0.4
	comp=Z,6.0nm,0.2s						
CRES	Cresnjev	1.37	110	i Sg	Sg	10 20 55.3	0.0
GOLS	Golise	1.43	102	ePg	Pg	10 20 37.0	-1.2
GCIS	Gornji Cirnik	1.47	107	ePg	Pg	10 20 37.9	-1.1
GCIS				eSg	Sg	10 20 59.3	+0.8
	comp=Z,5.0nm,0.2s						

NIED ***03*** *10:38:00, 27.90N×130.10E, h26^{km}, Mw3.6 Best double couple: $M_0 2.83\times10^{14}$ NP1:ϕ_s216°, δ61°, λ-73°. NP2:ϕ_s3°, δ33°, λ-118°.*

JMA 03 10:38:40.5±0.1**, 27.91N**×**130.12E, h54^{km}**±1^{km}**, M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	0.42	342	P	P	10 38 51.3	0.0
JZK				S	S	10 38 59.2	+0.2
JAM	Amami Oshima	0.68	318	P	P	10 38 54.2	+0.1
JAM				eS	S	10 39 04.2	-0.1
JTK	Tokunoshima	1.04	263	P	P	10 38 59.5	+0.3
JTK				eS	S	10 39 12.4	-0.6
JNN	Nakanoshima	1.94	354	P	P	10 39 12.1	+0.4
JNN				eS	S	10 39 35.3	+0.5
JOW	Kunigami	1.96	237	P	P	10 39 12.2	+0.2
JOW				S	S	10 39 35.4	0.0
JIH	Iheya	2.10	246	P	P	10 39 14.0	0.0
JIH				eS	S	10 39 38.1	-0.9
JMZ	Minamidaito 2	2.30	154	P	P	10 39 16.8	-0.1
JMZ				S	S	10 39 42.1	-2.0
JKC	Kuchinoerabu	2.54	1	P	P	10 39 20.9	+0.6
JKC				S	S	10 39 50.0	-0.2
JTN	Tanegashima 3	2.84	15	P	P	10 39 24.8	+0.3
JTN				eS	S	10 39 58.3	+0.7
JAGN	Aguni-jima	2.88	243	P	P	10 39 24.7	-0.4
JAGN				eS	S	10 39 57.1	-1.6
JKE	Kume jima 2	3.36	243	P	P	10 39 30.9	-1.0

TAP ***03*** *10:52:21.7, 24.26N×121.79E, h8^{km}, ML2.5*

JMA 03 10:52:03.3±0.1**, 24.25N**×**123.92E, h16^{km}**±2^{km}**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKRS	Kuro-shima	0.08	99	P	Pb	10 52 06.4	-0.2
JKRS				S	Sb	10 52 08.9	+0.1
IRIF	Iriomote-Funau	0.19	296	P	Pb	10 52 07.8	-0.3
IRIF				S	Sb	10 52 10.9	-0.3
HATJ	Hateruma jima	0.22	209	P	Pb	10 52 08.3	-0.2
HATJ				S	Sb	10 52 11.9	0.0
JIJ	Ishigaki jima	0.23	61	P	Pb	10 52 08.6	-0.1
JIJ				eS	Sb	10 52 12.2	-0.1

NEIC ***03*** *10:52:52.6, 35.36S×72.74W, h1^{km}, ML3.1(GUC), After GUC.*

GUC 03 10:52:52.6±0.5**, 35.36S**×**72.74W, h1^{km}**±2^{km}**, MD4.0, ML3.1, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCO	Chanco	0.41	156	⇑iP	Pg	10 53 00.9	+0.2
CNCO				i S	Sg	10 53 07.1	+0.9
CNCO				AMP		10 53 08.2	
	comp=E,2µm,0.6s						
LNCH	Linares	1.05	118	⇓iP	Pb	10 53 12.4	-0.8
LNCH				i S	Sb	10 53 27.9	+0.7
LNCH				AMP		10 53 31.3	
	comp=N,2µm,0.4s						
CCHI	Chillan	1.35	157	eP	Pb	10 53 17.2	-1.2
CCHI				i S	Sb	10 53 36.2	+0.1
CCHI				AMP		10 53 39.2	
	comp=N,639nm,0.4s						
SFDO	San Fernando	1.60	63	eP	Pn	10 53 21.2	-1.0
SFDO				i S	Sb	10 53 43.5	+0.1
CACH	El Canelo	2.16	55	eP	Pn	10 53 30.9	+0.7
CACH				i S	Sn	10 53 59.6	+1.8
CHCH	Chadas Angostu	2.23	51	eP	Pn	10 53 31.8	+0.5
TACH	Talagante	2.26	42	eP	Pn	10 53 32.0	+0.4
LMEL	Las Melosas	2.58	55	eP	Pn	10 53 37.0	+0.7
LMEL				i S	Sn	10 54 10.5	+1.8
LMEL				AMP		10 54 18.9	
	comp=N,105nm,0.1s						
FCH	Farellones	2.87	46	eP	Pn	10 53 41.6	+1.3
FCH				AMP		10 54 25.4	
	comp=N,68nm,0.2s						

MAN 03 11:18:44.8, 8.90N×**126.26E, h17^{km}, mb3.5, ML2.2, MS1.7, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.63	276	eP	Pb	11 18 57.6	+0.7
BUTP				eS	Sb	11 19 09.1	+3.9
BIPH	Bislig	0.72	172	eP	Pb	11 18 57.5	-1.0
BIPH				eS	Sb	11 19 07.0	-0.9
SCPH	Surigao	1.15	319	⇓eP	Pb	11 19 05.0	-0.9
BUKP	Musuan	1.56	229	eP	Pn	11 19 12.8	+0.8
BUKP				eS	Sn	11 19 32.2	+0.3

CASC 03 11:40:12.3±0.9**, 11.27N**×**87.19W, h31^{km}**±21^{km}**, MD4.0, ML3.0, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	1.07	33	⇓eP	Pn	11 40 31.3	-0.1
LEON	Leon	1.17	14	eP	Pn	11 40 32.9	0.0
XAVN	Gruta Xavier	1.21	44	eP	Pn	11 40 32.1	-1.3
MIRN	Miramar	1.25	22	eP	Pn	11 40 33.8	-0.1
APYN	Apoyeque	1.26	40	eP	Pn	11 40 33.6	-0.4
MGAN	Managua	1.27	46	eS	Sn	11 40 50.9	+0.6
	comp=N,263nm,0.4s						
MOMJ	Momotombo	1.29	29	eP	Pn	11 40 34.3	-0.3
MOMJ				eS	Sn	11 40 51.3	+0.3
TEL3	Telica 3	1.34	14	eP	Pn	11 40 35.0	-0.1
TELN	Telica	1.37	15	eP	Pn	11 40 35.3	-0.3
TELN				eS	Sn	11 40 53.1	+0.2
LAJ	Bijagual	3.32	115	eP	Pn	11 40 58.1	-5.4

MOS ***03*** *11:40:31.7±0.7, 38.00N×1.88W, h10^{km}, mb3.5/1, Error ellipse: s-maj=12.3km s-min=4.1km az=73.8*

NEIC ***03*** *11:40:32.6±0.5, 37.83N×1.84W, h8^{km}±4^{km}, mb4.3/5, ML4.5(LDG), ML3.8(STR), MN4.2(MDD), Error ellipse: s-maj=4.0km s-min=2.3km az=157.0*

NEIC Felt [V] at La Paca and Zaracilla de Ramos; [IV] at Bullas; [III] at Lorca, Mula and Totana; [II] at Aguilas, Alhama de Murcia, Alicante, Almeria, Caravaca de La Cruz, Cartagena, Jaen, Molina de Segura and Murcia.

ZUR_RM ***03*** *11:40:32, 37.83N×1.84W, h12^{km}, Mw4.3/9, Moment Tensor Solution. s9 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.00; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$1.51; $M_{r\theta}$0.43; $M_{\theta\phi}$-2.44; $M_{\phi r}$-0.77; Best double couple: $M_0 2.73\times10^{15}$ NP1:ϕ_s191°, δ85°, λ11°. NP2:ϕ_s100°, δ79°, λ175°. Principal axes: T 3.316, Plg12°, Azm56°; N -1.174, Plg78°, Azm217°; P -2.141, Plg4°, Azm326°;*

MDD ***03*** *11:40:33.6±0.3, 37.84N×1.79W, h6^{km}±3^{km}, mbLg4.2/32 Error ellipse: s-maj=3.4km s-min=2.2km az=156.0, PRXIMO IV BULLAS III LORCA MULA TOTANA II CARAVACA DE LA CRUZ MOLINA DE SEGURA GUILAS ALHAMA DE MURCIA II CARTAGENA MURCIA ALICANTE A N*

MDD EMS: IV-V LA PACA ZARCILLA DE RAMOS.

IAG ***03*** *11:40:33, 37.82N×1.79W, h10^{km}, Mw4.2, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.34; $M_{\theta\theta}$-0.80; $M_{\phi\phi}$1.14; $M_{r\theta}$-1.61; $M_{\theta\phi}$-1.46; $M_{\phi r}$0.46; Best double couple: $M_0 2.44\times10^{15}$ NP1:ϕ_s110°, δ84°, λ-136°. NP2:ϕ_s15°, δ46°, λ-7°. Principal axes: T 2.41, Plg25°, Azm234°; N .0687, Plg45°, Azm116°; P -2.48, Plg34°, Azm342°;*

IGIL ***03*** *11:40:33.1, 37.80N×1.70W, h2^{km}, ML4.5*

INMG ***03*** *11:40:33.7±1.5, 37.82N×1.79W, h14^{km}±3^{km}, ML4.3, Error ellipse: s-maj=3.0km s-min=2.0km az=168.0*

SFS ***03*** *11:40:33.0, 37.93N×1.77W*

LDG ***03*** *11:40:34.7±0.1, 37.86N×1.87W, h5^{km}, Md4.3/1, Ml4.5/22, Error ellipse: s-maj=3.7km s-min=1.8km az=139.0*

CSEM ***03*** *11:40:34.2±0.1, 37.82N×1.72W, h12^{km}, ML4.6/33, Error ellipse: s-maj=1.3km s-min=1.0km az=144.0*

CNRM ***03*** *11:40:34.0, 35.93N×1.74W, h30^{km}, MD4.3*

CRAAG ***03*** *11:40:36.5, 37.83N×2.12W, Mb4.2*

STR ***03*** *11:40:42.8±0.5, 38.45N×1.51W, h10^{km}±1^{km}, Ml4.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 03 11:40:31.9±0.3**, 37.93N**±0.01×**1.89W**±0.02**, h15^{km}**±2^{km}**, n208, σ1§32**/306**, mb4.3**/1**, 11C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EXMU	Mula	0.33	71	Pg	Pg	11 40 39.4	+0.4
EXMU				Lg		11 40 44.9	
EXMU	Mula	0.33	71	Pg	Pg	11 40 39.4	+0.4
	SNR=7.9						
EMUR	La Murta	0.52	100	⇑Pg	Pg	11 40 41.4	-1.2
	3µm,0.3s,SNR=18						
EMUR				Lg		11 40 47.3	
	24µm,0.4s,SNR=7.9						
EMUR	La Murta	0.52	100	Pg	Pg	11 40 41.4	-1.2
	3µm,0.3s,SNR=18						
CART	Cartagena	0.78	116	ePg	Pg	11 40 45.9	-1.8
CART	Cartagena	0.78	116	⇑P	Pb	11 40 46.4	-0.3
CART				S	Sb	11 40 55.5	-1.3
CART	Cartagena	0.78	116	ePg	Pg	11 40 45.9	-1.9
CART	Cartagena	0.78	116	i P	Pb	11 40 46.4	-0.3
CART				i S	Sb	11 40 55.5	-1.4
EVIA	Vianos	0.85	326	⇓Pg	Pg	11 40 51.0	+1.8
	430nm,0.3s,SNR=18						
EQES	Quesada	0.94	262	⇑Pg	Pg	11 40 51.8	+0.9
EQES				Lg		11 41 06.1	
EQES				Lg		11 41 10.2	
EQES	Quesada	0.94	262	⇑Pg	Pg	11 40 51.8	+0.9
	1µm,0.3s,SNR=18						
EQES				Lg		11 41 06.1	
	4µm,0.2s,SNR=22						
EQES	Quesada	0.94	262	Pg	Pg	11 40 51.8	+0.9
	1µm,0.3s,SNR=18						
ENIJ	Nijar	0.99	195	⇑Pg	Pg	11 40 50.6	-1.3
	552nm,0.3s,SNR=18						
EBER	Berja	1.30	218	⇑Pn	Pn	11 40 56.2	+0.5
	2µm,0.7s,SNR=18						
EBER				Lg		11 41 15.4	
	5µm,0.6s,SNR=24						
EBER	Berja	1.30	218	Pn	Pn	11 40 56.2	+0.5
	2µm,0.7s,SNR=18						
EBEN	Beniarda	1.52	59	Pn	Pn	11 40 58.3	-0.5
EBEN				Pg	Pg	11 40 58.6	-3.7
EBEN				Pg	Pg	11 41 00.5	-1.8
EBEN				Lg		11 41 22.3	
EBEN				Lg		11 41 27.0	
EBEN	Beniarda	1.52	59	Pn	Pn	11 40 58.3	-0.5
	22nm,0.3s,SNR=7.9						
EBEN				Pg	Pg	11 41 00.5	-1.8
	61nm,0.4s,SNR=70						
EBEN				Lg		11 41 22.3	
	2µm,0.5s,SNR=13						
EBEN	Beniarda	1.52	59	Pn	Pn	11 40 58.3	-0.4
	22nm,0.3s,SNR=7.9						
EBEN	Beniarda	1.52	59	Pg	Pg	11 41 00.5	-1.8
	61nm,0.4s,SNR=70						
ELOJ	Sierra Loja	1.96	247	⇑Pn	Pn	11 41 08.8	+3.7
ELOJ				Lg		11 41 34.8	
ELOJ				Lg		11 41 35.7	
ELOJ	Sierra Loja	1.96	247	⇑Pn	Pn	11 41 08.8	+3.7
	163nm,0.3s,SNR=18						
ELOJ				Lg		11 41 35.7	
	186nm,0.2s,SNR=5.9						
EADA	Adamuz	2.13	277	P	Pn	11 41 09.6	+2.0
EADA				Sn	Sn	11 41 37.2	+3.3
EADA				Lg		11 41 45.4	
EADA	Adamuz	2.13	277	Pn	Pn	11 41 09.5	+1.9
	149nm,0.4s,SNR=243						
EADA				Sn	Sn	11 41 37.2	+3.3
	464nm,0.3s,SNR=5.2						
EADA				Lg		11 41 45.4	
	2µm,0.6s,SNR=15						
EADA	Adamuz	2.13	277	Pn	Pn	11 41 09.5	+1.9
	149nm,0.4s,SNR=243						
EADA				Sn	Sn	11 41 37.2	+3.2
	464nm,0.3s,SNR=5.2						
EALB	Alboran	2.19	205	Pn	Pn	11 41 07.6	-0.8
EALB				P		11 41 09.1	
EALB				Pg	Pg	11 41 13.1	-2.6
EALB				Lg		11 41 44.3	
EALB	Alboran	2.19	205	Pn	Pn	11 41 07.6	-0.8
	103nm,0.5s,SNR=11						
EALB				Pg	Pg	11 41 13.1	-2.6
	179nm,0.5s,SNR=9.7						
EALB				Lg		11 41 44.3	
	596nm,0.6s,SNR=5.1						
EALB	Alboran	2.19	205	Pn	Pn	11 41 07.6	-0.8
	103nm,0.5s,SNR=11						
EALB	Alboran	2.19	205	P	Pn	11 41 09.1	+0.7
EALB	Alboran	2.19	205	Pg	Pg	11 41 13.1	-2.6
	179nm,0.5s,SNR=9.7						
EMAL	Malaga-Limoner	2.34	241	Pn	Pn	11 41 13.8	+3.4
	1.4nm,0.2s,SNR=7.9						
EMAL				Lg		11 41 50.7	
	260nm,0.7s,SNR=7.9						
ESDC	Sonseca Array	2.38	318	Pn	Pn	11 41 12.9	+1.8
	31nm,0.3s,baz=128,slow=13,SNR=154						
ESDC				Pg	Pg	11 41 18.4	-1.0
	82nm,0.4s,baz=127,slow=16,SNR=7.0						
ESDC				Lg		11 41 50.5	
	326nm,0.2s,baz=146,slow=27,SNR=9.7						
ESDC	Sonseca Array	2.38	318	Pn	Pn	11 41 12.9	+1.9
	31nm,0.3s,SNR=154						
ESDC	Sonseca Array	2.38	318	Pg	Pg	11 41 18.4	-1.0
	82nm,0.4s,SNR=7.0						
ESLA	Sonseca Array	2.38	318	ePn	Pn	11 41 12.8	+1.7
ESLA				eSn	Sg	11 41 49.9	-1.3
ESLA	Sonseca Array	2.38	318	ePn	Pn	11 41 12.8	+1.8
USTO	Oran	2.44	154	P	Pn	11 41 14.0	+2.0
EMOS	Mosqueruela	2.67	24	Pn	Pn	11 41 17.3	+2.2
	60nm,0.6s,SNR=48						
EMOS				Pg	Pg	11 41 24.5	-0.6
	204nm,0.4s,SNR=30						
EMOS				Lg		11 41 56.3	
	904nm,0.7s,SNR=11						
EMOS	Mosqueruela	2.67	24	Pn	Pn	11 41 17.3	+2.1
	60nm,0.6s,SNR=48						
EMOS	Mosqueruela	2.67	24	Pg	Pg	11 41 24.5	-0.7
	204nm,0.4s,SNR=30						
EMIJ	Mijas	2.68	240	Pn	Pn	11 41 16.9	+1.6
	107nm,0.5s,SNR=26						
EMIJ				Pg	Pg	11 41 23.3	-2.0
	212nm,0.4s,SNR=13						
EMIJ				Lg		11 42 01.9	
	736nm,0.6s,SNR=11						
OLHC	Oulhaca	2.70	172	P	Pn	11 41 15.0	-0.7
EIBI	Ibiza	2.76	66	Pn	Pn	11 41 15.5	-1.1
	45nm,0.3s,SNR=52						
EIBI				Pg	Pg	11 41 21.8	-5.3
	72nm,0.3s,SNR=15						
EIBI				Sn	Sn	11 41 48.0	-1.9
	134nm,0.3s,SNR=7.1						
EIBI				Lg		11 42 01.0	
	428nm,0.6s,SNR=4.0						
EIBI	Ibiza	2.76	66	Pn	Pn	11 41 15.5	-1.0
	45nm,0.3s,SNR=52						
EIBI	Ibiza	2.76	66	Pg	Pg	11 41 21.8	-5.3
	72nm,0.3s,SNR=15						
EIBI				Sn	Sn	11 41 48.0	-1.9
	134nm,0.3s,SNR=7.1						
EMEL	Melilla	2.77	198	Pn	Pn	11 41 16.5	-0.1
	72nm,0.2s,SNR=4.0						
EMEL				Sn	Sn	11 41 48.0	-2.0
	356nm,0.7s,SNR=4.0						
MELI	Melilla	2.77	198	eP	Pn	11 41 15.2	-1.4
OKGL	Djebel Kef Gue	2.77	132	P	Pn	11 41 17.0	+0.3
OTSS	Djebel Tessala	2.79	161	P	Pn	11 41 15.0	-1.9
ODJA	Bouhanifia	2.95	151	P	Pn	11 41 19.0	-0.2
OJBR	Djebel Berber	2.95	142	P	Pn	11 41 18.0	-1.2
LIJA	Lijar	2.98	251	⇓P	Pn	11 41 22.6	+3.0
LIJA	Lijar	2.98	251	i P	Pn	11 41 22.6	+3.0
REAL	Reales	3.02	242	P	Pn	11 41 23.2	+3.0
REAL	Reales	3.02	242	eP	Pn	11 41 23.2	+3.0
ZAI	Zaio	3.04	193	i P	Pn	11 41 19.0	-1.4
EANR	'Ain N'Sour	3.11	129	P	Pn	11 41 26.0	+4.6
TAF	Taforalt	3.14	188	P	Pn	11 41 24.0	+2.1

TAF				S	Sn	11 42 01.0	+1.5
ECHA	**Ech Chlef**	3.15	123	P	Pn	11 41 22.0	-0.1
MPAL	**Palemas**	3.17	212	*i* P	Pn	11 41 21.5	-0.8
EBNR	**Beni Rached**	3.19	120	P	Pn	11 41 24.0	+1.4
OJGS	**Djebel Guires**	3.22	138	P	Pn	11 41 25.0	+2.0
TOU	**Touzarine**	3.32	207	*i* P	Pn	11 41 23.5	-1.0
ESPR	**Espera**	3.33	253	Pn	Pn	11 41 26.8	+2.1
	22nm,0.3s,SNR=22						
ESPR				Pg	Pg	11 41 35.5	-2.9
	72nm,0.4s,SNR=4.0						
ESPR				Sn	Sn	11 42 07.0	+2.6
	132nm,0.4s,SNR=4.0						
ESPR				Lg		11 42 27.7	
	474nm,0.4s,SNR=4.0						
ESPR	**Espera**	3.33	253	Pn	Pn	11 41 26.8	+2.2
	22nm,0.3s,SNR=22						
ESPR	**Espera**	3.33	253	Pg	Pg	11 41 35.5	-3.0
	72nm,0.4s,SNR=4.0						
ESPR				Sn	Sn	11 42 07.0	+2.7
	132nm,0.4s,SNR=4.0						
EBR	**Ebro Roquetas**	3.42	32	*i* PN	Pn	11 41 27.5	+1.6
EBR				*i* SN	Sn	11 42 08.3	+1.6
EBR				*i* SG	Sg	11 42 27.0	+1.0
EBR				*e*PNPN		11 45 37.5	
GIBL	**Gibalbin**	3.43	253	P	Pn	11 41 28.6	+2.6
GIBL	**Gibalbin**	3.43	253	*e*P	Pn	11 41 28.6	+2.6
ERTA	**Horta de San J**	3.48	29	Pn	Pn	11 41 28.5	+1.8
	73nm,0.4s,SNR=84						
ERTA				Sn	Sn	11 42 07.2	-0.8
	239nm,0.4s,SNR=9.3						
ERTA				Lg		11 42 23.8	
	352nm,0.6s,SNR=4.9						
ERTA	**Horta de San J**	3.48	29	Pn	Pn	11 41 28.5	+1.8
	73nm,0.4s,SNR=84						
ERTA				Sn	Sn	11 42 07.2	-0.8
	239nm,0.4s,SNR=9.3						
ETRT	**Tiaret**	3.61	134	P	Pn	11 41 28.0	-0.5
CNIL	**Conil**	3.67	246	P	Pn	11 41 28.8	-0.7
CNIL	**Conil**	3.67	246	*e*P	Pn	11 41 28.8	-0.7
DKH	**Dar Kharkhour**	3.71	230	*i* P	Pn	11 41 30.0	+0.1
EMIN	**Mina Concepcio**	3.79	269	Pn	Pn	11 41 31.8	+0.6
EMIN				Sn	Sn	11 42 16.6	+0.7
EMIN				Lg		11 42 34.1	
EMIN	**Mina Concepcio**	3.79	269	Pn	Pn	11 41 31.7	+0.6
	32nm,0.3s,SNR=151						
EMIN				Sn	Sn	11 42 16.6	+0.7
	263nm,0.4s,SNR=16						
EMIN				Lg		11 42 34.2	
	950nm,0.9s,SNR=11						
EMIN	**Mina Concepcio**	3.79	269	Pn	Pn	11 41 31.8	+0.7
EMIN				Sn	Sn	11 42 16.6	+0.7
	263nm,0.4s,SNR=16						
ESAC	**San Caprasio**	3.94	16	Pn	Pn	11 41 35.8	+2.6
	121nm,0.3s,SNR=56						
ESAC				Pg	Pg	11 41 49.3	-1.2
	234nm,0.3s,SNR=8.4						
ESAC				Lg		11 42 38.2	
	2µm,0.4s,SNR=6.3						
ESAC	**San Caprasio**	3.94	16	Pn	Pn	11 41 35.8	+2.6
	121nm,0.3s,SNR=56						
ABA	**Alger-Bouzarea**	4.08	105	P	Pn	11 41 34.0	-1.3
ETOS	**Mallorca**	4.10	62	Pn	Pn	11 41 35.0	-0.6
	21nm,0.3s,SNR=7.9						
ETOS				Sn	Sn	11 42 21.1	-2.8
	31nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	4.10	62	Pn	Pn	11 41 35.0	-0.6
	21nm,0.3s,SNR=7.9						
ETOS				Sn	Sn	11 42 21.1	-2.8
	31nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	4.11	283	⇑Pn	Pn	11 41 36.4	+0.7
	25nm,0.3s,SNR=18						
EBAD				Sn	Sn	11 42 23.2	-0.8
	267nm,0.4s,SNR=6.5						
EBAD				Lg		11 42 45.4	
	2µm,0.5s,SNR=14						
EBAD	**Badajoz**	4.11	283	Pn	Pn	11 41 36.4	+0.7
	25nm,0.3s,SNR=18						
EPOB	**Poblet**	4.11	33	Pn	Pn	11 41 36.4	+0.7
EPOB				P		11 41 37.0	
EPOB				Sn	Sn	11 42 22.6	-1.5
EPOB				Lg		11 42 41.8	
EPOB	**Poblet**	4.11	33	Pn	Pn	11 41 36.4	+0.7
	38nm,0.4s,SNR=40						
EPOB				Sn	Sn	11 42 22.6	-1.5
	70nm,0.3s,SNR=7.4						
EPOB				Lg		11 42 41.8	
	222nm,0.8s,SNR=6.6						
EPOB	**Poblet**	4.11	33	Pn	Pn	11 41 36.4	+0.7
	38nm,0.4s,SNR=40						
EPOB	**Poblet**	4.11	33	P	Pn	11 41 37.0	+1.3
EPOB				Sn	Sn	11 42 22.6	-1.5
	70nm,0.3s,SNR=7.4						
EMHD	**Djebel Mahouad**	4.24	113	P	Pn	11 41 29.0	-8.5
TZK	**Tazeka**	4.26	207	*i* P	Pn	11 41 36.0	-1.9
ERIP	**Rio Piedras**	4.29	264	⇑Pn	Pn	11 41 38.4	+0.1
	47nm,0.3s,SNR=18						
ERIP				Sn	Sn	11 42 28.3	-0.4
	126nm,0.2s,SNR=7.9						
ERIP				Lg		11 42 50.1	
	357nm,0.5s,SNR=7.9						
PALC	**Alcoutim**	4.46	266	*e*Pn	Pn	11 41 40.6	0.0
PALC				*e*Sn	Sn	11 42 31.6	-1.2
PALC				*e*Sg	Sx	11 42 52.8	
	377nm,0.7s						
PALC	**Alcoutim**	4.46	266	Pn	Pn	11 41 40.8	+0.2
PALC				Sn	Sn	11 42 31.4	-1.4
PALC				*e*Sg	Sx	11 42 52.8	
	377nm,0.7s						
PBEJ	**Beja**	4.72	273	*e*Pn	Pn	11 41 44.8	+0.4
PBEJ				*e*Sn	Sn	11 42 38.0	-1.5
PBEJ				*e*Sg	Sg	11 43 02.4	-6.8
	408nm,0.6s						
PBEJ	**Beja**	4.72	273	Pn	Pn	11 41 44.9	+0.5
PBEJ				Sn	Sn	11 42 38.2	-1.3
PBEJ				Lg		11 43 02.4	
	204nm,0.6s						
PBEJ	**Beja**	4.72	273	Pn	Pn	11 41 44.9	+0.5
PBEJ				*e*Sn	Sn	11 42 38.0	-1.5
PBEJ				*e*Sg		11 43 02.4	
	408nm,0.6s						
PCBR	**Castelo Branco**	4.76	295	*e*Pn	Pn	11 41 45.7	+0.8
PCBR				*e*Sn	Sn	11 42 40.0	-0.4
PCBR				*e*Sg	Sx	11 43 03.0	
	560nm,0.7s						
PCBR	**Castelo Branco**	4.76	295	Pn	Pn	11 41 45.7	+0.8
PCBR				*e*Sn	Sn	11 42 40.0	-0.4
PCBR				*e*Sg	Sx	11 43 03.0	
	560nm,0.7s						
EMIR	**Miracle**	4.76	32	Pn	Pn	11 41 45.7	+0.8
	49nm,0.5s,SNR=4.0						
EMIR				Sn	Sn	11 42 39.4	-1.1
	69nm,0.3s,SNR=4.0						
EMIR				Lg		11 43 04.3	
	93nm,0.5s,SNR=4.0						
EMIR	**Miracle**	4.76	32	Pn	Pn	11 41 45.7	+0.7
	49nm,0.5s,SNR=4.0						
EMIR				Sn	Sn	11 42 39.4	-1.2
	69nm,0.3s,SNR=4.0						
EVO	**Evora**	4.86	279	*e*Pn	Pn	11 41 47.2	+0.9
EVO				*e*Sn	Sn	11 42 43.3	+0.3
EVO				*e*Sg	Sg	11 43 11.0	-2.7
	1µm,0.6s						
EBIE	**Bielsa**	5.00	17	Pn	Pn	11 41 50.2	+2.0
	15nm,0.3s,SNR=45						
EBIE				Sn	Sn	11 42 46.2	-0.2
	264nm,1.2s,SNR=5.4						
EBIE				Lg		11 43 12.9	
	96nm,0.6s,SNR=6.2						
EBIE	**Bielsa**	5.00	17	Pn	Pn	11 41 50.2	+2.0
	15nm,0.3s,SNR=45						
EBIE				Sn	Sn	11 42 46.2	-0.2
	264nm,1.2s,SNR=5.4						
MTE	**Manteigas**	5.04	301	*e*Pn	Pn	11 41 50.5	+1.7
MTE				*e*Sn	Sn	11 42 46.9	-0.6
MTE				*e*Sg	Sg	11 43 11.9	-7.8
	576nm,0.4s						
MTE	**Manteigas**	5.04	301	*e*Pn	Pn	11 41 50.1	+1.2
MTE				*e*Sn	Sn	11 42 42.5	-4.9
MTE	**Manteigas**	5.04	301	⇑Pn	Pn	11 41 50.5	+1.7
MTE				Sn	Sn	11 42 46.9	-0.6
MTE				Lg		11 43 11.9	
	288nm,0.4s						
MTE	**Manteigas**	5.04	301	*e*Pn	Pn	11 41 50.1	+1.3
MTE				*e*Sn	Sn	11 42 46.9	-0.6
MTE				*e*Sg		11 43 11.9	
	576nm,0.4s						
ETSF	**Etsaut**	5.06	11	*e*Pn	Pn	11 41 50.8	+1.6
ETSF				*e*Sn	Sn	11 42 47.1	-1.0
ETSF				*e*Sg	Sx	11 43 14.9	
	90nm,0.4s						
MOE	**Montemor**	5.12	279	*e*Pn	Pn	11 41 50.5	+0.5
MOE				*e*Sn	Sn	11 42 48.2	-1.4
MOE				*e*Sg	Sg	11 43 18.5	-3.9
IFR	**Ifrane**	5.13	212	P	Pn	11 41 50.0	-0.2
LARF	**Larrau**	5.14	7	P	Pn	11 41 51.8	+1.4
VIEF	**Viey**	5.16	16	P	Pn	11 41 51.8	+1.3
RESF	**Ens**	5.16	19	P	Pn	11 41 52.4	+1.9
SJPF	**Ste Jean**	5.20	5	*e*Pn	Pn	11 41 52.3	+1.2
SJPF				*e*Sn	Sn	11 42 49.9	-1.6
SJPF				*e*Sg	Sx	11 43 19.8	
	541nm,1.0s						
REYF	**Montagne du Re**	5.26	12	P	Pn	11 41 53.6	+1.7
REYF				S	Sn	11 42 52.5	-0.4
MIF	**Mishlifen**	5.27	212	*i* P	Pn	11 41 51.5	-0.6
EALK	**Alkurruntz**	5.29	3	Pn	Pn	11 41 54.6	+2.2
	113nm,0.4s,SNR=96						
EALK				Sn	Sn	11 42 53.7	0.0
	81nm,0.4s,SNR=9.2						
EALK				Lg		11 43 25.1	
	224nm,0.6s,SNR=6.5						
LABF	**Labassere**	5.32	16	P	Pn	11 41 54.0	+1.1
MELF	**Melles**	5.33	21	P	Pn	11 41 55.0	+2.0
OSSF	**Osses**	5.34	5	P	Pn	11 41 54.8	+1.7
OSSF				S	Sn	11 42 55.3	+0.3
SALF	**Salau**	5.36	25	P	Pn	11 41 54.8	+1.4
EPF	**Esparros**	5.37	18	*e*Pn	Pn	11 41 55.1	+1.6
EPF				*e*Sn	Sn	11 42 54.1	-1.6
EPF				*e*Sg	Sx	11 43 24.6	
	151nm,0.6s						
VALF	**Valcebollere**	5.37	33	P	Pn	11 41 54.8	+1.2
VALF				S	Sn	11 42 54.9	-1.0
PBRG	**Braganca**	5.37	318	*e*Pn	Pn	11 41 54.4	+0.8
PBRG				*e*Sn	Sn	11 42 55.2	-0.7
PBRG				*e*Sg	Sx	11 43 22.4	
	335nm,0.6s						
PBRG	**Braganca**	5.37	318	Pn	Pn	11 41 54.3	+0.7
PBRG				*e*Sn	Sn	11 42 55.2	-0.7
PBRG				*e*Sg	Sx	11 43 22.4	
	335nm,0.6s						
ALMR	**Almeirim**	5.38	285	*e*P	Pn	11 41 54.6	+0.9
ALMR				*e*S	Sn	11 42 54.4	-1.7
ALMR				*e*S	Sn	11 42 54.4	-1.7
ALMR				AML	AML	11 42 56.7	
	comp=N,809nm,0.4s						
ELAN	**Lanestosa**	5.42	348	Pn	Pn	11 41 55.9	+1.7
	comp=N,20nm,0.6s,SNR=28						
ELAN				Pg	Pg	11 42 18.2	-2.0
	comp=N,60nm,1.0s,SNR=9.5						
ELAN				Lg		11 43 32.9	
	comp=N,204nm,0.8s,SNR=4.0						
ELAN	**Lanestosa**	5.42	348	Pn	Pn	11 41 55.9	+1.6
PVIS	**Viseu**	5.42	303	*e*Pn	Pn	11 41 55.2	+0.9
PVIS				*e*Sn	Sn	11 42 56.1	-1.0
PVIS				*e*Sg	Sx	11 43 25.1	
	comp=N,302nm,0.8s						
PVIS	**Viseu**	5.42	303	*e*Pn	Pn	11 41 55.2	+0.9
PVIS				Sn	Sn	11 42 55.6	-1.5
PVIS				*e*Sg	Sx	11 43 25.1	
	comp=N,302nm,0.8s						
PTEO	**Sao Teotonio**	5.43	268	*e*Pn	Pn	11 41 54.4	0.0
PTEO				*e*Sn	Sn	11 42 48.6	-8.7
PTEO				*e*Sg		11 43 21.1	
PTEO	**Sao Teotonio**	5.43	268	Pn	Pn	11 41 54.3	-0.1
PTEO				Sn	Sn	11 42 48.6	-8.7
PTEO				Lg		11 43 21.1	
ECAL	**Calabor**	5.47	319	Pn	Pn	11 41 55.4	+0.5
	comp=N,47nm,0.4s,SNR=54						
ECAL				Lg		11 43 27.8	
	comp=N,1µm,1.1s,SNR=10						
ECAL	**Calabor**	5.47	319	Pn	Pn	11 41 55.4	+0.5
PVRL	**Vila Real**	5.60	308	*e*Pn	Pn	11 41 57.3	+0.5
PVRL				*e*Sn	Sn	11 42 59.3	-2.3
PVRL				*e*Sg	Sx	11 43 29.4	
	comp=N,226nm,0.6s						
PVRL	**Vila Real**	5.60	308	Pn	Pn	11 41 57.2	+0.4
PVRL				Sn	Sn	11 42 59.3	-2.3
CARF	**Carcanieres**	5.67	31	P	Pn	11 41 59.5	+1.8
FILF	**Fillols**	5.74	35	P	Pn	11 41 58.7	0.0
FILF				S	Sn	11 43 01.6	-3.5
LIS	**Lisbon**	5.76	280	*e*P	Pn	11 41 59.7	+0.6
LIS				*e*S	Sn	11 43 02.6	-3.1
LIS				*e*S	Sn	11 43 02.6	-3.0
LIS				AML	AML	11 43 07.8	
	comp=E,320nm,0.3s						
PLOU	**Loures**	5.78	282	*e*Pn	Pn	11 41 59.8	+0.5
PLOU				*e*Sn	Sn	11 43 04.8	-1.3
PLOU				*e*Sg		11 43 39.6	
	comp=E,703nm,0.7s						
PLOU	**Loures**	5.78	282	Pn	Pn	11 41 59.8	+0.5
PLOU				Sn	Sn	11 43 04.8	-1.3
PLOU				Lg		11 43 39.6	
	comp=E,352nm,0.7s						
LPEF	**Le Peyrat**	5.79	29	P	Pn	11 42 01.5	+2.1
EJON	**La Jonquera**	5.81	38	Pn	Pn	11 42 00.3	+0.6
EJON				P		11 42 00.6	
EJON	**La Jonquera**	5.81	38	Pn	Pn	11 42 00.3	+0.6
	comp=E,14nm,0.4s,SNR=9.1						
EJON	**La Jonquera**	5.81	38	Pn	Pn	11 42 00.3	+0.6
EJON	**La Jonquera**	5.81	38	P	Pn	11 42 00.6	+0.9
SJAF	**Saint Jean de**	5.83	37	P	Pn	11 42 00.1	+0.1
EARI	**Arriondas**	5.93	336	Pn	Pn	11 42 02.7	+1.3
	comp=E,63nm,0.5s,SNR=118						
EARI				Pg	Pg	11 42 28.1	-2.2
	comp=E,49nm,0.5s,SNR=6.6						
EARI				Lg		11 43 44.7	
	comp=E,180nm,0.8s,SNR=7.9						
EARI	**Arriondas**	5.93	336	Pn	Pn	11 42 02.7	+1.3
ERUA	**La Rua**	6.00	320	Lg		11 43 46.6	
	comp=E,90nm,0.4s,SNR=7.9						
SET	**Setif**	6.08	104	P	Pn	11 42 05.0	+1.5
ELOB	**Lobios**	6.16	312	Pn	Pn	11 42 05.0	+0.3
	comp=E,20nm,0.4s,SNR=30						
ELOB				Sn	Sn	11 43 11.4	-4.2
	comp=E,19nm,0.5s,SNR=4.7						
ELOB				Lg		11 43 48.6	
	comp=E,331nm,0.7s,SNR=7.9						
ELOB	**Lobios**	6.16	312	Pn	Pn	11 42 05.0	+0.3
CKHR	**Kef el Ahmar**	6.23	106	P	Pn	11 42 06.5	+0.9
MTLF	**Montolieu**	6.24	29	*e*Pn	Pn	11 42 06.3	+0.5
MTLF				*e*Sg	Sg	11 43 50.8	-8.8
	comp=E,164nm,0.8s						
EINC	**Incio**	6.30	320	Pn	Pn	11 42 07.6	+1.0
	comp=E,14nm,0.3s,SNR=32						
EINC				Lg		11 43 57.3	
	comp=E,283nm,0.8s,SNR=4.0						
DFRA	**Djebel Bou Aff**	6.35	100	P	Pn	11 42 07.5	+0.2
CMER	**Merouana**	6.66	108	P	Pn	11 42 15.0	+3.2
EZAM	**Zamans**	6.71	311	Pn	Pn	11 42 12.1	-0.3
	comp=E,7.9nm,0.3s,SNR=5.4						
EZAM				Lg		11 44 08.8	
	comp=E,126nm,0.5s,SNR=10						
EPON	**Pontenova**	6.71	325	Pn	Pn	11 42 13.2	+0.8
	comp=E,12nm,0.3s,SNR=24						
EPON				Lg		11 44 09.1	
	comp=E,205nm,0.8s,SNR=7.9						
CTEI	**Djebel Teioual**	6.90	103	P	Pn	11 42 17.5	+2.5
CASM	**Ain Smara**	6.90	101	P	Pn	11 42 16.0	+0.9
CKFL	**Kef-Lekhel**	7.04	100	P	Pn	11 42 17.5	+0.4
STS	**Santiago**	7.09	316	Lg		11 44 20.6	
	comp=E,157nm,0.8s,SNR=13						
LFF	**La Frestale**	7.27	15	*e*Pn	Pn	11 42 20.3	0.0
LFF				*e*Sn	Sn	11 43 38.5	-4.9
LFF				*e*Sg	Sg	11 44 23.9	-10
	comp=E,139nm,0.9s						
EMAZ	**Mazaricos**	7.37	315	P	Pn	11 42 20.9	-0.8
EMAZ				Pn	Pn	11 42 21.4	-0.2
EMAZ				Lg		11 44 27.3	
EMAZ	**Mazaricos**	7.37	315	Pn	Pn	11 42 21.4	-0.2
	comp=E,11nm,0.4s,SNR=8.3						
EMAZ				Lg		11 44 27.3	
	comp=E,708nm,1.6s,SNR=7.9						
EMAZ	**Mazaricos**	7.37	315	Pn	Pn	11 42 21.4	-0.3
LASF	**Ste Croix**	7.52	33	*e*Pn	Pn	11 42 23.3	-0.4
LASF				*e*Sn	Sn	11 43 44.0	-5.5
LASF				*e*Sg	Sx	11 44 30.0	
	comp=E,44nm,0.8s						
CAF	**Calviac**	7.59	22	*e*Pn	Pn	11 42 24.3	-0.5
CAF				*e*Sn	Sn	11 43 45.4	-6.0
CAF				*e*Sg	Sx	11 44 32.5	
	comp=E,42nm,0.6s						
RJF	**Les Rejaudoux**	7.79	18	*e*Pn	Pn	11 42 26.3	-1.3
RJF				*e*Sn	Sn	11 43 49.1	-7.3
RJF				*e*Sg	Sx	11 44 39.9	
	comp=E,246nm,1.2s						
SMRF	**Simiane la Rot**	8.26	41	*e*Pn	P	11 42 33.9	-0.3
LMR	**La Mourre**	8.36	47	*e*Pn	P	11 42 34.2	-1.2
LMR				*e*Sn	Sn	11 44 02.1	-8.4
	comp=E,11nm,0.4s						
VIVF	**Saint-Julien-l**	8.49	33	*e*Pn	P	11 42 36.4	-0.9
VIVF				*e*Sg	Sx	11 45 01.4	
	comp=E,75nm,1.1s						
FRF	**La Foret Royal**	8.57	46	*e*Pn	P	11 42 38.6	+0.1
MFF	**Saint Martin d**	8.76	8	*e*Pn	P	11 42 39.8	-1.2
MFF				*e*Sn	Sn	11 44 15.0	-5.5
MFF				*e*Sg	Sx	11 45 11.4	
	comp=E,36nm,0.8s						
TCF	**Toulx Ste Croi**	8.88	19	*e*Pn	P	11 42 41.5	-1.3
TCF				*e*Sn	Sn	11 44 16.4	-7.2
TCF				*e*Sg	Sx	11 45 13.5	
	comp=E,137nm,1.3s						
VSL	**Villasalto**	8.95	76	*e*Pn	P	11 42 43.1	-0.5
VSL				*e*Sn	Sx	11 44 15.2	
VSL	**Villasalto**	8.95	76	*e*Pn	P	11 42 43.1	-0.5
ORIF	**Oris-en-Rattie**	9.09	37	*e*Pn	P	11 42 45.6	-0.1
SBF	**Sospel**	9.21	47	*e*Pn	P	11 42 46.5	-0.8
SBF				*e*Sn	Sn	11 44 23.1	-8.6
	comp=E,20nm,0.5s						
BGF	**Bois d'Agland**	9.30	21	*e*Pn	P	11 42 47.2	-1.4
BGF				*e*Sn	Sn	11 44 26.3	-7.7
BGF				*e*Sg	Sx	11 45 25.4	
	comp=E,37nm,0.5s						
MBDF	**Montbardon**	9.40	41	*e*Pn	P	11 42 50.7	+0.8
PGF	**Pioggiola**	9.51	58	*e*Pn	P	11 42 50.8	-0.6
PGF				*e*Sn	Sn	11 44 31.8	-7.3
	comp=E,11nm,0.5s						
AVF	**Avril sur Loir**	9.66	22	*e*Pn	P	11 42 53.1	-0.3
AVF				*e*Sg	Sx	11 45 37.6	
	comp=E,158nm,1.6s						
SMF	**Signal de Mont**	9.68	24	*e*Pn	P	11 42 52.9	-0.8
SMF				*e*Sg	Sx	11 45 38.8	
	comp=E,90nm,1.3s						
HYF	**Humbligny**	9.91	18	*e*Pn	P	11 42 55.5	-1.3
LPG	**La Plagne**	9.94	38	*e*Pn	P	11 42 58.2	+1.0
LPL	**La Plagne**	9.94	38	*e*Pn	P	11 42 57.4	+0.1
SSF	**Saint Saulge**	9.95	22	*e*Pn	P	11 42 56.4	-1.0
SSF				*e*Sg	Sx	11 45 46.3	
	comp=E,62nm,1.3s						
QUIF	**Quistinic**	10.02	355	*e*Pn	P	11 42 57.7	-0.7
QUIF				*e*Sn	S	11 44 44.6	-7.0
SGMF	**Saint Gilles**	10.33	358	*e*Pn	P	11 43 01.6	-1.0
SGMF				*e*Sn	S	11 44 51.7	-7.4
ROSF	**Rostrenen**	10.45	355	*e*Pn	P	11 43 03.5	-0.7
ROSF				*e*Sn	S	11 44 53.7	-8.3
	comp=E,16nm,0.5s						
GRR	**Gorron**	10.48	4	*e*Pn	P	11 43 03.1	-1.5
CABF	**La Chapelle**	10.49	32	*e*Pn	P	11 43 04.2	-0.6
CABF				*e*Sg	S	11 45 03.3	+0.3
	comp=E,156nm,1.4s						
LDF	**La Druitiere**	10.73	6	*e*Pn	P	11 43 06.7	-1.4
FLN	**La Foliniere**	10.87	5	*e*Pn	P	11 43 08.1	-1.9
HINF	**Hinteralfeld**	11.77	30	*e*Pn	P	11 43 20.6	-1.6
GRA1	**Grafenberg Arr**	15.06	35	*e*P	P	11 44 11.2	+5.4
	comp=E,17nm,1.0s						
GRF	**Grafenberg Arr**	15.06	35	*e*P	P	11 44 11.2	+5.4
GRF				pmax	pmax		
	comp=Z,17nm,1.0s						
GRF	**Grafenberg Arr**	15.06	35	*e*P	P	11 44 11.2	+5.4
GRF				pmax	pmax		
	comp=Z,17nm,1.0s						
GRF	**Grafenberg Arr**	15.06	35	*e*P	P	11 44 11.2	+5.4
	comp=Z,17nm,1.0s						
KHC	**Kasperske Hory**	15.81	40	*e*P	P	11 44 19.0	+3.5
KHC				*e*x	x	11 44 29.0	
BRG	**Berggiesshubel**	17.14	36	*e*P	P	11 44 37.1	+4.8
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BRG	**Berggiesshubel**	17.14	36	*e*P	P	11 44 37.1	+4.8
	comp=Z,3.4nm,1.1s						
ESK	**Eskdalemuir**	17.41	357	*e*P	P	11 44 38.6	+2.9
ESK				pmax	pmax		
	comp=Z,20nm,1.2s						
ESK	**Eskdalemuir**	17.41	357	*e*P	P	11 44 38.6	+2.9
	comp=Z,20nm,1.2s						
EIL	**Elat**	31.54	94	P	P	11 46 53.5	-2.3
	comp=Z,4.2nm,0.8s,mb4.3						

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*SFS **03** 11:44:33.0, 38.15N×1.74W*

*CSEM **03** 11:44:35.5±0.2, 37.87N×1.80W, h2km, ML3.6/11, Error ellipse: s-maj=4.7km s-min=2.8km az=160.0*

*NEIC **03** 11:44:36.0, 37.85N×1.79W, h4km, MN3.3(MDD), After MDD.*

*INMG **03** 11:44:37.2±1.6, 37.80N×1.76W, h18km±5km, ML3.2, Error ellipse: s-maj=3.2km s-min=2.4km az=139.0*

MDD 03 11:44:36.1±0.3**, 37.86N×1.80W, h4**km±4km**, mbLg3.2**/22, **1C, Error ellipse: s-maj=3.9km s-min=2.3km az=159.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXMU	**Mula**	0.30	53	Pg	Pg	11 44 41.1	-1.1
EXMU				Lg		11 44 46.7	
EXMU	**Mula**	0.30	53	Pg	Pg	11 44 41.1	-1.1
	SNR=7.9						
EXMU				Lg		11 44 46.7	
	SNR=7.9						
EXMU	**Mula**	0.30	53	Pg	Pg	11 44 41.1	-1.1
	SNR=7.9						
EMUR	**La Murta**	0.44	92	Pg	Pg	11 44 43.7	-1.2
	106nm,0.2s,SNR=7.9						
EMUR				Lg		11 44 50.0	
	2µm,0.4s,SNR=7.9						
EMUR	**La Murta**	0.44	92	Pg	Pg	11 44 43.7	-1.2
	106nm,0.2s,SNR=7.9						
CART	**Cartagena**	0.69	113	⇑P	Pg	11 44 50.3	+0.5
CART				S	Sg	11 44 57.5	-1.5
CART	**Cartagena**	0.69	113	*i* P	Pg	11 44 50.3	+0.5
CART				*i* S	Sg	11 44 57.5	-1.5
ENIJ	**Nijar**	0.94	200	Pg	Pg	11 44 54.1	-0.8
	86nm,0.3s,SNR=4.0						
ENIJ				Lg		11 45 06.0	
	294nm,0.3s,SNR=4.0						
EVIA	**Vianos**	0.96	325	Pg	Pg	11 44 51.8	-3.5
	48nm,0.2s,SNR=4.0						
EVIA				Lg		11 45 08.3	
	SNR=7.9						
EQES	**Quesada**	1.01	267	Pg	Pg	11 44 52.1	-4.2
	81nm,0.1s,SNR=4.0						
EQES				Lg		11 45 09.2	
	551nm,0.2s,SNR=4.0						
EQES	**Quesada**	1.01	267	Pg	Pg	11 44 52.1	-4.2
	81nm,0.1s,SNR=4.0						
EBER	**Berja**	1.29	223	Pg	Pg	11 44 58.9	-3.0
EBER				Lg		11 45 20.1	
EBER	**Berja**	1.29	223	Pg	Pg	11 44 58.9	-3.0
	17nm,0.2s,SNR=7.9						
EBER				Lg		11 45 19.4	
	568nm,0.7s,SNR=7.9						
EBER	**Berja**	1.29	223	Pg	Pg	11 44 58.9	-3.0
	17nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	1.50	55	Pg	Pg	11 45 01.7	-4.3
	7.4nm,0.3s,SNR=4.0						
EBEN				Lg		11 45 24.9	
	64nm,0.3s,SNR=4.0						
EBEN	**Beniarda**	1.50	55	Pg	Pg	11 45 01.7	-4.4
	7.4nm,0.3s,SNR=4.0						
ELOJ	**Sierra Loja**	2.00	250	Pg	Pg	11 45 12.0	-4.0
	11nm,0.2s,SNR=7.9						
ELOJ				Lg		11 45 38.9	
	42nm,0.3s,SNR=7.9						
EADA	**Adamuz**	2.22	279	Pn	Pn	11 45 12.6	-1.5
	7.8nm,0.2s,SNR=4.0						
EADA				Pg	Pg	11 45 15.5	-4.9
	8.7nm,0.1s,SNR=4.0						
EADA				Sn	Sn	11 45 39.5	-2.9
	101nm,0.2s,SNR=7.9						
EADA				Lg		11 45 47.3	
	159nm,0.3s,SNR=7.9						
EADA	**Adamuz**	2.22	279	Pn	Pn	11 45 12.6	-1.6
	7.8nm,0.2s,SNR=4.0						
EADA	**Adamuz**	2.22	279	Pg	Pg	11 45 15.5	-4.9
	8.7nm,0.1s,SNR=4.0						
EADA				Sn	Sn	11 45 39.5	-2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	101nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	2.48	318	Pg	Pg	11 45 21.2	-4.5
	28nm,0.4s,baz=126,slow=16,SNR=9.7						
ESDC				Lg		11 45 52.5	
	70nm,0.3s,baz=136,slow=30,SNR=6.7						
ESDC	Sonseca Array	2.48	318	Pg	Pg	11 45 21.2	-4.5
	28nm,0.4s,baz=126,SNR=9.7						
EMIJ	Mijas	2.70	242	Pg	Pg	11 45 26.6	-3.5
	4.5nm,0.3s,SNR=4.0						
EMIJ				Lg		11 46 03.7	
	67nm,0.5s,SNR=5.3						
EMIJ	Mijas	2.70	242	Pg	Pg	11 45 26.5	-3.6
	4.5nm,0.3s,SNR=4.0						
EMOS	Mosqueruela	2.71	22	Pn	Pn	11 45 19.5	-1.8
	5.8nm,0.4s,SNR=4.0						
EMOS				Pg	Pg	11 45 26.7	-3.5
	1.8nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	11 45 51.9	-3.0
	18nm,0.5s,SNR=7.9						
EMOS				Lg		11 46 01.9	
	48nm,0.7s,SNR=7.9						
EMOS	Mosqueruela	2.71	22	Pn	Pn	11 45 19.5	-1.7
	SNR=4.0						
EMOS	Mosqueruela	2.71	22	Pg	Pg	11 45 26.7	-3.5
	1.8nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	11 45 51.9	-3.0
	SNR=7.9						
EIBI	Ibiza	2.73	64	Pn	Pn	11 45 18.2	-3.3
	4.1nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	11 45 49.5	-5.9
	13nm,0.3s,SNR=7.9						
EIBI	Ibiza	2.73	64	Pn	Pn	11 45 18.2	-3.3
	4.1nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	11 45 49.5	-5.9
	13nm,0.3s,SNR=7.9						
LIJA	Lijar	3.02	253	*i* P	Pn	11 45 23.0	-2.7
REAL	Reales	3.05	244	*e*P	Pn	11 45 20.0	-6.0
GUD	Guadarrama	3.33	327	Pg	Pg	11 45 37.0	-5.6
	15nm,0.3s,SNR=7.9						
GUD				Sn	Sn	11 46 04.9	-5.7
	11nm,0.2s,SNR=4.0						
GUD				Lg		11 46 19.9	
	41nm,0.3s,SNR=5.2						
ESPR	Espera	3.38	254	Pn	Pn	11 45 30.4	-0.4
ESPR				Pg	Pg	11 45 36.3	-7.3
ESPR				Sn	Sn	11 46 10.4	-1.4
ESPR				Lg		11 46 25.7	
ESPR	Espera	3.38	254	Pn	Pn	11 45 30.4	-0.4
	2.9nm,0.1s,SNR=4.0						
ESPR				Pg	Pg	11 45 36.3	-7.3
	9.9nm,0.2s,SNR=4.0						
ESPR				Sn	Sn	11 46 07.7	-4.1
	10nm,0.2s,SNR=4.0						
ESPR				Lg		11 46 25.7	
	39nm,0.3s,SNR=4.0						
ESPR	Espera	3.38	254	Pg	Pg	11 45 36.3	-7.3
	SNR=4.0						
ERTA	Horta de San J	3.51	27	Pn	Pn	11 45 30.7	-1.9
	6.3nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	11 46 10.8	-4.3
	21nm,0.2s,SNR=7.9						
ERTA				Lg		11 46 24.3	
	23nm,0.3s,SNR=7.9						
ERTA	Horta de San J	3.51	27	Pn	Pn	11 45 30.7	-1.9
	6.3nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	11 46 10.8	-4.3
	21nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.86	270	Pn	Pn	11 45 34.9	-2.6
	4.0nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	11 46 18.1	-5.9
	6.1nm,0.2s,SNR=7.9						
EMIN				Lg		11 46 35.4	
	73nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.86	270	Pn	Pn	11 45 34.9	-2.7
	4.0nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	11 46 18.1	-5.9
	6.1nm,0.2s,SNR=7.9						
ESAC	San Caprasio	4.00	14	Pg	Pg	11 45 48.9	-6.9
	44nm,0.3s,SNR=4.0						
ESAC				Lg		11 46 41.0	
	219nm,0.4s,SNR=7.9						
ESAC	San Caprasio	4.00	14	Pg	Pg	11 45 48.9	-7.0
	SNR=4.0						
ETOS	Mallorca	4.08	61	Pn	Pn	11 45 38.5	-2.2
	1.2nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	11 46 23.3	-6.2
	3.0nm,0.3s,SNR=7.9						
ETOS	Mallorca	4.08	61	Pn	Pn	11 45 38.5	-2.2
	1.2nm,0.1s,SNR=7.9						
ETOS				Sn	Sn	11 46 23.3	-6.2
	3.0nm,0.3s,SNR=7.9						
EPOB	Poblet	4.14	32	Pn	Pn	11 45 39.2	-2.4
	1.7nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	11 46 25.2	-5.9
	9.7nm,0.3s,SNR=7.9						
EPOB				Lg		11 46 43.4	
	6.6nm,0.3s,SNR=4.0						
EPOB	Poblet	4.14	32	Pn	Pn	11 45 39.2	-2.3
	1.7nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	11 46 25.2	-5.9
	9.7nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.20	284	Pn	Pn	11 45 41.6	-0.8
	1.7nm,0.1s,SNR=4.0						
EBAD				Pg	Pg	11 45 53.1	-6.9
	8.7nm,0.2s,SNR=4.0						
EBAD				Sn	Sn	11 46 27.3	-5.3
	63nm,0.2s,SNR=8.4						
EBAD				Lg		11 46 47.4	
	96nm,0.3s,SNR=6.2						
EBAD	Badajoz	4.20	284	Pn	Pn	11 45 41.7	-0.7
EBAD	Badajoz	4.20	284	Pg	Pg	11 45 53.1	-6.9
ERIP	Rio Piedras	4.36	265	Pn	Pn	11 45 41.0	-3.6
	3.7nm,0.1s,SNR=7.9						
ERIP				Sn	Sn	11 46 29.6	-7.0
	8.1nm,0.2s,SNR=7.9						
ERIP				Lg		11 46 53.8	
	13nm,0.3s,SNR=4.0						
PALC	Alcoutim	4.52	267	*e*Pn	Pn	11 45 44.5	-2.5
PALC				*e*Sn	Sn	11 46 34.9	-5.9
PALC				*e*Sg	Sg	11 46 57.4	-9.3
	42nm,0.7s						
PALC	Alcoutim	4.52	267	*e*Pn	Pn	11 45 44.5	-2.5
PALC				*e*Sn	Sn	11 46 34.9	-5.9
PALC				*e*Sg	Sg	11 46 57.4	-9.3
	42nm,0.7s						
PBEJ	Beja	4.80	274	*e*Sn	Sn	11 46 41.1	-6.7
PBEJ				*e*Sg	Sg	11 47 06.0	-10
	8.9nm,0.4s						
	28nm,0.5s						
PBEJ	Beja	4.80	274	*e*Sn	Sn	11 46 41.1	-6.7
	8.9nm,0.4s						
PBEJ				*e*Sg	Sg	11 47 06.0	-10
	28nm,0.5s						
PCBR	Castelo Branco	4.86	296	*e*Sn	Sn	11 46 43.2	-6.0
PCBR				*e*Sg	Sg	11 47 08.5	-9.3
	46nm,0.6s						
PCBR	Castelo Branco	4.86	296	*e*Sn	Sn	11 46 43.2	-6.0
PCBR				*e*Sg	Sg	11 47 08.5	-9.3
	46nm,0.6s						
EBIE	Bielsa	5.05	16	Pn	Pn	11 45 52.2	-2.2
	4.6nm,0.4s,SNR=4.0						
EBIE				Sn	Sn	11 46 47.7	-6.3
	2.7nm,0.3s,SNR=7.9						
EBIE				Lg		11 47 13.4	
	3.6nm,0.4s,SNR=4.0						
EBIE	Bielsa	5.05	16	Pn	Pn	11 45 52.2	-2.2
EBIE				Sn	Sn	11 46 47.8	-6.2
MOE	Montemor	5.21	279	*e*Sn	Sn	11 46 51.4	-6.6
MOE				*e*Sg	Sg	11 47 21.4	-8.0
EALK	Alkurruntz	5.36	2	Pn	Pn	11 45 56.9	-2.0
	32nm,0.8s,SNR=4.0						
PBRG	Braganca	5.48	318	*e*Sg	Sg	11 47 26.6	-12
	27nm,0.6s						
PBRG	Braganca	5.48	318	*e*Sg	Sg	11 47 26.6	-12
	27nm,0.6s						
PVIS	Viseu	5.53	303	*e*Sg	Sg	11 47 28.3	-12
	30nm,0.6s						
PVIS	Viseu	5.53	303	Lg		11 47 28.3	
	15nm,0.6s						
ECAL	Calabor	5.57	319	Lg		11 47 31.5	
	56nm,0.5s,SNR=4.7						
PVRL	Vila Real	5.71	309	*e*Sg	Sg	11 47 33.8	-12
	24nm,0.6s						
PLOU	Loures	5.87	282	*e*Sn	Sn	11 47 07.8	-6.9
PLOU				*e*Sg	Sg	11 47 41.0	-11
	74nm,0.6s						
EARI	Arriondas	6.03	336	Pn	Pn	11 46 04.6	-3.7
	11nm,0.5s,SNR=7.9						
EARI				Lg		11 47 45.7	
	5.1nm,0.4s,SNR=4.0						
EARI	Arriondas	6.03	336	Pn	Pn	11 46 04.6	-3.6

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*BJI **03** 12:18:33.1,2.40S×68.50E,h10^{km},mB5.1,mb4.7,Ms4.6, Msz4.2*

*NEIC **03** 12:18:33.2±0.5,2.43S×68.50E,h10^{km},mb4.9/24,Error ellipse: s-maj=11.3km s-min=10.9km az=217.0*

*HRVD **03** 12:18:33.2±0.5,2.62S×68.55E,h12^{km},MW5.0/60, Centroid moment Tensor Solution. LP body waves: s22,c26;Mantle waves: s60,c108; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.53±.12; $M_{\theta\theta}$3.30±.10; $M_{\phi\phi}$-2.76±.10; $M_{r\theta}$0.60±.34; $M_{\theta\phi}$0.93±.10; $M_{\phi r}$-1.35±.34; Best double couple: $M_0$3.527×10^{16} NP1: ϕ_s39°,δ68°,λ-166°. NP2:ϕ_s304°,δ77°,λ-23°. Principal axes: T 3.482, Plg6°, Azm353°; N .097, Plg64°, Azm95°; P -3.572, Plg25°, Azm260°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 12:18:31.4±0.4,**2.51S**±0.06×**68.50E**±0.07,**h10**^{km},**(h24**^{km}±5.5^{km}**:pP-P),n57,**σ**1**^{s}**11**/60,**mb5.0**/36,**MS4.1**/1,**1D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	6.26	141	*e*Pn	Pn	12 20 04.1	-2.0
	465nm,1.0s						
DGAR				*e*		12 20 11.0	
DGAR				*e*Sn	Sn	12 21 10.2	-8.3
PALK	Pallekele	15.57	51	*e*P	P	12 22 10.4	-2.5
	47nm,0.9s						
PALK				*e*S	S	12 24 46.8	-19
KAD	Karad	20.47	16	*e*P	P	12 23 13.9	+1.8
KAD				*e*		12 23 20.0	
	comp=Z,15nm,1.2s						
POO	Poona	21.56	14	*e*P	P	12 23 23.7	+0.5
POO				*e*		12 23 27.1	
	comp=Z,39nm,0.9s						
HYB	Hyderabad	22.14	26	*e*P	P	12 23 29.0	-0.1
HYB	Hyderabad	22.14	26	*i* P	P	12 23 29.0	-0.1
BHPL	Bhopal	27.03	18	*e*P	P	12 24 16.3	+0.4
BHPL				*e*	pP	12 24 17.2	-1.5
	comp=Z,29nm,0.9s						
KMBO	Kilima Mbogo	31.27	272	*e*P	P	12 24 55.3	+1.3
	comp=Z,9.4nm,1.0s,mb4.6						
KOLN	Koldanda	33.43	25	*e*P	P	12 25 12.5	-0.2
	comp=Z,64nm,1.4s,mb5.4						
DMN	Daman	33.94	27	*e*P	P	12 25 17.5	+0.3
	comp=Z,44nm,1.0s,mb5.4						
PKI	Pulchoki	34.05	27	*e*P	P	12 25 18.0	-0.1
	comp=Z,66nm,1.7s,mb5.3						
GKN	Gorkha	34.07	26	*e*P	P	12 25 18.4	+0.1
	comp=Z,92nm,1.1s,mb5.6						
KKN	Kakani	34.18	27	*e*P	P	12 25 19.4	+0.2
	comp=Z,24nm,0.7s,mb5.2						
JIRN	Jiri	34.49	28	*e*P	P	12 25 22.2	+0.3
	comp=Z,44nm,1.3s,mb5.2						
GUN	Gumba	34.56	28	*e*P	P	12 25 22.8	+0.4
	comp=Z,78nm,1.1s,mb5.5						
LSA	Lhasa	38.67	32	P	P	12 25 58.0	+0.9
LSZ	Lusaka	41.71	250	*e*P	P	12 26 22.9	+0.5
	comp=Z,7.5nm,0.9s,mb4.3						
KZA	Kyzart	44.80	7	P	P	12 26 48.4	+1.2
	SNR=24						
UCH	Uchtor	44.86	6	P	P	12 26 48.9	+1.1
	SNR=7.8						
EKS2	Erkin-Say	45.21	5	P	P	12 26 51.7	+1.1
	SNR=18						
AAK	Ala-Archa	45.26	6	P	P	12 26 51.8	+0.8
	SNR=5.5						
AAK	Ala-Archa	45.26	6	*e*P	P	12 26 50.3	-0.6
	comp=Z,11nm,1.1s,mb4.6						
EIL	Elat	45.31	317	P	P	12 26 51.4	-0.1
	comp=Z,7.5nm,1.2s,mb4.4						
KBK	Karagaybulak	45.33	7	P	P	12 26 52.6	+1.1
	SNR=17						
TKM2	Tokmak 2	45.67	7	P	P	12 26 54.6	+0.5
	SNR=20						
USP	Ospenovka	45.88	6	P	P	12 26 55.9	0.0
	SNR=7.1						
GYA	Guiyang	46.77	49	*e*P	P	12 27 01.3	-1.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
LBTB	Lobatse	46.98	238	*e*P	P	12 27 04.5	-0.3
	comp=Z,25nm,1.6s,mb4.9						
GNI	Garni	47.70	335	*e*P	P	12 27 09.0	-1.3
	comp=Z,18nm,1.0s,mb5.0						
BOSA	Boshof	48.66	233	*e*P	P	12 27 17.6	-0.3
	comp=Z,14nm,1.2s,mb4.9						
MALT	Malatya	49.21	329	*e*P	P	12 27 23.1	+1.1
	comp=Z,7.5nm,1.0s,mb4.7						
WMQ	Urumqi	49.23	18	*e*P	P	12 27 22.0	-0.1
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.9						
LZH	Lanzhou	50.61	37	*e*P	P	12 27 32.0	-0.7
LZH				AP	pP	12 27 42.0	+6.2
LZH				AMB	AMB		
	comp=Z,28nm,1.4s,mb5.0						
LZH	Lanzhou	50.61	37	*e*P	P	12 27 32.0	-0.7
	comp=Z,28nm,1.4s,mb5.0						
LZH				pP	pP	12 27 42.0	+6.2
LZH				sP	sP	12 27 49.5	+13
GTA	Gaotai	50.67	31	*e*P	P	12 27 32.5	-0.6
GTA				AP	pP	12 27 38.4	+2.2
GTA				XP	sP	12 27 41.3	+3.9
GTA				PP	PP	12 29 32.2	+2.1
GTA				S	S	12 34 52.4	+5.7
GTA				XS		12 35 02.3	
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
GTA				AMB	AMB		
	comp=Z,64nm,3.8s						
GTA				LR	LR		
	comp=N,143nm,19.0s,MS4.2						
GTA				LR	LR		
	comp=E,144nm,18.3s,MS4.2						
GTA				LR	LR		
	comp=Z,149nm,16.0s,MS4.1						
KIV	Kislovodsk	51.72	336	P	P	12 27 40.6	-0.5
	comp=Z,32nm,1.8s,mb5.0						
XAN	Xi’an	52.60	43	P	P	12 27 46.2	-1.6
XAN				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
MBWA	Marble Bar	53.16	115	P	P	12 27 55.3	+3.1
	comp=Z,34nm,1.5s,mb5.0						
KURK	Kurchatov	53.72	8	*e*P	P	12 27 54.1	-1.8
	comp=Z,16nm,1.1s,mb4.8						
GVD	Gavdhos	55.79	316	*e*P	P	12 28 07.9	-3.2
	comp=Z,215nm,1.3s,mb6.0						
CHKZ	Chkalovo	56.01	2	*e*P	P	12 28 11.0	-1.5
	comp=Z,4.6nm,0.8s,mb4.6						
HHC	Hu-ho-hao-te	58.30	38	*e*P	P	12 28 28.3	-0.6
HHC				AP	pP	12 28 36.3	+4.3
HHC				XP	sP	12 28 42.2	+9.1
HHC				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.7						
HHC				AMB	AMB		
	comp=Z,108nm,4.3s						
ULN	Ulaanbaatar	60.40	29	*e*P	P	12 28 42.3	-1.0
	comp=Z,7.9nm,1.1s,mb4.7						
TLY	Talaya	61.66	24	*e*P	P	12 28 51.7	-0.1
	comp=Z,13nm,1.1s,mb5.0						
WRAB	Tennant Creek	66.46	111	*e*P	P	12 29 24.2	+0.5
	comp=Z,6.7nm,0.7s,mb4.8						
WB2	Warramunga Arr	66.47	111	*e*P	P	12 29 25.1	+1.4
SUW	Suwalki	67.70	333	P	P	12 29 27.3	-3.7
	comp=Z,42nm,1.4s,mb5.3						
MORC	Moravsky Berou	67.98	327	P	P	12 29 31.5	-1.4
	comp=Z,6.2nm,1.2s,mb4.5						
SYO	Syowa Base	69.17	191	⇓P	P	12 29 38.4	-1.4
CLL	Collm	71.25	327	P	P	12 29 52.0	-0.8
STKA	Stephens Creek	74.33	122	P	P	12 30 15.4	+4.1
CTAO	Charters Tower	77.64	110	*e*P	P	12 30 32.9	+2.7
	comp=Z,12nm,1.2s,mb4.7						
PMG	Port Moresby	78.41	99	*e*P	P	12 30 35.9	+1.3
	comp=Z,23nm,1.0s,mb5.1						
TAU	Tasmania Unive	80.11	133	*e*P	P	12 30 44.5	+1.3
	comp=Z,129nm,1.5s,mb5.6						
YSS	Yuzh-Sakhalins	81.14	42	*e*P	P	12 30 50.0	+1.4
	comp=Z,57nm,1.5s,mb5.3						
QSPA	South Pole Qui	87.49	180	P	P	12 31 29.8	+10
	comp=Z,1.7nm,0.4s,mb4.6						
MA2	Magadan	88.22	30	P	P	12 31 23.2	-0.7

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*MAN **03** 13:04:00.3,5.69N×126.54E,h33^{km},mb4.8,ML3.7,MS3.7*

ISC 03 13:04:02.3±0.7,**5.87N**±0.07×**126.40E**±0.09,**h110**^{km}±9^{km},**n26,**σ**0**^{s}**90**/31,**mb4.7**/10,**1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.07	352	*e*P	P	13 04 23.2	-1.4
MATI				*e*S	S	13 04 40.8	-0.5
KCP	Kidapawan	1.73	311	⇓*e*P	P	13 04 31.2	-1.0
KCP				*i* S	S	13 04 54.2	-0.6
BIPH	Bislig	2.29	359	*e*P	P	13 04 39.0	-0.7
BIPH				*i* S	S	13 05 07.5	-0.3
BUKP	Musuan	2.40	326	*e*P	P	13 04 41.1	0.0
BUKP				*e*S	S	13 05 12.9	+2.7
BUTP	Butuan	3.17	346	*e*P	P	13 04 52.3	+0.7
BUTP				*e*S	S	13 05 34.6	+5.8
SCPH	Surigao	3.99	347	⇓*e*P	P	13 05 03.4	+0.8
ZMPH	Zamboanga City	4.44	284	⇓*i*P	P	13 05 10.2	+1.4
MSLP	Maasin	4.50	340	*e*P	P	13 05 09.7	+0.2
BESP	Borongan	5.77	351	*e*P	P	13 05 28.8	+2.0
KAKA	Kakadu	19.41	162	*e*P	P	13 08 21.5	-0.8
	8.8nm,0.5s						
FITZ	Fitzroy Crossi	23.84	182	*e*P	P	13 09 07.3	+1.0
	3.1nm,0.4s,mb4.0						
WB2	Warramunga Arr	26.82	163	*e*P	P	13 09 34.9	+0.6
ASPA	Alice Springs	30.26	166	*e*P	P	13 10 05.3	+0.1
CTA	Charters Tower	32.35	143	*e*P	P	13 10 24.0	+0.5
	2.2nm,0.6s,mb4.1						
FORT	Forrest	36.48	178	⇑*i*P	P	13 10 58.5	0.0
	27nm,0.4s,mb5.5						
KLBR	Kellerberrin	38.16	192	*e*P	P	13 11 11.9	-0.7
	25nm,0.3s,mb5.5						
MUN	Mundaring	38.88	194	*e*P	P	13 11 18.5	0.0
	3.7nm,0.7s,mb4.3						
STKA	Stephens Creek	40.24	160	*e*P	P	13 11 30.3	+0.5
	7.9nm,0.6s,mb4.7						
JIRN	Jiri	43.88	304	*e*P	P	13 11 58.6	-1.0
	8.7nm,0.8s,mb4.6						
JIRN	Jiri	43.88	304	*e*P	P	13 11 58.9	-0.7
	8.7nm,0.8s,mb4.6						
GUN	Gumba	44.23	304	*e*P	P	13 12 01.7	-0.7
	16nm,0.7s,mb4.8						
GUN	Gumba	44.23	304	*e*P	P	13 12 02.2	-0.2
	16nm,0.7s,mb4.8						
KKN	Kakani	44.68	304	*e*P	P	13 12 05.3	-0.7
	3.6nm,0.5s,mb4.3						
KKN	Kakani	44.68	304	*e*P	P	13 12 05.4	-0.6
KOLN	Koldanda	46.06	303	*e*P	P	13 12 15.7	-1.3
	5.8nm,0.4s,mb4.7						
KOLN	Koldanda	46.06	303	*e*P	P	13 12 16.1	-0.9
	5.8nm,0.4s,mb4.7						

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*NEIC **03** 13:58:35.4,37.45S×176.61E,h216^{km},mb4.5/1,After WEL.*

*WEL **03** 13:58:36.0±0.3,37.47S×176.60E,h211^{km}±2^{km},ML4.9/17, Error ellipse: s-maj=2.0km s-min=1.8km az=90.0*

ISC 03 13:58:32.1±0.8,**37.54S**±0.05×**176.57E**±0.08,**h249**^{km}±6^{km},**n148,**σ**1**^{s}**04**/158,**mb4.3**/1,**12C-5D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.31	233	P	P	13 59 03.8	-0.9
TGRZ				S	S	13 59 26.1	-3.9
TGRZ	Tauranga	0.31	233	⇓PN	P	13 59 03.8	-0.9
TGRZ				SN	S	13 59 26.1	-3.9
MYRZ	Mayor Island	0.37	315	PN	P	13 59 03.9	-1.0
MARZ	Manawahe	0.45	169	P	P	13 59 04.1	-0.9
MARZ	Manawahe	0.45	169	PN	P	13 59 04.1	-0.9
LIRZ	Lichensteins R	0.48	198	P	P	13 59 04.6	-0.5
LIRZ	Lichensteins R	0.48	198	PN	P	13 59 04.6	-0.5
WIZ	White Island	0.49	88	P	P	13 59 04.4	-0.7
WIZ	White Island	0.49	88	PN	P	13 59 04.1	-1.1
EDRZ	Edgecumbe	0.58	167	P	P	13 59 05.6	+0.2
EDRZ	Edgecumbe	0.58	167	PN	P	13 59 05.4	0.0
TAZ	Tarawera	0.69	184	PN	P	13 59 06.0	+0.2
URZ	Urewera	0.83	149	P	P	13 59 05.8	-0.6
URZ	Urewera	0.83	149	⇑PN	P	13 59 05.8	-0.6
URZ				SN	S	13 59 28.5	-4.6
TOZ	Tahuroa Road	0.87	257	P	P	13 59 06.3	-0.2
TOZ				S	S	13 59 29.4	-4.0
TOZ	Tahuroa Road	0.87	257	⇑PN	P	13 59 06.2	-0.3
TOZ				SN	S	13 59 29.5	-3.9
PATZ	Paeroa	0.87	196	P	P	13 59 06.9	+0.3
PATZ	Paeroa	0.87	196	PN	P	13 59 06.8	+0.2
KUZ	Kuaotunu	1.04	319	P	P	13 59 06.4	-1.1
KUZ	Kuaotunu	1.04	319	PN	P	13 59 06.4	-1.1
MWZ	Matawai	1.09	136	P	P	13 59 07.7	-0.1
MWZ	Matawai	1.09	136	⇑PN	P	13 59 07.5	-0.3
MKAZ	Moumakai	1.20	291	P	P	13 59 08.0	-0.5
MKAZ	Moumakai	1.20	291	⇓PN	P	13 59 08.0	-0.4
WATZ	Wairara	1.34	209	P	P	13 59 10.5	+1.0
WATZ	Wairara	1.34	209	PN	P	13 59 10.3	+0.8
MXZ	Matakaoa Point	1.38	91	P	P	13 59 09.9	+0.1
MXZ	Matakaoa Point	1.38	91	PN	P	13 59 09.8	0.0
HATZ	Hinemaiaia	1.40	195	P	P	13 59 10.3	+0.4
HATZ	Hinemaiaia	1.40	195	PN	P	13 59 10.4	+0.5
PUZ	Puketiti	1.44	112	P	P	13 59 10.4	+0.2
PUZ				S	S	13 59 36.2	-3.6
PUZ	Puketiti	1.44	112	PN	P	13 59 10.4	+0.2
PUZ				SN	S	13 59 36.1	-3.6
OTAZ	Otara	1.44	294	P	P	13 59 10.0	-0.2
OTAZ	Otara	1.44	294	PN	P	13 59 10.0	-0.2
RATZ	Rangitukua	1.46	205	P	P	13 59 11.4	+1.0
RATZ	Rangitukua	1.46	205	PN	P	13 59 11.2	+0.8
MTAZ	Motutapu	1.52	299	⇓PN	P	13 59 10.6	-0.2
RITZ	Rihia Road	1.54	201	P	P	13 59 12.1	+1.2
RITZ	Rihia Road	1.54	201	PN	P	13 59 12.1	+1.2
KATZ	Kakaramea	1.59	205	P	P	13 59 12.3	+1.0
KATZ	Kakaramea	1.59	205	PN	P	13 59 12.3	+1.0
BKZ	Black Stump Fm	1.62	182	P	P	13 59 12.0	+0.4
BKZ	Black Stump Fm	1.62	182	⇑PN	P	13 59 12.0	+0.3
KAAZ	Kauri Point	1.65	295	P	P	13 59 11.7	-0.2
KAAZ	Kauri Point	1.65	295	PN	P	13 59 11.6	-0.2
HIZ	Hauiti	1.66	234	P	P	13 59 12.7	+0.8
HIZ	Hauiti	1.66	234	PN	P	13 59 12.7	+0.8
HIZ				SN	S	13 59 41.8	-1.0
MGZ	Maungaku	1.67	209	P	P	13 59 13.1	+1.1
MGZ	Maungaku	1.67	209	⇑PN	P	13 59 13.1	+1.1
WTAZ	Waiatarua	1.70	290	P	P	13 59 12.2	-0.1
WTAZ	Waiatarua	1.70	290	PN	P	13 59 12.2	-0.1
KNZ	Kokohu	1.71	150	P	P	13 59 13.4	+1.1
KNZ				S	S	13 59 42.3	-1.2
KNZ	Kokohu	1.71	150	⇑PN	P	13 59 13.4	+1.1
KNZ				SN	S	13 59 41.6	-1.9
WTVZ	West Tongariro	1.75	206	P	P	13 59 13.5	+0.9
WTVZ	West Tongariro	1.75	206	PN	P	13 59 13.5	+0.9
TWVZ	Taurewa	1.77	210	P	P	13 59 13.7	+0.9
TWVZ	Taurewa	1.77	210	PN	P	13 59 13.8	+1.0
OTVZ	Oturere	1.77	203	PN	P	13 59 13.9	+1.1
NGZ	Ngauruhoe	1.80	205	P	P	13 59 14.3	+1.3
NGZ	Ngauruhoe	1.80	205	PN	P	13 59 14.2	+1.2
CNZ	Chateau	1.84	206	P	P	13 59 14.4	+1.0
CNZ	Chateau	1.84	206	PN	P	13 59 14.4	+1.0
WPVZ	Whakapapa	1.84	206	P	P	13 59 14.4	+1.0
WPVZ	Whakapapa	1.84	206	PN	P	13 59 14.4	+1.0
TUVZ	Tukino	1.87	202	P	P	13 59 14.6	+1.0
TUVZ	Tukino	1.87	202	PN	P	13 59 14.6	+1.0
TUVZ				SN	S	13 59 43.9	-1.8
FWVZ	Far West T-bar	1.89	205	P	P	13 59 15.1	+1.3
FWVZ	Far West T-bar	1.89	205	PN	P	13 59 15.1	+1.3
DRZ	Dome Shelter	1.90	204	P	P	13 59 15.4	+1.5
DRZ	Dome Shelter	1.90	204	*e*PN	P	13 59 14.8	+0.9
WNVZ	Wahianoa	1.94	203	P	P	13 59 13.2	-1.0
MOVZ	Moawhango	1.97	199	P	P	13 59 15.0	+0.5
MOVZ	Moawhango	1.97	199	PN	P	13 59 14.9	+0.5
WCZ	Waipu Caves	2.40	311	P	P	13 59 18.7	0.0
WCZ	Waipu Caves	2.40	311	⇓PN	P	13 59 18.7	0.0
RAEZ	Rainy Point	2.44	224	P	P	13 59 21.6	+2.5
RAEZ	Rainy Point	2.44	224	PN	P	13 59 21.6	+2.5
PWZ	Pawanui	2.49	175	P	P	13 59 20.6	+1.0
PWZ	Pawanui	2.49	175	PN	P	13 59 20.5	+0.9
WAZ	Wanganui	2.53	209	P	P	13 59 21.1	+1.1
WAZ	Wanganui	2.53	209	PN	P	13 59 21.0	+1.0
TSZ	Takapari Road	2.56	191	P	P	13 59 20.9	+0.6
TSZ	Takapari Road	2.56	191	PN	P	13 59 20.9	+0.6
NEZ	North Egmont	2.60	228	P	P	13 59 23.1	+2.4
NEZ	North Egmont	2.60	228	PN	P	13 59 23.1	+2.4
PKE	Pukeiti	2.61	230	P	P	13 59 23.1	+2.2
PKE	Pukeiti	2.61	230	PN	P	13 59 22.9	+2.1

DFE	Dawson Falls	2.63	227	PN	P	13 59 24.1	+3.1
NWEZ	Newall Road	2.74	230	P	P	13 59 24.6	+2.5
NWEZ	Newall Road	2.74	230	PN	P	13 59 24.5	+2.3
BFZ	Birch Farm	3.14	184	P	P	13 59 27.1	+0.5
BFZ	Birch Farm	3.14	184	⇑PN	P	13 59 27.1	+0.5
MRZ	Mangatainoka R	3.21	194	P	P	13 59 27.5	+0.2
MRZ	Mangatainoka R	3.21	194	⇑PN	P	13 59 27.5	+0.2
OUZ	Omahuta	3.33	313	P	P	13 59 29.1	+0.4
OUZ	Omahuta	3.33	313	⇓PN	P	13 59 29.1	+0.4
KIW	Kapiti Island	3.56	201	P	P	13 59 31.2	0.0
KIW	Kapiti Island	3.56	201	PN	P	13 59 31.1	-0.1
MTW	Mount Morrison	3.70	193	P	P	13 59 32.7	-0.2
MTW	Mount Morrison	3.70	193	⇑PN	P	13 59 32.6	-0.3
CAW	Cannon Point	3.75	198	P	P	13 59 33.4	0.0
CAW	Cannon Point	3.75	198	PN	P	13 59 33.2	-0.2
PAWZ	Paruwai Farm	3.93	193	PN	P	13 59 35.2	-0.4
MRW	Makara Radio	3.96	201	P	P	13 59 35.9	0.0
MRW	Makara Radio	3.96	201	PN	P	13 59 35.9	0.0
WEL	Wellington	3.99	200	PN	P	13 59 36.4	+0.2
MSWZ	Moikau Station	4.00	194	P	P	13 59 36.2	-0.2
MSWZ	Moikau Station	4.00	194	PN	P	13 59 35.9	-0.5
BHW	Baring Head	4.08	198	P	P	13 59 36.9	-0.4
BHW	Baring Head	4.08	198	PN	P	13 59 36.8	-0.5
TUWZ	Tuamarina	4.38	207	PN	P	13 59 40.5	-0.5
NNZ	Nelson	4.42	213	*e*P	P	13 59 40.9	-0.5
NNZ	Nelson	4.42	213	PN	P	13 59 40.3	-1.2
QRZ	Quartz Range	4.54	222	P	P	13 59 42.6	-0.2
QRZ	Quartz Range	4.54	222	PN	P	13 59 42.0	-0.8
BSWZ	Blackbirch Sta	4.66	206	P	P	13 59 44.0	-0.2
BSWZ	Blackbirch Sta	4.66	206	PN	P	13 59 43.9	-0.3
THZ	Tophouse	5.08	213	P	P	13 59 49.2	-0.1
THZ	Tophouse	5.08	213	PN	P	13 59 48.4	-0.9
KHZ	Kahutara	5.39	205	PN	P	13 59 52.9	-0.4
DSZ	Denniston Nort	5.58	220	*e*P	P	13 59 54.8	-0.8
DSZ	Denniston Nort	5.58	220	PN	P	13 59 54.4	-1.2
LTZ	Lake Taylor	6.18	211	*e*P	P	14 00 02.2	-0.9
LTZ	Lake Taylor	6.18	211	*e*PN	P	14 00 02.0	-1.1
CRLZ	Canterbury Las	6.73	205	*e*P	P	14 00 09.2	-0.9
CRLZ	Canterbury Las	6.73	205	*e*PN	P	14 00 08.6	-1.4
MQZ	McQueen's Vall	6.84	205	*e*P	P	14 00 10.1	-1.3
MQZ	McQueen's Vall	6.84	205	PN	P	14 00 10.0	-1.4
WVZ	Waitaha Valley	7.10	217	*e*P	P	14 00 14.4	-0.3
WVZ	Waitaha Valley	7.10	217	*e*PN	P	14 00 14.0	-0.7
RPZ	Rata Peaks	7.46	212	*e*P	P	14 00 18.3	-0.9
RPZ	Rata Peaks	7.46	212	*e*PN	P	14 00 18.0	-1.3
FOZ	Fox Glacier	7.97	219	*e*PN	P	14 00 23.9	-1.9
LBZ	Lake Benmore	8.37	213	*e*P	P	14 00 30.3	-0.5
LBZ	Lake Benmore	8.37	213	*e*PN	P	14 00 30.0	-0.8
ODZ	Otahua Downs	8.72	209	*e*P	P	14 00 35.4	+0.1
ODZ	Otahua Downs	8.72	209	*e*PN	P	14 00 34.7	-0.6
JCZ	Jackson Bay	8.81	220	*e*P	P	14 00 34.7	-1.7
JCZ	Jackson Bay	8.81	220	*e*PN	P	14 00 33.9	-2.5
WKZ	Wanaka	9.23	216	*e*P	P	14 00 40.5	-1.3
WKZ	Wanaka	9.23	216	*e*PN	P	14 00 40.1	-1.8
EAZ	Earnscleugh	9.42	213	*e*P	P	14 00 43.6	-0.5
TUZ	Tuapeka	9.87	209	*e*P	P	14 00 50.6	+0.8
MLZ	Mavora Lakes	10.02	216	*e*P	P	14 00 53.2	+1.5
QSPA	South Pole Qui	52.58	180	P	P	14 07 30.0	+8.5
	6.7nm,0.5s,mb4.3						
SYO	Syowa Base	69.11	195	⇑pP	pP	14 10 05.9	-4.4
VNA3	Neumayer Olymp	71.43	178	⇑*i*	P	14 09 34.3	+8.0
VNA2	Neumayer--Watz	71.80	179	⇑*i*	P	14 09 36.8	+8.2

PNSN ***03*** *14:08:04.2, 48.08N×122.58W, h32^{km}, MD3.1, Fault plane solution: NP1:ϕ_s45°, δ85°, NP2:ϕ_s313°, δ70°, Principal axes: T Plg18°, Azm271°; P Plg10°, Azm177°;*

NEIC ***03*** *14:08:04.2, 48.08N×122.58W, h32^{km}, MD3.1(SEA), ML3.1(PGC), After SEA.*

NEIC Felt [III] at Camano Island, Edmonds, Everett, Freeland, Langley, Marysville, Monroe, Mukilteo, Snohomish and Stanwood; [II] at Arlington, Bothell, Clinton, Coupeville, Greenbank, Kingston, Oak Harbor, Port Ludlow, Port Townsend and Seattle. Also felt at Victoria, British Columbia.

PGC ***03*** *14:08:04.2, 48.07N×122.59W, h29^{km}±4^{km}, ML3.1/28, MD3.1(SEA)*

PGC Whidbey Island, Washington. Near Everett, Washington. Felt (I) at Victoria, British Columbia.

ISC 03 14:08:03.9±0.2**, 48.09N**±0.01×**122.56W**±0.02**, h25**^{km}±2^{km}**, n130, σ0^{s}84**/153**, 11C-42D, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BEVT	Boeing Everett	0.26	131	⇑P	Pb	14 08 10.9	+0.7
BLN	Blyn Mountain	0.29	254	⇑P	Pb	14 08 10.7	0.0
SQM	Sequim	0.33	267	⇑P	Pb	14 08 11.6	+0.3
KINR	Kitsap County	0.34	190	⇓P	Pb	14 08 11.0	-0.5
ATES	Arlington Traf	0.36	66	⇑P	Pb	14 08 12.1	+0.3
ERW	Mount Erie	0.37	353	⇓P	Pb	14 08 12.1	+0.2
ERW	Mount Erie	0.37	353	⇓P	Pb	14 08 12.0	+0.2
BRKS	Brookside Elem	0.38	152	⇓P	Pb	14 08 12.7	+0.6
KITP	Kitsap County	0.42	187	⇓P	Pb	14 08 13.2	+0.5
FINN	Finn Hill Juni	0.43	149	⇓P	Pb	14 08 13.7	+0.8
JCW	Jim Creek	0.43	76	⇑P	Pb	14 08 13.2	+0.3
LEOT	Leota Junior H	0.44	137	P	Pb	14 08 13.5	+0.5
CMW	Cultus Mountai	0.44	41	⇓P	Pb	14 08 13.6	+0.4
LAWT	Lawton Element	0.45	165	⇓P	Pb	14 08 13.9	+0.8
NOWS	NOAA--Sand Poi	0.45	153	⇓P	Pb	14 08 14.1	+0.8
SEA	Seattle	0.47	159	⇓P	Pb	14 08 14.3	+0.8
QAW	Queen Anne	0.48	163	⇓P	Pb	14 08 14.6	+0.9
BABE	Bainbridge Sch	0.48	178	P	Pb	14 08 14.5	+0.8
MBPA	Monroe Substat	0.49	113	P	Pb	14 08 13.8	-0.1
EARN	East Ridge Ele	0.49	135	P	Pb	14 08 14.2	+0.3
HOLY	Holy Rosary Sc	0.54	167	P	Pb	14 08 15.3	+0.7
KIMB	Kimball Elemen	0.54	161	⇓P	Pb	14 08 15.6	+0.8
WISC	Wilburton Inst	0.55	152	⇓P	Pb	14 08 15.5	+0.7
GNW	Green Mountain	0.56	199	⇓P	Pb	14 08 14.2	-0.7
GNW	Green Mountain	0.56	199	⇓P	Pb	14 08 14.2	-0.7
GMW	Gold Mountain	0.56	196	⇓P	Pb	14 08 14.4	-0.6
HTW	Haystack Looko	0.60	118	⇓P	Pb	14 08 15.4	-0.3
KIMR	Kitsap County	0.60	194	P	Pb	14 08 15.2	-0.5
RHAZ	Hazelwood Elem	0.60	155	P	Pb	14 08 15.7	-0.1
VGZ	Gonzales	0.61	303	P	Pb	14 08 14.8	-1.0
VGZ				S	Sb	14 08 23.2	-0.7
VGZ				Trac		14 08 24.2	
	comp=Z,996nm,0.1s						
PNLK	Pine Lake Midd	0.62	145	⇓P	Pb	14 08 16.1	+0.1
SBES	Silver Beach E	0.69	8	⇓P	Pb	14 08 17.4	+0.4
TTW	Tolt Reservoir	0.71	124	P	Pb	14 08 17.0	-0.4
TTW				S	Sb	14 08 26.5	-0.3
STW	Striped Peak	0.75	275	⇑P	Pb	14 08 17.3	-0.9
ELW	Echo Lake	0.76	142	⇓P	Pb	14 08 17.7	-0.6
RPW	Rockport	0.78	62	⇑P	Pb	14 08 18.8	+0.1
SNB	Saturna Island	0.80	329	⇓P	Pb	14 08 18.8	-0.2
SNB	Saturna Island	0.80	329	P	Pb	14 08 18.8	-0.2
SNB				⇓P		14 08 18.8	
SNB				S	Sb	14 08 29.4	0.0
SNB				Trac		14 08 30.2	
	comp=Z,582nm,0.2s						
PGC	Sidney	0.82	314	*e*P	Pb	14 08 18.4	-0.9
PGC				*e*S	Sb	14 08 28.5	-1.5
PGC	Sidney	0.82	314	P	Pb	14 08 18.4	-0.9
PGC				S	Sb	14 08 29.3	-0.7
PGC				Trac		14 08 29.7	
	comp=Z,451nm,0.1s						
MEW	McNeil Island	0.89	184	⇓P	Pb	14 08 20.4	-0.2
VDB	Vedder Mountai	0.98	18	⇓P	Pb	14 08 21.9	-0.3
VDB	Vedder Mountai	0.98	18	⇓P	Pb	14 08 21.8	-0.3
VDB				S	Sb	14 08 34.6	-0.1
VDB				Trac		14 08 35.9	
	comp=Z,118nm,0.1s						
LZB	Mount Lazard	0.99	302	P	Pb	14 08 20.8	-1.5
LZB				S	Sb	14 08 33.3	-1.7
LZB				Trac		14 08 34.6	
	comp=Z,93nm,0.1s						
OBC	Olympics--Boni	1.02	267	P	Pn	14 08 22.0	-0.8
GSM	Grass Mountain	1.03	150	⇑P	Pn	14 08 21.8	-1.0
GHW	Garrison Hill	1.07	169	⇓P	Pn	14 08 22.2	-1.2
GOBB	Galiano Island	1.07	324	⇓P	Pn	14 08 22.7	-0.7
GOBB				S	Sb	14 08 36.8	-0.3
GOBB				Trac		14 08 37.7	
	comp=Z,323nm,0.1s						
PCFR	Pierce County	1.10	176	⇓P	Pn	14 08 23.1	-0.9
OSR	Olympics--Salm	1.11	239	P	Pn	14 08 24.7	+0.6
OCWA	Octopus Mounta	1.14	253	*e*P	Pn	14 08 24.8	+0.3
OCWA				*e*S	Sb	14 08 41.9	+2.6
OCWA	Octopus Mounta	1.14	253	⇑P	Pn	14 08 25.0	+0.5
WRW	Wenatchee Ridg	1.15	101	⇑P	Pn	14 08 24.3	-0.3
CPW	Capitol Peak	1.18	200	⇓P	Pn	14 08 24.3	-0.8
HNB	Haney	1.19	359	⇓P	Pn	14 08 24.6	-0.5
HNB				S	Sb	14 08 39.9	-0.6
HNB				Trac		14 08 40.1	
	comp=Z,730nm,0.2s						
OTR	Olympics--Tyee	1.20	270	P	Pn	14 08 25.1	-0.2
FMW	Mount Fremont	1.30	152	⇓P	Pn	14 08 26.2	-0.6
RRHS	Rochester High	1.33	194	P	Pn	14 08 26.9	-0.3
RCS	Mount Rainier-	1.34	155	⇓P	Pn	14 08 27.1	-0.3
PFB	Port Renfrew	1.35	292	P	Pn	14 08 26.1	-1.3
PFB				P		14 08 26.1	
PFB				S	Sn	14 08 43.3	-1.3
PFB				Trac		14 08 46.0	
	comp=Z,102nm,0.1s						
REMR	Mount Rainier-	1.36	159	P	Pn	14 08 27.1	-0.5
RCM	Mount Rainier-	1.38	156	⇓P	Pn	14 08 27.6	-0.2
SLFW	Sugar Loaf	1.40	103	P	Pn	14 08 28.5	+0.3
BIB	Bowen Island	1.41	340	P	Pn	14 08 28.0	-0.2
BIB				S	Sn	14 08 46.1	0.0
BIB				Trac		14 08 46.8	
	comp=Z,338nm,0.2s						
LCW	Lucas Creek	1.42	184	P	Pn	14 08 27.9	-0.6
LON	Longmire	1.43	159	⇓P	Pn	14 08 28.0	-0.6
LMW	Ladd Mountain	1.44	173	⇓P	Pn	14 08 28.3	-0.3
ON2	Olympics--Nort	1.47	215	P	Pn	14 08 29.6	+0.5
NLLB	Nanaimo Lost L	1.48	321	P	Pn	14 08 28.6	-0.7
NLLB				S	Sn	14 08 47.2	-0.9
NLLB				Trac		14 08 52.9	
	comp=Z,171nm,0.2s						
TWW	Teanaway	1.49	129	⇓P	Pn	14 08 30.4	+1.0
HOPB	Hope	1.50	30	P	Pn	14 08 29.8	+0.2
HOPB				S	Sn	14 08 49.8	+1.3
HOPB				Trac		14 08 51.9	
	comp=Z,208nm,0.3s						
WPW	White Pass	1.55	153	⇑P	Pn	14 08 30.5	+0.1
ETW	Entiat	1.58	107	⇓P	Pn	14 08 31.3	+0.6
TBM	Table Mountain	1.61	124	⇓P	Pn	14 08 32.2	+1.0
WPB	Watts Point	1.63	345	P	Pn	14 08 31.0	-0.4
WPB				S	Sn	14 08 51.5	-0.2
WPB				Trac		14 08 52.0	
	comp=Z,188nm,0.2s						
KOSW	Kosmos	1.65	171	P	Pn	14 08 31.8	+0.1
BMW	Boistfort Moun	1.68	196	⇓P	Pn	14 08 32.1	-0.1
MGB	Mount Grey	1.69	303	P	Pn	14 08 31.6	-0.6
MGB				S	Sn	14 08 53.5	+0.3
MGB				Trac		14 08 58.1	
	comp=Z,130nm,0.2s						
CBSW	Chelan Butte S	1.71	99	P	Pn	14 08 32.8	+0.2
SHB	Sechelt	1.74	330	⇓P	Pn	14 08 32.9	-0.1
SHB				S	Sn	14 08 55.0	+0.3
SHB				Trac		14 08 55.8	
	comp=Z,475nm,0.3s						
ERK	Elk Rock	1.79	175	⇓P	Pn	14 08 33.6	-0.1
EBG	Ellensburg	1.79	130	P	Pn	14 08 34.7	+1.0
NAC	Naches	1.79	138	P	Pn	14 08 34.9	+1.0
WTV	Waterville	1.79	102	⇑P	Pn	14 08 34.0	+0.2
STD	Studebaker Rid	1.87	173	P	Pn	14 08 35.3	+0.5
SOSW	Source of Smit	1.87	171	P	Pn	14 08 35.2	+0.3
DHW2	Dyer Hill 2	1.87	92	P	Pn	14 08 35.1	+0.2
ALB	Alberni	1.92	309	P	Pn	14 08 35.1	-0.4
ALB				S	Sn	14 09 01.6	+2.6
ALB				Trac		14 09 03.6	
	comp=Z,71nm,0.2s						
RVW	Rose Valley	1.95	184	P	Pn	14 08 36.1	+0.2
JLK	June Lake	1.96	172	P	Pn	14 08 36.9	+0.7
CDFW	Cedar Flats	2.01	170	P	Pn	14 08 37.6	+0.8
LVP	Lakeview Peak	2.03	177	⇓P	Pn	14 08 37.7	+0.6
TXB	Texada	2.03	323	P	Pn	14 08 37.2	0.0
TXB				S	Sn	14 09 02.4	+0.4
TXB				Trac		14 09 04.6	
	comp=Z,152nm,0.3s						
ASR	Mount Adams--S	2.05	161	P	Pn	14 08 38.2	+0.8
WSLR	Whistler	2.05	353	P	Pn	14 08 37.8	+0.3
WSLR				S	Sn	14 09 04.2	+1.7
WSLR				Trac		14 09 05.3	
	comp=Z,100nm,0.2s						
NLO	Nicolai Mounta	2.09	197	P	Pn	14 08 38.8	+0.7
EPH	Ephrata	2.13	109	P	Pn	14 08 38.1	-0.5
OZB	Mount Ozzard	2.14	295	P	Pn	14 08 38.8	+0.1
OZB				S	Sn	14 09 07.3	+2.6
OZB				Trac		14 09 11.1	
	comp=Z,125nm,0.3s						
MXC	Moxie City	2.16	134	P	Pn	14 08 39.3	+0.3
SAW	Saint Andrews	2.16	99	P	Pn	14 08 38.5	-0.6
BVW	Beverly	2.22	124	P	Pn	14 08 40.0	+0.1
PNT	Penticton	2.30	57	P	Pn	14 08 41.0	-0.1
PNT	Penticton	2.30	57	P	Pn	14 08 40.9	-0.1
PNT				P		14 08 41.0	
PNT				S	Sn	14 09 14.4	+5.5
PNT				Trac		14 09 23.2	
	comp=Z,33nm,0.2s						
FHE	Frenchman Hill	2.37	118	P	Pn	14 08 41.4	-0.6
BTB	Buttle Lake	2.40	306	P	Pn	14 08 43.5	+1.1
BTB				S	Sn	14 09 09.7	-1.6
BTB				Trac		14 09 19.9	
	comp=Z,121nm,0.3s						
MDW	Midway	2.41	127	P	Pn	14 08 42.6	0.0
WAH2	Wahluke Slope	2.43	122	P	Pn	14 08 42.5	-0.5
GBB	Gable Butte	2.48	126	P	Pn	14 08 43.5	-0.2
BENWA	Benson Ranch	2.49	128	P	Pn	14 08 44.0	+0.2
CRF	Corfu	2.50	119	P	Pn	14 08 43.0	-0.9
KMOR	Kings Mountain	2.54	195	P	Pn	14 08 44.4	-0.1
SNIWA	Snively Ranch	2.56	128	P	Pn	14 08 44.9	+0.2
LLLB	Lillooet	2.56	10	P	Pn	14 08 44.6	-0.1
LLLB				S	Sn	14 09 16.4	+1.0
LLLB				Trac		14 09 24.3	
	comp=Z,91nm,0.5s						
WRD	Warden	2.65	118	P	Pn	14 08 43.8	-2.3
CBB	Campbell River	2.68	318	P	Pn	14 08 48.2	+1.7
CBB				S	Sn	14 09 21.6	+3.1
CBB				Trac		14 09 32.1	
	comp=Z,26nm,0.3s						
OD2	Odessa Site #2	2.69	104	P	Pn	14 08 45.3	-1.2
GDR	Gold River	2.85	308	P	Pn	14 08 51.6	+2.8
GDR				Trac		14 09 34.2	
	comp=Z,35nm,0.3s						
DPW	Davenport	2.93	93	P	Pn	14 08 49.3	-0.8
NCRB	Newcastle Ridg	3.26	317	P	Pn	14 08 57.9	+3.2
NCRB				Trac		14 09 46.7	
	comp=Z,33nm,0.4s						
WOSB	Woss	3.35	310	P	Pn	14 08 57.6	+1.6
WOSB				Trac		14 09 48.2	
	comp=Z,31nm,0.5s						
NEW	Newport	3.64	85	*e*Pn	Pn	14 08 58.7	-1.4
MAYB	Maynard	3.81	309	Trac		14 10 06.2	
	comp=Z,48nm,0.9s						
PHC	Port Hardy	4.12	311	P	Pn	14 09 07.5	+0.6
PHC				Trac		14 10 18.2	
	comp=Z,11nm,0.6s						
SLEB	Sale Mountain	4.21	41	Trac		14 10 21.6	
	comp=Z,11nm,0.5s						
HOLB	Holberg	4.45	307	P	Pn	14 09 12.3	+0.7
BMO	Blue Mountains	4.86	130	*e*Pn	Pn	14 09 15.5	-1.9
MNB	Mounoet Dainar	4.91	32	P	Pn	14 09 18.0	-0.1
WALA	Waterton Lakes	5.82	77	Pn	Pn	14 09 26.2	-4.7
CHMT	Chamberlain Mo	6.41	97	*e*Pn	Pn	14 09 36.1	-3.3
HOPS	Hopland	9.10	183	Pn	P	14 10 15.0	-1.8

MOS ***03*** *14:16:50.9±1.1, 55.10N×162.28E, h40^{km}, mb4.7/1, Error ellipse: s-maj=26.7km s-min=12.4km az=83.6*

KRSC ***03*** *14:16:50.2±1.1, 55.15N×162.41E, h72^{km}±8^{km}, ML4.9*

ISC 03 14:16:50.6±0.5**, 55.13N**±0.02×**162.43E**±0.05**, h69**^{km}±10^{km}**, n41, σ0^{s}95**/80**, 1C, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.10	11	P	P	14 17 10.7	+0.1
KBTR				S	S	14 17 26.2	+0.8
KBTR	Krutoberegovo	1.10	11	*e*P	P	14 17 10.6	0.0
KBTR				*e*S	S	14 17 26.1	+0.7
KBG	Krutoberegovo	1.13	8	*i* P	P	14 17 11.0	0.0
KBG				*e*S	S	14 17 26.0	-0.2
KBG				Smax			
	10μm,1.0s						
KBG	Krutoberegovo	1.13	8	*e*P	P	14 17 10.8	-0.2
KBG				*e*S	S	14 17 26.2	0.0
KBG				Smax			
	7μm,0.5s						
ZLN	Zelenaya	1.28	314	*e*P	P	14 17 13.3	+0.2
ZLN				*e*S	S	14 17 29.3	-0.4
TUMR	Tumrok	1.32	277	*i* P	P	14 17 13.8	+0.1
TUMR				*e*S	S	14 17 30.5	-0.2
CIRR	Tsirk	1.37	316	*e*P	P	14 17 14.7	+0.3
CIRR				*e*S	S	14 17 32.0	+0.1
LGNR	Loginova	1.37	315	*e*P	P	14 17 14.7	+0.3
LGNR				*e*S	S	14 17 32.9	+1.0
KMNR	Kamenistaya	1.40	297	*e*P	P	14 17 14.4	-0.3
KMNR				*e*S	S	14 17 32.4	-0.1
KPT	Kopyto	1.51	304	*e*P	P	14 17 16.4	+0.2
KPT				*e*S	S	14 17 35.0	-0.1
KRSR	Krestovskiy	1.52	316	*e*P	P	14 17 16.1	-0.2
KRSR				*e*S	S	14 17 34.3	-0.9
KLY	Klyuchi	1.55	320	P	P	14 17 15.7	-1.1
KLY				S	S	14 17 34.3	-1.8
KLY	Klyuchi	1.55	320	*i* P	P	14 17 15.5	-1.3
KLY				*e*S	S	14 17 34.2	-1.9
SVLR	Shiveluch	1.60	335	*i* P	P	14 17 18.5	+1.1
SVLR				*e*S	S	14 17 39.2	+2.0
KOZR	Kozyr	1.72	304	PN	P	14 17 19.3	+0.3
KOZR				S	S	14 17 40.1	+0.2
KOZ	Kozyrevsk	1.72	304	P	P	14 17 19.3	+0.2
KOZ				S	S	14 17 40.1	0.0
KOZ	Kozyrevsk	1.72	304	*e*P	P	14 17 19.4	+0.3
KOZ				*e*S	S	14 17 40.0	-0.1
SRDR	Sredinnyy	1.94	309	*e*P	P	14 17 22.3	+0.3
SRDR				*e*S	S	14 17 44.9	-0.3
BKI	Bering	2.03	87	*i* P	P	14 17 23.1	-0.2
BKI				*i* S	S	14 17 47.2	-0.2
KII	Karymskiy	2.06	239	*e*P	P	14 17 24.1	+0.5
KII				*e*S	S	14 17 50.1	+2.0
ESO	Esso	2.27	292	*e*P	P	14 17 25.9	-0.7
ESO				*e*S	S	14 17 53.1	-0.3
SPN	Mys Shipunski	2.48	216	P	P	14 17 28.0	-1.7
SPN				S	S	14 17 54.5	-4.4
SPN	Mys Shipunski	2.48	216	*e*P	P	14 17 28.5	-1.2
SPN				*e*S	S	14 17 57.1	-1.8
NLC	Nalytchevo	2.68	224	P	P	14 17 32.1	-0.3
NLC				S	S	14 18 02.9	-0.8
NLC	Nalytchevo	2.68	224	*e*P	P	14 17 32.1	-0.3
NLC				*e*S	S	14 18 02.8	-0.9
AVH	Avacha	2.87	231	*i* P	P	14 17 36.0	+0.9
AVH				*e*S	S	14 18 09.1	+0.6
UGLR	Uglovaya	2.87	229	*e*P	P	14 17 35.7	+0.6
UGLR				*e*S	S	14 18 09.7	+1.2
KOK	Koryaka	2.90	232	*e*P	P	14 17 36.8	+1.3
KOK				*e*S	S	14 18 08.1	-1.1
GNL	Ganaly	3.00	243	*e*P	P	14 17 37.1	+0.2
GNL				*e*S	S	14 18 12.0	+0.3
PET	Petropavlovsk	3.07	228	P	P	14 17 37.8	-0.2
PET				S	S	14 18 12.4	-1.2
PET	Petropavlovsk	3.07	228	⇑*i*PN	P	14 17 38.3	+0.3
PET				*i* S	S	14 18 13.4	-0.2
PET				pmax	pmax		
	comp=Z,236nm,0.5s						
PET				smax			
	comp=N,2μm,0.6s						
PET				smax			
	comp=E,2μm,0.5s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s						
PET	Petropavlovsk	3.07	228	*e*P	P	14 17 37.7	-0.3
PET				*e*S	S	14 18 12.4	-1.2
KRMR	Karymshinskiy	3.43	229	*e*P	P	14 17 44.5	+1.5
KRMR				*e*S	S	14 18 23.0	+0.3
RUS	Russkaya	3.57	222	P	P	14 17 44.9	0.0
RUS				S	S	14 18 24.9	-1.2
RUS	Russkaya	3.57	222	*e*P	P	14 17 44.8	-0.1
RUS				*e*S	S	14 18 24.8	-1.3
GRL	Gorelyy	3.66	227	*e*P	P	14 17 46.8	+0.7
GRL				*e*S	S	14 18 26.3	-2.0
APC	Apacha	3.82	237	*e*P	P	14 17 49.7	+1.3
APC				*e*S	S	14 18 32.9	+0.6
OSSR	Ossora	4.14	4	*e*P	P	14 17 49.8	-3.1
OSSR				*e*S	S	14 18 38.3	-2.1
OSSR				Smax			
	comp=Z,100nm,0.5s						
PAU	Pauzhetka	4.99	225	*e*P	P	14 18 05.5	+0.8
PAU				*e*S	S	14 18 59.0	-2.6
PAU				Smax			
	comp=Z,480nm,0.6s						
YAK	Yakutsk	18.25	305	*i* P	P	14 20 59.6	-0.7
TIXI	Tiksi	21.86	332	*i* P	P	14 21 40.2	+1.7

NEIC 03 14:39:56.8, 53.49N×**163.44W, h9**^{km}**, ML3.2**(AEIC)**, After AEIC., Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSLS	Shishaldin Sou	1.26	345	P	Pb	14 40 18.6	-1.7
SSLS				S	Sb	14 40 37.7	+1.2
WESN	West Dahl Nort	1.27	328	P	Pb	14 40 18.6	-1.8
WFAR	Faris Peak	1.31	323	P	Pb	14 40 19.0	-2.1
SSLW	Shishaldin Wes	1.34	343	P	Pb	14 40 19.5	-2.1
SSLN	Shishaldin Nor	1.36	346	P	Pb	14 40 20.1	-1.9
FALS	False Pass	1.37	1	P	Pb	14 40 19.6	-2.4
FALS				S	Sb	14 40 38.5	-1.0
WTUG	Tugumak	1.47	338	P	Pn	14 40 21.5	-2.0
AKLV	Akutan Long Va	1.64	295	P	Pn	14 40 23.7	-2.2
AKLV				S	Sn	14 40 44.1	-3.1
AKGG	Akutan Green G	1.67	296	P	Pn	14 40 24.3	-2.1
AKGG				S	Sn	14 40 45.3	-2.8
BALA	Baldy Mountain	1.75	12	P	Pn	14 40 26.4	-1.1
DT1	Dutton Round H	1.75	22	P	Pn	14 40 24.7	-2.9
DTNA	Dutton South F	1.80	22	P	Pn	14 40 25.5	-2.7
UNV	Unalaska Valle	1.86	282	P	Pn	14 40 26.4	-2.7
DOL	Dolgoi Island	1.90	28	P	Pn	14 40 26.6	-3.1
MTBL	Makushin Table	1.98	285	P	Pn	14 40 29.0	-1.9
MTBL				S	Sn	14 40 55.1	-1.0
MSW	Makushin Switc	2.03	283	P	Pn	14 40 29.5	-2.1
MSW				S	Sn	14 40 55.0	-2.3
HAG	Hague Volcano	2.04	26	P	Pn	14 40 29.7	-2.0
PVV	Pavlof Volcano	2.12	26	P	Pn	14 40 30.5	-2.3
PN7A	Pavlof North-7	2.12	23	P	Pn	14 40 31.3	-1.6
BLHA	Black Hill	2.35	19	P	Pn	14 40 33.7	-2.5
SDPT	Sand Point	2.54	42	P	Pn	14 40 36.1	-2.8
OKFG	Magazine Ridge	2.68	270	P	Pn	14 40 38.6	-2.2
DAWY	Dawson	16.24	40	*e*P	P	14 43 45.6	-0.7

WEL 03 14:47:15.0±0.4**, 39.60S**×**174.36E, h217**^{km}±3^{km}**, ML4.0**/11**, 10C-4D, Error ellipse: s-maj=2.4km s-min=1.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAEZ	Rainy Point	0.31	5	PN	P	14 47 43.3	-0.5
NEZ	North Egmont	0.39	328	⇑PN	P	14 47 43.7	-0.3
NRZ	Ngariki Road	0.42	309	PN	P	14 47 43.6	-0.5
PKE	Pukeiti	0.50	325	PN	P	14 47 43.6	-0.7
PKE				SN	S	14 48 06.2	-0.9
NWEZ	Newall Road	0.50	310	PN	P	14 47 43.7	-0.6
WAZ	Wanganui	0.51	108	⇑PN	P	14 47 44.7	+0.3
WAZ				SN	S	14 48 07.4	+0.3
FWVZ	Far West T-bar	0.99	70	PN	P	14 47 46.4	-0.1
FWVZ				SN	S	14 48 10.0	-1.0
TWVZ	Taurewa	0.99	58	PN	P	14 47 45.8	-0.7
WNVZ	Wahianoa	1.00	75	PN	P	14 47 44.4	-2.1
WNVZ				SN	S	14 48 08.3	-2.9
WPVZ	Whakapapa	1.00	67	PN	P	14 47 46.4	-0.3
NGZ	Ngauruhoe	1.05	67	PN	P	14 47 46.7	-0.3
TUVZ	Tukino	1.06	72	PN	P	14 47 46.9	-0.1
TUVZ				SN	S	14 48 11.0	-0.9
WTVZ	West Tongariro	1.07	64	⇑PN	P	14 47 46.7	-0.4
WTVZ				SN	S	14 48 11.0	-1.1
MGZ	Maungaku	1.09	57	PN	P	14 47 46.7	-0.6
MOVZ	Moawhango	1.10	80	⇑PN	P	14 47 46.7	-0.6
MOVZ				SN	S	14 48 10.3	-2.1
OTVZ	Oturere	1.10	67	⇑PN	P	14 47 47.2	-0.2
KRVZ	Karewarewa	1.12	64	⇑PN	P	14 47 47.0	-0.4
KRVZ				SN	S	14 48 11.1	-1.5
HIZ	Hauiti	1.15	20	⇓PN	P	14 47 46.1	-1.7
HIZ				SN	S	14 48 11.0	-2.1
KATZ	Kakaramea	1.21	59	PN	P	14 47 47.8	-0.4
KATZ				SN	S	14 48 13.3	-0.6
TSZ	Takapari Road	1.32	111	PN	P	14 47 49.0	0.0
KIW	Kapiti Island	1.33	162	PN	P	14 47 48.8	-0.4
MRZ	Mangatainoka R	1.41	139	⇓PN	P	14 47 49.5	-0.3
CAW	Cannon Point	1.60	160	PN	P	14 47 51.0	-0.5
MRW	Makara Radio	1.65	171	PN	P	14 47 51.3	-0.5
BKZ	Black Stump Fm	1.71	76	PN	P	14 47 51.5	-0.9

WEL	Wellington	1.71	170	PN	P	14 47 51.8	-0.6
NNZ	Nelson	1.78	205	⇑PN	P	14 47 52.1	-0.9
MTW	Mount Morrison	1.79	151	⇓PN	P	14 47 52.5	-0.5
BHW	Baring Head	1.85	168	PN	P	14 47 52.8	-0.8
TUWZ	Tuamarina	1.85	190	PN	P	14 47 52.9	-0.8
QRZ	Quartz Range	1.86	228	⇑PN	P	14 47 51.8	-1.9
MSWZ	Moikau Station	1.94	160	PN	P	14 47 53.8	-0.7
PAWZ	Paruwai Farm	1.96	156	⇓PN	P	14 47 54.1	-0.6
PWZ	Pawanui	1.98	103	⇑PN	P	14 47 54.7	-0.1
BSWZ	Blackbirch Sta	2.14	190	PN	P	14 47 55.7	-0.9
THZ	Tophouse	2.43	207	⇑PN	P	14 47 58.2	-1.4

NIED **03** *14:56:00, 32.40N×137.30E, $h460^{km}$, Mw4.8 Best double couple: $M_0 1.53\times10^{16}$ NP1: ϕ_s187°, δ59°, λ92°. NP2: ϕ_s3°, δ31°, λ87°.*
MOS **03** *14:56:33.0±0.9, 32.30N×137.16E, $h383^{km}$, mb4.5/30,*
Error ellipse: s-maj=13.0km s-min=7.5km az=95.3
BJI **03** *14:56:34.5, 32.39N×137.19E, $h399^{km}$, mB4.6, mb4.7*
NEIC **03** *14:56:36.2±0.5, 32.41N×137.17E, $h400^{km}\pm4^{km}$, mb4.4/52,*
Error ellipse: s-maj=5.5km s-min=3.8km az=127.0
JMA **03** *14:56:36.2±0.2, 32.43N×137.33E, $h410^{km}\pm3^{km}$, M3.9*
ISC 03 14:56:35.8±0.3**, 32.38N**±0.04×**137.23E**±0.03**, $h408^{km}\pm2^{km}$, $h391^{km}\pm3.8^{km}$:pP-P, n178,** σ**1^{s}00**/197**, mb4.5**/67**, 17C-8D,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	Tokai 2	1.62	16	⇑P	P	14 57 31.0	+0.2
JWZ	Kozaga	1.71	312	⇑P	P	14 57 31.5	+0.2
JWZ				S	S	14 58 15.1	+0.3
TK03	Tokai 3	1.88	19	P	P	14 57 32.8	+0.6
JIE	Ise	2.05	348	⇑P	P	14 57 33.5	+0.2
JIE				S	S	14 58 18.5	+0.2
TK04	Tokai 4	2.07	15	⇑P	P	14 57 33.8	+0.4
JWY	Kouya	2.29	324	P	P	14 57 35.6	+0.8
JAI	Aioi	2.73	302	P	P	14 57 38.8	+0.9
JAI				S	S	14 58 27.3	+0.5
JIM2	Oshima 3	2.97	38	P	P	14 57 39.0	-0.7
JIM2				*e*S	S	14 58 30.9	+0.8
JMN	Monobe	3.12	296	⇑P	P	14 57 42.4	+1.4
JMN				S	S	14 58 34.8	+2.4
JOD2	Odawara 2	3.26	28	P	P	14 57 41.9	-0.3
JOD2				S	S	14 58 33.9	-0.6
JWT	Wachi	3.27	333	S	S	14 58 34.5	-0.1
JYN	Shimob	3.29	19	P	P	14 57 42.4	-0.1
JGM	Miyama	3.34	353	⇑P	P	14 57 43.0	+0.1
JGM				S	S	14 58 35.8	+0.1
BSO1	Boso 1	3.86	53	P	P	14 57 44.2	-3.4
BSO1				S	S	14 58 38.1	-5.9
JRY	Ryogami san	3.88	20	P	P	14 57 47.3	-0.5
JRY				S	S	14 58 41.2	-3.1
MAJO	Matsushiro	4.23	11	*e*P	P	14 57 49.8	-1.3
MAT	Matsushiro	4.23	11	*e*P	P	14 57 50.0	-1.1
MAT				*e*S	S	14 58 47.0	-3.2
MAT	Matsushiro	4.23	11	P	P	14 57 49.7	-1.4
MAT				S	S	14 58 47.2	-3.0
JHS	Saijyo	4.31	308	P	P	14 57 53.1	+1.2
JHS				S	S	14 58 53.4	+1.7
JSJ	Shimokoshiki	6.42	266	P	P	14 58 15.7	+1.7
JTU	Tsushima	6.89	290	P	P	14 58 20.2	+1.0
JMK	Ichinoseki	7.31	25	P	P	14 58 22.2	-1.8
JMK				S	S	14 59 42.8	-6.6
KS15	Wonju Array Si	9.19	306	*e*Pn	P	14 58 44.6	-0.8
MDJ	Mudanjiang	13.59	336	P	P	14 59 33.5	-1.7
MDJ				XP		15 01 06.7	
MDJ				S	S	15 01 57.6	-1.3
MDJ				PCP	PcP	15 04 25.3	-3.3
MDJ				SCP		15 07 21.4	
MDJ				PCS		15 08 01.0	
MDJ				SCS	ScS	15 10 58.9	+0.7
MDJ				AMB	AMB		
	comp=Z,26nm,2.5s						
SSE	Sheshan	13.72	269	P	P	14 59 34.8	-1.9
SSE				S	S	15 02 02.4	+1.0
SSE				SCS	ScS	15 11 00.8	+2.2
SSE				AMB	AMB		
	comp=Z,45nm,0.9s						
SSE				AMB	AMB		
	comp=Z,104nm,3.4s						
SSE				LR	LR		
	comp=N,35nm,18.9s						
SSE				LR	LR		
	comp=E,23nm,19.0s						
SSE				LR	LR		
	comp=Z,42nm,19.4s						
SSE	Sheshan	13.72	269	P	P	14 59 34.8	-1.9
	comp=Z,45nm,0.9s						
SSE				S	S	15 02 02.4	+1.0
SSE				PcS		15 04 29.2	
SSE				ScS	ScS	15 11 00.8	+2.2
DL2	Dalian	14.25	302	P	P	14 59 40.7	-1.6
DL2				AMB	AMB		
	comp=Z,50nm,1.0s						
SNY	Shenyang	14.39	315	⇓P	P	14 59 45.7	+2.0
SNY				AMB	AMB		
	comp=Z,40nm,1.5s						
CN2	Changchun	14.68	324	*e*P	P	14 59 46.8	+0.1
CN2				*e*XP		15 01 19.8	
CN2				*e*S	S	15 02 20.2	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s						
CN2				AMB	AMB		
	comp=Z,400nm,4.0s						
YSS	Yuzh-Sakhalins	15.15	15	P	P	14 59 50.5	-1.1
YSS				pmax	pmax		
	comp=Z,22nm,1.1s						
YSS	Yuzh-Sakhalins	15.15	15	P	P	14 59 50.5	-1.0
	comp=Z,22nm,1.1s						
NJ2	Nanjing	15.56	274	*e*P	P	14 59 54.6	-1.2
NJ2				XP		15 01 34.7	
NJ2				S	S	15 02 38.0	+1.0
NJ2				PCP	PcP	15 04 31.0	-0.4
NJ2				SCP		15 07 25.1	
NJ2				AMB	AMB		
	comp=Z,140nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,520nm,4.8s						
NJ2				LR	LR		
	comp=N,260nm,10.2s						
NJ2				LR	LR		
	comp=E,290nm,9.4s						
NJ2				LR	LR		
	comp=Z,240nm,9.5s						
TATO	Taipei	15.65	246	P	P	14 59 56.6	-0.1
	comp=Z,279nm,1.7s						
TIA	Tai’an	17.05	288	*e*P	P	15 00 08.1	-2.7
KLR	Kul’dur	17.33	348	*e*P	P	15 00 09.7	-3.8
KLR				*e*S	S	15 03 15.6	+5.8
BJI	Beijing	18.61	300	P	P	15 00 25.4	-0.9
BJI				S	S	15 03 35.4	+2.5
BJI				AMB	AMB		
	comp=Z,48nm,1.0s						
BJI				AMB	AMB		
	comp=Z,247nm,3.1s						
BJI				LR	LR		
	comp=Z,105nm,19.9s						
BJI	Beijing	18.61	300	P	P	15 00 25.4	-0.9
	comp=Z,48nm,1.0s						
BJI				S	S	15 03 35.4	+2.5
WHN	Wuhan	19.60	271	P	P	15 00 35.7	-0.4
HHC	Hu-ho-hao-te	22.21	300	⇓P	P	15 01 00.5	-0.4
HHC				S	S	15 04 37.2	+2.8
HHC				AMB	AMB		
	comp=Z,33nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,113nm,8.2s						
HHC				LR	LR		
	comp=N,144nm,13.0s						
HHC				LR	LR		
	comp=E,579nm,17.8s						
HHC				LR	LR		
	comp=Z,149nm,15.4s						
BTO	Baotou	23.30	298	*e*P	P	15 01 10.9	0.0
BTO				AMB	AMB		
	comp=Z,62nm,1.2s,mb4.9						
XAN	Xi’an	23.72	282	P	P	15 01 14.3	-0.4
XAN				AMB	AMB		
	comp=Z,155nm,0.8s,mb5.5						
GYA	Guiyang	27.22	265	P	P	15 01 45.0	-1.2
GYA				XP	sP	15 03 38.0	-8.5
GYA				S	S	15 05 56.4	+1.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GYA				AMB	AMB		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,470nm,7.2s						
GYA				LR	LR		
	comp=E,400nm,5.2s						
GYA				LR	LR		
	comp=Z,300nm,4.6s						
ULN	Ulaanbaatar	27.55	313	*i* P	P	15 01 49.3	+0.3
ULN	Ulaanbaatar	27.55	313	*e*P	P	15 01 48.8	-0.2
	comp=Z,34nm,1.2s,mb4.5						
LZH	Lanzhou	27.77	287	⇑P	P	15 01 49.5	-1.5
LZH				AP		15 03 02.1	
LZH				PP	PP	15 03 07.6	+6.8
LZH				XP	sP	15 03 49.3	-2.3
LZH				AMB	AMB		
	comp=Z,32nm,1.3s,mb4.5						
LZH	Lanzhou	27.77	287	⇑P	P	15 01 49.5	-1.5
LZH				*PP		15 03 02.1	
LZH				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.5						
LZH	Lanzhou	27.77	287	⇑P	P	15 01 49.5	-1.5
	comp=Z,32nm,1.3s,mb4.5						
LZH				pP		15 03 02.1	
LZH				PP	PP	15 03 07.6	+6.8
LZH				sP	sP	15 03 49.3	-2.3
CD2	Chengdu	28.47	276	P	P	15 01 56.0	-1.2
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb4.8						
MA2	Magadan	28.66	14	*e*P	P	15 01 58.0	-0.5
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MA2	Magadan	28.66	14	*e*P	P	15 01 57.9	-0.7
	comp=Z,26nm,0.8s,mb4.6						
YAK	Yakutsk	30.06	353	*i* P	P	15 02 09.7	-1.0
YAK				*i* *PP	pP	15 03 22.6	-2.8
YAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.0						
YAK	Yakutsk	30.06	353	*e*P	P	15 02 06.1	-4.5
	comp=Z,9.8nm,0.8s,mb4.2						
ZAK	Zakamensk	30.82	316	*i* P	P	15 02 17.3	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.7						
GTA	Gaotai	30.95	294	*e*P	P	15 02 18.1	-0.4
GTA				PP	PP	15 03 42.8	+3.4
GTA				XP	sP	15 04 18.8	-1.6
GTA				PCP	PcP	15 05 05.7	+1.9
GTA				S	S	15 06 51.4	-1.8
GTA				SCP		15 08 09.3	
GTA				PCS		15 08 48.8	
GTA				SS	SS	15 09 15.9	-6.8
GTA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,94nm,5.3s						
GTA				LR	LR		
	comp=N,104nm,13.3s						
GTA				LR	LR		
	comp=E,109nm,12.2s						
GTA				LR	LR		
	comp=Z,95nm,12.9s						
KMI	Kunming	31.00	265	⇑P	P	15 02 17.2	-1.9
KMI				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb4.3						
KMI				LR	LR		
	comp=Z,57nm,30.6s						
KMI	Kunming	31.00	265	⇑P	P	15 02 17.2	-1.9
	comp=Z,8.0nm,0.5s,mb4.3						
KMI				LR	LR		
	comp=Z,60nm,30.6s						
TLY	Talaya	31.14	318	P	P	15 02 20.0	0.0
	comp=Z,42nm,0.9s,mb4.8,SNR=8.4						
TLY	Talaya	31.14	318	*i* P	P	15 02 20.4	+0.4
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.9						
TLY	Talaya	31.14	318	*e*P	P	15 02 20.3	+0.3
	comp=Z,7.2nm,0.9s,mb4.0						
MOY	Mondy	32.65	317	*e*P	P	15 02 33.2	+0.3
CM31	Chiang Mai Arr	37.05	257	*e*P	P	15 03 10.1	-0.2
	comp=Z,4.7nm,0.5s,mb4.1						
LSA	Lhasa	39.34	279	P	P	15 03 30.2	+1.2
BILL	Bilibino	39.46	17	*i* P	P	15 03 30.0	+0.4
BILL				pmax	pmax		
	comp=Z,35nm,1.3s,mb4.5						
BILL	Bilibino	39.46	17	*e*P	P	15 03 29.6	0.0
	comp=Z,31nm,1.1s,mb4.5						
TIXI	Tiksi	39.58	356	*i* P	P	15 03 29.6	-1.0
TIXI				*i* *PP	pP	15 04 46.0	-3.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.6						
WMQ	Urumqi	40.08	301	P	P	15 03 35.6	+0.7
WMQ				AP	pP	15 04 50.0	-3.6
WMQ				PP	PP	15 05 19.0	+2.2
WMQ				S	S	15 09 13.0	+2.0
WMQ				SCS	ScS	15 12 57.0	+3.5
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.3						
WMQ				LR	LR		
	comp=N,16nm,20.0s						
WMQ				LR	LR		
	comp=E,14nm,20.0s						
PMG	Port Moresby	42.62	165	P	P	15 03 54.7	-1.0
PMG				pmax	pmax		
	comp=Z,14nm,1.0s						
PMG	Port Moresby	42.62	165	P	P	15 03 54.7	-1.0
	comp=Z,14nm,1.0s,mb4.3						
MKAR	Makanchi Array	43.85	306	*i* P	P	15 04 04.9	-0.1
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JIRN	Jiri	44.11	278	*e*P	P	15 04 07.0	-0.3
	comp=Z,242nm,0.7s						
GUN	Gumba	44.29	278	*e*P	P	15 04 09.5	+0.7
	comp=Z,187nm,0.7s,mb5.5						
PKI	Pulchoki	44.79	278	*e*P	P	15 04 12.8	+0.1
	comp=Z,73nm,0.7s,mb5.1						
KKN	Kakani	44.83	278	*e*P	P	15 04 13.3	+0.3
	comp=Z,138nm,0.8s,mb5.3						
DMN	Daman	45.03	278	*e*P	P	15 04 14.6	0.0
	comp=Z,67nm,0.8s,mb5.0						
GKN	Gorkha	45.30	279	*e*P	P	15 04 16.7	0.0
	comp=Z,118nm,0.8s,mb5.3						
KOLN	Koldanda	46.24	279	*e*P	P	15 04 24.1	+0.1
	comp=Z,98nm,0.9s,mb5.2						
TNA	Tin City	46.58	28	*e*P	P	15 04 25.9	-0.2
	comp=Z,5.6nm,0.9s,mb3.9						
KSH	Kashi	49.27	296	*e*P	P	15 04 47.0	0.0
KSH				*e*AP	pP	15 06 05.0	-3.9
KSH				*e*XP	sP	15 06 47.7	-5.7
KSH				*e*SCP		15 09 23.0	
KSH				*e*PCS		15 10 01.0	
KSH				*e*S	S	15 11 20.0	-0.9
KSH				*e*SCS	ScS	15 13 54.4	+2.1
KSH				*e*SS	SS	15 14 57.5	-0.2
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb4.9						
KSH				AMB	AMB		
	comp=Z,130nm,6.0s						
KSH				LR	LR		
	comp=N,260nm,5.3s						
KSH				LR	LR		
	comp=E,200nm,5.2s						
AAK	Ala-Archa	49.78	301	*i* P	P	15 04 49.0	-1.7
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb3.9						
AAK	Ala-Archa	49.78	301	*e*P	P	15 04 48.7	-2.0
	comp=Z,4.9nm,0.8s,mb3.9						
CHKZ	Chkalovo	51.08	315	*i* P	P	15 04 58.7	-1.5
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.7						
CHKZ	Chkalovo	51.08	315	*e*P	P	15 04 58.5	-1.8
	comp=Z,4.0nm,0.8s,mb3.7						
BVA0	Borovoye Array	51.26	315	*i* P	P	15 05 00.4	-1.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.3s						
FITZ	Fitzroy Crossi	51.41	194	⇓*i*P	P	15 05 03.2	+0.1
	comp=Z,20nm,0.8s,mb4.4						
WRAB	Tennant Creek	52.09	183	*e*P	P	15 05 06.1	-2.0
WRAB				pmax	pmax		
	comp=Z,47nm,1.0s,mb4.7						
WRAB	Tennant Creek	52.09	183	*e*P	P	15 05 06.1	-2.0
	comp=Z,47nm,1.0s,mb4.7						
RSO	Redoubt South	52.68	36	*e*P	P	15 05 06.6	-5.3
CTA	Charters Tower	52.88	169	⇓*i*P	P	15 05 13.5	-0.4
	comp=Z,5.7nm,0.8s,mb3.9						
CTA	Charters Tower	52.88	169	⇓*i*P	P	15 05 13.5	-0.4
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTAO	Charters Tower	52.88	169	*e*P	P	15 05 12.9	-1.0
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.0						
CTAO	Charters Tower	52.88	169	*e*P	P	15 05 12.9	-1.0
	comp=Z,7.8nm,0.8s,mb4.0						
MCK	McKinley	54.40	32	*e*P	P	15 05 23.0	-1.2
MCK				pmax	pmax		
	comp=Z,11nm,1.3s,mb3.9						
MCK	McKinley	54.40	32	*e*P	P	15 05 23.0	-1.3
	comp=Z,11nm,1.3s,mb3.9						
HYB	Hyderabad	54.66	269	*i* P	P	15 05 26.5	-0.2
COLA	College	54.83	30	*e*P	P	15 05 27.3	0.0
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.7						
COLA	College	54.83	30	*e*P	P	15 05 27.3	0.0
	comp=Z,4.5nm,0.8s,mb3.8						
MBWA	Marble Bar	55.81	200	*e*P	P	15 05 33.6	-1.1
	comp=Z,13nm,0.6s,mb4.4						
ASPA	Alice Springs	55.82	184	*e*P	P	15 05 34.2	-0.6
PALK	Pallekele	58.00	257	*e*P	P	15 05 50.1	+0.2
	comp=Z,13nm,0.9s,mb4.3						
INK	Inuvik	60.07	25	*e*P	P	15 06 02.3	-0.7
INK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
INK	Inuvik	60.07	25	*e*P	P	15 06 02.3	-0.7
	comp=Z,7.0nm,0.8s,mb4.1						
FORT	Forrest	63.41	189	⇓*i*P	P	15 06 25.3	-0.1
	comp=Z,72nm,0.7s,mb5.3						
STKA	Stephens Creek	64.04	176	⇓*i*P	P	15 06 29.6	+0.1
	comp=Z,8.7nm,0.8s,mb4.3						
STKA	Stephens Creek	64.04	176	*e*P	P	15 06 29.3	-0.2
KLBR	Kellerberrin	66.24	198	*e*P	P	15 06 42.7	-0.7
	comp=Z,73nm,0.8s,mb5.4						
ARE0	ARCESS Array S	67.12	339	P	P	15 06 46.7	-1.5
NWAO	Narrogin (SRO)	67.64	198	*e*P	P	15 06 51.3	-0.7
NWAO				pmax	pmax		
	comp=Z,11nm,0.7s						
NWAO	Narrogin (SRO)	67.64	198	*e*P	P	15 06 51.3	-0.8
	comp=Z,11nm,0.7s,mb4.6						
RES	Resolute Bay	67.93	13	*e*P	P	15 06 52.3	-0.8
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
RES	Resolute Bay	67.93	13	*e*P	P	15 06 52.3	-0.8
	comp=Z,10nm,1.0s,mb4.4						
YKW3	Yellowknife Ar	69.50	28	*e*P	P	15 07 01.8	-1.0
OBN	Obninsk	69.74	323	*e*P	P	15 07 05.0	+0.7
OBN				*e*	pP	15 08 33.4	-0.7
OBN				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.4						
SOC	Sochi	73.40	311	*e*P	P	15 07 22.3	-3.7
SOC				*e*		15 10 19.0	
SOC				*e*PPP	PPP	15 12 01.0	-2.7
SOC				*e*S	S	15 16 20.2	-0.6
SOC				*e*SS	SS	15 21 14.8	-0.9
SOC				*e*SSS	SSS	15 24 36.7	+4.0
SOC				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.2						
SOC				pmax	pmax		
	comp=N,5.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.7s						
EDM	Edmonton	75.12	36	*e*P	P	15 07 35.3	-0.2
SUMG	Summit	75.28	359	*e*P	P	15 07 37.2	+1.2
	comp=E,21nm,1.1s,mb4.7						
NEW	Newport	75.87	42	*e*P	P	15 07 39.8	0.0
NEW				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NEW	Newport	75.87	42	*e*P	P	15 07 39.8	0.0
	comp=Z,6.2nm,0.8s,mb4.3						
SUW	Suwalki	76.90	326	P	P	15 07 44.5	-0.8
SUW				pmax	pmax		
	comp=Z,47nm,1.5s,mb4.9						
SUW	Suwalki	76.90	326	P	P	15 07 44.5	-0.8
	comp=Z,47nm,1.5s,mb4.9						
NB2	NORSAR Subarra	77.09	336	P	P	15 07 45.9	-0.3
	comp=Z,2.7nm,0.7s,mb4.0,baz=43,slow=5.3						
NB2	NORSAR Subarra	77.09	336	P	P	15 07 45.9	-0.3
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
WALA	Waterton Lakes	77.20	40	*e*P	P	15 07 47.1	0.0
	comp=Z,11nm,1.0s,mb4.4						
MOD	Modoc	77.39	48	*e*P	P	15 07 48.3	+0.1
	comp=Z,8.9nm,0.8s,mb4.5						
BMO	Blue Mountains	77.63	45	*e*P	P	15 07 49.6	+0.1
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
BMO	Blue Mountains	77.63	45	*e*P	P	15 07 49.6	+0.1
	comp=Z,7.2nm,1.0s,mb4.3						
OHCM	Honcut	77.99	51	*e*P	P	15 07 51.8	+0.3
WVOR	Wild Horse Val	78.15	47	*e*P	P	15 07 52.7	+0.4
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.3						
WVOR	Wild Horse Val	78.15	47	*e*P	P	15 07 52.7	+0.4
	comp=Z,9.2nm,1.0s,mb4.4						
CHMT	Chamberlain Mo	78.80	41	*e*P	P	15 07 55.7	0.0
CMB	Columbia Colle	79.41	52	*e*P	P	15 07 59.3	+0.2
CMB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
CMB	Columbia Colle	79.41	52	*e*P	P	15 07 59.3	+0.2
	comp=Z,7.0nm,0.8s,mb4.3						
FCC	Fort Churchill	79.67	24	*e*P	P	15 07 59.7	-0.3
FCC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
FCC	Fort Churchill	79.67	24	*e*P	P	15 07 59.7	-0.3
	comp=Z,8.3nm,1.0s,mb4.3						
HLID	Hailey	80.08	44	*e*P	P	15 08 03.6	+1.1
	comp=Z,5.1nm,0.9s,mb4.2						
MCMT	McKenzie Canyo	80.25	43	*e*P	P	15 08 04.0	+0.6
BOZ	Bozeman (W)	80.46	42	*e*P	P	15 08 05.1	+0.7
BOZ				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
BOZ	Bozeman (W)	80.46	42	*e*P	P	15 08 05.0	+0.6
	comp=Z,17nm,1.2s,mb4.6						
QLMT	Earthquake Lak	81.06	42	*e*P	P	15 08 07.8	+0.2
TPH	Tonopah	81.47	50	*e*P	P	15 08 11.0	+1.2
TPH				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
TPH	Tonopah	81.47	50	*e*P	P	15 08 10.9	+1.1
	comp=Z,12nm,0.9s,mb4.6						
IMW	Indian Meadow	81.91	43	*e*P	P	15 08 13.9	+2.0
RRI2	Red Ridge	82.02	43	*e*P	P	15 08 13.7	+1.2
MOOW	Moose Ponds	82.11	43	*e*P	P	15 08 14.2	+1.3
TPAW	Teton Pass	82.15	43	*e*P	P	15 08 14.0	+0.9
LOHW	Long Hollow	82.27	43	*e*P	P	15 08 14.9	+1.1
MORC	Moravsky Berou	82.29	325	*e*P	P	15 08 13.7	-0.1
MORC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
MORC	Moravsky Berou	82.29	325	*e*P	P	15 08 13.7	0.0
	comp=Z,3.0nm,0.9s,mb4.0						
HWUT	Hardware Ranch	82.93	45	*e*P	P	15 08 18.4	+1.2
	comp=Z,24nm,1.2s,mb4.8						
BRG	Berggiesshubel	83.22	328	*i* P	P	15 08 18.9	+0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.4						
BRG	Berggiesshubel	83.22	328	*i* P	P	15 08 18.9	+0.5
	comp=Z,8.0nm,1.1s,mb4.4						
BRG				*i*		15 08 24.8	
TCUT	Toone Canyon	83.32	45	*e*P	P	15 08 20.6	+1.4
CLL	Collm	83.33	328	⇑*i*P	P	15 08 18.9	-0.1
CLL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
CLL	Collm	83.33	328	⇑*i*P	P	15 08 18.9	-0.1
	comp=Z,10.0nm,1.1s,mb4.5						
CLL	Collm	83.33	328	⇑P	P	15 08 18.9	-0.1
	comp=Z,logA/T=1.0,mb4.5						
BW06	Boulder Array	83.39	43	*e*P	P	15 08 20.1	+0.6
	comp=Z,5.9nm,0.9s,mb4.3						
DAU	Daniels Canyon	83.84	46	*e*P	P	15 08 23.2	+1.4
ARUT	Antelope Range	84.07	49	*e*P	P	15 08 24.1	+1.1
MVU	Marysvale	84.41	48	*e*P	P	15 08 26.0	+1.4
	comp=Z,12nm,1.1s,mb4.5						
MOX	Moxa	84.42	329	*e*P	P	15 08 24.0	-0.4
SRU	San Rafael	85.09	46	*e*P	P	15 08 28.9	+1.0
PV10	Paradox Valley	86.45	46	*e*P	P	15 08 36.0	+1.5
PV01	Paradox Valley	86.89	46	*e*P	P	15 08 37.4	+0.8
ISCO	Idaho Springs	87.58	43	*e*P	P	15 08 40.7	+0.9
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
ISCO	Idaho Springs	87.58	43	*e*P	P	15 08 40.7	+0.9
	comp=Z,6.4nm,1.1s,mb4.3						
SDCO	Great Sand Dun	88.99	45	*e*P	P	15 08 47.7	+1.2
	comp=Z,2.7nm,0.7s,mb4.1						

AMTX	Amarillo	93.19	45	eP	P	15 09 07.0	+1.0
	comp=Z,12nm,1.0s,mb4.8						
GDL2	Guadalupe Moun	93.36	48	eP	P	15 09 07.8	+1.0
WMOK	Wichita Mounta	95.00	43	eP	P	15 09 14.0	-0.2
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.5						
WMOK	Wichita Mounta	95.00	43	eP	P	15 09 14.0	-0.2
	comp=Z,7.2nm,1.4s,mb4.5						
LTX	Lajitas	95.71	50	P	P	15 09 16.8	-0.8
LTX				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
LTX	Lajitas	95.71	50	P	P	15 09 16.8	-0.8
	comp=Z,4.2nm,0.9s,mb4.6						
JTS	JuntasAbangare	121.50	51	ePKIKP	PKPdf	15 14 45.0	+3.0
QSPA	South Pole Qui	122.14	180	⇓iP	PKPdf	15 14 43.1	+1.3
VNA2	Neumayer--Watz	136.90	196	⇑iP	PKPdf	15 15 13.3	+3.5
VNA2	Neumayer--Watz	136.90	196	⇑i	PKPdf	15 15 14.8	+5.0
VNA3	Neumayer Olymp	137.19	195	⇑iP	PKPdf	15 15 16.8	+6.5
LPAZ	La Paz	151.99	61	ePKPdf	PKPdf	15 15 38.6	+2.1
LPAZ				ePKPbc	PKPdf	15 15 45.2	+8.6
LVC	Limon Verde	154.91	74	ePKP	PKPdf	15 15 53.1	+13

CASC 03 15:07:35.0±1.9**, 14.23N**×**91.50W, h64**^{km}±12^{km}**, MD4.0, 3C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.17	304	⇑iP	P	15 07 44.4	-0.4
JAT				eS	S	15 07 53.1	+1.1
FUG	Fuego 3	0.67	71	⇓iP	P	15 07 49.0	-0.2
TP2	Tecpan 2	0.72	40	eP	P	15 07 50.7	+0.8
TP2				eS	S	15 08 03.4	+2.5
PCG	Pacaya	0.88	79	⇑eP	P	15 07 52.0	+0.2
PCG				eS	S	15 08 05.2	+0.9
IXG	Ixpaco	1.01	93	⇓eP	P	15 07 53.2	-0.4
IXG				eS	S	15 08 07.8	+0.4
NBG	Las Nubes	1.17	72	⇑eP	P	15 07 56.6	+0.9
RBDL	Robledal	1.76	93	eP	P	15 08 03.5	-0.4
RTR	El Retiro	1.82	100	eP	P	15 08 04.4	-0.4
RTR				eS	S	15 08 29.4	+2.7
SBLS	San Blas	1.86	102	eP	P	15 08 04.9	-0.3
SBLS				eS	S	15 08 27.2	-0.3
SNJE	San Jose	1.87	101	eP	P	15 08 05.2	-0.1
SNJE				eS	S	15 08 29.1	+1.3
LFRS	El Faro	2.44	104	eP	P	15 08 13.2	-0.2
LFRS				eS	S	15 08 41.5	-0.5
LCBS	La Ceiba	2.51	103	eP	P	15 08 15.2	+0.8
LCBS				eS	S	15 08 44.4	+0.6

MAN 03 15:10:38.3, 9.47N×**126.84E, h8**^{km}**, mb5.0, ML3.9, MS4.0, 3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	1.30	248	eP	Pb	15 11 01.6	-0.9
BUTP				eS	Sb	15 11 20.1	+0.9
SCPH	Surigao	1.37	283	⇓eP	Pb	15 11 01.7	-1.9
MSLP	Maasin	2.06	289	eP	Pn	15 11 13.6	-0.1
BUKP	Musuan	2.36	228	eP	Pn	15 11 18.2	+0.3
PLP	Palo	2.49	313	eP	Pn	15 11 18.8	-1.0
PLP				iS	Sn	15 11 48.2	-2.4
BESP	Borongan	2.53	327	eP	Pn	15 11 20.5	+0.2
MATI	Mati	2.57	193	eP	Pn	15 11 20.8	-0.1
OCLP	Ormoc	2.70	306	eP	Pn	15 11 23.2	+0.4
TBP	Tagbilaran	2.94	275	eP	Pn	15 11 25.3	-0.9
TBP				iS	Sn	15 12 03.2	+1.0
LLP	Lapu-Lapu	2.95	287	⇓eP	Pn	15 11 27.0	+0.6
LLP				iS	Sn	15 12 05.1	+2.7
DCPH	Dipolog City	3.55	256	⇓eP	Pn	15 11 35.8	+0.9
GUIM	Jordan	4.34	286	eP	Pn	15 11 46.3	+0.2
PVCP	Virac	4.87	328	eP	Pn	15 11 55.3	+1.6

PGC ***03*** *15:36:04.8, 49.99N×130.20W, h10*^{km}*, MLSn4.2/2, West of Vancouver Island, British Columbia*

BJI ***03*** *15:36:06.5, 50.30N×129.80W, h10*^{km}*, mB5.0, mb5.0, Ms5.1, Msz4.7*

NEIC ***03*** *15:36:08.6±0.3, 50.28N×129.83W, h10*^{km}*, mb4.7/25, MW5.0(PGC), Error ellipse: s-maj=7.4km s-min=3.2km az=46.0*

ISC 03 15:36:06.5±0.3**, 50.26N**±0.03×**129.84W**±0.05**, h10**^{km}**, n125,** σ**1**^{s}**11**/137**, mb4.9**/17**, MS4.8**/2**, 1C-1D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.15	70	⇑Pn	Pn	15 36 29.6	+0.9
HOLB				Sn	Sn	15 36 48.0	+3.5
	comp=Z,849nm,0.4s						
HOLB				Trac		15 36 50.6	
	comp=Z,849nm,0.4s						
BPBC	Brooks Peninsu	1.33	94	⇑Pn	Pn	15 36 30.3	-0.9
BPBC				Sn	Sn	15 36 47.5	-1.6
	comp=Z,431nm,0.3s						
BPBC				Trac		15 36 52.3	
	comp=Z,431nm,0.3s						
PHC	Port Hardy	1.60	73	⇑Pn	Pn	15 36 35.9	+0.8
PHC				Sn	Sn	15 37 00.2	+4.3
PHC				Trac		15 37 02.8	
	comp=Z,286nm,0.3s						
MAYB	Maynard	1.71	84	⇑Pn	Pn	15 36 36.5	-0.2
MAYB				Trac		15 37 11.5	
	comp=Z,761nm,0.9s						
EDB	Eliza Dome	1.79	101	Pn	Pn	15 36 36.0	-1.8
EDB				Sn	Sn	15 36 58.7	-2.1
EDB				Trac		15 37 00.5	
	comp=Z,189nm,0.6s						
WOSB	Woss	2.10	92	⇑Pn	Pn	15 36 42.1	-0.2
WOSB				Trac		15 37 05.4	
	comp=Z,162nm,0.5s						
BBB	Bella Bella	2.21	29	⇓Pn	Pn	15 36 45.8	+2.0
BBB				Sn	Sn	15 37 13.5	+2.1
BBB				Trac		15 37 15.8	
	comp=Z,553nm,0.3s						
NCRB	Newcastle Ridg	2.43	85	⇑Pn	Pn	15 36 47.4	+0.5
GDR	Gold River	2.50	100	Pn	Pn	15 36 46.6	-1.3
GDR				Trac		15 37 55.7	
	comp=Z,199nm,0.8s						
BNB	Barry Inlet	2.61	333	Pn	Pn	15 36 47.4	-2.1
BNB				Trac		15 37 24.7	
	comp=Z,203nm,0.8s						
CBB	Campbell River	2.89	93	⇑Pn	Pn	15 36 53.3	-0.1
CBB				Sn	Sn	15 37 23.8	-4.8
CBB				Trac		15 37 43.0	
	comp=Z,148nm,1.1s						
BTB	Buttle Lake	2.90	104	Pn	Pn	15 36 52.3	-1.4
BTB				Trac		15 37 37.4	
	comp=Z,105nm,0.5s						
OZB	Mount Ozzard	3.11	113	Pn	Pn	15 36 56.6	0.0
OZB				Sn	Sn	15 37 31.7	-2.6
OZB				Trac		15 37 39.2	
	comp=Z,55nm,0.5s						
MOBC	Moresby Island	3.21	337	Pn	Pn	15 36 56.0	-1.9
MOBC				Sn	Sn	15 37 35.6	-1.1
BNAB	Bonilla	3.27	352	Pn	Pn	15 36 58.7	-0.3
BNAB				Sn	Sn	15 37 37.3	-1.1
	comp=Z,36nm,0.4s						
BNAB				Trac		15 37 43.1	
	comp=Z,36nm,0.4s						
ALB	Alberni	3.40	105	Pn	Pn	15 37 00.9	+0.2
VIB	Van Inlet	3.43	332	Pn	Pn	15 36 59.1	-2.1
TXB	Texada	3.53	97	Pn	Pn	15 37 01.9	-0.7
TXB				Trac		15 38 27.2	
	comp=Z,230nm,1.1s						
MGB	Mount Grey	3.58	109	Pn	Pn	15 37 02.5	-0.7
MGB				Trac		15 37 59.5	
	comp=Z,40nm,0.6s						
PFB	Port Renfrew	3.91	114	Pn	Pn	15 37 07.7	-0.3
SHB	Sechelt	3.91	98	Pn	Pn	15 37 08.3	+0.3
RUBB	Prince Rupert	4.08	357	Pn	Pn	15 37 10.6	+0.2
RUBB				Sn	Sn	15 37 58.3	-0.5
RUBB				Trac		15 38 13.4	
	comp=Z,125nm,0.5s						
NDB	Naden	4.16	334	Pn	Pn	15 37 10.4	-1.2
NDB				Trac		15 38 03.5	
	comp=Z,35nm,0.4s						
LZB	Mount Lazard	4.26	111	Pn	Pn	15 37 12.6	-0.3
LZB				Sn	Sg	15 38 32.3	+4.0
LZB				Trac		15 38 57.0	
	comp=Z,16nm,1.1s						
PGC	Sidney	4.47	109	eP	Pn	15 37 15.3	-0.6
PGC	Sidney	4.47	109	Pn	Pn	15 37 16.2	+0.3
OCWA	Octopus Mounta	4.50	122	eP	Pn	15 37 15.3	-1.0
HNB	Haney	4.81	99	Pn	Pn	15 37 21.2	+0.5
LLLB	Lillooet	5.10	83	Pn	Pn	15 37 24.9	+0.1
LLLB				Trac		15 38 59.0	
	comp=Z,15nm,0.6s						
VDB	Vedder Mountai	5.18	101	P	Pn	15 37 26.2	+0.3
CMW	Cultus Mountai	5.37	107	P	Pn	15 37 29.2	+0.5
HOPB	Hope	5.52	96	Pn	Pn	15 37 30.8	0.0
RPW	Rockport	5.73	105	P	Pn	15 37 34.0	+0.2
BMW	Boistfort Moun	5.81	128	P	Pn	15 37 35.1	+0.2
FMW	Mount Fremont	6.36	118	P	Pn	15 37 42.4	-0.2
WRW	Wenatchee Ridg	6.36	109	P	Pn	15 37 43.0	+0.4
TWW	Teanaway	6.71	114	P	Pn	15 37 48.4	+0.9
ETW	Entiat	6.80	109	P	Pn	15 37 49.2	+0.3
TBM	Table Mountain	6.85	113	P	Pn	15 37 49.8	+0.3
WTV	Waterville	6.99	108	P	Pn	15 37 51.4	-0.1
BMBC	Bull Mountain	7.41	36	Pn	Pn	15 37 59.9	+2.4
BMBC				Sn	Sn	15 39 26.1	+3.6
BMBC				Trac		15 40 20.7	
	comp=Z,67nm,1.2s						
NEW	Newport	8.55	99	eP	P	15 38 11.6	-1.8
YBH	Yreka Blue Hor	9.86	147	eP	P	15 38 30.7	-0.6
BMO	Blue Mountains	10.05	118	eP	P	15 38 32.0	-1.8
EDM	Edmonton	10.64	68	eP	P	15 38 41.3	-0.7
MOD	Modoc	10.66	138	eP	P	15 38 41.7	-0.5
WDC	Whiskeytown Da	10.95	149	eP	P	15 38 46.3	+0.1
WVOR	Wild Horse Val	11.00	131	eP	P	15 38 46.6	-0.4
MSO	Missoula	11.08	102	eP	P	15 38 45.4	-2.7
CHMT	Chamberlain Mo	11.48	101	eP	P	15 38 51.5	-2.1
HLID	Hailey	12.48	117	eP	P	15 39 06.4	-0.6
MCMT	McKenzie Canyo	12.69	109	eP	P	15 39 08.4	-1.3
PAHR	Pah Rah Range	12.88	141	P	P	15 39 13.6	+1.3
BOZ	Bozeman (W)	13.04	104	eP	P	15 39 13.3	-1.2
WCN	Washoe City	13.08	143	eP	P	15 39 14.8	-0.1
QLMT	Earthquake Lak	13.56	107	eP	P	15 39 22.1	+1.0
YMR	Madison River	13.93	106	eP	P	15 39 26.1	+0.1
CMB	Columbia Colle	13.96	147	eP	P	15 39 27.1	+0.5
YNR	Norris Junctio	14.08	106	eP	P	15 39 28.8	+0.7
YFT	Old Faithful	14.12	107	eP	P	15 39 29.7	+1.2
LKWY	Lake	14.32	106	eP	P	15 39 32.4	+1.1
	24nm,1.1s						
IMW	Indian Meadow	14.35	109	eP	P	15 39 32.6	+1.1
RRI2	Red Ridge	14.42	112	eP	P	15 39 34.0	+1.5
MNV	Mina	14.46	140	eP	P	15 39 33.6	+0.5
	31nm,1.4s						
MOOW	Moose Ponds	14.54	109	eP	P	15 39 35.6	+1.4
MOOW				e		15 39 42.5	
TPAW	Teton Pass	14.56	110	eP	P	15 39 36.2	+1.8
TPAW				e		15 39 43.5	
WUWY	Wally Ulrich	14.66	110	eP	P	15 39 39.2	+3.5
SNOW	Snow King Moun	14.70	110	P	P	15 39 37.3	+1.2
LOHW	Long Hollow	14.71	110	eP	P	15 39 37.9	+1.7
DAWY	Dawson	14.75	343	eP	P	15 39 39.4	+2.7
DAWY	Dawson	14.75	343	Pn	P	15 39 40.2	+3.5
OMM	Old Mammoth Mi	14.84	144	eP	P	15 39 38.7	+0.7
YKW3	Yellowknife Ar	14.87	28	eP	P	15 39 39.5	+1.2
AHID	Auburn Hatcher	14.90	113	P	P	15 39 37.7	-1.0
	56nm,1.1s						
TPH	Tonopah	15.15	139	eP	P	15 39 43.7	+1.6
	13nm,0.9s						
LRV	Little Rabbit	15.23	152	P	P	15 39 43.2	+0.1
SLKM	Skilak Lake	15.40	320	eP	P	15 39 45.5	+0.3
SML	Sawmill	15.44	326	eP	P	15 39 43.5	-2.2
THY	Trims Highway	15.73	333	eP	P	15 39 49.8	+0.3
BW06	Boulder Array	15.81	111	eP	P	15 39 52.4	+1.7
	50nm,1.3s						
LAO	LASA Array	16.04	94	eP	P	15 39 53.4	-0.2
	52nm,1.0s						
JLU	Jordanelle	16.08	120	P	P	15 39 53.2	-0.9
DAU	Daniels Canyon	16.32	120	eP	P	15 39 58.6	+1.5
RSO	Redoubt South	16.46	317	eP	P	15 40 01.5	+2.7
SPU	Mount Spurr	16.52	320	eP	P	15 40 00.3	+0.7
DGMT	Dagmar	16.77	86	eP	P	15 40 03.5	+0.6
	183nm,1.5s						
ARUT	Antelope Range	17.11	131	eP	P	15 40 07.9	+0.6
TMUT	Trail Mountain	17.13	123	eP	P	15 40 07.4	0.0
MVU	Marysvale	17.18	126	eP	P	15 40 08.9	+0.8
	11nm,1.2s						
MSU	Marysvale	17.19	126	eP	P	15 40 09.8	+1.6
COLA	College	17.44	334	eP	P	15 40 11.7	+0.6
	14nm,1.3s						
FFC	Flin Flon	17.48	64	Pn	P	15 40 11.2	-0.5
	242nm,1.0s,SNR=24						
FFC	Flin Flon	17.48	64	eP	P	15 40 10.9	-0.8
	42nm,1.1s						
SRU	San Rafael	17.63	122	eP	P	15 40 14.5	+0.8
SVW2	Sparrevohn	17.98	317	eP	P	15 40 17.9	0.0
INK	Inuvik	18.19	356	eP	P	15 40 21.3	+0.8
	19nm,1.1s						
LDFC	Landfair	18.59	139	P	P	15 40 27.1	+1.5
PV10	Paradox Valley	18.97	121	eP	P	15 40 30.3	+0.1
PHWY	Pilot Hill	19.15	109	eP	P	15 40 31.4	-0.9
PV01	Paradox Valley	19.40	121	eP	P	15 40 34.6	-0.7
ISCO	Idaho Springs	19.98	112	eP	P	15 40 40.6	-1.1
	30nm,1.5s						
IMA	Indian Mountai	20.01	331	eP	P	15 40 43.5	+1.6
	18nm,1.1s						
SDCO	Great Sand Dun	21.40	116	eP	P	15 40 56.0	-0.4
	88nm,1.8s,mb4.8						
ULM	Lac du Bonnet	21.61	77	eP	P	15 40 58.7	+0.3
	102nm,0.9s,mb5.2						
FCC	Fort Churchill	22.19	54	eP	P	15 41 02.4	-1.8
	86nm,1.7s,mb4.9						
TUC	Tucson	22.84	135	eP	P	15 41 09.1	-1.6
	7.1nm,0.6s,mb4.3						
EYMN	Ely	25.03	80	eP	P	15 41 32.5	+0.7
	45nm,1.0s,mb5.0						
AMTX	Amarillo	25.61	116	eP	P	15 41 37.1	-0.3
	38nm,0.9s,mb4.9						
MNTX	Cornudas Mount	25.98	126	eP	P	15 41 41.3	+0.4
	30nm,1.5s,mb4.6						
WMOK	Wichita Mounta	27.40	113	eP	P	15 41 53.1	-0.8
	30nm,1.4s,mb4.6						
CCM	Cathedral Cave	29.92	99	eP	P	15 42 16.1	-0.5
JCT	Junction City	29.92	120	eP	P	15 42 15.1	-1.6
	10nm,0.9s,mb4.6						
MIAR	Mount Ida	30.68	107	eP	P	15 42 23.2	-0.1
	20nm,1.3s,mb4.8						
OXF	Oxford	33.29	103	eP	P	15 42 45.4	-0.8
	76nm,1.3s,mb5.5						
BILL	Bilibino	35.24	324	eP	P	15 43 01.7	-0.9
CPCT	Cooper Cave	35.78	97	P	P	15 43 07.3	-0.3
SUMG	Summit	43.40	26	eP	P	15 44 11.6	+1.4
	6.1nm,0.8s,mb4.4						
SSE	Sheshan	77.58	304	P	P	15 48 03.3	-0.8
SSE				AMB	AMB		
	comp=Z,15nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,63nm,3.7s						
SSE	Sheshan	77.58	304	P	P	15 48 03.3	-0.8
	comp=Z,15nm,0.7s,mb5.0						
NJ2	Nanjing	78.06	306	eP	P	15 48 06.7	0.0
NJ2				AP	pP	15 48 11.0	+1.1
NJ2				XP	sP	15 48 13.5	+2.5
NJ2				PP	PP	15 51 04.0	-1.2
NJ2				S	S	15 57 57.0	-2.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,240nm,7.8s						
NJ2				LR	LR		
	comp=N,440nm,24.8s,MS4.9						
NJ2				LR	LR		
	comp=E,550nm,22.0s,MS4.9						
NJ2				LR	LR		
	comp=Z,280nm,22.6s,MS4.5						
LZH	Lanzhou	81.85	319	eP	P	15 48 27.5	+0.6
LZH				PP	PP	15 51 36.5	+0.1
LZH				AMB	AMB		
	comp=Z,24nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,87nm,5.2s						
LZH				LR	LR		
	comp=N,351nm,15.0s						
LZH				LR	LR		
	comp=Z,492nm,17.7s,MS4.9						
LZH	Lanzhou	81.85	319	eP	P	15 48 27.5	+0.6
	comp=Z,24nm,1.5s,mb4.9						
LZH				pP	pP	15 48 30.7	+0.6
LZH				sP	sP	15 48 32.3	+1.1
LZH				PP	PP	15 51 36.5	+0.1
LZH				LR	LR		
	comp=Z,490nm,17.7s,MS4.9						
GYA	Guiyang	88.72	312	P	P	15 49 03.2	+1.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.0						
KMI	Kunming	91.71	314	P	P	15 49 15.0	-0.2
KMI				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb5.1						
KMI	Kunming	91.71	314	P	P	15 49 15.0	-0.2
	comp=Z,6.0nm,0.6s,mb5.1						

CSEM ***03*** *15:49:46.1±0.3, 56.03N×11.14E, h8*^{km}*, ML3.0, Error ellipse: s-maj=9.8km s-min=4.1km az=51.0*

NEIC ***03*** *15:49:47.6, 56.14N×11.20E, h0*^{km}*, ML3.0(BER), After BER.*

NAO ***03*** *15:49:48.4±3.1, 56.27N×11.15E, ML3.0*

BER ***03*** *15:49:49.2±3.4, 56.20N×11.26E, MD3.1, ML3.0(NAO)*

ISC 03 15:49:48.2±0.5**, 56.34N**±0.04×**11.60E**±0.08**, h10**^{km}**, n16,** σ**1**^{s}**28**/25**, 1C, Denmark**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COP	Copenhagen	0.81	144	iP	Pb	15 50 03.2	-0.7
COP				eS	Sb	15 50 15.4	+0.8
MUD	Monsted U'grnd	1.35	276	⇑iP	Pb	15 50 14.0	+0.8
MUD				iS	Sg	15 50 34.3	+0.9
RGN	Rugen	2.05	151	ePn	Pn	15 50 22.4	-0.8
BSD	Bornholm Skovb	2.24	122	iP	Pn	15 50 24.9	-1.1
BSD				iS	Sn	15 50 55.9	+1.9
SNART	Snartemo	3.11	312	eP	Pn	15 50 37.0	-1.3
KONO	Kongsberg	3.48	343	eP	Sg	15 51 45.7	+1.5
HFS	Hagfors	3.96	15	Pn	Pn	15 50 52.2	+1.8
	baz=203,slow=14						
HFS				Pg	Pg	15 51 03.2	-4.1
	baz=194,slow=16						
HFS				Sn	Sn	15 51 41.0	+3.6
	baz=206,slow=37						
HFS				Lg		15 51 56.8	
	baz=204,slow=37						
HFS	Hagfors	3.96	15	Pg	Pg	15 51 03.2	-4.0
HFS				Sn	Sn	15 51 41.0	+3.6
	SNR=4.1						
BLS5	Blasjo	4.13	320	eP	Pn	15 50 53.2	+0.3
BLS5				eS	Sn	15 51 38.8	-3.0
NC6	NORSAR Subarra	4.42	359	Pn	Pn	15 50 57.5	+0.5
NC6				Lg		15 52 10.7	
ODD1	Odda	4.44	326	eP	Pn	15 50 56.6	-0.7
ODD1				eS	Sn	15 51 42.8	-6.9
NAO01	NORSAR Array S	4.53	356	ePn	Pn	15 50 58.7	+0.2
NAO01				eS	Sg	15 52 08.0	-11
NAO01	NORSAR Array S	4.53	356	ePn	Pn	15 50 58.7	+0.2
NB2	NORSAR Subarra	4.71	358	Pn	Pn	15 51 01.2	+0.1
NB2				Lg		15 52 17.8	
FIA0	FINESS Array S	9.06	50	Pn	P	15 52 00.8	-1.3
	baz=244,slow=12						
ARA0	ARCESS Array S	14.61	20	Pn	P	15 53 13.2	-3.3
	baz=207,slow=14						

NNC ***03*** *15:51:20.6±6.5, 41.87N×51.31E, Error ellipse: s-maj=70.6km s-min=50.8km az=118.0*

CSEM ***03*** *15:51:21.6±0.3, 40.80N×51.63E, h80*^{km}*, ML4.4, Error ellipse: s-maj=7.0km s-min=3.4km az=21.0*

TEH ***03*** *15:51:23.0, 40.80N×51.62E, h24*^{km}*, Mn4.4*

THR ***03*** *15:51:23.1±0.6, 40.50N×51.40E, h15*^{km}*, ML3.5*

ISC 03 15:51:22.0±0.8**, 40.74N**±0.04×**51.56E**±0.05**, h62**^{km}±13^{km}**, n39,** σ**1**^{s}**16**/47**, mb4.1**/4**, 8C-3D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRMI	Germi	3.42	237	ePN	P	15 52 14.6	+0.4
GRMI				AML	AML	15 52 56.3	
	comp=N,271nm,0.1s						
IHSH	Hashtroud	4.12	235	Pn	P	15 52 33.6	+10
IHRS	Heris	4.25	237	Pn	P	15 52 26.7	+0.9
IPRN	Paran-Amol	4.52	173	Pn	P	15 52 28.7	-0.9
IMIN	Minoodasht	4.59	140	Pn	P	15 52 30.0	-0.6
IBST	Bostanabad	4.73	232	Pn	P	15 52 33.1	+0.6
IAFJ	Afjeh	4.88	179	Pn	P	15 52 34.7	+0.1
IAFJ				Sn	S	15 53 28.4	-1.9
ITBZ	Tabriz	4.88	241	Pn	P	15 52 35.4	+0.8
IMHD	Mahdasht	5.09	188	Pn	P	15 52 37.7	+0.1
IMHD				Sn	S	15 53 33.9	-1.8
DAMV	Damavand	5.11	176	ePN	P	15 52 38.6	+0.8
IDMV	Damavand	5.17	176	Pn	P	15 52 39.8	+1.2
IFIR	Firoozkooh	5.17	169	Pn	P	15 52 39.4	+0.7
IFIR				Sn	S	15 53 35.5	-2.2
TI2	Plekhanov	5.23	283	eS	S	15 53 37.6	-1.6
IAZR	Azarshahr	5.30	237	Pn	P	15 52 41.4	+0.9
MAKU	Maku	5.46	258	ePN	P	15 52 44.0	+1.4
MAKU				AML	AML	15 53 46.2	
	comp=N,12nm,0.5s						
ILAS	Lasjerd	5.46	168	Pn	P	15 52 44.0	+1.4
IRAZ	Razeghan	5.48	194	Pn	P	15 52 42.8	-0.1
IRAZ				Sn	S	15 53 43.0	-2.3
IANJ	Anjiloo	5.58	160	Pn	P	15 52 44.6	+0.3
SNGE	Sanandaj	6.55	212	ePN	P	15 52 57.8	-0.1
NASN	Na'in	7.99	172	ePN	P	15 53 17.6	-0.1
USP	Ospenovka	17.23	74	P	P	15 55 18.8	-0.9
	SNR=9.0						
AAK	Ala-Archa	17.23	76	⇓P	P	15 55 21.6	+1.8
	comp=N,1.1nm,0.3s						
AAK				⇓S	S	15 58 33.8	+6.3
	comp=N,3.7nm,1.0s						
AAK	Ala-Archa	17.23	76	P	P	15 55 21.9	+2.2
	SNR=7.3						
CHMS	Chumysh	17.41	75	P	P	15 55 21.9	-0.1
	SNR=6.1						
KBK	Karagaybulak	17.56	76	P	P	15 55 24.3	+0.4
	SNR=17						
BVA0	Borovoye Array	17.73	40	⇑P	P	15 55 23.8	-2.1
	comp=N,0.6nm,0.3s,baz=226,slow=12,SNR=140						
BVA0				⇑S	S	15 58 28.7	-10
	comp=N,3.9nm,0.7s,baz=233,slow=25,SNR=18						
KZA	Kyzart	17.81	78	P	P	15 55 27.2	+0.2
	SNR=9.5						
ARQ	Araqi	17.85	165	⇑P	P	15 55 27.4	-0.2
TKM2	Tokmak 2	18.03	75	P	P	15 55 29.6	-0.1
	SNR=41						
CHKZ	Chkalovo	18.23	38	⇑P	P	15 55 28.8	-3.2
	comp=N,1.1nm,0.3s						
CHKZ				⇑S	S	15 58 39.9	-10
	comp=N,16nm,0.8s						
SHAO	Shalim	22.91	170	P	P	15 56 22.9	+1.7
SHAO	Shalim	22.91	170	⇑P	P	15 56 22.9	+1.7
MK31	Makanchi Array	22.91	64	⇑P	P	15 56 22.0	+1.0
	comp=N,1.0nm,0.3s,mb3.7,baz=258,slow=9.8,SNR=74						
MK31				⇑S	S	16 00 34.3	+12
	comp=N,2.5nm,0.7s,baz=263,slow=25,SNR=5.3						
RBK	Rabkut	23.27	174	P	P	15 56 26.0	+1.3
	SNR=6.6						
ABTO	Aybut	23.35	176	⇓P	P	15 56 26.6	+1.0
	SNR=9.5						
JOF	Joensuu	25.27	338	ep	P	15 56 36.4	-7.3
	comp=N,7.7nm,0.3s,mb4.7						
KAF	Kangasniemi	26.25	333	ep	P	15 56 51.8	-1.0
	comp=N,2.0nm,0.3s,mb4.1,baz=136,slow=4.5						
KEV	Kevo	31.79	344	ep	P	15 57 35.8	-6.4
NB2	NORSAR Subarra	31.82	323	P	P	15 57 41.0	-1.5
	comp=N,1.2nm,0.5s,mb4.0,baz=115,slow=8.6						

CSEM ***03*** *16:00:24.8±0.5, 36.80N×24.19W, h5*^{km}*, MD2.8, Error ellipse: s-maj=11.6km s-min=8.2km az=90.0, After PDA*

PDA ***03*** *16:00:24.8±0.3, 36.80N×24.19W, h5*^{km}*, MD2.8, Error ellipse: s-maj=4.2km s-min=2.7km az=72.0*

SVSA 03 16:00:24.8±0.3**, 36.80N**×**24.19W, h5**^{km}**, MD2.8, Error ellipse: s-maj=4.2km s-min=2.7km az=72.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.73	286	eP	Pg	16 00 36.9	-2.5
PSMN				iS	Sg	16 00 45.8	-3.3
MIRA	Miradouro	1.31	319	eP	Pb	16 00 45.0	-4.5
MIRA				iS	Sb	16 01 00.0	-6.5
FRA1	Furnas	1.32	316	eS	Sb	16 01 00.4	-6.4
PCNG	Congro	1.36	315	erx		16 01 02.2	
VIF	Vila Franca	1.37	314	eS	Sb	16 01 00.5	-7.7
PRCH	Ribeira Ch	1.38	312	erx		16 01 01.4	
MESC	Monte Escuro	1.41	315	eP	Pn	16 00 45.1	-6.1
MESC				iS	Sb	16 01 01.3	-8.0
LFA	Lagoa do Fogo	1.41	314	eP	Pn	16 00 45.5	-5.8

*MDD **03** 16:08:37.2±2.0,36.65N×11.22W,h23^{km}±72^{km},mb4.5/10, Error ellipse: s-maj=81.6km s-min=12.5km az=52.0, PRXIMO*

*NEIC **03** 16:08:37.1,36.68N×11.21W,h19^{km},mb4.6/1,After MDD.*

*CSEM **03** 16:08:38.8±0.2,36.79N×11.16W,h25^{km},ML3.3/9,Error ellipse: s-maj=4.7km s-min=2.8km az=60.0*

INMG 03 16:08:38.3±1.0**,36.58N×11.24W,h31^{km},ML2.7,Error ellipse: s-maj=6.3km s-min=4.2km az=67.0, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	**Sao Teotonio**	2.23	64	*e*Pn	Pn	16 09 11.6	-2.3
PTEO				*e*Sn	Sn	16 09 36.0	-4.7
	37nm,0.2s						
PTEO	**Sao Teotonio**	2.23	64	*e*Pn	Pn	16 09 11.6	-2.3
PTEO				*e*Sn	Sn	16 09 36.0	-4.7
	37nm,0.2s						
PLOU	**Loures**	2.83	35	*e*Pn	Pn	16 09 19.7	-2.8
PLOU				*e*Sn	Sn	16 09 51.4	-4.6
	29nm,0.1s						
PLOU	**Loures**	2.83	35	Pn	Pn	16 09 19.7	-2.8
PLOU				Sn	Sn	16 09 51.4	-4.6
	15nm,0.1s						
MOE	**Montemor**	3.00	49	*e*Pn	Pn	16 09 21.9	-3.1
MOE				*e*Sn	Sn	16 09 54.7	-5.6
PBEJ	**Beja**	3.05	61	*e*Pn	Pn	16 09 22.8	-2.8
PBEJ				*e*Sn	Sn	16 09 55.6	-5.9
	14nm,0.3s						
PBEJ	**Beja**	3.05	61	*e*Pn	Pn	16 09 22.8	-2.8
PBEJ				*e*Sn	Sn	16 09 55.6	-5.9
	14nm,0.3s						
PALC	**Alcoutim**	3.14	73	*e*Pn	Pn	16 09 23.6	-3.3
PALC				*e*Sn	Sn	16 09 58.1	-5.6
	25nm,0.2s						
PALC	**Alcoutim**	3.14	73	*e*Pn	Pn	16 09 23.6	-3.3
PALC				*e*Sn	Sn	16 09 58.1	-5.6
	25nm,0.2s						
EMIN	**Mina Concepcio**	3.83	71	Pn	Pn	16 09 33.6	-3.2
	4.7nm,0.1s,SNR=78						
EMIN				Sn	Sn	16 10 15.2	-6.2
	15nm,0.2s						
EMIN	**Mina Concepcio**	3.83	71	Pn	Pn	16 09 33.6	-3.2
	4.7nm,0.1s,SNR=78						
EMIN				Sn	Sn	16 10 15.2	-6.1
	5.2nm,0.4s						
EBAD	**Badajoz**	3.99	56	Pn	Pn	16 09 35.4	-3.6
	4.9nm,0.1s,SNR=23						
EBAD				Sn	Sn	16 10 17.2	-8.1
	13nm,0.2s						
EBAD	**Badajoz**	3.99	56	Pn	Pn	16 09 35.4	-3.6
	4.9nm,0.1s,SNR=23						
EBAD				Sn	Sn	16 10 17.2	-8.1
	5.9nm,0.3s						
SFS	**San Fernando**	4.06	90	*e*P	Pn	16 09 34.3	-5.7
SFS	**San Fernando**	4.06	90	*e*P	Pn	16 09 34.3	-5.6
ESPR	**Espera**	4.33	85	Pn	Pn	16 09 40.9	-2.9
	6.6nm,0.2s,SNR=18						
ESPR				Sn	Sn	16 10 25.9	-8.1
	63nm,0.2s						
ESPR	**Espera**	4.33	85	Pn	Pn	16 09 41.0	-2.9
ESPR				Sn	Sn	16 10 25.9	-8.1
	4.3nm,0.4s						
PCBR	**Castelo Branco**	4.40	41	*e*Pn	Pn	16 09 41.0	-3.8
PCBR				*e*Sn	Sn	16 10 28.0	-7.6
	6.0nm,0.1s						
PCBR	**Castelo Branco**	4.40	41	Pn	Pn	16 09 41.0	-3.8
PCBR				Sn	Sn	16 10 28.0	-7.6
	3.0nm,0.1s						
PVIS	**Viseu**	4.89	31	*e*Pn	Pn	16 09 47.5	-4.2
PVIS				*e*Sn	Sn	16 10 39.9	-8.0
	10nm,0.1s						
PVIS	**Viseu**	4.89	31	Pn	Pn	16 09 47.5	-4.2
PVIS				Sn	Sn	16 10 39.9	-8.0
	5.1nm,0.1s						
PVRL	**Vila Real**	5.43	29	*e*Sn	Sn	16 10 52.2	-9.4
	6.0nm,0.1s						
PVRL	**Vila Real**	5.43	29	Sn	Sn	16 10 52.2	-9.4
	3.0nm,0.1s						
EADA	**Adamuz**	5.54	71	Pn	Pn	16 09 57.5	-3.3
	3.9nm,0.1s,SNR=12						
EADA				Sn	Sn	16 10 55.2	-9.0
	2.7nm,0.2s						
EADA	**Adamuz**	5.54	71	Pn	Pn	16 09 57.5	-3.3
	3.9nm,0.1s,SNR=12						
EADA				Sn	Sn	16 10 55.2	-9.0
	3.2nm,0.5s						
ELOB	**Lobios**	5.82	24	Pn	Pn	16 10 00.3	-4.6
	1.8nm,0.1s,SNR=12						
ELOB				Sn	Sn	16 11 00.9	-10
	3.8nm,0.1s,SNR=7.9						
ELOB	**Lobios**	5.82	24	Pn	Pn	16 10 00.3	-4.6
	1.8nm,0.1s,SNR=12						
ELOB				Sn	Sn	16 11 00.9	-11
	SNR=7.9						
EZAM	**Zamans**	5.90	19	Sn	Sn	16 11 03.4	-10
	4.4nm,0.1s,SNR=5.3						
EBAN	**Banos Encina**	6.14	73	Pn	Pn	16 10 05.1	-4.3
	2.1nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	16 11 11.1	-8.3
	2.2nm,0.2s,SNR=7.9						
PBRG	**Braganca**	6.28	32	*e*Pn	Pn	16 10 06.6	-4.7
PBRG				*e*Sn	Sn	16 11 12.9	-10
	3.1nm,0.1s						
PBRG	**Braganca**	6.28	32	Pn	Pn	16 10 06.6	-4.7
PBRG				Sn	Sn	16 11 12.9	-10
	1.6nm,0.1s						
ECAL	**Calabor**	6.39	32	Pn	Pn	16 10 08.0	-4.8
	2.1nm,0.1s,SNR=8.1						
ECAL				Sn	Sn	16 11 15.3	-10
	1.6nm,0.2s,SNR=7.9						
ECAL	**Calabor**	6.39	32	Pn	Pn	16 10 08.1	-4.8
ECAL				Sn	Sn	16 11 15.3	-10
	SNR=7.9						
ESDC	**Sonseca Array**	6.51	60	Pn	Pn	16 10 10.3	-4.4
	1.4nm,0.2s,baz=246,slow=13,SNR=9.9						
ESDC				Sn	Sn	16 11 19.7	-8.9
	1.8nm,0.3s,baz=246,slow=23,SNR=8.7						
ESDC	**Sonseca Array**	6.51	60	Pn	Pn	16 10 10.3	-4.3
	1.4nm,0.2s,SNR=9.9						
ESDC				Sn	Sn	16 11 19.7	-8.9
	1.8nm,0.3s,SNR=8.7						
EMAZ	**Mazaricos**	6.59	15	Sn	Sn	16 11 16.7	-14
	2.8nm,0.1s,SNR=7.9						
EQES	**Quesada**	6.63	77	Pn	Pn	16 10 10.8	-5.5
	0.4nm,0.1s,SNR=4.0						
EQES				Sn	Sn	16 11 21.8	-10
	0.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	6.63	77	Pn	Pn	16 10 10.9	-5.4
EQES				Sn	Sn	16 11 21.8	-10
	SNR=7.9						
EINC	**Incio**	6.77	25	Pn	Pn	16 10 13.2	-5.0
	1.9nm,0.1s,SNR=7.8						
EINC				Sn	Sn	16 11 24.2	-11
	SNR=7.9						
EINC	**Incio**	6.77	25	Pn	Pn	16 10 13.2	-5.0
	1.9nm,0.1s,SNR=7.8						
EINC				Sn	Sn	16 11 24.2	-11
	SNR=7.9						
EPON	**Pontenova**	7.43	24	Pn	Pn	16 10 21.7	-5.7
	3.1nm,0.2s,SNR=7.9						
EPON				Sn	Sn	16 11 38.7	-13
	0.9nm,0.2s,SNR=7.9						
EPON	**Pontenova**	7.43	24	Pn	Pn	16 10 21.7	-5.8
	3.1nm,0.2s,SNR=7.9						
EPON				Sn	Sn	16 11 38.7	-13
	SNR=7.9						
EARI	**Arriondas**	8.15	33	Pn	P	16 10 32.9	-4.6
EARI	**Arriondas**	8.15	33	Pn	P	16 10 32.9	-4.6
NAO01	**NORSAR Array S**	28.05	23	P	P	16 14 25.1	-3.5
	14nm,1.1s						

*NIED **03** 16:08:00,34.00N×135.50E,h59^{km},Mw4.0 Best double couple: $M_0 1.05\times10^{15}$ NP1:ϕ_s162°,δ86°,λ27°. NP2:ϕ_s70°, δ63°,λ176°.*

*JMA **03** 16:08:47.8,33.97N×135.51E,h57^{km}±1^{km},M4.0 Broadband fault plane solution: P waves. NP1:ϕ_s71°,δ59°, λ178°. NP2:ϕ_s162°,δ89°,λ31°. Principal axes: T Plg22°, Azm31°; N Plg59°, Azm164°; P Plg20°, Azm292°;*

JMA Felt II J1.

ISC 03 16:08:47.0±1.0**,33.99N**±0.05×**135.53E**±0.05**,h61^{km}**±8^{km}**, n9,**$\sigma 0^{s}37$/18**,3C-4D,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	0.20	227	⇑P	P	16 08 56.7	+0.2
JWM				S	S	16 09 03.1	-0.5
JWY	**Kouya**	0.23	13	P	P	16 08 57.5	+0.7
JWY				S	S	16 09 04.1	+0.1
JWZ	**Kozaga**	0.48	161	⇓P	P	16 08 59.2	+0.2
JWZ				S	S	16 09 07.5	-0.2
JHE	**Heguri**	0.68	11	⇑P	P	16 09 01.5	+0.4
JHE				S	S	16 09 11.5	-0.1
JAJ2	**Tsuna**	0.69	309	⇓P	P	16 09 01.7	+0.5
JAJ2				S	S	16 09 11.7	-0.1
JAI	**Aioi**	0.92	258	⇓P	P	16 09 04.4	+0.2
JAI				S	S	16 09 16.5	-0.6
TSUJ	**Tsu 2**	1.03	45	⇑P	P	16 09 06.0	+0.3
TSUJ				S	S	16 09 19.3	-0.3
JIE	**Ise**	1.05	67	⇓P	P	16 09 06.5	+0.4
JIE				S	S	16 09 20.0	-0.2
MAT	**Matsushiro**	3.36	40	P	P	16 09 37.9	-0.5
MAT				S	S	16 10 16.8	-0.5

*INMG **03** 17:32:05.6±1.3,37.88N×1.81W,h10^{km},ML2.9,Error ellipse: s-maj=2.3km s-min=1.8km az=162.0*

*CSEM **03** 17:32:05.6±0.1,37.89N×1.77W,h5^{km},ML3.3/16,Error ellipse: s-maj=2.6km s-min=1.9km az=153.0*

*SFS **03** 17:32:05.0,37.86N×1.80W*

*LDG **03** 17:32:08.0±0.2,37.90N×1.87W,h5^{km},Md3.9/1,Ml3.1/4, Error ellipse: s-maj=5.0km s-min=2.5km az=142.0*

*NEIC **03** 17:32:08.0,37.90N×1.87W,h5^{km},ML3.1(LDG), MN2.9(MDD),After LDG.*

NEIC Felt [II] at Bullas and La Paca.

MDD 03 17:32:05.4±0.2**,37.86N×1.81W,mbLg2.8**/29**,2C,Error ellipse: s-maj=3.5km s-min=2.1km az=4.0,PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	0.45	92	⇑Pg	Pg	17 32 13.5	-0.8
	24nm,0.1s,SNR=18						
EMUR				Lg		17 32 19.5	
	330nm,0.2s,SNR=5.0						
EMUR	**La Murta**	0.45	92	Pg	Pg	17 32 13.5	-0.8
	24nm,0.1s,SNR=18						
CART	**Cartagena**	0.69	113	*e*Pg	Pg	17 32 18.1	-1.1
CART				*e*Sg	Sg	17 32 27.6	-0.8
CART	**Cartagena**	0.69	113	⇑P	Pg	17 32 18.5	-0.7
CART				S	Sg	17 32 27.4	-1.1
CART	**Cartagena**	0.69	113	*e*Pg	Pg	17 32 18.1	-1.1
CART	**Cartagena**	0.69	113	*i* P	Pg	17 32 18.5	-0.7
CART				*e*Sg	Sg	17 32 27.6	-0.9
ENIJ	**Nijar**	0.94	200	Pg	Pg	17 32 22.6	-1.7
	30nm,0.2s,SNR=9.1						
ENIJ				Lg		17 32 36.5	
	161nm,0.4s,SNR=5.0						
EVIA	**Vianos**	0.95	325	Pg	Pg	17 32 23.2	-1.2
	29nm,0.3s,SNR=61						
EVIA				Lg		17 32 36.5	
	196nm,0.3s,SNR=5.0						
EQES	**Quesada**	1.00	267	Pg	Pg	17 32 24.3	-1.1
	35nm,0.3s,SNR=66						
EQES				Lg		17 32 38.7	
	297nm,0.2s,SNR=14						
EQES	**Quesada**	1.00	267	Pg	Pg	17 32 24.3	-1.1
	35nm,0.3s,SNR=66						
EBER	**Berja**	1.29	222	Pg	Pg	17 32 28.6	-2.6
	9.2nm,0.2s,SNR=41						
EBER				Lg		17 32 47.4	
	186nm,0.6s,SNR=5.0						
EBER	**Berja**	1.29	222	Pg	Pg	17 32 28.6	-2.6
	9.2nm,0.2s,SNR=41						
EBEN	**Beniarda**	1.50	55	Pg	Pg	17 32 32.2	-3.2
	3.7nm,0.2s,SNR=20						
EBEN				Lg		17 32 53.2	
	21nm,0.3s,SNR=5.0						
EBEN	**Beniarda**	1.50	55	Pg	Pg	17 32 32.2	-3.2
	3.7nm,0.2s,SNR=20						
EBAN	**Banos Encina**	1.59	282	Pg	Pg	17 32 33.6	-3.6
	20nm,0.2s,SNR=7.9						
EBAN				Lg		17 32 56.0	
	248nm,0.4s,SNR=7.9						
ELOJ	**Sierra Loja**	2.00	250	Pn	Pn	17 32 38.5	-2.3
	2.7nm,0.1s,SNR=7.9						
ELOJ				Pg	Pg	17 32 41.9	-3.4
	5.8nm,0.2s,SNR=10						
ELOJ				Lg		17 33 08.7	
	13nm,0.2s,SNR=5.0						
EADA	**Adamuz**	2.21	279	Pn	Pn	17 32 41.9	-1.9
	5.5nm,0.2s,SNR=51						
EADA				Sn	Sn	17 33 09.2	-3.0
	27nm,0.2s,SNR=5.0						
EADA				Lg		17 33 16.5	
	35nm,0.1s,SNR=8.2						
EADA	**Adamuz**	2.21	279	Pn	Pn	17 32 41.9	-1.9
	5.5nm,0.2s,SNR=51						
EADA				Sn	Sn	17 33 09.2	-3.1
	27nm,0.2s,SNR=5.0						
ESDC	**Sonseca Array**	2.47	318	Pn	Pn	17 32 45.2	-2.4
	1.4nm,0.1s,baz=124,slow=13,SNR=17						
ESDC				Pg	Pg	17 32 50.1	-4.7
	10nm,0.1s,baz=120,slow=16,SNR=7.9						
ESDC				Lg		17 33 21.0	
	11nm,0.2s,baz=132,slow=28,SNR=7.9						
ESDC	**Sonseca Array**	2.47	318	Pn	Pn	17 32 45.2	-2.4
	1.4nm,0.1s,slow=13,SNR=17						
ESDC	**Sonseca Array**	2.47	318	Pg	Pg	17 32 50.1	-4.7
	10nm,0.1s,SNR=7.9						
ESLA	**Sonseca Array**	2.47	318	*e*Pn	Pn	17 32 48.5	+0.9
ESLA	**Sonseca Array**	2.47	318	*e*Pn	Pn	17 32 48.5	+0.9
EMIJ	**Mijas**	2.70	242	Pn	Pn	17 32 49.7	-1.1
	3.6nm,0.3s,SNR=7.2						
EMIJ				Lg		17 33 34.9	
	9.5nm,0.3s,SNR=4.0						
EMOS	**Mosqueruela**	2.71	22	Pn	Pn	17 32 49.5	-1.4
	1.0nm,0.1s,SNR=14						
EMOS				Sn	Sn	17 33 21.7	-3.2
	3.8nm,0.3s,SNR=5.0						
EMOS				Lg		17 33 29.8	
	7.8nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	2.71	22	Pn	Pn	17 32 49.5	-1.4
	1.0nm,0.1s,SNR=14						
EMOS				Sn	Sn	17 33 21.7	-3.1
	3.8nm,0.3s,SNR=5.0						
EIBI	**Ibiza**	2.73	64	Pn	Pn	17 32 49.0	-2.3
	3.3nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	17 33 20.0	-5.5
	3.9nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	2.73	64	Pn	Pn	17 32 49.0	-2.3
	3.3nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	17 33 20.0	-5.5
	3.9nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	3.32	327	Pn	Pn	17 32 58.6	-1.1
	1.2nm,0.2s,SNR=21						
GUD				Pg	Pg	17 33 07.0	-4.7
	7.3nm,0.2s,SNR=7.8						
GUD				Lg		17 33 50.0	
	18nm,0.2s,SNR=8.4						
ESPR	**Espera**	3.38	254	Pn	Pn	17 32 58.3	-2.1
	0.1nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	17 33 40.0	-1.8
	3.9nm,0.3s,SNR=4.0						
ESPR	**Espera**	3.38	254	Pn	Pn	17 32 58.3	-2.1
	0.1nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	17 33 40.0	-1.8
	3.9nm,0.3s,SNR=4.0						
EBR	**Ebro Roquetas**	3.45	30	*e*SN	Sn	17 33 40.0	-3.7
EBR				*e*S*	Sb	17 33 51.3	+1.3
ERTA	**Horta de San J**	3.51	28	Pn	Pn	17 33 00.4	-1.8
	1.9nm,0.1s,SNR=6.1						
ERTA				Sn	Sn	17 33 40.7	-4.4
	2.5nm,0.2s,SNR=5.0						
ERTA	**Horta de San J**	3.51	28	Pn	Pn	17 33 00.4	-1.9
	1.9nm,0.1s,SNR=6.1						
ERTA				Sn	Sn	17 33 40.7	-4.4
	2.5nm,0.2s,SNR=5.0						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	17 33 04.0	-3.2
	1.2nm,0.1s,SNR=27						
EMIN				Sn	Sn	17 33 47.8	-6.1
	4.1nm,0.2s,SNR=5.0						
EMIN				Lg		17 34 05.4	
	15nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	17 33 04.0	-3.2
	1.2nm,0.1s,SNR=27						
EMIN				Sn	Sn	17 33 47.8	-6.1
	4.1nm,0.2s,SNR=5.0						
ESAC	**San Caprasio**	3.99	15	Pn	Pn	17 33 06.3	-2.9
	1.8nm,0.2s,SNR=7.9						
ESAC				Lg		17 34 10.8	
	53nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	3.99	15	Pn	Pn	17 33 06.3	-2.9
	1.8nm,0.2s,SNR=7.9						
EPOB	**Poblet**	4.14	32	Pn	Pn	17 33 07.5	-3.7
	4.6nm,0.5s,SNR=7.9						
EPOB				Sn	Sn	17 33 55.0	-6.1
	0.8nm,0.1s,SNR=7.9						
EPOB				Lg		17 34 12.7	
	1.5nm,0.3s,SNR=4.0						
EPOB	**Poblet**	4.14	32	Pn	Pn	17 33 07.5	-3.7
	4.6nm,0.5s,SNR=7.9						
EPOB				Sn	Sn	17 33 55.0	-6.1
	0.8nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	4.19	284	Pn	Pn	17 33 08.1	-4.0
	0.6nm,0.1s,SNR=6.1						
EBAD				Sn	Sn	17 33 57.5	-5.0
	27nm,0.2s,SNR=5.0						
EBAD				Lg		17 34 18.5	
	31nm,0.2s,SNR=4.0						
EBAD	**Badajoz**	4.19	284	Pn	Pn	17 33 08.1	-3.9
	0.6nm,0.1s,SNR=6.1						
EBAD				Sn	Sn	17 33 57.5	-5.0
	27nm,0.2s,SNR=5.0						
PALC	**Alcoutim**	4.52	267	*e*Pn	Pn	17 33 13.2	-3.4
PALC				*e*Sn	Sn	17 34 03.6	-7.1
	11nm,0.3s						
PALC	**Alcoutim**	4.52	267	*e*Pn	Pn	17 33 13.2	-3.4
PALC				*e*Sn	Sn	17 34 03.6	-7.1
	11nm,0.3s						
EMIR	**Miracle**	4.79	31	Pn	Pn	17 33 18.6	-1.9
	0.4nm,0.0s,SNR=4.0						
EMIR				Sn	Sn	17 34 13.4	-4.2
	0.1nm,0.1s,SNR=4.0						
EMIR	**Miracle**	4.79	31	Pn	Pn	17 33 18.6	-1.9
	0.4nm,0.0s,SNR=4.0						
PBEJ	**Beja**	4.79	274	*e*Pn	Pn	17 33 17.0	-3.6
PBEJ				*e*Sn	Sn	17 34 10.2	-7.5
PBEJ				*e*Sg	Sg	17 34 38.0	-7.0
	7.5nm,0.1s						
PBEJ	**Beja**	4.79	274	*e*Pn	Pn	17 33 17.0	-3.6
PBEJ				*e*Sn	Sn	17 34 10.2	-7.5
PBEJ				*e*Sg	Sg	17 34 38.0	-7.0
	7.5nm,0.1s						
PCBR	**Castelo Branco**	4.85	296	*e*Pn	Pn	17 33 17.7	-3.7
PCBR				*e*Sn	Sn	17 34 12.8	-6.3
PCBR				*e*Sg	Sg	17 34 39.6	-7.2
	19nm,0.5s						
PCBR	**Castelo Branco**	4.85	296	*e*Pn	Pn	17 33 17.7	-3.7
PCBR				*e*Sn	Sn	17 34 12.8	-6.3
PCBR				*e*Sg	Sg	17 34 39.6	-7.2
	19nm,0.5s						
EVO	**Evora**	4.94	280	*e*Pn	Pn	17 33 20.7	-1.9
EVO				*e*Sn	Sn	17 34 16.1	-5.2
EVO				*e*Sg	Sg	17 34 43.5	-6.2
	36nm,0.4s						
EBIE	**Bielsa**	5.04	17	Pn	Pn	17 33 22.0	-2.1
	2.1nm,0.3s,SNR=10						
EBIE				Sn	Sn	17 34 17.5	-6.5
	0.7nm,0.2s,SNR=7.9						
EBIE				Lg		17 34 41.9	
	2.2nm,0.4s,SNR=4.0						
EBIE	**Bielsa**	5.04	17	Pn	Pn	17 33 22.0	-2.1
	2.1nm,0.3s,SNR=10						
EBIE				Sn	Sn	17 34 17.5	-6.5
	0.7nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	5.12	10	*e*Pn	Pn	17 33 23.3	-1.9
ETSF				*e*Sn	Sn	17 34 19.2	-6.7
ETSF				*e*Sg	Sg	17 34 47.4	-8.5
	3.5nm,0.4s						
MTE	**Manteigas**	5.13	301	*e*Sg	Sg	17 34 49.3	-6.9
	19nm,0.6s						
MTE	**Manteigas**	5.13	301	*e*Sg	Sg	17 34 49.3	-6.9
	19nm,0.6s						
MOE	**Montemor**	5.20	279	*e*Sn	Sn	17 34 20.7	-7.2
MOE				*e*Sg	Sg	17 34 51.4	-7.1
SJPF	**Ste Jean**	5.26	5	*e*Pn	Pn	17 33 24.5	-2.7
SJPF				*e*Sn	Sn	17 34 21.9	-7.6
SJPF				*e*Sg	Sg	17 34 51.7	-9.0
	2.3nm,0.4s						
EALK	**Alkurruntz**	5.36	2	Pn	Pn	17 33 25.9	-2.7
	4.2nm,0.3s,SNR=6.7						
EALK				Sn	Sn	17 34 24.4	-7.5
	1.7nm,0.2s,SNR=5.0						
EPF	**Esparros**	5.42	17	*e*Pn	Pn	17 33 27.1	-2.3
EPF				*e*Sn	Sn	17 34 26.6	-6.8
EPF				*e*Sg	Sg	17 34 57.3	-8.4
	4.6nm,0.4s						
PBRG	**Braganca**	5.47	318	*e*Pn	Pn	17 33 26.3	-3.8
PBRG				*e*Sg	Sg	17 34 59.9	-7.7
	9.4nm,0.5s						
PBRG	**Braganca**	5.47	318	*e*Pn	Pn	17 33 26.3	-3.8
PBRG				*e*Sg	Sg	17 34 59.9	-7.7
	9.4nm,0.5s						
PTEO	**Sao Teotonio**	5.50	269	*e*Pn	Pn	17 33 26.6	-3.9
PTEO				*e*Sn	Sn	17 34 27.7	-7.7
PTEO				*e*Sg	Sg	17 35 01.4	-7.0
	14nm,0.6s						
PTEO	**Sao Teotonio**	5.50	269	Pn	Pn	17 33 26.6	-3.9
PTEO				Sn	Sn	17 34 27.7	-7.7
PTEO				Lg		17 35 01.4	
	7.2nm,0.6s						
ELAN	**Lanestosa**	5.51	347	Pn	Pn	17 33 27.8	-2.8
	0.3nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	5.51	347	Pn	Pn	17 33 27.8	-2.8
PVIS	**Viseu**	5.52	303	*e*Pn	Pn	17 33 27.8	-3.0
PVIS				*e*Sn	Sn	17 34 27.9	-8.0
PVIS				*e*Sg	Sg	17 34 58.5	-11
ECAL	**Calabor**	5.57	319	Pn	Pn	17 33 28.0	-3.5
	1.6nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	17 34 28.0	-9.1
	1.3nm,0.2s,SNR=7.9						
ECAL				Lg		17 34 57.8	
	8.9nm,0.4s,SNR=7.9						
ECAL	**Calabor**	5.57	319	Pn	Pn	17 33 28.0	-3.5
ECAL				Sn	Sn	17 34 28.0	-9.1
PVRL	**Vila Real**	5.70	309	*e*Sn	Sn	17 34 32.5	-7.9
EARI	**Arriondas**	6.02	336	Pn	Pn	17 33 35.2	-2.7
	1.5nm,0.1s,SNR=14						
EARI				Sn	Sn	17 34 39.9	-8.6
	0.0nm,0.1s,SNR=7.9						
EARI				Lg		17 35 16.1	
	57nm,1.4s,SNR=5.0						
EARI	**Arriondas**	6.02	336	Pn	Pn	17 33 35.2	-2.7
EARI				Sn	Sn	17 34 39.9	-8.6
ELOB	**Lobios**	6.26	312	Pn	Pn	17 33 36.9	-4.3
	0.3nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	17 34 45.1	-9.3
	2.3nm,0.2s,SNR=7.9						
ELOB				Lg		17 35 23.3	
	4.5nm,0.3s,SNR=4.9						
ELOB	**Lobios**	6.26	312	Pn	Pn	17 33 36.9	-4.3
ELOB				Sn	Sn	17 34 45.1	-9.3
MTLF	**Montolieu**	6.27	28	*e*Pn	Pn	17 33 39.0	-2.4
LFF	**La Frestale**	7.33	14	*e*Pn	Pn	17 33 52.6	-3.7
CAF	**Calviac**	7.63	21	*e*Pn	Pn	17 33 56.9	-3.7
QUIF	**Quistinic**	10.10	355	*e*Pn	P	17 34 30.4	-4.3
QUIF				*e*Sn	S	17 36 16.7	-13
SGMF	**Saint Gilles**	10.40	357	*e*Sn	S	17 36 24.0	-13

*IPEC **03** 17:44:46.8±0.4,51.58N×16.22E,ML2.4/2,Error ellipse: s-maj=11.3km s-min=2.4km az=94.0*

*NEIC **03** 17:44:47.0±0.8,51.59N×16.09E,h5^{km},ML3.2(SZGRF), ML3.0(VIE),Error ellipse: s-maj=11.1km s-min=5.8km az=211.0*

*PRU **03** 17:44:48.0,51.52N×16.03E,Felt In Harrachov*

*BGR **03** 17:44:48.2±0.6,51.45N×16.11E,h1^{km},ML3.2/10,Error ellipse: s-maj=8.9km s-min=5.6km az=168.0*

*CSEM **03** 17:44:49.0±0.1,51.48N×16.04E,h2^{km},ML3.5/4,Error ellipse: s-maj=2.9km s-min=1.5km az=16.0*

WAR 03 17:44:48.3,51.54N×16.03E,h1^{km},ML3.0,1C-4D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.71	166	⇓*i*Pg	Pg	17 45 01.4	-1.2
KSP				*e*		17 45 03.3	
KSP				*i* Sg	Sg	17 45 11.1	-1.0
KSP				*i*		17 45 15.1	

KSP	Ksiaz	0.71	166	*i* PG	Pg	17 45 01.4	-1.2
KSP				*e*SG	Sg	17 45 11.4	-0.7
KSP	Ksiaz	0.71	166	*e*Pg	Pg	17 45 01.5	-1.1
KSP				*e*Sg	Sg	17 45 11.1	-1.0
KSP	Ksiaz	0.71	166	⇓*i*Pg	Pg	17 45 01.4	-1.2
KSP				*i* Sg	Sg	17 45 11.1	-1.0
UPC	Upice	1.03	180	*e*PG	Pg	17 45 07.2	-1.7
DPC	Dobruska-Polom	1.20	171	*e*PG	Pg	17 45 10.1	-2.2
DPC				*e*SG	Sg	17 45 25.8	-2.6
	48nm,0.2s						
DPC	Dobruska-Polom	1.20	171	Pg	Pg	17 45 10.1	-2.2
DPC				*e*Sg	Sg	17 45 25.7	-2.7
PVCC	Panska Ves	1.37	223	*e*PG	Pg	17 45 13.2	-2.4
BRG	Berggiesshubel	1.47	244	*e*Pg	Pg	17 45 15.5	-2.2
BRG				*e*Sg	Sg	17 45 36.1	-1.1
BRG	Berggiesshubel	1.47	244	*i* Pn	Pn	17 45 14.2	-1.8
BRG				*i* Pg	Pg	17 45 15.9	-1.7
BRG				*i* Sg	Sg	17 45 35.6	-1.6
BRG	Berggiesshubel	1.47	244	*i* Pg	Pg	17 45 15.9	-1.7
BRG				Sg	Sg	17 45 36.1	-1.1
RUE	Ruedersdorf	1.68	305	*e*Pn	Pn	17 45 17.3	-1.7
RUE				*e*Sn	Sn	17 45 41.0	-0.5
RUE	Ruedersdorf	1.68	305	*e*Pn	Pn	17 45 17.3	-1.7
RUE				*e*Sn	Sn	17 45 41.0	-0.4
PRU	Pruhonice	1.81	212	*e*PN	Pn	17 45 19.2	-1.7
PRU				*e*PG	Pg	17 45 21.0	-3.5
PRU				*e*SG	Sg	17 45 45.0	-3.7
	32nm,0.2s						
CLL	Collm	1.91	264	*i* Pn	Pn	17 45 20.2	-2.0
CLL				*i* Pg	Pg	17 45 22.9	-3.5
CLL				*i* Sg	Sg	17 45 48.8	-3.0
CLL	Collm	1.91	264	*i* PN	Pn	17 45 20.2	-2.0
CLL				*i* PG	Pg	17 45 22.9	-3.5
CLL				*i*		17 45 27.2	
CLL				*i* SG	Sg	17 45 48.8	-3.0
CLL	Collm	1.91	264	*i* Pg	Pg	17 45 22.9	-3.5
CLL				Sg	Sg	17 45 49.3	-2.5
RAC	Raciborz	2.00	136	*e*P	Pg	17 45 26.0	-2.3
RAC				*e*S	Sg	17 45 52.0	-3.0
MORC	Moravsky Berou	2.01	151	*e*Pn	Pn	17 45 21.6	-2.2
MORC				*e*Sn	Sn	17 45 46.4	-3.5
MORC	Moravsky Berou	2.01	151	*e*Pn	Pn	17 45 21.5	-2.2
MORC				*e*Sn	Sn	17 45 46.4	-3.5
OKC	Ostrava-Krasne	2.17	141	*e*PG	Pg	17 45 27.8	-3.9
OKC				*e*SG	Sg	17 45 55.6	-5.0
VRAC	Vranov	2.26	171	*e*Pn	Pn	17 45 25.8	-1.5
KRUC	Moravsky	2.49	174	*e*Pn	Pn	17 45 29.4	-1.2
KRUC				*e*Sg	Sg	17 46 05.4	-5.8
	14nm,0.3s						
TANN	Tannenbergstha	2.52	245	*e*Pn	Pn	17 45 30.0	-1.0
TANN				*e*Sg	Sg	17 46 08.4	-3.7
WERD	Werda	2.59	247	*e*Pn	Pn	17 45 30.7	-1.4
GUNZ	Gunzen	2.62	245	*e*Pn	Pn	17 45 31.6	-0.8
GUNZ				*e*Sg	Sg	17 46 10.8	-4.5
NKC	Novy Kostel	2.62	241	*e*PN	Pn	17 45 30.7	-1.7
NKC				*e*PG	Pg	17 45 37.0	-3.5
NKC				*e*SG	Sg	17 46 11.2	-4.1
	73nm,0.4s						
NEUB	Neuenburg	2.68	265	*e*Pg	Pg	17 45 38.5	-3.4
NEUB				*e*Sg	Sg	17 46 15.4	-2.3
OJC	Ojcow	2.73	117	*e*Pn	Pn	17 45 31.6	-2.4
OJC				*e*Pg	Pg	17 45 40.2	-2.6
OJC				*e*Sn	Sn	17 46 02.8	-5.4
OJC				*e*Sg	Sg	17 46 15.5	-3.7
KHC	Kasperske Hory	2.87	214	*e*PN	Pn	17 45 33.8	-2.3
KHC				*e*PG	Pg	17 45 40.2	-5.5
KHC				*e*SN	Sn	17 46 08.0	-3.8
KHC				*e*SG	Sg	17 46 18.7	-5.3
MOX	Moxa	2.92	254	*e*Pn	Pn	17 45 36.5	-0.3
MOX				*e*Sg	Sg	17 46 21.7	-3.8
MOX	Moxa	2.92	254	*e*Pn	Pn	17 45 34.6	-2.2
MOX				*e*Pg	Pg	17 45 42.8	-3.8
MOX				*e*Sg	Sg	17 46 21.5	-4.0
MOX	Moxa	2.92	254	*i* P	Pn	17 45 34.6	-2.2
MOX				Pg	Pg	17 45 43.0	-3.6
MOX				Sg	Sg	17 46 22.0	-3.5
MOX	Moxa	2.92	254	*e*Pg	Pg	17 45 42.8	-3.8
MOX				Sg	Sg	17 46 21.7	-3.8
NOTT	Nottersdorf	3.02	237	*e*Pn	Pn	17 45 36.4	-1.8
NOTT				*e*Sg	Sg	17 46 24.3	-4.7
GEC2	GERESS Array S	3.08	210	*e*Pn	Pn	17 45 38.0	-1.0
GEC2	GERESS Array S	3.08	210	*e*Pn	Pn	17 45 38.0	-1.0
WET	Wettzell	3.13	221	*e*Pn	Pn	17 45 37.8	-1.9
WET				*e*Sg	Sg	17 46 26.6	-5.9
WET	Wettzell	3.13	221	*e*Pn	Pn	17 45 37.8	-1.9
WET				*e*Sg	Sg	17 46 26.6	-5.9
VKA	Vienna	3.28	177	⇓*i*PG	Pg	17 45 49.2	-4.6
VKA				*i* SG	Sg	17 46 33.3	-4.2
NIE	Niedzica	3.46	126	*e*Pg	Pg	17 45 51.4	-6.0
NIE				*e*Sg	Sg	17 46 37.8	-5.8
GRA1	Grafenberg Arr	3.57	241	*e*Pn	Pn	17 45 44.3	-1.7
GRA1				*e*Sg	Sg	17 46 42.3	-5.0
GRA1	Grafenberg Arr	3.57	241	Pn	Pn	17 45 44.3	-1.7
GRA1				Sg	Sg	17 46 42.3	-5.0
GRF	Grafenberg Arr	3.57	241	*e*Pn	Pn	17 45 44.3	-1.7
GRF				*e*Sg	Sg	17 46 42.3	-5.0
HROE	Hohe Rhon--Fla	3.84	257	⇓*i*Pn	Pn	17 45 47.5	-2.3
MOA	Molln	3.86	198	⇑*i*PN	Pn	17 45 48.3	-1.9
MOA				*i* SG	Sg	17 46 50.2	-6.7
	8.8nm,0.5s						

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*CSEM **03** 17:49:24.5±0.1,56.21N×11.39E,h2^{km},ML3.0,Error ellipse: s-maj=4.4km s-min=2.8km az=47.0,Suspected Mining explosion.*

*NEIC **03** 17:49:25.8,56.17N×11.46E,ML3.0(BER),After BER.*

*BER **03** 17:49:26.5±2.3,56.19N×11.47E,MD2.9,ML3.0(NAO)*

*NAO **03** 17:49:26.0±3.1,56.28N×11.37E,ML3.0*

*UPP **03** 17:49:36.0,56.76N×12.39E,h0^{km},ML2.0,Suspected Mining explosion.*

ISC 03 17:49:24.4±0.6**,56.28N**±0.04×**11.45E**±0.08**,n25,**σ**1^{s}00**/29**, Denmark**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COP	Copenhagen	0.81	137	*i* P	Pg	17 49 40.7	+0.2
COP				*i*		17 49 42.6	
MUD	Monsted U'grnd	1.28	279	*i* P	Pb	17 49 51.0	+2.0
MUD				*i* S	Sb	17 50 11.0	+5.1
RGN	Rugen	2.04	148	*e*P	Pn	17 49 59.9	-0.3
RGN	Rugen	2.04	148	*e*P	Pn	17 49 59.9	-0.3
BSD	Bornholm Skovb	2.28	119	*i* P	Pn	17 50 02.5	-1.3
BSD				*i* S	Sn	17 50 32.4	-0.6
BSD				*i* LG		17 50 37.0	
LNKU	Linkoeping	2.94	47	P	Pn	17 50 13.9	+0.7
SNART	Snartemo	3.09	314	*e*P	Pn	17 50 15.5	+0.1
SNART				*e*S	Sn	17 50 52.0	-1.6
ASKU	Askersund	3.19	33	P	Pn	17 50 18.2	+1.4
VIKU	Vikbolandet	3.61	50	P	Pn	17 50 23.7	+1.0
NRAU	Nora	3.82	29	P	Pn	17 50 26.2	+0.5
ESKU	Eskilstuna	3.97	40	P	Pn	17 50 29.8	+1.9
HFS	Hagfors	4.05	16	Pn	Pn	17 50 29.0	+0.1
	baz=201,slow=14						
HFS				Sn	Sn	17 51 17.2	-0.5
	baz=194,slow=28						
HFS				Lg		17 51 32.9	
	baz=195,slow=37						
BLS5	Blasjo	4.13	322	*e*P	Pn	17 50 30.8	+0.6
GOTU	Gotland	4.14	67	P	Pn	17 50 31.3	+1.0
ODD1	Odda	4.45	327	*e*P	Pn	17 50 33.7	-1.0
NC6	NORSAR Subarra	4.48	0	Pn	Pn	17 50 35.0	-0.1
NC6				Lg		17 51 47.5	
NC6	NORSAR Subarra	4.48	0	Pn	Pn	17 50 35.0	-0.1
NB2	NORSAR Subarra	4.78	359	Pn	Pn	17 50 38.6	-0.7
NB2				Lg		17 51 56.5	
FALU	Falun	4.82	27	P	Pn	17 50 40.0	+0.1
IGGU	Iggoen	5.54	31	P	Pn	17 50 50.3	+0.3
ROTU	Roteberg	5.63	22	P	Pn	17 50 51.5	+0.1
ARNU	Arnoeviken	6.23	27	P	Pn	17 50 58.7	-1.2
HASU	Hassela	6.46	22	P	Pn	17 51 02.4	-0.7
FIA0	FINESS Array S	9.17	50	Pn	P	17 51 38.5	-2.4
	baz=252,slow=12						
ARA0	ARCESS Array S	14.70	20	Pn	P	17 52 50.0	-5.1
	baz=209,slow=16						

DJA 03 17:55:15.0±0.9**,8.71S×117.61E,h129^{km}**±**9^{km},MD4.6**/4**, ML4.4**/4**,2C-2D,Error ellipse: s-maj=69.1km s-min=19.1km az=3.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	1.50	279	⇑*e*Pn	P	17 55 43.5	+0.1
	484nm,0.2s						
KEDI	Kedomdong	1.50	279	*e*P	P	17 55 44.0	+0.6
KEDI				*e*Sn	S	17 56 04.1	-0.9
RATI	Rata	2.05	270	⇓*e*Pn	P	17 55 50.0	0.0
	475nm,0.2s						
RATI				*e*Sn	S	17 56 15.0	-1.6
KELI	Kelakatan	3.12	279	⇓*e*Pn	P	17 56 03.8	-0.3
	30nm,0.2s						
KELI				*e*Sn	S	17 56 39.5	-1.9
SRDI	Scrawed	3.44	274	⇑*i*Pn	P	17 56 07.5	-0.7
	144nm,0.2s						
SRDI				*e*Sn	S	17 56 46.7	-2.1

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*TAP **03** 18:18:47.4,24.79N×122.33E,h11^{km}±1^{km},ML3.0*

JMA 03 18:18:48.2±0.5**,24.33N×122.37E,h10**^{km}**,M2.4,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.60	77	P	Pg	18 18 59.8	-0.5
YOJ				S	Sg	18 19 07.9	-0.5
IRIF	Iriomote-Funau	1.24	90	P	Pb	18 19 11.9	+0.6
IRIF				S	Sb	18 19 28.0	+0.9
HATJ	Hateruma jima	1.34	101	*e*S	Sb	18 19 29.8	-0.2
JKRS	Kuro-shima	1.50	93	P	Pn	18 19 13.9	-1.4
JKRS				*e*S	Sb	18 19 33.2	-1.4
JIJ	Ishigaki jima	1.62	88	*e*S	Sn	18 19 37.4	-0.6

OTT 03 18:21:18.2±0.2**,53.09N×66.95W,MN2.9**/5**,Blast, Labrador City, Nl Mining explosion.,Labrador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	1.75	2	PN	Pn	18 21 49.7	-0.3
SCHQ				SG	Sg	18 22 13.5	-3.0
SCHQ				Trac		18 22 18.2	
	comp=Z,15nm,0.1s						
MNQ	Manicouagan	2.80	205	PN	Pn	18 22 04.2	-0.8
MNQ				SN	Sn	18 22 38.9	-1.0
MNQ				Trac		18 22 50.5	
	comp=Z,6.6nm,0.1s						
SMQ	Clarke City	2.87	177	PN	Pn	18 22 04.1	-2.0
SMQ				SN	Sn	18 22 37.8	-4.1
SMQ				Trac		18 22 51.2	
	comp=Z,9.4nm,0.1s						
ICQ	Pointe Anglais	3.58	183	PN	Pn	18 22 13.7	-2.3
ICQ				SN	Sn	18 22 56.5	-3.2
ICQ				Trac		18 22 59.2	
	comp=Z,3.3nm,0.1s						
CNQ	Baie Comeau	3.85	191	PN	Pn	18 22 18.7	-1.3
CNQ				SN	Sn	18 23 04.2	-2.5
CNQ				Trac		18 23 07.8	
	comp=Z,1.8nm,0.1s						
GSQ	Grosses Roches	4.18	181	PN	Pn	18 22 22.5	-2.2
GSQ				SN	Sn	18 23 12.6	-2.5
LG4Q	La Grande 4	4.32	280	PN	Pn	18 22 23.9	-2.7
LG4Q				SN	Sn	18 23 12.9	-5.5
LMQ	La Malbaie	5.95	203	PN	Pn	18 22 46.5	-3.2
LMQ				SN	Sn	18 23 53.0	-6.6
DRLN	Deer Lake	7.07	119	PN	Pn	18 23 01.6	-3.9
DRLN				SN	Sn	18 24 10.7	-17
LMN	Caledonia Moun	7.37	168	PN	Pn	18 23 05.1	-4.7
LMN				SN	Sn	18 24 24.0	-11
VLDQ	Val d'Or	8.33	237	PN	P	18 23 19.1	-4.0
VLDQ				SN	Sn	18 24 50.0	-9.0
MALO	McAlpine Lake	8.55	254	PN	P	18 23 20.3	-5.9
VIMO	Victor Mine	10.14	275	PN	P	18 23 42.1	-5.9
SILO	Sutton Inlier	10.72	285	PN	P	18 23 49.2	-6.8

PGC 03 18:38:24.8,48.20N×128.81W,h10^{km}**,Mw3.7,Northern Juan de Fuca ridge.,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.01	33	Pn	Pn	18 38 56.5	-2.7
EDB	Eliza Dome	2.01	33	Pn	Pn	18 38 56.5	-2.7
BPBC	Brooks Peninsu	2.08	19	Pn	Pn	18 38 58.2	-1.9
BPBC	Brooks Peninsu	2.08	19	Pn	Pn	18 38 58.2	-1.9
GDR	Gold River	2.42	48	Pn	Pn	18 39 03.1	-2.0
GDR	Gold River	2.42	48	Pn	Pn	18 39 03.1	-2.0
MAYB	Maynard	2.45	25	Pn	Pn	18 39 03.4	-2.2
MAYB				Sn	Sn	18 39 31.0	-4.9
	comp=Z,13nm,0.3s						
MAYB				Trac		18 39 32.5	
	comp=Z,13nm,0.3s						
MAYB	Maynard	2.45	25	Pn	Pn	18 39 03.4	-2.2
MAYB				Sn	Sn	18 39 31.0	-4.9
	comp=Z,13nm,0.3s						
MAYB				Trac		18 39 32.5	
	comp=Z,13nm,0.3s						
WOSB	Woss	2.45	36	Pn	Pn	18 39 03.7	-1.8
WOSB	Woss	2.45	36	Pn	Pn	18 39 03.7	-1.8
HOLB	Holberg	2.48	10	Pn	Pn	18 39 03.1	-2.9
HOLB				Sn	Sn	18 39 33.1	-3.5
	comp=Z,9.0nm,0.2s						
HOLB				Trac		18 39 35.1	
	comp=Z,9.0nm,0.2s						
HOLB	Holberg	2.48	10	Pn	Pn	18 39 03.1	-2.9
HOLB				Sn	Sn	18 39 33.1	-3.5
	comp=Z,9.0nm,0.2s						
HOLB				Trac		18 39 35.1	
	comp=Z,9.0nm,0.2s						
BTB	Buttle Lake	2.52	58	Pn	Pn	18 39 04.6	-1.9
BTB				Trac		18 39 37.5	
	comp=Z,20nm,0.4s						
BTB	Buttle Lake	2.52	58	Pn	Pn	18 39 04.6	-1.9
BTB				Trac		18 39 37.5	
	comp=Z,20nm,0.4s						
PHC	Port Hardy	2.67	19	Pn	Pn	18 39 06.7	-1.9
PHC	Port Hardy	2.67	19	Pn	Pn	18 39 06.7	-1.9
ALB	Alberni	2.85	66	Pn	Pn	18 39 09.1	-2.1
ALB	Alberni	2.85	66	Pn	Pn	18 39 09.1	-2.1
MGB	Mount Grey	2.85	72	Pn	Pn	18 39 08.6	-2.6
MGB				Sn	Sn	18 39 40.8	-5.1
	comp=Z,10.0nm,0.4s						
MGB				Trac		18 39 44.2	
	comp=Z,10.0nm,0.4s						
MGB	Mount Grey	2.85	72	Pn	Pn	18 39 08.6	-2.6
MGB				Sn	Sn	18 39 40.8	-5.1
	comp=Z,10.0nm,0.4s						
MGB				Trac		18 39 44.2	
	comp=Z,10.0nm,0.4s						
NCRB	Newcastle Ridg	2.85	38	Pn	Pn	18 39 09.4	-1.8
NCRB	Newcastle Ridg	2.85	38	Pn	Pn	18 39 09.4	-1.8
CBB	Campbell River	2.92	50	Pn	Pn	18 39 10.2	-2.0
CBB				Trac		18 39 46.4	
	comp=Z,19nm,0.8s						
CBB	Campbell River	2.92	50	Pn	Pn	18 39 10.2	-2.0
CBB				Trac		18 39 46.4	
	comp=Z,19nm,0.8s						
PFB	Port Renfrew	2.94	81	Pn	Pn	18 39 09.6	-2.8
PFB	Port Renfrew	2.94	81	Pn	Pn	18 39 09.6	-2.8
TXB	Texada	3.25	61	Pn	Pn	18 39 15.6	-1.3
TXB	Texada	3.25	61	Pn	Pn	18 39 15.6	-1.3
LZB	Mount Lazard	3.35	81	Pn	Pn	18 39 15.7	-2.6
LZB				Trac		18 39 56.9	
	comp=Z,1.0nm,0.3s						
LZB	Mount Lazard	3.35	81	Pn	Pn	18 39 15.7	-2.6
LZB				Trac		18 39 56.9	
	comp=Z,1.0nm,0.3s						
SHB	Sechelt	3.55	65	Pn	Pn	18 39 19.0	-2.1
SHB	Sechelt	3.55	65	Pn	Pn	18 39 19.0	-2.1
PGC	Sidney	3.60	81	Pn	Pn	18 39 19.0	-2.8
PGC	Sidney	3.60	81	Pn	Pn	18 39 19.0	-2.8
GOBB	Galiano Island	3.60	76	Pn	Pn	18 39 20.0	-1.8
GOBB	Galiano Island	3.60	76	Pn	Pn	18 39 20.0	-1.8
SNB	Saturna Island	3.80	79	Pn	Pn	18 39 22.9	-1.8
SNB	Saturna Island	3.80	79	Pn	Pn	18 39 22.9	-1.8
BIB	Bowen Island	3.83	70	Pn	Pn	18 39 23.1	-2.1
BIB	Bowen Island	3.83	70	Pn	Pn	18 39 23.1	-2.1
BBB	Bella Bella	4.02	6	Pn	Pn	18 39 24.3	-3.4
BBB				Sn	Sn	18 40 09.6	-5.8
BBB				Trac		18 40 11.2	
	comp=Z,10.0nm,0.3s						
BBB	Bella Bella	4.02	6	Pn	Pn	18 39 24.3	-3.4
BBB				Sn	Sn	18 40 09.6	-5.8
BBB				Trac		18 40 11.2	
	comp=Z,10.0nm,0.3s						
WSLR	Whistler	4.32	61	Pn	Pn	18 39 31.0	-1.1
WSLR	Whistler	4.32	61	Pn	Pn	18 39 31.0	-1.1
VDB	Vedder Mountai	4.53	77	Pn	Pn	18 39 32.6	-2.4
VDB	Vedder Mountai	4.53	77	Pn	Pn	18 39 32.6	-2.4
LLLB	Lillooet	5.13	59	Pn	Pn	18 39 40.4	-3.2
LLLB	Lillooet	5.13	59	Pn	Pn	18 39 40.4	-3.2

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*BJI **03** 19:50:10.0,6.70N×72.90W,h164^{km},mB4.9*

*NEIC **03** 19:50:10.0±0.8,6.66N×72.88W,h164^{km}±8^{km},mb4.7/28, Error ellipse: s-maj=12.6km s-min=7.7km az=133.0*

ISC 03 19:50:08.9±1.0**,6.64N**±0.08×**72.80W**±0.08**,h174**^{km}±7^{km}**, n61,**σ**0^{s}87**/60**,mb4.7**/25**,6C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	3.10	44	*e*Pn	P	19 51 01.7	+2.5
SDV				*e*Sn	S	19 51 36.6	-1.2
OTAV	Otavalo	8.49	222	*e*Pn	P	19 52 09.4	-0.3
	21nm,0.6s						
GWJ	Greenwich	11.99	342	⇑*e*P	P	19 52 55.2	0.0
STH	Stony Hill	12.02	341	⇑*e*P	P	19 52 55.6	0.0
STH				⇑*e*S	S	19 54 54.2	-12
MCJ	Malvern	12.19	337	⇑*e*P	P	19 52 58.5	+0.7
MCJ				*e*S	S	19 55 04.2	-6.3
CVJ	Coleyville	12.41	339	⇑*e*P	P	19 53 01.7	+1.1
BBJ	Bamboo Saint A	12.46	340	⇑*e*P	P	19 53 02.8	+1.5
JTS	JuntasAbangare	12.55	288	*e*P	P	19 53 01.5	-0.9
SJG	San Juan	13.12	29	P	P	19 53 08.5	-1.2
	17nm,0.6s						
PAYG	Puerto Ayora	18.90	248	P	P	19 54 17.6	-1.0
	24nm,0.9s						
TEIG	Tepich	20.19	313	*e*P	P	19 54 31.4	-0.5
	25nm,0.8s						
LRAL	Lakeview Retre	29.39	335	*e*P	P	19 55 58.3	+0.1
	16nm,1.0s,mb4.7						
BLA	Blacksburg	31.21	348	P	P	19 56 11.4	-2.7
	33nm,1.0s,mb5.0						
WVT	Waverly	32.42	337	*e*P	P	19 56 24.6	-0.1
	30nm,0.9s,mb5.0						
SDMD	Soldier's Deli	32.83	354	*e*P	P	19 56 25.9	-2.2
WCI	Wyandotte Cave	33.74	341	*e*P	P	19 56 36.5	+0.6
	26nm,0.8s,mb5.0						
MIAR	Mount Ida	33.74	328	*e*P	P	19 56 35.0	-0.9
	7.1nm,0.8s,mb4.5						
ACSO	Alum Creek Sta	34.67	346	*e*P	P	19 56 44.6	+0.9
	23nm,1.0s,mb4.8						
ACSO				*e*		19 57 05.6	
FVM	French Village	35.06	335	*e*P	P	19 56 47.2	+0.1
CCM	Cathedral Cave	35.47	335	*e*P	P	19 56 50.3	-0.2
	54nm,0.8s,mb5.2						
WMOK	Wichita Mounta	36.81	323	*e*P	P	19 57 00.2	-1.6
	10.0nm,0.8s,mb4.5						
LTX	Lajitas	36.82	312	*e*P	P	19 57 01.8	-0.2
	6.2nm,0.7s,mb4.3						
AMTX	Amarillo	38.69	321	*e*P	P	19 57 17.3	-0.2
	22nm,0.9s,mb4.8						
KSU1	Kansas State U	38.80	330	*e*P	P	19 57 17.5	-0.9
MNTX	Cornudas Mount	39.32	314	*e*P	P	19 57 22.6	-0.1
	9.2nm,0.6s,mb4.6						
ANMO	Albuquerque	41.87	317	*e*P	P	19 57 42.9	-0.7
LAZ	Ladron	42.03	316	*e*P	P	19 57 45.7	+0.8
SDCO	Great Sand Dun	42.89	321	*e*P	P	19 57 52.8	+0.9
	11nm,0.8s,mb4.5						
ISCO	Idaho Springs	44.24	323	*e*P	P	19 58 03.5	+0.9
	19nm,1.1s,mb4.6						
PV01	Paradox Valley	45.07	319	*e*P	P	19 58 10.6	+1.3
PV10	Paradox Valley	45.51	319	*e*P	P	19 58 13.1	+0.3
SRU	San Rafael	46.88	319	*e*P	P	19 58 24.2	+0.7
ULM	Lac du Bonnet	47.56	340	*e*P	P	19 58 28.1	-0.6
	23nm,0.7s,mb4.9						
MSU	Marysvale	47.65	318	*e*P	P	19 58 28.7	-0.8
TCUT	Toone Canyon	48.57	321	*e*P	P	19 58 36.7	+0.2
HWUT	Hardware Ranch	48.94	321	*e*P	P	19 58 39.1	-0.3
	11nm,1.0s,mb4.4						
DGMT	Dagmar	49.45	333	*e*P	P	19 58 43.7	+0.5
	56nm,0.6s,mb5.4						
BGU	Big Grassy Mou	49.48	320	*e*P	P	19 58 43.9	+0.3
SNOW	Snow King Moun	49.53	324	*e*P	P	19 58 43.1	-0.7
LOHW	Long Hollow	49.53	324	*e*P	P	19 58 44.5	+0.6
TPAW	Teton Pass	49.66	324	*e*P	P	19 58 45.1	+0.2
RRI2	Red Ridge	49.79	323	*e*P	P	19 58 46.1	+0.2
IMW	Indian Meadow	49.90	324	*e*P	P	19 58 46.7	+0.1
QLMT	Earthquake Lak	50.74	325	*e*P	P	19 58 54.2	+1.3
TPH	Tonopah	50.91	315	*e*P	P	19 58 54.7	+0.3
	7.2nm,1.0s,mb4.3						
MCMT	McKenzie Canyo	51.55	324	*e*P	P	19 59 00.0	+0.9
HLID	Hailey	51.77	322	*e*P	P	19 59 00.8	0.0
	9.5nm,1.1s,mb4.3						
CMB	Columbia Colle	53.16	313	*e*P	P	19 59 10.9	-0.2
	2.4nm,0.9s,mb3.9						
FFC	Flin Flon	53.37	339	*e*P	P	19 59 11.4	-1.0
	4.4nm,0.6s,mb4.4						
WVOR	Wild Horse Val	53.87	319	*e*P	P	19 59 16.2	0.0
	7.8nm,0.7s,mb4.5						
OHCM	Honcut	54.47	314	*e*P	P	19 59 20.8	+0.1
FCC	Fort Churchill	54.52	347	*e*P	P	19 59 19.9	-0.9
	18nm,1.1s,mb4.7						
EDM	Edmonton	56.93	332	*e*P	P	19 59 36.8	-1.2
YKW3	Yellowknife Ar	63.59	340	*e*P	P	20 00 22.6	-0.5
SUMG	Summit	69.11	10	*e*P	P	20 00 59.2	+1.4
	16nm,0.8s,mb4.8						
INK	Inuvik	73.31	340	*e*P	P	20 01 23.2	+0.4
	5.8nm,0.7s,mb4.4						
SNAA	Sanae	90.07	163	*e*P	P	20 02 50.8	+1.1
	162nm,1.2s,mb5.8						
MDJ	Mudanjiang	125.14	341	PKP	PKPdf	20 08 50.5	+1.6
CN2	Changchun	127.15	343	*e*PKP	PKPdf	20 08 54.8	+2.0
LZH	Lanzhou	137.39	4	*e*PKP	PKPdf	20 09 13.7	+1.5
LZH				XPKP		20 10 12.5	
LZH				LR	LR		
	comp=N,175nm,18.0s						
LZH				LR	LR		
	comp=Z,248nm,20.0s						
GYA	Guiyang	147.10	1	PKP	PKPdf	20 09 36.1	+6.6
GYA				APKP		20 10 19.0	
GYA				PP	PP		
	comp=Z,90nm,4.7s						

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*LDG **03** 20:13:20.0±0.3,26.11N×95.47E,h10^{km},Mb5.3/41, Ms3.9/7,Error ellipse: s-maj=13.6km s-min=7.6km az=162.0*

*CSEM **03** 20:13:23.3,26.20N×95.58E,h33^{km},mb5.5*

*MOS **03** 20:13:23.5±0.9,26.03N×95.61E,h36^{km},mb5.4/36,Error ellipse: s-maj=12.6km s-min=5.2km az=119.6*

*BJI **03** 20:13:27.7,26.19N×95.46E,h74^{km},mB5.0,mb4.8,Ms4.4, Msz3.9*

*NEIC **03** 20:13:29.8±0.2,26.13N×95.56E,mb5.2/131,Error ellipse: s-maj=4.8km s-min=3.6km az=198.0*

NEIC Felt at Itanagar and Sibsagar, India.

*HRVD **03** 20:13:29.8±0.4,26.04N×95.58E,h79^{km}±5^{km},MW4.9/48, Centroid moment Tensor Solution. LP body waves: s13,c14;Mantle waves: s48,c71; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.79±.22; $M_{\theta\theta}$1.24±.15; $M_{\phi\phi}$-0.45±.16; $M_{r\theta}$-1.37±.09; $M_{\theta\phi}$0.69±.15; $M_{\phi r}$-1.77±.09; Best double couple: $M_0$2.579×10^{16} NP1:ϕ_s286°,δ24°, λ-26°. NP2:ϕ_s40°,δ80°,λ-112°. Principal axes: T 2.664, Plg31°, Azm148°; N -.173, Plg21°, Azm44°; P -2.494, Plg51°, Azm286°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 20:13:28.7±0.1**,26.15N**±0.02×**95.51E**±0.02**,h76**^{km}**, h76**^{km}±.7^{km}**:pP-P,n467,**σ**1^{s}02**/495**,mb5.0**/167**,46C-93D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	Lekhapani	1.28	23	*i* P	P	20 13 51.0	-0.3
LKP				*i*		20 14 43.0	
LKP				*e*		20 14 55.0	
LKP				*e*		20 15 06.0	
IMP	Imphal	1.97	227	⇑*i*P	P	20 14 02.0	+1.4
SHL	Shillong	3.32	261	*e*P	P	20 14 20.5	+1.0
SHL				*e*S	S	20 14 57.0	-0.9
LSA	Lhasa	5.23	313	P	P	20 14 47.5	+1.6
LSA				Smax			
	comp=N,730nm,0.8s						
LSA				Smax			
	comp=E,1μm,0.9s						
GTK	Gangtok	6.27	282	*e*P	P	20 14 55.0	-5.4
GTK				*e*S	S	20 15 59.0	-12

SLGI	Shiliguri	6.38	276	*e*	P	20 14 55.3	-6.6
KMI	Kunming	6.61	97	⇑P	P	20 15 07.7	+2.6
KMI				XP		20 15 28.7	
KMI				S	S	20 16 21.0	+1.3
KMI				AMB	AMB		
	comp=Z,137nm,1.2s						
KMI				AMB	AMB		
	comp=Z,486nm,3.1s						
KMI				LR	LR		
	comp=N,2µm,8.2s						
KMI				LR	LR		
	comp=E,1µm,12.9s						
KMI				LR	LR		
	comp=Z,2µm,21.3s						
CHRT	Chiangrai	7.39	147	⇑P	P	20 15 15.5	-0.4
	comp=Z,3µm,0.9s						
CAL	Calcutta	7.47	243	*e*P	P	20 15 16.6	-0.4
CAL				*e*		20 16 20.3	
CAL				*e*		20 16 24.5	
CHG	Chiang Mai	7.97	156	⇑P	P	20 15 25.1	+1.3
	comp=Z,150nm,0.9s						
CHG				S	S	20 17 02.5	+9.4
CM31	Chiang Mai Arr	8.29	157	*e*P	P	20 15 29.5	+1.2
	comp=Z,377nm,0.9s						
JIRN	Jiri	8.45	282	*e*P	P	20 15 29.3	-1.1
JIRN	Jiri	8.45	282	*e*P	P	20 15 29.3	-1.1
	comp=Z,953nm,0.3s						
JIRN				*e*S	S	20 16 59.2	-5.9
CD2	Chengdu	8.66	55	P	P	20 15 33.5	+0.2
CD2				XP		20 15 53.8	
CD2				S	S	20 17 09.7	-0.6
CD2				AMB	AMB		
	comp=Z,20nm,0.7s						
CD2				AMB	AMB		
	comp=Z,90nm,3.1s						
CD2				LR	LR		
	comp=N,1µm,8.0s						
CD2				LR	LR		
	comp=Z,580nm,7.6s						
NANT	Nan	8.75	146	⇑P	P	20 15 33.0	-1.5
	comp=Z,219nm,1.0s						
BOK	Bokaro	9.04	257	⇑*i*P	P	20 15 36.0	-2.4
BOK				*i* S	S	20 17 13.3	-6.2
PKI	Pulchoki	9.13	281	*e*P	P	20 15 37.6	-2.0
	comp=Z,192nm,0.4s						
PKI				*e*S	S	20 17 13.8	-7.8
KKN	Kakani	9.27	282	*e*P	P	20 15 39.4	-2.1
KKN				*e*S	S	20 17 19.3	-5.8
DMN	Daman	9.40	281	*e*P	P	20 15 40.8	-2.5
	comp=Z,141nm,0.3s						
DMN				*e*S	S	20 17 20.4	-7.8
GKN	Gorkha	9.86	283	*e*P	P	20 15 46.7	-3.0
	comp=Z,613nm,0.4s						
GKN				*e*S	S	20 17 33.3	-6.2
GYA	Guiyang	10.02	86	P	P	20 15 51.4	-0.4
GYA				S	S	20 17 44.4	+1.1
GYA				AMB	AMB		
	comp=Z,40nm,0.8s						
GYA				AMB	AMB		
	comp=Z,250nm,4.2s						
GYA				LR	LR		
	comp=N,930nm,7.3s						
GYA				LR	LR		
	comp=E,300nm,7.5s						
GYA				LR	LR		
	comp=Z,680nm,7.4s						
VLK	Valmikinagar	10.47	279	*i* P	P	20 15 55.0	-2.9
VLK				*i*		20 17 52.0	
BWNR	Bhubaneshwar	10.65	239	⇑*i*P	P	20 15 59.0	-1.4
BWNR				*e*S	S	20 17 48.6	-10
BWNR				*e*		20 17 58.1	
	comp=E,649nm,0.4s						
BWNR				*e*		20 17 58.5	
	comp=N,857nm,0.4s						
KOLN	Koldanda	10.74	281	*e*P	P	20 15 58.0	-3.6
	comp=N,73nm,0.2s						
NST	Nakhon Sawan	11.29	157	P	P	20 16 11.0	+2.1
	comp=N,67nm,1.0s						
KKTK	Khon Kaen	11.91	144	⇑P	P	20 16 18.0	+0.8
	comp=N,494nm,0.8s						
LZH	Lanzhou	12.20	34	⇓P	P	20 16 19.0	-2.1
LZH				AP		20 16 28.5	
LZH				PP	PP	20 16 31.2	-0.3
LZH				XP		20 16 41.0	
LZH				*e*S	S	20 18 34.0	-1.8
LZH				SS	SS	20 18 50.4	-2.1
LZH				AMB	AMB		
	comp=Z,96nm,1.3s						
LZH				AMB	AMB		
	comp=Z,483nm,4.3s						
LZH				LR	LR		
	comp=N,2µm,8.2s						
LZH				LR	LR		
	comp=Z,3µm,10.3s						
LZH	Lanzhou	12.20	34	⇓P	P	20 16 19.0	-2.1
	comp=Z,96nm,1.3s						
LZH				pP		20 16 28.5	
LZH				PP	PP	20 16 31.2	-0.3
LZH				sP		20 16 41.0	
LZH				*e*S	S	20 18 34.0	-1.8
LZH				SS	SS	20 18 50.4	-2.1
LZH				sS		20 18 55.8	
ALBI	Allahabad	12.38	269	*e*	P	20 16 10.0	-13
ALBI				*e*S	S	20 18 30.0	-10
BLSP	Bilaspur	12.85	255	*e*P	P	20 16 27.2	-2.5
BLSP				*e*		20 18 44.0	
GTA	Gaotai	13.70	14	*e*P	P	20 16 37.3	-3.5
GTA				AP		20 16 48.2	
GTA				PP	PP	20 16 50.0	-2.3
GTA				XP		20 16 59.8	
GTA				S	S	20 19 02.0	-9.5
GTA				SCP		20 25 25.8	
GTA				SCS	ScS	20 29 01.6	-0.4
GTA				AMB	AMB		
	comp=Z,5.0nm,1.6s						
GTA				AMB	AMB		
	comp=Z,109nm,4.2s						
GTA				LR	LR		
	comp=N,287nm,11.0s						
GTA				LR	LR		
	comp=E,556nm,8.4s						
GTA				LR	LR		
	comp=Z,372nm,11.8s						
LGTI	Lohaghat	13.90	287	*e*P	P	20 16 42.0	-1.4
LGTI				*e*		20 19 11.0	
PTH	Pithoragarh	13.94	288	*e*	P	20 16 35.0	-8.9
PTH				*e*		20 18 58.0	
XAN	Xi’an	14.01	53	P	P	20 16 41.0	-3.8
VIS	Vishakhapatnam	14.07	236	*e*P	P	20 16 44.7	-0.9
VIS				*e*		20 16 47.5	
	comp=Z,60nm,0.5s						
VIS				*i*		20 16 53.0	
VIS				*i*		20 17 11.1	
NNT	Nongplab	14.07	163	P	P	20 16 50.5	+4.8
QIZ	Qiongzhong	15.01	115	P	P	20 16 58.8	+0.9
QIZ				S	S	20 19 43.4	+0.9
QIZ				AMB	AMB		
	comp=Z,243nm,6.9s						
JHNI	Jhansi	15.30	271	⇑*i*	P	20 16 57.0	-4.5
JHNI				*i*		20 19 38.0	
NGP	Nagpur	15.88	255	*e*P	P	20 17 06.4	-2.5
DDI	Dehra Dun	15.93	289	*e*P	P	20 17 04.8	-4.6
DDI				*e*		20 19 52.0	
KLP	Kalpa	16.04	294	*e*P	P	20 17 07.5	-3.3
NDI	New Delhi	16.44	283	*e*	P	20 17 10.5	-5.3
NDI				*e*		20 19 58.0	
SONA	Sohna	16.52	281	*e*P	P	20 17 13.7	-3.2
BHPL	Bhopal	16.69	264	*e*P	P	20 17 15.7	-3.3
BHPL				*e*		20 17 23.0	
	comp=Z,335nm,1.3s						
SMLA	Simla	16.84	291	*i* S	S	20 20 27.6	+3.4
KKR	Kurukshetra	16.92	287	*e*P	P	20 17 21.5	-0.3
KUDL	Kundal	17.04	281	*e*P	P	20 17 20.0	-3.4
SDNR	Sundarnagar	17.09	292	*e*P	P	20 17 21.2	-2.7
SDNR				*e*		20 20 23.2	
BHK	Bhakra	17.53	292	*e*P	P	20 17 31.6	+2.1
BHK				*e*		20 20 29.4	
KHET	Khetri	17.64	281	*e*P	P	20 17 28.3	-2.6
HYB	Hyderabad	17.97	244	⇓*e*P	P	20 17 35.0	+0.1
	comp=Z,330nm,1.0s						
HYB				*e*		20 17 36.5	
HYB				*e*S	S	20 20 41.0	-8.6
HYB	Hyderabad	17.97	244	⇓*i*P	P	20 17 35.0	+0.1
	comp=Z,330nm,1.0s						
HYB				*e*		20 17 36.5	
HYB				*e*S	S	20 20 41.0	-8.6
PONG	Pong	18.04	293	*e*P	P	20 17 33.0	-2.7
PONG				*e*		20 20 43.0	
THN	Thein Dam	18.35	295	*e*	P	20 17 34.7	-4.7
THN				*e*		20 22 36.0	
AJM	Ajmer	18.71	276	⇑*i*P	P	20 17 42.0	-1.5
WMQ	Urumqi	18.73	342	⇓*i*P	P	20 17 43.8	+0.1
WMQ				AP		20 17 57.0	
WMQ				XP		20 18 07.8	
WMQ				S	S	20 21 06.0	-0.6
WMQ				SS	SS	20 21 34.0	-0.3
WMQ				AMB	AMB		
	comp=Z,128nm,0.6s						
WMQ				AMB	AMB		
	comp=Z,79nm,5.0s						
WMQ				LR	LR		
	comp=N,226nm,14.0s						
WMQ				LR	LR		
	comp=E,251nm,12.0s						
WMQ				LR	LR		
	comp=Z,282nm,14.0s						
BTO	Baotou	18.79	36	*e*P	P	20 17 42.3	-2.1
BTO				AMB	AMB		
	comp=Z,13nm,0.6s						
LATR	Latur	19.14	250	*e*	P	20 17 50.6	+2.2
LATR				*e*		20 21 14.0	
HHC	Hu-ho-hao-te	19.80	38	⇑P	P	20 17 55.1	-0.3
HHC				AP		20 18 10.4	
HHC				XP		20 18 19.8	
HHC				S	S	20 21 34.9	+5.7
HHC				XS		20 21 57.4	
HHC				PCP	PcP	20 22 04.5	-5.9
HHC				SCP		20 25 33.0	
HHC				PCS		20 25 41.3	
HHC				AMB	AMB		
	comp=Z,27nm,1.2s						
HHC				AMB	AMB		
	comp=Z,144nm,6.4s						
HHC				LR	LR		
	comp=N,458nm,10.7s						
HHC				LR	LR		
	comp=E,369nm,14.2s						
HHC				LR	LR		
	comp=Z,189nm,14.2s						
TIA	Tai’an	21.00	56	*e*P	P	20 18 03.6	-4.1
KSH	Kashi	21.08	314	PR		20 18 10.3	
KSH				*e*AP		20 18 26.4	
KSH				*e*XP		20 18 36.7	
KSH				*e*S	S	20 21 55.1	+1.4
KSH				*e*PCP	PcP	20 22 13.2	+0.3
KSH				*e*XS		20 22 16.0	
KSH				*e*SCP		20 25 42.3	
KSH				*e*PCS		20 25 49.6	
KSH				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.2						
KSH				AMB	AMB		
	comp=Z,360nm,3.0s						
KSH				LR	LR		
	comp=N,480nm,6.9s						
KSH				LR	LR		
	comp=E,480nm,6.1s						
NJ2	Nanjing	21.21	68	*e*P	P	20 18 08.5	-1.4
NJ2				AP		20 18 25.8	
NJ2				XP		20 18 33.9	
NJ2				PP	PP	20 18 36.7	+1.3
NJ2				S	S	20 21 56.0	-0.1
NJ2				XS		20 22 24.0	
NJ2				AMB	AMB		
	comp=Z,50nm,0.8s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,380nm,5.6s						
NJ2				LR	LR		
	comp=N,580nm,16.2s						
NJ2				LR	LR		
	comp=E,650nm,17.9s						
NJ2				LR	LR		
	comp=Z,480nm,18.5s						
POO	Poona	21.40	254	⇑*i*P	P	20 18 12.0	+0.1
	comp=Z,100nm,1.0s,mb5.1						
POO				*i* S	S	20 22 04.0	+4.3
KAD	Karad	21.65	250	*e*P	P	20 18 14.4	+0.1
KAD				*e*		20 18 18.7	
	comp=Z,113nm,0.9s						
SALM	Salem	21.78	232	*e*S	S	20 22 11.0	+4.3
BHV	Bhavnagar	21.79	263	*e*P	P	20 18 16.5	+0.8
JASL	Jaisalmer	22.02	277	*e*P	P	20 18 17.7	-0.2
BJI	Beijing	22.10	46	P	P	20 18 19.8	+1.2
BJI				S	S	20 22 15.5	+3.2
BJI				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.2						
BJI				LR	LR		
	comp=Z,105nm,20.9s						
BJI	Beijing	22.10	46	P	P	20 18 19.8	+1.2
	comp=Z,14nm,1.1s,mb4.2						
BJI				S	S	20 22 15.5	+3.2
BJI				LR	LR		
	comp=Z,110nm,20.9s						
BOM	Bombay	22.15	256	*e*P	P	20 18 20.4	+1.2
BOM				*e*S	S	20 22 19.6	+6.2
ULHL	Ulahol	22.54	320	P	P	20 18 25.6	+2.7
	SNR=14						
GOA	Goa	22.84	247	*e*	P	20 18 35.0	+8.9
GOA				*e*		20 22 46.3	
KZA	Kyzart	23.01	319	P	P	20 18 30.1	+2.6
	SNR=23						
SSE	Sheshan	23.05	72	P	P	20 18 27.2	-0.8
SSE				XP		20 18 50.8	
SSE				S	S	20 22 33.7	+4.5
SSE				XS		20 23 02.6	
SSE				PCS		20 25 54.6	
SSE				AMB	AMB		
	comp=Z,21nm,0.8s,mb4.5						
SSE				AMB	AMB		
	comp=Z,53nm,3.3s						
SSE				LR	LR		
	comp=N,38nm,12.2s						
SSE				LR	LR		
	comp=E,77nm,12.2s						
SSE				LR	LR		
	comp=Z,104nm,19.1s						
SSE	Sheshan	23.05	72	P	P	20 18 27.2	-0.8
	comp=Z,21nm,0.8s,mb4.5						
SSE				sP		20 18 50.8	
SSE				S	S	20 22 33.7	+4.5
SSE				sS		20 23 02.6	
SSE				PcS		20 25 54.6	
SSE				LR	LR		
	comp=Z,100nm,19.1s						
MKAR	Makanchi Array	23.12	336	P	P	20 18 29.4	+1.0
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
TKM2	Tokmak 2	23.33	321	P	P	20 18 33.2	+2.7
	SNR=58						
PALK	Pallekele	23.48	220	*e*P	P	20 18 32.7	+0.4
	comp=Z,39nm,1.2s,mb4.6						
ULN	Ulaanbaatar	23.50	20	*i* P	P	20 18 33.2	+1.1
ULN	Ulaanbaatar	23.50	20	*e*P	P	20 18 32.6	+0.5
	comp=Z,15nm,0.6s,mb4.5						
UCH	Uchtor	23.54	318	P	P	20 18 35.4	+2.8
	SNR=60						
KBK	Karagaybulak	23.54	320	P	P	20 18 35.5	+3.0
	SNR=45						
AAK	Ala-Archa	23.79	319	P	P	20 18 37.9	+2.9
	SNR=41						
AAK	Ala-Archa	23.79	319	*i* P	P	20 18 36.8	+1.8
AAK				pmax	pmax		
	comp=Z,115nm,1.5s,mb5.0						
AAK	Ala-Archa	23.79	319	*e*P	P	20 18 36.0	+1.0
	comp=Z,86nm,1.1s,mb5.0						
FRU	Bishkek	23.84	320	*e*P	P	20 18 38.0	+2.5
FRU				pmax	pmax		
	comp=Z,176nm,2.0s,mb5.0						
CHMS	Chumysh	23.86	320	P	P	20 18 37.6	+1.9
	SNR=31						
AML	Almayashu	23.98	317	P	P	20 18 39.5	+2.7
	SNR=39						
USP	Ospenovka	24.18	320	P	P	20 18 40.7	+1.9
	SNR=65						
ZAK	Zakamensk	24.92	12	⇑*i*P	P	20 18 47.1	+1.2
ZAK				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.7						
MOY	Mondy	25.82	8	*e*P	P	20 18 55.8	+1.5
MOY				pmax	pmax		
	comp=Z,43nm,2.2s,mb4.5						
TLY	Talaya	26.23	12	P	P	20 18 59.5	+1.4
	comp=Z,61nm,1.2s,mb4.9,SNR=13						
TLY	Talaya	26.23	12	*e*P	P	20 18 59.7	+1.6
TLY				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
TLY				MLR	MLR		
	comp=Z,92nm,16.0s						
TLY	Talaya	26.23	12	*e*P	P	20 18 59.4	+1.3
	comp=Z,9.4nm,0.9s,mb4.2						
IRK	Irkutsk	26.88	12	*e*P	P	20 19 04.8	+0.7
IRK				*e*	pP	20 19 24.1	+2.3
IRK				pmax	pmax		
	comp=Z,34nm,1.7s,mb4.6						
KURK	Kurchatov	27.73	337	*e*P	P	20 19 12.1	+0.2
	comp=Z,54nm,0.8s,mb5.1						
KURK				*e*PcP	PcP	20 22 25.3	-1.8
KURK				*e*ScP		20 25 59.2	
SNY	Shenyang	27.87	49	⇑P	P	20 19 11.8	-1.4
KS15	Wonju Array Si	29.59	60	*e*P	P	20 19 22.7	-5.9
CN2	Changchun	29.97	46	*e*P	P	20 19 30.8	-1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
NVS	Novosibirsk	30.05	346	⇓*i*P	P	20 19 32.0	-0.4
NVS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.2						
NVS				pmax	pmax		
	comp=N,42nm,0.8s						
NVS				pmax	pmax		
	comp=E,25nm,0.8s						
BVA0	Borovoye Array	32.76	332	P	P	20 19 56.7	+0.5
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
MDJ	Mudanjiang	33.02	47	P	P	20 19 57.1	-1.5
MDJ				AP	pP	20 20 14.6	-2.3
MDJ				XP	sP	20 20 21.7	-4.5
MDJ				PP	PP	20 21 10.5	-0.6
MDJ				PCP	PcP	20 22 37.6	-3.2
MDJ				S	S	20 25 06.2	-4.2
MDJ				XS		20 25 38.9	
MDJ				SCP		20 26 14.8	
MDJ				PCS		20 26 23.0	
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,58nm,3.6s						
MDJ				LR	LR		
	comp=N,88nm,30.7s						
MDJ				LR	LR		
	comp=E,34nm,28.9s						
CHKZ	Chkalovo	33.13	333	*i* P	P	20 20 00.2	+0.8
CHKZ				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.2						
CHKZ	Chkalovo	33.13	333	*e*P	P	20 19 59.8	+0.3
	comp=Z,53nm,1.0s,mb5.3						
WBK	Wadi Bani Khal	33.40	272	⇑P	P	20 20 03.0	+0.9
	SNR=9.3						
BIDO	Bidbid	33.95	274	⇑P	P	20 20 07.5	+0.7
	SNR=6.8						
SMDO	Samad	34.12	273	⇑P	P	20 20 09.2	+0.9
	SNR=39						
JMDO	Jabal Madar	34.23	272	⇑P	P	20 20 10.0	+0.8
	SNR=11						
BOD	Bodaibo	34.26	18	*e*P	P	20 20 08.5	-0.6
HOQ	Hoqain	34.67	274	⇓P	P	20 20 13.8	+0.9
	SNR=9.7						
BSY	Bisya	34.95	273	⇓P	P	20 20 16.4	+1.1
	SNR=25						
ARQ	Araqi	35.43	274	⇑P	P	20 20 20.6	+1.2
	SNR=9.5						
ASHO	Ashiyiah	35.57	276	⇓P	P	20 20 22.1	+1.5
	SNR=6.0						
KLR	Kul’dur	36.27	41	*e*P	P	20 20 24.5	-1.8
CLNS	Chul’man	37.19	26	*e*P	P	20 20 28.1	-5.8
CLNS				pmax	pmax		
	comp=N,7.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
MAJO	Matsushiro	37.64	63	*e*P	P	20 20 37.7	-0.2
MAT	Matsushiro	37.64	63	*e*P	P	20 20 36.0	-1.9
MAT	Matsushiro	37.64	63	P	P	20 20 36.4	-1.5
RBK	Rabkut	39.16	266	⇑P	P	20 20 51.7	+1.1
	SNR=10.0						
WHFO	Wadi Hawf	39.41	267	⇑P	P	20 20 53.3	+0.6
	SNR=22						
SVE	Sverdlovsk	39.50	330	⇓*i*P	P	20 20 51.9	-1.2
SVE				*e*		20 21 05.5	
SVE				*e*		20 22 25.7	
SVE				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.8						
ABTO	Aybut	40.03	266	⇓P	P	20 20 58.6	+0.8
	SNR=9.5						
ARU	Arti	40.22	329	P	P	20 21 00.0	+1.0
	comp=Z,460nm,0.6s,SNR=25						
ARU	Arti	40.22	329	⇑*i*P	P	20 20 52.0	-7.0
ARU				*e*		20 22 57.6	
ARU				*e*		20 30 43.6	
ARU				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.3						
YSS	Yuzh-Sakhalins	42.50	48	*e*P	P	20 21 17.8	0.0
	comp=Z,31nm,1.1s,mb5.0						
YAK	Yakutsk	42.51	23	*i* P	P	20 21 17.8	+0.1
YAK				pmax	pmax		
	comp=Z,30nm,1.6s,mb4.8						
YAK	Yakutsk	42.51	23	*e*P	P	20 21 13.8	-3.9
	comp=Z,22nm,0.9s,mb4.9						
SOKR	Solikamsk	42.75	332	⇑*i*P	P	20 21 20.9	+1.2
SOKR				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
GNI	Garni	44.17	302	P	P	20 21 33.6	+2.1
GNI	Garni	44.17	302	*d* *i*P	P	20 21 33.7	+2.2
GNI				pmax	pmax		
	comp=Z,124nm,1.3s						
GNI	Garni	44.17	302	*e*P	P	20 21 33.4	+1.9
	comp=Z,62nm,0.8s,mb5.4						
TI2	Plekhanov	44.25	304	*e*P	P	20 21 33.2	+1.1
TI2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.2						
RAYN	Ar Rayn	45.23	278	P	P	20 21 41.4	+1.2
	comp=Z,221nm,0.6s,mb6.1,SNR=24						
GOF	Gofitskoye	45.79	308	⇑*i*P	P	20 21 45.5	+1.2
GOF				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.5						
KIV	Kislovodsk	45.93	307	P	P	20 21 46.2	+0.7
	comp=Z,459nm,0.9s,SNR=20						
KIV	Kislovodsk	45.93	307	*d* *i*P	P	20 21 46.6	+1.1
KIV				*e*		20 23 16.9	
KIV				*e*S	S	20 28 21.8	-1.8
KIV				pmax	pmax		
	comp=Z,100nm,1.3s,mb5.4						
KIV				pmax	pmax		
	comp=N,29nm,0.8s						
KIV				MLR	MLR		
	comp=E,52nm,16.0s						
KIV				MLR	MLR		
	comp=Z,78nm,16.0s						
KIV	Kislovodsk	45.93	307	*e*P	P	20 21 46.2	+0.7
	comp=Z,81nm,0.9s,mb5.5						
BCA	Borcka	46.58	303	P	P	20 21 52.2	+1.6
VRT	Varto	46.63	300	P	P	20 21 52.7	+1.6
BTMT	Batman	46.68	299	P	P	20 21 52.9	+1.3
ERZM	Erzurum	46.76	301	*i* P	P	20 21 54.6	+2.5
EZM	Erzurum	46.76	301	P	P	20 21 54.8	+2.8
BEST	Besiri	46.87	298	*i* P	P	20 21 54.6	+1.6
EZC	Erzincan	47.95	301	P	P	20 22 06.1	+4.7
SOC	Sochi	48.06	306	*i* P	P	20 22 02.1	-0.1
SOC				*e*		20 23 58.8	
SOC				*e*PPP	PPP	20 24 51.8	+5.1
SOC				*e*S	S	20 28 49.4	-4.2
SOC				*e*SS	SS	20 32 18.1	-0.3
SOC				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.5						
SOC				pmax	pmax		
	comp=N,15nm,0.9s						
SOC				pmax	pmax		
	comp=E,23nm,0.9s						
GUMT	Gumushane	48.20	302	P	P	20 22 05.1	+1.8
PTK	Pertek	48.30	300	P	P	20 22 05.2	+1.1
ELZG	Elazig	48.64	299	*i* P	P	20 22 08.4	+1.7
MALT	Malatya	49.09	299	*e*P	P	20 22 11.4	+1.2
	comp=E,24nm,0.8s,mb5.2						
TIXI	Tiksi	49.19	13	⇓*i*P	P	20 22 09.7	-0.8
TIXI				pmax	pmax		
	comp=Z,24nm,1.7s,mb4.8						
ANN	Anapa	49.74	308	*e*P	P	20 22 14.0	-1.1
ANN				pmax	pmax		

	comp=Z,87nm,1.1s,mb5.6						
GZT	Gaziantep	49.83	298	iP	P	20 22 16.5	+0.5
GAZ	Gaziantep	50.13	298	P	P	20 22 19.1	+0.9
MA2	Magadan	50.35	33	eP	P	20 22 18.9	-0.7
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MA2	Magadan	50.35	33	eP	P	20 22 18.3	-1.3
	comp=Z,22nm,0.9s,mb5.1						
TOKT	Tokat	50.44	302	P	P	20 22 21.6	+1.0
MOS	Moscow	50.82	322α	iP	P	20 22 23.0	-0.2
MOS				e	pP	20 22 42.5	+0.1
MOS				e		20 24 18.9	
MOS				pmax	pmax		
	comp=Z,139nm,0.8s,mb6.0						
COBT	Iskenderun	50.95	297	iP	P	20 22 25.2	+0.7
OBN	Obninsk	51.30	321κ	iP	P	20 22 23.5	-3.3
OBN						20 23 41.0	
OBN				i		20 24 26.1	
OBN				pmax	pmax		
	comp=Z,136nm,1.6s,mb5.7						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
OBN	Obninsk	51.30	321	eP	P	20 22 23.2	-3.6
	comp=Z,54nm,0.3s,mb6.1						
YOZ	Yozgat	51.42	301	P	P	20 22 29.0	+1.0
BOYT	Boyabat	51.63	303	iP	P	20 22 29.8	+0.3
BYBT	Boyabat	51.73	303	P	P	20 22 30.5	+0.2
NIG	Nigde	52.10	299	P	P	20 22 34.8	+1.7
SIM	Simferopol’	52.10	308d	iP	P	20 22 33.6	+0.6
SIM				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.7						
BZK	Bozkurt	52.28	304	P	P	20 22 34.8	+0.5
MBWA	Marble Bar	52.57	151	eP	P	20 22 35.7	-1.1
	comp=Z,52nm,0.7s,mb5.7						
CANT	Cankiri	52.65	302	P	P	20 22 38.1	+0.9
KAMT	Kaman	52.68	301	P	P	20 22 36.9	-0.5
BALT	Daday	52.76	304	iP	P	20 22 38.6	+0.6
ELDT	Eldivan	52.81	302	iP	P	20 22 39.2	+0.8
FITZ	Fitzroy Crossi	52.85	143	eP	P	20 22 37.9	-1.0
	comp=Z,13nm,0.8s,mb5.0						
EIL	Elat	53.10	289	eP	P	20 22 40.6	-0.1
	comp=Z,57nm,0.9s,mb5.6						
SAFT	Safranbolu	53.31	303	P	P	20 22 42.3	+0.2
LOD	Lodumlu	53.36	302	P	P	20 22 43.1	+0.6
KIZT	Kizilcal	54.15	300	P	P	20 22 48.3	0.0
HENT	Hendek	54.69	303	iP	P	20 22 51.9	-0.3
ESKT	Eskisehir	54.87	301	iP	P	20 22 52.8	-0.7
PUL	Pulkovo	55.32	326	eP	P	20 22 56.6	+0.1
PUL				pmax	pmax		
	comp=Z,126nm,0.6s,mb6.1						
PUL				pmax	pmax		
	comp=N,22nm,0.4s						
PUL				pmax	pmax		
	comp=E,43nm,0.6s						
JOF	Joensuu	55.33	330	ep	P	20 22 56.4	-0.1
	comp=E,26nm,0.7s,mb5.4						
JOF	Joensuu	55.33	330	eP	P	20 22 56.4	-0.1
JOF				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.4						
APA	Apatity	55.51	336	⇑iP	P	20 22 57.0	-0.8
APA				i	pP	20 23 15.4	-1.9
APA				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
KIS	Kishinev	55.73	310	eP	P	20 22 57.0	-2.6
ELL	Elmali	55.99	298	P	P	20 23 01.1	-0.4
ULDT	Uludag	56.10	302	iP	P	20 23 01.8	-0.6
TIRR	Tirgusor	56.19	307	⇓iP	P	20 23 02.5	-0.4
TIRR	Tirgusor	56.19	307	⇓iP	P	20 23 02.5	-0.4
MNK	Minsk	56.27	320	eP	P	20 23 01.0	-2.4
CFR	Carcaliu	56.32	308	⇓P	P	20 23 03.7	-0.2
CFR	Carcaliu	56.32	308	⇑iP	P	20 23 03.9	0.0
CFR	Carcaliu	56.32	308	⇑iP	P	20 23 03.9	0.0
HARR	Harsova	56.51	308	⇑P	P	20 23 05.4	+0.2
HARR	Harsova	56.51	308	⇑iP	P	20 23 05.5	+0.3
HARR	Harsova	56.51	308	⇑iP	P	20 23 05.5	+0.3
VRI	Vrincioaia	57.25	309	⇓iP	P	20 23 11.0	+0.5
VRI	Vrincioaia	57.25	309	⇓iP	P	20 23 11.0	+0.5
KAF	Kangasniemi	57.52	329	ep	P	20 23 11.1	-1.0
	comp=Z,12nm,0.7s,mb5.0,baz=96,slow=7.0						
KAF	Kangasniemi	57.52	329	eP	P	20 23 11.1	-1.0
KAF				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
MLR	Muntele Rosu	57.83	309	⇓iP	P	20 23 15.3	+0.8
MLR	Muntele Rosu	57.83	309	⇓iP	P	20 23 15.3	+0.8
BURAR	Bucovina Array	58.14	311	P	P	20 23 16.6	0.0
BURAR	Bucovina Array	58.14	311	⇓iP	P	20 23 16.5	-0.1
KEV	Kevo	58.29	338	ep	P	20 23 16.8	-0.6
	comp=Z,25nm,0.6s,mb5.4						
KEV	Kevo	58.29	338	eP	P	20 23 16.8	-0.6
KEV				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.4						
BILL	Bilibino	58.83	25d	iP	P	20 23 20.6	-0.5
BILL				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.4						
BILL	Bilibino	58.83	25	eP	P	20 23 20.3	-0.8
	comp=Z,26nm,0.8s,mb5.3						
SUW	Suwalki	59.01	319	eP	P	20 23 21.8	-0.7
WRAB	Tennant Creek	59.33	137	iP	P	20 23 24.5	-0.7
WRAB	Tennant Creek	59.33	137	eP	P	20 23 23.9	-1.3
	comp=Z,60nm,0.8s,mb5.7						
WRAB				epP	pP	20 23 42.6	-2.4
KTK1	Kautokeino	59.50	337	⇓iP	P	20 23 25.6	-0.2
KTK1				epP	pP	20 23 46.6	+1.2
SANT	Santorini	59.58	298	eP	P	20 23 25.1	-1.6
	comp=Z,200nm,1.0s,mb6.1						
KWP	Kalwaria	59.61	314	eP	P	20 23 26.9	+0.2
KOLS	Kolonicke sedl	59.96	313	eP	P	20 23 29.2	0.0
KOLS				e		20 23 32.8	
VTS	Vitosha	60.17	306	⇓P	P	20 23 31.0	+0.3
VTS	Vitosha	60.17	306	P	P	20 23 31.1	+0.3
ZAPS	Zavoj/Pirot	60.49	307	⇑iP	P	20 23 31.9	-0.9
CRVS	Cervenica-Dubn	60.50	313	eP	P	20 23 33.2	+0.3
CRVS				ePP	PP	20 25 36.8	-12
TRO	Tromso	61.07	337	eP	P	20 23 35.1	-1.4
	comp=Z,63nm,1.8s,mb5.3						
TRO	Tromso	61.07	337	⇓iP	P	20 23 35.0	-1.5
TRO				AMb	AMB	20 23 43.8	
	comp=Z,63nm,1.8s,mb5.3						
MUN	Mundaring	61.09	160	⇑iP	P	20 23 36.0	-1.1
	comp=Z,30nm,0.8s,mb5.4						
NIE	Niedzica	61.18	314	eP	P	20 23 36.6	-0.9
PMG	Port Moresby	61.38	118	eP	P	20 23 38.7	-0.6
	comp=Z,32nm,0.8s,mb5.4						
OJC	Ojcow	61.41	315	eP	P	20 23 38.7	-0.3
SKO	Skopje	61.57	305	⇓iP	P	20 23 39.6	-0.6
	comp=Z,0.1nm,0.8s						
PSZ	Piszkesteto	61.67	312	eP	P	20 23 40.6	-0.1
	comp=Z,11nm,0.8s,mb4.9						
PSZ	Piszkesteto	61.67	312	⇑iP	P	20 23 41.0	+0.3
ASPA	Alice Springs	61.91	140	⇑iP	P	20 23 41.9	-0.8
VYHS	Vyhne	62.28	313	eP	P	20 23 44.7	-0.1
VYHS				ePP	PP	20 26 00.2	-4.5
NWAO	Narrogin (SRO)	62.29	159	eP	P	20 23 43.6	-1.5
	comp=Z,18nm,0.6s,mb5.3						
KMBO	Kilima Mbogo	62.34	254	eP	P	20 23 46.0	+0.3
	comp=Z,22nm,1.0s,mb5.2						
OKC	Ostrava-Krasne	62.52	315	⇓iP	P	20 23 46.4	0.0
OKC				epP	pP	20 24 06.1	-0.2
GKP	Gorka Klasztor	62.60	319	eP	P	20 23 46.6	-0.3
SRO2	Moca	62.69	312	eP	P	20 23 47.8	+0.2
SRO2				e		20 23 52.9	
SRO2				e		20 24 12.8	
SRO	Srobarova	62.73	312	eP	P	20 23 48.3	+0.4
SRO				e		20 23 53.7	
SRO				i pP	pP	20 24 08.6	+0.8
MOR8	Moi Rana	62.79	333	⇓iP	P	20 23 46.8	-1.3
	comp=Z,78nm,1.0s,mb5.6						
MOR8	Moi Rana	62.79	333	⇓iP	P	20 23 46.8	-1.3
MOR8				AMb	AMB	20 23 48.0	
	comp=Z,78nm,1.0s,mb5.6						
MORC	Moravsky Berou	62.92	315	eP	P	20 23 48.4	-0.7
	comp=Z,34nm,0.9s,mb5.3						
LOF	Lofoten	63.03	335	eP	P	20 23 50.8	+1.2
ZST	Bratislava	63.47	313	eP	P	20 23 52.4	-0.4
ZST				i	pP	20 24 12.4	-0.3
ZST	Bratislava	63.47	313	eP	P	20 23 52.4	-0.4
ZST				e		20 23 55.9	
ZST				i pP	pP	20 24 12.4	-0.3
KSP	Ksiaz	63.53	316	⇓eP	P	20 23 53.3	+0.2
KSP				epP	pP	20 24 13.1	+0.1
KSP	Ksiaz	63.53	316	eP	P	20 23 53.4	+0.2
DPC	Dobruska-Polom	63.60	315	eP	P	20 23 53.9	+0.4
DPC				epP	pP	20 24 13.8	+0.3
BSD	Bornholm Skovb	63.69	321	⇓iP	P	20 23 52.9	-1.1
BSD				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.2						
BSD	Bornholm Skovb	63.69	321	⇓iP	P	20 23 52.9	-1.1
	comp=Z,34nm,0.9s,mb5.2						
UPC	Upice	63.77	316	⇓iP	P	20 23 55.0	+0.4
UPC				epP	pP	20 24 14.5	-0.1
NSS	Namsos	63.96	331	eP	P	20 23 54.1	-1.5
FORT	Forrest	64.61	149	eP	P	20 23 59.8	-0.6
	comp=Z,56nm,0.7s,mb5.5						
PVCC	Panska Ves	64.67	316	⇓eP	P	20 24 00.3	-0.2
PVCC				epP	pP	20 24 21.0	+0.5
ARSA	Arzberg	64.70	312	⇑iP	P	20 24 00.1	-0.6
	comp=Z,16nm,0.9s,mb4.9						
NB2	NORSAR Subarra	64.76	328	P	P	20 24 00.4	-0.5
	comp=Z,38nm,0.7s,mb5.3,baz=81,slow=6.5						
NB2	NORSAR Subarra	64.76	328	P	P	20 24 00.4	-0.5
	baz=81,slow=6.5						
PRU	Pruhonice	64.79	315	⇓iP	P	20 24 01.4	+0.1
PRU				epP	pP	20 24 20.9	-0.4
RUE	Ruedersdorf	64.79	318	eP	P	20 24 00.8	-0.4
GROS	Grobnik	64.87	311	iP	P	20 24 01.6	-0.3
BRG	Berggiesshubel	64.99	316	⇓iP	P	20 24 02.7	+0.1
BRG				i	pP	20 24 22.8	+0.2
BRG				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.1						
BRG	Berggiesshubel	64.99	316	⇓iP	P	20 24 02.7	+0.1
	comp=Z,37nm,1.1s,mb5.1						
BRG				i	pP	20 24 22.8	+0.2
COP	Copenhagen	65.00	322	iP	P	20 24 03.0	+0.5
COP				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.3						
COP	Copenhagen	65.00	322	iP	P	20 24 03.0	+0.5
	comp=Z,44nm,0.9s,mb5.3						
MOA	Molln	65.40	313	⇑iP	P	20 24 04.9	-0.4
	comp=Z,23nm,0.8s,mb5.1						
CLL	Collm	65.49	317	⇓iP	P	20 24 05.4	-0.3
CLL				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
CLL	Collm	65.49	317	⇓iP	P	20 24 05.4	-0.3
	comp=Z,25nm,1.0s,mb5.0						
CLL				i	pP	20 24 25.8	0.0
CLL	Collm	65.49	317	⇓P	P	20 24 05.4	-0.3
	comp=Z,logA/T=1.4,mb5.0						
CLL				i *PP	pP	20 24 25.8	0.0
CLL				ePP	PP	20 26 26.0	-6.8
OBKA	Obir	65.51	311	⇓iP	P	20 24 06.1	+0.2
	comp=Z,19nm,1.0s,mb4.9						
GEC2	GERESS Array S	65.56	314	eP	P	20 24 06.7	+0.5
GEC2				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.1						
GEC2	GERESS Array S	65.56	314	eP	P	20 24 06.7	+0.5
	comp=Z,29nm,0.9s,mb5.1						
KHC	Kasperske Hory	65.58	314	⇓iP	P	20 24 06.5	+0.1
DOMB	Dombas	65.61	329	eP	P	20 24 06.2	-0.1
	comp=Z,57nm,0.7s,mb5.5						
DOMB	Dombas	65.61	329	eP	P	20 24 06.2	-0.1
DOMB				AMb	AMB	20 24 07.4	
	comp=Z,57nm,0.7s,mb5.5						
DOMB				epP	pP	20 24 27.1	+0.7
LJU	Ljubljana	65.62	311	⇓iP	P	20 24 06.9	+0.2
CEY	Cerknica	65.76	311	⇓eP	P	20 24 07.6	0.0
CEY				e		20 24 22.2	
JAVS	Javornik	65.97	311	⇓iP	P	20 24 08.5	-0.5
	comp=Z,91nm,1.2s,mb5.5						
JAVS				i		20 24 23.2	
WET	Wettzell	66.02	315	eP	P	20 24 09.6	+0.4
WET				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
WET	Wettzell	66.02	315	eP	P	20 24 09.6	+0.4
	comp=Z,15nm,0.7s,mb4.9						
NKC	Novy Kostel	66.06	316	⇓eP	P	20 24 09.5	+0.1
NKC				epP	pP	20 24 28.3	-1.2
KBA	Koelnbreinsper	66.18	312	⇑iP	P	20 24 09.7	-0.6
	comp=Z,11nm,0.5s,mb4.9						
MRLC	Muro Lucano	66.21	305	eP	P	20 24 08.9	-1.6
MOL	Molde	66.21	330	⇓iP	P	20 24 12.7	+2.6
PTCC	Patocco-Chiusa	66.33	312	eP	P	20 24 10.4	-0.8
SGO	Sicignano	66.39	305	eP	P	20 24 11.3	-0.3
MOX	Moxa	66.49	316	eP	P	20 24 12.0	-0.1
MOX				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.1						
MOX	Moxa	66.49	316	eP	P	20 24 12.0	-0.1
	comp=Z,41nm,1.3s,mb5.1						
MOX	Moxa	66.49	316	iP	P	20 24 12.0	-0.1
	comp=Z,logA/T=1.5,mb5.1						
MUD	Monsted U’grnd	66.64	323	⇓iP	P	20 24 13.6	+0.7
MUD				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
MUD	Monsted U’grnd	66.64	323	⇓iP	P	20 24 13.6	+0.7
	comp=Z,15nm,0.6s,mb5.0						
FVI	Forni Avoltri	66.67	312	eP	P	20 24 12.3	-1.0
GRA1	Grafenberg Arr	66.95	315	eP	P	20 24 16.2	+1.2
	comp=Z,10.0nm,0.8s,mb4.7						
GRA1				epP	pP	20 24 36.3	+1.1
GRF	Grafenberg Arr	66.95	315	eP	P	20 24 16.2	+1.2
GRF				e*PP	pP	20 24 36.3	+1.1
GRF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
GRF	Grafenberg Arr	66.95	315	eP	P	20 24 16.2	+1.2
	comp=Z,10.0nm,0.8s,mb4.7						
GRF				epP	pP	20 24 36.3	+1.1
CLZ	Clausthal	66.98	318	eP	P	20 24 15.7	+0.6
	comp=Z,32nm,0.9s,mb5.2						
HYA	Hoyanger	67.13	328	eP	P	20 24 16.6	+0.7
ODD1	Odda	67.20	327	eP	P	20 24 15.4	-1.0
	comp=Z,63nm,1.8s,mb5.2						
ODD1	Odda	67.20	327	eP	P	20 24 15.4	-1.0
ODD1				AMb	AMB	20 24 27.1	
	comp=Z,63nm,1.8s,mb5.1						
ODD1				epP	pP	20 24 35.9	-0.6
WTTA	Wattenberg	67.27	313	⇑iP	P	20 24 16.6	-0.5
	comp=Z,20nm,0.6s,mb5.1						
FUR	Furstenfeldbru	67.28	314	eP	P	20 24 17.7	+0.6
WATA	Walderalm	67.29	313	⇓iP	P	20 24 16.5	-0.7
	comp=Z,13nm,1.1s,mb4.7						
CTA	Charters Tower	67.37	128	eP	P	20 24 17.5	-0.6
	comp=Z,6.9nm,0.9s,mb4.5						
CTAO	Charters Tower	67.37	128	eP	P	20 24 17.0	-1.1
	comp=Z,12nm,1.0s,mb4.7						
CTAO				epP	pP	20 24 35.2	-3.1
NRCA	Norcia	67.39	308	eP	P	20 24 17.9	0.0
BLS5	Blasjo	67.39	326	⇓iP	P	20 24 18.4	+0.8
SNTG	Esanatoglia	67.40	308	eP	P	20 24 18.0	+0.1
SQTA	Sankt Quirin	67.56	313	⇑iP	P	20 24 18.4	-0.5
	comp=Z,7.9nm,0.7s,mb4.7						
MOTA	Moosalm	67.60	313	⇑iP	P	20 24 18.6	-0.5
	comp=Z,12nm,0.9s,mb4.7						
MBAR	Mbarara	67.76	258	eP	P	20 24 19.3	-1.4
	comp=Z,17nm,0.8s,mb4.9						
MNS	Montasola	67.81	307	eP	P	20 24 19.5	-1.0
SFI	Santa Sofia	68.00	309	eP	P	20 24 22.4	+0.8
VMG	Vicchio	68.19	309	eP	P	20 24 24.2	+1.4
BRMO	Bormio	68.31	312	eP	P	20 24 23.1	-0.4
DAVA	Damuels	68.42	313	⇑iP	P	20 24 23.9	-0.3
	comp=Z,38nm,1.2s,mb5.1						
STU	Stuttgart	68.47	315	eP	P	20 24 24.3	-0.2
	comp=Z,33nm,0.8s,mb5.2						
ZCCA	Zocca	68.48	310	eP	P	20 24 26.1	+1.5
TOD	Tromm	68.50	316	eP	P	20 24 24.7	+0.1
TNS	Taunus Mts	68.56	316	eP	P	20 24 25.4	+0.4
GSCL	Gusciola	68.75	310	eP	P	20 24 27.2	+0.9
SARO	Sassorosso	68.92	310	P	P	20 24 27.3	-0.1
VALM		68.98	310	P	P	20 24 27.8	0.0
GRAM		69.06	310	P	P	20 24 28.2	-0.1
WTSB	Winterswijk	69.09	319	eP	P	20 24 28.6	+0.3
	comp=Z,31nm,1.1s,mb5.1						
WTSB				ex	x	20 24 49.1	
VINC	Vinca	69.11	310	P	P	20 24 27.2	-1.3
BFO	Black Forest	69.14	314	eP	P	20 24 28.6	-0.1
BFO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
BFO	Black Forest	69.14	314	eP	P	20 24 28.6	-0.1
	comp=Z,6.0nm,0.8s,mb4.5						
TNA	Tin City	69.15	26	eP	P	20 24 27.9	-0.5
	comp=Z,4.1nm,0.7s,mb4.4						
CODM		69.24	310	P	P	20 24 28.8	-0.5
LANF	Langenberg	69.30	315	eP	P	20 24 29.9	+0.3
FELD	Feldberg	69.48	314	eP	P	20 24 31.0	+0.3
VAI	Varese	69.55	312	eP	P	20 24 30.4	-0.8
RUP	Ruppelstein	69.56	316	eP	P	20 24 31.6	+0.4
WLS	Welschbruch	69.74	315	eP	P	20 24 32.3	0.0
CDF	Champ du Feu	69.79	315	⇓iP	P	20 24 32.4	-0.2
	comp=Z,28nm,0.7s,mb4.9						
GENL	Genova Univers	69.84	310	P	P	20 24 31.7	-1.3
ECH	Echery	69.93	315	eP	P	20 24 33.2	-0.2
HGN	Heimansgroeve	69.95	317	eP	P	20 24 34.0	+0.5
	comp=Z,16nm,1.9s,mb4.5						
HGN				ex	x	20 24 47.6	
DAG	Danmarks Havn	70.01	347	⇑eP	P	20 24 32.8	-0.7
DAG				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
DAG	Danmarks Havn	70.01	347	⇑eP	P	20 24 32.8	-0.7
	comp=Z,10.0nm,1.0s,mb4.6						
DAG	Danmarks Havn	70.01	347	⇑iP	P	20 24 32.8	-0.7
	comp=Z,10.0nm,1.0s,mb4.6						
MCGN	Macugnaga	70.05	312	eP	P	20 24 34.2	-0.1
MOF	Molkenrain	70.05	314	eP	P	20 24 34.0	-0.2
PCP	Pian Castagno	70.09	311	P	P	20 24 33.7	-0.8
WLF	Walferdange	70.13	316	eP	P	20 24 34.9	+0.2
	comp=Z,59nm,0.8s,mb5.5						
ORX	Oropa	70.15	312	P	P	20 24 33.0	-1.8
HINF	Hinteralfeld	70.24	314	⇓iP	P	20 24 34.8	-0.5
	comp=Z,20nm,0.8s,mb4.7						
TRAV		70.34	312	P	P	20 24 33.8	-2.2
PGF	Pioggiola	70.38	308	⇓iP	P	20 24 36.0	-0.3
	comp=Z,55nm,0.7s,mb5.2						
FIN	Finale Ligure	70.42	310	P	P	20 24 35.7	-0.8
HAU	Haudompre	70.51	315	⇓iP	P	20 24 36.6	-0.4
	comp=Z,25nm,1.0s,mb4.7						
HAU				eR			
	comp=Z,109nm,17.5s						
ROB	Roburent	70.63	310	P	P	20 24 37.2	-0.6
THEF	They Montfort	70.67	315	eP	P	20 24 37.7	-0.2
LSD	Ceresole Reale	70.75	312	P	P	20 24 38.4	-0.1
MONE	Monesi	70.77	310	P	P	20 24 37.8	-0.8
RSP	Reno Superiore	70.78	311	P	P	20 24 36.8	-1.9
GIVF	Givet	70.82	317	eP	P	20 24 39.0	+0.2
	comp=Z,24nm,0.8s,mb4.8						
BHB	Bricherasio	70.87	311	P	P	20 24 37.3	-1.9
NEGI	Negi	70.88	310	P	P	20 24 38.4	-0.8
SAOF	Saorge	70.94	310	eP	P	20 24 39.5	-0.1
FENE	Fenestrelle	70.95	311	P	P	20 24 38.4	-1.2
ENR	Entracque	70.96	311	P	P	20 24 38.8	-1.0
LPG	La Plagne	71.01	312	⇓iP	P	20 24 40.6	+0.6
	comp=Z,58nm,0.5s,mb5.3						
STV2	Anna di Valdie	71.01	311	P	P	20 24 38.1	-1.9
STV	Sta Anna Valdi	71.02	311	P	P	20 24 38.2	-1.9
LPL	La Plagne	71.02	312	⇓iP	P	20 24 40.6	+0.5
	comp=Z,100nm,0.6s,mb5.5						
AUTN	L’Aution	71.02	310	eP	P	20 24 41.3	+1.2
RSL	Roselend	71.04	312	eP	P	20 24 40.5	+0.3
SBF	Sospel	71.06	310	⇓iP	P	20 24 40.1	-0.2
	comp=Z,45nm,0.7s,mb5.1						
PZZ	Prazzo	71.09	311	P	P	20 24 38.3	-2.2
OG22	Abries	71.09	311	eP	P	20 24 40.2	-0.3
CABF	La Chapelle	71.10	313	⇓iP	P	20 24 40.4	-0.2
	comp=Z,46nm,1.0s,mb5.0						
TOUF	Mont Tournerai	71.14	310	eP	P	20 24 40.8	0.0
RRL	Cesana Torines	71.17	311	P	P	20 24 40.8	-0.2
MEZF	Maizieres J’vi	71.18	315	⇓iP	P	20 24 41.2	+0.2
	comp=Z,82nm,0.7s,mb5.3						
BNI	Bardonecchia	71.20	312	eP	P	20 24 40.3	-0.8
	comp=Z,15nm,0.6s,mb5.0						
BAIF	Baives	71.21	317	⇓iP	P	20 24 41.3	+0.1
	comp=Z,27nm,0.9s,mb4.8						
MBDF	Montbardon	71.24	311	⇓iP	P	20 24 40.6	-0.8
	comp=Z,56nm,0.6s,mb5.3						
MVIF	Mont Vial	71.24	310	eP	P	20 24 41.1	-0.4
SURF	Saint Ours	71.29	311	eP	P	20 24 42.0	+0.3
GDM	Grand’Maison	71.53	312	eP	P	20 24 43.4	+0.3
FRF	La Foret Royal	71.70	310	⇓iP	P	20 24 43.7	-0.5
	comp=Z,64nm,1.0s,mb5.1						
OG05	Jujurieux	71.70	313	eP	P	20 24 44.2	+0.1
GRN	Grenoble	71.77	312	eP	P	20 24 45.1	+0.5
ORIF	Oris-en-Rattie	71.78	312	⇓iP	P	20 24 44.2	-0.5
	comp=Z,38nm,0.6s,mb5.1						
ORIF				eR			
	comp=Z,145nm,19.5s						
OG25	Le Caire	71.83	311	eP	P	20 24 44.7	-0.2
LMR	La Mourre	71.86	310	⇓iP	P	20 24 44.9	-0.3
	comp=Z,44nm,0.9s,mb5.0						
TAVF	Tavernes	72.08	310	eP	P	20 24 46.6	+0.1
MENF	Mencas	72.30	318	eP	P	20 24 48.0	+0.4
SMRF	Simiane la Rot	72.30	311	⇓iP	P	20 24 47.9	+0.2
	comp=Z,21nm,0.7s,mb4.8						
BERF	Bertagne	72.44	310	eP	P	20 24 49.0	+0.4
STKA	Stephens Creek	72.55	140	⇓iP	P	20 24 48.7	-0.7
	comp=Z,5.6nm,0.7s,mb4.5						
SMF	Signal de Mont	72.56	314	⇓iP	P	20 24 49.0	-0.2
	comp=Z,80nm,0.8s,mb5.3						
VIVF	Saint-Julien-l	72.61	312	⇓iP	P	20 24 49.5	0.0
	comp=Z,33nm,0.7s,mb5.0						
SSF	Saint Saulge	72.63	314	⇓iP	P	20 24 49.5	-0.1
	comp=Z,69nm,0.7s,mb5.3						
AVF	Avril sur Loir	72.82	314	⇓iP	P	20 24 50.5	-0.2
	comp=Z,46nm,0.8s,mb5.1						
COLF	Collangettes	73.04	313	eP	P	20 24 52.4	+0.4
HYF	Humbligny	73.12	315	⇓iP	P	20 24 53.0	+0.6
AGO	Saint Agoulin	73.22	313	eP	P	20 24 53.6	+0.5
BGF	Bois d’Agland	73.23	314	⇓iP	P	20 24 53.0	-0.1
	comp=Z,35nm,0.7s,mb5.0						
PYM	Petit Puy Mans	73.41	313	eP	P	20 24 54.7	+0.5
LASF	Ste Croix	73.43	311	⇓iP	P	20 24 54.6	+0.3
	comp=Z,48nm,0.8s,mb5.1						
TCF	Toulx Ste Croi	73.74	314	⇓iP	P	20 24 56.5	+0.4
	comp=Z,62nm,0.7s,mb5.1						
SCO	Scoresbysund	74.12	342	iP	P	20 24 59.1	+1.2
SCO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
SCO	Scoresbysund	74.12	342	iP	P	20 24 59.1	+1.2
	comp=Z,5.4nm,0.8s,mb4.3						
CAF	Calviac	74.32	313	⇓iP	P	20 25 00.0	+0.4
	comp=Z,50nm,0.8s,mb5.0						
IMA	Indian Mountai	74.34	23	eP	P	20 25 00.4	+1.2
	comp=Z,10nm,0.7s,mb4.7						
LDF	La Druitiere	74.38	317	⇓iP	P	20 24 59.7	-0.1
	comp=Z,42nm,0.8s,mb4.9						
FLN	La Foliniere	74.53	317	⇓iP	P	20 25 00.4	-0.3
	comp=Z,15nm,0.7s,mb4.5						
FLN				eR			
	comp=Z,151nm,18.5s						
RJF	Les Rejaudoux	74.55	313	⇓iP	P	20 25 01.5	+0.7
	comp=Z,76nm,0.8s,mb5.2						
RJF				eR			
	comp=Z,150nm,18.6s						
MTLF	Montolieu	74.80	311	⇓iP	P	20 25 02.5	+0.2
	comp=Z,49nm,0.8s,mb5.0						
GRR	Gorron	74.91	317	⇓iP	P	20 25 02.8	0.0
	comp=Z,56nm,0.9s,mb5.0						
MFF	Saint Martin d	75.14	315	⇓iP	P	20 25 04.1	-0.1
	comp=Z,15nm,0.7s,mb4.5						
LFF	La Frestale	75.19	313	⇓iP	P	20 25 05.0	+0.5
	comp=Z,63nm,0.8s,mb5.1						
EMIR	Miracle	75.81	310	P	P	20 25 07.8	-0.3
	comp=Z,63nm,0.9s,mb5.3						
SGMF	Saint Gilles	76.00	317	⇓iP	P	20 25 09.5	+0.4
	comp=Z,57nm,0.8s,mb5.0						
SVW2	Sparrevohn	76.02	28	eP	P	20 25 09.7	+0.8
EPF	Esparros	76.19	311	⇓iP	P	20 25 10.3	+0.1
EPOB	Poblet	76.33	309	P	P	20 25 09.9	-1.1
	comp=Z,38nm,1.1s,mb5.0						
ROSF	Rostrenen	76.41	317	⇓iP	P	20 25 11.8	+0.5
	comp=Z,51nm,0.7s,mb5.0						
EBIE	Bielsa	76.46	311	P	P	20 25 11.9	+0.1
	comp=Z,56nm,1.4s,mb5.1						
QUIF	Quistinic	76.51	317	⇓iP	P	20 25 12.0	+0.1
SUMG	Summit	76.70	347	eP	P	20 25 12.6	+0.1
	comp=Z,17nm,0.8s,mb4.8						
SUMG				epP	pP	20 25 33.6	+0.5
ETSF	Etsaut	76.85	311	⇓iP	P	20 25 14.6	+0.7
	comp=Z,55nm,0.6s,mb5.2						
EBR	Ebro Roquetas	76.95	309	eP	P	20 25 15.2	+0.7
ERTA	Horta de San J	77.00	309	P	P	20 25 14.5	-0.3
	comp=Z,94nm,1.9s,mb5.2						
COLA	College	77.04	23	eP	P	20 25 15.0	+0.5
	comp=Z,25nm,0.7s,mb5.0						
SJPF	Ste Jean	77.21	312	⇓iP	P	20 25 15.7	-0.2
	comp=Z,26nm,0.6s,mb4.8						
ESAC	San Caprasio	77.25	310	P	P	20 25 16.9	+0.7
	comp=Z,75nm,1.1s,mb5.3						
MCK	McKinley	77.29	24	eP	P	20 25 15.3	-0.7
	comp=Z,7.7nm,0.7s,mb4.5						
LSZ	Lusaka	77.31	246	eP	P	20 25 16.9	-0.1
	comp=Z,13nm,0.6s,mb4.8						
LSZ				epP	pP	20 25 37.2	-0.4
SPU	Mount Spurr	77.45	27	eP	P	20 25 16.9	0.0
RSO	Redoubt South	77.54	28	eP	P	20 25 17.5	+0.1
EMOS	Mosqueruela	77.80	309	P	P	20 25 20.3	+1.0
	comp=Z,32nm,1.1s,mb5.0						

PWA	Palmer West	78.08	26	eP	P	20 25 20.2	-0.1
	comp=Z,112nm,0.9s,mb5.6						
FIB	Fire Island	78.23	27	eP	P	20 25 20.9	-0.2
SLKM	Skilak Lake	78.57	27	eP	P	20 25 22.2	-0.9
SML	Sawmill	78.60	26	eP	P	20 25 23.1	-0.1
ELAN	Lanestosa	78.63	313	P	P	20 25 24.7	+0.9
	comp=Z,88nm,1.8s,mb5.3						
THY	Trims Highway	78.63	24	eP	P	20 25 22.6	-0.8
INK	Inuvik	79.17	17	eP	P	20 25 26.1	-0.1
	comp=Z,25nm,0.8s,mb5.1						
INK				epP	pP	20 25 46.6	-0.2
RES	Resolute Bay	79.18	3	eP	P	20 25 26.1	0.0
	comp=Z,9.6nm,0.9s,mb4.6						
RES				epP	pP	20 25 46.6	-0.2
MENT	Mentasta	79.66	24	eP	P	20 25 29.9	+1.0
EARI	Arriondas	79.77	313	P	P	20 25 30.0	+0.1
	comp=Z,339nm,2.4s,mb5.8						
EVIA	Vianos	79.95	308	P	P	20 25 31.8	+0.8
	comp=Z,12nm,0.7s,mb4.8						
DIV	Divide	80.00	26	eP	P	20 25 31.1	+0.3
	comp=Z,45nm,0.9s,mb5.3						
GUD	Guadarrama	80.23	310	P	P	20 25 33.4	+0.9
	comp=Z,16nm,0.6s,mb5.0						
DAWY	Dawson	80.42	21	eP	P	20 25 32.9	-0.1
ESDC	Sonseca Array	80.52	309	P	P	20 25 34.5	+0.5
	comp=Z,5.0nm,0.7s,mb4.5						
EQES	Quesada	80.71	307	P	P	20 25 34.8	-0.3
	comp=Z,33nm,0.8s,mb5.2						
EBER	Berja	80.97	307	P	P	20 25 37.2	+0.7
	comp=Z,24nm,1.0s,mb5.0						
EPON	Pontenova	81.02	314	P	P	20 25 34.6	-2.0
	comp=Z,135nm,2.2s,mb5.4						
ECAL	Calabor	81.39	312	P	P	20 25 39.2	+0.6
	comp=Z,59nm,2.0s,mb5.1						
EINC	Incio	81.46	313	P	P	20 25 39.4	+0.5
	comp=Z,90nm,1.7s,mb5.3						
EADA	Adamuz	81.62	308	P	P	20 25 40.2	+0.4
	comp=Z,50nm,2.0s,mb5.0						
ELOJ	Sierra Loja	81.77	307	P	P	20 25 40.0	-0.7
	comp=Z,4.2nm,0.6s,mb4.5						
ELOB	Lobios	82.30	313	P	P	20 25 43.5	+0.3
	comp=Z,100nm,2.6s,mb5.2						
PVRL	Vila Real	82.35	312	eP	P	20 25 44.5	+1.0
	comp=Z,12nm,0.9s,mb4.7						
MTE	Manteigas	82.64	311	eP	P	20 25 45.5	+0.5
	comp=Z,27nm,1.6s,mb4.8						
PVIS	Viseu	82.73	312	eP	P	20 25 46.6	+1.1
	comp=Z,18nm,1.6s,mb4.6						
PVIS				epP	pP	20 26 07.3	+1.0
PCBR	Castelo Branco	82.86	311	eP	P	20 25 47.6	+1.4
	comp=Z,21nm,1.3s,mb4.8						
PCBR				epP	pP	20 26 09.3	+2.3
EBAD	Badajoz	83.05	310	P	P	20 25 47.3	+0.1
	comp=Z,24nm,1.0s,mb5.0						
ESPR	Espera	83.11	308	P	P	20 25 46.4	-1.1
	comp=Z,22nm,1.5s,mb4.8						
EMIN	Mina Concepcio	83.28	309	P	P	20 25 48.5	+0.2
	comp=Z,23nm,0.9s,mb5.0						
EVO	Evora	83.85	310	eP	P	20 25 52.0	+0.8
	comp=Z,14nm,0.9s,mb4.5						
EVO				eR			
	comp=Z,127nm,17.2s						
PALC	Alcoutim	83.98	309	eP	P	20 25 53.0	+1.1
	comp=Z,20nm,1.0s,mb4.9						
PALC				epP	pP	20 26 14.8	+2.1
PBEJ	Beja	83.99	309	eP	P	20 25 53.1	+1.2
	comp=Z,17nm,1.3s,mb4.7						
PTEO	Sao Teotonio	84.81	309	eP	P	20 25 57.3	+1.3
	comp=Z,32nm,1.8s,mb5.0						
YKW3	Yellowknife Ar	88.37	13	eP	P	20 26 12.0	-0.7
JCT	Junction City	121.81	16	PKP	PKPdf	20 32 14.4	0.0
SDV	Santo Domingo	142.66	337	ePKP	PKPdf	20 32 50.5	-3.2
BAO	Brasilia Array	144.44	280	eP	PKPbc	20 32 57.8	+1.4
BAO				i		20 33 09.1	
OTAV	Otavalo	153.12	347	ePKPdf	PKPdf	20 33 12.9	+2.2
OTAV				ePKPbc	PKPdf	20 33 21.0	+10
OTAV				ePKPab	PKPab	20 33 32.5	+0.1

NEIC 03 20:43:45.2±0.6, 17.49N×83.67W, h10$^{\text{km}}$, mb4.4/20, Error ellipse: s-maj=15.4km s-min=8.8km az=74.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	5.14	303	ePn	Pn	20 45 01.1	-3.2
JTS	JuntasAbangare	7.26	190	ePn	Pn	20 45 31.2	-2.9
	20nm,1.1s						
DWPF	Disney	10.77	11	P	P	20 46 27.0	+4.3
	74nm,0.9s						
SDV	Santo Domingo	15.29	122	eP	P	20 47 17.6	-5.5
	11nm,0.9s						
OXF	Oxford	17.71	344	eP	P	20 47 52.9	-0.8
	16nm,0.8s						
OTAV	Otavalo	17.90	163	eP	P	20 47 58.1	+2.0
	7.8nm,1.2s						
MIAR	Mount Ida	19.16	334	eP	P	20 48 09.3	-2.1
	17nm,1.3s						
JCT	Junction City	19.58	314	eP	P	20 48 14.3	-2.0
	20nm,0.5s						
JCT				eS	S	20 51 47.0	-4.1
CCM	Cathedral Cave	21.54	344	eP	P	20 48 34.6	-2.1
	9.4nm,0.7s						
LTX	Lajitas	21.77	306	eP	P	20 48 37.6	-1.6
	13nm,1.3s						
LTX				eS	S	20 52 05.5	-29
MCWV	Mont Chateau	22.34	8	eP	P	20 48 38.7	-6.0
	11nm,0.6s						
ACSO	Alum Creek Sta	22.67	1	eP	P	20 48 54.5	+6.4
	46nm,0.9s						
AMTX	Amarillo	23.63	321	eP	P	20 48 56.5	-1.0
	17nm,0.9s						
AMTX				e		20 49 04.3	
GDL2	Guadalupe Moun	23.75	312	eP	P	20 48 58.1	-0.6
CPRX	Cap Rock	23.87	314	eP	P	20 48 57.5	-2.3
KSU1	Kansas State U	24.31	335	eP	P	20 49 03.3	-0.7
ANMO	Albuquerque	26.74	315	eP	P	20 49 26.2	-0.7
	8.6nm,1.2s						
ANMO				e		20 49 33.9	
ISCO	Idaho Springs	29.26	324	P	P	20 49 52.3	+2.6
	9.1nm,0.9s						
PV10	Paradox Valley	30.41	318	P	P	20 49 55.1	-4.8
SRU	San Rafael	31.78	318	eP	P	20 50 09.8	-2.2
MVU	Marysvale	32.55	316	eP	P	20 50 17.9	-0.8
	3.8nm,0.9s						
BOZ	Bozeman (W)	36.47	326	eP	P	20 50 45.2	-7.1
	6.4nm,0.8s						
MCMT	McKenzie Canyo	36.60	324	eP	P	20 50 53.5	0.0
HLID	Hailey	36.74	322	eP	P	20 50 53.6	-1.0
	6.1nm,1.2s						
LPAZ	La Paz	36.89	155	eP	P	20 50 58.4	+2.3
	2.4nm,1.0s						
WVOR	Wild Horse Val	38.76	317	eP	P	20 51 10.4	-1.2
	12nm,1.0s						
SCHQ	Schefferville	39.45	15	eP	P	20 51 15.9	-1.3
	12nm,1.2s						
FCC	Fort Churchill	41.92	352	eP	P	20 51 34.9	-2.5
	3.0nm,0.9s						
LVC	Limon Verde	42.39	160	P	P	20 51 41.2	-0.6
EDM	Edmonton	42.50	334	eP	P	20 51 39.7	-2.6
CPUP	Villa Florida	50.52	149	P	P	20 52 53.6	+7.6
SUMG	Summit	60.83	14	P	P	20 53 56.1	-3.6
	4.3nm,0.8s						
IMA	Indian Mountai	66.06	335	eP	P	20 54 31.9	-2.2
TNA	Tin City	71.86	334	eP	P	20 55 08.1	-1.9

ISK 03 20:46:52.3, 38.51N×39.24E, h5$^{\text{km}}$, MD3.7, ML3.7
CSEM 03 20:46:52.3, 38.51N×39.24E, h5$^{\text{km}}$, MD3.7, After ISK

ISC 03 20:46:53.7±0.4, 38.50N±0.04×39.26E±0.03, h5$^{\text{km}}$, n25, σ0$^{\text{s}}$94/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.21	269	i P	Pg	20 46 58.5	+0.5
ELZG				i S	Sg	20 47 05.5	+4.5
PTK	Pertek	0.40	15	i PG	Pg	20 47 01.0	-0.8
MYA	Malataya	0.68	255	i PG	Pg	20 47 06.4	-0.9
MALT	Malatya	0.68	254	PG	Pg	20 47 06.1	-1.2
MALT				SG	Sg	20 47 16.9	+0.5
DIY	Diyarbakir	0.97	128	i PG	Pg	20 47 12.5	-0.6
BINT	Bingol	1.03	68	i PG	Pg	20 47 13.1	-1.2
URFA	Urfa	1.11	198	ePN	Pn	20 47 15.2	-0.7
EZC	Erzincan	1.32	19	PN	Pn	20 47 18.1	-0.7
BEST	Besiri	1.70	110	i P	Pn	20 47 23.6	-0.6
BEST				i S	Sn	20 47 48.1	+1.5
GZT	Gaziantep	1.76	230	i P	Pn	20 47 24.9	-0.2
GZT				i S	Sn	20 47 52.2	+4.0
BTMT	Batman	1.78	99	PN	Pn	20 47 23.8	-1.6
VRT	Varto	1.88	70	ePN	Pn	20 47 27.9	+1.1
GUMT	Gumushane	1.96	5	ePN	Pn	20 47 28.6	+0.6
KAHT	Ahir Dag	2.07	246	i P	Pn	20 47 32.2	+2.6
KAHT				i S	Sn	20 48 06.2	+10
GAZ	Gaziantep	2.10	231	ePN	Pn	20 47 29.4	-0.5
EZM	Erzurum	2.15	49	ePN	Pn	20 47 31.2	+0.5
ERZM	Erzurum	2.15	49	i P	Pn	20 47 32.6	+1.9
ERZM				i S	Sn	20 48 03.6	+5.4
BNN	Bunyan	2.69	278	ePN	Pn	20 47 38.1	-0.3
TOKT	Tokat	2.78	312	ePN	Pn	20 47 40.1	+0.5
COBT	Iskenderun	3.10	231	i P	Pn	20 47 44.6	+0.4
COBT				i S	Sn	20 48 23.3	+1.1
VANB	Van	3.24	87	ePN	Pn	20 47 46.7	+0.4
YOZ	Yozgat	3.27	292	ePN	Pn	20 47 46.3	-0.3
HTY	Hatay	3.44	227	ePN	Pn	20 47 48.3	-0.8
KAMT	Kaman	4.41	283	ePN	Pn	20 48 02.6	-0.3
HDMB	Hadim	5.58	256	ePN	Pn	20 48 19.4	0.0

ISC 03 21:06:33.8±3.6, 6.4N±0.2×92.7E±0.1, h46$^{\text{km}}$±28$^{\text{km}}$, n17, σ0$^{\text{s}}$55/20, mb5.1/1, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHG	Chiang Mai	13.73	26	P	P	21 09 47.2	-0.7
KKTK	Khon Kaen	13.96	44	P	P	21 09 52.0	+1.1
VIS	Vishakhapatnam	14.52	322	i P	P	21 09 57.2	-1.1
VIS				i S	S	21 12 39.0	+0.5
HYB	Hyderabad	17.65	310	eP	P	21 10 39.0	+0.8
HYB				eS	S	21 14 00.0	+9.2
KAD	Karad	21.12	302	eP	P	21 11 17.0	0.0
KAD				eS	S	21 15 18.0	+14
JIRN	Jiri	22.03	344	eP	P	21 11 25.1	-0.9
	64nm,1.0s						
PKI	Pulchoki	22.16	343	eP	P	21 11 27.5	+0.1
	119nm,1.1s						
DMN	Daman	22.29	342	eP	P	21 11 28.4	-0.2
	65nm,0.8s,mb5.1						
KKN	Kakani	22.41	342	eP	P	21 11 29.8	0.0
	48nm,0.9s						
GKN	Gorkha	22.81	341	eP	P	21 11 33.8	0.0
	78nm,0.9s						
KOLN	Koldanda	22.94	339	eP	P	21 11 35.3	+0.2
	54nm,0.8s						
UCH	Uchtor	39.16	338	P	P	21 13 59.0	+0.2
	SNR=7.2						
KBK	Karagaybulak	39.38	339	P	P	21 14 00.6	-0.1
	SNR=6.6						
AML	Almayashu	39.38	338	P	P	21 14 01.0	+0.4
	SNR=14						
AAK	Ala-Archa	39.52	339	P	P	21 14 01.9	+0.2
	SNR=5.2						
USP	Ospenovka	40.07	339	P	P	21 14 05.8	-0.6
	SNR=8.2						
WB2	Warramunga Arr	48.59	124	eP	P	21 15 01.4	-14

ATH 03 21:30:16.9, 40.26N×22.00E, h38$^{\text{km}}$±5$^{\text{km}}$, MD3.0/3
THE 03 21:30:19.6, 40.04N×21.64E, h1$^{\text{km}}$, ML2.9
CSEM 03 21:30:19.6±0.2, 40.04N×21.63E, h1$^{\text{km}}$±1$^{\text{km}}$, ML2.9, Error ellipse: s-maj=3.7km s-min=2.0km az=83.0

ISC 03 21:30:18.8±0.9, 40.05N±0.03×21.64E±0.06, h2$^{\text{km}}$±7$^{\text{km}}$, n10, σ0$^{\text{s}}$94/18, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.28	22	ePB	Pb	21 30 24.8	-1.4
KZN				eSB	Sb	21 30 29.0	-2.0
LIT	Litokhoron	0.66	85	ePg	Pg	21 30 31.7	-0.3
LIT				eSg	Sg	21 30 41.0	+0.2
JAN	Janina	0.72	237	ePN	Pn	21 30 37.0	+1.4
FNA	Florina	0.76	345	ePg	Pg	21 30 33.9	-0.1
FNA				eSg	Sg	21 30 44.7	+0.5
GRG	Griva	1.08	33	ePg	Pg	21 30 40.0	-0.4
GRG				eSg	Sg	21 30 56.1	+1.3
EVR	Evrytania	1.14	173	ePN	Pn	21 30 40.8	-0.8
EVR				eSN	Sn	21 30 58.5	+0.5
AGG	Agios Georgios	1.16	152	ePg	Pg	21 30 41.0	-0.9
AGG				eSg	Sg	21 30 57.7	+0.4
AGG	Agios Georgios	1.16	152	ePg	Pg	21 30 41.0	-0.9
AGG				eSg	Sg	21 30 57.7	+0.4
KNT	Kendrikon	1.47	40	ePb	Pb	21 30 46.4	-0.2
KNT				eSb	Sb	21 31 07.3	+1.6
SOH	Sokhos	1.52	59	ePb	Pb	21 30 47.6	+0.1

MOS 03 21:56:22.9±1.1, 50.59N×158.15E, h60$^{\text{km}}$, mb4.7/1, Error ellipse: s-maj=33.1km s-min=13.9km az=86.7
KRSC 03 21:56:23.4±0.5, 50.50N×158.43E, h37$^{\text{km}}$±15$^{\text{km}}$, ML4.5

ISC 03 21:56:23.1±1.1, 50.51N±0.06×158.44E±0.10, h70$^{\text{km}}$±9$^{\text{km}}$, n28, σ1$^{\text{s}}$04/46, mb4.3/4, 1C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	1.41	313	i P	P	21 56 47.7	+0.4
PAU				eS	S	21 57 05.2	0.0
PAU				Smax			
	5µm,0.5s						
SKR	Severo-Kuril's	1.49	277	⇓ iPN	P	21 56 45.9	-2.6
SKR				i S	S	21 57 04.0	-3.2
SKR				pmax	pmax		
	comp=E,2µm,0.5s						
SKR				pmax	pmax		
	comp=Z,4µm,0.5s						
SKR				pmax	pmax		
	comp=N,1µm,0.2s						
SKR				smax			
	comp=E,10µm,0.2s						
SKR				smax			
	comp=N,17µm,0.5s						
SKR				smax			
	comp=N,20µm,0.8s						
SKR				smax			
	comp=E,18µm,0.8s						
SKR	Severo-Kuril's	1.49	277	i P	P	21 56 45.9	-2.6
SKR				eS	S	21 57 04.0	-3.2
ALID	Alaid	1.87	282	eP	P	21 56 54.3	+0.7
ALID				eS	S	21 57 16.4	+0.3
RUS	Russkaya	1.92	1	P	P	21 56 54.1	-0.2
RUS				S	S	21 57 15.9	-1.4
RUS	Russkaya	1.92	1	i P	P	21 56 54.1	-0.2
RUS				eS	S	21 57 16.0	-1.3
GRL	Gorelyy	2.05	354	eP	P	21 56 56.8	+0.7
GRL				eS	S	21 57 20.6	+0.1
KRMR	Karymshinskiy	2.33	355	eP	P	21 57 00.8	+0.8
KRMR				eS	S	21 57 28.1	+0.7
PET	Petropavlovsk	2.52	3	P	P	21 57 02.4	-0.3
PET				S	S	21 57 31.1	-1.1
PET	Petropavlovsk	2.52	3	⇑ iPN	P	21 57 02.6	-0.1
PET				i S	S	21 57 31.6	-0.6
PET				pmax	pmax		
	comp=N,32nm,0.4s						
PET				pmax	pmax		
	comp=Z,62nm,0.4s						
PET				smax			
	comp=E,457nm,0.5s						
PET				smax			
	comp=N,719nm,0.4s						
PET	Petropavlovsk	2.52	3	eP	P	21 57 02.3	-0.4
PET				eS	S	21 57 31.0	-1.2
APC	Apacha	2.54	342	i P	P	21 57 03.8	+0.8
APC				i S	S	21 57 33.0	+0.1
APC				Smax			
	comp=N,200nm,1.2s						
NLC	Nalytchevo	2.72	12	eP	P	21 57 04.2	-1.3
NLC				eS	S	21 57 35.9	-1.4
AVH	Avacha	2.76	4	eP	P	21 57 06.9	+0.8
AVH				eS	S	21 57 38.3	0.0
SPN	Mys Shipunski	2.77	20	P	P	21 57 05.8	-0.4
SPN				S	S	21 57 35.6	-2.9
SPN	Mys Shipunski	2.77	20	eP	P	21 57 05.8	-0.4
SPN				eS	S	21 57 36.4	-2.1
KOK	Koryaka	2.79	2	i P	P	21 57 07.5	+1.1
KOK				eS	S	21 57 40.3	+1.4
GNL	Ganaly	3.20	355	i P	P	21 57 13.6	+1.3
GNL				eS	S	21 57 49.8	+0.4
TUMR	Tumrok	4.89	12	eP	P	21 57 37.4	+1.6
KMNR	Kamenistaya	5.36	11	eP	P	21 57 43.2	+0.9
KBTR	Krutoberegovo	6.28	23	P	P	21 57 54.1	-0.9
KBTR	Krutoberegovo	6.28	23	eP	P	21 57 54.3	-0.7
YAK	Yakutsk	19.50	317	eP	P	22 00 44.0	-2.8
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TIXI	Tiksi	25.05	338	eP	P	22 01 41.7	0.0
TIXI				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
ZAK	Zakamensk	34.44	292	eP	P	22 03 05.8	+0.4
ZAK				e		22 04 25.7	
JOF	Joensuu	59.47	335	ep	P	22 06 19.9	-0.5
	comp=Z,2.1nm,0.3s,mb4.7						
KAF	Kangasniemi	61.45	337	ep	P	22 06 33.5	-0.4
	comp=Z,1.2nm,0.4s,mb4.3,baz=32,slow=6.4						
NB2	NORSAR Subarra	65.73	343	P	P	22 07 02.5	+0.8
	comp=Z,1.2nm,0.5s,mb4.0,baz=22,slow=6.2						

JMA 03 22:18:28.1±0.4, 23.82N×122.04E, h73$^{\text{km}}$, M2.2

TAP 03 22:18:28.4, 23.75N×121.94E, h29$^{\text{km}}$, ML3.0, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.21	54	P	Pn	22 18 48.1	-1.5
YOJ				eS	Sn	22 19 03.1	-2.0
HATJ	Hateruma jima	1.73	79	eS	Sn	22 19 15.1	-3.4
IRIF	Iriomote-Funau	1.74	70	P	Pn	22 18 55.3	-1.9
IRIF				eS	Sn	22 19 15.8	-2.8
JKRS	Kuro-shima	1.95	75	P	Pn	22 18 58.7	-1.6
JKRS				eS	Sn	22 19 21.5	-2.6
JIJ	Ishigaki jima	2.10	73	P	Pn	22 18 59.7	-2.7
JIJ				eS	Sn	22 19 23.6	-4.3

DJA 03 22:44:01.7±0.7, 7.94S×116.29E, h240$^{\text{km}}$, MD4.4/3, ML3.8/1, 3C-1D, Error ellipse: s-maj=50.7km s-min=17.1km az=4.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	0.58	198	⇑ ePn	P	22 44 33.6	-0.3
	67nm,0.2s						
KEDI	Kedomdong	0.58	198	ePg	P	22 44 34.4	+0.5
RATI	Rata	1.08	224	⇑ iPn	P	22 44 36.3	-0.1
	142nm,0.2s						
RATI				eSn	S	22 45 01.5	-1.8
KELI	Kelakatan	1.80	261	⇓ iPn	P	22 44 41.8	-0.1
SRDI	Scrawed	2.19	256	⇑ ePn	P	22 44 46.0	+0.5
SRDI				eSn	S	22 45 18.5	-1.0

NEIC 03 22:46:59.0±0.8, 51.55N×16.31E, h5$^{\text{km}}$, ML3.2(VIE), ML3.0(SZGRF), Error ellipse: s-maj=10.9km s-min=6.0km az=212.0
PRU 03 22:47:01.2, 51.39N×16.16E, Felt In Harrachov
BGR 03 22:47:01.0±0.7, 51.33N×16.23E, h1$^{\text{km}}$, ML3.0/9, Error ellipse: s-maj=6.7km s-min=5.6km az=2.0
IPEC 03 22:47:01.7±0.4, 51.37N×16.48E, ML2.2/4, Error ellipse: s-maj=3.6km s-min=2.3km az=89.0
CSEM 03 22:47:02.3±0.2, 51.35N×16.12E, h1$^{\text{km}}$, ML3.5/3, Error ellipse: s-maj=4.0km s-min=2.0km az=16.0

WAR 03 22:47:01.5, 51.45N×16.17E, h1$^{\text{km}}$, ML3.0, 2C-1D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	173	ePG	Pg	22 47 13.0	-0.7
KSP				eSG	Sg	22 47 20.0	-1.9
KSP	Ksiaz	0.61	173	⇓ iPg	Pg	22 47 12.3	-1.4
KSP				i Sg	Sg	22 47 20.3	-1.6
UPC	Upice	0.95	186	ePG	Pg	22 47 18.5	-1.9
DPC	Dobruska-Polom	1.10	175	ePG	Pg	22 47 21.0	-2.5
DPC				eSG	Sg	22 47 35.2	-3.1
	42nm,0.2s						
DPC	Dobruska-Polom	1.10	175	ePg	Pg	22 47 21.1	-2.5
DPC				eSg	Sg	22 47 34.2	-4.1
PVCC	Panska Ves	1.37	228	ePG	Pg	22 47 26.1	-2.7
BRG	Berggiesshubel	1.52	249	ePg	Pg	22 47 29.1	-2.7
BRG				eSg	Sg	22 47 49.5	-2.4
BRG	Berggiesshubel	1.52	249	i Pn	Pn	22 47 27.4	-2.5
BRG				i Pg	Pg	22 47 29.1	-2.7
BRG				i Sg	Sg	22 47 49.5	-2.5
BRG	Berggiesshubel	1.52	249	Pg	Pg	22 47 29.1	-2.7
BRG				Sg	Sg	22 47 49.5	-2.5
PRU	Pruhonice	1.79	216	ePN	Pn	22 47 31.5	-2.3
PRU				ePG	Pg	22 47 33.4	-3.9
PRU				eSG	Sg	22 47 56.9	-4.3
	50nm,0.3s						
RUE	Ruedersdorf	1.80	306	ePn	Pn	22 47 31.2	-2.8
RUE				eSn	Sn	22 47 58.3	+0.5
MORC	Moravsky Berou	1.89	152	ePn	Pn	22 47 33.0	-2.2
MORC				eSn	Sn	22 47 52.4	-7.6
MORC	Moravsky Berou	1.89	152	ePn	Pn	22 47 33.0	-2.2
MORC				eSg	Sg	22 47 56.1	-8.3
	10nm,0.1s,baz=338						
CLL	Collm	1.99	267	ePn	Pn	22 47 36.8	+0.2
CLL				eSg	Sg	22 48 04.7	-3.0
CLL	Collm	1.99	267	ePN	Pn	22 47 34.0	-2.6
CLL				i PG	Pg	22 47 37.1	-4.1
CLL				eSG	Sg	22 48 05.0	-2.8
CLL	Collm	1.99	267	i Pg	Pg	22 47 37.1	-4.1
CLL				Sg	Sg	22 48 04.7	-3.1
OKC	Ostrava-Krasne	2.05	141	ePG	Pg	22 47 38.2	-4.2
OKC				eSG	Sg	22 48 04.0	-5.6
VRAC	Vranov	2.16	173	ePn	Pn	22 47 37.7	-1.4
KRUC	Moravsky	2.39	176	ePn	Pn	22 47 41.4	-1.0
KRUC				eSg	Sg	22 48 14.0	-7.2
	10nm,0.2s						
TANN	Tannenbergstha	2.56	248	ePn	Pn	22 47 43.2	-1.7
TANN				eSg	Sg	22 48 21.8	-5.1
OJC	Ojcow	2.61	117	ePN	Pn	22 47 41.0	-4.5
OJC				ePG	Pg	22 47 51.0	-2.6
OJC				eSN	Sn	22 48 13.0	-5.3
OJC				eSG	Sg	22 48 26.0	-2.4
OJC	Ojcow	2.61	117	ePg	Pg	22 47 51.1	-2.5
OJC				eSn	Sn	22 48 13.0	-5.3
OJC				eSg	Sg	22 48 25.6	-2.8
NKC	Novy Kostel	2.66	244	ePN	Pn	22 47 43.8	-2.4
NKC				ePG	Pg	22 47 49.8	-4.7
NKC				eSG	Sg	22 48 23.8	-6.1
	37nm,0.4s						
GUNZ	Gunzen	2.66	247	ePn	Pn	22 47 44.2	-2.0
GUNZ				eSg	Sg	22 48 25.7	-4.4
NEUB	Neuenburg	2.77	267	eSg	Sg	22 48 30.0	-3.7
KHC	Kasperske Hory	2.85	217	ePN	Pn	22 47 46.6	-2.4
KHC				ePG	Pg	22 47 52.7	-5.8
KHC				eSG	Sg	22 48 29.1	-7.4
KHC	Kasperske Hory	2.85	217	ePg	Pg	22 47 52.7	-5.8
KHC				eSg	Sg	22 48 29.1	-7.4
MOX	Moxa	2.98	256	ePn	Pn	22 47 48.5	-2.4
MOX				eSg	Sg	22 48 36.8	-4.1
MOX	Moxa	2.98	256	ePn	Pn	22 47 48.5	-2.4
MOX				ePg	Pg	22 47 56.9	-4.2
MOX				eSg	Sg	22 48 36.6	-4.3
MOX	Moxa	2.98	256	i P	Pn	22 47 48.5	-2.4
MOX				Pg	Pg	22 47 57.0	-4.1
MOX				Sg	Sg	22 48 37.0	-3.9
MOX	Moxa	2.98	256	ePg	Pg	22 47 56.9	-4.2
MOX				Sg	Sg	22 48 36.8	-4.1
GEC2	GERESS Array S	3.05	212	ePn	Pn	22 47 50.3	-1.5
GEC2				eSg	Sg	22 48 35.2	-7.9
GEC2	GERESS Array S	3.05	212	ePn	Pn	22 47 50.3	-1.5
GEC2				eSg	Sg	22 48 35.2	-7.9
NOTT	Nottersdorf	3.06	239	ePn	Pn	22 47 49.7	-2.1
WET	Wettzell	3.13	224	ePn	Pn	22 47 50.8	-2.1
WET				eSg	Sg	22 48 38.2	-7.4
WET	Wettzell	3.13	224	ePn	Pn	22 47 50.8	-2.1
WET				eSg	Sg	22 48 38.2	-7.4
ZST	Bratislava	3.31	169	eSN	Sn	22 48 33.2	-2.9
ZST				eSG	Sg	22 48 45.8	-6.0
NIE	Niedzica	3.34	126	eP	Pg	22 48 01.8	-6.3
NIE				eS	Sg	22 48 45.7	-6.9
VYHS	Vyhne	3.42	149	ePN	Pn	22 47 54.6	-2.5
VYHS				eSG	Sg	22 48 51.0	-4.4
GRA1	Grafenberg Arr	3.61	243	ePn	Pn	22 47 57.6	-2.2
GRA1	Grafenberg Arr	3.61	243	Pn	Pn	22 47 57.6	-2.2
GRF	Grafenberg Arr	3.61	243	ePn	Pn	22 47 57.6	-2.1
MOA	Molln	3.81	200	⇑ iPN	Pn	22 47 59.9	-2.7
MOA				i SG	Sg	22 49 03.1	-5.2
	15nm,0.5s						
HROE	Hohe Rhon--Fla	3.91	259	⇑ iPn	Pn	22 48 01.3	-2.7

*CSEM **03** 23:05:46.8±0.2,67.19N×20.42E,h2^{km}±2^{km},ML2.5,Error ellipse: s-maj=6.2km s-min=5.2km az=29.0,Mining explosion.*

*UPP **03** 23:05:47.4,67.19N×20.67E,h0^{km},ML2.5,Mining explosion.*

HEL 03 23:05:47.8±0.0,**67.18N×20.68E,ML2.4,ML2.5**(UPP),
Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.08	216	*i* P	Pg	23 05 49.1	-0.2
MASU	Masugnsbyn	0.58	61	*i* P	Pg	23 05 58.5	-0.9
KUA	Kurravaara	0.79	350	*i* P	Pg	23 06 02.0	-1.5
ERTU	Ertsjaerv	0.87	136	*i* P	Pg	23 06 03.3	-1.8
SALU	Saltoluokta	0.87	284	*i* P	Pg	23 06 03.4	-1.7
NIKU	Nikkaluokta	0.94	318	*e*P	Pg	23 06 04.6	-1.9
SJUU	Sjulsmark	1.72	167	*e*P	Pn	23 06 18.5	-0.7
KIF	Kilpisjarvi	1.83	1	*e*P	Pn	23 06 20.4	-0.4
KIF				*e*S	Sn	23 06 41.1	-3.9
KIF	Kilpisjarvi	1.83	1	P	Pn	23 06 20.3	-0.5
KIF				S	Sn	23 06 41.1	-3.9
LILU	Lilltraesk	1.94	190	*e*P	Pn	23 06 21.9	-0.3
KTK1	Kautokeino	2.07	26	*e*P	Pn	23 06 23.8	-0.4
SGF	Sodankyl	2.28	81	*e*PB	Pb	23 06 27.3	-2.3
SGF				*e*S	Sn	23 06 51.1	-5.4
MOR8	Moi Rana	2.68	251	*e*SG	Sn	23 07 07.0	+0.4
LOF	Lofoten	2.89	293	*e*	Sg	23 07 22.4	-1.6
LOF	Lofoten	2.89	293	*e*	Sg	23 07 22.4	-1.6
UMAU	Umeaa	3.31	180	*e*P	Pn	23 06 40.5	-1.4
KEV	Kevo	3.48	39	*e*PB	Pb	23 06 47.1	-3.0
KEV				*e*S	Sn	23 07 23.6	-3.2
KEV				MSG		23 07 31.3	
	comp=Z,8.5nm,0.8s						

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*NEIC **03** 23:36:03.0,31.25S×68.72W,h150^{km},mb3.6/1, MD3.8(GUC),After GUC.*

GUC 03 23:36:03.0±0.9,**31.25S×68.72W,h150**^{km}±18^{km},**MD3.8,**
ML4.4,6C-2D,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.30	173	⇓*i*P	P	23 36 39.0	+15
ZON				*e*S	S	23 36 51.0	+11
TLL	Tololo Astrono	2.10	300	⇑*i*P	P	23 36 40.6	+1.1
TLL				*i* S	S	23 37 08.5	+0.8
TLL				AMP		23 37 12.3	
	comp=N,3μm,0.4s						
ILCH	Illapel	2.13	259	*i* P	P	23 36 40.3	+0.3
ILCH				*i* S	S	23 37 08.4	-0.1
ILCH				AMP		23 37 10.2	
	comp=E,1μm,0.2s						
PTCH	Petorca	2.14	241	*i* P	P	23 36 40.0	-0.1
PTCH				*i* S	S	23 37 08.2	-0.4
PTCH				AMP		23 37 11.2	
	comp=E,3μm,0.3s						
JACH	Jahuel	2.14	228	*i* P	P	23 36 40.8	+0.6
JACH				*i* S	S	23 37 08.6	-0.1
FCH	Farellones	2.46	212	⇑*i*P	P	23 36 44.9	+0.8
FCH				*i* S	S	23 37 16.7	+0.9
FCH				AMP		23 37 24.9	
	comp=E,858nm,0.2s						
PEL	Peldehue	2.52	221	*i* P	P	23 36 44.7	-0.2
PEL				*i* S	S	23 37 16.2	-0.7
CLCH	Cerro Calan	2.63	215	⇑*i*P	P	23 36 46.5	+0.2
CLCH				*i* S	S	23 37 19.9	+0.4
CLCH				AMP		23 37 22.9	
	comp=E,2μm,0.6s						
CLCH				AMP		23 37 27.4	
	comp=E,2μm,0.7s						
SJCH	San Jose de Ma	2.75	210	*i* S	S	23 37 21.9	-0.4
SJCH				AMP		23 37 29.3	
	comp=N,434nm,0.3s						
ANTU	Antumapu	2.82	215	*i* P	P	23 36 49.0	+0.2
ANTU				*i* S	S	23 37 23.7	-0.1
ANTU				AMP		23 37 28.5	
	comp=E,949nm,0.3s						
RCDM	Rinconada Maip	2.85	218	*i* P	P	23 36 49.0	0.0
RCDM				*i* S	S	23 37 23.9	-0.4
RCDM				AMP		23 37 24.9	
	comp=E,1μm,0.4s						
LMEL	Las Melosas	2.88	205	⇑*i*P	P	23 36 49.6	+0.1
LMEL				*i* S	S	23 37 25.8	+0.8
LMEL				AMP		23 37 32.1	
	comp=E,360nm,0.5s						
CHCH	Chadas Angostu	3.13	211	⇓*i*P	P	23 36 52.6	-0.1
CHCH				*i* S	S	23 37 30.8	0.0
VACH	Vallenar	3.20	326	⇑*i*P	P	23 36 53.7	+0.1
VACH				*i* S	S	23 37 31.6	-0.8
CACH	El Canelo	3.27	209	*i* P	P	23 36 54.9	+0.3
CACH				*i* S	S	23 37 34.7	+0.7
LCCH	Las Cruces	3.28	227	*i* P	P	23 36 53.9	-0.8
LCCH				*i* S	S	23 37 34.0	-0.2
CICH	Cipreses	3.38	205	⇑*i*P	P	23 36 56.2	+0.2
CICH				*i* S	S	23 37 36.2	-0.4
LVC	Limon Verde	8.61	359	*e*Pn	P	23 38 03.6	-1.8
TRQA	Tornquist	8.77	143	*e*Pn	P	23 38 04.3	-3.3
PLCA	Paso Flores	9.58	188	*e*Pn	P	23 38 16.0	-2.2
LPAZ	La Paz	14.90	2	*e*P	P	23 39 28.1	+0.8
	comp=E,2.8nm,0.8s						

SKHL 04 00:07:57.6±0.2,**55.82N×124.44E,h7**^{km}±1^{km},**mb3.5**/2,
Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KROS	Kirovskiy	2.01	133	*e*Pg	Pg	00 08 34.2	-3.6
KROS				AMB	AMB	00 08 35.5	
	5.0nm,0.3s						
KROS				AMB	AMB	00 08 35.5	
	6.0nm,0.3s						
KROS				pPg		00 08 36.5	
KROS				*e*Sn	Sn	00 08 58.3	+0.3
KROS				*e*Sg	Sg	00 09 01.0	-3.6
KROS				A		00 09 02.5	
	30nm,0.4s						
KROS				A		00 09 02.5	
	88nm,0.4s						
KROS				A		00 09 02.5	
	49nm,0.4s						
ZEA	Zeya	2.65	141	*e*Sg	Sg	00 09 20.3	-5.4
ZEA				A		00 09 23.1	
	44nm,0.3s						
ZEA				A		00 09 23.1	
	74nm,0.3s						
BMKR	Bomnak	2.75	112	*e*Pn	Pn	00 08 44.0	+1.0
BMKR				*e*Pg	Pg	00 08 47.7	-4.9
BMKR				AMB	AMB	00 08 48.1	
	8.0nm,0.4s						
BMKR				pPg		00 08 50.6	
BMKR				*e*Sg	Sg	00 09 24.1	-5.2
BMKR				A		00 09 26.4	
	30nm,0.5s						
BMKR				A		00 09 26.4	
	20nm,0.5s						
TUP	Tupik	2.93	243	*e*Pn	Pn	00 08 47.3	+1.8
TUP				*e*rx	rx	00 08 54.0	
TUP				*e*Sn	Sn	00 09 22.2	+0.8
TUP				*e*Sg	Sg	00 09 30.2	-5.0
TUP				A		00 09 32.9	
	37nm,0.5s						
YASR	Yasnyy	3.27	139	*e*Pg	Pg	00 08 56.6	-6.2
YASR				*e*Sn	Sn	00 09 28.1	-1.8
YASR				*e*Sg	Sg	00 09 40.7	-5.7
YASR				A		00 09 42.3	
	20nm,0.6s						
YASR				A		00 09 42.3	
	9.0nm,0.6s						
YASR				A		00 09 42.3	
	8.0nm,0.6s						
EKMR	Ekimchan	5.68	116	*e*rx	rx	00 10 15.9	
EKMR				*e*Sg	Sg	00 10 55.0	-12
EKMR				A		00 11 05.5	
	4.0nm,0.4s						
EKMR				A		00 11 05.5	
	3.0nm,0.4s						

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*TIF **04** 00:19:55.4,37.76N×43.74E,h15^{km}±1^{km}*

*ISK **04** 00:19:56.2,37.77N×43.76E,h8^{km},MD4.6,ML4.8*

*TEH **04** 00:19:56.1,37.93N×43.31E,h10^{km},Mn4.3*

*THR **04** 00:19:56.3±0.8,37.82N×43.54E,h14^{km}±10^{km},ML4.2*

*BJI **04** 00:19:56.4,38.07N×43.45E,h10^{km},mB5.1,mb4.5,Ms4.3, Msz4.2*

*MOS **04** 00:19:57.4±1.4,37.64N×43.70E,h10^{km},mb4.7/34,Error ellipse: s-maj=8.7km s-min=4.4km az=126.0*

*NEIC **04** 00:19:58.5±1.0,37.57N×43.74E,h10^{km}±6^{km},mb4.5/38, MD4.6(ISK),Error ellipse: s-maj=9.2km s-min=6.5km az=168.0*

NEIC Felt in the Hakkari area, Turkey.

*ZUR_RM **04** 00:19:58,37.57N×43.74E,h21^{km},Mw4.8/11,Moment Tensor Solution. s11 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.01; M$_{\theta\theta}$-1.53; M$_{\phi\phi}$1.52; M$_{r\theta}$0.00; M$_{\theta\phi}$0.07; M$_{\phi r}$-0.08; Best double couple: M$_0$1.53×10^{16} NP1:ϕ_s136°,δ88°,λ178°. NP2:ϕ_s226°,δ88°,λ2°. Principal axes: T 1.52, Plg3°, Azm91°; N .011, Plg87°, Azm272°; P -1.531, Plg0°, Azm181°;*

*CSEM **04** 00:20:01.8,38.08N×43.50E,h2^{km},mb4.6*

ISC 04 00:19:57.5±0.2,**37.66N**±0.02×**43.70E**±0.02,**h10**^{km}**,n272,**
σ**1**^{s}**39**/283,**mb4.5**/54,**MS4.0**/7,**12C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	Hakkari	0.09	159	*i* PG	Pg	00 20 00.8	+0.8
VANT	Van	0.82	343	*i* PG	Pg	00 20 11.1	-2.8
TVAN	Van	0.89	345	*i* P	Pb	00 20 11.4	-3.2
TVAN				*i* S	Sg	00 20 26.5	-0.8
VANB	Van	0.96	345	PG	Pg	00 20 11.7	-5.0
MSL	Mosul	1.46	200	*i* Pn	Px	00 20 29.0	
MSL				*i* Sb	Sx	00 20 49.0	
MSL				*i* Sg	Sx	00 20 50.5	
IAZR	Azarshahr	1.81	89	Pn	Pn	00 20 30.5	+1.5
BTMT	Batman	1.83	287	PN	Pn	00 20 30.4	+1.2
BTMT				SN	Sn	00 20 56.3	+3.7
MAKU	Maku	1.86	24	*e*PG	Pb	00 20 28.6	-2.4
MAKU				AML	AML	00 20 58.2	
	comp=N,3μm,0.5s						
IMRD	Marand	1.90	56	Pn	Pn	00 20 30.2	0.0
BEST	Besiri	1.94	277	*i* P	Pn	00 20 30.4	-0.5
BEST				*i* S	Sn	00 20 58.0	+2.6
ITBZ	Tabriz	2.02	73	Pn	Pn	00 20 32.7	+0.7
VRT	Varto	2.25	311	PN	Pn	00 20 34.5	-0.8
VRT	Varto	2.25	311	Pn	Pn	00 20 36.1	+0.8
IBST	Bostanabad	2.53	88	Pn	Pn	00 20 30.4	-9.0
GNI	Garni	2.61	18	PN	Pn	00 20 38.1	-2.4
GNI	Garni	2.61	18	⇓*e*P	Pn	00 20 41.0	+0.5
IHRS	Heris	2.72	75	Pn	Pn	00 20 43.3	+1.3
DIY	Diyarbakir	2.76	276	PN	Pn	00 20 42.5	-0.1
DIY	Diyarbakir	2.76	276	Pn	Pn	00 20 42.6	0.0
BINT	Bingol	2.80	297	PN	Pn	00 20 42.8	-0.4
BINT	Bingol	2.80	297	P	Pn	00 20 44.4	+1.2
ERZM	Erzurum	2.89	322	*i* P	Pn	00 20 45.1	+0.7
ERZM				*i* S	Sg	00 21 29.2	-4.4
IHSH	Hashtroud	2.89	76	Pn	Pn	00 20 46.5	+2.1
EZM	Erzurum	2.89	322	PN	Pn	00 20 43.5	-0.9
KARS	Kars	2.98	351	PN	Pn	00 20 44.1	-1.7
KARS	Kars	2.98	351	P	Pn	00 20 45.4	-0.4
LEN	Leninakan	3.10	2	*e*P	Pg	00 20 54.0	-5.4
GRMI	Germi	3.50	70	*e*PN	Pn	00 20 53.7	+0.6
GRMI				AML	AML	00 22 12.1	
	comp=N,176nm,0.7s						
PTK	Pertek	3.60	291	*e*PN	Pn	00 20 54.4	-0.2
IDHR	Dehrash	3.67	143	Pn	Pn	00 20 57.8	+2.3
EZC	Erzincan	3.68	306	*e*PN	Pn	00 20 59.6	+3.9
EZC	Erzincan	3.68	306	P	Pb	00 21 01.6	-0.7
AKH	Akhalkalaki	3.75	358	P	Pn	00 20 57.5	+0.9
AKH				S	Sg	00 22 01.4	-0.8
ELZG	Elazig	3.81	284	*i* P	Pn	00 20 55.7	-1.8
ELZG				*i* S	Sb	00 21 54.3	+3.2
URFA	Urfa	3.88	268	*e*PN	Pn	00 20 58.5	-0.1
SNGE	Sanandaj	3.90	130	*e*PN	Pn	00 21 01.1	+2.3
SNGE				*e*SG	Sg	00 22 03.4	-4.1
SNGE				AML	AML	00 22 08.3	
	comp=N,692nm,0.7s						
SNGE	Sanandaj	3.90	130	*e*Pn	Pn	00 21 01.1	+2.2
	SNR=52						
SNGE				*e*Sg	Sg	00 22 03.4	-4.1
	comp=N,692nm,0.7s,SNR=90						
IVIS	Veys	4.04	140	Pn	Pn	00 21 02.7	+1.9
IGHG	Ghaleghazi	4.06	144	Pn	Pn	00 21 03.1	+2.0
BCA	Borcka	4.10	338	*e*PN	Pn	00 20 59.5	-2.2
BCA	Borcka	4.10	338	Pn	Pn	00 21 02.9	+1.2
MTA	Mtatsminda	4.11	11	P	Pn	00 21 02.8	+1.0
MTA				S	Sb	00 22 03.8	+4.0
TI2	Plekhanov	4.14	11	*i* P	Pn	00 21 02.8	+0.5
MALT	Malatya	4.21	280	*e*PN	Pn	00 21 02.6	-0.7
MALT	Malatya	4.21	280	*e*P	Pn	00 21 02.2	-1.1
MALT	Malatya	4.21	280	*e*Pn	Pn	00 21 02.6	-0.7
MYA	Malataya	4.22	281	*e*PN	Pn	00 21 02.8	-0.5
MYA	Malataya	4.22	281	Pn	Pn	00 21 03.1	-0.2
GUMT	Gumushane	4.31	312	*e*PN	Pn	00 21 03.9	-0.7
GUMT	Gumushane	4.31	312	Pn	Pn	00 21 05.8	+1.2
BHD	Baghdad	4.42	173	*e*Pn	Px	00 21 05.5	
BHD				*i* Pg	Px	00 21 24.5	
BHD				*i* Sn	Sx	00 21 58.5	
BHD				*i* Sb	Sx	00 22 09.5	
BHD				*i* Sg	Sx	00 22 22.5	
DUS	Dusheti	4.49	10	P	Pn	00 21 07.5	+0.4
IKOM	Komasi	4.66	137	Pn	Pn	00 21 11.1	+1.5
GZT	Gaziantep	4.89	268	*i* P	Pn	00 21 09.4	-3.4
GZT				*i* S	Sn	00 22 08.8	-1.4
ONI	Oni	4.92	358	P	Pn	00 21 15.3	+2.1
ONI				S	Sg	00 22 37.7	-3.4
GAZ	Gaziantep	5.19	267	*e*PN	Pn	00 21 17.8	+0.7
GAZ	Gaziantep	5.19	267	Pn	Pn	00 21 15.6	-1.5
IRAZ	Razeghan	5.50	112	Lg		00 22 59.4	
IRAZ	Razeghan	5.50	112	Pn	Pn	00 21 22.8	+1.4
IMHD	Mahdasht	5.94	107	Lg		00 23 12.9	
TOKT	Tokat	6.17	298	*e*PN	Pn	00 21 30.7	-0.2
TOKT	Tokat	6.17	298	Pn	Pn	00 21 31.2	+0.3
HTY	Hatay	6.25	258	*e*PN	Pn	00 21 32.2	+0.1
HTY	Hatay	6.25	258	Pn	Pn	00 21 32.0	-0.1
BNN	Bunyan	6.29	283	*e*PN	Pn	00 21 32.2	-0.5
KIV	Kislovodsk	6.33	353	Pn	Pn	00 21 35.4	+2.2
	comp=N,256nm,1.1s,SNR=17						
KIV	Kislovodsk	6.33	353	*e*P	Pn	00 21 34.4	+1.2
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV				MLR	MLR		
	comp=Z,1μm,16.0s						
KIV	Kislovodsk	6.33	353	*e*P	Pn	00 21 34.4	+1.2
CEYT	Ceyhan	6.37	267	*e*PN	Pn	00 21 34.1	+0.4
CEYT	Ceyhan	6.37	267	Pn	Pn	00 21 33.8	+0.1
IQOM	Qom	6.59	113	Lg		00 23 33.6	
IQOM	Qom	6.59	113	Pn	Pn	00 21 36.9	+0.1
SOC	Sochi	6.64	334	*e*P	Pn	00 21 36.9	-0.7
SOC				*e*		00 22 44.5	
SOC				pmax	pmax		
	comp=Z,67nm,1.0s						
SOC				pmax	pmax		
	comp=N,56nm,0.8s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,741nm,15.0s						
SOC				MLR	MLR		
	comp=N,643nm,12.0s						
SOC				MLR	MLR		
	comp=E,915nm,15.0s						
IAFJ	Afjeh	6.68	103	Pn	Pn	00 21 39.8	+1.7
IAFJ	Afjeh	6.68	103	Lg		00 23 34.9	
YOZ	Yozgat	6.85	289	*e*PN	Pn	00 21 40.0	-0.5
SHGR	Shooshtar-Gavs	6.95	141	*e*PN	Pn	00 21 42.1	+0.2
DAMV	Damavand	6.95	104	*e*PN	Pn	00 21 42.7	+0.8
IDMV	Damavand	7.02	105	Pn	Pn	00 21 43.6	+0.8
HWQ	Hawqa	7.13	244	*e*PN	Pn	00 21 44.4	-0.1
NIG	Nigde	7.20	276	*e*PN	Pn	00 21 45.1	-0.3
CORM	Corum	7.50	292	*e*PN	Pn	00 21 48.1	-1.5
BHL	Bhannes	7.54	243	*e*PN	Pn	00 21 51.4	+1.3
IFIR	Firoozkooh	7.55	103	Pn	Pn	00 21 52.2	+1.9
IFIR	Firoozkooh	7.55	103	Lg		00 24 03.2	
KAMT	Kaman	8.01	285	*e*PN	P	00 21 56.1	-0.7
KAMT	Kaman	8.01	285	Pn	P	00 21 55.9	-0.9
ANN	Anapa	8.55	328	*e*P	P	00 21 58.0	-6.2
ANN				pmax	pmax		
	comp=Z,27nm,0.8s						
NASN	Na’in	8.89	120	*e*PN	P	00 22 09.2	+0.3
NAY	Al-Naaiem	8.90	160	*e*P	P	00 22 06.0	-3.1
RDF	Al-Radifah	9.29	159	*e*P	P	00 22 11.8	-2.7
QRN	Al-Qurain	9.57	157	*e*P	P	00 22 16.3	-2.1
ISP	Isparta	10.45	275	*i* P	P	00 22 38.3	+7.9
EIL	Elat	10.80	225	*e*P	P	00 22 30.9	-4.3
RAYN	Ar Rayn	14.18	173	Pn	P	00 23 15.6	-4.9
	comp=Z,208nm,1.3s,SNR=49						
KIS	Kishinev	14.41	315	*e*P	P	00 23 35.0	+12
VOR	Voronezh	14.42	349	*e*P	P	00 23 22.0	-1.5
VOR				pmax	pmax		
	comp=Z,100nm,1.0s						
APE	Apeiranthos	14.47	273	*i* P	P	00 23 31.7	+7.5
IDI	Anoyia	15.32	267	P	P	00 23 40.3	+4.9
BANOM	Banah	15.85	134	P	P	00 23 39.2	-3.1
	SNR=7.5						
BANOM				P		00 23 39.2	
	SNR=7.5						
KMPD	K-Podol’skiy	16.61	316	P	P	00 23 54.0	+2.2
KIEV	Kiev	16.62	326	P	P	00 23 52.0	0.0
ASHO	Ashiyiah	16.69	137	P	P	00 23 50.2	-2.8
	SNR=8.4						
ASHO				P		00 23 50.2	
	SNR=8.4						
ARQ	Araqi	18.03	139	P	P	00 24 05.5	-4.2
	SNR=14						
ARQ				P		00 24 05.5	
	SNR=14						
OBN	Obninsk	18.12	347	*i* P	P	00 24 04.7	-6.0
OBN				pmax	pmax		
	comp=Z,59nm,2.0s						
OBN				MLR	MLR		
	comp=Z,300nm,15.0s						
OBN	Obninsk	18.12	347	*e*P	P	00 24 03.0	-7.7
	comp=Z,16nm,0.8s						
MOS	Moscow	18.54	349	*e*P	P	00 24 10.9	-5.0
MOS				pmax	pmax		
	comp=Z,48nm,1.3s						
MOS				MLR	MLR		
	comp=Z,400nm,15.3s						
BIDO	Bidbid	18.75	135	P	P	00 24 16.6	-2.2
	SNR=17						
BIDO				P		00 24 16.6	
	SNR=17						
BSY	Bisya	18.87	138	P	P	00 24 17.1	-3.0
	SNR=28						
BSY				P		00 24 17.1	
	SNR=28						
BSYO	Bisya	18.90	138	P	P	00 24 17.1	-3.4
	SNR=28						
DIVS	Divcibare	19.01	297	⇑*i*(P)	P	00 24 23.0	+1.3
SMDO	Samad	19.07	136	P	P	00 24 20.1	-2.5
	SNR=23						
SMDO				P		00 24 20.1	
	SNR=23						
KWP	Kalwaria	19.26	315	*e*P	P	00 24 25.4	+0.8
CRVS	Cervenica-Dubn	19.63	312	*e*P	P	00 24 28.2	-0.6
CRVS				*e*		00 24 33.5	
JMDO	Jabal Madar	19.66	137	P	P	00 24 26.9	-2.4
	SNR=13						
JMDO				P		00 24 26.9	
	SNR=13						
MNK	Minsk	20.04	332	*e*P	P	00 24 35.0	+1.8
PSZ	Piszkesteto	20.18	308	*e*P	P	00 24 34.7	-0.1
PSZ				pmax	pmax		
	comp=Z,11nm,0.9s						
PSZ	Piszkesteto	20.18	308	*e*P	P	00 24 34.7	-0.1
	comp=Z,11nm,0.9s						
PSZ	Piszkesteto	20.18	308	*e*P	P	00 24 36.9	+2.1
PSZ	Piszkesteto	20.18	308	*e*P	P	00 24 34.7	-0.1
	comp=Z,11nm,0.9s						
PKSM	Moragy	20.44	303	P	P	00 24 39.0	+1.5
PKSM	Moragy	20.44	303	*e*P	P	00 24 37.5	0.0
NIE	Niedzica	20.53	312	*e*P	P	00 24 37.8	-0.7
VYHS	Vyhne	21.05	309	P	P	00 24 46.9	+3.1
VYHS	Vyhne	21.05	309	*e*P	P	00 24 43.6	-0.2
VYHS				*e*sP		00 24 47.2	
VYHS				*e*		00 24 51.6	
TIP	Timpagrande	21.14	282	*e*P	P	00 24 43.6	-1.2
TIP	Timpagrande	21.14	282	*e*P	P	00 24 43.6	-1.2
OJC	Ojcow	21.19	314	*e*P	P	00 24 47.2	+2.0
ARU	Arti	21.25	23	P	P	00 24 44.0	-1.7
	comp=Z,217nm,0.7s,mb5.6,SNR=7.2						
ARU	Arti	21.25	23	⇑*i*P	P	00 24 36.8	-8.9
ARU				*e*SS	S	00 28 36.1	-0.8
ARU				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.6						
WHFO	Wadi Hawf	21.57	153	P	P	00 24 46.8	-2.4
	SNR=112						
WHFO				P		00 24 46.8	
	SNR=112						
SUW	Suwalki	21.59	326	*e*P	P	00 24 48.0	-1.2
	comp=Z,29nm,0.9s,mb4.7						
SUW	Suwalki	21.59	326	*e*P	P	00 24 51.1	+1.8
SUW	Suwalki	21.59	326	*e*P	P	00 24 48.0	-1.2
	comp=Z,29nm,0.9s,mb4.7						
JAVC	Velka Javorina	21.90	309	P	P	00 24 57.1	+4.7
ABTO	Aybut	21.92	155	P	P	00 24 50.7	-2.1
	SNR=41						
ABTO				P		00 24 50.7	
	SNR=41						
OKC	Ostrava-Krasne	21.99	312	*e*P	P	00 24 54.1	+0.9
OKC				AMS	AMS	00 34 50.0	
ZST	Bratislava	22.03	307	*e*P	P	00 24 57.4	+3.7
RBK	Rabkut	22.10	152	P	P	00 24 52.9	-1.7
	SNR=54						
RBK				P		00 24 52.9	
	SNR=54						
SHAO	Shalim	22.19	149	P	P	00 24 53.8	-1.7
	SNR=18						
SHAO				P		00 24 53.8	
	SNR=18						
SVE	Sverdlovsk	22.24	25	*e*P	P	00 24 51.7	-4.0
SVE				*e*		00 25 35.4	
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS3.5						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS3.5						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.8						
MORC	Moravsky Berou	22.32	311	*e*P	P	00 24 56.9	+0.3
MORC				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.3						
MORC	Moravsky Berou	22.32	311	*e*P	P	00 24 56.9	+0.3
	comp=Z,19nm,1.5s,mb4.3						
MORC	Moravsky Berou	22.32	311	*e*P	P	00 24 56.9	+0.3
	comp=Z,19nm,1.5s,mb4.3						
GROS	Grobnik	22.61	302	*e*P	P	00 25 02.3	+2.9
VRAC	Vranov	22.72	309	P	P	00 25 03.4	+2.9
VRAC	Vranov	22.72	309	*e*P	P	00 25 02.9	+2.4
KRUC	Moravsky	22.76	309	P	P	00 25 04.8	+3.9
ARSA	Arzberg	22.78	304	⇑*i*P	P	00 25 05.2	+4.1
	comp=Z,19nm,1.2s,mb4.4						
PDKS	Podkum	22.87	301	*e*P	P	00 25 06.1	+4.2
CII	Carovilli	22.93	289	*e*P	P	00 25 02.8	+0.3
	comp=Z,20nm,0.8s,mb4.6						
CII	Carovilli	22.93	289	*e*P	P	00 25 02.8	+0.2
	comp=Z,20nm,0.8s,mb4.6						
DPC	Dobruska-Polom	23.27	312	P	P	00 25 09.5	+3.7
DPC	Dobruska-Polom	23.27	312	*e*P	P	00 25 06.6	+0.8
KSP	Ksiaz	23.48	313	*e*P	P	00 25 11.0	+3.2
KSP				*e*pP		00 25 24.9	
SOKR	Solikamsk	23.48	17	⇑*i*P	P	00 25 12.1	+4.3
SOKR				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.4						
UPC	Upice	23.51	312	*e*P	P	00 25 10.9	+2.7
VOY	Vojsko	23.62	300	*e*P	P	00 25 10.2	+1.0
MOA	Molln	23.76	305	⇑*i*P	P	00 25 11.7	+1.1
	comp=Z,16nm,0.8s,mb4.5						
AAK	Ala-Archa	23.98	68	*e*P	P	00 25 13.8	+1.0
AAK				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.3						
AAK	Ala-Archa	23.98	68	*e*P	P	00 25 13.8	+1.0
	comp=Z,16nm,1.4s,mb4.3						
AAK	Ala-Archa	23.98	68	*e*P	P	00 25 13.8	+1.0
	comp=Z,16nm,1.4s,mb4.3						
PTCC	Patocco-Chiusa	24.05	301	*e*P	P	00 25 15.1	+1.6
PTCC	Patocco-Chiusa	24.05	301	*e*P	P	00 25 15.1	+1.6
FRU	Bishkek	24.08	68	*e*P	P	00 25 25.5	+12
FRU				pmax	pmax		
	comp=Z,55nm,1.8s,mb4.7						
KBA	Koelnbreinsper	24.19	303	⇑*i*P	P	00 25 16.0	+1.2
	comp=Z,20nm,0.8s,mb4.6						
KBA	Koelnbreinsper	24.19	303	⇑*i*P	P	00 25 16.0	+1.2
KBA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
PRU	Pruhonice	24.21	310	*e*P	P	00 25 16.4	+1.4
PRU				AMS	AMS	00 36 50.0	
PVCC	Panska Ves	24.38	311	*e*P	P	00 25 16.4	-0.2
GEC2	GERESS Array S	24.38	307	*e*P	P	00 25 16.0	-0.7
GEC2				pmax	pmax		

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      comp=Z,12nm,1.3s,mb4.2
GEC2  GERESS Array S   24.38 307  eP     P      00 25 16.0 -0.7
      comp=Z,12nm,1.3s,mb4.2
CHKZ  Chkalovo         24.49  41  eP     P      00 25 17.0 -0.6
CHKZ                               pmax  pmax
      comp=Z,13nm,1.1s,mb4.3
CHKZ  Chkalovo         24.49  41  eP     P      00 25 17.0 -0.7
      comp=Z,13nm,1.1s,mb4.3
CHKZ  Chkalovo         24.49  41  eP     P      00 25 17.0 -0.6
      comp=Z,13nm,1.1s,mb4.3
KHC   Kasperske Hory   24.54 307⇓iP     P      00 25 19.7 +1.5
KHC   Kasperske Hory   24.54 307  eP     P      00 25 18.6 +0.4
KHC                                AMS   AMS    00 35 40.0
      comp=Z,400nm,18.9s
BRG   Berggiesshubel   24.87 312  eP     P      00 25 21.2 -0.2
BRG                                pmax  pmax
      comp=Z,11nm,1.0s,mb4.3
BRG   Berggiesshubel   24.87 312  eP     P      00 25 21.2 -0.2
      comp=Z,11nm,1.0s,mb4.3
WET   Wettzell         24.99 307  eP     P      00 25 22.6 +0.1
WET                                pmax  pmax
      comp=Z,12nm,1.0s,mb4.4
WET   Wettzell         24.99 307  eP     P      00 25 22.6 +0.1
      comp=Z,12nm,1.0s,mb4.4
VMG   Vicchio          25.03 295  eP     P      00 25 28.4 +5.4
CTI   Castel Tesino    25.16 300  eP     P      00 25 26.4 +2.2
KSH   Kashi            25.23  76  eP     P      00 25 27.0 +2.2
KSH                               eAP    pP     00 25 32.4 +4.7
KSH                               eXP    sP     00 25 35.5 +6.4
KSH                               ePP    PP     00 26 05.3 +2.2
KSH                               eS     S      00 29 50.0 +2.5
KSH                               eSS    SS     00 30 51.4 +3.4
KSH                               ePCS          00 32 38.0
KSH                               eSCS   ScS    00 36 24.5 +0.1
KSH                                AMB   AMB
      comp=Z,130nm,3.1s
KSH                                LR    LR
      comp=N,440nm,12.0s
KSH                                LR    LR
      comp=E,350nm,6.6s
WTTA  Wattenberg       25.37 302   P     P      00 25 28.4 +2.3
NKC   Novy Kostel      25.57 309   P     P      00 25 30.2 +2.3
NKC   Novy Kostel      25.57 309  eP     P      00 25 29.5 +1.6
RUE   Ruedersdorf      25.57 315  eP     P      00 25 28.6 +0.7
      comp=E,27nm,1.1s,mb4.7
CLL   Collm            25.58 312  i P    P      00 25 27.7 -0.3
CLL                                pmax  pmax
      comp=Z,21nm,1.2s,mb4.5
CLL   Collm            25.58 312  i P    P      00 25 27.7 -0.3
      comp=Z,21nm,1.2s,mb4.5
CLL                               i             00 25 41.5
CLL   Collm            25.58 312   P     P      00 25 27.7 -0.3
      comp=Z,logA/T=1.2,mb4.5
CLL                               i             00 25 41.5
CLL                               e             00 25 48.0
CLL   Collm            25.58 312  eP     P      00 25 29.2 +1.2
      comp=Z,20nm,1.2s,mb4.5
NOTT  Nottersdorf      25.64 308  eP     P      00 25 28.7  0.0
      comp=Z,17nm,1.1s,mb4.5
SQTA  Sankt Quirin     25.65 302⇑iP     P      00 25 28.2 -0.5
      comp=Z,8.5nm,0.9s,mb4.3
SQTA  Sankt Quirin     25.65 302⇑iP     P      00 25 28.2 -0.5
SQTA                               pmax  pmax
      comp=Z,9.0nm,0.9s,mb4.3
GUNZ  Gunzen           25.68 310  eP     P      00 25 29.8 +0.9
      comp=Z,28nm,1.8s,mb4.5
MOTA  Moosalm          25.74 302⇑iP     P      00 25 29.5 -0.1
      comp=Z,6.5nm,0.9s,mb4.2
MOTA  Moosalm          25.74 302⇑iP     P      00 25 29.5 -0.1
MOTA                               pmax  pmax
      comp=Z,7.0nm,0.9s,mb4.2
FUR   Furstenfeldbru   25.78 304  eP     P      00 25 29.8 -0.2
FUR                                pmax  pmax
      comp=Z,36nm,0.9s,mb4.9
FUR   Furstenfeldbru   25.78 304  eP     P      00 25 29.8 -0.2
      comp=Z,36nm,0.9s,mb4.9
BRMO  Bormio           26.10 300  eP     P      00 25 33.8 +0.8
BRMO  Bormio           26.10 300  eP     P      00 25 33.8 +0.9
GRA1  Grafenberg Arr   26.18 308  eP     P      00 25 34.1 +0.5
      comp=Z,37nm,1.2s,mb4.8
GRF   Grafenberg Arr   26.18 308  eP     P      00 25 34.1 +0.5
GRF                                pmax  pmax
      comp=Z,37nm,1.2s,mb4.8
GRF   Grafenberg Arr   26.18 308  eP     P      00 25 34.1 +0.5
GRF                                pmax  pmax
      comp=Z,37nm,1.2s,mb4.8
GRF   Grafenberg Arr   26.18 308  eP     P      00 25 34.1 +0.5
      comp=Z,37nm,1.2s,mb4.8
GRFO  Grafenberg       26.18 308   P     P      00 25 36.6 +3.0
MOX   Moxa             26.20 310  eP     P      00 25 34.9 +1.1
      comp=Z,14nm,1.7s,mb4.2
JOF   Joensuu          26.40 347  ep     P      00 25 32.5 -3.0
DAVA  Damuels          26.55 302⇑iP     P      00 25 36.2 -0.9
      comp=Z,22nm,0.9s,mb4.7
KAF   Kangasniemi      26.74 342  ep     P      00 25 34.4 -4.2
PGF   Pioggiola        26.86 291  eP     P      00 25 41.0 +1.0
      comp=Z,59nm,1.0s,mb4.8
PGF   Pioggiola        26.86 291  eP     P      00 25 41.0 +1.0
PGF                                pmax  pmax
      comp=Z,30nm,1.0s,mb4.8
CLZ   Clausthal        27.31 312  eP     P      00 25 45.0 +1.1
      comp=Z,17nm,1.3s,mb4.4
NRDL  Niedersach Rie   27.67 313  eP     P      00 25 47.7 +0.5
      comp=Z,9.0nm,1.0s,mb4.3
KURK  Kurchatov        27.95  51  eP     P      00 25 48.4 -1.4
KURK                               pmax  pmax
      comp=Z,4.0nm,0.8s,mb4.1
KURK  Kurchatov        27.95  51  eP     P      00 25 48.4 -1.5
      comp=Z,4.3nm,0.8s,mb4.1
TNS   Taunus Mts       28.04 308  eP     P      00 25 51.8 +1.2
TNS                                pmax  pmax
      comp=Z,17nm,1.3s,mb4.5
TNS   Taunus Mts       28.04 308  eP     P      00 25 51.8 +1.2
      comp=Z,17nm,1.3s,mb4.5
MBDF  Montbardon       28.49 296  eP     P      00 25 54.7  0.0
      comp=Z,7.3nm,0.6s,mb4.2
MBDF  Montbardon       28.49 296  eP     P      00 25 54.7  0.0
MBDF                               pmax  pmax
      comp=Z,4.0nm,0.6s,mb4.2
LPG   La Plagne        28.53 298  eP     P      00 25 54.7 -0.4
      comp=Z,6.1nm,0.7s,mb4.1
LPG   La Plagne        28.53 298  eP     P      00 25 54.7 -0.4
LPG                                pmax  pmax
      comp=Z,3.0nm,0.7s,mb4.1
LPL   La Plagne        28.54 298  eP     P      00 25 54.2 -1.0
      comp=Z,5.7nm,0.6s,mb4.2
LPL   La Plagne        28.54 298  eP     P      00 25 54.2 -1.0
LPL                                pmax  pmax
      comp=Z,3.0nm,0.6s,mb4.2
BNI   Bardonecchia     28.56 297  eP     P      00 25 54.7 -0.7
BNI                                pmax  pmax
      comp=Z,5.0nm,0.8s,mb4.3
BNI   Bardonecchia     28.56 297  eP     P      00 25 54.7 -0.6
      comp=Z,5.1nm,0.8s,mb4.3
BNI   Bardonecchia     28.56 297  eP     P      00 25 54.7 -0.7
      comp=Z,5.1nm,0.8s,mb4.3
CABF  La Chapelle      29.06 300  eP     P      00 25 58.7 -1.1
      comp=Z,28nm,1.0s,mb4.6
CABF  La Chapelle      29.06 300  eP     P      00 25 58.7 -1.1
CABF                               pmax  pmax
      comp=Z,14nm,1.0s,mb4.7
SMF   Signal de Mont   30.60 300  eP     P      00 26 11.9 -1.7
      comp=Z,12nm,0.8s,mb4.5
SMF   Signal de Mont   30.60 300  eP     P      00 26 11.9 -1.7
SMF                                pmax  pmax
      comp=Z,6.0nm,0.8s,mb4.5
BAIF  Baives           30.69 307  eP     P      00 26 13.2 -1.1
      comp=Z,5.5nm,0.7s,mb4.2
BAIF  Baives           30.69 307  eP     P      00 26 13.2 -1.1
BAIF                               pmax  pmax
      comp=Z,3.0nm,0.7s,mb4.2
AVF   Avril sur Loir   30.95 300  eP     P      00 26 14.7 -1.9
      comp=Z,11nm,0.8s,mb4.4
AVF   Avril sur Loir   30.95 300  eP     P      00 26 14.7 -1.9
AVF                                pmax  pmax
      comp=Z,5.0nm,0.8s,mb4.4
NB2   NORSAR Subarra   30.98 329   P     P      00 26 14.3 -2.5
      comp=Z,2.4nm,0.8s,mb4.1,baz=124,slow=8.6
NB2   NORSAR Subarra   30.98 329   P     P      00 26 14.3 -2.5
NB2                                pmax  pmax
      comp=Z,2.0nm,0.8s,mb4.0
TCF   Toulx Ste Croi   31.72 299  eP     P      00 26 21.9 -1.5
NVS   Novosibirsk      31.75  44  eP     P      00 26 23.4 -0.2
MTLF  Montolieu        31.80 294  eP     P      00 26 23.2 -1.0
      comp=Z,38nm,1.3s,mb4.8
MTLF  Montolieu        31.80 294  eP     P      00 26 23.2 -1.0
MTLF                               pmax  pmax
      comp=Z,19nm,1.3s,mb4.8
WMQ   Urumqi           33.59  65  eP     P      00 26 40.0 +0.3
KOLN  Koldanda         34.77  95  eP     P      00 26 49.5 -0.6
      comp=Z,16nm,1.1s,mb4.9
QUIF  Quistinic        35.39 302  eP     P      00 26 53.1 -2.1
      comp=Z,8.1nm,0.6s,mb4.5
QUIF  Quistinic        35.39 302  eP     P      00 26 53.1 -2.1
QUIF                               pmax  pmax
      comp=Z,4.0nm,0.6s,mb4.5
ROSF  Rostrenen        35.46 303  eP     P      00 26 53.8 -2.0
GKN   Gorkha           35.48  94  eP     P      00 26 55.7 -0.5
      comp=Z,20nm,0.8s,mb5.1
DMN   Daman            36.03  94  eP     P      00 26 59.7 -1.1
      comp=Z,28nm,1.0s,mb5.2
KKN   Kakani           36.09  93  eP     P      00 27 00.1 -1.2
      comp=Z,11nm,0.7s,mb4.9
PKI   Pulchoki         36.29  94  eP     P      00 27 02.2 -0.8
      comp=Z,30nm,1.2s,mb5.1
HYB   Hyderabad        36.61 114  i P    P      00 27 05.5 -0.2
JIRN  Jiri             36.87  93  eP     P      00 27 06.3 -1.6
      comp=Z,10nm,0.6s,mb4.8
ESLA  Sonseca Array    36.93 288  eP     P      00 27 07.4 -0.9
      comp=Z,1.3nm,0.9s,mb3.8
GTA   Gaotai           43.32  70  eP     P      00 28 01.3 +0.2
GTA                                PP    PP     00 29 42.4 -1.7
GTA                                PCP   PcP    00 29 52.8 +2.2
GTA                                S     S      00 34 28.4 +0.2
GTA                                AMB   AMB
      comp=Z,4.0nm,0.9s,mb4.2
GTA                                AMB   AMB
      comp=Z,89nm,4.9s
GTA                                LR    LR
      comp=N,122nm,13.3s,MS4.1
GTA                                LR    LR
      comp=E,117nm,15.2s,MS4.1
GTA                                LR    LR
      comp=Z,126nm,14.8s,MS4.0
ULN   Ulaanbaatar      46.41  56   P     P      00 28 26.1 +0.4
LZH   Lanzhou          47.41  73  eP     P      00 28 33.2 -0.6
LZH                                AMB   AMB
      comp=Z,25nm,1.5s,mb4.9
LZH                                LR    LR
      comp=N,175nm,15.0s
LZH                                LR    LR
      comp=Z,296nm,17.8s,MS4.3
LZH   Lanzhou          47.41  73  eP     P      00 28 33.2 -0.6
LZH                                *PP   pP     00 28 36.5 -0.3
LZH                                *SP   sP     00 28 37.9 -0.1
LZH                                pmax  pmax
      comp=Z,25nm,1.5s,mb4.9
LZH                                MLR   MLR
      comp=Z,300nm,17.8s,MS4.3
LZH   Lanzhou          47.41  73  eP     P      00 28 33.2 -0.6
      comp=Z,25nm,1.5s,mb4.9
LZH                                pP    pP     00 28 36.5 -0.3
LZH                                sP    sP     00 28 37.9 -0.1
LZH                                LR    LR
      comp=Z,300nm,17.8s,MS4.3
BOD   Bodaibo          48.92  42  eP     P      00 28 42.9 -2.3
KMI   Kunming          51.17  86   P     P      00 29 06.0 +3.1
KMI                                AMB   AMB
      comp=Z,8.0nm,1.1s,mb4.6
KMI                                LR    LR
      comp=N,116nm,20.0s,MS4.0
KMI                                LR    LR
      comp=E,94nm,16.2s,MS4.0
KMI                                LR    LR
      comp=Z,140nm,26.2s
KMI   Kunming          51.17  86   P     P      00 29 06.0 +3.1
      comp=Z,8.0nm,1.1s,mb4.6
KMI                                LR    LR
      comp=Z,140nm,26.2s,MS3.9
CHG   Chiang Mai       51.42  95   P     P      00 29 08.5 +3.6
NANT  Nan              52.82  94   P     P      00 29 14.0 -1.4
TIXI  Tiksi            53.25  23  i P    P      00 29 19.5 +1.6
GYA   Guiyang          53.63  83   P     P      00 29 19.2 -2.1
GYA                                XP    sP     00 29 30.0 +4.5
GYA                                S     S      00 36 48.9 -4.3
GYA                                AMB   AMB
      comp=Z,10.0nm,0.7s,mb4.8
GYA                                AMB   AMB
      comp=Z,80nm,3.2s
GYA                                LR    LR
      comp=N,330nm,4.9s
GYA                                LR    LR
      comp=E,280nm,4.9s
GYA                                LR    LR
      comp=Z,300nm,4.9s
LSZ   Lusaka           54.64 198   P     P      00 29 29.2 +0.4
CN2   Changchun        59.86  56  eP     P      00 30 05.0 -0.4
NJ2   Nanjing          60.40  71  eP     P      00 30 12.5 +3.2
NJ2                                S     S      00 38 20.0 -2.4
NJ2                                AMB   AMB
      comp=Z,20nm,1.0s,mb5.1
NJ2                                AMB   AMB
      comp=Z,510nm,4.5s
NJ2                                LR    LR
      comp=N,390nm,24.9s,MS4.5
NJ2                                LR    LR
      comp=E,230nm,25.8s,MS4.5
NJ2                                LR    LR
      comp=Z,430nm,25.6s,MS4.5
MDJ   Mudanjiang       62.20  54   P     P      00 30 18.8 -2.5
MDJ                                AMB   AMB
      comp=Z,3.0nm,0.6s,mb4.6
MDJ                                AMB   AMB
      comp=Z,137nm,4.2s
MDJ                                LR    LR
      comp=N,114nm,23.6s,MS4.0
MDJ                                LR    LR
      comp=E,49nm,23.6s,MS4.0
MDJ                                LR    LR
      comp=Z,49nm,19.3s,MS3.7
SSE   Sheshan          62.60  71   P     P      00 30 24.3 +0.1
SSE                                S     S      00 38 42.5 -7.9
SSE                                XS           00 39 07.2
SSE                                AMB   AMB
      comp=Z,22nm,0.7s,mb5.4
SSE                                AMB   AMB
      comp=Z,77nm,3.9s
SSE                                LR    LR
      comp=N,54nm,19.1s,MS3.8
SSE                                LR    LR
      comp=E,20nm,19.0s,MS3.8
SSE                                LR    LR
      comp=Z,47nm,18.4s,MS3.7
SSE   Sheshan          62.60  71   P     P      00 30 24.3 +0.1
      comp=Z,22nm,0.7s,mb5.4
SSE                                S     S      00 38 42.5 -7.9
SSE                                sS           00 39 07.2
SSE                                LR    LR
      comp=Z,50nm,18.4s,MS3.7
BILL  Bilibino         66.23  20  eP     P      00 30 48.7 +1.6
BILL                               pmax  pmax
      comp=Z,2.0nm,0.9s
BILL                               MLR   MLR
      comp=Z,16µm,23.0s
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*NEIC **04** 00:23:46.4, 37.86N×1.79W, ML2.9(LDG), MN2.4(MDD), After MDD.*
NEIC Felt [III] at La Paca.
*INMG **04** 00:23:46.6±1.1, 37.84N×1.77W, h11^{km}±3^{km}, ML2.6, Error ellipse: s-maj=2.9km s-min=2.0km az=6.0*
*CSEM **04** 00:23:47.1±0.2, 37.81N×1.74W, h15^{km}, ML3.1/9, Error ellipse: s-maj=4.5km s-min=3.1km az=167.0*
*LDG **04** 00:23:48.7±0.4, 37.87N×1.87W, h5^{km}, Md3.8/1, Ml2.9/4, Error ellipse: s-maj=9.9km s-min=3.9km az=140.0*
MDD 04 00:23:46.4±0.3**, 37.86N×1.79W, mbLg2.4**/30**, 1C, Error ellipse: s-maj=3.7km s-min=2.1km az=4.0, PRXIMO, Spain**

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Code  Station Name       Δ°   AZ°    Phase ID        Time      Res
                                  Op     ISC      h  m  s    ISC
EMUR  La Murta          0.44  92 ⇑Pg     Pg     00 23 54.4 -0.8
      18nm,0.3s,SNR=18
EMUR                               Lg           00 24 00.0
      167nm,0.3s,SNR=5.0
EMUR  La Murta          0.44  92   Pg    Pg     00 23 54.4 -0.8
      18nm,0.3s,SNR=18
CART  Cartagena         0.69 113  ePg    Pg     00 23 59.4 -0.7
CART                              eSg    Sg     00 24 08.0 -1.2
CART  Cartagena         0.69 113   P     Pg     00 23 59.4 -0.7
CART                               S     Sg     00 24 08.1 -1.1
CART  Cartagena         0.69 113  ePg    Pg     00 23 59.4 -0.7
CART                              eSg    Sg     00 24 08.0 -1.2
ENIJ  Nijar             0.94 200   Pg    Pg     00 24 03.4 -1.8
      20nm,0.5s,SNR=25
ENIJ                               Lg           00 24 17.7
      39nm,0.3s,SNR=5.0
EVIA  Vianos            0.96 325   Pg    Pg     00 24 04.1 -1.4
      96nm,0.5s,SNR=54
EVIA                               Lg           00 24 18.9
      86nm,0.4s,SNR=5.0
EQES  Quesada           1.01 267   Pg    Pg     00 24 05.1 -1.5
      16nm,0.3s,SNR=49
EQES                               Lg           00 24 19.1
      52nm,0.2s,SNR=5.0
EQES  Quesada           1.01 267   Pg    Pg     00 24 05.1 -1.5
      16nm,0.3s,SNR=49
EBER  Berja             1.30 223   Pg    Pg     00 24 09.7 -2.6
      6.7nm,0.4s,SNR=24
EBER                               Lg           00 24 30.4
      25nm,0.4s,SNR=5.0
EBER  Berja             1.30 223   Pg    Pg     00 24 09.7 -2.6
      6.7nm,0.4s,SNR=24
EBEN  Beniarda          1.50  55   Pg    Pg     00 24 13.4 -2.9
      3.2nm,0.3s,SNR=13
EBEN                               Lg           00 24 35.7
      13nm,0.3s,SNR=5.0
EBEN  Beniarda          1.50  55   Pg    Pg     00 24 13.4 -2.9
      3.2nm,0.3s,SNR=13
EBAN  Banos Encina      1.60 282   Pg    Pg     00 24 14.6 -3.8
      13nm,0.2s,SNR=7.9
EBAN                               Lg           00 24 36.6
      39nm,0.2s,SNR=7.9
ELOJ  Sierra Loja       2.00 250   Pn    Pn     00 24 21.5 -0.4
      3.1nm,0.3s,SNR=7.9
ELOJ                               Lg           00 24 49.0
      12nm,0.5s,SNR=7.9
EADA  Adamuz            2.22 279   Pn    Pn     00 24 22.6 -2.3
      2.2nm,0.2s,SNR=18
EADA                               Sn    Sn     00 24 50.0 -3.4
      SNR=7.9
EADA                               Lg           00 24 56.9
      24nm,0.2s,SNR=5.0
EADA  Adamuz            2.22 279   Pn    Pn     00 24 22.6 -2.3
      2.2nm,0.2s,SNR=18
EADA                               Sn    Sn     00 24 50.0 -3.5
      SNR=7.9
ESDC  Sonseca Array     2.48 318   Pn    Pn     00 24 25.8 -2.9
      1.2nm,0.2s,baz=127,slow=13,SNR=11
ESDC                               Pg    Pg     00 24 30.5 -5.4
      5.1nm,0.2s,baz=121,slow=16,SNR=43
ESDC                               Lg           00 25 04.5
      5.1nm,0.2s,baz=134,slow=29,SNR=7.2
ESDC  Sonseca Array     2.48 318   Pn    Pn     00 24 25.8 -2.9
      1.2nm,0.2s,SNR=11
ESDC  Sonseca Array     2.48 318   Pg    Pg     00 24 30.5 -5.4
      5.1nm,0.2s,SNR=43
ESLA  Sonseca Array     2.48 318  ePn    Pn     00 24 26.3 -2.4
ESLA                              ePb    Pb     00 24 31.7 +0.1
ESLA                              ePg    Pg     00 24 33.8 -2.2
ESLA                              eSg    Sg     00 25 03.7 -5.3
ESLA  Sonseca Array     2.48 318  ePn    Pn     00 24 26.3 -2.4
ESLA  Sonseca Array     2.48 318  ePb    Pb     00 24 31.7 +0.1
EMOS  Mosqueruela       2.71  22   Pn    Pn     00 24 30.2 -1.7
      0.4nm,0.2s,SNR=7.9
EMOS                               Pg    Pg     00 24 37.5 -2.9
      2.4nm,0.4s,SNR=7.9
EMOS                               Lg           00 25 12.3
      3.1nm,0.3s,SNR=7.9
EMOS  Mosqueruela       2.71  22   Pn    Pn     00 24 30.1 -1.8
EMOS  Mosqueruela       2.71  22   Pg    Pg     00 24 37.5 -2.9
      2.4nm,0.4s,SNR=7.9
EMIJ  Mijas             2.71 242   Pn    Pn     00 24 31.4 -0.5
      1.4nm,0.5s,SNR=7.9
EMIJ                               Pg    Pg     00 24 36.9 -3.5
      1.6nm,0.3s,SNR=7.9
EMIJ                               Lg           00 25 14.3
      2.4nm,0.3s,SNR=4.0
EIBI  Ibiza             2.73  64   Pn    Pn     00 24 28.8 -3.4
      0.5nm,0.2s,SNR=7.9
EIBI                               Sn    Sn     00 25 01.2 -5.2
      2.9nm,0.2s,SNR=7.9
EIBI  Ibiza             2.73  64   Pn    Pn     00 24 28.8 -3.4
      0.5nm,0.2s,SNR=7.9
EIBI                               Sn    Sn     00 25 01.2 -5.1
      2.9nm,0.2s,SNR=7.9
GUD   Guadarrama        3.33 327   Pn    Pn     00 24 39.2 -1.6
      1.0nm,0.4s,SNR=7.9
GUD                                Pg    Pg     00 24 47.8 -5.1
      2.8nm,0.2s,SNR=17
GUD                                Lg           00 25 31.6
      5.6nm,0.2s,SNR=7.9
ESPR  Espera            3.38 254   Pn    Pn     00 24 40.8 -0.7
      1.1nm,0.2s,SNR=4.0
ESPR                               Sn    Sn     00 25 21.7 -1.3
      7.9nm,0.5s,SNR=4.0
ESPR                               Lg           00 25 38.0
      5.4nm,0.3s,SNR=4.0
ESPR  Espera            3.38 254   Pn    Pn     00 24 40.8 -0.7
      1.1nm,0.2s,SNR=4.0
ERTA  Horta de San J    3.51  27   Pn    Pn     00 24 42.0 -1.3
      0.8nm,0.2s,SNR=6.8
ERTA                               Sn    Sn     00 25 22.8 -3.3
      SNR=7.9
ERTA                               Lg           00 25 36.8
      4.0nm,0.5s,SNR=7.9
ERTA  Horta de San J    3.51  27   Pn    Pn     00 24 42.0 -1.3
      0.8nm,0.2s,SNR=6.8
ERTA                               Sn    Sn     00 25 22.8 -3.3
      SNR=7.9
EMIN  Mina Concepcio    3.86 270   Pn    Pn     00 24 45.3 -3.0
      0.5nm,0.3s,SNR=12
EMIN                               Sn    Sn     00 25 29.3 -5.9
      2.3nm,0.2s,SNR=7.3
EMIN                               Lg           00 25 46.8
      5.6nm,0.3s,SNR=5.0
EMIN  Mina Concepcio    3.86 270   Pn    Pn     00 24 45.3 -3.1
      0.5nm,0.3s,SNR=12
EMIN                               Sn    Sn     00 25 29.3 -5.8
      2.3nm,0.2s,SNR=7.3
ESAC  San Caprasio      3.99  14   Lg           00 25 53.0
      21nm,0.3s,SNR=7.9
EBAD  Badajoz           4.20 284   Pn    Pn     00 24 49.4 -3.7
      0.6nm,0.3s,SNR=7.9
EBAD                               Sn    Sn     00 25 38.3 -5.5
      3.4nm,0.2s,SNR=7.9
EBAD                               Lg           00 25 58.3
      15nm,0.2s,SNR=7.9
EBAD  Badajoz           4.20 284   Pn    Pn     00 24 49.4 -3.8
      0.6nm,0.3s,SNR=7.9
EBAD                               Sn    Sn     00 25 38.3 -5.4
      3.4nm,0.2s,SNR=7.9
EGRO  El Granado        4.52 268   Pn    Pn     00 24 54.1 -3.7
      SNR=7.9
EGRO                               Sn    Sn     00 25 45.5 -6.3
      SNR=4.0
EGRO                               Lg           00 26 09.9
      1.6nm,0.2s,SNR=4.0
EGRO  El Granado        4.52 268   Pn    Pn     00 24 54.1 -3.6
      SNR=7.9
EGRO                               Sn    Sn     00 25 45.5 -6.4
      SNR=4.0
PALC  Alcoutim          4.53 267  ePn    Pn     00 24 54.1 -3.7
PALC                              eSn    Sn     00 25 45.3 -6.6
PALC                              eSg    Sg     00 26 08.3 -8.7
      5.9nm,0.6s
PALC  Alcoutim          4.53 267  ePn    Pn     00 24 54.1 -3.7
PALC                              eSn    Sn     00 25 45.3 -6.6
PALC                              eSg    Sg     00 26 08.3 -8.7
      5.9nm,0.6s
PBEJ  Beja              4.80 274  ePn    Pn     00 24 58.0 -3.7
PBEJ                              eSn    Sn     00 25 52.0 -6.9
PCBR  Castelo Branco    4.86 296  ePn    Pn     00 24 59.4 -3.1
PCBR                              eSn    Sn     00 25 53.9 -6.4
PCBR                              eSg    Sg     00 26 16.2  -12
      9.9nm,0.7s
PCBR  Castelo Branco    4.86 296  ePn    Pn     00 24 59.4 -3.1
PCBR                              eSn    Sn     00 25 53.9 -6.4
PCBR                              eSg    Sg     00 26 16.2  -12
      9.9nm,0.7s
EVO   Evora             4.95 280  ePn    Pn     00 25 01.3 -2.4
EVO                               eSn    Sn     00 25 57.2 -5.3
EVO                               eSg    Sg     00 26 24.5 -6.5
      15nm,0.4s
ETSF  Etsaut            5.12  10  ePn    Pn     00 25 04.3 -1.9
ETSF                              eSn    Sn     00 26 00.5 -6.5
ETSF                              eSg    Sg     00 26 28.3 -8.6
      3.1nm,0.6s
```

MTE	**Manteigas**	**5.14**	**301**	*e*Sg	Sg	00 26 24.3	-13
	11nm,0.5s						
MTE	**Manteigas**	**5.14**	**301**	*e*Sg	Sg	00 26 24.3	-13
	11nm,0.5s						
MOE	**Montemor**	**5.21**	**279**	*e*Sn	Sn	00 26 02.1	-7.0
MOE				*e*Sg	Sg	00 26 29.4	-10
SJPF	**Ste Jean**	**5.27**	**5**	*e*Pn	Pn	00 25 05.4	-2.9
SJPF				*e*Sn	Sn	00 26 02.9	-7.7
SJPF				*e*Sg	Sg	00 26 33.6	-8.2
	2.5nm,0.5s						
EPF	**Esparros**	**5.42**	**17**	*e*Pn	Pn	00 25 08.4	-2.0
EPF				*e*Sn	Sn	00 26 08.1	-6.3
EPF				*e*Sg	Sg	00 26 38.2	-8.5
	2.6nm,0.5s						
PBRG	**Braganca**	**5.48**	**318**	*e*Sn	Sn	00 26 08.5	-7.4
PBRG				*e*Sg	Sg	00 26 35.1	-14
	4.7nm,0.7s						
PBRG	**Braganca**	**5.48**	**318**	*e*Sn	Sn	00 26 08.5	-7.4
PBRG				*e*Sg	Sg	00 26 35.1	-14
	4.7nm,0.7s						
PTEO	**Sao Teotonio**	**5.50**	**269**	*e*Pn	Pn	00 25 07.7	-3.9
PTEO				*e*Sg	Sg	00 26 35.6	-14
	6.2nm,0.7s						
PTEO	**Sao Teotonio**	**5.50**	**269**	*e*Pn	Pn	00 25 07.7	-3.9
PTEO				*e*Sg	Sg	00 26 35.6	-14
	6.2nm,0.7s						
PVIS	**Viseu**	**5.53**	**303**	*e*Pn	Pn	00 25 08.6	-3.3
PVIS				*e*Sg	Sg	00 26 37.1	-13
ECAL	**Calabor**	**5.57**	**319**	Lg		00 26 46.5	
	2.9nm,0.4s,SNR=7.9						
PVRL	**Vila Real**	**5.71**	**309**	*e*Sn	Sn	00 26 14.3	-7.4
PVRL				*e*Sg	Sg	00 26 44.0	-12
EARI	**Arriondas**	**6.03**	**336**	Pn	Pn	00 25 16.3	-2.7
	0.8nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.03**	**336**	Pn	Pn	00 25 16.3	-2.7
ERUA	**La Rua**	**6.11**	**320**	Lg		00 27 01.9	
	1.3nm,0.5s,SNR=4.0						
ELOB	**Lobios**	**6.27**	**312**	Lg		00 27 04.9	
	2.7nm,0.5s,SNR=7.9						

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*FUNV **04** 00:28:03.9, 10.84N×62.40W, h74^{km}, MW2.1*
*TRN **04** 00:28:07.7, 10.92N×62.25W, h73^{km}, MD2.9*
*NEIC **04** 00:28:07.7, 10.92N×62.25W, h73^{km}, MD2.9(TRN), After TRN.*
ISC 04 00:28:04.3±1.0**, 10.84N**±0.06×**62.48W**±0.04**, h69**^{km}±11^{km}**, n11, σ0^{s}78**/17**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.32**	**127**	*e*P	**P**	**00 28 15.1**	**-0.5**
GUIV				*e*S	**S**	**00 28 23.6**	**-0.4**
CRUV	**Carupano**	**0.76**	**257**	*e*P	**P**	**00 28 20.0**	**0.0**
CRUV				*e*S	**S**	**00 28 31.9**	**+0.2**
GUNV	**Guanoco**	**0.81**	**214**	*e*P	**P**	**00 28 20.4**	**-0.2**
GUNV				*e*S	**S**	**00 28 33.0**	**+0.3**
ITEV	**Isla Los Testi**	**0.82**	**309**	*e*P	**P**	**00 28 20.8**	**+0.1**
ITEV				*e*S	**S**	**00 28 33.5**	**+0.7**
TRN	**Trinidad (W)**	**1.08**	**100**	*e*P	**P**	**00 28 24.5**	**+0.5**
TRN				*e*S	**S**	**00 28 37.8**	**-0.9**
TPP	**Pointe-a-Pierr**	**1.14**	**117**	*e*P	**P**	**00 28 26.9**	**+2.0**
GRW	**Mount Saint Ca**	**1.54**	**31**	*e*P	**P**	**00 28 31.1**	**+0.8**
GRW				*e*S	**S**	**00 28 48.5**	**-0.9**
TPR	**Prospect**	**1.71**	**78**	*e*P	**P**	**00 28 32.8**	**+0.3**
BOT	**Bacolet**	**1.76**	**79**	*e*P	**P**	**00 28 33.2**	**-0.1**
CUPV	**Cœpira**	**3.34**	**257**	*e*P	**P**	**00 28 53.8**	**-1.7**
CAOV	**Caicara del Or**	**5.16**	**228**	*e*S	**S**	**00 30 13.1**	**-6.5**

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*IAG **04** 01:09:41, 37.82N×1.80W, h6^{km}, Mw3.9, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.16; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$0.39; $M_{r\theta}$-0.57; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.11; Best double couple: M_0.865×10^{15} NP1:ϕ_s109°, δ82°, λ-136°. NP2:ϕ_s11°, δ47°, λ-10°. Principal axes: T .858, Plg23°, Azm232°; N .0146, Plg46°, Azm117°; P -.873, Plg35°, Azm340°;*
*NEIC **04** 01:09:41.4, 37.82N×1.80W, h6^{km}, ML3.9(LDG), ML3.6(STR), MN3.6(MDD), After MDD.*
NEIC Felt [IV] at Bullas, Cehegin, La Paca, Lorca, Mula, Murcia and Zarcilla de Ramos.
*INMG **04** 01:09:41.8±1.5, 37.84N×1.79W, h12^{km}±3^{km}, ML3.8, Error ellipse: s-maj=2.3km s-min=2.0km az=121.0*
*CNRM **04** 01:09:41.8, 37.88N×1.63W, h30^{km}, MD3.7*
*SFS **04** 01:09:41.0, 37.89N×1.79W*
*IGIL **04** 01:09:41.9, 37.80N×1.70W, h0^{km}, ML3.9*
*LDG **04** 01:09:42.4±0.2, 37.82N×1.80W, h5^{km}, Md4.2/1, Ml3.9/9, Error ellipse: s-maj=4.0km s-min=2.0km az=141.0*
*CSEM **04** 01:09:42.3±0.1, 37.80N×1.75W, h15^{km}, ML4.1/22, Error ellipse: s-maj=2.6km s-min=1.8km az=148.0*
*CRAAG **04** 01:09:42.1, 37.79N×1.82W, Mb3.8*
*STR **04** 01:09:49.1±0.5, 38.37N×1.71W, h10^{km}±1^{km}, Ml3.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
MDD 04 01:09:41.3±0.3**, 37.83N×1.81W, h3**^{km}±3^{km}**, mbLg3.5**/37**, 3C-4D, Error ellipse: s-maj=2.8km s-min=1.8km az=166.0, PRXIMO III ZARCILLA DE RAMOS BULLAS II TOTANA MULA CARAVACA DE LA CRUZ, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EXMU	**Mula**	**0.33**	**51**	Pg	Pg	01 09 47.2	-0.6
EXMU				Lg		01 09 52.9	
EXMU	**Mula**	**0.33**	**51**	Pg	Pg	01 09 47.2	-0.7
EXMU				Lg		01 09 52.8	
EMUR	**La Murta**	**0.45**	**89**	⇑Pg	Pg	01 09 49.6	-0.8
	377nm,0.3s,SNR=18						
EMUR				Lg		01 09 55.7	
	11μm,0.5s,SNR=19						
EMUR	**La Murta**	**0.45**	**89**	Pg	Pg	01 09 49.6	-0.8
	377nm,0.3s,SNR=18						
CART	**Cartagena**	**0.69**	**111**	*e*Pg	Pg	01 09 54.4	-0.7
CART				*e*Sg	Sg	01 10 03.4	-0.9
CART	**Cartagena**	**0.69**	**111**	⇑P	Pg	01 09 54.3	-0.8
CART				S	Sg	01 10 03.4	-0.9
CART	**Cartagena**	**0.69**	**111**	*e*Pg	Pg	01 09 54.4	-0.7
CART				*e*Sg	Sg	01 10 03.4	-0.9
ENIJ	**Nijar**	**0.92**	**200**	⇑Pg	Pg	01 09 58.7	-0.9
	194nm,0.4s,SNR=18						
ENIJ				Lg		01 10 11.1	
	1μm,0.5s,SNR=15						
EVIA	**Vianos**	**0.97**	**326**	⇓Pg	Pg	01 09 59.0	-1.7
	398nm,0.3s,SNR=18						
EQES	**Quesada**	**1.00**	**269**	Pg	Pg	01 10 00.3	-1.0
	80nm,0.3s,SNR=7.9						
EQES				Lg		01 10 14.5	
	487nm,0.3s,SNR=7.9						
EQES	**Quesada**	**1.00**	**269**	Pg	Pg	01 10 00.3	-0.9
	80nm,0.3s,SNR=7.9						
EBER	**Berja**	**1.27**	**223**	Pg	Pg	01 10 04.3	-2.4
	116nm,0.6s,SNR=120						
EBER				Lg		01 10 21.3	
	1μm,0.7s,SNR=11						
EBER	**Berja**	**1.27**	**223**	Pg	Pg	01 10 04.3	-2.3
	116nm,0.6s,SNR=120						
EBEN	**Beniarda**	**1.52**	**55**	Pn	Pn	01 10 06.6	-2.9
	14nm,0.2s,SNR=46						
EBEN				Lg		01 10 30.0	
	69nm,0.2s,SNR=9.9						
EBEN	**Beniarda**	**1.52**	**55**	Pn	Pn	01 10 06.6	-2.9
	14nm,0.2s,SNR=46						
EBAN	**Banos Encina**	**1.59**	**283**	Pn	Pn	01 10 09.8	-0.7
EBAN				Lg		01 10 31.2	
EBAN	**Banos Encina**	**1.59**	**283**	Pn	Pn	01 10 09.8	-0.7
	184nm,0.3s,SNR=7.9						
EBAN				Lg		01 10 31.9	
	SNR=7.9						
ELOJ	**Sierra Loja**	**1.98**	**251**	Pg	Pg	01 10 16.7	-4.2
	96nm,0.6s,SNR=127						
ELOJ				Lg		01 10 44.0	
	182nm,0.3s,SNR=14						
EALB	**Alboran**	**2.13**	**208**	Pn	Pn	01 10 15.2	-3.0
	8.3nm,0.3s,SNR=9.3						
EALB				Sn	Sn	01 10 42.1	-3.4
	81nm,0.3s,SNR=4.0						
EALB	**Alboran**	**2.13**	**208**	Pn	Pn	01 10 15.2	-3.0
	8.3nm,0.3s,SNR=9.3						
EALB				Sn	Sn	01 10 42.1	-3.3
	81nm,0.3s,SNR=4.0						
EADA	**Adamuz**	**2.21**	**280**	Pn	Pn	01 10 17.6	-1.7
	23nm,0.2s,SNR=7.9						
EADA				Sn	Sn	01 10 45.2	-2.3
	158nm,0.1s,SNR=7.9						
EADA				Lg		01 10 53.9	
	196nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.21**	**280**	Pn	Pn	01 10 17.6	-1.8
	23nm,0.2s,SNR=7.9						
EADA				Sn	Sn	01 10 45.2	-2.3
	SNR=7.9						
USTO	**Oran**	**2.33**	**154**	P	Pn	01 10 22.0	+0.9
EMAL	**Malaga-Limoner**	**2.34**	**244**	⇓Pn	Pn	01 10 22.3	+1.0
	6.1nm,0.3s,SNR=18						
EMAL				Lg		01 10 58.7	
	54nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**2.49**	**318**	⇓Pn	Pn	01 10 20.8	-2.6
ESDC				Pg	Pg	01 10 26.3	-4.7
ESDC				Sn	Sn	01 10 50.0	-4.6
ESDC				Lg		01 10 57.9	
ESDC	**Sonseca Array**	**2.49**	**318**	⇓Pn	Pn	01 10 20.8	-2.6
	5.8nm,0.3s,baz=128,slow=13,SNR=18						
ESDC				Pg	Pg	01 10 26.3	-4.7
	baz=127,slow=17,SNR=7.9						
ESDC				Sn	Sn	01 10 50.0	-4.6
	13nm,0.3s,baz=127,slow=16,SNR=7.4						
ESDC				Lg		01 10 57.9	
	71nm,0.5s,baz=135,slow=30,SNR=9.8						
ESDC	**Sonseca Array**	**2.49**	**318**	Pn	Pn	01 10 20.8	-2.6
	5.8nm,0.3s,SNR=18						
ESDC	**Sonseca Array**	**2.49**	**318**	Pg	Pg	01 10 26.3	-4.8
	SNR=7.9						
ESDC				Sn	Sn	01 10 50.0	-4.7
	13nm,0.3s,SNR=7.4						
ESLA	**Sonseca Array**	**2.49**	**318**	*e*Pn	Pn	01 10 20.7	-2.7
ESLA				*e*Pg	Pg	01 10 29.1	-1.9
ESLA				*e*Sg	Sg	01 10 59.7	-4.6
ESLA	**Sonseca Array**	**2.49**	**318**	*e*Pn	Pn	01 10 20.7	-2.7
ESLA	**Sonseca Array**	**2.49**	**318**	*e*Pg	Pg	01 10 29.1	-2.0
OLHC	**Oulhaca**	**2.60**	**173**	P	Pn	01 10 24.0	-0.9
OTSS	**Djebel Tessala**	**2.67**	**162**	P	Pn	01 10 23.0	-3.0
EMIJ	**Mijas**	**2.68**	**243**	Pn	Pn	01 10 25.2	-0.9
	24nm,0.6s,SNR=7.9						
EMIJ				Pg	Pg	01 10 29.9	-5.0
	SNR=7.9						
EMIJ				Lg		01 11 07.0	
	55nm,0.3s,SNR=7.9						
EMEL	**Melilla**	**2.69**	**200**	Pn	Pn	01 10 24.2	-2.1
	SNR=4.0						
EMEL				Sn	Sn	01 10 56.8	-2.9
	SNR=4.0						
EMOS	**Mosqueruela**	**2.73**	**22**	Pn	Pn	01 10 24.8	-2.0
EMOS				Pg	Pg	01 10 32.1	-3.9
EMOS				Lg		01 11 05.9	
EMOS	**Mosqueruela**	**2.73**	**22**	Pn	Pn	01 10 24.8	-2.0
	9.9nm,0.4s,SNR=7.9						
EMOS				Pg	Pg	01 10 32.1	-3.9
	SNR=7.9						
EMOS				Lg		01 11 06.6	
	87nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**2.73**	**22**	Pn	Pn	01 10 24.8	-2.1
	9.9nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**2.73**	**22**	Pg	Pg	01 10 32.1	-3.8
	SNR=7.9						
EIBI	**Ibiza**	**2.75**	**63**	Pn	Pn	01 10 24.3	-2.8
EIBI				Sn	Sn	01 10 55.4	-5.9
EIBI				Lg		01 10 56.1	
EIBI	**Ibiza**	**2.75**	**63**	Pn	Pn	01 10 24.3	-2.8
	14nm,0.2s,SNR=39						
EIBI				Sn	Sn	01 10 55.4	-5.9
	34nm,0.3s,SNR=6.8						
EIBI	**Ibiza**	**2.75**	**63**	Pn	Pn	01 10 24.3	-2.8
	14nm,0.2s,SNR=39						
EIBI				Sn	Sn	01 10 55.4	-5.9
	34nm,0.3s,SNR=6.8						
ZAI	**Zaio**	**2.95**	**195**	P	Pn	01 10 27.0	-3.0
ZAI				S	Sn	01 11 00.0	-6.4
ZAI	**Zaio**	**2.95**	**195**	*i* P	Pn	01 10 27.0	-3.0
EANR	**'Ain N'Sour**	**3.00**	**128**	P	Pn	01 10 33.0	+2.4
LIJA	**Lijar**	**3.01**	**253**	P	Pn	01 10 30.3	-0.4
LIJA				S	Sg	01 11 24.0	+2.6
LIJA	**Lijar**	**3.01**	**253**	*i* P	Pn	01 10 30.3	-0.4
REAL	**Reales**	**3.03**	**245**	P	Pn	01 10 28.8	-2.3
REAL	**Reales**	**3.03**	**245**	*e*P	Pn	01 10 28.8	-2.2
ECHA	**Ech Chlef**	**3.05**	**122**	P	Pn	01 10 36.5	+5.1
TAF	**Taforalt**	**3.05**	**189**	S	Sn	01 11 10.0	+1.1
EBNR	**Beni Rached**	**3.09**	**119**	P	Pn	01 10 38.0	+6.1
TOU	**Touzarine**	**3.26**	**209**	P	Pn	01 10 32.0	-2.4
TOU				S	Sn	01 11 07.5	-6.8
TOU	**Touzarine**	**3.26**	**209**	*e*P	Pn	01 10 32.0	-2.4
GUD	**Guadarrama**	**3.34**	**328**	Pn	Pn	01 10 33.5	-2.1
	5.7nm,0.2s,SNR=21						
GUD				Pg	Pg	01 10 43.0	-5.1
	32nm,0.3s,SNR=35						
GUD				Sn	Sn	01 11 11.8	-4.4
	98nm,0.4s,SNR=8.7						
GUD				Lg		01 11 26.5	
	112nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**3.34**	**328**	Pg	Pg	01 10 43.0	-5.1
	32nm,0.3s,SNR=35						
GUD				Sn	Sn	01 11 11.8	-4.5
	98nm,0.4s,SNR=8.7						
ESPR	**Espera**	**3.36**	**255**	Pn	Pn	01 10 33.1	-2.7
	10nm,0.5s,SNR=7.9						
ESPR				Sn	Sn	01 11 12.4	-4.4
	SNR=7.9						
ESPR	**Espera**	**3.36**	**255**	Pn	Pn	01 10 33.1	-2.7
	10nm,0.5s,SNR=7.9						
ESPR				Sn	Sn	01 11 12.4	-4.3
	SNR=7.9						
EBR	**Ebro Roquetas**	**3.48**	**30**	*e*PN	Pn	01 10 35.5	-2.0
EBR				*e*SN	Sn	01 11 16.5	-3.2
EBR				*e*S*S*		01 11 33.8	
EBR	**Ebro Roquetas**	**3.48**	**30**	*e*SG	Sg	01 11 35.5	-1.7
ETRT	**Tiaret**	**3.50**	**133**	P	Pn	01 10 36.0	-1.7
ERTA	**Horta de San J**	**3.54**	**27**	Pn	Pn	01 10 36.5	-1.7
	33nm,0.4s,SNR=58						
ERTA				Sn	Sn	01 11 16.8	-4.4
	36nm,0.4s,SNR=6.6						
ERTA				Lg		01 11 37.0	
	405nm,1.3s,SNR=5.0						
ERTA	**Horta de San J**	**3.54**	**27**	Pn	Pn	01 10 36.5	-1.8
	33nm,0.4s,SNR=58						
ERTA				Sn	Sn	01 11 16.8	-4.3
	36nm,0.4s,SNR=6.6						
SCRT	**Cerro San Cris**	**3.68**	**252**	P	Pn	01 10 36.6	-3.7
SCRT	**Cerro San Cris**	**3.68**	**252**	*e*P	Pn	01 10 36.6	-3.7
CNIL	**Conil**	**3.69**	**248**	P	Pn	01 10 34.1	-6.3
CNIL	**Conil**	**3.69**	**248**	*e*P	Pn	01 10 34.1	-6.4
SFS	**San Fernando**	**3.77**	**250**	*e*Pn	Pn	01 10 39.5	-2.0
EMIN	**Mina Concepcio**	**3.85**	**271**	Pn	Pn	01 10 39.7	-3.0
	5.5nm,0.3s,SNR=7.9						
EMIN				Sn	Sn	01 11 23.9	-5.1
	SNR=7.9						
EMIN				Lg		01 11 43.2	
	198nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.85**	**271**	Pn	Pn	01 10 39.7	-3.0
	5.5nm,0.3s,SNR=7.9						
EMIN				Sn	Sn	01 11 23.9	-5.2
	SNR=7.9						
ESAC	**San Caprasio**	**4.02**	**15**	Pn	Pn	01 10 42.7	-2.5
	30nm,0.3s,SNR=16						
ESAC				Lg		01 11 47.1	
	338nm,0.4s,SNR=6.2						
ESAC	**San Caprasio**	**4.02**	**15**	Pn	Pn	01 10 42.7	-2.4
	30nm,0.3s,SNR=16						
EMHD	**Djebel Mahouad**	**4.15**	**112**	P	Pn	01 10 40.0	-7.0
EPOB	**Poblet**	**4.17**	**32**	Pn	Pn	01 10 44.7	-2.5
	26nm,0.6s,SNR=7.9						
EPOB				Sn	Sn	01 11 31.0	-6.0
	SNR=7.9						
EPOB				Lg		01 11 48.1	
	14nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**4.17**	**32**	Pn	Pn	01 10 44.7	-2.5
	26nm,0.6s,SNR=7.9						
EPOB				Sn	Sn	01 11 31.0	-6.1
	SNR=7.9						
EBAD	**Badajoz**	**4.19**	**284**	Pn	Pn	01 10 44.5	-3.1
	3.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	01 11 32.7	-5.1
	SNR=7.9						
EBAD				Lg		01 11 53.3	
	180nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.19**	**284**	Pn	Pn	01 10 44.5	-3.1
	3.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	01 11 32.7	-5.1
	SNR=7.9						
TZK	**Tazeka**	**4.20**	**208**	P	Pn	01 10 44.0	-3.7
TZK				S	Sn	01 11 32.0	-6.0
TZK	**Tazeka**	**4.20**	**208**	*i* P	Pn	01 10 44.0	-3.7
ERIP	**Rio Piedras**	**4.35**	**266**	Pn	Pn	01 10 46.6	-3.2
	184nm,0.5s,SNR=7.9						
ERIP				Sn	Sn	01 11 36.4	-5.2
	SNR=7.9						
ERIP				Lg		01 11 59.2	
	184nm,0.6s,SNR=7.9						
EGRO	**El Granado**	**4.51**	**268**	Pn	Pn	01 10 49.0	-3.1
	11nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	01 11 40.2	-5.5
	32nm,0.5s,SNR=7.9						
EGRO				Lg		01 12 03.8	
	372nm,0.7s,SNR=7.9						
EGRO	**El Granado**	**4.51**	**268**	Pn	Pn	01 10 49.0	-3.1
	11nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	01 11 40.2	-5.5
	32nm,0.5s,SNR=7.9						
PALC	**Alcoutim**	**4.51**	**267**	*e*Pn	Pn	01 10 48.9	-3.2
PALC				*e*Sn	Sn	01 11 39.7	-6.1
PALC				*e*Sg	Sg	01 12 01.4	-10
	149nm,0.6s						
PALC	**Alcoutim**	**4.51**	**267**	*e*Pn	Pn	01 10 48.9	-3.2
PALC				*e*Sn	Sn	01 11 39.7	-6.1
PALC				*e*Sg	Sg	01 12 01.4	-10
	149nm,0.6s						
PBEJ	**Beja**	**4.79**	**274**	*e*Pn	Pn	01 10 53.3	-2.8
PBEJ				*e*Sn	Sn	01 11 46.3	-6.6
PBEJ				*e*Sg	Sg	01 12 10.1	-11
	123nm,0.5s						
PBEJ	**Beja**	**4.79**	**274**	*e*Pn	Pn	01 10 53.3	-2.8
PBEJ				*e*Sn	Sn	01 11 46.3	-6.6
PBEJ				*e*Sg	Sg	01 12 10.1	-11
	123nm,0.5s						
EMIR	**Miracle**	**4.82**	**31**	Pn	Pn	01 10 53.6	-2.8
	SNR=7.9						
EMIR				Sn	Sn	01 11 45.5	-8.1
	SNR=7.9						
EMIR				Lg		01 12 13.7	
	14nm,0.3s,SNR=7.9						
EMIR	**Miracle**	**4.82**	**31**	Pn	Pn	01 10 53.6	-2.9
	SNR=7.9						
EMIR				Sn	Sn	01 11 45.5	-8.1
	SNR=7.9						
PCBR	**Castelo Branco**	**4.86**	**296**	*e*Pn	Pn	01 10 53.6	-3.4
PCBR				*e*Sn	Sn	01 11 48.5	-6.0
PCBR				*e*Sg	Sg	01 12 11.3	-12
	176nm,0.7s						
PCBR	**Castelo Branco**	**4.86**	**296**	*e*Pn	Pn	01 10 53.6	-3.4
PCBR				*e*Sn	Sn	01 11 48.5	-6.0
PCBR				*e*Sg	Sg	01 12 11.3	-12
	176nm,0.7s						
EVO	**Evora**	**4.93**	**280**	*e*Pn	Pn	01 10 56.1	-2.0
EVO				*e*Sn	Sn	01 11 51.9	-4.6
EVO				*e*Sg	Sg	01 12 19.2	-6.4
	568nm,0.7s						
EBIE	**Bielsa**	**5.07**	**17**	Pn	Pn	01 10 58.2	-1.9
	2.3nm,0.3s,SNR=31						
EBIE				Sn	Sn	01 11 54.2	-5.9
	36nm,0.9s,SNR=4.6						
EBIE				Lg		01 12 24.7	
	12nm,0.5s,SNR=4.9						
EBIE	**Bielsa**	**5.07**	**17**	Pn	Pn	01 10 58.2	-1.9
	2.3nm,0.3s,SNR=31						
EBIE				Sn	Sn	01 11 54.2	-5.8
	36nm,0.9s,SNR=4.6						
MTE	**Manteigas**	**5.14**	**302**	*e*Pn	Pn	01 10 58.1	-2.9
MTE				*e*Sn	Sn	01 11 55.0	-6.7
MTE				*e*Sg	Sg	01 12 19.7	-13
	173nm,0.3s						
MTE	**Manteigas**	**5.14**	**302**	*e*Pn	Pn	01 10 58.1	-2.9
MTE				*e*Sn	Sn	01 11 55.0	-6.7
MTE				*e*Sg	Sg	01 12 19.7	-13
	173nm,0.3s						
ETSF	**Etsaut**	**5.15**	**10**	*e*Pn	Pn	01 10 59.2	-2.0
ETSF				*e*Sn	Sn	01 11 54.9	-7.0
ETSF				*e*Sg	Sg	01 12 22.1	-11
	82nm,0.8s						
MOE	**Montemor**	**5.20**	**280**	*e*Pn	Pn	01 10 59.3	-2.5
MOE				*e*Sn	Sn	01 11 56.6	-6.5
RESF	**Ens**	**5.23**	**18**	P	Pn	01 10 59.3	-3.1
RESF				S	Sn	01 11 58.8	-5.3
VIEF	**Viey**	**5.24**	**15**	P	Pn	01 11 00.2	-2.2
VIEF				S	Sn	01 11 58.3	-5.8
SJPF	**Ste Jean**	**5.29**	**5**	*e*Pn	Pn	01 11 00.3	-2.9
SJPF				*e*Sn	Sn	01 11 58.1	-7.5
SJPF				*e*Sg	Sg	01 12 27.9	-10
	94nm,0.8s						
REYF	**Montagne du Re**	**5.34**	**11**	P	Pn	01 11 01.6	-2.3
REYF				S	Sn	01 12 00.7	-6.1
EALK	**Alkurruntz**	**5.39**	**2**	Pn	Pn	01 11 02.2	-2.3
	60nm,0.7s,SNR=7.9						
EALK				Sn	Sn	01 11 59.7	-8.2
	SNR=7.9						
EALK				Lg		01 12 32.3	
	9.6nm,0.2s,SNR=7.9						
LABF	**Labassere**	**5.40**	**15**	P	Pn	01 11 02.1	-2.7
LABF				S	Sn	01 12 03.5	-4.8
MELF	**Melles**	**5.40**	**21**	P	Pn	01 11 02.3	-2.4
EPF	**Esparros**	**5.45**	**17**	*e*Pn	Pn	01 11 03.2	-2.1
EPF				*e*Sn	Sn	01 12 01.0	-8.4
EPF				*e*Sg	Sg	01 12 32.9	-10
	70nm,0.7s						
ALMR	**Almeirim**	**5.47**	**286**	*e*P	Pn	01 11 03.3	-2.4
ALMR				*e*S	Sn	01 12 02.9	-7.0
ALMR				*e*S	Sn	01 12 03.0	-6.9
ALMR				AML	AML	01 12 05.1	
	comp=N,312nm,0.8s						
PBRG	**Braganca**	**5.49**	**318**	*e*Pn	Pn	01 11 02.5	-3.4
PBRG				*e*Sn	Sn	01 12 03.3	-7.1
PBRG				*e*Sg	Sg	01 12 30.0	-14
	comp=N,72nm,0.7s						
PBRG	**Braganca**	**5.49**	**318**	*e*Pn	Pn	01 11 02.5	-3.4
PBRG				*e*Sn	Sn	01 12 03.3	-7.1
PBRG				*e*Sg	Sg	01 12 30.0	-14
	comp=N,72nm,0.7s						
PTEO	**Sao Teotonio**	**5.49**	**269**	*e*Pn	Pn	01 11 02.8	-3.1
PTEO				*e*Sn	Sn	01 12 03.2	-7.2
PTEO				*e*Sg	Sg	01 12 32.8	-11
	comp=N,122nm,0.6s						
PTEO	**Sao Teotonio**	**5.49**	**269**	*e*Pn	Pn	01 11 02.8	-3.1
PTEO				*e*Sn	Sn	01 12 03.2	-7.2
PTEO				*e*Sg	Sg	01 12 32.8	-11
	comp=N,122nm,0.6s						
PVIS	**Viseu**	**5.53**	**303**	*e*Pn	Pn	01 11 03.6	-2.9
PVIS				*e*Sn	Sn	01 12 04.2	-7.2
PVIS				*e*Sg	Sg	01 12 33.8	-12
	comp=N,106nm,0.5s						
PVIS	**Viseu**	**5.53**	**303**	*e*Pn	Pn	01 11 03.6	-2.9
PVIS				*e*Sn	Sn	01 12 04.2	-7.2
PVIS				*e*Sg	Sg	01 12 33.8	-12
	comp=N,106nm,0.5s						
ELAN	**Lanestosa**	**5.53**	**348**	Pn	Pn	01 11 04.5	-2.0
	comp=N,4.7nm,0.3s,SNR=7.9						
ELAN				Sn	Sn	01 12 06.6	-4.9
	comp=N,8.0nm,0.5s,SNR=4.0						
ELAN				Lg		01 12 38.1	
	comp=N,42nm,0.6s,SNR=4.0						
ELAN	**Lanestosa**	**5.53**	**348**	Pn	Pn	01 11 04.5	-2.1
	comp=N,4.7nm,0.3s,SNR=7.9						
ELAN				Sn	Sn	01 12 06.6	-5.0
	comp=N,8.0nm,0.5s,SNR=4.0						
ECAL	**Calabor**	**5.58**	**319**	Pn	Pn	01 11 03.2	-4.1
ECAL				Lg		01 12 36.9	
ECAL	**Calabor**	**5.58**	**319**	Pn	Pn	01 11 03.2	-4.1
	comp=N,16nm,0.4s,SNR=7.9						
ECAL				Lg		01 12 36.9	
	comp=N,92nm,0.6s,SNR=7.9						
ECAL	**Calabor**	**5.58**	**319**	Pn	Pn	01 11 03.2	-4.1
	comp=N,16nm,0.4s,SNR=7.9						
PVRL	**Vila Real**	**5.71**	**309**	*e*Pn	Pn	01 11 06.1	-3.0
PVRL				*e*Sn	Sn	01 12 06.9	-9.1
PVRL				*e*Sg	Sg	01 12 37.4	-14
	comp=N,68nm,0.8s						
CARF	**Carcanieres**	**5.72**	**30**	P	Pn	01 11 07.0	-2.3
LIS	**Lisbon**	**5.84**	**281**	*e*P	Pn	01 11 08.8	-2.1
LIS				*e*S	Sn	01 12 12.5	-6.8
LIS				*e*S	Sn	01 12 12.5	-6.7
LIS				AML	AML	01 12 15.7	
	comp=N,77nm,0.2s						
EJON	**La Jonquera**	**5.85**	**37**	Pn	Pn	01 11 07.5	-3.6
	comp=N,2.7nm,0.4s,SNR=7.9						
EJON				Sn	Sn	01 12 11.2	-8.3
	SNR=7.9						
EJON	**La Jonquera**	**5.85**	**37**	Pn	Pn	01 11 07.5	-3.5
	comp=N,2.7nm,0.4s,SNR=7.9						
EJON				Sn	Sn	01 12 11.2	-8.3
	SNR=7.9						

PLOU	**Loures**	**5.86**	**283**	*e*Pn	Pn	01 11 08.1	-3.1
PLOU				*e*Sn	Sn	01 12 11.6	-8.2
	comp=N,270nm,0.6s						
PLOU	**Loures**	**5.86**	**283**	Pn	Pn	01 11 08.1	-3.1
PLOU				Sn	Sn	01 12 11.6	-8.2
	comp=N,135nm,0.6s						
EARI	**Arriondas**	**6.04**	**336**	Pn	Pn	01 11 10.6	-3.2
	SNR=7.9						
EARI				Lg		01 12 53.8	
	comp=N,70nm,0.8s,SNR=7.9						
EARI	**Arriondas**	**6.04**	**336**	Pn	Pn	01 11 10.6	-3.2
	SNR=7.9						
ERUA	**La Rua**	**6.12**	**320**	Pn	Pn	01 11 10.7	-4.1
	comp=N,1.3nm,0.2s,SNR=7.9						
ERUA				Lg		01 12 54.7	
	comp=N,34nm,0.6s,SNR=6.8						
CKHR	**Kef el Ahmar**	**6.14**	**105**	P	Pn	01 11 16.0	+0.8
ELOB	**Lobios**	**6.27**	**312**	Pn	Pn	01 11 13.0	-4.0
	comp=N,3.5nm,0.3s,SNR=8.3						
ELOB				Sn	Sn	01 12 19.9	-10
	comp=N,6.8nm,0.4s,SNR=4.6						
ELOB				Lg		01 12 58.1	
	comp=N,55nm,0.7s,SNR=12						
ELOB	**Lobios**	**6.27**	**312**	Pn	Pn	01 11 13.0	-4.0
DFRA	**Djebel Bou Aff**	**6.27**	**99**	P	Pn	01 11 17.0	0.0
MTLF	**Montolieu**	**6.30**	**28**	*e*Pn	Pn	01 11 14.5	-2.9
MTLF				*e*Sg	Sg	01 12 59.0	-12
	comp=N,29nm,0.9s						
EINC	**Incio**	**6.42**	**320**	Pn	Pn	01 11 14.8	-4.2
	comp=N,7.0nm,0.4s,SNR=7.9						
EINC				Sn	Sn	01 12 24.4	-9.3
	SNR=7.9						
EINC				Lg		01 13 04.1	
	comp=N,24nm,0.8s,SNR=7.9						
EINC	**Incio**	**6.42**	**320**	Pn	Pn	01 11 14.8	-4.2
EZAM	**Zamans**	**6.82**	**311**	Pn	Pn	01 11 19.6	-5.1
	comp=N,3.7nm,0.3s,SNR=7.9						
EZAM				Lg		01 13 17.3	
	comp=N,113nm,1.3s,SNR=4.7						
CASM	**Ain Smara**	**6.82**	**101**	P	Pn	01 11 24.0	-0.8
EPON	**Pontenova**	**6.83**	**325**	Pn	Pn	01 11 20.1	-4.7
EPON				Lg		01 13 15.9	
EPON	**Pontenova**	**6.83**	**325**	Pn	Pn	01 11 20.1	-4.7
	SNR=7.9						
EPON				Lg		01 13 15.9	
	comp=N,25nm,0.6s,SNR=7.9						
EPON	**Pontenova**	**6.83**	**325**	Pn	Pn	01 11 20.1	-4.7
CKFL	**Kef-Lekhel**	**6.97**	**99**	P	Pn	01 11 27.0	+0.2
CAEH	**’Ain El Ouahch**	**6.99**	**96**	P	Pn	01 11 28.5	+1.5
STS	**Santiago**	**7.21**	**317**	Lg		01 13 29.3	
	comp=N,25nm,0.7s,SNR=6.3						
LFF	**La Frestale**	**7.36**	**14**	*e*Pn	Pn	01 11 28.6	-3.6
LFF				*e*Sn	Sn	01 12 46.4	-11
LFF				*e*Sg	Sg	01 13 32.0	-14
	comp=N,29nm,0.8s						
EMAZ	**Mazaricos**	**7.48**	**315**	Pn	Pn	01 11 28.1	-5.9
	SNR=7.9						
EMAZ				Lg		01 13 41.1	
	comp=N,210nm,1.3s,SNR=5.9						
LASF	**Ste Croix**	**7.57**	**33**	*e*Pn	Pn	01 11 32.1	-3.1
LASF				*e*Sg	Sg	01 13 38.4	-15
	comp=N,32nm,1.1s						
CAF	**Calviac**	**7.66**	**21**	*e*Pn	Pn	01 11 32.3	-4.2
CAF				*e*Sn	Sn	01 12 53.3	-12
CAF				*e*Sg	Sg	01 13 40.6	-16
	comp=N,43nm,1.0s						
RJF	**Les Rejaudoux**	**7.87**	**17**	*e*Pn	Pn	01 11 34.6	-4.8
RJF				*e*Sn	Sn	01 12 57.2	-13
RJF				*e*Sg	Sg	01 13 48.3	-15
	comp=N,15nm,0.7s						
MFF	**Saint Martin d**	**8.85**	**7**	*e*Pn	P	01 11 48.3	-4.8
MFF				*e*Sn	Sn	01 13 22.6	-12
TCF	**Toulx Ste Croi**	**8.96**	**18**	*e*Pn	P	01 11 49.8	-4.8
BGF	**Bois d’Agland**	**9.38**	**20**	*e*Pn	P	01 11 55.1	-5.3
BGF				*e*Sn	Sn	01 13 35.2	-12
PGF	**Pioggiola**	**9.52**	**57**	*e*Pn	P	01 12 00.0	-2.3
AVF	**Avril sur Loir**	**9.73**	**21**	*e*Pn	P	01 12 01.1	-4.1
SMF	**Signal de Mont**	**9.75**	**24**	*e*Pn	P	01 12 01.0	-4.5
HYF	**Humbligny**	**9.98**	**18**	*e*Pn	P	01 12 03.1	-5.6
QUIF	**Quistinic**	**10.13**	**355**	*e*Pn	P	01 12 06.0	-4.6
QUIF				*e*Sn	S	01 13 52.5	-13
SGMF	**Saint Gilles**	**10.43**	**357**	*e*Pn	P	01 12 09.5	-5.3
SGMF				*e*Sn	S	01 13 59.6	-14
ROSF	**Rostrenen**	**10.55**	**355**	*e*Pn	P	01 12 11.7	-4.8
ROSF				*e*Sn	S	01 14 02.0	-14
GRR	**Gorron**	**10.57**	**3**	*e*Pn	P	01 12 11.4	-5.4
LDF	**La Druitiere**	**10.83**	**6**	*e*Pn	P	01 12 14.6	-5.6
FLN	**La Foliniere**	**10.97**	**5**	*e*Pn	P	01 12 16.2	-5.9

NEIC ***04*** *01:14:14.5, 37.88N×1.80W, ML3.5(LDG), MN3.2(MDD), After MDD.*

NEIC Felt [III] Cehegin and La Paca.

INMG ***04*** *01:14:14.5±1.3, 37.87N×1.82W, h3^{km}±2^{km}, ML3.3, Error ellipse: s-maj=2.0km s-min=1.7km az=134.0*

CSEM ***04*** *01:14:14.7±0.1, 37.84N×1.77W, h2^{km}, ML3.5/17, Error ellipse: s-maj=2.7km s-min=2.0km az=150.0*

SFS ***04*** *01:14:14.0, 37.87N×1.80W*

LDG ***04*** *01:14:16.4±0.2, 37.89N×1.85W, h5^{km}, Md4.0/1, Ml3.5/12, Error ellipse: s-maj=4.2km s-min=2.0km az=147.0*

MDD 04 01:14:14.6±0.2**, 37.88N×1.81W, mbLg3.1**/29**, 2C, Error ellipse: s-maj=3.4km s-min=2.1km az=5.0, II BULLAS TOTANA MULA LORCA PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.45**	**94**	⇑Pg	Pg	01 14 22.7	-0.9
	102nm,0.2s,SNR=18						
EMUR				Lg		01 14 29.3	
	1μm,0.3s,SNR=5.0						
EMUR	**La Murta**	**0.45**	**94**	⇑Pg	Pg	01 14 22.6	-0.9
CART	**Cartagena**	**0.70**	**114**	*e*Pg	Pg	01 14 27.4	-1.2
CART				*e*Sg	Sg	01 14 36.0	-1.9
CART	**Cartagena**	**0.70**	**114**	P	Pg	01 14 28.6	+0.1
CART				S	Sg	01 14 36.2	-1.6
CART	**Cartagena**	**0.70**	**114**	*e*Pg	Pg	01 14 27.4	-1.1
CART	**Cartagena**	**0.70**	**114**	*e*P	Pg	01 14 28.6	+0.1
CART				*e*Sg	Sg	01 14 36.0	-1.9
EVIA	**Vianos**	**0.94**	**325**	Pg	Pg	01 14 32.3	-0.9
	143nm,0.1s,SNR=74						
EVIA				Lg		01 14 44.2	
	451nm,0.6s,SNR=5.0						
ENIJ	**Nijar**	**0.96**	**200**	Pg	Pg	01 14 31.7	-2.0
	30nm,0.3s,SNR=28						
ENIJ				Lg		01 14 44.7	
	165nm,0.3s,SNR=5.0						
EQES	**Quesada**	**1.00**	**266**	Pg	Pg	01 14 33.0	-1.6
EQES				Lg		01 14 47.4	
EQES	**Quesada**	**1.00**	**266**	Pg	Pg	01 14 33.0	-1.6
	34nm,0.2s,SNR=61						
EQES				Lg		01 14 47.4	
	234nm,0.4s,SNR=5.0						
EQES	**Quesada**	**1.00**	**266**	Pg	Pg	01 14 33.0	-1.6
	34nm,0.2s,SNR=61						
EBER	**Berja**	**1.30**	**222**	Pg	Pg	01 14 37.9	-2.6
	128nm,0.6s,SNR=24						
EBER				Lg		01 14 58.2	
	778nm,0.9s,SNR=5.0						
EBER	**Berja**	**1.30**	**222**	Pg	Pg	01 14 38.0	-2.5
EBEN	**Beniarda**	**1.50**	**56**	Pg	Pg	01 14 41.4	-2.9
	62nm,0.5s,SNR=22						
EBEN				Lg		01 15 00.4	
	76nm,0.5s,SNR=12						
EBEN	**Beniarda**	**1.50**	**56**	Pg	Pg	01 14 41.4	-3.0
	62nm,0.5s,SNR=22						
EBAN	**Banos Encina**	**1.59**	**281**	Pg	Pg	01 14 42.9	-3.4
	93nm,0.5s,SNR=7.9						
EBAN				Lg		01 15 04.5	
	533nm,0.5s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.00**	**249**	Pn	Pn	01 14 49.7	-0.3
	24nm,0.4s,SNR=16						
ELOJ				Lg		01 15 16.8	
	50nm,0.5s,SNR=6.7						
EADA	**Adamuz**	**2.21**	**278**	Pn	Pn	01 14 50.8	-2.1
	7.2nm,0.1s,SNR=21						
EADA				Sn	Sn	01 15 17.8	-3.5
	32nm,0.2s,SNR=5.0						
EADA	**Adamuz**	**2.21**	**278**	Pn	Pn	01 14 50.8	-2.1
	7.2nm,0.1s,SNR=21						
EADA				Sn	Sn	01 15 17.8	-3.5
	32nm,0.2s,SNR=5.0						
ESDC	**Sonseca Array**	**2.46**	**317**	Pn	Pn	01 14 54.2	-2.4
	7.8nm,0.3s,baz=129,slow=13,SNR=11						
ESDC				Pg	Pg	01 14 58.9	-4.9
	41nm,0.2s,baz=134,slow=17,SNR=49						
ESDC				Lg		01 15 32.4	
	51nm,0.3s,baz=129,slow=30,SNR=14						
ESDC	**Sonseca Array**	**2.46**	**317**	Pn	Pn	01 14 54.2	-2.4
	7.8nm,0.3s,slow=13,SNR=11						
ESDC	**Sonseca Array**	**2.46**	**317**	Pg	Pg	01 14 58.9	-4.8
	41nm,0.2s,slow=17,SNR=49						
EMOS	**Mosqueruela**	**2.69**	**22**	Pn	Pn	01 14 57.7	-2.1
	38nm,0.6s,SNR=18						
EMOS				Lg		01 15 40.5	
	104nm,0.7s,SNR=5.0						
EMOS	**Mosqueruela**	**2.69**	**22**	Pn	Pn	01 14 57.8	-2.1
EMIJ	**Mijas**	**2.71**	**242**	Pn	Pn	01 14 58.6	-1.5
	20nm,0.4s,SNR=9.4						
EMIJ				Lg		01 15 41.0	
	36nm,0.5s,SNR=8.4						
EIBI	**Ibiza**	**2.73**	**64**	Pn	Pn	01 14 56.7	-3.6
	3.1nm,0.2s,SNR=11						
EIBI				Sn	Sn	01 15 29.5	-5.1
	18nm,0.3s,SNR=5.0						
EIBI	**Ibiza**	**2.73**	**64**	Pn	Pn	01 14 56.7	-3.7
	3.1nm,0.2s,SNR=11						
EIBI				Sn	Sn	01 15 29.5	-5.0
	18nm,0.3s,SNR=5.0						
LIJA	**Lijar**	**3.02**	**252**	*i* P	Pn	01 15 00.0	-4.6
GUD	**Guadarrama**	**3.31**	**327**	Pn	Pn	01 15 06.5	-2.1
	7.3nm,0.4s,SNR=7.0						
GUD				Pg	Pg	01 15 16.2	-4.5
	9.8nm,0.2s,SNR=17						
GUD				Lg		01 16 00.2	
	41nm,0.2s,SNR=9.8						
ESPR	**Espera**	**3.38**	**254**	Pn	Pn	01 15 08.3	-1.3
	2.8nm,0.4s,SNR=5.5						
ESPR	**Espera**	**3.38**	**254**	Pn	Pn	01 15 08.3	-1.3
	2.8nm,0.4s,SNR=5.5						
EBR	**Ebro Roquetas**	**3.44**	**31**	*e*PN	Pn	01 15 09.5	-1.0
EBR				*e*SN	Sn	01 15 49.0	-3.6
EBR				*e*S*S*		01 16 05.0	
ERTA	**Horta de San J**	**3.50**	**28**	Pn	Pn	01 15 09.8	-1.5
	4.7nm,0.2s,SNR=18						
ERTA				Sn	Sn	01 15 50.1	-3.9
	10.0nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**3.50**	**28**	Pn	Pn	01 15 09.8	-1.5
	4.7nm,0.2s,SNR=18						
ERTA				Sn	Sn	01 15 50.1	-3.9
	10.0nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.85**	**270**	Pn	Pn	01 15 13.7	-2.7
	4.0nm,0.2s,SNR=8.9						
EMIN				Sn	Sn	01 15 57.6	-5.5
	19nm,0.4s,SNR=6.5						
EMIN				Lg		01 16 17.5	
	102nm,0.6s,SNR=5.0						
EMIN	**Mina Concepcio**	**3.85**	**270**	Pn	Pn	01 15 13.7	-2.7
	4.0nm,0.2s,SNR=8.9						
EMIN				Sn	Sn	01 15 57.6	-5.5
	19nm,0.4s,SNR=6.5						
ESAC	**San Caprasio**	**3.98**	**15**	Pn	Pn	01 15 16.8	-1.3
	2.4nm,0.5s,SNR=6.5						
ESAC				Pg	Pg	01 15 30.6	-3.3
	47nm,0.3s,SNR=5.9						
ESAC				Lg		01 16 21.5	
	223nm,0.5s,SNR=4.7						
ESAC	**San Caprasio**	**3.98**	**15**	Pn	Pn	01 15 16.8	-1.3
	2.4nm,0.5s,SNR=6.5						
EPOB	**Poblet**	**4.13**	**32**	Pn	Pn	01 15 17.8	-2.5
	4.1nm,0.5s,SNR=10						
EPOB				Sn	Sn	01 16 04.8	-5.1
	6.2nm,0.3s,SNR=5.0						
EPOB	**Poblet**	**4.13**	**32**	Pn	Pn	01 15 17.8	-2.4
	4.1nm,0.5s,SNR=10						
EPOB				Sn	Sn	01 16 04.8	-5.1
	6.2nm,0.3s,SNR=5.0						
EBAD	**Badajoz**	**4.19**	**284**	Pn	Pn	01 15 17.7	-3.5
	6.0nm,0.2s,SNR=10						
EBAD				Sn	Sn	01 16 05.1	-6.5
	22nm,0.3s,SNR=7.4						
EBAD				Lg		01 16 28.4	
	74nm,0.8s,SNR=6.0						
EBAD	**Badajoz**	**4.19**	**284**	Pn	Pn	01 15 17.7	-3.4
	6.0nm,0.2s,SNR=10						
EBAD				Sn	Sn	01 16 05.1	-6.4
	22nm,0.3s,SNR=7.4						
EGRO	**El Granado**	**4.51**	**267**	Pn	Pn	01 15 22.2	-3.6
	1.3nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 16 13.6	-6.1
	0.9nm,0.3s,SNR=7.9						
EGRO				Lg		01 16 35.3	
	13nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**4.51**	**267**	Pn	Pn	01 15 22.2	-3.6
	1.3nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 16 13.6	-6.2
	0.9nm,0.3s,SNR=7.9						
PALC	**Alcoutim**	**4.52**	**267**	*e*Pn	Pn	01 15 22.3	-3.5
PALC				*e*Sn	Sn	01 16 13.6	-6.2
PALC				*e*Sg	Sg	01 16 37.7	-7.2
	25nm,0.8s						
PALC	**Alcoutim**	**4.52**	**267**	*e*Pn	Pn	01 15 22.3	-3.5
PALC				*e*Sn	Sn	01 16 13.6	-6.2
PALC				*e*Sg	Sg	01 16 37.7	-7.2
	25nm,0.8s						
EMIR	**Miracle**	**4.78**	**31**	Pn	Pn	01 15 27.0	-2.5
	10.0nm,0.6s,SNR=7.3						
EMIR				Sn	Sn	01 16 20.1	-6.4
	18nm,0.7s,SNR=5.0						
EMIR	**Miracle**	**4.78**	**31**	Pn	Pn	01 15 27.0	-2.5
	10.0nm,0.6s,SNR=7.3						
EMIR				Sn	Sn	01 16 20.1	-6.4
	18nm,0.7s,SNR=5.0						
PBEJ	**Beja**	**4.79**	**274**	*e*Pn	Pn	01 15 26.2	-3.5
PBEJ				*e*Sn	Sn	01 16 19.1	-7.7
PBEJ				*e*Sg	Sg	01 16 47.0	-7.1
	44nm,0.7s						
PBEJ	**Beja**	**4.79**	**274**	*e*Pn	Pn	01 15 26.2	-3.5
PBEJ				*e*Sn	Sn	01 16 19.1	-7.7
PBEJ				*e*Sg	Sg	01 16 47.0	-7.1
	44nm,0.7s						
PCBR	**Castelo Branco**	**4.84**	**296**	*e*Pn	Pn	01 15 27.2	-3.2
PCBR				*e*Sn	Sn	01 16 21.9	-6.1
PCBR				*e*Sg	Sg	01 16 47.3	-8.4
PCBR				AnL		01 16 55.9	
	59nm,0.7s						
PCBR	**Castelo Branco**	**4.84**	**296**	Pn	Pn	01 15 27.2	-3.2
PCBR				Sn	Sn	01 16 21.9	-6.1
PCBR				Lg		01 16 47.3	
	30nm,0.7s						
EVO	**Evora**	**4.93**	**280**	*e*Pn	Pn	01 15 29.1	-2.6
EVO				*e*Sn	Sn	01 16 25.3	-5.0
EVO				*e*Sg	Sg	01 16 52.7	-6.0
	108nm,0.5s						
EBIE	**Bielsa**	**5.03**	**17**	Pn	Pn	01 15 31.4	-1.7
EBIE				Sn	Sn	01 16 25.6	-7.2
EBIE				Lg		01 16 55.6	
EBIE	**Bielsa**	**5.03**	**17**	Pn	Pn	01 15 31.4	-1.7
	3.2nm,0.4s,SNR=7.6						
EBIE				Sn	Sn	01 16 25.6	-7.2
	5.6nm,0.4s,SNR=5.0						
EBIE				Lg		01 16 55.6	
	16nm,0.8s,SNR=7.9						
EBIE	**Bielsa**	**5.03**	**17**	Pn	Pn	01 15 31.4	-1.7
	3.2nm,0.4s,SNR=7.6						
ETSF	**Etsaut**	**5.11**	**10**	*e*Pn	Pn	01 15 32.4	-1.8
ETSF				*e*Sn	Sn	01 16 28.6	-6.1
ETSF				*e*Sg	Sg	01 16 55.6	-9.0
	20nm,0.6s						
MTE	**Manteigas**	**5.12**	**301**	*e*Pn	Pn	01 15 31.3	-3.1
MTE				*e*Sn	Sn	01 16 28.9	-6.2
MTE				*e*Sg	Sg	01 16 56.6	-8.5
	49nm,0.8s						
MTE	**Manteigas**	**5.12**	**301**	*e*Pn	Pn	01 15 31.3	-3.1
MTE				*e*Sn	Sn	01 16 28.9	-6.2
MTE				*e*Sg	Sg	01 16 56.6	-8.5
	49nm,0.8s						
MOE	**Montemor**	**5.20**	**279**	*e*Sn	Sn	01 16 29.8	-7.1
SJPF	**Ste Jean**	**5.25**	**5**	*e*Pn	Pn	01 15 33.5	-2.7
SJPF				*e*Sn	Sn	01 16 31.1	-7.3
SJPF				*e*Sg	Sg	01 17 00.9	-8.5
	49nm,0.9s						
EALK	**Alkurruntz**	**5.34**	**2**	Pn	Pn	01 15 36.6	-0.9
	19nm,0.5s,SNR=6.9						
EALK				Sn	Sn	01 16 33.0	-7.7
	24nm,0.9s,SNR=5.5						
EALK				Lg		01 17 04.2	
	16nm,0.8s,SNR=7.9						
EPF	**Esparros**	**5.40**	**17**	*e*Pn	Pn	01 15 36.6	-1.7
EPF				*e*Sn	Sn	01 16 35.8	-6.4
EPF				*e*Sg	Sg	01 17 04.8	-10
	16nm,0.5s						
PBRG	**Braganca**	**5.46**	**317**	*e*Pn	Pn	01 15 35.8	-3.3
PBRG				*e*Sn	Sn	01 16 37.2	-6.4
PBRG				*e*Sg	Sg	01 17 05.5	-11
	35nm,0.5s						
PBRG	**Braganca**	**5.46**	**317**	Pn	Pn	01 15 35.8	-3.3
PBRG				Sn	Sn	01 16 37.2	-6.4
PBRG				Lg		01 17 05.5	
	17nm,0.5s						
ELAN	**Lanestosa**	**5.49**	**347**	Pn	Pn	01 15 36.6	-3.0
	2.7nm,0.5s,SNR=8.6						
ELAN				Lg		01 17 07.9	
	15nm,0.6s,SNR=7.9						
ELAN	**Lanestosa**	**5.49**	**347**	Pn	Pn	01 15 36.6	-3.0
	2.7nm,0.5s,SNR=8.6						
PTEO	**Sao Teotonio**	**5.50**	**269**	*e*Pn	Pn	01 15 36.3	-3.3
PTEO				*e*Sn	Sn	01 16 37.6	-6.9
PTEO				*e*Sg	Sg	01 17 09.6	-7.9
	40nm,1.1s						
PTEO	**Sao Teotonio**	**5.50**	**269**	Pn	Pn	01 15 36.3	-3.3
PTEO				Sn	Sn	01 16 37.6	-6.9
PTEO				Lg		01 17 09.6	
	20nm,1.1s						
PVIS	**Viseu**	**5.51**	**303**	*e*Pn	Pn	01 15 36.6	-3.2
PVIS				*e*Sn	Sn	01 16 36.7	-8.1
PVIS				*e*Sg	Sg	01 17 08.6	-9.3
	36nm,1.2s						
PVIS	**Viseu**	**5.51**	**303**	Pn	Pn	01 15 36.6	-3.2
PVIS				Sn	Sn	01 16 36.7	-8.1
PVIS				Lg		01 17 08.6	
	18nm,1.2s						
ECAL	**Calabor**	**5.55**	**319**	Lg		01 17 10.1	
	48nm,0.6s,SNR=7.9						
PVRL	**Vila Real**	**5.69**	**308**	*e*Pn	Pn	01 15 39.2	-3.2
PVRL				*e*Sn	Sn	01 16 41.7	-7.6
PVRL				*e*Sg	Sg	01 17 12.6	-11
	26nm,0.7s						
PLOU	**Loures**	**5.86**	**282**	*e*Pn	Pn	01 15 42.4	-2.4
PLOU				*e*Sn	Sn	01 16 46.6	-7.0
PLOU				*e*Sg	Sg	01 17 20.8	-8.8
	60nm,0.5s						
EARI	**Arriondas**	**6.01**	**336**	Pn	Pn	01 15 43.9	-2.9
	9.0nm,0.6s,SNR=8.1						
EARI				Lg		01 17 27.3	
	22nm,0.7s,SNR=5.0						
EARI	**Arriondas**	**6.01**	**336**	Pn	Pn	01 15 43.9	-2.9
ELOB	**Lobios**	**6.25**	**312**	Lg		01 17 33.3	
	43nm,0.8s,SNR=6.2						
MTLF	**Montolieu**	**6.26**	**28**	*e*Pn	Pn	01 15 47.6	-2.8
MTLF				*e*Sg	Sg	01 17 31.7	-11
	6.8nm,0.5s						
EINC	**Incio**	**6.39**	**320**	Lg		01 17 37.9	
	8.7nm,0.5s,SNR=7.9						
LFF	**La Frestale**	**7.31**	**14**	*e*Pn	Pn	01 16 01.6	-3.6
LFF				*e*Sn	Sn	01 17 19.7	-10
LFF				*e*Sg	Sg	01 18 06.2	-12
	11nm,0.7s						
LFF	**La Frestale**	**7.31**	**14**	*e*Pn	Pn	01 16 01.6	-3.6
LFF				*e*Sg	Sg	01 18 06.2	-12
	5.7nm,0.7s						
LASF	**Ste Croix**	**7.53**	**33**	*e*Pn	Pn	01 16 04.7	-3.6
CAF	**Calviac**	**7.62**	**21**	*e*Pn	Pn	01 16 05.8	-3.7
CAF				*e*Sn	Sn	01 17 26.7	-11
CAF				*e*Sg	Sg	01 18 13.8	-14
	2.9nm,0.4s						
RJF	**Les Rejaudoux**	**7.83**	**17**	*e*Sn	Sn	01 17 30.4	-12
RJF				*e*Sg	Sg	01 18 21.4	-14
	4.5nm,0.5s						
LMR	**La Mourre**	**8.35**	**47**	*e*Sn	Sn	01 17 44.0	-12
	1.3nm,0.4s						
VIVF	**Saint-Julien-l**	**8.50**	**33**	*e*Pn	P	01 16 17.8	-4.1
MFF	**Saint Martin d**	**8.81**	**8**	*e*Pn	P	01 16 21.3	-4.8
MFF				*e*Sn	Sn	01 17 56.6	-11
PGF	**Pioggiola**	**9.49**	**57**	*e*Pn	P	01 16 32.4	-3.1
QUIF	**Quistinic**	**10.09**	**355**	*e*Pn	P	01 16 38.9	-4.8
QUIF				*e*Sn	S	01 18 26.1	-13
	5.1nm,0.5s						
SGMF	**Saint Gilles**	**10.39**	**357**	*e*Pn	P	01 16 43.1	-4.7
SGMF				*e*Sn	S	01 18 32.7	-14
	2.2nm,0.5s						
ROSF	**Rostrenen**	**10.51**	**355**	*e*Pn	P	01 16 44.8	-4.7
ROSF				*e*Sn	S	01 18 35.0	-14
	3.8nm,0.5s						

PRU ***04*** *01:21:59.5, 50.31N×18.77E*

WAR 04 01:21:57.9, 50.26N×18.86E, h0^{km}, ML2.5, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.47**	**248**	*e*PG	Pg	01 22 08.0	+0.8
RAC				*e*SG	Sg	01 22 15.0	+1.6
OJC	**Ojcow**	**0.60**	**94**	*e*PG	Pg	01 22 10.0	+0.1
OJC				*e*SG	Sg	01 22 19.0	+1.0
OKC	**Ostrava-Krasne**	**0.63**	**228**	*e*PG	Pg	01 22 10.7	+0.3
OKC				*e*SG	Sg	01 22 21.0	+2.3
LIKS	**Likavka**	**1.22**	**172**	*e*PG	Pg	01 22 24.7	+2.4
LIKS				*e*SG	Sg	01 22 40.7	+2.1
NIE	**Niedzica**	**1.26**	**131**	*e*Pg	Pg	01 22 21.4	-1.7
NIE				*e*Sg	Sg	01 22 38.8	-1.1
DPC	**Dobruska-Polom**	**1.63**	**274**	*e*PG	Pg	01 22 27.6	-2.9
DPC				*e*SG	Sg	01 22 49.0	-3.2
	45nm,0.6s						
KSP	**Ksiaz**	**1.74**	**291**	*e*PG	Pg	01 22 31.0	-1.6
KSP				*e*SG	Sg	01 22 54.0	-1.8
VYHS	**Vyhne**	**1.77**	**181**	*e*PN	Pn	01 22 29.6	-0.3
VYHS				*e*SN	Sn	01 22 55.3	+1.9
VYHS				*e*SG	Sg	01 22 57.5	+0.7
UPC	**Upice**	**1.84**	**279**	*e*SG	Sg	01 22 55.2	-4.0
CRVS	**Cervenica-Dubn**	**2.17**	**128**	*e*PN	Pn	01 22 39.8	+4.1
CRVS				*e*SN	Sn	01 23 07.1	+3.5
PSZ	**Piszkesteto**	**2.44**	**163**	⇑*i*P	Pg	01 22 46.2	-0.4
KOLS	**Kolonicke sedl**	**2.59**	**120**	*e*PG	Pg	01 22 48.7	-0.8
KOLS				*e*SN	Sn	01 23 17.6	+3.4
PRU	**Pruhonice**	**2.79**	**266**	*e*SG	Sg	01 23 24.7	-6.2
KHC	**Kasperske Hory**	**3.61**	**254**	*e*PG	Pn	01 23 01.5	+5.3
KHC				*e*x	x	01 23 10.0	
KHC				*e*SG	Sg	01 23 53.8	-4.3
CLL	**Collm**	**3.86**	**288**	*e*SG	Sg	01 24 05.0	-1.5
MOA	**Molln**	**3.87**	**233**	*i*	Pg	01 23 10.6	-4.5
MOA	**Molln**	**3.87**	**233**	*i* SG	Sg	01 24 02.2	-4.5
	3.6nm,0.5s						

CSEM ***04*** *01:29:06.9±0.6, 38.43N×28.72W, h5^{km}, ML1.6, Error ellipse: s-maj=4.6km s-min=2.3km az=54.0, After PDA*

PDA ***04*** *01:29:06.9±0.6, 38.43N×28.72W, h5^{km}, MD2.9, ML1.6, Error ellipse: s-maj=4.6km s-min=2.3km az=54.0*

SVSA 04 01:29:06.9±0.6**, 38.43N×28.72W, h5^{km}, MD2.9, ML1.6, Error ellipse: s-maj=4.6km s-min=2.3km az=54.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOR	**Horta**	**0.12**	**35**	*e*P	Pg	01 29 09.3	-0.1
HOR				*e*S	Sg	01 29 11.3	+0.1
CALA	**Caldeira**	**0.15**	**5**	*e*P	Pg	01 29 09.8	-0.3
CALA				*e*S	Sg	01 29 11.8	-0.4
PCED	**Cedros**	**0.20**	**4**	*i* P	Pg	01 29 10.7	-0.3
PCED				*i* S	Sg	01 29 13.7	0.0
	30nm,0.1s						
PCED	**Cedros**	**0.20**	**4**	*i* S	Sg	01 29 13.7	0.0
	30nm,0.1s						
	30nm,0.1s						
PICO	**Pico**	**0.24**	**73**	*e*P	Pg	01 29 11.3	-0.5
PICO				*e*S	Sg	01 29 14.7	-0.3
ROSA	**Rosais**	**0.47**	**52**	*e*P	Pg	01 29 15.3	-1.1

MDD ***04*** *01:32:43.4±0.3, 37.86N×1.81W, mbLg2.1/14, Error ellipse: s-maj=4.0km s-min=2.2km az=3.0, PRXIMO*

CSEM ***04*** *01:32:43.2±0.1, 37.84N×1.79W, h2^{km}, ML2.7/3, Error ellipse: s-maj=3.0km s-min=2.3km az=175.0*

ISC 04 01:32:41.3±0.5**, 37.90N**±0.04×**1.85W**±0.03**, h4^{km}**±5^{km}**, n34, σ1^{s}33**/43**, 1C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.48**	**96**	⇑Pg	**Pg**	**01 32 51.4**	**+0.4**
	6.6nm,0.3s,SNR=18						
EMUR				Lg		01 32 58.1	
	86nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**0.48**	**96**	Pg	**Pg**	**01 32 51.4**	**+0.4**

	6.6nm,0.3s,SNR=18						
CART	**Cartagena**	**0.74**	**114**	P	**Pg**	**01 32 57.5**	**+1.4**
CART				S	**Sg**	**01 33 05.2**	**-0.8**
CART	**Cartagena**	**0.74**	**114**	*e*P	**Pg**	**01 32 57.5**	**+1.4**
EVIA	**Vianos**	**0.90**	**325**	Pg	**Pg**	**01 33 01.2**	**+1.9**
	39nm,0.6s,SNR=15						
EVIA				Lg		01 33 16.2	
	38nm,0.3s,SNR=13						
ENIJ	**Nijar**	**0.97**	**197**	Pg	**Pg**	**01 33 00.3**	**-0.2**
	2.8nm,0.1s,SNR=12						
ENIJ				Lg		01 33 12.9	
	16nm,0.3s,SNR=7.9						
EQES	**Quesada**	**0.97**	**265**	Pg	**Pg**	**01 33 02.3**	**+1.6**
	1.7nm,0.3s,SNR=7.9						
EQES				Lg		01 33 16.7	
	30nm,0.2s,SNR=7.9						
EQES	**Quesada**	**0.97**	**265**	Pg	**Pg**	**01 33 02.3**	**+1.6**
	1.7nm,0.3s,SNR=7.9						
EBER	**Berja**	**1.30**	**220**	Pg	**Pg**	**01 33 06.6**	**-0.6**
	1.8nm,0.4s,SNR=7.9						
EBER				Lg		01 33 26.1	
	8.2nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.30**	**220**	Pg	**Pg**	**01 33 06.6**	**-0.5**
	1.8nm,0.4s,SNR=7.9						
EBEN	**Beniarda**	**1.51**	**57**	Pg	**Pg**	**01 33 09.3**	**-2.2**
	0.4nm,0.2s,SNR=7.9						
EBEN				Lg		01 33 32.4	
	3.1nm,0.3s,SNR=4.0						
EBEN	**Beniarda**	**1.51**	**57**	Pg	**Pg**	**01 33 09.3**	**-2.1**
	0.4nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**1.55**	**281**	Pg	**Pg**	**01 33 11.7**	**-0.5**
	5.9nm,0.3s,SNR=7.9						
EBAN				Lg		01 33 33.2	
	15nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.98**	**248**	Pg	**Pg**	**01 33 20.6**	**-0.1**
	1.3nm,0.2s,SNR=7.9						
ELOJ				Lg		01 33 46.3	
	2.8nm,0.3s,SNR=6.6						
EADA	**Adamuz**	**2.17**	**278**	Pn	**Pn**	**01 33 19.9**	**+1.3**
	0.9nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**01 33 46.6**	**+0.2**
	3.9nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.17**	**278**	Pn	**Pn**	**01 33 19.9**	**+1.2**
	0.9nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**01 33 46.6**	**+0.3**
	3.9nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**2.42**	**318**	Pn	**Pn**	**01 33 23.3**	**+1.0**
	0.3nm,0.2s,baz=129,slow=13,SNR=7.9						
ESDC				Pg	**Pg**	**01 33 27.7**	**-2.0**
	0.9nm,0.1s,baz=138,slow=17,SNR=20						
ESDC				Sn	**Sn**	**01 33 52.9**	**+0.1**
	1.5nm,0.2s,baz=9.8,slow=30,SNR=7.9						
ESDC				Lg		01 34 01.3	
	3.9nm,0.2s,baz=136,slow=29,SNR=4.1						
ESDC	**Sonseca Array**	**2.42**	**318**	Pn	**Pn**	**01 33 23.3**	**+1.0**
	0.3nm,0.2s,slow=13,SNR=7.9						
ESDC	**Sonseca Array**	**2.42**	**318**	Pg	**Pg**	**01 33 27.7**	**-2.0**
	0.9nm,0.1s,baz=138,slow=17,SNR=20						
ESDC				Sn	**Sn**	**01 33 52.9**	**+0.1**
	1.5nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**2.69**	**241**	Lg		01 34 09.9	
	1.8nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.69**	**23**	Pn	**Pn**	**01 33 27.4**	**+1.4**
	0.1nm,0.3s,SNR=7.9						
EMOS				Pg	**Pg**	**01 33 34.5**	**-0.4**
	0.8nm,0.3s,SNR=4.0						
EMOS				Lg		01 34 09.2	
	1.2nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.69**	**23**	Pn	**Pn**	**01 33 27.4**	**+1.4**
	0.1nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.69**	**23**	Pg	**Pg**	**01 33 34.5**	**-0.4**
	0.8nm,0.3s,SNR=4.0						
EIBI	**Ibiza**	**2.75**	**65**	Pn	**Pn**	**01 33 26.3**	**-0.7**
	0.8nm,0.3s,SNR=7.9						
EIBI				Sn	**Sn**	**01 33 59.1**	**-1.9**
	2.3nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.75**	**65**	Pn	**Pn**	**01 33 26.3**	**-0.6**
	0.8nm,0.3s,SNR=7.9						
EIBI				Sn	**Sn**	**01 33 59.1**	**-1.9**
	2.3nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.27**	**328**	Pg	**Pg**	**01 33 44.9**	**-1.7**
	1.0nm,0.2s,SNR=9.4						
GUD				Lg		01 34 29.0	
	5.0nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**3.49**	**28**	Pn	**Pn**	**01 33 39.5**	**+2.0**
	0.6nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**3.49**	**28**	Pn	**Pn**	**01 33 39.5**	**+2.0**
	0.6nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.82**	**270**	Pn	**Pn**	**01 33 43.0**	**+0.8**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**01 34 26.1**	**-2.1**
	0.4nm,0.1s,SNR=7.9						
EMIN				Lg		01 34 46.2	
	1.9nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.82**	**270**	Pn	**Pn**	**01 33 43.0**	**+0.9**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**01 34 26.1**	**-2.0**
	SNR=7.9						
ESAC	**San Caprasio**	**3.97**	**15**	Lg		01 34 51.0	
	2.7nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.15**	**284**	Sn	**Sn**	**01 34 35.0**	**-1.5**
	1.0nm,0.1s,SNR=7.9						
EBAD				Lg		01 34 57.0	
	5.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.15**	**284**	Sn	**Sn**	**01 34 35.0**	**-1.5**
	SNR=7.9						
KAF	**Kangasniemi**	**29.80**	**27**	*e*p	**P**	**01 38 53.7**	**+2.7**

DJA 04 01:39:16.3±0.9, 8.81S×114.81E, h112^{km}±8^{km}, MD4.5/3, ML3.7/1, 2C-2D, Error ellipse: s-maj=34.7km s-min=8.0km az=9.0, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELI	**Kelakatan**	**0.67**	**331**	⇓*e*Pn	P	01 39 34.6	0.0
KELI				*e*Sn	S	01 39 48.0	-0.6
RATI	**Rata**	**0.72**	**83**	⇓*e*Pn	P	01 39 35.0	-0.1
	231nm,0.2s						
RATI				*e*Sn	S	01 39 48.5	-0.8
SRDI	**Scrawed**	**0.74**	**296**	⇑*e*Pn	P	01 39 35.0	-0.3
	45nm,0.2s						
SRDI				*e*Sn	S	01 39 48.2	-1.4
KEDI	**Kedomdong**	**1.32**	**76**	⇑*e*Pn	P	01 39 40.8	-0.8
	80nm,0.2s						
KEDI				*e*Sn	S	01 39 58.2	-2.4

CSEM ***04*** *01:58:05.5±0.5, 38.44N×28.71W, h4^{km}±7^{km}, ML1.6, Error ellipse: s-maj=3.5km s-min=3.4km az=58.0, After PDA*

PDA ***04*** *01:58:05.5±0.5, 38.44N×28.71W, h4^{km}±7^{km}, MD2.9, ML1.6, Error ellipse: s-maj=3.5km s-min=3.4km az=58.0*

SVSA 04 01:58:05.5±0.5, 38.44N×28.71W, h4^{km}±7^{km}, MD2.9, ML1.6, Error ellipse: s-maj=3.5km s-min=3.4km az=58.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOR	**Horta**	**0.11**	**34**	*e*P	Pg	01 58 07.6	-0.1
HOR				*e*S	Sg	01 58 09.1	-0.1
CALA	**Caldeira**	**0.14**	**1**	*e*S	Sg	01 58 10.3	-0.1
PCED	**Cedros**	**0.19**	**1**	*e*P	Pg	01 58 09.0	-0.4
PCED				*i* S	Sg	01 58 11.9	0.0
	36nm,0.4s						
	36nm,0.4s						
PICO	**Pico**	**0.23**	**74**	*e*P	Pg	01 58 09.8	-0.3
PICO				*e*S	Sg	01 58 13.0	-0.2
ROSA	**Rosais**	**0.46**	**52**	*e*P	Pg	01 58 13.5	-1.2

ISK ***04*** *02:02:06.7, 35.68N×29.66E, h32^{km}, MD3.6, ML3.7*

CSEM ***04*** *02:02:07.8±0.1, 35.79N×29.71E, h30^{km}, MD3.6, Error ellipse: s-maj=2.5km s-min=1.4km az=79.0*

ATH ***04*** *02:02:08.1, 35.76N×29.54E, h6^{km}, MD3.4/4*

NEIC ***04*** *02:02:08.4, 35.77N×29.52E, h6^{km}, MD3.4(ATH), After ATH.*

HLW ***04*** *02:02:10.0, 35.92N×29.61E, h33^{km}, Mb3.9*

ISC 04 02:02:06.8±1.0, 35.76N±0.02×29.76E±0.05, h16^{km}±11^{km}, n40, $\sigma 0^{s}89$/47, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.41**	**340**	*e*PB	**Pb**	**02 02 15.8**	**+0.6**
ELL	**Elmali**	**0.99**	**7**	*i* PN	**Pn**	**02 02 25.8**	**-0.2**
ELL				SN	**Sn**	**02 02 39.8**	**+0.1**
FETY	**Fethiye**	**1.03**	**328**	*i* PG	**Pb**	**02 02 24.9**	**-0.8**
ARG	**Arkhangelos**	**1.40**	**289**	*e*PB	**Pb**	**02 02 31.5**	**-0.5**
YER	**Yerkesik**	**1.81**	**319**	PN	**Pn**	**02 02 36.6**	**-1.1**
BCK	**Bucak**	**1.82**	**21**	PN	**Pn**	**02 02 38.5**	**+0.7**
DNZL	**Cakiroluk**	**2.00**	**344**	*i* P	**Pn**	**02 02 41.1**	**+0.6**
DNZL				*i* S	**Sn**	**02 03 06.0**	**+0.6**
DENT	**Denizli**	**2.07**	**344**	PN	**Pn**	**02 02 41.5**	**0.0**
ISP	**Isparta**	**2.16**	**16**	*e*PN	**Pn**	**02 02 42.8**	**0.0**
ISP	**Isparta**	**2.16**	**16**	*e*Pn	**Pn**	**02 02 44.8**	**+2.1**
ISP				*e*Pg	**Pn**	**02 02 50.8**	**+8.1**
MLSB	**Milas**	**2.21**	**314**	*e*PN	**Pn**	**02 02 42.6**	**-0.8**
AYDN	**Tasoluk**	**2.42**	**322**	*i* P	**Pn**	**02 02 48.1**	**+1.7**
AYDN				*i* S	**Sn**	**02 03 17.4**	**+1.4**
HDMB	**Hadim**	**2.51**	**61**	*e*PN	**Pn**	**02 02 47.9**	**+0.2**
KHL	**Karahalli**	**2.56**	**356**	*e*PN	**Pn**	**02 02 48.2**	**-0.2**
LEF	**Lefka**	**2.64**	**103**	*e*PN	**Pn**	**02 02 48.8**	**-0.8**
MANT	**Manisa**	**2.88**	**341**	*i* P	**Pn**	**02 02 53.2**	**+0.1**
MANT				*i* S	**Sn**	**02 03 26.3**	**-1.5**
SMG	**Samos**	**3.04**	**310**	*e*PN	**Pn**	**02 02 58.0**	**+2.7**
ALT	**Altintas**	**3.30**	**5**	*e*PN	**Pn**	**02 02 58.5**	**-0.5**
IZM	**Izmir**	**3.30**	**324**	*e*PN	**Pn**	**02 02 58.2**	**-0.7**
KDAG	**Bornova**	**3.30**	**324**	*i* P	**Pn**	**02 02 56.9**	**-2.1**
NPS	**Neapolis**	**3.42**	**263**	*e*Pn	**Pn**	**02 03 01.5**	**+0.9**
AKS	**Akhisar**	**3.47**	**334**	*e*PN	**Pn**	**02 03 00.7**	**-0.7**
ESKT	**Eskisehir**	**3.85**	**13**	*e*PN	**Pn**	**02 03 06.9**	**+0.1**
ESKT	**Eskisehir**	**3.85**	**13**	*i* P	**Pn**	**02 03 07.6**	**+0.8**
LOD	**Lodumlu**	**4.76**	**29**	*e*PN	**Pn**	**02 03 19.6**	**0.0**
DABA	**Dabaa**	**4.90**	**195**	P	**Pn**	**02 03 22.7**	**+1.0**
HMAT	**Matruh**	**5.16**	**206**	P	**Pn**	**02 03 25.0**	**-0.3**
HMAT				S	**Sn**	**02 04 21.2**	**-4.1**
HBRG	**Burj al ‘Arab**	**5.18**	**179**	P	**Pn**	**02 03 26.5**	**+0.9**
HBRG				S	**Sn**	**02 04 23.8**	**-1.9**
ELDT	**Eldivan**	**5.53**	**30**	*i* P	**Pn**	**02 03 29.7**	**-0.9**
HMYD	**Mayadein**	**6.02**	**171**	P	**Pn**	**02 03 37.9**	**+0.5**
HHAG	**Hagoal**	**6.12**	**161**	P	**Pn**	**02 03 40.1**	**+1.2**
HNAT	**Natroun**	**6.16**	**173**	P	**Pn**	**02 03 39.8**	**+0.4**
HSAF	**As Saff**	**6.31**	**166**	P	**Pn**	**02 03 41.9**	**+0.3**
HNKL	**Nakhl**	**6.82**	**147**	P	**Pn**	**02 03 49.1**	**+0.4**
ZAF		**6.88**	**159**	P	**Pn**	**02 03 49.6**	**0.0**
SWA1		**7.33**	**209**	P	**Pn**	**02 03 55.2**	**-0.7**
HKAT	**Jabal Katrina**	**8.06**	**152**	P	**P**	**02 04 06.1**	**0.0**
TR2		**8.09**	**154**	P	**P**	**02 04 06.0**	**-0.5**
HDHB	**Dhahab**	**8.14**	**148**	P	**P**	**02 04 07.6**	**+0.4**
HHRG	**Al Ghardaqah**	**9.12**	**158**	P	**P**	**02 04 20.1**	**-0.7**

OTT 04 02:04:07.7±0.2, 49.25N×67.35W, h18^{km}, MN2.9/12, 2C-2D, 46km northeast from Matane, Qc Lower St. Lawrence Seismic Zone, Quebec, Southern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ICQ	**Pointe Anglais**	**0.28**	**10**	⇑PG	Pb	02 04 14.2	+0.3
ICQ				SG	Sb	02 04 17.9	-0.1
ICQ				Trac		02 04 18.7	
	comp=Z,608nm,0.1s						
GSQ	**Grosses Roches**	**0.38**	**155**	⇑PG	Pb	02 04 15.5	-0.1
GSQ				SG	Sb	02 04 19.0	-1.9
GSQ				Trac		02 04 21.2	
	comp=Z,186nm,0.2s						
CNQ	**Baie Comeau**	**0.48**	**276**	⇓PG	Pb	02 04 16.9	-0.4
CNQ				SG	Sb	02 04 23.3	-0.5
	comp=Z,424nm,0.1s						
CNQ				Trac		02 04 23.6	
	comp=Z,318nm,0.1s						
SMQ	**Clarke City**	**1.06**	**23**	⇓PG	Pb	02 04 26.6	-0.6
SMQ				SG	Sb	02 04 41.1	+0.5
SMQ				Trac		02 04 44.0	
	comp=Z,80nm,0.1s						
MNQ	**Manicouagan**	**1.58**	**325**	PN	Pn	02 04 34.9	-0.3
MNQ				SG	Sn	02 04 56.0	+0.7
MNQ				Trac		02 04 58.2	
	comp=Z,33nm,0.1s						
A21	**Saint Andre**	**2.20**	**226**	PN	Pn	02 04 43.0	-1.0
A21				SN	Sn	02 05 08.7	-2.2
A21				SG	Sn	02 05 14.4	+3.4
A21				Trac		02 05 15.3	
	comp=Z,44nm,0.2s						
A64	**Saint Simeon**	**2.21**	**231**	PN	Pn	02 04 43.4	-0.9
A64				SN	Sn	02 05 09.3	-2.1
A64				SG	Sn	02 05 12.8	+1.5
A64				Trac		02 05 15.4	
	comp=Z,25nm,0.2s						
A61	**Sainte Mathild**	**2.40**	**231**	PN	Pn	02 04 46.7	-0.3
A61				SN	Sn	02 05 11.9	-4.2
A61				SG	Sn	02 05 18.8	+2.7
A61				Trac		02 05 21.2	
	comp=Z,23nm,0.2s						
A16	**Riviere Ouelle**	**2.51**	**226**	PN	Pn	02 04 47.7	-0.8
A16				SN	Sn	02 05 15.9	-3.1
A16				SG	Sn	02 05 23.0	+4.0
A16				Trac		02 05 25.7	
	comp=Z,14nm,0.2s						
LMQ	**La Malbaie**	**2.62**	**230**	PN	Pn	02 04 49.1	-0.9
LMQ				SN	Sn	02 05 18.3	-3.3
LMQ				SG	Sn	02 05 25.0	+3.4
LMQ				Trac		02 05 31.4	
	comp=Z,18nm,0.1s						
A54	**Misere**	**2.72**	**230**	PN	Pn	02 04 50.3	-1.2
A54				SN	Sn	02 05 21.1	-3.2
A54				SG	Sn	02 05 28.1	+3.9
A54				Trac		02 05 28.7	
	comp=Z,13nm,0.1s						
A11	**Saint Roch-des**	**2.77**	**225**	PN	Pn	02 04 51.1	-1.1
A11				PG	Pn	02 04 55.9	+3.7
A11				SN	Sn	02 05 22.9	-2.6
A11				SG	Sn	02 05 30.4	+5.0
A11				Trac		02 05 38.4	
	comp=Z,18nm,0.3s						
DAQ	**Lac Daran**	**2.89**	**245**	PN	Pn	02 04 53.0	-0.9
DAQ				SN	Sn	02 05 26.5	-1.9
DAQ				SG	Sn	02 05 33.6	+5.2
DAQ				Trac		02 05 41.4	
	comp=Z,18nm,0.2s						
LMN	**Caledonia Moun**	**3.81**	**152**	PN	Pn	02 05 05.3	-1.7
LMN				SN	Sn	02 05 47.0	-4.9
LMN				Trac		02 06 09.5	
	comp=Z,6.1nm,0.3s						
GGN	**Saint George**	**4.15**	**175**	PN	Pn	02 05 09.4	-2.4
GGN				SN	Sn	02 05 55.5	-5.0
GGN				Trac		02 06 26.1	
	comp=Z,5.2nm,0.5s						
DPQ	**Saint Jean**	**4.46**	**237**	PN	Pn	02 05 13.3	-3.0
DPQ				SN	Sn	02 06 02.8	-5.6
DPQ				SG	Sn	02 06 22.2	+14
DPQ				Trac		02 06 27.4	
	comp=Z,5.1nm,0.2s						
MOQ	**Mont Orford**	**5.16**	**222**	PN	Pn	02 05 23.0	-3.1
MOQ				SN	Sn	02 06 18.9	-7.1
SCHQ	**Schefferville**	**5.60**	**3**	PN	Pn	02 05 29.0	-3.3
SCHQ				SN	Sn	02 06 29.5	-7.4
SCHQ				Trac		02 07 01.2	
	comp=Z,2.7nm,0.2s						
TRQ	**Mont Tremblant**	**5.73**	**241**	PN	Pn	02 05 29.9	-4.2
TRQ				SN	Sn	02 06 34.0	-6.1
MRHQ	**Morin Heights**	**5.74**	**237**	PN	Pn	02 05 29.4	-4.8
MRHQ				SN	Sn	02 06 33.2	-7.1
MRHQ				Trac		02 07 10.2	
	comp=Z,4.0nm,0.3s						
LG4Q	**La Grande 4**	**6.08**	**319**	PN	Pn	02 05 35.5	-3.6
LG4Q				SN	Sn	02 06 41.0	-8.0
GRQ	**Grand Remous**	**6.30**	**248**	SN	Sn	02 06 46.8	-7.7
GRQ				SG	Sn	02 07 18.5	+24
GRQ				Trac		02 07 29.2	
	comp=Z,3.9nm,0.3s						
DRLN	**Deer Lake**	**6.45**	**86**	PN	Pn	02 05 40.1	-4.2
DRLN				SN	Sn	02 06 52.0	-6.1
DRLN				SG	Sn	02 07 25.4	+27
DRLN				Trac		02 07 38.0	
	comp=Z,5.2nm,0.8s						
VLDQ	**Val d’Or**	**6.79**	**264**	PN	Pn	02 05 44.8	-4.2
VLDQ				SN	Sn	02 06 60.0	-6.7
VLDQ				SG	Sn	02 07 41.8	+35
VLDQ				Trac		02 07 55.6	
	comp=Z,3.9nm,0.7s						
CRLO	**Chalk River**	**7.50**	**248**	PN	Pn	02 05 55.5	-3.5
CRLO				SN	Sn	02 07 16.3	-8.2
CRLO				Trac		02 08 06.7	
	comp=Z,1.8nm,0.2s						
PLVO	**Plevna**	**7.86**	**241**	PN	Pn	02 06 04.6	+0.6
EEO	**Eldee**	**8.29**	**256**	PN	P	02 06 06.0	-4.1
EEO				SN	Sn	02 07 34.2	-10
EEO				SG	Sn	02 08 23.2	+39
EEO				Trac		02 08 29.2	
	comp=Z,2.0nm,0.2s						
VIMO	**Victor Mine**	**10.92**	**295**	PN	P	02 06 40.1	-6.1
VIMO				SN	S	02 08 34.4	-15
SILO	**Sutton Inlier**	**12.04**	**302**	PN	P	02 06 53.5	-7.9
SILO				SN	S	02 08 58.5	-18

IGQ 04 02:42:47.2, 1.48S×81.12W, h12^{km}±5^{km}, mb4.0, 4C, Error ellipse: s-maj=15.6km s-min=4.0km az=20.9, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.71**	**169**	P	Pb	02 43 01.9	+0.9
HOJA	**Cerro de Hojas**	**0.72**	**53**	⇑P	Pb	02 42 59.8	-1.4
IGUA	**Igualata**	**2.48**	**90**	P	Pn	02 43 28.4	+0.2
JUIV	**Juive**	**2.66**	**89**	P	Pn	02 43 31.3	+0.6
ARRY	**Arrayan**	**2.67**	**91**	⇑P	Pn	02 43 30.7	-0.1
ARRY				S	Sn	02 44 01.6	-1.7
RETU	**Refugio**	**2.68**	**89**	P	Pn	02 43 32.4	+1.5
PISA	**Pisayambo**	**2.77**	**81**	P	Pn	02 43 34.5	+2.2
PISA				S	Sn	02 44 11.0	+5.1
NAS1	**Nasa**	**2.78**	**72**	P	Pn	02 43 34.1	+1.8
TERV	**Terraza Guagua**	**2.83**	**63**	P	Pn	02 43 35.8	+2.6
TERV				S	Sn	02 44 11.3	+3.8
PINO	**Pino**	**2.84**	**62**	P	Pn	02 43 32.7	-0.5
VC1	**Cotopaxi 1**	**2.84**	**73**	⇑P	Pn	02 43 36.2	+2.9
TAMB	**Tambo**	**2.86**	**74**	⇑P	Pn	02 43 36.2	+2.6
YANA	**Yana**	**2.89**	**62**	P	Pn	02 43 33.8	-0.2
YANA				S	Sn	02 44 10.8	+1.8
ANTI	**Antisana**	**3.13**	**71**	P	Pn	02 43 38.5	+1.0
ANTI				S	Sn	02 44 17.4	+2.3
CAYR	**Refugio Cayamb**	**3.45**	**65**	P	Pn	02 43 44.8	+2.9

IGQ 04 02:47:06.6, 1.58S×80.99W, h12^{km}±7^{km}, mb4.0, 2C, Error ellipse: s-maj=20.2km s-min=3.0km az=14.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.60**	**180**	P	Pb	02 47 19.2	+0.7
SALI				S	Sb	02 47 24.0	-2.6
HOJA	**Cerro de Hojas**	**0.69**	**40**	⇑P	Pb	02 47 18.6	-1.4
IGUA	**Igualata**	**2.36**	**88**	P	Pn	02 47 46.8	+1.0
CUSU	**Cusua**	**2.52**	**87**	P	Pn	02 47 50.5	+2.5
ARRY	**Arrayan**	**2.54**	**88**	⇑P	Pn	02 47 49.0	+0.6
RETU	**Refugio**	**2.55**	**87**	P	Pn	02 47 51.2	+2.8
PISA	**Pisayambo**	**2.66**	**79**	P	Pn	02 47 53.5	+3.5
NAS1	**Nasa**	**2.69**	**70**	P	Pn	02 47 52.0	+1.5
JUA2	**San Juan 2**	**2.75**	**60**	P	Pn	02 47 53.0	+1.7
VC1	**Cotopaxi 1**	**2.75**	**70**	P	Pn	02 47 54.4	+3.0
TERV	**Terraza Guagua**	**2.77**	**60**	P	Pn	02 47 52.6	+1.0
TAMB	**Tambo**	**2.77**	**71**	P	Pn	02 47 54.5	+2.9
PINO	**Pino**	**2.77**	**59**	P	Pn	02 47 51.2	-0.4
YANA	**Yana**	**2.83**	**59**	P	Pn	02 47 52.1	-0.3
ANTI	**Antisana**	**3.05**	**68**	P	Pn	02 47 58.1	+2.6
CAYR	**Refugio Cayamb**	**3.38**	**62**	P	Pn	02 48 04.0	+3.7

CASC 04 03:37:16.8±2.0, 13.95N×91.34W, h46^{km}±39^{km}, MD4.1, 4C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.47**	**322**	⇑*e*P	P	03 37 28.8	+1.4
FUG	**Fuego 3**	**0.69**	**44**	⇓*e*P	P	03 37 30.6	+0.3
PCG	**Pacaya**	**0.84**	**58**	*e*P	P	03 37 32.6	+0.3
PCG				*e*S	S	03 37 44.5	+0.8
TP2	**Tecpan 2**	**0.89**	**20**	⇓*e*P	P	03 37 33.5	+0.5
TP2				*e*S	S	03 37 46.3	+1.4
IXG	**Ixpaco**	**0.89**	**75**	⇑*e*P	P	03 37 33.2	+0.2
IXG				*e*S	S	03 37 45.7	+0.7
NBG	**Las Nubes**	**1.16**	**56**	⇓*e*P	P	03 37 37.4	+0.6
NBG				*e*S	S	03 37 54.9	+3.2
RBDL	**Robledal**	**1.61**	**84**	*e*P	P	03 37 43.1	-0.3
RBDL				*e*S	S	03 38 03.5	+0.4
RTR	**El Retiro**	**1.65**	**92**	*e*P	P	03 37 44.0	+0.1
RTR				*e*S	S	03 38 05.1	+1.1
SBLS	**San Blas**	**1.67**	**93**	⇑*e*P	P	03 37 44.5	+0.4
SBLS				*e*S	S	03 38 05.4	+0.8
SNJE	**San Jose**	**1.69**	**92**	⇑*e*P	P	03 37 44.7	+0.3
SNJE				*e*S	S	03 38 04.7	-0.2
MTO2	**Montecristo 2**	**1.97**	**77**	*e*P	P	03 37 47.1	-1.3
MTO2				*e*S	S	03 38 14.8	+2.9
BOQS	**Boqueron**	**2.01**	**96**	*e*P	P	03 37 48.7	-0.3
BOQS				*e*S	S	03 38 13.1	+0.1
LFU	**La Fuente**	**2.17**	**95**	*e*P	P	03 37 50.8	-0.5
LFU				*e*S	S	03 38 17.3	+0.2
LFRS	**El Faro**	**2.24**	**98**	*e*P	P	03 37 52.0	-0.2
LFRS				*e*S	S	03 38 17.7	-1.1
LCBS	**La Ceiba**	**2.31**	**97**	*e*P	P	03 37 53.0	-0.3
LCBS				*e*S	S	03 38 20.7	0.0
SNVI	**San Vicente**	**2.45**	**98**	*e*P	P	03 37 55.1	-0.2
SNVI				*e*S	S	03 38 24.7	+0.5
BLLM	**Bellamira**	**3.06**	**99**	*e*P	P	03 38 03.1	-0.8

NEIC ***04*** *03:38:15.7, 37.85N×1.80W, ML3.1(LDG), MN2.7(MDD), After MDD.*

INMG ***04*** *03:38:15.8±1.5, 37.86N×1.82W, h2^{km}±4^{km}, ML2.7, Error ellipse: s-maj=2.4km s-min=2.3km az=157.0*

CSEM ***04*** *03:38:15.9±0.1, 37.88N×1.80W, h5^{km}, ML3.2/15, Error ellipse: s-maj=3.3km s-min=2.4km az=153.0*

LDG ***04*** *03:38:17.5±0.5, 37.85N×1.83W, h5^{km}, Md3.8/1, Ml3.1/5, Error ellipse: s-maj=10.6km s-min=3.4km az=141.0*

MDD 04 03:38:15.7±0.3, 37.86N×1.80W, mbLg2.6/23, 1C, Error ellipse: s-maj=3.6km s-min=2.1km az=2.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.45**	**92**	⇑Pg	Pg	03 38 23.8	-0.8
	22nm,0.3s,SNR=18						
EMUR				Lg		03 38 30.4	
	598nm,0.4s,SNR=5.0						
EMUR	**La Murta**	**0.45**	**92**	Pg	Pg	03 38 23.8	-0.8
	22nm,0.3s,SNR=18						
CART	**Cartagena**	**0.69**	**113**	*e*Pg	Pg	03 38 28.8	-0.8
CART				*e*Sg	Sg	03 38 37.2	-1.5
CART	**Cartagena**	**0.69**	**113**	P	Pg	03 38 28.6	-0.9
CART				S	Sg	03 38 37.4	-1.4
CART	**Cartagena**	**0.69**	**113**	*e*Pg	Pg	03 38 28.8	-0.7
CART				*e*Sg	Sg	03 38 37.2	-1.5
ENIJ	**Nijar**	**0.94**	**200**	Pg	Pg	03 38 32.8	-1.7
	32nm,0.2s,SNR=12						
ENIJ				Lg		03 38 46.1	
	126nm,0.5s,SNR=14						
EVIA	**Vianos**	**0.96**	**325**	Pg	Pg	03 38 33.3	-1.5
	149nm,0.5s,SNR=22						
EVIA				Lg		03 38 47.4	
	75nm,0.4s,SNR=5.0						
EQES	**Quesada**	**1.00**	**267**	Pg	Pg	03 38 34.6	-1.2
	92nm,0.3s,SNR=54						
EQES				Lg		03 38 48.5	
	68nm,0.3s,SNR=5.0						
EQES	**Quesada**	**1.00**	**267**	Pg	Pg	03 38 34.6	-1.2
	92nm,0.3s,SNR=54						
EBER	**Berja**	**1.29**	**222**	Pg	Pg	03 38 38.9	-2.5
	39nm,0.6s,SNR=22						
EBER				Lg		03 38 57.4	
	167nm,0.8s,SNR=5.0						
EBER	**Berja**	**1.29**	**222**	Pg	Pg	03 38 39.0	-2.5
EBEN	**Beniarda**	**1.50**	**55**	Pg	Pg	03 38 43.1	-2.6
	1.1nm,0.2s,SNR=16						
EBEN				Lg		03 39 02.5	
	18nm,0.5s,SNR=5.0						
EBEN	**Beniarda**	**1.50**	**55**	Pg	Pg	03 38 43.1	-2.6
	1.1nm,0.2s,SNR=16						
EBAN	**Banos Encina**	**1.60**	**282**	Pg	Pg	03 38 43.9	-3.7
	13nm,0.2s,SNR=7.9						
EBAN				Lg		03 39 06.1	
	213nm,0.6s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.00**	**250**	Pn	Pn	03 38 51.0	-0.1
	6.8nm,0.4s,SNR=11						
ELOJ				Lg		03 39 19.0	
	14nm,0.3s,SNR=12						
EADA	**Adamuz**	**2.21**	**279**	Pn	Pn	03 38 51.7	-2.5
	2.5nm,0.2s,SNR=20						
EADA				Sn	Sn	03 39 19.6	-3.0
	17nm,0.3s,SNR=9.6						
EADA	**Adamuz**	**2.21**	**279**	Pn	Pn	03 38 51.7	-2.5

	2.5nm,0.2s,SNR=20						
EADA				Sn	Sn	03 39 19.6	-3.0
	17nm,0.3s,SNR=9.6						
ESDC	**Sonseca Array**	2.48	318	Pn	Pn	03 38 55.5	-2.5
	1.8nm,0.3s,baz=128,slow=13,SNR=12						
ESDC				Pg	Pg	03 39 00.0	-5.2
	8.0nm,0.4s,baz=132,slow=17,SNR=45						
ESDC				Lg		03 39 35.1	
	6.6nm,0.2s,baz=134,slow=28,SNR=10						
ESDC	**Sonseca Array**	2.48	318	Pn	Pn	03 38 55.5	-2.5
	1.8nm,0.3s,SNR=12						
ESDC	**Sonseca Array**	2.48	318	Pg	Pg	03 39 00.0	-5.2
	8.0nm,0.4s,SNR=45						
ESLA	**Sonseca Array**	2.48	318	*e*Pn	Pn	03 38 55.6	-2.4
ESLA				*e*Pg	Pg	03 39 03.1	-2.1
ESLA				*e*Sg	Sg	03 39 33.1	-5.2
ESLA	**Sonseca Array**	2.48	318	*e*Pn	Pn	03 38 55.6	-2.4
ESLA	**Sonseca Array**	2.48	318	*e*Pg	Pg	03 39 03.1	-2.1
EMIJ	**Mijas**	2.70	242	Pn	Pn	03 38 59.6	-1.5
	1.0nm,0.4s,SNR=7.9						
EMIJ				Pg	Pg	03 39 04.5	-5.1
	3.2nm,0.4s,SNR=7.9						
EMIJ				Lg		03 39 40.0	
	11nm,0.5s,SNR=4.0						
EMOS	**Mosqueruela**	2.71	22	Pn	Pn	03 38 59.8	-1.5
	2.4nm,0.5s,SNR=7.0						
EMOS				Sn	Sn	03 39 32.3	-3.0
	14nm,0.5s,SNR=5.0						
EMOS	**Mosqueruela**	2.71	22	Pn	Pn	03 38 59.8	-1.5
	2.4nm,0.5s,SNR=7.0						
EMOS				Sn	Sn	03 39 32.3	-3.0
	14nm,0.5s,SNR=5.0						
EIBI	**Ibiza**	2.73	64	Pn	Pn	03 38 59.6	-2.1
	0.4nm,0.1s,SNR=4.0						
EIBI				Sn	Sn	03 39 30.8	-5.0
	8.6nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	2.73	64	Pn	Pn	03 38 59.6	-2.0
	0.4nm,0.1s,SNR=4.0						
EIBI				Sn	Sn	03 39 30.8	-5.1
	8.6nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	3.33	327	Pn	Pn	03 39 07.7	-2.4
	1.1nm,0.4s,SNR=7.9						
GUD				Pg	Pg	03 39 17.2	-4.9
	0.6nm,0.4s,SNR=12						
GUD				Lg		03 40 02.2	
	9.7nm,0.3s,SNR=7.9						
ESPR	**Espera**	3.38	254	Sn	Sn	03 39 48.8	-3.4
	5.8nm,0.5s,SNR=4.0						
ESPR	**Espera**	3.38	254	Sn	Sn	03 39 48.8	-3.3
	5.8nm,0.5s,SNR=4.0						
ERTA	**Horta de San J**	3.51	27	Pn	Pn	03 39 10.6	-2.1
	2.2nm,0.4s,SNR=9.1						
ERTA				Sn	Sn	03 39 51.9	-3.7
	4.2nm,0.3s,SNR=7.1						
ERTA	**Horta de San J**	3.51	27	Pn	Pn	03 39 10.6	-2.1
	2.2nm,0.4s,SNR=9.1						
ERTA				Sn	Sn	03 39 51.9	-3.7
	4.2nm,0.3s,SNR=7.1						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	03 39 14.7	-2.9
	1.1nm,0.2s,SNR=11						
EMIN				Sn	Sn	03 39 58.6	-5.7
	6.0nm,0.3s,SNR=7.5						
EMIN				Lg		03 40 18.8	
	21nm,0.7s,SNR=5.0						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	03 39 14.7	-2.9
	1.1nm,0.2s,SNR=11						
EMIN				Sn	Sn	03 39 58.6	-5.7
	6.0nm,0.3s,SNR=7.5						
ESAC	**San Caprasio**	4.00	14	Pn	Pn	03 39 16.5	-3.1
	4.2nm,0.2s,SNR=4.0						
ESAC				Pg	Pg	03 39 30.5	-5.0
	10nm,0.5s,SNR=4.0						
ESAC				Lg		03 40 24.8	
	67nm,0.4s,SNR=4.0						
ESAC	**San Caprasio**	4.00	14	Pn	Pn	03 39 16.5	-3.1
	4.2nm,0.2s,SNR=4.0						
ESAC	**San Caprasio**	4.00	14	Pg	Pg	03 39 30.5	-5.0
	10nm,0.5s,SNR=4.0						
EBAD	**Badajoz**	4.20	284	Pn	Pn	03 39 19.1	-3.3
	0.7nm,0.2s,SNR=4.6						
EBAD				Sn	Sn	03 40 07.6	-5.2
	14nm,0.2s,SNR=15						
EBAD				Lg		03 40 28.9	
	17nm,0.3s,SNR=5.0						
EBAD	**Badajoz**	4.20	284	Pn	Pn	03 39 19.1	-3.3
	0.7nm,0.2s,SNR=4.6						
EBAD				Sn	Sn	03 40 07.6	-5.3
	14nm,0.2s,SNR=15						
PALC	**Alcoutim**	4.52	267	*e*Pn	Pn	03 39 23.5	-3.5
PALC				*e*Sn	Sn	03 40 14.8	-6.3
PALC				*e*Sg	Sg	03 40 40.1	-6.0
	8.5nm,0.6s						
PALC	**Alcoutim**	4.52	267	*e*Pn	Pn	03 39 23.5	-3.5
PALC				*e*Sn	Sn	03 40 14.8	-6.3
PALC				*e*Sg	Sg	03 40 40.1	-6.0
	8.5nm,0.6s						
PBEJ	**Beja**	4.80	274	*e*Pn	Pn	03 39 27.5	-3.4
PBEJ				*e*Sn	Sn	03 40 21.3	-6.8
PBEJ				*e*Sg	Sg	03 40 48.6	-6.8
	10nm,0.5s						
PBEJ	**Beja**	4.80	274	*e*Pn	Pn	03 39 27.5	-3.4
PBEJ				*e*Sn	Sn	03 40 21.3	-6.8
PBEJ				*e*Sg	Sg	03 40 48.6	-6.8
	10nm,0.5s						
PCBR	**Castelo Branco**	4.85	296	*e*Pn	Pn	03 39 28.5	-3.2
PCBR				*e*Sn	Sn	03 40 23.7	-5.8
	12nm,0.9s						
PCBR	**Castelo Branco**	4.85	296	*e*Pn	Pn	03 39 28.5	-3.2
PCBR				*e*Sn	Sn	03 40 23.7	-5.8
	12nm,0.9s						
EVO	**Evora**	4.94	280	*e*Pn	Pn	03 39 30.5	-2.5
EVO				*e*Sn	Sn	03 40 26.1	-5.6
EVO				*e*Sg	Sg	03 40 53.2	-6.9
	26nm,0.5s						
ETSF	**Etsaut**	5.13	10	*e*Pn	Pn	03 39 33.6	-2.0
ETSF				*e*Sn	Sn	03 40 28.2	-8.2
ETSF				*e*Sg	Sg	03 40 57.6	-8.8
	6.3nm,0.6s						
MTE	**Manteigas**	5.13	301	*e*Sg	Sg	03 40 57.9	-8.8
	13nm,1.1s						
MTE	**Manteigas**	5.13	301	*e*Sg	Sg	03 40 57.9	-8.8
	13nm,1.1s						
MOE	**Montemor**	5.20	279	*e*Sn	Sn	03 40 32.5	-5.8
MOE				*e*Sg	Sg	03 41 01.4	-7.5
SJPF	**Ste Jean**	5.27	5	*e*Pn	Pn	03 39 34.5	-3.1
SJPF				*e*Sn	Sn	03 40 32.4	-7.6
SJPF				*e*Sg	Sg	03 41 02.0	-9.2
	24nm,0.9s						
EPF	**Esparros**	5.42	17	*e*Pn	Pn	03 39 37.8	-2.0
EPF				*e*Sn	Sn	03 40 36.8	-7.0
EPF				*e*Sg	Sg	03 41 07.0	-9.2
	3.1nm,0.5s						
PBRG	**Braganca**	5.48	318	*e*Pn	Pn	03 39 38.6	-1.9
PBRG				*e*Sg	Sg	03 41 09.9	-8.2
	6.9nm,0.6s						
PBRG	**Braganca**	5.48	318	Pn	Pn	03 39 38.6	-1.9
PBRG				Lg		03 41 09.9	
	3.5nm,0.6s						
PTEO	**Sao Teotonio**	5.50	269	*e*Pn	Pn	03 39 37.6	-3.2
PTEO				*e*Sn	Sn	03 40 38.9	-6.8
	9.5nm,0.5s						
PTEO	**Sao Teotonio**	5.50	269	Pn	Pn	03 39 37.6	-3.2
PTEO				Sn	Sn	03 40 38.9	-6.8
	4.8nm,0.5s						
PVIS	**Viseu**	5.52	303	*e*Pn	Pn	03 39 38.0	-3.2
PVIS				*e*Sg	Sg	03 41 10.2	-9.3
	6.6nm,0.6s						
PVIS	**Viseu**	5.52	303	Pn	Pn	03 39 38.0	-3.2
PVIS				Lg		03 41 10.2	
	3.3nm,0.6s						
PLOU	**Loures**	5.87	282	*e*Sg	Sg	03 41 17.9	-13
	17nm,0.7s						
PLOU	**Loures**	5.87	282	Lg		03 41 17.9	
	8.4nm,0.7s						
MTLF	**Montolieu**	6.28	28	*e*Sg	Sg	03 41 33.4	-11
	2.4nm,0.5s						

MOS ***04*** *03:40:09.4±1.0, 54.90N×162.04E, h42^{km}, mb4.5/1, Error ellipse: s-maj=37.4km s-min=14.4km az=77.8*

KRSC 04 03:40:09.5±0.9**, 54.88N×162.31E, h41**^{km}±20^{km}**, ML4.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMR	**Tumrok**	1.31	289	*i* P	P	03 40 30.8	-0.9
TUMR				*e*S	S	03 40 46.0	-2.2
KBTR	**Krutoberegovo**	1.36	12	P	P	03 40 32.3	-0.2
KBTR				S	S	03 40 48.6	-1.0
KBTR	**Krutoberegovo**	1.36	12	*e*P	P	03 40 32.2	-0.3
KBTR				*e*S	S	03 40 48.5	-1.1
KBG	**Krutoberegovo**	1.40	9	*e*P	P	03 40 31.1	-1.9
KBG				*e*S	S	03 40 48.6	-1.8
KBG				Smax			
	6µm,0.6s						
KBG	**Krutoberegovo**	1.40	9	*e*P	P	03 40 32.5	-0.5
KBG				*e*S	S	03 40 48.9	-1.5
KBG				Smax			
	4µm,0.8s						
ZLN	**Zelenaya**	1.43	324	*i* P	P	03 40 33.0	-0.4
ZLN				*e*S	S	03 40 49.8	-1.3
KMNR	**Kamenistaya**	1.48	307	*e*P	P	03 40 33.4	-0.7
KMNR				*e*S	S	03 40 50.3	-2.0
LGNR	**Loginova**	1.52	323	*e*P	P	03 40 34.8	+0.1
LGNR				*e*S	S	03 40 53.5	+0.1
CIRR	**Tsirk**	1.52	325	*e*P	P	03 40 35.5	+0.7
CIRR				*e*S	S	03 40 54.1	+0.5
KPT	**Kopyto**	1.61	313	*e*P	P	03 40 34.9	-1.1
KPT				*e*S	S	03 40 53.5	-2.3
KRSR	**Krestovskiy**	1.67	324	*e*P	P	03 40 36.1	-0.7
KRSR				*e*S	S	03 40 56.3	-0.8
KLY	**Klyuchi**	1.72	327	*e*P	P	03 40 36.0	-1.5
KLY				*e*S	S	03 40 54.9	-3.5
SVLR	**Shiveluch**	1.81	341	*i* P	P	03 40 38.5	-0.3
SVLR				*e*S	S	03 40 59.8	-0.9
KOZR	**Kozyr**	1.82	312	PN	P	03 40 38.8	-0.1
KOZR				S	S	03 40 59.7	-1.2
KOZ	**Kozyrevsk**	1.82	311	P	P	03 40 38.8	-0.2
KOZ				S	S	03 40 59.7	-1.3
KOZ	**Kozyrevsk**	1.82	311	*e*P	P	03 40 38.7	-0.3
KOZ				*e*S	S	03 40 59.6	-1.4
SRDR	**Sredinnyy**	2.06	315	*e*P	P	03 40 41.1	-1.2
SRDR				*e*S	S	03 41 04.8	-2.1
BKI	**Bering**	2.13	80	*e*P	P	03 40 41.1	-2.3
BKI				*i* S	S	03 41 03.6	-5.2
SPN	**Mys Shipunski**	2.24	218	P	P	03 40 42.8	-2.1
SPN				S	S	03 41 06.8	-4.7
SPN	**Mys Shipunski**	2.24	218	*e*P	P	03 40 43.6	-1.3
SPN				*e*S	S	03 41 09.8	-1.7
ESO	**Esso**	2.31	298	*e*P	P	03 40 45.3	-0.6
ESO				*e*S	S	03 41 11.2	-2.1
ESO				Smax			
	470nm,1.0s						
NLC	**Nalytchevo**	2.45	227	P	P	03 40 46.8	-1.1
NLC				S	S	03 41 15.1	-1.7
NLC	**Nalytchevo**	2.45	227	*e*P	P	03 40 46.7	-1.2
NLC				*e*S	S	03 41 15.0	-1.8
UGLR	**Uglovaya**	2.65	232	*e*P	P	03 40 50.5	-0.3
UGLR				*e*S	S	03 41 20.7	-1.3
AVH	**Avacha**	2.66	234	*e*P	P	03 40 50.8	-0.1
AVH				*e*S	S	03 41 21.1	-1.0
KOK	**Koryaka**	2.69	235	*e*P	P	03 40 50.7	-0.6
KOK				*e*S	S	03 41 20.9	-2.0
GNL	**Ganaly**	2.82	247	*e*P	P	03 40 52.8	-0.5
GNL				*e*S	S	03 41 25.7	-0.6
PET	**Petropavlovsk**	2.85	231	P	P	03 40 53.2	-0.5
PET				S	S	03 41 24.5	-2.6
PET	**Petropavlovsk**	2.85	231	*e*PN	P	03 40 53.6	-0.1
PET				*e*S	S	03 41 26.4	-0.7
PET				pmax	pmax		
	comp=Z,220nm,0.5s						
PET				smax			
	comp=N,651nm,0.6s						
PET				smax			
	comp=E,611nm,0.5s						
PET				MLR	MLR		
	comp=Z,500nm,21.0s						
PET	**Petropavlovsk**	2.85	231	*e*P	P	03 40 53.1	-0.6
PET				*e*S	S	03 41 24.4	-2.7
KRMR	**Karymshinskiy**	3.22	232	*e*P	P	03 40 59.0	+0.2
KRMR				*e*S	S	03 41 36.1	-0.2
RUS	**Russkaya**	3.33	224	P	P	03 41 00.0	-0.5
RUS				S	S	03 41 36.5	-2.8
RUS	**Russkaya**	3.33	224	*e*P	P	03 40 59.9	-0.6
RUS				*e*S	S	03 41 36.4	-2.9
GRL	**Gorelyy**	3.43	229	*e*P	P	03 41 01.0	-0.9
GRL				*e*S	S	03 41 38.6	-3.2
APC	**Apacha**	3.62	239	*i* P	P	03 41 05.0	+0.4
APC				*e*S	S	03 41 46.9	+0.3
OSSR	**Ossora**	4.40	5	*e*S	S	03 42 02.0	-4.3

NEIC ***04*** *03:41:13.7±4.3, 7.88N×95.06E, mb4.5/9, Error ellipse: s-maj=118.0km s-min=23.0km az=117.0*

ISC 04 03:41:14.1±2.0**, 8.1N**±0.2×**94.7E**±0.4**, h19**^{km}**, h19**^{km}±.3^{km}**:pP-P, n23,** σ**0^{s}47**/23**, mb4.6**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRN	**Jiri**	21.06	339	*e*P	P	03 46 00.0	+0.4
	30nm,0.9s,mb4.6						
PKI	**Pulchoki**	21.27	337	*e*P	P	03 46 01.1	-0.6
	36nm,0.9s,mb4.7						
GUN	**Gumba**	21.40	338	*e*P	P	03 46 03.2	+0.2
	48nm,0.8s,mb4.9						
DMN	**Daman**	21.42	336	*e*P	P	03 46 03.3	0.0
	56nm,1.1s,mb4.8						
KKN	**Kakani**	21.52	337	*e*P	P	03 46 03.8	-0.4
	30nm,0.9s,mb4.7						
GKN	**Gorkha**	21.96	336	*e*P	P	03 46 08.9	+0.2
	36nm,0.6s,mb5.0						
KOLN	**Koldanda**	22.20	333	*e*P	P	03 46 11.0	-0.1
	45nm,0.7s,mb5.0						
AAK	**Ala-Archa**	38.72	336	P	P	03 48 39.5	+0.6
	4.2nm,1.0s,mb4.1						
KURK	**Kurchatov**	44.53	345	*e*P	P	03 49 26.8	+0.4
	4.5nm,0.7s,mb4.4						
KURK				*e*pP	pP	03 49 33.0	+0.8
CHKZ	**Chkalovo**	49.44	341	*e*P	P	03 50 04.9	0.0
	8.9nm,1.0s,mb4.8						
CHKZ				*e*pP	pP	03 50 10.8	+0.1
RAYN	**Ar Rayn**	49.49	294	P	P	03 50 05.5	-0.2
	69nm,0.6s,SNR=12						
KMBO	**Kilima Mbogo**	57.98	264	*e*P	P	03 51 08.3	0.0
	4.3nm,0.8s,mb4.5						
JOF	**Joensuu**	70.89	334	*e*p	P	03 52 31.2	-0.5
KAF	**Kangasniemi**	72.84	333	*e*p	P	03 52 42.3	-1.1
OJC	**Ojcow**	74.16	320	*e*P	P	03 52 51.8	+0.6
MORC	**Moravsky Berou**	75.56	319	*e*P	P	03 52 59.0	-0.4
	3.4nm,1.0s,mb4.2						
MORC				*e*pP	pP	03 53 05.2	-0.2
BRG	**Berggiesshubel**	77.93	320	*e*P	P	03 53 12.8	+0.3
	4.5nm,1.0s,mb4.3						
CLL	**Collm**	78.53	321	P	P	03 53 16.0	+0.2
MOX	**Moxa**	79.40	320	*e*P	P	03 53 20.0	-0.6
MOX				pP	pP	03 53 26.0	-0.6
GRA1	**Grafenberg Arr**	79.66	319	*e*P	P	03 53 22.6	+0.6
	4.0nm,0.8s,mb4.4						
GRA1				*e*pP	pP	03 53 28.4	+0.4
GRF	**Grafenberg Arr**	79.66	319	*e*P	P	03 53 22.6	+0.6
	4.0nm,0.8s,mb4.4						
GRF				*e*pP	pP	03 53 28.4	+0.4
NB2	**NORSAR Subarra**	79.81	331	P	P	03 53 22.2	-0.3
	5.9nm,1.1s,mb4.4,baz=94,slow=5.0						
LPG	**La Plagne**	82.85	315	*e*P	P	03 53 39.5	+0.7
	15nm,0.8s,mb4.8						

PRU ***04*** *03:56:26.1, 50.30N×18.77E*

WAR 04 03:56:24.9, 50.26N×18.89E, h0^{km}**, ML2.5, 1D, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.59	93⇓	*e*Pg	Pg	03 56 37.0	+0.4
OJC				*e*Sg	Sg	03 56 45.3	+0.9
OKC	**Ostrava-Krasne**	0.64	229	*e*PG	Pg	03 56 37.8	+0.2
OKC				*e*SG	Sg	03 56 46.2	+0.1
NIE	**Niedzica**	1.25	132	*e*PG	Pg	03 56 49.0	-0.8
NIE				*e*SG	Sg	03 57 06.0	-0.4
DPC	**Dobruska-Polom**	1.65	274	*e*PG	Pg	03 56 54.8	-3.0
DPC				*e*SG	Sg	03 57 16.7	-3.0
	20nm,0.3s						
KSP	**Ksiaz**	1.76	291	*e*PN	Pn	03 56 56.0	-0.7
KSP				*e*PG	Pg	03 56 58.0	-1.9
KSP				*e*SN	Sn	03 57 20.0	-0.1
KSP				*e*SG	Sg	03 57 22.0	-1.3
VYHS	**Vyhne**	1.77	181	*e*PN	Pn	03 56 56.6	-0.3
VYHS				*e*SN	Sn	03 57 21.5	+1.2
UPC	**Upice**	1.86	279	*e*SG	Sg	03 57 23.2	-3.5
CRVS	**Cervenica-Dubn**	2.16	128	*e*PN	Pn	03 57 05.3	+2.8
CRVS				*e*SN	Sn	03 57 33.0	+2.7
KOLS	**Kolonicke sedl**	2.57	120	*e*PN	Pn	03 57 09.8	+1.4
KOLS				*e*PG	Pg	03 57 16.5	+0.3
KOLS				*e*SN	Sn	03 57 41.1	+0.3
PRU	**Pruhonice**	2.81	266	*e*SG	Sg	03 57 52.3	-6.1
KHC	**Kasperske Hory**	3.63	254	*e*PG	Pg	03 57 32.5	-4.8
KHC				*e*x	x	03 58 14.5	
KHC				*e*SG	Sg	03 58 19.6	-6.0
MOA	**Molln**	3.88	233	*i*	Pg	03 57 40.6	-1.7
MOA	**Molln**	3.88	233	*i* SG	Sg	03 58 28.1	-5.9
	2.6nm,0.5s						
CLL	**Collm**	3.88	288	*e*SG	Sg	03 58 28.0	-6.1
NKC	**Novy Kostel**	4.13	272	*e*SG	Sg	03 58 35.2	-7.3

BJI ***04*** *04:12:44.2, 84.10N×0.40W, h10^{km}, mb4.7*

MOS ***04*** *04:12:44.3±0.8, 84.16N×0.23E, h10^{km}, mb4.6/12, Error ellipse: s-maj=99.9km s-min=13.9km az=93.2*

NEIC ***04*** *04:12:46.2±0.3, 84.11N×0.35W, h10^{km}, mb4.4/21, Error ellipse: s-maj=9.0km s-min=4.8km az=48.0*

NAO ***04*** *04:12:50.3±18.0, 84.09N×4.43E, h19^{km}±81^{km}, ML2.5*

ISC 04 04:12:44.7±0.3**, 84.16N**±0.05×**0.2W**±0.5**, h10**^{km}**, n80,** σ**0^{s}95**/81**, mb4.6**/29**, 3D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	6.49	149	Pn	Pn	04 14 19.9	-2.8
	baz=31,slow=6.2						
DAG	**Danmarks Havn**	7.96	212⇓	*e*P	Pn	04 14 41.9	-1.3
DAG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAG	**Danmarks Havn**	7.96	212⇓	*e*P	Pn	04 14 41.9	-1.3
	comp=Z,10.0nm,1.0s						
DAG	**Danmarks Havn**	7.96	212⇓	*i*P	Pn	04 14 41.9	-1.3
	comp=Z,10.0nm,1.0s						
SUMG	**Summit**	13.40	234	*e*Pn	P	04 15 53.1	-4.1
	comp=Z,17nm,0.6s						
SCO	**Scoresbysund**	14.34	210	*e*P	P	04 16 10.5	+1.2
SCO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SCO	**Scoresbysund**	14.34	210	*e*P	P	04 16 10.5	+1.2
	comp=Z,3.1nm,0.7s						
SCO	**Scoresbysund**	14.34	210	*i* P	P	04 16 10.5	+1.2
	comp=Z,3.1nm,0.7s						
KEV	**Kevo**	15.37	143	*e*p	P	04 16 22.0	-0.8
ARA0	**ARCESS Array S**	15.50	145	P	P	04 16 22.4	-2.2
	baz=3.9,slow=12						
ARA0				Sn	S	04 19 00.1	-17
	baz=2.5,slow=22						
APA0	**Apatity Array**	17.89	137	P	P	04 16 53.9	-0.9
	baz=353,slow=14						
JOF	**Joensuu**	22.43	141	*e*p	P	04 17 42.0	-2.5
NB2	**NORSAR Subarra**	23.39	166	P	P	04 17 55.9	+2.1
	baz=1.4,slow=10						
NB2	**NORSAR Subarra**	23.39	166	P	P	04 17 54.9	+1.2
	comp=Z,10nm,0.9s,mb4.2,baz=354,slow=9.3						
NB2	**NORSAR Subarra**	23.39	166	P	P	04 17 54.9	+1.2
NB2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
NAO01	**NORSAR Array S**	23.58	166	P	P	04 17 55.7	+0.1
	comp=Z,11nm,1.0s,mb4.2						
FIA0	**FINESS Array S**	23.58	148	P	P	04 17 56.7	+1.1
	baz=354,slow=10						
HFS	**Hagfors**	24.37	163	P	P	04 18 03.0	-0.2
	baz=47,slow=6.9						
INK	**Inuvik**	26.19	322	*e*P	P	04 18 19.4	-1.0
INK				pmax	pmax		
	comp=Z,12nm,1.3s						
INK	**Inuvik**	26.19	322	*e*P	P	04 18 19.4	-1.0
	comp=Z,12nm,1.3s,mb4.3						
IMA	**Indian Mountai**	29.44	338	*e*P	P	04 18 50.3	+0.3
COLA	**College**	30.39	333	*e*P	P	04 18 57.8	-0.6
COLA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
COLA	**College**	30.39	333	*e*P	P	04 18 57.8	-0.6
	comp=Z,4.2nm,0.6s,mb4.3						
DAWY	**Dawson**	30.76	326	*e*P	P	04 19 00.6	-1.0
MCK	**McKinley**	31.58	334	P	P	04 19 09.2	+0.3
MCK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
MCK	**McKinley**	31.58	334	P	P	04 19 09.2	+0.3
	comp=Z,0.8nm,0.6s,mb3.7						
FCC	**Fort Churchill**	32.29	283	*e*P	P	04 19 13.3	-1.8
FCC				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
FCC	**Fort Churchill**	32.29	283	*e*P	P	04 19 13.3	-1.8
	comp=Z,1.0nm,0.5s,mb3.9						
CLL	**Collm**	33.18	165	*e*P	P	04 19 23.0	0.0
CLL	**Collm**	33.18	165	*e*	P	04 19 23.0	0.0
BRG	**Berggiesshubel**	33.65	164	*e*P	P	04 19 28.2	+1.2
BRG				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.7						
BRG	**Berggiesshubel**	33.65	164	*e*P	P	04 19 28.2	+1.2
	comp=Z,16nm,1.6s,mb4.7						
MOX	**Moxa**	33.81	166	*i* P	P	04 19 29.8	+1.3
	comp=Z,logA/T=1.2,mb4.9						
DPC	**Dobruska-Polom**	34.24	161	*e*P	P	04 19 31.4	-0.8
NKC	**Novy Kostel**	34.24	165	*e*P	P	04 19 33.7	+1.5
PRU	**Pruhonice**	34.55	163	*e*P	P	04 19 35.8	+1.0
MORC	**Moravsky Berou**	34.86	160	*e*P	P	04 19 37.4	-0.1
MORC				pmax	pmax		
	comp=Z,18nm,1.8s,mb4.7						
MORC	**Moravsky Berou**	34.86	160	*e*P	P	04 19 37.4	-0.1
	comp=Z,18nm,1.8s,mb4.7						
CHKZ	**Chkalovo**	34.96	101	*e*P	P	04 19 38.4	+0.1
CHKZ				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
CHKZ	**Chkalovo**	34.96	101	*e*P	P	04 19 38.4	+0.1
	comp=Z,9.2nm,1.2s,mb4.6						
KHC	**Kasperske Hory**	35.38	164	*e*P	P	04 19 43.2	+1.3
KOLS	**Kolonicke sedl**	35.89	154	*e*P	P	04 19 47.7	+1.4
VYHS	**Vyhne**	36.19	158	*e*P	P	04 19 49.6	+0.8
VYHS				*e*		04 19 59.0	
SRO	**Srobarova**	36.85	159	*e*P	P	04 19 53.1	-1.2
KURK	**Kurchatov**	38.70	94	*e*P	P	04 20 09.8	-0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
KURK	**Kurchatov**	38.70	94	*e*P	P	04 20 09.8	-0.1
	comp=Z,3.5nm,1.0s,mb4.0						
EDM	**Edmonton**	39.59	300	*e*P	P	04 20 16.8	-0.4
ULN	**Ulaanbaatar**	44.36	67	*e*P	P	04 20 57.0	+0.8
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	44.36	67	*e*P	P	04 20 57.0	+0.9
	comp=Z,8.8nm,0.9s,mb4.5						
LAO	**LASA Array**	45.40	292	*e*P	P	04 21 05.3	+0.8
	comp=Z,7.3nm,0.6s,mb4.7						
CHMT	**Chamberlain Mo**	45.83	298	*e*P	P	04 21 07.5	-0.4
AAK	**Ala-Archa**	46.28	100	*e*P	P	04 21 11.9	+0.4
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
AAK	**Ala-Archa**	46.28	100	*e*P	P	04 21 11.9	+0.5
	comp=Z,2.1nm,0.5s,mb4.3						
WMQ	**Urumqi**	46.45	86	*e*P	P	04 21 14.5	+1.7
CART	**Cartagena**	46.73	181	*e*P	P	04 21 13.7	-1.4
	comp=Z,12nm,0.9s,mb4.8						
BOZ	**Bozeman (W)**	46.94	297	*e*P	P	04 21 17.3	+0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BOZ	**Bozeman (W)**	46.94	297	*e*P	P	04 21 17.3	+0.6
	comp=Z,3.5nm,0.6s,mb4.5						
MALT	**Malatya**	47.39	138	*e*P	P	04 21 21.1	+0.8
MALT				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
MALT	**Malatya**	47.39	138	*e*P	P	04 21 21.1	+0.8
	comp=Z,18nm,1.5s,mb4.8						
MCMT	**McKenzie Canyo**	47.87	298	*e*P	P	04 21 24.0	0.0
IMW	**Indian Meadow**	48.61	296	*e*P	P	04 21 31.0	+1.2
MOOW	**Moose Ponds**	48.74	295	*e*P	P	04 21 31.0	+0.2
LOHW	**Long Hollow**	48.86	295	*e*P	P	04 21 31.3	-0.4
TPAW	**Teton Pass**	49.02	296	*e*P	P	04 21 32.3	-0.6
HLID	**Hailey**	49.26	299	*e*P	P	04 21 35.1	+0.3
	comp=Z,4.1nm,1.5s,mb4.2						
BW06	**Boulder Array**	49.61	294	*e*P	P	04 21 37.2	-0.2
	comp=Z,1.7nm,0.8s,mb4.1						
HWUT	**Hardware Ranch**	50.94	296	*e*P	P	04 21 48.0	+0.4
	comp=Z,2.7nm,0.8s,mb4.2						
GTA	**Gaotai**	52.04	75	*e*P	P	04 21 56.5	+0.5
GTA				AP	pP	04 22 04.3	+5.2
GTA				XP	sP	04 22 07.4	+7.2
GTA				AMB	AMB		

	comp=Z,5.0nm,1.3s,mb4.3						
TMUT	**Trail Mountain**	**53.20**	**295**	eP	**P**	**04 22 05.1**	**+0.4**
ANMO	**Albuquerque**	**57.06**	**290**	eP	**P**	**04 22 33.0**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ANMO	**Albuquerque**	**57.06**	**290**	eP	**P**	**04 22 33.0**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.9						
TUC	**Tucson**	**60.09**	**294**	eP	**P**	**04 22 53.7**	**-0.2**
TUC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
TUC	**Tucson**	**60.09**	**294**	eP	**P**	**04 22 53.7**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.4						
GKN	**Gorkha**	**61.79**	**92**	eP	**P**	**04 23 04.9**	**-0.6**
	comp=Z,33nm,0.9s,mb5.5						
KOLN	**Koldanda**	**61.92**	**93**	eP	**P**	**04 23 05.3**	**-1.1**
	comp=Z,16nm,1.0s,mb5.1						
GUN	**Gumba**	**62.01**	**91**	eP	**P**	**04 23 06.9**	**-0.1**
	comp=Z,15nm,0.6s,mb5.3						
KKN	**Kakani**	**62.07**	**91**	eP	**P**	**04 23 07.1**	**-0.3**
	comp=Z,47nm,0.9s,mb5.6						
DMN	**Daman**	**62.23**	**92**	eP	**P**	**04 23 08.1**	**-0.4**
JIRN	**Jiri**	**62.29**	**90**	eP	**P**	**04 23 08.8**	**-0.1**
	comp=Z,13nm,0.6s,mb5.3						
PKI	**Pulchoki**	**62.30**	**91**	eP	**P**	**04 23 08.9**	**0.0**
	comp=Z,13nm,0.6s,mb5.2						

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*MAN **04** 04:17:31.9,5.10N×126.60E,h45^{km},mb4.6,ML3.5,MS3.4*

ISC 04 04:17:39.3±1.0,5.7N±0.1×126.4E±0.1,h107^{km}±17^{km},n14, σ0^{s}83/18,mb4.8/3,3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.28**	**355**	eP	**P**	**04 18 02.2**	**-1.5**
KCP	**Kidapawan**	**1.84**	**317**	⇓eP	**P**	**04 18 10.0**	**-0.6**
KCP				iS	**S**	**04 18 40.7**	**+6.8**
BIPH	**Bislig**	**2.50**	**360**	eP	**P**	**04 18 20.5**	**+1.1**
BIPH				iS	**S**	**04 18 49.5**	**-0.1**
BUKP	**Musuan**	**2.55**	**330**	eP	**P**	**04 18 20.6**	**+0.5**
BUKP				eS	**S**	**04 18 50.7**	**0.0**
CGP	**Cagayan de Oro**	**3.23**	**329**	eP	**P**	**04 18 30.2**	**+0.9**
CGP				eS	**S**	**04 19 14.7**	**+7.5**
PAGZ	**Pagadian**	**3.67**	**306**	eP	**P**	**04 18 34.8**	**-0.5**
SCPH	**Surigao**	**4.18**	**348**	⇓eP	**P**	**04 18 42.9**	**+0.7**
KAKA	**Kakadu**	**19.23**	**162**	eP	**P**	**04 21 56.9**	**-0.7**
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**23.63**	**182**	eP	**P**	**04 22 43.2**	**+1.6**
	6.5nm,0.4s,mb4.3						
WB2	**Warramunga Arr**	**26.63**	**163**	⇓iP	**P**	**04 23 09.2**	**-0.7**
ASPA	**Alice Springs**	**30.07**	**166**	eP	**P**	**04 23 40.5**	**-0.3**
FORT	**Forrest**	**36.27**	**178**	eP	**P**	**04 24 34.4**	**+0.3**
	20nm,0.4s,mb5.4						
STKA	**Stephens Creek**	**40.06**	**160**	eP	**P**	**04 25 06.3**	**+0.7**
	3.5nm,0.4s,mb4.5						
KAF	**Kangasniemi**	**89.72**	**332**	ep	**P**	**04 30 25.1**	**-1.2**

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*BJI **04** 04:36:10.0,8.59N×93.73E,h12^{km},mb4.3*

*NEIC **04** 04:36:10.6±0.8,8.06N×94.73E,h30^{km},mb4.7/9,Error ellipse: s-maj=54.2km s-min=16.8km az=50.0*

ISC 04 04:36:09.6±1.0,8.8N±0.2×95.4E±0.3,h30^{km},n22, σ1^{s}17/22,mb4.6/12,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**20.58**	**30**	eP	**P**	**04 41 03.5**	**+15**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
JIRN	**Jiri**	**20.65**	**336**	eP	**P**	**04 40 49.6**	**0.0**
	comp=Z,46nm,1.2s						
PKI	**Pulchoki**	**20.89**	**335**	eP	**P**	**04 40 52.8**	**+0.7**
	comp=Z,72nm,1.1s						
GUN	**Gumba**	**21.00**	**336**	eP	**P**	**04 40 52.0**	**-1.2**
	comp=Z,24nm,0.7s						
DMN	**Daman**	**21.06**	**334**	eP	**P**	**04 40 54.5**	**+0.7**
	comp=Z,44nm,1.0s,mb4.7						
KKN	**Kakani**	**21.14**	**335**	eP	**P**	**04 40 53.5**	**-1.1**
	comp=Z,27nm,0.9s,mb4.6						
LSA	**Lhasa**	**21.16**	**350**	P	**P**	**04 40 55.2**	**+0.5**
GKN	**Gorkha**	**21.60**	**333**	eP	**P**	**04 40 56.9**	**-2.4**
KOLN	**Koldanda**	**21.88**	**331**	eP	**P**	**04 41 00.0**	**-2.1**
	comp=Z,76nm,1.2s,mb5.0						
AAK	**Ala-Archa**	**38.35**	**335**	eP	**P**	**04 43 31.8**	**+2.1**
	comp=Z,5.1nm,1.1s,mb4.2						
KURK	**Kurchatov**	**44.02**	**345**	eP	**P**	**04 44 20.6**	**+4.3**
	comp=Z,11nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**47.85**	**127**	P	**P**	**04 44 46.4**	**-0.7**
	comp=Z,7.6nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	**48.98**	**341**	eP	**P**	**04 44 58.0**	**+2.6**
	comp=Z,8.5nm,1.0s,mb4.7						
OJC	**Ojcow**	**74.04**	**320**	eP	**P**	**04 47 44.0**	**-0.5**
MORC	**Moravsky Berou**	**75.45**	**319**	eP	**P**	**04 47 52.6**	**-0.1**
	comp=Z,13nm,1.4s,mb4.7						
BRG	**Berggiesshubel**	**77.80**	**320**	eP	**P**	**04 48 06.4**	**+0.7**
	comp=Z,4.3nm,1.4s,mb4.2						
CLL	**Collm**	**78.40**	**321**	P	**P**	**04 48 09.0**	**0.0**
MOX	**Moxa**	**79.28**	**320**	eP	**P**	**04 48 14.0**	**+0.1**
NB2	**NORSAR Subarra**	**79.51**	**331**	P	**P**	**04 48 10.2**	**-4.7**
	comp=Z,9.3nm,1.2s,mb4.6,baz=91,slow=4.8						
GRA1	**Grafenberg Arr**	**79.55**	**319**	eP	**P**	**04 48 16.1**	**+0.8**
	comp=Z,10.0nm,1.3s,mb4.6						
GRF	**Grafenberg Arr**	**79.55**	**319**	eP	**P**	**04 48 16.1**	**+0.8**
	comp=Z,10.0nm,1.3s,mb4.6						
LPG	**La Plagne**	**82.81**	**315**	eP	**P**	**04 48 27.7**	**-4.8**
	comp=Z,9.1nm,0.8s,mb4.6						

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*NEIC **04** 05:06:52.8,30.73S×71.31W,h31^{km},ML3.6(GUC),After GUC.*

GUC 04 05:06:52.8±0.8,30.73S×71.31W,h31^{km}±3^{km},MD4.2, ML3.6,2C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**0.70**	**38**	⇓iP	Pb	05 07 06.5	-0.1
TLL				iS	Sb	05 07 17.2	+1.1
TLL				AMP		05 07 20.5	
	comp=N,2µm,0.6s						
ILCH	**Illapel**	**0.92**	**173**	⇓iP	Pn	05 07 09.5	-0.1
ILCH				iS	Sn	05 07 22.2	+0.5
ILCH				AMP		05 07 26.0	
	comp=E,2µm,0.1s						
PTCH	**Petorca**	**1.57**	**168**	⇑iP	Pn	05 07 19.1	+0.2
PTCH				iS	Sn	05 07 39.5	+1.2
PTCH				AMP		05 07 46.1	
	comp=E,2µm,0.4s						
PACH	**Papudo**	**1.81**	**183**	eP	Pn	05 07 21.8	-0.6
PACH				iS	Sn	05 07 44.4	-0.1
JACH	**Jahuel**	**2.04**	**163**	⇑iP	Pn	05 07 26.5	+0.7
JACH				iS	Sn	05 07 52.0	+1.6
ROCH	**El Roble**	**2.25**	**174**	eP	Pn	05 07 30.0	+1.3
ZON	**Zonda**	**2.40**	**111**	eP	Pn	05 07 34.0	+3.2
ZON				eS	Sn	05 08 07.0	+7.6
FCH	**Farellones**	**2.73**	**162**	eP	Pn	05 07 36.5	+0.9
FCH				iS	Sn	05 08 10.3	+2.3
FCH				AMP		05 08 20.1	
	comp=E,173nm,0.4s						
CLCH	**Cerro Calan**	**2.74**	**166**	eP	Pn	05 07 36.1	+0.3
CLCH				iS	Sn	05 08 11.0	+2.8
CLCH				AMP		05 08 22.9	
	comp=E,349nm,0.7s						
RCDM	**Rinconada Maip**	**2.79**	**171**	eP	Pn	05 07 36.5	+0.1
RCDM				iS	Sn	05 08 10.0	+0.6
RCDM				AMP		05 08 22.6	
	comp=E,337nm,0.4s						
FSR	**Penalolen**	**2.82**	**167**	eP	Pn	05 07 37.0	+0.1
CHCH	**Chadas Angostu**	**3.25**	**170**	eP	Pn	05 07 43.0	+0.1
LMEL	**Las Melosas**	**3.25**	**164**	eP	Pn	05 07 43.8	+0.8
LMEL				AMP		05 08 28.6	
	comp=N,166nm,0.1s						

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*CSEM **04** 05:16:37.9±0.7,38.44N×28.73W,h5^{km},ML1.4,Error ellipse: s-maj=5.9km s-min=2.7km az=57.0,After PDA*

*PDA **04** 05:16:37.9±0.7,38.44N×28.73W,h5^{km},MD3.0,ML1.4, Error ellipse: s-maj=5.9km s-min=2.7km az=57.0*

SVSA 04 05:16:37.9±0.7,38.44N×28.73W,h5^{km},MD3.0,ML1.4, Error ellipse: s-maj=5.9km s-min=2.7km az=57.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOR	**Horta**	**0.11**	**42**	eP	Pg	05 16 40.1	-0.2
HOR				eS	Sg	05 16 41.7	-0.2
CALA	**Caldeira**	**0.14**	**8**	eP	Pg	05 16 40.7	-0.1
CALA				eS	Sg	05 16 42.4	-0.4
PCED	**Cedros**	**0.19**	**6**	eS	Sg	05 16 44.4	+0.1
	16nm,0.1s						
	16nm,0.1s						
PICO	**Pico**	**0.24**	**76**	eP	Pg	05 16 42.4	-0.4
PICO				eS	Sg	05 16 46.0	-0.1
ROSA	**Rosais**	**0.47**	**54**	eP	Pg	05 16 46.0	-1.3

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*NEIC **04** 05:56:49.8,14.33N×93.42W,h43^{km},MD4.1(MEX),After MEX.*

MEX 04 05:56:50.1±0.5,14.36N×93.42W,h20^{km}±101^{km},MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**2.27**	**33**	iP	Pn	05 57 24.2	-3.1
CCIG				iS	Sn	05 57 50.4	-4.6
SCX	**San Cristobal**	**2.48**	**18**	iP	Pn	05 57 27.5	-2.7
SCX				iS	Sn	05 57 57.0	-3.1
CMIG	**Matias Romero**	**3.06**	**333**	eP	Pn	05 57 34.6	-3.8
CMIG				iS	Sn	05 58 10.2	-4.7
OXX	**Oaxaca**	**4.18**	**311**	eP	Pn	05 57 53.0	-1.4
OXX				iS	Sn	05 58 38.0	-5.2
TEIG	**Tepich**	**7.62**	**39**	ePn	Pn	05 58 34.7	-8.2
	5.9nm,0.4s						

GUC 04 06:08:58.0±1.1,33.41S×70.09W,h5^{km}±5^{km},MD3.5, ML2.1,2C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.19**	**296**	⇑iP	Pg	06 09 02.0	+0.1
FCH				iS	Sg	06 09 04.7	+0.2
FCH				AMP		06 09 05.0	
	comp=N,2µm,0.1s						
FSR	**Penalolen**	**0.38**	**260**	eP	Pg	06 09 06.4	+0.8
FSR				iS	Sg	06 09 12.0	+1.4
FSR				AMP		06 09 12.3	
	comp=N,240nm,0.2s						
CLCH	**Cerro Calan**	**0.38**	**272**	⇓iP	Pg	06 09 06.3	+0.7
CLCH				iS	Sg	06 09 11.9	+1.2
CLCH				AMP		06 09 12.6	
	comp=N,283nm,0.4s						
LMEL	**Las Melosas**	**0.45**	**193**	eP	Pg	06 09 07.5	+0.6
LMEL				iS	Sg	06 09 14.3	+1.4
LMEL				AMP		06 09 15.3	
	comp=N,355nm,0.1s						
ANTU	**Antumapu**	**0.48**	**251**	eP	Pg	06 09 08.1	+0.4
ANTU				iS	Sg	06 09 15.3	+1.1
ANTU				AMP		06 09 15.5	
	comp=N,96nm,0.4s						
RCDM	**Rinconada Maip**	**0.61**	**262**	iP	Pg	06 09 10.6	+0.4
RCDM				iS	Sg	06 09 19.3	+1.0
RCDM				AMP		06 09 19.5	
	comp=N,259nm,0.1s						
CHCH	**Chadas Angostu**	**0.70**	**222**	⇑iP	Pg	06 09 12.2	+0.1
CHCH				iS	Sg	06 09 22.2	+0.7
PTCH	**Petorca**	**1.35**	**328**	eP	Pb	06 09 22.8	-0.6
PTCH				iS	Sb	06 09 41.1	+0.3
PACH	**Papudo**	**1.43**	**307**	iP	Pn	06 09 25.1	+0.4

KRSC 04 06:11:22.2±1.4,48.89N×156.70E,h19^{km}±29^{km},ML4.3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.83**	**348**	eS	Sn	06 12 15.8	-0.3
PAU	**Pauzhetka**	**2.58**	**2**	iS	Sn	06 12 33.0	-2.0
PAU				Smax			
	380nm,0.2s						
RUS	**Russkaya**	**3.73**	**17**	eP	Pn	06 12 19.7	-0.5
RUS				eS	Sn	06 13 01.7	-2.4
GRL	**Gorelyy**	**3.77**	**13**	eP	Pn	06 12 21.1	+0.3
GRL				eS	Sn	06 13 05.8	+0.7
KRMR	**Karymshinskiy**	**4.05**	**12**	eP	Pn	06 12 25.1	+0.4
KRMR				eS	Sn	06 13 11.6	-0.6
PET	**Petropavlovsk**	**4.32**	**16**	eP	Pn	06 12 28.7	+0.1
UGLR	**Uglovaya**	**4.53**	**16**	eP	Pn	06 12 31.9	+0.4
UGLR				eS	Sn	06 13 22.0	-2.3
AVH	**Avacha**	**4.56**	**16**	eP	Pn	06 12 31.9	-0.2
AVH				eS	Sn	06 13 22.2	-3.1
KOK	**Koryaka**	**4.57**	**15**	eP	Pn	06 12 32.4	+0.2
KOK				eS	Sn	06 13 22.7	-2.8
SPN	**Mys Shipunski**	**4.71**	**25**	eP	Pn	06 12 31.3	-2.8
GNL	**Ganaly**	**4.88**	**9**	eP	Pn	06 12 37.4	+0.9

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*MOS **04** 06:13:02.3±1.2,4.38S×144.22E,h33^{km},mb4.8/11,Error ellipse: s-maj=19.4km s-min=11.4km az=103.2*

*BJI **04** 06:13:06.9,4.67S×144.57E,h97^{km},mB5.2,mb5.0*

*NEIC **04** 06:13:08.8±1.2,4.52S×144.35E,h86^{km}±12^{km},mb5.1/31, Error ellipse: s-maj=8.0km s-min=6.7km az=111.0*

*HRVD **04** 06:13:08.9±0.3,4.40S×144.21E,h70^{km}±3^{km},MW5.2/60, Centroid moment Tensor Solution. LP body waves: s41,c58;Mantle waves: s60,c93; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.97±.25; $M_{\theta\theta}$-3.30±.20; $M_{\phi\phi}$4.27±.23; $M_{r\theta}$-1.54±.15; $M_{\theta\phi}$3.81±.18; $M_{\phi r}$3.33±.18; Best double couple: $M_0$6.551×10^{16} NP1:ϕ_s66°,δ55°,λ-7°. NP2:ϕ_s160°,δ84°,λ-145°. Principal axes: T 6.727, Plg19°, Azm288°; N -.356, Plg54°, Azm169°; P -6.376, Plg29°, Azm29°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 04 06:13:06.0±1.2,4.53S±0.04×144.34E±0.05,h72^{km}±11^{km}, h90^{km}±3.1^{km}:pP-P,n114,σ0^{s}76/122,mb5.0/54,15C-2D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.59**	**150**	c iP	**P**	**06 14 29.0**	**+0.6**
PMG	**Port Moresby**	**5.59**	**150**	ePn	**P**	**06 14 29.2**	**+0.8**
	225nm,0.6s						
KAKA	**Kakadu**	**14.30**	**235**	eP	**P**	**06 16 26.0**	**-0.3**
	182nm,0.6s						
KAKA				eS	**S**	**06 18 57.3**	**-6.2**
CTA	**Charters Tower**	**15.57**	**173**	eP	**P**	**06 16 47.4**	**+4.7**
	15nm,0.6s						
CTA				eS	Sx	06 19 43.3	
CTAO	**Charters Tower**	**15.57**	**173**	eP	**P**	**06 16 46.3**	**+3.6**
	21nm,0.9s						
WRAB	**Tennant Creek**	**18.14**	**212**	c iP	**P**	**06 17 14.6**	**-0.1**
WRAB	**Tennant Creek**	**18.14**	**212**	eP	**P**	**06 17 14.4**	**-0.3**
	202nm,1.0s						
WB2	**Warramunga Arr**	**18.15**	**212**	⇑iP	**P**	**06 17 14.6**	**-0.2**
WB2				eS	**S**	**06 20 31.6**	**+0.1**
WRA	**Warramunga Arr**	**18.16**	**212**	iP	**P**	**06 17 13.4**	**-1.5**
WRA				pmax	pmax		
	comp=Z,84nm,1.0s						
ASPA	**Alice Springs**	**21.53**	**207**	eP	**P**	**06 17 51.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**22.73**	**232**	eP	**P**	**06 18 02.1**	**-0.8**
	comp=Z,925nm,1.0s,mb6.1						
FITZ				eS	Sx	06 22 16.0	
STKA	**Stephens Creek**	**27.32**	**185**	eP	**P**	**06 18 46.2**	**-0.1**
	comp=Z,6.8nm,0.6s,mb4.3						
DZM	**Mont Dzumac**	**27.61**	**131**	eP	**P**	**06 18 48.0**	**-1.0**
DZM	**Mont Dzumac**	**27.61**	**131**	eP	**P**	**06 18 48.0**	**-1.0**
MBWA	**Marble Bar**	**29.06**	**233**	eP	**P**	**06 19 01.6**	**-0.3**
	comp=Z,152nm,1.1s,mb5.5						
FORT	**Forrest**	**30.28**	**209**	eP	**P**	**06 19 12.3**	**-0.4**
	comp=Z,133nm,0.5s,mb5.8						
KLBR	**Kellerberrin**	**36.71**	**220**	⇑iP	**P**	**06 20 08.3**	**+0.2**
	comp=Z,2µm,0.8s						
KLBR				e		06 22 30.0	
TATO	**Taipei**	**36.80**	**324**	eP	**P**	**06 20 09.1**	**+0.2**
	comp=Z,419nm,1.2s						
NWAO	**Narrogin (SRO)**	**37.93**	**219**	eP	**P**	**06 20 18.8**	**+0.6**
	comp=Z,113nm,1.0s,mb5.7						
QIZ	**Qiongzhong**	**41.25**	**306**	P	**P**	**06 20 46.2**	**+0.4**
QIZ				AP	pP	06 21 07.5	+3.8
QIZ				S	**S**	**06 26 52.0**	**-2.1**
QIZ				AMB	AMB		
	comp=Z,53nm,1.3s,mb5.2						
MAJO	**Matsushiro**	**41.26**	**352**	eP	**P**	**06 20 44.9**	**-0.9**
	comp=Z,7.3nm,0.4s,mb4.9						
MAT	**Matsushiro**	**41.26**	**352**	P	**P**	**06 20 45.7**	**0.0**
SSE	**Sheshan**	**41.76**	**330**	P	**P**	**06 20 50.8**	**+0.8**
SSE				S	**S**	**06 27 02.3**	**+0.7**
SSE				XS		06 27 40.2	
SSE				AMB	AMB		
	comp=Z,65nm,1.0s,mb5.3						
SSE				AMB	AMB		
	comp=Z,133nm,3.9s						
SSE				LR	LR		
	comp=N,65nm,26.3s						
SSE				LR	LR		
	comp=E,74nm,26.1s						
SSE				LR	LR		
	comp=Z,94nm,23.5s						
SSE	**Sheshan**	**41.76**	**330**	P	**P**	**06 20 50.8**	**+0.8**
	comp=Z,65nm,1.0s,mb5.3						
SSE				S	**S**	**06 27 02.3**	**+0.7**
SSE				sS		06 27 40.2	
SSE				SS	SS	06 30 15.9	+12
SSE				LR	LR		
	comp=Z,90nm,23.5s						
NJ2	**Nanjing**	**43.72**	**328**	eP	**P**	**06 21 07.5**	**+1.5**
NJ2				AP	pP	06 21 28.4	+4.5
NJ2				XP	sP	06 21 42.1	+10
NJ2				PP	PP	06 22 50.9	+0.4
NJ2				S	**S**	**06 27 34.0**	**+3.7**
NJ2				XS		06 28 15.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,270nm,6.8s						
NJ2				LR	LR		
	comp=N,360nm,19.3s						
NJ2				LR	LR		
	comp=E,580nm,22.8s						
NJ2				LR	LR		
	comp=Z,370nm,18.0s						
KS15	**Wonju Array Si**	**44.48**	**341**	eP	**P**	**06 21 11.5**	**-0.5**
COCO	**West Island**	**47.56**	**258**	eP	**P**	**06 21 36.5**	**-0.1**
	comp=Z,318nm,0.9s						
GYA	**Guiyang**	**47.74**	**312**	⇑iP	**P**	**06 21 39.1**	**+1.2**
GYA				AP	pP	06 22 02.0	+6.0
GYA				XP	sP	06 22 10.2	+5.9
GYA				S	**S**	**06 28 23.1**	**-4.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,120nm,3.7s						
GYA				LR	LR		
	comp=N,280nm,6.3s						
GYA				LR	LR		
	comp=E,260nm,6.0s						
GYA				LR	LR		
	comp=Z,200nm,5.4s						
NST	**Nakhon Sawan**	**48.14**	**296**	P	**P**	**06 21 39.0**	**-2.2**
NANT	**Nan**	**48.83**	**300**	P	**P**	**06 21 46.5**	**+0.1**
KMI	**Kunming**	**50.01**	**308**	⇑P	**P**	**06 21 56.6**	**+1.1**
KMI				XP	sP	06 22 27.1	+5.2
KMI				S	**S**	**06 28 57.7**	**-1.7**
KMI				XS		06 29 43.8	
KMI				SS	SS	06 32 31.7	+1.8
KMI				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,141nm,5.1s						
KMI				LR	LR		
	comp=N,175nm,25.4s						
KMI				LR	LR		
	comp=E,263nm,24.2s						
KMI				LR	LR		
	comp=Z,205nm,29.0s						
KMI	**Kunming**	**50.01**	**308**	⇑P	**P**	**06 21 56.6**	**+1.1**
	comp=Z,13nm,1.2s,mb4.7						
KMI				sP	sP	06 22 27.1	+5.2
KMI				S	**S**	**06 28 57.7**	**-1.7**
KMI				sS		06 29 43.8	
KMI				SS	SS	06 32 31.7	+1.8
KMI				LR	LR		
	comp=Z,210nm,29.0s						
CM31	**Chiang Mai Arr**	**50.23**	**298**	eP	**P**	**06 21 57.2**	**0.0**
	comp=Z,24nm,0.7s,mb5.2						
CMAR	**Chiang Mai Arr**	**50.23**	**298**	iP	**P**	**06 21 57.8**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,19nm,0.7s						
CHG	**Chiang Mai**	**50.37**	**299**	⇑P	**P**	**06 21 58.3**	**+0.1**
	comp=Z,21nm,0.8s,mb5.1						
MDJ	**Mudanjiang**	**50.68**	**346**	P	**P**	**06 22 00.8**	**+0.5**
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,129nm,4.3s						
MDJ				LR	LR		
	comp=E,163nm,24.0s						
MDJ				LR	LR		
	comp=Z,98nm,27.3s						
XAN	**Xi'an**	**50.88**	**322**	P	**P**	**06 22 01.3**	**-0.7**
XAN				AMB	AMB		
	comp=Z,17nm,1.2s,mb5.0						
CN2	**Changchun**	**51.04**	**342**	eP	**P**	**06 22 03.8**	**+0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
BJI	**Beijing**	**51.36**	**332**	P	**P**	**06 22 05.2**	**-0.3**
BJI				PCP	PcP	06 23 13.8	-5.6
BJI				AMB	AMB		
	comp=Z,22nm,1.0s,mb5.1						
BJI				LR	LR		
	comp=N,178nm,10.1s						
BJI				LR	LR		
	comp=E,141nm,10.3s						
BJI				LR	LR		
	comp=Z,186nm,24.6s						
BJI	**Beijing**	**51.36**	**332**	P	**P**	**06 22 05.2**	**-0.3**
BJI				pP	pP	06 22 11.5	-12
BJI				PcP	PcP	06 23 13.8	-5.6
BJI				S	**S**	**06 29 28.9**	**+11**
BJI				ScS	ScS	06 31 54.3	+8.7
BJI				SS	SS	06 33 03.0	+11
BJI				LR	LR		
	comp=Z,190nm,24.6s						
CD2	**Chengdu**	**52.37**	**315**	P	**P**	**06 22 13.1**	**-0.1**
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
HHC	**Hu-ho-hao-te**	**54.22**	**330**	eP	**P**	**06 22 27.1**	**+0.4**
HHC				AP	pP	06 22 46.2	+1.0
HHC				PCP	PcP	06 23 31.6	+1.5
HHC				PP	PP	06 24 32.0	+1.5
HHC				SCP		06 27 21.4	
HHC				S	**S**	**06 29 56.6**	**-0.1**
HHC				SCS	ScS	06 32 06.9	+1.4
HHC				SS	SS	06 33 38.1	-0.8
HHC				AMB	AMB		
	comp=Z,17nm,1.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,131nm,3.5s						
HHC				LR	LR		
	comp=N,168nm,15.4s						
HHC				LR	LR		
	comp=E,326nm,16.6s						
HHC				LR	LR		
	comp=Z,148nm,19.0s						
KLR	**Kul'dur**	**54.65**	**350**	eP	**P**	**06 22 30.0**	**+0.3**
BTO	**Baotou**	**54.83**	**328**	eP	**P**	**06 22 30.7**	**-0.5**
BTO				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
LZH	**Lanzhou**	**55.39**	**320**	⇑P	**P**	**06 22 35.5**	**+0.2**
LZH				AP	pP	06 22 56.1	+2.2
LZH				XP	sP	06 23 07.5	+5.4
LZH				PP	PP	06 24 42.1	+1.0
LZH				eS	**S**	**06 30 12.2**	**-0.2**
LZH				XS		06 30 50.4	
LZH				SS	SS	06 33 56.5	-1.2
LZH				AMB	AMB		
	comp=Z,29nm,1.4s,mb5.1						
LZH				AMB	AMB		
	comp=Z,165nm,6.0s						
LZH				LR	LR		
	comp=N,702nm,15.0s						
LZH				LR	LR		
	comp=Z,897nm,17.8s						
LZH	**Lanzhou**	**55.39**	**320**	⇑P	**P**	**06 22 35.5**	**+0.2**
	comp=Z,29nm,1.4s,mb5.1						
LZH				pP	pP	06 22 56.1	+2.2
LZH				sP	sP	06 23 07.5	+5.4
LZH				PP	PP	06 24 42.1	+1.0
LZH				eS	**S**	**06 30 12.2**	**-0.2**
LZH				sS		06 30 50.4	
LZH				SS	SS	06 33 56.5	-1.2
LZH				LR	LR		
	comp=Z,900nm,17.8s						
GTA	**Gaotai**	**59.94**	**321**	⇑P	**P**	**06 23 07.5**	**+0.3**

GTA				AP	pP	06 23 30.5	+4.5
GTA				XP	sP	06 23 39.9	+5.6
GTA				PCP	PcP	06 23 50.1	-2.4
GTA				PP	PP	06 25 23.5	+1.5
GTA				S	**S**	**06 31 13.7**	**+1.8**
GTA				XS		06 31 52.1	
GTA				SCS	ScS	06 32 46.2	-0.8
GTA				SS	SS	06 35 13.6	+3.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
GTA				AMB	AMB		
	comp=Z,122nm,3.8s						
GTA				LR	LR		
	comp=N,95nm,15.2s						
GTA				LR	LR		
	comp=E,97nm,14.1s						
GTA				LR	LR		
	comp=Z,122nm,15.6s						
ULN	**Ulaanbaatar**	**61.57**	**332**	*c* *i*P	**P**	**06 23 18.5**	**+0.4**
ULN	**Ulaanbaatar**	**61.57**	**332**	*e*P	**P**	**06 23 17.8**	**-0.3**
	comp=Z,7.5nm,0.8s,mb4.8						
FX1	**Attu Island--F**	**62.17**	**19**	*e*P	**P**	**06 23 21.7**	**-0.3**
JIRN	**Jiri**	**64.51**	**303**	*e*P	**P**	**06 23 37.9**	**0.0**
	comp=Z,14nm,0.5s,mb5.0						
GUN	**Gumba**	**64.86**	**304**	*e*P	**P**	**06 23 40.3**	**+0.2**
	comp=Z,30nm,0.4s,mb5.5						
KIWB	**Kanaga Island**	**65.02**	**25**	*e*P	**P**	**06 23 40.7**	**0.0**
ZAK	**Zakamensk**	**65.11**	**332**	*e*P	**P**	**06 23 41.0**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
PKI	**Pulchoki**	**65.13**	**303**	*e*P	**P**	**06 23 41.4**	**-0.5**
	comp=Z,18nm,0.7s,mb5.0						
KKN	**Kakani**	**65.31**	**303**	*e*P	**P**	**06 23 43.0**	**-0.1**
	comp=Z,39nm,0.6s,mb5.4						
DMN	**Daman**	**65.40**	**303**	*e*P	**P**	**06 23 43.5**	**-0.1**
	comp=Z,92nm,0.9s,mb5.6						
TLY	**Talaya**	**65.85**	**334**	*e*P	**P**	**06 23 46.5**	**+0.4**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
TLY				MLR	MLR		
	comp=Z,108nm,18.0s						
GKN	**Gorkha**	**65.92**	**303**	*e*P	**P**	**06 23 46.5**	**-0.5**
	comp=Z,40nm,0.5s,mb5.5						
KOLN	**Koldanda**	**66.71**	**303**	*e*P	**P**	**06 23 51.7**	**-0.3**
	comp=Z,34nm,0.6s,mb5.3						
BOD	**Bodaibo**	**66.79**	**343**	*e*P	**P**	**06 23 48.9**	**-3.0**
MOY	**Mondy**	**67.04**	**332**	*e*P	**P**	**06 23 54.0**	**+0.4**
MOY				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.4						
HYB	**Hyderabad**	**68.47**	**291**	*i* P	**P**	**06 24 03.0**	**-0.1**
WMQ	**Urumqi**	**69.97**	**320**	P	**P**	**06 24 12.8**	**+1.0**
WMQ				AP	pP	06 24 37.6	+6.4
WMQ				XP	sP	06 24 48.6	+10
WMQ				PP	PP	06 26 51.0	+1.8
WMQ				S	S	06 33 14.0	-1.0
WMQ				SS	SS	06 37 46.0	-0.9
WMQ				AMB	AMB		
	comp=Z,19nm,0.8s,mb5.0						
WMQ				LR	LR		
	comp=N,27nm,20.0s						
WMQ				LR	LR		
	comp=E,31nm,20.0s						
UNV	**Unalaska Valle**	**71.15**	**28**	*e*P	**P**	**06 24 17.6**	**-1.1**
	comp=E,63nm,0.7s,mb5.6						
DGAR	**Diego Garcia**	**71.50**	**264**	*i* P	**P**	**06 24 21.3**	**-0.2**
POO	**Poona**	**73.08**	**291**	*e*P	**P**	**06 24 30.0**	**-0.9**
VNDA	**Vanda**	**73.54**	**176**	*e*P	**P**	**06 24 33.2**	**+0.8**
	comp=E,4.3nm,0.6s,mb4.4						
BILL	**Bilibino**	**74.03**	**8**	⇑*e*P	**P**	**06 24 35.9**	**+0.4**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.3						
BILL	**Bilibino**	**74.03**	**8**	*e*P	**P**	**06 24 35.1**	**-0.3**
	comp=Z,4.9nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**74.69**	**321**	*e*P	**P**	**06 24 39.6**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSH	**Kashi**	**76.44**	**312**	*e*P	**P**	**06 24 50.0**	**+0.2**
KSH				*e*PCP	PcP	06 25 03.0	+1.4
KSH				*e*AP	pP	06 25 16.2	+6.8
KSH				*e*XP	sP	06 25 27.7	+10
KSH				*e*PP	PP	06 27 45.3	+1.6
KSH				*e*S	S	06 34 24.0	-4.0
KSH				*e*SKS	SKS	06 34 48.1	-1.4
KSH				*e*SCS	ScS	06 34 53.6	-1.9
KSH				*e*XS		06 35 11.1	
KSH				*e*SS	SS	06 39 27.2	+0.5
KSH				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.7						
KSH				AMB	AMB		
	comp=Z,210nm,3.9s						
KSH				LR	LR		
	comp=N,330nm,5.4s						
KSH				LR	LR		
	comp=E,450nm,5.6s						
TIXI	**Tiksi**	**76.71**	**355**	⇑*i*P	**P**	**06 24 49.4**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NVS	**Novosibirsk**	**77.61**	**329**	*e*P	**P**	**06 24 54.2**	**-1.8**
NVS				*e*		06 34 52.2	
NVS				pmax	pmax		
	comp=N,11nm,1.5s						
NVS				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.6						
NVS				pmax	pmax		
	comp=E,15nm,1.4s						
KZA	**Kyzart**	**77.73**	**315**	P	**P**	**06 24 58.5**	**+1.5**
	SNR=23						
TKM2	**Tokmak 2**	**77.75**	**316**	P	**P**	**06 24 57.5**	**+0.5**
	SNR=18						
TNA	**Tin City**	**78.02**	**18**	*e*P	**P**	**06 24 57.9**	**-0.1**
	comp=E,7.2nm,0.9s,mb4.4						
KBK	**Karagaybulak**	**78.12**	**315**	P	**P**	**06 24 59.6**	**+0.6**
	SNR=6.1						
UCH	**Uchtor**	**78.30**	**315**	P	**P**	**06 25 01.5**	**+1.4**
	SNR=12						
CHMS	**Chumysh**	**78.36**	**315**	P	**P**	**06 25 00.5**	**+0.1**
	SNR=7.0						
AAK	**Ala-Archa**	**78.44**	**315**	⇓*e*P	**P**	**06 25 00.2**	**-0.6**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**78.44**	**315**	*e*P	**P**	**06 25 00.1**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.1						
KURK	**Kurchatov**	**78.46**	**324**	*e*P	**P**	**06 25 00.2**	**-0.6**
	comp=Z,22nm,1.4s,mb4.7						
USP	**Ospenovka**	**78.62**	**316**	P	**P**	**06 25 02.1**	**+0.3**
	SNR=13						
AML	**Almayashu**	**78.86**	**314**	P	**P**	**06 25 03.8**	**+0.7**
	SNR=13						
KDAK	**Kodiak Island**	**79.89**	**29**	*e*P	**P**	**06 25 08.8**	**+0.5**
RSO	**Redoubt South**	**80.98**	**27**	*e*P	**P**	**06 25 11.3**	**-2.7**
SLKM	**Skilak Lake**	**82.13**	**27**	*e*P	**P**	**06 25 19.8**	**-0.3**
FIB	**Fire Island**	**82.42**	**26**	*e*P	**P**	**06 25 21.6**	**+0.1**
MAW	**Mawson**	**82.58**	**202**	*e*P	**P**	**06 25 23.0**	**+0.7**
	comp=Z,8.3nm,0.6s,mb4.7						
IMA	**Indian Mountai**	**83.14**	**21**	*e*P	**P**	**06 25 25.8**	**+0.7**
	comp=Z,120nm,1.3s,mb5.6						
SML	**Sawmill**	**83.48**	**26**	*e*P	**P**	**06 25 26.6**	**-0.4**
MCK	**McKinley**	**83.97**	**24**	*e*P	**P**	**06 25 28.7**	**-0.6**
	comp=Z,34nm,0.9s,mb5.2						
BVA0	**Borovoye Array**	**84.04**	**324**	*i* P	**P**	**06 25 30.0**	**+0.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
CHKZ	**Chkalovo**	**84.08**	**325**	P	**P**	**06 25 29.8**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
CHKZ	**Chkalovo**	**84.08**	**325**	*e*P	**P**	**06 25 29.8**	**-0.3**
	comp=Z,7.8nm,0.6s,mb4.7						
DIV	**Divide**	**84.39**	**27**	*e*P	**P**	**06 25 31.8**	**+0.3**
	comp=Z,140nm,1.0s,mb5.7						
COLA	**College**	**84.85**	**23**	*c* *i*P	**P**	**06 25 33.2**	**-0.5**
COLA	**College**	**84.85**	**23**	*e*P	**P**	**06 25 32.3**	**-1.4**
	comp=Z,35nm,0.8s,mb5.3						
THY	**Trims Highway**	**85.18**	**25**	*e*P	**P**	**06 25 35.9**	**+0.5**
QSPA	**South Pole Qui**	**85.43**	**180**	*e*P	**P**	**06 25 36.5**	**+0.2**
	comp=Z,18nm,0.6s,mb5.2						
DAWY	**Dawson**	**88.08**	**25**	*e*P	**P**	**06 25 50.0**	**+0.6**
SYO	**Syowa Base**	**91.05**	**200**	⇓P	**P**	**06 26 04.9**	**+1.6**
INK	**Inuvik**	**91.27**	**22**	*e*P	**P**	**06 26 03.9**	**-0.4**
	comp=Z,21nm,1.0s,mb5.2						
ARU	**Arti**	**91.40**	**326**	*e*P	**P**	**06 25 55.5**	**-10**
WVOR	**Wild Horse Val**	**98.22**	**48**	*e*P	**P**	**06 26 36.5**	**-0.1**
	comp=Z,4.1nm,1.0s,mb4.9						
NEW	**Newport**	**99.05**	**42**	*e*P	**P**	**06 26 40.5**	**+0.2**
	comp=Z,1.5nm,0.5s,mb4.8						
BMO	**Blue Mountains**	**99.10**	**45**	*e*Pdif	**P**	**06 26 40.7**	**+0.2**
	comp=Z,11nm,1.2s,mb5.3						
BLO	**Bloomington**	**122.58**	**46**	*e*PKPdf	PKPdf	06 31 54.5	+0.7
BLA	**Blacksburg**	**127.76**	**45**	*e*PKPdf	PKPdf	06 32 04.6	+0.7
TRQA	**Tornquist**	**131.09**	**152**	*e*PKPdf	PKPdf	06 32 11.3	+1.1
LVC	**Limon Verde**	**137.76**	**131**	*e*PKPdf	PKPdf	06 32 24.2	+1.2
SDV	**Santo Domingo**	**145.01**	**81**	*e*PKPdf	PKPdf	06 32 36.4	+0.3
CAM4	**Nova Friburgo**	**152.44**	**166**	*e*P	PKPdf	06 32 57.4	+10
CAM4				*i*		06 33 01.8	
CAM4				*i*		06 33 07.4	
CAM4				*i*		06 33 26.5	

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*NEIC **04** 06:27:40.9±1.1, 0.63S×133.03E, h10^{km}, mb4.6/9, Error ellipse: s-maj=23.8km s-min=15.5km az=71.0*

ISC 04 06:27:46.0±1.5**, 1.1S**±0.1×**132.7E**±0.2**, h33^{km}, n12, $\sigma 1^{s}08$**/16**, mb4.6**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**11.54**	**181**	*e*P	**P**	**06 30 31.6**	**0.0**
	27nm,0.3s						
KAKA				*e*S	**S**	**06 32 39.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**18.27**	**202**	*e*P	**P**	**06 32 00.2**	**+1.3**
	20nm,0.6s						
FITZ				*e*S	**S**	**06 35 17.1**	**-1.3**
WRAB	**Tennant Creek**	**18.79**	**175**	*e*P	**P**	**06 32 05.0**	**-0.3**
	22nm,0.8s						
WB2	**Warramunga Arr**	**18.80**	**175**	*e*P	**P**	**06 32 05.4**	**0.0**
WB2				*e*S	**S**	**06 35 31.9**	**+1.6**
ASPA	**Alice Springs**	**22.47**	**177**	*e*P	**P**	**06 32 44.5**	**+0.7**
ASPA				*e*S	**S**	**06 36 59.7**	**+16**
CTA	**Charters Tower**	**23.06**	**146**	*e*P	**P**	**06 32 49.8**	**0.0**
	6.8nm,0.8s,mb4.1						
CTAO	**Charters Tower**	**23.06**	**146**	*e*P	**P**	**06 32 49.2**	**-0.6**
	6.5nm,0.8s,mb4.1						
MBWA	**Marble Bar**	**23.62**	**212**	*e*P	**P**	**06 32 59.4**	**+4.1**
	25nm,1.1s,mb4.6						
FORT	**Forrest**	**29.85**	**188**	*e*P	**P**	**06 33 54.4**	**+1.7**
	34nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**31.75**	**166**	*e*P	**P**	**06 34 07.8**	**-1.7**
	9.0nm,0.7s,mb4.7						
KURK	**Kurchatov**	**69.01**	**327**	*e*P	**P**	**06 38 44.8**	**-5.5**
	7.5nm,0.8s,mb4.7						
VNDA	**Vanda**	**77.97**	**174**	P	**P**	**06 39 41.2**	**-1.0**
	2.8nm,0.9s,mb4.2						

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*LDG **04** 06:52:04.4±0.3, 37.81N×1.77W, h5^{km}, Md3.8/1, Ml3.2/4, Error ellipse: s-maj=7.1km s-min=2.5km az=140.0*

*NEIC **04** 06:52:04.2, 37.98N×1.74W, h4^{km}, ML3.2(LDG), MN2.7(MDD), After MDD.*

*INMG **04** 06:52:04.2±1.3, 37.84N×1.78W, h12^{km}±3^{km}, ML2.9, Error ellipse: s-maj=3.8km s-min=1.9km az=171.0*

*CSEM **04** 06:52:04.7±0.1, 37.90N×1.73W, h12^{km}, ML3.0/19, Error ellipse: s-maj=3.2km s-min=2.2km az=158.0*

MDD 04 06:52:03.9±0.3**, 37.91N**×**1.78W, h4^{km}**±4^{km}**, mbLg2.7**/28**, 2C-2D, Error ellipse: s-maj=3.5km s-min=2.2km az=2.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.43**	**99**	⇑Pg	Pg	06 52 11.7	-0.9
	SNR=18						
EMUR				Lg		06 52 18.3	
	265nm,0.3s,SNR=11						
EMUR	**La Murta**	**0.43**	**99**	Pg	Pg	06 52 11.7	-0.9
	125nm,0.3s,SNR=49						
CART	**Cartagena**	**0.69**	**117**	*e*Pg	Pg	06 52 16.2	-1.6
CART				*e*Sg	Sg	06 52 26.2	-0.9
CART	**Cartagena**	**0.69**	**117**	⇑P	Pg	06 52 16.4	-1.4
CART				S	Sg	06 52 25.5	-1.6
CART	**Cartagena**	**0.69**	**117**	*e*Pg	Pg	06 52 16.2	-1.6
CART				*e*Sg	Sg	06 52 26.2	-0.9
EVIA	**Vianos**	**0.93**	**322**	⇓Pg	Pg	06 52 21.2	-1.2
	145nm,0.4s,SNR=18						
EVIA				Lg		06 52 33.8	
	119nm,0.3s,SNR=17						
ENIJ	**Nijar**	**0.99**	**200**	Pg	Pg	06 52 22.1	-1.7
	25nm,0.3s,SNR=7.1						
ENIJ				Lg		06 52 36.8	
	133nm,0.4s,SNR=13						
EQES	**Quesada**	**1.03**	**265**	⇓Pg	Pg	06 52 22.5	-1.9
	37nm,0.3s,SNR=18						
EQES				Lg		06 52 36.6	
	186nm,0.4s,SNR=19						
EQES	**Quesada**	**1.03**	**265**	Pg	Pg	06 52 22.5	-2.0
	37nm,0.3s,SNR=107						
EBER	**Berja**	**1.34**	**222**	Pn	Pn	06 52 26.6	-2.9
	26nm,0.5s,SNR=12						
EBER				Lg		06 52 47.1	
	85nm,0.6s,SNR=12						
EBER	**Berja**	**1.34**	**222**	Pn	Pn	06 52 26.6	-2.9
	26nm,0.5s,SNR=12						
EBEN	**Beniarda**	**1.46**	**57**	Pn	Pn	06 52 29.3	-1.9
	1.2nm,0.3s,SNR=4.0						
EBEN				Pg	Pg	06 52 31.2	-1.9
	7.8nm,0.3s,SNR=10						
EBEN				Lg		06 52 50.1	
	29nm,0.3s,SNR=7.2						
EBEN	**Beniarda**	**1.46**	**57**	Pn	Pn	06 52 29.3	-1.9
	SNR=4.0						
EBEN	**Beniarda**	**1.46**	**57**	Pg	Pg	06 52 31.2	-1.9
	7.8nm,0.3s,SNR=10						
EBAN	**Banos Encina**	**1.60**	**280**	Pn	Pn	06 52 31.7	-1.6
	23nm,0.4s,SNR=7.9						
EBAN				Lg		06 52 53.6	
	90nm,0.5s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.03**	**249**	Pn	Pn	06 52 38.6	-0.8
	11nm,0.5s,SNR=12						
ELOJ				Sn	Sn	06 53 04.8	-0.8
	13nm,0.3s,SNR=5.8						
ELOJ				Lg		06 53 10.3	
	17nm,0.4s,SNR=7.4						
EADA	**Adamuz**	**2.22**	**278**	Pn	Pn	06 52 39.8	-2.3
	4.3nm,0.3s,SNR=24						
EADA				Sn	Sn	06 53 06.6	-3.8
	19nm,0.3s,SNR=7.5						
EADA				Lg		06 53 15.1	
	39nm,0.4s,SNR=11						
EADA	**Adamuz**	**2.22**	**278**	Pn	Pn	06 52 39.8	-2.4
	4.3nm,0.3s,SNR=24						
EADA				Sn	Sn	06 53 06.6	-3.8
	19nm,0.3s,SNR=7.5						
ESDC	**Sonseca Array**	**2.45**	**317**	Pn	Pn	06 52 43.3	-2.2
	1.7nm,0.3s,baz=128,slow=13,SNR=7.2						
ESDC				Pg	Pg	06 52 49.5	-3.4
	7.2nm,0.3s,baz=125,slow=16,SNR=39						
ESDC				Lg		06 53 20.6	
	8.1nm,0.3s,baz=128,slow=26,SNR=13						
ESDC	**Sonseca Array**	**2.45**	**317**	Pn	Pn	06 52 43.3	-2.1
	1.7nm,0.3s,SNR=7.2						
ESDC	**Sonseca Array**	**2.45**	**317**	Pg	Pg	06 52 49.5	-3.4
	7.2nm,0.3s,SNR=39						
ESLA	**Sonseca Array**	**2.45**	**317**	*e*Pn	Pn	06 52 43.5	-1.9
ESLA				*e*Pg	Pg	06 52 50.2	-2.8
ESLA				*e*Sg	Sg	06 53 20.8	-4.8
ESLA	**Sonseca Array**	**2.45**	**317**	*e*Pn	Pn	06 52 43.5	-1.9
ESLA	**Sonseca Array**	**2.45**	**317**	*e*Pg	Pg	06 52 50.2	-2.7
EMOS	**Mosqueruela**	**2.66**	**22**	Pn	Pn	06 52 46.2	-2.1
	16nm,1.1s,SNR=7.1						
EMOS				Sn	Sn	06 53 16.6	-4.8
	20nm,0.8s,SNR=5.8						
EMOS				Lg		06 53 27.8	
	19nm,0.6s,SNR=8.1						
EMOS	**Mosqueruela**	**2.66**	**22**	Pn	Pn	06 52 46.2	-2.1
	16nm,1.1s,SNR=7.1						
EMOS				Sn	Sn	06 53 16.6	-4.8
	20nm,0.8s,SNR=5.8						
EIBI	**Ibiza**	**2.69**	**65**	Pn	Pn	06 52 46.6	-2.3
	2.4nm,0.3s,SNR=7.9						
EIBI				Sn	Sn	06 53 18.4	-3.9
	15nm,0.8s,SNR=7.9						
EIBI	**Ibiza**	**2.69**	**65**	Pn	Pn	06 52 46.6	-2.3
	2.4nm,0.3s,SNR=7.9						
EIBI				Sn	Sn	06 53 18.4	-4.0
	15nm,0.8s,SNR=7.9						
EMIJ	**Mijas**	**2.74**	**242**	Pn	Pn	06 52 48.6	-0.9
	2.0nm,1.1s,SNR=7.9						
EMIJ				Sn	Sn	06 53 21.8	-1.7
	1.0nm,0.3s,SNR=7.9						
EMIJ				Lg		06 53 32.6	
	24nm,0.6s,SNR=7.2						
GUD	**Guadarrama**	**3.29**	**327**	Pn	Pn	06 52 55.6	-1.8
	5.3nm,0.3s,SNR=7.5						
GUD				Pg	Pg	06 53 05.1	-4.7
	5.4nm,0.3s,SNR=13						
GUD				Lg		06 53 47.8	
	22nm,0.4s,SNR=9.5						
ESPR	**Espera**	**3.41**	**254**	Pn	Pn	06 52 56.9	-2.1
	4.2nm,0.3s,SNR=5.1						
ESPR				Sn	Sn	06 53 34.6	-5.9
	18nm,1.0s,SNR=7.9						
ESPR				Lg		06 53 53.3	
	10nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.41**	**254**	Pn	Pn	06 52 56.9	-2.1
	4.2nm,0.3s,SNR=5.1						
ESPR				Sn	Sn	06 53 34.6	-5.9
	18nm,1.0s,SNR=7.9						
ERTA	**Horta de San J**	**3.46**	**28**	Pn	Pn	06 52 57.8	-2.0
	4.6nm,0.4s,SNR=8.4						
ERTA				Sn	Sn	06 53 35.2	-6.4
	5.3nm,0.6s,SNR=7.9						
ERTA				Lg		06 53 53.5	
	4.2nm,0.2s,SNR=5.0						
ERTA	**Horta de San J**	**3.46**	**28**	Pn	Pn	06 52 57.8	-1.9
	4.6nm,0.4s,SNR=8.4						
ERTA				Sn	Sn	06 53 35.2	-6.5
	5.3nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.88**	**269**	Pn	Pn	06 53 03.1	-2.6
	1.7nm,0.4s,SNR=14						
EMIN				Sn	Sn	06 53 46.7	-5.6
	8.4nm,0.4s,SNR=10.0						
EMIN				Lg		06 54 06.5	
	26nm,0.7s,SNR=5.9						
EMIN	**Mina Concepcio**	**3.88**	**269**	Pn	Pn	06 53 03.1	-2.6
	1.7nm,0.4s,SNR=14						
EMIN				Sn	Sn	06 53 46.7	-5.6
	8.4nm,0.4s,SNR=10.0						
ESAC	**San Caprasio**	**3.94**	**14**	Pn	Pn	06 53 04.5	-2.1
	12nm,0.6s,SNR=7.9						
ESAC				Lg		06 54 08.5	
	30nm,0.3s,SNR=4.6						
ESAC	**San Caprasio**	**3.94**	**14**	Pn	Pn	06 53 04.5	-2.1
	12nm,0.6s,SNR=7.9						
EPOB	**Poblet**	**4.09**	**32**	Pn	Pn	06 53 06.7	-2.0
	2.9nm,0.3s,SNR=7.1						
EPOB				Sn	Sn	06 53 51.8	-5.9
	2.8nm,0.9s,SNR=7.9						
EPOB				Lg		06 54 12.0	
	2.4nm,0.3s,SNR=4.0						
EPOB	**Poblet**	**4.09**	**32**	Pn	Pn	06 53 06.7	-2.0
	2.9nm,0.3s,SNR=7.1						
EPOB				Sn	Sn	06 53 51.8	-5.8
	2.8nm,0.9s,SNR=7.9						
EBAD	**Badajoz**	**4.20**	**283**	Pn	Pn	06 53 06.9	-3.4
	2.9nm,0.5s,SNR=7.9						
EBAD				Sn	Sn	06 53 55.0	-5.6
	11nm,0.5s,SNR=9.2						
EBAD				Lg		06 54 14.8	
	20nm,0.4s,SNR=8.3						
EBAD	**Badajoz**	**4.20**	**283**	Pn	Pn	06 53 06.9	-3.4
	2.9nm,0.5s,SNR=7.9						
EBAD				Sn	Sn	06 53 55.0	-5.6
	11nm,0.5s,SNR=9.2						
EGRO	**El Granado**	**4.54**	**267**	Pn	Pn	06 53 11.5	-3.6
	12nm,0.8s,SNR=7.9						
EGRO				Sn	Sn	06 54 03.1	-5.9
	0.1nm,0.3s,SNR=7.9						
EGRO				Lg		06 54 29.3	
	3.6nm,0.5s,SNR=7.9						
EGRO	**El Granado**	**4.54**	**267**	Pn	Pn	06 53 11.5	-3.6
	12nm,0.8s,SNR=7.9						
EGRO				Sn	Sn	06 54 03.1	-6.0
	0.1nm,0.3s,SNR=7.9						
PALC	**Alcoutim**	**4.54**	**266**	*e*Pn	Pn	06 53 11.3	-3.8
PALC				*e*Sn	Sn	06 54 02.6	-6.5
PALC				*e*Sg	Sg	06 54 23.4	-12
	14nm,0.8s						
PALC	**Alcoutim**	**4.54**	**266**	*e*Pn	Pn	06 53 11.3	-3.8
PALC				*e*Sn	Sn	06 54 02.6	-6.5
PALC				*e*Sg	Sg	06 54 23.4	-12
	14nm,0.8s						
PBEJ	**Beja**	**4.81**	**273**	*e*Pn	Pn	06 53 14.7	-4.3
PBEJ				*e*Sn	Sn	06 54 09.0	-7.0
PBEJ				*e*Sg	Sg	06 54 31.6	-13
	11nm,0.7s						
PBEJ	**Beja**	**4.81**	**273**	*e*Pn	Pn	06 53 14.7	-4.3
PBEJ				*e*Sn	Sn	06 54 09.0	-7.0
PBEJ				*e*Sg	Sg	06 54 31.6	-13
	11nm,0.7s						
PCBR	**Castelo Branco**	**4.85**	**295**	*e*Pn	Pn	06 53 16.3	-3.2
PCBR				*e*Sn	Sn	06 54 10.7	-6.2
PCBR				*e*Sg	Sg	06 54 33.7	-12
	20nm,0.7s						
PCBR	**Castelo Branco**	**4.85**	**295**	*e*Pn	Pn	06 53 16.3	-3.2
PCBR				*e*Sn	Sn	06 54 10.7	-6.2
PCBR				*e*Sg	Sg	06 54 33.7	-12
	20nm,0.7s						
EVO	**Evora**	**4.95**	**279**	*e*Pn	Pn	06 53 18.4	-2.5
EVO				*e*Sn	Sn	06 54 14.5	-4.9
EVO				*e*Sg	Sg	06 54 41.5	-7.2
	35nm,0.4s						
EBIE	**Bielsa**	**4.99**	**17**	Pn	Pn	06 53 18.3	-3.2
	4.7nm,0.6s,SNR=7.9						
EBIE				Sn	Sn	06 54 13.3	-7.3
	11nm,1.0s,SNR=7.9						
EBIE				Lg		06 54 37.9	
	6.4nm,0.7s,SNR=4.0						
EBIE	**Bielsa**	**4.99**	**17**	Pn	Pn	06 53 18.3	-3.2
	4.7nm,0.6s,SNR=7.9						
EBIE				Sn	Sn	06 54 13.3	-7.3
ETSF	**Etsaut**	**5.07**	**10**	*e*Pn	Pn	06 53 20.9	-1.7
ETSF				*e*Sn	Sn	06 54 17.4	-5.1
ETSF				*e*Sg	Sg	06 54 45.4	-7.4
	6.0nm,0.7s						
MTE	**Manteigas**	**5.12**	**301**	*e*Sg	Sg	06 54 44.5	-10
	24nm,0.5s						
MTE	**Manteigas**	**5.12**	**301**	*e*Sg	Sg	06 54 44.5	-10
	24nm,0.5s						
MOE	**Montemor**	**5.21**	**279**	*e*Sn	Sn	06 54 19.3	-6.7
MOE				*e*Sg	Sg	06 54 44.1	-13
SJPF	**Ste Jean**	**5.22**	**4**	*e*Pn	Pn	06 53 22.4	-2.3
SJPF				*e*Sn	Sn	06 54 20.1	-6.1
SJPF				*e*Sg	Sg	06 54 50.2	-7.4
	3.1nm,0.5s						
EALK	**Alkurruntz**	**5.31**	**2**	Pn	Pn	06 53 23.5	-2.5
	6.1nm,0.5s,SNR=5.4						
EALK				Sn	Sn	06 54 21.0	-7.5
	54nm,2.0s,SNR=7.9						
EPF	**Esparros**	**5.37**	**17**	*e*Pn	Pn	06 53 25.3	-1.5
EPF				*e*Sn	Sn	06 54 24.5	-5.4
EPF				*e*Sg	Sg	06 54 54.9	-7.7
	6.4nm,0.4s						
PBRG	**Braganca**	**5.45**	**317**	*e*Pn	Pn	06 53 24.9	-3.1
PBRG				*e*Sg	Sg	06 54 53.0	-12
	9.3nm,0.4s						
PBRG	**Braganca**	**5.45**	**317**	*e*Pn	Pn	06 53 24.9	-3.1
PBRG				*e*Sg	Sg	06 54 53.0	-12
	9.3nm,0.4s						
ELAN	**Lanestosa**	**5.46**	**347**	Sn	Sn	06 54 22.0	-10
	150nm,2.8s,SNR=7.9						
PVIS	**Viseu**	**5.51**	**302**	*e*Pn	Pn	06 53 25.9	-2.9
PVIS				*e*Sn	Sn	06 54 26.5	-7.0
	9.2nm,0.4s						
PVIS	**Viseu**	**5.51**	**302**	Pn	Pn	06 53 25.9	-2.9
PVIS				Sn	Sn	06 54 26.5	-7.0
	4.6nm,0.4s						
PTEO	**Sao Teotonio**	**5.52**	**268**	*e*Pn	Pn	06 53 26.1	-2.8
PTEO				*e*Sn	Sn	06 54 26.1	-7.6
PTEO				*e*Sg	Sg	06 54 54.7	-13
	11nm,1.0s						
PTEO	**Sao Teotonio**	**5.52**	**268**	*e*Pn	Pn	06 53 26.1	-2.8
PTEO				*e*Sn	Sn	06 54 26.1	-7.6
PTEO				*e*Sg	Sg	06 54 54.7	-13
	11nm,1.0s						
ECAL	**Calabor**	**5.54**	**318**	Lg		06 54 56.8	
	10nm,0.4s,SNR=5.0						
PVRL	**Vila Real**	**5.69**	**308**	*e*Sn	Sn	06 54 31.6	-6.4
PVRL				*e*Sg	Sg	06 54 59.5	-14
	7.4nm,0.4s						
PVRL	**Vila Real**	**5.69**	**308**	Sn	Sn	06 54 31.6	-6.4
PVRL				Lg		06 54 59.5	
	3.7nm,0.4s						
PLOU	**Loures**	**5.87**	**282**	*e*Sn	Sn	06 54 35.3	-7.3
	29nm,0.3s						
PLOU	**Loures**	**5.87**	**282**	Sn	Sn	06 54 35.3	-7.3
	14nm,0.3s						
EARI	**Arriondas**	**5.99**	**335**	Pn	Pn	06 53 33.5	-2.0
	18nm,1.1s,SNR=7.2						
EARI	**Arriondas**	**5.99**	**335**	Pn	Pn	06 53 33.5	-2.0
ELOB	**Lobios**	**6.24**	**311**	Lg		06 55 19.4	
	6.2nm,0.3s,SNR=4.6						

EINC	**Incio**	**6.38**	**320**	Lg		06 55 25.5	
	0.7nm,0.2s,SNR=4.7						
QUIF	**Quistinic**	**10.05**	**355**	*e*Pn	P	06 54 28.0	-4.2
ROSF	**Rostrenen**	**10.48**	**355**	*e*Pn	P	06 54 33.2	-4.8

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*BJI **04** 06:57:06.0,2.65N×95.70E,h27^{km},mB5.2,mb5.1,Ms4.9, Msz4.7*

*MOS **04** 06:57:07.3±1.4,2.78N×95.67E,h33^{km},mb5.3/15, MS4.4/7,Error ellipse: s-maj=17.9km s-min=9.4km az=100.9*

*NEIC **04** 06:57:08.9±0.5,2.72N×95.75E,mb5.0/15,Error ellipse: s-maj=12.1km s-min=8.7km az=224.0*

*HRVD **04** 06:57:08.9±0.7,2.13N×95.51E,h40^{km}±2^{km},MW4.8/35, Centroid moment Tensor Solution. LP body waves: s19,c27;Mantle waves: s35,c49; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.99±.23; $M_{\theta\theta}$-1.43±.14; $M_{\phi\phi}$0.44±.19; $M_{r\theta}$0.81±.14; $M_{\theta\phi}$1.35±.11; $M_{\phi r}$-0.97±.20; Best double couple: $M_0$2.132×10^{16} NP1:ϕ_s259°,δ41°,λ28°. NP2:ϕ_s147°,δ72°,λ127°. Principal axes: T 1.736, Plg49°, Azm98°; N .796, Plg35°, Azm314°; P -2.528, Plg19°, Azm210°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 04 06:57:06.4±0.4**,2.72N**±0.06×**95.65E**±0.04**,h23**^{km}**, h23**^{km}±1.4^{km}**:pP-P,n107,**σ1^{s}07/116**,mb5.1**/50**,MS4.6**/22**, 12C-9D,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.67**	**71**	P	**Pn**	**06 58 32.4**	**+0.8**
SNG	**Songkhla**	**6.64**	**48**	P	**Pn**	**06 58 45.0**	**-0.2**
	296nm,0.8s						
KGM	**Kluang**	**7.69**	**95**	P	**Pn**	**06 59 00.7**	**+0.7**
NST	**Nakhon Sawan**	**13.61**	**19**	P	**P**	**07 00 24.5**	**+3.8**
KKTK	**Khon Kaen**	**15.27**	**27**	P	**P**	**07 00 47.0**	**+4.6**
PALK	**Pallekele**	**15.56**	**287**	*e*Pn	**P**	**07 00 49.6**	**+3.3**
	51nm,1.3s						
CM31	**Chiang Mai Arr**	**15.97**	**11**	*e*Pn	**P**	**07 00 53.1**	**+1.5**
	132nm,1.0s						
CHG	**Chiang Mai**	**16.32**	**11**	⇓P	**P**	**07 00 55.2**	**-0.7**
NANT	**Nan**	**16.73**	**17**	P	**P**	**07 01 02.0**	**+0.8**
VIS	**Vishakhapatnam**	**19.20**	**322**	*i* P	**P**	**07 01 30.5**	**-1.0**
KKM	**Kota Kinabalu**	**20.77**	**80**	P	**P**	**07 01 48.6**	**+0.2**
QIZ	**Qiongzhong**	**21.35**	**40**	P	**P**	**07 01 54.1**	**-0.2**
QIZ				AP		07 02 03.2	
QIZ				S	**S**	**07 05 53.7**	**+8.4**
QIZ				LR	LR		
	comp=E,1μm,12.6s						
QIZ				LR	LR		
	comp=Z,1μm,11.6s,MS4.6						
TSM	**Tawau**	**22.24**	**85**	P	**P**	**07 02 05.0**	**+1.7**
HYB	**Hyderabad**	**22.25**	**312**	*e*P	**P**	**07 02 06.5**	**+3.1**
HYB	**Hyderabad**	**22.25**	**312**	*i* P	**P**	**07 02 06.5**	**+3.1**
BATP	**Bataraza**	**22.84**	**74**	*e*P	**P**	**07 02 09.0**	**-0.4**
KMI	**Kunming**	**23.30**	**16**	P	**P**	**07 02 14.8**	**+1.1**
KMI				AP		07 02 23.2	
KMI				XP		07 02 28.2	
KMI				AMB	AMB		
	comp=Z,88nm,1.0s,mb5.1						
KMI				AMB	AMB		
	comp=Z,389nm,4.6s						
KMI				LR	LR		
	comp=N,2μm,13.4s,MS4.8						
KMI				LR	LR		
	comp=E,1μm,15.5s,MS4.8						
KMI				LR	LR		
	comp=Z,3μm,13.4s,MS4.9						
KMI	**Kunming**	**23.30**	**16**	P	**P**	**07 02 14.8**	**+1.1**
	comp=Z,88nm,1.0s,mb5.1						
KMI				pP		07 02 23.2	
KMI				sP		07 02 28.2	
KMI				S	**S**	**07 06 36.8**	**+16**
KMI				sS		07 06 52.3	
KMI				LR	LR		
	comp=Z,3μm,13.4s,MS4.9						
PPR	**Puerto Princes**	**23.98**	**72**	⇓*i*P	**P**	**07 02 23.1**	**+2.7**
ENPP	**El Nido**	**25.04**	**69**	*e*P	**P**	**07 02 27.5**	**-3.1**
GYA	**Guiyang**	**25.87**	**23**	⇑*i*P	**P**	**07 02 38.1**	**-0.2**
GYA				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.8						
GYA				AMB	AMB		
	comp=Z,230nm,6.3s						
GYA				LR	LR		
	comp=N,1μm,17.6s,MS4.6						
GYA				LR	LR		
	comp=E,1μm,19.5s,MS4.6						
GYA				LR	LR		
	comp=Z,1μm,18.0s,MS4.5						
JIRN	**Jiri**	**26.40**	**341**	*e*P	**P**	**07 02 43.3**	**+0.1**
	comp=Z,113nm,0.8s,mb5.4						
POO	**Poona**	**26.51**	**308**	*e*P	**P**	**07 02 59.2**	**+15**
PKI	**Pulchoki**	**26.59**	**339**	*e*P	**P**	**07 02 44.9**	**0.0**
	comp=Z,95nm,1.3s,mb5.2						
DMN	**Daman**	**26.73**	**339**	*e*P	**P**	**07 02 46.4**	**+0.2**
	comp=Z,25nm,0.6s,mb4.9						
GUN	**Gumba**	**26.74**	**340**	*e*P	**P**	**07 02 46.6**	**+0.3**
	comp=Z,71nm,0.7s,mb5.3						
KKN	**Kakani**	**26.83**	**339**	*e*P	**P**	**07 02 46.9**	**-0.3**
	comp=Z,69nm,0.9s,mb5.2						
LSA	**Lhasa**	**27.18**	**351**	P	**P**	**07 02 49.7**	**-0.6**
LSA				S	**S**	**07 07 32.7**	**+6.9**
LSA				LR	LR		
	comp=N,360nm,23.2s,MS4.2						
LSA				LR	LR		
	comp=E,630nm,21.0s,MS4.2						
LSA				LR	LR		
	comp=Z,650nm,24.0s,MS4.1						
GKN	**Gorkha**	**27.26**	**338**	*e*P	**P**	**07 02 50.8**	**-0.3**
	comp=Z,177nm,0.9s,mb5.6						
KOLN	**Koldanda**	**27.45**	**336**	*e*P	**P**	**07 02 52.8**	**0.0**
	comp=Z,85nm,0.8s,mb5.3						
CD2	**Chengdu**	**29.07**	**14**	P	**P**	**07 03 06.4**	**-1.0**
CD2				AP	pP	07 03 16.5	+2.2
CD2				XP	sP	07 03 21.1	+3.7
CD2				AMB	AMB		
	comp=Z,70nm,0.6s,mb5.6						
CD2				AMB	AMB		
	comp=Z,470nm,3.9s						
CD2				LR	LR		
	comp=N,2μm,13.8s						
CD2				LR	LR		
	comp=Z,2μm,13.7s,MS4.8						
WHN	**Wuhan**	**32.85**	**31**	⇓P	**P**	**07 03 40.6**	**-0.1**
XAN	**Xi’an**	**33.53**	**20**	P	**P**	**07 03 45.4**	**-1.3**
XAN				AP	pP	07 03 51.8	-1.8
XAN				S	**S**	**07 09 08.5**	**+2.2**
XAN				AMB	AMB		
	comp=Z,109nm,0.9s,mb5.8						
XAN				LR	LR		
	comp=N,505nm,13.5s,MS4.6						
XAN				LR	LR		
	comp=E,559nm,13.9s,MS4.6						
XAN				LR	LR		
	comp=Z,783nm,15.9s,MS4.5						
SDNR	**Sundarnagar**	**33.62**	**330**	*e*P	**P**	**07 03 48.4**	**+1.0**
LZH	**Lanzhou**	**34.06**	**12**	⇑P	**P**	**07 03 49.7**	**-1.5**
LZH				AP	pP	07 04 02.1	+4.0
LZH				XP	sP	07 04 07.5	+6.4
LZH				AMB	AMB		
	comp=Z,61nm,1.3s,mb5.4						
LZH				AMB	AMB		
	comp=Z,147nm,5.4s						
LZH				LR	LR		
	comp=N,1μm,12.8s						
LZH				LR	LR		
	comp=Z,2μm,14.5s,MS4.9						
LZH	**Lanzhou**	**34.06**	**12**	⇑P	**P**	**07 03 49.7**	**-1.5**
	comp=Z,61nm,1.3s,mb5.4						
LZH				pP	pP	07 04 02.1	+4.0
LZH				sP	sP	07 04 07.5	+6.4
LZH				*e*PP	PP	07 04 47.5	-18
LZH				*e*S	S	07 08 42.0	-32
LZH				sS		07 09 01.2	
LZH				SS	rx	07 10 18.7	
LZH				LR	LR		
	comp=Z,2μm,14.5s,MS4.9						
NJ2	**Nanjing**	**36.44**	**34**	*e*P	**P**	**07 04 11.5**	**0.0**
NJ2				AP	pP	07 04 21.0	+2.5
NJ2				XP	sP	07 04 24.9	+3.5
NJ2				PP	PP	07 05 35.3	-0.2
NJ2				S	**S**	**07 09 54.0**	**+2.8**
NJ2				XS		07 10 09.0	
NJ2				AMB	AMB		
	comp=Z,100nm,0.9s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,460nm,3.8s						
NJ2				LR	LR		
	comp=N,2μm,23.5s,MS4.8						
NJ2				LR	LR		
	comp=E,1μm,22.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,2μm,21.7s,MS4.8						
GTA	**Gaotai**	**36.72**	**5**	⇑P	**P**	**07 04 13.3**	**-0.5**
GTA				AP	pP	07 04 20.7	0.0
GTA				XP	sP	07 04 24.3	+0.6
GTA				AMB	AMB		
	comp=Z,27nm,1.2s,mb5.0						
GTA				AMB	AMB		
	comp=Z,173nm,6.1s						
GTA				LR	LR		
	comp=N,513nm,14.1s,MS4.5						
GTA				LR	LR		
	comp=E,409nm,14.8s,MS4.5						
GTA				LR	LR		
	comp=Z,738nm,14.4s,MS4.6						
SSE	**Sheshan**	**37.12**	**38**	P	**P**	**07 04 17.9**	**+0.7**
SSE				S	**S**	**07 10 00.3**	**-1.3**
SSE				XS		07 10 15.1	
SSE				AMB	AMB		
	comp=Z,26nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,115nm,3.8s						
SSE				LR	LR		
	comp=N,236nm,15.9s,MS4.3						
SSE				LR	LR		
	comp=E,370nm,16.0s,MS4.3						
SSE				LR	LR		
	comp=Z,583nm,16.1s,MS4.5						
SSE	**Sheshan**	**37.12**	**38**	P	**P**	**07 04 17.9**	**+0.7**
	comp=Z,26nm,0.8s,mb5.1						
SSE				S	**S**	**07 10 00.3**	**-1.3**
SSE				sS		07 10 15.1	
SSE				SS	SS	07 12 41.8	+10
SSE				LR	LR		
	comp=Z,580nm,16.1s,MS4.5						
TIA	**Tai’an**	**38.79**	**28**	*e*P	**P**	**07 04 30.5**	**-0.7**
TIA				AMB	AMB		
	comp=Z,26nm,1.0s,mb4.9						
BTO	**Baotou**	**39.89**	**17**	*e*P	**P**	**07 04 40.1**	**-0.2**
BTO				AMB	AMB		
	comp=Z,44nm,1.2s,mb5.1						
HHC	**Hu-ho-hao-te**	**40.59**	**19**	⇑*i*P	**P**	**07 04 47.2**	**+1.2**
HHC				AP	pP	07 04 52.7	-0.3
HHC				XP	sP	07 04 55.6	-0.3
HHC				PP	PP	07 06 25.1	+2.2
HHC				PCP	PcP	07 06 47.6	-1.0
HHC				SCP		07 10 33.8	
HHC				S	**S**	**07 10 58.7**	**+4.8**
HHC				XS		07 11 08.2	
HHC				SCS	ScS	07 14 47.3	-0.9
HHC				AMB	AMB		
	comp=Z,52nm,1.4s,mb5.0						
HHC				AMB	AMB		
	comp=Z,238nm,3.5s						
HHC				LR	LR		
	comp=N,1μm,16.6s,MS4.9						
HHC				LR	LR		
	comp=E,1μm,20.1s,MS4.9						
HHC				LR	LR		
	comp=Z,1μm,16.6s,MS4.8						
KSH	**Kashi**	**40.77**	**336**	*e*P	**P**	**07 04 48.0**	**+0.5**
KSH				*e*AP	pP	07 04 54.5	0.0
KSH				*e*XP	sP	07 04 57.1	-0.3
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.2						
KSH				AMB	AMB		
	comp=Z,260nm,4.4s						
KSH				LR	LR		
	comp=N,440nm,6.4s						
KSH				LR	LR		
	comp=E,380nm,6.8s						
WMQ	**Urumqi**	**41.54**	**351**	P	**P**	**07 04 54.2**	**+0.4**
WMQ				AMB	AMB		
	comp=Z,35nm,1.0s,mb4.9						
BJI	**Beijing**	**41.55**	**24**	P	**P**	**07 04 55.1**	**+1.1**
BJI				AP	pP	07 05 01.9	+0.9
BJI				XP	sP	07 05 05.1	+1.2
BJI				PP	PP	07 06 30.6	-2.5
BJI				S	**S**	**07 11 06.1**	**-2.2**
BJI				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.1						
BJI				AMB	AMB		
	comp=Z,349nm,3.7s						
BJI				LR	LR		
	comp=N,596nm,17.4s,MS4.7						
BJI				LR	LR		
	comp=E,647nm,14.9s,MS4.7						
BJI				LR	LR		
	comp=Z,360nm,17.4s,MS4.3						
BJI	**Beijing**	**41.55**	**24**	P	**P**	**07 04 55.1**	**+1.1**
	comp=Z,65nm,1.2s,mb5.1						
BJI				pP	pP	07 05 01.9	+0.9
BJI				sP	sP	07 05 05.1	+1.2
BJI				PP	PP	07 06 30.6	-2.5
BJI				S	**S**	**07 11 06.1**	**-2.2**
BJI				SS	SS	07 14 15.4	+7.0
BJI				LR	LR		
	comp=Z,360nm,17.4s,MS4.3						
DL2	**Dalian**	**43.11**	**30**	P	**P**	**07 05 07.8**	**+1.1**
DL2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
KZA	**Kyzart**	**43.24**	**338**	P	**P**	**07 05 09.4**	**+1.6**
	SNR=6.8						
UCH	**Uchtor**	**43.66**	**337**	P	**P**	**07 05 13.0**	**+1.9**
	SNR=18						
TKM2	**Tokmak 2**	**43.84**	**339**	P	**P**	**07 05 13.5**	**+0.8**
	SNR=13						
KBK	**Karagaybulak**	**43.86**	**338**	P	**P**	**07 05 14.0**	**+1.3**
	SNR=5.6						
AML	**Almayashu**	**43.90**	**336**	P	**P**	**07 05 14.9**	**+1.9**
	SNR=24						
AAK	**Ala-Archa**	**44.01**	**337**	P	**P**	**07 05 15.7**	**+1.8**
	SNR=7.0						
AAK	**Ala-Archa**	**44.01**	**337**	⇑*e*P	**P**	**07 05 14.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.5						
AAK				MLR	MLR		
	comp=Z,400nm,26.0s,MS4.2						
AAK	**Ala-Archa**	**44.01**	**337**	*e*P	**P**	**07 05 14.1**	**+0.2**
	comp=Z,14nm,1.0s,mb4.6						
FRU	**Bishkek**	**44.13**	**338**	*e*P	**P**	**07 05 16.0**	**+1.0**
FRU				*e*		07 05 29.0	
FRU				pmax	pmax		
	comp=Z,80nm,2.5s,mb5.0						
WRAB	**Tennant Creek**	**44.15**	**122**	*i* P	**P**	**07 05 15.2**	**-0.2**
WRAB	**Tennant Creek**	**44.15**	**122**	*e*P	**P**	**07 05 15.6**	**+0.1**
	comp=Z,24nm,1.0s,mb4.9						
WB2	**Warramunga Arr**	**44.16**	**122**	*e*P	**P**	**07 05 14.8**	**-0.7**
USP	**Ospenovka**	**44.55**	**338**	P	**P**	**07 05 19.1**	**+0.8**
	SNR=6.8						
MKAR	**Makanchi Array**	**45.42**	**347**	*i* P	**P**	**07 05 25.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,67nm,1.0s						
ASPA	**Alice Springs**	**45.54**	**127**	*e*P	**P**	**07 05 27.0**	**+0.5**
ULN	**Ulaanbaatar**	**46.04**	**11**	*c i*P	**P**	**07 05 29.6**	**-0.5**
SNY	**Shenyang**	**46.30**	**29**	⇓P	**P**	**07 05 32.8**	**+0.5**
SNY				S	**S**	**07 12 13.6**	**-3.5**
SNY				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2						
SNY				LR	LR		
	comp=N,400nm,14.3s,MS4.8						
SNY				LR	LR		
	comp=E,670nm,16.1s,MS4.8						
SNY				LR	LR		
	comp=Z,820nm,15.2s,MS4.8						
ZAK	**Zakamensk**	**47.93**	**7**	⇑*e*P	**P**	**07 05 44.8**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
CN2	**Changchun**	**48.69**	**29**	*e*P	**P**	**07 05 50.2**	**-0.8**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
TLY	**Talaya**	**49.25**	**7**	*e*P	**P**	**07 05 55.1**	**-0.1**
TLY				*e*S	**S**	**07 13 02.8**	**+4.2**
TLY				*e*SS	ScS	07 15 36.9	-5.9
TLY				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
TLY				MLR	MLR		
	comp=Z,376nm,17.0s,MS4.5						
TLY	**Talaya**	**49.25**	**7**	*e*P	**P**	**07 05 55.4**	**+0.2**
	comp=Z,11nm,0.9s,mb4.9						
TLY				*e*pP	pP	07 06 02.3	0.0
IRK	**Irkutsk**	**49.88**	**7**	*e*P	**P**	**07 05 59.9**	**-0.1**
IRK				pmax	pmax		
	comp=Z,43nm,2.0s,mb5.1						
KURK	**Kurchatov**	**49.95**	**346**	*e*P	**P**	**07 06 00.1**	**-0.4**
	comp=Z,30nm,1.1s,mb5.2						
KURK				*e*pP	pP	07 06 07.6	-0.1
MDJ	**Mudanjiang**	**51.33**	**31**	P	**P**	**07 06 10.8**	**-0.4**
MDJ				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,150nm,6.0s						
MDJ				LR	LR		
	comp=N,125nm,20.5s,MS4.4						
MDJ				LR	LR		
	comp=E,327nm,20.5s,MS4.4						
MDJ				LR	LR		
	comp=Z,229nm,22.8s,MS4.1						
NVS	**Novosibirsk**	**52.94**	**351**	⇑*i*P	**P**	**07 06 20.9**	**-2.2**
NVS				*i* S	**S**	**07 13 49.4**	**+0.1**
NVS				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
NVS				pmax	pmax		
	comp=N,19nm,1.0s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.9s						
NVS				smax			
	comp=N,15nm,1.8s						
NVS				smax			
	comp=E,25nm,1.9s						
BVA0	**Borovoye Array**	**54.33**	**341**	*i* P	**P**	**07 06 32.2**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CTA	**Charters Tower**	**54.56**	**117**	⇓*i*P	**P**	**07 06 35.8**	**+0.3**
	comp=Z,9.7nm,0.9s,mb4.8						
CTAO	**Charters Tower**	**54.56**	**117**	*e*P	**P**	**07 06 35.6**	**+0.1**
	comp=Z,24nm,1.1s,mb5.1						
CTAO				*e*pP	pP	07 06 42.1	-0.5
CHKZ	**Chkalovo**	**54.81**	**342**	P	**P**	**07 06 36.0**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**55.51**	**132**	*e*P	**P**	**07 06 41.7**	**-0.6**
	comp=Z,13nm,1.6s,mb4.7						
KLR	**Kul’dur**	**55.62**	**28**	*e*P	**P**	**07 06 39.0**	**-3.8**
KLR				MLR	MLR		
	comp=N,700nm,13.0s						
KLR				MLR	MLR		
	comp=Z,1μm,13.0s,MS5.2						
BOD	**Bodaibo**	**56.83**	**12**	*e*P	**P**	**07 06 50.0**	**-1.4**
BOD				*e*	pP	07 06 55.5	-3.1
BOD				pmax	pmax		
	comp=Z,48nm,2.5s,mb5.1						
BOD				pmax	pmax		
	comp=Z,34nm,2.1s,mb5.0						
KMBO	**Kilima Mbogo**	**58.51**	**267**	*i* P	**P**	**07 07 04.5**	**+0.8**
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMBO	**Kilima Mbogo**	**58.51**	**267**	*e*P	**P**	**07 07 04.5**	**+0.7**
	comp=Z,5.2nm,1.0s,mb4.5						
GNI	**Garni**	**59.13**	**316**	*i* P	**P**	**07 07 12.1**	**+4.4**
YSS	**Yuzh-Sakhalins**	**60.00**	**35**	⇑*e*P	**P**	**07 07 12.0**	**-1.6**
YSS				*e*		07 07 27.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.5						
SVE	**Sverdlovsk**	**60.72**	**339**	⇓*e*P	**P**	**07 07 15.2**	**-3.2**
SVE				*e*	pP	07 07 22.2	-3.5
SVE				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.6						
ARU	**Arti**	**61.20**	**338**	⇑*i*P	**P**	**07 07 12.2**	**-9.4**
ARU				*e*		07 17 09.0	
ARU				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.1						
KIV	**Kislovodsk**	**62.16**	**319**	*e*P	**P**	**07 07 28.2**	**-0.1**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.1						
MALT	**Malatya**	**62.97**	**312**	*e*P	**P**	**07 07 34.1**	**+0.4**
SOC	**Sochi**	**63.96**	**318**	*e*P	**P**	**07 07 37.4**	**-2.8**
SOC				*e*		07 08 12.7	
SOC				*e*		07 10 04.7	
SOC				*e*PPP	PPP	07 11 27.2	-7.5
SOC				*e*S	**S**	**07 16 12.3**	**-0.9**
SOC				*e*SS	SS	07 20 22.8	-0.6
SOC				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
SOC				pmax	pmax		
	comp=N,23nm,0.9s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.5s						
SOKR	**Solikamsk**	**64.12**	**339**	⇓*i*P	**P**	**07 07 40.5**	**-0.5**
SOKR				pmax	pmax		
	comp=Z,70nm,3.2s						
SOKR				MLR	MLR		
	comp=Z,220nm,19.0s,MS4.4						
YAK	**Yakutsk**	**64.42**	**17**	*i* P	**P**	**07 07 41.9**	**-1.0**
YAK				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.7						
YAK				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.0						
YAK	**Yakutsk**	**64.42**	**17**	*e*P	**P**	**07 07 41.3**	**-1.6**
	comp=Z,97nm,1.0s,mb5.8						
YAK				*e*pP	pP	07 07 48.5	-1.7
MBAR	**Mbarara**	**64.97**	**268**	⇓*e*P	**P**	**07 07 47.6**	**+0.3**
MBAR	**Mbarara**	**64.97**	**268**	*e*P	**P**	**07 07 46.8**	**-0.5**
MBAR				*e*pP	pP	07 07 54.1	-0.5
ANN	**Anapa**	**65.94**	**318**	*e*P	**P**	**07 07 50.6**	**-2.4**
ANN				pmax	pmax		
	comp=Z,69nm,1.4s,mb5.5						
OBN	**Obninsk**	**70.53**	**328**	⇓*e*P	**P**	**07 08 17.6**	**-3.7**
OBN				*e*		07 10 57.3	
OBN				*e*S	S	07 17 32.2	+0.3
OBN				SS	SS	07 22 06.3	+1.2
OBN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.4						
MA2	**Magadan**	**70.66**	**26**	*e*P	**P**	**07 08 21.5**	**-0.6**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
TIXI	**Tiksi**	**71.98**	**11**	⇑*i*P	**P**	**07 08 28.2**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,477nm,17.0s,MS4.8						
KOLS	**Kolonicke sedl**	**77.07**	**320**	*e*P	**P**	**07 09 00.0**	**+0.5**
KOLS				*e*pP	pP	07 09 06.5	-0.4
CRVS	**Cervenica-Dubn**	**77.59**	**319**	*e*P	sP	07 09 14.6	+2.3
CRVS	**Cervenica-Dubn**	**77.59**	**319**	*e*sP	sP	07 09 14.6	+2.3
FINES	**FINESS Array B**	**77.95**	**333**	*i* P	**P**	**07 09 03.7**	**-0.4**
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VYHS	**Vyhne**	**79.24**	**319**	*e*P	**P**	**07 09 11.8**	**+0.4**
VYHS				*e*sP	sP	07 09 21.1	-0.3
BILL	**Bilibino**	**80.31**	**21**	*i* P	**P**	**07 09 16.8**	**0.0**
BILL				*e*		07 09 27.8	
BILL				*e*		07 12 15.3	
BILL				S	S	07 19 19.5	-0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BILL				MLR	MLR		
	comp=Z,200nm,7.0s						
ZST	**Bratislava**	**80.35**	**318**	*e*P	sP	07 09 31.5	+4.2
ZST	**Bratislava**	**80.35**	**318**	*e*	sP	07 09 31.5	+4.2
CLL	**Collm**	**83.29**	**321**	*e**SP	sP	07 09 45.0	+2.4

GUC 04 07:19:59.6±0.7**,32.94S**×**70.65W,h9**^{km}±1^{km}**,MD3.7, ML2.1,5C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.26**	**10**	*e*P	Pg	07 20 05.5	+0.5
JACH				*i* S	Sg	07 20 09.5	+0.9
ROCH	**El Roble**	**0.31**	**263**	⇑*i*P	Pg	07 20 06.2	+0.3
ROCH				*i* S	Sg	07 20 10.5	+0.3
CLCH	**Cerro Calan**	**0.47**	**169**	⇑*i*P	Pg	07 20 09.6	+0.5
CLCH				*i* S	Sg	07 20 16.6	+1.3
CLCH				AMP		07 20 25.6	
	comp=E,321nm,0.9s						
FCH	**Farellones**	**0.49**	**143**	⇑*i*P	Pg	07 20 09.9	+0.3
FCH				*i* S	Sg	07 20 17.1	+0.9
FCH				AMP		07 20 19.0	

	comp=E,128nm,0.3s						
STL	Santa Lucia	0.50	179	⇑iP	Pg	07 20 10.0	+0.4
RCDM	Rinconada Maip	0.57	194	eP	Pg	07 20 11.0	0.0
RCDM				iS	Sg	07 20 18.6	0.0
RCDM				AMP		07 20 20.3	
	comp=E,236nm,0.2s						
PCH	Pirque	0.69	171	eP	Pb	07 20 13.1	-0.3
PCH				iS	Sb	07 20 23.2	+0.5
PTCH	Petorca	0.71	340	⇑iP	Pb	07 20 13.6	-0.1
PTCH				iS	Sb	07 20 24.0	+0.6
PTCH				AMP		07 20 24.6	
	comp=N,245nm,0.3s						
TACH	Talagante	0.76	199	iP	Pb	07 20 14.1	-0.4
PACH	Papudo	0.78	301	eP	Pb	07 20 14.6	-0.2
LCCH	Las Cruces	0.94	235	eP	Pb	07 20 17.3	-0.4
LCCH				iS	Sb	07 20 29.9	-0.1
LMEL	Las Melosas	0.98	158	eP	Pb	07 20 18.1	-0.3
LMEL				iS	Sb	07 20 32.0	+0.8
LMEL				AMP		07 20 33.5	
	comp=E,223nm,0.1s						
CHCH	Chadas Angostu	0.99	180	eP	Pb	07 20 18.2	-0.3
CHCH				iS	Sb	07 20 32.2	+0.6

GUC 04 08:02:35.0±0.9**,21.21S**×**69.42W,h145**^{km}±20^{km}**,MD3.8, ML3.6,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.48	161	eP	P	08 03 05.1	+0.8
LVC				iS	S	08 03 27.8	+0.9
LVC				AMP		08 03 30.3	
	comp=N,488nm,0.6s						
SPCH	San Pedro de A	2.04	147	eP	P	08 03 11.8	+1.2
SPCH				iS	S	08 03 39.9	+2.0
SPCH				AMP		08 04 04.2	
	comp=N,202nm,0.5s						
ANCH	Antofagasta	2.63	200	eP	P	08 03 18.4	+0.3
ANCH				iS	S	08 03 52.1	+1.0
ANCH				AMP		08 03 58.7	
	comp=N,342nm,0.0s						
CPN1	Cerro Paranal	3.52	195	iS	S	08 04 13.4	+1.7
CPN1				AMP		08 04 18.3	
	comp=E,115nm,0.6s						

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*GUC **04** 09:15:36.0±1.0,37.87S×73.78W,h23^{km}±6^{km},ML5.1*
*BJI **04** 09:15:36.0,37.90S×73.80W,h22^{km},mB5.8,Ms5.3, Msz5.0*
*NEIC **04** 09:15:36.0,37.87S×73.78W,h23^{km},mb5.1/27, ML5.1(GUC),After GUC.*
NEIC Felt [III] at Angol, Arauco, Curanilahue, Lebu, Lumaco and Traiguen.
*HRVD **04** 09:15:36.0±0.6,37.84S×73.53W,h17^{km}±2^{km},MW5.0/41, Centroid moment Tensor Solution. LP body waves: s8,c9; Mantle waves: s41,c60; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.53±.19; $M_{\theta\theta}$0.50±.12; $M_{\phi\phi}$-1.03±.16; $M_{r\theta}$-2.46±.67; $M_{\theta\phi}$-1.93±.10; $M_{\phi r}$0.12±.36; Best double couple: $M_0$3.225×10^{16} NP1:ϕ_s356°,δ42°,λ11°. NP2: ϕ_s258°,δ83°,λ131°. Principal axes: T 3.471, Plg38°, Azm204°; N -.493, Plg41°, Azm72°; P -2.979, Plg26°, Azm316°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 04 09:15:38.0±0.2**,37.92S**±0.03×**73.40W**±0.07**,h23**^{km}**,n81,** σ**0**^{s}**97**/73**,mb5.0**/26**,8C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCHI	Chillan	1.69	39	⇑iP	Pn	09 16 07.3	+0.7
CCHI				iS	Sn	09 16 30.9	+3.2
CCHI				AMP		09 16 45.3	
	comp=N,20µm,0.7s						
VLCH	Valdivia	1.89	176	⇑iP	Pn	09 16 09.4	0.0
VLCH				iS	Sn	09 16 34.2	+1.5
VLCH				AMP		09 16 48.6	
	comp=E,72µm,0.6s						
LNCH	Linares	2.52	35	⇑iP	Pn	09 16 18.5	-0.1
LNCH				iS	Sn	09 16 51.5	+2.6
LNCH				AMP		09 17 03.2	
	comp=E,18µm,0.6s						
OSCH	Osorno	2.66	176	eP	Pn	09 16 19.8	-0.7
OSCH				iS	Sn	09 16 53.0	+0.7
OSCH				AMP		09 17 11.2	
	comp=E,28µm,0.6s						
PMCH	Puerto Montt	3.58	174	⇓iP	Pn	09 16 32.7	-1.0
PMCH				iS	Sn	09 17 14.0	-1.7
SFDO	San Fernando	3.82	31	eP	Pn	09 16 35.8	-1.3
LMEL	Las Melosas	4.82	33	eP	Pn	09 16 50.3	-0.9
ANTU	Antumapu	4.89	28	eP	Pn	09 16 50.6	-1.6
ZON	Zonda	7.45	33	eP	Pn	09 17 23.0	-5.2
COYC	Coyhaique	7.71	173	eP	Pn	09 17 29.6	-2.2
TRQA	Tornquist	9.02	94	ePn	P	09 17 50.1	+0.1
	comp=E,49nm,0.9s						
LVC	Limon Verde	15.74	15	eP	P	09 19 19.1	-0.9
	comp=E,54nm,1.4s						
ARE	Arequipa	21.44	5	eP	P	09 20 28.0	+1.1
ARE				i		09 20 30.0	
LPAZ	La Paz	22.05	14	eP	P	09 20 33.0	0.0
	comp=E,17nm,1.0s,mb4.4						
NNA	Nana	26.01	352	eP	P	09 21 09.7	-1.5
	comp=E,29nm,0.9s,mb4.8						
OTAV	Otavalo	38.26	352	eP	P	09 22 59.1	+0.7
	comp=E,55nm,1.4s,mb5.1						
VNA3	Neumayer Olymp	46.19	156	⇑iP	P	09 24 03.1	+0.7
VNA3				e		09 24 20.7	
VNA3				e		09 24 28.8	
VNA3				e		09 24 35.2	
VNA1	Neumayer--Stat	46.54	155	⇑iP	P	09 24 05.4	+0.2
VNA1				e		09 24 22.5	
VNA1				e		09 24 30.7	
VNA1				e		09 24 37.2	
SDV	Santo Domingo	46.63	4	eP	P	09 24 04.5	-2.1
	comp=E,15nm,0.8s,mb5.0						
VNA2	Neumayer--Watz	46.87	156	⇑iP	P	09 24 08.5	+0.8
VNA2				e		09 24 25.1	
VNA2				e		09 24 33.2	
VNA2				e		09 24 39.9	
SNAA	Sanae	48.41	156	⇑iP	P	09 24 20.3	+0.5
SNAA				e		09 24 38.3	
SNAA				e		09 24 47.0	
SNAA				e		09 24 53.9	
QSPA	South Pole Qui	52.32	180	⇑iP	P	09 24 50.4	+0.8
	comp=E,31nm,0.9s,mb5.2						
TEIG	Tepich	59.51	344	eP	P	09 25 40.3	-1.7
SYO	Syowa Base	62.64	158	⇓P	P	09 25 54.2	-8.3
TBI	Tubuai	65.40	259	eLR	LR	09 45 17.7	
	comp=E,92nm,25.2s						
TAOE	Nuku Hiva Isla	66.29	277	eLR	LR	09 45 50.2	
PPT	Papeete	68.66	264	eLR	LR	09 46 50.3	
	comp=E,180nm,25.2s						
MAW	Mawson	69.74	164	eP	P	09 26 47.5	-0.2
	comp=E,21nm,0.9s,mb5.1						
LRAL	Lakeview Retre	71.72	348	eP	P	09 26 58.9	-1.4
	comp=E,18nm,0.9s,mb5.0						
NATX	Nacogdoches	72.11	341	eP	P	09 27 02.1	-0.5
	comp=E,46nm,1.0s,mb5.4						
JCT	Junction City	72.38	336	eP	P	09 27 03.7	-0.5
	comp=E,35nm,1.2s,mb5.2						
LTX	Lajitas	72.66	333	eP	P	09 27 05.5	-0.3
	comp=E,8.8nm,0.9s,mb4.7						
CPCT	Cooper Cave	73.73	351	eP	P	09 27 10.9	-1.1
WVT	Waverly	74.88	348	eP	P	09 27 17.3	-1.4
	comp=E,42nm,1.1s,mb5.3						
MNTX	Cornudas Mount	75.42	332	eP	P	09 27 20.4	-1.4
	comp=E,5.6nm,1.0s,mb4.5						
GDL2	Guadalupe Moun	75.50	333	eP	P	09 27 22.2	-0.1
WMOK	Wichita Mounta	76.04	339	eP	P	09 27 24.1	-1.2
	comp=E,26nm,1.3s,mb5.0						
CPRX	Cap Rock	76.08	334	eP	P	09 27 25.4	-0.2
CASY	Casey	76.08	182	P	P	09 27 25.5	+0.6
	comp=E,25nm,0.9s,mb5.1						
AMTX	Amarillo	77.05	336	eP	P	09 27 30.7	-0.3
	comp=E,34nm,0.9s,mb5.3						
CCM	Cathedral Cave	77.37	346	eP	P	09 27 31.7	-1.0
	comp=E,48nm,0.9s,mb5.4						
BLO	Bloomington	77.66	350	eP	P	09 27 32.6	-1.6
	comp=E,8.2nm,0.7s,mb4.8						
LPM	Los Pinos Moun	78.22	332	eP	P	09 27 38.2	+0.8
ACSO	Alum Creek Sta	78.27	353	eP	P	09 27 35.9	-1.7
	comp=E,37nm,1.1s,mb5.2						
ANMO	Albuquerque	78.73	333	eP	P	09 27 40.8	+0.7
	comp=E,19nm,1.0s,mb5.0						
SDCO	Great Sand Dun	80.91	335	eP	P	09 27 52.3	+0.4
	comp=E,6.8nm,0.9s,mb4.6						
LBTB	Lobatse	81.65	115	eP	P	09 27 55.2	-0.7
	comp=E,10nm,1.1s,mb4.7						
PV01	Paradox Valley	82.33	333	eP	P	09 28 00.2	+1.0
NEN	Nelson	82.66	327	eP	P	09 28 01.4	+0.4
PV10	Paradox Valley	82.72	333	eP	P	09 28 01.2	0.0
ISCO	Idaho Springs	82.80	336	eP	P	09 28 01.9	+0.3
	comp=E,14nm,1.4s,mb4.8						
SRU	San Rafael	83.91	332	eP	P	09 28 08.0	+0.7
MSU	Marysvale	84.02	330	eP	P	09 28 09.2	+1.4
MVU	Marysvale	84.03	330	eP	P	09 28 09.4	+1.6
	comp=E,5.9nm,1.0s,mb4.7						
PHWY	Pilot Hill	84.11	336	eP	P	09 28 08.6	+0.3
TMUT	Trail Mountain	84.33	331	eP	P	09 28 10.3	+0.9
MPU	Maple Canyon	85.12	332	eP	P	09 28 14.0	+0.7
NLU	North Lily Min	85.23	331	eP	P	09 28 14.3	+0.4
JLU	Jordanelle	85.56	332	eP	P	09 28 16.0	+0.5
TCUT	Toone Canyon	85.99	332	eP	P	09 28 18.0	+0.4
HWUT	Hardware Ranch	86.48	332	eP	P	09 28 20.6	+0.6
	comp=E,14nm,1.1s,mb5.1						
SPUT	South Promonto	86.55	332	eP	P	09 28 20.7	+0.3
BW06	Boulder Array	86.78	334	eP	P	09 28 21.6	+0.2
	comp=E,15nm,1.5s,mb5.0						
HVU	Hansel Valley	87.08	332	eP	P	09 28 23.2	+0.2
LOHW	Long Hollow	87.89	334	eP	P	09 28 27.6	+0.8
TPAW	Teton Pass	87.90	334	eP	P	09 28 27.6	+0.8
RRI2	Red Ridge	87.91	333	eP	P	09 28 27.5	+0.6
MOOW	Moose Ponds	88.06	334	eP	P	09 28 28.2	+0.7
HLID	Hailey	89.23	332	eP	P	09 28 33.8	+0.6
	comp=E,21nm,1.8s,mb5.2						
MCMT	McKenzie Canyo	89.74	333	eP	P	09 28 36.1	+0.5
CHMT	Chamberlain Mo	91.68	334	eP	P	09 28 45.3	+0.8
POO	Poona	145.53	115	⇓iP	PKPbc	09 35 16.0	+0.7
HYB	Hyderabad	148.04	122	eP	PKPdf	09 35 24.5	+1.2
HYB	Hyderabad	148.04	122	iPKP	PKPdf	09 35 24.5	+1.2
AAK	Ala-Archa	155.14	69	ePKPdf	PKPdf	09 35 30.3	-2.7
AAK				ePKPbc	PKPdf	09 35 38.8	+5.8
WMQ	Urumqi	164.54	62	ePKP	PKPdf	09 35 36.4	-7.2
CN2	Changchun	164.59	298	ePKP	PKPdf	09 35 37.0	-6.7
KMI	Kunming	166.82	164	PKP	PKPdf	09 35 39.5	-6.6
KMI				LR	LR		
	comp=Z,80nm,23.1s						
NJ2	Nanjing	168.37	243	ePKP	PKPdf	09 35 39.6	-7.3
NJ2				PKP2	PKPab	09 36 52.8	-0.7
NJ2				PP	PP	09 40 43.0	-0.5
NJ2				PP	PP		
	comp=Z,500nm,5.3s						
NJ2				LR	LR		
	comp=N,950nm,26.1s						
NJ2				LR	LR		
	comp=E,1µm,21.3s						
NJ2				LR	LR		
	comp=Z,640nm,22.0s						
GTA	Gaotai	174.48	72	ePKP	PKPdf	09 35 44.3	-5.5
GTA				LR	LR		
	comp=N,104nm,13.3s						
GTA				LR	LR		
	comp=E,125nm,13.3s						
GTA				LR	LR		
	comp=Z,99nm,12.2s						
LZH	Lanzhou	177.13	129	ePKP	PKPdf	09 35 47.0	-3.6
LZH				LR	LR		
	comp=N,479nm,18.0s						
LZH				LR	LR		
	comp=Z,747nm,20.0s						

GUC 04 09:19:48.4±0.7**,37.99S**×**73.38W,h5**^{km}±7^{km}**,ML4.5,1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMCH	Temuco	0.97	142	eP	Pb	09 20 48.1	+41
TMCH				iS	Sb	09 21 01.6	+41
CCHI	Chillan	1.74	37	eP	Pn	09 20 18.8	-0.6
CCHI				iS	Sn	09 20 41.6	-0.6
CCHI				AMP		09 20 48.4	
	comp=E,4µm,0.6s						
VLCH	Valdivia	1.81	177	⇓iP	Pn	09 20 20.2	-0.3
VLCH				iS	Sn	09 20 43.8	-0.4
VLCH				AMP		09 20 54.4	
	comp=E,10µm,0.6s						
LNCH	Linares	2.57	34	eP	Pn	09 20 31.6	+0.2
LNCH				iS	Sn	09 21 04.8	+1.3
LNCH				AMP		09 21 15.3	
	comp=N,3µm,0.6s						
SFDO	San Fernando	3.88	30	eP	Pn	09 20 46.5	-3.5
SFDO				iS	Sn	09 21 33.1	-3.4

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*JMA **04** 09:38:45.1±0.3,23.40N×122.07E*
TAP 04 09:38:46.2,23.60N×**121.77E,h15**^{km}±1^{km}**,ML2.9, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.42	53	P	Pn	09 39 11.2	-0.5
YOJ				eS	Sb	09 39 29.3	-0.5
HATJ	Hateruma jima	1.92	76	P	Pn	09 39 16.5	-2.3
HATJ				S	Sn	09 39 40.0	-2.8
IRIF	Iriomote-Funau	1.94	67	eS	Sn	09 39 41.5	-1.8
JKRS	Kuro-shima	2.15	72	S	Sn	09 39 46.3	-2.3
JIJ	Ishigaki jima	2.30	70	P	Pn	09 39 22.8	-1.5
JIJ				S	Sn	09 39 49.4	-3.1
JTJ	Tarama	2.87	68	eS	Sn	09 40 04.5	-2.5

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*BJI **04** 09:44:50.8,7.55N×93.86E,h36^{km},mB5.3,mb4.9,Ms5.5, Msz5.2*
*GUC **04** 09:44:53.1±0.0,7.88N×94.30E,h21^{km},mb5.1(NEIC), MS4.9(NEIC)*
*NEIC **04** 09:44:53.2±0.3,7.88N×94.32E,mb5.1/49,MS4.9/10, Error ellipse: s-maj=8.0km s-min=7.7km az=192.0*
*HRVD **04** 09:44:53.2±0.1,7.76N×94.20E,h13^{km},MW5.4/64, Centroid moment Tensor Solution. LP body waves: s48,c84;Mantle waves: s64,c124; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00±.02; $M_{\theta\theta}$-0.95±.02; $M_{\phi\phi}$0.95±.02; $M_{r\theta}$-0.45±.04; $M_{\theta\phi}$0.85±.02; $M_{\phi r}$0.07±.04; Best double couple: $M_0$1.353×10^{17} NP1: ϕ_s157°,δ75°,λ-171°. NP2:ϕ_s65°,δ81°,λ-16°. Principal axes: T 1.285, Plg4°, Azm112°; N .135, Plg72°, Azm215°; P -1.421, Plg17°, Azm20°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **04** 09:44:56.8±1.4,8.47N×94.09E,h33^{km},mb5.3/27, MS5.0/17 Error ellipse: s-maj=16.0km s-min=7.0km az=114.4*
ISC 04 09:44:52.3±0.3**,7.95N**±0.04×**94.20E**±0.03**,h21**^{km}**, h21**^{km}±.8^{km}**:pP-P,n224,**σ**1**^{s}**24**/243**,mb5.1**/78**,MS5.1**/42**, 27C-21D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	Nongplab	7.13	49	P	Pn	09 46 38.2	0.0
NST	Nakhon Sawan	9.62	37	P	P	09 47 10.0	-2.9
	56nm,0.7s						
CM31	Chiang Mai Arr	11.41	23	ePn	P	09 47 35.0	-2.4
	17nm,0.4s						
CM31				epPn		09 47 39.6	
KKTK	Khon Kaen	11.85	44	P	P	09 47 38.0	-5.3
CHRT	Chiangrai	13.02	24	⇑P	P	09 48 02.5	+3.5
	382nm,1.2s						
PALK	Pallekele	13.40	268	ePn	P	09 48 03.8	-0.2
	45nm,1.1s						
VIS	Vishakhapatnam	14.37	314	eP	P	09 48 15.4	-1.4
VIS				e		09 48 26.3	
	comp=Z,212nm,1.2s						
VIS				e	S	09 50 46.9	-10
MDRS	Chennai	14.63	291	⇓eP	P	09 48 22.0	+1.7
MDRS				e	S	09 51 22.0	+19
BWNR	Bhubaneshwar	14.72	327	eP	P	09 48 18.4	-3.0
BWNR				e		09 50 50.4	
CAL	Calcutta	15.56	339	eP	P	09 48 33.4	+1.0
CAL				e	S	09 51 37.5	+13
AGT	Agartala	16.09	350	⇓i	P	09 48 49.0	+10
AGT				i		09 49 42.0	
SALM	Salem	16.19	284	e	P	09 48 46.0	+5.5
SALM				e		09 51 28.0	
SHL	Shillong	17.66	353	eP	P	09 48 58.0	-0.9
SHL				eS	S	09 52 18.0	+5.3
HYB	Hyderabad	17.92	303	eP	P	09 48 58.5	-3.7
	comp=Z,93nm,1.2s						
HYB				eS	S	09 52 21.0	+2.3
HYB	Hyderabad	17.92	303	iP	P	09 48 58.5	-3.7
	comp=Z,93nm,1.2s						
HYB				e		09 49 03.0	
HYB				eS	S	09 52 12.0	-6.7
HYB				e		09 52 21.0	
HYB				LR	LR	09 54 46.0	
	comp=Z,4.6nm,24.0s						
BLSP	Bilaspur	18.27	322	eP	P	09 49 06.2	-0.4
BLSP				eS	S	09 52 32.3	+5.6
QIZ	Qiongzhong	18.76	52	P	P	09 49 12.9	+0.4
QIZ				S	S	09 52 36.8	-0.8
QIZ				AMB	AMB		
	comp=Z,868nm,7.4s						
QIZ				LR	LR		
	comp=N,17µm,14.1s						
KMI	Kunming	18.92	25	⇑P	P	09 49 16.9	+2.5
KMI				AP		09 49 24.0	
KMI				XP		09 49 28.3	
KMI				S	S	09 52 46.4	+5.1
KMI				AMB	AMB		
	comp=Z,89nm,1.0s						
KMI				AMB	AMB		
	comp=Z,1µm,5.0s						
KMI				LR	LR		
	comp=N,3µm,14.8s						
KMI				LR	LR		
	comp=E,4µm,13.8s						
KMI				LR	LR		
	comp=Z,5µm,13.3s						
KMI	Kunming	18.92	25	⇑P	P	09 49 16.9	+2.5
	comp=Z,89nm,1.0s						
KMI				pP		09 49 24.0	
KMI				sP		09 49 28.3	
KMI				S	S	09 52 46.4	+5.1
KMI				sS		09 52 54.8	
NGP	Nagpur	19.65	313	eP	P	09 49 21.2	-1.7
NGP				e	S	09 53 14.4	+17
MNGI	Mangalore	19.69	286	i	S	09 53 09.9	+11
COCO	West Island	20.18	173	eP	P	09 49 23.6	-4.9
	comp=Z,252nm,1.3s						
COCO				epP		09 49 30.0	
ALBI	Allahabad	20.92	327	eP	P	09 49 34.5	-1.7
JIRN	Jiri	21.02	340	eP	P	09 49 36.0	-1.2
	comp=Z,510nm,1.3s,mb5.7						
PKI	Pulchoki	21.22	338	eP	P	09 49 38.5	-0.7
	comp=Z,547nm,1.3s,mb5.7						
GOA	Goa	21.30	292	e	P	09 49 46.6	+6.5
GOA				e	S	09 53 47.9	+17
GUN	Gumba	21.36	339	eP	P	09 49 39.5	-1.1
	comp=Z,472nm,1.1s,mb5.7						
DMN	Daman	21.36	337	eP	P	09 49 40.1	-0.6
	comp=Z,260nm,0.9s,mb5.6						
KKN	Kakani	21.46	338	eP	P	09 49 40.6	-1.1
	comp=Z,439nm,1.3s,mb5.6						
LSA	Lhasa	21.82	353	P	P	09 49 43.2	-2.1
LSA				AP		09 49 52.3	
LSA				XP		09 49 54.9	
LSA				S	S	09 53 37.4	-3.0
LSA				XS		09 53 55.6	
LSA				LR	LR		
	comp=N,1µm,22.4s,MS4.6						
LSA				LR	LR		
	comp=E,2µm,18.7s,MS4.6						
LSA				LR	LR		
	comp=Z,3µm,20.8s,MS4.7						
GYA	Guiyang	21.89	31	⇓iP	P	09 49 47.9	+2.0
GYA				AP		09 49 53.6	
GYA				XP		09 49 56.8	
GYA				PP	PP	09 50 18.0	+6.5
GYA				S	S	09 53 53.0	+11
GYA				AMB	AMB		
	comp=Z,80nm,1.3s,mb5.0						
GYA				AMB	AMB		
	comp=Z,550nm,6.0s						
GYA				LR	LR		
	comp=N,5µm,14.4s,MS5.4						
GYA				LR	LR		
	comp=E,8µm,12.6s,MS5.4						
GYA				LR	LR		
	comp=Z,9µm,13.5s,MS5.3						
GKN	Gorkha	21.90	337	eP	P	09 49 44.9	-1.1
	comp=Z,120nm,0.6s,mb5.5						
KOLN	Koldanda	22.12	334	eP	P	09 49 48.0	-0.2
	comp=Z,304nm,1.0s,mb5.7						
BHPL	Bhopal	22.15	315	eP	P	09 49 49.4	+0.8
BHPL				e		09 49 53.5	
	comp=Z,114nm,1.0s						
POO	Poona	22.40	300	eP	P	09 49 51.9	+0.8
BOM	Bombay	23.45	300	e	P	09 49 54.6	-6.8
BOM				e		09 53 59.6	
GZH	Guangzhou	23.75	49	P	P	09 50 10.9	+6.5
GZH				LR	LR		
	comp=N,10µm,14.0s,MS5.5						
GZH				LR	LR		
	comp=E,7µm,14.0s,MS5.5						
GZH				LR	LR		
	comp=Z,10µm,14.0s,MS5.4						
HKC	Hong Kong	23.93	51	P	P	09 50 10.0	+3.9
HKC				S	S	09 54 38.0	+20
CD2	Chengdu	24.52	20	P	P	09 50 13.9	+2.1
LGTI	Lohaghat	25.09	330	⇓iP	P	09 50 17.5	+0.3
PTH	Pithoragarh	25.19	330	eP	P	09 50 20.0	+1.9
NDI	New Delhi	26.11	324	eP	P	09 50 28.0	+1.2
NDI				e	S	09 54 54.0	-0.8
AJM	Ajmer	26.17	317	iP	P	09 50 29.0	+1.7
DDI	Dehra Dun	26.91	328	eP	P	09 50 33.7	-0.4
DDI				e	S	09 55 02.2	-5.7
SDNR	Sundarnagar	28.41	328	eP	P	09 50 48.8	+1.1
QZH	Quanzhou	28.77	51	eP	P	09 50 51.7	+0.8
QZH				S	S	09 55 44.0	+6.1
QZH				LR	LR		
	comp=N,12µm,13.4s,MS5.8						
QZH				LR	LR		
	comp=E,8µm,13.7s,MS5.8						
QZH				LR	LR		
	comp=Z,12µm,13.2s,MS5.7						
XAN	Xi’an	29.30	26	P	P	09 50 55.1	-0.6
XAN				AP	pP	09 51 10.9	+9.0
XAN				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.6						
XAN				LR	LR		
	comp=N,5µm,15.3s,MS5.3						
XAN				LR	LR		
	comp=E,3µm,12.4s,MS5.3						
XAN				LR	LR		
	comp=Z,8µm,16.4s,MS5.4						
WHN	Wuhan	29.34	37	⇑P	P	09 50 57.4	+1.4
WHN				S	S	09 55 54.2	+7.3
WHN				LR	LR		
	comp=N,870nm,15.2s,MS5.5						
WHN				LR	LR		
	comp=E,8µm,11.2s,MS5.5						
WHN				LR	LR		
	comp=Z,9µm,12.2s,MS5.6						
LZH	Lanzhou	29.36	16	⇓P	P	09 50 55.9	-0.3
LZH				AP	pP	09 51 02.5	+0.1
LZH				PP	PP	09 51 52.1	+0.5
LZH				eS	S	09 55 48.5	+1.3
LZH				AMB	AMB		
	comp=Z,56nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,166nm,5.5s						
LZH				LR	LR		
	comp=N,2µm,12.9s						
LZH				LR	LR		
	comp=Z,2µm,16.8s,MS4.9						
LZH	Lanzhou	29.36	16	⇓P	P	09 50 55.9	-0.3
	comp=Z,56nm,1.5s,mb5.1						
LZH				pP	pP	09 51 02.5	+0.1
LZH				sP	sP	09 51 05.4	+0.2
LZH				PP	PP	09 51 52.1	+0.5
LZH				eS	S	09 55 48.5	+1.3
LZH				sS		09 55 59.1	
LZH				SS	SS	09 57 20.3	+1.1
LZH				LR	LR		
	comp=Z,2µm,16.8s,MS4.9						
GTA	Gaotai	31.73	8	eP	P	09 51 17.1	0.0
GTA				AP	pP	09 51 24.1	+0.7
GTA				XP	sP	09 51 27.6	+1.5
GTA				PP	PP	09 52 23.8	+1.5
GTA				S	S	09 56 27.5	+3.1
GTA				SCP		09 57 47.1	

GTA				SS	SS	09 58 21.2	+6.2
GTA				SCS	ScS	10 01 47.3	+1.3
GTA				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.8						
GTA				AMB	AMB		
	comp=Z,202nm,5.7s						
GTA				LR	LR		
	comp=N,2µm,19.4s,MS4.9						
GTA				LR	LR		
	comp=E,1µm,17.9s,MS4.9						
GTA				LR	LR		
	comp=Z,2µm,22.4s,MS4.8						
NJ2	**Nanjing**	**33.17**	**40**	*e*P	**P**	**09 51 31.2**	**+1.5**
NJ2				AP	pP	09 51 38.4	+2.3
NJ2				XP	sP	09 51 41.5	+2.7
NJ2				PP	PP	09 52 43.6	+2.6
NJ2				S	**S**	**09 56 54.0**	**+7.0**
NJ2				AMB	AMB		
	comp=Z,180nm,1.2s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,590nm,5.2s						
NJ2				LR	LR		
	comp=N,7µm,22.3s,MS5.5						
NJ2				LR	LR		
	comp=E,8µm,21.4s,MS5.5						
NJ2				LR	LR		
	comp=Z,6µm,20.4s,MS5.3						
SSE	**Sheshan**	**34.12**	**44**	P	**P**	**09 51 34.4**	**-3.6**
SSE				PP	PP	09 52 53.6	+1.0
SSE				S	**S**	**09 56 59.3**	**-2.5**
SSE				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.8						
SSE				AMB	AMB		
	comp=Z,87nm,4.9s						
SSE				LR	LR		
	comp=N,1µm,24.7s,MS4.8						
SSE				LR	LR		
	comp=E,2µm,24.7s,MS4.8						
SSE				LR	LR		
	comp=Z,2µm,16.0s						
SSE	**Sheshan**	**34.12**	**44**	P	**P**	**09 51 34.4**	**-3.6**
	comp=Z,14nm,1.2s,mb4.8						
SSE				sP	sP	09 51 46.6	-0.5
SSE				PP	PP	09 52 53.6	+1.0
SSE				S	**S**	**09 56 59.3**	**-2.5**
SSE				sS		09 57 13.9	
SSE				LR	LR		
	comp=Z,2µm,16.0s,MS4.9						
TIA	**Tai'an**	**35.05**	**33**	*e*P	**P**	**09 51 46.9**	**+1.0**
KSH	**Kashi**	**35.43**	**335**	*e*P	**P**	**09 51 48.1**	**-1.0**
KSH				*e*AP	pP	09 51 55.5	0.0
KSH				*e*XP	sP	09 51 59.5	+1.3
KSH				*e*PP	PP	09 53 08.1	-1.0
KSH				*e*PCP	PcP	09 54 17.2	-1.7
KSH				*e*S	**S**	**09 57 19.7**	**-2.3**
KSH				*e*SCP		09 58 02.0	
KSH				*e*SS	SS	09 59 40.7	+0.2
KSH				*e*SCS	ScS	10 02 04.2	-1.1
KSH				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.8						
KSH				AMB	AMB		
	comp=Z,170nm,4.0s						
KSH				LR	LR		
	comp=N,2µm,18.4s						
KSH				LR	LR		
	comp=E,1µm,11.2s						
BTO	**Baotou**	**35.44**	**21**	*e*P	**P**	**09 51 49.1**	**-0.1**
BTO				S	**S**	**09 57 30.9**	**+8.7**
BTO				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.9						
BTO				LR	LR		
	comp=N,879nm,10.6s,MS5.2						
BTO				LR	LR		
	comp=E,3µm,14.2s,MS5.2						
WMQ	**Urumqi**	**36.18**	**352**	P	**P**	**09 51 55.8**	**+0.4**
WMQ				XP	sP	09 52 06.5	+2.0
WMQ				PP	PP	09 53 19.0	+0.8
WMQ				S	**S**	**09 57 34.0**	**+0.5**
WMQ				SS	SS	09 59 59.0	+1.5
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,1µm,14.0s,MS5.2						
WMQ				LR	LR		
	comp=E,2µm,14.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,1µm,14.0s,MS4.8						
HHC	**Hu-ho-hao-te**	**36.22**	**23**	⇓P	**P**	**09 51 56.8**	**+1.0**
HHC				AP	pP	09 52 03.1	+0.9
HHC				PP	PP	09 53 23.6	+4.8
HHC				PCP	PcP	09 54 20.5	-0.7
HHC				S	**S**	**09 57 38.3**	**+4.1**
HHC				SCP		09 58 05.6	
HHC				SS	SS	10 00 02.9	+4.4
HHC				SCS	ScS	10 02 09.6	0.0
HHC				AMB	AMB		
	comp=Z,24nm,1.3s,mb5.0						
HHC				AMB	AMB		
	comp=Z,173nm,5.9s						
HHC				LR	LR		
	comp=N,2µm,16.6s,MS5.2						
HHC				LR	LR		
	comp=E,3µm,16.6s,MS5.2						
HHC				LR	LR		
	comp=Z,3µm,17.8s,MS5.1						
BJI	**Beijing**	**37.51**	**28**	P	**P**	**09 52 07.7**	**+1.1**
BJI				AP	pP	09 52 13.9	+0.9
BJI				PP	PP	09 53 36.0	+1.0
BJI				S	**S**	**09 58 00.6**	**+6.7**
BJI				SCS	ScS	10 02 17.3	+0.5
BJI				AMB	AMB		
	comp=Z,29nm,1.8s,mb4.7						
BJI				LR	LR		
	comp=N,3µm,13.0s,MS5.3						
BJI				LR	LR		
	comp=E,2µm,14.8s,MS5.3						
BJI				LR	LR		
	comp=Z,2µm,23.4s						
BJI	**Beijing**	**37.51**	**28**	P	**P**	**09 52 07.7**	**+1.1**
	comp=Z,29nm,1.8s,mb4.7						
BJI				pP	pP	09 52 13.9	+0.9
BJI				sP	sP	09 52 16.3	+0.6
BJI				PP	PP	09 53 36.0	+1.0
BJI				S	**S**	**09 58 00.6**	**+6.7**
BJI				SS	SS	10 00 54.3	+27
BJI				ScS	ScS	10 02 17.3	+0.5
BJI				LR	LR		
	comp=Z,2µm,23.4s,MS4.9						
KZA	**Kyzart**	**37.89**	**337**	P	**P**	**09 52 10.1**	**+0.3**
	SNR=7.8						
UCH	**Uchtor**	**38.31**	**336**	P	**P**	**09 52 13.9**	**+0.6**
	SNR=12						
BSY	**Bisya**	**38.46**	**297**	⇓P	**P**	**09 52 16.5**	**+1.7**
	SNR=9.3						
TKM2	**Tokmak 2**	**38.48**	**338**	P	**P**	**09 52 14.6**	**-0.1**
	SNR=7.3						
KBK	**Karagaybulak**	**38.50**	**337**	P	**P**	**09 52 15.8**	**+0.9**
	SNR=12						
AML	**Almayashu**	**38.56**	**335**	P	**P**	**09 52 15.2**	**-0.2**
	SNR=34						
HOQ	**Hoqain**	**38.60**	**298**	⇑P	**P**	**09 52 17.6**	**+1.6**
	SNR=12						
AAK	**Ala-Archa**	**38.66**	**337**	⇓*e*P	**P**	**09 52 15.0**	**-1.2**
AAK				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.6						
AAK				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.0						
AAK	**Ala-Archa**	**38.66**	**337**	*e*P	**P**	**09 52 15.4**	**-0.9**
	comp=Z,29nm,1.1s,mb4.9						
AAK				*e*pP	pP	09 52 21.6	-1.0
FRU	**Bishkek**	**38.78**	**337**	*e*P	**P**	**09 52 18.5**	**+1.2**
FRU				*e*	pP	09 52 26.0	+2.3
FRU				*e*S	**S**	**09 58 14.0**	**+0.9**
FRU				pmax	pmax		
	comp=Z,90nm,2.5s,mb5.1						
FRU				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.0						
CHMS	**Chumysh**	**38.87**	**337**	P	**P**	**09 52 17.9**	**-0.1**
	SNR=6.8						
USP	**Ospenovka**	**39.19**	**337**	P	**P**	**09 52 20.7**	**0.0**
	SNR=16						
ARQ	**Araqi**	**39.23**	**297**	⇑P	**P**	**09 52 22.8**	**+1.6**
	SNR=10						
MKAR	**Makanchi Array**	**40.03**	**347**	*e*P	**P**	**09 52 26.1**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,14nm,0.8s						
MKAR	**Makanchi Array**	**40.03**	**347**	*i* P	**P**	**09 52 26.1**	**-1.5**
ASHO	**Ashiyiah**	**40.03**	**299**	⇑P	**P**	**09 52 31.5**	**+3.7**
	SNR=12						
FITZ	**Fitzroy Crossi**	**40.41**	**130**	*e*P	**P**	**09 52 32.9**	**+1.9**
	comp=Z,25nm,0.8s,mb5.0						
WHFO	**Wadi Hawf**	**40.55**	**288**	⇑P	**P**	**09 52 32.5**	**+0.4**
	SNR=38						
ABTO	**Aybut**	**40.91**	**287**	⇓P	**P**	**09 52 35.9**	**+0.7**
ULN	**Ulaanbaatar**	**41.25**	**13***d*	*i*P	**P**	**09 52 37.4**	**-0.2**
ULN	**Ulaanbaatar**	**41.25**	**13**	*e*P	**P**	**09 52 37.8**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.3						
ULN				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
SNY	**Shenyang**	**42.57**	**33**	⇑P	**P**	**09 52 49.7**	**+1.2**
SNY				AMB	AMB		
	comp=Z,20nm,1.9s,mb4.5						
SNY				LR	LR		
	comp=N,2µm,15.9s						
SNY				LR	LR		
	comp=Z,3µm,16.9s,MS5.2						
ZAK	**Zakamensk**	**42.97**	**9**	⇓*e*P	**P**	**09 52 51.7**	**+0.1**
ZAK				*e*		09 54 32.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
TLY	**Talaya**	**44.28**	**8**	*e*P	**P**	**09 53 02.8**	**+0.5**
TLY				*e*S	**S**	**09 59 34.5**	**+0.1**
TLY				*e*SS	SS	10 03 01.0	+16
TLY				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.7						
TLY				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.9						
TLY	**Talaya**	**44.28**	**8**	*e*P	**P**	**09 53 02.5**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.2						
KURK	**Kurchatov**	**44.55**	**346**	*e*P	**P**	**09 53 03.3**	**-1.2**
	comp=Z,53nm,1.1s,mb5.3						
CN2	**Changchun**	**44.93**	**32**	*e*P	**P**	**09 53 08.5**	**+0.9**
CN2				XP	sP	09 53 18.2	+1.5
CN2				PP	PP	09 54 54.3	+0.7
CN2				*e*S	**S**	**09 59 44.4**	**+0.5**
CN2				SS	SS	10 03 00.9	+3.9
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS5.4						
CN2				LR	LR		
	comp=E,3µm,15.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.2						
NVS	**Novosibirsk**	**47.58**	**351**	⇑*i*P	**P**	**09 53 27.0**	**-1.4**
NVS				*i* S	**S**	**10 00 18.9**	**-2.5**
NVS				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
NVS				pmax	pmax		
	comp=N,44nm,1.4s						
NVS				pmax	pmax		
	comp=E,19nm,1.3s						
NVS				smax			
	comp=N,22nm,1.4s						
NVS				smax			
	comp=E,44nm,1.5s						
MDJ	**Mudanjiang**	**47.71**	**34**	P	**P**	**09 53 30.5**	**+0.9**
MDJ				AP	pP	09 53 36.5	+0.4
MDJ				S	**S**	**10 00 25.1**	**+1.7**
MDJ				SCS	ScS	10 03 20.6	+1.4
MDJ				SS	SS	10 03 53.6	+7.6
MDJ				AMB	AMB		
	comp=Z,21nm,1.5s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,125nm,3.5s						
MDJ				LR	LR		
	comp=N,504nm,12.0s,MS5.3						
MDJ				LR	LR		
	comp=E,2µm,13.4s,MS5.3						
MDJ				LR	LR		
	comp=Z,2µm,15.4s,MS5.2						
WRA	**Warramunga Arr**	**48.25**	**126**	*i* P	**P**	**09 53 29.3**	**-4.8**
WRA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WRAB	**Tennant Creek**	**48.26**	**126**	⇓*e*P	**P**	**09 53 34.7**	**+0.5**
WRAB	**Tennant Creek**	**48.26**	**126**	*e*P	**P**	**09 53 32.8**	**-1.4**
	comp=Z,27nm,1.2s,mb5.2						
WRAB				LR	LR		
	comp=Z,440nm,19.0s,MS4.5						
WB2	**Warramunga Arr**	**48.26**	**126**	*e*P	**P**	**09 53 31.1**	**-3.1**
BVA0	**Borovoye Array**	**48.94**	**341**	*i* P	**P**	**09 53 37.4**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
RAYN	**Ar Rayn**	**49.11**	**294**	P	**P**	**09 53 40.3**	**-0.4**
	comp=Z,231nm,1.3s,mb6.0,SNR=51						
CHKZ	**Chkalovo**	**49.42**	**342**	P	**P**	**09 53 41.0**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
CHKZ	**Chkalovo**	**49.42**	**342**	*e*P	**P**	**09 53 41.8**	**-0.8**
	comp=Z,48nm,1.2s,mb5.4						
CHKZ				*e*pP	pP	09 53 48.0	-1.2
ASPA	**Alice Springs**	**49.91**	**130**	*e*P	**P**	**09 53 45.7**	**-1.2**
KLR	**Kul'dur**	**51.79**	**31**	*e*P	**P**	**09 54 03.0**	**+2.3**
BOD	**Bodaibo**	**52.06**	**13**	*e*P	**P**	**09 54 01.6**	**-1.1**
BOD				pmax	pmax		
	comp=Z,41nm,1.7s,mb5.1						
CLNS	**Chul'man**	**54.34**	**20**	*e*P	**P**	**09 54 19.7**	**+0.1**
CLNS				pmax	pmax		
	comp=N,20nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.3						
CLNS				pmax	pmax		
	comp=E,15nm,1.1s						
CLNS				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.4						
CLNS				MLR	MLR		
	comp=N,2µm,14.0s,MS5.3						
CLNS				MLR	MLR		
	comp=E,1µm,12.0s,MS5.3						
GNI	**Garni**	**54.43**	**314**	⇓*e*P	**P**	**09 54 22.0**	**+1.6**
GNI				pmax	pmax		
	comp=Z,24nm,1.0s						
GNI				MLR	MLR		
	comp=Z,500nm,16.0s						
GNI	**Garni**	**54.43**	**314**	*e*P	**P**	**09 54 20.5**	**0.0**
	comp=Z,99nm,1.5s,mb5.5						
TI2	**Plekhanov**	**55.03**	**316**	*e*P	**P**	**09 54 25.8**	**+0.9**
SVE	**Sverdlovsk**	**55.35**	**338**	⇑*i*P	**P**	**09 54 23.4**	**-3.6**
SVE				*e*		09 54 42.0	
SVE				*e*		09 55 24.0	
SVE				*e*S	**S**	**10 02 22.0**	**+14**
SVE				pmax	pmax		
	comp=Z,60nm,1.8s,mb5.3						
SVE				MLR	MLR		
	comp=N,1µm,22.0s,MS5.0						
SVE				MLR	MLR		
	comp=E,800nm,22.0s,MS5.0						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.0						
ARU	**Arti**	**55.84**	**337**	⇓*i*P	**P**	**09 54 20.7**	**-10**
ARU				*e*S	**S**	**10 01 59.8**	**-15**
ARU				*e*		10 04 07.9	
ARU				*e*SS	SS	10 05 52.6	-8.0
ARU				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
ARU				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
ARU				MLR	MLR		
	comp=N,1µm,20.0s,MS5.1						
ARU				MLR	MLR		
	comp=E,700nm,20.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**56.68**	**38**	P	**P**	**09 54 44.0**	**+7.3**
YSS				MLR	MLR		
	comp=N,800nm,15.0s,MS5.1						
YSS				MLR	MLR		
	comp=E,900nm,15.0s,MS5.1						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.0						
KIV	**Kislovodsk**	**57.30**	**318**	*e*P	**P**	**09 54 41.3**	**+0.2**
KIV				*e*		09 56 44.5	
KIV				*e*SS	SS	10 06 24.2	-0.9
KIV				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
KIV				MLR	MLR		
	comp=Z,800nm,21.0s,MS4.8						
KIV	**Kislovodsk**	**57.30**	**318**	*e*P	**P**	**09 54 39.0**	**-2.1**
	comp=Z,14nm,0.8s,mb5.0						
KMBO	**Kilima Mbogo**	**57.49**	**264**	*e*P	**P**	**09 54 42.2**	**-0.7**
	comp=Z,24nm,1.0s,mb5.2						
KMBO				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
MALT	**Malatya**	**58.46**	**310**	*e*P	**P**	**09 54 48.6**	**-0.7**
	comp=Z,16nm,1.4s,mb4.9						
SOKR	**Solikamsk**	**58.75**	**339**	⇑*i*P	**P**	**09 54 49.2**	**-1.8**
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s						
SOKR				MLR	MLR		
	comp=Z,2290µm,21.0s						
SOC	**Sochi**	**59.17**	**316**	*e*P	**P**	**09 54 52.3**	**-1.9**
SOC				*e*		09 55 47.0	
SOC				*e*		09 57 07.4	
SOC				*e*S	**S**	**10 02 57.9**	**-0.8**
SOC				*e*		10 04 39.2	
SOC				*e*SS	SS	10 06 54.2	-0.6
SOC				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
SOC				pmax	pmax		
	comp=N,29nm,1.1s						
SOC				pmax	pmax		
	comp=E,16nm,1.1s						
SOC				MLR	MLR		
	comp=Z,848nm,21.0s,MS4.8						
SOC				MLR	MLR		
	comp=N,515nm,22.0s,MS4.7						
SOC				MLR	MLR		
	comp=E,400nm,21.0s,MS4.7						
EIL	**Elat**	**59.44**	**300**	*e*P	**P**	**09 54 55.2**	**-1.0**
	comp=E,60nm,1.5s,mb5.4						
YAK	**Yakutsk**	**59.90**	**18***d*	*i*P	**P**	**09 54 57.3**	**-1.7**
YAK				pmax	pmax		
	comp=Z,124nm,1.5s,mb5.7						
YAK				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.5						
YAK	**Yakutsk**	**59.90**	**18**	*e*P	**P**	**09 54 56.9**	**-2.1**
	comp=Z,59nm,0.9s,mb5.6						
YAK				*e*pP	pP	09 55 03.1	-2.5
MBAR	**Mbarara**	**63.83**	**265***c*	*i*P	**P**	**09 55 29.2**	**+3.1**
MBAR	**Mbarara**	**63.83**	**265**	*e*P	**P**	**09 55 26.4**	**+0.3**
	comp=Z,24nm,1.3s,mb5.1						
MOS	**Moscow**	**65.05**	**329**	*e*P	**P**	**09 55 31.6**	**-1.7**
MOS				*e*		09 55 50.5	
MOS				*e*S	S	10 04 10.5	-2.2
MOS				pmax	pmax		
	comp=Z,156nm,1.3s,mb5.9						
MOS				MLR	MLR		
	comp=Z,2µm,19.9s,MS5.3						
OBN	**Obninsk**	**65.35**	**328**	⇑*e*P	**P**	**09 55 32.1**	**-3.1**
OBN				*i*		09 57 56.4	
OBN				pmax	pmax		
	comp=Z,91nm,1.8s,mb5.5						
OBN	**Obninsk**	**65.35**	**328**	⇑*e*P	**P**	**09 55 32.2**	**-3.0**
MA2	**Magadan**	**66.67**	**28**	*e*P	**P**	**09 55 43.7**	**+0.1**
MA2				S	S	10 04 29.4	-3.0
MA2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
MA2				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.3						
MA2	**Magadan**	**66.67**	**28**	*e*P	**P**	**09 55 42.2**	**-1.4**
	comp=Z,38nm,1.0s,mb5.4						
MA2				*e*pP	pP	09 55 48.6	-1.7
TIXI	**Tiksi**	**67.14**	**11**	⇑*i*P	**P**	**09 55 44.9**	**-1.5**
TIXI				*e*S	S	10 04 31.9	-6.1
TIXI				*e*SS	SS	10 08 58.8	-0.3
TIXI				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.5						
TIXI				MLR	MLR		
	comp=Z,910nm,15.0s,MS5.1						
TIXI	**Tiksi**	**67.14**	**11**	⇑*e*P	**P**	**09 55 45.2**	**-1.2**
CFR	**Carcaliu**	**67.58**	**316**	⇓*i*P	**P**	**09 55 49.5**	**-0.2**
CFR	**Carcaliu**	**67.58**	**316**	⇓*i*P	**P**	**09 55 49.5**	**-0.1**
VRI	**Vrincioaia**	**68.69**	**316**	⇑*i*P	**P**	**09 55 57.2**	**+0.6**
VRI	**Vrincioaia**	**68.69**	**316**	⇑*i*P	**P**	**09 55 57.2**	**+0.7**
SEY	**Seymchan**	**68.83**	**25**	*e*P	**P**	**09 55 56.7**	**-0.4**
SEY						09 56 10.5	
SEY				*e*S	S	10 04 56.9	-1.3
SEY						10 05 43.4	
SEY				*e*SS	SS	10 09 24.4	-0.9
SEY				*e*SSS	SSS	10 12 27.4	+0.4
SEY				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.4						
SEY				pmax	pmax		
	comp=E,30nm,0.9s						
SEY				smax			
	comp=N,340nm,19.6s						
SEY				smax			
	comp=E,490nm,20.5s						
SEY				MLR	MLR		
	comp=Z,7µm,16.0s,MS6.0						
SEY				MLR	MLR		
	comp=N,4µm,17.0s,MS5.9						
SEY				MLR	MLR		
	comp=E,4µm,17.0s,MS5.9						
MLR	**Muntele Rosu**	**69.16**	**316**	⇑*i*P	**P**	**09 56 01.4**	**+2.0**
MLR	**Muntele Rosu**	**69.16**	**316**	⇑*i*P	**P**	**09 56 01.5**	**+2.1**
LSZ	**Lusaka**	**69.35**	**250**	*e*P	**P**	**09 56 00.6**	**-0.5**
	comp=E,11nm,0.9s,mb4.8						
LSZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
BURAR	**Bucovina Array**	**70.03**	**318**	⇑*i*P	**P**	**09 56 06.6**	**+1.9**
JOF	**Joensuu**	**70.81**	**334**	*e*p	**P**	**09 56 07.2**	**-2.0**
APA	**Apatity**	**71.80**	**339**	⇑*e*P	**P**	**09 56 16.0**	**+0.9**
APA				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.8						
KWP	**Kalwaria**	**72.01**	**320**	*e*P	**P**	**09 56 16.8**	**+0.1**
KOLS	**Kolonicke sedl**	**72.19**	**319**	*e*P	**P**	**09 56 17.4**	**-0.3**
SUW	**Suwalki**	**72.48**	**324**	*e*P	**P**	**09 56 17.4**	**-1.9**
FINES	**FINESS Array B**	**72.67**	**332**	*i* P	**P**	**09 56 18.8**	**-1.5**
FINES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CRVS	**Cervenica-Dubn**	**72.71**	**319**	*e*P	**P**	**09 56 22.0**	**+1.2**
CRVS				*e*pP	pP	09 56 28.1	+0.6
CRVS				*e*sP	sP	09 56 32.4	+2.5
KAF	**Kangasniemi**	**72.75**	**333**	*e*p	**P**	**09 56 18.6**	**-2.1**
	comp=Z,29nm,1.1s,mb5.1						
PSZ	**Piszkesteto**	**73.63**	**318**	*e*P	**P**	**09 56 24.7**	**-1.4**
	comp=Z,48nm,1.8s,mb5.1						
OJC	**Ojcow**	**73.96**	**320**	*e*P	**P**	**09 56 28.5**	**+0.5**
LBTB	**Lobatse**	**74.33**	**241**	*e*P	**P**	**09 56 30.4**	**-0.3**
	comp=Z,14nm,0.9s,mb4.9						
LBTB				LR	LR		
	comp=Z,835nm,19.0s,MS5.0						
VYHS	**Vyhne**	**74.39**	**318**	*e*P	**P**	**09 56 30.6**	**0.0**
VYHS				*e*pP	pP	09 56 38.0	+0.7
OKC	**Ostrava-Krasne**	**74.97**	**319**	*e*P	**P**	**09 56 34.6**	**+0.7**
MORC	**Moravsky Berou**	**75.36**	**319**	*e*P	**P**	**09 56 35.9**	**-0.2**
	comp=Z,15nm,1.0s,mb4.9						
ZST	**Bratislava**	**75.52**	**318**	*e*P	**P**	**09 56 34.4**	**-2.7**
ZST				*e*		09 56 37.5	
BOSA	**Boshof**	**75.68**	**238**	*e*P	**P**	**09 56 37.2**	**-1.2**
	comp=Z,16nm,0.9s,mb5.0						
BILL	**Bilibino**	**75.99**	**22***d*	*i*P	**P**	**09 56 37.9**	**-1.4**
BILL				*i*		09 56 51.4	
BILL				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3						
BILL	**Bilibino**	**75.99**	**22**	*e*P	**P**	**09 56 38.4**	**-0.9**
	comp=Z,15nm,1.1s,mb4.8						
DPC	**Dobruska-Polom**	**76.19**	**320**	*e*P	**P**	**09 56 41.4**	**+0.6**
KSP	**Ksiaz**	**76.24**	**320**	*e*P	**P**	**09 56 41.1**	**0.0**
KSP	**Ksiaz**	**76.24**	**320**	*e*P	**P**	**09 56 42.3**	**+1.2**
UPC	**Upice**	**76.40**	**320**	*e*P	**P**	**09 56 43.2**	**+1.2**
UPC				*e*pP	PcP	09 56 57.6	+3.5
ARSA	**Arzberg**	**76.52**	**317**	⇓*i*P	**P**	**09 56 43.6**	**+0.9**
	comp=Z,19nm,1.3s,mb4.9						
PRU	**Pruhonice**	**77.31**	**319**	*e*P	**P**	**09 56 46.9**	**-0.1**
PVCC	**Panska Ves**	**77.32**	**320**	*e*P	**P**	**09 56 48.4**	**+1.3**
BSD	**Bornholm Skovb**	**77.39**	**325**	*i* P	**P**	**09 56 49.8**	**+2.4**
BSD				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
BSD	**Bornholm Skovb**	**77.39**	**325**	*i* P	**P**	**09 56 49.8**	**+2.4**
	comp=Z,13nm,0.8s,mb4.9						
MOA	**Molln**	**77.40**	**317**	⇑*i*P	**P**	**09 56 48.2**	**+0.6**
	comp=Z,19nm,1.3s,mb4.9						
BRG	**Berggiesshubel**	**77.73**	**320**	*e*P	**P**	**09 56 50.5**	**+1.2**
BRG				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.1						
BRG				MLR	MLR		
	comp=N,560nm,19.9s,MS5.1						
BRG				MLR	MLR		
	comp=E,770nm,19.9s,MS5.1						
BRG				MLR	MLR		
	comp=Z,850nm,19.9s,MS5.1						
BRG	**Berggiesshubel**	**77.73**	**320**	*e*P	**P**	**09 56 50.5**	**+1.2**

	comp=Z,42nm,1.6s,mb5.1						
BRG				LR	LR		
	comp=Z,850nm,19.9s,MS5.1						
GEC2	GERESS Array S	77.81	318	*e*P	P	09 56 49.5	-0.3
GEC2				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GEC2	GERESS Array S	77.81	318	*e*P	P	09 56 49.5	-0.3
	comp=Z,12nm,1.0s,mb4.8						
KHC	Kasperske Hory	77.90	318	*e*P	P	09 56 48.5	-1.8
PTCC	Patocco-Chiusa	77.98	316	*e*P	P	09 56 49.3	-1.5
KBA	Koelnbreinsper	78.00	316	⇑*i*P	P	09 56 51.8	+0.9
	comp=Z,13nm,1.2s,mb4.7						
CLL	Collm	78.34	321	*e*P	P	09 56 52.0	-0.7
CLL				*i*	pP	09 56 56.8	-2.7
CLL	Collm	78.34	321	P	P	09 56 52.0	-0.7
CLL				*i* *PP	pP	09 56 56.8	-2.7
WET	Wettzell	78.36	318	*e*P	P	09 56 52.4	-0.4
WET				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
WET	Wettzell	78.36	318	*e*P	P	09 56 52.4	-0.4
	comp=Z,6.0nm,0.9s,mb4.5						
FVI	Forni Avoltri	78.38	316	*e*P	P	09 56 53.0	0.0
NKC	Novy Kostel	78.67	320	*e*P	P	09 56 56.5	+2.0
SFI	Santa Sofia	79.04	313	*e*P	P	09 56 59.6	+2.9
PGD	Poggio Sodo	79.13	313	*e*P	P	09 56 58.0	+0.9
CTI	Castel Tesino	79.16	315	*e*P	P	09 56 58.8	+1.4
WTTA	Wattenberg	79.17	317	⇑*i*P	P	09 56 56.8	-0.5
	comp=Z,30nm,1.2s,mb5.1						
MOX	Moxa	79.20	320	*e*P	P	09 56 58.5	+1.1
MOX				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
MOX				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.8						
MOX	Moxa	79.20	320	*e*P	P	09 56 58.5	+1.1
	comp=Z,22nm,1.7s,mb4.8						
MOX				LR	LR		
	comp=Z,500nm,20.0s,MS4.8						
MOX	Moxa	79.20	320	*i* P	P	09 56 58.5	+1.1
	comp=Z,logA/T=1.1,mb4.8						
MOX				L		10 38 17.0	
VMG	Vicchio	79.25	313	*e*P	P	09 57 00.1	+2.2
GRA1	Grafenberg Arr	79.45	319	*e*P	P	09 56 58.9	+0.1
	comp=Z,10.0nm,1.0s,mb4.7						
GRA1				LR	LR		
	comp=Z,400nm,22.0s,MS4.7						
GRF	Grafenberg Arr	79.45	319	*e*P	P	09 56 58.9	+0.1
GRF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GRF				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.7						
GRF	Grafenberg Arr	79.45	319	*e*P	P	09 56 58.9	+0.1
	comp=Z,10.0nm,1.0s,mb4.7						
GRF				LR	LR		
	comp=Z,400nm,22.0s,MS4.7						
NB2	NORSAR Subarra	79.69	331	P	P	09 56 58.0	-1.9
	comp=Z,32nm,1.1s,mb5.2,baz=91,slow=5.6						
NB2	NORSAR Subarra	79.69	331	P	P	09 56 58.0	-1.9
	baz=91,slow=5.9						
NAO01	NORSAR Array S	79.85	330	*e*P	P	09 56 60.0	-0.7
	comp=Z,32nm,1.0s,mb5.2						
CLZ	Clausthal	79.99	321	*e*P	P	09 57 01.3	-0.3
	comp=Z,5.0nm,0.8s,mb4.5						
DAVA	Damuels	80.37	317	⇑*i*P	P	09 57 04.3	+0.6
	comp=Z,33nm,1.3s,mb5.1						
MUD	Monsted U’grnd	80.68	326	*i* P	P	09 57 10.4	+5.2
MUD				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.3						
MUD	Monsted U’grnd	80.68	326	*i* P	P	09 57 10.4	+5.2
	comp=Z,45nm,1.2s,mb5.3						
TNS	Taunus Mts	81.23	320	*e*P	P	09 57 08.0	-0.2
BFO	Black Forest	81.38	318	*e*P	P	09 57 08.2	-0.8
BFO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BFO	Black Forest	81.38	318	*e*P	P	09 57 08.2	-0.8
	comp=Z,5.0nm,0.8s,mb4.5						
LPG	La Plagne	82.61	315	*e*P	P	09 57 15.3	-0.2
	comp=Z,25nm,0.7s,mb5.0						
BNI	Bardonecchia	82.69	314	*e*P	P	09 57 17.4	+1.5
	comp=Z,13nm,1.0s,mb4.9						
SYO	Syowa Base	85.50	197	⇓pP	pP	09 57 35.1	-1.3
TNA	Tin City	86.07	24	*e*P	P	09 57 32.5	0.0
IMA	Indian Mountai	91.53	22	*e*P	P	09 57 58.8	+0.5
MCK	McKinley	94.36	23	*e*P	P	09 58 10.8	-0.6
	comp=Z,8.2nm,1.3s,mb5.0						
MCK				LR	LR		
	comp=Z,350nm,19.0s,MS4.8						
INK	Inuvik	96.90	16	*e*P	P	09 58 21.9	-1.1
	comp=Z,9.0nm,1.2s,mb5.1						
RES	Resolute Bay	97.32	2	*e*P	P	09 58 24.3	-0.4
	comp=Z,9.7nm,0.9s,mb5.2						
TBI	Tubuai	117.26	112	*e*LR	LR	10 39 29.8	
	comp=Z,343nm,34.0s						
PPT	Papeete	117.30	106	*e*LR	LR	10 39 05.4	
	comp=Z,323nm,23.8s						
MSO	Missoula	119.99	22	*e*PKPdf	PKPdf	10 03 41.8	-4.0
MOD	Modoc	121.19	30	*e*PKPdf	PKPdf	10 03 45.4	-3.1
WVOR	Wild Horse Val	121.58	28	*e*PKPdf	PKPdf	10 03 47.3	-1.8
BOZ	Bozeman (W)	121.83	21	*e*PKPdf	PKPdf	10 03 45.5	-4.1
LAO	LASA Array	122.64	17	*e*PKPdf	PKPdf	10 03 48.1	-2.9
MOOW	Moose Ponds	123.79	22	*e*PKPdf	PKPdf	10 03 49.9	-3.5
LOHW	Long Hollow	123.96	22	*e*PKPdf	PKPdf	10 03 50.8	-2.9
MNV	Mina	124.89	31	*e*PKPdf	PKPdf	10 03 53.1	-2.6
TAOE	Nuku Hiva Isla	126.26	95	*e*LR	LR	10 43 37.8	
MVU	Marysvale	127.65	26	*e*PKPdf	PKPdf	10 03 58.6	-2.4
MSU	Marysvale	127.66	26	*e*PKPdf	PKPdf	10 03 58.4	-2.7
PV10	Paradox Valley	129.08	24	*e*PKPdf	PKPdf	10 04 00.8	-3.0
GDL2	Guadalupe Moun	136.32	23	*e*PKPdf	PKPdf	10 04 14.5	-2.9
MIAR	Mount Ida	137.10	9	*e*PKPdf	PKPdf	10 04 15.6	-3.2
JCT	Junction City	139.49	19	*e*PKPdf	PKPdf	10 04 19.6	-3.7
FCH	Farellones	150.96	207	*e*P	PKPdf	10 04 44.4	+1.8
LPAZ	La Paz	160.86	243	*e*PKPdf	PKPdf	10 04 52.7	-3.1

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*CSEM **04** 10:06:40.7±0.1, 38.00N×26.38W, h2^{km}, ML3.3, Error ellipse: s-maj=12.0km s-min=1.3km az=34.0, After PDA*

*PDA **04** 10:06:40.7±1.0, 38.00N×26.38W, h2^{km}±2^{km}, MD3.2, ML3.3, Error ellipse: s-maj=4.3km s-min=1.0km az=33.0*

SVSA 04 10:06:40.7±1.0**, 38.00N×26.38W, h2**^{km}±2^{km}**, MD3.2, ML3.3, Error ellipse: s-maj=4.3km s-min=1.0km az=33.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SET4	Mosteiros	0.48	105	*i* P	Pg	10 06 49.2	-1.1
SET4				*i* S	Sg	10 06 55.9	-0.8
SET2	Ginetes	0.48	109	*i* P	Pg	10 06 49.4	-0.9
SET2				*i* S	Sg	10 06 56.0	-0.8
PFET	Feteiras	0.51	111	*i* P	Pg	10 06 49.8	-1.0
PSAN	Santo Antonio	0.54	106	*e*P	Pg	10 06 50.2	-1.3
PSAN				*i* S	Sg	10 06 57.3	-1.4
PSET	Sete Cidades	0.55	108	*e*P	Pg	10 06 50.1	-1.7
PSET				*e*S	Sg	10 06 57.9	-1.2
	1μm,0.3s						
FAC	Faja de Cima	0.62	111	*e*P	Pg	10 06 51.8	-1.3
FAC				*i* S	Sg	10 06 59.7	-1.8
PDA	Ponta Delgada	0.62	114	*e*P	Pg	10 06 52.0	-1.2
PDA				*e*S	Sg	10 07 00.5	-1.0
CML	Cha da Macela	0.70	109	*e*P	Pg	10 06 52.9	-1.8
CML				*i* S	Sg	10 07 02.0	-2.1
PVER	Pico Vermelho	0.72	106	*e*P	Pg	10 06 53.0	-2.0
PMAT	Coroa da Mata	0.74	104	*e*P	Pg	10 06 53.2	-2.4
PMAT				*i* S	Sg	10 07 02.6	-2.9
	389nm,0.2s						
LFA	Lagoa do Fogo	0.75	107	*i* P	Pg	10 06 53.3	-2.3
PRCH	Ribeira Ch	0.77	111	*e*P	Pg	10 06 53.8	-2.2
PRCH				*i* S	Sg	10 07 03.6	-2.6
	720nm,0.3s						
MESC	Monte Escuro	0.77	105	*e*P	Pg	10 06 53.6	-2.5
MESC				*i* S	Sg	10 07 03.6	-2.8
VIF	Vila Franca	0.79	109	*e*P	Pg	10 06 54.1	-2.4
VIF				*i* S	Sg	10 07 04.1	-2.9
	204nm,0.3s						
PCNG	Congro	0.82	106	*e*P	Pg	10 06 54.4	-2.6
PCNG				*i* S	Sg	10 07 04.6	-3.3
	211nm,0.2s						
FRA1	Furnas	0.85	107	*e*P	Pg	10 06 54.9	-2.8
FRA1				*i* S	Sg	10 07 05.8	-3.3
PFAD	Fenais da Ajud	0.85	101	*e*P	Pg	10 06 54.7	-3.1
PFAD				*i* S	Sg	10 07 05.0	-4.2
PFAV	Pico das Favas	0.90	322	*i* P	Pg	10 06 55.3	-3.3
PFAV				*i* S	Sg	10 07 06.5	-4.1
	432nm,0.3s						
MIRA	Miradouro	0.90	103	*i* P	Pg	10 06 55.4	-3.3
MIRA				*i* S	Sg	10 07 06.3	-4.4
PSCM	Serra do Cume	0.91	321	*e*P	Pg	10 06 55.2	-3.6
PSCM				*e*S	Sg	10 07 06.6	-4.3
	794nm,0.2s						
RIB2	Ribeirinha	0.91	317	*e*P	Pg	10 06 55.5	-3.4
RIB2				*i* S	Sg	10 07 06.8	-4.3
	515nm,0.1s						
ADH	Angra Heroismo	0.94	315	*e*P	Pb	10 06 55.8	-3.5
ADH				*e*S	Sg	10 07 07.2	-4.6
PVNV	Vila Nova	0.97	322	*i* P	Pb	10 06 56.4	-3.5
PVNV				*i* S	Sg	10 07 08.3	-4.8
	300nm,0.2s						
BART	Pico Bartolome	0.99	103	*e*P	Pb	10 06 56.1	-4.1
BART				*e*S	Sb	10 07 08.2	-5.3
	295nm,0.4s						
PPAD	Pico dos Padre	1.00	315	*e*P	Pb	10 06 56.8	-3.6
PPAD				*i* S	Sb	10 07 09.0	-4.8
	240nm,0.2s						
PBIS	Biscoitos	1.02	318	*e*P	Pb	10 06 57.0	-3.8
PBIS				*i* S	Sb	10 07 09.6	-4.9
	108nm,0.4s						
ASBA	Santa Barbara	1.03	314	*e*P	Pb	10 06 57.4	-3.6
ASBA				*i* S	Sb	10 07 10.1	-4.7
	205nm,0.3s						
PSBA	Serra de Santa	1.06	316	*i* P	Pb	10 06 57.6	-3.9
PSBA				*e*S	Sb	10 07 10.8	-4.9
	442nm,0.3s						
PIED	Piedade	1.38	288	*e*S	Sb	10 07 18.1	-6.8
PSMN	Pico do Norte,	1.45	133	*e*P	Pn	10 07 03.1	-4.9
PSMN				*i* S	Sb	10 07 19.4	-7.4
PMAN	Manadas	1.48	296	*e*P	Pn	10 07 03.7	-4.8
PMAN				*e*S	Sb	10 07 20.1	-7.8
	137nm,0.1s						
ROSA	Rosais	1.63	297	*e*P	Pn	10 07 06.2	-4.4
ROSA				*e*S	Sb	10 07 23.8	-8.3
STGR	Santa Cruz	1.67	311	*i* S	Sb	10 07 25.4	-7.8
	53nm,0.2s						
PICO	Pico	1.68	288	*e*P	Pn	10 07 06.5	-4.9
PICO				*e*S	Sb	10 07 25.2	-8.5
HOR	Horta	1.84	287	*e*P	Pn	10 07 08.7	-5.0
HOR				*e*S	Sn	10 07 29.6	-8.3
CALA	Caldeira	1.91	288	*e*P	Pn	10 07 09.9	-4.8
CALA				*e*S	Sn	10 07 31.4	-8.3
PCED	Cedros	1.93	290	*e*P	Pn	10 07 09.7	-5.2
PCED				*e*S	Sn	10 07 31.6	-8.4
	131nm,0.4s						

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*NAO **04** 11:02:20.1±3.4, 60.85N×28.93E, ML2.9*

*CSEM **04** 11:02:20.1, 60.85N×28.92E, h7^{km}, ML2.9, After NAO*

*BER **04** 11:02:22.7±3.2, 60.97N×28.95E, ML2.9(NAO), Suspected explosion*

HEL 04 11:02:19.8±0.3**, 61.00N×29.17E, ML1.8, ML2.9**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.92	240	*e*P	Pg	11 02 36.3	-1.8
VJF				*e*S	Sg	11 02 47.8	-2.5
FIA0	FINESS Array S	1.56	288	Pn	Pn	11 02 47.6	-1.3
	baz=113,slow=18						
FIA0				Lg		11 03 07.7	
	baz=112,slow=28						
FIA0				Rg		11 03 15.9	
	baz=112,slow=37						
FIA0	FINESS Array S	1.56	288	*e*P	Pn	11 02 47.6	-1.3
FIA0				*e*S	Sb	11 03 07.5	-2.0
FIA0	FINESS Array S	1.56	288	Pn	Pn	11 02 47.6	-1.3
	baz=113,slow=16,SNR=5.1						
FIA0				Lg		11 03 07.7	
	baz=112,slow=25						
FIA0				Rg		11 03 15.9	
	baz=112,slow=35,SNR=7.4						
PVF	Pernaja	1.69	256	*e*P	Pn	11 02 49.3	-1.4
PVF				*e*S	Sb	11 03 11.6	-1.5
KAF	Kangasniemi	1.77	310	*e*P	Pn	11 02 52.0	+0.1
KAF				*e*S	Sn	11 03 13.7	-1.7
SUF	Sumiainen	2.24	322	MSG		11 03 32.6	
	comp=Z,4.2nm,0.2s						
KEF	Keuruu	2.37	302	MSG		11 03 35.3	
	comp=Z,2.4nm,0.2s						
KJN	Kajaani	3.17	348	*e*SB	Sb	11 03 54.1	-2.1
KJN				MSG		11 03 57.2	
	comp=Z,2.6nm,0.2s						
HFS	Hagfors	7.67	270	Pn	Pn	11 04 11.8	-3.8
	baz=84,slow=10						
HFS				Sn	Sn	11 05 36.6	-7.7
	baz=89,slow=22						
HFS				Lg		11 06 16.4	
	baz=65,slow=37						
HFS	Hagfors	7.67	270	*e*P	Pn	11 04 11.8	-3.8
HFS				*e*S	Sn	11 05 36.6	-7.7
HFS				*e*SG		11 06 16.4	
HFS	Hagfors	7.67	270	Pn	Pn	11 04 11.8	-3.8
	baz=84,slow=9.5,SNR=4.7						
HFS				Sn	Sn	11 05 36.6	-7.7
	baz=89,slow=22						
HFS				Lg		11 06 16.4	
	baz=65,slow=29,SNR=4.0						
ARA0	ARCESS Array S	8.71	351	Pn	P	11 04 28.4	-1.6
	baz=171,slow=12						
ARA0	ARCESS Array S	8.71	351	*e*P	P	11 04 28.4	-1.6
ARA0	ARCESS Array S	8.71	351	Pn	P	11 04 28.4	-1.5
	baz=171,slow=12,SNR=8.4						

MEX 04 11:11:07.7±0.5**, 13.96N×93.53W, h20**^{km}±180^{km}**, MD4.3, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	2.67	30	*e*P	Pn	11 11 47.4	-3.2
CCIG				*i* S	Sn	11 12 18.2	-4.6
SCX	San Cristobal	2.89	17	*i* P	Pn	11 11 51.0	-2.7
SCX				*i* S	Sn	11 12 25.0	-3.3
CMIG	Matias Romero	3.37	337	*i* P	Pn	11 11 56.6	-4.0
CMIG				*i* S	Sn	11 12 35.1	-5.4
OXX	Oaxaca	4.37	316	*e*P	Pn	11 12 11.0	-3.7
OXX				*i* S	Sn	11 13 01.0	-4.7
VHO	Vista Hermosa	4.37	316	*e*P	Pn	11 12 09.5	-5.2
VHO				*i* S	Sn	11 13 01.4	-4.3

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*BJI **04** 11:28:50.1, 8.30N×82.60W, h19^{km}, mB5.2, Ms5.1, Msz4.7*

*CASC **04** 11:28:51.3±2.3, 8.23N×82.66W, h10^{km}, MD4.9, ML3.8, MW5.1, mb4.6(NEIC)*

*NEIC **04** 11:28:52.1, 8.28N×82.64W, h20^{km}, mb4.6/28, After UPA.*

NEIC Felt strongly in the Alanje-David-Puerto Armuelles area, Panama.

ISC 04 11:28:49.3±0.4**, 8.14N**±0.04×**82.62W**±0.04**, h33**^{km}**, (h33**^{km}±.9^{km}**:pP-P), n102,** σ1^{s}**52**/105**, mb4.6**/28**, MS5.0**/2**, 14C-4D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.20	71	⇑*i*P	P	11 28 58.3	+2.4
PTP1				*e*S	S	11 29 01.2	+0.8
DVD	David	0.34	29	*e*P	P	11 28 58.4	+0.9
DVD	David	0.34	29	⇑*e*P	P	11 28 58.5	+1.0
DVD				*e*S	S	11 29 02.8	-0.5
BRU2	Volcan	0.65	354	*i* P	P	11 29 02.4	+0.4
BRU2				*e*S	S	11 29 10.9	-0.3
ACR	Cerro Adams	0.75	313	⇑*i*P	P	11 29 03.4	0.0
ACR	Cerro Adams	0.75	313	⇑*e*P	P	11 29 03.4	0.0
ACR				*e*S	S	11 29 12.4	-1.2
CNI	Changuinola	1.27	4	*e*P	P	11 29 12.2	+1.4
CNI	Changuinola	1.27	4	⇓*e*P	P	11 29 12.1	+1.3
BUS	Buena Vista	1.80	321	⇑*e*P	P	11 29 20.0	+1.6
LIO	Limon	1.90	347	⇑*i*P	P	11 29 21.9	+2.0
LCR2	La Lucha 2	2.10	319	⇑*e*P	P	11 29 23.9	+1.2
ICR	Volcan Irazu	2.19	327	⇑*e*P	P	11 29 26.5	+2.5
LAJ	Bijagual	2.27	319	*e*P	P	11 29 29.2	+4.1
SJS	Escuela Geolog	2.28	322	⇓*i*P	P	11 29 28.0	+2.7
SJS	Escuela Geolog	2.28	322	⇑*e*P	P	11 29 26.6	+1.3
SJS				⇓*i*P		11 29 28.0	
SJS				*e*S	S	11 29 53.6	+1.1
AZU	Azuero	2.35	98	*e*P	P	11 29 29.9	+3.6
AZU	Azuero	2.35	98	⇑*e*P	P	11 29 30.1	+3.8
AZU				*e*S	S	11 30 00.0	+5.8
PRS1	Puriscal	2.48	318	⇑*e*P	P	11 29 29.5	+1.3
VPS2	Volcan Poas 2	2.59	322	⇑*e*P	P	11 29 32.8	+3.1
CGA2	Cerro Gallo 2	2.61	316	*e*P	P	11 29 33.0	+3.0
AZU2	Pedas	2.64	103	*e*P	P	11 29 46.3	+16
AZU2				*e*S	S	11 30 18.5	+17
TRTC	Tortuguero	2.65	336	⇑*e*P	P	11 29 32.1	+1.5
JCR	Jicaral	2.99	305	*e*P	P	11 29 38.0	+2.6
FORC	Fortuna	3.08	319	⇑*e*P	P	11 29 39.1	+2.5
JTS	JuntasAbangare	3.14	313	*e*Pn	Pn	11 29 38.8	+1.0
UPA	Univ. de Panam	3.16	74	*e*P	P	11 29 39.8	+1.9
UPA	Univ. de Panam	3.16	74	*e*P	P	11 29 40.7	+2.8
UPA				*e*S	S	11 30 19.4	+4.5
VCR	Vista de Mar	3.57	304	*e*P	P	11 29 45.2	+1.5
MADN	Villa Maderas	4.34	319	*e*P	P	11 29 56.3	+1.8
SSNN	San Juan del S	4.46	315	⇓*e*P	P	11 29 57.5	+1.0
CONN	Concepcion	4.51	319	*e*P	P	11 29 58.1	+1.0
TICN	Ticuantepe	5.26	318	*e*P	P	11 30 07.8	+0.2
MGAN	Managua	5.35	318	*e*P	P	11 30 10.0	+1.1
MGAN				*i*		11 31 51.8	
	comp=E,163nm,0.9s						
XAVN	Gruta Xavier	5.40	318	*e*P	P	11 30 11.2	+1.6
APYN	Apoyeque	5.48	318	*e*P	P	11 30 12.4	+1.7
PYTN	Playitas	5.53	323	*e*P	P	11 30 11.7	+0.3
BLLM	Bellamira	7.63	314	*e*P	P	11 30 41.3	+0.4
LCBS	La Ceiba	8.31	312	*e*P	P	11 30 52.3	+2.0
LFRS	El Faro	8.35	311	*e*P	P	11 30 53.0	+2.1
OTAV	Otavalo	8.88	152	*e*Pn	P	11 31 01.0	+2.8
	comp=E,14nm,1.0s						
RTR	El Retiro	8.96	310	*e*P	P	11 31 03.0	+3.6
SDV	Santo Domingo	11.88	86	*e*Pn	P	11 31 36.2	-3.1
	comp=E,9.2nm,0.8s						
SJG	San Juan	18.83	57	*e*Pn	P	11 33 04.2	-4.8
NNA	Nana	20.80	164	*e*P	P	11 33 31.1	+0.7
	comp=E,49nm,1.4s						
HKT	Hockley	24.99	332	*e*P	P	11 34 11.2	-0.5
	comp=E,43nm,1.6s,mb4.7						
LRAL	Lakeview Retre	25.10	351	*e*P	P	11 34 12.1	-0.5
	comp=E,7.2nm,0.9s,mb4.2						
GOGA	Godfrey	25.16	358	*e*P	P	11 34 12.2	-1.0
JCT	Junction City	27.43	326	*e*P	P	11 34 31.8	-2.5
	comp=E,10nm,1.0s,mb4.3						
UALR	University of	27.97	343	*e*P	P	11 34 36.7	-2.4
	comp=E,16nm,0.9s,mb4.7						
MIAR	Mount Ida	28.14	341	*e*P	P	11 34 38.1	-2.6
	comp=E,5.7nm,0.8s,mb4.2						
FVM	French Village	30.54	348	*e*P	P	11 34 59.1	-2.9
CCM	Cathedral Cave	30.79	347	*e*P	P	11 35 00.9	-3.3
	comp=E,26nm,1.0s,mb5.0						
MNTX	Cornudas Mount	31.60	321	*e*P	P	11 35 09.7	-1.7
	comp=E,8.9nm,1.2s,mb4.5						
KSU1	Kansas State U	33.29	340	*e*P	P	11 35 23.7	-2.3
LVC	Limon Verde	33.38	157	*e*P	P	11 35 29.5	+2.5
	comp=E,20nm,1.4s,mb4.9						
ANMO	Albuquerque	34.50	324	*e*P	P	11 35 35.5	-1.1
	comp=E,6.8nm,1.0s,mb4.5						
TUC	Tucson	35.52	317	*e*P	P	11 35 43.9	-1.4
	comp=E,19nm,1.7s,mb4.7						
ISCO	Idaho Springs	37.64	330	*e*P	P	11 36 02.3	-0.8
	comp=E,5.1nm,1.2s,mb4.1						
PV01	Paradox Valley	37.95	326	*e*P	P	11 36 04.8	-0.9
PV10	Paradox Valley	38.38	326	*e*P	P	11 36 07.9	-1.3
SRU	San Rafael	39.73	325	*e*P	P	11 36 20.1	-0.3
NEN	Nelson	40.20	318	*e*P	P	11 36 24.8	+0.4
MSU	Marysvale	40.28	323	*e*P	P	11 36 25.2	+0.2
MVU	Marysvale	40.30	323	*e*P	P	11 36 25.3	+0.1
	comp=E,4.0nm,0.9s,mb4.2						
DAU	Daniels Canyon	41.03	326	*e*P	P	11 36 31.1	-0.2
JLU	Jordanelle	41.27	326	*e*P	P	11 36 32.7	-0.5
TCUT	Toone Canyon	41.61	327	*e*P	P	11 36 35.2	-0.7
BW06	Boulder Array	41.83	330	*e*P	P	11 36 36.8	-1.0
	comp=E,9.4nm,1.3s,mb4.3						
HWUT	Hardware Ranch	42.03	327	*e*P	P	11 36 38.8	-0.7
	comp=E,17nm,1.2s,mb4.5						
LOHW	Long Hollow	42.97	330	*e*P	P	11 36 46.2	-0.9
RRI2	Red Ridge	43.14	329	*e*P	P	11 36 47.4	-1.1
MOOW	Moose Ponds	43.14	330	*e*P	P	11 36 46.5	-2.0
LAO	LASA Array	43.40	336	*e*P	P	11 36 48.4	-2.2
	comp=E,18nm,1.3s,mb4.6						
ULM	Lac du Bonnet	43.40	348	*e*P	P	11 36 46.9	-3.6
	comp=E,32nm,1.0s,mb5.0						
OMM	Old Mammoth Mi	44.07	317	*e*P	P	11 36 57.1	+1.1
DGMT	Dagmar	44.13	339	*e*P	P	11 36 54.5	-1.9
	comp=E,8.6nm,0.7s,mb4.6						
GCMT	Greycliff	44.16	333	*e*P	P	11 36 55.6	-1.1
QLMT	Earthquake Lak	44.27	331	*e*P	P	11 36 57.1	-0.5
BMN	Battle Mountai	44.53	322	*e*P	P	11 36 60.0	+0.3
BMN				*e*	pP	11 37 09.6	0.0
LRV	Little Rabbit	44.85	315	*e*P	P	11 37 02.8	+0.4
HLID	Hailey	44.90	327	*e*P	P	11 37 01.9	-0.8
	comp=E,2.2nm,0.8s,mb4.0						
HLID				*e*	pP	11 37 12.1	-0.5
BOZ	Bozeman (W)	44.96	331	*e*P	P	11 37 01.3	-1.8
	comp=E,4.7nm,0.8s,mb4.4						
MCMT	McKenzie Canyo	44.96	330	*e*P	P	11 37 01.6	-1.6
WVOR	Wild Horse Val	46.58	323	*e*P	P	11 37 15.2	-0.7
	comp=E,12nm,1.1s,mb4.7						
BMO	Blue Mountains	47.32	327	*e*P	P	11 37 19.2	-2.5
	comp=E,3.9nm,1.3s,mb4.2						
FFC	Flin Flon	48.97	345	P	P	11 37 32.8	-1.7
	comp=E,63nm,1.0s,mb5.6,SNR=12						
PLCA	Paso Flores	49.89	168	*e*P	P	11 37 42.0	+0.3
	comp=E,4.1nm,0.6s,mb4.6						
FCC	Fort Churchill	51.26	352	*e*P	P	11 37 48.8	-3.1
	comp=E,3.7nm,0.9s,mb4.3						
FCC				*e*	pP	11 37 59.8	-2.0
EDM	Edmonton	51.38	337	*e*P	P	11 37 50.3	-2.6
EDM				*e*	pP	11 37 59.6	-3.2
YKW3	Yellowknife Ar	59.09	343	*e*P	P	11 38 45.4	-3.2
YKW3				*e*	pP	11 38 55.1	-3.6
RES	Resolute Bay	66.88	356	*e*P	P	11 39 36.5	-3.3
	comp=E,1.8nm,0.8s,mb4.2						
RES				*e*		11 39 44.5	
DAWY	Dawson	68.60	337	*e*P	P	11 39 49.1	-1.7
INK	Inuvik	68.73	342	*e*P	P	11 39 50.5	-1.1
	comp=E,16nm,1.2s,mb4.8						
INK				*e*	pP	11 39 59.9	-2.0
COLA	College	72.28	336	*e*P	P	11 40 11.2	-1.8
COLA				*e*	pP	11 40 21.4	-1.9
MCK	McKinley	72.37	335	*e*P	P	11 40 11.8	-1.7
	comp=E,8.5nm,1.1s,mb4.6						
MCK				*e*	pP	11 40 22.3	-1.5
IMA	Indian Mountai	74.96	336	*e*P	P	11 40 27.9	-0.8
	comp=E,98nm,1.6s,mb5.5						
CLL	Collm	87.21	39	P	P	11 41 35.0	+1.5
CN2	Changchun	122.38	336	*e*PKP	PKPdf	11 47 41.2	-0.3
GTA	Gaotai	132.64	357	*e*PKP	PKPdf	11 48 02.3	+1.0
GTA				XPKP		11 48 16.5	
GTA				PP	PP	11 50 27.1	-2.4
GTA				SKS	SKS	11 55 08.5	+1.5
GTA				PP	PP		
	comp=Z,144nm,4.9s						
GTA				LR	LR		
	comp=N,131nm,14.8s,MS4.9						
GTA				LR	LR		
	comp=E,133nm,16.4s,MS4.9						
GTA				LR	LR		
	comp=Z,132nm,16.3s,MS4.7						
NJ2	Nanjing	135.08	334	*e*PKP	PKPdf	11 48 05.3	-0.8
LZH	Lanzhou	135.59	353	*e*PKP	PKPdf	11 48 04.5	-2.4
LZH				XPKP		11 48 19.0	
LZH				LR	LR		
	comp=N,289nm,18.0s						
LZH				LR	LR		
	comp=Z,498nm,20.1s,MS5.2						
GYA	Guiyang	144.45	346	PKP	PKPdf	11 48 22.5	-0.5
GYA				PP	PP		
	comp=Z,80nm,5.4s						

NEIC 04 11:38:02.8±0.9**, 43.29N×126.82W, h10**^{km}**, mb3.7**/4**, Error ellipse: s-maj=11.4km s-min=4.6km az=68.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	1.87	102	*e*P	Pn	11 38 32.9	-2.3
DBO	Dodson Butte	2.62	92	P	Pn	11 38 44.3	-1.6
MPOR	Mary’s Peak	2.66	62	P	Pn	11 38 44.7	-1.8
HSO	Harness Mounta	2.73	84	P	Pn	11 38 45.9	-1.6
EUO	Eugene	2.82	73	P	Pn	11 38 47.4	-1.4
COR	Corvallis	2.85	62	*e*P	Pn	11 38 47.3	-1.9
HUMO	Hull Mountain	2.92	102	*e*P	Pn	11 38 48.0	-2.2
HEBO	Mount Hebo	2.93	48	P	Pn	11 38 48.4	-1.9
BBOR	Butler Butte	3.06	96	P	Pn	11 38 51.1	-1.0
BROR	Big Rock Looko	3.31	71	P	Pn	11 38 55.0	-0.8
HBO	Huckleberry Mo	3.32	79	P	Pn	11 38 55.0	-0.8
KMOR	Kings Mountain	3.35	44	P	Pn	11 38 54.1	-2.1
IRO	Indian Ridge	3.39	76	P	Pn	11 38 55.9	-1.0

YBH	Yreka Blue Hor	3.41	116	eP	Pn	11 38 56.2	-1.0
SSOR	Sweet Springs	3.51	62	P	Pn	11 38 58.0	-0.6
BUOR	Burton Butte	3.52	105	P	Pn	11 38 58.4	-0.2
FRIS	Frissel Point	3.54	73	P	Pn	11 38 58.4	-0.7
NLO	Nicolai Mounta	3.69	39	P	Pn	11 38 59.7	-1.5
HUOR	Husband	3.70	75	P	Pn	11 39 00.7	-0.6
LHEM	Herd Peak	3.79	114	P	Pn	11 39 02.5	0.0
BKCOR	Black Crater	3.85	73	P	Pn	11 39 02.5	-0.9
BEND	Bend	4.06	77	P	Pn	11 39 05.3	-1.1
RVW	Rose Valley	4.08	44	P	Pn	11 39 05.2	-1.4
BMW	Boistfort Moun	4.08	37	P	Pn	11 39 04.6	-2.2
VLMM	Larch Mountain	4.10	55	P	Pn	11 39 06.3	-0.7
TDH	Tom, Dick, Har	4.13	59	P	Pn	11 39 06.7	-0.7
WDC	Whiskeytown Da	4.18	129	eP	Pn	11 39 07.3	-0.8
ON2	Olympics--Nort	4.19	30	P	Pn	11 39 06.0	-2.2
LVP	Lakeview Peak	4.20	47	P	Pn	11 39 07.4	-1.0
VFP	Flag Point	4.35	60	P	Pn	11 39 09.4	-1.0
CPW	Capitol Peak	4.51	34	P	Pn	11 39 10.7	-2.1
CROR	Criterion Ridg	4.53	66	P	Pn	11 39 11.4	-1.7
KOSW	Kosmos	4.57	44	P	Pn	11 39 12.8	-0.8
VIPM	Ingram Point	4.64	73	P	Pn	11 39 13.4	-1.3
ASR	Mount Adams--S	4.70	51	P	Pn	11 39 14.5	-0.9
LON	Longmire	4.96	44	P	Pn	11 39 18.1	-1.1
REMR	Mount Rainier-	4.99	43	P	Pn	11 39 18.6	-1.0
RCM	Mount Rainier-	5.06	44	P	Pn	11 39 19.7	-0.8
WPW	White Pass	5.06	46	P	Pn	11 39 19.4	-1.2
RCS	Mount Rainier-	5.08	43	P	Pn	11 39 19.7	-1.2
FMW	Mount Fremont	5.15	43	P	Pn	11 39 20.7	-1.2
BLN	Blyn Mountain	5.44	28	P	Pn	11 39 24.0	-1.9
TTW	Tolt Reservoir	5.69	38	P	Pn	11 39 27.6	-1.9
EBG	Ellensburg	5.72	49	P	Pn	11 39 28.8	-1.1
HTW	Haystack Looko	5.74	36	P	Pn	11 39 28.0	-2.2
PGC	Sidney	5.85	22	eP	Pn	11 39 28.8	-3.0
ETW	Entiat	6.28	44	P	Pn	11 39 36.6	-1.2
OMM	Old Mammoth Mi	8.22	131	P	P	11 40 06.3	+1.2
NEW	Newport	8.41	50	eP	P	11 40 04.5	-3.0
HLID	Hailey	9.04	84	P	P	11 40 12.6	-3.7
MCMT	McKenzie Canyo	10.18	77	eP	P	11 40 26.6	-5.4
RRI2	Red Ridge	11.30	84	P	P	11 40 41.1	-6.2
LOHW	Long Hollow	11.80	83	P	P	11 40 51.3	-2.8
SDCO	Great Sand Dun	17.11	102	eP	P	11 42 02.6	-1.0
	6.4nm,1.3s						
MNTX	Cornudas Mount	20.51	117	P	P	11 42 41.6	-2.0
	1.6nm,1.0s						
YKW3	Yellowknife Ar	20.59	16	eP	P	11 42 41.2	-3.0
DAWY	Dawson	22.02	345	eP	P	11 42 56.5	-2.3
WMOK	Wichita Mounta	23.32	102	eP	P	11 43 12.2	+0.5
	6.4nm,0.9s						
FCC	Fort Churchill	25.42	41	P	P	11 43 30.0	-1.7
	1.9nm,0.9s						

GUC 04 11:41:45.9±0.8, 34.01S×70.08W, h8^{km}±2^{km}, MD3.5, ML1.8, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMEL	Las Melosas	0.19	326	⇑iP	Pg	11 41 50.4	+0.4
LMEL				iS	Sg	11 41 54.3	+1.5
LMEL				AMP		11 41 56.0	
	comp=N,551nm,0.1s						
CACH	El Canelo	0.45	256	iP	Pg	11 41 55.1	+0.1
CACH				iS	Sg	11 42 02.0	+1.0
CHCH	Chadas Angostu	0.49	279	iP	Pg	11 41 56.0	+0.3
CHCH				iS	Sg	11 42 03.7	+1.4
PCH	Pirque	0.53	317	iP	Pg	11 41 56.4	-0.2
PCH				iS	Sg	11 42 05.1	+1.4
FCH	Farellones	0.70	345	⇑iP	Pb	11 41 59.2	-0.8
FCH				iS	Sg	11 42 09.8	+0.3
FCH				AMP		11 42 10.9	
	comp=E,54nm,0.3s						
TACH	Talagante	0.80	296	eP	Pb	11 42 01.6	0.0
TACH				iS	Sb	11 42 13.0	+0.6
SFDO	San Fernando	0.98	232	eP	Pb	11 42 04.2	-0.5

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*NEIC **04** 12:15:52.0±0.3, 29.63S×13.84W, h10^{km}, mb4.8/21, Error ellipse: s-maj=10.8km s-min=6.2km az=154.0*

ISC 04 12:15:50.2±0.6, 29.6S±0.1×13.8W±0.1, h10^{km}, n32, σ0^{s}37/32, mb4.6/20, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAO	Brasilia Array	34.32	286	⇑iP	P	12 22 39.5	+0.3
TRQA	Tornquist	40.49	245	eP	P	12 23 30.9	0.0
	7.3nm,0.6s,mb4.6						
LSZ	Lusaka	41.15	79	eP	P	12 23 36.8	+0.4
	58nm,1.5s,mb5.0						
LVC	Limon Verde	49.56	265	eP	P	12 24 43.2	-0.3
	1.9nm,0.7s,mb4.2						
SAML	Samuel	50.47	284	eP	P	12 24 51.5	+0.8
	19nm,1.4s,mb4.9						
MBAR	Mbarara	51.29	64	eP	P	12 24 56.9	0.0
	18nm,1.4s,mb4.8						
LPAZ	La Paz	51.31	272	eP	P	12 24 55.9	-1.0
	5.2nm,1.3s,mb4.3						
KMBO	Kilima Mbogo	56.19	69	eP	P	12 25 32.4	-0.6
	1.8nm,0.8s,mb4.2						
QSPA	South Pole Qui	60.61	180	eP	P	12 26 03.2	+0.2
SDV	Santo Domingo	66.69	296	eP	P	12 26 44.2	+0.3
	7.3nm,1.1s,mb4.6						
ETSF	Etsaut	73.19	10	eP	P	12 27 23.0	-0.1
	15nm,1.0s,mb4.6						
SJPF	Ste Jean	73.30	10	eP	P	12 27 23.6	-0.1
EPF	Esparros	73.46	11	eP	P	12 27 24.4	-0.2
LMR	La Mourre	74.96	15	eP	P	12 27 33.5	+0.2
LFF	La Frestale	75.38	11	eP	P	12 27 35.6	-0.1
ORIF	Oris-en-Rattie	76.33	14	eP	P	12 27 41.3	+0.2
TCF	Toulx Ste Croi	76.94	11	eP	P	12 27 44.3	-0.1
LPG	La Plagne	77.07	15	eP	P	12 27 45.7	+0.5
	17nm,0.9s,mb4.7						
LPL	La Plagne	77.08	15	eP	P	12 27 45.6	+0.3
	17nm,0.9s,mb4.7						
SMF	Signal de Mont	77.58	12	eP	P	12 27 47.9	0.0
	21nm,1.2s,mb4.7						
AVF	Avril sur Loir	77.63	12	eP	P	12 27 48.2	0.0
	27nm,1.2s,mb4.7						
QUIF	Quistinic	77.78	7	eP	P	12 27 49.1	+0.1
SSF	Saint Saulge	77.92	12	eP	P	12 27 49.6	-0.2
	23nm,1.3s,mb4.6						
CABF	La Chapelle	77.99	14	eP	P	12 27 49.7	-0.5
	9.9nm,0.9s,mb4.5						
ROSF	Rostrenen	78.18	7	eP	P	12 27 51.4	+0.2
	28nm,1.1s,mb4.8						
SGMF	Saint Gilles	78.18	8	eP	P	12 27 50.9	-0.3
	16nm,0.9s,mb4.7						
GRR	Gorron	78.52	9	eP	P	12 27 52.7	-0.4
FLN	La Foliniere	78.94	9	eP	P	12 27 55.2	-0.2
	11nm,0.9s,mb4.5						
BAIF	Baives	80.93	12	eP	P	12 28 05.8	-0.2
	33nm,1.3s,mb4.8						
GRA1	Grafenberg Arr	82.05	16	eP	P	12 28 12.4	+0.6
	8.0nm,1.2s,mb4.5						
GRF	Grafenberg Arr	82.05	16	eP	P	12 28 12.4	+0.6
	8.0nm,1.2s,mb4.5						
VYHS	Vyhne	83.08	21	eP	P	12 28 17.6	+0.3

ISC 04 12:43:58.8±2.2, 5.2S±0.1×131.0E±0.2, h33^{km}, n5, σ1^{s}04/9, mb4.2/1, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	7.62	169	eP	P	12 45 51.4	+1.3
	23nm,0.6s						
KAKA				eS	S	12 47 16.9	+0.7
FITZ	Fitzroy Crossi	13.88	202	eP	P	12 47 16.8	+1.3
	6.7nm,0.4s						
FITZ				eS	S	12 49 48.6	-0.8
WB2	Warramunga Arr	15.03	168	eP	P	12 47 28.8	-1.8
WB2				eS	S	12 50 12.4	-4.2
ASPA	Alice Springs	18.59	172	eP	P	12 48 16.0	+0.4
ASPA				eS	S	12 51 38.1	-0.2
STKA	Stephens Creek	28.35	161	eP	P	12 49 51.3	-0.7
	5.2nm,0.9s,mb4.2						

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*JMA **04** 12:53:54.6±0.6, 23.67N×121.80E, h103^{km}*

TAP 04 12:53:51.7, 23.59N×121.57E, h22^{km}, ML3.1, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.58	56	S	Sn	12 54 38.3	-0.4
HATJ	Hateruma jima	2.10	77	P	Pn	12 54 26.2	0.0
HATJ				eS	Sn	12 54 49.2	-2.7
IRIF	Iriomote-Funau	2.11	69	P	Pn	12 54 26.5	+0.1
IRIF				S	Sn	12 54 50.2	-2.0
JKRS	Kuro-shima	2.32	73	S	Sn	12 54 55.7	-1.9
JIJ	Ishigaki jima	2.48	71	P	Pn	12 54 30.3	-1.3
JIJ				S	Sn	12 54 58.8	-2.7
JTJ	Tarama	3.05	69	eS	Sn	12 55 13.0	-3.0

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*JMA **04** 13:00:11.6±0.3, 23.50N×121.60E, h83^{km}, M3.2*
*TAP **04** 13:00:11.2, 23.54N×121.58E, h40^{km}, ML3.7*
TAP Felt I J at Hungye, I J at Shilin.

ISC 04 13:00:11.6±0.2, 23.52N±0.02×121.59E±0.02, h41^{km}±6^{km}, n67, σ0^{s}71/119, 9C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHY	Hungye	0.25	268	⇑iP	P	13 00 19.3	-0.1
EHY				S	S	13 00 24.8	0.0
TWF1	Yuli	0.32	239	⇑iP	P	13 00 19.9	-0.2
TWF1				S	S	13 00 26.2	+0.1
ESL	Shilin	0.33	334	⇑iP	P	13 00 20.1	-0.2
ESL				S	S	13 00 26.1	-0.2
HWA	Hwalien	0.46	2	eP	P	13 00 22.2	+0.4
HWA				S	S	13 00 29.5	+0.5
CHKT	Chengkung	0.46	207	⇑iP	P	13 00 22.1	+0.2
CHKT				S	S	13 00 30.3	+1.2
TWD	Chiawan	0.56	1	⇓iP	P	13 00 22.9	-0.3
TWD				S	S	13 00 31.0	-0.5
YUS	Yu-Shan	0.59	268	⇑iP	P	13 00 24.1	+0.5
YUS				S	S	13 00 32.4	+0.3
ELDTW	Lidau	0.62	238	⇑iP	P	13 00 23.3	-0.6
ELDTW				S	S	13 00 31.5	-1.4
WHF	Hehuan Shan	0.69	335	⇓iP	P	13 00 24.9	-0.1
WHF				S	S	13 00 34.4	-0.4
ALS	Alishan	0.72	270	P	P	13 00 25.8	+0.4
ALS				S	S	13 00 35.7	+0.2
SMLT	Sun Moon Lake	0.73	300	⇑iP	P	13 00 25.6	+0.1
SMLT				S	S	13 00 35.8	+0.2
TYC	Yuchr	0.78	300	⇑iP	P	13 00 26.2	+0.1
TYC				S	S	13 00 36.5	-0.2
TWT	Tachien	0.83	333	⇓iP	P	13 00 27.1	+0.3
TWT				S	S	13 00 37.2	-0.8
TWG	Pinlang	0.84	215	eP	P	13 00 25.6	-1.4
TWG				S	S	13 00 36.4	-2.0
CHN5	Tsauling	0.84	276	⇑P	P	13 00 27.2	+0.2
CHN5				S	S	13 00 38.8	+0.4
STYT	Tauyuan	0.84	246	eP	P	13 00 27.1	+0.1
STYT				S	S	13 00 38.8	+0.3
TTN	Taitung	0.86	208	eP	P	13 00 26.9	-0.4
TTN				S	S	13 00 39.4	+0.5
WNT	Mingjian	0.91	294	eP	P	13 00 28.0	+0.1
WNT				S	S	13 00 40.8	+0.7
ENA	Nanau	0.92	9	eP	P	13 00 27.6	-0.5
ENA				S	S	13 00 39.6	-0.7
CHN4	Tsaushan	0.93	260	P	P	13 00 28.4	+0.1
CHN4				S	S	13 00 41.3	+0.6
WTP	Ta-pu	0.94	254	⇓iP	P	13 00 28.8	+0.4
WTP				S	S	13 00 41.4	+0.5
NNS	Nan Shan	0.94	348	P	P	13 00 28.4	0.0
NNS				S	S	13 00 39.9	-1.1
WGK	Gukeng	0.96	280	eP	P	13 00 28.8	0.0
WGK				S	S	13 00 41.7	+0.3
SGST	Jiashian	1.02	245	eP	P	13 00 30.2	+0.6
SGST				S	S	13 00 43.7	+0.7
CHN1	Nanshi	1.03	252	⇓P	P	13 00 29.9	+0.2
CHN1				S	S	13 00 43.4	+0.2
TWK	Hsinying	1.04	256	⇓iP	P	13 00 29.8	0.0
TWK				S	S	13 00 43.6	+0.1
TCU	Taichung	1.05	307	eP	P	13 00 30.9	+0.9
CHY	Chiayi	1.07	269	eP	P	13 00 30.0	-0.2
CHY				S	S	13 00 44.0	-0.2
ECL	Taimali	1.09	213	eP	P	13 00 28.7	-1.8
TWC	Suao	1.11	12	P	P	13 00 30.8	-0.1
TWC				S	S	13 00 46.5	+1.2
TWQ1	Liyutan	1.12	318	eP	P	13 00 31.2	+0.3
TWQ1				S	S	13 00 45.9	+0.6
ENTT	Nioudou	1.12	359	⇓P	P	13 00 30.5	-0.5
ENTT				S	S	13 00 44.9	-0.5
SSD	Sandimen	1.17	229	eP	P	13 00 32.0	+0.4
SSD				S	S	13 00 47.0	+0.3
NSK	Sanguang	1.17	350	⇓iP	P	13 00 31.9	+0.1
NSK				S	S	13 00 45.9	-0.9
NSY	Sanyi	1.17	320	eP	P	13 00 32.0	+0.2
NSY				S	S	13 00 47.4	+0.6
TWE	Neicheng	1.20	3	eP	P	13 00 31.6	-0.5
CHN3	Shinhua	1.21	249	eP	P	13 00 33.2	+1.0
CHN3				S	S	13 00 49.5	+1.8
NSTT	Nanjuang	1.23	334	eP	P	13 00 32.8	+0.1
NSTT				S	S	13 00 48.4	0.0
WTCT	Ta-ch'eng	1.25	286	eP	P	13 00 32.5	-0.3
WTCT				S	S	13 00 48.8	+0.1
WSF	Szhu	1.26	276	eP	P	13 00 31.1	-1.9
WSF				S	S	13 00 48.1	-1.0
TWM1	Shoushan	1.28	238	eP	P	13 00 34.5	+1.3
TWM1				S	S	13 00 52.3	+2.9
CHN8	Yiju	1.28	263	eP	P	13 00 32.7	-0.5
CHN8				S	S	13 00 49.1	-0.4
SGLT	Jiouru	1.28	232	eP	P	13 00 34.4	+1.1
EAST	Anshuo	1.32	211	eP	P	13 00 32.5	-1.4
SCLT	Jiali	1.33	255	eP	P	13 00 33.8	-0.2
SCZT	Fangliau	1.45	218	eP	P	13 00 36.0	+0.3
SCZT				S	S	13 00 54.5	+0.7
TWA	Mucha	1.46	360	eP	P	13 00 35.8	-0.1
TWA				S	S	13 00 53.6	-0.4
LAY	Lan-yu	1.47	181	eP	P	13 00 35.3	-0.8
NCU	National Centr	1.49	346	eP	P	13 00 36.5	+0.1
TWB1	Santiao Chiao	1.53	14	eP	P	13 00 37.2	+0.3
TWB1				S	S	13 00 56.7	+0.9
NWF	Wu-fen Shan	1.56	6	P	P	13 00 37.2	-0.1
NWF				S	S	13 00 56.4	0.0
TWS1	Kuangyinshan	1.59	354	P	P	13 00 37.6	-0.1
TWS1				S	S	13 00 57.4	+0.2
YOJ	Yonaguni jima	1.60	54	P	P	13 00 38.7	+0.7
YOJ				S	S	13 00 59.0	+1.4
TWP	Hsiaoliuchiu	1.62	224	eP	P	13 00 38.6	+0.4
HEN	Hengchun	1.70	208	eP	P	13 00 38.4	-0.9
TWK1	Hengchun	1.73	205	eP	P	13 00 38.9	-0.8
TWK1				S	S	13 00 60.0	-0.6
TWY	Chenhua	1.75	0	eP	P	13 00 39.5	-0.5
WDGT	Dungji	1.79	262	eP	P	13 00 38.9	-1.8
PNG	Penghu	1.87	272	eP	P	13 00 40.1	-1.6
HATJ	Hateruma jima	2.10	75	P	P	13 00 45.1	+0.1
HATJ				S	S	13 01 11.0	+1.0
IRIF	Iriomote-Funau	2.12	67	P	P	13 00 45.9	+0.6
IRIF				S	S	13 01 11.7	+1.1
PCYT	Pengchaiyu	2.15	12	eP	P	13 00 45.6	-0.1
JKRS	Kuro-shima	2.33	72	P	P	13 00 48.7	+0.4
JKRS				S	S	13 01 16.9	+1.1
JIJ	Ishigaki jima	2.48	70	P	P	13 00 50.1	-0.4
JIJ				S	S	13 01 19.1	-0.7
JTJ	Tarama	3.06	68	P	P	13 00 58.4	-0.2
JTJ				S	S	13 01 33.7	-0.7
JMJ	Miyako jima 2	3.62	68	eS	S	13 01 48.3	-0.4
JOGS	Gusukube	3.70	70	P	P	13 01 07.6	-0.1
JOGS				S	S	13 01 50.4	-0.3

IGQ 04 13:09:29.4, 0.95S×81.26W, h7^{km}±4^{km}, mb4.1, 2C-1D, Error ellipse: s-maj=7.2km s-min=4.1km az=26.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.72	98	⇑P	Pg	13 09 42.8	-1.1
SALI	Salinas	1.26	168	P	Pb	13 09 53.1	-0.1
IGUA	Igualata	2.68	102	P	Pn	13 10 14.6	+0.8
TERV	Terraza Guagua	2.77	74	P	Pn	13 10 16.4	+1.4
PINO	Pino	2.77	74	P	Pn	13 10 16.3	+1.3
NAS1	Nasa	2.80	84	P	Pn	13 10 17.8	+2.3
YANA	Yana	2.81	73	P	Pn	13 10 17.0	+1.3
RETU	Refugio	2.86	100	P	Pn	13 10 15.5	-0.8
ARRY	Arrayan	2.86	101	⇓P	Pn	13 10 17.7	+1.3
ARRY				S	Sn	13 10 52.3	+0.9
VC1	Cotopaxi 1	2.87	84	P	Pn	13 10 19.6	+3.0
PISA	Pisayambo	2.88	92	P	Pn	13 10 18.3	+1.7
TAMB	Tambo	2.90	85	P	Pn	13 10 20.3	+3.3
ANTI	Antisana	3.14	81	P	Pn	13 10 23.1	+2.8
CAYR	Refugio Cayamb	3.39	74	⇑P	Pn	13 10 27.6	+3.7

MAN 04 13:50:28.8, 13.67N×120.05E, h30^{km}, mb3.5, ML2.2, MS1.7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.20	70	eP	Pb	13 50 36.3	+1.3
LUBP				eS	Sb	13 50 39.4	+0.2
SJMP	San Jose	1.58	139	eP	Pn	13 50 55.2	-0.1
ENPP	El Nido	2.52	194	eP	Pn	13 51 08.4	-0.3

IGQ 04 14:17:23.6, 2.26S×78.96W, h12^{km}±5^{km}, mb4.2, 6C-3D, Error ellipse: s-maj=9.0km s-min=2.4km az=46.5, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	0.83	23	⇑P	Pb	14 17 39.7	+0.3
ARRY	Arrayan	0.90	34	⇑P	Pb	14 17 41.0	+0.3
ARRY				S	Sb	14 17 52.4	0.0
PATA	Patacocha	0.92	35	P	Pb	14 17 42.1	+1.2
PATA				S	Sb	14 17 54.3	+1.4
CUSU	Cusua	0.94	31	P	Pb	14 17 42.0	+0.6
RETU	Refugio	0.95	33	P	Pb	14 17 42.4	+0.8
RETU				S	Sb	14 17 54.6	+0.8
JUIV	Juive	0.96	31	⇓P	Pb	14 17 42.2	+0.4
PISA	Pisayambo	1.32	26	P	Pb	14 17 48.9	+1.0
TAMB	Tambo	1.66	21	⇓P	Pn	14 17 55.1	+2.2
TAMB				S	Sn	14 18 17.4	+3.2
NAS1	Nasa	1.68	17	P	Pn	14 17 55.8	+2.7
VC1	Cotopaxi 1	1.70	19	⇑P	Pn	14 17 55.6	+2.2
ANTI	Antisana	1.96	24	⇑P	Pn	14 18 00.7	+3.5
HOJA	Cerro de Hojas	1.98	307	⇑P	Pn	14 17 55.1	-2.4
SALI	Salinas	2.03	272	P	Pn	14 17 57.5	-0.6
TERV	Terraza Guagua	2.10	10	P	Pn	14 18 02.8	+3.6
TERV				S	Sn	14 18 29.7	+4.4
PINO	Pino	2.11	10	⇓P	Pn	14 18 03.1	+3.8
YANA	Yana	2.16	10	⇑P	Pn	14 18 03.4	+3.4
CAYR	Refugio Cayamb	2.45	23	P	Pn	14 18 09.9	+5.8
CONE	Cono NE Rev Vo	2.54	31	P	Pn	14 18 11.0	+5.6

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*JMA **04** 14:40:36.4±0.2, 24.96N×122.18E, h50^{km}, M2.4*

TAP 04 14:40:37.1, 24.71N×122.06E, h54^{km}, ML3.1, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.90	106	P	P	14 40 53.0	-0.8
YOJ				S	S	14 41 05.1	-1.1
IRIF	Iriomote-Funau	1.57	103	P	P	14 41 01.7	-1.5
IRIF				S	S	14 41 20.7	-1.7
HATJ	Hateruma jima	1.72	112	P	P	14 41 05.0	-0.3
HATJ				eS	S	14 41 25.7	-0.4
JKRS	Kuro-shima	1.84	104	P	P	14 41 05.8	-1.1
JKRS				S	S	14 41 27.9	-1.1
JIJ	Ishigaki jima	1.93	100	P	P	14 41 06.9	-1.3
JIJ				S	S	14 41 29.0	-2.2

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*NEIC **04** 14:42:05.6±1.3, 44.59S×168.32E, h93^{km}±16^{km}, ML4.1(WEL), Error ellipse: s-maj=15.4km s-min=8.9km az=107.0*
*WEL **04** 14:42:05.5±0.2, 44.59S×168.17E, h84^{km}±2^{km}, ML4.0/6, Error ellipse: s-maj=2.1km s-min=1.4km az=90.0*

ISC 04 14:42:04.1±0.7, 44.60S±0.04×168.34E±0.06, h99^{km}±6^{km}, n42, σ1^{s}16/67, 8C-2D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.30	256	⇑PN	P	14 42 17.7	-0.9
MSZ				SN	S	14 42 26.4	-3.2
WKZ	Wanaka	0.54	115	P	P	14 42 21.5	+1.3
WKZ				S	S	14 42 31.9	-0.3
WKZ	Wanaka	0.54	115	⇑PN	P	14 42 21.5	+1.4
WKZ				SN	S	14 42 32.0	-0.2
JCZ	Jackson Bay	0.61	30	P	P	14 42 21.6	+0.9
JCZ				S	S	14 42 33.2	0.0
JCZ	Jackson Bay	0.61	30	⇓PN	P	14 42 21.6	+0.9
JCZ				SN	S	14 42 33.2	+0.1
MLZ	Mavora Lakes	0.76	189	P	P	14 42 22.5	+0.4
MLZ				S	S	14 42 35.4	-0.1
MLZ	Mavora Lakes	0.76	189	⇑PN	P	14 42 22.5	+0.4
MLZ				SN	S	14 42 34.7	-0.8
EAZ	Earnscleugh	0.94	133	P	P	14 42 25.4	+1.5
EAZ	Earnscleugh	0.94	133	⇑PN	P	14 42 25.4	+1.4
EAZ				SN	S	14 42 39.1	+0.3
DCZ	Deep Cove	1.21	223	PN	P	14 42 25.9	-1.3
DCZ				SN	S	14 42 41.4	-3.2
WHZ	Wether Hill Ro	1.32	192	P	P	14 42 28.9	+0.4
WHZ	Wether Hill Ro	1.32	192	⇑PN	P	14 42 28.9	+0.4
WHZ				SN	S	14 42 45.5	-1.2
LBZ	Lake Benmore	1.34	82	P	P	14 42 30.2	+1.5
LBZ	Lake Benmore	1.34	82	⇑PN	P	14 42 30.2	+1.5
FOZ	Fox Glacier	1.42	44	PN	P	14 42 31.5	+1.8
FOZ				SN	S	14 42 51.3	+2.5
TUZ	Tuapeka	1.64	146	P	P	14 42 33.8	+1.4
TUZ	Tuapeka	1.64	146	⇑PN	P	14 42 33.8	+1.5
TUZ				SN	S	14 42 53.3	0.0
ODZ	Otahua Downs	1.70	106	P	P	14 42 34.9	+1.7
ODZ	Otahua Downs	1.70	106	⇑PN	P	14 42 34.9	+1.7
ODZ				SN	S	14 42 54.4	-0.3
RPZ	Rata Peaks	2.15	67	eP	P	14 42 39.9	+0.8
RPZ	Rata Peaks	2.15	67	⇓PN	P	14 42 39.9	+0.9
RPZ				SN	S	14 43 06.1	+1.1
WVZ	Waitaha Valley	2.31	50	eP	P	14 42 41.5	+0.2
WVZ	Waitaha Valley	2.31	50	PN	P	14 42 41.4	+0.1
WVZ				SN	S	14 43 09.5	+0.5
MQZ	McQueen's Vall	3.23	75	eP	P	14 42 53.9	-0.1
MQZ	McQueen's Vall	3.23	75	PN	P	14 42 53.9	-0.1
MQZ				SN	S	14 43 29.4	-2.2
CRLZ	Canterbury Las	3.25	73	P	P	14 42 54.1	-0.1
CRLZ	Canterbury Las	3.25	73	PN	P	14 42 54.0	-0.2
CRLZ				SN	S	14 43 30.3	-1.9
LTZ	Lake Taylor	3.38	59	P	P	14 42 55.3	-0.7
LTZ	Lake Taylor	3.38	59	PN	P	14 42 55.3	-0.7
LTZ				SN	S	14 43 34.8	-0.5
KHZ	Kahutara	4.37	62	PN	P	14 43 08.6	-0.9
KHZ				SN	S	14 43 57.9	-1.6
THZ	Tophouse	4.38	51	P	P	14 43 08.8	-0.9
THZ	Tophouse	4.38	51	PN	P	14 43 08.8	-0.9
THZ				SN	S	14 43 58.6	-1.3
QRZ	Quartz Range	4.87	41	eP	P	14 43 16.2	-0.2
QRZ	Quartz Range	4.87	41	PN	P	14 43 16.0	-0.4
QRZ				SN	S	14 44 09.5	-2.5
NNZ	Nelson	5.01	49	eP	P	14 43 19.4	+1.1
NNZ	Nelson	5.01	49	PN	P	14 43 19.3	+1.0
NNZ				SN	S	14 44 14.8	-0.7
TUWZ	Tuamarina	5.19	54	PN	P	14 43 21.0	+0.3
TUWZ				SN	S	14 44 20.1	+0.3
CAW	Cannon Point	6.05	57	PN	P	14 43 32.0	-0.5
MRZ	Mangatainoka R	6.63	56	PN	P	14 43 40.7	+0.1
MRZ				SN	S	14 44 50.5	-4.8
WAZ	Wanganui	6.91	48	PN	P	14 43 48.5	+4.1
BFZ	Birch Farm	7.02	59	PN	P	14 43 46.7	+0.7
BFZ				SN	S	14 44 59.8	-5.0
OUZ	Omahuta	10.20	25	eP	P	14 44 30.7	+1.9

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*CSEM **04** 14:50:00.7±0.1, 37.02N×22.93E, h80^{km}, ML3.3, Error ellipse: s-maj=2.5km s-min=1.7km az=96.0*
*ATH **04** 14:50:01.5, 37.06N×22.94E, h75^{km}±4^{km}, ML3.3*
*NEIC **04** 14:50:01.5, 37.06N×22.94E, h75^{km}, After ATH.*
*HLW **04** 14:50:01.4, 36.97N×22.79E, h33^{km}, Mb3.6*

ISC 04 14:50:00.9±0.9, 37.02N±0.06×22.9E±0.1, h90^{km}±15^{km}, n15, σ0^{s}58/16, 3D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLI	Veliai	0.30	177	⇓iP	P	14 50 13.7	-0.7
KYTH	Kithira	0.75	172	⇓iP	P	14 50 18.5	+0.4
ITM	Ithomi	0.81	282	⇓iP	P	14 50 19.0	+0.3
NAIG	Nisos Aigina	0.87	32	eP	P	14 50 19.0	-0.3
MGER	Gerania Oros	1.00	16	eP	P	14 50 20.5	-0.3
ATH	Athens Observa	1.14	34	eP	P	14 50 22.5	-0.1
PTL	Penteli	1.27	36	eP	P	14 50 23.9	-0.4
MPAR	Parnis Oros	1.30	30	eP	P	14 50 24.5	-0.1
VAM	Vamos	1.92	147	eP	P	14 50 34.0	+1.5
EVR	Evrytania	2.08	336	eP	P	14 50 35.5	+0.7
APE	Apeiranthos	2.09	88	eP	P	14 50 35.5	+0.6

VLS	**Valsamata**	**2.18**	**303**	*e*P	**P**	**14 50 36.0**	**-0.1**
SLUM		**5.83**	**160**	P	**P**	**14 51 26.2**	**-0.2**
SWA2		**8.04**	**164**	P	**P**	**14 51 55.9**	**-1.0**
SWA1		**8.08**	**162**	P	**P**	**14 51 57.1**	**-0.3**
SWA1				S	**S**	**14 53 21.4**	**-6.4**

NIED ***04*** *15:19:00,33.90N×141.60E,h8^{km},Mw4.2 Best double couple: $M_0$2.15×10^{15} NP1:ϕ_s343°,δ62°,λ48°. NP2:ϕ_s225°,δ49°,λ142°.*

MOS ***04*** *15:19:30.2±1.3,33.93N×141.69E,h33^{km},mb4.4/10,Error ellipse: s-maj=26.2km s-min=12.5km az=109.5*

JMA ***04*** *15:19:30.4±0.4,33.92N×141.61E,h74^{km}±4^{km},M3.6*

ISC 04 15:19:29.5±1.3,**33.85N**±0.07×**141.68E**±0.09,**h36**^{km}±8^{km},**n36,**σ**1^{s}04**/41,**mb4.6**/11,**MS4.0**/4,**2C-1D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.99**	**324**	P	**P**	**15 19 48.0**	**+0.9**
BSO3	**Boso 3**	**1.36**	**315**	P	**P**	**15 19 53.0**	**+0.6**
BSO4	**Boso 4**	**1.59**	**316**	P	**P**	**15 19 56.6**	**+0.9**
KTR	**Katsuura**	**1.72**	**319**	P	**P**	**15 19 58.1**	**+0.6**
KTR				S	**S**	**15 20 20.8**	**+2.4**
JHJ2	**Mitsune**	**1.72**	**245**	P	**P**	**15 19 59.0**	**+1.5**
JIM2	**Oshima 3**	**2.05**	**296**	P	**P**	**15 20 01.4**	**-0.9**
JIM2				*e*S	**S**	**15 20 26.7**	**-0.2**
JIZS	**Izushimoda**	**2.48**	**291**	P	**P**	**15 20 07.5**	**-0.8**
JOD2	**Odawara 2**	**2.56**	**304**	P	**P**	**15 20 08.9**	**-0.7**
JYN	**Shimob**	**3.06**	**303**	P	**P**	**15 20 15.0**	**-1.7**
JYN				*e*S	**S**	**15 20 54.0**	**+1.5**
SHZ3	**Shizuoka 3**	**3.11**	**294**	P	**P**	**15 20 18.5**	**+1.1**
JRY	**Ryogami san**	**3.14**	**314**	P	**P**	**15 20 17.3**	**-0.6**
JAG	**Ashikaga**	**3.15**	**325**	P	**P**	**15 20 16.5**	**-1.5**
JAG				*e*S	**S**	**15 20 54.0**	**-0.8**
MAT	**Matsushiro**	**3.91**	**314**	P	**P**	**15 20 28.4**	**-0.4**
MAT				S	**S**	**15 21 13.3**	**-0.8**
YSS	**Yuzh-Sakhalins**	**13.12**	**3**	*i* P	**P**	**15 22 34.7**	**-1.2**
YAK	**Yakutsk**	**29.22**	**348**	⇑*e*P	**P**	**15 25 29.0**	**-0.8**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
YAK				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.8						
ULN	**Ulaanbaatar**	**29.42**	**309**	*i* P	**P**	**15 25 32.8**	**+1.1**
BOD	**Bodaibo**	**30.37**	**331**	*e*P	**P**	**15 25 41.3**	**+1.3**
ZAK	**Zakamensk**	**32.49**	**312**	*e*P	**P**	**15 25 57.5**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
MOY	**Mondy**	**34.23**	**314**	*e*P	**P**	**15 26 06.7**	**-7.0**
MOY				pmax	pmax		
	comp=Z,16nm,4.4s						
BILL	**Bilibino**	**37.03**	**15**	*i* P	**P**	**15 26 37.8**	**+0.4**
BILL				*e**PP	pP	15 26 48.3	+0.6
BILL				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb4.1						
BILL				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.2						
TIXI	**Tiksi**	**38.47**	**354**	*i* P	**P**	**15 26 49.0**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.0s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.6						
CMAR	**Chiang Mai Arr**	**41.00**	**259**	*i* P	**P**	**15 27 10.4**	**-0.5**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAL	**Zalesovo**	**44.28**	**315**	*i* P	**P**	**15 27 40.5**	**+3.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NVS	**Novosibirsk**	**45.24**	**316**	*e*P	**P**	**15 27 44.8**	**-0.1**
JIRN	**Jiri**	**47.60**	**278**	*e*P	**P**	**15 28 03.7**	**-0.2**
	comp=Z,19nm,0.9s,mb5.1						
KURK	**Kurchatov**	**48.11**	**310**	⇓*e*P	**P**	**15 28 07.5**	**-0.1**
PKI	**Pulchoki**	**48.28**	**278**	*e*P	**P**	**15 28 07.7**	**-1.5**
KKN	**Kakani**	**48.30**	**279**	*e*P	**P**	**15 28 08.7**	**-0.7**
	comp=Z,13nm,0.9s,mb4.9						
DMN	**Daman**	**48.51**	**279**	*e*P	**P**	**15 28 10.2**	**-0.8**
	comp=Z,7.3nm,0.9s,mb4.7						
GKN	**Gorkha**	**48.75**	**279**	*e*P	**P**	**15 28 12.1**	**-0.7**
	comp=Z,27nm,1.1s,mb5.2						
KOLN	**Koldanda**	**49.69**	**280**	*e*P	**P**	**15 28 19.6**	**-0.5**
	comp=Z,24nm,1.3s,mb5.1						
ARU	**Arti**	**58.91**	**320**	⇑*i*P	**P**	**15 29 18.5**	**-8.6**
ARU				*e*		15 30 19.6	
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
YKA	**Yellowknife Ar**	**66.46**	**29**	*i* P	**P**	**15 30 17.7**	**+0.7**
KIV	**Kislovodsk**	**73.17**	**312**	*e*P	**P**	**15 31 00.4**	**+2.2**
KIV				*e*S	S	15 40 24.3	+2.0
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
KIV				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
AKASG	**Malin Array Be**	**76.95**	**323**	*i* P	**P**	**15 31 20.3**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	**81.13**	**312**	*i* P	**P**	**15 31 44.2**	**+1.5**

NEIC ***04*** *15:41:28.4,36.62N×21.09E,h5^{km},MD3.6(ATH),After ATH.*

CSEM ***04*** *15:41:28.4±0.1,36.62N×21.09E,h5^{km},MD3.6/6,Error ellipse: s-maj=3.3km s-min=1.7km az=35.0,After ATH*

ATH 04 15:41:28.4,36.62N×21.09E,h5^{km}**,MD3.6**/6**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.87**	**50**	*e*PG	Pg	15 41 44.6	-1.2
ITM				*e*SB	Sb	15 41 57.3	-0.1
VLI	**Veliai**	**1.49**	**86**	*e*PG	Pg	15 41 56.2	-1.9
KYTH	**Kithira**	**1.60**	**102**	*e*PB	Pb	15 41 59.8	+1.6
VLS	**Valsamata**	**1.60**	**346**	*e*PB	Pb	15 41 58.6	+0.4
NAIG	**Nisos Aigina**	**2.23**	**59**	*e*PN	Pn	15 42 08.1	+1.6
EVR	**Evrytania**	**2.36**	**14**	*e*PN	Pn	15 42 11.2	+2.8

NEIC ***04*** *15:46:36.6,37.89N×1.80W,ML3.1(LDG),MN2.8(MDD),After MDD.*

INMG ***04*** *15:46:36.8±1.2,37.92N×1.80W,h1^{km}±2^{km},ML2.8,Error ellipse: s-maj=2.0km s-min=1.7km az=135.0*

CSEM ***04*** *15:46:37.2±0.1,37.94N×1.80W,h5^{km},ML3.1/12,Error ellipse: s-maj=2.8km s-min=1.8km az=166.0*

LDG ***04*** *15:46:38.6±0.5,37.85N×1.87W,h5^{km},Md3.7/1,Ml3.1/4,Error ellipse: s-maj=10.7km s-min=4.2km az=140.0*

MDD 04 15:46:36.7±0.3**,37.88N×1.80W,mbLg2.7**/22**,Error ellipse: s-maj=3.6km s-min=2.1km az=7.0,PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	**0.44**	**95**	Pg	Pg	15 46 44.2	-1.4
	8.7nm,0.2s,SNR=9.1						
EMUR				Lg		15 46 51.0	
	741nm,0.4s,SNR=12						
EMUR	**La Murta**	**0.44**	**95**	Pg	Pg	15 46 44.2	-1.4
	419nm,0.5s,SNR=9.1						
CART	**Cartagena**	**0.70**	**115**	*e*Pg	Pg	15 46 50.7	+0.1
CART				*e*Sg	Sg	15 46 58.2	-1.7
CART	**Cartagena**	**0.70**	**115**	P	Pg	15 46 50.8	+0.2
CART				S	Sg	15 46 58.2	-1.7
CART	**Cartagena**	**0.70**	**115**	*e*Pg	Pg	15 46 50.7	+0.1
CART				*e*Sg	Sg	15 46 58.2	-1.7
EVIA	**Vianos**	**0.94**	**324**	Pg	Pg	15 46 53.6	-1.8
	75nm,0.6s,SNR=26						
EVIA				Lg		15 47 07.7	
	117nm,0.4s,SNR=10.0						
ENIJ	**Nijar**	**0.97**	**200**	Pg	Pg	15 46 53.6	-2.3
	19nm,0.3s,SNR=7.9						
ENIJ				Lg		15 47 08.9	
	80nm,0.3s,SNR=8.2						
EQES	**Quesada**	**1.01**	**266**	Pg	Pg	15 46 55.7	-1.2
	8.6nm,0.1s,SNR=9.5						
EQES				Lg		15 47 09.9	
	159nm,0.2s,SNR=8.8						
EQES	**Quesada**	**1.01**	**266**	Pg	Pg	15 46 55.7	-1.2
	42nm,0.3s,SNR=9.5						
EBER	**Berja**	**1.31**	**222**	Pg	Pg	15 46 59.6	-3.3
	4.3nm,0.2s,SNR=9.7						
EBER				Lg		15 47 18.8	
	185nm,0.7s,SNR=12						
EBER	**Berja**	**1.31**	**222**	Pg	Pg	15 46 59.6	-3.3
	40nm,0.4s,SNR=9.7						
EBEN	**Beniarda**	**1.48**	**56**	Pg	Pg	15 47 03.7	-2.6
	1.9nm,0.2s,SNR=7.9						
EBEN				Lg		15 47 24.4	
	20nm,0.4s,SNR=6.7						
EBEN	**Beniarda**	**1.48**	**56**	Pg	Pg	15 47 03.7	-2.6
	SNR=7.9						
EBAN	**Banos Encina**	**1.59**	**281**	Pn	Pn	15 47 05.1	-1.2
	10nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	15 47 25.0	-2.9
	13nm,0.2s,SNR=7.9						
EBAN				Lg		15 47 27.4	
	110nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.01**	**249**	Pn	Pn	15 47 11.0	-1.2
	2.2nm,0.1s,SNR=8.0						
ELOJ				Sn	Sn	15 47 36.2	-2.3
	4.6nm,0.3s,SNR=6.8						
EADA	**Adamuz**	**2.21**	**278**	Pn	Pn	15 47 13.7	-1.4
	4.8nm,0.1s,SNR=4.0						
EADA				Sn	Sn	15 47 39.7	-3.9
	5.7nm,0.1s,SNR=4.9						
EADA				Lg		15 47 47.5	
	38nm,0.3s,SNR=7.8						
EADA	**Adamuz**	**2.21**	**278**	Pn	Pn	15 47 13.7	-1.4
	6.3nm,0.3s,SNR=4.0						
EADA				Sn	Sn	15 47 39.7	-3.9
	12nm,0.3s,SNR=4.9						
ESDC	**Sonseca Array**	**2.46**	**317**	Pg	Pg	15 47 20.9	-4.9
	8.7nm,0.5s,baz=134,slow=17,SNR=20						
ESDC				Sn	Sn	15 47 46.5	-3.4
	1.8nm,0.2s,baz=132,slow=24,SNR=3.6						
ESDC				Lg		15 47 54.5	
	9.9nm,0.2s,baz=136,slow=30,SNR=9.6						
ESDC	**Sonseca Array**	**2.46**	**317**	Pg	Pg	15 47 20.9	-4.9
	8.7nm,0.5s,SNR=20						
ESDC				Sn	Sn	15 47 46.5	-3.4
	1.8nm,0.2s,SNR=3.6						
ESLA	**Sonseca Array**	**2.46**	**317**	*e*Pg	Pg	15 47 23.5	-2.3
ESLA				*e*Sn	Sn	15 47 46.4	-3.6
ESLA				*e*Sg	Sg	15 47 54.5	-4.1
ESLA	**Sonseca Array**	**2.46**	**317**	*e*Pg	Pg	15 47 23.5	-2.3
ESLA				*e*Sn	Sn	15 47 46.4	-3.5
EMOS	**Mosqueruela**	**2.68**	**22**	Pn	Pn	15 47 20.2	-1.7
	0.6nm,0.2s,SNR=7.5						
EMOS				Sn	Sn	15 47 53.0	-2.5
	15nm,0.9s,SNR=5.6						
EMOS				Lg		15 48 01.6	
	15nm,0.5s,SNR=7.9						
EMOS	**Mosqueruela**	**2.68**	**22**	Pn	Pn	15 47 20.2	-1.7
	7.8nm,0.5s,SNR=7.5						
EMOS				Sn	Sn	15 47 53.0	-2.6
	15nm,0.9s,SNR=5.6						
EMIJ	**Mijas**	**2.71**	**242**	Pn	Pn	15 47 21.7	-0.6
	2.3nm,0.3s,SNR=4.0						
EMIJ				Lg		15 48 02.9	
	17nm,0.5s,SNR=7.9						
EIBI	**Ibiza**	**2.72**	**64**	Pn	Pn	15 47 19.8	-2.5
	0.7nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	15 47 52.7	-3.8
	4.5nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.72**	**64**	Pn	Pn	15 47 19.8	-2.6
	SNR=7.9						
EIBI				Sn	Sn	15 47 52.7	-3.8
	SNR=7.9						
EBR	**Ebro Roquetas**	**3.43**	**30**	*e*SG	Sg	15 48 29.7	-1.2
ERTA	**Horta de San J**	**3.48**	**28**	Pn	Pn	15 47 26.9	-6.4
	0.9nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	15 48 12.4	-3.4
	4.7nm,0.4s,SNR=7.9						
ERTA				Lg		15 48 26.8	
	3.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.86**	**270**	Pn	Pn	15 47 36.2	-2.4
	0.4nm,0.1s,SNR=5.7						
EMIN				Sn	Sn	15 48 19.5	-5.9
	2.0nm,0.1s,SNR=7.6						
EMIN				Lg		15 48 37.7	
	16nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.86**	**270**	Pn	Pn	15 47 36.2	-2.4
	1.6nm,0.4s,SNR=5.7						
EMIN				Sn	Sn	15 48 19.5	-5.9
	5.1nm,0.5s,SNR=7.6						
ESAC	**San Caprasio**	**3.97**	**15**	Sn	Sn	15 48 20.4	-7.7
	14nm,0.3s,SNR=7.9						
ESAC				Lg		15 48 44.3	
	70nm,0.7s,SNR=7.9						
ESAC	**San Caprasio**	**3.97**	**15**	Sn	Sn	15 48 20.4	-7.7
	SNR=7.9						
EPOB	**Poblet**	**4.12**	**32**	Pn	Pn	15 47 38.7	-3.5
	0.1nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	15 48 26.3	-5.5
	4.5nm,0.6s,SNR=7.9						
EPOB	**Poblet**	**4.12**	**32**	Pn	Pn	15 47 38.7	-3.5
	SNR=7.9						
EPOB				Sn	Sn	15 48 26.3	-5.5
	SNR=7.9						
EBAD	**Badajoz**	**4.19**	**284**	Pn	Pn	15 47 39.8	-3.5
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	15 48 26.6	-7.1
	3.2nm,0.2s,SNR=6.1						
EBAD				Lg		15 48 49.6	
	18nm,0.3s,SNR=10						
EBAD	**Badajoz**	**4.19**	**284**	Pn	Pn	15 47 39.8	-3.5
	SNR=7.9						
EBAD				Sn	Sn	15 48 26.6	-7.2
	2.6nm,0.3s,SNR=6.1						
PBEJ	**Beja**	**4.80**	**274**	*e*Sn	Sn	15 48 43.5	-5.6
PBEJ				*e*Sg	Sg	15 49 07.9	-8.5
	12nm,0.5s						
PBEJ	**Beja**	**4.80**	**274**	*e*Sn	Sn	15 48 43.5	-5.6
PBEJ				*e*Sg	Sg	15 49 07.9	-8.5
	12nm,0.5s						
PCBR	**Castelo Branco**	**4.84**	**296**	*e*Pn	Pn	15 47 49.9	-2.7
PCBR				*e*Sn	Sn	15 48 44.6	-5.6
PCBR				*e*Sg	Sg	15 49 10.5	-7.4
	14nm,0.7s						
PCBR	**Castelo Branco**	**4.84**	**296**	*e*Pn	Pn	15 47 49.9	-2.7
PCBR				*e*Sn	Sn	15 48 44.6	-5.6
PCBR				*e*Sg	Sg	15 49 10.5	-7.4
	14nm,0.7s						
EVO	**Evora**	**4.94**	**279**	*e*Pn	Pn	15 47 51.3	-2.6
EVO				*e*Sn	Sn	15 48 46.7	-5.9
EVO				*e*Sg	Sg	15 49 15.2	-5.9
	51nm,0.7s						
EBIE	**Bielsa**	**5.02**	**17**	Pn	Pn	15 47 52.6	-2.4
EBIE				Lg		15 49 14.5	
EBIE	**Bielsa**	**5.02**	**17**	Pn	Pn	15 47 52.7	-2.4
ETSF	**Etsaut**	**5.10**	**10**	*e*Pn	Pn	15 47 54.3	-1.9
ETSF				*e*Sn	Sn	15 48 50.9	-5.8
ETSF				*e*Sg	Sg	15 49 19.0	-7.4
	1.3nm,0.2s						
MTE	**Manteigas**	**5.12**	**301**	*e*Pn	Pn	15 47 53.9	-2.6
MTE				*e*Sg	Sg	15 49 19.4	-7.9
	15nm,0.5s						
MTE	**Manteigas**	**5.12**	**301**	*e*Pn	Pn	15 47 53.9	-2.6
MTE				*e*Sg	Sg	15 49 19.4	-7.9
	15nm,0.5s						
MOE	**Montemor**	**5.20**	**279**	*e*Sn	Sn	15 48 52.6	-6.6
MOE				*e*Sg	Sg	15 49 21.5	-8.3
SJPF	**Ste Jean**	**5.24**	**5**	*e*Pn	Pn	15 47 55.5	-2.7
SJPF				*e*Sn	Sn	15 48 53.9	-6.4
SJPF				*e*Sg	Sg	15 49 23.8	-7.4
	4.3nm,0.5s						
EPF	**Esparros**	**5.39**	**17**	*e*Pn	Pn	15 47 58.9	-1.4
EPF				*e*Sn	Sn	15 48 57.7	-6.4
EPF				*e*Sg	Sg	15 49 28.5	-7.8
	4.0nm,0.4s						
EPF	**Esparros**	**5.39**	**17**	*e*Pn	Pn	15 47 58.9	-1.4
EPF				*e*Sg	Sg	15 49 28.5	-7.8
	2.0nm,0.4s						
PBRG	**Braganca**	**5.46**	**317**	*e*Pn	Pn	15 47 58.0	-3.3
PBRG				*e*Sg	Sg	15 49 27.7	-11
	12nm,0.5s						
PBRG	**Braganca**	**5.46**	**317**	*e*Pn	Pn	15 47 58.0	-3.3
PBRG				*e*Sg	Sg	15 49 27.7	-11
	12nm,0.5s						
PVIS	**Viseu**	**5.51**	**303**	*e*Pn	Pn	15 47 58.6	-3.4
PVIS				*e*Sn	Sn	15 49 00.3	-6.7
PVIS				*e*Sg	Sg	15 49 30.3	-10
	14nm,0.5s						
PVIS	**Viseu**	**5.51**	**303**	Pn	Pn	15 47 58.6	-3.4
PVIS				Sn	Sn	15 49 00.3	-6.7
PVIS				Lg		15 49 30.3	
	6.9nm,0.5s						
ECAL	**Calabor**	**5.55**	**318**	Pn	Pn	15 47 58.7	-3.9
	SNR=7.9						
ECAL				Sn	Sn	15 48 58.7	-9.3
	SNR=7.9						
ECAL				Lg		15 49 32.2	
	15nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**5.55**	**318**	Pn	Pn	15 47 58.7	-3.9
	SNR=7.9						
ECAL				Sn	Sn	15 48 58.7	-9.4
	SNR=7.9						
EARI	**Arriondas**	**6.00**	**335**	Pn	Pn	15 48 05.5	-3.4
EARI				Sn	Sn	15 49 12.4	-6.9
EARI				Lg		15 49 46.7	
EARI	**Arriondas**	**6.00**	**335**	Pn	Pn	15 48 05.5	-3.4
	SNR=7.9						
EARI				Sn	Sn	15 49 12.4	-6.9
	SNR=7.9						
ELOB	**Lobios**	**6.25**	**312**	Sn	Sn	15 49 18.1	-7.4
	SNR=7.9						
ELOB				Lg		15 49 54.8	
	12nm,0.6s,SNR=7.9						

GUC 04 15:46:58.9±0.8**,37.97S×73.52W,h23**^{km}±6^{km}**,ML4.1, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMCH	**Temuco**	**1.05**	**138**	*e*P	Pb	15 48 00.1	+42
TMCH				*i* S	Sb	15 48 13.3	+42
CCHI	**Chillan**	**1.79**	**40**	*e*P	Pn	15 47 28.9	0.0
CCHI				*i* S	Sn	15 47 51.9	+0.9
CCHI				AMP		15 47 60.0	
	comp=N,2µm,0.4s						
VLCH	**Valdivia**	**1.84**	**174**	*e*P	Pn	15 47 29.5	-0.2
VLCH				*i* S	Sn	15 47 53.5	+1.1
VLCH				AMP		15 48 05.5	
	comp=E,3µm,0.3s						
LNCH	**Linares**	**2.62**	**36**	*e*P	Pn	15 47 41.3	+0.5
LNCH				*i* S	Sn	15 48 12.6	+0.4
LNCH				AMP		15 48 25.4	
	comp=N,995nm,0.9s						
SFDO	**San Fernando**	**3.92**	**32**	*e*P	Pn	15 47 57.4	-1.8
FCH	**Farellones**	**5.33**	**30**	*e*P	Pn	15 48 16.5	-2.7
FCH				*i* S	Sn	15 49 17.7	-2.9

BJI ***04*** *16:06:28.3,17.76N×145.57E,h502^{km},mB4.9,mb5.2*

NEIC ***04*** *16:06:28.8±0.4,17.52N×145.45E,h512^{km}±4^{km},mb5.1/79,Error ellipse: s-maj=5.1km s-min=3.9km az=111.0*

MOS ***04*** *16:06:28.5±1.1,17.56N×145.47E,h524^{km},mb5.0/15,Error ellipse: s-maj=22.7km s-min=8.6km az=106.2*

HRVD ***04*** *16:06:28.8±0.6,17.54N×145.55E,h514^{km}±2^{km},MW5.3/39,Centroid moment Tensor Solution. LP body waves: s39,c70; Half duration: $1^{s}1$ Moment tensor: Scale 10^{17}Nm; M_{rr}-0.66±.05; $M_{\theta\theta}$-0.44±.08; $M_{\phi\phi}$1.10±.07; $M_{r\theta}$-0.35±.08; $M_{\theta\phi}$0.58±.07; $M_{\phi r}$0.46±.08; Best double couple: $M_0$1.247×10^{17} NP1:ϕ_s54°,δ51°,λ-31°. NP2:ϕ_s165°,δ67°,λ-136°. Principal axes: T 1.348, Plg10°, Azm286°; N -.199, Plg42°, Azm187°; P -1.146, Plg47°, Azm27°; nsta1 refers to body waves, cutoff=40s.*

ISC 04 16:06:27.9±0.4**,17.54N**±0.03×**145.52E**±0.03**,h509**^{km}±5^{km}**, h508**^{km}±6.7^{km}**:pP-P,n294,**σ**0^{s}97**/303**,mb5.1**/114**,26C-27D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	**0.87**	**164**	⇑*e*P	**P**	**16 07 30.2**	**0.0**
SAPN	**Saipan**	**2.32**	**175**	⇑*e*P	**P**	**16 07 30.2**	**-5.9**
GUMO	**Guam**	**3.98**	**189**	*e*P	**P**	**16 07 46.5**	**-0.8**
GUMO				*e*S	**S**	**16 08 49.2**	**-1.1**
MAJO	**Matsushiro**	**20.01**	**343**	*e*P	**P**	**16 10 25.8**	**-1.0**
	199nm,0.7s						
MAJO				*e*S	**S**	**16 13 40.3**	**+1.3**
MAT	**Matsushiro**	**20.01**	**343**	P	**P**	**16 10 25.8**	**-1.0**
MAT				S	**S**	**16 13 42.7**	**+3.7**
PLP	**Palo**	**20.88**	**255**	*e*P	**P**	**16 10 35.2**	**+0.1**
PLP				*i* S		16 10 37.9	
SCPH	**Surigao**	**20.92**	**251**	⇓*e*P	**P**	**16 10 35.4**	**-0.1**
PVCP	**Virac**	**20.95**	**262**	*e*P	**P**	**16 10 36.5**	**+0.8**
OCLP	**Ormoc**	**21.26**	**255**	*e*P	**P**	**16 10 39.5**	**+1.0**
MSLP	**Maasin**	**21.36**	**253**	*e*P	**P**	**16 10 40.0**	**+0.5**
MATI	**Mati**	**21.55**	**243**	*e*P	**P**	**16 10 41.3**	**+0.1**
PALP	**Palanan**	**22.06**	**272**	*e*P	**P**	**16 10 46.7**	**+0.8**
LLP	**Lapu-Lapu**	**22.11**	**254**	⇑*i*P	**P**	**16 10 46.6**	**+0.3**
BUKP	**Musuan**	**22.12**	**247**	*e*P	**P**	**16 10 46.5**	**-0.1**
CGP	**Cagayan de Oro**	**22.19**	**249**	*i* P	**P**	**16 10 48.0**	**+0.9**
BBP	**Basco**	**22.46**	**281**	*e*P	**P**	**16 10 49.4**	**-0.1**
GQP	**Guinayangan**	**22.50**	**264**	⇓*e*P	**P**	**16 10 50.1**	**0.0**
CAUP	**Cauayan**	**22.64**	**272**	*e*P	**P**	**16 10 52.0**	**+0.6**
BALP	**Baler**	**23.01**	**269**	*e*P	**P**	**16 10 55.7**	**+1.1**
APYP	**Conner**	**23.13**	**275**	*e*P	**P**	**16 10 54.6**	**-1.2**
BOAC	**Boac**	**23.17**	**263**	*e*P	**P**	**16 10 56.5**	**+0.4**
GUIM	**Jordan**	**23.27**	**256**	*e*P	**P**	**16 10 57.2**	**+0.2**
OTRP	**Odiongan**	**23.27**	**260**	*e*P	**P**	**16 10 57.9**	**+0.9**
PCPH	**Palayan**	**23.49**	**269**	⇑*e*P	**P**	**16 10 59.7**	**+0.7**
TATO	**Taipei**	**23.57**	**292**	*e*P	**P**	**16 10 59.5**	**-0.1**
	182nm,0.7s,mb5.8						
PAGZ	**Pagadian**	**23.62**	**249**	*e*P	**P**	**16 11 01.4**	**+1.2**
ABRA	**Dolores**	**23.65**	**274**	*e*P	**P**	**16 10 59.7**	**-0.7**
TGY	**Tagaytay City**	**23.89**	**265**	⇑*e*P	**P**	**16 11 03.3**	**+0.7**
SJMP	**San Jose**	**24.10**	**261**	*e*P	**P**	**16 11 05.6**	**+1.1**
SCZP	**Santa Cruz**	**24.59**	**270**	*e*P	**P**	**16 11 08.5**	**-0.4**
LUBP	**Lubang**	**24.62**	**265**	*e*P	**P**	**16 11 10.1**	**+0.9**
CUYO	**Cuyo Island**	**24.65**	**258**	*e*P	**P**	**16 11 10.2**	**+0.7**
BUSP	**Coron**	**25.08**	**261**	*e*P	**P**	**16 11 13.5**	**+0.2**
KS15	**Wonju Array Si**	**25.18**	**325**	*e*P	**P**	**16 11 12.8**	**-1.0**
SSE	**Sheshan**	**25.89**	**306**	P	**P**	**16 11 19.7**	**-0.5**
SSE				S	**S**	**16 15 11.0**	**-3.4**
SSE				AMB	AMB		
	comp=Z,68nm,1.0s,mb5.2						
SSE				AMB	AMB		
	comp=Z,105nm,4.7s						
SSE	**Sheshan**	**25.89**	**306**	P	**P**	**16 11 19.7**	**-0.5**
	comp=Z,68nm,1.0s,mb5.2						
SSE				PP		16 12 45.5	
SSE				sP	sP	16 13 52.9	+10
SSE				S	**S**	**16 15 11.0**	**-3.4**
SSE				LR	LR		
	comp=Z,60nm,17.6s						
ENPP	**El Nido**	**26.04**	**260**	*e*P	**P**	**16 11 22.2**	**+0.5**
QZH	**Quanzhou**	**26.13**	**291**	⇑*i*P	**P**	**16 11 22.6**	**+0.2**
QZH				XP	sP	16 13 45.1	-0.3
QZH				S	**S**	**16 15 16.0**	**-2.2**
QZH				SCP		16 17 22.6	
QZH				AMB	AMB		
	comp=Z,190nm,0.8s,mb5.8						
PMG	**Port Moresby**	**26.82**	**176**	*d* *i*P	**P**	**16 11 27.2**	**-1.4**
PMG	**Port Moresby**	**26.82**	**176**	*e*P	**P**	**16 11 26.7**	**-1.9**
	comp=Z,33nm,0.7s,mb5.1						
NJ2	**Nanjing**	**28.09**	**306**	*e*P	**P**	**16 11 39.4**	**-0.3**
NJ2				XP	sP	16 14 03.0	-0.8
NJ2				S	**S**	**16 15 47.0**	**-1.9**
NJ2				SCP		16 17 29.0	
NJ2				PCS		16 18 14.0	
NJ2				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,220nm,5.8s						
BATP	**Bataraza**	**28.32**	**256**	*e*P	**P**	**16 11 43.0**	**+1.1**
YSS	**Yuzh-Sakhalins**	**29.42**	**356**	⇑*e*P	**P**	**16 11 50.2**	**-0.8**
YSS				*e*S	**S**	**16 16 06.5**	**-2.8**
YSS				pmax	pmax		
	comp=N,100nm,0.8s						
YSS				pmax	pmax		
	comp=Z,150nm,0.8s,mb5.7						
YSS	**Yuzh-Sakhalins**	**29.42**	**356**	*e*P	**P**	**16 11 50.0**	**-1.0**
	comp=Z,124nm,0.8s,mb5.6						
TSM	**Tawau**	**30.11**	**247**	P	**P**	**16 11 58.2**	**+1.0**
MDJ	**Mudanjiang**	**30.13**	**337**	P	**P**	**16 11 56.8**	**-0.3**
MDJ				AP		16 13 22.0	
MDJ				PCP	PcP	16 14 41.6	-1.7
MDJ				S	**S**	**16 16 19.9**	**-0.5**
MDJ				SCP		16 17 34.5	
MDJ				PCS		16 18 26.2	
MDJ				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,142nm,4.3s						
GZH	**Guangzhou**	**30.64**	**286**	P	**P**	**16 12 01.3**	**-0.4**
GZH				AMB	AMB		
	comp=Z,146nm,1.0s,mb5.5						
SNY	**Shenyang**	**30.64**	**327**	⇓P	**P**	**16 12 00.9**	**-0.6**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
KKM	**Kota Kinabalu**	**30.82**	**252**	P	**P**	**16 12 04.5**	**+1.1**

WHN	**Wuhan**	**31.16**	**300**	⇑P	**P**	**16 12 07.0**	**+0.9**
WHN				AMB	AMB		
	comp=Z,160nm,1.0s,mb5.5						
CN2	**Changchun**	**31.19**	**331**	*e*P	**P**	**16 12 06.0**	**-0.2**
CN2				PCP	PcP	16 14 44.6	-1.5
CN2				*e*S	**S**	**16 16 33.2**	**-3.6**
CN2				SCP		16 17 37.4	
CN2				*e*SS	SS	16 19 18.5	+0.2
CN2				SCS	ScS	16 21 34.8	-3.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
KAKA	**Kakadu**	**32.72**	**204**	*e*P	**P**	**16 12 18.5**	**-0.8**
	comp=Z,11nm,0.6s,mb4.6						
KLR	**Kul'dur**	**33.53**	**344**	*e*P	**P**	**16 12 23.0**	**-2.8**
KLR				*e*		16 14 49.0	
KLR				*e*S	**S**	**16 17 05.2**	**-7.4**
BJI	**Beijing**	**33.86**	**318**	P	**P**	**16 12 28.9**	**+0.1**
BJI				PCP	PcP	16 14 58.9	+5.3
BJI				S	**S**	**16 17 14.7**	**-3.1**
BJI				SS	SS	16 20 05.1	-4.3
BJI				SCS	ScS	16 21 56.7	+4.9
BJI				AMB	AMB		
	comp=Z,46nm,1.1s,mb4.9						
BJI	**Beijing**	**33.86**	**318**	P	**P**	**16 12 28.9**	**+0.1**
	comp=Z,46nm,1.1s,mb4.9						
BJI				pP		16 13 49.4	
BJI				PcP	PcP	16 14 58.9	+5.3
BJI				S	**S**	**16 17 14.7**	**-3.1**
BJI				SS	SS	16 20 05.1	-4.3
BJI				ScS	ScS	16 21 56.7	+4.9
QIZ	**Qiongzhong**	**33.88**	**278**	P	**P**	**16 12 30.5**	**+1.4**
QIZ				AP		16 13 59.5	
QIZ				S	**S**	**16 17 17.2**	**-1.0**
QIZ				XS		16 19 58.2	
QIZ				AMB	AMB		
	comp=Z,62nm,1.4s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,207nm,8.1s						
XAN	**Xi'an**	**36.59**	**304**	P	**P**	**16 12 52.0**	**+0.5**
XAN				AMB	AMB		
	comp=Z,45nm,0.9s,mb5.0						
PET	**Petropavlovsk**	**36.88**	**13**	⇑*e*P	**P**	**16 12 54.5**	**+0.9**
PET				pmax	pmax		
	comp=Z,193nm,1.5s,mb5.4						
PET	**Petropavlovsk**	**36.88**	**13**	*e*P	**P**	**16 12 53.2**	**-0.4**
	comp=Z,36nm,0.8s,mb5.0						
GYA	**Guiyang**	**36.99**	**291**	⇑*i*P	**P**	**16 12 56.9**	**+2.0**
GYA				AP	pP	16 14 30.8	+4.4
GYA				XP	sP	16 15 21.0	-2.2
GYA				S	**S**	**16 18 03.8**	**-1.1**
GYA				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.4						
GYA				AMB	AMB		
	comp=Z,200nm,6.0s						
HHC	**Hu-ho-hao-te**	**37.30**	**316**	*e*P	**P**	**16 12 58.2**	**+1.0**
HHC				AP	pP	16 14 29.5	+0.6
HHC				PP	PP	16 14 37.8	+2.5
HHC				PCP	PcP	16 15 09.8	+5.8
HHC				XP	sP	16 15 24.0	-1.6
HHC				S	**S**	**16 18 04.0**	**-5.4**
HHC				SCP		16 18 07.5	
HHC				PCS		16 18 56.1	
HHC				XS		16 20 46.2	
HHC				AMB	AMB		
	comp=Z,69nm,0.9s,mb5.2						
CTA	**Charters Tower**	**37.40**	**179**	*e*P	**P**	**16 12 57.6**	**-0.6**
	comp=Z,13nm,0.9s,mb4.5						
CTAO	**Charters Tower**	**37.40**	**179**	*e*P	**P**	**16 12 57.4**	**-0.9**
	comp=Z,16nm,0.9s,mb4.5						
BTO	**Baotou**	**38.23**	**314**	*e*P	**P**	**16 13 05.8**	**+1.0**
BTO				S	**S**	**16 18 22.6**	**-0.4**
BTO				AMB	AMB		
	comp=Z,34nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**38.82**	**197**	*d i*P	**P**	**16 13 09.5**	**-0.3**
WRAB	**Tennant Creek**	**38.82**	**197**	*e*P	**P**	**16 13 09.1**	**-0.7**
	comp=Z,25nm,0.4s,mb5.1						
WRAB				*e*ScP		16 18 06.3	
WB2	**Warramunga Arr**	**38.83**	**197**	⇓*i*P	**P**	**16 13 09.7**	**-0.2**
WB2				*e*		16 15 08.9	
WB2				*e*SCP		16 18 07.0	
WB2				*e*S	**S**	**16 18 31.1**	**-0.9**
CD2	**Chengdu**	**40.12**	**297**	⇑*i*P	**P**	**16 13 20.9**	**+0.7**
CD2				AMB	AMB		
	comp=Z,160nm,0.8s,mb5.6						
KMI	**Kunming**	**40.43**	**288**	⇑P	**P**	**16 13 24.5**	**+1.7**
KMI				AP	pP	16 14 58.7	+2.7
KMI				PP	PP	16 15 10.0	+3.2
KMI				SCP		16 18 13.4	
KMI				S	**S**	**16 18 55.8**	**+0.6**
KMI				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.0						
KMI				AMB	AMB		
	comp=Z,232nm,3.1s						
KMI	**Kunming**	**40.43**	**288**	⇑P	**P**	**16 13 24.5**	**+1.7**
	comp=Z,65nm,1.2s,mb5.0						
KMI				pP	pP	16 14 58.7	+2.7
KMI				PP	PP	16 15 10.0	+3.2
KMI				ScP		16 18 13.4	
KMI				S	**S**	**16 18 55.8**	**+0.6**
KMI				sS		16 21 49.9	
KMI				SS	SS	16 22 26.2	+16
KMI				LR	LR		
	comp=Z,90nm,14.6s						
FITZ	**Fitzroy Crossi**	**40.46**	**210**	⇓*i*P	**P**	**16 13 23.3**	**+0.2**
	comp=Z,52nm,0.2s,mb5.7						
FITZ				*e*S	**S**	**16 18 53.2**	**-2.5**
KKTK	**Khon Kaen**	**40.80**	**275**	⇓P	**P**	**16 13 27.0**	**+1.1**
	comp=Z,2µm,0.6s						
LZH	**Lanzhou**	**41.16**	**305**	⇑P	**P**	**16 13 30.4**	**+1.8**
LZH				AP	pP	16 14 57.4	-4.7
LZH				PP	PP	16 15 18.3	+4.4
LZH				SCP		16 18 17.0	
LZH				S	**S**	**16 19 04.5**	**-1.2**
LZH				PCS		16 19 09.3	
LZH				SS	SS	16 22 24.5	+0.4
LZH				SCS	ScS	16 22 34.5	+0.7
LZH				AMB	AMB		
	comp=Z,112nm,1.1s,mb5.3						
LZH				AMB	AMB		
	comp=Z,338nm,5.2s						
LZH	**Lanzhou**	**41.16**	**305**	⇑P	**P**	**16 13 30.4**	**+1.8**
	comp=Z,112nm,1.1s,mb5.3						
LZH				pP	pP	16 14 57.4	-4.7
LZH				PP	PP	16 15 18.3	+4.4
LZH				sP	sP	16 16 06.5	+8.4
LZH				ScP		16 18 17.0	
LZH				S	**S**	**16 19 04.5**	**-1.2**
LZH				PcS		16 19 09.3	
LZH				sS		16 21 58.2	
LZH				SS	SS	16 22 24.5	+0.4
LZH				ScS	ScS	16 22 34.5	+0.7
FX1	**Attu Island--F**	**41.37**	**25**	*e*P	**P**	**16 13 30.4**	**+0.4**
SMY	**Shemya**	**41.64**	**26**	*e*P	**P**	**16 13 32.9**	**+0.7**
	comp=Z,255nm,0.9s,mb5.8						
MA2	**Magadan**	**42.15**	**4**	*d i*P	**P**	**16 13 35.9**	**-0.3**
MA2				*e*S	**S**	**16 19 17.6**	**-2.0**
MA2				pmax	pmax		
	comp=N,70nm,0.7s						
MA2				pmax	pmax		
	comp=Z,200nm,0.7s,mb5.8						
MA2	**Magadan**	**42.15**	**4**	*e*P	**P**	**16 13 35.5**	**-0.7**
	comp=Z,290nm,0.8s,mb5.9						
CLNS	**Chul'man**	**42.19**	**343**	*e*P	**P**	**16 13 35.9**	**-0.6**
CLNS				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.1						
CLNS				pmax	pmax		
	comp=N,25nm,0.8s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
ASPA	**Alice Springs**	**42.50**	**196**	⇓*i*P	**P**	**16 13 38.7**	**-0.7**
ASPA				*e*		16 15 20.4	
ASPA				*e*SCP		16 18 22.5	
ASPA				*e*S	**S**	**16 19 24.0**	**-1.0**
ASPA				*e*SCS	ScS	16 22 44.4	+2.1
NANT	**Nan**	**42.52**	**279**	⇑P	**P**	**16 13 40.0**	**+0.3**
	comp=E,88nm,1.0s,mb5.2						
CHRT	**Chiangrai**	**43.29**	**281**	⇑P	**P**	**16 13 46.7**	**+1.0**
	comp=E,232nm,0.9s,mb5.7						
NST	**Nakhon Sawan**	**43.46**	**274**	P	**P**	**16 13 48.2**	**+1.1**
	comp=E,250nm,0.7s,mb5.8						
ULN	**Ulaanbaatar**	**43.58**	**323**	*d i*P	**P**	**16 13 47.9**	**+0.3**
ULN	**Ulaanbaatar**	**43.58**	**323**	*e*P	**P**	**16 13 47.7**	**+0.1**
	comp=E,19nm,0.7s,mb4.7						
ULN				*e*PcP	PcP	16 15 23.9	-0.7
CHG	**Chiang Mai**	**44.18**	**279**	⇑P	**P**	**16 13 52.9**	**+0.2**
	comp=E,107nm,0.9s,mb5.4						
CHG				S	**S**	**16 19 44.2**	**-4.6**
KGM	**Kluang**	**44.21**	**254**	P	**P**	**16 13 55.0**	**+2.0**
CM31	**Chiang Mai Arr**	**44.22**	**279**	*e*P	**P**	**16 13 54.0**	**+1.0**
	comp=E,228nm,0.8s,mb5.8						
NOUC	**Port Laguerre**	**44.34**	**152**	*e*P	**P**	**16 13 52.8**	**-1.0**
NNT	**Nongplab**	**44.41**	**270**	P	**P**	**16 13 56.6**	**+2.1**
GTA	**Gaotai**	**45.13**	**309**	⇑P	**P**	**16 14 00.8**	**+1.0**
GTA				AP	pP	16 15 29.8	-5.3
GTA				PP	PP	16 15 55.1	+2.3
GTA				XP	sP	16 16 28.4	-2.4
GTA				SCP		16 18 32.5	
GTA				S	**S**	**16 20 00.3**	**-1.5**
GTA				XS		16 22 50.0	
GTA				SCS	ScS	16 22 58.1	-0.7
GTA				SS	SS	16 23 26.5	-3.7
GTA				AMB	AMB		
	comp=Z,28nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,197nm,4.9s						
KIWB	**Kanaga Island**	**45.13**	**32**	*e*P	**P**	**16 13 59.6**	**0.0**
IPM	**Ipoh**	**45.40**	**259**	P	**P**	**16 14 04.3**	**+2.0**
SEY	**Seymchan**	**45.60**	**4**	*e*P	**P**	**16 13 58.9**	**-4.2**
SEY						16 15 26.8	
SEY				*PP	pP	16 15 39.3	+0.7
SEY				*e*		16 15 59.3	
SEY				*SS		16 22 56.6	
SEY				pmax	pmax		
	comp=E,40nm,0.7s						
SEY				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.3						
SEY				pmax	pmax		
	comp=N,70nm,0.9s						
YAK	**Yakutsk**	**45.82**	**350**	*d i*P	**P**	**16 14 03.6**	**-1.3**
YAK				pmax	pmax		
	comp=Z,410nm,1.2s,mb5.8						
YAK	**Yakutsk**	**45.82**	**350**	*e*P	**P**	**16 14 03.1**	**-1.8**
	comp=Z,295nm,0.9s,mb5.8						
MBWA	**Marble Bar**	**46.02**	**214**	*e*P	**P**	**16 14 05.6**	**-1.4**
	comp=Z,22nm,0.9s,mb4.7						
BOD	**Bodaibo**	**46.51**	**337**	⇓*i*P	**P**	**16 14 09.3**	**-0.8**
BOD				pmax	pmax		
	comp=Z,62nm,1.5s,mb4.9						
ZAK	**Zakamensk**	**46.98**	**324**	⇓*i*P	**P**	**16 14 13.4**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
IRK	**Irkutsk**	**47.37**	**327**	*e*P	**P**	**16 14 15.8**	**-1.0**
IRK				*e*		16 15 35.9	
IRK				pmax	pmax		
	comp=Z,28nm,1.8s,mb4.5						
TLY	**Talaya**	**47.42**	**326**	P	**P**	**16 14 17.4**	**+0.2**
	comp=Z,99nm,0.6s,mb5.5,SNR=11						
TLY	**Talaya**	**47.42**	**326**	*e*P	**P**	**16 14 17.0**	**-0.2**
TLY				*e*		16 15 37.3	
TLY				*e*S	**S**	**16 20 29.6**	**-3.9**
TLY				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5						
TLY	**Talaya**	**47.42**	**326**	*e*P	**P**	**16 14 17.0**	**-0.2**
	comp=Z,12nm,0.8s,mb4.5						
MOY	**Mondy**	**48.86**	**325**	*e*P	**P**	**16 14 29.8**	**+1.8**
MOY				pmax	pmax		
	comp=Z,20nm,3.2s						
STKA	**Stephens Creek**	**49.27**	**184**	⇓*i*P	**P**	**16 14 30.2**	**-1.3**
	comp=Z,12nm,0.4s,mb4.8						
LSA	**Lhasa**	**50.86**	**294**	P	**P**	**16 14 48.0**	**+4.8**
LSA				S	**S**	**16 21 16.1**	**-4.6**
FORT	**Forrest**	**50.89**	**199**	*e*P	**P**	**16 14 42.1**	**-1.3**
	comp=Z,51nm,1.0s,mb4.8						
UNV	**Unalaska Valle**	**51.70**	**34**	*e*P	**P**	**16 14 47.0**	**-2.0**
BILL	**Bilibino**	**52.19**	**10**	*d i*P	**P**	**16 14 51.2**	**-1.1**
BILL				*e*		16 15 55.3	
BILL				*e**PP	pP	16 16 29.5	-1.8
BILL				*e*S	**S**	**16 21 36.6**	**-1.3**
BILL				*e*SS	SS	16 25 25.2	-0.6
BILL				pmax	pmax		
	comp=Z,306nm,1.0s,mb5.6						
BILL				MLR	MLR		
	comp=Z,200nm,22.0s						
BILL	**Bilibino**	**52.19**	**10**	*e*P	**P**	**16 14 50.9**	**-1.5**
	comp=Z,223nm,0.8s,mb5.5						
CNB	**Canberra Magne**	**52.69**	**176**	*e*P	**P**	**16 14 55.4**	**-1.0**
	comp=Z,93nm,0.8s,mb5.2						
TOO	**Toolangi**	**54.81**	**180**	⇑*i*P	**P**	**16 15 11.1**	**-0.3**
	comp=Z,0.8nm,1.0s						
WMQ	**Urumqi**	**54.94**	**312**	P	**P**	**16 15 12.8**	**+0.6**
WMQ				AP	pP	16 16 48.0	-4.7
WMQ				S	**S**	**16 22 17.0**	**+2.3**
WMQ				SCS	ScS	16 24 09.0	+3.1
WMQ				AMB	AMB		
	comp=Z,42nm,1.0s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,52nm,8.0s						
TIXI	**Tiksi**	**55.00**	**354**	⇓*e*P	**P**	**16 15 09.8**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,60nm,1.3s,mb4.7						
JIRN	**Jiri**	**55.25**	**292**	*e*P	**P**	**16 15 15.0**	**+0.4**
	comp=Z,188nm,0.5s,mb5.5						
KLBR	**Kellerberrin**	**55.65**	**209**	⇓*i*P	**P**	**16 15 15.5**	**-1.8**
	comp=Z,356nm,0.7s,mb5.7						
POHA	**Pohakuloa**	**55.65**	**78**	P	**P**	**16 15 18.1**	**+0.6**
PKI	**Pulchoki**	**55.95**	**292**	*e*P	**P**	**16 15 19.2**	**-0.2**
	comp=Z,116nm,0.4s,mb5.4						
KKN	**Kakani**	**56.05**	**292**	*e*P	**P**	**16 15 19.9**	**-0.2**
	comp=Z,80nm,0.6s,mb5.1						
DMN	**Daman**	**56.22**	**292**	*e*P	**P**	**16 15 21.2**	**-0.1**
	comp=Z,120nm,0.4s,mb5.5						
GKN	**Gorkha**	**56.61**	**292**	*e*P	**P**	**16 15 23.8**	**-0.2**
	comp=Z,104nm,0.4s,mb5.4						
TNA	**Tin City**	**56.95**	**21**	*e*P	**P**	**16 15 24.8**	**-1.0**
NWAO	**Narrogin (SRO)**	**57.01**	**208**	*e*P	**P**	**16 15 24.9**	**-1.7**
	comp=Z,11nm,0.6s,mb4.3						
KOLN	**Koldanda**	**57.54**	**292**	*e*P	**P**	**16 15 30.1**	**-0.2**
	comp=Z,80nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**59.15**	**314**	*e*P	**P**	**16 15 40.7**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NVS	**Novosibirsk**	**59.94**	**324**	*e*P	**P**	**16 15 44.5**	**-1.5**
NVS				*i* S	**S**	**16 23 15.4**	**-3.0**
NVS				*e*		16 24 38.9	
NVS				pmax	pmax		
	comp=Z,55nm,1.2s,mb4.8						
NVS				pmax	pmax		
	comp=E,38nm,1.4s						
NVS				smax			
	comp=N,104nm,2.6s						
KDAK	**Kodiak Island**	**60.42**	**33**	*e*P	**P**	**16 15 48.0**	**-1.1**
	comp=N,111nm,1.0s,mb5.1						
RSO	**Redoubt South**	**61.05**	**30**	*e*P	**P**	**16 15 51.9**	**-1.3**
SPU	**Mount Spurr**	**61.58**	**29**	*e*P	**P**	**16 15 55.4**	**-1.3**
KURK	**Kurchatov**	**62.02**	**319**	P	**P**	**16 15 58.9**	**-0.9**
KURK				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.7						
KURK	**Kurchatov**	**62.02**	**319**	*e*P	**P**	**16 15 58.6**	**-1.1**
	comp=Z,65nm,0.8s,mb5.1						
SLKM	**Skilak Lake**	**62.27**	**30**	*e*P	**P**	**16 15 59.9**	**-1.4**
IMA	**Indian Mountai**	**62.40**	**24**	*e*P	**P**	**16 16 01.7**	**-0.3**
FIB	**Fire Island**	**62.45**	**30**	*e*P	**P**	**16 16 01.8**	**-0.6**
NDI	**New Delhi**	**63.07**	**294**	*e*P	**P**	**16 16 05.0**	**-1.8**
QRZ	**Quartz Range**	**63.26**	**157**	PN	**P**	**16 16 07.4**	**-0.5**
QRZ	**Quartz Range**	**63.26**	**157**	PN	**P**	**16 16 07.4**	**-0.5**
BKZ	**Black Stump Fm**	**63.41**	**153**	PN	**P**	**16 16 07.4**	**-1.5**
BKZ	**Black Stump Fm**	**63.41**	**153**	PN	**P**	**16 16 07.4**	**-1.5**
SML	**Sawmill**	**63.46**	**29**	*e*P	**P**	**16 16 08.0**	**-0.9**
HYB	**Hyderabad**	**63.55**	**281**	⇑*e*P	**P**	**16 16 09.5**	**-0.6**
	comp=Z,46nm,0.8s,mb5.0						
HYB	**Hyderabad**	**63.55**	**281**	⇑*i*P	**P**	**16 16 09.5**	**-0.6**
	comp=Z,46nm,0.8s,mb5.0						
HYB				*e*PcP	PcP	16 16 40.0	-1.4
HYB				*e*	pP	16 17 52.5	-2.7
HYB				*e*PP	PP	16 18 44.0	+6.0
MCK	**McKinley**	**63.64**	**27**	*e*P	**P**	**16 16 08.6**	**-1.3**
	comp=Z,47nm,1.1s,mb4.8						
COLA	**College**	**64.38**	**26**	*e*P	**P**	**16 16 13.3**	**-1.3**
	comp=Z,44nm,0.8s,mb4.9						
EYAK	**Cordova Ski Ar**	**64.44**	**31**	*e*P	**P**	**16 16 14.8**	**-0.3**
AAK	**Ala-Archa**	**64.47**	**309**	*d i*P	**P**	**16 16 14.3**	**-1.3**
AAK				pmax	pmax		
	comp=Z,16nm,2.0s,mb4.1						
AAK	**Ala-Archa**	**64.47**	**309**	*e*P	**P**	**16 16 14.3**	**-1.3**
	comp=Z,4.0nm,0.5s,mb4.1						
DIV	**Divide**	**64.53**	**30**	*e*P	**P**	**16 16 15.4**	**-0.2**
BFZ	**Birch Farm**	**64.58**	**155**	PN	**P**	**16 16 14.5**	**-1.8**
BFZ	**Birch Farm**	**64.58**	**155**	PN	**P**	**16 16 14.5**	**-1.8**
LTZ	**Lake Taylor**	**64.88**	**159**	PN	**P**	**16 16 16.2**	**-2.0**
LTZ	**Lake Taylor**	**64.88**	**159**	PN	**P**	**16 16 16.2**	**-2.0**
THY	**Trims Highway**	**64.96**	**28**	*e*P	**P**	**16 16 17.7**	**-0.6**
MSZ	**Milford Sound**	**65.20**	**163**	PN	**P**	**16 16 19.4**	**-0.7**
MSZ	**Milford Sound**	**65.20**	**163**	PN	**P**	**16 16 19.4**	**-0.7**
CHKZ	**Chkalovo**	**67.14**	**321**	P	**P**	**16 16 30.2**	**-1.8**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CHKZ	**Chkalovo**	**67.14**	**321**	*e*P	**P**	**16 16 30.2**	**-1.8**
	comp=Z,6.3nm,0.5s,mb4.4						
BVA0	**Borovoye Array**	**67.26**	**321**	P	**P**	**16 16 32.0**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
KAD	**Karad**	**67.66**	**282**	*e*P	**P**	**16 16 35.0**	**-0.7**
POO	**Poona**	**67.71**	**283**	⇓*i*P	**P**	**16 16 34.5**	**-1.6**
	comp=Z,50nm,1.0s,mb5.0						
DAWY	**Dawson**	**67.86**	**27**	*e*P	**P**	**16 16 35.9**	**-0.3**
DAWY				*e*PcP	PcP	16 16 58.2	-0.5
INK	**Inuvik**	**70.50**	**23**	*e*P	**P**	**16 16 51.0**	**-0.9**
	comp=Z,128nm,0.9s,mb5.5						
INK				*e*PcP	PcP	16 17 08.6	-1.2
ARU	**Arti**	**73.91**	**325**	P	**P**	**16 17 11.1**	**-0.6**
	comp=Z,292nm,0.5s,mb6.0,SNR=32						
ARU	**Arti**	**73.91**	**325**	⇓*i*P	**P**	**16 17 03.6**	**-8.1**
ARU				*e*		16 26 16.8	
ARU				pmax	pmax		
	comp=Z,67nm,1.5s,mb4.8						
OCWA	**Octopus Mounta**	**77.43**	**44**	*e*P	**P**	**16 17 32.9**	**+1.6**
	comp=Z,107nm,0.7s,mb5.4						
PGC	**Sidney**	**77.71**	**43**	*e*P	**P**	**16 17 33.1**	**+0.4**
	comp=Z,245nm,1.1s,mb5.5						
KEBM	**Edson Butte**	**78.39**	**49**	*e*P	**P**	**16 17 37.2**	**+0.7**
COR	**Corvallis**	**78.72**	**47**	*e*P	**P**	**16 17 37.6**	**-0.7**
	comp=Z,98nm,1.0s,mb5.1						
YKW3	**Yellowknife Ar**	**79.06**	**28**	*e*P	**P**	**16 17 39.3**	**-0.4**
TTW	**Tolt Reservoir**	**79.08**	**43**	P	**P**	**16 17 41.0**	**+0.9**
KHMM	**Horse Mountain**	**79.29**	**51**	*e*P	**P**	**16 17 42.0**	**+0.7**
HUMO	**Hull Mountain**	**79.44**	**49**	*e*P	**P**	**16 17 42.5**	**+0.5**
	comp=Z,152nm,1.3s,mb5.2						
BBOR	**Butler Butte**	**79.57**	**48**	P	**P**	**16 17 43.7**	**+1.0**
YBH	**Yreka Blue Hor**	**79.83**	**49**	*e*P	**P**	**16 17 45.0**	**+0.9**
	comp=Z,77nm,0.8s,mb5.1						
TBM	**Table Mountain**	**79.93**	**44**	P	**P**	**16 17 45.2**	**+0.8**
WDC	**Whiskeytown Da**	**80.24**	**51**	*e*P	**P**	**16 17 46.5**	**+0.3**
	comp=Z,52nm,1.0s,mb4.8						
HOPS	**Hopland**	**80.24**	**52**	*e*P	**P**	**16 17 46.8**	**+0.5**
	comp=Z,61nm,1.2s,mb4.8						
RES	**Resolute Bay**	**80.59**	**14**	*e*P	**P**	**16 17 47.3**	**-0.1**
	comp=Z,109nm,0.8s,mb5.3						
NSHM	**Saint Helena R**	**80.72**	**53**	*e*P	**P**	**16 17 49.3**	**+0.5**
SAC	**San Andreas**	**81.10**	**53**	*e*P	**P**	**16 17 51.1**	**+0.3**
OHCM	**Honcut**	**81.35**	**52**	*e*P	**P**	**16 17 51.7**	**-0.3**
MOD	**Modoc**	**81.52**	**49**	*e*P	**P**	**16 17 53.3**	**+0.5**
	comp=Z,71nm,0.9s,mb5.1						
BANOM	**Banah**	**81.84**	**295**	⇑P	**P**	**16 17 56.1**	**+1.4**
NEW	**Newport**	**81.88**	**42**	*e*P	**P**	**16 17 54.2**	**-0.3**
	comp=Z,59nm,0.9s,mb5.0						
SAO	**San Andreas Ge**	**82.07**	**54**	*e*P	**P**	**16 17 55.9**	**+0.2**
	comp=Z,43nm,1.3s,mb4.7						
ARQ	**Araqi**	**82.34**	**292**	⇑P	**P**	**16 17 57.9**	**+0.6**
	SNR=7.1						
ASHO	**Ashiyiah**	**82.39**	**293**	⇑P	**P**	**16 17 58.9**	**+1.4**
LRV	**Little Rabbit**	**82.50**	**54**	*e*P	**P**	**16 17 58.8**	**+1.0**
CMB	**Columbia Colle**	**82.53**	**53**	*e*P	**P**	**16 17 58.4**	**+0.4**
	comp=Z,84nm,0.9s,mb5.3						
WVOR	**Wild Horse Val**	**82.56**	**48**	*e*P	**P**	**16 17 58.6**	**+0.5**
	comp=Z,61nm,1.0s,mb5.1						
EDM	**Edmonton**	**82.61**	**37**	*e*P	**P**	**16 17 58.2**	**+0.1**
WCN	**Washoe City**	**82.65**	**51**	*e*P	**P**	**16 17 59.5**	**+1.0**
	comp=Z,80nm,1.0s,mb5.2						
BMO	**Blue Mountains**	**82.77**	**45**	*e*P	**P**	**16 17 59.2**	**+0.2**
	comp=Z,126nm,1.2s,mb5.3						
PAHR	**Pah Rah Range**	**82.81**	**51**	*e*P	**P**	**16 17 58.8**	**-0.5**
KEV	**Kevo**	**82.98**	**342**	*e*p	**P**	**16 17 57.8**	**-1.8**
ARE0	**ARCESS Array S**	**83.54**	**342**	*e*P	**P**	**16 18 01.9**	**-0.5**
WALA	**Waterton Lakes**	**83.66**	**41**	*e*P	**P**	**16 18 04.2**	**+0.9**
	comp=Z,85nm,1.0s,mb5.2						
OMM	**Old Mammoth Mi**	**83.71**	**53**	*e*P	**P**	**16 18 04.8**	**+0.9**
OMM				*e*PP	PP	16 21 25.5	-1.0
MNV	**Mina**	**84.10**	**52**	*e*P	**P**	**16 18 06.6**	**+0.8**
	comp=Z,25nm,0.9s,mb4.7						
BMN	**Battle Mountai**	**84.17**	**50**	*e*P	**P**	**16 18 06.7**	**+0.6**
	comp=Z,93nm,1.4s,mb5.1						
MSO	**Missoula**	**84.38**	**43**	*e*P	**P**	**16 18 07.0**	**0.0**
	comp=Z,25nm,1.2s,mb4.6						
MSO				*e*PP	PP	16 21 30.0	-1.6
CHMT	**Chamberlain Mo**	**84.80**	**42**	*e*P	**P**	**16 18 08.6**	**-0.5**
TPH	**Tonopah**	**84.90**	**52**	*e*P	**P**	**16 18 10.0**	**+0.2**
	comp=Z,71nm,0.9s,mb5.2						
JOF	**Joensuu**	**85.00**	**335**	*e*p	**P**	**16 18 07.5**	**-2.1**
HLID	**Hailey**	**85.16**	**46**	*e*P	**P**	**16 18 11.0**	**+0.2**
	comp=Z,91nm,1.0s,mb5.3						
DAG	**Danmarks Havn**	**85.41**	**356**	⇓*i*P	**P**	**16 18 10.9**	**-0.5**
DAG				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.1						
DAG	**Danmarks Havn**	**85.41**	**356**	⇓*i*P	**P**	**16 18 10.9**	**-0.5**
	comp=Z,54nm,0.9s,mb5.1						
MWC	**Mount Wilson**	**85.45**	**56**	*e*P	**P**	**16 18 12.8**	**+0.2**
TRCR	**Troy Canyon**	**86.04**	**51**	*e*P	**P**	**16 18 16.3**	**+1.1**
RBK	**Rabkut**	**86.07**	**287**	⇓P	**P**	**16 18 15.2**	**-0.6**
	SNR=6.8						
OBN	**Obninsk**	**86.15**	**327**	⇓*e*P	**P**	**16 18 14.6**	**-0.7**
OBN				*e**PP	pP	16 20 06.9	-1.5
OBN				*e*S	S	16 27 49.9	-16
OBN				pmax	pmax		
	comp=Z,62nm,1.7s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s						
BOZ	**Bozeman (W)**	**86.30**	**43**	*e*P	**P**	**16 18 16.2**	**0.0**
	comp=Z,23nm,1.0s,mb4.8						
QLMT	**Earthquake Lak**	**86.72**	**44**	*e*P	**P**	**16 18 19.6**	**+1.3**
KIV	**Kislovodsk**	**86.90**	**315**	*c i*P	**P**	**16 18 18.7**	**-0.4**
KIV				*e*		16 21 46.8	
KIV				*e*S	S	16 27 55.8	-18
KIV				*e*SS	SS	16 34 10.1	-4.1
KIV				pmax	pmax		
	comp=Z,45nm,1.4s,mb4.9						
KIV	**Kislovodsk**	**86.90**	**315**	*e*P	**P**	**16 18 18.4**	**-0.8**
	comp=Z,32nm,1.0s,mb4.9						
HVU	**Hansel Valley**	**86.90**	**47**	*e*P	**P**	**16 18 20.3**	**+1.1**
HVU				*e*PP	PP	16 21 50.9	-1.7
ABTO	**Aybut**	**86.94**	**287**	⇓P	**P**	**16 18 20.4**	**+0.5**
	SNR=12						
BGU	**Big Grassy Mou**	**87.02**	**48**	*e*P	**P**	**16 18 20.3**	**+0.5**
BAR	**Barrett**	**87.04**	**57**	*e*P	**P**	**16 18 20.3**	**+0.2**
YMR	**Madison River**	**87.09**	**44**	*e*P	**P**	**16 18 21.6**	**+1.6**
YFT	**Old Faithful**	**87.26**	**44**	*e*P	**P**	**16 18 22.9**	**+2.0**
YNR	**Norris Junctio**	**87.26**	**44**	*e*P	**P**	**16 18 22.8**	**+2.0**
SPUT	**South Promonto**	**87.30**	**48**	*e*P	**P**	**16 18 22.1**	**+1.0**
RRI2	**Red Ridge**	**87.34**	**45**	*e*P	**P**	**16 18 22.0**	**+0.8**
RRI2				*e*PP	PP	16 21 54.5	-1.6
IMW	**Indian Meadow**	**87.39**	**45**	*e*P	**P**	**16 18 22.5**	**+1.1**
IMW				*e*PP	PP	16 21 55.5	-1.0
KAF	**Kangasniemi**	**87.40**	**336**	*e*p	**P**	**16 18 19.0**	**-2.0**
	comp=Z,12nm,0.8s,mb4.6						
LDFC	**Landfair**	**87.48**	**54**	*e*P	**P**	**16 18 22.8**	**+0.6**
NEN	**Nelson**	**87.49**	**53**	*e*P	**P**	**16 18 22.9**	**+0.8**
LKWY	**Lake**	**87.50**	**44**	*e*P	**P**	**16 18 24.1**	**+2.1**
	comp=Z,17nm,0.9s,mb4.8						
TPAW	**Teton Pass**	**87.54**	**45**	*e*P	**P**	**16 18 23.0**	**+0.9**
TPAW				*e*PP	PP	16 21 56.4	-1.2
MOOW	**Moose Ponds**	**87.58**	**45**	*e*P	**P**	**16 18 23.4**	**+1.0**
AHID	**Auburn Hatcher**	**87.70**	**46**	*e*P	**P**	**16 18 23.3**	**+0.4**
	comp=Z,21nm,0.8s,mb4.9						
LOHW	**Long Hollow**	**87.73**	**45**	*e*P	**P**	**16 18 23.7**	**+0.7**
LOHW				*e*PP	PP	16 21 57.4	-1.7
NOQ	**North Oquirrh**	**87.77**	**48**	*e*P	**P**	**16 18 23.6**	**+0.3**
HWUT	**Hardware Ranch**	**87.81**	**47**	*e*P	**P**	**16 18 23.9**	**+0.5**
	comp=Z,76nm,1.0s,mb5.4						
NLU	**North Lily Min**	**88.05**	**49**	*e*P	**P**	**16 18 25.4**	**+0.7**
NLU				*e*PP	PP	16 21 59.6	-2.1
TCUT	**Toone Canyon**	**88.10**	**47**	*e*P	**P**	**16 18 25.4**	**+0.6**
FFC	**Flin Flon**	**88.16**	**32**	P	**P**	**16 18 25.1**	**+0.3**
	comp=Z,607nm,0.8s,SNR=85						
JLU	**Jordanelle**	**88.26**	**48**	*e*P	**P**	**16 18 26.2**	**+0.6**
MPU	**Maple Canyon**	**88.34**	**49**	*e*P	**P**	**16 18 26.7**	**+0.7**
DAU	**Daniels Canyon**	**88.47**	**48**	*e*P	**P**	**16 18 27.3**	**+0.7**
DAU				*e*PP	PP	16 22 04.4	-0.6
MVU	**Marysvale**	**88.47**	**50**	*e*P	**P**	**16 18 27.5**	**+0.9**
	comp=Z,44nm,0.8s,mb5.2						
MSU	**Marysvale**	**88.50**	**50**	*e*P	**P**	**16 18 27.6**	**+0.9**
MSU				*e*PP	PP	16 22 03.3	-2.0
BW06	**Boulder Array**	**88.75**	**45**	*e*P	**P**	**16 18 27.7**	**-0.2**

	comp=Z,11nm,0.9s,mb4.7						
TMUT	Trail Mountain	88.91	49	*e*P	P	16 18 29.5	+0.7
SOC	Sochi	89.03	316	*e*P	P	16 18 26.7	-2.5
SOC				*e**PP	pP	16 20 23.8	+0.8
SOC				*e*		16 22 03.2	
SOC				*e*S	SKS	16 28 03.1	-6.3
SOC				*e*		16 28 30.1	
SOC				*e*SS	SS	16 34 37.9	-6.8
SOC				*e*SSS	SSS	16 38 25.2	+0.9
SOC				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.0						
SOC				pmax	pmax		
	comp=N,21nm,1.1s						
SOC				pmax	pmax		
	comp=E,31nm,1.1s						
LAO	LASA Array	89.34	41	*e*P	P	16 18 30.4	-0.1
	comp=E,106nm,1.0s,mb5.6						
SRU	San Rafael	89.47	49	*e*P	P	16 18 31.6	+0.3
FCC	Fort Churchill	89.77	27	*e*P	P	16 18 31.5	-0.7
	comp=E,46nm,1.0s,mb5.3						
DGMT	Dagmar	89.80	39	*e*P	P	16 18 31.9	-0.7
	comp=E,65nm,0.9s,mb5.5						
SUMG	Summit	90.07	1	*e*P	P	16 18 33.6	+0.3
	comp=E,17nm,0.8s,mb4.9						
PV10	Paradox Valley	90.83	49	*e*P	P	16 18 38.2	+0.6
PV01	Paradox Valley	91.26	49	*e*P	P	16 18 39.8	+0.2
SCO	Scoresbysund	91.77	356	*i* P	P	16 18 41.2	0.0
SCO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
SCO	Scoresbysund	91.77	356	*i* P	P	16 18 41.2	0.0
	comp=Z,8.3nm,1.0s,mb4.7						
TUC	Tucson	91.83	55	*e*P	P	16 18 43.3	+0.9
	comp=Z,22nm,1.0s,mb5.2						
TUC				*e*PP	PP	16 22 28.1	-3.6
MALT	Malatya	92.05	311	*e*P	P	16 18 42.3	-0.9
	comp=Z,6.7nm,1.1s,mb4.6						
PHWY	Pilot Hill	92.14	45	*e*P	P	16 18 43.6	0.0
ISCO	Idaho Springs	92.68	47	*e*P	P	16 18 46.8	+0.7
	comp=Z,24nm,0.9s,mb5.2						
SUW	Suwalki	93.41	330	*e*P	P	16 18 48.0	-1.0
NB2	NORSAR Subarra	93.60	340	P	P	16 18 48.1	-1.6
	comp=Z,2.7nm,0.6s,mb4.5,baz=54,slow=4.8						
SDCO	Great Sand Dun	93.63	49	*e*P	P	16 18 50.4	-0.1
	comp=Z,40nm,1.5s,mb5.3						
ANMO	Albuquerque	94.11	52	*d* *i*P	P	16 18 53.8	+1.0
ANMO	Albuquerque	94.11	52	*e*P	P	16 18 53.0	+0.2
	comp=Z,22nm,1.3s,mb5.1						
LPM	Los Pinos Moun	94.24	52	*e*P	P	16 18 53.6	+0.3
MNTX	Cornudas Mount	96.28	54	*e*P	P	16 19 02.4	-0.3
	comp=Z,15nm,0.8s,mb5.3						
GDL2	Guadalupe Moun	96.85	53	*e*P	P	16 19 05.4	+0.2
CPRX	Cap Rock	96.87	52	*e*P	P	16 19 05.1	-0.3
AMTX	Amarillo	97.67	50	*e*P	P	16 19 08.7	-0.2
	comp=Z,17nm,0.8s,mb5.4						
LTX	Lajitas	98.63	56	*e*Pdif	P	16 19 14.0	+0.6
WMOK	Wichita Mounta	99.84	49	*e*Pdif	P	16 19 18.0	-0.7
	comp=Z,6.5nm,0.9s,mb5.1						
JCT	Junction City	101.11	53	*e*Pdif	P	16 19 24.2	-0.2
CII	Carovilli	105.79	324	*e*PKP		16 23 53.8	
LPL	La Plagne	106.96	331	*e*PKIKP		16 23 56.6	
	comp=Z,5.6nm,0.8s						
SSF	Saint Saulge	107.19	334	*e*PKIKP		16 23 56.6	
	comp=Z,4.8nm,0.7s						
QSPA	South Pole Qui	107.36	180	*e*PKP		16 23 55.6	
MBDF	Montbardon	107.54	330	*e*PKIKP		16 23 55.9	
	comp=Z,12nm,1.0s						
ORIF	Oris-en-Rattie	107.81	331	*e*PKIKP		16 23 56.0	
	comp=Z,14nm,0.9s						
PGF	Pioggiola	108.05	328	*e*PKIKP		16 23 56.7	
	comp=Z,46nm,1.1s						
SMRF	Simiane la Rot	108.67	331	*e*PKIKP		16 23 57.6	
	comp=Z,58nm,1.4s						
ROSF	Rostrenen	108.75	339	*e*PKIKP		16 23 59.0	
LRAL	Lakeview Retre	108.98	45	*e*PKP		16 23 59.5	
LASF	Ste Croix	109.38	332	*e*PKIKP		16 23 59.2	
ETSF	Etsaut	112.25	334	*e*PKIKP	PKPdf	16 24 04.8	-0.3
EVO	Evora	118.95	336	*e*PKIKP	PKPdf	16 24 19.8	+1.5
	comp=Z,6.5nm,0.5s						
LSZ	Lusaka	120.08	262	*e*PKPdf	PKPdf	16 24 22.4	+1.4
SNAA	Sanae	122.76	191	*e*PKPdf	PKPdf	16 24 24.9	0.0
OTAV	Otavalo	133.27	72	*e*PKPdf	PKPdf	16 24 48.0	+1.6
SDV	Santo Domingo	135.67	57	*e*PKPpre		16 24 37.0	
SDV				*e*PKPdf	PKPdf	16 24 52.0	+1.1
NNA	Nana	138.73	88	*e*PKPdf	PKPdf	16 24 57.8	+1.5
ARE	Arequipa	144.62	94	*e*P	PKPdf	16 25 10.0	+3.3
LVC	Limon Verde	147.31	105	*e*PKPdf	PKPdf	16 25 13.2	+2.1
LVC				*e*PKPbc	PKPdf	16 25 16.9	+5.9
LPAZ	La Paz	147.80	93	*e*PKPdf	PKPdf	16 25 13.7	+1.8
LPAZ				*e*PKPbc	PKPdf	16 25 18.2	+6.2
TRQA	Tornquist	148.42	136	*e*PKPdf	PKPdf	16 25 13.5	+1.1
TRQA				*e*PKPab	PKPab	16 25 23.6	-0.5

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*NIED **04** 16:41:00,37.10N×141.20E,h53^{km},Mw3.7 Best double couple: M$_0$3.79×10^{14} NP1:φ$_s$349°,δ79°,λ-100°. NP2: φ$_s$210°,δ15°,λ-50°.*

*JMA **04** 16:41:23.8±0.1,37.11N×141.16E,h55^{km}±1^{km},M3.9 Broadband fault plane solution: P waves. NP1:φ$_s$180°, δ18°,λ-90°. NP2:φ$_s$0°,δ72°,λ-90°. Principal axes: T Plg27°, Azm90°; N Plg0°, Azm0°; P Plg63°, Azm270°;*

JMA Felt II J1.

ISC 04 16:41:23.6±1.8**,37.11N**±0.06×**141.2E**±0.1**,h50**^{km}±10^{km}**,**
n7,σ**0**^{s}**84**/14**,5C,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.33	269	⇑P	P	16 41 33.4	+0.3
ONAJ				*e*S	S	16 41 40.2	+0.3
JFK	Kawauchi	0.37	314	⇑P	P	16 41 33.8	+0.3
JFK				*e*S	S	16 41 40.7	+0.1
JHO	Hitachi	0.71	226	⇑P	P	16 41 37.3	-0.3
JHO				*e*S	S	16 41 47.0	-0.9
JFT	Otama	0.81	301	⇑P	P	16 41 39.4	+0.6
JFT				*e*S	S	16 41 50.4	+0.3
JMM	Marumori	0.83	336	P	P	16 41 39.1	0.0
JMM				*e*S	S	16 41 50.2	-0.4
JFY	Yanaizu	1.24	284	⇑P	P	16 41 44.5	-0.4
JFY				*e*S	S	16 41 57.8	-2.9
MAT	Matsushiro	2.48	258	P	P	16 42 02.2	-0.2
MAT				*e*S	S	16 42 33.5	+2.0

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*NEIC **04** 16:41:55.5±1.4,51.60N×16.01E,h5^{km},ML3.0(VIE), ML2.4(CLL),Error ellipse: s-maj=20.5km s-min=9.0km az=189.0*

*WAR **04** 16:41:56.8,51.56N×16.01E,h1^{km},ML3.0,Mining Induced*

*PRU **04** 16:41:56.6,51.53N×16.02E*

*CSEM **04** 16:41:56.6±0.1,51.53N×15.98E,h6^{km},ML3.7/1,Error ellipse: s-maj=2.3km s-min=1.4km az=21.0*

ISC 04 16:41:54.4±0.7**,51.51N**±0.04×**16.02E**±0.03**,n22,**σ**1**^{s}**17**/51**,**
1C,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.69	165	*e*Pg	Pg	16 42 10.4	+2.2
KSP				*i*		16 42 11.5	
KSP				*i* Sg	Sg	16 42 20.3	+2.9
KSP	Ksiaz	0.69	165	*e*PG	Pg	16 42 10.0	+1.8
KSP				*i* SG	Sg	16 42 20.3	+2.9
KSP	Ksiaz	0.69	165	*e*Pg	Pg	16 42 10.3	+2.1
KSP				*e*		16 42 11.5	
KSP				*e*Sg	Sg	16 42 20.3	+2.9
UPC	Upice	1.00	180	*e*PG	Pg	16 42 16.2	+1.7
DPC	Dobruska-Polom	1.18	171	*e*PG	Pg	16 42 19.1	+1.2
DPC				*e*SG	Sg	16 42 34.9	+1.3
	227nm,0.7s						
PVCC	Panska Ves	1.34	224	*e*PG	Pg	16 42 21.8	+0.6
BRG	Berggiesshubel	1.46	245	*e*Pg	Pg	16 42 23.1	-0.3
BRG				*i* Pg	Pg	16 42 24.0	+0.6
BRG				*i* Sg	Sg	16 42 43.9	+1.1
BRG	Berggiesshubel	1.46	245	*i* Pg	Pg	16 42 24.0	+0.6
PRU	Pruhonice	1.79	212	*e*PN	Pn	16 42 27.8	+1.0
PRU				*e*PG	Pg	16 42 29.9	-0.2
PRU				*e*SG	Sg	16 42 53.8	-0.2
PRU	Pruhonice	1.79	212	*e*Pg	Pg	16 42 29.9	-0.2
PRU				*e*Sg	Sg	16 42 53.8	-0.2
CLL	Collm	1.90	265	*i* Pn	Pn	16 42 28.4	0.0
CLL				*e*Pg	Pg	16 42 31.0	-1.3
CLL				*e*Sg	Sg	16 42 57.0	-0.7
CLL	Collm	1.90	265	*i* PN	Pn	16 42 28.4	0.0
CLL				*e*PG	Pg	16 42 31.0	-1.3
CLL				*i*		16 42 35.4	
CLL				*e*SG	Sg	16 42 57.0	-0.7
MORC	Moravsky Berou	1.99	150	*e*Pn	Pn	16 42 29.7	+0.1
MORC				*e*Sn	Sn	16 42 56.0	+0.4
MORC				*e*Sg	Sg	16 43 00.3	-0.3
MORC	Moravsky Berou	1.99	150	*e*Pn	Pn	16 42 29.7	+0.1
MORC				*e*Sn	Sn	16 42 56.0	+0.4
MORC				*e*Sg	Sg	16 42 59.8	-0.8
OKC	Ostrava-Krasne	2.15	140	*e*PG	Pg	16 42 36.1	-1.3
OKC				*e*SG	Sg	16 43 05.4	-0.7
VRAC	Vranov	2.23	170	*e*Pn	Pn	16 42 35.3	+2.1
VRAC				*e*Sg	Sg	16 43 07.7	-1.1
NKC	Novy Kostel	2.60	242	*e*PN	Pn	16 42 39.4	+1.0
NKC				*e*PG	Pg	16 42 46.0	-0.3
NKC				*e*SG	Sg	16 43 20.3	-0.6
NKC	Novy Kostel	2.60	242	*e*Pg	Pg	16 42 46.0	-0.3
NKC				*e*Sg	Sg	16 43 20.3	-0.6
OJC	Ojcow	2.72	117	*e*Pn	Pn	16 42 39.6	-0.5
OJC				*e*Pg	Pg	16 42 49.2	+0.5
OJC				*e*Sn	Sn	16 43 12.1	-2.1
OJC				*e*Sg	Sg	16 43 24.7	-0.3
KHC	Kasperske Hory	2.85	214	*e*PN	Pn	16 42 42.6	+0.6
KHC				*e*PG	Pg	16 42 48.8	-2.5
KHC				*e*SN	Sn	16 43 17.0	-0.5
KHC				*e*SG	Sg	16 43 26.2	-3.1
MOA	Molln	3.84	198	⇑*i*PN	Pn	16 42 56.9	+0.9
MOA				*i* SG	Sg	16 44 00.3	-1.9
	12nm,0.6s						
KWP	Kalwaria	4.66	111	*e*Pg	Pg	16 43 26.6	-0.8

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*NEIC **04** 16:45:39.7±0.3,13.51S×174.35E,mb4.9/23,Error ellipse: s-maj=14.8km s-min=6.6km az=143.0*

*MOS **04** 16:45:39.8±0.9,13.40S×174.23E,h33^{km},mb5.0/5,Error ellipse: s-maj=55.5km s-min=32.6km az=110.4*

*HRVD **04** 16:45:39.7±0.2,13.24S×174.45E,h12^{km},MW5.2/58, Centroid moment Tensor Solution. LP body waves: s41,c74;Mantle waves: s58,c114; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.69±.02; M$_{\theta\theta}$0.78±.01; M$_{\phi\phi}$-0.08±.02; M$_{r\theta}$-0.14±.04; M$_{\theta\phi}$0.18±.01; M$_{\phi r}$0.08±.05; Best double couple: M$_0$.772×10^{17} NP1: φ$_s$249°,δ41°,λ-105°. NP2:φ$_s$88°,δ51°,λ-77°. Principal axes: T .824, Plg5°, Azm169°; N -.105, Plg10°, Azm260°; P -.72, Plg79°, Azm53°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **04** 16:45:40.5,12.76S×173.77E,h9^{km},mB5.2,mb4.7,Ms4.9, Msz4.5*

ISC 04 16:45:38.1±0.3**,13.61S**±0.09×**174.35E**±0.08**,h25**^{km}**,**
h25^{km}±2.9^{km}**:pP-P,n102,**σ**0**^{s}**95**/66**,mb4.8**/30**,MS4.7**/9**,**
9C-3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTAO	Charters Tower	27.62	253	*e*P	P	16 51 25.8	-0.1
	18nm,1.3s,mb4.5						
CNB	Canberra Magne	31.21	222	*e*P	P	16 51 59.3	+1.4
	323nm,0.9s						
PPT	Papeete	34.94	101	*e*P	P	16 52 25.2	-5.2
PPT				*e*LR	LR	17 01 57.2	
	270nm,27.0s						
TOO	Toolangi	35.06	222	⇑*i*P	P	16 52 33.1	+1.8
	1.2nm,0.9s,mb3.8						
STKA	Stephens Creek	35.06	233	*e*P	P	16 52 32.0	+0.7
	10nm,1.4s,mb4.6						
TBI	Tubuai	35.58	111	*e*LR	LR	17 02 15.0	
	548nm,31.2s						
ASPA	Alice Springs	39.49	249	*e*P	P	16 53 07.9	-0.7
TAOE	Nuku Hiva Isla	44.83	89	*e*LR	LR	17 06 30.5	
FORT	Forrest	45.79	240	⇑*i*P	P	16 54 00.0	+0.1
	60nm,0.9s,mb5.5						
FITZ	Fitzroy Crossi	46.97	258	⇑*i*P	P	16 54 07.7	-1.6
	23nm,1.4s,mb4.9						
MBWA	Marble Bar	52.45	254	*e*P	P	16 54 50.9	-0.5
	31nm,1.2s,mb5.1						
KLBR	Kellerberrin	54.64	241	*e*P	P	16 55 06.1	-1.3
	327nm,1.2s						
MAT	Matsushiro	60.41	327	P	P	16 55 51.9	+3.8
CASY	Casey	67.21	203	P	P	16 56 31.5	-0.7
	66nm,1.3s,mb5.5						
SSE	Sheshan	67.67	312	P	P	16 56 32.4	-3.3
SSE				S	S	17 05 20.9	-9.0
SSE				SS	SS	17 09 44.4	-8.1
SSE				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.9						
SSE				AMB	AMB		
	comp=Z,92nm,3.8s						
SSE				LR	LR		
	comp=N,161nm,20.0s,MS4.3						
SSE				LR	LR		
	comp=E,117nm,20.0s,MS4.3						
SSE				LR	LR		
	comp=Z,239nm,20.0s,MS4.4						
SSE	Sheshan	67.67	312	P	P	16 56 32.4	-3.3
	comp=Z,12nm,1.0s,mb4.9						
SSE				S	S	17 05 20.9	-9.0
SSE				sS		17 06 00.1	
SSE				SS	SS	17 09 44.4	-8.1
SSE				LR	LR		
	comp=Z,240nm,20.0s,MS4.4						
NJ2	Nanjing	69.86	312	*e*P	P	16 56 50.2	+1.0
NJ2				PCP	PcP	16 57 13.2	+1.5
NJ2				S	S	17 05 49.0	-6.9
NJ2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,290nm,4.4s						
NJ2				LR	LR		
	comp=N,560nm,15.1s,MS5.0						
NJ2				LR	LR		
	comp=E,430nm,18.6s,MS5.0						
NJ2				LR	LR		
	comp=Z,400nm,16.5s,MS4.8						
BJI	Beijing	75.89	318	P	P	16 57 25.7	+1.2
BJI				AP	pP	16 57 29.1	-3.2
BJI				XP	sP	16 57 30.4	-4.6
BJI				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.3						
BJI				LR	LR		
	comp=N,249nm,11.8s,MS4.9						
BJI				LR	LR		
	comp=E,253nm,10.8s,MS4.9						
BJI				LR	LR		
	comp=Z,273nm,30.0s						
BJI	Beijing	75.89	318	P	P	16 57 25.7	+1.2
	comp=Z,6.0nm,1.5s,mb4.3						
BJI				pP	pP	16 57 29.1	-3.2
BJI				sP	sP	16 57 30.4	-4.6
BJI				S	S	17 07 13.5	+9.4
BJI				SS	SS	17 11 57.0	-2.5
BJI				LR	LR		
	comp=Z,270nm,30.0s,MS4.4						
QSPA	South Pole Qui	76.42	180	P	P	16 57 26.0	-0.8
	comp=Z,18nm,1.0s,mb5.0						
XAN	Xi'an	78.14	309	P	P	16 57 36.1	-1.1
XAN				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.1						
RSO	Redoubt South	78.38	16	*e*P	P	16 57 37.8	-0.1
HHC	Hu-ho-hao-te	79.34	317	⇑*i*P	P	16 57 44.8	+1.2
HHC				PCP	PcP	16 57 52.7	+0.6
HHC				AP	pP	16 57 55.3	+3.9
HHC				PP	PP	17 00 46.6	+1.3
HHC				S	S	17 07 43.7	+2.4
HHC				SKS	SKS	17 07 54.5	-6.2
HHC				SCS	ScS	17 08 02.9	+1.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,101nm,4.9s						
HHC				LR	LR		
	comp=N,207nm,16.8s,MS4.8						
HHC				LR	LR		
	comp=E,367nm,21.6s,MS4.8						
HHC				LR	LR		
	comp=Z,369nm,21.6s,MS4.7						
KMI	Kunming	79.67	299	P	P	16 57 45.6	-0.1
KMI				AP	pP	16 57 52.4	-1.1
KMI				AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.4						
KMI				AMB	AMB		
	comp=Z,82nm,4.3s						
KMI				LR	LR		
	comp=N,130nm,15.7s,MS4.6						
KMI				LR	LR		
	comp=E,167nm,18.0s,MS4.6						
KMI				LR	LR		
	comp=Z,223nm,32.7s						
KMI	Kunming	79.67	299	P	P	16 57 45.6	-0.1
	comp=Z,7.0nm,1.4s,mb4.4						
KMI				pP	pP	16 57 52.4	-1.1
KMI				S	S	17 07 51.4	+6.4
KMI				SS	SS	17 13 13.3	+17
KMI				LR	LR		
	comp=Z,220nm,32.7s,MS4.3						
CM31	Chiang Mai Arr	80.85	292	*e*P	P	16 57 52.2	+0.2
	comp=Z,14nm,1.1s,mb4.8						
CMAR	Chiang Mai Arr	80.85	292	*i* P	P	16 57 52.5	+0.4
CMAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MNV	Mina	81.52	47	*e*P	P	16 57 55.4	+0.2
BILL	Bilibino	81.63	357	*d* *i*P	P	16 57 54.6	-0.6
BILL				*e*		17 01 00.3	
BILL				pmax	pmax		
	comp=Z,26nm,2.1s,mb4.8						
BILL	Bilibino	81.63	357	*e*P	P	16 57 54.6	-0.6
	comp=Z,25nm,1.5s,mb4.9						
MCK	McKinley	82.10	16	*e*P	P	16 57 57.0	-0.6
	comp=Z,6.4nm,1.1s,mb4.5						
LZH	Lanzhou	82.78	310	⇑P	P	16 58 04.1	+2.3
LZH				AP	pP	16 58 10.2	+0.6
LZH				XP	sP	16 58 14.3	+2.1
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb5.0						
LZH				LR	LR		
	comp=N,256nm,13.0s						
LZH				LR	LR		
	comp=Z,443nm,17.3s,MS4.9						
LZH	Lanzhou	82.78	310	⇑P	P	16 58 04.1	+2.3
	comp=Z,25nm,1.5s,mb5.0						
LZH				pP	pP	16 58 10.2	+0.6
LZH				sP	sP	16 58 14.3	+2.1
LZH				LR	LR		
	comp=Z,440nm,17.3s,MS4.9						
NEN	Nelson	82.84	51	*e*P	P	16 58 01.4	-0.7
WVOR	Wild Horse Val	82.88	43	*e*P	P	16 58 02.5	+0.3
	comp=Z,28nm,1.5s,mb5.1						
IMA	Indian Mountai	82.93	13	*e*P	P	16 58 02.0	0.0
YAK	Yakutsk	83.12	340	*i* P	P	16 58 02.5	-0.5
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
YAK				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.3						
YAK	Yakutsk	83.12	340	*e*P	P	16 58 01.8	-1.2
COLA	College	83.30	15	⇑*e*P	P	16 58 03.8	-0.1
COLA	College	83.30	15	*e*P	P	16 58 03.3	-0.6
	comp=Z,30nm,1.2s,mb5.2						
BMO	Blue Mountains	84.78	42	*e*P	P	16 58 11.5	-0.3
DAWY	Dawson	85.09	19	*e*P	P	16 58 12.8	-0.1
ULN	Ulaanbaatar	85.42	321	*d* *i*P	P	16 58 14.0	-0.9
ULN	Ulaanbaatar	85.42	321	*e*P	P	16 58 13.8	-1.0
	comp=Z,10nm,1.3s,mb4.8						
ULN				*e*pP	pP	16 58 22.9	+0.1
MSU	Marysvale	85.87	49	*e*P	P	16 58 18.7	+1.3
HLID	Hailey	86.17	44	*e*P	P	16 58 19.2	+0.5
	comp=Z,3.7nm,1.1s,mb4.5						
NLU	North Lily Min	86.46	48	*e*P	P	16 58 21.0	+0.8
NLU				pP	pP	16 58 29.7	+1.6
BOD	Bodaibo	86.56	332	*e*P	P	16 58 17.8	-2.5
GTA	Gaotai	86.96	312	*e*P	P	16 58 23.0	+0.3
GTA				AP	pP	16 58 28.0	-2.6
GTA				XP	sP	16 58 31.9	-1.2
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,135nm,4.2s						
GTA				LR	LR		
	comp=N,151nm,14.4s,MS4.7						
GTA				LR	LR		
	comp=E,136nm,13.7s,MS4.7						
GTA				LR	LR		
	comp=Z,134nm,14.5s,MS4.5						
DAU	Daniels Canyon	87.21	47	*e*P	P	16 58 25.2	+1.3
DAU				*e*		16 58 38.9	
TCUT	Toone Canyon	87.34	47	*e*P	P	16 58 25.7	+1.2
HWUT	Hardware Ranch	87.41	46	*e*P	P	16 58 24.5	-0.3
	comp=Z,4.6nm,1.0s,mb4.7						
PV10	Paradox Valley	88.14	50	*e*P	P	16 58 27.1	-1.3
RRI2	Red Ridge	88.19	45	*e*P	P	16 58 29.4	+1.0
TPAW	Teton Pass	88.49	45	*e*P	P	16 58 29.4	-0.5
MOOW	Moose Ponds	88.72	44	*e*P	P	16 58 31.6	+0.5
LPM	Los Pinos Moun	88.73	54	*e*P	P	16 58 31.0	-0.3
LOHW	Long Hollow	88.77	45	*e*P	P	16 58 30.8	-0.5
MNTX	Cornudas Mount	88.98	57	*e*P	P	16 58 30.9	-1.7
	comp=Z,4.4nm,1.1s,mb4.7						
ANMO	Albuquerque	89.06	54	*c* *i*P	P	16 58 33.5	+0.6
ANMO	Albuquerque	89.06	54	*e*P	P	16 58 31.6	-1.3
	comp=Z,8.5nm,1.1s,mb5.0						
ANMO				*e*pP	pP	16 58 42.4	+1.6
BW06	Boulder Array	89.20	46	*e*P	P	16 58 33.5	+0.2
	comp=Z,21nm,1.6s,mb5.2						
GDL2	Guadalupe Moun	89.95	57	*e*P	P	16 58 36.5	-0.6
GDL2				*e*pP	pP	16 58 45.2	+0.2
TIXI	Tiksi	90.33	347	⇑*i*P	P	16 58 37.8	-0.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.8						
SDCO	Great Sand Dun	90.61	51	*e*P	P	16 58 41.0	+1.0
	comp=Z,14nm,1.7s,mb5.0						
SYO	Syowa Base	91.64	195	⇓P	P	16 58 43.7	-0.3
YKW3	Yellowknife Ar	93.48	26	*e*P	P	16 58 52.2	-0.4
WMQ	Urumqi	96.90	313	*e*P	P	16 59 10.0	+1.3
ZAL	Zalesovo	100.60	323	*i* P	P	16 59 24.8	-0.4
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
OBN	Obninsk	127.23	331	*e*PKIKP	PKPdf	17 04 39.6	-5.5
OBN				*e*		17 11 38.1	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
OBN				MLR	MLR		
	comp=Z,400nm,20.0s,MS5.1						
KIV	Kislovodsk	128.94	316	*e*PKIKP	PKPdf	17 04 44.9	-3.9
KIV						17 11 44.2	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SOC	Sochi	131.07	317	*i* PKIKP	PKPdf	17 04 49.7	-3.2
SOC				*e*PPP	PPP	17 09 59.9	+0.8
SOC				*e*		17 11 51.1	
SOC				*e*SS	SS	17 24 32.5	-3.7
SOC				*e*SSS	SSS	17 29 19.5	-10
SOC				pmax	pmax		
	comp=Z,20nm,0.9s						
SOC				pmax	pmax		
	comp=N,5.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.6s						
CDF	Champ du Feu	143.68	345	*e*PKP1	PKPbc	17 05 11.8	+2.0
	comp=E,23nm,1.3s						
BRMO	Bormio	144.57	341	*e*PKP	PKPdf	17 05 11.9	-5.3
GRR	Gorron	145.09	354	*e*PKP1	PKPbc	17 05 13.0	-0.8
ROSF	Rostrenen	145.32	357	*e*PKP1	PKPbc	17 05 13.7	-0.6
	comp=E,100nm,1.6s						
SGMF	Saint Gilles	145.36	356	*e*PKP1	PKPbc	17 05 13.9	-0.5
	comp=E,62nm,1.3s						
VAI	Varese	145.61	342	*e*PKP	PKPdf	17 05 15.0	-4.0
CABF	La Chapelle	145.65	346	*e*PKP1	PKPbc	17 05 15.9	+0.7
	comp=E,102nm,1.5s						
QUIF	Quistinic	145.73	357	*e*PKP1	PKPbc	17 05 14.9	-0.5
	comp=E,29nm,1.2s						
MCGN	Macugnaga	145.75	343	*e*PKP	PKPdf	17 05 16.3	-3.0
SSF	Saint Saulge	145.78	349	*e*PKP1	PKPbc	17 05 15.9	+0.4
	comp=E,91nm,1.4s						
AVF	Avril sur Loir	146.07	349	*e*PKP1	PKPbc	17 05 16.5	+0.3
	comp=E,34nm,1.2s						
SMF	Signal de Mont	146.11	348	*e*PKP1	PKPbc	17 05 16.8	+0.5
	comp=E,104nm,1.5s						
BGF	Bois d'Agland	146.38	349	*e*PKP1	PKPbc	17 05 16.4	-0.6
	comp=E,39nm,1.3s						
LPL	La Plagne	146.51	344	*e*PKP1	PKPbc	17 05 17.7	+0.4
	comp=E,36nm,1.4s						
LPG	La Plagne	146.52	344	*e*PKP1	PKPbc	17 05 17.8	+0.5
	comp=E,79nm,1.7s						
TCF	Toulx Ste Croi	146.76	350	*e*PKP1	PKPbc	17 05 17.6	-0.2
	comp=E,40nm,1.5s						
MFF	Saint Martin d	146.78	353	*e*PKP1	PKPbc	17 05 18.9	+1.0
PTQR	Pietraquaria	147.21	333	*e*PKP	PKPdf	17 05 21.0	-0.9
ORIF	Oris-en-Rattie	147.28	345	*e*PKP1	PKPdf	17 05 19.4	-2.5
ORIF				*e*R			
	comp=E,277nm,22.0s						

VIVF	**Saint-Julien-l**	**147.64**	**346**	*e*PKP1	PKPdf	17 05 20.4	-2.0
	comp=E,58nm,1.6s						
RJF	**Les Rejaudoux**	**147.83**	**350**	*e*PKP1	PKPdf	17 05 21.8	-0.9
RJF				*e*R			
	comp=E,296nm,22.8s						
SBF	**Sospel**	**147.83**	**342**	*e*PKP1	PKPdf	17 05 20.2	-2.6
CAF	**Calviac**	**148.10**	**350**	*e*PKP1	PKPdf	17 05 21.3	-1.9
	comp=E,28nm,1.4s						
LFF	**La Frestale**	**148.30**	**351**	*e*PKP1	PKPdf	17 05 22.9	-0.6
FRF	**La Foret Royal**	**148.33**	**343**	*e*PKP1	PKPdf	17 05 21.4	-2.2
	comp=E,112nm,1.7s						
PGF	**Pioggiola**	**148.50**	**339**	*e*PKP1	PKPdf	17 05 23.4	-0.5
	comp=E,133nm,1.7s						
LMR	**La Mourre**	**148.58**	**343**	*e*PKP1	PKPdf	17 05 22.3	-1.7
MTLF	**Montolieu**	**149.61**	**349**	*e*PKP1	PKPdf	17 05 24.0	-1.7
	comp=E,24nm,1.3s						
EPF	**Esparros**	**150.23**	**351**	*e*PKP1	PKPdf	17 05 28.5	+1.9
	comp=E,39nm,1.5s						
ETSF	**Etsaut**	**150.48**	**352**	*e*PKP1	PKPdf	17 05 29.1	+2.1
	comp=E,35nm,1.2s						

OTT 04 17:02:45.5±0.2, 52.77N×67.34W, MN2.5/7, Blast, Mount Wright, Qc Mining explosion., Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**2.08**	**8**	PN	Pn	17 03 20.6	-1.5
SCHQ				SN	Sn	17 03 48.4	-0.7
SCHQ				Trac		17 03 51.2	
	comp=Z,6.3nm,0.1s						
MNQ	**Manicouagan**	**2.42**	**202**	PN	Pn	17 03 26.4	-0.5
MNQ				SN	Sn	17 03 57.0	-0.6
MNQ				Trac		17 04 07.6	
	comp=Z,9.2nm,0.2s						
SMQ	**Clarke City**	**2.59**	**171**	PN	Pn	17 03 28.2	-1.1
SMQ				SG	Sg	17 04 02.4	-9.3
SMQ				Trac		17 04 04.8	
	comp=Z,4.0nm,0.1s						
ICQ	**Pointe Anglais**	**3.26**	**179**	PN	Pn	17 03 37.5	-1.3
ICQ				SN	Sn	17 04 11.5	-7.5
ICQ				Trac		17 04 32.4	
	comp=Z,6.3nm,0.2s						
CNQ	**Baie Comeau**	**3.51**	**188**	PN	Pn	17 03 41.2	-1.3
CNQ				SN	Sn	17 04 22.9	-2.4
CNQ				Trac		17 04 35.9	
	comp=Z,2.5nm,0.1s						
GSQ	**Grosses Roches**	**3.87**	**178**	PN	Pn	17 03 44.9	-2.7
GSQ				SN	Sn	17 04 32.6	-1.9
GSQ				Trac		17 04 48.7	
	comp=Z,4.2nm,0.2s						
LG4Q	**La Grande 4**	**4.16**	**285**	PN	Pn	17 03 49.4	-2.2
LG4Q				SN	Sn	17 04 46.2	+4.5
LG4Q				Trac		17 05 21.6	
	comp=Z,5.1nm,0.2s						
LMQ	**La Malbaie**	**5.57**	**201**	PN	Pn	17 04 08.3	-3.4
DRLN	**Deer Lake**	**7.13**	**116**	SN	Sn	17 05 45.8	-11
VIMO	**Victor Mine**	**9.94**	**277**	PN	P	17 05 06.2	-6.4
SILO	**Sutton Inlier**	**10.58**	**286**	PN	P	17 05 15.3	-6.0
SILO				SN	S	17 07 00.1	-22

*BJI **04** 17:53:00.6, 7.55N×93.86E, h39^{km}, mB4.9, mb4.4, Ms4.6, Msz3.9*

*NEIC **04** 17:53:04.2±0.6, 7.97N×94.21E, mb4.7/19, Error ellipse: s-maj=15.6km s-min=11.0km az=147.0*

*MOS **04** 17:53:05.7±0.8, 8.35N×94.15E, h33^{km}, mb4.9/15, Error ellipse: s-maj=23.0km s-min=9.9km az=117.0*

ISC 04 17:53:02.6±1.7, 8.04N±0.06×94.27E±0.05, h22^{km}±12^{km}, h23^{km}±3.2^{km}:pP-P, n97, σ1^{s}15/115, mb4.7/33, MS4.0/9, 4C-8D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**11.31**	**23**	*e*P	**P**	**17 55 46.3**	**0.0**
	4.0nm,0.8s						
CHG	**Chiang Mai**	**11.63**	**23**	P	**P**	**17 55 59.6**	**+9.0**
NANT	**Nan**	**12.39**	**30**	P	**P**	**17 56 05.6**	**+4.8**
VIS	**Vishakhapatnam**	**14.36**	**313**	*e*P	**P**	**17 56 26.7**	**-0.2**
VIS				*e*		17 56 27.7	
	comp=Z,28nm,1.5s						
VIS				*e*S	**S**	**17 59 05.1**	**-1.1**
BWNR	**Bhubaneshwar**	**14.68**	**327**	*e*P	**P**	**17 56 27.3**	**-3.8**
BWNR				*e*		17 56 33.1	
	comp=Z,24nm,1.0s						
BWNR				*e*S	**S**	**17 59 16.0**	**+2.1**
SHL	**Shillong**	**17.58**	**353**	*e*P	**P**	**17 57 08.0**	**-0.1**
SHL				*e*		18 00 17.0	
HYB	**Hyderabad**	**17.93**	**303**	*e*P	**P**	**17 57 13.5**	**+1.1**
HYB				*e*S	**S**	**18 00 30.0**	**+1.0**
HYB	**Hyderabad**	**17.93**	**303**	*i* P	**P**	**17 57 13.5**	**+1.1**
HYB				*e*S	**S**	**18 00 30.0**	**+1.0**
KMI	**Kunming**	**18.82**	**24**	P	**P**	**17 57 25.4**	**+2.0**
KMI				AP		17 57 33.0	
KMI				XP		17 57 38.5	
KMI				S	**S**	**18 01 00.6**	**+11**
KMI				SS	SS	18 01 28.6	+14
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s						
KMI				AMB	AMB		
	comp=Z,90nm,3.8s						
KMI				LR	LR		
	comp=N,370nm,14.3s						
KMI				LR	LR		
	comp=E,400nm,16.9s						
KMI				LR	LR		
	comp=Z,240nm,13.0s						
KMI	**Kunming**	**18.82**	**24**	P	**P**	**17 57 25.4**	**+2.0**
	comp=Z,7.0nm,0.9s						
KMI				pP		17 57 33.0	
KMI				sP		17 57 38.5	
KMI				S	**S**	**18 01 00.6**	**+11**
KMI				SS	SS	18 01 28.6	+14
JIRN	**Jiri**	**20.96**	**340**	*e*P	**P**	**17 57 46.1**	**-0.6**
	comp=Z,87nm,1.0s						
PKI	**Pulchoki**	**21.16**	**338**	*e*P	**P**	**17 57 48.2**	**-0.6**
	comp=Z,90nm,1.2s,mb5.0						
DMN	**Daman**	**21.31**	**337**	*e*P	**P**	**17 57 49.5**	**-0.8**
	comp=Z,80nm,1.0s,mb5.0						
KKN	**Kakani**	**21.41**	**338**	*e*P	**P**	**17 57 50.2**	**-1.1**
	comp=Z,75nm,1.1s,mb5.0						
LSA	**Lhasa**	**21.75**	**353**	P	**P**	**17 57 55.0**	**+0.3**
GYA	**Guiyang**	**21.78**	**31**	P	**P**	**17 57 58.7**	**+3.7**
GYA				AP		17 58 07.7	
GYA				XP		17 58 11.6	
GYA				S	**S**	**18 02 04.1**	**+14**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
GYA				AMB	AMB		
	comp=Z,60nm,3.2s						
GYA				LR	LR		
	comp=N,400nm,12.8s,MS4.4						
GYA				LR	LR		
	comp=E,850nm,13.2s,MS4.4						
GYA				LR	LR		
	comp=Z,500nm,13.1s,MS4.1						
GKN	**Gorkha**	**21.84**	**337**	*e*P	**P**	**17 57 55.2**	**-0.5**
	comp=Z,54nm,0.8s,mb5.0						
KOLN	**Koldanda**	**22.07**	**334**	*e*P	**P**	**17 57 57.9**	**0.0**
	comp=Z,127nm,1.2s,mb5.2						
BHPL	**Bhopal**	**22.13**	**315**	*e*P	**P**	**17 57 57.4**	**-1.1**
BHPL				*e*		17 58 00.8	
	comp=Z,22nm,1.1s						
LGTI	**Lohaghat**	**25.05**	**330**	⇑*i*P	**P**	**17 58 27.7**	**+0.7**
NDI	**New Delhi**	**26.08**	**324**	*e*P	**P**	**17 58 35.0**	**-1.6**
NDI				*e*P		17 58 35.5	
XAN	**Xi'an**	**29.19**	**26**	P	**P**	**17 59 04.5**	**-0.4**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.3						
XAN				LR	LR		
	comp=N,283nm,13.4s,MS4.2						
XAN				LR	LR		
	comp=E,310nm,12.9s,MS4.2						
XAN				LR	LR		
	comp=Z,192nm,14.4s,MS3.9						
LZH	**Lanzhou**	**29.26**	**16**	*e*P	**P**	**17 59 07.3**	**+1.9**
LZH				AP	pP	17 59 16.3	+4.3
LZH				XP	sP	17 59 20.4	+5.5
LZH				PP	PP	18 00 03.5	+3.0
LZH				*e*S	**S**	**18 03 57.8**	**+2.1**
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,95nm,5.2s						
LZH				LR	LR		
	comp=N,689nm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.6						
LZH	**Lanzhou**	**29.26**	**16**	*e*P	**P**	**17 59 07.3**	**+1.9**
	comp=Z,21nm,1.3s,mb4.7						
LZH				pP	pP	17 59 16.3	+4.3
LZH				sP	sP	17 59 20.4	+5.5
LZH				PP	PP	18 00 03.5	+3.0
LZH				*e*S	**S**	**18 03 57.8**	**+2.1**
LZH				sS		18 04 13.2	
LZH				SS	SS	18 05 30.5	+3.5
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.6						
GTA	**Gaotai**	**31.63**	**8**	*e*P	**P**	**17 59 26.5**	**+0.1**
GTA				AP	pP	17 59 36.3	+3.3
GTA				XP	sP	17 59 39.7	+3.9
GTA				PP	PP	18 00 31.7	+0.4
GTA				PCP	PcP	18 02 19.8	+1.4
GTA				S	**S**	**18 04 33.9**	**+0.8**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb3.9						
GTA				AMB	AMB		
	comp=Z,108nm,4.6s						
GTA				LR	LR		
	comp=N,185nm,10.6s,MS4.1						
GTA				LR	LR		
	comp=E,137nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=Z,167nm,15.2s,MS3.8						
NJ2	**Nanjing**	**33.07**	**40**	*e*P	**P**	**17 59 39.1**	**+0.1**
NJ2				AP	pP	17 59 48.5	+2.9
NJ2				XP	sP	17 59 53.0	+4.6
NJ2				PP	PP	18 00 51.1	+1.1
NJ2				S	**S**	**18 04 55.0**	**-0.5**
NJ2				AMB	AMB		
	comp=Z,370nm,4.2s						
NJ2				LR	LR		
	comp=N,690nm,17.7s,MS4.6						
NJ2				LR	LR		
	comp=E,670nm,14.8s,MS4.6						
NJ2				LR	LR		
	comp=Z,380nm,15.4s,MS4.2						
SSE	**Sheshan**	**34.02**	**44**	P	**P**	**17 59 46.9**	**-0.4**
SSE				AP	pP	17 59 55.7	+1.8
SSE				S	**S**	**18 05 18.5**	**+8.2**
SSE				XS		18 05 33.9	
SSE				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
SSE				AMB	AMB		
	comp=Z,90nm,4.3s						
SSE				LR	LR		
	comp=N,62nm,21.6s,MS3.4						
SSE				LR	LR		
	comp=E,50nm,21.5s,MS3.4						
SSE				LR	LR		
	comp=Z,74nm,18.2s,MS3.5						
SSE	**Sheshan**	**34.02**	**44**	P	**P**	**17 59 46.9**	**-0.4**
	comp=Z,7.0nm,0.8s,mb4.6						
SSE				pP	pP	17 59 55.7	+1.8
SSE				S	**S**	**18 05 18.5**	**+8.2**
SSE				sS		18 05 33.9	
SSE				LR	LR		
	comp=Z,70nm,18.2s,MS3.4						
KSH	**Kashi**	**35.38**	**335**	*e*P	**P**	**17 59 54.0**	**-4.8**
KSH				*e*XP	sP	18 00 09.2	+1.0
KSH				*e*PCS		18 06 09.5	
KSH				AMB	AMB		
	comp=Z,260nm,5.4s						
KSH				LR	LR		
	comp=N,590nm,5.7s						
KSH				LR	LR		
	comp=E,500nm,4.3s						
BJI	**Beijing**	**37.40**	**28**	P	**P**	**18 00 18.0**	**+2.1**
BJI				AP	pP	18 00 26.9	+4.4
BJI				XP	sP	18 00 30.8	+5.5
BJI				S	**S**	**18 06 08.5**	**+6.1**
BJI				SCS	ScS	18 10 26.7	+0.4
BJI				AMB	AMB		
	comp=Z,3.0nm,1.5s,mb3.9						
BJI				AMB	AMB		
	comp=Z,173nm,4.9s						
BJI				LR	LR		
	comp=N,96nm,16.7s,MS3.9						
BJI				LR	LR		
	comp=E,122nm,15.4s,MS3.9						
BJI				LR	LR		
	comp=Z,96nm,23.3s						
BJI	**Beijing**	**37.40**	**28**	P	**P**	**18 00 18.0**	**+2.1**
	comp=Z,3.0nm,1.5s,mb3.9						
BJI				pP	pP	18 00 26.9	+4.4
BJI				sP	sP	18 00 30.8	+5.5
BJI				S	**S**	**18 06 08.5**	**+6.1**
BJI				SS	SS	18 09 01.7	+27
BJI				ScS	ScS	18 10 26.7	+0.4
BJI				LR	LR		
	comp=Z,100nm,23.3s,MS3.5						
BSY	**Bisya**	**38.48**	**297**	⇑P	**P**	**18 00 27.8**	**+2.7**
	SNR=9.1						
AAK	**Ala-Archa**	**38.60**	**336**	*i* P	**P**	**18 00 25.5**	**-0.5**
AAK				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.5						
AAK				MLR	MLR		
	comp=Z,200nm,23.0s,MS3.9						
HOQ	**Hoqain**	**38.62**	**298**	⇓P	**P**	**18 00 28.9**	**+2.6**
	SNR=11						
ARQ	**Araqi**	**39.24**	**297**	⇓P	**P**	**18 00 34.1**	**+2.6**
	SNR=7.9						
WHFO	**Wadi Hawf**	**40.58**	**288**	⇓P	**P**	**18 00 44.8**	**+2.2**
	SNR=13						
ULN	**Ulaanbaatar**	**41.15**	**13**	*i* P	**P**	**18 00 51.7**	**+4.8**
ULN	**Ulaanbaatar**	**41.15**	**13**	*e*P	**P**	**18 00 47.3**	**+0.4**
ZAK	**Zakamensk**	**42.87**	**8**	*e*P	**P**	**18 01 01.3**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
KURK	**Kurchatov**	**44.48**	**346*d***	*i*P	**P**	**18 01 13.9**	**-0.2**
KURK	**Kurchatov**	**44.48**	**346**	*e*P	**P**	**18 01 12.9**	**-1.2**
	comp=Z,13nm,1.2s,mb4.5						
CN2	**Changchun**	**44.83**	**32**	*e*P	**P**	**18 01 19.0**	**+2.0**
NVS	**Novosibirsk**	**47.50**	**351**	*e*P	**P**	**18 01 36.4**	**-1.6**
NVS				pmax	pmax		
	comp=Z,20nm,2.1s,mb4.8						
NVS				pmax	pmax		
	comp=E,22nm,2.2s						
WRAB	**Tennant Creek**	**48.26**	**126**	*e*P	**P**	**18 01 43.0**	**-1.3**
	comp=E,9.6nm,1.0s,mb4.8						
RAYN	**Ar Rayn**	**49.13**	**294**	P	**P**	**18 01 52.0**	**+1.0**
	comp=E,124nm,0.7s,SNR=18						
CHKZ	**Chkalovo**	**49.36**	**342**	*e*P	**P**	**18 01 50.4**	**-1.9**
	comp=E,11nm,0.9s,mb4.9						
BOD	**Bodaibo**	**51.96**	**13**	*e*P	**P**	**18 02 09.9**	**-2.2**
GNI	**Garni**	**54.41**	**314**	*i* P	**P**	**18 02 26.3**	**-4.2**
ARU	**Arti**	**55.79**	**337**	⇓*i*P	**P**	**18 02 30.7**	**-10**
ARU				*e*S	**S**	**18 10 14.3**	**-10**
ARU				*e*SS	SS	18 13 59.0	-11
ARU				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
KIV	**Kislovodsk**	**57.28**	**318**	*e*P	**P**	**18 02 50.4**	**-0.8**
KIV				*e*S	**S**	**18 10 42.9**	**-1.2**
KIV				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
KIV	**Kislovodsk**	**57.28**	**318**	*e*P	**P**	**18 02 49.3**	**-1.9**
	comp=Z,11nm,0.9s,mb4.9						
KMBO	**Kilima Mbogo**	**57.56**	**264**	*e*P	**P**	**18 02 54.2**	**+0.6**
	comp=Z,14nm,0.9s,mb5.0						
SOC	**Sochi**	**59.15**	**316**	*e*P	**P**	**18 02 54.7**	**-9.5**
SOC				*e*		18 03 53.4	
SOC				*e*		18 05 09.8	
SOC				*e*S	**S**	**18 11 01.0**	**-7.6**
SOC				*e*		18 12 41.2	
SOC				*e*SS	SS	18 15 03.8	-0.8
SOC				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
SOC				pmax	pmax		
	comp=N,24nm,0.8s						
SOC				pmax	pmax		
	comp=E,12nm,0.8s						
YAK	**Yakutsk**	**59.80**	**18*c***	*i*P	**P**	**18 03 08.5**	**+0.1**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
ANN	**Anapa**	**61.10**	**317**	*e*P	**P**	**18 03 10.0**	**-7.5**
ANN				*e*		18 03 21.3	
ANN				*i*		18 03 26.5	
ANN				*i*		18 04 02.2	
ANN				*e*S	**S**	**18 11 28.6**	**-5.0**
ANN				pmax	pmax		
	comp=Z,109nm,1.2s						
MBAR	**Mbarara**	**63.90**	**265*d***	*i*P	**P**	**18 03 37.6**	**+0.9**
MBAR	**Mbarara**	**63.90**	**265**	*e*P	**P**	**18 03 37.2**	**+0.5**
OBN	**Obninsk**	**65.31**	**328**	*e*P	**P**	**18 03 43.6**	**-1.5**
OBN				*e*		18 06 10.1	
OBN				*e*S	S	18 12 26.6	+0.6
OBN				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,9.0s						
TIXI	**Tiksi**	**67.05**	**11**	⇓*e*P	**P**	**18 03 55.1**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
AKASG	**Malin Array Be**	**68.10**	**322**	*i* P	**P**	**18 04 00.4**	**-2.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LSZ	**Lusaka**	**69.44**	**250**	*e*P	**P**	**18 04 12.0**	**+0.2**
JOF	**Joensuu**	**70.75**	**334**	*e*p	**P**	**18 04 17.5**	**-1.5**
KOLS	**Kolonicke sedl**	**72.16**	**319**	*e*P	**P**	**18 04 27.5**	**-0.2**
KOLS				*e*		18 04 31.4	
KAF	**Kangasniemi**	**72.70**	**333**	*e*p	**P**	**18 04 27.7**	**-2.9**
KECS	**Kecovo**	**73.28**	**318**	*e*P	**P**	**18 04 34.4**	**+0.1**
OJC	**Ojcow**	**73.93**	**320**	*e*P	**P**	**18 04 43.5**	**+5.5**
VYHS	**Vyhne**	**74.37**	**318**	*e*P	**P**	**18 04 40.1**	**-0.5**
OKC	**Ostrava-Krasne**	**74.95**	**319**	*e*P	**P**	**18 04 43.8**	**-0.1**
MORC	**Moravsky Berou**	**75.33**	**319**	*e*P	**P**	**18 04 45.4**	**-0.7**
	comp=Z,11nm,1.0s,mb4.7						
BILL	**Bilibino**	**75.89**	**22**	⇑*e*P	**P**	**18 04 49.5**	**+0.6**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.2						
DPC	**Dobruska-Polom**	**76.16**	**320**	*e*P	**P**	**18 04 51.1**	**+0.3**
UPC	**Upice**	**76.37**	**320**	*e*P	**P**	**18 04 52.1**	**+0.1**
PRU	**Pruhonice**	**77.28**	**319**	*e*P	**P**	**18 04 57.3**	**+0.2**
PVCC	**Panska Ves**	**77.29**	**320**	*e*P	**P**	**18 04 55.8**	**-1.3**
BRG	**Berggiesshubel**	**77.71**	**320**	*e*P	**P**	**18 04 59.8**	**+0.4**
BRG				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
BRG	**Berggiesshubel**	**77.71**	**320**	*e*P	**P**	**18 04 59.8**	**+0.4**
	comp=Z,14nm,1.4s,mb4.7						
GEC2	**GERESS Array S**	**77.79**	**318**	*e*P	**P**	**18 05 00.0**	**+0.1**
GEC2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
GEC2	**GERESS Array S**	**77.79**	**318**	*e*P	**P**	**18 05 00.0**	**+0.1**
	comp=Z,5.0nm,0.9s,mb4.4						
KHC	**Kasperske Hory**	**77.88**	**318**	*e*P	**P**	**18 05 00.2**	**-0.1**
KHC				*e*	pP	18 05 05.5	-1.9
KHC	**Kasperske Hory**	**77.88**	**318**	*e*P	**P**	**18 05 00.2**	**-0.1**
KHC				pP	pP	18 05 05.5	-1.9
CLL	**Collm**	**78.31**	**321**	*e*P	**P**	**18 05 02.0**	**-0.7**
CLL	**Collm**	**78.31**	**321**	P	**P**	**18 05 02.0**	**-0.7**
WET	**Wettzell**	**78.34**	**318**	*e*P	**P**	**18 05 03.1**	**+0.2**
WET				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
WET	**Wettzell**	**78.34**	**318**	*e*P	**P**	**18 05 03.1**	**+0.2**
	comp=Z,4.0nm,0.9s,mb4.3						
MOX	**Moxa**	**79.18**	**320**	*i* P	**P**	**18 05 07.6**	**+0.2**
FUR	**Furstenfeldbru**	**79.39**	**317**	*e*P	**P**	**18 05 08.3**	**-0.4**
GRA1	**Grafenberg Arr**	**79.43**	**319**	*e*P	**P**	**18 05 09.4**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.6						
GRA1				*e*pP	pP	18 05 13.9	-1.9
GRF	**Grafenberg Arr**	**79.43**	**319**	*e*P	**P**	**18 05 09.4**	**+0.6**
GRF				*e**PP	pP	18 05 13.9	-1.9
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GRF	**Grafenberg Arr**	**79.43**	**319**	*e*P	**P**	**18 05 09.4**	**+0.6**
	comp=Z,7.0nm,0.8s,mb4.6						
GRF				*e*pP	pP	18 05 13.9	-1.9
NB2	**NORSAR Subarra**	**79.65**	**331**	P	**P**	**18 05 09.2**	**-0.6**
	comp=Z,1.5nm,0.6s,mb4.1,baz=95,slow=5.0						
CLZ	**Clausthal**	**79.96**	**321**	*e*P	**P**	**18 05 11.9**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.6						
BFO	**Black Forest**	**81.36**	**318**	*e*P	**P**	**18 05 18.8**	**-0.3**
BFO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BFO	**Black Forest**	**81.36**	**318**	*e*P	**P**	**18 05 18.8**	**-0.3**
	comp=Z,3.0nm,0.9s,mb4.2						
LPG	**La Plagne**	**82.59**	**315**	*e*P	**P**	**18 05 25.8**	**+0.3**
	comp=Z,28nm,1.0s,mb5.0						
SYO	**Syowa Base**	**85.60**	**197**	⇓P	**P**	**18 05 43.3**	**+3.1**
IMA	**Indian Mountai**	**91.42**	**22**	*e*P	**P**	**18 06 09.6**	**+1.6**
IMA				*e*pP	pP	18 06 15.2	+0.1
PLCA	**Paso Flores**	**144.74**	**200**	*e*PKP	PKPdf	18 12 39.3	-3.2

IGQ 04 18:24:37.1, 1.52S×81.47W, h8^{km}±3^{km}, mb4.3, 1C-1D, Error ellipse: s-maj=6.7km s-min=3.4km az=24.2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	**Salinas**	**0.81**	**144**	⇓P	Pb	18 24 52.6	-0.5
HOJA	**Cerro de Hojas**	**1.03**	**63**	⇑P	Pb	18 24 56.2	-0.6
HOJA				S	Sb	18 25 09.9	-0.4
IGUA	**Igualata**	**2.83**	**89**	P	Pn	18 25 23.8	+0.4
ARRY	**Arrayan**	**3.01**	**90**	P	Pn	18 25 27.3	+1.3
ARRY				S	Sn	18 26 02.4	-0.3
RETU	**Refugio**	**3.02**	**89**	P	Pn	18 25 28.1	+2.0
PISA	**Pisayambo**	**3.11**	**82**	P	Pn	18 25 28.8	+1.3
NAS1	**Nasa**	**3.12**	**74**	P	Pn	18 25 29.9	+2.4
TERV	**Terraza Guagua**	**3.16**	**65**	P	Pn	18 25 31.0	+2.8
PINO	**Pino**	**3.16**	**65**	P	Pn	18 25 29.2	+1.0
VC1	**Cotopaxi 1**	**3.18**	**74**	P	Pn	18 25 31.0	+2.4
TAMB	**Tambo**	**3.20**	**75**	P	Pn	18 25 31.3	+2.5
YANA	**Yana**	**3.21**	**64**	P	Pn	18 25 29.5	+0.6
ANTI	**Antisana**	**3.47**	**72**	P	Pn	18 25 33.6	+1.0
ANTI				S	Sn	18 26 16.3	+1.9
CAYR	**Refugio Cayamb**	**3.78**	**66**	P	Pn	18 25 39.6	+2.7

*NEIC **04** 18:26:32.8, 36.64N×21.11E, h2^{km}, MD3.6(ATH), After ATH.*

*CSEM **04** 18:26:32.8, 36.64N×21.11E, h2^{km}, MD3.6/5, After ATH*

ATH 04 18:26:32.8, 36.64N×21.11E, h2^{km}, MD3.6/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.85**	**50**	*e*PG	Pg	18 26 48.6	-1.1
ITM				*e*SG	Sg	18 27 01.0	0.0
VLI	**Veliai**	**1.47**	**86**	*e*PG	Pg	18 27 00.0	-2.2
VLS	**Valsamata**	**1.59**	**345**	*e*PB	Pb	18 27 03.0	+0.4
KYTH	**Kithira**	**1.59**	**102**	*e*PB	Pb	18 27 03.3	+0.6
NAIG	**Nisos Aigina**	**2.20**	**59**	*e*PG	Pg	18 27 13.5	-3.3

*NEIC **04** 18:28:50.8, 18.25N×68.28W, h172^{km}, MD4.2(RSPR), After RSPR.*

RSPR 04 18:28:50.8, 18.25N×68.28W, h172^{km}±2^{km}, MD4.2/4, MD4.2/4, 1C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGP	**Maguayo**	**1.15**	**102**	⇓*e*P	P	18 29 17.5	-1.7
AOPR	**Arecibo Observ**	**1.45**	**86**	⇑*i*P	P	18 29 21.2	-0.8
AOPR				*e*S	S	18 29 45.2	-0.9
PORP	**Portuguez**	**1.57**	**97**	⇓*i*P	P	18 29 22.6	-0.6
OBIP	**Obispado Ponce**	**1.60**	**97**	⇓*i*P	P	18 29 23.0	-0.5
OBIP				*e*S	S	18 29 47.5	-1.2
CELP	**Cerrillos**	**1.62**	**96**	⇑*i*P	P	18 29 23.0	-0.7
CSB	**Colonia Sabana**	**2.02**	**88**	⇓*e*P	P	18 29 27.1	-0.8
SJG	**San Juan**	**2.03**	**93**	⇓*e*P	P	18 29 27.8	-0.2
SJG				*e*S	S	18 29 57.0	+0.4
CBYP	**Canovanas**	**2.30**	**89**	⇓*e*P	P	18 29 30.5	-0.7
CBYP				*e*S	S	18 30 01.9	-0.4

*NIED **04** 18:34:00, 33.20N×142.00E, h20^{km}, Mw4.9 Best double couple: M$_0$2.41×10^{16} NP1:φ$_s$221°, δ62°, λ-38°. NP2: φ$_s$331°, δ57°, λ-146°.*

*BJI **04** 18:34:11.3, 33.12N×142.14E, h25^{km}, mB5.1, mb4.8, Ms4.6, Msz4.4*

*NEIC **04** 18:34:13.7±1.7, 33.16N×142.05E, h21^{km}±11^{km}, mb5.2/111, MW4.9(NIED), Error ellipse: s-maj=4.1km s-min=3.3km az=160.0*

*HRVD **04** 18:34:13.7±0.4, 33.16N×142.25E, h16^{km}, MW5.0/58, Centroid moment Tensor Solution. LP body waves: s29,c42;Mantle waves: s58,c104; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.38±.18;*

$M_{\theta\theta}$-0.80±.12; $M_{\phi\phi}$4.18±.13; $M_{r\theta}$0.44±.42; $M_{\theta\phi}$0.11±.08; $M_{\phi r}$0.33±.29; Best double couple: M_0 3.831×10^{16} NP1: ϕ_s352°,δ43°,λ-103°. NP2:ϕ_s190°,δ48°,λ-78°. Principal axes: T 4.197, Plg3°, Azm271°; N -.734, Plg9°, Azm2°; P -3.465, Plg80°, Azm166°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*MOS **04** 18:34:14.0±0.9,33.14N×142.09E,h33km,mb5.5/87, MS4.4/18 Error ellipse: s-maj=9.1km s-min=4.8km az=108.7*

*JMA **04** 18:34:14.8±0.3,33.24N×142.03E,h68km,M4.9*

ISC 04 18:34:11.8±0.9,**33.15N**±0.03×**142.05E**±0.02,**h18**km±6km, **h16**km±2.3km**:pP-P,n399,**σ**0^{s}95**/424,**mb5.2**/144,**MS4.4**/21, **29C-24D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.74**	**330**	P	**Pn**	**18 34 42.4**	**+0.8**
JHJ2	**Mitsune**	**1.87**	**269**	P	**Pn**	**18 34 45.4**	**+2.0**
BSO3	**Boso 3**	**2.08**	**323**	P	**Pn**	**18 34 47.5**	**+1.0**
BSO4	**Boso 4**	**2.32**	**323**	P	**Pn**	**18 34 51.3**	**+1.4**
KTR	**Katsuura**	**2.46**	**325**	P	**Pn**	**18 34 53.1**	**+1.3**
KTR				S	**Sn**	**18 35 21.3**	**-0.3**
JIM2	**Oshima 3**	**2.68**	**306**	P	**Pn**	**18 34 55.2**	**+0.2**
JIM2				eS	**Sn**	**18 35 25.4**	**-1.9**
JIZS	**Izushimoda**	**3.06**	**302**	P	**Pn**	**18 35 01.4**	**+0.9**
JIZS				S	**Sn**	**18 35 36.8**	**-0.2**
JOD2	**Odawara 2**	**3.23**	**312**	P	**Pn**	**18 35 02.8**	**-0.1**
JOD2				eS	**Sn**	**18 35 39.2**	**-2.1**
JYN	**Shimob**	**3.73**	**310**	P	**Pn**	**18 35 10.4**	**+0.5**
JYN				S	**Sn**	**18 35 53.3**	**-0.5**
TK01	**Tokai 1**	**3.78**	**281**	P	**Pn**	**18 35 11.1**	**+0.5**
TK01				S	**Sn**	**18 35 55.3**	**+0.3**
JRY	**Ryogami san**	**3.86**	**319**	P	**Pn**	**18 35 11.3**	**-0.5**
JRY				S	**Sn**	**18 35 56.9**	**-0.3**
JAG	**Ashikaga**	**3.90**	**328**	P	**Pn**	**18 35 11.3**	**-1.1**
JAG				S	**Sn**	**18 35 56.1**	**-2.1**
JIE	**Ise**	**4.62**	**287**	P	**Pn**	**18 35 23.7**	**+1.2**
MAJO	**Matsushiro**	**4.63**	**318**	eP	**Pn**	**18 35 23.2**	**+0.5**
MAT	**Matsushiro**	**4.63**	**318**	P	**Pn**	**18 35 23.2**	**+0.5**
MAT				S	**Sn**	**18 36 15.2**	**-1.4**
MAT	**Matsushiro**	**4.63**	**318**	P	**Pn**	**18 35 23.1**	**+0.4**
MAT				S	**Sn**	**18 36 15.5**	**-1.1**
JMM	**Marumori**	**4.82**	**348**	P	**Pn**	**18 35 23.0**	**-2.3**
JMM				S	**Sn**	**18 36 13.6**	**-7.7**
JGM	**Miyama**	**5.08**	**301**	P	**Pn**	**18 35 30.9**	**+1.8**
JNS	**Sasagawa**	**5.16**	**335**	P	**Pn**	**18 35 29.9**	**-0.3**
JNS				S	**Sn**	**18 36 27.7**	**-2.4**
JWZ	**Kozaga**	**5.31**	**276**	P	**Pn**	**18 35 33.1**	**+0.8**
KS15	**Wonju Array Si**	**12.34**	**294**	eP	**P**	**18 37 09.0**	**-0.6**
YSS	**Yuzh-Sakhalins**	**13.80**	**2**	⇑eP	**P**	**18 37 24.4**	**-4.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				pmax	pmax		
	comp=N,50nm,0.8s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
YSS				MLR	MLR		
	comp=N,1µm,15.0s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
YSS	**Yuzh-Sakhalins**	**13.80**	**2**	eP	**P**	**18 37 23.5**	**-5.4**
	comp=E,53nm,0.9s						
MDJ	**Mudanjiang**	**14.98**	**323**	P	**P**	**18 37 43.9**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,21nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,87nm,4.5s						
MDJ				LR	LR		
	comp=N,696nm,22.6s						
MDJ				LR	LR		
	comp=E,585nm,19.6s						
MDJ				LR	LR		
	comp=Z,914nm,19.6s						
CN2	**Changchun**	**16.76**	**314**	eP	**P**	**18 38 08.7**	**+1.5**
CN2				eXP		18 38 17.2	
CN2				eS	**S**	**18 41 14.1**	**+2.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CN2				LR	LR		
	comp=N,1µm,13.0s						
CN2				LR	LR		
	comp=E,600nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
SNY	**Shenyang**	**17.00**	**306**	⇓P	**P**	**18 38 12.5**	**+2.2**
SNY				S	**S**	**18 41 19.4**	**+1.8**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.1s						
SNY				LR	LR		
	comp=N,520nm,10.8s						
SNY				LR	LR		
	comp=E,690nm,12.9s						
SNY				LR	LR		
	comp=Z,670nm,16.1s						
SSE	**Sheshan**	**17.79**	**269**	P	**P**	**18 38 20.2**	**0.0**
SSE				XP		18 38 33.4	
SSE				S	**S**	**18 41 38.3**	**+2.7**
SSE				AMB	AMB		
	comp=Z,15nm,1.1s						
SSE				AMB	AMB		
	comp=Z,197nm,8.7s						
SSE				LR	LR		
	comp=N,373nm,17.4s						
SSE				LR	LR		
	comp=E,304nm,17.5s						
SSE				LR	LR		
	comp=Z,484nm,18.8s						
SSE	**Sheshan**	**17.79**	**269**	P	**P**	**18 38 20.2**	**0.0**
	comp=Z,15nm,1.1s						
SSE				sP		18 38 33.4	
SSE				S	**S**	**18 41 38.3**	**+2.7**
SSE				sS		18 41 58.1	
KLR	**Kul'dur**	**17.81**	**337**	eP	**P**	**18 38 15.8**	**-4.5**
KLR				MLR	MLR		
	comp=N,1µm,15.0s						
KLR				MLR	MLR		
	comp=E,800nm,15.0s						
KLR				MLR	MLR		
	comp=Z,1µm,15.0s						
NJ2	**Nanjing**	**19.57**	**273**	eP	**P**	**18 38 40.4**	**-1.2**
NJ2				AP		18 38 45.0	
NJ2				XP		18 38 48.4	
NJ2				PP	PP	18 38 58.4	-1.2
NJ2				S	**S**	**18 42 14.0**	**-1.7**
NJ2				XS		18 42 23.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.1s						
NJ2				AMB	AMB		
	comp=Z,370nm,6.8s						
NJ2				LR	LR		
	comp=N,1µm,21.0s						
NJ2				LR	LR		
	comp=E,2µm,18.8s						
NJ2				LR	LR		
	comp=Z,2µm,18.0s						
TATO	**Taipei**	**19.71**	**251**	eP	**P**	**18 38 40.9**	**-2.4**
	comp=Z,80nm,1.0s						
TIA	**Tai'an**	**20.71**	**285**	eP	**P**	**18 38 51.8**	**-1.9**
BJI	**Beijing**	**21.84**	**296**	P	**P**	**18 39 01.7**	**-3.4**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.3						
BJI				LR	LR		
	comp=N,548nm,16.3s,MS4.3						
BJI				LR	LR		
	comp=E,662nm,15.3s,MS4.3						
BJI				LR	LR		
	comp=Z,665nm,21.2s						
BJI	**Beijing**	**21.84**	**296**	P	**P**	**18 39 01.7**	**-3.4**
	comp=Z,8.0nm,0.7s,mb4.3						
BJI				pP		18 39 06.3	
BJI				sP		18 39 09.2	
BJI				S	**S**	**18 42 49.1**	**-12**
BJI				LR	LR		
	comp=Z,670nm,21.2s,MS4.0						
QZH	**Quanzhou**	**22.04**	**254**	eP	**P**	**18 39 10.0**	**+2.7**
QZH				LR	LR		
	comp=N,410nm,6.9s						
QZH				LR	LR		
	comp=E,1µm,14.0s						
QZH				LR	LR		
	comp=Z,1µm,21.3s						
WHN	**Wuhan**	**23.65**	**271**	P	**P**	**18 39 23.3**	**+0.3**
WHN				LR	LR		
	comp=N,510nm,4.6s						
WHN				LR	LR		
	comp=E,890nm,11.0s						
WHN				LR	LR		
	comp=Z,2µm,17.2s						
HHC	**Hu-ho-hao-te**	**25.44**	**296**	eP	**P**	**18 39 41.1**	**+1.0**
HHC				AP	pP	18 39 45.2	-0.1
HHC				XP	sP	18 39 48.3	+0.6
HHC				PCP	PcP	18 43 12.3	-0.5
HHC				S	**S**	**18 44 08.7**	**+5.2**
HHC				XS		18 44 14.7	
HHC				SS	SS	18 45 08.6	+2.6
HHC				SCP		18 46 50.5	
HHC				PCS		18 46 51.7	
HHC				AMB	AMB		
	comp=Z,29nm,1.3s,mb4.7						
HHC				AMB	AMB		
	comp=Z,438nm,2.9s,mb5.5						
HHC				LR	LR		
	comp=N,564nm,18.0s,MS4.3						
HHC				LR	LR		
	comp=E,598nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=Z,420nm,14.4s,MS4.1						
CLNS	**Chul'man**	**26.46**	**339**	eP	**P**	**18 39 49.0**	**-0.4**
CLNS				e		18 40 29.1	
CLNS				ePPP	PPP	18 40 38.4	-6.5
CLNS				e		18 43 13.2	
CLNS				eS	**S**	**18 44 25.2**	**+4.9**
CLNS				pmax	pmax		
	comp=E,11nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.7						
CLNS				pmax	pmax		
	comp=N,20nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,45nm,1.6s,mb4.8						
CLNS				pmax	pmax		
	comp=N,17nm,1.0s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
CLNS				smax			
	comp=N,12nm,1.2s						
CLNS				smax			
	comp=Z,3.0nm,0.8s						
CLNS				smax			
	comp=E,7.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.5						
CLNS				MLR	MLR		
	comp=N,500nm,15.0s,MS4.2						
CLNS				MLR	MLR		
	comp=E,100nm,15.0s,MS4.2						
BTO	**Baotou**	**26.57**	**296**	eP	**P**	**18 39 51.2**	**+0.6**
BTO				AMB	AMB		
	comp=Z,27nm,0.8s,mb4.8						
BTO				LR	LR		
	comp=E,657nm,18.6s						
MA2	**Magadan**	**27.06**	**10**	d iP	**P**	**18 39 54.2**	**-0.7**
MA2				eS	**S**	**18 44 27.6**	**-2.5**
MA2				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.9						
MA2				MLR	MLR		
	comp=Z,600nm,21.6s,MS4.1						
MA2	**Magadan**	**27.06**	**10**	eP	**P**	**18 39 53.8**	**-1.2**
	comp=Z,60nm,1.0s,mb5.1						
GZH	**Guangzhou**	**27.15**	**256**	P	**P**	**18 39 50.9**	**-5.2**
GZH				LR	LR		
	comp=N,365nm,16.2s,MS4.2						
GZH				LR	LR		
	comp=E,407nm,20.2s,MS4.2						
GZH				LR	LR		
	comp=Z,573nm,20.2s,MS4.1						
XAN	**Xi'an**	**27.54**	**281**	P	**P**	**18 39 58.2**	**-1.4**
XAN				AP	pP	18 40 11.2	+6.4
XAN				S	**S**	**18 44 37.2**	**-0.9**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
XAN				LR	LR		
	comp=N,784nm,17.5s,MS4.4						
XAN				LR	LR		
	comp=E,453nm,19.0s,MS4.4						
XAN				LR	LR		
	comp=Z,670nm,15.8s,MS4.3						
YAK	**Yakutsk**	**29.97**	**348**	d iP	**P**	**18 40 19.7**	**-1.4**
YAK				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
YAK				MLR	MLR		
	comp=Z,400nm,13.0s,MS4.2						
YAK	**Yakutsk**	**29.97**	**348**	eP	**P**	**18 40 19.4**	**-1.7**
	comp=Z,14nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**30.10**	**310**	eP	**P**	**18 40 23.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.0						
ULN	**Ulaanbaatar**	**30.10**	**310**	eP	**P**	**18 40 23.1**	**+0.7**
	comp=Z,34nm,1.0s,mb5.0						
SEY	**Seymchan**	**30.51**	**9**	eP	**P**	**18 40 23.2**	**-2.7**
SEY				e		18 41 20.6	
SEY				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.4						
SEY				pmax	pmax		
	comp=N,30nm,0.9s						
BOD	**Bodaibo**	**31.13**	**331**	⇓iP	**P**	**18 40 30.7**	**-0.7**
BOD				pmax	pmax		
	comp=Z,159nm,1.4s,mb5.7						
GYA	**Guiyang**	**31.31**	**267**	⇑iP	**P**	**18 40 32.3**	**-1.0**
GYA				AP	pP	18 40 38.0	-0.6
GYA				XP	sP	18 40 41.3	+0.4
GYA				PCP	PcP	18 43 27.6	+0.2
GYA				S	**S**	**18 45 33.1**	**-5.1**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,220nm,3.5s						
GYA				LR	LR		
	comp=N,410nm,15.8s,MS4.4						
GYA				LR	LR		
	comp=E,490nm,15.8s,MS4.4						
GYA				LR	LR		
	comp=Z,630nm,15.1s,MS4.4						
LZH	**Lanzhou**	**31.44**	**286**	eP	**P**	**18 40 33.7**	**-0.7**
LZH				PP	PP	18 41 37.8	-0.6
LZH				eS	**S**	**18 45 39.7**	**-0.4**
LZH				SS	SS	18 47 26.7	-1.5
LZH				AMB	AMB		
	comp=Z,34nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,187nm,5.3s						
LZH				LR	LR		
	comp=N,2µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,16.7s,MS4.9						
LZH	**Lanzhou**	**31.44**	**286**	eP	**P**	**18 40 33.7**	**-0.7**
	comp=Z,34nm,1.5s,mb5.0						
LZH				pP	pP	18 40 37.1	-2.5
LZH				sP	sP	18 40 38.5	-3.4
LZH				PP	PP	18 41 37.8	-0.6
LZH				eS	**S**	**18 45 39.7**	**-0.4**
LZH				sS		18 45 46.5	
LZH				SS	SS	18 47 26.7	-1.5
LZH				LR	LR		
	comp=Z,2µm,16.7s,MS4.9						
QIZ	**Qiongzhong**	**32.01**	**252**	eP	**P**	**18 40 40.8**	**+1.3**
QIZ				S	**S**	**18 45 49.9**	**+0.7**
QIZ				LR	LR		
	comp=N,415nm,17.2s,MS4.3						
QIZ				LR	LR		
	comp=E,361nm,18.6s,MS4.3						
QIZ				LR	LR		
	comp=Z,349nm,18.6s,MS4.1						
CD2	**Chengdu**	**32.42**	**277**	P	**P**	**18 40 41.5**	**-1.5**
CD2				PP	PP	18 41 48.7	-2.5
CD2				S	**S**	**18 45 54.3**	**-1.1**
CD2				SS	SS	18 47 51.2	-0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CD2				AMB	AMB		
	comp=Z,280nm,7.4s						
CD2				LR	LR		
	comp=N,1µm,16.6s						
CD2				LR	LR		
	comp=Z,1µm,18.0s,MS4.7						
IRK	**Irkutsk**	**33.18**	**317**	eP	**P**	**18 40 49.8**	**+0.4**
IRK				e		18 46 13.6	
IRK				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
ZAK	**Zakamensk**	**33.19**	**313**	eP	**P**	**18 40 49.8**	**+0.3**
ZAK				e		18 43 31.0	
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
TLY	**Talaya**	**33.36**	**315**	P	**P**	**18 40 51.5**	**+0.6**
	comp=Z,80nm,0.7s,mb5.8,SNR=11						
TLY	**Talaya**	**33.36**	**315**	eP	**P**	**18 40 51.9**	**+1.0**
TLY				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
TLY				MLR	MLR		
	comp=Z,569nm,16.0s,MS4.4						
TLY	**Talaya**	**33.36**	**315**	eP	**P**	**18 40 51.6**	**+0.7**
	comp=Z,28nm,1.4s,mb5.0						
GTA	**Gaotai**	**34.38**	**293**	eP	**P**	**18 40 59.7**	**-0.2**
GTA				AP	pP	18 41 07.0	+1.9
GTA				XP	sP	18 41 11.1	+3.7
GTA				PP	PP	18 42 13.8	-1.7
GTA				PCP	PcP	18 43 35.7	0.0
GTA				S	**S**	**18 46 23.1**	**-2.6**
GTA				SS	SS	18 48 31.4	-4.8
GTA				SCS	ScS	18 51 19.2	-0.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.4						
GTA				AMB	AMB		
	comp=Z,139nm,4.9s						
GTA				LR	LR		
	comp=N,642nm,20.2s						
GTA				LR	LR		
	comp=E,338nm,12.9s						
GTA				LR	LR		
	comp=Z,557nm,12.9s						
MOY	**Mondy**	**34.93**	**314**	eP	**P**	**18 41 06.1**	**+1.6**
MOY				pmax	pmax		
	comp=Z,17nm,1.9s,mb4.7						
KMI	**Kunming**	**35.09**	**267**	⇓P	**P**	**18 41 05.9**	**-0.2**
KMI				AP	pP	18 41 14.6	+3.2
KMI				XP	sP	18 41 17.7	+4.0
KMI				PP	PP	18 42 29.1	+4.2
KMI				S	**S**	**18 46 37.9**	**+0.9**
KMI				XS		18 46 55.2	
KMI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
KMI				AMB	AMB		
	comp=Z,82nm,4.6s						
KMI				LR	LR		
	comp=N,521nm,16.1s,MS4.5						
KMI				LR	LR		
	comp=E,333nm,13.2s,MS4.5						
KMI				LR	LR		
	comp=Z,520nm,14.7s,MS4.4						
KMI	**Kunming**	**35.09**	**267**	⇓P	**P**	**18 41 05.9**	**-0.2**
	comp=Z,6.0nm,0.8s,mb4.6						
KMI				pP	pP	18 41 14.6	+3.2
KMI				sP	sP	18 41 17.7	+4.0
KMI				PP	PP	18 42 29.1	+4.2
KMI				S	**S**	**18 46 37.9**	**+0.9**
KMI				sS		18 46 55.2	
KMI				SS	SS	18 49 03.1	+10
KMI				LR	LR		
	comp=Z,520nm,14.7s,MS4.4						
BILL	**Bilibino**	**37.62**	**15**	d iP	**P**	**18 41 25.8**	**-1.2**
BILL				e		18 43 44.1	
BILL				eS	**S**	**18 47 17.0**	**+1.6**
BILL				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.0						
BILL				MLR	MLR		
	comp=Z,400nm,21.0s,MS4.2						
BILL	**Bilibino**	**37.62**	**15**	eP	**P**	**18 41 25.0**	**-2.0**
	comp=Z,29nm,1.1s,mb4.9						
TIXI	**Tiksi**	**39.20**	**353**	eP	**P**	**18 41 39.5**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,445nm,17.0s,MS4.4						
TIXI	**Tiksi**	**39.20**	**353**	⇓eP	**P**	**18 41 39.5**	**-0.7**
NANT	**Nan**	**39.56**	**259**	P	**P**	**18 41 43.0**	**-0.7**
CHG	**Chiang Mai**	**41.01**	**261**	P	**P**	**18 41 55.5**	**-0.1**
	comp=Z,12nm,0.8s,mb4.6						
CM31	**Chiang Mai Arr**	**41.18**	**260**	eP	**P**	**18 41 57.0**	**0.0**
	comp=Z,6.0nm,0.6s,mb4.4						
NST	**Nakhon Sawan**	**41.63**	**256**	P	**P**	**18 42 01.3**	**+0.5**
WMQ	**Urumqi**	**43.16**	**301**	P	**P**	**18 42 14.4**	**+1.4**
WMQ				XP	sP	18 42 23.4	+2.8
WMQ				PP	PP	18 43 57.0	+1.4
WMQ				S	**S**	**18 48 40.0**	**+1.7**
WMQ				SS	SS	18 51 46.0	+1.3
WMQ				AMB	AMB		
	comp=Z,21nm,0.8s,mb4.9						
WMQ				LR	LR		
	comp=N,358nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=E,178nm,18.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,186nm,18.0s,MS4.0						
LSA	**Lhasa**	**43.23**	**280**	P	**P**	**18 42 14.0**	**+0.3**
TNA	**Tin City**	**44.02**	**27**	eP	**P**	**18 42 19.2**	**-0.5**
ZAL	**Zalesovo**	**44.99**	**315**	i P	**P**	**18 42 27.6**	**0.0**
NVS	**Novosibirsk**	**45.95**	**316**	eP	**P**	**18 42 34.0**	**-1.2**
NVS				eS	**S**	**18 49 24.2**	**+5.8**
NVS				pmax	pmax		
	comp=E,32nm,1.4s						
NVS				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
NVS				smax			
	comp=E,56nm,2.2s						
NVS				smax			
	comp=N,38nm,2.0s						
KAKA	**Kakadu**	**46.52**	**193**	⇑iP	**P**	**18 42 39.6**	**-0.6**
	comp=N,34nm,0.6s,mb5.5						
MKAR	**Makanchi Array**	**46.70**	**305**	i P	**P**	**18 42 41.7**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,19nm,0.8s						
JIRN	**Jiri**	**48.01**	**279**	eP	**P**	**18 42 52.6**	**+0.7**
	comp=Z,39nm,0.6s,mb5.6						
PKI	**Pulchoki**	**48.69**	**279**	eP	**P**	**18 42 57.2**	**+0.1**
	comp=Z,16nm,0.7s,mb5.2						
KKN	**Kakani**	**48.72**	**280**	eP	**P**	**18 42 57.4**	**+0.1**
	comp=Z,37nm,0.9s,mb5.4						
KURK	**Kurchatov**	**48.80**	**311**	P	**P**	**18 42 57.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.4						
KURK	**Kurchatov**	**48.80**	**311**	eP	**P**	**18 42 56.9**	**-0.7**
	comp=Z,76nm,0.8s,mb5.8						
DMN	**Daman**	**48.93**	**279**	eP	**P**	**18 42 58.9**	**0.0**
	comp=Z,113nm,1.5s,mb5.7						
GKN	**Gorkha**	**49.18**	**280**	eP	**P**	**18 43 00.8**	**-0.1**
RSO	**Redoubt South**	**49.68**	**36**	eP	**P**	**18 43 03.2**	**-1.1**
KDAK	**Kodiak Island**	**49.69**	**40**	eP	**P**	**18 43 02.6**	**-1.8**
	comp=Z,66nm,0.7s,mb5.8						
IMA	**Indian Mountai**	**49.80**	**29**	eP	**P**	**18 43 04.9**	**-0.2**
IMA				e		18 44 25.8	
SPU	**Mount Spurr**	**50.05**	**35**	eP	**P**	**18 43 06.5**	**-0.6**
KOLN	**Koldanda**	**50.12**	**280**	eP	**P**	**18 43 08.1**	**0.0**
	comp=Z,144nm,1.4s,mb5.8						
FIB	**Fire Island**	**50.96**	**35**	eP	**P**	**18 43 13.1**	**-0.9**
MCK	**McKinley**	**51.61**	**32**	eP	**P**	**18 43 17.8**	**-1.1**
MCK				pmax	pmax		
	comp=Z,28nm,1.6s,mb4.9						
MCK	**McKinley**	**51.61**	**32**	eP	**P**	**18 43 17.8**	**-1.1**
	comp=Z,28nm,1.6s,mb5.0						
SML	**Sawmill**	**51.85**	**34**	eP	**P**	**18 43 20.2**	**-0.6**
COLA	**College**	**52.12**	**31**	i P	**P**	**18 43 22.5**	**-0.2**
COLA	**College**	**52.12**	**31**	eP	**P**	**18 43 22.1**	**-0.6**
	comp=Z,9.4nm,0.8s,mb4.8						
KSH	**Kashi**	**52.55**	**297**	eP	**P**	**18 43 28.0**	**+1.7**
KSH				eAP	pP	18 43 34.3	+2.5
KSH				eXP	sP	18 43 36.3	+2.4
KSH				ePCP	PcP	18 44 38.5	+1.9
KSH				ePP	PP	18 45 28.1	+1.6
KSH				eSCP		18 48 33.6	
KSH				eS	**S**	**18 50 53.3**	**+2.6**
KSH				eXS		18 51 01.2	
KSH				eSCS	ScS	18 53 14.3	+2.1
KSH				eSS	SS	18 54 30.3	+2.5
KSH				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.8						
KSH				AMB	AMB		
	comp=Z,350nm,6.4s						
KSH				LR	LR		
	comp=N,590nm,6.5s						
KSH				LR	LR		
	comp=E,490nm,6.2s						
AAK	**Ala-Archa**	**52.87**	**301**	i P	**P**	**18 43 28.2**	**-0.5**
AAK				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.7						
AAK	**Ala-Archa**	**52.87**	**301**	eP	**P**	**18 43 27.7**	**-1.0**

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      comp=Z,8.8nm,1.0s,mb4.6
CTA   Charters Tower    53.09 175⇑iP     P      18 43 30.0 -0.6
      comp=Z,3.4nm,0.6s,mb4.5
CTA   Charters Tower    53.09 175⇑iP     P      18 43 30.0 -0.6
CTA                                pmax   pmax
      comp=Z,3.0nm,0.6s
CTAO  Charters Tower    53.09 175 eP     P      18 43 29.7 -0.9
DIV   Divide            53.10  35 eP     P      18 43 29.3 -0.8
WRAB  Tennant Creek     53.29 189 eP     P      18 43 30.2 -1.9
WRAB                              e             18 43 45.6
WRAB                               pmax   pmax
      comp=Z,38nm,0.6s,mb5.5
WRAB  Tennant Creek     53.29 189 eP     P      18 43 30.1 -2.0
      comp=Z,38nm,0.6s,mb5.5
WRAB                              e             18 43 45.6
WB2   Warramunga Arr    53.30 189⇓iP     P      18 43 30.9 -1.3
WB2                               eS     S      18 51 00.3 -0.9
WRA   Warramunga Arr    53.30 189 i P    P      18 43 30.8 -1.4
WRA                                pmax   pmax
      comp=Z,32nm,0.6s
CHKZ  Chkalovo          53.39 315  P     P      18 43 31.5 -0.9
CHKZ                               pmax   pmax
      comp=Z,44nm,1.2s,mb5.3
CHKZ  Chkalovo          53.39 315 eP     P      18 43 31.1 -1.2
      comp=Z,50nm,1.2s,mb5.3
BVA0  Borovoye Array    53.62 315 i P    P      18 43 33.4 -0.6
BVA0                               pmax   pmax
      comp=Z,20nm,1.4s,mb4.8
SDNR  Sundarnagar       54.20 287 eP     P      18 43 39.2 +0.6
VIS   Vishakhapatnam    54.56 269 eP     P      18 43 41.2 -0.2
VIS                               e      pP     18 43 47.3 +0.5
      comp=Z,28nm,1.1s
THN   Thein Dam         54.88 289 eP     P      18 43 41.6 -2.0
NDI   New Delhi         55.02 284 eP     P      18 43 42.5 -2.2
DAWY  Dawson            55.81  31 eP     P      18 43 48.4 -1.5
BHPL  Bhopal            57.03 278 eP     P      18 43 57.1 -2.1
BHPL                              e             18 43 59.8
      comp=Z,31nm,1.3s
ASPA  Alice Springs     57.03 189⇓iP     P      18 43 57.8 -1.4
INK   Inuvik            57.62  26 eP     P      18 44 01.3 -1.5
INK                                pmax   pmax
      comp=Z,16nm,0.9s
INK   Inuvik            57.62  26 eP     P      18 44 01.3 -1.5
      comp=Z,16nm,0.9s,mb5.1
AJM   Ajmer             57.98 283⇓iP     P      18 44 05.0 -0.8
MBWA  Marble Bar        58.05 205 eP     P      18 44 05.3 -1.1
      comp=Z,71nm,1.0s,mb5.7
SVE   Sverdlovsk        58.43 320 eP     P      18 44 05.0 -3.6
SVE                               e             18 44 17.0
SVE                                pmax   pmax
      comp=Z,60nm,1.5s,mb5.4
HYB   Hyderabad         58.71 271 eP     P      18 44 11.0  0.0
HYB                               e             18 44 25.0
HYB                                pmax   pmax
      comp=Z,85nm,0.8s,mb5.8
HYB   Hyderabad         58.71 271 eP     P      18 44 11.0  0.0
      comp=Z,85nm,0.8s,mb5.8
HYB                               e             18 44 25.0
HYB   Hyderabad         58.71 271 i P    P      18 44 11.0  0.0
      comp=Z,85nm,0.8s,mb5.8
HYB                               e             18 44 25.0
ARU   Arti              59.64 320  P     P      18 44 16.3 -0.7
      comp=Z,320nm,0.8s,SNR=24
SOKR  Solikamsk         59.75 324⇑iP     P      18 44 17.1 -0.6
SOKR                               pmax   pmax
      comp=Z,30nm,1.1s,mb5.2
SOKR                               MLR    MLR
      comp=Z,520nm,21.0s,MS4.6
PALK  Pallekele         62.12 260 eP     P      18 44 33.9 -0.6
POO   Poona             62.12 275 eP     P      18 44 33.1 -1.2
POO                               e             18 44 34.8
      comp=Z,67nm,0.6s
KAD   Karad             62.42 273⇓iP     P      18 44 35.0 -1.4
TRD   Trivandrum        64.56 263 eP     P      18 44 49.5 -1.0
TRD                               e             18 44 51.6
      comp=Z,59nm,0.9s
STKA  Stephens Creek    64.68 180⇓iP     P      18 44 50.3 -0.7
      comp=Z,5.1nm,0.6s,mb4.7
FORT  Forrest           64.94 193⇓iP     P      18 44 52.0 -0.7
      comp=Z,81nm,0.6s,mb5.9
RES   Resolute Bay      66.23  14 eP     P      18 44 58.7 -1.5
RES                               e             18 45 12.8
RES                                pmax   pmax
      comp=Z,29nm,0.8s,mb5.4
RES   Resolute Bay      66.23  14 eP     P      18 44 58.7 -1.6
      comp=Z,29nm,0.8s,mb5.4
RES                               e             18 45 12.8
APA   Apatity           66.44 337⇓eP     P      18 44 54.0 -7.7
APA                                pmax   pmax
      comp=Z,74nm,1.7s,mb5.4
YKW3  Yellowknife Ar    66.88  29 eP     P      18 45 02.9 -1.6
YKA   Yellowknife Ar    66.92  29 i P    P      18 45 03.5 -1.3
KLBR  Kellerberrin      68.36 202 eP     P      18 45 13.9 -0.5
      comp=Z,371nm,1.0s
JOF   Joensuu           69.64 333 ep     P      18 45 19.5 -2.2
DAG   Danmarks Havn     69.68 355⇑iP     P      18 45 21.1 -0.7
DAG                                pmax   pmax
      comp=Z,12nm,0.8s,mb4.9
DAG   Danmarks Havn     69.68 355⇑iP     P      18 45 21.1 -0.7
      comp=Z,12nm,0.8s,mb4.9
NWAO  Narrogin (SRO)    69.76 202 eP     P      18 45 22.1 -0.9
NWAO                               pmax   pmax
      comp=Z,25nm,0.8s
NWAO  Narrogin (SRO)    69.76 202 eP     P      18 45 22.1 -0.9
      comp=Z,25nm,0.8s,mb5.2
MOS   Moscow            70.69 325 eP     P      18 45 26.5 -1.7
MOS                               e             18 45 42.6
KEBM  Edson Butte       70.73  51 eP     P      18 45 28.1 -0.7
OBN   Obninsk           71.53 324⇑eP     P      18 45 32.5 -0.8
OBN                               e             18 45 49.0
OBN                               i             18 54 46.4
OBN                               eSS    SS     18 59 27.1  0.0
OBN                                pmax   pmax
      comp=Z,69nm,1.9s,mb5.3
OBN                                MLR    MLR
      comp=Z,400nm,18.0s,MS4.7
OBN   Obninsk           71.53 324⇑eP     P      18 45 32.5 -0.8
OBN                                LR     LR
      comp=Z,400nm,18.0s,MS4.7
HUMO  Hull Mountain     71.75  51 eP     P      18 45 34.8 -0.1
      comp=Z,5.4nm,1.0s,mb4.4
KAF   Kangasniemi       72.00 334 ep     P      18 45 34.6 -1.4
      comp=Z,24nm,1.0s,mb5.1,baz=50,slow=5.7
KAF   Kangasniemi       72.00 334 eP     P      18 45 34.6 -1.4
KAF                                pmax   pmax
      comp=Z,24nm,1.0s,mb5.1
EDM   Edmonton          72.08  38 eP     P      18 45 35.4 -1.2
YBH   Yreka Blue Hor    72.33  51 eP     P      18 45 37.9 -0.4
YBH                                pmax   pmax
      comp=Z,17nm,1.1s
YBH   Yreka Blue Hor    72.33  51 eP     P      18 45 37.9 -0.4
      comp=Z,17nm,1.1s,mb4.9
FINES FINESS Array B    72.50 333 i P    P      18 45 38.6 -0.4
FINES                              pmax   pmax
      comp=Z,21nm,0.8s
NEW   Newport           72.57  43 eP     P      18 45 39.3 -0.3
NEW                                pmax   pmax
      comp=Z,20nm,1.0s
NEW   Newport           72.57  43 eP     P      18 45 39.3 -0.3
      comp=Z,20nm,1.0s,mb5.0
BANOM Banah             72.98 290 ⇓P     P      18 45 42.9 +0.4
      SNR=7.7
WDC   Whiskeytown Da    73.00  52 eP     P      18 45 41.5 -0.8
WDC                                pmax   pmax
      comp=Z,25nm,1.1s,mb5.1
WDC   Whiskeytown Da    73.00  52 eP     P      18 45 41.5 -0.8
      comp=Z,24nm,1.1s,mb5.0
GOF   Gofitskoye        73.09 313⇑iP     P      18 45 43.0 +0.3
GOF                                pmax   pmax
      comp=Z,40nm,1.0s,mb5.3
JMDO  Jabal Madar       73.27 286 ⇑P     P      18 45 44.5 +0.3
HOQ   Hoqain            73.31 287 ⇑P     P      18 45 44.6 +0.1
      SNR=12
TI2   Plekhanov         73.67 309 eP     P      18 45 47.0 +0.9
ASHO  Ashiyiah          73.78 289 ⇑P     P      18 45 47.6 +0.5
BSY   Bisya             73.81 287 ⇑P     P      18 45 47.5 +0.2
      SNR=13
MOD   Modoc             73.81  50 eP     P      18 45 46.8 -0.2
      comp=Z,20nm,1.0s,mb5.0
KIV   Kislovodsk        73.87 312  P     P      18 45 48.7 +1.5
      comp=Z,311nm,1.0s,mb6.2,SNR=9.5
KIV   Kislovodsk        73.87 312c iP    P      18 45 47.6 +0.4
KIV                               i             18 46 03.3
KIV                               eS     S      18 55 22.2 +5.6
KIV                                pmax   pmax
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      comp=Z,54nm,0.9s,mb5.5
KIV                                MLR    MLR
      comp=Z,200nm,23.0s,MS4.3
KIV   Kislovodsk        73.87 312 eP     P      18 45 46.9 -0.4
      comp=Z,57nm,1.1s,mb5.4
KIV                               e             18 46 02.1
WALA  Waterton Lakes    73.98  42 eP     P      18 45 47.5 -0.2
      comp=Z,32nm,1.2s,mb5.1
ARQ   Araqi             74.07 288 ⇑P     P      18 45 49.2 +0.4
      SNR=17
BMO   Blue Mountains    74.20  47 eP     P      18 45 48.7 -0.4
BMO                                pmax   pmax
      comp=Z,24nm,1.5s,mb4.9
BMO   Blue Mountains    74.20  47 eP     P      18 45 48.7 -0.4
      comp=Z,24nm,1.5s,mb4.9
OHCM  Honcut            74.32  53 eP     P      18 45 49.1 -0.8
GNI   Garni             74.47 308d iP    P      18 45 52.3 +1.5
GNI                                pmax   pmax
      comp=Z,37nm,1.4s
GNI                                MLR    MLR
      comp=Z,300nm,25.0s
GNI   Garni             74.47 308 eP     P      18 45 52.1 +1.3
      comp=Z,45nm,1.0s,mb5.4
SUMG  Summit            74.56   0 eP     P      18 45 51.3 +0.6
      comp=Z,17nm,0.8s,mb5.0
WVOR  Wild Horse Val    74.61  49 eP     P      18 45 51.8 +0.2
WVOR                               pmax   pmax
      comp=Z,17nm,0.9s,mb5.0
WVOR  Wild Horse Val    74.61  49 eP     P      18 45 51.8 +0.2
      comp=Z,17nm,0.9s,mb5.0
MSO   Missoula          75.16  44 eP     P      18 45 54.4 -0.3
      comp=Z,10.0nm,1.1s,mb4.7
WCN   Washoe City       75.49  52 eP     P      18 45 56.8 +0.1
CHMT  Chamberlain Mo    75.51  43 eP     P      18 45 56.0 -0.6
CMB   Columbia Colle    75.72  54 eP     P      18 45 57.8 -0.2
CMB                                pmax   pmax
      comp=Z,27nm,0.8s,mb5.2
CMB   Columbia Colle    75.72  54 eP     P      18 45 57.8 -0.2
      comp=Z,27nm,0.8s,mb5.2
SOC   Sochi             75.90 313 eP     P      18 45 57.8 -1.1
SOC                               e             18 48 48.7
SOC                               ePPP   PPP    18 50 34.8 -3.1
SOC                               eS     S      18 55 39.2  0.0
SOC                               e             18 56 18.2
SOC                               eSSS   SSS    19 03 49.5 -0.1
SOC                                pmax   pmax
      comp=N,17nm,0.7s
SOC                                pmax   pmax
      comp=E,16nm,0.7s
SOC                                pmax   pmax
      comp=Z,34nm,0.7s,mb5.4
SCO   Scoresbysund      76.02 355 i P    P      18 46 00.0 +0.9
SCO                                pmax   pmax
      comp=Z,16nm,0.7s,mb5.1
SCO   Scoresbysund      76.02 355 i P    P      18 46 00.0 +0.9
      comp=Z,16nm,0.7s,mb5.1
LRV   Little Rabbit     76.11  56  P     P      18 46 00.6 +0.3
BMN   Battle Mountai    76.56  50 eP     P      18 46 03.0 +0.3
BMN                                pmax   pmax
      comp=Z,20nm,1.0s,mb5.0
BMN   Battle Mountai    76.56  50 eP     P      18 46 03.0 +0.2
      comp=Z,20nm,1.0s,mb5.0
ANN   Anapa             76.61 315 e      P      18 46 02.6 -0.3
ANN                               i             18 46 10.8
HLID  Hailey            76.65  47 eP     P      18 46 02.9 -0.2
      comp=Z,13nm,1.3s,mb4.7
FFC   Flin Flon         76.69  32  P     P      18 46 02.5 -0.6
      comp=Z,150nm,0.9s,mb5.9,SNR=20
MNV   Mina              77.01  53 eP     P      18 46 05.1 -0.2
MNV                                pmax   pmax
      comp=Z,11nm,1.1s,mb4.7
MNV   Mina              77.01  53 eP     P      18 46 05.1 -0.2
      comp=Z,11nm,1.1s,mb4.7
FCC   Fort Churchill    77.24  26 eP     P      18 46 04.4 -1.7
FCC                                pmax   pmax
      comp=Z,19nm,0.9s,mb5.0
FCC   Fort Churchill    77.24  26 eP     P      18 46 04.4 -1.7
      comp=Z,19nm,0.9s,mb5.0
SHAO  Shalim            77.46 283 ⇑P     P      18 46 04.7 -3.4
AKASG Malin Array Be    77.70 323 i P    P      18 46 08.6 -0.2
AKASG                              pmax   pmax
      comp=Z,25nm,1.0s
QLMT  Earthquake Lak    77.72  44 eP     P      18 46 09.6 +0.5
TPH   Tonopah           77.82  52 eP     P      18 46 09.4 -0.3
TPH                                pmax   pmax
      comp=Z,19nm,1.1s,mb4.9
TPH   Tonopah           77.82  52 eP     P      18 46 09.4 -0.4
      comp=Z,20nm,1.1s,mb5.0
NB2   NORSAR Subarra    77.97 338  P     P      18 46 09.8 -0.2
      comp=Z,50nm,1.0s,mb5.4,baz=40,slow=5.6
NB2   NORSAR Subarra    77.97 338  P     P      18 46 09.8 -0.2
NB2                                pmax   pmax
      comp=Z,50nm,1.0s,mb5.4
NB2   NORSAR Subarra    77.97 338  P     P      18 46 09.8 -0.2
      baz=40,slow=5.6
YMR   Madison River     78.09  44 eP     P      18 46 12.0 +0.9
YNR   Norris Junctio    78.23  44 eP     P      18 46 13.5 +1.7
YFT   Old Faithful      78.29  44 eP     P      18 46 13.9 +1.8
SUW   Suwalki           78.44 328 eP     P      18 46 13.0 +0.2
SIM   Simferopol'       78.48 316 eP     P      18 46 14.0 +0.8
LKWY  Lake              78.48  44 eP     P      18 46 15.3 +2.1
LKWY                               pmax   pmax
      comp=Z,40nm,1.0s,mb5.3
LKWY  Lake              78.48  44 eP     P      18 46 15.3 +2.1
      comp=Z,40nm,1.0s,mb5.3
IMW   Indian Meadow     78.55  45 eP     P      18 46 14.8 +1.2
RRI2  Red Ridge         78.64  45 eP     P      18 46 14.8 +0.8
HVU   Hansel Valley     78.64  47 eP     P      18 46 14.8 +0.6
MOOW  Moose Ponds       78.75  45 eP     P      18 46 15.6 +0.9
TRCR  Troy Canyon       78.75  52 eP     P      18 46 15.1 +0.2
TPAW  Teton Pass        78.77  45 eP     P      18 46 15.7 +0.9
WUWY  Wally Ulrich      78.87  45 eP     P      18 46 16.5 +1.1
LOHW  Long Hollow       78.91  45 eP     P      18 46 16.2 +0.6
BGU   Big Grassy Mou    78.96  48 eP     P      18 46 16.2 +0.2
WHFO  Wadi Hawf         79.02 284 ⇑P     P      18 46 16.3 -0.4
      SNR=12
AHID  Auburn Hatcher    79.10  46 eP     P      18 46 17.1 +0.4
      comp=Z,13nm,1.0s,mb4.8
SPUT  South Promonto    79.11  48 eP     P      18 46 17.3 +0.6
HWUT  Hardware Ranch    79.48  47 eP     P      18 46 19.2 +0.4
      comp=Z,28nm,1.0s,mb5.2
LAO   LASA Array        79.58  41 eP     P      18 46 19.4 +0.3
      comp=Z,36nm,1.0s,mb5.2
MALT  Malatya           79.59 309 eP     P      18 46 20.6 +1.2
MALT                               pmax   pmax
      comp=Z,20nm,1.1s,mb5.0
MALT  Malatya           79.59 309 eP     P      18 46 20.6 +1.2
      comp=Z,20nm,1.1s,mb5.0
TCUT  Toone Canyon      79.86  47 eP     P      18 46 21.8 +1.0
BW06  Boulder Array     80.02  45 eP     P      18 46 21.5 -0.1
      comp=Z,10nm,1.1s,mb4.7
BW06                              epP    pP     18 46 25.2 -2.1
NLU   North Lily Min    80.11  49 eP     P      18 46 23.0 +0.8
JLU   Jordanelle        80.13  48 eP     P      18 46 22.7 +0.4
MPU   Maple Canyon      80.36  48 eP     P      18 46 24.1 +0.7
DAU   Daniels Canyon    80.36  48 eP     P      18 46 24.4 +0.9
NEN   Nelson            80.75  53 eP     P      18 46 25.8 +0.2
NEN                               epP    pP     18 46 29.3 -2.0
MVU   Marysvale         80.86  50 eP     P      18 46 26.9 +0.7
      comp=Z,17nm,1.0s,mb4.9
MSU   Marysvale         80.88  50 eP     P      18 46 26.9 +0.7
TMUT  Trail Mountain    81.04  49 eP     P      18 46 28.1 +1.0
BAR   Barrett           81.14  57 eP     P      18 46 27.4 -0.3
BAR                               epP    pP     18 46 30.7 -2.7
SRU   San Rafael        81.58  49 eP     P      18 46 30.6 +0.7
KWP   Kalwaria          81.59 325 eP     P      18 46 31.1 +1.3
BURAR Bucovina Array    81.69 322⇑iP     P      18 46 31.4 +1.1
VRI   Vrincioaia        82.03 320⇑iP     P      18 46 34.0 +1.9
KOLS  Kolonicke sedl    82.28 325 eP     P      18 46 34.2 +0.9
KOLS                              e             18 46 49.0
OJC   Ojcow             82.56 327 eP     P      18 46 35.5 +0.8
RAYN  Ar Rayn           82.63 293  P     P      18 46 36.0 +0.3
      comp=Z,166nm,0.8s,mb6.1,SNR=7.8
MLR   Muntele Rosu      82.69 320⇓iP     P      18 46 37.7 +2.2
NIE   Niedzica          82.88 326 eP     P      18 46 36.5 +0.1
PV10  Paradox Valley    82.95  49 eP     P      18 46 38.2 +1.2
PHWY  Pilot Hill        83.34  44 eP     P      18 46 39.3 +0.3
PV01  Paradox Valley    83.39  48 eP     P      18 46 40.0 +0.7
KECS  Kecovo            83.45 325 eP     P      18 46 40.2 +0.8
OKC   Ostrava-Krasne    83.58 327 eP     P      18 46 40.8 +0.8
OKC                               ex     x      18 46 55.7
KSP   Ksiaz             83.68 329 eP     P      18 46 41.4 +1.0
KSP                               e             18 46 55.4
KSP   Ksiaz             83.68 329 eP     P      18 46 41.4 +1.0
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KSP                               epP    pP     18 46 44.5 -1.6
KSP                               e             18 46 55.4
KSP   Ksiaz             83.68 329 eP     P      18 46 41.5 +1.1
BSEG  Bad Segeberg      83.76 334 eP     P      18 46 41.6 +0.8
BSEG                               pmax   pmax
      comp=Z,17nm,0.9s,mb5.2
MORC  Moravsky Berou    83.90 328 eP     P      18 46 41.5 -0.1
MORC                              e             18 46 56.5
MORC                               pmax   pmax
      comp=Z,18nm,1.0s,mb5.2
MORC  Moravsky Berou    83.90 328 eP     P      18 46 41.5 -0.1
      comp=Z,18nm,1.0s,mb5.2
MORC                              e             18 46 56.5
DPC   Dobruska-Polom    84.03 328 eP     P      18 46 43.3 +1.1
UPC   Upice             84.05 329 eP     P      18 46 43.1 +0.8
PSZ   Piszkesteto       84.12 325 eP     P      18 46 43.3 +0.5
PSZ                                pmax   pmax
      comp=Z,60nm,1.1s,mb5.6
PSZ   Piszkesteto       84.12 325 eP     P      18 46 43.3 +0.6
      comp=Z,60nm,1.1s,mb5.6
PSZ   Piszkesteto       84.12 325⇓eP     P      18 46 43.7 +0.9
ISCO  Idaho Springs     84.19  46 eP     P      18 46 43.8 +0.5
ISCO                               pmax   pmax
      comp=Z,22nm,1.4s,mb5.1
ISCO  Idaho Springs     84.19  46 eP     P      18 46 43.8 +0.5
      comp=Z,22nm,1.4s,mb5.1
VYHS  Vyhne             84.22 326 i P    P      18 46 44.4 +1.2
VYHS                              e             18 47 00.0
KOLL  Kolacno           84.36 326 eP     P      18 46 45.3 +1.4
KOLL                              e             18 46 59.0
PVCC  Panska Ves        84.65 329 eP     P      18 46 46.3 +1.0
BRG   Berggiesshubel    84.66 330 i P    P      18 46 45.9 +0.5
BRG                               e             18 47 01.4
BRG                                pmax   pmax
      comp=Z,23nm,0.8s,mb5.4
BRG   Berggiesshubel    84.66 330 i P    P      18 46 45.9 +0.5
      comp=Z,23nm,0.8s,mb5.4
BRG                               e             18 47 01.4
CLL   Collm             84.72 331⇓iP     P      18 46 46.1 +0.4
CLL                               i             18 47 01.3
CLL                                pmax   pmax
      comp=Z,56nm,0.9s,mb5.7
CLL   Collm             84.72 331⇓iP     P      18 46 46.1 +0.4
      comp=Z,56nm,0.9s,mb5.7
CLL                               i             18 47 01.3
CLL   Collm             84.72 331 ⇓P     P      18 46 46.1 +0.4
      comp=Z,logA/T=1.8,mb5.7
CLL                               i *SP  sP     18 47 01.3 +8.1
SMOL  Smolenice         84.86 327 eP     P      18 46 47.8 +1.4
SMOL                              e             18 47 03.3
CSS   Prodhromos        84.87 309 eP     P      18 46 46.7 -0.1
      comp=Z,44nm,1.0s,mb5.5
SRO1  Iza               85.03 326 eP     P      18 46 48.6 +1.3
PRU   Pruhonice         85.07 329 eP     P      18 46 47.8 +0.4
PRU                               ex     x      18 47 03.8
ZST   Bratislava        85.24 327 eP     P      18 46 49.8 +1.5
ZST                               e             18 47 05.4
CLZ   Clausthal         85.37 332 eP     P      18 46 49.8 +0.9
      comp=Z,41nm,1.0s,mb5.5
TUC   Tucson            85.42  54 eP     P      18 46 49.7 +0.1
TUC                                pmax   pmax
      comp=Z,16nm,1.4s,mb5.0
TUC   Tucson            85.42  54 eP     P      18 46 49.7 +0.1
      comp=Z,16nm,1.4s,mb5.0
SDCO  Great Sand Dun    85.54  47 eP     P      18 46 50.3 +0.2
      comp=Z,38nm,1.4s,mb5.4
NKC   Novy Kostel       85.77 330 eP     P      18 46 50.8 -0.1
NKC                               ex     x      18 47 07.1
MOX   Moxa              85.80 331⇑iP     P      18 46 51.7 +0.6
MOX                                pmax   pmax
      comp=Z,35nm,1.5s,mb5.4
MOX   Moxa              85.80 331⇑iP     P      18 46 51.7 +0.6
      comp=Z,35nm,1.5s,mb5.4
MOX   Moxa              85.80 331⇑iP     P      18 46 51.7 +0.6
      comp=Z,logA/T=1.4,mb5.4
BEO   Belgrade          86.01 323⇑iP     P      18 46 53.3 +1.1
KHC   Kasperske Hory    86.13 329⇑eP     P      18 46 53.7 +1.0
KHC   Kasperske Hory    86.13 329 eP     P      18 46 52.5 -0.2
KHC                               ex     x      18 47 09.9
GEC2  GERESS Array S    86.29 329 eP     P      18 46 53.9 +0.4
GEC2                               pmax   pmax
      comp=Z,26nm,1.5s,mb5.2
GEC2  GERESS Array S    86.29 329 eP     P      18 46 53.9 +0.4
      comp=Z,26nm,1.5s,mb5.2
WET   Wettzell          86.42 329 eP     P      18 46 55.1 +0.9
WET                                pmax   pmax
      comp=Z,38nm,2.3s,mb5.2
WET   Wettzell          86.42 329 eP     P      18 46 55.1 +0.9
      comp=Z,38nm,2.3s,mb5.2
LAZ   Ladron            86.58  51 eP     P      18 46 56.1 +0.7
WTSB  Winterswijk       86.62 334 eP     P      18 46 54.9 -0.1
      comp=Z,16nm,1.0s,mb5.2
ARSA  Arzberg           86.66 327⇑iP     P      18 46 56.1 +0.7
      comp=Z,6.7nm,0.9s,mb4.9
ANMO  Albuquerque       86.68  50⇑eP     P      18 46 56.7 +0.9
ANMO  Albuquerque       86.68  50 eP     P      18 46 56.2 +0.4
      comp=Z,15nm,1.2s,mb5.1
GRA1  Grafenberg Arr    86.69 331 eP     P      18 46 56.2 +0.7
      comp=Z,38nm,1.1s,mb5.5
GRA1                              epP    pP     18 47 12.3  +11
GRF   Grafenberg Arr    86.69 331 eP     P      18 46 56.2 +0.7
GRF                               e*PP   pP     18 47 12.3  +11
GRF                                pmax   pmax
      comp=Z,38nm,1.1s,mb5.5
GRF   Grafenberg Arr    86.69 331 eP     P      18 46 56.2 +0.7
GRF                               e*PP   pP     18 47 12.3  +11
GRF                                pmax   pmax
      comp=Z,38nm,1.1s,mb5.5
GRF   Grafenberg Arr    86.69 331 eP     P      18 46 56.2 +0.7
      comp=Z,38nm,1.1s,mb5.5
GRF                               epP    pP     18 47 12.3  +11
MOA   Molln             86.78 328⇑iP     P      18 46 57.0 +1.0
      comp=Z,6.0nm,0.9s,mb4.8
EIL   Elat              86.94 304 eP     P      18 46 57.1 -0.1
      comp=Z,8.2nm,0.9s,mb5.0
LPM   Los Pinos Moun    86.97  51 eP     P      18 46 57.7 +0.5
TNS   Taunus Mts        87.39 332 eP     P      18 46 59.7 +0.8
TNS                                pmax   pmax
      comp=Z,13nm,1.2s,mb5.0
TNS   Taunus Mts        87.39 332 eP     P      18 46 59.7 +0.8
      comp=Z,13nm,1.2s,mb5.0
FUR   Furstenfeldbru    87.85 330 eP     P      18 47 02.4 +1.3
FUR                                pmax   pmax
      comp=Z,22nm,0.8s,mb5.4
FUR   Furstenfeldbru    87.85 330 eP     P      18 47 02.4 +1.3
      comp=Z,22nm,0.8s,mb5.4
HGN   Heimansgroeve     87.91 334 eP     P      18 47 01.3  0.0
      comp=Z,24nm,1.3s,mb5.3
GIVF  Givet             88.86 334 eP     P      18 47 05.6 -0.3
SCHQ  Schefferville     88.92  16 eP     P      18 47 06.1 +0.1
      comp=Z,9.3nm,0.9s,mb5.1
BFO   Black Forest      88.94 331 eP     P      18 47 06.4 +0.1
BFO                                pmax   pmax
      comp=Z,9.0nm,0.9s,mb5.1
BFO   Black Forest      88.94 331 eP     P      18 47 06.4 +0.1
      comp=Z,9.0nm,0.9s,mb5.1
BAIF  Baives            89.12 334 eP     P      18 47 06.8 -0.4
DAVA  Damuels           89.13 330⇓iP     P      18 47 07.3 +0.1
      comp=Z,13nm,0.8s,mb5.3
CDF   Champ du Feu      89.30 332 eP     P      18 47 07.7 -0.3
      comp=Z,16nm,1.0s,mb5.0
CDF   Champ du Feu      89.30 332 eP     P      18 47 07.7 -0.3
CDF                                pmax   pmax
      comp=Z,8.0nm,1.0s,mb5.0
MNTX  Cornudas Mount    89.42  52 eP     P      18 47 08.9 -0.1
      comp=Z,2.7nm,0.8s,mb4.6
CPRX  Cap Rock          89.56  50 eP     P      18 47 09.0 -0.6
AMTX  Amarillo          89.74  47 eP     P      18 47 10.9 +0.4
      comp=Z,4.8nm,0.8s,mb4.9
GDL2  Guadalupe Moun    89.77  51 eP     P      18 47 10.1 -0.5
HINF  Hinteralfeld      89.95 332 eP     P      18 47 10.4 -0.7
HAU   Haudompre         90.00 332 eP     P      18 47 11.2 -0.1
HAU                               eR
      comp=Z,254nm,18.8s
MEZF  Maizieres J'vi    90.09 333 eP     P      18 47 12.2 +0.5
WMOK  Wichita Mounta    91.61  46 eP     P      18 47 18.4 -0.7
WMOK                               pmax   pmax
      comp=Z,10.0nm,1.4s,mb5.0
WMOK  Wichita Mounta    91.61  46 eP     P      18 47 18.4 -0.7
      comp=Z,9.9nm,1.4s,mb5.0
LPL   La Plagne         91.86 330 eP     P      18 47 20.2 +0.3
      comp=Z,24nm,0.8s,mb5.3
LPL   La Plagne         91.86 330 eP     P      18 47 20.2 +0.3
LPL                                pmax   pmax
      comp=Z,12nm,0.8s,mb5.3
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LPG	**La Plagne**	**91.86**	**330**	*e*P	**P**	**18 47 20.3**	**+0.4**
	comp=Z,27nm,0.8s,mb5.3						
LPG	**La Plagne**	**91.86**	**330**	*e*P	**P**	**18 47 20.3**	**+0.4**
LPG				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.3						
FLN	**La Foliniere**	**91.86**	**336**	*e*P	**P**	**18 47 19.5**	**-0.4**
	comp=Z,19nm,0.8s,mb5.2						
FLN				*e*R			
	comp=Z,264nm,19.0s						
FLN	**La Foliniere**	**91.86**	**336**	*e*P	**P**	**18 47 19.5**	**-0.4**
FLN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
FLN				MLR	MLR		
	comp=Z,260nm,19.0s,MS4.7						
SSF	**Saint Saulge**	**91.87**	**333**	*e*P	**P**	**18 47 19.9**	**0.0**
	comp=Z,14nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**91.87**	**333**	*e*P	**P**	**18 47 19.9**	**0.0**
SSF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
LDF	**La Druitiere**	**91.89**	**336**	*e*P	**P**	**18 47 19.6**	**-0.4**
	comp=Z,18nm,0.7s,mb5.2						
LDF	**La Druitiere**	**91.89**	**336**	*e*P	**P**	**18 47 19.6**	**-0.4**
LDF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.2						
HYF	**Humbligny**	**92.02**	**334**	*e*P	**P**	**18 47 21.0**	**+0.4**
LTX	**Lajitas**	**92.06**	**53**	*e*P	**P**	**18 47 21.7**	**+0.4**
LTX				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.4						
LTX	**Lajitas**	**92.06**	**53**	*e*P	**P**	**18 47 21.7**	**+0.4**
	comp=Z,30nm,1.5s,mb5.4						
SMF	**Signal de Mont**	**92.09**	**333**	*e*P	**P**	**18 47 20.7**	**-0.3**
	comp=Z,11nm,0.8s,mb5.0						
SMF	**Signal de Mont**	**92.09**	**333**	*e*P	**P**	**18 47 20.7**	**-0.3**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
AVF	**Avril sur Loir**	**92.16**	**333**	*e*P	**P**	**18 47 21.2**	**-0.1**
	comp=Z,52nm,0.9s,mb5.6						
AVF	**Avril sur Loir**	**92.16**	**333**	*e*P	**P**	**18 47 21.2**	**-0.1**
AVF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.6						
BNI	**Bardonecchia**	**92.25**	**330**	*e*P	**P**	**18 47 21.2**	**-0.6**
BNI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
BNI	**Bardonecchia**	**92.25**	**330**	*e*P	**P**	**18 47 21.2**	**-0.6**
	comp=Z,9.6nm,0.9s,mb5.1						
GRR	**Gorron**	**92.31**	**336**	*e*P	**P**	**18 47 22.0**	**+0.1**
	comp=Z,50nm,1.0s,mb5.5						
GRR	**Gorron**	**92.31**	**336**	*e*P	**P**	**18 47 22.0**	**+0.1**
GRR				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.5						
MBDF	**Montbardon**	**92.48**	**330**	*e*P	**P**	**18 47 22.2**	**-0.6**
	comp=Z,28nm,0.7s,mb5.4						
MBDF	**Montbardon**	**92.48**	**330**	*e*P	**P**	**18 47 22.2**	**-0.6**
MBDF				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.4						
BGF	**Bois d'Agland**	**92.54**	**333**	*e*P	**P**	**18 47 22.9**	**-0.1**
	comp=Z,15nm,0.9s,mb5.1						
BGF	**Bois d'Agland**	**92.54**	**333**	*e*P	**P**	**18 47 22.9**	**-0.1**
BGF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
ORIF	**Oris-en-Rattie**	**92.69**	**330**	*e*P	**P**	**18 47 23.8**	**0.0**
	comp=Z,18nm,0.7s,mb5.3						
ORIF				*e*R			
	comp=Z,232nm,18.2s						
SBF	**Sospel**	**92.89**	**329**	*e*P	**P**	**18 47 23.9**	**-0.8**
	comp=Z,78nm,0.9s,mb5.8						
SBF	**Sospel**	**92.89**	**329**	*e*P	**P**	**18 47 23.9**	**-0.8**
SBF				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.8						
SGMF	**Saint Gilles**	**92.99**	**337**	*e*P	**P**	**18 47 25.1**	**0.0**
	comp=Z,28nm,0.9s,mb5.4						
SGMF	**Saint Gilles**	**92.99**	**337**	*e*P	**P**	**18 47 25.1**	**0.0**
SGMF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.4						
TCF	**Toulx Ste Croi**	**93.01**	**333**	*e*P	**P**	**18 47 25.1**	**-0.1**
	comp=Z,13nm,0.8s,mb5.1						
TCF	**Toulx Ste Croi**	**93.01**	**333**	*e*P	**P**	**18 47 25.1**	**-0.1**
TCF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.1						
ROSF	**Rostrenen**	**93.15**	**338**	*e*P	**P**	**18 47 25.8**	**0.0**
	comp=Z,34nm,1.0s,mb5.4						
ROSF	**Rostrenen**	**93.15**	**338**	*e*P	**P**	**18 47 25.8**	**0.0**
ROSF				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.4						
VIVF	**Saint-Julien-l**	**93.24**	**331**	*e*P	**P**	**18 47 26.2**	**-0.1**
	comp=Z,34nm,0.9s,mb5.5						
VIVF	**Saint-Julien-l**	**93.24**	**331**	*e*P	**P**	**18 47 26.2**	**-0.1**
VIVF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.5						
PGF	**Pioggiola**	**93.24**	**327**	*e*P	**P**	**18 47 26.0**	**-0.4**
	comp=Z,44nm,1.2s,mb5.5						
PGF	**Pioggiola**	**93.24**	**327**	*e*P	**P**	**18 47 26.0**	**-0.4**
PGF				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.5						
FRF	**La Foret Royal**	**93.47**	**329**	*e*P	**P**	**18 47 26.6**	**-0.8**
	comp=Z,17nm,0.8s,mb5.2						
FRF	**La Foret Royal**	**93.47**	**329**	*e*P	**P**	**18 47 26.6**	**-0.8**
FRF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
QUIF	**Quistinic**	**93.48**	**337**	*e*P	**P**	**18 47 27.1**	**-0.2**
	comp=Z,8.9nm,0.9s,mb4.9						
QUIF	**Quistinic**	**93.48**	**337**	*e*P	**P**	**18 47 27.1**	**-0.2**
QUIF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
CCM	**Cathedral Cave**	**93.54**	**39**	*e*P	**P**	**18 47 26.7**	**-1.2**
CCM				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
CCM	**Cathedral Cave**	**93.54**	**39**	*e*P	**P**	**18 47 26.7**	**-1.2**
	comp=Z,6.3nm,0.9s,mb5.0						
SMRF	**Simiane la Rot**	**93.59**	**330**	*e*P	**P**	**18 47 27.6**	**-0.3**
	comp=Z,12nm,0.8s,mb5.1						
MFF	**Saint Martin d**	**93.60**	**335**	*e*P	**P**	**18 47 28.1**	**+0.2**
	comp=Z,42nm,1.2s,mb5.4						
MFF	**Saint Martin d**	**93.60**	**335**	*e*P	**P**	**18 47 28.1**	**+0.2**
MFF				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.4						
LMR	**La Mourre**	**93.71**	**329**	*e*P	**P**	**18 47 28.0**	**-0.5**
	comp=Z,46nm,1.0s,mb5.5						
LMR	**La Mourre**	**93.71**	**329**	*e*P	**P**	**18 47 28.0**	**-0.5**
LMR				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.6						
RJF	**Les Rejaudoux**	**94.10**	**333**	*e*P	**P**	**18 47 30.6**	**+0.4**
	comp=Z,22nm,0.9s,mb5.3						
RJF				*e*R			
	comp=Z,344nm,20.5s						
RJF	**Les Rejaudoux**	**94.10**	**333**	*e*P	**P**	**18 47 30.6**	**+0.4**
RJF				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.3						
RJF				MLR	MLR		
	comp=Z,340nm,20.5s,MS4.8						
CAF	**Calviac**	**94.21**	**333**	*e*P	**P**	**18 47 31.2**	**+0.4**
	comp=Z,16nm,0.9s,mb5.2						
CAF	**Calviac**	**94.21**	**333**	*e*P	**P**	**18 47 31.2**	**+0.4**
CAF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
LASF	**Ste Croix**	**94.21**	**331**	*e*P	**P**	**18 47 30.6**	**-0.2**
	comp=Z,41nm,1.2s,mb5.4						
LFF	**La Frestale**	**94.70**	**334**	*e*P	**P**	**18 47 33.3**	**+0.3**
MTLF	**Montolieu**	**95.48**	**332**	*e*P	**P**	**18 47 36.3**	**-0.3**
	comp=Z,15nm,1.1s,mb5.0						
MTLF	**Montolieu**	**95.48**	**332**	*e*P	**P**	**18 47 36.3**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb5.0						
ACSO	**Alum Creek Sta**	**95.96**	**33**	P	**P**	**18 47 38.4**	**-0.5**
	comp=Z,33nm,0.5s,mb6.0						
ETSF	**Etsaut**	**96.93**	**333**	*e*P	**P**	**18 47 43.1**	**-0.1**
CPCT	**Cooper Cave**	**99.01**	**37**	P	**P**	**18 47 54.1**	**+1.3**
LSZ	**Lusaka**	**118.03**	**270**	*e*PKIKP	PKPdf	18 52 59.7	-2.3
QSPA	**South Pole Qui**	**122.90**	**180**	⇓*i*P	PKPdf	18 53 07.2	-2.8
LBTB	**Lobatse**	**124.60**	**261**	*e*PKIKP	PKPdf	18 53 12.0	-2.7
BOSA	**Boshof**	**126.28**	**257**	*e*PKIKP	PKPdf	18 53 15.5	-2.2
SDV	**Santo Domingo**	**127.90**	**43**	*e*PKPdf	PKPdf	18 53 18.0	-3.3
OTAV	**Otavalo**	**129.47**	**57**	*e*PKPdf	PKPdf	18 53 22.4	-1.9
LPAZ	**La Paz**	**148.01**	**66**	*e*PKIKP	PKPdf	18 53 55.5	-2.0
LVC	**Limon Verde**	**150.79**	**77**	*e*PKPdf	PKPdf	18 54 00.2	-1.6
LVC				*e*PKPbc	PKPdf	18 54 05.5	+3.8
PLCA	**Paso Flores**	**152.98**	**116**	*e*PKIKP	PKPdf	18 54 09.4	+5.0
TRQA	**Tornquist**	**159.88**	**111**	*e*PKPab	PKPab	18 54 50.3	-0.8

NDI 04 19:22:09.0±3.6**,26.25N**×**87.13E,h10^{km},MD3.5, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTK	**Gangtok**	**1.71**	**51**	*e*P	Pn	19 22 38.0	-1.2
GTK				*e*SG	Sg	19 23 07.0	+0.9
ALBI	**Allahabad**	**4.89**	**260**	*e*P	Pn	19 23 22.1	-2.3
ALBI				*e*S	Sn	19 24 16.5	-5.2
BLSP	**Bilaspur**	**6.13**	**229**	*e*	Sn	19 24 55.0	+2.0
LGTI	**Lohaghat**	**6.88**	**299**	*e*S	Sn	19 25 03.5	-8.0
NDI	**New Delhi**	**9.13**	**288**	*e*PG	P	19 25 07.0	+43
HYB	**Hyderabad**	**11.86**	**224**	*e*P	P	19 24 53.0	-8.2

ISC 04 19:45:00.3±3.4**,9.4S**±0.2×**119.2E**±0.2**,h56^{km}**±34^{km}**,n6, σ1^{s}71**/8**,mb4.5**/2**,1C-1D,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.68**	**145**	*e*P	**P**	**19 47 31.5**	**-1.7**
	21nm,0.9s						
FITZ				*e*S	**S**	**19 49 33.3**	**+1.2**
KAKA	**Kakadu**	**13.38**	**106**	*e*P	**P**	**19 48 08.9**	**-0.3**
	19nm,0.5s						
WB2	**Warramunga Arr**	**17.99**	**127**	⇓*i*P	**P**	**19 49 09.6**	**+1.4**
WB2				*e*S	**S**	**19 52 22.7**	**-1.2**
ASPA	**Alice Springs**	**19.97**	**137**	⇑*i*P	**P**	**19 49 31.7**	**+1.0**
FORT	**Forrest**	**22.84**	**160**	*e*P	**P**	**19 49 58.1**	**-1.5**
	30nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**30.52**	**140**	*e*P	**P**	**19 51 11.6**	**+1.0**
	2.3nm,0.5s,mb4.3						

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*NEIC **04** 20:06:22.5±0.5,49.79N×18.53E,h5^{km},ML2.9(VIE),Error ellipse: s-maj=6.3km s-min=5.9km az=219.0*
*PRU **04** 20:06:22.6,49.79N×18.51E*
*IPEC **04** 20:06:22.8±0.1,49.82N×18.52E,h11^{km}±1^{km},ML2.2/3, Error ellipse: s-maj=1.1km s-min=0.7km az=169.0*
*CSEM **04** 20:06:23.3±0.2,49.81N×18.49E,h0^{km},ML3.1/3,Error ellipse: s-maj=3.1km s-min=1.5km az=38.0*
ISC 04 20:06:21.0±0.4**,49.84N**±0.03×**18.44E**±0.03**,n35,σ1^{s}20**/64**, 1C-2D,Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.19**	**268**	*e*PG	**Pg**	**20 06 27.7**	**+2.9**
OKC				*e*SG	**Sg**	**20 06 32.0**	**+4.6**
	495nm,0.9s						
RAC	**Raciborz**	**0.29**	**326**	*e*Pg	**Pg**	**20 06 29.8**	**+3.0**
RAC				*e*Sg	**Sg**	**20 06 35.8**	**+5.2**
MORC	**Moravsky Berou**	**0.59**	**264**	*e*Pg	**Pg**	**20 06 35.0**	**+2.3**
MORC				*e*Sg	**Sg**	**20 06 42.5**	**+2.0**
MORC	**Moravsky Berou**	**0.59**	**264**	*e*Pg	**Pg**	**20 06 35.0**	**+2.3**
MORC				*e*Sg	**Sg**	**20 06 43.2**	**+2.7**
	41nm,0.3s						
LIKS	**Likavka**	**0.90**	**151**	*e*PN	**Pn**	**20 06 41.5**	**+0.8**
LIKS				*e*SN	**Sn**	**20 06 55.2**	**+0.5**
OJC	**Ojcow**	**0.95**	**66**	*e*Pg	**Pg**	**20 06 39.9**	**-0.1**
OJC				*e*Sg	**Sg**	**20 06 52.5**	**-0.2**
OJC	**Ojcow**	**0.95**	**66**	*e*Pg	**Pg**	**20 06 40.0**	**0.0**
OJC				*e*Sg	**Sg**	**20 06 52.3**	**-0.4**
JAVC	**Velka Javorina**	**1.11**	**207**	*e*Pn	**Pn**	**20 06 44.7**	**+1.1**
KOLL	**Kolacno**	**1.27**	**181**	*i* PN	**Pn**	**20 06 46.1**	**+0.2**
KOLL				*e*SN	**Sn**	**20 07 02.9**	**-0.9**
NIE	**Niedzica**	**1.29**	**109**	*e*Pg	**Pg**	**20 06 44.7**	**-2.0**
NIE				*e*Sg	**Sg**	**20 07 03.3**	**-0.6**
VRAC	**Vranov**	**1.32**	**247**	*e*Pn	**Pn**	**20 06 47.4**	**+0.8**
VRAC				*e*Sg	**Sg**	**20 07 05.3**	**+0.4**
	39nm,0.4s						
VYHS	**Vyhne**	**1.38**	**169**	*e*PN	**Pn**	**20 06 47.2**	**-0.2**
VYHS				*e*SN	**Sn**	**20 07 05.3**	**-1.3**
VYHS	**Vyhne**	**1.38**	**169**	*e*Pn	**Pn**	**20 06 47.4**	**-0.1**
VYHS				*e*Sn	**Sn**	**20 07 05.3**	**-1.3**
VYHS				*e*Sg	**Sn**	**20 07 05.3**	**-1.3**
DPC	**Dobruska-Polom**	**1.46**	**291**	*e*PG	**Pg**	**20 06 50.2**	**+0.1**
DPC				*e*SG	**Sg**	**20 07 11.3**	**+1.8**
	93nm,1.2s						
DPC	**Dobruska-Polom**	**1.46**	**291**	*e*Pn	**Pn**	**20 06 49.9**	**+1.3**
DPC	**Dobruska-Polom**	**1.46**	**291**	Pg	**Pg**	**20 06 50.2**	**+0.1**
DPC				*e*Sg	**Sg**	**20 07 10.7**	**+1.2**
SMOL	**Smolenice**	**1.49**	**207**	*e*PN	**Pn**	**20 06 49.8**	**+0.7**
SMOL				*e*SN	**Sn**	**20 07 10.1**	**+0.6**
KRUC	**Moravsky**	**1.55**	**240**	*e*Pn	**Pn**	**20 06 50.0**	**+0.1**
KRUC	**Moravsky**	**1.55**	**240**	*e*Pg	**Pg**	**20 06 51.1**	**-0.8**
KRUC				*e*Sg	**Sg**	**20 07 12.5**	**0.0**
	27nm,0.5s						
UPC	**Upice**	**1.70**	**294**	*e*PG	**Pg**	**20 06 54.2**	**-0.7**
UPC				*e*SG	**Sg**	**20 07 18.2**	**+0.7**
ZST	**Bratislava**	**1.87**	**209**	*i* PN	**Pn**	**20 06 54.4**	**-0.1**
ZST				*e*SN	**Sn**	**20 07 19.3**	**+0.1**
KECS	**Kecovo**	**1.91**	**135**	*i* PN	**Pn**	**20 06 54.8**	**-0.3**
KECS				*e*SN	**Sn**	**20 07 20.4**	**+0.2**
PSZ	**Piszkesteto**	**2.15**	**153**	*e*Pn	**Pn**	**20 06 58.5**	**-0.1**
PSZ				*e*Pg	**Pg**	**20 07 04.2**	**+0.3**
PSZ	**Piszkesteto**	**2.15**	**153**	⇓*e*PB	**Pn**	**20 06 59.2**	**+0.6**
PSZ				*e*Sg	**Sn**	**20 07 28.3**	**+2.0**
PSZ	**Piszkesteto**	**2.15**	**153**	*e*Pn	**Pn**	**20 06 58.5**	**-0.1**
PSZ	**Piszkesteto**	**2.15**	**153**	⇓*e*P	**Pn**	**20 06 59.2**	**+0.6**
PSZ	**Piszkesteto**	**2.15**	**153**	*e*Pg	**Pg**	**20 07 04.2**	**+0.3**
PSZ				*e*S	**Sn**	**20 07 28.3**	**+2.0**
CRVS	**Cervenica-Dubn**	**2.19**	**114**	*i* PB	**Pb**	**20 07 01.6**	**+0.4**
PRU	**Pruhonice**	**2.53**	**275**	*e*PG	**Pg**	**20 07 08.5**	**-2.9**
PRU				*e*SG	**Sg**	**20 07 43.4**	**-1.7**
PVCC	**Panska Ves**	**2.58**	**287**	*e*SG	**Sg**	**20 07 46.6**	**-0.4**
KOLS	**Kolonicke sedl**	**2.66**	**109**	*e*PG	**Pg**	**20 07 13.2**	**-0.9**
KHC	**Kasperske Hory**	**3.25**	**259**	*e*PN	**Pn**	**20 07 14.5**	**+0.2**
KHC				*e*PG	**Pg**	**20 07 21.7**	**-4.2**
KHC				*e*x	x	20 07 58.0	
KHC				*e*SG	**Sg**	**20 08 06.8**	**-2.4**
KHC	**Kasperske Hory**	**3.25**	**259**	*e*Pg	**Pg**	**20 07 21.7**	**-4.2**
KHC				Sg	**Sg**	**20 08 06.8**	**-2.4**
MOA	**Molln**	**3.41**	**236**	⇑*i*PN	**Pn**	**20 07 16.0**	**-0.4**
MOA				*i* SG	**Sg**	**20 08 12.1**	**-2.2**
	10.0nm,0.6s						
CLL	**Collm**	**3.77**	**295**	*e*PG	**Pg**	**20 07 34.0**	**-2.2**
CLL				*i* SG	**Sg**	**20 08 23.8**	**-2.5**

WEL 04 20:15:08.5±0.5**,47.74S**×**166.60E,h12^{km},ML3.5**/3**,Error ellipse: s-maj=6.3km s-min=3.5km az=90.0,Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHZ	**Wether Hill Ro**	**2.07**	**27**	PN	Pn	20 15 42.0	-1.5
WHZ				SN	Sn	20 16 07.0	-2.4
WHZ				SN	Sn	20 16 07.1	-2.3
DCZ	**Deep Cove**	**2.30**	**10**	PN	Pn	20 15 45.4	-1.4
DCZ				SN	Sn	20 16 14.4	-0.9
MLZ	**Mavora Lakes**	**2.63**	**25**	PN	Pn	20 15 49.8	-1.8
MLZ				SN	Sn	20 16 20.7	-3.0
MLZ				SN	Sn	20 16 20.8	-2.9
TUZ	**Tuapeka**	**2.74**	**50**	PN	Pn	20 15 53.0	-0.2
TUZ				SN	Sn	20 16 28.5	+1.9
EAZ	**Earnscleugh**	**3.13**	**38**	PN	Pn	20 15 57.0	-1.7
EAZ				SN	Sn	20 16 35.3	-1.1
WKZ	**Wanaka**	**3.36**	**31**	PN	Pn	20 16 01.0	-0.9
WKZ				SN	Sn	20 16 40.8	-1.4
ODZ	**Otahua Downs**	**3.89**	**48**	PN	Pn	20 16 06.7	-2.7
JCZ	**Jackson Bay**	**3.97**	**23**	*e*PN	Pn	20 16 08.9	-1.6
JCZ				SN	Sn	20 16 55.4	-2.1

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*NEIC **04** 20:16:58.5,38.32S×74.37W,h10^{km},MD4.2(GUC),After GUC.*
GUC 04 20:16:58.5±1.7**,38.32S**×**74.37W,h10^{km},MD4.2,8C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**3.81**	**130**	*e*Pn	Pn	20 18 07.4	+8.8
PLCA				*e*Sg	Sg	20 19 05.4	0.0
SFDO	**San Fernando**	**4.58**	**37**	⇑*i*P	Pn	20 18 08.6	-0.8
SFDO				*i* S	Sn	20 19 01.9	-1.4
LNV	**Longovilo**	**4.96**	**30**	⇑*i*P	Pn	20 18 14.1	-0.8
CICH	**Cipreses**	**5.10**	**40**	⇑*i*P	Pn	20 18 16.7	-0.2
CICH				*i* S	Sn	20 19 15.6	-1.1
CACH	**El Canelo**	**5.18**	**37**	⇑*i*P	Pn	20 18 17.1	-0.8
CHCH	**Chadas Angostu**	**5.30**	**36**	⇑*i*P	Pn	20 18 18.5	-1.2
CHCH				*i* S	Sn	20 19 19.8	-1.9
LCCH	**Las Cruces**	**5.33**	**26**	⇓*i*P	Pn	20 18 19.5	-0.7
TACH	**Talagante**	**5.42**	**32**	*i* P	Pn	20 18 20.4	-0.9
LMEL	**Las Melosas**	**5.59**	**38**	⇓*i*P	Pn	20 18 23.3	-0.5
LMEL				*i* S	Sn	20 19 26.8	-2.0
PCH	**Pirque**	**5.63**	**35**	*i* P	Pn	20 18 22.9	-1.4
CLCH	**Cerro Calan**	**5.81**	**33**	⇑*i*P	Pn	20 18 25.3	-1.6
FCH	**Farellones**	**5.98**	**35**	⇓*i*P	Pn	20 18 27.9	-1.3
FCH				*i* S	Sn	20 19 36.6	-1.9
ROCH	**El Roble**	**5.99**	**28**	⇑*i*P	Pn	20 18 28.8	-0.6
PACH	**Papudo**	**6.24**	**23**	*i* P	Pn	20 18 31.4	-1.5
JACH	**Jahuel**	**6.41**	**30**	⇑*i*P	Pn	20 18 33.8	-1.5
TRQA	**Tornquist**	**9.76**	**92**	*e*Pn	P	20 19 23.9	+1.9
	4.5nm,0.6s						

CASC 04 20:46:34.7±1.7**,12.72N**×**88.40W,h35^{km}**±999^{km}**,MD3.7, ML3.2,5C-5D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.71**	**10**	⇓*e*P	P	20 46 48.9	+0.6
VSM				*e*S	S	20 46 58.6	+0.4
BLLM	**Bellamira**	**0.73**	**12**	⇓*e*P	P	20 46 48.8	+0.2
BLLM				*e*S	S	20 46 59.0	+0.2
CNCH	**Conchagua**	**0.78**	**45**	⇓*e*P	P	20 46 49.5	+0.2
CNCH				*e*S	S	20 47 00.9	+1.0
SNVI	**San Vicente**	**0.98**	**334**	⇑*e*P	P	20 46 52.4	+0.2
SNVI				*e*P		20 46 52.6	
SNVI				*e*S	S	20 47 05.3	+0.2
SNVI				*e*S	S	20 47 05.3	+0.2
CAHU	**Cacacuatique**	**1.06**	**10**	⇑*e*P	P	20 46 53.1	-0.1
CAHU				*e*S	S	20 47 08.8	+1.8
LCBS	**La Ceiba**	**1.09**	**329**	⇑*e*P	P	20 46 54.0	+0.4
LCBS				*e*S	S	20 47 07.4	-0.3
LFRS	**El Faro**	**1.10**	**324**	⇓*e*P	P	20 46 54.0	+0.1
LFRS				*e*S	S	20 47 08.2	+0.1
LBRS	**Las Brisas**	**1.19**	**328**	⇓*e*P	P	20 46 55.4	+0.4
LBRS				*e*S	S	20 47 09.9	-0.5
LFU	**La Fuente**	**1.24**	**326**	*e*P	P	20 46 56.5	+0.7
LFU				*e*S	S	20 47 11.7	+0.2
CRIN	**San Cristobal**	**1.32**	**91**	*e*P	P	20 46 56.9	-0.1
CRIN				*e*S	S	20 47 15.5	+2.0
BOQS	**Boqueron**	**1.32**	**320**	⇑*e*P	P	20 46 57.8	+0.7
BOQS				*e*S	S	20 47 14.2	+0.5
LEON	**Leon**	**1.50**	**101**	*e*P	P	20 46 58.6	-0.9
TEL3	**Telica 3**	**1.52**	**95**	⇑*e*P	P	20 46 59.4	-0.5
TEL3				*e*S	S	20 47 17.9	-0.9
MIRN	**Miramar**	**1.67**	**99**	*e*P	P	20 47 01.4	-0.6
CNGN	**Cerro Negro**	**1.67**	**97**	*e*P	P	20 47 01.4	-0.7
RTR	**El Retiro**	**1.69**	**314**	*e*P	P	20 47 03.1	+0.9
RTR				*e*S	S	20 47 23.4	+0.6
MOMJ	**Momotombo**	**1.84**	**100**	*e*P	P	20 47 03.5	-1.0
MOMJ				*e*S	S	20 47 27.3	+0.6
COPN	**Copaltepe**	**1.84**	**107**	*e*P	P	20 47 03.3	-1.1
COPN				*e*S	S	20 47 26.0	-0.9
RBDL	**Robledal**	**1.87**	**318**	*e*P	P	20 47 03.7	-1.1
APYN	**Apoyeque**	**2.06**	**103**	*e*P	P	20 47 06.9	-0.7
APYN				*e*S	S	20 47 29.8	-2.5
MGAN	**Managua**	**2.18**	**105**	*i*	S	20 47 35.6	+0.4
	comp=E,200nm,0.2s						

MAN 04 21:07:41.5,5.76N×**126.21E,h2^{km},mb3.9,ML2.6,MS2.3, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.18**	**2**	*e*P	Pb	21 08 04.3	0.0
MATI				*e*S	Sb	21 08 22.1	+2.2
KCP	**Kidapawan**	**1.67**	**318**	⇓*i*P	Pn	21 08 11.8	-0.1
KCP				*e*S	Sb	21 08 34.6	+0.6
BUKP	**Musuan**	**2.40**	**332**	*e*P	Pn	21 08 22.2	-0.1
BUKP				*e*S	Sn	21 08 52.9	+0.2

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*ISK **04** 21:12:47.9,36.11N×31.46E,h33^{km},MD3.7*
*HLW **04** 21:12:47.3,36.23N×31.20E,h33^{km},Mb3.8*
*CSEM **04** 21:12:47.3±0.1,36.12N×31.36E,h40^{km},Mw3.3,Error ellipse: s-maj=3.0km s-min=1.7km az=81.0*
*NIC **04** 21:12:52.0±0.3,36.04N×31.90E,h11^{km},ML3.6,MW3.3*
ISC 04 21:12:47.8±0.3**,36.06N**±0.03×**31.37E**±0.05**,h67^{km}**±17^{km}**, n36,σ1^{s}18**/46**,10C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTB	**Antalya**	**1.02**	**326**	PG	**P**	**21 13 05.5**	**-1.1**
HDMB	**Hadim**	**1.27**	**45**	PN	**P**	**21 13 09.2**	**-0.8**
ALFC	**Alevga**	**1.35**	**132**	⇑*i*P	**P**	**21 13 11.4**	**+0.3**
	51nm,0.1s						
ALFC				S	**S**	**21 13 26.6**	**-1.8**
ELL	**Elmali**	**1.37**	**301**	PN	**P**	**21 13 12.5**	**+1.1**
PPCY	**Paphos**	**1.42**	**146**	P	**P**	**21 13 14.7**	**+2.6**
BCK	**Bucak**	**1.53**	**336**	PN	**P**	**21 13 12.9**	**-0.7**
LEF	**Lefka**	**1.55**	**127**	PN	**P**	**21 13 13.8**	**-0.1**
LEF				SN	**S**	**21 13 31.4**	**-1.8**
MAMC	**Mammari**	**1.75**	**120**	P	**P**	**21 13 16.9**	**+0.4**
MAMC				S	**S**	**21 13 39.9**	**+2.2**
SZAC	**Souni-Zanaja**	**1.79**	**136**	P	**P**	**21 13 20.0**	**+2.9**
	15nm,0.5s						
SZAC				S	**S**	**21 13 44.5**	**+5.7**
ISP	**Isparta**	**1.91**	**339**	PN	**P**	**21 13 17.9**	**-0.8**
CSS	**Prodhromos**	**1.94**	**124**	P	**P**	**21 13 20.1**	**+1.0**
	9.5nm,0.5s						
CSS				S	**S**	**21 13 40.6**	**-1.6**
KONT	**Konya--Tatoy**	**2.04**	**23**	PN	**P**	**21 13 20.1**	**-0.5**
PHNC	**Paralimni**	**2.41**	**115**	P	**P**	**21 13 27.8**	**+2.0**
DENT	**Denizli**	**2.52**	**313**	PN	**P**	**21 13 28.8**	**+1.4**
KHL	**Karahalli**	**2.70**	**327**	PN	**P**	**21 13 30.0**	**+0.1**
YER	**Yerkesik**	**2.71**	**294**	PN	**P**	**21 13 31.2**	**+1.2**
KIZT	**Kizilcal**	**2.84**	**8**	PN	**P**	**21 13 30.8**	**-1.1**
ALT	**Altintas**	**3.15**	**342**	PN	**P**	**21 13 36.5**	**+0.2**
NIG	**Nigde**	**3.30**	**51**	PN	**P**	**21 13 37.6**	**-0.7**
ESKT	**Eskisehir**	**3.48**	**353**	*e*PN	**P**	**21 13 39.8**	**-1.0**
CEYT	**Ceyhan**	**3.65**	**74**	*e*PN	**P**	**21 13 43.2**	**0.0**
KAMT	**Kaman**	**3.79**	**29**	*e*PN	**P**	**21 13 45.3**	**+0.2**
HTY	**Hatay**	**3.86**	**88**	*e*PN	**P**	**21 13 45.8**	**-0.3**
IZM	**Izmir**	**4.03**	**307**	*e*PN	**P**	**21 13 49.7**	**+1.3**
MDU	**Mudurnu**	**4.40**	**358**	*e*PN	**P**	**21 13 52.8**	**-0.9**
ORLT	**Orhaneli**	**4.43**	**335**	*e*PN	**P**	**21 13 54.6**	**+0.4**
GAZ	**Gaziantep**	**4.83**	**75**	*e*PN	**P**	**21 14 00.3**	**+0.7**
HMAT	**Matruh**	**6.10**	**217**	⇑P	**P**	**21 14 16.3**	**-0.9**
HMAT				S	**S**	**21 15 21.1**	**-5.4**
SUZ		**6.32**	**168**	⇑P	**P**	**21 14 21.4**	**+1.0**
HSAF	**As Saff**	**6.42**	**179**	⇑P	**P**	**21 14 22.4**	**+0.6**
HNAT	**Natroun**	**6.44**	**186**	⇑P	**P**	**21 14 22.2**	**+0.2**
HNAT				S	**S**	**21 15 32.6**	**-2.3**
GLL	**Jalalah**	**6.47**	**177**	⇑P	**P**	**21 14 23.4**	**+1.0**
GLL				S	**S**	**21 15 32.5**	**-3.1**
TR2		**7.91**	**165**	⇑P	**P**	**21 14 43.5**	**+1.2**
AWBH		**7.99**	**196**	⇑P	**P**	**21 14 43.6**	**+0.1**
SWA1		**8.29**	**217**	⇑P	**P**	**21 14 46.7**	**-0.8**
SWA1				S	**S**	**21 16 14.0**	**-6.5**
SWA2		**8.43**	**218**	⇑P	**P**	**21 14 48.0**	**-1.5**
SWA2				S	**S**	**21 16 17.5**	**-6.5**

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*CSEM **04** 21:19:24.6,34.29N×54.55E,h10^{km},ML3.1,After TEH*
TEH 04 21:19:24.6,34.29N×**54.55E,h10^{km},Mn3.1,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IANJ	**Anjiloo**	**1.28**	**336**	Pg	Pg	21 19 47.7	-2.6
ILAS	**Lasjerd**	**1.70**	**310**	Pg	Pg	21 19 55.6	-3.0
IFIR	**Firoozkooh**	**2.00**	**313**	Pn	Pn	21 19 57.8	-1.1
IFIR				Sn	Sn	21 20 23.2	-0.9
IGLO	**Galoogah**	**2.19**	**337**	Pn	Pn	21 20 03.8	+2.2
IVRN	**Varamin**	**2.43**	**288**	Pn	Pn	21 20 04.1	-1.0
IDMV	**Damavand**	**2.44**	**303**	Pn	Pn	21 20 04.2	-0.9
IPRN	**Paran-Amol**	**2.71**	**317**	Pn	Pn	21 20 08.2	-0.9
IAFJ	**Afjeh**	**2.80**	**305**	Pn	Pn	21 20 09.6	-0.8
IAFJ				Sn	Sn	21 20 42.2	-2.4
IRAZ	**Razeghan**	**3.96**	**288**	Pn	Pn	21 20 24.9	-1.9
IKRD	**Kardeh**	**4.08**	**51**	Pn	Pn	21 20 51.3	+23
IKRD	**Kardeh**	**4.08**	**51**	Sn	Sn	21 21 36.9	+20
IKRD	**Kardeh**	**4.08**	**51**	Pn	Pn	21 20 51.3	+23
IKRD				Sn	Sn	21 21 36.9	+20
IPAY	**Payeh**	**4.22**	**58**	Pn	Pg	21 20 44.0	-4.9

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*NEIC **04** 21:24:22.7±0.9,7.01N×92.43E,mb4.5/6,Error ellipse: s-maj=22.5km s-min=14.5km az=202.0*
ISC 04 21:24:20.6±1.1**,7.1N**±0.1×**92.4E**±0.1**,h36^{km}, (h36^{km}**±1.0^{km}**:pP-P),n15,σ0^{s}81**/15**,mb4.5**/9**,MS3.2**/1**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.63	272	ePn	P	21 27 06.3	-0.9
	22nm,0.9s						
CM31	Chiang Mai Arr	12.99	29	ePn	P	21 27 19.3	-6.1
	6.2nm,0.7s						
HYB	Hyderabad	17.01	309	eP	P	21 28 19.0	+1.6
HYB	Hyderabad	17.01	309	iP	P	21 28 19.0	+1.6
KMI	Kunming	20.50	28	P	P	21 29 04.3	+6.0
	5.0nm,1.4s						
KMI				sP		21 29 12.3	
KMI				LR	LR		
	comp=Z,90nm,17.7s,MS3.2						
PKI	Pulchoki	21.46	343	eP	P	21 29 07.5	-0.5
	comp=Z,20nm,1.0s,mb4.4						
DMN	Daman	21.59	342	eP	P	21 29 08.7	-0.6
KKN	Kakani	21.71	343	eP	P	21 29 09.6	-0.9
	comp=Z,10nm,0.9s,mb4.3						
GKN	Gorkha	22.10	341	eP	P	21 29 14.0	-0.4
	comp=Z,22nm,0.8s,mb4.6						
KOLN	Koldanda	22.24	339	eP	P	21 29 15.6	-0.1
	comp=Z,34nm,0.8s,mb4.8						
AAK	Ala-Archa	38.81	339	P	P	21 31 44.2	+0.5
	comp=Z,7.7nm,1.0s,mb4.4						
KURK	Kurchatov	45.02	348	eP	P	21 32 35.0	+0.6
	comp=Z,9.5nm,1.1s,mb4.5						
KURK				epP	pP	21 32 45.9	+0.9
WRAB	Tennant Creek	49.20	124	eP	P	21 33 07.7	0.0
	comp=Z,12nm,0.9s,mb4.9						
WRAB				epP	pP	21 33 18.4	+0.2
CHKZ	Chkalovo	49.74	343	eP	P	21 33 11.7	+0.3
	comp=Z,4.2nm,0.8s,mb4.5						
CHKZ				pP	pP	21 33 21.8	-0.1
LPG	La Plagne	81.98	315	eP	P	21 36 42.0	+3.6
	comp=Z,7.5nm,0.6s,mb4.5						

ISC 04 21:36:14.2±0.7, 37.81N±0.04×74.2E±0.1, h33^{km}, n19, σ0^{s}94/29, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.33	355	P	P	21 37 16.3	-3.0
	SNR=506						
KZA	Kyzart	4.34	11	P	P	21 37 20.7	+1.2
	SNR=62						
UCH	Uchtor	4.42	3	P	P	21 37 20.2	-0.4
	SNR=125						
ULHL	Ulahol	4.71	19	P	P	21 37 27.6	+2.9
	SNR=64						
KBK	Karagaybulak	4.88	7	P	P	21 37 28.1	+0.9
	SNR=19						
CHMS	Chumysh	5.20	5	P	P	21 37 30.4	-1.3
	SNR=48						
TKM2	Tokmak 2	5.22	12	P	P	21 37 32.2	+0.3
	SNR=15						
USP	Ospenovka	5.46	3	P	P	21 37 32.6	-2.6
	SNR=65						
THN	Thein Dam	5.52	166	eP	P	21 37 35.9	-0.2
THN				eS	S	21 38 39.1	-0.2
PONG	Pong	6.03	165	eP	P	21 37 44.0	+0.7
PONG				eS	S	21 38 53.0	+0.9
BHK	Bhakra	6.65	163	eS	S	21 39 07.2	-0.3
SDNR	Sundarnagar	6.71	159	eP	P	21 37 54.0	+1.1
SDNR				eS	S	21 39 08.4	-0.7
DDI	Dehra Dun	8.14	155	eP	P	21 38 12.3	-0.5
DDI				eS	S	21 39 37.3	-7.4
KOLN	Koldanda	12.78	139	eP	P	21 39 16.1	-0.1
KOLN				eS	S	21 41 37.4	-0.8
GKN	Gorkha	13.15	135	eP	P	21 39 21.7	+0.5
GKN				eS	S	21 41 47.0	-0.2
KKN	Kakani	13.68	134	eP	P	21 39 27.8	-0.3
KKN				eS	S	21 41 58.9	-1.0
DMN	Daman	13.72	135	eP	P	21 39 28.5	-0.1
DMN				eS	S	21 42 00.2	-0.6
PKI	Pulchoki	13.92	134	eP	P	21 39 31.5	+0.2
PKI				eS	S	21 42 05.8	+0.2
JIRN	Jiri	14.31	132	eP	P	21 39 36.9	+0.5
JIRN				eS	S	21 42 16.0	+1.2

NEIC 04 21:43:58.5, 71.42N×6.92W, h11^{km}, ML3.0(BER), After BER.

BER 04 21:43:58.5±1.4, 71.42N×6.92W, h11^{km}±16^{km}, MD3.6, ML3.3, 3C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	0.62	227	⇑iP	Pb	21 44 09.3	-1.6
JNW	Jan Mayen West	0.63	232	⇑iP	Pb	21 44 10.0	-1.0
JNW				AML	AML	21 44 22.6	
	comp=Z,1μm,0.5s						
JMI	Jan Mayen	0.77	231	⇑iP	Pb	21 44 11.7	-1.7
JMI				AML	AML	21 44 26.4	
	comp=Z,1μm,0.6s						
LOF	Lofoten	7.79	105	eP	Pn	21 45 48.6	-6.1
HSP	Hornsund	8.23	37	eP	P	21 46 02.7	+2.0
TRO	Tromso	8.78	89	eP	P	21 45 58.7	-10
MOR8	Moi Rana	9.31	114	eP	P	21 46 08.5	-7.2
MOR8				eS	Sn	21 47 41.9	-20
MOR8				AML	AML	21 47 46.1	
	comp=Z,5.5nm,0.3s						
MOR8	Moi Rana	9.31	114	eP	P	21 46 08.5	-7.2
	SNR=48						
MOR8				eS	Sn	21 47 41.9	-20
	comp=Z,5.5nm,0.3s,SNR=48						
NSS	Namsos	9.85	125	eP	P	21 46 11.9	-11
KTK1	Kautokeino	10.43	89	eP	P	21 46 24.3	-6.5

NIED 04 21:49:00, 31.80N×131.90E, h26^{km}, Mw3.7 Best double couple: $M_0$3.7×10^{14} NP1:ϕ_s5°, δ73°, λ67°. NP2:ϕ_s241°, δ28°, λ142°.

JMA 04 21:49:18.1±0.1, 31.79N×131.89E, h28^{km}±1^{km}, M3.5, 3C-2D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTSN	Tsuno	0.56	324	⇓P	Pb	21 49 29.1	-0.3
JTSN				S	Sb	21 49 36.9	-0.2
JNAR	Kushima--Naru	0.59	244	⇓P	Pb	21 49 29.8	-0.1
JTZ	Takazaki	0.69	279	⇑P	Pb	21 49 31.4	-0.1
JTZ				S	Sb	21 49 40.7	-0.1
JZO	Okuchi	1.15	288	⇑P	Pn	21 49 38.4	-0.2
JZO				eS	Sn	21 49 54.2	+0.7
JIU2	Izumi 2	1.18	310	⇑P	Pn	21 49 39.5	+0.5
JTN	Tanegashima 3	1.38	215	P	Pn	21 49 41.3	-0.5
JTN				S	Sn	21 49 59.6	+0.4

NEIC 04 22:03:58.4±5.5, 12.26N×143.89E, h13^{km}±34^{km}, mb4.6/9, Error ellipse: s-maj=22.3km s-min=9.5km az=113.0

ISC 04 22:03:56.9±0.5, 12.22N±0.08×143.83E±0.09, h13^{km}, n22, σ0^{s}69/22, mb4.7/15, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.70	36	ePn	Pn	22 04 26.8	+0.3
GUMO				eSn	Sn	22 04 48.0	-0.2
CTAO	Charters Tower	32.19	176	eP	P	22 10 26.6	-0.4
	4.8nm,0.7s,mb4.4						
WRAB	Tennant Creek	33.28	196	eP	P	22 10 36.2	-0.4
	7.5nm,0.8s,mb4.7						
WB2	Warramunga Arr	33.29	196	eP	P	22 10 36.7	+0.1
MBWA	Marble Bar	40.75	216	P	P	22 11 39.9	+0.4
JIRN	Jiri	55.86	295	eP	P	22 13 37.4	+0.5
	7.0nm,0.3s,mb5.2						
PKI	Pulchoki	56.55	295	eP	P	22 13 41.9	+0.1
	2.5nm,0.3s,mb4.8						
KKN	Kakani	56.68	295	eP	P	22 13 43.0	+0.3
	2.3nm,0.2s,mb4.8						
DMN	Daman	56.82	295	eP	P	22 13 43.5	-0.2
	10nm,0.8s,mb4.9						
GKN	Gorkha	57.26	295	eP	P	22 13 46.8	0.0
	7.8nm,0.3s,mb5.2						
KOLN	Koldanda	58.16	295	eP	P	22 13 53.4	+0.2
	10nm,0.8s,mb4.9						
KURK	Kurchatov	64.98	320	eP	P	22 14 38.2	-0.5
	3.2nm,0.8s,mb4.4						
CHKZ	Chkalovo	70.31	323	eP	P	22 15 11.3	-0.8
	1.5nm,0.4s,mb4.3						
INK	Inuvik	76.01	22	eP	P	22 15 44.4	-0.9
	4.4nm,1.0s,mb4.3						
RES	Resolute Bay	86.11	13	eP	P	22 16 38.5	+0.2
	5.7nm,0.9s,mb4.8						
NEW	Newport	86.92	41	eP	P	22 16 43.3	+0.4
	4.2nm,0.9s,mb4.7						
BMO	Blue Mountains	87.67	45	eP	P	22 16 47.1	+0.5
MNV	Mina	88.67	51	eP	P	22 16 51.5	-0.1
	2.7nm,0.9s,mb4.6						
HLID	Hailey	90.02	45	eP	P	22 16 58.2	+0.4
	2.1nm,0.9s,mb4.5						
RRI2	Red Ridge	92.23	45	eP	P	22 17 06.2	-1.7
TPAW	Teton Pass	92.44	45	eP	P	22 17 11.3	+2.4
LPAZ	La Paz	148.78	101	ePKPbc	PKPdf	22 23 47.0	+2.4

CASC 04 23:05:30.4±2.9, 8.36N×82.84W, h0^{km}±6^{km}, MD4.2, MW4.8, 3C-4D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	David	0.39	79	eP	Pg	23 05 38.8	+0.6
DVD				eS	Sg	23 05 47.9	+4.4
ACR	Cerro Adams	0.43	312	⇑eP	Pg	23 05 39.3	+0.2
ACR				eS	Sg	23 05 47.3	+2.4
PTP1	Petroterminal	0.44	111	⇑iP	Pg	23 05 35.3	-3.8
BRU2	Volcan	0.45	19	⇓eP	Pg	23 05 41.1	+1.7
BRU2				eS	Sg	23 05 49.1	+3.7
CNI	Changuinola	1.09	17	eP	Pb	23 05 51.5	-0.4
BUS	Buena Vista	1.49	323	⇓eP	Pn	23 05 57.2	-1.3
BUS				eS	Sb	23 06 18.4	+0.3
LIO	Limon	1.64	353	eP	Pn	23 06 01.8	+1.2
LCR2	La Lucha 2	1.79	320	eP	Pn	23 06 02.0	-0.8
LCR2				eS	Sn	23 06 26.8	+0.3
ICR	Volcan Irazu	1.88	329	⇓eP	Pn	23 06 04.8	+0.7
ICR				eS	Sn	23 06 30.7	+1.8
LAJ	Bijagual	1.96	320	eP	Pn	23 06 05.9	+0.8
LAJ				eS	Sn	23 06 38.5	+7.8
SJS	Escuela Geolog	1.97	323	eS	Sn	23 06 33.1	+1.9
PRS1	Puriscal	2.17	318	eP	Pn	23 06 06.4	-1.8
PRS1				eS	Sn	23 06 36.4	+0.2
VPS2	Volcan Poas 2	2.28	323	⇑eP	Pn	23 06 10.3	+0.5
VPS2				eS	Sn	23 06 42.2	+3.2
CGA2	Cerro Gallo 2	2.30	316	⇓eP	Pn	23 06 09.4	-0.7
CGA2				eS	Sn	23 06 40.8	+1.4
TRTC	Tortuguero	2.36	339	eP	Pn	23 06 10.3	-0.7
AZU	Azuero	2.60	102	eP	Pn	23 06 12.1	-2.3
JCR	Jicaral	2.69	304	eP	Pn	23 06 14.0	-1.6
JCR				eS	Sn	23 06 52.3	+3.0
FORC	Fortuna	2.76	319	iP	Pn	23 06 17.0	+0.3

NEIC 04 23:13:21.2, 44.09S×172.48E, h30^{km}, ML3.7(WEL), After WEL., Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.40	18	P	Pb	23 13 30.2	+0.1
MQZ				S	Sb	23 13 36.2	0.0
CRLZ	Canterbury Las	0.52	11	P	Pb	23 13 32.1	+0.1
CRLZ				S	Sb	23 13 40.0	+0.7
RPZ	Rata Peaks	1.10	289	eP	Pn	23 13 40.5	-0.2
LTZ	Lake Taylor	1.32	353	eP	Pn	23 13 42.8	-1.0
ODZ	Otahua Downs	1.62	233	eP	Pn	23 13 47.2	-1.0
WVZ	Waitaha Valley	1.62	308	eP	Pn	23 13 47.1	-1.1
LBZ	Lake Benmore	1.68	259	eP	Pn	23 13 47.9	-1.1
KHZ	Kahutara	1.84	25	eP	Pn	23 13 50.5	-0.9
THZ	Tophouse	2.35	8	eP	Pn	23 13 57.4	-1.2
DSZ	Denniston Nort	2.39	348	P	Pn	23 13 58.0	-1.3
EAZ	Earnscleugh	2.54	242	eP	Pn	23 13 59.7	-1.6
JCZ	Jackson Bay	2.68	269	eP	Pn	23 14 02.7	-0.7
NNZ	Nelson	2.94	13	eP	Pn	23 14 06.3	-0.8
QRZ	Quartz Range	3.26	1	eP	Pn	23 14 10.1	-1.5
CAW	Cannon Point	3.54	34	P	Pn	23 14 13.6	-2.0

JMA 04 23:19:39.4±0.3, 23.88N×122.46E, h36^{km}, M2.7

TAP 04 23:19:38.8, 23.79N×122.32E, h1^{km}, ML3.2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.92	43	P	Pg	23 19 53.9	-3.3
YOJ				eS	Sg	23 20 03.9	-5.5
HATJ	Hateruma jima	1.39	79	P	Pb	23 20 00.9	-4.3
HATJ				eS	Sb	23 20 16.5	-6.7
IRIF	Iriomote-Funau	1.40	67	P	Pb	23 20 01.0	-4.4
IRIF				eS	Sb	23 20 18.0	-5.6
JKRS	Kuro-shima	1.61	74	P	Pn	23 20 04.3	-4.2
JKRS				eS	Sb	23 20 22.3	-7.4
JIJ	Ishigaki jima	1.76	71	P	Pn	23 20 05.9	-4.8
JIJ				eS	Sn	23 20 26.8	-7.2
JTJ	Tarama	2.33	68	P	Pn	23 20 14.2	-4.7
JTJ				eS	Sn	23 20 39.9	-8.7

JMA 04 23:28:33.9±0.6, 23.86N×122.47E, h26^{km}, M2.9

TAP 04 23:28:34.0, 23.75N×122.42E, h6^{km}±1^{km}, ML3.4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.89	37	P	Pb	23 28 48.5	-2.9
YOJ				eS	Sb	23 28 58.5	-4.8
HATJ	Hateruma jima	1.30	76	P	Pb	23 28 55.4	-3.1
HATJ				eS	Sb	23 29 12.2	-3.1
IRIF	Iriomote-Funau	1.33	64	P	Pb	23 28 55.2	-3.7
IRIF				eS	Sb	23 29 12.4	-3.7
JKRS	Kuro-shima	1.53	71	P	Pn	23 29 00.4	-1.6
JKRS				eS	Sb	23 29 17.3	-4.6
JIJ	Ishigaki jima	1.69	68	P	Pn	23 29 01.1	-3.1
JIJ				eS	Sn	23 29 21.6	-4.7
JTJ	Tarama	2.27	66	P	Pn	23 29 09.1	-3.4
JTJ				eS	Sn	23 29 37.6	-3.4

JMA 04 23:31:02.4±0.4, 23.85N×122.57E, h16^{km}, M2.4

TAP 04 23:31:00.3, 23.73N×122.48E, h4^{km}±1^{km}, ML3.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.88	34	P	Pb	23 31 16.4	-1.3
YOJ				eS	Sg	23 31 25.9	-3.6
HATJ	Hateruma jima	1.26	75	eS	Sb	23 31 38.6	-2.0
IRIF	Iriomote-Funau	1.29	62	P	Pb	23 31 23.5	-1.3
IRIF				eS	Sb	23 31 39.7	-1.9
JKRS	Kuro-shima	1.49	70	eS	Sb	23 31 44.8	-2.5
JIJ	Ishigaki jima	1.65	67	P	Pn	23 31 28.5	-1.7
JIJ				eS	Sb	23 31 48.9	-3.0
JTJ	Tarama	2.22	65	P	Pn	23 31 38.4	-0.1
JTJ				eS	Sn	23 32 05.1	-1.6

CSEM 04 23:36:40.1±0.7, 37.57N×25.33W, ML3.1, Error ellipse: s-maj=15.2km s-min=7.0km az=164.0, After PDA

PDA 04 23:36:40.1±1.1, 37.57N×25.33W, MD2.9, ML3.1, Error ellipse: s-maj=2.7km s-min=1.8km az=70.0

SVSA 04 23:36:40.1±1.1, 37.57N×25.33W, MD2.9, ML3.1, Error ellipse: s-maj=2.7km s-min=1.8km az=70.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRA1	Furnas	0.17	352	iP	Pg	23 36 43.8	+0.3
VIF	Vila Franca	0.20	332	iP	Pg	23 36 43.9	-0.1
VIF				iS	Sg	23 36 47.0	+0.4
	4μm,0.2s						
PRCH	Ribeira Ch	0.20	322	iP	Pg	23 36 43.9	-0.2
PRCH				iS	Sg	23 36 47.0	+0.3
	4μm,0.4s						
PCNG	Congro	0.20	344	iP	Pg	23 36 44.3	+0.2
PCNG				iS	Sg	23 36 47.4	+0.6
	3μm,0.1s						
MIRA	Miradouro	0.22	10	iP	Pg	23 36 44.5	+0.1
MIRA				iS	Sg	23 36 47.9	+0.6
LFA	Lagoa do Fogo	0.24	328	iP	Pg	23 36 44.7	-0.1
BART	Pico Bartolome	0.24	31	iP	Pg	23 36 44.4	-0.5
BART				iS	Sg	23 36 48.3	+0.2
	3μm,0.3s						
MESC	Monte Escuro	0.24	337	iP	Pg	23 36 44.6	-0.3
MESC				iS	Sg	23 36 48.5	+0.4
CML	Cha da Macela	0.26	319	iP	Pg	23 36 45.1	-0.3
CML				eS	Sg	23 36 48.8	-0.1
PFAD	Fenais da Ajud	0.27	0	iP	Pg	23 36 45.3	-0.1
PFAD				eS	Sg	23 36 49.1	+0.1
PMAT	Coroa da Mata	0.27	335	iP	Pg	23 36 44.9	-0.6
PMAT				iS	Sg	23 36 48.8	-0.3
	703nm,0.1s						
PVER	Pico Vermelho	0.27	326	iP	Pg	23 36 45.0	-0.5
PVER				iS	Sg	23 36 48.8	-0.3
PDA	Ponta Delgada	0.32	303	iP	Pg	23 36 45.9	-0.6
PDA				iS	Sg	23 36 51.0	+0.3
FAC	Faja de Cima	0.33	308	iP	Pg	23 36 46.4	-0.2
PSET	Sete Cidades	0.40	309	iP	Pg	23 36 47.6	-0.5
PSET				eS	Sg	23 36 53.3	-0.2
	2μm,0.4s						
PSAN	Santo Antonio	0.42	311	iP	Pg	23 36 47.9	-0.6
PFET	Feteiras	0.44	304	iP	Pg	23 36 48.1	-0.8
SET2	Ginetes	0.47	306	iP	Pg	23 36 48.6	-0.8
SET4	Mosteiros	0.48	309	iP	Pg	23 36 48.7	-1.0
PSMN	Pico do Norte,	0.60	160	iP	Pg	23 36 51.1	-1.1
PSMN				iS	Sg	23 36 59.2	-1.0
PFAV	Pico das Favas	1.79	310	eP	Pn	23 37 08.3	-4.2
PFAV				eS	Sn	23 37 29.1	-7.2
	28nm,0.2s						
RIB2	Ribeirinha	1.82	308	eP	Pn	23 37 08.8	-4.2
RIB2				eS	Sn	23 37 30.0	-7.1
	36nm,0.1s						
ADH	Angra Heroismo	1.85	306	eS	Sn	23 37 31.0	-6.9
PVNV	Vila Nova	1.87	310	eP	Pn	23 37 09.2	-4.4
PVNV				eS	Sn	23 37 30.9	-7.4
	38nm,0.3s						
PPAD	Pico dos Padre	1.91	307	eS	Sn	23 37 32.4	-7.0
	16nm,0.2s						
ASBA	Santa Barbara	1.95	307	eP	Pn	23 37 10.6	-4.2
ASBA				eS	Sn	23 37 33.7	-6.6
	39nm,0.2s						
PSBA	Serra de Santa	1.98	308	eP	Pn	23 37 10.5	-4.7
PSBA				eS	Sn	23 37 33.3	-7.7
	48nm,0.2s						
PMAN	Manadas	2.42	297	eP	Pn	23 37 17.3	-4.3
PMAN				eS	Sn	23 37 43.1	-9.3
	14nm,0.2s						
ROSA	Rosais	2.57	297	erx	Pn	23 37 19.3	-4.3
PICO	Pico	2.62	292	iP	Pn	23 37 20.1	-4.2
PICO				eS	Sn	23 37 47.2	-10
HOR	Horta	2.78	291	erx	Sn	23 37 48.8	-13
CALA	Caldeira	2.85	292	erx	Pn	23 37 22.4	-5.2
PCED	Cedros	2.86	293	erx	Sn	23 37 47.2	-16

NEIC 05 00:45:52.0, 15.83N×94.29W, h39^{km}, MD4.1(MEX), After MEX.

MEX 05 00:45:52.0±0.8, 15.82N×94.29W, h35^{km}±11^{km}, MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.75	269	eP	P	00 46 18.0	-2.4
HUIG				eS	S	00 46 38.7	-3.1
SCX	San Cristobal	1.83	60	eP	P	00 46 21.0	-0.6
SCX				eS	S	00 46 41.5	-2.3
SCX	San Cristobal	1.83	60	eP	P	00 46 20.0	-1.6
SCX				eS	S	00 46 41.5	-2.3
CCIG	Comitan	2.12	77	iP	P	00 46 23.8	-1.9
CCIG				iS	S	00 46 46.7	-4.4
CCIG	Comitan	2.12	77	iP	P	00 46 23.8	-1.9
CCIG				iS	S	00 46 47.4	-3.7
OXX	Oaxaca	2.66	299	eP	P	00 46 30.0	-3.4
OXX				eS	S	00 47 00.0	-4.7
VHO	Vista Hermosa	2.66	298	eP	P	00 46 32.1	-1.3
VHO				iS	S	00 46 60.0	-4.8
VHO	Vista Hermosa	2.66	298	eP	P	00 46 32.1	-1.3
VHO				iS	S	00 47 01.0	-3.8
PPM	Popocatepetl	5.25	309	eP	P	00 47 08.0	-2.2

NIED 05 01:16:00, 36.80N×142.00E, h29^{km}, Mw4.9 Best double couple: $M_0$2.19×10^{16} NP1:ϕ_s346°, δ73°, λ67°. NP2:ϕ_s220°, δ28°, λ141°.

BJI 05 01:16:36.7, 36.74N×141.64E, h13^{km}, mB4.9, mb4.8, Ms4.6, Msz4.4

JMA 05 01:16:37.0±0.4, 36.74N×142.05E, h36^{km}, M5.0

JMA Felt II J1.

NEIC 05 01:16:39.3±0.3, 36.68N×141.79E, mb4.8/31, MS4.1/2, MW4.8(NIED), Error ellipse: s-maj=8.7km s-min=5.4km az=168.0

NEIC Recorded [2 JMA] in Fukushima and [1 JMA] in Ibaraki, Miyagi and Tochigi Prefectures.

MOS 05 01:16:39.5±1.1, 36.73N×141.76E, h33^{km}, mb5.0/32, MS4.3/10, Error ellipse: s-maj=9.8km s-min=5.9km az=113.1

ISC 05 01:16:40.9±0.7, 36.84N±0.05×141.72E±0.05, h40^{km}±4^{km}, h33^{km}±3.7^{km}:pP-P, n158, σ1^{s}09/175, mb4.8/54, MS4.4/15, 6C-11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.78	290	P	P	01 16 55.7	+0.2
JFK	Kawauchi	0.86	308	⇓P	P	01 16 56.4	-0.2
JHO	Hitachi	0.95	256	P	P	01 16 57.2	-0.7
JHO				S	S	01 17 12.8	+2.2
JMM	Marumori	1.26	324	P	P	01 17 02.5	+0.2
JYT	Yasato	1.37	244	P	P	01 17 03.5	-0.5
JIO	Ouri	1.64	350	⇓P	P	01 17 07.5	-0.2
JAG	Ashikaga	1.87	258	P	P	01 17 11.2	+0.2
BSO3	Boso 3	2.26	206	P	P	01 17 15.2	-1.4
MAJO	Matsushiro	2.84	265	eP	P	01 17 26.1	+1.2
MAT	Matsushiro	2.84	265	eP	P	01 17 26.0	+1.1
MAT				eS	S	01 18 01.0	+2.8
MAT	Matsushiro	2.84	265	P	P	01 17 25.7	+0.8
MAT				S	S	01 18 00.7	+2.5
JNG	Nsakai	2.94	263	⇓P	P	01 17 27.4	+1.0
JIE	Ise	4.76	241	P	P	01 17 52.4	+0.3
YUK	Yuzh-Kuril'sk	7.85	22	P	P	01 18 36.0	+0.7
JKI	Kunimi	8.90	252	P	P	01 18 51.2	+1.4
YSS	Yuzh-Sakhalins	10.13	4	⇑iP	P	01 19 05.0	-1.8
YSS				eS	S	01 20 57.4	-2.9
YSS				MLR	MLR		
	comp=Z,1μm,19.0s						
YSS				MLR	MLR		
	comp=N,2μm,16.0s						
YSS				MLR	MLR		
	comp=E,1μm,19.0s						
YSS	Yuzh-Sakhalins	10.13	4	eP	P	01 19 04.9	-1.9
	comp=E,19nm,0.6s						
KS15	Wonju Array Si	11.06	277	eP	P	01 19 15.8	-3.7
CN2	Changchun	14.22	304	eP	P	01 20 01.5	+0.1
CN2				eXP		01 20 08.9	
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,800nm,15.0s						
CN2				LR	LR		
	comp=E,1μm,15.0s						
CN2				LR	LR		
	comp=Z,1μm,15.0s						
KLR	Kul'dur	14.35	333	eP	P	01 20 05.0	+1.9
KLR				MLR	MLR		
	comp=Z,1μm,14.0s						
SNY	Shenyang	14.89	295	⇑P	P	01 20 07.0	-3.2
SNY				AP		01 20 11.7	
SNY				XP		01 20 15.9	
SNY				AMB	AMB		
	comp=Z,10.0nm,0.4s						
SNY				LR	LR		
	comp=N,960nm,13.8s						
SNY				LR	LR		
	comp=E,2μm,16.3s						
SNY				LR	LR		
	comp=Z,2μm,15.3s						
NJ2	Nanjing	19.44	263	eP	P	01 21 04.3	-2.4
NJ2				AP		01 21 10.4	
NJ2				XP		01 21 14.3	
NJ2				PP	PP	01 21 24.1	-0.6
NJ2				S	S	01 24 35.0	-3.5
NJ2				XS		01 24 42.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,230nm,4.2s						
NJ2				LR	LR		
	comp=N,1μm,15.9s						
NJ2				LR	LR		

	comp=E,3µm,15.6s						
NJ2				LR	LR		
	comp=Z,2µm,14.8s						
TIA	**Tai'an**	**19.77**	**276**	*e*P	**P**	**01 21 07.6**	**-2.6**
BJI	**Beijing**	**20.24**	**287**	P	**P**	**01 21 14.8**	**-0.5**
BJI				AP		01 21 20.7	
BJI				XP		01 21 23.3	
BJI				AMB	AMB		
	comp=Z,12nm,0.9s						
BJI				AMB	AMB		
	comp=Z,148nm,4.1s						
BJI				LR	LR		
	comp=N,615nm,14.6s,MS4.3						
BJI				LR	LR		
	comp=E,667nm,14.0s,MS4.3						
BJI				LR	LR		
	comp=Z,539nm,21.9s						
BJI	**Beijing**	**20.24**	**287**	P	**P**	**01 21 14.8**	**-0.5**
BJI				*SP		01 21 23.3	
BJI				*SS		01 25 30.1	
BJI				pmax	pmax		
	comp=Z,12nm,0.9s						
BJI				MLR	MLR		
	comp=Z,540nm,21.9s,MS3.9						
BJI	**Beijing**	**20.24**	**287**	P	**P**	**01 21 14.8**	**-0.5**
	comp=Z,12nm,0.9s						
BJI				pP		01 21 20.7	
BJI				sP		01 21 23.3	
BJI				S	**S**	**01 25 12.2**	**+17**
BJI				sS		01 25 30.1	
BJI				LR	LR		
	comp=Z,540nm,21.9s,MS3.9						
CLNS	**Chul'man**	**22.96**	**336**	*e*P	**P**	**01 21 40.7**	**-1.6**
CLNS				*e**PP		01 21 45.5	
CLNS				*e*		01 22 08.9	
CLNS				*e*S	**S**	**01 25 50.9**	**+5.4**
CLNS				*e*SS	SS	01 26 41.7	+10
CLNS				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.2						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.9s						
CLNS				smax			
	comp=N,14nm,1.2s						
CLNS				smax			
	comp=Z,4.0nm,1.4s						
CLNS				smax			
	comp=E,8.0nm,1.3s						
CLNS				MLR	MLR		
	comp=Z,700nm,17.0s,MS4.2						
CLNS				MLR	MLR		
	comp=N,600nm,19.0s,MS4.1						
CLNS				MLR	MLR		
	comp=E,100nm,16.0s,MS4.1						
MA2	**Magadan**	**23.49**	**12**	*e*P	**P**	**01 21 48.5**	**+1.0**
MA2				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.5						
MA2	**Magadan**	**23.49**	**12**	*e*P	**P**	**01 21 48.5**	**+1.1**
	comp=Z,28nm,1.4s,mb4.5						
WHN	**Wuhan**	**23.58**	**263**	⇓P	**P**	**01 21 47.5**	**-1.1**
WHN				S	**S**	**01 26 05.0**	**+8.4**
WHN				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.2						
WHN				LR	LR		
	comp=Z,3µm,14.3s,MS4.8						
HHC	**Hu-ho-hao-te**	**23.77**	**289**	*e*P	**P**	**01 21 48.6**	**-1.7**
HHC				AP		01 21 54.7	
HHC				XP		01 21 57.1	
HHC				PP	PP	01 22 19.9	-4.3
HHC				PCP	PcP	01 25 34.1	-0.8
HHC				S	**S**	**01 25 58.1**	**-1.7**
HHC				XS		01 26 08.9	
HHC				SS	SS	01 26 46.0	-4.8
HHC				SCP		01 29 12.3	
HHC				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.0						
HHC				AMB	AMB		
	comp=Z,86nm,4.9s						
HHC				LR	LR		
	comp=N,622nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=E,533nm,14.4s,MS4.3						
HHC				LR	LR		
	comp=Z,509nm,14.4s,MS4.1						
BTO	**Baotou**	**24.94**	**288**	*e*P	**P**	**01 22 00.7**	**-1.1**
BTO				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.1						
BTO				LR	LR		
	comp=N,229nm,4.9s						
BTO				LR	LR		
	comp=E,479nm,14.9s						
YAK	**Yakutsk**	**26.31**	**347**	*e*P	**P**	**01 22 13.4**	**-0.9**
YAK				*e*		01 23 00.3	
YAK				*e*		01 25 34.6	
YAK				*e*S	**S**	**01 26 41.6**	**-0.6**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
YAK				pmax	pmax		
	comp=N,5.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax			
	comp=N,4.0nm,1.0s						
YAK				smax			
	comp=E,7.0nm,1.0s						
XAN	**Xi'an**	**26.80**	**274**	P	**P**	**01 22 18.0**	**-1.1**
XAN				AP	pP	01 22 27.4	-2.5
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
XAN				LR	LR		
	comp=N,389nm,14.5s,MS4.3						
XAN				LR	LR		
	comp=E,465nm,12.3s,MS4.3						
XAN				LR	LR		
	comp=Z,643nm,13.0s,MS4.4						
SEY	**Seymchan**	**26.93**	**11**	*e*P	**P**	**01 22 21.6**	**+1.6**
SEY				*e*		01 27 02.4	
SEY				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.0						
SEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
ULN	**Ulaanbaatar**	**27.67**	**304**	*e*P	**P**	**01 22 25.7**	**-1.2**
ULN				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.0						
ULN	**Ulaanbaatar**	**27.67**	**304**	*e*P	**P**	**01 22 25.7**	**-1.2**
	comp=Z,41nm,1.1s,mb5.0						
BOD	**Bodaibo**	**27.82**	**328**	*e*P	**P**	**01 22 27.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.6						
LZH	**Lanzhou**	**30.34**	**280**	⇓P	**P**	**01 22 49.8**	**-1.1**
LZH				AP	pP	01 22 55.7	-6.2
LZH				XP	sP	01 22 58.9	-8.2
LZH				PP	PP	01 23 49.5	-1.4
LZH				AMB	AMB		
	comp=Z,42nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,112nm,5.7s						
LZH				LR	LR		
	comp=E,765nm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,17.1s,MS4.6						
LZH	**Lanzhou**	**30.34**	**280**	⇓P	**P**	**01 22 49.8**	**-1.1**
LZH				*SP	sP	01 22 58.9	-8.2
LZH						01 23 49.5	
LZH				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.0						
LZH				MLR	MLR		
	comp=Z,1µm,17.1s,MS4.6						
LZH	**Lanzhou**	**30.34**	**280**	⇓P	**P**	**01 22 49.8**	**-1.1**
	comp=Z,42nm,1.3s,mb5.0						
LZH				pP	pP	01 22 55.7	-6.2
LZH				sP	sP	01 22 58.9	-8.2
LZH				PP	PP	01 23 49.5	-1.4
LZH				LR	LR		
	comp=Z,1µm,17.1s,MS4.6						
ZAK	**Zakamensk**	**30.58**	**309**	⇑*i*P	**P**	**01 22 52.8**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
TLY	**Talaya**	**30.64**	**311**	P	**P**	**01 22 53.0**	**-0.4**
	comp=Z,58nm,0.8s,mb5.5,SNR=11						
TLY	**Talaya**	**30.64**	**311**	*e*P	**P**	**01 22 53.3**	**-0.1**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
TLY				MLR	MLR		
	comp=Z,562nm,16.0s,MS4.3						
TLY	**Talaya**	**30.64**	**311**	*e*P	**P**	**01 22 52.8**	**-0.6**
	comp=Z,15nm,1.2s,mb4.7						
GYA	**Guiyang**	**31.43**	**261**	⇓*i*P	**P**	**01 22 59.3**	**-1.3**
GYA				AP	pP	01 23 05.7	-6.0
GYA				XP	sP	01 23 08.4	-8.5
GYA				S	**S**	**01 28 03.6**	**-0.7**
GYA				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.1						
GYA				AMB	AMB		
	comp=Z,140nm,6.3s						
GYA				LR	LR		
	comp=N,760nm,21.5s,MS4.4						
GYA				LR	LR		
	comp=E,470nm,22.7s,MS4.4						
GYA				LR	LR		
	comp=Z,690nm,20.0s,MS4.3						
MOY	**Mondy**	**32.25**	**310**	*e*P	**P**	**01 23 07.9**	**+0.4**
MOY				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.4						
GTA	**Gaotai**	**32.86**	**287**	*e*P	**P**	**01 23 13.3**	**+0.4**
GTA				AP	pP	01 23 20.9	-3.2
GTA				XP	sP	01 23 24.2	-5.0
GTA				PCP	PcP	01 25 57.6	+0.5
GTA				S	**S**	**01 28 30.3**	**+3.8**
GTA				XS		01 28 41.7	
GTA				SCP		01 29 37.9	
GTA				SS	SS	01 30 30.0	+3.2
GTA				SCS	ScS	01 33 38.6	+3.4
GTA				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.9						
GTA				AMB	AMB		
	comp=Z,159nm,5.7s						
GTA				LR	LR		
	comp=N,340nm,14.4s,MS4.3						
GTA				LR	LR		
	comp=E,333nm,14.1s,MS4.3						
GTA				LR	LR		
	comp=Z,430nm,16.0s,MS4.2						
QIZ	**Qiongzhong**	**33.08**	**246**	P	**P**	**01 23 14.5**	**-0.5**
QIZ				S	**S**	**01 28 31.2**	**+1.2**
QIZ				LR	LR		
	comp=N,402nm,13.0s,MS4.4						
QIZ				LR	LR		
	comp=E,249nm,13.0s,MS4.4						
QIZ				LR	LR		
	comp=Z,524nm,15.5s,MS4.3						
KMI	**Kunming**	**35.18**	**262**	⇑P	**P**	**01 23 31.7**	**-1.3**
KMI				AP	pP	01 23 40.9	-3.3
KMI				XP	sP	01 23 44.7	-4.7
KMI				S	**S**	**01 29 05.9**	**+3.4**
KMI				AMB	AMB		
	comp=Z,31nm,1.1s,mb5.2						
KMI				AMB	AMB		
	comp=Z,114nm,3.1s						
KMI				LR	LR		
	comp=N,488nm,18.6s,MS4.5						
KMI				LR	LR		
	comp=E,645nm,15.3s,MS4.5						
KMI				LR	LR		
	comp=Z,545nm,18.9s,MS4.3						
KMI	**Kunming**	**35.18**	**262**	⇑P	**P**	**01 23 31.7**	**-1.3**
	comp=Z,31nm,1.1s,mb5.2						
KMI				pP	pP	01 23 40.9	-3.3
KMI				sP	sP	01 23 44.7	-4.7
KMI				S	**S**	**01 29 05.9**	**+3.4**
KMI				sS		01 29 28.8	
KMI				SS	SS	01 31 41.1	+21
KMI				LR	LR		
	comp=Z,550nm,18.9s,MS4.3						
TIXI	**Tiksi**	**35.51**	**353**	*e*P	**P**	**01 23 34.9**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,352nm,18.0s,MS4.2						
WMQ	**Urumqi**	**41.15**	**297**	*e*P	**P**	**01 24 23.3**	**+0.6**
WMQ				XP	sP	01 24 32.3	-6.7
WMQ				PP	PP	01 26 02.0	+1.2
WMQ				S	**S**	**01 30 36.0**	**+3.1**
WMQ				SS	SS	01 33 34.0	+1.9
WMQ				AMB	AMB		
	comp=Z,28nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,554nm,18.0s,MS4.5						
WMQ				LR	LR		
	comp=E,327nm,20.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,351nm,18.0s,MS4.3						
LSA	**Lhasa**	**42.47**	**276**	P	**P**	**01 24 35.0**	**+1.3**
NVS	**Novosibirsk**	**43.15**	**314**	⇑*i*P	**P**	**01 24 38.5**	**-0.4**
NVS				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,19nm,1.3s						
MKAR	**Makanchi Array**	**44.43**	**302**	*i* P	**P**	**01 24 49.5**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,24nm,1.1s						
KURK	**Kurchatov**	**46.25**	**308**	P	**P**	**01 25 03.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KURK	**Kurchatov**	**46.25**	**308**	*e*P	**P**	**01 25 03.3**	**-0.5**
	comp=Z,17nm,0.6s,mb5.1						
JIRN	**Jiri**	**47.28**	**276**	*e*P	**P**	**01 25 13.3**	**+1.1**
	comp=Z,18nm,0.4s,mb5.3						
PKI	**Pulchoki**	**47.94**	**276**	*e*P	**P**	**01 25 17.4**	**0.0**
KKN	**Kakani**	**47.95**	**276**	*e*P	**P**	**01 25 16.9**	**-0.6**
	comp=Z,59nm,0.8s,mb5.7						
DMN	**Daman**	**48.17**	**276**	*e*P	**P**	**01 25 18.9**	**-0.3**
GKN	**Gorkha**	**48.37**	**277**	*e*P	**P**	**01 25 20.2**	**-0.5**
	comp=Z,102nm,0.8s,mb5.9						
MCK	**McKinley**	**48.66**	**34**	*e*P	**P**	**01 25 21.4**	**-1.0**
MCK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
MCK	**McKinley**	**48.66**	**34**	*e*P	**P**	**01 25 21.4**	**-1.0**
	comp=Z,4.3nm,1.2s,mb4.3						
COLA	**College**	**49.11**	**32**	P	**P**	**01 25 22.5**	**-3.4**
KOLN	**Koldanda**	**49.30**	**277**	*e*P	**P**	**01 25 27.8**	**-0.1**
	comp=Z,142nm,1.3s,mb5.8						
EYAK	**Cordova Ski Ar**	**50.36**	**38**	*e*P	**P**	**01 25 34.5**	**-1.0**
CHKZ	**Chkalovo**	**50.62**	**313**	P	**P**	**01 25 36.7**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
CHKZ	**Chkalovo**	**50.62**	**313**	*e*P	**P**	**01 25 36.4**	**-1.3**
	comp=Z,18nm,1.3s,mb4.8						
KSH	**Kashi**	**50.71**	**294**	*e*P	**P**	**01 25 40.4**	**+1.9**
KSH				*e*AP	pP	01 25 46.9	-3.1
KSH				*e*XP	sP	01 25 49.0	-5.8
KSH				*e*PCP	PcP	01 26 58.0	+2.5
KSH				*e*PP	PP	01 27 36.8	+1.3
KSH				*e*S	**S**	**01 32 53.9**	**+4.4**
KSH				*e*XS		01 33 09.3	
KSH				*e*SCS	ScS	01 35 24.9	+2.2
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
KSH				AMB	AMB		
	comp=Z,60nm,4.4s						
KSH				LR	LR		
	comp=N,360nm,5.3s						
KSH				LR	LR		
	comp=E,480nm,5.2s						
AAK	**Ala-Archa**	**50.80**	**299**	*e*P	**P**	**01 25 36.9**	**-2.2**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**50.80**	**299**	*e*P	**P**	**01 25 36.9**	**-2.3**
	comp=Z,8.8nm,1.1s,mb4.6						
BVA0	**Borovoye Array**	**50.88**	**312**	*i* P	**P**	**01 25 39.5**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
INK	**Inuvik**	**54.45**	**27**	*e*P	**P**	**01 26 05.2**	**-0.8**
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	**Inuvik**	**54.45**	**27**	*e*P	**P**	**01 26 05.2**	**-0.8**
	comp=Z,6.5nm,0.9s,mb4.6						
SVE	**Sverdlovsk**	**55.46**	**319**	*e*P	**P**	**01 26 11.0**	**-2.4**
ARU	**Arti**	**56.67**	**319**	P	**P**	**01 26 21.7**	**-0.5**
	comp=Z,85nm,1.2s,mb5.7,SNR=9.4						
ARU	**Arti**	**56.67**	**319**	⇓*i*P	**P**	**01 26 13.7**	**-8.5**
ARU				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**56.89**	**188**	*e*P	**P**	**01 26 20.4**	**-3.9**
WRAB				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**56.89**	**188**	*e*P	**P**	**01 26 20.4**	**-3.8**
	comp=Z,18nm,1.0s,mb5.0						
WB2	**Warramunga Arr**	**56.90**	**188**	*e*P	**P**	**01 26 19.5**	**-4.8**
HYB	**Hyderabad**	**58.45**	**269**	*e*P	**P**	**01 26 34.5**	**-0.7**
HYB	**Hyderabad**	**58.45**	**269**	*i* P	**P**	**01 26 34.5**	**-0.7**
ASPA	**Alice Springs**	**60.63**	**188**	*e*P	**P**	**01 26 47.4**	**-2.8**
POO	**Poona**	**61.62**	**273**	⇓*i*P	**P**	**01 26 55.5**	**-1.4**
	comp=Z,25nm,1.0s,mb5.3						
KEV	**Kevo**	**63.71**	**339**	*e*p	**P**	**01 27 08.0**	**-2.0**
OBN	**Obninsk**	**68.40**	**323**	*d* *i*P	**P**	**01 27 40.2**	**+0.2**
OBN				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.2						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.6						
KAF	**Kangasniemi**	**68.59**	**333**	*e*p	**P**	**01 27 39.8**	**-1.3**
	comp=Z,5.2nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**68.59**	**333**	*e*P	**P**	**01 27 39.8**	**-1.3**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
GOF	**Gofitskoye**	**70.41**	**312**	*e*P	**P**	**01 27 49.5**	**-3.0**
KIV	**Kislovodsk**	**71.22**	**311**	*c* *i*P	**P**	**01 27 57.7**	**+0.2**
KIV				*e*	pP	01 28 08.0	-1.5
KIV				*e*		01 28 15.8	
KIV				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.5						
KIV	**Kislovodsk**	**71.22**	**311**	*e*P	**P**	**01 27 56.6**	**-0.9**
	comp=Z,32nm,1.1s,mb5.2						
BMO	**Blue Mountains**	**71.88**	**47**	*e*P	**P**	**01 28 00.4**	**-0.9**
CMB	**Columbia Colle**	**73.78**	**55**	*e*P	**P**	**01 28 11.9**	**-0.8**
CMB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CMB	**Columbia Colle**	**73.78**	**55**	*e*P	**P**	**01 28 11.9**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.1						
HLID	**Hailey**	**74.32**	**47**	*e*P	**P**	**01 28 16.5**	**+0.8**
	comp=Z,6.4nm,1.5s,mb4.3						
NB2	**NORSAR Subarra**	**74.46**	**337**	P	**P**	**01 28 16.1**	**0.0**
	comp=Z,12nm,1.2s,mb4.7,baz=41,slow=5.8						
NB2	**NORSAR Subarra**	**74.46**	**337**	P	**P**	**01 28 16.1**	**0.0**
NB2				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
MNV	**Mina**	**75.00**	**53**	P	**P**	**01 28 19.9**	**+0.2**
SUW	**Suwalki**	**75.19**	**328**	*e*P	**P**	**01 28 20.7**	**+0.3**
	comp=Z,15nm,0.5s,mb5.2						
MALT	**Malatya**	**77.09**	**308**	*e*P	**P**	**01 28 30.7**	**-0.9**
BW06	**Boulder Array**	**77.63**	**46**	*e*P	**P**	**01 28 34.4**	**-0.1**
MVU	**Marysvale**	**78.70**	**50**	*e*P	**P**	**01 28 41.0**	**+0.5**
	comp=Z,5.8nm,1.2s,mb4.4						
MVU				*e*		01 28 48.1	
MSU	**Marysvale**	**78.72**	**50**	*e*P	**P**	**01 28 40.5**	**-0.1**
NEN	**Nelson**	**78.78**	**54**	*e*P	**P**	**01 28 41.2**	**+0.2**
KOLS	**Kolonicke sedl**	**79.12**	**324**	*e*P	**P**	**01 28 42.6**	**0.0**
KOLS				*e*	pP	01 28 56.1	+1.4
OJC	**Ojcow**	**79.34**	**326**	*e*P	**P**	**01 28 44.0**	**+0.3**
SRU	**San Rafael**	**79.35**	**49**	*e*P	**P**	**01 28 43.9**	**-0.1**
OKC	**Ostrava-Krasne**	**80.35**	**327**	*e*P	**P**	**01 28 50.5**	**+1.4**
KSP	**Ksiaz**	**80.40**	**328**	*e*P	**P**	**01 28 50.4**	**+1.1**
PV10	**Paradox Valley**	**80.72**	**49**	*e*P	**P**	**01 28 52.2**	**+0.9**
DPC	**Dobruska-Polom**	**80.75**	**328**	*e*P	**P**	**01 28 51.3**	**0.0**
RAYN	**Ar Rayn**	**80.96**	**292**	P	**P**	**01 28 53.1**	**+0.2**
	comp=Z,45nm,0.9s,mb5.4,SNR=9.1						
VYHS	**Vyhne**	**81.03**	**326**	*e*P	**P**	**01 28 54.1**	**+1.4**
VYHS				*e*	pP	01 29 07.0	+2.1
PV01	**Paradox Valley**	**81.16**	**49**	*e*P	**P**	**01 28 53.3**	**-0.4**
BRG	**Berggiesshubel**	**81.34**	**330**	*e*P	**P**	**01 28 55.8**	**+1.5**
BRG				*e*	pP	01 29 08.8	+2.3
BRG				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
BRG	**Berggiesshubel**	**81.34**	**330**	*e*P	**P**	**01 28 55.8**	**+1.5**
	comp=Z,15nm,1.5s,mb4.7						
BRG				*e*	pP	01 29 08.8	+2.3
PVCC	**Panska Ves**	**81.35**	**329**	*e*P	**P**	**01 28 55.9**	**+1.5**
CLL	**Collm**	**81.39**	**330**	*e*P	**P**	**01 28 55.0**	**+0.4**
CLL				*e*	pP	01 29 05.0	-1.7
CLL	**Collm**	**81.39**	**330**	P	**P**	**01 28 55.0**	**+0.4**
CLL				*e**SP	sP	01 29 05.0	-6.2
SMOL	**Smolenice**	**81.64**	**326**	*e*P	**P**	**01 28 57.9**	**+2.0**
SRO	**Srobarova**	**81.76**	**325**	*e*P	**P**	**01 28 58.2**	**+1.6**
PRU	**Pruhonice**	**81.78**	**329**	*e*P	**P**	**01 28 57.8**	**+1.2**
NKC	**Novy Kostel**	**82.44**	**330**	*e*P	**P**	**01 29 01.0**	**+1.0**
KHC	**Kasperske Hory**	**82.84**	**329**	*e*P	**P**	**01 29 02.5**	**+0.4**
SDCO	**Great Sand Dun**	**83.24**	**47**	*e*P	**P**	**01 29 05.2**	**+0.8**
	comp=Z,4.7nm,1.2s,mb4.4						
SDCO				*e*		01 29 11.6	
GRA1	**Grafenberg Arr**	**83.36**	**330**	*e*P	**P**	**01 29 05.8**	**+1.1**
	comp=Z,15nm,1.4s,mb4.8						
GRA1				*e*pP	pP	01 29 18.7	+1.8
GRF	**Grafenberg Arr**	**83.36**	**330**	*e*P	**P**	**01 29 05.8**	**+1.1**
GRF				*e**PP	pP	01 29 18.7	+1.8
GRF				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
GRF	**Grafenberg Arr**	**83.36**	**330**	*e*P	**P**	**01 29 05.8**	**+1.1**
GRF				*e**PP	pP	01 29 18.7	+1.8
GRF				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.8						
GRF	**Grafenberg Arr**	**83.36**	**330**	*e*P	**P**	**01 29 05.8**	**+1.1**
	comp=Z,15nm,1.4s,mb4.8						
GRF				*e*pP	pP	01 29 18.7	+1.8
ANMO	**Albuquerque**	**84.52**	**50**	*e*P	**P**	**01 29 12.1**	**+1.2**
ANMO				*e**PP	pP	01 29 18.2	-4.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANMO	**Albuquerque**	**84.52**	**50**	*e*P	**P**	**01 29 12.1**	**+1.2**
	comp=Z,5.9nm,1.0s,mb4.7						
ANMO				*e*pP	pP	01 29 18.2	-5.0
BAIF	**Baives**	**85.69**	**334**	*e*P	**P**	**01 29 17.1**	**+0.8**
	comp=Z,4.1nm,0.7s,mb4.5						
BAIF	**Baives**	**85.69**	**334**	*e*P	**P**	**01 29 17.1**	**+0.8**
BAIF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
CDF	**Champ du Feu**	**85.93**	**332**	*e*P	**P**	**01 29 18.1**	**+0.6**
	comp=Z,10nm,0.9s,mb4.7						
CDF	**Champ du Feu**	**85.93**	**332**	*e*P	**P**	**01 29 18.1**	**+0.6**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
HAU	**Haudompre**	**86.62**	**332**	*e*P	**P**	**01 29 21.8**	**+0.9**
HAU				*e*R			
	comp=Z,230nm,17.2s						
MEZF	**Maizieres J'vi**	**86.69**	**333**	*e*P	**P**	**01 29 21.6**	**+0.4**
MNTX	**Cornudas Mount**	**87.36**	**52**	P	**P**	**01 29 25.1**	**+0.2**
SSF	**Saint Saulge**	**88.47**	**333**	*e*P	**P**	**01 29 29.7**	**-0.1**
LPL	**La Plagne**	**88.53**	**330**	*e*P	**P**	**01 29 30.9**	**+0.8**
	comp=Z,6.2nm,0.9s,mb4.6						
LPL	**La Plagne**	**88.53**	**330**	*e*P	**P**	**01 29 30.9**	**+0.8**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
LPG	**La Plagne**	**88.53**	**330**	*e*P	**P**	**01 29 31.0**	**+0.8**
	comp=Z,6.6nm,0.9s,mb4.7						
LPG	**La Plagne**	**88.53**	**330**	*e*P	**P**	**01 29 31.0**	**+0.8**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
SMF	**Signal de Mont**	**88.70**	**332**	*e*P	**P**	**01 29 31.3**	**+0.4**
AVF	**Avril sur Loir**	**88.75**	**333**	*e*P	**P**	**01 29 31.8**	**+0.6**
	comp=Z,21nm,1.2s,mb5.0						
AVF	**Avril sur Loir**	**88.75**	**333**	*e*P	**P**	**01 29 31.8**	**+0.6**
AVF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.0						
WMOK	**Wichita Mounta**	**89.24**	**46**	*e*P	**P**	**01 29 34.5**	**+0.7**
WMOK				*e**PP	pP	01 29 40.1	-6.1
SGMF	**Saint Gilles**	**89.50**	**337**	*e*P	**P**	**01 29 35.1**	**+0.4**
SBF	**Sospel**	**89.60**	**329**	*e*P	**P**	**01 29 35.7**	**+0.5**
	comp=Z,12nm,0.7s,mb5.1						
SBF	**Sospel**	**89.60**	**329**	*e*P	**P**	**01 29 35.7**	**+0.5**
SBF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
VIVF	**Saint-Julien-l**	**89.89**	**331**	*e*P	**P**	**01 29 37.6**	**+1.0**
MFF	**Saint Martin d**	**90.16**	**335**	*e*P	**P**	**01 29 37.6**	**-0.2**
CAF	**Calviac**	**90.81**	**333**	*e*P	**P**	**01 29 41.4**	**+0.5**
	comp=Z,8.2nm,0.9s,mb4.8						
CAF	**Calviac**	**90.81**	**333**	*e*P	**P**	**01 29 41.4**	**+0.5**
CAF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
MIAR	**Mount Ida**	**92.30**	**43**	P	**P**	**01 29 47.7**	**-0.3**
ETSF	**Etsaut**	**93.52**	**333**	*e*P	**P**	**01 29 54.3**	**+0.9**

JMA 05 01:47:27.1±0.5, 31.97N×138.17E, h396^{km}, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**2.59**	**308**	P	P	01 48 27.1	0.0
JOD2	**Odawara 2**	**3.37**	**13**	P	P	01 48 34.4	+0.8
BSO4	**Boso 4**	**3.52**	**30**	P	P	01 48 34.9	0.0
BSO4				S	S	01 49 25.4	-2.8
JYN	**Shimob**	**3.53**	**5**	P	P	01 48 35.9	+0.9
BSO1	**Boso 1**	**3.56**	**41**	P	P	01 48 35.1	-0.2
JHU	**Hanno**	**3.98**	**13**	P	P	01 48 38.9	-0.3
JAG	**Ashikaga**	**4.57**	**13**	P	P	01 48 44.0	-1.1
JHO	**Hitachi**	**5.04**	**23**	P	P	01 48 49.3	-0.6
JHO				S	S	01 49 48.8	-6.0

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*BJI **05** 01:58:02.8, 12.72N×92.68E, h30^{km}, mB5.1, mb4.3, Ms4.1, Msz3.7*

*NEIC **05** 01:58:11.5±0.3, 13.58N×92.79E, h30^{km}, mb4.6/20, Error ellipse: s-maj=9.8km s-min=6.4km az=54.0*

ISC 05 01:58:09.5±0.3, **13.57N**±0.04×**92.81E**±0.04, **h29^{km}, h29^{km}**±.8^{km}**:pP-P, n81,** σ**1^{s}03**/92, **mb4.6**/22, **MS4.1**/3, **5C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**7.64**	**50**	*e*P	**Pn**	**02 00 00.0**	**-1.8**
CHRT	**Chiangrai**	**9.16**	**46**	P	**P**	**02 00 21.0**	**-1.8**
	126nm,1.0s						
NANT	**Nan**	**9.19**	**54**	P	**P**	**02 00 22.0**	**-1.3**
BWNR	**Bhubaneshwar**	**9.47**	**316**	*e*P	**P**	**02 00 23.1**	**-4.0**
BWNR				*e*S	**Sn**	**02 01 57.2**	**-16**
BWNR				*e*		02 02 03.9	
	comp=E,680nm,0.4s						
BWNR				*e*		02 02 03.9	
	comp=N,567nm,0.3s						
VIS	**Vishakhapatnam**	**10.02**	**296**	*e*P	**P**	**02 00 33.5**	**-1.3**
VIS				*e*S	**S**	**02 02 13.1**	**-14**
VIS				*e*		02 02 17.2	
	comp=N,152nm,0.3s						
VIS				*e*		02 02 17.6	
	comp=E,109nm,0.2s						
KKTK	**Khon Kaen**	**10.06**	**73**	P	**P**	**02 00 37.0**	**+1.6**
KKTK				S	Px	02 00 48.0	
BLSP	**Bilaspur**	**13.25**	**311**	*e*P	**P**	**02 01 17.7**	**-0.7**
BLSP				*e*S	**S**	**02 03 30.8**	**-15**
PALK	**Pallekele**	**13.44**	**243**	*e*P	**P**	**02 01 18.6**	**-2.3**
	comp=E,18nm,0.9s						
HYB	**Hyderabad**	**14.26**	**287**	*i* P	**P**	**02 01 30.5**	**-1.3**
	comp=E,64nm,1.2s						
HYB				*e*		02 03 57.0	
HYB				*e*S	**S**	**02 04 08.5**	**-1.3**
KMI	**Kunming**	**14.82**	**38**	P	**P**	**02 01 45.3**	**+6.3**
KMI				AP		02 01 54.6	
KMI				AMB	AMB		
	comp=Z,5.0nm,1.1s						
KMI				AMB	AMB		
	comp=Z,61nm,5.3s						
KMI				LR	LR		
	comp=N,240nm,17.6s						
KMI				LR	LR		
	comp=E,364nm,15.9s						
KMI				LR	LR		
	comp=Z,259nm,20.1s						
KMI	**Kunming**	**14.82**	**38**	P	**P**	**02 01 45.3**	**+6.3**
	comp=Z,5.0nm,1.1s						
KMI				pP		02 01 54.6	
KMI				sP		02 02 04.0	
KMI				S	**S**	**02 04 23.4**	**+0.4**
KMI				sS		02 04 36.8	
JIRN	**Jiri**	**15.32**	**337**	*e*P	**P**	**02 01 44.5**	**-1.1**
	comp=Z,22nm,0.3s						
JIRN				*e*S	**S**	**02 04 21.1**	**-14**
PKI	**Pulchoki**	**15.55**	**335**	*e*P	**P**	**02 01 48.4**	**-0.2**
	comp=Z,45nm,0.6s						
DMN	**Daman**	**15.71**	**334**	*e*P	**P**	**02 01 49.5**	**-1.1**
	comp=Z,148nm,0.7s						
KKN	**Kakani**	**15.80**	**335**	*e*P	**P**	**02 01 51.4**	**-0.3**
	comp=Z,53nm,0.7s						
LSA	**Lhasa**	**16.13**	**355**	P	**P**	**02 01 59.0**	**+3.1**
GKN	**Gorkha**	**16.26**	**333**	*e*P	**P**	**02 01 57.3**	**-0.3**
	comp=Z,56nm,0.3s						
TRD	**Trivandrum**	**16.34**	**254**	*e*P	**P**	**02 02 00.6**	**+1.9**
KOLN	**Koldanda**	**16.54**	**330**	*e*P	**P**	**02 02 00.7**	**-0.4**
	comp=Z,75nm,0.6s						
BHPL	**Bhopal**	**17.47**	**306**	*e*P	**P**	**02 02 12.3**	**-0.5**
BHPL				*e*		02 02 15.7	
	comp=Z,23nm,0.5s						
GYA	**Guiyang**	**18.25**	**43**	P	**P**	**02 02 22.2**	**-0.4**
GYA				AP		02 02 31.4	
GYA				XP		02 02 35.6	
GYA				S	**S**	**02 05 52.8**	**+11**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
GYA				AMB	AMB		
	comp=Z,120nm,5.7s						
GYA				LR	LR		
	comp=N,400nm,18.9s						
GYA				LR	LR		
	comp=E,200nm,16.2s						
GYA				LR	LR		
	comp=Z,250nm,12.3s						
POO	**Poona**	**18.87**	**288**	*i* S	**S**	**02 06 02.0**	**+6.0**
CD2	**Chengdu**	**19.99**	**29**	P	**P**	**02 02 42.0**	**-0.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
AJM	**Ajmer**	**21.33**	**310**	*i* P	**P**	**02 02 57.0**	**+0.6**
DDI	**Dehra Dun**	**21.53**	**323**	*e*P	**P**	**02 02 58.5**	**+0.1**
DDI				*e*		02 06 35.5	
SDNR	**Sundarnagar**	**23.03**	**323**	*e*P	**P**	**02 03 16.8**	**+3.5**
SDNR				*e*		02 07 35.0	
THN	**Thein Dam**	**24.43**	**323**	*e*P	**P**	**02 03 26.9**	**-0.1**
LZH	**Lanzhou**	**24.52**	**22**	⇑P	**P**	**02 03 36.5**	**+8.7**
	comp=Z,39nm,1.2s,mb4.8						
LZH				pP		02 03 45.5	
LZH				sP		02 03 49.5	
LZH				*e*PP	PP	02 04 13.5	+10
LZH				*e*S	**S**	**02 07 53.5**	**+10**
LZH				sS		02 08 08.6	
LZH				SS	SS	02 08 51.5	+12
LZH				LR	LR		
	comp=Z,2µm,12.3s,MS4.7						
XAN	**Xi’an**	**25.09**	**33**	P	**P**	**02 03 32.0**	**-1.2**
XAN				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.5						
WMQ	**Urumqi**	**30.47**	**353**	*e*P	**P**	**02 04 23.0**	**+1.0**
WMQ				PP	PP	02 05 23.0	+0.9
WMQ				S	**S**	**02 09 22.0**	**+1.9**
WMQ				LR	LR		
	comp=N,214nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=E,157nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,124nm,16.0s,MS3.6						
AAK	**Ala-Archa**	**33.01**	**335**	*e*P	**P**	**02 04 44.0**	**-0.2**
BJI	**Beijing**	**33.42**	**34**	P	**P**	**02 04 49.9**	**+2.1**
BJI				AP	pP	02 04 58.2	+1.7
BJI				XP	sP	02 05 02.2	+1.9
BJI				S	**S**	**02 10 10.9**	**+4.8**
BJI				SCS	ScS	02 15 08.1	-1.5
BJI				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.3						
BJI				AMB	AMB		
	comp=Z,106nm,3.5s						
BJI				LR	LR		
	comp=N,186nm,11.4s,MS4.1						
BJI				LR	LR		
	comp=E,158nm,15.2s,MS4.1						
BJI				LR	LR		
	comp=Z,120nm,22.0s						
BJI	**Beijing**	**33.42**	**34**	P	**P**	**02 04 49.9**	**+2.1**
	comp=Z,5.0nm,1.3s,mb4.3						
BJI				pP	pP	02 04 58.2	+1.7
BJI				sP	sP	02 05 02.2	+1.9
BJI				S	**S**	**02 10 10.9**	**+4.8**
BJI				SS	SS	02 12 46.3	+36
BJI				ScS	ScS	02 15 08.1	-1.5
BJI				LR	LR		
	comp=Z,120nm,22.0s,MS3.6						
ULN	**Ulaanbaatar**	**36.20**	**16**	P	**P**	**02 05 19.1**	**+7.5**
	comp=Z,4.1nm,1.1s,mb4.3						
KURK	**Kurchatov**	**38.81**	**346**	*e*P	**P**	**02 05 32.6**	**-0.8**
	comp=Z,7.2nm,0.8s,mb4.5						
TLY	**Talaya**	**39.01**	**11**	*e*P	**P**	**02 05 44.3**	**+9.2**
CHKZ	**Chkalovo**	**43.70**	**341**	*e*P	**P**	**02 06 12.8**	**-0.7**
	comp=Z,11nm,1.0s,mb4.5						
CHKZ				*e*pP	pP	02 06 21.1	-1.2
MDJ	**Mudanjiang**	**44.00**	**38**	P	**P**	**02 06 15.5**	**-0.6**
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.0s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,92nm,3.9s						
FITZ	**Fitzroy Crossi**	**45.15**	**133**	⇑*i*P	**P**	**02 06 25.4**	**-0.3**
	comp=Z,9.1nm,0.6s,mb4.8						
GNI	**Garni**	**49.62**	**312**	*e*P	**P**	**02 07 01.4**	**+0.9**
	comp=Z,16nm,0.9s,mb5.1						
MUN	**Mundaring**	**50.53**	**154**	*e*P	**P**	**02 07 07.8**	**+0.3**
	comp=Z,5.9nm,0.4s,mb4.9						
KLBR	**Kellerberrin**	**50.88**	**152**	*e*P	**P**	**02 07 10.4**	**+0.3**
	comp=Z,436nm,1.7s						
KIV	**Kislovodsk**	**52.30**	**316**	*e*P	**P**	**02 07 20.1**	**-0.6**
KIV				*e*	pP	02 07 29.5	-0.2
WRAB	**Tennant Creek**	**52.71**	**128**	*e*P	**P**	**02 07 23.1**	**-1.0**
	comp=Z,30nm,0.6s,mb5.4						
WB2	**Warramunga Arr**	**52.72**	**128**	⇑*i*P	**P**	**02 07 23.8**	**-0.4**
MALT	**Malatya**	**53.88**	**308**	*e*P	**P**	**02 07 33.1**	**+0.6**
	comp=Z,3.8nm,0.9s,mb4.3						
ASPA	**Alice Springs**	**54.62**	**132**	⇑*i*P	**P**	**02 07 37.9**	**-0.2**
STKA	**Stephens Creek**	**65.00**	**135**	⇑*i*P	**P**	**02 08 49.5**	**+0.1**
	comp=Z,2.1nm,0.6s,mb4.3						
JOF	**Joensuu**	**65.19**	**334**	*e*p	**P**	**02 08 49.7**	**-0.3**
	comp=Z,7.4nm,1.0s,mb4.7						
CRVS	**Cervenica-Dubn**	**67.64**	**317**	*e*P	**P**	**02 09 07.6**	**+1.7**
OJC	**Ojcow**	**68.83**	**319**	*e*P	**P**	**02 09 13.1**	**-0.1**
VYHS	**Vyhne**	**69.35**	**317**	*e*P	**P**	**02 09 16.3**	**-0.2**
SRO2	**Moca**	**69.62**	**316**	*e*P	**P**	**02 09 18.8**	**+0.7**
SRO	**Srobarova**	**69.67**	**316**	*e*P	**P**	**02 09 19.0**	**+0.6**
SRO				*e*pP	pP	02 09 28.0	+0.4
SRO1	**Iza**	**69.72**	**316**	*e*P	**P**	**02 09 19.1**	**+0.3**
OKC	**Ostrava-Krasne**	**69.87**	**318**	*e*P	**P**	**02 09 20.6**	**+1.0**
OKC				*e*pP	pP	02 09 28.8	0.0
LSZ	**Lusaka**	**70.05**	**248**	P	**P**	**02 09 21.7**	**+0.4**
MORC	**Moravsky Berou**	**70.26**	**318**	*e*P	**P**	**02 09 22.4**	**+0.4**
	comp=Z,11nm,1.1s,mb4.7						
DPC	**Dobruska-Polom**	**71.06**	**319**	*e*P	**P**	**02 09 27.8**	**+0.9**
KSP	**Ksiaz**	**71.09**	**319**	*e*P	**P**	**02 09 27.7**	**+0.7**
UPC	**Upice**	**71.26**	**319**	*e*P	**P**	**02 09 26.6**	**-1.5**
UPC				*e*pP	pP	02 09 37.6	+0.3
BILL	**Bilibino**	**71.33**	**22**	P	**P**	**02 09 28.2**	**0.0**
PVCC	**Panska Ves**	**72.19**	**319**	*e*P	**P**	**02 09 34.9**	**+1.3**
PRU	**Pruhonice**	**72.20**	**318**	*e*P	**P**	**02 09 34.2**	**+0.5**
PRU				*e*pP	pP	02 09 43.7	+0.8
BRG	**Berggiesshubel**	**72.58**	**319**	*e*P	**P**	**02 09 36.9**	**+1.0**
	comp=Z,4.8nm,0.8s,mb4.5						
BRG				*e*	pP	02 09 46.2	+1.1
RUE	**Ruedersdorf**	**72.69**	**321**	*e*P	**P**	**02 09 34.3**	**-2.2**
GEC2	**GERESS Array S**	**72.76**	**317**	*e*P	**P**	**02 09 37.9**	**+0.9**
	comp=Z,6.0nm,0.9s,mb4.5						
KHC	**Kasperske Hory**	**72.84**	**318**	*e*P	**P**	**02 09 37.7**	**+0.3**
CLL	**Collm**	**73.17**	**320**	*e*P	**P**	**02 09 40.0**	**+0.6**
CLL	**Collm**	**73.17**	**320**	P	**P**	**02 09 40.0**	**+0.6**
WET	**Wettzell**	**73.30**	**318**	*e*P	**P**	**02 09 41.1**	**+1.0**
	comp=Z,4.0nm,1.0s,mb4.3						
NKC	**Novy Kostel**	**73.55**	**319**	*e*P	**P**	**02 09 42.0**	**+0.4**
MOX	**Moxa**	**74.07**	**319**	*i* P	**P**	**02 09 45.5**	**+1.0**
NB2	**NORSAR Subarra**	**74.17**	**330**	P	**P**	**02 09 44.4**	**-0.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=91,slow=5.8						
GRA1	**Grafenberg Arr**	**74.36**	**318**	*e*P	**P**	**02 09 47.5**	**+1.2**
	comp=Z,8.0nm,0.7s,mb4.8						
GRA1				*e*pP	pP	02 09 56.5	+1.0
GRF	**Grafenberg Arr**	**74.36**	**318**	*e*P	**P**	**02 09 47.5**	**+1.2**
	comp=Z,8.0nm,0.7s,mb4.8						
GRF				*e*pP	pP	02 09 56.5	+1.0
CLZ	**Clausthal**	**74.80**	**320**	*e*P	**P**	**02 09 49.8**	**+1.0**
	comp=Z,4.0nm,0.8s,mb4.4						
LBTB	**Lobatse**	**75.89**	**240**	*e*P	**P**	**02 09 53.3**	**-2.3**
TNS	**Taunus Mts**	**76.11**	**319**	*e*P	**P**	**02 09 57.3**	**+1.0**
LPG	**La Plagne**	**77.72**	**314**	*e*P	**P**	**02 10 06.2**	**+0.9**
	comp=Z,20nm,0.7s,mb4.8						
SYO	**Syowa Base**	**90.43**	**197**	⇓P	**P**	**02 11 07.7**	**-1.5**

TAP 05 02:24:59.6, 24.90N×122.12E, h8^{km}, ML3.5, Taiwan region

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*CSEM **05** 02:59:47.6±0.1, 39.99N×41.97E, h2^{km}, MD3.1, Error ellipse: s-maj=3.9km s-min=2.3km az=161.0*

ISK 05 02:59:48.9, 39.95N×42.06E, h3^{km}, MD3.1, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.54**	**265**	*i* P	Pg	03 00 00.1	+0.5
ERZM				*i* S	Sg	03 00 06.3	-0.5
EZM	**Erzurum**	**0.54**	**265**	*i* PG	Pg	03 00 00.1	+0.4
EZM				*i* SG	Sg	03 00 08.3	+1.4
KARS	**Kars**	**1.03**	**50**	*e*PG	Pg	03 00 09.2	-0.2
BINT	**Bingol**	**1.62**	**229**	*e*PN	Pn	03 00 19.4	+0.8
BTMT	**Batman**	**1.81**	**194**	*e*PN	Pn	03 00 22.9	+1.6
VANT	**Van**	**1.82**	**145**	*e*PN	Pn	03 00 21.6	+0.2
GUMT	**Gumushane**	**2.04**	**285**	*e*PN	Pn	03 00 25.3	+0.7
GNI	**Garni**	**2.07**	**84**	*e*PN	Pn	03 00 25.8	+0.9
BEST	**Besiri**	**2.15**	**197**	*i* P	Pn	03 00 29.1	+2.9
BEST				*i* S	Sn	03 00 58.0	+4.4

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*BJI **05** 03:07:06.0, 9.97N×93.03E, h40^{km}, mB5.0, mb4.6, Ms4.1, Msz3.9*

*NEIC **05** 03:07:07.6±0.4, 10.10N×93.12E, h30^{km}, mb4.6/10, Error ellipse: s-maj=9.2km s-min=7.8km az=52.0*

ISC 05 03:07:05.6±0.5, **10.04N**±0.06×**93.06E**±0.06, **h32^{km}, h32^{km}**±1.6^{km}**:pP-P, n35,** σ**0^{s}87**/40, **mb4.6**/12, **MS4.0**/4, **3C-2D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**10.12**	**34**	Pn	**P**	**03 09 30.6**	**-1.4**
CM31				*e*		03 09 35.5	
PALK	**Pallekele**	**12.53**	**258**	P	**P**	**03 10 05.1**	**+0.4**
HYB	**Hyderabad**	**15.88**	**299**	*i* P	**P**	**03 10 54.5**	**+5.8**
KMI	**Kunming**	**17.59**	**30**	P	**P**	**03 11 08.8**	**-1.5**
KMI				S	**S**	**03 14 24.2**	**+1.3**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.9s						
KMI				AMB	AMB		
	comp=Z,39nm,3.1s						
KMI				LR	LR		
	comp=N,265nm,18.0s						
KMI				LR	LR		
	comp=E,222nm,20.7s						
KMI				LR	LR		
	comp=Z,195nm,20.1s						
KMI	**Kunming**	**17.59**	**30**	P	**P**	**03 11 08.8**	**-1.5**
	comp=Z,7.0nm,0.9s						
KMI				S	**S**	**03 14 24.2**	**+1.3**
KMI				sS		03 14 31.6	
JIRN	**Jiri**	**18.68**	**341**	*e*P	**P**	**03 11 26.9**	**+3.2**
PKI	**Pulchoki**	**18.87**	**339**	*e*P	**P**	**03 11 26.1**	**+0.2**
	comp=Z,46nm,1.0s						
DMN	**Daman**	**19.01**	**338**	*e*P	**P**	**03 11 27.5**	**-0.2**
	comp=Z,17nm,0.6s						
GKN	**Gorkha**	**19.54**	**337**	*e*P	**P**	**03 11 33.7**	**-0.1**
	comp=Z,45nm,0.6s						
KOLN	**Koldanda**	**19.76**	**334**	*e*P	**P**	**03 11 35.1**	**-1.0**
	comp=Z,31nm,0.7s						
GYA	**Guiyang**	**20.79**	**36**	⇑*i*P	**P**	**03 11 46.9**	**+0.1**
GYA				AP		03 11 55.8	
GYA				XP		03 11 59.4	
GYA				S	**S**	**03 15 31.4**	**-0.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s						
GYA				AMB	AMB		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,350nm,19.7s,MS3.8						
GYA				LR	LR		
	comp=E,230nm,18.8s,MS3.8						
GYA				LR	LR		
	comp=Z,450nm,18.8s,MS3.9						
LZH	**Lanzhou**	**27.71**	**19**	*e*P	**P**	**03 12 53.0**	**-0.3**
LZH				AP	pP	03 13 03.0	+0.4
LZH				XP	sP	03 13 10.0	+3.3
LZH				AMB	AMB		
	comp=Z,24nm,1.5s,mb4.6						
LZH	**Lanzhou**	**27.71**	**19**	*e*P	**P**	**03 12 53.0**	**-0.3**
	comp=Z,24nm,1.5s,mb4.6						
LZH				pP	pP	03 13 03.0	+0.4
LZH				sP	sP	03 13 10.0	+3.3
GTA	**Gaotai**	**29.86**	**11**	*e*P	**P**	**03 13 12.6**	**0.0**
GTA				AP	pP	03 13 20.5	-1.4
GTA				PP	PP	03 14 11.2	+1.1
GTA				S	**S**	**03 18 08.2**	**+2.1**
GTA				XS		03 18 23.0	
GTA				SS	SS	03 19 46.3	+3.7
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,35nm,5.3s						
GTA				LR	LR		
	comp=N,120nm,20.5s,MS3.7						
GTA				LR	LR		
	comp=E,130nm,16.0s,MS3.7						
GTA				LR	LR		
	comp=Z,87nm,14.8s,MS3.5						
NJ2	**Nanjing**	**32.38**	**44**	*e*P	**P**	**03 13 36.6**	**+1.8**
NJ2				AP	pP	03 13 46.2	+2.1
NJ2				XP	sP	03 13 50.1	+1.9
NJ2				S	**S**	**03 18 53.0**	**+7.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,420nm,4.2s						
NJ2				LR	LR		
	comp=N,520nm,14.4s,MS4.4						
NJ2				LR	LR		
	comp=E,420nm,17.2s,MS4.4						
NJ2				LR	LR		
	comp=Z,670nm,16.1s,MS4.4						
WMQ	**Urumqi**	**33.97**	**353**	*e*P	**P**	**03 13 49.0**	**+0.5**
BJI	**Beijing**	**36.25**	**31**	P	**P**	**03 14 08.6**	**+0.7**
BJI				XP	sP	03 14 21.3	-0.1
BJI				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
BJI				LR	LR		
	comp=N,166nm,12.3s,MS4.2						
BJI				LR	LR		
	comp=E,176nm,11.1s,MS4.2						
BJI				LR	LR		
	comp=Z,136nm,17.9s						
BJI	**Beijing**	**36.25**	**31**	P	**P**	**03 14 08.6**	**+0.7**
	comp=Z,4.0nm,1.0s,mb4.3						
BJI				sP	sP	03 14 21.3	-0.1
BJI				S		03 20 32.7	
BJI				LR	LR		
	comp=Z,140nm,17.9s,MS3.8						
AAK	**Ala-Archa**	**36.30**	**337**	*e*P	**P**	**03 14 08.5**	**+0.2**
	comp=Z,9.3nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**39.50**	**15**	*e*P	**P**	**03 14 34.0**	**-1.1**
	comp=Z,2.6nm,0.8s,mb4.0						
KURK	**Kurchatov**	**42.26**	**346**	*e*P	**P**	**03 14 56.9**	**-0.8**
KURK				*e*		03 15 09.0	
CN2	**Changchun**	**43.80**	**34**	*e*P	**P**	**03 15 10.6**	**+0.2**
CN2				*e*AP	pP	03 15 20.5	+0.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
MDJ	**Mudanjiang**	**46.65**	**36**	P	**P**	**03 15 32.3**	**-0.8**
MDJ				AMB	AMB		
	comp=Z,11nm,2.3s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,144nm,4.3s						
CHKZ	**Chkalovo**	**47.09**	**342**	*e*P	**P**	**03 15 36.1**	**-0.3**
	comp=Z,11nm,0.7s,mb4.9						
WRAB	**Tennant Creek**	**50.39**	**126**	*e*P	**P**	**03 16 02.2**	**-0.2**
WB2	**Warramunga Arr**	**50.40**	**126**	⇑*i*P	**P**	**03 16 02.5**	**0.0**
ASPA	**Alice Springs**	**52.12**	**131**	*e*P	**P**	**03 16 15.4**	**-0.1**
KIV	**Kislovodsk**	**55.01**	**317**	*e*P	**P**	**03 16 36.1**	**-0.4**
	comp=Z,5.0nm,0.5s,mb4.8						
MALT	**Malatya**	**56.26**	**310**	P	**P**	**03 16 44.7**	**-0.9**
STKA	**Stephens Creek**	**62.37**	**134**	⇑*i*P	**P**	**03 17 28.4**	**+0.5**
	comp=Z,11nm,0.9s,mb5.0						
DPC	**Dobruska-Polom**	**73.87**	**320**	*e*P	**P**	**03 18 39.6**	**+0.3**
KHC	**Kasperske Hory**	**75.60**	**318**	*e*P	**P**	**03 18 48.7**	**-0.6**
CLL	**Collm**	**76.02**	**320**	⇓*i*P	**P**	**03 18 53.3**	**+1.7**
CLL	**Collm**	**76.02**	**320**	⇓P	**P**	**03 18 53.3**	**+1.7**
LPG	**La Plagne**	**80.34**	**315**	*e*P	**P**	**03 19 15.9**	**+0.5**
	comp=Z,11nm,0.8s,mb4.5						

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*BJI **05** 03:25:18.6, 10.25S×123.07E, h107^{km}, mB5.4, mb5.1*

*NEIC **05** 03:25:22.7±0.4, 9.67S×122.57E, mb4.5/11, Error ellipse: s-maj=19.8km s-min=10.4km az=75.0*

ISC 05 03:25:20.6±0.4, **9.54S**±0.06×**122.7E**±0.1, **h76^{km}, (h76^{km}**±1.1^{km}**:pP-P), n58,** σ**1^{s}21**/48, **mb4.8**/23, **5C-3D, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.96**	**162**	*e*P	**P**	**03 27 23.3**	**-6.0**
	70nm,0.4s						
FITZ				*e*S	Sx	03 28 53.8	
MBWA	**Marble Bar**	**11.90**	**194**	*e*P	**P**	**03 28 03.5**	**-5.6**
	53nm,0.9s						
MBWA				*e*Sn	Sx	03 30 05.1	
WRAB	**Tennant Creek**	**15.25**	**134**	*e*P	**P**	**03 28 44.8**	**-8.1**
	27nm,0.8s						
WB2	**Warramunga Arr**	**15.26**	**134**	*e*P	**P**	**03 28 44.4**	**-8.6**
WB2				*e*S	Sx	03 31 21.1	
ASPA	**Alice Springs**	**17.64**	**144**	*e*P	**P**	**03 29 18.1**	**-4.8**
ASPA				*e*S	Sx	03 32 20.4	
FORT	**Forrest**	**21.70**	**168**	*e*P	**P**	**03 30 05.6**	**-1.2**
	176nm,0.6s,mb5.6						
FORT				*e*S	**S**	**03 33 59.0**	**+1.8**
KLBR	**Kellerberrin**	**22.42**	**191**	⇓*i*P	**P**	**03 30 13.5**	**-0.3**
	2µm,1.9s						
KLBR				*e*S	**S**	**03 34 12.9**	**+2.9**
MUN	**Mundaring**	**23.13**	**194**	⇑*i*P	**P**	**03 30 20.6**	**-0.1**
	8.7nm,0.4s,mb4.4						
MUN				*e*		03 34 27.3	
NWAO	**Narrogin (SRO)**	**23.82**	**192**	*e*P	**P**	**03 30 26.8**	**-0.5**
CTA	**Charters Tower**	**25.01**	**117**	*e*P	**P**	**03 30 39.3**	**+0.3**
	4.8nm,0.4s,mb4.3						
CTAO	**Charters Tower**	**25.01**	**117**	*e*P	**P**	**03 30 38.7**	**-0.4**
	14nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**28.28**	**145**	⇓*i*P	**P**	**03 31 07.8**	**-1.2**
	8.6nm,0.9s,mb4.3						
STKA				*e*S	Sx	03 36 27.8	
TOO	**Toolangi**	**34.64**	**147**	⇑*i*P	**P**	**03 32 05.6**	**+1.0**
	0.7nm,0.7s						
GYA	**Guiyang**	**39.04**	**337**	P	**P**	**03 32 43.5**	**+1.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI	**Kunming**	**39.58**	**331**	P	**P**	**03 32 48.3**	**+2.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
KMI	**Kunming**	**39.58**	**331**	P	**P**	**03 32 48.3**	**+2.2**
	comp=Z,10.0nm,1.2s,mb4.5						
KMI				pP	pP	03 33 07.4	+2.6
KMI				sP	sP	03 33 17.1	+3.3
NJ2	**Nanjing**	**41.52**	**355**	*e*P	**P**	**03 33 06.3**	**+4.2**
NJ2				PP	PP	03 34 47.1	+4.9
NJ2				S	**S**	**03 39 22.0**	**+10**
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,302nm,4.4s						
NJ2				LR	LR		
	comp=N,220nm,16.6s						
NJ2				LR	LR		
	comp=E,330nm,14.3s						
NJ2				LR	LR		
	comp=Z,1µm,15.1s						
XAN	**Xi’an**	**45.28**	**344**	P	**P**	**03 33 32.4**	**-0.2**
XAN				AMB	AMB		
	comp=Z,16nm,0.6s,mb4.9						
MAT	**Matsushiro**	**48.10**	**17**	*e*P	**P**	**03 33 53.0**	**-1.7**
MAT	**Matsushiro**	**48.10**	**17**	P	**P**	**03 33 52.8**	**-1.9**
LZH	**Lanzhou**	**48.75**	**340**	*e*P	**P**	**03 34 01.5**	**+1.8**
LZH				PP	PP	03 35 56.5	+3.1
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,98nm,5.2s						
LZH				LR	LR		
	comp=E,452nm,15.0s						
LZH				LR	LR		
	comp=Z,765nm,17.6s						
LZH	**Lanzhou**	**48.75**	**340**	*e*P	**P**	**03 34 01.5**	**+1.8**
	comp=Z,27nm,1.3s,mb5.0						
LZH				pP	pP	03 34 20.4	+1.7
LZH				sP	sP	03 34 29.1	+1.7

LZH				PP	PP	03 35 56.5	+3.1
LZH				LR	LR		
	comp=Z,770nm,17.6s						
JIRN	Jiri	51.18	317	*e*P	P	03 34 18.4	0.0
	comp=Z,4.7nm,0.3s,mb5.0						
PKI	Pulchoki	51.65	317	*e*P	P	03 34 21.1	-0.8
	comp=Z,8.3nm,0.4s,mb5.1						
KKN	Kakani	51.88	317	*e*P	P	03 34 22.6	-1.0
	comp=Z,9.1nm,0.6s,mb5.0						
DMN	Daman	51.88	316	*e*P	P	03 34 22.7	-0.9
	comp=Z,7.6nm,0.6s,mb4.9						
GKN	Gorkha	52.45	317	*e*P	P	03 34 27.3	-0.6
	comp=Z,11nm,0.5s,mb5.1						
KOLN	Koldanda	53.01	316	*e*P	P	03 34 30.7	-1.4
	comp=Z,7.4nm,0.6s,mb4.9						
CN2	Changchun	53.15	2	*e*P	P	03 34 37.7	+4.8
GTA	Gaotai	53.15	338	⇑P	P	03 34 34.3	+1.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
MDJ	Mudanjiang	54.26	6	P	P	03 34 41.2	+0.2
MDJ				AMB	AMB		
	comp=Z,24nm,0.9s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,87nm,5.9s						
WMQ	Urumqi	61.91	332	*e*P	P	03 35 36.6	+2.1
AAK	Ala-Archa	68.06	324	*e*P	P	03 36 13.6	-0.6
	comp=Z,4.3nm,0.6s,mb4.5						
VNDA	Vanda	70.90	172	*e*P	P	03 36 30.4	-0.6
	comp=Z,2.9nm,0.4s,mb4.5						
KURK	Kurchatov	71.15	332	*e*P	P	03 36 31.7	-1.1
	comp=Z,5.8nm,0.8s,mb4.5						
CHKZ	Chkalovo	76.82	331	*e*P	P	03 37 04.5	-1.2
	comp=Z,1.2nm,0.6s,mb3.8						
KMBO	Kilima Mbogo	85.36	270	P	P	03 37 51.4	0.0
	comp=Z,7.2nm,0.9s,mb4.6						
KMBO				*e*pP	pP	03 38 12.6	+0.2
SNAA	Sanae	91.45	195	⇓*i*P	P	03 38 21.1	+2.0
SNAA	Sanae	91.45	195	*e*	P	03 38 22.3	+3.2
SNAA	Sanae	91.45	195	*e*P	P	03 38 20.3	+1.2
	comp=Z,47nm,0.5s,mb5.9						
LSZ	Lusaka	91.85	254	*e*P	P	03 38 21.6	-0.6
LSZ				*e*pP	pP	03 38 42.0	-1.5
VNA2	Neumayer--Watz	93.06	195	⇑*i*P	P	03 38 27.4	+0.9
VNA2	Neumayer--Watz	93.06	195	*e*	P	03 38 29.1	+2.6
VNA3	Neumayer Olymp	93.40	194	⇑*i*P	P	03 38 30.4	+2.3
VNA3	Neumayer Olymp	93.40	194	*e*	P	03 38 32.3	+4.2
HLID	Hailey	120.14	45	*e*PKPdf	PKPdf	03 44 07.0	+4.1
NEN	Nelson	121.76	54	*e*PKPdf	PKPdf	03 44 10.3	+4.1
TPAW	Teton Pass	122.56	44	*e*PKP	PKPdf	03 44 11.3	+3.7
LOHW	Long Hollow	122.75	44	*e*PKP	PKPdf	03 44 11.3	+3.4
MSU	Marysvale	123.16	50	*e*PKPdf	PKPdf	03 44 13.6	+4.7
BW06	Boulder Array	123.76	44	*e*PKP	PKPdf	03 44 12.7	+2.7
SRU	San Rafael	124.23	49	*e*PKP	PKPdf	03 44 14.4	+3.4
LAO	LASA Array	124.43	39	*e*PKP	PKPdf	03 44 14.6	+3.5
PV10	Paradox Valley	125.56	49	*e*PKP	PKPdf	03 44 17.2	+3.6
PV01	Paradox Valley	125.99	50	*e*PKP	PKPdf	03 44 18.0	+3.6
LRAL	Lakeview Retre	143.99	45	*e*PKP	PKPdf	03 44 49.2	+1.5
GOGA	Godfrey	146.16	42	*e*PKPbc	PKPbc	03 44 55.6	+3.0
LPAZ	La Paz	152.17	157	PKPdf	PKPdf	03 45 05.2	+3.8
LPAZ				*e*PKPbc	PKPdf	03 45 11.8	+10
LPAZ				*e*PKPab	PKPab	03 45 20.4	-0.1

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*CRAAG **05** 03:34:13.0, 16.24N×145.94E, Mb6.6*

*MOS **05** 03:34:23.1±1.1, 15.99N×145.93E, h130^{km}, mb6.3/75, MS6.0/32, Error ellipse: s-maj=7.1km s-min=4.6km az=104.1*

*GUC **05** 03:34:24.9±0.0, 15.99N×145.85E, h139^{km}, mb6.3(NEIC), MW6.2(NEIC), MW6.6(HRVD)*

*BJI **05** 03:34:25.3, 16.22N×146.23E, h148^{km}, mB6.3, mb6.1*

*HRVD **05** 03:34:25.7±0.1, 15.88N×146.19E, h132^{km}, MW6.6/76, Centroid moment Tensor Solution. LP body waves: s76,c196;Mantle waves: s76,c363; Half duration: 4^{s}8 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.55±.01; $M_{\theta\theta}$0.63±.01; $M_{\phi\phi}$-0.08±.01; $M_{r\theta}$-0.05±.00; $M_{\theta\phi}$-0.52±.01; $M_{\phi r}$0.50±.00; Best double couple: M_0.936×10^{19} NP1: ϕ_s266°,δ46°,λ-144°. NP2:ϕ_s149°,δ65°,λ-50°. Principal axes: T .964, Plg11°, Azm211°; N -.056, Plg35°, Azm310°; P -.907, Plg52°, Azm106°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **05** 03:34:25.7±0.1, 16.01N×145.87E, mb6.3/126, ME6.2, MW6.5 Error ellipse: s-maj=4.9km s-min=3.8km az=97.0 Broadband fault plane solution: P waves. NP1:ϕ_s125°, δ55°,λ-70°. NP2:ϕ_s273°,δ40°,λ-116°. Principal axes: T Plg8°, Azm201°; N Plg0°, Azm0°; P Plg72°, Azm86°; Moment Tensor Solution. s54 Moment tensor: Scale 10^{18} Nm; M_{rr}-4.79; $M_{\theta\theta}$4.76; $M_{\phi\phi}$0.03; $M_{r\theta}$-0.70; $M_{\theta\phi}$-3.38; $M_{\phi r}$3.86; Best double couple: $M_0$7.1×10^{18} NP1: ϕ_s270°,δ41°,λ-137°. NP2:ϕ_s145°,δ63°,λ-58°. Principal axes: T 7.06, Plg13°, Azm212°; N -.02, Plg28°, Azm309°; P -7.04, Plg59°, Azm101°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [VI] on Tinian and [V] on Saipan. Felt [IV] at Barrigada, Hagatna, Tamuning and Yigo and [III] at Santa Rita, Guam.

*BGS **05** 03:38:44.6, 16.01N×145.87E, h143^{km}*

ISC 05 03:34:25.4±0.4**, 16.00N**±0.02×**146.04E**±0.02**, h148**^{km}±3^{km}**, h140**^{km}±1.5^{km}**:pP-P, n1010,** σ1^{s}**25**/710**, mb6.2**/169**, 72C-97D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANAT	Anatahan	0.51	313	*e*P	P	03 34 46.5	-0.5
SARN	Sarigan	0.74	340	⇓*i*P	P	03 34 47.4	-0.9
SAPN	Saipan	0.83	199	*e*P	P	03 34 46.0	-2.9
GUMO	Guam	2.65	205	⇑*e*P	P	03 35 07.1	-1.8
GUMO				*e*S	S	03 35 38.7	-3.5
BIPH	Bislig	20.74	250	⇑*i*P	P	03 38 57.0	+1.1
SCPH	Surigao	20.95	255	⇑*e*P	P	03 38 58.4	+0.4
PLP	Palo	21.02	259	*e*P	P	03 38 59.9	+1.2
BUTP	Butuan	21.11	253	*e*P	P	03 39 02.5	+2.9
PVCP	Virac	21.29	266	*e*P	P	03 39 03.4	+2.1
MATI	Mati	21.36	247	*e*P	P	03 39 03.0	+1.1
OCLP	Ormoc	21.40	259	*e*P	P	03 39 05.2	+2.8
MSLP	Maasin	21.43	257	*e*P	P	03 39 04.0	+1.2
MAJO	Matsushiro	21.61	343	*e*P	P	03 39 00.4	-3.9
MAJO				pmax	pmax		
	comp=Z,335nm,0.8s,mb5.8						
MAJO	Matsushiro	21.61	343	*e*P	P	03 39 00.4	-3.9
	comp=Z,335nm,0.8s,mb5.8						
MAT	Matsushiro	21.61	343	*e*P	P	03 39 00.0	-4.3
MAT				*e*S	S	03 42 51.0	+1.6
MAT				pmax	pmax		
	comp=Z,651nm,1.4s,mb5.9						
MAT				MLR	MLR		
	comp=Z,26µm,20.0s						
MAT	Matsushiro	21.61	343	*e*P	P	03 39 00.0	-4.3
	comp=Z,651nm,1.4s,mb5.9						
MAT				*e*S	S	03 42 51.0	+1.6
MAT				LR	LR		
	comp=Z,26µm,20.0s						
MAT	Matsushiro	21.61	343	P	P	03 38 59.7	-4.6
MAT				S	S	03 42 51.1	+1.7
DAV	Davao City (W)	21.91	248	⇓*e*P	P	03 39 09.0	+1.6
MMPH	Masbate	22.03	263	*e*P	P	03 39 12.0	+3.4
	comp=Z,9µm,1.2s,mb6.8						
BUKP	Musuan	22.04	251	*e*P	P	03 39 09.9	+1.2
CGP	Cagayan de Oro	22.15	253	*e*P	P	03 39 11.2	+1.4
LLP	Lapu-Lapu	22.21	258	⇓*e*P	P	03 39 11.5	+1.2
	comp=Z,4283µm,0.7s						
LLP				*e*S	S	03 43 03.7	+3.5
KCP	Kidapawan	22.37	249	⇓*e*P	P	03 39 13.3	+1.4
AUQP	San Andres	22.76	266	*e*P	P	03 39 19.2	+3.5
GQP	Guinayangan	22.89	268	⇑*e*P	P	03 39 19.1	+2.1
SGCP	Mt. Cagua	23.03	279	*e*P	P	03 39 21.3	+2.9
RCP	Roxas	23.04	262	⇓*e*P	P	03 39 19.7	+1.1
SNPH	Sibulan	23.20	256	⇓*e*P	P	03 39 20.5	+0.5
SNPH	Sibulan	23.20	256	⇓*i*P	P	03 39 13.2	-6.9
CVP	Callao Caves	23.24	278	⇓*e*P	P	03 39 21.8	+1.4
CAUP	Cauayan	23.24	276	*e*P	P	03 39 24.1	+3.7
POLP	Polilio Island	23.27	270	*e*P	P	03 39 22.3	+1.6
BBP	Basco	23.28	285	*e*P	P	03 39 22.3	+1.5
GUIM	Jordan	23.43	260	*e*P	P	03 39 23.3	+1.1
BALP	Baler	23.53	273	*e*P	P	03 39 24.8	+1.6
BOAC	Boac	23.53	267	*e*P	P	03 39 25.2	+1.9
OTRP	Odiongan	23.56	264	*e*P	P	03 39 24.7	+1.2
PAGZ	Pagadian	23.58	253	*e*P	P	03 39 25.1	+1.3
LQP	Lukban	23.73	269	*e*P	P	03 39 27.2	+2.1
APYP	Conner	23.79	278	*e*P	P	03 39 25.7	0.0
PCPH	Palayan	24.00	272	⇓*e*P	P	03 39 28.3	+0.5
AAP	Anini-y	24.09	260	*e*P	P	03 39 24.0	-4.6
ABRA	Dolores	24.29	277	*e*P	P	03 39 31.0	+0.5
TGY	Tagaytay City	24.31	269	⇓*e*P	P	03 39 32.6	+2.0
IPIL	Ipil	24.35	253	*e*P	P	03 39 34.1	+3.1
SJMP	San Jose	24.40	265	*e*P	P	03 39 33.2	+1.7
BCPH	Baguio City Da	24.45	274	*e*P	P	03 39 33.7	+1.7
TATO	Taipei	24.64	295	*e*P	P	03 39 31.9	-1.7
	comp=Z,422nm,0.7s,mb6.1						
CUYO	Cuyo Island	24.86	261	*e*P	P	03 39 36.9	+1.1
LUBP	Lubang	25.03	268	*e*P	P	03 39 34.4	-3.0
LUBP	Lubang	25.03	268	⇓*e*P	P	03 39 39.5	+2.1
BOLP	Bolinao	25.09	275	*e*P	P	03 39 37.6	-0.3
SCZP	Santa Cruz	25.13	273	*e*P	P	03 39 39.5	+1.1
ZMPH	Zamboanga City	25.13	252	⇓*e*P	P	03 39 39.0	+0.6
BUSP	Coron	25.38	264	*e*P	P	03 39 41.3	+0.6
ENPP	El Nido	26.29	263	*e*P	P	03 39 49.0	-0.2
KS15	Wonju Array Si	26.72	327	*e*P	P	03 39 51.9	-0.9
QZH	Quanzhou	27.16	294	P	P	03 39 56.8	-0.2
QZH				AP	pP	03 40 25.6	-2.2
QZH				S	S	03 44 22.5	-0.4
QZH				SCP		03 46 39.7	
QZH				AMB	AMB		
	comp=Z,990nm,0.9s,mb6.4						
QZH				AMB	AMB		
	comp=Z,6µm,10.6s						
QZH				LR	LR		
	comp=N,11µm,10.2s						
QZH				LR	LR		
	comp=E,8µm,9.5s						
QZH				LR	LR		
	comp=Z,26µm,19.2s						
SSE	Sheshan	27.20	308	P	P	03 39 55.4	-1.9
SSE				AP	pP	03 40 24.8	-3.3
SSE				S	S	03 44 23.3	-0.1
SSE				XS		03 45 16.0	
SSE				AMB	AMB		
	comp=Z,365nm,1.0s,mb6.0						
SSE				AMB	AMB		
	comp=Z,2µm,10.5s						
SSE				LR	LR		
	comp=N,18µm,29.1s						
SSE				LR	LR		
	comp=E,41µm,29.1s						
SSE				LR	LR		
	comp=Z,39µm,20.0s						
SSE	Sheshan	27.20	308	P	P	03 39 55.4	-1.9
	comp=Z,365nm,1.0s,mb6.0						
SSE				pP	pP	03 40 24.8	-3.3
SSE				S	S	03 44 23.3	-0.1
SSE				sS		03 45 16.0	
SSE				LR	LR		
	comp=Z,39µm,20.0s						
PPR	Puerto Princes	27.31	260	⇓*i*P	P	03 40 00.6	+2.1
INCN	Inchon	27.42	325	*e*P	P	03 39 58.9	-0.3
	comp=Z,690nm,1.5s,mb6.1						
YUK	Yuzh-Kuril'sk	27.94	360	*e*P	P	03 40 04.3	+0.4
YUK				*i*		03 40 43.5	
YUK				*e*		03 44 35.5	
YUK				S		03 45 24.0	
YUK				*i*		03 46 11.0	
YUK				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.6						
YUK				pmax	pmax		
	comp=Z,5µm,1.5s,mb7.0						
YUK				pmax	pmax		
	comp=N,3µm,1.2s						
YUK				pmax	pmax		
	comp=E,4µm,1.2s						
YUK				pmax	pmax		
	comp=N,24µm,3.0s						
YUK				pmax	pmax		
	comp=Z,15µm,3.0s						
YUK				pmax	pmax		
	comp=E,22µm,2.3s						
YUK				smax			
	comp=E,14µm,12.0s						
YUK				smax			
	comp=N,17µm,15.0s						
YUK				MLR	MLR		
	comp=Z,12µm,18.0s						
YUK				MLR	MLR		
	comp=N,13µm,15.0s						
YUK				MLR	MLR		
	comp=E,9µm,19.0s						
BATP	Bataraza	28.47	259	*e*P	P	03 40 10.0	+1.1
NJ2	Nanjing	29.41	308	*e*P	P	03 40 16.1	-1.0
NJ2				AP	pP	03 40 46.1	-2.2
NJ2				XP	sP	03 41 02.1	-3.3
NJ2				PP	PP	03 41 16.8	-1.6
NJ2				S	S	03 44 58.0	-0.6
NJ2				XS		03 45 51.0	
NJ2				SCP		03 46 45.5	
NJ2				AMB	AMB		
	comp=Z,200nm,0.9s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,4µm,5.2s						
NJ2				LR	LR		
	comp=N,73µm,16.4s						
NJ2				LR	LR		
	comp=E,46µm,16.6s						
NJ2				LR	LR		
	comp=Z,181µm,19.1s						
VLA	Vladivostok	29.61	339	*e*P	P	03 40 19.0	+0.3
VLA				*i*		03 41 06.0	
VLA				*i* S	S	03 45 00.0	-1.6
VLA				pmax	pmax		
	comp=Z,1µm,6.0s						
VLA				pmax	pmax		
	comp=E,600nm,3.8s						
VLA				pmax	pmax		
	comp=N,900nm,5.0s						
VLA				pmax	pmax		
	comp=Z,2µm,7.0s						
VLA				smax			
	comp=E,14µm,13.0s						
VLA				smax			
	comp=N,4µm,9.0s						
VLA				MLR	MLR		
	comp=N,22µm,15.0s						
VLA				MLR	MLR		
	comp=E,18µm,15.0s						
VLA				MLR	MLR		
	comp=Z,28µm,15.0s						
TSM	Tawau	30.02	250	P	P	03 40 21.6	-1.1
HKC	Hong Kong	30.71	287	⇓*i*P	P	03 40 30.0	+1.3
HKC				S	S	03 45 21.0	+1.9
KKM	Kota Kinabalu	30.86	255	P	P	03 40 28.9	-1.1
YSS	Yuzh-Sakhalins	30.98	356	α *i*P	P	03 40 29.7	-1.1
YSS				*e*	pP	03 40 57.0	-5.4
YSS				pmax	pmax		
	comp=Z,400nm,1.4s,mb6.0						
YSS				pmax	pmax		
	comp=Z,900nm,5.0s						
YSS				pmax	pmax		
	comp=Z,230nm,1.0s,mb5.9						
YSS				pmax	pmax		
	comp=Z,9µm,4.0s						
YSS				pmax	pmax		
	comp=N,11µm,5.0s						
YSS				MLR	MLR		
	comp=N,7µm,19.0s						
YSS				MLR	MLR		
	comp=Z,13µm,19.0s						
YSS				MLR	MLR		
	comp=E,30µm,16.0s						
YSS	Yuzh-Sakhalins	30.98	356	*e*P	P	03 40 29.5	-1.3
	comp=E,142nm,0.9s,mb5.7						
DL2	Dalian	31.28	322	*i* PR		03 40 34.5	
DL2				AP	pP	03 41 00.4	-4.7
DL2				XP	sP	03 41 25.6	+3.4
DL2				PP	PP	03 41 40.9	-1.1
DL2				PCP	PcP	03 43 25.2	+1.0
DL2				S	S	03 45 24.6	-3.3
DL2				XS		03 46 25.7	
DL2				SCP		03 46 51.8	
DL2				PCS		03 47 06.8	
DL2				SCS	ScS	03 50 49.0	+0.8
DL2				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.7						
DL2				AMB	AMB		
	comp=Z,1µm,7.0s						
MDJ	Mudanjiang	31.73	337	P	P	03 40 36.7	-0.7
MDJ				AP	pP	03 41 04.6	-4.5
MDJ				PP	PP	03 41 49.9	+2.3
MDJ				PCP	PcP	03 43 25.2	-0.1
MDJ				XS		03 46 28.1	
MDJ				SCP		03 46 52.5	
MDJ				SCS	ScS	03 50 51.5	+1.1
MDJ				AMB	AMB		
	comp=Z,125nm,1.7s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,600nm,6.1s						
MDJ				LR	LR		
	comp=N,23µm,26.0s						
MDJ				LR	LR		
	comp=E,10µm,24.2s						
MDJ				LR	LR		
	comp=Z,29µm,30.6s						
SNY	Shenyang	32.19	328	⇓P	P	03 40 42.2	+0.8
SNY				AP	pP	03 41 10.5	-2.7
SNY				PP	PP	03 41 48.5	-5.0
SNY				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.6						
SNY				AMB	AMB		
	comp=Z,1µm,12.7s						
SNY				LR	LR		
	comp=N,11µm,12.7s						
SNY				LR	LR		
	comp=E,29µm,17.4s						
SNY				LR	LR		
	comp=Z,25µm,17.2s						
WHN	Wuhan	32.38	302	⇓P	P	03 40 44.0	+0.9
WHN				AP	pP	03 41 15.4	+0.5
WHN				AMB	AMB		
	comp=Z,550nm,0.8s,mb6.3						
WHN				AMB	AMB		
	comp=Z,4µm,12.8s						
WHN				LR	LR		
	comp=Z,26µm,17.0s						
TIA	Tai'an	32.65	314	P	P	03 40 45.6	+0.2
TIA				AP	pP	03 41 17.0	-0.3
TIA				XP	sP	03 41 37.0	+2.6
TIA				S	S	03 45 44.8	-4.6
TIA				XS		03 46 42.0	
TIA				AMB	AMB		
	comp=Z,106nm,0.8s,mb5.6						
TIA				LR	LR		
	comp=N,21µm,16.0s						
TIA				LR	LR		
	comp=E,13µm,15.0s						
TIA				LR	LR		
	comp=N,23µm,13.5s						
TIA				LR	LR		
	comp=E,8µm,22.1s						
CN2	Changchun	32.77	332	*e*P	P	03 40 45.3	-1.1
CN2				*e*AP	pP	03 41 16.9	-1.4
CN2				XP	sP	03 41 32.5	-2.9
CN2				*e*S	S	03 45 49.1	-2.0
CN2				SCP		03 46 55.3	
CN2				SCS	ScS	03 50 56.1	+0.4
CN2				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.1						
CN2				AMB	AMB		
	comp=Z,1µm,5.0s						
CN2				LR	LR		
	comp=N,30µm,17.0s						
CN2				LR	LR		
	comp=E,33µm,17.0s						
CN2				LR	LR		
	comp=Z,19µm,19.0s						
QIZ	Qiongzhong	34.61	280	⇑P	P	03 41 02.4	+0.1
QIZ				AP	pP	03 41 31.8	-2.7
QIZ				XP	sP	03 41 51.4	-0.3
QIZ				PP	PP	03 42 22.6	-1.3
QIZ				S	S	03 46 18.0	-1.8
QIZ				AMB	AMB		
	comp=Z,507nm,1.1s,mb6.1						
KLR	Kul'dur	35.13	344	*e*P	P	03 41 00.0	-6.4
KLR				*e*		03 41 45.5	
KLR				*e*		03 42 53.5	
KLR				*e*S	S	03 46 21.2	-6.2
KLR				pmax	pmax		
	comp=N,76nm,1.0s						
KLR				pmax	pmax		
	comp=E,76nm,1.0s						
KLR				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.5						
KLR				smax			
	comp=N,400nm,2.0s						
KLR				smax			
	comp=E,920nm,2.0s						
KLR				MLR	MLR		
	comp=N,16nm,18.0s						
BJI	Beijing	35.33	319	P	P	03 41 07.7	-0.4
BJI				S	S	03 46 28.1	-2.5
BJI				SCS	ScS	03 51 10.9	+1.6
BJI				AMB	AMB		
	comp=Z,4µm,4.7s						
BJI				LR	LR		
	comp=N,46µm,20.6s						
BJI				LR	LR		
	comp=E,23µm,23.7s						
BJI				LR	LR		
	comp=Z,18µm,20.4s						
BJI	Beijing	35.33	319	P	P	03 41 07.7	-0.4
	comp=Z,4.0nm,1.0s						
BJI				S	S	03 46 28.1	-2.5
BJI				SS	SS	03 49 03.9	+5.6
BJI				ScS	ScS	03 51 10.9	+1.6
BJI				LR	LR		
	comp=Z,18µm,20.4s						
SKR	Severo-Kuril's	35.53	11	*e*P	P	03 41 08.5	-1.3
SKR				*e*		03 42 32.0	
SKR				*e*S	S	03 46 34.0	+0.4
SKR				*e**SS		03 47 22.0	
SKR				pmax	pmax		
	comp=N,3µm,12.0s						
SKR				pmax	pmax		
	comp=Z,3µm,12.0s						
SKR				pmax	pmax		
	comp=N,170nm,0.8s						
SKR				pmax	pmax		
	comp=E,140nm,0.8s						
SKR				pmax	pmax		
	comp=Z,480nm,0.8s,mb6.2						
SKR				pmax	pmax		
	comp=N,7µm,12.0s						
SKR				pmax	pmax		
	comp=E,5µm,12.0s						
SKR				pmax	pmax		
	comp=Z,8µm,12.0s						
SKR				smax			
	comp=N,7µm,3.0s						
SKR				smax			
	comp=E,5µm,3.0s						
SKR				smax			
	comp=N,15µm,16.0s						
SKR				smax			
	comp=E,12µm,16.0s						
SKR				MLR	MLR		
	comp=Z,8µm,16.0s						
SKR				MLR	MLR		
	comp=N,6µm,18.0s						
SKR				MLR	MLR		
	comp=E,7µm,16.0s						
CTA	Charters Tower	35.87	180	⇑*i*P	P	03 41 11.9	-1.0
	comp=E,930nm,1.5s,mb6.2						
CTA				*e*S	S	03 46 39.4	+0.4
CTA	Charters Tower	35.87	180	⇑*i*P	P	03 41 11.9	-1.0
CTA				*e*S	S	03 46 39.4	+0.4
CTA				pmax	pmax		
	comp=Z,930nm,1.5s						
CTAO	Charters Tower	35.87	180	*e*P	P	03 41 12.0	-0.9
	comp=Z,1µm,1.3s,mb6.4						
CTAO				LR	LR		
	comp=Z,14µm,20.0s						
TIY	Taiyuan	36.66	313	PR		03 41 15.0	
TIY				S	S	03 46 46.0	-5.0
TIY				LR	LR		
	comp=N,25µm,15.0s						
TIY				LR	LR		
	comp=Z,5µm,10.0s						
WRAB	Tennant Creek	37.51	198	*c i*P	P	03 41 24.7	-2.0
WRAB	Tennant Creek	37.51	198	*e*P	P	03 41 24.5	-2.2
	comp=Z,2µm,0.9s,mb6.7						
WB2	Warramunga Arr	37.52	198	⇑*i*P	P	03 41 24.7	-2.1
WB2				*i*		03 41 28.8	

WB2				*e*S	**S**	**03 47 00.2**	**-4.0**
WRA	**Warramunga Arr**	**37.53**	**198**	*i* P	**P**	**03 41 24.7**	**-2.1**
WRA				pmax	pmax		
	comp=Z,1µm,1.1s						
XAN	**Xi'an**	**37.86**	**305**	P	**P**	**03 41 30.0**	**+0.5**
XAN				S	**S**	**03 47 05.9**	**-3.4**
XAN				AMB	AMB		
	comp=Z,259nm,1.5s,mb5.6						
XAN				LR	LR		
	comp=N,17µm,16.4s						
XAN				LR	LR		
	comp=E,17µm,17.2s						
XAN				LR	LR		
	comp=Z,25µm,17.0s						
GYA	**Guiyang**	**38.01**	**293**	⇑*i*P	**P**	**03 41 31.9**	**+1.1**
GYA				AP	pP	03 42 03.0	-0.5
GYA				XP	sP	03 42 19.0	-2.0
GYA				PP	PP	03 43 09.3	+6.6
GYA				S	**S**	**03 47 16.3**	**+4.7**
GYA				AMB	AMB		
	comp=Z,120nm,1.0s,mb5.5						
GYA				AMB	AMB		
	comp=Z,3µm,4.7s						
GYA				LR	LR		
	comp=N,7µm,18.0s						
GYA				LR	LR		
	comp=E,7µm,15.3s						
GYA				LR	LR		
	comp=Z,8µm,18.5s						
PET	**Petropavlovsk**	**38.25**	**12**	⇑*i*P	**P**	**03 41 35.5**	**+2.9**
PET				*e*		03 43 45.0	
PET				*i* S	**S**	**03 47 17.7**	**+2.7**
PET				*e*SS	SS	03 50 05.5	+2.9
PET				*e*		03 51 24.8	
PET				pmax	pmax		
	comp=Z,496nm,0.9s,mb6.1						
PET				pmax	pmax		
	comp=E,116nm,1.0s						
PET				pmax	pmax		
	comp=N,265nm,0.9s						
PET				pmax	pmax		
	comp=Z,1µm,16.2s						
PET				pmax	pmax		
	comp=N,900nm,18.1s						
PET				pmax	pmax		
	comp=Z,4µm,15.7s						
PET				pmax	pmax		
	comp=Z,304nm,1.3s,mb5.8						
PET				pmax	pmax		
	comp=Z,240nm,1.4s,mb5.6						
PET				smax			
	comp=N,17µm,9.4s						
PET				smax			
	comp=E,6µm,8.4s						
PET				smax			
	comp=N,17µm,13.0s						
PET				MLR	MLR		
	comp=Z,10µm,17.0s						
PET	**Petropavlovsk**	**38.25**	**12**	*e*P	**P**	**03 41 33.9**	**+1.3**
	comp=Z,314nm,0.8s,mb6.0						
HHC	**Hu-ho-hao-te**	**38.74**	**317**	*e*P	**P**	**03 41 37.6**	**+0.8**
HHC				AP	pP	03 42 08.1	-1.4
HHC				XP	sP	03 42 24.6	-2.4
HHC				PP	PP	03 43 13.0	+2.0
HHC				PCP	PcP	03 43 50.3	+4.4
HHC				S	**S**	**03 47 21.3**	**-1.1**
HHC				SCP		03 47 22.4	
HHC				SS	SS	03 50 08.3	-4.3
HHC				SCS	ScS	03 51 31.9	+3.4
HHC				AMB	AMB		
	comp=Z,333nm,1.7s,mb5.7						
HHC				AMB	AMB		
	comp=Z,6µm,4.9s						
HHC				LR	LR		
	comp=N,30µm,23.1s						
HHC				LR	LR		
	comp=E,28µm,24.2s						
HHC				LR	LR		
	comp=Z,20µm,17.6s						
FITZ	**Fitzroy Crossi**	**39.40**	**211**	*e*P	**P**	**03 41 39.7**	**-2.7**
	comp=Z,1µm,1.1s,mb6.5						
FITZ				*e*S	**S**	**03 47 26.0**	**-6.5**
BTO	**Baotou**	**39.66**	**315**	*e*P	**P**	**03 41 45.6**	**+1.3**
BTO				AMB	AMB		
	comp=Z,521nm,1.4s,mb6.0						
BTO				LR	LR		
	comp=N,3µm,16.7s						
BTO				LR	LR		
	comp=E,11µm,14.8s						
ASPA	**Alice Springs**	**41.17**	**197**	*e*P	**P**	**03 41 55.0**	**-1.9**
ASPA				*e*S	**S**	**03 47 56.5**	**-2.2**
ASPA				*e*SCS	ScS	03 51 47.7	+4.8
CD2	**Chengdu**	**41.27**	**299**	⇑*i*P	**P**	**03 41 58.0**	**+0.4**
CD2				AP	pP	03 42 29.1	-1.5
CD2				XP	sP	03 42 45.2	-2.8
CD2				S	**S**	**03 47 57.6**	**-2.5**
CD2				SS	SS	03 51 09.4	+5.6
CD2				AMB	AMB		
	comp=Z,3µm,3.9s						
CD2				LR	LR		
	comp=N,18µm,16.8s						
CD2				LR	LR		
	comp=Z,13µm,21.6s						
KMI	**Kunming**	**41.40**	**290**	⇓P	**P**	**03 42 01.3**	**+2.6**
KMI				AP	pP	03 42 37.0	+5.4
KMI				XP	sP	03 42 53.7	+4.6
KMI				SCP		03 47 30.9	
KMI				S	**S**	**03 48 06.0**	**+4.1**
KMI				XS		03 49 06.2	
KMI				AMB	AMB		
	comp=Z,258nm,1.1s,mb5.8						
KMI				AMB	AMB		
	comp=Z,3µm,3.4s						
KMI				LR	LR		
	comp=N,9µm,20.5s						
KMI				LR	LR		
	comp=E,7µm,23.9s						
KMI				LR	LR		
	comp=Z,15µm,42.7s						
KMI	**Kunming**	**41.40**	**290**	⇓P	**P**	**03 42 01.3**	**+2.6**
KMI				PPP	PPP	03 44 08.9	-4.4
KMI				S	**S**	**03 48 06.0**	**+4.1**
KMI				pmax	pmax		
	comp=Z,258nm,1.1s,mb5.8						
KMI				MLR	MLR		
	comp=Z,15µm,42.7s						
KMI	**Kunming**	**41.40**	**290**	⇓P	**P**	**03 42 01.3**	**+2.6**
	comp=Z,258nm,1.1s,mb5.8						
KMI				pP	pP	03 42 37.0	+5.4
KMI				sP	sP	03 42 53.7	+4.6
KMI				PPP	PPP	03 44 08.9	-4.4
KMI				ScP		03 47 30.9	
KMI				S	**S**	**03 48 06.0**	**+4.1**
KMI				sS		03 49 06.2	
KMI				LR	LR		
	comp=Z,15µm,42.7s						
KKTK	**Khon Kaen**	**41.45**	**277**	P	**P**	**03 42 00.0**	**+0.8**
LZH	**Lanzhou**	**42.45**	**306**	⇓P	**P**	**03 42 08.7**	**+1.4**
LZH				AP	pP	03 42 40.1	-0.2
LZH				XP	sP	03 42 56.3	-1.4
LZH				PP	PP	03 43 51.7	+1.5
LZH				S	**S**	**03 48 18.0**	**+0.6**
LZH				XS		03 49 12.5	
LZH				SS	SS	03 51 24.5	-0.4
LZH				AMB	AMB		
	comp=Z,954nm,1.2s,mb6.3						
LZH				AMB	AMB		
	comp=Z,7µm,6.8s						
LZH				LR	LR		
	comp=N,27µm,14.5s						
LZH				LR	LR		
	comp=Z,53µm,17.8s						
LZH	**Lanzhou**	**42.45**	**306**	⇓P	**P**	**03 42 08.7**	**+1.4**
	comp=Z,954nm,1.2s,mb6.3						
LZH				pP	pP	03 42 40.1	-0.2
LZH				sP	sP	03 42 56.3	-1.4
LZH				PP	PP	03 43 51.7	+1.5
LZH				S	**S**	**03 48 18.0**	**+0.6**
LZH				sS		03 49 12.5	
LZH				SS	SS	03 51 24.5	-0.4
LZH				LR	LR		
	comp=Z,53µm,17.8s						
FX1	**Attu Island--F**	**42.55**	**24**	*e*P	**P**	**03 42 08.9**	**+1.1**
NOUC	**Port Laguerre**	**42.76**	**152**	*e*P	**P**	**03 42 09.8**	**-0.1**
SMY	**Shemya**	**42.81**	**25**	P	**P**	**03 42 13.3**	**+3.4**
SMY				pmax	pmax		
	comp=Z,2µm,1.1s,mb6.7						
SMY	**Shemya**	**42.81**	**25**	*e*P	**P**	**03 42 11.1**	**+1.1**
	comp=Z,2µm,1.1s,mb6.7						
MA2	**Magadan**	**43.64**	**3**	c*e*P	**P**	**03 42 16.9**	**+0.4**
MA2				*i* S	**S**	**03 48 35.0**	**+0.6**
MA2				*e**SS		03 49 31.7	
MA2				*e*SS	SS	03 51 50.7	+4.3
MA2				*e*SSS	SSS	03 52 48.3	0.0
MA2				pmax	pmax		
	comp=N,100nm,0.9s						
MA2				pmax	pmax		
	comp=Z,300nm,0.9s,mb5.9						
MA2	**Magadan**	**43.64**	**3**	*e*P	**P**	**03 42 16.3**	**-0.2**
	comp=Z,215nm,0.7s,mb5.9						
CLNS	**Chul'man**	**43.79**	**343**	*e*P	**P**	**03 42 17.8**	**0.0**
CLNS				*e*S	**S**	**03 48 34.3**	**-2.2**
CLNS				pmax	pmax		
	comp=Z,95nm,1.0s,mb5.4						
CLNS				pmax	pmax		
	comp=N,46nm,0.9s						
CLNS				pmax	pmax		
	comp=E,20nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,125nm,1.0s,mb5.5						
CLNS				pmax	pmax		
	comp=N,197nm,1.1s						
CLNS				pmax	pmax		
	comp=E,82nm,1.0s						
CLNS				smax			
	comp=N,98nm,1.4s						
CLNS				smax			
	comp=Z,51nm,1.0s						
CLNS				smax			
	comp=E,49nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,14µm,17.0s						
CLNS				MLR	MLR		
	comp=N,8µm,15.0s						
CLNS				MLR	MLR		
	comp=E,1µm,21.0s						
CHRT	**Chiangrai**	**44.07**	**282**	⇓P	**P**	**03 42 21.5**	**+1.0**
	comp=E,3µm,0.8s,mb7.0						
NST	**Nakhon Sawan**	**44.09**	**276**	⇑P	**P**	**03 42 21.5**	**+0.8**
	comp=E,192nm,0.5s,mb6.0						
KGM	**Kluang**	**44.30**	**256**	P	**P**	**03 42 22.7**	**+0.3**
NNT	**Nongplab**	**44.93**	**272**	P	**P**	**03 42 29.0**	**+1.5**
CM31	**Chiang Mai Arr**	**44.95**	**280**	*e*P	**P**	**03 42 26.4**	**-1.2**
	comp=E,769nm,0.9s,mb6.3						
CMAR	**Chiang Mai Arr**	**44.95**	**280**	*i* P	**P**	**03 42 28.0**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,611nm,1.0s						
MBWA	**Marble Bar**	**45.06**	**216**	*e*P	**P**	**03 42 25.8**	**-2.6**
	comp=Z,6.4nm,1.5s						
ULN	**Ulaanbaatar**	**45.09**	**323**	*e*P	**P**	**03 42 27.5**	**-0.8**
ULN				pmax	pmax		
	comp=Z,271nm,1.1s,mb5.8						
ULN	**Ulaanbaatar**	**45.09**	**323**	*e*P	**P**	**03 42 27.5**	**-0.9**
	comp=Z,271nm,1.1s,mb5.8						
SNG	**Songkhla**	**45.27**	**264**	P	**P**	**03 42 31.0**	**+0.9**
	comp=Z,260nm,0.9s,mb5.9						
IPM	**Ipoh**	**45.62**	**261**	P	**P**	**03 42 33.4**	**+0.5**
KIWB	**Kanaga Island**	**46.17**	**31**	*e*P	**P**	**03 42 36.9**	**+0.1**
GTA	**Gaotai**	**46.47**	**310**	P	**P**	**03 42 40.2**	**+0.9**
GTA				AP	pP	03 43 11.6	-1.2
GTA				XP	sP	03 43 28.7	-0.8
GTA				PCP	PcP	03 44 13.7	+1.9
GTA				PP	PP	03 44 30.0	-0.1
GTA				SCP		03 47 51.0	
GTA				S	**S**	**03 49 16.1**	**+1.0**
GTA				XS		03 50 14.8	
GTA				SCS	ScS	03 52 16.9	+0.9
GTA				SS	SS	03 52 36.3	-1.0
GTA				AMB	AMB		
	comp=Z,477nm,1.4s,mb5.9						
GTA				AMB	AMB		
	comp=Z,5µm,4.2s						
GTA				LR	LR		
	comp=N,30µm,20.9s						
GTA				LR	LR		
	comp=E,12µm,22.4s						
GTA				LR	LR		
	comp=Z,21µm,23.6s						
GSTR	**Great Sitkin T**	**46.86**	**31**	*e*P	**P**	**03 42 43.2**	**+1.1**
SEY	**Seymchan**	**47.09**	**4**	*e*P	**P**	**03 42 38.6**	**-5.2**
SEY						03 44 29.2	
SEY				*e*S	**S**	**03 49 14.9**	**-8.5**
SEY				*SS		03 50 10.2	
SEY				*e*SS	SS	03 52 45.5	-1.6
SEY				pmax	pmax		
	comp=Z,630nm,0.9s,mb6.2						
SEY				pmax	pmax		
	comp=N,500nm,1.2s						
SEY				smax			
	comp=N,16µm,8.5s						
SEY				smax			
	comp=E,3µm,7.2s						
YAK	**Yakutsk**	**47.41**	**350**	*e*P	**P**	**03 42 45.7**	**-0.6**
YAK				*e*S	**S**	**03 49 23.4**	**-4.6**
YAK				*e*		03 52 19.2	
YAK				*e*SS	SS	03 52 47.6	-5.3
YAK				pmax	pmax		
	comp=N,100nm,0.9s						
YAK				pmax	pmax		
	comp=Z,344nm,0.9s,mb6.0						
YAK				pmax	pmax		
	comp=E,45nm,1.1s						
YAK				pmax	pmax		
	comp=Z,98nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=N,78nm,1.3s						
YAK				pmax	pmax		
	comp=E,25nm,1.0s						
YAK				smax			
	comp=E,238nm,1.1s						
YAK				smax			
	comp=N,214nm,1.0s						
YAK				smax			
	comp=Z,98nm,1.0s						
YAK				MLR	MLR		
	comp=Z,5µm,17.0s						
YAK				MLR	MLR		
	comp=N,6µm,18.0s						
YAK				MLR	MLR		
	comp=E,2µm,12.0s						
YAK	**Yakutsk**	**47.41**	**350**	*e*P	**P**	**03 42 43.6**	**-2.8**
	comp=E,732nm,0.8s,mb6.4						
STKA	**Stephens Creek**	**47.80**	**185**	*e*P	**P**	**03 42 46.6**	**-3.1**
	comp=E,806nm,1.0s,mb6.3						
STKA				*e*PP	rx	03 45 14.3	
BOD	**Bodaibo**	**48.11**	**338**	*e*P	**P**	**03 42 51.1**	**-0.7**
BOD				pmax	pmax		
	comp=Z,236nm,2.0s,mb5.5						
ZAK	**Zakamensk**	**48.51**	**325**	⇓*e*P	**P**	**03 42 55.2**	**+0.2**
ZAK				*e*	pP	03 43 28.3	-0.4
ZAK				pmax	pmax		
	comp=Z,91nm,1.2s,mb5.3						
ZAK				pmax	pmax		
	comp=Z,222nm,1.1s,mb5.7						
IRK	**Irkutsk**	**48.92**	**327**	*e*P	**P**	**03 42 58.6**	**+0.5**
IRK				*e*	pP	03 43 31.7	-0.2
IRK				*e*		03 49 51.0	
IRK				pmax	pmax		
	comp=Z,434nm,2.2s,mb5.7						
TLY	**Talaya**	**48.96**	**326**	P	**P**	**03 42 58.0**	**-0.4**
	comp=Z,1µm,0.8s,mb6.6						
TLY	**Talaya**	**48.96**	**326**	*d i*P	**P**	**03 42 58.3**	**-0.1**
TLY				*e*	pP	03 43 31.5	-0.7
TLY				*e*		03 44 48.9	
TLY				*e*S	**S**	**03 49 41.5**	**-8.3**
TLY				*e*		03 50 32.2	
TLY				*e*SS	SS	03 53 21.1	+2.1
TLY				pmax	pmax		
	comp=Z,251nm,0.9s,mb5.8						
TLY	**Talaya**	**48.96**	**326**	*e*P	**P**	**03 42 58.1**	**-0.3**
	comp=Z,181nm,0.8s,mb5.8						
IMP	**Imphal**	**49.37**	**289**	*e*	**P**	**03 43 01.0**	**-0.9**
FORT	**Forrest**	**49.62**	**200**	⇑*i*P	**P**	**03 43 01.7**	**-2.1**
	comp=Z,4µm,1.2s,mb6.9						
FORT				*e*S	**S**	**03 50 00.7**	**+1.4**
RIV	**Riverview**	**49.79**	**174**	⇓*i*P	**P**	**03 43 06.0**	**+1.0**
MOY	**Mondy**	**50.39**	**325**	*e*P	**P**	**03 43 11.6**	**+2.3**
MOY				*e*	pP	03 43 43.0	-0.3
MOY				pmax	pmax		
	comp=Z,351nm,2.4s,mb5.6						
NIKO	**Nikolski**	**51.05**	**33**	*e*P	**P**	**03 43 13.6**	**-0.6**
CNB	**Canberra Magne**	**51.13**	**177**	⇓*i*P	**P**	**03 43 14.4**	**-0.8**
	comp=Z,11µm,0.9s						
AGT	**Agartala**	**51.84**	**288**	⇑*i*	**P**	**03 43 24.0**	**+3.4**
AGT				*i*		03 46 56.0	
LSA	**Lhasa**	**51.95**	**295**	P	**P**	**03 43 21.8**	**+0.4**
LSA				S	**S**	**03 50 31.1**	**-0.1**
LSA				LR	LR		
	comp=N,6µm,20.1s						
LSA				LR	LR		
	comp=E,8µm,21.5s						
LSA				LR	LR		
	comp=Z,10µm,20.4s						
UNV	**Unalaska Valle**	**52.70**	**33**	*e*P	**P**	**03 43 25.1**	**-1.5**
	comp=Z,5µm,1.1s,mb7.2						
KIP	**Kipapa**	**53.04**	**75**	*e*P	**P**	**03 43 30.6**	**+1.0**
KIP				pmax	pmax		
	comp=Z,3µm,1.4s,mb6.9						
KIP	**Kipapa**	**53.04**	**75**	*e*P	**P**	**03 43 30.6**	**+1.1**
	comp=Z,3µm,1.4s,mb6.9						
AKUT	**Akutan**	**53.22**	**33**	*e*P	**P**	**03 43 32.3**	**+1.9**
	comp=Z,3µm,1.0s,mb6.9						
TOO	**Toolangi**	**53.29**	**181**	*e*P	**P**	**03 43 30.7**	**-0.5**
	comp=Z,22nm,0.8s						
TOO				*i* S	**S**	**03 50 54.4**	**+5.1**
TOO	**Toolangi**	**53.29**	**181**	*e*P	**P**	**03 43 30.7**	**-0.5**
TOO				*i* S	**S**	**03 50 54.4**	**+5.1**
TOO				pmax	pmax		
	comp=Z,22nm,0.8s						
BILL	**Bilibino**	**53.61**	**9**	*d i*P	**P**	**03 43 31.8**	**-1.3**
BILL				pmax	pmax		
	comp=Z,520nm,0.8s,mb6.3						
BILL	**Bilibino**	**53.61**	**9**	*e*P	**P**	**03 43 31.9**	**-1.2**
	comp=Z,736nm,1.0s,mb6.4						
GTK	**Gangtok**	**54.14**	**292**	*e*P	**P**	**03 43 34.0**	**-3.5**
SLGI	**Shiliguri**	**54.33**	**292**	*e*P	**P**	**03 43 39.2**	**+0.3**
SLGI				*e*	pP	03 44 16.5	+3.2
KLBR	**Kellerberrin**	**54.56**	**210**	*e*P	**P**	**03 43 37.5**	**-3.0**
	comp=Z,3µm,0.7s,mb7.1						
KLBR				*e*S	**S**	**03 51 04.0**	**-2.3**
CAL	**Calcutta**	**54.59**	**286**	*e*	**P**	**03 43 43.6**	**+2.7**
CAL				*e*S	**S**	**03 51 07.5**	**+0.6**
HKL	**Haleakala**	**54.73**	**76**	*e*P	**P**	**03 43 43.1**	**+1.2**
KKH	**Kailua Kona**	**55.06**	**77**	*e*P	**P**	**03 43 46.3**	**+1.9**
POHA	**Pohakuloa**	**55.51**	**77**	*e*P	**P**	**03 43 48.1**	**+0.5**
	comp=Z,3µm,1.0s,mb7.1						
PLL	**Puu Ulaula**	**55.60**	**77**	*e*P	**P**	**03 43 51.1**	**+2.8**
MUN	**Mundaring**	**55.62**	**211**	*e*P	**P**	**03 43 45.1**	**-3.2**
	comp=Z,341nm,1.0s,mb6.1						
MUN	**Mundaring**	**55.62**	**211**	*e*P	**P**	**03 43 45.1**	**-3.2**
MUN				pmax	pmax		
	comp=Z,341nm,1.0s,mb6.1						
NWAO	**Narrogin (SRO)**	**55.91**	**209**	P	**P**	**03 43 47.9**	**-2.4**
NWAO				pmax	pmax		
	comp=Z,350nm,0.9s						
NWAO	**Narrogin (SRO)**	**55.91**	**209**	*e*P	**P**	**03 43 47.2**	**-3.1**
	comp=Z,345nm,0.8s,mb6.2						
COCO	**West Island**	**56.16**	**243**	*e*P	**P**	**03 43 50.6**	**-1.7**
	comp=Z,646nm,1.0s,mb6.4						
JIRN	**Jiri**	**56.29**	**293**	*e*P	**P**	**03 43 52.9**	**-0.2**
	comp=Z,2µm,0.9s,mb6.9						
WMQ	**Urumqi**	**56.33**	**312**	P	**P**	**03 43 53.6**	**+0.4**
WMQ				AP	pP	03 44 26.6	-1.2
WMQ				XP	sP	03 44 42.4	-1.7
WMQ				PP	PP	03 46 02.0	+0.4
WMQ				S	**S**	**03 51 32.0**	**+2.2**
WMQ				SCS	ScS	03 53 25.0	+1.4
WMQ				SS	SS	03 55 19.0	-0.4
WMQ				AMB	AMB		
	comp=Z,1µm,1.2s,mb6.6						
WMQ				AMB	AMB		
	comp=Z,2µm,9.0s						
WMQ				LR	LR		
	comp=N,25µm,22.0s						
WMQ				LR	LR		
	comp=E,14µm,21.0s						
WMQ				LR	LR		
	comp=Z,14µm,20.0s						
SDPT	**Sand Point**	**56.51**	**33**	*e*P	**P**	**03 43 54.0**	**-0.3**
	comp=Z,3µm,0.8s,mb7.1						
BOK	**Bokaro**	**56.75**	**288**	⇓*i*P	**P**	**03 43 55.8**	**-0.5**
BOK				*i*	pP	03 44 29.0	-2.0
PKI	**Pulchoki**	**56.98**	**293**	*e*P	**P**	**03 43 56.9**	**-1.0**
	comp=Z,3µm,1.5s,mb6.9						
KKN	**Kakani**	**57.09**	**293**	*e*P	**P**	**03 43 57.8**	**-0.9**
	comp=Z,2µm,1.0s,mb6.8						
DMN	**Daman**	**57.25**	**293**	*e*P	**P**	**03 43 58.9**	**-0.9**
	comp=Z,1µm,0.8s,mb6.8						
OUZ	**Omahuta**	**57.26**	**153**	PN	**P**	**03 44 01.9**	**+2.1**
OUZ	**Omahuta**	**57.26**	**153**	PN	**P**	**03 44 01.9**	**+2.1**
GKN	**Gorkha**	**57.66**	**293**	*e*P	**P**	**03 44 01.8**	**-0.8**
	comp=Z,3µm,1.1s,mb7.0						
TNA	**Tin City**	**58.20**	**21**	*e*P	**P**	**03 44 04.8**	**-1.1**
	comp=Z,140nm,0.3s,mb6.3						
KOLN	**Koldanda**	**58.58**	**293**	*e*P	**P**	**03 44 08.2**	**-0.9**
	comp=Z,2µm,0.9s,mb6.9						
TAU	**Tasmania Unive**	**58.63**	**179**	*e*P	**P**	**03 44 08.6**	**-0.6**
TAU				pmax	pmax		
	comp=Z,526nm,0.8s,mb6.4						
TAU	**Tasmania Unive**	**58.63**	**179**	*e*P	**P**	**03 44 08.6**	**-0.7**
	comp=Z,526nm,0.8s,mb6.4						
VIS	**Vishakhapatnam**	**59.79**	**281**	*i* P	**P**	**03 44 14.5**	**-3.0**
VIS				*i*		03 52 17.5	
ALBI	**Allahabad**	**60.34**	**290**	*e*P	**P**	**03 44 18.7**	**-2.5**
BLSP	**Bilaspur**	**60.34**	**287**	*i* P	**P**	**03 44 20.9**	**-0.3**
BLSP				*i*	pP	03 44 56.7	+0.3
TGRZ	**Tauranga**	**60.53**	**153**	*e*P	**P**	**03 44 22.1**	**-0.2**
TGRZ	**Tauranga**	**60.53**	**153**	PN	**P**	**03 44 23.6**	**+1.3**
TGRZ	**Tauranga**	**60.53**	**153**	PN	**P**	**03 44 23.6**	**+1.3**
MKAR	**Makanchi Array**	**60.57**	**315**	*e*P	**P**	**03 44 21.6**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,215nm,0.6s						
MKAR	**Makanchi Array**	**60.57**	**315**	*i* P	**P**	**03 44 21.6**	**-0.9**
MKAR				*i* S	**S**	**03 52 27.0**	**+2.3**
HIZ	**Hauiti**	**60.59**	**154**	P	**P**	**03 44 24.4**	**+1.7**
HIZ	**Hauiti**	**60.59**	**154**	PN	**P**	**03 44 24.4**	**+1.8**
HIZ	**Hauiti**	**60.59**	**154**	PN	**P**	**03 44 24.4**	**+1.8**
LIRZ	**Lichensteins R**	**60.81**	**153**	*e*P	**P**	**03 44 24.0**	**-0.2**
LIRZ	**Lichensteins R**	**60.81**	**153**	PN	**P**	**03 44 27.0**	**+2.8**
LIRZ	**Lichensteins R**	**60.81**	**153**	PN	**P**	**03 44 27.0**	**+2.8**
MARZ	**Manawahe**	**60.93**	**153**	*e*P	**P**	**03 44 26.3**	**+1.3**
MARZ	**Manawahe**	**60.93**	**153**	PN	**P**	**03 44 26.3**	**+1.3**
MARZ	**Manawahe**	**60.93**	**153**	PN	**P**	**03 44 26.3**	**+1.3**
SVW2	**Sparrevohn**	**61.02**	**28**	*e*P	**P**	**03 44 25.0**	**-0.3**
TAZ	**Tarawera**	**61.06**	**153**	*e*P	**P**	**03 44 27.6**	**+1.7**
TAZ	**Tarawera**	**61.06**	**153**	PN	**P**	**03 44 27.3**	**+1.4**
TAZ	**Tarawera**	**61.06**	**153**	PN	**P**	**03 44 27.3**	**+1.4**
PATZ	**Paeroa**	**61.07**	**153**	*e*P	**P**	**03 44 26.5**	**+0.5**
PATZ	**Paeroa**	**61.07**	**153**	PN	**P**	**03 44 26.5**	**+0.5**
PATZ	**Paeroa**	**61.07**	**153**	PN	**P**	**03 44 26.5**	**+0.5**
MGZ	**Maungaku**	**61.28**	**154**	*e*P	**P**	**03 44 26.0**	**-1.4**
MGZ	**Maungaku**	**61.28**	**154**	PN	**P**	**03 44 26.0**	**-1.4**
MGZ	**Maungaku**	**61.28**	**154**	PN	**P**	**03 44 26.0**	**-1.4**
URZ	**Urewera**	**61.34**	**152**	*e*P	**P**	**03 44 26.7**	**-1.1**
URZ	**Urewera**	**61.34**	**152**	*e*PN	**P**	**03 44 25.3**	**-2.5**
URZ	**Urewera**	**61.34**	**152**	*e*PN	**P**	**03 44 25.3**	**-2.5**
KDAK	**Kodiak Island**	**61.44**	**32**	*e*P	**P**	**03 44 29.2**	**+1.0**
LGTI	**Lohaghat**	**61.45**	**295**	*e*P	**P**	**03 44 29.5**	**+0.9**
CNZ	**Chateau**	**61.45**	**154**	P	**P**	**03 44 29.2**	**+0.7**
CNZ	**Chateau**	**61.45**	**154**	PN	**P**	**03 44 29.2**	**+0.7**
CNZ	**Chateau**	**61.45**	**154**	PN	**P**	**03 44 29.2**	**+0.7**
NGZ	**Ngauruhoe**	**61.45**	**154**	PN	**P**	**03 44 29.1**	**+0.5**
NGZ	**Ngauruhoe**	**61.45**	**154**	PN	**P**	**03 44 29.1**	**+0.5**
NVS	**Novosibirsk**	**61.46**	**324**	⇓*i*P	**P**	**03 44 27.3**	**-1.1**
NVS				*i* *PP	pP	03 45 01.0	-2.6
NVS				*i* S	**S**	**03 52 34.3**	**-1.5**
NVS				pmax	pmax		
	comp=Z,759nm,0.9s,mb6.5						
NVS				pmax	pmax		
	comp=N,183nm,0.9s						
NVS				pmax	pmax		
	comp=E,725nm,1.0s						
NVS				smax			
	comp=N,1µm,1.8s						
NVS				smax			
	comp=E,474nm,1.6s						
PTH	**Pithoragarh**	**61.47**	**295**	*e*	**P**	**03 44 43.0**	**+14**
PTH				*e*		03 53 02.0	
OTVZ	**Oturere**	**61.47**	**154**	PN	**P**	**03 44 29.5**	**+0.8**
OTVZ	**Oturere**	**61.47**	**154**	PN	**P**	**03 44 29.5**	**+0.8**
TUVZ	**Tukino**	**61.55**	**154**	P	**P**	**03 44 31.8**	**+2.6**
TUVZ	**Tukino**	**61.55**	**154**	PN	**P**	**03 44 30.4**	**+1.2**
TUVZ	**Tukino**	**61.55**	**154**	PN	**P**	**03 44 30.4**	**+1.2**
MWZ	**Matawai**	**61.59**	**152**	*e*P	**P**	**03 44 28.6**	**-0.9**

MWZ	Matawai	61.59	152	PN	P	03 44 28.6	-0.9
MWZ	Matawai	61.59	152	PN	P	03 44 28.6	-0.9
QRZ	Quartz Range	61.66	157	eP	P	03 44 29.7	-0.2
QRZ	Quartz Range	61.66	157	PN	P	03 44 29.7	-0.1
QRZ	Quartz Range	61.66	157	PN	P	03 44 29.7	-0.1
PUZ	Puketiti	61.71	151	eP	P	03 44 30.1	-0.2
PUZ	Puketiti	61.71	151	PN	P	03 44 29.1	-1.2
PUZ	Puketiti	61.71	151	PN	P	03 44 29.1	-1.2
BKZ	Black Stump Fm	61.83	153	eP	P	03 44 30.4	-0.6
BKZ	Black Stump Fm	61.83	153	PN	P	03 44 30.4	-0.7
BKZ	Black Stump Fm	61.83	153	PN	P	03 44 30.4	-0.7
JOSI	Joshimath	61.99	296	eP	P	03 44 27.4	-4.8
RSO	Redoubt South	62.13	29	eP	P	03 44 31.2	-1.5
NNZ	Nelson	62.31	157	eP	P	03 44 32.5	-1.7
NNZ	Nelson	62.31	157	PN	P	03 44 32.5	-1.7
NNZ	Nelson	62.31	157	PN	P	03 44 32.5	-1.7
THZ	Tophouse	62.61	158	eP	P	03 44 34.7	-1.5
THZ	Tophouse	62.61	158	PN	P	03 44 34.7	-1.5
THZ	Tophouse	62.61	158	PN	P	03 44 34.7	-1.5
SPU	Mount Spurr	62.67	29	eP	P	03 44 36.2	-0.1
MRZ	Mangatainoka R	62.70	155	eP	P	03 44 35.6	-1.2
MRZ	Mangatainoka R	62.70	155	PN	P	03 44 35.6	-1.2
MRZ	Mangatainoka R	62.70	155	PN	P	03 44 35.6	-1.2
WVZ	Waitaha Valley	63.01	160	eP	P	03 44 37.7	-1.1
WVZ	Waitaha Valley	63.01	160	PN	P	03 44 36.4	-2.4
WVZ	Waitaha Valley	63.01	160	PN	P	03 44 36.4	-2.4
KLP	Kalpa	63.06	298	eP	P	03 44 40.2	+0.9
KLP				e		03 44 43.6	
	comp=Z,961nm,1.0s						
FOZ	Fox Glacier	63.11	161	PN	P	03 44 37.6	-1.9
FOZ	Fox Glacier	63.11	161	PN	P	03 44 37.6	-1.9
PAWZ	Paruwai Farm	63.25	156	PN	P	03 44 39.1	-1.3
PAWZ	Paruwai Farm	63.25	156	PN	P	03 44 39.1	-1.3
JHNI	Jhansi	63.27	291	⇑iP	P	03 44 39.0	-1.7
JHNI				e	pP	03 45 15.0	-1.1
LTZ	Lake Taylor	63.27	159	eP	P	03 44 39.5	-1.0
LTZ	Lake Taylor	63.27	159	PN	P	03 44 39.5	-1.0
LTZ	Lake Taylor	63.27	159	PN	P	03 44 39.5	-1.0
JCZ	Jackson Bay	63.29	162	eP	P	03 44 40.3	-0.3
JCZ	Jackson Bay	63.29	162	PN	P	03 44 40.3	-0.4
JCZ	Jackson Bay	63.29	162	PN	P	03 44 40.3	-0.4
DDI	Dehra Dun	63.30	296	eP	P	03 44 40.5	-0.4
DDI				e		03 52 32.0	
NGP	Nagpur	63.31	286	eP	P	03 44 40.5	-0.5
	comp=Z,779nm,1.5s,mb6.3						
NGP				eS	S	03 53 00.6	+1.2
SLKM	Skilak Lake	63.34	30	eP	P	03 44 39.3	-1.4
KHZ	Kahutara	63.41	158	eP	P	03 44 38.2	-3.3
KHZ	Kahutara	63.41	158	PN	P	03 44 37.8	-3.6
KHZ	Kahutara	63.41	158	PN	P	03 44 37.8	-3.6
KURK	Kurchatov	63.50	319	eP	P	03 44 39.9	-2.0
KURK				pmax	pmax		
	comp=Z,3µm,1.0s,mb7.1						
KURK	Kurchatov	63.50	319	eP	P	03 44 39.9	-1.9
	comp=Z,3µm,1.0s,mb7.1						
MDRS	Chennai	63.52	277	⇑eP	P	03 44 41.0	-1.6
MDRS				i	pP	03 45 13.0	-5.1
MDRS				eS	S	03 53 04.0	+1.7
MDRS				e		03 58 18.0	
FIB	Fire Island	63.54	29	eP	P	03 44 41.6	-0.4
FIB	Fire Island	63.54	29	eP	P	03 44 40.5	-1.5
MSZ	Milford Sound	63.59	163	PN	P	03 44 41.9	-0.7
MSZ	Milford Sound	63.59	163	PN	P	03 44 41.9	-0.7
IMA	Indian Mountai	63.60	23	eP	P	03 44 43.1	+0.8
IMA				pmax	pmax		
	comp=Z,696nm,1.1s,mb6.4						
IMA	Indian Mountai	63.60	23	eP	P	03 44 43.1	+0.8
	comp=Z,696nm,1.1s,mb6.4						
AGRA	Agra	63.63	293	eP	P	03 44 40.0	-3.1
RPZ	Rata Peaks	63.69	160	eP	P	03 44 40.4	-2.8
LBZ	Lake Benmore	64.01	161	eP	P	03 44 44.5	-0.8
LBZ	Lake Benmore	64.01	161	PN	P	03 44 43.2	-2.1
LBZ	Lake Benmore	64.01	161	PN	P	03 44 43.2	-2.1
SMLA	Simla	64.01	297	iP	P	03 44 58.4	+13
	comp=Z,465nm,0.9s,mb6.3						
SMLA				iS	S	03 53 24.1	+16
AAA	Alma-Ata	64.03	311	iP	P	03 44 47.0	+1.5
AAA				iS	S	03 53 12.0	+3.8
AAA				pmax	pmax		
	comp=Z,4µm,8.0s						
AAA				smax			
	comp=N,6µm,8.0s						
DCZ	Deep Cove	64.12	164	PN	P	03 44 44.7	-1.3
DCZ	Deep Cove	64.12	164	PN	P	03 44 44.7	-1.3
PMR	Palmer	64.14	29	eP	P	03 44 44.1	-1.7
PMR				pmax	pmax		
	comp=Z,2µm,1.4s,mb6.7						
PMR	Palmer	64.14	29	eP	P	03 44 44.1	-1.7
	comp=Z,2µm,1.4s,mb6.7						
NDI	New Delhi	64.14	294	eP	P	03 44 44.0	-2.5
NDI				eS	S	03 53 09.0	-0.8
SDNR	Sundarnagar	64.16	298	eP	P	03 44 48.2	+1.7
MQZ	McQueen's Vall	64.22	159	eP	P	03 44 46.5	-0.2
MQZ	McQueen's Vall	64.22	159	PN	P	03 44 46.5	-0.2
MQZ	McQueen's Vall	64.22	159	PN	P	03 44 46.5	-0.2
AYAN	Aya Nagar	64.24	294	eP	P	03 44 43.8	-3.3
SONA	Sohna	64.30	294	eP	P	03 44 47.1	-0.4
SONA				e		03 44 53.6	
	comp=Z,487nm,0.9s						
HYB	Hyderabad	64.34	282	eP	P	03 44 46.5	-1.4
HYB				e	pP	03 45 22.0	-1.4
HYB				eS	S	03 53 12.0	-0.3
HYB				pmax	pmax		
	comp=Z,510nm,1.0s,mb6.3						
HYB	Hyderabad	64.34	282	eP	P	03 44 46.5	-1.4
	comp=Z,510nm,1.0s,mb6.3						
HYB				e	pP	03 45 22.0	-1.4
HYB				eS	S	03 53 12.0	-0.3
HYB	Hyderabad	64.34	282	iP	P	03 44 46.5	-1.4
	comp=Z,510nm,1.0s,mb6.3						
HYB				ePcP	PcP	03 45 13.5	-7.4
HYB				epP	pP	03 45 20.0	-3.4
HYB				esP	sP	03 45 36.5	-3.0
HYB				e		03 45 42.0	
HYB				ePP	PP	03 47 10.0	-2.7
HYB				eS	S	03 53 12.0	-0.3
HYB				ePKPPKP		04 13 36.0	
HYB				LR	LR	04 14 40.0	
	comp=Z,15nm,10.0s						
PALK	Pallekele	64.37	270	P	P	03 44 48.9	+0.7
	comp=Z,2µm,1.1s,mb6.9,SNR=82						
PALK	Pallekele	64.37	270	eP	P	03 44 46.4	-1.8
	comp=Z,410nm,1.0s,mb6.2						
BHGR	Bahadurgarh	64.39	294	eP	P	03 44 43.7	-4.4
ULHL	Ulahol	64.52	309	P	P	03 44 50.2	+1.5
	SNR=20						
BHPL	Bhopal	64.53	288	⇓iP	P	03 44 48.7	-0.4
SML	Sawmill	64.56	29	eP	P	03 44 47.4	-1.2
BHK	Bhakra	64.63	298	eP	P	03 44 50.6	+1.0
BHK				eS	S	03 53 17.0	+1.3
KSH	Kashi	64.70	306	PR		03 44 52.1	
KSH				eAP	pP	03 45 25.0	-0.5
KSH				eXP	sP	03 45 41.3	-0.3
KSH				ePP	PP	03 47 17.1	+1.5
KSH				eSCP		03 49 11.0	
KSH				ePCS		03 49 26.3	
KSH				eS	S	03 53 18.0	+1.5
KSH				eXS		03 54 17.3	
KSH				eSCS	ScS	03 54 28.3	+2.2
KSH				eSS	SS	03 57 34.0	+2.1
KSH				AMB	AMB		
	comp=Z,4µm,3.1s						
KSH				LR	LR		
	comp=N,20µm,22.6s						
KSH				LR	LR		
	comp=E,13µm,18.7s						
ODZ	Otahua Downs	64.74	161	eP	P	03 44 49.4	-0.7
ODZ	Otahua Downs	64.74	161	PN	P	03 44 49.4	-0.7
ODZ	Otahua Downs	64.74	161	PN	P	03 44 49.4	-0.7
MCK	McKinley	64.78	26	eP	P	03 44 49.0	-1.0
MCK				pmax	pmax		
	comp=Z,144nm,0.3s,mb6.3						
MCK	McKinley	64.78	26	eP	P	03 44 49.0	-1.0
	comp=Z,144nm,0.3s,mb6.3						
RTK	Rohtak	64.82	295	eP	P	03 44 50.2	-0.6
PONG	Pong	64.99	298	eP	P	03 44 52.0	+0.1
PONG				e		03 53 26.0	
TKM2	Tokmak 2	65.01	310	P	P	03 44 53.0	+1.1
	SNR=155						
THN	Thein Dam	65.16	299	eP	P	03 44 49.9	-3.1
THN				e		03 53 15.6	
TUZ	Tuapeka	65.26	162	eP	P	03 44 52.8	-0.6
TUZ	Tuapeka	65.26	162	PN	P	03 44 52.8	-0.6
TUZ	Tuapeka	65.26	162	PN	P	03 44 52.8	-0.6
KZA	Kyzart	65.26	309	P	P	03 44 54.1	+0.6
	SNR=214						
KHET	Khetri	65.44	294	eP	P	03 44 53.0	-1.8
KHET				e		03 44 57.7	
	comp=Z,664nm,0.7s						
KBK	Karagaybulak	65.49	310	P	P	03 44 55.8	+0.9
	SNR=381						
EYAK	Cordova Ski Ar	65.51	30	eP	P	03 44 54.0	-0.7
COLA	College	65.54	25	iP	P	03 44 54.1	-0.8
COLA	College	65.54	25	eP	P	03 44 54.4	-0.5
	comp=Z,942nm,1.2s,mb6.5						
DIV	Divide	65.61	30	eP	P	03 44 54.4	-1.0
	comp=Z,43nm,0.8s,mb5.3						
CHMS	Chumysh	65.64	310	P	P	03 44 56.3	+0.5
	SNR=235						
FRU	Bishkek	65.73	310	eP	P	03 44 58.0	+1.5
FRU				i	pP	03 45 30.0	-2.1
FRU				pmax	pmax		
	comp=Z,4µm,6.0s						
UCH	Uchtor	65.81	309	P	P	03 44 57.4	+0.4
	SNR=370						
AAK	Ala-Archa	65.82	310	c iP	P	03 44 56.2	-0.9
AAK				pmax	pmax		
	comp=Z,527nm,1.3s,mb6.2						
AAK	Ala-Archa	65.82	310	eP	P	03 44 54.8	-2.3
	comp=Z,436nm,1.1s,mb6.2						
USP	Ospenovka	65.82	311	P	P	03 44 57.7	+0.6
	SNR=14						
LATR	Latur	66.04	283	eP	P	03 44 58.2	-0.6
THY	Trims Highway	66.09	27	eP	P	03 44 57.7	-0.7
AML	Almayashu	66.42	309	P	P	03 45 01.0	+0.2
	SNR=333						
AJM	Ajmer	66.64	292	⇑iP	P	03 45 02.0	-0.5
MENT	Mentasta	66.90	28	eP	P	03 45 03.8	+0.3
KAD	Karad	68.46	283	eP	P	03 45 13.2	-0.7
KAD				i		03 53 58.8	
POO	Poona	68.55	284	⇑iP	P	03 45 12.0	-2.5
	comp=Z,910nm,1.0s,mb6.5						
POO				iS	S	03 54 04.0	+0.9
CHKZ	Chkalovo	68.64	322	eP	P	03 45 12.2	-2.2
CHKZ				pmax	pmax		
	comp=Z,292nm,0.9s,mb6.0						
CHKZ	Chkalovo	68.64	322	eP	P	03 45 12.2	-2.3
	comp=Z,292nm,0.9s,mb6.0						
MNGI	Mangalore	68.72	278	i	P	03 45 07.9	-7.7
MNGI				i		03 53 57.1	
BVA0	Borovoye Array	68.76	321	iP	P	03 45 13.6	-1.5
BVA0				pmax	pmax		
	comp=Z,120nm,0.7s,mb5.7						
DAWY	Dawson	68.99	27	eP	P	03 45 16.1	-0.3
GOA	Goa	69.15	281	⇑e	P	03 45 23.8	+5.7
GOA				e		03 54 14.3	
BOM	Bombay	69.45	285	eP	P	03 45 15.9	-4.0
BOM				e		03 54 09.2	
BHV	Bhavnagar	69.58	288	eP	P	03 45 20.5	-0.2
TAS	Tashkent	69.74	309	c eP	P	03 45 19.0	-2.3
TAS				pmax	pmax		
	comp=Z,8µm,2.0s,mb7.1						
TAS	Tashkent	69.74	309	⇑eP	P	03 45 19.0	-2.3
JASL	Jaisalmer	69.90	293	eP	P	03 45 19.9	-2.7
SIT	Sitka	70.55	35	eP	P	03 45 28.0	+2.1
SIT				pmax	pmax		
	comp=Z,847nm,1.3s,mb6.3						
SIT	Sitka	70.55	35	eP	P	03 45 28.0	+2.1
	comp=Z,847nm,1.3s,mb6.3						
MCQ	Macquarie Isla	71.08	172	eP	P	03 45 29.5	+0.3
MNCY	Minicoy	71.50	274	⇑iP	P	03 45 30.0	-2.3
MNCY				i		03 48 51.0	
BHJ	Bhuj	71.59	290	⇓e	P	03 45 34.6	+1.9
BHJ				e		03 54 43.9	
PPT	Papeete	71.67	115	eP	P	03 45 35.9	+2.6
	comp=Z,1µm,1.4s,mb6.5						
PPT	Papeete	71.67	115	eLR	LR	04 06 20.4	
	comp=Z,39µm,35.2s,baz=288						
PAE	Paea	71.71	115	eP	P	03 45 35.9	+2.4
	comp=Z,3µm,1.3s,mb6.8						
INK	Inuvik	71.72	23	eP	P	03 45 31.3	-1.4
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	71.72	23	eP	P	03 45 31.3	-1.4
	comp=Z,0.6nm,0.7s						
TIAR	Tiarei	71.87	115	eP	P	03 45 36.9	+2.5
	comp=Z,4µm,1.3s,mb7.0						
TVO	Taravao	72.04	115	eP	P	03 45 38.2	+2.8
	comp=Z,4µm,1.4s,mb6.9						
PMOR	Pomariorio Ree	72.15	112	eP	P	03 45 38.2	+2.1
	comp=Z,4µm,1.3s,mb7.0						
PMOR				epP	pP	03 46 11.7	-0.7
	comp=Z,809nm,1.3s						
MEH	Mehetia	73.11	115	eP	P	03 45 44.2	+2.3
	comp=Z,2µm,1.4s,mb6.6						
DLBC	Dease Lake	73.35	33	eP	P	03 45 42.6	+0.1
TBI	Tubuai	74.18	120	eP	P	03 45 50.3	+2.3
	comp=Z,2µm,1.4s,mb6.6						
TBI				eLQ		04 05 11.1	
TBI				eLR	LR	04 07 34.1	
	comp=Z,11µm,37.0s						
SVE	Sverdlovsk	74.26	325	⇑iP	P	03 45 46.0	-1.7
SVE				e		03 46 16.0	
SVE				e		03 48 30.0	
SVE				e		03 50 28.0	
SVE				eS	S	03 55 02.0	-5.7
SVE				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.7						
SVE				pmax	pmax		
	comp=N,100nm,3.0s						
SVE				pmax	pmax		
	comp=E,600nm,3.0s						
SVE				pmax	pmax		
	comp=Z,2µm,3.0s						
ARU	Arti	75.44	325	P	P	03 45 54.8	+0.4
	comp=Z,3µm,0.7s,mb7.0,SNR=86						
ARU	Arti	75.44	325	⇑iP	P	03 45 46.3	-8.1
ARU				i	pP	03 46 22.5	-8.6
ARU				e		03 55 41.9	
ARU				ePS	PS	03 55 49.6	-30
ARU				iSS		03 56 12.2	
ARU				pmax	pmax		
	comp=Z,382nm,1.0s,mb6.0						
ARU				MLR	MLR		
	comp=Z,6µm,18.0s						
ARU				MLR	MLR		
	comp=N,2µm,17.0s						
ARU				MLR	MLR		
	comp=E,4µm,17.0s						
SOKR	Solikamsk	75.98	328	d iP	P	03 45 56.9	-0.5
SOKR				iS	S	03 55 20.6	-6.0
SOKR				iSS	SS	04 00 19.2	-6.1
SOKR				pmax	pmax		
	comp=Z,360nm,0.9s,mb6.0						
SOKR				MLR	MLR		
	comp=Z,9µm,19.0s						
DGAR	Diego Garcia	76.44	258	⇓eP	P	03 46 00.5	-0.4
DGAR				pmax	pmax		
	comp=Z,270nm,0.8s,mb5.9						
DGAR	Diego Garcia	76.44	258	⇓eP	P	03 46 00.5	-0.4
	comp=Z,268nm,0.8s,mb5.9						
TAOE	Nuku Hiva Isla	77.11	103	eLQ		04 06 10.3	
TAOE				eLR	LR	04 09 14.1	
	baz=297						
OCWA	Octopus Mounta	78.19	44	eP	P	03 46 11.0	+1.1
	comp=Z,2µm,1.4s,mb6.6						
PGC	Sidney	78.50	43	eP	P	03 46 11.9	+0.4
	comp=Z,1µm,1.1s,mb6.5						
SNB	Saturna Island	78.66	42	P	P	03 46 15.1	+2.7
KEBM	Edson Butte	79.03	48	eP	P	03 46 15.1	+0.6
TAKO	Tahkenitch	79.03	48	P	P	03 46 17.1	+2.5
KBO	Bosley Butte	79.24	49	eP	P	03 46 14.9	-0.7
MPOR	Mary's Peak	79.25	47	P	P	03 46 18.4	+2.7
COR	Corvallis	79.41	47	eP	P	03 46 17.7	+1.2
COR				pmax	pmax		
	comp=Z,1µm,1.2s,mb6.4						
COR	Corvallis	79.41	47	eP	P	03 46 17.7	+1.2
	comp=Z,1µm,1.2s,mb6.4						
KHMM	Horse Mountain	79.88	50	eP	P	03 46 19.3	+0.1
HUMO	Hull Mountain	80.08	49	eP	P	03 46 21.2	+1.0
	comp=Z,902nm,1.2s,mb6.3						
YKW3	Yellowknife Ar	80.19	28	eP	P	03 46 19.3	-1.0
YKW3				epP	pP	03 46 55.6	-1.7
YKA	Yellowknife Ar	80.21	28	iP	P	03 46 19.7	-0.8
YKA				pmax	pmax		
	comp=Z,1µm,1.0s						
YBH	Yreka Blue Hor	80.45	49	eP	P	03 46 22.7	+0.5
YBH				pmax	pmax		
	comp=Z,904nm,1.1s						
YBH	Yreka Blue Hor	80.45	49	eP	P	03 46 22.7	+0.5
	comp=Z,904nm,1.1s,mb6.3						
WIFE	Three Sisters-	80.57	47	P	P	03 46 25.1	+2.4
BUOR	Burton Butte	80.66	49	P	P	03 46 24.5	+1.2
HOPS	Hopland	80.79	52	eP	P	03 46 24.4	+0.4
	comp=Z,907nm,1.2s,mb6.3						
WDC	Whiskeytown Da	80.83	50	eP	P	03 46 24.9	+0.7
WDC				pmax	pmax		
	comp=Z,855nm,1.4s,mb6.2						
WDC	Whiskeytown Da	80.83	50	eP	P	03 46 24.9	+0.7
	comp=Z,855nm,1.4s,mb6.2						
NSHM	Saint Helena R	81.25	53	eP	P	03 46 27.3	+0.8
WBK	Wadi Bani Khal	81.36	291	⇓P	P	03 46 28.2	+0.8
	SNR=71						
SAC	San Andreas	81.62	53	eP	P	03 46 28.0	-0.4
BIDO	Bidbid	81.90	292	⇑P	P	03 46 31.2	+1.0
	SNR=71						
OHCM	Honcut	81.91	51	eP	P	03 46 29.6	-0.3
RES	Resolute Bay	81.95	14	eP	P	03 46 28.8	-0.6
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RES	Resolute Bay	81.95	14	eP	P	03 46 28.8	-0.7
	comp=Z,6.3nm,1.2s						
SMDO	Samad	82.08	292	⇑P	P	03 46 31.6	+0.5
	SNR=103						
SMDO	Samad	82.08	292	⇑P	PKKP	04 05 01.0	+32
	SNR=5.5						
MOD	Modoc	82.16	49	eP	P	03 46 31.4	+0.3
	comp=Z,792nm,1.1s,mb6.3						
JMDO	Jabal Madar	82.20	291	⇑P	P	03 46 32.2	+0.5
	SNR=67						
JMDO	Jabal Madar	82.20	291	⇓P	PKKP	04 04 59.3	+30
	SNR=7.8						
DRV	Dumont d'Urvil	82.55	182	P	P	03 46 36.0	+3.4
SAO	San Andreas Ge	82.56	54	eP	P	03 46 33.9	+0.6
SAO				pmax	pmax		
	comp=Z,623nm,1.2s,mb6.2						
SAO	San Andreas Ge	82.56	54	eP	P	03 46 33.9	+0.6
	comp=Z,623nm,1.2s,mb6.2						
HOQ	Hoqain	82.61	292	⇑P	P	03 46 34.6	+0.8
	SNR=293						
HOQ	Hoqain	82.61	292	⇑P	PKKP	04 05 00.8	+32
NEW	Newport	82.69	42	eP	P	03 46 33.8	+0.1
NEW				pmax	pmax		
	comp=Z,516nm,1.0s						
NEW	Newport	82.69	42	eP	P	03 46 33.8	+0.1
	comp=Z,516nm,1.0s,mb6.2						
HSP	Hornsund	82.78	350	eP	P	03 46 33.7	+0.1
BSY	Bisya	82.92	292	⇑P	P	03 46 36.0	+0.6
	SNR=135						
BSY	Bisya	82.92	292	⇑P	PKKP	04 04 58.7	+31
	SNR=9.3						
BANOM	Banah	82.93	295	⇓P	P	03 46 38.0	+2.6
	SNR=44						
BANOM	Banah	82.93	295	⇓P	PKKP	04 05 00.6	+33
	SNR=6.4						
LRV	Little Rabbit	82.98	54	eP	P	03 46 34.6	-0.8
LVZ	Lovozero	83.06	339	P	P	03 46 34.1	-1.0
	comp=Z,882nm,1.0s,mb6.5,SNR=14						
LVZ	Lovozero	83.06	339	eP	P	03 46 34.7	-0.4
LVZ				eS	S	03 56 36.7	-3.8
LVZ				pmax	pmax		
	comp=N,67nm,1.3s						
LVZ				pmax	pmax		
	comp=Z,269nm,1.3s,mb5.8						
LVZ				pmax	pmax		
	comp=E,84nm,1.6s						
LVZ				smax			
	comp=Z,2µm,3.9s						
LVZ				smax			
	comp=N,776nm,3.3s						
LVZ				smax			
	comp=E,616nm,2.3s						
CMB	Columbia Colle	83.06	53	P	P	03 46 36.2	+0.4
CMB				P		03 46 37.9	
CMB				PP	PP	03 49 52.5	+2.2
CMB				SKSac		03 56 44.2	
CMB				SKSac		03 56 47.9	
CMB	Columbia Colle	83.06	53	eP	P	03 46 36.1	+0.3
CMB				pmax	pmax		
	comp=Z,1µm,1.2s,mb6.5						
CMB	Columbia Colle	83.06	53	eP	P	03 46 36.1	+0.3
	comp=Z,1µm,1.2s,mb6.5						
WCN	Washoe City	83.22	51	eP	P	03 46 36.4	-0.1
WCN				pmax	pmax		
	comp=Z,616nm,1.1s,mb6.2						
WCN	Washoe City	83.22	51	eP	P	03 46 36.4	-0.1
	comp=Z,616nm,1.1s,mb6.2						
WVOR	Wild Horse Val	83.22	48	eP	P	03 46 36.8	+0.3
WVOR				pmax	pmax		
	comp=Z,547nm,1.0s,mb6.2						
WVOR	Wild Horse Val	83.22	48	eP	P	03 46 36.8	+0.3
	comp=Z,547nm,1.0s,mb6.2						
PECR	Pechory	83.31	327	d iP	P	03 46 37.3	+0.7
PECR				e*PP	pP	03 47 09.3	-4.6
PECR				eS	S	03 56 38.0	-5.2
PECR				ePS	PS	03 57 35.0	-23
PECR				pmax	pmax		
	comp=Z,3µm,5.4s						
PECR				smax			
	comp=N,8µm,8.4s						
PECR				MLR	MLR		
	comp=Z,10µm,18.0s						
PECR				MLR	MLR		
	comp=N,4µm,14.0s						
PECR				MLR	MLR		
	comp=Z,11µm,18.0s						
ARQ	Araqi	83.38	292	⇑P	P	03 46 39.0	+1.4
	SNR=72						
ARQ	Araqi	83.38	292	⇑P	PKKP	04 04 59.3	+32
PAHR	Pah Rah Range	83.39	51	eP	P	03 46 37.9	+0.5
	comp=Z,518nm,1.2s,mb6.1						
ASHO	Ashiyiah	83.45	294	⇑P	P	03 46 38.9	+0.9
	SNR=60						
BMO	Blue Mountains	83.50	45	eP	P	03 46 37.6	-0.2
	comp=Z,17µm,0.4s						
EDM	Edmonton	83.55	36	eP	P	03 46 37.5	-0.4
APA	Apatity	83.63	339	⇓iP	P	03 46 36.3	-1.7
APA				i*PP	pP	03 47 18.7	+3.5
APA				iS	S	03 56 42.0	-4.1
APA				i		03 57 42.0	
APA				pmax	pmax		
	comp=Z,290nm,1.0s,mb6.0						
APA				MLR	MLR		
	comp=Z,12µm,18.0s						
BJO	Bjornoya	83.75	348	eP	P	03 46 41.6	+3.1
BJO				AMS	AMS	04 27 40.8	
	comp=Z,2µm,18.2s						
BJO1	Bjornoya	83.79	348	eP	P	03 46 41.6	+2.9
BJO1				LR	LR		
	comp=Z,2308µm,18.2s						
OMM	Old Mammoth Mi	84.24	53	eP	P	03 46 42.3	+0.6
WALA	Waterton Lakes	84.49	41	eP	P	03 46 43.2	+0.6
	comp=Z,2µm,1.5s,mb6.7						
KEV	Kevo	84.58	342	ep	P	03 46 40.5	-2.2
	comp=Z,11nm,0.3s						
KEV	Kevo	84.58	342	eP	P	03 46 40.5	-2.2
KEV				pmax	pmax		
	comp=Z,11nm,0.3s,mb5.1						
MNV	Mina	84.65	52	eP	P	03 46 44.1	+0.3
MNV				pmax	pmax		
	comp=Z,587nm,1.1s,mb6.2						
MNV	Mina	84.65	52	eP	P	03 46 44.1	+0.4
	comp=Z,587nm,1.1s,mb6.2						
BMN	Battle Mountai	84.79	50	eP	P	03 46 45.2	+0.8
BMN				pmax	pmax		
	comp=Z,382nm,1.1s,mb6.0						
BMN	Battle Mountai	84.79	50	eP	P	03 46 45.2	+0.8
	comp=Z,382nm,1.1s,mb6.0						
ARE0	ARCESS Array S	85.14	342	eP	P	03 46 43.3	-2.1
MSO	Missoula	85.17	43	eP	P	03 46 46.0	-0.1
	comp=Z,571nm,1.8s,mb6.0						
MAK	Makhachkala	85.34	313	c iP	P	03 46 48.0	+0.9
MAK				i*SP	sP	03 47 20.0	-21
MAK				e		03 56 57.0	
MAK				iS	S	03 57 04.0	+0.6
MAK				eSP	SP	03 57 59.0	-3.1
MAK				eSPP	SPP	03 58 32.0	+5.0
MAK				pmax	pmax		
	comp=Z,4µm,6.0s						
MAK				pmax	pmax		
	comp=N,1µm,8.0s						
MAK				pmax	pmax		
	comp=E,2µm,8.0s						

MAK				pmax	pmax		
	comp=Z,3µm,6.0s						
MAK				smax			
	comp=N,8µm,10.0s						
MAK				smax			
	comp=E,10µm,10.0s						
MAK				pmax	pmax		
	comp=N,28µm,25.0s						
MAK				pmax	pmax		
	comp=E,9µm,25.0s						
TPH	**Tonopah**	**85.46**	**52**	*e*P	**P**	**03 46 47.7**	**-0.1**
TPH				pmax	pmax		
	comp=Z,540nm,1.1s,mb6.2						
TPH	**Tonopah**	**85.46**	**52**	*e*P	**P**	**03 46 47.7**	**-0.1**
	comp=Z,540nm,1.1s,mb6.2						
SHAO	**Shalim**	**85.55**	**287**	⇓P	**P**	**03 46 49.3**	**+0.7**
	SNR=15						
CHMT	**Chamberlain Mo**	**85.59**	**43**	*e*P	**P**	**03 46 47.7**	**-0.5**
DAC	**Darwin (Calif)**	**85.69**	**54**	*e*P	**P**	**03 46 48.8**	**-0.1**
DAC				pmax	pmax		
	comp=Z,471nm,1.3s,mb6.1						
DAC	**Darwin (Calif)**	**85.69**	**54**	*e*P	**P**	**03 46 48.8**	**-0.1**
	comp=Z,471nm,1.3s,mb6.1						
HLID	**Hailey**	**85.86**	**46**	*e*P	**P**	**03 46 50.1**	**+0.5**
	comp=Z,21µm,0.4s						
HLID				*e*pP	pP	03 47 26.0	-1.1
MWC	**Mount Wilson**	**85.90**	**56**	P	**P**	**03 46 50.7**	**+0.7**
MWC	**Mount Wilson**	**85.90**	**56**	*e*P	**P**	**03 46 50.4**	**+0.3**
KTK1	**Kautokeino**	**86.11**	**342**	*e*P	**P**	**03 46 50.0**	**-0.2**
	comp=Z,283nm,1.0s,mb6.0						
KTK1	**Kautokeino**	**86.11**	**342**	*e*P	**P**	**03 46 50.0**	**-0.2**
KTK1				AMb	AMB	03 46 52.4	
	comp=Z,283nm,1.0s,mb6.0						
CASY	**Casey**	**86.20**	**194**	*e*P	**P**	**03 46 51.5**	**+0.8**
RKT	**Rikitea**	**86.44**	**115**	*e*P	**P**	**03 46 54.8**	**+1.9**
	comp=Z,1µm,1.3s,mb6.5						
MCMT	**McKenzie Canyo**	**86.53**	**44**	*e*P	**P**	**03 46 52.8**	**+0.1**
HRY	**Holter Researc**	**86.58**	**42**	*e*P	**P**	**03 46 53.2**	**+0.3**
JOF	**Joensuu**	**86.59**	**335**	*e*p	**P**	**03 46 50.5**	**-2.1**
	comp=Z,12nm,0.3s,mb5.2						
JOF	**Joensuu**	**86.59**	**335**	*e*p	PKKP	04 04 45.6	+25
	comp=Z,20nm,0.5s						
TRCR	**Troy Canyon**	**86.61**	**51**	*e*P	**P**	**03 46 54.6**	**+1.2**
MOS	**Moscow**	**86.90**	**327**	κ *i*P	**P**	**03 46 54.9**	**+0.6**
MOS				*e*		03 47 26.1	
MOS				*i* *PP	pP	03 47 38.0	+6.1
MOS				*e*		03 50 20.9	
MOS				*e*PPP	PPP	03 52 16.2	-3.2
MOS				*i* S	S	03 57 04.3	-14
MOS				*e*		03 57 16.1	
MOS				*e**SS		03 58 18.9	
MOS				*e*SS	SS	04 03 10.7	+3.9
MOS				pmax	pmax		
	comp=Z,291nm,1.6s,mb5.9						
MOS				MLR	MLR		
	comp=Z,10µm,18.0s						
TRO	**Tromso**	**86.93**	**344**	*e*P	**P**	**03 46 52.6**	**-1.6**
TRO				LR	LR		
	comp=Z,2661µm,20.6s						
TRO	**Tromso**	**86.93**	**344**	*e*P	**P**	**03 46 52.6**	**-1.6**
TRO				*e*SKSa		03 57 02.6	
TRO				AMS	AMS	04 26 34.7	
	comp=Z,3µm,20.6s						
DAG	**Danmarks Havn**	**86.96**	**357**	⇓*e*P	**P**	**03 46 53.3**	**-0.9**
DAG				pmax	pmax		
	comp=Z,180nm,0.8s,mb6.0						
DAG	**Danmarks Havn**	**86.96**	**357**	⇓*e*P	**P**	**03 46 53.3**	**-0.9**
	comp=Z,178nm,0.8s,mb6.0						
DAG	**Danmarks Havn**	**86.96**	**357**	⇓*i*P	**P**	**03 46 53.3**	**-0.9**
	comp=Z,177nm,0.8s,mb5.9						
RBK	**Rabkut**	**86.99**	**287**	⇑P	**P**	**03 46 56.8**	**+1.2**
	SNR=33						
RBK	**Rabkut**	**86.99**	**287**	⇓P	PKKP	04 04 50.0	+29
BOZ	**Bozeman (W)**	**87.07**	**43**	*e*P	**P**	**03 46 56.0**	**+0.6**
BOZ				*e**PP	pP	03 47 29.6	-3.4
BOZ				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.5						
BOZ	**Bozeman (W)**	**87.07**	**43**	*e*P	**P**	**03 46 56.0**	**+0.7**
	comp=Z,53nm,0.6s,mb5.5						
BOZ				*e*pP	pP	03 47 29.6	-3.3
WHFO	**Wadi Hawf**	**87.28**	**288**	⇓P	**P**	**03 46 56.9**	**-0.1**
	SNR=59						
WHFO	**Wadi Hawf**	**87.28**	**288**	⇑P	PKKP	04 04 49.8	+29
	SNR=8.5						
PFO	**Pinyon Flat Ob**	**87.36**	**56**	P	**P**	**03 46 58.2**	**+1.1**
PFO				pmax	pmax		
	comp=Z,740nm,1.2s,mb6.4						
PFO	**Pinyon Flat Ob**	**87.36**	**56**	*e*P	**P**	**03 46 57.6**	**+0.6**
	comp=Z,737nm,1.2s,mb6.4						
BAR	**Barrett**	**87.46**	**57**	*e*P	**P**	**03 46 57.4**	**-0.2**
QLMT	**Earthquake Lak**	**87.48**	**44**	*e*P	**P**	**03 46 58.3**	**+0.9**
HVU	**Hansel Valley**	**87.58**	**47**	*e*P	**P**	**03 46 58.6**	**+0.7**
DUS	**Dusheti**	**87.58**	**313**	P	**P**	**03 46 57.7**	**-0.3**
MTA	**Mtatsminda**	**87.65**	**313**	P	**P**	**03 46 57.8**	**-0.4**
MTA				S	S	03 57 11.2	-14
TI2	**Plekhanov**	**87.66**	**313**	⇓*i*P	**P**	**03 46 57.6**	**-0.7**
TI2				*i* S	S	03 57 12.2	-13
TI2				pmax	pmax		
	comp=Z,360nm,1.0s,mb6.2						
BGU	**Big Grassy Mou**	**87.67**	**48**	*e*P	**P**	**03 46 58.7**	**+0.3**
OBN	**Obninsk**	**87.70**	**327**	⇓*i*P	**P**	**03 46 56.9**	**-1.3**
OBN				*e*		03 50 25.2	
OBN				*i* S	S	03 57 09.7	-16
OBN				pmax	pmax		
	comp=Z,275nm,1.3s,mb5.9						
OBN	**Obninsk**	**87.70**	**327**	*e*P	**P**	**03 46 55.6**	**-2.6**
	comp=Z,250nm,1.3s,mb5.9						
GOF	**Gofitskoye**	**87.71**	**316**	⇑*i*P	**P**	**03 46 58.0**	**-0.5**
GOF				*i*	pP	03 47 33.0	-3.1
GOF				*i* S	S	03 57 14.0	-12
GOF				*i*		03 58 30.0	
GOF				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.7						
GOF				pmax	pmax		
	comp=Z,3µm,6.0s						
GOF				pmax	pmax		
	comp=Z,2µm,6.0s						
GOF				smax			
	comp=E,14µm,9.0s						
GOF				MLR	MLR		
	comp=N,14µm,18.0s						
GOF				MLR	MLR		
	comp=Z,6µm,18.0s						
YMR	**Madison River**	**87.84**	**44**	*e*P	**P**	**03 47 00.1**	**+1.0**
ABTO	**Aybut**	**87.86**	**287**	⇑P	**P**	**03 46 59.6**	**-0.3**
	SNR=246						
ABTO	**Aybut**	**87.86**	**287**	⇑P	PKKP	04 04 49.1	+29
	SNR=9.2						
SPUT	**South Promonto**	**87.96**	**48**	*e*P	**P**	**03 47 00.3**	**+0.5**
LDFC	**Landfair**	**87.97**	**54**	*e*P	**P**	**03 47 00.5**	**+0.5**
NEN	**Nelson**	**88.00**	**54**	*e*P	**P**	**03 47 00.6**	**+0.5**
YFT	**Old Faithful**	**88.01**	**44**	*e*P	**P**	**03 47 03.0**	**+3.1**
YNR	**Norris Junctio**	**88.02**	**44**	*e*P	**P**	**03 47 03.0**	**+3.1**
RRI2	**Red Ridge**	**88.06**	**45**	*e*P	**P**	**03 47 01.2**	**+1.0**
IMW	**Indian Meadow**	**88.13**	**45**	*e*P	**P**	**03 47 00.5**	**0.0**
GNI	**Garni**	**88.19**	**311**	*d* *i*P	**P**	**03 47 01.1**	**+0.2**
GNI				pmax	pmax		
	comp=Z,267nm,1.6s						
GNI	**Garni**	**88.19**	**311**	*e*P	**P**	**03 47 00.4**	**-0.5**
LKWY	**Lake**	**88.26**	**44**	*e*P	**P**	**03 47 03.0**	**+1.9**
LKWY				pmax	pmax		
	comp=Z,848nm,1.4s,mb6.4						
LKWY	**Lake**	**88.26**	**44**	*e*P	**P**	**03 47 03.0**	**+1.9**
	comp=Z,848nm,1.4s,mb6.4						
TPAW	**Teton Pass**	**88.26**	**45**	*e*P	**P**	**03 47 02.0**	**+0.9**
GCMT	**Greycliff**	**88.30**	**43**	*e*P	**P**	**03 47 02.4**	**+1.1**
MOOW	**Moose Ponds**	**88.31**	**45**	*e*P	**P**	**03 47 02.1**	**+0.7**
KIV	**Kislovodsk**	**88.33**	**315**	P	**P**	**03 47 00.6**	**-0.9**
	comp=Z,2µm,1.1s,mb6.8,SNR=39						
KIV	**Kislovodsk**	**88.33**	**315**	*c* *i*P	**P**	**03 47 00.4**	**-1.1**
KIV				pmax	pmax		
	comp=Z,275nm,0.9s,mb6.1						
KIV	**Kislovodsk**	**88.33**	**315**	*e*P	**P**	**03 46 59.7**	**-1.8**
	comp=Z,334nm,1.0s,mb6.1						
WUWY	**Wally Ulrich**	**88.39**	**45**	*e*P	**P**	**03 47 02.0**	**+0.2**
AHID	**Auburn Hatcher**	**88.41**	**46**	*e*P	**P**	**03 47 02.7**	**+0.8**
	comp=Z,921nm,1.4s,mb6.4						
NOQ	**North Oquirrh**	**88.42**	**48**	*e*P	**P**	**03 47 01.9**	**0.0**
LOHW	**Long Hollow**	**88.46**	**45**	*e*P	**P**	**03 47 02.4**	**+0.4**
HWUT	**Hardware Ranch**	**88.49**	**47**	*e*P	**P**	**03 47 02.6**	**+0.3**
	comp=Z,70nm,1.9s,mb5.2						
PUL	**Pulkovo**	**88.56**	**333**	*e*P	**P**	**03 47 02.9**	**+0.8**
PUL				*e*S		03 57 12.8	
PUL				pmax	pmax		
	comp=Z,149nm,0.6s,mb6.1						
PUL				pmax	pmax		
	comp=E,157nm,0.8s						
PUL				smax			
	comp=N,2µm,1.5s						
PUL				smax			
	comp=E,797nm,1.0s						
PUL				MLR	MLR		
	comp=Z,7µm,18.0s						
PUL				MLR	MLR		
	comp=N,3µm,13.0s						
PUL				MLR	MLR		
	comp=E,5µm,16.0s						
AKH	**Akhalkalaki**	**88.66**	**313**	P	**P**	**03 47 03.4**	**+0.4**
AKH				S	S	03 57 20.9	-14
CTU	**Camp Tracy**	**88.67**	**48**	*e*P	**P**	**03 47 03.1**	**0.0**
NLU	**North Lily Min**	**88.68**	**49**	*e*P	**P**	**03 47 03.2**	**0.0**
TCUT	**Toone Canyon**	**88.77**	**48**	*e*P	**P**	**03 47 04.0**	**+0.4**
JLU	**Jordanelle**	**88.91**	**48**	*e*P	**P**	**03 47 04.7**	**+0.4**
MPU	**Maple Canyon**	**88.98**	**49**	*e*P	**P**	**03 47 05.2**	**+0.6**
KAF	**Kangasniemi**	**89.00**	**336**	*e*p	**P**	**03 47 01.7**	**-2.4**
	comp=E,3.9nm,0.3s,baz=54,slow=4.4						
KAF	**Kangasniemi**	**89.00**	**336**	*e*p	PKKP	04 04 40.3	+24
	comp=E,18nm,0.5s						
KAF	**Kangasniemi**	**89.00**	**336**	*e*P	**P**	**03 47 01.7**	**-2.4**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MVU	**Marysvale**	**89.07**	**50**	*e*P	**P**	**03 47 05.8**	**+0.7**
	comp=Z,1.7nm,0.3s						
MSU	**Marysvale**	**89.09**	**50**	*e*P	**P**	**03 47 06.2**	**+1.0**
DAU	**Daniels Canyon**	**89.12**	**48**	*e*P	**P**	**03 47 06.1**	**+0.9**
FFC	**Flin Flon**	**89.18**	**33**	P	**P**	**03 47 05.5**	**+0.4**
	comp=Z,6µm,1.2s						
FFC	**Flin Flon**	**89.18**	**33**	*e*P	**P**	**03 47 04.8**	**-0.3**
FFC				pmax	pmax		
	comp=Z,906nm,0.9s,mb6.7						
FFC	**Flin Flon**	**89.18**	**33**	*e*P	**P**	**03 47 04.8**	**-0.4**
	comp=Z,906nm,0.9s,mb6.7						
KARS	**Kars**	**89.22**	**312**	P	**P**	**03 46 59.0**	**-6.7**
FINES	**FINESS Array B**	**89.46**	**335**	*i* P	**P**	**03 47 05.3**	**-1.0**
FINES				pmax	pmax		
	comp=Z,166nm,1.0s						
BW06	**Boulder Array**	**89.47**	**46**	*e*P	**P**	**03 47 06.8**	**-0.1**
	comp=Z,76nm,0.6s,mb5.8						
TMUT	**Trail Mountain**	**89.54**	**49**	*e*P	**P**	**03 47 08.1**	**+0.8**
VANB	**Van**	**89.70**	**310**	Pn	**P**	**03 47 10.7**	**+2.7**
TVAN	**Van**	**89.71**	**310**	*i* P	**P**	**03 47 08.2**	**+0.1**
VANT	**Van**	**89.76**	**310**	P	**P**	**03 46 59.0**	**-9.3**
HKR	**Hakkari**	**89.79**	**309**	Pn	**P**	**03 47 06.9**	**-1.6**
SRU	**San Rafael**	**90.10**	**49**	*e*P	**P**	**03 47 10.6**	**+0.7**
SRU	**San Rafael**	**90.10**	**49**	*e*P	**P**	**03 47 10.1**	**+0.3**
LAO	**LASA Array**	**90.17**	**41**	*e*P	**P**	**03 47 09.9**	**-0.1**
	comp=Z,75nm,1.2s,mb5.5						
SOC	**Sochi**	**90.47**	**316**	*i* P	**P**	**03 47 10.3**	**-1.2**
SOC				*e*		03 50 46.0	
SOC				*e*PPP	PPP	03 52 44.6	-6.3
SOC				*i* S		03 57 25.7	
SOC				*e*		03 57 54.5	
SOC				*e*PS	PS	03 59 19.0	-3.6
SOC				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.6						
SOC				pmax	pmax		
	comp=N,14nm,0.8s						
SOC				pmax	pmax		
	comp=E,23nm,1.2s						
SOC	**Sochi**	**90.47**	**316**	⇓*i*P	**P**	**03 47 10.2**	**-1.3**
MOR8	**Moi Rana**	**90.52**	**342**	*e*P	**P**	**03 47 10.8**	**-0.3**
	comp=E,150nm,2.1s,mb5.7						
MOR8	**Moi Rana**	**90.52**	**342**	*e*P	**P**	**03 47 10.8**	**-0.3**
MOR8				AMb	AMB	03 47 16.1	
	comp=Z,150nm,2.1s,mb5.6						
DGMT	**Dagmar**	**90.69**	**39**	*e*P	**P**	**03 47 11.4**	**-0.9**
	comp=Z,467nm,1.3s,mb6.4						
ERZM	**Erzurum**	**90.71**	**312**	*i* P	**P**	**03 47 12.8**	**+0.1**
MSL	**Mosul**	**90.73**	**308**	*e*P	**P**	**03 47 18.5**	**+5.6**
MSL				*e*PP	PP	03 50 41.0	-12
MSL				*e*PPP	PPP	03 52 55.0	+1.6
MSL				*e*SKS	SKS	03 57 35.0	+6.3
MSL				*e*S	S	03 57 58.5	+4.9
BHD	**Baghdad**	**90.76**	**305**	*e*P	**P**	**03 47 01.5**	**-12**
BHD				*i* pP	pP	03 47 36.5	-14
BHD				*i* PP	PP	03 50 34.0	-19
BHD				*e*PPP	PPP	03 52 44.0	-10
BHD				*i* SKS	SKS	03 57 18.0	-11
BHD				*i* S	S	03 57 43.5	-10
FCC	**Fort Churchill**	**90.91**	**27**	*e*P	**P**	**03 47 11.8**	**-1.4**
FCC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FCC	**Fort Churchill**	**90.91**	**27**	*e*P	**P**	**03 47 11.8**	**-1.4**
	comp=Z,8.3nm,0.9s						
MIR	**Mirnyy**	**91.12**	**199**	κ*e*P	**P**	**03 47 14.2**	**+0.2**
MIR				*e*S		03 57 27.0	
MIR				pmax	pmax		
	comp=Z,2µm,8.0s						
MIR				pmax	pmax		
	comp=Z,580nm,2.0s,mb6.3						
MIR				smax			
	comp=N,1µm,19.0s						
MIR				smax			
	comp=E,1µm,19.0s						
MIR				MLR	MLR		
	comp=N,2µm,18.0s						
MIR				MLR	MLR		
	comp=E,2µm,18.0s						
MIR				MLR	MLR		
	comp=Z,5µm,18.0s						
PTCN	**Pitcairn Islan**	**91.28**	**116**	*e*P	**P**	**03 47 16.6**	**+0.8**
	comp=Z,2µm,1.4s,mb7.0						
PV10	**Paradox Valley**	**91.45**	**49**	*e*P	**P**	**03 47 16.3**	**+0.1**
JMIC	**Jan Mayen**	**91.48**	**352**	*e*P	**P**	**03 47 17.9**	**+2.4**
JMIC				LR	LR		
	comp=Z,7526µm,23.6s						
JMIC	**Jan Mayen**	**91.48**	**352**	*e*P	**P**	**03 47 17.9**	**+2.4**
JMIC				*e*SKSa		03 57 33.5	
ANN	**Anapa**	**91.49**	**318**	*d* *i*P	**P**	**03 47 15.6**	**-0.7**
ANN				*e**PP	pP	03 47 53.6	-0.5
ANN				*i* S		03 57 33.7	
ANN				*e*		03 57 57.6	
ANN				*e*PS	PS	03 59 10.6	-24
ANN				pmax	pmax		
	comp=N,31nm,1.7s						
ANN				pmax	pmax		
	comp=Z,411nm,1.7s,mb6.2						
ANN				pmax	pmax		
	comp=E,53nm,0.8s						
ANN	**Anapa**	**91.49**	**318**	*e*P	**P**	**03 47 15.1**	**-1.1**
BEST	**Besiri**	**91.51**	**310**	*i* P	**P**	**03 47 15.4**	**-1.2**
SUMG	**Summit**	**91.58**	**1**	*e*P	**P**	**03 47 14.6**	**-1.4**
	comp=E,125nm,1.1s,mb5.8						
BINT	**Bingol**	**91.72**	**311**	P	**P**	**03 47 17.8**	**+0.4**
GUMT	**Gumushane**	**91.84**	**313**	Pn	**P**	**03 47 19.7**	**+1.8**
EZC	**Erzincan**	**91.87**	**312**	P	**P**	**03 47 17.5**	**-0.6**
PV01	**Paradox Valley**	**91.88**	**50**	*e*P	**P**	**03 47 18.2**	**0.0**
DIY	**Diyarbakir**	**92.28**	**310**	Pn	**P**	**03 47 20.1**	**+0.1**
TUC	**Tucson**	**92.29**	**56**	*e*P	**P**	**03 47 21.2**	**+1.0**
TUC				pmax	pmax		
	comp=Z,330nm,1.2s,mb6.2						
TUC	**Tucson**	**92.29**	**56**	*e*P	**P**	**03 47 21.2**	**+1.0**
	comp=Z,330nm,1.2s,mb6.2						
NSS	**Namsos**	**92.42**	**342**	*e*P	**P**	**03 47 19.6**	**-0.4**
NSS				*e*SKSa		03 57 36.5	
NSS				AMS	AMS	04 32 50.4	
	comp=Z,8µm,23.6s						
MNK	**Minsk**	**92.44**	**329**	*e*P	**P**	**03 47 17.0**	**-3.3**
MNK				pmax	pmax		
	comp=Z,410nm,1.4s,mb6.3						
MNK				MLR	MLR		
	comp=Z,8µm,14.0s						
MNK				MLR	MLR		
	comp=N,5µm,14.0s						
IZAR	**Zarasai**	**92.53**	**331**	*i* P	**P**	**03 47 19.7**	**-1.0**
IZAR				AMPb	AMB	03 47 23.9	
	comp=Z,73nm,1.4s,mb5.6						
IDID	**Didziasalis**	**92.54**	**330**	*i* P	**P**	**03 47 19.8**	**-1.0**
IDID				AMPb	AMB	03 47 23.2	
	comp=Z,40nm,1.2s,mb5.4						
ISAL	**Salakas**	**92.69**	**330**	*e*P	**P**	**03 47 20.3**	**-1.2**
IIGN	**Ignalina**	**92.76**	**330**	*e*P	**P**	**03 47 20.9**	**-1.0**
IIGN				AMPb	AMB	03 47 24.2	
	comp=Z,33nm,1.3s,mb5.3						
IIGN				*e*PP	PP	03 51 01.6	-6.7
PHWY	**Pilot Hill**	**92.86**	**46**	*e*P	**P**	**03 47 23.8**	**+1.2**
ELZG	**Elazig**	**92.95**	**311**	*i* P	**P**	**03 47 22.7**	**-0.4**
RAYN	**Ar Rayn**	**93.02**	**295**	P	**P**	**03 47 22.8**	**-1.0**
	comp=Z,667nm,0.8s,mb6.8						
SCO	**Scoresbysund**	**93.33**	**356**	*i* P	**P**	**03 47 23.2**	**-0.9**
SCO				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.5						
SCO	**Scoresbysund**	**93.33**	**356**	*i* P	**P**	**03 47 23.2**	**-0.9**
	comp=Z,36nm,0.9s,mb5.5						
ISCO	**Idaho Springs**	**93.36**	**47**	*e*P	**P**	**03 47 25.3**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,115nm,0.6s,mb6.2						
ISCO	**Idaho Springs**	**93.36**	**47**	*e*P	**P**	**03 47 25.2**	**+0.3**
	comp=Z,115nm,0.6s,mb6.2						
MYA	**Malataya**	**93.42**	**311**	P	**P**	**03 47 27.2**	**+2.0**
MALT	**Malatya**	**93.43**	**311**	*e*P	**P**	**03 47 24.3**	**-1.0**
MALT				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.9						
MALT	**Malatya**	**93.43**	**311**	Pn	**P**	**03 47 26.3**	**+1.0**
SIM	**Simferopol’**	**93.56**	**319**	⇓*i*P	**P**	**03 47 26.3**	**+0.6**
SIM				*e*		03 51 13.0	
SIM				*i*		03 57 46.8	
SIM				*e*S	S	03 58 19.0	+0.9
SIM				*i* PS	PS	03 59 48.0	-9.0
SIM				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.9						
SIM				MLR	MLR		
	comp=Z,8µm,20.0s						
VNDA	**Vanda**	**93.79**	**177**	*e*P	**P**	**03 47 24.4**	**-1.6**
VNDA				pmax	pmax		
	comp=Z,368nm,1.3s						
VNDA	**Vanda**	**93.79**	**177**	*e*P	**P**	**03 47 24.4**	**-1.7**
	comp=Z,368nm,1.3s,mb6.3						
SVST	**Sivas**	**93.89**	**313**	*i* P	**P**	**03 47 27.0**	**-0.3**
TOKT	**Tokat**	**93.94**	**314**	Pn	**P**	**03 47 25.4**	**-2.1**
SDCO	**Great Sand Dun**	**94.27**	**49**	*e*P	**P**	**03 47 29.0**	**0.0**
	comp=Z,406nm,2.5s,mb6.1						
LAZ	**Ladron**	**94.36**	**53**	*e*P	**P**	**03 47 29.4**	**-0.2**
SBA	**Scott Base**	**94.43**	**176**	*e*P	**P**	**03 47 29.2**	**+0.3**
SBA				pmax	pmax		
	comp=Z,778nm,1.5s,mb6.6						
SBA	**Scott Base**	**94.43**	**176**	*e*P	**P**	**03 47 29.2**	**+0.3**
	comp=Z,778nm,1.5s,mb6.6						
GZT	**Gaziantep**	**94.44**	**311**	*i* P	**P**	**03 47 29.0**	**-0.8**
LENM	**Lemitar**	**94.58**	**53**	*e*P	**P**	**03 47 28.7**	**-1.9**
BOYT	**Boyabat**	**94.60**	**315**	*i* P	**P**	**03 47 28.9**	**-1.6**
ULM	**Lac du Bonnet**	**94.62**	**35**	*e*P	**P**	**03 47 29.2**	**-1.2**
	comp=Z,369nm,1.1s,mb6.5						
ANMO	**Albuquerque**	**94.67**	**52**	P	**P**	**03 47 33.5**	**+2.5**
ANMO				pmax	pmax		
	comp=Z,220nm,1.3s						
ANMO	**Albuquerque**	**94.67**	**52**	*e*P	**P**	**03 47 31.8**	**+0.8**
	comp=Z,218nm,1.4s,mb6.2						
ANMO				LR	LR		
	comp=Z,4µm,21.0s						
BYBT	**Boyabat**	**94.67**	**315**	Pn	**P**	**03 47 29.4**	**-1.5**
GAZ	**Gaziantep**	**94.77**	**311**	Pn	**P**	**03 47 32.7**	**+1.4**
LPM	**Los Pinos Moun**	**94.78**	**52**	*e*P	**P**	**03 47 30.8**	**-0.7**
KAHT	**Ahir Dag**	**94.82**	**311**	*i* P	**P**	**03 47 30.8**	**-0.8**
SUW	**Suwalki**	**94.98**	**330**	*e*P	**P**	**03 47 30.6**	**-1.3**
	comp=Z,600nm,2.3s,mb6.4						
SUW				*e*SKS	SKS	03 57 50.7	-1.3
SUW				*e*S	S	03 58 28.5	-1.6
SUW				MLR	MLR	04 26 18.8	
	comp=Z,7µm,24.6s						
CTKT	**Corum**	**95.03**	**315**	*i* P	**P**	**03 47 32.4**	**-0.1**
BNN	**Bunyan**	**95.05**	**313**	Pn	**P**	**03 47 32.8**	**+0.1**
YOZ	**Yozgat**	**95.08**	**314**	Pn	**P**	**03 47 32.0**	**-0.8**
NB2	**NORSAR Subarra**	**95.20**	**340**	P	**P**	**03 47 31.3**	**-1.5**
	comp=Z,45nm,1.0s,mb5.7,baz=48,slow=4.5						
NB2	**NORSAR Subarra**	**95.20**	**340**	P	**P**	**03 47 31.3**	**-1.5**
NB2				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.7						
NB2	**NORSAR Subarra**	**95.20**	**340**	P	**P**	**03 47 31.3**	**-1.5**
	baz=48,slow=4.6						
NAO01	**NORSAR Array S**	**95.45**	**340**	*e*P	**P**	**03 47 30.4**	**-3.5**
	comp=Z,25nm,0.9s,mb5.4						
BALT	**Daday**	**95.57**	**316**	*i* P	**P**	**03 47 34.6**	**-0.3**
AVNT	**Avonos**	**95.78**	**313**	*i* P	**P**	**03 47 34.6**	**-1.3**
KIS	**Kishinev**	**95.82**	**322**	*e*P	**P**	**03 47 34.0**	**-1.9**
KIS				*i*		03 51 30.0	
KIS				*i* S	SKS	03 57 57.0	+0.3
KIS				*e*		03 58 40.0	
KIS				MLR	MLR		
	comp=N,6µm,17.0s						
KIS				MLR	MLR		
	comp=E,6µm,17.0s						
KIS				MLR	MLR		
	comp=Z,4µm,17.0s						
KIS				MLR	MLR		
	comp=Z,2µm,17.0s						
CANT	**Cankiri**	**95.83**	**315**	Pn	**P**	**03 47 33.4**	**-2.8**
CEYT	**Ceyhan**	**95.90**	**311**	Pn	**P**	**03 47 34.3**	**-2.2**
ELDT	**Eldivan**	**96.02**	**315**	*i* P	**P**	**03 47 37.3**	**+0.4**
BRTR	**Keskin Array B**	**96.21**	**314**	*i* P	**P**	**03 47 36.7**	**-1.2**
NIG	**Nigde**	**96.25**	**312**	Pn	**P**	**03 47 38.3**	**+0.3**
KAMT	**Kaman**	**96.32**	**314**	Pn	**P**	**03 47 36.0**	**-2.4**
LOD	**Lodumlu**	**96.74**	**315**	Pn	**P**	**03 47 38.6**	**-1.7**
TLCR		**96.74**	**321**	⇓*i*P	**P**	**03 47 40.9**	**+0.7**
TLCR		**96.74**	**321**	⇑*i*P	PKKP	04 04 24.9	+21
MNTX	**Cornudas Mount**	**96.77**	**54**	*e*P	**P**	**03 47 39.2**	**-1.5**
	comp=Z,116nm,1.1s,mb6.1						
LVV	**L’vov**	**96.98**	**326**	*e*P	**P**	**03 47 40.4**	**-0.7**
LVV				*i*		03 58 03.0	
CFR	**Carcaliu**	**97.16**	**321**	⇑*i*P	**P**	**03 47 42.5**	**+0.4**
CFR	**Carcaliu**	**97.16**	**321**	⇓*i*P	PKKP	04 04 22.9	+20
MEST	**Erdemli**	**97.24**	**311**	*i* P	**P**	**03 47 40.0**	**-2.7**
TIRR	**Tirgusor**	**97.36**	**320**	⇑*i*P	**P**	**03 47 41.3**	**-1.7**
TIRR	**Tirgusor**	**97.36**	**320**	⇓*i*P	PKKP	04 04 23.7	+21
GDL2	**Guadalupe Moun**	**97.36**	**54**	*e*P	**P**	**03 47 43.7**	**+0.3**
CPRX	**Cap Rock**	**97.41**	**53**	*e*P	**P**	**03 47 43.1**	**-0.4**
HARR	**Harsova**	**97.54**	**321**	⇑*i*P	**P**	**03 47 44.4**	**+0.6**
HARR	**Harsova**	**97.54**	**321**	⇓*i*P	PKKP	04 04 24.3	+22
BURAR	**Bucovina Array**	**97.56**	**324**	P	**P**	**03 47 44.6**	**+0.8**
BURAR	**Bucovina Array**	**97.56**	**324**	⇓*i*P	**P**	**03 47 44.9**	**+1.1**
BURAR	**Bucovina Array**	**97.56**	**324**	⇓*i*P	PKKP	04 04 22.5	+20
BER	**Bergen**	**97.58**	**341**	AMS	AMS	04 35 30.2	
	comp=Z,5µm,23.7s						
VRI	**Vrincioaia**	**97.64**	**322**	⇑*i*P	**P**	**03 47 45.3**	**+1.0**
VRI	**Vrincioaia**	**97.64**	**322**	⇑*i*P	**P**	**03 47 45.3**	**+1.1**
VRI	**Vrincioaia**	**97.64**	**322**	⇓*i*P	PKKP	04 04 21.0	+18
KWP	**Kalwaria**	**97.79**	**327**	*e*P	**P**	**03 47 43.2**	**-1.6**
KWP				*e*		03 58 07.8	
KWP				*e*S	S	03 58 52.4	-1.5
KWP	**Kalwaria**	**97.79**	**327**	*e*P	**P**	**03 47 43.2**	**-1.5**
KWP				*e*SKS	SKS	03 58 07.8	+0.9
KWP				*e*S	S	03 58 52.4	-1.5
KWP				MLR	MLR	04 29 20.7	
	comp=Z,7µm,24.7s						
KIZT	**Kizilcal**	**97.81**	**314**	Pn	**P**	**03 47 41.3**	**-3.9**
BSD	**Bornholm Skovb**	**98.00**	**334**	*i* P	**P**	**03 47 44.9**	**-0.7**
BSD				*i*		03 51 47.9	
BSD				*e*		03 58 03.8	
BSD				*i*		04 00 21.7	
BSD				pmax	pmax		
	comp=Z,57nm,1.0s,mb6.0						
BSD	**Bornholm Skovb**	**98.00**	**334**	*i* P	**P**	**03 47 44.9**	**-0.7**
	comp=Z,57nm,1.0s,mb6.0						
BSD				*i*		03 51 47.9	
BSD				*e*		03 58 03.8	
BSD				*i*		04 00 21.7	
BSD	**Bornholm Skovb**	**98.00**	**334**	⇓*i*P	PKKP	04 04 21.1	+19
	comp=Z,55nm,0.9s						
BSD				*i*		04 06 37.9	
BSD				*i* S	tx	04 14 04.2	
	comp=Z,4µm,19.0s						
GKP	**Gorka Klasztor**	**98.22**	**332**	*e*P	**P**	**03 47 46.5**	**-0.1**
GKP				*e*SKS	SKS	03 58 08.6	-0.4
GKP				MLR	MLR	04 30 57.6	
	comp=Z,8µm,25.1s						
ESKT	**Eskisehir**	**98.22**	**315**	Pn	**P**	**03 47 42.6**	**-4.4**
AMTX	**Amarillo**	**98.27**	**50**	*e*P	**P**	**03 47 47.8**	**+0.5**
	comp=Z,85nm,0.9s,mb6.2						
EYMN	**Ely**	**98.30**	**35**	*e*P	**P**	**03 47 45.9**	**-1.2**
	comp=Z,131nm,1.1s,mb6.3						
MLR	**Muntele Rosu**	**98.31**	**322**	⇑*i*P	**P**	**03 47 47.8**	**+0.6**
MLR	**Muntele Rosu**	**98.31**	**322**	⇑*i*P	PKKP	04 04 19.6	+18
KOLS	**Kolonicke sedl**	**98.43**	**326**	*e*P	**P**	**03 47 46.5**	**-1.2**
KOLS	**Kolonicke sedl**	**98.43**	**326**	PDIF	**P**	**03 47 46.5**	**-1.2**
KOLS	**Kolonicke sedl**	**98.43**	**326**	*e*PKP	PKKP	04 04 19.2	+18
KOLS				*e*		04 04 28.0	
CSS	**Prodhromos**	**98.55**	**310**	*e*P	**P**	**03 47 45.2**	**-3.4**
	comp=Z,64nm,0.8s,mb6.1						
UZH	**Uzhgorod**	**98.59**	**326**	*e*P	**P**	**03 47 50.0**	**+1.5**
UZH				*e*S	S	03 59 02.0	+1.3
COP	**Copenhagen**	**98.62**	**335**	*e*P	**P**	**03 47 45.2**	**-3.2**
COP				*i*		03 51 53.8	

COP				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.7						
COP	**Copenhagen**	**98.62**	**335**	eP	**P**	**03 47 45.2**	**-3.2**
	comp=Z,34nm,1.0s,mb5.7						
COP				i		03 51 53.8	
COP				i		04 00 14.1	
COP				e		04 02 06.7	
COP	**Copenhagen**	**98.62**	**335**	i P	**P**	**03 47 45.2**	**-3.2**
	comp=Z,34nm,1.0s,mb5.7						
COP				i		03 51 53.8	
COP				i		04 00 14.1	
COP				e		04 02 06.7	
COP	**Copenhagen**	**98.62**	**335**	i P	PKKP	04 04 19.3	+19
	comp=Z,38nm,0.9s						
COP				i		04 06 11.9	
	comp=Z,4µm,20.0s						
CRVS	**Cervenica-Dubn**	**98.88**	**327**	eP	**P**	**03 47 51.9**	**+2.1**
CRVS	**Cervenica-Dubn**	**98.88**	**327**	PDIF	**P**	**03 47 51.9**	**+2.1**
CRVS	**Cervenica-Dubn**	**98.88**	**327**	ePKP	PKKP	04 04 21.0	+21
CRVS				e		04 04 25.5	
OJC	**Ojcow**	**98.93**	**328**	eP	**P**	**03 47 49.2**	**-0.8**
OJC				⇑eSKSa		03 58 11.0	
OJC				eSS	SS	04 06 01.0	+3.3
OJC				MLR	MLR	04 33 21.0	
	comp=Z,9µm,19.4s						
ULDT	**Uludag**	**99.07**	**316**	i P	**P**	**03 47 50.2**	**-0.7**
LTX	**Lajitas**	**99.08**	**56**	P	**P**	**03 47 53.2**	**+2.0**
LTX				pmax	pmax		
	comp=Z,140nm,1.4s,mb6.2						
LTX	**Lajitas**	**99.08**	**56**	ePdif	**P**	**03 47 51.4**	**+0.2**
	comp=Z,139nm,1.4s,mb6.2						
NIE	**Niedzica**	**99.16**	**328**	eP	**P**	**03 47 50.1**	**-1.0**
MUD	**Monsted U’grnd**	**99.31**	**337**	i P	**P**	**03 47 51.6**	**0.0**
MUD				i S	SKS	03 58 16.0	+1.6
MUD				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.8						
MUD	**Monsted U’grnd**	**99.31**	**337**	i P	**P**	**03 47 51.6**	**0.0**
	comp=Z,37nm,1.0s,mb5.8						
MUD				i S	SKS	03 58 16.0	+1.6
MUD	**Monsted U’grnd**	**99.31**	**337**	i P	**P**	**03 47 51.6**	**0.0**
	comp=Z,37nm,1.0s,mb5.8						
MUD	**Monsted U’grnd**	**99.31**	**337**	i S	SKS	03 58 16.0	+1.6
MUD	**Monsted U’grnd**	**99.31**	**337**	⇓iP	PKKP	04 04 17.1	+18
	comp=Z,59nm,1.0s						
	comp=Z,6µm,19.0s						
SZH	**Strazhica**	**99.51**	**320**	eP	**P**	**03 47 53.0**	**+0.2**
EIL	**Elat**	**99.57**	**305**	eP	**P**	**03 47 50.1**	**-3.4**
	comp=Z,70nm,0.9s,mb6.1						
KECS	**Kecovo**	**99.64**	**327**	ePP	PP	03 51 57.4	-3.5
KECS	**Kecovo**	**99.64**	**327**	ePKP	PKKP	04 04 16.9	+18
KSU1	**Kansas State U**	**99.89**	**45**	ePdif	**P**	**03 47 53.4**	**-1.2**
PVL	**Pavlikeni**	**99.91**	**320**	eP	**P**	**03 47 55.0**	**+0.4**
OKC	**Ostrava-Krasne**	**100.00**	**329**	i P	**P**	**03 47 51.8**	**-3.0**
OKC				e		03 58 18.7	
OKC				MLR	MLR		
	comp=Z,6µm,18.9s						
OKC	**Ostrava-Krasne**	**100.00**	**329**	ePDIF	**P**	**03 47 51.8**	**-3.0**
OKC				eSKS	SKS	03 58 18.7	+0.8
OKC				eSP	SP	04 00 39.2	-7.4
OKC				ePKKP	PKKP	04 04 14.2	+16
OKC				AMS	AMS	04 34 10.0	
	comp=Z,6µm,18.9s						
LIKS	**Likavka**	**100.01**	**328**	ePKP	PKKP	04 04 17.9	+20
ELL	**Elmali**	**100.19**	**313**	P	P	03 47 54.5	-1.5
KSP	**Ksiaz**	**100.25**	**330**	eP	P	03 47 55.5	-0.4
KSP	**Ksiaz**	**100.25**	**330**	eP	P	03 47 54.9	-1.1
KSP				eSKS	SKS	03 58 20.4	+1.3
KSP				MLR	MLR	04 29 38.1	
	comp=Z,13µm,28.9s						
PSZ	**Piszkesteto**	**100.30**	**326**	eP	P	03 47 53.9	-2.3
PSZ				pmax	pmax		
	comp=Z,69nm,1.8s						
PSZ	**Piszkesteto**	**100.30**	**326**	ePdif	P	03 47 53.9	-2.3
	comp=Z,69nm,1.8s						
PSZ				P		03 47 57.0	
PSZ	**Piszkesteto**	**100.30**	**326**	⇑eP	P	03 47 56.8	+0.6
MORC	**Moravsky Berou**	**100.34**	**329**	eP	P	03 47 54.2	-2.2
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MORC	**Moravsky Berou**	**100.34**	**329**	ePdif	P	03 47 54.2	-2.2
	comp=Z,6.5nm,1.0s						
WMOK	**Wichita Mounta**	**100.46**	**49**	P	P	03 47 58.2	+0.9
WMOK				pmax	pmax		
	comp=Z,41nm,0.9s						
WMOK	**Wichita Mounta**	**100.46**	**49**	ePdif	P	03 47 56.1	-1.2
	comp=Z,452nm,1.8s						
VYHS	**Vyhne**	**100.50**	**327**	i P	P	03 47 56.7	-0.4
VYHS				e		03 52 05.9	
VYHS	**Vyhne**	**100.50**	**327**	PDIF	P	03 47 56.7	-0.4
VYHS				ePP	PP	03 52 05.9	-1.8
VYHS	**Vyhne**	**100.50**	**327**	ePKP	PKKP	04 04 13.4	+16
DPC	**Dobruska-Polom**	**100.56**	**330**	i P	P	03 47 56.2	-1.2
DPC				e		03 58 16.5	
DPC				MLR	MLR		
	comp=Z,8µm,18.5s						
DPC	**Dobruska-Polom**	**100.56**	**330**	ePDIF	P	03 47 56.2	-1.2
DPC				eSKS	SKS	03 58 16.5	-4.2
DPC				ePKKP	PKKP	04 04 13.1	+16
DPC				AMS	AMS	04 35 20.0	
	comp=Z,8µm,18.5s						
UPC	**Upice**	**100.61**	**330**	i P	P	03 47 56.8	-0.8
UPC				e		03 52 06.8	
UPC	**Upice**	**100.61**	**330**	ePDIF	P	03 47 56.8	-0.8
UPC				ePP	PP	03 52 06.8	-1.7
UPC				ePKKP	PKKP	04 04 14.5	+17
KOLL	**Kolacno**	**100.67**	**328**	ePP	PP	03 52 01.6	-7.5
KOLL	**Kolacno**	**100.67**	**328**	ePKP	PKKP	04 04 11.9	+15
BSEG	**Bad Segeberg**	**100.73**	**335**	ePdif	P	03 47 57.6	-0.4
BSEG				ePKKPbc		04 04 12.2	
PGB	**Panagyurishte**	**100.99**	**320**	P	P	03 48 01.0	+1.5
VRAC	**Vranov**	**101.11**	**329**	P	P	03 48 00.7	+0.8
RZN	**Rozhen**	**101.12**	**319**	eP	P	03 48 00.8	+0.7
SRO2	**Moca**	**101.19**	**327**	ePKP	PKKP	04 04 11.8	+16
SRO	**Srobarova**	**101.20**	**327**	ePKP	PKKP	04 04 10.9	+15
SMOL	**Smolenice**	**101.21**	**328**	eP	P	03 48 01.0	+0.7
SMOL	**Smolenice**	**101.21**	**328**	PDIF	P	03 48 01.0	+0.7
SMOL	**Smolenice**	**101.21**	**328**	ePKP	PKKP	04 04 11.8	+16
SRO1	**Iza**	**101.28**	**327**	ePKP	PKKP	04 04 10.4	+14
PVCC	**Panska Ves**	**101.28**	**331**	i P	P	03 48 00.1	-0.4
PVCC				e		03 58 18.8	
PVCC				MLR	MLR		
	comp=Z,5µm,18.5s						
PVCC	**Panska Ves**	**101.28**	**331**	ePDIF	P	03 48 00.1	-0.4
PVCC				eSKS	SKS	03 58 18.8	-5.4
PVCC				AMS	AMS	04 33 20.0	
	comp=Z,5µm,18.5s						
BRG	**Berggiesshubel**	**101.33**	**331**	eP	P	03 48 00.1	-0.7
BRG				i		03 58 23.0	
BRG				i S	S	03 59 24.0	+0.4
BRG				pmax	pmax		
	comp=Z,21nm,1.2s						
BRG				MLR	MLR		
	comp=N,11µm,18.2s						
BRG				MLR	MLR		
	comp=E,6µm,18.2s						
BRG				MLR	MLR		
	comp=Z,8µm,18.1s						
BRG	**Berggiesshubel**	**101.33**	**331**	eP	P	03 48 00.1	-0.7
	comp=Z,21nm,1.2s						
BRG				e		03 48 37.3	
BRG				e		03 49 00.9	
BRG				e		03 49 17.7	
BRG				i PP	Px	03 51 33.5	
BRG				i SKS	SKS	03 58 23.0	-1.4
BRG				i S	S	03 59 24.0	+0.4
BRG				i PS	PS	04 00 49.0	-29
BRG				ePKKP	PKKP	04 04 10.6	+15
BRG				i SS	SS	04 06 20.0	-11
BRG				eP’P’		04 12 23.8	
BRG				LR	LR		
	comp=Z,8µm,18.1s						
CLL	**Collm**	**101.46**	**332**	⇓iP	P	03 48 00.9	-0.4
CLL				e		03 58 24.0	
CLL				eS	S	03 59 23.0	-1.6
CLL				pmax	pmax		
	comp=Z,39nm,1.2s						
CLL	**Collm**	**101.46**	**332**	⇓iP	P	03 48 00.9	-0.4
	comp=Z,39nm,1.2s						
CLL				eSKS	SKS	03 58 24.0	-1.0
CLL				eS	S	03 59 23.0	-1.6
CLL				P’P’		04 12 23.0	
CLL				LR	LR		
	comp=Z,8µm,18.5s						
CLL	**Collm**	**101.46**	**332**	⇓P	P	03 48 00.9	-0.4
	comp=Z,logA/T=1.5						
CLL				e*SP		03 49 00.0	
CLL				i		03 49 18.3	
CLL				ePP	PP	03 52 06.0	-8.9
CLL				e*PPP		03 52 45.0	
CLL				i *SPP		03 52 59.3	
CLL				e		03 53 21.0	
CLL				e		03 55 01.0	
CLL				e		03 58 24.0	
CLL				eS	S	03 59 23.0	-1.6
CLL				e*SS		04 00 23.0	
CLL				eSP	SP	04 00 56.0	-5.9
CLL				e		04 01 43.0	
CLL				e		04 02 40.0	
CLL				e		04 03 58.0	
CLL				i PKKP	PKKP	04 04 10.4	+15
CLL				i PKKP	tx	04 04 36.0	
CLL				e		04 04 44.0	
CLL				i		04 05 30.8	
CLL				e	SS	04 07 08.0	+35
ZAPS	**Zavoj/Pirot**	**101.51**	**322**	⇑iP	P	03 48 01.5	-0.3
VTS	**Vitosha**	**101.56**	**321**	P	P	03 48 02.0	0.0
ZST	**Bratislava**	**101.58**	**328**	eP	P	03 48 02.3	+0.4
ZST				eS	SKS	03 58 25.4	-0.3
ZST	**Bratislava**	**101.58**	**328**	PDIF	P	03 48 02.3	+0.4
ZST	**Bratislava**	**101.58**	**328**	⇑eSKSp		03 58 25.4	
ZST	**Bratislava**	**101.58**	**328**	ePKP	PKKP	04 04 10.4	+15
BOLS	**Boljevac**	**101.59**	**322**	⇓iP	PKKP	04 04 10.8	+15
JCT	**Junction City**	**101.63**	**54**	eP	P	03 48 01.1	-1.5
JCT				pmax	pmax		
	comp=Z,111nm,1.1s						
JCT	**Junction City**	**101.63**	**54**	ePdif	P	03 48 01.1	-1.4
	comp=Z,111nm,1.1s						
PRU	**Pruhonice**	**101.66**	**330**	i P	P	03 48 02.1	-0.1
PRU				e		03 58 25.6	
PRU				MLR	MLR		
	comp=Z,6µm,22.7s						
PRU	**Pruhonice**	**101.66**	**330**	ePDIF	P	03 48 02.1	-0.1
PRU				ex	x	03 52 47.9	
PRU				eSKS	SKS	03 58 25.6	-0.4
PRU				ePKKP	PKKP	04 04 10.2	+15
PRU				AMS	AMS	04 31 40.0	
	comp=Z,6µm,22.7s						
SVIS	**Svilajnac**	**101.75**	**323**	⇑iP	PKKP	04 03 55.9	+0.8
MMB	**Musomiste**	**101.80**	**320**	P	P	03 48 02.5	-0.6
BEO	**Belgrade**	**101.88**	**324**	⇑iP	PKKP	04 04 09.9	+15
KKB	**Krupnik**	**102.04**	**320**	P	Pdif	03 48 04.0	-0.1
KKB	**Krupnik**	**102.04**	**320**	eP	PKKP	04 04 10.0	+15
CLZ	**Clausthal**	**102.23**	**334**	ePdif	Pdif	03 48 04.7	0.0
CLZ				eSP	SP	04 01 03.0	-6.8
CLZ				ePKKPab		04 04 32.6	
GRUS	**Gruza**	**102.28**	**323**	⇓iP	PKKP	04 04 09.9	+16
NKC	**Novy Kostel**	**102.47**	**332**	i P	Pdif	03 48 05.6	-0.2
NKC				e		03 58 23.6	
NKC				MLR	MLR		
	comp=Z,7µm,18.5s						
NKC	**Novy Kostel**	**102.47**	**332**	ePDIF	Pdif	03 48 05.6	-0.2
NKC				eSKS	SKS	03 58 23.6	-6.2
NKC				ePKKP	PKKP	04 04 07.2	+13
NKC				AMS	AMS	04 39 00.0	
	comp=Z,7µm,18.5s						
MOX	**Moxa**	**102.55**	**332**	eP	Pdif	03 48 06.1	-0.1
MOX				pmax	pmax		
	comp=Z,35nm,1.6s						
MOX				MLR	MLR		
	comp=Z,6µm,22.0s						
MOX	**Moxa**	**102.55**	**332**	eP	Pdif	03 48 06.1	-0.1
	comp=Z,35nm,1.6s						
MOX				LR	LR		
	comp=Z,6µm,22.0s						
MOX	**Moxa**	**102.55**	**332**	i P	Pdif	03 48 06.1	-0.1
	comp=Z,logA/T=1.3						
MOX				PP	PP	03 52 20.0	-3.1
MOX				SKS	SKS	03 58 27.0	-3.1
MOX				SP	SP	04 01 09.0	-4.2
MOX				PKKP	PKKP	04 04 07.0	+13
MOX				SS	SS	04 07 18.0	+30
MOX				PKPPKP		04 12 20.0	
MOX				LQ		04 16 38.0	
MOX				L		04 38 00.0	
DIVS	**Divcibare**	**102.58**	**323**	⇓i(P)	Pdif	03 48 06.9	+0.5
DIVS	**Divcibare**	**102.58**	**323**	⇓i	PKKP	04 03 57.3	+3.6
KHC	**Kasperske Hory**	**102.70**	**330**	i P	Pdif	03 48 05.4	-1.5
KHC				e		03 52 21.9	
KHC				MLR	MLR		
	comp=Z,8µm,18.4s						
KHC	**Kasperske Hory**	**102.70**	**330**	⇓eP	Pdif	03 48 06.8	-0.1
KHC	**Kasperske Hory**	**102.70**	**330**	ePDIF	Pdif	03 48 05.4	-1.5
KHC				ex	x	03 52 12.0	
KHC				ePP	PP	03 52 21.9	-2.4
KHC				ePKKP	PKKP	04 04 05.6	+12
KHC				ex	x	04 04 30.5	
KHC				AMS	AMS	04 36 40.0	
	comp=Z,8µm,18.4s						
GEC2	**GERESS Array S**	**102.84**	**330**	ePdif	Pdif	03 48 07.2	-0.3
GEC2				ePKKPbc		04 04 07.0	
SKO	**Skopje**	**102.98**	**321**	i P	Pdif	03 48 08.2	-0.1
SKO				i		03 58 32.4	
SKO				pmax	pmax		
	comp=Z,106nm,0.9s						
SKO	**Skopje**	**102.98**	**321**	i P	Pdif	03 48 08.2	-0.1
	comp=Z,0.1nm,0.9s						
SKO				i		03 48 50.2	
SKO				i PP	PP	03 52 44.4	+18
SKO				i SKS	SKS	03 58 32.4	0.0
SKO	**Skopje**	**102.98**	**321**	i P	PKKP	04 04 07.7	+15
ARSA	**Arzberg**	**103.01**	**328**	⇓iP	Pdif	03 48 07.6	-0.6
	comp=Z,20nm,1.5s						
ARSA	**Arzberg**	**103.01**	**328**	⇓iP	PKKP	04 04 06.9	+14
WET	**Wettzell**	**103.03**	**331**	ePdif	Pdif	03 48 08.6	+0.3
WET				eSP	SP	04 01 13.1	-5.3
WET				ePKKPbc		04 04 06.3	
WET				ePKKPab		04 04 28.5	
MOA	**Molln**	**103.24**	**329**	⇑iP	PKKP	04 04 05.9	+14
GRA1	**Grafenberg Arr**	**103.41**	**332**	ePdif	Pdif	03 48 09.5	-0.4
GRA1				ePP	PP	03 52 29.3	-0.2
GRA1				e		04 03 01.3	
GRA1				ePKKPbc		04 04 05.3	
GRA1				eP’P’		04 12 22.2	
GRF	**Grafenberg Arr**	**103.41**	**332**	ePdif	Pdif	03 48 09.5	-0.4
GRF				ePP	PP	03 52 29.3	-0.2
GRF				e		04 03 01.3	
GRF				PKKPbc		04 04 05.3	
WTSB	**Winterswijk**	**103.62**	**335**	ePP	PP	03 52 26.9	-4.0
	comp=Z,113nm,1.3s						
PERS	**Pernice**	**103.62**	**328**	i Pdiff	Pdif	03 48 09.9	-1.1
PERS				e		03 58 33.1	
PERS				eSP	SP	04 01 21.0	-3.4
OHR	**Ohrid**	**103.88**	**321**	i P	Pdif	03 48 10.2	-2.0
OBKA	**Obir**	**104.00**	**328**	⇑iP	PKKP	04 04 02.6	+12
	comp=Z,56nm,1.1s						
CCM	**Cathedral Cave**	**104.01**	**43**	P	Pdif	03 48 08.7	-4.2
CCM	**Cathedral Cave**	**104.01**	**43**	ePdif	Pdif	03 48 08.4	-4.5
PDKS	**Podkum**	**104.07**	**327**	ePKKPbc	PKKP	04 04 04.1	+13
SCHQ	**Schefferville**	**104.11**	**19**	ePdif	Pdif	03 48 12.5	-0.4
	comp=Z,25nm,1.1s						
KBA	**Koelnbreinsper**	**104.22**	**329**	⇑iP	PKKP	04 04 02.5	+12
	comp=Z,19nm,0.8s						
TNS	**Taunus Mts**	**104.25**	**333**	ePdif	Pdif	03 48 13.9	+0.3
TNS				eSP	SP	04 01 21.9	-8.5
MIAR	**Mount Ida**	**104.30**	**47**	P	Pdif	03 48 10.8	-3.4
MIAR				pmax	pmax		
	comp=Z,88nm,1.5s						
MIAR	**Mount Ida**	**104.30**	**47**	ePdif	Pdif	03 48 10.4	-3.8
	comp=Z,88nm,1.5s						
BOJS	**Bojanci**	**104.30**	**327**	e		03 52 15.3	
LJU	**Ljubljana**	**104.32**	**327**	eP	Pdif	03 48 13.2	-0.9
LJU				e		03 58 36.5	
LJU				eSP	SP	04 01 28.8	-2.4
LJU				e		04 02 23.7	
LJU	**Ljubljana**	**104.32**	**327**	ePdiff	Pdif	03 48 13.2	-0.8
LJU				e		03 52 14.3	
LJU				e		03 53 08.4	
LJU				e		03 58 36.5	
LJU				eSP	SP	04 01 28.8	-2.5
LJU				e		04 02 23.7	
LJU				e		04 03 21.6	
LJU				ePKKPbc		04 04 02.5	
LJU				e		04 08 10.1	
LJU				e		04 17 56.7	
ESK	**Eskdalemuir**	**104.34**	**342**	eP	PP	03 52 33.5	-2.7
SIND	**Sindeldorf**	**104.39**	**332**	⇓eP	PKKP	04 04 02.6	+12
TOD	**Tromm**	**104.55**	**333**	eP	Pdif	03 48 15.3	+0.3
TOD	**Tromm**	**104.55**	**333**	⇓eP	PKKP	04 04 01.9	+12
CEY	**Cerknica**	**104.58**	**327**	e	PKKP	04 04 02.2	+12
CEY				ePKKPbc		04 04 02.3	
CEY				ePKKPab		04 04 21.2	
FVM	**French Village**	**104.59**	**43**	eP	Pdif	03 48 16.6	+1.1
FVM				pmax	pmax		
	comp=Z,97nm,1.7s						
FVM	**French Village**	**104.59**	**43**	ePdif	Pdif	03 48 16.6	+1.1
	comp=Z,97nm,1.7s						
VOY	**Vojsko**	**104.66**	**328**	ePKKPbc	PKKP	04 04 01.1	+11
HDH	**Heidenheim**	**104.67**	**331**	⇓eP	PKKP	04 04 01.4	+12
SWS	**Schriesheim**	**104.69**	**333**	eP	PKKP	04 04 01.5	+12
ABH	**Alteburg**	**104.89**	**334**	eP	Pdif	03 48 16.4	-0.1
ABH	**Alteburg**	**104.89**	**334**	⇓eP	PKKP	04 04 01.2	+12
WATA	**Walderalm**	**104.91**	**330**	⇑iP	PKKP	04 03 59.4	+10
HKT	**Hockley**	**104.92**	**52**	eP	Pdif	03 48 19.2	+2.1
HKT				pmax	pmax		
	comp=Z,79nm,2.1s						
HKT	**Hockley**	**104.92**	**52**	ePdif	Pdif	03 48 19.2	+2.1
	comp=Z,79nm,2.1s						
HKT				ePKP		03 52 32.0	
NATX	**Nacogdoches**	**104.92**	**50**	PKP		03 52 28.7	
WTTA	**Wattenberg**	**104.93**	**330**	⇓iP	PKKP	04 03 59.2	+10
STU	**Stuttgart**	**104.99**	**332**	eP	Pdif	03 48 13.9	-3.0
STU				pmax	pmax		
	comp=Z,28nm,1.3s						
STU	**Stuttgart**	**104.99**	**332**	ePdif	Pdif	03 48 13.9	-3.1
	comp=Z,28nm,1.3s						
HPK	**Haverah Park**	**105.02**	**341**	eP		03 52 29.3	
UALR	**University of**	**105.04**	**47**	ePKP		03 52 31.2	
KTD	**Kalmit**	**105.08**	**333**	⇓eP	PKKP	04 04 00.4	+11
MOTA	**Moosalm**	**105.13**	**330**	⇓iP	PKKP	04 03 59.5	+11
	comp=Z,16nm,0.9s						
BUCH	**Bad Urach**	**105.16**	**332**	eP	PKKP	04 04 00.4	+11
SQTA	**Sankt Quirin**	**105.17**	**330**	⇑iP	PKKP	04 03 59.2	+10
RUP	**Ruppelstein**	**105.23**	**334**	eP	Pdif	03 48 18.1	+0.1
RUP	**Ruppelstein**	**105.23**	**334**	⇓eP	PKKP	04 04 00.4	+12
LBG	**Lerchenberg**	**105.25**	**332**	⇓eP	PKKP	04 03 59.8	+11
UBR	**Uberruh**	**105.37**	**331**	⇓eP	PKKP	04 03 59.9	+11
LHO	**Holmfirth**	**105.45**	**341**	eP		03 52 41.4	
GUT	**Gutenstein**	**105.54**	**332**	eP	PKKP	04 03 58.8	+11
ZIIG	**Zihuatanejo**	**105.58**	**66**	eP		03 52 43.0	
WLF	**Walferdange**	**105.64**	**334**	P	Pdif	03 48 21.3	+1.5
WLF				pmax	pmax		
	comp=Z,39nm,1.2s						
WLF	**Walferdange**	**105.64**	**334**	ePdif	Pdif	03 48 18.4	-1.3
	comp=Z,39nm,1.3s						
SPAK	**Spaichingen**	**105.67**	**332**	eP	PKKP	04 03 58.4	+10
DAVA	**Damuels**	**105.76**	**331**	⇑iP	PKKP	04 03 58.1	+10
	comp=Z,106nm,0.9s						
HBAR	**Harrisburg**	**105.78**	**45**	PKP		03 52 37.8	
QSPA	**South Pole Qui**	**105.83**	**180**	⇑iP	Pdif	03 48 23.5	+3.5
	comp=Z,60nm,1.1s						
GIVF	**Givet**	**105.85**	**335**	eP	Pdif	03 48 20.2	-0.5
	comp=Z,30nm,0.9s						
GIVF	**Givet**	**105.85**	**335**	eP	Pdif	03 48 20.2	-0.5
GIVF				pmax	pmax		
	comp=Z,15nm,0.9s						
GNAR	**Gosnell**	**105.99**	**44**	ePKP		03 52 32.4	
WLS	**Welschbruch**	**106.08**	**333**	eP	Pdif	03 48 20.2	-1.5
CDF	**Champ du Feu**	**106.11**	**333**	eP	Pdif	03 48 21.5	-0.4
	comp=Z,68nm,1.6s						
CDF	**Champ du Feu**	**106.11**	**333**	eP	Pdif	03 48 21.5	-0.4
CDF				pmax	pmax		
	comp=Z,34nm,1.6s						
BAIF	**Baives**	**106.13**	**336**	eP	Pdif	03 48 22.5	+0.6
	comp=Z,15nm,0.9s						
BAIF	**Baives**	**106.13**	**336**	eP	Pdif	03 48 22.5	+0.6
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LIBD	**Limburg**	**106.17**	**332**	⇓eP	PKKP	04 03 57.5	+10
KIZ	**Kirchzarten**	**106.17**	**332**	⇓eP	PKKP	04 03 56.9	+10
FELD	**Feldberg**	**106.19**	**332**	⇓eP	PKKP	04 03 57.1	+10
ECH	**Echery**	**106.31**	**333**	eP	Pdif	03 48 23.2	+0.4
BLO	**Bloomington**	**106.39**	**40**	ePKP		03 52 34.3	
USIN	**University of**	**106.39**	**42**	ePKPdf		03 52 35.3	
HALT	**Halls**	**106.47**	**44**	PKP		03 52 36.1	
MET	**Memphis--Engin**	**106.51**	**45**	ePKP		03 52 32.7	
UTMT	**University of**	**106.55**	**44**	ePKP		03 52 29.1	
BBS	**Basel-Blauen**	**106.72**	**332**	⇓eP	PKKP	04 03 55.4	+9.3
HAU	**Haudompre**	**106.83**	**333**	eP	Pdif	03 48 24.2	-0.8
	comp=Z,43nm,1.5s						
HAU				eR			
	comp=Z,8µm,19.8s						
HAU	**Haudompre**	**106.83**	**333**	eP	Pdif	03 48 24.2	-0.8
HAU				pmax	pmax		
	comp=Z,21nm,1.5s						
HAU				MLR	MLR		
	comp=Z,8µm,19.8s						
MEZF	**Maizieres J’vi**	**107.00**	**334**	eP	Pdif	03 48 25.8	0.0
	comp=Z,145nm,1.7s						
DLF	**Lyons Farm**	**107.05**	**343**	eP		03 52 53.6	
DLF	**Lyons Farm**	**107.05**	**343**	eP	PKKP	04 03 49.0	+3.6
DLF	**Lyons Farm**	**107.05**	**343**	⇑iP	PKKP	04 03 54.2	+8.8
DLF	**Lyons Farm**	**107.05**	**343**	eP	PKKP	04 04 09.4	+24
DLF	**Lyons Farm**	**107.05**	**343**	eP		03 52 38.0	
DLF				eP		03 52 53.6	
WCI	**Wyandotte Cave**	**107.10**	**41**	ePKP		03 52 35.6	
OXF	**Oxford**	**107.21**	**45**	P	Pdif	03 48 29.7	+2.6
OXF				pmax	pmax		
	comp=Z,83nm,1.2s						
OXF	**Oxford**	**107.21**	**45**	ePdif	Pdif	03 48 24.5	-2.6
	comp=Z,83nm,1.3s						
DCN	**Croghan**	**107.22**	**344**	eP		03 52 54.9	
DCN	**Croghan**	**107.22**	**344**	eP	PKKP	04 03 48.0	+2.9
DCN	**Croghan**	**107.22**	**344**	⇑iP	PKKP	04 03 53.5	+8.4
DCN	**Croghan**	**107.22**	**344**	eP	PKKP	04 04 08.4	+23
DCN	**Croghan**	**107.22**	**344**	eP		03 52 40.3	
DCN				eP		03 52 54.9	
WVT	**Waverly**	**107.35**	**43**	P	Pdif	03 48 30.3	+2.6
WVT				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WVT	**Waverly**	**107.35**	**43**	Pdif	Pdif	03 48 28.2	+0.6
	comp=Z,9.1nm,1.1s						
WVT				ePKP		03 52 36.5	
CABF	**La Chapelle**	**108.00**	**332**	eP	Pdif	03 48 30.7	+0.5
	comp=Z,72nm,1.7s						
CABF	**La Chapelle**	**108.00**	**332**	eP	Pdif	03 48 30.7	+0.5
CABF				pmax	pmax		
	comp=Z,36nm,1.7s						
KMBO	**Kilima Mbogo**	**108.36**	**274**	P	Pdif	03 48 34.1	+1.5
KMBO				e		03 53 04.3	
KMBO	**Kilima Mbogo**	**108.36**	**274**	ePdif	Pdif	03 48 32.7	+0.1
ALLY	**Alegheny Colle**	**108.52**	**35**	PKP		03 52 32.3	
LPG	**La Plagne**	**108.54**	**331**	eP	Pdif	03 48 33.8	+1.2
	comp=Z,33nm,0.9s						
LPG	**La Plagne**	**108.54**	**331**	eP	Pdif	03 48 33.8	+1.2
LPG				pmax	pmax		
	comp=Z,16nm,0.9s						
SSF	**Saint Saulge**	**108.78**	**334**	eP	Pdif	03 48 34.8	+1.2
	comp=Z,16nm,1.0s						
SSF	**Saint Saulge**	**108.78**	**334**	eP	Pdif	03 48 34.8	+1.2
SSF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SMF	**Signal de Mont**	**108.96**	**333**	eP	Pdif	03 48 35.6	+1.1
	comp=Z,9.8nm,0.9s						
SMF	**Signal de Mont**	**108.96**	**333**	eP	Pdif	03 48 35.6	+1.1
SMF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LDF	**La Druitiere**	**108.99**	**337**	eP	Pdif	03 48 35.3	+0.8
AVF	**Avril sur Loir**	**109.06**	**334**	eP	Pdif	03 48 36.0	+1.1
	comp=Z,30nm,1.2s						
AVF	**Avril sur Loir**	**109.06**	**334**	eP	Pdif	03 48 36.0	+1.1
AVF				pmax	pmax		
	comp=Z,15nm,1.2s						
MBDF	**Montbardon**	**109.11**	**331**	eP	Pdif	03 48 36.8	+1.6
	comp=Z,41nm,1.6s						
SAOF	**Saorge**	**109.28**	**330**	eP	SP	04 02 17.2	-2.5
ORIF	**Oris-en-Rattie**	**109.38**	**331**	eP	Pdif	03 48 38.6	+2.2
	comp=Z,46nm,1.7s						
ORIF				eR			
	comp=Z,7µm,20.0s						
TOUF	**Mont Tournerai**	**109.41**	**330**	eP	SP	04 02 18.5	-2.5
BGF	**Bois d’Agland**	**109.45**	**334**	eP	Pdif	03 48 37.7	+1.1
MVIF	**Mont Vial**	**109.54**	**330**	eP	SP	04 02 19.2	-3.2
REVF	**Revere**	**109.55**	**329**	eP	SP	04 02 20.6	-1.9
LRAL	**Lakeview Retre**	**109.70**	**45**	ePKP		03 52 41.1	
PYM	**Petit Puy Mans**	**110.02**	**333**	eP	SP	04 02 26.3	-0.8
FRF	**La Foret Royal**	**110.04**	**330**	eP	Pdif	03 48 40.7	+1.4
MIV	**Mineville/With**	**110.15**	**29**	ePKP	PKPdf	03 52 42.1	+2.9
SMRF	**Simiane la Rot**	**110.24**	**331**	eP	Pdif	03 48 41.7	+1.6

TAVF	**Tavernes**	**110.28**	**330**	*e*P	SP	04 02 26.1	-3.6
LBL	**Lubilhac**	**110.33**	**333**	*e*P	SP	04 02 25.7	-4.5
MDV	**Middlebury**	**110.37**	**29**	*e*PKP	PKPdf	03 52 41.7	+2.0
SSPA	**Standing Stone**	**110.45**	**34**	*e*PKP	PKPdf	03 52 42.2	+2.3
PUYF	**Puyloubier**	**110.51**	**330**	*e*P	SP	04 02 29.1	-3.0
PRAF	**Pradon**	**110.56**	**331**	*e*P	SP	04 02 29.4	-3.1
TREF	**Trevaresse**	**110.59**	**331**	*e*P	SP	04 02 30.0	-2.9
BERF	**Bertagne**	**110.68**	**330**	*e*P	SP	04 02 31.3	-2.5
SYO	**Syowa Base**	**110.71**	**202**	⇑PP	PP	03 53 18.4	-4.8
CAF	**Calviac**	**111.08**	**333**	*e*P	Pdif	03 48 44.4	+0.6
	comp=Z,29nm,1.4s						
GOGA	**Godfrey**	**111.85**	**43**	*e*PKIKP	PKPdf	03 52 44.0	+1.2
SDMD	**Soldier's Deli**	**111.89**	**35**	*e*PKP	PKPdf	03 52 44.4	+1.7
PAL	**Palisades**	**112.27**	**32**	*e*PKIKP	PKPdf	03 52 45.4	+1.9
PAL				*e*		03 53 34.4	
EBIE	**Bielsa**	**113.71**	**333**	PKP	PKPdf	03 52 49.9	+3.6
EMIR	**Miracle**	**113.71**	**332**	PKP	PKPdf	03 52 49.1	+2.7
EALK	**Alkurruntz**	**113.97**	**335**	PKP	PKPdf	03 52 49.6	+2.8
EPOB	**Poblet**	**114.36**	**332**	PKP	PKPdf	03 52 49.9	+2.2
MBAR	**Mbarara**	**114.45**	**277**	*e*PKIKP	PKPdf	03 52 49.4	+0.9
ELAN	**Lanestosa**	**114.74**	**336**	PKP	PKPdf	03 52 51.4	+3.0
ESAC	**San Caprasio**	**114.76**	**333**	PKP	PKPdf	03 52 51.3	+2.9
CAEH	**'Ain El Ouahch**	**114.90**	**325**	P	PKPdf	03 52 54.0	+5.1
ERTA	**Horta de San J**	**115.02**	**332**	PKP	PKPdf	03 52 50.4	+1.4
EBR	**Ebro Roquetas**	**115.05**	**332**	*e*PKPDF	PKPdf	03 52 51.5	+2.5
EBR				*e*Ts	PKKP	04 03 27.0	-3.3
CKFL	**Kef-Lekhel**	**115.25**	**324**	P	PKPdf	03 52 53.5	+4.0
CASM	**Ain Smara**	**115.48**	**324**	P	PKPdf	03 52 51.5	+1.5
DFRA	**Djebel Bou Aff**	**115.61**	**325**	P	PKPdf	03 52 54.5	+4.3
TEIG	**Tepich**	**115.64**	**58**	*e*PKP	PKPdf	03 52 52.4	+1.8
CTEI	**Djebel Teioual**	**115.67**	**324**	P	PKPdf	03 52 54.5	+4.2
EMOS	**Mosqueruela**	**115.86**	**332**	PKP	PKPdf	03 52 53.9	+3.4
EPON	**Pontenova**	**116.04**	**339**	PKP	PKPdf	03 52 53.8	+3.0
SET	**Setif**	**116.13**	**325**	P	PKPdf	03 52 55.0	+3.8
CKHR	**Kef el Ahmar**	**116.20**	**325**	P	PKPdf	03 52 55.0	+3.7
CMER	**Merouana**	**116.27**	**324**	P	PKPdf	03 52 55.0	+3.5
EINC	**Incio**	**116.70**	**338**	PKP	PKPdf	03 52 55.0	+2.9
ABMS	**Boumerdes**	**116.75**	**327**	P	PP	03 53 52.1	-15
ERUA	**La Rua**	**116.86**	**338**	PKIKP	PKPdf	03 52 55.3	+2.9
STS	**Santiago**	**116.92**	**339**	PKIKP	PKPdf	03 52 55.1	+2.6
ABA	**Alger-Bouzarea**	**116.94**	**327**	P	PKPdf	03 52 56.5	+3.8
EMAZ	**Mazaricos**	**117.00**	**340**	PKP	PKPdf	03 52 55.2	+2.5
EBEN	**Beniarda**	**117.08**	**331**	PKP	PKPdf	03 52 55.8	+2.9
ECAL	**Calabor**	**117.10**	**337**	PKP	PKPdf	03 52 55.4	+2.5
GUD	**Guadarrama**	**117.21**	**335**	PKIKP	PKPdf	03 52 55.5	+2.4
PBRG	**Braganca**	**117.22**	**337**	*e*PKPdf	PKPdf	03 52 53.5	+0.4
EZAM	**Zamans**	**117.62**	**339**	PKIKP	PKPdf	03 52 57.3	+3.4
ELOB	**Lobios**	**117.65**	**338**	PKP	PKPdf	03 52 56.9	+3.0
ESDC	**Sonseca Array**	**117.94**	**334**	PKP	PKPdf	03 52 55.9	+1.3
ESLA	**Sonseca Array**	**117.94**	**334**	*e*PKP	PKPdf	03 52 55.8	+1.3
PVRL	**Vila Real**	**118.04**	**338**	*e*PKPdf	PKPdf	03 52 56.6	+1.9
EVIA	**Vianos**	**118.17**	**332**	PKIKP	PKPdf	03 52 55.0	0.0
EMUR	**La Murta**	**118.24**	**331**	PKP	PKPdf	03 52 57.9	+2.7
PVIS	**Viseu**	**118.60**	**338**	*e*PKPdf	PKPdf	03 52 57.3	+1.4
MTE	**Manteigas**	**118.74**	**337**	*e*PKPdf	PKPdf	03 52 57.1	+0.9
MTE				*i* -		04 10 33.9	
MTE	**Manteigas**	**118.74**	**337**	*e*PKP	PKPdf	03 52 55.9	-0.3
EQES	**Quesada**	**119.11**	**332**	PKP	PKPdf	03 52 58.4	+1.5
EBAN	**Banos Encina**	**119.13**	**333**	PKIKP	PKPdf	03 52 58.4	+1.5
PCBR	**Castelo Branco**	**119.21**	**337**	*e*PKPdf	PKPdf	03 52 58.3	+1.2
ENIJ	**Nijar**	**119.40**	**331**	PKIKP	PKPdf	03 53 00.5	+3.0
EADA	**Adamuz**	**119.47**	**334**	PKP	PKPdf	03 52 59.4	+1.8
EBER	**Berja**	**119.77**	**332**	PKP	PKPdf	03 53 00.4	+2.2
ELUQ	**Luque**	**119.84**	**333**	PKIKP	PKPdf	03 53 00.8	+2.5
EBAD	**Badajoz**	**119.97**	**336**	PKP	PKPdf	03 53 00.9	+2.3
ELOJ	**Sierra Loja**	**120.14**	**333**	PKIKP	PKPdf	03 52 59.6	+0.7
LSZ	**Lusaka**	**120.36**	**261**	*e*PKIKP	PKPdf	03 52 59.5	-0.3
EVO	**Evora**	**120.55**	**337**	*e*PKIKP	PKPdf	03 53 00.9	+1.2
	comp=Z,122nm,1.1s						
EVO				*e*R			
	comp=Z,7µm,22.2s						
EALB	**Alboran**	**120.62**	**331**	PKP	PKPdf	03 53 02.2	+2.3
PLOU	**Loures**	**120.67**	**338**	*e*PKPdf	PKPdf	03 53 02.0	+2.1
EMIN	**Mina Concepcio**	**120.68**	**335**	PKP	PKPdf	03 53 02.0	+2.0
PBEJ	**Beja**	**120.93**	**336**	*e*PKPdf	PKPdf	03 53 03.0	+2.5
ESPR	**Espera**	**121.11**	**334**	PKP	PKPdf	03 53 02.8	+1.9
EGRO	**El Granado**	**121.21**	**336**	PKP	PKPdf	03 53 02.7	+1.7
SNAA	**Sanae**	**121.36**	**191**	⇓*i*P	PKPdf	03 53 02.5	+2.0
SNAA	**Sanae**	**121.36**	**191**	*e*		03 53 36.9	
SNAA	**Sanae**	**121.36**	**191**	*e*	PP	03 54 32.2	-5.5
SNAA	**Sanae**	**121.36**	**191**	*e*PKIKP	PKPdf	03 53 00.4	-0.1
SFS	**San Fernando**	**121.60**	**334**	*e*PKIKP	PKPdf	03 53 02.2	+0.4
PTEO	**Sao Teotonio**	**121.68**	**337**	*e*PKPdf	PKPdf	03 53 04.1	+2.2
PAYG	**Puerto Ayora**	**122.44**	**80**	PKP	PKPdf	03 53 04.9	+1.0
VNA2	**Neumayer--Watz**	**122.79**	**190**	⇓*i*P	PKPdf	03 53 04.5	+1.3
VNA2	**Neumayer--Watz**	**122.79**	**190**	*e*		03 53 42.7	
VNA2	**Neumayer--Watz**	**122.79**	**190**	*e*		03 53 53.1	
VNA2	**Neumayer--Watz**	**122.79**	**190**	*e*	PP	03 54 43.4	-4.3
VNA3	**Neumayer Olymp**	**122.88**	**189**	⇓*i*P	PKPdf	03 53 04.5	+1.1
VNA3	**Neumayer Olymp**	**122.88**	**189**	*e*		03 53 42.5	
VNA3	**Neumayer Olymp**	**122.88**	**189**	*e*		03 53 53.6	
VNA3	**Neumayer Olymp**	**122.88**	**189**	*e*	PP	03 54 43.4	-4.9
JTS	**JuntasAbangare**	**123.17**	**66**	*e*PKIKP	PKPdf	03 53 06.6	+1.3
VNA1	**Neumayer--Stat**	**123.17**	**190**	⇓*i*P	PKPdf	03 53 06.7	+2.7
VNA1	**Neumayer--Stat**	**123.17**	**190**	*e*		03 53 42.1	
VNA1	**Neumayer--Stat**	**123.17**	**190**	*e*		03 53 53.8	
VNA1	**Neumayer--Stat**	**123.17**	**190**	*e*	PP	03 54 46.3	-4.1
JCR	**Jicaral**	**123.23**	**67**	*e*P	PKPdf	03 53 08.8	+3.4
BBSR	**BB Station**	**123.61**	**31**	PKPdf	PKPdf	03 53 06.6	+0.9
LBTB	**Lobatse**	**123.87**	**250**	*e*PKIKP	PKPdf	03 53 06.3	-0.2
LAJ	**Bijagual**	**124.09**	**66**	*e*P	PKPdf	03 53 06.2	-0.9
LCR2	**La Lucha 2**	**124.25**	**66**	*e*P	PKPdf	03 53 10.2	+2.8
BOSA	**Boshof**	**124.28**	**246**	*e*PKIKP	PKPdf	03 53 07.4	+0.2
ICR	**Volcan Irazu**	**124.29**	**66**	⇓*e*P	PKPdf	03 53 12.2	+4.7
BUS	**Buena Vista**	**124.55**	**66**	*e*P	PKPdf	03 53 06.2	-1.9
ADH	**Angra Heroismo**	**125.27**	**354**	*e*PP	PP	03 55 37.5	+33
ADH	**Angra Heroismo**	**125.27**	**354**	*e*		04 07 37.5	
ADH				*e*SS	SS	04 11 27.5	-20
ADH	**Angra Heroismo**	**125.27**	**354**	*i* LR	LR	04 32 27.5	
ACR	**Cerro Adams**	**125.47**	**67**	*e*P	PKPdf	03 53 13.0	+3.2
SUR	**Sutherland**	**127.98**	**241**	PKP	PKPdf	03 53 15.2	+0.9
TSUM	**Tsumeb**	**130.91**	**258**	*e*PKP	PKPdf	03 53 15.3	-4.8
CFTV	**Fuerteventura**	**131.84**	**336**	PKP	PKPdf	03 53 24.9	+3.2
EOSO	**Osorio**	**132.70**	**338**	PKP	PKPdf	03 53 27.8	+4.5
OTAV	**Otavalo**	**133.23**	**74**	*e*PKP	PKPdf	03 53 13.7	-11
SJG	**San Juan**	**133.59**	**44**	*e*PKHKP		03 53 13.7	
CBYP	**Canovanas**	**133.67**	**44**	PKP	PKPdf	03 53 15.4	-10
SDV	**Santo Domingo**	**136.07**	**58**	*e*PKP	PKPdf	03 53 20.4	-10
COYC	**Coyhaique**	**136.59**	**141**	*e*P	PKPdf	03 53 20.6	-9.4
NNA	**Nana**	**138.25**	**90**	*e*PKP	PKPdf	03 53 29.4	-4.5
FDF	**Fort de France**	**139.33**	**43**	*e*P	PKPdf	03 53 29.4	-6.4
CRM	**Caravelle**	**139.47**	**42**	*e*P	PKPdf	03 53 27.3	-8.8
BIM	**Bigot**	**139.54**	**43**	*e*P	PKPdf	03 53 29.7	-6.5
PLCA	**Paso Flores**	**139.90**	**135**	*e*PKHKP		03 53 30.9	
GRW	**Mount Saint Ca**	**140.83**	**46**	*e*P	PKPdf	03 53 35.1	-3.6
TRN	**Trinidad (W)**	**142.07**	**47**	*e*P	PKPdf	03 53 38.8	-2.0
TPR	**Prospect**	**142.13**	**46**	*e*P	PKPdf	03 53 38.1	-2.8
TPP	**Pointe-a-Pierr**	**142.26**	**48**	*e*P	PKPdf	03 53 39.2	-1.9
CLCH	**Cerro Calan**	**142.77**	**125**	⇓*e*P	PKPdf	03 53 40.6	-0.9
LMEL	**Las Melosas**	**142.89**	**125**	⇓*i*P	PKPdf	03 53 41.4	-0.3
FCH	**Farellones**	**142.99**	**125**	*e*P	PKPdf	03 53 39.9	-2.0
TLL	**Tololo Astrono**	**143.47**	**119**	*e*P	PKPbc	03 53 42.9	+1.5
ARE	**Arequipa**	**144.00**	**96**	*e*P	PKPbc	03 53 46.0	+2.7
ARE				*i*		03 53 47.1	
ARE				*i*		03 57 14.9	
ARE				*i*		03 57 23.4	
ZON	**Zonda**	**144.84**	**122**	*e*PKIKP	PKPdf	03 53 46.0	+0.9
ANCH	**Antofagasta**	**144.95**	**108**	*e*P	PKPdf	03 53 47.4	+1.8
LVC	**Limon Verde**	**146.42**	**107**	*e*PKPdf	PKPdf	03 53 50.8	+2.8
TRQA	**Tornquist**	**146.97**	**137**	*e*PKPdf	PKPdf	03 53 50.4	+1.9
SPCH	**San Pedro de A**	**147.05**	**107**	*e*P	PKPdf	03 53 54.3	+5.3
LPAZ	**La Paz**	**147.20**	**95**	*e*PKIKP	PKPdf	03 53 51.2	+1.8
LPA	**La Plata**	**151.44**	**136**	*de*PKP	PKPdf	03 53 58.0	+2.4
LPA				PKIKP	PKPdf	03 54 05.3	+10
LPA	**La Plata**	**151.44**	**136**	*ce*PKP	PKPdf	03 54 11.0	+15
LPA				*e*PP	PP	03 57 45.0	-0.4
LPA				*e*SKKS		04 04 18.0	
TRIS	**Tristan da Cun**	**151.58**	**218**	PKPdf	PKPdf	03 53 55.6	-0.1
CPUP	**Villa Florida**	**155.95**	**119**	PKPdf	PKPdf	03 54 04.5	+2.5
CPUP				PKPdf	PKPdf	03 54 15.3	+13
BAO	**Brasilia Array**	**166.49**	**90**	P	PKPdf	03 54 15.1	+1.6
BAO				*i*		03 55 21.0	
BAO				*i*		03 55 59.0	
BAO				*e*		04 05 42.1	
CAM4	**Nova Friburgo**	**169.71**	**129**	*e*P	PKPdf	03 54 17.8	+2.4
CAM4				*i*		03 54 19.0	
CAM4				*i*		03 55 34.9	
CAM4				*i*		03 55 39.2	
RCBR	**Riachuelo**	**169.71**	**11**	*e*PKPdf	PKPdf	03 54 17.7	+2.1

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*NEIC **05** 03:39:18.5, 37.88N×1.81W, h2^{km}, ML3.3(LDG), MN2.7(MDD), After MDD.*

*INMG **05** 03:39:18.3±1.1, 37.89N×1.83W, ML2.8, Error ellipse: s-maj=1.8km s-min=1.5km az=143.0*

*CSEM **05** 03:39:18.6±0.1, 37.88N×1.77W, h5^{km}, ML3.3/9, Error ellipse: s-maj=3.7km s-min=2.4km az=149.0*

*SFS **05** 03:39:18.0, 37.90N×1.70W*

*LDG **05** 03:39:20.0±0.3, 37.86N×1.88W, h5^{km}, Md3.8/1, Ml3.3/4, Error ellipse: s-maj=6.8km s-min=3.3km az=141.0*

MDD 05 03:39:18.4±0.2**, 37.88N×1.81W, mbLg2.6**/27**, 2C-2D, Error ellipse: s-maj=3.4km s-min=2.0km az=5.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.45**	**95**	⇑Pg	Pg	03 39 26.5	-0.9
	60nm,0.2s,SNR=18						
EMUR				Lg		03 39 33.4	
	452nm,0.4s,SNR=9.7						
EMUR	**La Murta**	**0.45**	**95**	Pg	Pg	03 39 26.5	-1.0
	60nm,0.2s,SNR=18						
CART	**Cartagena**	**0.71**	**114**	*e*P	Pg	03 39 31.5	-1.0
CART	**Cartagena**	**0.71**	**114**	P	Pg	03 39 31.9	-0.6
CART				S	Sg	03 39 40.2	-1.7
CART	**Cartagena**	**0.71**	**114**	*e*P	Pg	03 39 31.9	-0.6
EVIA	**Vianos**	**0.93**	**325**	⇓Pg	Pg	03 39 36.0	-1.1
	160nm,0.5s,SNR=18						
EVIA				Lg		03 39 48.1	
	58nm,0.4s,SNR=4.6						
ENIJ	**Nijar**	**0.96**	**199**	⇑Pg	Pg	03 39 35.6	-1.9
	39nm,0.4s,SNR=18						
ENIJ				Lg		03 39 49.2	
	129nm,0.3s,SNR=15						
EQES	**Quesada**	**1.00**	**266**	⇓Pg	Pg	03 39 37.3	-1.1
	16nm,0.3s,SNR=18						
EQES				Lg		03 39 51.0	
	82nm,0.3s,SNR=18						
EQES	**Quesada**	**1.00**	**266**	Pg	Pg	03 39 37.3	-1.1
	16nm,0.3s,SNR=18						
EBER	**Berja**	**1.30**	**222**	Pn	Pn	03 39 41.5	-2.3
	9.4nm,0.3s,SNR=26						
EBER				Lg		03 40 01.0	
	54nm,0.4s,SNR=7.9						
EBER	**Berja**	**1.30**	**222**	Pn	Pn	03 39 41.5	-2.3
	9.4nm,0.3s,SNR=26						
EBEN	**Beniarda**	**1.50**	**56**	Pn	Pn	03 39 45.2	-1.4
	2.3nm,0.3s,SNR=16						
EBEN				Lg		03 40 06.6	
	21nm,0.5s,SNR=7.0						
EBEN	**Beniarda**	**1.50**	**56**	Pn	Pn	03 39 45.2	-1.4
	2.3nm,0.3s,SNR=16						
EBAN	**Banos Encina**	**1.58**	**281**	Pn	Pn	03 39 46.7	-1.2
EBAN				Lg		03 40 08.5	
EBAN	**Banos Encina**	**1.58**	**281**	Pn	Pn	03 39 46.7	-1.2
	14nm,0.1s,SNR=7.9						
EBAN				Lg		03 40 08.5	
	195nm,0.6s,SNR=7.9						
ELUQ	**Luque**	**1.97**	**261**	Pn	Pn	03 39 52.4	-1.1
	10.0nm,0.3s,SNR=14						
ELUQ				Sn	Sn	03 40 16.8	-2.4
	9.7nm,0.3s,SNR=4.6						
ELOJ	**Sierra Loja**	**2.00**	**249**	Pn	Pn	03 39 53.6	-0.2
ELOJ				Sn	Sn	03 40 17.4	-2.5
ELOJ				Lg		03 40 21.3	
ELOJ	**Sierra Loja**	**2.00**	**249**	Pn	Pn	03 39 53.6	-0.2
	4.9nm,0.3s,SNR=12						
ELOJ				Sn	Sn	03 40 17.4	-2.5
	7.7nm,0.5s,SNR=9.0						
ELOJ				Lg		03 40 21.3	
	16nm,0.3s,SNR=7.2						
EADA	**Adamuz**	**2.20**	**278**	Pn	Pn	03 39 54.5	-2.2
	2.8nm,0.1s,SNR=33						
EADA				Sn	Sn	03 40 22.0	-3.1
	18nm,0.3s,SNR=7.9						
EADA				Lg		03 40 28.0	
	23nm,0.2s,SNR=8.2						
EADA	**Adamuz**	**2.20**	**278**	Pn	Pn	03 39 54.5	-2.2
	2.8nm,0.1s,SNR=33						
EADA				Sn	Sn	03 40 22.0	-3.1
	SNR=7.9						
ESDC	**Sonseca Array**	**2.46**	**317**	Pn	Pn	03 39 58.0	-2.4
	1.0nm,0.3s,baz=128,slow=13,SNR=18						
ESDC				Pg	Pg	03 40 02.7	-4.8
	3.9nm,0.4s,baz=134,slow=17,SNR=8.3						
ESDC				Lg		03 40 35.6	
	4.7nm,0.3s,baz=136,slow=29,SNR=6.2						
ESDC	**Sonseca Array**	**2.46**	**317**	Pn	Pn	03 39 58.0	-2.4
	1.0nm,0.3s,slow=13,SNR=18						
ESDC	**Sonseca Array**	**2.46**	**317**	Pg	Pg	03 40 02.7	-4.8
	3.9nm,0.4s,slow=17,SNR=8.3						
ESLA	**Sonseca Array**	**2.46**	**317**	*e*P	Pn	03 39 58.2	-2.2
ESLA	**Sonseca Array**	**2.46**	**317**	*e*P	Pn	03 39 58.2	-2.2
EMOS	**Mosqueruela**	**2.69**	**22**	Pn	Pn	03 40 02.1	-1.6
	4.1nm,0.5s,SNR=6.3						
EMOS				Pg	Pg	03 40 08.1	-4.1
	7.4nm,0.5s,SNR=12						
EMOS				Lg		03 40 43.6	
	11nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**2.69**	**22**	Pn	Pn	03 40 02.1	-1.6
	4.1nm,0.5s,SNR=6.3						
EMOS	**Mosqueruela**	**2.69**	**22**	Pg	Pg	03 40 08.1	-4.0
	7.4nm,0.5s,SNR=12						
EMIJ	**Mijas**	**2.70**	**242**	Pn	Pn	03 40 01.1	-2.8
	24nm,0.9s,SNR=5.6						
EMIJ				Sn	Sn	03 40 34.0	-3.8
	4.6nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**64**	Pn	Pn	03 40 01.0	-3.3
	3.3nm,0.4s,SNR=7.1						
EIBI				Sn	Sn	03 40 33.1	-5.3
	2.4nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**2.73**	**64**	Pn	Pn	03 40 01.0	-3.2
	3.3nm,0.4s,SNR=7.1						
EIBI				Sn	Sn	03 40 33.1	-5.3
	SNR=7.9						
GUD	**Guadarrama**	**3.31**	**327**	Pn	Pn	03 40 10.8	-1.6
	1.1nm,0.3s,SNR=6.0						
GUD				Pg	Pg	03 40 20.0	-4.3
	5.2nm,0.5s,SNR=16						
GUD				Sn	Sn	03 40 49.0	-4.0
	1.6nm,0.2s,SNR=7.9						
GUD				Lg		03 41 04.2	
	14nm,0.3s,SNR=11						
GUD	**Guadarrama**	**3.31**	**327**	Pg	Pg	03 40 20.0	-4.4
	5.2nm,0.5s,SNR=16						
GUD				Sn	Sn	03 40 49.0	-4.0
	SNR=7.9						
ESPR	**Espera**	**3.38**	**254**	Pn	Pn	03 40 12.1	-1.3
	2.0nm,0.3s,SNR=8.0						
ESPR				Sn	Sn	03 40 54.8	0.0
	4.7nm,0.2s,SNR=7.9						
ESPR				Lg		03 41 09.3	
	9.7nm,0.3s,SNR=5.8						
ESPR	**Espera**	**3.38**	**254**	Pn	Pn	03 40 12.1	-1.4
	2.0nm,0.3s,SNR=8.0						
EBR	**Ebro Roquetas**	**3.44**	**31**	*e*SN	Sn	03 40 54.0	-2.4
ERTA	**Horta de San J**	**3.49**	**28**	Pn	Pn	03 40 13.3	-1.8
	2.4nm,0.3s,SNR=14						
ERTA				Sn	Sn	03 40 53.1	-4.7
	2.1nm,0.4s,SNR=7.9						
ERTA				Lg		03 41 08.9	
	3.4nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**3.49**	**28**	Pn	Pn	03 40 13.3	-1.8
	2.4nm,0.3s,SNR=14						
ERTA				Sn	Sn	03 40 53.0	-4.8
EMIN	**Mina Concepcio**	**3.85**	**270**	Pn	Pn	03 40 17.5	-2.7
	1.1nm,0.2s,SNR=16						
EMIN				Sn	Sn	03 41 01.5	-5.3
	4.4nm,0.4s,SNR=7.9						
EMIN				Lg		03 41 17.9	
	9.5nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.85**	**270**	Pn	Pn	03 40 17.5	-2.7
	1.1nm,0.2s,SNR=16						
EMIN				Sn	Sn	03 41 01.5	-5.3
	SNR=7.9						
ESAC	**San Caprasio**	**3.97**	**15**	Pn	Pn	03 40 19.2	-2.8
	4.5nm,0.3s,SNR=7.9						
ESAC				Sn	Sn	03 41 08.7	-1.2
	10nm,0.3s,SNR=7.9						
ESAC				Lg		03 41 23.2	
	20nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**3.97**	**15**	Pn	Pn	03 40 19.2	-2.7
	SNR=7.9						
EPOB	**Poblet**	**4.12**	**32**	Pn	Pn	03 40 20.4	-3.6
	0.3nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	03 41 08.9	-4.9
	1.0nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**4.12**	**32**	Pn	Pn	03 40 20.5	-3.6
	SNR=7.9						
EPOB				Sn	Sn	03 41 08.9	-4.9
	SNR=7.9						
EBAD	**Badajoz**	**4.18**	**284**	Pn	Pn	03 40 20.2	-4.7
	0.6nm,0.3s,SNR=7.4						
EBAD				Sn	Sn	03 41 09.1	-6.2
	6.2nm,0.2s,SNR=7.9						
EBAD				Lg		03 41 30.2	
	28nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.18**	**284**	Pn	Pn	03 40 20.2	-4.7
	1.6nm,0.5s,SNR=7.4						
EBAD				Sn	Sn	03 41 09.1	-6.2
	SNR=7.9						
EMIR	**Miracle**	**4.78**	**31**	Pn	Pn	03 40 29.4	-4.0
	0.9nm,0.3s,SNR=7.9						
EMIR	**Miracle**	**4.78**	**31**	Pn	Pn	03 40 29.4	-4.0
PBEJ	**Beja**	**4.79**	**274**	*e*Pn	Pn	03 40 30.4	-3.1
PBEJ				*e*Sn	Sn	03 41 24.1	-6.5
PBEJ				*e*Sg	Sg	03 41 50.2	-7.6
	12nm,0.7s						
PBEJ	**Beja**	**4.79**	**274**	*e*Pn	Pn	03 40 30.4	-3.1
PBEJ				*e*Sn	Sn	03 41 24.1	-6.5
PBEJ				*e*Sg	Sg	03 41 50.2	-7.6
	12nm,0.7s						
PCBR	**Castelo Branco**	**4.84**	**296**	*e*Pn	Pn	03 40 30.7	-3.5
PCBR				*e*Sn	Sn	03 41 25.7	-6.1
PCBR				*e*Sg	Sg	03 41 51.5	-7.9
	17nm,0.6s						
PCBR	**Castelo Branco**	**4.84**	**296**	*e*Pn	Pn	03 40 30.7	-3.5
PCBR				*e*Sn	Sn	03 41 25.7	-6.1
PCBR				*e*Sg	Sg	03 41 51.5	-7.9
	17nm,0.6s						
EVO	**Evora**	**4.93**	**279**	*e*Pn	Pn	03 40 32.7	-2.8
EVO				*e*Sn	Sn	03 41 29.1	-5.0
EVO				*e*Sg	Sg	03 41 56.3	-6.2
	46nm,0.5s						
EBIE	**Bielsa**	**5.03**	**17**	Pn	Pn	03 40 34.1	-2.8
	0.5nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**5.03**	**17**	Pn	Pn	03 40 34.1	-2.8
ETSF	**Etsaut**	**5.10**	**10**	*e*Pn	Pn	03 40 36.2	-1.8
ETSF				*e*Sn	Sn	03 41 31.9	-6.6
ETSF				*e*Sg	Sg	03 42 00.6	-7.7
	6.5nm,0.7s						
MTE	**Manteigas**	**5.12**	**301**	*e*Sg	Sg	03 42 00.8	-8.0
	27nm,0.4s						
MTE	**Manteigas**	**5.12**	**301**	*e*Sg	Sg	03 42 00.8	-8.0
	27nm,0.4s						
MOE	**Montemor**	**5.19**	**279**	*e*Sn	Sn	03 41 33.2	-7.5
SJPF	**Ste Jean**	**5.25**	**5**	*e*Pn	Pn	03 40 36.9	-3.1
SJPF				*e*Sn	Sn	03 41 35.1	-7.0
SJPF				*e*Sg	Sg	03 42 04.5	-8.6
	15nm,0.8s						
EALK	**Alkurruntz**	**5.34**	**2**	Pn	Pn	03 40 38.8	-2.5
	5.0nm,0.5s,SNR=7.9						
EPF	**Esparros**	**5.40**	**17**	*e*Pn	Pn	03 40 40.1	-2.1
EPF				*e*Sn	Sn	03 41 39.5	-6.5
EPF				*e*Sg	Sg	03 42 09.8	-8.4
	10nm,0.7s						
PBRG	**Braganca**	**5.46**	**317**	*e*Pn	Pn	03 40 39.7	-3.2
PBRG				*e*Sg	Sg	03 42 11.4	-8.6
	8.3nm,0.7s						
PBRG	**Braganca**	**5.46**	**317**	*e*Pn	Pn	03 40 39.7	-3.2
PBRG				*e*Sg	Sg	03 42 11.4	-8.6
	8.3nm,0.7s						
PTEO	**Sao Teotonio**	**5.49**	**269**	*e*Pn	Pn	03 40 39.7	-3.7
PTEO				*e*Sn	Sn	03 41 41.8	-6.5
	11nm,0.7s						
PTEO	**Sao Teotonio**	**5.49**	**269**	Pn	Pn	03 40 39.7	-3.7
PTEO				Sn	Sn	03 41 41.8	-6.5
	5.6nm,0.7s						
PVIS	**Viseu**	**5.50**	**303**	*e*Pn	Pn	03 40 40.2	-3.4
PVIS				*e*Sn	Sn	03 41 42.0	-6.5
PVIS				*e*Sg	Sg	03 42 11.6	-10
	8.6nm,0.4s						
PVIS	**Viseu**	**5.50**	**303**	Pn	Pn	03 40 40.2	-3.4
PVIS				Sn	Sn	03 41 42.0	-6.5
PVIS				Lg		03 42 11.6	
	4.3nm,0.4s						
ECAL	**Calabor**	**5.55**	**319**	Pn	Pn	03 40 39.5	-4.7
	1.3nm,0.4s,SNR=7.9						
ECAL				Lg		03 42 13.0	
	42nm,1.2s,SNR=7.9						
ECAL	**Calabor**	**5.55**	**319**	Pn	Pn	03 40 39.5	-4.7
PVRL	**Vila Real**	**5.68**	**308**	*e*Pn	Pn	03 40 43.3	-2.9
PVRL				*e*Sn	Sn	03 41 46.0	-7.1
PVRL				*e*Sg	Sg	03 42 15.4	-12
	7.7nm,0.6s						
EARI	**Arriondas**	**6.00**	**336**	Pn	Pn	03 40 46.0	-4.6
	4.8nm,0.8s,SNR=7.9						
EARI	**Arriondas**	**6.00**	**336**	Pn	Pn	03 40 46.0	-4.6
ELOB	**Lobios**	**6.24**	**312**	Lg		03 42 34.4	
	6.5nm,0.6s,SNR=4.8						
EINC	**Incio**	**6.38**	**320**	Pn	Pn	03 40 50.6	-5.3
EINC	**Incio**	**6.38**	**320**	Pn	Pn	03 40 50.7	-5.3
LASF	**Ste Croix**	**7.53**	**33**	*e*Pn	Pn	03 41 08.8	-3.3
CAF	**Calviac**	**7.62**	**21**	*e*Pn	Pn	03 41 09.7	-3.7
MFF	**Saint Martin d**	**8.80**	**8**	*e*Pn	P	03 41 25.0	-4.9
QUIF	**Quistinic**	**10.08**	**355**	*e*Pn	P	03 41 42.9	-4.6
ROSF	**Rostrenen**	**10.51**	**355**	*e*Pn	P	03 41 48.5	-4.8

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*NEIC **05** 03:43:59.5, 31.40S×68.94W, h168^{km}, MD3.5(GUC), After GUC.*

GUC 05 03:43:59.5±0.7**, 31.40S×68.94W, h168**^{km}±11^{km}**, MD3.5, ML3.9, 4C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	**Jahuel**	**1.90**	**227**	⇑*i*P	P	03 44 35.3	+0.4
JACH				*i* S	S	03 45 02.5	+0.2
PTCH	**Petorca**	**1.90**	**243**	⇓*i*P	P	03 44 35.0	+0.1
PTCH				*i* S	S	03 45 02.0	-0.3
PTCH				AMP		03 45 04.1	
	comp=E,3µm,0.3s						
ILCH	**Illapel**	**1.92**	**262**	*i* P	P	03 44 35.7	+0.6
ILCH				*i* S	S	03 45 02.6	-0.1
ILCH				AMP		03 45 05.5	
	comp=N,1µm,0.3s						
TLL	**Tololo Astrono**	**2.02**	**307**	⇑*i*P	P	03 44 37.2	+0.9
TLL				*i* S	S	03 45 05.6	+0.9
TLL				AMP		03 45 12.1	
	comp=N,1µm,0.4s						
FCH	**Farellones**	**2.23**	**210**	⇓*i*P	P	03 44 39.3	+0.5
FCH				*i* S	S	03 45 10.2	+1.1
FCH				AMP		03 45 21.4	
	comp=E,200nm,0.2s						
ROCH	**El Roble**	**2.35**	**228**	⇑*i*P	P	03 44 40.7	+0.4
ROCH				*i* S	S	03 45 11.9	+0.3
CLCH	**Cerro Calan**	**2.40**	**214**	⇑*i*P	P	03 44 41.1	+0.2
CLCH				*i* S	S	03 45 12.2	-0.5
CLCH				AMP		03 45 19.6	
	comp=E,358nm,0.5s						
PCH	**Pirque**	**2.58**	**211**	*i* P	P	03 44 43.5	+0.5
PCH				*i* S	S	03 45 16.4	0.0
ANTU	**Antumapu**	**2.59**	**213**	*i* P	P	03 44 43.7	+0.5
ANTU				*i* S	S	03 45 16.8	+0.1
ANTU				AMP		03 45 19.0	
	comp=E,232nm,0.3s						
RCDM	**Rinconada Maip**	**2.61**	**217**	*i* P	P	03 44 43.5	+0.1
RCDM				*i* S	S	03 45 16.9	-0.2
RCDM				AMP		03 45 22.2	
	comp=E,428nm,0.2s						
LMEL	**Las Melosas**	**2.66**	**203**	*i* P	P	03 44 44.3	+0.3
LMEL				AMP		03 45 30.2	
	comp=N,163nm,0.1s						
TACH	**Talagante**	**2.81**	**216**	⇓*i*P	P	03 44 45.6	-0.2
TACH				*i* S	S	03 45 21.5	+0.1
LCCH	**Las Cruces**	**3.04**	**226**	*i* P	P	03 44 48.5	-0.2
LCCH				*i* S	S	03 45 25.9	-0.5
VACH	**Vallenar**	**3.23**	**330**	⇓*i*P	P	03 44 51.2	+0.1
VACH				*i* S	S	03 45 30.2	-0.6
TRQA	**Tornquist**	**8.77**	**141**	*e*P	P	03 45 59.9	-4.0

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*CSEM **05** 04:03:10.0, 2.30N×94.99E, h10^{km}, mb5.5*

*BJI **05** 04:03:13.0, 2.10N×94.77E, h41^{km}, mB5.8, mb4.9, Ms6.3, Msz6.1*

*NEIC **05** 04:03:13.8±0.2, 2.26N×94.99E, h30^{km}, mb5.4/62, MS5.8/114, Error ellipse: s-maj=9.6km s-min=6.0km az=215.0*

*MOS **05** 04:03:13.3±1.3, 2.28N×95.01E, h33^{km}, mb5.5/30, Error*

ellipse: s-maj=14.7km s-min=7.8km az=119.7

HRVD ***05*** *04:03:13.8±0.2,2.20N×95.03E,h12^{km},MW6.0/72, Centroid moment Tensor Solution. LP body waves: s46,c72;Mantle waves: s72,c226; Half duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}1.15±.02; $M_{\theta\theta}$-0.93±.01; $M_{\phi\phi}$-0.22±.02; $M_{r\theta}$-0.15±.05; $M_{\theta\phi}$0.45±.01; $M_{\phi r}$0.03±.06; Best double couple: $M_0$1.159×10^{18} NP1: ϕ_s118°,δ41°,λ93°. NP2:ϕ_s294°,δ49°,λ88°. Principal axes: T 1.16, Plg86°, Azm178°; N -.007, Plg2°, Azm295°; P -1.157, Plg4°, Azm26°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 05 04:03:11.0±1.3**,2.23N**±0.04×**94.99E**±0.04**,h20**^{km}±8^{km}**,** **h29**^{km}±1.7^{km}**:pP-P,n331,**σ**1^{s}17**/234**,mb5.3**/86**,MS5.8**/132**,** **20C-7D,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**6.46**	**69**	P	**Pn**	**04 04 47.0**	**-0.7**
KGM	**Kluang**	**8.33**	**91**	P	**P**	**04 05 13.0**	**-0.8**
NST	**Nakhon Sawan**	**14.29**	**21**	P	**P**	**04 06 41.0**	**+6.4**
PALK	**Pallekele**	**15.08**	**290**	*e*P	**P**	**04 06 44.6**	**-0.5**
	116nm,1.3s						
CM31	**Chiang Mai Arr**	**16.58**	**13**	*e*P	**P**	**04 07 05.1**	**+0.7**
	77nm,1.0s						
NANT	**Nan**	**17.39**	**18**	⇑P	**P**	**04 07 12.0**	**-2.5**
	261nm,0.9s						
MDRS	**Chennai**	**18.13**	**307**	*e*	**P**	**04 07 23.0**	**-0.7**
TRD	**Trivandrum**	**18.99**	**290**	*e*P	**P**	**04 07 35.2**	**+1.0**
TRD				*e*		04 07 37.4	
	comp=Z,93nm,1.1s						
TRD				*e*		04 09 51.7	
VIS	**Vishakhapatnam**	**19.18**	**324**	*e*P	**P**	**04 07 35.0**	**-1.5**
VIS				*e*		04 07 46.1	
	comp=Z,85nm,1.0s						
VIS				*e*		04 10 59.6	
BWNR	**Bhubaneshwar**	**20.07**	**334**	*e*P	**P**	**04 07 49.4**	**+3.1**
BWNR				*e*		04 07 55.1	
	comp=Z,200nm,1.5s						
BWNR				*e*		04 11 17.4	
KKM	**Kota Kinabalu**	**21.51**	**79**	P	**P**	**04 08 02.7**	**+1.6**
AGT	**Agartala**	**21.82**	**351**	⇑*i*P	**P**	**04 08 05.0**	**+0.8**
AGT				*i*		04 09 22.0	
HYB	**Hyderabad**	**22.09**	**314**	*e*P	**P**	**04 08 07.0**	**0.0**
	comp=Z,50nm,1.0s,mb4.9						
HYB	**Hyderabad**	**22.09**	**314**	*i* P	**P**	**04 08 07.0**	**0.0**
	comp=Z,50nm,1.0s,mb4.9						
QIZ	**Qiongzhong**	**22.14**	**40**	P	**P**	**04 08 06.3**	**-1.1**
QIZ				AP		04 08 17.1	
QIZ				PP	PP	04 08 30.9	-3.0
QIZ				S	**S**	**04 12 02.3**	**-3.1**
QIZ				LR	LR		
	comp=N,38μm,17.0s,MS6.0						
QIZ				LR	LR		
	comp=E,23μm,14.8s,MS6.0						
QIZ				LR	LR		
	comp=Z,33μm,12.7s,MS6.0						
MNGI	**Mangalore**	**22.61**	**299**	*i* S	**S**	**04 12 27.4**	**+13**
MNCY	**Minicoy**	**22.66**	**286**	⇑*i*	**P**	**04 08 23.0**	**+10**
MNCY				*i*		04 09 50.0	
TSM	**Tawau**	**22.94**	**84**	P	**P**	**04 08 18.4**	**+2.9**
BLSP	**Bilaspur**	**23.39**	**329**	*e*P	**P**	**04 08 20.7**	**+0.9**
BLSP				*e*		04 08 28.2	
	comp=Z,246nm,1.6s						
KMI	**Kunming**	**23.95**	**18**	⇑P	**P**	**04 08 26.0**	**+0.8**
KMI				AP		04 08 35.9	
KMI				XP		04 08 40.7	
KMI				S	**S**	**04 12 41.8**	**+4.1**
KMI				AMB	AMB		
	comp=Z,86nm,1.5s,mb5.0						
KMI				AMB	AMB		
	comp=Z,1μm,5.1s						
KMI				LR	LR		
	comp=N,35μm,13.0s,MS6.2						
KMI				LR	LR		
	comp=E,40μm,13.9s,MS6.2						
KMI				LR	LR		
	comp=Z,50μm,15.8s,MS6.1						
KMI	**Kunming**	**23.95**	**18**	⇑P	**P**	**04 08 26.0**	**+0.8**
	comp=Z,86nm,1.5s,mb5.0						
KMI				pP		04 08 35.9	
KMI				sP		04 08 40.7	
KMI				PP	PP	04 09 04.8	+5.5
KMI				S	**S**	**04 12 41.8**	**+4.1**
KMI				sS		04 13 04.5	
KMI				SS	SS	04 13 46.1	+17
KMI				LR	LR		
	comp=Z,50μm,15.8s,MS6.1						
LATR	**Latur**	**24.18**	**313**	*e*P	**P**	**04 08 31.2**	**+3.7**
DGAR	**Diego Garcia**	**24.44**	**247**	PFAKE		04 08 40.0	+10
DGAR				LR	LR		
	comp=Z,3μm,19.0s,MS4.8						
PPR	**Puerto Princes**	**24.76**	**71**	⇑*i*P	**P**	**04 08 36.6**	**+3.5**
KAD	**Karad**	**25.34**	**308**	*e*P	**P**	**04 08 40.0**	**+1.4**
GTK	**Gangtok**	**25.69**	**347**	*e*P	**P**	**04 08 41.0**	**-0.8**
POO	**Poona**	**26.29**	**309**	*e*P	**P**	**04 08 49.2**	**+1.8**
POO				*e*	pP	04 08 55.1	+1.9
	comp=Z,68nm,2.1s						
GYA	**Guiyang**	**26.57**	**24**	⇑*i*P	**P**	**04 08 52.3**	**+2.3**
GYA				AP	pP	04 09 01.3	+5.6
GYA				XP	sP	04 09 05.3	+7.0
GYA				S	**S**	**04 13 27.4**	**+5.9**
GYA				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.8						
GYA				LR	LR		
	comp=N,34μm,14.7s,MS6.2						
GYA				LR	LR		
	comp=E,30μm,14.3s,MS6.2						
GYA				LR	LR		
	comp=Z,41μm,15.2s,MS6.1						
JIRN	**Jiri**	**26.65**	**342**	*e*P	**P**	**04 08 51.8**	**+1.1**
PKI	**Pulchoki**	**26.81**	**341**	*e*P	**P**	**04 08 52.0**	**-0.1**
	comp=Z,858nm,1.6s,mb6.0						
BHPL	**Bhopal**	**26.94**	**322**	*e*P	**P**	**04 08 54.9**	**+1.5**
BHPL				*e*	pP	04 09 00.5	+1.4
	comp=Z,42nm,0.9s						
DMN	**Daman**	**26.95**	**340**	*e*P	**P**	**04 08 52.9**	**-0.5**
	comp=Z,393nm,1.2s,mb5.8						
KKN	**Kakani**	**27.05**	**341**	*e*P	**P**	**04 08 53.8**	**-0.6**
	comp=Z,892nm,1.4s,mb6.1						
GKN	**Gorkha**	**27.47**	**340**	*e*P	**P**	**04 08 57.4**	**-0.7**
	comp=Z,269nm,0.8s,mb5.8						
LSA	**Lhasa**	**27.56**	**353**	P	**P**	**04 09 00.7**	**+1.7**
LSA				PCP	PcP	04 12 16.7	-0.3
LSA				S	**S**	**04 13 36.4**	**-1.1**
LSA				LR	LR		
	comp=N,6μm,16.7s,MS5.4						
LSA				LR	LR		
	comp=E,7μm,16.4s,MS5.4						
LSA				LR	LR		
	comp=Z,10μm,18.1s,MS5.4						
KOLN	**Koldanda**	**27.63**	**338**	*e*P	**P**	**04 08 58.1**	**-1.5**
	comp=Z,168nm,0.8s,mb5.8						
CD2	**Chengdu**	**29.70**	**15**	P	**P**	**04 09 16.2**	**-2.1**
CD2				AP	pP	04 09 26.3	+2.3
CD2				XP	sP	04 09 31.5	+4.9
CD2				S	**S**	**04 14 05.4**	**-6.5**
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
CD2				AMB	AMB		
	comp=Z,1μm,7.4s						
CD2				LR	LR		
	comp=N,51μm,15.6s						
CD2				LR	LR		
	comp=Z,43μm,14.4s,MS6.2						
LGTI	**Lohaghat**	**30.48**	**334**	*e*P	**P**	**04 09 28.0**	**+2.8**
NDI	**New Delhi**	**31.29**	**329**	*e*P	**P**	**04 09 30.5**	**-1.8**
DDI	**Dehra Dun**	**32.22**	**332**	*e*P	**P**	**04 09 40.5**	**+0.1**
DDI				*e*		04 13 20.5	
MBWA	**Marble Bar**	**33.58**	**135**	*e*P	**P**	**04 09 51.6**	**-0.7**
	comp=Z,104nm,1.4s,mb5.6						
MBWA				LR	LR		
	comp=Z,5μm,19.0s,MS5.3						
TATO	**Taipei**	**34.12**	**46**	PFAKE		04 10 10.0	+13
TATO				LR	LR		
	comp=Z,5μm,19.0s,MS5.3						
XAN	**Xi'an**	**34.22**	**21**	P	**P**	**04 09 56.0**	**-1.7**
XAN				AP	pP	04 10 07.7	+4.2
XAN				S	**S**	**04 15 21.5**	**-0.8**
XAN				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.9						
XAN				LR	LR		
	comp=N,19μm,13.2s,MS6.2						
XAN				LR	LR		
	comp=E,23μm,13.2s,MS6.2						
XAN				LR	LR		
	comp=Z,28μm,16.8s,MS6.1						
PONG	**Pong**	**34.58**	**331**	*e*	**P**	**04 10 08.0**	**+7.1**
PONG				*e*		04 13 39.0	
LZH	**Lanzhou**	**34.67**	**13**	⇑P	**P**	**04 10 03.0**	**+1.4**
LZH				AP	pP	04 10 12.1	+4.7
LZH				XP	sP	04 10 16.2	+6.3
LZH				PP	PP	04 11 20.8	+2.2
LZH				S	**S**	**04 15 30.5**	**+1.2**
LZH				AMB	AMB		
	comp=Z,167nm,1.5s,mb5.8						
LZH				AMB	AMB		
	comp=Z,1μm,5.4s						
LZH				LR	LR		
	comp=N,14μm,13.0s						
LZH				LR	LR		
	comp=Z,16μm,17.3s,MS5.8						
LZH	**Lanzhou**	**34.67**	**13**	⇑P	**P**	**04 10 03.0**	**+1.4**
	comp=Z,167nm,1.5s,mb5.8						
LZH				pP	pP	04 10 12.1	+4.7
LZH				sP	sP	04 10 16.2	+6.3
LZH				PP	PP	04 11 20.8	+2.2
LZH				S	**S**	**04 15 30.5**	**+1.2**
LZH				sS		04 15 46.6	
LZH				SS	SS	04 17 44.7	+2.6
LZH				LR	LR		
	comp=Z,16μm,17.3s,MS5.8						
THN	**Thein Dam**	**35.08**	**331**	*e*	**P**	**04 10 01.4**	**-3.8**
FITZ	**Fitzroy Crossi**	**36.33**	**125**	⇑*i*P	**P**	**04 10 15.0**	**-0.8**
	comp=Z,36nm,0.9s,mb5.3						
NJ2	**Nanjing**	**37.21**	**35**	*e*P	**P**	**04 10 23.0**	**-0.2**
NJ2				AP	pP	04 10 32.6	+3.6
NJ2				XP	sP	04 10 37.5	+6.1
NJ2				PP	PP	04 11 51.3	+0.8
NJ2				S	**S**	**04 16 09.0**	**+0.5**
NJ2				XS		04 16 26.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,220nm,4.2s						
NJ2				LR	LR		
	comp=N,60μm,11.6s,MS6.7						
NJ2				LR	LR		
	comp=E,36μm,13.7s,MS6.7						
NJ2				LR	LR		
	comp=Z,20μm,11.6s,MS6.2						
GTA	**Gaotai**	**37.26**	**6**	*e*P	**P**	**04 10 23.0**	**-0.5**
GTA				AP	pP	04 10 31.9	+2.6
GTA				XP	sP	04 10 35.4	+3.6
GTA				PP	PP	04 11 50.6	-0.4
GTA				PCP	PcP	04 12 44.1	+0.7
GTA				S	**S**	**04 16 07.3**	**-2.0**
GTA				XS		04 16 23.6	
GTA				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.3						
GTA				LR	LR		
	comp=N,8μm,16.8s,MS5.8						
GTA				LR	LR		
	comp=E,8μm,13.4s,MS5.8						
GTA				LR	LR		
	comp=Z,12μm,15.3s,MS5.8						
SSE	**Sheshan**	**37.91**	**38**	P	**P**	**04 10 27.9**	**-1.1**
SSE				AP	pP	04 10 37.0	+2.2
SSE				S	**S**	**04 16 21.0**	**+1.8**
SSE				XS		04 16 37.1	
SSE				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
SSE				AMB	AMB		
	comp=Z,1μm,11.5s						
SSE				LR	LR		
	comp=N,8μm,16.5s,MS5.8						
SSE				LR	LR		
	comp=E,9μm,16.5s,MS5.8						
SSE				LR	LR		
	comp=Z,10μm,16.6s,MS5.7						
SSE	**Sheshan**	**37.91**	**38**	P	**P**	**04 10 27.9**	**-1.1**
	comp=Z,15nm,1.0s,mb4.7						
SSE				pP	pP	04 10 37.0	+2.2
SSE				sP	sP	04 10 40.5	+3.2
SSE				S	**S**	**04 16 21.0**	**+1.8**
SSE				sS		04 16 37.1	
SSE				LR	LR		
	comp=Z,10μm,16.6s,MS5.7						
MUN	**Mundaring**	**39.54**	**151**	*e*P	**P**	**04 10 45.6**	**+3.0**
	comp=Z,20nm,0.7s,mb5.0						
BTO	**Baotou**	**40.55**	**18**	*e*P	**P**	**04 10 52.4**	**+1.5**
BTO				S	**S**	**04 17 06.2**	**+7.4**
BTO				AMB	AMB		
	comp=Z,74nm,2.6s,mb4.8						
NWAO	**Narrogin (SRO)**	**40.81**	**151**	PFAKE		04 11 00.0	+6.9
NWAO				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
KSH	**Kashi**	**40.95**	**337**	*e*P	**P**	**04 10 55.0**	**+0.9**
KSH				*e*AP	pP	04 11 06.1	+6.1
KSH				*e*PP	PP	04 12 34.5	+2.8
KSH				*e*SCP		04 16 41.0	
KSH				*e*S	**S**	**04 17 05.0**	**+0.2**
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.4						
KSH				AMB	AMB		
	comp=Z,980nm,8.7s						
KSH				LR	LR		
	comp=N,7μm,13.0s						
KSH				LR	LR		
	comp=E,5μm,8.0s						
HHC	**Hu-ho-hao-te**	**41.26**	**19**	⇓P	**P**	**04 10 58.5**	**+1.8**
HHC				AP	pP	04 11 07.5	+5.0
HHC				XP	sP	04 11 12.4	+7.4
HHC				PP	PP	04 12 38.6	+3.5
HHC				PCP	PcP	04 12 56.6	+0.6
HHC				SCP		04 16 40.8	
HHC				PCS		04 16 44.4	
HHC				S	**S**	**04 17 14.4**	**+5.0**
HHC				AMB	AMB		
	comp=Z,22nm,2.2s,mb4.4						
HHC				AMB	AMB		
	comp=Z,5μm,8.3s						
HHC				LR	LR		
	comp=N,35μm,18.0s,MS6.3						
HHC				LR	LR		
	comp=E,18μm,18.0s,MS6.3						
HHC				LR	LR		
	comp=Z,39μm,18.0s,MS6.3						
WMQ	**Urumqi**	**41.91**	**352**	P	**P**	**04 11 03.0**	**+0.9**
WMQ				AP	pP	04 11 13.0	+5.1
WMQ				XP	sP	04 11 17.0	+6.6
WMQ				PP	PP	04 12 44.0	+1.7
WMQ				S	**S**	**04 17 20.0**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,3μm,8.0s						
WMQ				LR	LR		
	comp=N,4μm,20.0s,MS5.6						
WMQ				LR	LR		
	comp=E,6μm,18.0s,MS5.6						
WMQ				LR	LR		
	comp=Z,4μm,19.0s,MS5.4						
BJI	**Beijing**	**42.26**	**24**	P	**P**	**04 11 05.6**	**+0.6**
BJI				AP	pP	04 11 14.8	+4.0
BJI				XP	sP	04 11 18.5	+5.2
BJI				S	**S**	**04 17 32.4**	**+8.1**
BJI				AMB	AMB		
	comp=Z,23nm,1.4s,mb4.6						
BJI				AMB	AMB		
	comp=Z,4μm,10.3s						
BJI				LR	LR		
	comp=N,10μm,12.9s,MS6.1						
BJI				LR	LR		
	comp=E,15μm,16.3s,MS6.1						
BJI				LR	LR		
	comp=Z,9μm,28.5s						
BJI	**Beijing**	**42.26**	**24**	P	**P**	**04 11 05.6**	**+0.6**
	comp=Z,23nm,1.4s,mb4.6						
BJI				pP	pP	04 11 14.8	+4.0
BJI				sP	sP	04 11 18.5	+5.2
BJI				S	**S**	**04 17 32.4**	**+8.1**
BJI				SS	SS	04 20 52.2	+25
BJI				LR	LR		
	comp=Z,9μm,28.5s,MS5.5						
AAK	**Ala-Archa**	**44.20**	**338**	⇑*e*P	**P**	**04 11 22.2**	**+1.5**
AAK				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.7						
AAK	**Ala-Archa**	**44.20**	**338**	*e*P	**P**	**04 11 21.9**	**+1.2**
	comp=Z,68nm,1.3s,mb5.2						
AAK				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
WRA	**Warramunga Arr**	**44.46**	**122**	*i* P	**P**	**04 11 23.2**	**+0.1**
WRA				pmax	pmax		
	comp=Z,24nm,1.0s						
WRAB	**Tennant Creek**	**44.46**	**122**	*i* P	**P**	**04 11 23.2**	**+0.1**
WRAB	**Tennant Creek**	**44.46**	**122**	*e*P	**P**	**04 11 22.9**	**-0.2**
	comp=Z,87nm,1.2s,mb5.4						
WRAB				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
WB2	**Warramunga Arr**	**44.47**	**122**	*e*P	**P**	**04 11 23.0**	**-0.2**
FORT	**Forrest**	**45.50**	**139**	*e*P	**P**	**04 11 31.4**	**+0.1**
	comp=Z,110nm,0.7s,mb5.8						
INCN	**Inchon**	**45.56**	**36**	PFAKE		04 11 40.0	+8.3
INCN				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
MKAR	**Makanchi Array**	**45.74**	**348**	P	**P**	**04 11 32.9**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,68nm,0.8s						
ASPA	**Alice Springs**	**45.78**	**127**	*e*P	**P**	**04 11 34.8**	**+1.2**
KS15	**Wonju Array Si**	**46.27**	**37**	*e*P	**P**	**04 11 35.1**	**-2.2**
ULN	**Ulaanbaatar**	**46.64**	**11**	*i* P	**P**	**04 11 45.7**	**+5.7**
ULN	**Ulaanbaatar**	**46.64**	**11**	*e*P	**P**	**04 11 38.8**	**-1.2**
	comp=Z,23nm,0.9s,mb5.1						
ULN				LR	LR		
	comp=Z,15μm,20.0s,MS6.0						
SNY	**Shenyang**	**47.04**	**29**	⇑P	**P**	**04 11 44.0**	**+0.7**
SNY				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
SNY				AMB	AMB		
	comp=Z,2μm,11.8s						
SNY				LR	LR		
	comp=N,16μm,15.5s,MS6.1						
SNY				LR	LR		
	comp=E,7μm,15.3s,MS6.1						
SNY				LR	LR		
	comp=Z,14μm,13.7s,MS6.1						
ZAK	**Zakamensk**	**48.49**	**7**	*e*P	**P**	**04 11 54.0**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.1						
ZAK				pmax	pmax		
	comp=Z,14nm,2.1s,mb4.6						
CN2	**Changchun**	**49.43**	**29**	*e*P	**P**	**04 12 01.4**	**-0.5**
CN2				*e*AP	pP	04 12 11.9	+4.1
CN2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
CN2				LR	LR		
	comp=N,15μm,15.0s,MS6.3						
CN2				LR	LR		
	comp=E,20μm,15.0s,MS6.3						
CN2				LR	LR		
	comp=Z,16μm,15.0s,MS6.1						
MOY	**Mondy**	**49.52**	**5**	*e*P	**P**	**04 12 03.2**	**+0.8**
MOY				pmax	pmax		
	comp=Z,149nm,3.3s						
TLY	**Talaya**	**49.81**	**7**	P	**P**	**04 12 04.4**	**-0.2**
	comp=Z,408nm,0.9s,SNR=24						
TLY	**Talaya**	**49.81**	**7**	*e*P	**P**	**04 12 04.9**	**+0.3**
TLY				*e*S	**S**	**04 19 17.8**	**+5.9**
TLY				*e*SS	SS	04 22 45.5	+4.4
TLY				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.7						
TLY				MLR	MLR		
	comp=Z,10μm,15.0s,MS5.9						
TLY	**Talaya**	**49.81**	**7**	*e*P	**P**	**04 12 04.2**	**-0.5**
	comp=Z,138nm,2.5s,mb5.5						
TLY				LR	LR		
	comp=Z,3μm,20.0s,MS5.2						
KURK	**Kurchatov**	**50.25**	**347**	*c i*P	**P**	**04 12 07.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,104nm,2.0s,mb5.5						
KURK	**Kurchatov**	**50.25**	**347**	*e*P	**P**	**04 12 05.9**	**-2.1**
	comp=Z,5.2nm,1.6s,mb4.3						
KURK				LR	LR		
	comp=Z,1μm,22.0s,MS4.9						
IRK	**Irkutsk**	**50.44**	**7**	*e*P	**P**	**04 12 09.4**	**0.0**
IRK				pmax	pmax		
	comp=Z,177nm,2.5s,mb5.7						
GUMO	**Guam**	**50.57**	**74**	PFAKE		04 12 20.0	+9.1
GUMO				LR	LR		
	comp=Z,4μm,20.0s,MS5.5						
MAJO	**Matsushiro**	**52.46**	**44**	PFAKE		04 12 40.0	+15
MAJO				LR	LR		
	comp=Z,8μm,22.0s,MS5.7						
MAT	**Matsushiro**	**52.46**	**44**	P	**P**	**04 12 25.0**	**0.0**
MAT				LR	LR		
	comp=Z,7μm,20.0s,MS5.7						
MAT	**Matsushiro**	**52.46**	**44**	P	**P**	**04 12 25.2**	**+0.2**
PMG	**Port Moresby**	**53.25**	**103**	PFAKE		04 12 40.0	+8.9
PMG				LR	LR		
	comp=Z,3μm,21.0s,MS5.3						
NVS	**Novosibirsk**	**53.31**	**352**	*e*P	**P**	**04 12 29.2**	**-1.8**
NVS				*e*		04 13 38.2	
NVS				pmax	pmax		
	comp=N,96nm,1.6s						
NVS				pmax	pmax		
	comp=Z,96nm,1.6s,mb5.5						
NVS				pmax	pmax		
	comp=E,44nm,1.4s						
BVA0	**Borovoye Array**	**54.57**	**342**	P	**P**	**04 12 39.9**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
CTA	**Charters Tower**	**54.94**	**116**	*e*P	**P**	**04 12 43.6**	**+0.1**
	comp=Z,14nm,0.8s,mb5.0						
CTAO	**Charters Tower**	**54.94**	**116**	*e*P	**P**	**04 12 42.0**	**-1.5**
	comp=Z,20nm,0.8s,mb5.2						
CTAO				LR	LR		
	comp=Z,4μm,21.0s,MS5.4						
CHKZ	**Chkalovo**	**55.06**	**343**	*e*P	**P**	**04 12 41.5**	**-2.4**
CHKZ				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
CHKZ	**Chkalovo**	**55.06**	**343**	*e*P	**P**	**04 12 41.5**	**-2.4**
	comp=Z,32nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**55.69**	**132**	*e*P	**P**	**04 12 47.9**	**-0.9**
	comp=Z,41nm,1.6s,mb5.2						
KLR	**Kul'dur**	**56.36**	**28**	*e*P	**P**	**04 12 52.8**	**-0.5**
BOD	**Bodaibo**	**57.43**	**12**	*e*P	**P**	**04 12 59.9**	**-0.9**
BOD				pmax	pmax		
	comp=Z,183nm,2.9s,mb5.6						
KMBO	**Kilima Mbogo**	**57.82**	**267**	*e*P	**P**	**04 13 04.5**	**+0.4**
	comp=Z,34nm,1.6s,mb5.1						
KMBO				LR	LR		
	comp=Z,5μm,22.0s,MS5.6						
GNI	**Garni**	**59.02**	**317**	PFAKE		04 13 20.0	+7.8
GNI				LR	LR		
	comp=Z,3μm,19.0s,MS5.5						
CLNS	**Chul'man**	**59.44**	**19**	*e*P	**P**	**04 13 24.8**	**+10**
CLNS				*e**PP	pP	04 13 31.5	+11
CLNS				*e*		04 15 30.3	
CLNS				*e*PPP	PPP	04 16 48.7	-4.4
CLNS				*e*S	**S**	**04 21 26.6**	**+5.4**
CLNS				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
CLNS				pmax	pmax		
	comp=N,20nm,1.0s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.1s						
CLNS				smax			
	comp=E,385nm,11.2s						
CLNS				smax			
	comp=Z,2μm,13.0s						
CLNS				smax			
	comp=N,717nm,14.2s						
CLNS				MLR	MLR		
	comp=Z,39μm,16.0s,MS6.6						
CLNS				MLR	MLR		
	comp=N,21μm,15.0s,MS6.4						
CLNS				MLR	MLR		
	comp=E,4μm,15.0s,MS6.4						
YSS	**Yuzh-Sakhalins**	**60.77**	**36**	*i* P	**P**	**04 13 31.8**	**+7.7**
YSS	**Yuzh-Sakhalins**	**60.77**	**36**	PFAKE		04 13 40.0	+16
YSS				LR	LR		
	comp=Z,6μm,20.0s,MS5.8						
TOO	**Toolangi**	**61.22**	**136**	*e*P	**P**	**04 13 29.6**	**+2.4**
	comp=Z,0.9nm,1.0s						
KIV	**Kislovodsk**	**62.09**	**320**	⇓*e*P	**P**	**04 13 29.5**	**-3.5**
KIV				pmax	pmax		
	comp=Z,29nm,1.7s,mb5.1						

KIV	Kislovodsk	62.09	320	*e*P	P	04 13 32.3	-0.8
	comp=Z,61nm,1.1s,mb5.7						
KIV				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
MALT	Malatya	62.80	312	*e*P	P	04 13 38.1	+0.3
MALT				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.4						
MALT	Malatya	62.80	312	*e*P	P	04 13 38.1	+0.2
	comp=Z,41nm,1.3s,mb5.4						
EIL	Elat	63.03	302	*e*P	P	04 13 39.5	0.0
	comp=Z,30nm,1.4s,mb5.2						
SOC	Sochi	63.88	318	*e*P	P	04 13 41.0	-3.9
MBAR	Mbarara	64.29	268	⇓*e*P	P	04 13 48.5	+0.4
MBAR	Mbarara	64.29	268	*e*P	P	04 13 47.6	-0.5
	comp=Z,21nm,1.5s,mb4.9						
MBAR				LR	LR		
	comp=Z,744nm,19.0s,MS4.9						
TAU	Tasmania Unive	65.02	140	PFAKE		04 14 00.0	+7.7
TAU				LR	LR		
	comp=Z,906nm,19.0s,MS5.0						
YAK	Yakutsk	65.07	17	*i* P	P	04 13 57.1	+4.8
YAK	Yakutsk	65.07	17	PFAKE		04 14 00.0	+7.7
YAK				LR	LR		
	comp=Z,24µm,19.0s,MS6.4						
ANN	Anapa	65.86	319	*e*P	P	04 13 51.4	-6.3
ANN				pmax	pmax		
	comp=Z,131nm,1.3s,mb5.8						
LSZ	Lusaka	68.30	253	PFAKE		04 14 30.0	+16
LSZ				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
ISP	Isparta	68.62	310	*e*P	P	04 14 15.2	0.0
CASY	Casey	69.26	173	PFAKE		04 14 30.0	+11
CASY				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
MOS	Moscow	70.32	330	*e*P	P	04 14 27.7	+2.4
MOS				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.4						
OBN	Obninsk	70.59	329	⇑*e*P	P	04 14 26.3	-0.6
OBN				*e*		04 16 59.8	
OBN				pmax	pmax		
	comp=Z,36nm,1.5s,mb5.1						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.5						
OBN	Obninsk	70.59	329	*e*P	P	04 14 25.4	-1.5
	comp=Z,92nm,1.4s,mb5.5						
OBN				LR	LR		
	comp=Z,997nm,20.0s,MS5.1						
MA2	Magadan	71.38	26	*e*P	P	04 14 36.7	+5.0
MA2				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
MA2	Magadan	71.38	26	PFAKE		04 14 40.0	+8.3
MA2				LR	LR		
	comp=Z,6µm,19.0s,MS5.9						
CFR	Carcaliu	72.23	317	⇑*i*P	P	04 14 38.5	+1.5
CFR	Carcaliu	72.23	317	⇑*i*P	P	04 14 38.5	+1.5
LBTB	Lobatse	72.37	243	*e*P	P	04 14 38.7	+0.6
	comp=Z,18nm,0.9s,mb5.0						
LBTB				LR	LR		
	comp=Z,6µm,20.0s,MS5.8						
TIXI	Tiksi	72.57	11	PFAKE		04 14 50.0	+11
TIXI				LR	LR		
	comp=Z,8µm,20.0s,MS6.0						
PET	Petropavlovsk	72.63	35	PFAKE		04 14 50.0	+11
PET				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
MAW	Mawson	73.23	192	PFAKE		04 14 50.0	+7.6
MAW				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
VRI	Vrincioaia	73.36	317	⇑*i*P	P	04 14 44.0	+0.4
VRI	Vrincioaia	73.36	317	⇑*i*P	P	04 14 44.0	+0.4
BOSA	Boshof	73.38	239	*e*P	P	04 14 42.4	-1.7
	comp=Z,51nm,1.4s,mb5.3						
BOSA				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
MLR	Muntele Rosu	73.80	317	⇓*i*P	P	04 14 46.4	+0.2
MLR	Muntele Rosu	73.80	317	⇓*i*P	P	04 14 46.4	+0.2
RZN	Rozhen	73.84	313	*e*P	P	04 14 39.0	-7.5
MMB	Musomiste	74.55	313	*e*P	P	04 14 56.0	+5.4
BURAR	Bucovina Array	74.79	319	⇓*i*P	P	04 14 52.2	+0.3
KKB	Krupnik	75.07	313	*e*P	P	04 15 00.0	+6.4
VTS	Vitosha	75.12	313	*e*P	P	04 14 53.0	-0.9
BOLS	Boljevac	76.24	315	⇑*i*P	P	04 15 01.7	+1.5
JOF	Joensuu	76.28	335	*e*p	P	04 15 03.2	+3.2
SKO	Skopje	76.30	313	*e*P	pP	04 15 09.0	+2.2
KWP	Kalwaria	76.87	321	*e*P	P	04 15 02.3	-1.3
KWP				pmax	pmax		
	comp=Z,110nm,1.7s,mb5.5						
KWP	Kalwaria	76.87	321	*e*P	P	04 15 02.2	-1.4
	comp=Z,115nm,1.7s,mb5.5						
KOLS	Kolonicke sedl	77.00	320	*e*P	P	04 15 05.6	+1.2
KOLS				*e*		04 15 33.6	
GRUS	Gruza	77.14	314	⇑*i*P	P	04 15 08.8	+3.5
CRVS	Cervenica-Dubn	77.52	320	*e*P	P	04 15 11.0	+3.8
CRVS	Cervenica-Dubn	77.52	320	*e*	P	04 15 11.0	+3.8
SUW	Suwalki	77.56	325	*e*P	P	04 15 07.2	-0.1
SUW				pmax	pmax		
	comp=Z,140nm,1.2s,mb5.8						
SUW	Suwalki	77.56	325	*e*P	P	04 15 07.2	-0.1
	comp=Z,136nm,1.2s,mb5.8						
SUR	Sutherland	77.88	236	PFAKE		04 15 20.0	+10
SUR				LR	LR		
	comp=Z,925nm,20.0s,MS5.1						
KAF	Kangasniemi	78.17	333	*e*p	P	04 15 09.6	-0.9
	comp=Z,20nm,0.9s,mb5.0						
PSZ	Piszkesteto	78.37	318	*e*P	P	04 15 10.1	-1.8
PSZ				pmax	pmax		
	comp=Z,71nm,1.6s,mb5.3						
PSZ	Piszkesteto	78.37	318	*e*P	P	04 15 10.1	-1.8
	comp=Z,71nm,1.6s,mb5.3						
OJC	Ojcow	78.83	321	*e*P	P	04 15 13.3	-1.1
TSUM	Tsumeb	78.85	250	PFAKE		04 15 30.0	+15
TSUM				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
VYHS	Vyhne	79.16	319	*e*P	P	04 15 17.3	+1.1
VYHS				*e*		04 15 40.1	
SRO2	Moca	79.34	318	*e*P	P	04 15 18.4	+1.2
SRO	Srobarova	79.41	318	*e*P	P	04 15 18.3	+0.7
SRO1	Iza	79.45	318	*e*P	P	04 15 19.1	+1.3
GRI	Girifalco	79.69	309	*e*P	P	04 15 20.9	+1.5
OKC	Ostrava-Krasne	79.81	320	*e*P	P	04 15 20.7	+1.0
SMOL	Smolenice	80.09	319	*e*P	P	04 15 19.6	-1.6
ZST	Bratislava	80.26	318	*e*P	P	04 15 23.0	+0.8
SYO	Syowa Base	80.31	198	⇓PcP	PcP	04 15 27.5	-2.1
MGR	Morigerati	80.48	310	*e*P	P	04 15 23.4	-0.1
SGO	Sicignano	80.71	311	*e*P	P	04 15 26.1	+1.4
BILL	Bilibino	81.00	21	*i* P	P	04 15 28.0	+2.4
BILL				pmax	pmax		
	comp=Z,19nm,1.8s,mb4.7						
BILL	Bilibino	81.00	21	PFAKE		04 15 40.0	+14
BILL				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
DPC	Dobruska-Polom	81.05	321	*e*P	P	04 15 27.2	+0.9
KSP	Ksiaz	81.13	321	*e*P	P	04 15 26.7	0.0
BOJS	Bojanci	81.21	316	*e*P	P	04 15 27.2	0.0
UPC	Upice	81.27	321	*e*P	P	04 15 27.9	+0.5
CII	Carovilli	81.56	312	P	P	04 15 28.6	-0.5
SMY	Shemya	81.64	37	PFAKE		04 15 40.0	+11
SMY				LR	LR		
	comp=Z,11µm,22.0s,MS6.2						
LJU	Ljubljana	81.77	316	*e*P	P	04 15 31.8	+1.7
PRU	Pruhonice	82.15	320	*e*P	P	04 15 32.5	+0.5
PVCC	Panska Ves	82.18	321	*e*P	P	04 15 33.3	+1.1
VOY	Vojsko	82.21	316	*e*P	P	04 15 32.2	-0.2
PTQR	Pietraquaria	82.25	312	*e*P	P	04 15 34.4	+1.7
AQU	L'Aquila	82.28	312	*e*P	P	04 15 33.5	+0.7
AQU				pmax	pmax		
	comp=Z,89nm,1.3s,mb5.5						
AQU	L'Aquila	82.28	312	*e*P	P	04 15 33.5	+0.7
	comp=Z,90nm,1.3s,mb5.5						
BRG	Berggiesshubel	82.61	321	*e*P	P	04 15 35.9	+1.5
BRG				*i*		04 15 44.6	
BRG				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
BRG	Berggiesshubel	82.61	321	*e*P	P	04 15 35.9	+1.5
	comp=Z,19nm,1.4s,mb4.9						
BRG				*i*		04 15 44.6	
BRG				*e*		04 22 15.1	
BRG				*e*		04 30 46.1	
BRG				*e*		04 45 39.6	
KHC	Kasperske Hory	82.69	319	*e*P	P	04 15 37.4	+2.6
KHC				*e*	pP	04 15 43.5	+2.4
KHC	Kasperske Hory	82.69	319	*e*P	P	04 15 37.4	+2.6
KHC				pP	pP	04 15 43.5	+2.4
ARV	Arcevia	82.69	313	*e*P	P	04 15 36.6	+1.6
RUE	Ruedersdorf	82.87	322	*e*P	P	04 15 35.0	-0.7
	comp=Z,59nm,1.3s,mb5.5						
CLL	Collm	83.25	321	*e*P	P	04 15 38.0	+0.4
CLL				*e*	pP	04 15 46.0	+2.1
CLL	Collm	83.25	321	P	P	04 15 38.0	+0.4
CLL				*e**PP	pP	04 15 46.0	+2.1
SFI	Santa Sofia	83.51	314	*e*P	P	04 15 40.5	+1.3
NKC	Novy Kostel	83.51	320	*e*P	P	04 15 36.7	-2.3
CTI	Castel Tesino	83.77	316	*e*P	P	04 15 41.8	+1.4
MOX	Moxa	84.07	321	*e*P	P	04 15 46.4	+4.5
MOX				pmax	pmax		
	comp=Z,36nm,1.7s,mb5.2						
MOX	Moxa	84.07	321	*e*P	P	04 15 46.4	+4.5
	comp=Z,36nm,1.7s,mb5.2						
MOX	Moxa	84.07	321	*i* P	P	04 15 46.4	+4.5
	comp=Z,logA/T=1.3,mb5.2						
GRA1	Grafenberg Arr	84.26	320	*e*P	P	04 15 43.3	+0.4
	comp=Z,120nm,2.3s,mb5.6						
GRF	Grafenberg Arr	84.26	320	*e*P	P	04 15 43.3	+0.4
GRF				pmax	pmax		
	comp=Z,120nm,2.3s,mb5.6						
GRF	Grafenberg Arr	84.26	320	*e*P	P	04 15 43.3	+0.4
	comp=Z,120nm,2.3s,mb5.6						
BRMO	Bormio	84.67	316	*e*P	P	04 15 46.6	+1.6
NB2	NORSAR Subarra	85.03	331	P	P	04 15 46.8	+0.4
	comp=Z,26nm,1.2s,mb5.2,baz=95,slow=5.6						
NB2	NORSAR Subarra	85.03	331	P	P	04 15 46.8	+0.4
	baz=95,slow=5.6						
PGF	Pioggiola	85.54	312	*e*P	P	04 15 47.8	-1.6
KONO	Kongsberg	85.75	329	PFAKE		04 16 00.0	+10
KONO				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
SBF	Sospel	86.70	314	*e*P	P	04 15 54.0	-1.1
	comp=Z,63nm,0.9s,mb5.5						
CDF	Champ du Feu	86.82	318	*e*P	P	04 15 54.3	-1.3
	comp=Z,8.1nm,0.9s,mb4.7						
HINF	Hinteralfeld	87.10	318	*e*P	P	04 15 55.3	-1.7
MBDF	Montbardon	87.17	314	*e*P	P	04 15 57.0	-0.4
LPG	La Plagne	87.18	315	*e*P	P	04 15 56.7	-0.7
	comp=Z,58nm,1.1s,mb5.4						
LPL	La Plagne	87.19	315	*e*P	P	04 15 56.5	-1.0
	comp=Z,51nm,1.1s,mb5.4						
FRF	La Foret Royal	87.27	313	*e*P	P	04 15 57.1	-0.8
VNDA	Vanda	87.27	168	PFAKE		04 16 10.0	+13
VNDA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
LMR	La Mourre	87.37	313	*e*P	P	04 15 57.5	-0.9
	comp=Z,141nm,1.7s,mb5.6						
HAU	Haudompre	87.44	318	*e*P	P	04 15 57.1	-1.5
	comp=Z,17nm,0.8s,mb5.0						
CABF	La Chapelle	87.63	316	*e*P	P	04 15 58.7	-0.8
	comp=Z,67nm,1.4s,mb5.4						
ORIF	Oris-en-Rattie	87.80	315	*e*P	P	04 15 59.8	-0.6
	comp=Z,38nm,1.2s,mb5.2						
SMRF	Simiane la Rot	88.04	314	*e*P	P	04 16 00.2	-1.4
MEZF	Maizieres J'vi	88.30	318	*e*P	P	04 16 01.6	-1.1
SBA	Scott Base	88.37	168	PFAKE		04 16 10.0	+7.6
SBA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
GIVF	Givet	88.41	320	*e*P	P	04 16 02.2	-1.0
VIVF	Saint-Julien-l	88.66	315	*e*P	P	04 16 03.6	-0.9
	comp=Z,43nm,1.4s,mb5.3						
BAIF	Baives	88.81	320	*e*P	P	04 16 04.3	-0.8
	comp=Z,15nm,0.9s,mb5.0						
SMF	Signal de Mont	89.18	316	*e*P	P	04 16 05.7	-1.2
LASF	Ste Croix	89.28	314	*e*P	P	04 16 06.9	-0.6
	comp=Z,29nm,1.1s,mb5.2						
SSF	Saint Saulge	89.39	317	*e*P	P	04 16 07.1	-0.8
	comp=Z,32nm,1.2s,mb5.2						
AVF	Avril sur Loir	89.51	317	*e*P	P	04 16 07.5	-1.0
	comp=Z,61nm,1.5s,mb5.4						
BGF	Bois d'Agland	89.87	316	*e*P	P	04 16 09.4	-0.8
	comp=Z,80nm,1.4s,mb5.6						
MTLF	Montolieu	90.50	313	*e*P	P	04 16 12.8	-0.4
	comp=Z,28nm,1.0s,mb5.2						
CAF	Calviac	90.51	315	*e*P	P	04 16 12.8	-0.4
	comp=Z,33nm,1.5s,mb5.2						
RJF	Les Rejaudoux	90.87	315	*e*P	P	04 16 14.7	-0.1
	comp=Z,74nm,1.6s,mb5.5						
LFF	La Frestale	91.45	315	*e*P	P	04 16 17.4	-0.1
	comp=Z,91nm,1.5s,mb5.6						
LDF	La Druitiere	91.72	319	*e*P	P	04 16 18.0	-0.7
	comp=Z,113nm,1.5s,mb5.7						
EPF	Esparros	91.89	313	*e*P	P	04 16 18.6	-1.0
	comp=Z,49nm,1.5s,mb5.3						
MFF	Saint Martin d	91.92	317	*e*P	P	04 16 19.0	-0.6
	comp=Z,181nm,1.9s,mb5.8						
FLN	La Foliniere	91.95	319	*e*P	P	04 16 18.7	-1.0
	comp=Z,115nm,1.4s,mb5.7						
EBR	Ebro Roquetas	91.96	311	*e*P	P	04 16 12.0	-7.9
QSPA	South Pole Qui	92.17	180	PFAKE		04 16 30.0	+10
QSPA				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
ETSF	Etsaut	92.56	313	*e*P	P	04 16 22.8	+0.1
	comp=Z,46nm,1.1s,mb5.5						
ESK	Eskdalemuir	92.84	325	PFAKE		04 16 30.0	+6.4
ESK				LR	LR		
	comp=Z,615nm,20.0s,MS5.0						
SJPF	Ste Jean	93.03	313	*e*P	P	04 16 24.0	-0.8
	comp=Z,37nm,1.1s,mb5.4						
AFI	Afiamalu	93.67	104	PFAKE		04 16 40.0	+12
AFI				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
ROSF	Rostrenen	93.84	319	*e*P	P	04 16 27.7	-0.7
	comp=Z,115nm,1.5s,mb5.8						
ESLA	Sonseca Array	95.47	310	PFAKE		04 16 50.0	+14
ESLA				LR	LR		
	comp=Z,16µm,20.0s,MS6.5						
COLA	College	99.19	23	PFAKE		04 17 00.0	+7.7
COLA				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
MCK	McKinley	99.25	24	PFAKE		04 17 00.0	+7.4
MCK				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
FIB	Fire Island	99.77	27	PFAKE		04 17 10.0	+15
FIB				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
KDAK	Kodiak Island	99.88	30	PFAKE		04 17 10.0	+14
KDAK				LR	LR		
	comp=Z,539nm,20.0s,MS5.0						
TRIS	Tristan da Cun	105.12	232	PFAKE		04 21 50.0	
TRIS				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
SIT	Sitka	108.44	26	PFAKE		04 21 50.0	
SIT				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
PMSA	Palmer Station	115.78	190	PFAKE		04 22 00.0	+3.8
PMSA				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
OCWA	Octopus Mounta	119.62	29	PFAKE		04 22 10.0	+6.0
OCWA				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
SCHQ	Schefferville	121.18	348	PFAKE		04 22 20.0	+13
SCHQ				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
COR	Corvallis	122.23	32	PFAKE		04 22 20.0	+11
COR				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
NEW	Newport	122.46	25	PFAKE		04 22 20.0	+11
NEW				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
HUMO	Hull Mountain	123.76	33	PFAKE		04 22 20.0	+7.8
HUMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
YBH	Yreka Blue Hor	124.48	34	PFAKE		04 22 20.0	+6.4
YBH				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
MSO	Missoula	124.92	24	PFAKE		04 22 20.0	+5.7
MSO				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
BMO	Blue Mountains	125.00	28	PKP	PKPdf	04 22 12.1	-2.4
BMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
CHMT	Chamberlain Mo	125.12	23	*e*PKP	PKPdf	04 22 11.5	-3.2
WDC	Whiskeytown Da	125.35	35	PFAKE		04 22 20.0	+4.7
WDC				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
MOD	Modoc	125.67	32	PFAKE		04 22 20.0	+4.1
MOD				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
HOPS	Hopland	126.08	36	PFAKE		04 22 30.0	+13
HOPS				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
WVOR	Wild Horse Val	126.16	31	PFAKE		04 22 30.0	+13
WVOR				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
BOZ	Bozeman (W)	126.81	23	*e*PKP	PKPdf	04 22 15.2	-2.7
BOZ				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
DGMT	Dagmar	126.81	16	PFAKE		04 22 30.0	+12
DGMT				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
ULM	Lac du Bonnet	126.89	9	PFAKE		04 22 30.0	+12
ULM				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
MCMT	McKenzie Canyo	126.98	25	*e*PKP	PKPdf	04 22 15.9	-2.4
HLID	Hailey	127.32	27	PFAKE		04 22 30.0	+11
HLID				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
LAO	LASA Array	127.82	18	PFAKE		04 22 30.0	+10
LAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
LKWY	Lake	128.19	23	PFAKE		04 22 30.0	+9.3
LKWY				LR	LR		
	comp=Z,6µm,20.0s,MS6.3						
CMB	Columbia Colle	128.29	36	PFAKE		04 22 30.0	+8.9
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
BMN	Battle Mountai	128.34	31	PFAKE		04 22 30.0	+8.9
BMN				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
SAO	San Andreas Ge	128.50	38	PFAKE		04 22 30.0	+8.5
SAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
MNV	Mina	129.29	34	*e*PKP	PKPdf	04 22 20.3	-2.7
MNV				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
AHID	Auburn Hatcher	129.40	25	PFAKE		04 22 30.0	+6.9
AHID				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
EYMN	Ely	129.71	6	PFAKE		04 22 30.0	+6.5
EYMN				LR	LR		
	comp=Z,4µm,19.0s,MS6.1						
BW06	Boulder Array	130.03	24	PFAKE		04 22 30.0	+5.7
BW06				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
TPH	Tonopah	130.05	33	PFAKE		04 22 30.0	+5.5
TPH				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
HWUT	Hardware Ranch	130.15	26	PFAKE		04 22 30.0	+5.5
HWUT				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
RCBR	Riachuelo	130.89	264	PFAKE		04 22 40.0	+13
RCBR				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
DAC	Darwin (Calif)	131.12	35	PFAKE		04 22 40.0	+13
DAC				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
MVU	Marysvale	132.32	29	PFAKE		04 22 40.0	+11
MVU				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
MSU	Marysvale	132.34	29	*e*PKIKP	PKPdf	04 22 26.3	-2.5
NCB	Newcomb	133.00	349	PFAKE		04 22 40.0	+10
NCB				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
NEN	Nelson	133.12	34	*e*PKP	PKPdf	04 22 25.7	-4.6
PFO	Pinyon Flat Ob	133.64	37	PFAKE		04 22 40.0	+8.7
PFO				LR	LR		
	comp=Z,368nm,19.0s,MS5.1						
HRV	Harvard--Oak R	133.83	346	PFAKE		04 22 40.0	+8.6
HRV				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
PV10	Paradox Valley	133.90	26	*e*PKP	PKPdf	04 22 27.0	-4.6
ISCO	Idaho Springs	134.10	22	PFAKE		04 22 40.0	+8.0
ISCO				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
AAM	Ann Arbor	135.66	359	PFAKE		04 22 40.0	+5.2
AAM				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
SDCO	Great Sand Dun	135.93	24	PFAKE		04 22 40.0	+4.6
SDCO				LR	LR		
	comp=Z,4µm,19.0s,MS6.2						
SSPA	Standing Stone	136.84	352	PFAKE		04 22 50.0	+13
SSPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
ACSO	Alum Creek Sta	137.70	358	PFAKE		04 22 50.0	+11
ACSO				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
TUC	Tucson	137.85	33	PFAKE		04 22 50.0	+11
TUC				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
ANMO	Albuquerque	137.90	27	PFAKE		04 22 50.0	+11
ANMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
MCWV	Mont Chateau	138.04	354	PFAKE		04 22 50.0	+11
MCWV				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
LPM	Los Pinos Moun	138.35	27	PKP	PKPdf	04 22 36.1	-3.9
TRQA	Tornquist	138.56	208	PFAKE		04 22 50.0	+10
TRQA				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
CBN	Corbin	139.15	351	PFAKE		04 22 50.0	+8.7
CBN				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
CCM	Cathedral Cave	139.50	8	PFAKE		04 22 50.0	+8.0
CCM				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
PLCA	Paso Flores	139.50	197	PFAKE		04 22 50.0	+8.1
PLCA				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
WCI	Wyandotte Cave	139.72	2	PFAKE		04 22 50.0	+7.7
WCI				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
AMTX	Amarillo	139.90	21	PFAKE		04 22 50.0	+7.2
AMTX				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
BLA	Blacksburg	140.53	354	PFAKE		04 22 50.0	+6.1
BLA				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
BBSR	BB Station	140.56	332	PFAKE		04 22 50.0	+5.9
BBSR				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
WMOK	Wichita Mounta	141.02	18	PFAKE		04 22 50.0	+5.2
WMOK				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
MNTX	Cornudas Mount	141.10	28	PFAKE		04 22 50.0	+4.9
MNTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
GDL2	Guadalupe Moun	141.15	27	*e*PKP	PKPdf	04 22 41.2	-3.9
WVT	Waverly	141.75	4	PFAKE		04 22 50.0	+4.0
WVT				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
MIAR	Mount Ida	142.54	12	*e*PKP	PKPdf	04 22 41.7	-5.8
MIAR				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
OXF	Oxford	143.22	6	PFAKE		04 23 00.0	+17
OXF				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
LTX	Lajitas	143.88	28	PFAKE		04 23 00.0	+15
LTX				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
GOGA	Godfrey	144.52	358	PFAKE		04 23 00.0	+13
GOGA				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
JCT	Junction City	144.54	22	*e*PKP	PKPdf	04 22 46.6	-4.4
JCT				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
NHSC	New Hope	144.56	353	PFAKE		04 23 00.0	+13
NHSC				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
LRAL	Lakeview Retre	144.87	3	*e*PKP	PKPdf	04 22 47.4	-4.2
LRAL				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
NATX	Nacogdoches	144.97	14	*e*PKP	PKPdf	04 22 48.8	-3.0
NATX				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
FCH	Farellones	146.13	202	*e*P	PKPbc	04 22 54.6	+3.9
CLCH	Cerro Calan	146.16	202	*e*P	PKPbc	04 22 52.5	+1.8
HKT	Hockley	146.37	17	*e*PKP	PKPdf	04 22 53.0	-1.2
HKT				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
DWPF	Disney	149.64	354	PFAKE		04 23 10.0	+10
DWPF				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
SJG	San Juan	152.54	318	PFAKE		04 23 10.0	+5.9
SJG				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
LVC	Limon Verde	154.41	216	PKP	PKPdf	04 23 15.4	+8.8
LVC				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
SAML	Samuel	157.28	252	PFAKE		04 23 20.0	+9.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SAML				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
TEIG	Tepich	157.45	8	PFAKE		04 23 20.0	+9.3
TEIG				LR	LR		
	comp=Z,762nm,20.0s,MS5.5						
LPAZ	La Paz	158.29	229	*e*PKP	PKPdf	04 23 10.6	-1.3
LPAZ				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
SDV	Santo Domingo	161.90	308	PFAKE		04 23 20.0	+4.2
SDV				LR	LR		
	comp=Z,2µm,20.0s						
NNA	Nana	167.37	220	PFAKE		04 23 30.0	+9.3
NNA				LR	LR		
	comp=Z,368nm,20.0s						
JTS	JuntasAbangare	167.56	360	PFAKE		04 23 30.0	+9.2
JTS				LR	LR		
	comp=Z,364nm,21.0s						
OTAV	Otavalo	172.99	290	PFAKE		04 23 30.0	+6.0
OTAV				LR	LR		
	comp=Z,2µm,21.0s						
PAYG	Puerto Ayora	174.51	74	PFAKE		04 23 30.0	+5.5
PAYG				LR	LR		
	comp=Z,2µm,20.0s						

BJI ***05*** *04:09:50.8, 1.74N×94.97E, h51^{km}, mB6.0, mb5.1, Ms6.1, Msz5.9*
MOS ***05*** *04:09:52.5±0.8, 2.22N×95.11E, h33^{km}, mb5.2/15, Error ellipse: s-maj=16.7km s-min=8.8km az=110.8*
NEIC ***05*** *04:09:53.6±0.3, 2.33N×95.07E, h30^{km}, mb5.1/27, Error ellipse: s-maj=9.2km s-min=6.2km az=218.0*
ISC 05 04:09:52.1±0.3, **2.23N**±0.05×**95.05E**±0.05, **h31^{km}, h31^{km}**±.8^{km}**:pP-P, n108,** σ**1^{s}02**/112, **mb5.1**/44, **MS5.7**/10, **11C-14D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	15.15	290	P	P	04 13 25.7	-0.1
CM31	Chiang Mai Arr	16.57	13	*e*P	P	04 13 40.4	-3.6
	29nm,0.8s						
CMAR	Chiang Mai Arr	16.57	13	*i* P	P	04 13 46.0	+1.9
CMAR				pmax	pmax		
	comp=Z,28nm,0.9s						
QIZ	Qiongzhong	22.11	40	P	P	04 14 46.7	0.0
HYB	Hyderabad	22.15	314	*i* P	P	04 14 46.0	-1.1
KMI	Kunming	23.94	17	P	P	04 15 06.3	+1.6
KMI				AP		04 15 14.8	
KMI				AMB	AMB		
	comp=Z,113nm,1.3s,mb5.1						
KMI	Kunming	23.94	17	P	P	04 15 06.3	+1.6
	comp=Z,113nm,1.3s,mb5.1						
KMI				pP		04 15 14.8	
GYA	Guiyang	26.55	24	⇓*i*P	P	04 15 31.3	+2.0
GYA				AP	pP	04 15 40.0	+1.7
GYA				XP	sP	04 15 44.2	+1.8
GYA				S	S	04 20 05.3	+5.5
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,2µm,7.1s						
GYA				LR	LR		
	comp=N,13µm,11.1s						
GYA				LR	LR		
	comp=E,11µm,9.9s						
GYA				LR	LR		
	comp=Z,10µm,11.0s,MS5.6						
LZH	Lanzhou	34.66	13	*e*P	P	04 16 40.3	-0.8
LZH				PP	PP	04 17 57.2	-0.9
LZH				*e*S	S	04 22 06.5	-1.2
LZH				AMB	AMB		
	comp=Z,47nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,167nm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,17.1s,MS4.9						
LZH	Lanzhou	34.66	13	*e*P	P	04 16 40.3	-0.8
	comp=Z,47nm,1.5s,mb5.2						
LZH				pP	pP	04 16 49.5	-0.7
LZH				sP	sP	04 16 53.4	-0.7
LZH				PP	PP	04 17 57.2	-0.9
LZH				*e*S	S	04 22 06.5	-1.2
LZH				LR	LR		
	comp=Z,2µm,17.1s,MS4.9						
FITZ	Fitzroy Crossi	36.27	125	*e*P	P	04 16 54.4	-0.5
	comp=Z,40nm,0.9s,mb5.3						
FITZ				*e*pP	pP	04 17 03.9	-0.1
NJ2	Nanjing	37.18	35	*e*P	P	04 17 02.8	+0.4
NJ2				AP	pP	04 17 11.6	0.0
NJ2				XP	sP	04 17 17.5	+2.1
NJ2				PP	PP	04 18 32.3	+2.6
NJ2				XS		04 23 15.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,400nm,5.8s						
NJ2				LR	LR		
	comp=N,60µm,11.6s,MS6.7						
NJ2				LR	LR		
	comp=E,36µm,13.7s,MS6.7						
NJ2				LR	LR		
	comp=Z,20µm,11.6s,MS6.2						
GTA	Gaotai	37.26	6	*e*P	P	04 17 02.8	-0.2
GTA				PP	PP	04 18 29.6	-1.1
GTA				PCP	PcP	04 19 24.1	+1.5
GTA				S	S	04 22 48.7	+0.9
GTA				XS		04 23 11.5	
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GTA				LR	LR		
	comp=N,5µm,11.8s,MS5.7						
GTA				LR	LR		
	comp=E,5µm,10.3s,MS5.7						
GTA				LR	LR		
	comp=Z,4µm,11.0s,MS5.4						
SSE	Sheshan	37.87	38	P	P	04 17 08.7	+0.5
SSE				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.6						
SSE				AMB	AMB		
	comp=Z,2µm,11.9s						
SSE				LR	LR		
	comp=N,8µm,16.5s,MS5.8						
SSE				LR	LR		
	comp=E,9µm,16.5s,MS5.8						
SSE				LR	LR		
	comp=Z,10µm,16.6s,MS5.7						
SSE	Sheshan	37.87	38	P	P	04 17 08.7	+0.5
	comp=Z,15nm,1.2s,mb4.6						
SSE				LR	LR		
	comp=Z,10µm,16.6s,MS5.7						
KSH	Kashi	40.98	337	*e*P	P	04 17 35.0	+1.1
KSH				*e*AP	pP	04 17 45.3	+2.2
KSH				*e*XP	sP	04 17 49.1	+2.2
KSH				*e*PP	PP	04 19 13.0	+1.7
KSH				*e*S	S	04 23 45.0	+1.3
KSH				*e*XS		04 24 05.1	
KSH				*e*SS	SS	04 26 42.3	+0.5
KSH				*e*SCS	ScS	04 27 33.1	-1.0
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.4						
KSH				AMB	AMB		
	comp=Z,1µm,4.9s						
KSH				LR	LR		
	comp=N,6µm,11.6s,MS5.8						
KSH				LR	LR		
	comp=E,6µm,13.0s,MS5.8						
HHC	Hu-ho-hao-te	41.24	19	*e*P	P	04 17 37.2	+1.2
HHC				AP	pP	04 17 46.9	+1.6
HHC				XP	sP	04 17 50.4	+1.3
HHC				PP	PP	04 19 20.0	+5.8
HHC				PCP	PcP	04 19 32.0	-3.2
HHC				SCP		04 23 18.6	
HHC				S	S	04 23 54.5	+6.9
HHC				XS		04 24 10.1	
HHC				SS	SS	04 26 55.6	+8.8
HHC				SCS	ScS	04 27 32.7	-3.0
HHC				AMB	AMB		
	comp=Z,48nm,1.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,4µm,7.8s						
HHC				LR	LR		
	comp=N,35µm,16.8s,MS6.3						
HHC				LR	LR		
	comp=E,18µm,18.0s,MS6.3						
HHC				LR	LR		
	comp=Z,39µm,18.0s,MS6.3						
WMQ	Urumqi	41.93	352	*e*P	P	04 17 39.0	-2.7
WMQ				PP	PP	04 19 19.0	-2.8
WMQ				S	S	04 23 54.0	-3.8
WMQ				AMB	AMB		
	comp=Z,38nm,1.2s,mb4.9						
WMQ				LR	LR		
	comp=N,4µm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=E,2µm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
BJI	Beijing	42.24	24	P	P	04 17 44.9	+0.6
BJI				AP	pP	04 17 53.1	-0.4
BJI				AMB	AMB		
	comp=Z,51nm,1.1s,mb5.1						
BJI				AMB	AMB		
	comp=Z,2µm,6.4s						
BJI				LR	LR		
	comp=N,8µm,11.7s,MS6.0						
BJI				LR	LR		
	comp=E,9µm,12.7s,MS6.0						
BJI				LR	LR		
	comp=Z,5µm,17.4s,MS5.5						
BJI	Beijing	42.24	24	P	P	04 17 44.9	+0.6
	comp=Z,51nm,1.1s,mb5.1						
BJI				pP	pP	04 17 53.1	-0.4
BJI				sS		04 17 57.2	
BJI				S	rx	04 25 45.6	
BJI				LR	LR		
	comp=Z,5µm,17.4s,MS5.5						
AAK	Ala-Archa	44.23	338	*i* P	P	04 18 00.9	+0.4
AAK				pmax	pmax		
	comp=Z,49nm,2.0s,mb4.9						
AAK	Ala-Archa	44.23	338	*i* P	P	04 18 00.9	+0.4
	comp=Z,0.9nm,1.0s						
WRAB	Tennant Creek	44.40	122	*c i*P	P	04 18 02.4	+0.2
WRAB	Tennant Creek	44.40	122	*e*P	P	04 18 01.5	-0.6
	comp=Z,105nm,1.1s,mb5.5						
WB2	Warramunga Arr	44.41	122	*e*P	P	04 18 01.9	-0.3
WB2				*e*pP	pP	04 18 11.2	-0.2
FORT	Forrest	45.45	139	*e*P	P	04 18 11.7	+1.4
	comp=Z,74nm,0.7s,mb5.6						
ASPA	Alice Springs	45.73	127	*e*P	P	04 18 12.9	+0.3
ASPA				*e*pP	pP	04 18 21.9	0.0
ULN	Ulaanbaatar	46.63	11	⇓*e*P	P	04 18 19.8	+0.4
ULN	Ulaanbaatar	46.63	11	*e*P	P	04 18 18.6	-0.9
	comp=Z,58nm,1.7s,mb5.2						
SNY	Shenyang	47.02	29	⇑P	P	04 18 18.4	-4.2
SNY				AMB	AMB		
	comp=Z,10.0nm,1.9s,mb4.4						
ZAK	Zakamensk	48.49	7	*e*P	P	04 18 33.6	-0.3
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.7						
CN2	Changchun	49.41	29	*e*P	P	04 18 40.4	-0.7
CN2				*e*AP	pP	04 18 50.5	0.0
CN2				*e*S	S	04 25 48.0	+3.1
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
CN2				AMB	AMB		
	comp=Z,2µm,12.0s						
CN2				LR	LR		
	comp=N,3µm,15.0s,MS5.6						
CN2				LR	LR		
	comp=E,3µm,15.0s,MS5.6						
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.3						
TLY	Talaya	49.81	7	⇑*e*P	P	04 18 44.8	+0.7
TLY				pmax	pmax		
	comp=Z,47nm,1.7s,mb5.2						
TLY	Talaya	49.81	7	*e*P	P	04 18 42.2	-1.9
	comp=Z,25nm,1.1s,mb5.2						
KURK	Kurchatov	50.27	346	⇓*e*P	P	04 18 48.3	+0.6
KURK	Kurchatov	50.27	346	*e*P	P	04 18 45.9	-1.8
	comp=Z,70nm,1.3s,mb5.5						
KURK				*e*	pP	04 18 55.8	-1.3
IRK	Irkutsk	50.44	7	*e*P	P	04 18 49.0	+0.1
IRK				pmax	pmax		
	comp=Z,326nm,1.6s,mb6.1						
MDJ	Mudanjiang	52.06	31	P	P	04 18 59.9	-1.4
MDJ				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,2µm,15.4s						
ZAL	Zalesovo	52.23	352	*i* P	P	04 19 02.3	-0.1
ZAL				pmax	pmax		
	comp=Z,11nm,0.8s						
CTA	Charters Tower	54.88	116	⇑*i*P	P	04 19 22.4	-0.1
	comp=Z,18nm,0.9s,mb5.1						
CTA				*e*pP	pP	04 19 31.9	0.0
CTAO	Charters Tower	54.88	116	*e*P	P	04 19 21.8	-0.7
	comp=Z,74nm,1.4s,mb5.5						
CHKZ	Chkalovo	55.09	343	*e*P	P	04 19 21.2	-2.3
	comp=Z,54nm,1.3s,mb5.4						
STKA	Stephens Creek	55.64	132	⇑*i*P	P	04 19 27.8	0.0
	comp=Z,16nm,0.8s,mb5.1						
STKA				*e*pP	pP	04 19 37.3	+0.1
KLR	Kul'dur	56.33	28	*e*P	P	04 19 29.7	-2.8
KLR				*e*	pP	04 19 37.8	-4.2
BOD	Bodaibo	57.43	12	*e*P	P	04 19 39.5	-0.7
BOD				pmax	pmax		
	comp=Z,90nm,2.0s,mb5.5						
KMBO	Kilima Mbogo	57.88	267	*i* P	P	04 19 45.2	+1.2
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMBO	Kilima Mbogo	57.88	267	*e*P	P	04 19 44.2	+0.3
	comp=Z,4.0nm,0.8s,mb4.5						
GNI	Garni	59.07	317	⇑*e*P	P	04 19 51.5	-0.4
GNI				pmax	pmax		
	comp=Z,38nm,1.7s						
GNI	Garni	59.07	317	P	P	04 19 49.2	-2.7
YSS	Yuzh-Sakhalins	60.74	36	*e*P	P	04 20 02.0	-1.3
YSS				*e*	pP	04 20 10.0	-2.9
YSS	Yuzh-Sakhalins	60.74	36	*i* P	P	04 20 02.9	-0.4
ARU	Arti	61.42	338	⇓*i*P	P	04 19 57.2	-11
ARU				*e*		04 29 50.2	
ARU				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
KIV	Kislovodsk	62.13	320	*i* P	P	04 20 11.9	-0.9
KIV				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.2						
MALT	Malatya	62.85	312	*e*P	P	04 20 16.4	-1.1
	comp=Z,14nm,1.1s,mb5.0						
YAK	Yakutsk	65.06	17	⇑*e*P	P	04 20 30.4	-1.2
YAK				pmax	pmax		
	comp=Z,67nm,1.3s,mb5.5						
YAK	Yakutsk	65.06	17	⇑*e*P	P	04 20 30.5	-1.1
ANN	Anapa	65.91	319	*e*P	P	04 20 40.3	+2.9
ANN				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.8						
BRTR	Keskin Array B	66.84	313	*i* P	P	04 20 42.3	-1.1
LSZ	Lusaka	68.35	253	*e*P	P	04 20 52.6	-0.7
	comp=Z,4.6nm,0.9s,mb4.5						
OBN	Obninsk	70.63	329	⇓*e*P	P	04 21 05.6	-1.0
OBN				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
OBN	Obninsk	70.63	329	⇓*e*P	P	04 21 05.7	-0.9
MA2	Magadan	71.36	26	⇓*e*P	P	04 21 10.9	0.0
MA2				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.1						
CFR	Carcaliu	72.28	317	⇓*i*P	P	04 21 15.7	-0.9
CFR	Carcaliu	72.28	317	⇓*i*P	P	04 21 15.7	-0.9
LBTB	Lobatse	72.42	243	*e*P	P	04 21 17.8	-0.1
VRI	Vrincioaia	73.41	317	⇑*i*P	P	04 21 24.2	+0.9
VRI	Vrincioaia	73.41	317	⇑*i*P	P	04 21 24.2	+0.9
MLR	Muntele Rosu	73.85	317	⇓*i*P	P	04 21 23.1	-2.8
MLR	Muntele Rosu	73.85	317	⇓*i*P	P	04 21 23.1	-2.8
BURAR	Bucovina Array	74.84	319	⇓*i*P	P	04 21 32.3	+0.8
KOLS	Kolonicke sedl	77.05	320	*i* P	P	04 21 44.9	+0.9
FINES	FINESS Array B	78.10	333	*i* P	P	04 21 57.7	+8.2
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OJC	Ojcow	78.87	321	*e*P	P	04 21 53.8	-0.2
VYHS	Vyhne	79.21	319	*e*P	P	04 21 55.9	0.0
VYHS				*e*	pP	04 22 07.1	+1.5
VYHS	Vyhne	79.21	319	*e*P	P	04 21 55.9	0.0
VYHS				*e*	pP	04 22 07.1	+1.5
VYHS				*e*		04 30 26.5	
SRO	Srobarova	79.45	318	*e*P	P	04 21 58.1	+0.9
SRO1	Iza	79.50	318	*e*P	P	04 21 56.6	-0.8
OKC	Ostrava-Krasne	79.86	320	*e*P	P	04 22 00.0	+0.7
SMOL	Smolenice	80.14	319	*e*P	P	04 22 00.4	-0.4
MORC	Moravsky Berou	80.24	320	*e*P	P	04 21 59.8	-1.5
	comp=Z,5.8nm,0.9s,mb4.5						
ZST	Bratislava	80.31	318	*e*P	P	04 22 02.6	+0.8
SYO	Syowa Base	80.32	198	⇑PcP	PcP	04 22 11.4	+2.6
BILL	Bilibino	80.98	21	*i* P	P	04 22 04.9	0.0
BILL				pmax	pmax		
	comp=Z,15nm,2.0s,mb4.6						
BILL	Bilibino	80.98	21	*i* P	P	04 22 04.0	-0.9
DPC	Dobruska-Polom	81.10	321	*e*P	P	04 22 06.9	+1.0
UPC	Upice	81.31	321	*e*P	P	04 22 07.8	+0.8
PERS	Pernice	81.47	317	*e*P	P	04 22 08.6	+0.7
PRU	Pruhonice	82.19	320	*e*P	P	04 22 11.2	-0.4
GEC2	GERESS Array S	82.63	319	*e*P	P	04 22 14.7	+0.8
GEC2				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
GEC2	GERESS Array S	82.63	319	*e*P	P	04 22 14.7	+0.8
	comp=Z,11nm,1.0s,mb4.8						
KHC	Kasperske Hory	82.74	319	*e*P	P	04 22 15.1	+0.7
WET	Wettzell	83.19	319	*e*P	P	04 22 17.4	+0.6
WET				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
WET	Wettzell	83.19	319	*e*P	P	04 22 17.4	+0.6
	comp=Z,5.0nm,1.0s,mb4.5						
CLL	Collm	83.29	321	⇓*i*P	P	04 22 17.6	+0.4
CLL	Collm	83.29	321	⇓P	P	04 22 17.6	+0.4
FUR	Furstenfeldbru	84.19	318	*e*P	P	04 22 22.2	+0.3
GRA1	Grafenberg Arr	84.31	320	*e*P	P	04 22 23.2	+0.8
	comp=Z,12nm,0.9s,mb5.0						
GRF	Grafenberg Arr	84.31	320	*e*P	P	04 22 23.2	+0.8
GRF				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.0						
GRF	Grafenberg Arr	84.31	320	*e*P	P	04 22 23.2	+0.8
	comp=Z,12nm,0.9s,mb5.0						
CLZ	Clausthal	84.96	322	*e*P	P	04 22 26.2	+0.6
	comp=Z,9.0nm,1.0s,mb4.8						
NB2	NORSAR Subarra	85.07	331	P	P	04 22 25.8	-0.1
	comp=Z,8.7nm,1.0s,mb4.8,baz=94,slow=5.6						
TNS	Taunus Mts	86.12	320	*e*P	P	04 22 32.4	+0.9
BFO	Black Forest	86.16	318	*e*P	P	04 22 32.0	+0.3
BFO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
BFO	Black Forest	86.16	318	*e*P	P	04 22 32.0	+0.3
	comp=Z,5.0nm,0.9s,mb4.7						
LPG	La Plagne	87.23	315	*e*P	P	04 22 37.7	+0.7
	comp=Z,22nm,1.0s,mb5.0						
EDM	Edmonton	119.85	19	*e*PKP	PKPdf	04 28 40.0	-4.6
JCT	Junction City	144.52	22	*e*PKPdf	PKPdf	04 29 26.6	-4.8
HKT	Hockley	146.36	17	*e*PKPdf	PKPdf	04 29 30.1	-4.4

BJI ***05*** *04:18:49.3, 9.66N×92.87E, h30^{km}, mb4.6, Ms5.7, Msz5.5*
NEIC ***05*** *04:18:55.0±0.4, 10.01N×92.98E, h30^{km}, mb5.0/17, Error ellipse: s-maj=13.1km s-min=8.1km az=56.0*
ISC 05 04:18:53.5±0.4, **10.02N**±0.06×**93.05E**±0.06, **h31^{km}, h31^{km}**±1.2^{km}**:pP-P, n60,** σ**1^{s}24**/54, **mb4.9**/17, **MS5.5**/1, **3C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	9.58	124	P	P	04 21 13.4	+0.8
CM31	Chiang Mai Arr	10.15	34	P	P	04 21 21.0	+0.6
	66nm,1.0s						
VIS	Vishakhapatnam	12.15	310	*e*P	P	04 21 48.0	+0.4
VIS				AMb	AMB	04 22 02.6	
	comp=Z,81nm,2.0s						
VIS				*e*S	S	04 23 47.9	-15
BWNR	Bhubaneshwar	12.38	326	*e*P	P	04 21 51.8	+1.2
BWNR				AMb	AMB	04 22 00.1	
	comp=Z,52nm,2.0s						
BWNR				*e*S	S	04 23 51.3	-17
HYB	Hyderabad	15.88	299	*i* P	P	04 22 41.5	+4.8
HYB				*e*		04 25 15.0	
HYB				*e*S	S	04 25 39.5	+7.9
BLSP	Bilaspur	15.96	320	*e*P	P	04 22 40.7	+3.1
BLSP				AMb	AMB	04 22 56.1	
	comp=Z,118nm,0.7s						
BLSP				*e*		04 25 24.5	
KMI	Kunming	17.62	30	P	P	04 23 02.0	+3.4
KMI				AP		04 23 10.3	
KMI				AMB	AMB		
	comp=Z,11nm,1.7s						
KMI	Kunming	17.62	30	P	P	04 23 02.0	+3.4
	comp=Z,11nm,1.7s						
KMI				pP		04 23 10.3	
JIRN	Jiri	18.70	341	*e*P	P	04 23 14.1	+2.2
PKI	Pulchoki	18.89	339	*e*P	P	04 23 13.9	-0.2
	comp=Z,224nm,1.3s						
DMN	Daman	19.03	338	*e*P	P	04 23 15.8	0.0
	comp=Z,280nm,1.4s						
GKN	Gorkha	19.57	337	*e*P	P	04 23 21.1	-0.8
	comp=Z,737nm,2.0s						
LSA	Lhasa	19.66	355	P	P	04 23 23.0	0.0
KAD	Karad	19.70	294	*e*P	P	04 23 24.9	+1.5
KAD				*e*		04 23 34.7	
	comp=Z,80nm,1.7s						
KOLN	Koldanda	19.78	335	*e*P	P	04 23 23.3	-1.0
	comp=Z,160nm,1.1s						
BHPL	Bhopal	19.90	313	*e*P	P	04 23 24.9	-0.7
BHPL				*e*		04 23 32.9	
BHPL				AMb	AMB	04 23 45.2	
	comp=Z,58nm,1.4s						
POO	Poona	20.42	297	*e*		04 23 44.0	
POO				*e*		04 26 11.0	
GYA	Guiyang	20.82	36	P	P	04 23 35.3	+0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s						
NDI	New Delhi	23.78	324	*e*		04 24 15.5	
DDI	Dehra Dun	24.57	327	*e*		04 24 25.0	
DDI				*e*		04 26 44.5	
TSM	Tawau	25.27	101	P	P	04 24 20.7	+1.8
GTA	Gaotai	29.89	11	*e*P	P	04 24 59.6	-1.2
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.5						
ULN	Ulaanbaatar	39.53	15	*e*P	P	04 26 21.9	-1.5
	comp=Z,3.0nm,0.8s,mb4.1						
KURK	Kurchatov	42.29	346	*e*P	P	04 26 46.7	+0.8
	comp=Z,7.0nm,1.1s,mb4.2						
KURK				*e*pP	pP	04 26 54.8	-0.5
CN2	Changchun	43.84	34	*e*P	P	04 26 58.0	-0.6
CN2				*e*AP	pP	04 27 07.9	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				LR	LR		
	comp=N,2µm,13.0s,MS5.5						
CN2				LR	LR		
	comp=E,4µm,13.0s,MS5.5						
CN2				LR	LR		
	comp=Z,4µm,14.0s,MS5.5						
CHKZ	Chkalovo	47.12	342	*e*P	P	04 27 23.1	-1.5
	comp=Z,15nm,0.7s,mb5.0						
WRAB	Tennant Creek	50.39	126	*e*P	P	04 27 49.4	-0.9
	comp=Z,28nm,0.8s,mb5.3						
WB2	Warramunga Arr	50.39	126	*e*P	P	04 27 49.7	-0.7
ASPA	Alice Springs	52.11	131	⇓*i*P	P	04 28 03.2	-0.2
KIV	Kislovodsk	55.02	317	*e*P	P	04 28 23.3	-1.3
	comp=Z,6.3nm,0.6s,mb4.8						
MALT	Malatya	56.27	310	P	P	04 28 31.4	-2.2
	comp=Z,9.6nm,1.4s,mb4.6						
KMBO	Kilima Mbogo	56.62	262	P	P	04 28 35.2	-1.2
CTA	Charters Tower	60.30	120	*e*P	P	04 29 02.1	+0.1
	comp=Z,7.9nm,1.4s,mb4.5						
CTA				*i*	pP	04 29 12.7	+1.0
CTAO	Charters Tower	60.30	120	*e*P	P	04 29 01.8	-0.2
	comp=Z,62nm,1.5s,mb5.4						
CTAO				*e*pP	pP	04 29 11.9	+0.2
STKA	Stephens Creek	62.36	134	⇑*i*P	P	04 29 15.7	-0.1
	comp=Z,34nm,1.2s,mb5.4						
STKA				*e*	pP	04 29 27.2	+1.7
JOF	Joensuu	68.46	334	*e*p	P	04 29 50.3	-4.3
LSZ	Lusaka	68.98	249	P	P	04 29 57.6	-1.0
CNB	Canberra Magne	69.68	133	⇑*i*P	P	04 30 03.2	+0.7
	comp=Z,168nm,1.0s,mb5.9						
CNB				*i* pP	pP	04 30 14.0	+1.8
SUW	Suwalki	70.15	324	*e*P	P	04 30 03.7	-1.3
	comp=Z,23nm,0.9s,mb5.1						
KAF	Kangasniemi	70.41	333	*e*p	P	04 30 03.8	-2.7
OKC	Ostrava-Krasne	72.67	319	*e*P	pP	04 30 29.6	-0.5
MORC	Moravsky Berou	73.06	319	*e*P	P	04 30 21.8	-0.7
	comp=Z,71nm,1.9s,mb5.3						
MORC				*e*pP	pP	04 30 31.4	-1.0
DPC	Dobruska-Polom	73.89	320	*e*P	P	04 30 27.2	-0.1
DPC				*e*pP	pP	04 30 37.1	0.0
UPC	Upice	74.09	320	*e*P	P	04 30 31.4	+2.9
LBTB	Lobatse	74.33	240	*e*P	P	04 30 31.9	+1.4
LBTB				*e*pP	pP	04 30 42.5	+2.2
PRU	Pruhonice	75.01	319	*e*pP	pP	04 30 42.9	-0.8
PVCC	Panska Ves	75.02	320	*e*P	P	04 30 36.6	+2.7

KHC	**Kasperske Hory**	**75.61**	**318**	*e*P	**P**	**04 30 36.3**	**-1.0**
KHC				*e*pP	pP	04 30 47.6	+0.5
CLL	**Collm**	**76.03**	**320**	*i* *PP	pP	04 30 50.5	+1.0
NKC	**Novy Kostel**	**76.36**	**319**	*e*P	**P**	**04 30 43.8**	**+2.3**
NKC				*e*pP	pP	04 30 51.3	-0.1
MOX	**Moxa**	**76.90**	**320**	*i* P	pP	04 30 54.8	+0.4
	comp=Z,logA/T=1.3						
GRA1	**Grafenberg Arr**	**77.15**	**319**	*e*P	**P**	**04 30 48.3**	**+2.4**
	comp=Z,35nm,1.6s,mb5.0						
GRA1				*e*pP	pP	04 30 56.5	+0.7
GRF	**Grafenberg Arr**	**77.15**	**319**	*e*P	**P**	**04 30 48.3**	**+2.4**
	comp=Z,35nm,1.6s,mb5.0						
GRF				*e*pP	pP	04 30 56.5	+0.7
NB2	**NORSAR Subarra**	**77.35**	**330**	P	**P**	**04 30 48.2**	**+1.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=96,slow=5.0						
LPG	**La Plagne**	**80.35**	**315**	*e*P	**P**	**04 31 03.7**	**+0.3**
	comp=Z,18nm,0.9s,mb4.7						
TNA	**Tin City**	**84.67**	**24**	P	**P**	**04 31 24.3**	**-1.0**
SYO	**Syowa Base**	**87.12**	**197**	⇑PcP	PcP	04 31 43.0	+3.3
IMA	**Indian Mountai**	**90.06**	**22**	*e*P	**P**	**04 31 51.1**	**-0.2**
	comp=Z,112nm,1.5s,mb6.0						
DAWY	**Dawson**	**96.25**	**21**	*e*P	**P**	**04 32 19.8**	**0.0**
PLCA	**Paso Flores**	**146.13**	**203**	*e*PKPdf	PKPdf	04 38 32.9	-2.3

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*BJI **05** 04:21:15.9, 9.26N×92.77E, h30^{km}, mB5.7, mb4.7, Ms5.7, Msz5.4*

*NEIC **05** 04:21:23.8±0.4, 9.97N×92.94E, h30^{km}, mb4.6/14, Error ellipse: s-maj=17.2km s-min=9.4km az=224.0*

ISC 05 04:21:23.0±0.4**, 9.94N**±0.07×**92.94E**±0.07**, h35**^{km}**, h35**^{km}±1.1^{km}**:pP-P, n50,** σ**1**^{s}**12**/50**, mb4.7**/18**, MS5.5**/2**, 2C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIZ	**Qiongzhong**	**18.68**	**59**	*e*P	**P**	**04 25 41.6**	**+0.9**
GYA	**Guiyang**	**20.94**	**37**	P	**P**	**04 26 04.4**	**-0.9**
GYA				AMB	AMB		
	comp=Z,20nm,0.9s						
GTA	**Gaotai**	**29.99**	**11**	*e*P	**P**	**04 27 29.7**	**-0.8**
GTA				AP	pP	04 27 39.3	-1.2
GTA				XP	sP	04 27 44.2	-1.0
GTA				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.7						
HHC	**Hu-ho-hao-te**	**34.92**	**25**	*e*P	**P**	**04 28 14.8**	**+1.3**
HHC				S	**S**	**04 33 46.4**	**+4.7**
HHC				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0						
HHC				LR	LR		
	comp=N,4µm,13.2s,MS5.5						
HHC				LR	LR		
	comp=E,4µm,13.2s,MS5.5						
HHC				LR	LR		
	comp=Z,5µm,12.0s,MS5.5						
ULN	**Ulaanbaatar**	**39.64**	**15**	*e*P	**P**	**04 28 51.1**	**-1.8**
ULN				*e*	pP	04 29 01.6	-1.6
KURK	**Kurchatov**	**42.34**	**346**	*e*P	**P**	**04 29 14.3**	**-1.0**
CN2	**Changchun**	**43.96**	**34**	*e*P	**P**	**04 29 27.7**	**-0.8**
CN2				*e*AP	pP	04 29 37.5	-1.4
CN2				*e*S	**S**	**04 35 57.0**	**-0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				LR	LR		
	comp=N,4µm,13.0s,MS5.5						
CN2				LR	LR		
	comp=E,2µm,13.0s,MS5.5						
CN2				LR	LR		
	comp=Z,3µm,14.0s,MS5.4						
CHKZ	**Chkalovo**	**47.16**	**342**	*e*P	**P**	**04 29 52.6**	**-1.2**
WRAB	**Tennant Creek**	**50.42**	**126**	*e*P	**P**	**04 30 19.1**	**-0.4**
	comp=Z,19nm,0.6s,mb5.3						
WB2	**Warramunga Arr**	**50.43**	**126**	⇑*i*P	**P**	**04 30 19.3**	**-0.2**
ASPA	**Alice Springs**	**52.14**	**130**	*e*P	**P**	**04 30 31.4**	**-1.0**
KMBO	**Kilima Mbogo**	**56.51**	**262**	P	**P**	**04 31 03.1**	**-1.4**
KMBO				*e*pP	pP	04 31 15.8	+0.7
CTA	**Charters Tower**	**60.35**	**120**	*e*P	**P**	**04 31 30.9**	**-0.3**
	comp=Z,6.3nm,1.6s,mb4.4						
CTA				*i* pP	pP	04 31 43.6	+1.7
CTAO	**Charters Tower**	**60.35**	**120**	*e*P	**P**	**04 31 29.9**	**-1.4**
STKA	**Stephens Creek**	**62.38**	**134**	*e*P	**P**	**04 31 44.9**	**+0.2**
	comp=Z,20nm,0.8s,mb5.3						
MBAR	**Mbarara**	**62.77**	**264**	P	**P**	**04 31 46.1**	**-1.5**
TOO	**Toolangi**	**68.16**	**137**	*e*P	**P**	**04 32 24.5**	**+2.6**
	comp=Z,0.9nm,0.9s,mb3.8						
JOF	**Joensuu**	**68.49**	**334**	*e*p	**P**	**04 32 19.5**	**-4.0**
	comp=Z,9.9nm,0.9s,mb4.8						
CNB	**Canberra Magne**	**69.70**	**133**	*e*P	**P**	**04 32 32.4**	**+1.0**
	comp=Z,177nm,1.1s						
SUW	**Suwalki**	**70.15**	**324**	*e*P	**P**	**04 32 32.7**	**-1.2**
CRVS	**Cervenica-Dubn**	**70.41**	**318**	*e*P	**P**	**04 32 37.7**	**+2.2**
CRVS				*e*		04 32 53.0	
CRVS	**Cervenica-Dubn**	**70.41**	**318**	*e*	**P**	**04 32 37.7**	**+2.2**
CRVS				*e*		04 32 53.0	
VYHS	**Vyhne**	**72.09**	**318**	*e*P	**P**	**04 32 44.8**	**-0.7**
VYHS				*e*sP	sP	04 32 56.4	-3.9
VYHS	**Vyhne**	**72.09**	**318**	*e*	**P**	**04 32 44.8**	**-0.7**
VYHS				*e*	pP	04 32 56.4	0.0
VYHS	**Vyhne**	**72.09**	**318**	*e*	**P**	**04 32 44.8**	**-0.7**
VYHS				*e*	pP	04 32 56.4	0.0
OKC	**Ostrava-Krasne**	**72.67**	**319**	*e*P	**P**	**04 32 49.5**	**+0.5**
OKC				*e*pP	pP	04 33 00.5	+0.7
MORC	**Moravsky Berou**	**73.05**	**319**	*e*P	**P**	**04 32 50.2**	**-1.0**
	comp=Z,48nm,1.7s,mb5.2						
MORC				*e*pP	pP	04 33 00.4	-1.7
ZST	**Bratislava**	**73.22**	**317**	*e*P	**P**	**04 32 52.9**	**+0.6**
ZST				*e*pP	pP	04 33 03.6	+0.4
ZST	**Bratislava**	**73.22**	**317**	*e*	**P**	**04 32 52.9**	**+0.6**
ZST				*e*	pP	04 33 03.6	+0.4
DPC	**Dobruska-Polom**	**73.88**	**320**	*e*P	**P**	**04 32 56.8**	**+0.7**
DPC				*e*pP	pP	04 33 07.1	+0.2
KSP	**Ksiaz**	**73.93**	**320**	*e*P	**P**	**04 32 56.8**	**+0.4**
KSP				*e*	pP	04 33 07.8	+0.6
UPC	**Upice**	**74.09**	**320**	*e*P	**P**	**04 32 59.1**	**+1.8**
UPC				*e*pP	pP	04 33 09.3	+1.2
LBTB	**Lobatse**	**74.20**	**240**	*e*P	**P**	**04 32 57.2**	**-1.3**
PRU	**Pruhonice**	**75.00**	**319**	*e*P	**P**	**04 33 03.3**	**+0.7**
PRU				*e*pP	pP	04 33 13.6	+0.2
PVCC	**Panska Ves**	**75.01**	**320**	*e*P	**P**	**04 33 04.0**	**+1.4**
PVCC				*e*pP	pP	04 33 14.8	+1.3
GEC2	**GERESS Array S**	**75.51**	**318**	*e*P	**P**	**04 33 06.5**	**+1.0**
	comp=Z,7.0nm,0.9s,mb4.6						
KHC	**Kasperske Hory**	**75.60**	**318**	*e*P	**P**	**04 33 04.1**	**-1.9**
KHC				*e*pP	pP	04 33 16.7	-0.2
CLL	**Collm**	**76.03**	**320**	⇑*i**PP	pP	04 33 19.5	+0.2
WET	**Wettzell**	**76.06**	**318**	*e*P	**P**	**04 33 09.6**	**+1.0**
	comp=Z,4.0nm,0.9s,mb4.3						
MOX	**Moxa**	**76.89**	**320**	*e*P	**P**	**04 33 14.0**	**+0.7**
GRA1	**Grafenberg Arr**	**77.15**	**319**	*e*P	**P**	**04 33 16.0**	**+1.2**
	comp=Z,4.0nm,0.9s,mb4.3						
GRA1				*e*pP	pP	04 33 26.5	+0.8
GRF	**Grafenberg Arr**	**77.15**	**319**	*e*P	**P**	**04 33 16.0**	**+1.2**
	comp=Z,4.0nm,0.9s,mb4.3						
GRF				*e*pP	pP	04 33 26.5	+0.8
NB2	**NORSAR Subarra**	**77.37**	**330**	P	**P**	**04 33 13.7**	**-2.1**
	comp=Z,5.3nm,1.0s,mb4.4,baz=96,slow=5.0						
CLZ	**Clausthal**	**77.67**	**321**	*e*P	**P**	**04 33 18.5**	**+0.9**
	comp=Z,7.0nm,0.9s,mb4.6						
BFO	**Black Forest**	**79.08**	**317**	*e*P	**P**	**04 33 25.9**	**+0.5**
	comp=Z,3.0nm,1.0s,mb4.2						
LPG	**La Plagne**	**80.34**	**315**	*e*P	**P**	**04 33 33.0**	**+0.8**
	comp=Z,20nm,0.8s,mb4.8						
BNI	**Bardonecchia**	**80.42**	**314**	*e*P	**P**	**04 33 32.4**	**-0.3**
	comp=Z,6.2nm,0.8s,mb4.6						
IMA	**Indian Mountai**	**90.17**	**22**	*e*P	**P**	**04 34 21.8**	**+1.2**
	comp=Z,16nm,1.1s,mb5.3						
IMA				*e*pP	pP	04 34 30.9	-0.9
SPU	**Mount Spurr**	**92.97**	**26**	P	**P**	**04 34 33.4**	**-0.3**
PLCA	**Paso Flores**	**146.02**	**203**	*e*PKP	PKPdf	04 41 01.7	+3.1

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*THR **05** 04:32:03.7±0.8, 32.33N×49.08E, h14^{km}±12^{km}, ML3.1*

*CSEM **05** 04:32:04.1±0.1, 32.32N×49.06E, h16^{km}, ML3.4/1, Error ellipse: s-maj=2.8km s-min=1.4km az=117.0*

*TEH **05** 04:32:07.9, 32.33N×49.12E, h21^{km}, Mn3.2*

ISC 05 04:32:04.0±1.0**, 32.25N**±0.04×**49.15E**±0.07**, h9**^{km}±7^{km}**, n22,** σ**0**^{s}**71**/27**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGO	**Shushtar**	**0.32**	**245**	*e*PG	**Pg**	**04 32 10.1**	**-0.5**
SHGO				AML	AML	04 32 21.7	
	comp=N,2µm,0.3s						
SHGR	**Shooshtar-Gavs**	**0.32**	**245**	*i* PG	**Pg**	**04 32 10.1**	**-0.5**
SHGR				*e*SG	**Sg**	**04 32 15.7**	**+0.6**
SHGR				AML	AML	04 32 19.9	
	comp=N,5µm,0.6s						
SHGR	**Shooshtar-Gavs**	**0.32**	**245**	*i* Pg	**Pg**	**04 32 10.1**	**-0.5**
	SNR=92						
SHGR				*e*Sg	**Sg**	**04 32 15.6**	**+0.5**
	SNR=92						
IKOM	**Komasi**	**2.36**	**325**	Pn	**Pn**	**04 32 44.2**	**+0.7**
QAM	**Qamsar**	**2.77**	**53**	Pn	**Pn**	**04 32 48.0**	**-1.4**
IVIS	**Veys**	**2.98**	**320**	Pn	**Pn**	**04 32 52.5**	**+0.2**
NASN	**Na’in**	**3.14**	**79**	*e*PN	**Pn**	**04 32 56.0**	**+1.4**
NASN				AML	AML	04 33 49.6	
	comp=N,35nm,0.6s						
SNGE	**Sanandaj**	**3.21**	**333**	*e*PN	**Pn**	**04 32 54.6**	**-1.0**
SNGE				*e*SG	**Sg**	**04 33 41.0**	**-10**
SNGE				AML	AML	04 33 45.0	
	comp=N,30nm,0.6s						
SNGE	**Sanandaj**	**3.21**	**333**	*e*Pn	**Pn**	**04 32 54.7**	**-0.9**
	SNR=52						
SNGE				*e*Sg	**Sg**	**04 33 41.0**	**-10**
	comp=N,30nm,0.6s,SNR=90						
IRAZ	**Razeghan**	**3.22**	**11**	Lg		04 33 45.9	
IRAZ	**Razeghan**	**3.22**	**11**	Pn	**Pn**	**04 32 56.0**	**+0.3**
IRAZ	**Razeghan**	**3.22**	**11**	Lg		04 33 45.8	
IDHR	**Dehrash**	**3.36**	**317**	Pn	**Pn**	**04 32 57.8**	**0.0**
NAY	**Al-Naaiem**	**3.41**	**209**	*e*P	**Pn**	**04 32 58.5**	**+0.1**
NAY				*e*S	**Sn**	**04 33 39.7**	**+0.4**
IVRN	**Varamin**	**3.49**	**37**	Pn	**Pn**	**04 33 01.2**	**+1.7**
RDF	**Al-Radifah**	**3.58**	**203**	*e*P	**Pn**	**04 33 01.5**	**+0.6**
RDF				*e*S	**Sn**	**04 33 44.0**	**+0.2**
QRN	**Al-Qurain**	**3.65**	**197**	*e*P	**Pn**	**04 33 01.7**	**-0.1**
QRN				*e*S	**Sn**	**04 33 44.2**	**-1.2**
IMHD	**Mahdasht**	**3.66**	**20**	Pn	**Pn**	**04 33 01.7**	**-0.2**
IDMV	**Damavand**	**4.10**	**35**	Pn	**Pn**	**04 33 08.1**	**-0.1**
DAMV	**Damavand**	**4.11**	**34**	*e*PN	**Pn**	**04 33 07.8**	**-0.6**
IAFJ	**Afjeh**	**4.18**	**30**	Pn	**Pn**	**04 33 09.2**	**-0.2**
IFIR	**Firoozkooh**	**4.52**	**41**	Pn	**Pn**	**04 33 13.9**	**-0.4**

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*BJI **05** 04:33:12.7, 1.77N×95.13E, h28^{km}, mB5.8, mb4.8, Ms5.4, Msz5.1*

*MOS **05** 04:33:17.2±1.0, 2.20N×95.12E, h33^{km}, mb5.2/16, Error ellipse: s-maj=15.4km s-min=8.4km az=105.7*

*NEIC **05** 04:33:18.2±0.3, 2.27N×95.15E, mb4.9/23, MS4.5/1, Error ellipse: s-maj=10.6km s-min=6.7km az=49.0*

ISC 05 04:33:16.5±0.3**, 2.23N**±0.05×**95.14E**±0.05**, h28**^{km}**, h28**^{km}±.5^{km}**:pP-P, n105,** σ**1**^{s}**06**/108**, mb4.9**/46**, MS5.1**/8**, 9C-15D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**6.32**	**68**	P	**Pn**	**04 34 49.8**	**-0.6**
KGM	**Kluang**	**8.18**	**91**	P	**P**	**04 35 14.9**	**-1.5**
CM31	**Chiang Mai Arr**	**16.55**	**13**	*e*P	**P**	**04 37 07.3**	**-1.1**
	273nm,1.4s						
CMAR	**Chiang Mai Arr**	**16.55**	**13**	*i* P	**P**	**04 37 10.4**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKM	**Kota Kinabalu**	**21.36**	**79**	P	**P**	**04 38 06.1**	**+2.1**
QIZ	**Qiongzhong**	**22.05**	**40**	*e*P	**P**	**04 38 09.4**	**-1.4**
HYB	**Hyderabad**	**22.21**	**314**	*e*P	**P**	**04 38 13.0**	**+0.5**
HYB	**Hyderabad**	**22.21**	**314**	*i* P	**P**	**04 38 13.0**	**+0.5**
KMI	**Kunming**	**23.91**	**17**	P	**P**	**04 38 31.4**	**+2.2**
KMI				AP		04 38 40.0	
KMI				AMB	AMB		
	comp=Z,55nm,1.5s,mb4.8						
KMI				LR	LR		
	comp=Z,2µm,19.1s,MS4.5						
KMI	**Kunming**	**23.91**	**17**	P	**P**	**04 38 31.4**	**+2.2**
	comp=Z,55nm,1.5s,mb4.8						
KMI				pP		04 38 40.0	
KMI				LR	LR		
	comp=Z,2µm,19.1s,MS4.5						
GYA	**Guiyang**	**26.51**	**24**	P	**P**	**04 38 55.6**	**+1.9**
GYA				AP	pP	04 39 02.6	+0.7
GYA				XP	sP	04 39 06.6	+0.9
GYA				S	**S**	**04 43 29.0**	**+4.9**
GYA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
GYA				AMB	AMB		
	comp=Z,2µm,9.9s						
GYA				LR	LR		
	comp=N,2µm,11.6s						
GYA				LR	LR		
	comp=E,2µm,9.8s						
GYA				LR	LR		
	comp=Z,3µm,11.0s,MS5.1						
NDI	**New Delhi**	**31.37**	**329**	*e*	**P**	**04 39 35.5**	**-1.8**
XAN	**Xi’an**	**34.17**	**21**	P	**P**	**04 40 00.0**	**-1.6**
XAN				AP	pP	04 40 08.7	-1.2
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
LZH	**Lanzhou**	**34.64**	**12**	⇓P	**P**	**04 40 05.0**	**-0.7**
LZH				AP	pP	04 40 13.0	-1.0
LZH				XP	sP	04 40 16.7	-0.9
LZH				PP	PP	04 41 22.3	-0.3
LZH				*e*S	**S**	**04 45 31.5**	**-0.9**
LZH				AMB	AMB		
	comp=Z,45nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,157nm,5.3s						
LZH				LR	LR		
	comp=E,1µm,12.8s						
LZH				LR	LR		
	comp=Z,2µm,17.2s,MS4.9						
LZH	**Lanzhou**	**34.64**	**12**	⇓P	**P**	**04 40 05.0**	**-0.7**
	comp=Z,45nm,1.5s,mb5.2						
LZH				pP	pP	04 40 13.0	-1.0
LZH				sP	sP	04 40 16.7	-0.9
LZH				PP	PP	04 41 22.3	-0.3
LZH				*e*S	**S**	**04 45 31.5**	**-0.9**
LZH				LR	LR		
	comp=Z,2µm,17.2s,MS4.9						
FITZ	**Fitzroy Crossi**	**36.20**	**125**	*e*P	**P**	**04 40 18.5**	**-0.5**
	comp=Z,16nm,0.9s,mb5.0						
FITZ				*e*pP	pP	04 40 27.5	+0.1
NJ2	**Nanjing**	**37.13**	**34**	*e*P	**P**	**04 40 27.6**	**+0.9**
NJ2				AP	pP	04 40 37.3	+2.2
NJ2				XP	sP	04 40 41.3	+2.7
NJ2				PP	PP	04 41 55.6	+1.7
NJ2				S	**S**	**04 46 14.0**	**+3.2**
NJ2				XS		04 46 31.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,224nm,5.2s						
NJ2				LR	LR		
	comp=N,4µm,10.7s,MS5.6						
NJ2				LR	LR		
	comp=E,3µm,13.1s,MS5.6						
NJ2				LR	LR		
	comp=Z,5µm,11.2s,MS5.5						
GTA	**Gaotai**	**37.25**	**6**	*e*P	**P**	**04 40 27.6**	**-0.1**
GTA				AP	pP	04 40 35.5	-0.6
GTA				XP	sP	04 40 39.3	-0.3
GTA				PP	PP	04 41 55.0	-0.3
GTA				S	**S**	**04 46 13.1**	**+0.5**
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.2						
GTA				LR	LR		
	comp=N,2µm,13.3s,MS5.1						
GTA				LR	LR		
	comp=E,993nm,12.5s,MS5.1						
GTA				LR	LR		
	comp=Z,3µm,13.7s,MS5.2						
SSE	**Sheshan**	**37.81**	**38**	P	**P**	**04 40 31.8**	**-0.7**
SSE				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
SSE				AMB	AMB		
	comp=Z,1µm,9.4s						
SSE	**Sheshan**	**37.81**	**38**	P	**P**	**04 40 31.8**	**-0.7**
	comp=Z,12nm,0.8s,mb4.7						
KSH	**Kashi**	**41.01**	**337**	*e*P	**P**	**04 41 00.0**	**+1.1**
KSH				*e*AP	pP	04 41 10.5	+3.1
KSH				*e*XP	sP	04 41 14.0	+3.2
KSH				*e*PP	PP	04 42 38.1	+1.6
KSH				*e*SCP		04 46 46.4	
KSH				*e*S	**S**	**04 47 10.0**	**+0.8**
KSH				*e*XS		04 47 27.3	
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.4						
KSH				AMB	AMB		
	comp=Z,3µm,14.8s						
KSH				LR	LR		
	comp=N,3µm,11.9s,MS5.7						
KSH				LR	LR		
	comp=E,5µm,11.9s,MS5.7						
HHC	**Hu-ho-hao-te**	**41.21**	**19**	⇓P	**P**	**04 41 02.2**	**+1.6**
HHC				AP	pP	04 41 10.7	+1.7
HHC				XP	sP	04 41 15.6	+3.1
HHC				S	**S**	**04 47 13.6**	**+1.4**
HHC				AMB	AMB		
	comp=Z,25nm,1.4s,mb4.7						
HHC				LR	LR		
	comp=N,2µm,14.4s,MS5.3						
HHC				LR	LR		
	comp=E,2µm,15.6s,MS5.3						
HHC				LR	LR		
	comp=Z,2µm,14.4s,MS5.2						
WMQ	**Urumqi**	**41.94**	**352**	*e*P	**P**	**04 41 07.0**	**+0.5**
WMQ				XP	sP	04 41 18.0	-0.5
WMQ				PP	PP	04 42 47.0	+0.3
WMQ				S	**S**	**04 47 23.0**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,29nm,1.2s,mb4.8						
WMQ				LR	LR		
	comp=N,987nm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
BJI	**Beijing**	**42.20**	**24**	P	**P**	**04 41 09.9**	**+1.1**
BJI				AMB	AMB		
	comp=Z,25nm,1.5s,mb4.6						
BJI	**Beijing**	**42.20**	**24**	P	**P**	**04 41 09.9**	**+1.1**
	comp=Z,25nm,1.5s,mb4.6						
AAK	**Ala-Archa**	**44.26**	**338**	⇓*e*P	**P**	**04 41 25.8**	**+0.3**
AAK				pmax	pmax		
	comp=Z,30nm,1.9s,mb4.7						
AAK	**Ala-Archa**	**44.26**	**338**	*e*P	**P**	**04 41 25.4**	**-0.2**
	comp=Z,37nm,1.4s,mb4.9						
WRAB	**Tennant Creek**	**44.33**	**122**	⇓*e*P	**P**	**04 41 26.9**	**+0.6**
WRAB	**Tennant Creek**	**44.33**	**122**	*e*P	**P**	**04 41 25.8**	**-0.6**
	comp=Z,69nm,1.0s,mb5.3						
WRAB				*e*	pP	04 41 34.2	-0.5
WB2	**Warramunga Arr**	**44.33**	**122**	⇑*i*P	**P**	**04 41 26.3**	**-0.1**
WB2				*e*pP	pP	04 41 35.0	+0.2
FORT	**Forrest**	**45.39**	**139**	*e*P	**P**	**04 41 36.1**	**+1.4**
	comp=Z,56nm,1.2s,mb5.3						
ASPA	**Alice Springs**	**45.65**	**127**	*e*P	**P**	**04 41 37.7**	**+0.9**
ASPA				*e*pP	pP	04 41 46.6	+1.3
ULN	**Ulaanbaatar**	**46.61**	**11**	⇓*e*P	**P**	**04 41 44.2**	**+0.1**
ULN	**Ulaanbaatar**	**46.61**	**11**	*e*P	**P**	**04 41 43.1**	**-1.0**
	comp=Z,17nm,1.1s,mb4.9						
ULN				*e*	pP	04 41 51.7	-0.9
SNY	**Shenyang**	**46.97**	**29**	⇑P	**P**	**04 41 46.4**	**-0.6**
SNY				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
ZAK	**Zakamensk**	**48.47**	**7**	⇑*i*P	**P**	**04 41 58.3**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2	**Changchun**	**49.36**	**29**	*e*P	**P**	**04 42 05.1**	**-0.5**
CN2				*e*AP	pP	04 42 14.5	+0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
MOY	**Mondy**	**49.51**	**5**	*e*P	**P**	**04 42 06.8**	**+0.2**
MOY				pmax	pmax		
	comp=Z,54nm,3.8s						
TLY	**Talaya**	**49.79**	**7**	⇓*i*P	**P**	**04 42 09.7**	**+0.9**
TLY				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
KURK	**Kurchatov**	**50.29**	**346**	⇑*e*P	**P**	**04 42 12.4**	**-0.2**
KURK	**Kurchatov**	**50.29**	**346**	*e*P	**P**	**04 42 11.9**	**-0.7**
	comp=Z,48nm,1.4s,mb5.3						
IRK	**Irkutsk**	**50.42**	**7**	*e*P	**P**	**04 42 13.4**	**-0.2**
IRK				*e*	pP	04 42 20.9	-1.3
IRK				*e*		04 49 14.9	
IRK				pmax	pmax		
	comp=Z,50nm,1.8s,mb5.2						
MDJ	**Mudanjiang**	**52.01**	**31**	P	**P**	**04 42 26.5**	**+0.8**
MDJ				AMB	AMB		
	comp=Z,17nm,1.6s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,7µm,11.8s						
NVS	**Novosibirsk**	**53.34**	**351**	*i* P	**P**	**04 42 33.9**	**-1.6**
NVS				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.4						
NVS				pmax	pmax		
	comp=N,53nm,1.5s						
NVS				pmax	pmax		
	comp=E,24nm,1.3s						
CTA	**Charters Tower**	**54.80**	**116**	*e*P	**P**	**04 42 46.6**	**-0.1**
	comp=E,7.0nm,0.9s,mb4.7						
CTA				*e*pP	pP	04 42 55.5	+0.2
CHKZ	**Chkalovo**	**55.12**	**342**	*e*P	**P**	**04 42 46.3**	**-2.2**
	comp=E,26nm,0.8s,mb5.3						
STKA	**Stephens Creek**	**55.57**	**132**	⇑*i*P	**P**	**04 42 52.1**	**0.0**
	comp=E,6.7nm,0.7s,mb4.8						
STKA				*e*pP	pP	04 43 00.8	0.0
KLR	**Kul’dur**	**56.29**	**28**	*e*P	**P**	**04 42 53.5**	**-3.5**
BOD	**Bodaibo**	**57.41**	**12**	*e*P	**P**	**04 43 03.4**	**-1.5**
BOD				pmax	pmax		
	comp=Z,60nm,1.8s,mb5.3						
KMBO	**Kilima Mbogo**	**57.97**	**267**	*i* P	**P**	**04 43 10.8**	**+1.4**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GNI	**Garni**	**59.13**	**317**	*d i*P	**P**	**04 43 17.0**	**-0.2**
GNI				pmax	pmax		
	comp=Z,29nm,1.7s						
YSS	**Yuzh-Sakhalins**	**60.69**	**35**	*i* P	**P**	**04 43 27.7**	**0.0**
ARU	**Arti**	**61.45**	**338**	⇑*i*P	**P**	**04 43 22.5**	**-10**
ARU				*e*		04 53 10.8	
ARU				*e*SS	SS	04 55 48.8	-4.0
ARU				*e*SSS	SSS	04 58 28.8	-3.7
ARU				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
KIV	**Kislovodsk**	**62.19**	**320**	⇑*e*P	**P**	**04 43 37.6**	**-0.3**
KIV				pmax	pmax		
	comp=Z,24nm,1.8s,mb5.0						
KIV	**Kislovodsk**	**62.19**	**320**	*e*P	**P**	**04 43 37.1**	**-0.9**
MALT	**Malatya**	**62.92**	**312**	*e*P	**P**	**04 43 40.8**	**-2.0**
	comp=Z,14nm,1.3s,mb4.9						
MBAR	**Mbarara**	**64.45**	**268**	*i* P	**P**	**04 43 50.7**	**-2.6**
YAK	**Yakutsk**	**65.03**	**17**	⇑*e*P	**P**	**04 43 55.6**	**-0.7**
YAK				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
YAK	**Yakutsk**	**65.03**	**17**	*e*P	**P**	**04 43 54.1**	**-2.2**
ANN	**Anapa**	**65.97**	**319**	*e*P	**P**	**04 44 05.4**	**+2.8**
ANN				pmax	pmax		
	comp=Z,107nm,1.2s,mb5.8						
LSZ	**Lusaka**	**68.44**	**253**	*e*P	**P**	**04 44 18.2**	**-0.4**
	comp=Z,5.6nm,1.1s,mb4.5						
LSZ				*e*pP	pP	04 44 26.6	-0.8
MOS	**Moscow**	**70.40**	**330**	*e*P	**P**	**04 44 29.2**	**-0.8**
MOS				*e*		04 44 42.6	
MOS				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.3						
OBN	**Obninsk**	**70.67**	**329**	⇓*i*P	**P**	**04 44 30.4**	**-1.2**
OBN				*e*		04 47 13.8	
OBN				S	S	04 53 40.6	-2.0
OBN				pmax	pmax		
	comp=Z,52nm,1.8s,mb5.2						
MA2	**Magadan**	**71.31**	**26**	⇑*e*P	**P**	**04 44 35.1**	**-0.4**
MA2				pmax	pmax		
	comp=Z,42nm,2.4s,mb4.9						
LBTB	**Lobatse**	**72.50**	**243**	*e*P	**P**	**04 44 42.7**	**-0.5**
	comp=Z,14nm,0.8s,mb5.0						
LBTB				*e*pP	pP	04 44 51.5	-0.6
TIXI	**Tiksi**	**72.55**	**11**	⇓*e*P	**P**	**04 44 41.7**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
VRI	**Vrincioaia**	**73.47**	**317**	⇓*i*P	**P**	**04 44 49.5**	**+1.0**
VRI	**Vrincioaia**	**73.47**	**317**	⇓*i*P	**P**	**04 44 49.5**	**+1.1**
MLR	**Muntele Rosu**	**73.91**	**317**	⇓*i*P	**P**	**04 44 51.9**	**+0.9**
MLR	**Muntele Rosu**	**73.91**	**317**	⇓*i*P	**P**	**04 44 51.9**	**+0.9**
BURAR	**Bucovina Array**	**74.90**	**319**	⇓*i*P	**P**	**04 45 05.4**	**+8.7**
KOLS	**Kolonicke sedl**	**77.10**	**320**	*i* P	**P**	**04 45 10.0**	**+0.9**
KOLS				*e*pP	pP	04 45 17.9	-0.1
KOLS				*e*		04 45 30.0	
SUW	**Suwalki**	**77.65**	**325**	*e*P	**P**	**04 45 10.8**	**-1.2**
VYHS	**Vyhne**	**79.27**	**319**	*e*P	**P**	**04 45 21.1**	**+0.1**
OKC	**Ostrava-Krasne**	**79.92**	**320**	*e*P	**P**	**04 45 24.6**	**+0.2**
MORC	**Moravsky Berou**	**80.30**	**320**	*e*P	**P**	**04 45 26.0**	**-0.5**
ZST	**Bratislava**	**80.37**	**318**	*e*P	**P**	**04 45 27.3**	**+0.4**
ZST				*e*pP	pP	04 45 35.8	0.0
BILL	**Bilibino**	**80.95**	**21**	*i* P	**P**	**04 45 29.6**	**+0.1**
BILL				pmax	pmax		

	comp=Z,16nm,2.0s,mb4.6						
DPC	Dobruska-Polom	81.15	321	*e*P	P	04 45 31.6	+0.6
KSP	Ksiaz	81.23	321	*e*P	P	04 45 32.2	+0.8
UPC	Upice	81.37	321	*e*P	P	04 45 31.9	-0.2
PRU	Pruhonice	82.25	320	*e*P	P	04 45 37.1	+0.4
PVCC	Panska Ves	82.29	321	*e*P	P	04 45 34.1	-2.8
GEC2	GERESS Array S	82.69	319	*e*P	P	04 45 39.9	+0.9
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
GEC2	GERESS Array S	82.69	319	*e*P	P	04 45 39.9	+0.9
	comp=Z,3.0nm,0.8s,mb4.4						
KHC	Kasperske Hory	82.79	319	*e*P	P	04 45 38.8	-0.7
WET	Wettzell	83.25	319	*e*P	P	04 45 42.6	+0.7
WET				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
WET	Wettzell	83.25	319	*e*P	P	04 45 42.6	+0.7
	comp=Z,2.0nm,0.7s,mb4.3						
CLL	Collm	83.34	321	*e*P	P	04 45 42.0	-0.3
CLL				*i*	pP	04 45 51.8	+0.5
CLL	Collm	83.34	321	P	P	04 45 42.0	-0.3
CLL				*i* *SP	sP	04 45 51.8	-2.4
NKC	Novy Kostel	83.61	320	*e*P	P	04 45 43.7	0.0
MOX	Moxa	84.17	321	*i* P	P	04 45 47.3	+0.8
GRA1	Grafenberg Arr	84.37	320	*e*P	P	04 45 48.9	+1.4
	comp=Z,4.0nm,0.7s,mb4.7						
GRA1				*e*pP	pP	04 45 57.2	+0.6
GRF	Grafenberg Arr	84.37	320	*e*P	P	04 45 48.9	+1.4
GRF				*e**PP	pP	04 45 57.2	+0.6
GRF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
GRF	Grafenberg Arr	84.37	320	*e*P	P	04 45 48.9	+1.4
	comp=Z,4.0nm,0.7s,mb4.7						
GRF				*e*pP	pP	04 45 57.2	+0.6
CLZ	Clausthal	85.02	322	*e*P	P	04 45 51.4	+0.7
	comp=Z,3.0nm,0.8s,mb4.5						
TNS	Taunus Mts	86.18	320	*e*P	P	04 45 57.3	+0.8
BFO	Black Forest	86.22	318	*e*P	P	04 45 56.9	+0.1
BFO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.5						
BFO	Black Forest	86.22	318	*e*P	P	04 45 56.9	+0.1
	comp=Z,2.0nm,0.7s,mb4.5						
LPG	La Plagne	87.29	315	*e*P	P	04 46 10.6	+8.5
	comp=Z,10nm,0.8s,mb4.8						
MSU	Marysvale	132.26	29	PKP	PKPdf	04 52 29.3	-4.3
NEN	Nelson	133.04	34	PKP	PKPdf	04 52 30.9	-4.2
PV10	Paradox Valley	133.84	27	*e*PKP	PKPdf	04 52 32.1	-4.3
JCT	Junction City	144.49	23	*e*PKPdf	PKPdf	04 52 51.3	-4.5
NATX	Nacogdoches	144.94	15	*e*PKP	PKPdf	04 52 52.8	-3.9

SKHL 05 04:38:39.1±0.1**,53.00N**×**142.74E,h10^{km},mb3.5**/3**,**
Sakhalin Island

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*TEH **05** 04:42:04.8,32.21N×49.09E,h7^{km},Mn3.9*
*CSEM **05** 04:42:04.8,32.21N×49.09E,h7^{km},ML3.9,After TEH*
*THR **05** 04:42:04.6±1.1,32.35N×49.02E,h18^{km}±8^{km},ML3.6*
ISC 05 04:42:03.6±0.6**,32.24N**±0.04×**49.21E**±0.04**,h10^{km},n22,**
σ0^{s}71/26**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	Shushtar	0.37	249	*i* PG	Pg	04 42 10.9	-0.3
SHGO				AML	AML	04 42 20.9	
	comp=N,5µm,0.5s						
SHGR	Shooshtar-Gavs	0.37	249	*i* PG	Pg	04 42 10.9	-0.3
SHGR				*e*SG	Sg	04 42 16.7	+0.5
SHGR				AML	AML	04 42 21.4	
	comp=N,16µm,0.6s						
IBRJ	Borojen	1.81	105	Pn	Pg	04 42 39.6	-0.2
IBRJ	Borojen	1.81	105	Pn	Pg	04 42 39.6	-0.2
IKOM	Komasi	2.40	324	Pn	Pn	04 42 43.2	-0.4
QAM	Qamsar	2.74	52	Pn	Pn	04 42 48.0	-0.4
IVIS	Veys	3.01	320	Pn	Pn	04 42 51.8	-0.5
IVIS	Veys	3.01	320	Pn	Pn	04 42 51.8	-0.5
NASN	Na'in	3.09	79	*e*PN	Pn	04 42 57.0	+3.5
NASN				*e*SG	Sg	04 43 45.6	-1.0
IRAZ	Razeghan	3.21	11	Lg		04 43 46.3	
IRAZ	Razeghan	3.21	11	Pn	Pn	04 42 56.0	+0.8
SNGE	Sanandaj	3.24	332	*e*PN	Pn	04 42 54.5	-1.1
SNGE				*e*SG	Sb	04 43 40.7	+0.1
SNGE				AML	AML	04 43 51.1	
	comp=E,212nm,0.7s						
IDHR	Dehrash	3.40	317	Pn	Pn	04 42 57.3	-0.6
IDHR	Dehrash	3.40	317	Pn	Pn	04 42 57.3	-0.6
IVRN	Varamin	3.46	37	Pn	Pn	04 43 00.0	+1.3
IVRN				Sn	Sn	04 43 40.5	+0.2
IMHD	Mahdasht	3.65	19	Pn	Pn	04 43 01.9	+0.6
IDMV	Damavand	4.08	34	Pn	Pn	04 43 08.0	+0.6
DAMV	Damavand	4.09	33	*e*PN	Pn	04 43 08.2	+0.6
DAMV				AML	AML	04 44 22.1	
	comp=N,59nm,0.6s						
IAFJ	Afjeh	4.16	29	Pn	Pn	04 43 09.1	+0.4
IAFJ				Sn	Sn	04 43 56.9	-1.1
ISRV	Sarvestan	4.41	129	Pn	Pn	04 43 12.0	-0.2
ISRV	Sarvestan	4.41	129	Pn	Pn	04 43 12.0	-0.2
IFIR	Firoozkooh	4.50	40	Pn	Pn	04 43 13.9	+0.5

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*PRU **05** 05:07:52.4,50.23N×19.19E*
WAR 05 05:07:51.4,50.17N×19.30E,h0^{km},ML2.5,1C,Mining
Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.32	81	*e*PG	Pg	05 07 58.0	+0.2
OJC				*e*SG	Sg	05 08 03.0	+0.8
OKC	Ostrava-Krasne	0.82	246	*e*PG	Pg	05 08 07.1	-0.6
OKC				*e*SG	Sg	05 08 18.4	-0.2
NIE	Niedzica	1.00	139	*e*PG	Pg	05 08 10.0	-1.3
NIE				*e*SG	Sg	05 08 25.0	+0.4
VYHS	Vyhne	1.70	190	*i* PN	Pn	05 08 21.9	-0.6
VYHS				*e*SN	Sn	05 08 44.2	-1.1
CRVS	Cervenica-Dubn	1.89	131	*e*PN	Pn	05 08 27.1	+1.9
CRVS				*e*SN	Sn	05 08 53.5	+3.4
DPC	Dobruska-Polom	1.92	277	*e*PG	Pg	05 08 24.8	-5.0
DPC				*e*SG	Sg	05 08 50.2	-5.2
	26nm,0.4s						
KSP	Ksiaz	2.04	291	*e*Pn	Pn	05 08 27.9	+0.6
KSP				*e*Pg	Pg	05 08 30.1	-2.0
KSP				*e*Sn	Sn	05 08 55.9	+2.1
KSP				*e*Sg	Sg	05 08 56.7	-2.5
UPC	Upice	2.13	280	*e*SG	Sg	05 08 57.7	-4.8
KWP	Kalwaria	2.27	102	*e*Pn	Pn	05 08 34.0	+3.4
KWP				*e*Sn	Sn	05 09 03.5	+3.9
KWP				*e*Sg	Sg	05 09 14.3	+7.5
PSZ	Piszkesteto	2.29	170	⇑*e*P	Pn	05 08 33.8	+3.0
KOLS	Kolonicke sedl	2.30	121	*e*PG	Pg	05 08 37.3	+0.1
SRO	Srobarova	2.45	196	*e*PG	Pg	05 08 38.5	-1.7
PRU	Pruhonice	3.07	268	*e*SG	Sg	05 09 25.5	-8.2
KHC	Kasperske Hory	3.86	257	*e*SG	Sg	05 09 52.0	-8.0
CLL	Collm	4.16	288	*e*SG	Sg	05 10 05.0	-4.9

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*MOS **05** 05:10:34.2±1.5,46.03N×149.03E,h145^{km},mb4.1/4,Error ellipse: s-maj=23.3km s-min=15.4km az=53.5*
*JMA **05** 05:10:37.9±0.5,45.28N×149.28E,h158^{km},M3.9*
*BJI **05** 05:10:44.8,47.10N×148.30E,h186^{km},mB4.9,mb4.4*
*NEIC **05** 05:10:44.8±3.9,47.11N×148.27E,h187^{km}±15^{km},mb4.2/6, Error ellipse: s-maj=105.2km s-min=7.6km az=152.0*
ISC 05 05:10:35.2±0.9**,45.0N**±0.1×**149.6E**±0.1**,h188^{km}**±7^{km}**,n49,**
σ0^{s}94/59**,mb4.6**/14**,1C-1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.23	281	⇓*i*PN	P	05 10 59.0	-6.9
KUR				*i* S	S	05 11 18.5	-11
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,90nm,0.5s						
KUR				pmax	pmax		
	comp=Z,300nm,0.5s						
KUR				smax			
	comp=N,420nm,0.9s						
KUR				smax			
	comp=E,2µm,0.9s						
YUK	Yuzh-Kuril'sk	2.84	251	*e*PN	P	05 11 22.8	-0.1
YUK				*e*S	S	05 11 59.0	-0.6
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				smax			
	comp=E,280nm,0.4s						
YUK				smax			
	comp=N,310nm,0.3s						
NEM2	Nemuro 2	3.22	240	P	P	05 11 28.1	+0.6
NEM2				S	S	05 12 07.6	-0.2
JNK	Nakash	3.77	249	P	P	05 11 35.3	+0.9
JAK	Akkeshi	4.06	242	P	P	05 11 38.7	+0.6
JAK				*e*S	S	05 12 25.9	-0.7
JTKR	Abashiri--Toko	4.19	257	P	P	05 11 39.3	-0.4
JAR	Ashorobuto	4.52	250	P	P	05 11 45.3	+1.4
JMP	Maruseppu	4.56	259	P	P	05 11 44.5	0.0
JOB	Onbets	4.66	245	P	P	05 11 46.6	+0.9
JOB				*e*S	S	05 12 39.9	-0.3
JKK2	Kamakawa 2	5.02	259	P	P	05 11 50.3	-0.1
ASAJ	Asahikawa	5.07	262	P	P	05 11 50.5	-0.5
JCH	Churui	5.10	244	P	P	05 11 51.8	+0.4
JCH				*e*S	S	05 12 48.8	-1.6
YSS	Yuzh-Sakhalins	5.13	295	*e*PN	P	05 11 43.2	-8.6
JFR	Furan	5.36	252	P	P	05 11 56.8	+2.0
JEM	Erimo	5.55	239	P	P	05 11 59.2	+2.0
JNBK	Urakawa-nobuka	5.66	243	P	P	05 11 58.4	-0.2
JBT2	Biratori 2	5.67	249	P	P	05 11 59.4	+0.6
JNB	Noboribetsu	6.69	251	P	P	05 12 11.9	-0.2
JNB				*e*S	S	05 13 24.9	-2.7
JKB	Kayabe	6.96	246	P	P	05 12 15.2	-0.5
JKB				*e*S	S	05 13 29.7	-4.3
JYM2	Yakumo 2	7.29	250	P	P	05 12 19.8	-0.2
JSH	Shimam	7.29	254	P	P	05 12 20.5	+0.5
JANG	Nango	7.54	235	P	P	05 12 25.1	+1.8
JANG				*e*S	S	05 13 45.5	-2.1
JSR	Shiriuchi	7.54	246	P	P	05 12 23.3	0.0
JTM	Tenmabayashi	7.54	239	P	P	05 12 23.0	-0.4
JTM				*e*S	S	05 13 43.4	-4.4
JTH	Tanohata	7.63	231	*e*S	S	05 13 49.1	-0.8
JRG	Rokugo	8.70	233	*e*S	S	05 14 15.1	+0.4
JIO	Ouri	8.99	226	*e*S	S	05 14 21.3	-0.3
KLR	Kul'dur	12.85	295	*e*PN	P	05 13 20.5	-11
HHC	Hu-ho-hao-te	27.97	275	⇑P	P	05 16 09.8	-0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,168nm,5.4s						
IMA	Indian Mountai	36.65	35	*e*P	P	05 17 23.2	-1.6
IMA				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.1						
IMA	Indian Mountai	36.65	35	*e*P	P	05 17 23.2	-1.6
	comp=Z,31nm,0.6s,mb5.1						
GTA	Gaotai	36.81	279	*e*P	P	05 17 26.2	-0.2
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
MCK	McKinley	38.56	39	*e*P	P	05 17 40.1	-0.6
MCK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
MCK	McKinley	38.56	39	*e*P	P	05 17 40.1	-0.6
	comp=Z,2.1nm,0.8s,mb3.8						
COLA	College	39.02	37	*e*P	P	05 17 43.7	-0.8
INK	Inuvik	44.42	31	*e*P	P	05 18 26.9	-1.3
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	Inuvik	44.42	31	*e*P	P	05 18 26.9	-1.3
	comp=Z,3.4nm,0.5s,mb4.2						
JIRN	Jiri	52.60	273	*e*P	P	05 19 32.7	+1.2
	comp=Z,9.0nm,0.2s,mb5.2						
GUN	Gumba	52.67	274	*e*P	P	05 19 32.8	+0.8
	comp=Z,14nm,0.5s,mb4.9						
KKN	Kakani	53.17	274	*e*P	P	05 19 36.7	+1.0
	comp=Z,16nm,0.8s,mb4.8						
PKI	Pulchoki	53.21	274	*e*P	P	05 19 36.3	+0.3
	comp=Z,14nm,0.8s,mb4.8						
RES	Resolute Bay	53.24	17	*e*P	P	05 19 30.4	-5.2
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
RES	Resolute Bay	53.24	17	*e*P	P	05 19 30.4	-5.2
	comp=Z,1.6nm,0.6s,mb3.9						
DMN	Daman	53.40	274	*e*P	P	05 19 38.1	+0.7
	comp=Z,20nm,0.9s,mb4.8						
GKN	Gorkha	53.50	275	*e*P	P	05 19 38.6	+0.5
	comp=Z,12nm,0.4s,mb5.0						
KOLN	Koldanda	54.37	275	*e*P	P	05 19 45.2	+0.7
	comp=Z,29nm,0.8s,mb5.0						
FCC	Fort Churchill	64.04	31	*e*P	P	05 20 49.0	-1.3
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
FCC	Fort Churchill	64.04	31	*e*P	P	05 20 49.0	-1.3
	comp=Z,2.6nm,0.7s,mb4.2						
CLL	Collm	76.97	334	P	P	05 22 03.0	-4.9

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*THR **05** 06:22:57.7±0.5,32.30N×49.04E,h18^{km}±3^{km},ML2.8*
*TEH **05** 06:22:58.4,31.80N×48.73E,h23^{km},Mn3.3*
*CSEM **05** 06:22:58.8±0.2,32.30N×48.64E,h8^{km},ML2.8,Error ellipse: s-maj=7.7km s-min=3.8km az=102.0*
ISC 05 06:22:59.6±1.0**,32.27N**±0.04×**48.71E**±0.10**,h10^{km}**±6^{km}**,**
n17,σ0^{s}97/21**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	Shushtar	0.18	153	*e*PG	Pg	06 23 03.8	+0.2
SHGO				AML	AML	06 23 15.6	
	comp=N,821nm,0.6s						
SHGR	Shooshtar-Gavs	0.18	153	*e*PG	Pg	06 23 03.8	+0.2
SHGR				AML	AML	06 23 12.1	
	comp=E,1µm,0.4s						
ASAO	Ashtian	2.53	25	*e*PN	Pn	06 23 38.4	-3.1
ASAO				*e*SG	Sn	06 24 12.9	+0.3
ASAO				AML	AML	06 24 17.6	
	comp=N,54nm,0.6s						
SNGE	Sanandaj	3.04	338	*e*PN	Pn	06 23 48.0	-0.7
SNGE				AML	AML	06 24 38.6	
	comp=N,26nm,0.6s						
IDHR	Dehrash	3.11	322	Pn	Pn	06 23 50.9	+1.2
NAY	Al-Naaiem	3.26	203	*e*P	Pn	06 23 52.2	+0.3
IRAZ	Razeghan	3.29	18	Pn	Pn	06 23 49.7	-2.6
RDF	Al-Radifah	3.48	197	*e*P	Pn	06 23 55.1	+0.1
RDF				*e*S	Sn	06 24 38.0	+1.3
NASN	Na'in	3.50	80	*e*PN	Pn	06 23 49.7	-5.7
QRN	Al-Qurain	3.58	191	*e*P	Pn	06 23 55.7	-0.7
QRN				*e*S	Sn	06 24 38.0	-1.2
ISFB	Sefidab	3.61	54	Pn	Pn	06 23 56.3	-0.6
IVRN	Varamin	3.71	42	Pn	Pn	06 23 58.6	+0.3
IVRN				Sn	Sn	06 24 43.3	+0.7
IMHD	Mahdasht	3.78	25	Pn	Pn	06 24 00.5	+1.2
IGZV	Gazvin	4.29	17	Pn	Pn	06 24 14.7	+8.1
IDMV	Damavand	4.31	39	Pn	Pn	06 24 06.9	+0.1
IAFJ	Afjeh	4.36	34	Pn	Pn	06 24 07.7	+0.1
IFIR	Firoozkooh	4.76	44	Pn	Pn	06 24 08.0	-5.2

IGQ 05 07:17:07.5,0.51S×81.28W,h6^{km}±6^{km},mb4.4,6C,Error ellipse: s-maj=8.0km s-min=5.6km az=5.6,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.91	126	⇑P	Pb	07 17 24.4	-0.9
SALI	Salinas	1.69	170	P	Pn	07 17 38.8	+0.9
PINO	Pino	2.69	83	P	Pn	07 17 53.0	+0.8
TERV	Terraza Guagua	2.70	83	P	Pn	07 17 53.1	+0.9
YANA	Yana	2.74	82	P	Pn	07 17 53.5	+0.7
NAS1	Nasa	2.81	93	⇑P	Pn	07 17 55.8	+2.0
IGUA	Igualata	2.82	110	P	Pn	07 17 55.5	+1.6
IGUA				S	Sn	07 18 28.8	+0.2
VC1	Cotopaxi 1	2.88	93	⇑P	Pn	07 17 57.1	+2.2
TAMB	Tambo	2.92	94	⇑P	Pn	07 17 57.4	+2.1
PISA	Pisayambo	2.95	101	P	Pn	07 17 58.5	+2.7
CUSU	Cusua	2.95	108	P	Pn	07 17 59.0	+3.2
JUIV	Juive	2.96	108	P	Pn	07 17 57.6	+1.7
RETU	Refugio	2.98	108	P	Pn	07 17 58.5	+2.1
ARRY	Arrayan	2.99	109	⇑P	Pn	07 17 57.9	+1.5
ARRY				S	Sn	07 18 32.6	-0.4
ANTI	Antisana	3.12	89	P	Pn	07 18 00.8	+2.5
ANTI				S	Sn	07 18 39.7	+3.5
CAYR	Refugio Cayamb	3.31	81	⇑P	Pn	07 18 04.9	+3.9
CONE	Cono NE Rev Vo	3.66	83	P	Pn	07 18 11.9	+5.9

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*BGS **05** 08:00:25.2,7.14N×94.53E,h33^{km},mb6.1*
*BJI **05** 08:00:25.7,7.83N×93.76E,h35^{km},mB5.7,mb5.4,Ms5.3, Msz4.9*
*NEIC **05** 08:00:27.5±0.1,8.06N×94.05E,mb5.7/155,MS5.0/98, MW5.4,Error ellipse: s-maj=4.6km s-min=3.2km az=213.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.60; M$_{\theta\theta}$0.84; M$_{\phi\phi}$0.76; M$_{r\theta}$0.04; M$_{\theta\phi}$0.63; M$_{\phi r}$0.24; Best double couple: M$_{0}$1.5×10^{17} NP1:φ$_{s}$51°,δ42°, λ-83°. NP2:φ$_{s}$222°,δ49°,λ-96°. Principal axes: T 1.44, Plg4°, Azm316°; N .18, Plg5°, Azm226°; P -1.62, Plg84°, Azm84°;*
*HRVD **05** 08:00:27.5±0.3,8.06N×94.26E,h12^{km},MW5.3/58, Centroid moment Tensor Solution. LP body waves: s27,c43;Mantle waves: s58,c122; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.26±.03; M$_{\theta\theta}$0.41±.03; M$_{\phi\phi}$0.85±.04; M$_{r\theta}$-0.05±.11; M$_{\theta\phi}$0.53±.03; M$_{\phi r}$-0.41±.10; Best double couple: M$_{0}$1.298×10^{17} NP1: φ$_{s}$221°,δ37°,λ-78°. NP2:φ$_{s}$26°,δ54°,λ-99°. Principal axes: T 1.257, Plg8°, Azm122°; N .085, Plg7°, Azm31°; P -1.339, Plg79°, Azm260°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*DHMR **05** 08:00:29.6±2.7,7.99N×94.08E,h10^{km},mb5.6*
*MOS **05** 08:00:30.0±0.8,8.36N×93.93E,h33^{km},mb5.9/113, MS4.9/62,Error ellipse: s-maj=7.8km s-min=3.5km az=125.5*
ISC 05 08:00:26.2±0.2**,8.11N**±0.03×**94.09E**±0.02**,h17^{km},**
h17^{km}±.3^{km}**:pP-P,n831,σ0^{s}99**/727**,mb5.7**/217**,MS4.9**/128**,**
29C-190D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.54	98	P	Pn	08 02 00.0	-4.1
	286nm,0.9s						
NNT	Nongplab	7.12	51	P	Pn	08 02 11.0	-1.3
IPM	Ipoh	7.74	117	P	Pn	08 02 18.1	-2.8
NST	Nakhon Sawan	9.57	38	P	P	08 02 46.0	-0.4
CM31	Chiang Mai Arr	11.32	24	*e*P	P	08 03 11.3	+0.9
	123nm,1.1s						
CMAR	Chiang Mai Arr	11.32	24	*i* P	P	08 03 11.4	+1.0
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
KKTK	Khon Kaen	11.82	45	P	P	08 03 14.0	-3.2
	comp=Z,247nm,0.9s						
NANT	Nan	12.42	30	⇑P	P	08 03 26.0	+0.8
	comp=Z,119nm,1.0s						
CHRT	Chiangrai	12.93	25	⇓P	P	08 03 34.0	+1.9
	comp=Z,560nm,1.0s						
PALK	Pallekele	13.29	267	*e*P	P	08 03 39.5	+2.7
	comp=Z,54nm,1.4s						
VIS	Vishakhapatnam	14.18	313	*e*P	P	08 03 48.8	+0.2
VIS				*e*		08 03 51.0	
	comp=Z,50nm,0.8s						
VIS				*e*		08 06 12.1	
CAL	Calcutta	15.38	340	*e*	P	08 04 00.4	-3.9
CAL				*e*		08 07 14.4	
AGT	Agartala	15.92	350	⇓*i*P	P	08 04 12.0	+0.7
AGT				*i*		08 05 04.0	
SALM	Salem	16.04	284	⇑*i*P	P	08 04 15.0	+2.1
SALM				*i*		08 07 04.0	
IMP	Imphal	16.59	360	*e*P	P	08 04 19.0	-0.7
TRD	Trivandrum	16.95	273	*e*P	P	08 04 29.7	+5.3
HYB	Hyderabad	17.74	303	⇑*e*P	P	08 04 35.0	+0.8
HYB				pmax	pmax		
	comp=Z,180nm,1.0s						
HYB	Hyderabad	17.74	303	⇑*e*P	P	08 04 35.0	+0.8
	comp=Z,180nm,1.0s						
HYB				*e*S	S	08 07 55.0	+5.9
HYB	Hyderabad	17.74	303	⇑*i*P	P	08 04 35.0	+0.8
	comp=Z,180nm,1.0s						
HYB				*e*S	S	08 07 55.0	+5.9
HYB				*e*		08 16 24.0	
BLSP	Bilaspur	18.08	322	*e*P	P	08 04 38.7	+0.2
BLSP				*e*		08 08 05.4	
QIZ	Qiongzhong	18.76	53	P	P	08 04 48.4	+1.6
QIZ				S	S	08 08 13.1	+0.9
QIZ				SS	SS	08 08 40.2	+2.9
QIZ				AMB	AMB		
	comp=Z,736nm,4.7s						
QIZ				LR	LR		
	comp=N,12µm,15.6s						
QIZ				LR	LR		
	comp=Z,4µm,11.9s						
KMI	Kunming	18.83	25	⇓P	P	08 04 50.8	+3.2
KMI				AP		08 04 57.2	
KMI				XP		08 04 59.9	
KMI				PP	PP	08 05 11.9	+8.0
KMI				S	S	08 08 27.9	+14
KMI				AMB	AMB		
	comp=Z,106nm,1.6s						
KMI				AMB	AMB		
	comp=Z,1µm,4.2s						
KMI				LR	LR		
	comp=N,3µm,7.8s						
KMI				LR	LR		
	comp=E,3µm,7.3s						
KMI				LR	LR		
	comp=Z,2µm,8.1s						
KMI	Kunming	18.83	25	⇓P	P	08 04 50.8	+3.2
KMI				pmax	pmax		
	comp=Z,106nm,1.6s						
KMI	Kunming	18.83	25	⇓P	P	08 04 50.8	+3.2
	comp=Z,106nm,1.6s						
KMI				pP		08 04 57.2	
KMI				sP		08 04 59.9	
KMI				PP	PP	08 05 11.9	+8.0
KMI				S	S	08 08 27.9	+14
KMI				sS		08 08 40.2	
KMI				SS	SS	08 09 00.4	+21
NGP	Nagpur	19.46	313	*e*P	P	08 04 56.3	+1.2
NGP				*e*		08 08 25.3	
MNGI	Mangalore	19.54	286	*i* P	P	08 04 57.8	+1.8
	comp=Z,213nm,1.3s						
GTK	Gangtok	19.81	346	*e*	P	08 04 52.0	-7.0
LATR	Latur	19.88	303	*e*P	P	08 04 59.5	-0.3
COCO	West Island	20.35	172	*e*P	P	08 05 07.3	+2.6
	comp=Z,129nm,0.6s						
COCO				*e*pP		08 05 15.4	
COCO				LR	LR		
	comp=Z,686nm,19.0s,MS4.0						
ALBI	Allahabad	20.73	327	*e*P	P	08 05 07.5	-1.1
JIRN	Jiri	20.84	340	*e*P	P	08 05 09.6	-0.1
	comp=Z,1µm,1.3s						
MNCY	Minicoy	20.84	272	⇑*i*P	P	08 05 09.0	-0.8
MNCY				*i*		08 06 07.0	
PKI	Pulchoki	21.03	338	*e*P	P	08 05 11.0	-0.7
	comp=Z,4µm,1.7s,mb6.4						
GOA	Goa	21.14	292	*e*	P	08 05 21.1	+8.3
	comp=Z,354nm,1.8s,mb5.4						
GOA				*e*		08 09 21.1	
GUN	Gumba	21.17	340	*e*P	P	08 05 12.8	-0.3
	comp=Z,2µm,1.2s,mb6.3						
DMN	Daman	21.18	337	*e*P	P	08 05 13.0	-0.2
	comp=Z,1µm,1.0s,mb6.2						
KKN	Kakani	21.28	338	*e*P	P	08 05 13.7	-0.4
	comp=Z,743nm,1.0s,mb6.0						
KAD	Karad	21.44	297	⇓*i*P	P	08 05 17.0	+1.1
LSA	Lhasa	21.66	353	P	P	08 05 17.1	-0.9
LSA				AP		08 05 27.7	
LSA				XP		08 05 33.4	
LSA				LR	LR		
	comp=N,550nm,16.3s,MS4.5						
LSA				LR	LR		
	comp=E,1µm,16.3s,MS4.5						
LSA				LR	LR		
	comp=Z,1µm,15.5s,MS4.4						
GKN	Gorkha	21.71	337	*e*P	P	08 05 18.2	-0.3
	comp=Z,876nm,0.8s,mb6.3						
GYA	Guiyang	21.82	32	⇓*i*P	P	08 05 20.9	+1.3
GYA				AP		08 05 26.2	
GYA				XP		08 05 29.5	
GYA				S	S	08 09 23.4	+8.4
GYA				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.1						
GYA				AMB	AMB		
	comp=Z,590nm,4.3s						
GYA				LR	LR		
	comp=N,2µm,12.2s,MS5.0						
GYA				LR	LR		
	comp=E,4µm,12.9s,MS5.0						
GYA				LR	LR		
	comp=Z,2µm,11.8s,MS4.8						
KOLN	Koldanda	21.93	334	*e*P	P	08 05 21.3	+0.6
	comp=Z,2µm,1.2s,mb6.5						
BHPL	Bhopal	21.96	315	*e*P	P	08 05 23.2	+2.2
BHPL				*i*		08 09 37.6	
KKM	Kota Kinabalu	22.05	94	P	P	08 05 23.4	+1.4
POO	Poona	22.23	300	*e*P	P	08 05 25.9	+2.2
POO				*e*		08 09 20.8	

POO				*e*S	**S**	**08 09 25.0**	**+2.4**
BOM	**Bombay**	**23.27**	**300**	*e*P	**P**	**08 05 36.7**	**+2.6**
BOM				*e*		08 09 31.9	
HKC	**Hong Kong**	**23.93**	**52**	⇑*e*P	**P**	**08 05 44.0**	**+3.5**
HKC				*i* S		08 10 10.0	
TSM	**Tawau**	**23.94**	**98**	P	**P**	**08 05 41.8**	**+1.1**
CD2	**Chengdu**	**24.42**	**20**	P	**P**	**08 05 46.2**	**+1.0**
CD2				S	**S**	**08 10 01.2**	**0.0**
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.8						
CD2				AMB	AMB		
	comp=Z,970nm,3.6s						
CD2				LR	LR		
	comp=E,5µm,9.9s						
CD2				LR	LR		
	comp=Z,4µm,9.8s						
LGTI	**Lohaghat**	**24.90**	**330**	⇓*i*P	**P**	**08 05 51.0**	**+1.2**
PTH	**Pithoragarh**	**25.00**	**330**	*e*P	**P**	**08 05 53.0**	**+2.3**
PTH				*e*		08 13 11.0	
NDI	**New Delhi**	**25.92**	**324**	*e*P	**P**	**08 05 58.5**	**-0.9**
NDI				*e*		08 10 42.0	
AJM	**Ajmer**	**25.98**	**317**	*i* P	**P**	**08 06 01.0**	**+1.0**
DGAR	**Diego Garcia**	**26.51**	**235**	PFAKE		08 06 20.0	+15
DGAR				LR	LR		
	comp=Z,550nm,19.0s,MS4.1						
DDI	**Dehra Dun**	**26.72**	**328**	*e*P	**P**	**08 06 06.6**	**-0.1**
SDNR	**Sundarnagar**	**28.22**	**328**	⇓*i*P	**P**	**08 06 21.0**	**+0.7**
BHK	**Bhakra**	**28.45**	**327**	*e*P	**P**	**08 06 23.4**	**+1.0**
PONG	**Pong**	**29.11**	**327**	*e*P	**P**	**08 06 28.0**	**-0.4**
XAN	**Xi'an**	**29.21**	**26**	P	**P**	**08 06 28.5**	**-0.8**
XAN				S	**S**	**08 11 18.4**	**-1.2**
XAN				AMB	AMB		
	comp=Z,79nm,0.9s,mb5.4						
XAN				LR	LR		
	comp=N,1µm,11.6s,MS5.0						
XAN				LR	LR		
	comp=E,2µm,10.5s,MS5.0						
XAN				LR	LR		
	comp=Z,2µm,15.3s,MS4.9						
LZH	**Lanzhou**	**29.24**	**16**	⇓P	**P**	**08 06 28.9**	**-0.6**
LZH				PP	PP	08 07 24.2	-0.3
LZH				S	**S**	**08 11 20.4**	**+0.3**
LZH				SS	SS	08 12 51.8	+0.7
LZH				AMB	AMB		
	comp=Z,71nm,1.3s,mb5.2						
LZH				AMB	AMB		
	comp=Z,432nm,6.4s						
LZH				LR	LR		
	comp=N,2µm,12.5s						
LZH				LR	LR		
	comp=Z,4µm,16.9s,MS5.1						
LZH	**Lanzhou**	**29.24**	**16**	⇓P	**P**	**08 06 28.9**	**-0.6**
LZH				*SP	sP	08 06 37.4	+0.5
LZH						08 07 24.2	
LZH				S	**S**	**08 11 20.4**	**+0.3**
LZH				SS	SS	08 12 51.8	+0.7
LZH				pmax	pmax		
	comp=Z,71nm,1.3s,mb5.2						
LZH				MLR	MLR		
	comp=Z,4µm,16.9s,MS5.1						
LZH	**Lanzhou**	**29.24**	**16**	⇓P	**P**	**08 06 28.9**	**-0.6**
	comp=Z,71nm,1.3s,mb5.2						
LZH				pP	pP	08 06 34.1	-0.5
LZH				sP	sP	08 06 37.4	+0.5
LZH				PP	PP	08 07 24.2	-0.3
LZH				S	**S**	**08 11 20.4**	**+0.3**
LZH				sS		08 11 30.3	
LZH				SS	SS	08 12 51.8	+0.7
LZH				LR	LR		
	comp=Z,4µm,16.9s,MS5.1						
WHN	**Wuhan**	**29.29**	**38**	⇓P	**P**	**08 06 30.5**	**+0.5**
WHN				PCP	PcP	08 09 35.5	-1.3
WHN				S	**S**	**08 11 25.3**	**+4.4**
WHN				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.5						
WHN				AMB	AMB		
	comp=Z,1µm,3.2s						
WHN				LR	LR		
	comp=Z,4µm,13.3s,MS5.3						
THN	**Thein Dam**	**29.61**	**327**	*e*P	**P**	**08 06 30.8**	**-2.1**
THN				*e*		08 13 13.4	
TATO	**Taipei**	**31.06**	**54**	PFAKE		08 07 00.0	+14
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS4.9						
GTA	**Gaotai**	**31.59**	**8**	⇓P	**P**	**08 06 50.3**	**0.0**
GTA				AP	pP	08 06 55.5	+0.1
GTA				PP	PP	08 07 51.4	-3.5
GTA				PCP	PcP	08 09 42.8	+0.1
GTA				S	**S**	**08 11 55.0**	**-2.1**
GTA				XS		08 12 12.6	
GTA				SCP		08 13 24.2	
GTA				PCS		08 13 27.4	
GTA				SCS	ScS	08 17 19.4	-1.0
GTA				AMB	AMB		
	comp=Z,42nm,1.0s,mb5.2						
GTA				AMB	AMB		
	comp=Z,463nm,5.4s						
GTA				LR	LR		
	comp=N,881nm,19.5s,MS4.6						
GTA				LR	LR		
	comp=E,954nm,21.4s,MS4.6						
GTA				LR	LR		
	comp=Z,809nm,24.5s,MS4.3						
NJ2	**Nanjing**	**33.13**	**41**	*e*P	**P**	**08 07 04.9**	**+1.1**
NJ2				AP	pP	08 07 14.0	+5.1
NJ2				XP	sP	08 07 19.5	+8.4
NJ2				PP	PP	08 08 17.8	+2.9
NJ2				S	**S**	**08 12 22.0**	**+0.8**
NJ2				XS		08 12 38.0	
NJ2				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,400nm,4.2s						
NJ2				LR	LR		
	comp=N,3µm,10.5s,MS5.4						
NJ2				LR	LR		
	comp=E,3µm,10.2s,MS5.4						
NJ2				LR	LR		
	comp=Z,1µm,12.7s,MS4.9						
SSE	**Sheshan**	**34.09**	**44**	P	**P**	**08 07 13.7**	**+1.5**
SSE				PCP	PcP	08 09 48.4	-1.3
SSE				S	**S**	**08 12 41.8**	**+5.7**
SSE				XS		08 12 50.9	
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,192nm,3.8s						
SSE				LR	LR		
	comp=N,1µm,18.2s,MS4.7						
SSE				LR	LR		
	comp=E,640nm,18.2s,MS4.7						
SSE				LR	LR		
	comp=Z,575nm,14.5s,MS4.4						
SSE	**Sheshan**	**34.09**	**44**	P	**P**	**08 07 13.7**	**+1.5**
	comp=Z,25nm,0.7s,mb5.2						
SSE				PcP	PcP	08 09 48.4	-1.3
SSE				S	**S**	**08 12 41.8**	**+5.7**
SSE				sS		08 12 50.9	
SSE				SS	SS	08 15 12.6	+28
SSE				LR	LR		
	comp=Z,580nm,14.5s,MS4.5						
TIA	**Tai'an**	**34.99**	**34**	P	**P**	**08 07 20.1**	**+0.3**
TIA				S	**S**	**08 12 54.4**	**+4.5**
TIA				AMB	AMB		
	comp=Z,66nm,1.3s,mb5.4						
TIA				LR	LR		
	comp=N,1µm,10.0s,MS5.2						
TIA				LR	LR		
	comp=E,3µm,14.0s,MS5.2						
KSH	**Kashi**	**35.24**	**335**	PR		08 07 21.7	
KSH				*e*AP	pP	08 07 26.2	-0.8
KSH				*e*XP	sP	08 07 29.6	+0.4
KSH				*e*PP	PP	08 08 38.3	-2.9
KSH				*e*PCP	PcP	08 09 53.0	+0.1
KSH				*e*S	**S**	**08 12 52.3**	**-1.5**
KSH				*e*SCP		08 13 36.5	
KSH				*e*SS	SS	08 15 05.8	-5.0
KSH				*e*SCS	ScS	08 17 39.0	-0.3
KSH				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.7						
KSH				AMB	AMB		
	comp=Z,410nm,2.6s,mb5.9						
KSH				LR	LR		
	comp=N,2µm,16.3s,MS5.1						
KSH				LR	LR		
	comp=E,2µm,15.9s,MS5.1						
BTO	**Baotou**	**35.34**	**21**	*e*P	**P**	**08 07 22.6**	**-0.2**
BTO				AMB	AMB		
	comp=Z,30nm,1.6s,mb5.0						
WMQ	**Urumqi**	**36.01**	**352**	⇓*i*P	**P**	**08 07 28.8**	**+0.4**
WMQ				XP	sP	08 07 38.0	+2.3
WMQ				PP	PP	08 08 50.8	+0.4
WMQ				S	**S**	**08 13 06.0**	**+0.3**
WMQ				SS	SS	08 15 28.0	-0.4
WMQ				AMB	AMB		
	comp=Z,87nm,1.0s,mb5.6						
WMQ				LR	LR		
	comp=N,742nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=E,2µm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,985nm,20.0s,MS4.6						
HHC	**Hu-ho-hao-te**	**36.13**	**23**	⇓*i*P	**P**	**08 07 30.2**	**+0.8**
HHC				AP	pP	08 07 35.3	+0.8
HHC				XP	sP	08 07 38.9	+2.2
HHC				PP	PP	08 08 58.5	+6.6
HHC				PCP	PcP	08 09 56.8	+1.3
HHC				S	**S**	**08 13 09.5**	**+2.0**
HHC				SCP		08 13 39.2	
HHC				SS	SS	08 15 34.6	+3.6
HHC				SCS	ScS	08 17 41.8	-2.3
HHC				AMB	AMB		
	comp=Z,49nm,1.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,688nm,3.3s						
HHC				LR	LR		
	comp=N,1µm,14.3s,MS5.0						
HHC				LR	LR		
	comp=E,2µm,11.8s,MS5.0						
HHC				LR	LR		
	comp=Z,1µm,19.0s						
BJI	**Beijing**	**37.43**	**28**	P	**P**	**08 07 42.2**	**+1.9**
BJI				AP	pP	08 07 47.5	+2.0
BJI				SCP		08 13 35.6	
BJI				AMB	AMB		
	comp=Z,76nm,0.8s,mb5.6						
BJI				AMB	AMB		
	comp=Z,1µm,4.3s						
BJI				LR	LR		
	comp=N,2µm,15.1s,MS5.0						
BJI				LR	LR		
	comp=E,1µm,18.7s,MS5.0						
BJI				LR	LR		
	comp=Z,685nm,22.6s,MS4.4						
BJI	**Beijing**	**37.43**	**28**	P	**P**	**08 07 42.2**	**+1.9**
BJI				*SS		08 07 50.7	
BJI				pmax	pmax		
	comp=Z,76nm,0.8s,mb5.6						
BJI				MLR	MLR		
	comp=Z,690nm,22.6s,MS4.4						
BJI	**Beijing**	**37.43**	**28**	P	**P**	**08 07 42.2**	**+1.9**
	comp=Z,76nm,0.8s,mb5.6						
BJI				pP	pP	08 07 47.5	+2.0
BJI				sS		08 07 50.7	
BJI				ScP		08 13 35.6	
BJI				S	**S**	**08 13 42.5**	**+15**
BJI				LR	LR		
	comp=Z,690nm,22.6s,MS4.4						
KZA	**Kyzart**	**37.70**	**337**	P	**P**	**08 07 43.4**	**+0.7**
	SNR=24						
UCH	**Uchtor**	**38.12**	**336**	P	**P**	**08 07 46.9**	**+0.8**
	SNR=41						
TKM2	**Tokmak 2**	**38.29**	**338**	P	**P**	**08 07 47.8**	**+0.2**
	SNR=17						
KBK	**Karagaybulak**	**38.31**	**337**	P	**P**	**08 07 48.5**	**+0.8**
	SNR=8.7						
AML	**Almayashu**	**38.37**	**335**	P	**P**	**08 07 49.2**	**+0.9**
	SNR=106						
AAK	**Ala-Archa**	**38.47**	**337**	P	**P**	**08 07 49.7**	**+0.6**
	SNR=69						
AAK	**Ala-Archa**	**38.47**	**337**	*d i*P	**P**	**08 07 48.5**	**-0.6**
AAK				pmax	pmax		
	comp=Z,138nm,1.3s,mb5.5						
AAK	**Ala-Archa**	**38.47**	**337**	*e*P	**P**	**08 07 48.3**	**-0.8**
	comp=Z,189nm,1.3s,mb5.7						
AAK				LR	LR		
	comp=Z,836nm,20.0s,MS4.5						
MBWA	**Marble Bar**	**38.47**	**140**	*e*P	pP	08 07 56.5	+2.1
MBWA				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
FRU	**Bishkek**	**38.59**	**337**	*e*P	**P**	**08 07 51.0**	**+0.9**
FRU				*e*	pP	08 07 56.0	+0.7
FRU				pmax	pmax		
	comp=Z,200nm,1.8s,mb5.5						
FRU				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.2						
CHMS	**Chumysh**	**38.68**	**337**	P	**P**	**08 07 50.9**	**0.0**
	SNR=38						
EKS2	**Erkin-Say**	**38.78**	**336**	P	**P**	**08 07 52.1**	**+0.4**
	SNR=32						
USP	**Ospenovka**	**39.01**	**337**	P	**P**	**08 07 53.6**	**+0.1**
	SNR=61						
DL2	**Dalian**	**39.41**	**35**	P	**P**	**08 07 58.7**	**+1.7**
DL2				S	**S**	**08 14 03.6**	**+6.1**
DL2				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.5						
DL2				AMB	AMB		
	comp=Z,200nm,2.6s,mb5.4						
DL2				LR	LR		
	comp=N,370nm,12.0s,MS4.7						
DL2				LR	LR		
	comp=E,570nm,12.0s,MS4.7						
DL2				LR	LR		
	comp=Z,570nm,10.8s,MS4.7						
MKAR	**Makanchi Array**	**39.85**	**347**	*i* P	**P**	**08 08 00.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,54nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.60**	**130**	*e*P	**P**	**08 08 04.1**	**-2.9**
	comp=Z,24nm,1.1s,mb4.7						
FITZ				*e*PCP	PcP	08 10 07.5	-2.1
ULN	**Ulaanbaatar**	**41.12**	**13**	*d i*P	**P**	**08 08 10.9**	**-0.1**
ULN	**Ulaanbaatar**	**41.12**	**13**	*e*P	**P**	**08 08 10.0**	**-0.9**
	comp=Z,22nm,0.8s,mb4.8						
ULN				LR	LR		
	comp=Z,990nm,22.0s,MS4.6						
INCN	**Inchon**	**41.51**	**40**	*e*P	**P**	**08 08 14.7**	**+0.4**
	comp=Z,89nm,1.3s,mb5.2						
INCN				LR	LR		
	comp=Z,692nm,20.0s,MS4.5						
KS15	**Wonju Array Si**	**42.29**	**41**	*e*P	**P**	**08 08 20.5**	**-0.2**
SNY	**Shenyang**	**42.51**	**33**	⇓P	**P**	**08 08 23.1**	**+0.7**
SNY				AP	pP	08 08 28.3	+0.7
SNY				S	**S**	**08 14 39.9**	**-3.6**
SNY				AMB	AMB		
	comp=Z,60nm,2.1s,mb5.0						
SNY				AMB	AMB		
	comp=Z,690nm,3.9s						
SNY				LR	LR		
	comp=N,480nm,12.2s,MS4.9						
SNY				LR	LR		
	comp=E,790nm,13.3s,MS4.9						
SNY				LR	LR		
	comp=Z,710nm,13.7s,MS4.7						
ZAK	**Zakamensk**	**42.83**	**9**	⇑*i*P	**P**	**08 08 24.5**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
MOY	**Mondy**	**43.80**	**6**	*e*P	**P**	**08 08 33.1**	**+0.3**
MOY				pmax	pmax		
	comp=Z,37nm,2.1s,mb4.8						
TLY	**Talaya**	**44.15**	**9**	P	**P**	**08 08 36.8**	**+1.2**
	comp=Z,129nm,0.8s,mb5.7,SNR=15						
TLY	**Talaya**	**44.15**	**9**	⇓*i*P	**P**	**08 08 36.2**	**+0.6**
TLY				*e*		08 10 20.0	
TLY				*e*SS	SS	08 18 23.7	+6.6
TLY				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.0						
TLY				MLR	MLR		
	comp=Z,469nm,15.0s,MS4.5						
TLY	**Talaya**	**44.15**	**9**	*e*P	**P**	**08 08 35.9**	**+0.3**
	comp=Z,26nm,0.9s,mb5.0						
TLY				LR	LR		
	comp=Z,171nm,19.0s,MS4.0						
KURK	**Kurchatov**	**44.37**	**346**	*d i*P	**P**	**08 08 36.8**	**-0.7**
KURK				pmax	pmax		
	comp=Z,159nm,1.3s,mb5.6						
KURK	**Kurchatov**	**44.37**	**346**	*e*P	**P**	**08 08 36.6**	**-0.9**
	comp=Z,328nm,1.3s,mb5.9						
KURK				LR	LR		
	comp=Z,351nm,20.0s,MS4.3						
IRK	**Irkutsk**	**44.79**	**9**	*e*P	**P**	**08 08 40.5**	**-0.3**
IRK				*e*		08 10 20.8	
IRK				pmax	pmax		
	comp=Z,46nm,2.2s,mb4.9						
CN2	**Changchun**	**44.86**	**32**	*e*P	**P**	**08 08 42.2**	**+0.7**
CN2				*e*AP	pP	08 08 47.0	+0.3
CN2				PCP	PcP	08 10 22.6	-1.0
CN2				PP	PP	08 10 28.5	+1.1
CN2				*e*S	**S**	**08 15 19.3**	**+1.6**
CN2				SS	SS	08 18 34.0	+3.4
CN2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.4						
CN2				AMB	AMB		
	comp=Z,730nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,14.0s,MS5.1						
CN2				LR	LR		
	comp=E,1µm,14.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1µm,16.0s,MS4.9						
MUN	**Mundaring**	**45.11**	**153**	*e*P	**P**	**08 08 43.1**	**-0.6**
	comp=Z,29nm,0.7s,mb5.2						
MUN	**Mundaring**	**45.11**	**153**	*e*P	**P**	**08 08 43.1**	**-0.6**
MUN				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.2						
KLBR	**Kellerberrin**	**45.50**	**151**	*e*P	**P**	**08 08 46.0**	**-0.8**
	comp=Z,526nm,0.9s,mb6.5						
KLBR				*e*PCP	PcP	08 10 23.6	-2.4
ZAL	**Zalesovo**	**46.31**	**352**	*i* P	**P**	**08 08 52.6**	**-0.2**
ZAL				pmax	pmax		
	comp=Z,35nm,0.7s						
NWAO	**Narrogin (SRO)**	**46.38**	**153**	*e*P	**P**	**08 08 52.2**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,80nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,2µm,21.0s						
NWAO	**Narrogin (SRO)**	**46.38**	**153**	*e*P	**P**	**08 08 52.2**	**-1.4**
	comp=Z,80nm,1.1s,mb5.6						
NWAO				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
NVS	**Novosibirsk**	**47.41**	**351**	⇓*i*P	**P**	**08 09 00.1**	**-1.4**
NVS				*e*S	**S**	**08 15 49.2**	**-4.7**
NVS				pmax	pmax		
	comp=Z,133nm,1.0s,mb5.8						
NVS				pmax	pmax		
	comp=N,175nm,1.7s						
NVS				smax			
	comp=N,35nm,2.2s						
NVS				smax			
	comp=E,61nm,2.2s						
MDJ	**Mudanjiang**	**47.65**	**34**	P	**P**	**08 09 04.5**	**+1.0**
MDJ				PP	PP	08 10 59.9	+5.4
MDJ				S	**S**	**08 16 00.4**	**+3.0**
MDJ				AMB	AMB		
	comp=Z,76nm,1.6s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,237nm,5.3s						
MDJ				LR	LR		
	comp=N,461nm,13.6s,MS4.9						
MDJ				LR	LR		
	comp=E,879nm,16.5s,MS4.9						
MDJ				LR	LR		
	comp=Z,843nm,16.5s,MS4.8						
BDHA	**Al Bayda'**	**47.91**	**281**	⇓*e*P	**P**	**08 09 08.6**	**+2.7**
LBOS		**48.22**	**281**	⇓*e*P	**P**	**08 09 11.1**	**+2.7**
LBOS				AMb	AMB	08 09 12.0	
	comp=Z,86nm,0.8s,mb5.8						
WRA	**Warramunga Arr**	**48.44**	**126**	*i* P	**P**	**08 09 07.4**	**-2.6**
WRA				pmax	pmax		
	comp=Z,13nm,0.7s						
WRAB	**Tennant Creek**	**48.44**	**126**	*e*P	**P**	**08 09 07.5**	**-2.5**
	comp=Z,33nm,0.8s,mb5.4						
WRAB				*e*	pP	08 09 12.9	-2.4
WRAB				LR	LR		
	comp=Z,265nm,20.0s,MS4.2						
WB2	**Warramunga Arr**	**48.45**	**126**	*e*P	**P**	**08 09 07.3**	**-2.8**
BVA0	**Borovoye Array**	**48.75**	**341**	*i* P	**P**	**08 09 10.9**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
MAJO	**Matsushiro**	**49.05**	**48**	*e*P	**P**	**08 09 15.7**	**+1.2**
MAJO				pmax	pmax		
	comp=Z,243nm,1.9s,mb5.9						
MAJO				MLR	MLR		
	comp=Z,606nm,20.0s,MS4.6						
MAJO	**Matsushiro**	**49.05**	**48**	*e*P	**P**	**08 09 15.7**	**+1.2**
	comp=Z,243nm,1.9s,mb5.9						
MAJO				LR	LR		
	comp=Z,606nm,20.0s,MS4.6						
MAT	**Matsushiro**	**49.05**	**48**	*e*P	**P**	**08 09 14.0**	**-0.5**
MAT				pmax	pmax		
	comp=Z,107nm,1.6s,mb5.6						
MAT	**Matsushiro**	**49.05**	**48**	P	**P**	**08 09 14.3**	**-0.2**
MAT				S	**S**	**08 16 22.4**	**+5.2**
DHBB	**Dhamar BB**	**49.07**	**282**	⇓*e*P	**P**	**08 09 17.6**	**+2.8**
CHKZ	**Chkalovo**	**49.24**	**342**	P	**P**	**08 09 14.9**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,229nm,1.2s,mb6.1						
TRBA	**At Turbah**	**49.31**	**280**	⇓*e*P	**P**	**08 09 19.3**	**+2.6**
GUMO	**Guam**	**50.10**	**79**	PFAKE		08 09 30.0	+7.2
GUMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
ASPA	**Alice Springs**	**50.10**	**130**	*e*P	**P**	**08 09 20.0**	**-2.7**
ASPA				*e*PCP	PcP	08 10 41.1	-1.4
FORT	**Forrest**	**50.55**	**141**	*e*P	**P**	**08 09 23.7**	**-2.4**
	comp=Z,81nm,0.8s,mb5.7						
KLR	**Kul'dur**	**51.71**	**31**	*e*P	**P**	**08 09 31.8**	**-2.8**
KLR				*e*		08 11 33.5	
KLR				*e*S	**S**	**08 16 51.5**	**-2.4**
KLR				pmax	pmax		
	comp=N,60nm,2.2s						
KLR				pmax	pmax		
	comp=E,80nm,2.2s						
KLR				pmax	pmax		
	comp=Z,110nm,2.2s,mb5.4						
KLR				MLR	MLR		
	comp=N,1µm,14.0s,MS5.3						
KLR				MLR	MLR		
	comp=E,2µm,14.0s,MS5.3						
KLR				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.2						
BOD	**Bodaibo**	**51.94**	**13**	⇓*i*P	**P**	**08 09 36.2**	**0.0**
BOD				pmax	pmax		
	comp=Z,96nm,1.7s,mb5.5						
HKR	**Hakkari**	**54.05**	**311**	P	**P**	**08 09 51.2**	**-0.9**
GNI	**Garni**	**54.24**	**314**	P	**P**	**08 09 52.7**	**-0.8**
GNI	**Garni**	**54.24**	**314**	*e*P	**P**	**08 09 53.0**	**-0.5**
GNI				*e*	pP	08 09 58.7	0.0
GNI				pmax	pmax		
	comp=Z,150nm,1.2s						
CLNS	**Chul'man**	**54.24**	**20**	*e*P	**P**	**08 09 53.3**	**+0.1**
CLNS				*e*		08 10 55.4	
CLNS				*e*S	**S**	**08 17 32.9**	**+4.8**
CLNS				*e*SS	SS	08 21 06.7	-3.1
CLNS				*e*SSS	SSS	08 23 08.3	+2.8
CLNS				pmax	pmax		
	comp=N,57nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,98nm,1.0s,mb5.7						
CLNS				pmax	pmax		
	comp=E,48nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CLNS				pmax	pmax		
	comp=N,12nm,0.9s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.7s						
CLNS				smax			
	comp=E,55nm,13.2s						
CLNS				smax			
	comp=Z,66nm,10.6s						
CLNS				smax			
	comp=N,255nm,14.2s						
CLNS				MLR	MLR		
	comp=Z,900nm,14.0s,MS5.0						
CLNS				MLR	MLR		
	comp=N,2µm,17.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,100nm,12.0s,MS5.2						
TI2	**Plekhanov**	**54.84**	**316**	⇓*i*P	**P**	**08 09 56.8**	**-1.1**
TI2				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.8						
SVE	**Sverdlovsk**	**55.17**	**338**	⇓*e*P	**P**	**08 09 59.5**	**-0.6**
SVE				*e*		08 11 05.0	
SVE				*e*S	**S**	**08 17 32.0**	**-8.5**
SVE				MLR	MLR		
	comp=N,2µm,22.0s,MS5.1						
SVE				MLR	MLR		

	comp=E,1µm,22.0s,MS5.1						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.2						
KARS	Kars	55.58	314	*e*P	P	08 10 05.7	+2.4
PMG	Port Moresby	55.65	107	*e*P	P	08 10 03.9	-0.2
PMG				pmax	pmax		
	comp=Z,49nm,0.8s						
PMG	Port Moresby	55.65	107	*e*P	P	08 10 03.9	-0.3
	comp=Z,49nm,0.8s,mb5.6						
ARU	Arti	55.66	337	P	P	08 10 02.7	-0.9
	comp=Z,664nm,1.3s,mb6.5,SNR=51						
ARU	Arti	55.66	337⇑	*i*P	P	08 09 54.6	-9.0
ARU				*e*S	S	08 17 34.3	-13
ARU				pmax	pmax		
	comp=Z,159nm,1.2s,mb5.9						
ARU				MLR	MLR		
	comp=N,1µm,20.0s,MS5.2						
ARU				MLR	MLR		
	comp=E,2µm,20.0s,MS5.2						
ARU				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
ARU	Arti	55.66	337	*e*P	P	08 09 54.5	-9.1
	comp=Z,246nm,1.4s,mb6.0						
BTMT	Batman	55.93	311	*e*P	P	08 10 05.1	-0.7
ERZM	Erzurum	56.58	313	*i* P	P	08 10 10.4	-0.1
EZM	Erzurum	56.58	313	*e*P	P	08 10 09.8	-0.7
YSS	Yuzh-Sakhalins	56.63	38	*i* P	P	08 10 10.3	-0.5
YSS				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
YSS	Yuzh-Sakhalins	56.63	38	*e*P	P	08 10 10.9	+0.2
	comp=Z,163nm,1.4s,mb5.9						
BINT	Bingol	56.89	311	*e*P	P	08 10 11.9	-0.9
KIV	Kislovodsk	57.11	318	P	P	08 10 13.1	-1.1
	comp=Z,735nm,0.9s,mb6.7,SNR=19						
KIV	Kislovodsk	57.11	318	*e*P	P	08 10 13.2	-1.0
KIV				*e**PP	pP	08 10 19.5	0.0
KIV				pmax	pmax		
	comp=Z,118nm,0.9s,mb5.9						
KIV				MLR	MLR		
	comp=Z,193nm,22.0s,MS4.2						
KIV	Kislovodsk	57.11	318	*e*P	P	08 10 13.2	-1.0
	comp=Z,118nm,0.9s,mb5.9						
KIV				*e*pP	pP	08 10 19.5	0.0
KIV				LR	LR		
	comp=Z,193nm,22.0s,MS4.2						
GOF	Gofitskoye	57.32	319⇑	*i*P	P	08 10 14.5	-1.2
GOF				pmax	pmax		
	comp=Z,120nm,1.2s,mb5.8						
KMBO	Kilima Mbogo	57.40	263	*i* P	P	08 10 19.1	+2.5
KMBO				pmax	pmax		
	comp=Z,83nm,0.8s						
KMBO	Kilima Mbogo	57.40	263	*e*P	P	08 10 18.6	+2.0
	comp=Z,96nm,0.8s,mb5.9						
KMBO				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
EZC	Erzincan	57.66	312	*e*P	P	08 10 20.0	+1.9
PTK	Pertek	57.71	311	*e*P	P	08 10 16.4	-2.1
URFA	Urfa	57.73	309	*e*P	P	08 10 17.1	-1.6
ELZG	Elazig	57.90	311	*i* P	P	08 10 18.7	-1.1
GUMT	Gumushane	58.12	313	P	P	08 10 20.1	-1.2
MALT	Malatya	58.27	310	P	P	08 10 21.2	-1.2
MALT	Malatya	58.27	310	P	P	08 10 21.6	-0.8
MALT				pmax	pmax		
	comp=Z,78nm,1.1s,mb5.7						
MYA	Malataya	58.28	310	*e*P	P	08 10 23.1	+0.6
CTA	Charters Tower	58.47	119	*e*P	P	08 10 22.1	-1.9
	comp=Z,7.8nm,1.1s,mb4.7						
CTA				*e*PCP	PcP	08 11 13.9	-0.5
CTA	Charters Tower	58.47	119	*e*P	P	08 10 22.1	-1.9
CTA				*e*		08 11 13.9	
CTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CTAO	Charters Tower	58.47	119	PFAKE		08 10 40.0	+16
CTAO				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
SOKR	Solikamsk	58.56	339*d*	*i*P	P	08 10 20.5	-3.7
SOKR				pmax	pmax		
	comp=Z,180nm,0.9s,mb6.1						
SOKR				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.4						
GZT	Gaziantep	58.68	309	*i* P	P	08 10 24.4	-0.9
GAZ	Gaziantep	58.90	309	*e*P	P	08 10 26.8	-0.1
SOC	Sochi	58.98	316	*e*P	P	08 10 24.0	-3.3
SOC				*e*		08 11 17.2	
SOC				*e*		08 12 32.8	
SOC				*e*S	S	08 18 28.1	-3.0
SOC				*e*		08 20 06.4	
SOC				pmax	pmax		
	comp=Z,75nm,0.8s,mb5.8						
SOC				pmax	pmax		
	comp=N,10.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,48nm,1.0s						
SOC				MLR	MLR		
	comp=Z,468nm,17.0s,MS4.7						
SOC				MLR	MLR		
	comp=N,474nm,16.0s,MS4.8						
SOC				MLR	MLR		
	comp=E,438nm,17.0s,MS4.8						
EIL	Elat	59.26	300	*e*P	P	08 10 29.3	-0.1
	comp=E,128nm,1.2s,mb5.8						
EIL				*e*pP	pP	08 10 34.9	0.0
COBT	Iskenderun	59.49	308	*i* P	P	08 10 30.4	-0.5
YAK	Yakutsk	59.79	19	*e*P	P	08 10 31.0	-1.7
YAK				*e*		08 11 14.6	
YAK				*e*		08 12 44.9	
YAK				*e*PPP	PPP	08 14 09.8	-2.5
YAK				*e*S	S	08 18 39.6	-1.8
YAK				*e*		08 20 12.1	
YAK				*e*SS	SS	08 22 41.0	+2.2
YAK				pmax	pmax		
	comp=Z,86nm,0.9s,mb5.8						
YAK				pmax	pmax		
	comp=N,28nm,1.1s						
YAK				pmax	pmax		
	comp=E,22nm,1.1s						
YAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax			
	comp=N,33nm,1.4s						
YAK				smax			
	comp=E,21nm,1.7s						
YAK	Yakutsk	59.79	19	*e*P	P	08 10 31.2	-1.4
	comp=E,166nm,0.8s,mb6.1						
YAK				LR	LR		
	comp=Z,596nm,21.0s,MS4.7						
CEYT	Ceyhan	60.00	308	*e*P	P	08 10 31.0	-3.4
STKA	Stephens Creek	60.30	134	*e*P	P	08 10 34.0	-2.6
	comp=Z,15nm,0.9s,mb5.0						
ANN	Anapa	60.93	317	*e*P	P	08 10 43.2	+2.6
ANN				pmax	pmax		
	comp=Z,128nm,1.2s,mb5.9						
AVNT	Avonos	61.10	310	*i* P	P	08 10 40.6	-1.3
NIG	Nigde	61.13	309	*e*P	P	08 10 41.9	-0.2
CSS	Prodhromos	61.50	305	*e*P	P	08 10 43.5	-1.1
	comp=Z,80nm,1.3s,mb5.7						
BOYT	Boyabat	61.72	313	*i* P	P	08 10 45.0	-1.1
KAMT	Kaman	62.10	310	*e*P	P	08 10 46.7	-2.0
VOR	Voronezh	62.36	325⇓	*i*P	P	08 10 46.5	-3.7
VOR				pmax	pmax		
	comp=Z,200nm,1.5s,mb6.0						
CANT	Cankiri	62.46	312	*e*P	P	08 10 49.9	-1.1
HDMB	Hadim	62.54	307	*e*P	P	08 10 49.5	-2.1
ELDT	Eldivan	62.57	311	*i* P	P	08 10 50.2	-1.5
KONT	Konya--Tatoy	62.83	308	*e*P	P	08 10 50.2	-3.3
BALT	Daday	62.85	313	*i* P	P	08 10 48.5	-5.0
LOD	Lodumlu	62.93	311	*e*P	P	08 10 54.2	+0.1
SIM	Simferopol’	63.22	316⇓	*i*P	P	08 10 55.2	-0.8
SIM				S	S	08 19 39.0	+14
SIM				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.8						
SIM				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.8						
SIM	Simferopol’	63.22	316	*i* Pr		08 10 55.0	
SAFT	Safranbolu	63.29	312	*e*P	P	08 10 55.6	-0.9
KIZT	Kizilcal	63.39	309	*e*P	P	08 10 55.0	-2.2
MBAR	Mbarara	63.73	265	*e*P	P	08 11 00.3	+0.4
MBAR				pmax	pmax		
	comp=Z,100nm,1.3s,mb5.7						
MBAR				MLR	MLR		
	comp=Z,397nm,22.0s,MS4.5						
MBAR	Mbarara	63.73	265	*e*P	P	08 11 00.3	+0.4
	comp=Z,100nm,1.3s,mb5.7						
MBAR				LR	LR		
	comp=Z,397nm,22.0s,MS4.5						
MDU	Mudurnu	64.21	311	*e*P	P	08 10 58.8	-3.8
ISP	Isparta	64.25	308	*e*P	P	08 11 00.8	-2.1
ELL	Elmali	64.54	307	P	P	08 11 03.9	-0.9
MOS	Moscow	64.86	329κ	*i*P	P	08 11 05.4	-1.1
MOS				*e*	pP	08 11 10.5	-1.4
MOS				*e*		08 11 41.0	
MOS				*e*		08 13 23.1	
MOS				*e*S	S	08 19 42.3	-2.9
MOS				pmax	pmax		
	comp=Z,429nm,1.5s,mb6.3						
MOS				pmax	pmax		
	comp=Z,700nm,2.0s,mb6.3						
MOS				MLR	MLR		
	comp=N,1µm,20.5s,MS5.2						
MOS				MLR	MLR		
	comp=Z,2µm,20.5s,MS5.3						
MOS				MLR	MLR		
	comp=E,1µm,21.2s,MS5.2						
OBN	Obninsk	65.16	328*d*	*i*P	P	08 11 06.9	-1.5
OBN				*e*		08 13 28.8	
OBN				*i* S	S	08 19 53.1	+4.2
OBN				pmax	pmax		
	comp=Z,288nm,1.5s,mb6.1						
OBN				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
OBN	Obninsk	65.16	328	*e*P	P	08 11 07.0	-1.4
	comp=Z,520nm,1.4s,mb6.4						
OBN				*e*pP	pP	08 11 12.2	-1.6
OBN				LR	LR		
	comp=Z,362nm,20.0s,MS4.6						
ULDT	Uludag	65.71	310	*i* P	P	08 11 10.5	-1.8
TOO	Toolangi	66.06	137	*e*P	P	08 11 18.2	+3.6
	comp=Z,1.1nm,1.1s						
TOO	Toolangi	66.06	137	*e*P	P	08 11 18.2	+3.6
TOO				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MA2	Magadan	66.59	28*d*	*i*P	P	08 11 16.8	-0.7
MA2				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.6						
MA2				pmax	pmax		
	comp=E,40nm,1.3s						
MA2				pmax	pmax		
	comp=N,10.0nm,1.1s						
MA2	Magadan	66.59	28	*e*P	P	08 11 17.1	-0.4
	comp=N,105nm,1.1s,mb5.8						
TLCR		66.92	316⇑	*i*P	P	08 11 18.9	-1.0
TIXI	Tiksi	67.02	11⇓	*i*P	P	08 11 18.3	-1.8
TIXI				*e*	pP	08 11 24.4	-1.1
TIXI				*e*S	S	08 20 14.1	+2.8
TIXI				*e*SS	SS	08 24 35.2	+3.2
TIXI				pmax	pmax		
	comp=Z,144nm,0.8s,mb6.1						
TIXI				pmax	pmax		
	comp=N,21nm,0.7s						
TIXI				pmax	pmax		
	comp=E,16nm,0.7s						
TIXI				pmax	pmax		
	comp=Z,202nm,0.9s,mb6.2						
TIXI	Tiksi	67.02	11	*i* Pr		08 11 18.6	
TIXI				LR	LR		
	comp=Z,437nm,22.0s,MS4.6						
TIRR	Tirgusor	67.05	315⇑	*i*P	P	08 11 19.6	-1.2
KIS	Kishinev	67.31	318	*e*P	P	08 11 20.0	-2.4
KIS				*i*	pP	08 11 25.0	-2.8
KIS				*i*		08 11 49.0	
KIS				pmax	pmax		
	comp=Z,190nm,1.0s,mb6.1						
CFR	Carcaliu	67.39	316⇑	*i*P	P	08 11 21.9	-1.0
HARR	Harsova	67.44	315⇓	*i*P	P	08 11 22.1	-1.1
PRD	Provadia	67.54	313	*i* P	P	08 11 23.5	-0.3
CNB	Canberra Magne	67.63	133	*e*P	P	08 11 23.2	-1.4
	comp=Z,170nm,1.0s,mb6.0						
JMB	Yambol	68.00	312	*e*P	P	08 11 27.0	+0.2
ALN	Alexandroupoli	68.16	311	*e*P	P	08 11 27.0	-0.8
VRI	Vrincioaia	68.50	316⇑	*i*P	P	08 11 29.9	+0.1
DIM	Dimitrovgrad	68.71	312	*e*P	P	08 11 31.0	-0.2
KDZ	Kurdzhali	68.74	311	*i* P	P	08 11 31.0	-0.3
SEY	Seymchan	68.74	25	*e*P	P	08 11 31.9	+0.9
SEY						08 11 55.3	
SEY				*e*		08 14 10.9	
SEY				*e*S	S	08 20 34.2	+2.2
SEY				*e*		08 21 00.5	
SEY						08 21 20.9	
SEY				pmax	pmax		
	comp=N,30nm,1.1s						
SEY				pmax	pmax		
	comp=E,100nm,1.1s						
SEY				pmax	pmax		
	comp=Z,210nm,1.1s,mb6.0						
SEY				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.2						
SEY				MLR	MLR		
	comp=N,2µm,22.0s						
SEY				MLR	MLR		
	comp=E,1µm,16.0s						
MLR	Muntele Rosu	68.97	316⇑	*i*P	P	08 11 32.7	0.0
PVL	Pavlikeni	69.03	313	*i* P	P	08 11 34.0	+0.9
RZN	Rozhen	69.26	311	*i* P	P	08 11 34.0	-0.6
LSZ	Lusaka	69.30	250	*e*P	P	08 11 36.2	+1.0
LSZ				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.2						
LSZ				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
LSZ	Lusaka	69.30	250	*e*P	P	08 11 36.2	+1.1
	comp=Z,27nm,0.8s,mb5.2						
LSZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
PLD	Plovdiv	69.33	312	*e*P	P	08 11 34.0	-1.0
MNK	Minsk	69.73	325⇓	*i*P	P	08 11 32.0	-5.2
MNK				pmax	pmax		
	comp=Z,1µm,1.0s						
PGB	Panagyurishte	69.78	312	*i* P	P	08 11 37.0	-0.7
PAIG	Paliouri	69.83	309	*e*P	P	08 11 36.9	-1.1
BURAR	Bucovina Array	69.84	318	P	P	08 11 37.9	-0.1
BURAR	Bucovina Array	69.84	318⇑	*i*P	P	08 11 37.7	-0.3
MMB	Musomiste	69.98	311	*i* P	P	08 11 38.0	-1.0
SRS	Serrai	70.03	311	*e*P	P	08 11 37.7	-1.5
XOR	Xorichti	70.14	309	*e*P	P	08 11 38.7	-1.2
SOH	Sokhos	70.17	310	*e*P	P	08 11 39.0	-1.1
THE	Thessaloniki	70.45	310	*e*P	P	08 11 40.0	-1.8
VTS	Vitosha	70.49	312	P	P	08 11 41.0	-1.0
VTS	Vitosha	70.49	312	*i* P	P	08 11 41.0	-1.0
KKB	Krupnik	70.50	311	*i* P	P	08 11 41.0	-1.1
KNT	Kendrikon	70.55	311	*e*P	P	08 11 41.1	-1.3
JOF	Joensuu	70.62	334	*e*p	P	08 11 40.8	-1.7
	comp=Z,57nm,0.6s,mb5.7						
LIT	Litokhoron	70.75	310	*e*P	P	08 11 42.0	-1.7
AGG	Agios Georgios	70.77	308	*e*P	P	08 11 41.3	-2.5
GRG	Griva	70.91	310	*e*P	P	08 11 43.0	-1.6
LVZ	Lovozero	71.33	340	P	P	08 11 45.5	-1.2
	comp=Z,606nm,0.7s,mb6.6,SNR=27						
LVZ	Lovozero	71.33	340	*e*P	P	08 11 46.1	-0.6
LVZ				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.5						
LVZ				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.5						
LVZ				MLR	MLR		
	comp=N,789nm,17.0s,MS5.4						
LVZ				MLR	MLR		
	comp=E,2µm,20.0s,MS5.4						
BOLS	Boljevac	71.54	313⇓	*i*P	P	08 11 47.4	-1.0
APA	Apatity	71.61	339⇑	*i*P	P	08 11 47.6	-0.8
APA				*i*	pP	08 11 52.9	-0.9
APA				*i*		08 12 06.0	
APA				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
APA				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
FNA	Florina	71.66	310	*e*P	P	08 11 47.2	-1.9
SKO	Skopje	71.73	311	*i* P	P	08 11 47.7	-1.8
KWP	Kalwaria	71.82	320	*e*P	P	08 11 49.5	-0.4
KOLS	Kolonicke sedl	72.00	319	*i* P	P	08 11 50.5	-0.5
KOLS				*e*pP	pP	08 11 54.8	-1.6
SVIS	Svilajnac	72.12	314⇑	*i*P	P	08 11 49.7	-2.1
SUW	Suwalki	72.29	324	*e*P	P	08 11 51.8	-0.8
IGT	Igoumenitsa	72.36	309	*e*P	P	08 11 51.5	-1.8
GRUS	Gruza	72.44	313⇑	*i*P	P	08 11 52.6	-1.1
CRVS	Cervenica-Dubn	72.52	319	*e*P	P	08 11 54.3	+0.2
KAF	Kangasniemi	72.56	333	*e*p	P	08 11 51.8	-2.3
	comp=Z,46nm,0.6s,mb5.6,baz=104,slow=5.6						
KAF	Kangasniemi	72.56	333	*e*P	P	08 11 51.8	-2.3
KAF				pmax	pmax		
	comp=Z,46nm,0.6s,mb5.6						
DIVS	Divcibare	72.98	314⇑	*i*P	P	08 11 55.7	-1.2
KECS	Kecovo	73.11	318	*e*P	P	08 11 56.5	-1.1
KECS				*e*pP	pP	08 12 01.9	-1.1
WAR	Warsaw	73.27	322	*e*P	P	08 11 58.0	-0.4
WAR	Warsaw	73.27	322	*e*P	P	08 11 58.0	-0.5
NIE	Niedzica	73.33	319⇓	*e*P	P	08 11 57.5	-1.4
PSZ	Piszkesteto	73.44	318	P	P	08 11 59.1	-0.4
PSZ	Piszkesteto	73.44	318	*e*P	P	08 11 58.1	-1.4
	comp=Z,68nm,1.1s,mb5.5						
PSZ	Piszkesteto	73.44	318⇓	*e*P	P	08 11 58.8	-0.7
OJC	Ojcow	73.76	320⇓	*i*P	P	08 12 00.9	-0.4
OJC				*e*pP	pP	08 12 06.1	-0.7
VYHS	Vyhne	74.20	318	*e*P	P	08 12 03.3	-0.6
VYHS				*e*pP	pP	08 12 08.4	-0.9
LBTB	Lobatse	74.31	241	*e*P	P	08 12 06.1	+1.1
LBTB				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.5						
LBTB				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
LBTB	Lobatse	74.31	241	*e*P	P	08 12 06.1	+1.1
	comp=Z,46nm,0.8s,mb5.5						
LBTB				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
SRO	Srobarova	74.48	317	*e*P	P	08 12 05.4	-0.2
SRO				*e*pP	pP	08 12 10.4	-0.6
KOLL	Kolacno	74.50	318	*e*P	P	08 12 05.5	-0.1
KOLL				*e*pP	pP	08 12 10.4	-0.6
SRO1	Iza	74.53	317	*e*P	P	08 12 06.2	+0.3
SRO1				*e*pP	pP	08 12 11.2	-0.1
KEV	Kevo	74.60	341	*e*p	P	08 12 04.1	-1.7
	comp=Z,50nm,0.7s,mb5.5						
KEV	Kevo	74.60	341	*e*P	P	08 12 04.1	-1.7
KEV				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.5						
OKC	Ostrava-Krasne	74.78	319⇓	*i*P	P	08 12 07.2	0.0
OKC				*e*pP	pP	08 12 12.1	-0.6
ARE0	ARCESS Array S	75.03	340	*e*P	P	08 12 08.4	+0.1
TIP	Timpagrande	75.11	308	*e*P	P	08 12 08.9	-0.5
SMOL	Smolenice	75.13	318	*e*P	P	08 12 09.2	-0.1
SMOL				*e*pP	pP	08 12 15.0	+0.3
CASY	Casey	75.16	173	PFAKE		08 12 20.0	+11
CASY				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
MORC	Moravsky Berou	75.17	319	*e*P	P	08 12 08.6	-0.9
MORC				*e**PP	pP	08 12 14.9	0.0
MORC				pmax	pmax		
	comp=Z,175nm,1.2s,mb5.9						
MORC	Moravsky Berou	75.17	319	*e*P	P	08 12 08.6	-0.8
	comp=Z,175nm,1.2s,mb5.9						
MORC				*e*pP	pP	08 12 14.9	0.0
ZST	Bratislava	75.33	318	*i* P	P	08 12 10.2	-0.2
ZST				*e*pP	pP	08 12 15.3	-0.6
GRI	Girifalco	75.36	308	*e*P	P	08 12 11.1	+0.3
SOI	Samo	75.64	307	*e*P	P	08 12 12.2	-0.2
KTK1	Kautokeino	75.66	339	*e*P	P	08 12 11.6	-0.3
	comp=Z,171nm,1.6s,mb5.7						
KTK1	Kautokeino	75.66	339	*e*P	P	08 12 11.6	-0.3
KTK1				*e*pP	pP	08 12 17.6	+0.2
KTK1				AMb	AMB	08 12 19.1	
	comp=Z,171nm,1.6s,mb5.7						
BOSA	Boshof	75.66	238	P	P	08 12 13.6	+0.8
BOSA				P		08 12 13.7	
BOSA				pP	pP	08 12 18.9	+0.7
BOSA	Boshof	75.66	238	*e*P	P	08 12 13.5	+0.8
BOSA				*e**PP	pP	08 12 19.0	+0.8
BOSA				pmax	pmax		
	comp=Z,84nm,1.1s,mb5.6						
BOSA				MLR	MLR		
	comp=Z,615nm,22.0s,MS4.9						
BOSA	Boshof	75.66	238	*e*P	P	08 12 13.5	+0.8
	comp=Z,84nm,1.1s,mb5.6						
BOSA				*e*pP	pP	08 12 19.0	+0.8
BOSA				LR	LR		
	comp=Z,615nm,22.0s,MS4.9						
GKP	Gorka Klasztor	75.68	323	*e*P	P	08 12 11.8	-0.5
GKP	Gorka Klasztor	75.68	323	*e*P	P	08 12 11.8	-0.5
VKA	Vienna	75.85	318⇓	*i*P	P	08 12 13.5	+0.1
	comp=Z,653nm,2.5s,mb6.1						
VKA	Vienna	75.85	318⇓	*i*P	P	08 12 13.5	+0.1
VKA				pmax	pmax		
	comp=Z,653nm,2.5s,mb6.1						
BILL	Bilibino	75.89	22	*i* P	P	08 12 12.2	-1.0
BILL				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.2						
BILL				MLR	MLR		
	comp=Z,1µm,23.0s,MS5.1						
BILL	Bilibino	75.89	22	*e*P	P	08 12 12.7	-0.6
	comp=Z,88nm,1.3s,mb5.5						
BILL				LR	LR		
	comp=Z,444nm,20.0s,MS4.8						
KSP	Ksiaz	76.05	320⇓	*e*P	P	08 12 14.8	+0.3
KSP				*e*S	S	08 21 47.0	-8.6
KSP				MLR	MLR		
	comp=Z,1µm,19.3s,MS5.2						
KSP	Ksiaz	76.05	320⇓	*e*P	P	08 12 14.8	+0.3
KSP				*e*pP	pP	08 12 19.4	-0.5
KSP				*e*S	S	08 21 47.0	-8.6
KSP				LR	LR		
	comp=Z,1µm,19.3s,MS5.2						
KSP	Ksiaz	76.05	320	*e*P	P	08 12 14.9	+0.5
MGR	Morigerati	76.06	309	*e*P	P	08 12 13.5	-1.3
UPC	Upice	76.20	320⇓	*i*P	P	08 12 14.8	-0.5
UPC				*e*pP	pP	08 12 20.9	+0.1
SGO	Sicignano	76.26	310	*e*P	P	08 12 15.5	-0.4
ARSA	Arzberg	76.33	317⇓	*i*P	P	08 12 16.3	+0.2
	comp=Z,134nm,1.3s,mb5.7						
LEGS	Legarje	76.41	315	*e*P	P	08 12 16.1	-0.6
BOJS	Bojanci	76.44	315	*e*P	P	08 12 16.3	-0.5
	comp=Z,166nm,1.2s,mb5.8						
BOJS				*e*pP	pP	08 12 21.6	-0.6
NOUC	Port Laguerre	76.82	115	*e*P	P	08 12 21.8	+2.4
NOUC	Port Laguerre	76.82	115	*e*P	P	08 12 21.8	+2.4
LJU	Ljubljana	76.97	315	*i* P	P	08 12 19.6	-0.1
LJU				*e**PP	pP	08 12 24.7	-0.5
LJU				pmax	pmax		
	comp=Z,322nm,1.4s,mb6.1						
LJU	Ljubljana	76.97	315	*i* P	P	08 12 19.6	-0.1
	comp=Z,322nm,1.4s,mb6.1						
LJU				*e*pP	pP	08 12 24.7	-0.5
LJU				*e*		08 12 35.5	
OBKA	Obir	76.97	316⇑	*i*P	P	08 12 19.8	+0.1
	comp=Z,130nm,1.2s,mb5.7						
PRU	Pruhonice	77.12	319⇓	*i*P	P	08 12 20.5	+0.1
PRU				*e*pP	pP	08 12 25.2	-0.7
PRU				AMS	AMS	08 51 30.0	
	comp=Z,400nm,19.8s						
PVCC	Panska Ves	77.13	320⇓	*i*P	P	08 12 20.8	+0.3
PVCC				*e*pP	pP	08 12 26.4	+0.5
PVCC				AMS	AMS	08 52 10.0	
	comp=Z,600nm,15.1s						
BSD	Bornholm Skovb	77.20	325⇓	*i*P	P	08 12 19.8	-1.0
BSD				pmax	pmax		
	comp=Z,110nm,0.7s,mb5.9						
BSD				MLR	MLR		
	comp=Z,660nm,20.0s,MS5.0						
BSD	Bornholm Skovb	77.20	325⇓	*i*P	P	08 12 19.8	-1.0
	comp=Z,111nm,0.7s,mb5.9						
	comp=Z,660nm,20.0s						
MOA	Molln	77.21	317⇓	*i*P	P	08 12 20.4	-0.6
	comp=Z,64nm,1.2s,mb5.4						
TRO	Tromso	77.29	340	*e*P	P	08 12 19.8	-1.3
VOY	Vojsko	77.41	315	*e*P	P	08 12 21.8	-0.3
TRI	Trieste	77.49	315	*e*P	P	08 12 21.5	-1.1
BRG	Berggiesshubel	77.54	320	*i* P	P	08 12 22.9	+0.1
BRG				*i*	pP	08 12 28.3	+0.1
BRG				*e*		08 15 20.0	
BRG				pmax	pmax		
	comp=Z,167nm,1.3s,mb5.8						
BRG	Berggiesshubel	77.54	320	*i* P	P	08 12 22.9	+0.1
	comp=Z,167nm,1.3s,mb5.8						
BRG				*i* PcP	PcP	08 12 28.3	-5.2
BRG				*e*PP	PP	08 15 20.0	+0.5
GEC2	GERESS Array S	77.62	318	*e*P	P	08 12 23.6	+0.4
GEC2				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.7						
GEC2	GERESS Array S	77.62	318	*e*P	P	08 12 23.6	+0.4
	comp=Z,80nm,0.8s,mb5.7						
KHC	Kasperske Hory	77.71	318⇓	*i*P	P	08 12 23.5	-0.2
KHC				*e**PP	pP	08 12 28.9	-0.3
KHC				MLR	MLR		
	comp=Z,500nm,16.7s,MS4.9						

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KHC   Kasperske Hory   77.71 318⇓iP     P      08 12 23.5 -0.2
KHC                              epP    pP     08 12 28.9 -0.3
KHC                               x     x      08 13 25.0
KHC                               AMS   AMS    08 52 30.0
      comp=Z,500nm,16.7s
AQU   L'Aquila         77.71 312 eP     P      08 12 23.1 -0.8
AQU                               pmax  pmax
      comp=Z,86nm,1.1s,mb5.6
AQU   L'Aquila         77.71 312 eP     P      08 12 23.1 -0.7
      comp=Z,86nm,1.1s,mb5.6
RUE   Ruedersdorf      77.71 322 eP     P      08 12 23.7  0.0
      comp=Z,324nm,1.0s,mb6.2
RUE                              epP    pP     08 12 29.2  0.0
PTCC  Patocco-Chiusa   77.79 316 eP     P      08 12 23.9 -0.3
KBA   Koelnbreinsper   77.81 316⇓iP     P      08 12 24.0 -0.3
      comp=Z,98nm,1.3s,mb5.6
KBA   Koelnbreinsper   77.81 316⇓iP     P      08 12 24.0 -0.3
KBA                               pmax  pmax
      comp=Z,98nm,1.3s,mb5.6
GMNA  Gemona           77.87 316 eP     P      08 12 24.5 -0.2
ARV   Arcevia          78.05 313 eP     P      08 12 25.6 -0.1
SNTG  Esanatoglia      78.05 312 eP     P      08 12 25.4 -0.3
CLL   Collm            78.15 321⇓iP     P      08 12 25.7 -0.4
CLL                              i      pP     08 12 31.1 -0.4
CLL                               pmax  pmax
      comp=Z,70nm,1.0s,mb5.5
CLL   Collm            78.15 321⇓iP     P      08 12 25.7 -0.4
      comp=Z,70nm,1.0s,mb5.5
CLL                              i      pP     08 12 31.1 -0.4
CLL   Collm            78.15 321 ⇓P     P      08 12 25.7 -0.4
      comp=Z,logA/T=1.8,mb5.5
CLL                              i *PP  pP     08 12 31.1 -0.4
WET   Wettzell         78.17 318 eP     P      08 12 26.7 +0.5
WET                               pmax  pmax
      comp=Z,52nm,0.9s,mb5.5
WET   Wettzell         78.17 318 eP     P      08 12 26.7 +0.5
      comp=Z,52nm,0.9s,mb5.5
FSSB  Fossombrone      78.17 313 eP     P      08 12 26.4  0.0
FVI   Forni Avoltri    78.19 316 eP     P      08 12 26.1 -0.3
MNS   Montasola        78.25 312 eP     P      08 12 25.4 -1.4
ERC   Erice            78.37 307 eP     P      08 12 27.5 -0.1
MOR8  Moi Rana         78.44 336⇓iP     P      08 12 26.4 -1.0
      comp=Z,145nm,1.7s,mb5.6
MOR8  Moi Rana         78.44 336⇓iP     P      08 12 26.4 -1.0
MOR8                             epP    pP     08 12 32.3 -0.6
MOR8                              AMb   AMB    08 12 35.9
      comp=Z,145nm,1.7s,mb5.6
NKC   Novy Kostel      78.47 320⇓iP     P      08 12 28.1 +0.2
NKC                              epP    pP     08 12 33.9 +0.5
NKC                               AMS   AMS    08 52 50.0
      comp=Z,500nm,17.7s
COP   Copenhagen       78.65 325⇓iP     P      08 12 29.1 +0.4
COP                               pmax  pmax
      comp=Z,100nm,0.8s,mb5.8
COP                               MLR   MLR
      comp=Z,220nm,18.0s,MS4.5
COP   Copenhagen       78.65 325⇓iP     P      08 12 29.1 +0.4
      comp=Z,105nm,0.8s,mb5.8
      comp=Z,210nm,18.0s
MAW   Mawson           78.75 192 eP     P      08 12 29.5 +0.4
SFI   Santa Sofia      78.85 313 eP     P      08 12 31.0 +0.9
PGD   Poggio Sodo      78.94 313 eP     P      08 12 31.4 +0.8
CTI   Castel Tesino    78.97 315 eP     P      08 12 31.0 +0.3
WTTA  Wattenberg       78.98 317⇓iP     P      08 12 30.3 -0.4
      comp=Z,169nm,1.1s,mb5.9
WTTA  Wattenberg       78.98 317⇓iP     P      08 12 30.3 -0.4
WTTA                              pmax  pmax
      comp=Z,169nm,1.1s,mb5.9
LOF   Lofoten          79.00 338⇑iP     P      08 12 32.1 +1.7
      comp=Z,266nm,1.4s,mb6.0
LOF   Lofoten          79.00 338⇑iP     P      08 12 32.1 +1.7
LOF                               AMb   AMB    08 12 39.4
      comp=Z,266nm,1.4s,mb6.0
MOX   Moxa             79.01 320 i P    P      08 12 30.8  0.0
MOX                              e      pP     08 12 36.4 +0.1
MOX                               pmax  pmax
      comp=Z,127nm,1.4s,mb5.7
MOX                               MLR   MLR
      comp=Z,400nm,22.0s,MS4.7
MOX   Moxa             79.01 320 i P    P      08 12 30.8  0.0
      comp=Z,127nm,1.4s,mb5.7
MOX                              e      pP     08 12 36.4 +0.1
MOX                               LR    LR
      comp=Z,400nm,22.0s,MS4.7
MOX   Moxa             79.01 320 i P    P      08 12 30.8  0.0
      comp=Z,logA/T=2.0,mb5.7
MOX                               pP    pP     08 12 36.0 -0.3
MOX                               L            08 52 20.0
WATA  Walderalm        79.02 317⇑iP     P      08 12 30.1 -0.9
      comp=Z,137nm,1.4s,mb5.7
WATA  Walderalm        79.02 317⇑iP     P      08 12 30.1 -0.9
WATA                              pmax  pmax
      comp=Z,137nm,1.4s,mb5.7
VMG   Vicchio          79.06 313 eP     P      08 12 32.2 +0.9
SEI   Scarperia        79.20 313 eP     P      08 12 32.6 +0.6
FUR   Furstenfeldbru   79.22 317 eP     P      08 12 31.9 -0.1
GRA1  Grafenberg Arr   79.26 319 eP     P      08 12 33.0 +0.8
      comp=Z,85nm,0.9s,mb5.7
GRA1                             epP    pP     08 12 38.4 +0.7
GRF   Grafenberg Arr   79.26 319 eP     P      08 12 33.0 +0.8
GRF                              e*PP   pP     08 12 38.4 +0.7
GRF                               pmax  pmax
      comp=Z,85nm,0.9s,mb5.7
GRF   Grafenberg Arr   79.26 319 eP     P      08 12 33.0 +0.8
GRF                              e*PP   pP     08 12 38.5 +0.8
GRF                               pmax  pmax
      comp=Z,85nm,0.9s,mb5.7
GRF   Grafenberg Arr   79.26 319 eP     P      08 12 33.0 +0.8
      comp=Z,85nm,0.9s,mb5.7
GRF                              epP    pP     08 12 38.5 +0.8
SQTA  Sankt Quirin     79.27 316⇓iP     P      08 12 32.0 -0.3
      comp=Z,96nm,1.1s,mb5.6
SQTA  Sankt Quirin     79.27 316⇓iP     P      08 12 32.0 -0.3
SQTA                              pmax  pmax
      comp=Z,96nm,1.1s,mb5.6
NSS   Namsos           79.34 334 eP     P      08 12 31.1 -1.2
      comp=Z,204nm,1.5s,mb5.8
NSS   Namsos           79.34 334 eP     P      08 12 31.1 -1.2
NSS                              epP    pP     08 12 36.5 -1.3
NSS                               AMb   AMB    08 12 38.5
      comp=Z,204nm,1.5s,mb5.8
MOTA  Moosalm          79.34 317⇓iP     P      08 12 32.2 -0.5
      comp=Z,54nm,1.1s,mb5.4
MOTA  Moosalm          79.34 317⇓iP     P      08 12 32.2 -0.5
MOTA                              pmax  pmax
      comp=Z,54nm,1.1s,mb5.4
ZCCA  Zocca            79.47 314 eP     P      08 12 35.0 +1.5
GRFL  Gerfalco         79.49 312 eP     P      08 12 32.7 -0.9
NB2   NORSAR Subarra   79.50 331  P     P      08 12 32.8 -0.5
      comp=Z,101nm,1.1s,mb5.7,baz=97,slow=4.8
NB2   NORSAR Subarra   79.50 331  P     P      08 12 32.8 -0.5
NB2                               pmax  pmax
      comp=Z,101nm,1.1s,mb5.7
NB2   NORSAR Subarra   79.50 331  P     P      08 12 32.8 -0.5
      baz=97,slow=5.1
NAO01 NORSAR Array S   79.66 330 eP     P      08 12 33.7 -0.4
      comp=Z,47nm,0.8s,mb5.5
NAO01                            epP    pP     08 12 39.1 -0.5
BDI   Bagni Di Lucca   79.75 313 eP     P      08 12 34.1 -0.9
GSCL  Gusciola         79.75 314 eP     P      08 12 36.0 +1.1
SAL   Salo             79.76 315 eP     P      08 12 35.7 +0.7
CLZ   Clausthal        79.80 321 eP     P      08 12 35.5 +0.4
      comp=Z,81nm,0.8s,mb5.7
PII   Pisa             79.81 313 eP     P      08 12 33.9 -1.4
BSEG  Bad Segeberg     79.83 323 eP     P      08 12 35.7 +0.5
BRMO  Bormio           79.85 316 eP     P      08 12 35.8 +0.3
ERBM  Eremo            79.87 314 eP     P      08 12 36.9 +1.3
SARO  Sassorosso       79.88 313  P     P      08 12 35.0 -0.7
VLC   Villacollemand   79.89 313 eP     P      08 12 33.5 -2.3
      comp=Z,41nm,0.9s,mb5.4
FUORN Ofenpass         79.93 316⇓iP     P      08 12 36.2 +0.3
HDH   Heidenheim       79.93 318⇓eP     P      08 12 35.5 -0.3
VALM                   79.99 314  P     P      08 12 35.7 -0.6
UBR   Uberruh          80.01 317⇓eP     P      08 12 36.0 -0.3
TSUM  Tsumeb           80.06 249 eP     P      08 12 38.6 +1.4
      comp=Z,28nm,1.1s,mb5.1
TSUM                              LR    LR
      comp=Z,2µm,20.0s,MS5.4
VINC  Vinca            80.06 313  P     P      08 12 35.5 -1.2
BERNI Berninapass      80.10 316⇓iP     P      08 12 37.3 +0.5
GRAM                   80.12 314  P     P      08 12 37.3 +0.3
BACM                   80.12 314  P     P      08 12 36.9  0.0
DAVA  Damuels          80.17 317⇓iP     P      08 12 36.9 -0.3
      comp=Z,221nm,1.2s,mb6.0
DAVOX Davos            80.19 316⇓iP     P      08 12 37.6 +0.3
CODM                   80.27 314  P     P      08 12 37.5 -0.2
SIND  Sindeldorf       80.31 319 eP     P      08 12 38.1 +0.2
SUR   Sutherland       80.42 235 eP     P      08 12 40.6 +1.8
      comp=Z,88nm,1.1s,mb5.6
LIENZ Alp Oberkamor    80.44 317⇓iP     P      08 12 38.6  0.0
VDL   Val di Lei       80.48 316⇓iP     P      08 12 39.0 +0.2
MUD   Monsted U'grnd   80.49 326⇓iP     P      08 12 39.0 +0.4
MUD                              i      pP     08 12 44.4 +0.3
MUD                               pmax  pmax
      comp=Z,140nm,0.9s,mb5.9
MUD                               MLR   MLR
      comp=Z,360nm,18.0s,MS4.8
MUD   Monsted U'grnd   80.49 326⇓iP     P      08 12 39.0 +0.4
      comp=Z,144nm,0.9s,mb5.9
MUD                              i      pP     08 12 44.4 +0.3
      comp=Z,360nm,18.0s
BUCH  Bad Urach        80.50 318⇓eP     P      08 12 38.9  0.0
PLONS Plons            80.52 316⇓iP     P      08 12 39.1 +0.1
BOB   Bobbio (Coli)    80.55 314 eP     P      08 12 39.9 +0.7
STU   Stuttgart        80.60 318 eP     P      08 12 39.4  0.0
STU                               pmax  pmax
      comp=Z,55nm,0.9s,mb5.5
STU   Stuttgart        80.60 318 eP     P      08 12 39.4  0.0
      comp=Z,55nm,0.9s,mb5.5
GUT   Gutenstein       80.67 317⇓eP     P      08 12 39.6 -0.2
WEIN  Weingarten       80.78 317⇓iP     P      08 12 40.0 -0.4
LLS   Linth-Limmern    80.78 316⇓iP     P      08 12 40.5 +0.1
MUGIO Muggio           80.79 315⇓iP     P      08 12 39.6 -0.9
TOD   Tromm            80.83 319 eP     P      08 12 40.5 -0.1
TOD   Tromm            80.83 319⇓eP     P      08 12 40.7 +0.1
WILA  Wila             80.83 317⇓iP     P      08 12 40.5 -0.2
STEIN Stein am Rhein   80.85 317⇓iP     P      08 12 40.5 -0.2
LBG   Lerchenberg      80.86 318⇓eP     P      08 12 40.7 -0.1
SPAK  Spaichingen      80.89 317 eP     P      08 12 41.0 +0.1
SWS   Schriesheim      80.90 319 eP     P      08 12 41.0  0.0
GENL  Genova Univers   80.90 314  P     P      08 12 39.6 -1.5
PGF   Pioggiola        80.97 312⇓iP     P      08 12 41.3 -0.2
      comp=Z,192nm,1.2s,mb5.6
PGF   Pioggiola        80.97 312⇓iP     P      08 12 41.3 -0.2
PGF                               pmax  pmax
      comp=Z,96nm,1.2s,mb5.6
TRULL Truellikon       80.98 317⇓iP     P      08 12 40.7 -0.7
VAI   Varese           80.99 315 eP     P      08 12 40.6 -0.9
MUO   Muotathal        81.03 316⇓iP     P      08 12 42.1 +0.4
FUSIO Fusio            81.03 316⇓iP     P      08 12 41.3 -0.4
TNS   Taunus Mts       81.04 320 eP     P      08 12 42.2 +0.5
ZUR   Zurich           81.06 317⇓iP     P      08 12 41.6 -0.2
FLACH Flaach           81.06 317⇓iP     P      08 12 41.6 -0.2
SLE   Schleitheim      81.10 317⇓iP     P      08 12 41.6 -0.5
BNALP Bannalp          81.18 316⇓iP     P      08 12 42.7 +0.2
BFO   Black Forest     81.19 318 eP     P      08 12 42.4 -0.1
BFO                               pmax  pmax
      comp=Z,32nm,0.8s,mb5.3
BFO   Black Forest     81.19 318 eP     P      08 12 42.4 -0.1
      comp=Z,32nm,0.8s,mb5.3
PCP   Pian Castagno    81.20 314  P     P      08 12 42.0 -0.7
MOL   Molde            81.27 332⇓iP     P      08 12 43.0 +0.4
      comp=Z,178nm,1.6s,mb5.8
MOL   Molde            81.27 332⇓iP     P      08 12 43.0 +0.4
MOL                              epP    pP     08 12 48.5 +0.4
MOL                               AMb   AMB    08 12 50.7
      comp=Z,178nm,1.6s,mb5.8
KTD   Kalmit           81.31 319 eP     P      08 12 43.3 +0.2
SULZ  Sulz-Cheisache   81.36 317⇓iP     P      08 12 43.1 -0.3
HASLI Hasliberg        81.38 316⇓iP     P      08 12 43.5  0.0
FELD  Feldberg         81.42 317 eP     P      08 12 43.6 -0.1
FIN   Finale Ligure    81.46 314 eP     P      08 12 44.0  0.0
KIZ   Kirchzarten      81.48 317⇓eP     P      08 12 43.8 -0.2
LANF  Langenberg       81.51 318⇓eP     P      08 12 44.5 +0.3
MCGN  Macugnaga        81.53 315 eP     P      08 12 44.1 -0.2
MMK   Mattmark         81.54 315⇓iP     P      08 12 44.5 +0.1
ORO   Oropa            81.55 315 eP     P      08 12 43.4 -1.0
ORX   Oropa            81.55 315  P     P      08 12 43.1 -1.3
ABH   Alteburg         81.63 319⇓eP     P      08 12 45.2 +0.4
ABH   Alteburg         81.63 319⇓eP     P      08 12 45.1 +0.3
BALST Balsthal         81.66 317⇓iP     P      08 12 44.8 -0.2
LIBD  Limburg          81.68 318 eP     P      08 12 45.3 +0.2
LIBD  Limburg          81.68 318⇓eP     P      08 12 45.4 +0.3
ROB   Roburent         81.70 314  P     P      08 12 45.3 +0.1
IMI   Imperia          81.70 313 eP     P      08 12 45.3  0.0
TRAV                   81.72 315  P     P      08 12 43.9 -1.4
WIMIS Wimmis           81.74 316⇓iP     P      08 12 45.5 +0.1
LKBD  Leukerbad        81.75 316⇓iP     P      08 12 45.8 +0.3
BBS   Basel-Blauen     81.78 317⇓eP     P      08 12 45.2 -0.4
BBS   Basel-Blauen     81.78 317⇓eP     P      08 12 45.3 -0.3
MONE  Monesi           81.79 313  P     P      08 12 45.4 -0.3
WLS   Welschbruch      81.83 318 eP     P      08 12 45.7 -0.2
NEGI  Negi             81.84 313  P     P      08 12 45.9 -0.2
CDF   Champ du Feu     81.89 318 eP     P      08 12 45.8 -0.3
      comp=Z,71nm,0.8s,mb5.3
CDF   Champ du Feu     81.89 318 eP     P      08 12 45.8 -0.3
CDF                               pmax  pmax
      comp=Z,36nm,0.8s,mb5.3
DIX   Grande Dixence   81.92 315⇓iP     P      08 12 47.2 +0.8
SAOF  Saorge           81.94 313 eP     P      08 12 46.7 +0.2
RUP   Ruppelstein      81.96 319⇓eP     P      08 12 47.0 +0.5
BOURR Bourrignon       81.97 317⇓iP     P      08 12 46.3 -0.3
ECH   Echery           81.97 318⇓eP     P      08 12 46.2 -0.4
SENIN Lac Senin        81.98 316⇓iP     P      08 12 47.1 +0.4
WTSB  Winterswijk      82.01 321⇓eP     P      08 12 46.8 +0.2
      comp=Z,164nm,0.8s,mb6.0
WTSB                             ePcP   PcP    08 12 52.4 -0.4
ENR   Entracque        82.02 314  P     P      08 12 47.4 +0.5
AUTN  L'Aution         82.03 313 eP     P      08 12 47.4 +0.4
SBF   Sospel           82.03 313 eP     P      08 12 47.0  0.0
      comp=Z,265nm,0.8s,mb5.9
SBF   Sospel           82.03 313 eP     P      08 12 47.0  0.0
SBF                               pmax  pmax
      comp=Z,133nm,0.8s,mb5.9
WIT   Witteveen        82.05 322 eP     P      08 12 48.3 +1.4
WIT                              ePcP   PcP    08 12 53.2 +0.3
RSP   Reno Superiore   82.08 314  P     P      08 12 46.7 -0.5
STV2  Anna di Valdie   82.09 314  P     P      08 12 46.1 -1.2
STV   Sta Anna Valdi   82.09 314  P     P      08 12 46.2 -1.1
REVF  Revere           82.09 313 eP     P      08 12 47.0 -0.3
BHB   Bricherasio      82.10 314  P     P      08 12 45.8 -1.5
GRYON Gryon            82.12 316⇓iP     P      08 12 47.7 +0.3
DOI   San Damiano      82.13 314 eP     P      08 12 46.0 -1.5
LSD   Ceresole Reale   82.14 315  P     P      08 12 48.1 +0.6
TOUF  Mont Tournerai   82.16 313 eP     P      08 12 48.0 +0.4
TORNY Torny            82.19 316⇓iP     P      08 12 48.0 +0.2
HINF  Hinteralfeld     82.20 317⇓iP     P      08 12 47.1 -0.7
      comp=Z,66nm,1.1s,mb5.2
HINF  Hinteralfeld     82.20 317⇓iP     P      08 12 47.1 -0.7
HINF                              pmax  pmax
      comp=Z,33nm,1.1s,mb5.2
SALAN Lac Salanfe      82.22 316⇓iP     P      08 12 48.3 +0.4
AIGLE Aigle            82.22 316⇓iP     P      08 12 48.0 +0.1
FENE  Fenestrelle      82.23 314  P     P      08 12 47.2 -0.7
PZZ   Prazzo           82.23 314  P     P      08 12 46.7 -1.3
MVIF  Mont Vial        82.24 313 eP     P      08 12 48.3 +0.3
LOMF  Lomont           82.25 317 eP     P      08 12 47.9 -0.1
EMV   Vieux Emosson    82.28 315⇓iP     P      08 12 48.7 +0.5
OG22  Abries           82.33 314 eP     P      08 12 48.3 -0.2
LPG   La Plagne        82.42 315 eP     P      08 12 49.4 +0.5
      comp=Z,229nm,0.8s,mb5.9
LPG   La Plagne        82.42 315 eP     P      08 12 49.4 +0.5
LPG                               pmax  pmax
      comp=Z,114nm,0.8s,mb5.8
LPL   La Plagne        82.43 315⇓iP     P      08 12 49.4 +0.4
      comp=Z,292nm,0.7s,mb6.0
LPL   La Plagne        82.43 315⇓iP     P      08 12 49.4 +0.4
LPL                               pmax  pmax
      comp=Z,146nm,0.7s,mb6.0
RRL   Cesana Torines   82.43 314  P     P      08 12 48.9 -0.1
SURF  Saint Ours       82.44 314⇓eP     P      08 12 49.8 +0.7
MBDF  Montbardon       82.45 314 eP     P      08 12 48.7 -0.5
      comp=Z,58nm,0.6s,mb5.4
MBDF  Montbardon       82.45 314 eP     P      08 12 48.7 -0.5
MBDF                              pmax  pmax
      comp=Z,29nm,0.6s,mb5.4
BNI   Bardonecchia     82.50 314 eP     P      08 12 49.1 -0.3
BNI                               pmax  pmax
      comp=Z,125nm,1.1s,mb5.8
BNI   Bardonecchia     82.50 314 eP     P      08 12 49.1 -0.3
      comp=Z,125nm,1.1s,mb5.8
HAU   Haudompre        82.53 317 eP     P      08 12 49.3 -0.2
      comp=Z,211nm,0.9s,mb5.9
HAU                              eR
      comp=Z,393nm,21.2s
HAU   Haudompre        82.53 317 eP     P      08 12 49.3 -0.2
HAU                               pmax  pmax
      comp=Z,105nm,0.9s,mb5.9
HAU                               MLR   MLR
      comp=Z,390nm,21.3s,MS4.7
WLF   Walferdange      82.55 319 eP     P      08 12 49.8 +0.3
WLF                               pmax  pmax
      comp=Z,140nm,1.3s,mb5.8
WLF   Walferdange      82.55 319 eP     P      08 12 49.8 +0.2
      comp=Z,139nm,1.3s,mb5.8
HGN   Heimansgroeve    82.62 320 eP     P      08 12 49.9  0.0
      comp=Z,52nm,1.7s,mb5.3
FRF   La Foret Royal   82.63 313⇓iP     P      08 12 50.2 +0.1
      comp=Z,175nm,0.9s,mb5.8
FRF   La Foret Royal   82.63 313⇓iP     P      08 12 50.2 +0.1
FRF                               pmax  pmax
      comp=Z,88nm,0.9s,mb5.8
GIMEL Gimel            82.69 316⇓iP     P      08 12 50.6 +0.3
LMR   La Mourre        82.74 313⇓iP     P      08 12 50.6 -0.1
      comp=Z,164nm,1.2s,mb5.6
LMR   La Mourre        82.74 313⇓iP     P      08 12 50.6 -0.1
LMR                               pmax  pmax
      comp=Z,82nm,1.2s,mb5.6
THEF  They Montfort    82.75 318 eP     P      08 12 50.6  0.0
CABF  La Chapelle      82.80 316⇓iP     P      08 12 51.2 +0.3
      comp=Z,107nm,0.8s,mb5.7
CABF  La Chapelle      82.80 316⇓iP     P      08 12 51.2 +0.3
CABF                              pmax  pmax
      comp=Z,54nm,0.8s,mb5.6
GDM   Grand'Maison     82.89 315 eP     P      08 12 51.6 +0.2
OG25  Le Caire         82.98 314 eP     P      08 12 52.2 +0.3
CAEH  'Ain El Ouahch   83.00 306  P     P      08 12 52.5 +0.3
TAVF  Tavernes         83.05 313⇓eP     P      08 12 53.1 +0.8
ORIF  Oris-en-Rattie   83.07 314⇓iP     P      08 12 52.1 -0.3
      comp=Z,66nm,0.7s,mb5.5
ORIF                             eR
      comp=Z,473nm,22.5s
CKFL  Kef-Lekhel       83.14 306  P     P      08 12 54.0 +1.1
VILF  Villemus         83.28 313 eP     P      08 12 54.4 +1.0
PUYF  Puyloubier       83.31 313 eP     P      08 12 54.3 +0.7
CASM  Ain Smara        83.34 306  P     P      08 12 54.0 +0.1
BERF  Bertagne         83.34 313 eP     P      08 12 54.5 +0.7
MEZF  Maizieres J'vi   83.36 318⇓iP     P      08 12 53.6 -0.1
      comp=Z,258nm,1.4s,mb5.8
SMRF  Simiane la Rot   83.37 313⇓iP     P      08 12 54.5 +0.6
      comp=Z,367nm,1.5s,mb5.9
GIVF  Givet            83.38 320 eP     P      08 12 53.9 +0.1
      comp=Z,173nm,1.3s,mb5.6
GIVF  Givet            83.38 320 eP     P      08 12 53.9 +0.1
GIVF                              pmax  pmax
      comp=Z,87nm,1.3s,mb5.6
CTEI  Djebel Teioual   83.42 305  P     P      08 12 55.5 +1.2
OCF   Saint Nazaire    83.51 314 eP     P      08 12 55.4 +0.7
OG26  St.-Nazaire-De   83.51 314 eP     P      08 12 55.4 +0.7
TREF  Trevaresse       83.54 313 eP     P      08 12 55.6 +0.8
PRAF  Pradon           83.67 313 eP     P      08 12 56.3 +0.8
BAIF  Baives           83.77 320 eP     P      08 12 56.1 +0.3
      comp=Z,254nm,1.2s,mb5.9
BAIF  Baives           83.77 320 eP     P      08 12 56.1 +0.3
BAIF                              pmax  pmax
      comp=Z,127nm,1.2s,mb5.9
DFRA  Djebel Bou Aff   83.80 306  P     P      08 12 57.0 +0.7
CMER  Merouana         83.87 305  P     P      08 12 58.0 +1.3
VIVF  Saint-Julien-l   83.93 314⇓iP     P      08 12 56.9 +0.1
      comp=Z,191nm,1.2s,mb5.8
VIVF  Saint-Julien-l   83.93 314⇓iP     P      08 12 56.9 +0.1
VIVF                              pmax  pmax
      comp=Z,95nm,1.2s,mb5.8
CKHR  Kef el Ahmar     84.15 305  P     P      08 12 59.0 +0.9
SET   Setif            84.22 306  P     P      08 13 00.0 +1.6
SMF   Signal de Mont   84.34 316⇓iP     P      08 12 58.5 -0.3
      comp=Z,126nm,0.8s,mb5.8
SMF   Signal de Mont   84.34 316⇓iP     P      08 12 58.5 -0.3
SMF                               pmax  pmax
      comp=Z,63nm,0.8s,mb5.8
SSF   Saint Saulge     84.53 317⇓iP     P      08 12 59.6 -0.1
      comp=Z,263nm,1.5s,mb5.8
SSF   Saint Saulge     84.53 317⇓iP     P      08 12 59.6 -0.1
SSF                               pmax  pmax
      comp=Z,131nm,1.5s,mb5.8
COLF  Collangettes     84.56 315 eP     P      08 13 00.2 +0.3
PLDF  La Plantade      84.56 316 eP     P      08 13 00.3 +0.4
LASF  Ste Croix        84.59 314⇓iP     P      08 13 00.5 +0.4
      comp=Z,330nm,1.5s,mb6.0
AVF   Avril sur Loir   84.66 316⇓iP     P      08 13 00.1 -0.3
      comp=Z,209nm,1.3s,mb5.8
AVF   Avril sur Loir   84.66 316⇓iP     P      08 13 00.1 -0.3
AVF                               pmax  pmax
      comp=Z,104nm,1.3s,mb5.8
AGO   Saint Agoulin    84.89 316⇓eP     P      08 13 01.9 +0.3
LBL   Lubilhac         84.90 315⇓eP     P      08 13 02.3 +0.7
PYM   Petit Puy Mans   85.01 315⇓eP     P      08 13 02.6 +0.4
BGF   Bois d'Agland    85.03 316 eP     P      08 13 02.4 +0.2
      comp=Z,295nm,1.4s,mb5.9
BGF   Bois d'Agland    85.03 316 eP     P      08 13 02.4 +0.2
BGF                               pmax  pmax
      comp=Z,147nm,1.4s,mb5.9
MENF  Mencas           85.03 320⇓eP     P      08 13 02.7 +0.6
HYF   Humbligny        85.09 317 eP     P      08 13 02.9 +0.4
FRNF  Fournols         85.36 315 eP     P      08 13 04.7 +0.8
VERF  Verneugheol      85.38 315 eP     P      08 13 04.6 +0.6
EJON  La Jonquera      85.48 312  P     P      08 13 04.5  0.0
      comp=Z,15nm,0.8s,mb5.2
SJAF  Saint Jean de    85.48 312 eP     P      08 13 04.4 -0.2
TCF   Toulx Ste Croi   85.50 316⇓iP     P      08 13 04.7 +0.1
      comp=Z,176nm,1.5s,mb5.8
TCF   Toulx Ste Croi   85.50 316⇓iP     P      08 13 04.7 +0.1
TCF                               pmax  pmax
      comp=Z,88nm,1.5s,mb5.8
SYO   Syowa Base       85.61 197 ⇑P     P      08 13 06.0 +1.4
SYO   Syowa Base       85.61 197 ⇓pP    pP     08 13 11.1 +1.0
SYO   Syowa Base       85.61 197 ⇓sP    sP     08 13 15.1 +3.2
LRW   Lerwick          85.65 330 eP     P      08 13 05.6 +0.6
LRW                               AMb   AMB    08 13 10.1
      comp=Z,220nm,1.8s,mb6.1
LRDF  Laroque-de-Fa    85.67 313⇓eP     P      08 13 06.1 +0.6
FILF  Fillols          85.70 312 eP     P      08 13 06.3 +0.6
CAF   Calviac          85.77 315⇓iP     P      08 13 06.4 +0.4
      comp=Z,147nm,1.2s,mb5.8
CAF   Calviac          85.77 315⇓iP     P      08 13 06.4 +0.4
CAF                               pmax  pmax
      comp=Z,73nm,1.2s,mb5.8
WAL1  Walls            85.85 330 eP     P      08 13 07.2 +1.2
WAL1                              AMb   AMB    08 13 14.2
      comp=Z,236nm,1.5s,mb6.2
MTLF  Montolieu        85.86 313⇓iP     P      08 13 06.7 +0.3
      comp=Z,213nm,1.4s,mb5.9
MTLF  Montolieu        85.86 313⇓iP     P      08 13 06.7 +0.3
MTLF                              pmax  pmax
      comp=Z,107nm,1.4s,mb5.9
TNA   Tin City         85.98  24 eP     P      08 13 06.6 +0.1
      comp=Z,31nm,1.0s,mb5.5
TNA                              e      pP     08 13 12.1  0.0
RJF   Les Rejaudoux    86.11 315 eP     P      08 13 07.5 -0.1
      comp=Z,83nm,0.9s,mb5.7
RJF                              eR
      comp=Z,278nm,19.4s
RJF   Les Rejaudoux    86.11 315 eP     P      08 13 07.5 -0.1
RJF                               pmax  pmax
      comp=Z,42nm,0.9s,mb5.7
RJF                               MLR   MLR
      comp=Z,280nm,19.4s,MS4.7
VALF  Valcebollere     86.12 312⇓eP     P      08 13 08.7 +0.9
LPEF  Le Peyrat        86.13 313⇓eP     P      08 13 08.2 +0.4
LMK   Market Rasen     86.17 323 eP     P      08 13 08.4 +0.7
EMHD  Djebel Mahouad   86.19 306  P     P      08 13 10.0 +1.7
EMIR  Miracle          86.55 312  P     P      08 13 10.7 +0.8
      comp=Z,52nm,0.7s,mb5.9
LCP   Cassop           86.65 325 eP     P      08 13 11.0 +0.9
LCP                               AMb   AMB    08 13 18.2
      comp=Z,379nm,1.4s,mb6.4
LFF   La Frestale      86.70 315⇓iP     P      08 13 11.0 +0.4
      comp=Z,219nm,1.5s,mb5.9
LFF   La Frestale      86.70 315⇓iP     P      08 13 11.0 +0.4
LFF                               pmax  pmax
      comp=Z,110nm,1.5s,mb5.9
MLS   Moulis           86.72 313 eP     P      08 13 10.5 -0.2
LDF   La Druitiere     86.76 318⇓iP     P      08 13 10.8 +0.1
      comp=Z,280nm,1.4s,mb6.0
LDF   La Druitiere     86.76 318⇓iP     P      08 13 10.8 +0.1
LDF                               pmax  pmax
      comp=Z,140nm,1.4s,mb6.0
HPK   Haverah Park     86.86 324 eP     P      08 13 11.8 +0.7
HPK                               AMb   AMB    08 13 18.6
      comp=Z,666nm,1.2s
KBI1  Birley Grange    86.92 323 eP     P      08 13 11.6 +0.2
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KBI1				AMb	AMB	08 13 18.6	
	comp=Z,332nm,1.1s,mb6.5						
EPOB	Poblet	86.96	311	P	P	08 13 12.4	+0.5
	comp=Z,34nm,0.7s,mb5.7						
FLN	La Foliniere	86.97	319	eP	P	08 13 11.8	0.0
	comp=Z,184nm,1.2s,mb5.9						
FLN				eR			
	comp=Z,358nm,22.0s						
FLN	La Foliniere	86.97	319	eP	P	08 13 11.8	0.0
FLN				pmax	pmax		
	comp=Z,92nm,1.2s,mb5.9						
FLN				MLR	MLR		
	comp=Z,360nm,22.0s,MS4.7						
LHO	Holmfirth	87.06	324	eP	P	08 13 12.5	+0.4
LHO				AMb	AMB	08 13 19.5	
	comp=Z,299nm,1.1s,mb6.4						
MFF	Saint Martin d	87.07	316	⇓iP	P	08 13 12.3	0.0
	comp=Z,147nm,1.2s,mb5.8						
MFF	Saint Martin d	87.07	316	⇓iP	P	08 13 12.3	0.0
MFF				pmax	pmax		
	comp=Z,74nm,1.2s,mb5.8						
EIBI	Ibiza	87.08	309	P	P	08 13 13.5	+0.9
	comp=Z,25nm,0.9s,mb5.4						
KWE	Weaver Farm	87.14	323	eP	P	08 13 13.0	+0.5
KWE				AMb	AMB	08 13 20.5	
	comp=Z,377nm,1.4s,mb6.4						
DAG	Danmarks Havn	87.24	348	⇑iP	P	08 13 11.9	-0.6
DAG				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.3						
DAG	Danmarks Havn	87.24	348	⇑iP	P	08 13 11.9	-0.6
	comp=Z,10nm,0.5s,mb5.3						
EPF	Esparros	87.26	313	⇓iP	P	08 13 12.8	-0.5
	comp=Z,58nm,1.5s,mb5.3						
EPF	Esparros	87.26	313	⇓iP	P	08 13 12.8	-0.5
EPF				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.3						
GRR	Gorron	87.28	318	⇓iP	P	08 13 13.2	-0.1
	comp=Z,178nm,1.5s,mb5.8						
GRR	Gorron	87.28	318	⇓iP	P	08 13 13.2	-0.1
GRR				pmax	pmax		
	comp=Z,89nm,1.5s,mb5.8						
EBNR	Beni Rached	87.31	306	P	P	08 13 16.0	+2.3
EDI	Edinburgh	87.41	326	eP	P	08 13 14.2	+0.5
EBIE	Bielsa	87.45	313	P	P	08 13 15.0	+0.8
	comp=Z,13nm,0.7s,mb5.3						
ECHA	Ech Chlef	87.46	306	P	P	08 13 17.0	+2.5
EBR	Ebro Roquetas	87.47	311	eP	P	08 13 15.3	+0.9
VIEF	Viey	87.51	313	⇓eP	P	08 13 15.2	+0.7
ESK	Eskdalemuir	87.53	325	eP	P	08 13 14.9	+0.6
ESK				e*PP	pP	08 13 20.2	+0.4
ESK				pmax	pmax		
	comp=Z,110nm,1.1s,mb6.0						
ESK	Eskdalemuir	87.53	325	eP	P	08 13 14.9	+0.6
	comp=Z,114nm,1.1s,mb6.0						
ESK				epP	pP	08 13 20.2	+0.4
ESK	Eskdalemuir	87.53	325	eP	P	08 13 14.7	+0.4
ESK				AMb	AMB	08 13 22.3	
	comp=Z,162nm,1.7s,mb6.0						
EAU	Auchinoon	87.57	326	eP	P	08 13 15.0	+0.5
EAU				AMb	AMB	08 13 22.2	
	comp=Z,253nm,1.3s,mb6.3						
ERTA	Horta de San J	87.57	311	P	P	08 13 15.6	+0.7
	comp=Z,20nm,0.8s,mb5.4						
ETRT	Tiaret	87.62	305	P	P	08 13 18.0	+2.7
EANR	'Ain N'Sour	87.71	306	P	P	08 13 17.5	+1.9
ETSF	Etsaut	87.93	313	eP	P	08 13 17.2	+0.7
	comp=Z,46nm,0.8s,mb5.5						
ETSF	Etsaut	87.93	313	eP	P	08 13 17.2	+0.7
ETSF				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.5						
EAB	Aberfoyle	87.99	326	eP	P	08 13 17.0	+0.5
EAB				AMb	AMB	08 13 24.8	
	comp=Z,126nm,1.5s,mb5.9						
ESAC	San Caprasio	88.05	312	P	P	08 13 19.1	+2.0
	comp=Z,26nm,0.6s,mb5.6						
LARF	Larrau	88.22	313	⇓eP	P	08 13 18.9	+1.0
EMOS	Mosqueruela	88.27	310	P	P	08 13 19.7	+1.4
	comp=Z,38nm,0.8s,mb5.7						
SJPF	Ste Jean	88.38	313	⇓iP	P	08 13 18.3	-0.4
	comp=Z,111nm,1.2s,mb5.7						
SJPF	Ste Jean	88.38	313	⇓iP	P	08 13 18.3	-0.4
SJPF				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.7						
SGMF	Saint Gilles	88.42	318	⇓iP	P	08 13 18.8	+0.1
	comp=Z,309nm,1.6s,mb6.0						
SGMF	Saint Gilles	88.42	318	⇓iP	P	08 13 18.8	+0.1
SGMF				pmax	pmax		
	comp=Z,154nm,1.6s,mb6.0						
EALK	Alkurruntz	88.57	313	P	P	08 13 20.6	+1.0
	comp=Z,19nm,0.7s,mb5.5						
HEX	Exmoor	88.69	321	eP	P	08 13 19.8	-0.2
HSA	Swansea	88.77	322	eP	P	08 13 20.9	+0.6
HSA				AMb	AMB	08 13 27.8	
	comp=Z,129nm,1.5s,mb6.0						
ROSF	Rostrenen	88.87	319	⇓iP	P	08 13 21.1	+0.2
	comp=Z,150nm,1.2s,mb5.9						
ROSF	Rostrenen	88.87	319	⇓iP	P	08 13 21.1	+0.2
ROSF				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.9						
QUIF	Quistinic	88.88	318	⇓iP	P	08 13 20.8	-0.1
	comp=Z,62nm,1.0s,mb5.6						
QUIF	Quistinic	88.88	318	⇓iP	P	08 13 20.8	-0.1
QUIF				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.6						
HPE	Pembroke	89.11	322	eP	P	08 13 22.5	+0.6
ELAN	Lanestosa	89.95	314	P	P	08 13 26.7	+0.6
	comp=Z,14nm,0.8s,mb5.3						
EVIA	Vianos	90.11	309	P	P	08 13 27.9	+0.9
EVIA				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.5						
EVIA	Vianos	90.11	309	P	P	08 13 27.9	+0.9
	comp=Z,21nm,0.8s,mb5.5						
ENIJ	Nijar	90.17	307	P	P	08 13 28.9	+1.6
ENIJ				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.5						
ENIJ	Nijar	90.17	307	P	P	08 13 28.9	+1.6
	comp=Z,20nm,0.8s,mb5.5						
EQES	Quesada	90.70	308	P	P	08 13 30.2	+0.5
	comp=Z,18nm,0.8s,mb5.4						
EBER	Berja	90.72	307	P	P	08 13 31.2	+1.4
	comp=Z,30nm,0.7s,mb5.7						
SCO	Scoresbysund	90.81	342	i P	P	08 13 30.7	+1.3
SCO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
SCO	Scoresbysund	90.81	342	i P	P	08 13 30.7	+1.3
	comp=Z,6.5nm,1.0s,mb4.9						
GUD	Guadarrama	90.98	311	P	P	08 13 32.6	+1.7
GUD				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.7						
GUD	Guadarrama	90.98	311	P	P	08 13 32.6	+1.6
	comp=Z,29nm,0.8s,mb5.7						
ESDC	Sonseca Array	91.03	310	P	P	08 13 31.9	+0.8
	comp=Z,14nm,0.6s,mb5.5						
ESLA	Sonseca Array	91.03	310	eP	P	08 13 30.9	-0.3
	comp=Z,30nm,1.4s,mb5.4						
ESLA				e	pP	08 13 36.8	+0.1
ESLA				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
EBAN	Banos Encina	91.19	309	P	P	08 13 32.4	+0.5
EBAN				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.5						
EBAN	Banos Encina	91.19	309	P	P	08 13 32.4	+0.5
	comp=Z,24nm,1.0s,mb5.5						
EARI	Arriondas	91.21	314	P	P	08 13 33.0	+1.2
	comp=Z,27nm,1.0s,mb5.5						
IMA	Indian Mountai	91.43	22	eP	P	08 13 34.3	+1.9
IMA				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.9						
IMA	Indian Mountai	91.43	22	eP	P	08 13 34.3	+1.9
	comp=Z,60nm,0.9s,mb5.9						
ELUQ	Luque	91.68	308	P	P	08 13 35.2	+1.0
ELUQ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ELUQ	Luque	91.68	308	P	P	08 13 35.2	+1.0
	comp=Z,0.9nm,0.7s						
EADA	Adamuz	91.80	309	P	P	08 13 34.9	+0.1
	comp=Z,29nm,1.0s,mb5.6						
EMIJ	Mijas	92.27	307	P	P	08 13 40.3	+3.3
	comp=Z,20nm,1.1s,mb5.3						
SVW2	Sparrevohn	92.56	27	eP	P	08 13 35.5	-2.2
ECAL	Calabor	92.60	313	P	P	08 13 39.1	+0.8
	comp=Z,21nm,1.0s,mb5.5						
PBRG	Braganca	92.64	313	eP	P	08 13 39.0	+0.5
	comp=Z,38nm,1.4s,mb5.6						
ERUA	La Rua	92.79	313	P	P	08 13 40.3	+1.1
ERUA				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.4						
ERUA	La Rua	92.79	313	P	P	08 13 40.3	+1.0
	comp=Z,13nm,0.8s,mb5.4						
EINC	Incio	92.88	314	P	P	08 13 40.4	+0.8
	comp=Z,16nm,0.9s,mb5.5						
ESPR	Espera	93.06	308	P	P	08 13 44.2	+3.6
	comp=Z,16nm,1.0s,mb5.4						
VNDA	Vanda	93.17	168	PFAKE		08 13 50.0	+10
VNDA				LR	LR		
	comp=Z,500nm,19.0s,MS5.0						
PVRL	Vila Real	93.47	312	eP	P	08 13 42.8	+0.4
	comp=Z,42nm,1.5s,mb5.7						
EMIN	Mina Concepcio	93.50	309	P	P	08 13 42.9	+0.3
	comp=Z,4.6nm,1.4s,mb4.7						
EBAD	Badajoz	93.54	310	P	P	08 13 44.9	+2.2
	comp=Z,6.8nm,0.9s,mb5.1						
MTE	Manteigas	93.56	311	eP	P	08 13 43.8	+1.0
	comp=Z,42nm,1.4s,mb5.7						
MTE				eSKS	SKS	08 24 06.6	-15
MTE				eLR	LR	08 46 50.2	
	comp=Z,205nm,19.8s						
MTE				i -		08 52 40.4	
ELOB	Lobios	93.58	313	P	P	08 13 43.7	+0.9
	comp=Z,12nm,0.9s,mb5.3						
PCBR	Castelo Branco	93.64	311	eP	P	08 13 43.6	+0.4
	comp=Z,47nm,1.4s,mb5.7						
SUMG	Summit	93.91	347	eP	P	08 13 44.6	+0.9
	comp=Z,45nm,1.1s,mb5.8						
RSO	Redoubt South	94.09	27	eP	P	08 13 45.2	+0.5
SPU	Mount Spurr	94.10	26	eP	P	08 13 45.2	+0.4
SPU				epP	pP	08 13 50.4	+0.1
COLA	College	94.14	22	eP	P	08 13 45.2	+0.3
COLA				pmax	pmax		
	comp=Z,19nm,1.5s,mb5.3						
COLA	College	94.14	22	eP	P	08 13 45.2	+0.3
	comp=Z,19nm,1.5s,mb5.3						
MCK	McKinley	94.27	23	eP	P	08 13 45.8	+0.3
MCK				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.5						
MCK				MLR	MLR		
	comp=Z,151nm,20.0s,MS4.5						
MCK	McKinley	94.27	23	eP	P	08 13 45.8	+0.4
	comp=Z,24nm,1.1s,mb5.5						
MCK				LR	LR		
	comp=Z,151nm,20.0s,MS4.5						
EVO	Evora	94.35	310	eP	P	08 13 47.5	+1.0
	comp=Z,64nm,1.5s,mb5.5						
EVO				eR			
	comp=Z,351nm,20.2s						
PBEJ	Beja	94.36	309	eP	P	08 13 48.5	+2.0
	comp=Z,18nm,1.6s,mb5.2						
FIB	Fire Island	94.93	26	eP	P	08 13 49.5	+0.9
FIB				MLR	MLR		
	comp=Z,764nm,19.0s,MS5.2						
PMR	Palmer	95.18	25	eP	P	08 13 50.1	+0.4
PMR				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.8						
PMR	Palmer	95.18	25	eP	P	08 13 50.1	+0.4
	comp=Z,38nm,1.0s,mb5.8						
SLKM	Skilak Lake	95.20	27	eP	P	08 13 50.0	+0.2
SLKM				epP	pP	08 13 55.3	-0.1
SML	Sawmill	95.42	25	eP	P	08 13 51.7	+0.9
INK	Inuvik	96.79	16	eP	P	08 13 56.6	-0.3
INK				pmax	pmax		
	comp=Z,62nm,1.2s						
INK	Inuvik	96.79	16	eP	P	08 13 56.6	-0.3
	comp=Z,62nm,1.2s,mb5.9						
RES	Resolute Bay	97.17	2	eP	P	08 13 59.3	+0.8
RES				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.5						
RES	Resolute Bay	97.17	2	eP	P	08 13 59.3	+0.7
	comp=Z,15nm,0.8s,mb5.5						
DAWY	Dawson	97.66	21	eP	P	08 14 01.2	+0.3
QSPA	South Pole Qui	98.01	180	PFAKE		08 14 10.0	+7.8
QSPA				LR	LR		
	comp=Z,760nm,21.0s,MS5.2						
SIT	Sitka	103.57	25	PFAKE		08 14 40.0	+12
SIT				LR	LR		
	comp=Z,606nm,22.0s,MS5.1						
EBAJ	Bajamar	103.74	302	P	Pdif	08 14 31.3	+2.2
YKW3	Yellowknife Ar	106.15	13	eP	Pdif	08 14 37.1	-1.8
EDM	Edmonton	114.61	18	ePKIKP	PKPdf	08 19 06.7	-2.7
SCHQ	Schefferville	115.29	348	PFAKE		08 19 20.0	+9.3
SCHQ				LR	LR		
	comp=Z,947nm,21.0s,MS5.4						
FFC	Flin Flon	115.97	10	ePKIKP	PKPdf	08 19 08.6	-3.4
NEW	Newport	117.49	23	PFAKE		08 19 20.0	+4.9
NEW				LR	LR		
	comp=Z,278nm,20.0s,MS4.9						
COR	Corvallis	117.66	29	PFAKE		08 19 20.0	+4.5
COR				LR	LR		
	comp=Z,59nm,22.0s,MS4.2						
HUMO	Hull Mountain	119.28	31	ePKPdf	PKPdf	08 19 16.4	-2.4
HUMO				LR	LR		
	comp=Z,288nm,19.0s,MS4.9						
MSO	Missoula	119.89	22	ePKPdf	PKPdf	08 19 17.0	-2.7
MSO				LR	LR		
	comp=Z,169nm,19.0s,MS4.7						
YBH	Yreka Blue Hor	120.04	31	PFAKE		08 19 30.0	+10
YBH				LR	LR		
	comp=Z,264nm,21.0s,MS4.8						
CHMT	Chamberlain Mo	120.07	21	ePKPdf	PKPdf	08 19 17.1	-3.0
BMO	Blue Mountains	120.18	25	PFAKE		08 19 30.0	+10
BMO				LR	LR		
	comp=Z,353nm,21.0s,MS5.0						
WDC	Whiskeytown Da	120.96	32	ePKIKP	PKPdf	08 19 19.4	-2.7
WDC				MLR	MLR		
	comp=Z,219nm,22.0s,MS4.8						
MOD	Modoc	121.12	30	ePKPdf	PKPdf	08 19 20.7	-1.7
MOD				LR	LR		
	comp=Z,153nm,20.0s,MS4.6						
ULM	Lac du Bonnet	121.24	7	ePKPdf	PKPdf	08 19 18.9	-3.5
ULM				LR	LR		
	comp=Z,730nm,22.0s,MS5.3						
DGMT	Dagmar	121.41	14	PFAKE		08 19 30.0	+7.2
DGMT				LR	LR		
	comp=Z,408nm,21.0s,MS5.0						
WVOR	Wild Horse Val	121.50	28	ePKIKP	PKPdf	08 19 21.2	-1.9
WVOR	Wild Horse Val	121.50	28	PFAKE		08 19 30.0	+6.9
WVOR				LR	LR		
	comp=Z,346nm,21.0s,MS5.0						
BOZ	Bozeman (W)	121.73	21	eP	Pdif	08 15 42.1	-5.8
BOZ	Bozeman (W)	121.73	21	PFAKE		08 19 30.0	+6.6
BOZ				LR	LR		
	comp=Z,241nm,19.0s,MS4.9						
HOPS	Hopland	121.81	34	ePKPdf	PKPdf	08 19 21.3	-2.5
MCMT	McKenzie Canyo	121.99	22	ePKPdf	PKPdf	08 19 22.2	-1.8
HLID	Hailey	122.44	24	ePKPdf	PKPdf	08 19 22.9	-1.9
HLID				LR	LR		
	comp=Z,250nm,19.0s,MS4.9						
QLMT	Earthquake Lak	122.51	21	ePKPdf	PKPdf	08 19 23.6	-1.2
LAO	LASA Array	122.52	16	ePKPdf	PKPdf	08 19 23.3	-1.5
LAO				LR	LR		
	comp=Z,403nm,20.0s,MS5.1						
YMR	Madison River	122.81	21	ePKPdf	PKPdf	08 19 24.5	-1.0
YFT	Old Faithful	123.05	21	ePKPdf	PKPdf	08 19 25.6	-0.3
LKWY	Lake	123.10	21	ePKIKP	PKPdf	08 19 25.8	-0.2
LKWY				MLR	MLR		
	comp=Z,524nm,20.0s,MS5.2						
WCN	Washoe City	123.35	31	PKIKP	PKPdf	08 19 24.9	-1.8
WCN	Washoe City	123.35	31	ePKPdf	PKPdf	08 19 25.0	-1.7
IMW	Indian Meadow	123.49	22	ePKPdf	PKPdf	08 19 25.3	-1.6
BMN	Battle Mountai	123.73	28	PFAKE		08 19 40.0	+13
BMN				LR	LR		
	comp=Z,226nm,22.0s,MS4.8						
RRI2	Red Ridge	123.83	22	ePKPdf	PKPdf	08 19 25.2	-2.3
TPAW	Teton Pass	123.84	22	ePKPdf	PKPdf	08 19 25.6	-2.0
LOHW	Long Hollow	123.86	21	ePKPdf	PKPdf	08 19 25.5	-2.1
CMB	Columbia Colle	123.96	33	PFAKE		08 19 40.0	+12
CMB				LR	LR		
	comp=Z,249nm,19.0s,MS4.9						
EYMN	Ely	123.98	5	PFAKE		08 19 40.0	+12
EYMN				LR	LR		
	comp=Z,533nm,20.0s,MS5.2						
SAO	San Andreas Ge	124.30	34	PFAKE		08 19 40.0	+11
SAO				LR	LR		
	comp=Z,260nm,21.0s,MS4.9						
AHID	Auburn Hatcher	124.41	22	PFAKE		08 19 40.0	+11
AHID				LR	LR		
	comp=Z,362nm,20.0s,MS5.0						
HVU	Hansel Valley	124.59	24	ePKIKP	PKPdf	08 19 26.8	-2.3
MNV	Mina	124.82	31	ePKIKP	PKPdf	08 19 28.0	-1.7
MNV				MLR	MLR		
	comp=Z,236nm,21.0s,MS4.8						
BW06	Boulder Array	124.97	21	PFAKE		08 19 40.0	+10
BW06				LR	LR		
	comp=Z,360nm,20.0s,MS5.0						
BGU	Big Grassy Mou	125.20	25	ePKPdf	PKPdf	08 19 28.2	-2.1
HWUT	Hardware Ranch	125.22	23	ePKPdf	PKPdf	08 19 27.8	-2.5
HWUT				LR	LR		
	comp=Z,492nm,19.0s,MS5.2						
RSSD	Black Hills	125.49	16	PFAKE		08 19 40.0	+9.2
RSSD				LR	LR		
	comp=Z,1.0nm,19.0s						
TPH	Tonopah	125.56	30	PKIKP	PKPdf	08 19 30.1	-1.0
TPH				e		08 19 35.1	
TPH	Tonopah	125.56	30	ePKPdf	PKPdf	08 19 28.8	-2.3
TPH				LR	LR		
	comp=Z,287nm,19.0s,MS5.0						
TCUT	Toone Canyon	125.70	24	ePKPpre		08 19 20.8	
JLU	Jordanelle	126.12	24	ePKPdf	PKPdf	08 19 29.9	-2.1
TRCR	Troy Canyon	126.15	29	ePKPdf	PKPdf	08 19 30.6	-1.6
DAU	Daniels Canyon	126.36	24	ePKIKP	PKPdf	08 19 30.7	-1.8
NLU	North Lily Min	126.41	25	ePKPdf	PKPdf	08 19 30.8	-1.8
MPU	Maple Canyon	126.54	25	ePKPdf	PKPdf	08 19 31.0	-1.8
DAC	Darwin (Calif)	126.75	32	PFAKE		08 19 40.0	+6.7
DAC				LR	LR		
	comp=Z,210nm,20.0s,MS4.8						
MDV	Middlebury	126.87	349	ePKPdf	PKPdf	08 19 31.0	-2.4
NCB	Newcomb	127.10	349	ePKPdf	PKPdf	08 19 31.0	-2.8
NCB				LR	LR		
	comp=Z,600nm,21.0s,MS5.2						
TMUT	Trail Mountain	127.32	25	ePKPdf	PKPdf	08 19 32.9	-1.5
MVU	Marysvale	127.56	26	ePKPdf	PKPdf	08 19 33.4	-1.5
MVU				LR	LR		
	comp=Z,302nm,20.0s,MS5.0						
MSU	Marysvale	127.57	26	ePKIKP	PKPdf	08 19 33.9	-1.0
PHWY	Pilot Hill	127.66	19	ePKPdf	PKPdf	08 19 32.4	-2.7
SRU	San Rafael	127.76	24	ePKIKP	PKPdf	08 19 31.5	-3.8
NEN	Nelson	128.65	30	ePKPdf	PKPdf	08 19 35.7	-1.4
LDFC	Landfair	128.96	31	ePKPdf	PKPdf	08 19 36.6	-1.1
ISCO	Idaho Springs	128.97	20	ePKIKP	PKPdf	08 19 35.7	-1.9
ISCO				MLR	MLR		
	comp=Z,420nm,20.0s,MS5.1						
PV01	Paradox Valley	129.38	23	ePKPdf	PKPdf	08 19 36.6	-1.8
PFO	Pinyon Flat Ob	129.38	33	ePKIKP	PKPdf	08 19 29.4	-9.2
PFO				e		08 19 37.4	
PFO				MLR	MLR		
	comp=Z,49nm,20.0s,MS4.2						
AAM	Ann Arbor	129.80	358	PFAKE		08 19 50.0	+11
AAM				LR	LR		
	comp=Z,447nm,21.0s,MS5.1						
RCBR	Riachuelo	130.33	269	PFAKE		08 19 50.0	+9.1
RCBR				LR	LR		
	comp=Z,449nm,22.0s,MS5.1						
SDCO	Great Sand Dun	130.85	21	PFAKE		08 19 50.0	+8.8
SDCO				LR	LR		
	comp=Z,471nm,20.0s,MS5.2						
SSPA	Standing Stone	130.94	352	PFAKE		08 19 50.0	+8.7
SSPA				LR	LR		
	comp=Z,183nm,22.0s,MS4.7						
ACSO	Alum Creek Sta	131.83	357	ePKPdf	PKPdf	08 19 40.1	-2.9
ACSO				LR	LR		
	comp=Z,635nm,21.0s,MS5.3						
KSU1	Kansas State U	132.00	11	ePKPdf	PKPdf	08 19 40.4	-3.0
MCWV	Mont Chateau	132.15	354	PFAKE		08 19 50.0	+6.4
MCWV				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
ANMO	Albuquerque	132.98	23	PKHKP		08 19 30.2	
ANMO	Albuquerque	132.98	23	ePKPdf	PKPdf	08 19 43.9	-1.4
ANMO				LR	LR		
	comp=Z,284nm,20.0s,MS5.0						
CBN	Corbin	133.25	351	PFAKE		08 19 50.0	+4.3
CBN				LR	LR		
	comp=Z,719nm,20.0s,MS5.4						
SLM	Saint Louis	133.33	5	PKHKP		08 19 17.6	
TUC	Tucson	133.33	29	ePKIKP	PKPdf	08 19 44.7	-1.3
TUC				MLR	MLR		
	comp=Z,235nm,21.0s,MS4.9						
LENM	Lemitar	133.46	24	ePKPdf	PKPdf	08 19 44.6	-1.6
LPM	Los Pinos Moun	133.47	24	ePKPdf	PKPdf	08 19 44.6	-1.6
CCM	Cathedral Cave	133.81	6	ePKIKP	PKPdf	08 19 43.0	-3.7
CCM				MLR	MLR		
	comp=Z,147nm,21.0s,MS4.7						
WCI	Wyandotte Cave	133.91	0	ePKIKP	PKPdf	08 19 43.9	-3.0
WCI				MLR	MLR		
	comp=Z,116nm,19.0s,MS4.6						
BLA	Blacksburg	134.63	354	ePKIKP	PKPdf	08 19 45.2	-3.1
BLA				MLR	MLR		
	comp=Z,775nm,20.0s,MS5.4						
AMTX	Amarillo	134.72	18	PFAKE		08 20 00.0	+11
AMTX				LR	LR		
	comp=Z,490nm,21.0s,MS5.2						
CPRX	Cap Rock	135.67	22	ePKPdf	PKPdf	08 19 48.9	-1.4
WMOK	Wichita Mounta	135.69	15	PKIKP	PKPdf	08 19 41.2	-9.1
WMOK	Wichita Mounta	135.69	15	ePKPpre		08 19 38.0	
WMOK				LR	LR		
	comp=Z,323nm,22.0s,MS5.0						
WVT	Waverly	135.97	2	ePKIKP	PKPdf	08 19 48.0	-2.8
WVT				MLR	MLR		
	comp=Z,474nm,22.0s,MS5.2						
CAM4	Nova Friburgo	136.01	246	(P)	PKPdf	08 19 49.0	-2.2
CAM4				i		08 19 52.2	
GDL2	Guadalupe Moun	136.22	23	ePKPpre		08 19 42.1	
MNTX	Cornudas Mount	136.26	24	ePKPpre		08 19 39.1	
MNTX				ePKPdf	PKPdf	08 19 48.6	-2.8
MNTX				LR	LR		
	comp=Z,348nm,22.0s,MS5.0						
CPCT	Cooper Cave	136.66	358	ePKPdf	PKPdf	08 19 49.6	-2.4
UALR	University of	136.92	8	ePKPdf	PKPdf	08 19 49.8	-2.7
MIAR	Mount Ida	136.97	9	ePKIKP	PKPdf	08 19 50.4	-2.2
MIAR				MLR	MLR		
	comp=Z,584nm,21.0s,MS5.3						
OXF	Oxford	137.49	4	PFAKE		08 20 00.0	+6.4
OXF				LR	LR		
	comp=Z,590nm,19.0s,MS5.3						
GOGA	Godfrey	138.65	357	PFAKE		08 20 00.0	+4.2
GOGA				LR	LR		
	comp=Z,823nm,21.0s,MS5.5						
LTX	Lajitas	139.04	24	ePKIKP	PKPdf	08 19 54.0	-2.6
LTX				MLR	MLR		
	comp=Z,510nm,22.0s,MS5.2						
LRAL	Lakeview Retre	139.08	1	ePKPdf	PKPdf	08 19 55.0	-1.6
LRAL				LR	LR		
	comp=Z,543nm,21.0s,MS5.3						
JCT	Junction City	139.39	19	ePKIKP	PKPdf	08 19 55.2	-2.0
JCT				MLR	MLR		
	comp=Z,379nm,22.0s,MS5.1						
NATX	Nacogdoches	139.49	12	PFAKE		08 20 10.0	+13
NATX				LR	LR		
	comp=Z,465nm,19.0s,MS5.2						
HKT	Hockley	140.98	14	PKHKP		08 19 51.4	
HKT	Hockley	140.98	14	ePKPpre		08 19 51.2	
HKT				LR	LR		
	comp=Z,110nm,22.0s,MS4.6						
BAO	Brasilia Array	142.19	255	⇓P	PKPdf	08 19 56.0	-6.6
BAO				i		08 19 59.1	
BAO				i		08 20 03.5	
TRQA	Tornquist	143.17	212	ePKPpre		08 19 57.1	
TRQA				LR	LR		
	comp=Z,569nm,20.0s,MS5.3						
PLCA	Paso Flores	144.75	200	ePKIKP	PKPdf	08 20 02.6	-3.7
PLCA				MLR	MLR		
	comp=Z,385nm,20.0s						
DEG	La Desirade	145.45	315	⇓eP	PKPbc	08 20 05.4	+0.5
SEG	Port Louis	145.70	315	eP	PKPbc	08 20 05.8	+0.2
BBL	Barber's Block	146.27	314	eP	PKPbc	08 20 08.2	+1.3
BBL	Barber's Block	146.27	314	eP	PKPbc	08 20 10.4	+3.5
MDN	Morne-Daniel	146.35	314	eP	PKPbc	08 20 11.0	+3.9
CRM	Caravelle	146.38	312	eP	PKPbc	08 20 07.7	+0.5
FDF	Fort de France	146.56	313	⇑eP	PKPbc	08 20 08.6	+0.9
BIM	Bigot	146.65	312	eP	PKPbc	08 20 08.5	+0.6
CBYP	Canovanas	147.15	323	ePKPdf	PKPdf	08 20 10.1	-1.0
CPUP	Villa Florida	147.36	233	PKPdf	PKPdf	08 20 09.2	-2.0
CPUP				PKPdf	PKPdf	08 20 11.1	-0.1
SJG	San Juan	147.45	323	ePKIKP	PKPdf	08 20 10.2	-1.3
SJG				MLR	MLR		
	comp=Z,722nm,22.0s						
FCH	Farellones	151.04	208	eP	PKPdf	08 20 20.2	+3.5
CLCH	Cerro Calan	151.09	207	eP	PKPdf	08 20 19.9	+3.1
TEIG	Tepich	151.75	5	ePKPdf	PKPdf	08 20 16.2	-2.0
TEIG				ePKPbc	PKPdf	08 20 22.1	+3.9
TEIG				LR	LR		
	comp=Z,264nm,21.0s,MS5.0						
SDV	Santo Domingo	157.27	318	ePKPdf	PKPdf	08 20 23.3	-2.6
SDV				LR	LR		
	comp=Z,270nm,20.0s,MS5.1						
SAML	Samuel	157.50	266	ePKPdf	PKPdf	08 20 23.8	-2.4

SAML				LR	LR		
	comp=Z,652nm,21.0s,MS5.4						
LVC	**Limon Verde**	158.20	227	*e*PKPdf	PKPdf	08 20 26.2	-0.6
LPAZ	**La Paz**	160.82	243	*e*PKIKP	PKPdf	08 20 28.0	-1.9
LPAZ				MLR	MLR		
	comp=Z,312nm,20.0s						
JTS	**JuntasAbangare**	161.70	357	PFAKE		08 20 40.0	+9.2
JTS				LR	LR		
	comp=Z,98nm,20.0s						
OTAV	**Otavalo**	168.86	318	*e*PKPdf	PKPdf	08 20 35.9	-1.0
OTAV				LR	LR		
	comp=Z,304nm,19.0s						
NNA	**Nana**	170.27	246	PFAKE		08 20 50.0	+12
NNA				LR	LR		
	comp=Z,72nm,19.0s						

*BJI **05** 08:14:02.4, 13.70N×92.80E, h30^{km}, mb4.2, Ms4.3, Msz4.2*

*NEIC **05** 08:14:02.5±0.7, 13.68N×92.79E, h30^{km}, mb4.5/4, Error ellipse: s-maj=21.2km s-min=10.2km az=54.0*

ISC 05 08:14:00.5±0.6**, 13.58N**±0.08×**92.75E**±0.08**, h30^{km}, n21, σ1^{s}21**/21**, mb4.4**/6**, MS4.0**/1**, 2D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	9.96	296	*i* P	P	08 16 24.1	-0.9
HYB	**Hyderabad**	14.20	287	*e*P	P	08 17 21.0	-1.0
HYB	**Hyderabad**	14.20	287	*i* P	P	08 17 21.0	-1.0
HYB				*e*		08 19 35.0	
JIRN	**Jiri**	15.29	337	*e*P	P	08 17 37.9	+1.8
	21nm,0.3s						
PKI	**Pulchoki**	15.52	335	*e*P	P	08 17 40.2	+1.1
	30nm,0.7s						
DMN	**Daman**	15.68	334	*e*P	P	08 17 40.9	-0.2
KKN	**Kakani**	15.76	335	*e*P	P	08 17 42.3	+0.1
GKN	**Gorkha**	16.22	333	*e*P	P	08 17 46.4	-1.7
	22nm,0.3s						
KOLN	**Koldanda**	16.50	330	*e*P	P	08 17 48.7	-2.9
	21nm,0.6s						
GYA	**Guiyang**	18.28	43	*e*P	P	08 18 14.0	0.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
LZH	**Lanzhou**	24.53	22	⇓P	P	08 19 18.5	-0.4
LZH				AP		08 19 28.1	
LZH				XP		08 19 32.0	
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb4.6						
LZH				LR	LR		
	comp=N,297nm,13.4s						
LZH				LR	LR		
	comp=Z,479nm,17.3s,MS4.0						
LZH	**Lanzhou**	24.53	22	⇓P	P	08 19 18.5	-0.4
	comp=Z,29nm,1.5s,mb4.6						
LZH				pP		08 19 28.1	
LZH				sP		08 19 32.0	
LZH				LR	LR		
	comp=Z,480nm,17.3s,MS4.0						
GTA	**Gaotai**	26.48	12	*e*P	P	08 19 37.7	+0.6
GTA				AP	pP	08 19 45.4	-0.4
GTA				XP	sP	08 19 48.5	-1.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	36.20	16	P	P	08 21 01.9	-0.7
	comp=Z,2.8nm,0.6s,mb4.4						
KURK	**Kurchatov**	38.78	346	*e*P	P	08 21 24.9	+0.7
	comp=Z,3.2nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	52.77	128	*e*P	P	08 23 14.3	-1.1
	comp=Z,6.1nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	52.77	128	*e*P	P	08 23 14.6	-0.9
ASPA	**Alice Springs**	54.68	132	*e*P	P	08 23 28.6	-0.9
STKA	**Stephens Creek**	65.05	135	*e*P	P	08 24 42.3	+1.6
BOSA	**Boshof**	77.52	236	*e*P	P	08 25 57.8	+2.3
LPG	**La Plagne**	77.67	314	*e*P	P	08 25 57.8	+1.8
	comp=Z,15nm,0.9s,mb4.6						

*NEIC **05** 08:31:04.9, 37.90N×27.38E, h29^{km}, MD3.3(ISK), MD3.2(ATH), After ISK.*

*ISK **05** 08:31:05.0, 37.89N×27.38E, h29^{km}, MD3.3*

*CSEM **05** 08:31:05.0±0.1, 37.98N×27.65E, h10^{km}, MD3.3, Error ellipse: s-maj=1.6km s-min=1.0km az=70.0*

*ATH **05** 08:31:10.8, 38.00N×27.14E, h10^{km}, MD3.2/3*

ISC 05 08:31:05.5±0.5**, 37.95N**±0.02×**27.61E**±0.04**, h7^{km}**±5^{km}**, n25, σ0^{s}96**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	0.36	144	*i* P	Pg	08 31 13.2	+0.3
AYDN				*i* S	Sg	08 31 18.5	+0.7
IZM	**Izmir**	0.52	328	*i* PG	Pg	08 31 15.8	-0.2
KDAG	**Bornova**	0.52	329	*i* P	Pg	08 31 15.9	-0.2
KDAG				*i* S	Sg	08 31 22.5	-0.6
BLCB	**Balcova**	0.62	314	*i* PG	Pg	08 31 17.6	-0.4
BLCB				*i* SG	Sg	08 31 25.6	-0.7
BLCB	**Balcova**	0.62	314	Pg	Pg	08 31 17.6	-0.4
BLCB				Sg	Sg	08 31 25.6	-0.7
SMG	**Samos**	0.66	248	*e*PB	Pb	08 31 18.1	-0.8
MLSB	**Milas**	0.67	168	*i* PG	Pg	08 31 18.7	-0.3
MLSB				*i* SG	Sg	08 31 28.7	+0.7
MLSB	**Milas**	0.67	168	Pg	Pg	08 31 18.7	-0.3
MLSB				Sg	Sg	08 31 28.7	+0.7
BDRM	**Kayabasi**	0.90	188	*i* P	Pb	08 31 22.4	-0.6
BDRM				*i* S	Sb	08 31 34.8	-0.2
MANT	**Manisa**	0.92	54	*i* P	Pb	08 31 23.1	-0.3
MANT				*i* S	Sb	08 31 34.8	-0.8
AKS	**Akhisar**	0.94	10	*i* PG	Pg	08 31 24.0	-0.3
YER	**Yerkesik**	0.98	147	*e*PG	Pg	08 31 24.5	-0.6
DENT	**Denizli**	1.15	100	*e*PN	Pn	08 31 27.5	-0.5
AYVA	**Ayvalik**	1.53	332	*i* P	Pn	08 31 34.5	+1.0
AYVA				*i* S	Sb	08 31 54.5	+1.1
KHL	**Karahalli**	1.55	76	*e*PN	Pn	08 31 34.6	+0.8
PRK	**Paraskevi**	1.66	321	*e*PB	Pb	08 31 37.5	+1.4
BALB	**Balikesir**	1.70	7	*e*PN	Pn	08 31 35.1	-0.7
BTOK	**Tokmak**	1.83	10	*i* P	Pn	08 31 40.8	+3.0
BTOK				*i* S	Pg	08 31 45.1	+2.9
APE	**Apeiranthos**	1.87	242	*e*PB	Pb	08 31 40.6	+0.9
ELL	**Elmali**	2.19	123	*e*PN	Pn	08 31 41.8	-1.1
ALT	**Altintas**	2.25	60	*e*PN	Pn	08 31 44.4	+0.7
ORLT	**Orhaneli**	2.32	25	*e*PN	Pn	08 31 44.0	-0.7
KCT	**Karacabey**	2.38	14	*e*PN	Pn	08 31 44.7	-0.9
EDC	**Edincik**	2.40	5	*e*PN	Pn	08 31 43.9	-2.0
ULDT	**Uludag**	2.49	28	*i* P	Pb	08 31 51.7	+1.5
ULDT				*i* S	Sb	08 32 26.5	+5.4

NEIC 05 08:32:43.8±1.2**, 48.53N**×**128.13W, h10^{km}, mb3.7**/5**, Error ellipse: s-maj=20.6km s-min=9.8km az=59.0, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCWA	**Octopus Mounta**	2.76	105	P	Pn	08 33 26.5	-2.4
PGC	**Sidney**	3.11	86	*e*P	Pn	08 33 32.5	-1.4
NEW	**Newport**	7.33	88	P	Pn	08 34 28.8	-4.8
YBH	**Yreka Blue Hor**	7.80	149	*e*P	Pn	08 34 36.4	-3.8
WVOR	**Wild Horse Val**	9.03	129	*e*P	P	08 34 55.0	-2.2
JLU	**Jordanelle**	14.27	118	*e*P	P	08 36 07.4	-0.5
DAWY	**Dawson**	16.73	343	*e*P	P	08 36 37.6	-1.9
PV10	**Paradox Valley**	17.14	119	*e*P	P	08 36 44.9	+0.1
FFC	**Flin Flon**	17.32	59	Pn	P	08 36 49.3	+2.4
	68nm,1.0s,SNR=14						
FFC	**Flin Flon**	17.32	59	*e*P	P	08 36 46.9	0.0
	20nm,1.1s						
PHWY	**Pilot Hill**	17.57	106	*e*P	P	08 36 50.1	-0.1
PV01	**Paradox Valley**	17.57	119	*e*P	P	08 36 47.8	-2.4
SDCO	**Great Sand Dun**	19.65	115	*e*P	P	08 37 12.9	-2.4
	1.4nm,0.8s						
INK	**Inuvik**	20.02	354	*e*P	P	08 37 16.4	-2.8
	1.9nm,1.0s						
ULM	**Lac du Bonnet**	20.98	73	P	P	08 37 27.1	-2.2
MNTX	**Cornudas Mount**	24.05	126	P	P	08 37 59.7	-0.1
	2.1nm,1.1s						
WMOK	**Wichita Mounta**	25.72	112	*e*P	P	08 38 13.3	-2.4
	3.7nm,1.0s						

*JMA **05** 08:47:37.1±0.4, 32.21N×138.91E, h318^{km}, M3.5*

ISC 05 08:47:37.4±0.8**, 32.2N**±0.1×**139.0E**±0.1**, h301^{km}**±16^{km}**, n16, σ0^{s}54**/19**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	**Tokai 1**	1.98	325	P	P	08 48 24.5	+0.1
TK02	**Tokai 2**	2.06	331	P	P	08 48 25.7	+0.7
JIM2	**Oshima 3**	2.58	8	P	P	08 48 30.6	+0.9
JIE	**Ise**	2.93	320	P	P	08 48 33.0	+0.1
BSO1	**Boso 1**	3.01	33	P	P	08 48 33.7	0.0
BSO1				*e*S	S	08 49 17.0	-0.6
JWZ	**Kozaga**	3.06	297	P	P	08 48 33.1	-1.2
JOD2	**Odawara 2**	3.10	2	P	P	08 48 34.7	0.0
JYN	**Shimob**	3.35	354	P	P	08 48 38.0	+0.7
JRY	**Ryogami san**	3.85	359	P	P	08 48 42.9	+0.3
JRY				S	S	08 49 33.6	+0.1
JGM	**Miyama**	4.00	333	P	P	08 48 44.5	+0.3
JAG	**Ashikaga**	4.28	5	P	P	08 48 46.1	-1.2
JWT	**Wachi**	4.31	317	P	P	08 48 47.4	-0.2
MAT	**Matsushiro**	4.42	352	P	P	08 48 48.5	-0.4
MAT				*e*S	S	08 49 44.9	+0.1
MAT	**Matsushiro**	4.42	352	P	P	08 48 48.9	0.0
WB2	**Warramunga Arr**	51.99	186	*e*P	P	08 56 18.1	-0.2
ASPA	**Alice Springs**	55.72	186	*e*P	P	08 56 45.4	+0.3

*NEIC **05** 09:11:56.1±0.6, 6.18S×151.44E, h10^{km}, mb4.7/8, Error ellipse: s-maj=25.9km s-min=9.6km az=121.0*

ISC 05 09:11:54.7±0.7**, 6.2S**±0.1×**151.4E**±0.2**, h10^{km}, n13, σ0^{s}86**/15**, mb4.6**/8**, 2D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	14.69	199	*e*P	P	09 15 24.4	-0.2
	9.8nm,0.9s						
WRAB	**Tennant Creek**	21.45	229	*e*P	P	09 16 45.9	+0.3
	88nm,1.1s,mb5.0						
WB2	**Warramunga Arr**	21.46	229	*e*P	P	09 16 45.6	0.0
WB2				*e*S	S	09 20 43.6	+5.0
ASPA	**Alice Springs**	24.18	222	*e*P	P	09 17 13.6	+1.2
ASPA				*e*S	S	09 21 40.2	+13
STKA	**Stephens Creek**	27.14	198	⇓*i*P	P	09 17 39.9	-0.3
	8.3nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	27.76	242	*e*P	P	09 17 45.8	-0.1
	19nm,0.8s,mb4.8						
MBWA	**Marble Bar**	34.06	241	P	P	09 18 39.6	-2.0
	4.0nm,0.8s,mb4.4						
MCK	**McKinley**	82.68	23	*e*P	P	09 24 18.8	-0.8
COLA	**College**	83.66	22	*e*P	P	09 24 23.4	-1.2
	6.8nm,1.1s,mb4.7						
QSPA	**South Pole Qui**	83.78	180	⇓*i*P	P	09 24 25.4	+0.4
	7.5nm,0.9s,mb4.8						
DAWY	**Dawson**	86.63	24	*e*P	P	09 24 40.2	+0.8
CHKZ	**Chkalovo**	89.49	324	P	P	09 24 54.6	+1.2
	0.5nm,0.6s,mb4.0						
INK	**Inuvik**	90.25	21	P	P	09 24 57.0	+0.4
	4.2nm,1.1s,mb4.7						

MEX 05 09:27:07.2±1.2**, 17.41N**×**101.03W, h16^{km}**±19^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	0.46	295	*i* P	Pb	09 27 15.3	-1.1
ZIIG				*i* S	Sb	09 27 20.4	-2.4
CAIG	**El Cayaco**	0.81	116	*i* P	Pb	09 27 19.1	-3.3
CAIG				*i* S	Sb	09 27 29.6	-3.3
ACX	**Acapulco**	1.19	117	*e*P	Pb	09 27 26.5	-2.5
ACX				*e*S	Sb	09 27 41.5	-2.5

*CSEM **05** 10:37:41.9±0.1, 38.78N×25.76E, h10^{km}, ML3.7, Error ellipse: s-maj=2.6km s-min=1.4km az=151.0*

*ATH **05** 10:37:42.3, 38.80N×25.62E, h20^{km}±5^{km}, MD3.7/15, ML3.7*

*NEIC **05** 10:37:42.2, 38.81N×25.60E, h18^{km}, MD3.7(ATH), After ATH.*

*THE **05** 10:37:43.8, 38.71N×25.76E, h20^{km}, ML3.9*

*ISK **05** 10:37:44.6, 38.89N×25.76E, h71^{km}, MD3.6*

ISC 05 10:37:41.5±0.8**, 38.81N**±0.02×**25.64E**±0.02**, h3^{km}**±6^{km}**, n70, σ0^{s}95**/86**, 4C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.65	49	*e*PN	Pg	10 37 55.2	+0.6
AYVA	**Ayvalik**	0.95	59	*i* P	Pb	10 38 01.2	+1.0
AYVA				*i* S	Sb	10 38 15.7	+2.6
BOZC	**Bozcaada**	1.07	17	*i* P	Pb	10 38 02.9	+0.6
BOZC				*i* S	Sb	10 38 15.4	-1.2
EZN	**Ezine**	1.14	28	*i* PG	Pg	10 38 04.2	-0.1
EZN				*i* SG	Sg	10 38 19.1	-0.4
EZN	**Ezine**	1.14	28	*i* Pg	Pg	10 38 04.2	-0.1
EZN				Sg	Sg	10 38 19.2	-0.3
BLCB	**Balcova**	1.18	111	*e*PN	Pn	10 38 05.6	+0.8
LOS	**Limnos**	1.20	339	*e*Pb	Pb	10 38 05.7	+1.3
LOS				*e*Sb	Sb	10 38 23.3	+3.1
IZM	**Izmir**	1.34	108	PN	Pn	10 38 07.9	+0.9
IZM				SN	Sn	10 38 23.7	-1.8
IZM	**Izmir**	1.34	108	Pn	Pn	10 38 07.9	+0.9
IZM				Sg	Sg	10 38 23.9	-2.1
KDAG	**Bornova**	1.34	107	*i* P	Pb	10 38 07.9	+1.1
KDAG				*i* S	Sb	10 38 23.5	-0.8
AOS	**Alonnisos**	1.42	285	*e*Pb	Pb	10 38 08.5	+0.3
SMG	**Samos**	1.45	139	*e*PN	Pn	10 38 10.5	+1.8
SMG	**Samos**	1.45	139	*e*Pn	Pn	10 38 11.0	+2.3
PTL	**Penteli**	1.59	242	*e*PN	Pn	10 38 10.6	-0.1
MPAR	**Parnis Oros**	1.64	247	*e*PN	Pn	10 38 11.7	+0.4
AKS	**Akhisar**	1.70	87	PN	Pn	10 38 12.5	+0.3
AKS	**Akhisar**	1.70	87	Pn	Pn	10 38 12.6	+0.4
ATH	**Athens Observa**	1.73	242	*e*PN	Pn	10 38 12.8	+0.2
APE	**Apeiranthos**	1.75	183	*e*PN	Pn	10 38 13.0	+0.1
BALB	**Balikesir**	1.93	64	PN	Pn	10 38 15.3	-0.1
BALB	**Balikesir**	1.93	64	Pn	Pn	10 38 15.4	-0.1
NEO	**Neokhori**	1.94	285	*e*PN	Pn	10 38 16.5	+0.8
XOR	**Xorichti**	1.98	287	*e*Pn	Pn	10 38 16.1	-0.2
XOR	**Xorichti**	1.98	287	*e*Pn	Pn	10 38 16.0	-0.3
OUR	**Ouranopolis**	1.99	320	*e*Pn	Pn	10 38 16.4	+0.1
OUR				*e*Sn	Sn	10 38 42.5	+0.5
NAIG	**Nisos Aigina**	2.00	239	*e*PB	Pb	10 38 16.5	-1.6
MGER	**Gerania Oros**	2.04	247	*e*PN	Pn	10 38 17.5	+0.3
BTOK	**Tokmak**	2.08	62	*i* P	Pn	10 38 18.7	+1.0
BTOK				*i* S	Sn	10 38 51.2	+6.8
ALN	**Alexandroupoli**	2.10	8	*e*Pn	Pn	10 38 17.7	-0.3
ALN				*e*Sn	Sn	10 38 44.0	-1.0
AYDN	**Tasoluk**	2.10	122	*i* P	Pn	10 38 19.3	+1.3
AYDN				*i* S	Sn	10 38 50.1	+5.1
EDC	**Edincik**	2.30	48	PN	Pn	10 38 20.0	-0.8
PLG	**Polygyros**	2.30	313	*e*PB	Pb	10 38 22.5	-0.8
MANT	**Manisa**	2.31	97	*i* P	Pn	10 38 21.6	+0.7
RDO	**Rodhopi**	2.33	358	*e*PN	Pn	10 38 21.1	-0.1
BNT	**Bandirma**	2.34	48	PN	Pn	10 38 20.3	-1.1
KCT	**Karacabey**	2.55	55	*e*PN	Pn	10 38 23.8	-0.6
KCT	**Karacabey**	2.55	55	Pn	Pn	10 38 23.9	-0.6
KCT	**Karacabey**	2.55	55	Pn	Pn	10 38 23.9	-0.5
AGG	**Agios Georgios**	2.59	276	*e*Pn	Pn	10 38 24.9	0.0
YER	**Yerkesik**	2.68	128	*e*PN	Pn	10 38 27.0	+0.8
THE	**Thessaloniki**	2.75	312	*e*Pn	Pn	10 38 27.5	+0.3
THE				*e*Sn	Sn	10 39 01.7	+0.3
LIT	**Litokhoron**	2.76	299	*e*Pn	Pn	10 38 27.4	+0.1
LIT				*e*Sn	Sn	10 39 01.4	-0.2
SRS	**Serrai**	2.79	326	*e*Pn	Pn	10 38 27.6	-0.2
ORLT	**Orhaneli**	2.81	63	*e*PN	Pn	10 38 27.7	-0.3
ORLT	**Orhaneli**	2.81	63	Pn	Pn	10 38 27.7	-0.3
DNZL	**Cakiroluk**	2.91	112	*i* P	Pn	10 38 30.4	+0.9
EVR	**Evrytania**	2.99	273	*e*PN	Pn	10 38 30.8	+0.1
VLI	**Veliai**	3.00	227	*e*PN	Pn	10 38 30.2	-0.5
ULDT	**Uludag**	3.01	63	*i* P	Pn	10 38 32.9	+1.9
ULDT				*i* S	Sn	10 39 13.0	+5.0
EDRB	**Edirne**	3.14	15	*e*PN	Pn	10 38 31.6	-1.3
EDRB	**Edirne**	3.14	15	Pn	Pn	10 38 31.6	-1.2
KNT	**Kendrikon**	3.15	319	*e*Pn	Pn	10 38 33.3	+0.3
KNT				*e*Sn	Sn	10 39 11.0	-0.6
KYTH	**Kithira**	3.27	220	*e*PN	Pn	10 38 34.1	-0.5
GRG	**Griva**	3.29	312	*e*Pn	Pn	10 38 35.1	+0.3
ITM	**Ithomi**	3.36	242	*e*PB	Pb	10 38 39.2	-2.2
YLV	**Yalova**	3.37	58	*e*PN	Pn	10 38 35.0	-1.0
ISK	**Istanbul-Kandi**	3.46	48	*e*PN	Pn	10 38 36.3	-1.0
HRT	**Hereke**	3.69	56	*e*PN	Pn	10 38 39.0	-1.6
GPA	**Golpazari**	3.90	66	*e*PN	Pn	10 38 42.8	-0.7
GPA	**Golpazari**	3.90	66	Pn	Pn	10 38 42.8	-0.7
ESKT	**Eskisehir**	4.11	78	*i* P	Pn	10 38 45.8	-0.8
SGKT	**Sivrigoynuk**	5.25	68	*i* P	Pn	10 39 02.5	-0.2
BOLS	**Boljevac**	5.73	332	⇑*i*Pn	Pn	10 39 08.6	-0.9
HARR	**Harsova**	6.12	16	⇓*i*P	Pn	10 39 14.0	-1.0
HARR	**Harsova**	6.12	16	⇓*i*P	Pn	10 39 14.0	-0.9
CFR	**Carcaliu**	6.62	15	⇓*i*P	Pn	10 39 22.5	+0.4
CFR	**Carcaliu**	6.62	15	⇓*i*P	Pn	10 39 22.5	+0.4
MLR	**Muntele Rosu**	6.68	2	⇑*i*P	Pn	10 39 24.1	+1.2
MLR	**Muntele Rosu**	6.68	2	⇑*i*P	Pn	10 39 24.0	+1.2
VRI	**Vrincioaia**	7.09	6	⇑*i*P	Pn	10 39 30.4	+1.7

*INMG **05** 10:40:27.9±1.3, 36.22N×8.56W, h19^{km}±20^{km}, MD2.8, ML2.5, Error ellipse: s-maj=18.3km s-min=4.3km az=40.0*

*CSEM **05** 10:40:27.9±0.5, 36.20N×8.50W, h40^{km}, ML2.9/13, Error ellipse: s-maj=8.6km s-min=4.5km az=37.0*

MDD 05 10:40:27.5±1.7**, 36.36N**×**8.40W, mbLg2.2**/6**, 3C-1D, Error ellipse: s-maj=15.4km s-min=7.0km az=37.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	1.21	348	*e*P	Pb	10 40 49.6	-1.4
PTEO				*e*S	Sb	10 41 06.4	-0.6
	30nm,0.1s						
PTEO	**Sao Teotonio**	1.21	348	*e*P	Pb	10 40 49.6	-1.4
PTEO				*e*S	Sb	10 41 06.4	-0.6
	30nm,0.1s						
PBEJ	**Beja**	1.72	14	*i* Pn	Pn	10 40 57.5	-1.3
PBEJ				*e*Sn	Sn	10 41 19.7	-2.1
	14nm,0.1s						
PBEJ	**Beja**	1.72	14	⇓Pn	Pn	10 40 57.5	-1.3
PBEJ				Sn	Sn	10 41 19.7	-2.1
	7.2nm,0.1s						
EMIN	**Mina Concepcio**	1.97	44	⇑P	Pn	10 41 01.0	-1.5
	2.2nm,0.2s,SNR=18						
EMIN				S	Sn	10 41 25.9	-2.3
	3.2nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	1.97	44	Pn	Pn	10 41 01.0	-1.5
	2.2nm,0.2s,SNR=18						
EMIN				Sn	Sn	10 41 25.9	-2.3
	3.2nm,0.2s,SNR=7.9						
ESPR	**Espera**	2.11	75	P	Pn	10 41 02.3	-2.1
	5.7nm,0.1s,SNR=7.9						
ESPR				S	Sn	10 41 27.6	-4.1
	0.4nm,0.3s,SNR=7.9						
ESPR	**Espera**	2.11	75	Pn	Pn	10 41 02.3	-2.2
	5.7nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	10 41 27.6	-4.2
	0.4nm,0.3s,SNR=7.9						
MOE	**Montemor**	2.16	1	*e*Pn	Pn	10 41 03.8	-1.4
MOE				*e*Sn	Sn	10 41 29.8	-3.2
MOE	**Montemor**	2.16	1	⇑Pn	Pn	10 41 03.8	-1.4
MOE				Sn	Sn	10 41 29.8	-3.2
PLOU	**Loures**	2.59	347	*e*Pn	Pn	10 41 09.2	-2.1
PLOU				*e*Sn	Sn	10 41 39.1	-4.9
	13nm,0.1s						
PLOU	**Loures**	2.59	347	*e*Pn	Pn	10 41 09.2	-2.1
PLOU				*e*Sn	Sn	10 41 39.1	-4.9
	13nm,0.1s						
EBAD	**Badajoz**	2.63	24	P	Pn	10 41 10.1	-1.9
	1.7nm,0.3s,SNR=9.3						
EBAD				S	Sn	10 41 42.3	-2.7
	1.8nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	2.63	24	Pn	Pn	10 41 10.1	-1.8
	1.7nm,0.3s,SNR=9.3						
EBAD				Sn	Sn	10 41 42.3	-2.8
	1.8nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	2.93	85	S	Sn	10 41 48.1	-4.6
	0.8nm,0.1s,SNR=7.9						
ELUQ	**Luque**	3.52	69	S	Sn	10 42 03.7	-3.9
	2.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	3.54	58	⇑P	Pn	10 41 22.6	-2.3
	3.3nm,0.2s,SNR=18						
EADA				S	Sn	10 42 03.5	-4.6
	2.0nm,0.1s,SNR=7.9						
EADA	**Adamuz**	3.54	58	Pn	Pn	10 41 22.6	-2.3
	3.3nm,0.2s,SNR=18						
EADA				Sn	Sn	10 42 03.5	-4.6
	2.0nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	3.55	12	*e*Pn	Pn	10 41 22.7	-2.3
PCBR				*e*Sn	Sn	10 42 02.8	-5.5
	12nm,0.2s						
PCBR	**Castelo Branco**	3.55	12	*e*Pn	Pn	10 41 22.7	-2.3
PCBR				*e*Sn	Sn	10 42 02.8	-5.5
	12nm,0.2s						
MTE	**Manteigas**	4.09	9	*e*Sn	Sn	10 42 16.6	-5.3
	5.1nm,0.4s						
MTE	**Manteigas**	4.09	9	Sn	Sn	10 42 16.6	-5.3
	2.5nm,0.4s						
EBAN	**Banos Encina**	4.10	63	P	Pn	10 41 29.9	-2.9
	0.7nm,0.3s,SNR=7.9						
EBAN				S	Sn	10 42 16.8	-5.4
	1.4nm,0.2s,SNR=7.9						
PVIS	**Viseu**	4.37	5	*e*Sn	Sn	10 42 21.4	-7.6
	6.2nm,0.1s						
PVIS	**Viseu**	4.37	5	Sn	Sn	10 42 21.4	-7.6
	3.1nm,0.1s						
EQES	**Quesada**	4.50	70	P	Pn	10 41 35.7	-2.8
	0.1nm,0.3s,SNR=7.9						
EQES				S	Sn	10 42 26.2	-6.1
	0.7nm,0.1s,SNR=7.9						
EQES	**Quesada**	4.50	70	Pn	Pn	10 41 35.7	-2.8
	0.1nm,0.3s,SNR=7.9						
EQES				Sn	Sn	10 42 26.2	-6.1
	0.7nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	4.82	45	P	Pn	10 41 40.2	-2.8
	2.8nm,0.1s,baz=234,slow=12,SNR=7.9						
ESDC				S	Sn	10 42 33.1	-7.3
	baz=230,slow=24,SNR=7.9						
ESDC	**Sonseca Array**	4.82	45	Pn	Pn	10 41 40.2	-2.8
	2.8nm,0.1s,SNR=7.9						
ESDC				Sn	Sn	10 42 33.1	-7.3
	SNR=7.9						
PVRL	**Vila Real**	4.94	6	*e*Sn	Sn	10 42 35.8	-7.6
	5.3nm,0.2s						
PVRL	**Vila Real**	4.94	6	Sn	Sn	10 42 35.8	-7.6
	2.7nm,0.2s						
EVIA	**Vianos**	5.21	62	S	Sn	10 42 43.2	-7.1
	0.6nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.50	3	P	Pn	10 41 50.2	-2.5
	0.5nm,0.1s,SNR=4.0						
ELOB				S	Sn	10 42 49.8	-7.9
	0.7nm,0.3s,SNR=7.9						
ELOB	**Lobios**	5.50	3	Pn	Pn	10 41 50.2	-2.5
	0.5nm,0.1s,SNR=4.0						
ELOB				Sn	Sn	10 42 49.8	-7.9
	0.7nm,0.3s,SNR=7.9						
PBRG	**Braganca**	5.59	13	*e*Sn	Sn	10 42 52.4	-7.3
	1.6nm,0.2s						
PBRG	**Braganca**	5.59	13	Sn	Sn	10 42 52.4	-7.3
	0.8nm,0.2s						
ECAL	**Calabor**	5.72	13	P	Pn	10 41 51.8	-4.0
	0.5nm,0.2s,SNR=7.9						
ECAL				S	Sn	10 42 56.6	-6.5
	SNR=7.9						
ECAL	**Calabor**	5.72	13	Pn	Pn	10 41 51.8	-4.0
	0.5nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	10 42 56.6	-6.5
	SNR=7.9						
EINC	**Incio**	6.34	7	P	Pn	10 42 01.6	-2.9
	0.2nm,0.1s,SNR=4.0						
EINC				S	Sn	10 43 08.8	-10
	SNR=4.0						
EINC	**Incio**	6.34	7	Pn	Pn	10 42 01.6	-2.9
	0.2nm,0.1s,SNR=4.0						

*JMA **05** 10:45:25.4±0.6, 23.86N×121.85E, M3.1*

*TAP **05** 10:45:26.9, 24.27N×121.74E, h6^{km}, ML3.7*

TAP Felt III J at Nanau, I J at Nanshan, I J at Nioudou.

ISC 05 10:45:27.3±0.3**, 24.25N**±0.01×**121.82E**±0.02**, h6^{km}, n54, σ0^{s}86**/90**, 6C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	0.19	339	⇑*i*P	Pg	10 45 31.4	+0.2
ENA				S	Sg	10 45 34.0	+0.1
TWD	**Chiawan**	0.26	230	⇓*i*P	Pg	10 45 32.3	-0.3
TWD				S	Sg	10 45 36.1	-0.1
HWA	**Hwalien**	0.33	215	*e*P	Pg	10 45 34.5	+0.5
TWC	**Suao**	0.36	5	⇑*i*P	Pg	10 45 34.7	+0.2
TWC				S	Sg	10 45 39.8	+0.4
NNS	**Nan Shan**	0.45	295	⇑*i*P	Pg	10 45 35.9	-0.4
NNS				S	Sg	10 45 41.4	-0.8
ENTT	**Nioudou**	0.45	330	⇑*i*P	Pg	10 45 36.3	0.0
ENTT				S	Sg	10 45 42.4	0.0
TWE	**Neicheng**	0.49	344	⇑*i*P	Pg	10 45 37.1	0.0
TWE				S	Sg	10 45 43.8	+0.2
WHF	**Hehuan Shan**	0.51	258	⇑*i*P	Pg	10 45 36.9	-0.7
WHF				S	Sg	10 45 43.6	-0.9

ILA	**Ilan**	**0.52**	**353**	*e*P	**Pg**	**10 45 37.6**	**0.0**
ILA				S	**Sg**	**10 45 45.7**	**+1.1**
ESL	**Shilin**	**0.56**	**219**	*e*P	**Pg**	**10 45 37.7**	**-0.8**
TWT	**Tachien**	**0.58**	**270**	*e*P	**Pg**	**10 45 38.8**	**-0.2**
TWT				S	**Sg**	**10 45 46.0**	**-0.8**
NSK	**Sanguang**	**0.59**	**316**	⇓*i*P	**Pg**	**10 45 38.9**	**-0.3**
NSK				S	**Sg**	**10 45 46.4**	**-0.8**
TWA	**Mucha**	**0.76**	**344**	*e*P	**Pb**	**10 45 42.2**	**-0.2**
TWB1	**Santiao Chiao**	**0.77**	**12**	P	**Pb**	**10 45 42.3**	**-0.4**
NWF	**Wu-fen Shan**	**0.82**	**358**	*e*P	**Pb**	**10 45 43.4**	**-0.1**
NWF				S	**Sb**	**10 45 54.0**	**-0.4**
TAP1	**Taipei**	**0.83**	**341**	*e*P	**Pb**	**10 45 43.6**	**0.0**
NSTT	**Nanjuang**	**0.83**	**297**	*e*P	**Pb**	**10 45 43.1**	**-0.6**
NSTT				S	**Sb**	**10 45 54.1**	**-0.8**
EHY	**Hungye**	**0.87**	**211**	*e*P	**Pb**	**10 45 42.6**	**-1.7**
EHY				S	**Sb**	**10 45 57.6**	**+1.6**
SMLT	**Sun Moon Lake**	**0.91**	**247**	*e*P	**Pb**	**10 45 44.7**	**-0.4**
SMLT				S	**Sb**	**10 45 55.9**	**-1.4**
NCU	**National Centr**	**0.92**	**322**	*e*P	**Pb**	**10 45 45.2**	**0.0**
NCU				S	**Sb**	**10 45 58.2**	**+0.8**
TWS1	**Kuangyinshan**	**0.92**	**337**	*e*P	**Pb**	**10 45 45.1**	**-0.1**
TWS1				S	**Sb**	**10 45 58.3**	**+0.9**
TYC	**Yuchr**	**0.94**	**249**	P	**Pb**	**10 45 45.1**	**-0.4**
TYC				S	**Sb**	**10 45 56.2**	**-1.9**
TWQ1	**Liyutan**	**0.96**	**276**	*e*P	**Pb**	**10 45 47.2**	**+1.4**
TWQ1				S	**Sb**	**10 45 58.8**	**+0.3**
NSY	**Sanyi**	**0.97**	**280**	*e*P	**Pb**	**10 45 46.0**	**-0.1**
NSY				S	**Sb**	**10 45 59.3**	**+0.2**
TWF1	**Yuli**	**1.01**	**208**	*e*P	**Pb**	**10 45 45.1**	**-1.7**
TWY	**Chenhua**	**1.04**	**349**	*e*P	**Pb**	**10 45 47.7**	**+0.5**
TCU	**Taichung**	**1.04**	**265**	*e*P	**Pb**	**10 45 48.8**	**+1.4**
YUS	**Yu-Shan**	**1.09**	**226**	*e*P	**Pb**	**10 45 47.7**	**-0.5**
YUS				S	**Sb**	**10 46 03.2**	**+0.7**
WNT	**Mingjian**	**1.10**	**250**	*e*P	**Pb**	**10 45 48.5**	**+0.2**
WNT				S	**Sb**	**10 46 04.7**	**+2.0**
YOJ	**Yonaguni jima**	**1.11**	**79**	P	**Pb**	**10 45 48.8**	**+0.3**
YOJ				*e*S	**Sb**	**10 46 05.8**	**+2.8**
ALS	**Alishan**	**1.18**	**232**	*e*P	**Pb**	**10 45 49.7**	**0.0**
ALS				S	**Sb**	**10 46 06.0**	**+0.9**
CHKT	**Chengkung**	**1.22**	**200**	*e*P	**Pb**	**10 45 48.2**	**-2.1**
CHN5	**Tsauling**	**1.23**	**238**	*e*P	**Pb**	**10 45 50.4**	**0.0**
CHN5				S	**Sb**	**10 46 07.2**	**+0.8**
ELDTW	**Lidau**	**1.29**	**215**	*e*P	**Pb**	**10 45 49.7**	**-1.8**
PCYT	**Pengchaiyu**	**1.39**	**10**	P	**Pn**	**10 45 53.1**	**-0.1**
CHN4	**Tsaushan**	**1.43**	**232**	P	**Pn**	**10 45 53.9**	**0.0**
CHN4				S	**Sb**	**10 46 14.0**	**+1.7**
STYT	**Tauyuan**	**1.45**	**222**	*e*P	**Pn**	**10 45 53.4**	**-0.8**
STYT				S	**Sb**	**10 46 13.8**	**+0.9**
CHY	**Chiayi**	**1.48**	**240**	*e*P	**Pn**	**10 45 54.8**	**+0.3**
CHY				S	**Sb**	**10 46 13.4**	**-0.2**
WTP	**Ta-pu**	**1.49**	**228**	P	**Pn**	**10 45 54.5**	**-0.1**
WTP				S	**Sb**	**10 46 14.8**	**+0.8**
TWK	**Hsinying**	**1.56**	**231**	*e*P	**Pn**	**10 45 55.8**	**+0.1**
TWK				S	**Sb**	**10 46 17.1**	**+1.0**
TWG	**Pinlang**	**1.58**	**206**	*e*P	**Pn**	**10 45 52.0**	**-3.9**
CHN1	**Nanshi**	**1.59**	**228**	*e*P	**Pn**	**10 45 56.0**	**0.0**
CHN1				S	**Sb**	**10 46 17.7**	**+0.9**
SGST	**Jiashian**	**1.62**	**224**	*e*P	**Pn**	**10 45 56.6**	**+0.1**
SGST				S	**Sb**	**10 46 18.6**	**+0.7**
IRIF	**Iriomote-Funau**	**1.75**	**87**	P	**Pn**	**10 45 57.4**	**-1.0**
IRIF				*e*S	**Sn**	**10 46 21.2**	**0.0**
ECL	**Taimali**	**1.83**	**206**	*e*P	**Pn**	**10 45 57.2**	**-2.3**
SSD	**Sandimen**	**1.85**	**216**	*e*P	**Pn**	**10 45 59.5**	**-0.3**
SSD				S	**Sn**	**10 46 24.9**	**+1.2**
TWM1	**Shoushan**	**1.91**	**222**	*e*P	**Pn**	**10 46 02.2**	**+1.5**
JKRS	**Kuro-shima**	**2.00**	**90**	P	**Pn**	**10 46 01.7**	**-0.3**
JKRS				*e*S	**Sn**	**10 46 27.9**	**+0.3**
EAST	**Anshuo**	**2.06**	**206**	*e*P	**Pn**	**10 46 03.6**	**+0.8**
JIJ	**Ishigaki jima**	**2.13**	**87**	P	**Pn**	**10 46 02.9**	**-0.9**
JIJ				*e*S	**Sn**	**10 46 29.8**	**-1.0**
SCZT	**Fangliau**	**2.17**	**211**	*e*P	**Pn**	**10 46 04.5**	**+0.1**
WDGT	**Dungji**	**2.21**	**244**	*e*P	**Pn**	**10 46 04.4**	**-0.5**
LAY	**Lan-yu**	**2.22**	**186**	*e*P	**Pn**	**10 46 01.1**	**-3.9**
JTJ	**Tarama**	**2.66**	**81**	P	**Pn**	**10 46 11.6**	**+0.2**
JTJ				*e*S	**Sn**	**10 46 45.6**	**+1.3**

JMA ***05*** *10:46:40.8±0.3, 23.86N×121.59E, h95km*

TAP 05 10:46:39.9, 23.66N×121.56E, h39km, ML3.0, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**1.55**	**59**	P	P	10 47 06.3	+0.8
YOJ				*e*S	S	10 47 25.4	+0.8
HATJ	**Hateruma jima**	**2.09**	**79**	P	P	10 47 14.0	+0.7
HATJ				*e*S	S	10 47 39.0	+0.7
IRIF	**Iriomote-Funau**	**2.10**	**71**	P	P	10 47 14.2	+0.9
IRIF				*e*S	S	10 47 39.2	+0.9
JKRS	**Kuro-shima**	**2.31**	**75**	P	P	10 47 17.5	+1.1
JKRS				*e*S	S	10 47 45.2	+1.3
JIJ	**Ishigaki jima**	**2.46**	**73**	P	P	10 47 18.5	-0.1
JIJ				*e*S	S	10 47 47.2	-0.5
JTJ	**Tarama**	**3.03**	**71**	P	P	10 47 26.4	-0.3
JTJ				*e*S	S	10 48 01.5	-0.6

NEIC ***05*** *10:47:49.9±1.7, 34.68N×73.37E, h22km±13km, mb4.8/69, Error ellipse: s-maj=6.8km s-min=4.2km az=212.0*

NEIC Felt at Mansehra.

BJI ***05*** *10:47:50.2, 34.75N×73.68E, h11km, mB4.8, mb4.6, ML5.1, Ms4.5, Msz4.3*

MOS ***05*** *10:47:50.6±1.0, 34.77N×73.21E, h33km, mb5.0/49, Error ellipse: s-maj=8.2km s-min=4.9km az=122.2*

NDI ***05*** *10:47:53.1±7.8, 34.44N×73.39E, h15km, mb4.7, ML4.5, mb4.8(NEIC)*

NNC ***05*** *10:47:56.4±18.0, 34.80N×73.61E, h99km±160km, mpv4.7, Error ellipse: s-maj=344.4km s-min=158.6km az=87.0*

ISC 05 10:47:51.1±0.4**, 34.64N**±0.02×**73.40E**±0.03**, h48**km±4km**, h53**km±4.6km**:pP-P, n262,** σ1§**24**/283**, mb4.8**/85**, MS4.2**/6**, 19C-10D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	**0.99**	**187**	⇓P	**P**	**10 48 09.0**	**+0.3**
CEP	**Cherat**	**1.48**	**237**	⇓P	**P**	**10 48 15.4**	**-0.4**
CEP				S	**S**	**10 48 36.0**	**+1.8**
JMU	**Jammu**	**2.29**	**147**	*e*PG	**P**	**10 48 32.5**	**+5.3**
THW	**Thamme Wali**	**2.30**	**217**	⇑P	**P**	**10 48 29.1**	**+1.7**
SARP	**Sargodha**	**2.78**	**193**	P	**P**	**10 48 35.6**	**+1.4**
SARP				S	**S**	**10 49 14.0**	**+7.2**
THN	**Thein Dam**	**2.93**	**138**	*e*P	**P**	**10 48 39.3**	**+3.0**
THN				*e*SG	**S**	**10 49 24.2**	**+14**
SBDP	**Sheikh Budin**	**3.19**	**224**	P	**P**	**10 48 41.1**	**+1.1**
PONG	**Pong**	**3.42**	**141**	⇓*e*P	**P**	**10 48 47.0**	**+3.7**
PONG				*e*		10 49 49.0	
PONG				*e*		10 51 03.0	
PONG				*e*		10 52 06.0	
DRP	**Derazinda**	**3.94**	**224**	P	**P**	**10 48 51.8**	**+1.2**
BHK	**Bhakra**	**4.09**	**141**	*e*P	**P**	**10 48 55.7**	**+3.0**
BHK				*e*		10 49 57.1	
SDNR	**Sundarnagar**	**4.33**	**135**	⇑*i*P	**P**	**10 48 58.8**	**+2.7**
SDNR				*e*		10 50 06.6	
SMLA	**Simla**	**4.72**	**137**	⇑*i*P	**P**	**10 49 18.3**	**+17**
SMLA				*i* S	**S**	**10 50 11.9**	**+16**
KLP	**Kalpa**	**5.11**	**126**	*e*P	**P**	**10 49 09.2**	**+2.2**
KLP				*e*	**S**	**10 50 07.3**	**+1.7**
KLP				AML	AML	10 50 42.5	
	comp=E,3µm,0.8s						
KLP				AML	AML	10 50 43.1	
	comp=N,3µm,1.2s						
KKR	**Kurukshetra**	**5.49**	**147**	*e*P	**P**	**10 49 14.3**	**+2.0**
DDI	**Dehra Dun**	**5.83**	**136**	*e*	**P**	**10 49 12.6**	**-4.4**
DDI				*e*		10 49 58.6	
JOSI	**Joshimath**	**6.60**	**126**	*e*	**P**	**10 49 23.2**	**-4.7**
JOSI				AML	AML	10 51 17.4	
	comp=N,1µm,0.8s						
JOSI				AML	AML	10 51 19.6	
	comp=E,906nm,0.9s						
NDI	**New Delhi**	**6.77**	**150**	*e*PN	**P**	**10 49 29.5**	**-0.8**
NDI				*e*	**S**	**10 50 45.0**	**-1.9**
NDI				*e*		10 51 30.0	
KALG	**Kalgarh**	**6.84**	**137**	*e*	**P**	**10 49 20.0**	**-11**
KALG				*e*S	**S**	**10 50 41.3**	**-7.4**
KHET	**Khetri**	**6.86**	**162**	*e*P	**P**	**10 49 30.5**	**-1.1**
KHET				*e*	**S**	**10 50 48.2**	**-0.9**
KHET				*e*		10 51 41.1	
	comp=E,282nm,0.4s						
KHET				*e*		10 51 41.7	
	comp=N,180nm,0.5s						
AYAN	**Aya Nagar**	**6.91**	**152**	*e*P	**P**	**10 49 31.9**	**-0.4**
ASOR	**Ausora**	**6.95**	**146**	*e*P	**P**	**10 49 32.6**	**-0.2**
ASOR				*e*		10 51 35.6	
KUDL	**Kundal**	**6.99**	**157**	*e*P	**P**	**10 49 33.0**	**-0.5**
SONA	**Sohna**	**7.10**	**153**	*e*P	**P**	**10 49 34.2**	**-0.7**
SONA				*e*	**S**	**10 50 53.7**	**-1.5**
SONA				*e*		10 51 47.8	
	comp=N,256nm,0.4s						
SONA				*e*		10 51 48.4	
	comp=E,297nm,0.5s						
AML	**Almayashu**	**7.48**	**2**	P	**P**	**10 49 40.9**	**+0.8**
	SNR=49						
KZA	**Kyzart**	**7.56**	**10**	P	**P**	**10 49 41.7**	**+0.4**
	SNR=52						
UCH	**Uchtor**	**7.62**	**6**	P	**P**	**10 49 42.8**	**+0.6**
	SNR=62						
LGTI	**Lohaghat**	**7.78**	**130**	⇑*i*P	**P**	**10 49 45.7**	**+1.4**
LGTI				*e*	**S**	**10 51 09.5**	**-2.4**
ULHL	**Ulahol**	**7.91**	**15**	P	**P**	**10 49 47.0**	**+0.9**
	SNR=8.1						
JASL	**Jaisalmer**	**7.99**	**196**	*e*P	**P**	**10 49 47.1**	**-0.1**
EKS2	**Erkin-Say**	**8.01**	**2**	P	**P**	**10 49 48.4**	**+0.8**
	SNR=25						
AAK	**Ala-Archa**	**8.03**	**6**	⇑P	**P**	**10 49 48.0**	**+0.3**
	comp=E,21nm,0.5s						
AAK				⇑S	**S**	**10 51 15.9**	**-2.1**
	comp=E,100nm,0.8s						
AAK	**Ala-Archa**	**8.03**	**6**	P	**P**	**10 49 48.3**	**+0.6**
	SNR=33						
AAK	**Ala-Archa**	**8.03**	**6**	*i* P	**P**	**10 49 47.7**	**0.0**
AAK				pmax	pmax		
	comp=Z,21nm,0.5s						
AAK	**Ala-Archa**	**8.03**	**6**	*e*P	**P**	**10 49 47.1**	**-0.6**
	comp=Z,29nm,0.6s						
KBK	**Karagaybulak**	**8.09**	**8**	P	**P**	**10 49 49.4**	**+0.8**
	SNR=11						
AJM	**Ajmer**	**8.21**	**172**	⇑*i*P	**P**	**10 49 47.0**	**-3.2**
AJM				*i* S	**S**	**10 51 17.0**	**-5.5**
FRU	**Bishkek**	**8.23**	**6**	*e*P	**P**	**10 49 55.0**	**+4.4**
FRU				pmax	pmax		
	comp=Z,40nm,1.8s						
CHMS	**Chumysh**	**8.41**	**7**	P	**P**	**10 49 53.3**	**+0.3**
	SNR=18						
TKM2	**Tokmak 2**	**8.44**	**11**	P	**P**	**10 49 53.6**	**+0.2**
	SNR=36						
USP	**Ospenovka**	**8.65**	**5**	P	**P**	**10 49 57.8**	**+1.4**
	SNR=7.9						
KOLN	**Koldanda**	**11.09**	**125**	*e*P	**P**	**10 50 28.0**	**-1.8**
	comp=Z,58nm,0.3s						
GKN	**Gorkha**	**11.66**	**122**	*e*P	**P**	**10 50 35.3**	**-2.1**
	comp=Z,141nm,0.4s						
ALBI	**Allahabad**	**11.81**	**140**	*e*P	**P**	**10 50 35.0**	**-4.4**
DMN	**Daman**	**12.23**	**122**	*e*P	**P**	**10 50 42.1**	**-2.9**
	comp=Z,172nm,0.6s						
KKN	**Kakani**	**12.24**	**121**	*e*P	**P**	**10 50 42.9**	**-2.3**
	comp=Z,85nm,0.4s						
PKI	**Pulchoki**	**12.46**	**121**	*e*P	**P**	**10 50 46.5**	**-1.7**
	comp=Z,110nm,0.5s						
GUN	**Gumba**	**12.60**	**119**	*e*P	**P**	**10 50 48.3**	**-1.7**
	comp=Z,126nm,0.6s						
JIRN	**Jiri**	**12.97**	**119**	*e*P	**P**	**10 50 53.3**	**-1.6**
	comp=Z,197nm,0.4s						
MK31	**Makanchi Array**	**13.87**	**26**	⇓P	**P**	**10 51 05.8**	**-0.8**
	comp=Z,13nm,0.8s,baz=204,slow=12,SNR=86						
MKAR	**Makanchi Array**	**13.87**	**26**	*i* P	**P**	**10 51 05.9**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,17nm,0.8s						
NGP	**Nagpur**	**14.33**	**158**	*e*	**P**	**10 51 09.4**	**-3.4**
NGP				*e*	**S**	**10 53 50.2**	**-0.9**
	comp=Z,32nm,1.2s						
WMQ	**Urumqi**	**14.36**	**46**	*e*P	**P**	**10 51 11.4**	**-1.6**
WMQ				AMB	AMB		
	comp=Z,34nm,1.0s						
BLSP	**Bilaspur**	**14.63**	**146**	*e*P	**P**	**10 51 16.1**	**-0.6**
BLSP				*e*	**S**	**10 53 47.3**	**-11**
LSA	**Lhasa**	**15.81**	**103**	P	**P**	**10 51 29.6**	**-2.3**
POO	**Poona**	**16.05**	**178**	*e*P	**P**	**10 51 32.0**	**-3.0**
POO				*i*	**S**	**10 54 25.0**	**-6.2**
KURK	**Kurchatov**	**16.51**	**12**	⇑P	**P**	**10 51 35.9**	**-4.6**
	comp=Z,28nm,1.3s,baz=233,slow=12,SNR=40						
KURK	**Kurchatov**	**16.51**	**12**	*i* P	**P**	**10 51 35.3**	**-5.2**
KURK				pmax	pmax		
	comp=Z,28nm,1.3s						
KURK	**Kurchatov**	**16.51**	**12**	*e*P	**P**	**10 51 36.0**	**-4.6**
	comp=Z,15nm,0.9s						
KAD	**Karad**	**17.28**	**177**	*e*	**P**	**10 51 48.0**	**-2.4**
KAD				*e*	**S**	**10 55 02.0**	**+2.8**
SMDO	**Samad**	**17.70**	**233**	⇓P	**P**	**10 52 01.8**	**+6.2**
HYB	**Hyderabad**	**17.76**	**164**	*e*P	**P**	**10 51 58.5**	**+2.0**
HYB				*e*S	**S**	**10 55 03.0**	**-7.1**
HYB	**Hyderabad**	**17.76**	**164**	*i* P	**P**	**10 51 58.5**	**+2.0**
HYB				*e*S	**S**	**10 55 03.0**	**-7.1**
JMDO	**Jabal Madar**	**18.15**	**232**	⇑P	**P**	**10 52 05.1**	**+3.9**
	SNR=10.0						
BVA0	**Borovoye Array**	**18.50**	**354**	⇓P	**P**	**10 52 02.7**	**-2.7**
	comp=Z,3.1nm,0.7s,baz=158,slow=14,SNR=121						
BVA0	**Borovoye Array**	**18.50**	**354**	*i* P	**P**	**10 52 02.6**	**-2.8**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHKZ	**Chkalovo**	**19.13**	**355**	⇓P	**P**	**10 52 10.3**	**-2.4**
	comp=Z,10nm,0.7s						
CHKZ	**Chkalovo**	**19.13**	**355**	*e*P	**P**	**10 52 10.1**	**-2.6**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CHKZ	**Chkalovo**	**19.13**	**355**	*e*P	**P**	**10 52 10.1**	**-2.6**
	comp=Z,8.2nm,0.6s						
NVS	**Novosibirsk**	**21.33**	**16**	*e*P	**P**	**10 52 33.6**	**-2.2**
NVS				*e*S	**S**	**10 56 26.8**	**+2.0**
NVS				pmax	pmax		
	comp=Z,45nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=N,84nm,1.7s						
NVS				smax			
	comp=N,64nm,1.9s						
GTA	**Gaotai**	**21.58**	**70**	*e*P	**P**	**10 52 40.5**	**+2.1**
GTA				AP		10 52 48.0	
GTA				XP		10 52 51.2	
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.0						
GTA				AMB	AMB		
	comp=Z,87nm,3.8s						
GTA				LR	LR		
	comp=N,160nm,13.0s,MS3.8						
GTA				LR	LR		
	comp=E,171nm,11.5s,MS3.8						
GTA				LR	LR		
	comp=Z,281nm,14.9s,MS3.8						
GNI	**Garni**	**23.37**	**292**	*i* P	**P**	**10 52 59.7**	**+3.8**
GNI	**Garni**	**23.37**	**292**	*e*P	**P**	**10 52 59.0**	**+3.1**
	comp=Z,28nm,0.9s,mb4.7						
SVE	**Sverdlovsk**	**23.83**	**343**	*e*P	**P**	**10 53 00.0**	**-0.2**
SVE				*e*		10 53 09.0	
SVE				*e*		10 53 38.0	
ARU	**Arti**	**24.04**	**340**	P	**P**	**10 53 03.1**	**+0.9**
	comp=Z,210nm,0.6s,mb5.7,SNR=15						
ARU	**Arti**	**24.04**	**340**	⇑*i*P	**P**	**10 52 55.5**	**-6.7**
ARU				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.6						
WHFO	**Wadi Hawf**	**24.16**	**231**	P	**P**	**10 53 06.2**	**+2.4**
	SNR=9.5						
LZH	**Lanzhou**	**24.82**	**78**	*e*P	**P**	**10 53 14.6**	**+4.5**
LZH				AMB	AMB		
	comp=Z,33nm,1.4s,mb4.7						
LZH				LR	LR		
	comp=N,517nm,13.0s						
LZH				LR	LR		
	comp=Z,893nm,17.5s,MS4.3						
LZH	**Lanzhou**	**24.82**	**78**	*e*P	**P**	**10 53 14.6**	**+4.5**
LZH				*PP		10 53 24.1	
LZH				*SP		10 53 28.0	
LZH				pmax	pmax		
	comp=Z,33nm,1.4s,mb4.7						
LZH				MLR	MLR		
	comp=Z,890nm,17.5s,MS4.3						
LZH	**Lanzhou**	**24.82**	**78**	*e*P	**P**	**10 53 14.6**	**+4.5**
	comp=Z,33nm,1.4s,mb4.7						
LZH				pP		10 53 24.1	
LZH				sP		10 53 28.0	
LZH				LR	LR		
	comp=Z,890nm,17.5s,MS4.3						
ABTO	**Aybut**	**24.88**	**231**	⇑P	**P**	**10 53 13.5**	**+2.7**
	SNR=21						
GOF	**Gofitskoye**	**25.40**	**303**	⇓*i*P	**P**	**10 53 17.5**	**+2.1**
GOF				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.8						
KIV	**Kislovodsk**	**25.40**	**301**	*i* P	**P**	**10 53 19.2**	**+3.7**
MOY	**Mondy**	**26.13**	**41**	*e*P	**P**	**10 53 27.4**	**+5.2**
MOY				pmax	pmax		
	comp=Z,32nm,1.7s,mb4.6						
ZAK	**Zakamensk**	**26.82**	**45**	⇑*e*P	**P**	**10 53 29.9**	**+1.3**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.1						
KMI	**Kunming**	**27.07**	**103**	P	**P**	**10 53 35.4**	**+4.3**
KMI				AMB	AMB		
	comp=Z,11nm,1.4s,mb4.2						
KMI				AMB	AMB		
	comp=Z,53nm,3.1s						
KMI				LR	LR		
	comp=N,252nm,19.8s,MS3.8						
KMI				LR	LR		
	comp=E,106nm,19.8s,MS3.8						
KMI				LR	LR		
	comp=Z,215nm,13.5s						
KMI	**Kunming**	**27.07**	**103**	P	**P**	**10 53 35.4**	**+4.3**
	comp=Z,11nm,1.4s,mb4.2						
KMI				pP	pP	10 53 47.2	+3.8
KMI				PP	PP	10 54 39.7	+21
KMI				S	S	10 58 26.6	+23
KMI				sS		10 58 44.4	
KMI				LR	LR		
	comp=Z,220nm,13.5s,MS3.9						
SOC	**Sochi**	**27.47**	**299**	*e*P	**P**	**10 53 34.6**	**0.0**
SOC				*e*		10 54 23.8	
SOC				*e*		10 56 52.2	
SOC				*e*S	**S**	**10 58 10.0**	**-0.1**
SOC				*e*SS	SS	10 59 27.9	-2.2
SOC				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.0						
SOC				pmax	pmax		
	comp=N,66nm,1.4s						
SOC				pmax	pmax		
	comp=E,64nm,1.2s						
TLY	**Talaya**	**27.59**	**43**	*e*P	**P**	**10 53 41.1**	**+5.5**
TLY				*e*S	**S**	**10 58 20.6**	**+8.7**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,207µm,17.0s						
CM31	**Chiang Mai Arr**	**27.84**	**119**	*e*P	**P**	**10 53 37.8**	**-0.5**
	comp=Z,29nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**27.84**	**119**	*i* P	**P**	**10 53 40.1**	**+1.9**
CMAR				pmax	pmax		
	comp=Z,16nm,1.0s						
MALT	**Malatya**	**28.26**	**288**	*e*P	**P**	**10 53 42.7**	**+0.9**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
MALT	**Malatya**	**28.26**	**288**	*e*P	**P**	**10 53 42.7**	**+0.9**
	comp=Z,2.4nm,0.8s,mb3.9						
ULN	**Ulaanbaatar**	**28.30**	**52**	*i* P	**P**	**10 53 43.5**	**+1.5**
ULN	**Ulaanbaatar**	**28.30**	**52**	*e*P	**P**	**10 53 42.9**	**+1.0**
	comp=Z,8.2nm,1.1s,mb4.3						
GYA	**Guiyang**	**29.68**	**97**	P	**P**	**10 53 57.3**	**+2.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
OBN	**Obninsk**	**32.62**	**320**	*e*P	**P**	**10 54 19.8**	**-0.3**
OBN				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.5						
WHN	**Wuhan**	**34.57**	**85**	*e*P	**P**	**10 54 36.0**	**-1.2**
BOD	**Bodaibo**	**35.61**	**37**	*e*P	**P**	**10 54 46.3**	**+0.6**
CFR	**Carcaliu**	**35.86**	**301**	⇓*i*P	**P**	**10 54 48.1**	**+0.1**
VRI	**Vrincioaia**	**36.86**	**302**	⇑*i*P	**P**	**10 55 04.0**	**+7.6**
MLR	**Muntele Rosu**	**37.41**	**301**	⇑*i*P	**P**	**10 55 02.6**	**+1.6**
MLR	**Muntele Rosu**	**37.41**	**301**	⇑*i*P	**P**	**10 55 02.5**	**+1.5**
NJ2	**Nanjing**	**37.81**	**81**	*e*P	**P**	**10 55 05.1**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
JOF	**Joensuu**	**38.45**	**330**	*e*p	**P**	**10 55 09.1**	**-0.4**
	comp=Z,26nm,0.6s,mb5.1						
KWP	**Kalwaria**	**39.69**	**308**	*e*P	**P**	**10 55 20.9**	**+0.9**
KWP				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.0						
KWP	**Kalwaria**	**39.69**	**308**	*e*P	**P**	**10 55 20.9**	**+1.0**
	comp=Z,42nm,1.3s,mb5.0						
KOLS	**Kolonicke sedl**	**39.95**	**307**	*e*P	**P**	**10 55 22.6**	**+0.5**
SSE	**Sheshan**	**40.00**	**81**	P	**P**	**10 55 22.5**	**-0.2**
SSE				S	**S**	**11 01 21.1**	**-3.6**
SSE				AMB	AMB		
	comp=Z,15nm,1.3s,mb4.6						
SSE				AMB	AMB		
	comp=Z,45nm,5.2s						
SSE				LR	LR		
	comp=N,869nm,20.2s,MS4.9						
SSE				LR	LR		
	comp=E,2µm,20.4s,MS4.9						
SSE				LR	LR		
	comp=Z,2µm,15.5s,MS5.2						
SSE	**Sheshan**	**40.00**	**81**	P	**P**	**10 55 22.5**	**-0.2**
	comp=Z,15nm,1.3s,mb4.6						
SSE				S	**S**	**11 01 21.1**	**-3.6**
SSE				sS		11 01 50.8	
SSE				LR	LR		
	comp=Z,2µm,15.5s,MS5.2						
FINES	**FINESS Array B**	**40.11**	**327**	*e*P	**P**	**10 55 23.5**	**+0.2**
KAF	**Kangasniemi**	**40.24**	**328**	*e*p	**P**	**10 55 23.1**	**-1.3**
	comp=Z,11nm,0.9s,mb4.6						
KAF	**Kangasniemi**	**40.24**	**328**	*e*P	**P**	**10 55 23.1**	**-1.3**
KAF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
CN2	**Changchun**	**40.76**	**61**	*e*P	**P**	**10 55 29.9**	**+1.0**
OJC	**Ojcow**	**41.59**	**309**	*e*P	**P**	**10 55 36.0**	**+0.4**
OKC	**Ostrava-Krasne**	**42.65**	**308**	*e*P	**P**	**10 55 45.1**	**+0.8**
MORC	**Moravsky Berou**	**43.05**	**308**	*e*P	**P**	**10 55 47.7**	**+0.2**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
MORC	**Moravsky Berou**	**43.05**	**308**	*e*P	**P**	**10 55 47.6**	**+0.1**
	comp=Z,4.7nm,0.6s,mb4.4						
KEV	**Kevo**	**43.25**	**338**	*e*p	**P**	**10 55 46.9**	**-2.0**
	comp=Z,18nm,0.9s,mb4.8						
KEV	**Kevo**	**43.25**	**338**	*e*P	**P**	**10 55 46.9**	**-2.0**
KEV				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
ARE0	**ARCESS Array S**	**43.60**	**338**	*e*P	**P**	**10 55 52.5**	**+0.7**
DPC	**Dobruska-Polom**	**43.82**	**309**	*e*P	**P**	**10 55 54.2**	**+0.4**
UPC	**Upice**	**44.01**	**309**	*e*P	**P**	**10 55 55.7**	**+0.4**
YAK	**Yakutsk**	**44.37**	**34**	*i* P	**P**	**10 55 58.6**	**+0.5**
YAK				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
YAK	**Yakutsk**	**44.37**	**34**	*e*P	**P**	**10 55 57.5**	**-0.6**
	comp=Z,36nm,0.7s,mb5.2						
PRU	**Pruhonice**	**44.98**	**309**	*e*P	**P**	**10 56 03.8**	**+0.7**
BRG	**Berggiesshubel**	**45.31**	**310**	*e*P	**P**	**10 56 06.4**	**+0.6**
BRG				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
BRG	**Berggiesshubel**	**45.31**	**310**	*e*P	**P**	**10 56 06.4**	**+0.6**
	comp=Z,11nm,1.1s,mb4.6						
KHC	**Kasperske Hory**	**45.66**	**307**	*e*P	**P**	**10 56 08.8**	**+0.2**
CLL	**Collm**	**45.88**	**311**	*e*P	**P**	**10 56 10.0**	**-0.3**
CLL	**Collm**	**45.88**	**311**	P	**P**	**10 56 10.0**	**-0.3**
TIXI	**Tiksi**	**46.78**	**21**	*i* P	**P**	**10 56 16.9**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
MOX	**Moxa**	**46.80**	**310**	*e*P	**P**	**10 56 18.0**	**+0.5**
NB2	**NORSAR Subarra**	**47.04**	**324**	P	**P**	**10 56 18.2**	**-1.0**
	comp=Z,4.5nm,0.5s,mb4.7,baz=97,slow=7.4						
NB2	**NORSAR Subarra**	**47.04**	**324**	P	**P**	**10 56 18.2**	**-1.0**
NB2				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
GRA1	**Grafenberg Arr**	**47.14**	**308**	*e*P	**P**	**10 56 20.9**	**+0.7**
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**47.14**	**308**	*e*P	**P**	**10 56 20.9**	**+0.7**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**47.14**	**308**	*e*P	**P**	**10 56 20.9**	**+0.7**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**47.14**	**308**	*e*P	**P**	**10 56 20.9**	**+0.7**
	comp=Z,6.0nm,1.0s,mb4.5						
KMBO	**Kilima Mbogo**	**49.11**	**231**	*e*P	**P**	**10 56 38.0**	**+2.0**
KMBO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KMBO	**Kilima Mbogo**	**49.11**	**231**	*e*P	**P**	**10 56 38.0**	**+2.0**
	comp=Z,7.3nm,0.8s,mb4.8						
PGF	**Pioggiola**	**49.88**	**299**	*e*P	**P**	**10 56 40.2**	**-1.3**
CDF	**Champ du Feu**	**49.89**	**307**	*e*P	**P**	**10 56 40.8**	**-0.7**
HINF	**Hinteralfeld**	**50.27**	**306**	*e*P	**P**	**10 56 43.3**	**-1.1**
	comp=Z,6.9nm,0.7s,mb4.5						
HINF	**Hinteralfeld**	**50.27**	**306**	*e*P	**P**	**10 56 43.3**	**-1.1**
HINF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
HAU	**Haudompre**	**50.57**	**307**	*e*P	**P**	**10 56 45.9**	**-0.8**

SBF	Sospel	50.69	301	eP	P	10 56 46.9	-0.7
	comp=Z,26nm,0.7s,mb5.0						
SBF	Sospel	50.69	301	eP	P	10 56 46.9	-0.7
SBF				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
LPG	La Plagne	50.80	304	eP	P	10 56 48.1	-0.4
LPL	La Plagne	50.81	304	eP	P	10 56 48.0	-0.5
MBDF	Montbardon	50.95	303	eP	P	10 56 48.7	-1.0
	comp=Z,26nm,1.1s,mb4.8						
MBDF	Montbardon	50.95	303	eP	P	10 56 48.7	-1.0
MBDF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
CABF	La Chapelle	51.02	305	eP	P	10 56 49.5	-0.6
GIVF	Givet	51.19	310	eP	P	10 56 50.0	-1.3
FRF	La Foret Royal	51.31	301	eP	P	10 56 51.2	-1.2
ORIF	Oris-en-Rattie	51.53	303	eP	P	10 56 53.1	-0.9
BAIF	Baives	51.58	310	eP	P	10 56 53.9	-0.4
MAT	Matsushiro	51.82	68	P	P	10 56 57.0	+0.7
MAT				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
MAT	Matsushiro	51.82	68	P	P	10 56 57.0	+0.7
	comp=Z,6.8nm,0.7s,mb4.7						
MAT	Matsushiro	51.82	68	P	P	10 56 57.2	+0.9
SMRF	Simiane la Rot	51.96	302	eP	P	10 56 55.4	-1.9
YSS	Yuzh-Sakhalins	52.31	54	eP	P	10 57 04.0	+4.2
YSS				e		11 04 21.0	
VIVF	Saint-Julien-l	52.38	303	eP	P	10 56 59.6	-0.7
	comp=Z,21nm,0.9s,mb4.8						
VIVF	Saint-Julien-l	52.38	303	eP	P	10 56 59.6	-0.7
VIVF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
SMF	Signal de Mont	52.52	306	eP	P	10 57 00.4	-1.0
	comp=Z,17nm,0.6s,mb4.8						
SMF	Signal de Mont	52.52	306	eP	P	10 57 00.4	-1.0
SMF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
SSF	Saint Saulge	52.65	306	eP	P	10 57 01.1	-1.3
	comp=Z,10nm,0.7s,mb4.6						
SSF	Saint Saulge	52.65	306	eP	P	10 57 01.1	-1.3
SSF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
AVF	Avril sur Loir	52.81	306	eP	P	10 57 02.4	-1.2
	comp=Z,12nm,0.6s,mb4.7						
AVF	Avril sur Loir	52.81	306	eP	P	10 57 02.4	-1.2
AVF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
MBAR	Mbarara	53.10	238	eP	P	10 57 06.9	+0.7
MBAR				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
MBAR	Mbarara	53.10	238	eP	P	10 57 06.9	+0.7
	comp=Z,4.3nm,0.4s,mb4.7						
LASF	Ste Croix	53.14	302	eP	P	10 57 05.5	-0.6
	comp=Z,38nm,1.1s,mb4.9						
BGF	Bois d’Agland	53.21	306	eP	P	10 57 05.3	-1.2
TCF	Toulx Ste Croi	53.70	305	eP	P	10 57 09.4	-0.8
	comp=Z,25nm,0.9s,mb4.8						
TCF	Toulx Ste Croi	53.70	305	eP	P	10 57 09.4	-0.8
TCF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
CAF	Calviac	54.15	304	eP	P	10 57 12.8	-0.7
	comp=Z,30nm,1.0s,mb4.9						
CAF	Calviac	54.15	304	eP	P	10 57 12.8	-0.7
CAF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
RJF	Les Rejaudoux	54.42	304	eP	P	10 57 14.8	-0.7
	comp=Z,18nm,0.9s,mb4.7						
RJF	Les Rejaudoux	54.42	304	eP	P	10 57 14.8	-0.7
RJF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MTLF	Montolieu	54.48	302	eP	P	10 57 15.1	-0.8
	comp=Z,27nm,1.2s,mb4.7						
MTLF	Montolieu	54.48	302	eP	P	10 57 15.1	-0.8
MTLF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
MA2	Magadan	54.63	38	eP	P	10 57 17.3	+0.5
MA2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
MA2	Magadan	54.63	38	eP	P	10 57 18.0	+1.2
	comp=Z,15nm,1.0s,mb5.0						
LDF	La Druitiere	54.66	309	eP	P	10 57 17.0	-0.2
FLN	La Foliniere	54.85	309	eP	P	10 57 17.6	-1.0
	comp=Z,16nm,0.8s,mb4.8						
FLN	La Foliniere	54.85	309	eP	P	10 57 17.6	-1.0
FLN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
SEY	Seymchan	54.88	33	eP	P	10 57 21.9	+3.3
SEY				*PP	pP	10 57 39.8	+7.8
SEY						10 58 19.5	
SEY				e		10 59 28.9	
SEY				ePPP	PPP	11 00 41.9	+5.7
SEY				eS	S	11 04 57.3	+2.7
SEY						11 07 01.0	
SEY				SS	SS	11 08 45.2	+7.1
SEY				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
SEY				pmax	pmax		
	comp=E,20nm,1.1s						
SEY				MLR	MLR		
	comp=Z,630nm,30.0s,MS4.5						
SEY				MLR	MLR		
	comp=N,630nm,23.0s						
SEY				MLR	MLR		
	comp=E,530nm,24.0s						
LFF	La Frestale	55.05	304	eP	P	10 57 19.3	-0.8
	comp=E,21nm,0.6s,mb5.0						
LFF	La Frestale	55.05	304	eP	P	10 57 19.3	-0.8
LFF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
GRR	Gorron	55.19	309	eP	P	10 57 20.8	-0.2
MFF	Saint Martin d	55.19	306	eP	P	10 57 19.8	-1.3
EMIR	Miracle	55.39	300	P	P	10 57 22.2	-0.3
	comp=Z,8.2nm,0.7s,mb4.9						
EPOB	Poblet	55.88	300	P	P	10 57 26.2	+0.1
	comp=Z,3.9nm,0.8s,mb4.5						
EPF	Esparros	55.88	302	eP	P	10 57 24.1	-2.0
	comp=Z,12nm,0.8s,mb4.7						
EPF	Esparros	55.88	302	eP	P	10 57 24.1	-2.0
EPF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
EBIE	Bielsa	56.13	302	P	P	10 57 29.1	+1.3
	comp=Z,21nm,1.3s,mb5.0						
ETSF	Etsaut	56.55	302	eP	P	10 57 30.4	-0.5
	comp=Z,28nm,0.7s,mb5.1						
ETSF	Etsaut	56.55	302	eP	P	10 57 30.4	-0.5
ETSF				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
ROSF	Rostrenen	56.75	309	eP	P	10 57 31.7	-0.6
	comp=Z,154nm,1.5s,mb5.5						
ROSF	Rostrenen	56.75	309	eP	P	10 57 31.7	-0.6
ROSF				pmax	pmax		
	comp=Z,77nm,1.5s,mb5.5						
SJPF	Ste Jean	56.95	303	eP	P	10 57 32.5	-1.2
	comp=Z,14nm,0.9s,mb4.7						
SJPF	Ste Jean	56.95	303	eP	P	10 57 32.5	-1.2
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
DAG	Danmarks Havn	57.06	344	⇑iP	P	10 57 34.0	-0.1
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
DAG	Danmarks Havn	57.06	344	⇑iP	P	10 57 34.0	-0.1
	comp=Z,3.0nm,0.8s,mb4.4						
ELAN	Lanestosa	58.44	303	P	P	10 57 44.1	-0.1
	comp=Z,22nm,0.8s,mb5.2						
BILL	Bilibino	59.42	26	eP	P	10 57 51.8	+1.2
BILL				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.8						
BILL	Bilibino	59.42	26	eP	P	10 57 51.8	+1.2
	comp=Z,15nm,1.6s,mb4.8						
ENIJ	Nijar	59.80	296	P	P	10 57 50.9	-2.8
ENIJ				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
ENIJ	Nijar	59.80	296	P	P	10 57 50.9	-2.8
	comp=Z,15nm,0.8s,mb5.1						
ESDC	Sonseca Array	60.07	300	P	P	10 57 55.1	-0.3
	comp=Z,6.4nm,0.8s,mb4.7						
ESLA	Sonseca Array	60.07	300	eP	P	10 57 54.9	-0.6
	comp=Z,3.9nm,1.2s,mb4.3						
EQES	Quesada	60.12	297	P	P	10 57 55.9	0.0
	comp=Z,8.9nm,0.6s,mb5.0						
EBAN	Banos Encina	60.51	298	P	P	10 57 56.7	-1.8
EBAN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
EBAN	Banos Encina	60.51	298	P	P	10 57 56.7	-1.8
	comp=Z,9.3nm,0.8s,mb5.0						
EPON	Pontenova	60.95	305	P	P	10 58 01.9	+0.5
	comp=Z,15nm,1.0s,mb5.1						
EADA	Adamuz	61.08	298	P	P	10 58 02.5	+0.1
	comp=Z,5.0nm,0.7s,mb4.8						
ELUQ	Luque	61.09	298	P	P	10 58 01.0	-1.5
ELUQ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
ELUQ	Luque	61.09	298	P	P	10 58 01.0	-1.5
	comp=Z,5.6nm,0.6s,mb4.9						
ELOJ	Sierra Loja	61.17	297	P	P	10 58 02.5	-0.5
ECAL	Calabor	61.18	303	P	P	10 58 01.6	-1.3
	comp=Z,2.5nm,1.5s,mb4.1						
ERUA	La Rua	61.29	304	P	P	10 58 03.4	-0.3
ERUA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
ERUA	La Rua	61.29	304	P	P	10 58 03.4	-0.3
	comp=Z,6.1nm,0.8s,mb4.8						
EINC	Incio	61.33	304	P	P	10 58 04.4	+0.4
	comp=Z,18nm,0.6s,mb5.4						
PVRL	Vila Real	62.11	303	eP	P	10 58 09.2	0.0
	comp=Z,13nm,1.1s,mb5.0						
ELOB	Lobios	62.12	303	P	P	10 58 09.5	+0.2
	comp=Z,17nm,0.6s,mb5.3						
EMAZ	Mazaricos	62.33	305	P	P	10 58 09.8	-0.9
	comp=Z,12nm,0.6s,mb5.2						
MTE	Manteigas	62.33	302	eP	P	10 58 10.8	+0.1
	comp=Z,42nm,1.1s,mb5.5						
MTE				epP	pP	10 58 25.0	+0.7
PVIS	Viseu	62.45	302	eP	P	10 58 11.8	+0.3
	comp=Z,27nm,1.1s,mb5.3						
PVIS				epP	pP	10 58 25.8	+0.7
EBAD	Badajoz	62.61	300	P	P	10 58 12.5	-0.1
	comp=Z,16nm,0.7s,mb5.3						
EMIN	Mina Concepcio	62.76	299	P	P	10 58 13.2	-0.5
	comp=Z,7.1nm,0.9s,mb4.8						
EVO	Evora	63.41	300	eP	P	10 58 17.3	-0.6
	comp=Z,26nm,1.1s,mb5.0						
SUMG	Summit	63.44	342	eP	P	10 58 18.5	+0.8
	comp=Z,14nm,0.8s,mb5.2						
PBEJ	Beja	63.52	299	eP	P	10 58 18.7	+0.1
	comp=Z,13nm,2.2s,mb4.6						
TNA	Tin City	69.52	23	eP	P	10 58 54.5	-1.6
	comp=Z,4.3nm,0.8s,mb4.4						
RES	Resolute Bay	70.67	357	eP	P	10 59 04.3	+1.3
IMA	Indian Mountai	73.29	18	eP	P	10 59 19.5	+1.0
IMA				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
IMA	Indian Mountai	73.29	18	eP	P	10 59 19.5	+1.0
	comp=Z,29nm,0.8s,mb5.3						
LBTB	Lobatse	74.66	224	eP	P	10 59 29.2	+1.8
LBTB				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
LBTB	Lobatse	74.66	224	eP	P	10 59 29.2	+1.9
	comp=Z,24nm,0.8s,mb5.2						
INK	Inuvik	75.41	10	eP	P	10 59 31.9	+1.2
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	Inuvik	75.41	10	eP	P	10 59 31.9	+1.2
	comp=Z,4.7nm,0.6s,mb4.6						
COLA	College	75.70	17	eP	P	10 59 34.0	+1.5
COLA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
COLA	College	75.70	17	eP	P	10 59 34.0	+1.5
	comp=Z,13nm,0.9s,mb4.8						
MCK	McKinley	76.38	18	eP	P	10 59 36.8	+0.5
MCK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
MCK	McKinley	76.38	18	eP	P	10 59 36.8	+0.5
	comp=Z,1.6nm,0.6s,mb4.1						
BOSA	Boshof	77.64	222	eP	P	10 59 45.3	+1.2
BOSA				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
BOSA	Boshof	77.64	222	eP	P	10 59 45.3	+1.1
	comp=Z,18nm,0.6s,mb5.2						
SML	Sawmill	78.12	19	eP	P	10 59 47.1	+1.0
DAWY	Dawson	78.26	14	eP	P	10 59 47.8	+0.9
WRA	Warramunga Arr	79.34	123	iP	P	10 59 55.4	+1.8
WRA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRAB	Tennant Creek	79.34	123	eP	P	10 59 55.0	+1.4
WRAB				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
WRAB	Tennant Creek	79.34	123	eP	P	10 59 55.0	+1.4
	comp=Z,17nm,0.6s,mb5.1						
WB2	Warramunga Arr	79.35	123	⇑iP	P	10 59 55.5	+1.8
ASPA	Alice Springs	81.58	126	⇑iP	P	11 00 07.3	+1.9
YKW3	Yellowknife Ar	82.92	4	eP	P	11 00 12.7	+1.2
FORT	Forrest	82.97	135	eP	P	11 00 12.6	+0.2
	comp=Z,80nm,0.6s						
YKA	Yellowknife Ar	82.99	4	iP	P	11 00 13.2	+1.3
YKA				pmax	pmax		
	comp=Z,18nm,1.0s						
CTAO	Charters Tower	87.98	116	eP	P	11 00 39.0	+1.6
EDM	Edmonton	92.31	4	eP	P	11 00 58.4	+1.5
QSPA	South Pole Qui	124.44	180	⇓iP	PKPdf	11 06 46.4	+2.3
TRQA	Tornquist	144.16	251	ePKPdf	PKPdf	11 07 22.3	+0.9
LVC	Limon Verde	145.01	280	ePKPdf	PKPdf	11 07 25.8	+2.5

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*JMA **05** 10:50:31.8±0.3,23.94N×121.76E,h17^{km},M2.9*

*TAP **05** 10:50:33.4,24.24N×121.79E,h8^{km},ML3.7*

TAP Felt III J at Nanau, I J at Suao, I J at Nanshan, II J at Nioudou.

ISC 05 10:50:32.3±0.5**,24.22N**±0.02×**121.83E**±0.02**,h2**^{km}±4^{km}**,n60,**σ**0**^{s}**78**/87**,8C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.23	338	⇑iP	Pg	10 50 37.2	+0.4
ENA				S	Sg	10 50 40.4	+0.5
TWD	Chiawan	0.26	238	⇓iP	Pg	10 50 38.0	+0.6
TWD				S	Sg	10 50 41.8	+0.9
HWA	Hwalien	0.32	221	eP	Pg	10 50 40.3	+1.6
TWC	Suao	0.39	2	⇑iP	Pg	10 50 40.5	+0.4
TWC				S	Sg	10 50 45.5	+0.2
NNS	Nan Shan	0.47	298	⇑iP	Pg	10 50 41.7	-0.1
NNS				S	Sg	10 50 47.6	-0.5
ENTT	Nioudou	0.48	330	⇑iP	Pg	10 50 42.1	+0.1
ENTT				S	Sg	10 50 48.1	-0.4
TWE	Neicheng	0.52	343	⇑iP	Pg	10 50 42.9	+0.2
TWE				S	Sg	10 50 49.6	-0.1
WHF	Hehuan Shan	0.52	262	⇑iP	Pg	10 50 42.6	-0.2
ESL	Shilin	0.54	222	eP	Pg	10 50 43.3	+0.1
ILA	Ilan	0.55	352	iP	Pg	10 50 43.6	+0.3
ILA				S	Sg	10 50 51.4	+0.7
TWT	Tachien	0.60	273	P	Pg	10 50 44.5	+0.2
TWT				S	Sg	10 50 52.1	-0.3
NSK	Sanguang	0.63	317	⇓iP	Pg	10 50 44.6	-0.3
NSK				S	Sg	10 50 52.7	-0.6
TWA	Mucha	0.79	343	eP	Pg	10 50 48.0	-0.1
TWB1	Santiao Chiao	0.80	10	⇑P	Pg	10 50 48.1	-0.2
TWB1				S	Sg	10 50 58.5	-0.5
EHY	Hungye	0.85	214	eP	Pb	10 50 48.4	-1.0
NWF	Wu-fen Shan	0.85	357	⇑P	Pb	10 50 49.3	-0.1
NWF				S	Sg	10 50 59.7	-0.9
NSTT	Nanjuang	0.86	299	eP	Pb	10 50 49.1	-0.5
NSTT				S	Sg	10 51 00.3	-0.7
TAP1	Taipei	0.86	341	eP	Pb	10 50 49.1	-0.6
TAP1				S	Sg	10 51 00.5	-0.6
TAP	Taipei	0.87	340	eP	Pb	10 50 50.7	+0.9
SMLT	Sun Moon Lake	0.92	249	eP	Pb	10 50 50.4	-0.1
SMLT				S	Sb	10 51 01.8	-1.2
TYC	Yuchr	0.95	251	eP	Pb	10 50 50.5	-0.5
TYC				S	Sb	10 51 03.2	-0.6
NCU	National Centr	0.95	322	eP	Pb	10 50 51.8	+0.6
TWS1	Kuangyinshan	0.96	337	eP	Pb	10 50 51.4	+0.2
TWQ1	Liyutan	0.98	278	eP	Pb	10 50 52.0	+0.4
HSN	Hsinchu	0.98	307	eP	Pb	10 50 52.2	+0.6
TWF1	Yuli	0.99	210	eP	Pb	10 50 50.5	-1.4
NSY	Sanyi	1.00	282	eP	Pb	10 50 52.6	+0.7
NSY				S	Sb	10 51 05.9	+0.5
TCU	Taichung	1.06	266	eP	Pb	10 50 52.9	-0.1
TWY	Chenhua	1.07	349	eP	Pb	10 50 53.7	+0.4
YUS	Yu-Shan	1.08	228	eP	Pb	10 50 53.4	0.0
YUS				S	Sb	10 51 08.8	+1.0
YOJ	Yonaguni jima	1.10	77	P	Pb	10 50 54.5	+0.8
YOJ				eS	Sb	10 51 11.3	+3.0
WNT	Mingjian	1.10	252	eP	Pb	10 50 54.0	+0.3
ALS	Alishan	1.18	233	eP	Pb	10 50 54.4	-0.6
CHKT	Chengkung	1.19	201	eP	Pb	10 50 54.0	-1.3
CHN5	Tsauling	1.23	240	eP	Pb	10 50 56.3	+0.4
ELDTW	Lidau	1.27	216	eP	Pb	10 50 55.4	-1.2
WGK	Gukeng	1.28	246	eP	Pb	10 50 57.0	+0.3
PCYT	Pengchaiyu	1.42	9	eP	Pn	10 50 58.5	-0.7
PCYT				S	Sb	10 51 17.9	+0.3
CHN4	Tsaushan	1.43	233	eP	Pn	10 50 59.8	+0.5
CHN4				S	Sb	10 51 20.6	+2.9
STYT	Tauyuan	1.44	223	eP	Pn	10 50 58.9	-0.5
CHY	Chiayi	1.48	241	eP	Pn	10 51 00.4	+0.4
WTP	Ta-pu	1.48	229	eP	Pn	10 51 00.3	+0.3
TWK	Hsinying	1.56	233	eP	Pn	10 51 01.5	+0.4
TWK				S	Sb	10 51 24.0	+2.5
TWG	Pinlang	1.56	207	eP	Pn	10 50 58.7	-2.4
CHN1	Nanshi	1.58	230	eP	Pn	10 51 01.8	+0.4
SGST	Jiashian	1.61	226	eP	Pn	10 51 02.1	+0.2
IRIF	Iriomote-Funau	1.73	86	P	Pn	10 51 03.2	-0.5
IRIF				eS	Sn	10 51 26.2	-0.4
ECL	Taimali	1.81	207	eP	Pn	10 51 04.3	-0.3
SSD	Sandimen	1.83	217	eP	Pn	10 51 05.3	+0.3
SSD				S	Sn	10 51 30.1	+0.9
TWM1	Shoushan	1.90	223	eP	Pn	10 51 06.8	+0.8
JKRS	Kuro-shima	1.99	89	P	Pn	10 51 07.4	+0.1
JKRS				eS	Sn	10 51 32.3	-0.7
EAST	Anshuo	2.04	207	eP	Pn	10 51 07.7	-0.3
JIJ	Ishigaki jima	2.11	86	P	Pn	10 51 08.6	-0.5
JIJ				eS	Sn	10 51 35.3	-0.9
SCZT	Fangliau	2.15	211	eP	Pn	10 51 09.6	0.0
PNG	Penghu	2.18	253	eP	Pn	10 51 09.0	-1.1
LAY	Lan-yu	2.19	187	eP	Pn	10 51 07.4	-2.7
WDGT	Dungji	2.21	245	eP	Pn	10 51 09.9	-0.5
TWK1	Hengchun	2.45	203	eP	Pn	10 51 13.2	-0.7
JTJ	Tarama	2.65	80	P	Pn	10 51 17.2	+0.5
JTJ				eS	Sn	10 51 50.1	+0.3
JOGS	Gusukube	3.30	80	P	Pn	10 51 26.6	+0.6
JOGS				eS	Sn	10 52 07.5	+1.2

TAP 05 10:58:48.1,24.25N×121.78E,h5^{km},ML4.0,Taiwan

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*NIED **05** 10:59:00,25.00N×121.70E,h5^{km},Mw4.6 Best double couple: M$_0$8.22×10^{15} NP1:φ$_s$279°,δ83°,λ-85°. NP2:φ$_s$61°,δ9°,λ-128°.*

*BJI **05** 10:59:04.6,24.43N×121.67E,h5^{km},mB4.6,mb4.3,ML4.5,Ms4.1,Msz4.2*

*TAP **05** 10:59:04.3,24.25N×121.79E,h6^{km}±1^{km},ML4.5*

TAP Felt IV J at Nanau, II J at Chiawan, II J at Hualien, II J at Suao, III J at Nanshan, III J at Nioudou, II J at Neicheng, II J at Hehuanshan, I J at Ilan, I J at Shilin, II J at Sanguang, I J at Tachien, I J at Nanjuang, I J.

ISC 05 10:59:04.1±0.6**,24.25N**±0.02×**121.81E**±0.04**,h6**^{km}±4^{km}**,n36,**σ**0**^{s}**73**/48**,mb3.6**/1**,2C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.18	341	iP	Pg	10 59 08.0	0.0
ENA				S	Sg	10 59 10.9	+0.4
TWD	Chiawan	0.26	228	iP	Pg	10 59 08.9	-0.4
TWD				S	Sg	10 59 12.8	-0.1
HWA	Hwalien	0.33	214	eP	Pg	10 59 11.2	+0.5
TWC	Suao	0.36	6	iP	Pg	10 59 11.2	0.0
TWC				S	Sg	10 59 15.7	-0.3
NNS	Nan Shan	0.44	295	eP	Pg	10 59 12.5	-0.4
NNS				S	Sg	10 59 18.2	-0.6
ENTT	Nioudou	0.44	330	⇑iP	Pg	10 59 12.8	-0.2
TWE	Neicheng	0.48	345	⇑iP	Pg	10 59 13.7	-0.1
TWE				S	Sg	10 59 20.4	+0.2
WHF	Hehuan Shan	0.51	258	eP	Pg	10 59 13.9	-0.3
ILA	Ilan	0.51	354	eP	Pg	10 59 14.3	-0.1
ILA				S	Sg	10 59 22.4	+1.2
ESL	Shilin	0.56	218	eP	Pg	10 59 15.0	-0.2
ESL				S	Sg	10 59 22.8	+0.2
TWT	Tachien	0.58	270	eP	Pg	10 59 16.1	+0.5
TWT				S	Sg	10 59 22.9	-0.4
NSK	Sanguang	0.59	316	P	Pg	10 59 15.6	-0.3
NSK				S	Sg	10 59 23.1	-0.6
TWA	Mucha	0.75	344	eP	Pb	10 59 19.3	+0.2
TWB1	Santiao Chiao	0.77	12	eP	Pb	10 59 19.1	-0.3
NWF	Wu-fen Shan	0.81	358	eP	Pb	10 59 20.9	+0.7
NWF				S	Sb	10 59 31.1	0.0
TAP1	Taipei	0.82	342	eP	Pb	10 59 19.8	-0.6
NSTT	Nanjuang	0.82	297	eP	Pb	10 59 20.2	-0.2
NSTT				S	Sb	10 59 31.3	-0.1
EHY	Hungye	0.87	211	eP	Pb	10 59 20.5	-0.6
SMLT	Sun Moon Lake	0.91	246	eP	Pb	10 59 21.8	+0.1
NCU	National Centr	0.91	322	eP	Pb	10 59 21.7	-0.1
TWS1	Kuangyinshan	0.92	337	eP	Pb	10 59 22.1	+0.2
HSN	Hsinchu	0.94	306	eP	Pb	10 59 22.9	+0.6
NSY	Sanyi	0.97	280	eP	Pb	10 59 23.5	+0.7
TWF1	Yuli	1.01	208	eP	Pb	10 59 23.2	-0.4
TWY	Chenhua	1.03	350	eP	Pb	10 59 25.0	+1.0
TCU	Taichung	1.04	264	eP	Pb	10 59 25.1	+1.1
ALS	Alishan	1.18	231	eP	Pb	10 59 26.6	+0.2
CHN5	Tsauling	1.22	238	eP	Pb	10 59 29.7	+2.6
ELDTW	Lidau	1.28	214	eP	Pb	10 59 27.4	-0.8
PCYT	Pengchaiyu	1.39	10	eP	Pn	10 59 29.6	-0.4
CHN4	Tsaushan	1.43	231	eP	Pn	10 59 30.9	+0.4
SGST	Jiashian	1.62	224	eP	Pn	10 59 33.6	+0.4
QZH	Quanzhou	3.01	284	P	Pn	10 59 48.8	-4.3
QZH				S	Sn	11 00 25.0	-4.9
QZH				Smax			
	comp=N,1μm,0.8s						
QZH				Smax			
	comp=E,1μm,1.3s						
NJ2	Nanjing	8.19	342	eP	P	11 01 04.2	-2.1
NJ2				AMB	AMB		
	comp=Z,40nm,0.6s						
LZH	Lanzhou	19.46	311	⇓P	P	11 03 37.5	+3.3
LZH				AMB	AMB		
	comp=Z,45nm,1.5s						
LZH				AMB	AMB		
	comp=Z,132nm,5.3s						
LZH				LR	LR		
	comp=N,465nm,13.2s						
LZH				LR	LR		
	comp=Z,879nm,17.3s						
GTA	Gaotai	23.94	314	eP	P	11 04 17.8	-1.9
GTA				AP		11 04 25.2	
GTA				XP		11 04 28.7	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb3.6						

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*NIED **05** 11:00:00,24.00N×121.70E,h20^{km},Mw4.8 Best double couple: M$_0$2.09×10^{16} NP1:φ$_s$57°,δ69°,λ-82°. NP2:φ$_s$215°,δ22°,λ-111°.*

*JMA **05** 11:00:52.4±0.5,24.04N×121.72E,h23^{km},M4.9*

*TAP **05** 11:00:52.9,24.25N×121.75E,h5^{km},ML5.0*

TAP Felt V J at Nanau, III J at Chiawan, III J at Hualien, III J at Suao, III J at Nanshan, IV J at Nioudou, II J at Hehuanshan, III J at Neicheng, III J at Ilan, II J at Shilin, II J at Tachien, II J at Sanguang, I J at Mucha, I J at Nanjuang, I J at Taipai, II J, I J at Jungli (National Central University), I J at Liyutan, I J at Hsinchu, I J at Sanyi, I J at Mingjian, I J at Tsauling, I J at Chiayi, I J at Anpu.

*BJI **05** 11:00:55.3,24.38N×121.76E,h21^{km},mB5.1,mb4.5,ML5.4,Ms4.9,Msz4.9*

*NEIC **05** 11:00:55.9±1.6,24.28N×121.79E,h36^{km}±13^{km},mb4.7/22, Error ellipse: s-maj=15.0km s-min=10.6km az=63.0*

NEIC Recorded [5 TAP] in Hua-lien and I-lan; [2 TAP] in Nan-t’ou, T’ai-chung, T’ai-pei and T’ao-yuan; [1 TAP] in Hsin-chu and Miao-li Counties.

ISC 05 11:00:52.4±0.4**,24.26N**±0.01×**121.87E**±0.02**,h8**^{km}±2^{km}**,n131,**σ**1**^{s}**26**/168**,mb4.7**/23**,MS4.8**/3**,12C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	Nanau	0.20	325	⇑iP	Pg	11 00 56.9	+0.2
ENA				S	Sg	11 00 59.9	+0.4
TWD	Chiawan	0.31	234	⇑iP	Pg	11 00 58.0	-0.8
TWD				S	Sg	11 01 01.6	-1.3
TWC	Suao	0.35	357	⇑iP	Pg	11 01 00.1	+0.7
HWA	Hwalien	0.37	220	⇑iP	Pg	11 01 00.2	+0.2
ENTT	Nioudou	0.47	324	⇑iP	Pg	11 01 01.7	-0.1
NNS	Nan Shan	0.48	292	⇑iP	Pg	11 01 01.4	-0.8
NNS				S	Sg	11 01 06.8	-1.9
TWE	Neicheng	0.49	338	⇑iP	Pg	11 01 02.6	+0.3
ILA	Ilan	0.51	348	P	Pg	11 01 03.4	+0.6
ILA				S	Sg	11 01 10.9	+1.2
WHF	Hehuan Shan	0.56	258	⇑iP	Pg	11 01 02.5	-1.3
ESL	Shilin	0.60	222	eP	Pg	11 01 03.2	-1.2
NSK	Sanguang	0.62	312	⇓iP	Pg	11 01 04.3	-0.5
TWT	Tachien	0.63	269	iP	Pg	11 01 04.3	-0.8

TWB1	Santiao Chiao	0.75	8	*i*P	Pb	11 01 07.8	+0.5
TWB1				S	Sb	11 01 18.1	+0.6
TWA	Mucha	0.76	340	⇓*i*P	Pb	11 01 08.0	+0.5
TWA				S	Sb	11 01 17.7	0.0
TATO	Taipei	0.79	334	*e*P	Pb	11 01 07.8	-0.2
NWF	Wu-fen Shan	0.81	354	*e*P	Pb	11 01 09.1	+0.7
TAP1	Taipei	0.83	338	*e*P	Pb	11 01 09.6	+0.9
TAP	Taipei	0.84	337	*e*P	Pb	11 01 09.6	+0.7
TAP				S	Sb	11 01 19.9	-0.2
NSTT	Nanjuang	0.87	295	*e*P	Pb	11 01 08.9	-0.4
EHY	Hungye	0.90	214	*e*P	Pb	11 01 08.6	-1.3
TWS1	Kuangyinshan	0.93	334	*e*P	Pb	11 01 11.3	+0.9
TWS1				S	Sb	11 01 24.8	+2.1
NCU	National Centr	0.94	319	*e*P	Pb	11 01 11.0	+0.5
NCU				S	Sb	11 01 24.5	+1.6
SMLT	Sun Moon Lake	0.96	247	*e*P	Pb	11 01 10.3	-0.6
SMLT				S	Sb	11 01 24.5	+0.9
HSN	Hsinchu	0.98	304	*e*P	Pb	11 01 11.6	+0.4
HSN				S	Sb	11 01 24.9	+0.9
TYC	Yuchr	0.99	249	*e*P	Pb	11 01 10.9	-0.5
TYC				S	Sb	11 01 24.9	+0.5
TWQ1	Liyutan	1.00	275	*e*P	Pb	11 01 12.0	+0.4
TWQ1				S	Sb	11 01 25.9	+1.1
NSY	Sanyi	1.02	279	*e*P	Pb	11 01 12.3	+0.3
NSY				S	Sb	11 01 26.0	+0.7
TWY	Chenhua	1.04	347	*e*P	Pb	11 01 13.1	+0.8
TWF1	Yuli	1.04	210	*e*P	Pb	11 01 11.8	-0.6
YOJ	Yonaguni jima	1.06	79	P	Pb	11 01 14.5	+1.9
YOJ				S	Sb	11 01 30.9	+4.4
TCU	Taichung	1.09	264	*e*P	Pb	11 01 13.4	+0.2
TCU				S	Sb	11 01 28.2	+0.8
YUS	Yu-Shan	1.14	228	*e*P	Pb	11 01 13.4	-0.5
YUS				S	Sb	11 01 29.6	+1.0
WNT	Mingjian	1.15	251	*e*P	Pb	11 01 14.5	+0.4
WNT				S	Sb	11 01 31.6	+2.6
ALS	Alishan	1.23	233	*e*P	Pb	11 01 15.6	+0.1
CHKT	Chengkung	1.25	202	*e*P	Pb	11 01 15.4	-0.4
CHN5	Tsauling	1.27	239	*e*P	Pb	11 01 16.3	0.0
ELDTW	Lidau	1.32	216	*e*P	Pb	11 01 16.1	-1.0
WGK	Gukeng	1.32	245	*e*P	Pb	11 01 17.6	+0.4
PCYT	Pengchaiyu	1.37	8	P	Pb	11 01 18.4	+0.4
PCYT				S	Sb	11 01 39.1	+3.6
CHN2	Minshiung	1.47	241	*e*P	Pn	11 01 19.8	+0.4
CHN4	Tsaushan	1.48	232	*e*P	Pn	11 01 20.0	+0.6
STYT	Tauyuan	1.49	223	*e*P	Pn	11 01 19.0	-0.7
WTCT	Ta-ch'eng	1.50	255	*e*P	Pn	11 01 19.9	0.0
WTCT				S	Sb	11 01 39.9	+0.6
CHY	Chiayi	1.52	240	*e*P	Pn	11 01 20.7	+0.5
CHY				S	Sb	11 01 40.4	+0.5
WTP	Ta-pu	1.53	229	*e*P	Pn	11 01 20.4	+0.2
WTP				S	Sb	11 01 41.0	+0.9
TWK	Hsinying	1.60	232	*e*P	Pn	11 01 22.2	+0.9
TWG	Pinlang	1.61	207	*e*P	Pn	11 01 19.1	-2.2
WSF	Szhu	1.63	248	*e*P	Pn	11 01 21.6	0.0
WSF				S	Sb	11 01 43.9	+1.0
CHN1	Nanshi	1.63	229	*e*P	Pn	11 01 22.1	+0.4
TTN	Taitung	1.64	204	*e*P	Pn	11 01 23.3	+1.5
SGST	Jiashian	1.66	225	*e*P	Pn	11 01 22.6	+0.4
IRIF	Iriomote-Funau	1.70	87	P	Pn	11 01 23.3	+0.6
IRIF				*e*S	Sn	11 01 47.1	+2.3
CHN8	Yiju	1.77	239	*e*P	Pn	11 01 23.6	0.0
CHN8				S	Sn	11 01 48.0	+1.5
HATJ	Hateruma jima	1.78	96	P	Pn	11 01 24.7	+0.9
HATJ				S	Sn	11 01 46.0	-0.9
CHN3	Shinhua	1.81	230	*e*P	Pn	11 01 24.9	+0.6
ECL	Taimali	1.86	207	*e*P	Pn	11 01 25.4	+0.5
SSD	Sandimen	1.89	217	*e*P	Pn	11 01 25.4	0.0
TAI1	Yung-k'ang	1.93	231	*e*P	Pn	11 01 27.2	+1.3
TWM1	Shoushan	1.95	223	*e*P	Pn	11 01 27.6	+1.4
JKRS	Kuro-shima	1.96	90	P	Pn	11 01 27.5	+1.2
JKRS				*e*S	Sn	11 01 53.5	+2.2
SGLT	Jiouru	1.98	220	*e*P	Pn	11 01 27.5	+0.8
JIJ	Ishigaki jima	2.08	87	P	Pn	11 01 28.5	+0.4
JIJ				*e*S	Sn	11 01 52.1	-2.3
EAST	Anshuo	2.09	207	*e*P	Pn	11 01 30.3	+2.0
TAW	Tawu	2.10	205	*e*P	Pn	11 01 29.3	+1.0
SCZT	Fangliau	2.20	212	*e*P	Pn	11 01 30.1	+0.3
PNG	Penghu	2.23	252	*e*P	Pn	11 01 30.2	0.0
LAY	Lan-yu	2.23	188	*e*P	Pn	11 01 27.1	-3.1
WDGT	Dungji	2.25	244	*e*P	Pn	11 01 30.4	-0.2
TWP	Hsiaoliuchiu	2.36	216	*e*P	Pn	11 01 32.9	+0.9
HEN	Hengchun	2.48	205	*e*P	Pn	11 01 35.0	+1.2
TWK1	Hengchun	2.51	203	*e*P	Pn	11 01 34.9	+0.7
JTJ	Tarama	2.61	81	P	Pn	11 01 36.7	+1.0
JTJ				*e*S	Sn	11 02 10.6	+2.7
QZH	Quanzhou	3.06	283	P	Pn	11 01 40.3	-1.8
QZH				S	Sn	11 02 15.1	-4.2
QZH				Smax			
	comp=N,3µm,1.1s						
QZH				Smax			
	comp=E,3µm,0.8s						
KNM	Kinmen	3.14	274	*e*P	Pn	11 01 42.6	-0.6
JMJ	Miyako jima 2	3.17	79	P	Pn	11 01 45.2	+1.6
JMJ				*e*S	Sn	11 02 23.6	+1.5
JOGS	Gusukube	3.26	81	P	Pn	11 01 47.3	+2.3
JKE	Kume jima 2	4.90	64	P	Pn	11 02 08.8	+0.5
JAGN	Aguni-jima	5.38	63	P	Pn	11 02 18.6	+3.6
JIH	Iheya	6.16	62	P	Pn	11 02 27.6	+1.6
JOW	Kunigami	6.33	65	P	Pn	11 02 26.6	-1.8
JTK	Tokunoshima	7.27	60	P	Pn	11 02 39.5	-2.2
JAM	Amami Oshima	8.08	58	P	P	11 02 50.2	-2.7
NJ2	Nanjing	8.20	342	*e*P	P	11 02 50.6	-4.0
NJ2				S	Sn	11 04 20.9	-7.6
NJ2				AMB	AMB		
	comp=Z,90nm,0.6s						
NJ2				Smax			
	comp=N,1µm,1.1s						
NJ2				Smax			
	comp=E,1µm,0.9s						
NJ2				LR	LR		
	comp=N,8µm,14.3s						
NJ2				LR	LR		
	comp=E,6µm,9.3s						
NJ2				LR	LR		
	comp=Z,15µm,10.7s						
INCN	Inchon	13.80	16	P	P	11 04 11.7	+1.0
	comp=Z,71nm,1.1s						
GYA	Guiyang	13.92	282	⇑*i*P	P	11 04 10.4	-2.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
KS15	Wonju Array Si	14.11	20	*e*P	P	11 04 14.2	-0.7
XAN	Xi'an	14.91	314	P	P	11 04 22.7	-2.7
XAN				AP		11 04 34.5	
XAN				AMB	AMB		
	comp=Z,15nm,1.2s						
XAN				LR	LR		
	comp=N,1µm,8.9s						
XAN				LR	LR		
	comp=E,4µm,11.6s						
XAN				LR	LR		
	comp=Z,4µm,11.6s						
BJI	Beijing	16.45	344	P	P	11 04 45.3	+0.1
BJI				AP		11 04 50.8	
BJI				XP		11 04 53.9	
BJI				AMB	AMB		
	comp=Z,15nm,1.2s						
BJI				LR	LR		
	comp=N,3µm,12.9s						
BJI				LR	LR		
	comp=E,1µm,13.5s						
BJI				LR	LR		
	comp=Z,1µm,18.5s						
BJI	Beijing	16.45	344	P	P	11 04 45.3	+0.1
	comp=Z,15nm,1.2s						
BJI				pP		11 04 50.8	
BJI				sP		11 04 53.9	
BJI				S	S	11 08 03.4	+16
CD2	Chengdu	17.36	296	P	P	11 04 57.0	+0.3
CD2				AP		11 05 04.4	
CD2				XP		11 05 09.3	
CD2				AMB	AMB		
	comp=Z,20nm,0.5s						
CD2				AMB	AMB		
	comp=Z,260nm,3.3s						
CD2				LR	LR		
	comp=E,5µm,10.4s						
CD2				LR	LR		
	comp=Z,4µm,11.4s						
SNY	Shenyang	17.58	4	⇑P	P	11 04 59.9	+0.5
SNY				AP		11 05 06.4	
SNY				XP		11 05 12.1	
SNY				AMB	AMB		
	comp=Z,20nm,2.5s						
SNY				AMB	AMB		
	comp=Z,220nm,11.9s						
SNY				LR	LR		
	comp=N,3µm,11.4s						
SNY				LR	LR		
	comp=E,980nm,11.2s						
SNY				LR	LR		
	comp=Z,4µm,12.9s						
HHC	Hu-ho-hao-te	18.66	335	*e*P	P	11 05 17.2	+4.4
HHC				AMB	AMB		
	comp=Z,21nm,2.4s						
HHC				AMB	AMB		
	comp=Z,430nm,3.9s						
HHC				LR	LR		
	comp=N,2µm,15.6s						
HHC				LR	LR		
	comp=E,1µm,18.0s						
HHC				LR	LR		
	comp=Z,2µm,15.6s						
BTO	Baotou	19.09	331	*e*P	P	11 05 20.1	+2.1
BTO				S	S	11 08 46.9	-0.8
BTO				AMB	AMB		
	comp=Z,28nm,1.6s						
BTO				LR	LR		
	comp=N,1µm,11.8s						
BTO				LR	LR		
	comp=E,1µm,11.0s						
LZH	Lanzhou	19.50	311	⇑P	P	11 05 21.4	-1.4
LZH				AP		11 05 26.0	
LZH				XP		11 05 29.0	
LZH				PP	PP	11 05 38.5	-2.0
LZH				*e*S	S	11 08 51.5	-5.5
LZH				SS	SS	11 09 17.4	-6.2
LZH				AMB	AMB		
	comp=Z,97nm,1.5s						
LZH				AMB	AMB		
	comp=Z,483nm,4.6s						
LZH				LR	LR		
	comp=N,2µm,9.7s						
LZH				LR	LR		
	comp=Z,3µm,12.1s						
LZH	Lanzhou	19.50	311	⇑P	P	11 05 21.4	-1.4
	comp=Z,97nm,1.5s						
LZH				pP		11 05 26.0	
LZH				sP		11 05 29.0	
LZH				PP	PP	11 05 38.5	-2.0
LZH				*e*S	S	11 08 51.5	-5.5
LZH				sS		11 08 59.2	
LZH				SS	SS	11 09 17.4	-6.2
CN2	Changchun	19.71	8	*e*P	P	11 05 22.6	-2.6
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
MDJ	Mudanjiang	21.26	15	P	P	11 05 42.5	+1.1
MDJ				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,156nm,5.0s						
MDJ				LR	LR		
	comp=N,759nm,16.3s,MS4.5						
MDJ				LR	LR		
	comp=E,2µm,15.5s,MS4.5						
MDJ				LR	LR		
	comp=Z,2µm,15.5s,MS4.6						
GTA	Gaotai	23.98	314	*e*P	P	11 06 07.3	-0.9
GTA				AP		11 06 13.1	
GTA				XP		11 06 16.9	
GTA				PP	PP	11 06 40.6	-1.6
GTA				S	S	11 10 15.2	-6.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.0						
GTA				LR	LR		
	comp=N,701nm,13.4s,MS4.8						
GTA				LR	LR		
	comp=E,2µm,12.2s,MS4.8						
GTA				LR	LR		
	comp=Z,3µm,13.4s,MS4.9						
ULN	Ulaanbaatar	26.33	337	*e*P	P	11 06 28.0	-2.5
	comp=Z,37nm,1.3s,mb4.8						
TLY	Talaya	30.74	338	*e*P	P	11 07 07.5	-2.6
	comp=Z,8.9nm,0.9s,mb4.6						
WMQ	Urumqi	34.05	313	*e*P	P	11 07 39.2	0.0
WMQ				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
KURK	Kurchatov	42.43	320	*e*P	P	11 08 46.6	-2.6
	comp=Z,23nm,1.4s,mb4.6						
MBWA	Marble Bar	45.19	183	*e*P	P	11 09 09.2	-2.8
	comp=Z,10nm,0.8s,mb4.7						
WB2	Warramunga Arr	45.59	163	*e*P	P	11 09 09.2	-5.9
CHKZ	Chkalovo	48.06	321	*e*P	P	11 09 30.5	-3.7
	comp=Z,13nm,0.6s,mb5.1						
ASPA	Alice Springs	49.05	165	*e*P	P	11 09 43.6	+1.4
CTA	Charters Tower	50.07	150	*e*P	P	11 09 47.7	-2.4
	comp=Z,5.8nm,1.0s,mb4.6						
CTAO	Charters Tower	50.07	150	*e*P	P	11 09 47.5	-2.6
	comp=Z,27nm,1.5s,mb5.1						
BILL	Bilibino	51.40	20	*e*P	P	11 09 56.8	-2.8
	comp=Z,3.1nm,0.6s,mb4.4						
STKA	Stephens Creek	58.92	160	*e*P	P	11 10 52.7	-1.9
	comp=Z,2.1nm,0.6s,mb4.3						
IMA	Indian Mountai	65.86	26	*e*P	P	11 11 38.4	-1.9
KIV	Kislovodsk	66.02	309	*e*P	P	11 11 39.9	-1.8
	comp=Z,37nm,1.4s,mb5.2						
COLA	College	68.43	27	*e*P	P	11 11 53.2	-3.4
	comp=Z,3.9nm,0.8s,mb4.5						
JOF	Joensuu	68.95	331	*e*p	P	11 11 55.7	-4.1
	comp=Z,6.8nm,0.8s,mb4.6						
MALT	Malatya	70.47	304	*e*P	P	11 12 07.7	-1.9
	comp=Z,13nm,0.8s,mb4.9						
KAF	Kangasniemi	71.40	330	*e*p	P	11 12 10.3	-4.4
	comp=Z,5.2nm,0.8s,mb4.5						
DAWY	Dawson	72.18	27	*e*P	P	11 12 16.9	-2.5
INK	Inuvik	72.92	22	*e*P	P	11 12 20.1	-3.5
	comp=Z,5.6nm,0.8s,mb4.5						
KWP	Kalwaria	77.53	319	*e*P	P	11 12 48.4	-1.9
	comp=Z,14nm,0.8s,mb5.0						
NB2	NORSAR Subarra	78.45	332	P	P	11 12 51.6	-3.5
	comp=Z,4.8nm,0.9s,mb4.4,baz=62,slow=5.3						
DPC	Dobruska-Polom	80.97	321	*e*P	P	11 13 12.8	+4.0
CLL	Collm	82.37	323	*e*P	P	11 13 13.0	-3.1
CLL				*e*		11 13 20.0	
CLL				LR	LR		
	comp=Z,500nm,17.9s,MS4.9						
CLL	Collm	82.37	323	P	P	11 13 13.0	-3.1
CLL				*e**PP	pP	11 13 20.0	+1.4
CLL				*e**SP	sP	11 13 27.0	+7.6
YKW3	Yellowknife Ar	82.61	23	*e*P	P	11 13 13.7	-3.4
KHC	Kasperske Hory	83.11	321	*e*P	P	11 13 19.0	-1.0
EDM	Edmonton	89.23	30	*e*P	P	11 13 48.5	-1.5
WALA	Waterton Lakes	91.71	33	*e*P	P	11 14 00.8	-0.8
	comp=Z,8.3nm,1.1s,mb5.0						
FCC	Fort Churchill	92.08	18	*e*P	P	11 13 59.9	-3.2
MOD	Modoc	92.65	41	*e*P	P	11 14 05.7	-0.4
	comp=Z,6.8nm,0.8s,mb5.1						
WVOR	Wild Horse Val	93.33	40	P	P	11 14 08.8	-0.4
	comp=Z,5.0nm,1.1s,mb4.9						
HLID	Hailey	95.03	37	*e*P	P	11 14 16.8	-0.3
	comp=Z,1.8nm,0.8s,mb4.5						

TAP 05 11:02:05.1,24.26N×121.79E,h10^{km}±1^{km},ML3.5, Taiwan

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TAP 05 11:03:57.5,24.27N×121.77E,h10^{km}±1^{km},ML3.5,7C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.16	350	⇑*i*P	Pg	11 04 02.1	+1.0
ENA				S	Sg	11 04 04.9	+1.3
TWD	Chiawan	0.25	220	*i* P	Pg	11 04 03.2	+0.5
TWD				S	Sg	11 04 07.3	+1.1
HWA	Hwalien	0.33	207	*e*P	Pg	11 04 05.7	+1.3
TWC	Suao	0.34	12	⇑*i*P	Pg	11 04 05.2	+0.6
TWC				S	Sg	11 04 10.0	+0.6
NNS	Nan Shan	0.40	295	⇑*i*P	Pg	11 04 06.7	+1.0
NNS				S	Sg	11 04 12.4	+1.2
ENTT	Nioudou	0.41	333	⇑*i*P	Pg	11 04 07.0	+1.1
ENTT				S	Sg	11 04 13.1	+1.5
TWE	Neicheng	0.46	348	⇑*i*P	Pg	11 04 07.7	+0.9
TWE				S	Sg	11 04 14.3	+1.2
WHF	Hehuan Shan	0.48	255	*e*P	Pg	11 04 07.8	+0.6
WHF				S	Sg	11 04 15.2	+1.6
TWT	Tachien	0.54	268	⇑*i*P	Pg	11 04 09.8	+1.3
TWT				S	Sg	11 04 17.4	+1.5
ESL	Shilin	0.55	214	*e*P	Pg	11 04 08.6	-0.1
NSK	Sanguang	0.55	317	⇑*i*P	Pg	11 04 09.7	+1.0
NSK				S	Sg	11 04 17.4	+1.2
TWA	Mucha	0.73	347	*e*P	Pb	11 04 13.0	+1.2
TWA				S	Sb	11 04 22.7	+1.2
TWB1	Santiao Chiao	0.76	15	*e*P	Pb	11 04 12.9	+0.5
NSTT	Nanjuang	0.79	297	*e*P	Pb	11 04 14.4	+1.6
NSTT				S	Sb	11 04 25.4	+2.1
NWF	Wu-fen Shan	0.80	1	*e*P	Pb	11 04 14.2	+1.2
NWF				S	Sb	11 04 24.5	+0.9
TAP1	Taipei	0.80	344	*e*P	Pb	11 04 15.4	+2.4
TAP	Taipei	0.80	343	*e*P	Pb	11 04 15.1	+2.0
EHY	Hungye	0.86	208	*e*P	Pb	11 04 14.2	+0.1
EHY				S	Sb	11 04 27.2	+1.7
NCU	National Centr	0.88	323	*e*P	Pb	11 04 17.0	+2.7
SMLT	Sun Moon Lake	0.88	244	*e*P	Pb	11 04 15.8	+1.3
SMLT				S	Sb	11 04 27.5	+1.4
TWS1	Kuangyinshan	0.89	339	*e*P	Pb	11 04 16.6	+2.1
TYC	Yuchr	0.91	247	*e*P	Pb	11 04 16.5	+1.6
TWQ1	Liyutan	0.91	275	*e*P	Pb	11 04 18.1	+3.1
NSY	Sanyi	0.93	279	*e*P	Pb	11 04 18.2	+2.9
TCU	Taichung	1.01	263	*e*P	Pb	11 04 20.4	+3.8
TWF1	Yuli	1.01	205	*e*P	Pb	11 04 17.2	+0.5
TWY	Chenhua	1.01	351	*e*P	Pb	11 04 19.8	+3.1
YUS	Yu-Shan	1.08	224	*e*P	Pb	11 04 18.6	+0.8
ALS	Alishan	1.16	230	*e*P	Pb	11 04 21.4	+2.2
CHN5	Tsauling	1.20	236	*e*P	Pb	11 04 22.5	+2.6
CHN5				S	Sb	11 04 39.9	+4.5
ELDTW	Lidau	1.28	213	*e*P	Pb	11 04 21.3	+0.1
PCYT	Pengchaiyu	1.38	11	*e*P	Pn	11 04 23.5	+0.6
CHN4	Tsaushan	1.41	230	*e*P	Pn	11 04 24.7	+1.3
STYT	Tauyuan	1.44	220	*e*P	Pn	11 04 24.8	+1.0
CHN1	Nanshi	1.57	227	*e*P	Pn	11 04 28.2	+2.5
SGST	Jiashian	1.61	223	*e*P	Pn	11 04 28.4	+2.2

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*JMA **05** 11:09:27.5±0.5,23.83N×121.79E,M3.3*

*TAP **05** 11:09:30.2,24.26N×121.76E,h8^{km}±1^{km},ML3.8*

TAP Felt IV J at Nanau, I J at Suao, II J at Nanshan, II J at Nioudou, I J at Neicheng, I J at Sanguang.

ISC 05 11:09:30.4±0.3,24.28N±0.01×121.81E±0.02,h8^{km},n57, σ0.^{s}74/84,9C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.16	339	⇑*i*P	Pg	11 09 34.2	+0.2
ENA				S	Sg	11 09 36.7	+0.3
TWD	Chiawan	0.27	225	⇓*i*P	Pg	11 09 35.5	-0.6
TWD				S	Sg	11 09 39.3	-0.6
TWC	Suao	0.34	7	⇑*i*P	Pg	11 09 37.4	+0.1
TWC				S	Sg	11 09 42.0	+0.2
HWA	Hwalien	0.35	212	*e*P	Pg	11 09 37.5	-0.1
ENTT	Nioudou	0.42	329	⇑*i*P	Pg	11 09 39.0	0.0
ENTT				S	Sg	11 09 44.7	-0.1
NNS	Nan Shan	0.43	293	⇑*i*P	Pg	11 09 38.8	-0.3
NNS				S	Sg	11 09 44.2	-0.6
TWE	Neicheng	0.46	344	⇑*i*P	Pg	11 09 39.8	0.0
TWE				S	Sg	11 09 46.0	0.0
ILA	Ilan	0.49	354	⇑*i*P	Pg	11 09 40.5	+0.1
ILA				S	Sg	11 09 47.9	+0.9
WHF	Hehuan Shan	0.51	255	*i* P	Pg	11 09 40.0	-0.7
WHF				S	Sg	11 09 46.8	-0.8
ESL	Shilin	0.57	217	*e*P	Pg	11 09 41.0	-1.0
ESL				S	Sg	11 09 49.8	+0.2
NSK	Sanguang	0.57	315	⇑*i*P	Pg	11 09 41.6	-0.3
NSK				S	Sg	11 09 49.0	-0.6
TWT	Tachien	0.57	268	⇑*i*P	Pg	11 09 41.9	-0.1
TWT				S	Sg	11 09 49.2	-0.5
TWA	Mucha	0.73	344	P	Pb	11 09 44.9	-0.1
TWA				S	Sb	11 09 54.8	0.0
TWB1	Santiao Chiao	0.75	13	P	Pb	11 09 44.9	-0.4
TWB1				S	Sb	11 09 55.0	-0.4
NWF	Wu-fen Shan	0.79	358	⇑*i*P	Pb	11 09 46.1	+0.1
NWF				S	Sb	11 09 56.3	-0.4
TAP1	Taipei	0.80	341	*e*P	Pb	11 09 46.1	-0.1
TAP1				S	Sb	11 09 56.7	-0.3
TAP	Taipei	0.81	340	*e*P	Pb	11 09 46.3	-0.1
TAP				S	Sb	11 09 56.6	-0.5
NSTT	Nanjuang	0.81	296	*e*P	Pb	11 09 46.4	-0.1
NSTT				S	Sb	11 09 57.0	-0.3
EHY	Hungye	0.88	210	*e*P	Pb	11 09 46.7	-0.9
NCU	National Centr	0.89	321	*e*P	Pb	11 09 48.7	+1.0
TWS1	Kuangyinshan	0.90	337	*e*P	Pb	11 09 48.3	+0.5
SMLT	Sun Moon Lake	0.92	245	*e*P	Pb	11 09 47.8	-0.3
SMLT				S	Sb	11 10 00.3	+0.1
HSN	Hsinchu	0.93	305	*e*P	Pb	11 09 48.9	+0.6
TYC	Yuchr	0.94	247	*e*P	Pb	11 09 48.3	-0.3
TWQ1	Liyutan	0.94	275	*e*P	Pb	11 09 49.0	+0.4
NSY	Sanyi	0.96	279	*e*P	Pb	11 09 49.1	+0.1
TWY	Chenhua	1.01	349	*e*P	Pb	11 09 50.0	+0.2
TWF1	Yuli	1.03	207	*e*P	Pb	11 09 49.3	-0.8
TCU	Taichung	1.04	263	*e*P	Pb	11 09 51.4	+1.1
YUS	Yu-Shan	1.10	225	*e*P	Pb	11 09 50.9	-0.5
YOJ	Yonaguni jima	1.11	80	P	Pb	11 09 51.9	+0.3
YOJ				S	Sb	11 10 09.9	+3.9
ALS	Alishan	1.19	230	*e*P	Pb	11 09 53.1	+0.2
CHN5	Tsauling	1.23	237	*e*P	Pb	11 09 53.8	+0.2
CHN5				S	Sb	11 10 12.6	+3.1
CHKT	Chengkung	1.24	199	*e*P	Pb	11 09 52.8	-0.9
ELDTW	Lidau	1.30	214	*e*P	Pb	11 09 54.1	-0.6
PCYT	Pengchaiyu	1.37	10	*e*P	Pb	11 09 55.9	0.0
PCYT				S	Sb	11 10 16.7	+3.3
CHN4	Tsaushan	1.44	231	*e*P	Pn	11 09 57.6	+0.7
CHN4				S	Sb	11 10 18.5	+3.0
STYT	Tauyuan	1.47	221	*e*P	Pn	11 09 56.9	-0.4
STYT				S	Sb	11 10 18.6	+2.4
CHY	Chiayi	1.48	239	*e*P	Pn	11 09 57.4	-0.1
WTP	Ta-pu	1.50	227	*e*P	Pn	11 09 57.9	+0.2
TWK	Hsinying	1.57	231	*e*P	Pn	11 09 58.9	+0.1
CHN1	Nanshi	1.60	227	*e*P	Pn	11 09 59.1	0.0
TWG	Pinlang	1.60	205	*e*P	Pn	11 09 59.9	+0.7
SGST	Jiashian	1.63	224	*e*P	Pn	11 10 00.2	+0.5
SGST				S	Sn	11 10 22.6	+1.6
CHN8	Yiju	1.73	238	*e*P	Pn	11 10 02.0	+0.9
IRIF	Iriomote-Funau	1.76	88	P	Pn	11 10 00.8	-0.7
IRIF				S	Sn	11 10 24.9	+0.7
HATJ	Hateruma jima	1.84	96	P	Pn	11 10 01.1	-1.5
ECL	Taimali	1.84	205	*e*P	Pn	11 10 03.4	+0.7
SSD	Sandimen	1.86	216	*e*P	Pn	11 10 02.8	-0.2
JKRS	Kuro-shima	2.01	91	P	Pn	11 10 04.2	-0.9
EAST	Anshuo	2.08	205	*e*P	Pn	11 10 06.4	+0.3
JIJ	Ishigaki jima	2.13	87	P	Pn	11 10 06.2	-0.7
JIJ				S	Sn	11 10 33.2	-0.6
PNG	Penghu	2.18	252	*e*P	Pn	11 10 06.5	-1.0
SCZT	Fangliau	2.19	210	*e*P	Pn	11 10 07.4	-0.2
WDGT	Dungji	2.21	243	*e*P	Pn	11 10 08.1	+0.1
LAY	Lan-yu	2.24	186	*e*P	Pn	11 10 05.0	-3.4
JTJ	Tarama	2.67	82	P	Pn	11 10 14.4	-0.1
JTJ				S	Sn	11 10 49.3	+2.0

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*NEIC **05** 11:33:42.1,17.00N×94.97W,h157^{km},MD3.8(MEX),After MEX.*

MEX 05 11:33:42.1±1.1,17.00N×94.97W,h157^{km}±29^{km},MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.64	222	*i* P	P	11 34 11.5	-2.5
HUIG				*e*S	S	11 34 36.1	-2.5
OXX	Oaxaca	1.68	273	*i* P	P	11 34 13.0	-1.4
OXX				*e*S	S	11 34 37.5	-1.8
VHO	Vista Hermosa	1.69	273	*i* P	P	11 34 13.3	-1.2
VHO				*i* S	S	11 34 36.7	-2.8
CCIG	Comitan	2.81	104	*i* P	P	11 34 26.5	-1.5
CCIG				*i* S	S	11 35 00.5	-2.5

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*NEIC **05** 11:44:56.8±1.4,2.42N×95.35E,mb4.2/6,Error ellipse: s-maj=51.6km s-min=17.0km az=65.0*

*BJI **05** 11:45:02.8,2.40N×95.30E,h28^{km},mb4.7,mB5.0*

ISC 05 11:44:53.2±1.5,2.3N±0.2×95.1E±0.3,h29^{km},n13,σ0.^{s}51/6, mb4.5/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	16.50	13	*e*P	P	11 48 44.5	0.0
	7.6nm,0.8s						
CM31				*e*		11 48 55.0	

HYB	**Hyderabad**	**22.13**	**314**	*i* P		11 49 57.0	
KMI	**Kunming**	**23.86**	**17**	P		11 50 16.5	
KMI				AMB	AMB		
	comp=Z,60nm,1.1s,mb4.9						
CD2	**Chengdu**	**29.62**	**15**	P	pP	11 51 06.2	-0.7
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
GTA	**Gaotai**	**37.19**	**6**	*e*P	pP	11 52 12.3	-0.1
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.3						
HHC	**Hu-ho-hao-te**	**41.16**	**19**	*e*P	pP	11 52 46.8	+1.4
HHC				AP	pP	11 52 53.5	+8.1
HHC				XP	sP	11 52 56.4	+7.4
HHC				AMB	tx		
	comp=Z,11nm,1.3s						
HHC				AMB	tx		
	comp=Z,63nm,5.0s						
WRAB	**Tennant Creek**	**44.41**	**122**	*e*P	**P**	**11 53 03.7**	**+0.1**
	comp=Z,7.8nm,0.9s,mb4.4						
WRAB				*e*pP	pP	11 53 12.6	+0.4
ULN	**Ulaanbaatar**	**46.56**	**11**	*e*P	pP	11 53 28.1	-0.9
	comp=Z,3.2nm,0.9s						
KURK	**Kurchatov**	**50.22**	**346**	*e*P	**P**	**11 53 49.3**	**+0.6**
	comp=Z,4.2nm,0.8s,mb4.5						
KURK				*e*	pP	11 53 57.0	-0.4
CTAO	**Charters Tower**	**54.88**	**116**	P	**P**	**11 54 23.7**	**-0.2**
	comp=Z,1.4nm,0.7s,mb4.1						
CTAO				*e*	pP	11 54 33.3	+0.7
CHKZ	**Chkalovo**	**55.04**	**342**	*e*P	**P**	**11 54 24.1**	**-0.6**
	comp=Z,1.4nm,0.8s,mb4.0						
CHKZ				*e*pP	pP	11 54 32.4	-1.0
STKA	**Stephens Creek**	**55.65**	**132**	*e*P	**P**	**11 54 29.5**	**+0.1**
JCT	**Junction City**	**144.44**	**22**	PKPdf	PKPdf	12 04 33.2	+0.7

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*CASC **05** 12:10:21.2±1.7, 14.22N×91.48W, h68^{km}, MD4.3, ML5.1, mb4.2(NEIC)*

*NEIC **05** 12:10:22.4±1.1, 14.33N×91.30W, mb4.2/13, Error ellipse: s-maj=17.6km s-min=11.5km az=195.0*

ISC 05 12:10:20.4±0.4**, 14.15N**±0.06×**91.53W**±0.03**, h68^{km}, n51, σ1^{s}10**/65**, mb4.1**/8**, 3C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.20**	**328**	⇓*e*P	**P**	**12 10 31.0**	**+0.3**
JAT				*e*S	**S**	**12 10 39.8**	**+1.4**
JAT				AML	AML	12 10 40.4	
	comp=N,437µm,0.3s						
FUG	**Fuego 3**	**0.73**	**66**	⇓*e*P	**P**	**12 10 35.5**	**-0.1**
PCG	**Pacaya**	**0.93**	**75**	⇓*e*P	**P**	**12 10 38.4**	**+0.3**
PCG				*e*S	**S**	**12 10 51.5**	**+0.3**
IXG	**Ixpaco**	**1.04**	**88**	⇑*e*P	**P**	**12 10 39.3**	**-0.3**
IXG				*e*S	**S**	**12 10 54.4**	**+0.6**
IXG				AML	AML	12 10 59.1	
	comp=E,118µm,0.6s						
NBG	**Las Nubes**	**1.23**	**69**	*e*P	**P**	**12 10 43.0**	**+1.0**
NBG				*e*S	**S**	**12 10 59.7**	**+1.5**
NBG				AML	AML	12 11 04.8	
	comp=E,54µm,0.4s						
RBDL	**Robledal**	**1.79**	**91**	*e*P	**P**	**12 10 50.0**	**+0.3**
RTR	**El Retiro**	**1.84**	**98**	*e*P	**P**	**12 10 50.9**	**+0.5**
SBLS	**San Blas**	**1.88**	**99**	⇑*e*P	**P**	**12 10 51.1**	**+0.2**
SBLS				*e*S	**S**	**12 11 13.2**	**-0.2**
SNJE	**San Jose**	**1.89**	**98**	⇑*e*P	**P**	**12 10 51.5**	**+0.4**
MTO2	**Montecristo 2**	**2.12**	**83**	*e*P	**P**	**12 10 53.3**	**-0.9**
CCIG	**Comitan**	**2.20**	**345**	*i* P	**P**	**12 10 57.1**	**+1.7**
CCIG				*i* S	**S**	**12 11 31.1**	**+10**
BOQS	**Boqueron**	**2.22**	**100**	*e*P	**P**	**12 10 55.9**	**+0.2**
BOQS				*e*S	**S**	**12 11 22.5**	**+0.5**
SNET	**Serv Nac Est T**	**2.28**	**101**	*e*P	**P**	**12 10 57.0**	**+0.5**
SNET				*e*S	**S**	**12 11 25.1**	**+1.7**
LFU	**La Fuente**	**2.38**	**99**	*e*P	**P**	**12 10 57.9**	**0.0**
LBRS	**Las Brisas**	**2.45**	**99**	*e*P	**P**	**12 10 58.8**	**-0.2**
LFRS	**El Faro**	**2.45**	**102**	*e*P	**P**	**12 10 59.1**	**+0.1**
LCBS	**La Ceiba**	**2.52**	**101**	*e*P	**P**	**12 11 00.1**	**+0.1**
SNVI	**San Vicente**	**2.67**	**101**	*e*P	**P**	**12 11 02.6**	**+0.6**
SNVI				*e*S	**S**	**12 11 31.6**	**-1.6**
SCX	**San Cristobal**	**2.79**	**338**	*e*P	**P**	**12 11 04.5**	**+0.8**
SCX				*i* S	**S**	**12 11 38.0**	**+1.8**
CAHU	**Cacacuatique**	**3.24**	**96**	*e*P	**P**	**12 11 09.6**	**-0.5**
BLLM	**Bellamira**	**3.27**	**102**	*e*P	**P**	**12 11 10.0**	**-0.5**
CNCH	**Conchagua**	**3.69**	**103**	*e*P	**P**	**12 11 15.7**	**-0.7**
CNCH				*e*S	**S**	**12 12 00.1**	**+1.1**
APYN	**Apoyeque**	**5.39**	**110**	*e*P	**P**	**12 11 40.9**	**+0.9**
XAVN	**Gruta Xavier**	**5.44**	**111**	*e*P	**P**	**12 11 41.3**	**+0.6**
MGAN	**Managua**	**5.51**	**111**	*e*P	**P**	**12 11 41.1**	**-0.6**
MGAN				*i*		12 12 54.7	
	comp=E,480nm,0.6s						
PYTN	**Playitas**	**5.56**	**106**	*e*P	**P**	**12 11 42.6**	**+0.2**
WILN	**Americas 2**	**5.56**	**110**	*e*P	**P**	**12 11 41.1**	**-1.3**
WILN				*e*S	**S**	**12 12 46.1**	**+0.3**
TICN	**Ticuantepe**	**5.57**	**112**	*e*P	**P**	**12 11 42.4**	**-0.1**
OXX	**Oaxaca**	**5.79**	**301**	*e*P	**P**	**12 11 47.0**	**+1.5**
OXX				*e*S	**S**	**12 12 53.0**	**+1.6**
VHO	**Vista Hermosa**	**5.80**	**301**	*e*P	**P**	**12 11 46.4**	**+0.8**
TEIG	**Tepich**	**6.80**	**27**	*e*P	**P**	**12 11 57.2**	**-2.4**
	comp=E,470nm,0.5s						
JTS	**JuntasAbangare**	**7.48**	**120**	*e*P	**P**	**12 12 08.5**	**-0.6**
	comp=E,14nm,0.4s						
PPM	**Popocatepetl**	**8.38**	**307**	*e*P	**P**	**12 12 19.2**	**-2.1**
PPM				*i* S	**S**	**12 13 45.1**	**-10**
ACX	**Acapulco**	**8.53**	**290**	*e*P	**P**	**12 12 22.0**	**-1.3**
SFJM	**Santa Fe**	**12.67**	**301**	*e*P	**P**	**12 13 23.0**	**+3.6**
JCT	**Junction City**	**17.95**	**336**	*e*P	**P**	**12 14 27.6**	**+0.7**
	comp=E,19nm,1.4s						
LTX	**Lajitas**	**18.83**	**325**	*e*P	**P**	**12 14 37.9**	**+0.5**
	comp=E,5.6nm,0.9s						
LRAL	**Lakeview Retre**	**19.25**	**12**	*e*P	**P**	**12 14 41.0**	**-1.0**
	comp=E,9.2nm,0.4s						
OXF	**Oxford**	**20.37**	**5**	*e*P	**P**	**12 14 50.9**	**-2.9**
	comp=E,7.2nm,0.5s						
OXF				*e*		12 15 04.6	
MIAR	**Mount Ida**	**20.39**	**355**	*e*P	**P**	**12 14 50.6**	**-3.5**
	comp=E,25nm,1.6s						
CPCT	**Cooper Cave**	**22.13**	**15**	*e*P	**P**	**12 15 10.4**	**-1.1**
WVT	**Waverly**	**22.14**	**8**	*e*P	**P**	**12 15 08.9**	**-2.7**
	comp=E,4.4nm,0.9s,mb3.8						
AMTX	**Amarillo**	**22.59**	**338**	*e*P	**P**	**12 15 14.4**	**-1.6**
	comp=E,12nm,0.7s,mb4.3						
CCM	**Cathedral Cave**	**23.81**	**1**	*e*P	**P**	**12 15 25.6**	**-2.2**
	comp=E,10nm,0.6s,mb4.3						
WCI	**Wyandotte Cave**	**24.43**	**10**	*e*P	**P**	**12 15 31.4**	**-2.5**
	comp=E,13nm,0.8s,mb4.3						
TUC	**Tucson**	**25.22**	**319**	*e*P	**P**	**12 15 42.2**	**+0.7**
	comp=E,2.6nm,0.8s,mb3.7						
NEN	**Nelson**	**29.95**	**320**	*e*P	**P**	**12 16 24.8**	**+0.4**
MNV	**Mina**	**33.76**	**321**	*e*P	**P**	**12 16 58.5**	**+0.8**
	comp=E,2.8nm,0.8s,mb4.1						
MNV				*e*	pP	12 17 15.8	+1.5
HLID	**Hailey**	**35.27**	**331**	*e*P	**P**	**12 17 10.6**	**+0.1**
	comp=E,1.4nm,0.7s,mb3.9						
MCMT	**McKenzie Canyo**	**35.54**	**334**	*e*P	**P**	**12 17 12.2**	**-0.6**
INK	**Inuvik**	**60.43**	**343**	*e*P	**P**	**12 20 21.5**	**-3.4**
	comp=E,1.9nm,0.6s,mb4.3						

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*ORF **05** 12:22:56.8, 10.06N×118.57E, h30^{km}, mb6.3*

*MOS **05** 12:22:59.2±1.3, 5.42N×123.04E, h327^{km}, mb6.5/65, MS6.2/17, Error ellipse: s-maj=6.5km s-min=4.2km az=117.9*

*BJI **05** 12:23:13.1, 4.88N×123.85E, h525^{km}, mB6.9, mb6.4*

*MAN **05** 12:23:15.8, 5.03N×123.53E, h558^{km}, mb6.8, ML5.9, MS6.9*

MAN GENERAL SANTOS INTENSITY III DAVAO CITY INTENSITY III.

*GUC **05** 12:23:16.5±0.0, 5.36N×123.21E, h501^{km}, mb6.4(NEIC), MW7.1(NEIC), MW7.1(HRVD)*

*DHMR **05** 12:23:17.5±2.4, 5.27N×123.42E, h500^{km}, mb6.4*

*NEIC **05** 12:23:18.9±0.1, 5.29N×123.34E, mb6.4/146, ME6.6, MW7.0, Error ellipse: s-maj=4.9km s-min=3.0km az=47.0 Broadband fault plane solution: P waves. NP1:ϕ_s5°,δ83°, λ-90°. NP2:ϕ_s185°,δ7°,λ-90°. Principal axes: T Plg38°, Azm95°; N Plg0°, Azm0°; P Plg52°, Azm275°; Moment Tensor Solution. s28 Moment tensor: Scale 10^{19} Nm; M_{rr}-2.27; $M_{\theta\theta}$0.37; $M_{\phi\phi}$1.90; $M_{r\theta}$-0.55; $M_{\theta\phi}$-0.49; $M_{\phi r}$-4.15; Best double couple: $M_0$4.7×10^{19} NP1:ϕ_s153°,δ15°,λ-120°. NP2:ϕ_s4°,δ77°,λ-82°. Principal axes: T 4.47, Plg32°, Azm88°; N .46, Plg8°, Azm183°; P -4.93, Plg57°, Azm285°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Two people killed in Sabah, Malaysia. Felt at Kota Kinabalu and Tawau, Malaysia. Felt [III PIVS] at Davao and General Santos, Mindanao, Philippines.

*HRVD **05** 12:23:18.9±0.1, 5.47N×123.67E, h531^{km}±1^{km}, MW7.1/78, Centroid moment Tensor Solution. LP body waves: s78,c222;Mantle waves: s76,c183; Half duration: 8^{s}5 Moment tensor: Scale 10^{19}Nm; M_{rr}-2.35±.02; $M_{\theta\theta}$0.09±.03; $M_{\phi\phi}$2.26±.03; $M_{r\theta}$-0.38±.02; $M_{\theta\phi}$-0.42±.03; $M_{\phi r}$-4.66±.02; Best double couple: $M_0$5.229×10^{19} NP1: ϕ_s158°,δ14°,λ-114°. NP2:ϕ_s3°,δ77°,λ-84°. Principal axes: T 5.159, Plg32°, Azm88°; N .144, Plg6°, Azm182°; P -5.299, Plg58°, Azm281°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=150s.*

*BGS **05** 12:23:19.4, 5.29N×123.34E, h525^{km}*

ISC 05 12:23:18.9±0.2**, 5.29N**±0.02×**123.44E**±0.02**, h540^{km}**±2^{km}**, h539^{km}**±3.3^{km}**:pP-P, n1353, σ1^{s}17**/915**, mb6.4**/153**, 93C-91D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZMPH	**Zamboanga City**	**2.14**	**321**	⇑*i*P	**P**	**12 24 29.0**	**+0.2**
KCP	**Kidapawan**	**2.37**	**44**	⇓*i*P	**P**	**12 24 31.4**	**+1.4**
KCP				*i* S	**S**	**12 25 33.1**	**+6.7**
PAGZ	**Pagadian**	**2.54**	**359**	*e*P	**P**	**12 24 30.5**	**-0.5**
IPIL	**Ipil**	**2.63**	**341**	*e*P	**P**	**12 24 32.0**	**+0.6**
DAV	**Davao City (W)**	**2.77**	**50**	⇓*e*P	**P**	**12 24 32.0**	**-0.3**
BUKP	**Musuan**	**3.04**	**32**	*e*P	**P**	**12 24 33.9**	**0.0**
MATI	**Mati**	**3.25**	**59**	*e*P	**P**	**12 24 33.8**	**-1.5**
CGP	**Cagayan de Oro**	**3.38**	**22**	*e*P	**P**	**12 24 37.6**	**+1.4**
SNPH	**Sibulan**	**4.03**	**357**	⇓*i*P	**P**	**12 24 40.0**	**-0.8**
SNPH				*i* S	S	12 25 24.5	-21
MNI	**Manado**	**4.07**	**160**	*e*P	**P**	**12 24 36.0**	**-5.1**
MNI				*e*S	**S**	**12 25 42.8**	**-3.7**
BIPH	**Bislig**	**4.09**	**45**	⇓*i*P	**P**	**12 24 40.5**	**-0.8**
BUTP	**Butuan**	**4.25**	**31**	*e*P	**P**	**12 24 46.0**	**+3.4**
TBP	**Tagbilaran**	**4.39**	**5**	*e*P	**P**	**12 24 43.0**	**-0.7**
TBP				*e*S	**S**	**12 25 52.7**	**+1.6**
MSLP	**Maasin**	**5.01**	**16**	*e*P	**P**	**12 24 48.7**	**-0.2**
LLP	**Lapu-Lapu**	**5.02**	**6**	*e*P	**P**	**12 24 47.9**	**-1.1**
	30088µm,1.2s						
LLP				*e*S	**S**	**12 26 02.0**	**+1.5**
GUIM	**Jordan**	**5.37**	**351**	*e*P	**P**	**12 24 50.6**	**-1.4**
TSM	**Tawau**	**5.63**	**260**	P	**P**	**12 24 55.0**	**+0.6**
TSM	**Tawau**	**5.63**	**260**	P	**P**	**12 24 55.4**	**+1.0**
TNE	**Ternate**	**5.82**	**139**	*e*P	**P**	**12 24 56.3**	**+0.2**
OCLP	**Ormoc**	**5.84**	**11**	*e*P	**P**	**12 24 56.0**	**-0.3**
CUYO	**Cuyo Island**	**6.02**	**337**	*e*P	**P**	**12 24 58.1**	**+0.2**
PLP	**Palo**	**6.03**	**15**	*i* P	**P**	**12 24 57.1**	**-1.0**
PLP				*i* S	**S**	**12 26 19.6**	**+2.8**
RCP	**Roxas**	**6.27**	**354**	⇑*e*P	**P**	**12 24 58.4**	**-1.9**
PPR	**Puerto Princes**	**6.45**	**314**	⇑*i*P	**P**	**12 25 05.5**	**+3.5**
	1733µm,0.6s						
PPR				*i* S	**S**	**12 26 30.2**	**+6.3**
BATP	**Bataraza**	**6.59**	**302**	*e*P	**P**	**12 25 03.5**	**+0.2**
MMPH	**Masbate**	**7.03**	**2**	*e*P	**P**	**12 25 09.0**	**+1.5**
	41µm,2.0s						
ENPP	**El Nido**	**7.09**	**326**	*e*P	**P**	**12 25 08.4**	**+0.2**
OTRP	**Odiongan**	**7.17**	**349**	*e*P	**P**	**12 25 08.7**	**-0.2**
KKM	**Kota Kinabalu**	**7.22**	**276**	P	**P**	**12 25 09.9**	**+0.4**
BUSP	**Coron**	**7.40**	**335**	*e*P	**P**	**12 25 11.3**	**+0.2**
SJMP	**San Jose**	**7.48**	**342**	*e*P	**P**	**12 25 25.6**	**+14**
AUQP	**San Andres**	**8.02**	**355**	*e*P	**P**	**12 25 19.0**	**+1.7**
BOAC	**Boac**	**8.27**	**349**	*e*P	**P**	**12 25 20.5**	**+0.6**
PVCP	**Virac**	**8.28**	**5**	*e*P	**P**	**12 25 19.6**	**-0.4**
GQP	**Guinayangan**	**8.62**	**354**	⇑*e*P	**P**	**12 25 25.2**	**+1.8**
LUBP	**Lubang**	**8.96**	**340**	*e*P	**P**	**12 25 27.1**	**+0.3**
LUBP	**Lubang**	**8.96**	**340**	⇑*e*P	**P**	**12 25 27.2**	**+0.3**
LQP	**Lukban**	**8.96**	**348**	*e*P	**P**	**12 25 31.1**	**+4.2**
TGY	**Tagaytay City**	**9.10**	**344**	⇓*e*P	**P**	**12 25 29.1**	**+0.9**
	12682µm,1.5s						
TGY				*e*S	**S**	**12 27 17.8**	**+6.4**
BUNI	**Buntu Taipa**	**9.42**	**199**	*e*P	**P**	**12 25 32.2**	**+0.7**
POLP	**Polilio Island**	**9.49**	**351**	*e*P	**P**	**12 25 32.1**	**-0.2**
TANI	**Tanete Lipujan**	**9.57**	**205**	*e*P	**P**	**12 25 32.5**	**-0.7**
NINI	**Niniconang**	**10.32**	**201**	*e*P	**P**	**12 25 42.2**	**+1.3**
PCPH	**Palayan**	**10.46**	**347**	⇑*e*P	**P**	**12 25 42.7**	**+0.4**
BALP	**Baler**	**10.55**	**350**	*e*P	**P**	**12 25 43.0**	**-0.2**
SCZP	**Santa Cruz**	**10.98**	**342**	*e*P	**P**	**12 25 46.2**	**-1.4**
MKS	**Makassar**	**11.16**	**201**	*e*P	**P**	**12 25 53.5**	**+4.1**
BCPH	**Baguio City Da**	**11.37**	**346**	*e*P	**P**	**12 25 51.2**	**-0.3**
	4390µm,1.0s						
BCPH				*e*S	**S**	**12 27 56.1**	**+2.0**
BOLP	**Bolinao**	**11.55**	**343**	*e*P	**P**	**12 25 52.3**	**-1.1**
CAUP	**Cauayan**	**11.69**	**352**	*e*P	**P**	**12 25 55.2**	**+0.5**
CVP	**Callao Caves**	**12.44**	**353**	⇑*i*P	**P**	**12 26 01.8**	**-0.5**
ABRA	**Dolores**	**12.57**	**348**	*e*P	**P**	**12 25 59.4**	**-4.3**
APYP	**Conner**	**12.68**	**350**	*e*P	**P**	**12 26 04.6**	**-0.2**
SGCP	**Mt. Cagua**	**12.95**	**354**	*e*P	**P**	**12 26 07.1**	**-0.4**
BBP	**Basco**	**15.13**	**355**	*e*P	**P**	**12 26 29.1**	**-0.4**
TRT	**Tretes**	**16.81**	**220**	*e*P	**P**	**12 26 49.0**	**+3.0**
QIZ	**Qiongzhong**	**19.03**	**317**	⇑*i*P	**P**	**12 27 07.5**	**+0.2**
QIZ				S	**S**	**12 30 09.4**	**-1.7**
QIZ				AMB	AMB		
	comp=Z,56µm,10.1s						
HKC	**Hong Kong**	**19.14**	**333**	⇓*i*P	**P**	**12 27 12.0**	**+3.7**
HKC				*i* S	**S**	**12 30 20.0**	**+7.1**
TATO	**Taipei**	**19.66**	**355**	*e*P	**P**	**12 27 10.8**	**-2.4**
	comp=Z,1µm,0.9s						
QZH	**Quanzhou**	**20.09**	**347**	*i* PR		12 27 16.8	
QZH				XP		12 29 33.2	
QZH				S	**S**	**12 30 31.0**	**+2.3**
QZH				SCS	ScS	12 37 38.0	+2.7
QZH				AMB	AMB		
	comp=Z,6µm,1.8s						
QZH				AMB	AMB		
	comp=Z,59µm,7.3s						
GZH	**Guangzhou**	**20.20**	**332**	P	**P**	**12 27 21.2**	**+3.0**
GUMO	**Guam**	**22.68**	**67**	*e*P	**P**	**12 27 39.5**	**-1.5**
GUMO				pmax	pmax		
	comp=Z,4µm,1.0s,mb7.0						
GUMO	**Guam**	**22.68**	**67**	*e*P	**P**	**12 27 39.5**	**-1.5**
	comp=Z,4µm,1.0s,mb7.0						
FITZ	**Fitzroy Crossi**	**23.34**	**175**	⇑*i*P	**P**	**12 27 46.3**	**-0.7**
	comp=Z,870nm,0.9s,mb6.4						
FITZ				*i* S	**S**	**12 31 20.6**	**-1.3**
FITZ				*i* SCS	ScS	12 37 46.5	-1.2
NNT	**Nongplab**	**24.50**	**289**	P	**P**	**12 27 57.6**	**+0.2**
SARN	**Sarigan**	**24.65**	**61**	*e*P	**P**	**12 27 58.5**	**-0.2**
NST	**Nakhon Sawan**	**25.10**	**296**	⇑P	**P**	**12 28 03.0**	**+0.3**
	comp=Z,408nm,0.5s,mb6.3						
SSE	**Sheshan**	**25.76**	**356**	P	**P**	**12 28 06.5**	**-1.9**
SSE				S	**S**	**12 32 01.1**	**+1.0**
SSE				PCS		12 34 58.9	
SSE				AMB	AMB		
	comp=Z,373nm,1.0s,mb6.0						
SSE				AMB	AMB		
	comp=Z,13µm,12.8s						
SSE	**Sheshan**	**25.76**	**356**	P	**P**	**12 28 06.5**	**-1.9**
	comp=Z,373nm,1.0s,mb6.0						
SSE				pP		12 29 28.5	
SSE				S	**S**	**12 32 01.1**	**+1.0**
SSE				sS		12 34 35.4	
SSE				PcS		12 34 58.9	
SSE				LR	LR		
	comp=Z,24µm,18.7s						
GYA	**Guiyang**	**26.45**	**325**	⇓*i*P	**P**	**12 28 14.8**	**+0.3**
GYA				XP	sP	12 30 41.5	-3.0
GYA				S	**S**	**12 32 15.3**	**+4.3**
GYA				SCS	ScS	12 37 59.6	-1.2
GYA				AMB	AMB		
	comp=Z,560nm,1.7s,mb5.9						
GYA				AMB	AMB		
	comp=Z,33µm,14.1s						
MBWA	**Marble Bar**	**26.53**	**188**	*e*P	**P**	**12 28 14.1**	**-1.2**
	comp=Z,672nm,1.6s,mb6.0						
WHN	**Wuhan**	**26.54**	**342**	⇓P	**P**	**12 28 15.0**	**-0.2**
WHN				XP	sP	12 30 44.4	-0.8
WHN				S	**S**	**12 32 14.0**	**+1.7**
WHN				AMB	AMB		
	comp=Z,46µm,13.0s						
NJ2	**Nanjing**	**26.97**	**351**	*e*P	**P**	**12 28 19.0**	**0.0**
NJ2				XP	sP	12 30 49.0	-0.3
NJ2				S	**S**	**12 32 21.0**	**+2.1**
NJ2				PCS		12 35 02.0	
NJ2				AMB	AMB		
	comp=Z,2µm,1.0s,mb6.7						
NJ2				AMB	AMB		
	comp=Z,37µm,11.8s						
CM31	**Chiang Mai Arr**	**27.26**	**301**	⇓*e*P	**P**	**12 28 21.8**	**+0.2**
	comp=Z,793nm,0.6s,mb6.5						
CM31				*e*pP		12 29 44.3	
CM31				*e*sP	sP	12 30 49.6	-2.5
CM31				*e*PcP	PcP	12 31 27.6	+3.6
CM31				*e*S	**S**	**12 32 27.8**	**+4.2**
CM31				*e*ScP		12 34 15.1	
WRAB	**Tennant Creek**	**27.27**	**157**	*e*P	**P**	**12 28 20.3**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,1µm,0.6s,mb6.8						
WRAB	**Tennant Creek**	**27.27**	**157**	*e*P	**P**	**12 28 20.3**	**-1.5**
	comp=Z,1µm,0.6s,mb6.8						
WRA	**Warramunga Arr**	**27.27**	**157**	*i* P	**P**	**12 28 20.2**	**-1.6**
WRA				pmax	pmax		
	comp=Z,3µm,1.2s						
WB2	**Warramunga Arr**	**27.27**	**157**	⇑*i*P	**P**	**12 28 20.2**	**-1.6**
WB2				*e*		12 29 48.2	
WB2				*i* S	**S**	**12 32 20.0**	**-3.9**
WB2				*i* SCS	ScS	12 38 03.8	-0.7
KMI	**Kunming**	**27.98**	**317**	PR		12 28 28.8	
KMI				XP	sP	12 30 56.6	-2.3
KMI				PCP	PcP	12 31 28.3	+2.6
KMI				S	**S**	**12 32 40.1**	**+5.3**
KMI				SCP		12 34 16.6	
KMI				SCS	ScS	12 38 10.7	+3.0
KMI				AMB	AMB		
	comp=Z,3µm,1.3s,mb6.7						
KMI				AMB	AMB		
	comp=Z,33µm,8.4s						
KMI	**Kunming**	**27.98**	**317**	P	**P**	**12 28 28.8**	**+0.8**
KMI						12 31 28.3	
KMI				S	**S**	**12 32 40.1**	**+5.3**
KMI				pmax	pmax		
	comp=Z,3µm,1.3s,mb6.7						
KMI				MLR	MLR		
	comp=Z,75µm,19.0s						
KMI	**Kunming**	**27.98**	**317**	Pr		12 28 28.8	
	comp=Z,3µm,1.3s						
KMI				pP		12 29 56.9	
KMI				sP	sP	12 30 56.6	-2.3
KMI				PcP	PcP	12 31 28.3	+2.6
KMI				S	**S**	**12 32 40.1**	**+5.3**
KMI				ScP		12 34 16.6	
KMI				sS		12 35 19.5	
KMI				ScS	ScS	12 38 10.7	+3.0
KMI				LR	LR		
	comp=Z,75µm,19.0s						
ASPA	**Alice Springs**	**30.54**	**161**	⇑*i*P	**P**	**12 28 49.7**	**-0.2**
ASPA				*i* S	**S**	**12 33 13.1**	**-1.4**
ASPA				*i* SCS	ScS	12 38 18.1	-2.0
TIA	**Tai’an**	**31.32**	**350**	P	**P**	**12 28 55.4**	**-1.0**
TIA				S	**S**	**12 33 20.9**	**-5.4**
TIA				AMB	AMB		
	comp=Z,339nm,1.1s,mb5.8						
TIA				AMB	AMB		
	comp=Z,16µm,7.0s						
CD2	**Chengdu**	**31.49**	**326**	⇑*i*P	**P**	**12 28 58.0**	**0.0**
CD2				S	**S**	**12 33 30.6**	**+1.5**
XAN	**Xi’an**	**31.62**	**337**	P	**P**	**12 28 57.9**	**-1.1**
XAN				AMB	AMB		
	comp=Z,24µm,15.9s						
COCO	**West Island**	**31.64**	**237**	*e*P	**P**	**12 28 57.3**	**-2.1**
	comp=Z,5µm,1.5s,mb6.8						
COCO				*e*PP	PP	12 30 35.7	+9.2
COCO				*e*S	**S**	**12 33 25.8**	**-5.7**
COCO				*e*ScP		12 34 28.8	
INCN	**Inchon**	**32.17**	**5**	*e*P	**P**	**12 29 03.6**	**-0.1**
	comp=Z,355nm,0.6s,mb6.1						
KS15	**Wonju Array Si**	**32.26**	**7**	*e*P	**P**	**12 29 03.9**	**-0.5**
DL2	**Dalian**	**33.50**	**357**	*i* PR		12 29 14.8	
DL2				XP	sP	12 31 44.0	-5.2
DL2				S	**S**	**12 33 57.4**	**-2.4**
DL2				SCP		12 34 35.9	
DL2				SCS	ScS	12 38 37.7	+2.5
DL2				AMB	AMB		
	comp=Z,920nm,0.6s,mb6.5						
DL2				AMB	AMB		
	comp=Z,6µm,8.1s						
CTA	**Charters Tower**	**33.75**	**139**	⇑*i*P	**P**	**12 29 17.1**	**0.0**
	comp=Z,1µm,1.0s,mb6.5						
CTA				*i* S	**S**	**12 34 04.0**	**+0.2**
CTA				*i* SCS	ScS	12 38 41.2	+4.5
CTA	**Charters Tower**	**33.75**	**139**	⇑*i*P	**P**	**12 29 17.1**	**0.0**
CTA				pmax	pmax		
	comp=Z,1µm,1.0s						
CTAO	**Charters Tower**	**33.75**	**139**	⇑*e*P	**P**	**12 29 17.2**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,2µm,0.9s,mb6.6						
CTAO	**Charters Tower**	**33.75**	**139**	⇑*e*P	**P**	**12 29 17.2**	**+0.1**
	comp=Z,2µm,0.9s,mb6.6						
MAJO	**Matsushiro**	**33.93**	**22**	P	**P**	**12 29 16.3**	**-2.1**
MAJO				P		12 30 04.1	
MAJO				S	**S**	**12 34 01.2**	**-5.2**
MAJO				ScS	ScS	12 38 41.1	+3.5
MAJO	**Matsushiro**	**33.93**	**22**	*e*P	**P**	**12 29 16.2**	**-2.2**
MAJO				pmax	pmax		
	comp=Z,3µm,0.9s,mb6.8						
MAJO	**Matsushiro**	**33.93**	**22**	*e*P	**P**	**12 29 16.2**	**-2.2**
	comp=Z,3µm,0.9s,mb6.8						
MAT	**Matsushiro**	**33.93**	**22**	*e*P	**P**	**12 29 15.0**	**-3.4**
MAT				pmax	pmax		
	comp=Z,520nm,1.0s,mb6.0						
MAT				MLR	MLR		
	comp=Z,26µm,20.0s						
MAT	**Matsushiro**	**33.93**	**22**	*e*P	**P**	**12 29 15.0**	**-3.4**
	comp=Z,520nm,1.0s,mb6.0						
MAT				*e*S	**S**	**12 34 01.0**	**-5.3**
MAT				LR	LR		
	comp=Z,26µm,20.0s						
MAT	**Matsushiro**	**33.93**	**22**	P	**P**	**12 29 14.6**	**-3.8**
MAT				S	**S**	**12 34 00.6**	**-5.7**
LKP	**Lekhapani**	**34.05**	**313**	*e*P	**P**	**12 29 18.5**	**-1.0**
LKP				*e*		12 29 31.0	
IMP	**Imphal**	**34.31**	**307**	⇑*i*P	**P**	**12 29 22.0**	**+0.2**
BJT	**Baijiatuau**	**35.19**	**350**	P	**P**	**12 29 27.9**	**-0.9**
BJT				S	**S**	**12 34 25.9**	**+0.6**
BJT				ScS	ScS	12 38 46.6	+2.3
BJI	**Beijing**	**35.21**	**350**	P	**P**	**12 29 27.9**	**-1.1**
BJI				S	**S**	**12 34 22.9**	**-2.7**
BJI				SS	SS	12 37 22.4	-2.0
BJI				SCS	ScS	12 38 49.4	+4.9
BJI				AMB	AMB		
	comp=Z,1µm,1.2s,mb6.3						
BJI				AMB	AMB		
	comp=Z,23µm,5.6s						
BJI	**Beijing**	**35.21**	**350**	P	**P**	**12 29 27.9**	**-1.1**
BJI				*PP		12 30 53.9	
BJI				*SP	sP	12 31 50.7	-13
BJI				S	**S**	**12 34 22.9**	**-2.7**
BJI				pmax	pmax		
	comp=Z,1µm,1.2s,mb6.3						
BJI	**Beijing**	**35.21**	**350**	P	**P**	**12 29 27.9**	**-1.1**
	comp=Z,1µm,1.2s,mb6.3						
BJI				pP		12 30 53.9	
BJI				sP	sP	12 31 50.7	-13
BJI				S	**S**	**12 34 22.9**	**-2.7**
BJI				SS	SS	12 37 22.4	-2.0
BJI				ScS	ScS	12 38 49.4	+4.9
LZH	**Lanzhou**	**35.55**	**332**	⇓P	**P**	**12 29 32.4**	**+0.5**
LZH				AP		12 31 00.5	
LZH				PP	PP	12 31 09.5	+3.0
LZH				S	**S**	**12 34 33.0**	**+2.3**
LZH				SS	SS	12 37 29.6	-1.1
LZH				AMB	AMB		
	comp=Z,3µm,1.5s,mb6.6						
LZH				AMB	AMB		
	comp=Z,34µm,8.2s						
LZH	**Lanzhou**	**35.55**	**332**	⇓P	**P**	**12 29 32.4**	**+0.5**
LZH				*PP		12 31 00.5	
LZH						12 31 09.5	
LZH				*SP	sP	12 31 54.9	-12
LZH				S	**S**	**12 34 33.0**	**+2.3**
LZH				pmax	pmax		
	comp=Z,3µm,1.5s,mb6.6						
LZH	**Lanzhou**	**35.55**	**332**	⇓P	**P**	**12 29 32.4**	**+0.5**
	comp=Z,3µm,1.5s,mb6.6						
LZH				pP		12 31 00.5	
LZH				PP	PP	12 31 09.5	+3.0
LZH				sP	sP	12 31 54.9	-12
LZH				S	**S**	**12 34 33.0**	**+2.3**
LZH				ScP		12 34 48.5	
LZH				sS		12 37 09.4	
LZH				SS	SS	12 37 29.6	-1.1
LZH				ScS	ScS	12 38 53.5	+7.1
FORT	**Forrest**	**36.13**	**173**	⇑*i*P	**P**	**12 29 36.8**	**0.0**
	comp=Z,8µm,0.8s,mb7.3						

FORT				i S	S	12 34 39.6	+0.1
FORT				i SCS	ScS	12 38 50.1	+0.4
SHL	Shillong	36.32	307	i P	P	12 29 39.0	+0.7
SHL				eS	S	12 34 44.0	+1.7
SNY	Shenyang	36.38	0	⇓P	P	12 29 37.4	-1.3
SNY				AP		12 31 13.5	
SNY				XP	sP	12 32 12.4	-1.6
SNY				SCS	ScS	12 38 53.2	+2.2
SNY				AMB	AMB		
	comp=Z,710nm,0.6s,mb6.4						
HHC	Hu-ho-hao-te	36.97	345	eP	P	12 29 43.3	-0.2
HHC				AP		12 31 16.8	
HHC				PP	PP	12 31 25.2	+3.5
HHC				PCP	PcP	12 31 52.8	+2.0
HHC				XP	sP	12 32 14.4	-4.5
HHC				SCP		12 34 49.0	
HHC				S	S	12 34 52.6	+0.8
HHC				PCS		12 35 39.4	
HHC				SS	SS	12 37 52.4	-4.1
HHC				SCS	ScS	12 38 56.0	+1.6
HHC				AMB	AMB		
	comp=Z,23μm,9.8s						
KLBR	Kellerberrin	37.07	188	⇑iP	P	12 29 44.0	-0.5
	comp=Z,3μm,0.3s,mb7.3						
KLBR				i S	S	12 34 52.6	-0.8
BTO	Baotou	37.17	343	eP	P	12 29 45.6	+0.5
BTO				AMB	AMB		
	comp=Z,793nm,2.1s,mb5.9						
MUN	Mundaring	37.69	190	⇓iP	P	12 29 50.2	+0.7
	comp=Z,648nm,0.8s,mb6.2						
MUN				i SCP		12 34 49.1	
MUN				i S	S	12 35 03.3	+0.7
MUN	Mundaring	37.69	190	⇓iP	P	12 29 50.2	+0.7
MUN				i S	S	12 35 03.3	+0.7
MUN				pmax	pmax		
	comp=Z,648nm,0.8s,mb6.2						
CAL	Calcutta	37.99	300	eP	P	12 29 54.3	+2.3
CAL				e		12 35 13.2	
CAL				e		12 35 13.9	
CN2	Changchun	38.40	2	eP	P	12 29 57.1	+2.1
CN2				eAP		12 31 30.0	
CN2				PCP	PcP	12 31 57.4	+2.2
CN2				SCP		12 34 51.7	
CN2				eS	S	12 35 08.9	-3.8
CN2				SS	SS	12 38 22.1	-0.8
CN2				SCS	ScS	12 39 06.6	+4.0
CN2				AMB	AMB		
	comp=Z,410nm,0.7s,mb6.1						
CN2				AMB	AMB		
	comp=Z,8μm,10.0s						
VLA	Vladivostok	38.41	10	⇑iP	P	12 29 57.0	+1.8
VLA				i		12 31 53.0	
VLA				pmax	pmax		
	comp=Z,5μm,4.0s						
VLA				pmax	pmax		
	comp=N,2μm,3.0s						
VLA				pmax	pmax		
	comp=E,2μm,3.0s						
VLA				pmax	pmax		
	comp=Z,3μm,5.0s						
NWAO	Narrogin (SRO)	38.46	188	eP	P	12 29 55.9	+0.2
NWAO				pmax	pmax		
	comp=Z,710nm,0.8s						
NWAO	Narrogin (SRO)	38.46	188	eP	P	12 29 55.9	+0.2
	comp=Z,710nm,0.8s,mb6.2						
LSA	Lhasa	38.96	312	P	P	12 30 02.6	+2.8
LSA				AMB	AMB		
	comp=Z,2μm,1.3s,mb6.4						
BWNR	Bhubaneshwar	39.48	296	eP	P	12 30 04.8	+0.7
BWNR				e		12 30 10.2	
	comp=Z,4μm,1.6s						
MDJ	Mudanjiang	39.54	7	P	P	12 30 03.3	-1.0
MDJ				PP	PP	12 31 46.1	-1.5
MDJ				PCP	PcP	12 31 57.7	-1.2
MDJ				S	S	12 35 27.6	-1.7
MDJ				SCS	ScS	12 39 12.5	+3.1
MDJ				AMB	AMB		
	comp=Z,1μm,1.2s,mb6.4						
MDJ				AMB	AMB		
	comp=Z,5μm,14.8s						
SLGI	Shiliguri	39.60	306	e	P	12 30 07.2	+2.2
GTK	Gangtok	39.73	307	eP	P	12 30 03.0	-3.0
GTA	Gaotai	40.12	331	⇓iP	P	12 30 09.3	+0.3
GTA				AP	pP	12 31 45.4	-0.6
GTA				PP	PP	12 31 55.9	+2.8
GTA				PCP	PcP	12 32 02.2	+1.3
GTA				XP	sP	12 32 45.7	+0.5
GTA				SCP		12 35 00.3	
GTA				S	S	12 35 36.9	-0.9
GTA				XS		12 38 27.5	
GTA				SCS	ScS	12 39 13.3	+0.4
GTA				AMB	AMB		
	comp=Z,1μm,1.4s,mb6.3						
GTA				AMB	AMB		
	comp=Z,30μm,6.9s						
STKA	Stephens Creek	40.81	156	⇑iP	P	12 30 15.1	+0.4
	comp=Z,1μm,0.9s,mb6.5						
STKA				i SCP		12 35 01.3	
STKA				i S	S	12 35 47.6	-0.2
STKA				i SCS	ScS	12 39 16.2	-0.9
VIS	Vishakhapatnam	41.09	291	eP	P	12 30 19.0	+1.9
VIS				e		12 30 22.1	
	comp=Z,2μm,1.3s						
JIRN	Jiri	41.81	306	eP	P	12 30 23.4	+0.6
GUN	Gumba	42.16	307	eP	P	12 30 25.9	+0.3
	comp=Z,7μm,0.7s,mb7.3						
PKI	Pulchoki	42.40	306	eP	P	12 30 26.8	-0.7
PALK	Pallekele	42.51	275	P	P	12 30 29.1	+0.6
	comp=Z,5μm,0.8s,mb7.1						
PALK	Pallekele	42.51	275	eP	P	12 30 28.6	0.0
	comp=Z,2μm,1.4s,mb6.4						
KKN	Kakani	42.59	306	eP	P	12 30 28.8	-0.2
	comp=Z,4μm,0.8s,mb6.9						
DMN	Daman	42.66	306	eP	P	12 30 29.3	-0.2
	comp=Z,11μm,1.2s,mb7.3						
GKN	Gorkha	43.20	306	eP	P	12 30 33.3	-0.4
	comp=Z,5μm,0.9s,mb7.0						
MDRS	Chennai	43.28	283	i P	P	12 30 32.0	-2.5
MDRS				⇓i		12 30 37.0	
MDRS				i		12 32 17.0	
MDRS				e		12 33 08.0	
MDRS				i		12 34 47.0	
MDRS				e		12 36 26.0	
MDRS				e		12 39 32.0	
BLSP	Bilaspur	43.29	297	⇑iP	P	12 30 36.0	+1.5
BLSP				i	pP	12 32 15.1	+2.1
YUK	Yuzh-Kuril'sk	43.34	24	eP	P	12 30 35.3	+0.7
YUK				i	pP	12 32 13.0	-0.1
YUK				pmax	pmax		
	comp=Z,10μm,2.0s,mb7.0						
YUK				pmax	pmax		
	comp=N,12μm,3.0s						
YUK				pmax	pmax		
	comp=E,7μm,3.5s						
YUK				pmax	pmax		
	comp=Z,3μm,1.0s,mb6.8						
VLK	Valmikinagar	43.55	305	i P	P	12 30 35.0	-1.5
VLK				i		12 30 38.0	
HIA	Hailar	43.93	357	P	P	12 30 38.2	-1.0
HIA				PcP	PcP	12 32 15.2	+1.6
HIA				S	S	12 36 29.2	-2.9
HIA				ScS	ScS	12 39 38.3	+2.0
KOLN	Koldanda	43.95	305	eP	P	12 30 39.6	0.0
KLR	Kul'dur	44.35	8	eP	P	12 30 37.5	-4.9
KLR				e	pP	12 32 12.5	-9.0
KLR				pmax	pmax		
	comp=N,3μm,11.0s						
KLR				pmax	pmax		
	comp=Z,5μm,11.0s						
ALBI	Allahabad	44.55	301	⇑iP	P	12 30 42.5	-1.8
ULN	Ulaanbaatar	44.68	344	P	P	12 30 44.8	-0.3
ULN				i *PP	pP	12 32 32.9	+8.7
ULN	Ulaanbaatar	44.68	344	⇓eP	P	12 30 44.3	-0.7
	comp=Z,981nm,0.7s,mb6.5						
YSS	Yuzh-Sakhalins	44.73	19	⇑iP	P	12 30 43.0	-2.4
YSS				e*PP	pP	12 32 21.0	-3.6
YSS				e		12 32 32.0	
YSS				pmax	pmax		
	comp=N,4μm,4.0s						
YSS				pmax	pmax		
	comp=E,2μm,4.0s						
YSS				pmax	pmax		
	comp=Z,5μm,4.0s						
YSS				pmax	pmax		
	comp=N,730nm,1.1s						
YSS				pmax	pmax		
	comp=E,700nm,1.1s						
YSS				pmax	pmax		
	comp=Z,1μm,1.1s,mb6.4						
YSS				pmax	pmax		
	comp=Z,6μm,11.0s						
YSS				pmax	pmax		
	comp=N,3μm,10.0s						
YSS				MLR	MLR		
	comp=Z,15μm,20.0s						
YSS				MLR	MLR		
	comp=N,15μm,18.0s						
YSS				MLR	MLR		
	comp=E,10μm,16.0s						
YSS	Yuzh-Sakhalins	44.73	19	eP	P	12 30 43.7	-1.8
	comp=E,2μm,1.2s,mb6.5						
SALM	Salem	45.14	281	⇓iP	P	12 30 49.0	-0.1
SALM				i		12 32 21.0	
HYB	Hyderabad	45.50	289	⇓eP	P	12 30 51.0	-0.8
HYB				e		12 32 36.0	
HYB				eS	S	12 36 52.0	-2.4
HYB				pmax	pmax		
	comp=Z,900nm,1.0s,mb6.2						
HYB	Hyderabad	45.50	289	⇓eP	P	12 30 51.0	-0.8
	comp=Z,900nm,1.0s,mb6.2						
HYB				e		12 32 36.0	
HYB				e		12 33 24.0	
HYB				eS	S	12 36 52.0	-2.4
HYB	Hyderabad	45.50	289	⇓iP	P	12 30 51.0	-0.8
	comp=Z,900nm,1.0s,mb6.2						
HYB				ePcP	PcP	12 32 18.0	-1.6
HYB				epP	pP	12 32 22.5	-8.9
HYB				ePP	PP	12 32 36.0	-10
HYB				esP	sP	12 33 24.0	-6.1
HYB				eScP		12 35 19.0	
HYB				ePcS		12 36 06.5	
HYB				eS	S	12 36 52.0	-2.4
HYB				eScS	ScS	12 39 50.0	+3.1
HYB				ePKPPKP		13 02 37.5	
HYB				e		13 13 27.0	
NGP	Nagpur	45.80	294	eP	P	12 30 54.4	+0.4
NGP				eS	S	12 37 01.1	+2.5
TRD	Trivandrum	46.23	277	eP	P	12 30 57.5	+0.1
TRD				e		12 31 01.3	
	comp=Z,4μm,1.2s						
RIV	Riverview	46.92	148	⇓iP	P	12 31 03.7	+1.3
RIV				i SCP		12 35 27.8	
RIV				eS	S	12 37 19.8	+5.9
RIV	Riverview	46.92	148	⇓iP	P	12 31 03.7	+1.3
RIV				eS	S	12 37 19.8	+5.9
CNB	Canberra Magne	47.18	151	⇑iP	P	12 31 04.5	+0.1
	comp=Z,15μm,1.1s						
CNB				eSCP		12 35 27.9	
CNB				i S	S	12 37 19.7	+2.3
CNB				i SCS	ScS	12 40 00.8	+3.0
LGTI	Lohaghat	47.31	306	eP	P	12 31 05.5	+0.1
LGTI				e		12 32 28.5	
TOO	Toolangi	47.33	156	⇑iP	P	12 31 06.0	+0.5
	comp=Z,25nm,0.7s						
TOO				eSCP		12 35 28.5	
TOO				i S	S	12 37 23.1	+3.6
TOO				i SCS	ScS	12 40 01.7	+3.0
PTH	Pithoragarh	47.37	306	eP	P	12 31 08.0	+2.1
PTH				e		12 35 33.0	
JHNI	Jhansi	47.41	300	⇑iP	P	12 31 04.0	-2.2
JHNI				i		12 33 27.0	
LATR	Latur	47.54	290	eP	P	12 31 06.1	-1.3
BHPL	Bhopal	47.77	297	eP	P	12 31 08.6	-0.5
BHPL				e		12 31 13.0	
	comp=Z,3μm,1.0s						
BHPL				eS	S	12 37 27.7	+2.0
BHPL				e		12 47 51.7	
	comp=Z,39μm,20.7s						
ZAK	Zakamensk	48.02	343	eP	P	12 31 10.0	-0.6
ZAK				e		12 32 30.2	
ZAK				pmax	pmax		
	comp=Z,373nm,1.4s,mb5.7						
MNGI	Mangalore	48.53	283	i P	P	12 31 15.7	+0.9
MNGI				i		12 37 39.9	
TLY	Talaya	49.08	344	P	P	12 31 17.5	-0.9
	comp=Z,9μm,0.7s						
TLY	Talaya	49.08	344	eP	P	12 31 17.5	-0.9
TLY				eS	S	12 37 43.9	+0.8
TLY				pmax	pmax		
	comp=Z,2μm,1.5s,mb6.5						
TLY	Talaya	49.08	344	eP	P	12 31 17.4	-1.1
	comp=Z,2μm,1.1s,mb6.6						
DDI	Dehra Dun	49.40	306	eP	P	12 31 19.7	-1.4
DDI				eS	S	12 37 45.7	-2.1
IRK	Irkutsk	49.41	345	eP	P	12 31 20.9	0.0
IRK				pmax	pmax		
	comp=Z,3μm,2.2s,mb6.4						
NDI	New Delhi	49.53	303	eP	P	12 31 19.0	-3.1
NDI				e		12 37 44.0	
NDI				e		12 40 15.0	
WMQ	Urumqi	49.59	326	P	P	12 31 21.8	-0.6
WMQ				S	S	12 37 52.0	+1.8
WMQ				SCS	ScS	12 40 20.0	+6.1
WMQ				AMB	AMB		
	comp=Z,4μm,1.0s,mb6.8						
WMQ				AMB	AMB		
	comp=Z,16μm,9.0s						
KAD	Karad	49.61	288	⇑iP	P	12 31 23.2	+0.4
KAD				e	pP	12 33 08.3	+3.5
KAD				e		12 43 21.1	
	comp=Z,22μm,18.5s						
GOA	Goa	49.73	286	e	P	12 31 32.1	+8.4
	comp=Z,7μm,20.2s						
GOA				e		12 37 58.2	
MOY	Mondy	49.84	342	eP	P	12 31 23.4	-0.7
MOY				pmax	pmax		
	comp=Z,4μm,2.5s,mb6.4						
NOUC	Port Laguerre	50.01	125	eP	P	12 31 25.1	-0.6
NOUC				eS	Px	12 33 14.2	
POO	Poona	50.10	290	eP	P	12 31 26.6	+0.2
POO				e		12 31 29.3	
	comp=Z,3μm,1.2s						
MNCY	Minicoy	50.11	276	⇓iP	P	12 31 25.0	-1.6
MNCY				i		12 32 19.0	
SMLA	Simla	50.40	306	⇓i	P	12 31 45.2	+17
	comp=Z,764nm,0.0s						
SMLA				i		12 38 20.0	
SDNR	Sundarnagar	50.69	307	⇓iP	P	12 31 30.4	-0.2
SDNR				i		12 38 11.0	
AJM	Ajmer	51.05	300	i P	P	12 31 32.0	-1.3
BHK	Bhakra	51.10	307	eP	P	12 31 35.0	+1.4
BHK				e		12 38 04.2	
BOM	Bombay	51.13	290	eP	P	12 31 34.2	+0.2
BOM				e		12 38 14.2	
CLNS	Chul'man	51.42	1	eP	P	12 31 34.2	-1.3
CLNS				e	pP	12 33 21.4	+2.9
CLNS				pmax	pmax		
	comp=N,605nm,0.7s						
CLNS				pmax	pmax		
	comp=E,425nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,1μm,0.7s,mb6.3						
CLNS				MLR	MLR		
	comp=Z,18μm,13.0s						
CLNS				MLR	MLR		
	comp=N,17μm,12.0s						
CLNS				MLR	MLR		
	comp=E,8μm,15.0s						
CLNS	Chul'man	51.42	1	eP	P	12 31 34.2	-1.3
CLNS				eS	S	12 38 08.0	-6.7
PONG	Pong	51.66	307	e	P	12 31 32.0	-5.7
PONG				e		12 38 23.0	
THN	Thein Dam	52.02	307	eP	P	12 31 37.6	-2.7
THN				e		12 32 43.4	
BHV	Bhavnagar	52.22	293	eP	P	12 31 41.0	-0.8
DGAR	Diego Garcia	52.41	257	eP	P	12 31 40.8	-2.5
DGAR				pmax	pmax		
	comp=Z,3μm,1.3s,mb6.4						
DGAR	Diego Garcia	52.41	257	eP	P	12 31 40.8	-2.5
	comp=Z,3μm,1.3s,mb6.4						
TAU	Tasmania Unive	52.64	158	eP	P	12 31 44.6	+0.1
TAU				pmax	pmax		
	comp=Z,179nm,0.6s,mb5.6						
TAU	Tasmania Unive	52.64	158	eP	P	12 31 44.6	0.0
	comp=Z,179nm,0.6s,mb5.6						
JMU	Jammu	52.76	307	e	P	12 31 50.5	+4.9
SKR	Severo-Kuril's	52.85	26	eP	P	12 31 43.4	-2.5
SKR				pmax	pmax		
	comp=Z,1μm,1.0s,mb6.2						
SKR				pmax	pmax		
	comp=N,2μm,1.5s						
SKR				pmax	pmax		
	comp=E,2μm,1.5s						
SKR				pmax	pmax		
	comp=N,5μm,4.0s						
SKR				pmax	pmax		
	comp=E,8μm,4.0s						
SKR				pmax	pmax		
	comp=Z,10μm,4.0s						
SKR				MLR	MLR		
	comp=N,11μm,18.0s						
SKR				MLR	MLR		
	comp=E,10μm,18.0s						
SKR				MLR	MLR		
	comp=Z,9μm,18.0s						
SKR	Severo-Kuril's	52.85	26	eP	P	12 31 44.0	-1.9
SKR				i S	S	12 38 28.0	-5.8
BOD	Bodaibo	52.91	354	eP	P	12 31 44.7	-1.5
BOD				e		12 38 35.0	
BOD				e		12 40 35.3	
BOD				pmax	pmax		
	comp=Z,3μm,2.8s,mb6.1						
MKAR	Makanchi Array	54.43	326	eP	P	12 31 56.3	-0.8
MKAR				pmax	pmax		
	comp=Z,1μm,0.6s						
MKAR	Makanchi Array	54.43	326	i P	P	12 31 56.4	-0.7
KSH	Kashi	54.63	316	PR		12 31 59.5	
KSH				ePCP	PcP	12 32 54.3	+1.1
KSH				ePP	PP	12 34 10.3	+1.5
KSH				ePCS		12 36 51.3	
KSH				eS	S	12 38 59.3	+1.9
KSH				eSS	SS	12 42 56.0	+3.1
KSH				AMB	AMB		
	comp=Z,5μm,1.2s,mb6.6						
BHJ	Bhuj	54.75	295	⇓eP	P	12 32 01.2	+1.5
	comp=Z,493nm,23.1s						
BHJ				eS	S	12 39 00.8	+1.5
PET	Petropavlovsk	55.64	25	eP	P	12 32 04.4	-1.1
PET				e		12 32 54.0	
PET				pmax	pmax		
	comp=Z,2μm,1.3s,mb6.2						
PET				pmax	pmax		
	comp=Z,7μm,2.3s,mb6.5						
PET				pmax	pmax		
	comp=Z,5μm,12.0s						
PET	Petropavlovsk	55.64	25	eP	P	12 32 04.1	-1.3
	comp=Z,4μm,1.3s,mb6.5						
ULHL	Ulahol	55.68	319	P	P	12 32 06.1	+0.2
	SNR=34						
AAA	Alma-Ata	55.72	320	i P	P	12 32 06.0	-0.1
AAA				i S	S	12 39 14.0	+2.5
AAA				pmax	pmax		
	comp=Z,28μm,9.0s						
AAA				smax			
	comp=N,36μm,10.0s						
AAA	Alma-Ata	55.72	320	eP	P	12 32 06.0	-0.1
AAA				eS	S	12 39 16.0	+4.5
KZA	Kyzart	56.26	318	P	P	12 32 10.9	+1.0
	SNR=30						
TKM2	Tokmak 2	56.42	319	P	P	12 32 10.0	-0.9
	SNR=281						
KBK	Karagaybulak	56.72	319	P	P	12 32 13.0	-0.1
	SNR=356						
YAK	Yakutsk	56.81	4	d iP	P	12 32 13.9	+0.5
YAK				pmax	pmax		
	comp=E,171nm,0.9s						
YAK				pmax	pmax		
	comp=Z,2μm,0.9s,mb6.2						
YAK				pmax	pmax		
	comp=N,882nm,1.4s						
YAK	Yakutsk	56.81	4	eP	P	12 32 10.9	-2.5
	comp=N,5μm,0.7s,mb6.8						
UCH	Uchtor	56.82	318	P	P	12 32 14.2	+0.5
	SNR=296						
CHMS	Chumysh	57.01	319	P	P	12 32 14.0	-1.0
	SNR=257						
AAK	Ala-Archa	57.01	318	P	P	12 32 14.9	-0.2
	SNR=342						
AAK	Ala-Archa	57.01	318	P	P	12 32 15.1	0.0
AAK				pmax	pmax		
	comp=Z,4μm,1.4s,mb6.5						
AAK	Ala-Archa	57.01	318	eP	P	12 32 13.4	-1.7
	comp=Z,6μm,1.7s,mb6.6						
FRU	Bishkek	57.02	319	i P	P	12 32 15.0	-0.1
FRU				i		12 39 28.0	
FRU				pmax	pmax		
	comp=Z,29μm,10.0s						
FRU				MLR	MLR		
	comp=Z,20μm,16.0s						
USP	Ospenovka	57.29	319	P	P	12 32 16.2	-0.8
	SNR=473						
AML	Almayashu	57.32	318	P	P	12 32 18.3	+1.1
	SNR=22						
EKS2	Erkin-Say	57.50	318	P	P	12 32 18.2	-0.2
	SNR=404						
MA2	Magadan	58.06	16	d iP	P	12 32 21.0	-0.9
MA2				i *PP	pP	12 34 05.2	-3.7
MA2				ePPP	PPP	12 36 06.4	-4.9
MA2				eSSS	SSS	12 46 32.4	-3.4
MA2				pmax	pmax		
	comp=N,500nm,0.7s						
MA2				pmax	pmax		
	comp=E,200nm,0.7s						
MA2				pmax	pmax		
	comp=Z,1μm,0.7s,mb6.2						
MA2	Magadan	58.06	16	eP	P	12 32 20.8	-1.1
	comp=Z,128nm,3.0s						
KURK	Kurchatov	58.68	328	i P	P	12 32 24.7	-1.6
KURK				pmax	pmax		
	comp=Z,2μm,0.6s,mb6.5						
KURK	Kurchatov	58.68	328	⇓iP	P	12 32 24.6	-1.6
	comp=Z,4μm,0.6s,mb6.8						
NVS	Novosibirsk	59.03	334	eP	P	12 32 25.4	-3.1
NVS				pmax	pmax		
	comp=N,2μm,1.4s						
NVS				pmax	pmax		
	comp=E,3μm,1.4s						
NVS				pmax	pmax		
	comp=Z,5μm,1.4s,mb6.6						
SEY	Seymchan	61.31	15	eP	P	12 32 44.9	+1.5
SEY						12 33 19.1	
SEY				*PP	pP	12 34 32.9	+0.6
SEY						12 35 10.2	
SEY				eS	S	12 40 26.6	+4.7
SEY				SS	SS	12 44 50.6	+14
SEY				pmax	pmax		
	comp=E,1μm,1.3s						
SEY				pmax	pmax		
	comp=Z,4μm,1.3s,mb6.5						
SEY				pmax	pmax		
	comp=N,1μm,1.4s						
SEY				smax			
	comp=N,363μm,9.8s						
SEY				smax			
	comp=E,1867μm,15.6s						
OUZ	Omahuta	61.98	135	eP	P	12 32 48.8	+0.6
OUZ	Omahuta	61.98	135	PN	P	12 32 48.8	+0.6
OUZ	Omahuta	61.98	135	PN	P	12 32 48.8	+0.6
FX1	Attu Island--F	62.42	31	eP	P	12 32 49.8	-1.0
SMY	Shemya	62.83	32	eP	P	12 32 55.3	+1.9
SMY				pmax	pmax		
	comp=Z,5μm,1.6s,mb6.7						
SMY	Shemya	62.83	32	eP	P	12 32 55.3	+1.9
	comp=Z,5μm,1.6s,mb6.7						
WCZ	Waipu Caves	62.87	135	eP	P	12 32 56.3	+2.4
WCZ	Waipu Caves	62.87	135	PN	P	12 32 54.3	+0.5
WCZ	Waipu Caves	62.87	135	PN	P	12 32 54.3	+0.5
WTAZ	Waiatarua	63.52	136	eP	P	12 33 00.9	+2.8
WTAZ	Waiatarua	63.52	136	PN	P	12 33 00.4	+2.3
WTAZ	Waiatarua	63.52	136	PN	P	12 33 00.4	+2.3
MSZ	Milford Sound	63.73	146	PN	P	12 32 59.1	-0.1
MSZ				pP	pP	12 34 45.3	-4.1
MSZ	Milford Sound	63.73	146	PN	P	12 32 59.1	-0.1
MSZ				pP	pP	12 34 45.3	-4.1
OTAZ	Otara	63.77	136	eP	P	12 33 01.7	+2.0
OTAZ	Otara	63.77	136	PN	P	12 33 01.7	+2.0
OTAZ	Otara	63.77	136	PN	P	12 33 01.7	+2.0
DCZ	Deep Cove	63.81	147	PN	P	12 32 59.0	-0.8
	comp=Z,327nm,0.8s,mb5.8						
DCZ				pP	pP	12 34 48.6	-1.3
DCZ	Deep Cove	63.81	147	PN	P	12 32 59.0	-0.8

	comp=Z,327nm,0.8s,mb5.8						
DCZ				pP	pP	12 34 48.6	-1.3
JCZ	Jackson Bay	63.82	145	eP	P	12 32 59.9	0.0
JCZ	Jackson Bay	63.82	145	PN	P	12 32 59.8	-0.1
JCZ				pP	pP	12 34 48.0	-2.1
JCZ				S	S	12 40 58.3	+5.5
JCZ	Jackson Bay	63.82	145	PN	P	12 32 59.8	-0.1
JCZ				pP	pP	12 34 48.0	-2.1
JCZ				S	S	12 40 58.3	+5.5
MKAZ	Moumakai	64.02	136	eP	P	12 33 02.5	+1.2
MKAZ	Moumakai	64.02	136	PN	P	12 33 02.5	+1.2
MKAZ	Moumakai	64.02	136	PN	P	12 33 02.5	+1.2
FOZ	Fox Glacier	64.05	144	PN	P	12 33 01.0	-0.3
FOZ				pP	pP	12 34 50.7	-1.0
FOZ	Fox Glacier	64.05	144	PN	P	12 33 01.0	-0.3
FOZ				pP	pP	12 34 50.7	-1.0
QRZ	Quartz Range	64.20	140	eP	P	12 33 02.0	-0.3
QRZ	Quartz Range	64.20	140	PN	P	12 33 02.0	-0.4
QRZ				pP	pP	12 34 51.4	-1.3
QRZ				SN	S	12 40 59.6	+2.1
QRZ	Quartz Range	64.20	140	PN	P	12 33 02.0	-0.4
QRZ				pP	pP	12 34 51.4	-1.3
QRZ				SN	S	12 40 59.6	+2.1
BVA0	Borovoye Array	64.24	328	i P	P	12 33 00.8	-1.6
BVA0				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.0						
MLZ	Mavora Lakes	64.28	147	eP	P	12 33 01.6	-1.2
MLZ	Mavora Lakes	64.28	147	PN	P	12 33 01.6	-1.2
MLZ	Mavora Lakes	64.28	147	PN	P	12 33 01.6	-1.2
WVZ	Waitaha Valley	64.37	143	eP	P	12 33 02.9	-0.5
WVZ	Waitaha Valley	64.37	143	PN	P	12 33 02.9	-0.5
WVZ	Waitaha Valley	64.37	143	PN	P	12 33 02.9	-0.5
WBK	Wadi Bani Khal	64.43	292	⇓P	P	12 33 04.1	0.0
	SNR=112						
CHKZ	Chkalovo	64.43	328	eP	P	12 33 01.3	-2.2
CHKZ				pmax	pmax		
	comp=Z,3µm,1.3s,mb6.5						
CHKZ	Chkalovo	64.43	328	eP	P	12 33 01.3	-2.3
	comp=Z,3µm,1.3s,mb6.5						
WKZ	Wanaka	64.43	146	eP	P	12 33 04.2	+0.5
WKZ	Wanaka	64.43	146	PN	P	12 33 04.2	+0.5
WKZ				SN	S	12 41 02.3	+2.2
WKZ	Wanaka	64.43	146	PN	P	12 33 04.2	+0.5
WKZ				SN	S	12 41 02.3	+2.2
HIZ	Hauiti	64.51	137	eP	P	12 33 04.4	+0.1
HIZ	Hauiti	64.51	137	PN	P	12 33 04.4	+0.1
HIZ	Hauiti	64.51	137	PN	P	12 33 04.4	+0.1
LBZ	Lake Benmore	64.83	145	eP	P	12 33 05.5	-0.7
LBZ	Lake Benmore	64.83	145	PN	P	12 33 05.5	-0.7
LBZ				pP	pP	12 34 53.6	-3.3
LBZ	Lake Benmore	64.83	145	PN	P	12 33 05.5	-0.7
LBZ				pP	pP	12 34 53.6	-3.3
EAZ	Earnscleugh	64.84	146	eP	P	12 33 06.0	-0.3
EAZ	Earnscleugh	64.84	146	PN	P	12 33 04.5	-1.8
EAZ	Earnscleugh	64.84	146	PN	P	12 33 04.5	-1.8
THZ	Tophouse	64.95	141	eP	P	12 33 06.0	-1.1
THZ	Tophouse	64.95	141	PN	P	12 33 05.0	-2.1
THZ				SN	S	12 41 08.1	+1.7
THZ	Tophouse	64.95	141	PN	P	12 33 05.0	-2.1
THZ				SN	S	12 41 08.1	+1.7
NNZ	Nelson	64.95	140	eP	P	12 33 06.4	-0.7
NNZ	Nelson	64.95	140	PN	P	12 33 06.4	-0.7
NNZ				SN	S	12 41 05.9	-0.6
NNZ	Nelson	64.95	140	PN	P	12 33 06.4	-0.7
NNZ				SN	S	12 41 05.9	-0.6
TGRZ	Tauranga	65.08	136	eP	P	12 33 09.7	+1.8
TGRZ	Tauranga	65.08	136	PN	P	12 33 09.4	+1.4
TGRZ	Tauranga	65.08	136	PN	P	12 33 09.4	+1.4
LTZ	Lake Taylor	65.13	142	eP	P	12 33 07.1	-1.0
LTZ	Lake Taylor	65.13	142	PN	P	12 33 07.8	-0.3
LTZ				pP	pP	12 34 56.7	-2.2
LTZ	Lake Taylor	65.13	142	PN	P	12 33 07.8	-0.3
LTZ				pP	pP	12 34 56.7	-2.2
WATZ	Wairara	65.20	137	eP	P	12 33 09.6	+0.9
WATZ	Wairara	65.20	137	PN	P	12 33 09.6	+0.9
WATZ	Wairara	65.20	137	PN	P	12 33 09.6	+0.9
JMDO	Jabal Madar	65.21	292	⇑P	P	12 33 09.5	+0.5
	SNR=236						
MGZ	Maungaku	65.22	137	P	P	12 33 12.3	+3.6
MGZ	Maungaku	65.22	137	PN	P	12 33 10.2	+1.5
MGZ	Maungaku	65.22	137	PN	P	12 33 10.2	+1.5
BIDO	Bidbid	65.28	293	⇑P	P	12 33 10.2	+0.8
	SNR=233						
LIRZ	Lichensteins R	65.30	136	eP	P	12 33 10.9	+1.6
LIRZ	Lichensteins R	65.30	136	PN	P	12 33 10.6	+1.3
LIRZ	Lichensteins R	65.30	136	PN	P	12 33 10.6	+1.3
RATZ	Rangitukua	65.31	137	eP	P	12 33 10.0	+0.7
RATZ	Rangitukua	65.31	137	PN	P	12 33 11.6	+2.2
RATZ	Rangitukua	65.31	137	PN	P	12 33 11.6	+2.2
WTVZ	West Tongariro	65.31	137	eP	P	12 33 09.9	+0.6
WTVZ	West Tongariro	65.31	137	PN	P	12 33 09.9	+0.6
WTVZ	West Tongariro	65.31	137	PN	P	12 33 09.9	+0.6
SMDO	Samad	65.31	293	⇑P	P	12 33 10.2	+0.6
	SNR=196						
CNZ	Chateau	65.32	138	eP	P	12 33 10.0	+0.6
CNZ	Chateau	65.32	138	PN	P	12 33 10.0	+0.6
CNZ	Chateau	65.32	138	PN	P	12 33 10.0	+0.6
NGZ	Ngauruhoe	65.34	138	eP	P	12 33 10.3	+0.8
NGZ	Ngauruhoe	65.34	138	PN	P	12 33 10.3	+0.7
NGZ	Ngauruhoe	65.34	138	PN	P	12 33 10.3	+0.7
OTVZ	Oturere	65.38	137	PN	P	12 33 10.3	+0.5
OTVZ	Oturere	65.38	137	PN	P	12 33 10.3	+0.5
PATZ	Paeroa	65.40	136	eP	P	12 33 10.7	+0.8
PATZ	Paeroa	65.40	136	PN	P	12 33 10.7	+0.8
PATZ	Paeroa	65.40	136	PN	P	12 33 10.7	+0.8
WNVZ	Wahianoa	65.42	138	eP	P	12 33 08.1	-1.9
TUVZ	Tukino	65.43	138	eP	P	12 33 09.8	-0.3
TUVZ	Tukino	65.43	138	PN	P	12 33 09.8	-0.2
TUVZ	Tukino	65.43	138	PN	P	12 33 09.8	-0.2
TUWZ	Tuamarina	65.43	140	PN	P	12 33 08.5	-1.5
TUWZ	Tuamarina	65.43	140	PN	P	12 33 08.5	-1.5
TUZ	Tuapeka	65.46	146	eP	P	12 33 09.6	-0.6
TUZ	Tuapeka	65.46	146	PN	P	12 33 09.6	-0.6
TUZ				SN	S	12 41 13.8	+1.3
TUZ	Tuapeka	65.46	146	PN	P	12 33 09.6	-0.6
TUZ				SN	S	12 41 13.8	+1.3
ODZ	Otahua Downs	65.48	145	eP	P	12 33 09.8	-0.5
ODZ	Otahua Downs	65.48	145	PN	P	12 33 09.6	-0.7
ODZ	Otahua Downs	65.48	145	PN	P	12 33 09.6	-0.7
MARZ	Manawahe	65.49	136	eP	P	12 33 11.7	+1.2
MARZ	Manawahe	65.49	136	PN	P	12 33 11.4	+0.9
MARZ	Manawahe	65.49	136	PN	P	12 33 11.4	+0.9
TAZ	Tarawera	65.50	136	eP	P	12 33 12.0	+1.5
TAZ	Tarawera	65.50	136	PN	P	12 33 12.0	+1.5
TAZ	Tarawera	65.50	136	PN	P	12 33 12.0	+1.5
MOVZ	Moawhango	65.56	138	eP	P	12 33 10.1	-0.8
MOVZ	Moawhango	65.56	138	PN	P	12 33 10.1	-0.8
MOVZ	Moawhango	65.56	138	PN	P	12 33 10.1	-0.8
EDRZ	Edgecumbe	65.60	136	eP	P	12 33 11.2	+0.1
EDRZ	Edgecumbe	65.60	136	PN	P	12 33 12.5	+1.4
EDRZ	Edgecumbe	65.60	136	PN	P	12 33 12.5	+1.4
KHZ	Kahutara	65.71	141	eP	P	12 33 10.4	-1.3
KHZ	Kahutara	65.71	141	PN	P	12 33 10.4	-1.3
KHZ	Kahutara	65.71	141	PN	P	12 33 10.4	-1.3
KIW	Kapiti Island	65.75	139	eP	P	12 33 10.6	-1.4
KIW	Kapiti Island	65.75	139	PN	P	12 33 10.6	-1.5
KIW	Kapiti Island	65.75	139	PN	P	12 33 10.6	-1.5
MRW	Makara Radio	65.80	140	P	P	12 33 10.7	-1.7
MRW	Makara Radio	65.80	140	PN	P	12 33 10.6	-1.7
MRW	Makara Radio	65.80	140	PN	P	12 33 10.6	-1.7
MQZ	McQueen's Vall	65.88	143	eP	P	12 33 12.9	+0.1
MQZ	McQueen's Vall	65.88	143	PN	P	12 33 12.9	+0.2
MQZ	McQueen's Vall	65.88	143	PN	P	12 33 12.9	+0.2
URZ	Urewera	65.93	136	eP	P	12 33 12.2	-1.0
URZ	Urewera	65.93	136	PN	P	12 33 11.8	-1.4
URZ				SN	S	12 41 16.9	-1.2
URZ	Urewera	65.93	136	PN	P	12 33 11.8	-1.4
URZ				SN	S	12 41 16.9	-1.2
BKZ	Black Stump Fm	65.94	137	P	P	12 33 12.3	-0.9
BKZ	Black Stump Fm	65.94	137	PN	P	12 33 12.3	-0.9
BKZ				SN	S	12 41 17.8	-0.5
BKZ	Black Stump Fm	65.94	137	PN	P	12 33 12.3	-0.9
BKZ				SN	S	12 41 17.8	-0.5
CAW	Cannon Point	65.98	140	P	P	12 33 11.9	-1.5
CAW	Cannon Point	65.98	140	PN	P	12 33 11.9	-1.5
CAW	Cannon Point	65.98	140	PN	P	12 33 11.9	-1.5
BHW	Baring Head	66.01	140	P	P	12 33 11.8	-1.8
BHW	Baring Head	66.01	140	PN	P	12 33 11.8	-1.8
BHW	Baring Head	66.01	140	PN	P	12 33 11.8	-1.8
TSZ	Takapari Road	66.03	138	eP	P	12 33 12.4	-1.4
TSZ	Takapari Road	66.03	138	PN	P	12 33 12.4	-1.4
TSZ	Takapari Road	66.03	138	PN	P	12 33 12.4	-1.4
HOQ	Hoqain	66.03	293	⇑P	P	12 33 14.7	+0.7
	SNR=61						
BSY	Bisya	66.07	292	⇓P	P	12 33 15.0	+0.8
	SNR=35						
MRZ	Mangatainoka R	66.08	139	eP	P	12 33 12.2	-1.9
MRZ	Mangatainoka R	66.08	139	PN	P	12 33 12.2	-1.9
MRZ	Mangatainoka R	66.08	139	PN	P	12 33 12.2	-1.9
MWZ	Matawai	66.25	136	PN	P	12 33 14.1	-1.1
MWZ				SN	S	12 41 22.5	+0.6
MWZ	Matawai	66.25	136	PN	P	12 33 14.1	-1.1
MWZ				SN	S	12 41 22.5	+0.6
MSWZ	Moikau Station	66.25	140	P	P	12 33 13.8	-1.3
MSWZ	Moikau Station	66.25	140	PN	P	12 33 13.8	-1.3
MSWZ	Moikau Station	66.25	140	PN	P	12 33 13.8	-1.3
MTW	Mount Morrison	66.28	139	PN	P	12 33 14.3	-1.0
MTW	Mount Morrison	66.28	139	PN	P	12 33 14.3	-1.0
TIXI	Tiksi	66.37	2	⇓iP	P	12 33 12.5	-2.8
TIXI				e*PP	pP	12 35 02.4	-4.3
TIXI				eSS	SS	12 45 54.8	0.0
TIXI				eSSS	SSS	12 49 07.5	+3.9
TIXI				pmax	pmax		
	comp=Z,3µm,1.7s,mb6.5						
TIXI				pmax	pmax		
	comp=N,380nm,0.7s						
TIXI				pmax	pmax		
	comp=E,149nm,0.8s						
TIXI				pmax	pmax		
	comp=Z,5µm,1.8s,mb6.7						
TIXI				MLR	MLR		
	comp=Z,25µm,16.0s						
TIXI				MLR	MLR		
	comp=N,18µm,18.0s						
TIXI				MLR	MLR		
	comp=E,4µm,15.0s						
TIXI	Tiksi	66.37	2	⇓iP	P	12 33 12.9	-2.4
MCQ	Macquarie Isla	66.52	158	⇑iP	P	12 33 18.6	+2.0
MCQ				eS	S	12 41 29.9	+5.1
BFZ	Birch Farm	66.53	139	eP	P	12 33 15.8	-1.0
BFZ	Birch Farm	66.53	139	PN	P	12 33 15.8	-1.0
BFZ	Birch Farm	66.53	139	PN	P	12 33 15.8	-1.0
PWZ	Pawanui	66.61	138	eP	P	12 33 17.3	-0.1
PWZ	Pawanui	66.61	138	PN	P	12 33 17.3	-0.1
PWZ	Pawanui	66.61	138	PN	P	12 33 17.3	-0.1
PUZ	Puketiti	66.64	135	eP	P	12 33 16.5	-1.1
PUZ	Puketiti	66.64	135	PN	P	12 33 16.5	-1.1
PUZ	Puketiti	66.64	135	PN	P	12 33 16.5	-1.1
KNZ	Kokohu	66.68	136	eP	P	12 33 13.5	-4.3
KNZ	Kokohu	66.68	136	PN	P	12 33 17.1	-0.7
KNZ	Kokohu	66.68	136	PN	P	12 33 17.1	-0.7
ARQ	Araqi	66.74	293	⇑P	P	12 33 19.5	+1.0
	SNR=61						
BANOM	Banah	67.16	296	⇓P	P	12 33 22.4	+1.4
	SNR=43						
ASHO	Ashiyiah	67.27	294	⇑P	P	12 33 22.6	+0.9
	SNR=80						
KIWB	Kanaga Island	67.29	35	P	P	12 33 21.2	-0.1
SHAO	Shalim	67.29	287	⇑P	P	12 33 22.6	+0.7
	SNR=51						
GSTR	Great Sitkin T	68.00	35	eP	P	12 33 25.6	-0.1
RBK	Rabkut	68.63	287	⇓P	P	12 33 29.9	-0.2
	SNR=351						
BILL	Bilibino	68.93	16	d iP	P	12 33 29.7	-1.3
BILL				pmax	pmax		
	comp=Z,433nm,1.4s,mb5.8						
BILL	Bilibino	68.93	16	eP	P	12 33 28.8	-2.1
	comp=Z,2µm,1.6s,mb6.3						
WHFO	Wadi Hawf	69.06	287	⇑P	P	12 33 32.7	+0.1
	SNR=18						
ABTO	Aybut	69.50	286	⇑P	P	12 33 35.5	+0.3
	SNR=32						
SVE	Sverdlovsk	70.93	329	⇓iP	P	12 33 42.6	-0.4
SVE				e		12 36 24.0	
SVE				e		12 38 08.0	
SVE				pmax	pmax		
	comp=Z,600nm,1.5s,mb5.9						
SVE				pmax	pmax		
	comp=N,3µm,12.0s						
SVE				pmax	pmax		
	comp=E,10µm,12.0s						
SVE				pmax	pmax		
	comp=Z,17µm,12.0s						
SVE				MLR	MLR		
	comp=N,16µm,14.0s						
SVE				MLR	MLR		
	comp=E,11µm,14.0s						
SVE				MLR	MLR		
	comp=Z,19µm,14.0s						
ARU	Arti	71.88	328	P	P	12 33 46.6	-1.9
	comp=Z,11µm,0.7s						
ARU	Arti	71.88	328	⇓iP	P	12 33 38.8	-10
ARU				i		12 36 29.0	
ARU				i		12 42 44.8	
ARU				pmax	pmax		
	comp=Z,1µm,0.8s,mb6.4						
CASY	Casey	72.00	185	eP	P	12 33 49.7	+0.6
CASY				eS	S	12 42 26.6	-0.6
NIKO	Nikolski	72.46	36	eP	P	12 33 53.5	+1.6
DRV	Dumont d'Urvil	72.77	173	P	P	12 33 57.0	+3.6
MUKL	Al Mukalla	73.61	283	⇑eP	P	12 33 59.5	+0.4
UNV	Unalaska Valle	74.04	35	eP	P	12 33 60.0	-0.8
	comp=Z,4µm,1.3s,mb6.7						
AKUT	Akutan	74.52	35	eP	P	12 34 04.0	+0.5
	comp=Z,1µm,0.7s,mb6.5						
MIR	Mirnyy	74.95	192	κeP	P	12 34 06.2	+0.6
MIR				pmax	pmax		
	comp=Z,2µm,2.0s,mb6.3						
MIR				pmax	pmax		
	comp=Z,12µm,11.0s						
MAK	Makhachkala	76.12	313	c iP	P	12 34 13.0	+0.5
MAK				i		12 37 11.0	
MAK				i		12 43 26.0	
MAK				i SP	SP	12 43 52.0	-4.3
MAK				eSPP	SPP	12 44 26.0	+11
MAK				i SS	SS	12 48 33.0	+9.0
MAK				pmax	pmax		
	comp=Z,3µm,1.7s,mb6.4						
MAK				pmax	pmax		
	comp=N,1µm,2.0s						
MAK				pmax	pmax		
	comp=E,4µm,2.0s						
MAK				pmax	pmax		
	comp=N,6µm,10.0s						
MAK				pmax	pmax		
	comp=E,14µm,10.0s						
MAK				pmax	pmax		
	comp=Z,32µm,10.0s						
MAK				pmax	pmax		
	comp=Z,20µm,12.0s						
MAK	Makhachkala	76.12	313	eP	P	12 34 12.0	-0.5
TNA	Tin City	76.46	23	eP	P	12 34 13.2	-0.7
	comp=Z,1µm,0.5s,mb6.6						
BDHA	Al Bayda'	76.99	283	⇓eP	P	12 34 18.6	+0.9
LBOS		77.30	283	⇑eP	P	12 34 19.8	+0.4
LBOS				AMb	AMB	12 34 22.2	
	comp=Z,4µm,1.4s,mb6.6						
KIP	Kipapa	77.44	69	eP	P	12 34 22.2	+2.1
KIP				pmax	pmax		
	comp=Z,254nm,0.7s,mb5.8						
KIP	Kipapa	77.44	69	eP	P	12 34 22.2	+2.1
	comp=Z,254nm,0.7s,mb5.8						
HON	Honolulu	77.45	69	eP	P	12 34 22.6	+2.4
SDPT	Sand Point	77.77	35	eP	P	12 34 21.1	0.0
	comp=Z,1000nm,0.6s,mb6.3						
GNI	Garni	77.97	310	eP	P	12 34 22.9	+0.3
GNI	Garni	77.97	310	i P	P	12 34 24.3	+1.7
GNI				pmax	pmax		
	comp=Z,2µm,1.8s						
BHD	Baghdad	77.97	303	i P	P	12 34 12.0	-11
BHD				i S	S	12 43 22.0	-10
MTA	Mtatsminda	78.02	311	P	P	12 34 23.5	+0.7
TI2	Plekhanov	78.06	311	⇓iP	P	12 34 22.6	-0.4
TI2				i		12 34 26.0	
TI2				i S	S	12 43 36.2	+3.5
DHBB	Dhamar BB	78.11	284	eP	P	12 34 24.8	+1.0
DHBB				AMb	AMB	12 34 27.2	
	comp=Z,3µm,1.2s,mb6.5						
TRBA	At Turbah	78.43	282	eP	P	12 34 26.5	+1.0
UDYN	Al 'Udayn	78.54	283	eP	P	12 34 26.9	+0.8
HKR	Hakkari	78.63	307	eP	P	12 34 26.8	+0.6
TVAN	Van	78.93	308	i P	P	12 34 29.3	+1.6
VANT	Van	78.94	308	eP	P	12 34 30.7	+2.9
VANB	Van	78.94	308	eP	P	12 34 29.8	+2.1
HKL	Haleakala	79.09	70	eP	P	12 34 32.4	+3.5
KARS	Kars	79.25	310	eP	P	12 34 30.5	+1.2
GOF	Gofitskoye	79.50	315	⇑iP	P	12 34 31.0	+0.5
GOF				pmax	pmax		
	comp=Z,2µm,1.8s,mb6.1						
GOF				pmax	pmax		
	comp=Z,37µm,10.0s						
KIH	Kanekii	79.59	71	⇓eP	P	12 34 34.0	+2.5
KIV	Kislovodsk	79.69	314	P	P	12 34 32.6	+1.0
	comp=Z,3µm,0.9s,mb6.6,SNR=90						
KIV	Kislovodsk	79.69	314	eP	P	12 34 31.8	+0.2
KIV				pmax	pmax		
	comp=Z,340nm,0.8s,mb5.7						
KIV	Kislovodsk	79.69	314	eP	P	12 34 31.8	+0.2
	comp=Z,340nm,0.8s,mb5.7						
DAH	Dandelion	79.69	71	eP	P	12 34 34.0	+2.0
SPT	South Point	79.70	72	⇑eP	P	12 34 34.8	+2.7
PECR	Pechory	79.71	326	eP	P	12 34 32.0	+0.6
PECR				pmax	pmax		
	comp=Z,19µm,12.0s						
PECR				pmax	pmax		
	comp=E,8µm,13.2s						
PECR				MLR	MLR		
	comp=Z,23µm,20.0s						
PECR				MLR	MLR		
	comp=E,13µm,16.0s						
MWH	Mokuaweoweo	79.75	71	eP	P	12 34 35.6	+3.3
PLL	Puu Ulaula	79.88	71	eP	P	12 34 35.4	+2.4
MLH	Mauna Loa	79.95	71	⇑eP	P	12 34 35.6	+2.2
DES	Desert	79.96	71	eP	P	12 34 36.4	+3.0
KKU	Keanakolu	79.98	71	⇑eP	P	12 34 36.9	+3.3
CPK	Cone Peak	80.01	71	eP	P	12 34 35.7	+2.0
OUT	Outlet	80.06	71	eP	P	12 34 35.2	+1.3
AHA	Ahua	80.07	71	eP	P	12 34 35.9	+1.9
NGH	National Guard	80.28	71	eP	P	12 34 37.3	+2.2
BTMT	Batman	80.43	308	eP	P	12 34 35.9	+0.4
ERZM	Erzurum	80.55	309	i P	P	12 34 37.9	+1.8
EZM	Erzurum	80.55	309	eP	P	12 34 37.4	+1.3
BEST	Besiri	80.60	307	i P	P	12 34 36.8	+0.4
BINT	Bingol	81.22	308	eP	P	12 34 40.5	+0.9
DIY	Diyarbakir	81.42	307	eP	P	12 34 41.1	+0.5
EZC	Erzincan	81.74	309	eP	P	12 34 46.2	+4.0
SOC	Sochi	81.83	313	i P	P	12 34 42.7	+0.2
SOC				e		12 38 01.2	
SOC				e		12 44 25.1	
SOC				eSS	SS	12 49 47.5	-0.7
SOC				eSSS	SSS	12 53 23.8	+6.0
SOC				pmax	pmax		
	comp=Z,465nm,0.9s,mb5.9						
SOC				pmax	pmax		
	comp=N,81nm,1.2s						
SOC				pmax	pmax		
	comp=E,57nm,1.1s						
SOC	Sochi	81.83	313	⇓iP	P	12 34 42.9	+0.4
SOC				eS	S	12 44 07.0	-4.0
GUMT	Gumushane	82.00	310	eP	P	12 34 44.8	+1.4
PTK	Pertek	82.07	308	eP	P	12 34 45.2	+1.4
IMA	Indian Mountai	82.30	24	eP	P	12 34 45.4	+1.0
IMA				pmax	pmax		
	comp=Z,613nm,1.0s,mb6.0						
IMA	Indian Mountai	82.30	24	eP	P	12 34 45.4	+1.0
	comp=Z,613nm,1.0s,mb6.0						
IMA				ePKKPdf		12 52 56.1	
VOR	Voronezh	82.31	321	⇑iP	P	12 34 43.6	-1.1
VOR				pmax	pmax		
	comp=Z,6µm,1.7s,mb6.8						
KDAK	Kodiak Island	82.34	33	eP	P	12 34 46.0	+1.2
RSO	Redoubt South	82.37	30	eP	P	12 34 44.9	0.0
ELZG	Elazig	82.40	308	i P	P	12 34 47.2	+1.7
URFA	Urfa	82.54	307	eP	P	12 34 47.3	+1.1
SPU	Mount Spurr	82.75	29	eP	P	12 34 46.6	-0.2
MALT	Malatya	82.84	308	eP	P	12 34 48.0	+0.2
MYA	Malataya	82.84	308	eP	P	12 34 49.2	+1.5
MOS	Moscow	83.30	325	α iP	P	12 34 48.8	-0.9
MOS				e		12 38 13.0	
MOS				ePPP	PPP	12 40 08.3	-1.2
MOS				eSS	SS	12 50 10.9	+1.6
MOS				eSSS	SSS	12 53 35.2	-6.4
MOS				pmax	pmax		
	comp=Z,14µm,2.0s,mb7.2						
MOS				pmax	pmax		
	comp=Z,6µm,1.7s,mb6.8						
MOS	Moscow	83.30	325	eP	P	12 34 50.2	+0.5
MOS				i S	S	12 44 22.4	-2.7
ANN	Anapa	83.47	314	eP	P	12 34 49.8	-1.0
ANN				e*PP	pP	12 36 39.1	-10
ANN				e		12 38 11.8	
ANN				pmax	pmax		
	comp=Z,4µm,0.9s,mb7.0						
ANN				pmax	pmax		
	comp=N,1µm,1.0s						
ANN				pmax	pmax		
	comp=E,687nm,1.0s						
GZT	Gaziantep	83.54	307	i P	P	12 34 51.6	+0.2
SLKM	Skilak Lake	83.63	30	eP	P	12 34 51.2	+0.1
SLKM				eS	S	12 44 19.5	-8.6
FIB	Fire Island	83.66	29	eP	P	12 34 50.8	-0.5
GAZ	Gaziantep	83.83	307	eP	P	12 34 52.9	+0.1
OBN	Obninsk	83.90	325	d iP	P	12 34 51.4	-1.2
OBN				e		12 38 16.0	
OBN				eSS	SS	12 50 27.8	+10
OBN				pmax	pmax		
	comp=Z,3µm,1.4s,mb6.7						
OBN	Obninsk	83.90	325	eP	P	12 34 51.2	-1.4
	comp=Z,3µm,0.8s,mb6.8						
SVST	Sivas	83.95	309	i P	P	12 34 54.1	+0.9
FURI	Furi	84.03	278	P	P	12 34 57.4	+3.2
FURI				SKSac		12 44 34.0	
MAW	Mawson	84.09	200	eP	P	12 34 54.3	+1.0
	comp=Z,161nm,0.9s,mb5.5						
MAW				eS	S	12 44 32.8	+0.3
MAW	Mawson	84.09	200	eP	P	12 34 54.3	+1.0
MAW				pmax	pmax		
	comp=Z,161nm,0.9s						
PMR	Palmer	84.16	29	eP	P	12 34 55.1	+1.4
PMR				pmax	pmax		
	comp=Z,485nm,1.3s,mb5.9						
PMR	Palmer	84.16	29	eP	P	12 34 55.1	+1.4
	comp=Z,485nm,1.3s,mb5.9						
MCK	McKinley	84.24	27	eP	P	12 34 52.9	-1.2
MCK				pmax	pmax		
	comp=Z,281nm,1.0s,mb5.8						
MCK	McKinley	84.24	27	eP	P	12 34 52.9	-1.2
	comp=Z,281nm,1.0s,mb5.8						
TOKT	Tokat	84.24	310	eP	P	12 34 54.1	-0.6
SML	Sawmill	84.54	28	eP	P	12 34 54.7	-0.9
SML				eS	S	12 44 27.5	-9.4
KVT	Kavak	84.59	311	eP	P	12 34 58.1	+1.8
COBT	Iskenderun	84.62	306	i P	P	12 34 58.0	+1.4
LVZ	Lovozero	84.68	338	P	P	12 34 57.9	+1.8
	comp=Z,4µm,0.7s,mb7.1,SNR=39						
LVZ	Lovozero	84.68	338	eP	P	12 34 56.0	-0.1
LVZ				eSS	SS	12 50 28.2	-0.5
LVZ				pmax	pmax		
	comp=Z,548nm,0.7s,mb6.2						
LVZ				pmax	pmax		
	comp=N,136nm,1.1s						
LVZ				pmax	pmax		
	comp=E,177nm,0.9s						
COLA	College	84.70	25	eP	P	12 34 56.8	+0.5
COLA				pmax	pmax		
	comp=Z,119nm,0.9s,mb5.4						
COLA	College	84.70	25	eP	P	12 34 56.8	+0.5
	comp=Z,119nm,0.9s,mb5.4						
BNN	Bunyan	84.84	308	eP	P	12 34 57.6	0.0
CEYT	Ceyhan	85.01	307	eP	P	12 34 59.5	+1.0
APA	Apatity	85.16	337	⇓iP	P	12 34 56.0	-2.5
APA				pmax	pmax		
	comp=Z,550nm,1.0s,mb6.0						
APA				pmax	pmax		
	comp=Z,15µm,13.0s						
APA				MLR	MLR		
	comp=Z,20µm,17.0s						
YOZ	Yozgat	85.21	309	eP	P	12 35 00.4	+1.0
BHL	Bhannes	85.25	303	eP	P	12 35 01.2	+1.5
KSDI	Kefar Szold	85.28	303	P	P	12 34 59.8	-0.1
VNDA	Vanda	85.39	172	P	P	12 34 59.3	-0.2
VNDA				P		12 35 01.8	
VNDA				pP	pP	12 36 55.8	-2.1
VNDA				SKSac		12 44 31.6	
VNDA				SKSac		12 44 44.1	
VNDA				sSKSac		12 48 07.0	
VNDA	Vanda	85.39	172	eP	P	12 34 59.0	-0.5

VNDA				pmax	pmax		
	comp=Z,163nm,1.8s						
VNDA	Vanda	85.39	172	eP	P	12 34 59.0	-0.5
	comp=Z,163nm,1.8s,mb5.3						
BOYT	Boyabat	85.44	311	i P	P	12 35 00.9	+0.5
MMLI	Mount Malkishu	85.52	302	P	P	12 35 01.3	+0.2
BYBT	Boyabat	85.54	311	eP	P	12 35 01.0	0.0
CTKT	Corum	85.57	310	i P	P	12 35 01.8	+0.7
DRGI	Dragot	85.60	301	P	P	12 35 01.3	-0.2
AVNT	Avonos	85.62	308	i P	P	12 35 01.5	+0.1
MZDA	Masada	85.64	301	P	P	12 35 01.5	-0.2
THY	Trims Highway	85.67	27	eP	P	12 35 02.5	+1.5
THY				eS	S	12 44 36.3	-11
CORM	Corum	85.71	310	eP	P	12 35 02.7	+0.9
DIV	Divide	85.79	29	eP	P	12 35 01.0	-0.6
	comp=Z,0.8nm,0.5s						
DIV				eS	S	12 44 38.2	-11
SIM	Simferopol’	85.82	315	⇑eP	P	12 35 02.5	+0.3
SIM				PPP	PPP	12 40 20.0	-13
SIM				i S	S	12 44 49.5	+0.1
SIM				pmax	pmax		
	comp=Z,630nm,0.7s,mb6.3						
SIM				pmax	pmax		
	comp=Z,8µm,13.2s						
SIM	Simferopol’	85.82	315	eP	P	12 35 03.0	+0.8
SIM				eS	S	12 44 36.0	-13
EYAK	Cordova Ski Ar	85.84	30	eP	P	12 35 02.8	+0.9
HAF	Haifa	85.84	302	P	P	12 35 02.3	-0.3
ZFRI	Zfri	85.85	300	P	P	12 35 02.7	0.0
NIG	Nigde	85.85	308	eP	P	12 35 02.5	-0.1
SLTI	Sal’it	85.86	302	P	P	12 35 02.6	-0.1
BZK	Bozkurt	86.08	312	eP	P	12 35 06.6	+3.0
EIL	Elat	86.10	299	P	P	12 35 03.9	0.0
MBH	Mount Berech	86.12	299	P	P	12 35 04.0	0.0
TOS	Tosya	86.12	311	eP	P	12 35 03.2	-0.5
JOF	Joensuu	86.30	333	ep	P	12 35 02.0	-2.0
	comp=Z,922nm,0.6s,mb6.6						
KMBO	Kilima Mbogo	86.30	269	P	P	12 35 05.5	+0.2
KMBO				sP	sP	12 37 55.2	-2.4
KMBO				SKSac		12 44 42.3	
KMBO	Kilima Mbogo	86.30	269	eP	P	12 35 02.9	-2.3
KMBO				pmax	pmax		
	comp=Z,2µm,1.4s						
KMBO	Kilima Mbogo	86.30	269	eP	P	12 35 02.9	-2.3
	comp=Z,2µm,1.4s,mb6.5						
MEST	Erdemli	86.31	306	i P	P	12 35 03.6	-1.2
SBA	Scott Base	86.33	172	eP	P	12 35 05.9	+2.0
SBA				pmax	pmax		
	comp=Z,4µm,2.4s,mb6.7						
SBA	Scott Base	86.33	172	eP	P	12 35 05.9	+2.0
	comp=Z,4µm,2.4s,mb6.7						
CANT	Cankiri	86.46	310	eP	P	12 35 06.0	+0.7
KAMT	Kaman	86.47	309	eP	P	12 35 05.3	-0.1
KZIT	Kziot	86.49	301	P	P	12 35 05.3	-0.4
BALT	Daday	86.57	311	i P	P	12 35 06.2	+0.4
ELDT	Eldivan	86.61	310	i P	P	12 35 06.6	+0.5
PUL	Pulkovo	87.05	330	eP	P	12 35 08.3	+0.7
PUL				e		12 44 58.5	
PUL				pmax	pmax		
	comp=N,961nm,0.8s						
PUL				pmax	pmax		
	comp=Z,2µm,0.8s,mb6.8						
PUL				pmax	pmax		
	comp=E,1µm,1.0s						
CSS	Prodhromos	87.09	305	eP	P	12 35 07.4	-1.1
	comp=E,643nm,0.8s,mb6.3						
SAFT	Safranbolu	87.12	311	eP	P	12 35 07.4	-1.0
ANTO	Ankara	87.14	310	eP	P	12 35 04.7	-3.8
ANTO	Ankara	87.14	310	P	P	12 35 09.5	+0.9
LOD	Lodumlu	87.16	310	eP	P	12 35 07.5	-1.2
KEV	Kevo	87.30	340	ep	P	12 35 05.6	-3.0
	comp=E,167nm,0.8s,mb5.7						
KEV	Kevo	87.30	340	P	P	12 35 08.2	-0.4
KEV				sP	sP	12 38 09.1	+7.9
KEV				PP	PP	12 38 48.3	+4.1
KEV				SKSac		12 44 42.8	
KEV				SKKSac		12 45 00.5	
KEV				sSKSac		12 48 30.8	
KEV				SS	SS	12 51 05.1	-1.5
KEV	Kevo	87.30	340	eP	P	12 35 05.6	-3.0
KEV				pmax	pmax		
	comp=Z,167nm,0.8s,mb5.7						
LEF	Lefka	87.44	305	eP	P	12 35 10.6	+0.5
HDMB	Hadim	87.62	307	eP	P	12 35 10.2	-0.7
KONT	Konya--Tatoy	87.63	308	eP	P	12 35 10.8	-0.2
SGKT	Sivrigoynuk	87.65	310	i P	P	12 35 11.2	+0.3
ARCES	ARCESS Array B	87.86	340	P	P	12 35 08.8	-2.4
ARE0	ARCESS Array S	87.86	340	eP	P	12 35 09.3	-1.9
KIZT	Kizilcal	87.93	309	eP	P	12 35 11.0	-1.3
MDU	Mudurnu	88.30	310	eP	P	12 35 14.1	+0.2
DAWY	Dawson	88.42	26	eP	P	12 35 13.6	-0.3
DAWY				ePKKPbc		12 52 53.6	
HENT	Hendek	88.50	311	i P	P	12 35 15.2	+0.3
ESKT	Eskisehir	88.67	309	eP	P	12 35 15.9	+0.2
ESKT	Eskisehir	88.67	309	i P	P	12 35 15.1	-0.6
KAF	Kangasniemi	88.70	332	ep	P	12 35 12.4	-2.9
	comp=Z,488nm,0.6s,mb6.5,baz=77,slow=4.3						
KAF	Kangasniemi	88.70	332	eP	P	12 35 12.4	-2.9
KAF				pmax	pmax		
	comp=Z,488nm,0.6s,mb6.5						
PPT	Papeete	88.71	108	eP	P	12 35 20.2	+3.8
	comp=Z,205nm,1.3s,mb5.8						
PPT	Papeete	88.71	108	eSKSac		12 44 59.7	
PAE	Paea	88.72	108	eP	P	12 35 20.1	+3.6
	comp=Z,575nm,1.4s,mb6.2						
BJO	Bjornoya	88.72	345	eP	P	12 35 17.7	+2.5
BJO				e		12 45 15.9	
KTK1	Kautokeino	88.75	339	eP	P	12 35 14.2	-1.3
	comp=Z,800nm,1.4s,mb6.4						
KTK1	Kautokeino	88.75	339	eP	P	12 35 14.2	-1.3
KTK1				AMb	AMB	12 35 22.9	
	comp=Z,800nm,1.4s,mb6.3						
BJO1	Bjornoya	88.77	345	eP	P	12 35 17.7	+2.3
FINES	FINESS Array B	88.91	332	i P	P	12 35 14.6	-1.7
FINES				pmax	pmax		
	comp=Z,211nm,0.6s						
FINES	FINESS Array B	88.91	332	P	P	12 35 14.3	-2.0
TIAR	Tiarei	88.93	108	eP	P	12 35 21.2	+3.8
	comp=Z,379nm,1.0s,mb6.2						
TIAR				epP	pP	12 37 12.0	-4.9
	comp=Z,174nm,1.1s						
MNK	Minsk	88.99	325	⇓iP	P	12 35 13.0	-3.9
MNK				e		12 39 00.0	
MNK				eS	S	12 45 17.0	-1.0
MNK				pmax	pmax		
	comp=Z,4µm,1.5s,mb7.0						
MNK				pmax	pmax		
	comp=E,930nm,1.5s						
MNK				pmax	pmax		
	comp=N,3µm,1.5s						
MNK				pmax	pmax		
	comp=Z,14µm,6.0s						
GPA	Golpazari	89.00	310	eP	P	12 35 18.0	+0.7
TVO	Taravao	89.04	108	eP	P	12 35 21.7	+3.7
	comp=Z,253nm,0.9s,mb6.0						
ANTB	Antalya	89.08	307	eP	P	12 35 17.6	-0.1
ISP	Isparta	89.10	308	eP	P	12 35 14.4	-3.4
ALT	Altintas	89.28	309	eP	P	12 35 17.7	-0.9
KIS	Kishinev	89.32	317	eP	P	12 35 17.0	-1.6
KIS				i S	S	12 45 16.0	-5.1
KIS				ePS	PS	12 47 36.0	-13
KIS				pmax	pmax		
	comp=Z,540nm,1.2s,mb6.2						
KIS				pmax	pmax		
	comp=E,700nm,2.0s						
KIS				pmax	pmax		
	comp=Z,9µm,13.0s						
KIS				pmax	pmax		
	comp=E,4µm,14.0s						
KIS				pmax	pmax		
	comp=Z,5µm,18.0s						
KIS				MLR	MLR		
	comp=Z,9µm,20.0s						
KIS				MLR	MLR		
	comp=Z,3µm,20.0s						
TBI	Tubuai	89.42	113	eP	P	12 35 23.1	+3.5
	comp=Z,1µm,1.1s,mb6.6						
TBI				eSKSac		12 45 04.4	
HRT	Hereke	89.43	311	eP	P	12 35 18.3	-1.0
HRT	Hereke	89.43	311	P	P	12 35 17.1	-2.2
IDID	Didziasalis	89.50	325	eP	P	12 35 18.8	-0.4
IDID				AMPb	AMB	12 35 25.9	
	comp=Z,176nm,1.3s,mb5.7						
TLCR		89.54	315	⇓iP	P	12 35 21.1	+1.4
YLV	Yalova	89.68	311	eP	P	12 35 18.7	-1.7
ELL	Elmali	89.69	307	eP	P	12 35 20.0	-0.6
IZAR	Zarasai	89.71	326	eP	P	12 35 19.7	-0.5
IZAR				AMPb	AMB	12 35 23.6	
	comp=Z,124nm,0.9s,mb5.8						
IIGN	Ignalina	89.78	325	eP	P	12 35 20.2	-0.3
IIGN				AMPb	AMB	12 35 23.7	
	comp=Z,130nm,1.1s,mb5.7						
ISAL	Salakas	89.81	326	eP	P	12 35 19.4	-1.2
KHL	Karahalli	89.82	308	eP	P	12 35 20.8	-0.3
ISK	Istanbul-Kandi	89.86	311	eP	P	12 35 21.2	0.0
ULDT	Uludag	89.91	310	i P	P	12 35 20.8	-0.6
TIRR	Tirgusor	89.92	314	⇓iP	P	12 35 21.3	-0.1
INK	Inuvik	89.92	21	eP	P	12 35 19.2	-1.6
	comp=Z,0.5nm,1.5s						
INK				eS	S	12 45 29.7	+3.7
INK				ePKKPbc		12 52 51.6	
CFR	Carcaliu	90.02	315	⇓iP	P	12 35 22.2	+0.4
PMOR	Pomariorio Ree	90.07	105	eP	P	12 35 26.5	+3.8
	comp=Z,329nm,1.1s,mb6.1						
TRO	Tromso	90.09	340	eP	P	12 35 21.6	0.0
TRO				e		12 45 24.1	
TRO				eSS	SS	12 51 47.0	+0.3
ORLT	Orhaneli	90.11	310	eP	P	12 35 23.1	+0.7
IAS	Iasi	90.14	317	P	P	12 35 21.3	-1.1
MEH	Mehetia	90.18	108	eP	P	12 35 26.6	+3.4
	comp=Z,131nm,1.3s,mb5.6						
PSN	Preselentsi	90.18	314	i P	P	12 35 24.0	+1.4
HARR	Harsova	90.23	315	⇓iP	P	12 35 23.4	+0.6
DNZL	Cakiroluk	90.27	308	i P	P	12 35 22.5	-0.7
DENT	Denizli	90.27	308	eP	P	12 35 22.9	-0.3
FETY	Fethiye	90.37	307	eP	P	12 35 22.2	-1.4
MANT	Manisa	90.56	309	i P	P	12 35 23.7	-0.8
BNT	Bandirma	90.81	310	eP	P	12 35 24.8	-0.8
PRD	Provadia	90.81	313	i P	P	12 35 26.0	+0.5
VRI	Vrincioaia	90.90	316	⇓iP	P	12 35 25.7	-0.2
VRI	Vrincioaia	90.90	316	⇓iP	P	12 35 25.7	-0.2
BALB	Balikesir	90.93	310	eP	P	12 35 24.6	-1.6
YER	Yerkesik	90.94	307	eP	P	12 35 23.4	-2.9
AKS	Akhisar	91.08	309	eP	P	12 35 26.7	-0.2
ARG	Arkhangelos	91.18	306	P	P	12 35 28.1	+0.7
AYDN	Tasoluk	91.19	308	i P	P	12 35 27.6	+0.2
MLSB	Milas	91.32	307	eP	P	12 35 24.8	-3.2
EDRB	Edirne	91.48	312	eP	P	12 35 26.8	-1.9
MLR	Muntele Rosu	91.50	316	⇓iP	P	12 35 28.1	-0.6
JMB	Yambol	91.51	313	i P	P	12 35 29.0	+0.2
KDAG	Bornova	91.57	309	i P	P	12 35 28.8	-0.3
IZM	Izmir	91.58	309	eP	P	12 35 29.3	+0.1
BUC1	Bucharest	91.62	315	P	P	12 35 29.8	+0.6
BURAR	Bucovina Array	91.66	318	P	P	12 35 28.5	-0.8
BURAR	Bucovina Array	91.66	318	⇑iP	P	12 35 30.0	+0.7
SIT	Sitka	91.68	32	eP	P	12 35 31.9	+2.7
SIT				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.5						
SIT	Sitka	91.68	32	eP	P	12 35 31.9	+2.7
	comp=Z,1µm,1.8s,mb6.5						
SUW	Suwalki	91.76	324	eP	P	12 35 28.7	-0.9
SUW				pmax	pmax		
	comp=Z,10µm,2.8s						
SUW	Suwalki	91.76	324	eP	P	12 35 28.7	-0.9
SUW				ePPP	PPP	12 41 57.0	+33
SUW				eSKS	SKS	12 45 10.7	+0.5
SUW				eS	S	12 45 42.4	+0.1
SUW	Suwalki	91.76	324	eP	P	12 35 28.7	-0.9
	comp=Z,10µm,2.8s						
SUW				ePPP	PPP	12 41 57.0	+33
SUW				eSKS	SKS	12 45 10.7	+0.6
SUW				eS	S	12 45 42.4	+0.1
SNX	Sinaia	91.82	316	P	P	12 35 31.9	+1.8
LVV	L’vov	92.04	320	i P	P	12 35 33.0	+2.0
LVV				i S	S	12 45 47.0	+2.1
ALN	Alexandroupoli	92.14	311	eP	P	12 35 31.4	-0.3
MTUR	Matau	92.16	316	⇓iP	P	12 35 31.8	+0.1
PVL	Pavlikeni	92.30	314	i P	P	12 35 33.0	+0.6
DIM	Dimitrovgrad	92.34	312	i P	P	12 35 33.0	+0.4
LOF	Lofoten	92.41	339	eP	P	12 35 33.4	+1.1
	comp=Z,629nm,1.9s,mb6.3						
LOF	Lofoten	92.41	339	eP	P	12 35 33.4	+1.1
LOF				AMb	AMB	12 35 39.4	
	comp=Z,629nm,1.9s,mb6.3						
RDO	Rodhopi	92.48	312	P	P	12 35 33.1	-0.2
KDZ	Kurdzhali	92.49	312	i P	P	12 35 34.0	+0.7
SYO	Syowa Base	92.69	201	⇑P	P	12 35 33.9	+0.3
SYO	Syowa Base	92.69	201	⇑PcP	PcP	12 35 38.0	+4.0
MBAR	Mbarara	92.74	270	eP	P	12 35 34.3	-0.8
MBAR				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.5						
MBAR	Mbarara	92.74	270	eP	P	12 35 34.3	-0.8
	comp=Z,41nm,0.8s,mb5.5						
MOR8	Moi Rana	92.75	337	eP	P	12 35 30.9	-3.0
	comp=Z,392nm,1.7s,mb6.2						
MOR8	Moi Rana	92.75	337	eP	P	12 35 30.9	-3.0
MOR8				AMb	AMB	12 35 38.3	
	comp=Z,392nm,1.7s,mb6.2						
KWP	Kalwaria	92.92	320	eP	P	12 35 34.2	-0.9
KWP				e		12 39 22.9	
KWP				pmax	pmax		
	comp=Z,4µm,2.7s,mb7.0						
KWP	Kalwaria	92.92	320	eP	P	12 35 34.2	-0.9
KWP				epP	pP	12 37 38.7	+3.5
KWP				ePP	PP	12 39 22.9	-5.8
KWP				ePPP	PPP	12 42 09.3	+35
KWP				eSKS	SKS	12 45 17.5	+0.7
KWP				eS	S	12 45 53.5	+1.1
KWP	Kalwaria	92.92	320	eP	P	12 35 34.2	-0.9
	comp=Z,4µm,2.7s,mb7.0						
KWP				epP	pP	12 37 38.7	+3.5
KWP				ePP	PP	12 39 22.9	-5.9
KWP				ePPP	PPP	12 42 09.3	+35
KWP				eSKS	SKS	12 45 17.5	+0.7
KWP				eS	S	12 45 53.5	+1.1
PLD	Plovdiv	92.94	313	i P	P	12 35 35.0	-0.4
RZN	Rozhen	93.00	312	i P	P	12 35 36.0	+0.3
LOS	Limnos	93.02	310	eP	P	12 35 37.6	+1.8
APE	Apeiranthos	93.13	307	eP	P	12 35 33.4	-3.0
PGB	Panagyurishte	93.26	313	i P	P	12 35 36.0	-0.8
SANT	Santorini	93.30	307	eP	P	12 35 36.7	-0.4
	comp=Z,1µm,1.7s,mb6.6						
KOLS	Kolonicke sedl	93.34	320	eP	P	12 35 37.4	+0.4
KOLS				e		12 35 39.9	
UZH	Uzhgorod	93.39	319	i P	P	12 35 32.2	-5.1
WAR	Warsaw	93.41	323	eP	P	12 35 38.0	+0.8
WAR				e		12 39 29.6	
WAR				pmax	pmax		
	comp=Z,6µm,2.6s,mb7.2						
WAR	Warsaw	93.41	323	eP	P	12 35 38.0	+0.8
	comp=Z,6.0nm,2.6s						
WAR				ePP	PP	12 39 29.6	-2.8
WAR				ePPP	PPP	12 42 12.7	+34
WAR				eSKS	SKS	12 45 19.8	+0.5
WAR				eS	S	12 45 58.2	+1.7
WAR	Warsaw	93.41	323	eP	P	12 35 38.0	+0.8
	comp=Z,6µm,2.6s,mb7.2						
WAR				ePP	PP	12 39 29.6	-2.9
WAR				ePPP	PPP	12 42 12.7	+34
WAR				eSKS	SKS	12 45 19.8	+0.5
WAR				eS	S	12 45 58.2	+1.7
MMB	Musomiste	93.75	312	i P	P	12 35 38.0	-1.1
OUR	Ouranopolis	93.78	311	eP	P	12 35 37.7	-1.6
CRVS	Cervenica-Dubn	93.87	320	eP	P	12 35 43.7	+4.2
CRVS				e	pP	12 37 44.9	+5.3
CRVS				eS		12 45 19.3	
CRVS				e		12 48 28.2	
CRVS				e		12 50 50.3	
CRVS	Cervenica-Dubn	93.87	320	e	P	12 35 43.7	+4.2
CRVS				e	pP	12 37 44.9	+5.3
IDI	Anoyia	93.92	306	P	P	12 35 42.1	+2.1
SRS	Serrai	93.94	312	eP	P	12 35 38.2	-1.7
VTS	Vitosha	93.95	313	P	P	12 35 43.1	+3.1
VTS	Vitosha	93.95	313	P	P	12 35 39.1	-0.9
VTS	Vitosha	93.95	313	i P	P	12 35 40.0	0.0
AOS	Alonnisos	94.07	310	eP	P	12 35 40.3	-0.3
DLBC	Dease Lake	94.08	30	eP	P	12 35 40.6	+0.4
SOH	Sokhos	94.17	311	eP	P	12 35 39.5	-1.5
KKB	Krupnik	94.17	313	i P	P	12 35 39.5	-1.5
NSS	Namsos	94.30	336	eP	P	12 35 38.2	-2.9
NSS				e		12 46 00.2	
NSS				eSS	SS	12 52 41.1	-4.8
NSS				AMS	AMS	13 22 04.1	
	comp=Z,15µm,18.7s						
KNT	Kendrikon	94.44	312	eP	P	12 35 39.6	-2.7
NIE	Niedzica	94.49	320	eP	P	12 35 40.7	-1.6
THE	Thessaloniki	94.49	311	eP	P	12 35 41.7	-0.8
XOR	Xorichti	94.56	310	eP	P	12 35 42.1	-0.7
KECS	Kecovo	94.60	319	eP	P	12 35 41.7	-1.1
KECS				e		12 35 44.1	
BOLS	Boljevac	94.60	315	⇑iP	P	12 35 42.6	-0.3
OJC	Ojcow	94.63	321	eP	P	12 35 42.5	-0.3
OJC				epP	pP	12 37 40.8	-2.2
OJC				i		12 39 46.4	
OJC				i SKS	SKS	12 45 26.1	+0.2
OJC				i S	S	12 46 06.5	-0.4
OJC				i		12 49 45.6	
OJC				LR	LR		
	comp=Z,11µm,19.3s						
OJC	Ojcow	94.63	321	eP	P	12 35 42.5	-0.3
OJC				epP	pP	12 37 40.8	-2.2
OJC				e		12 39 46.4	
OJC				i SKS	SKS	12 45 26.1	+0.2
OJC				i S	S	12 46 06.5	-0.4
OJC				e		12 49 45.6	
OJC				MLR	MLR	13 10 30.8	
	comp=Z,11µm,19.3s						
VAY	Valandovo	94.66	312	i P	P	12 35 42.5	-0.7
VAY				i PP	PP	12 39 45.5	+3.7
VAY				i PPP	PPP	12 41 28.7	-21
VAY				i		12 44 22.9	
VAY				⇑i		12 45 24.5	
VAY				⇑iSKS	S	12 46 05.9	-1.4
VAY				i		12 49 42.7	
GRG	Griva	94.85	312	eP	P	12 35 42.4	-1.7
BARS	Barje	94.90	314	⇑iP	P	12 35 43.3	-0.9
LIT	Litokhoron	94.95	311	eP	P	12 35 42.3	-2.2
SVIS	Svilajnac	95.02	315	⇑iP	P	12 35 43.4	-1.4
PSZ	Piszkesteto	95.11	319	P	P	12 35 44.6	-0.5
PSZ	Piszkesteto	95.11	319	⇓eP	P	12 35 44.7	-0.4
QSPA	South Pole Qui	95.19	180	eP	P	12 35 46.8	+2.1
	comp=Z,960nm,2.0s,mb6.6						
DAG	Danmarks Havn	95.27	352	⇑eP	P	12 35 43.2	-2.0
DAG				pmax	pmax		
	comp=Z,240nm,1.0s,mb6.3						
DAG				MLR	MLR		
	comp=Z,11µm,18.0s						
DAG	Danmarks Havn	95.27	352	⇑eP	P	12 35 43.2	-2.0
	comp=Z,236nm,1.0s,mb6.3						
DAG				LR	LR		
	comp=Z,11µm,18.0s						
DAG	Danmarks Havn	95.27	352	⇑iP	P	12 35 43.2	-2.0
	comp=Z,236nm,1.0s,mb6.3						
	comp=Z,10µm,18.0s						
AGG	Agios Georgios	95.28	310	eP	P	12 35 44.0	-2.1
LIKS	Likavka	95.35	320	eP	P	12 35 47.8	+1.7
SKO	Skopje	95.36	313	⇓iP	P	12 35 46.4	+0.1
SKO				pmax	pmax		
	comp=Z,172nm,0.9s,mb6.2						
SKO	Skopje	95.36	313	⇓iP	P	12 35 46.4	+0.1
	comp=Z,0.2nm,0.9s						
SKO				i pP	pP	12 37 50.0	+3.5
SKO				i PP	PP	12 39 51.0	+4.1
GKP	Gorka Klasztor	95.37	325	eP	P	12 35 46.6	+0.5
GKP				e		12 39 48.7	
GKP				pmax	pmax		
	comp=Z,3µm,2.6s,mb7.0						
GKP	Gorka Klasztor	95.37	325	eP	P	12 35 46.6	+0.5
	comp=Z,3.3nm,2.6s						
GKP				ePP	PP	12 39 48.7	+1.9
GKP				ePPP	PPP	12 42 27.1	+31
GKP				eSKS	SKS	12 45 30.0	+0.2
GKP				eS	S	12 46 14.3	+1.2
GKP	Gorka Klasztor	95.37	325	eP	P	12 35 46.6	+0.5
	comp=Z,3µm,2.6s,mb7.0						
GKP				ePP	PP	12 39 48.7	+2.0
GKP				ePPP	PPP	12 42 27.1	+31
GKP				eSKS	SKS	12 45 30.0	+0.2
GKP				eS	S	12 46 14.2	+1.2
GRUS	Gruza	95.47	315	⇑iP	P	12 35 46.0	-0.8
FNA	Florina	95.65	312	eP	P	12 35 45.7	-1.9
VYHS	Vyhne	95.66	320	eP	P	12 35 46.4	-1.1
VYHS				e		12 39 49.6	
VYHS	Vyhne	95.66	320	eP	P	12 35 46.4	-1.1
VYHS				e		12 35 49.1	
VYHS				epP	pP	12 37 43.1	-4.6
VYHS				ePP	PP	12 39 49.6	+0.5
VYHS				e		12 45 29.0	
VYHS				e		12 51 02.4	
RAC	Raciborz	95.66	321	eP	P	12 35 48.4	+0.9
RAC				epP	pP	12 37 44.2	-3.5
RAC				eS	S	12 46 20.3	+4.8
OKC	Ostrava-Krasne	95.75	321	eP	P	12 35 47.0	-0.9
OKC				e		12 39 52.8	
OKC	Ostrava-Krasne	95.75	321	eP	P	12 35 47.0	-0.9
OKC				epP	pP	12 37 51.3	+3.2
OKC				ePP	PP	12 39 52.8	+3.0
OKC				ex	x	12 42 28.0	
OKC				eSKS	SKS	12 45 32.3	+0.4
OKC				eS	S	12 46 10.9	-5.4
NB2	NORSAR Subarra	95.93	333	P	P	12 35 46.3	-2.1
	comp=Z,208nm,0.7s,mb6.5,baz=70,slow=4.5						
NB2	NORSAR Subarra	95.93	333	P	P	12 35 49.6	+1.2
NB2				pmax	pmax		
	comp=Z,208nm,0.7s,mb6.5						
NB2	NORSAR Subarra	95.93	333	P	P	12 35 49.6	+1.2
	comp=Z,208nm,0.7s,mb6.5						
NB2	NORSAR Subarra	95.93	333	P	P	12 35 46.3	-2.1
	baz=70,slow=4.4						
DIVS	Divcibare	95.93	315	⇓iP	P	12 35 47.4	-1.4
OHR	Ohrid	96.01	312	i P	P	12 35 47.2	-2.1
SRO2	Moca	96.13	319	eP	P	12 35 51.3	+1.6
BSD	Bornholm Skovb	96.13	327	i P	P	12 35 50.7	+1.2
BSD				i		12 39 54.9	
BSD				pmax	pmax		
	comp=Z,210nm,0.7s,mb6.5						
BSD				MLR	MLR		
	comp=Z,10µm,18.0s						
BSD	Bornholm Skovb	96.13	327	i P	P	12 35 50.7	+1.2
	comp=Z,210nm,0.7s,mb6.5						
BSD				i		12 39 54.9	
BSD				i S		12 45 34.9	
BSD				i		12 46 18.8	
BSD				e		12 48 26.5	
BSD				e		12 49 48.2	
	comp=Z,10µm,18.0s						
MORC	Moravsky Berou	96.15	321	P	P	12 35 49.2	-0.5
NAO01	NORSAR Array S	96.15	333	eP	P	12 35 48.2	-1.2
	comp=Z,5.4nm,1.1s						
SRO	Srobarova	96.17	319	eP	P	12 35 50.6	+0.7
SRO				ePP	PP	12 39 56.9	+3.8
SRO1	Iza	96.23	319	eP	P	12 35 50.8	+0.6
SRO1				e		12 35 52.7	
SRO1				ePP	PP	12 39 57.3	+3.7
NVSS	Nova Varos 2	96.27	315	⇑iP	P	12 35 50.4	0.0
IVA	Berane	96.28	314	⇓iPKP	P	12 35 52.6	+2.1
PVY	Plav	96.28	314	⇓iPKP	P	12 35 53.2	+2.7
LSZ	Lusaka	96.42	255	eP	P	12 35 50.5	-1.2
LSZ				pmax	pmax		
	comp=Z,135nm,0.9s,mb6.2						
LSZ	Lusaka	96.42	255	eP	P	12 35 50.5	-1.2
	comp=Z,136nm,0.9s,mb6.2						
DOMB	Dombas	96.48	334	eP	P	12 35 50.9	-0.1
	comp=Z,354nm,1.8s,mb6.3						
DOMB	Dombas	96.48	334	eP	P	12 35 50.9	-0.1
DOMB				AMb	AMB	12 35 58.4	
	comp=Z,354nm,1.8s,mb6.3						
PLE	Pljevlja	96.53	315	⇓iPKP	P	12 35 52.6	+1.0
SMOL	Smolenice	96.56	320	eP	P	12 35 52.1	+0.5
SMOL				e		12 35 56.2	
SMOL				ePP	PP	12 40 02.8	+6.7
SMOL	Smolenice	96.56	320	e	P	12 35 52.1	+0.5
SMOL				e		12 35 56.2	
SMOL				ePP	PP	12 40 02.8	+6.7
OSL	Oslo	96.57	332	eP	P	12 35 51.1	-0.3
	comp=Z,61nm,0.8s,mb5.9						
OSL	Oslo	96.57	332	eP	P	12 35 51.1	-0.3
OSL				AMb	AMB	12 35 56.4	
	comp=Z,61nm,0.8s,mb5.9						
QSH	Qafa e Shtames	96.57	313	i p	P	12 35 51.0	-0.9
KSP	Ksiaz	96.62	322	eP	P	12 35 51.3	-0.5
KSP				e		12 39 56.0	
KSP				ePS	PS	12 48 55.0	-6.8
KSP	Ksiaz	96.62	322	eP	P	12 35 51.3	-0.5
KSP				e		12 35 53.4	
KSP				epP	pP	12 37 55.4	+3.3
KSP				esP	sP	12 38 43.8	-1.2

KSP				ePP	PP	12 39 56.0	-0.5
KSP				e		12 42 10.0	
KSP				eSKS	SKS	12 45 36.0	-0.4
KSP				eS	S	12 46 20.0	-3.6
KSP				ePS	PS	12 48 55.0	-6.8
KSP				e		12 49 50.0	
KSP	Ksiaz	96.62	322	eP	P	12 35 51.2	-0.6
	comp=Z,4µm,2.5s,mb7.2						
KSP				epP	pP	12 38 04.1	+12
KSP				ePP	PP	12 39 58.3	+1.7
KSP				ePPP	PPP	12 42 21.4	+15
KSP				eSKS	SKS	12 45 36.4	0.0
KSP				eS	S	12 46 25.3	+1.7
TIR	Tirane	96.64	313	ep	P	12 35 52.6	+0.4
DPC	Dobruska-Polom	96.74	322	eP	P	12 35 51.3	-1.1
DPC				e		12 39 55.8	
DPC	Dobruska-Polom	96.74	322	eP	P	12 35 51.3	-1.1
DPC				epP	pP	12 37 50.6	-2.1
DPC				ePP	PP	12 39 55.8	-1.7
DPC				ex	x	12 42 35.6	
DPC				eSKS	SKS	12 45 34.0	-3.1
DPC				eS	S	12 46 25.9	+1.3
TTG	Podgorica	96.83	314	⇓iPKP	P	12 35 52.6	-0.4
RES	Resolute Bay	96.85	10	P	P	12 35 51.7	-0.7
RES	Resolute Bay	96.85	10	eP	P	12 35 51.3	-1.1
	comp=Z,0.1nm,0.5s						
ZST	Bratislava	96.85	320	eP	P	12 35 53.5	+0.5
ZST				e		12 35 56.8	
ZST				epP	pP	12 37 52.7	-0.6
ZST				ePP	PP	12 40 04.0	+5.6
ZST				eS		12 45 41.0	
ZST				e		12 51 31.4	
ZST	Bratislava	96.85	320	PDIF	P	12 35 53.5	+0.5
ZST				e		12 35 56.8	
ZST				e	pP	12 37 52.7	-0.6
ZST				ePP	PP	12 40 04.0	+5.6
ZST				e		12 45 41.0	
ZST				e		12 51 31.4	
VRAC	Vranov	96.87	321	P	P	12 35 52.4	-0.6
UPC	Upice	96.89	322	eP	P	12 35 52.4	-0.7
UPC				e		12 39 59.8	
UPC	Upice	96.89	322	ePDIF	P	12 35 52.4	-0.7
UPC				epP	pP	12 37 52.0	-1.4
UPC				ePP	PP	12 39 59.8	+1.2
UPM	Unac-Piva	96.90	315	⇓iPKP	P	12 35 53.9	+0.6
MOL	Molde	96.90	335	eP	P	12 35 55.2	+2.3
	comp=Z,435nm,1.7s,mb6.4						
MOL	Molde	96.90	335	eP	P	12 35 55.2	+2.3
MOL				AMb	AMB	12 36 01.4	
	comp=Z,435nm,1.7s,mb6.4						
NKY	Niksic	96.93	314	⇓iPKP	P	12 35 52.8	-0.7
ULC	Ulcinj	96.95	313	ePKP	P	12 35 53.4	-0.2
BUM	Brajici-Budva	97.12	314	⇓iPKP	P	12 35 53.4	-1.0
RGN	Rugen	97.19	327	eP	P	12 35 56.2	+1.8
	comp=Z,815nm,1.3s,mb6.8						
BRY	Bratogost	97.23	314	⇓iPKP	P	12 35 54.5	-0.4
COP	Copenhagen	97.28	328	⇓iP	P	12 35 56.8	+2.1
COP				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.8						
COP				MLR	MLR		
	comp=Z,11µm,20.0s						
COP	Copenhagen	97.28	328	⇓iP	P	12 35 56.8	+2.1
	comp=Z,49nm,0.7s,mb5.8						
COP				e		12 38 03.4	
COP				i		12 40 05.7	
COP				i S		12 45 41.0	
COP				i		12 46 29.9	
COP				i		12 51 26.9	
	comp=Z,11µm,20.0s						
VKA	Vienna	97.34	320	⇑iP	P	12 35 55.6	+0.4
	comp=Z,2µm,2.0s,mb7.0						
VKA	Vienna	97.34	320	⇑iP	P	12 35 55.6	+0.4
VKA				pmax	pmax		
	comp=Z,2µm,2.0s,mb7.0						
SOP	Sopron	97.34	319	⇑eP	P	12 35 55.4	+0.1
HCY	Herceg Novi	97.38	314	⇓iPKP	P	12 35 55.7	+0.1
RUE	Ruedersdorf	97.61	324	eP	P	12 35 55.1	-1.2
	comp=Z,208nm,2.6s,mb6.0						
PVCC	Panska Ves	97.76	322	ePDIF	P	12 35 56.5	-0.5
PVCC				ex	x	12 42 43.5	
PVCC				eSKS	SKS	12 45 42.1	-0.2
PVCC				eSDIF		12 46 33.6	
STON	Ston	97.84	314	i P	P	12 35 57.3	-0.3
PRU	Pruhonice	97.94	322	eP	P	12 35 56.6	-1.3
PRU				e		12 40 05.3	
PRU	Pruhonice	97.94	322	ePDIF	P	12 35 56.6	-1.3
PRU				epP	pP	12 37 59.2	+1.0
PRU				ePP	PP	12 40 05.3	-1.6
PRU				ex	x	12 42 45.4	
PRU				eSKS	SKS	12 45 38.3	-4.9
PRU				eSDIF		12 46 34.9	
PRA	Prague	97.98	322	PDIF	P	12 35 58.0	-0.1
PRA				pP	pP	12 38 00.0	+1.6
PRA				sP	sP	12 38 56.0	+4.8
PRA				PP	PP	12 40 07.0	-0.2
PRA				ex	x	12 42 50.0	
BRG	Berggiesshubel	98.03	323	i P	P	12 35 57.4	-0.8
BRG				pmax	pmax		
	comp=Z,298nm,1.0s,mb6.6						
BRG	Berggiesshubel	98.03	323	i P	P	12 35 57.4	-0.8
	comp=Z,298nm,1.0s,mb6.6						
BRG				i pP	pP	12 38 01.6	+3.0
BRG				esP	sP	12 38 45.0	-6.4
BRG				i PP	PP	12 40 12.0	+4.5
BRG				i		12 42 28.0	
BRG				i SKS	SKS	12 45 45.0	+1.4
BRG				i S	S	12 46 38.0	+2.6
BRG				i		12 50 07.0	
BRG				i SS	SS	12 53 23.0	-15
BRG				e		12 58 27.7	
BRG				eP'P'		13 00 42.9	
BRG				LR	LR		
	comp=Z,19µm,24.9s						
SISC	Sisak	98.08	317	i P	P	12 35 59.2	+0.6
HYA	Hoyanger	98.10	334	eP	P	12 35 59.1	+0.8
	comp=Z,430nm,1.5s,mb6.6						
HYA	Hoyanger	98.10	334	eP	P	12 35 59.1	+0.8
HYA				AMb	AMB	12 36 06.0	
	comp=Z,430nm,1.5s,mb6.6						
ARSA	Arzberg	98.14	319	⇑iP	P	12 35 59.3	+0.5
	comp=Z,110nm,1.0s,mb6.1						
LCI	Lecce	98.17	312	P	P	12 35 59.3	+0.2
GROS	Grobnik	98.38	318	P	P	12 36 00.4	+0.5
FOO	Floro	98.39	335	eP	P	12 36 02.0	+2.4
	comp=Z,242nm,1.4s,mb6.3						
FOO	Floro	98.39	335	eP	P	12 36 02.0	+2.4
FOO				AMb	AMB	12 36 05.4	
	comp=Z,242nm,1.4s,mb6.3						
GOLS	Golise	98.43	318	P	P	12 36 01.7	+1.5
CLL	Collm	98.45	324	i P	P	12 36 00.1	0.0
CLL				pmax	pmax		
	comp=Z,1µm,2.3s,mb6.9						
CLL	Collm	98.45	324	i P	P	12 36 00.1	0.0
	comp=Z,1µm,2.3s,mb6.9						
CLL				esP	sP	12 39 01.0	+7.8
CLL				eSKS	SKS	12 45 40.0	-5.7
CLL				eS	S	12 46 39.0	+0.1
CLL	Collm	98.45	324	P	P	12 36 00.1	0.0
	comp=Z,logA/T=2.2,mb6.3						
CLL				i		12 36 03.7	
CLL				e*PP	pP	12 38 10.0	+10
CLL				e*SP	sP	12 39 01.0	+7.8
CLL				ePP	PP	12 40 10.0	-0.4
CLL				e		12 40 17.0	
CLL				e*PPP		12 41 55.0	
CLL				ePPP	PPP	12 42 21.0	-1.3
CLL				e		12 42 51.0	
CLL				e		12 44 47.0	
CLL				e		12 45 40.0	
CLL				eS	S	12 46 39.0	+0.1
CLL				ePS	PS	12 49 20.0	+0.2
CLL				e*SS		12 50 14.0	
CLL				e		12 51 45.0	
CLL				e*SSS		12 56 36.0	
CLL				eSSS	SSS	12 57 42.0	+3.8
ODD1	Odda	98.46	333	eP	P	12 35 59.0	-0.9
	comp=Z,194nm,2.0s,mb6.1						
ODD1	Odda	98.46	333	eP	P	12 35 59.0	-0.9
ODD1				AMb	AMB	12 36 04.8	
	comp=Z,194nm,2.0s,mb6.1						
DOBS	Dobrina	98.50	318	P	P	12 36 01.2	+0.7
PERS	Pernice	98.59	319	P	P	12 36 02.1	+1.2
LEGS	Legarje	98.65	318	ePdiff	P	12 36 01.6	+0.4
MUD	Monsted U'grnd	98.69	329	⇓iP	P	12 36 01.6	+0.6
MUD				i		12 40 13.1	
MUD				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.4						
MUD				MLR	MLR		
	comp=Z,7µm,18.0s						
MUD	Monsted U'grnd	98.69	329	⇓iP	P	12 36 01.6	+0.6
	comp=Z,202nm,1.0s,mb6.4						
MUD				i		12 38 14.3	
MUD				i		12 40 13.1	
MUD				i		12 42 58.4	
MUD				i S		12 45 49.8	
MUD				i		12 46 42.6	
	comp=Z,7µm,18.0s						
BLS5	Blasjo	98.76	333	eP	P	12 36 01.6	+0.3
BLS5				AML	AML	12 36 07.5	
	comp=Z,111nm,0.9s						
SUE	Sulen	98.77	334	eP	P	12 36 03.7	+2.4
	comp=Z,354nm,1.7s,mb6.4						
SUE	Sulen	98.77	334	eP	P	12 36 03.7	+2.4
SUE				AMb	AMB	12 36 07.2	
	comp=Z,354nm,1.7s,mb6.4						
MOA	Molln	98.78	320	⇓iP	P	12 36 00.4	-1.3
	comp=Z,206nm,0.9s,mb6.5						
KHC	Kasperske Hory	98.81	321	eP	P	12 36 00.7	-1.1
KHC				e		12 40 13.2	
KHC	Kasperske Hory	98.81	321	i Pr		12 36 01.4	
KHC	Kasperske Hory	98.81	321	eP	P	12 36 00.7	-1.1
KHC				ex	x	12 39 32.5	
KHC				ePP	PP	12 40 13.2	+0.3
KHC				ex	x	12 42 51.4	
KHC				eSKS	SKS	12 45 47.4	-0.2
KHC				eSDIF		12 46 44.3	
GEC2	GERESS Array S	98.82	321	eP	P	12 36 00.7	-1.2
GEC2				pmax	pmax		
	comp=Z,172nm,1.1s,mb6.3						
GEC2	GERESS Array S	98.82	321	ePdif	P	12 36 00.7	-1.2
	comp=Z,172nm,1.1s,mb6.3						
GEC2				esPP		12 42 55.7	
GEC2				eSdif		12 46 46.4	
GEC2				e		12 50 22.4	
GEC2				e		12 51 47.3	
BOJS	Bojanci	98.83	317	ePdiff	P	12 36 01.3	-0.7
BOJS				e	pP	12 38 06.4	+4.1
BOJS				e		12 38 53.7	
BOJS				e		12 40 10.9	
BOJS				eSKSac		12 45 47.9	
BOJS				eSdiff		12 46 45.2	
BOJS				epS		12 49 25.4	
BOJS				e		12 50 23.4	
BOJS				e		12 51 44.8	
BOJS				e		12 56 24.3	
BOJS				e		13 03 60.0	
BER	Bergen	98.83	334	eP	P	12 36 02.2	+0.6
BER				LR	LR		
	comp=Z,13398µm,16.1s						
BER	Bergen	98.83	334	eP	P	12 36 02.2	+0.6
BER				eP		12 36 03.8	
BER				AMb	AMB	12 36 07.3	
	comp=Z,198nm,1.3s,mb6.3						
BER				AMS	AMS	13 23 27.0	
	comp=Z,13µm,16.1s						
PDKS	Podkum	98.83	318	P	P	12 36 03.6	+1.6
ASK	Askoy	98.85	334	eP	P	12 36 03.9	+2.3
	comp=Z,426nm,2.1s,mb6.4						
ASK	Askoy	98.85	334	eP	P	12 36 03.9	+2.3
ASK				AMb	AMB	12 36 07.9	
	comp=Z,426nm,2.1s,mb6.4						
EGD	Espegrend	98.93	334	eP	P	12 36 03.4	+1.4
	comp=Z,340nm,1.4s,mb6.5						
EGD	Espegrend	98.93	334	eP	P	12 36 03.4	+1.4
EGD				AMb	AMB	12 36 08.1	
	comp=Z,340nm,1.4s,mb6.5						
OBKA	Obir	99.00	319	⇓iP	P	12 36 01.8	-0.9
	comp=Z,123nm,0.9s,mb6.2						
NKC	Novy Kostel	99.14	323	eP	P	12 36 02.7	-0.6
NKC				ePP	PP	12 40 17.2	+2.0
NKC				eSKS	SKS	12 45 48.5	-0.7
NKC				eSDIF		12 46 45.0	
LJU	Ljubljana	99.15	318	eP	P	12 36 04.6	+1.2
LJU				e		12 40 13.2	
LJU	Ljubljana	99.15	318	ePdif	P	12 36 04.6	+1.2
LJU				epP	pP	12 38 01.1	-2.6
LJU				ePP	PP	12 40 13.2	-2.2
LJU				e		12 41 33.1	
LJU				e		12 42 31.7	
LJU				ePPP	PPP	12 42 57.6	+29
LJU				e		12 44 55.5	
LJU				eSKSac		12 45 47.2	
LJU				e		12 46 44.1	
LJU				e		12 48 21.6	
LJU				epS		12 49 21.4	
LJU				e		12 50 17.4	
LJU				e		12 51 48.6	
LJU				e		13 03 59.5	
LJU	Ljubljana	99.15	318	ePdiff	P	12 36 04.6	+1.2
LJU				e		12 36 06.5	
LJU				epP	pP	12 38 01.1	-2.6
LJU				e		12 40 06.8	
LJU				ePP	PP	12 40 13.2	-2.2
LJU				e		12 40 33.0	
LJU				e		12 41 33.1	
LJU				e		12 42 31.7	
LJU				ePPP	PPP	12 42 57.6	+29
LJU				e		12 44 55.5	
LJU				eSKSac		12 45 47.2	
LJU				e		12 46 44.1	
LJU				eSdiff		12 46 49.0	
LJU				eSP	SP	12 48 15.0	-5.7
LJU				e		12 48 21.6	
LJU				epS		12 49 21.4	
LJU				e		12 50 17.4	
LJU				e		12 51 48.6	
LJU				e		13 03 59.5	
WET	Wettzell	99.24	321	eP	P	12 36 02.8	-0.9
WET				pmax	pmax		
	comp=Z,163nm,1.3s,mb6.2						
WET	Wettzell	99.24	321	ePdif	P	12 36 02.8	-0.9
	comp=Z,163nm,1.3s,mb6.2						
WET				esPP		12 43 03.0	
WET				eSdif		12 46 48.2	
WET				e		12 50 24.2	
WET				e		12 51 51.0	
LBTB	Lobatse	99.31	246	P	P	12 36 05.3	+0.7
LBTB				pmax	pmax		
	comp=Z,250nm,1.8s,mb6.2						
LBTB	Lobatse	99.31	246	ePdif	P	12 36 04.7	+0.1
	comp=Z,248nm,1.8s,mb6.2						
STAV	Stavanger	99.32	332	eP	P	12 36 04.9	+1.1
	comp=Z,149nm,1.9s,mb6.0						
STAV	Stavanger	99.32	332	eP	P	12 36 04.9	+1.1
STAV				AMb	AMB	12 36 09.4	
	comp=Z,149nm,1.9s,mb6.0						
YKW3	Yellowknife Ar	99.38	23	ePdif	P	12 36 02.8	-1.2
TIP	Timpagrande	99.47	311	ePdif	P	12 36 04.3	-0.7
ORI	Oriolo Calabro	99.47	312	eP	P	12 36 06.2	+1.2
MOX	Moxa	99.50	323	deP	P	12 36 04.1	-0.8
MOX				pmax	pmax		
	comp=Z,719nm,2.0s,mb6.7						
MOX	Moxa	99.50	323	ePr	P	12 36 04.1	-0.8
	comp=Z,719nm,2.0s,mb6.7						
MOX				e		12 39 30.8	
MOX	Moxa	99.50	323	i P	P	12 36 04.1	-0.8
	comp=Z,logA/T=2.6,mb6.7						
MOX				pP	pP	12 38 08.0	+2.8
MOX				e		12 39 31.0	
MOX				PP	PP	12 40 20.0	+2.0
MOX				pPP		12 41 40.0	
MOX				sPP		12 42 39.0	
MOX				e		12 45 10.0	
MOX				S	S	12 46 56.0	+8.3
MOX				PS	PS	12 49 30.0	-0.2
MOX				PPS	PPS	12 50 36.0	-16
MOX				SS	SS	12 53 30.0	-28
MOX				e		13 02 30.0	
VOY	Vojsko	99.58	318	ePdiff	P	12 36 05.1	-0.2
VOY				e	pP	12 38 09.7	+4.0
KBA	Koelnbreinsper	99.61	319	⇑iP	P	12 36 03.7	-1.7
	comp=Z,84nm,0.9s,mb6.2						
KBA	Koelnbreinsper	99.61	319	⇑iP	P	12 36 03.7	-1.7
KBA				pmax	pmax		
	comp=Z,84nm,0.9s,mb6.2						
LSR	Lussari	99.68	319	⇓eP	P	12 36 07.0	+1.2
BOSA	Boshof	99.68	242	eP	P	12 36 05.8	-0.4
BOSA				pmax	pmax		
	comp=Z,231nm,1.8s,mb6.3						
BOSA	Boshof	99.68	242	ePdif	P	12 36 05.8	-0.4
	comp=Z,231nm,1.8s,mb6.3						
DRE	Drenchia	99.70	318	⇓iP	P	12 36 06.0	+0.1
TRI	Trieste	99.76	318	eP	P	12 36 06.3	+0.1
ROBS	Robic	99.77	319	P	P	12 36 06.8	+0.6
CLZ	Clausthal	99.80	325	ePdif	P	12 36 05.6	-0.6
	comp=Z,364nm,1.1s,mb6.7						
CLZ				eSdif		12 46 51.9	
CLZ				e		12 50 27.9	
CLZ				e		12 52 00.2	
GRI	Girifalco	99.81	311	eP	P	12 36 07.6	+1.0
PTCC	Patocco-Chiusa	99.82	319	eP	P	12 36 06.0	-0.4
FG4	Candela	99.87	313	P	P	12 36 08.5	+1.7
COLI	Coloredo	99.89	318	⇓eP	P	12 36 08.0	+1.3
GMNA	Gemona	99.94	319	eP	P	12 36 07.2	+0.3
BAD	Bernadia	99.94	319	⇓eP	P	12 36 08.0	+1.0
MRLC	Muro Lucano	99.99	313	eP	P	12 36 08.1	+0.8
ZOU	Zoufplan	100.02	319	⇓eP	P	12 36 08.0	+0.7
GRA1	Grafenberg Arr	100.07	322	ePdif	P	12 36 06.6	-0.8
	comp=Z,168nm,1.3s						
GRA1				ePP	PP	12 40 26.7	+4.2
GRA1				esPP		12 43 04.9	
GRA1				eSdif		12 46 55.6	
GRA1				e		12 50 29.7	
GRA1				e		12 52 00.2	
GRF	Grafenberg Arr	100.07	322	eP	P	12 36 06.6	-0.8
GRF				pmax	pmax		
	comp=Z,168nm,1.3s						
GRF	Grafenberg Arr	100.07	322	eP	P	12 36 06.6	-0.8
GRF				pmax	pmax		
	comp=Z,168nm,1.3s						
GRF	Grafenberg Arr	100.07	322	ePdif	P	12 36 06.6	-0.8
	comp=Z,168nm,1.3s						
GRF				ePP	PP	12 40 26.7	+4.2
GRF				esPP		12 43 04.9	
GRF				Sdif		12 46 55.6	
GRF				e		12 50 29.7	
GRF				e		12 52 00.2	
GRFO	Grafenberg	100.07	322	Pdiff	P	12 36 08.8	+1.4
GRFO				PP	PP	12 40 28.7	+6.2
MPRI	Monte Prat	100.11	319	⇑iP	P	12 36 08.0	+0.3
MGR	Morigerati	100.11	312	eP	P	12 36 06.7	-1.2
FVI	Forni Avoltri	100.13	319	eP	P	12 36 07.7	-0.1
TLI	Talmassons	100.14	318	⇑eP	P	12 36 10.0	+2.2
SGO	Sicignano	100.18	313	eP	P	12 36 08.2	0.0
CSMI	Casera Mimoias	100.24	319	⇑eP	P	12 36 11.0	+2.7
SOI	Samo	100.28	310	eP	P	12 36 09.8	+1.1
SEST	Monte Rota	100.45	319	P	P	12 36 09.3	+0.1
FUR	Furstenfeldbru	100.57	321	eP	P	12 36 10.2	+0.5
FUR				pmax	pmax		
	comp=Z,350nm,1.6s						
FUR	Furstenfeldbru	100.57	321	ePdif	P	12 36 10.2	+0.5
	comp=Z,350nm,1.6s						
FUR				e		12 50 35.3	
FUR				e		12 52 07.6	
CII	Carovilli	100.58	314	ePdif	P	12 36 09.2	-0.7
	comp=Z,30nm,0.8s						
MTTG	Motta San Giov	100.58	310	eP	P	12 36 10.6	+0.6
WTTA	Wattenberg	100.65	320	⇑iP	P	12 36 08.6	-1.5
	comp=Z,212nm,1.0s						
WTTA	Wattenberg	100.65	320	⇑iP	P	12 36 08.6	-1.5
WTTA				pmax	pmax		
	comp=Z,212nm,1.0s						
WATA	Walderalm	100.67	320	⇑iP	P	12 36 08.6	-1.5
	comp=Z,145nm,1.2s						
WATA	Walderalm	100.67	320	⇑iP	P	12 36 08.6	-1.5
WATA				pmax	pmax		
	comp=Z,145nm,1.2s						
RNI2	Rionero Sannit	100.69	314	P	P	12 36 12.1	+1.7
BRES	Bressanone	100.78	319	P	P	12 36 10.3	-0.3
SCO	Scoresbysund	100.91	349	i P	P	12 36 12.7	+2.0
SCO				pmax	pmax		
	comp=Z,31nm,0.7s						
SCO	Scoresbysund	100.91	349	i P	P	12 36 12.7	+2.0
	comp=Z,31nm,0.7s						
SDI	San Donato	100.94	314	eP	P	12 36 11.7	+0.2
SQTA	Sankt Quirin	100.94	320	⇓iP	P	12 36 09.6	-1.7
	comp=Z,144nm,1.1s						
SQTA	Sankt Quirin	100.94	320	⇓iP	P	12 36 09.6	-1.7
SQTA				pmax	pmax		
	comp=Z,144nm,1.1s						
MOTA	Moosalm	100.96	320	⇓iP	P	12 36 10.4	-1.0
	comp=Z,70nm,1.1s						
MOTA	Moosalm	100.96	320	⇓iP	P	12 36 10.4	-1.0
MOTA				pmax	pmax		
	comp=Z,70nm,1.1s						
ARV	Arcevia	101.01	316	eP	P	12 36 12.8	+1.1
AQU	L'Aquila	101.03	315	P	P	12 36 12.4	+0.5
AQU				pmax	pmax		
	comp=Z,90nm,1.0s						
AQU	L'Aquila	101.03	315	eP	P	12 36 13.2	+1.3
CTI	Castel Tesino	101.05	319	eP	P	12 36 12.4	+0.5
FSSB	Fossombrone	101.06	316	eP	P	12 36 12.7	+0.7
SNTG	Esanatoglia	101.08	316	eP	P	12 36 12.5	+0.4
HDH	Heidenheim	101.09	322	P	P	12 36 12.5	+0.5
HDH	Heidenheim	101.09	322	eP	P	12 36 12.1	+0.1
NRCA	Norcia	101.09	315	eP	P	12 36 12.3	+0.1
PTQR	Pietraquaria	101.14	314	eP	P	12 36 12.9	+0.6
SIND	Sindeldorf	101.18	322	eP	P	12 36 12.4	+0.1
APPI	Appiano	101.18	319	P	P	12 36 12.0	-0.4
RSM	Repubblica di	101.21	317	eP	P	12 36 14.9	+2.3
UBR	Uberruh	101.48	321	P	P	12 36 14.7	+1.0
UBR	Uberruh	101.48	321	eP	P	12 36 13.5	-0.2
BADI	Badiali	101.48	316	P	P	12 36 15.0	+1.2
WIT	Witteveen	101.50	326	eP	P	12 36 15.1	+1.5
WIT				ePP	PP	12 40 30.4	-2.9
MNS	Montasola	101.53	315	eP	P	12 36 14.6	+0.5
TNS	Taunus Mts	101.54	324	eP	P	12 36 13.2	-0.7
TNS				pmax	pmax		
	comp=Z,146nm,1.4s						
TNS	Taunus Mts	101.54	324	ePdif	P	12 36 13.2	-0.7
	comp=Z,146nm,1.4s						
TNS				eSdif		12 47 06.7	
TOD	Tromm	101.56	323	eP	P	12 36 14.4	+0.4
SFI	Santa Sofia	101.63	317	eP	P	12 36 15.7	+1.2
CRE	Caprese Michel	101.65	316	eP	P	12 36 15.0	+0.4
BUCH	Bad Urach	101.67	322	P	P	12 36 14.8	+0.3
BUCH	Bad Urach	101.67	322	eP	P	12 36 14.9	+0.4
SWS	Schriesheim	101.67	323	P	P	12 36 16.7	+2.2
SWS	Schriesheim	101.67	323	eP	P	12 36 14.8	+0.3
PGD	Poggio Sodo	101.72	317	eP	P	12 36 16.6	+1.7
BRMO	Bormio	101.74	320	eP	P	12 36 15.2	+0.4
DAVA	Damuels	101.76	320	⇓iP	P	12 36 14.5	-0.5
	comp=Z,83nm,1.2s						
WTSB	Winterswijk	101.79	326	eP	P	12 36 14.7	-0.2
	comp=Z,332nm,1.8s						
WTSB				ePP	PP	12 40 32.9	-2.3
VMG	Vicchio	101.82	317	eP	P	12 36 16.8	+1.5
SEI	Scarperia	101.91	317	eP	P	12 36 18.5	+2.8
LBG	Lerchenberg	101.93	322	P	P	12 36 16.2	+0.6
LBG	Lerchenberg	101.93	322	eP	P	12 36 15.8	+0.2
SAL	Salo	101.94	319	P	P	12 36 17.2	+1.4
GUT	Gutenstein	101.95	321	P	P	12 36 17.5	+1.7
GUT	Gutenstein	101.95	321	eP	P	12 36 16.0	+0.2
NVL	N'lazarevskaya	102.00	198	⇓eP		12 36 18.0	
NVL				e		12 40 34.0	
NVL				e		12 42 50.0	
NVL				e		12 47 10.0	
NVL				pmax	pmax		
	comp=Z,805nm,2.8s						
NVL				MLR	MLR		
	comp=Z,8µm,17.0s						
FNVD	Fontana Vidola	102.03	317	P	Pdif	12 36 17.8	+1.6
ZCCA	Zocca	102.07	317	P	Pdif	12 36 18.7	+2.3
KTD	Kalmit	102.11	323	eP	Pdif	12 36 17.2	+0.8
KTD	Kalmit	102.11	323	eP	Pdif	12 36 16.8	+0.4
SPAK	Spaichingen	102.15	321	eP	Pdif	12 36 18.2	+1.6
SPAK	Spaichingen	102.15	321	eP	Pdif	12 36 16.7	+0.1
SISB	Singen-Sch Ber	102.19	321	P	Pdif	12 36 18.6	+1.8
ABH	Alteburg	102.21	323	eP	Pdif	12 36 17.9	+1.1
ABH	Alteburg	102.21	323	eP	Pdif	12 36 17.7	+0.9
GSCL	Gusciola	102.33	317	eP	Pdif	12 36 19.4	+1.9
BFO	Black Forest	102.34	322	eP	Pdif	12 36 16.9	-0.6
BFO				e		12 50 50.0	
BFO				pmax	pmax		
	comp=Z,66nm,1.3s						
BFO	Black Forest	102.34	322	ePdif	Pdif	12 36 16.9	-0.6

	comp=Z,66nm,1.3s						
BFO				*e*Sdif		12 47 06.7	
BFO				*e*		12 50 50.0	
LANF	**Langenberg**	**102.41**	**323**	*e*P	Pdif	12 36 18.4	+0.6
BDI	**Bagni Di Lucca**	**102.43**	**317**	*e*P	Pdif	12 36 18.4	+0.4
ERBM	**Eremo**	**102.43**	**318**	*e*P	Pdif	12 36 19.9	+2.0
GRFL	**Gerfalco**	**102.48**	**316**	*e*P	Pdif	12 36 19.0	+0.8
SARO	**Sassorosso**	**102.52**	**317**	P	Pdif	12 36 20.0	+1.6
COR	**Corvallis**	**102.53**	**42**	pPdiff		12 38 18.6	
COR				PKiKP		12 40 41.0	
COR				SKSac		12 46 09.1	
COR				SP	SP	12 48 55.7	+0.4
COR				SS	SS	12 54 43.4	+3.5
COR				SKKSdf		12 58 34.3	
VLC	**Villacollemand**	**102.54**	**317**	*e*Pdif	Pdif	12 36 19.0	+0.6
	comp=Z,32nm,0.8s						
VALM		**102.56**	**317**	P	Pdif	12 36 19.8	+1.2
RUP	**Ruppelstein**	**102.57**	**323**	*e*P	Pdif	12 36 19.6	+1.2
RUP	**Ruppelstein**	**102.57**	**323**	*e*P	Pdif	12 36 19.4	+1.0
PII	**Pisa**	**102.59**	**317**	*e*P	Pdif	12 36 19.2	+0.5
GRAM		**102.64**	**318**	P	Pdif	12 36 19.7	+0.8
VINC	**Vinca**	**102.70**	**317**	P	Pdif	12 36 20.2	+1.0
BACM		**102.71**	**317**	P	Pdif	12 36 21.1	+1.9
FELD	**Feldberg**	**102.72**	**321**	*e*P	Pdif	12 36 19.3	+0.1
KIZ	**Kirchzarten**	**102.74**	**322**	P	Pdif	12 36 20.3	+1.1
KIZ	**Kirchzarten**	**102.74**	**322**	*e*P	Pdif	12 36 19.3	+0.1
HGN	**Heimansgroeve**	**102.79**	**325**	*e*P	Pdif	12 36 20.0	+0.6
	comp=Z,230nm,2.5s						
HGN				*e*PP	PP	12 40 39.3	-3.7
CODM		**102.82**	**318**	P	Pdif	12 36 21.5	+1.9
LIBD	**Limburg**	**102.86**	**322**	*e*P	Pdif	12 36 20.1	+0.3
LIBD	**Limburg**	**102.86**	**322**	*e*P	Pdif	12 36 19.8	0.0
WLS	**Welschbruch**	**102.91**	**322**	*e*P	Pdif	12 36 20.1	+0.1
BOB	**Bobbio (Coli)**	**102.95**	**318**	*e*P	Pdif	12 36 21.5	+1.3
CDF	**Champ du Feu**	**102.96**	**322**	*e*P	Pdif	12 36 20.4	+0.2
	comp=Z,235nm,1.1s						
CDF	**Champ du Feu**	**102.96**	**322**	*e*P	Pdif	12 36 20.4	+0.2
CDF				pmax	pmax		
	comp=Z,117nm,1.1s						
VAI	**Varese**	**103.00**	**319**	*e*P	Pdif	12 36 19.9	-0.5
ECH	**Echery**	**103.11**	**322**	*e*P	Pdif	12 36 20.9	+0.1
BBS	**Basel-Blauen**	**103.19**	**321**	*e*P	Pdif	12 36 21.0	-0.2
BBS	**Basel-Blauen**	**103.19**	**321**	*e*P	Pdif	12 36 21.4	+0.2
MOF	**Molkenrain**	**103.27**	**322**	*e*P	Pdif	12 36 22.0	+0.4
GENL	**Genova Univers**	**103.40**	**318**	P	Pdif	12 36 23.4	+1.1
HUMO	**Hull Mountain**	**103.45**	**44**	*e*Pdif	Pdif	12 36 24.2	+1.6
	comp=Z,107nm,0.4s						
HUMO				*e*PKKPbc		12 52 15.2	
HINF	**Hinteralfeld**	**103.46**	**322**	*e*P	Pdif	12 36 22.2	-0.2
	comp=Z,333nm,1.7s						
HINF	**Hinteralfeld**	**103.46**	**322**	*e*P	Pdif	12 36 22.2	-0.2
HINF				pmax	pmax		
	comp=Z,166nm,1.7s						
MCGN	**Macugnaga**	**103.47**	**320**	*e*P	Pdif	12 36 23.4	+0.9
ORX	**Oropa**	**103.59**	**319**	P	Pdif	12 36 23.0	-0.1
ORO	**Oropa**	**103.60**	**319**	P	Pdif	12 36 23.2	+0.1
PCP	**Pian Castagno**	**103.63**	**318**	P	Pdif	12 36 24.0	+0.7
LOMF	**Lomont**	**103.66**	**321**	*e*P	Pdif	12 36 23.2	-0.1
HAU	**Haudompre**	**103.69**	**322**	*e*P	Pdif	12 36 23.4	0.0
	comp=Z,51nm,0.9s						
HAU				*e*R			
	comp=Z,10µm,22.8s						
HAU	**Haudompre**	**103.69**	**322**	*e*P	Pdif	12 36 23.4	0.0
HAU				pmax	pmax		
	comp=Z,26nm,0.9s						
HAU				MLR	MLR		
	comp=Z,10µm,22.8s						
GIVF	**Givet**	**103.71**	**324**	*e*P	Pdif	12 36 24.1	+0.6
	comp=Z,117nm,1.0s						
TRAV		**103.79**	**319**	P	Pdif	12 36 23.6	-0.4
THEF	**They Montfort**	**103.82**	**322**	*e*P	Pdif	12 36 22.7	-1.3
YBH	**Yreka Blue Hor**	**103.93**	**45**	*e*Pdif	Pdif	12 36 26.3	+1.7
	comp=Z,19nm,1.1s						
FIN	**Finale Ligure**	**103.98**	**318**	*e*P	Pdif	12 36 25.7	+0.9
PGF	**Pioggiola**	**104.05**	**316**	*e*P	Pdif	12 36 25.1	0.0
	comp=Z,97nm,1.0s						
BAIF	**Baives**	**104.09**	**325**	*e*P	Pdif	12 36 26.0	+0.9
ROB	**Roburent**	**104.17**	**318**	P	Pdif	12 36 26.0	+0.4
LSD	**Ceresole Reale**	**104.20**	**319**	P	Pdif	12 36 26.6	+0.9
RSP	**Reno Superiore**	**104.25**	**319**	P	Pdif	12 36 26.9	+1.0
MEZF	**Maizieres J'vi**	**104.27**	**323**	*e*P	Pdif	12 36 26.4	+0.5
	comp=Z,130nm,1.0s						
IMI	**Imperia**	**104.31**	**318**	*e*P	Pdif	12 36 27.8	+1.5
MONE	**Monesi**	**104.33**	**318**	P	Pdif	12 36 26.5	+0.2
BHB	**Bricherasio**	**104.37**	**319**	P	Pdif	12 36 26.0	-0.5
CABF	**La Chapelle**	**104.42**	**321**	*e*P	Pdif	12 36 26.9	+0.2
	comp=Z,272nm,1.6s						
FENE	**Fenestrelle**	**104.42**	**319**	P	Pdif	12 36 26.7	0.0
LPG	**La Plagne**	**104.44**	**320**	*e*P	Pdif	12 36 27.5	+0.7
	comp=Z,50nm,0.6s						
WDC	**Whiskeytown Da**	**104.44**	**46**	*e*Pdif	Pdif	12 36 28.7	+1.7
	comp=Z,84nm,1.8s						
WDC				*e*PKKPbc		12 52 13.5	
WDC				*e*		12 52 30.8	
LPL	**La Plagne**	**104.45**	**320**	*e*P	Pdif	12 36 27.4	+0.6
	comp=Z,56nm,0.6s						
NEGI	**Negi**	**104.45**	**318**	P	Pdif	12 36 27.7	+0.8
ENR	**Entracque**	**104.50**	**318**	P	Pdif	12 36 27.4	+0.3
SAOF	**Saorge**	**104.50**	**318**	*e*P	Pdif	12 36 28.4	+1.3
STV2	**Anna di Valdie**	**104.55**	**318**	P	Pdif	12 36 27.9	+0.5
STV	**Sta Anna Valdi**	**104.56**	**318**	P	Pdif	12 36 27.5	+0.1
AUTN	**L'Aution**	**104.58**	**318**	*e*P	Pdif	12 36 27.8	+0.4
PZZ	**Prazzo**	**104.60**	**318**	P	Pdif	12 36 27.2	-0.3
SBF	**Sospel**	**104.63**	**318**	*e*P	Pdif	12 36 27.4	-0.2
	comp=Z,98nm,0.8s						
RRL	**Cesana Torines**	**104.65**	**319**	P	Pdif	12 36 28.7	+1.0
BNI	**Bardonecchia**	**104.67**	**319**	*e*Pdif	Pdif	12 36 28.5	+0.7
	comp=Z,39nm,0.9s						
MBDF	**Montbardon**	**104.73**	**319**	*e*P	Pdif	12 36 29.4	+1.3
	comp=Z,38nm,0.7s						
EDM	**Edmonton**	**104.76**	**31**	*e*Pdif	Pdif	12 36 30.0	+2.0
EDM				*e*PKKPbc		12 52 11.0	
EDM				*e*		12 52 29.9	
VSL	**Villasalto**	**104.84**	**313**	*e*Pdif	Pdif	12 36 29.5	+0.8
	comp=Z,54nm,0.9s						
GDM	**Grand'Maison**	**104.97**	**319**	*e*P	Pdif	12 36 29.8	+0.7
EDI	**Edinburgh**	**104.99**	**332**	*e*P	Pdif	12 36 30.3	+1.3
NEW	**Newport**	**105.01**	**37**	*e*Pdif	Pdif	12 36 31.1	+1.9
	comp=Z,46nm,1.5s						
MENF	**Mencas**	**105.03**	**326**	*e*P	Pdif	12 36 29.4	+0.2
OG05	**Jujurieux**	**105.05**	**320**	*e*P	Pdif	12 36 29.7	+0.2
EAU	**Auchinoon**	**105.16**	**332**	*e*P	Pdif	12 36 31.0	+1.4
ORIF	**Oris-en-Rattie**	**105.24**	**319**	*e*P	Pdif	12 36 30.6	+0.3
	comp=Z,95nm,0.9s						
ORIF				*e*R			
	comp=Z,14µm,19.0s						
FRF	**La Foret Royal**	**105.27**	**318**	*e*P	Pdif	12 36 30.4	-0.1
	comp=Z,64nm,0.9s						
HPK	**Haverah Park**	**105.32**	**330**	*e*P	Pdif	12 36 30.9	+0.5
BTA	**Talkin**	**105.32**	**331**	*e*P	Pdif	12 36 30.6	+0.1
ESK	**Eskdalemuir**	**105.34**	**332**	*e*Pdif	Pdif	12 36 31.2	+0.7
	comp=Z,101nm,1.3s						
ESK	**Eskdalemuir**	**105.34**	**332**	*e*P	Pdif	12 36 31.5	+1.0
EAB	**Aberfoyle**	**105.37**	**333**	*e*P	Pdif	12 36 31.4	+0.8
LMR	**La Mourre**	**105.45**	**318**	*e*P	Pdif	12 36 31.3	0.0
	comp=Z,119nm,1.2s						
BHH	**Howats Hill**	**105.47**	**331**	*e*P	Pdif	12 36 31.7	+0.6
MOD	**Modoc**	**105.54**	**44**	*e*Pdif	Pdif	12 36 32.5	+0.8
	comp=Z,6.8nm,1.1s						
MOD				*e*PKKPbc		12 52 08.8	
MOD				*e*PKKPab		12 52 28.2	
BWH	**Wardlaw**	**105.64**	**332**	*e*P	Pdif	12 36 33.1	+1.4
OHCM	**Honcut**	**105.64**	**47**	*e*Pdif	Pdif	12 36 33.9	+1.7
OHCM				*e*PKKPbc		12 52 09.7	
OHCM				*e*PKKPab		12 52 27.8	
TAVF	**Tavernes**	**105.64**	**318**	*e*P	Pdif	12 36 32.8	+0.7
LHO	**Holmfirth**	**105.66**	**330**	*e*P	Pdif	12 36 32.2	+0.3
VILF	**Villemus**	**105.78**	**318**	*e*P	Pdif	12 36 33.3	+0.6
SMF	**Signal de Mont**	**105.81**	**321**	*e*P	Pdif	12 36 32.9	+0.1
	comp=Z,59nm,0.9s						
SMRF	**Simiane la Rot**	**105.82**	**318**	*e*P	Pdif	12 36 33.2	+0.3
	comp=Z,32nm,0.7s						
SSF	**Saint Saulge**	**105.83**	**322**	*e*P	Pdif	12 36 33.1	+0.2
	comp=Z,282nm,1.9s						
SNAA	**Sanae**	**105.86**	**195**	⇑*i*P	Pdif	12 36 35.5	+3.1
SNAA	**Sanae**	**105.86**	**195**	⇑*i*		12 46 20.6	
SNAA	**Sanae**	**105.86**	**195**	⇑*i*		12 52 06.8	
SNAA	**Sanae**	**105.86**	**195**	*e*PKKPbc		12 52 06.9	
SNAA				*e*PKKPab		12 52 25.3	
PUYF	**Puyloubier**	**105.92**	**318**	*e*P	Pdif	12 36 35.4	+2.1
KWE	**Weaver Farm**	**105.93**	**329**	*e*P	Pdif	12 36 33.8	+0.7
BERF	**Bertagne**	**106.01**	**318**	*e*P	Pdif	12 36 35.9	+2.2
AVF	**Avril sur Loir**	**106.05**	**322**	*e*P	Pdif	12 36 33.9	+0.1
	comp=Z,106nm,1.4s						
VIVF	**Saint-Julien-l**	**106.05**	**320**	*e*P	Pdif	12 36 34.0	+0.1
	comp=Z,70nm,1.0s						
TREF	**Trevaresse**	**106.09**	**318**	*e*P	Pdif	12 36 32.3	-1.8
PRAF	**Pradon**	**106.16**	**318**	*e*P	Pdif	12 36 35.2	+0.8
PLDF	**La Plantade**	**106.24**	**321**	*e*P	Pdif	12 36 35.7	+1.0
HYF	**Humbligny**	**106.27**	**322**	*e*P	Pdif	12 36 35.7	+0.9
BMO	**Blue Mountains**	**106.37**	**40**	*e*Pdif	Pdif	12 36 36.5	+1.3
	comp=Z,40nm,1.6s						
BMO				*e*PKKPbc		12 52 05.6	
COLF	**Collangettes**	**106.39**	**320**	*e*P	Pdif	12 36 36.2	+0.8
BGF	**Bois d'Agland**	**106.46**	**322**	*e*P	Pdif	12 36 36.0	+0.3
	comp=Z,62nm,1.4s						
WVOR	**Wild Horse Val**	**106.48**	**43**	*e*Pdif	Pdif	12 36 36.8	+1.0
	comp=Z,2µm,1.0s						
WVOR				*e*PKKPbc		12 52 07.8	
WVOR				*e*PKKPab		12 52 24.1	
AGO	**Saint Agoulin**	**106.51**	**321**	*e*P	Pdif	12 36 36.5	+0.6
WALA	**Waterton Lakes**	**106.53**	**35**	*e*Pdif	Pdif	12 36 39.4	+3.5
	comp=Z,0.5nm,0.9s						
TSUM	**Tsumeb**	**106.68**	**252**	Pdiff	Pdif	12 36 39.4	+2.2
TSUM				sPdiff		12 39 27.5	
TSUM				SKSac		12 46 29.8	
TSUM	**Tsumeb**	**106.68**	**252**	*e*Pdif	Pdif	12 36 34.2	-3.0
	comp=Z,16nm,1.1s						
PYM	**Petit Puy Mans**	**106.72**	**321**	*e*P	Pdif	12 36 37.5	+0.7
LBL	**Lubilhac**	**106.80**	**320**	*e*P	Pdif	12 36 38.2	+1.0
WCN	**Washoe City**	**106.90**	**46**	*e*Pdif	Pdif	12 36 38.8	+1.1
	comp=Z,125nm,2.1s						
WCN				*e*PKKPbc		12 52 05.5	
CMB	**Columbia Colle**	**106.90**	**48**	pPdiff		12 38 36.5	
CMB				PP	PP	12 41 12.4	-1.4
CMB				SKSac		12 46 27.7	
CMB				SKSac		12 46 30.6	
CMB				SKKSac		12 47 18.1	
CMB				pSKSac		12 49 34.5	
CMB				PS	PS	12 50 42.4	-0.1
CMB	**Columbia Colle**	**106.90**	**48**	*e*Pdif	Pdif	12 36 39.0	+1.2
	comp=Z,4.6nm,0.3s						
CMB				*e*PKKPbc		12 52 05.0	
LASF	**Ste Croix**	**106.91**	**319**	*e*P	Pdif	12 36 38.1	+0.4
	comp=Z,92nm,1.4s						
TCF	**Toulx Ste Croi**	**106.98**	**322**	*e*P	Pdif	12 36 38.5	+0.6
	comp=Z,250nm,1.8s						
LRV	**Little Rabbit**	**106.99**	**50**	*e*PKiKP		12 40 40.9	
LRV				*e*PKKPab		12 52 22.5	
PAHR	**Pah Rah Range**	**107.02**	**46**	*e*PKKPab		12 52 22.5	
LDF	**La Druitiere**	**107.28**	**325**	*e*P	Pdif	12 36 39.8	+0.6
	comp=Z,91nm,1.2s						
CMAH	**Djebel Manchou**	**107.28**	**311**	P	Pdif	12 36 41.5	+2.0
CGMA	**Guelma**	**107.34**	**311**	P	Pdif	12 36 45.0	+5.2
ABSA	**Djebel Ababsia**	**107.36**	**310**	P	Pdif	12 36 42.5	+2.7
FLN	**La Foliniere**	**107.40**	**325**	*e*P	Pdif	12 36 40.5	+0.8
	comp=Z,115nm,1.4s						
FLN				*e*R			
	comp=Z,16µm,23.0s						
VNA2	**Neumayer--Watz**	**107.49**	**195**	⇑*i*P	Pdif	12 36 39.4	-0.2
VNA2	**Neumayer--Watz**	**107.49**	**195**	⇑*i*		12 40 47.2	
VNA2	**Neumayer--Watz**	**107.49**	**195**	⇑*i*		12 46 29.2	
VNA2	**Neumayer--Watz**	**107.49**	**195**	⇑*i*		12 47 20.8	
MSO	**Missoula**	**107.58**	**37**	Pdif	Pdif	12 36 42.5	+2.0
	comp=Z,22nm,1.8s						
MSO				*e*PKPdf		12 40 47.2	
MSO				*e*PKKPbc		12 52 03.6	
CAEH	**'Ain El Ouahch**	**107.65**	**311**	P	Pdif	12 36 42.0	+0.9
CAF	**Calviac**	**107.69**	**320**	*e*P	Pdif	12 36 41.8	+0.7
GRR	**Gorron**	**107.80**	**325**	*e*P	Pdif	12 36 42.4	+0.9
	comp=Z,282nm,1.8s						
RJF	**Les Rejaudoux**	**107.86**	**321**	*e*P	Pdif	12 36 42.8	+1.0
	comp=Z,107nm,1.3s						
RJF				*e*R			
	comp=Z,15µm,20.2s						
VNA3	**Neumayer Olymp**	**107.87**	**194**	⇑*i*		12 46 29.6	
VNA3	**Neumayer Olymp**	**107.87**	**194**	⇑*i*		12 47 23.8	
CKFL	**Kef-Lekhel**	**107.88**	**311**	P	Pdif	12 36 44.0	+1.8
VNA1	**Neumayer--Stat**	**107.89**	**195**	⇑*i*		12 47 23.7	
CHMT	**Chamberlain Mo**	**107.95**	**37**	*e*Pdif	Pdif	12 36 44.9	+2.7
CHMT				*e*PKiKP		12 40 48.3	
OMM	**Old Mammoth Mi**	**108.08**	**48**	*e*Pdif	Pdif	12 36 43.8	+0.8
OMM				*e*PKKPbc		12 52 02.8	
DLF	**Lyons Farm**	**108.10**	**331**	⇑*i*P	PP	12 41 22.6	+0.7
CASM	**Ain Smara**	**108.11**	**311**	P	Pdif	12 36 44.5	+1.3
CTEI	**Djebel Teioual**	**108.24**	**311**	P	Pdif	12 36 43.0	-0.7
EJON	**La Jonquera**	**108.24**	**318**	PKP		12 40 49.3	
BMN	**Battle Mountai**	**108.26**	**44**	*e*PP	PP	12 41 18.6	-4.8
BMN				*e*PKKPbc		12 52 01.8	
BMN				*e*PKKPab		12 52 16.3	
LRDF	**Laroque-de-Fa**	**108.26**	**318**	*e*P	Pdif	12 36 44.8	+1.1
MFF	**Saint Martin d**	**108.27**	**323**	*e*P	Pdif	12 36 44.5	+0.9
MTLF	**Montolieu**	**108.30**	**319**	*e*P	Pdif	12 36 44.2	+0.4
	comp=Z,32nm,0.8s						
MNV	**Mina**	**108.39**	**47**	*e*Pdif	Pdif	12 36 45.1	+0.8
	comp=Z,33nm,1.1s						
MNV				*e*PKKPbc		12 52 00.5	
FILF	**Fillols**	**108.41**	**318**	*e*P	Pdif	12 36 45.1	+0.8
DCN	**Croghan**	**108.43**	**331**	⇑*i*P	PP	12 41 26.7	+2.2
DFRA	**Djebel Bou Aff**	**108.47**	**311**	P	Pdif	12 36 47.5	+2.8
LFF	**La Frestale**	**108.52**	**321**	*e*P	Pdif	12 36 45.8	+1.1
HLID	**Hailey**	**108.80**	**41**	*e*Pdif	Pdif	12 36 47.3	+1.3
	comp=Z,148nm,0.6s						
HLID				*e*PKKPab		12 52 14.0	
VALF	**Valcebollere**	**108.84**	**318**	*e*P	Pdif	12 36 48.3	+2.1
SGMF	**Saint Gilles**	**108.84**	**325**	*e*P	Pdif	12 36 47.1	+1.0
CKHR	**Kef el Ahmar**	**108.93**	**311**	P	Pdif	12 36 49.0	+2.2
SET	**Setif**	**108.95**	**311**	P	Pdif	12 36 51.0	+4.1
TPH	**Tonopah**	**109.20**	**47**	*e*Pdif	Pdif	12 36 50.3	+2.3
TPH				*e*PKKPbc		12 51 57.5	
MLS	**Moulis**	**109.20**	**319**	*e*P	Pdif	12 36 49.5	+1.7
MCMT	**McKenzie Canyo**	**109.21**	**39**	*e*PKiKP		12 40 50.6	
MCMT				*e*PKKPab		12 52 10.8	
ROSF	**Rostrenen**	**109.21**	**325**	*e*P	Pdif	12 36 48.6	+0.9
QUIF	**Quistinic**	**109.37**	**325**	*e*P	Pdif	12 36 53.2	+4.8
EMIR	**Miracle**	**109.39**	**318**	PKP		12 40 51.2	
FCC	**Fort Churchill**	**109.48**	**20**	*e*Pdif	Pdif	12 36 51.2	+2.6
FCC				*e*PKKPab		12 52 08.8	
BOZ	**Bozeman (W)**	**109.56**	**38**	*e*Pdif	Pdif	12 36 51.1	+1.8
BOZ				*e*PKiKP		12 40 51.0	
BOZ				*e*PKKPab		12 52 09.1	
DAC	**Darwin (Calif)**	**109.62**	**49**	*e*PKKPbc		12 51 55.6	
DAC				*e*PKKPab		12 52 11.2	
EPF	**Esparros**	**109.66**	**319**	*e*P	Pdif	12 36 50.0	+0.2
RESF	**Ens**	**109.77**	**319**	*e*P	Pdif	12 36 51.5	+1.2
VIEF	**Viey**	**109.94**	**319**	*e*P	Pdif	12 36 53.6	+2.6
EPOB	**Poblet**	**109.94**	**317**	PKP		12 40 51.6	
EBIE	**Bielsa**	**109.95**	**319**	PKP		12 40 52.9	
MWC	**Mount Wilson**	**110.03**	**51**	PKPdf	PKPdf	12 40 51.8	+2.9
MWC				*e*SKPdf		12 43 37.4	
MWC				*e*PKKPab		12 52 08.6	
QLMT	**Earthquake Lak**	**110.09**	**38**	*e*Pdif	Pdif	12 36 57.3	+5.7
QLMT				*e*PKKPbc		12 51 52.1	
TRCR	**Troy Canyon**	**110.27**	**46**	*e*PKiKP		12 40 53.5	
TRCR				*e*PKKPbc		12 51 54.5	
ETSF	**Etsaut**	**110.31**	**319**	*e*P	Pdif	12 36 53.8	+1.1
	comp=Z,14nm,0.8s						
YMR	**Madison River**	**110.45**	**38**	*e*PKKPab		12 52 05.5	
ABA	**Alger-Bouzarea**	**110.48**	**312**	P	PKPdf	12 40 45.0	-4.7
EBR	**Ebro Roquetas**	**110.57**	**317**	*e*PKPDF	PKPdf	12 40 48.2	-1.6
EBR				*e*PP	PP	12 41 45.5	+5.5
YNR	**Norris Junctio**	**110.61**	**38**	*e*Pdif	Pdif	12 36 59.0	+5.0
YNR				*e*PKKPbc		12 51 54.0	
ERTA	**Horta de San J**	**110.62**	**317**	PKP	PKPdf	12 40 53.6	+3.7
YFT	**Old Faithful**	**110.64**	**38**	*e*Pdif	Pdif	12 37 00.9	+6.8
HVU	**Hansel Valley**	**110.70**	**42**	*e*PKIKP	PKPdf	12 40 51.8	+1.8
HVU				*e*		12 41 39.5	
EALK	**Alkurruntz**	**110.76**	**320**	PKP	PKPdf	12 40 55.4	+5.3
EIBI	**Ibiza**	**110.77**	**315**	PKP	PKPdf	12 40 56.6	+6.4
EMHD	**Djebel Mahouad**	**110.78**	**312**	P	PKPdf	12 40 48.5	-1.8
ESAC	**San Caprasio**	**110.80**	**318**	PKP	PKPdf	12 40 55.6	+5.3
IMW	**Indian Meadow**	**110.86**	**39**	*e*PKiKP		12 40 58.4	
IMW				*e*PP	PP	12 41 38.5	-3.4
RRI2	**Red Ridge**	**110.89**	**40**	Pdif	Pdif	12 36 55.6	+0.4
RRI2				PKPdf	PKPdf	12 40 54.7	+4.3
RRI2				*e*PP	PP	12 41 39.8	-2.4
RRI2				*e*SKPdf		12 43 40.0	
BGU	**Big Grassy Mou**	**110.92**	**43**	*e*PKiKP		12 40 55.0	
BGU				*e*PKKPbc		12 51 51.8	
BGU				*i* PKKPab		12 52 04.2	
MOOW	**Moose Ponds**	**111.05**	**39**	*e*Pdif	Pdif	12 36 59.7	+3.8
MOOW				*e*PP	PP	12 41 42.5	-0.8
MOOW				*e*PKKPbc		12 51 51.7	
MOOW				*e*PKKPab		12 52 03.1	
TPAW	**Teton Pass**	**111.05**	**39**	*e*PKiKP		12 40 53.3	
TPAW				PKKPbc		12 51 52.1	
TPAW				*e*PKKPab		12 52 03.4	
SPUT	**South Promonto**	**111.13**	**42**	Pdif	Pdif	12 37 00.2	+3.9
SPUT				*e*PKPdf	PKPdf	12 40 54.5	+3.6
SPUT				*e*PP	PP	12 41 42.5	-1.4
WUWY	**Wally Ulrich**	**111.16**	**39**	*e*PKiKP		12 40 54.9	
WUWY				*e*PKKPbc		12 52 02.5	
LOHW	**Long Hollow**	**111.21**	**39**	Pdif	Pdif	12 36 58.2	+1.5
LOHW				*e*PKiKP		12 40 54.1	
LOHW				*e*PKKPbc		12 51 51.0	
LOHW				*e*PKKPab		12 52 02.3	
AHID	**Auburn Hatcher**	**111.32**	**40**	PKKPbc		12 51 51.2	
AHID				*i* PKKPab		12 52 02.1	
EMOS	**Mosqueruela**	**111.43**	**317**	PKP	PKPdf	12 40 55.6	+4.1
PFO	**Pinyon Flat Ob**	**111.50**	**51**	*e*PKKPbc		12 51 50.4	
PFO				*e*PKKPab		12 52 01.6	
HWUT	**Hardware Ranch**	**111.58**	**41**	*e*Pdif	Pdif	12 37 01.4	+3.1
HWUT				*e*PKiKP		12 40 55.7	
HWUT				*e*PKKPbc		12 51 49.5	
HWUT				*e*PKKPab		12 52 01.8	
NOQ	**North Oquirrh**	**111.66**	**42**	*e*PKPdf	PKPdf	12 40 55.6	+3.7
NOQ				*e*		12 41 35.6	
NOQ				*e*PP	PP	12 41 49.8	+2.3
NOQ				*e*SKP		12 43 39.6	
NOQ				*e*PKKPbc		12 51 50.6	
NOQ				*e*PKKPab		12 52 01.9	
BAR	**Barrett**	**111.67**	**52**	*e*PKKPbc		12 51 49.3	
BAR				*e*PKKPab		12 52 01.3	
EBNR	**Beni Rached**	**111.79**	**312**	P	PKPdf	12 40 57.0	+4.7
TCUT	**Toone Canyon**	**111.92**	**42**	*e*PKKPbc		12 51 48.8	
TCUT				*e*PKKPab		12 51 59.8	
NEN	**Nelson**	**111.92**	**48**	*e*Pdif	Pdif	12 37 02.3	+2.4
NEN				*e*PKiKP		12 40 56.4	
NEN				*e*SKPdf		12 43 38.9	
NEN				*e*PKKPbc		12 51 48.4	
NEN				*e*PKKPab		12 52 00.1	
LDFC	**Landfair**	**111.95**	**49**	*e*PKKPbc		12 51 49.0	
ECHA	**Ech Chlef**	**111.97**	**312**	P	PKPdf	12 40 56.0	+3.4
ELAN	**Lanestosa**	**111.97**	**321**	PKP	PKPdf	12 40 56.4	+4.0
EBEN	**Beniarda**	**112.02**	**315**	PKP	PKPdf	12 40 58.2	+5.5
NLU	**North Lily Min**	**112.02**	**43**	*e*PKiKP		12 40 57.7	
NLU				*e*PKKPbc		12 51 50.1	
NLU				*e*PKKPab		12 51 59.8	
JLU	**Jordanelle**	**112.13**	**42**	*e*Pdif	Pdif	12 37 01.6	+0.8
JLU				*e*PKPdf	PKPdf	12 40 54.2	+1.4
JLU				*e*PP	PP	12 41 50.2	-0.6
JLU				*e*PKKPbc		12 51 49.0	
JLU				*i* PKKPab		12 51 59.3	
LAO	**LASA Array**	**112.17**	**35**	*e*PKiKP		12 40 56.6	
LAO				*e*PP	PP	12 41 46.3	-4.6
DGMT	**Dagmar**	**112.22**	**32**	*e*PKiKP		12 40 54.8	
DGMT				*e*PKKPbc		12 51 48.8	
DGMT				*e*PKKPab		12 51 57.9	
EANR	**'Ain N'Sour**	**112.25**	**312**	P	PKPdf	12 40 57.0	+3.8
MPU	**Maple Canyon**	**112.29**	**43**	*e*PKiKP		12 40 56.1	
MPU				*e*PP	PP	12 41 50.1	-1.9
MPU				*e*PKKPbc		12 51 48.2	
MPU				*e*PKKPab		12 51 58.9	
BW06	**Boulder Array**	**112.30**	**39**	*e*PKKPbc		12 51 47.4	
BW06				*e*PKKPab		12 51 57.3	
ETRT	**Tiaret**	**112.33**	**312**	P	PKPdf	12 40 58.5	+5.1
DAU	**Daniels Canyon**	**112.35**	**42**	*e*Pdif	Pdif	12 37 05.2	+3.4
DAU				*e*PKPdf	PKPdf	12 40 58.7	+5.5
DAU				*e*PP	PP	12 41 53.8	+1.3
DAU				*e*PKKPbc		12 51 46.8	
DAU				*e*PKKPab		12 51 57.9	
MVU	**Marysvale**	**112.59**	**45**	*e*PKKPbc		12 51 46.0	
MVU				*e*PKKPab		12 51 58.0	
MSU	**Marysvale**	**112.61**	**45**	*e*Pdif	Pdif	12 37 06.8	+3.9
MSU				*e*PKiKP		12 40 58.7	
MSU				*e*PKKPbc		12 51 47.2	
MSU				*e*PKKPab		12 51 57.8	
TMUT	**Trail Mountain**	**112.92**	**43**	*e*PKPdf	PKPdf	12 40 57.9	+3.4
TMUT				*i* SKPdf		12 43 42.0	
TMUT				*e*PKKPbc		12 51 46.2	
EARI	**Arriondas**	**113.04**	**322**	PKP	PKPdf	12 40 58.5	+4.0
EMUR	**La Murta**	**113.12**	**315**	PKP	PKPdf	12 40 59.0	+4.1
SRU	**San Rafael**	**113.47**	**43**	*e*Pdif	Pdif	12 37 07.8	+1.1
SRU				*e*PKiKP		12 40 58.9	
SRU				*e*PKKPbc		12 51 44.0	
SRU				*e*PKKPab		12 51 52.9	
EVIA	**Vianos**	**113.63**	**316**	PKIKP	PKPdf	12 41 00.0	+4.1
GUD	**Guadarrama**	**113.75**	**319**	PKIKP	PKPdf	12 41 00.5	+4.4
ESDC	**Sonseca Array**	**114.11**	**318**	PKP	PKPdf	12 41 01.3	+4.5
ESLA	**Sonseca Array**	**114.11**	**318**	*e*PKiKP		12 40 58.6	
ENIJ	**Nijar**	**114.20**	**314**	PKIKP	PKPdf	12 41 00.5	+3.5
EPON	**Pontenova**	**114.22**	**323**	PKP	PKPdf	12 40 59.8	+2.8
EQES	**Quesada**	**114.42**	**316**	PKP	PKPdf	12 41 02.7	+5.3
EINC	**Incio**	**114.71**	**322**	PKP	PKPdf	12 41 02.0	+4.1
EBER	**Berja**	**114.72**	**315**	PKP	PKPdf	12 41 01.2	+3.1
ECAL	**Calabor**	**114.73**	**321**	PKP	PKPdf	12 41 00.6	+2.7
ERUA	**La Rua**	**114.73**	**322**	PKIKP	PKPdf	12 41 02.0	+4.1
EBAN	**Banos Encina**	**114.74**	**316**	PKIKP	PKPdf	12 41 00.0	+2.0
PBRG	**Braganca**	**114.80**	**321**	*e*PKPdf	PKPdf	12 41 01.1	+3.0
PBRG				*e*PP	PP	12 42 10.4	+0.6
PV10	**Paradox Valley**	**114.84**	**43**	*e*Pdif	Pdif	12 37 15.5	+2.8
PV10				*e*PKiKP		12 41 02.5	
PV10				*e*PKKPbc		12 51 39.0	
ULM	**Lac du Bonnet**	**115.11**	**27**	*e*PKiKP		12 40 59.5	
ULM				*e*PKKPbc		12 51 37.9	
EADA	**Adamuz**	**115.28**	**317**	PKP	PKPdf	12 41 01.4	+2.4
PV01	**Paradox Valley**	**115.28**	**43**	Pdif	Pdif	12 37 18.1	+3.4
PV01				*e*PKiKP		12 41 02.7	
PV01				*e*SKPdf		12 43 46.4	
PV01				*e*PKKPbc		12 51 38.4	
PV01				*e*PKKPab		12 51 45.7	
STS	**Santiago**	**115.31**	**323**	PKIKP	PKPdf	12 41 01.4	+2.4
ELUQ	**Luque**	**115.36**	**316**	PKIKP	PKPdf	12 41 02.6	+3.4
ELOJ	**Sierra Loja**	**115.49**	**315**	PKIKP	PKPdf	12 41 02.4	+2.9
EMAZ	**Mazaricos**	**115.53**	**323**	PKP	PKPdf	12 41 02.9	+3.5
ELOB	**Lobios**	**115.59**	**322**	PKP	PKPdf	12 41 02.3	+2.8
PHWY	**Pilot Hill**	**115.66**	**39**	*e*PKiKP		12 41 01.1	
PHWY				*e*PKKPbc		12 51 36.8	
PHWY				*e*PKKPab		12 51 43.3	
PVRL	**Vila Real**	**115.71**	**321**	*e*PKPdf	PKPdf	12 41 02.0	+2.2
PVRL				*e*PP	PP	12 42 14.9	-1.1
EZAM	**Zamans**	**115.82**	**322**	PKIKP	PKPdf	12 41 03.8	+3.8
MTE	**Manteigas**	**116.08**	**320**	*e*PKPdf	PKPdf	12 41 02.1	+1.6
MTE				*e*PP	PP	12 42 19.0	+0.5
MTE	**Manteigas**	**116.08**	**320**	*e*PKiKP		12 41 03.7	
PVIS	**Viseu**	**116.13**	**321**	*e*PKPdf	PKPdf	12 41 02.7	+2.1
PVIS				*e*PP	PP	12 42 18.3	-0.5
EMIJ	**Mijas**	**116.20**	**315**	PKP	PKPdf	12 41 03.4	+2.5
PCBR	**Castelo Branco**	**116.34**	**320**	*e*PKPdf	PKPdf	12 41 03.5	+2.4
PCBR				*e*PP	PP	12 42 19.5	-0.8
PCBR				*i* -	tx	12 43 57.8	
TUC	**Tucson**	**116.38**	**50**	*e*PKiKP		12 41 05.1	
TUC				*e*PKKPbc		12 51 34.3	
TUC				*e*PKKPab		12 51 40.4	
ISCO	**Idaho Springs**	**116.39**	**41**	*e*PKiKP		12 41 04.2	
ISCO				*e*PKKPbc		12 51 34.5	
EBAD	**Badajoz**	**116.62**	**318**	PKP	PKPdf	12 41 04.1	+2.4
ESPR	**Espera**	**116.81**	**316**	PKP	PKPdf	12 41 04.8	+2.7
EMIN	**Mina Concepcio**	**116.91**	**317**	PKP	PKPdf	12 41 04.4	+2.1
EVO	**Evora**	**117.40**	**319**	*e*PKIKP	PKPdf	12 41 05.3	+2.1
	comp=Z,153nm,1.0s						
EVO				*e*R			
	comp=Z,11µm,21.2s						
SDCO	**Great Sand Dun**	**117.56**	**42**	*e*PKiKP		12 41 07.1	
SDCO				*e*PKKPbc		12 51 30.6	
PBEJ	**Beja**	**117.57**	**318**	*e*PKPdf	PKPdf	12 41 05.5	+2.0
PBEJ				*e*PP	PP	12 42 26.6	-2.1
PBEJ				*i* -	tx	12 44 03.3	
MOE	**Montemor**	**117.63**	**319**	*e*PKPdf	PKPdf	12 41 05.0	+1.4
MOE				*e*PP	PP	12 42 28.3	-0.8
MOE				*i* -	tx	12 43 49.3	
PLOU	**Loures**	**117.95**	**319**	*e*PKPdf	PKPdf	12 41 06.3	+2.1
PLOU				*e*PP	PP	12 42 32.6	+1.3
LIS	**Lisbon**	**118.04**	**319**	*e*P	PKPdf	12 41 06.2	+1.8
ANMO	**Albuquerque**	**118.34**	**46**	*e*PKPdf	PKPdf	12 41 08.2	+3.1
ANMO				*e*PKKPbc		12 51 27.9	
ANMO				*e*PKKPab		12 51 32.0	
LENM	**Lemitar**	**118.36**	**47**	*e*PKPdf	PKPdf	12 41 08.8	+3.6
LENM				*e*PKKPbc		12 51 27.2	
PTEO	**Sao Teotonio**	**118.41**	**318**	*e*PKPdf	PKPdf	12 41 08.0	+2.8
PTEO				*e*PP	PP	12 42 29.4	-5.0
LPM	**Los Pinos Moun**	**118.53**	**46**	*e*PKPdf	PKPdf	12 41 08.3	+2.8
LPM				*e*PKKPbc		12 51 27.6	
EYMN	**Ely**	**118.76**	**26**	*e*PKPdf	PKPdf	12 41 06.9	+1.3

SCHQ	Schefferville	119.49	7	ePKPdf	PKPdf	12 41 07.5	+0.7
MNTX	Cornudas Mount	120.73	48	ePKPdf	PKPdf	12 41 12.3	+2.6
CPRX	Cap Rock	121.17	46	eP	PKPdf	12 41 13.6	+3.0
GDL2	Guadalupe Moun	121.23	47	eP	PKPdf	12 41 14.2	+3.5
AMTX	Amarillo	121.71	43	eP	PKPdf	12 41 13.9	+2.3
KSU1	Kansas State U	122.39	36	ePKPdf	PKPdf	12 41 14.6	+1.8
LTX	Lajitas	123.18	50	ePKIKP	PKPdf	12 41 16.6	+2.0
WMOK	Wichita Mounta	123.74	42	ePKIKP	PKPdf	12 41 17.7	+2.2
WMOK				e		12 43 07.3	
JCT	Junction City	125.45	47	ePKIKP	PKPdf	12 41 20.5	+1.5
CCM	Cathedral Cave	126.17	34	PKPdf	PKPdf	12 41 21.9	+1.7
CCM				PP	PP	12 43 23.8	-2.0
CCM				SKSac		12 47 36.9	
CCM				SKKSac		12 49 23.2	
CCM				SS	SS	12 59 43.5	-2.8
CCM	Cathedral Cave	126.17	34	ePKIKP	PKPdf	12 41 22.0	+1.8
EFAM	Famara	126.33	312	PKP	PKPdf	12 41 26.2	+5.4
AAM	Ann Arbor	126.60	25	ePKPdf	PKPdf	12 41 23.4	+2.5
AAM				e		12 43 48.0	
FVM	French Village	126.67	33	ePKIKP	PKPdf	12 41 21.3	+0.1
MIAR	Mount Ida	127.21	39	ePKIKP	PKPdf	12 41 24.0	+1.7
PTN	Potsdam (NY)	127.68	17	ePKIKP	PKPdf	12 41 23.1	+0.2
PTN				e		12 43 35.3	
BLO	Bloomington	127.81	29	ePKPpre		12 41 11.5	
BLO				ePKPdf	PKPdf	12 41 25.6	+2.3
BLO				e		12 43 53.6	
UALR	University of	127.81	38	ePKPdf	PKPdf	12 41 25.2	+1.8
UALR				e		12 43 53.0	
USIN	University of	128.16	31	ePKPdf	PKPdf	12 41 25.5	+1.5
USIN				ePP	PP	12 43 37.3	-1.3
HBAR	Harrisburg	128.27	36	ePKPdf	PKPdf	12 41 25.6	+1.2
HBAR				e		12 43 54.6	
NATX	Nacogdoches	128.29	42	ePKPdf	PKPdf	12 41 27.7	+3.2
NATX				e		12 43 56.5	
EOSO	Osorio	128.40	312	PKP	PKPdf	12 41 29.4	+4.6
GENY	Geneseo	128.42	20	ePKPdf	PKPdf	12 41 25.1	+0.6
GENY				ePP	PP	12 43 36.9	-3.4
GENY				e		12 43 55.1	
PDA	Ponta Delgada	128.43	329	i PKKP	Px	12 42 18.6	
PDA				epPKP		12 43 23.0	
PDA	Ponta Delgada	128.43	329	i PP	PP	12 43 40.0	-0.5
PDA				eSKKP		12 44 57.6	
PDA				i SKS	tx	12 46 33.0	
PDA				i SKKS		12 49 19.8	
PDA				i sS		12 54 03.8	
PDA				e		12 56 08.0	
PDA				e		12 58 09.6	
PDA				eSS	SS	13 00 20.4	+6.2
PDA				i		13 03 52.0	
PDA	Ponta Delgada	128.43	329	eLQ		13 15 50.0	
PDA				eLR	LR	13 23 29.8	
NCB	Newcomb	128.44	16	ePKPpre		12 41 15.0	
PBIS	Biscoitos	128.44	331	ePKP	PKPdf	12 41 28.4	+3.8
PPAD	Pico dos Padre	128.51	331	ePKP	PKPdf	12 41 27.2	+2.5
ASBA	Santa Barbara	128.51	331	ePKP	PKPdf	12 41 27.3	+2.6
ADH	Angra Heroismo	128.52	331	e		12 38 35.0	
ADH	Angra Heroismo	128.52	331	ePKP	PKPdf	12 41 27.4	+2.7
ADH	Angra Heroismo	128.52	331	i PP	PP	12 43 50.0	+8.9
ADH	Angra Heroismo	128.52	331	i LR	LR	13 23 35.0	
MIV	Mineville/With	128.54	16	ePKPdf	PKPdf	12 41 26.7	+2.1
MIV				ePP	PP	12 43 38.9	-2.1
GLAT	Glass	128.54	34	ePP	PP	12 43 37.3	-4.0
GLAT				e		12 43 53.7	
ALLY	Alegheny Colle	128.56	23	ePKPdf	PKPdf	12 41 26.4	+1.7
ALLY				ePP	PP	12 43 35.4	-5.8
HKT	Hockley	128.58	45	ePKPdf	PKPdf	12 41 27.4	+2.4
HKT				e		12 43 57.9	
ACSO	Alum Creek Sta	128.60	26	ePKPpre		12 41 14.6	
ACSO				ePKPdf	PKPdf	12 41 26.3	+1.5
WCI	Wyandotte Cave	128.65	30	ePKHKP		12 41 13.6	
MDV	Middlebury	128.70	15	ePKPdf	PKPdf	12 41 26.4	+1.4
MDV				ePP	PP	12 43 37.9	-4.2
EBAJ	Bajamar	128.72	313	PKP	PKPdf	12 41 31.1	+5.7
UTMT	University of	128.72	34	ePKPdf	PKPdf	12 41 27.5	+2.3
UTMT				ePP	PP	12 43 38.6	-3.9
UTMT				e		12 43 57.4	
HALT	Halls	128.77	34	ePKPdf	PKPdf	12 41 26.8	+1.5
HALT				ePP	PP	12 43 38.2	-4.7
WVL	Waterville	129.00	12	ePKPdf	PKPdf	12 41 24.6	-0.9
WVL				ePP	PP	12 43 41.0	-3.2
WVL				e		12 43 55.9	
CCAN	Las Canadas	129.09	313	PKP	PKPdf	12 41 30.5	+4.4
ACCN	Adirondack Com	129.14	16	ePKPdf	PKPdf	12 41 27.3	+1.5
ACCN				ePP	PP	12 43 39.6	-5.5
ACCN				e		12 43 56.6	
HNH	Hanover	129.21	15	ePKPpre		12 41 16.5	
HNH				PKPdf	PKPdf	12 41 28.9	+3.0
HNH				ePP	PP	12 43 39.3	-6.1
HNH				e		12 43 58.2	
EMMW	East Machias	129.28	10	ePP	PP	12 43 40.0	-5.9
EMMW				e		12 43 57.4	
WVT	Waverly	129.44	33	ePKHKP		12 41 08.3	
WVT				e		12 41 29.0	
EGOM	La Gomera	129.56	313	PKP	PKPdf	12 41 30.3	+3.3
FFD	Franklin Falls	129.58	14	eSKPab		12 44 01.1	
OXF	Oxford	129.73	36	ePKPpre		12 41 11.1	
OXF				ePKPdf	PKPdf	12 41 27.3	+0.1
EHIG	Higuera	129.76	314	PKP	PKPdf	12 41 31.6	+4.2
SSPA	Standing Stone	130.28	21	ePKPpre		12 41 20.9	
SSPA				ePKPdf	PKPdf	12 41 30.9	+2.8
CHIE	El Hierro	130.35	313	PKP	PKPdf	12 41 32.6	+4.0
MCWV	Mont Chateau	130.38	24	ePKPdf	PKPdf	12 41 28.7	+0.4
MCWV				eSKPbc		12 44 02.8	
HRV	Harvard--Oak R	130.51	15	PKPdf	PKPdf	12 41 31.9	+3.5
HRV				SKPbc		12 44 05.5	
HRV				SKPbc		12 44 05.7	
HRV	Harvard--Oak R	130.51	15	ePKPdf	PKPdf	12 41 31.2	+2.7
HRV				eSKPbc		12 44 04.2	
QUA2	Belchertown	130.52	15	ePKPdf	PKPdf	12 41 29.0	+0.5
QUA2				eSKPbc		12 44 03.8	
WES	Weston	130.69	14	ePKPdf	PKPdf	12 41 33.0	+4.2
WES				eSKPbc		12 44 03.4	
PAL	Palisades	131.26	17	ePKPdf	PKPdf	12 41 32.8	+3.0
PAL				ePP	PP	12 44 00.0	+1.3
PAL				eSKP		12 44 08.7	
BRNJ	Basking Ridge	131.36	18	eSKPbc		12 44 07.1	
MVL	Millersville	131.39	20	ePKPpre		12 41 21.0	
MVL				eSKPbc		12 41 33.1	
MVL				eSKPbc		12 44 04.3	
CPNY	Central Park	131.44	18	ePKPdf	PKPdf	12 41 33.2	+3.0
CPNY				eSKPbc		12 44 08.1	
UNM	Universidad Na	131.45	59	i P	PKPdf	12 41 34.9	+4.2
UNM				i S	Px	12 43 47.8	
CPCT	Cooper Cave	131.70	31	ePKPpre		12 41 17.6	
SDMD	Soldier's Deli	131.74	21	ePKPdf	PKPdf	12 41 27.7	-3.0
SDMD				eSKPbc		12 44 06.2	
PPM	Popocatepetl	132.03	59	eP	PKPdf	12 41 30.6	-1.2
PPM				i S	Px	12 43 26.1	
BLA	Blacksburg	132.22	26	ePKHKP		12 41 19.0	
BLA				e		12 41 34.5	
BLA				e		12 44 06.2	
CBN	Corbin	132.60	22	ePKPpre		12 41 29.3	
CBN				eSKPbc		12 44 08.3	
GOGA	Godfrey	133.84	32	ePKHKP		12 41 24.5	
GOGA				e		12 44 14.0	
JSC	Jenkinsville	134.25	29	ePKHKP		12 41 25.9	
JSC				e		12 44 16.6	
COW	Cow Castle Cre	135.25	29	eSKPbc		12 44 18.7	
NHSC	New Hope	135.73	29	eSKPbc		12 44 21.6	
HBF	Harts Bluff	135.77	29	eSKPbc		12 44 21.7	
CSU	Charleston Sou	135.88	29	eSKPbc		12 44 22.0	
RGRS	Roger Stewart	135.88	29	eSKPbc		12 44 20.5	
COYC	Coyhaique	137.66	164	eP	PKPdf	12 41 32.7	-8.9
DWPF	Disney	139.04	35	eSKPdf		12 44 31.0	
TEIG	Tepich	139.82	50	ePKPpre		12 41 44.1	
TEIG				eSKPdf		12 44 31.0	
BBSR	BB Station	141.76	11	ePKPdf	PKPdf	12 41 50.9	+1.7
PLCA	Paso Flores	142.54	162	PKHKP		12 41 49.9	
PLCA	Paso Flores	142.54	162	ePKPdf	PKPdf	12 41 50.5	+0.2
CRIN	San Cristobal	144.83	59	eP	PKPdf	12 41 59.6	+4.6
TELN	Telica	145.06	59	eP	PKPdf	12 41 59.5	+4.1
TEL3	Telica 3	145.06	59	eP	PKPdf	12 41 58.9	+3.5
LEON	Leon	145.10	60	eP	PKPdf	12 42 00.1	+4.6
CNGN	Cerro Negro	145.22	59	eP	PKPdf	12 42 00.2	+4.6
MIRN	Miramar	145.24	59	eP	PKPdf	12 42 00.1	+4.4
MOMJ	Momotombo	145.40	59	eP	PKPdf	12 42 02.3	+6.3
COPN	Copaltepe	145.47	60	eP	PKPdf	12 41 59.8	+3.7
APYN	Apoyeque	145.65	59	eP	PKPdf	12 42 01.1	+4.7
XAVN	Gruta Xavier	145.71	59	eP	PKPdf	12 42 00.6	+4.1
CCHI	Chillan	145.74	158	eP	PKPdf	12 42 00.0	+4.0
PYTN	Playitas	145.75	59	eP	PKPdf	12 42 00.7	+4.1
WILN	Americas 2	145.82	59	eP	PKPdf	12 41 58.4	+1.7
TICN	Ticuantepe	145.84	60	eP	PKPdf	12 42 01.3	+4.5
PAYG	Puerto Ayora	146.02	83	PKPbc	PKPbc	12 42 03.9	+5.2
PAYG	Puerto Ayora	146.02	83	ePKPbc	PKPbc	12 42 03.0	+4.3
APON	Apoyo	146.04	60	eP	PKPdf	12 42 01.5	+4.4
SSNN	San Juan del S	146.53	60	eP	PKPdf	12 42 00.6	+2.8
MADN	Villa Maderas	146.74	60	eP	PKPdf	12 42 00.8	+2.6
TRQA	Tornquist	147.01	172	ePKP	PKPdf	12 42 00.5	+2.5
VCR	Vista de Mar	147.25	62	eP	PKPdf	12 42 02.9	+3.9
JTS	JuntasAbangare	147.77	61	ePKHKP		12 42 02.8	
JCR	Jicaral	147.83	62	eP	PKPdf	12 42 06.2	+6.2
FORC	Fortuna	147.93	61	eP	PKPdf	12 42 04.0	+3.9
VPS2	Volcan Poas 2	148.44	61	eP	PKPdf	12 42 04.6	+3.7
LAJ	Bijagual	148.69	61	eP	PKPdf	12 42 07.2	+5.9
TRTC	Tortuguero	148.71	60	eP	PKPdf	12 42 05.1	+3.8
SJS	Escuela Geolog	148.71	61	eP	PKPdf	12 42 06.8	+5.4
CVJ	Coleyville	148.79	41⇑	eP	PKPdf	12 42 05.0	+3.6
LCR2	La Lucha 2	148.85	61	eP	PKPdf	12 42 06.0	+4.5
BBJ	Bamboo Saint A	148.85	40⇑	eP	PKPdf	12 42 08.6	+7.1
LMEL	Las Melosas	148.89	158	eP	PKPdf	12 42 05.0	+3.9
ICR	Volcan Irazu	148.89	61	eP	PKPdf	12 42 06.2	+4.6
MCJ	Malvern	148.91	42⇑	eP	PKPdf	12 42 02.0	+0.5
BUS	Buena Vista	149.15	62	eP	PKPdf	12 42 07.0	+4.9
CLCH	Cerro Calan	149.16	157⇓	eP	PKPdf	12 42 04.7	+3.2
STH	Stony Hill	149.37	40⇑	eP	PKPdf	12 42 06.0	+3.7
GWJ	Greenwich	149.43	40⇑	eP	PKPdf	12 42 04.9	+2.5
ACR	Cerro Adams	150.07	63	eP	PKPdf	12 42 07.8	+4.2
LPA	La Plata	150.50	178	dePKP	PKPdf	12 42 05.0	+1.4
LPA				PKIKP	PKPdf	12 42 12.0	+8.4
LPA	La Plata	150.50	178	ePKP	PKPdf	12 42 18.0	+14
LPA				epPKP		12 44 04.0	
LPA				epPKP		12 44 14.0	
	comp=Z,12μm,21.0s						
ZON	Zonda	151.51	158	ePKIKP	PKPdf	12 42 09.0	+3.8
TLL	Tololo Astrono	151.84	153⇓	eP	PKPdf	12 42 09.1	+3.4
CBYP	Canovanas	154.86	21	ePKPdf	PKPdf	12 42 13.1	+3.0
SJG	San Juan	154.90	22	ePKIKP	PKPdf	12 42 11.9	+1.7
BPA	Boggy Peak	157.20	13	eP	PKPab	12 42 47.4	-2.4
OTAV	Otavalo	157.46	77	ePKPdf	PKPdf	12 42 16.9	+3.3
SEG	Port Louis	157.90	13	eP	PKPdf	12 42 16.9	+2.8
DEG	La Desirade	158.08	12	eP	PKPdf	12 42 16.7	+2.4
CAM4	Nova Friburgo	158.29	217	eP	PKPdf	12 42 17.0	+2.6
CAM4				i		12 42 19.0	
CAM4				i		12 42 58.1	
BBL	Barber's Block	158.76	13	eP	PKPdf	12 42 18.2	+3.1
BBL	Barber's Block	158.76	13	eP	PKPdf	12 42 18.8	+3.7
NNA	Nana	158.89	110	ePKPdf	PKPdf	12 42 18.2	+3.0
MDN	Morne-Daniel	158.97	13	eP	PKPdf	12 42 19.5	+4.2
LVC	Limon Verde	159.05	146	ePKPdf	PKPdf	12 42 19.2	+4.0
RCBR	Riachuelo	159.43	268	ePKPdf	PKPdf	12 42 18.8	+2.9
FDF	Fort de France	159.59	13	eP	PKPdf	12 42 19.9	+3.8
FDF				eS	PKPab	12 43 01.8	+1.7
CRM	Caravelle	159.62	12	eP	PKPdf	12 42 19.5	+3.4
CRM				eS	PKPab	12 43 01.0	+0.8
BIM	Bigot	159.82	13	eP	PKPdf	12 42 20.0	+3.7
BIM				eS	PKPab	12 43 01.5	+0.4
SDV	Santo Domingo	160.12	45	PKPdf	PKPdf	12 42 17.6	+0.9
SDV	Santo Domingo	160.12	45	ePKPdf	PKPdf	12 42 17.6	+0.9
ARE	Arequipa	161.63	128	eP	PKPdf	12 42 25.0	+7.0
ARE				i		12 43 12.2	
ARE				e		12 45 11.0	
LPAZ	La Paz	164.25	135	PKPdf	PKPdf	12 42 22.5	+1.8
LPAZ				PKPdf	PKPdf	12 42 24.4	+3.8
LPAZ	La Paz	164.25	135	ePKIKP	PKPdf	12 42 22.5	+1.8
BAO	Brasilia Array	166.71	219	P	PKPdf	12 42 23.8	+1.0
BAO				i		12 42 27.1	
BAO				i		12 43 33.1	
BAO				i		12 47 27.1	
SAML	Samuel	172.49	119	ePKPdf	PKPdf	12 42 27.0	+0.8

MDD 05 12:28:13.6±3.7**, 34.13N**×**12.80W, mb4.8**/2**, Error ellipse: s-maj=71.6km s-min=21.2km az=135.0, PRXIMO SIN SOLUCIN, Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFTV	Fuerteventura 0.6nm,0.2s,SNR=7.9	5.80	191	P	Pn	12 29 40.6	-2.4
CFTV	 0.6nm,0.2s,SNR=7.9			S	Sn	12 30 42.8	-8.4
CCAN	Las Canadas 0.5nm,0.1s,SNR=7.9	6.73	210	P	Pn	12 29 53.5	-2.7
CCAN	 0.4nm,0.2s,SNR=4.0			S	Sn	12 31 04.2	-10
EGOM	La Gomera 4.8nm,0.1s,SNR=7.9	7.05	214	P	Pn	12 29 56.8	-3.8
EGOM	 8.7nm,0.2s,SNR=7.9			S	Sn	12 31 10.9	-12
EGOM	La Gomera 4.8nm,0.1s,SNR=7.9	7.05	214	P	Pn	12 29 56.8	-3.8
EGOM	 8.7nm,0.2s,SNR=7.9			S	Sn	12 31 10.9	-12
ELUQ	Luque 5.6nm,0.2s,SNR=4.0	7.73	61	S	Sn	12 31 27.6	-12
CHIE	El Hierro 1.3nm,0.1s,SNR=7.9	7.77	216	P	Pn	12 29 59.7	-11
CHIE	 12nm,0.7s,SNR=4.0			S	Sn	12 31 20.1	-20

TAP 05 12:30:30.5, 22.69N×**121.82E, h11^{km}**±1^{km}**, ML4.1, Taiwan region**

*NEIC **05** 12:56:55.4±1.7, 5.06N×95.08E, h30^{km}, mb4.4/5, Error ellipse: s-maj=84.1km s-min=15.1km az=55.0*

ISC 05 12:56:51.7±1.2**, 4.4N**±0.1×**94.3E**±0.2**, h33^{km}, n9, σ0^{s}82**/9**, mb4.4**/5**, 1C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr 5.0nm,0.6s	14.66	18	eP	P	13 00 18.6	0.0
NANT	Nan	15.59	23	PG	P	13 00 31.0	+0.3
WRAB	Tennant Creek 8.6nm,0.6s,mb4.9	46.23	123	eP	P	13 05 15.2	-0.7
WB2	Warramunga Arr	46.23	123⇑	iP	P	13 05 15.1	-0.8
ASPA	Alice Springs	47.66	128	eP	P	13 05 28.8	+1.6
TLY	Talaya 1.1nm,0.8s,mb3.9	47.73	8	P	P	13 05 23.5	-3.7
KURK	Kurchatov 1.5nm,0.5s,mb4.3	47.96	347	eP	P	13 05 28.7	-0.4
CHKZ	Chkalovo 3.7nm,0.5s,mb4.6	52.76	343	eP	P	13 06 05.9	+0.3
KAF	Kangasniemi 1.6nm,0.5s,mb4.2	75.89	333	ep	P	13 08 36.6	+0.2

*TAP **05** 13:04:45.5, 24.21N×122.25E, h5^{km}, ML2.7*

JMA 05 13:04:44.8±0.3**, 24.37N**×**122.22E, h41^{km}, M2.0, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.73	83	P	P	13 04 58.6	-0.1
YOJ				eS	S	13 05 08.6	-0.2
IRIF	Iriomote-Funau	1.38	91	P	P	13 05 07.6	-0.4
IRIF				eS	S	13 05 24.8	-0.4
HATJ	Hateruma jima	1.48	102	eS	S	13 05 27.8	0.0
JKRS	Kuro-shima	1.64	94	P	P	13 05 12.7	+1.0
JKRS				eS	S	13 05 32.9	+1.2
JIJ	Ishigaki jima	1.75	90	P	P	13 05 13.4	+0.1
JIJ				eS	S	13 05 34.2	-0.4
JTJ	Tarama	2.28	83	P	P	13 05 21.4	+0.6
JTJ				eS	S	13 05 49.0	+1.2

*NEIC **05** 13:09:50.0±2.3, 5.28N×123.57E, h512^{km}±32^{km}, mb4.5/17, Error ellipse: s-maj=12.7km s-min=6.9km az=64.0*

ISC 05 13:09:51.4±0.5**, 5.22N**±0.06×**123.58E**±0.10**, h554^{km}**±7^{km}**, n37, σ0^{s}95**/40**, mb4.6**/24**, 7C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.33	40⇓	iP	P	13 11 03.5	0.0
KCP				i S	S	13 12 04.7	+4.0
CUYO	Cuyo Island	6.14	336	eP	P	13 11 32.0	-0.3
PPR	Puerto Princes	6.60	314⇓	iP	P	13 11 36.5	0.0
BATP	Bataraza	6.75	302	eP	P	13 11 37.9	0.0
ENPP	El Nido	7.23	326	eP	P	13 11 41.9	-0.6
BUSP	Coron	7.52	334	eP	P	13 11 45.4	0.0
FITZ	Fitzroy Crossi 18nm,1.1s,mb4.6	23.26	175⇑	iP	P	13 14 17.8	-0.4
MBWA	Marble Bar 7.0nm,0.5s,mb4.5	26.48	188	eP	P	13 14 45.2	-1.5
WRAB	Tennant Creek 45nm,0.6s,mb5.3	27.14	157	eP	P	13 14 51.6	-0.9
WB2	Warramunga Arr	27.15	157⇑	iP	P	13 14 52.1	-0.5
WB2				eS	S	13 18 50.5	-2.7
ASPA	Alice Springs	30.42	161⇑	iP	P	13 15 21.2	+0.4
ASPA				i S	S	13 19 42.0	-2.0
CTA	Charters Tower 9.9nm,0.9s,mb4.3	33.60	139⇑	iP	P	13 15 49.0	+1.3
CTAO	Charters Tower 14nm,0.8s,mb4.5	33.60	139	eP	P	13 15 49.0	+1.3
MAJO	Matsushiro 3.3nm,0.6s,mb4.0	33.94	21	eP	P	13 15 49.3	-1.0
MAT	Matsushiro	33.94	21	eP	P	13 15 49.0	-1.3
MAT	Matsushiro	33.94	21	P	P	13 15 49.1	-1.2
FORT	Forrest 109nm,0.5s,mb5.6	36.05	173⇑	iP	P	13 16 08.5	+0.7
KLBR	Kellerberrin 76nm,0.3s,mb5.7	37.02	188⇑	iP	P	13 16 15.8	0.0
NWAO	Narrogin (SRO) 7.3nm,0.6s,mb4.4	38.41	189	eP	P	13 16 27.8	+0.7
STKA	Stephens Creek 10nm,0.4s,mb4.7	40.69	156⇑	iP	P	13 16 46.6	+1.1
JIRN	Jiri 5.5nm,0.3s,mb4.5	41.96	306	eP	P	13 16 56.8	+1.0
PKI	Pulchoki	42.55	306	eP	P	13 17 00.8	+0.4
KKN	Kakani 20nm,0.9s,mb4.6	42.75	306	eP	P	13 17 02.0	0.0
DMN	Daman 26nm,1.0s,mb4.7	42.81	306	eP	P	13 17 03.0	+0.5
GKN	Gorkha 24nm,1.1s,mb4.7	43.35	306	eP	P	13 17 06.5	-0.2
KOLN	Koldanda 31nm,0.6s,mb5.0	44.10	305	eP	P	13 17 13.2	+0.7
ULN	Ulaanbaatar 7.2nm,0.9s,mb4.2	44.79	344	eP	P	13 17 18.2	+0.6
CNB	Canberra Magne 184nm,1.1s,mb5.5	47.05	151	eP	P	13 17 36.5	+1.4
YAK	Yakutsk 41nm,0.8s,mb4.7	56.87	3	eP	P	13 18 45.0	-0.4
KURK	Kurchatov 11nm,0.6s,mb4.3	58.82	328	eP	P	13 18 58.3	-0.5
CHKZ	Chkalovo 2.2nm,0.6s,mb3.8	64.56	328	eP	P	13 19 35.2	-0.8
IMA	Indian Mountai 34nm,0.9s,mb4.8	82.31	24	eP	P	13 21 18.2	+2.3
MCK	McKinley 2.7nm,0.6s,mb4.0	84.24	27	eP	P	13 21 26.3	+0.8
JOF	Joensuu 5.1nm,0.6s,mb4.3	86.43	333	ep	P	13 21 33.1	-3.0
KEV	Kevo	87.42	340	ep	P	13 21 55.3	+15
KAF	Kangasniemi 5.7nm,0.8s,mb4.5	88.83	332	ep	P	13 21 43.1	-4.3
INK	Inuvik 2.9nm,1.1s,mb4.0	89.93	21	eP	P	13 21 52.2	-0.1

*NEIC **05** 13:19:04.7±3.5, 5.17N×123.49E, h568^{km}±54^{km}, mb4.2/12, Error ellipse: s-maj=19.3km s-min=7.5km az=51.0*

ISC 05 13:19:03.2±0.6**, 5.19N**±0.10×**123.6E**±0.2**, h568^{km}, n23, σ0^{s}66**/23**, mb4.5**/18**, 6C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 12nm,1.5s,mb4.3	23.24	175⇑	iP	P	13 23 28.6	-0.5
MBWA	Marble Bar 3.5nm,0.5s,mb4.2	26.45	188	eP	P	13 23 56.6	-1.0
WRAB	Tennant Creek 14nm,0.5s,mb4.8	27.13	157	eP	P	13 24 02.6	-0.9
WB2	Warramunga Arr	27.14	157⇑	iP	P	13 24 02.7	-0.9
CM31	Chiang Mai Arr 0.7nm,0.4s,mb3.6	27.41	301	P	P	13 24 06.7	+0.8
ASPA	Alice Springs	30.41	161⇑	iP	P	13 24 31.9	+0.2
CTA	Charters Tower 3.5nm,0.8s,mb3.9	33.60	139⇓	iP	P	13 24 59.8	+1.2
CTAO	Charters Tower 4.5nm,0.8s,mb4.0	33.60	139	eP	P	13 24 59.6	+1.0
FORT	Forrest 46nm,0.4s,mb5.4	36.02	173⇑	iP	P	13 25 19.2	+0.6
KLBR	Kellerberrin 41nm,0.3s,mb5.4	36.99	188⇑	iP	P	13 25 26.7	+0.2
NWAO	Narrogin (SRO) 5.0nm,0.5s,mb4.3	38.38	189	P	P	13 25 38.5	+0.6
STKA	Stephens Creek 3.6nm,0.4s,mb4.2	40.67	156⇑	iP	P	13 25 57.3	+1.0
STKA	Stephens Creek	40.67	156	eP	P	13 25 56.9	+0.6
JIRN	Jiri 5.1nm,0.3s,mb4.5	41.96	306	eP	P	13 26 07.0	+0.3
PKI	Pulchoki	42.55	306	eP	P	13 26 10.4	-0.9
KKN	Kakani 14nm,0.7s,mb4.6	42.74	306	eP	P	13 26 13.0	+0.1
DMN	Daman 25nm,0.9s,mb4.7	42.81	306	eP	P	13 26 12.5	-0.9
GKN	Gorkha 16nm,0.8s,mb4.6	43.35	306	eP	P	13 26 18.1	+0.5
KOLN	Koldanda 43nm,0.6s,mb5.1	44.10	305	eP	P	13 26 24.2	+0.8
ULN	Ulaanbaatar 3.0nm,0.7s,mb3.9	44.81	344	eP	P	13 26 28.9	+0.2
YAK	Yakutsk 14nm,0.7s,mb4.3	56.90	3	eP	P	13 27 56.0	-0.3
KURK	Kurchatov 9.7nm,0.6s,mb4.2	58.83	328	eP	P	13 28 09.1	-0.5
CHKZ	Chkalovo 2.0nm,0.5s,mb3.8	64.57	328	eP	P	13 28 46.4	-0.3

*TAP **05** 13:23:39.9, 24.26N×121.77E, h10^{km}, ML2.8*

JMA 05 13:23:33.7±0.3**, 25.09N**×**123.33E, h138^{km}, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.69	205	P	P	13 23 55.0	-0.3
YOJ				eS	S	13 24 10.8	-1.1
IRIF	Iriomote-Funau	0.83	154	P	P	13 23 55.7	-0.6
IRIF				eS	S	13 24 13.0	-0.6
JIJ	Ishigaki jima	1.03	134	P	P	13 23 57.5	-0.4
JIJ				eS	S	13 24 15.3	-1.1
JKRS	Kuro-shima	1.05	144	P	P	13 23 58.0	0.0
JKRS				eS	S	13 24 16.5	-0.2
HATJ	Hateruma jima	1.12	157	eS	S	13 24 18.4	+0.5
JTJ	Tarama	1.32	109	P	P	13 24 01.0	+0.1
JTJ				eS	S	13 24 21.5	-0.2
JOGS	Gusukube	1.91	99	eS	S	13 24 33.3	0.0

NEIC 05 13:30:03.4, 63.09N×**151.58W, h12^{km}, ML3.7**(PMR)**, ML3.3**(AEIC)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	Kantishna Hill	0.55	32	P	Pb	13 30 14.8	+0.3
KTH				S	Sb	13 30 22.6	+0.5
TRF	Thorofare Moun	0.69	58	P	Pb	13 30 17.3	+0.4
TRF				S	Sb	13 30 26.3	+0.3
HUR	Hurricane	0.89	96	P	Pb	13 30 20.2	-0.2
HUR				S	Sb	13 30 31.8	-0.2
CUT	Chulitna	0.92	138	P	Pb	13 30 20.5	-0.3
RND	Reindeer	1.27	74	P	Pb	13 30 27.1	+0.2
RND				S	Sb	13 30 44.2	+1.1
MCK	McKinley	1.35	60	P	Pn	13 30 28.3	0.0
MCK				S	Sb	13 30 47.0	+1.7
BWN	Browne	1.44	40	P	Pn	13 30 29.6	+0.2
STLK	Strandline Lak	1.60	184	P	Pn	13 30 31.0	-0.8
PWA	Palmer West	1.65	151	P	Pn	13 30 32.2	-0.2
GHO	Glory Hole Cre	1.81	136	P	Pn	13 30 34.7	-0.1
NEA	Nenana	1.86	36	P	Pn	13 30 34.1	-1.3
PMR	Palmer	1.89	142	P	Pn	13 30 35.5	-0.4
PMR				S	Sn	13 31 00.6	+0.8
SPU	Mount Spurr	1.93	187	P	Pn	13 30 36.3	-0.2
MLY	Manley	1.98	10	P	Pn	13 30 36.8	-0.4
SML	Sawmill	1.98	129	P	Pn	13 30 37.1	-0.1
TT01	Tatalina	2.04	267	P	Pn	13 30 36.7	-1.3
FIB	Fire Island	2.04	161	eP	Pn	13 30 38.3	+0.2
FIB				eS	Sn	13 31 06.2	+2.6
RC01	Rabbit Creek A	2.19	156	P	Pn	13 30 39.8	-0.4
KNK	Knik Glacier	2.23	138	P	Pn	13 30 41.4	+0.6
CCB	Clear Creek Bu	2.29	45	P	Pn	13 30 40.1	-1.5

SCM	Sheep Creek Mo	2.34	121	P	Pn	13 30 42.8	+0.4
MDM	Murphy Dome	2.38	37	P	Pn	13 30 41.6	-1.5
COLA	College	2.43	41	P	Pn	13 30 42.2	-1.4
THY	Trims Highway	2.66	80	Pn	Pn	13 30 46.6	-0.3
IL1	Eielson Array	2.67	49	P	Pn	13 30 45.5	-1.6
SLKM	Skilak Lake	2.67	165	*e*P	Pn	13 30 46.7	-0.4
RSO	Redoubt South	2.70	192	*e*P	Pn	13 30 47.6	+0.1
SVW2	Sparrevohn	2.75	225	P	Pn	13 30 47.0	-1.1
PAX	Paxson	2.79	90	P	Pn	13 30 48.5	-0.2
GCSA	Galena City Sc	2.87	308	P	Pn	13 30 50.0	+0.1
IM3	Indian Mountai	3.05	343	P	Pn	13 30 51.8	-0.7
IMA	Indian Mountai	3.12	344	*e*P	Pn	13 30 53.4	-0.1
DIV	Divide	3.37	123	*e*P	Pn	13 30 56.4	-0.6
MENT	Mentasta	3.59	89	*e*P	Pn	13 31 00.7	+0.6
EYAK	Cordova Ski Ar	3.76	130	P	Pn	13 31 01.4	-1.2
COLD	Coldfoot	4.20	7	P	Pn	13 31 08.0	-0.8
BCA3	Beaver Creek A	4.45	86	P	Pn	13 31 11.7	-0.7
BM3	Burnt Mountain	5.24	31	P	Pn	13 31 20.9	-2.6
DAWY	Dawson	5.53	74	P	Pn	13 31 25.7	-2.0

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*MAN **05** 13:54:42.0, 5.27N×123.47E, h542^{km}, mb5.1, ML4.1, MS4.2*
*BJI **05** 13:54:42.9, 5.26N×123.61E, h585^{km}, mB5.3, mb5.2*
*NEIC **05** 13:54:44.2±0.9, 5.28N×123.37E, h570^{km}±11^{km}, mb5.1/58, Error ellipse: s-maj=8.7km s-min=4.8km az=63.0*
ISC 05 13:54:41.4±0.3**, 5.25N**±0.03×**123.46E**±0.04**, h551**^{km}±3^{km}**, n208, σ0^{s}94**/197**, mb5.1**/71**, 23C-19D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZMPH	Zamboanga City	2.19	321	⇓*i*P	P	13 55 52.0	-0.5
KCP	Kidapawan	2.38	43	⇑*i*P	P	13 55 54.0	+0.4
PAGZ	Pagadian	2.58	358	*e*P	P	13 55 55.0	+0.3
IPIL	Ipil	2.67	341	*e*P	P	13 55 55.4	+0.2
BUKP	Musuan	3.06	31	*e*P	P	13 55 57.5	0.0
MATI	Mati	3.25	59	*e*P	P	13 55 57.9	-0.8
CGP	Cagayan de Oro	3.41	21	*e*P	P	13 55 59.6	-0.2
BIPH	Bislig	4.10	45	*e*P	P	13 56 04.0	-0.7
BIPH				*e*S	S	13 57 09.0	-1.8
BUTP	Butuan	4.27	30	*e*P	P	13 56 06.5	+0.4
MSLP	Maasin	5.05	16	*e*P	P	13 56 12.9	+0.5
GUIM	Jordan	5.41	351	*e*P	P	13 56 13.9	-1.6
TSM	Tawau	5.65	261	P	P	13 56 17.6	0.0
CUYO	Cuyo Island	6.07	337	*e*P	P	13 56 21.7	+0.2
PLP	Palo	6.07	14	*e*P	P	13 56 21.1	-0.3
RCP	Roxas	6.31	354	⇑*e*P	P	13 56 23.1	-0.6
PPR	Puerto Princes	6.50	314	⇓*i*P	P	13 56 23.0	-2.4
BATP	Bataraza	6.63	302	*e*P	P	13 56 26.6	-0.1
ENPP	El Nido	7.14	326	*e*P	P	13 56 31.8	+0.2
OTRP	Odiongan	7.21	349	*e*P	P	13 56 32.1	-0.1
KKM	Kota Kinabalu	7.25	277	P	P	13 56 32.7	+0.1
BUSP	Coron	7.44	335	*e*P	P	13 56 34.8	+0.3
SJMP	San Jose	7.53	342	*e*P	P	13 56 36.2	+0.8
AUQP	San Andres	8.06	355	*e*P	P	13 56 42.6	+2.1
BOAC	Boac	8.31	349	*e*P	P	13 56 43.6	+0.6
PVCP	Virac	8.32	5	*e*P	P	13 56 43.2	0.0
LUBP	Lubang	9.00	340	*e*P	P	13 56 50.6	+0.6
LUBP	Lubang	9.00	340	*e*P	P	13 56 50.7	+0.7
POLP	Polilio Island	9.54	351	*e*P	P	13 56 55.6	+0.2
BALP	Baler	10.59	350	*e*P	P	13 57 06.1	0.0
SCZP	Santa Cruz	11.02	342	*e*P	P	13 57 08.3	-2.2
BOLP	Bolinao	11.60	343	*e*P	P	13 57 15.9	-0.3
CAUP	Cauayan	11.73	352	*e*P	P	13 57 18.9	+1.3
ABRA	Dolores	12.61	348	*e*P	P	13 57 25.4	-1.2
APYP	Conner	12.72	350	*e*P	P	13 57 28.4	+0.7
BBP	Basco	15.17	355	*e*P	P	13 57 54.2	+1.9
QIZ	Qiongzhong	19.07	317	P	P	13 58 30.6	+0.8
TATO	Taipei	19.70	355	*e*P	P	13 58 32.3	-3.4
	82nm,1.0s						
KGM	Kluang	20.35	262	P	P	13 58 42.5	+0.7
IPM	Ipoh	22.36	269	P	P	13 59 00.2	+0.1
FITZ	Fitzroy Crossi	23.30	175	⇑*i*P	P	13 59 08.4	-0.3
	30nm,0.3s,mb5.4						
FITZ				*i* S	S	14 02 40.0	-2.9
FITZ				*i* SCP		14 05 21.7	
NST	Nakhon Sawan	25.14	296	P	P	13 59 27.5	+2.4
GYA	Guiyang	26.50	325	⇓*i*P	P	13 59 37.9	+0.9
GYA				PCP	PcP	14 02 44.0	+0.3
GYA				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.3						
MBWA	Marble Bar	26.50	188	*e*P	P	13 59 36.2	-0.8
	comp=Z,22nm,0.5s,mb5.0						
WRAB	Tennant Creek	27.22	157	⇑*i*P	P	13 59 42.7	-0.6
	comp=Z,248nm,0.6s,mb6.0						
WB2	Warramunga Arr	27.23	157	⇑*i*P	P	13 59 42.9	-0.6
WB2				*i* S	S	14 03 40.4	-4.3
WB2				*i* SCP		14 05 32.9	
WB2				*i* SCS	ScS	14 09 22.8	-2.2
CM31	Chiang Mai Arr	27.30	301	*e*P	P	13 59 44.5	+0.5
	comp=Z,91nm,0.9s,mb5.4						
KMI	Kunming	28.02	317	P	P	13 59 51.8	+1.4
KMI				AMB	AMB		
	comp=Z,46nm,0.8s,mb5.2						
KMI	Kunming	28.02	317	P	P	13 59 51.8	+1.4
	comp=Z,46nm,0.8s,mb5.2						
KMI				pP		14 00 21.0	
ASPA	Alice Springs	30.49	161	⇑*i*P	P	14 00 12.0	+0.5
ASPA				*i* S	S	14 04 33.0	-2.3
ASPA				*i* SCP		14 05 43.6	
ASPA				*i* SCS	ScS	14 09 37.9	-2.7
TIA	Tai'an	31.36	350	P	P	14 00 18.8	0.0
TIA				AMB	AMB		
	comp=Z,86nm,1.3s,mb5.1						
CD2	Chengdu	31.54	326	P	P	14 00 20.2	-0.1
CD2				AMB	AMB		
	comp=Z,80nm,0.7s,mb5.4						
XAN	Xi'an	31.66	337	P	P	14 00 21.0	-0.4
XAN				AMB	AMB		
	comp=Z,93nm,0.9s,mb5.3						
KS15	Wonju Array Si	32.29	7	*e*P	P	14 00 27.1	+0.5
DL2	Dalian	33.54	357	P	P	14 00 37.6	+0.5
DL2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.1						
CTA	Charters Tower	33.71	139	⇑*i*P	P	14 00 39.9	+1.2
	comp=Z,37nm,0.6s,mb5.1						
CTA				*i* SCP		14 05 56.0	
CTAO	Charters Tower	33.71	139	*e*P	P	14 00 39.8	+1.1
	comp=Z,62nm,0.8s,mb5.2						
MAJO	Matsushiro	33.96	22	*e*P	P	14 00 39.6	-1.0
	comp=Z,41nm,0.8s,mb5.0						
MAT	Matsushiro	33.96	22	*e*P	P	14 00 37.0	-3.6
	comp=Z,34nm,0.8s,mb4.9						
MAT	Matsushiro	33.96	22	P	P	14 00 37.4	-3.2
BJT	Baijiatuau	35.23	350	*e*P	P	14 00 47.1	-4.0
	comp=Z,117nm,1.2s,mb5.3						
LZH	Lanzhou	35.59	332	⇓P	P	14 00 55.3	+1.1
LZH				AMB	AMB		
	comp=Z,172nm,1.3s,mb5.4						
LZH				AMB	AMB		
	comp=Z,413nm,4.7s						
LZH	Lanzhou	35.59	332	⇓P	P	14 00 55.3	+1.1
	comp=Z,172nm,1.3s,mb5.4						
LZH				pP		14 02 29.5	
LZH				sP	PcP	14 03 08.1	-0.1
FORT	Forrest	36.09	173	⇑*i*P	P	14 00 59.1	+0.7
	comp=Z,611nm,0.5s						
FORT				*e*S	S	14 05 59.5	-0.8
SHL	Shillong	36.36	307	*e*P	P	14 01 02.0	+1.4
SNY	Shenyang	36.42	0	⇓P	P	14 01 00.7	-0.2
SNY				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.6						
HHC	Hu-ho-hao-te	37.02	345	⇓*i*P	P	14 01 06.4	+0.6
HHC				AMB	AMB		
	comp=Z,41nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,900nm,12.0s						
KLBR	Kellerberrin	37.04	188	⇑*i*P	P	14 01 06.4	+0.3
	comp=Z,136nm,0.3s,mb6.0						
KLBR				*e*S	S	14 06 11.9	-2.4
BTO	Baotou	37.21	343	*e*P	P	14 01 07.2	-0.2
BTO				AMB	AMB		
	comp=Z,16nm,0.5s,mb4.8						
MUN	Mundaring	37.66	190	*e*P	P	14 01 11.9	+0.7
	comp=Z,11nm,0.8s,mb4.4						
NWAO	Narrogin (SRO)	38.42	188	*e*P	P	14 01 18.0	+0.6
CN2	Changchun	38.43	2	*e*P	P	14 01 16.0	-1.3
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
LSA	Lhasa	39.00	312	P	P	14 01 24.0	+1.9
LSA	Lhasa	39.00	312	*e*P	P	14 01 20.4	-1.7
	comp=Z,70nm,0.6s,mb5.4						
BWNR	Bhubaneshwar	39.52	296	*e*P	P	14 01 26.0	-0.3
BWNR				AMb	AMB	14 01 26.8	
	comp=Z,102nm,0.5s,mb5.6						
MDJ	Mudanjiang	39.58	7	P	P	14 01 26.8	+0.2
MDJ				AMB	AMB		
	comp=Z,53nm,1.0s,mb5.0						
MDJ	Mudanjiang	39.58	7	*e*P	P	14 01 22.4	-4.1
	comp=Z,31nm,0.6s,mb5.0						
GTA	Gaotai	40.16	331	⇓*i*P	P	14 01 32.5	+1.2
GTA				AP	pP	14 03 09.7	+0.1
GTA				PP	PP	14 03 19.9	+4.1
GTA				PCP	PcP	14 03 23.1	+0.5
GTA				S	S	14 07 02.3	+2.5
GTA				PCS		14 07 11.9	
GTA				XS		14 09 55.7	
GTA				SS	SS	14 10 20.4	+4.4
GTA				SCS	ScS	14 10 33.5	-0.4
GTA				AMB	AMB		
	comp=Z,122nm,0.7s,mb5.5						
STKA	Stephens Creek	40.77	156	⇑*i*P	P	14 01 37.4	+1.1
	comp=Z,54nm,0.4s,mb5.4						
STKA				*i* SCP		14 06 21.4	
STKA				*i* S	S	14 07 08.1	-0.4
VIS	Vishakhapatnam	41.13	291	*e*P	P	14 01 40.0	+0.7
VIS				*e*		14 01 41.0	
	comp=Z,37nm,0.4s						
JIRN	Jiri	41.85	306	*e*P	P	14 01 46.0	+1.0
	comp=Z,206nm,0.5s,mb5.9						
PKI	Pulchoki	42.44	306	*e*P	P	14 01 49.0	-0.7
	comp=Z,99nm,0.6s,mb5.5						
PALK	Pallekele	42.54	275	*e*P	P	14 01 50.3	-0.3
	comp=Z,18nm,0.7s,mb4.7						
KKN	Kakani	42.63	306	*e*P	P	14 01 51.4	+0.2
	comp=Z,231nm,0.8s,mb5.7						
DMN	Daman	42.70	306	*e*P	P	14 01 52.1	+0.4
	comp=Z,275nm,0.9s,mb5.8						
GKN	Gorkha	43.24	306	*e*P	P	14 01 56.0	0.0
	comp=Z,224nm,0.9s,mb5.7						
HIA	Hailar	43.97	356	*e*P	P	14 01 56.8	-4.6
	comp=Z,36nm,0.7s,mb5.0						
KOLN	Koldanda	43.98	305	*e*P	P	14 02 02.5	+0.7
	comp=Z,689nm,0.6s						
ULN	Ulaanbaatar	44.73	344	⇓*i*P	P	14 02 07.4	+0.1
	comp=Z,50nm,0.8s,mb5.1						
YSS	Yuzh-Sakhalins	44.76	19	*e*P	P	14 02 07.0	-0.6
	comp=Z,18nm,0.5s,mb4.9						
HYB	Hyderabad	45.54	289	⇓*e*P	P	14 02 14.0	+0.1
	comp=Z,120nm,1.0s,mb5.4						
HYB	Hyderabad	45.54	289	⇓*i*P	P	14 02 14.0	+0.1
	comp=Z,120nm,1.0s,mb5.4						
TRD	Trivandrum	46.26	277	*e*P	P	14 02 19.7	+0.2
TRD				AMb	AMB	14 02 21.0	
	comp=Z,143nm,1.1s,mb5.4						
RIV	Riverview	46.87	148	⇑*i*P	P	14 02 25.7	+1.8
CNB	Canberra Magne	47.13	151	⇑*i*P	P	14 02 27.1	+1.2
	comp=Z,916nm,1.0s						
TOO	Toolangi	47.29	156	⇑*i*P	P	14 02 28.4	+1.4
	comp=Z,1.4nm,0.6s						
TLY	Talaya	49.12	344	P	P	14 02 41.8	+1.2
	comp=Z,311nm,0.7s,mb6.0,SNR=14						
TLY	Talaya	49.12	344	*e*P	P	14 02 40.8	+0.1
	comp=Z,49nm,0.9s,mb5.0						
KAD	Karad	49.64	288	*e*P	P	14 02 43.7	-1.2
NOUC	Port Laguerre	49.97	125	*e*P	P	14 02 47.8	+0.5
POO	Poona	50.13	290	⇓*i*P	P	14 02 47.0	-1.5
SDNR	Sundarnagar	50.73	307	*e*P	P	14 02 53.6	+0.8
KSH	Kashi	54.68	316	*e*P	P	14 03 21.6	+0.8
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb4.8						
ULHL	Ulahol	55.73	319	P	P	14 03 28.8	+0.7
	SNR=21						
KZA	Kyzart	56.30	318	P	P	14 03 33.4	+1.4
	SNR=19						
TKM2	Tokmak 2	56.46	319	P	P	14 03 33.5	+0.5
	SNR=24						
KBK	Karagaybulak	56.77	319	P	P	14 03 35.9	+0.8
	SNR=44						
YAK	Yakutsk	56.84	3	*e*P	P	14 03 34.5	-0.9
	comp=Z,256nm,0.8s,mb5.5						
UCH	Uchtor	56.86	318	P	P	14 03 37.1	+1.3
	SNR=69						
CHMS	Chumysh	57.05	319	P	P	14 03 37.1	0.0
	SNR=6.8						
AAK	Ala-Archa	57.05	318	P	P	14 03 38.2	+1.1
	SNR=13						
AAK	Ala-Archa	57.05	318	*e*P	P	14 03 36.3	-0.8
	comp=Z,28nm,0.8s,mb4.5						
USP	Ospenovka	57.34	319	P	P	14 03 39.2	+0.1
	SNR=23						
AML	Almayashu	57.37	318	P	P	14 03 40.8	+1.5
	SNR=11						
EKS2	Erkin-Say	57.54	318	P	P	14 03 41.2	+0.8
	SNR=47						
MA2	Magadan	58.09	16	*e*P	P	14 03 44.1	+0.2
	comp=Z,78nm,0.6s,mb5.1						
KURK	Kurchatov	58.73	328	⇓*i*P	P	14 03 47.8	-0.6
	comp=Z,128nm,0.7s,mb5.3						
WBK	Wadi Bani Khal	64.46	292	⇑P	P	14 04 24.8	-1.2
	SNR=6.8						
CHKZ	Chkalovo	64.47	328	⇓*i*P	P	14 04 24.7	-0.9
	comp=Z,38nm,0.9s,mb4.8						
JMDO	Jabal Madar	65.24	292	⇓P	P	14 04 29.9	-1.0
	SNR=7.7						
BIDO	Bidbid	65.32	293	⇓P	P	14 04 30.9	-0.5
SMDO	Samad	65.35	293	⇑P	P	14 04 30.4	-1.2
	SNR=7.0						
HOQ	Hoqain	66.07	293	⇓P	P	14 04 35.4	-0.6
BSY	Bisya	66.11	292	⇑P	P	14 04 35.5	-0.8
ARQ	Araqi	66.77	293	⇓P	P	14 04 39.9	-0.5
BANOM	Banah	67.19	296	⇑P	P	14 04 42.9	0.0
	SNR=8.1						
ASHO	Ashiyiah	67.30	294	⇑P	P	14 04 43.0	-0.6
SHAO	Shalim	67.33	287	⇑P	P	14 04 43.7	-0.1
RBK	Rabkut	68.67	287	⇑P	P	14 04 51.4	-0.6
	SNR=11						
BILL	Bilibino	68.96	16	*e*P	P	14 04 52.2	-0.6
	comp=Z,6.8nm,0.6s,mb4.3						
WHFO	Wadi Hawf	69.09	287	⇑P	P	14 04 53.2	-1.3
	SNR=35						
ABTO	Aybut	69.53	286	⇑P	P	14 04 56.2	-0.9
	SNR=20						
ARU	Arti	71.92	328	P	P	14 05 09.0	-1.4
	comp=Z,720nm,0.6s,SNR=53						
GNI	Garni	78.01	310	*e*P	P	14 05 45.1	+0.7
	comp=Z,14nm,0.8s,mb4.4						
KIV	Kislovodsk	79.73	314	*e*P	P	14 05 51.4	-2.0
	comp=Z,17nm,0.8s,mb4.4						
SVW2	Sparrevohn	81.06	29	*e*P	P	14 06 01.6	+1.7
IMA	Indian Mountai	82.33	24	*e*P	P	14 06 08.6	+2.4
	comp=Z,24nm,0.7s,mb4.7						
KDAK	Kodiak Island	82.36	33	*e*P	P	14 06 07.8	+1.2
MALT	Malatya	82.88	308	*e*P	P	14 06 10.8	+1.1
	comp=Z,24nm,1.4s,mb4.5						
OBN	Obninsk	83.95	325	*e*P	P	14 06 13.9	-0.6
MAW	Mawson	84.06	200	P	P	14 06 15.5	+0.7
PMR	Palmer	84.18	29	*e*P	P	14 06 15.7	+0.2
	comp=Z,6.0nm,0.3s,mb4.6						
MCK	McKinley	84.27	27	*e*P	P	14 06 15.8	-0.1
	comp=Z,9.7nm,0.6s,mb4.5						
COLA	College	84.72	25	*e*P	P	14 06 18.0	-0.1
	comp=Z,4.7nm,0.7s,mb4.1						
VNDA	Vanda	85.35	172	*e*P	P	14 06 21.8	+0.8
	comp=Z,1.7nm,0.6s						
DIV	Divide	85.81	29	*e*P	P	14 06 24.4	+0.9
	comp=Z,29nm,0.7s,mb5.0						
KMBO	Kilima Mbogo	86.33	269	*e*P	P	14 06 27.5	+0.5
	comp=Z,19nm,0.9s,mb4.7						
JOF	Joensuu	86.34	333	*e*p	P	14 06 24.3	-1.6
	comp=Z,42nm,0.5s,mb5.3						
MENT	Mentasta	86.65	27	*e*P	P	14 06 27.7	+0.3
KEV	Kevo	87.35	340	*e*p	P	14 06 29.1	-1.4
	comp=Z,10nm,0.6s,mb4.6						
KAF	Kangasniemi	88.74	332	*e*p	P	14 06 34.9	-2.3
	comp=Z,22nm,0.5s,mb5.2,baz=77,slow=4.2						
KTK1	Kautokeino	88.79	339	*e*P	P	14 06 36.1	-1.2
INK	Inuvik	89.94	21	*e*P	P	14 06 42.7	+0.1
	comp=Z,4.5nm,0.8s,mb4.3						
TRO	Tromso	90.13	340	*e*P	P	14 06 41.8	-1.7
VRI	Vrincioaia	90.95	316	⇑*i*P	P	14 06 48.5	+0.7
MLR	Muntele Rosu	91.55	316	⇓*i*P	P	14 06 50.2	-0.3
MOR8	Moi Rana	92.80	337	*e*P	P	14 06 53.5	-2.2
	comp=Z,44nm,2.5s,mb5.0						
MOR8	Moi Rana	92.80	337	*e*P	P	14 06 53.5	-2.2
MOR8				AMb	AMB	14 06 58.7	
	comp=Z,44nm,2.5s,mb5.0						
KWP	Kalwaria	92.97	320	*e*P	P	14 06 57.1	+0.2
	comp=Z,17nm,0.7s,mb5.2						
KOLS	Kolonicke sedl	93.39	320	*i* P	P	14 06 58.9	0.0
KOLS				*e*		14 07 07.0	
CRVS	Cervenica-Dubn	93.92	320	*e*P	P	14 07 01.9	+0.6
NSS	Namsos	94.35	336	*e*P	P	14 07 00.6	-2.3
	comp=Z,83nm,2.1s,mb5.5						
NSS	Namsos	94.35	336	*e*P	P	14 07 00.6	-2.3
NSS				AMb	AMB	14 07 14.0	
	comp=Z,83nm,2.1s,mb5.5						
KECS	Kecovo	94.64	319	*i* P	P	14 07 04.6	0.0
OJC	Ojcow	94.67	321	*e*P	P	14 07 04.4	-0.3
QSPA	South Pole Qui	95.15	180	*e*P	P	14 07 07.0	+0.8
PSZ	Piszkesteto	95.16	319	*e*P	P	14 07 06.7	-0.2
	comp=Z,12nm,1.0s,mb5.0						
VYHS	Vyhne	95.70	320	*i* P	P	14 07 09.4	+0.1
OKC	Ostrava-Krasne	95.80	321	*e*P	P	14 07 09.6	-0.1
NB2	NORSAR Subarra	95.97	333	P	P	14 07 08.8	-1.5
	comp=Z,7.2nm,0.6s,mb5.1,baz=69,slow=4.3						
NB2	NORSAR Subarra	95.97	333	P	P	14 07 08.8	-1.5
	baz=69,slow=4.4						
DPC	Dobruska-Polom	96.79	322	*e*PDIF	P	14 07 14.5	+0.3
RES	Resolute Bay	96.89	10	*e*P	P	14 07 14.4	+0.2
	comp=Z,4.8nm,0.7s,mb4.8						
UPC	Upice	96.93	322	*e*PDIF	P	14 07 14.6	-0.3
MOL	Molde	96.95	335	*e*P	P	14 07 18.0	+3.4
	comp=Z,136nm,1.9s,mb5.8						
MOL	Molde	96.95	335	*e*P	P	14 07 18.0	+3.4
MOL				AMb	AMB	14 07 27.1	
	comp=Z,136nm,1.9s,mb5.8						
RUE	Ruedersdorf	97.65	324	*e*P	P	14 07 18.1	0.0
	comp=Z,36nm,0.8s,mb5.8						
PVCC	Panska Ves	97.81	322	*e*PDIF	P	14 07 19.0	+0.2
PRU	Pruhonice	97.99	322	*e*PDIF	P	14 07 19.8	+0.1
BRG	Berggiesshubel	98.07	323	*i* P	P	14 07 19.8	-0.2
	comp=Z,13nm,0.8s,mb5.3						
CLL	Collm	98.49	324	*i* P	P	14 07 21.0	-0.9
	comp=Z,5.0nm,0.7s,mb5.0						
CLL	Collm	98.49	324	P	P	14 07 21.0	-0.9
	comp=Z,logA/T=0.9,mb5.0						
BLS5	Blasjo	98.80	333	*e*P	P	14 07 22.4	-0.7
KHC	Kasperske Hory	98.85	321	*e*PDIF	P	14 07 23.3	-0.3
GEC2	GERESS Array S	98.87	321	*e*P	P	14 07 23.4	-0.3
	comp=Z,6.0nm,0.8s,mb5.0						
NKC	Novy Kostel	99.19	323	*e*P	P	14 07 25.4	+0.3
WET	Wettzell	99.28	321	*e*P	P	14 07 25.7	+0.2
	comp=Z,3.0nm,1.0s,mb4.6						
LBTB	Lobatse	99.31	246	Pdif	P	14 07 25.5	-0.7
MOX	Moxa	99.54	323	*i* P	P	14 07 26.0	-0.7
CLZ	Clausthal	99.84	325	*e*P	P	14 07 28.2	+0.2
	comp=Z,8.0nm,0.9s,mb5.2						
GRA1	Grafenberg Arr	100.11	322	*e*P	P	14 07 29.4	+0.1
	comp=Z,13nm,1.2s						
GRF	Grafenberg Arr	100.11	322	*e*P	P	14 07 29.4	+0.1
	comp=Z,13nm,1.2s						
TNS	Taunus Mts	101.58	324	*e*P	P	14 07 36.9	+1.2
	comp=Z,13nm,1.3s						
LPG	La Plagne	104.49	320	*e*P	PP	14 12 18.9	+1.6
	comp=Z,14nm,0.7s						
LPL	La Plagne	104.49	320	*e*P	PP	14 12 19.0	+1.6
	comp=Z,16nm,0.7s						
MBDF	Montbardon	104.78	319	*e*P	PP	14 12 21.0	+1.3
	comp=Z,16nm,0.9s						
ORIF	Oris-en-Rattie	105.28	319	*e*P	PP	14 12 22.0	-1.4
	comp=Z,6.3nm,0.6s						
AVF	Avril sur Loir	106.09	322	*e*P	PP	14 12 28.3	-0.7
	comp=Z,11nm,0.9s						
PV10	Paradox Valley	114.85	43	*e*PKiKP	PKPdf	14 12 22.5	+2.7
PV01	Paradox Valley	115.30	43	*e*PKPdf	PKPdf	14 12 23.2	+2.6
ISCO	Idaho Springs	116.40	41	*e*PKiKP	PKPdf	14 12 25.3	+2.6
SCHQ	Schefferville	119.52	7	*e*PKPdf	PKPdf	14 12 29.8	+1.4
WMOK	Wichita Mounta	123.75	42	*e*PKPdf	PKPdf	14 12 38.7	+1.6
JCT	Junction City	125.47	47	*e*PKPdf	PKPdf	14 12 42.5	+2.0
MIAR	Mount Ida	127.22	39	*e*PKPdf	PKPdf	14 12 45.5	+1.7
PLCA	Paso Flores	142.50	162	*e*PKPpre	PKPdf	14 13 11.8	0.0
TRQA	Tornquist	146.97	172	*e*PKPbc	PKPbc	14 13 24.4	+2.7
JTS	JuntasAbangare	147.76	61	*e*PKPbc	PKPdf	14 13 26.6	+5.2
SDV	Santo Domingo	160.14	45	*e*PKPdf	PKPdf	14 13 39.9	+1.6

NDI 05 14:00:39.4±4.9**, 31.54N**×**77.62E, h5**^{km}±16^{km}**, MD2.9, ML3.3, 3C, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLP	Kalpa	0.54	91	*e*P	Pg	14 00 50.4	+0.1
KLP				*e*S	Sg	14 00 59.2	+1.7
SDNR	Sundarnagar	0.55	266	⇑*i*P	Pg	14 00 50.6	+0.1
SMLA	Simla	0.56	223	⇑*i*	Pg	14 01 03.8	+13
SMLA				*i*		14 01 11.2	
BHK	Bhakra	1.03	263	*e*P	Pb	14 00 57.4	-2.0
BHK				*e*S	Sb	14 01 14.7	+1.6
DDI	Dehra Dun	1.27	163	*e*P	Pb	14 01 02.7	-0.8
DDI				*e*S	Sb	14 01 19.7	-0.3
PONG	Pong	1.48	287	*e*P	Pn	14 01 07.0	+0.2
PONG				*e*S	Sb	14 01 28.0	+2.0
KKR	Kurukshetra	1.72	204	*e*P	Pn	14 01 10.7	+0.5
THN	Thein Dam	1.84	299	*e*P	Pn	14 01 11.1	-0.9
THN				*e*		14 01 35.8	
JOSI	Joshimath	1.94	120	*e*P	Pn	14 01 10.5	-2.9
NDI	New Delhi	2.87	187	*e*P	Pn	14 01 27.5	+0.8
NDI				*e*		14 02 06.5	
NDI				*e*		14 02 42.0	
AYAN	Aya Nagar	3.08	188	*e*P	Pn	14 01 29.2	-0.5
AYAN				*e*S	Sn	14 02 06.8	-0.6
LGTI	Lohaghat	3.08	132	*e*P	Pn	14 01 30.0	+0.3
LGTI				*e*		14 02 18.5	
SONA	Sohna	3.31	188	*e*P	Pn	14 01 32.0	-1.0
SONA				*e*S	Sn	14 02 11.0	-2.3
SONA				*e*		14 02 30.8	
	comp=N,74nm,0.5s						
SONA				*e*		14 02 30.8	
	comp=E,126nm,0.3s						
KUDL	Kundal	3.52	196	*e*P	Pn	14 01 35.3	-0.7
KUDL				*e*		14 02 47.2	
	comp=Z,176nm,0.5s						
KHET	Khetri	3.79	205	*e*	Pn	14 01 33.0	-6.8
KHET				*e*		14 02 36.5	
KHET				*e*		14 02 42.8	
	comp=E,105nm,0.4s						
KHET				*e*		14 02 42.9	
	comp=N,64nm,0.4s						
AJM	Ajmer	5.67	208	⇑*i*	rx	14 02 53.0	
AJM				*i*		14 03 38.0	

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*NEIC **05** 15:45:10.6±1.8, 22.49S×179.49E, h600^{km}, mb4.3/9, Error ellipse: s-maj=37.1km s-min=28.1km az=55.0*
ISC 05 15:45:09.0±2.3**, 23.0S**±0.1×**179.9E**±0.2**, h628**^{km}±26^{km}**, n33, σ1^{s}02**/38**, mb4.4**/9**, 6C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	15.07	185	PN	P	15 48 17.1	-0.2
PUZ				SN	S	15 50 46.4	-2.1
PUZ	Puketiti	15.07	185	PN	P	15 48 17.1	-0.2
PUZ				SN	S	15 50 46.4	-2.1
URZ	Urewera	15.38	188	PN	P	15 48 18.4	-1.9
URZ	Urewera	15.38	188	PN	P	15 48 18.4	-1.9
MWZ	Matawai	15.40	187	PN	P	15 48 20.2	-0.3
MWZ				SN	S	15 50 54.4	+0.2
MWZ	Matawai	15.40	187	PN	P	15 48 20.2	-0.3
MWZ				SN	S	15 50 54.4	+0.2
QRZ	Quartz Range	18.81	198	PN	P	15 48 53.8	+1.6
QRZ	Quartz Range	18.81	198	PN	P	15 48 53.8	+1.6
NNZ	Nelson	18.96	195	PN	P	15 48 54.0	+0.4
NNZ	Nelson	18.96	195	PN	P	15 48 54.0	+0.4
THZ	Tophouse	19.59	196	PN	P	15 48 60.0	+0.7
THZ	Tophouse	19.59	196	PN	P	15 48 60.0	+0.7
DSZ	Denniston Nort	19.87	198	PN	P	15 49 03.0	+1.1
DSZ	Denniston Nort	19.87	198	PN	P	15 49 03.0	+1.1
LTZ	Lake Taylor	20.71	196	PN	P	15 49 09.2	-0.2
LTZ				SN	S	15 52 19.5	-2.8
LTZ	Lake Taylor	20.71	196	PN	P	15 49 09.2	-0.2
LTZ				SN	S	15 52 19.5	-2.8
MSZ	Milford Sound	23.73	202	PN	P	15 49 37.1	+0.6
MSZ	Milford Sound	23.73	202	PN	P	15 49 37.1	+0.6
CNB	Canberra Magne	29.22	238	*e*P	P	15 50 24.6	+0.4
	193nm,0.8s,mb5.8						
CTA	Charters Tower	31.38	269	⇑*i*P	P	15 50 42.6	0.0
	9.7nm,0.3s,mb4.9						
CTAO	Charters Tower	31.38	269	*e*P	P	15 50 42.5	-0.2
	14nm,0.4s,mb4.9						
TAU	Tasmania Unive	33.47	226	*e*P	P	15 51 00.8	+0.9
	14nm,0.9s,mb4.6						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	34.97	247	⇑iP	P	15 51 12.7	+0.3
	3.5nm,0.6s,mb4.2						
ASPA	**Alice Springs**	42.09	260	⇑iP	P	15 52 09.9	-0.1
WB2	**Warramunga Arr**	42.36	265	⇑iP	P	15 52 11.6	-0.5
WRAB	**Tennant Creek**	42.37	265	eP	P	15 52 11.1	-1.1
	4.5nm,0.6s,mb4.2						
MBWA	**Marble Bar**	55.43	260	eP	P	15 53 48.5	+0.2
	1.6nm,0.5s,mb3.6						
NWAO	**Narrogin (SRO)**	55.51	245	eP	P	15 53 49.1	+0.4
	13nm,1.0s,mb4.1						
QSPA	**South Pole Qui**	67.06	180	⇓iP	P	15 55 09.9	+7.2
	4.7nm,0.9s,mb3.9						
VNA2	**Neumayer--Watz**	86.18	178		P	15 56 48.7	+2.8
BJT	**Baijiatuau**	86.32	316	eP	P	15 56 45.6	-1.6
	3.3nm,0.5s,mb4.2						
VNA1	**Neumayer--Stat**	86.42	177	⇑i	P	15 56 46.5	-0.5
CLL	**Collm**	149.99	343	⇑iPKP1	PKPab	16 03 59.6	-1.1

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*JMA **05** 15:53:39.6±0.4, 24.33N×121.44E, h73^{km}, M3.8*
*TAP **05** 15:53:42.4, 24.24N×121.72E, h12^{km}, ML4.3*
TAP Felt IV J at Nanau, II J at Chiawan, I J at Hualien, II J at Nanshan, II J at Suao, II J at Nioudou, II J at Hehuanshan, I J at Neicheng, I J at Shilin, I J at Tachien, I J at Sanguang.
*BJI **05** 15:53:47.2, 24.47N×121.10E, h4^{km}, mb4.4, ML4.2*
ISC 05 15:53:42.2±0.4**, 24.22N**±0.01×**121.80E**±0.02**, h7^{km}**±2^{km}**, n75, σ0^{s}94**/121**, 11C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	0.21	345	⇑iP	Pg	15 53 47.3	+0.6
ENA				S	Sg	15 53 50.5	+0.9
TWD	**Chiawan**	0.23	233	⇑iP	Pg	15 53 47.5	+0.5
TWD				S	Sg	15 53 51.1	+0.8
HWA	**Hwalien**	0.30	216	⇑P	Pg	15 53 49.3	+1.0
TWC	**Suao**	0.39	7	⇑iP	Pg	15 53 50.7	+0.6
TWC				S	Sg	15 53 55.8	+0.4
NNS	**Nan Shan**	0.45	299	⇑iP	Pg	15 53 50.9	-0.4
NNS				S	Sg	15 53 56.5	-0.7
ENTT	**Nioudou**	0.47	333	⇑iP	Pg	15 53 51.6	0.0
ENTT				S	Sg	15 53 57.9	-0.1
WHF	**Hehuan Shan**	0.49	261	⇑iP	Pg	15 53 51.7	-0.5
WHF				S	Sg	15 53 57.9	-0.9
TWE	**Neicheng**	0.51	346	⇑iP	Pg	15 53 52.6	+0.1
TWE				S	Sg	15 53 59.8	+0.4
ESL	**Shilin**	0.53	220	P	Pg	15 53 52.5	-0.3
ESL				S	Sg	15 54 00.6	+0.8
ILA	**Ilan**	0.54	355	eP	Pg	15 53 53.5	+0.4
ILA				S	Sg	15 54 01.4	+0.9
TWT	**Tachien**	0.57	273	eP	Pg	15 53 53.5	-0.2
TWT				S	Sg	15 54 00.8	-0.5
NSK	**Sanguang**	0.61	318	⇓iP	Pg	15 53 54.0	-0.4
NSK				S	Sg	15 54 01.6	-0.9
TWA	**Mucha**	0.78	345	eP	Pb	15 53 57.3	-0.4
TWA				S	Sb	15 54 08.0	-0.2
TWB1	**Santiao Chiao**	0.80	12	⇑iP	Pb	15 53 58.1	+0.1
TWB1				S	Sb	15 54 08.4	-0.5
EHY	**Hungye**	0.83	212	eP	Pb	15 53 57.2	-1.4
NSTT	**Nanjuang**	0.83	299	⇓iP	Pb	15 53 58.3	-0.4
NSTT				S	Sb	15 54 08.7	-1.1
NWF	**Wu-fen Shan**	0.85	359	eP	Pb	15 53 58.9	+0.1
NWF				S	Sb	15 54 10.4	+0.2
TAP1	**Taipei**	0.85	343	eP	Pb	15 53 59.0	+0.1
TAP1				S	Sb	15 54 09.8	-0.6
TAP	**Taipei**	0.86	342	eP	Pb	15 53 58.9	-0.1
TAP				S	Sb	15 54 10.2	-0.2
SMLT	**Sun Moon Lake**	0.89	248	P	Pb	15 53 58.9	-0.6
SMLT				S	Sb	15 54 10.4	-1.0
TYC	**Yuchr**	0.92	250	⇓P	Pb	15 53 59.3	-0.7
TYC				S	Sb	15 54 11.9	-0.3
NCU	**National Centr**	0.93	323	eP	Pb	15 54 00.5	+0.2
NCU				S	Sb	15 54 14.5	+1.9
TWS1	**Kuangyinshan**	0.94	338	eP	Pb	15 54 00.3	-0.1
TWS1				S	Sb	15 54 13.4	+0.5
TWQ1	**Liyutan**	0.94	278	eP	Pb	15 54 01.0	+0.5
TWQ1				S	Sb	15 54 13.2	+0.2
HSN	**Hsinchu**	0.95	308	eP	Pb	15 54 00.6	0.0
HSN				S	Sb	15 54 13.3	+0.1
NSY	**Sanyi**	0.97	282	eP	Pb	15 54 01.4	+0.5
NSY				S	Sb	15 54 14.2	+0.6
TWF1	**Yuli**	0.98	208	eP	Pb	15 53 59.4	-1.7
TCU	**Taichung**	1.03	266	eP	Pb	15 54 02.5	+0.6
TCU				S	Sb	15 54 16.6	+1.2
YUS	**Yu-Shan**	1.06	227	⇑P	Pb	15 54 02.5	-0.1
YUS				S	Sb	15 54 16.8	+0.4
TWY	**Chenhua**	1.07	350	eP	Pb	15 54 02.8	+0.2
WNT	**Mingjian**	1.08	252	eP	Pb	15 54 03.2	+0.5
WNT				S	Sb	15 54 18.3	+1.5
YOJ	**Yonaguni jima**	1.13	78	P	Pb	15 54 04.3	+0.6
YOJ				S	Sb	15 54 22.7	+4.3
ALS	**Alishan**	1.15	232	eP	Pb	15 54 04.0	-0.1
CHKT	**Chengkung**	1.19	200	eP	Pb	15 54 03.1	-1.5
CHKT				S	Sb	15 54 20.7	+0.7
CHN5	**Tsauling**	1.20	239	eP	Pb	15 54 04.8	0.0
CHN5				S	Sb	15 54 23.1	+2.7
WGK	**Gukeng**	1.25	245	eP	Pb	15 54 06.0	+0.3
ELDTW	**Lidau**	1.25	215	eP	Pb	15 54 03.8	-2.0
CHN2	**Minshiung**	1.39	241	eP	Pn	15 54 08.6	+0.5
CHN2				S	Sb	15 54 27.8	+1.8
CHN4	**Tsaushan**	1.40	232	eP	Pn	15 54 08.7	+0.4
CHN4				S	Sb	15 54 28.2	+1.9
STYT	**Tauyuan**	1.42	222	eP	Pn	15 54 07.7	-0.8
PCYT	**Pengchaiyu**	1.42	10	eP	Pn	15 54 08.2	-0.3
PCYT				S	Sb	15 54 28.7	+1.8
WTCT	**Ta-ch’eng**	1.43	256	eP	Pn	15 54 08.2	-0.5
WTCT				S	Sb	15 54 26.8	-0.4
CHY	**Chiayi**	1.45	241	eP	Pn	15 54 09.2	+0.2
CHY				S	Sb	15 54 28.1	+0.4
WTP	**Ta-pu**	1.46	228	eP	Pn	15 54 09.3	+0.3
WTP				S	Sb	15 54 29.3	+1.4
TWK	**Hsinying**	1.53	232	eP	Pn	15 54 10.5	+0.4
TWK				S	Sb	15 54 31.0	+0.9
TWG	**Pinlang**	1.55	206	eP	Pn	15 54 07.8	-2.5
CHN1	**Nanshi**	1.56	229	eP	Pn	15 54 10.6	+0.2
CHN1				S	Sb	15 54 31.6	+0.9
WSF	**Szhu**	1.56	248	eP	Pn	15 54 09.9	-0.6
WSF				S	Sb	15 54 31.5	+0.8
SGST	**Jiashian**	1.59	225	eP	Pn	15 54 11.4	+0.5
SGST				S	Sb	15 54 32.9	+1.2
CHN8	**Yiju**	1.70	239	eP	Pn	15 54 12.4	0.0
CHN8				S	Sn	15 54 34.8	+0.2
CHN3	**Shinhua**	1.74	229	eP	Pn	15 54 13.6	+0.4
IRIF	**Iriomote-Funau**	1.77	86	P	Pn	15 54 12.9	-0.6
ECL	**Taimali**	1.79	206	eP	Pn	15 54 11.5	-2.3
SSD	**Sandimen**	1.82	216	eP	Pn	15 54 13.9	-0.3
HATJ	**Hateruma jima**	1.84	95	P	Pn	15 54 14.5	0.0
TWM1	**Shoushan**	1.88	223	eP	Pn	15 54 16.3	+1.2
SGLT	**Jiouru**	1.91	219	eP	Pn	15 54 17.5	+1.9
JKRS	**Kuro-shima**	2.02	89	P	Pn	15 54 17.2	+0.1
EAST	**Anshuo**	2.03	206	eP	Pn	15 54 14.8	-2.4
TAW	**Tawu**	2.03	204	eP	Pn	15 54 18.1	+0.8
SCZT	**Fangliau**	2.14	211	eP	Pn	15 54 18.5	-0.2
JIJ	**Ishigaki jima**	2.14	86	P	Pn	15 54 17.9	-1.0
JIJ				S	Sn	15 54 48.0	+2.0
PNG	**Penghu**	2.15	253	eP	Pn	15 54 17.8	-1.2
PNG				S	Sn	15 54 44.4	-1.9
WDGT	**Dungji**	2.18	244	eP	Pn	15 54 18.6	-0.8
WDGT				S	Sn	15 54 45.0	-1.9
LAY	**Lan-yu**	2.18	186	eP	Pn	15 54 16.1	-3.3
TWP	**Hsiaoliuchiu**	2.29	216	eP	Pn	15 54 20.9	0.0
HEN	**Hengchun**	2.41	204	eP	Pn	15 54 23.8	+1.1
TWK1	**Hengchun**	2.44	202	eP	Pn	15 54 22.3	-0.8
JTJ	**Tarama**	2.68	80	P	Pn	15 54 26.1	-0.4
QZH	**Quanzhou**	3.01	284	P	Pn	15 54 28.6	-2.6
QZH				S	Sn	15 54 59.9	-8.0
QZH				Smax			
	comp=N,480nm,0.8s						
QZH				Smax			
	comp=E,350nm,0.7s						
KNM	**Kinmen**	3.08	274	eP	Pn	15 54 31.4	-0.8
JMJ	**Miyako jima 2**	3.24	79	eS	Sn	15 55 14.9	+1.2
JOGS	**Gusukube**	3.33	80	P	Pn	15 54 35.3	-0.5
NJ2	**Nanjing**	8.22	342	eP	P	15 55 44.3	-0.5
NJ2				AP		15 55 48.6	
NJ2				XP		15 55 51.3	
NJ2				S	Sn	15 57 18.0	-1.0
NJ2				XS		15 57 22.3	
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s						
NJ2				Smax			
	comp=N,50nm,1.0s						
NJ2				Smax			
	comp=E,210nm,1.0s						
GYA	**Guiyang**	13.87	282	⇑iP	P	15 56 59.3	-2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						

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*ISK **05** 15:53:58.3, 38.17N×26.77E, h16^{km}, MD3.2*
*ATH **05** 15:53:58.8, 38.10N×26.84E, h38^{km}, MD3.3/3*
*NEIC **05** 15:53:58.4, 38.19N×26.76E, h16^{km}, MD3.3(ATH), MD3.2(ISK), After ISK.*
*CSEM **05** 15:53:58.8±0.2, 38.20N×26.79E, h16^{km}±1^{km}, MD3.3, Error ellipse: s-maj=5.1km s-min=2.2km az=116.0*
ISC 05 15:53:58.7±0.6**, 38.18N**±0.03×**26.75E**±0.05**, h10^{km}, n31, σ0^{s}64**/43**, 1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	0.31	49	PG	Pg	15 54 05.1	0.0
BLCB	**Balcova**	0.31	49	ePg	Pg	15 54 05.1	0.0
BLCB				Sg	Sg	15 54 09.1	-0.3
IZM	**Izmir**	0.46	62	PG	Pg	15 54 08.1	0.0
IZM				SG	Sg	15 54 14.6	+0.3
IZM	**Izmir**	0.46	62	Pg	Pg	15 54 08.2	+0.1
IZM				Sg	Sg	15 54 14.2	-0.2
KDAG	**Bornova**	0.47	62	i P	Pg	15 54 08.2	0.0
KDAG				i S	Sg	15 54 14.3	-0.2
SMG	**Samos**	0.48	171	⇓iPB	Pb	15 54 08.4	-0.3
SMG				eSB	Sb	15 54 15.5	0.0
AYDN	**Tasoluk**	1.04	120	i P	Pb	15 54 18.6	+0.3
AYDN				i S	Sb	15 54 31.7	0.0
AKS	**Akhisar**	1.09	50	PN	Pn	15 54 19.5	-0.4
AKS	**Akhisar**	1.09	50	Pg	Pg	15 54 19.5	-1.0
AYVA	**Ayvalik**	1.12	358	i P	Pb	15 54 20.9	+1.2
AYVA				i S	Sb	15 54 38.8	+4.5
PRK	**Paraskevi**	1.12	341	ePN	Pn	15 54 21.0	+0.5
MLSB	**Milas**	1.21	137	PN	Pn	15 54 20.5	-1.1
MLSB	**Milas**	1.21	137	Pn	Pn	15 54 20.6	-1.0
MLSB	**Milas**	1.21	137	Pn	Pn	15 54 20.6	-1.0
BDRM	**Kayabasi**	1.25	153	i P	Pb	15 54 22.5	+0.6
BDRM				i S	Sb	15 54 38.7	+0.9
MANT	**Manisa**	1.46	77	i P	Pn	15 54 26.4	+1.1
MANT				i S	Sb	15 54 44.8	+0.8
APE	**Apeiranthos**	1.47	221	ePN	Pn	15 54 25.0	-0.4
YER	**Yerkesik**	1.61	130	ePN	Pn	15 54 26.8	-0.6
YER	**Yerkesik**	1.61	130	Pn	Pn	15 54 26.8	-0.5
EZN	**Ezine**	1.67	349	ePN	Pn	15 54 27.6	-0.7
EZN	**Ezine**	1.67	349	Pn	Pn	15 54 27.7	-0.6
EZN	**Ezine**	1.67	349	Pn	Pn	15 54 27.7	-0.6
BALB	**Balikesir**	1.70	31	ePN	Pn	15 54 28.3	-0.4
BALB	**Balikesir**	1.70	31	Pn	Pn	15 54 28.4	-0.4
BOZC	**Bozcaada**	1.74	342	i P	Pn	15 54 32.9	+3.6
BOZC				i S	Sn	15 54 56.6	+4.8
DENT	**Denizli**	1.86	103	ePN	Pn	15 54 30.5	-0.5
DENT	**Denizli**	1.86	103	Pn	Pn	15 54 30.6	-0.4
DNZL	**Cakiroluk**	1.89	104	i P	Pn	15 54 31.2	-0.1
DNZL				i S	Sn	15 55 00.1	+4.8
ORLT	**Orhaneli**	2.50	41	ePN	Pn	15 54 40.0	-0.2
ULDT	**Uludag**	2.70	43	i P	Pn	15 54 50.3	+7.3
ULDT				i S	Sn	15 55 24.4	+8.4
MOX	**Moxa**	16.45	324	Sg	S	16 00 48.0	-5.3

TAP 05 15:57:56.7, 24.34N×121.78E, h6^{km}, ML3.9, 9C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	0.10	338	⇓iP	Pg	15 57 59.9	+1.0
ENA				S	Sg	15 58 01.5	+1.1
TWC	**Suao**	0.28	13	⇑iP	Pg	15 58 03.1	+0.7
TWC				S	Sg	15 58 07.0	+1.0
TWD	**Chiawan**	0.31	213	⇑iP	Pg	15 58 03.7	+0.7
TWD				S	Sg	15 58 08.3	+1.1
ENTT	**Nioudou**	0.36	327	⇓iP	Pg	15 58 05.2	+1.3
ENTT				S	Sg	15 58 10.2	+1.5
NNS	**Nan Shan**	0.38	285	⇓P	Pg	15 58 05.7	+1.2
NNS				S	Sg	15 58 11.2	+1.5
TWE	**Neicheng**	0.39	345	⇓iP	Pg	15 58 05.7	+1.1
TWE				S	Sg	15 58 11.2	+1.2
HWA	**Hwalien**	0.40	204	eP	Pg	15 58 05.5	+0.8
ILA	**Ilan**	0.42	356	eP	Pg	15 58 06.8	+1.5
ILA				S	Sg	15 58 13.0	+2.0
WHF	**Hehuan Shan**	0.51	248	⇑iP	Pg	15 58 07.8	+0.9
WHF				S	Sg	15 58 15.2	+1.5
NSK	**Sanguang**	0.51	311	⇓iP	Pg	15 58 08.3	+1.3
NSK				S	Sg	15 58 15.1	+1.4
TWT	**Tachien**	0.56	261	⇑iP	Pg	15 58 09.5	+1.5
TWT				S	Sg	15 58 17.6	+2.3
ESL	**Shilin**	0.61	211	⇑iP	Pg	15 58 09.2	+0.2
ESL				S	Sg	15 58 17.9	+0.7
TWA	**Mucha**	0.66	344	⇓P	Pg	15 58 11.3	+1.3
TWA				S	Sg	15 58 20.6	+1.8
TWB1	**Santiao Chiao**	0.69	16	eP	Pg	15 58 10.9	+0.3
TWB1				S	Sg	15 58 20.4	+0.6
NWF	**Wu-fen Shan**	0.73	0	eP	Pg	15 58 12.3	+1.0
NWF				S	Sg	15 58 21.6	+0.6
TAP1	**Taipei**	0.73	341	eP	Pg	15 58 12.5	+1.1
TAP1				S	Sg	15 58 22.4	+1.1
TAP	**Taipei**	0.74	340	eP	Pg	15 58 12.3	+0.8
TAP				S	Sg	15 58 22.6	+1.2
NSTT	**Nanjuang**	0.77	292	eP	Pb	15 58 13.6	+1.6
NSTT				S	Sg	15 58 23.6	+1.3
TWS1	**Kuangyinshan**	0.83	337	eP	Pb	15 58 15.1	+2.0
TWS1				S	Sb	15 58 25.7	+1.5
NCU	**National Centr**	0.83	319	eP	Pb	15 58 15.2	+2.1
NCU				S	Sb	15 58 26.6	+2.3
HSN	**Hsinchu**	0.87	302	eP	Pb	15 58 15.7	+1.9
TWQ1	**Liyutan**	0.92	271	eP	Pb	15 58 16.9	+2.2
TWQ1				S	Sb	15 58 28.9	+2.0
SMLT	**Sun Moon Lake**	0.92	241	⇑iP	Pb	15 58 16.0	+1.2
SMLT				S	Sb	15 58 29.0	+1.9
EHY	**Hungye**	0.93	207	eP	Pb	15 58 14.8	-0.1
NSY	**Sanyi**	0.93	275	eP	Pb	15 58 16.5	+1.6
TWY	**Chenhua**	0.95	350	eP	Pb	15 58 17.5	+2.4
TWY				S	Sb	15 58 30.2	+2.5
TYC	**Yuchr**	0.95	243	⇑iP	Pb	15 58 16.2	+1.1
TYC				S	Sb	15 58 29.4	+1.6
TCU	**Taichung**	1.03	259	eP	Pb	15 58 18.9	+2.4
TCU				S	Sb	15 58 33.2	+3.2
TWF1	**Yuli**	1.08	204	eP	Pb	15 58 17.4	0.0
WNT	**Mingjian**	1.10	246	eP	Pb	15 58 20.0	+2.2
YUS	**Yu-Shan**	1.14	222	eP	Pb	15 58 19.3	+0.9
YUS				S	Sb	15 58 37.9	+4.7
ALS	**Alishan**	1.22	227	⇑P	Pb	15 58 21.0	+1.3
CHN5	**Tsauling**	1.25	234	⇑iP	Pb	15 58 22.3	+1.9
CHN5				S	Sb	15 58 39.7	+3.2
WGK	**Gukeng**	1.29	240	eP	Pb	15 58 23.1	+2.0
CHKT	**Chengkung**	1.29	197	eP	Pb	15 58 21.6	+0.5
CHKT				S	Sb	15 58 41.0	+3.3
PCYT	**Pengchaiyu**	1.31	12	eP	Pb	15 58 21.9	+0.5
PCYT				S	Sb	15 58 40.6	+2.3
ELDTW	**Lidau**	1.34	212	eP	Pb	15 58 22.6	+0.7
CHN2	**Minshiung**	1.44	236	eP	Pn	15 58 25.7	+2.3
WTCT	**Ta-ch’eng**	1.45	251	eP	Pn	15 58 25.0	+1.5
WTCT				S	Sb	15 58 45.9	+3.5
CHN4	**Tsaushan**	1.47	228	eP	Pn	15 58 25.9	+2.0
CHY	**Chiayi**	1.50	236	eP	Pn	15 58 26.4	+2.1
CHY				S	Sb	15 58 45.8	+2.0
STYT	**Tauyuan**	1.50	219	eP	Pn	15 58 24.6	+0.3
WTP	**Ta-pu**	1.52	225	eP	Pn	15 58 26.2	+1.6
WSF	**Szhu**	1.59	244	eP	Pn	15 58 27.4	+1.9
WSF				S	Sb	15 58 50.1	+3.8
TWK	**Hsinying**	1.59	228	eP	Pn	15 58 27.8	+2.1
CHN1	**Nanshi**	1.62	225	eP	Pn	15 58 27.8	+1.8
TWG	**Pinlang**	1.65	203	eP	Pn	15 58 25.8	-0.6
SGST	**Jiashian**	1.67	221	eP	Pn	15 58 27.8	+1.1
TTN	**Taitung**	1.68	200	eP	Pn	15 58 27.7	+0.8
CHN8	**Yiju**	1.74	236	eP	Pn	15 58 30.0	+2.2
ECL	**Taimali**	1.89	204	eP	Pn	15 58 29.9	0.0
SSD	**Sandimen**	1.91	214	eP	Pn	15 58 31.3	+1.2
TWM1	**Shoushan**	1.96	220	eP	Pn	15 58 31.9	+1.0
SGLT	**Jiouru**	2.00	217	eP	Pn	15 58 34.9	+3.5
EAST	**Anshuo**	2.13	204	eP	Pn	15 58 35.1	+1.8
PNG	**Penghu**	2.18	250	eP	Pn	15 58 34.5	+0.5
PNG				S	Sn	15 59 02.4	+0.8
WDGT	**Dungji**	2.22	241	eP	Pn	15 58 35.6	+1.0
SCZT	**Fangliau**	2.23	209	eP	Pn	15 58 35.5	+0.8
TWK1	**Hengchun**	2.55	201	eP	Pn	15 58 40.3	+1.0

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*NDI **05** 16:17:40.4±4.5, 23.33N×70.15E, h12^{km}±27^{km}, ML3.5*
ISC 05 16:17:33.6±0.8**, 23.80N**±0.05×**70.17E**±0.06**, h10^{km}, n13, σ1^{s}25**/18**, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHJ	**Bhuj**	0.73	221	eP	Pb	16 17 49.0	+1.1
BHJ				eS	Sb	16 17 56.7	-0.9
BHJ				e		16 17 57.2	
	comp=E,5µm,0.2s						
BHJ				e		16 17 57.4	
	comp=N,9µm,0.3s						
BHV	**Bhavnagar**	2.74	138	i	Pn	16 18 21.0	+2.6
BHV				ePB	Pb	16 18 23.0	+0.7
BHV				eSB	Sb	16 18 56.0	0.0
BOM	**Bombay**	5.47	153	e	rx	16 19 35.0	
BOM				eSB	Sb	16 20 14.8	-0.5
POO	**Poona**	6.27	146	eP	Pn	16 19 07.5	-1.0
POO				eS	Sn	16 20 09.0	-12
POO				e		16 21 00.1	
	comp=N,32nm,0.6s						
POO				e		16 21 00.3	
	comp=E,63nm,0.6s						
BHPL	**Bhopal**	6.68	93	i P	Pn	16 19 16.5	+2.2
BHPL				eP		16 19 18.4	
BHPL				eS	Sn	16 20 30.5	-0.6
BHPL				e		16 21 14.4	
	comp=E,31nm,0.5s						
BHPL				e		16 21 14.5	
	comp=N,34nm,0.4s						
KAD	**Karad**	7.47	149	ePG	Pg	16 19 57.0	-5.8
SDNR	**Sundarnagar**	9.75	37	eS	Sn	16 21 51.6	+4.0
SDNR				e		16 22 53.0	
KOLN	**Koldanda**	12.72	69	eP	P	16 20 38.2	+0.7
	comp=N,4.9nm,0.5s						
GKN	**Gorkha**	13.67	69	eP	P	16 20 47.2	-2.9
DMN	**Daman**	13.98	71	eP	P	16 20 54.1	-0.1
	comp=N,8.9nm,0.9s						
KKN	**Kakani**	14.17	71	eP	P	16 20 55.1	-1.6
	comp=N,11nm,0.8s						
PKI	**Pulchoki**	14.24	72	eP	P	16 20 58.1	+0.6
JIRN	**Jiri**	14.94	72	eP	P	16 21 05.6	-1.0
	comp=N,4.3nm,0.3s						

OTT 05 16:20:50.7±0.2**, 53.00N×66.87W, MN2.7**/7**, Blast, Labrador City, Nl Mining explosion., Labrador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	1.83	1	PN	Pn	16 21 23.6	-0.1
SCHQ				SG	Sg	16 21 48.0	-3.8
SCHQ				Trac		16 21 50.8	
	comp=Z,28nm,0.2s						
MNQ	**Manicouagan**	2.74	206	PN	Pn	16 21 36.1	-0.6
MNQ				Trac		16 22 17.9	
	comp=Z,3.6nm,0.1s						
SMQ	**Clarke City**	2.78	178	PN	Pn	16 21 36.1	-1.2
SMQ				SN	Sn	16 22 11.1	-1.0
SMQ				Trac		16 22 18.5	
	comp=Z,8.7nm,0.1s						
ICQ	**Pointe Anglais**	3.49	184	PN	Pn	16 21 45.7	-1.7
ICQ				SN	Sn	16 22 27.0	-3.0
ICQ				Trac		16 22 41.6	
	comp=Z,7.8nm,0.2s						
CNQ	**Baie Comeau**	3.78	192	PN	Pn	16 21 50.1	-1.3
CNQ				SN	Sn	16 22 32.7	-4.6
CNQ				Trac		16 22 52.8	
	comp=Z,4.5nm,0.2s						
GSQ	**Grosses Roches**	4.10	182	PN	Pn	16 21 54.3	-1.7
GSQ				SN	Sn	16 22 42.1	-3.3
GSQ				Trac		16 23 01.8	
	comp=Z,3.9nm,0.2s						
LG4Q	**La Grande 4**	4.38	281	PN	Pn	16 21 56.8	-3.2
LG4Q				SN	Sn	16 22 45.9	-6.7
LG4Q				SG	Sg	16 23 02.8	-14
LG4Q				Trac		16 23 06.1	
	comp=Z,3.8nm,0.2s						
LMQ	**La Malbaie**	5.89	203	PN	Pn	16 22 18.4	-3.0
LMQ				SN	Sn	16 23 25.6	-5.0
DRLN	**Deer Lake**	6.98	119	PN	Pn	16 22 32.2	-4.5
DRLN				SN	Sn	16 23 48.9	-8.9
DRLN				SG	Sg	16 24 23.3	-20
VIMO	**Victor Mine**	10.20	276	PN	P	16 23 15.2	-6.2
VIMO				SN	S	16 24 59.9	-18
SILO	**Sutton Inlier**	10.79	285	PN	P	16 23 21.2	-8.2

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*LDG **05** 16:28:21.4±0.2, 51.69N×7.84E, h1^{km}, Ml2.5/4, Error ellipse: s-maj=2.8km s-min=2.6km az=63.0, Suspected Mining induced.*
*NEIC **05** 16:28:21.7±1.0, 51.59N×7.82E, h10^{km}, ML2.5(LDG), Error ellipse: s-maj=16.7km s-min=7.8km az=101.0*
*BUG **05** 16:28:21.3, 51.67N×7.75E, h1^{km}, ML2.1*
*BNS **05** 16:28:21.3±1.6, 51.71N×7.84E, h1^{km}, ML2.0*
*BGR **05** 16:28:21.8±0.6, 51.58N×7.92E, h1^{km}, ML2.3/1, Error ellipse: s-maj=15.6km s-min=6.7km az=155.0*
*CSEM **05** 16:28:22.3±0.1, 51.67N×7.76E, h2^{km}, ML2.4/4, Error ellipse: s-maj=2.7km s-min=2.1km az=101.0*
ISC 05 16:28:20.2±0.5**, 51.56N**±0.02×**7.82E**±0.05**, n23, σ1^{s}17**/42**, 1C, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHL	**Ahlen**	0.18	1	Pg	Pg	16 28 24.3	+0.5
BAHL				Sg	Sg	16 28 26.3	+0.1
BUG	**Bochum--Univer**	0.36	252	⇑ePg	Pg	16 28 29.4	+2.0
BUG				Sg	Sg	16 28 35.3	+3.1
BUG	**Bochum--Univer**	0.36	252	ePg	Pg	16 28 29.4	+2.0
BUG				eSg	Sg	16 28 35.7	+3.5
BNS	**Bensberg**	0.72	214	eSg	Sg	16 28 50.5	+6.4
IBBN	**Ibbenburen**	0.75	357	ePg	Pg	16 28 35.7	+0.5
WTSB	**Winterswijk**	0.76	303	ePg	Pg	16 28 36.1	+0.8
WTSB				eSg	Sg	16 28 45.7	+0.4
STB	**Steinbach**	1.14	213	ePg	Pg	16 28 44.7	+1.6
STB				eSg	Sg	16 29 00.6	+2.3
	16nm,0.5s						
KLL	**Kalltalsperre**	1.32	227	ePg	Pg	16 28 46.7	+0.2
KLL				eSg	Sg	16 29 04.9	+0.9
BGG	**Burgeitz**	1.39	193	ePg	Pg	16 28 49.7	+1.8
BGG				eSg	Sg	16 29 08.8	+2.4
TNS	**Taunus Mts**	1.39	163	eSg	Sg	16 29 08.3	+1.7
HGN	**Heimansgroeve**	1.43	237	ePg	Pg	16 28 48.4	-0.3
	12nm,0.6s						
HGN				eSg	Sg	16 29 07.5	-0.3
MEM	**Membach**	1.48	231	P	Pn	16 28 49.4	+1.2
MEM				S	Sb	16 29 08.6	+0.9
CLZ	**Clausthal**	1.61	79	ePg	Pg	16 28 51.2	-1.3
WLF	**Walferdange**	2.17	210	P	Pg	16 29 02.6	-0.9
WLF	**Walferdange**	2.17	210	P	Pg	16 29 02.7	-0.8
GIVF	**Givet**	2.39	234	ePn	Pn	16 29 00.8	-0.4
GIVF				ePg	Pg	16 29 07.6	-0.4
GIVF				eSn	Sn	16 29 30.2	-1.5
GIVF				eSg	Sg	16 29 39.5	-0.4
	7.8nm,0.2s						
BAIF	**Baives**	2.74	238	ePn	Pn	16 29 05.7	-0.5
BAIF				ePg	Pg	16 29 13.7	-1.1
BAIF				eSn	Sn	16 29 38.5	-1.9
BAIF				eSg	Sg	16 29 50.1	-1.2
	2.2nm,0.2s						
CDF	**Champ du Feu**	3.17	187	ePn	Pn	16 29 12.5	+0.2
CDF				eSn	Sn	16 29 50.5	-0.8
CDF				eSg	Sg	16 30 05.3	-0.3
	2.2nm,0.4s						
RFYF	**Reffroy**	3.30	208	ePn	Pn	16 29 14.1	0.0
RFYF				eSn	Sn	16 29 52.8	-1.8
RFYF				eSg	Sg	16 30 08.9	-1.0
	3.5nm,0.3s						
MEZF	**Maizieres J’vi**	3.54	211	ePn	Pn	16 29 17.1	-0.5
RUE	**Ruedersdorf**	3.80	74	P	Pg	16 29 29.7	-6.3
SFTF	**Sexfontaines**	3.81	209	ePn	Pn	16 29 19.4	-1.9
SSF	**Saint Saulge**	5.31	214	ePn	Pn	16 29 41.7	-1.0

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*NEIC **05** 16:43:33.9±0.7, 51.55N×16.16E, h5^{km}, ML3.5(VIE), ML3.3(SZGRF), Error ellipse: s-maj=9.3km s-min=7.5km az=32.0*
*WAR **05** 16:43:34.6, 51.48N×16.10E, h1^{km}, ML3.3, Mining*

Induced
*PRU **05** 16:43:34.8, 51.47N×16.10E*
*BGR **05** 16:43:34.1±0.8, 51.53N×16.14E, h1^{km}, ML3.3/6, Error ellipse: s-maj=8.9km s-min=5.6km az=174.0*
*CSEM **05** 16:43:34.9±0.2, 51.47N×16.12E, ML3.7/7, Error ellipse: s-maj=3.0km s-min=1.5km az=20.0*
*IPEC **05** 16:43:34.3±0.2, 51.51N×16.18E, ML2.6/2, Error ellipse: s-maj=1.8km s-min=0.9km az=32.0*
ISC 05 16:43:32.7±0.5**, 51.43N**±0.02×**16.09E**±0.02**, n56, σ1^{s}44**/110**, 5C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**168**	*e*Pg	**Pg**	**16 43 46.5**	**+1.9**
KSP				*i*		16 43 47.0	
KSP				*e*Sg	**Sg**	**16 43 55.6**	**+3.0**
KSP				*e*		16 44 00.7	
KSP	**Ksiaz**	**0.60**	**168**	*e*PG	**Pg**	**16 43 46.0**	**+1.4**
KSP				*e*SG	**Sg**	**16 43 56.0**	**+3.4**
KSP	**Ksiaz**	**0.60**	**168**	*e*Pg	**Pg**	**16 43 47.0**	**+2.4**
KSP				*e*Sg	**Sg**	**16 43 55.4**	**+2.8**
UPC	**Upice**	**0.92**	**183**	*e*PG	**Pg**	**16 43 53.0**	**+1.9**
DPC	**Dobruska-Polom**	**1.09**	**172**	*e*PG	**Pg**	**16 43 55.9**	**+1.5**
DPC				*e*SG	**Sg**	**16 44 10.3**	**+1.5**
DPC	**Dobruska-Polom**	**1.09**	**172**	Pg	**Pg**	**16 43 55.9**	**+1.5**
DPC				*e*Sg	**Sg**	**16 44 10.6**	**+1.8**
PVCC	**Panska Ves**	**1.32**	**228**	*e*PG	**Pg**	**16 44 00.1**	**+1.1**
PVCC	**Panska Ves**	**1.32**	**228**	*e*Pg	**Pg**	**16 44 00.2**	**+1.2**
PVCC				*e*Sg	**Sg**	**16 44 18.8**	**+2.3**
BRG	**Berggiesshubel**	**1.46**	**249**	*e*Pg	**Pg**	**16 44 01.9**	**0.0**
BRG				*e*Sg	**Sg**	**16 44 23.1**	**+1.7**
BRG	**Berggiesshubel**	**1.46**	**249**	*i* Pg	**Pg**	**16 44 02.6**	**+0.7**
BRG				*i* Sg	**Sg**	**16 44 23.0**	**+1.6**
PRU	**Pruhonice**	**1.74**	**215**	*e*PN	**Pn**	**16 44 05.8**	**+1.4**
PRU				*e*PG	**Pg**	**16 44 07.6**	**+0.1**
PRU				*e*SG	**Sg**	**16 44 31.1**	**+0.4**
PRU	**Pruhonice**	**1.74**	**215**	*e*Pg	**Pg**	**16 44 07.6**	**+0.1**
PRU				*e*Sg	**Sg**	**16 44 31.1**	**+0.4**
RUE	**Ruedersdorf**	**1.78**	**307**	*e*Pn	**Pn**	**16 44 04.4**	**-0.5**
RUE				*e*Sn	**Sn**	**16 44 30.9**	**+2.3**
RUE	**Ruedersdorf**	**1.78**	**307**	*e*Pn	**Pn**	**16 44 04.4**	**-0.5**
RUE				*e*Sn	**Sn**	**16 44 30.9**	**+2.3**
MORC	**Moravsky Berou**	**1.89**	**150**	*e*Pn	**Pn**	**16 44 07.7**	**+1.2**
MORC				*e*Sn	**Sn**	**16 44 32.1**	**+0.7**
MORC	**Moravsky Berou**	**1.89**	**150**	*e*Pn	**Pn**	**16 44 07.7**	**+1.2**
MORC				*e*Sn	**Sn**	**16 44 32.1**	**+0.7**
MORC				*e*Sg	**Sg**	**16 44 35.1**	**-0.6**
	42nm,0.3s						
RAC	**Raciborz**	**1.89**	**134**	*e*Pg	**Pg**	**16 44 10.7**	**+0.2**
RAC				*e*Sg	**Sg**	**16 44 35.9**	**+0.2**
CLL	**Collm**	**1.94**	**268**	Pn	**Pn**	**16 44 08.0**	**+0.8**
CLL				*e*Pg	**Pg**	**16 44 10.0**	**-1.4**
CLL				*i* Sg	**Sg**	**16 44 36.2**	**-1.1**
CLL	**Collm**	**1.94**	**268**	*e*PN	**Pn**	**16 44 08.0**	**+0.8**
CLL				*e*PG	**Pg**	**16 44 10.0**	**-1.4**
CLL				*e*		16 44 15.0	
CLL				*i* SG	**Sg**	**16 44 36.2**	**-1.1**
CLL				*i*		16 44 46.0	
CLL	**Collm**	**1.94**	**268**	*e*Pg	**Pg**	**16 44 10.0**	**-1.4**
CLL				Sg	**Sg**	**16 44 36.8**	**-0.5**
OKC	**Ostrava-Krasne**	**2.06**	**140**	*e*PG	**Pg**	**16 44 13.3**	**-0.5**
OKC				*e*SG	**Sg**	**16 44 39.5**	**-1.7**
OKC	**Ostrava-Krasne**	**2.06**	**140**	*e*Pg	**Pg**	**16 44 13.3**	**-0.5**
OKC				*e*Sg	**Sg**	**16 44 40.1**	**-1.1**
VRAC	**Vranov**	**2.14**	**171**	*e*Pn	**Pn**	**16 44 12.8**	**+2.6**
VRAC				*e*Sg	**Sg**	**16 44 44.2**	**+0.1**
	26nm,0.3s						
KRUC	**Moravsky**	**2.37**	**175**	*e*Pn	**Pn**	**16 44 15.9**	**+2.4**
TANN	**Tannenbergstha**	**2.51**	**248**	*e*Sg	**Sg**	**16 44 54.9**	**-1.4**
WERD	**Werda**	**2.59**	**249**	*e*Sg	**Sg**	**16 44 57.2**	**-1.7**
NKC	**Novy Kostel**	**2.60**	**244**	*e*PG	**Pg**	**16 44 24.2**	**-0.4**
NKC				*e*SG	**Sg**	**16 44 58.8**	**-0.5**
	104nm,0.3s						
GUNZ	**Gunzen**	**2.61**	**247**	*e*Sg	**Sg**	**16 44 59.9**	**+0.4**
OJC	**Ojcow**	**2.64**	**116**	*e*PN	**Pn**	**16 44 14.0**	**-3.3**
OJC				*e*PG	**Pg**	**16 44 26.0**	**+0.6**
OJC				*e*SN	**Sn**	**16 44 48.0**	**-2.5**
OJC				*e*SG	**Sg**	**16 45 01.0**	**+0.3**
OJC	**Ojcow**	**2.64**	**116**	*e*Pg	**Pg**	**16 44 25.9**	**+0.5**
OJC				*e*Sn	**Sn**	**16 44 48.4**	**-2.1**
OJC				*e*Sg	**Sg**	**16 45 00.6**	**-0.1**
NEUB	**Neuenburg**	**2.72**	**267**	*e*Sg	**Sg**	**16 45 01.6**	**-1.6**
KHC	**Kasperske Hory**	**2.81**	**216**	*e*PN	**Pn**	**16 44 19.9**	**+0.3**
KHC				*e*PG	**Pg**	**16 44 27.0**	**-1.7**
KHC				*e*SG	**Sg**	**16 45 03.4**	**-2.7**
	21nm,0.3s						
MOX	**Moxa**	**2.93**	**256**	*e*Pn	**Pn**	**16 44 22.8**	**+1.4**
MOX				*e*Sg	**Sg**	**16 45 09.3**	**-1.0**
MOX	**Moxa**	**2.93**	**256**	*e*Pn	**Pn**	**16 44 22.6**	**+1.2**
MOX				*i* Pg	**Pg**	**16 44 29.5**	**-1.7**
MOX				*i* Sg	**Sg**	**16 45 07.9**	**-2.4**
MOX	**Moxa**	**2.93**	**256**	*i* P	**Pn**	**16 44 22.6**	**+1.2**
MOX				Pg	**Pg**	**16 44 30.0**	**-1.2**
MOX				Sg	**Sg**	**16 45 08.0**	**-2.3**
MOX	**Moxa**	**2.93**	**256**	*i* Pg	**Pg**	**16 44 29.5**	**-1.7**
MOX				Sg	**Sg**	**16 45 09.3**	**-1.0**
NOTT	**Nottersdorf**	**3.00**	**239**	*e*Pn	**Pn**	**16 44 23.6**	**+1.2**
GEC2	**GERESS Array S**	**3.01**	**212**	*e*Pn	**Pn**	**16 44 24.7**	**+2.3**
GEC2				*e*Sg	**Sg**	**16 45 12.3**	**-0.4**
GEC2	**GERESS Array S**	**3.01**	**212**	*e*Pn	**Pn**	**16 44 24.7**	**+2.2**
GEC2				*e*Sg	**Sg**	**16 45 12.3**	**-0.5**
SMOL	**Smolenice**	**3.04**	**163**	*i* PG	**Pg**	**16 44 32.8**	**-0.6**
SMOL				*e*SG	**Sg**	**16 45 14.9**	**+1.0**
VKA	**Vienna**	**3.17**	**177**	⇑*i*PG	**Pg**	**16 44 35.0**	**-0.9**
VKA				*i* SG	**Sg**	**16 45 18.5**	**+0.4**
ZST	**Bratislava**	**3.30**	**168**	*i* PG	**Pg**	**16 44 37.5**	**-1.0**
ZST				*i* SG	**Sg**	**16 45 20.2**	**-2.3**
NIE	**Niedzica**	**3.36**	**125**	*e*P	**Pg**	**16 44 36.8**	**-3.1**
NIE				*e*S	**Sg**	**16 45 22.2**	**-2.5**
VYHS	**Vyhne**	**3.43**	**148**	*i* PG	**Pg**	**16 44 39.3**	**-1.8**
VYHS				*i* SG	**Sg**	**16 45 26.0**	**-0.8**
GRA1	**Grafenberg Arr**	**3.56**	**243**	*e*Pn	**Pn**	**16 44 31.0**	**+0.7**
GRA1				*e*Sg	**Sg**	**16 45 29.7**	**-1.4**
GRA1	**Grafenberg Arr**	**3.56**	**243**	Pn	**Pn**	**16 44 31.0**	**+0.7**
GRA1				Sg	**Sg**	**16 45 29.7**	**-1.4**
GRF	**Grafenberg Arr**	**3.56**	**243**	*e*Pn	**Pn**	**16 44 31.0**	**+0.6**
GRF				*e*Sg	**Sg**	**16 45 29.7**	**-1.4**
BSD	**Bornholm Skovb**	**3.76**	**350**	*i* P	**Pn**	**16 44 31.5**	**-1.7**
BSD				*i* S	**Sn**	**16 45 13.7**	**-5.2**
MOA	**Molln**	**3.77**	**199**	⇑*i*PN	**Pn**	**16 44 34.8**	**+1.5**
MOA				*i* SG	**Sg**	**16 45 38.4**	**+0.2**
	27nm,0.6s						
HROE	**Hohe Rhon--Fla**	**3.85**	**259**	⇑*i*Pn	**Pn**	**16 44 34.9**	**+0.4**
ARSA	**Arzberg**	**4.20**	**185**	⇑*i*PN	**Pn**	**16 44 41.5**	**+2.1**
ARSA				*i* SG	**Sg**	**16 45 49.9**	**-2.5**
	34nm,0.8s						
CRVS	**Cervenica-Dubn**	**4.28**	**124**	*e*Pn	**Pn**	**16 44 43.6**	**+3.1**
CRVS				*i* Sg	**Sg**	**16 45 51.7**	**-3.4**
KWP	**Kalwaria**	**4.59**	**110**	*e*Pn	**Pn**	**16 44 37.8**	**-7.1**
KOLS	**Kolonicke sedl**	**4.69**	**120**	*e*PN	**Pn**	**16 44 47.9**	**+1.5**
KBA	**Koelnbreinsper**	**4.71**	**204**	⇑*i*PN	**Pn**	**16 44 48.0**	**+1.3**
KBA				*i* SG	**Sg**	**16 46 07.7**	**-1.7**
	15nm,0.6s						
KAF	**Kangasniemi**	**12.07**	**24**	*e*p	**P**	**16 46 23.3**	**-5.5**

OTT 05 17:00:03.6±0.1**, 52.77N**×**67.30W, MN2.8**/7**, Blast, Mount Wright, Qc Mining explosion., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**2.08**	**7**	PN	Pn	17 00 39.8	-0.4
SCHQ				SG	Sg	17 01 08.3	-4.7
SCHQ				Trac		17 01 12.2	
	comp=Z,23nm,0.2s						
MNQ	**Manicouagan**	**2.42**	**203**	PN	Pn	17 00 45.3	+0.2
MNQ				SN	Sn	17 01 16.9	+1.1
MNQ				Trac		17 01 21.1	
	comp=Z,14nm,0.2s						
SMQ	**Clarke City**	**2.58**	**171**	PN	Pn	17 00 45.7	-1.6
SMQ				SN	Sn	17 01 18.4	-1.4
SMQ				Trac		17 01 27.8	
	comp=Z,14nm,0.2s						
ICQ	**Pointe Anglais**	**3.25**	**180**	PN	Pn	17 00 55.1	-1.8
ICQ				SN	Sn	17 01 33.5	-3.5
ICQ				Trac		17 01 45.4	
	comp=Z,11nm,0.2s						
CNQ	**Baie Comeau**	**3.51**	**188**	PN	Pn	17 00 60.0	-0.5
CNQ				Trac		17 01 55.9	
	comp=Z,6.1nm,0.2s						
GSQ	**Grosses Roches**	**3.87**	**178**	PN	Pn	17 01 03.6	-2.1
GSQ				Trac		17 02 07.0	
	comp=Z,5.3nm,0.2s						
LG4Q	**La Grande 4**	**4.18**	**285**	PN	Pn	17 01 07.8	-2.3
LG4Q				SN	Sn	17 01 54.0	-6.3
LG4Q				Trac		17 02 18.7	
	comp=Z,4.7nm,0.2s						
LMQ	**La Malbaie**	**5.58**	**202**	PN	Pn	17 01 25.5	-4.4
DRLN	**Deer Lake**	**7.11**	**116**	PN	Pn	17 01 47.1	-4.4
VIMO	**Victor Mine**	**9.96**	**277**	PN	P	17 02 23.8	-7.2
SILO	**Sutton Inlier**	**10.60**	**286**	PN	P	17 02 30.1	-10

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*NEIC **05** 17:16:10.0, 37.86N×1.80W, ML3.5(LDG), MN3.1(MDD), After MDD.*
NEIC Felt [III] at Lorca and Zarcilla de Ramos.
*INMG **05** 17:16:10.1±1.4, 37.86N×1.81W, h4^{km}±3^{km}, ML3.1, Error ellipse: s-maj=2.2km s-min=1.7km az=126.0*
*SFS **05** 17:16:10.0, 37.80N×1.80W*
*CSEM **05** 17:16:11.0±0.1, 37.85N×1.74W, h12^{km}, ML3.5/12, Error ellipse: s-maj=2.3km s-min=1.6km az=172.0*
*LDG **05** 17:16:13.1±0.3, 37.91N×1.94W, h5^{km}, Md3.9/1, Ml3.5/4, Error ellipse: s-maj=7.1km s-min=3.3km az=163.0*
MDD 05 17:16:10.1±0.2**, 37.87N**×**1.80W, mbLg3.1**/25**, 3C-2D, Error ellipse: s-maj=3.3km s-min=1.7km az=5.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.44**	**93**	⇑Pg	Pg	17 16 17.9	-1.0
	121nm,0.3s,SNR=18						
EMUR				Lg		17 16 24.4	
	691nm,0.2s,SNR=14						
EMUR	**La Murta**	**0.44**	**93**	⇑Pg	Pg	17 16 18.0	-0.9
CART	**Cartagena**	**0.69**	**114**	*e*Pg	Pg	17 16 22.4	-1.4
CART				*e*Sg	Sg	17 16 32.4	-0.7
CART	**Cartagena**	**0.69**	**114**	⇑P	Pg	17 16 23.9	0.0
CART				S	Sg	17 16 31.9	-1.2
CART	**Cartagena**	**0.69**	**114**	*e*Pg	Pg	17 16 22.5	-1.4
CART	**Cartagena**	**0.69**	**114**	*i* P	Pg	17 16 23.9	0.0
CART				*i* S	Sg	17 16 31.9	-1.2
CART				*e*Sg	Sg	17 16 32.4	-0.7
EVIA	**Vianos**	**0.95**	**325**	⇓Pg	Pg	17 16 27.6	-1.4
	380nm,0.5s,SNR=18						
EVIA				Lg		17 16 40.6	
	115nm,0.2s,SNR=16						
ENIJ	**Nijar**	**0.95**	**200**	Pg	Pg	17 16 27.0	-2.1
	49nm,0.3s,SNR=28						
ENIJ				Lg		17 16 40.3	
	319nm,0.4s,SNR=9.7						
EQES	**Quesada**	**1.01**	**267**	⇓Pg	Pg	17 16 28.7	-1.5
	59nm,0.3s,SNR=18						
EQES				Lg		17 16 43.2	
	248nm,0.3s,SNR=17						
EQES	**Quesada**	**1.01**	**267**	Pg	Pg	17 16 28.7	-1.5
	59nm,0.3s,SNR=18						
EBER	**Berja**	**1.30**	**222**	Pg	Pg	17 16 33.0	-3.0
	116nm,0.8s,SNR=45						
EBER				Lg		17 16 51.8	
	558nm,1.0s,SNR=6.6						
EBER	**Berja**	**1.30**	**222**	Pg	Pg	17 16 33.0	-3.0
	116nm,0.8s,SNR=45						
EBEN	**Beniarda**	**1.50**	**56**	Pn	Pn	17 16 35.7	-2.6
	SNR=7.9						
EBEN				Pg	Pg	17 16 37.4	-2.5
	11nm,0.3s,SNR=26						
EBEN				Lg		17 16 57.7	
	80nm,0.4s,SNR=5.1						
EBEN	**Beniarda**	**1.50**	**56**	Pn	Pn	17 16 35.7	-2.5
	SNR=7.9						
EBEN	**Beniarda**	**1.50**	**56**	Pg	Pg	17 16 37.4	-2.5
	11nm,0.3s,SNR=26						
EBAN	**Banos Encina**	**1.60**	**281**	Pn	Pn	17 16 37.9	-1.8
	19nm,0.2s,SNR=7.9						
EBAN				Lg		17 16 59.6	
	57nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.98**	**262**	Pn	Pn	17 16 44.1	-1.1
	22nm,0.3s,SNR=5.0						
ELUQ				Sn	Sn	17 17 08.0	-3.0
	36nm,0.6s,SNR=6.0						
ELUQ				Lg		17 17 14.1	
	25nm,0.2s,SNR=6.8						
ELOJ	**Sierra Loja**	**2.00**	**250**	Pn	Pn	17 16 45.0	-0.5
	10nm,0.2s,SNR=22						
ELOJ				Lg		17 17 13.5	
	20nm,0.3s,SNR=6.5						
EADA	**Adamuz**	**2.21**	**279**	Pn	Pn	17 16 45.9	-2.6
	9.5nm,0.2s,SNR=62						
EADA				Sn	Sn	17 17 13.1	-3.9
	14nm,0.3s,SNR=6.3						
EADA				Lg		17 17 20.5	
	37nm,0.2s,SNR=9.0						
EADA	**Adamuz**	**2.21**	**279**	Pn	Pn	17 16 45.9	-2.6
	9.5nm,0.2s,SNR=62						
EADA				Sn	Sn	17 17 13.1	-3.9
	14nm,0.3s,SNR=6.3						
ESDC	**Sonseca Array**	**2.47**	**318**	Pn	Pn	17 16 50.5	-1.7
	1.6nm,0.2s,baz=128,slow=13,SNR=14						
ESDC				Pg	Pg	17 16 54.7	-4.8
	18nm,0.1s,baz=130,slow=16,SNR=7.9						
ESDC				Sn	Sn	17 17 18.3	-5.3
	8.2nm,0.3s,baz=129,slow=25,SNR=4.9						
ESDC				Lg		17 17 28.7	
	8.0nm,0.1s,baz=133,slow=28,SNR=16						
ESDC	**Sonseca Array**	**2.47**	**318**	Pn	Pn	17 16 50.5	-1.7
	1.6nm,0.2s,slow=13,SNR=14						
ESDC	**Sonseca Array**	**2.47**	**318**	Pg	Pg	17 16 54.7	-4.7
	18nm,0.1s,slow=16,SNR=7.9						
ESDC				Sn	Sn	17 17 18.3	-5.3
	8.2nm,0.3s,slow=25,SNR=4.9						
ESLA	**Sonseca Array**	**2.47**	**318**	*e*Pn	Pn	17 16 47.8	-4.4
ESLA				*e*Pg	Pg	17 16 55.3	-4.1
ESLA	**Sonseca Array**	**2.47**	**318**	*e*Pn	Pn	17 16 47.8	-4.4
ESLA	**Sonseca Array**	**2.47**	**318**	*e*Pg	Pg	17 16 55.3	-4.1
EMOS	**Mosqueruela**	**2.70**	**22**	Pn	Pn	17 16 53.8	-1.7
	3.8nm,0.4s,SNR=13						
EMOS				Sn	Sn	17 17 25.2	-4.1
	61nm,0.8s,SNR=7.6						
EMOS				Lg		17 17 34.7	
	38nm,0.6s,SNR=6.0						
EMOS	**Mosqueruela**	**2.70**	**22**	Pn	Pn	17 16 53.8	-1.7
	3.8nm,0.4s,SNR=13						
EMOS				Sn	Sn	17 17 25.2	-4.1
	61nm,0.8s,SNR=7.6						
EMIJ	**Mijas**	**2.71**	**242**	Pn	Pn	17 16 54.5	-1.1
	14nm,0.6s,SNR=8.8						
EMIJ				Sn	Sn	17 17 27.0	-2.5
	47nm,0.9s,SNR=4.0						
EMIJ				Lg		17 17 39.5	
	40nm,0.6s,SNR=4.0						
EIBI	**Ibiza**	**2.73**	**64**	Pn	Pn	17 16 53.4	-2.4
	8.1nm,0.6s,SNR=12						
EIBI				Sn	Sn	17 17 24.4	-5.6
	SNR=7.9						
EIBI	**Ibiza**	**2.73**	**64**	Pn	Pn	17 16 53.4	-2.5
	8.1nm,0.6s,SNR=12						
EIBI				Sn	Sn	17 17 24.4	-5.6
	SNR=7.9						
LIJA	**Lijar**	**3.03**	**253**	*e*P	Pn	17 16 59.0	-1.1
GUD	**Guadarrama**	**3.32**	**327**	Pn	Pn	17 17 02.5	-1.8
GUD				Pg	Pg	17 17 11.3	-5.0
GUD				Lg		17 17 53.5	
GUD	**Guadarrama**	**3.32**	**327**	Pn	Pn	17 17 02.5	-1.8
	3.1nm,0.4s,SNR=10						
GUD				Pg	Pg	17 17 11.3	-5.0
	6.9nm,0.2s,SNR=42						
GUD				Lg		17 17 53.5	
	9.5nm,0.2s,SNR=10						
ESPR	**Espera**	**3.38**	**254**	Pn	Pn	17 17 03.2	-2.0
	2.3nm,0.3s,SNR=6.3						
ESPR				Sn	Sn	17 17 43.5	-3.2
	SNR=7.9						
ESPR	**Espera**	**3.38**	**254**	Pn	Pn	17 17 03.2	-2.0
	2.3nm,0.3s,SNR=6.3						
ESPR				Sn	Sn	17 17 43.5	-3.1
	SNR=7.9						
EBR	**Ebro Roquetas**	**3.44**	**30**	*e*PN	Pn	17 17 05.0	-1.1
EBR				*e*S*	Sb	17 17 57.5	+3.1
ERTA	**Horta de San J**	**3.50**	**28**	Pn	Pn	17 17 04.9	-2.0
	5.6nm,0.3s,SNR=10						
ERTA				Sn	Sn	17 17 44.9	-4.7
	SNR=7.9						
ERTA				Lg		17 17 59.9	
	7.8nm,0.2s,SNR=5.0						
ERTA	**Horta de San J**	**3.50**	**28**	Pn	Pn	17 17 04.9	-2.0
	5.6nm,0.3s,SNR=10						
ERTA				Sn	Sn	17 17 44.9	-4.7
	SNR=7.9						
EMIN	**Mina Concepcio**	**3.86**	**270**	Pn	Pn	17 17 08.5	-3.5
EMIN				Sn	Sn	17 17 53.0	-5.7
EMIN				Lg		17 18 10.3	
EMIN	**Mina Concepcio**	**3.86**	**270**	Pn	Pn	17 17 08.5	-3.5
	2.0nm,0.3s,SNR=25						
EMIN				Sn	Sn	17 17 53.0	-5.8
	5.0nm,0.3s,SNR=6.4						
EMIN				Lg		17 18 10.3	
	71nm,0.7s,SNR=8.5						
EMIN	**Mina Concepcio**	**3.86**	**270**	Pn	Pn	17 17 08.5	-3.5
	2.0nm,0.3s,SNR=25						
EMIN				Sn	Sn	17 17 53.0	-5.7
	5.0nm,0.3s,SNR=6.4						
ESAC	**San Caprasio**	**3.98**	**14**	Pn	Pn	17 17 11.6	-2.1
	7.8nm,0.3s,SNR=7.1						
ESAC				Sn	Sn	17 17 56.6	-5.2
	30nm,0.6s,SNR=8.8						
ESAC				Lg		17 18 15.5	
	137nm,0.4s,SNR=5.4						
ESAC	**San Caprasio**	**3.98**	**14**	Pn	Pn	17 17 11.6	-2.1
	7.8nm,0.3s,SNR=7.1						
ESAC				Sn	Sn	17 17 56.6	-5.3
	30nm,0.6s,SNR=8.8						
EPOB	**Poblet**	**4.13**	**32**	Pn	Pn	17 17 13.4	-2.4
	4.8nm,0.3s,SNR=10.0						
EPOB				Sn	Sn	17 18 00.1	-5.5
	SNR=7.9						
EPOB				Lg		17 18 19.0	
	5.2nm,0.4s,SNR=4.0						
EPOB	**Poblet**	**4.13**	**32**	Pn	Pn	17 17 13.4	-2.4
	4.8nm,0.3s,SNR=10.0						
EPOB				Sn	Sn	17 18 00.1	-5.5
	SNR=7.9						
EBAD	**Badajoz**	**4.20**	**284**	Pn	Pn	17 17 14.2	-2.6
EBAD				Sn	Sn	17 18 02.0	-5.2
EBAD				Lg		17 18 22.8	
EBAD	**Badajoz**	**4.20**	**284**	Pn	Pn	17 17 14.2	-2.6
	2.0nm,0.3s,SNR=8.1						
EBAD				Sn	Sn	17 18 02.0	-5.2
	8.9nm,0.3s,SNR=9.7						
EBAD				Lg		17 18 22.8	
	72nm,0.4s,SNR=5.0						
EBAD	**Badajoz**	**4.20**	**284**	Pn	Pn	17 17 14.2	-2.5
	2.0nm,0.3s,SNR=8.1						
EBAD				Sn	Sn	17 18 02.0	-5.2
	8.9nm,0.3s,SNR=9.7						
PBEJ	**Beja**	**4.80**	**274**	*e*Pn	Pn	17 17 21.8	-3.5
PBEJ				*e*Sn	Sn	17 18 14.8	-7.7
PBEJ				*e*Sg	Sg	17 18 42.7	-7.1
	28nm,0.6s						
PBEJ	**Beja**	**4.80**	**274**	*e*Pn	Pn	17 17 21.8	-3.5
PBEJ				*e*Sn	Sn	17 18 14.8	-7.7
PBEJ				*e*Sg	Sg	17 18 42.7	-7.1
	28nm,0.6s						
PCBR	**Castelo Branco**	**4.85**	**296**	*e*Pn	Pn	17 17 22.6	-3.4
PCBR				*e*Sn	Sn	17 18 17.3	-6.5
PCBR				*e*Sg	Sg	17 18 39.8	-12
	41nm,0.4s						
PCBR	**Castelo Branco**	**4.85**	**296**	*e*Pn	Pn	17 17 22.6	-3.4
PCBR				*e*Sn	Sn	17 18 17.3	-6.5
PCBR				*e*Sg	Sg	17 18 39.8	-12
	41nm,0.4s						
EVO	**Evora**	**4.94**	**280**	*e*Pn	Pn	17 17 25.6	-1.7
EVO				*e*Sn	Sn	17 18 20.7	-5.3
EVO				*e*Sg	Sg	17 18 47.8	-6.7
	87nm,0.6s						
EBIE	**Bielsa**	**5.04**	**17**	Pn	Pn	17 17 26.9	-1.8
	1.4nm,0.3s,SNR=14						
EBIE				Sn	Sn	17 18 21.5	-7.0
	SNR=7.9						
EBIE				Lg		17 18 50.7	
	13nm,0.8s,SNR=4.0						
EBIE	**Bielsa**	**5.04**	**17**	Pn	Pn	17 17 26.9	-1.8
	1.4nm,0.3s,SNR=14						
EBIE				Sn	Sn	17 18 21.5	-7.0
	SNR=7.9						
ETSF	**Etsaut**	**5.12**	**10**	*e*Pn	Pn	17 17 27.9	-1.9
ETSF				*e*Sn	Sn	17 18 25.8	-4.6
ETSF				*e*Sg	Sg	17 18 53.1	-7.2
	11nm,0.5s						
MTE	**Manteigas**	**5.13**	**301**	*e*Sn	Sn	17 18 25.7	-5.2
MTE				*e*Sg	Sg	17 18 52.7	-8.2
	32nm,0.8s						
MTE	**Manteigas**	**5.13**	**301**	*e*Sn	Sn	17 18 25.7	-5.2
MTE				*e*Sg	Sg	17 18 52.7	-8.2
	32nm,0.8s						
MOE	**Montemor**	**5.20**	**279**	*e*Sn	Sn	17 18 25.7	-6.9
MOE				*e*Sg	Sg	17 18 55.3	-7.9
SJPF	**Ste Jean**	**5.26**	**5**	*e*Pn	Pn	17 17 28.9	-2.9
SJPF				*e*Sn	Sn	17 18 27.6	-6.5
SJPF				*e*Sg	Sg	17 18 57.8	-7.3
	22nm,0.8s						
EALK	**Alkurruntz**	**5.35**	**2**	Pn	Pn	17 17 31.6	-1.5
	7.0nm,0.4s,SNR=15						
EALK				Sn	Sn	17 18 29.1	-7.3
	SNR=7.9						
EALK				Lg		17 19 05.0	
	16nm,0.5s,SNR=4.0						
EPF	**Esparros**	**5.41**	**17**	*e*Pn	Pn	17 17 31.9	-2.0
EPF				*e*Sn	Sn	17 18 32.2	-5.7
EPF				*e*Sg	Sg	17 19 02.2	-8.0
	9.6nm,0.5s						
PBRG	**Braganca**	**5.47**	**318**	*e*Pn	Pn	17 17 31.2	-3.6
PBRG				*e*Sn	Sn	17 18 32.4	-7.0
PBRG				*e*Sg	Sg	17 18 59.0	-13
	17nm,0.5s						
PBRG	**Braganca**	**5.47**	**318**	*e*Pn	Pn	17 17 31.2	-3.6
PBRG				*e*Sn	Sn	17 18 32.4	-7.0
PBRG				*e*Sg	Sg	17 18 59.0	-13
	17nm,0.5s						
PTEO	**Sao Teotonio**	**5.50**	**269**	*e*Pn	Pn	17 17 31.6	-3.6
PTEO				*e*Sn	Sn	17 18 33.0	-7.1
PTEO				*e*Sg	Sg	17 19 05.4	-7.8
	23nm,0.8s						
PTEO	**Sao Teotonio**	**5.50**	**269**	Pn	Pn	17 17 31.6	-3.6
PTEO				Sn	Sn	17 18 33.0	-7.1
PTEO				Lg		17 19 05.4	
	12nm,0.8s						
ELAN	**Lanestosa**	**5.50**	**347**	Pn	Pn	17 17 33.4	-1.8
	5.0nm,0.8s,SNR=7.7						
ELAN				Sn	Sn	17 18 32.9	-7.2
	SNR=7.9						
ELAN				Lg		17 19 05.8	
	7.1nm,0.4s,SNR=5.0						
ELAN	**Lanestosa**	**5.50**	**347**	Pn	Pn	17 17 33.4	-1.8
	5.0nm,0.8s,SNR=7.7						
ELAN				Sn	Sn	17 18 33.0	-7.2
PVIS	**Viseu**	**5.52**	**303**	*e*Pn	Pn	17 17 32.2	-3.3
PVIS				*e*Sn	Sn	17 18 31.8	-8.8
PVIS				*e*Sg	Sg	17 19 02.6	-11
ECAL	**Calabor**	**5.56**	**319**	Pn	Pn	17 17 32.8	-3.3
	3.4nm,0.4s,SNR=5.3						
ECAL				Sn	Sn	17 18 32.7	-9.1
	SNR=7.9						
ECAL				Lg		17 19 04.4	
	41nm,0.7s,SNR=5.0						
ECAL	**Calabor**	**5.56**	**319**	Pn	Pn	17 17 32.8	-3.3
	3.4nm,0.4s,SNR=5.3						
PVRL	**Vila Real**	**5.70**	**309**	*e*Sn	Sn	17 18 38.6	-6.5
PVRL				*e*Sg	Sg	17 19 07.2	-13
	19nm,0.8s						
PLOU	**Loures**	**5.87**	**282**	*e*Sg	Sg	17 19 11.2	-14
	34nm,0.5s						
EARI	**Arriondas**	**6.02**	**336**	Pn	Pn	17 17 39.8	-2.7
	8.6nm,0.7s,SNR=18						
EARI				Sn	Sn	17 18 42.9	-10
	SNR=7.9						
EARI				Lg		17 19 23.9	
	20nm,0.8s,SNR=5.0						
EARI	**Arriondas**	**6.02**	**336**	Pn	Pn	17 17 39.8	-2.7
	8.6nm,0.7s,SNR=18						
ELOB	**Lobios**	**6.26**	**312**	Pn	Pn	17 17 42.4	-3.5
	0.1nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	17 18 49.2	-10
	SNR=7.9						
ELOB				Lg		17 19 27.0	
	46nm,0.8s,SNR=6.4						
ELOB	**Lobios**	**6.26**	**312**	Pn	Pn	17 17 42.4	-3.5
MTLF	**Montolieu**	**6.26**	**28**	*e*Pn	Pn	17 17 44.4	-1.6
EINC	**Incio**	**6.40**	**320**	Sn	Sn	17 18 53.3	-9.3
	SNR=7.9						
EINC				Lg		17 19 31.8	
	15nm,0.5s,SNR=7.9						
EPON	**Pontenova**	**6.80**	**325**	Pn	Pn	17 17 49.7	-3.9

	18nm,1.2s,SNR=5.5						
EPON				Sn	Sn	17 19 01.1	-12
	SNR=7.9						
EPON				Lg		17 19 44.9	
	10nm,0.5s,SNR=4.0						
EPON	**Pontenova**	**6.80**	**325**	Pn	Pn	17 17 49.7	-3.9
LFF	**La Frestale**	**7.32**	**14**	*e*Pn	Pn	17 17 58.4	-2.4
LASF	**Ste Croix**	**7.53**	**33**	*e*Pn	Pn	17 18 00.9	-2.9
CAF	**Calviac**	**7.63**	**21**	*e*Pn	Pn	17 18 02.0	-3.1
PGF	**Pioggiola**	**9.49**	**57**	*e*Pn	P	17 18 28.9	-2.1
QUIF	**Quistinic**	**10.09**	**355**	*e*Pn	P	17 18 36.3	-3.0
SGMF	**Saint Gilles**	**10.40**	**357**	*e*Pn	P	17 18 39.5	-4.0
ROSF	**Rostrenen**	**10.52**	**355**	*e*Pn	P	17 18 40.8	-4.3

MAN 05 17:24:52.9,17.01N×119.67E,h19^{km},mb4.3,ML3.1, MS2.9,1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.66**	**159**	*e*P	Pb	17 25 06.1	+0.5
BCPH	**Baguio City Da**	**1.07**	**125**	⇑*i*P	Pb	17 25 12.0	-0.6
BCPH				*i* S	Sb	17 25 27.6	+1.4
ABRA	**Dolores**	**1.18**	**57**	*e*P	Pb	17 25 13.4	-1.1
SCZP	**Santa Cruz**	**1.25**	**169**	*e*P	Pn	17 25 14.2	-1.3
APYP	**Conner**	**1.73**	**60**	*e*P	Pn	17 25 22.1	-0.3
CAUP	**Cauayan**	**2.06**	**91**	*e*P	Pn	17 25 30.4	+3.2
BALP	**Baler**	**2.22**	**124**	*e*P	Pn	17 25 32.3	+2.9

CSEM ***05*** *17:31:41.3±0.2,37.38N×23.12E,h100^{km}±2^{km},ML3.0, Error ellipse: s-maj=4.8km s-min=3.8km az=101.0*

HLW ***05*** *17:31:42.5,37.22N×22.73E,h33^{km},Mb3.3*

ATH ***05*** *17:31:43.4,37.46N×22.96E,h80^{km}±6^{km},ML3.0*

ISC 05 17:31:41.6±1.1,37.40N±0.08×23.2E±0.1,h107^{km}±15^{km}, n13,σ0^{s}77/17,3C-5D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NAIG	**Nisos Aigina**	**0.44**	**35**	⇓*i*P	**P**	**17 31 58.0**	**0.0**
VLI	**Veliai**	**0.70**	**195**	⇓*i*P	**P**	**17 31 59.8**	**-0.1**
ATH	**Athens Observa**	**0.72**	**37**	⇑*i*P	**P**	**17 32 00.7**	**+0.6**
PTL	**Penteli**	**0.85**	**40**	⇑*i*P	**P**	**17 32 02.5**	**+1.1**
PTL				*e*S	**S**	**17 32 15.8**	**-0.4**
MPAR	**Parnis Oros**	**0.88**	**31**	⇓*i*P	**P**	**17 32 02.5**	**+0.9**
MPAR				*e*S	**S**	**17 32 15.5**	**-1.1**
ITM	**Ithomi**	**1.01**	**258**	⇓*i*P	**P**	**17 32 02.0**	**-1.0**
KYTH	**Kithira**	**1.12**	**185**	*e*P	**P**	**17 32 05.5**	**+1.2**
EVR	**Evrytania**	**1.85**	**325**	*e*P	**P**	**17 32 12.5**	**-0.6**
VLS	**Valsamata**	**2.18**	**292**	*e*P	**P**	**17 32 17.5**	**+0.1**
VLS	**Valsamata**	**2.18**	**292**	*e*P	**P**	**17 32 18.9**	**+1.5**
SLUM		**6.13**	**163**	⇓P	**P**	**17 33 10.6**	**-0.5**
SWA2		**8.36**	**166**	⇑P	**P**	**17 33 41.1**	**-0.2**
SWA2				S	**S**	**17 35 07.5**	**-7.2**
SWA1		**8.39**	**165**	P	**P**	**17 33 41.3**	**-0.6**
SWA1				S	**S**	**17 35 08.8**	**-6.6**

BJI ***05*** *17:35:43.9,7.86N×93.90E,h37^{km},mB5.8,mb5.3,Ms6.3, Msz6.0*

NEIC ***05*** *17:35:46.9±0.1,8.11N×94.19E,h30^{km},mb5.5/158, MS5.8/132,MW5.7,Error ellipse: s-maj=5.2km s-min=3.6km az=40.0,Moment Tensor Solution. s4 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.04; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$1.19; $M_{r\theta}$-1.24; $M_{\theta\phi}$4.32; $M_{\phi r}$1.55; Best double couple: $M_0$4.9×10^{17} NP1:ϕ_s82°,δ68°,λ-17°. NP2:ϕ_s179°,δ74°, λ-157°. Principal axes: T 4.91, Plg4°, Azm310°; N -.06, Plg62°, Azm212°; P -4.85, Plg27°, Azm42°;*

HRVD ***05*** *17:35:46.9±0.1,8.08N×94.27E,h15^{km},MW5.9/72, Centroid moment Tensor Solution. LP body waves: s50,c99;Mantle waves: s72,c196; Half duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.14±.14; $M_{\theta\theta}$1.27±.12; $M_{\phi\phi}$-0.12±.14; $M_{r\theta}$0.86±.41; $M_{\theta\phi}$8.72±.10; $M_{\phi r}$0.69±.44; Best double couple: $M_0$8.805×10^{17} NP1:ϕ_s2°, δ85°,λ176°. NP2:ϕ_s92°,δ86°,λ5°. Principal axes: T 9.434, Plg6°, Azm317°; N -1.253, Plg84°, Azm131°; P -8.176, Plg1°, Azm227°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***05*** *17:35:47.5±0.8,8.40N×93.98E,h32^{km},mb5.8/107, MS5.7/84 Error ellipse: s-maj=8.2km s-min=3.6km az=124.3*

BGS ***05*** *17:35:52.4±1.8,8.75N×93.47E,h33^{km},mb5.8*

ISC 05 17:35:45.6±0.2,8.11N±0.03×94.21E±0.02,h31^{km}, h31^{km}±.8^{km}:pP-P,n785,σ1^{s}16/694,mb5.5/201,MS5.8/170, 45C-59D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	**6.41**	**98**	P	**Pn**	**17 37 18.0**	**-2.5**
	386nm,0.9s						
NNT	**Nongplab**	**7.02**	**50**	P	**Pn**	**17 37 26.6**	**-2.4**
IPM	**Ipoh**	**7.62**	**117**	P	**Pn**	**17 37 32.9**	**-4.6**
NST	**Nakhon Sawan**	**9.49**	**37**	P	**P**	**17 38 02.0**	**-1.3**
KGM	**Kluang**	**10.90**	**123**	P	**P**	**17 38 18.5**	**-4.4**
CM31	**Chiang Mai Arr**	**11.27**	**24**	*e*P	**P**	**17 38 27.2**	**-0.5**
	55nm,0.6s						
CMAR	**Chiang Mai Arr**	**11.27**	**24**	*i* P	**P**	**17 38 27.2**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,45nm,0.7s						
KKTK	**Khon Kaen**	**11.73**	**45**	P	**P**	**17 38 34.0**	**0.0**
	comp=Z,494nm,0.8s						
CHRT	**Chiangrai**	**12.88**	**24**	⇓P	**P**	**17 38 50.5**	**+1.1**
	comp=Z,600nm,1.3s						
PALK	**Pallekele**	**13.42**	**267**	*e*P	**P**	**17 38 54.8**	**-1.7**
	comp=Z,16nm,0.8s						
VIS	**Vishakhapatnam**	**14.27**	**313**	*e*P	**P**	**17 39 05.7**	**-2.1**
VIS				*e*		17 39 10.2	
	comp=Z,296nm,1.0s						
VIS				*e*		17 41 26.6	
MDRS	**Chennai**	**14.58**	**291**	⇑*e*P	**P**	**17 39 10.0**	**-2.0**
MDRS				*e*		17 41 42.0	
MDRS				*e*		17 42 08.0	
BWNR	**Bhubaneshwar**	**14.59**	**327**	*e*P	**P**	**17 39 08.6**	**-3.5**
BWNR				*e*		17 39 13.5	
	comp=Z,194nm,0.8s						
BWNR				*e*		17 41 45.1	
AGT	**Agartala**	**15.94**	**350**	⇓*i*P	**P**	**17 39 29.0**	**-0.5**
AGT				*i*		17 42 06.0	
SALM	**Salem**	**16.16**	**284**	⇑*i*	**P**	**17 39 37.0**	**+4.6**
SALM				*i*		17 42 20.0	
IMP	**Imphal**	**16.58**	**359**	⇓*i*P	**P**	**17 39 37.0**	**-0.6**
SHL	**Shillong**	**17.50**	**353**	⇑*i*P	**P**	**17 39 46.0**	**-3.2**
	comp=Z,1µm,1.8s						
SHL				*i* S	**S**	**17 43 03.0**	**+2.2**
BOK	**Bokaro**	**17.52**	**334**	⇓*i*P	**P**	**17 39 48.5**	**-0.9**
BOK				*i*		17 43 11.1	
HYB	**Hyderabad**	**17.84**	**303**	⇑*e*P	**P**	**17 39 51.0**	**-2.4**
HYB				pmax	pmax		
	comp=Z,286nm,1.2s						
HYB	**Hyderabad**	**17.84**	**303**	⇑*e*P	**P**	**17 39 51.0**	**-2.4**
	comp=Z,286nm,1.2s						
HYB				*e*S	**S**	**17 43 15.0**	**+6.4**
HYB	**Hyderabad**	**17.84**	**303**	⇑*i*P	**P**	**17 39 51.0**	**-2.4**
	comp=Z,286nm,1.2s						
HYB				*e*S	**S**	**17 43 03.0**	**-5.6**
HYB				*e*		17 43 15.0	
HYB				LR	LR	17 45 40.0	
	comp=Z,23nm,24.0s						
BLSP	**Bilaspur**	**18.15**	**321**	*e*P	**P**	**17 39 57.6**	**+0.2**
BLSP				*e*		17 40 07.9	
	comp=Z,535nm,1.4s						
BLSP				*e*		17 43 13.7	
QIZ	**Qiongzhong**	**18.65**	**53**	P	**P**	**17 40 03.2**	**-0.2**
QIZ				PP	PP	17 40 19.5	+0.3
QIZ				S	**S**	**17 43 26.9**	**0.0**
QIZ				AMB	AMB		
	comp=Z,7µm,9.5s						
QIZ				LR	LR		
	comp=N,103µm,14.0s						
QIZ				LR	LR		
	comp=Z,45µm,18.6s						
QIZ	**Qiongzhong**	**18.65**	**53**	⇓*e*P	**P**	**17 40 00.0**	**-3.4**
	comp=Z,213nm,1.3s						
KMI	**Kunming**	**18.77**	**25**	P	**P**	**17 40 07.1**	**+2.3**
KMI				AP		17 40 12.7	
KMI				PP	PP	17 40 25.6	+4.7
KMI				S	**S**	**17 43 40.9**	**+11**
KMI				XS		17 43 49.2	
KMI				AMB	AMB		
	comp=Z,132nm,1.2s						
KMI				AMB	AMB		
	comp=Z,4µm,8.4s						
KMI				LR	LR		
	comp=N,44µm,14.5s						
KMI				LR	LR		
	comp=E,59µm,17.1s						
KMI				LR	LR		
	comp=Z,30µm,13.2s						
KMI	**Kunming**	**18.77**	**25**	P	**P**	**17 40 07.1**	**+2.3**
KMI				pmax	pmax		
	comp=Z,132nm,1.2s						
KMI	**Kunming**	**18.77**	**25**	P	**P**	**17 40 07.1**	**+2.3**
	comp=Z,132nm,1.2s						
KMI				pP		17 40 12.7	
KMI				sP		17 40 15.1	
KMI				PP	PP	17 40 25.6	+4.7
KMI				S	**S**	**17 43 40.9**	**+11**
KMI				sS		17 43 49.2	
KMI				SS	SS	17 44 07.5	+13
NGP	**Nagpur**	**19.55**	**313**	*e*P	**P**	**17 40 12.7**	**-1.3**
NGP				*e*		17 43 54.1	
MNGI	**Mangalore**	**19.66**	**286**	*i* P	**P**	**17 40 16.2**	**+1.2**
	comp=Z,279nm,1.8s						
MNGI				*i* S	**S**	**17 43 57.8**	**+8.4**
GTK	**Gangtok**	**19.84**	**345**	*e*P	**P**	**17 40 13.0**	**-4.1**
LATR	**Latur**	**19.98**	**303**	*e*P	**P**	**17 40 18.0**	**-0.7**
COCO	**West Island**	**20.34**	**173**	*e*P	**P**	**17 40 20.6**	**-1.6**
	comp=Z,361nm,0.8s						
COCO				LR	LR		
	comp=Z,2µm,20.0s						
ALBI	**Allahabad**	**20.80**	**327**	*e*P	**P**	**17 40 25.0**	**-2.0**
JIRN	**Jiri**	**20.87**	**340**	*e*P	**P**	**17 40 26.5**	**-1.2**
	comp=Z,2µm,1.2s						
MNCY	**Minicoy**	**20.96**	**272**	⇑*i*P	**P**	**17 40 30.0**	**+1.2**
PKI	**Pulchoki**	**21.07**	**338**	*e*P	**P**	**17 40 27.5**	**-2.3**
	comp=Z,1µm,1.2s,mb6.2						
DMN	**Daman**	**21.22**	**337**	*e*P	**P**	**17 40 28.7**	**-2.6**
	comp=Z,989nm,0.9s,mb6.2						
GOA	**Goa**	**21.25**	**292**	*e*	**P**	**17 40 40.4**	**+8.7**
	comp=Z,365nm,1.7s,mb5.4						
GOA				*e*S	**S**	**17 44 28.0**	**+6.9**
KKN	**Kakani**	**21.32**	**338**	*e*P	**P**	**17 40 30.6**	**-1.7**
	comp=Z,1µm,1.2s,mb6.1						
KAD	**Karad**	**21.55**	**297**	*e*P	**P**	**17 40 35.3**	**+0.6**
KAD				*e*		17 40 38.5	
	comp=Z,245nm,1.1s						
KAD				*e*		17 44 29.0	
LSA	**Lhasa**	**21.67**	**353**	P	**P**	**17 40 34.6**	**-1.2**
LSA				XP		17 40 52.5	
LSA				S	**S**	**17 44 33.7**	**+4.9**
LSA				LR	LR		
	comp=N,6µm,13.7s						
LSA				LR	LR		
	comp=E,11µm,20.6s						
LSA				LR	LR		
	comp=Z,18µm,16.2s,MS5.6						
LSA	**Lhasa**	**21.67**	**353**	⇑*e*P	**P**	**17 40 30.9**	**-4.9**
LSA				pmax	pmax		
	comp=Z,187nm,0.9s,mb5.5						
LSA	**Lhasa**	**21.67**	**353**	⇑*e*P	**P**	**17 40 30.9**	**-4.9**
	comp=Z,186nm,0.9s,mb5.5						
GYA	**Guiyang**	**21.75**	**31**	⇓*i*P	**P**	**17 40 37.1**	**+0.6**
GYA				AP		17 40 46.1	
GYA				XP		17 40 50.0	
GYA				S	**S**	**17 44 39.1**	**+8.8**
GYA				AMB	AMB		
	comp=Z,100nm,0.9s,mb5.2						
GYA				AMB	AMB		
	comp=Z,3µm,11.8s						
GYA				LR	LR		
	comp=N,52µm,15.0s,MS6.3						
GYA				LR	LR		
	comp=E,65µm,14.4s,MS6.3						
GYA				LR	LR		
	comp=Z,34µm,18.0s,MS5.8						
GKN	**Gorkha**	**21.76**	**337**	*e*P	**P**	**17 40 35.6**	**-1.1**
	comp=Z,2µm,1.2s,mb6.3						
KKM	**Kota Kinabalu**	**21.93**	**94**	P	**P**	**17 40 40.3**	**+1.8**
KOLN	**Koldanda**	**21.98**	**334**	*e*P	**P**	**17 40 37.5**	**-1.4**
	comp=Z,2µm,1.5s,mb6.4						
BHPL	**Bhopal**	**22.04**	**315**	*e*P	**P**	**17 40 40.6**	**+1.0**
BHPL				*e*		17 40 46.1	
	comp=Z,632nm,1.1s						
BHPL				*e*S	**S**	**17 44 39.6**	**+3.8**
POO	**Poona**	**22.33**	**300**	*e*P	**P**	**17 40 44.5**	**+2.0**
POO				*e*		17 40 50.6	
	comp=Z,339nm,1.2s						
JHNI	**Jhansi**	**22.82**	**321**	⇑*i*P	**P**	**17 40 49.0**	**+1.6**
JHNI				*e*		17 41 11.0	
BOM	**Bombay**	**23.38**	**299**	*e*P	**P**	**17 40 56.3**	**+3.6**
	comp=Z,474nm,12.3s						
BOM				*e*		17 45 10.5	
TSM	**Tawau**	**23.82**	**98**	P	**P**	**17 40 57.9**	**+0.8**
HKC	**Hong Kong**	**23.83**	**51**	⇓*e*P	**P**	**17 40 58.0**	**+0.9**
HKC				*i* S	**S**	**17 45 15.0**	**+7.4**
CD2	**Chengdu**	**24.37**	**20**	P	**P**	**17 41 03.8**	**+1.4**
CD2				AP		17 41 12.4	
CD2				XP		17 41 17.3	
CD2				S	**S**	**17 45 20.3**	**+3.5**
CD2				XS		17 45 36.5	
CD2				SS	SS	17 46 18.3	+6.8
CD2				AMB	AMB		
	comp=Z,100nm,0.6s,mb5.4						
CD2				AMB	AMB		
	comp=Z,2µm,5.0s						
CD2				LR	LR		
	comp=N,64µm,13.8s						
CD2				LR	LR		
	comp=Z,49µm,10.9s,MS6.3						
LGTI	**Lohaghat**	**24.96**	**330**	*e*P	**P**	**17 41 08.5**	**+0.5**
PTH	**Pithoragarh**	**25.05**	**330**	*e*P	**P**	**17 41 11.0**	**+2.1**
PTH				*e*		17 45 45.0	
AJM	**Ajmer**	**26.06**	**317**	*i* P	**P**	**17 41 19.0**	**+0.7**
DGAR	**Diego Garcia**	**26.62**	**235**	P	**P**	**17 41 30.0**	**+6.5**
DGAR				MLR	MLR		
	comp=Z,4µm,22.0s,MS4.9						
DGAR	**Diego Garcia**	**26.62**	**235**	PFAKE		17 41 30.0	+6.5
DGAR				LR	LR		
	comp=Z,4µm,22.0s,MS4.9						
DDI	**Dehra Dun**	**26.78**	**328**	*e*P	**P**	**17 41 25.3**	**+0.4**
DDI				*e*S	**S**	**17 46 01.8**	**+4.8**
SMLA	**Simla**	**27.89**	**327**	⇑*i*	**P**	**17 41 48.2**	**+13**
SMLA				*i*		17 46 48.3	
SDNR	**Sundarnagar**	**28.28**	**328**	*e*P	**P**	**17 41 38.6**	**+0.1**
BHK	**Bhakra**	**28.51**	**327**	*e*	**P**	**17 41 54.5**	**+14**
BHK				*e*		17 47 22.5	
QZH	**Quanzhou**	**28.66**	**51**	P	**P**	**17 41 40.2**	**-1.8**
QZH				S	**S**	**17 46 33.5**	**+6.2**
QZH				LR	LR		
	comp=N,40µm,13.8s,MS6.5						
QZH				LR	LR		
	comp=E,76µm,14.1s,MS6.5						
QZH				LR	LR		
	comp=Z,89µm,15.8s,MS6.5						
PONG	**Pong**	**29.18**	**327**	*e*P	**P**	**17 41 46.0**	**-0.6**
PONG				*e*		17 48 40.0	
LZH	**Lanzhou**	**29.20**	**16**	⇓P	**P**	**17 41 46.5**	**-0.3**
LZH				AP	pP	17 41 55.6	-0.3
LZH				XP	sP	17 41 59.6	-0.4
LZH				PP	PP	17 42 42.1	+0.4
LZH				S	**S**	**17 46 36.0**	**+0.2**
LZH				XS		17 46 51.5	
LZH				SS	SS	17 48 07.8	+0.8
LZH				AMB	AMB		
	comp=Z,208nm,1.5s,mb5.6						
LZH				AMB	AMB		
	comp=Z,789nm,5.4s						
LZH				LR	LR		
	comp=E,15µm,12.3s						
LZH				LR	LR		
	comp=Z,26µm,16.9s,MS5.9						
LZH	**Lanzhou**	**29.20**	**16**	⇓P	**P**	**17 41 46.5**	**-0.3**
	comp=Z,208nm,1.5s,mb5.6						
LZH				pP	pP	17 41 55.6	-0.3
LZH				sP	sP	17 41 59.6	-0.4
LZH				PP	PP	17 42 42.1	+0.4
LZH				S	**S**	**17 46 36.0**	**+0.2**
LZH				sS		17 46 51.5	
LZH				SS	SS	17 48 07.8	+0.8
LZH				LR	LR		
	comp=Z,26µm,16.9s,MS5.9						
WHN	**Wuhan**	**29.20**	**37**	⇑P	**P**	**17 41 48.0**	**+1.2**
WHN				S	**S**	**17 46 42.7**	**+6.8**
WHN				AMB	AMB		
	comp=Z,2µm,12.6s						
WHN				LR	LR		
	comp=Z,59µm,11.8s,MS6.4						
THN	**Thein Dam**	**29.67**	**327**	*e*P	**P**	**17 41 49.2**	**-1.8**
TATO	**Taipei**	**30.96**	**54**	PFAKE		17 42 10.0	+7.6
TATO				LR	LR		
	comp=Z,22µm,19.0s,MS5.8						
DAV	**Davao City (W)**	**31.10**	**90**	*e*P	**P**	**17 42 06.0**	**+2.2**
GTA	**Gaotai**	**31.57**	**8**	*e*P	**P**	**17 42 07.8**	**+0.2**
GTA				AP	pP	17 42 16.0	-0.9
GTA				XP	sP	17 42 19.6	-1.3
GTA				PP	PP	17 43 11.4	-1.0
GTA				PCP	PcP	17 45 02.9	+3.1
GTA				S	**S**	**17 47 12.1**	**-1.0**
GTA				XS		17 47 28.4	
GTA				SCS	ScS	17 52 39.0	+3.2
GTA				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.8						
GTA				AMB	AMB		
	comp=Z,396nm,4.6s						
GTA				LR	LR		
	comp=N,10µm,16.7s,MS5.8						
GTA				LR	LR		
	comp=E,13µm,14.1s,MS5.8						
GTA				LR	LR		
	comp=Z,11µm,16.0s,MS5.6						
NJ2	**Nanjing**	**33.04**	**40**	*e*P	**P**	**17 42 21.1**	**+0.5**
NJ2				AP	pP	17 42 31.0	+1.2
NJ2				XP	sP	17 42 35.2	+1.4
NJ2				PP	PP	17 43 32.9	+1.3
NJ2				S	**S**	**17 47 37.0**	**+0.8**
NJ2				XS		17 47 54.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,402nm,4.8s						
NJ2				LR	LR		
	comp=N,21µm,10.0s,MS6.5						
NJ2				LR	LR		
	comp=E,43µm,10.0s,MS6.5						
NJ2				LR	LR		
	comp=Z,194µm,16.0s						
TIY	**Taiyuan**	**33.77**	**26**	*e*P	**P**	**17 42 23.0**	**-3.9**
TIY				S	**S**	**17 47 50.0**	**+2.6**
TIY				LR	LR		
	comp=N,33µm,13.0s						
SSE	**Sheshan**	**34.00**	**44**	P	**P**	**17 42 30.5**	**+1.6**
SSE				XP	sP	17 42 43.2	+1.0
SSE				S	**S**	**17 47 53.1**	**+2.1**
SSE				XS		17 48 07.8	
SSE				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.9						
SSE				AMB	AMB		
	comp=Z,520nm,7.6s						
SSE				LR	LR		
	comp=N,18µm,16.1s,MS6.1						
SSE				LR	LR		
	comp=E,21µm,16.1s,MS6.1						
SSE				LR	LR		
	comp=Z,21µm,14.1s,MS6.0						
SSE	**Sheshan**	**34.00**	**44**	P	**P**	**17 42 30.5**	**+1.6**
	comp=Z,14nm,0.8s,mb4.9						
SSE				sP	sP	17 42 43.2	+1.0
SSE				S	**S**	**17 47 53.1**	**+2.1**
SSE				sS		17 48 07.8	
SSE				LR	LR		
	comp=Z,21µm,14.1s,MS6.0						
TIA	**Tai'an**	**34.91**	**33**	*e*P	**P**	**17 42 37.4**	**+0.7**
TIA				S	**S**	**17 48 09.0**	**+3.9**
TIA				LR	LR		
	comp=N,7µm,10.2s,MS5.9						
TIA				LR	LR		
	comp=E,10µm,13.7s,MS5.9						
KSH	**Kashi**	**35.29**	**335**	⇑P	**P**	**17 42 39.0**	**-0.9**
KSH				*e*AP	pP	17 42 49.1	0.0
KSH				*e*XP	sP	17 42 53.3	+0.2
KSH				*e*PP	PP	17 43 56.4	-3.1
KSH				*e*PCP	PcP	17 45 09.3	-0.9
KSH				*e*S	**S**	**17 48 09.0**	**-1.9**
KSH				*e*XS		17 48 26.0	
KSH				*e*SCP		17 48 52.0	
KSH				*e*SS	SS	17 50 26.0	-2.8
KSH				*e*SCS	ScS	17 52 53.2	-1.9
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.7						
KSH				AMB	AMB		
	comp=Z,320nm,5.8s						
KSH				LR	LR		
	comp=N,12µm,16.4s,MS6.0						
KSH				LR	LR		
	comp=E,16µm,14.3s,MS6.0						
BTO	**Baotou**	**35.29**	**21**	*e*P	**P**	**17 42 40.0**	**+0.1**
BTO				S	**S**	**17 48 13.2**	**+2.3**
BTO				AMB	AMB		
	comp=Z,35nm,1.1s,mb5.2						
BTO				LR	LR		
	comp=N,4µm,12.7s,MS6.0						
BTO				LR	LR		
	comp=E,20µm,16.3s,MS6.0						
WMQ	**Urumqi**	**36.02**	**352**	P	**P**	**17 42 45.6**	**-0.4**
WMQ				AP	pP	17 42 55.4	+0.1
WMQ				XP	sP	17 42 59.2	-0.1
WMQ				PP	PP	17 44 07.8	-0.5
WMQ				S	**S**	**17 48 21.0**	**-1.2**
WMQ				SS	SS	17 50 44.0	-1.6
WMQ				AMB	AMB		
	comp=Z,64nm,1.0s,mb5.5						
WMQ				LR	LR		
	comp=N,8µm,18.0s,MS5.9						
WMQ				LR	LR		
	comp=E,16µm,18.0s,MS5.9						
WMQ				LR	LR		
	comp=Z,9µm,16.0s,MS5.6						
HHC	**Hu-ho-hao-te**	**36.07**	**23**	⇓P	**P**	**17 42 47.6**	**+1.1**
HHC				AP	pP	17 42 57.3	+1.5
HHC				XP	sP	17 43 01.1	+1.4
HHC				PP	PP	17 44 11.8	+2.9
HHC				PCP	PcP	17 45 10.6	-1.9
HHC				S	**S**	**17 48 28.4**	**+5.4**
HHC				XS		17 48 47.6	
HHC				SCP		17 48 53.6	
HHC				SS	SS	17 50 54.6	+7.9
HHC				SCS	ScS	17 52 59.3	-0.1
HHC				AMB	AMB		
	comp=Z,56nm,1.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,1µm,5.4s						
HHC				LR	LR		
	comp=N,21µm,15.6s,MS6.2						
HHC				LR	LR		
	comp=E,23µm,15.6s,MS6.2						
HHC				LR	LR		
	comp=Z,19µm,15.6s,MS6.0						
WBK	**Wadi Bani Khal**	**36.79**	**297**	⇑P	**P**	**17 42 56.0**	**+3.3**
	SNR=11						
BJT	**Baijiatuau**	**37.34**	**28**	*e*P	**P**	**17 42 54.9**	**-2.3**
BJT				pmax	pmax		
	comp=Z,122nm,1.0s						
BJT	**Baijiatuau**	**37.34**	**28**	*e*P	**P**	**17 42 54.9**	**-2.2**
	comp=Z,122nm,1.0s,mb5.7						
BJI	**Beijing**	**37.36**	**28**	P	**P**	**17 42 59.3**	**+2.0**
BJI				AP	pP	17 43 08.1	+1.5
BJI				XP	sP	17 43 11.9	+1.3
BJI				S	**S**	**17 48 50.2**	**+7.5**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.7						
BJI				LR	LR		
	comp=N,21µm,16.1s,MS6.2						
BJI				LR	LR		
	comp=E,23µm,16.1s,MS6.2						
BJI				LR	LR		
	comp=Z,15µm,20.8s,MS5.8						
BJI	**Beijing**	**37.36**	**28**	P	**P**	**17 42 59.3**	**+2.0**
	comp=Z,8.0nm,0.7s,mb4.7						
BJI				pP	pP	17 43 08.1	+1.5
BJI				sP	sP	17 43 11.9	+1.3
BJI				S	**S**	**17 48 50.2**	**+7.5**
BJI				SS	SS	17 51 44.8	+29
BJI				LR	LR		
	comp=Z,15µm,20.8s,MS5.8						
JMDO	**Jabal Madar**	**37.49**	**296**	⇑P	**P**	**17 43 01.4**	**+2.8**
	SNR=8.7						
SMDO	**Samad**	**37.74**	**297**	⇓P	**P**	**17 43 03.5**	**+2.9**
	SNR=15						
KZA	**Kyzart**	**37.75**	**337**	P	**P**	**17 43 01.7**	**+1.1**

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           SNR=14
BIDO  Bidbid             37.81 298 ⇑P     P      17 43 04.4 +3.1
           SNR=14
AAA   Alma-Ata           38.16 339 eP     P      17 43 02.0 -2.0
AAA                                eS     S      17 48 50.0 -4.7
AAA                                 pmax  pmax
           comp=Z,3µm,7.0s
AAA                                 smax
           comp=N,2µm,8.0s
AAA                                 MLR   MLR
           comp=Z,8µm,17.0s,MS5.6
UCH   Uchtor             38.17 336  P     P      17 43 03.9 -0.2
           SNR=26
TKM2  Tokmak 2           38.34 338  P     P      17 43 05.2 -0.3
           SNR=13
KBK   Karagaybulak       38.36 337  P     P      17 43 06.1 +0.4
           SNR=41
BSY   Bisya              38.40 297 ⇓P     P      17 43 08.7 +2.5
           SNR=26
MBWA  Marble Bar         38.40 140  P     P      17 43 04.4 -1.8
MBWA                                LR    LR
           comp=Z,6µm,20.0s,MS5.4
AML   Almayashu          38.42 335  P     P      17 43 06.3 +0.1
           SNR=63
AAK   Ala-Archa          38.52 336  P     P      17 43 07.5 +0.5
           SNR=33
AAK   Ala-Archa          38.52 336⇑eP     P      17 43 05.8 -1.2
AAK                                 pmax  pmax
           comp=Z,88nm,1.0s,mb5.4
AAK                                 MLR   MLR
           comp=Z,6µm,21.0s,MS5.4
AAK   Ala-Archa          38.52 336⇑eP     P      17 43 05.8 -1.2
           comp=Z,88nm,1.0s,mb5.4
AAK                                 LR    LR
           comp=Z,6µm,21.0s,MS5.4
HOQ   Hoqain             38.54 298 ⇑P     P      17 43 10.3 +2.9
           SNR=22
FRU   Bishkek            38.64 337 eP     P      17 43 08.0  0.0
FRU                                i             17 44 55.0
FRU                                e             17 49 06.0
FRU                                 pmax  pmax
           comp=Z,160nm,1.6s,mb5.5
FRU                                 MLR   MLR
           comp=Z,20µm,20.0s,MS5.9
CHMS  Chumysh            38.73 337  P     P      17 43 08.8  0.0
           SNR=28
SHAO  Shalim             38.78 289 ⇓P     P      17 43 12.5 +3.1
EKS2  Erkin-Say          38.83 336  P     P      17 43 10.4 +0.8
           SNR=17
USP   Ospenovka          39.05 337  P     P      17 43 11.6 +0.1
           SNR=44
ARQ   Araqi              39.16 297 ⇑P     P      17 43 15.7 +3.1
           SNR=15
DL2   Dalian             39.34  35  P     P      17 43 17.3 +3.4
DL2                                 PP    PP     17 44 54.0 +5.9
DL2                                 S     S      17 49 18.0 +5.4
DL2                                 AMB   AMB
           comp=Z,50nm,1.1s,mb5.2
DL2                                 AMB   AMB
           comp=Z,500nm,5.1s
DL2                                 LR    LR
           comp=N,6µm,17.8s,MS5.7
DL2                                 LR    LR
           comp=E,7µm,13.5s,MS5.7
DL2                                 LR    LR
           comp=Z,9µm,12.3s,MS5.8
MKAR  Makanchi Array     39.87 347 i P    P      17 43 17.0 -1.2
MKAR                                pmax  pmax
           comp=Z,58nm,0.9s
ASHO  Ashiyiah           39.96 299 ⇑P     P      17 43 22.9 +3.7
           SNR=12
RBK   Rabkut             40.04 288 ⇓P     P      17 43 22.0 +2.1
           SNR=10
BANOM Banah              40.15 301 ⇑P     P      17 43 23.4 +2.7
FITZ  Fitzroy Crossi     40.51 130 eP     P      17 43 21.2 -2.5
           comp=Z,40nm,1.1s,mb5.0
WHFO  Wadi Hawf          40.51 288 ⇑P     P      17 43 25.1 +1.4
           SNR=121
ABTO  Aybut              40.88 287 ⇑P     P      17 43 28.4 +1.7
           SNR=33
ULN   Ulaanbaatar        41.09  13 eP     P      17 43 27.8 -0.5
           comp=Z,18nm,0.8s,mb4.8
ULN                                 LR    LR
           comp=Z,11µm,19.0s,MS5.7
INCN  Inchon             41.42  40 eP     P      17 43 31.9 +0.8
           comp=Z,138nm,1.5s,mb5.4
INCN                                LR    LR
           comp=Z,26µm,19.0s,MS6.1
KS15  Wonju Array Si     42.21  41 eP     P      17 43 38.8 +1.3
SNY   Shenyang           42.43  33 ⇓P     P      17 43 40.2 +0.9
SNY                                 AP    pP     17 43 49.4 +0.7
SNY                                 XP    sP     17 43 52.4 -0.2
SNY                                 PP    PP     17 45 23.4 +3.0
SNY                                 S     S      17 49 57.8 -0.9
SNY                                 AMB   AMB
           comp=Z,30nm,1.1s,mb4.8
SNY                                 AMB   AMB
           comp=Z,740nm,9.3s
SNY                                 LR    LR
           comp=N,9µm,13.3s,MS6.1
SNY                                 LR    LR
           comp=E,15µm,14.1s,MS6.1
SNY                                 LR    LR
           comp=Z,10µm,13.7s,MS5.9
ZAK   Zakamensk          42.81   9⇓iP     P      17 43 42.2 -0.1
ZAK                                 pmax  pmax
           comp=Z,13nm,1.1s,mb4.6
MOY   Mondy              43.78   6 eP     P      17 43 48.4 -1.7
MOY                                 pmax  pmax
           comp=Z,39nm,3.6s
TLY   Talaya             44.12   8 eP     P      17 43 54.7 +1.8
TLY                                eS     S      17 50 26.1 +3.0
TLY                                eSS    SS     17 53 49.0  +16
TLY                                e             17 54 22.7
TLY                                 pmax  pmax
           comp=Z,35nm,1.8s,mb4.8
TLY                                 MLR   MLR
           comp=Z,5µm,16.0s,MS5.6
TLY   Talaya             44.12   8 eP     P      17 43 53.4 +0.5
           comp=Z,9.3nm,0.8s,mb4.6
TLY                                 LR    LR
           comp=Z,2µm,22.0s,MS5.0
KURK  Kurchatov          44.40 346 i P    P      17 43 54.0 -1.2
KURK                                pmax  pmax
           comp=Z,120nm,1.3s,mb5.5
KURK  Kurchatov          44.40 346 eP     P      17 43 54.0 -1.2
           comp=Z,149nm,1.1s,mb5.6
KURK                                LR    LR
           comp=Z,3µm,20.0s,MS5.2
IRK   Irkutsk            44.77   9 eP     P      17 43 58.6 +0.5
IRK                                e             17 45 44.0
IRK                                 pmax  pmax
           comp=Z,64nm,2.6s,mb5.0
CN2   Changchun          44.79  32 eP     P      17 43 59.3 +0.9
CN2                                eAP    pP     17 44 08.7 +0.9
CN2                                 PCP   PcP    17 45 44.2 +3.7
CN2                                eS     S      17 50 34.2 +1.3
CN2                                 SS    SS     17 53 52.2 +6.9
CN2                                 AMB   AMB
           comp=Z,10.0nm,1.0s,mb4.6
CN2                                 AMB   AMB
           comp=Z,1µm,5.0s
CN2                                 LR    LR
           comp=N,9µm,13.0s,MS6.2
CN2                                 LR    LR
           comp=E,19µm,13.0s,MS6.2
CN2                                 LR    LR
           comp=Z,16µm,14.0s,MS6.1
MUN   Mundaring          45.06 153 eP     P      17 44 01.3 +0.5
           comp=Z,61nm,0.9s,mb5.4
MUN   Mundaring          45.06 153 eP     P      17 44 01.3 +0.5
MUN                                 pmax  pmax
           comp=Z,61nm,0.9s,mb5.4
KLBR  Kellerberrin       45.45 151 eP     P      17 44 03.2 -0.6
           comp=Z,857nm,1.0s,mb6.5
HIA   Hailar             46.28  23⇓eP     P      17 44 06.2 -3.9
HIA                                 pmax  pmax
           comp=Z,113nm,1.2s
HIA   Hailar             46.28  23⇓eP     P      17 44 06.2 -3.9
           comp=Z,113nm,1.2s,mb5.7
NWAO  Narrogin (SRO)     46.32 153  P     P      17 44 09.8 -0.9
NWAO                                pmax  pmax
           comp=Z,120nm,1.1s
NWAO  Narrogin (SRO)     46.32 153 eP     P      17 44 09.2 -1.5
           comp=Z,124nm,1.1s,mb5.8
NWAO                                LR    LR
           comp=Z,9µm,22.0s,MS5.7
NVS   Novosibirsk        47.42 351 eP     P      17 44 17.4 -1.7
NVS                                eS     S      17 51 03.8 -6.5
NVS                                 pmax  pmax
           comp=N,137nm,1.4s
NVS                                 pmax  pmax
           comp=E,89nm,1.4s
NVS                                 pmax  pmax
           comp=Z,203nm,1.4s,mb5.9
NVS                                 smax
           comp=N,98nm,2.9s
NVS                                 smax
           comp=E,126nm,2.9s
MDJ   Mudanjiang         47.57  34  P     P      17 44 23.2 +2.8
MDJ                                 AP    pP     17 44 33.0 +3.1
MDJ                                 XP    sP     17 44 37.1 +3.4
MDJ                                 PP    PP     17 46 15.8 +4.6
MDJ                                 PCS          17 49 42.3
MDJ                                 XS           17 51 36.9
MDJ                                 AMB   AMB
           comp=Z,57nm,1.4s,mb5.4
MDJ                                 AMB   AMB
           comp=Z,669nm,8.5s
MDJ                                 LR    LR
           comp=N,7µm,18.4s,MS5.8
MDJ                                 LR    LR
           comp=E,8µm,17.2s,MS5.8
MDJ                                 LR    LR
           comp=Z,13µm,19.5s,MS5.9
MDJ   Mudanjiang         47.57  34 eP     P      17 44 18.8 -1.6
           comp=Z,85nm,1.3s,mb5.6
VLA   Vladivostok        47.99  37 eP     P      17 44 33.0 +9.3
VLA                                i S    S      17 51 27.0 +8.6
VLA                                 pmax  pmax
           comp=Z,2µm,12.0s
VLA                                 pmax  pmax
           comp=E,2µm,11.0s
VLA                                 pmax  pmax
           comp=Z,1µm,9.0s
VLA                                 pmax  pmax
           comp=N,1µm,5.0s
VLA                                 pmax  pmax
           comp=E,1µm,7.0s
VLA                                 smax
           comp=E,4µm,14.0s
VLA                                 smax
           comp=N,2µm,16.0s
VLA                                 MLR   MLR
           comp=Z,22µm,13.0s,MS6.3
VLA                                 MLR   MLR
           comp=N,10µm,15.0s,MS6.2
VLA                                 MLR   MLR
           comp=E,14µm,15.0s,MS6.2
LBOS                     48.34 281⇓eP     P      17 44 29.0 +2.3
WRAB  Tennant Creek      48.34 126 eP     P      17 44 23.9 -2.8
WRAB                                pmax  pmax
           comp=Z,41nm,0.9s,mb5.5
WRAB                                MLR   MLR
           comp=Z,2µm,19.0s,MS5.1
WRAB  Tennant Creek      48.34 126 eP     P      17 44 23.9 -2.8
           comp=Z,41nm,0.9s,mb5.5
WRAB                                LR    LR
           comp=Z,2µm,19.0s,MS5.1
WB2   Warramunga Arr     48.35 126 eP     P      17 44 24.4 -2.4
BVA0  Borovoye Array     48.79 341 eP     P      17 44 27.9 -1.8
BVA0                                pmax  pmax
           comp=Z,13nm,1.4s,mb4.8
MAJO  Matsushiro         48.95  48  PFAKE        17 44 40.0 +8.8
MAJO                                LR    LR
           comp=Z,13µm,21.0s,MS5.9
MAT   Matsushiro         48.95  48 eP     P      17 44 31.0 -0.2
MAT                                eS     S      17 51 38.0 +6.0
MAT                                 pmax  pmax
           comp=Z,63nm,1.4s,mb5.5
MAT                                 MLR   MLR
           comp=Z,12µm,20.0s,MS5.9
MAT   Matsushiro         48.95  48 eP     P      17 44 31.0 -0.2
           comp=Z,63nm,1.4s,mb5.5
MAT                                eS     S      17 51 38.0 +6.0
MAT                                 LR    LR
           comp=Z,12µm,20.0s,MS5.9
MAT   Matsushiro         48.95  48  P     P      17 44 31.1 -0.1
MAT                                 S     S      17 51 37.6 +5.6
DHBB  Dhamar BB          49.19 282⇓eP     P      17 44 35.6 +2.3
CHKZ  Chkalovo           49.27 342  P     P      17 44 32.2 -1.2
CHKZ                                pmax  pmax
           comp=Z,97nm,1.0s,mb5.8
CHKZ  Chkalovo           49.27 342 eP     P      17 44 31.8 -1.6
           comp=Z,78nm,0.8s,mb5.8
TRBA  At Turbah          49.43 280⇑eP     P      17 44 37.3 +2.2
TRBA                                AMb   AMB    17 44 38.1
           comp=Z,68nm,0.9s,mb5.7
GUMO  Guam               49.98  79  PFAKE        17 44 50.0  +11
GUMO                                LR    LR
           comp=Z,3µm,19.0s,MS5.3
ASPA  Alice Springs      50.01 130 eP     P      17 44 37.7 -1.8
FORT  Forrest            50.48 142 eP     P      17 44 42.4 -0.6
           comp=Z,194nm,0.8s,mb6.2
KLR   Kul'dur            51.64  31 eP     P      17 44 48.5 -3.1
KLR                                eS     S      17 52 09.5 +0.4
KLR                                 MLR   MLR
           comp=E,10µm,14.0s
KLR                                 MLR   MLR
           comp=Z,20µm,14.0s,MS6.3
BOD   Bodaibo            51.90  13 eP     P      17 44 52.4 -1.0
BOD                                 pmax  pmax
           comp=Z,122nm,1.9s,mb5.5
BHD   Baghdad            52.30 306 eP     P      17 44 44.0  -13
MAK   Makhachkala        53.59 318 eP     P      17 45 10.0 +3.9
MAK                                e             17 46 09.0
MAK                                eS     S      17 52 38.0 +2.3
MAK                                e             17 54 55.0
MAK                                 pmax  pmax
           comp=Z,1µm,6.0s
MAK                                 smax
           comp=N,2µm,8.0s
MAK                                 smax
           comp=E,3µm,8.0s
MAK                                 smax
           comp=Z,1µm,8.0s
MAK                                 MLR   MLR
           comp=Z,6µm,15.0s,MS5.8
CLNS  Chul'man           54.19  20 eP     P      17 45 10.9 +0.6
CLNS                               e*PP   pP     17 45 18.9 -1.0
CLNS                               e             17 46 13.7
CLNS                               e             17 47 10.2
CLNS                               eS     S      17 52 46.0 +2.4
CLNS                               eSS    SS     17 56 18.7 -6.3
CLNS                                pmax  pmax
           comp=Z,94nm,1.1s,mb5.6
CLNS                                pmax  pmax
           comp=N,51nm,1.2s
CLNS                                pmax  pmax
           comp=E,53nm,1.1s
CLNS                                pmax  pmax
           comp=Z,18nm,1.1s,mb4.9
CLNS                                pmax  pmax
           comp=N,13nm,1.2s
CLNS                                pmax  pmax
           comp=E,16nm,1.0s
CLNS                                smax
           comp=N,1µm,15.2s
CLNS                                smax
           comp=Z,497nm,12.3s
CLNS                                smax
           comp=E,284nm,15.1s
CLNS                                MLR   MLR
           comp=N,5µm,12.0s,MS5.9
CLNS                                MLR   MLR
           comp=E,2µm,12.0s,MS5.9
CLNS                                MLR   MLR
           comp=Z,9µm,12.0s,MS6.0
MSL   Mosul              54.22 309 eP     P      17 45 13.5 +2.6
GNI   Garni              54.32 314  P     P      17 45 11.5 -0.1
GNI                                 pmax  pmax
           comp=Z,78nm,1.1s
GNI   Garni              54.32 314 eP     P      17 45 10.8 -0.8
           comp=Z,78nm,1.1s,mb5.5
GNI                                 LR    LR
           comp=Z,3µm,19.0s,MS5.4
TI2   Plekhanov          54.93 316⇓iP     P      17 45 15.6 -0.4
TI2                                i S    S      17 52 54.2 +0.5
TI2                                 MLR   MLR
           comp=N,1µm,15.0s,MS5.2
TI2                                 MLR   MLR
           comp=E,1µm,15.0s,MS5.2
TI2                                 MLR   MLR
           comp=Z,2µm,15.0s,MS5.4
SVE   Sverdlovsk         55.21 338⇓iP     P      17 45 18.0 +0.2
SVE                                eS     S      17 53 00.0 +2.7
SVE                                 pmax  pmax
           comp=Z,220nm,2.0s,mb5.8
SVE                                 MLR   MLR
           comp=N,9µm,22.0s,MS5.9
SVE                                 MLR   MLR
           comp=E,8µm,22.0s,MS5.9
SVE                                 MLR   MLR
           comp=Z,16µm,22.0s,MS6.1
PMG   Port Moresby       55.53 107  PFAKE        17 45 30.0 +9.3
PMG                                 LR    LR
           comp=Z,3µm,21.0s,MS5.4
ARU   Arti               55.70 337  P     P      17 45 20.2 -1.2
           comp=Z,368nm,1.3s,mb6.2,SNR=41
ARU   Arti               55.70 337⇑iP     P      17 45 12.5 -8.9
ARU                                e             17 46 14.0
ARU                                eS     S      17 52 51.2  -13
ARU                                 pmax  pmax
           comp=Z,93nm,1.2s,mb5.7
ARU                                 MLR   MLR
           comp=N,9µm,20.0s,MS6.0
ARU                                 MLR   MLR
           comp=Z,17µm,20.0s,MS6.1
ARU                                 MLR   MLR
           comp=E,9µm,19.0s,MS6.0
YSS   Yuzh-Sakhalins     56.55  38 eP     P      17 45 27.7 +0.1
YSS                                e             17 45 40.0
YSS                                 S     S      17 53 22.0 +6.7
YSS                                 pmax  pmax
           comp=Z,70nm,1.0s,mb5.7
YSS                                 pmax  pmax
           comp=Z,90nm,1.0s,mb5.8
YSS                                 MLR   MLR
           comp=Z,7µm,17.0s,MS5.8
YSS                                 MLR   MLR
           comp=N,4µm,16.0s,MS6.0
YSS                                 MLR   MLR
           comp=E,8µm,14.0s,MS6.0
YSS   Yuzh-Sakhalins     56.55  38 eP     P      17 45 28.0 +0.4
           comp=E,76nm,1.1s,mb5.6
YSS                                 LR    LR
           comp=Z,7µm,20.0s,MS5.7
ERZM  Erzurum            56.66 313 i P    P      17 45 28.0 -0.6
KIV   Kislovodsk         57.19 318  P     P      17 45 31.4 -0.8
           comp=Z,406nm,1.2s,mb6.3,SNR=18
KIV   Kislovodsk         57.19 318d iP    P      17 45 31.1 -1.1
KIV   Kislovodsk         57.19 318 eP     P      17 45 30.4 -1.8
           comp=Z,58nm,0.9s,mb5.6
KIV                                 LR    LR
           comp=Z,1µm,22.0s,MS4.9
GOF   Gofitskoye         57.40 319⇑iP     P      17 45 33.0 -0.7
GOF                                i S    S      17 53 34.0 +7.5
GOF                                 pmax  pmax
           comp=Z,60nm,1.4s,mb5.4
GOF                                 smax
           comp=N,6µm,8.0s
GOF                                 MLR   MLR
           comp=N,6µm,16.0s,MS6.0
GOF                                 MLR   MLR
           comp=E,7µm,16.0s,MS6.0
GOF                                 MLR   MLR
           comp=Z,8µm,16.0s,MS5.9
KMBO  Kilima Mbogo       57.52 263  P     P      17 45 36.4 +1.4
KMBO                                S     S      17 53 35.1 +6.6
KMBO  Kilima Mbogo       57.52 263 eP     P      17 45 35.6 +0.6
KMBO                                pmax  pmax
           comp=Z,63nm,0.8s
KMBO                                MLR   MLR
           comp=Z,3µm,19.0s
KMBO  Kilima Mbogo       57.52 263 eP     P      17 45 35.6 +0.6
           comp=Z,63nm,0.8s,mb5.7
KMBO                                LR    LR
           comp=Z,3µm,19.0s,MS5.5
ELZG  Elazig             58.00 311 i P    P      17 45 37.1 -0.9
CTA   Charters Tower     58.36 119 eP     P      17 45 39.6 -1.1
           comp=Z,10nm,1.0s,mb4.8
CTA   Charters Tower     58.36 119 eP     P      17 45 39.6 -1.1
CTA                                 pmax  pmax
           comp=Z,10.0nm,1.0s
CTAO  Charters Tower     58.36 119  P     P      17 45 39.5 -1.2
CTAO                                pmax  pmax
           comp=Z,24nm,1.1s,mb5.1
CTAO  Charters Tower     58.36 119 eP     P      17 45 38.5 -2.2
           comp=Z,24nm,1.1s,mb5.1
CTAO                                LR    LR
           comp=Z,5µm,20.0s,MS5.6
MALT  Malatya            58.37 310  P     P      17 45 39.7 -0.8
MALT                                pmax  pmax
           comp=Z,38nm,1.2s,mb5.3
MALT  Malatya            58.37 310 eP     P      17 45 38.1 -2.4
           comp=Z,38nm,1.2s,mb5.3
SOKR  Solikamsk          58.61 339⇓iP     P      17 45 41.4 -0.5
SOKR                                pmax  pmax
           comp=Z,200nm,1.2s,mb6.0
SOKR                                MLR   MLR
           comp=Z,19µm,21.0s,MS6.2
GZT   Gaziantep          58.77 309 i P    P      17 45 42.0 -1.4
SOC   Sochi              59.06 316 eP     P      17 45 43.2 -2.1
SOC                                ePPP   PPP    17 49 16.2 -5.9
SOC                                eS     S      17 53 42.5 -5.8
SOC                                i SS   SS     17 57 34.9 -9.2
SOC                                 pmax  pmax
           comp=Z,102nm,1.4s,mb5.7
SOC                                 pmax  pmax
           comp=N,126nm,1.3s
SOC                                 pmax  pmax
           comp=E,98nm,1.3s
SOC                                 MLR   MLR
           comp=Z,3µm,22.0s,MS5.4
SOC                                 MLR   MLR
           comp=N,4µm,28.0s
SOC                                 MLR   MLR
           comp=E,3µm,24.0s
EIL   Elat               59.37 300 eP     P      17 45 46.6 -1.1
           comp=E,56nm,1.0s,mb5.5
COBT  Iskenderun         59.59 308 i P    P      17 45 47.4 -1.7
YAK   Yakutsk            59.75  18c iP    P      17 45 49.9 +0.1
YAK                                e*PP   pP     17 45 59.9 +0.4
YAK                                e             17 46 42.2
YAK                                e             17 47 57.1
YAK                                eS     S      17 53 48.0 -8.9
YAK                                e             17 55 36.8
YAK                                 pmax  pmax
           comp=Z,83nm,1.0s,mb5.7
YAK                                 pmax  pmax
           comp=N,50nm,1.1s
YAK                                 pmax  pmax
           comp=E,33nm,1.1s
YAK                                 pmax  pmax
           comp=Z,6.0nm,0.9s,mb4.6
YAK                                 pmax  pmax
           comp=N,7.0nm,1.3s
YAK                                 pmax  pmax
           comp=E,5.0nm,1.0s
YAK                                 smax
           comp=N,5.0nm,1.3s
YAK                                 smax
           comp=E,3.0nm,1.0s
YAK                                 MLR   MLR
           comp=Z,4µm,12.0s,MS5.8
YAK                                 MLR   MLR
           comp=N,4µm,13.0s,MS5.8
YAK                                 MLR   MLR
           comp=E,3µm,12.0s,MS5.8
YAK   Yakutsk            59.75  18 eP     P      17 45 48.0 -1.8
           comp=E,174nm,1.1s,mb6.0
YAK                                 LR    LR
           comp=Z,7µm,22.0s,MS5.7
STKA  Stephens Creek     60.22 134⇑iP     P      17 45 51.2 -2.2
           comp=Z,14nm,1.0s,mb5.0
ANN   Anapa              61.01 317 eP     P      17 45 51.5 -7.1
ANN                                 pmax  pmax
           comp=Z,138nm,2.1s,mb5.7
AVNT  Avonos             61.19 310 i P    P      17 45 57.5 -2.5
BOYT  Boyabat            61.81 313 i P    P      17 46 02.8 -1.3
PECR  Pechory            61.96 331 eP     P      17 46 03.0 -1.9
PECR                               eS     S      17 54 22.0 -3.2
PECR                               ePS    PS     17 54 43.0 -3.0
PECR                                pmax  pmax
           comp=Z,900nm,5.0s
PECR                                smax
           comp=E,3µm,10.0s
PECR                                smax
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	comp=N,3µm,12.0s						
PECR				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.8						
BR131	**Keskin Array S**	**62.33**	**311**	PFAKE		17 46 20.0	+12
BR131				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
BRTR	**Keskin Array B**	**62.33**	**311**	*i* P	**P**	**17 46 04.8**	**-2.8**
VOR	**Voronezh**	**62.43**	**325**	*e*P	**P**	**17 46 06.0**	**-2.1**
VOR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.9						
ELDT	**Eldivan**	**62.66**	**311**	*i* P	**P**	**17 45 57.9**	**-12**
SIM	**Simferopol'**	**63.31**	**316**	*e*P	**P**	**17 46 13.4**	**-0.6**
SIM				*e*S	**S**	**17 54 43.0**	**+0.7**
SIM				*i* PS	PS	17 55 09.0	+4.1
SIM				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.5						
SIM				MLR	MLR		
	comp=Z,6µm,24.7s,MS5.7						
SIM	**Simferopol'**	**63.31**	**316**	*i* Pr		17 46 13.1	
MBAR	**Mbarara**	**63.85**	**265**	*d* *i*P	**P**	**17 46 18.1**	**0.0**
MBAR	**Mbarara**	**63.85**	**265**	*e*P	**P**	**17 46 17.8**	**-0.3**
	comp=Z,80nm,1.6s,mb5.5						
MBAR				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
ISP	**Isparta**	**64.35**	**308**	*e*P	**P**	**17 46 17.9**	**-3.1**
MOS	**Moscow**	**64.92**	**329**	κ *i*P	**P**	**17 46 23.5**	**-0.8**
MOS				*e*	pP	17 46 33.5	-0.5
MOS				*e*		17 46 54.9	
MOS				*e*		17 48 46.4	
MOS				*e*S	**S**	**17 55 00.9**	**-1.1**
MOS				pmax	pmax		
	comp=Z,700nm,2.0s,mb6.3						
MOS				pmax	pmax		
	comp=Z,318nm,1.5s,mb6.1						
MOS				pmax	pmax		
	comp=N,57nm,1.0s						
MOS				pmax	pmax		
	comp=E,137nm,1.0s						
MOS				MLR	MLR		
	comp=Z,10µm,19.1s,MS6.0						
OBN	**Obninsk**	**65.22**	**328**	*d* *e*P	**P**	**17 46 25.0**	**-1.3**
OBN				*e*		17 48 49.6	
OBN				*i* S	S	17 55 04.6	-1.1
OBN				pmax	pmax		
	comp=Z,243nm,1.5s,mb6.0						
OBN	**Obninsk**	**65.22**	**328**	*e*P	**P**	**17 46 24.7**	**-1.5**
	comp=Z,268nm,1.4s,mb6.1						
OBN				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
TOO	**Toolangi**	**65.98**	**137**	*e*P	**P**	**17 46 31.0**	**-0.4**
	comp=Z,1.2nm,1.0s						
TOO	**Toolangi**	**65.98**	**137**	*e*P	**P**	**17 46 31.0**	**-0.4**
TOO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MA2	**Magadan**	**66.52**	**28**	*e*P	**P**	**17 46 35.4**	**+0.9**
MA2				*e*S	S	17 55 22.7	+1.1
MA2				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
MA2				MLR	MLR		
	comp=Z,10µm,22.5s,MS6.0						
MA2	**Magadan**	**66.52**	**28**	*e*P	**P**	**17 46 34.6**	**+0.1**
	comp=Z,94nm,1.3s,mb5.7						
MA2				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
KIS	**Kishinev**	**67.40**	**318**	*e*P	**P**	**17 46 38.0**	**-2.3**
KIS				*e*S	S	17 55 28.0	-4.3
KIS				MLR	MLR		
	comp=N,2µm,20.0s,MS5.6						
KIS				MLR	MLR		
	comp=E,3µm,20.0s,MS5.6						
KIS				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
KIS				MLR	MLR		
	comp=Z,1µm,18.0s						
CFR	**Carcaliu**	**67.48**	**316**	⇓*i*P	**P**	**17 46 37.6**	**-3.2**
CFR	**Carcaliu**	**67.48**	**316**	⇓*i*P	**P**	**17 46 37.5**	**-3.3**
CNB	**Canberra Magne**	**67.54**	**133**	*e*P	**P**	**17 46 40.0**	**-1.4**
	comp=Z,244nm,1.1s,mb6.2						
JMB	**Yambol**	**68.09**	**312**	*e*P	**P**	**17 46 45.0**	**+0.3**
RIV	**Riverview**	**68.17**	**131**	⇓*i*P	**P**	**17 46 45.8**	**+0.4**
PET	**Petropavlovsk**	**68.30**	**36**	*e*P	**P**	**17 46 54.4**	**+8.6**
PET				*e*		17 49 20.6	
PET				pmax	pmax		
	comp=Z,400nm,16.6s						
PET				pmax	pmax		
	comp=Z,300nm,12.0s						
PET				MLR	MLR		
	comp=Z,6µm,17.0s,MS5.9						
PET	**Petropavlovsk**	**68.30**	**36**	PFAKE		17 47 00.0	+14
PET				LR	LR		
	comp=Z,6µm,20.0s,MS5.8						
VRI	**Vrincioaia**	**68.58**	**316**	⇓*i*P	**P**	**17 46 47.5**	**-0.2**
SEY	**Seymchan**	**68.68**	**25**	*e*P	**P**	**17 46 50.7**	**+2.7**
SEY				*e*		17 47 16.5	
SEY				*e*		17 49 18.2	
SEY				*e*PPP	PPP	17 51 06.9	+7.3
SEY				*e*S	S	17 55 52.1	+4.7
SEY				*e*		17 56 41.1	
SEY				SS	SS	18 00 14.9	+1.1
SEY				pmax	pmax		
	comp=N,20nm,1.2s						
SEY				pmax	pmax		
	comp=E,50nm,1.2s						
SEY				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
SEY				smax			
	comp=N,6µm,28.3s						
SEY				smax			
	comp=E,2µm,22.4s						
SEY				MLR	MLR		
	comp=N,20µm,17.0s,MS6.6						
SEY				MLR	MLR		
	comp=Z,50µm,17.0s,MS6.8						
SEY				MLR	MLR		
	comp=E,19µm,16.0s,MS6.6						
DIM	**Dimitrovgrad**	**68.80**	**312**	*e*P	**P**	**17 46 48.0**	**-1.1**
KDZ	**Kurdzhali**	**68.83**	**311**	*e*P	**P**	**17 46 52.0**	**+2.7**
MLR	**Muntele Rosu**	**69.05**	**316**	⇓*i*P	**P**	**17 46 50.0**	**-0.6**
PVL	**Pavlikeni**	**69.12**	**313**	*e*P	**P**	**17 46 51.0**	**-0.1**
SNX	**Sinaia**	**69.33**	**315**	⇓*i*P	**P**	**17 46 47.8**	**-4.5**
RZN	**Rozhen**	**69.35**	**311**	*i* P	**P**	**17 46 52.0**	**-0.5**
LSZ	**Lusaka**	**69.42**	**250**	*e*P	**P**	**17 46 53.5**	**+0.2**
LSZ				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
LSZ				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.8						
LSZ	**Lusaka**	**69.42**	**250**	*e*P	**P**	**17 46 53.5**	**+0.2**
	comp=Z,17nm,0.9s,mb5.0						
LSZ				LR	LR		
	comp=Z,6µm,19.0s,MS5.8						
MNK	**Minsk**	**69.80**	**325**	⇓*e*P	**P**	**17 46 50.0**	**-5.0**
PGB	**Panagyurishte**	**69.87**	**312**	*e*P	**P**	**17 46 55.0**	**-0.7**
PAIG	**Paliouri**	**69.92**	**309**	*e*P	**P**	**17 46 59.3**	**+3.3**
BURAR	**Bucovina Array**	**69.92**	**318**	P	**P**	**17 46 55.8**	**-0.1**
TAU	**Tasmania Unive**	**70.02**	**141**	PFAKE		17 47 10.0	+13
TAU				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
PUL	**Pulkovo**	**70.04**	**331**	*e*P	**P**	**17 46 55.6**	**-0.8**
PUL				*e*S	S	17 56 04.6	+1.1
PUL				pmax	pmax		
	comp=Z,109nm,0.6s,mb6.0						
PUL				pmax	pmax		
	comp=N,83nm,0.8s						
PUL				pmax	pmax		
	comp=E,284nm,1.4s						
PUL				smax			
	comp=N,343nm,1.9s						
PUL				smax			
	comp=E,277nm,1.3s						
PUL				pmax	pmax		
	comp=Z,6µm,19.0s						
PUL				pmax	pmax		
	comp=N,6µm,24.0s						
PUL				pmax	pmax		
	comp=E,5µm,20.0s						
MMB	**Musomiste**	**70.08**	**311**	*i* P	**P**	**17 46 56.0**	**-0.9**
SRS	**Serrai**	**70.12**	**311**	*e*P	**P**	**17 46 55.5**	**-1.7**
SOH	**Sokhos**	**70.27**	**310**	*e*P	**P**	**17 46 58.0**	**-0.1**
THE	**Thessaloniki**	**70.54**	**310**	*e*P	**P**	**17 46 58.1**	**-1.6**
VTS	**Vitosha**	**70.58**	**312**	P	**P**	**17 46 59.3**	**-0.7**
VTS	**Vitosha**	**70.58**	**312**	*i* P	**P**	**17 46 59.0**	**-1.0**
KKB	**Krupnik**	**70.59**	**311**	*i* P	**P**	**17 46 58.5**	**-1.5**
KNT	**Kendrikon**	**70.65**	**311**	*e*P	**P**	**17 46 57.8**	**-2.6**
JOF	**Joensuu**	**70.67**	**334**	*e*p	**P**	**17 46 58.1**	**-2.1**
	comp=E,29nm,0.6s,mb5.4						
LIT	**Litokhoron**	**70.85**	**310**	*e*P	**P**	**17 46 59.8**	**-1.9**
GRG	**Griva**	**71.00**	**310**	*e*P	**P**	**17 47 00.6**	**-2.0**
LVV	**L'vov**	**71.08**	**320**	*e*P	**P**	**17 47 03.0**	**+0.1**
LVV				*e*S	S	17 56 18.0	+2.2
LVZ	**Lovozero**	**71.36**	**340**	*e*P	**P**	**17 47 03.5**	**-0.8**
LVZ				*e*S	S	17 56 20.8	+2.0
LVZ				pmax	pmax		
	comp=Z,180nm,3.0s						
LVZ				pmax	pmax		
	comp=N,61nm,1.9s						
LVZ				pmax	pmax		
	comp=E,41nm,1.1s						
LVZ				smax			
	comp=N,675nm,4.0s						
LVZ				smax			
	comp=E,1µm,4.8s						
LVZ				MLR	MLR		
	comp=N,5µm,19.0s,MS6.2						
LVZ				MLR	MLR		
	comp=Z,15µm,19.0s,MS6.3						
LVZ				MLR	MLR		
	comp=E,13µm,22.0s,MS6.2						
BOLS	**Boljevac**	**71.63**	**313**	⇓*i*P	**P**	**17 47 04.9**	**-1.4**
APA	**Apatity**	**71.65**	**339**	⇑*i*P	**P**	**17 47 05.8**	**-0.2**
APA				*i* S	S	17 56 22.0	-0.1
APA				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.7						
APA				MLR	MLR		
	comp=Z,15µm,20.0s,MS6.2						
FNA	**Florina**	**71.76**	**310**	*e*P	**P**	**17 47 02.7**	**-4.4**
SKO	**Skopje**	**71.82**	**311**	*e*P	**P**	**17 47 03.0**	**-4.5**
SKO				*i*		17 47 09.0	
KWP	**Kalwaria**	**71.90**	**320**	*e*P	**P**	**17 47 06.7**	**-1.1**
UZH	**Uzhgorod**	**72.02**	**318**	*c* *i*P	**P**	**17 47 08.0**	**-0.5**
UZH				*e*S	S	17 56 20.0	-6.6
UZH	**Uzhgorod**	**72.02**	**318**	⇑*i*P	**P**	**17 47 08.0**	**-0.5**
KOLS	**Kolonicke sedl**	**72.07**	**319**	*i* P	**P**	**17 47 08.7**	**-0.2**
SUW	**Suwalki**	**72.36**	**324**	*e*P	**P**	**17 47 09.0**	**-1.4**
SUW	**Suwalki**	**72.36**	**324**	*e*P	**P**	**17 47 09.0**	**-1.5**
IGT	**Igoumenitsa**	**72.45**	**309**	*e*P	**P**	**17 47 09.5**	**-1.8**
GRUS	**Gruza**	**72.53**	**313**	⇓*i*P	**P**	**17 47 11.0**	**-0.7**
CRVS	**Cervenica-Dubn**	**72.60**	**319**	*i* P	**P**	**17 47 12.1**	**+0.1**
CRVS				*e*		17 47 16.1	
KAF	**Kangasniemi**	**72.61**	**333**	*e*p	**P**	**17 47 10.7**	**-1.1**
	comp=Z,24nm,0.5s,mb5.4						
KAF	**Kangasniemi**	**72.61**	**333**	*e*P	**P**	**17 47 10.7**	**-1.1**
KAF				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.4						
DIVS	**Divcibare**	**73.07**	**314**	⇑*i*P	**P**	**17 47 13.5**	**-1.3**
KECS	**Kecovo**	**73.19**	**318**	*i* P	**P**	**17 47 15.3**	**-0.1**
KECS				*i*		17 47 19.8	
NIE	**Niedzica**	**73.41**	**319**	*e*P	**P**	**17 47 16.0**	**-0.7**
PSZ	**Piszkesteto**	**73.52**	**318**	P	**P**	**17 47 17.0**	**-0.4**
PSZ	**Piszkesteto**	**73.52**	**318**	*e*P	**P**	**17 47 15.9**	**-1.4**
	comp=Z,70nm,1.3s,mb5.4						
PSZ	**Piszkesteto**	**73.52**	**318**	⇓*e*P	**P**	**17 47 16.8**	**-0.6**
OJC	**Ojcow**	**73.84**	**320**	*e*P	**P**	**17 47 18.2**	**-1.0**
OJC				*e*S	S	17 56 44.8	-2.4
OJC				MLR	MLR	18 25 47.4	
	comp=Z,3µm,19.0s,MS5.6						
VYHS	**Vyhne**	**74.28**	**318**	*i* P	**P**	**17 47 21.4**	**-0.4**
LBTB	**Lobatse**	**74.42**	**241**	P	**P**	**17 47 23.9**	**+0.9**
LBTB				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2						
LBTB	**Lobatse**	**74.42**	**241**	*e*P	**P**	**17 47 23.5**	**+0.4**
	comp=Z,32nm,0.9s,mb5.3						
LBTB				LR	LR		
	comp=Z,9µm,20.0s,MS6.0						
SRO2	**Moca**	**74.51**	**317**	*i* P	**P**	**17 47 23.4**	**+0.3**
SRO	**Srobarova**	**74.57**	**317**	*i* P	**P**	**17 47 24.0**	**+0.6**
KOLL	**Kolacno**	**74.58**	**318**	*i* P	**P**	**17 47 24.1**	**+0.6**
KEV	**Kevo**	**74.64**	**341**	*e*p	**P**	**17 47 21.9**	**-1.5**
	comp=Z,34nm,0.9s,mb5.3						
KEV	**Kevo**	**74.64**	**341**	*e*P	**P**	**17 47 21.9**	**-1.5**
KEV				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.3						
OKC	**Ostrava-Krasne**	**74.86**	**319**	*e*P	**P**	**17 47 25.0**	**-0.1**
OKC				AMS	AMS	18 27 20.0	
	comp=Z,2µm,17.9s						
ARE0	**ARCESS Array S**	**75.07**	**340**	*e*P	**P**	**17 47 24.9**	**-1.0**
CASY	**Casey**	**75.15**	**173**	PFAKE		17 47 40.0	+14
CASY				LR	LR		
	comp=Z,4µm,21.0s,MS5.7						
TIP	**Timpagrande**	**75.21**	**308**	*e*P	**P**	**17 47 25.6**	**-1.7**
MORC	**Moravsky Berou**	**75.24**	**319**	P	**P**	**17 47 26.6**	**-0.7**
MORC				pmax	pmax		
	comp=Z,97nm,1.1s,mb5.7						
MORC	**Moravsky Berou**	**75.24**	**319**	*e*P	**P**	**17 47 26.5**	**-0.8**
	comp=Z,97nm,1.1s,mb5.7						
ZST	**Bratislava**	**75.41**	**318**	*i* P	**P**	**17 47 28.5**	**+0.2**
GRI	**Girifalco**	**75.46**	**308**	*e*P	**P**	**17 47 29.0**	**+0.2**
KTK1	**Kautokeino**	**75.70**	**339**	*e*P	**P**	**17 47 30.0**	**+0.5**
	comp=Z,125nm,1.4s,mb5.7						
KTK1	**Kautokeino**	**75.70**	**339**	*e*P	**P**	**17 47 29.4**	**-0.1**
KTK1				AMb	AMB	17 47 34.7	
	comp=Z,125nm,1.4s,mb5.7						
SOI	**Samo**	**75.73**	**307**	*e*P	**P**	**17 47 30.5**	**+0.2**
SOP	**Sopron**	**75.74**	**317**	*e*P	**P**	**17 47 29.3**	**-0.8**
GKP	**Gorka Klasztor**	**75.75**	**323**	*e*P	**P**	**17 47 29.4**	**-0.7**
BOSA	**Boshof**	**75.77**	**238**	P	**P**	**17 47 31.5**	**+0.8**
BOSA				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
BOSA	**Boshof**	**75.77**	**238**	*e*P	**P**	**17 47 30.7**	**-0.1**
	comp=Z,25nm,0.9s,mb5.2						
BOSA				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
BILL	**Bilibino**	**75.84**	**22**	*i* P	**P**	**17 47 29.1**	**-1.2**
BILL				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.6						
BILL	**Bilibino**	**75.84**	**22**	*e*P	**P**	**17 47 29.6**	**-0.8**
	comp=Z,52nm,1.4s,mb5.3						
BILL				LR	LR		
	comp=Z,9µm,22.0s,MS6.0						
VKA	**Vienna**	**75.94**	**318**	⇑*i*P	**P**	**17 47 30.6**	**-0.7**
MTTG	**Motta San Giov**	**76.02**	**307**	*e*P	**P**	**17 47 32.1**	**+0.2**
DPC	**Dobruska-Polom**	**76.07**	**320**	*e*P	**P**	**17 47 31.7**	**-0.3**
DPC				AMS	AMS	18 25 10.0	
	comp=Z,3µm,19.5s						
KSP	**Ksiaz**	**76.13**	**320**	*e*P	**P**	**17 47 31.8**	**-0.5**
KSP				*e*S	S	17 57 09.5	-3.0
KSP				*e*		17 57 39.0	
KSP				*e*SS	SS	18 02 04.0	-5.0
KSP				MLR	MLR		
	comp=Z,7µm,20.7s,MS6.0						
KSP	**Ksiaz**	**76.13**	**320**	*e*P	**P**	**17 47 31.8**	**-0.5**
KSP				*e*		17 47 32.5	
KSP				*e*S	S	17 57 09.5	-3.0
KSP				*e*SKS	SKS	17 57 39.0	-5.3
KSP				*e*SS	SS	18 02 04.0	-5.0
KSP				LR	LR		
	comp=Z,7µm,20.7s,MS6.0						
KSP	**Ksiaz**	**76.13**	**320**	*e*P	**P**	**17 47 31.9**	**-0.3**
MGR	**Morigerati**	**76.16**	**309**	*e*P	**P**	**17 47 31.4**	**-1.2**
UPC	**Upice**	**76.28**	**320**	*e*P	**P**	**17 47 33.3**	**+0.1**
SGO	**Sicignano**	**76.35**	**310**	*e*P	**P**	**17 47 33.5**	**-0.3**
ARSA	**Arzberg**	**76.42**	**317**	⇑*i*P	**P**	**17 47 34.0**	**0.0**
	comp=Z,66nm,1.1s,mb5.5						
PDKS	**Podkum**	**76.73**	**315**	*e*P	**P**	**17 47 36.0**	**+0.2**
LJU	**Ljubljana**	**77.05**	**315**	*e*P	**P**	**17 47 37.4**	**-0.2**
OBKA	**Obir**	**77.05**	**316**	⇑*i*P	**P**	**17 47 37.1**	**-0.4**
	comp=Z,61nm,1.2s,mb5.4						
PRU	**Pruhonice**	**77.19**	**319**	*e*P	**P**	**17 47 38.5**	**+0.3**
PRU				AMS	AMS	18 26 40.0	
	comp=Z,2µm,22.0s						
PVCC	**Panska Ves**	**77.20**	**320**	*e*P	**P**	**17 47 38.6**	**+0.3**
PVCC				AMS	AMS	18 26 00.0	
	comp=Z,3µm,20.4s						
BSD	**Bornholm Skovb**	**77.27**	**325**	⇑*i*P	**P**	**17 47 38.6**	**0.0**
BSD				*i* S	S	17 57 20.9	-3.9
BSD				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
BSD				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.8						
BSD	**Bornholm Skovb**	**77.27**	**325**	⇑*i*P	**P**	**17 47 38.6**	**0.0**
	comp=Z,101nm,1.1s,mb5.7						
BSD				*i* S	S	17 57 20.9	-3.9
	comp=Z,4µm,18.0s						
MOA	**Molln**	**77.29**	**317**	⇓*i*P	**P**	**17 47 38.5**	**-0.3**
	comp=Z,52nm,1.1s,mb5.4						
TRO	**Tromso**	**77.33**	**340**	*e*P	**P**	**17 47 37.2**	**-1.4**
	comp=Z,125nm,1.4s,mb5.7						
TRO	**Tromso**	**77.33**	**340**	*e*P	**P**	**17 47 37.2**	**-1.4**
TRO				AMb	AMB	17 47 47.2	
	comp=Z,125nm,1.4s,mb5.6						
SMY	**Shemya**	**77.47**	**38**	PFAKE		17 47 50.0	+10
SMY				LR	LR		
	comp=Z,5µm,20.0s,MS5.9						
VOY	**Vojsko**	**77.49**	**315**	*e*P	**P**	**17 47 39.4**	**-0.6**
CADS	**Cadrg**	**77.61**	**315**	*e*P	**P**	**17 47 39.7**	**-0.9**
BRG	**Berggiesshubel**	**77.62**	**320**	*i* P	**P**	**17 47 40.8**	**+0.3**
BRG				*e*S	S	17 57 25.0	-3.6
BRG				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4						
BRG				MLR	MLR		
	comp=N,4µm,21.2s,MS5.8						
BRG				MLR	MLR		
	comp=E,3µm,21.2s,MS5.8						
BRG				MLR	MLR		
	comp=Z,5µm,21.2s,MS5.8						
BRG	**Berggiesshubel**	**77.62**	**320**	*i* P	**P**	**17 47 40.8**	**+0.3**
	comp=Z,60nm,1.2s,mb5.4						
BRG				*e*		17 50 50.2	
BRG				*e*S	S	17 57 25.0	-3.6
BRG				*e*SS	SS	18 02 19.0	-12
BRG				LR	LR		
	comp=Z,5µm,21.2s,MS5.8						
GEC2	**GERESS Array S**	**77.70**	**318**	*e*P	**P**	**17 47 40.5**	**-0.5**
GEC2				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.4						
GEC2	**GERESS Array S**	**77.70**	**318**	*e*P	**P**	**17 47 40.5**	**-0.5**
	comp=Z,54nm,1.0s,mb5.4						
RUE	**Ruedersdorf**	**77.79**	**322**	*e*P	**P**	**17 47 40.2**	**-1.3**
	comp=Z,190nm,1.0s,mb6.0						
KHC	**Kasperske Hory**	**77.79**	**318**	*e*P	**P**	**17 47 40.8**	**-0.7**
KHC				*e*		17 47 45.0	
KHC				MLR	MLR		
	comp=Z,3µm,20.4s,MS5.6						
KHC	**Kasperske Hory**	**77.79**	**318**	⇓*i*P	**P**	**17 47 41.5**	**0.0**
KHC	**Kasperske Hory**	**77.79**	**318**	*e*P	**P**	**17 47 40.8**	**-0.7**
KHC				x	x	17 47 45.0	
KHC				AMS	AMS	18 26 20.0	
	comp=Z,3µm,20.4s						
AQU	**L'Aquila**	**77.80**	**312**	*e*P	**P**	**17 47 40.5**	**-1.3**
AQU				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
AQU	**L'Aquila**	**77.80**	**312**	*e*P	**P**	**17 47 40.5**	**-1.2**
	comp=Z,35nm,1.0s,mb5.2						
PTQR	**Pietraquaria**	**77.80**	**311**	*e*P	**P**	**17 47 41.0**	**-0.8**
PTCC	**Patocco-Chiusa**	**77.88**	**316**	*e*P	**P**	**17 47 41.4**	**-0.7**
KBA	**Koelnbreinsper**	**77.89**	**316**	⇑*i*P	**P**	**17 47 41.8**	**-0.4**
	comp=Z,77nm,1.2s,mb5.5						
KBA	**Koelnbreinsper**	**77.89**	**316**	⇑*i*P	**P**	**17 47 41.8**	**-0.4**
KBA				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.5						
GMNA	**Gemona**	**77.95**	**316**	*e*P	**P**	**17 47 42.3**	**-0.2**
NRCA	**Norcia**	**78.02**	**312**	*e*P	**P**	**17 47 43.0**	**0.0**
ARV	**Arcevia**	**78.14**	**313**	*e*P	**P**	**17 47 43.5**	**-0.1**
SNTG	**Esanatoglia**	**78.14**	**312**	*e*P	**P**	**17 47 43.4**	**-0.2**
CLL	**Collm**	**78.22**	**321**	⇓*i*P	**P**	**17 47 43.8**	**-0.1**
CLL				*i*	pP	17 47 54.6	+0.8
CLL				*e*S	S	17 57 26.0	-9.2
CLL				pmax	pmax		
	comp=Z,195nm,2.3s,mb5.6						
CLL				MLR	MLR		
	comp=Z,3µm,19.4s,MS5.7						
CLL	**Collm**	**78.22**	**321**	⇓*i*P	**P**	**17 47 43.8**	**-0.1**
	comp=Z,195nm,2.3s,mb5.6						
CLL				*i* sP	sP	17 47 54.6	-2.5
CLL				*e*S	S	17 57 26.0	-9.2
CLL				LR	LR		
	comp=Z,3µm,19.4s,MS5.7						
CLL	**Collm**	**78.22**	**321**	⇓P	**P**	**17 47 43.8**	**-0.1**
	comp=Z,logA/T=1.9,mb5.6						
CLL				*i*		17 47 47.4	
CLL				*i* *SP	sP	17 47 54.6	-2.5
CLL				*e*S	S	17 57 26.0	-9.2
CLL				*e*SCS	ScS	17 58 00.0	+1.8
WET	**Wettzell**	**78.25**	**318**	*e*P	**P**	**17 47 43.5**	**-0.6**
WET				pmax	pmax		
	comp=Z,68nm,1.2s,mb5.5						
WET	**Wettzell**	**78.25**	**318**	*e*P	**P**	**17 47 43.5**	**-0.6**
	comp=Z,68nm,1.2s,mb5.5						
FSSB	**Fossombrone**	**78.26**	**313**	*e*P	**P**	**17 47 43.5**	**-0.8**
FVI	**Forni Avoltri**	**78.28**	**316**	*e*P	**P**	**17 47 44.1**	**-0.2**
MNS	**Montasola**	**78.34**	**312**	*e*P	**P**	**17 47 44.9**	**+0.2**
MOR8	**Moi Rana**	**78.49**	**336**	*e*P	**P**	**17 47 44.0**	**-1.0**
	comp=Z,74nm,1.5s,mb5.4						
MOR8	**Moi Rana**	**78.49**	**336**	*e*P	**P**	**17 47 44.0**	**-1.0**
MOR8				AMb	AMB	17 47 49.9	
	comp=Z,74nm,1.6s,mb5.4						
NKC	**Novy Kostel**	**78.55**	**320**	*e*P	**P**	**17 47 45.3**	**-0.4**
NKC				AMS	AMS	18 26 40.0	
	comp=Z,3µm,18.5s						
COP	**Copenhagen**	**78.72**	**325**	*e*P	**P**	**17 47 48.5**	**+2.0**
COP				*i* S	S	17 57 42.2	+1.9
COP				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.5						
COP				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.4						
COP	**Copenhagen**	**78.72**	**325**	*e*P	**P**	**17 47 48.5**	**+2.0**
	comp=Z,45nm,0.7s,mb5.5						
COP				*i* S	S	17 57 42.2	+1.9
COP				LR	LR		
	comp=Z,1µm,18.0s,MS5.4						
COP	**Copenhagen**	**78.72**	**325**	*i* P	**P**	**17 47 48.5**	**+2.0**
	comp=Z,45nm,0.7s,mb5.5						
COP				*i* S	S	17 57 42.2	+1.9
	comp=Z,1µm,18.0s						
MAW	**Mawson**	**78.78**	**192**	PFAKE		17 48 00.0	+13
MAW				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
CRE	**Caprese Michel**	**78.86**	**313**	*e*P	**P**	**17 47 47.4**	**-0.2**
SFI	**Santa Sofia**	**78.94**	**313**	*e*P	**P**	**17 47 48.9**	**+1.0**
PGD	**Poggio Sodo**	**79.03**	**313**	*e*P	**P**	**17 47 49.1**	**+0.7**
CTI	**Castel Tesino**	**79.06**	**315**	*e*P	**P**	**17 47 49.0**	**+0.4**
WTTA	**Wattenberg**	**79.06**	**317**	⇑*i*P	**P**	**17 47 48.3**	**-0.3**
	comp=Z,124nm,1.1s,mb5.8						
WTTA	**Wattenberg**	**79.06**	**317**	⇑*i*P	**P**	**17 47 48.3**	**-0.3**
WTTA				pmax	pmax		
	comp=Z,124nm,1.1s,mb5.8						
MOX	**Moxa**	**79.09**	**320**	*e*P	**P**	**17 47 48.8**	**+0.2**
MOX				*e*	pP	17 47 59.7	+1.2
MOX				pmax	pmax		
	comp=Z,163nm,2.0s,mb5.6						
MOX				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.6						
MOX	**Moxa**	**79.09**	**320**	*e*P	**P**	**17 47 48.8**	**+0.2**
	comp=Z,163nm,2.0s,mb5.6						
MOX				*e*	pP	17 47 59.7	+1.2
MOX				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
MOX	**Moxa**	**79.09**	**320**	*i* P	**P**	**17 47 48.8**	**+0.2**
	comp=Z,logA/T=1.9,mb5.6						
MOX				pP	pP	17 48 00.0	+1.5
MOX				S	S	17 57 45.0	+0.6
MOX				LR	LR	18 13 06.0	
MOX				L		18 27 25.0	
WATA	**Walderalm**	**79.10**	**317**	⇓*i*P	**P**	**17 47 48.1**	**-0.7**
	comp=Z,53nm,1.1s,mb5.4						
WATA	**Walderalm**	**79.10**	**317**	⇓*i*P	**P**	**17 47 48.1**	**-0.7**
WATA				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
VMG	**Vicchio**	**79.15**	**313**	*e*P	**P**	**17 47 50.0**	**+0.8**
SEI	**Scarperia**	**79.29**	**313**	*e*P	**P**	**17 47 50.7**	**+0.9**
FUR	**Furstenfeldbru**	**79.30**	**317**	*e*P	**P**	**17 47 48.8**	**-1.0**
GRA1	**Grafenberg Arr**	**79.34**	**319**	*e*P	**P**	**17 47 49.9**	**-0.1**
	comp=Z,85nm,1.1s,mb5.6						
GRF	**Grafenberg Arr**	**79.34**	**319**	*e*P	**P**	**17 47 49.9**	**-0.1**
GRF				pmax	pmax		
	comp=Z,85nm,1.1s,mb5.6						
GRF	**Grafenberg Arr**	**79.34**	**319**	*e*P	**P**	**17 47 49.9**	**-0.1**
GRF				pmax	pmax		
	comp=Z,85nm,1.1s,mb5.6						
GRF	**Grafenberg Arr**	**79.34**	**319**	*e*P	**P**	**17 47 49.9**	**-0.1**
	comp=Z,85nm,1.1s,mb5.6						
SQTA	**Sankt Quirin**	**79.35**	**316**	⇑*i*P	**P**	**17 47 49.6**	**-0.5**
	comp=Z,60nm,1.2s,mb5.4						
SQTA	**Sankt Quirin**	**79.35**	**316**	⇑*i*P	**P**	**17 47 49.6**	**-0.5**
SQTA				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4						
NSS	**Namsos**	**79.39**	**334**	*e*P	**P**	**17 47 48.8**	**-1.2**
	comp=Z,111nm,1.7s,mb5.5						
NSS	**Namsos**	**79.39**	**334**	*e*P	**P**	**17 47 48.8**	**-1.2**
NSS				AMb	AMB	17 47 54.1	
	comp=Z,111nm,1.7s,mb5.5						
NSS				*e*pP	pP	17 47 58.8	-1.1
MOTA	**Moosalm**	**79.42**	**317**	⇓*i*P	**P**	**17 47 49.5**	**-1.0**
	comp=Z,46nm,1.1s,mb5.3						
MOTA	**Moosalm**	**79.42**	**317**	⇓*i*P	**P**	**17 47 49.5**	**-1.0**

MOTA				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
ZCCA	**Zocca**	**79.56**	**314**	*e*P	**P**	**17 47 52.9**	**+1.6**
NB2	**NORSAR Subarra**	**79.56**	**331**	P	**P**	**17 47 50.1**	**-0.9**
	comp=Z,53nm,1.0s,mb5.4,baz=90,slow=5.3						
NB2	**NORSAR Subarra**	**79.56**	**331**	P	**P**	**17 47 50.1**	**-0.9**
NB2				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.4						
NB2	**NORSAR Subarra**	**79.56**	**331**	P	**P**	**17 47 50.1**	**-0.9**
	baz=90,slow=5.6						
GRFL	**Gerfalco**	**79.58**	**312**	*e*P	**P**	**17 47 50.8**	**-0.7**
NAO01	**NORSAR Array S**	**79.72**	**330**	*e*P	**P**	**17 47 50.9**	**-0.9**
	comp=Z,31nm,1.0s,mb5.2						
NAO01				LR	LR		
	comp=Z,7µm,19.0s,MS6.0						
BDI	**Bagni Di Lucca**	**79.83**	**313**	*e*P	**P**	**17 47 52.1**	**-0.7**
GSCL	**Gusciola**	**79.83**	**314**	*e*P	**P**	**17 47 53.9**	**+1.2**
SAL	**Salo**	**79.85**	**315**	*e*P	**P**	**17 47 54.2**	**+1.4**
CLZ	**Clausthal**	**79.87**	**321**	*e*P	**P**	**17 47 52.3**	**-0.5**
	comp=Z,65nm,1.0s,mb5.5						
ERBM	**Eremo**	**79.96**	**314**	*e*P	**P**	**17 47 54.7**	**+1.3**
SARO	**Sassorosso**	**79.97**	**313**	P	**P**	**17 47 53.2**	**-0.3**
HDH	**Heidenheim**	**80.01**	**318**	⇓*e*P	**P**	**17 47 53.4**	**-0.2**
VALM		**80.08**	**314**	P	**P**	**17 47 53.5**	**-0.6**
UBR	**Uberruh**	**80.09**	**317**	⇓*e*P	**P**	**17 47 53.9**	**-0.2**
VINC	**Vinca**	**80.15**	**313**	P	**P**	**17 47 53.3**	**-1.2**
TSUM	**Tsumeb**	**80.18**	**249**	*e*P	**P**	**17 47 55.1**	**0.0**
	comp=Z,19nm,1.1s,mb4.9						
TSUM				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
GRAM		**80.20**	**314**	P	**P**	**17 47 54.8**	**+0.1**
DAVA	**Damuels**	**80.26**	**317**	⇑*i*P	**P**	**17 47 55.2**	**+0.2**
	comp=Z,117nm,1.1s,mb5.7						
CODM		**80.36**	**314**	P	**P**	**17 47 54.8**	**-0.8**
SIND	**Sindeldorf**	**80.39**	**319**	⇓*e*P	**P**	**17 47 56.0**	**+0.3**
SUR	**Sutherland**	**80.53**	**235**	*e*P	**P**	**17 47 57.1**	**+0.4**
	comp=Z,330nm,2.1s,mb5.9						
SUR				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
MUD	**Monsted U'grnd**	**80.56**	**326**	*i* P	**P**	**17 47 57.1**	**+0.7**
MUD				*i* S	S	17 57 55.4	-4.2
MUD				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
MUD				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.7						
MUD	**Monsted U'grnd**	**80.56**	**326**	*i* P	**P**	**17 47 57.1**	**+0.7**
	comp=Z,100nm,1.1s,mb5.7						
MUD				*i* S	S	17 57 55.4	-4.2
	comp=Z,4µm,19.0s						
BUCH	**Bad Urach**	**80.58**	**318**	⇓*e*P	**P**	**17 47 56.8**	**+0.1**
DOMB	**Dombas**	**80.61**	**332**	*e*P	**P**	**17 47 56.8**	**+0.2**
	comp=Z,84nm,1.3s,mb5.5						
DOMB	**Dombas**	**80.61**	**332**	*e*P	**P**	**17 47 56.8**	**+0.2**
DOMB				*e*pP	pP	17 48 04.5	-2.0
DOMB				AMb	AMB	17 48 05.1	
	comp=Z,84nm,1.3s,mb5.5						
BOB	**Bobbio (Coli)**	**80.64**	**314**	*e*P	**P**	**17 47 57.8**	**+0.8**
STU	**Stuttgart**	**80.68**	**318**	*e*P	**P**	**17 47 56.5**	**-0.7**
STU				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
STU	**Stuttgart**	**80.68**	**318**	*e*P	**P**	**17 47 56.5**	**-0.7**
	comp=Z,29nm,0.8s,mb5.3						
GUT	**Gutenstein**	**80.75**	**317**	⇓*e*P	**P**	**17 47 57.5**	**-0.1**
TOD	**Tromm**	**80.91**	**319**	*e*P	**P**	**17 47 58.6**	**+0.2**
TOD	**Tromm**	**80.91**	**319**	*e*P	**P**	**17 47 58.7**	**+0.3**
VSL	**Villasalto**	**80.92**	**309**	*e*P	**P**	**17 47 56.8**	**-1.9**
	comp=Z,48nm,0.9s,mb5.4						
LBG	**Lerchenberg**	**80.95**	**318**	*e*P	**P**	**17 47 58.8**	**+0.2**
SPAK	**Spaichingen**	**80.97**	**317**	*e*P	**P**	**17 47 59.0**	**+0.3**
SPAK	**Spaichingen**	**80.97**	**317**	*e*P	**P**	**17 47 58.8**	**+0.1**
SWS	**Schriesheim**	**80.98**	**319**	*e*P	**P**	**17 47 58.9**	**+0.1**
PGF	**Pioggiola**	**81.06**	**312**	*e*P	**P**	**17 47 58.9**	**-0.4**
	comp=Z,129nm,1.2s,mb5.4						
PGF	**Pioggiola**	**81.06**	**312**	*e*P	**P**	**17 47 58.9**	**-0.4**
PGF				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.4						
VAI	**Varese**	**81.07**	**315**	*e*P	**P**	**17 47 58.7**	**-0.6**
TNS	**Taunus Mts**	**81.12**	**320**	*e*P	**P**	**17 47 59.0**	**-0.5**
BFO	**Black Forest**	**81.27**	**318**	*e*P	**P**	**17 47 59.3**	**-1.0**
BFO				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
BFO	**Black Forest**	**81.27**	**318**	*e*P	**P**	**17 47 59.3**	**-1.0**
	comp=Z,34nm,1.0s,mb5.2						
PCP	**Pian Castagno**	**81.29**	**314**	P	**P**	**17 47 59.8**	**-0.7**
MOL	**Molde**	**81.32**	**332**	*e*P	**P**	**17 48 06.5**	**+6.2**
MOL				AMb	AMB	17 48 15.0	
	comp=Z,156nm,1.8s,mb5.7						
FELD	**Feldberg**	**81.51**	**317**	*e*P	**P**	**17 48 01.6**	**+0.1**
FIN	**Finale Ligure**	**81.55**	**314**	*e*P	**P**	**17 48 01.8**	**0.0**
KIZ	**Kirchzarten**	**81.56**	**317**	⇓*e*P	**P**	**17 48 01.8**	**0.0**
DRV	**Dumont d'Urvil**	**81.58**	**163**	S	S	17 58 10.0	0.0
DRV				SS	SS	18 03 33.0	+2.5
DRV				L		18 09 00.0	
DRV				R		18 15 00.0	
LANF	**Langenberg**	**81.59**	**318**	*e*P	**P**	**17 48 02.5**	**+0.6**
MCGN	**Macugnaga**	**81.61**	**315**	*e*P	**P**	**17 48 03.1**	**+1.0**
ORX	**Oropa**	**81.63**	**315**	P	**P**	**17 48 01.4**	**-0.8**
ABH	**Alteburg**	**81.71**	**319**	*e*P	**P**	**17 48 02.9**	**+0.3**
ABH	**Alteburg**	**81.71**	**319**	⇓*e*P	**P**	**17 48 03.1**	**+0.5**
LIBD	**Limburg**	**81.76**	**318**	*e*P	**P**	**17 48 04.8**	**+2.0**
LIBD	**Limburg**	**81.76**	**318**	*e*P	**P**	**17 48 03.5**	**+0.7**
ROB	**Roburent**	**81.78**	**314**	P	**P**	**17 48 01.9**	**-1.2**
IMI	**Imperia**	**81.79**	**313**	*e*P	**P**	**17 48 04.9**	**+1.8**
TRAV		**81.80**	**315**	P	**P**	**17 48 02.1**	**-1.0**
ODD1	**Odda**	**81.83**	**329**	*e*P	**P**	**17 48 02.8**	**-0.1**
BBS	**Basel-Blauen**	**81.86**	**317**	*e*P	**P**	**17 48 03.5**	**+0.1**
MONE	**Monesi**	**81.88**	**313**	P	**P**	**17 48 02.5**	**-1.0**
WLS	**Welschbruch**	**81.91**	**318**	*e*P	**P**	**17 48 03.5**	**-0.1**
BLS5	**Blasjo**	**81.94**	**329**	⇓*i*P	**P**	**17 48 04.9**	**+1.4**
CDF	**Champ du Feu**	**81.97**	**318**	*e*P	**P**	**17 48 03.5**	**-0.4**
	comp=Z,87nm,1.1s,mb5.3						
CDF	**Champ du Feu**	**81.97**	**318**	*e*P	**P**	**17 48 03.5**	**-0.4**
CDF				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
SAOF	**Saorge**	**82.03**	**313**	*e*P	**P**	**17 48 06.6**	**+2.3**
RUP	**Ruppelstein**	**82.04**	**319**	*e*P	**P**	**17 48 04.8**	**+0.6**
RUP	**Ruppelstein**	**82.04**	**319**	*e*P	**P**	**17 48 04.9**	**+0.7**
ECH	**Echery**	**82.06**	**318**	*e*P	**P**	**17 48 04.4**	**0.0**
WTSB	**Winterswijk**	**82.08**	**321**	*e*P	**P**	**17 48 04.2**	**-0.2**
	comp=Z,77nm,1.6s,mb5.4						
MOF	**Molkenrain**	**82.09**	**317**	*e*P	**P**	**17 48 04.4**	**-0.2**
ENR	**Entracque**	**82.11**	**314**	P	**P**	**17 48 03.8**	**-0.9**
WIT	**Witteveen**	**82.12**	**322**	*e*P	**P**	**17 48 06.1**	**+1.5**
SBF	**Sospel**	**82.12**	**313**	*e*P	**P**	**17 48 04.4**	**-0.4**
	comp=Z,177nm,0.8s,mb5.7						
SBF	**Sospel**	**82.12**	**313**	*e*P	**P**	**17 48 04.4**	**-0.4**
SBF				pmax	pmax		
	comp=Z,88nm,0.8s,mb5.7						
RSP	**Reno Superiore**	**82.17**	**314**	P	**P**	**17 48 03.9**	**-1.1**
STV2	**Anna di Valdie**	**82.18**	**314**	P	**P**	**17 48 03.5**	**-1.6**
STV	**Sta Anna Valdi**	**82.18**	**314**	P	**P**	**17 48 03.6**	**-1.5**
BHB	**Bricherasio**	**82.19**	**314**	P	**P**	**17 48 03.9**	**-1.2**
LSD	**Ceresole Reale**	**82.22**	**315**	P	**P**	**17 48 05.3**	**0.0**
TOUF	**Mont Tournerai**	**82.25**	**313**	*e*P	**P**	**17 48 07.9**	**+2.4**
HINF	**Hinteralfeld**	**82.28**	**317**	*e*P	**P**	**17 48 04.9**	**-0.7**
FENE	**Fenestrelle**	**82.31**	**314**	P	**P**	**17 48 05.6**	**-0.2**
PZZ	**Prazzo**	**82.32**	**314**	P	**P**	**17 48 04.3**	**-1.5**
MVIF	**Mont Vial**	**82.33**	**313**	*e*P	**P**	**17 48 07.8**	**+1.9**
LOMF	**Lomont**	**82.33**	**317**	*e*P	**P**	**17 48 05.5**	**-0.3**
LPG	**La Plagne**	**82.50**	**315**	*e*P	**P**	**17 48 07.1**	**+0.3**
	comp=Z,150nm,0.8s,mb5.8						
LPG	**La Plagne**	**82.50**	**315**	*e*P	**P**	**17 48 07.1**	**+0.3**
LPG				pmax	pmax		
	comp=Z,75nm,0.8s,mb5.8						
LPL	**La Plagne**	**82.52**	**315**	*e*P	**P**	**17 48 06.8**	**0.0**
	comp=Z,156nm,0.8s,mb5.8						
LPL	**La Plagne**	**82.52**	**315**	*e*P	**P**	**17 48 06.8**	**0.0**
LPL				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.8						
RRL	**Cesana Torines**	**82.52**	**314**	P	**P**	**17 48 05.7**	**-1.2**
MBDF	**Montbardon**	**82.54**	**314**	*e*P	**P**	**17 48 06.5**	**-0.5**
	comp=Z,99nm,1.0s,mb5.5						
MBDF	**Montbardon**	**82.54**	**314**	*e*P	**P**	**17 48 06.5**	**-0.5**
MBDF				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
RSL	**Roselend**	**82.58**	**315**	*e*P	**P**	**17 48 07.5**	**+0.4**
BNI	**Bardonecchia**	**82.58**	**314**	*e*P	**P**	**17 48 05.8**	**-1.4**
BNI				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.6						
BNI	**Bardonecchia**	**82.58**	**314**	*e*P	**P**	**17 48 05.8**	**-1.4**
	comp=Z,53nm,0.9s,mb5.6						
HAU	**Haudompre**	**82.61**	**317**	*e*P	**P**	**17 48 07.1**	**-0.2**
	comp=Z,143nm,1.0s,mb5.7						
HAU				*e*R			
	comp=Z,3µm,21.5s						
HAU	**Haudompre**	**82.61**	**317**	*e*P	**P**	**17 48 07.1**	**-0.2**
HAU				pmax	pmax		
	comp=Z,72nm,1.0s,mb5.7						
HAU				MLR	MLR		
	comp=Z,3µm,21.5s,MS5.6						
WLF	**Walferdange**	**82.63**	**319**	*e*P	**P**	**17 48 06.7**	**-0.6**
WLF				pmax	pmax		
	comp=Z,78nm,1.3s,mb5.6						
WLF	**Walferdange**	**82.63**	**319**	*e*P	**P**	**17 48 06.7**	**-0.6**
	comp=Z,78nm,1.3s,mb5.6						
ABSA	**Djebel Ababsia**	**82.64**	**306**	P	**P**	**17 48 10.0**	**+2.3**
CMAH	**Djebel Manchou**	**82.66**	**306**	P	**P**	**17 48 06.0**	**-1.8**
HGN	**Heimansgroeve**	**82.70**	**320**	*e*P	**P**	**17 48 05.2**	**-2.5**
	comp=Z,41nm,2.3s,mb5.0						
HGN	**Heimansgroeve**	**82.70**	**320**	*e*S	S	17 58 25.1	+3.3
FRF	**La Foret Royal**	**82.72**	**313**	*e*P	**P**	**17 48 07.8**	**-0.1**
	comp=Z,210nm,1.3s,mb5.7						
FRF	**La Foret Royal**	**82.72**	**313**	*e*P	**P**	**17 48 07.8**	**-0.1**
FRF				pmax	pmax		
	comp=Z,105nm,1.3s,mb5.7						
LMR	**La Mourre**	**82.83**	**313**	*e*P	**P**	**17 48 08.4**	**-0.1**
	comp=Z,176nm,1.5s,mb5.6						
LMR	**La Mourre**	**82.83**	**313**	*e*P	**P**	**17 48 08.4**	**-0.1**
LMR				pmax	pmax		
	comp=Z,88nm,1.5s,mb5.6						
THEF	**They Montfort**	**82.84**	**318**	*e*P	**P**	**17 48 08.7**	**+0.3**
CABF	**La Chapelle**	**82.89**	**316**	*e*P	**P**	**17 48 08.9**	**+0.2**
	comp=Z,106nm,1.0s,mb5.5						
CABF	**La Chapelle**	**82.89**	**316**	*e*P	**P**	**17 48 08.9**	**+0.2**
CABF				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.5						
GDM	**Grand'Maison**	**82.97**	**315**	*e*P	**P**	**17 48 09.3**	**+0.1**
OG25	**Le Caire**	**83.07**	**314**	*e*P	**P**	**17 48 10.1**	**+0.4**
TAVF	**Tavernes**	**83.14**	**313**	*e*P	**P**	**17 48 11.8**	**+1.7**
ORIF	**Oris-en-Rattie**	**83.16**	**314**	*e*P	**P**	**17 48 10.3**	**+0.1**
	comp=Z,69nm,0.8s,mb5.4						
ORIF				*e*R			
	comp=Z,3µm,22.8s						
GRN	**Grenoble**	**83.23**	**315**	*e*P	**P**	**17 48 11.2**	**+0.7**
CKFL	**Kef-Lekhel**	**83.24**	**306**	P	**P**	**17 48 11.5**	**+0.7**
OG05	**Jujurieux**	**83.36**	**315**	*e*P	**P**	**17 48 11.7**	**+0.5**
VILF	**Villemus**	**83.36**	**313**	*e*P	**P**	**17 48 12.8**	**+1.6**
PUYF	**Puyloubier**	**83.40**	**313**	*e*P	**P**	**17 48 12.6**	**+1.2**
BERF	**Bertagne**	**83.43**	**313**	*e*P	**P**	**17 48 12.8**	**+1.2**
CASM	**Ain Smara**	**83.44**	**306**	P	**P**	**17 48 12.5**	**+0.7**
MEZF	**Maizieres J'vi**	**83.44**	**318**	*e*P	**P**	**17 48 11.4**	**-0.1**
	comp=Z,68nm,1.0s,mb5.3						
GIVF	**Givet**	**83.45**	**320**	*e*P	**P**	**17 48 11.5**	**-0.1**
	comp=Z,66nm,1.1s,mb5.3						
GIVF	**Givet**	**83.45**	**320**	*e*P	**P**	**17 48 11.5**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.3						
SMRF	**Simiane la Rot**	**83.46**	**313**	*e*P	**P**	**17 48 12.2**	**+0.5**
	comp=Z,331nm,1.9s,mb5.7						
CTEI	**Djebel Teioual**	**83.52**	**305**	P	**P**	**17 48 13.0**	**+0.7**
TREF	**Trevaresse**	**83.62**	**313**	*e*P	**P**	**17 48 14.1**	**+1.5**
BAIF	**Baives**	**83.85**	**320**	*e*P	**P**	**17 48 13.6**	**0.0**
	comp=Z,98nm,1.0s,mb5.6						
BAIF	**Baives**	**83.85**	**320**	*e*P	**P**	**17 48 13.6**	**0.0**
BAIF				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.6						
DFRA	**Djebel Bou Aff**	**83.90**	**306**	P	**P**	**17 48 16.0**	**+1.8**
CMER	**Merouana**	**83.97**	**305**	P	**P**	**17 48 20.0**	**+5.4**
VIVF	**Saint-Julien-l**	**84.02**	**314**	*e*P	**P**	**17 48 14.4**	**-0.2**
	comp=Z,58nm,0.9s,mb5.4						
VIVF	**Saint-Julien-l**	**84.02**	**314**	*e*P	**P**	**17 48 14.4**	**-0.2**
VIVF				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.4						
CKHR	**Kef el Ahmar**	**84.25**	**305**	P	**P**	**17 48 18.0**	**+2.1**
SET	**Setif**	**84.32**	**306**	P	**P**	**17 48 18.0**	**+1.7**
SMF	**Signal de Mont**	**84.42**	**316**	*e*P	**P**	**17 48 16.2**	**-0.4**
	comp=Z,95nm,1.0s,mb5.6						
SMF	**Signal de Mont**	**84.42**	**316**	*e*P	**P**	**17 48 16.2**	**-0.4**
SMF				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.6						
SSF	**Saint Saulge**	**84.61**	**317**	*e*P	**P**	**17 48 17.4**	**-0.1**
	comp=Z,148nm,1.5s,mb5.6						
SSF	**Saint Saulge**	**84.61**	**317**	*e*P	**P**	**17 48 17.4**	**-0.1**
SSF				pmax	pmax		
	comp=Z,74nm,1.5s,mb5.6						
COLF	**Collangettes**	**84.64**	**315**	*e*P	**P**	**17 48 18.0**	**+0.3**
PLDF	**La Plantade**	**84.65**	**316**	*e*P	**P**	**17 48 18.3**	**+0.6**
LASF	**Ste Croix**	**84.68**	**314**	*e*P	**P**	**17 48 18.2**	**+0.3**
	comp=Z,161nm,1.5s,mb5.6						
AVF	**Avril sur Loir**	**84.74**	**316**	*e*P	**P**	**17 48 17.8**	**-0.3**
	comp=Z,102nm,1.1s,mb5.6						
AVF	**Avril sur Loir**	**84.74**	**316**	*e*P	**P**	**17 48 17.8**	**-0.3**
AVF				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.6						
AGO	**Saint Agoulin**	**84.98**	**316**	*e*P	**P**	**17 48 19.7**	**+0.4**
LBL	**Lubilhac**	**84.99**	**315**	*e*P	**P**	**17 48 20.4**	**+1.0**
PYM	**Petit Puy Mans**	**85.10**	**315**	*e*P	**P**	**17 48 20.6**	**+0.7**
BGF	**Bois d'Agland**	**85.12**	**316**	*e*P	**P**	**17 48 20.2**	**+0.2**
	comp=Z,143nm,1.4s,mb5.6						
BGF	**Bois d'Agland**	**85.12**	**316**	*e*P	**P**	**17 48 20.2**	**+0.2**
BGF				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.6						
HYF	**Humbligny**	**85.17**	**317**	*e*P	**P**	**17 48 20.7**	**+0.4**
APAE	**Packway**	**85.32**	**322**	*e*P	**P**	**17 48 21.6**	**+0.8**
ABA1	**Baconsthorpe**	**85.45**	**323**	*e*P	**P**	**17 48 22.1**	**+0.6**
EJON	**La Jonquera**	**85.57**	**312**	P	**P**	**17 48 22.2**	**-0.2**
	comp=Z,2.5nm,0.6s,mb4.6						
TCF	**Toulx Ste Croi**	**85.58**	**316**	*e*P	**P**	**17 48 22.5**	**+0.1**
	comp=Z,75nm,1.3s,mb5.5						
TCF	**Toulx Ste Croi**	**85.58**	**316**	*e*P	**P**	**17 48 22.5**	**+0.1**
TCF				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.5						
SYO	**Syowa Base**	**85.65**	**197**	⇓P	**P**	**17 48 23.9**	**+1.7**
SYO	**Syowa Base**	**85.65**	**197**	⇓pP	pP	17 48 32.0	-0.2
LRDF	**Laroque-de-Fa**	**85.76**	**313**	*e*P	**P**	**17 48 23.8**	**+0.5**
FILF	**Fillols**	**85.79**	**312**	*e*P	**P**	**17 48 24.3**	**+0.8**
CAF	**Calviac**	**85.86**	**315**	*e*P	**P**	**17 48 24.0**	**+0.3**
	comp=Z,61nm,1.2s,mb5.4						
CAF	**Calviac**	**85.86**	**315**	*e*P	**P**	**17 48 24.0**	**+0.3**
CAF				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.4						
TNA	**Tin City**	**85.92**	**24**	*e*P	**P**	**17 48 24.1**	**+0.5**
	comp=Z,24nm,1.1s,mb5.3						
TNA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
MTLF	**Montolieu**	**85.95**	**313**	*e*P	**P**	**17 48 24.4**	**+0.2**
	comp=Z,88nm,1.2s,mb5.6						
MTLF	**Montolieu**	**85.95**	**313**	*e*P	**P**	**17 48 24.4**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.6						
ABA	**Alger-Bouzarea**	**86.14**	**306**	P	**P**	**17 48 25.0**	**-0.4**
RJF	**Les Rejaudoux**	**86.19**	**315**	*e*P	**P**	**17 48 25.7**	**+0.3**
	comp=Z,121nm,1.2s,mb5.7						
RJF				*e*R			
	comp=Z,3µm,21.8s						
RJF	**Les Rejaudoux**	**86.19**	**315**	*e*P	**P**	**17 48 25.7**	**+0.3**
RJF				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.7						
RJF				MLR	MLR		
	comp=Z,3µm,21.8s,MS5.6						
VALF	**Valcebollere**	**86.21**	**312**	*e*P	**P**	**17 48 26.6**	**+1.0**
LPEF	**Le Peyrat**	**86.22**	**313**	*e*P	**P**	**17 48 26.2**	**+0.6**
LMK	**Market Rasen**	**86.25**	**323**	*e*P	**P**	**17 48 26.1**	**+0.7**
EMHD	**Djebel Mahouad**	**86.28**	**306**	P	**P**	**17 48 27.5**	**+1.4**
EMIR	**Miracle**	**86.64**	**312**	P	**P**	**17 48 27.7**	**0.0**
	comp=Z,16nm,0.9s,mb5.2						
LCP	**Cassop**	**86.72**	**325**	*e*P	**P**	**17 48 28.6**	**+0.9**
LFF	**La Frestale**	**86.79**	**315**	*e*P	**P**	**17 48 28.9**	**+0.6**
	comp=Z,141nm,1.5s,mb5.7						
LFF	**La Frestale**	**86.79**	**315**	*e*P	**P**	**17 48 28.9**	**+0.6**
LFF				pmax	pmax		
	comp=Z,70nm,1.5s,mb5.7						
MLS	**Moulis**	**86.81**	**313**	*e*P	**P**	**17 48 29.5**	**+1.0**
LDF	**La Druitiere**	**86.84**	**318**	*e*P	**P**	**17 48 28.4**	**-0.1**
	comp=Z,100nm,1.0s,mb5.7						
LDF	**La Druitiere**	**86.84**	**318**	*e*P	**P**	**17 48 28.4**	**-0.1**
LDF				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.7						
HPK	**Haverah Park**	**86.93**	**324**	*e*P	**P**	**17 48 29.7**	**+0.9**
HPK				AMb	AMB	17 48 35.6	
	comp=Z,359nm,1.4s,mb6.4						
EPOB	**Poblet**	**87.05**	**311**	P	**P**	**17 48 31.8**	**+2.1**
	comp=Z,21nm,0.9s,mb5.4						
FLN	**La Foliniere**	**87.05**	**319**	*e*P	**P**	**17 48 29.5**	**0.0**
	comp=Z,103nm,1.0s,mb5.7						
FLN				*e*R			
	comp=Z,3µm,22.8s						
FLN	**La Foliniere**	**87.05**	**319**	*e*P	**P**	**17 48 29.5**	**0.0**
FLN				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.7						
FLN				MLR	MLR		
	comp=Z,3µm,22.8s,MS5.6						
LHO	**Holmfirth**	**87.13**	**324**	*e*P	**P**	**17 48 30.4**	**+0.6**
LHO				AMb	AMB	17 48 35.9	
	comp=Z,128nm,1.2s,mb6.0						
MFF	**Saint Martin d**	**87.16**	**316**	*e*P	**P**	**17 48 29.9**	**-0.2**
	comp=Z,70nm,1.1s,mb5.5						
MFF	**Saint Martin d**	**87.16**	**316**	*e*P	**P**	**17 48 29.9**	**-0.2**
MFF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.5						
EIBI	**Ibiza**	**87.17**	**309**	P	**P**	**17 48 28.2**	**-2.1**
	comp=Z,3.3nm,0.5s,mb4.8						
EPF	**Esparros**	**87.35**	**313**	*e*P	**P**	**17 48 30.7**	**-0.4**
	comp=Z,54nm,1.6s,mb5.2						
EPF	**Esparros**	**87.35**	**313**	*e*P	**P**	**17 48 30.7**	**-0.4**
EPF				pmax	pmax		
	comp=Z,27nm,1.6s,mb5.2						
GRR	**Gorron**	**87.36**	**318**	*e*P	**P**	**17 48 31.2**	**+0.2**
	comp=Z,62nm,1.2s,mb5.4						
GRR	**Gorron**	**87.36**	**318**	*e*P	**P**	**17 48 31.2**	**+0.2**
GRR				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.4						
RESF	**Ens**	**87.38**	**313**	*e*P	**P**	**17 48 32.4**	**+1.1**
EBNR	**Beni Rached**	**87.41**	**306**	P	**P**	**17 48 32.0**	**+0.4**
EDI	**Edinburgh**	**87.47**	**326**	*e*P	**P**	**17 48 32.7**	**+1.3**
EDI				AMb	AMB	17 48 39.9	
	comp=Z,160nm,1.5s,mb6.0						
EBIE	**Bielsa**	**87.54**	**313**	P	**P**	**17 48 34.5**	**+2.5**
	comp=Z,8.6nm,1.1s,mb4.9						
EBR	**Ebro Roquetas**	**87.56**	**311**	*e*P	**P**	**17 48 33.5**	**+1.3**
ECHA	**Ech Chlef**	**87.56**	**306**	P	**P**	**17 48 33.0**	**+0.7**
ESK	**Eskdalemuir**	**87.60**	**325**	*e*P	**P**	**17 48 31.2**	**-0.8**
ESK				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.8						
ESK				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.4						
ESK	**Eskdalemuir**	**87.60**	**325**	*e*P	**P**	**17 48 31.2**	**-0.7**
	comp=Z,69nm,1.1s,mb5.8						
ESK				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
VIEF	**Viey**	**87.60**	**313**	*e*P	**P**	**17 48 34.7**	**+2.4**
EAU	**Auchinoon**	**87.63**	**326**	*e*P	**P**	**17 48 33.0**	**+0.9**
EAU				AMb	AMB	17 48 38.5	
	comp=Z,154nm,1.5s,mb6.0						
ERTA	**Horta de San J**	**87.66**	**311**	P	**P**	**17 48 36.4**	**+3.8**
	comp=Z,36nm,1.2s,mb5.5						
ETRT	**Tiaret**	**87.72**	**305**	P	**P**	**17 48 40.0**	**+6.9**
EANR	**'Ain N'Sour**	**87.81**	**306**	P	**P**	**17 48 38.0**	**+4.5**
HAE	**Alders End**	**87.81**	**322**	*e*P	**P**	**17 48 33.8**	**+0.7**
HAE				AMb	AMB	17 48 39.0	
	comp=Z,160nm,1.3s,mb6.1						
HLM1	**Long Mynd**	**87.92**	**323**	*e*P	**P**	**17 48 34.5**	**+0.9**
HLM1				AMb	AMB	17 48 39.8	
	comp=Z,81nm,1.4s,mb5.8						
ETSF	**Etsaut**	**88.02**	**313**	*e*P	**P**	**17 48 35.1**	**+0.8**
	comp=Z,52nm,0.9s,mb5.5						
ETSF	**Etsaut**	**88.02**	**313**	*e*P	**P**	**17 48 35.1**	**+0.8**
ETSF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.5						
HGH	**Gray Hill**	**88.04**	**322**	*e*P	**P**	**17 48 34.7**	**+0.5**
HGH				AMb	AMB	17 48 40.0	
	comp=Z,193nm,1.2s,mb6.2						
EAB	**Aberfoyle**	**88.06**	**326**	*e*P	**P**	**17 48 35.1**	**+0.9**
EAB				AMb	AMB	17 48 41.1	
	comp=Z,109nm,1.5s,mb5.9						
SBD1	**Bryn Du**	**88.08**	**323**	*e*P	**P**	**17 48 35.1**	**+0.7**
SSP1	**Stoney Pound**	**88.08**	**323**	*e*P	**P**	**17 48 36.0**	**+1.7**
MCH1	**Michaelchurch**	**88.09**	**322**	*e*P	**P**	**17 48 35.6**	**+1.2**
ESAC	**San Caprasio**	**88.14**	**312**	P	**P**	**17 48 40.9**	**+6.0**
	comp=Z,26nm,0.9s,mb5.5						
EMOS	**Mosqueruela**	**88.36**	**310**	P	**P**	**17 48 39.3**	**+3.3**
	comp=Z,42nm,1.0s,mb5.6						
SJPF	**Ste Jean**	**88.47**	**313**	*e*P	**P**	**17 48 36.1**	**-0.3**
	comp=Z,35nm,0.9s,mb5.3						
SJPF	**Ste Jean**	**88.47**	**313**	*e*P	**P**	**17 48 36.1**	**-0.3**
SJPF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.3						
SGMF	**Saint Gilles**	**88.50**	**318**	*e*P	**P**	**17 48 36.7**	**+0.3**
	comp=Z,187nm,1.4s,mb5.8						
SGMF	**Saint Gilles**	**88.50**	**318**	*e*P	**P**	**17 48 36.7**	**+0.3**
SGMF				pmax	pmax		
	comp=Z,94nm,1.4s,mb5.8						
EALK	**Alkurruntz**	**88.65**	**313**	P	**P**	**17 48 36.8**	**-0.5**
	comp=Z,19nm,0.9s,mb5.4						
ROSF	**Rostrenen**	**88.95**	**319**	*e*P	**P**	**17 48 38.7**	**+0.1**
	comp=Z,152nm,1.3s,mb5.9						
ROSF	**Rostrenen**	**88.95**	**319**	*e*P	**P**	**17 48 38.7**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,76nm,1.3s,mb5.9						
UNV	**Unalaska Valle**	**88.95**	**36**	PFAKE		17 48 50.0	+12
UNV				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
QUIF	**Quistinic**	**88.96**	**318**	*e*P	**P**	**17 48 38.5**	**-0.2**
	comp=Z,199nm,1.6s,mb5.9						
QUIF	**Quistinic**	**88.96**	**318**	*e*P	**P**	**17 48 38.5**	**-0.2**
QUIF				pmax	pmax		
	comp=Z,99nm,1.6s,mb5.9						
ELAN	**Lanestosa**	**90.04**	**314**	P	**P**	**17 48 45.7**	**+1.8**
	comp=Z,18nm,1.0s,mb5.3						
EVIA	**Vianos**	**90.20**	**309**	P	**P**	**17 48 50.1**	**+5.4**
EVIA				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
EVIA	**Vianos**	**90.20**	**309**	P	**P**	**17 48 50.1**	**+5.3**
	comp=Z,18nm,1.0s,mb5.4						
ENIJ	**Nijar**	**90.27**	**307**	P	**P**	**17 48 46.5**	**+1.4**
ENIJ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
ENIJ	**Nijar**	**90.27**	**307**	P	**P**	**17 48 46.5**	**+1.4**
	comp=Z,4.2nm,0.6s,mb5.0						
EQES	**Quesada**	**90.80**	**308**	P	**P**	**17 48 48.6**	**+1.1**
	comp=Z,14nm,1.2s,mb5.2						
EBER	**Berja**	**90.82**	**307**	P	**P**	**17 48 48.8**	**+1.1**
	comp=Z,46nm,1.2s,mb5.7						
GUD	**Guadarrama**	**91.07**	**311**	P	**P**	**17 48 49.6**	**+0.9**
GUD				pmax	pmax		
	comp=Z,48nm,1.2s,mb5.7						
GUD	**Guadarrama**	**91.07**	**311**	P	**P**	**17 48 49.6**	**+1.0**
	comp=Z,48nm,1.2s,mb5.7						
ESDC	**Sonseca Array**	**91.12**	**310**	P	**P**	**17 48 49.8**	**+0.9**
	comp=Z,17nm,1.0s,mb5.3						
ESLA	**Sonseca Array**	**91.12**	**310**	*e*P	**P**	**17 48 48.2**	**-0.8**
	comp=Z,11nm,1.2s,mb5.1						
ESLA				LR	LR		
	comp=Z,7µm,20.0s,MS6.1						
EBAN	**Banos Encina**	**91.28**	**309**	P	**P**	**17 48 49.9**	**+0.2**
EBAN				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
EBAN	**Banos Encina**	**91.28**	**309**	P	**P**	**17 48 49.9**	**+0.2**
	comp=Z,15nm,0.9s,mb5.3						
EARI	**Arriondas**	**91.29**	**314**	P	pP	17 48 58.0	-1.6
	comp=Z,29nm,0.9s						
IMA	**Indian Mountai**	**91.38**	**22**	*e*P	**P**	**17 48 51.7**	**+2.2**
IMA				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.5						
IMA	**Indian Mountai**	**91.38**	**22**	*e*P	**P**	**17 48 51.7**	**+2.2**
	comp=Z,23nm,0.9s,mb5.5						
ELOJ	**Sierra Loja**	**91.77**	**308**	P	**P**	**17 48 53.4**	**+1.4**
ELOJ				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.0						
ELOJ	**Sierra Loja**	**91.77**	**308**	P	**P**	**17 48 53.4**	**+1.5**
	comp=Z,9.5nm,1.2s,mb5.0						
ELUQ	**Luque**	**91.77**	**308**	P	**P**	**17 48 55.6**	**+3.6**
ELUQ				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						
ELUQ	**Luque**	**91.77**	**308**	P	**P**	**17 48 55.6**	**+3.6**
	comp=Z,7.4nm,0.7s,mb5.1						
EADA	**Adamuz**	**91.89**	**309**	P	**P**	**17 48 54.7**	**+2.1**
	comp=Z,29nm,1.1s,mb5.5						
EMIJ	**Mijas**	**92.37**	**307**	P	**P**	**17 48 55.3**	**+0.6**
	comp=Z,10nm,0.8s,mb5.2						
SVW2	**Sparrevohn**	**92.50**	**27**	*e*P	**P**	**17 48 58.4**	**+3.7**
EPON	**Pontenova**	**92.67**	**314**	P	**P**	**17 48 58.2**	**+2.2**
	comp=Z,14nm,1.0s,mb5.3						
ECAL	**Calabor**	**92.69**	**313**	P	**P**	**17 49 00.4**	**+4.3**
	comp=Z,20nm,1.1s,mb5.5						
ERUA	**La Rua**	**92.88**	**313**	P	**P**	**17 48 58.0**	**+1.0**
ERUA				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.5						
ERUA	**La Rua**	**92.88**	**313**	P	**P**	**17 48 58.0**	**+1.1**
	comp=Z,27nm,1.2s,mb5.5						
EINC	**Incio**	**92.97**	**314**	P	**P**	**17 48 58.3**	**+0.9**
	comp=Z,4.3nm,1.5s,mb4.7						
VNDA	**Vanda**	**93.14**	**168**	*e*P	**P**	**17 48 57.2**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,11nm,1.2s						

VNDA				MLR	MLR		
	comp=Z,2µm,19.0s						
VNDA	Vanda	93.14	168	eP	P	17 48 57.2	-0.2
	comp=Z,11nm,1.2s,mb5.2						
VNDA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
ESPR	Espera	93.16	308	P	P	17 49 00.3	+2.0
	comp=Z,6.9nm,1.0s,mb5.0						
BORG	Borgarnes	93.24	337	PFAKE		17 49 10.0	+12
BORG				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
EMIN	Mina Concepcio	93.59	309	P	P	17 49 01.6	+1.2
	comp=Z,4.1nm,0.9s,mb4.9						
EBAD	Badajoz	93.63	310	P	P	17 48 58.0	-2.5
	comp=Z,5.8nm,1.1s,mb4.9						
MTE	Manteigas	93.65	311	eP	P	17 49 01.8	+1.3
	comp=Z,27nm,1.1s,mb5.6						
SUMG	Summit	93.93	347	eP	P	17 49 01.6	+0.5
	comp=Z,25nm,1.1s,mb5.5						
RSO	Redoubt South	94.03	27	eP	P	17 49 03.7	+1.9
SPU	Mount Spurr	94.04	26	eP	P	17 49 01.6	-0.2
COLA	College	94.09	22	eP	P	17 49 02.6	+0.6
COLA				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.2						
COLA				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.7						
COLA	College	94.09	22	eP	P	17 49 02.6	+0.6
	comp=Z,12nm,1.3s,mb5.2						
COLA				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
MCK	McKinley	94.21	23	eP	P	17 49 03.0	+0.4
MCK				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.3						
MCK				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.5						
MCK	McKinley	94.21	23	eP	P	17 49 03.0	+0.4
	comp=Z,14nm,1.1s,mb5.3						
MCK				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
SBA	Scott Base	94.25	168	PFAKE		17 49 10.0	+7.5
SBA				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
PWA	Palmer West	94.78	26	eP	P	17 49 06.9	+1.7
PWA				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.8						
PWA	Palmer West	94.78	26	eP	P	17 49 06.9	+1.7
	comp=Z,43nm,1.1s,mb5.8						
FIB	Fire Island	94.87	26	eP	P	17 49 05.4	-0.2
FIB				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
SLKM	Skilak Lake	95.14	27	P	P	17 49 11.6	+4.7
SLKM	Skilak Lake	95.14	27	eP	P	17 49 07.8	+0.9
KDAK	Kodiak Island	95.20	30	PFAKE		17 49 20.0	+13
KDAK				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
SML	Sawmill	95.36	25	eP	P	17 49 07.6	-0.3
THY	Trims Highway	95.61	23	eP	P	17 49 10.7	+1.7
INK	Inuvik	96.75	16	eP	P	17 49 14.4	+0.4
INK				pmax	pmax		
	comp=Z,46nm,1.2s						
INK	Inuvik	96.75	16	eP	P	17 49 14.4	+0.4
	comp=Z,46nm,1.2s,mb5.8						
DIV	Divide	96.77	25	PFAKE		17 49 30.0	+16
DIV				LR	LR		
	comp=Z,11µm,19.0s,MS6.4						
RES	Resolute Bay	97.16	2	eP	P	17 49 16.7	+0.9
RES				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.7						
RES	Resolute Bay	97.16	2	eP	P	17 49 16.7	+0.9
	comp=Z,36nm,1.1s,mb5.7						
DAWY	Dawson	97.61	21	eP	P	17 49 19.8	+1.8
QSPA	South Pole Qui	98.01	180	PFAKE		17 49 30.0	+10
QSPA				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
SNAA	Sanae	99.87	199⇓	iP	P	17 49 39.1	+11
VNA2	Neumayer--Watz	101.41	199⇓	iP	P	17 49 35.5	+0.4
VNA2	Neumayer--Watz	101.41	199⇑	i	PP	17 53 46.2	-1.2
SIT	Sitka	103.51	25	PFAKE		17 50 00.0	+15
SIT				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
EDM	Edmonton	114.57	18	P	Pdif	17 50 29.3	-4.0
OCWA	Octopus Mounta	114.85	28	PFAKE		17 54 40.0	+11
OCWA				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
SCHQ	Schefferville	115.31	348	PFAKE		17 54 40.0	+11
SCHQ				LR	LR		
	comp=Z,7µm,22.0s,MS6.2						
TBI	Tubuai	117.31	112	ePS	PS	18 05 44.2	+20
TBI				eSS	SS	18 12 00.8	+12
TBI				eLQ		18 25 24.9	
TBI				eLR	LR	18 30 16.5	
	comp=Z,2µm,31.5s						
PPT	Papeete	117.34	106	ePS	PS	18 05 12.1	-13
PPT				eSS	SS	18 12 05.6	+16
PPT				eLQ		18 25 00.8	
PPT				eLR	LR	18 30 18.5	
	comp=Z,2µm,26.5s						
NEW	Newport	117.44	23	PFAKE		17 54 40.0	+6.4
NEW				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
COR	Corvallis	117.59	29	PFAKE		17 54 40.0	+6.0
COR				LR	LR		
	comp=Z,465nm,22.0s,MS5.1						
HUMO	Hull Mountain	119.21	31	ePKP	PKPdf	17 54 33.9	-3.4
HUMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
MSO	Missoula	119.83	22	ePKP	PKPdf	17 54 34.5	-3.8
MSO				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
YBH	Yreka Blue Hor	119.97	31	PFAKE		17 54 50.0	+11
YBH				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
BMO	Blue Mountains	120.12	25	PFAKE		17 54 50.0	+11
BMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
WDC	Whiskeytown Da	120.89	32	PFAKE		17 54 50.0	+9.4
WDC				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
MOD	Modoc	121.05	30	ePKP	PKPdf	17 54 37.7	-3.2
MOD				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
ULM	Lac du Bonnet	121.22	8	ePKP	PKPdf	17 54 35.8	-5.2
ULM				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
DGMT	Dagmar	121.37	14	PFAKE		17 54 50.0	+8.7
DGMT				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
PMSA	Palmer Station	121.39	191	PFAKE		17 54 50.0	+9.1
PMSA				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
WVOR	Wild Horse Val	121.44	28	ePKIKP	PKPdf	17 54 38.6	-3.0
WVOR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.8						
BOZ	Bozeman (W)	121.68	21	ePKIKP	PKPdf	17 54 38.3	-3.6
BOZ				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.1						
HOPS	Hopland	121.74	34	PFAKE		17 54 50.0	+7.8
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
HLID	Hailey	122.38	24	ePKP	PKPdf	17 54 39.9	-3.5
HLID				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
QLMT	Earthquake Lak	122.46	21	ePKP	PKPdf	17 54 40.5	-2.9
LAO	LASA Array	122.48	17	ePKP	PKPdf	17 54 40.9	-2.5
LAO				LR	LR		
	comp=Z,5µm,22.0s,MS6.1						
YMR	Madison River	122.76	21	ePKP	PKPdf	17 54 40.5	-3.5
YFT	Old Faithful	123.00	21	PKP	PKPdf	17 54 40.1	-4.3
LKWY	Lake	123.05	21	PFAKE		17 54 50.0	+5.4
LKWY				LR	LR		
	comp=Z,6µm,19.0s,MS6.3						
PQI	Presque Isle	123.21	345	PFAKE		17 54 50.0	+5.2
PQI				LR	LR		
	comp=Z,10µm,21.0s,MS6.5						
WCN	Washoe City	123.28	31	ePKIKP	PKPdf	17 54 40.6	-4.6
MOOW	Moose Ponds	123.64	22	ePKP	PKPdf	17 54 42.7	-3.1
BMN	Battle Mountai	123.66	29	PFAKE		17 54 50.0	+4.1
BMN				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
RRI2	Red Ridge	123.77	22	ePKP	PKPdf	17 54 42.8	-3.3
TPAW	Teton Pass	123.79	22	ePKP	PKPdf	17 54 42.5	-3.6
LOHW	Long Hollow	123.81	22	ePKP	PKPdf	17 54 42.1	-4.0
CMB	Columbia Colle	123.89	33	ePKIKP	PKPdf	17 54 42.9	-3.5
CMB				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
EYMN	Ely	123.96	5	PFAKE		17 54 50.0	+3.7
EYMN				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
SAO	San Andreas Ge	124.23	34	PFAKE		17 54 50.0	+2.9
SAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
AHID	Auburn Hatcher	124.35	22	PFAKE		17 55 00.0	+13
AHID				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
HVU	Hansel Valley	124.53	24	ePKIKP	PKPdf	17 54 43.3	-4.3
MNV	Mina	124.75	31	ePKIKP	PKPdf	17 54 42.9	-5.2
MNV				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.7						
EMMW	East Machias	124.88	344	PFAKE		17 55 00.0	+12
EMMW				LR	LR		
	comp=Z,12µm,21.0s,MS6.5						
BW06	Boulder Array	124.92	21	PFAKE		17 55 00.0	+12
BW06				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
BGU	Big Grassy Mou	125.14	25	ePKP	PKPdf	17 54 44.9	-3.9
HWUT	Hardware Ranch	125.16	24	ePKP	PKPdf	17 54 45.4	-3.4
HWUT				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
TPH	Tonopah	125.50	30	PFAKE		17 55 00.0	+10
TPH				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
WVL	Waterville	125.58	346	PFAKE		17 55 00.0	+10
WVL				LR	LR		
	comp=Z,10µm,20.0s,MS6.5						
JLU	Jordanelle	126.06	24	ePKP	PKPdf	17 54 48.1	-2.5
TRCR	Troy Canyon	126.08	29	ePKP	PKPdf	17 54 48.3	-2.3
TAOE	Nuku Hiva Isla	126.27	95	eSS	SS	18 13 47.6	+4.0
TAOE				eLR	LR	18 34 52.6	
DAU	Daniels Canyon	126.30	24	ePKIKP	PKPdf	17 54 47.7	-3.3
NLU	North Lily Min	126.35	25	ePKP	PKPdf	17 54 48.1	-3.0
DAC	Darwin (Calif)	126.68	32	PKIKP	PKPdf	17 54 49.4	-2.4
DAC				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.8						
MIV	Mineville/With	126.89	349	ePKP	PKPdf	17 54 48.4	-3.6
MDV	Middlebury	126.89	349	ePKP	PKPdf	17 54 49.0	-3.0
NCB	Newcomb	127.11	350	PFAKE		17 55 00.0	+7.5
NCB				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
TMUT	Trail Mountain	127.27	25	ePKP	PKPdf	17 54 49.9	-3.0
MVU	Marysvale	127.50	26	ePKP	PKPdf	17 54 50.6	-2.8
MVU				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
MSU	Marysvale	127.51	26	ePKIKP	PKPdf	17 54 51.3	-2.1
SRU	San Rafael	127.70	24	ePKIKP	PKPdf	17 54 50.3	-3.5
HRV	Harvard--Oak R	127.98	347	PFAKE		17 55 00.0	+5.8
HRV				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
WES	Weston	128.04	346	PFAKE		17 55 00.0	+5.7
WES				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
NEN	Nelson	128.58	30	ePKP	PKPdf	17 54 52.2	-3.4
GENY	Geneseo	128.85	352	ePKP	PKPdf	17 54 51.8	-4.0
LDFC	Landfair	128.89	31	ePKP	PKPdf	17 54 52.7	-3.5
ISCO	Idaho Springs	128.92	20	PFAKE		17 55 00.0	+3.9
ISCO				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
PV10	Paradox Valley	128.93	24	ePKP	PKPdf	17 54 53.4	-2.8
BINY	Binghamton	129.14	351	ePKP	PKPdf	17 54 52.2	-4.3
BINY				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
PFO	Pinyon Flat Ob	129.31	33	PKIKP	PKPdf	17 54 53.8	-3.2
PFO				MLR	MLR		
	comp=Z,360nm,19.0s,MS5.1						
PV01	Paradox Valley	129.32	23	PKP	PKPdf	17 54 52.8	-4.1
AAM	Ann Arbor	129.80	358	PFAKE		17 55 10.0	+12
AAM				LR	LR		
	comp=Z,4µm,19.0s,MS6.1						
RCBR	Riachuelo	130.46	269	PFAKE		17 55 10.0	+10
RCBR				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
SDCO	Great Sand Dun	130.80	21	ePKP	PKPdf	17 54 54.8	-5.0
SDCO				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
SSPA	Standing Stone	130.95	352	PFAKE		17 55 10.0	+10
SSPA				LR	LR		
	comp=Z,708nm,22.0s,MS5.3						
ACSO	Alum Creek Sta	131.83	357	PFAKE		17 55 10.0	+8.4
ACSO				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
MCWV	Mont Chateau	132.16	354	PFAKE		17 55 10.0	+7.7
MCWV				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
ANMO	Albuquerque	132.93	23	ePKIKP	PKPdf	17 55 00.3	-3.5
ANMO				MLR	MLR		
	comp=Z,3µm,20.0s						
LAZ	Ladron	133.13	24	ePKP	PKPdf	17 55 02.0	-2.3
CBN	Corbin	133.26	351	PFAKE		17 55 10.0	+5.6
CBN				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
TUC	Tucson	133.26	29	ePKIKP	PKPdf	17 55 00.2	-4.3
TUC				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.6						
LENM	Lemitar	133.40	24	ePKP	PKPdf	17 55 01.4	-3.3
LPM	Los Pinos Moun	133.41	24	ePKP	PKPdf	17 55 01.4	-3.4
CCM	Cathedral Cave	133.79	6	PFAKE		17 55 10.0	+4.7
CCM				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
WCI	Wyandotte Cave	133.90	1	PFAKE		17 55 10.0	+4.5
WCI				LR	LR		
	comp=Z,929nm,19.0s,MS5.5						
BLA	Blacksburg	134.64	354	PFAKE		17 55 10.0	+3.1
BLA				LR	LR		
	comp=Z,5µm,21.0s,MS6.2						
AMTX	Amarillo	134.68	18	PFAKE		17 55 10.0	+2.9
AMTX				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
BBSR	BB Station	135.00	334	PFAKE		17 55 20.0	+12
BBSR				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
WMOK	Wichita Mounta	135.65	15	ePKIKP	PKPdf	17 55 01.4	-7.5
WMOK				MLR	MLR		
	comp=Z,3µm,20.0s,MS6.0						
WVT	Waverly	135.95	2	ePKIKP	PKPdf	17 55 05.6	-3.8
WVT				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.9						
GDL2	Guadalupe Moun	136.17	23	ePKP	PKPdf	17 55 05.2	-4.6
MNTX	Cornudas Mount	136.21	24	ePKP	PKPdf	17 54 57.3	-13
MNTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
MIAR	Mount Ida	136.94	9	PKIKP	PKPdf	17 55 07.9	-3.3
MIAR	Mount Ida	136.94	9	ePKP	PKPdf	17 55 04.8	-6.4
MIAR				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
OXF	Oxford	137.47	4	PFAKE		17 55 20.0	+7.8
OXF				LR	LR		
	comp=Z,5µm,20.0s,MS6.3						
JSC	Jenkinsville	137.62	354	PKIKP	PKPdf	17 55 08.9	-3.6
GOGA	Godfrey	138.65	357	PFAKE		17 55 20.0	+5.6
GOGA				LR	LR		
	comp=Z,6µm,21.0s,MS6.3						
NHSC	New Hope	138.67	353	PFAKE		17 55 20.0	+5.6
NHSC				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
LTX	Lajitas	138.98	24	ePKIKP	PKPdf	17 55 11.2	-3.9
LTX				MLR	MLR		
	comp=Z,3µm,21.0s,MS6.1						
LRAL	Lakeview Retre	139.07	2	PFAKE		17 55 20.0	+4.8
LRAL				LR	LR		
	comp=Z,5µm,22.0s,MS6.2						
JCT	Junction City	139.34	19	ePKIKP	PKPdf	17 55 12.8	-2.9
JCT				MLR	MLR		
	comp=Z,3µm,22.0s,MS6.0						
NATX	Nacogdoches	139.46	12	PFAKE		17 55 20.0	+4.1
NATX				LR	LR		
	comp=Z,4µm,19.0s,MS6.2						
HKT	Hockley	140.94	14	PKIKP	PKPdf	17 55 13.4	-5.3
HKT	Hockley	140.94	14	ePKP	PKPdf	17 55 12.4	-6.3
HKT				LR	LR		
	comp=Z,989nm,19.0s,MS5.6						
TRQA	Tornquist	143.24	212	ePKP	PKPdf	17 55 14.2	-8.2
TRQA				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
DWPF	Disney	143.75	353	PFAKE		17 55 30.0	+13
DWPF				LR	LR		
	comp=Z,867nm,20.0s,MS5.5						
PLCA	Paso Flores	144.79	200	ePKIKP	PKPdf	17 55 20.8	-4.2
PLCA				MLR	MLR		
	comp=Z,2µm,21.0s						
CPB	Codrington	145.14	317	eP	PKPbc	17 55 26.4	+5.0
BPA	Boggy Peak	145.58	317	eP	PKPbc	17 55 24.9	+2.5
BBL	Barber’s Block	146.36	314	eP	PKPbc	17 55 26.0	+1.7
CBYP	Canovanas	147.22	323	ePKPdf	PKPdf	17 55 23.9	-5.8
CBYP				ePKPbc	PKPdf	17 55 28.4	-1.3
CPUP	Villa Florida	147.46	233	PKPdf	PKPdf	17 55 28.7	-1.2
CPUP				PKPdf	PKPdf	17 55 28.8	-1.2
SJG	San Juan	147.52	323	ePKIKP	PKPdf	17 55 27.6	-2.6
SJG				MLR	MLR		
	comp=Z,2µm,21.0s						
FCH	Farellones	151.10	208	eP	PKPdf	17 55 33.4	-2.1
TEIG	Tepich	151.74	5	PKPdf	PKPdf	17 55 32.6	-4.1
TEIG				ePKPbc	PKPdf	17 55 39.8	+3.0
TEIG				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
TLL	Tololo Astrono	153.95	211	eP	PKPdf	17 55 37.3	-2.3
SDV	Santo Domingo	157.35	318	ePKPdf	PKPdf	17 55 41.1	-3.5
SDV				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
SAML	Samuel	157.63	266	ePKPdf	PKPdf	17 55 41.9	-3.1
SAML				LR	LR		
	comp=Z,3µm,22.0s,MS6.1						
LVC	Limon Verde	158.30	226	ePKPdf	PKPdf	17 55 43.6	-1.9
LVC				ePKPab	PKPab	17 56 17.3	+0.4
LVC				LR	LR		
	comp=Z,1µm,20.0s,MS5.8						
LPAZ	La Paz	160.94	243	ePKIKP	PKPdf	17 55 45.8	-2.8
LPAZ				MLR	MLR		
	comp=Z,1µm,20.0s						
JTS	JuntasAbangare	161.70	357	PFAKE		17 56 00.0	+11
JTS				LR	LR		
	comp=Z,572nm,21.0s						
OTAV	Otavalo	168.94	318	ePKPdf	PKPdf	17 55 53.4	-2.2
OTAV				LR	LR		
	comp=Z,2µm,22.0s						
NNA	Nana	170.39	246	PFAKE		17 56 00.0	+3.7
NNA				LR	LR		
	comp=Z,433nm,19.0s						
PAYG	Puerto Ayora	171.36	31	PFAKE		17 56 00.0	+3.0
PAYG				LR	LR		
	comp=Z,2µm,20.0s						

ISC 05 18:06:07.5±2.2**, 10.40N**±0.09×**91.55E**±0.09**, h13**^{km}±15^{km}**,**
n19, σ1^{s}**08**/25**, mb4.6**/2**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIS	Vishakhapatnam	10.79	313	eP	P	18 08 42.8	-2.2
VIS				eS	S	18 10 33.1	-13
VIS				e		18 10 46.3	
	comp=E,58nm,0.5s						
VIS				e		18 10 46.4	
	comp=N,80nm,0.5s						
BWNR	Bhubaneshwar	11.28	331	eP	P	18 08 47.1	-4.6
BWNR				eS	S	18 10 45.1	-14
BWNR				e		18 10 51.7	
	comp=N,57nm,0.3s						
BWNR				e		18 10 51.7	
	comp=E,56nm,0.2s						
SALM	Salem	13.16	277	eP	P	18 09 18.0	+1.1
SALM				eS	S	18 11 34.0	-10
HYB	Hyderabad	14.40	300	eP	P	18 09 33.0	-0.4
HYB				eS	S	18 12 13.5	-0.4
BLSP	Bilaspur	14.74	323	eP	P	18 09 36.5	-1.3
BLSP				eS	S	18 12 20.6	-1.3
JIRN	Jiri	17.89	344	eP	P	18 10 19.6	+1.7
	comp=E,14nm,0.3s						
PKI	Pulchoki	18.03	342	eP	P	18 10 19.9	+0.2
	comp=E,33nm,0.6s						
DMN	Daman	18.16	341	eP	P	18 10 20.3	-1.0
	comp=E,60nm,0.7s						
KAD	Karad	18.19	294	eP	P	18 10 20.3	-1.5
KKN	Kakani	18.27	342	eP	P	18 10 22.9	+0.2
	comp=E,23nm,0.6s						
BHPL	Bhopal	18.57	315	eP	P	18 10 28.2	+1.8
BHPL				eS	S	18 13 51.7	+1.5
GKN	Gorkha	18.67	341	eP	P	18 10 27.7	+0.1
	comp=E,38nm,0.3s						
KOLN	Koldanda	18.82	338	eP	P	18 10 30.2	+0.8
	comp=E,29nm,0.6s						
POO	Poona	18.93	297	eP	P	18 10 32.0	+1.2
NDI	New Delhi	22.61	326	eP	P	18 11 10.0	+0.5
WB2	Warramunga Arr	51.82	126	eP	P	18 15 16.9	-0.9
ASPA	Alice Springs	53.49	130	eP	P	18 15 29.9	-0.3
STKA	Stephens Creek	63.69	133	eP	P	18 16 42.2	+0.8
	comp=E,3.7nm,1.0s,mb4.4						
JOF	Joensuu	67.48	335	ep	P	18 17 04.3	-0.8
	comp=E,8.3nm,0.7s,mb4.9						

CASC 05 18:09:33.0±1.3**, 12.88N**×**88.75W, h37**^{km}±191^{km}**, MD3.8,**
2C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.72	40⇓	eP	P	18 09 46.9	+0.3
VSM				eS	S	18 09 58.1	+1.5
SNVI	San Vicente	0.73	353	eP	P	18 09 47.0	+0.1
SNVI				eS	S	18 09 57.6	+0.6
BLLM	Bellamira	0.75	42⇓	eP	P	18 09 47.1	-0.1
BLLM				eS	S	18 09 58.5	+1.0
LFRS	El Faro	0.80	338⇓	eP	P	18 09 47.9	+0.1
LFRS				eS	S	18 09 58.4	-0.2
LCBS	La Ceiba	0.80	344⇓	eP	P	18 09 47.9	0.0
LCBS				eS	S	18 09 59.4	+0.6
LBRS	Las Brisas	0.90	342	eP	P	18 09 49.9	+0.7
LFU	La Fuente	0.93	338⇑	eP	P	18 09 50.0	+0.3
LFU				eS	S	18 10 02.8	+0.7
CNCH	Conchagua	0.98	66⇓	eP	P	18 09 49.9	-0.4
CNCH				eS	S	18 10 03.2	-0.1
BOQS	Boqueron	0.99	329	eP	P	18 09 51.0	+0.4
BOQS				eS	S	18 10 04.7	+1.0
CAHU	Cacacuatique	1.03	31⇑	eP	P	18 09 51.2	+0.1
SBLS	San Blas	1.28	318	eP	P	18 09 54.5	-0.1
SBLS				eS	S	18 10 11.6	+0.8
RBDL	Robledal	1.53	324	eP	P	18 09 59.0	+0.7
RBDL				eS	S	18 10 17.9	+0.8
COPN	Copaltepe	2.22	108	eP	P	18 10 07.9	-0.3
APYN	Apoyeque	2.43	105	eP	P	18 10 09.9	-1.2

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*MOS **05** 18:13:42.4±0.9, 27.34N×140.01E, h323^{km}, mb4.5/12,*
Error ellipse: s-maj=25.0km s-min=8.8km az=108.9
*BJI **05** 18:13:44.3, 27.46N×140.07E, h328^{km}, mB5.2, mb4.7*
*NEIC **05** 18:13:44.8±0.8, 27.37N×140.15E, h339^{km}±8^{km}, mb4.6/71,*
Error ellipse: s-maj=6.3km s-min=5.1km az=118.0
*JMA **05** 18:13:45.2±0.1, 27.51N×140.86E, h333^{km}, M4.8*
ISC 05 18:13:42.8±0.3**, 27.34N**±0.03×**140.31E**±0.04**, h332**^{km}±3^{km}**,**
h329^{km}±6.7^{km}**: pP-P, n214,** σ1^{s}**05**/233**, mb4.6**/83**, 8C-21D,**
Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.68	98	P	P	18 14 30.4	-0.2
CBIJ				eS	S	18 15 05.3	-2.6
JHHJ	Haha-jima-NKT	1.81	113	P	P	18 14 31.7	+0.3
JHHJ				eS	S	18 15 08.3	-1.1
JHJ2	Mitsune	5.77	356	P	P	18 15 12.9	+2.0
JHJ2				eS	S	18 16 17.6	-2.5
TK01	Tokai 1	6.82	341	P	P	18 15 26.1	+2.7
JKO	Kozu shima	6.90	352	P	P	18 15 26.1	+1.8
BSO1	Boso 1	7.31	4	P	P	18 15 28.9	-0.3
BSO1				eS	S	18 16 50.1	-2.7
JWZ	Kozaga	7.33	328	P	P	18 15 32.5	+3.0
JWZ				eS	S	18 16 57.9	+4.6
JIM2	Oshima 3	7.39	354	P	P	18 15 31.4	+1.2
JIM2				eS	S	18 16 53.4	-1.2
JIZS	Izushimoda	7.46	351	P	P	18 15 32.5	+1.6
TATJ	Tateyama 2	7.68	357	P	P	18 15 33.4	-0.2
TATJ				eS	S	18 16 58.8	-1.9
JIE	Ise	7.68	337	P	P	18 15 36.8	+3.2
JOD2	Odawara 2	7.97	353	P	P	18 15 37.6	+0.5
JOD2				eS	S	18 17 04.7	-2.3
JTO	Tosashimizu	8.52	312	P	P	18 15 46.9	+3.2
JRY	Ryogami san	8.73	352	P	P	18 15 46.2	-0.1
JRY				eS	S	18 17 19.1	-4.5
MAJO	Matsushiro	9.35	349	ePn	P	18 15 53.5	-0.2
	16nm,0.4s						
MAT	Matsushiro	9.35	349	eP	P	18 15 53.0	-0.7
	11nm,0.5s						
MAT				eS	S	18 17 32.0	-5.1
MAT	Matsushiro	9.35	349	P	P	18 15 53.0	-0.7
MAT				S	S	18 17 32.4	-4.7

Code	Station	Δ	AZ	Phase	ISC	Time	Res
JSJ	Shimokoshiki	10.19	298	P	P	18 16 09.4	+5.4
JOW	Kunigami	10.74	270	P	P	18 16 13.1	+2.4
JMK	Ichinoseki	11.60	4	P	P	18 16 22.1	+1.0
JMK				eS	S	18 18 23.6	-2.8
JOT	Ohata	14.02	2	P	P	18 16 50.9	+0.9
GUMO	Guam	14.33	162	eP	P	18 16 53.6	0.0
	332nm,1.1s						
JKB	Kayabe	14.52	2	P	P	18 16 55.5	0.0
KS15	Wonju Array Si	14.54	317	eP	P	18 16 58.0	+2.4
JOSM	Okushiri--Mats	14.72	358	P	P	18 16 57.2	-0.5
YOJ	Yonaguni jima	15.83	263	P	P	18 17 10.6	+0.8
JTKR	Abashiri--Toko	16.85	9	P	P	18 17 21.1	+0.8
JTKR				eS	S	18 20 24.9	+10
TATO	Taipei	17.07	266	eP	P	18 17 21.5	-1.2
	118nm,1.4s						
SSE	Sheshan	17.11	287	P	P	18 17 18.2	-4.9
SSE				XP		18 18 49.2	
SSE				S	S	18 20 16.1	-4.2
SSE				AMB	AMB		
	comp=Z,10.0nm,1.2s						
SSE				AMB	AMB		
	comp=Z,1µm,11.5s						
SSE				LR	LR		
	comp=N,485nm,17.2s						
SSE				LR	LR		
	comp=E,307nm,17.2s						
SSE				LR	LR		
	comp=Z,806nm,17.3s						
SSE	Sheshan	17.11	287	P	P	18 17 18.2	-4.9
	comp=Z,10.0nm,1.2s						
SSE				sP		18 18 49.2	
SSE				S	S	18 20 16.1	-4.2
NJ2	Nanjing	19.22	289	eP	P	18 17 41.0	-3.3
NJ2				XP		18 19 15.5	
NJ2				S	S	18 20 55.0	-4.5
NJ2				PCS		18 25 26.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,342nm,4.0s						
NJ2				LR	LR		
	comp=N,17µm,24.0s						
NJ2				LR	LR		
	comp=E,9µm,18.0s						
NJ2				LR	LR		
	comp=Z,11µm,24.0s						
MDJ	Mudanjiang	19.27	336	P	P	18 17 45.6	+0.9
MDJ				AMB	AMB		
	comp=Z,37nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,2µm,13.2s						
MDJ	Mudanjiang	19.27	336	eP	P	18 17 41.2	-3.5
	comp=Z,43nm,1.0s						
QZH	Quanzhou	19.65	268	P	P	18 17 50.4	+1.8
QZH				AMB	AMB		
	comp=Z,50nm,0.9s						
YSS	Yuzh-Sakhalins	19.67	5	eP	P	18 17 49.3	+0.6
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS	Yuzh-Sakhalins	19.67	5	eP	P	18 17 49.7	+1.0
	comp=Z,28nm,0.7s						
SNY	Shenyang	19.92	321	⇑P	P	18 17 52.2	+1.1
SNY				AMB	AMB		
	comp=Z,50nm,0.8s						
CN2	Changchun	20.34	328	eP	P	18 17 56.8	+1.5
CN2				XP		18 19 26.4	
CN2				eS	S	18 21 20.8	+1.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
TIA	Tai'an	21.57	300	P	P	18 18 08.0	+0.8
TIA				AMB	AMB		
	comp=Z,96nm,1.0s,mb5.0						
KLR	Kul'dur	22.84	345	eP	P	18 18 16.7	-2.3
WHN	Wuhan	22.93	284	P	P	18 18 20.7	+0.6
BJT	Baijiatuau	23.66	308	eP	P	18 18 20.9	-5.8
	comp=Z,17nm,1.1s,mb4.2						
BJI	Beijing	23.66	309	P	P	18 18 26.1	-0.7
BJI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.1						
BJI	Beijing	23.66	309	P	P	18 18 26.1	-0.7
	comp=Z,8.0nm,0.7s,mb4.1						
HIA	Hailar	27.04	330	eP	P	18 18 52.3	-4.9
	comp=Z,38nm,0.7s,mb4.7						
XAN	Xi'an	27.74	292	P	P	18 19 03.6	-0.1
XAN				AMB	AMB		
	comp=Z,38nm,0.9s,mb4.6						
QIZ	Qiongzhong	29.15	260	P	P	18 19 13.7	-2.6
	comp=Z,12nm,0.9s,mb4.1						
GYA	Guiyang	29.97	276	⇓iP	P	18 19 23.5	+0.1
GYA				AMB	AMB		
	comp=Z,30nm,0.5s,mb4.8						
GYA				AMB	AMB		
	comp=Z,1µm,11.1s						
CD2	Chengdu	32.04	285	P	P	18 19 41.4	+0.2
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.6						
LZH	Lanzhou	32.08	295	⇓P	P	18 19 41.5	+0.1
LZH				AP	pP	18 20 45.1	-0.3
LZH				PP	PP	18 21 03.6	+1.0
LZH				XP	sP	18 21 23.7	+0.1
LZH				AMB	AMB		
	comp=Z,37nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,102nm,4.7s						
LZH	Lanzhou	32.08	295	⇓P	P	18 19 41.5	+0.1
	comp=Z,37nm,1.3s,mb4.5						
LZH				pP	pP	18 20 45.1	-0.3
LZH				PP	PP	18 21 03.6	+1.0
LZH				sP	sP	18 21 23.7	+0.1
ULN	Ulaanbaatar	33.01	317	⇓iP	P	18 19 49.6	+0.4
	comp=Z,18nm,0.7s,mb4.4						
MA2	Magadan	33.02	10	eP	P	18 19 49.4	+0.2
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.4						
MA2	Magadan	33.02	10	eP	P	18 19 49.3	0.0
	comp=Z,54nm,1.0s,mb4.7						
KMI	Kunming	33.70	275	P	P	18 19 56.1	+0.8
KMI				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.3						
KMI	Kunming	33.70	275	P	P	18 19 56.1	+0.8
	comp=Z,17nm,0.9s,mb4.3						
YAK	Yakutsk	35.41	351	i P	P	18 20 09.0	-0.3
YAK				pmax	pmax		
	comp=Z,37nm,0.9s,mb4.6						
YAK	Yakutsk	35.41	351	eP	P	18 20 08.2	-1.1
	comp=Z,52nm,0.7s,mb4.9						
GTA	Gaotai	35.62	300	⇓P	P	18 20 11.6	+0.2
GTA				AP	pP	18 21 15.4	-1.2
GTA				PP	PP	18 21 44.3	+4.1
GTA				XP	sP	18 21 55.1	+0.7
GTA				PCP	PcP	18 22 33.6	+1.1
GTA				S	S	18 25 19.9	-3.1
GTA				SCP		18 25 46.3	
GTA				XS		18 27 19.7	
GTA				SS	SS	18 28 04.5	-4.8
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.1						
GTA				LR	LR		
	comp=N,631nm,12.9s						
GTA				LR	LR		
	comp=E,661nm,13.3s						
GTA				LR	LR		
	comp=Z,846nm,17.9s						
BOD	Bodaibo	35.64	336	eP	P	18 20 11.1	-0.3
BOD				pmax	pmax		
	comp=Z,41nm,3.5s						
ZAK	Zakamensk	36.34	319	⇓iP	P	18 20 16.8	-0.4
ZAK				e		18 22 33.6	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s						
SEY	Seymchan	36.47	9	eP	P	18 20 21.2	+3.0
SEY				pmax	pmax		
	comp=N,10.0nm,0.6s						
SEY				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.2						
TLY	Talaya	36.70	322	i P	P	18 20 20.4	+0.1
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb3.8						
TLY	Talaya	36.70	322	eP	P	18 20 20.8	+0.5
	comp=Z,9.3nm,0.6s,mb4.2						
MOY	Mondy	38.19	320	eP	P	18 20 32.8	+0.2
CM31	Chiang Mai Arr	38.98	266	eP	P	18 20 39.8	+0.4
	comp=Z,4.0nm,0.6s,mb3.8						
LSA	Lhasa	43.01	285	P	P	18 21 14.7	+2.7
LSA	Lhasa	43.01	285	eP	P	18 21 09.8	-2.2
	comp=Z,5.7nm,0.6s,mb3.9						
BILL	Bilibino	43.60	14	d iP	P	18 21 16.8	+0.5
BILL				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.2						
BILL	Bilibino	43.60	14	eP	P	18 21 16.4	+0.1
	comp=Z,36nm,1.0s,mb4.5						
WMQ	Urumqi	45.08	306	P	P	18 21 28.0	-0.3
WMQ				AP	pP	18 22 39.0	+3.1
WMQ				XP	sP	18 23 17.0	+4.1
WMQ				S	S	18 27 39.0	-2.6
WMQ				SCS	ScS	18 30 44.0	-2.5
WMQ				AMB	AMB		
	comp=Z,26nm,0.8s,mb4.4						
WRAB	Tennant Creek	47.35	188	i P	P	18 21 45.8	-0.4
WRAB	Tennant Creek	47.35	188	eP	P	18 21 45.7	-0.5
	comp=Z,132nm,0.4s,mb5.5						
WB2	Warramunga Arr	47.36	188	⇑iP	P	18 21 45.7	-0.6
WRA	Warramunga Arr	47.36	188	i P	P	18 21 45.8	-0.5
WRA				pmax	pmax		
	comp=Z,73nm,0.3s						
FITZ	Fitzroy Crossi	47.36	199	eP	P	18 21 46.2	-0.1
	comp=Z,14nm,0.6s,mb4.4						
CTA	Charters Tower	47.50	172	eP	P	18 21 47.0	-0.3
	comp=Z,6.1nm,0.4s,mb4.2						
CTAO	Charters Tower	47.50	172	eP	P	18 21 46.4	-0.9
	comp=Z,26nm,1.2s,mb4.3						
JIRN	Jiri	47.67	284	eP	P	18 21 49.9	+1.3
	comp=Z,16nm,0.3s,mb4.7						
ZAL	Zalesovo	48.22	319	i P	P	18 21 51.5	-1.0
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PKI	Pulchoki	48.37	284	eP	P	18 21 53.8	-0.1
	comp=Z,11nm,0.5s,mb4.4						
KKN	Kakani	48.43	284	eP	P	18 21 54.9	+0.5
	comp=Z,37nm,0.9s,mb4.6						
DMN	Daman	48.62	284	eP	P	18 21 56.4	+0.5
	comp=Z,17nm,0.4s,mb4.6						
GKN	Gorkha	48.94	284	eP	P	18 21 58.7	+0.5
	comp=Z,36nm,0.9s,mb4.6						
NVS	Novosibirsk	49.28	320	eP	P	18 21 58.8	-1.7
NVS				e		18 23 14.0	
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.3						
KOLN	Koldanda	49.88	284	eP	P	18 22 06.0	+0.6
	comp=Z,43nm,0.9s,mb4.7						
ASPA	Alice Springs	51.09	188	⇑iP	P	18 22 13.4	-0.9
KURK	Kurchatov	51.63	314	i P	P	18 22 17.0	-0.9
KURK	Kurchatov	51.63	314	eP	P	18 22 16.9	-1.0
	comp=Z,45nm,0.9s,mb4.8						
KURK				ePcP	PcP	18 23 25.6	-1.2
MBWA	Marble Bar	52.17	205	eP	P	18 22 21.6	-0.7
	comp=Z,12nm,0.6s,mb4.4						
ULHL	Ulahol	53.50	304	P	P	18 22 32.4	+0.7
	SNR=13						
TKM2	Tokmak 2	53.91	305	P	P	18 22 35.0	+0.4
	SNR=8.0						
SVW2	Sparrevohn	53.98	33	eP	P	18 22 36.0	+1.1
KSH	Kashi	54.02	301	eP	P	18 22 36.0	+0.5
KSH				ePCP	PcP	18 23 37.3	+1.2
KSH				eAP	pP	18 23 44.0	-2.1
KSH				eXP	sP	18 24 18.0	-4.3
KSH				ePP	PP	18 24 43.0	+0.9
KSH				eS	S	18 29 42.0	-2.4
KSH				eXS		18 31 43.0	
KSH				eSCS	ScS	18 31 52.0	+4.9
KSH				eSS	SS	18 33 31.6	-0.8
KSH				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.7						
KSH				AMB	AMB		
	comp=Z,160nm,8.3s						
KSH				LR	LR		
	comp=N,2µm,16.4s						
KSH				LR	LR		
	comp=E,1µm,14.3s						
KZA	Kyzart	54.25	304	P	P	18 22 38.7	+1.6
	SNR=11						
KBK	Karagaybulak	54.41	304	P	P	18 22 38.8	+0.5
	SNR=10						
CHMS	Chumysh	54.52	305	P	P	18 22 39.1	+0.1
	SNR=5.7						
SDNR	Sundarnagar	54.66	291	eP	P	18 22 40.6	+0.4
USP	Ospenovka	54.67	305	P	P	18 22 40.1	0.0
	SNR=12						
AAK	Ala-Archa	54.75	304	P	P	18 22 41.0	+0.4
	SNR=13						
AAK	Ala-Archa	54.75	304	i P	P	18 22 40.3	-0.3
AAK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.2						
AAK	Ala-Archa	54.75	304	eP	P	18 22 39.8	-0.8
	comp=Z,11nm,0.5s,mb4.4						
AAK				ePcP	PcP	18 23 36.1	-2.6
UCH	Uchtor	54.78	304	P	P	18 22 42.3	+1.4
	SNR=25						
NDI	New Delhi	55.12	287	e	P	18 22 43.0	-0.5
EKS2	Erkin-Say	55.27	305	P	P	18 22 44.7	+0.3
	SNR=5.2						
RSO	Redoubt South	55.28	34	eP	P	18 22 43.5	-0.6
AML	Almayashu	55.40	304	P	P	18 22 46.5	+1.2
	SNR=13						
THN	Thein Dam	55.49	292	eP	P	18 22 43.9	-2.2
IMA	Indian Mountai	55.62	27	eP	P	18 22 47.8	+1.3
	comp=Z,6.0nm,0.8s,mb4.0						
CHKZ	Chkalovo	56.58	318	eP	P	18 22 52.0	-1.4
	comp=Z,18nm,0.7s,mb4.5						
CHKZ				ePcP	PcP	18 23 44.8	-1.0
FIB	Fire Island	56.60	33	eP	P	18 22 53.6	+0.2
PMR	Palmer	57.12	32	eP	P	18 22 57.1	+0.1
	comp=Z,14nm,0.6s,mb4.5						
MCK	McKinley	57.34	30	eP	P	18 22 58.2	-0.3
	comp=Z,24nm,0.9s,mb4.5						
SML	Sawmill	57.51	32	eP	P	18 22 60.0	+0.2
COLA	College	57.89	29	eP	P	18 23 03.0	+0.7
	comp=Z,12nm,0.5s,mb4.5						
THY	Trims Highway	58.75	30	eP	P	18 23 08.6	+0.3
STKA	Stephens Creek	58.90	179	⇑iP	P	18 23 08.6	-1.2
	comp=Z,9.0nm,0.8s,mb4.2						
FORT	Forrest	58.97	192	⇑iP	P	18 23 09.4	-0.8
	comp=Z,203nm,0.5s						
MENT	Mentasta	59.67	31	eP	P	18 23 15.2	+0.6
DAWY	Dawson	61.56	30	eP	P	18 23 27.4	+0.4
ARU	Arti	63.21	322	P	P	18 23 37.8	-0.1
	comp=Z,152nm,0.4s,SNR=15						
ARU	Arti	63.21	322	⇓iP	P	18 23 29.0	-8.9
ARU				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.6						
INK	Inuvik	63.50	24	eP	P	18 23 39.3	-0.3
	comp=Z,9.7nm,0.5s,mb4.6						
NWAO	Narrogin (SRO)	63.83	202	eP	P	18 23 41.4	-0.8
	comp=Z,23nm,1.1s,mb4.7						
DLBC	Dease Lake	66.96	35	eP	P	18 24 03.2	+1.6
KEV	Kevo	72.20	340	ep	P	18 24 32.5	-0.6
	comp=Z,26nm,0.5s,mb5.2						
RES	Resolute Bay	72.21	13	eP	P	18 24 33.1	0.0
	comp=Z,6.8nm,0.8s,mb4.4						
WBK	Wadi Bani Khal	72.64	287	⇓P	P	18 24 37.3	+0.6
YKW3	Yellowknife Ar	72.68	28	eP	P	18 24 35.7	-0.3
BIDO	Bidbid	73.01	288	⇓P	P	18 24 39.5	+0.7
	SNR=6.5						
SMDO	Samad	73.25	288	⇓P	P	18 24 40.6	+0.4
BANOM	Banah	73.61	291	⇓P	P	18 24 43.3	+1.1
HOQ	Hoqain	73.67	288	⇓P	P	18 24 43.0	+0.4
	SNR=6.3						
KTK1	Kautokeino	73.72	340	eP	P	18 24 42.3	+0.3
	comp=Z,77nm,2.0s,mb5.1						
KTK1	Kautokeino	73.72	340	eP	P	18 24 42.3	+0.3
KTK1				AMb	AMB	18 24 47.7	
	comp=Z,77nm,2.0s,mb5.1						
BSY	Bisya	74.09	288	⇓P	P	18 24 45.5	+0.4
	SNR=6.4						
JOF	Joensuu	74.12	333	ep	P	18 24 42.8	-1.6
	comp=Z,44nm,0.7s,mb5.3						
ARQ	Araqi	74.43	288	⇓P	P	18 24 47.7	+0.6
	SNR=9.2						
TRO	Tromso	74.59	342	eP	P	18 24 45.9	-1.1
OBN	Obninsk	75.38	325	⇑iP	P	18 24 51.7	0.0
OBN				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.0						
OBN	Obninsk	75.38	325	eP	P	18 24 51.0	-0.7
	comp=Z,32nm,0.9s,mb5.0						
KAF	Kangasniemi	76.53	334	ep	P	18 24 56.9	-1.0
	comp=Z,26nm,0.5s,mb5.2,baz=55,slow=5.2						
KIV	Kislovodsk	76.66	313	i P	P	18 24 56.9	-2.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
FINES	FINESS Array B	76.99	333	i P	P	18 25 00.3	-0.2
FINES				pmax	pmax		
	comp=Z,46nm,0.4s						
SHAO	Shalim	77.36	284	⇑P	P	18 25 03.2	-0.2
EDM	Edmonton	77.61	36	eP	P	18 25 04.8	+0.8
NEW	Newport	77.84	42	eP	P	18 25 05.8	+0.4
	comp=Z,14nm,0.9s,mb4.7						
MOR8	Moi Rana	78.13	340	eP	P	18 25 05.4	-1.2
	comp=Z,41nm,0.6s,mb5.3						
MOR8	Moi Rana	78.13	340	eP	P	18 25 05.4	-1.2
MOR8				AMb	AMB	18 25 06.5	
	comp=Z,41nm,0.6s,mb5.3						
RBK	Rabkut	78.81	284	⇑P	P	18 25 11.1	0.0
WHFO	Wadi Hawf	79.00	285	⇓P	P	18 25 11.7	-0.5
	SNR=9.8						
BMO	Blue Mountains	79.31	45	eP	P	18 25 14.3	+1.1
	comp=Z,7.4nm,0.8s,mb4.5						
WALA	Waterton Lakes	79.34	40	eP	P	18 25 14.2	+0.9
	comp=Z,10nm,0.7s,mb4.7						
ABTO	Aybut	79.65	284	⇓P	P	18 25 15.7	+0.1
	SNR=11						
ANN	Anapa	79.65	315	eP	P	18 25 07.9	-7.2
ANN				pmax	pmax		
	comp=Z,180nm,2.0s,mb5.5						
NSS	Namsos	80.02	340	eP	P	18 25 15.5	-1.2
SUMG	Summit	80.35	360	eP	P	18 25 19.6	+1.4
	comp=Z,8.2nm,0.5s,mb4.7						
CMB	Columbia Colle	80.40	52	eP	P	18 25 20.0	+0.8
	comp=Z,3.8nm,0.7s,mb4.2						
HLID	Hailey	81.76	45	eP	P	18 25 27.5	+1.4
	comp=Z,6.3nm,0.8s,mb4.5						
FFC	Flin Flon	82.40	31	eP	P	18 25 29.2	+0.1
	comp=Z,8.6nm,0.8s,mb4.6						
BOZ	Bozeman (W)	82.41	42	eP	P	18 25 30.6	+1.2
	comp=Z,5.3nm,0.8s,mb4.4						
TPH	Tonopah	82.59	51	eP	P	18 25 31.7	+1.3
	comp=Z,11nm,1.0s,mb4.6						
NB2	NORSAR Subarra	82.76	338	P	P	18 25 30.4	-0.4
	comp=Z,22nm,0.6s,mb5.2,baz=51,slow=4.6						
NB2	NORSAR Subarra	82.76	338	P	P	18 25 30.4	-0.4
	baz=51,slow=4.6						
MOL	Molde	82.81	340	eP	P	18 25 37.5	+6.4
FCC	Fort Churchill	83.11	25	eP	P	18 25 32.0	-0.6
	comp=Z,7.1nm,0.8s,mb4.5						
RRI2	Red Ridge	83.80	44	eP	P	18 25 38.8	+2.3
HWUT	Hardware Ranch	84.56	46	eP	P	18 25 42.1	+1.8
	comp=Z,15nm,0.9s,mb4.8						
ASK	Askoy	85.14	339	eP	P	18 25 43.1	+0.5
BER	Bergen	85.17	339	eP	P	18 25 43.4	+0.6
	comp=Z,160nm,1.5s,mb5.6						
BER	Bergen	85.17	339	eP	P	18 25 43.4	+0.6
BER				AMb	AMB	18 25 48.8	
	comp=Z,160nm,1.5s,mb5.6						
EGD	Espegrend	85.29	339	eP	P	18 25 44.3	+0.9
KOLS	Kolonicke sedl	86.12	324	i P	P	18 25 45.9	-1.7
CRVS	Cervenica-Dubn	86.56	325	i P	P	18 25 50.9	+1.1
CRVS				ePP	PP	18 29 15.9	-2.3
OKC	Ostrava-Krasne	87.62	327	eP	P	18 25 54.4	-0.4
KSP	Ksiaz	87.84	328	⇓eP	P	18 25 55.9	+0.1
KSP	Ksiaz	87.84	328	eP	P	18 25 56.0	+0.1
DPC	Dobruska-Polom	88.16	328	eP	P	18 25 57.4	0.0
VYHS	Vyhne	88.16	325	i P	P	18 25 57.6	+0.2
UPC	Upice	88.20	328	eP	P	18 25 57.2	-0.3
PVCC	Panska Ves	88.85	329	eP	P	18 26 00.5	-0.1
BRG	Berggiesshubel	88.90	329	i P	P	18 26 00.6	-0.2
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
BRG	Berggiesshubel	88.90	329	i P	P	18 26 00.6	-0.2
	comp=Z,4.4nm,0.7s,mb4.4						
CLL	Collm	89.02	330	⇓iP	P	18 26 00.7	-0.6
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
CLL	Collm	89.02	330	⇓iP	P	18 26 00.7	-0.6
	comp=Z,8.0nm,0.7s,mb4.7						
CLL	Collm	89.02	330	⇓P	P	18 26 00.7	-0.6
	comp=Z,logA/T=1.1,mb4.7						
PRU	Pruhonice	89.24	328	eP	P	18 26 02.3	-0.1
NKC	Novy Kostel	90.03	330	eP	P	18 26 06.2	+0.1
MOX	Moxa	90.10	330	eP	P	18 26 06.0	-0.4
KHC	Kasperske Hory	90.29	328	i P	P	18 26 07.4	+0.1
KHC	Kasperske Hory	90.29	328	eP	P	18 26 07.2	-0.1
GRA1	Grafenberg Arr	90.97	330	eP	P	18 26 10.5	+0.1
	comp=Z,7.0nm,0.8s,mb4.6						
GRF	Grafenberg Arr	90.97	330	eP	P	18 26 10.5	+0.1
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GRF	Grafenberg Arr	90.97	330	eP	P	18 26 10.5	+0.1
	comp=Z,7.0nm,0.8s,mb4.6						
ANMO	Albuquerque	91.58	49	eP	P	18 26 15.6	+2.0
	comp=Z,7.3nm,1.0s,mb4.6						
CDF	Champ du Feu	93.66	331	eP	P	18 26 22.2	-0.7
	comp=Z,11nm,0.6s,mb4.8						
BAIF	Baives	93.66	333	eP	P	18 26 22.0	-0.8
	comp=Z,35nm,1.3s,mb4.9						
HINF	Hinteralfeld	94.30	331	eP	P	18 26 24.7	-1.1
	comp=Z,5.6nm,0.7s,mb4.4						
HAU	Haudompre	94.37	331	eP	P	18 26 25.6	-0.5
	comp=Z,6.0nm,0.6s,mb4.5						
MEZF	Maizieres J'vi	94.54	332	eP	P	18 26 26.4	-0.4
	comp=Z,5.7nm,0.6s,mb4.5						
CABF	La Chapelle	95.56	330	eP	P	18 26 30.7	-0.9
	comp=Z,3.1nm,0.6s,mb4.3						
LPL	La Plagne	96.10	329	eP	P	18 26 33.5	-0.6
	comp=Z,7.3nm,0.5s,mb4.7						
LPG	La Plagne	96.11	329	eP	P	18 26 33.6	-0.5
	comp=Z,10nm,0.6s,mb4.9						
SSF	Saint Saulge	96.31	332	eP	P	18 26 34.0	-1.0
SMF	Signal de Mont	96.50	331	eP	P	18 26 34.9	-1.0
LDF	La Druitiere	96.53	335	eP	P	18 26 34.2	-1.7
AVF	Avril sur Loir	96.59	332	eP	P	18 26 35.2	-1.1
	comp=Z,4.6nm,0.7s,mb4.4						
MBDF	Montbardon	96.69	329	eP	P	18 26 35.2	-1.6
	comp=Z,8.0nm,0.7s,mb4.7						
GRR	Gorron	96.97	335	eP	P	18 26 36.9	-1.1
SBF	Sospel	97.03	328	eP	P	18 26 37.2	-1.1
	comp=Z,77nm,1.1s,mb5.5						
TCF	Toulx Ste Croi	97.47	332	eP	P	18 26 39.9	-0.4
	comp=Z,1.9nm,0.4s,mb4.3						
VIVF	Saint-Julien-l	97.54	330	eP	P	18 26 40.2	-0.4
	comp=Z,16nm,1.1s,mb4.8						
MFF	Saint Martin d	98.17	334	eP	P	18 26 43.2	-0.2
SNAA	Sanae	131.19	195	i PKIKP	PKPdf	18 32 17.5	+2.6

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*BJI **05** 18:43:28.4, 37.40N×121.50W, h7^{km}, mB4.7, mb4.0, Ms4.6, Msz4.4*

*NEIC **05** 18:43:30.4, 37.40N×121.49W, h7^{km}, mb3.9/1, ML4.4(NCEDC), MW4.1(BRK), After NCEDC.*

NEIC Felt [III] at Livermore, Los Gatos, Mount Hamilton, Newman, Patterson, San Jose and Watsonville; [II] at Aptos, Ben Lomond, Boulder Creek, Capitola, Felton, Gilroy, Morgan Hill, Palo Alto, San Francisco, Santa Cruz, Scotts Valley, Soquel, Stanford and Sunnyvale.

ISC 05 18:43:28.6±0.4**, 37.43N**±0.03×**121.40W**±0.04**, h7^{km}, n53, σ1^{s}23**/54**, mb4.6**/2**, MS4.8**/1**, 2C-2D, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
						h m s	ISC
SAO	San Andreas Ge	0.66	183	⇓iP	Pg	18 43 43.1	+1.2
SAO				i S	Sg	18 43 54.1	+3.4
SAC	San Andreas	0.82	281	⇑iP	Pb	18 43 44.8	-0.1
CMB	Columbia Colle	1.01	53	eP	Pb	18 43 49.9	+1.8
LRV	Little Rabbit	1.04	163	⇓iP	Pb	18 43 49.7	+1.1
NSHM	Saint Helena R	1.45	319	eP	Pn	18 43 54.7	-0.7
OHCM	Honcut	1.91	358	eP	Pn	18 44 01.4	-0.5
OMM	Old Mammoth Mi	1.93	84	⇑ePn	Pn	18 44 04.9	+2.7
HOPS	Hopland	2.05	320	ePn	Pn	18 44 02.6	-1.3
WCN	Washoe City	2.28	34	ePn	Pn	18 44 09.2	+2.0
MNV	Mina	2.76	68	ePn	Pn	18 44 15.6	+1.5
PAHR	Pah Rah Range	2.77	34	ePn	Pn	18 44 16.3	+2.0
DAC	Darwin (Calif)	3.26	109	Pn	Pn	18 44 23.0	+1.8
WDC	Whiskeytown Da	3.27	345	ePn	Pn	18 44 20.1	-1.3
TPH	Tonopah	3.38	78	ePn	Pn	18 44 24.7	+1.8
KHMM	Horse Mountain	3.89	333	ePn	Pn	18 44 31.2	+1.0
MWC	Mount Wilson	4.19	139	ePn	Pn	18 44 34.0	-0.5
YBH	Yreka Blue Hor	4.42	347	ePn	Pn	18 44 37.5	-0.2
BMN	Battle Mountai	4.43	46	ePn	Pn	18 44 38.6	+0.7
MOD	Modoc	4.55	10	ePn	Pn	18 44 40.6	+1.0

TRCR	Troy Canyon	4.69	77	Pn	Pn	18 44 41.7	+0.1
KBO	Bosley Butte	5.25	336	ePn	Pn	18 44 49.1	-0.3
HUMO	Hull Mountain	5.31	348	ePn	Pn	18 44 51.3	+1.0
WVOR	Wild Horse Val	5.43	22	ePn	Pn	18 44 52.5	+0.4
PFO	Pinyon Flat Ob	5.55	132	ePn	Pn	18 44 52.6	-1.1
NEN	Nelson	5.57	107	ePn	Pn	18 44 53.8	-0.2
LDFC	Landfair	5.60	113	ePn	Pn	18 44 53.2	-1.1
BAR	Barrett	6.12	139	ePn	Pn	18 44 59.7	-2.1
MVU	Marysvale	7.34	79	ePn	Pn	18 45 18.7	-0.2
MSU	Marysvale	7.37	79	ePn	Pn	18 45 20.7	+1.4
BGU	Big Grassy Mou	7.38	59	ePn	Pn	18 45 20.3	+0.8
NLU	North Lily Min	7.72	68	ePn	Pn	18 45 21.4	-2.8
SPUT	South Promonto	7.94	58	ePn	Pn	18 45 25.9	-1.4
BMO	Blue Mountains	8.04	21	ePn	P	18 45 26.8	-1.8
HLID	Hailey	8.12	39	Pn	P	18 45 29.0	-0.8
TMUT	Trail Mountain	8.22	74	ePn	P	18 45 30.5	-0.8
HWUT	Hardware Ranch	8.67	58	Pn	P	18 45 36.6	-0.8
SRU	San Rafael	8.72	76	Pn	P	18 45 38.0	-0.2
AHID	Auburn Hatcher	9.52	53	Pn	P	18 45 50.4	+1.2
MCMT	McKenzie Canyo	9.81	38	Pn	P	18 45 51.6	-1.6
PV10	Paradox Valley	9.82	81	ePn	P	18 45 51.2	-2.1
TUC	Tucson	10.10	117	Pn	P	18 45 53.0	-4.2
PV01	Paradox Valley	10.18	82	Pn	P	18 45 58.7	+0.4
MOOW	Moose Ponds	10.27	49	Pn	P	18 45 59.4	-0.1
BOZ	Bozeman (W)	11.00	39	Pn	P	18 46 08.6	-0.9
GDL2	Guadalupe Moun	14.93	105	Pn	P	18 46 59.8	-2.1
CPRX	Cap Rock	14.98	102	Pn	P	18 47 02.5	-0.1
EDM	Edmonton	16.76	17	eP	P	18 47 25.8	+0.5
JCT	Junction City	19.19	105	P	P	18 47 53.3	-2.2
	6.8nm,1.0s						
FFC	Flin Flon	21.80	31	P	P	18 48 23.4	+0.4
	57nm,0.8s,mb5.0,SNR=9.8						
MDJ	Mudanjiang	76.21	316	P	P	18 55 18.6	-0.5
MDJ				AMB	AMB		
	comp=Z,8.0nm,2.4s,mb4.2						
CN2	Changchun	79.00	317	eP	P	18 55 36.0	+1.4
BJI	Beijing	86.56	320	P	P	18 56 12.8	-0.8
LZH	Lanzhou	95.69	325	eP	P	18 56 57.5	+1.2
LZH				AP	pP	18 57 00.0	+1.5
LZH				XP	sP	18 57 01.2	+1.9
LZH				LR	LR		
	comp=N,175nm,15.0s						
LZH				LR	LR		
	comp=Z,285nm,17.5s,MS4.8						

*JMA **05** 19:09:59.3±0.5,24.07N×121.70E,h21^{km},M2.6*
*TAP **05** 19:09:60.0,24.25N×121.71E,h12^{km},ML3.5*
TAP Felt II J at Nanau, I J at Chiawan, I J at Nanshan, I J at Nioudou.

ISC 05 19:09:59.3±0.4**,24.21N**±0.02×**121.81E**±0.02**,h0**^{km}±3^{km}**, n59,σ0^{s}86**/94**,10C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.23	343	⇑iP	Pg	19 10 04.8	+0.9
ENA				S	Sg	19 10 08.0	+1.0
TWD	Chiawan	0.23	238	⇑iP	Pg	19 10 05.0	+1.0
TWD				S	Sg	19 10 08.6	+1.5
HWA	Hwalien	0.30	220	P	Pg	19 10 06.9	+1.7
TWC	Suao	0.40	5	⇑iP	Pg	19 10 08.2	+0.8
TWC				S	Sg	19 10 13.6	+0.8
NNS	Nan Shan	0.47	300	⇑iP	Pg	19 10 08.4	-0.1
NNS				S	Sg	19 10 13.9	-0.9
ENTT	Nioudou	0.49	333	⇑iP	Pg	19 10 09.2	+0.2
ENTT				S	Sg	19 10 15.4	-0.2
WHF	Hehuan Shan	0.51	263	⇑iP	Pg	19 10 09.3	-0.1
WHF				S	Sg	19 10 15.2	-0.8
ESL	Shilin	0.52	222	⇑iP	Pg	19 10 10.0	+0.3
ESL				S	Sg	19 10 17.8	+1.1
TWE	Neicheng	0.53	345	i P	Pg	19 10 10.3	+0.4
TWE				S	Sg	19 10 17.3	+0.4
ILA	Ilan	0.56	354	eP	Pg	19 10 11.5	+1.0
ILA				S	Sg	19 10 18.2	+0.3
TWT	Tachien	0.58	275	⇑iP	Pg	19 10 11.1	+0.1
TWT				S	Sg	19 10 18.3	-0.4
NSK	Sanguang	0.63	319	⇑iP	Pg	19 10 11.5	-0.3
NSK				S	Sg	19 10 19.2	-0.9
TWA	Mucha	0.80	345	eP	Pg	19 10 15.4	+0.2
TWB1	Santiao Chiao	0.81	11	eP	Pg	19 10 15.8	+0.3
TWB1				S	Sg	19 10 25.8	-0.6
EHY	Hungye	0.83	213	eP	Pg	19 10 15.6	-0.2
NSTT	Nanjuang	0.85	300	i P	Pg	19 10 15.8	-0.5
NSTT				S	Sg	19 10 26.3	-1.4
TAP1	Taipei	0.87	342	eP	Pg	19 10 16.9	+0.2
TAP1				S	Sg	19 10 27.3	-1.0
TAP	Taipei	0.88	341	eP	Pg	19 10 16.9	+0.1
TAP				S	Sg	19 10 27.8	-0.6
SMLT	Sun Moon Lake	0.90	249	P	Pg	19 10 16.7	-0.5
SMLT				S	Sg	19 10 27.9	-1.2
TYC	Yuchr	0.92	251	⇓iP	Pb	19 10 16.9	-1.0
TYC				S	Sg	19 10 28.8	-1.3
NCU	National Centr	0.95	323	eP	Pb	19 10 18.3	0.0
NCU				S	Sg	19 10 30.9	0.0
TWQ1	Liyutan	0.96	279	eP	Pb	19 10 18.4	-0.1
TWQ1				S	Sg	19 10 30.7	-0.6
TWS1	Kuangyinshan	0.96	338	eP	Pb	19 10 18.1	-0.4
TWS1				S	Sg	19 10 32.0	+0.7
HSN	Hsinchu	0.97	308	eP	Pb	19 10 18.3	-0.4
HSN				S	Sb	19 10 31.9	0.0
TWF1	Yuli	0.97	209	eP	Pb	19 10 16.7	-2.0
NSY	Sanyi	0.98	283	eP	Pb	19 10 18.9	+0.1
NSY				S	Sb	19 10 33.9	+1.7
TCU	Taichung	1.04	267	eP	Pb	19 10 20.5	+0.7
TCU				S	Sb	19 10 34.7	+0.9
YUS	Yu-Shan	1.06	228	⇑P	Pb	19 10 19.9	-0.3
YUS				S	Sb	19 10 34.1	-0.4
WNT	Mingjian	1.08	253	eP	Pb	19 10 20.7	+0.2
WNT				S	Sb	19 10 36.1	+1.1
TWY	Chenhua	1.08	350	eP	Pb	19 10 21.1	+0.5
YOJ	Yonaguni jima	1.12	77	P	Pb	19 10 21.8	+0.6
YOJ				eS	Sb	19 10 37.9	+1.7
ALS	Alishan	1.15	233	eP	Pb	19 10 21.6	-0.2
CHKT	Chengkung	1.18	201	eP	Pb	19 10 20.6	-1.6
CHN5	Tsauling	1.20	240	eP	Pb	19 10 22.5	-0.1
ELDTW	Lidau	1.25	216	eP	Pb	19 10 21.3	-2.1
WGK	Gukeng	1.26	246	eP	Pb	19 10 23.2	-0.3
CHN4	Tsaushan	1.41	233	eP	Pb	19 10 26.5	+0.4
CHN4				S	Sb	19 10 46.4	+2.0
STYT	Tauyuan	1.42	223	eP	Pn	19 10 26.2	-0.1
STYT				S	Sb	19 10 45.5	+0.6
CHY	Chiayi	1.45	241	eP	Pn	19 10 26.4	-0.4
CHY				S	Sb	19 10 46.2	+0.3
WTP	Ta-pu	1.46	229	eP	Pn	19 10 26.8	0.0
WTP				S	Sb	19 10 47.8	+1.9
TWK	Hsinying	1.53	233	eP	Pn	19 10 27.9	0.0
TWG	Pinlang	1.54	206	eP	Pn	19 10 25.5	-2.6
CHN1	Nanshi	1.56	230	eP	Pn	19 10 28.7	+0.4
CHN1				S	Sb	19 10 49.1	+0.3
WSF	Szhu	1.56	249	eP	Pn	19 10 28.0	-0.4
SGST	Jiashian	1.59	226	eP	Pn	19 10 29.0	+0.2
SGST				S	Sb	19 10 49.7	-0.1
CHN8	Yiju	1.70	240	eP	Pn	19 10 31.2	+0.9
IRIF	Iriomote-Funau	1.75	85	P	Pn	19 10 30.5	-0.6
IRIF				eS	Sn	19 10 53.6	-0.9
ECL	Taimali	1.79	206	eP	Pn	19 10 31.9	+0.3
SSD	Sandimen	1.81	217	eP	Pn	19 10 31.8	-0.2
HATJ	Hateruma jima	1.82	94	P	Pn	19 10 31.9	-0.2
TWM1	Shoushan	1.88	223	eP	Pn	19 10 33.5	+0.6
JKRS	Kuro-shima	2.00	89	P	Pn	19 10 34.7	0.0
JKRS				eS	Sn	19 11 01.5	+0.7
EAST	Anshuo	2.02	206	eP	Pn	19 10 35.5	+0.6
SCZT	Fangliau	2.13	211	eP	Pn	19 10 36.7	+0.2
JIJ	Ishigaki jima	2.13	85	P	Pn	19 10 35.7	-0.8
JIJ				eS	Sn	19 11 02.6	-1.5
PNG	Penghu	2.16	253	eP	Pn	19 10 35.2	-1.8
LAY	Lan-yu	2.17	186	eP	Pn	19 10 33.9	-3.2
WDGT	Dungji	2.19	245	eP	Pn	19 10 36.3	-1.1
TWK1	Hengchun	2.44	203	eP	Pn	19 10 41.6	+0.8

CASC 05 19:21:44.7±1.9**,11.28N**×**85.93W,h85**^{km}±6^{km}**,MD3.6, ML3.2,8C-3D,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	San Juan del S	0.08	82	⇑eP	P	19 21 56.9	+0.1
SSNN				eS	S	19 22 06.4	+0.6
MADN	Villa Maderas	0.41	71	⇑eP	P	19 21 58.3	0.0
MADN				eS	S	19 22 08.7	+0.2
CONN	Concepcion	0.41	46	⇓eP	P	19 21 58.2	-0.1
CONN				eS	S	19 22 08.9	+0.3
APON	Apoyo	0.65	348	eP	P	19 22 01.2	+0.7
TICN	Ticuantepe	0.81	339	⇑eP	P	19 22 02.5	+0.3
MGAN	Managua	0.92	340	eS	S	19 22 17.7	+0.4
	comp=N,422nm,0.3s						
XAVN	Gruta Xavier	0.95	336	eP	P	19 22 03.5	-0.1
XAVN				eS	S	19 22 19.6	+1.7
APYN	Apoyeque	1.04	337	eP	P	19 22 04.4	-0.3
APYN				eS	S	19 22 21.1	+1.3
COPN	Copaltepe	1.11	324	⇑eP	P	19 22 04.9	-0.6
COPN				eS	S	19 22 20.0	-1.2
VCR	Vista de Mar	1.18	166	eP	P	19 22 06.6	+0.1
VCR				eS	S	19 22 24.4	+1.5
MOMJ	Momotombo	1.27	332	⇑eP	P	19 22 06.8	-0.8
MOMJ				eS	S	19 22 24.5	-0.4
MIRN	Miramar	1.39	327	⇓eP	P	19 22 08.7	-0.5
CNGN	Cerro Negro	1.43	328	eP	P	19 22 09.2	-0.6
CNGN				eS	S	19 22 29.5	+1.2
LEON	Leon	1.47	320	eP	P	19 22 09.7	-0.6
TEL3	Telica 3	1.57	325	⇑eP	P	19 22 11.0	-0.5
TEL3				eS	S	19 22 30.9	-0.4
JCR	Jicaral	1.63	150	⇑eP	P	19 22 12.8	+0.4
JCR				eS	S	19 22 32.7	-0.1
CGA2	Cerro Gallo 2	1.91	131	⇓eP	P	19 22 16.6	+0.6
CGA2				eS	S	19 22 40.2	+1.1
LAJ	Bijagual	2.27	128	eP	P	19 22 19.4	-1.6
LAJ				eS	S	19 22 44.2	-3.7
LCR2	La Lucha 2	2.43	129	eP	P	19 22 23.5	+0.2
LCR2				eS	S	19 22 53.1	+1.0
ICR	Volcan Irazu	2.43	122	⇑eP	P	19 22 23.8	+0.5
BUS	Buena Vista	2.74	128	eP	P	19 22 28.7	+1.2
BUS				eS	S	19 22 59.2	-0.4

*BJI **05** 19:41:36.7,21.77S×175.83W,h131^{km},mB5.6,mb5.1*
*NEIC **05** 19:41:37.8±2.5,22.23S×175.95W,h142^{km}±21^{km}, mb4.9/46,Error ellipse: s-maj=9.4km s-min=6.8km az=126.0*
*HRVD **05** 19:41:37.8±1.2,22.65S×175.94W,h147^{km}±13^{km}, MW5.3/38,Centroid moment Tensor Solution. LP body waves: s4,c4;Mantle waves: s38,c48; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.64±.14; $M_{\theta\theta}$0.04±.12; $M_{\phi\phi}$0.59±.11; $M_{r\theta}$0.62±.10; $M_{\theta\phi}$0.36±.11; $M_{\phi r}$0.27±.10; Best double couple: M_0.983×10^{17} NP1:ϕ_s3°, δ32°,λ-135°. NP2:ϕ_s232°,δ68°,λ-66°. Principal axes: T .96, Plg20°, Azm305°; N .045, Plg22°, Azm43°; P -1.005, Plg60°, Azm177°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 05 19:41:27.0±2.9**,22.27S**±0.05×**175.93W**±0.07**, h61**^{km}±24^{km}**,n160,σ0^{s}92**/96**,mb5.1**/50**,22C-6D,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOUC	Port Laguerre	16.46	267	eP	P	19 45 22.9	+7.5
NOUC	Port Laguerre	16.46	267	eP	P	19 45 22.9	+7.5
MWZ	Matawai	16.97	198	SN	S	19 48 28.9	+1.8
URZ	Urewera	17.02	199	PN	P	19 45 20.1	-2.3
BKZ	Black Stump Fm	18.05	199	ePN	P	19 45 31.0	-4.1
QRZ	Quartz Range	20.92	205	PN	P	19 46 05.1	-1.5
THZ	Tophouse	21.58	203	SN	S	19 49 57.8	-5.9
LTZ	Lake Taylor	22.70	203	SN	S	19 50 20.5	-3.4
MQZ	McQueen’s Vall	23.38	201	SN	S	19 50 34.2	-1.6
RPZ	Rata Peaks	23.95	204	PN	P	19 46 34.7	-1.7
FOZ	Fox Glacier	24.36	206	PN	P	19 46 39.0	-1.4
JCZ	Jackson Bay	25.16	207	PN	P	19 46 48.3	+0.2
ARMA	Armidale	30.11	247	eP	P	19 47 34.4	+1.3
CTA	Charters Tower	35.27	266	eP	P	19 48 18.9	+0.9
	18nm,0.4s,mb5.3						
CTAO	Charters Tower	35.27	266	eP	P	19 48 18.8	+0.7
	26nm,0.6s,mb5.3						
TAU	Tasmania Unive	36.78	227	P	P	19 48 31.9	+1.2
	4.0nm,0.6s,mb4.4						
STKA	Stephens Creek	38.81	246	⇓iP	P	19 48 48.4	+0.8
	8.0nm,0.6s,mb4.6						
ASPA	Alice Springs	46.02	258	⇓iP	P	19 49 46.7	+0.2
WB2	Warramunga Arr	46.28	263	eP	P	19 49 47.7	-0.9
WRAB	Tennant Creek	46.28	263	eP	P	19 49 48.0	-0.6
	32nm,0.8s,mb5.3						
FORT	Forrest	50.39	248	⇓iP	P	19 50 19.5	-0.9
	266nm,0.5s						
GUMO	Guam	52.41	309	eP	P	19 50 36.3	+0.6
	158nm,0.8s,mb6.0						
FITZ	Fitzroy Crossi	54.72	263	eP	P	19 50 52.1	-0.6
	24nm,0.6s,mb5.4						
SBA	Scott Base	56.25	184	eP	P	19 51 05.1	+2.1
	16nm,0.8s,mb5.1						
VNDA	Vanda	56.34	186	eP	P	19 51 04.4	+0.8
	13nm,1.1s,mb4.9						
KLBR	Kellerberrin	59.07	246	⇓iP	P	19 51 22.5	-0.9
	121nm,0.5s,mb6.2						
NWAO	Narrogin (SRO)	59.32	244	eP	P	19 51 24.6	-0.5
	9.5nm,0.8s,mb4.9						
MBWA	Marble Bar	59.36	258	eP	P	19 51 24.2	-1.4
	22nm,1.0s,mb5.1						
MUN	Mundaring	60.32	245	eP	P	19 51 31.8	-0.2
	7.7nm,1.1s,mb4.7						
CASY	Casey	63.21	206	eP	P	19 51 50.8	-0.2
	30nm,1.0s,mb5.4						
QSPA	South Pole Qui	67.81	180	⇓iP	P	19 52 21.0	+0.9
	65nm,0.8s,mb5.7						
MAJO	Matsushiro	72.78	323	eP	P	19 52 50.0	-0.8
	14nm,0.6s,mb5.1						
MAT	Matsushiro	72.78	323	eP	P	19 52 50.0	-0.9
	11nm,0.9s,mb4.8						
MAT	Matsushiro	72.78	323	P	P	19 52 49.9	-1.0
YSS	Yuzh-Sakhalins	78.34	332	eP	P	19 53 23.0	+0.8
	22nm,0.8s,mb5.2						
CMB	Columbia Colle	79.47	41	eP	P	19 53 28.2	-0.5
	4.9nm,0.9s,mb4.4						
YBH	Yreka Blue Hor	80.49	37	eP	P	19 53 34.4	+0.3
	9.0nm,0.8s,mb4.8						
MAW	Mawson	80.55	199	eP	P	19 53 33.7	-0.2
	24nm,0.8s,mb5.2						
LDFC	Landfair	81.09	46	eP	P	19 53 37.1	-0.3
NEN	Nelson	81.59	46	eP	P	19 53 39.6	-0.4
MOD	Modoc	81.97	38	eP	P	19 53 41.5	-0.3
	7.1nm,1.0s,mb4.5						
MDJ	Mudanjiang	83.07	324	P	P	19 53 48.5	+1.2
MDJ				AMB	AMB		
	comp=Z,24nm,1.2s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,147nm,5.5s						
MDJ	Mudanjiang	83.07	324	eP	P	19 53 44.2	-3.2
	comp=Z,22nm,0.9s,mb5.2						
WVOR	Wild Horse Val	83.27	39	eP	P	19 53 48.2	-0.1
	comp=Z,11nm,1.1s,mb4.8						
RSO	Redoubt South	84.57	11	eP	P	19 53 53.7	-0.7
SVW2	Sparrevohn	84.69	10	eP	P	19 53 54.8	-0.3
CN2	Changchun	84.87	322	eP	P	19 53 57.3	+0.9
CN2				eAP	pP	19 54 26.7	+13
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.1						
MSU	Marysvale	84.97	45	eP	P	19 53 58.0	+1.0
SLKM	Skilak Lake	85.09	12	eP	P	19 53 56.8	-0.3
SPU	Mount Spurr	85.36	11	eP	P	19 53 57.4	-1.0
SYO	Syowa Base	85.42	192	⇑P	P	19 53 58.6	+0.1
FIB	Fire Island	85.70	12	eP	P	19 54 00.1	+0.1
MA2	Magadan	86.00	344	eP	P	19 54 01.4	-0.2
	comp=Z,35nm,0.8s,mb5.7						
TMUT	Trail Mountain	86.03	45	eP	P	19 54 02.9	+0.7
EYAK	Cordova Ski Ar	86.09	14	eP	P	19 54 01.8	-0.2
SNAA	Sanae	86.19	178	⇑i	P	19 54 01.3	-0.9
SNAA	Sanae	86.19	178	⇑i	P	19 54 08.2	+6.0
SNAA	Sanae	86.19	178	eP	P	19 54 01.6	-0.6
	comp=Z,179nm,1.0s,mb6.2						
VNA3	Neumayer Olymp	86.25	176	⇑i	P	19 54 04.4	+1.9
VNA3	Neumayer Olymp	86.25	176	⇑i	P	19 54 12.8	+10
PMR	Palmer	86.30	12	eP	P	19 54 02.8	-0.2
	comp=Z,20nm,1.0s,mb5.3						
SRU	San Rafael	86.37	45	eP	P	19 54 04.0	0.0
LPM	Los Pinos Moun	86.58	51	eP	P	19 54 05.5	+0.5
DIV	Divide	86.60	14	eP	P	19 54 04.1	-0.4
	comp=Z,193nm,1.2s,mb6.2						
PLCA	Paso Flores	86.66	133	eP	P	19 54 04.9	-0.4
	comp=Z,22nm,1.2s,mb5.2						
VNA2	Neumayer--Watz	86.71	176	⇑i	P	19 54 07.2	+2.4
VNA2	Neumayer--Watz	86.71	176	⇑i	P	19 54 13.1	+8.3
VNA2	Neumayer--Watz	86.71	176	⇑i	P	19 54 17.8	+13
ANMO	Albuquerque	87.02	50	eP	P	19 54 06.5	-0.7
	comp=Z,3.3nm,1.0s,mb4.5						
GDL2	Guadalupe Moun	87.22	54	eP	P	19 54 08.6	+0.3
NEW	Newport	87.69	35	eP	P	19 54 09.0	-1.1
	comp=Z,2.4nm,0.7s,mb4.5						
TNA	Tin City	87.76	3	eP	P	19 54 10.2	+0.1
	comp=Z,18nm,1.2s,mb5.2						
MCK	McKinley	88.29	12	eP	P	19 54 12.1	-0.4
	comp=Z,17nm,1.1s,mb5.2						
BJT	Baijiatuau	88.49	315	eP	P	19 54 10.2	-3.9
	comp=Z,5.8nm,0.6s,mb5.0						
BJI	Beijing	88.50	315	P	P	19 54 14.9	+0.8
BJI				AMB	AMB		
	comp=Z,14nm,0.9s,mb5.3						
BJI	Beijing	88.50	315	P	P	19 54 14.9	+0.8
	comp=Z,14nm,0.9s,mb5.3						
MENT	Mentasta	88.66	14	eP	P	19 54 15.3	+1.0
SDCO	Great Sand Dun	89.06	48	eP	P	19 54 16.4	-0.4
	comp=Z,2.2nm,1.0s,mb4.4						
GYA	Guiyang	89.19	299	P	P	19 54 18.7	+1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
BOZ	Bozeman (W)	89.24	39	eP	P	19 54 17.7	+0.2
	comp=Z,3.9nm,0.9s,mb4.7						
COLA	College	89.53	12	eP	P	19 54 18.3	-0.1
	comp=Z,30nm,1.1s,mb5.5						
IMA	Indian Mountai	89.67	9	eP	P	19 54 20.3	+1.3
	comp=Z,13nm,0.9s,mb5.2						
WALA	Waterton Lakes	89.88	36	eP	P	19 54 19.9	-0.5
	comp=Z,3.7nm,0.9s,mb4.7						
DAWY	Dawson	90.64	15	eP	P	19 54 23.9	+0.3
XAN	Xi’an	90.73	307	P	P	19 54 25.6	+0.8
XAN				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.4						
BILL	Bilibino	90.99	353	eP	P	19 54 25.0	-0.2
	comp=Z,12nm,0.7s,mb5.3						
HIA	Hailar	91.25	324	eP	P	19 54 22.5	-4.3
	comp=Z,10nm,0.9s,mb5.2						
KMI	Kunming	91.86	296	P	P	19 54 32.1	+1.9
KMI				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.4						
KMI	Kunming	91.86	296	P	P	19 54 32.1	+1.9
	comp=Z,13nm,0.7s,mb5.4						
HHC	Hu-ho-hao-te	91.96	314	eP	P	19 54 31.4	+1.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb5.0						
HHC				AMB	AMB		
	comp=Z,186nm,7.2s						
CM31	Chiang Mai Arr	92.52	289	eP	P	19 54 34.6	+1.2
	comp=Z,15nm,0.9s,mb5.4						
EDM	Edmonton	92.55	32	eP	P	19 54 32.4	-0.3
TRQA	Tornquist	93.76	134	P	P	19 54 39.9	+1.3
	comp=Z,1.1nm,0.5s,mb4.5						
YAK	Yakutsk	94.47	337	eP	P	19 54 40.4	-0.8
	comp=Z,45nm,0.8s,mb6.0						
INK	Inuvik	95.48	15	eP	P	19 54 44.8	-0.9
	comp=Z,6.4nm,1.3s,mb4.9						
YKW3	Yellowknife Ar	97.35	24	P	P	19 54 53.8	-0.5
CHKZ	Chkalovo	121.48	320	ePKPdf	PKPdf	20 00 13.0	-0.5
JOF	Joensuu	135.39	343	ep	PKPdf	20 00 36.3	-3.4
	comp=Z,7.5nm,0.7s						
KAF	Kangasniemi	137.37	345	ep	PKPdf	20 00 36.3	-7.1
NB2	NORSAR Subarra	140.94	354	PKP	PKPdf	20 00 43.3	-6.5
	comp=Z,1.7nm,0.7s,baz=12,slow=3.0						
NB2	NORSAR Subarra	140.94	354	⇑PKPab	PKPdf	20 00 43.3	-6.5
SUW	Suwalki	145.16	340	ePKPdf	PKPdf	20 00 58.0	+0.7
MBAR	Mbarara	145.47	232	ePKPdf	PKPdf	20 01 01.0	+1.9
MUD	Monsted U’grnd	145.65	355	⇓iP	PKPdf	20 01 00.0	+2.0
	comp=Z,40nm,0.9s						
MUD				i		20 01 23.3	
BSD	Bornholm Skovb	146.21	349	i P	PKPdf	20 01 00.5	+1.5
	comp=Z,35nm,0.5s						
MALT	Malatya	146.53	306	ePKPdf	PKPdf	20 01 01.9	+1.7
MALT				ePKPbc	PKPbc	20 01 03.8	+2.3
DMUB	Kingscourt	147.34	12	⇑iP	PKPdf	20 01 04.2	+3.2
DCN	Croghan	147.79	13	⇑iP	PKPdf	20 01 05.3	+3.6
DLF	Lyons Farm	147.98	12	⇑iP	PKPdf	20 01 05.6	+3.6
BSEG	Bad Segeberg	148.03	353	ePKPbc	PKPdf	20 01 06.9	+4.8
RUE	Ruedersdorf	148.93	348	ePKPbc	PKPdf	20 01 08.4	+4.8
KWP	Kalwaria	148.98	336	ePKPbc	PKPdf	20 01 08.9	+5.2
KOLS	Kolonicke sedl	149.72	336	i PKP	PKPdf	20 01 12.0	+7.1
KOLS				i		20 01 17.9	
KSP	Ksiaz	149.92	344	ePKPdf	PKPdf	20 01 12.0	+6.8
KSP				epPKP		20 01 34.5	
CRVS	Cervenica-Dubn	150.04	337	i PKP	PKPdf	20 01 12.7	+7.2
CRVS				e		20 01 19.0	
CRVS				e		20 01 23.0	
CLZ	Clausthal	150.08	352	ePKPbc	PKPdf	20 01 12.2	+6.8
CLL	Collm	150.19	349	i PKP1	PKPdf	20 01 12.3	+6.7
CLL				i PKP2	PKPab	20 01 17.8	-1.4
CLL				i *PPKP		20 01 35.7	
CLL				i PP	PP	20 04 43.4	-6.1
UPC	Upice	150.30	345	⇑ePKPB		20 01 12.5	
UPC				ePKPAB	PKPab	20 01 19.9	+0.2
OKC	Ostrava-Krasne	150.33	341	⇑ePKPB		20 01 12.8	
OKC				ePKPAB	PKPab	20 01 20.1	+0.3
DPC	Dobruska-Polom	150.37	344	⇑ePKPB		20 01 12.7	
DPC				ePKPAB	PKPab	20 01 20.2	+0.2
BRG	Berggiesshubel	150.43	347	i P	PKPdf	20 01 12.9	+6.9
BRG				i		20 01 19.6	
BRG				i		20 01 36.6	
MORC	Moravsky Berou	150.56	342	ePKPdf	PKPdf	20 01 08.2	+2.0
MORC				ePKPbc	PKPdf	20 01 13.2	+6.9
MORC				ePKPab	PKPab	20 01 20.7	-0.1
PVCC	Panska Ves	150.62	346	⇑ePKPB		20 01 13.6	
KECS	Kecovo	150.75	337	i PKP	PKPdf	20 01 14.5	+8.0
KECS				i		20 01 22.8	
MOX	Moxa	151.07	350	eP	PKPdf	20 01 14.2	+7.3
PRU	Pruhonice	151.13	346	⇑ePKPB		20 01 14.7	
PRU				ePKPAB	PKPab	20 01 22.4	-0.8
VYHS	Vyhne	151.30	339	i PKP	PKPdf	20 01 15.1	+7.7
VYHS				i		20 01 24.3	
NKC	Novy Kostel	151.32	349	⇑ePKPB		20 01 15.0	
NKC				ePKPAB	PKPab	20 01 23.4	-0.6
EIL	Elat	151.34	291	ePKPbc	PKPdf	20 01 14.8	+6.8
PSZ	Piszkesteto	151.44	337	ePKPbc	PKPdf	20 01 15.4	+7.8
PSZ	Piszkesteto	151.44	337	ePKP/p	PKPdf	20 01 15.3	+7.7
SMOL	Smolenice	151.73	341	ePKP	PKPdf	20 01 14.0	+6.0
TNS	Taunus Mts	151.89	354	ePKPbc	PKPdf	20 01 16.0	+7.8
TNS				ePKPab	PKPab	20 01 26.0	-0.4
GRA1	Grafenberg Arr	152.06	350	ePKPbc	PKPdf	20 01 16.3	+7.9
GRA1				ePKPab	PKPab	20 01 26.8	-0.3
GRF	Grafenberg Arr	152.06	350	ePKP	PKPdf	20 01 16.3	+7.9
GRF				ePKP	PKPab	20 01 26.8	-0.3
SRO	Srobarova	152.07	339	i PKP	PKPab	20 01 27.9	+0.7
ZST	Bratislava	152.11	341	ePKP	PKPdf	20 01 17.4	+8.8
KHC	Kasperske Hory	152.15	347	ePKPDF	PKPdf	20 01 10.7	+2.1
KHC				⇑ePKPB		20 01 16.9	
KHC				ePKPAB	PKPab	20 01 25.9	-1.6
KHC				x	x	20 01 43.0	
GIVF	Givet	152.22	359	ePKP1	PKPdf	20 01 17.0	+8.3
	comp=Z,29nm,0.7s						
BAIF	Baives	152.26	360	ePKP1	PKPdf	20 01 17.1	+8.4
	comp=Z,14nm,0.6s						
GEC2	GERESS Array S	152.40	346	ePKPbc	PKPdf	20 01 17.5	+8.5
FLN	La Foliniere	153.31	7	ePKP1	PKPdf	20 01 18.8	+8.6
	comp=Z,8.0nm,0.4s						
ARSA	Arzberg	153.42	342	⇑iP	PKPab	20 01 32.6	-0.3
	comp=Z,6.0nm,0.7s						
LDF	La Druitiere	153.52	6	ePKP1	PKPdf	20 01 19.2	+8.7
	comp=Z,14nm,0.8s						
SGMF	Saint Gilles	153.53	10	ePKP1	PKPdf	20 01 19.0	+8.5
	comp=Z,100nm,1.4s						
GRR	Gorron	153.64	7	ePKP1	PKPdf	20 01 19.7	+9.0
	comp=Z,12nm,0.5s						
BFO	Black Forest	153.77	354	ePKPab	PKPab	20 01 32.9	-1.5
BEO	Belgrade	153.79	333	⇑iP	PKPdf	20 01 19.9	+8.9
CDF	Champ du Feu	153.79	355	ePKP1	PKPdf	20 01 20.5	+10
	comp=Z,12nm,0.9s						
MEZF	Maizieres J’vi	153.81	359	ePKP1	PKPdf	20 01 20.5	+10
	comp=Z,21nm,0.9s						
HAU	Haudompre	154.26	356	ePKP1	PKPdf	20 01 21.3	+10
	comp=Z,4.5nm,0.5s						
HINF	Hinteralfeld	154.41	356	ePKP1	PKPdf	20 01 21.2	+9.5
DIVS	Divcibare	154.56	333	⇑i(P)	PKPdf	20 01 22.0	+10
LEGS	Legarje	154.66	341	ePKPab	PKPab	20 01 37.5	-0.6
HYF	Humbligny	155.03	2	ePKP1	PKPdf	20 01 23.3	+11
CEY	Cerknica	155.11	343	i PKPab	PKPab	20 01 39.3	-0.7
MFF	Saint Martin d	155.49	7	ePKP1	PKPdf	20 01 24.6	+11
SKO	Skopje	155.55	327	i PKP	PKPab	20 01 42.2	+0.1
TCF	Toulx Ste Croi	155.99	3	ePKP1	PKPdf	20 01 24.8	+11
	comp=Z,3.7nm,0.7s						
CAF	Calviac	157.34	4	ePKP1	PKPdf	20 01 27.9	+12

*BJI **05** 19:49:01.6,5.17S×154.53E,h112^{km},mB5.5,mb5.3*

*NEIC **05** 19:49:03.1±0.2,5.55S×154.29E,mb5.1/43,Error ellipse: s-maj=7.7km s-min=5.0km az=83.0*

*HRVD **05** 19:49:03.1±0.9,5.76S×154.16E,h168^{km}±10^{km}, MW5.2/28,Centroid moment Tensor Solution. LP body waves: s6,c7;Mantle waves: s28,c37; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.16±.97; $M_{\theta\theta}$-4.70±1.06; $M_{\phi\phi}$-1.46±1.01; $M_{r\theta}$4.46±.86; $M_{\theta\phi}$2.51±.98; $M_{\phi r}$-1.82±.81; Best double couple: $M_0$7.783×10^{16} NP1: ϕ_s302°,δ26°,λ97°. NP2:ϕ_s115°,δ64°,λ87°. Principal axes: T 7.844, Plg71°, Azm17°; N -.121, Plg3°, Azm116°; P -7.723, Plg19°, Azm207°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 05 19:49:01.7±0.2**,5.55S**±0.04×**154.27E**±0.06**,h120^{km}, h120^{km}**±2.0^{km}**:pP-P,n121,$\sigma 0^{s}92$**/106**,mb5.2**/56**,11C-4D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	16.42	208	⇑iP	P	19 52 49.3	+2.8
	72nm,0.6s						
CTAO	Charters Tower	16.42	208	eP	P	19 52 48.6	+2.1
	132nm,0.9s						
NOUC	Port Laguerre	20.16	146	⇑eP	P	19 53 28.0	-0.7
NOUC	Port Laguerre	20.16	146	⇑eP	P	19 53 28.0	-0.7
WRAB	Tennant Creek	24.08	232	eP	P	19 54 07.7	+0.4
	153nm,0.7s,mb5.4						
WRAB				epP		19 54 35.3	
WB2	Warramunga Arr	24.08	232	eP	P	19 54 07.6	+0.2
ARMA	Armidale	24.87	185	eP	P	19 54 15.6	+0.8
ASPA	Alice Springs	26.63	225	⇓iP	P	19 54 30.3	-0.9
STKA	Stephens Creek	28.76	203	⇑iP	P	19 54 49.0	-1.3
	18nm,0.8s,mb4.7						
CNB	Canberra Magne	29.97	188	eP	P	19 55 04.6	+3.5
	104nm,0.8s,mb5.5						
FITZ	Fitzroy Crossi	30.61	243	⇓iP	P	19 55 05.6	-1.3
	41nm,0.8s,mb5.2						
FORT	Forrest	35.17	221	eP	P	19 55 45.3	-0.7
	132nm,0.7s,mb5.9						
MBWA	Marble Bar	36.89	242	eP	P	19 55 59.9	-0.7
	12nm,0.6s,mb5.0						
TAU	Tasmania Unive	37.71	188	eP	P	19 56 06.8	-0.5
	35nm,1.0s,mb5.1						
MGZ	Maungaku	38.47	153	P	P	19 56 14.5	+0.9
MGZ	Maungaku	38.47	153	PN	P	19 56 14.5	+0.9
MGZ	Maungaku	38.47	153	PN	P	19 56 14.5	+0.9
CNZ	Chateau	38.63	153	P	P	19 56 16.2	+1.2
CNZ	Chateau	38.63	153	PN	P	19 56 16.2	+1.2
CNZ	Chateau	38.63	153	PN	P	19 56 16.2	+1.2
NGZ	Ngauruhoe	38.64	153	P	P	19 56 16.1	+1.1
NGZ	Ngauruhoe	38.64	153	PN	P	19 56 16.1	+1.0
NGZ	Ngauruhoe	38.64	153	PN	P	19 56 16.1	+1.0
TUVZ	Tukino	38.74	153	ePN	P	19 56 17.1	+1.3
TUVZ	Tukino	38.74	153	ePN	P	19 56 17.1	+1.3
MWZ	Matawai	38.88	150	eP	P	19 56 17.2	+0.2
MWZ	Matawai	38.88	150	PN	P	19 56 16.7	-0.3
MWZ	Matawai	38.88	150	PN	P	19 56 16.7	-0.3
BKZ	Black Stump Fm	39.04	152	P	P	19 56 18.0	-0.4
BKZ	Black Stump Fm	39.04	152	PN	P	19 56 17.8	-0.5
BKZ	Black Stump Fm	39.04	152	PN	P	19 56 17.8	-0.5
THZ	Tophouse	39.70	158	eP	P	19 56 23.3	-0.5
THZ	Tophouse	39.70	158	PN	P	19 56 23.3	-0.6
THZ	Tophouse	39.70	158	PN	P	19 56 23.3	-0.6
LTZ	Lake Taylor	40.37	159	P	P	19 56 28.9	-0.3
LTZ	Lake Taylor	40.37	159	PN	P	19 56 28.9	-0.4
LTZ	Lake Taylor	40.37	159	PN	P	19 56 28.9	-0.4
MSZ	Milford Sound	40.77	165	PN	P	19 56 32.6	+0.1
MSZ	Milford Sound	40.77	165	PN	P	19 56 32.6	+0.1
NWAO	Narrogin (SRO)	43.93	227	eP	P	19 57 00.2	+1.7
	14nm,1.0s,mb4.7						
TATO	Taipei	44.01	315	eP	P	19 57 00.1	+0.9
	36nm,0.7s,mb5.2						
MAJO	Matsushiro	44.49	341	eP	P	19 57 02.0	-0.9
MAT	Matsushiro	44.49	341	PCP	PcP	19 58 43.2	-1.6
QZH	Quanzhou	46.07	313	P	P	19 57 17.0	+1.4
QZH				AMB	AMB		
	comp=Z,150nm,0.8s,mb5.8						
KS15	Wonju Array Si	49.34	332	eP	P	19 57 40.7	-0.2
INCN	Inchon	49.96	331	eP	P	19 57 45.7	+0.1
	comp=Z,35nm,0.6s,mb5.5						
QIZ	Qiongzhong	50.11	300	eP	P	19 57 44.9	-2.1
	comp=Z,18nm,1.2s,mb4.9						
YSS	Yuzh-Sakhalins	53.26	350	eP	P	19 58 10.0	-0.3
	comp=Z,10nm,0.8s,mb4.9						
MDJ	Mudanjiang	54.64	339	eP	P	19 58 15.8	-4.6
	comp=Z,13nm,0.9s,mb5.0						
CN2	Changchun	55.58	335	eP	P	19 58 27.0	-0.2
CN2				eAP	pP	19 58 53.4	-2.5
CN2				eS	S	20 06 03.0	+1.4
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
GYA	Guiyang	56.01	307	⇑iP	P	19 58 31.5	+1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
BJT	Baijiatuau	57.31	326	eP	P	19 58 34.7	-4.8
	comp=Z,8.6nm,0.8s,mb4.8						
XAN	Xi'an	58.17	316	P	P	19 58 45.2	-0.4
XAN				AMB	AMB		
	comp=Z,35nm,0.7s,mb5.5						
KMI	Kunming	58.62	304	P	P	19 58 50.3	+1.5
KMI				AP	pP	19 59 20.8	+3.0
KMI				AMB	AMB		
	comp=Z,37nm,0.9s,mb5.4						
KMI				LR	LR		
	comp=Z,129nm,27.3s						
KMI	Kunming	58.62	304	P	P	19 58 50.3	+1.5
	comp=Z,37nm,0.9s,mb5.4						
KMI				pP	pP	19 59 20.8	+3.0
KMI				LR	LR		
	comp=Z,130nm,27.3s						
CM31	Chiang Mai Arr	59.52	295	eP	P	19 58 55.9	+0.8
	comp=Z,17nm,0.8s,mb5.1						
CM31				epP	pP	19 59 23.4	-0.8
CD2	Chengdu	60.33	310	P	P	19 59 00.9	+0.4
CD2				AMB	AMB		
	comp=Z,80nm,0.8s,mb5.8						
HHC	Hu-ho-hao-te	60.51	324	eP	P	19 59 01.8	+0.2
HHC				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,146nm,4.8s						
HIA	Hailar	62.31	335	eP	P	19 59 08.7	-4.9
	comp=Z,38nm,0.8s,mb5.5						
LZH	Lanzhou	62.78	315	⇓P	P	19 59 17.3	+0.4
LZH				AP	pP	19 59 45.2	-1.0
LZH				XP	sP	19 59 59.3	-0.1
LZH				AMB	AMB		
	comp=Z,39nm,1.3s,mb5.2						
LZH	Lanzhou	62.78	315	⇓P	P	19 59 17.3	+0.4
	comp=Z,39nm,1.3s,mb5.2						
LZH				pP	pP	19 59 45.2	-1.0
LZH				sP	sP	19 59 59.3	-0.1
MA2	Magadan	64.98	358	eP	P	19 59 30.4	-0.4
	comp=Z,18nm,0.8s,mb5.0						
MA2				epP	pP	20 00 04.2	+3.9
GTA	Gaotai	67.20	317	⇑iP	P	19 59 46.4	+1.1
GTA				AP	pP	20 00 14.6	-0.3
GTA				XP	sP	20 00 29.0	+1.0
GTA				AMB	AMB		
	comp=Z,44nm,0.8s,mb5.3						
GTA				AMB	AMB		
	comp=Z,102nm,4.6s						
ULN	Ulaanbaatar	67.40	328	eP	P	19 59 47.0	+0.5
	comp=Z,16nm,0.9s,mb4.8						
ULN				epP	pP	20 00 15.0	-1.1
ULN				esP	sP	20 00 30.3	+1.1
CASY	Casey	67.74	198	eP	P	19 59 46.7	-1.5
	comp=Z,42nm,1.1s,mb5.2						
LSA	Lhasa	69.87	304	eP	P	19 59 59.1	-2.7
	comp=Z,30nm,0.9s,mb5.1						
LSA				e	pP	20 00 27.0	-4.7
YAK	Yakutsk	70.00	348	eP	P	20 00 01.7	-0.4
	comp=Z,52nm,0.9s,mb5.4						
TLY	Talaya	71.46	329	eP	P	20 00 10.1	-0.9
	comp=Z,12nm,1.1s,mb4.6						
BWNR	Bhubaneshwar	71.95	293	eP	P	20 00 14.2	-0.3
BWNR				e		20 00 14.9	
	comp=Z,72nm,0.6s						
VNDA	Vanda	72.04	178	eP	P	20 00 13.3	-0.8
	comp=Z,20nm,0.7s,mb5.0						
SBA	Scott Base	72.56	177	eP	P	20 00 17.1	0.0
	comp=Z,36nm,1.0s,mb5.2						
JIRN	Jiri	73.43	301	eP	P	20 00 24.0	+0.9
	comp=Z,14nm,0.4s,mb5.1						
VIS	Vishakhapatnam	73.70	290	eP	P	20 00 25.4	+0.6
VIS				e		20 00 26.3	
	comp=Z,45nm,0.6s						
BILL	Bilibino	73.90	5	eP	P	20 00 25.3	+0.3
	comp=Z,39nm,0.9s,mb5.1						
PKI	Pulchoki	74.07	301	eP	P	20 00 26.9	0.0
	comp=Z,84nm,1.0s,mb5.4						
KKN	Kakani	74.24	301	eP	P	20 00 28.3	+0.5
	comp=Z,31nm,0.6s,mb5.2						
DMN	Daman	74.34	301	eP	P	20 00 29.2	+0.8
	comp=Z,150nm,1.0s,mb5.7						
PALK	Pallekele	74.50	279	eP	P	20 00 30.0	+0.4
	comp=Z,13nm,0.8s,mb4.7						
GKN	Gorkha	74.84	301	eP	P	20 00 31.7	+0.4
	comp=Z,126nm,1.0s,mb5.6						
KOLN	Koldanda	75.67	300	eP	P	20 00 36.3	+0.3
	comp=Z,86nm,0.9s,mb5.5						
WMQ	Urumqi	77.28	317	eP	P	20 00 45.0	+0.4
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
HYB	Hyderabad	78.12	289	⇑eP	P	20 00 49.0	-0.7
	comp=Z,50nm,1.0s,mb5.2						
HYB	Hyderabad	78.12	289	⇑iP	P	20 00 49.0	-0.7
	comp=Z,50nm,1.0s,mb5.2						
HYB				e	pP	20 01 19.0	-1.2
SLKM	Skilak Lake	78.73	25	eP	P	20 00 52.1	-0.1
SLKM				epP	pP	20 01 23.7	+1.0
FIB	Fire Island	79.11	24	eP	P	20 00 54.9	+0.7
FIB				epP	pP	20 01 29.7	+4.9
FIB				esP	sP	20 01 44.4	+6.3
BHPL	Bhopal	80.17	295	eP	P	20 01 00.3	-0.5
BHPL				e		20 01 01.3	
	comp=Z,25nm,1.0s						
SML	Sawmill	80.20	24	eP	P	20 01 00.2	+0.1
SML				epP	pP	20 01 34.9	+4.1
IMA	Indian Mountai	80.67	19	eP	P	20 01 03.3	+0.7
	comp=Z,43nm,0.9s,mb5.3						
IMA				epP	pP	20 01 34.6	+1.4
DIV	Divide	80.92	25	eP	P	20 01 04.1	+0.1
	comp=Z,39nm,0.7s,mb5.3						
MCK	McKinley	80.99	22	eP	P	20 01 03.5	-0.8
	comp=Z,12nm,0.9s,mb4.7						
MCK				epP	pP	20 01 34.8	-0.1
MCK				esP	sP	20 01 58.2	+10
NDI	New Delhi	81.37	300	e	P	20 01 05.0	-2.0
COLA	College	82.00	21	eP	P	20 01 08.6	-0.9
	comp=Z,11nm,0.7s,mb4.8						
COLA				epP	pP	20 01 39.7	-0.6
SDNR	Sundarnagar	82.13	303	eP	P	20 01 11.6	+0.7
KAD	Karad	82.22	288	eP	P	20 01 11.3	-0.3
KAD				e		20 01 13.3	
	comp=Z,57nm,0.8s						
POO	Poona	82.71	289	eP	P	20 01 13.5	-0.6
POO				e		20 01 14.6	
	comp=Z,30nm,0.5s						
QSPA	South Pole Qui	84.42	180	eP	P	20 01 21.7	+0.3
	comp=Z,130nm,0.7s,mb5.9						
QSPA				epP	pP	20 01 52.7	+0.4
KSH	Kashi	84.53	310	eP	P	20 01 25.3	+2.4
KSH				AMB	AMB		
	comp=Z,370nm,0.9s,mb6.3						
DAWY	Dawson	84.87	24	eP	P	20 01 24.7	+0.8
DAWY				epP	pP	20 01 56.3	+1.4
KURK	Kurchatov	85.25	322	eP	P	20 01 25.3	-0.9
	comp=Z,6.9nm,0.4s,mb4.9						
KURK				epP	pP	20 01 55.4	-1.7
MAW	Mawson	85.45	203	eP	P	20 01 26.9	+0.1
	comp=Z,34nm,0.7s,mb5.4						
TKM2	Tokmak 2	85.50	314	P	pP	20 01 58.7	+0.1
	SNR=5.3						
KZA	Kyzart	85.58	313	P	pP	20 01 59.8	+0.7
	SNR=7.4						
KBK	Karagaybulak	85.92	313	P	pP	20 01 59.8	-0.8
	SNR=8.2						
CHMS	Chumysh	86.12	314	P	pP	20 02 01.3	-0.3
	SNR=12						
UCH	Uchtor	86.15	313	P	pP	20 02 02.5	+0.7
	SNR=7.4						
AAK	Ala-Archa	86.24	313	P	pP	20 02 02.2	-0.1
	SNR=6.3						
AAK	Ala-Archa	86.24	313	eP	P	20 01 30.2	-1.0
	comp=Z,3.4nm,0.8s,mb4.3						
AAK				epP	pP	20 02 00.7	-1.6
USP	Ospenovka	86.36	314	P	pP	20 02 02.2	-0.6
	SNR=9.0						
AML	Almayashu	86.73	313	P	pP	20 02 05.2	+0.6
	SNR=6.0						
INK	Inuvik	88.63	21	eP	P	20 01 41.4	-0.6
	comp=Z,3.4nm,0.7s,mb4.5						
MOD	Modoc	90.27	48	eP	P	20 01 50.1	-0.3
	comp=Z,5.4nm,1.1s,mb4.6						
CHKZ	Chkalovo	90.67	324	eP	P	20 01 50.0	-2.0
	comp=Z,5.1nm,0.5s,mb4.9						
CHKZ				epP	pP	20 02 20.3	-3.0
CHKZ				esP	sP	20 02 34.6	-1.7
BMO	Blue Mountains	92.75	45	eP	P	20 02 02.3	+0.5
	comp=Z,4.5nm,1.1s,mb4.7						
SYO	Syowa Base	93.45	199	⇑P	P	20 02 03.0	-1.4
SNAA	Sanae	101.48	187	ePdif	P	20 02 39.2	-1.5
	comp=Z,185nm,1.4s						
VNA3	Neumayer Olymp	102.63	185	⇑i	Pdif	20 02 47.1	+1.3
VNA2	Neumayer--Watz	102.71	186	⇑i	Pdif	20 02 53.9	+7.7
VNA2	Neumayer--Watz	102.71	186		Pdif	20 02 57.9	+12
VNA1	Neumayer--Stat	103.06	186	⇑i	Pdif	20 02 47.8	+0.1
LSZ	Lusaka	122.73	248	eP	PKPdf	20 07 46.8	+2.5
SDV	Santo Domingo	135.35	83	ePKPdf	PKPdf	20 08 08.8	+0.3

*JMA **05** 19:57:03.5±0.3,24.32N×121.61E,h63^{km},M2.5*

*TAP **05** 19:57:04.2,24.25N×121.71E,h11^{km},ML3.5*

TAP Felt II J at Nanau, I J at Chiawan, I J at Nanshan, I J at Nioudou.

ISC 05 19:57:04.0±0.4**,24.22N**±0.01×**121.80E**±0.02**,h7^{km}**±2^{km}**, n61,$\sigma 0^{s}77$**/109**,6C-1D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.22	346	⇑iP	Pg	19 57 09.0	+0.5
ENA				S	Sg	19 57 12.3	+0.8
TWD	Chiawan	0.23	234	⇓iP	Pg	19 57 09.1	+0.3
TWD				S	Sg	19 57 12.7	+0.7
HWA	Hwalien	0.30	217	P	Pg	19 57 10.9	+0.8
HWA				S	Sg	19 57 15.9	+1.7
TWC	Suao	0.39	7	⇑iP	Pg	19 57 12.3	+0.4
TWC				S	Sg	19 57 17.6	+0.4
NNS	Nan Shan	0.45	300	⇑iP	Pg	19 57 12.6	-0.4
NNS				S	Sg	19 57 18.3	-0.8
ENTT	Nioudou	0.47	333	⇑iP	Pg	19 57 13.3	-0.1
ENTT				S	Sg	19 57 19.5	-0.3
WHF	Hehuan Shan	0.49	262	⇑iP	Pg	19 57 13.4	-0.5
WHF				S	Sg	19 57 19.6	-0.9
TWE	Neicheng	0.52	346	i P	Pg	19 57 14.3	0.0
TWE				S	Sg	19 57 21.4	+0.1
ESL	Shilin	0.52	220	eP	Pg	19 57 14.2	-0.3
ESL				S	Sg	19 57 22.9	+1.4
TWT	Tachien	0.57	274	i P	Pg	19 57 15.2	-0.2
TWT				S	Sg	19 57 22.3	-0.8
NSK	Sanguang	0.61	319	⇑iP	Pg	19 57 15.6	-0.6
NSK				S	Sg	19 57 23.3	-1.0
TWA	Mucha	0.78	346	eP	Pb	19 57 19.4	-0.1
TWA				S	Sb	19 57 29.7	-0.4
TWB1	Santiao Chiao	0.81	12	eP	Pb	19 57 20.1	+0.3
TWB1				S	Sb	19 57 30.1	-0.6
EHY	Hungye	0.83	212	eP	Pb	19 57 19.7	-0.6
EHY				S	Sb	19 57 32.4	+1.0
NSTT	Nanjuang	0.84	300	eP	Pb	19 57 19.9	-0.5
NSTT				S	Sb	19 57 30.4	-1.2
NWF	Wu-fen Shan	0.85	359	P	Pb	19 57 20.8	+0.2
NWF				S	Sb	19 57 31.8	-0.2
TAP1	Taipei	0.86	343	eP	Pb	19 57 21.0	+0.3
TAP1				S	Sb	19 57 32.4	+0.3
TAP	Taipei	0.86	342	eP	Pb	19 57 21.0	+0.2
TAP				S	Sb	19 57 32.0	-0.3
SMLT	Sun Moon Lake	0.89	248	P	Pb	19 57 20.8	-0.5
SMLT				S	Sb	19 57 31.9	-1.1
TYC	Yuchr	0.92	250	P	Pb	19 57 20.8	-0.9
TYC				S	Sb	19 57 33.3	-0.6
NCU	National Centr	0.93	323	eP	Pb	19 57 22.5	+0.5
NCU				S	Sb	19 57 35.6	+1.2
TWS1	Kuangyinshan	0.94	338	eP	Pb	19 57 22.6	+0.3
TWS1				S	Sb	19 57 36.2	+1.5
TWQ1	Liyutan	0.95	278	eP	Pb	19 57 22.4	+0.2
TWQ1				S	Sb	19 57 34.4	-0.3
HSN	Hsinchu	0.95	308	eP	Pb	19 57 23.1	+0.7
NSY	Sanyi	0.97	282	eP	Pb	19 57 22.9	+0.3
TWF1	Yuli	0.98	208	eP	Pb	19 57 20.8	-2.0
TWF1				S	Sb	19 57 35.8	+0.1
TCU	Taichung	1.03	266	eP	Pb	19 57 23.8	+0.1
TCU				S	Sb	19 57 38.5	+1.3
YUS	Yu-Shan	1.06	227	eP	Pb	19 57 23.8	-0.4
YUS				S	Sb	19 57 37.5	-0.7
TWY	Chenhua	1.07	350	eP	Pb	19 57 24.7	+0.3
TWY				S	Sb	19 57 39.2	+0.9
WNT	Mingjian	1.07	252	eP	Pb	19 57 24.7	+0.3
WNT				S	Sb	19 57 39.6	+1.1
YOJ	Yonaguni jima	1.13	77	P	Pb	19 57 25.8	+0.4
YOJ				eS	Sb	19 57 42.2	+2.1
ALS	Alishan	1.15	232	eP	Pb	19 57 25.5	-0.3
ALS				S	Sb	19 57 40.9	+0.2
CHKT	Chengkung	1.18	200	eP	Pb	19 57 25.1	-1.2
CHN5	Tsauling	1.20	239	eP	Pb	19 57 26.4	-0.1
CHN5				S	Sb	19 57 43.1	+1.1
WGK	Gukeng	1.25	245	eP	Pb	19 57 27.7	+0.3
ELDTW	Lidau	1.25	215	eP	Pb	19 57 25.6	-1.8
CHN4	Tsaushan	1.40	232	eP	Pn	19 57 30.3	+0.3
CHN4				S	Sb	19 57 48.6	+0.6
STYT	Tauyuan	1.42	223	eP	Pn	19 57 29.9	-0.3
STYT				S	Sb	19 57 49.4	+0.9
PCYT	Pengchaiyu	1.43	10	eP	Pn	19 57 30.1	-0.2
WTCT	Ta-ch'eng	1.43	256	eP	Pn	19 57 29.1	-1.3
WTCT				S	Sb	19 57 49.3	+0.4
CHY	Chiayi	1.45	241	eP	Pn	19 57 30.6	0.0
CHY				S	Sb	19 57 49.5	+0.2
WTP	Ta-pu	1.46	229	eP	Pn	19 57 30.7	0.0
WTP				S	Sb	19 57 50.1	+0.5
TWK	Hsinying	1.53	232	eP	Pn	19 57 32.0	+0.2
TWK				S	Sb	19 57 52.0	+0.3
TWG	Pinlang	1.54	206	eP	Pn	19 57 29.8	-2.2
CHN1	Nanshi	1.55	229	eP	Pn	19 57 32.5	+0.3
CHN1				S	Sb	19 57 52.5	+0.1
WSF	Szhu	1.56	249	eP	Pn	19 57 31.6	-0.5
WSF				S	Sb	19 57 53.0	+0.6
TTN	Taitung	1.58	202	eP	Pn	19 57 32.0	-0.5
TTN				S	Sb	19 57 54.2	+1.2
SGST	Jiashian	1.59	225	eP	Pn	19 57 32.9	+0.2
SGST				S	Sb	19 57 54.3	+0.9
CHN8	Yiju	1.69	240	eP	Pn	19 57 33.8	-0.4
CHN8				S	Sn	19 57 56.1	-0.2
IRIF	Iriomote-Funau	1.77	86	P	Pn	19 57 34.6	-0.6
IRIF				eS	Sn	19 57 57.6	-0.5
ECL	Taimali	1.79	206	eP	Pn	19 57 34.6	-0.9
SSD	Sandimen	1.82	216	eP	Pn	19 57 35.8	-0.1
SSD				S	Sn	19 57 59.6	+0.2
HATJ	Hateruma jima	1.84	95	eS	Sn	19 58 00.0	+0.1
TWM1	Shoushan	1.88	223	eP	Pn	19 57 36.4	-0.4
JKRS	Kuro-shima	2.02	89	P	Pn	19 57 38.7	-0.1
JKRS				eS	Sn	19 58 05.2	+0.7
EAST	Anshuo	2.02	206	eP	Pn	19 57 39.8	+0.9
SCZT	Fangliau	2.13	211	eP	Pn	19 57 41.5	+1.0
SCZT				S	Sn	19 58 07.2	-0.2
JIJ	Ishigaki jima	2.14	86	P	Pn	19 57 40.0	-0.6
JIJ				eS	Sn	19 58 06.9	-0.8
WDGT	Dungji	2.18	245	eP	Pn	19 57 39.6	-1.5
LAY	Lan-yu	2.18	186	eP	Pn	19 57 38.1	-3.0
TWK1	Hengchun	2.44	202	eP	Pn	19 57 45.8	+0.9
TWK1				S	Sn	19 58 14.4	-0.9

*TAP **05** 20:05:27.9,24.68N×122.45E,h90^{km},ML3.0*

JMA 05 20:05:26.1±0.4**,24.84N**×**122.35E,h88^{km},Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.71	122	P	P	20 05 42.5	-0.3
YOJ				eS	S	20 05 55.4	+0.3
IRIF	Iriomote-Funau	1.35	112	P	P	20 05 50.3	-0.1
IRIF				eS	S	20 06 07.4	-1.0
JKRS	Kuro-shima	1.63	111	P	P	20 05 54.0	+0.2
JKRS				eS	S	20 06 13.8	-0.5
JIJ	Ishigaki jima	1.70	106	P	P	20 05 54.6	-0.2
JIJ				eS	S	20 06 14.6	-1.4
JTJ	Tarama	2.15	95	P	P	20 06 01.2	+0.4
JTJ				eS	S	20 06 26.7	+0.2

JMA 05 20:54:06.0±0.1**,33.02N**×**136.73E,h37^{km}**±4^{km}**,M3.6,8D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWZ	Kozaga	0.99	301	⇓P	P	20 54 23.6	0.0
JWZ				S	S	20 54 35.6	-1.0
TK01	Tokai 1	1.03	44	P	P	20 54 24.0	-0.2
TK01				eS	S	20 54 36.9	-0.8
TK02	Tokai 2	1.26	43	⇓P	P	20 54 27.4	0.0
TK02				S	S	20 54 43.1	-0.4
JIE	Ise	1.37	359	⇓P	P	20 54 29.7	+0.7
JIE				S	S	20 54 45.5	-0.6
JWM	Minabe	1.42	306	⇓P	P	20 54 29.9	+0.2
JWM				S	S	20 54 47.1	-0.3
JWY	Kouya	1.53	322	⇓P	P	20 54 32.2	+1.0
TK03	Tokai 3	1.54	42	S	S	20 54 50.0	-0.4
TK04	Tokai 4	1.66	35	P	P	20 54 33.4	+0.2
TK04				S	S	20 54 53.2	-0.3
TSUJ	Tsu 2	1.71	351	⇓P	P	20 54 34.4	+0.6
TSUJ				S	S	20 54 54.3	-0.3
JHE	Heguri	1.85	332	⇓P	P	20 54 36.7	+0.9
JHE				S	S	20 54 58.3	+0.2
JAI	Aioi	2.06	293	⇓P	P	20 54 39.0	+0.2
JAI				S	S	20 55 03.0	-0.4
JAJ2	Tsuna	2.08	313	P	P	20 54 40.0	+0.9
JAJ2				S	S	20 55 04.5	+0.5

*STR **05** 21:09:10.1±0.3,46.84N×1.56W,h5^{km}±1^{km},Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **05** 21:09:11.0,46.37N×1.30W,h4^{km},ML2.5(STR), ML2.2(LDG),After LDG.*

LDG 05 21:09:11.0±0.1**,46.37N**×**1.30W,h4^{km},Md2.4**/1**,Ml2.2**/13**, Error ellipse: s-maj=1.6km s-min=0.7km az=43.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LRYF	La Roche-sur-Y	0.27	321	Pg	Pg	21 09 15.4	-1.1
LRYF				Sg	Sg	21 09 19.5	-0.7
LCHF	La Chataignera	0.49	52	Pg	Pg	21 09 21.3	+0.5
LCHF				Sg	Sg	21 09 29.3	+2.0
MFF	Saint Martin d	0.83	73	ePg	Pg	21 09 26.9	-0.7
MFF				eSg	Sg	21 09 37.0	-1.6
	5.9nm,0.2s						
QUIF	Quistinic	2.01	321	ePn	Pn	21 09 43.9	-2.2
QUIF				eP		21 09 46.5	
QUIF				ePg	Pg	21 09 48.5	-2.6
QUIF				eSn	Sn	21 10 08.3	-3.6
QUIF				eSg	Sg	21 10 13.3	-4.5
	2.5nm,0.2s						
LFF	La Frestale	2.02	134	ePn	Pn	21 09 44.0	-2.2
LFF				eP		21 09 46.3	
LFF				ePg	Pg	21 09 48.5	-2.8
LFF				eSn	Sn	21 10 07.5	-4.7
LFF				eSg	Sg	21 10 14.3	-4.0
	5.9nm,0.3s						
GRR	Gorron	2.04	8	ePn	Pn	21 09 44.6	-2.0
GRR				ePg	Pg	21 09 48.6	-3.2
GRR				eSn	Sn	21 10 08.9	-3.9
GRR				eSg	Sg	21 10 15.5	-3.5
	3.1nm,0.2s						
SGMF	Saint Gilles	2.07	336	ePg	Pg	21 09 49.1	-3.3
SGMF				eSn	Sn	21 10 09.7	-3.9
SGMF				eSg	Sg	21 10 15.3	-4.7
	4.4nm,0.3s						
RJF	Les Rejaudoux	2.24	117	ePg	Pg	21 09 51.2	-4.4
RJF				eSn	Sn	21 10 13.1	-4.6
RJF				eSg	Sg	21 10 20.6	-4.8
	3.1nm,0.2s						
LDF	La Druitiere	2.37	19	ePn	Pn	21 09 49.0	-2.2
LDF				ePg	Pg	21 09 54.9	-3.3
LDF				eSn	Sn	21 10 16.4	-4.6
LDF				eSg	Sg	21 10 25.1	-4.7
	1.3nm,0.3s						
ROSF	Rostrenen	2.38	326	ePn	Pn	21 09 49.1	-2.4
ROSF				ePg	Pg	21 09 55.5	-3.1

ROSF				*e*Sn	Sn	21 10 16.0	-5.5
ROSF				*e*Sg	Sg	21 10 25.5	-4.9
	12nm,0.9s						
TCF	**Toulx Ste Croi**	2.43	91	*e*Pn	Pn	21 09 49.0	-3.1
TCF				*e*Pg	Pg	21 09 55.0	-4.5
TCF				*e*Sn	Sn	21 10 17.7	-5.0
TCF				*e*Sg	Sg	21 10 27.4	-4.6
	4.0nm,0.5s						
FLN	**La Foliniere**	2.46	13	*e*Pn	Pn	21 09 50.1	-2.4
FLN				*e*Pg	Pg	21 09 56.5	-3.6
FLN				*e*Sn	Sn	21 10 18.6	-4.8
FLN				*e*Sg	Sg	21 10 28.8	-4.1
	1.3nm,0.2s						
CAF	**Calviac**	2.76	120	*e*Pn	Pn	21 09 54.2	-2.7
CAF				*e*Pg	Pg	21 10 02.5	-3.7
CAF				*e*Sn	Sn	21 10 25.8	-5.3
CAF				*e*Sg	Sg	21 10 38.0	-5.0
	1.4nm,0.2s						
BGF	**Bois d'Agland**	2.87	85	*e*Pg	Pg	21 10 04.3	-4.0
BGF				*e*Sn	Sn	21 10 28.7	-5.1
BGF				*e*Sg	Sg	21 10 41.2	-5.4
	4.6nm,0.3s						
AVF	**Avril sur Loir**	3.23	81	*e*Pn	Pn	21 10 00.7	-2.9
AVF				*e*Sn	Sn	21 10 37.2	-5.9
	0.9nm,0.4s						

MAN 05 21:35:14.2,10.82N×124.96E,h23^{km},mb4.1,ML2.9,MS2.6,2C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	0.34	3	*e*P	Pb	21 35 23.5	+1.8
PLP				*e*S	Sb	21 35 31.6	+4.8
OCLP	**Ormoc**	0.41	304	*e*P	Pb	21 35 24.2	+1.3
OCLP				*e*S	Sb	21 35 32.6	+3.8
MSLP	**Maasin**	0.69	188	*e*P	Pb	21 35 25.8	-1.7
MSLP				*e*S	Sb	21 35 32.0	-4.5
SCPH	**Surigao**	1.16	153	⇑*e*P	Pn	21 35 34.2	-1.0
SCPH				*e*S	Sb	21 35 46.7	-3.3
TBP	**Tagbilaran**	1.56	224	⇑*e*P	Pn	21 35 40.4	-0.5
TBP				*i* S	Sn	21 36 01.4	+0.8

NEIC 05 21:53:51.1,37.36N×13.85W,h1^{km},MG4.3(MDD),After MDD.
INMG 05 21:53:52.7±0.9,37.13N×14.19W,h10^{km},ML2.1,Error ellipse: s-maj=7.8km s-min=7.2km az=33.0
CSEM 05 21:53:52.8±0.2,37.38N×13.83W,h20^{km},ML3.2/9,Error ellipse: s-maj=3.6km s-min=2.4km az=59.0
MDD 05 21:53:51.3±2.6,37.38N×13.84W,mb4.3/7,Error ellipse: s-maj=23.6km s-min=17.3km az=60.0,PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOU	**Loures**	3.99	66	*e*Pn	Pn	21 54 52.8	-2.2
PLOU				*e*Sn	Sn	21 55 38.1	-5.1
	4.3nm,0.2s						
PLOU	**Loures**	3.99	66	*e*Pn	Pn	21 54 52.8	-2.2
PLOU				*e*Sn	Sn	21 55 38.1	-5.1
	4.3nm,0.2s						
PTEO	**Sao Teotonio**	4.07	86	*e*Pn	Pn	21 54 53.0	-3.2
PTEO				*e*Sn	Sn	21 55 37.6	-7.7
	3.4nm,0.2s						
PTEO	**Sao Teotonio**	4.07	86	*e*Pn	Pn	21 54 53.0	-3.2
PTEO				*e*Sn	Sn	21 55 37.6	-7.7
	3.4nm,0.2s						
MOE	**Montemor**	4.48	74	*e*Pn	Pn	21 54 59.1	-2.9
MOE				*e*Sn	Sn	21 55 49.4	-6.3
PBEJ	**Beja**	4.78	80	*e*Pn	Pn	21 55 03.7	-2.5
PBEJ				*e*Sn	Sn	21 55 55.9	-7.3
	1.6nm,0.1s						
PBEJ	**Beja**	4.78	80	Pn	Pn	21 55 03.7	-2.5
PBEJ				Sn	Sn	21 55 55.9	-7.3
	0.8nm,0.1s						
PCBR	**Castelo Branco**	5.55	62	*e*Pn	Pn	21 55 14.0	-3.2
PCBR				*e*Sn	Sn	21 56 15.8	-6.9
	1.0nm,0.1s						
PCBR	**Castelo Branco**	5.55	62	Pn	Pn	21 55 14.0	-3.2
PCBR				Sn	Sn	21 56 15.8	-6.9
	0.5nm,0.1s						
EBAD	**Badajoz**	5.56	74	Pn	Pn	21 55 13.4	-3.8
	1.2nm,0.1s,SNR=7.6						
EBAD				Sn	Sn	21 56 14.6	-8.1
	3.0nm,0.2s						
EBAD	**Badajoz**	5.56	74	Pn	Pn	21 55 13.4	-3.8
	1.2nm,0.1s,SNR=7.6						
EBAD				Sn	Sn	21 56 14.6	-8.2
	3.0nm,0.2s						
EMIN	**Mina Concepcio**	5.71	84	Pn	Pn	21 55 15.8	-3.5
	1.0nm,0.2s,SNR=6.6						
EMIN				Sn	Sn	21 56 18.1	-8.4
	1.0nm,0.3s						
EMIN	**Mina Concepcio**	5.71	84	Pn	Pn	21 55 15.8	-3.5
	1.0nm,0.2s,SNR=6.6						
EMIN				Sn	Sn	21 56 18.1	-8.4
	1.0nm,0.3s						
ELOB	**Lobios**	6.32	43	Pn	Pn	21 55 24.6	-3.4
	3.6nm,0.3s,SNR=7.9						
ELOB				Sn	Sn	21 56 33.3	-8.6
	1.0nm,0.1s,SNR=7.9						
ELOB	**Lobios**	6.32	43	Pn	Pn	21 55 24.6	-3.4
	3.6nm,0.3s,SNR=7.9						
ELOB				Sn	Sn	21 56 33.3	-8.6
	1.0nm,0.1s,SNR=7.9						
ESPR	**Espera**	6.40	92	Pn	Pn	21 55 25.6	-3.5
	0.9nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	21 56 35.1	-8.7
	1.0nm,0.2s,SNR=7.9						
ESPR	**Espera**	6.40	92	Pn	Pn	21 55 25.6	-3.5
	0.9nm,0.2s,SNR=7.9						
ESPR				Sn	Sn	21 56 35.1	-8.7
	1.0nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	6.69	32	Pn	Pn	21 55 29.8	-3.5
	5.3nm,0.6s,SNR=7.9						
EMAZ				Sn	Sn	21 56 40.4	-11
	1.6nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	6.69	32	Pn	Pn	21 55 29.8	-3.4
	SNR=7.9						
EMAZ				Sn	Sn	21 56 40.4	-11
	1.6nm,0.2s,SNR=7.9						
ECAL	**Calabor**	7.12	48	Pn	Pn	21 55 35.7	-3.6
	4.1nm,0.4s,SNR=7.9						
ECAL				Sn	Sn	21 56 52.9	-9.1
	1.7nm,0.4s,SNR=7.9						
ECAL	**Calabor**	7.12	48	Pn	Pn	21 55 35.7	-3.6
	4.1nm,0.4s,SNR=7.9						
ECAL				Sn	Sn	21 56 52.9	-9.0
	1.7nm,0.4s,SNR=7.9						
EINC	**Incio**	7.25	41	Pn	Pn	21 55 38.0	-3.0
	1.2nm,0.2s,SNR=5.5						
EINC				Sn	Sn	21 56 55.7	-9.4
	1.2nm,0.3s						
EINC	**Incio**	7.25	41	Pn	Pn	21 55 38.0	-3.1
	1.2nm,0.2s,SNR=5.5						
EINC				Sn	Sn	21 56 55.7	-9.4
	1.2nm,0.3s						
EADA	**Adamuz**	7.38	81	Pn	Pn	21 55 39.0	-3.8
	0.7nm,0.1s,SNR=8.5						
EADA				Sn	Sn	21 56 59.0	-9.3
	0.5nm,0.1s						
EADA	**Adamuz**	7.38	81	Pn	Pn	21 55 39.0	-3.8
	0.7nm,0.1s,SNR=8.5						
EADA				Sn	Sn	21 56 59.0	-9.3
	0.5nm,0.1s						
ESDC	**Sonseca Array**	8.07	70	Pn	P	21 55 48.3	-4.2
	2.5nm,0.1s,baz=257,slow=13,SNR=23						
ESDC	**Sonseca Array**	8.07	70	Pn	P	21 55 48.3	-4.3
	2.5nm,0.1s,SNR=23						
ESLA	**Sonseca Array**	8.07	70	*e*Pn	P	21 55 48.2	-4.4
ESLA	**Sonseca Array**	8.07	70	*e*Pn	P	21 55 48.2	-4.4

THE 05 22:04:29.2,39.03N×20.26E,h9^{km},ML4.0
ATH 05 22:04:29.7,39.11N×20.64E,h5^{km}±4^{km},MD3.8/16,ML3.9
NEIC 05 22:04:29.7,39.11N×20.64E,h5^{km},mb4.1/5,ML3.9(ATH), After ATH.
CSEM 05 22:04:31.6±0.1,39.11N×20.56E,h2^{km},ML4.0,Error ellipse: s-maj=1.6km s-min=1.1km az=19.0
PDG 05 22:04:32.6±0.6,39.28N×20.57E,h18^{km}±1^{km}
HLW 05 22:04:33.1,39.05N×20.24E,h33^{km},Mb4.0
ISC 05 22:04:31.2±0.5,39.14N±0.02×20.38E±0.03,h24^{km}±4^{km}, n117,σ1§37/165,mb4.1/5,12C-5D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGT	**Igoumenitsa**	0.40	355	*e*Pg	Pb	22 04 39.0	-0.6
IGT				*e*Sg	Sb	22 04 46.3	+1.0
JAN	**Janina**	0.64	35	*e*PG	Pb	22 04 40.5	-3.1
KEK	**Kerkira**	0.73	322	*e*PG	Pb	22 04 46.0	+0.9
KEK				*e*SB	Sb	22 04 59.8	+5.1
SRN	**Sarande**	0.80	339	*e*Pn	Pn	22 04 46.8	-0.2
SRN				*i* Sn	Sn	22 05 01.2	+3.1
VLS	**Valsamata**	0.97	170	*e*PB	Pb	22 04 47.9	-1.4
EVR	**Evrytania**	1.14	101	*e*PN	Pn	22 04 48.6	-3.2
TPE	**Tepelena**	1.19	346	*e*Pn	Pn	22 04 55.5	+2.9
KBN	**Korca**	1.52	12	*i* Pn	Pn	22 05 00.2	+2.9
KBN				*i* Sn	Sn	22 05 24.9	+8.5
KBN	**Korca**	1.52	12	*e*Pn	Pn	22 05 00.2	+2.9
AGG	**Agios Georgios**	1.53	94	*e*Pb	Pb	22 04 57.2	-1.5
KZN	**Kozani**	1.59	42	*e*PB	Pb	22 04 58.2	-1.5
FNA	**Florina**	1.82	25	*e*Pb	Pb	22 05 01.8	-1.8
FNA				*e*Sb	Sb	22 05 27.4	+1.3
LIT	**Litokhoron**	1.90	59	*e*Pn	Pn	22 05 02.4	-0.2
LIT				*e*Sn	Sn	22 05 29.6	+3.5
OHR	**Ohrid**	2.00	9	*i* Pn	Pn	22 05 07.2	+3.1
OHR				*i* Pg	Pn	22 05 09.0	+4.9
OHR				*i* Sg	Sn	22 05 33.9	+5.3
LCI	**Lecce**	2.12	305	*e*Pn	Pn	22 05 09.5	+3.7
LCI	**Lecce**	2.12	305	*e*Pn	Pn	22 05 09.5	+3.7
XOR	**Xorichti**	2.20	83	*e*Pn	Pn	22 05 06.8	-0.2
XOR				*e*Sn	Sn	22 05 36.3	+2.5
NEO	**Neokhori**	2.22	85	*e*PG	Pn	22 05 07.7	+0.4
TIR	**Tirane**	2.24	350	*e*Pn	Pn	22 05 10.6	+3.0
ITM	**Ithomi**	2.31	147	*e*PG	Pn	22 05 10.5	+2.0
GRG	**Griva**	2.39	40	*e*Pn	Pn	22 05 10.3	+0.6
GRG				*e*Sn	Sn	22 05 42.0	+3.4
QSH	**Qafa e Shtames**	2.41	352	*e*Pn	Pn	22 05 14.6	+4.6
QSH				*i* Sn	Sn	22 05 47.6	+8.5
THE	**Thessaloniki**	2.49	52	*e*Pn	Pn	22 05 11.3	+0.1
MGER	**Gerania Oros**	2.54	116	*e*PG	Pn	22 05 12.5	+0.7
PLG	**Polygyros**	2.67	61	*e*PN	Pn	22 05 13.5	-0.2
PAIG	**Paliouri**	2.67	72	*e*Pn	Pn	22 05 13.6	-0.2
AOS	**Alonnisos**	2.73	88	*e*Pn	Pn	22 05 13.9	-0.6
KNT	**Kendrikon**	2.80	43	*e*Pn	Pn	22 05 15.5	0.0
NAIG	**Nisos Aigina**	2.81	118	*e*PN	Pn	22 05 16.0	+0.3
MPAR	**Parnis Oros**	2.81	109	*e*PN	Pn	22 05 15.8	+0.1
TIP	**Timpagrande**	2.81	272	*e*Pn	Pn	22 05 18.0	+2.2
TIP				*e*Sn	Sn	22 05 56.0	+6.7
TIP	**Timpagrande**	2.81	272	*e*Pn	Pn	22 05 18.0	+2.2
TIP				*e*Sn	Sn	22 05 56.0	+6.7
SOH	**Sokhos**	2.84	53	*e*Pn	Pn	22 05 16.3	+0.2
ATH	**Athens Observa**	2.87	113	*e*PN	Pn	22 05 16.3	-0.2
PTL	**Penteli**	2.94	111	*e*PN	Pn	22 05 17.2	-0.4
SKO	**Skopje**	2.95	16	*i* Pn	Pn	22 05 19.1	+1.4
SKO				*i* Pg	Pn	22 05 26.0	+8.3
SKO				*i* Sn	Sn	22 05 53.9	+1.2
SKO				*i* Sb	Sb	22 06 00.0	+1.3
SKO				*i* Sg	Sn	22 06 03.8	+11
SKO				Lg		22 06 13.0	
	comp=Z,0.2nm,0.8s						
SKO	**Skopje**	2.95	16	*i* Pn	Pn	22 05 19.1	+1.4
SKO				*i* Sn	Sn	22 05 53.9	+1.2
ULC	**Ulcinj**	2.95	343	⇑*i*Pn	Pn	22 05 18.2	+0.5
ULC				*e*Sn	Sn	22 05 53.7	+0.9
ULC	**Ulcinj**	2.95	343	⇑*i*Pn	Pn	22 05 18.2	+0.5
ULC				*e*Sn	Sn	22 05 53.7	+0.9
OUR	**Ouranopolis**	3.03	66	*e*Pn	Pn	22 05 18.7	-0.1
GRI	**Girifalco**	3.10	265	*e*Pn	Pn	22 05 23.2	+3.4
GRI	**Girifalco**	3.10	265	*e*Pn	Pn	22 05 23.2	+3.4
VLI	**Veliai**	3.15	139	*e*PN	Pn	22 05 21.4	+0.8
SRS	**Serrai**	3.16	50	*e*Pn	Pn	22 05 21.0	+0.3
SRS				*e*Sn	Sn	22 06 00.3	+2.2
ORI	**Oriolo Calabro**	3.17	288	*e*Pn	Pn	22 05 25.3	+4.4
ORI	**Oriolo Calabro**	3.17	288	*e*Pn	Pn	22 05 25.3	+4.4
SG1	**Sgolgore (BA)**	3.31	302	*e*Pn	Pn	22 05 24.9	+2.1
BUM	**Brajici-Budva**	3.35	341	*e*Pn	Pn	22 05 23.6	+0.1
BUM				*e*Sn	Sn	22 06 03.5	+0.5
TTG	**Podgorica**	3.40	346	*e*Pn	Pn	22 05 24.6	+0.5
TTG				*e*Sn	Sn	22 06 04.3	+0.2
KKB	**Krupnik**	3.42	36	*i* P	Pn	22 05 24.7	+0.3
KKB				*i* S	Sn	22 06 06.0	+1.3
PVY	**Plav**	3.47	355	*e*Pn	Pn	22 05 26.2	+1.1
PVY				*e*Sn	Sn	22 06 06.1	+0.2
MMB	**Musomiste**	3.54	45	*i* P	Pn	22 05 26.0	-0.2
MMB				*i* S	Sn	22 06 06.5	-1.3
KYTH	**Kithira**	3.55	143	*e*PB	Pb	22 05 27.7	-5.4
KYTH	**Kithira**	3.55	143	*e*Pb	Pb	22 05 28.0	-5.1
SOI	**Samo**	3.55	254	*e*Pn	Pn	22 05 29.6	+3.4
SOI	**Samo**	3.55	254	*e*Pn	Pn	22 05 29.6	+3.4
HCY	**Herceg Novi**	3.60	337	⇑*i*Pn	Pn	22 05 26.6	-0.4
HCY				*e*Sn	Sn	22 06 09.8	+0.6
CDT	**Castel del Mon**	3.70	303	*e*Pn	Pn	22 05 29.8	+1.5
IVA	**Berane**	3.75	355	⇓*i*Pn	Pn	22 05 30.2	+1.1
IVA				*e*Sn	Sn	22 06 12.8	-0.2
NKY	**Niksic**	3.82	345	*e*Pn	Pn	22 05 30.2	+0.2
NKY				*e*Sn	Sn	22 06 14.0	-0.7
MTTG	**Motta San Giov**	3.84	254	*e*Pn	Pn	22 05 33.5	+3.2
MTTG	**Motta San Giov**	3.84	254	*e*Pn	Pn	22 05 33.5	+3.1
MGR	**Morigerati**	3.85	287	*e*Pn	Pn	22 05 33.3	+2.7
MGR	**Morigerati**	3.85	287	*e*Pn	Pn	22 05 33.3	+2.7
BRY	**Bratogost**	4.01	340	⇓*i*Pn	Pn	22 05 32.9	+0.1
BRY				*e*Sn	Sn	22 06 19.2	-0.3
VTS	**Vitosha**	4.07	31	*i* P	Pn	22 05 34.5	+0.9
VTS				*i* S	Sn	22 06 24.0	+3.0
MRLC	**Muro Lucano**	4.09	295	*e*Pn	Pn	22 05 36.9	+2.9
MRLC	**Muro Lucano**	4.09	295	*e*Pn	Pn	22 05 36.8	+2.9
SGO	**Sicignano**	4.15	292	*e*Pn	Pn	22 05 38.3	+3.5
SGO	**Sicignano**	4.15	292	*e*Pn	Pn	22 05 38.3	+3.5
UPM	**Unac-Piva**	4.21	345	⇓*i*Pn	Pn	22 05 35.9	+0.3
UPM				*e*Sn	Sn	22 06 23.4	-1.3
STON	**Ston**	4.25	332	*i* Pn	Pn	22 05 35.3	-0.9
STON				*i* Sn	Sn	22 06 23.5	-2.1
STON	**Ston**	4.25	332	*i* Pn	Pn	22 05 35.2	-0.9
STON				*i* Sn	Sn	22 06 23.4	-2.2
PLE	**Pljevlja**	4.25	350	⇓*i*Pn	Pn	22 05 36.5	+0.2
PLE				*e*Sn	Sn	22 06 24.5	-1.3
RDO	**Rodhopi**	4.44	61	*e*PN	Pn	22 05 37.9	-0.9
PGB	**Panagyurishte**	4.46	39	*i* P	Pn	22 05 38.7	-0.5
ALN	**Alexandroupoli**	4.70	66	*e*Pn	Pn	22 05 41.7	-0.8
DIVS	**Divcibare**	4.97	357	⇑*i*Pn	Pn	22 05 45.1	-1.2
CII	**Carovilli**	5.30	301	*e*Pn	Pn	22 05 53.8	+2.7
CII	**Carovilli**	5.30	301	*e*Pn	Pn	22 05 53.8	+2.7
SDI	**San Donato**	5.63	299	*e*Pn	Pn	22 05 58.5	+2.8
SDI	**San Donato**	5.63	299	*e*Pn	Pn	22 05 58.5	+2.8
AQU	**L'Aquila**	6.19	303	*e*Pn	Pn	22 06 03.6	0.0
AQU	**L'Aquila**	6.19	303	*e*Pn	Pn	22 06 03.6	0.0
NRCA	**Norcia**	6.62	306	*e*Pn	Pn	22 06 11.1	+1.4
NRCA	**Norcia**	6.62	306	*e*Pn	Pn	22 06 11.1	+1.5
SNTG	**Esanatoglia**	6.95	309	*e*Pn	Pn	22 06 14.9	+0.6
SNTG	**Esanatoglia**	6.95	309	*e*Pn	Pn	22 06 14.9	+0.6
FSSB	**Fossombrone**	7.30	311	*e*Pn	Pn	22 06 18.6	-0.6
FSSB	**Fossombrone**	7.30	311	*e*Pn	Pn	22 06 18.5	-0.7
CRES	**Cresnjev**	7.61	333	*i* Pn	Pn	22 06 21.6	-1.9
VOY	**Vojsko**	8.38	327	*e*Pn	P	22 06 32.8	-1.5
VOY				*e*Sn	Sn	22 08 06.3	-2.9
PERS	**Pernice**	8.43	334	*e*Pn	P	22 06 32.2	-2.7
OBKA	**Obir**	8.52	332	⇑*i*PN	P	22 06 34.4	-1.8
OBKA				*i* SN	Sn	22 08 03.9	-8.7
SLUM		8.59	151	P	P	22 06 33.2	-4.0
SLUM				S	Sn	22 08 02.1	-12
PSZ	**Piszkesteto**	8.79	358	*e*Pn	P	22 06 39.8	0.0
PSZ				*e*Sn	Sn	22 08 09.7	-10
PSZ	**Piszkesteto**	8.79	358	*e*	P	22 06 40.1	+0.2
PSZ	**Piszkesteto**	8.79	358	*e*Pn	P	22 06 39.8	-0.1
PSZ	**Piszkesteto**	8.79	358	*e*P	P	22 06 40.1	+0.2
ARSA	**Arzberg**	8.85	338	⇑*i*PN	P	22 06 38.1	-2.6
ARSA				*i* SN	Sn	22 08 09.5	-11
PTCC	**Patocco-Chiusa**	8.91	327	*e*Pn	P	22 06 39.8	-1.8
KBA	**Koelnbreinsper**	9.45	329	⇑*i*PN	P	22 06 47.0	-2.1
KBA				*i* SN	Sn	22 08 27.7	-8.0
MOA	**Molln**	9.77	335	⇑*i*PN	P	22 06 51.1	-2.3
MOA				*i* SN	Sn	22 08 34.6	-8.8
WTTA	**Wattenberg**	10.32	325	⇑*i*PN	P	22 06 59.7	-1.3
WTTA				*i* SN	S	22 08 48.8	-8.1
WATA	**Walderalm**	10.40	325	⇑*i*PN	P	22 07 01.0	-1.1
WATA				*i* SN	S	22 08 51.4	-7.5
SQTA	**Sankt Quirin**	10.48	323	⇑*i*PN	P	22 07 02.6	-0.6
SQTA				*i* SN	S	22 08 55.0	-5.9
MOTA	**Moosalm**	10.62	324	⇑*i*PN	P	22 07 04.4	-0.7
MOTA				*i* SN	S	22 08 57.0	-7.4
SWA2		10.72	155	⇓P	P	22 07 02.1	-4.4
SWA2				S	S	22 08 53.3	-14
SWA1		10.79	154	P	P	22 07 03.0	-4.5
SWA1				S	S	22 08 55.0	-13
KHC	**Kasperske Hory**	11.12	336	*e*P	P	22 07 10.0	-1.8
KHC				x	x	22 07 19.5	
MALT	**Malatya**	14.12	88	*e*P	P	22 07 56.2	+4.3
	comp=Z,3.1nm,0.9s						
ESK	**Eskdalemuir**	22.60	323	*e*P	P	22 09 30.8	-0.2
	comp=Z,9.5nm,0.9s,mb4.2						
NB2	**NORSAR Subarra**	22.66	348	P	P	22 09 31.2	-0.4
	comp=Z,2.4nm,0.9s,mb3.6,baz=157,slow=9.3						
KAF	**Kangasniemi**	23.29	7	*e*p	P	22 09 33.8	-3.9
CHKZ	**Chkalovo**	36.76	50	*e*P	P	22 11 34.6	-3.8
	comp=Z,2.6nm,0.9s,mb4.1						
SCHQ	**Schefferville**	57.68	317	P	P	22 14 20.2	-1.6
	comp=Z,8.2nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	60.32	51	P	P	22 14 37.2	-3.0
	comp=Z,1.0nm,0.8s,mb3.9						

THR 05 22:20:38.9±0.9,37.29N×56.78E,h15^{km},ML3.2
CSEM 05 22:20:41.9±0.1,36.96N×56.78E,h10^{km},ML3.6,Error ellipse: s-maj=6.3km s-min=1.7km az=172.0
TEH 05 22:20:43.9,37.11N×56.82E,h10^{km},Mn3.6
ISC 05 22:20:41.4±2.1,37.0N±0.1×56.76E±0.06,h2^{km}±20^{km},n26, σ1§05/21,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISFR	**Esferayen**	0.99	86	Pg	Pg	22 21 01.2	0.0
IQHU	**Quchan**	1.43	86	Pg	Pn	22 21 06.9	-1.5
IPAY	**Payeh**	1.87	106	Pn	Pn	22 21 14.8	+0.1
MHI	**Mashhad**	2.28	106	Pn	Pn	22 21 21.7	+1.1
IANJ	**Anjiloo**	2.75	238	Pn	Pn	22 21 28.4	+1.1
IMYA	**Miamay**	2.76	102	Pn	Pn	22 21 27.9	+0.5
ILAS	**Lasjerd**	3.46	244	Pn	Pn	22 21 37.8	+0.4
IFIR	**Firoozkooh**	3.50	249	Pn	Pn	22 21 38.8	+0.8
IFIR	**Firoozkooh**	3.50	249	Lg		22 22 36.4	
IPRN	**Paran-Amol**	3.71	260	Pn	Pn	22 21 40.1	-0.8
IDMV	**Damavand**	4.07	251	Pn	Pn	22 21 48.6	+2.6
DAMV	**Damavand**	4.10	252	*e*PN	Pn	22 21 45.6	-0.8
DAMV				AML	AML	22 23 10.8	
	comp=N,41nm,0.7s						
IAFJ	**Afjeh**	4.22	256	Lg		22 22 57.7	
IAFJ	**Afjeh**	4.22	256	Pn	Pn	22 21 49.6	+1.4
IMHD	**Mahdasht**	5.09	257	Lg		22 23 24.9	
ICHK	**Chekchek**	5.11	203	Pn	Pn	22 21 59.5	-1.2
NASN	**Na'in**	5.29	219	*e*PN	Pn	22 22 02.5	-0.8
IGZV	**Gazvin**	5.29	266	Lg		22 23 30.6	
IBAF	**Bafgh**	5.46	191	Pn	Pn	22 22 06.4	+0.6
IRAZ	**Razeghan**	5.74	256	Pn	Pn	22 22 09.4	-0.3
IRAZ	**Razeghan**	5.74	256	Lg		22 23 45.0	
IMEH	**Mehriz**	5.85	198	Pn	Pn	22 22 10.4	-0.9
ASAO	**Ashtian**	5.99	248	*e*PN	Pn	22 22 11.2	-2.0
ASAO				AML	AML	22 24 11.6	
	comp=N,5.6nm,0.8s						
KRBR	**Kerman**	6.98	180	*e*PN	Pn	22 22 27.8	+0.7
GRMI	**Germi**	7.25	287	*e*PN	Pn	22 22 25.5	-5.4
MAKU	**Maku**	9.80	288	*e*PN	P	22 23 00.4	-6.0

NEIC 05 22:32:33.4,30.76S×71.71W,h20^{km},ML3.9(GUC),After GUC.
GUC 05 22:32:33.4±0.7,30.76S×71.71W,h20^{km}±3^{km},MD3.7, ML3.9,1C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	0.47	71	⇑*i*P	Pb	22 32 42.8	0.0
OVCH				*i* S	Sb	22 32 49.8	+0.6
TLL	**Tololo Astrono**	0.98	53	⇓*i*P	Pb	22 32 51.1	-0.4
TLL				*i* S	Sb	22 33 04.8	+0.6
TLL				AMP		22 33 07.5	
	comp=N,4µm,0.3s						
ILCH	**Illapel**	0.98	152	*i* P	Pb	22 32 50.4	-1.2
ILCH				*i* S	Sb	22 33 04.0	-0.2
ILCH				AMP		22 33 05.3	
	comp=N,4µm,0.2s						
PTCH	**Petorca**	1.64	156	⇓*i*P	Pn	22 33 01.3	-0.2
PTCH				*i* S	Sn	22 33 22.2	+0.1
PTCH				AMP		22 33 27.4	
	comp=E,4µm,0.4s						
PACH	**Papudo**	1.78	173	*i* P	Pn	22 33 03.7	+0.2
PACH				*i* S	Sn	22 33 26.6	+0.7
VACH	**Vallenar**	2.33	21	AMP		22 33 48.0	
	comp=E,1µm,0.3s						
CLCH	**Cerro Calan**	2.81	160	*i* P	Pn	22 33 18.7	+0.5
CLCH				*i* S	Sn	22 33 52.7	+0.9
CLCH				AMP		22 34 03.3	
	comp=E,864nm,0.6s						
RCDM	**Rinconada Maip**	2.82	164	*i* P	Pn	22 33 18.5	+0.1
RCDM				AMP		22 34 09.3	
	comp=E,357nm,0.2s						
FCH	**Farellones**	2.83	155	*i* P	Pn	22 33 19.3	+0.8
FCH				*i* S	Sn	22 33 54.0	+1.7
FCH				AMP		22 34 05.2	
	comp=E,330nm,0.4s						
TACH	**Talagante**	2.95	167	*i* P	Pn	22 33 20.1	-0.3
TACH				*i* S	Sn	22 33 56.0	+0.5
LMEL	**Las Melosas**	3.33	158	AMP		22 34 15.5	
	comp=N,344nm,0.2s						

BJI 05 22:58:14.4,8.07N×93.75E,h23^{km},mB4.8,mb4.2,Ms3.9
NEIC 05 22:58:14.1±0.5,7.88N×94.23E,h30^{km},mb4.4/20,Error ellipse: s-maj=16.2km s-min=8.7km az=65.0
ISC 05 22:58:08.7±2.5,7.69N±0.05×94.07E±0.08,h6^{km}±15^{km}, n37,σ1§15/41,mb4.5/27,MS4.0/1,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	11.71	23	*e*P	P	23 00 58.9	-0.5
	18nm,1.1s						
KMI	**Kunming**	19.22	25	P	P	23 02 38.8	+2.7
KMI				AP		23 02 44.0	
KMI				XP		23 02 46.9	
KMI				S	S	23 06 08.2	+0.9
KMI				AMB	AMB		
	comp=Z,3.0nm,0.8s						
KMI				AMB	AMB		
	comp=Z,81nm,5.1s						
KMI				LR	LR		
	comp=N,145nm,14.6s						
KMI				LR	LR		
	comp=E,110nm,16.3s						
KMI	**Kunming**	19.22	25	P	P	23 02 38.8	+2.7
	comp=E,3.0nm,0.8s						
KMI				pP		23 02 44.0	
KMI				sP		23 02 46.9	
KMI				S	S	23 06 08.2	+0.9
JIRN	**Jiri**	21.22	340	*e*P	P	23 02 57.6	0.0
	comp=E,28nm,0.6s,mb4.8						
PKI	**Pulchoki**	21.41	339	*e*P	P	23 02 59.1	-0.4
	comp=E,16nm,0.5s,mb4.6						
DMN	**Daman**	21.56	338	*e*P	P	23 03 01.8	+0.8
	comp=E,24nm,0.6s,mb4.8						
KKN	**Kakani**	21.66	338	*e*P	P	23 03 01.8	-0.2
	comp=E,24nm,0.5s,mb4.8						
LSA	**Lhasa**	22.07	353	P	P	23 03 06.2	+0.1
LSA	**Lhasa**	22.07	353	*e*P	P	23 03 02.5	-3.6
	comp=E,17nm,0.7s,mb4.6						
LSA				*e*S	S	23 07 06.0	+1.2
GKN	**Gorkha**	22.09	337	*e*P	P	23 03 06.4	+0.1
	comp=E,27nm,0.5s,mb4.9						
KOLN	**Koldanda**	22.30	335	*e*P	P	23 03 08.7	+0.3
	comp=E,24nm,0.7s,mb4.8						
GTA	**Gaotai**	32.01	8	*e*P	P	23 04 38.9	+0.9
GTA				AP	pP	23 04 44.4	+4.5
GTA				XP	sP	23 04 47.2	+6.5
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.2						
HHC	**Hu-ho-hao-te**	36.52	23	*e*P	P	23 05 19.1	+2.3
HHC				AP	pP	23 05 23.3	+4.6
HHC				S	S	23 10 57.4	-1.3
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
HHC				LR	LR		
	comp=N,121nm,14.4s,MS4.0						
HHC				LR	LR		
	comp=E,121nm,13.2s,MS4.0						
BJT	**Baijiatuau**	37.78	28	*e*P	P	23 05 26.7	-0.7
	comp=E,3.4nm,0.5s,mb4.3						
MBWA	**Marble Bar**	38.17	139	*e*P	P	23 05 28.2	-2.6

	comp=E,11nm,1.0s,mb4.5						
ULN	Ulaanbaatar	41.53	13	P	P	23 05 59.0	+0.5
	comp=E,3.1nm,0.8s,mb4.0						
KURK	Kurchatov	44.77	346	eP	P	23 06 24.0	-0.8
	comp=E,2.9nm,0.7s,mb4.2						
CN2	Changchun	45.23	32	eP	P	23 06 28.5	0.0
NWAO	Narrogin (SRO)	46.01	153	eP	P	23 06 36.0	+1.1
	comp=E,3.0nm,0.6s,mb4.4						
HIA	Hailar	46.72	23	eP	P	23 06 35.8	-4.4
	comp=E,9.5nm,1.0s,mb4.7						
WRAB	Tennant Creek	48.22	125	eP	P	23 06 52.6	+0.2
	comp=E,9.9nm,0.8s,mb4.9						
WB2	Warramunga Arr	48.22	125	eP	P	23 06 52.7	+0.3
CHKZ	Chkalovo	49.63	342	eP	P	23 07 01.9	-0.8
	comp=E,3.6nm,0.9s,mb4.4						
ASPA	Alice Springs	49.85	130	eP	P	23 07 05.4	+0.5
STKA	Stephens Creek	60.03	134	eP	P	23 08 18.0	-0.8
MA2	Magadan	66.96	28	eP	P	23 09 01.4	-2.7
	comp=E,12nm,1.1s,mb4.8						
LSZ	Lusaka	69.14	251	eP	P	23 09 19.6	+1.2
	comp=E,2.5nm,0.7s,mb4.2						
JOF	Joensuu	70.99	335	ep	P	23 09 26.6	-2.3
	comp=E,6.4nm,0.5s,mb4.8						
KAF	Kangasniemi	72.92	333	ep	P	23 09 38.6	-1.8
	comp=E,6.0nm,0.6s,mb4.7						
LBTB	Lobatse	74.09	241	eP	P	23 09 49.3	+1.4
	comp=E,4.0nm,0.8s,mb4.4						
BOSA	Boshof	75.42	238	eP	P	23 09 56.8	+1.2
	comp=E,1.9nm,0.6s,mb4.2						
BOSA				e		23 10 03.6	
BILL	Bilibino	76.29	22	eP	P	23 09 59.8	+0.1
	comp=E,5.4nm,1.2s,mb4.3						
KHC	Kasperske Hory	78.01	319	eP	P	23 10 07.5	-2.1
KHC				x	x	23 10 09.5	
GRA1	Grafenberg Arr	79.56	319	eP	P	23 10 18.6	+0.6
	comp=E,2.0nm,0.8s,mb4.1						
GRF	Grafenberg Arr	79.56	319	eP	P	23 10 18.6	+0.6
	comp=E,2.0nm,0.8s,mb4.1						
NB2	NORSAR Subarra	79.86	331	P	P	23 10 18.6	-0.8
	comp=E,2.5nm,0.6s,mb4.3,baz=96,slow=5.0						
LPG	La Plagne	82.70	315	eP	P	23 10 35.0	+0.4
	comp=E,9.8nm,0.9s,mb4.6						

IGQ 05 23:10:28.9, 3.34S×81.18W, h12km±32km, mb4.4, 1C-2D, Error ellipse: s-maj=30.9km s-min=8.0km az=122.5, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	2.36	16	P	Pn	23 11 10.1	+2.1
HOJA				S	Sn	23 11 36.7	-0.4
IGUA	Igualata	3.13	54	P	Pn	23 11 19.2	+0.1
JAMA	Jama	3.21	18	P	Pn	23 11 21.5	+1.4
JAMA				S	Sn	23 11 57.8	-0.9
ARRY	Arrayan	3.27	56	P	Pn	23 11 21.8	+0.7
NAS1	Nasa	3.81	45	P	Pn	23 11 30.8	+2.1
TAMB	Tambo	3.84	47	P	Pn	23 11 30.9	+1.7
VC1	Cotopaxi 1	3.85	46	P	Pn	23 11 31.5	+2.2
JUA2	San Juan 2	4.03	40	⇑P	Pn	23 11 33.8	+2.0
JUA2				S	Sn	23 12 19.4	-0.1
TERV	Terraza Guagua	4.06	39	⇓P	Pn	23 11 33.9	+1.6
TERV				S	Sn	23 12 20.8	+0.5
PINO	Pino	4.07	39	P	Pn	23 11 33.5	+1.1
YANA	Yana	4.12	39	⇓P	Pn	23 11 34.5	+1.4
JOR1	San Jorge 1	4.17	37	P	Pn	23 11 32.4	-1.5

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*CSEM **05** 23:20:20.0, 12.43N×45.63E, h5km, ML3.4, After DHMR*

DHMR 05 23:20:20.0±1.2, 12.43N×45.63E, h5km±12km, ML3.5, 2C-3D, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBOS		1.48	346	⇓eP	Pn	23 20 47.7	+0.4
LBOS				i S	Sb	23 21 09.0	+2.4
BDHA	Al Bayda’	1.54	358	⇑iP	Pn	23 20 48.9	+0.6
BDHA				i S	Sb	23 21 10.6	+2.3
BDHA				AML	AML	23 21 24.5	
	comp=E,979nm,0.5s						
BDHA	Al Bayda’	1.54	358	⇑iP	Pn	23 20 48.8	+0.6
BDHA				i S	Sb	23 21 10.6	+2.3
TRBA	At Turbah	1.68	299	⇓eP	Pn	23 20 50.0	-0.2
TRBA				i S	Sn	23 21 15.1	+2.8
TRBA				AML	AML	23 21 15.2	
	comp=N,380nm,0.6s						
DHBB	Dhamar BB	2.45	331	⇓iP	Pn	23 21 02.9	+1.7
DHBB				i S	Sn	23 21 36.0	+4.2

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*MOS **05** 23:37:53.9±1.1, 0.10S×123.15E, h51km, mb5.3/15, Error ellipse: s-maj=24.0km s-min=9.9km az=106.2*

*BJI **05** 23:38:06.5, 0.10N×123.60E, h142km, mB5.0, mb5.0*

*HRVD **05** 23:38:06.5±0.8, 0.14N×123.65E, h136km±7km, MW5.1/42, Centroid moment Tensor Solution. LP body waves: s5,c6; Mantle waves: s42,c54; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.13±.40; $M_{\theta\theta}$2.65±.41; $M_{\phi\phi}$-6.77±.48; $M_{r\theta}$1.59±.27; $M_{\theta\phi}$0.20±.45; $M_{\phi r}$0.91±.45; Best double couple: $M_0$6.027×10^{16} NP1:ϕ_s150°, δ49°, λ46°. NP2:ϕ_s26°, δ57°, λ129°. Principal axes: T 5.208, Plg58°, Azm352°; N 1.648, Plg32°, Azm183°; P -6.846, Plg5°, Azm90°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 23:38:06.5±1.3, 0.07N×123.58E, h142km±11km, mb5.0/52 Error ellipse: s-maj=8.0km s-min=4.5km az=79.0*

ISC 05 23:38:05.3±0.2, 0.03N±0.03×123.58E±0.05, h145km, h145km±3.5km:pP-P, n205, σ1§17/153, mb5.0/76, 18C-7D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	7.09	12	⇑eP	P	23 39 51.4	+3.9
TSM	Tawau	7.10	307	P	P	23 39 49.0	+1.2
PAGZ	Pagadian	7.76	359	eP	P	23 39 59.6	+3.0
PAGZ				eS	rx	23 40 08.2	
BUKP	Musuan	7.93	11	eP	P	23 40 01.8	+3.0
KKM	Kota Kinabalu	9.47	309	P	P	23 40 23.3	+4.1
TBP	Tagbilaran	9.60	2	eP	P	23 40 23.5	+2.5
	46μm,1.3s						
FITZ	Fitzroy Crossi	18.14	174	⇓iP	P	23 42 08.1	-1.0
	12nm,0.3s						
MBWA	Marble Bar	21.40	190	eP	P	23 42 42.8	+0.3
	69nm,1.2s,mb4.9						
MBWA				e		23 43 04.2	
MBWA				e		23 43 13.9	
WRAB	Tennant Creek	22.47	153	i P	P	23 42 51.8	-1.3
WRAB	Tennant Creek	22.47	153	eP	P	23 42 53.3	+0.2
	73nm,0.9s,mb5.1						
WB2	Warramunga Arr	22.48	153	⇓iP	P	23 42 53.0	-0.2
WB2				eS	S	23 46 47.4	+2.2
IPM	Ipoh	22.98	282	P	P	23 43 01.1	+2.9
QIZ	Qiongzhong	23.20	325	P	P	23 43 02.3	+2.1
QIZ				S	S	23 47 05.5	+7.9
QIZ				AMB	AMB		
	comp=Z,182nm,5.1s						
QIZ				LR	LR		
	comp=N,1μm,14.1s						
QIZ				LR	LR		
	comp=E,2μm,16.4s						
QIZ				LR	LR		
	comp=Z,584nm,1.6s						
QIZ	Qiongzhong	23.20	325	eP	P	23 43 02.6	+2.4
	comp=Z,66nm,0.9s,mb5.1						
QIZ				e		23 43 10.9	
GUMO	Guam	25.02	57	P	P	23 43 24.2	+6.6
	comp=Z,301nm,1.2s,mb5.7						
GUMO				e		23 43 30.3	
PMG	Port Moresby	25.27	112	eP	P	23 43 19.9	-0.1
	comp=Z,24nm,0.8s,mb4.8						
ASPA	Alice Springs	25.60	158	eP	P	23 43 22.9	-0.1
CTAO	Charters Tower	29.88	133	eP	P	23 44 01.7	0.0
	comp=Z,7.5nm,0.8s,mb4.5						
CM31	Chiang Mai Arr	30.35	308	eP	P	23 44 06.3	+0.5
	comp=Z,74nm,1.1s,mb5.3						
GYA	Guiyang	30.92	329	⇓iP	P	23 44 13.0	+2.3
GYA				PCP	PcP	23 47 04.2	+0.5
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
FORT	Forrest	30.94	172	eP	P	23 44 10.4	-0.5
	comp=Z,172nm,0.6s,mb6.0						
KLBR	Kellerberrin	31.93	189	eP	P	23 44 18.9	-0.6
	comp=Z,55nm,0.4s,mb5.6						
KMI	Kunming	32.07	323	P	P	23 44 23.3	+2.5
KMI				AP	pP	23 44 56.7	+4.7
KMI				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
KMI	Kunming	32.07	323	P	P	23 44 23.3	+2.5
	comp=Z,15nm,1.0s,mb4.7						
KMI				pP	pP	23 44 56.7	+4.7
NJ2	Nanjing	32.16	352	eP	P	23 44 21.6	+0.1
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
MUN	Mundaring	32.59	192	eP	P	23 44 24.8	-0.4
	comp=Z,21nm,1.9s,mb4.5						
ENH	Enshi	32.93	337	eP	P	23 44 28.6	+0.5
	comp=Z,70nm,1.0s,mb5.3						
ENH				ePcP	PcP	23 47 08.6	-0.5
NWAO	Narrogin (SRO)	33.33	190	eP	P	23 44 30.9	-0.6
	comp=Z,16nm,1.0s,mb4.7						
CD2	Chengdu	36.02	330	P	P	23 44 55.5	+1.2
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.1						
STKA	Stephens Creek	36.02	153	eP	P	23 44 54.8	+0.4
	comp=Z,25nm,0.6s,mb5.0						
STKA				e	pP	23 45 28.3	+2.1
XAN	Xi’an	36.52	339	P	P	23 44 58.3	-0.2
XAN				AMB	AMB		
	comp=Z,26nm,0.8s,mb4.9						
KS15	Wonju Array Si	37.43	6	eP	P	23 45 06.0	-0.1
MAJO	Matsushiro	38.78	19	eP	P	23 45 16.0	-1.3
	comp=Z,63nm,0.8s,mb5.3						
MAT	Matsushiro	38.78	19	eP	P	23 45 16.0	-1.4
	comp=Z,44nm,0.8s,mb5.1						
MAT	Matsushiro	38.78	19	P	P	23 45 15.8	-1.6
LZH	Lanzhou	40.29	335	⇑P	P	23 45 31.8	+2.0
LZH				PP	PP	23 47 12.5	+4.7
LZH				AMB	AMB		
	comp=Z,63nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,213nm,5.2s						
LZH				LR	LR		
	comp=E,296nm,15.0s						
LZH				LR	LR		
	comp=Z,498nm,17.7s						
LZH	Lanzhou	40.29	335	⇑P	P	23 45 31.8	+2.0
	comp=Z,63nm,1.3s,mb5.1						
LZH				pP	pP	23 45 46.5	-16
LZH				sP	sP	23 45 52.1	-27
LZH				PP	PP	23 47 12.5	+4.7
LZH				LR	LR		
	comp=Z,500nm,17.7s						
BJT	Baijiatuau	40.37	351	eP	P	23 45 29.8	-0.6
	comp=Z,31nm,1.0s,mb4.9						
BJI	Beijing	40.39	351	P	P	23 45 29.9	-0.6
BJI				AMB	AMB		
	comp=Z,25nm,0.9s,mb4.8						
BJI	Beijing	40.39	351	P	P	23 45 29.9	-0.6
	comp=Z,25nm,0.9s,mb4.8						
SNY	Shenyang	41.60	360	⇑P	P	23 45 39.4	-1.2
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
SNY				LR	LR		
	comp=E,440nm,19.2s						
SNY				LR	LR		
	comp=Z,250nm,21.8s						
HHC	Hu-ho-hao-te	42.07	346	⇓P	P	23 45 45.5	+1.1
HHC				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,217nm,9.6s						
TOO	Toolangi	42.54	154	eP	P	23 45 49.7	+1.4
	comp=Z,1.1nm,0.9s						
TOO				e	pP	23 46 24.1	+3.4
CNB	Canberra Magne	42.60	148	eP	P	23 45 50.7	+1.9
	comp=Z,136nm,0.7s,mb5.7						
CNB				e	pP	23 46 25.2	+4.0
LSA	Lhasa	42.72	317	P	P	23 45 51.0	+1.1
LSA	Lhasa	42.72	317	eP	P	23 45 51.4	+1.6
	comp=Z,23nm,0.7s,mb4.9						
CN2	Changchun	43.61	2	eP	P	23 45 59.4	+2.6
CN2				eAP	pP	23 46 28.4	-0.9
CN2				eS	S	23 52 20.0	+5.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
MDJ	Mudanjiang	44.71	6	P	P	23 46 05.0	-0.6
MDJ				AMB	AMB		
	comp=Z,42nm,0.8s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,92nm,5.8s						
MDJ	Mudanjiang	44.71	6	eP	P	23 46 04.1	-1.5
	comp=Z,54nm,1.0s,mb5.1						
GTA	Gaotai	44.82	334	eP	P	23 46 07.7	+1.2
GTA				AP	pP	23 46 40.5	+1.4
GTA				XP	sP	23 46 55.7	-0.2
GTA				PCP	PcP	23 47 47.1	+0.7
GTA				PP	PP	23 47 55.7	+1.6
GTA				SCP		23 51 26.5	
GTA				S	S	23 52 35.5	+3.5
GTA				XS		23 53 29.9	
GTA				SCS	ScS	23 55 46.6	+0.6
GTA				SS	SS	23 55 51.7	+2.8
GTA				AMB	AMB		
	comp=Z,33nm,1.1s,mb4.9						
GTA				AMB	AMB		
	comp=Z,189nm,3.8s						
GTA				LR	LR		
	comp=N,279nm,17.1s						
GTA				LR	LR		
	comp=E,269nm,20.2s						
GTA				LR	LR		
	comp=Z,327nm,17.1s						
JIRN	Jiri	45.17	311	eP	P	23 46 10.5	+1.0
	comp=Z,43nm,0.4s,mb5.4						
PKI	Pulchoki	45.72	310	eP	P	23 46 14.2	+0.3
	comp=Z,34nm,0.6s,mb5.1						
KKN	Kakani	45.93	310	eP	P	23 46 15.3	-0.2
	comp=Z,93nm,1.1s,mb5.3						
DMN	Daman	45.97	310	eP	P	23 46 16.3	+0.5
	comp=Z,103nm,1.0s,mb5.4						
GKN	Gorkha	46.53	310	eP	P	23 46 20.1	-0.1
	comp=Z,122nm,1.1s,mb5.5						
KOLN	Koldanda	47.22	309	eP	P	23 46 25.9	+0.3
	comp=Z,172nm,1.1s,mb5.6						
HYB	Hyderabad	47.55	294	eP	P	23 46 28.0	-0.3
	comp=Z,80nm,1.0s,mb5.3						
HYB				e	pP	23 47 00.0	-1.3
HYB	Hyderabad	47.55	294	i P	P	23 46 28.0	-0.3
	comp=Z,80nm,1.0s,mb5.3						
HYB				e	pP	23 47 00.0	-1.3
HIA	Hailar	49.15	357	i P	P	23 46 39.3	-0.9
HIA	Hailar	49.15	357	eP	P	23 46 39.1	-1.1
	comp=Z,23nm,0.9s,mb4.8						
HIA				ePcP	PcP	23 47 59.7	-2.0
KLR	Kul’dur	49.51	7	eP	P	23 46 38.8	-4.1
YSS	Yuzh-Sakhalins	49.65	17	⇑iP	P	23 46 43.0	-1.0
YSS				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.0						
YSS	Yuzh-Sakhalins	49.65	17	eP	P	23 46 43.1	-1.0
	comp=Z,59nm,1.3s,mb5.1						
ULN	Ulaanbaatar	49.76	345	eP	P	23 46 44.1	-0.8
	comp=Z,17nm,0.8s,mb4.7						
ULN				epP	pP	23 47 15.1	-3.1
ULN				esP	sP	23 47 30.2	-3.9
ULN				ePcP	PcP	23 48 02.6	-1.3
NDI	New Delhi	52.66	307	eP	P	23 47 04.0	-3.0
DDI	Dehra Dun	52.69	309	eP	P	23 47 07.1	-0.1
ZAK	Zakamensk	53.07	344	⇑eP	P	23 47 08.6	-1.1
ZAK				e		23 48 15.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
SMLA	Simla	53.73	310	⇑iP	P	23 47 28.9	+14
	comp=Z,191nm,1.6s,mb5.6						
SMLA				i S	S	23 54 51.0	+15
SDNR	Sundarnagar	54.05	310	eP	P	23 47 17.4	+0.3
WMQ	Urumqi	54.07	328	P	P	23 47 17.0	-0.1
WMQ				AMB	AMB		
	comp=Z,29nm,0.8s,mb5.1						
TLY	Talaya	54.14	345	P	P	23 47 17.2	-0.3
	comp=Z,69nm,0.8s,mb5.4,SNR=7.6						
TLY	Talaya	54.14	345	⇓iP	P	23 47 17.3	-0.2
TLY				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.4						
TLY	Talaya	54.14	345	eP	P	23 47 16.6	-0.9
	comp=Z,8.9nm,0.7s,mb4.6						
MOY	Mondy	54.87	343	eP	P	23 47 22.3	-0.5
MOY				e		23 48 22.8	
MOY				pmax	pmax		
	comp=Z,25nm,3.2s						
THN	Thein Dam	55.41	310	eP	P	23 47 24.9	-2.2
BOD	Bodaibo	58.12	354	eP	P	23 47 44.3	-1.4
BOD				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.7						
KSH	Kashi	58.54	318	eP	P	23 47 49.6	+0.6
KSH				ePCP	PcP	23 48 39.1	+1.6
KSH				AMB	AMB		
	comp=Z,50nm,4.3s						
MKAR	Makanchi Array	58.89	328	eP	P	23 47 50.3	-1.0
MKAR				pmax	pmax		
	comp=Z,15nm,0.5s						
KZA	Kyzart	60.31	320	P	P	23 48 01.6	+0.6
	SNR=9.6						
PET	Petropavlovsk	60.34	24	i P	P	23 48 01.1	0.0
PET				pmax	pmax		
	comp=Z,116nm,1.6s,mb5.5						
TKM2	Tokmak 2	60.52	321	P	P	23 48 02.3	-0.2
	SNR=29						
KBK	Karagaybulak	60.80	321	P	P	23 48 04.4	0.0
	SNR=12						
UCH	Uchtor	60.86	320	P	P	23 48 05.2	+0.4
	SNR=17						
AAK	Ala-Archa	61.07	320	P	P	23 48 06.2	0.0
	SNR=10						
AAK	Ala-Archa	61.07	320	i P	P	23 48 05.5	-0.8
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
AAK				MLR	MLR		
	comp=Z,100nm,17.0s						
AAK	Ala-Archa	61.07	320	eP	P	23 48 04.7	-1.6
	comp=Z,11nm,0.8s,mb4.7						
AAK				e	pP	23 48 36.3	-4.5
AAK				e		23 48 46.1	
CHMS	Chumysh	61.09	321	P	P	23 48 05.5	-0.9
	SNR=6.3						
AML	Almayashu	61.34	320	P	P	23 48 08.2	+0.2
	SNR=18						
USP	Ospenovka	61.39	321	P	P	23 48 07.7	-0.7
	SNR=12						
EKS2	Erkin-Say	61.55	320	P	P	23 48 09.3	-0.1
	SNR=12						
YAK	Yakutsk	62.01	3	i P	P	23 48 11.0	-1.3
YAK				pmax	pmax		
	comp=Z,161nm,0.9s,mb5.8						
YAK	Yakutsk	62.01	3	eP	P	23 48 10.9	-1.3
	comp=Z,195nm,0.8s,mb6.0						
MA2	Magadan	63.05	15c	iP	P	23 48 19.2	+0.1
MA2				e*SP	pP	23 48 55.4	+1.5
MA2				eS	S	23 56 42.2	+6.0
MA2				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.4						
MA2	Magadan	63.05	15	eP	P	23 48 19.0	-0.2
	comp=Z,87nm,0.6s,mb5.8						
MA2				e	pP	23 48 55.5	+1.6
KURK	Kurchatov	63.24	330	i P	P	23 48 18.4	-2.1
KURK				pmax	pmax		
	comp=Z,43nm,0.6s,mb5.5						
KURK	Kurchatov	63.24	330	eP	P	23 48 18.6	-1.9
	comp=Z,152nm,0.8s,mb5.9						
NVS	Novosibirsk	63.81	335	eP	P	23 48 21.1	-3.1
NVS				e	pP	23 48 55.2	-3.8
NVS				pmax	pmax		
	comp=N,27nm,0.7s						
NVS				pmax	pmax		
	comp=E,27nm,0.7s						
NVS				pmax	pmax		
	comp=Z,48nm,0.7s,mb5.4						
SEY	Seymchan	66.33	14	eP	P	23 48 42.9	+2.6
SEY				pmax	pmax		
	comp=N,30nm,0.7s						
SEY				pmax	pmax		
	comp=E,20nm,0.7s						
SEY				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.4						
CASY	Casey	66.82	186	eP	P	23 48 43.2	-0.1
	comp=Z,22nm,0.7s,mb5.1						
JMDO	Jabal Madar	67.39	294	⇑P	P	23 48 46.7	-0.9
BSY	Bisya	68.28	294	⇑P	P	23 48 52.7	-0.4
	SNR=6.2						
BVA0	Borovoye Array	68.75	329	i P	P	23 48 54.0	-1.5
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CHKZ	Chkalovo	68.97	329	P	P	23 48 55.2	-1.6
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
CHKZ	Chkalovo	68.97	329	eP	P	23 48 54.9	-1.8
	comp=Z,20nm,0.9s,mb4.8						
ARQ	Araqi	68.99	295	⇑P	P	23 48 57.2	-0.2
	SNR=6.5						
ASHO	Ashiyiah	69.63	296	⇑P	P	23 49 03.1	+1.8
RBK	Rabkut	70.35	288	⇑P	P	23 49 05.8	+0.1
WHFO	Wadi Hawf	70.81	289	⇑P	P	23 49 07.4	-1.0
	SNR=6.1						
ABTO	Aybut	71.20	288	⇓P	P	23 49 08.8	-2.0
BILL	Bilibino	73.92	15	i P	P	23 49 25.4	-0.5
BILL				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
BILL				MLR	MLR		
	comp=Z,10μm,19.0s						
BILL	Bilibino	73.92	15	eP	P	23 49 25.2	-0.7
	comp=Z,15nm,0.5s,mb5.0						
SVE	Sverdlovsk	75.49	330	⇑eP	P	23 49 34.4	-0.6
SVE				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.2						
SVE				MLR	MLR		
	comp=N,100nm,20.0s						
SVE				MLR	MLR		
	comp=E,200nm,20.0s						
SVE				MLR	MLR		
	comp=Z,400nm,20.0s						
ARU	Arti	76.40	329	P	P	23 49 38.7	-1.5
	comp=Z,229nm,0.6s,mb6.0,SNR=21						
ARU	Arti	76.40	329	⇑iP	P	23 49 30.5	-10
ARU				e		23 49 41.4	
ARU				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.0						
VNDA	Vanda	80.20	172	eP	P	23 50 01.3	+0.7
	comp=Z,18nm,0.8s,mb4.8						
TNA	Tin City	81.19	23	eP	P	23 50 06.9	+0.9
	comp=Z,9.5nm,0.7s,mb4.5						
GNI	Garni	81.45	310	eP	P	23 50 09.8	+1.9
	comp=Z,16nm,1.0s,mb4.6						
KIV	Kislovodsk	83.42	314	i P	P	23 50 16.6	-1.2
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
KIV				MLR	MLR		
	comp=Z,100nm,23.0s						
KIV	Kislovodsk	83.42	314	eP	P	23 50 16.9	-0.9
	comp=Z,13nm,1.0s,mb4.6						
SVW2	Sparrevohn	85.53	29	eP	P	23 50 29.1	+1.2
MALT	Malatya	86.17	308	eP	P	23 50 32.0	+0.4
	comp=Z,13nm,0.9s,mb4.7						
KMBO	Kilima Mbogo	86.33	269	i P	P	23 50 28.3	-4.7
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KMBO	Kilima Mbogo	86.33	269	eP	P	23 50 33.5	+0.5
	comp=Z,5.5nm,0.8s,mb4.3						
RSO	Redoubt South	86.83	30	eP	P	23 50 33.8	-0.4
IMA	Indian Mountai	87.01	24	eP	P	23 50 36.8	+1.8
	comp=Z,22nm,0.8s,mb5.0						
ANN	Anapa	87.24	315	eP	P	23 50 31.1	-5.5
ANN				pmax	pmax		
	comp=Z,125nm,1.3s,mb5.6						
SPU	Mount Spurr	87.24	29	eP	P	23 50 36.6	+0.4
SYO	Syowa Base	87.87	201	⇑P	P	23 50 40.4	+1.3
SYO	Syowa Base	87.87	201	⇓PcP	PcP	23 50 42.4	+1.3
OBN	Obninsk	88.26	325	i P	P	23 50 39.7	-1.5
OBN				e		23 54 10.0	
OBN				ePS	PS	00 02 44.6	+7.2
OBN				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.9						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s						
OBN	Obninsk	88.26	325	eP	P	23 50 40.2	-1.0
	comp=Z,28nm,0.6s,mb5.3						
PWA	Palmer West	88.32	28	eP	P	23 50 41.2	-0.1
	comp=Z,10nm,0.8s,mb4.7						
MCK	McKinley	88.85	26	eP	P	23 50 43.7	-0.1
	comp=Z,14nm,0.9s,mb4.9						
SML	Sawmill	89.06	28	eP	P	23 50 45.0	+0.2
COLA	College	89.36	25	eP	P	23 50 45.4	-0.8
	comp=Z,4.4nm,0.7s,mb4.5						
QSPA	South Pole Qui	89.97	180	⇑iP	P	23 50 50.6	+1.9
	comp=Z,11nm,0.7s,mb4.9						

JOF	Joensuu	91.01	333	*e*p	P	23 50 51.4	-2.6
	comp=Z,34nm,0.6s,mb5.5						
MENT	Mentasta	91.20	27	*e*P	P	23 50 56.1	+1.2
KEV	Kevo	92.25	340	*e*p	P	23 50 56.6	-2.9
AKASG	Malin Array Be	92.74	321	*i* P	P	23 51 00.7	-1.5
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DAWY	Dawson	93.05	26	*e*P	P	23 51 04.0	+0.6
KAF	Kangasniemi	93.38	332	*e*p	P	23 51 01.7	-3.2
	comp=Z,4.3nm,0.5s,mb4.8						
FINES	FINESS Array B	93.57	331	*i* P	P	23 51 04.3	-1.4
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	Inuvik	94.73	21	*e*P	P	23 51 10.6	-0.2
	comp=Z,24nm,1.0s,mb5.4						
LSZ	Lusaka	95.22	255	*e*P	P	23 51 14.7	+0.4
	comp=Z,26nm,0.8s,mb5.5						
KWP	Kalwaria	97.02	320	*e*P	P	23 51 21.7	0.0
LBTB	Lobatse	97.26	245	*e*P	P	23 51 23.6	+0.2
	comp=Z,2.9nm,0.7s,mb4.7						
BOSA	Boshof	97.33	241	*e*P	P	23 51 24.3	+0.7
	comp=Z,4.9nm,0.9s,mb4.8						
NB2	NORSAR Subarra	100.64	333	P	P	23 51 35.6	-2.2
	comp=Z,3.4nm,0.8s,baz=72,slow=4.5						
NB2	NORSAR Subarra	100.64	333	P	P	23 51 35.6	-2.2
	baz=72,slow=4.4						
RES	Resolute Bay	101.97	10	*e*Pdif	P	23 51 43.5	0.0
	comp=Z,2.9nm,0.7s						
HINF	Hinteralfeld	107.62	321	*e*PKIKP		23 56 16.3	
	comp=Z,4.7nm,0.7s						
PGF	Pioggiola	107.88	315	*e*PKIKP		23 56 16.6	
	comp=Z,42nm,1.1s						
LPG	La Plagne	108.48	319	*e*PKIKP		23 56 18.9	
LPL	La Plagne	108.49	319	*e*PKIKP		23 56 18.9	
CABF	La Chapelle	108.53	320	*e*PKIKP		23 56 18.5	
	comp=Z,8.0nm,0.7s						
MBDF	Montbardon	108.73	318	*e*PKIKP		23 56 19.1	
	comp=Z,5.2nm,0.7s						
ORIF	Oris-en-Rattie	109.26	318	*e*PKIKP		23 56 19.7	
	comp=Z,5.6nm,0.8s						
SSF	Saint Saulge	110.01	321	*e*PKIKP		23 56 21.5	
	comp=Z,13nm,1.0s						
VIVF	Saint-Julien-l	110.09	318	*e*PKIKP	PKPdf	23 56 21.6	+2.1
AVF	Avril sur Loir	110.21	321	*e*PKIKP	PKPdf	23 56 21.3	+1.6
BGF	Bois d'Agland	110.62	321	*e*PKIKP	PKPdf	23 56 22.7	+2.1
	comp=Z,12nm,0.8s						
TCF	Toulx Ste Croi	111.14	321	*e*PKIKP	PKPdf	23 56 23.7	+2.1
	comp=Z,4.5nm,0.9s						
MTLF	Montolieu	112.29	318	*e*PKIKP	PKPdf	23 56 25.7	+1.8
	comp=Z,4.2nm,0.6s						
MFF	Saint Martin d	112.48	322	*e*PKIKP	PKPdf	23 56 25.2	+1.0
	comp=Z,7.9nm,0.7s						
LFF	La Frestale	112.63	320	*e*PKIKP	PKPdf	23 56 26.2	+1.7
HLID	Hailey	112.63	42	*e*PKPdf	PKPdf	23 56 27.8	+3.2
EPF	Esparros	113.68	318	*e*PKIKP	PKPdf	23 56 28.4	+1.8
ETSF	Etsaut	114.33	318	*e*PKIKP	PKPdf	23 56 30.4	+2.4
	comp=Z,10.0nm,0.9s						
SJPF	Ste Jean	114.68	319	*e*PKIKP	PKPdf	23 56 29.8	+1.1
	comp=Z,8.8nm,0.7s						
EMOS	Mosqueruela	115.31	316	PKP	PKPdf	23 56 32.4	+2.4
HWUT	Hardware Ranch	115.35	43	*e*PKPdf	PKPdf	23 56 32.3	+2.3
EBEN	Beniarda	115.78	314	PKP	PKPdf	23 56 33.0	+2.1
ELAN	Lanestosa	116.08	319	PKP	PKPdf	23 56 32.3	+1.0
MSU	Marysvale	116.17	46	*e*PKPdf	PKPdf	23 56 35.4	+3.8
MSU				*e*pPKPdf		23 57 11.4	
MSU				*e*sPKPdf		23 57 25.8	
TMUT	Trail Mountain	116.55	45	*e*PKPdf	PKPdf	23 56 35.1	+2.7
SRU	San Rafael	117.11	45	*e*PKPdf	PKPdf	23 56 35.5	+2.1
EVIA	Vianos	117.44	315	PKP	PKPdf	23 56 36.6	+2.6
GUD	Guadarrama	117.73	317	PKP	PKPdf	23 56 36.6	+2.1
ENIJ	Nijar	117.91	313	PKP	PKPdf	23 56 36.9	+2.0
ESDC	Sonseca Array	118.03	316	PKP	PKPdf	23 56 36.7	+1.6
EQES	Quesada	118.20	314	PKP	PKPdf	23 56 36.9	+1.3
EBER	Berja	118.44	313	PKP	PKPdf	23 56 36.9	+0.9
PV10	Paradox Valley	118.48	45	*e*PKPdf	PKPdf	23 56 38.9	+2.8
PV01	Paradox Valley	118.91	45	*e*PKPdf	PKPdf	23 56 40.0	+3.1
EADA	Adamuz	119.12	315	PKP	PKPdf	23 56 38.9	+1.6
ELUQ	Luque	119.16	314	PKP	PKPdf	23 56 39.6	+2.2
ELOJ	Sierra Loja	119.25	314	PKP	PKPdf	23 56 38.5	+0.9
EMIJ	Mijas	119.95	313	PKP	PKPdf	23 56 40.3	+1.3
EBAD	Badajoz	120.56	316	PKP	PKPdf	23 56 42.1	+2.0
ESPR	Espera	120.60	314	PKP	PKPdf	23 56 42.7	+2.4
EMIN	Mina Concepcio	120.78	315	PKP	PKPdf	23 56 42.8	+2.2
SDCO	Great Sand Dun	121.25	44	*e*PKPdf	PKPdf	23 56 44.5	+3.0
EVO	Evora	121.35	317	*e*PKIKP	PKPdf	23 56 43.5	+1.8
	comp=Z,18nm,0.8s						
ANMO	Albuquerque	121.82	48	*e*PKPdf	PKPdf	23 56 45.8	+3.1
LPM	Los Pinos Moun	121.96	49	*e*PKPdf	PKPdf	23 56 45.6	+2.7
MNTX	Cornudas Mount	124.01	51	*e*PKPdf	PKPdf	23 56 49.5	+2.5
GDL2	Guadalupe Moun	124.58	50	*e*PKPdf	PKPdf	23 56 49.6	+1.4
JCT	Junction City	128.84	50	*e*PKPdf	PKPdf	23 56 58.5	+2.1
CCM	Cathedral Cave	130.37	36	*e*PKPdf	PKPdf	23 56 59.6	+0.5
WVT	Waverly	133.68	36	*e*PKPdf	PKPdf	23 57 06.3	+1.0
BINY	Binghamton	134.41	20	*e*PKPdf	PKPdf	23 57 08.2	+1.6
LVC	Limon Verde	154.47	152	*e*PKPdf	PKPdf	23 57 43.8	+3.2
LPAZ	La Paz	160.14	145	*e*PKPdf	PKPdf	23 57 48.4	+0.5
LPAZ				*e*PKPab	PKPab	23 58 32.9	+1.8
SAML	Samuel	168.87	143	*e*PKPdf	PKPdf	23 57 57.8	+2.2
SAML				*e*PKPab	PKPab	23 59 10.0	+0.7

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*TAP **05** 23:39:01.0,24.54N×122.32E,h66^{km}±1^{km},ML2.9*

JMA 05 23:39:00.9±0.1**,24.78N**×**122.44E,h71**^{km}±2^{km}**,M2.0, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.61	121	P	P	23 39 15.0	-0.1
YOJ				*e*S	S	23 39 25.3	-0.2
IRIF	Iriomote-Funau	1.26	110	P	P	23 39 22.7	-0.4
IRIF				*e*S	S	23 39 39.4	-0.1
HATJ	Hateruma jima	1.44	120	P	P	23 39 25.5	-0.1
HATJ				*e*S	S	23 39 43.5	-0.3
JKRS	Kuro-shima	1.53	110	P	P	23 39 26.7	-0.1
JKRS				*e*S	S	23 39 46.1	+0.2
JIJ	Ishigaki jima	1.60	105	P	P	23 39 27.8	0.0
JIJ				*e*S	S	23 39 47.6	-0.1

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*PRU **05** 23:45:55.2,2.30N×92.03E,h30^{km}*

ISC 05 23:45:45.0±0.5**,4.2N**±0.2×**97.04E**±0.10**,h33**^{km}**,n29, σ1^{s}08**/30**,mb4.8**/2**,4C-6D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	3.99	85	P	P	23 46 46.3	+1.0
KGM	Kluang	6.64	109	P	P	23 47 28.0	+5.2
KKM	Kota Kinabalu	19.18	84	P	P	23 50 12.1	+3.3
HYB	Hyderabad	22.36	307	*e*P	P	23 50 42.0	+0.3
HYB				*e*S	S	23 54 46.0	+5.6
SMDO	Samad	42.05	300	⇑P	P	23 53 36.2	+0.6
BIDO	Bidbid	42.15	301	⇓P	P	23 53 37.0	+0.7
	SNR=7.5						
BSY	Bisya	42.68	299	⇑P	P	23 53 42.1	+1.4
	SNR=6.3						
HOQ	Hoqain	42.87	300	⇓P	P	23 53 43.2	+0.9
ARQ	Araqi	43.47	300	⇓P	P	23 53 48.1	+1.0
WB2	Warramunga Arr	43.83	125	*e*P	P	23 53 48.5	-1.6
RBK	Rabkut	43.96	291	⇑P	P	23 53 52.1	+1.0
WHFO	Wadi Hawf	44.45	291	⇑P	P	23 53 55.2	+0.1
	SNR=7.1						
BANOM	Banah	44.57	303	⇓P	P	23 54 01.5	+5.5
ABTO	Aybut	44.78	290	⇓P	P	23 53 58.2	+0.5
ASPA	Alice Springs	45.38	129	*e*P	P	23 54 01.8	-0.7
STKA	Stephens Creek	55.52	134	*e*P	P	23 55 21.0	+1.5
	3.0nm,0.6s,mb4.5						
KOLS	Kolonicke sedl	76.82	319	*e*P	P	23 57 35.5	+0.2
CRVS	Cervenica-Dubn	77.35	319	*e*P	P	23 57 38.6	+0.4
PSZ	Piszkesteto	78.26	318	⇓*e*P	P	23 57 42.1	-1.1
OJC	Ojcow	78.60	320	*e*PX	P	23 57 44.1	-0.9
OKC	Ostrava-Krasne	79.61	320	*e*P	P	23 57 49.2	-1.4
ZST	Bratislava	80.15	318	*e*P	P	23 57 52.9	-0.6
DPC	Dobruska-Polom	80.83	320	*e*P	P	23 57 56.3	-0.8
UPC	Upice	81.04	320	*e*P	P	23 57 57.7	-0.5
PRU	Pruhonice	81.95	320	*e*P	P	23 58 01.7	-1.2
KHC	Kasperske Hory	82.54	319	*e*P	P	23 58 03.6	-2.3
CLL	Collm	82.98	321	*e*PPP	P	23 58 07.0	-1.2
MOX	Moxa	83.84	320	*e*P	P	23 58 14.0	+1.4
LPG	La Plagne	87.21	315	*e*P	P	23 58 28.8	-0.5
	17nm,0.8s,mb5.0						

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*NEIC **06** 01:01:27.0±0.4,23.94S×177.96W,h400^{km},mb4.1/14, Error ellipse: s-maj=21.2km s-min=8.4km az=156.0*

ISC 06 01:01:07.3±2.0**,24.21S**±0.07×**177.7W**±0.1**,h219**^{km}±18^{km}**, n49,σ1^{s}11**/40**,mb4.3**/14**,4C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	14.67	195	*e*PN	P	01 04 26.6	+0.8
MWZ	Matawai	14.67	195	*e*PN	P	01 04 26.6	+0.8
URZ	Urewera	14.70	196	PN	P	01 04 25.3	-0.9
URZ	Urewera	14.70	196	PN	P	01 04 25.3	-0.9
KIW	Kapiti Island	17.74	199	SN	S	01 08 05.8	-3.5
KIW	Kapiti Island	17.74	199	SN	S	01 08 05.8	-3.5
MTW	Mount Morrison	17.85	197	*e*SN	S	01 08 07.6	-3.9
MTW	Mount Morrison	17.85	197	*e*SN	S	01 08 07.6	-3.9
QRZ	Quartz Range	18.50	204	*e*PN	P	01 05 09.9	+0.6
QRZ	Quartz Range	18.50	204	*e*PN	P	01 05 09.9	+0.6
NNZ	Nelson	18.54	202	SN	S	01 08 23.8	-1.2
NNZ	Nelson	18.54	202	SN	S	01 08 23.8	-1.2
THZ	Tophouse	19.19	202	*e*PN	P	01 05 14.7	-1.6
THZ				*e*SN	S	01 08 37.9	+0.7
THZ	Tophouse	19.19	202	*e*PN	P	01 05 14.7	-1.6
THZ				*e*SN	S	01 08 37.9	+0.7
MQZ	McQueen's Vall	21.02	200	*e*SN	S	01 09 14.6	+4.1
MQZ	McQueen's Vall	21.02	200	*e*SN	S	01 09 14.6	+4.1
CTA	Charters Tower	33.61	270	*e*P	P	01 07 30.4	+1.3
	17nm,0.4s,mb4.9						
CTAO	Charters Tower	33.61	270	*e*P	P	01 07 30.2	+1.1
	20nm,0.5s,mb4.9						
STKA	Stephens Creek	36.60	249	*e*P	P	01 07 55.6	+1.4
	3.7nm,1.5s,mb3.7						
ASPA	Alice Springs	44.09	260	*e*P	P	01 08 56.3	+0.6
WB2	Warramunga Arr	44.51	266	*e*P	P	01 08 58.8	-0.2
WRAB	Tennant Creek	44.51	266	*e*P	P	01 08 59.1	+0.1
	5.5nm,0.4s,mb4.2						
FORT	Forrest	48.21	250	*e*P	P	01 09 27.4	-0.3
	62nm,0.7s,mb5.0						
KAKA	Kakadu	48.47	274	*e*P	P	01 09 29.3	-0.6
	6.8nm,0.3s,mb4.5						
FITZ	Fitzroy Crossi	52.93	265	*e*P	P	01 10 03.8	+0.5
	7.2nm,0.6s,mb4.3						
KLBR	Kellerberrin	56.84	247	*e*P	P	01 10 30.7	-0.5
	60nm,0.5s,mb5.5						
NWAO	Narrogin (SRO)	57.05	245	*e*P	P	01 10 31.8	-0.9
	1.3nm,0.5s,mb3.8						
MBWA	Marble Bar	57.42	260	*e*P	P	01 10 34.3	-1.1
	1.0nm,0.3s,mb3.9						
MUN	Mundaring	58.07	246	*e*P	P	01 10 39.9	+0.1
	11nm,1.1s,mb4.4						
QSPA	South Pole Qui	65.88	180	⇑*i*P	P	01 11 33.2	+2.3
	2.2nm,0.6s,mb4.0						
VNA3	Neumayer Olymp	84.44	176	⇑*i*	P	01 13 17.6	+1.8
MOD	Modoc	84.47	39	*e*P	P	01 13 15.5	-1.2
	3.4nm,0.9s,mb4.1						
VNA2	Neumayer--Watz	84.88	177	⇑*i*	P	01 13 20.2	+2.2
VNA1	Neumayer--Stat	85.11	176	⇑*i*	P	01 13 25.8	+6.6
TMUT	Trail Mountain	88.52	45	*e*P	P	01 13 36.6	+0.4
HLID	Hailey	88.92	40	*e*P	P	01 13 37.6	-0.4
	1.9nm,1.0s,mb3.9						
MCMT	McKenzie Canyo	90.57	40	*e*P	P	01 13 45.2	-0.4
BW06	Boulder Array	91.44	43	*e*P	P	01 13 48.3	-1.4
	1.6nm,0.8s,mb4.0						
NB2	NORSAR Subarra	142.68	353	PKP	PKPdf	01 20 10.3	-3.3
	0.6nm,0.5s,baz=9.0,slow=3.1						
KSP	Ksiaz	151.30	341	*e*P	PKPdf	01 20 35.8	+7.7
KSP				*e*		01 20 44.6	
OKC	Ostrava-Krasne	151.59	338	*e*P	PKPab	01 20 46.0	-0.8
UPC	Upice	151.68	341	*e*P	PKPab	01 20 46.3	-0.9
CLL	Collm	151.72	346	*i* PKP1	PKPdf	01 20 36.4	+7.7
DPC	Dobruska-Polom	151.73	341	*e*P	PKPdf	01 20 37.0	+8.2
DPC				*e*pP		01 20 46.6	
KECS	Kecovo	151.85	334	*e*	PKPab	01 20 52.4	+4.4
BRG	Berggiesshubel	151.90	344	*i* P	PKPdf	01 20 37.1	+8.1
PRU	Pruhonice	152.56	343	*e*P	PKPab	01 20 49.8	-1.1
SMOL	Smolenice	152.97	338	*e*	PKPab	01 20 52.6	-0.1
KHC	Kasperske Hory	153.60	343	*e*P	PKPab	01 20 54.3	-1.0

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*JMA **06** 01:05:34.6±0.3,24.85N×122.60E,h96^{km},M2.0*

TAP 06 01:05:35.4,24.73N×122.62E,h86^{km}±1^{km}**,ML3.3, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.45	127	P	P	01 05 50.4	+1.0
IRIF	Iriomote-Funau	1.08	111	P	P	01 05 56.3	+0.2
IRIF				*e*S	S	01 06 13.0	+1.3
HATJ	Hateruma jima	1.27	122	*e*S	S	01 06 18.2	+2.4
JKRS	Kuro-shima	1.36	111	P	P	01 06 00.2	+0.6
JKRS				*e*S	S	01 06 19.2	+1.6
JIJ	Ishigaki jima	1.43	104	P	P	01 06 00.6	0.0
JIJ				*e*S	S	01 06 19.9	+0.7
JTJ	Tarama	1.90	92	P	P	01 06 07.1	+0.5
JTJ				*e*S	S	01 06 30.6	+1.0

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*NEIC **06** 01:10:17.7±0.9,41.44N×20.16E,h5^{km},MD2.5(PDG), Error ellipse: s-maj=12.4km s-min=5.7km az=211.0*

*CSEM **06** 01:10:18.3±0.5,41.48N×20.28E,h0^{km}±2^{km},MD2.5,Error ellipse: s-maj=7.8km s-min=5.6km az=9.0*

*PDG **06** 01:10:19.7±0.3,41.46N×20.08E,h1^{km}±1^{km}*

*TIR **06** 01:10:20.3,41.60N×20.07E,h18^{km}*

ISC 06 01:10:19.0±0.5**,41.52N**±0.03×**20.30E**±0.03**,h10**^{km}**,n18, σ1^{s}49**/36**,6C-4D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSH	Qafa e Shtames	0.30	271	*e*Pg	Pg	01 10 25.3	+0.1
QSH				*i* Sg	Sg	01 10 33.3	+4.0
TIR	Tirane	0.37	243	*e*Pg	Pg	01 10 25.7	-0.8
TIR				*i* Sg	Sg	01 10 33.5	+1.9
LACI	Lac	0.46	285	*i* Pg	Pg	01 10 27.2	-1.1
LACI				*i* Sg	Sg	01 10 34.8	+0.3
LACI	Lac	0.46	285	*e*Pg	Pg	01 10 27.2	-1.1
LACI				*i* Sg	Sg	01 10 34.8	+0.3
OHR	Ohrid	0.55	137	*i* Pg	Pg	01 10 29.2	-1.0
OHR				*i* Sg	Sg	01 10 37.9	+0.2
ULC	Ulcinj	0.90	300	⇑*i*Pg	Pg	01 10 34.7	-2.4
ULC				*e*Sg	Sg	01 10 47.3	-1.9
SKO	Skopje	0.97	62	*e*Pg	Pg	01 10 38.0	-0.4
SKO				⇑*i*Sg	Sg	01 10 50.6	-0.7
SKO				Lg		01 10 52.0	
	comp=Z,0.1nm,0.4s						
PVY	Plav	1.10	347	⇓*i*Pg	Pg	01 10 40.6	-0.5
PVY				*e*Sg	Sg	01 10 58.9	+3.0
TTG	Podgorica	1.20	320	⇑*i*Pg	Pg	01 10 40.6	-2.3
TTG				*e*Sg	Sg	01 10 59.2	+0.3
BUM	Brajici-Budva	1.31	307	⇓*i*Pg	Pg	01 10 41.9	-3.2
BUM				*e*Sg	Sg	01 11 02.0	-0.6
IVA	Berane	1.39	348	⇓*i*Pg	Pg	01 10 46.1	-0.6
IVA				*e*Sg	Sg	01 11 07.7	+2.5
NKY	Niksic	1.61	324	⇑*i*Pg	Pg	01 10 48.0	-3.3
NKY				*e*Sg	Sg	01 11 13.6	+0.7
HCY	Herceg Novi	1.63	305	⇓*i*Pg	Pg	01 10 47.9	-3.8
HCY				*e*Sg	Sg	01 11 12.4	-1.0
SRN	Sarande	1.65	188	*i* Pn	Pn	01 10 51.5	+3.2
SRN				*i* Sn	Sn	01 11 14.4	+4.7
SRN	Sarande	1.65	188	*e*Pn	Pn	01 10 51.5	+3.2
SRN				*i* Sn	Sn	01 11 14.4	+4.7
BRY	Bratogost	1.90	317	*e*Pn	Pn	01 10 53.6	+1.8
BRY				*e*Sn	Sn	01 11 20.8	+4.8
PLE	Pljevlja	1.93	340	⇑*i*Pn	Pn	01 10 53.8	+1.5
PLE				*e*Sn	Sn	01 11 22.4	+5.6
UPM	Unac-Piva	1.97	329	⇑*i*Pn	Pn	01 10 54.7	+1.8
UPM				*e*Sn	Sn	01 11 23.3	+5.4

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*BJI **06** 01:23:16.9,22.82N×144.01E,h17^{km},mB5.0,mb4.6, Ms4.2,Msz4.0*

*NEIC **06** 01:23:17.2±0.6,23.02N×144.02E,h10^{km},mb4.6/9,Error ellipse: s-maj=23.6km s-min=9.8km az=76.0*

ISC 06 01:23:15.9±0.8**,23.11N**±0.08×**144.5E**±0.2**,h20**^{km}**, h20**^{km}±1.1^{km}**:pP-P,n33,σ1^{s}18**/30**,mb4.5**/17**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAJO	Matsushiro	14.45	339	*e*P	P	01 26 40.9	-0.4
MAT	Matsushiro	14.45	339	P	P	01 26 39.0	-2.4
MAT	Matsushiro	14.45	339	P	P	01 26 39.2	-2.2
KS15	Wonju Array Si	20.19	319	P	P	01 27 50.7	-1.5
NJ2	Nanjing	24.35	297	*e*P	P	01 28 33.6	-0.1
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.9						
CN2	Changchun	25.93	327	*e*P	P	01 28 51.5	+3.0
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
TIA	Tai'an	27.02	305	*e*P	P	01 29 00.2	+1.6
HHC	Hu-ho-hao-te	32.80	310	*e*P	P	01 29 49.3	-0.7
HHC				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
XAN	Xi'an	32.92	297	P	P	01 29 50.0	-1.2
XAN				AP	pP	01 29 55.3	-1.8
XAN				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.6						
LZH	Lanzhou	37.36	300	*e*P	P	01 30 28.5	-0.5
LZH				AP	pP	01 30 35.0	-0.1
LZH				XP	sP	01 30 39.5	+1.9
LZH				AMB	AMB		
	comp=Z,26nm,1.5s,mb4.8						
LZH	Lanzhou	37.36	300	*e*P	P	01 30 28.5	-0.5
	comp=Z,26nm,1.5s,mb4.8						
LZH				pP	pP	01 30 35.0	-0.1
LZH				sP	sP	01 30 39.5	+1.9
GTA	Gaotai	41.06	304	*e*P	P	01 31 00.1	+0.4
GTA				AP	pP	01 31 06.3	+0.6
GTA				XP	sP	01 31 09.2	+1.0
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CTA	Charters Tower	42.97	178	*e*P	P	01 31 15.8	+0.2
	comp=Z,12nm,0.8s,mb4.7						
CTAO	Charters Tower	42.97	178	*e*P	P	01 31 15.8	+0.2
	comp=Z,14nm,0.7s,mb4.8						
WRAB	Tennant Creek	43.90	194	*e*P	P	01 31 22.2	-1.1
	comp=Z,4.5nm,0.5s,mb4.5						
WB2	Warramunga Arr	43.91	194	*e*P	P	01 31 22.5	-0.8
LSA	Lhasa	47.87	290	P	P	01 31 55.0	+0.3
WMQ	Urumqi	50.63	308	*e*P	P	01 32 16.9	+1.3
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.8						
JIRN	Jiri	52.45	288	*e*P	P	01 32 31.7	+2.1
PKI	Pulchoki	53.15	288	*e*P	P	01 32 34.2	-0.6
KKN	Kakani	53.23	288	*e*P	P	01 32 37.3	+1.9
GKN	Gorkha	53.75	289	*e*P	P	01 32 42.7	+3.4
KOLN	Koldanda	54.70	288	*e*P	P	01 32 45.1	-1.1
	comp=Z,16nm,0.8s,mb5.1						
KURK	Kurchatov	57.27	316	*e*P	P	01 33 03.9	-0.6
	comp=Z,5.2nm,1.0s,mb4.5						
CHKZ	Chkalovo	62.23	320	*e*P	P	01 33 38.0	-0.5
	comp=Z,2.6nm,0.8s,mb4.4						
INK	Inuvik	65.80	24	*e*P	P	01 34 02.3	+0.8
	comp=Z,7.4nm,0.9s,mb4.7						
KEV	Kevo	77.41	342	*e*p	P	01 35 01.9	-8.9
	comp=Z,0.3nm,0.3s,mb3.7						
JOF	Joensuu	79.56	335	*e*p	P	01 35 23.4	+0.7
	comp=Z,1.0nm,0.4s,mb4.1						
BMO	Blue Mountains	79.59	46	*e*P	P	01 35 28.8	+5.6
	comp=Z,2.6nm,1.0s,mb4.1						
KAF	Kangasniemi	81.95	335	*e*p	P	01 35 47.7	+12
	comp=Z,0.3nm,0.4s,mb3.6						
SNAA	Sanae	127.98	193	*e*	Pdif	01 39 12.4	+8.7
VNA2	Neumayer--Watz	129.46	192	*e*	Pdif	01 39 16.7	+6.5
SAML	Samuel	150.00	67	*e*PKPbc	PKPdf	01 43 10.8	+5.8

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*BJI **06** 01:25:42.7,53.00S×140.40E,h10^{km},mB5.4,mb5.3, Ms5.3,Msz4.9*

*NEIC **06** 01:25:43.2±0.3,52.98S×140.39E,h10^{km},mb5.0/21,Error ellipse: s-maj=14.1km s-min=7.7km az=91.0*

*HRVD **06** 01:25:43.2±0.6,52.87S×140.17E,h12^{km},MW5.3/51, Centroid moment Tensor Solution. LP body waves: s20,c24;Mantle waves: s51,c68; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.73±.55; $M_{\theta\theta}$1.79±.58; $M_{\phi\phi}$-0.05±.59; $M_{r\theta}$-4.62±1.46; $M_{\theta\phi}$-8.18±.45; $M_{\phi r}$0.50±1.31; Best double couple: $M_0$9.451×10^{16} NP1: ϕ_s357°,δ60°,λ-5°. NP2:ϕ_s89°,δ86°,λ-150°. Principal axes: T 10.326, Plg18°, Azm219°; N -1.748, Plg59°, Azm96°; P -8.576, Plg24°, Azm317°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 06 01:25:41.1±2.6**,52.96S**±0.05×**140.3E**±0.2**,h5**^{km}±15^{km}**, h11**^{km}±3.1^{km}**:pP-P,n108,σ1^{s}21**/48**,mb5.0**/22**,MS5.0**/7**, 9C-3D,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAU	Tasmania Unive	11.09	28	P	P	01 28 23.3	0.0
TOO	Toolangi	15.81	15	*e*P	P	01 29 25.7	-0.1
	1.5nm,0.9s						
CNB	Canberra Magne	18.77	24	*e*P	P	01 30 03.9	+0.9
	427nm,1.2s						
CASY	Casey	19.85	216	*e*P	P	01 30 15.3	-0.1
	91nm,1.0s						
STKA	Stephens Creek	21.09	3	⇑*i*P	P	01 30 28.4	-0.2
	21nm,1.0s,mb4.4						
FORT	Forrest	23.91	333	*e*P	P	01 30 57.5	+1.1
	215nm,0.7s,mb5.7						
VNDA	Vanda	25.89	169	*e*P	P	01 31 15.7	+0.7
	31nm,1.0s,mb4.8						
KLBR	Kellerberrin	26.90	314	*e*P	P	01 31 23.3	-1.4
	163nm,0.8s,mb5.6						
MUN	Mundaring	27.27	311	*e*P	P	01 31 27.9	-0.1
	16nm,0.9s,mb4.5						
ASPA	Alice Springs	29.66	348	*e*P	P	01 31 48.7	-1.0
CTAO	Charters Tower	33.13	10	P	P	01 32 19.3	-0.9
	8.5nm,0.9s,mb4.7						
WB2	Warramunga Arr	33.28	350	*e*P	P	01 32 20.2	-1.3
WRAB	Tennant Creek	33.29	350	*e*P	P	01 32 20.1	-1.5
	51nm,1.1s,mb5.4						
MBWA	Marble Bar	35.48	326	*e*P	P	01 32 40.2	-0.2
	24nm,1.0s,mb5.1						
FITZ	Fitzroy Crossi	36.63	336	*e*P	P	01 32 49.6	-0.6
	23nm,0.8s,mb5.1						
QSPA	South Pole Qui	37.15	180	⇓*i*P	P	01 32 55.1	+1.1
	45nm,1.0s,mb5.2						
KAKA	Kakadu	40.64	348	*e*P	P	01 33 23.2	-0.5
	35nm,0.7s,mb5.1						
SYO	Syowa Base	45.40	210	⇓P	P	01 34 00.0	-1.6
SNAA	Sanae	52.97	194	⇑*i*P	P	01 34 57.1	-3.0
SNAA	Sanae	52.97	194	*e*	P	01 34 59.9	-0.2
SNAA	Sanae	52.97	194	*e*	P	01 35 01.2	+1.1
SNAA	Sanae	52.97	194	P	P	01 35 00.0	0.0
	136nm,1.0s,mb5.8						
VNA3	Neumayer Olymp	54.27	191	⇑*i*P	P	01 35 09.4	-0.1
VNA3	Neumayer Olymp	54.27	191	*e*	P	01 35 12.6	+3.1
VNA3	Neumayer Olymp	54.27	191	*e*	P	01 35 13.7	+4.2
VNA2	Neumayer--Watz	54.28	192	⇑*i*P	P	01 35 06.7	-2.9
VNA2	Neumayer--Watz	54.28	192	*e*	P	01 35 09.6	0.0
VNA1	Neumayer--Stat	54.65	192	⇑*i*P	P	01 35 04.0	-8.3
VNA1	Neumayer--Stat	54.65	192	*e*	P	01 35 06.8	-5.5
VNA1	Neumayer--Stat	54.65	192	*e*	P	01 35 07.9	-4.4
TBI	Tubuai	59.87	89	*e*S	S	01 44 00.0	-0.5
TBI				*e*LQ		01 51 01.4	
TBI				*e*LR	LR	01 53 20.8	
	580nm,31.8s,baz=221						
PPT	Papeete	64.19	85	*e*S	S	01 44 54.8	-0.5
PPT				*e*LQ		01 52 33.3	
PPT				*e*LR	LR	01 55 27.9	
	1μm,30.5s						
QIZ	Qiongzhong	76.40	330	*e*P	P	01 37 33.4	+0.3
QIZ				LR	LR		
	comp=N,277nm,16.7s						
CM31	Chiang Mai Arr	79.61	320	*e*P	P	01 37 51.3	+0.5
	comp=N,18nm,1.4s,mb4.8						
SUR	Sutherland	80.08	228	P	P	01 37 52.8	-0.3
	comp=N,17nm,1.0s,mb4.9						
GYA	Guiyang	84.35	330	⇑*i*P	P	01 38 17.7	+2.4
GYA				XP	sP	01 38 29.8	+13
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,150nm,3.9s						
GYA				LR	LR		
	comp=N,880nm,20.1s,MS5.2						
GYA				LR	LR		
	comp=E,500nm,17.1s,MS5.2						
GYA				LR	LR		
	comp=Z,480nm,18.0s,MS4.9						
KMI	Kunming	84.36	326	P	P	01 38 19.0	+3.7
KMI				AP	pP	01 38 21.2	+4.3
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,51nm,6.4s						
KMI				LR	LR		
	comp=N,639nm,22.3s,MS5.0						

KMI				LR	LR		
	comp=E,487nm,22.3s,MS5.0						
KMI				LR	LR		
	comp=Z,832nm,36.2s						
KMI	**Kunming**	**84.36**	**326**	P	**P**	**01 38 19.0**	**+3.7**
	comp=Z,9.0nm,1.0s,mb4.8						
KMI				pP	pP	01 38 21.2	+4.3
KMI				sP	sP	01 38 22.1	+4.7
KMI				PP	PP	01 41 39.2	+7.2
KMI				SKS	SKS	01 48 38.6	-1.1
KMI				S	S	01 48 47.0	+6.6
KMI				SS	SS	01 54 17.2	+4.2
KMI				LR	LR		
	comp=Z,830nm,36.2s,MS4.9						
SSE	**Sheshan**	**85.35**	**344**	P	**P**	**01 38 21.8**	**+1.6**
SSE				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.9						
SSE				AMB	AMB		
	comp=Z,103nm,4.4s						
SSE				LR	LR		
	comp=N,164nm,24.2s,MS4.5						
SSE				LR	LR		
	comp=E,179nm,24.1s,MS4.5						
SSE				LR	LR		
	comp=Z,275nm,22.6s,MS4.6						
SSE	**Sheshan**	**85.35**	**344**	P	**P**	**01 38 21.8**	**+1.6**
	comp=Z,11nm,1.2s,mb4.9						
SSE				sP	sP	01 38 26.4	+4.2
SSE				S	S	01 48 53.0	+2.9
SSE				sS		01 48 59.0	
SSE				SS	SS	01 54 28.7	+0.9
SSE				LR	LR		
	comp=Z,280nm,22.6s,MS4.6						
NJ2	**Nanjing**	**86.70**	**342**	*e*P	**P**	**01 38 30.8**	**+4.0**
NJ2				AP	pP	01 38 34.1	+5.7
NJ2				XP	sP	01 38 37.5	+8.6
NJ2				AMB	AMB		
	comp=Z,1µm,4.8s						
NJ2				LR	LR		
	comp=N,690nm,15.1s,MS5.3						
NJ2				LR	LR		
	comp=E,480nm,14.7s,MS5.3						
NJ2				LR	LR		
	comp=Z,390nm,23.5s						
TRQA	**Tornquist**	**87.31**	**163**	P	**P**	**01 38 27.5**	**-2.1**
	comp=Z,2.5nm,0.9s,mb4.4						
XAN	**Xi’an**	**90.85**	**334**	P	**P**	**01 38 48.4**	**+1.9**
XAN				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.8						
LSA	**Lhasa**	**92.78**	**319**	P	**P**	**01 38 54.4**	**-1.0**
LSA	**Lhasa**	**92.78**	**319**	*e*P	**P**	**01 38 56.3**	**+0.9**
	comp=Z,4.4nm,0.8s,mb4.9						
LZH	**Lanzhou**	**94.18**	**331**	*e*P	**P**	**01 39 04.5**	**+2.8**
LZH				AP	pP	01 39 09.5	+6.2
LZH				XP	sP	01 39 11.5	+7.7
LZH				AMB	AMB		
	comp=Z,26nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,125nm,4.5s						
LZH				LR	LR		
	comp=N,910nm,16.8s						
LZH				LR	LR		
	comp=Z,1µm,17.5s,MS5.4						
LZH	**Lanzhou**	**94.18**	**331**	*e*P	**P**	**01 39 04.5**	**+2.8**
	comp=Z,26nm,1.5s,mb5.4						
LZH				pP	pP	01 39 09.5	+6.2
LZH				sP	sP	01 39 11.5	+7.7
LZH				PP	PP	01 42 54.5	+3.4
LZH				*e*S	S	01 50 13.5	+3.0
LZH				sS		01 50 21.5	
LZH				*e*SS	SS	01 56 39.5	+4.5
LZH				LR	LR		
	comp=Z,1µm,17.5s,MS5.4						
CN2	**Changchun**	**97.23**	**349**	*e*P	**P**	**01 39 19.0**	**+3.6**
CN2				XP	sP	01 39 26.0	+8.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.3						
CN2				AMB	AMB		
	comp=Z,320nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,18.0s,MS5.1						
CN2				LR	LR		
	comp=E,400nm,18.0s,MS5.1						
CN2				LR	LR		
	comp=Z,500nm,19.0s,MS5.0						
WMQ	**Urumqi**	**106.48**	**323**	*e*PDIF	Pdif	01 40 00.0	+3.3
WMQ				PP	PP		
	comp=Z,27nm,10.0s						
WMQ				LR	LR		
	comp=N,478nm,25.0s,MS5.0						
WMQ				LR	LR		
	comp=E,354nm,25.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,361nm,26.0s,MS4.8						
TNA	**Tin City**	**124.63**	**23**	*e*PKPdf	PKPdf	01 44 40.6	-2.3
MNTX	**Cornudas Mount**	**128.94**	**87**	*e*PKPdf	PKPdf	01 44 50.8	-1.4
MVU	**Marysvale**	**129.50**	**76**	*e*PKPdf	PKPdf	01 44 53.6	+0.5
MSU	**Marysvale**	**129.53**	**76**	*e*PKPdf	PKPdf	01 44 53.4	+0.3
CPRX	**Cap Rock**	**130.78**	**87**	PKPdf	PKPdf	01 44 51.8	-3.9
PV10	**Paradox Valley**	**131.29**	**78**	*e*PKPdf	PKPdf	01 44 55.0	-1.4
WMOK	**Wichita Mounta**	**135.03**	**89**	*e*PKPdf	PKPdf	01 45 01.9	-1.7
JOF	**Joensuu**	**142.96**	**314**	*e*p	PKPdf	01 45 10.4	-6.4
	comp=Z,1.9nm,0.9s						
OJC	**Ojcow**	**143.87**	**290**	*e*PKP	PKPdf	01 45 16.3	-2.4
FFC	**Flin Flon**	**144.26**	**62**	*e*PKPdf	PKPdf	01 45 16.0	-3.3
OKC	**Ostrava-Krasne**	**144.63**	**289**	*e*PKP	PKPdf	01 45 22.9	+2.8
WCI	**Wyandotte Cave**	**144.88**	**96**	*e*PKPdf	PKPdf	01 45 18.2	-2.7
ARSA	**Arzberg**	**144.90**	**283**	⇑*i*P	PKPbc	01 45 19.3	+1.0
KAF	**Kangasniemi**	**144.94**	**312**	*e*p	PKPbc	01 45 18.0	0.0
	comp=Z,1.1nm,0.5s						
MORC	**Moravsky Berou**	**144.95**	**288**	*e*PKPdf	PKPdf	01 45 18.6	-2.0
JSC	**Jenkinsville**	**145.20**	**106**	*e*PKPdf	PKPdf	01 45 20.2	-1.4
ULM	**Lac du Bonnet**	**145.75**	**71**	*e*PKPdf	PKPdf	01 45 20.4	-1.6
DPC	**Dobruska-Polom**	**145.91**	**289**	*e*PKP	PKPdf	01 45 22.6	+0.3
DPC				*e*x	x	01 45 36.6	
KEV	**Kevo**	**146.08**	**325**	*e*p	PKPbc	01 45 23.1	+2.5
	comp=Z,0.9nm,0.4s						
KSP	**Ksiaz**	**146.14**	**289**	*e*PKP	PKPdf	01 45 23.1	+0.4
KSP				*e*		01 45 27.7	
UPC	**Upice**	**146.16**	**289**	*e*PKP	PKPdf	01 45 23.1	+0.4
UPC				*e*x	x	01 45 37.3	
PGF	**Pioggiola**	**146.27**	**272**	*e*PKP1	PKPbc	01 45 22.9	+1.0
ARE0	**ARCESS Array S**	**146.59**	**325**	*e*PKPbc	PKPbc	01 45 24.4	+2.6
PRU	**Pruhonice**	**146.77**	**287**	*e*PKP	PKPdf	01 45 24.2	+0.4
KHC	**Kasperske Hory**	**146.94**	**285**	*e*PKP	PKPdf	01 45 24.8	+0.7
KHC				*e*x	x	01 45 39.4	
PVCC	**Panska Ves**	**146.99**	**288**	*e*PKP	PKPdf	01 45 25.4	+1.3
WTTA	**Wattenberg**	**147.20**	**281**	⇑*i*P	PKPdf	01 45 25.9	+1.3
SQTA	**Sankt Quirin**	**147.43**	**281**	⇑*i*P	PKPdf	01 45 26.5	+1.6
BRG	**Berggiesshubel**	**147.50**	**288**	*e*P	PKPdf	01 45 27.5	+2.6
ELN	**Prospectdale**	**147.53**	**102**	PKPbc	PKPdf	01 45 26.9	+1.5
MOTA	**Moosalm**	**147.56**	**281**	⇓*i*P	PKPdf	01 45 26.7	+1.6
SBF	**Sospel**	**147.96**	**273**	*e*PKP1	PKPdf	01 45 25.6	-0.3
NKC	**Novy Kostel**	**148.09**	**286**	*e*PKP	PKPdf	01 45 27.1	+1.2
ACSO	**Alum Creek Sta**	**148.13**	**96**	*e*PKPbc	PKPdf	01 45 27.8	+1.5
CLL	**Collm**	**148.22**	**289**	*e*PKP1	PKPdf	01 45 28.0	+1.9
CLL				*e*		01 45 39.0	
LMR	**La Mourre**	**148.22**	**271**	*e*PKP1	PKPdf	01 45 28.5	+2.2
	comp=Z,75nm,1.2s						
FRF	**La Foret Royal**	**148.26**	**272**	*e*PKP1	PKPdf	01 45 27.9	+1.5
GRA1	**Grafenberg Arr**	**148.57**	**285**	*e*PKP	PKPdf	01 45 29.5	+2.8
GRF	**Grafenberg Arr**	**148.57**	**285**	*e*PKP	PKPdf	01 45 29.5	+2.8
MBDF	**Montbardon**	**148.82**	**274**	*e*PKP1	PKPdf	01 45 30.4	+3.1
	comp=Z,18nm,0.7s						
LPG	**La Plagne**	**149.24**	**275**	*e*PKP1	PKPdf	01 45 30.3	+2.4
	comp=Z,17nm,0.9s						
RES	**Resolute Bay**	**149.24**	**25**	PKPdf	PKPdf	01 45 25.9	-1.2
RES				*e*PKPbc	PKPdf	01 45 30.1	+3.0
LPL	**La Plagne**	**149.26**	**275**	*e*PKP1	PKPdf	01 45 30.3	+2.4
	comp=Z,31nm,1.2s						
ORIF	**Oris-en-Rattie**	**149.46**	**273**	*e*PKP1	PKPdf	01 45 32.3	+4.0
FCC	**Fort Churchill**	**149.66**	**57**	*e*PKPdf	PKPdf	01 45 25.8	-2.4
FCC				*e*PKPbc	PKPdf	01 45 31.3	+3.1
VIVF	**Saint-Julien-l**	**150.16**	**272**	*e*PKP1	PKPdf	01 45 33.1	+3.7
	comp=Z,7.8nm,0.9s						
CABF	**La Chapelle**	**150.20**	**276**	*e*PKP1	PKPdf	01 45 33.3	+3.9
	comp=Z,29nm,1.0s						
LASF	**Ste Croix**	**150.24**	**270**	*e*PKP1	PKPdf	01 45 32.9	+3.4
HINF	**Hinteralfeld**	**150.31**	**279**	*e*PKP1	PKPdf	01 45 32.7	+3.2
	comp=Z,17nm,1.1s						
HAU	**Haudompre**	**150.70**	**279**	*e*PKP1	PKPdf	01 45 34.8	+4.7
	comp=Z,18nm,1.0s						
SMF	**Signal de Mont**	**151.57**	**275**	*e*PKP1	PKPdf	01 45 36.0	+4.6
	comp=Z,20nm,1.1s						
MEZF	**Maizieres J’vi**	**151.70**	**279**	*e*PKP1	PKPdf	01 45 37.3	+5.7
	comp=Z,18nm,0.9s						
EPF	**Esparros**	**151.78**	**266**	*e*PKP1	PKPdf	01 45 37.8	+5.9
	comp=Z,12nm,1.0s						
NB2	**NORSAR Subarra**	**151.80**	**307**	P	PKPdf	01 45 36.5	+5.2
	comp=Z,1.2nm,0.8s,baz=91,slow=7.9						
SSF	**Saint Saulge**	**151.97**	**275**	*e*PKP1	PKPdf	01 45 37.2	+5.2
	comp=Z,40nm,1.4s						
ETSF	**Etsaut**	**152.25**	**265**	*e*PKP1	PKPdf	01 45 39.2	+6.7
	comp=Z,11nm,0.9s						
SJPF	**Ste Jean**	**152.77**	**264**	*e*PKP1	PKPdf	01 45 39.6	+6.3
	comp=Z,20nm,1.0s						
BAIF	**Baives**	**152.85**	**282**	*e*PKP1	PKPdf	01 45 39.1	+5.9
	comp=Z,14nm,0.9s						
DAG	**Danmarks Havn**	**154.81**	**349**	*i* P	PKPdf	01 45 43.0	+7.9

CSEM ***06*** *01:28:44.6, 52.76S×139.51E, h2^{km}, mb5.6*

BJI ***06*** *01:28:47.0, 52.80S×140.20E, h10^{km}, mB5.9, mb5.1, Ms5.3, Msz5.0*

NEIC ***06*** *01:28:48.1±0.3, 52.82S×140.23E, h10^{km}, mb5.2/21, MS5.2/115, Error ellipse: s-maj=14.0km s-min=7.3km az=94.0*

HRVD ***06*** *01:28:48.1±0.2, 52.79S×140.32E, h12^{km}, MW5.6/76, Centroid moment Tensor Solution. LP body waves: s60,c109;Mantle waves: s76,c154; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.28±.04; $M_{\theta\theta}$0.57±.04; $M_{\phi\phi}$-0.28±.05; $M_{r\theta}$0.16±.11; $M_{\theta\phi}$-2.75±.03; $M_{\phi r}$0.08±.11; Best double couple: $M_0$2.79×10^{17} NP1: ϕ_s175°,δ86°,λ-2°. NP2:ϕ_s266°,δ88°,λ-176°. Principal axes: T 2.927, Plg1°, Azm41°; N -.274, Plg86°, Azm294°; P -2.653, Plg4°, Azm131°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***06*** *01:28:51.1±2.0, 52.73S×140.64E, h33^{km}, MS5.2/7 Error ellipse: s-maj=34.6km s-min=9.6km az=87.7*

ISC 06 01:28:46.8±0.4**, 52.80S**±0.04×**140.2E**±0.2**, h10^{km}, (h14^{km}**±3.2^{km}**:pP-P), n248, σ1^{s}35**/71**, mb5.2**/25**, MS5.2**/127**, 8C-4D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**10.99**	**29**	*e*P	**P**	**01 31 26.6**	**-0.5**
TOO	**Toolangi**	**15.68**	**16**	*e*P	**P**	**01 32 28.2**	**-1.0**
	5.5nm,1.1s						
CNB	**Canberra Magne**	**18.66**	**24**	*e*P	**P**	**01 33 07.6**	**+0.8**
	881nm,1.1s						
CASY	**Casey**	**19.93**	**216**	*e*P	**P**	**01 33 19.4**	**-1.8**
RIV	**Riverview**	**20.53**	**27**	*e*P	**P**	**01 33 28.3**	**+0.5**
STKA	**Stephens Creek**	**20.94**	**3**	*e*P	**P**	**01 33 31.3**	**-0.7**
	48nm,1.0s						
FORT	**Forrest**	**23.72**	**333**	*e*P	**P**	**01 34 00.1**	**+0.5**
	198nm,0.7s,mb5.7						
NWAO	**Narrogin (SRO)**	**25.83**	**311**	*e*P	**P**	**01 34 16.5**	**-3.3**
NWAO	**Narrogin (SRO)**	**25.83**	**311**	P	**P**	**01 34 16.5**	**-3.2**
	58nm,1.4s,mb4.9						
NWAO				LR	LR		
	comp=Z,8µm,22.0s,MS5.2						
VNDA	**Vanda**	**26.07**	**169**	*e*P	**P**	**01 34 20.0**	**-1.5**
	comp=Z,93nm,1.3s,mb5.2						
VNDA				LR	LR		
	comp=Z,4µm,19.0s,MS5.0						
KLBR	**Kellerberrin**	**26.73**	**314**	*e*P	**P**	**01 34 27.7**	**-0.3**
	comp=Z,1µm,1.4s,mb6.2						
SBA	**Scott Base**	**26.93**	**168**	*e*P	**P**	**01 34 29.4**	**-0.1**
SBA	**Scott Base**	**26.93**	**168**	P	**P**	**01 34 29.4**	**0.0**
SBA				LR	LR		
	comp=Z,6µm,21.0s,MS5.1						
MUN	**Mundaring**	**27.09**	**311**	*e*P	**P**	**01 34 32.2**	**+0.8**
	comp=Z,24nm,1.0s,mb4.7						
ASPA	**Alice Springs**	**29.48**	**348**	⇓*i*P	**P**	**01 34 51.4**	**-1.7**
ASPA	**Alice Springs**	**29.48**	**348**	*e*P	**P**	**01 34 51.4**	**-1.7**
CTA	**Charters Tower**	**32.99**	**11**	*e*P	**P**	**01 35 22.5**	**-1.5**
	comp=Z,14nm,1.1s,mb4.8						
CTAO	**Charters Tower**	**32.99**	**11**	*e*P	**P**	**01 35 22.2**	**-1.8**
CTAO	**Charters Tower**	**32.99**	**11**	*e*P	**P**	**01 35 22.1**	**-1.8**
	comp=Z,58nm,1.4s,mb5.3						
CTAO				LR	LR		
	comp=Z,7µm,19.0s,MS5.4						
WB2	**Warramunga Arr**	**33.11**	**350**	*e*P	**P**	**01 35 22.3**	**-2.7**
WRAB	**Tennant Creek**	**33.12**	**350**	*i* P	**P**	**01 35 23.3**	**-1.8**
WRAB	**Tennant Creek**	**33.12**	**350**	*e*P	**P**	**01 35 22.8**	**-2.2**
	comp=Z,187nm,1.1s,mb5.9						
WRAB				LR	LR		
	comp=Z,717nm,19.0s,MS4.4						
MBWA	**Marble Bar**	**35.30**	**326**	*e*P	**P**	**01 35 43.2**	**-0.7**
	comp=Z,51nm,1.0s,mb5.4						
MBWA				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
FITZ	**Fitzroy Crossi**	**36.45**	**336**	*e*P	**P**	**01 35 52.5**	**-1.1**
	comp=Z,35nm,0.8s,mb5.3						
QSPA	**South Pole Qui**	**37.31**	**180**	*e*P	**P**	**01 36 00.0**	**-0.3**
	comp=Z,51nm,1.0s,mb5.3						
MAW	**Mawson**	**38.27**	**217**	*e*P	**P**	**01 36 07.9**	**-0.6**
MAW	**Mawson**	**38.27**	**217**	P	**P**	**01 36 07.9**	**-0.6**
	comp=Z,48nm,1.1s,mb5.1						
MAW				LR	LR		
	comp=Z,13µm,20.0s,MS5.7						
KAKA	**Kakadu**	**40.47**	**348**	*e*P	**P**	**01 36 26.1**	**-1.1**
	comp=Z,113nm,0.9s,mb5.6						
PMG	**Port Moresby**	**43.64**	**10**	PFAKE		01 37 00.0	+6.8
PMG				LR	LR		
	comp=Z,4µm,19.0s,MS5.3						
SYO	**Syowa Base**	**45.49**	**210**	⇑P	**P**	**01 37 06.6**	**-0.7**
SYO	**Syowa Base**	**45.49**	**210**	⇓pP	pP	01 37 08.9	-1.4
NVL	**N’lazarevskaya**	**51.33**	**199**	⇑*e*P	**P**	**01 37 49.0**	**-3.6**
NVL				*e*S	**S**	**01 45 13.0**	**+2.7**
NVL				pmax	pmax		
	comp=Z,365nm,5.0s						
SNAA	**Sanae**	**53.11**	**194**	⇑*i*P	**P**	**01 38 06.3**	**+0.3**
SNAA	**Sanae**	**53.11**	**194**	*e*	**P**	**01 38 09.7**	**+3.7**
SNAA	**Sanae**	**53.11**	**194**	*e*S	**S**	**01 45 38.3**	**+3.7**
SNAA	**Sanae**	**53.11**	**194**	*i* P	**P**	**01 38 03.0**	**-3.0**
SNAA	**Sanae**	**53.11**	**194**	*e*P	**P**	**01 38 05.7**	**-0.3**
	comp=Z,843nm,1.4s						
COCO	**West Island**	**53.24**	**303**	PFAKE		01 38 20.0	+12
COCO				LR	LR		
	comp=Z,414nm,19.0s,MS4.5						
AFI	**Afiamalu**	**54.27**	**63**	PFAKE		01 38 30.0	+15
AFI				LR	LR		
	comp=Z,4µm,22.0s,MS5.5						
VNA3	**Neumayer Olymp**	**54.41**	**192**	⇑*i*P	**P**	**01 38 14.9**	**-0.6**
VNA3	**Neumayer Olymp**	**54.41**	**192**	*e*	**P**	**01 38 18.6**	**+3.1**
VNA3	**Neumayer Olymp**	**54.41**	**192**	*e*S	**S**	**01 45 55.5**	**+3.3**
VNA2	**Neumayer--Watz**	**54.41**	**193**	⇑*i*P	**P**	**01 38 13.3**	**-2.2**
VNA2	**Neumayer--Watz**	**54.41**	**193**	*e*	**P**	**01 38 16.5**	**+1.0**
VNA2	**Neumayer--Watz**	**54.41**	**193**	*e*	**P**	**01 38 17.8**	**+2.3**
VNA2	**Neumayer--Watz**	**54.41**	**193**	*e*S	**S**	**01 45 51.4**	**-0.9**
TBI	**Tubuai**	**59.95**	**90**	*e*S	**S**	**01 46 53.0**	**-13**
TBI				*e*LQ		01 53 53.6	
TBI				*e*LR	LR	01 56 09.9	
	comp=Z,2µm,30.5s						
PPT	**Papeete**	**64.27**	**85**	*e*S	**S**	**01 47 53.1**	**-7.4**
PPT				*e*LQ		01 55 36.6	
PPT				*e*LR	LR	01 58 29.0	
	comp=Z,2µm,29.0s						
GUMO	**Guam**	**66.24**	**5**	PFAKE		01 39 50.0	+13
GUMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
DGAR	**Diego Garcia**	**70.73**	**284**	PFAKE		01 40 20.0	+15
DGAR				LR	LR		
	comp=Z,201nm,20.0s,MS4.4						
KKTK	**Khon Kaen**	**76.04**	**323**	P	**P**	**01 40 35.0**	**-1.0**
QIZ	**Qiongzhong**	**76.22**	**331**	*e*P	**P**	**01 40 35.2**	**-1.8**
QIZ				S	S	01 50 19.2	-0.7
QIZ				LR	LR		
	comp=N,364nm,21.0s,MS4.9						
QIZ				LR	LR		
	comp=E,467nm,19.8s,MS4.9						
QIZ				LR	LR		
	comp=Z,784nm,21.6s,MS5.0						
NST	**Nakhon Sawan**	**76.44**	**320**	P	**P**	**01 40 44.0**	**+5.7**
PALK	**Pallekele**	**78.11**	**299**	PFAKE		01 41 00.0	+12
PALK				LR	LR		
	comp=Z,427nm,20.0s,MS4.8						
NANT	**Nan**	**79.08**	**322**	P	**P**	**01 40 53.0**	**+0.2**
TATO	**Taipei**	**79.14**	**343**	PFAKE		01 41 00.0	+6.9
TATO				LR	LR		
	comp=Z,569nm,20.0s,MS4.9						
CM31	**Chiang Mai Arr**	**79.44**	**320**	*e*P	**P**	**01 40 56.3**	**+1.6**
	comp=Z,15nm,1.1s,mb4.8						
CM31				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
SUR	**Sutherland**	**80.12**	**228**	PFAKE		01 41 10.0	+12
SUR				LR	LR		
	comp=Z,582nm,20.0s,MS4.9						
CHRT	**Chiangrai**	**80.40**	**322**	P	**P**	**01 40 55.0**	**-4.9**
	comp=Z,179nm,1.3s,mb5.8						
BOSA	**Boshof**	**81.16**	**234**	PFAKE		01 41 20.0	+16
BOSA				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
PLCA	**Paso Flores**	**83.11**	**157**	PFAKE		01 41 20.0	+6.3
PLCA				LR	LR		
	comp=Z,844nm,19.0s,MS5.1						
LBTB	**Lobatse**	**83.97**	**236**	PFAKE		01 41 30.0	+12
LBTB				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
GYA	**Guiyang**	**84.16**	**330**	⇓*i*P	**P**	**01 41 21.0**	**+1.8**
GYA				S	S	01 51 47.6	+4.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,290nm,5.1s						
GYA				LR	LR		
	comp=N,710nm,17.6s,MS5.3						
GYA				LR	LR		
	comp=E,740nm,16.4s,MS5.3						
GYA				LR	LR		
	comp=Z,450nm,16.7s,MS4.9						
KMI	**Kunming**	**84.17**	**326**	P	**P**	**01 41 22.2**	**+2.9**
KMI				AP	pP	01 41 25.4	+2.9
KMI				XP	sP	01 41 26.3	+2.7
KMI				PP	PP	01 44 40.9	+5.4
KMI				SKS	SKS	01 51 43.9	0.0
KMI				S	S	01 51 48.4	+5.5
KMI				SS	SS	01 57 19.5	+4.7
KMI				AMB	AMB		
	comp=Z,15nm,1.2s,mb5.0						
KMI				AMB	AMB		
	comp=Z,200nm,3.7s						
KMI				LR	LR		
	comp=N,712nm,23.0s,MS5.1						
KMI				LR	LR		
	comp=E,718nm,24.3s,MS5.1						
KMI				LR	LR		
	comp=Z,963nm,23.0s,MS5.1						
KMI	**Kunming**	**84.17**	**326**	*e*P	**P**	**01 41 22.2**	**+2.9**
KMI	**Kunming**	**84.17**	**326**	P	**P**	**01 41 22.2**	**+2.9**
	comp=Z,15nm,1.2s,mb5.0						
KMI				pP	pP	01 41 25.4	+2.9
KMI				sP	sP	01 41 26.3	+2.7
KMI				PP	PP	01 44 40.9	+5.4
KMI				SKS	SKS	01 51 43.9	0.0
KMI				S	S	01 51 48.4	+5.5
KMI				SS	SS	01 57 19.5	+4.7
KMI				LR	LR		
	comp=Z,960nm,23.0s,MS5.1						
SSE	**Sheshan**	**85.17**	**344**	P	**P**	**01 41 25.2**	**+1.0**
SSE				PP	PP	01 44 43.1	-0.2
SSE				S	S	01 51 55.3	+2.7
SSE				SS	SS	01 57 28.9	-0.7
SSE				AMB	AMB		
	comp=Z,19nm,1.1s,mb5.1						
SSE				AMB	AMB		
	comp=Z,101nm,4.3s						
SSE				LR	LR		
	comp=N,207nm,26.2s,MS4.8						
SSE				LR	LR		
	comp=E,409nm,26.1s,MS4.8						
SSE				LR	LR		
	comp=Z,308nm,30.0s,MS4.5						
SSE	**Sheshan**	**85.17**	**344**	P	**P**	**01 41 25.2**	**+1.0**
	comp=Z,19nm,1.1s,mb5.1						
SSE				sP	sP	01 41 30.1	+1.7
SSE				PP	PP	01 44 43.1	-0.2
SSE				S	S	01 51 55.3	+2.7
SSE				sS		01 52 00.2	
SSE				SS	SS	01 57 28.9	-0.7
SSE				LR	LR		
	comp=Z,310nm,30.0s,MS4.5						
NJ2	**Nanjing**	**86.52**	**342**	*e*P	**P**	**01 41 32.0**	**+1.1**
NJ2				AP	pP	01 41 37.6	+3.5
NJ2				XP	sP	01 41 39.9	+4.8
NJ2				PP	PP	01 44 58.4	+3.8
NJ2				S	S	01 52 09.0	+3.4
NJ2				XS		01 52 18.0	
NJ2				AMB	AMB		
	comp=Z,1µm,4.5s						
NJ2				LR	LR		
	comp=N,3µm,26.1s,MS5.7						
NJ2				LR	LR		
	comp=E,2µm,24.6s,MS5.7						
NJ2				LR	LR		
	comp=Z,3µm,31.6s						
TRIS	**Tristan da Cun**	**87.36**	**202**	PFAKE		01 41 50.0	+15
TRIS				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
TRQA	**Tornquist**	**87.49**	**163**	PFAKE		01 41 50.0	+15
TRQA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
MAJO	**Matsushiro**	**88.99**	**358**	PFAKE		01 41 50.0	+7.4
MAJO				LR	LR		
	comp=Z,588nm,20.0s,MS5.0						
MAT	**Matsushiro**	**88.99**	**358**	*e*P	**P**	**01 41 44.0**	**+1.4**
MAT				*e*S	S	01 52 35.0	+6.3
MAT	**Matsushiro**	**88.99**	**358**	P	**P**	**01 41 44.0**	**+1.4**
MAT				S	S	01 52 35.0	+6.3
CD2	**Chengdu**	**89.21**	**329**	*e*P	**P**	**01 41 44.5**	**+0.7**
CD2				AMB	AMB		
	comp=Z,14nm,1.0s,mb5.2						
LSZ	**Lusaka**	**90.65**	**244**	PFAKE		01 42 00.0	+9.2
LSZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
XAN	**Xi’an**	**90.67**	**334**	P	**P**	**01 41 51.9**	**+1.4**
XAN				AMB	AMB		
	comp=Z,7.0nm,1.7s,mb4.7						
XAN				LR	LR		
	comp=N,517nm,34.8s,MS4.8						
XAN				LR	LR		
	comp=E,275nm,35.9s,MS4.8						
XAN				LR	LR		
	comp=Z,1µm,37.3s,MS5.0						
INCN	**Inchon**	**90.68**	**349**	PFAKE		01 42 00.0	+10
INCN				LR	LR		
	comp=Z,725nm,20.0s,MS5.1						
LSA	**Lhasa**	**92.60**	**319**	P	**P**	**01 42 01.2**	**+1.7**
LSA	**Lhasa**	**92.60**	**319**	*e*P	**P**	**01 42 00.9**	**+1.4**
	comp=Z,11nm,1.2s,mb5.2						
TSUM	**Tsumeb**	**92.83**	**233**	PFAKE		01 42 10.0	+9.3
TSUM				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
LZH	**Lanzhou**	**94.00**	**331**	*e*P	**P**	**01 42 07.5**	**+1.7**
LZH				AP	pP	01 42 15.0	+6.0
LZH				XP	sP	01 42 19.0	+9.0
LZH				SKS	SKS	01 52 40.0	-4.1
LZH				S	S	01 53 22.0	+8.8
LZH				AMB	AMB		
	comp=Z,28nm,1.4s,mb5.5						
LZH				AMB	AMB		
	comp=Z,122nm,4.6s						
LZH				LR	LR		
	comp=N,860nm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,18.0s,MS5.4						
LZH	**Lanzhou**	**94.00**	**331**	*e*P	**P**	**01 42 07.5**	**+1.7**
	comp=Z,28nm,1.4s,mb5.5						
LZH				pP	pP	01 42 15.0	+6.0
LZH				sP	sP	01 42 19.0	+9.0
LZH				PP	tx	01 45 04.0	
LZH				SKS	SKS	01 52 40.0	-4.1
LZH				S	S	01 53 22.0	+8.8
LZH				sS		01 53 35.0	
LZH				SS	SS	01 59 57.0	+20
LZH				LR	LR		
	comp=Z,1µm,18.0s,MS5.4						
ERM	**Erimo**	**94.47**	**2**	PFAKE		01 42 20.0	+12
ERM				LR	LR		
	comp=Z,17nm,20.0s						
BJI	**Beijing**	**94.78**	**342**	*e*P	**P**	**01 42 10.1**	**+0.8**
BJI				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb5.1						
BJI	**Beijing**	**94.78**	**342**	*e*P	**P**	**01 42 10.1**	**+0.8**
	comp=Z,9.0nm,1.1s,mb5.1						
KMBO	**Kilima Mbogo**	**96.91**	**259**	PFAKE		01 42 30.0	+10
KMBO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
CN2	**Changchun**	**97.06**	**349**	*e*P	**P**	**01 42 21.2**	**+1.7**
CN2				XP	sP	01 42 28.2	+4.4
CN2				*e*S	S	01 53 41.5	+2.6

CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.3						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=E,400nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=Z,500nm,19.0s,MS5.0						
MDJ	**Mudanjiang**	**97.47**	**352**	P	**P**	**01 42 22.5**	**+1.1**
MDJ				AP	pP	01 42 25.7	+1.1
MDJ				PP	PP	01 46 20.6	-0.7
MDJ				S	S	01 53 46.1	+3.8
MDJ				PS	PS	01 55 14.8	+3.4
MDJ				SS	SS	02 00 27.5	+2.3
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,175nm,4.2s						
MDJ				LR	LR		
	comp=N,416nm,28.2s,MS4.8						
MDJ				LR	LR		
	comp=E,152nm,30.5s,MS4.8						
MDJ				LR	LR		
	comp=Z,616nm,29.4s,MS4.9						
GTA	**Gaotai**	**98.28**	**330**	*e*P	**P**	**01 42 30.5**	**+5.3**
GTA				AP	pP	01 42 34.3	+5.9
GTA				XP	sP	01 42 36.8	+7.4
GTA				PP	PP	01 46 33.2	+5.5
GTA				S	S	01 53 54.3	+5.0
GTA				PS	PS	01 55 25.1	+5.2
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.7						
GTA				AMB	AMB		
	comp=Z,47nm,6.8s						
GTA				LR	LR		
	comp=N,380nm,22.4s,MS4.9						
GTA				LR	LR		
	comp=E,294nm,24.3s,MS4.9						
GTA				LR	LR		
	comp=Z,468nm,25.1s,MS4.9						
YSS	**Yuzh-Sakhalins**	**99.40**	**2**	PFAKE		01 42 40.0	+10
YSS				LR	LR		
	comp=Z,667nm,20.0s,MS5.1						
LVC	**Limon Verde**	**100.75**	**153**	PFAKE		01 42 50.0	+13
LVC				LR	LR		
	comp=Z,801nm,21.0s,MS5.2						
MBAR	**Mbarara**	**101.17**	**254**	PFAKE		01 42 50.0	+11
MBAR				LR	LR		
	comp=Z,530nm,20.0s,MS5.0						
ULN	**Ulaanbaatar**	**104.19**	**338**	PFAKE		01 43 00.0	+8.6
ULN				LR	LR		
	comp=Z,715nm,20.0s,MS5.2						
WMQ	**Urumqi**	**106.30**	**323**	*e*PDIF	Pdif	01 43 04.0	+3.2
WMQ				PP	PP	01 47 30.0	+2.0
WMQ				SS	SS	02 02 31.0	+3.4
WMQ				LR	LR		
	comp=N,582nm,27.0s,MS5.1						
WMQ				LR	LR		
	comp=E,378nm,26.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,558nm,28.0s,MS5.0						
LPAZ	**La Paz**	**106.97**	**152**	*e*Pdif	Pdif	01 43 07.5	+3.1
	comp=Z,4.3nm,0.7s						
LPAZ				LR	LR		
	comp=Z,400nm,21.0s,MS5.0						
NNA	**Nana**	**108.08**	**142**	PFAKE		01 47 30.0	
NNA				LR	LR		
	comp=Z,168nm,20.0s,MS4.6						
TLY	**Talaya**	**108.55**	**337**	PFAKE		01 47 30.0	
TLY				LR	LR		
	comp=Z,119nm,20.0s,MS4.5						
SMY	**Shemya**	**108.93**	**21**	PFAKE		01 47 30.0	
SMY				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
AAK	**Ala-Archa**	**110.59**	**314**	*i* PKIKP	PKPdf	01 47 17.6	-4.3
AAK	**Ala-Archa**	**110.59**	**314**	PFAKE		01 47 30.0	+8.1
AAK				LR	LR		
	comp=Z,132nm,21.0s,MS4.5						
MA2	**Magadan**	**112.35**	**6**	PFAKE		01 47 30.0	+5.2
MA2				LR	LR		
	comp=Z,439nm,21.0s,MS5.0						
YAK	**Yakutsk**	**114.79**	**355**	*i* PKIKP	PKPdf	01 47 25.9	-3.6
YAK	**Yakutsk**	**114.79**	**355**	PFAKE		01 47 40.0	+10
YAK				LR	LR		
	comp=Z,389nm,22.0s,MS5.0						
UNV	**Unalaska Valle**	**115.16**	**32**	PFAKE		01 47 40.0	+10
UNV				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
SAML	**Samuel**	**115.33**	**154**	PFAKE		01 47 40.0	+8.2
SAML				LR	LR		
	comp=Z,644nm,21.0s,MS5.2						
KURK	**Kurchatov**	**115.44**	**322**	PFAKE		01 47 40.0	+8.9
KURK				LR	LR		
	comp=Z,97nm,20.0s,MS4.4						
OTAV	**Otavalo**	**118.53**	**135**	P	PKPdf	01 47 38.8	+0.8
OTAV				LR	LR		
	comp=Z,382nm,19.0s,MS5.0						
RCBR	**Riachuelo**	**121.50**	**185**	PFAKE		01 47 50.0	+6.2
RCBR				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
BILL	**Bilibino**	**122.08**	**11**	*i* PKIKP	PKPdf	01 47 40.3	-3.3
BILL				MLR	MLR		
	comp=Z,1µm,26.0s,MS5.3						
BILL	**Bilibino**	**122.08**	**11**	PFAKE		01 47 50.0	+6.4
BILL				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
SAO	**San Andreas Ge**	**122.99**	**71**	PFAKE		01 48 00.0	+14
SAO				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
KDAK	**Kodiak Island**	**123.03**	**36**	PFAKE		01 47 50.0	+4.4
KDAK				LR	LR		
	comp=Z,416nm,19.0s,MS5.1						
HOPS	**Hopland**	**123.61**	**68**	PFAKE		01 48 00.0	+13
HOPS				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
GNI	**Garni**	**123.67**	**294**	PFAKE		01 48 00.0	+13
GNI				LR	LR		
	comp=Z,404nm,20.0s,MS5.1						
PFO	**Pinyon Flat Ob**	**123.70**	**77**	PFAKE		01 48 00.0	+12
PFO				LR	LR		
	comp=Z,164nm,19.0s,MS4.7						
ISA	**Isabella**	**123.95**	**74**	PFAKE		01 48 00.0	+12
ISA				LR	LR		
	comp=Z,13nm,21.0s						
JTS	**JuntasAbangare**	**124.23**	**122**	PFAKE		01 48 00.0	+11
JTS				LR	LR		
	comp=Z,174nm,20.0s,MS4.7						
CMB	**Columbia Colle**	**124.48**	**71**	PFAKE		01 48 00.0	+11
CMB				LR	LR		
	comp=Z,735nm,21.0s,MS5.3						
TNA	**Tin City**	**124.52**	**23**	*e*PKPdf	PKPdf	01 47 44.8	-3.5
TNA				LR	LR		
	comp=Z,619nm,19.0s,MS5.3						
DAC	**Darwin (Calif)**	**124.89**	**74**	PFAKE		01 48 00.0	+10
DAC				LR	LR		
	comp=Z,660nm,21.0s,MS5.3						
WDC	**Whiskeytown Da**	**124.99**	**67**	PFAKE		01 48 00.0	+10
WDC				LR	LR		
	comp=Z,662nm,19.0s,MS5.3						
YBH	**Yreka Blue Hor**	**125.67**	**66**	PFAKE		01 48 00.0	+8.9
YBH				LR	LR		
	comp=Z,574nm,22.0s,MS5.2						
MNV	**Mina**	**126.04**	**72**	PFAKE		01 48 00.0	+8.1
MNV				LR	LR		
	comp=Z,829nm,19.0s,MS5.4						
HUMO	**Hull Mountain**	**126.12**	**65**	*e*PKPdf	PKPdf	01 47 50.5	-1.4
HUMO				LR	LR		
	comp=Z,430nm,20.0s,MS5.1						
TUC	**Tucson**	**126.18**	**83**	PFAKE		01 48 00.0	+7.7
TUC				LR	LR		
	comp=Z,348nm,21.0s,MS5.0						
TPH	**Tonopah**	**126.33**	**73**	PFAKE		01 48 00.0	+7.6
TPH				LR	LR		
	comp=Z,658nm,20.0s,MS5.3						
FIB	**Fire Island**	**126.34**	**34**	PFAKE		01 48 00.0	+8.2
FIB				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
SVE	**Sverdlovsk**	**127.10**	**317**	*e*PKIKP	PKPdf	01 48 04.3	+11
MOD	**Modoc**	**127.13**	**67**	PFAKE		01 48 00.0	+6.2
MOD				LR	LR		
	comp=Z,661nm,21.0s,MS5.3						
COR	**Corvallis**	**127.24**	**63**	PFAKE		01 48 00.0	+6.0
COR				LR	LR		
	comp=Z,283nm,21.0s,MS4.9						
KIV	**Kislovodsk**	**127.36**	**296**	*i* PKIKP	PKPdf	01 47 51.7	-2.5
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
KIV	**Kislovodsk**	**127.36**	**296**	PFAKE		01 48 00.0	+5.8
KIV				LR	LR		
	comp=Z,67nm,20.0s,MS4.3						
ARU	**Arti**	**127.70**	**316**	*i* PKHKP		01 47 42.2	
ARU				*e*		01 54 50.9	
BMN	**Battle Mountai**	**127.91**	**71**	PFAKE		01 48 10.0	+15
BMN				LR	LR		
	comp=Z,534nm,20.0s,MS5.2						
LTX	**Lajitas**	**128.39**	**91**	PFAKE		01 48 10.0	+13
LTX				LR	LR		
	comp=Z,485nm,20.0s,MS5.2						
WVOR	**Wild Horse Val**	**128.41**	**68**	PFAKE		01 48 10.0	+14
WVOR				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
MCK	**McKinley**	**128.54**	**33**	*e*PKPdf	PKPdf	01 47 52.9	-3.2
MCK				LR	LR		
	comp=Z,639nm,21.0s,MS5.3						
SOC	**Sochi**	**128.75**	**294**	*i* PKIKP	PKPdf	01 47 46.8	-10
SOC				*e*		01 54 55.6	
SOC				*e*SS	SS	02 07 15.7	-3.7
SOC				pmax	pmax		
	comp=N,42nm,0.9s						
SOC				pmax	pmax		
	comp=E,68nm,0.9s						
SOC				pmax	pmax		
	comp=Z,59nm,0.9s						
OCWA	**Octopus Mounta**	**128.80**	**60**	PFAKE		01 48 10.0	+13
OCWA				LR	LR		
	comp=Z,598nm,19.0s,MS5.3						
MNTX	**Cornudas Mount**	**129.02**	**87**	*e*PKPdf	PKPdf	01 47 54.0	-3.9
MNTX				LR	LR		
	comp=Z,412nm,19.0s,MS5.1						
SIT	**Sitka**	**129.32**	**45**	PFAKE		01 48 10.0	+12
SIT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MVU	**Marysvale**	**129.55**	**76**	*e*PKPdf	PKPdf	01 47 57.3	-1.4
MVU				LR	LR		
	comp=Z,601nm,21.0s,MS5.3						
MSU	**Marysvale**	**129.58**	**76**	*e*PKPdf	PKPdf	01 47 57.5	-1.2
SDV	**Santo Domingo**	**129.59**	**139**	PFAKE		01 48 10.0	+11
SDV				LR	LR		
	comp=Z,711nm,21.0s,MS5.3						
COLA	**College**	**129.66**	**32**	PFAKE		01 48 10.0	+12
COLA				LR	LR		
	comp=Z,481nm,20.0s,MS5.2						
ANMO	**Albuquerque**	**130.61**	**83**	*i* PKIKP	PKPdf	01 47 57.4	-3.4
ANMO	**Albuquerque**	**130.61**	**83**	PFAKE		01 48 10.0	+9.2
ANMO				LR	LR		
	comp=Z,505nm,20.0s,MS5.2						
TEIG	**Tepich**	**130.63**	**112**	PFAKE		01 48 10.0	+8.8
TEIG				LR	LR		
	comp=Z,161nm,20.0s,MS4.7						
BMO	**Blue Mountains**	**130.70**	**66**	PFAKE		01 48 10.0	+9.3
BMO				LR	LR		
	comp=Z,406nm,19.0s,MS5.1						
PV10	**Paradox Valley**	**131.34**	**78**	*e*PKPdf	PKPdf	01 47 57.5	-4.6
HLID	**Hailey**	**131.52**	**69**	PFAKE		01 48 10.0	+7.7
HLID				LR	LR		
	comp=Z,581nm,21.0s,MS5.3						
JCT	**Junction City**	**131.55**	**93**	PFAKE		01 48 10.0	+7.3
JCT				LR	LR		
	comp=Z,509nm,19.0s,MS5.2						
HWUT	**Hardware Ranch**	**131.93**	**73**	PFAKE		01 48 10.0	+6.9
HWUT				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
NEW	**Newport**	**132.87**	**63**	PFAKE		01 48 10.0	+5.3
NEW				LR	LR		
	comp=Z,574nm,20.0s,MS5.3						
AHID	**Auburn Hatcher**	**132.93**	**72**	PFAKE		01 48 10.0	+5.0
AHID				LR	LR		
	comp=Z,580nm,20.0s,MS5.3						
SDCO	**Great Sand Dun**	**133.05**	**81**	PFAKE		01 48 20.0	+15
SDCO				LR	LR		
	comp=Z,689nm,20.0s,MS5.4						
AMTX	**Amarillo**	**133.46**	**87**	PFAKE		01 48 20.0	+14
AMTX				LR	LR		
	comp=Z,472nm,20.0s,MS5.2						
HKT	**Hockley**	**133.57**	**97**	PFAKE		01 48 20.0	+14
HKT				LR	LR		
	comp=Z,105nm,19.0s,MS4.6						
MSO	**Missoula**	**133.77**	**66**	PFAKE		01 48 20.0	+14
MSO				LR	LR		
	comp=Z,405nm,19.0s,MS5.2						
BW06	**Boulder Array**	**133.82**	**73**	PFAKE		01 48 20.0	+14
BW06				LR	LR		
	comp=Z,746nm,19.0s,MS5.4						
ISCO	**Idaho Springs**	**134.30**	**79**	PFAKE		01 48 20.0	+12
ISCO				LR	LR		
	comp=Z,630nm,22.0s,MS5.3						
BOZ	**Bozeman (W)**	**134.37**	**69**	PFAKE		01 48 20.0	+13
BOZ				LR	LR		
	comp=Z,742nm,21.0s,MS5.4						
LKWY	**Lake**	**134.43**	**71**	PFAKE		01 48 20.0	+12
LKWY				LR	LR		
	comp=Z,647nm,22.0s,MS5.3						
WMOK	**Wichita Mounta**	**135.12**	**89**	*e*PKPdf	PKPdf	01 48 06.3	-2.9
NATX	**Nacogdoches**	**135.56**	**96**	PFAKE		01 48 20.0	+10
NATX				LR	LR		
	comp=Z,352nm,20.0s,MS5.1						
OBN	**Obninsk**	**137.09**	**305**	*i* PKIKP	PKPdf	01 48 09.9	-2.2
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,400nm,23.0s,MS5.1						
OBN	**Obninsk**	**137.09**	**305**	PFAKE		01 48 20.0	+7.9
OBN				LR	LR		
	comp=Z,130nm,20.0s,MS4.7						
LAO	**LASA Array**	**138.04**	**71**	PFAKE		01 48 20.0	+5.7
LAO				LR	LR		
	comp=Z,590nm,21.0s,MS5.3						
MIAR	**Mount Ida**	**138.15**	**94**	PFAKE		01 48 20.0	+5.2
MIAR				LR	LR		
	comp=Z,377nm,21.0s,MS5.1						
SJG	**San Juan**	**139.73**	**139**	PFAKE		01 48 30.0	+12
SJG				LR	LR		
	comp=Z,288nm,20.0s,MS5.0						
DGMT	**Dagmar**	**140.16**	**69**	PFAKE		01 48 30.0	+12
DGMT				LR	LR		
	comp=Z,845nm,21.0s,MS5.5						
OXF	**Oxford**	**140.64**	**98**	PFAKE		01 48 30.0	+11
OXF				LR	LR		
	comp=Z,494nm,19.0s,MS5.3						
LRAL	**Lakeview Retre**	**141.06**	**101**	PFAKE		01 48 30.0	+10
LRAL				LR	LR		
	comp=Z,573nm,20.0s,MS5.3						
CCM	**Cathedral Cave**	**141.87**	**92**	PFAKE		01 48 30.0	+8.8
CCM				LR	LR		
	comp=Z,120nm,20.0s,MS4.7						
WVT	**Waverly**	**142.68**	**97**	PFAKE		01 48 30.0	+7.3
WVT				LR	LR		
	comp=Z,378nm,20.0s,MS5.2						
JOF	**Joensuu**	**142.78**	**314**	*e*p	PKPdf	01 48 16.3	-5.7
	comp=Z,0.3nm,0.3s						
GOGA	**Godfrey**	**143.41**	**104**	PFAKE		01 48 30.0	+11
GOGA				LR	LR		
	comp=Z,410nm,20.0s,MS5.2						
OJC	**Ojcow**	**143.73**	**290**	*e*PKP	PKPdf	01 48 19.3	-4.7
FFC	**Flin Flon**	**144.26**	**61**	*e*PKPdf	PKPdf	01 48 21.3	-3.5
ZST	**Bratislava**	**144.31**	**286**	*e*PKP	PKPdf	01 48 22.8	-2.3
OKC	**Ostrava-Krasne**	**144.49**	**289**	*e*PKP	PKPdf	01 48 25.6	+0.2
PERS	**Pernice**	**144.70**	**283**	*e*PKP	PKPdf	01 48 24.2	-1.6
KAF	**Kangasniemi**	**144.77**	**312**	*e*p	PKPbc	01 48 20.9	-1.5
	comp=Z,17nm,0.7s						
ARSA	**Arzberg**	**144.77**	**284**	⇑*i*P	PKPbc	01 48 24.4	+1.5
MORC	**Moravsky Berou**	**144.81**	**289**	*e*PKPdf	PKPdf	01 48 23.4	-2.5
WCI	**Wyandotte Cave**	**144.98**	**96**	*e*PKPdf	PKPdf	01 48 21.5	-5.1
WCI				LR	LR		
	comp=Z,115nm,21.0s,MS4.6						
JSC	**Jenkinsville**	**145.32**	**106**	*e*PKPdf	PKPdf	01 48 23.8	-3.6
DPC	**Dobruska-Polom**	**145.77**	**289**	*e*PKP	PKPdf	01 48 25.9	-1.7
ULM	**Lac du Bonnet**	**145.78**	**71**	*e*PKPdf	PKPdf	01 48 24.3	-3.3
ULM				LR	LR		
	comp=Z,987nm,21.0s,MS5.6						
KEV	**Kevo**	**145.90**	**325**	*e*p	PKPbc	01 48 26.0	+0.9
	comp=Z,0.8nm,0.4s						
KSP	**Ksiaz**	**146.00**	**290**	*e*PKP	PKPdf	01 48 27.3	-0.6
KSP				LR	LR		
	comp=Z,700nm,24.7s,MS5.3						
UPC	**Upice**	**146.02**	**289**	*e*PKP	PKPdf	01 48 28.0	0.0
PGF	**Pioggiola**	**146.18**	**272**	*e*PKP1	PKPbc	01 48 26.3	-0.3
ARE0	**ARCESS Array S**	**146.40**	**325**	*e*PKPdf	PKPdf	01 48 27.1	-1.0
PRU	**Pruhonice**	**146.64**	**287**	*e*PKP	PKPdf	01 48 27.9	-1.2
PRU				AMS	AMS	02 57 00.0	
	comp=Z,400nm,18.4s						
KHC	**Kasperske Hory**	**146.82**	**286**	*e*PKP2	PKPab	01 48 29.3	-2.2
KHC				MLR	MLR		
	comp=Z,500nm,17.7s,MS5.3						
KHC	**Kasperske Hory**	**146.82**	**286**	*e*PKP	PKPdf	01 48 29.3	-0.1
KHC				x	x	01 48 41.5	
KHC				AMS	AMS	03 00 30.0	
	comp=Z,500nm,17.7s						
PVCC	**Panska Ves**	**146.86**	**288**	*e*PKP	PKPdf	01 48 30.2	+0.8
WTTA	**Wattenberg**	**147.08**	**281**	⇑*i*P	PKPdf	01 48 30.9	+1.0
EYMN	**Ely**	**147.28**	**77**	PFAKE		01 48 40.0	+10
EYMN				LR	LR		
	comp=Z,497nm,19.0s,MS5.3						
SQTA	**Sankt Quirin**	**147.32**	**281**	⇑*i*P	PKPdf	01 48 30.7	+0.4
BRG	**Berggiesshubel**	**147.37**	**289**	*e*PKP2	PKPab	01 48 31.7	-1.9
BRG				pmax	pmax		
	comp=Z,12nm,1.1s						
BRG	**Berggiesshubel**	**147.37**	**289**	*e*P	PKPdf	01 48 31.7	+1.5
BRG				*i*		01 48 39.9	
BRG				*i*		01 49 01.3	
MOTA	**Moosalm**	**147.44**	**281**	⇓*i*P	PKPdf	01 48 30.8	+0.3
BLA	**Blacksburg**	**147.84**	**103**	PFAKE		01 48 40.0	+8.6
BLA				LR	LR		
	comp=Z,638nm,21.0s,MS5.4						
NKC	**Novy Kostel**	**147.96**	**287**	*e*PKP	PKPdf	01 48 33.5	+2.3
NKC				AMS	AMS	03 00 30.0	
	comp=Z,600nm,17.5s						
CLL	**Collm**	**148.09**	**289**	*e*PKP2	PKPdf	01 48 33.0	+1.6
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL				MLR	MLR		
	comp=Z,400nm,21.1s,MS5.2						
CLL	**Collm**	**148.09**	**289**	*e*PKP	PKPdf	01 48 33.0	+1.6
CLL				LR	LR		
	comp=Z,400nm,21.1s,MS5.2						
CLL	**Collm**	**148.09**	**289**	*e*PKP1	PKPdf	01 48 33.0	+1.6
CLL				*e*		01 48 45.0	
CLL				*e*		01 48 55.0	
FRF	**La Foret Royal**	**148.17**	**272**	*e*PKP1	PKPdf	01 48 32.5	+0.8
ACSO	**Alum Creek Sta**	**148.24**	**96**	PKPbc	PKPdf	01 48 34.9	+2.9
ACSO				LR	LR		
	comp=Z,624nm,19.0s,MS5.4						
GRA1	**Grafenberg Arr**	**148.44**	**285**	*e*PKP	PKPdf	01 48 33.7	+1.7
GRA1				LR	LR		
	comp=Z,800nm,21.7s,MS5.5						
GRF	**Grafenberg Arr**	**148.44**	**285**	*e*PKP	PKPdf	01 48 33.7	+1.7
GRF				LR	LR		
	comp=Z,800nm,21.7s,MS5.5						
MOX	**Moxa**	**148.62**	**287**	*e*PKP2	PKPab	01 48 39.9	+1.3
MOX				pmax	pmax		
	comp=Z,20nm,1.5s						
MOX				MLR	MLR		
	comp=Z,400nm,22.0s,MS5.2						
MBDF	**Montbardon**	**148.72**	**274**	*e*PKP1	PKPdf	01 48 35.0	+2.4
	comp=Z,14nm,0.8s						
AAM	**Ann Arbor**	**149.06**	**92**	PFAKE		01 48 40.0	+6.8
AAM				LR	LR		
	comp=Z,623nm,20.0s,MS5.4						
RES	**Resolute Bay**	**149.13**	**25**	*e*PKPdf	PKPdf	01 48 28.7	-3.7
RES				*e*PKPbc	PKPdf	01 48 33.0	+0.5
RES				*e*PKPab	PKPab	01 48 40.4	+0.3
LPG	**La Plagne**	**149.14**	**275**	*e*PKP1	PKPdf	01 48 34.9	+1.7
LPL	**La Plagne**	**149.16**	**275**	*e*PKP1	PKPdf	01 48 34.9	+1.6
ORIF	**Oris-en-Rattie**	**149.36**	**274**	*e*PKP1	PKPdf	01 48 35.3	+1.7
FCC	**Fort Churchill**	**149.65**	**57**	*e*PKPdf	PKPdf	01 48 29.0	-4.7
FCC				*e*PKPbc	PKPdf	01 48 35.8	+2.2
MCWV	**Mont Chateau**	**149.77**	**100**	PFAKE		01 48 40.0	+5.6
MCWV				LR	LR		
	comp=Z,557nm,20.0s,MS5.4						
VIVF	**Saint-Julien-l**	**150.06**	**273**	*e*PKP1	PKPdf	01 48 37.1	+2.4
	comp=Z,26nm,1.1s						
CABF	**La Chapelle**	**150.09**	**277**	*e*PKP1	PKPdf	01 48 37.8	+3.1
LASF	**Ste Croix**	**150.15**	**271**	*e*PKP1	PKPdf	01 48 37.2	+2.3
	comp=Z,37nm,1.1s						
HINF	**Hinteralfeld**	**150.20**	**279**	*e*PKP1	PKPdf	01 48 37.3	+2.5
CBN	**Corbin**	**150.30**	**104**	PFAKE		01 48 40.0	+4.7
CBN				LR	LR		
	comp=Z,726nm,20.0s,MS5.5						
EBR	**Ebro Roquetas**	**150.31**	**263**	*e*Ts	PKPab	01 48 48.2	+2.2
HAU	**Haudompre**	**150.59**	**279**	*e*PKP1	PKPdf	01 48 38.7	+3.3
	comp=Z,43nm,1.1s						
SDMD	**Soldier's Deli**	**151.40**	**103**	*e*PKPbc	PKPdf	01 48 40.3	+3.4
SMF	**Signal de Mont**	**151.47**	**275**	*e*PKP1	PKPdf	01 48 40.6	+3.8
	comp=Z,32nm,1.2s						
SSPA	**Standing Stone**	**151.55**	**100**	PFAKE		01 48 50.0	+13
SSPA				LR	LR		
	comp=Z,109nm,20.0s,MS4.7						
MEZF	**Maizieres J'vi**	**151.59**	**280**	*e*PKP1	PKPdf	01 48 41.1	+4.2
	comp=Z,19nm,0.9s						
NB2	**NORSAR Subarra**	**151.64**	**307**	PKPab	PKPab	01 48 40.8	-10
	comp=Z,9.8nm,1.1s,baz=97,slow=4.1						
SSF	**Saint Saulge**	**151.87**	**276**	*e*PKP1	PKPdf	01 48 41.9	+4.5
	comp=Z,59nm,1.4s						
ETSF	**Etsaut**	**152.17**	**265**	*e*PKP1	PKPdf	01 48 43.1	+5.2
	comp=Z,21nm,1.0s						
ESLA	**Sonseca Array**	**152.26**	**256**	PFAKE		01 48 50.0	+12
ESLA				LR	LR		
	comp=Z,4µm,19.0s						
TCF	**Toulx Ste Croi**	**152.28**	**273**	*e*PKP1	PKPdf	01 48 42.8	+4.8
GIVF	**Givet**	**152.38**	**283**	*e*PKP1	PKPdf	01 48 42.7	+4.7
SJPF	**Ste Jean**	**152.70**	**265**	*e*PKP1	PKPdf	01 48 43.5	+4.8
	comp=Z,17nm,0.8s						
BAIF	**Baives**	**152.73**	**282**	*e*PKP1	PKPdf	01 48 43.9	+5.4
	comp=Z,27nm,1.0s						
BINY	**Binghamton**	**153.63**	**99**	PFAKE		01 48 50.0	+10
BINY				LR	LR		
	comp=Z,797nm,20.0s,MS5.5						
DAG	**Danmarks Havn**	**154.64**	**349**	*e*PKIKP	PKPdf	01 48 46.0	+5.6
DAG	**Danmarks Havn**	**154.64**	**349**	*i* P	PKPdf	01 48 46.0	+5.6
NCB	**Newcomb**	**155.71**	**97**	PFAKE		01 48 50.0	+7.3
NCB				LR	LR		
	comp=Z,709nm,22.0s,MS5.5						
HRV	**Harvard--Oak R**	**156.46**	**103**	PFAKE		01 48 50.0	+6.3
HRV				LR	LR		
	comp=Z,565nm,20.0s,MS5.4						
SCHQ	**Schefferville**	**163.96**	**72**	PFAKE		01 49 00.0	+8.4
SCHQ				LR	LR		
	comp=Z,1µm,22.0s						

NIED ***06*** *02:42:00, 41.30N×142.70E, h44^{km}, Mw4.1 Best double couple: $M_0$1.34×10^{15} NP1:ϕ_s19°, δ75°, λ70°. NP2:ϕ_s254°, δ25°, λ143°.*

JMA ***06*** *02:42:12.7±0.1, 41.32N×142.65E, h33^{km}±4^{km}, M3.6*

ISC 06 02:42:12.5±2.4**, 41.36N**±0.06×**142.64E**±0.08**, h26**^{km}±27^{km}**,**
n15, σ0^{s}42/22**, 5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.77**	**30**	P	**Pn**	**02 42 27.1**	**-0.5**
JEM				*e*S	**Sn**	**02 42 38.3**	**-0.1**
JNBK	**Urakawa-nobuka**	**0.93**	**5**	⇓P	**Pn**	**02 42 30.1**	**+0.1**
JNBK				*e*S	**Sn**	**02 42 42.9**	**+0.4**
JOT	**Ohata**	**1.20**	**272**	⇓P	**Pn**	**02 42 33.6**	**-0.3**
JOT				*e*S	**Sn**	**02 42 48.9**	**-0.5**
JANG	**Nango**	**1.30**	**221**	P	**Pn**	**02 42 34.6**	**-0.7**
JKB	**Kayabe**	**1.32**	**294**	P	**Pn**	**02 42 35.3**	**-0.3**
JKB				*e*S	**Sn**	**02 42 52.3**	**-0.1**
JTM	**Tenmabayashi**	**1.32**	**245**	⇓P	**Pn**	**02 42 35.7**	**+0.2**
JTM				*e*S	**Sn**	**02 42 52.4**	**0.0**
JCH	**Churui**	**1.37**	**23**	P	**Pn**	**02 42 36.4**	**+0.1**
JBT2	**Biratori 2**	**1.44**	**352**	P	**Pn**	**02 42 37.7**	**+0.4**
JNB	**Noboribetsu**	**1.63**	**313**	⇓P	**Pn**	**02 42 39.6**	**-0.5**
JNB				*e*S	**Sn**	**02 42 59.7**	**-0.7**
JSR	**Shiriuchi**	**1.68**	**277**	P	**Pn**	**02 42 40.9**	**+0.2**
JSR				*e*S	**Sn**	**02 43 02.5**	**+0.9**
JEW	**Eniwo**	**1.73**	**330**	P	**Pn**	**02 42 41.9**	**+0.5**
JOB	**Onbets**	**1.78**	**29**	P	**Pn**	**02 42 42.0**	**-0.2**
JYM2	**Yakumo 2**	**1.86**	**295**	⇓P	**Pn**	**02 42 43.5**	**+0.2**
JAH	**Hinai**	**1.92**	**233**	P	**Pn**	**02 42 44.6**	**+0.5**
MAT	**Matsushiro**	**5.92**	**217**	P	**Pn**	**02 43 41.1**	**+0.2**

NEIC ***06*** *03:25:21.5±0.6, 5.29N×123.41E, h500^{km}, mb4.2/7, Error ellipse: s-maj=34.6km s-min=8.5km az=74.0*

ISC 06 03:25:23.7±0.8**, 5.27N**±0.10×**123.5E**±0.2**, h557**^{km}±11^{km}**,**
n14, σ0^{s}48/14**, mb4.3**/8**, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.32**	**42**	⇑*i*P	**P**	**03 26 36.0**	**0.0**

TSM	**Tawau**	**5.72**	**260**	P	**P**	**03 27 01.7**	**+0.7**
KKM	**Kota Kinabalu**	**7.32**	**276**	P	**P**	**03 27 15.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.32**	**175**	*e*P	**P**	**03 29 50.6**	**-0.3**
	8.4nm,1.2s,mb4.2						
MBWA	**Marble Bar**	**26.53**	**188**	*e*P	**P**	**03 30 18.4**	**-0.9**
	7.2nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	**27.21**	**157**	*e*P	**P**	**03 30 24.9**	**-0.3**
	9.3nm,0.4s,mb4.8						
WB2	**Warramunga Arr**	**27.22**	**157**	⇓*i*P	**P**	**03 30 24.9**	**-0.5**
ASPA	**Alice Springs**	**30.49**	**161**	⇓*i*P	**P**	**03 30 54.0**	**+0.5**
FORT	**Forrest**	**36.10**	**173**	*e*P	**P**	**03 31 41.2**	**+0.8**
	83nm,0.6s,mb5.4						
KLBR	**Kellerberrin**	**37.07**	**188**	⇓*i*P	**P**	**03 31 48.6**	**+0.3**
	1μm,1.8s						
NWAO	**Narrogin (SRO)**	**38.45**	**189**	*e*P	**P**	**03 31 59.8**	**+0.3**
	14nm,0.7s,mb4.6						
ULN	**Ulaanbaatar**	**44.73**	**344**	*e*P	**P**	**03 32 49.5**	**+0.3**
	2.5nm,0.9s,mb3.7						
KURK	**Kurchatov**	**58.75**	**328**	*e*P	**P**	**03 34 30.2**	**-0.1**
	7.7nm,1.0s,mb3.9						
CHKZ	**Chkalovo**	**64.50**	**328**	*e*P	**P**	**03 35 07.4**	**-0.1**
	1.9nm,0.9s,mb3.5						

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*CSEM **06** 03:58:11.7,36.33N×54.99E,h10^{km},ML3.0,After TEH*

TEH 06 03:58:11.7,36.33N×54.99E,h10^{km},Mn3.0,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMIN	**Minoodasht**	**0.84**	**13**	Pg	Pg	03 58 20.5	-8.0
IANJ	**Anjiloo**	**1.23**	**226**	Pg	Pg	03 58 33.8	-2.4
ILAS	**Lasjerd**	**1.90**	**241**	Pn	Pn	03 58 44.0	-0.6
IFIR	**Firoozkooh**	**1.94**	**250**	Lg		03 59 12.4	
IFIR	**Firoozkooh**	**1.94**	**250**	Pn	Pn	03 58 43.9	-1.2
IPRN	**Paran-Amol**	**2.22**	**269**	Pn	Pn	03 58 44.9	-4.3
IDMV	**Damavand**	**2.51**	**254**	Pn	Pn	03 58 52.7	-0.6
ISFR	**Esferayen**	**2.52**	**73**	Pn	Pn	03 58 52.2	-1.3
IAFJ	**Afjeh**	**2.70**	**261**	Lg		03 59 35.6	
IAFJ	**Afjeh**	**2.70**	**261**	Pn	Pn	03 58 55.2	-0.7
IVRN	**Varamin**	**2.97**	**244**	Lg		03 59 43.5	
IVRN	**Varamin**	**2.97**	**244**	Pn	Pn	03 58 58.6	-1.2
ISFB	**Sefidab**	**2.99**	**230**	Lg		03 59 44.8	
ISFB	**Sefidab**	**2.99**	**230**	Pn	Pn	03 58 59.0	-1.1
IPAY	**Payeh**	**3.23**	**87**	Pn	Pn	03 59 01.7	-1.9
IPAY	**Payeh**	**3.23**	**87**	Pn	Pn	03 59 01.7	-1.9
IQOM	**Qom**	**3.52**	**246**	Lg		04 00 01.4	
IQOM	**Qom**	**3.52**	**246**	Pn	Pn	03 59 06.3	-1.4
IMHD	**Mahdasht**	**3.56**	**261**	Pn	Pn	03 59 10.7	+2.4
IGZV	**Gazvin**	**3.85**	**272**	Pn	Pn	03 59 10.1	-2.3
IMYA	**Miamay**	**4.13**	**88**	Pn	Pn	03 59 14.4	-1.9
IRAZ	**Razeghan**	**4.21**	**259**	Pn	Pn	03 59 18.6	+1.1

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*NEIC **06** 04:03:44.1,23.78S×69.12W,h9^{km},ML4.4(GUC),After GUC.*

GUC 06 04:03:44.1±1.0**,23.78S×69.12W,h9**^{km}±7^{km}**,MD4.1, ML4.4,2C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**1.18**	**274**	⇑*i*P	Pb	04 04 05.8	-0.5
ANCH				*i* S	Sb	04 04 21.0	-0.5
SPCH	**San Pedro de A**	**1.21**	**45**	⇓*i*P	Pb	04 04 06.7	-0.1
SPCH				*i* S	Sb	04 04 23.2	+0.9
SPCH				AMP		04 04 24.1	
	comp=N,15μm,0.4s						
CPCH	**Copiapo**	**3.73**	**197**	*i* P	Pn	04 04 42.3	-0.9
CPCH				*i* S	Sn	04 05 27.8	0.0
VACH	**Vallenar**	**5.00**	**197**	⇑*i*P	Pn	04 05 00.1	-1.1
VACH				*i* S	Sn	04 05 58.5	-1.3
LPAZ	**La Paz**	**7.51**	**7**	*e*Pn	Pn	04 05 28.7	-7.8
	comp=N,1.7nm,0.4s						
LPAZ				*e*Pg	Pg	04 05 34.2	-40
ARE	**Arequipa**	**7.61**	**343**	*e*P	Pn	04 05 42.0	+4.1
ARE				*e*S	Sn	04 07 19.0	+14

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*BGS **06** 04:24:04.0,12.14N×96.08E,h33^{km},mb5.4*

*BJI **06** 04:24:17.0,13.83N×93.59E,h42^{km},mB5.7,mb5.8,Ms5.2, Msz4.9*

*NEIC **06** 04:24:18.6±0.1,13.86N×93.58E,mb5.6/162,MS5.1/105, MW5.4,Error ellipse: s-maj=3.9km s-min=2.7km az=198.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.63; M$_{\theta\theta}$0.80; M$_{\phi\phi}$-1.43; M$_{r\theta}$0.87; M$_{\theta\phi}$-0.15; M$_{\phi r}$-0.97; Best double couple: M$_0$1.8×10^{17} NP1:φ$_s$41°, δ39°,λ159°. NP2:φ$_s$147°,δ77°,λ53°. Principal axes: T 1.78, Plg45°, Azm20°; N .05, Plg36°, Azm157°; P -1.83, Plg23°, Azm265°;*

*HRVD **06** 04:24:18.6±0.2,13.93N×93.55E,h42^{km},MW5.5/69, Centroid moment Tensor Solution. LP body waves: s64,c122;Mantle waves: s69,c129; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.02±.03; M$_{\theta\theta}$0.48±.03; M$_{\phi\phi}$-1.51±.03; M$_{r\theta}$0.89±.03; M$_{\theta\phi}$0.28±.03; M$_{\phi r}$-0.87±.03; Best double couple: M$_0$1.843×10^{17} NP1:φ$_s$22°,δ34°,λ142°. NP2:φ$_s$145°,δ70°,λ62°. Principal axes: T 1.777, Plg56°, Azm18°; N .123, Plg26°, Azm155°; P -1.909, Plg20°, Azm256°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **06** 04:24:18.2±0.9,14.11N×93.44E,h33^{km},mb5.9/113, MS4.9/63 Error ellipse: s-maj=6.9km s-min=3.3km az=125.8*

*CRAAG **06** 04:24:20.3,14.63N×93.52E,Mb5.7*

ISC 06 04:24:16.9±0.5**,13.85N**±0.03×**93.58E**±0.02**,h34**^{km}±4^{km}**, h39**^{km}±1.1^{km}**:pP-P,n853,σ0**^{s}**91**/739**,mb5.6**/215**,MS5.0**/133**, 186C-26D,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.33**	**201**	*e*	**P**	**04 24 58.7**	**+5.1**
PBA				*e*S	**S**	**04 25 29.1**	**+7.9**
NNT	**Nongplab**	**6.12**	**101**	P	**P**	**04 25 49.0**	**+1.6**
NST	**Nakhon Sawan**	**6.60**	**73**	⇑P	**P**	**04 25 55.0**	**+1.0**
CM31	**Chiang Mai Arr**	**6.90**	**48**	*e*Pn	**P**	**04 25 59.0**	**+0.7**
	1μm,0.8s						
NANT	**Nan**	**8.43**	**53**	⇑P	**P**	**04 26 21.0**	**+1.5**
	688nm,0.5s						
CHRT	**Chiangrai**	**8.44**	**44**	⇑PN	**P**	**04 26 19.6**	**0.0**
CHRT				PG	**P**	**04 26 29.5**	**+10**
CHRT				SG	**S**	**04 28 11.0**	**+16**
KKTK	**Khon Kaen**	**9.27**	**73**	⇓P	**P**	**04 26 32.5**	**+1.3**
	7μm,0.7s						
SNG	**Songkhla**	**9.58**	**133**	P	**P**	**04 26 38.0**	**+2.4**
	202nm,0.8s						
BWNR	**Bhubaneshwar**	**9.81**	**312**	*e*P	**P**	**04 26 30.0**	**-8.8**
BWNR				*e*S	S	04 28 08.0	-21
BWNR				*e*S	**S**	**04 28 13.7**	**-15**
CAL	**Calcutta**	**9.98**	**331**	*e*	Px	04 26 20.4	
CAL				*e*	**S**	**04 28 21.9**	**-11**
AGT	**Agartala**	**10.22**	**348**	⇓*i*P	**P**	**04 26 43.0**	**-1.4**
AGT				*i*		04 27 19.0	
VIS	**Vishakhapatnam**	**10.59**	**293**	*e*P	**P**	**04 26 47.3**	**-2.1**
VIS				*e*S	**S**	**04 28 32.6**	**-15**
VIS				*i*		04 30 01.2	
IMP	**Imphal**	**10.88**	**2**	⇑*i*P	**P**	**04 26 52.0**	**-1.5**
SHL	**Shillong**	**11.77**	**352**	*e*P	**P**	**04 27 00.5**	**-4.9**
	409nm,1.2s						
SHL				*e*S	**S**	**04 29 03.0**	**-14**
IPM	**Ipoh**	**11.78**	**141**	P	**P**	**04 27 10.2**	**+4.6**
BOK	**Bokaro**	**12.28**	**325**	*e*P	**P**	**04 27 12.0**	**-0.3**
BOK				*e*S	**S**	**04 29 12.6**	**-16**
MDRS	**Chennai**	**12.99**	**268**	*e*P	**P**	**04 27 20.6**	**-1.2**
MDRS				*i*		04 30 43.0	
BLSP	**Bilaspur**	**13.64**	**309**	*e*P	**P**	**04 27 29.2**	**-1.3**
BLSP				*i* S	**S**	**04 29 45.0**	**-17**
SLGI	**Shiliguri**	**13.67**	**340**	*e*	**P**	**04 27 31.0**	**+0.2**
SLGI				*e*		04 29 50.2	
KMI	**Kunming**	**14.15**	**36**	⇑P	**P**	**04 27 39.1**	**+2.0**
KMI				AP		04 27 46.3	
KMI				XP		04 27 49.2	
KMI				S	**S**	**04 30 15.4**	**+1.5**
KMI				SS	SS	04 30 32.8	+2.4
KMI				AMB	AMB		
	comp=Z,71nm,1.2s						
KMI				AMB	AMB		
	comp=Z,706nm,4.6s						
KMI				LR	LR		
	comp=N,4μm,16.6s						
KMI				LR	LR		
	comp=E,5μm,16.3s						
KMI				LR	LR		
	comp=Z,6μm,22.5s						
KMI	**Kunming**	**14.15**	**36**	⇑P	**P**	**04 27 39.1**	**+2.0**
KMI				S	**S**	**04 30 15.4**	**+1.5**
KMI				pmax	pmax		
	comp=Z,71nm,1.2s						
KMI	**Kunming**	**14.15**	**36**	⇑P	**P**	**04 27 39.1**	**+2.0**
	comp=Z,71nm,1.2s						
KMI				pP		04 27 46.3	
KMI				sP		04 27 49.2	
KMI				PP	PP	04 27 49.7	+1.5
KMI				PPP	PPP	04 27 59.1	+3.9
KMI				S	**S**	**04 30 15.4**	**+1.5**
KMI				sS		04 30 25.1	
KMI				SS	SS	04 30 32.8	+2.4
GTK	**Gangtok**	**14.20**	**342**	*e*	**P**	**04 27 28.0**	**-10**
PALK	**Pallekele**	**14.24**	**244**	Pn	**P**	**04 27 39.4**	**+1.1**
	comp=Z,713nm,1.4s,SNR=34						
PALK	**Pallekele**	**14.24**	**244**	*e*P	**P**	**04 27 37.0**	**-1.3**
	comp=Z,79nm,1.0s						
HYB	**Hyderabad**	**14.90**	**286**	⇓*e*P	**P**	**04 27 45.0**	**-1.9**
HYB				pmax	pmax		
	comp=Z,231nm,0.8s						
HYB	**Hyderabad**	**14.90**	**286**	⇓*i*P	**P**	**04 27 45.0**	**-1.9**
	comp=Z,231nm,0.8s						
HYB				*e*		04 30 10.0	
HYB				*e*S	**S**	**04 30 33.5**	**+2.0**
HYB				LR	LR	04 32 44.0	
	comp=Z,5.9nm,22.0s						
KGM	**Kluang**	**15.20**	**140**	P	**P**	**04 27 56.0**	**+5.1**
JIRN	**Jiri**	**15.37**	**335**	*e*P	**P**	**04 27 52.4**	**-0.7**
	comp=Z,588nm,0.6s						
NGP	**Nagpur**	**15.64**	**300**	*e*P	**P**	**04 27 56.4**	**-0.1**
NGP				*e*		04 30 36.5	
	comp=Z,467nm,0.9s						
PKI	**Pulchoki**	**15.64**	**332**	*e*P	**P**	**04 27 53.6**	**-2.9**
	comp=Z,467nm,0.6s						
DMN	**Daman**	**15.81**	**331**	*e*P	**P**	**04 27 55.1**	**-3.6**
	comp=Z,590nm,0.6s						
KKN	**Kakani**	**15.88**	**332**	*e*P	**P**	**04 27 56.7**	**-2.9**
	comp=Z,460nm,0.7s						
ALBI	**Allahabad**	**15.89**	**318**	*e*P	**P**	**04 28 00.0**	**+0.3**
LSA	**Lhasa**	**15.94**	**352**	P	**P**	**04 27 58.0**	**-2.3**
LSA				AP		04 28 08.2	
LSA				S	**S**	**04 31 00.5**	**+4.8**
LSA				LR	LR		
	comp=N,3μm,28.1s						
LSA				LR	LR		
	comp=E,4μm,29.2s						
LSA				LR	LR		
	comp=Z,5μm,26.9s						
LSA	**Lhasa**	**15.94**	**352**	*e*P	**P**	**04 27 56.9**	**-3.4**
LSA				pmax	pmax		
	comp=Z,473nm,0.8s						
LSA	**Lhasa**	**15.94**	**352**	*e*Pn	**P**	**04 27 56.9**	**-3.4**
	comp=Z,473nm,0.8s						
LSA				*e*		04 28 04.2	
GKN	**Gorkha**	**16.36**	**331**	*e*P	**P**	**04 28 03.3**	**-2.4**
	comp=Z,683nm,0.8s						
QIZ	**Qiongzhong**	**16.43**	**70**	P	**P**	**04 28 07.1**	**+0.5**
QIZ				AP		04 28 15.0	
QIZ				S	**S**	**04 31 07.4**	**+0.2**
QIZ				XS		04 31 24.6	
QIZ				LR	LR		
	comp=E,4μm,18.4s						
QIZ				LR	LR		
	comp=Z,6μm,18.4s						
QIZ	**Qiongzhong**	**16.43**	**70**	*e*P	**P**	**04 28 06.3**	**-0.2**
	comp=Z,72nm,0.8s						
KOLN	**Koldanda**	**16.68**	**328**	*e*P	**P**	**04 28 06.2**	**-3.5**
	comp=Z,785nm,0.8s						
LATR	**Latur**	**16.96**	**288**	*e*P	**P**	**04 28 13.5**	**+0.2**
LATR				*e*		04 31 06.2	
TRD	**Trivandrum**	**17.14**	**254**	*e*P	**P**	**04 28 16.0**	**+0.5**
TRD				*i*		04 32 54.4	
GYA	**Guiyang**	**17.54**	**42**	⇑*i*P	**P**	**04 28 21.0**	**+0.5**
GYA				AP		04 28 30.8	
GYA				XP		04 28 36.1	
GYA				S	**S**	**04 31 33.0**	**+0.4**
GYA				AMB	AMB		
	comp=Z,160nm,0.9s						
GYA				AMB	AMB		
	comp=Z,1μm,5.5s						
GYA				LR	LR		
	comp=N,5μm,12.0s						
GYA				LR	LR		
	comp=E,4μm,15.0s						
GYA				LR	LR		
	comp=Z,4μm,18.0s						
BHPL	**Bhopal**	**17.92**	**304**	*e*P	**P**	**04 28 25.3**	**+0.1**
BHPL				*e*		04 28 31.0	
	comp=Z,151nm,1.2s						
JHNI	**Jhansi**	**18.26**	**312**	*e*P	**P**	**04 28 31.0**	**+1.5**
JHNI				*e*		04 31 37.0	
MNGI	**Mangalore**	**18.27**	**269**	*i* P	**P**	**04 28 30.2**	**+0.5**
MNGI				*i*		04 31 41.9	
	comp=Z,393nm,1.0s						
KAD	**Karad**	**18.99**	**283**	*e*P	**P**	**04 28 38.8**	**+0.3**
KAD				*i*		04 31 56.3	
GOA	**Goa**	**19.18**	**277**	*e*P	**P**	**04 28 48.9**	**+8.3**
	comp=Z,474nm,1.1s						
GOA				*e*		04 32 05.9	
CD2	**Chengdu**	**19.40**	**27**	P	**P**	**04 28 41.4**	**-1.5**
CD2				PP	PP	04 29 00.0	-0.5
CD2				PPP	PPP	04 29 08.5	-1.1
CD2				S	**S**	**04 32 16.2**	**+1.7**
CD2				SS	SS	04 32 43.0	+2.0
CD2				AMB	AMB		
	comp=Z,682nm,1.0s						
CD2				AMB	AMB		
	comp=Z,2μm,5.0s						
CD2				LR	LR		
	comp=E,3μm,8.0s						
POO	**Poona**	**19.50**	**286**	⇓*i*P	**P**	**04 28 45.0**	**+0.8**
	comp=E,568nm,1.2s						
POO				*i*		04 32 08.0	
LGTI	**Lohaghat**	**19.83**	**324**	*e*P	**P**	**04 28 49.5**	**+1.8**
LGTI				*e*		04 32 19.3	
PTH	**Pithoragarh**	**19.93**	**324**	*e*P	**P**	**04 28 50.7**	**+2.0**
PTH				*e*S	**S**	**04 32 25.4**	**-0.6**
BOM	**Bombay**	**20.54**	**287**	*e*P	**P**	**04 28 56.6**	**+1.4**
BOM				*e*		04 32 29.6	
GZH	**Guangzhou**	**20.86**	**61**	P	**P**	**04 29 02.9**	**+4.4**
GZH				LR	LR		
	comp=N,3μm,17.1s,MS4.8						
GZH				LR	LR		
	comp=E,2μm,18.3s,MS4.8						
GZH				LR	LR		
	comp=Z,4μm,20.8s,MS4.7						
NDI	**New Delhi**	**21.18**	**317**	⇑*i*P	**P**	**04 29 02.0**	**+0.3**
NDI				*e*		04 32 42.5	
AJM	**Ajmer**	**21.73**	**308**	⇓*i*P	**P**	**04 29 09.0**	**+1.8**
AJM				*i*		04 32 57.0	
DDI	**Dehra Dun**	**21.77**	**321**	*e*P	**P**	**04 29 09.0**	**+1.5**
DDI				*e*		04 32 59.0	
ENH	**Enshi**	**21.97**	**39**	*e*P	**P**	**04 29 08.7**	**-0.9**
	comp=Z,2μm,1.0s,mb6.5						
SMLA	**Simla**	**22.88**	**321**	⇑*i*P	**P**	**04 29 35.1**	**+16**
	comp=Z,863nm,0.4s,mb6.5						
SMLA				*i* S	**S**	**04 33 41.0**	**+19**
SDNR	**Sundarnagar**	**23.26**	**322**	⇑*i*P	**P**	**04 29 25.8**	**+3.5**
SDNR				*e*		04 33 39.8	
BHK	**Bhakra**	**23.54**	**321**	*e*P	**P**	**04 29 25.9**	**+0.9**
BHK				*e*		04 33 41.5	
KKM	**Kota Kinabalu**	**23.59**	**107**	P	**P**	**04 29 27.2**	**+1.5**
LZH	**Lanzhou**	**23.99**	**21**	⇑P	**P**	**04 29 30.9**	**+1.6**
LZH				AP		04 29 39.4	
LZH				XP		04 29 42.7	
LZH				SCP		04 36 46.0	
LZH				AMB	AMB		
	comp=Z,370nm,1.6s,mb5.6						
LZH				AMB	AMB		
	comp=Z,2μm,5.2s						
LZH				LR	LR		
	comp=E,9μm,13.7s						
LZH				LR	LR		
	comp=Z,18μm,14.0s,MS5.7						
LZH	**Lanzhou**	**23.99**	**21**	⇑P	**P**	**04 29 30.9**	**+1.6**
LZH				*PP		04 29 39.4	
LZH				*SP		04 29 42.7	
LZH						04 30 10.0	
LZH				pmax	pmax		
	comp=Z,370nm,1.6s,mb5.6						
LZH				MLR	MLR		
	comp=Z,18μm,14.0s,MS5.7						
LZH	**Lanzhou**	**23.99**	**21**	⇑P	**P**	**04 29 30.9**	**+1.6**
	comp=Z,370nm,1.6s,mb5.6						
LZH				pP		04 29 39.4	
LZH				sP		04 29 42.7	
LZH				PP	PP	04 30 10.0	+6.1
LZH				S	**S**	**04 33 51.0**	**+10**
LZH				sS		04 34 10.0	
LZH				SS	SS	04 34 57.2	+24
LZH				ScP		04 36 46.0	
LZH				ScS	ScS	04 40 42.5	+10
LZH				LR	LR		
	comp=Z,18μm,14.0s,MS5.7						
PONG	**Pong**	**24.19**	**321**	*e*P	**P**	**04 29 33.0**	**+1.6**
PONG				*e*		04 34 09.0	
XAN	**Xi'an**	**24.45**	**32**	P	**P**	**04 29 33.0**	**-0.9**
XAN				AP		04 29 47.1	
XAN				S	**S**	**04 33 53.0**	**+4.1**
XAN				AMB	AMB		
	comp=Z,714nm,1.0s,mb6.0						
XAN				LR	LR		
	comp=N,2μm,27.5s,MS4.7						
XAN				LR	LR		
	comp=E,2μm,24.1s,MS4.7						
XAN				LR	LR		
	comp=Z,4μm,22.9s,MS4.8						
THN	**Thein Dam**	**24.67**	**322**	*e*P	**P**	**04 29 35.5**	**-0.5**
THN				*e*		04 34 13.3	
WHN	**Wuhan**	**25.34**	**46**	⇑P	**P**	**04 29 41.8**	**-0.7**
WHN				LR	LR		
	comp=N,1μm,5.0s						
WHN				LR	LR		
	comp=E,4μm,7.1s						
WHN				LR	LR		
	comp=Z,8μm,19.9s,MS5.2						
TSM	**Tawau**	**25.77**	**109**	P	**P**	**04 29 48.2**	**+1.5**
QZH	**Quanzhou**	**26.00**	**61**	⇑*i*P	**P**	**04 29 47.4**	**-1.3**
QZH				XP	sP	04 30 01.2	-1.2
QZH				S	**S**	**04 34 15.5**	**+0.7**
QZH				SS	SS	04 35 22.4	+0.3
QZH				AMB	AMB		
	comp=Z,290nm,1.0s,mb5.8						
QZH				LR	LR		
	comp=N,5μm,20.0s,MS5.2						
QZH				LR	LR		
	comp=E,5μm,21.5s,MS5.2						
QZH				LR	LR		
	comp=Z,6μm,23.7s,MS5.0						
GTA	**Gaotai**	**26.05**	**11**	⇑*i*P	**P**	**04 29 49.9**	**+0.9**
GTA				AP	pP	04 29 59.5	+0.9
GTA				XP	sP	04 30 02.7	0.0
GTA				PP	PP	04 30 31.8	+1.1
GTA				PPP	PPP	04 30 44.0	+1.3
GTA				PCP	PcP	04 33 17.7	+0.8
GTA				S	**S**	**04 34 17.4**	**+1.9**
GTA				XS		04 34 34.8	
GTA				SS	SS	04 35 26.5	+3.3
GTA				SCP		04 36 53.1	
GTA				PCS		04 36 56.9	
GTA				SCS	ScS	04 40 40.9	0.0
GTA				AMB	AMB		
	comp=Z,523nm,1.3s,mb5.9						
GTA				AMB	AMB		
	comp=Z,2μm,5.7s						
GTA				LR	LR		
	comp=N,1μm,22.8s,MS4.6						
GTA				LR	LR		
	comp=E,1μm,19.8s,MS4.6						
GTA				LR	LR		
	comp=Z,2μm,35.4s						
COCO	**West Island**	**26.07**	**173**	PFAKE		04 30 00.0	+11
COCO				LR	LR		
	comp=Z,457nm,19.0s,MS4.0						
PCPH	**Palayan**	**26.67**	**83**	⇓*e*P	**P**	**04 29 54.0**	**-0.9**
TATO	**Taipei**	**28.50**	**63**	*e*P	**P**	**04 30 12.2**	**+0.8**
	comp=Z,67nm,0.9s,mb5.3						
TATO				LR	LR		
	comp=Z,2μm,20.0s,MS4.6						
NJ2	**Nanjing**	**29.38**	**48**	*e*P	**P**	**04 30 18.8**	**-0.3**
NJ2				AP	pP	04 30 28.1	-0.9
NJ2				PP	PP	04 31 13.6	-1.3
NJ2				S	**S**	**04 35 09.0**	**-0.2**
NJ2				XS		04 35 26.0	
NJ2				AMB	AMB		
	comp=Z,1μm,1.1s,mb6.5						
NJ2				AMB	AMB		
	comp=Z,1μm,4.0s						
NJ2				LR	LR		
	comp=N,7μm,19.1s,MS5.4						
NJ2				LR	LR		
	comp=E,5μm,16.9s,MS5.4						
NJ2				LR	LR		
	comp=Z,9μm,14.8s,MS5.5						
DGAR	**Diego Garcia**	**29.76**	**226**	*e*P	**P**	**04 30 23.5**	**+0.7**
	comp=Z,136nm,1.3s,mb5.5						
DGAR				LR	LR		
	comp=Z,551nm,19.0s,MS4.2						
KSH	**Kashi**	**29.90**	**332**	⇑P	**P**	**04 30 24.7**	**+0.9**
KSH				*e*AP	pP	04 30 35.4	+1.8
KSH				*e*XP	sP	04 30 39.2	+1.1
KSH				*e*PCP	PcP	04 33 27.4	+1.2
KSH				*e*S	**S**	**04 35 17.5**	**0.0**
KSH				*e*SCP		04 37 05.0	
KSH				*e*SCS	ScS	04 40 58.7	+0.5
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.5						
KSH				LR	LR		
	comp=E,5μm,24.3s						
WMQ	**Urumqi**	**30.29**	**352**	⇑*i*P	**P**	**04 30 28.0**	**+0.8**
WMQ				AP	pP	04 30 38.0	+1.0
WMQ				XP	sP	04 30 42.0	+0.4
WMQ				PP	PP	04 31 28.0	+1.2
WMQ				S	**S**	**04 35 14.0**	**-10**
WMQ				SS	SS	04 37 03.0	-0.6
WMQ				AMB	AMB		
	comp=Z,243nm,1.0s,mb5.9						
WMQ				AMB	AMB		
	comp=Z,202nm,8.0s						
WMQ				LR	LR		
	comp=N,1μm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=E,2μm,15.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,2μm,16.0s,MS4.8						
SSE	**Sheshan**	**30.62**	**51**	P	**P**	**04 30 29.0**	**-1.3**
SSE				AP	pP	04 30 37.6	-2.5
SSE				S	**S**	**04 35 28.1**	**-0.8**
SSE				AMB	AMB		
	comp=Z,133nm,1.0s,mb5.7						
SSE				AMB	AMB		
	comp=Z,196nm,7.4s						
SSE				LR	LR		
	comp=N,1μm,21.0s,MS4.7						
SSE				LR	LR		
	comp=E,1μm,21.0s,MS4.7						
SSE				LR	LR		
	comp=Z,2μm,27.5s						
SSE	**Sheshan**	**30.62**	**51**	P	**P**	**04 30 29.0**	**-1.3**
	comp=Z,133nm,1.0s,mb5.7						
SSE				pP	pP	04 30 37.6	-2.5
SSE				sP	sP	04 30 42.0	-2.6
SSE				S	**S**	**04 35 28.1**	**-0.8**
SSE				sS		04 35 43.4	
SSE				LR	LR		
	comp=Z,2μm,27.5s,MS4.5						
TIA	**Tai'an**	**30.68**	**39**	⇑P	**P**	**04 30 29.4**	**-1.4**
TIA				AMB	AMB		
	comp=Z,220nm,1.4s,mb5.8						
HHC	**Hu-ho-hao-te**	**31.15**	**27**	⇑P	**P**	**04 30 34.6**	**-0.3**
HHC				AP	pP	04 30 44.9	+0.2
HHC				XP	sP	04 30 48.5	-0.8
HHC				PP	PP	04 31 39.4	+1.4
HHC				PCP	PcP	04 33 28.5	-1.0
HHC				S	**S**	**04 35 38.0**	**+0.9**
HHC				SCP		04 37 08.5	
HHC				SS	SS	04 37 22.0	-1.6
HHC				AMB	AMB		
	comp=Z,381nm,1.2s,mb6.1						
HHC				LR	LR		
	comp=N,903nm,19.2s,MS4.7						
HHC				LR	LR		
	comp=E,1μm,21.6s,MS4.7						
HHC				LR	LR		
	comp=Z,1μm,21.6s,MS4.6						

ULHL	Ulahol	32.03	335	P	P	04 30 43.3	+0.8
	SNR=6.3						
KZA	Kyzart	32.30	334	P	P	04 30 45.8	+0.8
	SNR=42						
UCH	Uchtor	32.74	333	P	P	04 30 49.9	+1.1
	SNR=42						
BJT	Baijiatuau	32.75	33	eP	P	04 30 48.4	-0.5
BJT				pmax	pmax		
	comp=Z,402nm,1.3s						
BJT	Baijiatuau	32.75	33	eP	P	04 30 48.4	-0.5
	comp=Z,402nm,1.3s,mb6.2						
BJI	Beijing	32.77	33	eP	P	04 30 48.9	-0.1
BJI				AMB	AMB		
	comp=Z,258nm,1.2s,mb6.0						
BJI				AMB	AMB		
	comp=Z,2µm,2.9s,mb6.6						
BJI				LR	LR		
	comp=N,2µm,16.5s,MS5.1						
BJI				LR	LR		
	comp=E,2µm,17.2s,MS5.1						
BJI				LR	LR		
	comp=Z,9µm,22.0s,MS5.4						
BJI	Beijing	32.77	33	eP	P	04 30 48.9	-0.1
	comp=Z,258nm,1.2s,mb6.0						
BJI				S	S	04 36 29.8	+27
BJI				LR	LR		
	comp=Z,9µm,22.0s,MS5.4						
TKM2	Tokmak 2	32.86	335	P	P	04 30 50.2	+0.5
	SNR=72						
KBK	Karagaybulak	32.91	334	P	P	04 30 51.3	+1.1
	SNR=5.9						
AML	Almayashu	33.03	332	P	P	04 30 52.4	+1.2
	SNR=62						
AAK	Ala-Archa	33.08	334	P	P	04 30 52.8	+1.2
	SNR=72						
AAK	Ala-Archa	33.08	334	⇑iP	P	04 30 51.7	0.0
AAK				pmax	pmax		
	comp=Z,102nm,1.3s,mb5.6						
AAK				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.6						
AAK	Ala-Archa	33.08	334	eP	P	04 30 51.6	-0.1
	comp=Z,99nm,1.1s,mb5.7						
AAK				LR	LR		
	comp=Z,320nm,19.0s,MS4.0						
FRU	Bishkek	33.19	334	⇑iP	P	04 30 53.5	+0.9
FRU				pmax	pmax		
	comp=Z,240nm,2.0s,mb5.8						
FRU				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.7						
CHMS	Chumysh	33.27	334	P	P	04 30 53.6	+0.3
	SNR=74						
EKS2	Erkin-Say	33.42	333	P	P	04 30 55.6	+1.1
	SNR=68						
USP	Ospenovka	33.59	334	P	P	04 30 56.5	+0.4
	SNR=138						
MKAR	Makanchi Array	34.18	346	i P	P	04 31 01.0	-0.1
MKAR				pmax	pmax		
	comp=Z,247nm,1.0s						
DL2	Dalian	35.16	40	P	P	04 31 09.8	+0.2
DL2				AMB	AMB		
	comp=Z,170nm,1.0s,mb5.9						
DL2				AMB	AMB		
	comp=Z,260nm,4.9s						
DL2				LR	LR		
	comp=N,650nm,19.4s,MS4.7						
DL2				LR	LR		
	comp=E,920nm,17.7s,MS4.7						
DL2				LR	LR		
	comp=Z,920nm,18.8s,MS4.6						
ULN	Ulaanbaatar	35.72	16	⇑iP	P	04 31 14.2	-0.1
ULN				e		04 33 41.6	
ULN				pmax	pmax		
	comp=Z,154nm,1.1s,mb5.8						
ULN				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.2						
ULN	Ulaanbaatar	35.72	16	⇑iP	P	04 31 14.2	-0.1
	comp=Z,154nm,1.1s,mb5.8						
ULN				ePcP	PcP	04 33 41.6	-0.6
ULN				eScP		04 37 24.1	
ULN				LR	LR		
	comp=Z,5µm,21.0s,MS5.2						
ZAK	Zakamensk	37.28	10	⇓iP	P	04 31 27.8	+0.4
ZAK				e		04 32 55.2	
ZAK				e		04 33 44.2	
ZAK				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.2						
INCN	Inchon	37.65	45	eP	P	04 31 29.8	-0.8
	comp=Z,134nm,1.1s,mb5.6						
INCN				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
MOY	Mondy	38.19	7	eP	P	04 31 35.7	+0.7
MOY				pmax	pmax		
	comp=Z,110nm,2.2s,mb5.2						
KS15	Wonju Array Si	38.50	46	eP	P	04 31 37.1	-0.6
TLY	Talaya	38.60	10	P	P	04 31 40.6	+2.3
	comp=Z,1µm,1.0s,mb6.6						
TLY	Talaya	38.60	10	c iP	P	04 31 39.9	+1.6
TLY				e		04 33 11.2	
TLY				ePPP	PPP	04 33 30.2	-3.4
TLY				eSS	SS	04 40 38.5	+25
TLY				pmax	pmax		
	comp=Z,217nm,0.9s,mb5.9						
TLY				MLR	MLR		
	comp=Z,2µm,24.0s,MS4.8						
TLY	Talaya	38.60	10	eP	P	04 31 39.6	+1.3
	comp=Z,197nm,0.9s,mb5.8						
TLY				LR	LR		
	comp=Z,434nm,22.0s,MS4.2						
KURK	Kurchatov	38.73	345	i P	P	04 31 39.6	+0.2
KURK				pmax	pmax		
	comp=Z,167nm,1.3s,mb5.6						
KURK	Kurchatov	38.73	345	⇑eP	P	04 31 39.5	0.0
	comp=Z,301nm,1.2s,mb5.9						
KURK				eScP		04 37 35.2	
KURK				LR	LR		
	comp=Z,525nm,22.0s,MS4.3						
IRK	Irkutsk	39.25	10	eP	P	04 31 43.7	0.0
IRK				e		04 33 18.7	
IRK				pmax	pmax		
	comp=Z,191nm,1.7s,mb5.5						
CN2	Changchun	40.42	36	eP	P	04 31 53.5	-0.1
CN2				AP	pP	04 32 03.9	+0.2
CN2				XP	sP	04 32 07.1	-0.9
CN2				PP	PP	04 33 31.3	+1.2
CN2				PCP	PcP	04 33 56.7	-0.1
CN2				SCP		04 37 40.7	
CN2				eS	S	04 37 57.9	-1.6
CN2				AMB	AMB		
	comp=Z,300nm,0.8s,mb6.1						
CN2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=N,1µm,17.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,17.0s,MS5.2						
CN2				LR	LR		
	comp=Z,3µm,18.0s,MS5.1						
HIA	Hailar	41.34	26	⇑iP	P	04 32 01.0	-0.1
HIA				e		04 33 36.3	
HIA				pmax	pmax		
	comp=Z,191nm,1.1s						
HIA	Hailar	41.34	26	⇑iP	P	04 32 01.0	-0.1
	comp=Z,191nm,1.1s,mb5.6						
HIA				ePP	PP	04 33 36.3	-3.4
HIA				eScP		04 37 44.9	
NVS	Novosibirsk	41.69	351	i P	P	04 32 02.7	-1.2
NVS				e		04 33 49.5	
NVS				eS	S	04 38 13.1	-5.1
NVS				pmax	pmax		
	comp=N,113nm,0.8s						
NVS				pmax	pmax		
	comp=E,70nm,0.8s						
NVS				pmax	pmax		
	comp=Z,267nm,0.8s,mb5.9						
NVS				smax			
	comp=E,70nm,0.8s						
BVA0	Borovoye Array	43.21	340	i P	P	04 32 15.9	-0.5
BVA0				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MBWA	Marble Bar	43.24	143	eP	P	04 32 16.2	-0.8
	comp=Z,22nm,0.7s,mb5.0						
MBWA				e		04 32 30.0	
MBWA				LR	LR		
	comp=Z,817nm,19.0s,MS4.7						
MDJ	Mudanjiang	43.32	38	P	P	04 32 16.8	-0.6
MDJ				AP	pP	04 32 25.6	-1.9
MDJ				PP	PP	04 33 57.6	-2.5
MDJ				PCP	PcP	04 34 05.2	-1.1
MDJ				S	S	04 38 42.2	+0.1
MDJ				AMB	AMB		
	comp=Z,35nm,1.3s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,341nm,8.7s						
MDJ				LR	LR		
	comp=N,1µm,18.4s,MS4.9						
MDJ				LR	LR		
	comp=E,920nm,19.8s,MS4.9						
MDJ				LR	LR		
	comp=Z,1µm,16.0s,MS4.9						
MDJ	Mudanjiang	43.32	38	eP	P	04 32 16.7	-0.6
	comp=Z,58nm,1.0s,mb5.3						
CHKZ	Chkalovo	43.68	340	i P	P	04 32 20.1	0.0
CHKZ				pmax	pmax		
	comp=Z,96nm,0.7s,mb5.6						
CHKZ	Chkalovo	43.68	340	⇑iP	P	04 32 20.1	0.0
	comp=Z,134nm,0.6s,mb5.8						
FITZ	Fitzroy Crossi	44.81	134	⇑iP	P	04 32 28.6	-1.1
	comp=Z,111nm,0.5s,mb5.9						
FITZ				ePCP	PcP	04 34 11.1	-0.6
MAJO	Matsushiro	45.76	52	eP	P	04 32 36.1	-1.0
MAJO				e		04 34 13.2	
MAJO				pmax	pmax		
	comp=Z,215nm,0.9s,mb6.1						
MAJO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
MAJO	Matsushiro	45.76	52	eP	P	04 32 36.1	-1.0
	comp=Z,214nm,0.9s,mb6.1						
MAJO				ePcP	PcP	04 34 13.2	-1.6
MAJO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
MAT	Matsushiro	45.76	52	eP	P	04 32 36.0	-1.1
MAT				eS	S	04 39 38.0	+21
MAT				pmax	pmax		
	comp=Z,250nm,1.0s,mb6.1						
MAT				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
MAT	Matsushiro	45.76	52	eP	P	04 32 36.0	-1.1
	comp=Z,250nm,1.0s,mb6.1						
MAT				eS	S	04 39 38.0	+21
MAT				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
MAT	Matsushiro	45.76	52	P	P	04 32 36.2	-0.9
BOD	Bodaibo	46.53	15	eP	P	04 32 42.4	-0.4
BOD				pmax	pmax		
	comp=Z,255nm,1.4s,mb6.0						
KAKA	Kakadu	46.69	123	eP	P	04 32 42.8	-1.8
	comp=Z,15nm,0.6s,mb5.1						
KLR	Kul'dur	47.14	34	eP	P	04 32 43.8	-4.0
KLR				e		04 34 35.5	
KLR				eS	S	04 39 55.5	+19
KLR				pmax	pmax		
	comp=N,45nm,1.6s						
KLR				pmax	pmax		
	comp=E,80nm,1.6s						
KLR				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.5						
KLR				MLR	MLR		
	comp=N,3µm,15.0s,MS5.5						
KLR				MLR	MLR		
	comp=E,2µm,15.0s,MS5.5						
KLR				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.3						
BHD	Baghdad	48.58	302	eP	P	04 32 50.0	-9.2
CLNS	Chul'man	49.10	22	eP	P	04 33 03.1	+0.2
CLNS				e*PP	pP	04 33 14.5	+1.5
CLNS				e		04 34 26.3	
CLNS				e		04 34 52.9	
CLNS				eS	S	04 40 06.2	+1.8
CLNS				pmax	pmax		
	comp=Z,387nm,0.8s,mb6.5						
CLNS				pmax	pmax		
	comp=N,224nm,0.9s						
CLNS				pmax	pmax		
	comp=E,206nm,0.9s						
CLNS				pmax	pmax		
	comp=N,28nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
CLNS				pmax	pmax		
	comp=E,16nm,0.9s						
CLNS				smax			
	comp=N,180nm,13.2s						
CLNS				smax			
	comp=Z,64nm,10.4s						
CLNS				smax			
	comp=E,42nm,13.6s						
CLNS				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.0						
CLNS				MLR	MLR		
	comp=N,2µm,18.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,200nm,14.0s,MS5.2						
SVE	Sverdlovsk	49.70	337	⇑iP	P	04 33 07.5	0.0
SVE				e	pP	04 33 20.5	+2.8
SVE				pmax	pmax		
	comp=Z,400nm,1.5s,mb6.2						
SVE				MLR	MLR		
	comp=N,600nm,18.0s						
SVE				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.9						
GUMO	Guam	49.75	84	PFAKE		04 33 20.0	+12
GUMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
GNI	Garni	50.00	311	eP	P	04 33 10.9	+0.9
GNI	Garni	50.00	311	⇑iP	P	04 33 11.7	+1.7
GNI				pmax	pmax		
	comp=Z,208nm,1.7s						
GNI	Garni	50.00	311	eP	P	04 33 11.8	+1.7
	comp=Z,141nm,1.2s,mb5.9						
GNI				LR	LR		
	comp=Z,706nm,21.0s,MS4.7						
HKR	Hakkari	50.05	308	eP	P	04 33 09.0	-1.5
ARU	Arti	50.23	336	P	P	04 33 11.3	-0.3
	comp=Z,778nm,0.6s,SNR=56						
ARU	Arti	50.23	336	⇑iP	P	04 33 03.2	-8.4
ARU				e		04 34 23.9	
ARU				eS	S	04 40 09.1	-11
ARU				eSS	SS	04 43 44.3	-6.3
ARU				pmax	pmax		
	comp=Z,95nm,0.8s,mb5.9						
ARU				MLR	MLR		
	comp=Z,900nm,24.0s,MS4.7						
ARU				MLR	MLR		
	comp=N,1µm,23.0s,MS5.0						
ARU				MLR	MLR		
	comp=E,800nm,22.0s,MS5.0						
MSL	Mosul	50.25	306	eP	P	04 33 18.5	+6.5
MTA	Mtatsminda	50.44	313	P	P	04 33 14.7	+1.3
MUN	Mundaring	50.46	155	⇓iP	P	04 33 13.4	-0.3
	comp=E,90nm,1.0s,mb5.8						
MUN	Mundaring	50.46	155	⇓iP	P	04 33 13.4	-0.3
MUN				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.8						
TI2	Plekhanov	50.48	313	⇑iP	P	04 33 14.4	+0.7
TI2				i S	S	04 40 17.0	-6.8
TI2				pmax	pmax		
	comp=Z,90nm,0.6s,mb6.0						
KLBR	Kellerberrin	50.79	153	⇓iP	P	04 33 15.5	-0.7
	comp=Z,373nm,0.7s,mb6.4						
NWAO	Narrogin (SRO)	51.71	155	eP	P	04 33 22.1	-1.0
NWAO				e*PP	pP	04 33 32.8	-0.5
NWAO				pmax	pmax		
	comp=Z,64nm,0.9s						
NWAO				MLR	MLR		
	comp=Z,895nm,20.0s						
NWAO	Narrogin (SRO)	51.71	155	eP	P	04 33 22.1	-1.0
	comp=Z,64nm,0.9s,mb5.5						
NWAO				epP	pP	04 33 32.8	-0.5
NWAO				LR	LR		
	comp=Z,895nm,20.0s,MS4.8						
BTMT	Batman	51.92	308	eP	P	04 33 29.3	+4.7
VRT	Varto	52.11	309	eP	P	04 33 28.5	+2.4
WRAB	Tennant Creek	52.31	129	eP	P	04 33 26.5	-1.2
WRAB				e*PP	pP	04 33 36.4	-1.5
WRAB				e		04 34 37.5	
WRAB				eS	S	04 40 47.5	-1.7
WRAB				pmax	pmax		
	comp=Z,139nm,0.9s,mb5.9						
WRAB				MLR	MLR		
	comp=Z,256nm,21.0s,MS4.2						
WRAB	Tennant Creek	52.31	129	eP	P	04 33 26.5	-1.2
	comp=Z,139nm,0.9s,mb5.9						
WRAB				epP	pP	04 33 36.4	-1.5
WRAB				ePcP	PcP	04 34 37.5	-1.2
WRAB				eScP		04 38 28.5	
WRAB				eS	S	04 40 47.5	-1.7
WRAB				LR	LR		
	comp=Z,256nm,21.0s,MS4.2						
WB2	Warramunga Arr	52.31	129	⇑iP	P	04 33 26.4	-1.4
WB2				ePCP	PcP	04 34 37.9	-0.8
WB2				eS	S	04 40 45.7	-3.6
EZM	Erzurum	52.43	310	eP	P	04 33 30.4	+2.0
YSS	Yuzh-Sakhalins	52.54	41	⇑iP	P	04 33 28.0	-1.1
YSS				e	pP	04 33 39.0	-0.3
YSS				e		04 34 36.0	
YSS				pmax	pmax		
	comp=Z,190nm,1.0s,mb6.0						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.9						
YSS				MLR	MLR		
	comp=N,2µm,19.0s						
YSS	Yuzh-Sakhalins	52.54	41	eP	P	04 33 27.8	-1.3
	comp=N,142nm,0.9s,mb5.9						
YSS				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
KIV	Kislovodsk	52.63	315	P	P	04 33 30.9	+1.1
	comp=Z,1µm,0.9s,SNR=31						
KIV	Kislovodsk	52.63	315	eP	P	04 33 30.4	+0.6
KIV				e*PP	pP	04 33 39.9	-0.1
KIV				pmax	pmax		
	comp=Z,209nm,1.0s,mb6.0						
KIV				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.1						
KIV	Kislovodsk	52.63	315	eP	P	04 33 30.4	+0.6
	comp=Z,209nm,1.0s,mb6.0						
KIV				epP	pP	04 33 39.9	-0.1
KIV				LR	LR		
	comp=Z,200nm,21.0s,MS4.1						
GOF	Gofitskoye	52.75	317	⇓iP	P	04 33 31.5	+0.8
GOF				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
BINT	Bingol	52.84	308	eP	P	04 33 33.0	+1.5
SOKR	Solikamsk	53.08	338	⇓iP	P	04 33 30.7	-2.3
SOKR				pmax	pmax		
	comp=Z,140nm,0.9s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,880nm,20.0s,MS4.8						
EZC	Erzincan	53.55	309	eP	P	04 33 41.6	+4.9
PTK	Pertek	53.68	308	eP	P	04 33 39.5	+1.8
GUMT	Gumushane	53.96	310	eP	P	04 33 41.6	+1.9
ASPA	Alice Springs	54.27	133	⇑iP	P	04 33 40.9	-1.3
ASPA				ePCP	PcP	04 34 45.4	-0.7
ASPA				eS	S	04 41 12.6	-3.1
ASPA				eSCS	ScS	04 43 22.3	-3.0
MALT	Malatya	54.31	307	eP	P	04 33 35.7	-6.6
MALT	Malatya	54.31	307	eP	P	04 33 42.9	+0.6
	comp=Z,32nm,1.2s,mb5.1						
YAK	Yakutsk	54.57	20	eP	P	04 33 42.1	-1.8
YAK				pmax	pmax		
	comp=Z,328nm,0.7s,mb6.5						
YAK				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
YAK	Yakutsk	54.57	20	eP	P	04 33 42.1	-1.8
	comp=Z,328nm,0.7s,mb6.5						
YAK				eScP		04 38 38.4	
YAK				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
SOC	Sochi	54.57	314	eP	P	04 33 43.3	-0.9
SOC				e		04 34 47.6	
SOC				e		04 35 41.7	
SOC				ePPP	PPP	04 36 57.1	-2.7
SOC				eS	S	04 41 19.2	-0.4
SOC				e		04 43 24.0	
SOC				eSSS	SSS	04 47 02.5	+1.4
SOC				pmax	pmax		
	comp=N,40nm,1.1s						
SOC				pmax	pmax		
	comp=E,60nm,1.1s						
SOC				pmax	pmax		
	comp=Z,79nm,1.1s,mb5.7						
GAZ	Gaziantep	55.05	306	eP	P	04 33 48.9	+1.2
FORT	Forrest	55.39	144	eP	P	04 33 49.2	-1.1
	comp=Z,129nm,0.7s,mb6.1						
EIL	Elat	56.13	297	eP	P	04 33 56.0	+0.3
	comp=Z,45nm,1.3s,mb5.3						
ANN	Anapa	56.48	315	eP	P	04 33 43.9	-14
ANN				pmax	pmax		
	comp=Z,92nm,0.9s,mb5.8						
VOR	Voronezh	57.45	323	i P	P	04 34 04.0	-0.7
VOR				pmax	pmax		
	comp=Z,400nm,1.0s,mb6.4						
KMBO	Kilima Mbogo	57.73	260	i P	P	04 34 09.0	+1.7
KMBO				pmax	pmax		
	comp=Z,12nm,1.1s						
KMBO	Kilima Mbogo	57.73	260	eP	P	04 34 08.7	+1.4
	comp=Z,36nm,1.5s,mb5.2						
KMBO				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
PMG	Port Moresby	57.97	111	PFAKE		04 34 20.0	+11
PMG				LR	LR		
	comp=Z,326nm,21.0s,MS4.4						
SIM	Simferopol'	58.81	314	i P	P	04 34 14.6	+0.3
SIM				eS	S	04 42 16.9	+1.4
SIM				pmax	pmax		
	comp=Z,150nm,0.7s,mb6.1						
SIM	Simferopol'	58.81	314	i Pr		04 34 14.4	
SAFT	Safranbolu	59.17	310	eP	P	04 34 15.6	-1.2
MOS	Moscow	59.76	327	αiP	P	04 34 19.9	-0.8
MOS				e	pP	04 34 32.2	+1.1
MOS				e		04 36 28.9	
MOS				eS	S	04 42 23.0	-4.7
MOS				pmax	pmax		
	comp=Z,400nm,1.3s,mb6.3						
MOS				pmax	pmax		
	comp=Z,332nm,1.3s,mb6.2						
OBN	Obninsk	60.10	326	⇑iP	P	04 34 21.8	-1.3
OBN				i		04 34 38.1	
OBN				e		04 36 35.7	
OBN				i S	S	04 42 28.8	-3.3
OBN				eSS	SS	04 46 25.2	-5.0
OBN				pmax	pmax		
	comp=Z,227nm,1.2s,mb6.1						
OBN				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.0						
OBN	Obninsk	60.10	326	eP	P	04 34 21.7	-1.4
	comp=Z,239nm,1.3s,mb6.1						
OBN				LR	LR		
	comp=Z,247nm,20.0s,MS4.3						
BCK	Bucak	60.33	305	eP	P	04 34 23.2	-1.7
ESKT	Eskisehir	60.33	308	eP	P	04 34 24.2	-0.7
ISP	Isparta	60.42	306	i P	P	04 34 24.4	-1.2
ISP	Isparta	60.42	306	eP	P	04 34 24.2	-1.4
	comp=Z,56nm,1.1s,mb5.5						
ELL	Elmali	60.81	304	eP	P	04 34 27.1	-1.1
ALT	Altintas	60.85	307	eP	P	04 34 26.5	-2.0
DENT	Denizli	61.58	306	eP	P	04 34 32.0	-1.4
MA2	Magadan	61.80	29	⇑iP	P	04 34 33.1	-1.4
MA2				pmax	pmax		
	comp=Z,256nm,0.8s,mb6.4						
MA2				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.0						
MA2	Magadan	61.80	29	eP	P	04 34 32.7	-1.8
	comp=Z,211nm,0.8s,mb6.3						
MA2				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
CTA	Charters Tower	61.81	122	eP	P	04 34 33.9	-1.3
	comp=Z,13nm,0.8s,mb5.1						
CTA				ePCP	PcP	04 35 15.0	-0.7
CTA	Charters Tower	61.81	122	eP	P	04 34 33.9	-1.3
CTA				e		04 35 15.0	
CTA				pmax	pmax		
	comp=Z,13nm,0.8s						
CTAO	Charters Tower	61.81	122	eP	P	04 34 33.9	-1.3
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,463nm,20.0s,MS4.6						
CTAO	Charters Tower	61.81	122	eP	P	04 34 33.9	-1.3
	comp=Z,12nm,0.8s,mb5.1						
CTAO				LR	LR		
	comp=Z,463nm,20.0s,MS4.6						
KIS	Kishinev	62.81	316	⇑iP	P	04 34 39.0	-2.5
KIS				e		04 43 05.0	
KIS				e		04 43 40.0	
KIS				pmax	pmax		
	comp=Z,300nm,0.6s,mb6.6						
KIS				MLR	MLR		

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      comp=Z,500nm,19.0s,MS4.7
IZM   Izmir            63.02 306  eP    P     04 34 42.6 -0.4
CFR   Carcaliu         63.02 314⇓iP     P     04 34 42.7 -0.2
HARR  Harsova          63.10 313⇓iP     P     04 34 43.6 +0.1
PRD   Provadia         63.31 312  i P   P     04 34 44.0 -0.9
SEY   Seymchan         63.79  26  eP    P     04 34 46.0 -1.7
SEY                               e           04 35 23.3
SEY                               eS    S     04 43 48.6  +30
SEY                                pmax pmax
      comp=Z,120nm,1.1s,mb5.8
SEY                                pmax pmax
      comp=E,120nm,2.1s
MBAR  Mbarara          63.84 262  eP    P     04 34 49.4 +0.6
MBAR                               pmax pmax
      comp=Z,56nm,1.4s,mb5.4
MBAR                               MLR  MLR
      comp=Z,266nm,19.0s,MS4.4
MBAR  Mbarara          63.84 262  eP    P     04 34 49.4 +0.6
      comp=Z,56nm,1.4s,mb5.4
MBAR                               LR   LR
      comp=Z,266nm,19.0s,MS4.4
JMB   Yambol           63.84 311  i P   P     04 34 49.0 +0.7
VRI   Vrincioaia       64.09 314⇑iP     P     04 34 50.3 +0.4
PET   Petropavlovsk    64.10  38   P    P     04 34 48.3 -1.5
PET                               e     pP    04 35 01.5 +1.2
PET                                pmax pmax
      comp=Z,170nm,1.0s,mb6.0
PET   Petropavlovsk    64.10  38  eP    P     04 34 48.0 -1.8
      comp=Z,170nm,1.0s,mb6.0
PET                               epP   pP    04 35 00.8 +0.5
PET                                LR   LR
      comp=Z,1μm,20.0s,MS5.1
DIM   Dimitrovgrad     64.58 310  i P   P     04 34 52.0 -1.1
MLR   Muntele Rosu     64.59 314⇑iP     P     04 34 53.7 +0.6
KDZ   Kurdzhali        64.64 310  i P   P     04 34 54.0 +0.5
STKA  Stephens Creek   64.67 136⇓iP     P     04 34 53.1 -0.8
      comp=Z,10.0nm,0.6s,mb5.0
MNK   Minsk            64.79 324⇑eP     P     04 34 49.0 -5.3
MNK                                pmax pmax
      comp=Z,910nm,1.0s
MNK                                pmax pmax
      comp=N,900nm,1.8s
PVL   Pavlikeni        64.82 311  i P   P     04 34 55.0 +0.3
SNX   Sinaia           64.88 314⇑iP     P     04 34 50.7 -4.3
RZN   Rozhen           65.17 310  i P   P     04 34 57.0 +0.1
PLD   Plovdiv          65.20 310  i P   P     04 34 57.0 -0.2
JOF   Joensuu          65.27 334  ep    P     04 34 55.9 -1.3
      comp=N,6.9nm,0.3s,mb5.2
IDID  Didziasalis      65.57 325  i P   P     04 34 58.8 -0.5
IDID                               AMPb AMB   04 35 00.6
      comp=Z,50nm,1.0s,mb5.5
PGB   Panagyurishte    65.63 311  i P   P     04 35 00.0 +0.1
AOS   Alonnisos        65.69 307  eP    P     04 35 00.2 -0.2
LVZ   Lovozero         65.80 339   P    P     04 34 59.6 -1.0
      comp=Z,455nm,0.9s,mb6.5,SNR=13
LVZ   Lovozero         65.80 339  eP    P     04 34 59.3 -1.3
LVZ                               eS    S     04 43 35.0 -8.2
LVZ                               eSS   tx    04 50 55.8
LVZ                                pmax pmax
      comp=N,11nm,0.9s
LVZ                                pmax pmax
      comp=Z,68nm,0.9s,mb5.7
LVZ                                pmax pmax
      comp=E,8.0nm,0.6s
LVZ                                MLR  MLR
      comp=Z,1μm,17.0s,MS5.1
LVZ                                MLR  MLR
      comp=N,659nm,16.0s,MS5.0
LVZ                                MLR  MLR
      comp=E,564nm,17.0s,MS5.0
IIGN  Ignalina         65.87 325  i P   P     04 35 00.9 -0.3
IIGN                               AMPb AMB   04 35 02.6
      comp=Z,51nm,1.1s,mb5.5
MMB   Musomiste        65.90 310  i P   P     04 35 01.0 -0.6
IZAR  Zarasai          65.93 325  i P   P     04 35 01.1 -0.5
IZAR                               AMPb AMB   04 35 02.3
      comp=Z,37nm,0.6s,mb5.6
ISAL  Salakas          65.97 325  eP    P     04 35 01.2 -0.6
SRS   Serrai           65.98 309  eP    P     04 35 01.2 -0.9
APA   Apatity          66.11 339⇑eP     P     04 34 56.0 -6.5
APA                               i           04 35 12.2
APA                                pmax pmax
      comp=Z,110nm,1.1s,mb5.8
APA                                MLR  MLR
      comp=Z,1μm,18.0s,MS5.2
VTS   Vitosha          66.34 311  i P   P     04 35 04.0 -0.4
KKB   Krupnik          66.40 310  i P   P     04 35 03.0 -1.8
THE   Thessaloniki     66.44 308  eP    P     04 35 04.0 -1.1
KNT   Kendrikon        66.51 309  eP    P     04 35 04.7 -0.8
VAY   Valandovo        66.76 309  i P   P     04 35 05.9 -1.2
LIT   Litokhoron       66.79 308  eP    P     04 35 06.0 -1.3
GRG   Griva            66.88 309  eP    P     04 35 06.7 -1.1
KWP   Kalwaria         67.19 318⇑iP     P     04 35 09.5 -0.1
FINES FINESS Array B   67.22 331  i P   P     04 35 09.2 -0.4
FINES                              pmax pmax
      comp=Z,140nm,1.1s
KAF   Kangasniemi      67.27 332  ep    P     04 35 08.9 -1.0
      comp=Z,2.5nm,0.3s,mb4.7,baz=102,slow=6.1
BOLS  Boljevac         67.31 312⇑iP     P     04 35 09.4 -1.0
SUW   Suwalki          67.40 323  eP    P     04 35 09.9 -0.9
KOLS  Kolonicke sedl   67.41 317  i P   P     04 35 11.4 +0.4
SKO   Skopje           67.63 310  i P   P     04 35 11.5 -1.0
SKO                                pmax pmax
      comp=Z,46nm,0.8s,mb5.6
SKO   Skopje           67.63 310  i P   P     04 35 11.5 -1.0
      comp=Z,0.0nm,0.8s
FNA   Florina          67.65 309  eP    P     04 35 11.2 -1.4
CRVS  Cervenica-Dubn   67.94 317  i P   P     04 35 15.3 +0.9
CRVS                              e           04 35 20.8
GRUS  Gruza            68.21 312⇓iP     P     04 35 15.9 -0.2
IGT   Igoumenitsa      68.45 307  eP    P     04 35 16.1 -1.6
WAR   Warsaw           68.49 321  eP    P     04 35 17.8 +0.1
KECS  Kecovo           68.56 317  i P   P     04 35 18.4 +0.2
PVY   Plav             68.72 311⇑iP     P     04 35 16.6 -2.8
NIE   Niedzica         68.73 318⇑eP     P     04 35 18.4 -0.8
DIVS  Divcibare        68.73 312⇓iP     P     04 35 18.2 -1.1
IVA   Berane           68.78 311  eP    P     04 35 17.5 -2.2
PSZ   Piszkesteto      68.93 316  eP    P     04 35 19.9 -0.6
PSZ                                pmax pmax
      comp=Z,73nm,0.9s,mb5.6
PSZ   Piszkesteto      68.93 316  eP    P     04 35 19.9 -0.6
      comp=Z,72nm,0.9s,mb5.6
PSZ   Piszkesteto      68.93 316⇑iP     P     04 35 20.4 -0.1
KEV   Kevo             69.06 340  ep    P     04 35 19.9 -1.1
      comp=Z,3.7nm,0.4s,mb4.7
KEV   Kevo             69.06 340   P    P     04 35 20.8 -0.1
OJC   Ojcow            69.11 319  eP    P     04 35 20.8 -0.8
PLE   Pljevlja         69.16 311⇑iP     P     04 35 22.0  0.0
TTG   Podgorica        69.25 310⇑iP     P     04 35 19.6 -3.0
ULC   Ulcinj           69.26 310⇑iP     P     04 35 20.5 -2.2
NKY   Niksic           69.44 311⇑iP     P     04 35 21.2 -2.6
ARE0  ARCESS Array S   69.50 340  eP    P     04 35 23.5 -0.1
UPM   Unac-Piva        69.51 311⇑iP     P     04 35 23.6 -0.5
BUM   Brajici-Budva    69.52 310⇑iP     P     04 35 21.5 -2.7
BRY   Bratogost        69.78 311⇑iP     P     04 35 24.1 -1.7
HCY   Herceg Novi      69.81 310⇑iP     P     04 35 23.5 -2.6
SRO2  Moca             69.93 316  i P   P     04 35 27.0 +0.4
SRO2                              e           04 35 45.5
SRO2  Moca             69.93 316  i P   P     04 35 27.0 +0.4
SRO2                              e           04 35 31.1
SRO2                              e           04 35 45.5
SRO   Srobarova        69.99 316  i P   P     04 35 27.6 +0.6
KTK1  Kautokeino       70.15 339⇑iP     P     04 35 27.4 -0.2
      comp=Z,119nm,1.8s,mb5.5
KTK1  Kautokeino       70.15 339⇑iP     P     04 35 27.4 -0.2
KTK1                               AMb  AMB   04 35 33.2
      comp=Z,119nm,1.8s,mb5.5
OKC   Ostrava-Krasne   70.16 318⇑iP     P     04 35 27.9 -0.1
OKC                               epP   pP    04 35 39.6 +1.1
OKC                                AMS  AMS   05 14 10.0
      comp=Z,400nm,22.6s
MORC  Moravsky Berou   70.55 318  eP    P     04 35 30.4 +0.1
MORC                               pmax pmax
      comp=Z,94nm,0.9s,mb5.7
MORC  Moravsky Berou   70.55 318  eP    P     04 35 30.4  0.0
      comp=Z,94nm,0.9s,mb5.7
SMOL  Smolenice        70.59 317  i P   P     04 35 30.7  0.0
TOO   Toolangi         70.63 138⇓iP     P     04 35 31.7 +0.6
      comp=Z,1.0nm,1.1s
TOO   Toolangi         70.63 138⇓iP     P     04 35 31.7 +0.6
TOO                                pmax pmax
      comp=Z,1.0nm,1.1s
BILL  Bilibino         70.79  22   P    P     04 35 30.1 -1.4
BILL                               pmax pmax
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      comp=Z,66nm,1.0s,mb5.5
BILL  Bilibino         70.79  22  eP    P     04 35 29.9 -1.6
      comp=Z,66nm,1.0s,mb5.5
ZST   Bratislava       70.81 316  i P   P     04 35 32.4 +0.4
LSZ   Lusaka           70.84 248  eP    P     04 35 33.9 +1.2
      comp=Z,30nm,0.8s,mb5.3
LSZ                                LR   LR
      comp=Z,2μm,20.0s,MS5.5
GKP   Gorka Klasztor   70.86 322  eP    P     04 35 31.3 -0.9
SOP   Sopron           71.17 316⇓eP     P     04 35 34.5 +0.3
TIP   Timpagrande      71.23 307  eP    P     04 35 34.1 -0.5
TIP                               epP   pP    04 35 46.5 +1.3
VKA   Vienna           71.33 317⇑iP     P     04 35 35.2 +0.1
DPC   Dobruska-Polom   71.34 319⇑iP     P     04 35 35.7 +0.6
DPC                                AMS  AMS   05 12 20.0
      comp=Z,500nm,24.4s
KSP   Ksiaz            71.37 319⇑iP     P     04 35 35.6 +0.3
KSP                               e*PP  pP    04 35 44.6 -1.3
KSP                               e           04 35 53.8
KSP                               eS    S     04 44 47.5 -2.1
KSP                                MLR  MLR
      comp=Z,1μm,19.8s,MS5.2
ORI   Oriolo Calabro   71.42 308  eP    P     04 35 36.3 +0.5
GRI   Girifalco        71.51 307  eP    P     04 35 36.9 +0.6
UPC   Upice            71.54 319⇑iP     P     04 35 36.4 +0.1
UPC                               epP   pP    04 35 46.0 -0.9
TRO   Tromso           71.77 339  eP    P     04 35 36.2 -1.2
SOI   Samo             71.84 306  eP    P     04 35 38.8 +0.5
ARSA  Arzberg          71.88 315⇑iP     P     04 35 38.4 +0.1
      comp=Z,32nm,0.9s,mb5.2
SCLL  Scilla           72.10 306  eP    P     04 35 41.0 +1.2
BOJS  Bojanci          72.10 314⇑iP     P     04 35 39.7  0.0
      comp=Z,157nm,1.1s,mb5.8
BOJS                              e     pP    04 35 52.0 +1.8
MTTG  Motta San Giov   72.13 306  eP    P     04 35 40.8 +0.8
PDKS  Podkum           72.26 314⇑iP     P     04 35 41.0 +0.3
      comp=Z,142nm,0.8s,mb6.0
PDKS                              e     pP    04 35 53.8 +2.5
PDKS                              e           04 35 59.5
SGO   Sicignano        72.27 308  eP    P     04 35 40.5 -0.3
BSD   Bornholm Skovb   72.28 324  i P   P     04 35 39.4 -1.2
BSD                                pmax pmax
      comp=Z,24nm,0.7s,mb5.2
BSD                                MLR  MLR
      comp=Z,430nm,18.0s,MS4.8
BSD   Bornholm Skovb   72.28 324  i P   P     04 35 39.4 -1.2
      comp=Z,24nm,0.7s,mb5.2
      comp=Z,430nm,18.0s
PVCC  Panska Ves       72.47 319⇑eP     P     04 35 42.2 +0.4
PVCC                               AMS  AMS   05 12 40.0
      comp=Z,700nm,20.8s
PRU   Pruhonice        72.49 318⇑iP     P     04 35 42.1 +0.2
PRU                               epP   pP    04 35 54.5 +2.0
PRU                                AMS  AMS   05 15 00.0
      comp=Z,400nm,22.2s
AGST  Augusta-Monte    72.55 305  eP    P     04 35 42.3 -0.2
OBKA  Obir             72.56 315⇑iP     P     04 35 42.8 +0.4
      comp=Z,72nm,0.9s,mb5.6
LJU   Ljubljana        72.59 314⇑iP     P     04 35 42.8 +0.2
LJU                                pmax pmax
      comp=Z,226nm,1.0s,mb6.0
LJU   Ljubljana        72.59 314⇑iP     P     04 35 42.8 +0.2
      comp=Z,226nm,1.0s,mb6.0
MOA   Molln            72.71 316⇑iP     P     04 35 43.1 -0.2
      comp=Z,56nm,0.9s,mb5.5
FX1   Attu Island--F   72.81  39  eP    P     04 35 43.4 -0.4
BRG   Berggiesshubel   72.86 319  i P   P     04 35 44.4 +0.3
BRG                               i     pP    04 35 56.8 +2.1
BRG                               i           04 36 01.6
BRG                                pmax pmax
      comp=Z,80nm,0.9s,mb5.7
BRG   Berggiesshubel   72.86 319  i P   P     04 35 44.4 +0.3
      comp=Z,80nm,0.9s,mb5.7
BRG                               i     pP    04 35 56.8 +2.1
BRG                               i           04 36 01.6
RUE   Ruedersdorf      72.94 321  eP    P     04 35 44.3 -0.3
      comp=Z,151nm,0.8s,mb6.0
VOY   Vojsko           73.03 314  eP    P     04 35 45.1 -0.2
VOY                               e           04 36 00.4
MOR8  Moi Rana         73.04 335⇑iP     P     04 35 43.9 -1.0
      comp=Z,93nm,0.8s,mb5.8
MOR8  Moi Rana         73.04 335⇑iP     P     04 35 43.9 -1.0
MOR8                               AMb  AMB   04 35 44.9
      comp=Z,93nm,0.8s,mb5.8
MOR8                              epP   pP    04 35 54.6 -0.9
MOR8                              esP   sP    04 35 59.6 +0.3
GEC2  GERESS Array S   73.06 317  eP    P     04 35 45.6 +0.2
GEC2                               pmax pmax
      comp=Z,107nm,0.9s,mb5.8
GEC2  GERESS Array S   73.06 317  eP    P     04 35 45.6 +0.2
      comp=Z,107nm,0.9s,mb5.8
KHC   Kasperske Hory   73.13 317⇑iP     P     04 35 45.6 -0.2
KHC                               e*PP  pP    04 35 56.1 -0.3
KHC                               e           04 36 04.0
KHC                                MLR  MLR
      comp=Z,500nm,22.2s,MS4.8
KHC   Kasperske Hory   73.13 317⇑iP     P     04 35 45.6 -0.2
KHC                               epP   pP    04 35 56.1 -0.3
KHC                                x    x     04 36 04.0
KHC                                AMS  AMS   05 12 30.0
      comp=Z,500nm,22.2s
KBA   Koelnbreinsper   73.37 315⇑iP     P     04 35 46.9 -0.3
      comp=Z,38nm,1.1s,mb5.2
KBA   Koelnbreinsper   73.37 315⇑iP     P     04 35 46.9 -0.3
KBA                                pmax pmax
      comp=Z,38nm,1.1s,mb5.2
PTCC  Patocco-Chiusa   73.39 315  eP    P     04 35 47.1 -0.3
CLL   Collm            73.44 320⇑iP     P     04 35 47.3 -0.3
CLL                               i     pP    04 35 59.6 +1.4
CLL                                pmax pmax
      comp=Z,62nm,1.2s,mb5.4
CLL                                MLR  MLR
      comp=Z,800nm,24.7s,MS4.9
CLL   Collm            73.44 320⇑iP     P     04 35 47.3 -0.3
      comp=Z,62nm,1.2s,mb5.4
CLL                               i     pP    04 35 59.6 +1.4
CLL                                LR   LR
      comp=Z,800nm,24.7s,MS4.9
CLL   Collm            73.44 320 ⇑P     P     04 35 47.3 -0.3
      comp=Z,logA/T=1.7,mb5.4
CLL                               i           04 35 04.6
CLL                               i *SP sP    04 35 59.6 -2.4
LOF   Lofoten          73.53 337⇑iP     P     04 35 49.2 +1.4
      comp=Z,158nm,1.3s,mb5.8
LOF   Lofoten          73.53 337⇑iP     P     04 35 49.2 +1.4
LOF                                AMb  AMB   04 35 52.6
      comp=Z,158nm,1.2s,mb5.8
AQU   L'Aquila         73.59 310   P    P     04 35 48.9 +0.3
AQU                               e     pP    04 36 01.2 +2.0
AQU   L'Aquila         73.59 310  eP    P     04 35 48.1 -0.6
AQU                               epP   pP    04 35 59.3 +0.1
WET   Wettzell         73.59 318  eP    P     04 35 48.7 +0.2
WET                                pmax pmax
      comp=Z,79nm,1.1s,mb5.6
WET   Wettzell         73.59 318  eP    P     04 35 48.7 +0.2
      comp=Z,79nm,1.1s,mb5.6
PTQR  Pietraquaria     73.61 310  eP    P     04 35 48.2 -0.5
COP   Copenhagen       73.70 324  eP    P     04 35 48.4 -0.6
COP                                pmax pmax
      comp=Z,40nm,0.6s,mb5.5
COP                                MLR  MLR
      comp=Z,260nm,19.0s,MS4.5
COP   Copenhagen       73.70 324  eP    P     04 35 48.4 -0.6
      comp=Z,40nm,0.6s,mb5.5
COP                                LR   LR
      comp=Z,260nm,19.0s,MS4.5
COP   Copenhagen       73.70 324  i P   P     04 35 48.4 -0.6
      comp=Z,40nm,0.6s,mb5.5
      comp=Z,250nm,19.0s
NRCA  Norcia           73.77 311  eP    P     04 35 48.9 -0.7
FVI   Forni Avoltri    73.78 315  eP    P     04 35 49.2 -0.4
NKC   Novy Kostel      73.83 319⇑iP     P     04 35 50.0 +0.2
NKC                               epP   pP    04 36 01.8 +1.4
NKC                                AMS  AMS   05 13 40.0
      comp=Z,600nm,17.8s
ARV   Arcevia          73.85 312  eP    P     04 35 50.3 +0.2
SNTG  Esanatoglia      73.87 311  eP    P     04 35 50.0 -0.2
HSP   Hornsund         73.90 347  eP    P     04 35 49.8  0.0
NSS   Namsos           74.00 334  eP    P     04 35 49.1 -1.4
      comp=Z,93nm,0.9s,mb5.7
NSS   Namsos           74.00 334  eP    P     04 35 49.1 -1.4
NSS                                AMb  AMB   04 35 50.9
      comp=Z,93nm,0.9s,mb5.7
NSS                               epP   pP    04 36 00.7 -0.4
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NSS                               esP   sP    04 36 06.1 +1.2
NB2   NORSAR Subarra   74.30 330   P    P     04 35 51.7 -0.6
      comp=Z,45nm,0.8s,mb5.5,baz=89,slow=5.8
NB2   NORSAR Subarra   74.30 330   P    P     04 35 51.7 -0.6
NB2                                pmax pmax
      comp=Z,45nm,0.8s,mb5.5
NB2   NORSAR Subarra   74.30 330   P    P     04 35 51.7 -0.6
      baz=89,slow=6.2
MOX   Moxa             74.34 319⇑iP     P     04 35 53.2 +0.4
MOX                               e     pP    04 36 05.2 +1.8
MOX                                pmax pmax
      comp=Z,88nm,1.5s,mb5.5
MOX                                MLR  MLR
      comp=Z,500nm,22.0s,MS4.8
MOX   Moxa             74.34 319⇑iP     P     04 35 53.2 +0.4
      comp=Z,88nm,1.5s,mb5.5
MOX                               e     pP    04 36 05.2 +1.8
MOX                                LR   LR
      comp=Z,500nm,22.0s,MS4.8
MOX   Moxa             74.34 319⇑iP     P     04 35 53.2 +0.4
      comp=Z,logA/T=1.8,mb5.5
MOX                                PcP  PcP   04 36 05.0 -2.8
MOX                                S    S     04 45 24.0 +0.7
MOX                                SSS  SSS   04 53 36.0  +11
MOX                                L          05 14 38.0
NAO01 NORSAR Array S   74.46 330  eP    P     04 35 52.4 -0.9
      comp=Z,30nm,0.8s,mb5.3
WTTA  Wattenberg       74.52 316⇑iP     P     04 35 53.3 -0.6
      comp=Z,55nm,0.7s,mb5.6
WTTA  Wattenberg       74.52 316⇑iP     P     04 35 53.3 -0.6
WTTA                               pmax pmax
      comp=Z,55nm,0.7s,mb5.6
OSL   Oslo             74.56 329  eP    P     04 35 54.0 +0.2
WATA  Walderalm        74.56 316⇑iP     P     04 35 53.1 -1.0
      comp=Z,38nm,1.1s,mb5.2
WATA  Walderalm        74.56 316⇑iP     P     04 35 53.1 -1.0
WATA                               pmax pmax
      comp=Z,38nm,1.1s,mb5.2
CTI   Castel Tesino    74.59 314  eP    P     04 35 54.5 +0.2
GRA1  Grafenberg Arr   74.65 318  eP    P     04 35 55.2 +0.6
      comp=Z,104nm,1.3s,mb5.6
GRA1                               LR   LR
      comp=Z,800nm,22.0s,MS5.0
GRF   Grafenberg Arr   74.65 318  eP    P     04 35 55.2 +0.6
GRF                                pmax pmax
      comp=Z,104nm,1.3s,mb5.6
GRF                                MLR  MLR
      comp=Z,800nm,22.0s,MS5.0
GRF   Grafenberg Arr   74.65 318  eP    P     04 35 55.2 +0.6
      comp=Z,104nm,1.3s,mb5.6
GRF                                LR   LR
      comp=Z,800nm,22.0s,MS5.0
FUR   Furstenfeldbru   74.70 317  eP    P     04 35 54.7 -0.2
FUR                                pmax pmax
      comp=Z,58nm,0.9s,mb5.5
FUR   Furstenfeldbru   74.70 317  eP    P     04 35 54.7 -0.2
      comp=Z,58nm,0.9s,mb5.5
PGD   Poggio Sodo      74.71 312  eP    P     04 35 56.1 +1.1
SQTA  Sankt Quirin     74.81 316⇑iP     P     04 35 54.9 -0.7
      comp=Z,37nm,0.9s,mb5.3
SQTA  Sankt Quirin     74.81 316⇑iP     P     04 35 54.9 -0.7
SQTA                               pmax pmax
      comp=Z,37nm,0.9s,mb5.3
VMG   Vicchio          74.83 312  eP    P     04 35 56.9 +1.2
MOTA  Moosalm          74.88 316⇓iP     P     04 35 55.1 -0.8
      comp=Z,28nm,1.0s,mb5.2
MOTA  Moosalm          74.88 316⇓iP     P     04 35 55.1 -0.8
MOTA                               pmax pmax
      comp=Z,29nm,1.0s,mb5.2
SEI   Scarperia        74.95 312  eP    P     04 35 57.2 +0.7
BSEG  Bad Segeberg     74.98 323  eP    P     04 35 56.8 +0.4
BSEG                               pmax pmax
      comp=Z,115nm,1.0s,mb5.8
CLZ   Clausthal        75.06 320  eP    P     04 35 57.1 +0.2
      comp=Z,83nm,1.0s,mb5.6
ZCCA  Zocca            75.20 313  eP    P     04 35 59.3 +1.4
DOMB  Dombas           75.31 331⇑iP     P     04 35 57.9 -0.2
HDH   Heidenheim       75.39 317⇑eP     P     04 35 58.5 -0.3
SAL   Salo             75.41 314  eP    P     04 35 59.7 +0.6
BRMO  Bormio           75.44 315  eP    P     04 35 59.1 -0.1
GSCL  Gusciola         75.48 313  eP    P     04 36 00.1 +0.6
BDI   Bagni Di Lucca   75.50 312  eP    P     04 35 58.9 -0.7
MUD   Monsted U'grnd   75.50 325⇑iP     P     04 35 59.8 +0.5
MUD                               i           04 36 16.0
MUD                                pmax pmax
      comp=Z,49nm,1.0s,mb5.4
MUD                                MLR  MLR
      comp=Z,490nm,22.0s,MS4.8
MUD   Monsted U'grnd   75.50 325⇑iP     P     04 35 59.8 +0.5
      comp=Z,49nm,1.0s,mb5.4
MUD                               i           04 36 16.0
      comp=Z,490nm,22.0s
FUORN Ofenpass         75.51 315  i Pu  P     04 35 59.6  0.0
UBR   Uberruh          75.52 316⇑eP     P     04 35 59.2 -0.5
PII   Pisa             75.58 312  eP    P     04 35 59.0 -1.1
ERBM  Eremo            75.60 313  eP    P     04 36 01.2 +1.1
SARO  Sassorosso       75.63 312   P    P     04 36 00.4  0.0
VLC   Villacollemand   75.64 312  eP    P     04 36 00.1 -0.3
      comp=Z,34nm,0.9s,mb5.3
BERNI Berninapass      75.69 315  i Pu  P     04 36 00.9 +0.3
DAVA  Damuels          75.71 316⇑iP     P     04 36 00.5 -0.2
      comp=Z,99nm,1.0s,mb5.7
SIND  Sindeldorf       75.72 318⇑eP     P     04 36 00.7  0.0
VALM                   75.72 313   P    P     04 36 01.5 +0.7
DAVOX Davos            75.76 315  i Pu  P     04 36 01.0  0.0
GRAM                   75.84 313   P    P     04 36 02.3 +0.8
BUCH  Bad Urach        75.96 317⇑eP     P     04 36 01.8 -0.3
LIENZ Alp Oberkamor    75.97 316  i Pu  P     04 36 01.9 -0.3
MOL   Molde            76.00 332⇑iP     P     04 36 03.0 +0.9
MOL                               epP   pP    04 36 12.7  0.0
STU   Stuttgart        76.04 317   P    P     04 36 02.7 +0.1
STU                                pmax pmax
      comp=Z,36nm,1.1s,mb5.2
STU   Stuttgart        76.04 317  eP    P     04 36 01.7 -0.8
      comp=Z,36nm,1.1s,mb5.2
VDL   Val di Lei       76.06 315  i P   P     04 36 02.8 +0.1
VDL   Val di Lei       76.06 315  i Pu  P     04 36 02.8 +0.1
PLONS Plons            76.07 315  i Pu  P     04 36 02.5 -0.3
GUT   Gutenstein       76.16 317⇑eP     P     04 36 02.9 -0.3
TOD   Tromm            76.22 318  eP    P     04 36 04.2 +0.6
TOD   Tromm            76.22 318  eP    P     04 36 03.4 -0.2
BOB   Bobbio (Coli)    76.25 313  eP    P     04 36 04.5 +0.7
SWS   Schriesheim      76.30 318  eP    P     04 36 04.0  0.0
LBG   Lerchenberg      76.31 317⇑eP     P     04 36 03.8 -0.3
LLS   Linth-Limmern    76.34 315  i P   P     04 36 04.3  0.0
LLS   Linth-Limmern    76.34 315  i Pu  P     04 36 04.3  0.0
STEIN Stein am Rhein   76.36 316  i Pu  P     04 36 03.8 -0.6
SPAK  Spaichingen      76.37 317  eP    P     04 36 04.8 +0.3
SPAK  Spaichingen      76.37 317⇑eP     P     04 36 04.1 -0.4
TNS   Taunus Mts       76.39 319  eP    P     04 36 04.7 +0.2
TNS                                pmax pmax
      comp=Z,44nm,1.0s,mb5.3
TNS   Taunus Mts       76.39 319  eP    P     04 36 04.7 +0.2
      comp=Z,44nm,1.0s,mb5.3
MUGIO Muggio           76.42 314  i Pu  P     04 36 03.8 -1.0
SNART Snartemo         76.44 327  eP    P     04 36 04.5 -0.1
TRULL Truellikon       76.49 316  i Pu  P     04 36 04.1 -1.0
FLACH Flaach           76.57 316  i Pu  P     04 36 05.1 -0.5
MUO   Muotathal        76.59 315  i Pu  P     04 36 05.9 +0.2
SLE   Schleitheim      76.60 316  i P   P     04 36 05.2 -0.6
SLE   Schleitheim      76.60 316  i Pu  P     04 36 05.2 -0.6
VAI   Varese           76.61 314  eP    P     04 36 05.0 -0.9
ODD1  Odda             76.62 329  eP    P     04 36 05.2 -0.4
GENL  Genova Univers   76.63 313   P    P     04 36 05.1 -0.9
BFO   Black Forest     76.65 317  eP    P     04 36 05.6 -0.5
BFO                                pmax pmax
      comp=Z,27nm,1.2s,mb5.0
BFO   Black Forest     76.65 317  eP    P     04 36 05.6 -0.5
      comp=Z,27nm,1.2s,mb5.0
LBTB  Lobatse          76.68 240  eP    P     04 36 08.0 +1.3
LBTB                               pmax pmax
      comp=Z,17nm,0.8s,mb5.0
LBTB                               MLR  MLR
      comp=Z,1μm,20.0s,MS5.2
LBTB  Lobatse          76.68 240  eP    P     04 36 08.0 +1.3
      comp=Z,17nm,0.8s,mb5.0
LBTB                               LR   LR
      comp=Z,1μm,20.0s,MS5.2
BLS5  Blasjo           76.74 328  eP    P     04 36 07.3 +0.9
BNALP Bannalp          76.74 315  i Pu  P     04 36 06.7 +0.1
PGF   Pioggiola        76.82 311⇑iP     P     04 36 06.9 -0.2
      comp=Z,90nm,1.2s,mb5.3
PGF   Pioggiola        76.82 311⇑iP     P     04 36 06.9 -0.2
PGF                                pmax pmax
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      comp=Z,45nm,1.2s,mb5.3
SULZ  Sulz-Cheisache    76.88 316 i Pu   P      04 36 06.8 -0.6
PCP   Pian Castagno     76.92 313 P      P      04 36 07.3 -0.3
FELD  Feldberg          76.92 316⇑eP     P      04 36 07.4 -0.2
LANF  Langenberg        76.93 318 eP     P      04 36 08.3 +0.7
KIZ   Kirchzarten       76.97 317⇑eP     P      04 36 07.4 -0.5
STR   Strasbourg        77.00 317 eP     P      04 36 08.5 +0.5
ABH   Alteburg          77.00 319 eP     P      04 36 08.7 +0.7
ABH   Alteburg          77.00 319⇑eP     P      04 36 08.1 +0.1
MCGN  Macugnaga         77.14 314 eP     P      04 36 08.7 -0.2
MMK   Mattmark          77.15 315 i P    P      04 36 08.8 -0.1
MMK   Mattmark          77.15 315 i Pu   P      04 36 08.8 -0.1
LIBD  Limburg           77.16 317 eP     P      04 36 08.6 -0.3
ORX   Oropa             77.19 314 P      P      04 36 08.2 -0.9
BALST Balsthal          77.19 316 i Pu   P      04 36 08.6 -0.5
FIN   Finale Ligure     77.19 313 eP     P      04 36 09.1 -0.1
WTSB  Winterswijk       77.25 321 eP     P      04 36 09.1 -0.2
      comp=Z,91nm,1.3s,mb5.6
WTSB                              ex     x      04 36 30.4
WLS   Welschbruch       77.29 317 eP     P      04 36 09.8 +0.1
BBS   Basel-Blauen      77.30 316 eP     P      04 36 09.8 +0.1
BBS   Basel-Blauen      77.30 316 eP     P      04 36 09.1 -0.6
WIMIS Wimmis            77.31 315 i Pu   P      04 36 09.6 -0.2
RUP   Ruppelstein       77.34 318 eP     P      04 36 10.7 +0.8
RUP   Ruppelstein       77.34 318⇑eP     P      04 36 10.1 +0.2
LKBD  Leukerbad         77.34 315 i Pu   P      04 36 10.0  0.0
CDF   Champ du Feu      77.34 317⇑iP     P      04 36 09.5 -0.4
      comp=Z,57nm,1.0s,mb5.2
CDF   Champ du Feu      77.34 317⇑iP     P      04 36 09.5 -0.4
CDF                               pmax   pmax
      comp=Z,29nm,1.0s,mb5.2
TRAV                    77.36 314 P      P      04 36 08.1 -2.0
ROB   Roburent          77.42 313 P      P      04 36 10.3 -0.2
ECH   Echery            77.44 317 eP     P      04 36 10.7 +0.2
IMI   Imperia           77.46 312 eP     P      04 36 10.5 -0.2
BOURR Bourrignon        77.49 316 i Pu   P      04 36 10.2 -0.6
MOF   Molkenrain        77.50 316 eP     P      04 36 10.9 +0.1
DIX   Grande Dixence    77.53 315 i P    P      04 36 11.6 +0.6
DIX   Grande Dixence    77.53 315 i Pu   P      04 36 11.6 +0.6
MONE  Monesi            77.53 313 P      P      04 36 10.3 -0.8
SENIN Lac Senin         77.57 315 i Pu   P      04 36 11.3 +0.1
NEGI  Negi              77.60 312 P      P      04 36 11.3 -0.1
SAOF  Saorge            77.69 313 eP     P      04 36 12.5 +0.6
HINF  Hinteralfeld      77.70 316⇑iP     P      04 36 10.0 -1.9
      comp=Z,28nm,0.9s,mb4.9
HINF  Hinteralfeld      77.70 316⇑iP     P      04 36 10.0 -1.9
HINF                              pmax   pmax
      comp=Z,14nm,0.9s,mb4.9
GRYON Gryon             77.71 315 i Pu   P      04 36 12.0  0.0
RSP   Reno Superiore    77.75 314 P      P      04 36 11.0 -1.3
ENR   Entracque         77.75 313 P      P      04 36 11.2 -1.1
TORNY Torny             77.75 315 i Pu   P      04 36 12.2  0.0
LOMF  Lomont            77.77 316 eP     P      04 36 12.4 +0.1
AUTN  L’Aution          77.78 313 eP     P      04 36 13.3 +0.9
LSD   Ceresole Reale    77.78 314 P      P      04 36 12.7 +0.3
BHB   Bricherasio       77.79 313 P      P      04 36 10.6 -1.9
SBF   Sospel            77.79 312⇑iP     P      04 36 12.2 -0.3
      comp=Z,155nm,1.0s,mb5.6
SBF   Sospel            77.79 312⇑iP     P      04 36 12.2 -0.3
SBF                               pmax   pmax
      comp=Z,78nm,1.0s,mb5.6
AIGLE Aigle             77.81 315 i Pu   P      04 36 12.3 -0.3
STV2  Anna di Valdie    77.82 313 P      P      04 36 11.6 -1.0
STV   Sta Anna Valdi    77.82 313 P      P      04 36 11.8 -0.9
SALAN Lac Salanfe       77.82 315 i Pu   P      04 36 12.7 +0.1
DOI   San Damiano       77.84 313 eP     P      04 36 11.3 -1.5
REVF  Revere            77.85 312 eP     P      04 36 13.1 +0.2
EMV   Vieux Emosson     77.88 315 i Pu   P      04 36 13.2 +0.2
FENE  Fenestrelle       77.90 314 P      P      04 36 12.5 -0.6
TOUF  Mont Tournerai    77.90 313 eP     P      04 36 13.8 +0.7
WLF   Walferdange       77.93 318 P      P      04 36 14.0 +0.9
WLF                               e      pP     04 36 27.3 +3.5
WLF                               pmax   pmax
      comp=Z,46nm,1.2s,mb5.3
WLF   Walferdange       77.93 318 eP     P      04 36 13.0 -0.1
      comp=Z,46nm,1.2s,mb5.3
HGN   Heimansgroeve     77.93 320 eP     P      04 36 13.4 +0.3
      comp=Z,25nm,1.5s,mb4.9
HGN                               ex     x      04 36 33.9
HGN                               eS     S      04 45 55.7 -7.0
PZZ   Prazzo            77.94 313 P      P      04 36 12.1 -1.2
MVIF  Mont Vial         77.99 312 eP     P      04 36 13.1 -0.5
HAU   Haudompre         78.01 317⇑iP     P      04 36 13.1 -0.5
      comp=Z,99nm,1.0s,mb5.4
HAU                               eR
      comp=Z,558nm,21.5s
HAU   Haudompre         78.01 317⇑iP     P      04 36 13.1 -0.5
HAU                               pmax   pmax
      comp=Z,50nm,1.0s,mb5.4
HAU                               MLR    MLR
      comp=Z,560nm,21.5s,MS4.9
LPG   La Plagne         78.06 314⇑iP     P      04 36 14.3 +0.4
      comp=Z,187nm,0.9s,mb5.7
LPG   La Plagne         78.06 314⇑iP     P      04 36 14.3 +0.4
LPG                               pmax   pmax
      comp=Z,94nm,0.9s,mb5.7
BRANT Les Verrieres     78.06 316 i Pu          04 36 13.8
LPL   La Plagne         78.07 314⇑iP     P      04 36 14.3 +0.3
      comp=Z,210nm,0.9s,mb5.8
LPL   La Plagne         78.07 314⇑iP     P      04 36 14.3 +0.3
LPL                               pmax   pmax
      comp=Z,105nm,0.9s,mb5.8
RRL   Cesana Torines    78.11 314 P      P      04 36 13.5 -0.7
MBDF  Montbardon        78.15 313⇑iP     P      04 36 13.8 -0.6
      comp=Z,74nm,0.9s,mb5.3
MBDF  Montbardon        78.15 313⇑iP     P      04 36 13.8 -0.6
MBDF                              pmax   pmax
      comp=Z,37nm,0.9s,mb5.3
SURF  Saint Ours        78.15 313 eP     P      04 36 15.3 +0.8
SURF  Saint Ours        78.15 313 eP     P      04 36 15.3 +0.8
BNI   Bardonecchia      78.17 314 P      P      04 36 14.2 -0.3
BNI                               pmax   pmax
      comp=Z,55nm,1.0s,mb5.4
BNI   Bardonecchia      78.17 314 eP     P      04 36 13.9 -0.6
      comp=Z,54nm,1.0s,mb5.4
THEF  They Montfort     78.22 317 eP     P      04 36 14.6 -0.2
GIMEL Gimel             78.26 315 i Pu   P      04 36 15.1 +0.1
BOSA  Boshof            78.33 237 P      P      04 36 17.2 +1.4
BOSA                              pmax   pmax
      comp=Z,24nm,0.8s,mb5.2
BOSA  Boshof            78.33 237 eP     P      04 36 16.8 +0.9
      comp=Z,24nm,0.8s,mb5.2
BOSA                              LR     LR
      comp=Z,683nm,19.0s,MS5.0
CABF  La Chapelle       78.37 315⇑iP     P      04 36 15.7 +0.1
      comp=Z,113nm,1.0s,mb5.5
CABF  La Chapelle       78.37 315⇑iP     P      04 36 15.7 +0.1
CABF                              pmax   pmax
      comp=Z,56nm,1.0s,mb5.5
FRF   La Foret Royal    78.40 312⇑iP     P      04 36 15.8  0.0
      comp=Z,237nm,1.0s,mb5.8
FRF   La Foret Royal    78.40 312⇑iP     P      04 36 15.8  0.0
FRF                               pmax   pmax
      comp=Z,119nm,1.0s,mb5.8
LMR   La Mourre         78.53 312 eP     P      04 36 16.4 -0.2
      comp=Z,209nm,1.1s,mb5.7
LMR   La Mourre         78.53 312 eP     P      04 36 16.4 -0.2
LMR                               pmax   pmax
      comp=Z,104nm,1.1s,mb5.7
GDM   Grand’Maison      78.54 314 eP     P      04 36 17.0 +0.4
GDM   Grand’Maison      78.54 314 eP     P      04 36 17.0 +0.4
GIVF  Givet             78.72 319⇑iP     P      04 36 17.4 -0.1
      comp=Z,94nm,1.2s,mb5.3
GIVF  Givet             78.72 319⇑iP     P      04 36 17.4 -0.1
GIVF                              pmax   pmax
      comp=Z,47nm,1.2s,mb5.3
ORIF  Oris-en-Rattie    78.75 314 eP     P      04 36 17.3 -0.4
      comp=Z,28nm,0.8s,mb5.0
ORIF                              eR
      comp=Z,580nm,21.2s
GRN   Grenoble          78.80 314 eP     P      04 36 18.7 +0.7
GRN   Grenoble          78.80 314 eP     P      04 36 18.7 +0.7
MEZF  Maizieres J’vi    78.80 317⇑iP     P      04 36 17.7 -0.2
      comp=Z,54nm,1.1s,mb5.1
TAVF  Tavernes          78.81 312 eP     P      04 36 19.3 +1.2
VILF  Villemus          79.02 313 eP     P      04 36 20.4 +1.1
PUYF  Puyloubier        79.08 312 eP     P      04 36 20.4 +0.8
SMRF  Simiane la Rot    79.11 313⇑iP     P      04 36 20.1 +0.4
      comp=Z,56nm,0.8s,mb5.2
BAIF  Baives            79.12 319⇑iP     P      04 36 19.7  0.0
      comp=Z,119nm,1.0s,mb5.5
BAIF  Baives            79.12 319⇑iP     P      04 36 19.7  0.0
BAIF                              pmax   pmax
      comp=Z,60nm,1.0s,mb5.5
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CAEH  ’Ain El Ouahch    79.26 305 P      P      04 36 18.0 -2.7
PRAF  Pradon            79.42 313 eP     P      04 36 22.4 +1.0
CKFL  Kef-Lekhel        79.43 305 P      P      04 36 21.0 -0.6
VIVF  Saint-Julien-l    79.61 314⇑iP     P      04 36 22.3 -0.1
      comp=Z,107nm,1.0s,mb5.4
VIVF  Saint-Julien-l    79.61 314⇑iP     P      04 36 22.3 -0.1
VIVF                              pmax   pmax
      comp=Z,54nm,1.0s,mb5.4
CASM  Ain Smara         79.63 305 P      P      04 36 22.0 -0.7
CTEI  Djebel Teioual    79.73 305 P      P      04 36 24.0 +0.7
DZM   Mont Dzumac       79.83 116 eP     P      04 36 24.6 +0.6
DZM   Mont Dzumac       79.83 116 eP     P      04 36 24.6 +0.6
SMF   Signal de Mont    79.89 316⇑iP     P      04 36 23.5 -0.4
      comp=Z,99nm,0.9s,mb5.4
SMF   Signal de Mont    79.89 316⇑iP     P      04 36 23.5 -0.4
SMF                               pmax   pmax
      comp=Z,49nm,0.9s,mb5.4
SSF   Saint Saulge      80.05 316⇑iP     P      04 36 24.5 -0.2
      comp=Z,63nm,1.0s,mb5.2
SSF   Saint Saulge      80.05 316⇑iP     P      04 36 24.5 -0.2
SSF                               pmax   pmax
      comp=Z,31nm,1.0s,mb5.2
DFRA  Djebel Bou Aff    80.07 305 P      P      04 36 26.0 +0.9
PLDF  La Plantade       80.16 315 eP     P      04 36 25.9 +0.6
AVF   Avril sur Loir    80.20 316⇑iP     P      04 36 25.1 -0.4
      comp=Z,74nm,1.0s,mb5.3
AVF   Avril sur Loir    80.20 316⇑iP     P      04 36 25.1 -0.4
AVF                               pmax   pmax
      comp=Z,37nm,1.0s,mb5.3
CMER  Merouana          80.21 304 P      P      04 36 30.0 +4.1
LASF  Ste Croix         80.31 313 eP     P      04 36 26.4 +0.2
      comp=Z,210nm,1.3s,mb5.6
MENF  Mencas            80.34 320 eP     P      04 36 26.8 +0.6
CKHR  Kef el Ahmar      80.45 305 P      P      04 36 27.0 -0.1
AGO   Saint Agoulin     80.48 315 eP     P      04 36 27.6 +0.6
SET   Setif             80.51 305 P      P      04 36 29.0 +1.6
LBL   Lubilhac          80.54 314 eP     P      04 36 28.2 +0.8
BGF   Bois d’Agland     80.58 316⇑iP     P      04 36 27.4 -0.2
      comp=Z,85nm,1.1s,mb5.3
BGF   Bois d’Agland     80.58 316⇑iP     P      04 36 27.4 -0.2
BGF                               pmax   pmax
      comp=Z,42nm,1.1s,mb5.3
HYF   Humbligny         80.60 316⇑iP     P      04 36 27.9 +0.2
PYM   Petit Puy Mans    80.62 315 eP     P      04 36 28.5 +0.7
CASY  Casey             80.89 173 PFAKE         04 36 40.0 +11
CASY                              LR     LR
      comp=Z,863nm,22.0s,MS5.1
TNA   Tin City          81.00  25 eP     P      04 36 28.7 -0.7
      comp=Z,32nm,1.1s,mb5.2
TCF   Toulx Ste Croi    81.07 315⇑iP     P      04 36 30.2 +0.1
      comp=Z,107nm,1.0s,mb5.4
EJON  La Jonquera       81.30 312 P      P      04 36 31.4  0.0
      comp=Z,124nm,2.0s,mb5.5
CAF   Calviac           81.42 314⇑iP     P      04 36 32.3 +0.3
      comp=Z,87nm,1.0s,mb5.3
CAF   Calviac           81.42 314⇑iP     P      04 36 32.3 +0.3
CAF                               pmax   pmax
      comp=Z,43nm,1.0s,mb5.3
DAG   Danmarks Havn     81.56 348⇓iP     P      04 36 31.6 -0.6
DAG                               pmax   pmax
      comp=Z,64nm,1.0s,mb5.5
DAG   Danmarks Havn     81.56 348⇓iP     P      04 36 31.6 -0.6
      comp=Z,64nm,1.0s,mb5.5
MTLF  Montolieu         81.61 313⇑iP     P      04 36 33.2 +0.1
      comp=Z,84nm,1.0s,mb5.3
MTLF  Montolieu         81.61 313⇑iP     P      04 36 33.2 +0.1
MTLF                              pmax   pmax
      comp=Z,42nm,1.0s,mb5.3
TSUM  Tsumeb            81.69 248 eP     P      04 36 35.5 +1.6
      comp=Z,12nm,0.8s,mb4.9
TSUM                              LR     LR
      comp=Z,2µm,22.0s,MS5.3
LCP   Cassop            81.71 324 eP     P      04 36 34.2 +0.9
RJF   Les Rejaudoux     81.73 315⇑iP     P      04 36 34.0 +0.4
      comp=Z,108nm,1.0s,mb5.4
RJF                               eR
      comp=Z,138nm,17.2s
RJF   Les Rejaudoux     81.73 315⇑iP     P      04 36 34.0 +0.4
RJF                               pmax   pmax
      comp=Z,54nm,1.0s,mb5.4
RJF                               MLR    MLR
      comp=Z,140nm,17.3s,MS4.4
HPK   Haverah Park      81.96 324 eP     P      04 36 35.4 +0.7
KBI1  Birley Grange     82.06 323 eP     P      04 36 35.4 +0.3
KBI1                              AMb    AMB    04 36 37.8
      comp=Z,58nm,1.4s,mb5.3
LDF   La Druitiere      82.17 318⇑iP     P      04 36 35.7 -0.1
      comp=Z,92nm,0.9s,mb5.4
LDF   La Druitiere      82.17 318⇑iP     P      04 36 35.7 -0.1
LDF                               pmax   pmax
      comp=Z,46nm,0.9s,mb5.4
LHO   Holmfirth         82.19 323 eP     P      04 36 36.5 +0.7
ABA   Alger-Bouzarea    82.27 306 P      P      04 36 40.0 +3.4
KWE   Weaver Farm       82.30 323 eP     P      04 36 36.4 +0.1
KWE                               AMb    AMB    04 36 38.7
      comp=Z,147nm,1.5s,mb5.7
LFF   La Frestale       82.34 314⇑iP     P      04 36 37.1 +0.3
      comp=Z,67nm,1.0s,mb5.2
LFF   La Frestale       82.34 314⇑iP     P      04 36 37.1 +0.3
LFF                               pmax   pmax
      comp=Z,34nm,1.0s,mb5.2
FLN   La Foliniere      82.37 318⇑iP     P      04 36 36.7 -0.1
      comp=Z,118nm,1.0s,mb5.5
FLN                               eR
      comp=Z,598nm,23.0s
FLN   La Foliniere      82.37 318⇑iP     P      04 36 36.7 -0.1
FLN                               pmax   pmax
      comp=Z,59nm,1.0s,mb5.5
FLN                               MLR    MLR
      comp=Z,600nm,23.0s,MS4.9
EMIR  Miracle           82.39 311 P      P      04 36 37.9 +0.8
      comp=Z,56nm,0.6s,mb5.7
EDI   Edinburgh         82.40 326 eP     P      04 36 37.3 +0.5
EMHD  Djebel Mahouad    82.45 305 P      P      04 36 39.0 +1.5
MLS   Moulis            82.50 312 eP     P      04 36 37.7 +0.1
ESK   Eskdalemuir       82.56 325 eP     P      04 36 37.7 +0.1
ESK                               AMb    AMB    04 36 41.0
      comp=Z,61nm,2.4s,mb5.2
EAU   Auchinoon         82.57 326 eP     P      04 36 38.8 +1.1
EAU                               AMb    AMB    04 36 45.7
      comp=Z,90nm,1.8s,mb5.5
MFF   Saint Martin d    82.60 316⇑iP     P      04 36 38.1  0.0
      comp=Z,130nm,1.0s,mb5.6
MFF   Saint Martin d    82.60 316⇑iP     P      04 36 38.1  0.0
MFF                               pmax   pmax
      comp=Z,65nm,1.0s,mb5.6
GRR   Gorron            82.69 318⇑iP     P      04 36 38.4 -0.1
      comp=Z,105nm,1.4s,mb5.4
GRR   Gorron            82.69 318⇑iP     P      04 36 38.4 -0.1
GRR                               pmax   pmax
      comp=Z,53nm,1.4s,mb5.4
EPOB  Poblet            82.84 311 P      P      04 36 39.8 +0.4
      comp=Z,76nm,0.9s,mb5.7
EAB   Aberfoyle         82.97 326 eP     P      04 36 39.3 -0.5
EAB                               AMb    AMB    04 36 45.2
      comp=Z,80nm,1.8s,mb5.5
EPF   Esparros          83.02 312⇑iP     P      04 36 39.8 -0.5
      comp=Z,17nm,1.0s,mb4.7
EPF   Esparros          83.02 312⇑iP     P      04 36 39.8 -0.5
EPF                               pmax   pmax
      comp=Z,8.0nm,1.0s,mb4.7
RESF  Ens               83.07 312 eP     P      04 36 41.7 +1.2
EIBI  Ibiza             83.13 308 P      P      04 36 42.2 +1.3
      comp=Z,133nm,1.4s,mb5.8
EBIE  Bielsa            83.24 312 P      P      04 36 42.5 +1.1
      comp=Z,37nm,0.9s,mb5.4
VIEF  Viey              83.28 312 eP     P      04 36 42.8 +1.2
SUR   Sutherland        83.29 234 PFAKE         04 36 50.0 +8.1
SUR                               LR     LR
      comp=Z,303nm,20.0s,MS4.7
EBR   Ebro Roquetas     83.38 310 eP     P      04 36 43.0 +0.8
ERTA  Horta de San J    83.47 310 P      P      04 36 43.5 +0.9
      comp=Z,82nm,1.4s,mb5.6
EBNR  Beni Rached       83.56 306 P      P      04 36 43.0 -0.2
ETSF  Etsaut            83.69 312⇑iP     P      04 36 44.3 +0.6
      comp=Z,56nm,0.9s,mb5.4
ETSF  Etsaut            83.69 312⇑iP     P      04 36 44.3 +0.6
ETSF                              pmax   pmax
      comp=Z,28nm,0.9s,mb5.4
ECHA  Ech Chlef         83.72 306 P      P      04 36 45.5 +1.5
SGMF  Saint Gilles      83.83 318⇑iP     P      04 36 44.4 +0.1
      comp=Z,89nm,0.9s,mb5.6
SGMF  Saint Gilles      83.83 318⇑iP     P      04 36 44.4 +0.1
SGMF                              pmax   pmax
      comp=Z,45nm,0.9s,mb5.6
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ESAC  San Caprasio      83.89 311 P      P      04 36 45.6 +0.8
      comp=Z,52nm,1.0s,mb5.6
ETRT  Tiaret            83.94 305 P      P      04 36 48.0 +2.8
HSA   Swansea           83.97 322 eP     P      04 36 45.5 +0.6
HSA                               AMb    AMB    04 36 46.7
      comp=Z,53nm,1.7s,mb5.4
LARF  Larrau            83.97 313 eP     P      04 36 46.2 +1.1
EANR  ’Ain N’Sour       83.98 305 P      P      04 36 47.0 +1.7
SJPF  Ste Jean          84.12 313 eP     P      04 36 45.3 -0.6
      comp=Z,76nm,1.2s,mb5.4
SJPF  Ste Jean          84.12 313 eP     P      04 36 45.3 -0.6
SJPF                              pmax   pmax
      comp=Z,38nm,1.2s,mb5.4
EMOS  Mosqueruela       84.20 310 P      P      04 36 48.1 +1.8
      comp=Z,148nm,1.3s,mb6.0
ROSF  Rostrenen         84.27 318⇑iP     P      04 36 46.7 +0.2
      comp=Z,114nm,1.0s,mb5.7
ROSF  Rostrenen         84.27 318⇑iP     P      04 36 46.7 +0.2
ROSF                              pmax   pmax
      comp=Z,57nm,1.0s,mb5.7
HPE   Pembroke          84.29 322 eP     P      04 36 46.9 +0.3
HPE                               AMb    AMB    04 36 48.5
      comp=Z,120nm,1.5s,mb5.8
EALK  Alkurruntz        84.30 313 P      P      04 36 47.7 +0.9
      comp=Z,37nm,1.0s,mb5.5
QUIF  Quistinic         84.30 318⇑iP     P      04 36 46.5 -0.2
      comp=Z,44nm,0.8s,mb5.3
QUIF  Quistinic         84.30 318⇑iP     P      04 36 46.5 -0.2
QUIF                              pmax   pmax
      comp=Z,22nm,0.8s,mb5.3
EBEN  Beniarda          84.39 308 P      P      04 36 47.2 -0.2
      comp=Z,178nm,2.5s,mb5.8
DLF   Lyons Farm        84.96 324 eP     P      04 36 49.7 -0.1
DLF   Lyons Farm        84.96 324⇑iP     sP     04 37 06.6 +2.4
DMUB  Kingscourt        85.00 324 eP     P      04 36 50.0  0.0
DMUB  Kingscourt        85.00 324⇑iP     sP     04 37 07.2 +2.7
SCO   Scoresbysund      85.22 342 i P    P      04 36 52.2 +1.5
SCO                               pmax   pmax
      comp=Z,13nm,1.2s,mb4.9
SCO   Scoresbysund      85.22 342 i P    P      04 36 52.2 +1.5
      comp=Z,13nm,1.2s,mb4.9
DCN   Croghan           85.37 324 eP     P      04 36 51.9  0.0
DCN   Croghan           85.37 324⇑iP     sP     04 37 08.9 +2.6
ELAN  Lanestosa         85.66 313 P      P      04 36 53.0 -0.5
      comp=Z,139nm,2.7s,mb5.7
EVIA  Vianos            86.14 309 P      P      04 36 57.2 +1.2
EVIA                              pmax   pmax
      comp=Z,14nm,0.6s,mb5.4
EVIA  Vianos            86.14 309 P      P      04 36 57.2 +1.2
      comp=Z,14nm,0.6s,mb5.3
ENIJ  Nijar             86.33 307 P      P      04 36 57.8 +0.8
ENIJ                              pmax   pmax
      comp=Z,19nm,0.8s,mb5.4
ENIJ  Nijar             86.33 307 P      P      04 36 57.8 +0.8
      comp=Z,19nm,0.8s,mb5.4
IMA   Indian Mountai    86.33  22 eP     P      04 36 58.0 +1.7
IMA                               pmax   pmax
      comp=Z,61nm,0.7s,mb5.9
IMA   Indian Mountai    86.33  22 eP     P      04 36 58.0 +1.7
      comp=Z,61nm,0.7s,mb5.9
EQES  Quesada           86.78 308 P      P      04 36 59.8 +0.6
      comp=Z,56nm,1.9s,mb5.5
GUD   Guadarrama        86.85 311 P      P      04 37 00.7 +1.3
GUD                               pmax   pmax
      comp=Z,32nm,0.7s,mb5.7
GUD   Guadarrama        86.85 311 P      P      04 37 00.7 +1.3
      comp=Z,32nm,0.7s,mb5.7
EBER  Berja             86.88 307 P      P      04 37 00.0 +0.4
      comp=Z,107nm,2.0s,mb5.7
EARI  Arriondas         86.89 314 P      P      04 36 58.8 -0.7
      comp=Z,268nm,2.8s,mb6.0
ESDC  Sonseca Array     86.97 310 P      P      04 37 00.5 +0.5
      comp=Z,14nm,0.8s,mb5.2
ESLA  Sonseca Array     86.97 310 eP     P      04 37 00.2 +0.2
      comp=Z,5.2nm,1.0s,mb4.7
ESLA                              epP    pP     04 37 12.0 +1.1
ESLA                              LR     LR
      comp=Z,1µm,21.0s,MS5.3
EBAN  Banos Encina      87.23 308 P      P      04 37 01.7 +0.3
EBAN                              pmax   pmax
      comp=Z,31nm,1.0s,mb5.5
EBAN  Banos Encina      87.23 308 P      P      04 37 01.7 +0.4
      comp=Z,30nm,1.0s,mb5.5
SVW2  Sparrevohn        87.71  27 eP     P      04 37 03.6 +0.5
ELOJ  Sierra Loja       87.79 308 P      P      04 37 03.0 -1.0
ELOJ                              pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.7
ELOJ  Sierra Loja       87.79 308 P      P      04 37 03.0 -1.0
      comp=Z,3.6nm,0.8s,mb4.7
EADA  Adamuz            87.83 309 P      P      04 37 05.0 +0.8
      comp=Z,76nm,1.3s,mb5.8
SUMG  Summit            88.23 347 eP     P      04 37 06.2 +0.9
      comp=Z,139nm,0.9s,mb6.2
SUMG                              epP    pP     04 37 18.6 +2.4
PBRG  Braganca          88.40 313 eP     P      04 37 07.4 +0.5
      comp=Z,25nm,1.2s,mb5.3
PBRG                              i pP   pP     04 37 22.0 +4.3
EMIJ  Mijas             88.42 307 P      P      04 37 06.6 -0.5
      comp=Z,24nm,1.0s,mb5.4
COLA  College           89.04  22 eP     P      04 37 09.1 -0.3
COLA                              pmax   pmax
      comp=Z,55nm,1.3s,mb5.7
COLA  College           89.04  22 eP     P      04 37 09.1 -0.3
      comp=Z,55nm,1.3s,mb5.7
ESPR  Espera            89.17 308 P      P      04 37 11.0 +0.4
      comp=Z,62nm,1.9s,mb5.6
SPU   Mount Spurr       89.21  26 eP     P      04 37 10.2  0.0
MCK   McKinley          89.23  23 P      P      04 37 10.5 +0.2
MCK                               pmax   pmax
      comp=Z,88nm,1.1s,mb6.0
MCK   McKinley          89.23  23 eP     P      04 37 10.3  0.0
      comp=Z,88nm,1.1s,mb6.0
MCK                               LR     LR
      comp=Z,328nm,20.0s,MS4.8
RSO   Redoubt South     89.24  27 eP     P      04 37 10.5 +0.2
PVRL  Vila Real         89.26 312 eP     P      04 37 10.9 -0.1
      comp=Z,45nm,1.5s,mb5.6
ELOB  Lobios            89.33 313 P      P      04 37 11.4 +0.1
      comp=Z,132nm,1.9s,mb5.9
STS   Santiago          89.35 314 P      P      04 37 12.5 +1.1
STS                               pmax   pmax
      comp=Z,20nm,0.6s,mb5.6
STS   Santiago          89.35 314 P      P      04 37 12.5 +1.1
      comp=Z,20nm,0.6s,mb5.6
MTE   Manteigas         89.40 311 eP     P      04 37 12.5 +0.9
      comp=Z,68nm,1.1s,mb5.9
MTE                               i pP   pP     04 37 26.6 +4.1
MTE                               eSKS   SKS    04 47 56.1  +19
MTE                               i -           04 54 03.6
      comp=Z,270nm,20.0s
MTE   Manteigas         89.40 311 eP     P      04 37 12.3 +0.7
      comp=Z,48nm,1.0s,mb5.8
EBAD  Badajoz           89.50 310 P      P      04 37 13.1 +0.9
      comp=Z,133nm,2.6s,mb5.8
PCBR  Castelo Branco    89.52 311 eP     P      04 37 12.9 +0.7
      comp=Z,38nm,1.0s,mb5.7
PCBR                              i pP   pP     04 37 26.8 +3.7
EMIN  Mina Concepcio    89.54 309 P      P      04 37 12.7 +0.3
      comp=Z,48nm,2.2s,mb5.4
PVIS  Viseu             89.56 312 eP     P      04 37 13.6 +1.2
      comp=Z,49nm,1.4s,mb5.6
PVIS                              i pP   pP     04 37 26.5 +3.2
EMAZ  Mazaricos         89.63 314 P      P      04 37 13.8 +1.1
      comp=Z,672nm,3.2s
FIB   Fire Island       90.01  26 P      P      04 37 15.1 +1.1
FIB   Fire Island       90.01  26 eP     P      04 37 14.3 +0.3
FIB                               LR     LR
      comp=Z,1µm,20.0s,MS5.3
PMR   Palmer            90.24  25 eP     P      04 37 15.3 +0.3
PMR                               pmax   pmax
      comp=Z,249nm,1.2s,mb6.4
PMR   Palmer            90.24  25 eP     P      04 37 15.3 +0.3
      comp=Z,249nm,1.2s,mb6.4
EVO   Evora             90.31 310 eP     P      04 37 16.3 +0.3
      comp=Z,51nm,1.1s,mb5.5
EVO                               eR
      comp=Z,304nm,21.0s
SLKM  Skilak Lake       90.32  26 P      P      04 37 15.9 +0.5
SLKM  Skilak Lake       90.32  26 eP     P      04 37 15.2 -0.3
PBEJ  Beja              90.36 309 eP     P      04 37 17.0 +0.8
      comp=Z,47nm,1.3s,mb5.7
PBEJ                              i pP   pP     04 37 31.9 +4.8
SML   Sawmill           90.45  25 P      P      04 37 17.0 +1.0
SML   Sawmill           90.45  25 eP     P      04 37 16.8 +0.7
KDAK  Kodiak Island     90.55  29 eP     P      04 37 17.6 +1.0
KDAK                              LR     LR
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      comp=Z,290nm,21.0s,MS4.7
THY   Trims Highway     90.60  23 eP       P        04 37 17.6 +0.8
SYO   Syowa Base        90.92 197 ⇑P       P        04 37 19.6 +1.5
SYO   Syowa Base        90.92 197 ⇓pP      pP       04 37 28.1 -0.9
PLOU  Loures            91.05 310 eP       P        04 37 19.2 -0.2
PLOU                              i pP     pP       04 37 37.8 +7.5
INK   Inuvik            91.44  16  P       P        04 37 20.8 +0.3
INK                                pmax    pmax
      comp=Z,100nm,1.1s
INK   Inuvik            91.44  16 eP       P        04 37 20.5  0.0
      comp=Z,101nm,1.1s,mb6.1
RES   Resolute Bay      91.49   2  P       P        04 37 20.9 +0.2
RES                                pmax    pmax
      comp=Z,30nm,0.9s,mb5.6
RES   Resolute Bay      91.49   2 eP       P        04 37 20.6 -0.1
      comp=Z,30nm,0.8s,mb5.7
MENT  Mentasta          91.64  23 eP       P        04 37 23.1 +1.6
DIV   Divide            91.86  25 eP       P        04 37 23.4 +0.8
      comp=Z,502nm,1.7s,mb6.6
EYAK  Cordova Ski Ar    92.19  25 eP       P        04 37 24.4 +0.3
DAWY  Dawson            92.50  21 eP       P        04 37 25.8 +0.3
SIT   Sitka             98.61  25  PFAKE            04 38 10.0  +17
SIT                                LR      LR
      comp=Z,893nm,21.0s,MS5.2
VNDA  Vanda             98.85 168  PFAKE            04 38 10.0  +16
VNDA                               LR      LR
      comp=Z,765nm,20.0s,MS5.2
DLBC  Dease Lake        99.66  22 eP       P        04 37 59.2 +1.1
YKW3  Yellowknife Ar   100.71  13 eP       P        04 38 02.1 -0.7
EDM   Edmonton         109.31  17 ePKiKP            04 42 44.7
SCHQ  Schefferville    109.60 348  PFAKE            04 43 00.0
SCHQ                               LR      LR
      comp=Z,757nm,22.0s,MS5.2
OCWA  Octopus Mounta   110.05  26  PFAKE            04 43 00.0  +15
OCWA                               LR      LR
      comp=Z,811nm,21.0s,MS5.3
RAR   Rarotonga        110.20 108  PFAKE            04 43 00.0  +14
RAR                                LR      LR
      comp=Z,5µm,21.0s
NEW   Newport          112.40  22  PFAKE            04 43 00.0  +11
NEW                                LR      LR
      comp=Z,560nm,22.0s,MS5.1
HUMO  Hull Mountain    114.57  29 ePKPdf   PKPdf    04 42 55.7 +1.8
HUMO                               LR      LR
      comp=Z,423nm,22.0s,MS5.0
MSO   Missoula         114.75  20 ePKiKP            04 42 54.8
MSO                               ePP      PP       04 43 48.4 -8.8
MSO                                LR      LR
      comp=Z,538nm,21.0s,MS5.1
CHMT  Chamberlain Mo   114.90  20 ePKiKP            04 42 55.7
CHMT                              ePP      PP       04 43 45.9  -12
BMO   Blue Mountains   115.20  24  PFAKE            04 43 10.0  +15
BMO                                LR      LR
      comp=Z,496nm,21.0s,MS5.1
YBH   Yreka Blue Hor   115.36  29  PFAKE            04 43 10.0  +15
YBH                                LR      LR
      comp=Z,459nm,21.0s,MS5.1
ULM   Lac du Bonnet    115.64   7  PFAKE            04 43 10.0  +14
ULM                                LR      LR
      comp=Z,643nm,21.0s,MS5.2
DGMT  Dagmar           115.98  13 ePKPdf   PKPdf    04 42 58.2 +1.8
DGMT                               LR      LR
      comp=Z,651nm,19.0s,MS5.3
WDC   Whiskeytown Da   116.33  30  PKIKP   PKPdf    04 42 59.0 +1.7
WDC   Whiskeytown Da   116.33  30 ePKPdf   PKPdf    04 42 58.7 +1.4
WDC                                LR      LR
      comp=Z,534nm,20.0s,MS5.2
MOD   Modoc            116.34  28 ePKPdf   PKPdf    04 42 59.1 +1.8
MOD                                LR      LR
      comp=Z,491nm,21.0s,MS5.1
BOZ   Bozeman (W)      116.55  20 ePKIKP   PKPdf    04 42 59.5 +1.9
BOZ                                MLR     MLR
      comp=Z,491nm,21.0s,MS5.1
WVOR  Wild Horse Val   116.65  26 ePKIKP   PKPdf    04 42 59.2 +1.4
WVOR                               MLR     MLR
      comp=Z,532nm,21.0s,MS5.1
MCMT  McKenzie Canyo   116.86  21 ePKPdf   PKPdf    04 42 59.9 +1.8
LAO   LASA Array       117.17  15 ePKPdf   PKPdf    04 43 01.1 +2.4
LAO                                LR      LR
      comp=Z,711nm,22.0s,MS5.2
QLMT  Earthquake Lak   117.34  20 ePKPdf   PKPdf    04 43 01.8 +2.8
HLID  Hailey           117.40  23 ePKPdf   PKPdf    04 43 01.3 +2.1
HLID                               LR      LR
      comp=Z,480nm,21.0s,MS5.1
YMR   Madison River    117.64  20 ePKPdf   PKPdf    04 43 02.7 +3.1
YFT   Old Faithful     117.87  20 ePKPdf   PKPdf    04 43 03.7 +3.6
LKWY  Lake             117.91  19  PKIKP   PKPdf    04 43 04.0 +3.8
LKWY                              e                 04 43 12.2
LKWY  Lake             117.91  19 ePKPdf   PKPdf    04 43 04.2 +4.0
LKWY                               LR      LR
      comp=Z,776nm,22.0s,MS5.3
EYMN  Ely              118.32   4 ePKPdf   PKPdf    04 43 02.3 +1.4
EYMN                               LR      LR
      comp=Z,658nm,21.0s,MS5.2
IMW   Indian Meadow    118.33  20 ePKPdf   PKPdf    04 43 03.1 +2.1
MOOW  Moose Ponds      118.53  20 ePKPdf   PKPdf    04 43 03.2 +1.8
WCN   Washoe City      118.66  29 ePKIKP   PKPdf    04 43 04.2 +2.4
TPAW  Teton Pass       118.69  20 ePKPdf   PKPdf    04 43 03.8 +2.0
RRI2  Red Ridge        118.69  20 ePKPdf   PKPdf    04 43 03.8 +2.0
RRI2                              eSKPdf            04 46 35.8
LOHW  Long Hollow      118.69  20 ePKPdf   PKPdf    04 43 03.6 +1.8
LOHW                              eSKPdf            04 46 35.9
BMN   Battle Mountai   118.90  27  PFAKE            04 43 20.0  +18
BMN                                LR      LR
      comp=Z,309nm,20.0s,MS4.9
AHID  Auburn Hatcher   119.28  21  PFAKE            04 43 20.0  +17
AHID                               LR      LR
      comp=Z,546nm,20.0s,MS5.2
PPT   Papeete          119.33 103 ePP      PP       04 44 24.1 -5.4
PPT                               eSS      SS       05 01 11.6  +26
PPT                               eLR      LR       05 19 26.7
      comp=Z,418nm,28.5s
CMB   Columbia Colle   119.36  30  PKIKP   PKPdf    04 43 05.0 +1.8
CMB   Columbia Colle   119.36  30 ePKPdf   PKPdf    04 43 04.2 +1.0
CMB                                LR      LR
      comp=Z,371nm,21.0s,MS5.0
HVU   Hansel Valley    119.55  22  PKIKP   PKPdf    04 43 05.7 +2.2
HVU   Hansel Valley    119.55  22 ePKPdf   PKPdf    04 43 04.9 +1.4
BW06  Boulder Array    119.79  19  PFAKE            04 43 20.0  +16
BW06                               LR      LR
      comp=Z,390nm,19.0s,MS5.1
TBI   Tubuai           119.90 109 eLR      LR       05 19 58.2
      comp=Z,449nm,29.5s
MNV   Mina             120.11  29 ePKIKP   PKPdf    04 43 06.7 +2.0
MNV                                MLR     MLR
      comp=Z,428nm,19.0s,MS5.1
HWUT  Hardware Ranch   120.14  22 ePKPdf   PKPdf    04 43 05.8 +1.1
HWUT                               LR      LR
      comp=Z,525nm,21.0s,MS5.2
BGU   Big Grassy Mou   120.19  23 ePKPdf   PKPdf    04 43 04.6 -0.2
TCUT  Toone Canyon     120.62  22 ePKPdf   PKPdf    04 43 06.5 +0.9
NOQ   North Oquirrh    120.77  23 ePKPdf   PKPdf    04 43 07.7 +1.8
TPH   Tonopah          120.83  28  PFAKE            04 43 20.0  +14
TPH                                LR      LR
      comp=Z,373nm,22.0s,MS5.0
MIV   Mineville/With   121.17 349 ePKPdf   PKPdf    04 43 07.7 +1.1
MDV   Middlebury       121.18 349 ePKPdf   PKPdf    04 43 07.2 +0.6
DAU   Daniels Canyon   121.30  22 ePKIKP   PKPdf    04 43 08.8 +1.9
TRCR  Troy Canyon      121.33  27 ePKPdf   PKPdf    04 43 09.0 +1.9
TRCR                              e                 04 43 19.9
NCB   Newcomb          121.39 350  PFAKE            04 43 20.0  +13
NCB                                LR      LR
      comp=Z,624nm,22.0s,MS5.2
NLU   North Lily Min   121.39  23 ePKPdf   PKPdf    04 43 08.9 +1.8
DAC   Darwin (Calif)   122.11  30 ePKIKP   PKPdf    04 43 10.4 +1.8
DAC                                MLR     MLR
      comp=Z,353nm,20.0s,MS5.0
HRV   Harvard--Oak R   122.28 347  PFAKE            04 43 20.0  +11
HRV                                LR      LR
      comp=Z,392nm,19.0s,MS5.1
TMUT  Trail Mountain   122.30  23 ePKPdf   PKPdf    04 43 11.1 +2.2
PHWY  Pilot Hill       122.38  17 ePKPdf   PKPdf    04 43 10.2 +1.3
MVU   Marysvale        122.60  24 ePKPdf   PKPdf    04 43 12.2 +2.7
MVU                               eSKPdf            04 46 44.4
MVU                                LR      LR
      comp=Z,524nm,21.0s,MS5.2
MSU   Marysvale        122.61  24 ePKPdf   PKPdf    04 43 12.1 +2.5
MSU                               eSKPdf            04 46 43.9
SRU   San Rafael       122.71  22  PKIKP   PKPdf    04 43 11.6 +1.9
SRU   San Rafael       122.71  22 ePKPdf   PKPdf    04 43 11.1 +1.4
BINY  Binghamton       123.41 351 ePKPdf   PKPdf    04 43 12.3 +1.3
BINY                              e                 04 43 26.9
BINY                               LR      LR
      comp=Z,1µm,22.0s,MS5.5
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MWC   Mount Wilson     123.51  31 ePKIKP   PKPdf    04 43 13.2 +1.8
ISCO  Idaho Springs    123.72  18  PKIKP   PKPdf    04 43 13.5 +1.9
ISCO  Idaho Springs    123.72  18 ePKPdf   PKPdf    04 43 12.6 +1.0
ISCO                               LR      LR
      comp=Z,564nm,22.0s,MS5.2
PV10  Paradox Valley   123.90  21 ePKPdf   PKPdf    04 43 13.8 +1.8
NEN   Nelson           123.90  28 ePKPdf   PKPdf    04 43 14.1 +2.0
AAM   Ann Arbor        124.08 358  PFAKE            04 43 30.0  +18
AAM                                LR      LR
      comp=Z,512nm,20.0s,MS5.2
LDFC  Landfair         124.25  28 ePKPdf   PKPdf    04 43 15.4 +2.6
PV01  Paradox Valley   124.28  21 ePKPdf   PKPdf    04 43 14.6 +1.9
PV01                              ePP      PP       04 44 56.4 -6.4
PFO   Pinyon Flat Ob   124.80  31 ePKIKP   PKPdf    04 43 15.9 +2.0
PFO                                MLR     MLR
      comp=Z,125nm,21.0s,MS4.5
SSPA  Standing Stone   125.22 352  PFAKE            04 43 30.0  +16
SSPA                               LR      LR
      comp=Z,99nm,22.0s,MS4.4
BAR   Barrett          125.44  31 ePKPdf   PKPdf    04 43 17.4 +2.3
MVL   Millersville     125.62 350 ePKPdf   PKPdf    04 43 16.9 +1.7
SDCO  Great Sand Dun   125.64  19 ePKPdf   PKPdf    04 43 16.8 +1.4
SDCO                               LR      LR
      comp=Z,638nm,22.0s,MS5.2
ACSO  Alum Creek Sta   126.11 357 ePKPdf   PKPdf    04 43 16.8 +0.6
ACSO                              e                 04 43 32.6
ACSO                              ePP      PP       04 45 09.1 -5.6
ACSO                               LR      LR
      comp=Z,896nm,22.0s,MS5.4
SDMD  Soldier’s Deli   126.27 351 ePKPdf   PKPdf    04 43 17.3 +0.7
MCWV  Mont Chateau     126.42 354  PFAKE            04 43 30.0  +13
MCWV                               LR      LR
      comp=Z,857nm,20.0s,MS5.4
KSU1  Kansas State U   126.48  10 eP       PKPdf    04 43 17.6 +0.7
TAOE  Nuku Hiva Isla   127.18  91 eLR      LR       05 23 18.8
BLO   Bloomington      127.26   0  PKIKP   PKPdf    04 43 19.4 +0.9
BLO   Bloomington      127.26   0 ePKPdf   PKPdf    04 43 18.9 +0.4
CBN   Corbin           127.53 351  PFAKE            04 43 30.0  +11
CBN                                LR      LR
      comp=Z,610nm,21.0s,MS5.3
ANMO  Albuquerque      127.88  21  PKIKP   PKPdf    04 43 21.9 +2.1
ANMO  Albuquerque      127.88  21 ePKPdf   PKPdf    04 43 21.2 +1.4
ANMO                               LR      LR
      comp=Z,553nm,21.0s,MS5.2
LAZ   Ladron           128.13  22 ePKPdf   PKPdf    04 43 22.7 +2.4
CCM   Cathedral Cave   128.18   5  PKIKP   PKPdf    04 43 20.8 +0.5
CCM                               e                 04 43 33.9
CCM   Cathedral Cave   128.18   5 ePKPdf   PKPdf    04 43 20.6 +0.3
CCM                                LR      LR
      comp=Z,124nm,22.0s,MS4.5
WCI   Wyandotte Cave   128.20 360  PKIKP   PKPdf    04 43 21.7 +1.4
WCI   Wyandotte Cave   128.20 360 ePKPdf   PKPdf    04 43 21.1 +0.8
WCI                                LR      LR
      comp=Z,115nm,19.0s,MS4.6
FVM   French Village   128.31   4  PKIKP   PKPdf    04 43 21.8 +1.3
FVM   French Village   128.31   4 ePKPdf   PKPdf    04 43 21.3 +0.8
LPM   Los Pinos Moun   128.39  21 ePKPdf   PKPdf    04 43 20.7 -0.1
LENM  Lemitar          128.40  22 ePKPdf   PKPdf    04 43 22.5 +1.7
TUC   Tucson           128.52  27 ePKIKP   PKPdf    04 43 23.1 +2.0
TUC                                MLR     MLR
      comp=Z,352nm,22.0s,MS5.0
PWV   Princeton        128.84 354 ePKPdf   PKPdf    04 43 22.9 +1.4
BLA   Blacksburg       128.90 354  PFAKE            04 43 30.0 +8.3
BLA                                LR      LR
      comp=Z,531nm,19.0s,MS5.2
AMTX  Amarillo         129.42  16  PFAKE            04 43 40.0  +17
AMTX                               LR      LR
      comp=Z,448nm,19.0s,MS5.2
RCBR  Riachuelo        129.67 274  PFAKE            04 43 40.0  +16
RCBR                               LR      LR
      comp=Z,590nm,19.0s,MS5.3
WVT   Waverly          130.28   1  PKIKP   PKPdf    04 43 25.7 +1.4
WVT   Waverly          130.28   1 ePKPdf   PKPdf    04 43 25.5 +1.2
WVT                                LR      LR
      comp=Z,540nm,20.0s,MS5.2
WMOK  Wichita Mounta   130.28  13 ePKIKP   PKPdf    04 43 25.5 +1.1
WMOK                               MLR     MLR
      comp=Z,521nm,20.0s,MS5.2
WMOK  Wichita Mounta   130.28  13 ePKPdf   PKPdf    04 43 25.5 +1.1
WMOK                              eSKP              04 46 45.1
WMOK                               LR      LR
      comp=Z,521nm,20.0s,MS5.2
CPRX  Cap Rock         130.50  19 ePKPdf   PKPdf    04 43 27.0 +2.1
CPRX                              eSKP              04 46 45.3
GDL2  Guadalupe Moun   131.10  20 ePKPdf   PKPdf    04 43 27.1 +1.1
GDL2                              eSKPbc            04 46 47.9
MNTX  Cornudas Mount   131.20  22 ePKPpre           04 43 11.1
MNTX                              ePKPdf   PKPdf    04 43 27.7 +1.5
MNTX                               LR      LR
      comp=Z,584nm,21.0s,MS5.3
MIAR  Mount Ida        131.40   8 ePKHKP            04 43 14.2
MIAR                               MLR     MLR
      comp=Z,519nm,19.0s,MS5.2
OXF   Oxford           131.83   3  PFAKE            04 43 40.0  +13
OXF                                LR      LR
      comp=Z,627nm,22.0s,MS5.3
GOGA  Godfrey          132.92 357  PFAKE            04 43 40.0  +11
GOGA                               LR      LR
      comp=Z,568nm,21.0s,MS5.3
NHSC  New Hope         132.93 353  PFAKE            04 43 40.0  +11
NHSC                               LR      LR
      comp=Z,513nm,19.0s,MS5.3
LRAL  Lakeview Retre   133.38   1 ePKPdf   PKPdf    04 43 25.2 -5.1
LRAL                               LR      LR
      comp=Z,666nm,22.0s,MS5.3
LTX   Lajitas          133.96  21  PKIKP   PKPdf    04 43 33.7 +2.2
LTX   Lajitas          133.96  21 ePKPdf   PKPdf    04 43 32.0 +0.5
LTX                                LR      LR
      comp=Z,510nm,21.0s,MS5.2
NATX  Nacogdoches      133.97  10  PFAKE            04 43 40.0 +8.5
NATX                               LR      LR
      comp=Z,624nm,20.0s,MS5.3
JCT   Junction City    134.09  16 ePKIKP   PKPdf    04 43 32.8 +1.1
JCT                                MLR     MLR
      comp=Z,507nm,22.0s,MS5.2
JCT   Junction City    134.09  16 ePKPdf   PKPdf    04 43 32.8 +1.1
JCT                               eSKPbc            04 46 58.1
JCT                                LR      LR
      comp=Z,507nm,22.0s,MS5.2
HKT   Hockley          135.52  12  PFAKE            04 43 50.0  +16
HKT                                LR      LR
      comp=Z,131nm,19.0s,MS4.7
CBYP  Canovanas        142.19 327 ePKPpre           04 43 43.4
SJG   San Juan         142.47 327  PFAKE            04 44 00.0  +13
SJG                                LR      LR
      comp=Z,320nm,19.0s,MS5.1
BAO   Brasilia Array   142.82 262  P       PKPdf    04 43 46.1 -1.7
BAO                               e                 04 43 53.1
BAO                               i                 04 44 05.2
BAO                               e                 04 47 23.2
PPM   Popocatepetl     145.16  20⇑iPKIKP   PKPdf    04 43 52.5 +0.7
TRN   Trinidad (W)     145.24 313 eP       PKPdf    04 43 55.0 +2.9
ZIIG  Zihuatanejo      145.40  26 i P      PKPdf    04 43 53.9 +1.6
TPP   Pointe-a-Pierr   145.50 313 eP       PKPdf    04 43 57.6 +5.1
TEIG  Tepich           146.09   3 ePKPdf   PKPdf    04 43 55.2 +1.8
TEIG                               LR      LR
      comp=Z,265nm,19.0s,MS5.0
BBJ   Bamboo Saint A   146.73 344⇑eP       PKPdf    04 43 58.5 +4.0
GWJ   Greenwich        146.87 343⇑eP       PKPdf    04 43 58.8 +4.0
STH   Stony Hill       146.89 343⇑eP       PKPdf    04 43 58.6 +3.8
HOJ   Hope             146.94 343⇑eP       PKPdf    04 43 59.3 +4.5
CVJ   Coleyville       146.95 344⇑eP       PKPdf    04 43 58.9 +4.0
MCJ   Malvern          147.28 344⇑eP       PKPdf    04 44 00.0 +4.6
TUIG  Tuzandepetl      147.35  14 eP       PKPdf    04 44 00.2 +4.7
TRQA  Tornquist        147.57 218 ePKPdf   PKPdf    04 43 57.1 +1.8
TRQA                              ePKPbc   PKPdf    04 43 59.8 +4.5
TRQA                               LR      LR
      comp=Z,503nm,19.0s,MS5.3
PNIG  Pinotepa         147.81  21 eP       PKPdf    04 44 01.8 +5.5
PLCA  Paso Flores      149.83 204 ePKIKP   PKPdf    04 44 01.0 +2.1
PLCA                              e                 04 44 06.1
SDV   Santo Domingo    152.51 324 ePKPdf   PKPdf    04 44 04.8 +1.2
SDV                               e                 04 44 11.6
SDV                                LR      LR
      comp=Z,355nm,21.0s,MS5.2
JTS   JuntasAbangare   155.97 356  PFAKE            04 44 20.0  +12
JTS                                LR      LR
      comp=Z,101nm,21.0s,MS4.6
SAML  Samuel           156.71 280 ePKPdf   PKPdf    04 44 10.6 +1.3
SAML                               LR      LR
      comp=Z,627nm,21.0s,MS5.4
LVC   Limon Verde      161.24 240 ePKPdf   PKPdf    04 44 17.2 +2.9
LVC                                LR      LR
```

```
      comp=Z,401nm,20.0s
LPAZ  La Paz           162.17 260 ePKIKP   PKPdf    04 44 17.3 +1.9
LPAZ                               MLR     MLR
      comp=Z,496nm,21.0s
OTAV  Otavalo          163.93 330  PFAKE            04 44 30.0  +13
OTAV                               LR      LR
      comp=Z,428nm,19.0s
ARE   Arequipa         165.35 258 eP       PKPdf    04 44 22.0 +3.5
NNA   Nana             170.48 280  PFAKE            04 44 30.0 +8.1
NNA                                LR      LR
      comp=Z,95nm,20.0s
```

*NEIC **06** 04:51:08.4±1.1, 13.78N×93.29E, h30^{km}, mb4.2/4, Error ellipse: s-maj=20.2km s-min=11.4km az=39.0*

ISC 06 04:51:05.8±1.2**, 13.7N**±0.1×**93.3E**±0.1**, h30^{km}, n14, σ1^{s}.02**/16**, mb4.5**/2**, Andaman Islands region**

```
Code  Station Name       Δ°   AZ°     Phase ID             Time     Res
                                   Op      ISC          h  m  s   ISC
CM31  Chiang Mai Arr     7.21  48 eP       Pn       04 52 50.7 -1.3
      4.3nm,0.3s
BWNR  Bhubaneshwar       9.67 314 eP       P        04 53 21.9 -4.4
BWNR                               AMb     AMB      04 53 23.6
      comp=Z,17nm,0.1s
BWNR                              eS       Sn       04 54 60.0  -15
VIS   Vishakhapatnam    10.36 294 eP       P        04 53 33.8 -1.9
VIS                               e                 04 53 36.1
      comp=Z,32nm,0.3s
VIS                               eS       S        04 55 19.4  -12
VIS                               e                 04 55 26.1
      comp=N,445nm,0.3s
SHL   Shillong          11.86 354 eP       P        04 53 55.0 -1.1
BLSP  Bilaspur          13.49 310 i P      P        04 54 18.1 +0.3
BLSP                              i                 04 56 15.5
BLSP                              e                 04 56 16.6
      comp=N,12nm,0.6s
BLSP                              e                 04 56 16.6
      comp=E,14nm,0.2s
JIRN  Jiri              15.36 336 eP       P        04 54 41.9 -0.4
      comp=E,11nm,0.3s
PKI   Pulchoki          15.61 333 eP       P        04 54 46.7 +1.1
      comp=E,7.3nm,0.2s
DMN   Daman             15.78 332 eP       P        04 54 48.8 +1.1
LSA   Lhasa             16.02 353  P       P        04 54 52.3 +1.5
      comp=E,4.1nm,0.6s
GKN   Gorkha            16.33 332 eP       P        04 54 54.1 -0.6
      comp=E,11nm,0.3s
KOLN  Koldanda          16.63 329 eP       P        04 54 58.6  0.0
      comp=E,16nm,0.7s
CHKZ  Chkalovo          43.70 341 eP       P        04 59 10.2 +0.4
      comp=E,1.7nm,0.5s,mb4.0
WRAB  Tennant Creek     52.46 129  P       P        05 00 19.0 +0.5
KIV   Kislovodsk        52.50 315 eP       P        05 00 18.9 +0.5
      comp=E,19nm,1.1s,mb5.0
```

*KRSC **06** 04:57:56.0±2.3, 53.54N×163.48E, h40^{km}±19^{km}, ML4.6*
*MOS **06** 04:57:57.9±2.1, 53.62N×163.19E, h35^{km}, mb4.5/1, Error ellipse: s-maj=21.9km s-min=16.6km az=79.1*

ISC 06 04:57:57.0±0.7**, 53.57N**±0.03×**163.38E**±0.07**, h49^{km}**±16^{km}**, n38, σ1^{s}.03**/74**, mb4.0**/1**, 1D, Off east coast of Kamchatka Peninsula**

```
Code  Station Name       Δ°   AZ°     Phase ID             Time     Res
                                   Op      ISC          h  m  s   ISC
SPN   Mys Shipunski      2.06 258  P       P        04 58 30.2 +0.3
SPN                                S       S        04 58 53.5 -1.0
SPN   Mys Shipunski      2.06 258 eP       P        04 58 30.2 +0.3
SPN                               eS       S        04 58 53.7 -0.8
BKI   Bering             2.23  42 i P      P        04 58 30.9 -1.5
BKI                               i S      S        04 58 54.7 -4.1
NLC   Nalytchevo         2.45 262  P       P        04 58 35.6 +0.2
NLC                                S       S        04 59 02.7 -1.5
NLC   Nalytchevo         2.45 262 eP       P        04 58 35.6 +0.2
NLC                               eS       S        04 59 03.3 -0.9
TUMR  Tumrok             2.55 314 eP       P        04 58 37.2 +0.3
TUMR                              eS       S        04 59 07.5 +0.6
KBTR  Krutoberegovo      2.67 353  P       P        04 58 36.9 -1.6
KBTR                               S       S        04 59 04.6 -5.2
KBTR  Krutoberegovo      2.67 353 i P      P        04 58 37.0 -1.5
KBTR                              i S      S        04 59 09.6 -0.2
KBG   Krutoberegovo      2.72 352 eP       P        04 58 37.8 -1.5
KBG                               eS       S        04 59 10.8 -0.4
KBG                                Smax
      1µm,1.0s
KBG   Krutoberegovo      2.72 352 i P      P        04 58 37.9 -1.4
KBG                               i S      S        04 59 10.4 -0.8
UGLR  Uglovaya           2.75 264 eP       P        04 58 40.4 +0.7
UGLR                              eS       S        04 59 10.7 -1.2
AVH   Avacha             2.79 266 eP       P        04 58 41.3 +1.0
AVH                               eS       S        04 59 12.9 -0.1
KOK   Koryaka            2.85 266 eP       P        04 58 42.1 +1.0
KOK                               eS       S        04 59 13.6 -0.8
KMNR  Kamenistaya        2.85 322 eP       P        04 58 42.2 +1.0
KMNR                              eS       S        04 59 15.7 +1.2
PET   Petropavlovsk      2.89 261  P       P        04 58 42.0 +0.3
PET                                S       S        04 59 13.8 -1.5
PET   Petropavlovsk      2.89 261⇓iPN      P        04 58 42.2 +0.6
PET                               i S      S        04 59 16.3 +1.0
PET                                smax
      comp=E,516nm,0.5s
PET                                smax
      comp=N,344nm,0.5s
PET   Petropavlovsk      2.89 261 eP       P        04 58 42.3 +0.7
PET                               eS       S        04 59 15.9 +0.6
LGNR  Loginova           2.96 329 eP       P        04 58 43.4 +0.7
LGNR                              eS       S        04 59 15.9 -1.4
KPT   Kopyto             3.02 324 eP       P        04 58 45.0 +1.5
KPT                               eS       S        04 59 20.5 +1.8
KRSR  Krestovskiy        3.11 330 eP       P        04 58 44.3 -0.6
KRSR                              eS       S        04 59 21.7 +0.6
RUS   Russkaya           3.15 251  P       P        04 58 45.2 -0.2
RUS                                S       S        04 59 19.3 -2.7
RUS   Russkaya           3.15 251 eP       P        04 58 45.2 -0.2
RUS                               eS       S        04 59 20.2 -1.8
KLY   Klyuchi            3.17 331  P       P        04 58 45.2 -0.4
KLY                                S       S        04 59 20.6 -1.9
KLY   Klyuchi            3.17 331 eP       P        04 58 45.3 -0.3
KLY                               eS       S        04 59 20.2 -2.3
KOZR  Kozyr              3.21 323  PN      P        04 58 47.6 +1.3
KOZR                               S       S        04 59 24.7 +1.1
KOZ   Kozyrevsk          3.21 322  P       P        04 58 47.6 +1.3
KOZ                                S       S        04 59 24.7 +1.0
KOZ   Kozyrevsk          3.21 322 eP       P        04 58 48.2 +1.9
KOZ                               eS       S        04 59 24.5 +0.8
GNL   Ganaly             3.24 274 eP       P        04 58 47.6 +1.0
GNL                               eS       S        04 59 24.6 +0.3
KRMR  Karymshinskiy      3.24 259 eP       P        04 58 47.1 +0.4
KRMR                              eS       S        04 59 23.0 -1.3
SVLR  Shiveluch          3.26 339 eP       P        04 58 46.9 -0.1
SVLR                              eS       S        04 59 23.4 -1.4
GRL   Gorelyy            3.36 254 eP       P        04 58 49.1 +0.8
GRL                               eS       S        04 59 26.0 -1.3
SRDR  Sredinnyy          3.47 324 eP       P        04 58 50.0 +0.1
SRDR                              eS       S        04 59 29.7 -0.4
ESO   Esso               3.59 313 i P      P        04 58 51.7  0.0
ESO                               eS       S        04 59 32.8 -0.5
ESO                                Smax
      comp=N,180nm,0.9s
APC   Apacha             3.79 263 i P      P        04 58 55.7 +1.3
APC                               eS       S        04 59 38.8 +0.6
PAU   Pauzhetka          4.53 245 eP       P        04 59 04.8  0.0
PAU                               eS       S        04 59 52.8 -4.0
SKR   Severo-Kuril’s     5.32 240 ePN      P        04 59 11.5 -4.4
KAMR  Kamenskoye         9.04   8 eP       P        05 00 07.3 -0.3
KAMR                              eS       S        05 01 45.5 -3.6
NB2   NORSAR Subarra    63.61 345  P       P        05 08 25.2 +0.9
      comp=N,1.0nm,0.7s,mb4.0,baz=21,slow=6.5
```

*NEIC **06** 05:32:16.2, 16.64N×100.55W, h4^{km}, MD4.0(MEX), After MEX.*

MEX 06 05:32:16.3±0.6**, 16.64N**×**100.56W, h5^{km}**±5^{km}**, MD4.0, 1C, Near coast of Guerrero**

```
Code  Station Name       Δ°   AZ°     Phase ID             Time     Res
                                   Op      ISC          h  m  s   ISC
CAIG  El Cayaco          0.49  35⇑iP       Pg       05 32 25.1 -1.0
CAIG                              i S      Sg       05 32 32.6  0.0
ACX   Acapulco           0.65  70 i P      Pg       05 32 28.0 -1.3
ACX                               eS       Sg       05 32 37.5 -0.6
```

ZIIG	**Zihuatanejo**	**1.29**	**318**	eP	Pb	05 32 38.1	-2.7
ZIIG				i S	Sb	05 32 53.5	-4.1
ZIIG	**Zihuatanejo**	**1.29**	**318**	eP	Pb	05 32 38.1	-2.7
ZIIG				i S	Sb	05 32 53.1	-4.5
PLIG	**Platanillo**	**2.01**	**30**	i P	Pn	05 32 48.2	-3.1
PLIG				i S	Sn	05 33 12.8	-4.3
YAIG	**Yautepec**	**2.62**	**33**	eP	Pn	05 32 56.4	-3.7
YAIG				i S	Sn	05 33 27.3	-5.5
PPM	**Popocatepetl**	**3.03**	**37**	eP	Pn	05 33 11.0	+5.1
PPM				eS	Sn	05 33 46.5	+3.4
PPM	**Popocatepetl**	**3.03**	**37**	eP	Pn	05 33 01.7	-4.3
PPM				eP		05 33 02.0	
PPM				eS	Sn	05 33 38.6	-4.4
PPM				eS	Sn	05 33 41.0	-2.1
IIB	**San Bernardino**	**3.12**	**42**	eP	Pn	05 33 12.0	+4.7
IIB				eS	Sn	05 33 50.0	+4.5
IIB	**San Bernardino**	**3.12**	**42**	eP	Pn	05 33 02.0	-5.3
IIB				eS	Sn	05 33 41.0	-4.5
OXX	**Oaxaca**	**3.70**	**83**	eP	Pn	05 33 19.0	+3.6

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*BJI **06** 06:07:53.7, 7.82N×93.85E, h36^{km}, mB5.6, mb5.1, Ms5.4, Msz5.2*

*NEIC **06** 06:07:55.1±0.1, 8.07N×94.06E, mb5.4/123, MS5.1/116, MW5.4, Error ellipse: s-maj=5.3km s-min=4.1km az=39.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-1.10; M$_{\theta\theta}$-0.77; M$_{\phi\phi}$1.87; M$_{r\theta}$0.15; M$_{\theta\phi}$0.71; M$_{\phi r}$-0.38; Best double couple: M$_0$1.7×10^{17} NP1:φ$_s$225°, δ49°, λ-43°. NP2:φ$_s$346°, δ59°, λ-130°. Principal axes: T 2.08, Plg6°, Azm104°; N -.79, Plg34°, Azm10°; P -1.29, Plg56°, Azm202°;*

*HRVD **06** 06:07:55.1±0.2, 8.07N×94.23E, h12^{km}, MW5.4/57, Centroid moment Tensor Solution. LP body waves: s49,c87;Mantle waves: s57,c107; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.01±.03; M$_{\theta\theta}$-0.01±.03; M$_{\phi\phi}$1.02±.03; M$_{r\theta}$0.61±.09; M$_{\theta\phi}$0.99±.03; M$_{\phi r}$-0.43±.09; Best double couple: M$_0$1.604×10^{17} NP1: φ$_s$243°, δ55°, λ-42°. NP2:φ$_s$360°, δ57°, λ-137°. Principal axes: T 1.624, Plg1°, Azm121°; N -.043, Plg38°, Azm30°; P -1.583, Plg52°, Azm213°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **06** 06:07:58.0±0.8, 8.45N×93.83E, h33^{km}, mb5.6/54, MS5.0/29 Error ellipse: s-maj=11.2km s-min=5.6km az=115.9*

*CSEM **06** 06:07:59.2, 8.74N×93.90E, h33^{km}, mb5.6*

ISC 06 06:07:53.9±0.9**, 8.05N**±0.03×**94.13E**±0.03**, h22**^{km}±6^{km}**, h19**^{km}±.5^{km}**:pP-P, n529,** σ1^s**03**/443**, mb5.3**/163**, MS5.1**/142**, 28C-45D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**3.83**	**339**	eP	Px	06 08 54.8	
PBA				e		06 09 42.9	
IPM	**Ipoh**	**7.67**	**116**	P	**Pn**	**06 09 44.3**	**-2.9**
KGM	**Kluang**	**10.94**	**123**	P	**P**	**06 10 29.4**	**-3.0**
CM31	**Chiang Mai Arr**	**11.35**	**24**	eP	**P**	**06 10 38.5**	**+0.5**
PALK	**Pallekele**	**13.33**	**268**	ePn	**P**	**06 11 03.9**	**-0.6**
	8.3nm,0.7s						
VIS	**Vishakhapatnam**	**14.25**	**313**	eP	**P**	**06 11 15.5**	**-1.2**
VIS				AMb	AMB	06 11 37.4	
	comp=Z,246nm,1.4s						
VIS				eS	**S**	**06 13 56.9**	**+2.0**
MDRS	**Chennai**	**14.53**	**291**	eP	**P**	**06 11 20.0**	**-0.4**
MDRS				e		06 14 18.0	
MDRS				e		06 15 50.0	
CAL	**Calcutta**	**15.45**	**339**	eP	**P**	**06 11 33.3**	**+0.9**
CAL				e		06 14 37.7	
AGT	**Agartala**	**15.98**	**350**	⇓iP	**P**	**06 11 40.0**	**+0.8**
AGT				i		06 12 29.0	
TRD	**Trivandrum**	**17.00**	**273**	eP	**P**	**06 11 52.4**	**+0.2**
TRD				e		06 12 03.9	
	comp=Z,116nm,1.1s						
TRD				e		06 15 17.8	
TRD				i		06 16 05.2	
TRD				i		06 16 40.5	
SHL	**Shillong**	**17.55**	**353**	eP	**P**	**06 11 57.0**	**-2.0**
	comp=Z,118nm,0.5s						
SHL				e		06 15 21.0	
HYB	**Hyderabad**	**17.80**	**303**	⇑eP	**P**	**06 12 04.0**	**+1.8**
	comp=Z,120nm,1.0s						
HYB				eS	**S**	**06 15 21.0**	**+3.5**
HYB	**Hyderabad**	**17.80**	**303**	⇑iP	**P**	**06 12 04.0**	**+1.8**
	comp=Z,120nm,1.0s						
HYB				eS	**S**	**06 15 21.0**	**+3.5**
HYB				LR	LR	06 18 00.0	
	comp=Z,6.3nm,20.0s						
BLSP	**Bilaspur**	**18.15**	**322**	eP	**P**	**06 12 06.6**	**+0.1**
BLSP				e		06 12 14.9	
	comp=Z,260nm,1.4s						
BLSP				e		06 15 33.5	
BLSP				i		06 17 02.2	
QIZ	**Qiongzhong**	**18.75**	**53**	P	**P**	**06 12 15.4**	**+1.5**
QIZ				XP		06 12 29.6	
QIZ				S	**S**	**06 15 40.8**	**+1.8**
QIZ				AMB	AMB		
	comp=Z,73nm,1.4s						
QIZ				AMB	AMB		
	comp=Z,698nm,4.8s						
QIZ				LR	LR		
	comp=N,21µm,13.1s						
QIZ				LR	LR		
	comp=Z,7µm,9.6s						
QIZ	**Qiongzhong**	**18.75**	**53**	eP	**P**	**06 12 16.0**	**+2.1**
	comp=Z,178nm,1.4s						
KMI	**Kunming**	**18.86**	**25**	P	**P**	**06 12 19.0**	**+3.9**
KMI				AP		06 12 24.7	
KMI				XP		06 12 28.3	
KMI				PP	PP	06 12 36.0	+4.5
KMI				PPP	PPP	06 12 44.9	+4.5
KMI				S	**S**	**06 15 45.1**	**+3.7**
KMI				XS		06 15 55.5	
KMI				SS	SS	06 16 13.2	+6.5
KMI				AMB	AMB		
	comp=Z,57nm,1.7s						
KMI				AMB	AMB		
	comp=Z,833nm,4.0s						
KMI				LR	LR		
	comp=N,5µm,13.8s						
KMI				LR	LR		
	comp=E,5µm,16.3s						
KMI				LR	LR		
	comp=Z,4µm,17.9s						
KMI	**Kunming**	**18.86**	**25**	P	**P**	**06 12 19.0**	**+3.9**
	comp=Z,57nm,1.7s						
KMI				pP		06 12 24.7	
KMI				sP		06 12 28.3	
KMI				PP	PP	06 12 36.0	+4.5
KMI				PPP	PPP	06 12 44.9	+4.5
KMI				S	**S**	**06 15 45.1**	**+3.7**
KMI				sS		06 15 55.5	
KMI				SS	SS	06 16 13.2	+6.5
NGP	**Nagpur**	**19.53**	**313**	eP	**P**	**06 12 24.6**	**+1.6**
NGP				eS	**S**	**06 16 03.7**	**+7.2**
MNGI	**Mangalore**	**19.59**	**286**	i	**P**	**06 12 26.5**	**+2.9**
MNGI				i		06 16 12.2	
	comp=Z,146nm,1.3s						
GTK	**Gangtok**	**19.88**	**345**	eP	**P**	**06 12 27.0**	**+0.2**
COCO	**West Island**	**20.29**	**172**	eP	**P**	**06 12 33.3**	**+2.2**
	comp=Z,598nm,1.0s						
COCO				LR	LR		
	comp=Z,754nm,21.0s,MS4.0						
ALBI	**Allahabad**	**20.80**	**327**	eP	**P**	**06 12 35.5**	**-0.9**
JIRN	**Jiri**	**20.90**	**340**	eP	**P**	**06 12 37.2**	**-0.2**
	comp=Z,572nm,1.2s						
PKI	**Pulchoki**	**21.10**	**338**	eP	**P**	**06 12 38.8**	**-0.6**
	comp=Z,359nm,0.8s,mb5.8						
GOA	**Goa**	**21.20**	**292**	⇑i	**P**	**06 12 48.2**	**+7.8**
	comp=Z,201nm,1.8s,mb5.2						
GOA				eS	**S**	**06 16 39.1**	**+9.0**
GUN	**Gumba**	**21.24**	**339**	eP	**P**	**06 12 40.3**	**-0.5**
	comp=Z,1µm,1.2s,mb6.0						
DMN	**Daman**	**21.24**	**337**	eP	**P**	**06 12 40.6**	**-0.3**
	comp=Z,510nm,0.9s,mb5.9						
KKN	**Kakani**	**21.34**	**338**	eP	**P**	**06 12 41.2**	**-0.7**
	comp=Z,532nm,1.1s,mb5.8						
KAD	**Karad**	**21.50**	**297**	eP	**P**	**06 12 42.6**	**-0.9**
KAD				e		06 12 48.7	
	comp=Z,152nm,1.4s						
LSA	**Lhasa**	**21.72**	**353**	P	**P**	**06 12 45.0**	**-0.6**
LSA				AP		06 12 54.3	
LSA				XP		06 13 00.3	
LSA				S	**S**	**06 16 45.1**	**+5.3**
LSA				LR	LR		
	comp=N,760nm,15.1s,MS4.7						
LSA				LR	LR		
	comp=E,2µm,17.1s,MS4.7						
LSA				LR	LR		
	comp=Z,2µm,14.4s,MS4.6						
LSA	**Lhasa**	**21.72**	**353**	⇓iP	**P**	**06 12 45.3**	**-0.4**
	comp=Z,116nm,0.8s,mb5.4						
LSA				LR	LR		
	comp=Z,1µm,19.0s,MS4.4						
GKN	**Gorkha**	**21.78**	**337**	eP	**P**	**06 12 46.0**	**-0.3**
	comp=Z,471nm,0.8s,mb6.0						
GYA	**Guiyang**	**21.84**	**32**	⇑iP	**P**	**06 12 47.9**	**+1.0**
GYA				AP		06 12 55.1	
GYA				XP		06 12 57.9	
GYA				S	**S**	**06 16 40.8**	**-1.3**
GYA				AMB	AMB		
	comp=Z,50nm,1.4s,mb4.8						
GYA				AMB	AMB		
	comp=Z,100nm,3.0s						
GYA				LR	LR		
	comp=N,3µm,10.2s						
GYA				LR	LR		
	comp=E,4µm,8.4s						
GYA				LR	LR		
	comp=Z,5µm,11.7s,MS5.1						
KOLN	**Koldanda**	**22.00**	**334**	eP	**P**	**06 12 48.8**	**+0.4**
	comp=Z,801nm,1.2s,mb6.0						
KKM	**Kota Kinabalu**	**22.01**	**94**	P	**P**	**06 12 50.3**	**+1.6**
POO	**Poona**	**22.29**	**300**	⇓iP	**P**	**06 12 52.0**	**+0.6**
	comp=Z,286nm,1.5s,mb5.5						
POO				i		06 17 04.0	
BOM	**Bombay**	**23.33**	**300**	eP	**P**	**06 13 03.5**	**+1.7**
BOM				e		06 17 10.5	
TSM	**Tawau**	**23.89**	**98**	P	**P**	**06 13 08.2**	**+0.9**
HKC	**Hong Kong**	**23.93**	**51**	P	**P**	**06 13 12.0**	**+4.5**
HKC				S	**S**	**06 17 28.0**	**+8.4**
CD2	**Chengdu**	**24.46**	**20**	P	**P**	**06 13 13.4**	**+0.8**
CD2				PP	PP	06 13 53.0	+4.6
CD2				PPP	PPP	06 14 06.0	+7.2
CD2				S	**S**	**06 17 35.0**	**+6.5**
CD2				AMB	AMB		
	comp=Z,690nm,2.0s,mb5.7						
CD2				LR	LR		
	comp=E,7µm,10.0s						
LGTI	**Lohaghat**	**24.97**	**330**	eP	**P**	**06 13 18.3**	**+0.8**
PTH	**Pithoragarh**	**25.06**	**330**	eP	**P**	**06 13 20.0**	**+1.6**
NDI	**New Delhi**	**25.99**	**324**	eP	**P**	**06 13 26.5**	**-0.5**
NDI				e		06 18 10.0	
AJM	**Ajmer**	**26.05**	**317**	i P	**P**	**06 13 29.0**	**+1.4**
ENH	**Enshi**	**26.38**	**31**	⇓eP	**P**	**06 13 30.5**	**-0.1**
	comp=E,38nm,0.8s,mb5.0						
ENH				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
DGAR	**Diego Garcia**	**26.51**	**235**	PFAKE		06 13 40.0	+8.0
DGAR				LR	LR		
	comp=Z,565nm,19.0s,MS4.1						
DDI	**Dehra Dun**	**26.79**	**328**	eP	**P**	**06 13 34.1**	**-0.3**
DDI				eS	**S**	**06 18 09.1**	**+1.8**
SMLA	**Simla**	**27.89**	**328**	⇑iP	**P**	**06 13 58.3**	**+14**
	comp=Z,314nm,3.0s						
SMLA				i S	**S**	**06 18 42.0**	**+17**
SDNR	**Sundarnagar**	**28.29**	**328**	eP	**P**	**06 13 49.0**	**+1.0**
QZH	**Quanzhou**	**28.76**	**51**	eP	**P**	**06 13 52.3**	**0.0**
QZH				S	**S**	**06 18 38.6**	**-0.6**
QZH				AMB	AMB		
	comp=Z,170nm,1.8s,mb5.5						
QZH				LR	LR		
	comp=N,8µm,13.3s,MS5.6						
QZH				LR	LR		
	comp=E,9µm,16.5s,MS5.6						
QZH				LR	LR		
	comp=Z,10µm,14.0s,MS5.6						
XAN	**Xi’an**	**29.24**	**26**	P	**P**	**06 13 56.0**	**-0.6**
XAN				S	**S**	**06 18 48.4**	**+1.7**
XAN				AMB	AMB		
	comp=Z,31nm,1.1s,mb5.0						
XAN				LR	LR		
	comp=N,4µm,13.7s,MS5.3						
XAN				LR	LR		
	comp=E,2µm,12.6s,MS5.3						
XAN				LR	LR		
	comp=Z,5µm,14.6s,MS5.3						
LZH	**Lanzhou**	**29.28**	**16**	eP	**P**	**06 13 57.0**	**+0.1**
LZH				AP	pP	06 14 04.3	+0.9
LZH				AMB	AMB		
	comp=Z,140nm,1.6s,mb5.4						
LZH				AMB	AMB		
	comp=Z,500nm,4.0s						
LZH				LR	LR		
	comp=N,4µm,12.8s						
LZH				LR	LR		
	comp=Z,5µm,15.5s,MS5.2						
LZH	**Lanzhou**	**29.28**	**16**	eP	**P**	**06 13 57.0**	**+0.1**
	comp=Z,140nm,1.6s,mb5.4						
LZH				pP	pP	06 14 04.3	+0.9
LZH				sP	sP	06 14 06.6	+0.3
LZH				PP	PP	06 15 05.0	+13
LZH				S	**S**	**06 19 02.2**	**+15**
LZH				sS		06 19 15.0	
LZH				SS	SS	06 20 50.0	+31
LZH				LR	LR		
	comp=Z,5µm,15.5s,MS5.2						
WHN	**Wuhan**	**29.30**	**38**	⇓P	**P**	**06 13 58.0**	**+0.8**
WHN				S	**S**	**06 18 55.0**	**+7.3**
WHN				LR	LR		
	comp=N,1µm,8.0s						
WHN				LR	LR		
	comp=E,5µm,8.2s						
WHN				LR	LR		
	comp=Z,8µm,13.5s,MS5.5						
THN	**Thein Dam**	**29.68**	**327**	eP	**P**	**06 13 58.5**	**-2.0**
THN				e		06 20 43.4	
TATO	**Taipei**	**31.06**	**54**	PFAKE		06 14 20.0	+7.2
TATO				LR	LR		
	comp=Z,1µm,21.0s,MS4.6						
GTA	**Gaotai**	**31.64**	**8**	eP	**P**	**06 14 17.8**	**+0.1**
GTA				AP	pP	06 14 24.5	+0.3
GTA				XP	sP	06 14 28.6	+1.5
GTA				PP	PP	06 15 24.8	+2.2
GTA				PCP	PcP	06 17 10.0	+0.3
GTA				S	**S**	**06 19 23.6**	**-0.8**
GTA				SCP		06 20 47.7	
GTA				PCS		06 20 52.8	
GTA				SCS	ScS	06 24 46.1	-0.8
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.6						
GTA				AMB	AMB		
	comp=Z,127nm,6.5s						
GTA				LR	LR		
	comp=N,1µm,19.4s						
GTA				LR	LR		
	comp=E,1µm,14.4s						
GTA				LR	LR		
	comp=Z,2µm,16.7s,MS4.8						
NJ2	**Nanjing**	**33.14**	**41**	eP	**P**	**06 14 32.0**	**+1.1**
NJ2				AP	pP	06 14 40.5	+3.0
NJ2				XP	sP	06 14 44.3	+4.0
NJ2				PP	PP	06 15 43.0	+0.9
NJ2				S	**S**	**06 19 50.0**	**+2.0**
NJ2				XS		06 20 06.0	
NJ2				AMB	AMB		
	comp=Z,90nm,1.3s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,1µm,6.0s						
NJ2				LR	LR		
	comp=N,4µm,11.2s						
NJ2				LR	LR		
	comp=E,5µm,19.3s						
NJ2				LR	LR		
	comp=Z,4µm,17.0s						
SSE	**Sheshan**	**34.10**	**44**	P	**P**	**06 14 39.6**	**+0.3**
SSE				AP	pP	06 14 45.4	-0.4
SSE				PP	PP	06 15 55.0	+1.2
SSE				S	**S**	**06 20 03.8**	**+0.9**
SSE				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.9						
SSE				AMB	AMB		
	comp=Z,52µm,3.0s						
SSE				LR	LR		
	comp=N,2µm,19.9s,MS4.8						
SSE				LR	LR		
	comp=E,1µm,19.9s,MS4.8						
SSE				LR	LR		
	comp=Z,807nm,15.7s,MS4.6						
SSE	**Sheshan**	**34.10**	**44**	P	**P**	**06 14 39.6**	**+0.3**
	comp=Z,21nm,1.4s,mb4.9						
SSE				pP	pP	06 14 45.4	-0.4
SSE				sP	sP	06 14 48.4	-0.2
SSE				PP	PP	06 15 55.0	+1.2
SSE				S	**S**	**06 20 03.8**	**+0.9**
SSE				sS		06 20 14.2	
SSE				SS	SS	06 22 28.9	+17
SSE				LR	LR		
	comp=Z,810nm,15.7s,MS4.6						
TIA	**Tai’an**	**35.01**	**33**	eP	**P**	**06 14 46.6**	**-0.4**
TIA				S	**S**	**06 20 21.3**	**+4.5**
TIA				LR	LR		
	comp=N,1µm,12.8s,MS5.1						
TIA				LR	LR		
	comp=E,2µm,12.3s,MS5.1						
KSH	**Kashi**	**35.31**	**335**	⇑P	**P**	**06 14 49.1**	**-0.4**
KSH				eAP	pP	06 14 56.4	+0.3
KSH				eXP	sP	06 15 01.3	+2.4
KSH				ePP	PP	06 16 06.2	-2.8
KSH				ePCP	PcP	06 17 21.3	+1.3
KSH				eS	**S**	**06 20 19.0**	**-2.5**
KSH				ePS		06 20 26.3	
KSH				eXS		06 20 34.3	
KSH				eSCP		06 21 03.5	
KSH				eSCS	ScS	06 25 06.0	0.0
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				AMB	AMB		
	comp=Z,130nm,3.7s						
KSH				LR	LR		
	comp=N,2µm,16.8s,MS5.2						
KSH				LR	LR		
	comp=E,2µm,14.9s,MS5.2						
WMQ	**Urumqi**	**36.07**	**352**	⇓iP	**P**	**06 14 56.0**	**+0.1**
WMQ				XP	sP	06 15 07.0	+1.7
WMQ				PP	PP	06 16 18.0	-0.2
WMQ				S	**S**	**06 20 33.0**	**-0.2**
WMQ				SS	SS	06 22 56.0	-0.5
WMQ				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
WMQ				LR	LR		
	comp=N,642nm,18.0s,MS5.0						
WMQ				LR	LR		
	comp=E,2µm,20.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,1µm,18.0s,MS4.7						
HHC	**Hu-ho-hao-te**	**36.16**	**23**	⇓P	**P**	**06 14 57.5**	**+0.8**
HHC				AP	pP	06 15 03.1	-0.2
HHC				PP	PP	06 16 22.2	+2.8
HHC				S	**S**	**06 20 38.8**	**+4.2**
HHC				SCP		06 21 04.0	
HHC				SS	SS	06 23 03.8	+5.3
HHC				SCS	ScS	06 25 08.5	-2.1
HHC				AMB	AMB		
	comp=Z,31nm,2.5s,mb4.8						
HHC				AMB	AMB		
	comp=Z,386nm,3.8s						
HHC				LR	LR		
	comp=N,2µm,14.4s,MS5.2						
HHC				LR	LR		
	comp=E,3µm,15.6s,MS5.2						
HHC				LR	LR		
	comp=Z,2µm,15.6s,MS5.0						
WBK	**Wadi Bani Khal**	**36.74**	**297**	⇓P	**P**	**06 15 03.7**	**+1.9**
BJT	**Baijiatuau**	**37.43**	**28**	eP	**P**	**06 15 08.7**	**+1.3**
	comp=Z,360nm,2.4s,mb5.8						
BJT				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
JMDO	**Jabal Madar**	**37.44**	**296**	⇑P	**P**	**06 15 10.3**	**+2.7**
SMDO	**Samad**	**37.69**	**297**	⇓P	**P**	**06 15 13.1**	**+3.4**
	SNR=9.9						
BIDO	**Bidbid**	**37.76**	**298**	⇓P	**P**	**06 15 13.6**	**+3.2**
	SNR=6.1						
KZA	**Kyzart**	**37.77**	**337**	P	**P**	**06 15 10.7**	**+0.5**
	SNR=9.1						
AAA	**Alma-Ata**	**38.18**	**340**	eP	**P**	**06 15 11.0**	**-2.7**
AAA				eS	**S**	**06 21 04.0**	**-1.4**
AAA				smax			
	comp=E,1µm,8.0s						
AAA				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.7						
UCH	**Uchtor**	**38.19**	**336**	P	**P**	**06 15 14.3**	**+0.6**
	SNR=18						
BSY	**Bisya**	**38.35**	**297**	⇓P	**P**	**06 15 18.5**	**+3.3**
	SNR=11						
TKM2	**Tokmak 2**	**38.36**	**338**	P	**P**	**06 15 15.3**	**+0.1**
	SNR=18						
MBWA	**Marble Bar**	**38.41**	**140**	P	**P**	**06 15 14.7**	**-1.1**
MBWA				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
AML	**Almayashu**	**38.44**	**335**	P	**P**	**06 15 16.6**	**+0.8**
	SNR=43						
HOQ	**Hoqain**	**38.49**	**298**	⇑P	**P**	**06 15 20.0**	**+3.5**
	SNR=22						
AAK	**Ala-Archa**	**38.54**	**337**	P	**P**	**06 15 17.7**	**+1.0**
	SNR=19						
AAK	**Ala-Archa**	**38.54**	**337**	d iP	**P**	**06 15 15.7**	**-1.0**
AAK				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.0						
AAK	**Ala-Archa**	**38.54**	**337**	⇓iP	**P**	**06 15 15.9**	**-0.7**
	comp=Z,28nm,1.0s,mb4.9						
AAK				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
FRU	**Bishkek**	**38.66**	**337**	eP	pP	06 15 25.0	+0.7
FRU				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.2						
CHMS	**Chumysh**	**38.75**	**337**	P	**P**	**06 15 18.0**	**-0.4**
	SNR=14						
EKS2	**Erkin-Say**	**38.85**	**336**	P	**P**	**06 15 20.0**	**+0.7**
	SNR=19						
USP	**Ospenovka**	**39.07**	**337**	P	**P**	**06 15 21.1**	**-0.1**
	SNR=29						
ARQ	**Araqi**	**39.11**	**297**	P	**P**	**06 15 24.7**	**+3.0**
	SNR=11						
DL2	**Dalian**	**39.43**	**35**	P	**P**	**06 15 28.8**	**+4.6**
DL2				S	**S**	**06 21 32.1**	**+7.7**
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
DL2				AMB	AMB		
	comp=Z,150nm,3.4s						
DL2				LR	LR		
	comp=N,600nm,12.6s,MS4.9						
DL2				LR	LR		
	comp=E,1µm,14.5s,MS4.9						
DL2				LR	LR		
	comp=Z,1µm,11.3s,MS4.9						
MKAR	**Makanchi Array**	**39.91**	**347**	i P	**P**	**06 15 27.5**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,33nm,0.9s						
ASHO	**Ashiyiah**	**39.92**	**299**	⇑P	**P**	**06 15 32.9**	**+4.6**
RBK	**Rabkut**	**39.98**	**288**	⇑P	**P**	**06 15 32.2**	**+3.3**
	SNR=8.4						
BANOM	**Banah**	**40.11**	**301**	⇑P	**P**	**06 15 34.1**	**+4.3**
WHFO	**Wadi Hawf**	**40.45**	**288**	⇑P	**P**	**06 15 35.1**	**+2.4**
	SNR=78						
ABTO	**Aybut**	**40.81**	**287**	⇑P	**P**	**06 15 38.3**	**+2.6**
	SNR=18						
ULN	**Ulaanbaatar**	**41.17**	**13**	d iP	**P**	**06 15 38.4**	**+0.1**
ULN	**Ulaanbaatar**	**41.17**	**13**	⇓eP	**P**	**06 15 38.3**	**0.0**
	comp=Z,9.5nm,0.8s,mb4.5						
ULN				LR	LR		
	comp=Z,959nm,21.0s,MS4.6						
INCN	**Inchon**	**41.52**	**40**	PFAKE		06 15 50.0	+8.6
INCN				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
SNY	**Shenyang**	**42.53**	**33**	⇑P	**P**	**06 15 51.1**	**+1.5**
SNY				S	**S**	**06 22 14.5**	**+4.1**
SNY				AMB	AMB		
	comp=Z,40nm,2.4s,mb4.7						
SNY				AMB	AMB		
	comp=Z,220nm,3.5s						
SNY				LR	LR		
	comp=N,2µm,16.2s						
SNY				LR	LR		
	comp=Z,1µm,13.9s,MS5.0						
ZAK	**Zakamensk**	**42.88**	**9**	⇑iP	**P**	**06 15 51.5**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,4.0nm,2.0s						
TLY	**Talaya**	**44.20**	**8**	eP	**P**	**06 16 04.1**	**+1.1**
TLY				eS	**S**	**06 22 40.3**	**+5.8**
TLY				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.5						
TLY				MLR	MLR		

	comp=Z,580nm,15.0s,MS4.6						
TLY	**Talaya**	**44.20**	**8**	⇓eP	**P**	**06 16 03.6**	**+0.6**
	comp=Z,5.4nm,0.8s,mb4.3						
TLY				LR	LR		
	comp=Z,201nm,22.0s,MS4.0						
KURK	**Kurchatov**	**44.44**	**346**	d iP	**P**	**06 16 04.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
KURK	**Kurchatov**	**44.44**	**346**	⇓iP	**P**	**06 16 04.5**	**-0.4**
	comp=Z,43nm,1.0s,mb5.1						
KURK				LR	LR		
	comp=Z,471nm,20.0s,MS4.4						
CN2	**Changchun**	**44.88**	**32**	eP	**P**	**06 16 09.5**	**+0.8**
CN2				eAP	pP	06 16 20.9	+5.6
CN2				eS	**S**	**06 22 45.5**	**+0.9**
CN2				SS	SS	06 25 58.1	+0.6
CN2				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.0						
CN2				AMB	AMB		
	comp=Z,770nm,3.0s						
CN2				LR	LR		
	comp=N,2µm,13.0s,MS5.5						
CN2				LR	LR		
	comp=E,3µm,13.0s,MS5.5						
CN2				LR	LR		
	comp=Z,2µm,14.0s,MS5.2						
MUN	**Mundaring**	**45.05**	**153**	eP	**P**	**06 16 10.8**	**+0.7**
	comp=Z,38nm,1.6s,mb5.0						
KLBR	**Kellerberrin**	**45.44**	**151**	eP	**P**	**06 16 13.2**	**0.0**
	comp=Z,2µm,1.4s						
NWAO	**Narrogin (SRO)**	**46.31**	**153**	eP	**P**	**06 16 19.9**	**-0.2**
	comp=Z,210nm,1.4s,mb5.9						
NWAO				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
HIA	**Hailar**	**46.36**	**23**	⇓eP	**P**	**06 16 20.9**	**+0.7**
	comp=Z,197nm,2.0s,mb5.7						
HIA				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
ZAL	**Zalesovo**	**46.37**	**352**	i P	**P**	**06 16 20.3**	**0.0**
ZAL				pmax	pmax		
	comp=Z,12nm,0.4s						
NVS	**Novosibirsk**	**47.47**	**351**	eP	**P**	**06 16 27.2**	**-1.8**
NVS				e		06 17 56.2	
NVS				ePPP	PPP	06 18 58.9	-9.4
NVS				eS	**S**	**06 23 19.0**	**-2.2**
NVS				pmax	pmax		
	comp=N,97nm,1.7s						
NVS				pmax	pmax		
	comp=E,83nm,1.7s						
NVS				pmax	pmax		
	comp=Z,170nm,1.7s,mb5.7						
NVS				smax			
	comp=N,42nm,2.2s						
NVS				smax			
	comp=E,139nm,2.2s						
MDJ	**Mudanjiang**	**47.67**	**34**	P	**P**	**06 16 31.2**	**+0.5**
MDJ				AP	pP	06 16 37.5	+0.1
MDJ				PCP	PcP	06 18 00.0	-0.4
MDJ				PP	PP	06 18 22.7	+1.0
MDJ				PCS		06 21 55.5	
MDJ				S	**S**	**06 23 26.9**	**+2.7**
MDJ				SCS	ScS	06 26 23.5	+3.2
MDJ				AMB	AMB		
	comp=Z,27nm,2.2s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,222nm,3.9s						
MDJ				LR	LR		
	comp=N,1µm,16.0s,MS5.2						
MDJ				LR	LR		
	comp=E,2µm,13.8s,MS5.2						
MDJ				LR	LR		
	comp=Z,2µm,14.4s,MS5.2						
MDJ	**Mudanjiang**	**47.67**	**34**	eP	**P**	**06 16 31.7**	**+1.0**
	comp=Z,27nm,1.1s,mb5.2						
MDJ				LR	LR		
	comp=Z,1µm,21.0s,MS4.8						
LBOS		**48.27**	**281**	eP	**P**	**06 16 38.9**	**+3.2**
WRA	**Warramunga Arr**	**48.37**	**126**	i P	**P**	**06 16 35.0**	**-1.5**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRAB	**Tennant Creek**	**48.38**	**126**	i P	**P**	**06 16 35.1**	**-1.4**
WRAB	**Tennant Creek**	**48.38**	**126**	eP	**P**	**06 16 35.0**	**-1.5**
	comp=Z,34nm,0.9s,mb5.4						
WRAB				LR	LR		
	comp=Z,320nm,21.0s,MS4.3						
WB2	**Warramunga Arr**	**48.38**	**126**	⇓iP	**P**	**06 16 35.2**	**-1.3**
BVA0	**Borovoye Array**	**48.82**	**341**	P	**P**	**06 16 38.1**	**-1.4**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAJO	**Matsushiro**	**49.05**	**48**	PFAKE		06 16 50.0	+8.5
MAJO				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
MAT	**Matsushiro**	**49.05**	**48**	eP	**P**	**06 16 42.0**	**+0.5**
MAT				eS	**S**	**06 23 38.0**	**-5.8**
MAT	**Matsushiro**	**49.05**	**48**	P	**P**	**06 16 42.3**	**+0.8**
MAT				S	**S**	**06 23 46.0**	**+2.2**
DHBB	**Dhamar BB**	**49.12**	**282**	eP	**P**	**06 16 45.3**	**+3.0**
CHKZ	**Chkalovo**	**49.30**	**342**	i P	**P**	**06 16 42.5**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.3						
CHKZ	**Chkalovo**	**49.30**	**342**	⇓iP	**P**	**06 16 42.4**	**-0.8**
	comp=Z,45nm,0.8s,mb5.5						
CHKZ				e	pP	06 16 48.3	-1.7
ASPA	**Alice Springs**	**50.03**	**130**	eP	**P**	**06 16 47.5**	**-1.7**
GUMO	**Guam**	**50.07**	**79**	PFAKE		06 17 00.0	+10
GUMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
FORT	**Forrest**	**50.48**	**141**	eP	**P**	**06 16 54.4**	**+1.9**
	comp=Z,96nm,0.8s,mb5.9						
KLR	**Kul'dur**	**51.74**	**31**	eP	**P**	**06 17 00.0**	**-1.8**
KLR				eS	**S**	**06 24 21.0**	**+0.2**
KLR				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.4						
BOD	**Bodaibo**	**51.98**	**13**	eP	**P**	**06 17 02.5**	**-1.0**
BOD				pmax	pmax		
	comp=Z,68nm,2.4s,mb5.2						
BHD	**Baghdad**	**52.26**	**306**	eP	**P**	**06 16 59.0**	**-7.0**
CLNS	**Chul'man**	**54.27**	**20**	eP	**P**	**06 17 20.5**	**0.0**
CLNS				e		06 18 24.6	
CLNS				e		06 19 19.0	
CLNS				eS	**S**	**06 24 55.1**	**0.0**
CLNS				pmax	pmax		
	comp=N,9.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.0s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
CLNS				pmax	pmax		
	comp=E,6.0nm,1.0s						
CLNS				smax			
	comp=E,48nm,13.4s						
CLNS				smax			
	comp=Z,55nm,9.4s						
CLNS				smax			
	comp=N,82nm,11.5s						
GNI	**Garni**	**54.30**	**314**	i P	**P**	**06 17 21.0**	**0.0**
GNI				pmax	pmax		
	comp=Z,56nm,1.4s						
GNI	**Garni**	**54.30**	**314**	eP	**P**	**06 17 20.8**	**-0.1**
	comp=Z,77nm,1.3s,mb5.5						
GNI				LR	LR		
	comp=Z,669nm,19.0s,MS4.7						
TI2	**Plekhanov**	**54.91**	**316**	i P	**P**	**06 17 25.2**	**-0.2**
TI2				eS	**S**	**06 25 13.6**	**+10**
SVE	**Sverdlovsk**	**55.23**	**338**	⇓iP	**P**	**06 17 27.0**	**-0.6**
SVE				eS	**S**	**06 25 14.0**	**+6.0**
SVE				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.5						
PMG	**Port Moresby**	**55.59**	**107**	PFAKE		06 17 40.0	+9.3
PMG				LR	LR		
	comp=Z,730nm,19.0s,MS4.8						
ARU	**Arti**	**55.72**	**337**	P	**P**	**06 17 29.8**	**-1.3**
	comp=Z,188nm,0.9s,mb6.1,SNR=15						
ARU	**Arti**	**55.72**	**337**	⇓iP	**P**	**06 17 21.6**	**-9.5**
ARU				eS	**S**	**06 25 01.5**	**-13**
ARU				eSS	SS	06 29 00.3	+0.3
ARU				eSSS	SSS	06 31 03.1	-2.6
ARU				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
ARU				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.4						
ARU				MLR	MLR		
	comp=N,2µm,20.0s,MS5.3						
ARU				MLR	MLR		
	comp=E,2µm,20.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**56.65**	**38**	eP	**P**	**06 17 40.0**	**+2.1**
YSS				e		06 17 53.0	
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.2						
YSS	**Yuzh-Sakhalins**	**56.65**	**38**	P	**P**	**06 17 37.2**	**-0.7**
	comp=Z,31nm,1.0s,mb5.3						
YSS				LR	LR		
	comp=Z,594nm,19.0s,MS4.7						
KIV	**Kislovodsk**	**57.18**	**318**	P	**P**	**06 17 40.5**	**-1.2**
	comp=Z,286nm,0.9s,mb6.3,SNR=8.7						
KIV	**Kislovodsk**	**57.18**	**318**	eP	**P**	**06 17 40.6**	**-1.1**
KIV				e		06 18 34.2	
KIV				e		06 19 46.2	
KIV				eS	**S**	**06 25 35.4**	**+1.4**
KIV				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.5						
KIV				pmax	pmax		
	comp=N,27nm,0.9s						
KIV				MLR	MLR		
	comp=Z,875nm,21.0s,MS4.8						
KIV				MLR	MLR		
	comp=N,319nm,18.0s,MS4.9						
KIV				MLR	MLR		
	comp=E,876nm,21.0s,MS4.9						
KIV	**Kislovodsk**	**57.18**	**318**	eP	**P**	**06 17 39.8**	**-1.9**
	comp=E,41nm,0.8s,mb5.5						
KIV				LR	LR		
	comp=Z,248nm,22.0s,MS4.3						
GOF	**Gofitskoye**	**57.39**	**319**	⇓iP	**P**	**06 17 43.0**	**-0.1**
GOF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
KMBO	**Kilima Mbogo**	**57.43**	**264**	P	**P**	**06 17 46.3**	**+2.4**
KMBO	**Kilima Mbogo**	**57.43**	**264**	⇓iP	**P**	**06 17 46.1**	**+2.2**
	comp=Z,126nm,1.3s,mb5.8						
KMBO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
MALT	**Malatya**	**58.34**	**310**	P	**P**	**06 17 48.1**	**-1.8**
MALT				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
MALT	**Malatya**	**58.34**	**310**	eP	**P**	**06 17 48.5**	**-1.4**
	comp=Z,14nm,0.9s,mb5.0						
CTA	**Charters Tower**	**58.40**	**119**	eP	**P**	**06 17 50.6**	**0.0**
	comp=Z,8.2nm,1.0s,mb4.7						
CTAO	**Charters Tower**	**58.40**	**119**	PFAKE		06 18 00.0	+9.4
CTAO				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
SOKR	**Solikamsk**	**58.63**	**339**	⇓iP	**P**	**06 17 49.4**	**-2.2**
SOKR				e	pP	06 17 55.7	-2.8
SOKR				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.5						
SOC	**Sochi**	**59.05**	**316**	eP	**P**	**06 17 48.9**	**-5.8**
SOC				e		06 18 38.3	
SOC				e		06 20 02.2	
SOC				ePPP	PPP	06 21 22.6	-8.9
SOC				eS	**S**	**06 25 55.8**	**-2.7**
SOC				e		06 27 36.9	
SOC				eSS	SS	06 29 47.1	-7.2
SOC				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.5						
SOC				pmax	pmax		
	comp=N,66nm,1.2s						
SOC				pmax	pmax		
	comp=E,54nm,1.0s						
SOC				MLR	MLR		
	comp=Z,990nm,22.0s,MS4.9						
SOC				MLR	MLR		
	comp=N,934nm,24.0s,MS5.0						
SOC				MLR	MLR		
	comp=E,649nm,20.0s,MS5.0						
EIL	**Elat**	**59.33**	**300**	eP	**P**	**06 17 56.8**	**-0.1**
	comp=E,34nm,0.9s,mb5.4						
YAK	**Yakutsk**	**59.83**	**18**	d iP	**P**	**06 17 58.8**	**-1.1**
YAK				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.5						
YAK				MLR	MLR		
	comp=Z,700nm,15.0s,MS4.9						
YAK	**Yakutsk**	**59.83**	**18**	PFAKE		06 18 10.0	+10
YAK				LR	LR		
	comp=Z,857nm,19.0s,MS4.9						
STKA	**Stephens Creek**	**60.24**	**134**	eP	**P**	**06 18 01.9**	**-1.2**
	comp=Z,13nm,1.1s,mb4.9						
ANN	**Anapa**	**61.00**	**317**	eP	**P**	**06 18 12.4**	**+4.3**
BR131	**Keskin Array S**	**62.30**	**311**	PFAKE		06 18 30.0	+13
BR131				LR	LR		
	comp=Z,673nm,20.0s,MS4.8						
SIM	**Simferopol'**	**63.29**	**316**	eP	**P**	**06 18 22.3**	**-1.1**
SIM				eS	**S**	**06 26 51.3**	**-1.2**
SIM				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.7						
SIM				MLR	MLR		
	comp=Z,1µm,25.4s,MS4.9						
MBAR	**Mbarara**	**63.76**	**265**	⇓iP	**P**	**06 18 28.0**	**+0.9**
	comp=Z,50nm,1.2s,mb5.4						
MBAR				LR	LR		
	comp=Z,483nm,21.0s,MS4.7						
ISP	**Isparta**	**64.32**	**308**	P	**P**	**06 18 28.8**	**-1.5**
ISP				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.6						
ISP	**Isparta**	**64.32**	**308**	eP	**P**	**06 18 28.3**	**-2.0**
	comp=Z,103nm,1.6s,mb5.6						
MOS	**Moscow**	**64.92**	**329**	eP	**P**	**06 18 32.8**	**-1.1**
MOS				e		06 19 06.9	
MOS				eS	**S**	**06 27 10.1**	**-2.4**
MOS				e		06 27 29.7	
MOS				pmax	pmax		
	comp=Z,300nm,1.9s,mb6.0						
MOS				MLR	MLR		
	comp=Z,3µm,21.2s,MS5.4						
OBN	**Obninsk**	**65.22**	**328**	⇓iP	**P**	**06 18 34.5**	**-1.4**
OBN				i	pP	06 18 42.3	-0.4
OBN				e		06 20 56.9	
OBN				i S	S	06 27 18.1	+1.9
OBN				pmax	pmax		
	comp=Z,102nm,1.6s,mb5.6						
OBN				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.2						
OBN	**Obninsk**	**65.22**	**328**	eP	**P**	**06 18 34.3**	**-1.6**
	comp=Z,107nm,1.2s,mb5.8						
OBN				LR	LR		
	comp=Z,440nm,22.0s,MS4.6						
MA2	**Magadan**	**66.61**	**28**	eP	**P**	**06 18 45.1**	**+0.4**
MA2				e		06 19 22.4	
MA2				ePPP	PPP	06 22 47.3	-2.3
MA2				eS	S	06 27 35.3	+2.2
MA2				eSS	SS	06 31 52.1	-0.1
MA2				eSSS	SSS	06 34 52.0	+3.5
MA2				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.1						
MA2				MLR	MLR		
	comp=Z,2µm,25.0s,MS5.1						
MA2	**Magadan**	**66.61**	**28**	eP	**P**	**06 18 44.7**	**0.0**
	comp=Z,19nm,0.9s,mb5.1						
MA2				LR	LR		
	comp=Z,523nm,19.0s,MS4.8						
TIXI	**Tiksi**	**67.06**	**11**	PFAKE		06 19 00.0	+13
TIXI				LR	LR		
	comp=Z,742nm,21.0s,MS4.9						
VRI	**Vrincioaia**	**68.57**	**316**	⇑iP	**P**	**06 18 57.0**	**-0.2**
SEY	**Seymchan**	**68.77**	**25**	eP	**P**	**06 18 58.0**	**-0.2**
SEY						06 19 29.5	
SEY				ePPP	PPP	06 23 17.9	+7.8
SEY						06 28 58.5	
SEY				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
SEY				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3						
SEY				MLR	MLR		
	comp=N,400nm,14.0s,MS5.2						
SEY				MLR	MLR		
	comp=E,900nm,15.0s,MS5.2						
MLR	**Muntele Rosu**	**69.04**	**316**	⇑iP	**P**	**06 18 59.8**	**-0.3**
LSZ	**Lusaka**	**69.32**	**250**	P	**P**	**06 19 03.6**	**+1.3**
LSZ				pmax	pmax		
	comp=Z,75nm,1.6s,mb5.4						
LSZ	**Lusaka**	**69.32**	**250**	eP	**P**	**06 19 03.0**	**+0.7**
	comp=Z,75nm,1.6s,mb5.4						
LSZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
RZN	**Rozhen**	**69.33**	**311**	i P	**P**	**06 19 01.0**	**-1.0**
MNK	**Minsk**	**69.80**	**325**	⇓eP	**P**	**06 19 01.0**	**-3.6**
TAU	**Tasmania Unive**	**70.03**	**141**	PFAKE		06 19 20.0	+14
TAU				LR	LR		
	comp=Z,282nm,21.0s,MS4.5						
MMB	**Musomiste**	**70.05**	**311**	i P	**P**	**06 19 04.0**	**-2.3**
SRS	**Serrai**	**70.09**	**311**	eP	**P**	**06 19 03.8**	**-2.8**
THE	**Thessaloniki**	**70.51**	**310**	eP	**P**	**06 19 03.0**	**-6.2**
VTS	**Vitosha**	**70.56**	**312**	eP	**P**	**06 19 08.0**	**-1.4**
KKB	**Krupnik**	**70.56**	**311**	i P	**P**	**06 19 08.0**	**-1.5**
KNT	**Kendrikon**	**70.62**	**311**	eP	**P**	**06 19 08.4**	**-1.4**
JOF	**Joensuu**	**70.68**	**334**	ep	**P**	**06 19 08.8**	**-1.0**
	comp=Z,4.1nm,0.4s,mb4.7						
WAKE	**Wake Island**	**70.94**	**72**	PFAKE		06 19 20.0	+7.9
WAKE				LR	LR		
	comp=Z,62µm,19.0s						
GRG	**Griva**	**70.97**	**310**	eP	**P**	**06 19 10.4**	**-1.6**
LVZ	**Lovozero**	**71.39**	**340**	eP	**P**	**06 19 13.2**	**-0.8**
LVZ				eS	S	06 28 23.0	-6.5
LVZ				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
LVZ				pmax	pmax		
	comp=N,16nm,1.5s						
LVZ				pmax	pmax		
	comp=E,19nm,1.8s						
LVZ				smax			
	comp=N,656nm,3.4s						
LVZ				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.6						
LVZ				MLR	MLR		
	comp=N,699nm,17.0s,MS5.5						
LVZ				MLR	MLR		
	comp=E,2µm,19.0s,MS5.5						
APA	**Apatity**	**71.68**	**339**	⇑iP	**P**	**06 19 16.0**	**+0.2**
APA				eS	S	06 28 37.0	+4.2
APA				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
APA				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
FNA	**Florina**	**71.73**	**310**	eP	**P**	**06 19 14.4**	**-2.1**
SKO	**Skopje**	**71.79**	**311**	eP	**P**	**06 19 14.2**	**-2.7**
KWP	**Kalwaria**	**71.89**	**320**	eP	**P**	**06 19 16.6**	**-0.7**
KOLS	**Kolonicke sedl**	**72.06**	**319**	i P	**P**	**06 19 17.6**	**-0.8**
KOLS				epP	pP	06 19 22.1	-3.2
SUW	**Suwalki**	**72.36**	**324**	P	**P**	**06 19 19.1**	**-0.9**
SUW				pmax	pmax		
	comp=Z,140nm,0.9s,mb5.9						
SUW	**Suwalki**	**72.36**	**324**	eP	**P**	**06 19 18.6**	**-1.4**
SUW	**Suwalki**	**72.36**	**324**	eP	**P**	**06 19 18.6**	**-1.4**
IGT	**Igoumenitsa**	**72.43**	**309**	eP	**P**	**06 19 19.7**	**-1.0**
FINES	**FINESS Array B**	**72.55**	**332**	i P	**P**	**06 19 20.2**	**-0.8**
FINES				pmax	pmax		
	comp=Z,12nm,0.5s						
CRVS	**Cervenica-Dubn**	**72.59**	**319**	i P	**P**	**06 19 21.9**	**+0.4**
CRVS				epP	pP	06 19 27.7	-0.7
KAF	**Kangasniemi**	**72.63**	**333**	ep	**P**	**06 19 20.3**	**-1.1**
	comp=Z,3.9nm,0.4s,mb4.7,baz=103,slow=5.7						
BEO	**Belgrade**	**72.79**	**314**	⇑iP	**P**	**06 19 27.4**	**+4.6**
DIVS	**Divcibare**	**73.05**	**314**	⇑iP	**P**	**06 19 22.3**	**-2.0**
KECS	**Kecovo**	**73.18**	**318**	i P	**P**	**06 19 25.0**	**+0.1**
KECS				epP	pP	06 19 30.5	-1.4
NIE	**Niedzica**	**73.40**	**319**	⇑eP	**P**	**06 19 25.2**	**-1.0**
PSZ	**Piszkesteto**	**73.50**	**318**	P	**P**	**06 19 26.3**	**-0.6**
PSZ				pmax	pmax		
	comp=Z,98nm,1.5s,mb5.5						
PSZ	**Piszkesteto**	**73.50**	**318**	eP	**P**	**06 19 25.6**	**-1.2**
	comp=Z,98nm,1.5s,mb5.5						
PSZ				e	pP	06 19 32.0	-1.8
PSZ	**Piszkesteto**	**73.50**	**318**	⇓iP	**P**	**06 19 26.2**	**-0.7**
OJC	**Ojcow**	**73.83**	**320**	eP	**P**	**06 19 27.7**	**-1.0**
LBTB	**Lobatse**	**74.32**	**241**	P	**P**	**06 19 33.6**	**+1.6**
LBTB	**Lobatse**	**74.32**	**241**	eP	**P**	**06 19 33.0**	**+1.0**
	comp=Z,43nm,1.2s,mb5.2						
LBTB				LR	LR		
	comp=Z,965nm,20.0s,MS5.1						
SRO2	**Moca**	**74.49**	**317**	i P	pP	06 19 38.1	-1.4
SRO2	**Moca**	**74.49**	**317**	i pP	pP	06 19 38.1	-1.4
SRO	**Srobarova**	**74.55**	**317**	i P	**P**	**06 19 33.4**	**+0.5**
SRO				i pP	pP	06 19 39.0	-0.9
KEV	**Kevo**	**74.67**	**341**	ep	**P**	**06 19 32.1**	**-1.1**
	comp=Z,1.7nm,0.4s,mb4.3						
OKC	**Ostrava-Krasne**	**74.85**	**319**	eP	**P**	**06 19 34.2**	**-0.4**
OKC				epP	pP	06 19 39.8	-1.8
OKC				AMS	AMS	06 59 20.0	
	comp=Z,400nm,15.8s						
ARE0	**ARCESS Array S**	**75.10**	**340**	eP	**P**	**06 19 34.5**	**-1.1**
ARE0				e	pP	06 19 40.6	-2.0
CASY	**Casey**	**75.10**	**173**	PFAKE		06 19 50.0	+14
CASY				LR	LR		
	comp=Z,839nm,22.0s,MS5.0						
TIP	**Timpagrande**	**75.18**	**308**	eP	**P**	**06 19 36.3**	**-0.4**
SMOL	**Smolenice**	**75.20**	**318**	i P	**P**	**06 19 37.0**	**+0.3**
SMOL				i pP	pP	06 19 42.2	-1.4
MORC	**Moravsky Berou**	**75.23**	**319**	P	**P**	**06 19 36.3**	**-0.5**
MORC				pmax	pmax		
	comp=Z,130nm,1.5s,mb5.6						
MORC	**Moravsky Berou**	**75.23**	**319**	eP	**P**	**06 19 36.3**	**-0.5**
	comp=Z,127nm,1.5s,mb5.6						
ZST	**Bratislava**	**75.39**	**318**	i P	**P**	**06 19 37.9**	**+0.1**
ZST				i pP	pP	06 19 43.4	-1.3
GRI	**Girifalco**	**75.43**	**308**	eP	**P**	**06 19 38.5**	**+0.3**
BOSA	**Boshof**	**75.67**	**238**	eP	**P**	**06 19 40.7**	**+0.9**
	comp=Z,59nm,1.3s,mb5.4						
BOSA				LR	LR		
	comp=Z,570nm,21.0s,MS4.8						
KTK1	**Kautokeino**	**75.72**	**339**	eP	**P**	**06 19 39.9**	**+0.7**
	comp=Z,67nm,2.0s,mb5.2						
KTK1	**Kautokeino**	**75.72**	**339**	eP	**P**	**06 19 39.9**	**+0.7**
KTK1				AMb	AMB	06 19 43.9	
	comp=Z,67nm,2.0s,mb5.2						
KTK1				epP	pP	06 19 45.4	-0.8
GKP	**Gorka Klasztor**	**75.75**	**323**	eP	**P**	**06 19 39.0**	**-0.7**
GKP	**Gorka Klasztor**	**75.75**	**323**	eP	**P**	**06 19 39.0**	**-0.7**
VKA	**Vienna**	**75.92**	**318**	⇓iP	**P**	**06 19 40.4**	**-0.4**
BILL	**Bilibino**	**75.93**	**22**	i P	**P**	**06 19 40.2**	**-0.2**
BILL				pmax	pmax		
	comp=Z,30nm,1.8s,mb4.9						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.3						
BILL	**Bilibino**	**75.93**	**22**	eP	**P**	**06 19 40.3**	**-0.1**
BILL				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MTTG	**Motta San Giov**	**75.99**	**307**	eP	**P**	**06 19 41.9**	**+0.5**
DPC	**Dobruska-Polom**	**76.06**	**320**	eP	**P**	**06 19 41.9**	**+0.4**
DPC				epP	pP	06 19 47.6	-0.9
DPC				AMS	AMS	06 58 50.0	
	comp=Z,600nm,19.3s						
KSP	**Ksiaz**	**76.12**	**320**	⇓eP	**P**	**06 19 42.0**	**+0.2**
KSP				epP	pP	06 19 47.4	-1.4
KSP				eS	S	06 29 23.0	+0.1
KSP				LR	LR		
	comp=Z,2µm,19.8s,MS5.3						
KSP	**Ksiaz**	**76.12**	**320**	eP	**P**	**06 19 42.0**	**+0.2**
UPC	**Upice**	**76.27**	**320**	eP	**P**	**06 19 42.0**	**-0.7**
ARSA	**Arzberg**	**76.40**	**317**	⇑iP	**P**	**06 19 43.4**	**-0.1**
	comp=Z,44nm,1.2s,mb5.3						
LEGS	**Legarje**	**76.48**	**315**	⇓eP	**P**	**06 19 43.1**	**-0.8**
LJU	**Ljubljana**	**77.04**	**315**	eP	**P**	**06 19 47.0**	**0.0**
LJU				e	pP	06 19 52.9	-1.2
OBKA	**Obir**	**77.04**	**316**	⇑iP	**P**	**06 19 46.9**	**-0.1**
	comp=Z,45nm,1.4s,mb5.2						
PRU	**Pruhonice**	**77.19**	**319**	eP	**P**	**06 19 47.8**	**0.0**
PRU				epP	pP	06 19 53.5	-1.3
PRU				AMS	AMS	06 58 50.0	
	comp=Z,400nm,22.2s						
PVCC	**Panska Ves**	**77.19**	**320**	eP	**P**	**06 19 48.0**	**+0.2**
PVCC				AMS	AMS	06 59 40.0	
	comp=Z,700nm,21.1s						
BSD	**Bornholm Skovb**	**77.27**	**325**	i P	**P**	**06 19 47.4**	**-0.7**
BSD				i	pP	06 19 52.5	-2.6
BSD				pmax	pmax		
	comp=Z,35nm,0.6s,mb5.5						
BSD				MLR	MLR		
	comp=Z,740nm,19.0s,MS5.0						
BSD	**Bornholm Skovb**	**77.27**	**325**	i P	**P**	**06 19 47.4**	**-0.7**
	comp=Z,35nm,0.6s,mb5.5						
BSD				i	pP	06 19 52.5	-2.6
	comp=Z,740nm,19.0s						
MOA	**Molln**	**77.28**	**317**	⇑iP	**P**	**06 19 47.8**	**-0.5**
	comp=Z,30nm,1.1s,mb5.1						
TRO	**Tromso**	**77.36**	**340**	eP	**P**	**06 19 47.4**	**-0.9**
	comp=Z,115nm,1.4s,mb5.6						
TRO	**Tromso**	**77.36**	**340**	eP	**P**	**06 19 47.4**	**-0.9**
TRO				AMb	AMB	06 19 49.5	
	comp=Z,115nm,1.4s,mb5.6						

VOY	**Vojsko**	**77.48**	**315**	*e*P	**P**	**06 19 49.0**	**-0.5**
BRG	**Berggiesshubel**	**77.61**	**320**	*i* P	**P**	**06 19 50.2**	**+0.1**
BRG				*i*	pP	06 19 56.3	-0.8
BRG				*e*		06 22 49.0	
BRG				pmax	pP		
	comp=Z,44nm,1.0s						
BRG				MLR	MLR		
	comp=N,370nm,17.9s,MS5.0						
BRG				MLR	MLR		
	comp=E,620nm,17.9s,MS5.0						
BRG				MLR	MLR		
	comp=Z,870nm,17.9s,MS5.1						
BRG	**Berggiesshubel**	**77.61**	**320**	*i* Pg	**P**	**06 19 50.2**	**+0.1**
	comp=Z,44nm,1.0s,mb5.3						
BRG				*i*	pP	06 19 56.3	-0.8
BRG				*e*PP	PP	06 22 49.0	+1.9
BRG				*e*S	S	06 29 46.0	+7.0
BRG				*e*SS	SS	06 34 48.0	+6.3
BRG				LR	LR		
	comp=Z,870nm,17.9s,MS5.1						
GEC2	**GERESS Array S**	**77.69**	**318**	*e*P	**P**	**06 19 50.7**	**+0.1**
GEC2				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.3						
GEC2	**GERESS Array S**	**77.69**	**318**	*e*P	**P**	**06 19 50.7**	**+0.1**
	comp=Z,44nm,1.1s,mb5.3						
KHC	**Kasperske Hory**	**77.78**	**318**	*e*P	**P**	**06 19 50.7**	**-0.4**
KHC				*e*pP	pP	06 19 56.6	-1.4
KHC				AMS	AMS	06 58 20.0	
	comp=Z,500nm,19.2s						
RUE	**Ruedersdorf**	**77.78**	**322**	*e*P	**P**	**06 19 50.8**	**-0.2**
	comp=Z,133nm,0.8s,mb5.9						
RUE				*e*	pP	06 19 56.7	-1.3
PTCC	**Patocco-Chiusa**	**77.86**	**316**	*e*P	**P**	**06 19 51.0**	**-0.5**
KBA	**Koelnbreinsper**	**77.88**	**316**	⇓*i*P	**P**	**06 19 51.3**	**-0.4**
	comp=Z,34nm,1.1s,mb5.2						
GMNA	**Gemona**	**77.94**	**316**	*e*P	**P**	**06 19 51.6**	**-0.4**
CLL	**Collm**	**78.22**	**321**	⇓*i*P	**P**	**06 19 53.1**	**-0.3**
CLL				*i*	pP	06 19 59.0	-1.4
CLL				*i*		06 20 02.1	
CLL				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
CLL				MLR	MLR		
	comp=Z,600nm,20.1s,MS4.9						
CLL	**Collm**	**78.22**	**321**	⇓*i*P	**P**	**06 19 53.1**	**-0.3**
	comp=Z,24nm,1.1s,mb5.0						
CLL				*i*	pP	06 19 59.0	-1.4
CLL				*i*		06 20 02.1	
CLL				LR	LR		
	comp=Z,600nm,20.1s,MS4.9						
CLL	**Collm**	**78.22**	**321**	⇓P	**P**	**06 19 53.1**	**-0.3**
	comp=Z,logA/T=1.3,mb5.0						
CLL				*i* *PP	pP	06 19 59.0	-1.4
CLL				*i* *SP	sP	06 20 02.1	-0.7
CLL				*e*		06 20 28.0	
WET	**Wettzell**	**78.24**	**318**	*e*P	**P**	**06 19 53.7**	**+0.1**
WET				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
WET	**Wettzell**	**78.24**	**318**	*e*P	**P**	**06 19 53.7**	**+0.1**
	comp=Z,31nm,1.1s,mb5.2						
FVI	**Forni Avoltri**	**78.26**	**316**	*e*P	**P**	**06 19 53.8**	**+0.1**
MOR8	**Moi Rana**	**78.51**	**336**	*e*P	**P**	**06 19 54.4**	**-0.4**
	comp=Z,67nm,1.8s,mb5.3						
MOR8	**Moi Rana**	**78.51**	**336**	*e*P	**P**	**06 19 54.4**	**-0.4**
MOR8				*e*pP	pP	06 20 00.2	-1.5
MOR8				AMb	AMB	06 20 02.2	
	comp=Z,67nm,1.8s,mb5.3						
NKC	**Novy Kostel**	**78.54**	**320**	*e*P	**P**	**06 19 55.4**	**+0.2**
NKC				AMS	AMS	07 00 30.0	
	comp=Z,500nm,16.3s						
MAW	**Mawson**	**78.70**	**192**	PFAKE		06 20 10.0	+14
MAW				LR	LR		
	comp=Z,461nm,20.0s,MS4.8						
COP	**Copenhagen**	**78.72**	**325**	*i* P	**P**	**06 20 02.6**	**+6.5**
COP				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.5						
COP				MLR	MLR		
	comp=Z,290nm,18.0s,MS4.7						
COP	**Copenhagen**	**78.72**	**325**	*i* P	**P**	**06 20 02.6**	**+6.5**
	comp=Z,49nm,0.7s,mb5.5						
	comp=Z,290nm,18.0s						
CRE	**Caprese Michel**	**78.84**	**313**	*e*P	**P**	**06 19 57.2**	**+0.2**
SFI	**Santa Sofia**	**78.91**	**313**	*e*P	**P**	**06 19 58.2**	**+0.8**
PGD	**Poggio Sodo**	**79.00**	**313**	*e*P	**P**	**06 19 58.8**	**+0.9**
CTI	**Castel Tesino**	**79.04**	**315**	*e*P	**P**	**06 19 58.3**	**+0.3**
WTTA	**Wattenberg**	**79.05**	**317**	⇓*i*P	**P**	**06 19 57.7**	**-0.4**
	comp=Z,44nm,0.6s,mb5.6						
MOX	**Moxa**	**79.08**	**320**	*e*P	**P**	**06 19 58.4**	**+0.2**
MOX				pmax	pmax		
	comp=Z,69nm,1.6s,mb5.3						
MOX				MLR	MLR		
	comp=Z,600nm,20.0s,MS4.9						
MOX	**Moxa**	**79.08**	**320**	*e*P	**P**	**06 19 58.4**	**+0.2**
	comp=Z,69nm,1.6s,mb5.3						
MOX				*e*		06 20 40.3	
MOX				*e*		06 23 06.0	
MOX				LR	LR		
	comp=Z,600nm,20.0s,MS4.9						
MOX	**Moxa**	**79.08**	**320**	*i* P	**P**	**06 19 58.4**	**+0.2**
	comp=Z,logA/T=1.6,mb5.3						
MOX				*e*		06 20 40.0	
MOX				PP	PP	06 23 06.0	+6.8
MOX				PS	PS	06 30 45.0	+3.8
MOX				SS	tx	06 35 48.0	
MOX				L		07 01 12.0	
WATA	**Walderalm**	**79.09**	**317**	⇑*i*P	**P**	**06 19 57.6**	**-0.7**
	comp=Z,19nm,0.8s,mb5.1						
VMG	**Vicchio**	**79.13**	**313**	*e*P	**P**	**06 19 59.6**	**+1.0**
FUR	**Furstenfeldbru**	**79.29**	**317**	*e*P	**P**	**06 19 59.0**	**-0.4**
FUR				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
FUR	**Furstenfeldbru**	**79.29**	**317**	*e*P	**P**	**06 19 59.0**	**-0.4**
	comp=Z,29nm,0.9s,mb5.2						
GRA1	**Grafenberg Arr**	**79.33**	**319**	*e*P	**P**	**06 20 00.0**	**+0.5**
	comp=Z,46nm,1.0s,mb5.4						
GRA1				*e*pP	pP	06 20 05.9	-0.6
GRA1				LR	LR		
	comp=Z,500nm,20.6s,MS4.8						
GRF	**Grafenberg Arr**	**79.33**	**319**	*e*P	**P**	**06 20 00.0**	**+0.5**
GRF				*e**PP	pP	06 20 05.9	-0.6
GRF				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
GRF				MLR	MLR		
	comp=Z,500nm,20.6s,MS4.8						
GRF	**Grafenberg Arr**	**79.33**	**319**	*e*P	**P**	**06 20 00.0**	**+0.5**
	comp=Z,46nm,1.0s,mb5.4						
GRF				*e*pP	pP	06 20 05.9	-0.6
GRF				LR	LR		
	comp=Z,500nm,20.6s,MS4.8						
SQTA	**Sankt Quirin**	**79.34**	**317**	⇑*i*P	**P**	**06 19 59.1**	**-0.6**
	comp=Z,25nm,0.8s,mb5.2						
NSS	**Namsos**	**79.41**	**334**	*e*P	**P**	**06 19 58.4**	**-1.3**
	comp=Z,99nm,1.6s,mb5.5						
NSS	**Namsos**	**79.41**	**334**	*e*P	**P**	**06 19 58.4**	**-1.3**
NSS				AMb	AMB	06 20 06.5	
	comp=Z,99nm,1.6s,mb5.5						
MOTA	**Moosalm**	**79.41**	**317**	⇓*i*P	**P**	**06 19 59.4**	**-0.6**
	comp=Z,18nm,0.9s,mb5.0						
ZCCA	**Zocca**	**79.53**	**314**	*e*P	**P**	**06 20 02.1**	**+1.3**
NB2	**NORSAR Subarra**	**79.57**	**331**	P	**P**	**06 19 59.8**	**-0.8**
	comp=Z,18nm,0.7s,mb5.1,baz=92,slow=5.8						
NB2	**NORSAR Subarra**	**79.57**	**331**	P	**P**	**06 19 59.8**	**-0.8**
	baz=92,slow=5.9						
NAO01	**NORSAR Array S**	**79.72**	**330**	*e*P	**P**	**06 20 01.0**	**-0.4**
	comp=Z,19nm,0.8s,mb5.1						
NAO01				*e*	pP	06 20 06.8	-1.6
BDI	**Bagni Di Lucca**	**79.81**	**313**	*e*P	**P**	**06 20 01.4**	**-0.9**
GSCL	**Gusciola**	**79.81**	**314**	*e*P	**P**	**06 20 03.2**	**+1.0**
CLZ	**Clausthal**	**79.87**	**321**	*e*P	**P**	**06 20 02.5**	**+0.1**
	comp=Z,37nm,0.9s,mb5.3						
BSEG	**Bad Segeberg**	**79.90**	**323**	*e*P	**P**	**06 20 03.0**	**+0.5**
BSEG				*e**PP	pP	06 20 08.8	-0.8
BSEG				pmax	pmax		
	comp=Z,94nm,0.9s,mb5.7						
BRMO	**Bormio**	**79.92**	**316**	*e*P	**P**	**06 20 03.0**	**+0.2**
SARO	**Sassorosso**	**79.95**	**313**	P	**P**	**06 20 03.4**	**+0.4**
VALM		**80.06**	**314**	P	**P**	**06 20 04.6**	**+1.0**
TSUM	**Tsumeb**	**80.08**	**249**	*e*P	**P**	**06 20 06.0**	**+1.8**
	comp=Z,19nm,1.4s,mb4.8						
TSUM				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
GRAM		**80.18**	**314**	P	**P**	**06 20 04.8**	**+0.6**
DAVA	**Damuels**	**80.24**	**317**	⇓*i*P	**P**	**06 20 04.8**	**+0.3**
	comp=Z,94nm,1.5s,mb5.5						
SUR	**Sutherland**	**80.42**	**235**	P	**P**	**06 20 08.3**	**+2.6**
	comp=Z,39nm,1.0s,mb5.3						
MUD	**Monsted U’grnd**	**80.56**	**326**	⇓*i*P	**P**	**06 20 06.7**	**+0.7**
MUD				*i*	pP	06 20 12.1	-0.9
MUD				*i* S	S	06 30 15.5	+5.4
MUD				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
MUD				MLR	MLR		
	comp=Z,620nm,18.0s,MS5.0						
MUD	**Monsted U’grnd**	**80.56**	**326**	⇓*i*P	**P**	**06 20 06.7**	**+0.7**
	comp=Z,42nm,0.9s,mb5.4						
MUD				*i*	pP	06 20 12.1	-0.9
MUD				*i* S	S	06 30 15.5	+5.4
MUD	**Monsted U’grnd**	**80.56**	**326**	⇓*i*P	**P**	**06 20 06.7**	**+0.7**
	comp=Z,42nm,0.9s,mb5.4						
MUD				*i*	pP	06 20 12.1	-0.9
MUD	**Monsted U’grnd**	**80.56**	**326**	*i* S	S	06 30 15.5	+5.4
	comp=Z,620nm,18.0s						
BOB	**Bobbio (Coli)**	**80.62**	**314**	*e*P	**P**	**06 20 07.2**	**+0.7**
STU	**Stuttgart**	**80.67**	**318**	P	**P**	**06 20 06.4**	**-0.3**
STU				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.4						
STU	**Stuttgart**	**80.67**	**318**	*e*P	**P**	**06 20 05.8**	**-0.9**
	comp=Z,46nm,1.0s,mb5.4						
PGF	**Pioggiola**	**81.03**	**312**	*e*P	**P**	**06 20 08.2**	**-0.6**
	comp=Z,354nm,1.9s,mb5.7						
VAI	**Varese**	**81.05**	**315**	*e*P	**P**	**06 20 08.0**	**-0.9**
TNS	**Taunus Mts**	**81.11**	**320**	*e*P	**P**	**06 20 09.3**	**+0.3**
TNS				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
TNS	**Taunus Mts**	**81.11**	**320**	*e*P	**P**	**06 20 09.3**	**+0.3**
	comp=Z,33nm,1.0s,mb5.2						
BFO	**Black Forest**	**81.25**	**318**	*e*P	**P**	**06 20 09.5**	**-0.3**
BFO				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
BFO	**Black Forest**	**81.25**	**318**	*e*P	**P**	**06 20 09.5**	**-0.3**
	comp=Z,32nm,1.0s,mb5.2						
PCP	**Pian Castagno**	**81.27**	**314**	P	**P**	**06 20 09.5**	**-0.5**
MOL	**Molde**	**81.33**	**332**	*e*P	**P**	**06 20 11.7**	**+1.8**
FIN	**Finale Ligure**	**81.53**	**314**	*e*P	**P**	**06 20 11.2**	**-0.1**
MCGN	**Macugnaga**	**81.59**	**315**	*e*P	**P**	**06 20 11.2**	**-0.4**
ORX	**Oropa**	**81.61**	**315**	P	**P**	**06 20 11.4**	**-0.3**
ROB	**Roburent**	**81.77**	**314**	P	**P**	**06 20 12.4**	**-0.2**
IMI	**Imperia**	**81.77**	**313**	P	**P**	**06 20 13.4**	**+0.9**
TRAV		**81.79**	**315**	P	**P**	**06 20 11.0**	**-1.6**
MONE	**Monesi**	**81.86**	**313**	P	**P**	**06 20 13.8**	**+0.8**
NEGI	**Negi**	**81.91**	**313**	P	**P**	**06 20 13.0**	**-0.3**
CDF	**Champ du Feu**	**81.95**	**318**	*e*P	**P**	**06 20 12.8**	**-0.6**
	comp=Z,45nm,1.1s,mb5.0						
WTSB	**Winterswijk**	**82.08**	**321**	*e*P	**P**	**06 20 14.2**	**+0.2**
	comp=Z,53nm,1.0s,mb5.4						
WTSB				*e*x	x	06 20 20.2	
ENR	**Entracque**	**82.09**	**314**	P	**P**	**06 20 14.2**	**0.0**
SBF	**Sospel**	**82.10**	**313**	*e*P	**P**	**06 20 13.9**	**-0.4**
	comp=Z,111nm,0.7s,mb5.6						
RSP	**Reno Superiore**	**82.15**	**314**	P	**P**	**06 20 13.9**	**-0.6**
STV2	**Anna di Valdie**	**82.16**	**314**	P	**P**	**06 20 14.1**	**-0.5**
STV	**Sta Anna Valdi**	**82.16**	**314**	P	**P**	**06 20 14.8**	**+0.2**
BHB	**Bricherasio**	**82.17**	**314**	P	**P**	**06 20 13.4**	**-1.3**
LSD	**Ceresole Reale**	**82.20**	**315**	P	**P**	**06 20 14.9**	**+0.1**
HINF	**Hinteralfeld**	**82.27**	**317**	*e*P	**P**	**06 20 14.1**	**-1.0**
	comp=Z,11nm,0.7s,mb4.6						
FENE	**Fenestrelle**	**82.30**	**314**	P	**P**	**06 20 14.6**	**-0.7**
PZZ	**Prazzo**	**82.30**	**314**	P	**P**	**06 20 14.3**	**-1.0**
LPG	**La Plagne**	**82.48**	**315**	*e*P	**P**	**06 20 16.3**	**0.0**
	comp=Z,98nm,0.8s,mb5.5						
LPL	**La Plagne**	**82.50**	**315**	*e*P	**P**	**06 20 16.4**	**+0.1**
	comp=Z,92nm,0.6s,mb5.5						
RRL	**Cesana Torines**	**82.50**	**314**	P	**P**	**06 20 15.4**	**-1.0**
MBDF	**Montbardon**	**82.52**	**314**	*e*P	**P**	**06 20 15.7**	**-0.8**
	comp=Z,48nm,0.9s,mb5.2						
BNI	**Bardonecchia**	**82.57**	**314**	P	**P**	**06 20 16.9**	**+0.2**
BNI				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.2						
BNI	**Bardonecchia**	**82.57**	**314**	*e*P	**P**	**06 20 16.2**	**-0.5**
	comp=Z,25nm,0.9s,mb5.2						
HAU	**Haudompre**	**82.60**	**317**	*e*P	**P**	**06 20 16.1**	**-0.7**
	comp=Z,92nm,0.9s,mb5.5						
HAU				*e*R			
	comp=Z,535nm,21.5s						
WLF	**Walferdange**	**82.62**	**319**	P	**P**	**06 20 18.0**	**+1.1**
WLF				pmax	pmax		
	comp=Z,120nm,1.7s,mb5.7						
WLF	**Walferdange**	**82.62**	**319**	*e*P	**P**	**06 20 17.7**	**+0.9**
	comp=Z,116nm,1.7s,mb5.6						
HGN	**Heimansgroeve**	**82.69**	**320**	*e*P	**P**	**06 20 17.3**	**+0.1**
	comp=Z,40nm,2.5s,mb5.0						
HGN	**Heimansgroeve**	**82.69**	**320**	*e*S	S	06 30 34.7	+2.6
FRF	**La Foret Royal**	**82.69**	**313**	*e*P	**P**	**06 20 17.1**	**-0.3**
	comp=Z,169nm,1.3s,mb5.6						
LMR	**La Mourre**	**82.81**	**313**	*e*P	**P**	**06 20 17.6**	**-0.4**
	comp=Z,276nm,1.7s,mb5.7						
CABF	**La Chapelle**	**82.87**	**316**	*e*P	**P**	**06 20 18.1**	**-0.1**
	comp=Z,88nm,1.0s,mb5.4						
ORIF	**Oris-en-Rattie**	**83.14**	**314**	*e*P	**P**	**06 20 20.5**	**+0.8**
	comp=Z,42nm,0.8s,mb5.2						
ORIF				*e*R			
	comp=Z,395nm,18.2s						
CKFL	**Kef-Lekhel**	**83.20**	**306**	P	**P**	**06 20 20.0**	**-0.2**
CASM	**Ain Smara**	**83.40**	**306**	P	**P**	**06 20 22.0**	**+0.8**
MEZF	**Maizieres J’vi**	**83.42**	**318**	*e*P	**P**	**06 20 20.5**	**-0.5**
	comp=Z,77nm,1.2s,mb5.3						
SMRF	**Simiane la Rot**	**83.44**	**313**	*e*P	**P**	**06 20 21.4**	**+0.2**
	comp=Z,56nm,1.1s,mb5.2						
GIVF	**Givet**	**83.44**	**320**	*e*P	**P**	**06 20 20.8**	**-0.3**
	comp=Z,35nm,1.0s,mb5.1						
CTEI	**Djebel Teioual**	**83.49**	**305**	P	**P**	**06 20 23.5**	**+1.9**
BAIF	**Baives**	**83.84**	**320**	*e*P	**P**	**06 20 23.1**	**0.0**
	comp=Z,75nm,1.2s,mb5.4						
DFRA	**Djebel Bou Aff**	**83.87**	**306**	P	**P**	**06 20 25.0**	**+1.4**
CMER	**Merouana**	**83.94**	**305**	P	**P**	**06 20 25.0**	**+1.0**
VIVF	**Saint-Julien-l**	**84.00**	**314**	*e*P	**P**	**06 20 23.7**	**-0.4**
	comp=Z,81nm,1.2s,mb5.4						
CKHR	**Kef el Ahmar**	**84.21**	**305**	P	**P**	**06 20 28.0**	**+2.6**
SET	**Setif**	**84.28**	**306**	P	**P**	**06 20 28.0**	**+2.3**
SMF	**Signal de Mont**	**84.41**	**316**	*e*P	**P**	**06 20 25.5**	**-0.6**
	comp=Z,66nm,1.0s,mb5.4						
SSF	**Saint Saulge**	**84.60**	**317**	*e*P	**P**	**06 20 26.7**	**-0.3**
	comp=Z,156nm,1.8s,mb5.5						
LASF	**Ste Croix**	**84.66**	**314**	*e*P	**P**	**06 20 27.3**	**-0.1**
	comp=Z,337nm,1.8s,mb5.9						
AVF	**Avril sur Loir**	**84.73**	**316**	*e*P	**P**	**06 20 27.2**	**-0.5**
	comp=Z,92nm,1.4s,mb5.4						
BGF	**Bois d’Agland**	**85.10**	**316**	*e*P	**P**	**06 20 29.4**	**-0.1**
	comp=Z,51nm,1.0s,mb5.3						
HYF	**Humbligny**	**85.16**	**317**	*e*P	**P**	**06 20 29.9**	**+0.1**
EJON	**La Jonquera**	**85.54**	**312**	P	**P**	**06 20 34.0**	**+2.1**
	comp=Z,30nm,1.5s,mb5.3,SNR=7.9						
TCF	**Toulx Ste Croi**	**85.57**	**316**	*e*P	**P**	**06 20 31.9**	**0.0**
	comp=Z,148nm,1.8s,mb5.6						
SYO	**Syowa Base**	**85.57**	**197**	⇑P	**P**	**06 20 32.9**	**+1.5**
SYO	**Syowa Base**	**85.57**	**197**	⇓pP	pP	06 20 38.8	+0.4
CAF	**Calviac**	**85.84**	**315**	*e*P	**P**	**06 20 33.4**	**+0.1**
	comp=Z,40nm,1.2s,mb5.2						
MTLF	**Montolieu**	**85.92**	**313**	*e*P	**P**	**06 20 33.7**	**0.0**
	comp=Z,64nm,1.2s,mb5.4						
TNA	**Tin City**	**86.01**	**24**	*e*P	**P**	**06 20 34.0**	**+0.3**
	comp=Z,9.0nm,1.0s,mb5.0						
TNA				*e*	pP	06 20 39.8	-1.0
ABA	**Alger-Bouzarea**	**86.11**	**306**	P	**P**	**06 20 35.0**	**+0.2**
RJF	**Les Rejaudoux**	**86.17**	**315**	*e*P	**P**	**06 20 35.1**	**+0.2**
	comp=Z,39nm,0.9s,mb5.3						
RJF				*e*R			
	comp=Z,384nm,20.5s						
EMIR	**Miracle**	**86.62**	**312**	P	**P**	**06 20 38.4**	**+1.2**
	comp=Z,10nm,0.5s,mb5.3,SNR=5.6						
LFF	**La Frestale**	**86.77**	**315**	*e*P	**P**	**06 20 37.8**	**0.0**
	comp=Z,34nm,1.0s,mb5.2						
LDF	**La Druitiere**	**86.83**	**318**	*e*P	**P**	**06 20 37.8**	**-0.2**
	comp=Z,66nm,1.0s,mb5.5						
HPK	**Haverah Park**	**86.93**	**324**	P	**P**	**06 20 39.0**	**+0.6**
EPOB	**Poblet**	**87.03**	**311**	P	**P**	**06 20 39.6**	**+0.4**
	comp=Z,9.4nm,0.7s,mb5.1,SNR=7.3						
FLN	**La Foliniere**	**87.04**	**319**	*e*P	**P**	**06 20 38.7**	**-0.4**
	comp=Z,46nm,0.9s,mb5.4						
FLN				*e*R			
	comp=Z,455nm,20.5s						
MFF	**Saint Martin d**	**87.14**	**316**	*e*P	**P**	**06 20 39.1**	**-0.5**
	comp=Z,110nm,1.4s,mb5.6						
DAG	**Danmarks Havn**	**87.30**	**348**	⇑*i*P	**P**	**06 20 39.1**	**-0.6**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
DAG	**Danmarks Havn**	**87.30**	**348**	⇑*i*P	**P**	**06 20 39.1**	**-0.6**
	comp=Z,2.7nm,0.7s,mb4.6						
EPF	**Esparros**	**87.33**	**313**	*e*P	**P**	**06 20 42.0**	**+1.4**
	comp=Z,13nm,1.0s,mb4.8						
GRR	**Gorron**	**87.34**	**318**	*e*P	**P**	**06 20 40.3**	**-0.2**
	comp=Z,158nm,1.7s,mb5.7						
EBIE	**Bielsa**	**87.52**	**313**	P	pP	06 20 49.1	+0.5
	comp=Z,4.9nm,0.7s,SNR=4.6						
EBR	**Ebro Roquetas**	**87.54**	**311**	*e*PCP	PcP	06 20 45.0	+1.0
ERTA	**Horta de San J**	**87.64**	**311**	P	**P**	**06 20 41.7**	**-0.4**
	comp=Z,129nm,1.9s,mb5.8,SNR=7.9						
ETSF	**Etsaut**	**88.00**	**313**	*e*P	**P**	**06 20 44.1**	**+0.3**
	comp=Z,24nm,0.8s,mb5.2						
ESAC	**San Caprasio**	**88.12**	**312**	P	pP	06 20 50.6	-0.9
	comp=Z,23nm,0.9s,SNR=5.5						
EMOS	**Mosqueruela**	**88.33**	**310**	P	**P**	**06 20 45.3**	**-0.2**
	comp=Z,18nm,0.9s,mb5.3,SNR=5.9						
SJPF	**Ste Jean**	**88.45**	**313**	*e*P	**P**	**06 20 46.3**	**+0.3**
	comp=Z,45nm,1.2s,mb5.3						
SGMF	**Saint Gilles**	**88.48**	**318**	*e*P	**P**	**06 20 45.7**	**-0.3**
	comp=Z,87nm,1.4s,mb5.5						
ROSF	**Rostrenen**	**88.94**	**319**	*e*P	**P**	**06 20 48.0**	**-0.2**
QUIF	**Quistinic**	**88.95**	**318**	*e*P	**P**	**06 20 48.1**	**-0.1**
EVIA	**Vianos**	**90.17**	**309**	P	**P**	**06 20 54.3**	**0.0**
	comp=Z,19nm,1.0s,mb5.4						
EVIA	**Vianos**	**90.17**	**309**	P	**P**	**06 20 54.3**	**+0.1**
	comp=Z,19nm,1.0s,mb5.4,SNR=6.0						
EQES	**Quesada**	**90.77**	**308**	P	**P**	**06 20 56.8**	**-0.2**
	comp=Z,6.9nm,0.8s,mb5.0						
EQES	**Quesada**	**90.77**	**308**	P	**P**	**06 20 56.8**	**-0.2**
	comp=Z,6.9nm,0.8s,mb5.0,SNR=5.2						
EBER	**Berja**	**90.79**	**307**	P	**P**	**06 20 52.8**	**-4.3**
	comp=Z,8.2nm,0.7s,mb5.2						
EBER	**Berja**	**90.79**	**307**	P	**P**	**06 20 52.8**	**-4.3**
	comp=Z,8.2nm,0.7s,mb5.2,SNR=5.0						
GUD	**Guadarrama**	**91.05**	**311**	P	pP	06 21 04.6	-0.7
	comp=Z,20nm,0.9s,SNR=7.9						
ESDC	**Sonseca Array**	**91.09**	**310**	P	**P**	**06 20 59.4**	**+0.9**
	comp=Z,20nm,1.1s,mb5.4						
ESDC	**Sonseca Array**	**91.09**	**310**	P	**P**	**06 20 59.4**	**+1.0**
	comp=Z,20nm,1.1s,mb5.4,SNR=7.9						
ESLA	**Sonseca Array**	**91.09**	**310**	*e*P	**P**	**06 20 59.0**	**+0.5**
	comp=Z,12nm,1.3s,mb5.0						
ESLA				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
EBAN	**Banos Encina**	**91.25**	**309**	P	**P**	**06 20 60.0**	**+0.8**
	comp=Z,50nm,1.4s,mb5.7						
EBAN	**Banos Encina**	**91.25**	**309**	P	**P**	**06 21 00.0**	**+0.8**
	comp=Z,50nm,1.4s,mb5.7,SNR=7.9						
IMA	**Indian Mountai**	**91.46**	**22**	P	**P**	**06 21 01.3**	**+1.8**
IMA				pmax	pmax		
	comp=Z,59nm,0.7s,mb6.0						
IMA	**Indian Mountai**	**91.46**	**22**	*e*P	**P**	**06 21 00.7**	**+1.2**
	comp=Z,59nm,0.7s,mb6.0						
EADA	**Adamuz**	**91.86**	**309**	P	**P**	**06 21 05.2**	**+3.2**
	comp=Z,75nm,1.7s,mb5.8						
EADA	**Adamuz**	**91.86**	**309**	P	**P**	**06 21 05.2**	**+3.2**
	comp=Z,75nm,1.7s,mb5.8,SNR=7.9						
EMIJ	**Mijas**	**92.34**	**307**	P	**P**	**06 21 04.5**	**+0.3**
	comp=Z,21nm,1.8s,mb5.2						
EMIJ	**Mijas**	**92.34**	**307**	P	**P**	**06 21 04.5**	**+0.3**
	comp=Z,21nm,1.8s,mb5.2,SNR=7.9						
VNDA	**Vanda**	**93.10**	**168**	PFAKE		06 21 20.0	+13
VNDA				LR	LR		
	comp=Z,593nm,19.0s,MS5.1						
COLA	**College**	**94.17**	**22**	PFAKE		06 21 20.0	+8.0
COLA				LR	LR		
	comp=Z,420nm,20.0s,MS4.9						
MCK	**McKinley**	**94.30**	**23**	P	**P**	**06 21 14.0**	**+1.4**
MCK				pmax	pmax		
	comp=Z,29nm,1.8s,mb5.4						
MCK	**McKinley**	**94.30**	**23**	*e*P	**P**	**06 21 13.1**	**+0.5**
	comp=Z,29nm,1.8s,mb5.4						
MCK				LR	LR		
	comp=Z,207nm,21.0s,MS4.6						
FIB	**Fire Island**	**94.96**	**26**	PFAKE		06 21 30.0	+14
FIB				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
KDAK	**Kodiak Island**	**95.29**	**30**	PFAKE		06 21 30.0	+13
KDAK				LR	LR		
	comp=Z,147nm,19.0s,MS4.5						
SML	**Sawmill**	**95.45**	**25**	P	**P**	**06 21 19.7**	**+1.8**
SML	**Sawmill**	**95.45**	**25**	*e*P	**P**	**06 21 18.4**	**+0.5**
INK	**Inuvik**	**96.83**	**16**	P	**P**	**06 21 24.4**	**+0.4**
	comp=Z,16nm,1.1s,mb5.3						
RES	**Resolute Bay**	**97.22**	**2**	P	**P**	**06 21 26.7**	**+1.0**
RES				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.2						
RES	**Resolute Bay**	**97.22**	**2**	*e*P	**P**	**06 21 26.4**	**+0.6**
	comp=Z,8.7nm,0.9s,mb5.2						
RES				*e*	pP	06 21 31.6	-1.2
DAWY	**Dawson**	**97.70**	**21**	*e*P	**P**	**06 21 28.9**	**+0.9**
DAWY				*e*	pP	06 21 34.0	-1.1
QSPA	**South Pole Qui**	**97.95**	**180**	PFAKE		06 21 40.0	+11
QSPA				LR	LR		
	comp=Z,727nm,20.0s,MS5.2						
SIT	**Sitka**	**103.60**	**25**	PFAKE		06 22 10.0	+15
SIT				LR	LR		
	comp=Z,628nm,19.0s,MS5.2						
EDM	**Edmonton**	**114.65**	**18**	PKIKP	PKPdf	06 26 36.0	-0.8
EDM	**Edmonton**	**114.65**	**18**	*e*P	PKPdf	06 26 34.6	-2.2
EDM				*e*		06 26 39.8	
SCHQ	**Schefferville**	**115.35**	**348**	PFAKE		06 26 50.0	+12
SCHQ				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
FFC	**Flin Flon**	**116.01**	**10**	PFAKE		06 26 50.0	+10
FFC				LR	LR		
	comp=Z,160nm,21.0s,MS4.6						
NEW	**Newport**	**117.53**	**23**	PFAKE		06 26 50.0	+7.4
NEW				LR	LR		
	comp=Z,427nm,22.0s,MS5.0						
HUMO	**Hull Mountain**	**119.30**	**31**	*e*PKPdf	PKPdf	06 26 44.4	-1.8
HUMO				LR	LR		
	comp=Z,369nm,20.0s,MS5.0						
MSO	**Missoula**	**119.92**	**22**	*e*PKPdf	PKPdf	06 26 43.9	-3.3
MSO				*e*		06 26 49.7	
MSO				LR	LR		
	comp=Z,340nm,20.0s,MS5.0						
YBH	**Yreka Blue Hor**	**120.06**	**31**	PFAKE		06 27 00.0	+12
YBH				LR	LR		
	comp=Z,375nm,20.0s,MS5.0						
BMO	**Blue Mountains**	**120.21**	**25**	PFAKE		06 27 00.0	+12
BMO				LR	LR		
	comp=Z,379nm,21.0s,MS5.0						
WDC	**Whiskeytown Da**	**120.98**	**32**	PFAKE		06 27 00.0	+10
WDC				LR	LR		
	comp=Z,346nm,20.0s,MS5.0						
MOD	**Modoc**	**121.14**	**30**	*e*PKPdf	PKPdf	06 26 47.8	-2.0
MOD				LR	LR		
	comp=Z,296nm,21.0s,MS4.9						
ULM	**Lac du Bonnet**	**121.29**	**7**	*e*PKPdf	PKPdf	06 26 46.6	-3.3
ULM				LR	LR		
	comp=Z,861nm,20.0s,MS5.4						
DGMT	**Dagmar**	**121.45**	**14**	PKPdf	PKPdf	06 26 48.2	-2.0
DGMT				LR	LR		
	comp=Z,498nm,19.0s,MS5.2						
WVOR	**Wild Horse Val**	**121.53**	**28**	PFAKE		06 27 00.0	+9.5
WVOR				LR	LR		
	comp=Z,456nm,22.0s,MS5.1						
BOZ	**Bozeman (W)**	**121.77**	**21**	PKIKP	PKPdf	06 26 49.3	-1.6
BOZ	**Bozeman (W)**	**121.77**	**21**	*e*PKPdf	PKPdf	06 26 48.6	-2.3
BOZ				LR	LR		
	comp=Z,497nm,21.0s,MS5.1						
MCMT	**McKenzie Canyo**	**122.02**	**22**	*e*PKPdf	PKPdf	06 26 49.0	-2.4
HLID	**Hailey**	**122.47**	**24**	*e*PKPdf	PKPdf	06 26 50.2	-2.0
HLID				LR	LR		
	comp=Z,374nm,20.0s,MS5.0						
QLMT	**Earthquake Lak**	**122.54**	**21**	PKPdf	PKPdf	06 26 51.8	-0.6
LAO	**LASA Array**	**122.56**	**17**	PFAKE		06 27 00.0	+7.7
LAO				LR	LR		
	comp=Z,598nm,19.0s,MS5.3						
YMR	**Madison River**	**122.85**	**21**	*e*PKPdf	PKPdf	06 26 51.6	-1.3
YFT	**Old Faithful**	**123.08**	**21**	*e*PKPdf	PKPdf	06 26 52.5	-1.0
LKWY	**Lake**	**123.14**	**21**	PFAKE		06 27 00.0	+6.5
LKWY				LR	LR		
	comp=Z,716nm,20.0s,MS5.3						
IMW	**Indian Meadow**	**123.53**	**22**	PKPdf	PKPdf	06 26 53.0	-1.4
BMN	**Battle Mountai**	**123.76**	**29**	PFAKE		06 27 00.0	+5.1
BMN				LR	LR		
	comp=Z,316nm,21.0s,MS5.0						
RRI2	**Red Ridge**	**123.86**	**22**	*e*PKPdf	PKPdf	06 26 52.9	-2.1
TPAW	**Teton Pass**	**123.87**	**22**	*e*PKPdf	PKPdf	06 26 53.0	-2.1
LOHW	**Long Hollow**	**123.89**	**21**	*e*PKPdf	PKPdf	06 26 53.0	-2.1
CMB	**Columbia Colle**	**123.98**	**33**	PFAKE		06 27 00.0	+4.6
CMB				LR	LR		
	comp=Z,256nm,20.0s,MS4.9						
EYMN	**Ely**	**124.03**	**5**	PFAKE		06 27 00.0	+4.8
EYMN				LR	LR		
	comp=Z,857nm,21.0s,MS5.4						
AHID	**Auburn Hatcher**	**124.44**	**22**	PFAKE		06 27 10.0	+14
AHID				LR	LR		
	comp=Z,588nm,19.0s,MS5.3						

MNV	**Mina**	124.85	31	PFAKE		06 27 10.0	+13
MNV				LR	LR		
	comp=Z,349nm,20.0s,MS5.0						
BW06	**Boulder Array**	125.01	21	PFAKE		06 27 10.0	+13
BW06				LR	LR		
	comp=Z,527nm,20.0s,MS5.2						
HWUT	**Hardware Ranch**	125.25	23	PFAKE		06 27 10.0	+12
HWUT				LR	LR		
	comp=Z,546nm,19.0s,MS5.2						
TPH	**Tonopah**	125.59	30	PFAKE		06 27 10.0	+11
TPH				LR	LR		
	comp=Z,279nm,20.0s,MS4.9						
DAU	**Daniels Canyon**	126.39	24	PKIKP	PKPdf	06 27 04.1	+4.2
DAU	**Daniels Canyon**	126.39	24	*e*PKPdf	PKPdf	06 26 58.1	-1.8
ISA	**Isabella**	126.77	33	PFAKE		06 27 10.0	+9.2
ISA				LR	LR		
	comp=Z,187nm,20.0s,MS4.8						
DAC	**Darwin (Calif)**	126.78	32	PFAKE		06 27 10.0	+9.2
DAC				LR	LR		
	comp=Z,369nm,19.0s,MS5.1						
NCB	**Newcomb**	127.16	349	PFAKE		06 27 10.0	+8.7
NCB				LR	LR		
	comp=Z,720nm,21.0s,MS5.3						
MVU	**Marysvale**	127.59	26	*e*PKPdf	PKPdf	06 27 01.1	-1.3
MVU				LR	LR		
	comp=Z,377nm,20.0s,MS5.1						
MSU	**Marysvale**	127.60	26	*e*PKIKP	PKPdf	06 27 00.7	-1.7
MSU	**Marysvale**	127.60	26	*e*PKPdf	PKPdf	06 27 01.0	-1.4
HRV	**Harvard--Oak R**	128.01	347	PFAKE		06 27 10.0	+6.9
HRV				LR	LR		
	comp=Z,542nm,19.0s,MS5.2						
NEN	**Nelson**	128.67	30	*e*PKPdf	PKPdf	06 27 03.0	-1.5
ISCO	**Idaho Springs**	129.00	20	PFAKE		06 27 10.0	+4.9
ISCO				LR	LR		
	comp=Z,661nm,21.0s,MS5.3						
PV10	**Paradox Valley**	129.02	23	*e*PKPdf	PKPdf	06 27 03.8	-1.3
BINY	**Binghamton**	129.18	351	PFAKE		06 27 10.0	+4.7
BINY				LR	LR		
	comp=Z,980nm,21.0s,MS5.5						
PFO	**Pinyon Flat Ob**	129.41	33	PFAKE		06 27 20.0	+14
PFO				LR	LR		
	comp=Z,77nm,20.0s,MS4.4						
AAM	**Ann Arbor**	129.85	358	PFAKE		06 27 20.0	+13
AAM				LR	LR		
	comp=Z,732nm,19.0s,MS5.4						
RCBR	**Riachuelo**	130.37	269	PFAKE		06 27 20.0	+12
RCBR				LR	LR		
	comp=Z,564nm,20.0s,MS5.3						
SDCO	**Great Sand Dun**	130.89	21	PFAKE		06 27 20.0	+11
SDCO				LR	LR		
	comp=Z,641nm,19.0s,MS5.3						
SSPA	**Standing Stone**	131.00	352	PFAKE		06 27 20.0	+11
SSPA				LR	LR		
	comp=Z,693nm,22.0s,MS5.3						
ACSO	**Alum Creek Sta**	131.89	357	PFAKE		06 27 20.0	+9.5
ACSO				LR	LR		
	comp=Z,843nm,21.0s,MS5.4						
KSU1	**Kansas State U**	132.04	11	*e*PKPdf	PKPdf	06 27 07.7	-3.2
MCWV	**Mont Chateau**	132.21	354	PFAKE		06 27 20.0	+8.8
MCWV				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
ANMO	**Albuquerque**	133.01	23	PKIKP	PKPdf	06 27 11.4	-1.4
ANMO	**Albuquerque**	133.01	23	*e*PKPdf	PKPdf	06 27 11.0	-1.8
ANMO				LR	LR		
	comp=Z,606nm,21.0s,MS5.3						
CBN	**Corbin**	133.31	351	PFAKE		06 27 20.0	+6.8
CBN				LR	LR		
	comp=Z,788nm,21.0s,MS5.4						
TUC	**Tucson**	133.35	29	PKIKP	PKPdf	06 27 11.8	-1.7
TUC	**Tucson**	133.35	29	*e*PKPdf	PKPdf	06 27 11.0	-2.5
TUC				LR	LR		
	comp=Z,288nm,20.0s,MS5.0						
CCM	**Cathedral Cave**	133.86	6	PFAKE		06 27 20.0	+5.8
CCM				LR	LR		
	comp=Z,873nm,20.0s,MS5.5						
WCI	**Wyandotte Cave**	133.96	0	PFAKE		06 27 20.0	+5.6
WCI				LR	LR		
	comp=Z,645nm,19.0s,MS5.4						
BLA	**Blacksburg**	134.69	354	PFAKE		06 27 20.0	+4.2
BLA				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
AMTX	**Amarillo**	134.76	18	PFAKE		06 27 30.0	+14
AMTX				LR	LR		
	comp=Z,669nm,20.0s,MS5.4						
WMOK	**Wichita Mounta**	135.73	15	PFAKE		06 27 30.0	+12
WMOK				LR	LR		
	comp=Z,433nm,19.0s,MS5.2						
WVT	**Waverly**	136.02	2	PFAKE		06 27 30.0	+12
WVT				LR	LR		
	comp=Z,745nm,22.0s,MS5.4						
GDL2	**Guadalupe Moun**	136.25	23	*e*PKPdf	PKPdf	06 27 16.4	-2.4
MNTX	**Cornudas Mount**	136.29	24	*e*PKPpre		06 27 06.8	
MNTX				LR	LR		
	comp=Z,378nm,19.0s,MS5.1						
MIAR	**Mount Ida**	137.01	9	PFAKE		06 27 30.0	+10
MIAR				LR	LR		
	comp=Z,903nm,21.0s,MS5.5						
OXF	**Oxford**	137.54	4	PFAKE		06 27 30.0	+8.9
OXF				LR	LR		
	comp=Z,684nm,21.0s,MS5.4						
GOGA	**Godfrey**	138.71	357	PFAKE		06 27 30.0	+6.7
GOGA				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
NHSC	**New Hope**	138.71	353	PFAKE		06 27 30.0	+6.7
NHSC				LR	LR		
	comp=Z,573nm,19.0s,MS5.3						
LTX	**Lajitas**	139.07	24	PFAKE		06 27 30.0	+5.9
LTX				LR	LR		
	comp=Z,881nm,21.0s,MS5.5						
LRAL	**Lakeview Retre**	139.13	1	PFAKE		06 27 30.0	+5.9
LRAL				LR	LR		
	comp=Z,661nm,20.0s,MS5.4						
JCT	**Junction City**	139.42	19	PKIKP	PKPdf	06 27 19.5	-5.2
JCT	**Junction City**	139.42	19	*e*PKPpre		06 27 16.0	
JCT				LR	LR		
	comp=Z,481nm,20.0s,MS5.2						
NATX	**Nacogdoches**	139.53	12	PFAKE		06 27 30.0	+5.2
NATX				LR	LR		
	comp=Z,712nm,19.0s,MS5.4						
HKT	**Hockley**	141.02	14	PFAKE		06 27 40.0	+12
HKT				LR	LR		
	comp=Z,633nm,21.0s,MS5.3						
TRQA	**Tornquist**	143.15	212	*e*PKPpre		06 27 24.9	
TRQA				LR	LR		
	comp=Z,593nm,21.0s,MS5.3						
PLCA	**Paso Flores**	144.71	200	PKHKP		06 27 29.9	
PLCA	**Paso Flores**	144.71	200	*e*PKPdf	PKPdf	06 27 30.0	-3.7
PLCA				*e*		06 27 36.1	
DEG	**La Desirade**	145.52	315	*e*P	PKPbc	06 27 32.4	+0.4
BPA	**Boggy Peak**	145.57	316	*e*P	PKPbc	06 27 34.0	+1.8
BBL	**Barber's Block**	146.34	314	*e*P	PKPbc	06 27 35.8	+1.7
BBL	**Barber's Block**	146.34	314	*e*P	PKPbc	06 27 37.5	+3.5
SJG	**San Juan**	147.52	323	PKP2	PKPab	06 27 38.7	-2.8
SJG	**San Juan**	147.52	323	*e*PKPbc	PKPdf	06 27 38.5	-0.6
SJG				LR	LR		
	comp=Z,705nm,22.0s,MS5.4						
FCH	**Farellones**	151.01	208	*e*P	PKPdf	06 27 48.1	+4.0
CLCH	**Cerro Calan**	151.07	207	*e*P	PKPdf	06 27 47.9	+3.7
TEIG	**Tepich**	151.80	5	*e*PKPbc	PKPdf	06 27 50.1	+4.4
TEIG				LR	LR		
	comp=Z,340nm,20.0s,MS5.2						
SDV	**Santo Domingo**	157.34	318	PKPdf	PKPdf	06 27 51.0	-2.4
SDV				*e*PKPab	PKPab	06 28 21.7	-1.1
SDV				LR	LR		
	comp=Z,335nm,20.0s,MS5.2						
SAML	**Samuel**	157.54	266	*e*PKPdf	PKPdf	06 27 51.5	-2.1
SAML				LR	LR		
	comp=Z,622nm,19.0s,MS5.5						
LVC	**Limon Verde**	158.19	227	PFAKE		06 28 00.0	+5.8
LVC				LR	LR		
	comp=Z,346nm,19.0s,MS5.2						
LPAZ	**La Paz**	160.84	243	PKIKP	PKPdf	06 27 55.9	-1.4
LPAZ	**La Paz**	160.84	243	*e*PKPdf	PKPdf	06 27 55.5	-1.8
LPAZ				*e*PKPab	PKPab	06 28 37.1	-0.6
LPAZ				LR	LR		
	comp=Z,481nm,20.0s						
JTS	**JuntasAbangare**	161.76	357	PFAKE		06 28 10.0	+12
JTS				LR	LR		
	comp=Z,131nm,19.0s						
OTAV	**Otavalo**	168.93	318	*e*PKPdf	PKPdf	06 28 03.1	-1.2
OTAV				LR	LR		
	comp=Z,428nm,19.0s						
NNA	**Nana**	170.29	246	PFAKE		06 28 10.0	+4.9
NNA				LR	LR		
	comp=Z,123nm,19.0s						

CASC 06 06:56:53.5±1.9**, 12.47N×87.86W, h41**^{km}±167^{km}**, MD3.6, ML3.0, 3C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	0.81	2	*e*P	P	06 57 09.0	+0.5
CNCH				*e*S	S	06 57 21.0	+1.6
BLLM	**Bellamira**	1.04	339	⇓*e*P	P	06 57 12.0	+0.2
BLLM				*e*S	S	06 57 25.9	+0.6
CAHU	**Cacacuatique**	1.34	345	*e*P	P	06 57 16.6	+0.4
CAHU				*e*S	S	06 57 33.5	+0.5
SNVI	**San Vicente**	1.49	320	*e*P	P	06 57 18.1	-0.1
SNVI				*e*S	S	06 57 35.8	-0.8
APYN	**Apoyeque**	1.49	99	⇓*e*P	P	06 57 17.9	-0.4
APYN				*e*S	S	06 57 36.9	+0.1
XAVN	**Gruta Xavier**	1.53	102	*e*P	P	06 57 18.4	-0.4
XAVN				*e*S	S	06 57 36.9	-0.8
LCBS	**La Ceiba**	1.61	317	⇑*e*P	P	06 57 19.8	-0.1
LCBS				*e*S	S	06 57 39.0	-0.6
MGAN	**Managua**	1.61	101	⇑*e*P	P	06 57 19.4	-0.5
MGAN				*e*S	S	06 57 38.6	-1.0
	comp=N,182nm,0.2s						
LFRS	**El Faro**	1.64	315	⇓*e*P	P	06 57 20.3	-0.1
LFRS				*e*S	S	06 57 40.3	-0.2
TICN	**Ticuantepe**	1.65	105	*e*P	P	06 57 20.2	-0.3
TICN				*e*S	S	06 57 39.3	-1.4
WILN	**Americas 2**	1.66	100	⇑*e*P	P	06 57 20.3	-0.4
WILN				*e*S	S	06 57 42.0	+1.0
LBRS	**Las Brisas**	1.71	318	*e*P	P	06 57 22.1	+0.7
LBRS				*e*S	S	06 57 41.8	-0.4
LFU	**La Fuente**	1.77	316	*e*P	P	06 57 22.2	0.0
BOQS	**Boqueron**	1.87	312	*e*P	P	06 57 24.5	+0.8
BOQS				*e*S	S	06 57 45.8	-0.4
SBLS	**San Blas**	2.19	309	*e*P	P	06 57 28.5	+0.2
SBLS				*e*S	S	06 57 54.4	0.0
RTR	**El Retiro**	2.25	309	*e*P	P	06 57 29.6	+0.6

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*BJI **06** 07:16:45.5, 10.59N×91.74E, h56^{km}*
*NEIC **06** 07:16:46.8±1.4, 11.01N×92.27E, h30^{km}, mb4.2/5, Error ellipse: s-maj=28.1km s-min=16.1km az=41.0*
ISC 06 07:16:41.4±1.4**, 10.4N**±0.2×**91.3E**±0.2**, h33**^{km}**, n17, σ0**^{s}**94**/20**, mb4.3**/3**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	**Vishakhapatnam**	10.60	314	*e*P	**P**	**07 19 13.8**	**-0.4**
VIS				*e*S	**S**	**07 21 03.2**	**-10**
VIS				AML	AML	07 21 05.0	
	comp=E,16nm,0.4s						
VIS				AML	AML	07 21 08.3	
	comp=N,18nm,0.7s						
BWNR	**Bhubaneshwar**	11.15	332	*e*P	**P**	**07 19 16.9**	**-4.8**
BWNR				*e*S	**S**	**07 21 10.3**	**-16**
BWNR				AML	AML	07 21 16.1	
	comp=E,65nm,0.4s						
BWNR				AML	AML	07 21 16.5	
	comp=N,40nm,0.4s						
HYB	**Hyderabad**	14.18	301	*e*P	**P**	**07 20 15.0**	**+13**
HYB	**Hyderabad**	14.18	301	*i* P	**P**	**07 20 15.0**	**+13**
BLSP	**Bilaspur**	14.58	324	*e*P	**P**	**07 20 06.7**	**-0.8**
BLSP				*e*S	**S**	**07 22 44.9**	**-3.9**
JIRN	**Jiri**	17.81	345	*e*P	**P**	**07 20 48.9**	**+0.4**
PKI	**Pulchoki**	17.94	343	*e*P	**P**	**07 20 51.1**	**+1.0**
	comp=N,13nm,0.3s						
DMN	**Daman**	18.07	342	*e*P	**P**	**07 20 51.8**	**+0.1**
	comp=N,16nm,0.7s						
GKN	**Gorkha**	18.58	341	*e*P	**P**	**07 20 59.1**	**+1.0**
	comp=N,10nm,0.3s						
KOLN	**Koldanda**	18.72	338	*e*P	**P**	**07 21 00.2**	**+0.4**
	comp=N,16nm,0.6s						
LSA	**Lhasa**	19.19	360	P	**P**	**07 21 05.0**	**-0.2**
LSA	**Lhasa**	19.19	360	*e*P	**P**	**07 21 03.9**	**-1.3**
	comp=N,3.9nm,0.6s						
NDI	**New Delhi**	22.46	326	*e*P	**P**	**07 21 40.0**	**+0.9**
ENH	**Enshi**	26.03	38	P	**P**	**07 22 09.7**	**-3.9**
	comp=N,8.9nm,0.6s,mb4.5						
KURK	**Kurchatov**	41.51	348	*e*P	**P**	**07 24 27.6**	**+0.4**
	comp=N,7.5nm,1.4s,mb4.1						
CN2	**Changchun**	44.50	35	*e*P	**P**	**07 24 50.8**	**-0.7**
WRAB	**Tennant Creek**	52.02	125	*e*P	**P**	**07 25 49.9**	**-0.3**
	comp=N,2.1nm,0.5s,mb4.3						

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*NEIC **06** 07:34:33.4±1.8, 2.79N×95.65E, mb4.4/7, Error ellipse: s-maj=46.0km s-min=18.9km az=67.0*
*BJI **06** 07:34:36.0, 3.43N×95.68E, h22^{km}, mB4.6, mb4.6*
ISC 06 07:34:31.5±1.9**, 2.8N**±0.2×**95.7E**±0.3**, h21**^{km}**, h21**^{km}±.5^{km}**:pP-P, n13, σ1**^{s}**00**/13**, mb4.4**/10**, 2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	15.90	11	P	**P**	**07 38 15.4**	**-0.5**
GYA	**Guiyang**	25.79	23	⇓*i*P	**P**	**07 40 03.2**	**+0.2**
GYA				AP	pP	07 40 09.3	+0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
LSA	**Lhasa**	27.11	351	P	**P**	**07 40 15.6**	**+0.6**
LSA	**Lhasa**	27.11	351	*e*P	**P**	**07 40 15.4**	**+0.4**
	comp=Z,6.0nm,0.7s,mb4.2						
ENH	**Enshi**	30.31	24	*e*P	**P**	**07 40 42.2**	**-1.7**
	comp=Z,4.0nm,0.8s,mb4.2						
XAN	**Xi'an**	33.46	20	P	**P**	**07 41 10.0**	**-1.4**
XAN				AMB	AMB		
	comp=Z,24nm,0.7s,mb5.2						
HHC	**Hu-ho-hao-te**	40.52	19	⇓P	**P**	**07 42 12.2**	**+1.4**
HHC				AP	pP	07 42 18.1	+0.9
HHC				XP	sP	07 42 20.3	+0.4
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.4						
BJT	**Baijiatuau**	41.46	24	*e*P	**P**	**07 42 19.8**	**+1.2**
	comp=Z,12nm,0.7s,mb4.6						
BJT				*e*	pP	07 42 26.5	+1.5
BJI	**Beijing**	41.48	24	*e*P	**P**	**07 42 20.1**	**+1.4**
BJI				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.7						
BJI	**Beijing**	41.48	24	*e*P	**P**	**07 42 20.1**	**+1.4**
	comp=Z,15nm,0.8s,mb4.7						
WRAB	**Tennant Creek**	44.18	122	P	**P**	**07 42 40.8**	**-0.2**
	comp=Z,1.0nm,0.5s,mb3.8						
ULN	**Ulaanbaatar**	45.97	11	*e*P	**P**	**07 42 54.7**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.1						
ULN				*e*pP	pP	07 43 00.9	-0.4
KURK	**Kurchatov**	49.88	346	*e*P	**P**	**07 43 24.8**	**-0.6**
	comp=Z,3.5nm,0.6s,mb4.6						
KURK				*e*	pP	07 43 31.8	-0.1

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*NIED **06** 07:57:00, 42.20N×144.10E, h26^{km}, Mw4.3 Best double couple: M$_0$2.95×10^{15} NP1:ϕ_s91°, δ67°, λ81°. NP2:ϕ_s292°, δ25°, λ109°.*
*MOS **06** 07:57:08.3±1.0, 42.27N×144.05E, h33^{km}, mb4.7/25, Error ellipse: s-maj=9.9km s-min=6.8km az=87.7*
*JMA **06** 07:57:09.0±0.1, 42.23N×144.14E, h60^{km}±2^{km}, M4.4*
JMA Felt II J1.
*SKHL **06** 07:57:09.3±0.6, 42.17N×144.21E, h45^{km}±15^{km}, mb4.9/5*
*BJI **06** 07:57:10.1, 42.50N×144.12E, h45^{km}, mB4.7, mb4.6, Ms3.9, Msz3.7*
*NEIC **06** 07:57:11.0±0.8, 42.27N×144.04E, h39^{km}±7^{km}, mb4.4/32, Error ellipse: s-maj=8.4km s-min=4.7km az=148.0*
NEIC Recorded [2 JMA] in the Obihiro area and [1 JMA] in the Kushiro area.
ISC 06 07:57:09.3±0.5**, 42.23N**±0.04×**144.12E**±0.04**, h43**^{km}±4^{km}**, h43**^{km}±5.5^{km}**:pP-P, n127, σ1**^{s}**09**/146**, mb4.6**/47**, MS3.6**/4**, 6C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCH	**Churui**	0.68	304	⇓P	**P**	**07 57 23.3**	**+0.8**
JCH				*e*S	**S**	**07 57 32.8**	**+0.6**
JOB	**Onbets**	0.70	342	⇑P	**P**	**07 57 23.7**	**+0.8**
JOB				*e*S	**S**	**07 57 34.8**	**+2.0**
JEM	**Erimo**	0.75	253	P	**P**	**07 57 24.0**	**+0.5**
JEM				*e*S	**S**	**07 57 35.8**	**+1.8**
JAK	**Akkeshi**	0.87	29	⇓P	**P**	**07 57 25.3**	**+0.1**
JAK				*e*S	**S**	**07 57 37.3**	**+0.3**
JNBK	**Urakawa-nobuka**	1.02	273	P	**P**	**07 57 27.5**	**+0.2**
JNBK				*e*S	**S**	**07 57 41.8**	**+1.1**
JAR	**Ashorobuto**	1.09	346	⇑P	**P**	**07 57 28.8**	**+0.4**
JAR				*e*S	**S**	**07 57 43.1**	**+0.5**
JBT2	**Biratori 2**	1.41	293	⇑P	**P**	**07 57 32.5**	**-0.5**
JNK	**Nakash**	1.42	18	P	**P**	**07 57 32.7**	**-0.4**
JNK				*e*S	**S**	**07 57 50.0**	**-0.8**
JFR	**Furan**	1.46	310	P	**P**	**07 57 33.3**	**-0.4**
JFR				*e*S	**S**	**07 57 52.1**	**+0.3**
NEM2	**Nemuro 2**	1.64	46	P	**P**	**07 57 35.5**	**-0.7**
NEM2				*e*S	**S**	**07 57 55.9**	**-0.4**
JTKR	**Abashiri--Toko**	1.74	355	⇑P	**P**	**07 57 38.5**	**+0.8**
JTKR				*e*S	**S**	**07 58 00.4**	**+1.6**
JRA	**Rausu**	1.85	23	P	**P**	**07 57 39.2**	**0.0**
JRA				*e*S	**S**	**07 58 01.4**	**-0.2**
JMP	**Maruseppu**	1.86	343	⇑P	**P**	**07 57 39.9**	**+0.6**
YUK	**Yuzh-Kuril'sk**	2.20	35	*e*PN	**P**	**07 57 44.0**	**-0.2**
YUK				*i* S	**S**	**07 58 09.5**	**-0.9**
YUK				pmax	pmax		
	comp=Z,2µm,0.7s						
YUK				pmax	pmax		
	comp=N,640nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.5s						
YUK				pmax	pmax		
	comp=E,180nm,0.4s						
YUK				smax			
	comp=N,3µm,0.6s						
YUK				smax			
	comp=E,4µm,0.4s						
YUK				smax			
	comp=N,10µm,1.0s						
YUK				smax			
	comp=E,4µm,1.0s						
YUK	**Yuzh-Kuril'sk**	2.20	35	*e*P	**P**	**07 57 44.0**	**-0.2**
YUK				AMB	AMB	07 57 45.0	
	comp=E,2µm,1.0s						
YUK				AMB	AMB	07 57 45.5	
	comp=E,640nm,0.4s						
YUK				AMB	AMB	07 57 45.5	
	comp=E,180nm,0.4s						
YUK				AMB	AMB	07 57 45.5	
	comp=E,1µm,0.4s						
YUK				*i* S	**S**	**07 58 09.5**	**-0.9**
YUK				A		07 58 14.5	
	comp=E,3µm,0.5s						
YUK				A		07 58 14.5	
	comp=E,4µm,0.5s						
YUK				A		07 58 21.0	
	comp=E,10µm,1.0s						
YUK				A		07 58 21.0	
	comp=E,4µm,1.0s						
KUR	**Kuril'sk**	4.04	41	⇓*i*PN	**P**	**07 58 08.3**	**-2.0**
KUR				pmax	pmax		
	comp=N,110nm,0.7s						
KUR				pmax	pmax		
	comp=Z,220nm,0.7s						
YSS	**Yuzh-Sakhalins**	4.82	349	⇓*e*PN	**P**	**07 58 21.7**	**+0.4**
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s						
YSS	**Yuzh-Sakhalins**	4.82	349	*e*P	**P**	**07 58 21.5**	**+0.2**
TEY	**Ternei**	6.13	300	*e*P	**P**	**07 58 38.0**	**-1.7**
MAJO	**Matsushiro**	7.30	221	*e*PN	**P**	**07 58 54.8**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,18nm,0.6s						
MAJO	**Matsushiro**	7.30	221	*e*P	**P**	**07 58 54.8**	**-1.2**
	comp=Z,18nm,0.6s						
MAT	**Matsushiro**	7.30	221	*e*PN	**P**	**07 58 55.0**	**-1.0**
MAT				pmax	pmax		
	comp=Z,35nm,1.0s						
MAT	**Matsushiro**	7.30	221	*e*P	**P**	**07 58 55.0**	**-1.0**
	comp=Z,35nm,1.0s						
MAT				S	**S**	**08 00 15.0**	**-3.4**
MAT	**Matsushiro**	7.30	221	P	**P**	**07 58 54.9**	**-1.1**
MAT				*e*S	**S**	**08 00 17.3**	**-1.1**
EKMR	**Ekimchan**	13.18	329	*e*P	**P**	**08 00 12.2**	**-3.9**
EKMR				AMB	AMB	08 00 20.0	
	comp=Z,10.0nm,1.0s						
CN2	**Changchun**	13.76	283	*e*P	**P**	**08 00 23.3**	**-0.3**
CN2				XP		08 00 38.4	
CN2				*e*S	**S**	**08 02 53.8**	**-2.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=N,300nm,14.0s						
CN2				LR	LR		
	comp=E,400nm,14.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
YASR	**Yasnyy**	15.46	321	*e*P	**P**	**08 00 43.3**	**-2.4**
YASR				AMB	AMB	08 00 47.0	
	comp=Z,3.0nm,0.6s						
YASR				AMB	AMB	08 00 47.0	
	comp=Z,6.0nm,0.6s						
BMKR	**Bomnak**	16.03	326	*e*P	**P**	**08 00 52.0**	**-1.0**
BMKR				AMB	AMB	08 00 53.5	
	comp=Z,10.0nm,0.6s						
ZEA	**Zeya**	16.08	321	*e*P	**P**	**08 00 53.2**	**-0.4**
ZEA				AMB	AMB	08 00 53.8	
	comp=Z,22nm,0.7s						
KROS	**Kirovskiy**	16.65	323	*e*P	**P**	**08 00 58.9**	**-1.9**
MA2	**Magadan**	17.85	11	*e*P	**P**	**08 01 14.1**	**-1.6**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MA2	**Magadan**	17.85	11	*e*P	**P**	**08 01 15.1**	**-0.6**
	comp=Z,11nm,0.5s						
HIA	**Hailar**	18.36	301	*e*P	**P**	**08 01 21.0**	**-1.3**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HIA	**Hailar**	18.36	301	*e*P	**P**	**08 01 21.0**	**-1.3**
	comp=Z,6.7nm,0.8s						
CLNS	**Chul'man**	19.12	326	*e*P	**P**	**08 01 26.2**	**-4.9**
CLNS				pmax	pmax		
	comp=Z,18nm,0.9s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.0s						
BJI	**Beijing**	21.13	273	*e*P	**P**	**08 01 55.2**	**+2.7**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb3.9						
BJI	**Beijing**	21.13	273	*e*P	**P**	**08 01 55.2**	**+2.7**
	comp=Z,6.0nm,0.9s,mb3.9						
BJT	**Baijiatuau**	21.14	273	*e*P	**P**	**08 01 50.5**	**-2.1**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BJT	**Baijiatuau**	21.14	273	*e*P	**P**	**08 01 50.5**	**-2.1**
	comp=Z,3.5nm,0.4s,mb4.0						
SEY	**Seymchan**	21.30	10	*e*P	**P**	**08 01 53.3**	**-0.7**
SEY				*e*		08 06 40.1	
SEY				pmax	pmax		
	comp=Z,60nm,1.1s,mb4.8						
SSE	**Sheshan**	21.43	246	P	**P**	**08 02 02.6**	**+7.0**
SSE				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.0						
SSE				AMB	AMB		
	comp=Z,119nm,4.9s						
SSE	**Sheshan**	21.43	246	P	**P**	**08 02 02.6**	**+7.0**
	comp=Z,8.0nm,1.0s,mb4.0						
YAK	**Yakutsk**	21.62	341	*e*P	**P**	**08 01 53.6**	**-3.7**
YAK				*e*		08 02 10.6	
YAK				*e*S	**S**	**08 05 51.5**	**+2.3**
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax			
	comp=N,8.0nm,1.0s						
YAK				smax			
	comp=Z,4.0nm,0.9s						
YAK				smax			
	comp=E,4.0nm,1.0s						
YAK				MLR	MLR		
	comp=Z,179nm,19.0s,MS3.5						
YAK				MLR	MLR		
	comp=N,110nm,17.0s,MS3.5						
YAK				MLR	MLR		
	comp=E,131nm,18.0s,MS3.5						

YAK	Yakutsk	21.62	341	eP	P	08 01 53.4	-3.9
	comp=E,24nm,0.6s,mb4.8						
FX1	Attu Island--F	22.15	51	P	P	08 02 01.9	-0.7
NJ2	Nanjing	22.49	251	eP	P	08 02 08.0	+1.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
BOD	Bodaibo	24.57	320	eP	P	08 02 23.5	-2.5
ULN	Ulaanbaatar	26.61	295	eP	P	08 02 45.0	-0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.1						
ULN	Ulaanbaatar	26.61	295	eP	P	08 02 45.0	-0.3
	comp=Z,4.3nm,0.7s,mb4.1						
BILL	Bilibino	28.45	17	iP	P	08 03 00.2	-1.6
TLY	Talaya	28.87	303	P	P	08 03 07.6	+1.9
	comp=Z,47nm,1.0s,mb5.2,SNR=7.9						
TLY	Talaya	28.87	303	eP	P	08 03 06.5	+0.8
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
TLY				MLR	MLR		
	comp=Z,55nm,14.0s,MS3.3						
TLY	Talaya	28.87	303	eP	P	08 03 06.0	+0.3
	comp=Z,7.8nm,1.0s,mb4.4						
ZAK	Zakamensk	29.06	300	eP	P	08 03 07.2	-0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
ENH	Enshi	30.17	258	eP	P	08 03 15.9	-1.6
	comp=Z,2.6nm,0.3s,mb4.4						
MOY	Mondy	30.52	303	eP	P	08 03 20.9	+0.5
MOY				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.6						
LZH	Lanzhou	31.61	272	eP	P	08 03 30.5	+0.3
LZH				AP	pP	08 03 39.0	-2.8
LZH				XP	sP	08 03 44.0	-3.3
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.9						
LZH	Lanzhou	31.61	272	eP	P	08 03 30.5	+0.3
	comp=Z,28nm,1.5s,mb4.9						
LZH				pP	pP	08 03 39.0	-2.8
LZH				sP	sP	08 03 44.0	-3.3
GTA	Gaotai	33.37	280	eP	P	08 03 46.1	+0.6
GTA				AP	pP	08 03 58.3	+1.2
GTA				XP	sP	08 04 03.0	+0.4
GTA				PP	PP	08 05 00.8	+2.8
GTA				PCP	PcP	08 06 24.5	-2.1
GTA				S	S	08 09 05.2	+2.9
GTA				XS		08 09 26.9	
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,68nm,6.5s						
GTA				LR	LR		
	comp=N,117nm,14.5s,MS3.9						
GTA				LR	LR		
	comp=E,145nm,16.0s,MS3.9						
GTA				LR	LR		
	comp=Z,102nm,12.5s,MS3.7						
WMQ	Urumqi	40.60	292	eP	P	08 04 47.0	+0.8
WMQ				XP	sP	08 05 05.0	+1.6
WMQ				PP	PP	08 06 25.0	+1.7
WMQ				S	S	08 10 52.0	-0.6
WMQ				SS	SS	08 13 47.0	-1.7
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.5						
WMQ				LR	LR		
	comp=N,85nm,20.0s,MS3.8						
WMQ				LR	LR		
	comp=E,102nm,20.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,78nm,18.0s,MS3.6						
NVS	Novosibirsk	40.95	310	eP	P	08 04 48.1	-1.0
NVS				pmax	pmax		
	comp=N,1.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
IMA	Indian Mountai	41.17	33	eP	P	08 04 51.4	+0.6
IMA				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.0						
IMA	Indian Mountai	41.17	33	eP	P	08 04 51.4	+0.7
	comp=Z,25nm,0.6s,mb5.0						
SPU	Mount Spurr	41.88	41	eP	P	08 04 57.7	+1.3
MCK	McKinley	43.19	37	eP	P	08 05 09.2	+2.1
MCK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
MCK	McKinley	43.19	37	eP	P	08 05 09.2	+2.0
	comp=Z,2.6nm,0.7s,mb4.1						
MKAR	Makanchi Array	43.33	298	iP	P	08 05 08.8	+0.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
COLA	College	43.60	35	⇓iP	P	08 05 11.7	+1.2
COLA	College	43.60	35	eP	P	08 05 10.9	+0.4
	comp=Z,7.4nm,0.7s,mb4.5						
LSA	Lhasa	44.01	271	eP	P	08 05 14.1	-0.2
LSA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
LSA	Lhasa	44.01	271	eP	P	08 05 14.1	-0.2
	comp=Z,2.4nm,0.4s,mb4.3						
KURK	Kurchatov	44.55	304	eP	P	08 05 18.1	-0.2
KURK				e		08 07 01.2	
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
KURK	Kurchatov	44.55	304	eP	P	08 05 18.1	-0.2
	comp=Z,9.6nm,0.7s,mb4.7						
KURK				e		08 07 01.2	
CMAR	Chiang Mai Arr	44.96	252	iP	P	08 05 22.8	+0.8
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CHKZ	Chkalovo	48.42	310	iP	P	08 05 48.5	-0.3
CHKZ				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
BVA0	Borovoye Array	48.75	310	iP	P	08 05 51.5	+0.1
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
JIRN	Jiri	48.78	272	eP	P	08 05 53.6	+1.7
	comp=Z,4.8nm,0.3s,mb5.0						
INK	Inuvik	48.82	29	eP	P	08 05 51.6	-0.1
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	Inuvik	48.82	29	eP	P	08 05 51.6	-0.1
	comp=Z,4.8nm,0.6s,mb4.7						
GUN	Gumba	48.87	273	eP	P	08 05 53.5	+0.8
	comp=Z,30nm,0.5s,mb5.6						
KKN	Kakani	49.38	273	eP	P	08 05 57.4	+0.8
	comp=Z,26nm,0.9s,mb5.3						
PKI	Pulchoki	49.41	273	eP	P	08 05 57.3	+0.5
	comp=Z,7.1nm,0.5s,mb4.9						
DMN	Daman	49.61	273	eP	P	08 05 58.3	-0.1
GKN	Gorkha	49.74	273	eP	P	08 05 59.8	+0.4
AAK	Ala-Archa	50.01	295	⇑iP	P	08 05 59.1	-2.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
AAK	Ala-Archa	50.01	295	eP	P	08 06 00.1	-1.1
	comp=Z,2.0nm,0.4s,mb4.5						
KOLN	Koldanda	50.64	274	eP	P	08 06 06.6	+0.4
	comp=Z,14nm,0.7s,mb5.0						
ARU	Arti	53.93	317	P	P	08 06 29.5	-0.9
	comp=Z,125nm,0.6s,mb6.0,SNR=9.9						
ARU	Arti	53.93	317	⇓iP	P	08 06 21.2	-9.2
ARU				e		08 07 29.0	
ARU				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
RES	Resolute Bay	57.04	16	eP	P	08 06 51.4	-1.3
RES				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
RES	Resolute Bay	57.04	16	eP	P	08 06 51.4	-1.4
	comp=Z,8.9nm,0.6s,mb5.0						
YKW3	Yellowknife Ar	58.24	32	eP	P	08 07 00.8	-0.4
KEV	Kevo	59.34	339	ep	P	08 07 07.2	-1.6
	comp=Z,0.7nm,0.3s,mb4.2						
KEV	Kevo	59.34	339	eP	P	08 07 07.2	-1.6
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
JOF	Joensuu	62.38	332	ep	P	08 07 27.6	-1.8
	comp=Z,0.9nm,0.3s,mb4.4						
WRAB	Tennant Creek	62.51	190	P	P	08 07 30.4	-0.5
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
WRAB	Tennant Creek	62.51	190	P	P	08 07 30.4	-0.5
	comp=Z,0.7nm,0.4s,mb4.1						
KAF	Kangasniemi	64.66	333	ep	P	08 07 42.9	-1.4
	comp=Z,0.6nm,0.3s,mb4.1,baz=45,slow=6.2						
KAF	Kangasniemi	64.66	333	eP	P	08 07 42.9	-1.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
NEW	Newport	65.00	47	eP	P	08 07 47.1	+0.4
FINES	FINESS Array B	65.20	332	iP	P	08 07 47.0	-0.8
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUMG	Summit	65.48	1	eP	P	08 07 50.2	+0.7
	comp=Z,8.6nm,0.7s,mb4.9						
BMO	Blue Mountains	66.92	50	eP	P	08 07 59.6	+0.6
BMO				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
BMO	Blue Mountains	66.92	50	eP	P	08 07 59.6	+0.6
	comp=Z,2.2nm,1.0s,mb4.1						
FFC	Flin Flon	68.23	35	eP	P	08 08 07.3	+0.3
FFC				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
FFC	Flin Flon	68.23	35	eP	P	08 08 07.3	+0.3
	comp=Z,14nm,1.1s,mb4.9						
FCC	Fort Churchill	68.43	28	eP	P	08 08 07.6	-0.6
FCC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
FCC	Fort Churchill	68.43	28	eP	P	08 08 07.6	-0.6
	comp=Z,14nm,1.1s,mb4.9						
FCC				e		08 08 12.2	
KIV	Kislovodsk	69.09	311	eP	P	08 08 13.3	+0.7
KIV				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
HLID	Hailey	69.36	50	eP	P	08 08 15.6	+1.5
	comp=Z,4.7nm,1.3s,mb4.3						
BOZ	Bozeman (W)	69.57	47	eP	P	08 08 16.5	+1.0
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
BOZ	Bozeman (W)	69.57	47	eP	P	08 08 16.5	+1.1
	comp=Z,5.1nm,0.5s,mb4.7						
NB2	NORSAR Subarra	70.19	338	P	P	08 08 18.4	-0.5
	comp=Z,1.6nm,0.4s,mb4.3,baz=35,slow=6.5						
SOC	Sochi	70.99	312	eP	P	08 08 21.7	-2.4
SOC				e		08 08 50.4	
SOC				e		08 11 06.7	
SOC				ePPP	PPP	08 12 48.0	+3.0
SOC				e		08 18 20.0	
SOC				eSS	SS	08 22 04.0	-7.1
SOC				eSSS	SSS	08 25 18.8	+1.6
SOC				pmax	pmax		
	comp=N,40nm,0.9s						
SOC				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.6						
SOC				pmax	pmax		
	comp=E,16nm,0.6s						
RRI2	Red Ridge	71.22	48	eP	P	08 08 27.1	+1.5
BW06	Boulder Array	72.58	48	eP	P	08 08 34.5	+1.0
	comp=E,1.5nm,0.4s,mb4.3						
PV10	Paradox Valley	75.82	51	eP	P	08 08 54.4	+2.0
OJC	Ojcow	75.87	327	eP	P	08 08 53.2	+0.8
PV01	Paradox Valley	76.26	51	eP	P	08 08 55.9	+1.0
CLL	Collm	77.60	331	P	P	08 09 02.0	-0.1
CLL				i *PP	pP	08 09 16.1	+1.2
SDCO	Great Sand Dun	78.27	49	eP	P	08 09 07.1	+0.9
	comp=E,0.6nm,0.4s,mb3.9						
KHC	Kasperske Hory	79.17	329	eP	P	08 09 11.5	+0.7
KHC				e	pP	08 09 25.0	+1.4
KHC	Kasperske Hory	79.17	329	eP	P	08 09 11.5	+0.7
KHC				x	x	08 09 25.0	
GRA1	Grafenberg Arr	79.58	331	eP	P	08 09 13.6	+0.6
	comp=E,5.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	79.58	331	eP	P	08 09 13.6	+0.6
GRF				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	79.58	331	eP	P	08 09 13.6	+0.6
GRF				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	79.58	331	eP	P	08 09 13.6	+0.6
	comp=Z,5.0nm,1.2s,mb4.3						

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*BJI **06** 08:14:47.4,1.94N×94.24E,h30^{km},mB5.2,mb4.9,Ms4.2*

*NEIC **06** 08:14:56.0±0.6,2.75N×94.12E,mb4.6/10,Error ellipse: s-maj=16.7km s-min=12.5km az=71.0*

ISC 06 08:14:53.9±0.7,**2.77N**±0.09×**94.1E**±0.1,**h29**^{km}, **h29**^{km}±.9^{km}**:pP-P,n18,**σ**1^{s}05**/18,**mb4.5**/12,**MS4.0**/1,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	16.30	17	eP	P	08 18 44.7	+2.1
	33nm,0.8s						
CM31				e		08 18 52.9	
VIS	Vishakhapatnam	18.23	325	iP	P	08 19 06.0	-0.9
HYB	Hyderabad	21.09	315	eP	P	08 19 38.5	-0.1
HYB	Hyderabad	21.09	315	iP	P	08 19 38.5	-0.1
GYA	Guiyang	26.46	26	eP	P	08 20 34.3	+3.7
GYA				AP	pP	08 20 41.1	+2.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
LSA	Lhasa	26.93	354	P	P	08 20 36.6	+1.7
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
LSA	Lhasa	26.93	354	eP	P	08 20 35.4	+0.5
	comp=Z,16nm,0.7s,mb4.7						
LSA				e	pP	08 20 45.0	+1.7
XAN	Xi'an	34.05	22	P	P	08 21 35.9	-2.0
XAN				AP	pP	08 21 44.7	-1.7
XAN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.7						
GTA	Gaotai	36.84	7	eP	P	08 22 01.4	-0.1
GTA				AP	pP	08 22 10.2	0.0
GTA				XP	sP	08 22 13.8	0.0
GTA				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,51nm,6.1s						
GTA				LR	LR		
	comp=N,155nm,10.6s,MS4.0						
GTA				LR	LR		
	comp=E,60nm,13.7s,MS4.0						
NWAO	Narrogin (SRO)	41.71	150	eP	P	08 22 42.4	+0.3
	comp=E,1.1nm,0.6s,mb3.7						
AAK	Ala-Archa	43.38	339	eP	P	08 22 55.9	+0.3
	comp=E,5.9nm,1.0s,mb4.3						
WRAB	Tennant Creek	45.49	122	eP	P	08 23 12.4	-0.5
	comp=E,2.6nm,0.5s,mb4.3						
WRAB				e	pP	08 23 22.1	+0.5
ULN	Ulaanbaatar	46.29	12	eP	P	08 23 18.4	-0.4
	comp=E,6.2nm,1.2s,mb4.4						
ULN				e	pP	08 23 27.0	-0.6
KURK	Kurchatov	49.53	347	eP	P	08 23 44.1	0.0
	comp=E,7.5nm,0.8s,mb4.8						
KURK				e	pP	08 23 52.5	-0.4
KMBO	Kilima Mbogo	56.96	267	eP	P	08 24 40.8	+1.1
	comp=E,3.2nm,1.0s,mb4.3						
KMBO				e	pP	08 24 49.5	+0.9
KIV	Kislovodsk	61.11	320	P	P	08 25 06.0	-2.0
	comp=E,16nm,1.0s,mb5.1						
MALT	Malatya	61.79	313	eP	P	08 25 13.0	+0.4
	comp=E,7.6nm,1.0s,mb4.8						
MALT				e	pP	08 25 21.9	+0.2
LSZ	Lusaka	67.61	252	P	P	08 25 51.1	+0.3

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*BJI **06** 08:22:24.9,21.50S×66.60W,h200^{km},mB4.6*

*NEIC **06** 08:22:25.0±0.6,21.54S×66.63W,h202^{km}±5^{km},mb4.8/54, Error ellipse: s-maj=9.3km s-min=5.6km az=69.0*

ISC 06 08:22:24.7±0.7,**21.45S**±0.06×**66.68W**±0.07,**h208**^{km}±6^{km}, **n132,**σ**1^{s}02**/122,**mb4.7**/49,**4C-9D,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.37	240	eP	P	08 23 08.7	+0.6
LVC				eS	S	08 23 41.5	-0.1
LPAZ	La Paz	5.32	345	⇑iP	P	08 23 47.3	+3.4
	93nm,0.7s						
ARE	Arequipa	6.73	317	⇓iP	P	08 24 02.5	+0.3
ARE				iS	Px	08 24 15.8	
MDZ	Mendoza	11.55	189	eP	P	08 25 01.8	-2.7
MDZ				e		08 25 07.8	
SAML	Samuel	12.88	16	⇑eP	P	08 25 22.7	+1.4
	19nm,0.6s						
NNA	Nana	13.53	312	Pn	P	08 25 30.1	+0.6
	862nm,1.0s,SNR=30						
NNA	Nana	13.53	312	ePn	P	08 25 29.7	+0.2
	151nm,1.0s						
NNA				eP		08 25 33.6	
NNA				eS	S	08 27 53.1	-2.3
TRQA	Tornquist	17.04	167	eP	P	08 26 07.2	-4.9
	9.2nm,0.6s						
BAO	Brasilia Array	18.64	75	⇑iP	P	08 26 29.1	+0.2
PLCA	Paso Flores	19.50	189	eP	P	08 26 35.2	-2.5
	17nm,0.9s						
PLCA				e		08 26 52.7	
CAM4	Nova Friburgo	22.39	97	eP	P	08 27 06.7	+0.3
CAM4				i		08 27 07.7	
OTAV	Otavalo	24.43	330	eP	P	08 27 27.7	+1.9
	14nm,0.9s,mb4.6						
SDV	Santo Domingo	30.39	352	eP	P	08 28 18.1	-1.6
	19nm,1.0s,mb4.7						
PAYG	Puerto Ayora	30.93	309	eP	P	08 28 25.2	+0.9
	29nm,0.7s,mb5.0						
SJG	San Juan	39.32	1	eP	P	08 29 33.4	-1.9
	38nm,0.8s,mb5.0						
TEIG	Tepich	46.49	332	eP	P	08 30 32.2	-0.8
	13nm,0.8s,mb4.3						
LRAL	Lakeview Retre	57.55	340	eP	P	08 31 52.5	-2.1
	12nm,0.9s,mb4.5						
HKT	Hockley	58.30	330	eP	P	08 31 59.0	-0.9
NATX	Nacogdoches	59.31	332	eP	P	08 32 06.8	-0.1
	87nm,0.8s,mb5.4						
OXF	Oxford	59.70	338	eP	P	08 32 07.2	-2.4
	100nm,1.0s,mb5.4						
PWV	Princeton	60.02	347	eP	P	08 32 10.9	-0.7
JCT	Junction City	60.66	327	⇓eP	P	08 32 14.9	-1.1
	36nm,0.8s,mb5.0						
WVT	Waverly	60.66	340	⇓iP	P	08 32 14.0	-2.0
	55nm,0.7s,mb5.3						
UALR	University of	61.00	336	eP	P	08 32 16.2	-2.1
GNAR	Gosnell	61.23	338	eP	P	08 32 18.7	-1.1
MIAR	Mount Ida	61.28	335	eP	P	08 32 18.8	-1.3
	35nm,0.9s,mb5.0						
LTX	Lajitas	61.80	323	eP	P	08 32 22.6	-1.1
	4.5nm,0.7s,mb4.2						
BLO	Bloomington	63.10	343	eP	P	08 32 29.3	-2.8
	9.1nm,0.5s,mb4.7						
FVM	French Village	63.19	339	eP	P	08 32 31.1	-1.7
ACSO	Alum Creek Sta	63.22	346	eP	P	08 32 30.7	-2.2
	31nm,1.0s,mb4.9						
CCM	Cathedral Cave	63.53	338	⇓eP	P	08 32 33.3	-1.7
	44nm,0.7s,mb5.2						
WMOK	Wichita Mounta	63.66	331	eP	P	08 32 34.8	-1.1
	7.1nm,0.8s,mb4.3						
WMOK				ePcP	PcP	08 33 09.6	-0.6
ALLY	Alegheny Colle	64.01	349	eP	P	08 32 36.6	-1.4
GDL2	Guadalupe Moun	64.39	325	eP	P	08 32 40.0	-0.7
MNTX	Cornudas Mount	64.56	324	eP	P	08 32 39.9	-1.8
	22nm,1.0s,mb4.7						
CPRX	Cap Rock	64.77	326	eP	P	08 32 42.2	-0.9
AMTX	Amarillo	65.14	329	eP	P	08 32 44.2	-1.2
	23nm,0.9s,mb4.8						
KSU1	Kansas State U	66.43	335	eP	P	08 32 52.0	-1.6
LPM	Los Pinos Moun	67.22	325	eP	P	08 32 58.4	-0.2
ANMO	Albuquerque	67.62	325	eP	P	08 33 01.2	+0.1
	21nm,0.8s,mb4.8						
TUC	Tucson	68.09	321	eP	P	08 33 04.0	-0.1
	19nm,1.0s,mb4.7						
QSPA	South Pole Qui	68.74	180	⇓iP	P	08 33 07.2	0.0
	7.4nm,0.7s,mb4.4						
SDCO	Great Sand Dun	69.28	328	⇑eP	P	08 33 11.3	+0.1
	39nm,0.8s,mb5.1						
ISCO	Idaho Springs	70.94	329	eP	P	08 33 21.1	-0.1
	16nm,1.0s,mb4.6						
PV01	Paradox Valley	71.14	326	eP	P	08 33 23.1	+0.7
PV10	Paradox Valley	71.56	326	eP	P	08 33 24.7	-0.2
BAR	Barrett	71.96	317	eP	P	08 33 27.5	+0.1
PHWY	Pilot Hill	72.05	330	eP	P	08 33 27.9	+0.1
PFO	Pinyon Flat Ob	72.44	318	eP	P	08 33 30.6	+0.4
	20nm,1.1s,mb4.7						
EYMN	Ely	72.58	343	eP	P	08 33 29.0	-1.8
LDFC	Landfair	72.60	320	eP	P	08 33 32.2	+1.0
NEN	Nelson	72.83	321	eP	P	08 33 32.9	+0.3
SRU	San Rafael	72.88	326	⇓iP	P	08 33 33.1	+0.4
MSU	Marysvale	73.33	324	⇓iP	P	08 33 36.5	+1.1
MVU	Marysvale	73.34	324	⇓eP	P	08 33 36.4	+1.0
	37nm,0.8s,mb5.1						
TMUT	Trail Mountain	73.38	325	eP	P	08 33 36.5	+0.8
MWC	Mount Wilson	73.84	318	⇓eP	P	08 33 38.9	+0.4
MPU	Maple Canyon	74.13	326	eP	P	08 33 40.4	+0.5
DAU	Daniels Canyon	74.22	326	eP	P	08 33 41.5	+1.0
NLU	North Lily Min	74.32	325	eP	P	08 33 41.7	+0.6
TCUT	Toone Canyon	74.82	327	eP	P	08 33 44.5	+0.6
DAC	Darwin (Calif)	74.90	319	eP	P	08 33 45.0	+0.6
TRCR	Troy Canyon	75.12	322	eP	P	08 33 46.8	+1.1
HWUT	Hardware Ranch	75.26	327	eP	P	08 33 46.6	+0.3
	18nm,0.8s,mb4.8						
SPUT	South Promonto	75.49	326	eP	P	08 33 48.2	+0.5
BGU	Big Grassy Mou	75.52	326	eP	P	08 33 48.4	+0.5
AHID	Auburn Hatcher	75.88	328	eP	P	08 33 50.0	+0.2
	34nm,0.8s,mb5.0						
TPH	Tonopah	75.88	321	eP	P	08 33 50.6	+0.7
ULM	Lac du Bonnet	75.92	341	eP	P	08 33 48.6	-1.2
	26nm,0.6s,mb5.0						
ULM				ePcP	PcP	08 34 00.4	-1.2
HVU	Hansel Valley	76.00	326	eP	P	08 33 50.6	+0.1
LOHW	Long Hollow	76.26	329	eP	P	08 33 52.3	+0.4
WUWY	Wally Ulrich	76.28	329	eP	P	08 33 52.4	+0.4
TPAW	Teton Pass	76.34	328	eP	P	08 33 53.0	+0.6
RRI2	Red Ridge	76.41	328	eP	P	08 33 53.4	+0.7
MOOW	Moose Ponds	76.43	329	eP	P	08 33 53.2	+0.4
OMM	Old Mammoth Mi	76.63	320	eP	P	08 33 54.8	+0.7
IMW	Indian Meadow	76.64	329	eP	P	08 33 54.6	+0.6
LAO	LASA Array	76.65	333	eP	P	08 33 53.9	-0.1
	29nm,1.2s,mb4.8						
MNV	Mina	76.66	321	eP	P	08 33 54.7	+0.5
	15nm,1.1s,mb4.5						
LKWY	Lake	76.88	330	eP	P	08 33 56.4	+1.1
	13nm,0.9s,mb4.6						
YFT	Old Faithful	77.00	329	eP	P	08 33 58.1	+2.2
YMR	Madison River	77.22	329	eP	P	08 33 58.5	+1.3
DGMT	Dagmar	77.27	335	eP	P	08 33 57.6	+0.2
	27nm,0.8s,mb4.9						
QLMT	Earthquake Lak	77.56	329	eP	P	08 34 00.2	+1.2
CMB	Columbia Colle	77.74	319	eP	P	08 33 60.0	-0.2
	14nm,1.2s,mb4.5						
TSUM	Tsumeb	78.06	106	eP	P	08 34 01.8	-0.6
	6.2nm,0.8s,mb4.3						
HLID	Hailey	78.12	327	eP	P	08 34 03.2	+1.0
	28nm,0.8s,mb4.9						
WCN	Washoe City	78.18	321	eP	P	08 34 03.4	+0.9
PAHR	Pah Rah Range	78.22	321	P	P	08 34 03.8	+1.1
MCMT	McKenzie Canyo	78.25	328	eP	P	08 34 04.1	+1.3
BOZ	Bozeman (W)	78.26	330	eP	P	08 34 02.6	-0.2
	14nm,1.5s,mb4.4						
WVOR	Wild Horse Val	79.59	324	eP	P	08 34 10.0	-0.1
	14nm,1.4s,mb4.4						
MOD	Modoc	80.18	322	eP	P	08 34 12.7	-0.5
	17nm,1.0s,mb4.6						
MSO	Missoula	80.22	329	eP	P	08 34 13.6	+0.2
	5.2nm,1.1s,mb4.1						
BMO	Blue Mountains	80.51	326	eP	P	08 34 14.8	-0.1
	33nm,1.2s,mb4.8						
BSMT	Bassoo Peak	81.36	330	P	P	08 34 20.0	+0.7
FFC	Flin Flon	81.67	340	P	P	08 34 20.1	-0.6
	58nm,1.0s,mb5.2,SNR=8.7						
FFC	Flin Flon	81.67	340	eP	P	08 34 19.7	-1.0
	17nm,1.3s,mb4.5						
WALA	Waterton Lakes	81.82	331	eP	P	08 34 21.6	0.0
	15nm,0.9s,mb4.6						
VIPM	Ingram Point	82.05	324	P	P	08 34 24.3	+1.4
HUMO	Hull Mountain	82.15	322	eP	P	08 34 22.9	-0.5
	3.1nm,0.6s,mb4.1						
WRD	Warden	82.78	327	P	P	08 34 28.1	+1.5
GBL	Gable Mountain	82.80	326	P	P	08 34 27.8	+1.0
FCC	Fort Churchill	83.07	346	eP	P	08 34 27.4	-0.4
	22nm,0.8s,mb5.0						
LBTB	Lobatse	83.15	114	eP	P	08 34 28.9	-0.1
	5.2nm,0.7s,mb4.4						
MXC	Moxie City	83.22	326	P	P	08 34 29.9	+1.0
EPH	Ephrata	83.38	327	P	P	08 34 30.3	+0.6
EBG	Ellensburg	83.58	326	P	P	08 34 31.9	+1.3
NAC	Naches	83.60	326	P	P	08 34 31.8	+1.0
TBM	Table Mountain	83.77	326	P	P	08 34 32.3	+0.7
WTV	Waterville	83.79	327	P	P	08 34 32.1	+0.5
ETW	Entiat	83.92	327	P	P	08 34 33.0	+0.7
EDM	Edmonton	84.61	334	eP	P	08 34 34.4	-1.3
JCW	Jim Creek	85.12	327	P	P	08 34 38.0	-0.3
CMW	Cultus Mountai	85.36	327	P	P	08 34 39.5	0.0
PGC	Sidney	86.19	326	eP	P	08 34 43.3	-0.2
	35nm,0.7s,mb5.2						
LSZ	Lusaka	88.92	106	P	P	08 34 57.8	+0.7
	1.9nm,0.6s,mb4.1						
YKW3	Yellowknife Ar	91.89	340	eP	P	08 35 09.8	-0.2
SUMG	Summit	95.70	8	eP	P	08 35 27.9	+0.8
	13nm,1.3s,mb5.0						
MBAR	Mbarara	96.69	93	eP	P	08 35 33.4	+0.3
	5.3nm,0.5s,mb5.0						

YSS	**Yuzh-Sakhalins**	**145.15**	**324**	*e*PKPdf	PKPdf	08 41 38.3	+1.3
HYB	**Hyderabad**	**147.01**	**91**	*e*P	PKPdf	08 41 44.0	+3.0
HYB				*e*		08 42 42.5	
HYB	**Hyderabad**	**147.01**	**91**	*i* PKP	PKPdf	08 41 44.0	+3.0
HYB				*e*pPKP		08 42 42.5	
WMQ	**Urumqi**	**149.19**	**38**	*e*PKP	PKPdf	08 41 43.0	-0.8
WMQ				PP	PP	08 45 24.0	-0.6
WMQ				PP	PP		
	comp=Z,35nm,10.0s						
HIA	**Hailar**	**151.78**	**351**	*e*PKPbc	PKPdf	08 41 54.4	+6.8
HIA				*e*PKPab	PKPab	08 42 04.9	-1.4
ULN	**Ulaanbaatar**	**153.17**	**9**	*e*PKPdf	PKPdf	08 41 51.5	+1.9
ULN				*e*PKPbc	PKPdf	08 41 59.0	+9.4
GTA	**Gaotai**	**158.69**	**30**	*e*PKP	PKPdf	08 41 58.5	+1.4
HHC	**Hu-ho-hao-te**	**160.60**	**4**	*e*PKP	PKPdf	08 42 01.7	+2.6
LZH	**Lanzhou**	**163.23**	**28**	*e*PKP	PKPdf	08 41 59.0	-2.9
LZH				APKP		08 42 57.0	
LZH				XPKP		08 43 20.0	
NJ2	**Nanjing**	**168.34**	**336**	*e*PKP	PKPdf	08 42 02.2	-3.9
NJ2				APKP		08 43 00.3	
NJ2				XPKP		08 43 22.5	
NJ2				PKS	PKS	08 45 34.0	-3.5
NJ2				PP	PP	08 47 06.4	-1.5
NJ2				PP	PP		
	comp=Z,20nm,8.5s						
NJ2				LR	LR		
	comp=N,2µm,28.7s						
NJ2				LR	LR		
	comp=E,320nm,23.0s						
NJ2				LR	LR		
	comp=Z,270nm,26.9s						
KMI	**Kunming**	**169.61**	**67**	PKP	PKPdf	08 42 07.2	+0.2
GYA	**Guiyang**	**172.13**	**49**	PKP	PKPdf	08 42 10.1	+1.6

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*NEIC **06** 08:27:09.1,20.26N×99.19W,h5^{km},MD3.7(MEX),After MEX.*

MEX 06 08:27:09.2±0.9**,20.25N**×**99.18W,h4**^{km}±5^{km}**,MD3.7, MW3.3,1C-2D,Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IIC	**Rita Coyotepec**	**0.49**	**188**	⇓*i*P	Pg	08 27 18.1	-0.8
IIC				*i* S	Sg	08 27 25.2	-0.2
PTVM	**Pico Tres Padr**	**0.66**	**174**	⇓*i*P	Pg	08 27 21.3	-1.0
PTVM				*e*S	Sg	08 27 31.2	+0.1
IIJ	**Jocotitlan**	**0.73**	**225**	*i* P	Pg	08 27 18.4	-5.4
IIJ				*i* S	Sg	08 27 26.6	-6.9
IIO	**Organos**	**0.79**	**146**	⇑*i*P	Pg	08 27 23.2	-1.7
IIO				*i* S	Sg	08 27 33.4	-2.0
UNM	**Universidad Na**	**0.92**	**180**	*e*P	Pb	08 27 25.1	-2.1
UNM				*e*S	Sb	08 27 37.3	-2.3
IIZ	**Mezontepec**	**1.06**	**183**	*i* P	Pb	08 27 27.9	-1.8
IIZ				*i* S	Sb	08 27 39.1	-4.7
CHVM	**Chichinautzin**	**1.16**	**178**	*e*P	Pb	08 27 31.0	-0.4
CHVM				*i* S	Sb	08 27 42.6	-3.9
CHVM	**Chichinautzin**	**1.16**	**178**	*e*P	Pb	08 27 30.7	-0.7
CHVM				*i* S	Sb	08 27 43.0	-3.6
PPM	**Popocatepetl**	**1.29**	**156**	*e*P	Pb	08 27 34.0	+0.4
PPM				*i* S	Sb	08 27 47.5	-2.9
PPM	**Popocatepetl**	**1.29**	**156**	*e*P	Pb	08 27 31.0	-2.6
PPM				*e*P		08 27 31.6	
PPM				*e*P		08 27 34.5	
PPM				*e*S	Sb	08 27 46.9	-3.5
PPM				*i* S	Sb	08 27 47.5	-2.9
PPM				*i* S	Sb	08 27 50.5	+0.1
YAIG	**Yautepec**	**1.39**	**175**	*e*P	Pb	08 27 34.9	-0.4
YAIG				*i* S	Sb	08 27 48.1	-5.1
IIB	**San Bernardino**	**1.50**	**148**	*e*P	Pn	08 27 34.0	-3.0
IIB				*e*S	Sb	08 27 54.0	-2.6
PLIG	**Platanillo**	**1.87**	**189**	*e*P	Pn	08 27 42.8	+0.5
PLIG				*i* S	Sn	08 28 02.4	-4.2
ACX	**Acapulco**	**3.44**	**192**	*e*P	Pn	08 28 07.3	+2.7
ACX				*e*S	Sn	08 28 39.9	-6.5

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*NEIC **06** 08:46:12.1±0.8,27.68N×111.98W,h10^{km},mb4.0/12, Error ellipse: s-maj=11.0km s-min=5.6km az=209.0*

ISC 06 08:46:10.5±1.0**,27.73N**±0.09×**111.95W**±0.07**,h10**^{km}**,n42,** σ**1**^{s}**03**/42**,mb4.4**/4**,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUC	**Tucson**	**4.68**	**12**	*e*Pn	**Pn**	**08 47 20.1**	**-2.8**
BAR	**Barrett**	**6.41**	**322**	*e*Pn	**Pn**	**08 47 46.1**	**-1.3**
MNTX	**Cornudas Mount**	**6.95**	**54**	*e*Pn	**Pn**	**08 47 53.4**	**-1.5**
PFO	**Pinyon Flat Ob**	**7.03**	**328**	*e*Pn	**Pn**	**08 47 56.4**	**+0.2**
LTX	**Lajitas**	**7.46**	**76**	*e*Pn	**Pn**	**08 48 02.4**	**+0.4**
LENM	**Lemitar**	**7.71**	**32**	*e*Pn	**Pn**	**08 48 06.0**	**+0.5**
LDFC	**Landfair**	**7.81**	**341**	Pn	**Pn**	**08 48 05.5**	**-1.5**
GDL2	**Guadalupe Moun**	**7.95**	**54**	*e*Pn	**Pn**	**08 48 09.0**	**+0.1**
NEN	**Nelson**	**8.28**	**343**	*e*Pn	**P**	**08 48 09.3**	**-4.2**
ANMO	**Albuquerque**	**8.59**	**32**	*e*Pn	**P**	**08 48 16.3**	**-1.6**
CPRX	**Cap Rock**	**8.75**	**51**	Pn	**P**	**08 48 20.6**	**+0.5**
MVU	**Marysvale**	**10.75**	**359**	*e*Pn	**P**	**08 48 48.1**	**+0.5**
MSU	**Marysvale**	**10.76**	**359**	Pn	**P**	**08 48 48.0**	**+0.3**
PV01	**Paradox Valley**	**10.76**	**14**	*e*Pn	**P**	**08 48 47.3**	**-0.5**
PV10	**Paradox Valley**	**10.90**	**12**	*e*Pn	**P**	**08 48 47.6**	**-2.0**
JCT	**Junction City**	**10.97**	**73**	*e*Pn	**P**	**08 48 50.3**	**-0.4**
SDCO	**Great Sand Dun**	**11.37**	**27**	*e*Pn	**P**	**08 48 56.2**	**+0.2**
SRU	**San Rafael**	**11.42**	**6**	*e*Pn	**P**	**08 48 57.1**	**+0.3**
LRV	**Little Rabbit**	**11.59**	**321**	Pn	**P**	**08 48 58.7**	**-0.3**
HWUT	**Hardware Ranch**	**13.85**	**1**	*e*Pn	**P**	**08 49 30.1**	**+0.9**
BW06	**Boulder Array**	**15.13**	**7**	*e*Pn	**P**	**08 49 45.8**	**-0.2**
	6.1nm,1.0s						
RRI2	**Red Ridge**	**15.60**	**2**	*e*Pn	**P**	**08 49 53.0**	**+0.9**
MOD	**Modoc**	**15.71**	**336**	*e*Pn	**P**	**08 49 55.5**	**+2.1**
	17nm,1.1s						
TPAW	**Teton Pass**	**15.75**	**3**	*e*Pn	**P**	**08 49 54.2**	**+0.2**
LOHW	**Long Hollow**	**15.89**	**4**	*e*Pn	**P**	**08 49 56.4**	**+0.6**
HLID	**Hailey**	**15.93**	**353**	*e*Pn	**P**	**08 49 57.0**	**+0.6**
	4.9nm,1.3s						
MOOW	**Moose Ponds**	**16.02**	**3**	*e*Pn	**P**	**08 49 58.4**	**+0.9**
IMW	**Indian Meadow**	**16.16**	**3**	*e*Pn	**P**	**08 50 00.5**	**+1.3**
LKWY	**Lake**	**16.85**	**4**	*e*Pn	**P**	**08 50 08.6**	**+0.6**
	14nm,1.5s						
MCMT	**McKenzie Canyo**	**17.08**	**358**	*e*Pn	**P**	**08 50 11.6**	**+0.6**
MIAR	**Mount Ida**	**17.12**	**62**	Pn	**P**	**08 50 12.6**	**+1.0**
	3.1nm,0.7s						
BMO	**Blue Mountains**	**17.62**	**347**	*e*Pn	**P**	**08 50 16.8**	**-0.9**
	14nm,1.8s						
BOZ	**Bozeman (W)**	**17.89**	**1**	*e*Pn	**P**	**08 50 19.4**	**-1.6**
	11nm,1.4s						
LAO	**LASA Array**	**19.46**	**12**	*e*P	**P**	**08 50 40.1**	**+0.1**
	19nm,1.0s						
NEW	**Newport**	**20.90**	**350**	*e*P	**P**	**08 50 54.2**	**-1.2**
	8.2nm,1.0s						
WVT	**Waverly**	**22.08**	**62**	*e*P	**P**	**08 51 07.6**	**+0.2**
	5.4nm,0.8s,mb4.0						
GOGA	**Godfrey**	**25.13**	**70**	P	**P**	**08 51 40.8**	**+3.7**
	19nm,0.2s,mb5.3						
EDM	**Edmonton**	**25.49**	**358**	*e*P	**P**	**08 51 41.1**	**+0.8**
FCC	**Fort Churchill**	**33.42**	**17**	*e*P	**P**	**08 52 50.6**	**-0.6**
	2.8nm,0.8s,mb4.2						
DAWY	**Dawson**	**40.40**	**342**	*e*P	**P**	**08 53 51.3**	**+1.2**
SDV	**Santo Domingo**	**43.20**	**108**	*e*P	**P**	**08 54 14.7**	**+1.1**
SAML	**Samuel**	**59.62**	**121**	*e*P	**P**	**08 56 15.3**	**-2.0**
	2.1nm,0.9s,mb4.2						

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*PNSN **06** 08:53:53.5,48.75N×121.16W,h0^{km},MD3.2,Fault plane solution: NP1:ϕ_s215°,δ80°, NP2:ϕ_s313°,δ51°, Principal axes: T Plg19°, Azm270°; P Plg35°, Azm166°; Fault plane solution: NP1:ϕ_s205°,δ70°, NP2:ϕ_s298°,δ81°, Principal axes: T Plg7°, Azm70°; P Plg21°, Azm163°;*

*NEIC **06** 08:53:53.5,48.75N×121.16W,MD3.2(SEA),After SEA.*

*PGC **06** 08:53:54.2,48.76N×121.19W,h1^{km},ML2.8/27, MD3.3(SEA),Near Mount Baker, Washington.*

ISC 06 08:53:51.9±0.2**,48.80N**±0.02×**121.12W**±0.02**,n72,** σ**0**^{s}**93**/109**,14C-8D,Washington**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPW	**Rockport**	**0.44**	**216**	⇓P	**Pg**	**08 54 00.9**	**+0.2**
HOPB	**Hope**	**0.62**	**342**	⇑P	**Pg**	**08 54 05.5**	**+1.2**
HOPB				S	**Sg**	**08 54 13.9**	**+1.5**
HOPB				Trac		08 54 15.3	
	comp=Z,568nm,0.2s						
VDB	**Vedder Mountai**	**0.68**	**289**	⇑P	**Pg**	**08 54 06.1**	**+0.6**
VDB	**Vedder Mountai**	**0.68**	**289**	⇑P	**Pg**	**08 54 06.1**	**+0.6**
VDB				S	**Sg**	**08 54 15.2**	**+0.6**
VDB				Trac		08 54 15.7	
	comp=Z,258nm,0.1s						
CMW	**Cultus Mountai**	**0.76**	**241**	⇑P	**Pg**	**08 54 06.8**	**-0.3**
JCW	**Jim Creek**	**0.81**	**222**	⇑P	**Pg**	**08 54 07.7**	**-0.4**
ATES	**Arlington Traf**	**0.84**	**228**	P	**Pg**	**08 54 08.3**	**-0.4**
SBES	**Silver Beach E**	**0.85**	**268**	⇑P	**Pg**	**08 54 09.3**	**+0.4**
NLW	**Nelson Butte**	**0.89**	**144**	⇓P	**Pg**	**08 54 09.4**	**-0.3**
ERW	**Mount Erie**	**1.05**	**251**	P	**Pb**	**08 54 12.3**	**-0.4**
HNB	**Haney**	**1.07**	**297**	⇑P	**Pb**	**08 54 12.4**	**-0.5**
HNB				S	**Sb**	**08 54 25.9**	**-1.4**
HNB				Trac		08 54 27.0	
	comp=Z,103nm,0.1s						
HTW	**Haystack Looko**	**1.09**	**204**	⇑P	**Pb**	**08 54 12.5**	**-0.8**
PNT	**Penticton**	**1.12**	**62**	⇑P	**Pb**	**08 54 14.9**	**+1.1**
PNT	**Penticton**	**1.12**	**62**	P	**Pb**	**08 54 15.0**	**+1.2**
PNT				S	**Sb**	**08 54 29.9**	**+1.2**
PNT				Trac		08 54 39.5	
	comp=Z,141nm,0.2s						
TTW	**Tolt Reservoir**	**1.17**	**199**	⇓P	**Pb**	**08 54 13.6**	**-1.1**
DHW2	**Dyer Hill 2**	**1.22**	**132**	⇓P	**Pb**	**08 54 15.3**	**-0.2**
CBSW	**Chelan Butte S**	**1.23**	**144**	⇓P	**Pb**	**08 54 15.5**	**-0.3**
ETW	**Entiat**	**1.31**	**156**	P	**Pb**	**08 54 16.7**	**-0.4**
WTV	**Waterville**	**1.35**	**144**	P	**Pb**	**08 54 17.7**	**-0.2**
SNB	**Saturna Island**	**1.35**	**270**	⇑P	**Pb**	**08 54 17.8**	**-0.1**
SNB	**Saturna Island**	**1.35**	**270**	P	**Pb**	**08 54 17.7**	**-0.2**
SNB				S	**Sb**	**08 54 35.8**	**+0.2**
SNB				Trac		08 54 39.0	
	comp=Z,50nm,0.2s						
ELW	**Echo Lake**	**1.40**	**201**	P	**Pb**	**08 54 18.2**	**-0.5**
BLN	**Blyn Mountain**	**1.47**	**238**	P	**Pn**	**08 54 19.0**	**-0.6**
SQM	**Sequim**	**1.47**	**241**	P	**Pn**	**08 54 19.7**	**-0.1**
VGZ	**Gonzales**	**1.51**	**256**	⇑P	**Pn**	**08 54 19.5**	**-0.8**
VGZ				S	**Sb**	**08 54 38.8**	**-1.4**
VGZ				Trac		08 54 39.2	
	comp=Z,481nm,0.2s						
PGC	**Sidney**	**1.55**	**265**	*e*P	**Pn**	**08 54 20.1**	**-0.7**
PGC	**Sidney**	**1.55**	**265**	P	**Pn**	**08 54 20.3**	**-0.6**
PGC				S	**Sb**	**08 54 40.4**	**-0.9**
PGC				Trac		08 54 41.9	
	comp=Z,66nm,0.2s						
BIB	**Bowen Island**	**1.56**	**294**	⇑P	**Pn**	**08 54 20.6**	**-0.3**
BIB				S	**Sb**	**08 54 41.0**	**-0.5**
BIB				Trac		08 54 43.7	
	comp=Z,29nm,0.2s						
LTY	**Liberty**	**1.57**	**169**	⇓P	**Pn**	**08 54 21.2**	**0.0**
GOBB	**Galiano Island**	**1.58**	**276**	⇑P	**Pn**	**08 54 21.2**	**-0.2**
GOBB				S	**Sb**	**08 54 42.1**	**-0.1**
GOBB				Trac		08 54 42.8	
	comp=Z,48nm,0.2s						
SAW	**Saint Andrews**	**1.59**	**133**	P	**Pn**	**08 54 22.1**	**+0.6**
WPB	**Watts Point**	**1.61**	**303**	⇑P	**Pn**	**08 54 21.7**	**-0.1**
WPB				S	**Sb**	**08 54 42.0**	**-1.2**
WPB				Trac		08 54 43.0	
	comp=Z,41nm,0.2s						
GSM	**Grass Mountain**	**1.66**	**196**	⇑P	**Pn**	**08 54 22.1**	**-0.4**
TBM	**Table Mountain**	**1.67**	**168**	⇓P	**Pn**	**08 54 22.9**	**+0.3**
TWW	**Teanaway**	**1.67**	**174**	P	**Pn**	**08 54 23.3**	**+0.7**
GMW	**Gold Mountain**	**1.68**	**222**	P	**Pn**	**08 54 22.2**	**-0.5**
WSLR	**Whistler**	**1.77**	**319**	P	**Pn**	**08 54 25.2**	**+1.2**
WSLR				S	**Sn**	**08 54 47.1**	**-0.5**
WSLR				Trac		08 54 53.3	
	comp=Z,72nm,0.2s						
EPH	**Ephrata**	**1.77**	**144**	P	**Pn**	**08 54 25.2**	**+1.1**
LZB	**Mount Lazard**	**1.80**	**265**	⇓P	**Pn**	**08 54 24.1**	**-0.4**
LZB				S	**Sn**	**08 54 47.1**	**-1.1**
LZB				Trac		08 54 48.1	
	comp=Z,24nm,0.2s						
STW	**Striped Peak**	**1.81**	**250**	P	**Pn**	**08 54 24.2**	**-0.4**
LLLB	**Lillooet**	**1.87**	**345**	⇑P	**Pn**	**08 54 25.8**	**+0.2**
LLLB				Pg	**Pg**	**08 54 27.9**	**-1.4**
LLLB				S	**Sn**	**08 54 50.4**	**+0.2**
LLLB				Sg	**Sg**	**08 54 53.8**	**-0.5**
LLLB				Trac		08 54 54.2	
	comp=Z,135nm,0.2s						
FMW	**Mount Fremont**	**1.91**	**191**	P	**Pn**	**08 54 25.7**	**-0.3**
EBG	**Ellensburg**	**1.93**	**169**	P	**Pn**	**08 54 26.4**	**+0.1**
NLLB	**Nanaimo Lost L**	**1.93**	**284**	P	**Pn**	**08 54 26.2**	**-0.1**
NLLB				S	**Sn**	**08 54 51.0**	**-0.7**
NLLB				Trac		08 54 53.0	
	comp=Z,17nm,0.1s						
SHB	**Sechelt**	**1.97**	**295**	P	**Pn**	**08 54 27.4**	**+0.5**
SHB				S	**Sn**	**08 54 52.9**	**+0.2**
SHB				Trac		08 54 54.0	
	comp=Z,147nm,0.1s						
REMR	**Mount Rainier-**	**2.04**	**194**	P	**Pn**	**08 54 28.6**	**+0.7**
LON	**Longmire**	**2.10**	**193**	P	**Pn**	**08 54 29.4**	**+0.6**
WPW	**White Pass**	**2.12**	**188**	P	**Pn**	**08 54 29.1**	**0.0**
FHE	**Frenchman Hill**	**2.15**	**149**	P	**Pn**	**08 54 31.7**	**+2.2**
BVW	**Beverly**	**2.16**	**157**	P	**Pn**	**08 54 31.9**	**+2.3**
PFB	**Port Renfrew**	**2.21**	**265**	P	**Pn**	**08 54 30.5**	**+0.2**
PFB				S	**Sn**	**08 54 59.0**	**+0.2**
PFB				Trac		08 55 03.5	
	comp=Z,17nm,0.2s						
CPW	**Capitol Peak**	**2.28**	**217**	P	**Pn**	**08 54 31.9**	**+0.7**
LMW	**Ladd Mountain**	**2.28**	**201**	P	**Pn**	**08 54 32.4**	**+1.1**
TXB	**Texada**	**2.35**	**294**	P	**Pn**	**08 54 32.2**	**-0.1**
TXB				S	**Sn**	**08 55 04.0**	**+1.7**
TXB				Trac		08 55 06.7	
	comp=Z,22nm,0.2s						
MGB	**Mount Grey**	**2.36**	**276**	P	**Pn**	**08 54 32.8**	**+0.3**
MGB				S	**Sn**	**08 55 03.8**	**+1.1**
MGB				Trac		08 55 04.5	
	comp=Z,24nm,0.3s						
ALB	**Alberni**	**2.48**	**282**	P	**Pn**	**08 54 35.2**	**+1.0**
ALB				S	**Sn**	**08 55 06.8**	**+1.2**
ALB				Trac		08 55 07.9	
	comp=Z,9.0nm,0.2s						
NEW	**Newport**	**2.71**	**100**	*e*P	**Pn**	**08 54 36.4**	**-1.1**
OZB	**Mount Ozzard**	**2.89**	**275**	P	**Pn**	**08 54 41.6**	**+1.6**
BTB	**Buttle Lake**	**2.96**	**285**	P	**Pn**	**08 54 42.6**	**+1.5**
BTB				Sg	**Sg**	**08 55 22.2**	**-8.4**
BTB				Trac		08 55 28.0	
	comp=Z,24nm,0.3s						
CBB	**Campbell River**	**3.03**	**296**	P	**Pn**	**08 54 41.1**	**-0.9**
CBB				Sg	**Sg**	**08 55 22.6**	**-10**
CBB				Trac		08 55 24.4	
	comp=Z,19nm,0.5s						
SLEB	**Sale Mountain**	**3.05**	**38**	P	**Pn**	**08 54 43.0**	**+0.6**
SLEB				Pg	**Pg**	**08 54 51.0**	**-1.9**
SLEB				S	**Sn**	**08 55 19.9**	**-0.2**
SLEB				Sg	**Sg**	**08 55 29.9**	**-3.7**
SLEB				Trac		08 55 34.3	
	comp=Z,51nm,0.3s						
DOWB	**Downie Slide**	**3.19**	**31**	P	**Pn**	**08 54 48.2**	**+3.8**
DOWB				Pg	**Pg**	**08 54 53.1**	**-2.5**
DOWB				Sg	**Sg**	**08 55 33.6**	**-4.6**
GDR	**Gold River**	**3.36**	**289**	P	**Pn**	**08 54 49.9**	**+3.2**
GDR				Sg	**Sg**	**08 55 34.4**	**-9.4**
GDR				Trac		08 55 37.4	
	comp=Z,18nm,0.5s						
NCRB	**Newcastle Ridg**	**3.58**	**298**	Pg	**Pg**	**08 54 55.9**	**-7.6**
NCRB				S	**Sn**	**08 55 39.5**	**+5.9**
NCRB				Sg	**Sg**	**08 55 43.7**	**-7.6**
NCRB				Trac		08 55 44.8	
	comp=Z,4.0nm,0.3s						
WOSB	**Woss**	**3.80**	**293**	P	**Pn**	**08 54 53.1**	**+0.1**
WOSB				Pg	**Pg**	**08 55 00.4**	**-7.5**
WOSB				Sg	**Sg**	**08 55 48.0**	**-10**
WOSB				Trac		08 55 49.1	
	comp=Z,6.0nm,0.3s						
MNB	**Mounoet Dainar**	**3.82**	**26**	P	**Pn**	**08 54 53.8**	**+0.5**
MNB				Sg	**Sg**	**08 55 55.4**	**-3.8**
MAYB	**Maynard**	**4.25**	**294**	P	**Pn**	**08 55 00.6**	**+1.3**
MAYB				Sg	**Sg**	**08 56 01.5**	**-12**
MAYB				Trac		08 56 06.2	
	comp=Z,8.0nm,0.6s						
BMO	**Blue Mountains**	**4.74**	**145**	*e*P	**Pn**	**08 55 04.7**	**-1.6**
WALA	**Waterton Lakes**	**4.76**	**84**	*e*P	**Pn**	**08 55 05.8**	**-0.8**
WALA	**Waterton Lakes**	**4.76**	**84**	P	**Pn**	**08 55 07.0**	**+0.3**
WALA				Pg	**Pg**	**08 55 21.6**	**-5.4**
WALA				Sg	**Sg**	**08 56 21.2**	**-9.2**
WALA				Trac		08 56 27.9	
	comp=Z,13nm,0.4s						
CHMT	**Chamberlain Mo**	**5.62**	**107**	*e*P	**Pn**	**08 55 17.6**	**-1.3**
EDM	**Edmonton**	**6.60**	**45**	Sg	**Sg**	**08 57 21.1**	**-11**

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*CSEM **06** 09:14:16.5±0.1,39.74N×32.80E,h5^{km},MD3.0,Error ellipse: s-maj=2.2km s-min=1.6km az=69.0*

*ISK **06** 09:14:17.2,39.76N×32.81E,h9^{km},MD3.0*

*NEIC **06** 09:14:17.1,39.76N×32.82E,h9^{km},MD3.0(ISK),After ISK.*

ISC 06 09:14:17.0±0.8**,39.75N**±0.05×**32.71E**±0.07**,h7**^{km}±6^{km}**,** **n13,**σ**1**^{s}**07**/18**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTO	**Ankara**	**0.14**	**27**	*i* PG	**Pg**	**09 14 20.2**	**+0.2**
ANTO				*i* SG	**Sg**	**09 14 22.1**	**+0.2**
ANTO	**Ankara**	**0.14**	**27**	Pg	**Pg**	**09 14 20.2**	**+0.2**
ANTO				Sg	**Sg**	**09 14 22.2**	**+0.2**
ANTO	**Ankara**	**0.14**	**27**	*i* Pg	**Pg**	**09 14 20.2**	**+0.2**
ANTO				Sg	**Sg**	**09 14 22.2**	**+0.2**
LOD	**Lodumlu**	**0.15**	**15**	*i* PG	**Pg**	**09 14 21.0**	**+0.8**
KAMT	**Kaman**	**0.86**	**116**	*e*PG	**Pg**	**09 14 32.3**	**-1.9**
ELDT	**Eldivan**	**0.92**	**36**	*i* P	**Pb**	**09 14 31.8**	**-3.0**
ELDT				*i* S	**Sb**	**09 14 48.9**	**+1.8**
SGKT	**Sivrigoynuk**	**0.97**	**329**	*i* P	**Pb**	**09 14 34.8**	**-0.8**
SGKT				*i* S	**Sb**	**09 14 47.1**	**-1.3**
KIZT	**Kizilcal**	**1.08**	**217**	*e*PN	**Pn**	**09 14 39.4**	**+0.9**
MDU	**Mudurnu**	**1.35**	**302**	*e*PN	**Pn**	**09 14 43.3**	**+0.9**
ESKT	**Eskisehir**	**1.46**	**262**	*i* P	**Pn**	**09 14 43.8**	**-0.1**
CORM	**Corum**	**1.54**	**73**	*e*PN	**Pn**	**09 14 44.8**	**-0.2**
TOS	**Tosya**	**1.63**	**37**	*e*PN	**Pn**	**09 14 46.4**	**+0.1**
KONT	**Konya--Tatoy**	**1.82**	**189**	*e*PN	**Pn**	**09 14 49.6**	**+0.5**

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*BJI **06** 09:27:57.1,12.25N×125.09E,h50^{km},mB5.1,mb5.0, Ms4.3,Msz4.2*

*MAN **06** 09:27:59.8,12.47N×124.98E,h54^{km},mb4.0,ML5.1, MS5.1*

MAN CATARMAN N SAMAR IV TACLOBAN LEYTE III IROSIN SORSOGON III LEGASPI CITY II LIGNON HILL II DIMASALANG MASBATE II.

*NEIC **06** 09:27:59.4±0.2,12.24N×124.92E,mb5.0/46,Error ellipse: s-maj=8.9km s-min=4.7km az=70.0*

NEIC Felt [IV PIVS] at Catarman. Felt [III PIVS] at Tacloban, Leyte. Also felt [III PIVS] at Irosin and [II PIVS] at Legaspi, Luzon. Felt [II PIVS] at Dimasalang, Masbate.

*HRVD **06** 09:27:59.4±0.3,12.50N×124.98E,h38^{km}±1^{km},MW5.0/56, Centroid moment Tensor Solution. LP body waves: s34,c45;Mantle waves: s56,c95; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.10±.19; $M_{\theta\theta}$-0.07±.13; $M_{\phi\phi}$1.17±.15; $M_{r\theta}$1.95±.14; $M_{\theta\phi}$3.28±.09; $M_{\phi r}$-0.15±.17; Best double couple: $M_0$3.973×10^{16} NP1:ϕ_s358°,δ58°, λ-165°. NP2:ϕ_s260°,δ77°,λ-33°. Principal axes: T 4.148, Plg13°, Azm313°; N -.349, Plg55°, Azm62°; P -3.798, Plg32°, Azm214°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **06** 09:28:07.3±1.6,12.18N×124.70E,h141^{km},mb4.7/13 Error ellipse: s-maj=24.5km s-min=7.9km az=114.5*

ISC 06 09:27:58.3±0.2**,12.44N**±0.02×**125.07E**±0.03**,h47**^{km}**,** **h47**^{km}±1.5^{km}**:pP-P,n207,**σ**1**^{s}**25**/214**,mb5.0**/71**,MS4.2**/11**,** **22C-26D,Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.27**	**184**	*i* P	**P**	**09 28 22.0**	**+2.0**
PLP				*i* S	**S**	**09 28 35.8**	**-0.4**
MMPH	**Masbate**	**1.42**	**267**	⇓*i*P	**P**	**09 28 23.5**	**+1.3**
MMPH				*i* S	**S**	**09 28 38.0**	**-1.9**
OCLP	**Ormoc**	**1.45**	**198**	*e*P	**P**	**09 28 24.7**	**+2.1**
OCLP				*e*S	**S**	**09 28 40.6**	**-0.2**
PVCP	**Virac**	**1.46**	**322**	*e*P	**P**	**09 28 24.0**	**+1.3**
PVCP				*e*S	**S**	**09 28 44.2**	**+3.5**
MSLP	**Maasin**	**2.30**	**185**	*e*P	**P**	**09 28 37.2**	**+2.6**
LLP	**Lapu-Lapu**	**2.37**	**207**	⇓*i*P	**P**	**09 28 36.1**	**+0.5**
LLP				*e*S	**S**	**09 28 57.2**	**-6.4**
RCP	**Roxas**	**2.44**	**249**	⇓*e*P	**P**	**09 28 37.4**	**+0.8**
AUQP	**San Andres**	**2.50**	**291**	*e*P	**P**	**09 28 39.9**	**+2.4**
SCPH	**Surigao**	**2.67**	**171**	⇑*e*P	**P**	**09 28 41.7**	**+1.8**
SCPH				*e*S	**S**	**09 29 18.3**	**+7.0**
TBP	**Tagbilaran**	**2.98**	**204**	*e*P	**P**	**09 28 44.8**	**+0.5**
TBP				*e*S	**S**	**09 29 15.7**	**-3.4**
OTRP	**Odiongan**	**2.98**	**269**	*e*P	**P**	**09 28 44.8**	**+0.4**
GUIM	**Jordan**	**3.03**	**234**	*e*P	**P**	**09 28 45.5**	**+0.5**
BOAC	**Boac**	**3.31**	**288**	*e*P	**P**	**09 28 49.6**	**+0.6**
BUTP	**Butuan**	**3.49**	**171**	*e*P	**P**	**09 28 54.7**	**+3.1**
SNPH	**Sibulan**	**3.57**	**211**	⇓*i*P	**P**	**09 28 53.5**	**+0.9**
SNPH				*i* S	**S**	**09 29 41.5**	**+7.5**
POLP	**Polilio Island**	**3.80**	**307**	*e*P	**P**	**09 28 57.1**	**+1.1**
LQP	**Lukban**	**3.82**	**296**	*e*P	**P**	**09 28 57.1**	**+0.9**
SJMP	**San Jose**	**3.86**	**271**	*e*P	**P**	**09 28 58.3**	**+1.6**
CGP	**Cagayan de Oro**	**3.98**	**185**	⇑*e*P	**P**	**09 28 59.4**	**+1.0**
CGP				*e*S	**S**	**09 29 50.3**	**+6.0**
CUYO	**Cuyo Island**	**4.28**	**249**	*e*P	**P**	**09 29 02.6**	**0.0**
TGY	**Tagaytay City**	**4.35**	**293**	⇓*e*P	**P**	**09 29 06.0**	**+2.3**
BIPH	**Bislig**	**4.42**	**163**	⇓*i*P	**P**	**09 29 04.5**	**-0.1**
BIPH				*i* S	**S**	**09 29 52.5**	**-2.9**
BUKP	**Musuan**	**4.53**	**180**	*e*P	**P**	**09 29 09.0**	**+2.8**
BALP	**Baler**	**4.72**	**314**	*e*P	**P**	**09 29 07.9**	**-0.9**
BUSP	**Coron**	**4.79**	**265**	*e*P	**P**	**09 29 10.1**	**+0.3**
PAGZ	**Pagadian**	**4.86**	**200**	*e*P	**P**	**09 29 11.6**	**+0.8**
LUBP	**Lubang**	**4.88**	**286**	*e*P	**P**	**09 29 11.6**	**+0.6**
PCPH	**Palayan**	**4.95**	**309**	⇓*i*P	**P**	**09 29 10.9**	**-1.2**
DAV	**Davao City (W)**	**5.36**	**175**	*e*P	**P**	**09 29 23.0**	**+5.2**
KCP	**Kidapawan**	**5.40**	**180**	⇓*e*P	**P**	**09 29 23.6**	**+5.2**
KCP				*i* S	**S**	**09 30 38.8**	**+19**
CAUP	**Cauayan**	**5.47**	**325**	*e*P	**P**	**09 29 18.8**	**-0.5**
MATI	**Mati**	**5.58**	**168**	*e*P	**P**	**09 29 22.9**	**+2.0**
ENPP	**El Nido**	**5.66**	**258**	*e*P	**P**	**09 29 21.7**	**-0.3**
BCPH	**Baguio City Da**	**5.86**	**313**	*e*P	**P**	**09 29 23.6**	**-1.1**
SCZP	**Santa Cruz**	**6.01**	**304**	*e*P	**P**	**09 29 29.4**	**+2.6**
CVP	**Callao Caves**	**6.10**	**329**	⇑*e*P	**P**	**09 29 29.0**	**+0.8**
CVP				*e*S	**S**	**09 30 33.5**	**-4.1**
BOLP	**Bolinao**	**6.35**	**309**	*e*P	**P**	**09 29 31.5**	**-0.2**
SGCP	**Mt. Cagua**	**6.46**	**334**	*e*P	**P**	**09 29 33.6**	**+0.3**
APYP	**Conner**	**6.54**	**326**	*e*P	**P**	**09 29 34.7**	**+0.4**
ABRA	**Dolores**	**6.67**	**321**	*e*P	**P**	**09 29 31.4**	**-4.8**
BATP	**Bataraza**	**8.01**	**244**	*e*P	**P**	**09 29 57.0**	**+2.2**
TSM	**Tawau**	**10.78**	**222**	P	**P**	**09 30 33.9**	**+1.0**
KKM	**Kota Kinabalu**	**10.81**	**235**	P	**P**	**09 30 37.8**	**+4.5**
TATO	**Taipei**	**12.92**	**345**	*e*P	**P**	**09 31 05.2**	**+3.5**
	86nm,0.9s						
GZH	**Guangzhou**	**15.38**	**315**	P	**P**	**09 31 37.3**	**+3.4**
GZH				LR	LR		
	comp=N,719nm,16.2s						
GZH				LR	LR		
	comp=E,740nm,21.7s						
GZH				LR	LR		
	comp=Z,2µm,21.5s						
QIZ	**Qiongzhong**	**16.05**	**296**	P	**P**	**09 31 42.0**	**-0.5**
QIZ				LR	LR		
	comp=E,465nm,20.2s						
QIZ				LR	LR		
	comp=Z,815nm,26.3s						
QIZ	**Qiongzhong**	**16.05**	**296**	*e*P	**P**	**09 31 43.0**	**+0.5**
	comp=Z,51nm,1.2s						
SSE	**Sheshan**	**18.91**	**350**	P	**P**	**09 32 20.6**	**+2.8**
SSE				AP		09 32 28.4	
SSE				S	**S**	**09 35 50.0**	**+6.5**
SSE				XS		09 36 06.1	
SSE				AMB	AMB		
	comp=Z,33nm,1.0s						
SSE				AMB	AMB		
	comp=Z,183nm,7.7s						
SSE				LR	LR		
	comp=N,289nm,23.3s						
SSE				LR	LR		
	comp=E,347nm,23.3s						
SSE				LR	LR		
	comp=Z,434nm,29.0s						
SSE	**Sheshan**	**18.91**	**350**	P	**P**	**09 32 20.6**	**+2.8**
	comp=Z,33nm,1.0s						
SSE				pP		09 32 28.4	
SSE				S	**S**	**09 35 50.0**	**+6.5**
SSE				sS		09 36 06.1	
NJ2	**Nanjing**	**20.34**	**345**	*e*P	**P**	**09 32 34.1**	**+0.8**
NJ2				AP		09 32 43.8	
NJ2				XP		09 32 48.1	
NJ2				PP	PP	09 32 58.9	+4.3
NJ2				XS		09 36 39.0	
NJ2				AMB	AMB		
	comp=Z,240nm,0.9s						
NJ2				AMB	AMB		
	comp=Z,2µm,6.2s						
NJ2				LR	LR		
	comp=N,1µm,11.4s						
NJ2				LR	LR		
	comp=E,2µm,23.0s						
NJ2				LR	LR		
	comp=Z,2µm,19.4s						

WHN	**Wuhan**	**20.57**	**333**	*e*P	**P**	**09 32 36.0**	**+0.3**
WHN				S	**S**	**09 36 21.0**	**+2.8**
WHN				LR	LR		
	comp=Z,2µm,21.9s,MS4.4						
YOMI	**Yo Moklole**	**21.48**	**133**	⇑*e*P	**P**	**09 32 43.0**	**-2.0**
	comp=Z,87nm,0.8s,mb5.1						
KKTK	**Khon Kaen**	**21.89**	**283**	P	**P**	**09 32 50.0**	**+0.8**
GYA	**Guiyang**	**22.22**	**312**	⇓*i*P	**P**	**09 32 52.0**	**-0.4**
GYA				PP	PP	09 33 16.1	-3.9
GYA				S	**S**	**09 36 54.9**	**+5.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
GYA				AMB	AMB		
	comp=Z,150nm,3.9s						
GYA				LR	LR		
	comp=N,530nm,18.8s,MS4.2						
GYA				LR	LR		
	comp=E,820nm,20.3s,MS4.2						
GYA				LR	LR		
	comp=Z,1µm,19.5s,MS4.3						
KEDI	**Kedomdong**	**22.62**	**204**	*e*P	**P**	**09 32 55.0**	**-1.5**
	comp=Z,185nm,1.0s,mb5.5						
ENH	**Enshi**	**22.88**	**323**	*e*P	**P**	**09 32 58.9**	**+0.1**
	comp=Z,65nm,0.8s,mb5.1						
KELI	**Kelakatan**	**23.06**	**208**	⇓*e*P	**P**	**09 33 05.5**	**+4.7**
	comp=Z,332nm,1.1s,mb5.7						
RATI	**Rata**	**23.07**	**205**	⇑*e*P	**P**	**09 33 02.7**	**+1.9**
	comp=Z,246nm,0.5s,mb5.9						
SRDI	**Scrawed**	**23.45**	**208**	*e*P	**P**	**09 33 04.7**	**+0.1**
SRDI	**Scrawed**	**23.45**	**208**	⇓*i*P	**P**	**09 33 04.7**	**+0.1**
	comp=Z,486nm,0.9s,mb5.9						
KGM	**Kluang**	**23.91**	**246**	P	**P**	**09 33 09.7**	**+0.7**
NANT	**Nan**	**24.29**	**288**	P	**P**	**09 33 11.7**	**-1.0**
NST	**Nakhon Sawan**	**24.40**	**280**	P	**P**	**09 33 20.0**	**+6.2**
KMI	**Kunming**	**24.57**	**304**	⇑P	**P**	**09 33 14.8**	**-0.6**
KMI				AP		09 33 23.4	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.2						
KMI				LR	LR		
	comp=N,374nm,22.3s,MS4.1						
KMI				LR	LR		
	comp=E,620nm,20.6s,MS4.1						
KMI				LR	LR		
	comp=Z,851nm,24.1s,MS4.2						
KMI	**Kunming**	**24.57**	**304**	*e*P	**P**	**09 33 14.8**	**-0.6**
KMI	**Kunming**	**24.57**	**304**	⇑P	**P**	**09 33 14.8**	**-0.6**
	comp=Z,10.0nm,1.3s,mb4.2						
KMI				pP		09 33 23.4	
KMI				sP		09 33 27.1	
KMI				PP	Px	09 33 27.7	
KMI				S	tx	09 36 12.9	
KMI				sS		09 36 17.4	
KMI				SS	tx	09 36 28.8	
KMI				LR	LR		
	comp=Z,850nm,24.1s,MS4.2						
TIA	**Tai'an**	**24.73**	**344**	*e*P	**P**	**09 33 17.4**	**+0.6**
TIA				AMB	AMB		
	comp=Z,77nm,1.0s,mb5.2						
INCN	**Inchon**	**24.98**	**3**	P	**P**	**09 33 21.1**	**+2.0**
	comp=Z,37nm,0.8s,mb5.0						
INCN				*e*		09 33 32.0	
IPM	**Ipoh**	**25.01**	**254**	P	**P**	**09 33 19.3**	**-0.5**
KS15	**Wonju Array Si**	**25.02**	**5**	*e*P	**P**	**09 33 20.6**	**+1.0**
KS15				*e*	pP	09 33 33.8	+2.4
CHRT	**Chiangrai**	**25.37**	**290**	⇑P	**P**	**09 33 22.0**	**-1.0**
CM31	**Chiang Mai Arr**	**25.87**	**287**	*e*P	**P**	**09 33 25.4**	**-2.3**
	comp=Z,6.9nm,0.6s,mb4.4						
KAKA	**Kakadu**	**26.04**	**163**	⇑*i*P	**P**	**09 33 27.2**	**-2.1**
	comp=Z,66nm,0.6s,mb5.3						
XAN	**Xi'an**	**26.05**	**328**	P	**P**	**09 33 28.8**	**-0.5**
XAN				AMB	AMB		
	comp=Z,97nm,0.9s,mb5.3						
XAN				LR	LR		
	comp=N,338nm,28.2s						
XAN				LR	LR		
	comp=E,277nm,22.0s						
XAN				LR	LR		
	comp=Z,431nm,33.6s						
MAT	**Matsushiro**	**26.75**	**24**	*e*P	pP	09 33 47.0	-0.7
	comp=Z,5.5nm,0.7s						
MAT	**Matsushiro**	**26.75**	**24**	P	pP	09 33 46.7	-1.0
CD2	**Chengdu**	**26.93**	**316**	⇑*i*P	**P**	**09 33 36.9**	**-0.5**
BJT	**Baijiatuau**	**28.57**	**346**	*e*P	**P**	**09 33 51.7**	**-0.4**
	comp=Z,20nm,0.6s,mb5.0						
BJI	**Beijing**	**28.59**	**346**	*e*P	**P**	**09 33 52.0**	**-0.3**
BJI				AMB	AMB		
	comp=Z,28nm,0.7s,mb5.1						
BJI				LR	LR		
	comp=N,223nm,17.6s,MS4.1						
BJI				LR	LR		
	comp=E,406nm,18.6s,MS4.1						
BJI				LR	LR		
	comp=Z,250nm,21.8s,MS3.8						
BJI	**Beijing**	**28.59**	**346**	*e*P	**P**	**09 33 52.0**	**-0.3**
	comp=Z,28nm,0.7s,mb5.1						
BJI				LR	LR		
	comp=Z,250nm,21.8s,MS3.8						
SNY	**Shenyang**	**29.30**	**358**	⇑P	**P**	**09 33 59.0**	**+0.4**
SNY				AP	pP	09 34 13.2	+2.3
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
SNY				LR	LR		
	comp=N,400nm,18.0s,MS4.2						
SNY				LR	LR		
	comp=E,440nm,18.0s,MS4.2						
SNY				LR	LR		
	comp=Z,510nm,17.2s,MS4.2						
LZH	**Lanzhou**	**30.34**	**324**	⇑P	**P**	**09 34 07.5**	**-0.4**
LZH				AP	pP	09 34 22.5	+2.3
LZH				XP	sP	09 34 27.5	+1.5
LZH				AMB	AMB		
	comp=Z,58nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,145nm,4.6s						
LZH				LR	LR		
	comp=N,690nm,16.0s						
LZH				LR	LR		
	comp=Z,952nm,17.5s,MS4.5						
LZH	**Lanzhou**	**30.34**	**324**	*e*P	**P**	**09 34 07.5**	**-0.4**
LZH	**Lanzhou**	**30.34**	**324**	⇑P	**P**	**09 34 07.5**	**-0.4**
	comp=Z,58nm,1.5s,mb5.1						
LZH				pP	pP	09 34 22.5	+2.3
LZH				sP	sP	09 34 27.5	+1.5
LZH				LR	LR		
	comp=Z,950nm,17.5s,MS4.5						
HHC	**Hu-ho-hao-te**	**30.68**	**340**	*e*P	**P**	**09 34 11.3**	**+0.4**
HHC				AP	pP	09 34 20.7	-2.5
HHC				XP	sP	09 34 25.5	-3.6
HHC				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.8						
HHC				AMB	AMB		
	comp=Z,209nm,10.8s						
HHC				LR	LR		
	comp=N,309nm,25.2s,MS4.2						
HHC				LR	LR		
	comp=E,644nm,25.2s,MS4.2						
HHC				LR	LR		
	comp=Z,318nm,24.0s,MS3.9						
CN2	**Changchun**	**31.25**	**1**	*e*P	**P**	**09 34 15.4**	**-0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
MDJ	**Mudanjiang**	**32.30**	**6**	P	**P**	**09 34 23.5**	**-1.5**
MDJ				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,147nm,4.6s						
MDJ	**Mudanjiang**	**32.30**	**6**	*e*P	**P**	**09 34 26.2**	**+1.2**
	comp=Z,19nm,0.9s,mb4.9						
MDJ				*e*	pP	09 34 37.6	+0.2
WRAB	**Tennant Creek**	**33.44**	**164**	⇓*i*P	**P**	**09 34 31.4**	**-3.8**
WRAB	**Tennant Creek**	**33.44**	**164**	*e*P	**P**	**09 34 32.2**	**-3.0**
	comp=Z,26nm,0.8s,mb5.2						
WB2	**Warramunga Arr**	**33.45**	**164**	⇓*i*P	**P**	**09 34 32.1**	**-3.1**
MBWA	**Marble Bar**	**33.80**	**189**	*e*P	**P**	**09 34 34.4**	**-3.8**
	comp=Z,11nm,0.6s,mb5.0						
SHL	**Shillong**	**33.88**	**298**	*e*P	**P**	**09 34 38.0**	**-0.9**
GTA	**Gaotai**	**34.94**	**325**	*e*P	**P**	**09 34 48.2**	**+0.3**
GTA				S	**S**	**09 40 06.1**	**-9.2**
GTA				SCS	ScS	09 45 00.7	-1.7
GTA				AMB	AMB		
	comp=Z,15nm,1.3s,mb4.8						
GTA				AMB	AMB		
	comp=Z,51nm,6.1s						
GTA				LR	LR		
	comp=N,242nm,24.3s,MS4.0						
GTA				LR	LR		
	comp=E,262nm,24.3s,MS4.0						
GTA				LR	LR		
	comp=Z,411nm,23.6s,MS4.1						
LSA	**Lhasa**	**35.83**	**304**	P	**P**	**09 34 56.0**	**+0.5**
LSA				AP	pP	09 35 04.4	-3.6
LSA				XP	sP	09 35 08.6	-5.3
LSA				PP	PP	09 36 16.3	-1.4
LSA				PCP	PcP	09 37 24.0	+1.4
LSA				S	**S**	**09 40 27.4**	**-1.7**
LSA				PCS		09 41 11.1	
LSA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
LSA				LR	LR		
	comp=E,360nm,25.7s						
LSA				LR	LR		
	comp=Z,430nm,25.7s,MS4.1						
LSA	**Lhasa**	**35.83**	**304**	*e*P	**P**	**09 34 55.8**	**+0.3**
	comp=Z,26nm,1.0s,mb5.1						
LSA				*e*	pP	09 35 09.2	+1.2
ASPA	**Alice Springs**	**36.91**	**166**	⇓*i*P	**P**	**09 35 03.1**	**-1.6**
ASPA				*e*S	**S**	**09 40 42.4**	**-3.3**
ASPA	**Alice Springs**	**36.91**	**166**	*e*P	**P**	**09 34 55.8**	**-8.9**
ASPA				*e*S	**S**	**09 40 42.4**	**-3.3**
HIA	**Hailar**	**36.98**	**354**	*e*P	**P**	**09 35 03.1**	**-1.9**
HIA				*e*	pP	09 35 18.2	+0.7
KLR	**Kul'dur**	**37.09**	**7**	*e*P	**P**	**09 35 03.7**	**-2.2**
YSS	**Yuzh-Sakhalins**	**37.49**	**20**	*e*P	pP	09 35 20.0	-1.8
ULN	**Ulaanbaatar**	**38.40**	**340**	⇑*i*P	**P**	**09 35 17.6**	**+0.8**
ULN	**Ulaanbaatar**	**38.40**	**340**	*e*P	**P**	**09 35 17.5**	**+0.7**
	comp=Z,13nm,0.7s,mb4.8						
BWNR	**Bhubaneshwar**	**38.40**	**287**	*e*P	**P**	**09 35 14.9**	**-2.2**
BWNR				*e*		09 35 16.8	
	comp=Z,32nm,0.5s						
BWNR				*e*		09 38 47.6	
CTA	**Charters Tower**	**38.46**	**147**	⇓*i*P	**P**	**09 35 17.5**	**-0.2**
	comp=Z,9.2nm,0.6s,mb4.7						
CTA	**Charters Tower**	**38.46**	**147**	*e*P	**P**	**09 35 17.5**	**-0.2**
CTAO	**Charters Tower**	**38.46**	**147**	*e*P	**P**	**09 35 17.4**	**-0.2**
	comp=Z,9.5nm,0.6s,mb4.7						
JIRN	**Jiri**	**39.35**	**299**	*e*P	**P**	**09 35 25.1**	**+0.1**
	comp=Z,68nm,0.4s,mb5.7						
GUN	**Gumba**	**39.68**	**299**	*e*P	**P**	**09 35 27.7**	**0.0**
	comp=Z,102nm,0.9s,mb5.6						
PKI	**Pulchoki**	**40.00**	**298**	*e*P	**P**	**09 35 29.7**	**-0.6**
	comp=Z,36nm,0.6s,mb5.3						
KKN	**Kakani**	**40.16**	**298**	*e*P	**P**	**09 35 31.1**	**-0.6**
DMN	**Daman**	**40.27**	**298**	*e*P	**P**	**09 35 31.8**	**-0.8**
	comp=Z,29nm,0.6s,mb5.2						
VIS	**Vishakhapatnam**	**40.59**	**283**	*e*P	**P**	**09 35 35.7**	**+0.4**
VIS				*e*		09 35 40.2	
	comp=Z,26nm,1.3s						
GKN	**Gorkha**	**40.77**	**299**	*e*P	**P**	**09 35 35.8**	**-0.9**
	comp=Z,35nm,0.6s,mb5.2						
KOLN	**Koldanda**	**41.60**	**298**	*e*P	**P**	**09 35 43.2**	**-0.5**
	comp=Z,64nm,0.9s,mb5.2						
ZAK	**Zakamensk**	**41.83**	**339**	*e*P	**P**	**09 35 45.0**	**-0.2**
ZAK				*e*		09 37 36.0	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.0						
TLY	**Talaya**	**42.81**	**340**	⇑*i*P	**P**	**09 35 53.3**	**+0.1**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
FORT	**Forrest**	**43.06**	**176**	⇓*i*P	**P**	**09 35 54.0**	**-1.6**
	comp=Z,578nm,0.6s						
MOY	**Mondy**	**43.71**	**338**	*e*P	**P**	**09 36 01.5**	**+1.0**
MOY				pmax	pmax		
	comp=Z,23nm,15.0s						
CLNS	**Chul'man**	**44.30**	**360**	*e*P	**P**	**09 36 05.5**	**+0.3**
CLNS				pmax	pmax		
	comp=N,30nm,1.0s						
CLNS				pmax	pmax		
	comp=E,21nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.2						
KLBR	**Kellerberrin**	**44.34**	**189**	⇑*i*P	**P**	**09 36 03.2**	**-2.7**
	comp=Z,237nm,0.3s						
WMQ	**Urumqi**	**44.80**	**321**	*e*P	**P**	**09 36 10.2**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
MUN	**Mundaring**	**44.98**	**191**	*e*P	**P**	**09 36 08.2**	**-2.8**
	comp=Z,24nm,0.6s,mb5.2						
HYB	**Hyderabad**	**45.14**	**282**	*e*P	**P**	**09 36 12.0**	**-0.5**
HYB	**Hyderabad**	**45.14**	**282**	*i* P	**P**	**09 36 12.0**	**-0.5**
HYB				*e*	pP	09 36 25.5	+0.3
NWAO	**Narrogin (SRO)**	**45.73**	**189**	*e*P	**P**	**09 36 14.1**	**-2.9**
	comp=Z,82nm,0.8s,mb5.7						
BOD	**Bodaibo**	**46.06**	**352**	*e*P	**P**	**09 36 17.2**	**-2.1**
BOD				pmax	pmax		
	comp=Z,28nm,2.0s,mb4.8						
BHPL	**Bhopal**	**46.43**	**290**	*e*P	**P**	**09 36 22.3**	**-0.3**
BHPL				*e*		09 36 24.2	
	comp=Z,18nm,0.6s						
STKA	**Stephens Creek**	**46.82**	**161**	⇓*i*P	**P**	**09 36 24.8**	**-0.8**
	comp=Z,21nm,0.6s,mb5.2						
DDI	**Dehra Dun**	**46.89**	**300**	*e*P	**P**	**09 36 25.5**	**-0.7**
DDI				*e*		09 36 52.7	
NDI	**New Delhi**	**47.30**	**298**	*e*P	**P**	**09 36 26.0**	**-3.4**
SDNR	**Sundarnagar**	**48.05**	**301**	*e*P	**P**	**09 36 35.4**	**+0.2**
PET	**Petropavlovsk**	**48.53**	**26**	*e*P	pP	09 36 53.4	+2.0
PET				pmax	pmax		
	comp=Z,75nm,1.5s,mb5.5						
AJM	**Ajmer**	**49.26**	**294**	⇓*i*P	**P**	**09 36 44.0**	**-0.6**
AJM				*i* P		09 36 44.0	
THN	**Thein Dam**	**49.28**	**302**	*e*P	**P**	**09 36 42.0**	**-2.8**
KAD	**Karad**	**49.31**	**282**	*e*P	**P**	**09 36 43.6**	**-1.5**
MKAR	**Makanchi Array**	**49.60**	**322**	*i* P	**P**	**09 36 47.0**	**0.0**
MKAR				pmax	pmax		
	comp=Z,18nm,0.8s						
POO	**Poona**	**49.60**	**284**	*e*P	**P**	**09 36 43.4**	**-4.0**
YAK	**Yakutsk**	**49.62**	**3**	*i* P	**P**	**09 36 53.8**	**+6.9**
YAK	**Yakutsk**	**49.62**	**3**	*e*P	**P**	**09 36 46.8**	**-0.1**
	comp=Z,125nm,1.0s,mb5.9						
YAK				*e*	pP	09 36 59.5	-0.3
MA2	**Magadan**	**50.78**	**17**	*e*P	pP	09 37 05.7	-3.0
MA2				*e*S	**S**	**09 44 25.7**	**+19**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
MA2	**Magadan**	**50.78**	**17**	P	**P**	**09 36 57.7**	**+1.8**
	comp=Z,28nm,0.8s,mb5.2						
MA2				*e*	pP	09 37 09.1	+0.4
KZA	**Kyzart**	**52.26**	**314**	P	**P**	**09 37 08.1**	**+1.0**
	SNR=9.7						
CNB	**Canberra Magne**	**52.77**	**155**	⇑*i*P	**P**	**09 37 11.3**	**+0.2**
	comp=Z,436nm,0.7s						
UCH	**Uchtor**	**52.83**	**314**	P	**P**	**09 37 12.3**	**+0.9**
	SNR=16						
AAK	**Ala-Archa**	**52.97**	**314**	*e*P	**P**	**09 37 09.7**	**-2.8**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.4						
AAK	**Ala-Archa**	**52.97**	**314**	*e*P	**P**	**09 37 11.0**	**-1.5**
	comp=Z,2.5nm,0.8s,mb4.2						
USP	**Ospenovka**	**53.18**	**315**	P	**P**	**09 37 13.7**	**-0.3**
	SNR=7.4						
TOO	**Toolangi**	**53.31**	**160**	⇓*i*P	**P**	**09 37 14.8**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.1						
AML	**Almayashu**	**53.37**	**314**	P	**P**	**09 37 16.1**	**+0.6**
	SNR=11						
NVS	**Novosibirsk**	**53.45**	**331**	*e*P	**P**	**09 37 13.8**	**-2.0**
NVS				*e*S	**S**	**09 44 42.8**	**-0.4**
NVS				pmax	pmax		
	comp=N,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
NVS				smax			
	comp=N,16nm,1.9s						
NVS				smax			
	comp=E,32nm,1.9s						
EKS2	**Erkin-Say**	**53.48**	**314**	P	**P**	**09 37 16.5**	**+0.2**
	SNR=7.4						
KURK	**Kurchatov**	**53.62**	**325**	⇓*i*P	**P**	**09 37 16.3**	**-0.9**
KURK	**Kurchatov**	**53.62**	**325**	*e*P	**P**	**09 37 16.9**	**-0.4**
	comp=E,56nm,0.6s,mb5.7						
KURK				*e*	pP	09 37 30.5	+0.3
SEY	**Seymchan**	**54.03**	**15**	*e*P	**P**	**09 37 23.2**	**+3.2**
SEY				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
TAU	**Tasmania Unive**	**58.73**	**161**	*e*P	**P**	**09 37 49.0**	**-4.8**
	comp=Z,22nm,0.6s,mb5.4						
BVA0	**Borovoye Array**	**59.22**	**325**	P	**P**	**09 37 56.4**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
CHKZ	**Chkalovo**	**59.34**	**326**	*i* P	**P**	**09 37 57.1**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,17nm,1.9s,mb4.8						
CHKZ	**Chkalovo**	**59.34**	**326**	*e*P	**P**	**09 37 56.7**	**-1.2**
	comp=Z,4.8nm,0.8s,mb4.6						
CHKZ				*e*	pP	09 38 10.5	-0.6
BILL	**Bilibino**	**61.65**	**16**	⇑*i*P	**P**	**09 38 23.5**	**+10**
WBK	**Wadi Bani Khal**	**63.42**	**289**	⇓P	**P**	**09 38 23.9**	**-2.0**
SVE	**Sverdlovsk**	**65.76**	**327**	*e*P	**P**	**09 38 37.6**	**-2.9**
ASHO	**Ashiyiah**	**65.98**	**292**	⇓P	**P**	**09 38 42.4**	**0.0**
ARU	**Arti**	**66.78**	**326**	P	**P**	**09 38 45.8**	**-1.1**
	comp=Z,195nm,0.6s,SNR=14						
ARU	**Arti**	**66.78**	**326**	⇓*i*P	**P**	**09 38 37.4**	**-10**
ARU				*e*S	S	09 47 20.9	-13
ARU				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
SHAO	**Shalim**	**66.91**	**284**	⇑P	**P**	**09 38 47.6**	**-0.9**
RBK	**Rabkut**	**68.32**	**284**	⇑P	**P**	**09 38 55.8**	**-1.4**
	SNR=13						
WHFO	**Wadi Hawf**	**68.68**	**285**	⇑P	**P**	**09 38 57.5**	**-2.0**
	SNR=33						
ABTO	**Aybut**	**69.19**	**284**	⇓P	**P**	**09 39 01.2**	**-1.5**
	SNR=17						
TNA	**Tin City**	**69.30**	**24**	P	**P**	**09 39 04.1**	**+1.6**
	comp=Z,2.8nm,0.7s,mb4.3						
TNA				*e*	pP	09 39 17.0	+1.0
TI2	**Plekhanov**	**74.64**	**310**	*e*P	pP	09 39 48.6	+0.3
IMA	**Indian Mountai**	**75.16**	**25**	*e*P	**P**	**09 39 39.2**	**+2.0**
	comp=Z,32nm,1.3s,mb5.1						
IMA				*e*	pP	09 39 52.9	+2.2
GOF	**Gofitskoye**	**75.71**	**314**	⇓*i*P	**P**	**09 39 49.0**	**+8.3**
GOF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
KIV	**Kislovodsk**	**76.02**	**312**	*e*P	**P**	**09 39 41.6**	**-1.0**
KIV				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
KIV	**Kislovodsk**	**76.02**	**312**	*e*P	**P**	**09 39 43.4**	**+0.8**
	comp=Z,53nm,1.5s,mb5.2						
KIV				*e*	pP	09 39 56.2	+0.1
MCK	**McKinley**	**77.17**	**27**	*e*P	**P**	**09 39 48.0**	**-0.6**
	comp=Z,25nm,1.1s,mb5.1						
MCK				*e*	pP	09 40 02.7	+0.5
COLA	**College**	**77.59**	**26**	⇑*i*P	PcP	09 40 00.2	-1.2
COLA	**College**	**77.59**	**26**	P	**P**	**09 39 53.4**	**+2.5**
SOC	**Sochi**	**78.20**	**312**	*e*P	**P**	**09 39 49.6**	**-5.1**
SOC				*e*S	S	09 49 28.5	-16
SOC				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.3						
SOC				pmax	pmax		
	comp=N,89nm,1.2s						
SOC				pmax	pmax		
	comp=E,30nm,0.9s						
OBN	**Obninsk**	**79.06**	**324**	⇓*i*P	**P**	**09 39 59.0**	**-0.2**
OBN				*i*	pP	09 40 12.2	-0.6
OBN				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.2						
ANN	**Anapa**	**79.69**	**314**	*e*P	**P**	**09 39 48.7**	**-14**
ANN				pmax	pmax		
	comp=Z,78nm,1.0s,mb5.6						
MALT	**Malatya**	**79.80**	**307**	*e*P	**P**	**09 40 03.7**	**+0.1**
	comp=Z,12nm,1.3s,mb4.7						
JOF	**Joensuu**	**80.74**	**332**	*e*p	**P**	**09 40 07.6**	**-0.4**
	comp=Z,1.1nm,0.3s,mb4.3						
KEV	**Kevo**	**81.20**	**340**	*e*p	**P**	**09 40 10.8**	**+0.5**
	comp=Z,0.7nm,0.4s						
INK	**Inuvik**	**82.71**	**22**	*e*P	**P**	**09 40 19.2**	**+1.1**
	comp=Z,6.4nm,1.0s,mb4.6						
INK				*e*	pP	09 40 32.9	+1.0
KAF	**Kangasniemi**	**83.17**	**332**	*e*p	**P**	**09 40 20.2**	**-0.4**
	comp=Z,1.0nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**83.44**	**331**	*i* P	**P**	**09 40 22.0**	**+0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CSS	**Prodhromos**	**84.39**	**304**	*e*P	**P**	**09 40 26.7**	**-0.7**
	comp=Z,30nm,0.8s,mb5.5						
ISP	**Isparta**	**86.03**	**308**	*e*P	**P**	**09 40 31.3**	**-4.1**
ISP	**Isparta**	**86.03**	**308**	*e*P	pP	09 40 49.3	0.0
SUW	**Suwalki**	**86.91**	**325**	*e*P	**P**	**09 40 40.1**	**+0.9**
	comp=Z,38nm,0.9s,mb5.6						
SUW				*e*	pP	09 40 53.0	-0.2
KMBO	**Kilima Mbogo**	**88.11**	**268**	*e*P	**P**	**09 40 45.9**	**-0.1**
	comp=Z,9.4nm,1.0s,mb5.0						
KMBO				*e*	pP	09 41 00.1	+0.1
DAG	**Danmarks Havn**	**88.46**	**352**	*e*P	**P**	**09 40 47.0**	**+0.7**
DAG	**Danmarks Havn**	**88.46**	**352**	*i* P	**P**	**09 40 47.0**	**+0.7**
RES	**Resolute Bay**	**89.58**	**10**	*e*P	**P**	**09 40 52.1**	**+0.5**
	comp=Z,4.3nm,0.8s,mb4.8						
RES				*e*	pP	09 41 05.2	-0.3
NB2	**NORSAR Subarra**	**90.30**	**334**	P	**P**	**09 40 54.6**	**-0.7**
	comp=Z,4.7nm,0.8s,mb4.9,baz=65,slow=4.6						
YKW3	**Yellowknife Ar**	**92.22**	**24**	*e*P	**P**	**09 41 04.9**	**+0.8**
YKW3				*e*	pP	09 41 18.3	+0.2
YKA	**Yellowknife Ar**	**92.26**	**24**	*i* P	**P**	**09 41 05.9**	**+1.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SBA	**Scott Base**	**93.13**	**172**	*e*P	**P**	**09 41 05.2**	**-2.9**
	comp=Z,1.9nm,0.6s,mb4.7						
SUMG	**Summit**	**94.48**	**355**	*e*P	**P**	**09 41 16.0**	**+1.8**
	comp=Z,7.9nm,0.9s,mb5.1						
SUMG				*e*	pP	09 41 29.1	+0.9
JCT	**Junction City**	**119.31**	**44**	*e*PKPdf	PKPdf	09 46 44.6	+1.5
JCT				*e*		09 46 57.7	
WVT	**Waverly**	**122.57**	**31**	*e*PKPdf	PKPdf	09 46 50.8	+1.4
WVT				*e*		09 47 04.0	
PLCA	**Paso Flores**	**148.65**	**157**	*e*PKPbc	PKPdf	09 47 41.3	+4.5
SDV	**Santo Domingo**	**153.68**	**37**	*e*PKPdf	PKPdf	09 47 47.1	+2.1
SDV				*e*		09 48 01.3	
TRQA	**Tornquist**	**153.72**	**167**	*e*PKPbc	PKPdf	09 47 52.8	+8.3
TRQA				*e*		09 48 06.3	
LPAZ	**La Paz**	**166.65**	**108**	*e*PKPdf	PKPdf	09 48 01.6	+2.2
LPAZ				*e*PKPab	PKPab	09 49 06.0	+2.0
SAML	**Samuel**	**171.18**	**68**	*e*PKPdf	PKPdf	09 48 03.7	+1.5

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*GUC **06** 10:15:39.7±0.4, 24.57S×67.30W, h200^{km}, ML4.9*
*NEIC **06** 10:15:39.8±1.2, 24.41S×67.03W, h150^{km}±20^{km}, mb4.3/4,*
Error ellipse: s-maj=24.2km s-min=10.0km az=94.0
ISC 06 10:15:39.8±1.0**, 24.49S**±0.05×**67.2W**±0.1**, h163**^{km}±15^{km}**, n16, σ1^{s}07**/24**, mb5.0**/1**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.46**	**319**	⇑*i*P	**P**	**10 16 22.7**	**+1.1**
LVC				*i* S	**S**	**10 16 52.7**	**-1.0**
LVC				AMP		10 16 55.5	
	comp=E,2µm,0.5s						
LVC	**Limon Verde**	**2.46**	**319**	P	**P**	**10 16 22.7**	**+1.1**
LVC				*e*Sn	**S**	**10 16 47.3**	**-6.4**
LVC				S	**S**	**10 16 52.7**	**-1.0**
ANCH	**Antofagasta**	**3.06**	**285**	⇑*i*P	**P**	**10 16 30.0**	**+0.9**
ANCH				*i* S	**S**	**10 17 07.8**	**+0.8**
ANCH				AMP		10 17 08.9	
	comp=N,2µm,0.3s						
CPCH	**Copiapo**	**4.04**	**224**	⇑*i*P	**P**	**10 16 41.3**	**-0.4**
CPCH				*i* S	**S**	**10 17 28.4**	**-0.9**
VACH	**Vallenar**	**5.18**	**217**	*i* P	**P**	**10 16 56.2**	**-0.4**
VACH				*i* S	**S**	**10 17 54.7**	**-1.3**
TLL	**Tololo Astrono**	**6.50**	**209**	*e*P	**P**	**10 17 14.8**	**+0.6**
TLL				*e*S	**S**	**10 18 27.0**	**-0.6**
ARE	**Arequipa**	**8.95**	**332**	P	**P**	**10 17 47.0**	**+0.4**
ARE				*e*S	**S**	**10 19 17.0**	**-8.8**
TRQA	**Tornquist**	**14.23**	**163**	*e*P	**P**	**10 18 55.4**	**+0.5**
	comp=N,20nm,0.7s						
SAML	**Samuel**	**15.92**	**15**	*e*P	**P**	**10 19 12.1**	**-4.1**
	comp=N,6.4nm,0.6s						
PLCA	**Paso Flores**	**16.44**	**189**	*e*P	**P**	**10 19 24.5**	**+2.1**
	comp=N,3.7nm,0.7s						
PLCA				*e*		10 19 32.4	
BAO	**Brasilia Array**	**20.04**	**68**	*e*P	**P**	**10 20 00.5**	**-1.5**
BAO				*i*		10 20 02.1	
SDV	**Santo Domingo**	**33.35**	**354**	P	**P**	**10 22 02.1**	**-2.4**
SDV				*e*		10 22 09.2	
VNA3	**Neumayer Olymp**	**56.74**	**161**	*e*	**P**	**10 25 09.3**	**+0.9**
VNA2	**Neumayer--Watz**	**57.31**	**160**	*e*	**P**	**10 25 12.5**	**+0.2**
SNAA	**Sanae**	**58.94**	**161**	*e*	**P**	**10 25 23.2**	**-0.5**
QSPA	**South Pole Qui**	**65.71**	**180**	*e*P	**P**	**10 26 09.6**	**+1.2**
	comp=N,12nm,0.5s,mb5.0						
QSPA				⇓*i*P		10 26 09.9	

SSS ***06*** *10:33:03.2, 12.83N×88.66W, h40^{km}, MD3.4, ML3.6*
INET ***06*** *10:33:04.8, 12.63N×88.50W, h9^{km}, ML3.7*
CASC 06 10:33:03.0±1.0**, 12.80N×88.66W, h33**^{km}±11^{km}**, MD3.8, 4D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.73**	**31**	*e*P	Pn	10 33 17.9	+0.8
BLLM	**Bellamira**	**0.76**	**33**	⇓*e*P	Pn	10 33 17.5	0.0
BLLM				*e*S	Sn	10 33 29.0	+1.1
SNVI	**San Vicente**	**0.83**	**348**	⇓*e*P	Pn	10 33 18.6	+0.1
SNVI				*e*S	Sn	10 33 31.7	+2.0
LCBS	**La Ceiba**	**0.91**	**340**	*e*P	Pn	10 33 19.4	-0.2
LCBS				*e*S	Sn	10 33 31.4	-0.2
LFRS	**El Faro**	**0.91**	**335**	⇓*e*P	Pn	10 33 19.4	-0.2
CNCH	**Conchagua**	**0.94**	**59**	*e*P	Pn	10 33 19.5	-0.5
CNCH				*e*S	Sn	10 33 32.9	+0.5
LBRS	**Las Brisas**	**1.01**	**338**	*e*P	Pn	10 33 21.0	0.0
LBRS				*e*S	Sn	10 33 34.3	+0.2
LFU	**La Fuente**	**1.04**	**335**	*e*P	Pn	10 33 21.1	-0.5
LFU				*e*S	Sn	10 33 36.2	+1.1
SNET	**Serv Nac Est T**	**1.05**	**328**	*e*P	Pn	10 33 21.1	-0.5
CAHU	**Cacacuatique**	**1.06**	**24**	*e*P	Pn	10 33 21.7	-0.1
CAHU				*e*S	Sn	10 33 36.5	+1.0
BOQS	**Boqueron**	**1.11**	**327**	⇓*e*P	Pn	10 33 22.4	-0.1
BOQS				*e*S	Sn	10 33 38.4	+1.6
SBLS	**San Blas**	**1.40**	**318**	*e*P	Pn	10 33 26.7	+0.1
SNJE	**San Jose**	**1.41**	**319**	*e*P	Pn	10 33 26.7	-0.1
SNJE				*e*S	Sn	10 33 45.3	+1.0
RTR	**El Retiro**	**1.46**	**319**	*e*P	Pn	10 33 27.5	+0.1
RTR				*e*S	Sn	10 33 46.4	+0.9
RBDL	**Robledal**	**1.65**	**323**	*e*P	Pn	10 33 29.8	-0.3

NIED ***06*** *10:40:00, 42.40N×143.10E, h59^{km}, Mw4.2 Best double couple: M$_0$1.89×10^{15} NP1:φ$_s$22°, δ74°, λ83°. NP2:φ$_s$228°, δ17°, λ115°.*
BJI ***06*** *10:40:07.0, 42.27N×143.77E, h68^{km}, mB4.7, mb4.4*
MOS ***06*** *10:40:09.8±1.4, 42.44N×142.75E, h33^{km}, mb4.2/4, Error ellipse: s-maj=17.9km s-min=10.1km az=76.5*
SKHL ***06*** *10:40:12.4±0.7, 42.22N×143.14E, h56^{km}±4^{km}, mb5.1/2, msh5.5/1*
NEIC ***06*** *10:40:13.5±1.1, 42.35N×142.95E, h69^{km}±12^{km}, mb4.1/9, Error ellipse: s-maj=20.3km s-min=9.3km az=118.0*
NEIC Recorded [1 JMA] in south-central Hokkaido.
JMA ***06*** *10:40:13.3±0.1, 42.36N×143.12E, h51^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1:φ$_s$241°, δ10°, λ124°. NP2:φ$_s$26°, δ81°, λ84°. Principal axes: T Plg53°, Azm289°; N Plg6°, Azm27°; P Plg36°, Azm121°;*
JMA Felt I J1.
ISC 06 10:40:11.4±0.4**, 42.31N**±0.04×**143.09E**±0.05**, h68**^{km}±3^{km}**, n45, σ0^{s}97**/58**, mb4.1**/10**, 5C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.25**	**264**	⇓P	**P**	**10 40 22.1**	**0.0**
JNBK				*e*S	**S**	**10 40 29.4**	**-0.6**
JEM	**Erimo**	**0.29**	**170**	P	**P**	**10 40 23.0**	**+0.6**
JEM				*e*S	**S**	**10 40 30.4**	**-0.1**
JCH	**Churui**	**0.37**	**33**	⇑P	**P**	**10 40 22.5**	**-0.4**
JCH				*e*S	**S**	**10 40 29.8**	**-1.6**
JBT2	**Biratori 2**	**0.71**	**311**	⇓P	**P**	**10 40 27.2**	**+0.8**
JBT2				*e*S	**S**	**10 40 38.5**	**+0.9**
JOB	**Onbets**	**0.81**	**42**	⇑P	**P**	**10 40 28.6**	**+1.0**
JOB				*e*S	**S**	**10 40 40.4**	**+0.8**
JFR	**Furan**	**0.93**	**337**	⇓P	**P**	**10 40 28.5**	**-0.6**
JFR				*e*S	**S**	**10 40 40.2**	**-2.1**
JAR	**Ashorobuto**	**1.11**	**27**	⇑P	**P**	**10 40 31.7**	**+0.3**
JAR				*e*S	**S**	**10 40 45.0**	**-1.3**
JEW	**Eniwo**	**1.32**	**294**	⇓P	**P**	**10 40 35.9**	**+1.4**
JEW				*e*S	**S**	**10 40 51.8**	**+0.2**
JAB	**Ashibetsu**	**1.36**	**332**	⇓P	**P**	**10 40 36.0**	**+1.1**
JAK	**Akkeshi**	**1.37**	**59**	⇑P	**P**	**10 40 35.1**	**0.0**
JAK				*e*S	**S**	**10 40 52.8**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**2.66**	**49**	*e*PN	**P**	**10 40 53.9**	**+0.9**
YUK				*i* S	**S**	**10 41 24.5**	**+0.4**
YUK				pmax	pmax		
	comp=Z,480nm,0.4s						
YUK				pmax	pmax		
	comp=N,180nm,0.4s						
YUK				pmax	pmax		
	comp=E,180nm,0.4s						
YUK				smax			
	comp=N,5μm,1.6s						
YUK				smax			
	comp=E,3μm,0.6s						
YUK				smax			
	comp=N,2μm,0.4s						
YUK				smax			
	comp=E,2μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.66**	**49**	*e*P	**P**	**10 40 53.9**	**+0.9**
YUK				AMB	AMB	10 40 55.3	
	comp=E,180nm,0.4s						
YUK				AMB	AMB	10 40 55.3	
	comp=E,480nm,0.4s						
YUK				*i* S	**S**	**10 41 24.5**	**+0.4**
YUK				A		10 41 28.3	
	comp=E,5μm,2.0s						
YUK				A		10 41 28.3	
	comp=E,3μm,1.0s						
YUK				A		10 41 30.0	
	comp=E,2μm,0.4s						
YUK				A		10 41 30.0	
	comp=E,2μm,0.4s						
KUR	**Kuril'sk**	**4.53**	**48**	⇓*i*PN	**P**	**10 41 19.0**	**-0.1**
KUR				pmax	pmax		
	comp=Z,150nm,0.7s						
KUR	**Kuril'sk**	**4.53**	**48**	*i* P	**P**	**10 41 19.0**	**-0.1**
KUR				AMB	AMB	10 41 23.7	
	comp=Z,150nm,0.7s						
KUR				*e*S	**S**	**10 42 10.0**	**-0.9**
KUR				A		10 42 17.3	
	comp=Z,170nm,0.5s						
KUR				A		10 42 17.3	
	comp=Z,180nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.65**	**357**	⇑*e*PN	**P**	**10 41 22.0**	**+1.2**
YSS				*e*S	**S**	**10 42 14.8**	**+0.8**
YSS				smax			
	comp=N,20nm,0.8s						
YSS				smax			
	comp=E,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.65**	**357**	*e*P	**P**	**10 41 21.7**	**+0.9**
MAJO	**Matsushiro**	**6.89**	**215**	*e*PN	**P**	**10 41 50.4**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAJO	**Matsushiro**	**6.89**	**215**	*e*P	**P**	**10 41 50.4**	**-1.4**
	comp=Z,5.8nm,0.6s						
MAT	**Matsushiro**	**6.89**	**215**	*e*PN	**P**	**10 41 52.0**	**+0.2**
MAT	**Matsushiro**	**6.89**	**215**	P	**P**	**10 41 52.2**	**+0.4**
EKMR	**Ekimchan**	**12.74**	**331**	*e*P	**P**	**10 43 12.1**	**+1.0**
MA2	**Magadan**	**17.93**	**13**	*e*P	**P**	**10 44 16.3**	**-1.0**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MA2	**Magadan**	**17.93**	**13**	*e*P	**P**	**10 44 16.3**	**-1.0**
	comp=Z,3.8nm,0.8s						
BJT	**Baijiatuau**	**20.37**	**273**	P	**P**	**10 44 42.7**	**-1.9**
BJT				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BJT	**Baijiatuau**	**20.37**	**273**	P	**P**	**10 44 42.7**	**-1.9**
	comp=Z,2.8nm,0.4s						
YAK	**Yakutsk**	**21.31**	**342**	*e*P	**P**	**10 44 52.1**	**-1.9**
YAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.4						
YAK	**Yakutsk**	**21.31**	**342**	*e*P	**P**	**10 44 52.1**	**-1.9**
	comp=Z,12nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**25.88**	**295**	*e*P	**P**	**10 45 38.6**	**+0.4**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.3						
ULN	**Ulaanbaatar**	**25.88**	**295**	*e*P	**P**	**10 45 38.5**	**+0.3**
	comp=Z,1.5nm,0.8s,mb3.5						
ZAK	**Zakamensk**	**28.36**	**300**	*e*P	**P**	**10 46 00.4**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,2.3s						
BILL	**Bilibino**	**28.61**	**18**	*e*P	**P**	**10 46 02.8**	**-0.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
BILL	**Bilibino**	**28.61**	**18**	*e*P	**P**	**10 46 02.8**	**-0.1**
	comp=Z,3.3nm,1.0s,mb3.9						
ENH	**Enshi**	**29.44**	**257**	*e*P	**P**	**10 46 10.3**	**-0.4**
	comp=Z,3.6nm,0.3s,mb4.5						
GTA	**Gaotai**	**32.60**	**280**	*e*P	**P**	**10 46 39.6**	**+1.2**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**43.87**	**304**	*e*P	**P**	**10 48 12.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
KURK	**Kurchatov**	**43.87**	**304**	*e*P	**P**	**10 48 12.7**	**+0.4**
	comp=Z,11nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**47.78**	**310**	*e*P	**P**	**10 48 43.4**	**+0.1**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**47.78**	**310**	*e*P	**P**	**10 48 43.4**	**+0.1**
	comp=Z,7.9nm,0.8s,mb4.6						
ARU	**Arti**	**53.35**	**316**	*e*P	**P**	**10 49 16.0**	**-10**
JOF	**Joensuu**	**61.95**	**331**	*e*p	**P**	**10 50 24.6**	**-1.2**
	comp=Z,0.7nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**64.23**	**332**	*e*p	**P**	**10 50 39.5**	**-1.3**
	comp=Z,0.3nm,0.4s,mb3.5						
NB2	**NORSAR Subarra**	**69.83**	**337**	P	**P**	**10 51 15.1**	**-0.9**
	comp=Z,2.6nm,1.0s,mb4.0,baz=35,slow=6.5						
PV10	**Paradox Valley**	**76.37**	**50**	*e*P	**P**	**10 51 57.0**	**+2.3**
CLL	**Collm**	**77.16**	**330**	P	**P**	**10 51 59.4**	**+0.6**
KHC	**Kasperske Hory**	**78.72**	**329**	*e*P	**P**	**10 52 08.5**	**+1.0**

JMA 06 10:50:35.7±0.2**, 37.78N×134.56E, h450**^{km}**, M3.5, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**2.58**	**165**	P	P	10 51 40.6	+0.3
JHS	**Saijyo**	**3.01**	**203**	P	P	10 51 42.8	-0.5
JFT	**Otama**	**4.59**	**92**	P	P	10 51 57.2	+0.3
JMM	**Marumori**	**4.94**	**87**	P	P	10 52 00.3	+0.1
JMM				S	S	10 53 06.6	-0.2
JRG	**Rokugo**	**5.03**	**69**	P	P	10 52 00.6	-0.5
JRG				S	S	10 53 07.1	-1.3
JFK	**Kawauchi**	**5.03**	**93**	P	P	10 52 00.8	-0.4
JFK				S	S	10 53 06.8	-1.7
JMK	**Ichinoseki**	**5.36**	**75**	P	P	10 52 04.1	-0.3
JMK				S	S	10 53 14.2	-0.2
JOT	**Ohata**	**6.17**	**52**	P	P	10 52 12.1	-0.6

BJI ***06*** *11:12:37.6, 7.55N×92.66E, h35^{km}, mB5.1, mb4.8, Ms4.4, Msz4.0*
NEIC ***06*** *11:12:46.6±0.3, 8.35N×92.60E, mb4.8/21, Error ellipse: s-maj=8.8km s-min=6.5km az=64.0*
MOS ***06*** *11:13:11.6±1.9, 11.92N×92.39E, h33^{km}, mb4.9/13, Error ellipse: s-maj=14.3km s-min=8.9km az=95.4*
ISC 06 11:12:45.0±0.3**, 8.40N**±0.04×**92.67E**±0.04**, h38**^{km}**, h38**^{km}±1.1^{km}**: pP-P, n129, σ1^{s}17**/115**, mb4.7**/43**, MS4.2**/6**, 5C-7D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.23**	**1**	*e*PG	**P**	**11 13 44.2**	**+10**
PBA				*e*S	**S**	**11 14 10.9**	**-1.4**
SNG	**Songkhla**	**7.97**	**98**	P	**P**	**11 14 42.0**	**+0.8**
	184nm,0.8s						
NNT	**Nongplab**	**8.10**	**58**	P	**P**	**11 14 44.0**	**+1.1**
CM31	**Chiang Mai Arr**	**11.71**	**31**	*e*P	**P**	**11 15 34.9**	**+2.3**
	27nm,0.8s						
PALK	**Pallekele**	**11.91**	**265**	Pn	**P**	**11 15 34.0**	**-1.3**
	309nm,0.7s,SNR=36						
PALK	**Pallekele**	**11.91**	**265**	*e*P	**P**	**11 15 33.0**	**-2.3**
	22nm,0.6s						
PALK				*e*S	S	11 17 20.5	-27
KKTK	**Khon Kaen**	**12.67**	**51**	P	**P**	**11 15 49.0**	**+3.5**
NANT	**Nan**	**12.95**	**36**	P	**P**	**11 15 52.0**	**+2.8**
VIS	**Vishakhapatnam**	**12.98**	**316**	*e*P	**P**	**11 15 46.9**	**-2.7**
VIS				*e*P		11 15 47.0	
VIS				*e*S	**S**	**11 17 55.7**	**-18**
VIS				*e*		11 18 04.3	
	comp=N,375nm,0.3s						
VIS				*e*		11 18 04.6	
	comp=E,504nm,0.3s						
CHRT	**Chiangrai**	**13.32**	**30**	⇓P	**P**	**11 15 54.6**	**+0.5**
	comp=E,153nm,1.0s						
BWNR	**Bhubaneshwar**	**13.56**	**331**	*e*P	**P**	**11 15 52.2**	**-5.1**
BWNR				*e*		11 18 08.2	
BWNR				*e*		11 18 16.1	
	comp=N,242nm,0.6s						
BWNR				*e*		11 18 16.3	
	comp=E,552nm,0.2s						
AGT	**Agartala**	**15.45**	**355**	*e*P	**P**	**11 16 22.0**	**0.0**
HYB	**Hyderabad**	**16.41**	**304**	*i* P	**P**	**11 16 35.0**	**+0.8**
HYB				*e*		11 16 45.0	
HYB				*e*		11 19 20.0	
HYB				*e*S	**S**	**11 19 34.0**	**-0.4**
BLSP	**Bilaspur**	**17.00**	**325**	*e*P	**P**	**11 16 40.4**	**-1.3**
BLSP				*e*		11 16 56.8	
	comp=Z,84nm,1.1s						
BLSP				*e*		11 19 32.6	
SHL	**Shillong**	**17.09**	**358**	*e*	**P**	**11 16 39.0**	**-3.7**
SHL				*e*		11 19 35.0	
MNGI	**Mangalore**	**18.10**	**286**	*i* P	**P**	**11 16 56.3**	**+0.8**
MNGI				*i*		11 20 01.9	
KMI	**Kunming**	**19.20**	**29**	P	**P**	**11 17 10.5**	**+1.9**
KMI				AP		11 17 17.5	
KMI				PP	PP	11 17 28.2	+2.4
KMI				AMB	AMB		
	comp=Z,14nm,1.1s						
KMI				AMB	AMB		
	comp=Z,47nm,3.1s						
KMI				LR	LR		
	comp=N,531nm,20.9s						
KMI				LR	LR		
	comp=E,438nm,20.9s						
KMI				LR	LR		
	comp=Z,564nm,19.5s						
KMI	**Kunming**	**19.20**	**29**	*e*P	**P**	**11 17 10.5**	**+1.9**
KMI	**Kunming**	**19.20**	**29**	P	**P**	**11 17 10.5**	**+1.9**
	comp=Z,14nm,1.1s						
KMI				pP		11 17 17.5	
KMI				sP		11 17 20.6	
KMI				PP	PP	11 17 28.2	+2.4
KMI				S	**S**	**11 20 36.0**	**-1.8**
KMI				sS		11 20 51.8	
KMI				SS	SS	11 21 00.3	-3.8
GOA	**Goa**	**19.72**	**293**	*e*	**P**	**11 17 27.8**	**+13**
	comp=Z,78nm,0.9s						
GOA				*e*		11 20 44.1	
QIZ	**Qiongzhong**	**19.73**	**56**	P	**P**	**11 17 14.5**	**+0.1**
QIZ				AMB	AMB		
	comp=Z,42nm,1.4s						
QIZ				LR	LR		
	comp=N,886nm,17.6s						
QIZ				LR	LR		
	comp=Z,538nm,17.6s						
QIZ	**Qiongzhong**	**19.73**	**56**	*e*P	**P**	**11 17 14.0**	**-0.4**
	comp=Z,96nm,1.4s						
KAD	**Karad**	**20.06**	**298**	*e*P	**P**	**11 17 19.5**	**+1.6**
KAD				*e*		11 17 21.7	
	comp=Z,37nm,1.2s						
JIRN	**Jiri**	**20.11**	**343**	*e*P	**P**	**11 17 18.6**	**+0.2**
	comp=Z,51nm,0.3s						
PKI	**Pulchoki**	**20.26**	**341**	*e*P	**P**	**11 17 19.9**	**-0.1**
	comp=Z,102nm,0.6s						
DMN	**Daman**	**20.40**	**340**	*e*P	**P**	**11 17 21.5**	**+0.1**
	comp=Z,138nm,0.6s						
GUN	**Gumba**	**20.44**	**343**	*e*P	**P**	**11 17 21.9**	**+0.1**
	comp=Z,180nm,0.8s						
KKN	**Kakani**	**20.51**	**341**	*e*P	**P**	**11 17 22.5**	**-0.1**
	comp=Z,110nm,0.8s						
BHPL	**Bhopal**	**20.77**	**317**	*e*P	**P**	**11 17 26.0**	**+0.7**
BHPL				*e*		11 17 38.8	
	comp=Z,70nm,1.0s						
BHPL				*e*		11 21 04.1	
POO	**Poona**	**20.86**	**301**	*e*	**P**	**11 17 33.0**	**+6.7**
POO				*e*		11 21 06.0	
GKN	**Gorkha**	**20.92**	**340**	*e*P	**P**	**11 17 27.0**	**+0.2**
	comp=Z,143nm,0.4s						
KOLN	**Koldanda**	**21.08**	**337**	*e*P	**P**	**11 17 28.8**	**+0.3**
	comp=Z,262nm,0.9s,mb5.5						
KOLN				*e*S	**S**	**11 21 13.2**	**-2.8**
LSA	**Lhasa**	**21.23**	**356**	*e*P	**P**	**11 17 30.0**	**0.0**
	comp=Z,1.4nm,0.6s						
GYA	**Guiyang**	**22.34**	**35**	P	**P**	**11 17 41.3**	**+0.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
GYA				AMB	AMB		
	comp=Z,80nm,2.7s,mb4.7						
GYA				LR	LR		
	comp=N,640nm,18.0s,MS4.3						
GYA				LR	LR		
	comp=E,560nm,14.7s,MS4.3						
GYA				LR	LR		
	comp=Z,600nm,19.5s,MS4.0						
CD2	**Chengdu**	**24.67**	**23**	*e*P	**P**	**11 18 03.9**	**+0.1**
CD2				AMB	AMB		
	comp=Z,179nm,1.4s,mb5.4						
NDI	**New Delhi**	**24.87**	**326**	*e*P	**P**	**11 18 06.0**	**+0.2**
NDI				*e*		11 22 41.0	
DDI	**Dehra Dun**	**25.74**	**330**	*e*P	**P**	**11 18 14.7**	**+0.7**
DDI				*e*		11 23 04.7	
ENH	**Enshi**	**26.86**	**34**	*e*P	**P**	**11 18 22.8**	**-1.5**
	comp=Z,6.2nm,0.4s,mb4.5						
SDNR	**Sundarnagar**	**27.24**	**330**	*e*	**P**	**11 18 38.8**	**+11**
LZH	**Lanzhou**	**29.38**	**19**	*e*P	**P**	**11 18 46.0**	**-0.9**
LZH				AP	pP	11 18 56.0	-1.4
LZH				XP	sP	11 19 02.5	+0.2
LZH				AMB	AMB		
	comp=Z,26nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,104nm,4.6s						
LZH				LR	LR		
	comp=N,840nm,14.8s						
LZH				LR	LR		
	comp=Z,1μm,17.5s,MS4.6						
LZH	**Lanzhou**	**29.38**	**19**	*e*P	**P**	**11 18 46.0**	**-0.9**
	comp=Z,26nm,1.0s,mb4.9						
LZH				pP	pP	11 18 56.0	-1.4
LZH				sP	sP	11 19 02.5	+0.2
LZH				LR	LR		
	comp=Z,1μm,17.5s,MS4.6						
GTA	**Gaotai**	**31.53**	**11**	*e*P	**P**	**11 19 06.0**	**0.0**
GTA				AP	pP	11 19 15.5	-1.1
GTA				XP	sP	11 19 19.0	-2.5
GTA				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,80nm,6.5s						
GTA				LR	LR		
	comp=N,182nm,19.8s,MS3.9						
GTA				LR	LR		
	comp=E,213nm,22.8s,MS3.9						
GTA				LR	LR		
	comp=Z,202nm,31.2s						
HHC	**Hu-ho-hao-te**	**36.42**	**24**	*e*P	**P**	**11 19 46.8**	**-1.2**
HHC				XP	sP	11 20 00.9	-2.6
HHC				S	**S**	**11 25 28.2**	**+1.9**
HHC				AMB	AMB		
	comp=Z,155nm,4.6s						
HHC				LR	LR		
	comp=N,191nm,19.2s,MS4.4						
HHC				LR	LR		
	comp=E,598nm,22.8s,MS4.4						
HHC				LR	LR		
	comp=Z,265nm,22.8s,MS4.0						
KZA	**Kyzart**	**36.89**	**338**	P	**P**	**11 19 53.8**	**+1.8**
	SNR=6.9						
UCH	**Uchtor**	**37.30**	**338**	P	**P**	**11 19 57.3**	**+2.0**
	SNR=8.3						
TKM2	**Tokmak 2**	**37.51**	**339**	P	pP	11 20 08.1	+0.3
	SNR=10						
KBK	**Karagaybulak**	**37.51**	**338**	P	**P**	**11 19 59.2**	**+2.1**
	SNR=8.7						
AML	**Almayashu**	**37.53**	**337**	P	**P**	**11 19 58.9**	**+1.6**
	SNR=29						
AAK	**Ala-Archa**	**37.66**	**338**	P	**P**	**11 19 60.0**	**+1.7**
	SNR=8.8						
AAK	**Ala-Archa**	**37.66**	**338**	⇓*i*P	**P**	**11 19 57.6**	**-0.7**
AAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**37.66**	**338**	*e*P	**P**	**11 19 58.9**	**+0.5**
	comp=Z,14nm,1.1s,mb4.6						
AAK				*e*	pP	11 20 09.0	0.0
BJT	**Baijiatuau**	**37.83**	**30**	*e*P	**P**	**11 19 59.9**	**+0.1**
	comp=Z,6.8nm,0.6s,mb4.5						
BJT				*e*	pP	11 20 11.8	+1.2
BJI	**Beijing**	**37.85**	**30**	*e*P	**P**	**11 20 00.5**	**+0.5**
BJI				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.9						
BJI				LR	LR		
	comp=N,330nm,21.2s,MS4.2						
BJI				LR	LR		
	comp=E,352nm,24.9s,MS4.2						
BJI				LR	LR		
	comp=Z,327nm,23.3s,MS4.1						
BJI	**Beijing**	**37.85**	**30**	*e*P	**P**	**11 20 00.5**	**+0.5**
	comp=Z,17nm,0.7s,mb4.9						
BJI				S	**S**	**11 26 05.9**	**+18**
BJI				LR	LR		
	comp=Z,330nm,23.3s,MS4.1						
CHMS	**Chumysh**	**37.88**	**338**	P	pP	11 20 11.0	+0.1
	SNR=7.6						
EKS2	**Erkin-Say**	**37.95**	**337**	P	**P**	**11 20 02.4**	**+1.6**
	SNR=8.8						
USP	**Ospenovka**	**38.20**	**338**	P	**P**	**11 20 03.8**	**+0.9**
	SNR=11						
MKAR	**Makanchi Array**	**39.27**	**349**	*i* P	**P**	**11 20 11.6**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MBWA	**Marble Bar**	**39.62**	**138**	*e*P	**P**	**11 20 14.3**	**-0.5**
	comp=Z,5.8nm,0.5s,mb4.6						
ULN	**Ulaanbaatar**	**41.18**	**15**	⇓*i*P	**P**	**11 20 26.3**	**-1.2**
ZAK	**Zakamensk**	**42.77**	**10**	*e*P	**P**	**11 20 39.2**	**-1.3**
ZAK				*i*	pP	11 20 50.6	-0.8
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb3.9						
SNY	**Shenyang**	**43.04**	**34**	⇓P	**P**	**11 20 42.6**	**-0.3**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
MOY	**Mondy**	**43.67**	**8**	*e*P	pP	11 20 58.8	0.0
MOY				pmax	pmax		
	comp=Z,19nm,4.0s						
KURK	**Kurchatov**	**43.76**	**347**	⇑*i*P	**P**	**11 20 47.9**	**-0.7**
KURK	**Kurchatov**	**43.76**	**347**	*e*P	**P**	**11 20 48.3**	**-0.3**
	comp=Z,9.1nm,1.2s,mb4.4						
KURK				*e*	pP	11 20 57.9	-1.6
TLY	**Talaya**	**44.08**	**10**	*e*P	pP	11 21 01.6	-0.5
TLY				pmax	pmax		
	comp=Z,17nm,2.1s,mb4.4						
CN2	**Changchun**	**45.38**	**33**	*e*P	**P**	**11 21 01.1**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				AMB	AMB		
	comp=Z,240nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS4.2						
ZAL	**Zalesovo**	**45.85**	**354**	*i* P	**P**	**11 21 05.4**	**+0.1**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MUN	**Mundaring**	**46.02**	**152**	*e*P	**P**	**11 21 08.2**	**+1.2**
	comp=Z,12nm,0.5s,mb5.1						
KLBR	**Kellerberrin**	**46.45**	**150**	*e*P	**P**	**11 21 11.8**	**+1.5**
	comp=Z,957nm,1.9s						
HIA	**Hailar**	**46.62**	**24**	*e*P	**P**	**11 21 11.2**	**-0.2**
	comp=Z,8.6nm,0.8s,mb4.7						
HIA				*e*	pP	11 21 22.9	+0.6
NVS	**Novosibirsk**	**46.92**	**353**	*e*P	**P**	**11 21 11.9**	**-1.7**
NVS				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.6						
NVS				pmax	pmax		
	comp=N,8.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.0s						
NWAO	**Narrogin (SRO)**	**47.29**	**152**	*e*P	**P**	**11 21 17.4**	**+0.5**
CHKZ	**Chkalovo**	**48.53**	**343**	*i* P	**P**	**11 21 26.1**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
CHKZ	**Chkalovo**	**48.53**	**343**	*e*P	**P**	**11 21 25.9**	**-0.4**
	comp=Z,8.0nm,0.7s,mb4.9						
CHKZ				*e*	pP	11 21 35.5	-1.7
WRAB	**Tennant Creek**	**49.76**	**125**	*e*P	**P**	**11 21 34.9**	**-1.3**
	comp=Z,445nm,2.4s						
WRAB				*e*	pP	11 21 47.6	+0.4
WB2	**Warramunga Arr**	**49.77**	**125**	⇑*i*P	**P**	**11 21 34.8**	**-1.4**
ASPA	**Alice Springs**	**51.37**	**129**	*e*P	**P**	**11 21 46.9**	**-1.5**
FORT	**Forrest**	**51.66**	**141**	*e*P	**P**	**11 21 50.8**	**+0.3**
	comp=Z,76nm,0.7s,mb5.7						
BOD	**Bodaibo**	**51.99**	**14**	*e*P	**P**	**11 21 50.4**	**-2.1**
BOD				*e*	pP	11 22 02.8	-0.7
BOD				pmax	pmax		
	comp=Z,26nm,3.7s						
BOD				pmax	pmax		
	comp=Z,10.0nm,2.9s,mb4.2						

GNI	Garni	53.03	315	eP	P	11 22 06.6	+6.0
CLNS	Chul’man	54.46	21	eP	P	11 22 18.2	+7.3
CLNS				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.9s						
ARU	Arti	54.84	338	⇑iP	P	11 22 05.0	-8.7
ARU				e		11 23 25.8	
ARU				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.1						
KIV	Kislovodsk	55.95	318	⇓eP	P	11 22 26.5	+4.6
KIV				pmax	pmax		
	comp=Z,16nm,2.5s,mb4.6						
KIV	Kislovodsk	55.95	318	eP	pP	11 22 32.6	-0.4
MALT	Malatya	57.01	310	eP	pP	11 22 40.9	+0.1
YSS	Yuzh-Sakhalins	57.27	39	⇑iP	pP	11 22 41.8	-0.7
YSS				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
YSS	Yuzh-Sakhalins	57.27	39	eP	P	11 22 29.8	-1.5
YSS				e	pP	11 22 41.1	-1.4
SOKR	Solikamsk	57.79	339	i P	pP	11 22 43.3	-2.6
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SOC	Sochi	57.80	317	eP	P	11 22 37.7	+2.7
SOC				e		11 24 44.0	
SOC				ePPP	PPP	11 25 56.9	-10
SOC				eS	S	11 30 20.9	-8.8
SOC				eSS	SS	11 34 07.1	-15
SOC				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.4						
SOC				pmax	pmax		
	comp=N,25nm,0.8s						
SOC				pmax	pmax		
	comp=E,46nm,1.1s						
YAK	Yakutsk	59.97	19	eP	P	11 22 56.4	+6.6
YAK				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
STKA	Stephens Creek	61.53	133	eP	P	11 22 59.9	-0.9
	comp=Z,8.4nm,0.9s,mb4.9						
STKA	Stephens Creek	61.53	133	eP	P	11 22 59.6	-1.2
STKA				eP		11 22 59.9	
STKA				e	pP	11 23 11.7	-0.4
ISP	Isparta	62.97	308	⇓eP	pP	11 23 19.9	-1.8
OBN	Obninsk	64.16	328	⇓iP	pP	11 23 27.5	-1.7
OBN				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.2						
MA2	Magadan	66.98	28	eP	pP	11 23 44.3	-3.0
MA2				e		11 32 50.7	
MA2				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
LSZ	Lusaka	68.08	250	P	P	11 23 41.5	-2.0
	comp=Z,4.5nm,0.8s,mb4.5						
LSZ				e	pP	11 23 54.6	-0.3
JOF	Joensuu	69.75	335	ep	P	11 23 49.9	-3.1
	comp=Z,0.6nm,0.4s,mb3.9						
JOF	Joensuu	69.75	335	ep	pP	11 24 02.0	-2.4
	comp=Z,5.3nm,0.6s						
JOF	Joensuu	69.75	335	eP	P	11 23 49.9	-3.1
JOF				eP	pP	11 24 02.0	-2.4
KAF	Kangasniemi	71.66	333	ep	P	11 24 02.7	-1.8
	comp=Z,0.6nm,0.4s,mb3.9,baz=104,slow=5.7						
KAF	Kangasniemi	71.66	333	ep	pP	11 24 14.2	-1.8
	comp=Z,0.7nm,0.4s						
KAF	Kangasniemi	71.66	333	eP	P	11 24 02.7	-1.8
	comp=Z,0.6nm,0.4s,mb3.9						
KAF				eP	pP	11 24 14.2	-1.8
LBTB	Lobatse	73.22	241	P	P	11 24 14.4	-0.1
	comp=Z,22nm,1.4s,mb4.9						
LBTB				e	pP	11 24 26.3	+0.3
OKC	Ostrava-Krasne	73.64	319	eP	P	11 24 17.0	+0.5
KEV	Kevo	73.86	341	ep	P	11 24 20.0	+2.7
	comp=Z,5.3nm,0.8s,mb4.5						
MORC	Moravsky Berou	74.03	319	eP	P	11 24 18.5	-0.2
MORC				e	pP	11 24 29.4	-0.7
DPC	Dobruska-Polom	74.86	320	eP	P	11 24 24.0	+0.5
DPC				epP	pP	11 24 34.3	-0.7
KSP	Ksiaz	74.93	320	eP	P	11 24 24.0	+0.1
KSP				epP	pP	11 24 34.0	-1.3
KSP	Ksiaz	74.93	320	eP	P	11 24 24.3	+0.5
UPC	Upice	75.08	320	eP	P	11 24 24.6	-0.1
UPC				epP	pP	11 24 35.6	-0.6
PRU	Pruhonice	75.98	319	eP	P	11 24 29.8	-0.1
PRU				epP	pP	11 24 40.4	-1.0
PVCC	Panska Ves	76.00	320	eP	P	11 24 24.9	-5.1
BILL	Bilibino	76.14	22	⇑iP	pP	11 24 40.1	-1.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
BRG	Berggiesshubel	76.42	320	eP	sP	11 24 44.4	-3.6
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
KHC	Kasperske Hory	76.56	318	eP	P	11 24 33.3	+0.1
KHC				epP	pP	11 24 41.9	-2.8
CLL	Collm	77.03	321	eP	pP	11 24 55.0	+7.7
CLL	Collm	77.03	321	e*PP	pP	11 24 47.0	-0.3
NKC	Novy Kostel	77.34	320	eP	P	11 24 32.0	-5.6
NKC				epP	pP	11 24 50.1	+1.0
MOX	Moxa	77.88	320	eP	sP	11 24 54.0	-2.3
GRA1	Grafenberg Arr	78.11	319	eP	pP	11 24 52.7	-0.7
GRF	Grafenberg Arr	78.11	319	eP	P	11 24 52.7	+11
GRF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
NB2	NORSAR Subarra	78.56	331	P	P	11 24 42.7	-1.3
	comp=Z,1.2nm,0.5s,mb4.1,baz=97,slow=5.0						
LPG	La Plagne	81.21	315	eP	P	11 24 58.6	0.0
	comp=Z,25nm,1.2s,mb4.7						
BNI	Bardonecchia	81.29	314	P	P	11 24 59.6	+0.6
	comp=Z,55nm,1.6s,mb5.2						
BNI				e	pP	11 25 12.8	+2.1
COLA	College	94.39	22	i P	sP	11 26 16.4	-1.0
RES	Resolute Bay	96.93	2	eP	P	11 26 13.1	-0.1
	comp=Z,7.8nm,1.1s,mb5.0						
RES				e	pP	11 26 25.7	+0.7
TEIG	Tepich	151.54	2	PKPab	PKPab	11 32 46.0	-0.8
TEIG				e		11 32 58.2	
LPAZ	La Paz	159.69	245	ePKPab	PKPab	11 33 21.3	-0.3

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*JMA **06** 11:21:30.1±0.3, 24.25N×121.69E, h36^{km}*

TAP 06 11:21:30.6, 24.34N×121.80E, h8^{km}, ML2.9, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.11	83	P	Pb	11 21 51.4	-0.3
YOJ				eS	Sb	11 22 07.0	+0.9
IRIF	Iriomote-Funau	1.76	90	P	Pn	11 22 00.6	-1.1
IRIF				eS	Sn	11 22 22.8	-1.7
JKRS	Kuro-shima	2.02	92	eS	Sn	11 22 30.3	-0.8
JIJ	Ishigaki jima	2.14	89	P	Pn	11 22 06.5	-0.6
JIJ				eS	Sn	11 22 31.5	-2.6

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*BJI **06** 11:23:07.1, 59.60N×153.00W, h99^{km}, mB4.5, mb4.1*

*NEIC **06** 11:23:09.1, 59.64N×153.00W, h100^{km}, mb4.1/4, After AEIC.*

ISC 06 11:23:06.8±0.2, **59.65N**±0.02×**152.97W**±0.05, **h112**^{km}±2^{km}**, n108, σ0^{s}78**/118**, mb4.2**/4**, 1C, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPT	Oil Point	0.13	273	P	P	11 23 22.5	+0.1
AUE	Augustine Isla	0.35	216	P	P	11 23 23.1	0.0
IVE	Iliamna Volcan	0.37	356	P	P	11 23 23.5	+0.3
IVE				S	S	11 23 34.1	-1.5
AUW	Augustine West	0.38	223	P	P	11 23 23.5	+0.2
AUI	Augustine Isla	0.39	217	P	P	11 23 23.4	0.0
AUI				S	S	11 23 34.7	-1.0
INE	Iliamna NE	0.42	354	P	P	11 23 24.0	+0.5
XLV	Seldovia	0.66	106	P	P	11 23 25.8	+0.6
XLV				S	S	11 23 39.6	+0.6
HOM	Homer	0.67	88	P	P	11 23 26.1	+0.9
HOM				S	S	11 23 39.3	+0.1
RSO	Redoubt South	0.83	7	eP	P	11 23 27.3	+0.6
MCNL	McNeil River	0.84	237	P	P	11 23 26.8	0.0
REF	Redoubt East F	0.86	9	P	P	11 23 27.6	+0.6
REF				S	S	11 23 42.0	-0.1
RDN	Redoubt North	0.88	7	P	P	11 23 27.9	+0.7
RDN				S	S	11 23 42.5	0.0
CNPM	China Poot	0.89	97	P	P	11 23 27.9	+0.6
NNL	Ninilchik	0.93	64	P	P	11 23 29.5	+1.7
DFR	Drift River	0.96	8	P	P	11 23 28.6	+0.6
SYI	Shuyak Island	1.08	164	P	P	11 23 29.8	+0.5
KAPH	Katmai Pasha	1.27	215	P	P	11 23 31.8	+0.3
KAPH				S	S	11 23 49.5	-0.5
NKA	Nikishka	1.40	37	P	P	11 23 35.6	+2.6
KAHC	Katmai Hardscr	1.45	227	P	P	11 23 33.8	+0.2
KAWH	Katmai	1.58	218	P	P	11 23 35.4	+0.3
KAWH				S	S	11 23 55.3	-1.1
KAIC	Katmai Ikaglui	1.58	224	P	P	11 23 35.4	+0.2
SPU	Mount Spurr	1.61	16	eP	P	11 23 36.0	+0.6
SLKM	Skilak Lake	1.63	57	P	P	11 23 36.4	+0.7
CKN	Chakachatna No	1.63	13	P	P	11 23 36.7	+1.0
SEW	Seward	1.83	74	P	P	11 23 38.4	+0.2
SEW				S	S	11 24 00.4	-1.4
VOGL	Vogel Lake	1.85	42	P	P	11 23 38.2	-0.2
KDAK	Kodiak Island	1.88	174	P	P	11 23 38.3	-0.5
KDAK				S	S	11 24 01.6	-1.2
MGLS	Mageik LS	1.89	221	P	P	11 23 39.4	+0.5
STLK	Strandline Lak	1.94	16	P	P	11 23 40.6	+1.0
SVW2	Sparrevohn	1.95	319	P	P	11 23 39.8	+0.1
ANCK	Angle Creek	1.96	223	P	P	11 23 40.2	+0.5
CNTC	Contact Creek	2.05	229	P	P	11 23 41.4	+0.4
FIB	Fire Island	2.06	41	P	P	11 23 42.6	+1.5
RC01	Rabbit Creek A	2.16	47	P	P	11 23 43.4	+0.9
RC01				S	S	11 24 08.8	-0.5
PWA	Palmer West	2.52	36	P	P	11 23 48.0	+0.7
LTI	Latouche	2.61	79	P	P	11 23 48.5	-0.1
PWL	Port Wells	2.61	60	P	P	11 23 48.3	-0.2
PMR	Palmer	2.72	42	P	P	11 23 49.7	-0.3
KNK	Knik Glacier	2.85	50	P	P	11 23 51.7	-0.1
GHO	Glory Hole Cre	2.92	41	P	P	11 23 52.6	0.0
CUT	Chulitna	3.06	24	P	P	11 23 55.1	+0.5
SML	Sawmill	3.15	44	P	P	11 23 55.6	-0.2
GLI	Glacier Island	3.18	65	P	P	11 23 55.5	-0.7
HIN	Hinchinbrook I	3.33	74	P	P	11 23 58.0	-0.2
MID	Middleton Isla	3.38	91	P	P	11 23 58.8	-0.2
FID	Port Fidalgo	3.42	68	P	P	11 23 58.3	-1.3
JPK	Jack Peak	3.47	63	P	P	11 23 59.8	-0.3
SCM	Sheep Creek Mo	3.53	49	P	P	11 24 01.0	0.0
TT01	Tatalina	3.59	337	P	P	11 24 01.5	-0.3
VLZ	Valdez	3.62	63	P	P	11 24 01.7	-0.4
HUR	Hurricane	3.71	24	P	P	11 24 03.9	+0.5
EYAK	Cordova Ski Ar	3.73	73	P	P	11 24 03.0	-0.6
DIV	Divide	3.87	64	P	P	11 24 05.7	+0.1
TRF	Thorofare Moun	4.03	17	P	P	11 24 07.8	+0.1
KTH	Kantishna Hill	4.04	13	P	P	11 24 07.6	-0.2
RND	Reindeer	4.26	26	P	P	11 24 11.0	+0.2
KAIM	Kayak Island	4.33	83	P	P	11 24 12.0	+0.2
TZL	Tazlina	4.41	54	P	P	11 24 13.1	+0.3
MCK	McKinley	4.53	23	P	P	11 24 14.8	+0.3
BWN	Browne	4.83	19	P	P	11 24 18.6	0.0
GLB	Gilahina Butte	4.87	64	P	P	11 24 18.6	-0.5
PAX	Paxson	4.92	44	P	P	11 24 19.6	-0.2
WANC	Wrangell North	4.96	58	P	P	11 24 21.2	+0.9
THY	Trims Highway	5.12	39	P	P	11 24 23.0	+0.5
NEA	Nenana	5.28	19	P	P	11 24 24.1	-0.5
CYK	Cape Yakataga	5.30	81	P	P	11 24 25.2	+0.2
GCSA	Galena City Sc	5.44	342	P	P	11 24 26.3	-0.4
BALM	Baldy	5.46	71	P	P	11 24 27.0	0.0
MLY	Manley	5.50	10	P	P	11 24 27.1	-0.6
MENT	Mentasta	5.55	50	P	P	11 24 28.0	-0.2
HDA	Harding Lake	5.55	28	P	P	11 24 28.0	-0.3
CCB	Clear Creek Bu	5.57	24	P	P	11 24 27.7	-0.9
YAH	Yahtse	5.68	78	P	P	11 24 29.8	-0.2
COLA	College	5.76	22	P	P	11 24 30.6	-0.6
MDM	Murphy Dome	5.77	20	P	P	11 24 30.7	-0.6
DOT	Dot Lake	5.84	43	P	P	11 24 32.0	-0.2
IL1	Eielson Array	5.88	26	P	P	11 24 31.7	-1.0
GLM	Gilmore Dome	5.96	23	P	P	11 24 33.2	-0.6
IM3	Indian Mountai	6.37	357	P	P	11 24 39.2	-0.4
BCA3	Beaver Creek A	6.38	53	P	P	11 24 39.2	-0.4
IMA	Indian Mountai	6.46	357	eP	P	11 24 41.2	+0.5
HAG	Hague Volcano	6.48	232	P	P	11 24 40.9	-0.2
DTNA	Dutton South F	6.74	232	P	P	11 24 44.1	-0.6
YKU2	Yakutat	6.76	85	P	P	11 24 44.2	-0.6
PNL	Peninsula	6.88	84	P	P	11 24 46.2	-0.4
DRIA	Deer Island	6.88	231	P	P	11 24 45.5	-1.0
COLD	Coldfoot	7.71	8	P	P	11 24 56.9	-0.9
DAWY	Dawson	7.79	50	P	P	11 24 57.6	-1.3
BM3	Burnt Mountain	8.64	22	P	P	11 25 08.5	-1.8
WHY	Whitehorse	9.07	76	P	P	11 25 15.6	-0.5
TNA	Tin City	9.08	317	eP	P	11 25 16.5	+0.3
SIT	Sitka	9.62	98	P	P	11 25 22.0	-1.4
DLBC	Dease Lake	11.86	86	eP	P	11 25 54.7	+1.6
INK	Inuvik	12.12	36	eP	P	11 25 56.2	-0.2
YKW3	Yellowknife Ar	18.57	64	eP	P	11 27 17.1	0.0
EDM	Edmonton	22.55	89	P	P	11 28 01.6	+4.0
WVOR	Wild Horse Val	27.18	114	eP	P	11 28 41.9	+0.6
FCC	Fort Churchill	29.31	66	P	P	11 29 01.2	+0.9
IMW	Indian Meadow	29.78	103	P	P	11 29 08.5	+3.8
BW06	Boulder Array	31.30	103	P	P	11 29 21.8	+3.8
	4.6nm,1.3s,mb4.0						
PV01	Paradox Valley	35.33	107	P	P	11 29 55.0	+2.4
CHKZ	Chkalovo	61.74	332	eP	P	11 33 13.3	-1.7
	3.0nm,0.6s,mb4.5						
NJ2	Nanjing	62.05	286	eP	P	11 33 20.1	+2.7
KURK	Kurchatov	62.33	326	eP	P	11 33 17.8	-1.2
	1.6nm,0.6s,mb4.2						
WMQ	Urumqi	65.53	316	eP	P	11 33 44.7	+4.9
LZH	Lanzhou	65.71	300	eP	P	11 33 44.0	+2.9
LZH				AP	pP	11 34 08.4	-0.5
LZH				XP	sP	11 34 19.0	-2.2
LZH				PP	PP	11 36 11.0	+1.8
AAK	Ala-Archa	70.86	325	eP	P	11 34 12.3	-0.5
	0.8nm,0.4s,mb3.9						
QSPA	South Pole Qui	149.44	180	⇑iP	PKPdf	11 42 43.2	+7.3

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*NEIC **06** 12:01:20.6, 16.93N×94.61W, h104^{km}, MD3.7(MEX), After MEX.*

MEX 06 12:01:20.6±1.0**, 16.93N×94.61W, h104**^{km}±20^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUIG	Tuzandepetl	1.12	9	i P	P	12 01 41.8	-1.1
TUIG				eS	S	12 01 57.0	-2.7
HUIG	Huatulco	1.84	232	eP	P	12 01 49.3	-2.5
HUIG				eS	S	12 02 13.8	-1.2
OXX	Oaxaca	2.03	275	eP	P	12 01 53.0	-1.2
OXX				eS	S	12 02 18.0	-1.3
VHO	Vista Hermosa	2.04	274	i P	P	12 01 53.0	-1.4
VHO				i S	S	12 02 17.5	-1.9
IIB	San Bernardino	4.10	300	eP	P	12 02 21.0	-1.4
IIB				eS	S	12 03 07.0	-2.5

WEL 06 12:14:08.0±0.2**, 41.41S×172.96E, h112**^{km}±2^{km}**, ML3.5**/7**, 3C-11D, Error ellipse: s-maj=1.3km s-min=1.2km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.36	187	⇑PN	P	12 14 24.4	0.0
THZ				SN	S	12 14 35.5	-1.1
NNZ	Nelson	0.37	59	⇓PN	P	12 14 24.2	-0.2
NNZ				SN	S	12 14 36.0	-0.7
QRZ	Quartz Range	0.67	331	⇓PN	P	12 14 26.4	+0.1
QRZ				SN	S	12 14 38.8	-1.5
TUWZ	Tuamarina	0.74	92	⇓PN	P	12 14 27.1	0.0
TUWZ				SN	S	12 14 41.0	-0.4
BSWZ	Blackbirch Sta	0.75	114	PN	P	12 14 27.2	0.0
BSWZ				eSN	S	12 14 41.3	-0.2
DSZ	Denniston Nort	0.93	248	⇑PN	P	12 14 28.4	-0.6
DSZ				SN	S	12 14 42.8	-1.9
KHZ	Kahutara	1.10	157	⇓PN	P	12 14 30.5	-0.2
KHZ				SN	S	12 14 46.0	-1.7
MRW	Makara Radio	1.32	83	⇓PN	P	12 14 32.5	-0.7
MRW				SN	S	12 14 50.7	-1.6
WEL	Wellington	1.36	85	PN	P	12 14 32.9	-0.9
WEL				SN	S	12 14 52.3	-0.9
BHW	Baring Head	1.44	91	⇓PN	P	12 14 33.4	-1.2
BHW				SN	S	12 14 52.5	-2.2
LTZ	Lake Taylor	1.47	200	⇑PN	P	12 14 34.4	-0.5
LTZ				SN	S	12 14 53.5	-1.8
KIW	Kapiti Island	1.57	70	⇓PN	P	12 14 35.6	-0.6
KIW				eSN	S	12 14 56.1	-1.3
CAW	Cannon Point	1.62	80	⇓PN	P	12 14 35.7	-1.1
CAW				SN	S	12 14 57.2	-1.2
MSWZ	Moikau Station	1.72	91	PN	P	12 14 36.6	-1.5
MSWZ				SN	S	12 14 58.6	-2.0
PAWZ	Paruwai Farm	1.85	90	⇓PN	P	12 14 38.1	-1.6
PAWZ				eSN	S	12 15 01.3	-2.2
MTW	Mount Morrison	1.93	83	⇓PN	P	12 14 39.0	-1.6
MTW				SN	S	12 15 03.0	-2.2
MRZ	Mangatainoka R	2.12	70	⇓PN	P	12 14 41.5	-1.6
MRZ				SN	S	12 15 07.6	-1.8
CRLZ	Canterbury Las	2.18	187	PN	P	12 14 42.3	-1.7
CRLZ				SN	S	12 15 07.5	-3.5
NRZ	Ngariki Road	2.20	20	ePN	P	12 14 45.0	+0.7
NWEZ	Newall Road	2.24	18	PN	P	12 14 45.3	+0.5
WAZ	Wanganui	2.26	44	PN	P	12 14 45.8	+0.8
NEZ	North Egmont	2.31	22	PN	P	12 14 46.2	+0.6
MQZ	McQueen’s Vall	2.31	186	PN	P	12 14 43.6	-2.1
MQZ				SN	S	12 15 09.6	-4.4
WVZ	Waitaha Valley	2.35	224	PN	P	12 14 44.9	-1.3
WVZ				SN	S	12 15 11.1	-3.9
PKE	Pukeiti	2.35	20	PN	P	12 14 46.8	+0.6
PKE				SN	S	12 15 13.8	-1.2
RAEZ	Rainy Point	2.38	28	PN	P	12 14 47.5	+0.7
BFZ	Birch Farm	2.59	75	PN	P	12 14 47.1	-2.4
BFZ				eSN	S	12 15 17.9	-2.8
RPZ	Rata Peaks	2.70	211	PN	P	12 14 49.0	-2.0
RPZ				SN	S	12 15 19.0	-4.4
WNVZ	Wahianoa	2.89	45	ePN	P	12 14 51.8	-1.8
WNVZ				eSN	S	12 15 25.3	-2.7
WPVZ	Whakapapa	2.96	43	SN	S	12 15 29.1	-0.5
CNZ	Chateau	2.96	43	PN	P	12 14 54.3	-0.3
NGZ	Ngauruhoe	3.01	43	ePN	P	12 14 55.9	+0.8
WTVZ	West Tongariro	3.05	42	ePN	P	12 14 55.4	-0.2
HIZ	Hauiti	3.24	27	PN	P	12 14 57.4	-0.9
FOZ	Fox Glacier	3.24	227	PN	P	12 14 55.0	-3.2
PWZ	Pawanui	3.27	66	SN	S	12 15 34.6	-2.5
BKZ	Black Stump Fm	3.51	51	PN	P	12 14 59.5	-2.4
LBZ	Lake Benmore	3.61	214	PN	P	12 15 00.3	-2.9
ODZ	Otahua Downs	4.01	204	PN	P	12 15 06.2	-2.5
ODZ				SN	S	12 15 49.0	-6.0
JCZ	Jackson Bay	4.08	228	PN	P	12 15 07.5	-2.2
EAZ	Earnscleugh	4.66	214	ePN	P	12 15 14.3	-3.1
MWZ	Matawai	4.67	50	PN	P	12 15 14.4	-3.2
MSZ	Milford Sound	4.92	227	SN	S	12 16 11.1	-6.2
TUZ	Tuapeka	5.15	207	ePN	P	12 15 22.3	-1.7
PUZ	Puketiti	5.27	52	eSN	S	12 16 19.4	-6.3

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*JMA **06** 12:17:31.3±0.1, 24.41N×121.88E, h86^{km}, M2.2*

*TAP **06** 12:17:31.7, 24.24N×121.72E, h42^{km}, ML3.2*

ISC 06 12:17:30.5±2.3**, 24.4N**±0.5×**121.9E**±0.2**, h90**^{km}±31^{km}**, n6, σ0^{s}36**/10**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.06	89	P	P	12 17 51.3	+0.1
YOJ				S	S	12 18 06.1	-0.6
IRIF	Iriomote-Funau	1.72	93	P	P	12 17 59.6	+0.1
IRIF				S	S	12 18 21.0	+0.1
HATJ	Hateruma jima	1.82	102	eS	S	12 18 23.5	+0.1
JKRS	Kuro-shima	1.98	95	P	P	12 18 03.0	0.0
JKRS				eS	S	12 18 27.5	+0.6
JIJ	Ishigaki jima	2.09	92	P	P	12 18 04.9	+0.4
JIJ				eS	S	12 18 29.1	-0.6
WB2	Warramunga Arr	45.76	163	eP	P	12 25 44.6	-0.3

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*NIED **06** 13:02:00, 36.40N×140.90E, h32^{km}, Mw3.6 Best double couple: $M_0$3.05×10^{14} NP1:ϕ_s277°, δ83°, λ167°. NP2:ϕ_s9°, δ77°, λ8°.*

*JMA **06** 13:02:02.7±0.1, 36.44N×140.89E, h33^{km}±1^{km}, M3.4*

JMA Felt I J1.

ISC 06 13:02:01.5±1.8**, 36.42N**±0.07×**141.0E**±0.1**, h23**^{km}±8^{km}**, n9, σ0^{s}61**/15**, 1C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.39	299	⇓P	Pb	13 02 10.3	+0.6
JHO				S	Sb	13 02 15.5	+0.2
JYT	Yasato	0.67	253	⇑P	Pb	13 02 14.5	+0.1
JYT				S	Sb	13 02 22.8	-0.5
ONAJ	Iwakimizuishiy	0.69	347	⇓P	Pb	13 02 15.1	+0.3
ONAJ				S	Sb	13 02 23.8	-0.2
JFK	Kawauchi	0.95	355	P	Pb	13 02 18.8	-0.3
JFT	Otama	1.21	335	⇓P	Pn	13 02 23.8	+0.5
JFT				S	Sb	13 02 38.5	-0.3
JAG	Ashikaga	1.24	271	P	Pn	13 02 22.8	-0.9
JFY	Yanaizu	1.42	314	P	Pn	13 02 26.4	+0.1
JKT	Katashina	1.44	284	P	Pn	13 02 26.7	+0.1
JKT				S	Sn	13 02 43.8	-1.1
MAT	Matsushiro	2.24	274	P	Pn	13 02 38.0	-0.1
MAT				S	Sn	13 03 06.9	+1.6

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*TEH **06** 13:05:09.7, 35.38N×52.64E, h18^{km}, Mn3.5*

*CSEM **06** 13:05:09.0±0.1, 35.40N×52.64E, h19^{km}±1^{km}, ML3.5, Error ellipse: s-maj=2.6km s-min=1.5km az=13.0*

*THR **06** 13:05:10.9±0.9, 35.26N×52.39E, h14^{km}±9^{km}, ML2.7*

ISC 06 13:05:10.1±0.6**, 35.47N**±0.09×**52.62E**±0.07**, h18**^{km}±14^{km}**, n19, σ0^{s}90**/20**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IFIR	Firoozkooh	0.20	33	Sg	Sb	13 05 19.6	+1.0
IFIR	Firoozkooh	0.20	33	Pg	Pb	13 05 15.0	-0.2
IFIR	Firoozkooh	0.20	33	Pg	Pb	13 05 15.0	-0.2
IFIR				Sg	Sb	13 05 19.6	+1.0
ILAS	Lasjerd	0.29	108	Pg	Pb	13 05 15.4	-1.2
IDMV	Damavand	0.49	283	Pg	Pb	13 05 19.7	-0.2
DAMV	Damavand	0.55	287	ePG	Pb	13 05 20.8	-0.2
DAMV				AML	AML	13 05 35.8	
	comp=N,406nm,0.4s						
ISHM	Shahmirzad	0.64	59	Pg	Pb	13 05 22.3	-0.2
IPRN	Paran-Amol	0.83	338	Pg	Pb	13 05 26.3	+0.7
IAFJ	Afjeh	0.83	298	Pg	Pb	13 05 26.0	+0.3
IANJ	Anjiloo	1.06	90	Pg	Pb	13 05 28.6	-1.0
IQOM	Qom	1.42	244	Pn	Pn	13 05 34.4	-0.8
IQOM	Qom	1.42	244	Lg		13 05 53.3	
IMHD	Mahdasht	1.60	278	Pn	Pn	13 05 38.8	+0.9
IMHD	Mahdasht	1.60	278	Lg		13 06 01.1	
QAM	Qamsar	1.71	203	Pn	Pn	13 05 43.0	+3.6
IRAZ	Razeghan	2.20	269	Pn	Pn	13 05 46.5	+0.1
IRAZ				Sn	Sn	13 06 11.9	-1.4
ASAO	Ashtian	2.32	247	ePG	Pn	13 05 48.7	+0.6
ASAO				AML	AML	13 06 26.1	
	comp=N,78nm,0.5s						
NASN	Na’in	2.67	177	ePN	Pn	13 05 53.5	+0.3
NASN				eSG	Sn	13 06 28.5	+3.2
SNGE	Sanandaj	4.33	266	ePN	Pn	13 06 16.2	-0.5
SNGE				AML	AML	13 07 34.3	
	comp=N,7.4nm,0.5s						

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*BJI **06** 13:14:15.0, 2.86S×139.69E, h90^{km}, mb4.6*

*NEIC **06** 13:14:17.7±1.6, 2.80S×139.04E, h68^{km}±17^{km}, mb4.6/8, Error ellipse: s-maj=14.7km s-min=11.5km az=78.0*

ISC 06 13:14:14.7±2.3**, 2.84S**±0.07×**139.0E**±0.1**, h57**^{km}±24^{km}**, n20, σ0^{s}97**/23**, mb4.8**/13**, 3C-1D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	10.37	129	eP	P	13 16 44.9	+1.5
KAKA	Kakadu	11.78	213	⇑iP	P	13 17 02.6	+0.1
	87nm,0.4s						
WRAB	Tennant Creek	17.59	195	eP	P	13 18 16.9	-0.7
	27nm,0.6s						
WB2	Warramunga Arr	17.60	195	⇓iP	P	13 18 15.4	-2.3
WB2				eS	S	13 21 26.1	-3.3
FITZ	Fitzroy Crossi	20.06	220	⇑iP	P	13 18 47.2	+1.1
	28nm,0.7s						
FITZ				eS	S	13 22 25.2	+1.8
ASPA	Alice Springs	21.29	193	eP	P	13 18 59.0	+0.4
ASPA				eS	S	13 22 51.5	+4.8
MBWA	Marble Bar	26.17	224	eP	P	13 19 47.5	+1.6
	7.9nm,0.7s,mb4.3						
STKA	Stephens Creek	28.98	176	eP	P	13 20 10.4	-0.9
	4.3nm,0.9s,mb4.2						
GYA	Guiyang	42.75	315	⇑iP	P	13 22 09.7	+1.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
ENH	Enshi	43.37	322	eP	P	13 22 12.4	-1.1
	comp=Z,6.6nm,0.7s,mb4.5						
BJI	Beijing	47.55	336	eP	P	13 22 46.1	-0.5
BJI				AMB	AMB		

	comp=Z,8.0nm,0.8s,mb4.8						
BJI	**Beijing**	47.55	336	*e*P	P	13 22 46.1	-0.5
	comp=Z,8.0nm,0.8s,mb4.8						
GTA	**Gaotai**	55.37	323	*e*P	P	13 23 45.5	0.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
JIRN	**Jiri**	59.19	305	*e*P	P	13 24 12.5	0.0
	comp=Z,10nm,0.5s,mb5.1						
GUN	**Gumba**	59.54	305	*e*P	P	13 24 15.0	+0.1
	comp=Z,12nm,0.5s,mb5.2						
KKN	**Kakani**	59.98	304	*e*P	P	13 24 17.7	-0.3
	comp=Z,25nm,0.8s,mb5.3						
DMN	**Daman**	60.06	304	*e*P	P	13 24 18.5	-0.1
	comp=Z,19nm,0.6s,mb5.3						
GKN	**Gorkha**	60.59	304	*e*P	P	13 24 21.9	-0.3
	comp=Z,25nm,0.7s,mb5.5						
KOLN	**Koldanda**	61.37	304	*e*P	P	13 24 27.3	-0.1
	comp=Z,22nm,0.9s,mb5.3						
VNDA	**Vanda**	75.62	175	*e*P	P	13 25 54.5	-0.3
	comp=Z,3.8nm,0.8s,mb4.4						

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*NEIC **06** 13:26:12.4, 34.83S×69.70W, h158^{km}, MD3.4(GUC), After GUC.*

GUC 06 13:26:12.4±0.8**, 34.83S×69.70W, h158**^{km}±4^{km}**, MD3.4, ML3.7, 5C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CICH	**Cipreses**	0.78	311	⇑*i*P	P	13 26 37.0	+0.4
CICH				*i* S	S	13 26 55.1	-0.1
CACH	**El Canelo**	1.03	314	⇓*i*P	P	13 26 38.8	+0.4
CACH				*i* S	S	13 26 58.5	+0.1
LMEL	**Las Melosas**	1.06	337	⇑*i*P	P	13 26 38.8	+0.1
LMEL				*i* S	S	13 26 59.2	+0.3
LMEL				AMP		13 27 16.0	
	comp=N,491nm,0.3s						
SFDO	**San Fernando**	1.10	281	*i* P	P	13 26 39.3	+0.3
SFDO				*i* S	S	13 26 59.8	+0.2
CHCH	**Chadas Angostu**	1.19	318	⇑*i*P	P	13 26 40.1	+0.2
CHCH				*i* S	S	13 27 00.8	-0.3
PCH	**Pirque**	1.38	331	*i* P	P	13 26 42.2	+0.5
PCH				*i* S	S	13 27 03.9	-0.5
ANTU	**Antumapu**	1.48	328	*i* P	P	13 26 42.8	+0.1
ANTU				AMP		13 27 13.9	
	comp=N,880nm,0.6s						
TACH	**Talagante**	1.56	319	⇑*i*P	P	13 26 43.5	0.0
TACH				*i* S	S	13 27 07.1	-0.4
FCH	**Farellones**	1.58	342	⇓*i*P	P	13 26 44.1	+0.3
FCH				AMP		13 27 12.1	
	comp=E,410nm,0.4s						
CLCH	**Cerro Calan**	1.59	334	⇓*i*P	P	13 26 44.3	+0.5
CLCH				AMP		13 27 11.7	
	comp=E,1μm,0.5s						
CLCH				AMP		13 27 12.3	
	comp=E,1μm,0.5s						
RCDM	**Rinconada Maip**	1.62	325	⇑*i*P	P	13 26 44.0	-0.2
RCDM				*i* S	S	13 27 08.6	-0.2
RCDM				AMP		13 27 12.0	
	comp=E,1μm,0.4s						
LNV	**Longovilo**	1.66	301	⇓*i*P	P	13 26 44.1	-0.5
LNV				*i* S	S	13 27 09.1	-0.4
LCCH	**Las Cruces**	2.06	311	⇓*i*P	P	13 26 48.6	-0.4
LCCH				*i* S	S	13 27 16.5	-0.7
MDZ	**Mendoza**	2.07	20	*e*P	P	13 26 45.8	-3.4
ROCH	**El Roble**	2.15	329	⇓*i*P	P	13 26 50.9	+0.7
ROCH				*i* S	S	13 27 20.1	+0.9
JACH	**Jahuel**	2.27	341	*i* P	P	13 26 51.9	+0.3
JACH				*i* S	S	13 27 22.2	+0.5
IHA	**Instituto Hidr**	2.42	318	*i* P	P	13 26 53.2	-0.2

NEIC 06 13:45:39.6, 56.12N×153.55W, h35^{km}**, ML3.8**(AEIC)**, After AEIC., Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	1.75	17	P	P	13 46 06.4	-1.7
KDAK				S	S	13 46 27.2	-2.2
CAHL	**Cahill**	2.16	334	P	P	13 46 12.5	-1.5
KJL	**Kejulik**	2.23	331	P	P	13 46 14.0	-1.0
KJL				S	S	13 46 40.2	-1.4
MGLS	**Mageik LS**	2.31	336	P	P	13 46 13.5	-2.5
MGLS				S	S	13 46 39.2	-4.4
ANCK	**Angle Creek**	2.34	334	P	P	13 46 15.5	-1.0
ANCK				S	S	13 46 43.2	-1.1
KAWH	**Katmai**	2.37	344	P	P	13 46 15.2	-1.8
KAPH	**Katmai Pasha**	2.52	350	P	P	13 46 18.5	-0.6
KAPH				S	S	13 46 47.9	-1.1
KAHC	**Katmai Hardscr**	2.66	343	P	P	13 46 19.2	-1.8
XLV	**Seldovia**	3.48	16	P	P	13 46 31.4	-1.5
CNPM	**China Poot**	3.63	19	P	P	13 46 33.1	-1.8
RSO	**Redoubt South**	4.38	5	P	P	13 46 42.5	-3.0
SLKM	**Skilak Lake**	4.74	20	P	P	13 46 46.2	-4.4
FIB	**Fire Island**	5.36	18	*e*P	P	13 46 56.3	-3.0
RC01	**Rabbit Creek A**	5.37	20	P	P	13 46 56.0	-3.4
EYAK	**Cordova Ski Ar**	6.05	40	P	P	13 47 04.8	-4.2
SCM	**Sheep Creek Mo**	6.57	27	P	P	13 47 12.5	-3.9
TT01	**Tatalina**	6.92	351	P	P	13 47 18.5	-2.8
TRF	**Thorofare Moun**	7.54	11	P	P	13 47 26.6	-3.3
YAH	**Yahtse**	7.54	51	P	P	13 47 26.0	-3.9
BALM	**Baldy**	7.65	45	P	P	13 47 27.5	-3.9
MCK	**McKinley**	7.98	15	P	P	13 47 31.4	-4.7

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*MAN **06** 13:49:32.4, 7.67N×126.71E, h1^{km}, mb4.6, ML3.5, MS3.4*

ISC 06 13:49:31.4±0.9**, 7.56N**±0.06×**126.99E**±0.08**, h33**^{km}**, n12, σ0^{s}.97**/17**, mb4.1**/1**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	0.88	315	⇓*i*P	P	13 49 46.5	-0.8
BIPH				*e*S	S	13 49 52.0	-7.1
MATI	**Mati**	0.95	230	*e*P	P	13 49 48.8	+0.5
MATI				*e*S	S	13 50 00.8	-0.1
BUKP	**Musuan**	1.94	280	*e*P	P	13 50 03.4	+0.9
BUKP				*e*S	S	13 50 16.4	-10
BUTP	**Butuan**	1.95	316	*e*P	P	13 50 03.5	+0.8
CGP	**Cagayan de Oro**	2.44	292	⇓*e*P	P	13 50 10.0	+0.2
CGP				*e*S	S	13 50 38.8	+0.1
SCPH	**Surigao**	2.66	326	⇑*e*P	P	13 50 13.3	+0.4
MSLP	**Maasin**	3.32	321	*e*P	P	13 50 23.6	+1.4
PAGZ	**Pagadian**	3.59	275	*e*P	P	13 50 26.0	-0.1
TBP	**Tagbilaran**	3.75	305	*e*P	P	13 50 27.9	-0.4
TBP				*e*S	S	13 51 10.0	-2.0
KAKA	**Kakadu**	20.85	165	*e*P	P	13 54 12.4	-0.6
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	25.53	183	*e*P	P	13 55 00.2	+1.2
	7.5nm,1.1s,mb4.1						
WB2	**Warramunga Arr**	28.27	165	*e*P	P	13 55 21.8	-2.3

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*THE **06** 14:08:51.0, 38.22N×21.99E, h10^{km}, ML3.4*

*ATH **06** 14:08:51.2, 38.35N×21.78E, h5^{km}±2^{km}, MD3.4/12, ML3.3*

*NEIC **06** 14:08:51.3, 38.35N×21.78E, h6^{km}, ML3.3(ATH), After ATH.*

*CSEM **06** 14:08:52.1±0.1, 38.33N×21.82E, h2^{km}, ML3.3, Error ellipse: s-maj=2.1km s-min=1.7km az=50.0*

ISC 06 14:08:51.2±0.5**, 38.33N**±0.03×**21.76E**±0.04**, h5**^{km}**, n26, σ1^{s}.14**/36**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	0.36	221	*e*PB	Pb	14 08 59.0	-0.6
EVR	**Evrytania**	0.59	3	*e*PB	Pb	14 09 02.2	-1.3
AGG	**Agios Georgios**	0.82	32	*e*Pg	Pg	14 09 06.5	-1.1
AGG				*e*Sg	Sg	14 09 19.5	+0.9
VLS	**Valsamata**	0.94	261	*e*PG	Pg	14 09 08.9	-1.0
LKR	**Lokris**	1.02	71	*e*PG	Pg	14 09 09.9	-1.7
ITM	**Ithomi**	1.15	173	*e*PB	Pb	14 09 13.5	+0.3
ITM				*e*SB	Sb	14 09 29.5	+1.2
MGER	**Gerania Oros**	1.23	106	*e*PB	Pb	14 09 15.0	+0.5
MGER				*e*SB	Sb	14 09 31.5	+1.0
NAIG	**Nisos Aigina**	1.48	112	*e*PB	Pb	14 09 19.0	+0.3
NEO	**Neokhori**	1.50	49	*e*PG	Pg	14 09 18.6	-2.6
JAN	**Janina**	1.50	332	*e*PB	Pb	14 09 19.5	+0.3
JAN	**Janina**	1.50	332	*e*Pb	Pb	14 09 20.5	+1.3
MPAR	**Parnis Oros**	1.56	96	*e*PG	Pg	14 09 20.0	-2.4
MPAR				*e*SB	Sb	14 09 41.8	+1.6
ATH	**Athens Observa**	1.58	102	*e*PB	Pb	14 09 21.0	+0.5
ATH				*e*SB	Sb	14 09 42.0	+1.3
IGT	**Igoumenitsa**	1.64	318	*e*Pb	Pb	14 09 22.8	+1.2
IGT				*e*Sb	Sb	14 09 48.1	+5.7
PTL	**Penteli**	1.68	99	*e*PB	Pb	14 09 21.5	-0.7
PTL				*e*SB	Sb	14 09 44.0	+0.4
LIT	**Litokhoron**	1.86	17	*e*Pb	Pb	14 09 24.1	-1.2
LIT				*e*Sb	Sb	14 09 49.6	+0.8
VLI	**Veliai**	1.86	149	*e*PG	Pg	14 09 26.2	-2.1
KZN	**Kozani**	1.98	0	*e*PN	Pn	14 09 27.3	+1.6
KEK	**Kerkira**	2.06	313	*e*PN	Pn	14 09 28.5	+1.6
PAIG	**Paliouri**	2.19	42	*e*Pn	Pn	14 09 27.4	-1.3
FNA	**Florina**	2.47	353	*e*Pn	Pn	14 09 34.0	+1.2
OUR	**Ouranopolis**	2.64	40	*e*Pn	Pn	14 09 33.9	-1.3
OUR				*e*Sn	Sn	14 10 07.4	-0.6
GRG	**Griva**	2.67	10	*e*Pn	Pn	14 09 35.9	+0.3
SOH	**Sokhos**	2.78	26	*e*Pn	Pn	14 09 37.2	0.0
SOH				*e*Sn	Sn	14 10 12.3	+0.9
KNT	**Kendrikon**	2.96	17	*e*Pn	Pn	14 09 39.7	0.0
SRS	**Serrai**	3.12	26	*e*Pn	Pn	14 09 41.7	-0.3

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*DJA **06** 14:27:34.0±1.0, 8.33S×118.09E, h33^{km}, MD4.8/4, ML5.5/4, Error ellipse: s-maj=61.3km s-min=20.7km az=4.0*

*NEIC **06** 14:27:54.3±0.6, 8.41S×116.46E, h15^{km}, mb4.3/2, Error ellipse: s-maj=15.5km s-min=6.4km az=214.0*

NEIC Felt [III] at Mataram.

ISC 06 14:27:55.3±1.5**, 8.6S**±0.1×**116.5E**±0.1**, h30**^{km}±13^{km}**, n14, σ1^{s}.07**/18**, mb4.2**/2**, 3C-6D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	0.40	290	⇓*i*Pn	Pn	14 28 03.7	-1.1
	5μm,0.3s						
KEDI	**Kedomdong**	0.40	290	⇑*i*P	Pb	14 28 04.1	-0.1
RATI	**Rata**	0.96	264	⇓*i*Pn	Pn	14 28 13.9	+1.1
	6μm,0.3s						
RATI	**Rata**	0.96	264	⇓*i*P	Pn	14 28 14.5	+1.7
KELI	**Kelakatan**	2.02	281	⇓*e*Pn	Pn	14 28 27.6	-0.4
	421nm,0.4s						
KELI	**Kelakatan**	2.02	281	⇓*e*P	Pn	14 28 28.7	+0.7
KELI				⇑*i*S	Sn	14 29 09.7	+17
SRDI	**Scrawed**	2.33	273	⇓*e*Pn	Pn	14 28 32.1	-0.3
	653nm,0.3s						
SRDI				⇑*i*S	Sn	14 29 18.4	+18
MBWA	**Marble Bar**	12.85	166	*e*P	P	14 30 57.9	-0.9
MBWA				*e*S	S	14 33 11.1	-11
FITZ	**Fitzroy Crossi**	12.95	138	*e*P	P	14 31 00.4	+0.3
	7.2nm,0.7s						
FITZ				*e*S	S	14 33 20.8	-3.4
WRAB	**Tennant Creek**	20.61	125	*e*P	P	14 32 35.0	+0.1
WB2	**Warramunga Arr**	20.61	125	*e*P	P	14 32 35.1	+0.2
ASPA	**Alice Springs**	22.39	134	*e*P	P	14 32 54.5	+1.7
STKA	**Stephens Creek**	32.85	138	*e*P	P	14 34 29.7	+1.0
	1.8nm,0.7s,mb4.1						
LSA	**Lhasa**	45.24	328	*e*P	P	14 36 11.2	-0.9
	4.3nm,0.8s,mb4.3						

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*NIED **06** 15:12:00, 30.90N×130.30E, h165^{km}, Mw3.8 Best double couple: $M_0 6.56\times10^{14}$ NP1:ϕ_s130°, δ77°, λ112°. NP2: ϕ_s249°, δ25°, λ31°.*

*JMA **06** 15:12:31.2±0.1, 30.87N×130.27E, h154^{km}±1^{km}, M3.7*

ISC 06 15:12:29.0±0.8**, 30.87N**±0.06×**130.3E**±0.1**, h167**^{km}±5^{km}**, n13, σ0^{s}.88**/22**, mb3.8**/3**, 3C-7D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKC	**Kuchinoerabu**	0.41	186	⇑P	P	15 12 52.7	+0.3
JKC				*e*S	S	15 13 09.8	-0.5
JTSR	**Tashiro 2**	0.65	63	⇓P	P	15 12 53.6	+0.2
JTSR				S	S	15 13 10.5	-1.7
JSU	**Suzuyama**	0.66	16	⇓P	P	15 12 54.1	+0.6
JSU				S	S	15 13 11.4	-0.9
JTN	**Tanegashima 3**	0.67	109	⇑P	P	15 12 54.1	+0.6
JTN				S	S	15 13 11.6	-0.8
JSJ	**Shimokoshiki**	0.93	331	⇓P	P	15 12 55.8	+0.8
JSJ				S	S	15 13 14.5	-0.6
JNN	**Nakanoshima**	1.08	198	⇑P	P	15 12 57.0	+0.8
JNN				*e*S	S	15 13 17.1	-0.2
JNAR	**Kushima--Naru**	1.09	53	⇓P	P	15 12 57.4	+1.0
JNAR				S	S	15 13 17.5	0.0
JTZ	**Takazaki**	1.25	35	⇓P	P	15 12 58.8	+0.9
JTZ				S	S	15 13 19.2	-0.9
JZO	**Okuchi**	1.30	13	⇓P	P	15 12 59.3	+1.0
JZO				*e*S	S	15 13 21.2	+0.3
JIU2	**Izumi 2**	1.74	16	⇓P	P	15 13 04.0	+1.3
JOF	**Joensuu**	66.87	331	*e*p	P	15 23 03.7	-1.0
	1.0nm,0.3s,mb4.1						
KAF	**Kangasniemi**	69.32	331	*e*p	P	15 23 16.6	-3.1
	1.5nm,0.7s,mb3.8						
NB2	**NORSAR Subarra**	75.94	334	P	P	15 23 58.1	-0.3
	0.5nm,0.5s,mb3.4,baz=46,slow=5.8						

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*BJI **06** 15:50:43.2, 1.83N×95.04E, h47^{km}, mB4.7, mb4.5*

*NEIC **06** 15:50:46.2±0.6, 2.25N×94.96E, mb4.5/13, Error ellipse: s-maj=15.3km s-min=8.3km az=51.0*

ISC 06 15:50:47.2±5.2**, 2.3N**±0.1×**95.0E**±0.1**, h51**^{km}±46^{km}**, n33, σ0^{s}.76**/33**, mb4.5**/19**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	16.52	13	*e*P	P	15 54 37.2	+0.2
	25nm,1.0s						
HYB	**Hyderabad**	22.09	314	*e*P	P	15 55 40.0	+0.5
HYB	**Hyderabad**	22.09	314	*i* P	P	15 55 40.0	+0.5
KMI	**Kunming**	23.89	17	P	P	15 55 58.8	+1.6
KMI				AMB	AMB		
	comp=Z,29nm,1.5s,mb4.5						
KMI				AMB	AMB		
	comp=Z,155nm,5.5s						
KMI	**Kunming**	23.89	17	P	P	15 55 58.8	+1.6
	comp=Z,29nm,1.5s,mb4.5						
KMI				pP		15 56 06.9	
JIRN	**Jiri**	26.61	342	*e*P	P	15 56 22.8	-0.1
	comp=Z,36nm,0.8s,mb5.0						
PKI	**Pulchoki**	26.77	341	*e*P	P	15 56 24.3	-0.1
DMN	**Daman**	26.91	340	*e*P	P	15 56 26.1	+0.4
	comp=Z,23nm,1.1s,mb4.6						
KKN	**Kakani**	27.02	341	*e*P	P	15 56 26.3	-0.4
	comp=Z,18nm,0.9s,mb4.6						
GKN	**Gorkha**	27.43	340	*e*P	P	15 56 29.8	-0.7
	comp=Z,33nm,1.1s,mb4.8						
LSA	**Lhasa**	27.51	353	P	P	15 56 31.0	-0.2
LSA	**Lhasa**	27.51	353	*e*P	P	15 56 31.3	+0.2
	comp=Z,14nm,0.8s,mb4.6						
KOLN	**Koldanda**	27.60	338	*e*P	P	15 56 31.0	-1.0
	comp=Z,17nm,0.9s,mb4.7						
CD2	**Chengdu**	29.64	15	P	P	15 56 48.8	-1.4
XAN	**Xi'an**	34.15	21	P	P	15 57 28.0	-1.6
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
GTA	**Gaotai**	37.21	6	*e*P	P	15 57 54.7	-0.7
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
HHC	**Hu-ho-hao-te**	41.20	19	*e*P	P	15 58 29.7	+1.2
HHC				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.0						
HHC				AMB	AMB		
	comp=Z,137nm,3.2s						
BJT	**Baijiatuau**	42.17	24	*e*P	P	15 58 37.0	+0.4
	comp=Z,9.3nm,1.0s,mb4.4						
BJI	**Beijing**	42.20	24	*e*P	P	15 58 37.5	+0.7
BJI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.3						
BJI	**Beijing**	42.20	24	*e*P	P	15 58 37.5	+0.7
	comp=Z,9.0nm,1.0s,mb4.3						
UCH	**Uchtor**	43.81	338	P	P	15 58 50.8	+0.9
	SNR=7.6						
TKM2	**Tokmak 2**	44.02	339	P	P	15 58 52.0	+0.4
	SNR=5.8						
KBK	**Karagaybulak**	44.02	339	P	P	15 58 52.6	+1.0
	SNR=7.8						
AML	**Almayashu**	44.04	337	P	P	15 58 52.5	+0.7
	SNR=11						
AAK	**Ala-Archa**	44.17	338	*e*P	P	15 58 52.7	-0.1
	comp=Z,7.3nm,1.1s,mb4.3						
WRAB	**Tennant Creek**	44.45	122	*e*P	P	15 58 55.5	+0.2
	comp=Z,15nm,1.0s,mb4.7						
WRAB				*e*		15 59 04.0	
USP	**Ospenovka**	44.72	339	P	P	15 58 57.5	+0.3
	SNR=15						
ULN	**Ulaanbaatar**	46.58	11	*e*P	P	15 59 11.4	-0.5
	comp=Z,0.6nm,0.6s,mb3.7						
TLY	**Talaya**	49.75	7	P	P	15 59 36.8	+0.3
	comp=Z,42nm,0.8s,mb5.5,SNR=8.6						
TLY	**Talaya**	49.75	7	*e*P	P	15 59 36.3	-0.2
	comp=Z,4.6nm,0.8s,mb4.6						
KURK	**Kurchatov**	50.21	346	*e*P	P	15 59 39.6	-0.4
	comp=Z,7.4nm,1.0s,mb4.7						
KURK				*e*		15 59 47.7	
CHKZ	**Chkalovo**	55.03	343	*e*P	P	16 00 14.5	-1.4
	comp=Z,5.5nm,0.8s,mb4.6						
CHKZ				*e*		16 00 23.1	
STKA	**Stephens Creek**	55.69	132	⇓*i*P	P	16 00 20.8	-0.2
	comp=Z,3.2nm,0.6s,mb4.5						
STKA				*e*		16 00 29.4	

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*BJI **06** 16:25:20.4, 7.42N×93.94E, h43^{km}, mB5.0, mb4.5, Ms4.5, Msz4.1*

*NEIC **06** 16:25:21.9±0.5, 7.81N×94.16E, mb4.7/23, Error ellipse: s-maj=10.6km s-min=8.8km az=137.0*

*MOS **06** 16:25:24.5±1.1, 8.22N×93.99E, h33^{km}, mb4.9/14, Error ellipse: s-maj=19.2km s-min=8.9km az=108.5*

ISC 06 16:25:20.1±0.4**, 7.77N**±0.05×**94.14E**±0.04**, h19**^{km}**, h19**^{km}±1.1^{km}**:pP-P, n103, σ1^{s}.14**/115**, mb4.7**/44**, MS4.1**/11**, 6C-9D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	6.45	95	P	Pn	16 26 56.0	-0.5
	218nm,0.8s						
NNT	**Nongplab**	7.30	48	P	Pn	16 27 07.5	-1.0
IPM	**Ipoh**	7.54	114	P	Pn	16 27 11.0	-0.9
KGM	**Kluang**	10.78	122	P	P	16 27 56.9	+0.1
CM31	**Chiang Mai Arr**	11.61	23	*e*P	P	16 28 07.2	-0.8
	4.7nm,0.6s						
NANT	**Nan**	12.69	30	P	P	16 28 25.0	+2.5
PALK	**Pallekele**	13.34	269	P	P	16 28 30.0	-1.1
VIS	**Vishakhapatnam**	14.45	314	*e*P	P	16 28 43.1	-2.9
VIS				*e*		16 28 48.3	
	comp=Z,22nm,1.2s						
VIS				*e*		16 31 12.8	
BWNR	**Bhubaneshwar**	14.84	328	*e*P	P	16 28 49.0	-2.0
BWNR				*e*		16 28 52.5	
	comp=Z,22nm,0.6s						
BWNR				*e*		16 31 30.0	
HYB	**Hyderabad**	17.97	304	*e*P	P	16 29 32.0	+1.2
HYB	**Hyderabad**	17.97	304	*i* P	P	16 29 32.0	+1.2
BLSP	**Bilaspur**	18.38	322	*e*P	P	16 29 36.2	+0.3
BLSP				*e*		16 29 37.9	
	comp=Z,33nm,1.1s						
KMI	**Kunming**	19.11	24	⇑P	P	16 29 47.8	+3.1
KMI				PP	PP	16 30 04.3	+2.7
KMI				S	S	16 33 18.0	+4.1
KMI				SS	SS	16 33 43.6	+3.8
KMI				AMB	AMB		
	comp=Z,20nm,1.0s						
KMI				AMB	AMB		
	comp=Z,122nm,3.1s						
KMI				LR	LR		
	comp=N,448nm,14.3s						
KMI				LR	LR		
	comp=E,347nm,14.0s						
KMI				LR	LR		
	comp=Z,364nm,15.5s						
KMI	**Kunming**	19.11	24	⇑P	P	16 29 47.8	+3.1
	comp=Z,20nm,1.0s						
KMI				pP		16 29 51.2	
KMI				sP		16 29 52.9	
KMI				PP	PP	16 30 04.3	+2.7
KMI				S	S	16 33 18.0	+4.1
KMI				sS		16 33 24.1	
KMI				SS	SS	16 33 43.6	+3.8
JIRN	**Jiri**	21.17	340	*e*P	P	16 30 06.5	-0.3
	comp=Z,81nm,0.9s,mb5.0						
PKI	**Pulchoki**	21.36	338	*e*P	P	16 30 09.2	+0.5
	comp=Z,88nm,1.0s,mb5.0						
DMN	**Daman**	21.51	338	*e*P	P	16 30 10.9	+0.7
	comp=Z,85nm,0.8s,mb5.2						
KKN	**Kakani**	21.61	338	*e*P	P	16 30 10.6	-0.6
	comp=Z,53nm,0.9s,mb5.0						
KAD	**Karad**	21.65	298	⇑*i*P	P	16 30 12.5	+0.9
LSA	**Lhasa**	22.00	353	P	P	16 30 14.4	-0.7
LSA	**Lhasa**	22.00	353	*e*P	P	16 30 13.6	-1.5
	comp=Z,22nm,0.8s,mb4.7						
GKN	**Gorkha**	22.05	337	*e*P	P	16 30 15.3	-0.3
	comp=Z,53nm,0.7s,mb5.0						
GYA	**Guiyang**	22.07	31	⇓*i*P	P	16 30 16.5	+0.6
GYA				S	S	16 34 21.8	+8.4
GYA				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.0						
GYA				LR	LR		
	comp=N,930nm,14.3s,MS4.5						
GYA				LR	LR		
	comp=E,1μm,13.7s,MS4.5						
GYA				LR	LR		
	comp=Z,680nm,16.1s,MS4.2						
BHPL	**Bhopal**	22.24	316	*e*P	P	16 30 18.6	+1.1
BHPL				*e*		16 30 24.7	
	comp=Z,45nm,1.0s						
KOLN	**Koldanda**	22.26	335	*e*P	P	16 30 17.4	-0.3
	comp=Z,68nm,0.9s,mb5.1						
POO	**Poona**	22.44	300	⇓*i*P	P	16 30 21.0	+1.4
CD2	**Chengdu**	24.72	20	*e*P	P	16 30 42.2	+0.4
CD2				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.5						
LGTI	**Lohaghat**	25.22	331	⇓*i*P	P	16 30 47.3	+0.8
NDI	**New Delhi**	26.23	325	*e*P	P	16 30 55.0	-0.9
ENH	**Enshi**	26.61	31	*e*P	P	16 30 58.7	-0.8
	comp=Z,10.0nm,0.9s,mb4.3						
DDI	**Dehra Dun**	27.04	328	*e*	P	16 31 04.5	+1.2
XAN	**Xi'an**	29.49	25	P	P	16 31 24.8	-0.7
XAN				S	S	16 36 18.5	+0.9
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2						
XAN				LR	LR		
	comp=N,452nm,14.7s,MS4.3						
XAN				LR	LR		
	comp=E,316nm,12.7s,MS4.3						
XAN				LR	LR		
	comp=Z,394nm,14.4s,MS4.2						
LZH	**Lanzhou**	29.55	16	*e*P	P	16 31 27.7	+1.7
LZH				PP	PP	16 32 23.9	+1.7
LZH				AMB	AMB		
	comp=Z,21nm,1.6s,mb4.6						
LZH				AMB	AMB		
	comp=Z,96nm,4.5s						
LZH				LR	LR		
	comp=E,590nm,14.0s						
LZH				LR	LR		
	comp=Z,920nm,14.8s,MS4.5						
LZH	**Lanzhou**	29.55	16	*e*P	P	16 31 27.7	+1.7
	comp=Z,21nm,1.6s,mb4.6						
LZH				pP	pP	16 31 32.1	+0.6
LZH				sP	sP	16 31 34.7	+0.8
LZH				PP	PP	16 32 23.9	+1.7
LZH				LR	LR		
	comp=Z,920nm,14.8s,MS4.5						
GTA	**Gaotai**	31.92	8	*e*P	P	16 31 46.5	-0.3
GTA				PP	PP	16 32 54.2	+1.3
GTA				PPP	PPP	16 33 09.4	+1.5
GTA				PCP	PcP	16 34 34.8	-2.4
GTA				S	S	16 36 58.1	+2.4
GTA				PCS		16 38 17.6	
GTA				SS	SS	16 38 52.0	+4.2
GTA				SCS	ScS	16 42 12.2	-3.3
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb3.9						
GTA				AMB	AMB		
	comp=Z,83nm,5.3s						
GTA				LR	LR		
	comp=N,191nm,15.6s,MS4.0						
GTA				LR	LR		
	comp=E,127nm,15.2s,MS4.0						
GTA				LR	LR		
	comp=Z,201nm,17.5s,MS3.9						
NJ2	**Nanjing**	33.35	40	*e*P	P	16 32 00.3	+0.9
NJ2				PP	PP	16 33 12.8	+1.5
NJ2				S	S	16 37 21.0	+2.8
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,530nm,6.2s						
NJ2				LR	LR		
	comp=N,900nm,14.4s,MS4.8						

NJ2				LR	LR		
	comp=E,830nm,14.9s,MS4.8						
NJ2				LR	LR		
	comp=Z,460nm,11.8s,MS4.4						
SSE	Sheshan	34.30	44	P	P	16 32 07.1	-0.5
SSE				S	S	16 37 34.3	+1.5
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
SSE				AMB	AMB		
	comp=Z,133nm,4.5s						
SSE				LR	LR		
	comp=N,146nm,15.8s,MS3.9						
SSE				LR	LR		
	comp=E,109nm,15.8s,MS3.9						
SSE				LR	LR		
	comp=Z,96nm,15.6s,MS3.6						
SSE	Sheshan	34.30	44	P	P	16 32 07.1	-0.5
	comp=Z,10.0nm,1.0s,mb4.7						
SSE				sP	sP	16 32 15.3	-0.3
SSE				S	S	16 37 34.3	+1.5
SSE				S	S	16 37 44.7	+12
SSE				LR	LR		
	comp=Z,100nm,15.6s,MS3.7						
WMQ	Urumqi	36.35	352	*e*P	P	16 32 25.0	0.0
WMQ				PP	PP	16 33 48.0	-0.5
WMQ				S	S	16 38 05.0	+0.5
WMQ				SS	SS	16 40 30.0	+0.4
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,25nm,8.0s						
WMQ				LR	LR		
	comp=N,126nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=E,175nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,102nm,18.0s,MS3.6						
HHC	Hu-ho-hao-te	36.42	22	⇑P	P	16 32 26.6	+1.1
HHC				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.3						
HHC				AMB	AMB		
	comp=Z,112nm,4.3s						
BJI	Beijing	37.70	28	*e*P	P	16 32 38.2	+1.9
BJI				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.1						
BJI				LR	LR		
	comp=N,268nm,10.7s,MS4.5						
BJI				LR	LR		
	comp=E,280nm,10.3s,MS4.5						
BJI				LR	LR		
	comp=Z,143nm,22.5s						
BJI	Beijing	37.70	28	*e*P	P	16 32 38.2	+1.9
	comp=Z,6.0nm,1.5s,mb4.1						
BJI				S	S	16 38 37.4	+12
BJI				LR	LR		
	comp=Z,140nm,22.5s,MS3.7						
AAK	Ala-Archa	38.80	337	⇓*i*P	P	16 32 43.6	-2.0
AAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.4						
AAK	Ala-Archa	38.80	337	*e*P	P	16 32 44.9	-0.7
	comp=Z,5.0nm,0.8s,mb4.3						
MKAR	Makanchi Array	40.19	347	*i* P	P	16 32 56.2	-0.8
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ULN	Ulaanbaatar	41.44	13	⇑*i*P	P	16 33 06.0	-1.2
ULN	Ulaanbaatar	41.44	13	*e*P	P	16 33 07.2	0.0
	comp=Z,2.4nm,0.8s,mb3.9						
ZAK	Zakamensk	43.16	9	*e*P	P	16 33 20.5	-0.8
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s						
TLY	Talaya	44.48	8	*e*P	P	16 33 33.1	+1.1
TLY				*e*		16 35 56.7	
TLY				*e*S	S	16 40 02.7	-2.8
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
TLY				MLR	MLR		
	comp=Z,114nm,24.0s,MS3.7						
KURK	Kurchatov	44.72	346	⇓*i*P	P	16 33 31.9	-2.0
KURK	Kurchatov	44.72	346	*e*P	P	16 33 32.4	-1.5
	comp=Z,19nm,1.2s,mb4.8						
CN2	Changchun	45.12	32	*e*P	P	16 33 39.2	+2.0
CN2				*e*S	S	16 40 16.3	+1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,110nm,14.0s,MS3.9						
HIA	Hailar	46.62	23	*e*P	P	16 33 49.1	+0.1
	comp=Z,3.0nm,0.4s,mb4.6						
NVS	Novosibirsk	47.75	351	*e*P	P	16 33 55.7	-2.2
NVS				pmax	pmax		
	comp=N,8.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
WRAB	Tennant Creek	48.20	125	*e*P	P	16 34 00.7	-1.1
CHKZ	Chkalovo	49.58	342	*i* P	P	16 34 11.2	-0.8
CHKZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
CHKZ	Chkalovo	49.58	342	*e*P	P	16 34 10.6	-1.4
	comp=Z,13nm,0.9s,mb5.0						
CHKZ				*e*pP	pP	16 34 16.6	-1.1
BOD	Bodaibo	52.25	13	*e*P	P	16 34 30.4	-1.9
CLNS	Chul'man	54.53	20	*e*P	P	16 34 48.9	-0.2
CLNS				*e*		16 35 53.8	
CLNS				*e*		16 36 45.2	
CLNS				*e*S	S	16 42 22.5	-3.2
CLNS				*e*SS	SS	16 46 01.9	-6.2
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
CLNS				pmax	pmax		
	comp=N,2.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,2.0nm,1.0s						
CLNS				smax			
	comp=N,4.0nm,0.7s						
CLNS				smax			
	comp=Z,3.0nm,0.8s						
CLNS				smax			
	comp=E,3.0nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.3						
CLNS				MLR	MLR		
	comp=N,200nm,15.0s,MS4.4						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS4.4						
SVE	Sverdlovsk	55.50	338	*e*P	P	16 34 55.6	-0.6
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
ARU	Arti	55.99	337	⇓*i*P	P	16 34 50.5	-9.2
ARU				*e*S	S	16 42 30.6	-15
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
KIV	Kislovodsk	57.40	318	⇓*i*P	P	16 35 08.6	-1.3
KIV				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
KMBO	Kilima Mbogo	57.41	264	*i* P	P	16 35 11.7	+1.2
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMBO	Kilima Mbogo	57.41	264	*e*P	P	16 35 11.9	+1.5
	comp=Z,5.0nm,0.8s,mb4.6						
SOC	Sochi	59.26	317	*e*P	P	16 35 19.7	-3.2
SOC				*e*		16 36 06.1	
SOC				*e*		16 37 29.2	
SOC				*e*PPP	PPP	16 38 52.4	-8.1
SOC				*e*S	S	16 43 23.6	-4.7
SOC				*e*		16 45 07.5	
SOC				*e*SS	SS	16 47 21.7	-2.9
SOC				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
SOC				pmax	pmax		
	comp=N,36nm,1.2s						
SOC				pmax	pmax		
	comp=E,32nm,1.2s						
YAK	Yakutsk	60.10	18	⇑*i*P	P	16 35 26.5	-1.9
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YAK	Yakutsk	60.10	18	*e*P	P	16 35 27.0	-1.4
	comp=Z,15nm,0.8s,mb5.1						
ANN	Anapa	61.22	317	*e*P	P	16 35 30.0	-6.3
MBAR	Mbarara	63.76	265	*e*P	P	16 35 55.2	+1.4
	comp=Z,5.3nm,1.0s,mb4.5						
OBN	Obninsk	65.47	328	⇓*e*P	P	16 36 03.5	-0.6
OBN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
MA2	Magadan	66.86	28	*e*P	P	16 36 12.2	-0.7
MA2				*e*S	S	16 44 59.7	-3.4
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
JOF	Joensuu	70.95	334	*e*pkp	P	16 36 35.7	-2.4
KOLS	Kolonicke sedl	72.29	319	*e*P	pP	16 36 51.7	-0.6
KOLS	Kolonicke sedl	72.29	319	*e*pP	pP	16 36 51.7	-0.6
FINES	FINESS Array B	72.81	332	*i* P	P	16 36 48.6	-0.6
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CRVS	Cervenica-Dubn	72.81	319	*i* P	P	16 36 49.8	+0.3
CRVS				*i* pP	pP	16 36 56.3	+0.9
KAF	Kangasniemi	72.89	333	*e*pkp	P	16 36 48.8	-0.9
OJC	Ojcow	74.06	320	*e*P	P	16 36 56.6	-0.1
LBTB	Lobatse	74.19	241	*e*P	P	16 36 59.9	+1.9
	comp=Z,6.5nm,0.8s,mb4.6						
VYHS	Vyhne	74.49	318	*e*P	P	16 36 59.0	-0.2
OKC	Ostrava-Krasne	75.07	319	*e*P	P	16 37 03.2	+0.6
MORC	Moravsky Berou	75.46	319	*e*P	P	16 37 04.0	-0.8
	comp=Z,7.4nm,1.1s,mb4.5						
ZST	Bratislava	75.61	318	*e*P	P	16 37 06.4	+0.7
BILL	Bilibino	76.19	22	⇓*i*P	P	16 37 07.8	-0.8
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
DPC	Dobruska-Polom	76.29	320	*e*P	P	16 37 10.2	+0.7
KSP	Ksiaz	76.35	320	*e*P	P	16 37 10.0	+0.2
UPC	Upice	76.50	320	*e*P	P	16 37 13.9	+3.2
PRU	Pruhonice	77.41	319	*e*P	P	16 37 16.4	+0.7
PVCC	Panska Ves	77.42	320	*e*P	P	16 37 16.3	+0.5
BRG	Berggiesshubel	77.84	320	*e*P	P	16 37 18.8	+0.8
BRG				pmax	pmax		
	comp=Z,28nm,1.9s,mb4.9						
BRG	Berggiesshubel	77.84	320	*e*P	P	16 37 18.8	+0.8
	comp=Z,28nm,1.9s,mb4.9						
KHC	Kasperske Hory	78.00	319	*e*P	P	16 37 19.2	+0.2
MAW	Mawson	78.43	192	*e*P	P	16 37 20.9	0.0
	comp=Z,42nm,0.6s,mb5.5						
CLL	Collm	78.45	321	*e*P	P	16 37 25.0	+3.6
CLL	Collm	78.45	321	*e**PP	pP	16 37 26.0	-1.3
MOX	Moxa	79.31	320	*e*P	P	16 37 26.0	-0.1
MOX				pP	pP	16 37 32.0	-0.1
GRA1	Grafenberg Arr	79.55	319	*e*P	P	16 37 28.5	+1.1
	comp=Z,11nm,1.2s,mb4.7						
GRF	Grafenberg Arr	79.55	319	*e*P	P	16 37 28.5	+1.1
GRF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
GRF	Grafenberg Arr	79.55	319	*e*P	P	16 37 28.5	+1.1
	comp=Z,11nm,1.2s,mb4.7						
NB2	NORSAR Subarra	79.83	331	P	P	16 37 28.2	-0.5
	comp=Z,6.0nm,0.8s,mb4.6,baz=95,slow=5.0						
LPG	La Plagne	82.70	315	*e*P	P	16 37 44.0	-0.1
	comp=Z,9.2nm,0.8s,mb4.6						
IMA	Indian Mountai	91.72	22	*e*P	P	16 38 28.6	+1.2
	comp=Z,118nm,1.9s						
JCT	Junction City	139.69	19	PKP	PKPdf	16 44 49.3	-2.3

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*NEIC **06** 16:27:32.4, 37.82N×1.78W, h12^{km}, ML3.2(LDG), MN3.0(MDD), After MDD.*

*INMG **06** 16:27:32.1±1.5, 37.88N×1.83W, h5^{km}±3^{km}, ML2.9, Error ellipse: s-maj=2.2km s-min=2.0km az=149.0*

*CSEM **06** 16:27:32.9±0.1, 37.86N×1.74W, h12^{km}, ML3.2/19, Error ellipse: s-maj=3.5km s-min=2.2km az=149.0*

*SFS **06** 16:27:32.0, 37.80N×1.70W*

*LDG **06** 16:27:33.2±0.3, 37.84N×1.80W, h5^{km}, Md3.8/1, Ml3.2/4, Error ellipse: s-maj=7.5km s-min=2.9km az=144.0*

MDD 06 16:27:32.5±0.2**, 37.82N×1.78W, h12**^{km}**, mbLg2.9**/24**, 3C-2D, Error ellipse: s-maj=3.4km s-min=2.1km az=173.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	La Murta	0.42	87	⇑Pg	Pg	16 27 40.2	-1.0
	43nm,0.2s,SNR=18						
EMUR				Lg		16 27 46.9	
	1μm,0.5s,SNR=7.9						
EMUR	La Murta	0.42	87	Pg	Pg	16 27 40.2	-1.0
	43nm,0.2s,SNR=18						
CART	Cartagena	0.66	111	⇑P	Pb	16 27 44.9	-0.6
CART				S	Sb	16 27 53.8	-0.5
CART	Cartagena	0.66	111	*i* P	Pb	16 27 44.9	-0.5
CART				*i* S	Sb	16 27 53.8	-0.5
ENIJ	Nijar	0.92	202	⇑Pg	Pg	16 27 49.2	-1.7
	92nm,0.3s,SNR=18						
ENIJ				Lg		16 28 00.8	
	139nm,0.4s,SNR=7.9						
EVIA	Vianos	1.00	325	⇓Pg	Pg	16 27 49.8	-2.6
	211nm,0.5s,SNR=18						
EVIA				Lg		16 28 04.1	
	110nm,0.2s,SNR=7.9						
EQES	Quesada	1.02	269	⇓Pg	Pg	16 27 51.0	-2.1
	56nm,0.1s,SNR=18						
EQES				Lg		16 28 05.2	
	277nm,0.2s,SNR=7.9						
EQES	Quesada	1.02	269	Pg	Pg	16 27 51.0	-2.0
	56nm,0.1s,SNR=18						
EBER	Berja	1.28	224	Pg	Pg	16 27 55.0	-3.1
	76nm,0.5s,SNR=56						
EBER				Lg		16 28 13.4	
	197nm,0.6s,SNR=7.9						
EBER	Berja	1.28	224	Pg	Pg	16 27 55.0	-3.1
	76nm,0.5s,SNR=56						
EBEN	Beniarda	1.51	54	Pn	Pn	16 27 57.4	-2.1
	0.5nm,0.1s,SNR=7.9						
EBEN				Pg	Pg	16 27 59.7	-3.0
	24nm,0.4s,SNR=7.9						
EBEN				Lg		16 28 20.2	
	42nm,0.4s,SNR=7.9						
EBEN	Beniarda	1.51	54	Pn	Pn	16 27 57.4	-2.1
	0.5nm,0.1s,SNR=7.9						
EBEN	Beniarda	1.51	54	Pg	Pg	16 27 59.7	-2.9
	24nm,0.4s,SNR=7.9						
EBAN	Banos Encina	1.62	283	Pn	Pn	16 28 00.3	-0.9
	33nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	16 28 20.8	-1.3
	52nm,0.2s,SNR=7.9						
ELUQ	Luque	1.99	263	Pg	Pg	16 28 06.4	-5.9
	19nm,0.3s,SNR=14						
ELUQ				Lg		16 28 32.8	
	68nm,0.4s,SNR=7.9						
ELOJ	Sierra Loja	2.01	251	Pg	Pg	16 28 07.3	-5.2
	5.1nm,0.2s,SNR=7.9						
ELOJ				Lg		16 28 33.9	
	26nm,0.4s,SNR=7.9						
EALB	Alboran	2.13	209	Pn	Pn	16 28 07.7	-0.8
	15nm,0.7s,SNR=4.0						
EALB	Alboran	2.13	209	Pn	Pn	16 28 07.7	-0.8
	SNR=4.0						
EADA	Adamuz	2.24	280	Pn	Pn	16 28 08.2	-1.8
	3.8nm,0.1s,SNR=32						
EADA				Sn	Sn	16 28 34.9	-3.0
	36nm,0.1s,SNR=7.9						
EADA				Lg		16 28 40.5	
	62nm,0.2s,SNR=4.0						
EADA	Adamuz	2.24	280	Pn	Pn	16 28 08.2	-1.8
	3.8nm,0.1s,SNR=32						
EADA				Sn	Sn	16 28 34.9	-2.9
	36nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	2.52	318	Pn	Pn	16 28 11.6	-2.4
ESDC				Pg	Pg	16 28 16.6	-6.2
ESDC				Lg		16 28 49.8	
ESDC	Sonseca Array	2.52	318	Pn	Pn	16 28 11.6	-2.4
	1.3nm,0.2s,baz=128,slow=13,SNR=7.9						
ESDC				Pg	Pg	16 28 16.6	-6.2
	44nm,0.5s,baz=126,slow=16,SNR=7.9						
ESDC				Lg		16 28 49.8	
	8.7nm,0.2s,baz=134,slow=30,SNR=7.9						
ESDC	Sonseca Array	2.52	318	Pn	Pn	16 28 11.6	-2.4
	1.3nm,0.2s,slow=13,SNR=7.9						
ESDC	Sonseca Array	2.52	318	Pg	Pg	16 28 16.6	-6.2
	44nm,0.5s,slow=16,SNR=7.9						
EMIJ	Mijas	2.70	243	Pn	Pn	16 28 16.5	-0.1
	2.4nm,0.4s,SNR=7.9						
EMIJ				Pg	Pg	16 28 21.8	-4.6
	12nm,0.5s,SNR=7.9						
EMIJ				Sn	Sn	16 28 47.1	-2.4
	1.6nm,0.2s,SNR=7.9						
EMIJ				Lg		16 28 57.5	
	43nm,0.7s,SNR=7.9						
EMIJ	Mijas	2.70	243	Pg	Pg	16 28 21.8	-4.6
	0.4nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	16 28 47.1	-2.5
	1.6nm,0.2s,SNR=7.9						
EIBI	Ibiza	2.73	63	Pn	Pn	16 28 14.3	-2.7
	1.2nm,0.1s,SNR=9.9						
EIBI				Sn	Sn	16 28 45.8	-4.5
	5.4nm,0.3s,SNR=7.9						
EIBI	Ibiza	2.73	63	Pn	Pn	16 28 14.3	-2.7
	1.2nm,0.1s,SNR=9.9						
EIBI				Sn	Sn	16 28 45.8	-4.5
	5.4nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	2.73	21	Pn	Pn	16 28 15.6	-1.5
	0.6nm,0.2s,SNR=14						
EMOS				Pg	Pg	16 28 20.7	-6.4
	9.2nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	16 28 47.4	-3.0
	1.8nm,0.2s,SNR=4.0						
EMOS				Lg		16 28 57.0	
	14nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	2.73	21	Pn	Pn	16 28 15.6	-1.5
	0.6nm,0.2s,SNR=14						
EMOS	Mosqueruela	2.73	21	Pg	Pg	16 28 20.7	-6.4
	9.2nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	16 28 47.4	-3.0
	1.8nm,0.2s,SNR=4.0						
LIJA	Lijar	3.03	254	*e*P	Pn	16 28 20.5	-0.8
GUD	Guadarrama	3.37	328	Pn	Pn	16 28 24.2	-1.9
	2.4nm,0.4s,SNR=9.5						
GUD				Pg	Pg	16 28 32.8	-7.0
	5.9nm,0.2s,SNR=7.9						
GUD				Lg		16 29 16.1	
	24nm,0.2s,SNR=7.9						
ESPR	Espera	3.39	255	Pn	Pn	16 28 25.6	-0.8
	1.7nm,0.3s,SNR=7.5						
ESPR	Espera	3.39	255	Pn	Pn	16 28 25.6	-0.8
	1.7nm,0.3s,SNR=7.5						
EBR	Ebro Roquetas	3.47	30	*e*PN	Pn	16 28 27.0	-0.6
EBR				*e*Rs		16 29 29.0	
ERTA	Horta de San J	3.53	27	Pn	Pn	16 28 26.8	-1.6
	0.8nm,0.1s,SNR=13						
ERTA				Sn	Sn	16 29 05.2	-5.4
	6.3nm,0.2s,SNR=4.0						
ERTA				Lg		16 29 21.2	
	34nm,0.9s,SNR=7.9						
ERTA	Horta de San J	3.53	27	Pn	Pn	16 28 26.8	-1.6
	0.8nm,0.1s,SNR=13						
ERTA				Sn	Sn	16 29 05.2	-5.4
	3.2nm,0.2s,SNR=4.0						
EMIN	Mina Concepcio	3.88	271	Pn	Pn	16 28 30.3	-3.0
	0.2nm,0.1s,SNR=24						
EMIN				Sn	Sn	16 29 14.9	-4.5
	6.0nm,0.3s,SNR=7.9						
EMIN				Lg		16 29 32.3	
	30nm,0.5s,SNR=4.0						
EMIN	Mina Concepcio	3.88	271	Pn	Pn	16 28 30.3	-3.0
	0.2nm,0.1s,SNR=24						
EMIN				Sn	Sn	16 29 14.9	-4.4
	6.0nm,0.3s,SNR=7.9						
ESAC	San Caprasio	4.02	14	Pn	Pn	16 28 33.3	-2.1
	2.0nm,0.2s,SNR=7.9						
ESAC				Lg		16 29 36.8	
	91nm,0.4s,SNR=7.9						
ESAC	San Caprasio	4.02	14	Pn	Pn	16 28 33.3	-2.1
	2.0nm,0.2s,SNR=7.9						
EPOB	Poblet	4.16	31	Pn	Pn	16 28 34.2	-3.1
	0.5nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	16 29 21.7	-4.8
	0.8nm,0.2s,SNR=4.0						
EPOB				Lg		16 29 41.3	
	3.6nm,0.4s,SNR=4.0						
EPOB	Poblet	4.16	31	Pn	Pn	16 28 34.2	-3.1
	0.5nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	16 29 21.7	-4.8
	0.8nm,0.2s,SNR=4.0						
EBAD	Badajoz	4.22	284	Pn	Pn	16 28 35.1	-3.1
	1.2nm,0.1s,SNR=7.2						
EBAD				Sn	Sn	16 29 22.6	-5.5
	16nm,0.2s,SNR=7.9						
EBAD				Lg		16 29 44.8	
	38nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.22	284	Pn	Pn	16 28 35.1	-3.2
	1.2nm,0.1s,SNR=7.2						
EBAD				Sn	Sn	16 29 22.6	-5.5
	16nm,0.2s,SNR=7.9						
ERIP	Rio Piedras	4.37	266	Pn	Pn	16 28 37.0	-3.4
	1.2nm,0.1s,SNR=7.9						
ERIP				Sn	Sn	16 29 26.1	-5.8
	11nm,0.2s,SNR=7.9						
EMIR	Miracle	4.81	31	Pn	Pn	16 28 44.4	-2.2
	1.6nm,0.1s,SNR=4.0						
EMIR	Miracle	4.81	31	Pn	Pn	16 28 44.4	-2.2
	1.6nm,0.1s,SNR=4.0						
PBEJ	Beja	4.82	274	*e*Pn	Pn	16 28 43.5	-3.2
PBEJ				*e*Sn	Sn	16 29 36.7	-6.5
PBEJ				*e*Sg	Sg	16 30 04.3	-8.7
	17nm,0.6s						
PBEJ	Beja	4.82	274	*e*Pn	Pn	16 28 43.5	-3.2
PBEJ				*e*Sn	Sn	16 29 36.7	-6.5
PBEJ				*e*Sg	Sg	16 30 04.3	-8.7
	17nm,0.6s						
PCBR	Castelo Branco	4.89	296	*e*Pn	Pn	16 28 44.3	-3.4
PCBR				*e*Sn	Sn	16 29 39.1	-5.8
PCBR				*e*Sg	Sg	16 30 03.2	-12
	18nm,0.8s						
PCBR	Castelo Branco	4.89	296	*e*Pn	Pn	16 28 44.3	-3.4
PCBR				*e*Sn	Sn	16 29 39.1	-5.8
PCBR				*e*Sg	Sg	16 30 03.2	-12
	18nm,0.8s						
EVO	Evora	4.96	280	*e*Pn	Pn	16 28 45.9	-2.9
EVO				*e*Sn	Sn	16 29 42.9	-3.9
EVO				*e*Sg	Sg	16 30 10.2	-7.6
	35nm,0.4s						
EBIE	Bielsa	5.08	16	Pn	Pn	16 28 48.9	-1.4
EBIE				Sn	Sn	16 29 43.5	-6.1
EBIE	Bielsa	5.08	16	Pn	Pn	16 28 48.9	-1.4
	0.3nm,0.1s,SNR=5.6						
EBIE				Sn	Sn	16 29 43.5	-6.1
	0.2nm,0.1s,SNR=7.9						
EBIE	Bielsa	5.08	16	Pn	Pn	16 28 48.9	-1.4
	0.3nm,0.1s,SNR=5.6						
EBIE				Sn	Sn	16 29 43.5	-6.1
	0.2nm,0.1s,SNR=7.9						
ETSF	Etsaut	5.16	10	*e*Pn	Pn	16 28 49.8	-1.7
ETSF				*e*Sn	Sn	16 29 45.7	-5.9
ETSF				*e*Sg	Sg	16 30 13.2	-11
	3.7nm,0.5s						
MTE	Manteigas	5.17	302	*e*Pn	Pn	16 28 48.9	-2.8
MTE				*e*Sn	Sn	16 29 45.9	-6.1
MTE				*e*Sg	Sg	16 30 10.9	-14
	26nm,0.7s						
MTE	Manteigas	5.17	302	*e*Pn	Pn	16 28 48.9	-2.8
MTE				*e*Sn	Sn	16 29 45.9	-6.1
MTE				*e*Sg	Sg	16 30 10.9	-14
	26nm,0.7s						
MOE	Montemor	5.23	280	*e*Sn	Sn	16 29 47.4	-6.0
MOE				*e*Sg	Sg	16 30 15.5	-11
SJPF	Ste Jean	5.30	4	*e*Pn	Pn	16 28 51.0	-2.5
SJPF				*e*Sn	Sn	16 29 48.3	-7.0
SJPF				*e*Sg	Sg	16 30 18.4	-11
	8.2nm,0.6s						
EALK	Alkurruntz	5.40	2	Pn	Pn	16 28 53.6	-1.2
	0.4nm,0.1s,SNR=6.4						
EALK				Sn	Sn	16 29 50.5	-7.2
	2.4nm,0.3s,SNR=7.9						
EPF	Esparros	5.45	17	*e*Pn	Pn	16 28 54.3	-1.3
EPF				*e*Sn	Sn	16 29 52.4	-6.6
EPF				*e*Sg	Sg	16 30 22.8	-11
	7.1nm,0.6s						
PBRG	Braganca	5.52	318	*e*Pn	Pn	16 28 53.2	-3.3
PBRG				*e*Sn	Sn	16 29 52.8	-7.9
PBRG				*e*Sg	Sg	16 30 24.4	-12
	9.9nm,0.8s						
PBRG	Braganca	5.52	318	Pn	Pn	16 28 53.2	-3.3
PBRG				Sn	Sn	16 29 52.8	-7.9
PBRG				Lg		16 30 24.4	
	4.9nm,0.8s						
PTEO	Sao Teotonio	5.52	269	*e*Pn	Pn	16 28 53.4	-3.1
PTEO				*e*Sn	Sn	16 29 54.5	-6.2
PTEO				*e*Sg	Sg	16 30 24.2	-12
	16nm,0.6s						
PTEO	Sao Teotonio	5.52	269	Pn	Pn	16 28 53.4	-3.1
PTEO				Sn	Sn	16 29 54.5	-6.2

PTEO				Lg		16 30 24.2	
	7.9nm,0.6s						
PTEO	**Sao Teotonio**	5.52	269	ePn	Pn	16 28 53.4	-3.1
PTEO				eSg	Sg	16 30 24.2	-12
	16nm,0.6s						
ELAN	**Lanestosa**	5.55	347	Pn	Pn	16 28 54.2	-2.8
	0.4nm,0.3s,SNR=4.0						
ELAN				Sn	Sn	16 29 54.1	-7.5
	1.0nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	5.55	347	Pn	Pn	16 28 54.2	-2.8
	0.4nm,0.3s,SNR=4.0						
ELAN				Sn	Sn	16 29 54.1	-7.4
	1.0nm,0.2s,SNR=7.9						
PVIS	**Viseu**	5.56	303	ePn	Pn	16 28 53.9	-3.2
PVIS				eSn	Sn	16 29 54.7	-7.0
PVIS				eSg	Sg	16 30 24.7	-13
	8.8nm,0.6s						
PVIS	**Viseu**	5.56	303	Pn	Pn	16 28 53.9	-3.2
PVIS				Sn	Sn	16 29 54.7	-7.0
PVIS				Lg		16 30 24.7	
	4.4nm,0.6s						
ECAL	**Calabor**	5.61	319	Pn	Pn	16 28 54.7	-3.2
	0.4nm,0.1s,SNR=7.5						
ECAL				Lg		16 30 25.4	
	15nm,0.4s,SNR=7.9						
ECAL	**Calabor**	5.61	319	Pn	Pn	16 28 54.7	-3.2
	0.4nm,0.1s,SNR=7.5						
PVRL	**Vila Real**	5.74	309	eSn	Sn	16 29 58.9	-7.4
	11nm,0.7s						
PVRL	**Vila Real**	5.74	309	Sn	Sn	16 29 58.9	-7.4
	5.7nm,0.7s						
PLOU	**Loures**	5.89	283	ePn	Pn	16 28 59.2	-2.6
PLOU				eSn	Sn	16 30 03.8	-6.3
PLOU				eSg	Sg	16 30 41.5	-7.2
	23nm,0.6s						
PLOU	**Loures**	5.89	283	Pn	Pn	16 28 59.2	-2.6
PLOU				Sn	Sn	16 30 03.8	-6.3
PLOU				Lg		16 30 41.5	
	12nm,0.6s						
EARI	**Arriondas**	6.07	336	Pn	Pn	16 29 01.4	-2.9
	0.4nm,0.2s,SNR=9.7						
EARI				Sn	Sn	16 30 05.1	-9.3
	0.3nm,0.2s,SNR=7.9						
EARI				Lg		16 30 38.0	
	67nm,1.7s,SNR=7.9						
EARI	**Arriondas**	6.07	336	Pn	Pn	16 29 01.4	-2.9
	0.4nm,0.2s,SNR=9.7						
ELOB	**Lobios**	6.30	312	Pn	Pn	16 29 03.2	-4.4
	0.2nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	16 30 10.6	-10
	0.9nm,0.2s,SNR=7.9						
ELOB				Lg		16 30 50.4	
	27nm,0.9s,SNR=7.9						
ELOB	**Lobios**	6.30	312	Pn	Pn	16 29 03.2	-4.4
	0.2nm,0.1s,SNR=7.9						
EINC	**Incio**	6.44	320	Pn	Pn	16 29 05.7	-3.9
	0.4nm,0.2s,SNR=4.0						
EINC				Lg		16 30 55.3	
	13nm,0.9s,SNR=7.9						
EINC	**Incio**	6.44	320	Pn	Pn	16 29 05.8	-3.8
EPON	**Pontenova**	6.85	325	Pn	Pn	16 29 12.1	-3.2
	0.3nm,0.1s,SNR=7.9						
EPON				Sn	Sn	16 30 23.9	-10
	0.5nm,0.2s,SNR=4.0						
EPON				Lg		16 31 07.5	
	3.4nm,0.4s,SNR=4.0						
EPON	**Pontenova**	6.85	325	Pn	Pn	16 29 12.1	-3.3
QUIF	**Quistinic**	10.14	355	ePn	P	16 29 56.4	-4.6
ROSF	**Rostrenen**	10.57	355	ePn	P	16 30 01.9	-4.9

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*ISK **06** 16:28:50.8,36.90N×27.74E,h8^{km},MD3.3*
*NEIC **06** 16:28:50.1,36.88N×27.70E,h5^{km},MD3.4(ATH), ML3.4(ISK),After ISK.*
*ATH **06** 16:28:52.7,36.87N×27.72E,h19^{km}±4^{km},MD3.4/6*
*CSEM **06** 16:28:52.2±0.1,36.96N×27.82E,h12^{km},MD3.3,Error ellipse: s-maj=2.2km s-min=1.8km az=85.0*
ISC 06 16:28:52.3±0.7,**36.93N**±0.04×**27.77E**±0.04,**h11**^{km}±6^{km}, **n30**,σ**0^{s}81**/36,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	0.29	297	i P	Pg	16 28 58.8	+0.4
BDRM				i S	Sg	16 29 03.3	+0.7
MLSB	**Milas**	0.36	1	i PG	Pg	16 28 59.4	-0.4
MLSB				i SG	Sg	16 29 05.1	+0.3
MLSB	**Milas**	0.36	1	Pg	Pg	16 28 59.4	-0.4
MLSB				Sg	Sg	16 29 05.4	+0.6
YER	**Yerkesik**	0.46	64	i PG	Pg	16 29 00.9	-0.8
YER	**Yerkesik**	0.46	64	Pg	Pg	16 29 00.9	-0.8
AYDN	**Tasoluk**	0.73	7	i P	Pb	16 29 06.2	-0.3
AYDN				i S	Sb	16 29 15.8	-0.5
ARG	**Arkhangelos**	0.77	158	ePN	Pn	16 29 07.0	-1.9
SMG	**Samos**	1.07	316	ePN	Pn	16 29 13.5	+0.3
FETY	**Fethiye**	1.10	105	PN	Pn	16 29 12.0	-1.5
DNZL	**Cakiroluk**	1.27	53	i P	Pb	16 29 16.1	+0.3
DNZL				i S	Sb	16 29 33.7	+1.8
DENT	**Denizli**	1.30	51	PN	Pn	16 29 16.8	+0.4
DENT	**Denizli**	1.30	51	Pn	Pn	16 29 16.8	+0.4
KARP	**Karpathos**	1.47	200	ePN	Pn	16 29 18.8	0.0
KARP				eSN	Sn	16 29 39.0	+0.9
IZM	**Izmir**	1.52	345	ePN	Pn	16 29 19.7	+0.2
BLCB	**Balcova**	1.56	339	ePN	Pn	16 29 19.2	-0.9
BLCB	**Balcova**	1.56	339	Pn	Pn	16 29 19.3	-0.9
BLCB	**Balcova**	1.56	339	Pn	Pn	16 29 19.3	-0.8
KSL	**Kastellorizon**	1.66	118	ePN	Pn	16 29 23.0	+1.5
ELL	**Elmali**	1.73	96	ePN	Pn	16 29 22.4	-0.1
ELL	**Elmali**	1.73	96	Pn	Pn	16 29 22.5	0.0
APE	**Apeiranthos**	1.80	275	ePN	Pn	16 29 23.8	+0.3
AKS	**Akhisar**	1.94	1	ePN	Pn	16 29 24.8	-0.8
AKS	**Akhisar**	1.94	1	Pn	Pn	16 29 24.9	-0.7
AKS	**Akhisar**	1.94	1	Pn	Pn	16 29 24.9	-0.7
KHL	**Karahalli**	1.97	45	ePN	Pn	16 29 25.8	-0.2
BCK	**Bucak**	2.31	76	ePN	Pn	16 29 31.2	+0.3
BCK	**Bucak**	2.31	76	Pn	Pn	16 29 31.2	+0.3
ISP	**Isparta**	2.37	67	ePn	Pn	16 29 32.3	+0.7
ISP	**Isparta**	2.37	67	ePn	Pn	16 29 32.3	+0.6
PRK	**Paraskevi**	2.59	333	ePB	Pb	16 29 37.5	-0.9

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*NEIC **06** 16:54:42.5,18.04N×102.11W,h62^{km},MD4.2(MEX),After MEX.*
MEX 06 16:54:41.7±0.9,**18.16N×102.10W,h6**^{km}±11^{km},**MD4.2,1C, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	0.82	133	⇑iP	Pb	16 54 55.9	-2.0
ZIIG				eS	Sb	16 55 06.9	-2.0
COLM	**Colima**	1.82	304	eP	Pn	16 55 10.9	-3.0
COLM				eS	Sn	16 55 33.4	-4.0
COLM	**Colima**	1.82	304	eP	Pn	16 55 10.5	-3.3
COLM				i S	Sn	16 55 32.0	-5.4
COLM				eS	Sn	16 55 33.4	-4.0
CGX	**Ciudad Guzman**	2.02	319	eP	Pn	16 55 13.0	-3.8
CAIG	**El Cayaco**	2.07	122	eP	Pn	16 55 12.6	-4.8
CAIG				i S	Sn	16 55 37.0	-6.7
ACX	**Acapulco**	2.45	121	eP	Pn	16 55 18.5	-4.3
ACX				i S	Sn	16 55 47.0	-6.4
SFJM	**Santa Fe**	2.48	339	eP	Pn	16 55 18.0	-5.2
SFJM				i S	Sn	16 55 57.5	+3.4
SFJM	**Santa Fe**	2.48	339	eP	Pn	16 55 18.0	-5.2
SFJM				i S	Sn	16 55 51.0	-3.1
YAIG	**Yautepec**	2.96	76	eP	Pn	16 55 26.6	-3.4
YAIG				i S	Sn	16 56 01.2	-5.1
UNM	**Universidad Na**	3.00	67	eP	Pn	16 55 27.5	-3.2
UNM				eS	Sn	16 56 10.5	+3.1
UNM	**Universidad Na**	3.00	67	eP	Pn	16 55 27.5	-3.2
UNM				eS	Sn	16 56 06.0	-1.4
CJM	**Chamela**	3.09	296	eP	Pn	16 55 29.1	-2.9
CJM				i S	Sn	16 56 06.8	-3.0
PPM	**Popocatepetl**	3.41	74	eP	Pn	16 55 34.0	-2.5
PPM				eS	Sn	16 56 09.6	-8.1
PPM	**Popocatepetl**	3.41	74	eP	Pn	16 55 33.0	-3.5
PPM				eP		16 55 34.0	
PPM				eS	Sn	16 56 09.6	-8.1
IIB	**San Bernardino**	3.65	77	i P	Pn	16 55 36.0	-3.9
IIB				i S	Sn	16 56 22.0	-1.8
OXX	**Oaxaca**	5.24	101	eP	Pn	16 56 00.0	-2.4

OTT 06 16:59:01.4±0.2,**52.76N×67.31W,MN3.1**/8,**Blast, Mount Wright, Qc Mining explosion.,Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	2.10	7	PN	Pn	16 59 37.4	-0.9
SCHQ				SN	Sn	17 00 05.2	-0.3
SCHQ				Trac		17 00 16.1	
	comp=Z,43nm,0.2s						
MNQ	**Manicouagan**	2.41	203	PN	Pn	16 59 41.9	-0.7
MNQ				SN	Sn	17 00 15.5	+2.3
MNQ				Trac		17 00 24.8	
	comp=Z,45nm,0.2s						
SMQ	**Clarke City**	2.57	171	PN	Pn	16 59 43.4	-1.5
SMQ				Trac		17 00 27.1	
	comp=Z,30nm,0.2s						
ICQ	**Pointe Anglais**	3.24	180	PN	Pn	16 59 52.5	-2.0
ICQ				Trac		17 00 49.8	
	comp=Z,16nm,0.2s						
CNQ	**Baie Comeau**	3.49	188	PN	Pn	16 59 57.0	-1.2
CNQ				Trac		17 00 58.5	
	comp=Z,10nm,0.1s						
GSQ	**Grosses Roches**	3.85	178	PN	Pn	17 00 01.6	-1.6
GSQ				Trac		17 01 11.4	
	comp=Z,9.3nm,0.2s						
LG4Q	**La Grande 4**	4.18	285	PN	Pn	17 00 04.4	-3.4
LG4Q				Trac		17 01 19.3	
	comp=Z,8.7nm,0.2s						
LMQ	**La Malbaie**	5.56	202	PN	Pn	17 00 24.1	-3.3
LMQ				SN	Sn	17 01 29.6	-3.5
LMQ				Trac		17 01 42.9	
	comp=Z,9.3nm,0.2s						
LMN	**Caledonia Moun**	7.10	166	PN	Pn	17 00 44.9	-4.3
DRLN	**Deer Lake**	7.11	116	PN	Pn	17 00 45.6	-3.6
DRLN				SN	Sn	17 02 05.5	-6.2
VLDQ	**Val d’Or**	7.97	238	PN	Pn	17 00 57.5	-3.9
MALO	**McAlpine Lake**	8.26	256	PN	P	17 00 59.1	-6.2
VIMO	**Victor Mine**	9.96	277	PN	P	17 01 22.2	-6.5
SILO	**Sutton Inlier**	10.60	286	PN	P	17 01 30.9	-6.6
FRB	**Frobisher Bay**	11.04	357	PN	P	17 01 36.1	-7.4

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*NIED **06** 17:13:00,32.90N×139.50E,h155^{km},Mw3.9 Best double couple: M$_0$7.52×10^{14} NP1:ϕ_s313°,δ64°,λ-36°. NP2:ϕ_s61°, δ58°,λ-149°.*
*JMA **06** 17:13:37.0±0.3,32.93N×139.52E,h193^{km}±3^{km},M3.9*
ISC 06 17:13:36.3±1.1,**32.9N**±0.1×**139.49E**±0.08,**h196**^{km}±6^{km}, **n21**,σ**0^{s}50**/25,**mb3.3**/2,**4C-3D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	0.35	52	⇓P	P	17 14 02.6	-0.2
JHJ2				S	S	17 14 23.1	-0.1
JMY	**Miyakejima3**	1.17	1	P	P	17 14 07.7	+0.5
JKO	**Kozu shima**	1.32	347	P	P	17 14 08.4	0.0
NJJJ	**Nii jima 2**	1.51	354	P	P	17 14 10.5	+0.4
TK01	**Tokai 1**	1.81	299	P	P	17 14 12.5	-0.4
JIM2	**Oshima 3**	1.82	359	P	P	17 14 13.2	+0.2
JIZS	**Izushimoda**	1.89	345	P	P	17 14 13.9	+0.2
TK04	**Tokai 4**	2.00	318	P	P	17 14 15.4	+0.5
TK04				S	S	17 14 44.7	+0.1
BSO3	**Boso 3**	2.08	24	⇓P	P	17 14 15.8	0.0
BSO3				S	S	17 14 45.6	-0.6
BSO1	**Boso 1**	2.15	35	P	P	17 14 16.1	-0.4
BSO1				S	S	17 14 47.2	-0.2
JOD2	**Odawara 2**	2.38	352	P	P	17 14 19.5	+0.4
SHZ3	**Shizuoka 3**	2.41	334	⇑P	P	17 14 19.9	+0.5
JYN	**Shimob**	2.71	344	⇑P	P	17 14 23.7	+0.9
JIE	**Ise**	2.76	304	S	S	17 14 58.5	-1.2
JRY	**Ryogami san**	3.15	351	⇑P	P	17 14 28.7	+0.6
JWZ	**Kozaga**	3.22	282	⇓P	P	17 14 28.8	-0.2
JAG	**Ashikaga**	3.52	360	⇑P	P	17 14 31.6	-1.0
JGM	**Miyama**	3.61	321	P	P	17 14 34.4	+0.6
MAT	**Matsushiro**	3.79	344	P	P	17 14 36.0	+0.1
JOF	**Joensuu**	68.87	332	ep	P	17 24 21.1	0.0
	0.2nm,0.3s,mb3.2						
KAF	**Kangasniemi**	71.25	333	ep	P	17 24 34.9	-0.6
	0.3nm,0.3s,mb3.4						

MAN 06 17:30:30.1,7.58N×126.13E,h4^{km}**,mb4.8,ML3.7,MS3.7, 2C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	0.64	168	eP	Pg	17 30 43.3	+0.4
MATI				eS	Sg	17 30 53.3	+1.9
BIPH	**Bislig**	0.65	21	⇑iP	Pg	17 30 42.0	-1.1
BIPH				i S	Sg	17 30 51.5	-0.2
BUKP	**Musuan**	1.10	286	eP	Pb	17 30 50.7	-0.6
BUKP				eS	Sb	17 31 08.5	+2.7
BUTP	**Butuan**	1.47	340	eP	Pn	17 30 57.0	-0.6
BUTP				eS	Sb	17 31 18.2	+1.5
CGP	**Cagayan de Oro**	1.67	302	⇑eP	Pn	17 30 59.4	-0.9
CGP				eS	Sb	17 31 22.6	+0.3
SCPH	**Surigao**	2.28	344	⇓eP	Pn	17 31 08.9	-0.2
PAGZ	**Pagadian**	2.73	276	eP	Pn	17 31 14.7	-0.9
MSLP	**Maasin**	2.83	334	eP	Pn	17 31 18.4	+1.4

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*CSEM **06** 17:42:43.9±0.1,37.81N×1.78W,h5^{km},ML2.6/4,Error ellipse: s-maj=2.3km s-min=1.7km az=165.0*
*SFS **06** 17:42:43.0,37.85N×1.81W*
MDD 06 17:42:44.0±0.3,**37.85N×1.80W,mbLg2.0**/12,**1C,Error ellipse: s-maj=4.5km s-min=1.9km az=4.0,PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	0.45	91	⇑Pg	Pg	17 42 51.7	-1.1
	6.7nm,0.2s,SNR=18						
EMUR				Lg		17 42 58.4	
	63nm,0.3s,SNR=47						
EMUR	**La Murta**	0.45	91	Pg	Pg	17 42 51.7	-1.2
	6.7nm,0.2s,SNR=18						
CART	**Cartagena**	0.69	112	P	Pg	17 42 57.3	-0.4
CART				S	Sg	17 43 05.9	-1.0
CART	**Cartagena**	0.69	112	eP	Pg	17 42 57.3	-0.4
CART				eS	Sg	17 43 05.9	-1.0
ENIJ	**Nijar**	0.94	200	Pg	Pg	17 43 00.8	-1.9
	8.0nm,0.3s,SNR=6.3						
ENIJ				Lg		17 43 14.4	
	16nm,0.4s,SNR=7.2						
EVIA	**Vianos**	0.96	325	Pg	Pg	17 43 02.1	-0.9
	11nm,0.4s,SNR=14						
EVIA				Lg		17 43 14.9	
	13nm,0.2s,SNR=11						
EQES	**Quesada**	1.00	267	Pg	Pg	17 43 02.7	-1.4
	6.8nm,0.1s,SNR=33						
EQES				Lg		17 43 16.8	
	34nm,0.2s,SNR=13						
EQES	**Quesada**	1.00	267	Pg	Pg	17 43 02.7	-1.3
	6.8nm,0.1s,SNR=33						
EBER	**Berja**	1.29	223	Pg	Pg	17 43 07.4	-2.3
	6.1nm,0.6s,SNR=12						
EBER				Lg		17 43 26.2	
	19nm,0.5s,SNR=5.5						
EBER	**Berja**	1.29	223	Pg	Pg	17 43 07.4	-2.3
	6.1nm,0.6s,SNR=12						
EBEN	**Beniarda**	1.50	55	Pg	Pg	17 43 11.9	-2.1
	6.1nm,0.7s,SNR=6.5						
EBEN				Lg		17 43 32.1	
	2.6nm,0.3s,SNR=5.5						
EBEN	**Beniarda**	1.50	55	Pg	Pg	17 43 11.9	-2.1
	6.1nm,0.7s,SNR=6.5						
EBAN	**Banos Encina**	1.60	282	Pn	Pn	17 43 12.0	-1.6
	1.6nm,0.1s,SNR=7.9						
EBAN				Pg	Pg	17 43 14.0	-1.9
	6.2nm,0.2s,SNR=7.9						
EBAN				Lg		17 43 34.4	
	11nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	1.60	282	Pg	Pg	17 43 14.0	-1.8
	6.2nm,0.2s,SNR=7.9						
ELUQ	**Luque**	1.98	262	Lg		17 43 46.5	
	3.0nm,0.2s,SNR=4.0						
EADA	**Adamuz**	2.21	279	Pn	Pn	17 43 20.3	-2.2
	0.9nm,0.1s,SNR=11						
EADA				Sn	Sn	17 43 47.9	-3.0
	4.3nm,0.1s,SNR=5.8						
EADA				Lg		17 43 54.4	
	4.8nm,0.1s,SNR=5.5						
EADA	**Adamuz**	2.21	279	Pn	Pn	17 43 20.3	-2.1
	0.9nm,0.1s,SNR=11						
EADA				Sn	Sn	17 43 47.9	-3.0
	4.3nm,0.1s,SNR=5.8						
ESDC	**Sonseca Array**	2.48	318	Pg	Pg	17 43 28.5	-5.0
	1.2nm,0.3s,baz=135,slow=17,SNR=22						
ESDC				Lg		17 44 01.0	
	2.3nm,0.3s,baz=134,slow=30,SNR=11						
ESDC	**Sonseca Array**	2.48	318	Pg	Pg	17 43 28.5	-5.0
	1.2nm,0.3s,baz=135,slow=17,SNR=22						
EMOS	**Mosqueruela**	2.71	22	Pn	Pn	17 43 27.9	-1.7
	0.3nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	17 44 01.1	-2.5
	3.8nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	2.71	22	Pn	Pn	17 43 27.9	-1.7
	0.3nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	17 44 01.1	-2.5
	3.8nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	2.73	64	Sn	Sn	17 43 59.5	-4.6
	0.2nm,0.1s,SNR=4.0						
EIBI	**Ibiza**	2.73	64	Sn	Sn	17 43 59.5	-4.6
	0.2nm,0.1s,SNR=4.0						
GUD	**Guadarrama**	3.33	328	Pn	Pn	17 43 35.2	-3.2
	0.2nm,0.4s,SNR=7.9						
GUD				Pg	Pg	17 43 45.7	-4.7
	0.8nm,0.2s,SNR=7.9						
GUD				Lg		17 44 28.8	
	2.6nm,0.3s,SNR=7.4						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	17 43 42.8	-3.1
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	17 44 26.5	-6.0
	0.5nm,0.1s,SNR=7.9						
EMIN				Lg		17 44 45.1	
	0.6nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	17 43 42.8	-3.0
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	17 44 26.5	-6.0
	0.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	4.20	284	Sn	Sn	17 44 34.6	-6.5
	1.5nm,0.4s,SNR=7.9						
EBAD				Lg		17 44 58.2	
	3.9nm,0.3s,SNR=7.9						

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*BJI **06** 18:39:20.8,4.85N×94.47E,h43^{km},mB4.5,mb4.7*
*NEIC **06** 18:39:23.6±0.9,5.15N×94.16E,h30^{km},mb4.5/13,Error ellipse: s-maj=21.1km s-min=12.9km az=53.0*
ISC 06 18:39:23.1±0.9,**5.3N**±0.1×**94.4E**±0.1,**h33**^{km},**n29**, σ**1^{s}02**/29,**mb4.5**/23,**1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	13.87	18	eP	P	18 42 42.5	+2.8
	6.4nm,0.3s						
KMI	**Kunming**	21.33	21	P	P	18 44 11.0	+1.5
KMI				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb3.6						
KMI	**Kunming**	21.33	21	P	P	18 44 11.0	+1.5
	comp=Z,4.0nm,1.2s,mb3.6						
JIRN	**Jiri**	23.61	342	eP	P	18 44 31.9	-0.2
	comp=Z,38nm,0.6s,mb5.0						
PKI	**Pulchoki**	23.79	340	eP	P	18 44 33.8	0.0
	comp=Z,12nm,0.6s,mb4.5						
DMN	**Daman**	23.93	339	eP	P	18 44 35.6	+0.4
	comp=Z,14nm,0.6s,mb4.6						
KKN	**Kakani**	24.03	340	eP	P	18 44 36.1	-0.1
	comp=Z,11nm,0.4s,mb4.6						
GYA	**Guiyang**	24.14	28	⇑iP	P	18 44 38.3	+1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
GKN	**Gorkha**	24.45	339	eP	P	18 44 40.7	+0.4
	comp=Z,15nm,0.3s,mb4.9						
LSA	**Lhasa**	24.51	353	P	P	18 44 39.4	-1.5
LSA	**Lhasa**	24.51	353	eP	P	18 44 40.6	-0.2
	comp=Z,10nm,0.6s,mb4.5						
KOLN	**Koldanda**	24.63	337	eP	P	18 44 43.2	+1.1
	comp=Z,31nm,0.6s,mb5.0						
ENH	**Enshi**	28.68	28	eP	P	18 45 17.5	-1.9
	comp=Z,4.4nm,0.4s,mb4.5						
XAN	**Xi’an**	31.67	23	P	P	18 45 43.9	-2.0
XAN				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.9						
GTA	**Gaotai**	34.37	7	eP	P	18 46 08.5	-0.6
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
BJT	**Baijiatuau**	39.80	26	eP	P	18 46 55.3	+0.5
	comp=Z,18nm,1.3s,mb4.6						
BJI	**Beijing**	39.82	26	eP	P	18 46 55.5	+0.5
BJI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
BJI	**Beijing**	39.82	26	eP	P	18 46 55.5	+0.5
	comp=Z,9.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	41.20	338	eP	P	18 47 06.3	0.0
	comp=Z,3.6nm,0.9s,mb4.0						
ULN	**Ulaanbaatar**	43.83	12	eP	P	18 47 26.8	-1.0
	comp=Z,3.1nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	46.59	124	eP	P	18 47 50.8	+0.6
	comp=Z,10nm,0.7s,mb4.9						
WB2	**Warramunga Arr**	46.60	124	eP	P	18 47 50.5	+0.3
CN2	**Changchun**	47.14	31	eP	P	18 47 52.7	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
KURK	**Kurchatov**	47.20	346	eP	P	18 47 55.0	+0.4
	comp=Z,11nm,0.6s,mb5.0						
CHKZ	**Chkalovo**	52.03	342	eP	P	18 48 31.6	+0.1
	comp=Z,8.8nm,0.5s,mb5.0						
JOF	**Joensuu**	73.31	335	ep	P	18 50 51.2	-1.7
	comp=Z,1.3nm,0.7s,mb4.0						
KAF	**Kangasniemi**	75.22	333	ep	P	18 50 54.8	-9.2
	comp=Z,0.2nm,0.3s,mb3.5						
KEV	**Kevo**	77.38	341	ep	P	18 51 15.8	-0.3
	comp=Z,0.3nm,0.3s,mb3.7						
KHC	**Kasperske Hory**	80.03	319	eP	P	18 51 32.0	+1.0

MAN 06 18:50:34.6,10.92N×124.87E,h33^{km}**,mb3.9,ML2.7, MS2.4,1D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	**Palo**	0.26	24	i P	P	18 50 43.0	+1.2
PLP				i S	S	18 50 47.5	+0.4
MSLP	**Maasin**	0.78	181	eP	P	18 50 50.4	+1.2
MSLP				eS	S	18 51 01.3	+1.4
SCPH	**Surigao**	1.29	152	⇓eP	P	18 50 57.8	+1.5
SCPH				eS	S	18 51 12.6	-0.1

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*CSEM **06** 19:05:31.0±0.2,32.93N×55.52E,h5^{km},ML3.5,Error ellipse: s-maj=6.1km s-min=2.1km az=75.0*
*TEH **06** 19:05:32.8,32.91N×55.70E,h12^{km},Mn3.5*
*THR **06** 19:05:32.2±0.6,32.86N×55.48E,h14^{km},ML3.2*
ISC 06 19:05:33.6±0.9,**32.92N**±0.04×**55.35E**±0.07,**h10**^{km},**n17**, σ**1^{s}08**/22,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ICHK	**Chekchek**	1.04	230	Pg	Pg	19 05 53.4	-1.1
IBAF	**Bafgh**	1.34	172	Pg	Pn	19 05 56.6	-1.9
IMEH	**Mehriz**	1.65	202	Pn	Pn	19 06 04.0	+1.1
ISAD	**Sadrabad**	1.73	235	Pn	Pn	19 06 05.9	+1.9
NASN	**Na’in**	2.14	267	ePN	Pn	19 06 11.5	+1.6
NASN				eSG	Sg	19 06 43.1	-1.8
NASN				AML	AML	19 06 51.9	
	comp=E,129nm,0.4s						
NASN	**Na’in**	2.14	267	ePn	Pn	19 06 11.5	+1.6
	SNR=52						
NASN				eSg	Sg	19 06 43.1	-1.8
	comp=E,129nm,0.4s,SNR=90						
IFIR	**Firoozkooh**	3.46	322	Pn	Pn	19 06 28.7	-0.1
IFIR				Sn	Sn	19 07 10.3	0.0
IDMV	**Damavand**	3.82	315	Pn	Pn	19 06 34.0	+0.2
DAMV	**Damavand**	3.89	315	ePN	Pn	19 06 35.5	+0.6
DAMV				SN	Sn	19 07 21.9	+0.9
DAMV				AML	AML	19 07 57.4	
	comp=N,41nm,0.6s						
IQOM	**Qom**	4.04	300	Pn	Pn	19 06 37.9	+0.9
IAFJ	**Afjeh**	4.20	315	Pn	Pn	19 06 39.9	+0.7
IAFJ				Sn	Sn	19 07 28.3	-0.6
IPAY	**Payeh**	4.63	39	Pn	Pn	19 06 43.2	-2.2
IKRD	**Kardeh**	4.65	33	Pn	Pn	19 06 51.0	+5.4
ASAO	**Ashtian**	4.72	292	ePN	Pn	19 06 46.6	0.0
ASAO				AML	AML	19 08 22.2	
	comp=N,11nm,0.5s						
IMHD	**Mahdasht**	4.75	307	Pn	Pn	19 06 46.8	-0.3
IMHD				Sn	Sn	19 07 42.0	-1.0
IRAZ	**Razeghan**	5.13	300	Lg		19 08 20.8	
IRAZ	**Razeghan**	5.13	300	Pn	Pn	19 06 52.3	-0.1

*JMA **06** 19:15:34.8±0.3,24.18N×121.49E,h62^{km},M2.7*
*TAP **06** 19:15:34.7,24.11N×121.52E,h21^{km},ML3.5*
TAP Felt II J at Chiawan, II J at Hehuanshan, II J at Shilin, I J at Nanshan, I J at Nanau.
ISC 06 19:15:34.9±0.3,**24.05N**±0.02×**121.57E**±0.02,**h23**^{km}±3^{km},**n38,**σ**0**^{s}**67**/65,**5C-2D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	0.04	34	⇑iP	Pb	19 15 39.2	+0.2
TWD				S	Sb	19 15 42.0	+0.3
HWA	**Hwalien**	0.08	158	⇑iP	Pb	19 15 39.9	+0.7
HWA				S	Sb	19 15 43.3	+1.2
ESL	**Shilin**	0.27	209	⇑iP	Pb	19 15 41.1	-0.2
ESL				S	Sb	19 15 45.6	0.0
WHF	**Hehuan Shan**	0.30	289	⇓iP	Pb	19 15 41.3	-0.5
WHF				S	Sb	19 15 45.7	-0.7
ENA	**Nanau**	0.41	22	⇓iP	Pb	19 15 43.1	-0.3
ENA				S	Sb	19 15 48.9	-0.4
TWT	**Tachien**	0.42	299	⇑iP	Pb	19 15 43.4	-0.2
TWT				S	Sb	19 15 48.9	-0.7
NNS	**Nan Shan**	0.43	335	i P	Pb	19 15 43.2	-0.6
NNS				S	Sb	19 15 48.8	-1.1
ENTT	**Nioudou**	0.59	359	eP	Pb	19 15 45.9	-0.5
ENTT				S	Sb	19 15 54.2	-0.2
TWC	**Suao**	0.61	24	eP	Pb	19 15 46.6	-0.3
TWC				S	Sb	19 15 55.3	+0.3
SMLT	**Sun Moon Lake**	0.64	255	P	Pb	19 15 47.0	-0.3
SMLT				S	Sb	19 15 55.4	-0.4
NSK	**Sanguang**	0.65	343	eP	Pb	19 15 46.8	-0.7
NSK				S	Sb	19 15 55.3	-0.9
TYC	**Yuchr**	0.67	258	eP	Pb	19 15 47.3	-0.6
TYC				S	Sb	19 15 55.6	-1.1
TWE	**Neicheng**	0.67	7	eP	Pb	19 15 47.4	-0.5
TWE				S	Sb	19 15 56.6	-0.2
ILA	**Ilan**	0.73	13	eP	Pb	19 15 48.3	-0.6
NSTT	**Nanjuang**	0.78	318	⇑iP	Pb	19 15 49.5	-0.2
NSTT				S	Sb	19 15 58.9	-0.9
TWQ1	**Liyutan**	0.79	292	eP	Pb	19 15 50.0	+0.2
TCU	**Taichung**	0.83	277	eP	Pb	19 15 50.9	+0.4
NSY	**Sanyi**	0.83	296	eP	Pb	19 15 51.0	+0.6
NSY				S	Sb	19 16 02.9	+1.7
WNT	**Mingjian**	0.83	258	eP	Pb	19 15 51.0	+0.4
TWA	**Mucha**	0.93	1	eP	Pb	19 15 52.1	0.0
TWA				S	Sb	19 16 04.3	+0.2
HSN	**Hsinchu**	0.93	324	eP	Pb	19 15 52.9	+0.7
NCU	**National Centr**	0.98	339	eP	Pb	19 15 53.6	+0.5
NCU				S	Sb	19 16 07.9	+2.3
TAP1	**Taipei**	0.99	357	eP	Pb	19 15 53.4	+0.2
TAP1				S	Sb	19 16 06.3	+0.5
TAP	**Taipei**	0.99	356	eP	Pb	19 15 53.1	-0.1
TAP				S	Sb	19 16 06.3	+0.6
TWB1	**Santiao Chiao**	1.03	22	eP	Pb	19 15 53.6	-0.3
NWF	**Wu-fen Shan**	1.03	10	eP	Pb	19 15 53.7	-0.3
TWS1	**Kuangyinshan**	1.06	352	eP	Pb	19 15 54.6	+0.2
TWS1				S	Sb	19 16 09.5	+1.7
WTCT	**Ta-ch’eng**	1.20	261	eP	Pn	19 15 56.9	+0.5
TWY	**Chenhua**	1.22	1	eP	Pn	19 15 57.5	+0.7
WSF	**Szhu**	1.30	252	eP	Pn	19 15 58.2	+0.3
WSF				S	Sn	19 16 15.9	+1.1
YOJ	**Yonaguni jima**	1.37	72	P	Pn	19 15 58.8	-0.2
YOJ				eS	Sn	19 16 16.3	-0.2
PNG	**Penghu**	1.91	256	eP	Pn	19 16 06.1	-0.5
WDGT	**Dungji**	1.92	246	eP	Pn	19 16 06.6	-0.2
IRIF	**Iriomote-Funau**	1.99	81	P	Pn	19 16 07.4	-0.3
IRIF				S	Sn	19 16 32.3	+0.1
HATJ	**Hateruma jima**	2.04	89	P	Pn	19 16 08.5	0.0
HATJ				S	Sn	19 16 33.6	+0.1
JKRS	**Kuro-shima**	2.23	85	P	Pn	19 16 11.4	+0.2
JKRS				S	Sn	19 16 39.8	+1.4
JIJ	**Ishigaki jima**	2.37	82	P	Pn	19 16 12.6	-0.6
JIJ				S	Sn	19 16 40.7	-1.1
JTJ	**Tarama**	2.91	78	P	Pn	19 16 20.8	-0.2
JTJ				eS	Sn	19 16 55.1	-0.5

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*THR **06** 19:41:23.7±0.6,38.39N×49.72E,h14^{km},ML2.5*
*TEH **06** 19:41:24.2,38.89N×50.27E,h23^{km},Mn3.6*
*CSEM **06** 19:41:24.0±0.2,38.38N×49.73E,h10^{km},ML3.2/2,Error ellipse: s-maj=4.7km s-min=3.7km az=169.0*
ISC 06 19:41:08.2±1.9,**40.0N**±0.1×**50.0E**±0.1,**h89**^{km}±30^{km},**n22,**σ**0**^{s}**80**/25,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGZV	**Gazvin**	3.64	177	Pn	P	19 42 05.4	+1.8
IMHD	**Mahdasht**	4.37	173	Lg		19 43 04.6	
IMHD	**Mahdasht**	4.37	173	Pn	P	19 42 14.4	+0.7
IAFJ	**Afjeh**	4.39	161	Lg		19 43 05.3	
IAFJ	**Afjeh**	4.39	161	Pn	P	19 42 13.3	-0.6
IRAZ	**Razeghan**	4.62	180	Pn	P	19 42 16.7	-0.4
DAMV	**Damavand**	4.67	160	ePN	P	19 42 17.6	-0.2
DAMV				eSG	S	19 43 11.9	+0.8
IDMV	**Damavand**	4.74	159	Pn	P	19 42 19.4	+0.7
IFIR	**Firoozkooh**	4.90	152	Pn	P	19 42 20.9	-0.1
IQOM	**Qom**	5.25	170	Pn	P	19 42 25.5	-0.2
IQOM	**Qom**	5.25	170	Sn	S	19 43 10.0	-16
SNGE	**Sanandaj**	5.35	204	ePN	P	19 42 24.7	-2.3
SNGE				eSG	S	19 43 28.3	+0.3
SNGE				AML	AML	19 43 30.8	
	comp=N,7.3nm,0.6s						
SNGE	**Sanandaj**	5.35	204	ePn	P	19 42 24.7	-2.4
	SNR=47						
SNGE				eSg	S	19 43 28.3	+0.3
	comp=N,7.3nm,0.6s,SNR=91						
ASAO	**Ashtian**	5.47	180	ePN	P	19 42 25.0	-3.7
ASAO				eSG	S	19 43 30.4	-0.6
ASAO				AML	AML	19 43 35.0	
	comp=N,7.0nm,0.2s						
ASAO	**Ashtian**	5.47	180	ePn	P	19 42 25.0	-3.7
	SNR=47						
ASAO				eSg	S	19 43 30.4	-0.6
	comp=N,7.0nm,0.2s,SNR=91						
EKS2	**Erkin-Say**	18.06	74	P	P	19 45 14.0	-0.4
	SNR=9.1						
AAK	**Ala-Archa**	18.59	74	P	P	19 45 20.2	-0.3
	SNR=6.8						
CHMS	**Chumysh**	18.78	73	P	P	19 45 22.2	-0.5
	SNR=9.7						
KBK	**Karagaybulak**	18.92	74	P	P	19 45 24.4	+0.1
	SNR=8.2						
TKM2	**Tokmak 2**	19.40	73	P	P	19 45 29.5	+0.1
	SNR=23						
JOF	**Joensuu**	25.50	340	epkp	P	19 46 29.7	+0.3
KAF	**Kangasniemi**	26.35	335	epkp	P	19 46 38.0	+0.7

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*JMA **06** 20:11:06.9±0.3,24.19N×121.81E,h18^{km},M2.6*
TAP 06 20:11:06.5,24.34N×121.76E,h7^{km},ML3.3,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	1.15	84	P	Pb	20 11 27.4	-0.8
YOJ				eS	Sb	20 11 42.2	-0.9
IRIF	**Iriomote-Funau**	1.80	90	P	Pn	20 11 36.8	-1.3
IRIF				eS	Sn	20 11 59.2	-2.2
JKRS	**Kuro-shima**	2.06	92	P	Pn	20 11 40.7	-1.1
JKRS				eS	Sn	20 12 05.9	-2.0
JIJ	**Ishigaki jima**	2.17	89	P	Pn	20 11 43.2	-0.3
JIJ				eS	Sn	20 12 07.5	-3.5

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*CSEM **06** 20:16:44.1±0.1,37.82N×1.79W,h2^{km},ML2.5/3,Error ellipse: s-maj=2.3km s-min=1.6km az=167.0*
MDD 06 20:16:44.1±0.3,**37.83N×1.80W,mbLg1.8**/11,**2C-1D, Error ellipse: s-maj=5.1km s-min=2.1km az=179.0, PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	0.44	88	⇑Pg	Pg	20 16 52.1	-0.8
	4.5nm,0.3s,SNR=18						
EMUR				Lg		20 16 58.4	
	53nm,0.3s,SNR=12						
EMUR	**La Murta**	0.44	88	Pg	Pg	20 16 52.1	-0.8
	4.5nm,0.3s,SNR=18						
ENIJ	**Nijar**	0.92	201	Pg	Pg	20 17 00.7	-1.7
	5.6nm,0.4s,SNR=7.9						
ENIJ				Lg		20 17 13.1	
	4.3nm,0.2s,SNR=5.1						
EVIA	**Vianos**	0.98	326	Pg	Pg	20 17 02.5	-1.2
	6.2nm,0.3s,SNR=8.3						
EVIA				Lg		20 17 15.7	
	7.8nm,0.2s,SNR=6.4						
EVIA	**Vianos**	0.98	326	Pg	Pg	20 17 02.5	-1.2
	6.2nm,0.3s,SNR=8.3						
EQES	**Quesada**	1.01	269	Pg	Pg	20 17 02.9	-1.4
	2.9nm,0.1s,SNR=28						
EQES				Lg		20 17 17.3	
	16nm,0.2s,SNR=5.5						
EQES	**Quesada**	1.01	269	Pg	Pg	20 17 02.9	-1.4
	2.9nm,0.1s,SNR=28						
EBER	**Berja**	1.27	224	Pg	Pg	20 17 07.5	-2.0
	3.8nm,0.7s,SNR=8.1						
EBER				Lg		20 17 25.9	
	5.1nm,0.3s,SNR=4.6						
EBER	**Berja**	1.27	224	Pg	Pg	20 17 07.5	-2.0
	3.8nm,0.7s,SNR=8.1						
EBEN	**Beniarda**	1.51	54	Pg	Pg	20 17 11.5	-2.9
	1.7nm,0.4s,SNR=7.9						
EBEN				Lg		20 17 31.9	
	1.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	1.51	54	Pg	Pg	20 17 11.5	-2.8
	1.7nm,0.4s,SNR=7.9						
EBAN	**Banos Encina**	1.61	283	Pn	Pn	20 17 12.5	-1.4
	0.5nm,0.1s,SNR=7.9						
EBAN				Pg	Pg	20 17 13.5	-2.7
	1.8nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	20 17 33.0	-2.6
	1.2nm,0.1s,SNR=7.9						
EBAN				Lg		20 17 34.9	
	4.0nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	1.61	283	Pg	Pg	20 17 13.5	-2.7
	1.8nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	20 17 33.0	-2.6
	1.2nm,0.1s,SNR=7.9						
ELUQ	**Luque**	1.98	263	Pg	Pg	20 17 19.3	-4.3
	1.6nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	20 17 44.7	-0.4
	1.4nm,0.2s,SNR=7.9						
ELUQ				Lg		20 17 49.4	
	1.4nm,0.2s,SNR=7.9						
EADA	**Adamuz**	2.22	280	Pn	Pn	20 17 20.8	-1.9
	0.8nm,0.3s,SNR=5.2						
EADA				Sn	Sn	20 17 48.1	-3.2
	2.4nm,0.1s,SNR=6.9						
EADA				Lg		20 17 55.6	
	2.2nm,0.1s,SNR=6.4						
EADA	**Adamuz**	2.22	280	Pn	Pn	20 17 20.8	-1.9
	0.8nm,0.3s,SNR=5.2						
EADA				Sn	Sn	20 17 48.1	-3.2
	2.4nm,0.1s,SNR=6.9						
ESDC	**Sonseca Array**	2.50	318	Pg	Pg	20 17 30.0	-4.1
	0.8nm,0.4s,baz=139,slow=17,SNR=15						
ESDC				Lg		20 18 01.0	
	1.0nm,0.3s,baz=177,slow=30,SNR=7.9						
ESDC	**Sonseca Array**	2.50	318	Pg	Pg	20 17 30.0	-4.1
	0.8nm,0.4s,baz=139,slow=17,SNR=15						
GUD	**Guadarrama**	3.35	328	Pg	Pg	20 17 45.2	-5.9
	0.5nm,0.2s,SNR=7.9						
GUD				Lg		20 18 29.5	
	1.1nm,0.3s,SNR=6.0						
EMIN	**Mina Concepcio**	3.86	271	Pn	Pn	20 17 43.0	-3.0
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	20 18 26.8	-6.0
	0.2nm,0.1s,SNR=7.9						
EMIN				Lg		20 18 47.1	
	0.6nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	3.86	271	Pn	Pn	20 17 43.0	-3.1
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	20 18 26.8	-6.0
	0.2nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	4.21	284	Sn	Sn	20 18 35.1	-6.5
	1.4nm,0.2s,SNR=7.9						
EBAD				Lg		20 18 58.6	
	1.7nm,0.2s,SNR=7.9						
PKS7	**Kunszentmiklos**	17.96	52	⇑eP	P	20 20 56.9	+0.2
PKSN	**Nyarlorinc**	18.35	54	⇓eP	P	20 21 01.8	+0.2

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*NEIC **06** 21:41:47.0,9.43S×114.30E,h2^{km},ML3.6(DJA),After DJA.*
DJA 06 21:41:47.2±1.0,**9.51S×114.25E,h33**^{km},**MD5.3**/4,**ML3.6**/4,**4C-4D,Error ellipse: s-maj=22.5km s-min=9.8km az=33.0,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	**Scrawed**	1.03	354	⇑iPn	Pn	21 42 04.1	-1.4
	82nm,0.2s						
SRDI				⇓iSn	Sn	21 42 15.5	-3.4
KELI	**Kelakatan**	1.31	10	⇓iPn	Pn	21 42 08.4	-1.1
	29nm,0.2s						
KELI				⇑iSn	Sn	21 42 24.4	-1.5
RATI	**Rata**	1.49	58	⇓iPn	Pn	21 42 11.2	-0.8
	228nm,0.3s						
RATI				⇑iSn	Sn	21 42 27.2	-3.3
KEDI	**Kedomdong**	2.10	61	⇓iPn	Pn	21 42 18.6	-2.2
	18nm,0.2s						
KEDI				⇑iSn	Sn	21 42 37.2	-8.9

IGQ 06 21:53:52.3,1.54S×81.47W,h21^{km}±2^{km},**mb4.2,Error ellipse: s-maj=3.8km s-min=1.8km az=7.5,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	**Salinas**	0.80	143	P	Pb	21 54 07.1	-0.4
SALI				S	Sb	21 54 18.0	+0.2
HOJA	**Cerro de Hojas**	1.04	62	P	Pb	21 54 11.4	-0.2
HOJA				S	Sb	21 54 25.0	+0.3
JAMA	**Jama**	1.79	45	P	Pn	21 54 23.9	+1.3
JAMA				S	Sn	21 54 46.9	+2.0
IGUA	**Igualata**	2.83	89	P	Pn	21 54 38.2	+0.9
ARRY	**Arrayan**	3.01	89	P	Pn	21 54 40.9	+1.0
ARRY				S	Sn	21 55 15.8	0.0
PISA	**Pisayambo**	3.12	81	P	Pn	21 54 44.2	+2.7
NAS1	**Nasa**	3.12	73	P	Pn	21 54 45.0	+3.5
JUA2	**San Juan 2**	3.15	65	P	Pn	21 54 43.6	+1.7
TERV	**Terraza Guagua**	3.17	65	P	Pn	21 54 45.9	+3.7
PINO	**Pino**	3.17	64	P	Pn	21 54 43.8	+1.6
VC1	**Cotopaxi 1**	3.19	74	P	Pn	21 54 46.5	+4.0
TAMB	**Tambo**	3.21	75	P	Pn	21 54 46.8	+4.0
YANA	**Yana**	3.22	64	P	Pn	21 54 45.0	+2.1
ANTI	**Antisana**	3.48	72	P	Pn	21 54 50.4	+3.8

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*NEIC **06** 21:56:17.2,37.87N×1.80W,ML2.9(LDG),MN2.6(MDD),After MDD.*
NEIC Felt [III] at Lorca.
*INMG **06** 21:56:17.3±1.6,37.88N×1.81W,h1^{km}±4^{km},ML2.7,Error ellipse: s-maj=2.7km s-min=2.4km az=121.0*
*CSEM **06** 21:56:17.0±0.1,37.88N×1.80W,h2^{km},ML3.2/9,Error ellipse: s-maj=2.8km s-min=2.1km az=159.0*
*SFS **06** 21:56:17.0,37.80N×1.80W*
*LDG **06** 21:56:19.6±0.5,37.89N×1.86W,h5^{km},Md3.7/1,Ml2.9/4, Error ellipse: s-maj=9.7km s-min=4.5km az=144.0*
MDD 06 21:56:17.2±0.2,**37.87N×1.80W,mbLg2.5**/33,**2C-3D, Error ellipse: s-maj=3.4km s-min=2.1km az=4.0, PRXIMO,Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	0.44	93	⇑Pg	Pg	21 56 25.3	-0.7
	SNR=18						
EMUR				Lg		21 56 31.9	
	414nm,0.3s,SNR=5.0						
EMUR	**La Murta**	0.44	93	Pg	Pg	21 56 25.3	-0.7
	SNR=18						
CART	**Cartagena**	0.69	114	ePg	Pg	21 56 29.7	-1.3
CART	**Cartagena**	0.69	114	⇓P	Pg	21 56 29.9	-1.1
CART				S	Sg	21 56 38.4	-1.8
CART	**Cartagena**	0.69	114	ePg	Pg	21 56 29.7	-1.3
ENIJ	**Nijar**	0.95	200	⇑Pg	Pg	21 56 34.2	-2.0
	19nm,0.4s,SNR=18						
ENIJ				Lg		21 56 48.1	
	57nm,0.3s,SNR=5.0						
EVIA	**Vianos**	0.95	324	⇓Pg	Pg	21 56 35.0	-1.2
	135nm,0.5s,SNR=18						
EVIA				Lg		21 56 48.0	
	84nm,0.3s,SNR=5.0						
EQES	**Quesada**	1.01	267	⇓Pg	Pg	21 56 36.0	-1.4
	19nm,0.3s,SNR=18						
EQES				Lg		21 56 50.5	
	55nm,0.2s,SNR=5.0						
EQES	**Quesada**	1.01	267	Pg	Pg	21 56 36.0	-1.4
	19nm,0.3s,SNR=18						
EBER	**Berja**	1.30	222	Pg	Pg	21 56 40.7	-2.5
	17nm,0.5s,SNR=33						
EBER				Lg		21 56 59.7	
	153nm,0.8s,SNR=5.0						
EBER	**Berja**	1.30	222	Pg	Pg	21 56 40.7	-2.5
	17nm,0.5s,SNR=33						
EBEN	**Beniarda**	1.49	55	Pg	Pg	21 56 44.4	-2.6
	6.1nm,0.2s,SNR=17						
EBEN				Lg		21 57 05.7	
	20nm,0.6s,SNR=5.0						
EBEN	**Beniarda**	1.49	55	Pg	Pg	21 56 44.4	-2.7
	6.1nm,0.2s,SNR=17						
EBAN	**Banos Encina**	1.60	281	Pg	Pg	21 56 45.4	-3.7
	13nm,0.3s,SNR=7.9						
EBAN				Lg		21 57 07.9	
	134nm,0.4s,SNR=7.9						
ELUQ	**Luque**	1.98	262	Pn	Pn	21 56 51.4	-1.0
ELUQ				Sn	Sn	21 57 16.6	-1.7
ELUQ				Lg		21 57 22.0	
ELUQ	**Luque**	1.98	262	Pn	Pn	21 56 51.4	-1.0
	11nm,0.4s,SNR=15						
ELUQ				Sn	Sn	21 57 16.6	-1.7
	21nm,0.3s,SNR=5.0						
ELUQ				Lg		21 57 22.0	
	12nm,0.2s,SNR=6.8						
ELOJ	**Sierra Loja**	2.01	250	Pn	Pn	21 56 52.2	-0.6
ELOJ				Lg		21 57 19.2	
ELOJ	**Sierra Loja**	2.01	250	Pn	Pn	21 56 52.2	-0.6
	2.0nm,0.2s,SNR=9.1						
ELOJ				Lg		21 57 20.2	
	11nm,0.5s,SNR=5.0						
EADA	**Adamuz**	2.22	279	Pn	Pn	21 56 53.6	-2.1
	4.0nm,0.2s,SNR=20						
EADA				Sn	Sn	21 57 21.4	-2.9
	24nm,0.3s,SNR=5.0						
EADA				Lg		21 57 28.1	
	10nm,0.2s,SNR=5.0						
EADA	**Adamuz**	2.22	279	Pn	Pn	21 56 53.6	-2.1
	4.0nm,0.2s,SNR=20						
EADA				Sn	Sn	21 57 21.4	-2.8
	24nm,0.3s,SNR=5.0						
ESLA	**Sonseca Array**	2.48	318	ePn	Pn	21 57 01.8	+2.3
ESLA				eSn	Sn	21 57 26.2	-4.6
ESLA				eSg	Sg	21 57 33.6	-6.1
ESDC	**Sonseca Array**	2.48	318	Pn	Pn	21 56 57.2	-2.3
	2.5nm,0.5s,baz=128,slow=13,SNR=21						
ESDC				Pg	Pg	21 57 01.6	-5.0
	14nm,0.3s,baz=122,slow=16,SNR=7.9						
ESDC				Lg		21 57 34.9	
	9.1nm,0.3s,baz=95,slow=42,SNR=8.4						
ESDC	**Sonseca Array**	2.48	318	Pn	Pn	21 56 57.2	-2.3
	2.5nm,0.5s,SNR=21						
ESDC	**Sonseca Array**	2.48	318	Pg	Pg	21 57 01.6	-5.1
	14nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	2.70	22	Pn	Pn	21 57 01.1	-1.6
EMOS				Pg	Pg	21 57 11.2	0.0
EMOS				Sn	Sn	21 57 33.3	-3.2
EMOS				Lg		21 57 42.4	
EMOS	**Mosqueruela**	2.70	22	Pn	Pn	21 57 01.1	-1.6
	0.7nm,0.3s,SNR=7.3						
EMOS				Pg	Pg	21 57 09.2	-1.9
	3.9nm,0.3s,SNR=8.1						
EMOS				Sn	Sn	21 57 33.3	-3.2
	SNR=7.9						
EMOS				Lg		21 57 42.4	
	11nm,0.5s,SNR=7.9						
EMOS	**Mosqueruela**	2.70	22	Pn	Pn	21 57 01.1	-1.5
	0.7nm,0.3s,SNR=7.3						
EMOS				Sn	Sn	21 57 33.3	-3.2
	SNR=7.9						
EMIJ	**Mijas**	2.71	242	Pg	Pg	21 57 05.6	-5.7
	2.0nm,0.3s,SNR=7.9						
EMIJ				Sn	Sn	21 57 37.2	+0.5
	SNR=4.0						
EMIJ				Lg		21 57 45.5	
	8.0nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	2.73	64	Pn	Pn	21 56 59.5	-3.5
	1.0nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	21 57 32.4	-4.8
	SNR=7.9						
EIBI	**Ibiza**	2.73	64	Pn	Pn	21 56 59.5	-3.5
	1.0nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	21 57 32.4	-4.8
	SNR=7.9						
LIJA	**Lijar**	3.03	253	eP	Pn	21 57 08.0	+0.7
GUD	**Guadarrama**	3.32	327	Pn	Pn	21 57 09.5	-2.0
	0.8nm,0.3s,SNR=5.6						
GUD				Pg	Pg	21 57 18.6	-5.0
	4.3nm,0.2s,SNR=7.9						
GUD				Lg		21 58 02.3	
	9.8nm,0.3s,SNR=5.0						
ESPR	**Espera**	3.38	254	Pn	Pn	21 57 10.3	-2.1
	0.4nm,0.1s,SNR=4.0						
ESPR				Sn	Sn	21 57 50.5	-3.3
	SNR=4.0						
ESPR	**Espera**	3.38	254	Pn	Pn	21 57 10.3	-2.1
	0.4nm,0.1s,SNR=4.0						
ESPR				Sn	Sn	21 57 50.5	-3.3
	SNR=4.0						
ERTA	**Horta de San J**	3.50	27	Pn	Pn	21 57 11.6	-2.5
	1.9nm,0.2s,SNR=8.2						
ERTA				Sn	Sn	21 57 53.2	-3.6
	SNR=7.9						
ERTA				Lg		21 58 06.8	
	2.3nm,0.2s,SNR=5.0						
ERTA	**Horta de San J**	3.50	27	Pn	Pn	21 57 11.6	-2.4
	1.9nm,0.2s,SNR=8.2						
ERTA				Sn	Sn	21 57 53.2	-3.6
	SNR=7.9						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	21 57 15.4	-3.7
	0.3nm,0.1s,SNR=9.0						
EMIN				Sn	Sn	21 57 59.7	-6.3
	13nm,0.5s,SNR=5.0						
EMIN				Lg		21 58 18.4	
	18nm,0.5s,SNR=5.6						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	21 57 15.4	-3.8
	0.3nm,0.1s,SNR=9.0						
EMIN				Sn	Sn	21 57 59.7	-6.2
	13nm,0.5s,SNR=5.0						
ESAC	**San Caprasio**	3.98	14	Pn	Pn	21 57 18.5	-2.4
	4.7nm,0.3s,SNR=7.9						
ESAC				Pg	Pg	21 57 32.4	-4.4
	6.6nm,0.3s,SNR=7.9						
ESAC				Lg		21 58 24.0	
	28nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	3.98	14	Pn	Pn	21 57 18.5	-2.4
	4.7nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	4.20	284	Pn	Pn	21 57 20.1	-3.8
	0.2nm,0.1s,SNR=4.9						
EBAD				Pg	Pg	21 57 33.5	-7.6
	1.6nm,0.2s,SNR=6.1						
EBAD				Sn	Sn	21 58 08.9	-5.6
	12nm,0.4s,SNR=5.0						
EBAD				Lg		21 58 28.9	
	14nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	4.20	284	Pn	Pn	21 57 20.1	-3.9
	0.2nm,0.1s,SNR=4.9						
EBAD	**Badajoz**	4.20	284	Pg	Pg	21 57 33.5	-7.5
	1.6nm,0.2s,SNR=6.1						
EBAD				Sn	Sn	21 58 08.9	-5.6
	12nm,0.4s,SNR=5.0						
PBEJ	**Beja**	4.80	274	ePn	Pn	21 57 29.8	-2.7
PBEJ				eSn	Sn	21 58 23.3	-6.4
PBEJ				eSg	Sg	21 58 50.0	-7.1
	8.6nm,0.6s						
PBEJ	**Beja**	4.80	274	ePn	Pn	21 57 29.8	-2.7
PBEJ				eSn	Sn	21 58 23.3	-6.4
PBEJ				eSg	Sg	21 58 50.0	-7.1
	8.6nm,0.6s						
PCBR	**Castelo Branco**	4.85	296	ePn	Pn	21 57 30.3	-3.0
PCBR				eSn	Sn	21 58 24.6	-6.4
PCBR				eSg	Sg	21 58 50.5	-8.3
	12nm,0.8s						
PCBR	**Castelo Branco**	4.85	296	ePn	Pn	21 57 30.3	-3.0
PCBR				eSn	Sn	21 58 24.6	-6.4
PCBR				eSg	Sg	21 58 50.5	-8.3
	12nm,0.8s						
EVO	**Evora**	4.94	280	ePn	Pn	21 57 31.3	-3.2
EVO				eSn	Sn	21 58 27.7	-5.6
EVO				eSg	Sg	21 58 55.3	-6.5
	26nm,0.4s						
EBIE	**Bielsa**	5.04	17	Pn	Pn	21 57 33.9	-1.9
	2.1nm,0.3s,SNR=7.9						
EBIE				Sn	Sn	21 58 28.0	-7.7
	SNR=7.9						
EBIE				Lg		21 58 53.8	

	SNR=4.0						
EBIE	**Bielsa**	**5.04**	**17**	Pn	Pn	21 57 34.0	-1.9
EBIE				Sn	Sn	21 58 28.0	-7.7
	SNR=7.9						
ETSF	**Etsaut**	**5.12**	**10**	*e*Pn	Pn	21 57 34.8	-2.2
ETSF				*e*Sn	Sn	21 58 31.0	-6.6
ETSF				*e*Sg	Sg	21 58 59.2	-8.3
	2.0nm,0.4s						
MTE	**Manteigas**	**5.13**	**301**	*e*Sg	Sg	21 58 55.7	-12
	12nm,0.6s						
MTE	**Manteigas**	**5.13**	**301**	*e*Sg	Sg	21 58 55.7	-12
	12nm,0.6s						
MOE	**Montemor**	**5.20**	**279**	*e*Sg	Sg	21 59 00.8	-10
SJPF	**Ste Jean**	**5.26**	**5**	*e*Pn	Pn	21 57 36.0	-3.0
SJPF				*e*Sn	Sn	21 58 33.7	-7.6
SJPF				*e*Sg	Sg	21 59 04.1	-8.3
	2.1nm,0.4s						
EALK	**Alkurruntz**	**5.35**	**2**	Pn	Pn	21 57 38.0	-2.3
EALK				Sn	Sn	21 58 36.5	-7.1
EALK				Lg		21 59 07.6	
EALK	**Alkurruntz**	**5.35**	**2**	Pn	Pn	21 57 38.0	-2.3
	1.5nm,0.2s,SNR=7.9						
EALK				Sn	Sn	21 58 36.5	-7.1
	SNR=7.9						
EALK				Lg		21 59 07.6	
	2.1nm,0.3s,SNR=4.0						
EALK	**Alkurruntz**	**5.35**	**2**	Pn	Pn	21 57 38.0	-2.3
	1.5nm,0.2s,SNR=7.9						
EALK				Sn	Sn	21 58 36.5	-7.1
	SNR=7.9						
EPF	**Esparros**	**5.41**	**17**	*e*Pn	Pn	21 57 39.3	-1.8
EPF				*e*Sn	Sn	21 58 38.3	-6.8
EPF				*e*Sg	Sg	21 59 08.5	-8.9
	2.5nm,0.4s						
PTEO	**Sao Teotonio**	**5.50**	**269**	*e*Sg	Sg	21 59 12.7	-7.7
	11nm,0.8s						
PTEO	**Sao Teotonio**	**5.50**	**269**	*e*Sg	Sg	21 59 12.7	-7.7
	11nm,0.8s						
ELAN	**Lanestosa**	**5.50**	**347**	Pn	Pn	21 57 40.0	-2.4
	1.0nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	21 58 40.2	-7.1
	SNR=7.9						
ELAN				Lg		21 59 12.9	
	0.2nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**5.50**	**347**	Pn	Pn	21 57 40.0	-2.4
ELAN				Sn	Sn	21 58 40.2	-7.2
PVIS	**Viseu**	**5.52**	**303**	*e*Pn	Pn	21 57 39.4	-3.3
PVIS				*e*Sn	Sn	21 58 41.0	-6.8
PVIS				*e*Sg	Sg	21 59 11.0	-10
	7.3nm,0.5s						
PVIS	**Viseu**	**5.52**	**303**	Pn	Pn	21 57 39.4	-3.3
PVIS				Sn	Sn	21 58 41.0	-6.8
PVIS				Lg		21 59 11.0	
	3.7nm,0.5s						
ECAL	**Calabor**	**5.57**	**319**	Pn	Pn	21 57 39.6	-3.7
	5.2nm,0.5s,SNR=7.9						
ECAL				Lg		21 59 12.4	
	11nm,0.4s,SNR=4.8						
ECAL	**Calabor**	**5.57**	**319**	Pn	Pn	21 57 39.6	-3.7
PVRL	**Vila Real**	**5.70**	**309**	*e*Sn	Sn	21 58 42.6	-10
PVRL				*e*Sg	Sg	21 59 12.3	-15
	5.8nm,0.5s						
PVRL	**Vila Real**	**5.70**	**309**	Sn	Sn	21 58 42.6	-10
PVRL				Lg		21 59 12.3	
	2.9nm,0.5s						
PLOU	**Loures**	**5.87**	**282**	*e*Sg	Sg	21 59 24.2	-8.4
	9.5nm,0.7s						
PLOU	**Loures**	**5.87**	**282**	Lg		21 59 24.2	
	4.8nm,0.7s						
EARI	**Arriondas**	**6.02**	**336**	Pn	Pn	21 57 46.6	-3.1
EARI				Lg		21 59 26.2	
EARI	**Arriondas**	**6.02**	**336**	Pn	Pn	21 57 46.6	-3.1
	6.9nm,0.7s,SNR=5.9						
EARI				Lg		21 59 26.3	
	51nm,1.4s,SNR=4.0						
EARI	**Arriondas**	**6.02**	**336**	Pn	Pn	21 57 46.7	-3.0
ELOB	**Lobios**	**6.26**	**312**	Pn	Pn	21 57 49.2	-4.0
	SNR=7.9						
ELOB				Sn	Sn	21 58 57.4	-8.9
	SNR=7.9						
ELOB				Lg		21 59 33.6	
	1.2nm,0.2s,SNR=4.7						
ELOB	**Lobios**	**6.26**	**312**	Pn	Pn	21 57 49.2	-3.9
ELOB				Sn	Sn	21 58 57.4	-8.9
EINC	**Incio**	**6.40**	**320**	Lg		21 59 38.6	
	1.5nm,0.4s,SNR=4.0						
QUIF	**Quistinic**	**10.10**	**355**	*e*Pn	P	21 58 41.6	-4.9

MAN ***06*** *22:07:54.6, 6.22N×126.04E, h100^{km}, mb4.7, ML3.6, MS3.6*

ISC 06 22:07:55.3±0.8**, 6.4N**±0.1×**126.1E**±0.2**, h119**^{km}±17^{km}**, n14, σ0^{s}81**/15**, mb5.1**/4**, 5C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.62**	**17**	*e*P	**P**	**22 08 14.1**	**+0.1**
BUKP	**Musuan**	**1.83**	**327**	*e*P	**P**	**22 08 26.7**	**-0.2**
CGP	**Cagayan de Oro**	**2.50**	**327**	*e*P	**P**	**22 08 35.3**	**-0.5**
CGP				*e*S	**S**	**22 09 08.0**	**+1.5**
BUTP	**Butuan**	**2.64**	**350**	*e*P	**P**	**22 08 38.6**	**+0.9**
PAGZ	**Pagadian**	**3.06**	**299**	*e*P	**P**	**22 08 42.5**	**-0.8**
SCPH	**Surigao**	**3.46**	**350**	⇓*e*P	**P**	**22 08 46.8**	**-1.9**
MSLP	**Maasin**	**3.95**	**342**	*e*P	**P**	**22 08 55.3**	**+0.1**
KAKA	**Kakadu**	**19.96**	**162**	⇑*i*P	**P**	**22 12 20.8**	**+0.4**
	57nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.30**	**181**	⇓*i*P	**P**	**22 13 03.7**	**+0.6**
	13nm,0.4s,mb4.6						
WB2	**Warramunga Arr**	**27.36**	**163**	*e*P	**P**	**22 13 30.9**	**-0.7**
ASPA	**Alice Springs**	**30.79**	**166**	⇑*i*P	**P**	**22 14 01.7**	**-0.4**
FORT	**Forrest**	**36.96**	**177**	⇑*i*P	**P**	**22 14 55.0**	**+0.2**
	47nm,0.5s,mb5.7						
KLBR	**Kellerberrin**	**38.55**	**191**	⇑*i*P	**P**	**22 15 07.6**	**-0.5**
	39nm,0.4s,mb5.6						
STKA	**Stephens Creek**	**40.79**	**160**	⇑*i*P	**P**	**22 15 27.6**	**+1.1**
	7.1nm,0.6s,mb4.7						

MOS ***06*** *22:44:16.4±1.2, 56.44N×113.67E, h26^{km}, mb4.4/1, Error ellipse: s-maj=38.2km s-min=19.0km az=74.3*

BYKL 06 22:44:16.7±0.3**, 56.44N×113.71E, h26**^{km}±3^{km}**, 6C-2D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SVK	**Severo-Muysk**	**0.28**	**203**	*e*PG	Pb	22 44 22.7	-0.8
SVK				*e*		22 44 27.0	
SVK				pmax	pmax		
	comp=Z,3μm,0.3s						
SVK				smax			
	comp=N,10μm,0.4s						
SVKR	**Severomuysk**	**0.34**	**195**	⇑*i*Pg	Pb	22 44 22.8	-1.5
SVKR				*e*Sg	Sb	22 44 27.6	-1.9
SVKR				Pmax			
	comp=N,4μm,0.2s						
SVKR				Smax			
	comp=N,10μm,0.3s						
UKT	**Uakit**	**0.95**	**183**	*e*PG	Pb	22 44 33.6	-0.9
UKT				*e*		22 44 47.5	
UKT				pmax	pmax		
	comp=Z,202nm,0.1s						
UKT				smax			
	comp=E,739nm,0.2s						
UKT	**Uakit**	**0.95**	**183**	⇑*i*Pg	Pb	22 44 33.7	-0.8
UKT				*e*Sg	Sb	22 44 47.5	+0.8
UKT				Pmax			
	comp=E,209nm,0.2s						
UKT				Smax			
	comp=E,777nm,0.3s						
NLYR	**Nelyaty**	**1.11**	**87**	⇓*i*PN	Pn	22 44 37.0	+0.3
NLYR				*e*		22 44 52.4	
NLYR				pmax	pmax		
	comp=Z,103nm,0.2s						
NLYR				smax			
	comp=E,503nm,0.9s						
NLYR	**Nelyaty**	**1.11**	**87**	⇓*i*Pg	Pn	22 44 37.1	+0.4
NLYR				*e*Sg	Sb	22 44 52.5	+1.4
NLYR				Pmax			
	comp=E,100nm,0.2s						
NLYR				Smax			
	comp=E,503nm,0.7s						
YOA	**Uoyan**	**1.15**	**255**	⇑*i*PN	Pn	22 44 37.2	-0.1
YOA				*e*		22 44 53.6	
YOA				pmax	pmax		
	comp=Z,409nm,0.3s						
YOA				smax			
	comp=N,2μm,0.5s						
YOA	**Uoyan**	**1.15**	**255**	*e*Pg	Pn	22 44 37.4	+0.1
YOA				*e*Sg	Sn	22 44 53.6	+1.3
YOA				Pmax			
	comp=N,434nm,0.4s						
YOA				Smax			
	comp=N,2μm,0.4s						
BOD	**Bodaibo**	**1.39**	**6**	⇑*i*PN	Pn	22 44 41.7	+0.9
BOD				*e*		22 45 00.3	
BOD				pmax	pmax		
	comp=Z,165nm,0.2s						
BOD				smax			
	comp=E,386nm,0.2s						
BOD	**Bodaibo**	**1.39**	**6**	⇑*i*Pg	Pn	22 44 41.9	+1.1
BOD				*e*Sg	Sn	22 45 00.6	+2.2
BOD				Pmax			
	comp=E,164nm,0.2s						
BOD				Smax			
	comp=E,346nm,0.3s						
KMO	**Kumora**	**1.51**	**249**	*e*PN	Pn	22 44 43.2	+0.7
KMO				*e*		22 45 03.6	
KMO				pmax	pmax		
	comp=Z,160nm,0.3s						
KMO				smax			
	comp=E,209nm,0.5s						
KMO	**Kumora**	**1.51**	**249**	*e*Pg	Pn	22 44 43.1	+0.6
KMO				*e*Pb	Pb	22 44 43.7	-0.2
KMO				*e*Sg	Sn	22 45 03.8	+2.4
KMO				max			
	comp=E,154nm,0.2s						
KMO				Smax			
	comp=E,372nm,0.7s						
YLYR	**Ulyunkhan**	**2.13**	**224**	⇑*i*Pn	Pn	22 44 51.6	+0.2
YLYR				*e*Pg	Pn	22 44 54.6	+3.2
YLYR				*e*Sn	Sn	22 45 18.1	+0.9
YLYR				*e*Sg	Sn	22 45 22.0	+4.8
YLYR				Pmax			
	comp=E,34nm,0.3s						
YLYR				Smax			
	comp=E,199nm,0.2s						
NIZ	**Nizh Angarsk**	**2.43**	**256**	*e*Pn	Pn	22 44 56.4	+0.8
NIZ				*e*Pg	Pn	22 45 00.3	+4.7
NIZ				*e*Sn	Sn	22 45 25.5	+0.7
NIZ				*e*Sg	Sn	22 45 31.7	+6.9
NIZ				Pmax			
	comp=E,26nm,0.2s						
NIZ				Smax			
	comp=E,195nm,0.4s						
CRS	**Chara**	**2.56**	**78**	*e*Pg	Pn	22 45 03.2	+5.7
CRS				*e*Sg	Sn	22 45 36.9	+8.8
CRS				Pmax			
	comp=E,46nm,0.6s						
CRS				Smax			
	comp=E,163nm,1.4s						
SYVR	**Suvo**	**3.51**	**219**	*e*Pn	Pn	22 45 10.0	-1.0
SYVR				*e*Pg	Pn	22 45 19.8	+8.8
SYVR				*e*Sn	Sn	22 45 52.6	+0.4
SYVR				*e*Sg	Sn	22 46 06.2	+14
SYVR				Pmax			
	comp=E,10.0nm,0.8s						
SYVR				Smax			
	comp=E,144nm,0.8s						
TUP	**Tupik**	**4.09**	**117**	*e*Pn	Pn	22 45 18.4	-0.8
TUP				*e*Sn	Sn	22 46 03.6	-3.3
TUP				*e*Sg	Sn	22 46 22.8	+16
TUP				max			
	comp=E,8.0nm,0.6s						
TUP				Smax			
	comp=E,66nm,0.7s						
CIT	**Chita**	**4.43**	**181**	*e*Pg	Pn	22 45 36.3	+12
CIT				*e*Sg	Sn	22 46 33.5	+18
CIT				Pmax			
	comp=E,7.0nm,0.8s						
CIT				Smax			
	comp=E,76nm,0.6s						
OGRR	**Ongureny**	**4.50**	**234**	*e*Pn	Pn	22 45 23.7	-1.3
OGRR				*e*Pg	Pn	22 45 37.6	+13
OGRR				*e*Sg	Sn	22 46 37.1	+20
OGRR				Pmax			
	comp=E,5.0nm,0.7s						
OGRR				Smax			
	comp=E,30nm,1.3s						
ZRHB	**Zarechye**	**5.46**	**227**	*e*Sg	Sn	22 47 05.5	+24
ZRHB				Smax			
	comp=E,113nm,1.1s						
TRTB	**Turuntaevo**	**5.52**	**223**	*e*Sg	Sn	22 47 06.8	+24
TRTB				Smax			
	comp=E,37nm,1.6s						
TRG	**Tyrgan**	**5.65**	**232**	*e*Pg	Pn	22 45 57.4	+16
TRG				*e*Sg	Sn	22 47 11.4	+25
TRG				Pmax			
	comp=E,2.0nm,0.3s						
TRG				Smax			
	comp=E,17nm,0.5s						
HRMR	**Khuramsha**	**6.25**	**222**	*e*Sg	Sn	22 47 31.0	+30
HRMR				Smax			
	comp=E,81nm,0.6s						
KPC	**Khapcheranga**	**6.80**	**187**	*e*Pn	Pn	22 45 54.4	-3.0
KPC				*e*Pg	Pn	22 46 18.6	+21
KPC				*e*Sn	Sn	22 47 12.1	-2.7
KPC				*e*Sg	Sn	22 47 47.4	+33
KPC				Smax			
	comp=E,25nm,1.0s						
LSTR	**Listvyanka**	**6.94**	**232**	*e*Sg	Sn	22 47 52.1	+34
ARS	**Arshan**	**8.02**	**240**	*e*Sg	Sn	22 48 23.4	+38
ARS				Smax			
	comp=E,41nm,1.5s						
ZAK	**Zakamensk**	**8.69**	**230**	*e*Sg	Sn	22 48 47.9	+46
ZAK				Smax			
	comp=E,8.0nm,1.6s						
MOY	**Mondy**	**8.87**	**243**	*e*Sg	Sn	22 48 51.4	+45
MOY				Smax			
	comp=E,21nm,1.4s						

NEIC ***06*** *22:46:34.0±1.3, 1.32S×129.23E, h10^{km}, mb4.2/4, Error ellipse: s-maj=38.3km s-min=18.5km az=68.0*

ISC 06 22:46:38.5±1.3**, 1.8S**±0.1×**129.3E**±0.3**, h33**^{km}**, n9, σ1^{s}47**/13**, mb4.1**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**11.31**	**164**	*e*P	**P**	**22 49 20.4**	**-0.5**
	7.6nm,0.4s						
KAKA				*e*S	**S**	**22 51 26.5**	**-0.6**
WRAB	**Tennant Creek**	**18.71**	**165**	*e*P	**P**	**22 50 56.7**	**-0.2**
WRAB				*e*S	**S**	**22 54 11.7**	**-9.1**
WB2	**Warramunga Arr**	**18.72**	**165**	*e*P	**P**	**22 50 56.9**	**-0.1**
WB2				*e*S	**S**	**22 54 18.1**	**-3.0**
MBWA	**Marble Bar**	**21.40**	**205**	P	**P**	**22 51 26.6**	**+1.0**
	16nm,1.0s,mb4.3						
ASPA	**Alice Springs**	**22.22**	**169**	*e*P	**P**	**22 51 37.1**	**+3.3**
ASPA				*e*S	**S**	**22 55 41.3**	**+10**
CTAO	**Charters Tower**	**24.63**	**139**	*e*P	**P**	**22 51 58.6**	**+1.2**
	3.8nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**32.12**	**160**	*e*P	**P**	**22 53 07.1**	**+2.0**
ULN	**Ulaanbaatar**	**53.11**	**341**	*e*P	**P**	**22 55 52.3**	**-2.8**
	2.6nm,1.0s,mb4.1						
KURK	**Kurchatov**	**67.72**	**328**	*e*P	**P**	**22 57 28.5**	**-6.2**
	1.1nm,0.7s,mb4.0						

BJI ***06*** *23:01:39.7, 13.07N×92.02E, h43^{km}, mB4.6, mb4.4, Ms3.9, Msz3.5*

NEIC ***06*** *23:01:41.0±0.5, 13.34N×91.92E, h30^{km}, mb4.5/22, Error ellipse: s-maj=13.9km s-min=8.1km az=59.0*

ISC 06 23:01:39.1±0.4**, 13.31N**±0.05×**91.93E**±0.04**, h30**^{km}**, n54, σ1^{s}26**/62**, mb4.5**/23**, MS3.8**/2**, 5D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
NST	**Nakhon Sawan**	**8.28**	**73**	P	**P**	**23 03 35.0**	**-5.2**
CM31	**Chiang Mai Arr**	**8.47**	**52**	*e*P	**P**	**23 03 42.6**	**-0.1**
	3.5nm,0.4s						
CM31				*e*S	**Sn**	**23 05 10.9**	**-7.4**
CHG	**Chiang Mai**	**8.68**	**50**	⇓P	**P**	**23 04 02.0**	**+16**
BWNR	**Bhubaneshwar**	**9.09**	**321**	*e*P	**P**	**23 03 48.0**	**-3.4**
BWNR				*e*S	**Sn**	**23 05 22.2**	**-12**
BWNR				*e*		23 05 26.9	
	comp=E,904nm,0.4s						
BWNR				*e*		23 05 26.9	
	comp=N,582nm,0.5s						
VIS	**Vishakhapatnam**	**9.38**	**299**	*e*P	**P**	**23 03 53.5**	**-1.9**
VIS				*e*S	**Sn**	**23 05 31.9**	**-8.9**
VIS				*e*		23 05 34.8	
	comp=E,36nm,0.6s						
VIS				*e*		23 05 34.9	
	comp=N,122nm,0.5s						
NANT	**Nan**	**10.04**	**56**	P	**P**	**23 04 05.3**	**+0.7**
SHL	**Shillong**	**12.19**	**360**	*e*P	**P**	**23 04 30.0**	**-3.8**
HYB	**Hyderabad**	**13.53**	**289**	*i* P	**P**	**23 04 50.0**	**-1.7**
HYB				*e*		23 07 13.0	
HYB				*e*S	**S**	**23 07 23.5**	**+1.5**
JIRN	**Jiri**	**15.25**	**340**	*e*P	**P**	**23 05 12.9**	**-1.3**
	comp=N,40nm,0.6s						
PKI	**Pulchoki**	**15.44**	**338**	*e*P	**P**	**23 05 15.4**	**-1.3**
	comp=N,41nm,0.6s						
KMI	**Kunming**	**15.55**	**39**	P	**P**	**23 05 20.4**	**+2.3**
KMI				AP		23 05 27.6	
KMI				XP		23 05 32.4	
KMI				PP	PP	23 05 34.8	+4.4
KMI				S	**S**	**23 08 17.6**	**+7.9**
KMI				XS		23 08 30.9	
KMI				AMB	AMB		
	comp=Z,5.0nm,1.0s						
KMI				AMB	AMB		
	comp=Z,72nm,5.0s						
KMI				LR	LR		
	comp=N,282nm,12.8s						
KMI				LR	LR		
	comp=E,228nm,15.2s						
KMI				LR	LR		
	comp=Z,172nm,15.5s						
KMI	**Kunming**	**15.55**	**39**	P	**P**	**23 05 20.4**	**+2.3**
	comp=Z,5.0nm,1.0s						
KMI				pP		23 05 27.6	
KMI				sP		23 05 32.4	
KMI				PP	PP	23 05 34.8	+4.4
KMI				S	**S**	**23 08 17.6**	**+7.9**
KMI				sS		23 08 30.9	
KMI				SS	SS	23 08 37.3	+9.3
DMN	**Daman**	**15.59**	**337**	*e*P	**P**	**23 05 17.1**	**-1.5**
	comp=Z,54nm,0.6s						
KKN	**Kakani**	**15.69**	**338**	*e*P	**P**	**23 05 18.2**	**-1.6**
	comp=Z,43nm,0.8s						
GKN	**Gorkha**	**16.13**	**336**	*e*P	**P**	**23 05 22.9**	**-2.5**
	comp=Z,68nm,0.3s						
LSA	**Lhasa**	**16.33**	**358**	P	**P**	**23 05 29.0**	**+1.1**
LSA	**Lhasa**	**16.33**	**358**	*e*P	**P**	**23 05 28.7**	**+0.8**
	comp=Z,18nm,0.9s						
KOLN	**Koldanda**	**16.36**	**333**	*e*P	**P**	**23 05 24.4**	**-3.9**
	comp=Z,64nm,0.7s						
BHPL	**Bhopal**	**16.94**	**308**	*e*P	**P**	**23 05 36.7**	**+1.0**
BHPL				*e*		23 05 41.7	
	comp=Z,22nm,1.2s						
BHPL				*e*S	**S**	**23 08 40.0**	**-1.6**
KAD	**Karad**	**17.57**	**285**	*e*	**P**	**23 05 48.0**	**+4.3**
KAD				*e*S	**S**	**23 08 57.0**	**+0.8**
POO	**Poona**	**18.14**	**289**	*e*P	**P**	**23 05 53.0**	**+2.2**
GYA	**Guiyang**	**19.03**	**44**	⇓*i*P	**P**	**23 06 01.8**	**+0.4**
GYA				AMB	AMB		
	comp=Z,20nm,1.0s						
NDI	**New Delhi**	**20.53**	**320**	*e*P	**P**	**23 06 18.0**	**+0.3**
NDI				*e*		23 09 54.0	
CD2	**Chengdu**	**20.63**	**30**	P	**P**	**23 06 19.1**	**+0.3**
SDNR	**Sundarnagar**	**22.74**	**325**	*e*	**P**	**23 06 44.4**	**+4.4**
ENH	**Enshi**	**23.41**	**41**	*e*P	**P**	**23 06 45.6**	**-1.0**
	comp=Z,13nm,0.9s,mb4.4						
XAN	**Xi’an**	**25.77**	**34**	P	**P**	**23 07 08.4**	**-0.7**
XAN				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.5						
GTA	**Gaotai**	**26.91**	**14**	*e*P	**P**	**23 07 21.4**	**+1.8**
GTA				PP	PP	23 08 12.4	+7.0
GTA				XS		23 12 13.9	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.6s,mb3.6						
GTA				AMB	AMB		
	comp=Z,72nm,5.3s						
GTA				LR	LR		
	comp=N,108nm,11.0s,MS3.8						
GTA				LR	LR		
	comp=E,138nm,15.6s,MS3.8						
GTA				LR	LR		
	comp=Z,148nm,14.1s,MS3.7						
HHC	**Hu-ho-hao-te**	**32.37**	**28**	*e*P	**P**	**23 08 11.3**	**+3.1**
HHC				AP	pP	23 08 16.9	-0.2
HHC				AMB	AMB		
	comp=Z,5.0nm,1.6s,mb4.1						
HHC				AMB	AMB		
	comp=Z,144nm,4.7s						
AAK	**Ala-Archa**	**32.89**	**336**	*e*P	**P**	**23 08 13.8**	**+1.1**
	comp=Z,2.0nm,0.6s,mb4.2						
BJI	**Beijing**	**34.10**	**34**	*e*P	**P**	**23 08 23.0**	**-0.3**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
BJI				LR	LR		
	comp=N,100nm,11.7s,MS4.0						
BJI				LR	LR		
	comp=E,160nm,12.8s,MS4.0						
BJI				LR	LR		
	comp=Z,86nm,21.8s						
BJI	**Beijing**	**34.10**	**34**	*e*P	**P**	**23 08 23.0**	**-0.3**
	comp=Z,5.0nm,0.9s,mb4.4						
BJI				LR	LR		
	comp=Z,90nm,21.8s,MS3.5						
ULN	**Ulaanbaatar**	**36.69**	**17**	*e*P	**P**	**23 08 44.3**	**-0.8**
	comp=Z,1.7nm,0.8s,mb3.9						
KURK	**Kurchatov**	**38.85**	**347**	*e*P	**P**	**23 09 05.0**	**+1.7**
	comp=Z,10nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**43.66**	**342**	*e*P	**P**	**23 09 44.4**	**+1.6**
	comp=Z,8.6nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**45.60**	**132**	*e*P	**P**	**23 09 57.8**	**-1.0**
	comp=Z,12nm,0.4s,mb5.2						
KIV	**Kislovodsk**	**51.89**	**316**	P	**P**	**23 10 48.5**	**+1.4**
	comp=Z,9.9nm,0.9s,mb4.7						
NWAO	**Narrogin (SRO)**	**51.94**	**153**	*e*P	**P**	**23 10 47.7**	**0.0**
	comp=Z,54nm,1.5s,mb5.3						
WRAB	**Tennant Creek**	**53.23**	**128**	*e*P	**P**	**23 10 56.6**	**-0.8**
	comp=Z,9.5nm,0.7s,mb4.8						
WB2	**Warramunga Arr**	**53.23**	**128**	*e*P	**P**	**23 10 56.3**	**-1.2**
ASPA	**Alice Springs**	**55.09**	**132**	⇓*i*P	**P**	**23 11 10.5**	**-0.5**
FORT	**Forrest**	**55.93**	**142**	⇓*i*P	**P**	**23 11 17.2**	**+0.3**
	comp=Z,50nm,0.6s,mb5.7						
CTAO	**Charters Tower**	**62.90**	**121**	*e*P	**P**	**23 12 04.9**	**-0.3**
	comp=Z,16nm,1.3s,mb5.0						
JOF	**Joensuu**	**65.04**	**334**	*e*p	**P**	**23 12 16.5**	**-2.1**
	comp=Z,0.4nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**65.42**	**135**	⇓*i*P	**P**	**23 12 21.7**	**+0.1**
	comp=Z,3.0nm,0.9s,mb4.3						
KAF	**Kangasniemi**	**67.00**	**332**	*e*p	**P**	**23 12 31.0**	**-0.1**
	comp=Z,1.1nm,0.7s,mb4.0						
MORC	**Moravsky Berou**	**69.88**	**318**	*e*P	**P**	**23 12 49.4**	**+0.2**
	comp=Z,19nm,1.7s,mb4.8						
DPC	**Dobruska-Polom**	**70.69**	**319**	*e*P	**P**	**23 12 58.7**	**+4.6**
KHC	**Kasperske Hory**	**72.45**	**318**	*e*P	**P**	**23 13 05.4**	**+0.7**
NB2	**NORSAR Subarra**	**73.96**	**330**	P	**P**	**23 13 13.4**	**+0.2**
	comp=Z,1.5nm,0.7s,mb4.0,baz=90,slow=5.8						
GRA1	**Grafenberg Arr**	**73.98**	**318**	*e*P	**P**	**23 13 15.2**	**+1.6**
	comp=Z,3.0nm,1.0s,mb4.2						
GRF	**Grafenberg Arr**	**73.98**	**318**	*e*P	**P**	**23 13 15.2**	**+1.6**
	comp=Z,3.0nm,1.0s,mb4.2						
LBTB	**Lobatse**	**75.03**	**239**	*e*P	**P**	**23 13 19.6**	**-0.5**
	comp=Z,4.7nm,0.9s,mb4.4						
LPG	**La Plagne**	**77.28**	**314**	*e*P	**P**	**23 13 33.8**	**+1.4**
	comp=Z,14nm,0.9s,mb4.6						

BJI ***06*** *23:12:50.3, 6.63N×92.52E, h32^{km}, mb4.2*

NEIC ***06*** *23:12:58.9±0.4, 7.37N×92.27E, mb4.5/17, Error ellipse: s-maj=10.6km s-min=7.8km az=57.0*

ISC 06 23:12:57.6±2.3**, 7.36N**±0.07×**92.31E**±0.08**, h38**^{km}±21^{km}**, h33**^{km}±.8^{km}**:pP-P, n43, σ1^{s}00**/43**, mb4.5**/22**, 2C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**11.51**	**270**	Pn	**P**	**23 15 42.3**	**-0.3**
	228nm,0.6s,SNR=22						
PALK	**Pallekele**	**11.51**	**270**	*e*P	**P**	**23 15 42.3**	**-0.3**
	13nm,0.4s						
CM31	**Chiang Mai Arr**	**12.78**	**30**	*e*P	**P**	**23 16 00.5**	**+1.0**
	14nm,0.7s						
KAD	**Karad**	**20.26**	**301**	*e*	**P**	**23 17 44.0**	**+11**
KMI	**Kunming**	**20.28**	**28**	⇑P	**P**	**23 17 32.9**	**+0.1**
KMI				AP		23 17 40.5	
KMI				XP		23 17 43.6	
KMI				AMB	AMB		

	comp=Z,9.0nm,1.0s						
KMI	Kunming	20.28	28	⇑P	P	23 17 32.9	+0.1
	comp=Z,9.0nm,1.0s						
KMI				pP		23 17 40.5	
KMI				sP		23 17 43.6	
JIRN	Jiri	21.00	345	eP	P	23 17 39.0	-1.3
	comp=Z,42nm,1.1s,mb4.7						
PKI	Pulchoki	21.14	343	eP	P	23 17 41.3	-0.3
DMN	Daman	21.26	342	eP	P	23 17 43.3	+0.4
	comp=Z,28nm,0.8s,mb4.6						
KKN	Kakani	21.38	343	eP	P	23 17 43.0	-1.1
GKN	Gorkha	21.77	341	eP	P	23 17 47.6	-0.4
	comp=Z,11nm,0.4s,mb4.7						
KOLN	Koldanda	21.91	339	eP	P	23 17 49.4	+0.1
	comp=Z,23nm,0.8s,mb4.6						
LSA	Lhasa	22.25	357	P	P	23 17 55.2	+2.5
LSA	Lhasa	22.25	357	eP	P	23 17 55.0	+2.3
	comp=Z,12nm,0.7s,mb4.4						
GYA	Guiyang	23.39	34	⇓iP	P	23 18 03.9	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
CD2	Chengdu	25.76	23	P	P	23 18 25.4	-1.4
ENH	Enshi	27.91	33	eP	P	23 18 44.4	-2.1
	comp=Z,5.6nm,0.7s,mb4.3						
GTA	Gaotai	32.61	11	eP	P	23 19 27.6	-0.4
GTA				AP	pP	23 19 37.2	-1.4
GTA				XP	sP	23 19 41.0	-2.5
GTA				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
UCH	Uchtor	38.12	338	P	P	23 20 16.0	+1.1
	SNR=6.0						
KBK	Karagaybulak	38.34	339	P	P	23 20 18.5	+1.9
	SNR=7.3						
AML	Almayashu	38.34	337	P	P	23 20 18.3	+1.6
	SNR=9.5						
AAK	Ala-Archa	38.48	339	P	P	23 20 19.6	+1.7
	SNR=5.4						
AAK	Ala-Archa	38.48	339	eP	P	23 20 18.1	+0.2
	comp=Z,4.1nm,1.0s,mb4.1						
USP	Ospenovka	39.04	339	P	P	23 20 23.2	+0.8
	SNR=7.4						
FITZ	Fitzroy Crossi	41.51	128	eP	P	23 20 43.9	+0.7
	comp=Z,22nm,1.0s,mb4.8						
FITZ				i	pP	23 20 53.2	-0.8
KURK	Kurchatov	44.69	348	eP	P	23 21 08.3	-0.4
	comp=Z,12nm,1.2s,mb4.6						
KURK				e	pP	23 21 18.6	-1.0
HIA	Hailar	47.71	24	eP	P	23 21 31.6	-1.0
	comp=Z,2.8nm,0.6s,mb4.5						
CHKZ	Chkalovo	49.41	343	eP	P	23 21 45.1	-0.5
	comp=Z,11nm,0.8s,mb4.9						
CHKZ				e	pP	23 21 55.3	-1.3
WRAB	Tennant Creek	49.47	124	eP	P	23 21 46.6	+0.1
	comp=Z,13nm,0.7s,mb5.1						
WRAB				e	pP	23 21 56.7	-0.8
WB2	Warramunga Arr	49.47	124	eP	P	23 21 46.5	-0.1
WB2				i	pP	23 21 57.1	-0.4
ASPA	Alice Springs	51.00	128	eP	P	23 21 58.4	+0.2
STKA	Stephens Creek	61.08	133	eP	P	23 23 11.2	+0.7
MA2	Magadan	68.06	28	eP	P	23 23 55.0	-0.3
MA2				e	pP	23 24 04.6	-2.0
JOF	Joensuu	70.53	335	ep	P	23 24 06.9	-3.4
	comp=Z,1.7nm,0.5s,mb4.2						
LBTB	Lobatse	72.41	241	eP	P	23 24 20.4	-1.9
	comp=Z,21nm,1.6s,mb4.8						
KAF	Kangasniemi	72.42	333	ep	P	23 24 20.6	-1.0
	comp=Z,0.4nm,0.4s,mb3.7						
KEV	Kevo	74.72	341	ep	P	23 24 24.9	-10
	comp=Z,0.3nm,0.4s,mb3.6						
KSP	Ksiaz	75.50	321	eP	P	23 24 40.2	+0.4
KSP				epP	pP	23 24 50.3	-0.9
GRA1	Grafenberg Arr	78.66	319	eP	P	23 24 58.4	+0.9
	comp=Z,6.0nm,1.1s,mb4.4						
GRF	Grafenberg Arr	78.66	319	eP	P	23 24 58.4	+0.9
	comp=Z,6.0nm,1.1s,mb4.4						
NB2	NORSAR Subarra	79.28	331	P	P	23 24 59.7	-0.9
	comp=Z,2.5nm,1.0s,mb4.1,baz=91,slow=4.8						
LPG	La Plagne	81.69	315	eP	P	23 25 14.4	+0.7
	comp=Z,15nm,0.9s,mb4.6						
INK	Inuvik	97.98	16	eP	P	23 26 31.2	+0.6
	comp=Z,0.3nm,0.5s,mb4.1						

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*CSEM **07** 00:11:45.5±0.1, 37.84N×1.76W, h5^{km}, ML2.7/7, Error ellipse: s-maj=3.2km s-min=2.2km az=156.0*

*SFS **07** 00:11:45.0, 37.86N×1.79W*

MDD 07 00:11:45.6±0.3**, 37.87N×1.79W, mbLg2.2**/12**, 2C, Error ellipse: s-maj=4.1km s-min=2.2km az=3.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	La Murta	0.44	93	⇑Pg	Pg	00 11 53.6	-0.8
	5.5nm,0.2s,SNR=18						
EMUR				Lg		00 11 59.7	
	84nm,0.3s,SNR=5.0						
EMUR	La Murta	0.44	93	Pg	Pg	00 11 53.6	-0.7
	5.5nm,0.2s,SNR=18						
CART	Cartagena	0.69	114	P	Pg	00 11 58.8	-0.5
CART				S	Sg	00 12 07.1	-1.3
CART	Cartagena	0.69	114	eP	Pg	00 11 58.8	-0.5
ENIJ	Nijar	0.95	200	⇑Pg	Pg	00 12 02.6	-1.9
	4.8nm,0.2s,SNR=18						
ENIJ				Lg		00 12 14.7	
	17nm,0.3s,SNR=5.0						
EVIA	Vianos	0.95	324	Pg	Pg	00 12 03.4	-1.2
	16nm,0.3s,SNR=19						
EVIA				Lg		00 12 16.4	
	13nm,0.2s,SNR=5.0						
EQES	Quesada	1.01	267	Pg	Pg	00 12 04.5	-1.3
	5.5nm,0.1s,SNR=79						
EQES				Lg		00 12 18.4	
	47nm,0.2s,SNR=5.6						
EQES	Quesada	1.01	267	Pg	Pg	00 12 04.5	-1.3
	5.5nm,0.1s,SNR=79						
EBER	Berja	1.30	222	Pg	Pg	00 12 09.6	-2.0
	7.0nm,0.4s,SNR=13						
EBER				Lg		00 12 28.0	
	12nm,0.3s,SNR=5.0						
EBER	Berja	1.30	222	Pg	Pg	00 12 09.6	-2.0
	7.0nm,0.4s,SNR=13						
EBEN	Beniarda	1.49	55	Pg	Pg	00 12 12.7	-2.6
	1.7nm,0.3s,SNR=11						
EBEN				Lg		00 12 32.5	
	6.3nm,0.4s,SNR=5.0						
EBEN	Beniarda	1.49	55	Pg	Pg	00 12 12.7	-2.6
	1.7nm,0.3s,SNR=11						
EBAN	Banos Encina	1.60	281	Pg	Pg	00 12 13.8	-3.8
	5.6nm,0.2s,SNR=7.9						
EBAN				Lg		00 12 36.2	
	29nm,0.3s,SNR=7.9						
ELUQ	Luque	1.98	262	Pn	Pn	00 12 19.9	-0.8
	3.8nm,0.4s,SNR=5.7						
ELUQ				Sn	Sn	00 12 44.5	-2.1
	5.7nm,0.2s,SNR=7.6						
ELOJ	Sierra Loja	2.01	250	Pn	Pn	00 12 20.4	-0.7
	1.0nm,0.2s,SNR=4.6						
ELOJ				Sn	Sn	00 12 45.3	-2.0
	0.9nm,0.2s,SNR=5.0						
EADA	Adamuz	2.22	279	Pn	Pn	00 12 21.9	-2.2
	1.7nm,0.2s,SNR=13						
EADA				Sn	Sn	00 12 49.3	-3.4
	12nm,0.2s,SNR=5.0						
EADA				Lg		00 12 56.8	
	7.9nm,0.2s,SNR=5.0						
EADA	Adamuz	2.22	279	Pn	Pn	00 12 21.9	-2.2
	1.7nm,0.2s,SNR=13						
EADA				Sn	Sn	00 12 49.3	-3.3
	12nm,0.2s,SNR=5.0						
ESDC	Sonseca Array	2.48	317	Pn	Pn	00 12 25.4	-2.4
	0.4nm,0.2s,baz=129,slow=13,SNR=5.3						
ESDC				Pg	Pg	00 12 30.3	-4.7
	5.7nm,0.4s,baz=133,slow=17,SNR=41						
ESDC				Lg		00 13 04.0	
	6.3nm,0.3s,baz=134,slow=30,SNR=15						
ESDC	Sonseca Array	2.48	317	Pn	Pn	00 12 25.4	-2.4
	0.4nm,0.2s,SNR=5.3						
ESDC	Sonseca Array	2.48	317	Pg	Pg	00 12 30.3	-4.7
	5.7nm,0.4s,SNR=41						
EMOS	Mosqueruela	2.70	22	Pn	Pn	00 12 29.2	-1.7
	1.0nm,0.2s,SNR=6.4						
EMOS				Sn	Sn	00 13 02.2	-2.6
	0.6nm,0.2s,SNR=5.0						
EMOS				Lg		00 13 11.2	
	21nm,1.2s,SNR=5.0						
EMOS	Mosqueruela	2.70	22	Pn	Pn	00 12 29.2	-1.8
	1.0nm,0.2s,SNR=6.4						
EMOS				Sn	Sn	00 13 02.2	-2.6
	0.6nm,0.2s,SNR=5.0						
EMIJ	Mijas	2.71	242	Pg	Pg	00 12 35.4	-4.2
	9.0nm,0.6s,SNR=7.9						
EMIJ				Sn	Sn	00 13 02.2	-2.9
	5.2nm,0.5s,SNR=7.9						
EIBI	Ibiza	2.72	64	Pn	Pn	00 12 27.9	-3.4
	9.2nm,0.4s,SNR=7.9						
EIBI				Sn	Sn	00 12 59.0	-6.4
	1.1nm,0.1s,SNR=7.9						
EIBI	Ibiza	2.72	64	Pn	Pn	00 12 27.9	-3.4
	9.2nm,0.4s,SNR=7.9						
EIBI				Sn	Sn	00 12 59.0	-6.4
	1.1nm,0.1s,SNR=7.9						
GUD	Guadarrama	3.32	327	Pn	Pn	00 12 38.2	-1.7
	0.5nm,0.3s,SNR=7.9						
GUD				Pg	Pg	00 12 47.1	-4.8
	0.8nm,0.2s,SNR=12						
GUD				Lg		00 13 29.4	
	3.0nm,0.2s,SNR=8.3						
ERTA	Horta de San J	3.50	27	Pn	Pn	00 12 41.2	-1.1
	4.1nm,0.4s,SNR=7.9						
ERTA				Sn	Sn	00 13 21.0	-4.1
	1.6nm,0.2s,SNR=7.9						
ERTA	Horta de San J	3.50	27	Pn	Pn	00 12 41.2	-1.2
	4.1nm,0.4s,SNR=7.9						
ERTA				Sn	Sn	00 13 21.0	-4.1
	1.6nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.87	270	Pn	Pn	00 12 44.4	-3.1
	0.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	00 13 28.5	-5.9
	0.9nm,0.1s,SNR=11						
EMIN				Lg		00 13 47.1	
	1.8nm,0.3s,SNR=6.0						
EMIN	Mina Concepcio	3.87	270	Pn	Pn	00 12 44.4	-3.1
	0.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	00 13 28.5	-5.8
	0.9nm,0.1s,SNR=11						
ESAC	San Caprasio	3.98	14	Pn	Pn	00 12 45.7	-3.6
	5.2nm,0.3s,SNR=7.9						
ESAC	San Caprasio	3.98	14	Pn	Pn	00 12 45.7	-3.6
	5.2nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.20	284	Pn	Pn	00 12 48.3	-4.1
	0.5nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	00 13 37.3	-5.5
	3.4nm,0.2s,SNR=7.5						
EBAD				Lg		00 13 59.3	
	4.8nm,0.2s,SNR=4.0						
EBAD	Badajoz	4.20	284	Pn	Pn	00 12 48.3	-4.0
	0.5nm,0.1s,SNR=7.9						
ISP	Isparta	25.44	80	i P	P	00 17 14.8	-1.7

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*CSEM **07** 00:13:06.9±0.1, 51.60N×16.05E, h2^{km}, mb4.2/4, ML4.4/13, Error ellipse: s-maj=1.3km s-min=1.1km az=3.0*

*MOS **07** 00:13:07.8±1.2, 51.58N×16.02E, h10^{km}, mb4.6/4, Error ellipse: s-maj=6.9km s-min=3.6km az=72.9*

*LDG **07** 00:13:08.5±0.2, 51.47N×16.02E, h1^{km}, Ml4.4/12, Error ellipse: s-maj=5.4km s-min=2.6km az=8.0, Suspected Mining induced.*

*NEIC **07** 00:13:09.0±0.3, 51.57N×16.08E, h5^{km}, mb4.3/3, ML4.1(VIE), ML4.1(SZGRF), ML4.1(STR), ML3.5(CLL), Error ellipse: s-maj=4.1km s-min=3.7km az=180.0*

*BGR **07** 00:13:09.2±0.6, 51.55N×16.08E, h1^{km}, ML4.1/8, Error ellipse: s-maj=6.7km s-min=4.4km az=166.0*

*IPEC **07** 00:13:09.5±0.3, 51.49N×16.32E, ML3.7/4, Error ellipse: s-maj=3.9km s-min=2.0km az=84.0*

*WAR **07** 00:13:10.4, 51.49N×16.09E, h1^{km}, ML4.0, Mining Induced*

*PRU **07** 00:13:10.0, 51.49N×16.13E, Felt In Harrachov, Neic M4.3*

*STR **07** 00:13:22.2±0.3, 50.96N×14.78E, h5^{km}±1^{km}, Ml4.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 07 00:13:07.9±0.2**, 51.42N**±0.02×**16.06E**±0.02**, n197, σ1ˢ43**/308**, mb4.2**/5**, 14C-13D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.59	166	⇓iP	Pg	00 13 22.5	+2.8
KSP				e		00 13 35.5	
KSP	Ksiaz	0.59	166	⇓iPg	Pg	00 13 22.5	+2.8
KSP				eSg	Sg	00 13 31.6	+4.0
KSP				e		00 13 35.5	
KSP	Ksiaz	0.59	166	ePG	Pg	00 13 22.0	+2.3
KSP				eSG	Sg	00 13 32.0	+4.4
KSP	Ksiaz	0.59	166	⇓iPg	Pg	00 13 22.5	+2.8
KSP				eSg	Sg	00 13 31.6	+4.0
UPC	Upice	0.91	182	ePG	Pg	00 13 28.4	+2.4
DPC	Dobruska-Polom	1.08	171	eP	Pg	00 13 31.3	+1.9
DPC				e		00 13 45.9	
DPC				smax			
	comp=N,844nm,0.8s						
DPC	Dobruska-Polom	1.08	171	ePG	Pg	00 13 31.3	+1.9
DPC				eSG	Sg	00 13 45.9	+2.1
	comp=N,844nm,0.8s						
PVCC	Panska Ves	1.30	227	ePG	Pg	00 13 35.3	+1.6
BRG	Berggiesshubel	1.44	249	ePg	Pg	00 13 36.6	0.0
BRG				eSg	Sg	00 13 57.9	+2.1
BRG	Berggiesshubel	1.44	249	eP	Pn	00 13 36.4	+1.2
BRG				i		00 13 57.9	
BRG				MLR	MLR		
	comp=N,1μm,4.7s						
BRG				MLR	MLR		
	comp=E,1μm,4.7s						
BRG				MLR	MLR		
	comp=Z,2μm,5.0s						
BRG	Berggiesshubel	1.44	249	ePn	Pn	00 13 36.4	+1.2
BRG				i Pg	Pg	00 13 38.3	+1.7
BRG				i Sg	Sg	00 13 57.9	+2.1
BRG	Berggiesshubel	1.44	249	Pg	Pg	00 13 36.6	0.0
BRG				Sg	Sg	00 13 57.9	+2.1
PRA	Prague	1.70	218	PG	Pg	00 13 45.0	+3.2
PRA				SG	Sg	00 14 10.0	+5.6
PRU	Pruhonice	1.73	215	eP	Pn	00 13 41.0	+1.7
PRU				e		00 14 06.3	
PRU				smax			
	comp=N,462nm,0.7s						
PRU	Pruhonice	1.73	215	ePN	Pn	00 13 41.0	+1.7
PRU				ePG	Pg	00 13 42.7	+0.4
PRU				eSG	Sg	00 14 06.3	+1.0
	comp=N,462nm,0.7s						
PRU				AMS	AMS	00 14 30.0	
RUE	Ruedersdorf	1.77	308	⇓iPn	Pn	00 13 39.6	-0.3
RUE	Ruedersdorf	1.77	308	⇓iPn	Pn	00 13 39.6	-0.3
MORC	Moravsky Berou	1.90	149	⇓ePn	Pn	00 13 43.0	+1.2
MORC				eSn	Sn	00 14 10.8	+4.1
MORC	Moravsky Berou	1.90	149	ePn	Pn	00 13 43.0	+1.3
MORC				eSg	Sg	00 14 08.7	-2.2
	comp=N,414nm,0.6s						
RAC	Raciborz	1.90	134	eP	Pn	00 13 42.4	+0.5
RAC				e		00 14 11.3	
RAC	Raciborz	1.90	134	ePn	Pn	00 13 42.4	+0.5
RAC				ePg	Pg	00 13 45.8	0.0
RAC				eSg	Sg	00 14 11.3	+0.1
RAC	Raciborz	1.90	134	ePg	Pg	00 13 45.8	0.0
RAC				eSg	Sg	00 14 11.3	+0.1
CLL	Collm	1.92	268	ePn	Pn	00 13 42.7	+0.6
CLL				eSg	Sg	00 14 10.8	-0.9
CLL	Collm	1.92	268	i P	Pn	00 13 42.6	+0.5
CLL				i		00 14 12.0	
CLL	Collm	1.92	268	i Pn	Pn	00 13 42.6	+0.5
CLL				i Pg	Pg	00 13 46.2	0.0
CLL				i Sg	Sg	00 14 12.0	+0.3
CLL	Collm	1.92	268	i PN	Pn	00 13 42.6	+0.5
	comp=N,logA/T=2.0						
CLL				i PG	Pg	00 13 46.2	0.0
CLL				i		00 13 49.9	
CLL				i SG	Sg	00 14 12.0	+0.3
CLL				i		00 14 19.3	
CLL	Collm	1.92	268	i Pg	Pg	00 13 46.2	0.0
CLL				Sg	Sg	00 14 10.8	-0.9
GKP	Gorka Klasztor	1.99	21	eP	Pn	00 13 43.0	-0.1
GKP				e		00 14 12.9	
GKP	Gorka Klasztor	1.99	21	ePn	Pn	00 13 43.0	-0.1
GKP				ePg	Pg	00 13 47.4	-0.2
GKP				ePP	PP	00 13 51.4	+1.7
GKP				eSn	Sn	00 14 12.9	+3.8
GKP				eSg	Sg	00 14 16.4	+2.2
GKP	Gorka Klasztor	1.99	21	ePn	Pn	00 13 43.0	-0.1
GKP				ePg	Pg	00 13 47.4	-0.2
GKP				ePP	PP	00 13 51.4	+1.7
GKP				eSn	Sn	00 14 12.9	+3.8
GKP				eSg	Sg	00 14 16.4	+2.3
OKC	Ostrava-Krasne	2.07	139	eP	Pn	00 13 44.4	+0.2
OKC				e		00 14 15.6	
OKC	Ostrava-Krasne	2.07	139	ePN	Pn	00 13 44.4	+0.2
OKC				ePG	Pg	00 13 48.9	-0.2
OKC				eSG	Sg	00 14 15.6	-1.0
OKC	Ostrava-Krasne	2.07	139	ePg	Pg	00 13 48.9	-0.2
OKC				eSg	Sg	00 14 15.6	-1.0
VRAC	Vranov	2.14	171	ePn	Pn	00 13 47.1	+1.9
VRAC				eSg	Sg	00 14 17.4	-1.6
	comp=N,435nm,0.7s						
KRUC	Moravsky	2.37	175	ePn	Pn	00 13 50.2	+1.7
KRUC	Moravsky	2.37	175	ePg	Pg	00 13 54.6	-0.5
KRUC				eSg	Sg	00 14 25.8	-0.9
	comp=N,226nm,0.6s						
TANN	Tannenbergstha	2.49	248	ePn	Pn	00 13 52.5	+2.2
TANN				eSg	Sg	00 14 30.2	-0.5
WERD	Werda	2.56	249	ePn	Pn	00 13 52.8	+1.5
WERD				eSg	Sg	00 14 32.3	-0.9
NKC	Novy Kostel	2.58	244	ePN	Pn	00 13 53.4	+1.9
NKC				ePG	Pg	00 13 59.8	+0.5
NKC				eSG	Sg	00 14 35.9	+2.2
	comp=N,659nm,1.0s						
GUNZ	Gunzen	2.58	247	ePn	Pn	00 13 53.2	+1.6
GUNZ				eSg	Sg	00 14 33.5	-0.4
OJC	Ojcow	2.66	115	eP	Pn	00 13 51.4	-1.3
OJC				e		00 14 23.4	
OJC	Ojcow	2.66	115	ePn	Pn	00 13 51.4	-1.3
OJC				i Pg	Pg	00 14 00.1	-0.8
OJC				eSn	Sn	00 14 23.4	-2.7
OJC				i Sg	Sg	00 14 36.3	0.0
OJC	Ojcow	2.66	115	i Pg	Pg	00 14 00.1	-0.8
OJC				eSn	Sn	00 14 23.4	-2.7
OJC				eS	Sn	00 14 23.4	-2.7
OJC				i Sg	Sg	00 14 36.3	0.0
NEUB	Neuenburg	2.70	267	ePn	Pn	00 13 54.3	+1.1
NEUB				eSg	Sg	00 14 34.9	-2.7
KHC	Kasperske Hory	2.79	216	eP	Pn	00 13 55.7	+1.2
KHC				e		00 14 39.6	
KHC				smax			
	comp=N,285nm,1.0s						
KHC	Kasperske Hory	2.79	216	ePN	Pn	00 13 55.7	+1.2
KHC				ePG	Pg	00 14 02.3	-1.2
KHC				eSG	Sg	00 14 39.6	-1.0
	comp=N,285nm,1.0s						
MOX	Moxa	2.91	256	ePn	Pn	00 13 56.9	+0.7
MOX				eSg	Sg	00 14 43.0	-1.7
MOX	Moxa	2.91	256	i Pn	Pn	00 13 57.0	+0.7
MOX				i Pg	Pg	00 14 05.6	-0.3
MOX				i Sg	Sg	00 14 44.7	0.0
MOX	Moxa	2.91	256	i P	Pn	00 13 57.0	+0.7
MOX				Pg	Pg	00 14 06.0	+0.1
MOX				Sg	Sg	00 14 45.0	+0.3
MOX	Moxa	2.91	256	i Pg	Pg	00 14 05.6	-0.3
MOX				Sg	Sg	00 14 43.0	-1.7
GEC2	GERESS Array S	2.99	211	ePn	Pn	00 13 59.0	+1.6
GEC2				eSg	Sg	00 14 47.4	0.0
GEC2	GERESS Array S	2.99	211	ePn	Pn	00 13 59.0	+1.6
GEC2				eSg	Sg	00 14 47.4	+0.1
SMOL	Smolenice	3.04	163	i Pg	Pg	00 14 08.5	0.0
SMOL				eSg	Sg	00 14 50.9	+1.9
WET	Wettzell	3.06	223	ePn	Pn	00 13 59.7	+1.4
WET				eSg	Sg	00 14 50.2	+0.6
WET	Wettzell	3.06	223	ePn	Pn	00 13 59.7	+1.4
WET				eSg	Sg	00 14 50.2	+0.6
VKA	Vienna	3.16	177	⇑iPN	Pn	00 14 02.1	+2.3
VKA				i PG	Pg	00 14 10.3	-0.6
VKA				i SG	Sg	00 14 53.7	+0.7
VKA	Vienna	3.16	177	i Pg	Pg	00 14 10.3	-0.6
VKA				i Sg	Sg	00 14 53.7	+0.7
WAR	Warsaw	3.19	73	ePg	Pg	00 14 17.0	+5.5
WAR				eSn	Sn	00 14 38.6	-0.9
WAR	Warsaw	3.19	73	ePg	Pg	00 14 17.0	+5.5
WAR				eSn	Sn	00 14 38.6	-0.9
WAR	Warsaw	3.19	73	eS	Sn	00 14 38.6	-0.9
KOLL	Kolacno	3.22	151	ePN	Pn	00 14 01.7	+1.0
KOLL				eSG	Sg	00 14 57.7	+2.7
ZST	Bratislava	3.29	168	i Pg	Pg	00 14 11.7	-1.9
ZST				i Sg	Sg	00 14 56.4	-1.1
NIE	Niedzica	3.38	125	ePn	Pn	00 14 01.4	-1.5
NIE				e		00 14 06.9	
NIE				ePg	Pg	00 14 12.3	-3.0
NIE				e		00 14 54.1	
NIE				eSg	Sg	00 14 58.2	-2.1
VYHS	Vyhne	3.43	147	ePN	Pn	00 14 04.5	+0.8
VYHS				ePG	Pg	00 14 17.6	+1.2
GRA1	Grafenberg Arr	3.54	243	ePn	Pn	00 14 06.5	+1.4
GRA1				eSg	Sg	00 15 04.8	-0.7
GRA1	Grafenberg Arr	3.54	243	Pn	Pn	00 14 06.5	+1.4
GRA1				Sg	Sg	00 15 04.8	-0.7
GRF	Grafenberg Arr	3.54	243	ePn	Pn	00 14 06.5	+1.4
GRF				eSg	Sg	00 15 04.8	-0.7
SOP	Sopron	3.75	175	⇑ePB	Pb	00 14 09.6	-5.2
SOP				eSg	Sg	00 15 09.1	-3.6
MOA	Molln	3.76	199	⇓iPN	Pn	00 14 09.5	+1.2
MOA				i SG	Sg	00 15 13.9	+1.0
	comp=N,119nm,0.5s						
BSD	Bornholm Skovb	3.77	350	i P	Pn	00 14 06.0	-2.5
BSD				i S	Sn	00 14 48.0	-6.2
BSD				pmax	pmax		
	comp=Z,11nm,0.5s						
BSD	Bornholm Skovb	3.77	350	i P	Pn	00 14 06.0	-2.5
	comp=Z,11nm,0.5s						
BSD				i S	Sn	00 14 48.0	-6.2
BSD				i LG		00 15 10.5	
HROE	Hohe Rhon--Fla	3.83	259	⇓iPn	Pn	00 14 09.9	+0.5
SRO1	Iza	3.92	158	ePG	Pg	00 14 25.4	-0.7
KECS	Kecovo	4.10	134	eP	Pg	00 14 28.0	-1.7
KECS	Kecovo	4.10	134	e	Pg	00 14 28.0	-1.7
KECS	Kecovo	4.10	134	eSG	Sg	00 15 22.5	-1.8
ARSA	Arzberg	4.18	185	⇑iPN	Pn	00 14 16.4	+2.0
ARSA				i SG	Sg	00 15 25.1	-2.1
	comp=Z,217nm,0.8s						
PENC	Penc	4.19	149	⇑eP	Pn	00 14 15.5	+1.0
CRVS	Cervenica-Dubn	4.29	124	ePN	Pn	00 14 16.9	+1.0
PSZ	Piszkesteto	4.30	143	⇑iPB	Pb	00 14 17.1	-7.0
PSZ	Piszkesteto	4.30	143	eP	Pn	00 14 16.4	+0.4
PKSG		4.31	158	⇑iP	Pn	00 14 16.9	+0.8
KWP	Kalwaria	4.60	110	eP	Pn	00 14 27.0	+6.7
KWP	Kalwaria	4.60	110	ePn	Pn	00 14 19.4	-0.9
KWP				ePg	Pg	00 14 34.4	-5.3
KWP	Kalwaria	4.60	110	ePn	Pn	00 14 19.4	-0.9
KWP				eP*	Pb	00 14 27.0	-2.3
KWP				ePg	Pg	00 14 34.4	-5.4
KBA	Koelnbreinsper	4.69	203	⇑iPN	Pn	00 14 23.2	+1.6
KBA				i SG	Sg	00 15 42.7	-1.3
	comp=Z,76nm,0.6s						
KOLS	Kolonicke sedl	4.70	119	ePN	Pn	00 14 21.8	0.0
COP	Copenhagen	4.79	335	eP	Pn	00 14 19.9	-3.1
COP				eS	Sn	00 15 14.2	-5.9
COP				pmax	pmax		
	comp=Z,14nm,0.5s						
COP	Copenhagen	4.79	335	i P	Pn	00 14 19.9	-3.1
	comp=Z,14nm,0.5s						
COP				eS	Sn	00 15 14.2	-5.9
UZH	Uzhgorod	4.89	122	eP	Pg	00 14 43.0	-2.5
TOD	Tromm	4.97	251	P	Pn	00 14 24.6	-1.0
TOD				S	Sn	00 15 16.1	-8.5
WATA	Walderalm	5.03	217	⇑iPN	Pn	00 14 27.1	+0.8
WATA				i SG	Sg	00 15 52.6	-2.5
	comp=Z,44nm,0.5s						
WATA	Walderalm	5.03	217	⇑iPn	Pn	00 14 27.1	+0.8
	comp=Z,44nm,0.5s						
WATA				i Sg	Sg	00 15 52.6	-2.5
WATA	Walderalm	5.03	217	i P	Pn	00 14 27.1	+0.8
	comp=Z,44nm,0.5s						
WATA				i Sg	Sg	00 15 52.6	-2.5
SUW	Suwalki	5.05	56	ePg	Pg	00 14 42.8	-5.9
SUW				eSn	Sn	00 15 22.0	-4.6
WTTA	Wattenberg	5.06	217	⇓iPN	Pn	00 14 28.1	+1.3
WTTA				i SG	Sg	00 15 54.3	-2.1
	comp=Z,54nm,0.6s						
WTTA	Wattenberg	5.06	217	⇓iPn	Pn	00 14 28.1	+1.3
	comp=Z,54nm,0.6s						
WTTA				i Sg	Sg	00 15 54.3	-2.1
WTTA	Wattenberg	5.06	217	i P	Pn	00 14 28.1	+1.3
	comp=Z,54nm,0.6s						
WTTA				i Sg	Sg	00 15 54.3	-2.1
STU	Stuttgart	5.15	242	eP	Pn	00 14 26.7	-1.4
STU				pmax	pmax		

	comp=Z,30nm,0.9s						
STU	Stuttgart	5.15	242	*e*Pn	Pn	00 14 26.7	-1.3
	comp=Z,30nm,0.9s						
STU				*e*S	Sg	00 15 56.3	-3.0
STU	Stuttgart	5.15	242	*e*P	Pn	00 14 26.7	-1.4
	comp=Z,30nm,0.9s						
PKSN	Nyarlorinc	5.17	150	⇑*i*P	Pn	00 14 29.2	+0.9
MOTA	Moosalm	5.20	220	⇑*i*PN	Pn	00 14 29.6	+0.8
MOTA				*i* SG	Sg	00 15 58.3	-2.8
	comp=Z,20nm,0.5s						
MOTA	Moosalm	5.20	220	⇑*i*Pn	Pn	00 14 29.6	+0.8
	comp=Z,20nm,0.5s						
MOTA				*i* Sg	Sg	00 15 58.3	-2.8
MOTA	Moosalm	5.20	220	*i* P	Pn	00 14 29.6	+0.8
	comp=Z,20nm,0.5s						
MOTA				*i* Sg	Sg	00 15 58.3	-2.8
SQTA	Sankt Quirin	5.26	219	⇑*i*PN	Pn	00 14 31.0	+1.4
SQTA				*i* SG	Sg	00 16 00.9	-2.1
	comp=Z,31nm,0.7s						
SQTA	Sankt Quirin	5.26	219	⇑*i*Pn	Pn	00 14 31.0	+1.4
	comp=Z,31nm,0.7s						
SQTA				*i* Sg	Sg	00 16 00.9	-2.1
FVI	Forni Avoltri	5.28	205	*e*P	Pn	00 14 31.5	+1.5
LVV	L'vov	5.32	104	*e*P	Pn	00 14 37.2	+6.7
PTCC	Patocco-Chiusa	5.32	201	*e*P	Pn	00 14 31.9	+1.4
PTCC	Patocco-Chiusa	5.32	201	*e*P	Pn	00 14 31.9	+1.4
LJU	Ljubljana	5.47	191	*i* Pn	Pn	00 14 33.9	+1.3
PKSM	Moragy	5.48	161	*e*P	Pn	00 14 33.1	+0.4
RHK1	Bakonya	5.49	165	*e*P	Pn	00 14 33.7	+0.8
KTD	Kalmit	5.52	251	P	Pn	00 14 32.1	-1.2
VOY	Vojsko	5.58	196	*e*Pn	Pn	00 14 36.6	+2.5
VOY				*e*		00 14 56.4	
ABH	Alteburg	5.63	257	P	Pn	00 14 34.3	-0.5
DAVA	Damuels	5.78	227	⇓*i*PN	Pn	00 14 36.9	0.0
DAVA				*i* SG	Sg	00 16 18.5	-1.7
	comp=Z,41nm,0.7s						
DAVA	Damuels	5.78	227	⇓*i*Pn	Pn	00 14 36.9	0.0
	comp=Z,41nm,0.7s						
DAVA				*i* Sg	Sg	00 16 18.5	-1.7
WTSB	Winterswijk	5.79	279	*e*Pn	Pn	00 14 36.7	-0.3
WTSB				*e*Sg	Sg	00 16 22.8	+2.3
LANF	Langenberg	5.83	249	P	Pn	00 14 36.5	-1.2
LANF				S	Sn	00 15 38.5	-7.8
BOJS	Bojanci	5.94	185	*e*Pn	Pn	00 14 40.5	+1.3
RUP	Ruppelstein	5.99	257	P	Pn	00 14 39.3	-0.6
CTI	Castel Tesino	6.11	210	*e*P	Pn	00 14 43.7	+2.1
BRMO	Bormio	6.20	219	*e*P	Pn	00 14 46.1	+3.2
BRMO	Bormio	6.20	219	*e*P	Pn	00 14 46.1	+3.2
WLS	Welschbruch	6.38	245	P	Pn	00 14 43.9	-1.5
HGN	Heimansgroeve	6.42	268	*e*Pn	Pn	00 14 46.5	+0.6
HGN				*e*Sg	Sg	00 16 34.8	-6.7
CDF	Champ du Feu	6.42	245	*e*Pn	Pn	00 14 43.8	-2.2
CDF				*e*Sg	Sg	00 16 28.8	-13
	comp=Z,226nm,1.2s						
MUD	Monsted U'grnd	6.48	324	*i* P	Pn	00 14 49.4	+2.6
MUD				pmax	pmax		
	comp=Z,11nm,0.5s						
MUD	Monsted U'grnd	6.48	324	*i* P	Pn	00 14 49.4	+2.6
	comp=Z,11nm,0.5s						
MUD				*e*S	Sn	00 15 54.3	-8.1
MUD				*i* S	Sn	00 15 56.0	-6.4
WLF	Walferdange	6.55	258	P	Pn	00 14 47.6	-0.3
ECH	Echery	6.59	244	P	Pn	00 14 48.9	+0.5
MOF	Molkenrain	6.81	242	P	Pn	00 14 49.7	-1.7
HINF	Hinteralfeld	6.98	243	*e*Pn	Pn	00 14 50.8	-3.1
HINF				*e*Sg	Sg	00 16 47.8	-12
	comp=Z,77nm,0.8s						
HAU	Haudompre	7.16	245	*e*Pn	Pn	00 14 53.3	-3.1
HAU				*e*Sg	Sg	00 16 53.5	-13
	comp=Z,148nm,1.1s						
GIVF	Givet	7.25	264	*e*Sg	Sg	00 16 53.8	-15
	comp=Z,177nm,1.2s						
VAI	Varese	7.36	224	*e*P	Pn	00 14 59.7	+0.5
RFYF	Reffroy	7.37	252	*e*Pn	Pn	00 14 55.5	-3.8
RFYF				*e*Sg	Sg	00 16 58.9	-14
	comp=Z,190nm,1.4s						
DOU	Dourbes	7.39	264	P	Pn	00 14 59.1	-0.6
MCGN	Macugnaga	7.64	227	*e*P	Pn	00 15 04.0	+0.9
MCGN	Macugnaga	7.64	227	*e*P	Pn	00 15 04.0	+0.9
BAIF	Baives	7.64	264	*e*Sg	Sg	00 17 06.7	-16
	comp=Z,112nm,1.2s						
MEZF	Maizieres J'vi	7.67	252	*e*Sg	Sg	00 17 08.9	-14
	comp=Z,153nm,1.3s						
SFTF	Sexfontaines	7.82	250	*e*Pn	Pn	00 15 00.3	-5.3
	baz=73						
SFTF				*e*Sg	Sg	00 17 13.3	-15
	comp=Z,131nm,1.3s						
GRAM		8.01	212	P	P	00 15 09.1	+0.8
GRAM		8.01	212	P	P	00 15 09.1	+0.8
VALM		8.08	211	P	P	00 15 10.3	+1.1
VALM		8.08	211	P	P	00 15 10.3	+1.1
CABF	La Chapelle	8.13	238	*e*Sg	Sg	00 17 23.5	-15
	comp=Z,235nm,1.2s						
SARO	Sassorosso	8.17	210	P	P	00 15 12.1	+1.5
SARO	Sassorosso	8.17	210	P	P	00 15 12.1	+1.5
LSD	Ceresole Reale	8.40	228	P	P	00 15 13.5	-0.2
SNTG	Esanatoglia	8.44	196	*e*P	P	00 15 13.7	-0.5
SNTG	Esanatoglia	8.44	196	*e*P	P	00 15 13.7	-0.5
PCP	Pian Castagno	8.52	219	P	P	00 15 16.1	+0.7
LPL	La Plagne	8.55	230	*e*Pn	P	00 15 11.9	-4.0
LPL				*e*Sg	Sg	00 17 36.9	-16
	comp=Z,79nm,1.4s						
BHB	Bricherasio	8.82	225	P	P	00 15 18.0	-1.5
BHB	Bricherasio	8.82	225	P	P	00 15 18.0	-1.6
FIN	Finale Ligure	8.93	219	P	P	00 15 21.7	+0.6
RRL	Cesana Torines	8.98	227	P	P	00 15 21.1	-0.6
ROB	Roburent	9.00	221	P	P	00 15 21.6	-0.4
PZZ	Prazzo	9.16	224	P	P	00 15 22.6	-1.6
MONE	Monesi	9.22	220	P	P	00 15 24.9	-0.3
ENR	Entracque	9.24	222	P	P	00 15 24.4	-1.0
SSF	Saint Saulge	9.29	247	*e*Pn	P	00 15 23.0	-3.1
IMI	Imperia	9.31	219	P	P	00 15 25.4	-0.9
ORIF	Oris-en-Rattie	9.40	230	*e*Pn	P	00 15 23.4	-4.2
NEGI	Negi	9.44	220	P	P	00 15 26.4	-1.7
AVF	Avril sur Loir	9.53	246	*e*Pn	P	00 15 23.8	-5.5
AVF				*e*Sg	Sg	00 18 05.6	-19
	comp=Z,84nm,1.3s						
SBF	Sospel	9.53	221	*e*Pn	P	00 15 26.3	-3.0
NB2	NORSAR Subarra	10.01	346	P	P	00 15 30.1	-5.8
	comp=Z,1.7nm,0.6s,baz=166,slow=12						
NB2	NORSAR Subarra	10.01	346	P	P	00 15 30.1	-5.8
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CAF	Calviac	11.37	241	*e*Pn	P	00 15 48.9	-5.6
RJF	Les Rejaudoux	11.44	243	*e*Pn	P	00 15 49.8	-5.6
KAF	Kangasniemi	12.09	24	*e*p	P	00 15 58.7	-5.5
	comp=Z,2.1nm,0.4s						
KAF	Kangasniemi	12.09	24	*e*P	P	00 15 58.7	-5.5
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
OBN	Obninsk	12.81	65	*e*P	P	00 16 06.2	-7.7
OBN				*e*		00 18 41.6	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JOF	Joensuu	14.14	30	*e*p	P	00 16 21.9	-9.3
	comp=Z,2.0nm,0.4s						
JOF	Joensuu	14.14	30	*e*P	P	00 16 21.9	-9.3
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ANN	Anapa	15.71	107	*e*P	P	00 16 46.5	-5.4
SOC	Sochi	17.75	107	*e*P	P	00 17 19.6	+1.9
SOC				pmax	pmax		
	comp=Z,40nm,1.0s						
SOC				pmax	pmax		
	comp=N,50nm,0.9s						
SOC				pmax	pmax		
	comp=E,39nm,0.9s						
SOC				MLR	MLR		
	comp=Z,48nm,6.0s						
SOC				MLR	MLR		
	comp=N,32nm,5.0s						
SOC				MLR	MLR		
	comp=E,23nm,5.0s						
SOC	Sochi	17.75	107	*e*P	P	00 17 19.6	+1.9
	comp=E,48nm,6.0s						
KIV	Kislovodsk	19.34	102	*i* P	P	00 17 40.8	+3.6
ARU	Arti	25.21	62	⇓*i*P	P	00 18 27.0	-9.2
ARU				*e*PPP	PPP	00 19 08.8	-17
ARU				*e*S	S	00 22 53.8	-6.1
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
SVE	Sverdlovsk	26.30	61	*e*P	P	00 18 44.6	-1.8
KURK	Kurchatov	38.26	66	*e*P	P	00 20 25.2	-5.9
AAK	Ala-Archa	39.82	79	*e*P	P	00 20 44.1	-0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
AAK	Ala-Archa	39.82	79	*e*P	P	00 20 44.0	-0.2
	comp=Z,5.4nm,1.1s,mb4.1						
AAK	Ala-Archa	39.82	79	*e*P	P	00 20 44.1	-0.1
	comp=Z,5.0nm,1.1s,mb4.1						
ZAK	Zakamensk	51.80	54	*e*P	P	00 22 18.0	-1.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5						
ZAK	Zakamensk	51.80	54	*e*P	P	00 22 18.0	-1.1
	comp=Z,1.0nm,1.4s,mb3.5						
MBAR	Mbarara	53.30	162	P	P	00 22 28.6	-2.2
MBAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
MBAR	Mbarara	53.30	162	P	P	00 22 28.6	-2.2
	comp=Z,2.0nm,0.6s,mb4.2						
LSA	Lhasa	58.37	81	*e*P	P	00 23 07.8	+0.7
LSA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
LSA	Lhasa	58.37	81	*e*P	P	00 23 07.8	+0.7
	comp=Z,14nm,1.1s,mb4.9						
LSA	Lhasa	58.37	81	*e*P	P	00 23 07.8	+0.7
	comp=Z,14nm,1.1s,mb4.9						

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*BJI **07** 00:14:17.9, 7.17N×93.51E, h78^{km}, mB5.1, mb5.0, Ms4.1, Msz4.0*

*NEIC **07** 00:14:19.9±0.4, 7.43N×93.70E, mb4.7/32, Error ellipse: s-maj=8.9km s-min=8.1km az=121.0*

ISC 07 00:14:18.4±0.9**, 7.40N**±0.05×**93.69E**±0.04**, h55^{km}**±8^{km}**, h55^{km}**±1.6^{km}**: pP-P, n82,** σ1^{s}09/93**, mb4.8**/43**, MS4.1**/8**, 5C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	Songkhla	6.88	91	P	P	00 15 59.0	0.0
	256nm,0.8s						
IPM	Ipoh	7.81	111	P	P	00 16 11.3	-0.7
NNT	Nongplab	7.87	49	P	P	00 16 13.8	+1.0
NST	Nakhon Sawan	10.36	37	P	P	00 16 48.5	+1.5
KGM	Kluang	10.98	119	P	P	00 16 55.5	0.0
CM31	Chiang Mai Arr	12.12	24	*e*P	P	00 17 11.0	+0.3
	46nm,0.7s						
CHG	Chiang Mai	12.44	24	⇓P	P	00 17 17.0	+1.9
	40nm,0.8s						
PALK	Pallekele	12.88	270	*e*P	P	00 17 20.3	-0.6
	8.5nm,0.6s						
VIS	Vishakhapatnam	14.39	316	*e*P	P	00 17 39.7	-1.1
VIS				AMb	AMB	00 17 56.4	
	comp=Z,58nm,0.7s						
VIS				*e*S	S	00 20 19.3	-0.3
BWNR	Bhubaneshwar	14.92	330	*e*P	P	00 17 44.9	-2.8
BWNR				*e*S	S	00 20 30.0	-1.9
HYB	Hyderabad	17.81	305	*i* P	P	00 18 24.5	+0.4
HYB				*e*		00 21 27.0	
HYB				*e*S	S	00 21 41.0	+3.0
SHL	Shillong	18.14	355	*e*P	P	00 18 26.0	-2.3
	comp=Z,90nm,1.0s						
SHL				*e*		00 21 46.0	
QIZ	Qiongzhong	19.49	52	P	P	00 18 44.7	+0.9
QIZ				S	S	00 22 20.3	+4.7
QIZ				LR	LR		
	comp=N,340nm,21.5s						
QIZ				LR	LR		
	comp=E,286nm,24.0s						
QIZ				LR	LR		
	comp=Z,403nm,21.8s						
QIZ	Qiongzhong	19.49	52	*e*P	P	00 18 44.5	+0.6
	comp=Z,67nm,1.2s						
KMI	Kunming	19.63	25	⇑P	P	00 18 47.3	+2.0
KMI				PP	PP	00 19 04.1	-0.3
KMI				S	S	00 22 23.1	+4.6
KMI				AMB	AMB		
	comp=Z,37nm,1.0s						
KMI				AMB	AMB		
	comp=Z,87nm,3.1s						
KMI				LR	LR		
	comp=N,271nm,18.8s						
KMI				LR	LR		
	comp=E,304nm,15.4s						
KMI				LR	LR		
	comp=Z,502nm,30.7s						
KMI	Kunming	19.63	25	⇑P	P	00 18 47.3	+2.0
	comp=Z,37nm,1.0s						
KMI				pP		00 18 51.4	
KMI				sP		00 18 53.3	
KMI				PP	PP	00 19 04.1	-0.3
KMI				S	S	00 22 23.1	+4.6
KMI				sS		00 22 30.6	
KMI				SS	SS	00 22 49.8	+2.4
JIRN	Jiri	21.36	341	*e*P	P	00 19 02.9	-0.3
	comp=Z,42nm,0.7s,mb4.9						
KAD	Karad	21.43	299	*e*P	P	00 19 04.6	+0.8
PKI	Pulchoki	21.54	340	*e*P	P	00 19 04.6	-0.4
	comp=Z,69nm,0.9s,mb5.1						
DMN	Daman	21.68	339	*e*P	P	00 19 07.0	+0.6
	comp=Z,91nm,0.9s,mb5.2						
KKN	Kakani	21.79	340	*e*P	P	00 19 07.1	-0.3
	comp=Z,42nm,0.8s,mb4.9						
BHPL	Bhopal	22.19	317	*e*P	P	00 19 13.1	+1.7
BHPL				AMb	AMB	00 19 16.8	
	comp=Z,24nm,1.2s,mb4.5						
GKN	Gorkha	22.21	338	*e*P	P	00 19 11.7	+0.1
	comp=Z,70nm,0.7s,mb5.2						
POO	Poona	22.25	302	*e*P	P	00 19 12.3	+0.4
POO				AMb	AMB	00 19 15.3	
	comp=Z,23nm,1.4s,mb4.4						
POO				*e*S	S	00 23 10.7	+2.4
LSA	Lhasa	22.31	354	P	P	00 19 12.1	-0.5
LSA				S	S	00 23 05.9	-3.5
LSA				PCP	PcP	00 23 07.3	-0.6
LSA				PCS		00 26 46.2	
LSA				LR	LR		
	comp=N,160nm,23.3s						
LSA				LR	LR		
	comp=E,300nm,29.5s						
LSA				LR	LR		
	comp=Z,290nm,23.3s,MS3.6						
LSA	Lhasa	22.31	354	*e*P	P	00 19 12.2	-0.4
	comp=Z,17nm,0.8s,mb4.5						
KOLN	Koldanda	22.40	336	*e*P	P	00 19 14.1	+0.6
	comp=Z,27nm,0.6s,mb4.8						
KKM	Kota Kinabalu	22.41	92	P	P	00 19 16.9	+3.3
GYA	Guiyang	22.62	32	⇑*i*P	P	00 19 16.8	+1.1
GYA				PP	PP	00 19 46.6	+1.3
GYA				S	S	00 23 14.4	-0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
GYA				LR	LR		
	comp=N,760nm,22.2s,MS4.2						
GYA				LR	LR		
	comp=E,310nm,17.4s,MS4.2						
GYA				LR	LR		
	comp=Z,650nm,23.9s						
CD2	Chengdu	25.21	21	⇑*i*P	P	00 19 40.2	-0.6
CD2				AMB	AMB		
	comp=Z,47nm,1.0s,mb5.0						
LGTI	Lohaghat	25.32	332	*e*P	P	00 19 41.0	-0.8
NDI	New Delhi	26.27	326	*e*P	P	00 19 50.5	-0.1
NDI				*e*	pP	00 20 05.0	+0.9
NDI				*e*		00 24 44.0	
ENH	Enshi	27.15	31	*e*P	P	00 19 57.6	-1.1
	comp=Z,22nm,0.9s,mb4.7						
LZH	Lanzhou	30.02	17	*e*P	P	00 20 23.5	-0.9
LZH				AMB	AMB		
	comp=Z,60nm,1.6s,mb5.1						
LZH				AMB	AMB		
	comp=Z,109nm,4.5s						
LZH				LR	LR		
	comp=E,810nm,17.0s						
LZH				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
LZH	Lanzhou	30.02	17	*e*P	P	00 20 23.5	-0.9
	comp=Z,60nm,1.6s,mb5.1						
LZH				pP	pP	00 20 33.5	-4.7
LZH				sP	sP	00 20 37.5	-7.4
LZH				ScP		00 27 02.5	
LZH				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
GTA	Gaotai	32.34	9	*e*P	P	00 20 44.1	-0.7
GTA				PP	PP	00 21 51.2	-2.4
GTA				S	S	00 25 55.7	+2.0
GTA				SS	SS	00 27 49.4	-2.0
GTA				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,107nm,5.7s						
GTA				LR	LR		
	comp=N,222nm,18.2s,MS4.0						
GTA				LR	LR		
	comp=E,98nm,16.4s,MS4.0						
GTA				LR	LR		
	comp=Z,306nm,20.9s,MS4.0						
NJ2	Nanjing	33.92	40	*e*P	P	00 20 58.6	+0.1
NJ2				AMB	AMB		
	comp=Z,170nm,9.8s						
NJ2				LR	LR		
	comp=N,470nm,17.8s,MS4.4						
NJ2				LR	LR		
	comp=E,330nm,15.0s,MS4.4						
NJ2				LR	LR		
	comp=Z,610nm,26.6s						
HHC	Hu-ho-hao-te	36.92	23	*e*P	P	00 21 24.2	+0.3
HHC				PP	PP	00 22 50.2	-0.7
HHC				S	S	00 27 09.2	+4.8
HHC				AMB	AMB		
	comp=Z,25nm,1.4s,mb4.8						
HHC				LR	LR		
	comp=N,204nm,26.4s,MS3.9						
HHC				LR	LR		
	comp=E,156nm,24.0s,MS3.9						
HHC				LR	LR		
	comp=Z,323nm,28.8s,MS4.0						
MBWA	Marble Bar	38.20	139	*e*P	P	00 21 33.2	-1.6
BJT	Baijiatuau	38.21	28	*e*P	P	00 21 35.7	+1.1
	comp=Z,11nm,0.6s,mb4.8						
UCH	Uchtor	38.61	337	P	P	00 21 38.8	+0.9
	SNR=5.6						
KBK	Karagaybulak	38.81	338	P	P	00 21 40.6	+1.0
	SNR=13						
AML	Almayashu	38.85	336	P	P	00 21 40.9	+1.0
	SNR=6.3						
AAK	Ala-Archa	38.96	337	P	P	00 21 42.1	+1.3
	SNR=5.3						
AAK	Ala-Archa	38.96	337	*e*P	P	00 21 40.6	-0.3
	comp=Z,5.4nm,0.9s,mb4.3						
AAK				*e*	pP	00 21 56.0	+0.9
EKS2	Erkin-Say	39.26	337	P	P	00 21 43.8	+0.4
	SNR=6.8						
USP	Ospenovka	39.50	338	P	P	00 21 45.8	+0.5
	SNR=11						
ULN	Ulaanbaatar	41.90	13	*e*P	P	00 22 03.7	-1.4
	comp=Z,4.2nm,0.8s,mb4.1						
SNY	Shenyang	43.31	33	⇑P	P	00 22 16.7	0.0
SNY				AMB	AMB		
	comp=Z,30nm,1.7s,mb4.8						
SNY				LR	LR		
	comp=N,250nm,20.6s						
SNY				LR	LR		
	comp=Z,160nm,30.4s						
KURK	Kurchatov	44.96	346	*e*P	P	00 22 29.1	-0.8
	comp=Z,4.6nm,0.6s,mb4.5						
CN2	Changchun	45.66	32	*e*P	P	00 22 35.3	-0.3
CN2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
CN2				LR	LR		
	comp=Z,220nm,19.0s,MS4.1						
NWAO	Narrogin (SRO)	45.94	152	*e*P	P	00 22 38.3	+0.4
	comp=Z,3.4nm,0.4s,mb4.6						
HIA	Hailar	47.13	23	*e*P	P	00 22 46.8	-0.2
	comp=Z,23nm,0.6s,mb5.3						
WRAB	Tennant Creek	48.36	125	*e*P	P	00 22 54.8	-2.2
	comp=Z,14nm,0.5s,mb5.2						
MDJ	Mudanjiang	48.45	34	P	P	00 22 57.8	+0.4
MDJ				PCP	PcP	00 24 17.1	-6.2
MDJ				SCP		00 28 08.0	
MDJ				PCS		00 28 12.0	
MDJ				AMB	AMB		
	comp=Z,21nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,65nm,5.4s						
MDJ				LR	LR		
	comp=N,67nm,22.8s,MS3.7						
MDJ				LR	LR		
	comp=E,76nm,24.9s,MS3.7						
MDJ				LR	LR		
	comp=Z,123nm,28.0s,MS3.7						
RAYN	Ar Rayn	48.87	295	P	P	00 23 02.7	+1.8
	comp=Z,76nm,0.6s,mb5.9,SNR=14						
CHKZ	Chkalovo	49.78	342	*e*P	P	00 23 06.5	-1.0
	comp=Z,10nm,0.8s,mb4.9						
CHKZ				*e*	pP	00 23 22.1	+0.1
MAT	Matsushiro	49.81	48	*e*P	P	00 23 08.0	0.0
	comp=Z,13nm,0.8s,mb5.0						
MAT				S	S	00 30 25.0	+13
MAT	Matsushiro	49.81	48	P	P	00 23 07.7	-0.3
MAT				*e*S	S	00 30 24.6	+12
KMBO	Kilima Mbogo	56.93	264	*e*P	P	00 24 02.2	+1.3
KMBO				*e*	pP	00 24 17.0	+1.3
MALT	Malatya	58.43	311	*e*P	P	00 24 09.9	-1.1
	comp=Z,5.4nm,1.2s,mb4.5						
MALT				*e*	pP	00 24 25.2	-0.7
EIL	Elat	59.27	300	*e*P	P	00 24 17.7	+0.7
	comp=Z,26nm,1.2s,mb5.1						
EIL				*e*	pP	00 24 33.0	+1.0
YAK	Yakutsk	60.58	19	*e*P	P	00 24 22.3	-3.3
	comp=Z,29nm,0.4s,mb5.8						
MBAR	Mbarara	63.28	266	*e*P	P	00 24 44.6	+0.3
	comp=Z,17nm,1.5s,mb5.0						
MA2	Magadan	67.39	28	*e*P	P	00 25 08.6	-1.4
	comp=Z,12nm,0.8s,mb5.0						
LSZ	Lusaka	68.69	251	*e*P	P	00 25 19.5	+0.7
	comp=Z,5.8nm,1.0s,mb4.5						
JOF	Joensuu	71.08	335	*e*p	P	00 25 30.1	-2.5
	comp=Z,2.1nm,0.5s,mb4.3						
KAF	Kangasniemi	73.00	333	*e*p	P	00 25 43.1	-0.8
	comp=Z,1.4nm,0.5s,mb4.2,baz=104,slow=5.6						
LBTB	Lobatse	73.63	241	*e*P	P	00 25 49.3	+1.0
	comp=Z,12nm,0.9s,mb4.8						
BOSA	Boshof	74.96	238	*e*P	P	00 25 56.2	+0.2
	comp=Z,8.6nm,0.6s,mb4.9						
BOSA				*e*	pP	00 26 12.6	+1.2
KEV	Kevo	75.13	341	*e*p	P	00 25 53.3	-2.8
	comp=Z,4.8nm,0.7s,mb4.5						
KSP	Ksiaz	76.34	320	*e*P	P	00 26 03.6	+0.2
KSP				*e*	pP	00 26 17.6	-1.2
BRG	Berggiesshubel	77.83	320	P	pP	00 26 27.7	+0.5
KHC	Kasperske Hory	77.97	319	*e*P	P	00 26 12.0	-0.5
KHC				*e*	pP	00 26 28.0	0.0
KHC	Kasperske Hory	77.97	319	*e*P	P	00 26 12.0	-0.5
KHC				pP	pP	00 26 28.0	0.0
GRA1	Grafenberg Arr	79.53	319	*e*P	P	00 26 21.3	+0.3
	comp=Z,13nm,1.2s,mb4.7						
GRA1				*e*pP	pP	00 26 37.1	+0.6
GRF	Grafenberg Arr	79.53	319	*e*P	P	00 26 21.3	+0.3
	comp=Z,13nm,1.2s,mb4.7						
GRF				*e*pP	pP	00 26 37.1	+0.6
NB2	NORSAR Subarra	79.92	331	P	P	00 26 21.7	-1.2
	comp=Z,6.9nm,1.0s,mb4.5,baz=92,slow=5.0						
LPG	La Plagne	82.63	315	*e*P	P	00 26 36.6	-0.8
	comp=Z,18nm,0.8s,mb4.8						
IMA	Indian Mountai	92.22	22	*e*P	P	00 27 23.9	+0.6
	comp=Z,13nm,0.6s,mb5.4						
DAWY	Dawson	98.45	21	*e*P	P	00 27 52.0	+0.4
LPAZ	La Paz	160.15	242	*e*PKPdf	PKPdf	00 34 14.8	+2.6

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*CSEM **07** 00:19:33.5±0.2, 37.81N×1.79W, h8^{km}, mb4.0/1, Error ellipse: s-maj=6.8km s-min=4.1km az=175.0*

MDD 07 00:19:33.1±0.5**, 37.87N×1.80W, mbLg1.3**/2**, Error ellipse: s-maj=6.5km s-min=2.4km az=4.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	La Murta	0.45	93	Pg	Pg	00 19 42.0	-0.1
	0.2nm,0.1s,SNR=7.9						
EMUR				Lg		00 19 47.4	
	7.2nm,0.4s,SNR=18						
EMUR	La Murta	0.45	93	Pg	Pg	00 19 42.0	0.0
	SNR=7.9						
EVIA	Vianos	0.94	325	Pg	Pg	00 19 50.5	-1.5
	0.4nm,0.1s,SNR=7.9						
EVIA				Lg		00 20 02.1	
	0.6nm,0.1s,SNR=7.9						
ENIJ	Nijar	0.95	200	Pg	Pg	00 19 49.9	-2.2
	1.0nm,0.3s,SNR=7.9						
ENIJ				Lg		00 20 03.1	

	0.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	1.00	267	Pg	Pg	00 19 52.4	-0.7
	0.6nm,0.3s,SNR=7.0						
EQES				Lg		00 20 06.2	
	4.0nm,0.2s,SNR=14						
EQES	**Quesada**	1.00	267	Pg	Pg	00 19 52.4	-0.8
	2.2nm,0.7s,SNR=7.0						
EBAN	**Banos Encina**	1.59	281	Pn	Pn	00 20 00.8	-1.9
	0.4nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	00 20 22.4	-1.9
	1.8nm,0.3s,SNR=7.9						
EADA	**Adamuz**	2.21	279	Sn	Sn	00 20 36.0	-4.0
	0.5nm,0.2s,SNR=7.9						
EADA				Lg		00 20 43.3	
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	2.21	279	Sn	Sn	00 20 36.0	-4.0
	SNR=7.9						

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*BJI **07** 01:26:55.0, 13.50N×93.17E, h33^{km}, mb4.2*
*NEIC **07** 01:26:56.4±1.5, 13.42N×92.84E, h54^{km}±17^{km}, mb4.2/8, Error ellipse: s-maj=18.9km s-min=13.3km az=140.0*
ISC 07 01:26:53.5±1.6, **13.4N**±0.1×**92.78E**±0.07, **h41**^{km}±16^{km}, **n24**, σ**1$\overset{s}{.}$32**/25, **mb4.3**/9, **1C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	7.75	49	*e*P	P	01 28 46.4	-0.1
CHG	**Chiang Mai**	7.99	47	PG	P	01 28 50.1	+0.4
	14nm,0.8s						
CHRT	**Chiangrai**	9.28	45	⇑P	P	01 29 04.0	-3.6
VIS	**Vishakhapatnam**	10.05	296	*e*P	P	01 29 16.1	-2.3
VIS				*e*S	S	01 30 56.2	-15
BLSP	**Bilaspur**	13.32	312	*e*P	P	01 30 00.9	-1.5
BLSP				AMb	AMB	01 30 08.0	
	comp=Z,7.6nm,0.6s						
BLSP				*e*		01 32 38.5	
PALK	**Pallekele**	13.36	244	*e*P	P	01 30 03.7	+0.8
HYB	**Hyderabad**	14.27	288	*i* P	P	01 30 18.0	+3.0
LSA	**Lhasa**	16.26	355	P	P	01 30 42.0	+1.5
LSA	**Lhasa**	16.26	355	*e*P	P	01 30 42.3	+1.7
	comp=Z,4.4nm,0.6s						
BHPL	**Bhopal**	17.52	306	*e*P	P	01 30 57.6	+1.2
BHPL				*e*		01 30 58.9	
	comp=Z,5.2nm,0.3s						
GYA	**Guiyang**	18.37	43	⇓*i*P	P	01 31 08.2	+1.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2	**Chengdu**	20.12	28	*e*P	P	01 31 25.4	-1.4
NDI	**New Delhi**	20.97	319	*e*P	P	01 31 33.0	-2.5
ENH	**Enshi**	22.78	40	*e*P	P	01 31 53.1	-0.5
	comp=Z,15nm,1.0s,mb4.4						
SDNR	**Sundarnagar**	23.12	324	*e*P	P	01 31 58.8	+1.9
LZH	**Lanzhou**	24.66	22	*e*P	P	01 32 11.0	-0.8
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.6						
LZH	**Lanzhou**	24.66	22	*e*P	P	01 32 11.0	-0.8
	comp=Z,30nm,1.5s,mb4.6						
LZH				pP		01 32 16.5	
LZH				sP		01 32 20.0	
XAN	**Xi’an**	25.22	33	P	P	01 32 17.1	-0.1
XAN				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.2						
GTA	**Gaotai**	26.61	12	*e*P	P	01 32 31.0	+0.9
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.1						
AAK	**Ala-Archa**	33.12	335	P	P	01 33 29.4	+1.5
	comp=Z,4.4nm,1.2s,mb4.3						
ULN	**Ulaanbaatar**	36.33	16	*e*P	P	01 33 56.5	+1.1
	comp=Z,1.3nm,0.7s,mb4.0						
KURK	**Kurchatov**	38.93	346	*e*P	P	01 34 15.9	-1.1
	comp=Z,4.3nm,1.2s,mb4.0						
CHKZ	**Chkalovo**	43.81	341	*e*P	P	01 34 56.3	-0.8
	comp=Z,5.4nm,1.1s,mb4.2						
WRAB	**Tennant Creek**	52.65	128	*e*P	P	01 36 05.6	-0.6
	comp=Z,9.3nm,0.9s,mb4.7						

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*CSEM **07** 02:46:03.4±0.1, 35.20N×4.01W, h12^{km}, MD3.3, Error ellipse: s-maj=3.3km s-min=2.7km az=61.0*
*MDD **07** 02:46:05.5±0.5, 35.20N×4.02W, h5^{km}±4^{km}, mb3.6/11, Error ellipse: s-maj=4.4km s-min=3.2km az=93.0, PRXIMO*
*NEIC **07** 02:46:05.6, 35.23N×4.03W, h4^{km}, MG3.6(MDD), After MDD.*
*SFS **07** 02:46:05.0, 35.24N×4.04W*
*CNRM **07** 02:46:05.8, 35.20N×3.98W, h5^{km}, MD3.3*
*INMG **07** 02:46:06.3±1.5, 35.13N×4.03W, h24^{km}±15^{km}, ML2.2, Error ellipse: s-maj=6.7km s-min=5.7km az=7.0*
ISC 07 02:46:03.3±0.3, **35.25N**±0.02×**4.12W**±0.02, **h5**^{km}, **n65**, σ**1$\overset{s}{.}$27**/121, **1C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	**Palemas**	0.14	99	P	Pg	02 46 06.0	-0.2
MPAL				S	Sg	02 46 08.5	+0.2
MPAL	**Palemas**	0.14	99	*i* P	Pg	02 46 06.0	-0.2
TOU	**Touzarine**	0.41	134	P	Pg	02 46 10.8	-0.7
TOU				S	Sg	02 46 16.0	-1.0
TOU	**Touzarine**	0.41	134	*i* P	Pg	02 46 10.8	-0.7
EMEL	**Melilla**	0.95	87	⇑P	Pb	02 46 21.8	0.0
	57nm,0.2s,SNR=18						
EMEL				S	Sb	02 46 34.6	+0.1
	294nm,0.2s,SNR=6.9						
EMLI	**Melilla**	0.95	87	P	Pb	02 46 21.8	-0.1
	57nm,0.2s,SNR=18						
EMLI				S	Sb	02 46 34.6	-0.1
	294nm,0.2s,SNR=6.9						
MELI	**Melilla**	0.97	87	P	Pb	02 46 22.9	+0.8
MELI				S	Sb	02 46 35.9	+0.9
MELI	**Melilla**	0.97	87	*e*P	Pb	02 46 22.9	+0.8
MELI				*e*S	Sb	02 46 35.9	+0.9
EALB	**Alboran**	1.12	52	P	Pb	02 46 24.9	+0.1
	13nm,0.1s,SNR=23						
EALB				S	Sb	02 46 39.5	+0.1
	62nm,0.2s						
EALB	**Alboran**	1.12	52	P	Pb	02 46 24.9	+0.2
	13nm,0.1s,SNR=23						
EALB				S	Sb	02 46 39.5	0.0
	62nm,0.2s						
ZAI	**Zaio**	1.16	103	*i* P	Pb	02 46 25.5	+0.1
ZAI				*i* S	Sb	02 46 38.5	-2.0
TZK	**Tazeka**	1.16	183	*i* P	Pb	02 46 26.0	+0.6
TZK				*i* S	Sb	02 46 42.0	+1.5
EMIJ	**Mijas**	1.42	338	P	Pn	02 46 30.2	+0.4
	3.1nm,0.3s,SNR=12						
EMIJ				S	Sb	02 46 49.0	+0.9
	9.7nm,0.1s						
TAF	**Taforalt**	1.46	107	P	Pn	02 46 28.0	-2.4
TAF				S	Sb	02 46 45.0	-4.4
REAL	**Reales**	1.52	325	*e*P	Pn	02 46 34.0	+2.8
REAL				*e*S	Sb	02 46 50.0	-1.1
ELOJ	**Sierra Loja**	1.90	359	P	Pn	02 46 37.4	+0.7
	0.5nm,0.1s,SNR=7.9						
EBER	**Berja**	1.92	31	P	Pn	02 46 37.5	+0.5
	4.1nm,0.3s,SNR=8.9						
EBER				S	Sn	02 47 02.6	+0.7
	17nm,0.4s						
EBER	**Berja**	1.92	31	P	Pn	02 46 37.5	+0.5
	4.1nm,0.3s,SNR=8.9						
EBER				S	Sn	02 47 02.6	+0.7
	17nm,0.4s						
LIJA	**Lijar**	1.96	328	P	Pn	02 46 41.0	+3.5
LIJA				S	Sn	02 47 05.0	+2.3
MIF	**Mishlifen**	2.05	207	*i* P	Pn	02 46 40.0	+1.1
MIF				*i* S	Sn	02 47 04.0	-1.2
ESPR	**Espera**	2.15	319	P	Pn	02 46 42.7	+2.5
	1.1nm,0.2s,SNR=11						
ESPR				S	Sn	02 47 09.8	+2.3
	6.8nm,0.3s						
ESPR	**Espera**	2.15	319	P	Pn	02 46 42.7	+2.5
	1.1nm,0.2s,SNR=11						
ESPR				S	Sn	02 47 09.8	+2.3
	6.8nm,0.3s						
ELUQ	**Luque**	2.31	357	P	Pn	02 46 45.0	+2.4
	1.9nm,0.2s,SNR=7.9						
ELUQ				S	Sn	02 47 11.8	0.0
	2.4nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	2.31	41	P	Pn	02 46 41.5	-1.1
	2.1nm,0.4s,SNR=7.4						
ENIJ				S	Sn	02 47 09.7	-2.1
	6.8nm,0.2s						
CZD	**Col de Zad**	2.34	199	*i* P	Pn	02 46 44.0	+1.0
CZD				*i* S	Sn	02 47 10.5	-1.9
EQES	**Quesada**	2.69	18	P	Pn	02 46 49.7	+1.8
	1.2nm,0.1s,SNR=20						
EQES				S	Sn	02 47 21.9	+0.6
	12nm,0.4s						
EQES	**Quesada**	2.69	18	P	Pn	02 46 49.7	+1.8
	1.2nm,0.1s,SNR=20						
EQES				S	Sn	02 47 21.9	+0.7
	12nm,0.4s						
EBAN	**Banos Encina**	2.92	5	P	Pn	02 46 53.1	+1.8
	0.6nm,0.1s,SNR=7.9						
EBAN				S	Sn	02 47 27.7	+0.4
	1.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	2.94	353	P	Pn	02 46 52.9	+1.4
EADA				S	Sn	02 47 27.2	-0.5
EADA	**Adamuz**	2.94	353	P	Pn	02 46 52.9	+1.4
	1.0nm,0.1s,SNR=15						
EADA				S	Sn	02 47 27.2	-0.5
	2.5nm,0.2s						
EADA	**Adamuz**	2.94	353	P	Pn	02 46 52.9	+1.4
	1.0nm,0.1s,SNR=15						
EADA				S	Sn	02 47 27.2	-0.4
	2.5nm,0.2s						
EMIN	**Mina Concepcio**	3.25	321	P	Pn	02 46 56.2	+0.2
	0.4nm,0.1s,SNR=21						
EMIN				S	Sn	02 47 33.9	-1.6
	1.1nm,0.2s						
EMIN	**Mina Concepcio**	3.25	321	P	Pn	02 46 56.2	+0.2
	0.4nm,0.1s,SNR=21						
EMIN				S	Sn	02 47 33.9	-1.7
	1.1nm,0.2s						
EMUR	**La Murta**	3.47	41	P	Pn	02 46 59.3	+0.2
	0.1nm,0.1s,SNR=7.9						
EMUR				S	Sn	02 47 36.7	-4.5
	7.1nm,0.4s,SNR=8.0						
EMUR	**La Murta**	3.47	41	P	Pn	02 46 59.3	+0.2
	0.1nm,0.1s,SNR=7.9						
EMUR				S	Sn	02 47 36.7	-4.5
	7.1nm,0.4s,SNR=8.0						
EGRO	**El Granado**	3.55	311	P	Pn	02 47 01.2	+1.0
	1.0nm,0.1s,SNR=7.9						
EGRO				S	Sn	02 47 41.5	-1.5
	1.8nm,0.1s,SNR=7.9						
EGRO	**El Granado**	3.55	311	P	Pn	02 47 01.2	+1.0
	1.0nm,0.1s,SNR=7.9						
EGRO				S	Sn	02 47 41.5	-1.6
	1.8nm,0.1s,SNR=7.9						
PBEJ	**Beja**	4.10	314	*e*Pn	Pn	02 47 08.2	+0.2
PBEJ				*e*Sn	Sn	02 47 52.3	-4.7
	2.2nm,0.2s						
PBEJ	**Beja**	4.10	314	Pn	Pn	02 47 08.2	+0.2
PBEJ				Sn	Sn	02 47 52.3	-4.7
	1.1nm,0.2s						
EBAD	**Badajoz**	4.20	327	P	Pn	02 47 10.2	+0.7
	0.7nm,0.1s,SNR=15						
EBAD				S	Sn	02 47 57.4	-2.2
	5.1nm,0.2s						
EBAD	**Badajoz**	4.20	327	P	Pn	02 47 10.2	+0.7
	0.7nm,0.1s,SNR=15						
EBAD				S	Sn	02 47 57.4	-2.2
	5.1nm,0.2s						
PTEO	**Sao Teotonio**	4.37	303	*e*Pn	Pn	02 47 12.6	+0.8
PTEO				*e*Sn	Sn	02 48 01.5	-2.4
	7.4nm,0.7s						
PTEO	**Sao Teotonio**	4.37	303	*e*Pn	Pn	02 47 12.6	+0.8
PTEO				*e*Sn	Sn	02 48 01.5	-2.4
	7.4nm,0.7s						
ESDC	**Sonseca Array**	4.42	2	P	Pn	02 47 13.1	+0.5
	0.5nm,0.1s,baz=179,slow=12,SNR=10						
ESDC				S	Sn	02 48 02.8	-2.4
	0.3nm,0.1s,baz=186,slow=23,SNR=4.9						
ESDC	**Sonseca Array**	4.42	2	P	Pn	02 47 13.1	+0.5
	0.5nm,0.1s,SNR=10						
ESDC				S	Sn	02 48 02.8	-2.4
	0.3nm,0.1s,SNR=4.9						
MOE	**Montemor**	4.71	315	*e*Sn	Sn	02 48 10.3	-2.3
PCBR	**Castelo Branco**	5.31	331	*e*Pn	Pn	02 47 25.4	+0.3
PCBR				*e*Sn	Sn	02 48 22.2	-5.3
	2.0nm,0.4s						
PCBR	**Castelo Branco**	5.31	331	*e*Pn	Pn	02 47 25.4	+0.3
PCBR				*e*Sn	Sn	02 48 22.2	-5.3
	2.0nm,0.4s						
GUD	**Guadarrama**	5.39	360	P	Pn	02 47 26.4	+0.2
	0.6nm,0.2s,SNR=6.7						
GUD				S	Sn	02 48 26.0	-3.5
	1.9nm,0.5s						
PLOU	**Loures**	5.42	314	*e*Pn	Pn	02 47 27.4	+0.7
PLOU				*e*Sn	Sn	02 48 27.3	-3.1
	4.5nm,0.3s						
PLOU	**Loures**	5.42	314	Pn	Pn	02 47 27.4	+0.7
PLOU				Sn	Sn	02 48 27.3	-3.1
	2.2nm,0.3s						
EIBI	**Ibiza**	5.76	48	P	Pn	02 47 30.2	-1.4
	1.7nm,0.3s,SNR=7.9						
EIBI				S	Sn	02 48 32.3	-6.7
	2.8nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	5.76	48	P	Pn	02 47 30.2	-1.4
	1.7nm,0.3s,SNR=7.9						
MTE	**Manteigas**	5.81	333	*e*Sn	Sn	02 48 37.6	-2.7
	3.0nm,0.5s						
MTE	**Manteigas**	5.81	333	Sn	Sn	02 48 37.6	-2.7
	1.5nm,0.5s						
PVIS	**Viseu**	6.22	332	*e*Pn	Pn	02 47 38.7	+0.7
PVIS				*e*Sn	Sn	02 48 43.9	-6.5
	0.8nm,0.1s						
PVIS	**Viseu**	6.22	332	Pn	Pn	02 47 38.7	+0.7
PVIS				Sn	Sn	02 48 43.9	-6.5
	0.4nm,0.1s						
PVRL	**Vila Real**	6.65	336	*e*Pn	Pn	02 47 43.6	-0.5
PVRL				*e*Sn	Sn	02 48 54.8	-6.4
	2.4nm,0.3s						
PVRL	**Vila Real**	6.65	336	Pn	Pn	02 47 43.6	-0.5
PVRL				Sn	Sn	02 48 54.8	-6.4
	1.2nm,0.3s						
PBRG	**Braganca**	6.86	343	*e*Pn	Pn	02 47 46.9	-0.2
PBRG				*e*Sn	Sn	02 48 59.9	-6.6
	0.9nm,0.2s						
PBRG	**Braganca**	6.86	343	Pn	Pn	02 47 46.9	-0.2
PBRG				Sn	Sn	02 48 59.9	-6.6
	0.4nm,0.2s						
ECAL	**Calabor**	6.99	344	P	Pn	02 47 48.6	-0.3
	0.6nm,0.2s,SNR=6.0						
ECAL				S	Sn	02 49 03.7	-6.0
	2.5nm,0.6s,SNR=7.9						
ECAL	**Calabor**	6.99	344	P	Pn	02 47 48.6	-0.3
	0.6nm,0.2s,SNR=6.0						
ELOB	**Lobios**	7.30	336	P	Pn	02 47 53.4	+0.3
	2.2nm,0.5s,SNR=7.9						
ELOB				S	Sn	02 49 10.2	-7.1
	0.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	7.30	336	P	Pn	02 47 53.4	+0.2
	2.2nm,0.5s,SNR=7.9						

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*NEIC **07** 02:59:40.4, 45.00S×167.58E, h73^{km}, ML3.9(WEL), After WEL.*
WEL 07 02:59:40.0±0.3, **45.03S**×**167.54E**, **h78**^{km}±2^{km}, **ML3.9**/6, **2C-4D, Error ellipse: s-maj=2.0km s-min=1.4km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	0.45	38	⇑PN	P	02 59 53.0	-0.2
MSZ				SN	S	03 00 02.8	-0.2
DCZ	**Deep Cove**	0.53	211	⇑PN	P	02 59 53.3	-0.6
DCZ				SN	S	03 00 03.8	-0.4
MLZ	**Mavora Lakes**	0.55	126	P	P	02 59 53.8	-0.4
MLZ				S	S	03 00 03.5	-1.1
MLZ	**Mavora Lakes**	0.55	126	⇓PN	P	02 59 53.8	-0.4
MLZ				SN	S	03 00 03.5	-1.1
WHZ	**Wether Hill Ro**	0.91	162	P	P	02 59 58.0	-0.1
WHZ				S	S	03 00 11.5	-0.2
WHZ	**Wether Hill Ro**	0.91	162	PN	P	02 59 57.9	-0.2
WHZ				SN	S	03 00 11.4	-0.3
WKZ	**Wanaka**	1.07	80	P	P	02 59 59.8	-0.2
WKZ	**Wanaka**	1.07	80	⇓PN	P	02 59 59.8	-0.2
WKZ				SN	S	03 00 13.7	-1.3
EAZ	**Earnscleugh**	1.27	100	P	P	03 00 02.2	-0.4
EAZ				S	S	03 00 17.3	-2.2
EAZ	**Earnscleugh**	1.27	100	PN	P	03 00 02.1	-0.5
EAZ				SN	S	03 00 17.4	-2.1
JCZ	**Jackson Bay**	1.29	43	P	P	03 00 01.9	-1.0
JCZ	**Jackson Bay**	1.29	43	PN	P	03 00 01.8	-1.1
JCZ				SN	S	03 00 18.0	-2.0
TUZ	**Tuapeka**	1.74	123	*e*P	P	03 00 08.4	-0.5
TUZ	**Tuapeka**	1.74	123	PN	P	03 00 08.2	-0.7
TUZ				SN	S	03 00 28.3	-1.9
LBZ	**Lake Benmore**	1.99	72	*e*P	P	03 00 10.2	-2.1
LBZ	**Lake Benmore**	1.99	72	⇓PN	P	03 00 10.2	-2.1
LBZ				SN	S	03 00 32.6	-3.5
FOZ	**Fox Glacier**	2.13	47	PN	P	03 00 12.5	-1.7
ODZ	**Otahua Downs**	2.20	92	P	P	03 00 13.4	-1.9
ODZ	**Otahua Downs**	2.20	92	⇓PN	P	03 00 13.3	-1.9
ODZ				SN	S	03 00 37.4	-4.0
ODZ				SN	S	03 00 37.4	-4.0
RPZ	**Rata Peaks**	2.84	64	P	P	03 00 20.8	-3.4
RPZ	**Rata Peaks**	2.84	64	PN	P	03 00 20.8	-3.5
RPZ				SN	S	03 00 53.1	-4.3
WVZ	**Waitaha Valley**	3.02	51	PN	P	03 00 23.7	-3.0
MQZ	**McQueen’s Vall**	3.90	72	*e*P	P	03 00 35.2	-3.7
MQZ	**McQueen’s Vall**	3.90	72	PN	P	03 00 34.9	-4.0
MQZ				SN	S	03 01 15.2	-8.5
DSZ	**Denniston Nort**	4.52	45	*e*P	P	03 00 43.5	-4.0
DSZ	**Denniston Nort**	4.52	45	PN	P	03 00 43.5	-4.0
DSZ				*e*SN	S	03 01 31.9	-7.3
THZ	**Tophouse**	5.09	52	*e*P	P	03 00 50.7	-4.7
THZ	**Tophouse**	5.09	52	PN	P	03 00 50.6	-4.9
THZ				*e*SN	S	03 01 46.4	-7.1
QRZ	**Quartz Range**	5.57	43	*e*P	P	03 00 58.4	-3.6
QRZ	**Quartz Range**	5.57	43	*e*PN	P	03 00 57.5	-4.5
QRZ				SN	S	03 01 57.3	-8.1

SKHL 07 03:01:58.4±0.5, **54.39N**×**131.89E**, **h8**^{km}±1^{km}, **mb4.6**/7, **Ms3.3**/1, **1C-2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKMR	**Ekimchan**	1.47	154	⇑*i*Pg	Pg	03 02 24.6	-3.1
EKMR				AMB	AMB	03 02 26.5	
	300nm,0.4s						
EKMR				AMB	AMB	03 02 26.5	
	42nm,0.4s						
EKMR				AMB	AMB	03 02 26.5	
	280nm,0.4s						
EKMR				pPg		03 02 27.5	
EKMR				*e*Sg	Sg	03 02 44.2	-3.0
BMKR	**Bomnak**	1.80	282	⇓*e*Pn	Pn	03 02 29.0	-1.1
BMKR				⇓*i*Pg	Pg	03 02 30.4	-4.1
BMKR				AMB	AMB	03 02 31.0	
	216nm,0.6s						
BMKR				pPg		03 02 34.1	
BMKR				*e*Sg	Sg	03 02 54.0	-4.5
YASR	**Yasnyy**	2.57	246	*e*Pn	Pn	03 02 40.5	-0.5
YASR				pPn		03 02 44.0	
YASR				*e*Pg	Pg	03 02 45.6	-4.0
YASR				AMB	AMB	03 02 50.5	
	133nm,0.5s						
YASR				*e*Sg	Sg	03 03 19.0	-4.8
YASR				A		03 03 24.2	
	329nm,0.5s						
YASR				A		03 03 24.2	
	228nm,0.5s						
ZEA	**Zeya**	2.81	258	*e*Pg	Pg	03 02 48.5	-6.0
ZEA				AMB	AMB	03 02 48.8	
	74nm,0.2s						
ZEA				pPg		03 02 50.9	
ZEA				*i* Sg	Sg	03 03 25.0	-7.0
ZEA				A		03 03 28.0	
	700nm,0.5s						
ZEA				A		03 03 28.1	
	730nm,0.5s						
ZEA				A		03 03 28.1	
	270nm,0.5s						
ZEA				A		03 03 28.1	
	78nm,0.5s						
ZEA				AMS	AMS	03 03 45.0	
	400nm,6.0s						
KROS	**Kirovskiy**	2.88	273	*e*Pn	Pn	03 02 44.0	-1.4
KROS				pPn		03 02 47.6	
KROS				*e*Pg	Pg	03 02 49.6	-6.2
KROS				AMB	AMB	03 02 50.5	
	9.0nm,0.6s						
KROS				AMB	AMB	03 02 50.5	
	82nm,0.6s						
KROS				AMB	AMB	03 02 50.5	
	84nm,0.6s						
KROS				*e*rx	rx	03 02 52.6	
KROS				*i* Sn	Sn	03 03 18.0	-2.6
KROS				*i* Sg	Sg	03 03 28.3	-5.8
KROS				A		03 03 33.5	
	390nm,0.6s						
KROS				A		03 03 33.5	
	240nm,0.6s						
KROS				A		03 03 33.5	
	100nm,0.6s						
GRNR	**Gornyy**	4.56	141	*e*Pn	Pn	03 03 10.8	+1.5
GRNR				AMB	AMB	03 03 12.0	
	66nm,0.5s						
GRNR				*e*rx	rx	03 03 25.8	
GRNR				*e*Sg	Sg	03 04 23.2	-7.0
GRNR				A		03 04 25.6	
	95nm,0.8s						
KLR	**Kul’dur**	5.17	181	*e*Pn	Pn	03 03 17.2	-0.8
KLR				*e*rx	rx	03 03 35.2	
KLR				*e*rx	rx	03 04 18.7	
KLR				*e*Sg	Sg	03 04 40.2	-10
NKL	**Nikolayevsk**	5.36	100	*e*rx	rx	03 03 15.8	
NKL				*e*Pn	Pn	03 03 19.0	-1.7
NKL				*e*rx	rx	03 04 40.0	
NKL				*e*Sg	Sg	03 04 44.5	-12
NKL				A		03 04 47.5	
	130nm,0.8s						
NKL				A		03 04 47.5	
	110nm,0.8s						
OKH	**Okha**	6.57	93	*e*Sg	Sg	03 05 22.9	-14
OKH				A		03 05 33.9	
	183nm,1.0s						
TUP	**Tupik**	6.97	275	*e*Pn	Pn	03 03 43.1	-0.3
TUP				*e*Pg	Pg	03 04 06.5	-11
TUP				AMB	AMB	03 04 08.9	
	20nm,0.5s						
TUP				*e*Sg	Sg	03 05 39.0	-11
TYV	**Tymovskoe**	7.44	114	*e*rx	rx	03 05 09.0	
TYV				*e*Sg	Sg	03 05 51.2	-15
TYV				A		03 06 10.0	
	53nm,1.0s						

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*NEIC **07** 03:58:20.8, 34.90N×26.60E, h4^{km}, MD3.4(ATH), After ATH.*
*CSEM **07** 03:58:20.8, 34.90N×26.60E, h4^{km}, MD3.4/5, After ATH*
ATH 07 03:58:13.2, 34.44N×26.70E, h3^{km}**, MD3.5**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	0.94	298	*e*PG	Pg	03 58 31.2	-0.7
KARP	**Karpathos**	1.17	19	*e*PB	Pb	03 58 35.2	-0.5
KARP	**Karpathos**	1.17	19	*e*Pg	Pg	03 58 35.5	-1.0
NPS	**Neapolis**	1.21	313	*e*PG	Pg	03 58 35.6	-1.8
ARG	**Arkhangelos**	2.12	33	*e*PN	Pn	03 58 51.2	+1.2
ARG	**Arkhangelos**	2.12	33	*e*Pg	Pg	03 58 54.0	-1.6
VAM	**Vamos**	2.27	296	*e*Pg	Pg	03 59 00.0	+1.5
APE	**Apeiranthos**	2.79	340	*e*PG	Pg	03 59 04.5	-4.4

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*PDG **07** 04:42:30.4±0.1, 41.20N×20.02E, h8^{km}*
*NEIC **07** 04:42:30.4, 41.20N×20.02E, h8^{km}, MD2.9(PDG), After PDG.*
*TIR **07** 04:42:30.6, 41.42N×20.24E, h5^{km}, Ml2.8*
*CSEM **07** 04:42:30.8±0.1, 41.38N×20.20E, h2^{km}, ML2.7, Error ellipse: s-maj=2.7km s-min=1.3km az=16.0*
*THE **07** 04:42:32.8, 41.33N×20.37E, h10^{km}, ML2.7*
ISC 07 04:42:30.7±0.3, **41.37N**±0.02×**20.30E**±0.02, **h2**^{km}, **n31**, σ**1$\overset{s}{.}$22**/56, **7C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	0.33	267	⇑*i*Pg	Pg	04 42 36.0	-1.3
TIR				*i* Sg	Sg	04 42 41.5	-0.2
QSH	**Qafa e Shtames**	0.34	298	*i* Pg	Pg	04 42 36.2	-1.2
QSH				*i* Sg	Sg	04 42 42.2	+0.3
OHR	**Ohrid**	0.45	124	⇑*i*Pg	Pg	04 42 40.2	+0.4
OHR				*i* Sg	Sg	04 42 48.0	+2.2
LACI	**Lac**	0.52	301	*i* Pg	Pg	04 42 39.5	-1.6
LACI				*i* Sg	Sg	04 42 47.5	-0.5
ULC	**Ulcinj**	0.99	307	⇓*i*Pg	Pg	04 42 48.0	-2.4
ULC				*e*Sg	Sg	04 43 03.1	-0.5
FNA	**Florina**	1.00	125	*e*Pg	Pg	04 42 49.7	-0.9
FNA				*e*Sg	Sg	04 43 04.6	+0.6
SKO	**Skopje**	1.04	54	*i* Pg	Pg	04 42 51.3	-0.3

SKO				i		04 42 52.2	
	comp=Z,0.1nm,0.4s						
SKO				⇑iSg	Sg	04 43 05.8	+0.3
SKO				Lg		04 43 06.5	
	comp=Z,0.2nm,0.6s						
SKO	Skopje	1.04	54	i Pg	Pg	04 42 51.3	-0.3
SKO				⇑iSg	Sg	04 43 05.8	+0.3
LSK	Leskovik	1.24	169	i Pn	Pn	04 42 57.4	+2.4
LSK				i Sn	Sn	04 43 12.7	+0.3
PVY	Plav	1.25	349	⇓iPg	Pg	04 42 56.1	+0.4
PVY				eSg	Sg	04 43 17.8	+5.5
TTG	Podgorica	1.32	324	⇑iPg	Pg	04 42 54.6	-2.4
TTG				eSg	Sg	04 43 16.5	+2.0
BUM	Brajici-Budva	1.40	312	⇓iPg	Pg	04 42 56.1	-2.6
BUM				eSg	Sg	04 43 17.5	+0.1
IVA	Berane	1.53	349	⇑iPn	Pn	04 43 00.5	+1.2
IVA				eSn	Sn	04 43 25.0	+5.0
IVA	Berane	1.53	349	⇑iPn	Pn	04 43 00.4	+1.2
GRG	Griva	1.64	104	ePb	Pb	04 43 01.0	-0.3
GRG				eSb	Sb	04 43 22.8	+0.4
HCY	Herceg Novi	1.73	309	⇓iPn	Pn	04 43 01.2	-0.7
HCY				eSn	Sn	04 43 25.8	+0.9
NKY	Niksic	1.74	327	⇓iPn	Pn	04 43 02.3	+0.1
NKY				eSn	Sn	04 43 27.9	+2.7
IGT	Igoumenitsa	1.83	179	ePb	Pb	04 43 04.0	-0.6
IGT				eSb	Sb	04 43 28.7	+0.7
KNT	Kendrikon	1.97	95	ePb	Pb	04 43 06.6	-0.4
KNT				eSb	Sb	04 43 31.9	0.0
BRY	Bratogost	2.02	320	⇓iPn	Pn	04 43 05.7	-0.4
BRY				eSn	Sn	04 43 33.7	+1.5
PLE	Pljevlja	2.07	341	⇓iPn	Pn	04 43 08.2	+1.2
PLE				eSn	Sn	04 43 37.5	+3.8
LIT	Litokhoron	2.09	127	ePn	Pn	04 43 07.5	+0.3
UPM	Unac-Piva	2.11	331	⇓iPn	Pn	04 43 08.0	+0.6
UPM				eSn	Sn	04 43 37.1	+2.6
KKB	Krupnik	2.14	76	i P	Pn	04 43 08.0	+0.1
KKB				i Sg	Sg	04 43 42.5	+0.4
VTS	Vitosha	2.49	60	eP	Pn	04 43 12.0	-0.9
VTS	Vitosha	2.49	60	ePg	Pg	04 43 19.0	-1.4
VTS				eS	Sn	04 43 47.0	+2.8
VTS				eSg	Sg	04 43 52.5	-1.1
MMB	Musomiste	2.58	84	P	Pn	04 43 13.0	-1.2
MMB	Musomiste	2.58	84	Pg	Pg	04 43 19.5	-2.8
MMB				Sg	Sg	04 43 55.0	-1.7
AGG	Agios Georgios	2.81	146	ePn	Pn	04 43 18.1	+0.7
AGG	Agios Georgios	2.81	146	ePn	Pn	04 43 18.1	+0.6
PGB	Panagyurishte	3.12	66	eP	Pn	04 43 22.0	+0.2

PGC ***07*** *06:23:31.8, 51.24N×131.15W, h10^{km}, Mw5.3, Mw5.7, South of Moresby Island, British Columbia*

BJI ***07*** *06:23:32.0, 51.20N×131.10W, h11^{km}, mB5.3, mb4.9, Ms4.8, Msz4.6*

NEIC ***07*** *06:23:32.0, 51.24N×131.15W, h10^{km}, mb4.9/73, MS4.5/6, MW5.2(PGC), After PGC.*

HRVD ***07*** *06:23:32.0±0.2, 51.20N×131.16W, h12^{km}, MW5.0/62, Centroid moment Tensor Solution. LP body waves: s36,c48;Mantle waves: s62,c120; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.40±.12; $M_{\theta\theta}$-3.54±.10; $M_{\phi\phi}$3.94±.10; $M_{r\theta}$0.10±.30; $M_{\theta\phi}$1.73±.10; $M_{\phi r}$-0.48±.28; Best double couple: $M_0$4.148×10^{16} NP1: ϕ_s238°,δ84°,λ1°. NP2:ϕ_s147°,δ89°,λ174°. Principal axes: T 4.363, Plg5°, Azm102°; N -.43, Plg84°, Azm314°; P -3.933, Plg3°, Azm193°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***07*** *06:23:36.4±2.3, 51.24N×130.99W, h33^{km}, mb5.2/23, MS4.4/8 Error ellipse: s-maj=13.6km s-min=5.3km az=111.8*

ISC 07 06:23:33.0±0.2**, 51.41N**±0.02×**130.81W**±0.03**, h10**^{km}**, (h17**^{km}±1.3^{km}**:pP-P), n322,** σ1^{s}**14**/321**, mb4.9**/75**, MS4.5**/23**, 9C-8D, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	Barry Inlet	1.30	334	⇓Pn	Pn	06 23 55.5	-1.8
BNB				Sn	Sn	06 24 11.4	-3.5
	comp=Z,2μm,0.2s						
BNB				Trac		06 24 13.6	
	comp=Z,2μm,0.2s						
BBB	Bella Bella	1.84	64	Pn	Pn	06 24 05.9	+0.9
BBB				Sn	Sn	06 24 29.6	+1.0
BBB				Trac		06 24 41.7	
	comp=Z,3μm,0.5s						
HOLB	Holberg	1.86	114	Pn	Pn	06 24 04.0	-1.3
MOBC	Moresby Island	1.91	340	Pn	Pn	06 24 04.0	-2.0
MOBC				Sn	Sn	06 24 26.6	-3.7
MOBC				Trac		06 24 27.3	
	comp=Z,2μm,0.5s						
BNAB	Bonilla	2.09	3	⇓Pn	Pn	06 24 08.9	+0.4
BNAB				Trac		06 24 48.5	
	comp=Z,2μm,0.6s						
PHC	Port Hardy	2.24	107	Pn	Pn	06 24 08.8	-2.0
BPBC	Brooks Peninsu	2.30	122	⇑Pn	Pn	06 24 09.2	-2.3
BPBC				Sg	Sg	06 24 43.8	-5.8
BPBC				Trac		06 24 45.7	
	comp=Z,1μm,0.3s						
MAYB	Maynard	2.51	112	Pn	Pn	06 24 12.9	-1.7
MASB	Masset	2.71	345	Pn	Pn	06 24 16.8	-0.7
EDB	Eliza Dome	2.81	122	Pn	Pn	06 24 16.3	-2.5
EDB				Trac		06 25 05.0	
	comp=Z,861nm,0.8s						
NDB	Naden	2.86	334	Pn	Pn	06 24 17.2	-2.3
NDB				Trac		06 24 57.1	
	comp=Z,720nm,0.4s						
RUBB	Prince Rupert	2.94	6	⇓Pn	Pn	06 24 21.3	+0.6
RUBB				Trac		06 25 14.0	
	comp=Z,2μm,0.5s						
WOSB	Woss	2.97	113	⇑Pn	Pn	06 24 19.8	-1.3
NCRB	Newcastle Ridg	3.17	107	Pn	Pn	06 24 23.2	-0.8
ETB	Estevan Point	3.41	125	Pn	Pn	06 24 25.1	-2.3
GDR	Gold River	3.45	116	⇑Pn	Pn	06 24 26.2	-1.8
GDR				Trac		06 25 17.5	
	comp=Z,797nm,0.7s						
CBB	Campbell River	3.72	110	Pn	Pn	06 24 31.2	-0.6
CBB				Trac		06 25 42.2	
	comp=Z,508nm,0.8s						
BTB	Buttle Lake	3.90	118	⇑Pn	Pn	06 24 32.6	-1.8
BTB				Trac		06 25 34.1	
	comp=Z,362nm,0.5s						
OZB	Mount Ozzard	4.21	124	Pn	Pn	06 24 36.3	-2.4
ALB	Alberni	4.39	117	Pn	Pn	06 24 39.7	-1.6
ALB				Trac		06 26 01.6	
	comp=Z,258nm,0.8s						
TXB	Texada	4.41	110	Pn	Pn	06 24 40.3	-1.3
TXB				Trac		06 26 15.0	
	comp=Z,871nm,1.1s						
MGB	Mount Grey	4.61	119	Pn	Pn	06 24 42.0	-2.4
SHB	Sechelt	4.78	110	Pn	Pn	06 24 46.2	-0.7
NLLB	Nanaimo Lost L	4.88	114	Pn	Pn	06 24 46.8	-1.5
FSB	Fort Saint Jam	4.97	49	Pn	Pn	06 24 54.5	+4.9
FSB				Sg	Sg	06 26 16.5	-2.2
FSB				Trac		06 26 28.7	
	comp=Z,793nm,0.8s						
PFB	Port Renfrew	5.00	122	Pn	Pn	06 24 48.8	-1.1
WPB	Watts Point	5.15	107	Pn	Pn	06 24 52.1	0.0
WPB				Trac		06 26 25.5	
	comp=Z,421nm,1.1s						
WSLR	Whistler	5.17	101	Pn	Pn	06 24 53.0	+0.7
WSLR				Trac		06 26 32.9	
	comp=Z,167nm,0.8s						
BIB	Bowen Island	5.20	110	Pn	Pn	06 24 52.6	-0.2
BIB				Trac		06 26 34.4	
	comp=Z,294nm,0.9s						
GOBB	Galiano Island	5.30	115	Pn	Pn	06 24 54.0	-0.1
GOBB				Trac		06 26 44.6	
	comp=Z,312nm,0.9s						
LZB	Mount Lazard	5.30	119	Pn	Pn	06 24 52.4	-1.9
PGC	Sidney	5.49	117	ePn	Pn	06 24 56.0	-0.8
PGC	Sidney	5.49	117	Pn	Pn	06 24 55.9	-0.9
PGC				Trac		06 26 54.6	
	comp=Z,205nm,1.4s						
OBC	Olympics--Boni	5.52	125	P	Pn	06 24 56.4	-0.9
SNB	Saturna Island	5.58	115	Pn	Pn	06 24 58.1	0.0
SNB				Trac		06 27 06.2	
	comp=Z,227nm,1.0s						
OCWA	Octopus Mounta	5.66	128	eP	Pn	06 24 58.3	-1.0
HNB	Haney	5.69	109	Pn	Pn	06 24 59.9	+0.3
HNB				Trac		06 26 58.9	
	comp=Z,124nm,0.9s						
VGZ	Gonzales	5.69	119	Pn	Pn	06 24 57.8	-1.9
LLLB	Lillooet	5.69	95	Pn	Pn	06 24 59.5	-0.2
LLLB				Trac		06 26 57.5	
	comp=Z,135nm,0.9s						
SBES	Silver Beach E	6.01	113	P	Pn	06 25 04.8	+0.5
VDB	Vedder Mountai	6.08	110	P	Pn	06 25 05.8	+0.6
VDB	Vedder Mountai	6.08	110	Pn	Pn	06 25 05.4	+0.2
SIT	Sitka	6.24	337	eP	Pn	06 25 05.9	-1.6
HOPB	Hope	6.33	105	Pn	Pn	06 25 08.4	-0.4
CMW	Cultus Mountai	6.36	115	P	Pn	06 25 08.9	-0.2
ATES	Arlington Traf	6.49	116	P	Pn	06 25 10.7	-0.3
JCW	Jim Creek	6.59	116	P	Pn	06 25 11.4	-0.9
RPW	Rockport	6.69	113	P	Pn	06 25 13.5	-0.4
CPW	Capitol Peak	6.71	129	P	Pn	06 25 12.3	-1.7
HTW	Haystack Looko	6.89	118	P	Pn	06 25 15.9	-0.7
BMBC	Bull Mountain	6.93	45	Pn	Pn	06 25 18.6	+1.5
BMBC				Sn	Sn	06 26 37.8	+1.0
BMBC				Sg	Sg	06 27 19.6	-4.0
BMBC				Trac		06 27 22.2	
	comp=Z,608nm,0.9s						
BMW	Boistfort Moun	7.02	132	eP	Pn	06 25 17.4	-1.1
BMW	Boistfort Moun	7.02	132	P	Pn	06 25 17.4	-1.0
DLBC	Dease Lake	7.05	3	ePn	Pn	06 25 19.8	+0.9
DLBC	Dease Lake	7.05	3	⇓Pn	Pn	06 25 20.1	+1.2
DLBC				Trac		06 27 28.9	
	comp=Z,105nm,0.8s						
LMW	Ladd Mountain	7.34	127	P	Pn	06 25 23.3	+0.4
PNT	Penticton	7.46	102	Pn	Pn	06 25 24.7	+0.1
PNT				Trac		06 27 54.7	
	comp=Z,192nm,1.2s						
FMW	Mount Fremont	7.48	123	P	Pn	06 25 24.6	-0.3
RVW	Rose Valley	7.49	132	P	Pn	06 25 24.6	-0.4
RCM	Mount Rainier-	7.51	124	P	Pn	06 25 24.8	-0.5
LON	Longmire	7.53	125	eP	Pn	06 25 25.0	-0.5
LON	Longmire	7.53	125	P	Pn	06 25 24.9	-0.6
KOSW	Kosmos	7.53	128	P	Pn	06 25 25.8	+0.2
ERK	Elk Rock	7.57	129	P	Pn	06 25 25.6	-0.5
DOWB	Downie Slide	7.68	84	Pn	Pn	06 25 29.4	+1.8
DOWB				Sg	Sg	06 27 47.5	-1.2
WPW	White Pass	7.70	124	P	Pn	06 25 27.6	-0.3
MNB	Mounoet Dainar	7.74	79	Pn	Pn	06 25 30.2	+1.6
MNB				Sg	Sg	06 27 51.8	+1.0
TBM	Table Mountain	7.91	119	P	Pn	06 25 29.7	-1.2
SLEB	Sale Mountain	7.95	87	Pn	Pn	06 25 32.5	+1.0
SLEB				Sg	Sg	06 27 46.1	-12
SLEB				Trac		06 28 06.2	
	comp=Z,144nm,1.1s						
WTV	Waterville	7.97	114	P	Pn	06 25 31.1	-0.7
ASR	Mount Adams--S	8.04	127	P	P	06 25 32.7	-0.1
PGO	Gresham	8.14	134	P	P	06 25 34.8	+0.7
VLMM	Larch Mountain	8.27	132	P	P	06 25 36.1	+0.2
GT2	Goat Mountain	8.46	134	P	P	06 25 38.8	+0.3
COR	Corvallis	8.48	141	eP	P	06 25 39.1	+0.3
TDH	Tom, Dick, Har	8.57	132	P	P	06 25 40.2	0.0
FNBB	Fort Nelson	8.72	28	Pn	P	06 25 43.2	+1.1
FNBB				Sg	Sg	06 28 09.0	-14
FNBB				Trac		06 28 56.9	
	comp=Z,133nm,1.1s						
OD2	Odessa Site #2	8.85	112	P	P	06 25 42.7	-1.3
NEW	Newport	9.39	104	eP	P	06 25 51.3	-0.1
WHY	Whitehorse	9.54	348	Pn	P	06 25 52.8	-0.6
WHY				Trac		06 29 17.5	
	comp=Z,25nm,1.0s						
KEBM	Edson Butte	9.61	150	P	P	06 25 56.0	+1.7
VIPM	Ingram Point	9.71	131	P	P	06 25 55.3	-0.4
HYT	Haines Junctio	10.14	341	Pn	P	06 26 00.8	-0.8
HYT				Trac		06 29 33.4	
	comp=Z,43nm,1.1s						
HUMO	Hull Mountain	10.30	146	ePn	P	06 26 05.3	+1.4
EDM	Edmonton	10.84	74	eP	P	06 26 10.7	-0.5
EDM	Edmonton	10.84	74	Pn	P	06 26 11.8	+0.6
EDM				Trac		06 29 36.6	
	comp=Z,32nm,0.9s						
WALA	Waterton Lakes	11.07	96	Pn	P	06 26 14.2	-0.2
WALA				e		06 26 17.6	
WALA	Waterton Lakes	11.07	96	Pn	P	06 26 15.8	+1.3
WALA				Sg	S	06 29 21.0	+62
WALA				Trac		06 29 48.2	
	comp=Z,23nm,1.0s						
BMO	Blue Mountains	11.15	121	eP	P	06 26 14.1	-1.4
YBH	Yreka Blue Hor	11.16	147	eP	P	06 26 15.4	-0.3
KHMM	Horse Mountain	11.62	152	eP	P	06 26 23.0	+1.1
MOD	Modoc	11.93	139	eP	P	06 26 26.9	+0.9
MSO	Missoula	11.96	106	eP	P	06 26 25.8	-0.6
WVOR	Wild Horse Val	12.23	133	eP	P	06 26 29.2	-0.9
WDC	Whiskeytown Da	12.25	149	eP	P	06 26 30.9	+0.5
CHMT	Chamberlain Mo	12.33	105	eP	P	06 26 30.5	-1.0
DIV	Divide	12.77	325	eP	P	06 26 35.7	-1.5
DAWY	Dawson	13.47	344	ePn	P	06 26 46.7	+0.2
DAWY	Dawson	13.47	344	Pn	P	06 26 47.1	+0.5
DAWY				Trac		06 31 45.2	
	comp=Z,12nm,1.1s						
HOPS	Hopland	13.55	153	eP	P	06 26 45.8	-1.8
HLID	Hailey	13.56	119	eP	P	06 26 47.7	-0.1
MCMT	McKenzie Canyo	13.67	112	ePn	P	06 26 48.8	-0.3
OHCM	Honcut	13.72	148	eP	P	06 26 49.9	0.0
BOZ	Bozeman (W)	13.94	107	eP	P	06 26 50.8	-1.9
	46nm,1.2s						
SML	Sawmill	14.14	324	eP	P	06 26 54.7	-0.5
YKW3	Yellowknife Ar	14.18	32	eP	P	06 26 53.9	-1.9
YKW3	Yellowknife Ar	14.18	32	Pn	P	06 26 54.7	-1.0
YKW3				Pn	P	06 26 55.9	+0.1
YKW3				Sg		06 30 58.8	
YKW3				Trac		06 31 32.1	
	comp=Z,107nm,1.1s						
YKW3				Trac		06 31 32.5	
	comp=Z,36nm,1.0s						
PMR	Palmer	14.31	323	eP	P	06 27 01.9	+4.5
	102nm,1.6s						
WCN	Washoe City	14.37	143	eP	P	06 26 59.1	+0.8
	58nm,1.3s						
THY	Trims Highway	14.42	332	eP	P	06 26 59.4	+0.4
BMN	Battle Mountai	14.46	134	eP	P	06 27 00.2	+0.6
	112nm,1.2s						
BMN				e		06 27 08.1	
QLMT	Earthquake Lak	14.50	109	eP	P	06 27 01.1	+1.1
YMR	Madison River	14.86	109	eP	P	06 27 06.0	+1.2
YNR	Norris Junctio	15.01	109	eP	P	06 27 08.4	+1.7
YFT	Old Faithful	15.06	110	eP	P	06 27 09.1	+1.7
RSO	Redoubt South	15.20	315	eP	P	06 27 10.2	+1.1
SPU	Mount Spurr	15.25	318	eP	P	06 27 10.5	+0.8
LKWY	Lake	15.26	109	eP	P	06 27 10.7	+0.8
	74nm,0.8s						
CMB	Columbia Colle	15.27	147	eP	P	06 27 10.2	+0.1
	29nm,1.1s						
IMW	Indian Meadow	15.32	112	eP	P	06 27 12.0	+1.2
RRI2	Red Ridge	15.44	114	eP	P	06 27 13.6	+1.3
MOOW	Moose Ponds	15.52	112	eP	P	06 27 15.0	+1.6
TPAW	Teton Pass	15.56	113	eP	P	06 27 15.7	+1.8
MCK	McKinley	15.63	329	eP	P	06 27 13.9	-0.8
	23nm,0.9s						
WUWY	Wally Ulrich	15.65	112	eP	P	06 27 16.7	+1.6
HVU	Hansel Valley	15.66	121	eP	P	06 27 15.8	+0.6
LOHW	Long Hollow	15.69	112	eP	P	06 27 16.8	+1.3
MNV	Mina	15.74	141	eP	P	06 27 18.1	+1.8
	62nm,1.2s						
AHID	Auburn Hatcher	15.93	115	eP	P	06 27 20.2	+1.6
	87nm,1.4s						
SAO	San Andreas Ge	16.09	152	eP	P	06 27 21.7	+0.9
	47nm,1.3s						
BGU	Big Grassy Mou	16.13	124	eP	P	06 27 21.5	+0.3
OMM	Old Mammoth Mi	16.13	144	eP	P	06 27 22.4	+1.1
COLA	College	16.13	333	i P	P	06 27 23.5	+2.4
COLA	College	16.13	333	Pn	P	06 27 21.3	+0.2
	78nm,1.3s						
COLA				e		06 27 32.2	
SPUT	South Promonto	16.16	122	eP	P	06 27 22.1	+0.4
TPH	Tonopah	16.42	139	eP	P	06 27 26.1	+1.1
	102nm,1.1s						
HWUT	Hardware Ranch	16.43	119	eP	P	06 27 26.3	+1.2
	61nm,1.5s						
LRV	Little Rabbit	16.54	151	eP	P	06 27 28.3	+1.9
LAO	LASA Array	16.76	97	eP	P	06 27 30.3	+1.1
	104nm,1.1s						
NOQ	North Oquirrh	16.81	123	eP	P	06 27 30.6	+0.7
BW06	Boulder Array	16.81	113	eP	P	06 27 32.0	+2.2
	185nm,1.5s						
TCUT	Toone Canyon	16.86	120	eP	P	06 27 31.6	+1.2
TRCR	Troy Canyon	16.89	135	eP	P	06 27 31.9	+0.9
INK	Inuvik	17.00	357	eP	P	06 27 32.5	+0.4
	91nm,1.1s						
INK	Inuvik	17.00	357	Pn	P	06 27 32.4	+0.3
INK				Trac		06 33 15.7	
	comp=Z,6.0nm,1.1s						
JLU	Jordanelle	17.20	121	eP	P	06 27 35.1	+0.4
NLU	North Lily Min	17.34	124	eP	P	06 27 36.7	+0.2
DGMT	Dagmar	17.34	89	eP	P	06 27 37.4	+0.9
	60nm,0.9s						
DAU	Daniels Canyon	17.44	121	eP	P	06 27 38.3	+0.6
MPU	Maple Canyon	17.52	123	eP	P	06 27 39.0	+0.1
FFC	Flin Flon	17.58	68	Pn	P	06 27 39.3	-0.1
	231nm,0.8s,SNR=26						
FFC	Flin Flon	17.58	68	eP	P	06 27 39.0	-0.4
	38nm,0.9s						
DAC	Darwin (Calif)	17.84	143	eP	P	06 27 44.2	+1.4
	104nm,1.6s						
TMUT	Trail Mountain	18.27	124	eP	P	06 27 48.8	+0.6
MVU	Marysvale	18.36	127	eP	P	06 27 50.4	+1.0
	38nm,1.1s						
MSU	Marysvale	18.37	127	eP	P	06 27 50.6	+1.1
IMA	Indian Mountai	18.71	330	eP	P	06 27 53.3	0.0
SRU	San Rafael	18.77	123	eP	P	06 27 54.7	+0.4
NEN	Nelson	19.48	138	eP	P	06 28 01.5	-1.2
MWC	Mount Wilson	19.51	147	eP	P	06 28 01.8	-1.3
LDFC	Landfair	19.86	139	eP	P	06 28 06.5	-0.4
PV10	Paradox Valley	20.09	122	eP	P	06 28 10.1	+0.7
PHWY	Pilot Hill	20.11	110	eP	P	06 28 08.7	-0.9
PV01	Paradox Valley	20.52	122	eP	P	06 28 13.3	-0.6
PFO	Pinyon Flat Ob	20.63	144	eP	P	06 28 14.4	-0.7
	57nm,1.1s						
ISCO	Idaho Springs	20.99	114	eP	P	06 28 18.9	+0.2
	49nm,1.3s						
BAR	Barrett	21.39	146	eP	P	06 28 22.8	0.0
UNV	Unalaska Valle	21.66	291	eP	P	06 28 23.5	-1.9
	121nm,0.7s,mb5.4						
ULM	Lac du Bonnet	21.97	79	eP	P	06 28 27.9	-0.7
	48nm,1.0s,mb4.9						
ULM	Lac du Bonnet	21.97	79	Pn	P	06 28 27.3	-1.3
ULM				Trac		06 35 37.0	
	comp=Z,3.0nm,0.6s						
FCC	Fort Churchill	22.03	56	eP	P	06 28 28.6	-0.4
	41nm,0.9s,mb4.9						
FCC	Fort Churchill	22.03	56	Pn	P	06 28 31.2	+2.1
FCC				Trac		06 35 39.7	
	comp=Z,13nm,1.3s						
SDCO	Great Sand Dun	22.47	118	eP	P	06 28 34.4	+0.7
	71nm,1.3s,mb4.9						
NIKO	Nikolski	23.20	289	P	P	06 28 43.1	+2.6
TNA	Tin City	23.55	321	eP	P	06 28 44.0	+0.2
	12nm,1.0s,mb4.3						
ANMO	Albuquerque	24.04	124	eP	P	06 28 49.4	+0.6
	58nm,1.3s,mb4.8						
TUC	Tucson	24.08	135	eP	P	06 28 50.2	+0.9
	30nm,1.0s,mb4.7						
LAZ	Ladron	24.11	126	eP	P	06 28 50.6	+1.1
LENM	Lemitar	24.38	126	eP	P	06 28 53.7	+1.5
LPM	Los Pinos Moun	24.44	125	eP	P	06 28 53.9	+1.0
EYMN	Ely	25.46	82	eP	P	06 29 02.4	+0.1
	65nm,0.9s,mb5.2						
AMTX	Amarillo	26.67	117	eP	P	06 29 14.3	+0.6
	183nm,1.3s,mb5.5						
KSU1	Kansas State U	26.78	104	eP	P	06 29 15.1	+0.4
CPRX	Cap Rock	26.88	123	eP	P	06 29 15.9	+0.2
MNTX	Cornudas Mount	27.15	127	eP	P	06 29 18.2	0.0
	54nm,1.2s,mb5.0						
GDL2	Guadalupe Moun	27.27	125	eP	P	06 29 18.7	-0.5
RES	Resolute Bay	27.58	20	eP	P	06 29 21.3	-0.3
	9.2nm,0.7s,mb4.5						
RES	Resolute Bay	27.58	20	Pn	P	06 29 22.0	+0.4
WMOK	Wichita Mounta	28.42	113	eP	P	06 29 29.4	-0.2
	62nm,1.0s,mb5.2						
WMOK				epP	pP	06 29 35.3	+2.8
WMOK				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
LTX	Lajitas	29.93	127	eP	P	06 29 43.8	+0.5
	comp=Z,45nm,1.2s,mb5.1						
LTX				epP	pP	06 29 48.8	+2.5
CCM	Cathedral Cave	30.72	100	eP	P	06 29 48.9	-1.2
	comp=Z,40nm,1.4s,mb5.1						
JCT	Junction City	31.03	120	eP	P	06 29 52.5	-0.5
	comp=Z,61nm,1.2s,mb5.3						
JCT				epP	pP	06 29 57.9	+2.0
FVM	French Village	31.27	99	eP	P	06 29 53.9	-1.0
	comp=Z,6.1nm,0.8s,mb4.5						
MIAR	Mount Ida	31.61	108	eP	P	06 29 58.1	+0.1
	comp=Z,76nm,1.5s,mb5.3						
MIAR				epP	pP	06 30 04.1	+3.1
MIAR				LR	LR		
	comp=Z,870nm,20.0s,MS4.4						
BLO	Bloomington	32.97	94	eP	P	06 30 09.3	-0.5
	comp=Z,8.8nm,0.8s,mb4.7						
HKT	Hockley	33.63	116	eP	P	06 30 15.1	-0.5
	comp=Z,47nm,1.4s,mb5.2						
OXF	Oxford	34.14	103	eP	P	06 30 18.8	-1.3
	comp=Z,90nm,1.2s,mb5.6						
ELN	Prospectdale	37.76	92	eP	P	06 30 50.0	-0.7
SEY	Seymchan	40.66	317	eP	P	06 31 17.3	+2.8
SEY						06 32 56.2	
SEY				eS	S	06 37 29.5	+5.3
SEY						06 41 14.6	
SEY				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.9						
SEY				pmax	pmax		
	comp=E,20nm,1.3s						
SEY				smax			
	comp=N,270nm,5.3s						
SEY				smax			
	comp=E,110nm,5.3s						
SEY				MLR	MLR		
	comp=E,300nm,19.0s						
SEY				MLR	MLR		
	comp=Z,610nm,19.0s,MS4.5						
SEY				MLR	MLR		
	comp=N,90nm,12.0s						
PET	Petropavlovsk	41.64	301	eP	P	06 31 24.9	+2.4
PET				eS	S	06 37 42.9	+4.2
PET				eSS	SS	06 40 42.4	+3.7
PET				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.9						
PET				smax			
	comp=E,200nm,18.1s						
SUMG	Summit	42.64	26	P	P	06 31 31.9	+1.4
	comp=E,16nm,1.1s,mb4.7						
MA2	Magadan	42.69	313	eP	P	06 31 32.3	+1.3
MA2				e		06 33 14.8	
MA2				ePPP	PPP	06 33 44.8	-1.4
MA2				eS	S	06 37 52.3	-1.8
MA2				eSS	SS	06 41 27.7	+29
MA2				MLR	MLR		
	comp=Z,800nm,22.0s,MS4.6						
MA2	Magadan	42.69	313	eP	P	06 31 31.8	+0.8
	comp=Z,18nm,1.0s,mb4.8						
DAG	Danmarks Havn	45.23	17	⇓iP	P	06 31 53.0	+1.6
DAG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
DAG	Danmarks Havn	45.23	17	⇓iP	P	06 31 53.0	+1.6
	comp=Z,2.7nm,0.7s,mb4.2						
TIXI	Tiksi	45.26	334	i P	P	06 31 52.0	+0.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.2						
YAK	Yakutsk	50.30	323	i P	P	06 32 30.6	-0.5
YAK				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.5						
YAK				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.5						
YAK	Yakutsk	50.30	323	eP	P	06 32 30.3	-0.8
	comp=Z,26nm,0.6s,mb5.4						
YSS	Yuzh-Sakhalins	53.52	302	eP	P	06 32 53.0	-2.5
YSS				e		06 33 01.8	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
YSS	Yuzh-Sakhalins	53.52	302	eP	P	06 32 53.4	-2.1
	comp=Z,15nm,0.7s,mb5.0						
KLR	Kul'dur	57.62	310	eP	P	06 33 23.8	-1.3
KLR				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.8						
BOD	Bodaibo	58.94	326	eP	P	06 33 30.8	-3.4
BOD				pmax	pmax		
	comp=Z,32nm,2.1s,mb5.0						
TAOE	Nuku Hiva Isla	60.56	191	eLQ		06 48 12.4	
TAOE				eLR	LR	06 50 46.0	
	baz=17						
MDJ	Mudanjiang	61.90	307	P	P	06 33 53.8	-0.8
MDJ				AP	pP	06 33 57.0	-0.8
MDJ				XP	sP	06 33 58.3	-0.6
MDJ				PP	PP	06 36 09.7	-3.5

MDJ				SCP		06 38 36.8	
MDJ				PCS		06 38 38.0	
MDJ				S	**S**	**06 42 14.8**	**-1.8**
MDJ				SCS	ScS	06 43 44.5	+1.7
MDJ				SS	SS	06 46 18.1	-2.4
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,124nm,6.0s						
MDJ				LR	LR		
	comp=N,139nm,24.9s,MS4.2						
MDJ				LR	LR		
	comp=E,136nm,24.9s,MS4.2						
MDJ				LR	LR		
	comp=Z,270nm,20.1s,MS4.4						
MDJ	**Mudanjiang**	**61.90**	**307**	*e*P	**P**	**06 33 54.4**	**-0.2**
MAJO	**Matsushiro**	**63.03**	**295**	*e*P	**P**	**06 34 02.4**	**+0.1**
	comp=Z,14nm,0.8s,mb5.1						
HIA	**Hailar**	**63.10**	**316**	*e*P	**P**	**06 34 00.4**	**-2.1**
	comp=Z,11nm,0.8s,mb5.0						
NB2	**NORSAR Subarra**	**63.85**	**19**	P	**P**	**06 34 07.5**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.3,baz=335,slow=6.5						
CN2	**Changchun**	**64.53**	**309**	*e*P	**P**	**06 34 10.0**	**-1.9**
CN2				*e*AP	pP	06 34 16.1	+1.0
CN2				*e*S	**S**	**06 42 44.8**	**-4.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,250nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,19.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,21.0s,MS4.3						
SDV	**Santo Domingo**	**64.69**	**109**	*e*P	**P**	**06 34 12.4**	**-1.0**
	comp=Z,3.9nm,0.9s,mb4.4						
JOF	**Joensuu**	**65.14**	**9**	*e*p	**P**	**06 34 14.5**	**-1.0**
	comp=Z,29nm,1.0s,mb5.3						
JOF	**Joensuu**	**65.14**	**9**	*e*P	**P**	**06 34 14.5**	**-1.0**
JOF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
KAF	**Kangasniemi**	**65.37**	**12**	*e*p	**P**	**06 34 16.1**	**-0.9**
	comp=Z,5.7nm,1.0s,mb4.6,baz=341,slow=6.8						
KAF	**Kangasniemi**	**65.37**	**12**	*e*P	**P**	**06 34 16.1**	**-0.9**
KAF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
FINES	**FINESS Array B**	**65.99**	**12**	*i* P	**P**	**06 34 21.3**	**+0.3**
FINES				pmax	pmax		
	comp=Z,18nm,1.2s						
OTAV	**Otavalo**	**67.31**	**121**	*e*P	**P**	**06 34 30.9**	**+0.6**
	comp=Z,20nm,1.3s,mb5.0						
OTAV				LR	LR		
	comp=Z,146nm,20.0s,MS4.2						
TLY	**Talaya**	**67.46**	**327**	*i* P	**P**	**06 34 31.1**	**+0.6**
TLY				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.9						
TLY				MLR	MLR		
	comp=Z,300nm,22.0s,MS4.5						
TLY	**Talaya**	**67.46**	**327**	*e*P	**P**	**06 34 30.6**	**+0.1**
	comp=Z,26nm,1.1s,mb5.2						
MOY	**Mondy**	**68.36**	**328**	*e*P	**P**	**06 34 36.6**	**+0.4**
MOY				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.1						
ZAK	**Zakamensk**	**68.67**	**326**	*e*P	**P**	**06 34 38.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
ULN	**Ulaanbaatar**	**69.39**	**322**	*i* P	**P**	**06 34 41.9**	**-0.7**
ULN	**Ulaanbaatar**	**69.39**	**322**	*e*P	**P**	**06 34 41.5**	**-1.1**
	comp=Z,5.6nm,1.0s,mb4.5						
ULN				*e*pP	pP	06 34 48.1	+2.5
BSEG	**Bad Segeberg**	**70.10**	**23**	*e*P	**P**	**06 34 52.1**	**+5.4**
BSEG				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
PPT	**Papeete**	**70.62**	**199**	*e*LQ		06 52 28.3	
PPT				*e*LR	LR	06 55 25.2	
	comp=Z,430nm,26.8s,baz=13						
SGMF	**Saint Gilles**	**71.29**	**34**	*e*P	**P**	**06 34 58.4**	**+4.3**
FLN	**La Foliniere**	**71.56**	**32**	*e*P	**P**	**06 34 59.8**	**+4.1**
FLN				*e*R			
	comp=Z,324nm,17.5s						
SVE	**Sverdlovsk**	**71.71**	**353**	⇓*e*P	**P**	**06 34 54.3**	**-2.2**
SVE				*e*		06 35 18.0	
SVE				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
GRR	**Gorron**	**71.75**	**33**	*e*P	**P**	**06 35 01.4**	**+4.5**
	comp=Z,21nm,0.9s,mb4.8						
HGN	**Heimansgroeve**	**71.78**	**27**	*e*P	**P**	**06 35 00.8**	**+3.7**
	comp=Z,29nm,1.9s,mb4.9						
BJI	**Beijing**	**71.85**	**312**	*e*P	PcP	06 35 14.9	-1.8
BJI				S	S	06 44 20.6	+3.7
BJI				LR	LR		
	comp=Z,180nm,19.6s,MS4.3						
BAIF	**Baives**	**71.91**	**29**	*e*P	**P**	**06 35 02.5**	**+4.7**
CLZ	**Clausthal**	**72.02**	**24**	*e*P	**P**	**06 35 03.9**	**+5.5**
	comp=Z,18nm,1.0s,mb5.0						
GIVF	**Givet**	**72.05**	**28**	*e*P	**P**	**06 35 03.2**	**+4.6**
ARU	**Arti**	**72.24**	**355**	⇑*i*P	**P**	**06 34 50.4**	**-9.3**
ARU				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
MOS	**Moscow**	**72.79**	**7**	*e*P	**P**	**06 34 56.5**	**-6.2**
MOS				*e*		06 35 07.0	
MOS				*e*		06 35 13.2	
TNS	**Taunus Mts**	**72.98**	**26**	*e*P	**P**	**06 35 09.2**	**+5.2**
TNS				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
TNS	**Taunus Mts**	**72.98**	**26**	*e*P	**P**	**06 35 09.2**	**+5.2**
	comp=Z,18nm,1.3s,mb4.8						
CLL	**Collm**	**73.16**	**23**	*i* P	**P**	**06 35 08.8**	**+3.8**
CLL				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.8						
CLL	**Collm**	**73.16**	**23**	*i* P	**P**	**06 35 08.8**	**+3.8**
	comp=Z,19nm,1.6s,mb4.8						
CLL	**Collm**	**73.16**	**23**	P	**P**	**06 35 08.8**	**+3.8**
	comp=Z,logA/T=1.1,mb4.8						
HHC	**Hu-ho-hao-te**	**73.28**	**315**	*e*P	**P**	**06 35 05.3**	**-0.7**
HHC				XP	sP	06 35 19.9	+10
HHC				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,83nm,4.5s						
HHC				LR	LR		
	comp=N,176nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=E,170nm,16.8s,MS4.5						
HHC				LR	LR		
	comp=Z,100nm,15.6s,MS4.2						
OBN	**Obninsk**	**73.32**	**8**	*i* P	**P**	**06 35 06.1**	**+0.2**
OBN				*i*		06 35 12.7	
OBN				S	S	06 44 38.0	+4.8
OBN				SS	SS	06 49 16.0	-1.6
OBN				pmax	pmax		
	comp=Z,74nm,1.5s,mb5.4						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
MOX	**Moxa**	**73.43**	**24**	*e*P	**P**	**06 35 10.0**	**+3.4**
MOX				L		07 12 32.0	
BRG	**Berggiesshubel**	**73.79**	**22**	*e*P	**P**	**06 35 13.5**	**+4.8**
BRG				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
BRG	**Berggiesshubel**	**73.79**	**22**	*e*P	**P**	**06 35 13.5**	**+4.8**
	comp=Z,12nm,1.3s,mb4.7						
NKC	**Novy Kostel**	**74.02**	**24**	*e*P	**P**	**06 35 17.8**	**+7.8**
BTO	**Baotou**	**74.16**	**316**	*e*P	**P**	**06 35 11.8**	**+0.8**
BTO				AMB	AMB		
	comp=Z,19nm,0.8s,mb5.1						
GRA1	**Grafenberg Arr**	**74.20**	**25**	*e*P	**P**	**06 35 17.1**	**+6.0**
	comp=Z,15nm,1.0s,mb4.9						
GRF	**Grafenberg Arr**	**74.20**	**25**	*e*P	**P**	**06 35 17.1**	**+6.0**
GRF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
GRF	**Grafenberg Arr**	**74.20**	**25**	*e*P	**P**	**06 35 17.1**	**+6.0**
	comp=Z,15nm,1.0s,mb4.9						
PVCC	**Panska Ves**	**74.26**	**22**	*e*P	**P**	**06 35 16.5**	**+5.1**
CDF	**Champ du Feu**	**74.28**	**28**	*e*P	**P**	**06 35 16.5**	**+4.9**
	comp=Z,13nm,0.7s,mb4.7						
SSF	**Saint Saulge**	**74.34**	**31**	*e*P	**P**	**06 35 16.7**	**+4.7**
	comp=Z,18nm,0.8s,mb4.7						
KSP	**Ksiaz**	**74.36**	**21**	⇑*e*P	**P**	**06 35 13.6**	**+1.6**
KSP				*e*pP	pP	06 35 16.8	+1.7
KSP				LR	LR		
	comp=Z,700nm,17.6s,MS5.0						
HAU	**Haudompre**	**74.38**	**28**	*e*P	**P**	**06 35 16.7**	**+4.6**
HAU				*e*R			
	comp=Z,320nm,18.2s						
AVF	**Avril sur Loir**	**74.53**	**31**	*e*P	**P**	**06 35 17.5**	**+4.4**
	comp=Z,33nm,1.1s,mb4.9						
TCF	**Toulx Ste Croi**	**74.61**	**32**	*e*P	**P**	**06 35 18.1**	**+4.6**
BFO	**Black Forest**	**74.66**	**27**	*e*P	**P**	**06 35 18.9**	**+5.1**
BFO				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
BFO	**Black Forest**	**74.66**	**27**	*e*P	**P**	**06 35 18.9**	**+5.1**
	comp=Z,14nm,1.1s,mb4.8						
HINF	**Hinteralfeld**	**74.70**	**28**	*e*P	**P**	**06 35 18.6**	**+4.6**
PRU	**Pruhonice**	**74.76**	**22**	*e*P	**P**	**06 35 18.2**	**+3.9**
SMF	**Signal de Mont**	**74.82**	**31**	*e*P	**P**	**06 35 19.2**	**+4.5**
DPC	**Dobruska-Polom**	**74.83**	**21**	*e*P	**P**	**06 35 16.2**	**+1.5**
WET	**Wettzell**	**75.13**	**24**	*e*P	**P**	**06 35 21.7**	**+5.2**
WET				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
WET	**Wettzell**	**75.13**	**24**	*e*P	**P**	**06 35 21.7**	**+5.2**
	comp=Z,6.0nm,1.1s,mb4.4						
KURK	**Kurchatov**	**75.22**	**341**	*i* P	**P**	**06 35 17.2**	**+0.2**
KURK	**Kurchatov**	**75.22**	**341**	*e*P	**P**	**06 35 15.7**	**-1.2**
	comp=Z,10.0nm,0.9s,mb4.8						
KHC	**Kasperske Hory**	**75.32**	**23**	*e*P	**P**	**06 35 18.9**	**+1.3**
KHC				*e*		06 35 25.5	
KHC	**Kasperske Hory**	**75.32**	**23**	*e*P	**P**	**06 35 18.9**	**+1.3**
KHC				x	x	06 35 25.5	
CABF	**La Chapelle**	**75.55**	**29**	*e*P	**P**	**06 35 24.0**	**+5.1**
GEC2	**GERESS Array S**	**75.61**	**23**	*e*P	**P**	**06 35 24.3**	**+5.1**
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
GEC2	**GERESS Array S**	**75.61**	**23**	*e*P	**P**	**06 35 24.3**	**+5.1**
	comp=Z,10.0nm,1.1s,mb4.7						
OJC	**Ojcow**	**75.70**	**19**	*e*P	**P**	**06 35 20.5**	**+0.8**
OKC	**Ostrava-Krasne**	**75.72**	**20**	*e*P	**P**	**06 35 24.6**	**+4.8**
TBI	**Tubuai**	**76.22**	**198**	*e*LR	LR	06 57 52.5	
	comp=Z,316nm,31.5s						
SSE	**Sheshan**	**76.43**	**303**	P	**P**	**06 35 24.5**	**+0.2**
SSE				XP	sP	06 35 29.2	+0.7
SSE				S	S	06 45 07.9	-0.4
SSE				XS		06 45 18.0	
SSE				SS	SS	06 50 01.3	-4.5
SSE				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.8						
SSE				AMB	AMB		
	comp=Z,168nm,3.7s						
SSE				LR	LR		
	comp=N,61nm,26.1s,MS4.0						
SSE				LR	LR		
	comp=E,82nm,26.1s,MS4.0						
SSE				LR	LR		
	comp=Z,147nm,23.3s,MS4.2						
SSE	**Sheshan**	**76.43**	**303**	P	**P**	**06 35 24.5**	**+0.2**
	comp=Z,16nm,1.2s,mb4.8						
SSE				sP	sP	06 35 29.2	+0.7
SSE				S	S	06 45 07.9	-0.4
SSE				sS		06 45 18.0	
SSE				SS	SS	06 50 01.3	-4.5
SSE				LR	LR		
	comp=Z,150nm,23.3s,MS4.2						
NJ2	**Nanjing**	**76.89**	**305**	*e*P	**P**	**06 35 31.3**	**+4.5**
NJ2				PP	PP	06 38 25.2	+3.9
NJ2				S	S	06 45 08.0	-5.2
NJ2				XS		06 45 23.0	
NJ2				LR	LR		
	comp=N,160nm,18.6s,MS4.6						
NJ2				LR	LR		
	comp=E,200nm,15.6s,MS4.6						
NJ2				LR	LR		
	comp=Z,250nm,15.2s,MS4.7						
CRVS	**Cervenica-Dubn**	**77.29**	**18**	*e*P	**P**	**06 35 36.7**	**+8.1**
CRVS	**Cervenica-Dubn**	**77.29**	**18**	*e*	**P**	**06 35 36.7**	**+8.1**
GTA	**Gaotai**	**79.33**	**322**	*e*P	**P**	**06 35 39.7**	**-0.3**
GTA				AP	pP	06 35 44.2	+1.0
GTA				XP	sP	06 35 46.0	+1.7
GTA				PP	PP	06 38 43.7	+2.0
GTA				PPP	PPP	06 40 33.2	+1.2
GTA				S	S	06 45 42.0	+2.8
GTA				XS		06 45 50.7	
GTA				SS	SS	06 50 53.8	+4.7
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,157nm,4.8s						
GTA				LR	LR		
	comp=N,215nm,20.5s,MS4.7						
GTA				LR	LR		
	comp=E,290nm,19.4s,MS4.7						
GTA				LR	LR		
	comp=Z,350nm,22.4s,MS4.7						
WMQ	**Urumqi**	**79.45**	**333**	*e*P	**P**	**06 35 42.0**	**+1.4**
WMQ				XP	sP	06 35 49.0	+4.2
WMQ				PP	PP	06 38 44.0	+1.5
WMQ				S	S	06 45 41.0	+0.7
WMQ				SS	SS	06 50 51.0	+0.2
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,145nm,25.0s,MS4.5						
WMQ				LR	LR		
	comp=E,224nm,25.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,149nm,20.0s,MS4.3						
XAN	**Xi’an**	**80.08**	**313**	P	**P**	**06 35 43.1**	**-1.1**
XAN				XP	sP	06 35 49.6	+1.2
LZH	**Lanzhou**	**80.58**	**318**	*e*P	**P**	**06 35 49.5**	**+2.7**
LZH				AP	pP	06 35 52.8	+2.8
LZH				XP	sP	06 35 55.9	+4.9
LZH				PP	PP	06 38 54.0	+1.7
LZH				*e*S	S	06 45 53.5	+1.2
LZH				XS		06 46 01.5	
LZH				*e*SS	SS	06 51 08.5	+0.6
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,109nm,4.7s						
LZH				LR	LR		
	comp=N,440nm,16.0s						
LZH				LR	LR		
	comp=Z,950nm,18.0s,MS5.2						
LZH	**Lanzhou**	**80.58**	**318**	*e*P	**P**	**06 35 49.5**	**+2.7**
	comp=Z,42nm,1.5s,mb5.2						
LZH				pP	pP	06 35 52.8	+2.8
LZH				sP	sP	06 35 55.9	+4.9
LZH				PP	PP	06 38 54.0	+1.7
LZH				*e*S	S	06 45 53.5	+1.2
LZH				sS		06 46 01.5	
LZH				*e*SS	SS	06 51 08.5	+0.6
LZH				LR	LR		
	comp=Z,950nm,18.0s,MS5.2						
ENH	**Enshi**	**82.96**	**311**	*e*P	**P**	**06 35 58.0**	**-1.3**
	comp=Z,27nm,1.3s,mb5.1						
SAML	**Samuel**	**83.39**	**113**	*e*P	**P**	**06 35 59.0**	**-2.8**
	comp=Z,5.9nm,1.3s,mb4.5						
SAML				*e*pP	pP	06 36 05.7	+0.7
GOF	**Gofitskoye**	**83.76**	**4**	*e*P	**P**	**06 36 03.0**	**0.0**
GOF				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.6						
AAK	**Ala-Archa**	**83.78**	**342**	*i* P	**P**	**06 36 03.0**	**-0.2**
AAK				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.9						
AAK	**Ala-Archa**	**83.78**	**342**	*e*P	**P**	**06 36 02.7**	**-0.5**
	comp=Z,12nm,1.3s,mb4.8						
AAK				*e*pP	pP	06 36 08.7	+2.3
KIV	**Kislovodsk**	**84.84**	**5**	*i* P	**P**	**06 36 10.0**	**+1.5**
KIV				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.3						
CD2	**Chengdu**	**85.04**	**315**	*e*P	**P**	**06 36 10.0**	**+0.2**
LPAZ	**La Paz**	**86.63**	**121**	*e*P	**P**	**06 36 16.3**	**-1.6**
	comp=Z,4.8nm,1.0s,mb4.7						
LPAZ				*e*pP	pP	06 36 22.6	+1.5
GYA	**Guiyang**	**87.50**	**311**	⇓*i*P	**P**	**06 36 21.5**	**-0.5**
GYA				AP	pP	06 36 25.6	+0.4
GYA				XP	sP	06 36 28.1	+1.9
GYA				SKS	SKS	06 46 44.4	-7.9
GYA				S	S	06 46 57.2	-4.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,90nm,3.0s						
GYA				LR	LR		
	comp=N,280nm,20.1s,MS4.9						
GYA				LR	LR		
	comp=E,370nm,19.8s,MS4.9						
GYA				LR	LR		
	comp=Z,240nm,20.5s,MS4.6						
MALT	**Malatya**	**90.15**	**8**	*e*P	**P**	**06 36 35.4**	**+1.2**
KMI	**Kunming**	**90.47**	**313**	P	**P**	**06 36 38.2**	**+2.2**
KMI				S	S	06 47 31.0	+2.4
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.9						
KMI				LR	LR		
	comp=Z,84nm,26.1s,MS4.1						
KMI	**Kunming**	**90.47**	**313**	P	**P**	**06 36 38.2**	**+2.2**
	comp=Z,6.0nm,0.9s,mb4.9						
KMI				S	S	06 47 31.0	+2.4
KMI				LR	LR		
	comp=Z,80nm,26.1s,MS4.0						
LSA	**Lhasa**	**91.20**	**324**	*e*P	**P**	**06 36 40.3**	**+1.0**
	comp=Z,6.4nm,0.8s,mb5.0						
VNA3	**Neumayer Olymp**	**147.40**	**149**	*e*	PKPdf	06 43 21.9	+6.0
VNA3	**Neumayer Olymp**	**147.40**	**149**	*e*	PKPdf	06 43 25.1	+9.2
VNA3	**Neumayer Olymp**	**147.40**	**149**	⇑*i*PKPdf	PKPdf	06 43 16.1	+0.1
VNA3				*e*		06 43 21.9	
VNA3				*e*		06 43 25.1	
VNA1	**Neumayer--Stat**	**147.92**	**148**	*e*	PKPdf	06 43 21.7	+4.9
VNA1	**Neumayer--Stat**	**147.92**	**148**	*e*	PKPdf	06 43 23.7	+6.9
VNA1	**Neumayer--Stat**	**147.92**	**148**	⇑*i*PKPdf	PKPdf	06 43 16.1	-0.7
VNA1				*e*		06 43 21.7	
VNA1				*e*		06 43 23.7	
VNA2	**Neumayer--Watz**	**148.17**	**149**	*e*	PKPdf	06 43 23.4	+6.2
VNA2	**Neumayer--Watz**	**148.17**	**149**	*e*	PKPdf	06 43 25.7	+8.5
VNA2	**Neumayer--Watz**	**148.17**	**149**	*e*	PKPdf	06 43 26.6	+9.4
VNA2	**Neumayer--Watz**	**148.17**	**149**	⇑*i*PKPdf	PKPdf	06 43 17.7	+0.5
VNA2				*e*		06 43 23.4	
VNA2				*e*		06 43 25.7	
VNA2				*e*		06 43 26.6	
SNAA	**Sanae**	**149.48**	**151**	*e*	PKPdf	06 43 28.1	+8.8
SNAA	**Sanae**	**149.48**	**151**	*e*	PKPdf	06 43 30.0	+11
SNAA	**Sanae**	**149.48**	**151**	*e*	PKPdf	06 43 31.1	+12
SNAA	**Sanae**	**149.48**	**151**	⇑*i*PKPdf	PKPdf	06 43 21.9	+2.6
SNAA				*e*		06 43 28.1	
SNAA				*e*		06 43 30.0	
SNAA				*e*		06 43 31.1	

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*NEIC **07** 06:38:39.6,32.16S×71.73W,h26^{km},ML3.3(GUC),After GUC.*

GUC 07 06:38:39.6±0.8**,32.16S×71.73W,h26**^{km}±3^{km}**,MD4.0, ML3.3,3C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.45**	**147**	*e*P	Pb	06 38 49.0	-0.1
PACH				*i* S	Sb	06 38 56.1	+0.6
IHA	**Instituto Hidr**	**0.87**	**175**	*e*P	Pb	06 38 55.6	-0.3
ROCH	**El Roble**	**1.01**	**143**	⇓*i*P	Pn	06 38 58.0	-0.3
ROCH				*i* S	Sb	06 39 12.1	+0.8
JACH	**Jahuel**	**1.09**	**119**	⇓*i*P	Pn	06 38 59.2	-0.3
JACH				*i* S	Sb	06 39 14.0	+0.3
LCCH	**Las Cruces**	**1.32**	**174**	*e*P	Pn	06 39 02.5	-0.2
LCCH				*i* S	Sn	06 39 19.2	-0.3
RCDM	**Rinconada Maip**	**1.54**	**150**	⇑*i*P	Pn	06 39 06.2	+0.4
RCDM				*i* S	Sn	06 39 25.7	+0.5
RCDM				AMP		06 39 34.9	
	comp=N,346nm,0.5s						
CLCH	**Cerro Calan**	**1.59**	**141**	⇑*i*P	Pn	06 39 07.1	+0.5
CLCH				*i* S	Sn	06 39 27.7	+1.2
CLCH				AMP		06 39 36.9	
	comp=N,741nm,0.4s						
TACH	**Talagante**	**1.63**	**156**	*e*P	Pn	06 39 07.8	+0.6
TACH				*i* S	Sn	06 39 29.4	+1.8
ANTU	**Antumapu**	**1.68**	**147**	*e*P	Pn	06 39 08.0	+0.1
FCH	**Farellones**	**1.68**	**134**	*e*P	Pn	06 39 08.6	+0.7
FCH				*i* S	Sn	06 39 30.8	+2.1
FCH				AMP		06 39 33.8	
	comp=N,370nm,0.4s						
PCH	**Pirque**	**1.78**	**145**	⇓*i*P	Pn	06 39 09.7	+0.4
CHCH	**Chadas Angostu**	**1.99**	**153**	⇑*i*P	Pn	06 39 13.1	+0.9
LMEL	**Las Melosas**	**2.12**	**143**	*e*P	Pn	06 39 14.7	+0.6
LMEL				*i* S	Sn	06 39 42.1	+2.3
LMEL				AMP		06 39 49.6	
	comp=N,326nm,0.2s						
TLL	**Tololo Astrono**	**2.14**	**22**	*e*P	Pn	06 39 15.4	+1.0
TLL				*i* S	Sn	06 39 42.9	+2.5
TLL				AMP		06 39 48.9	
	comp=N,621nm,0.7s						
SFDO	**San Fernando**	**2.52**	**166**	*e*P	Pn	06 39 19.8	-0.1

IGQ 07 07:24:50.2,1.05S×78.33W,h21^{km}±2^{km}**,mb4.0,6C-9D, Error ellipse: s-maj=2.5km s-min=0.9km az=13.9, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.06**	**260**	⇓P	Pb	07 24 54.0	0.0
TAMB	**Tambo**	**0.35**	**353**	⇑P	Pb	07 24 58.2	+0.4
JUIV	**Juive**	**0.40**	**200**	⇓P	Pb	07 24 58.8	+0.2
VC1	**Cotopaxi 1**	**0.41**	**349**	⇑P	Pb	07 24 59.4	+0.6
RETU	**Refugio**	**0.42**	**197**	⇑P	Pb	07 24 59.4	+0.5
CUSU	**Cusua**	**0.42**	**202**	⇓P	Pb	07 24 59.3	+0.4
NAS1	**Nasa**	**0.44**	**340**	⇑P	Pb	07 25 00.1	+0.8
PATA	**Patacocha**	**0.47**	**193**	⇑P	Pb	07 25 00.3	+0.6
ARRY	**Arrayan**	**0.47**	**196**	⇓P	Pb	07 24 59.9	+0.1
IGUA	**Igualata**	**0.54**	**215**	⇓P	Pb	07 25 02.0	+1.1
ANTI	**Antisana**	**0.62**	**15**	⇓P	Pb	07 25 02.4	+0.2
JUA2	**San Juan 2**	**0.87**	**341**	P	Pb	07 25 07.8	+1.2
GGP	**Refugio Guagua**	**0.91**	**343**	P	Pb	07 25 08.9	+1.7
TERV	**Terraza Guagua**	**0.91**	**342**	⇑P	Pb	07 25 08.7	+1.5
PINO	**Pino**	**0.93**	**342**	P	Pb	07 25 09.0	+1.4
YANA	**Yana**	**0.96**	**345**	⇓P	Pb	07 25 09.1	+1.1
YANA				S	Sb	07 25 22.4	+2.2
CAYR	**Refugio Cayamb**	**1.10**	**17**	⇓P	Pb	07 25 11.8	+1.3
CAYR				S	Sb	07 25 26.1	+1.6
CONE	**Cono NE Rev Vo**	**1.19**	**35**	⇓P	Pn	07 25 13.2	+1.4
CONE				S	Sb	07 25 29.0	+2.1
HOJA	**Cerro de Hojas**	**2.22**	**270**	P	Pn	07 25 28.7	+2.1
HOJA				S	Sn	07 25 52.6	-1.1

MEX 07 07:57:05.0±0.4**,18.31N×103.02W,h15**^{km}±34^{km}**,MD4.0, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGX	**Ciudad Guzman**	**1.45**	**341**	*i* P	Pn	07 57 27.5	-3.3
CGX				*i* S	Sb	07 57 44.5	-4.7
SFJM	**Santa Fe**	**2.16**	**359**	*i* P	Pn	07 57 37.5	-3.5
SFJM				*i* S	Sn	07 58 03.0	-4.7
CJM	**Chamela**	**2.25**	**302**	*e*P	Pn	07 57 38.3	-4.0
CJM				*i* S	Sn	07 58 05.2	-4.8

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*NIED **07** 08:58:00,33.70N×141.90E,h5^{km},Mw4.2 Best double couple: $M_0$1.96×10^{15} NP1:ϕ_s165°,δ64°,λ62°. NP2:ϕ_s35°, δ38°,λ134°.*

*JMA **07** 08:58:22.3±0.4,33.66N×141.85E,h16^{km},M4.0*

ISC 07 08:58:24.4±1.7**,33.7N**±0.1×**141.8E**±0.1**,h86**^{km}±22^{km}**,n12, σ1§16**/20**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.18**	**326**	P	**P**	**08 58 44.9**	**-1.4**
BSO1				*e*S	**S**	**08 59 01.6**	**-1.1**
BSO2	**Boso 2**	**1.36**	**322**	*e*S	**S**	**08 59 07.3**	**+0.5**
BSO3	**Boso 3**	**1.54**	**318**	P	**P**	**08 58 50.5**	**-0.4**
BSO3				*e*S	**S**	**08 59 12.6**	**+2.1**
JHJ2	**Mitsune**	**1.73**	**252**	P	**P**	**08 58 53.9**	**+0.5**
BSO4	**Boso 4**	**1.77**	**318**	P	**P**	**08 58 54.3**	**+0.4**
BSO4				*e*S	**S**	**08 59 17.9**	**+2.2**
JIM2	**Oshima 3**	**2.20**	**299**	P	**P**	**08 58 59.1**	**-0.7**
JIM2				*e*S	**S**	**08 59 26.5**	**+0.5**
JKO	**Kozu shima**	**2.25**	**284**	P	**P**	**08 59 00.7**	**+0.2**
KTJJ	**Kamata 2**	**2.56**	**300**	P	**P**	**08 59 03.8**	**-1.1**
KTJJ				*e*S	**S**	**08 59 32.6**	**-2.5**
JIZS	**Izushimoda**	**2.61**	**294**	P	**P**	**08 59 05.5**	**-0.1**
JIZS				*e*S	**S**	**08 59 36.7**	**+0.4**
JOD2	**Odawara 2**	**2.72**	**306**	P	**P**	**08 59 06.3**	**-0.8**
JOD2				*e*S	**S**	**08 59 37.4**	**-1.7**
SHZ3	**Shizuoka 3**	**3.25**	**296**	P	**P**	**08 59 16.9**	**+2.4**
MAT	**Matsushiro**	**4.09**	**315**	P	**P**	**08 59 26.5**	**+0.5**
MAT				S	**S**	**09 00 13.1**	**+0.2**

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*NNC **07** 09:23:14.2±49.0,36.94N×73.17E,mpv3.8,Error ellipse: s-maj=1042.9km s-min=376.7km az=87.0*

ISC 07 09:23:11.8±2.1, 36.77N±0.08×72.3E±0.3, h114^{km}±55^{km}, n15, σ0^{s}55/19, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.18**	**146**	*e*P	**P**	**09 24 28.4**	**0.0**
THN				*e*S	**S**	**09 25 27.8**	**+0.4**
AML	**Almayashu** SNR=84	**5.47**	**11**	P	**P**	**09 24 31.8**	**-0.5**
UCH	**Uchtor** SNR=23	**5.73**	**17**	P	**P**	**09 24 36.1**	**+0.4**
KZA	**Kyzart** SNR=20	**5.79**	**23**	P	**P**	**09 24 37.2**	**+0.7**
EKS2	**Erkin-Say** SNR=28	**6.00**	**11**	P	**P**	**09 24 38.9**	**-0.5**
AAK	**Ala-Archa** 4.0nm,0.4s	**6.11**	**16**	⇑P	**P**	**09 24 40.8**	**-0.1**
AAK	24nm,0.7s			⇑S	**S**	**09 25 49.4**	**-0.6**
AAK	**Ala-Archa** SNR=15	**6.11**	**16**	P	**P**	**09 24 40.9**	**0.0**
ULHL	**Ulahol** SNR=11	**6.28**	**28**	P	**P**	**09 24 44.6**	**+1.3**
CHMS	**Chumysh** SNR=8.7	**6.51**	**16**	P	**P**	**09 24 46.2**	**-0.3**
SDNR	**Sundarnagar**	**6.55**	**142**	*e*P	**P**	**09 24 47.4**	**+0.4**
SDNR				*e*S	**S**	**09 25 59.8**	**-1.0**
TKM2	**Tokmak 2** SNR=7.7	**6.66**	**22**	P	**P**	**09 24 48.9**	**+0.3**
USP	**Ospenovka** SNR=15	**6.72**	**14**	P	**P**	**09 24 48.7**	**-0.6**
SMLA	**Simla**	**6.95**	**143**	⇓*i*P	**P**	**09 25 06.4**	**+14**
SMLA	484nm,0.1s			*i* S	**S**	**09 26 23.3**	**+13**
DDI	**Dehra Dun**	**8.05**	**141**	*e*S	**S**	**09 26 37.2**	**0.0**
MK31	**Makanchi Array** 0.6nm,0.5s,baz=215,slow=14,SNR=14	**12.50**	**34**	⇓P	**P**	**09 26 06.8**	**+0.2**

MAN 07 09:23:20.4, 6.57N×126.29E, h132^{km}, mb4.1, ML2.9, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.38**	**355**	*e*P	P	09 23 41.3	+2.0
KCP	**Kidapawan**	**1.27**	**290**	⇓*e*P	P	09 23 46.5	0.0
KCP				*i* S	S	09 24 07.0	+0.7
BIPH	**Bislig**	**1.60**	**3**	*e*P	P	09 23 51.0	+0.7
BIPH				*e*S	S	09 24 14.0	+1.0
BUKP	**Musuan**	**1.78**	**317**	*e*P	P	09 23 53.3	+1.0
BUKP				*e*S	S	09 24 18.0	+1.4
PAGZ	**Pagadian**	**3.15**	**294**	*e*P	P	09 24 09.9	-0.1

NEIC 07 09:27:06.8, 60.14N×152.85W, h115^{km}, 1C, After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIM	**Iliamna**	**0.08**	**225**	P	P	09 27 22.1	-0.7
ILIM				S	S	09 27 34.6	0.0
INE	**Iliamna NE**	**0.13**	**235**	P	P	09 27 22.2	-0.6
ILW	**Iliamna West**	**0.16**	**242**	P	P	09 27 22.2	-0.6
RSO	**Redoubt South**	**0.33**	**8**	⇑*i*P	P	09 27 22.9	-0.5
RDN	**Redoubt North**	**0.38**	**6**	P	P	09 27 23.0	-0.6
NCT	**North Crescent**	**0.43**	**355**	P	P	09 27 23.2	-0.7
NCT				S	S	09 27 36.3	-0.5
DFR	**Drift River**	**0.47**	**10**	P	P	09 27 23.2	-0.9
RDT	**Redoubt**	**0.49**	**26**	P	P	09 27 23.6	-0.8
OPT	**Oil Point**	**0.52**	**202**	P	P	09 27 24.1	-0.4
OPT				S	S	09 27 36.7	-1.2
HOM	**Homer**	**0.77**	**128**	P	P	09 27 26.3	-0.1
HOM				S	S	09 27 42.2	+0.9
NNL	**Ninilchik**	**0.78**	**96**	P	P	09 27 26.9	+0.3
AUE	**Augustine Isla**	**0.82**	**199**	P	P	09 27 26.1	-0.9
AUW	**Augustine West**	**0.83**	**203**	P	P	09 27 26.4	-0.6
AUI	**Augustine Isla**	**0.85**	**200**	P	P	09 27 26.5	-0.8
AUI				S	S	09 27 41.8	-0.8
XLV	**Seldovia**	**0.89**	**140**	P	P	09 27 26.9	-0.7
XLV				S	S	09 27 43.5	+0.3
CNPM	**China Poot**	**1.02**	**126**	P	P	09 27 28.5	-0.5
BRLK	**Bradley Lake**	**1.06**	**110**	P	P	09 27 28.6	-0.7
BRLK				S	S	09 27 45.9	-0.3
SPU	**Mount Spurr**	**1.12**	**20**	P	P	09 27 29.1	-0.9
SPU				S	S	09 27 46.5	-0.9
CKN	**Chakachatna No**	**1.14**	**16**	P	P	09 27 29.4	-0.9
BGL	**Barrier Glacie**	**1.16**	**11**	P	P	09 27 29.7	-0.8
CRP	**Crater Peak**	**1.19**	**16**	P	P	09 27 30.0	-0.8
MCNL	**McNeil River**	**1.22**	**219**	P	P	09 27 29.8	-1.3
MCNL				S	S	09 27 47.7	-1.6
SLKM	**Skilak Lake**	**1.36**	**73**	P	P	09 27 31.5	-1.3
SLKM				S	S	09 27 50.7	-1.6
STLK	**Strandline Lak**	**1.46**	**20**	P	P	09 27 32.8	-1.0
VOGL	**Vogel Lake**	**1.48**	**53**	P	P	09 27 33.6	-0.4
SYI	**Shuyak Island**	**1.55**	**171**	P	P	09 27 33.7	-1.2
SYI				S	S	09 27 54.5	-1.6
SVW2	**Sparrevohn**	**1.66**	**307**	P	P	09 27 34.1	-2.1
FIB	**Fire Island**	**1.68**	**51**	P	P	09 27 36.0	-0.4
SEW	**Seward**	**1.70**	**90**	P	P	09 27 34.9	-1.9
SEW				S	S	09 27 57.0	-2.4
KAPH	**Katmai Pasha**	**1.72**	**207**	P	P	09 27 36.1	-1.0
KAHC	**Katmai Hardscr**	**1.85**	**217**	P	P	09 27 37.4	-1.3
KAHC				S	S	09 28 01.1	-1.5
KAIC	**Katmai Ikaglui**	**2.00**	**215**	P	P	09 27 39.3	-1.2
PWA	**Palmer West**	**2.10**	**42**	P	P	09 27 40.2	-1.6
ACHA	**Angle Creek He**	**2.31**	**215**	P	P	09 27 43.2	-1.5
MGLS	**Mageik LS**	**2.31**	**215**	P	P	09 27 43.6	-1.1
PMR	**Palmer**	**2.33**	**50**	P	P	09 27 42.1	-2.8
PWL	**Port Wells**	**2.35**	**70**	P	P	09 27 42.5	-2.7
KDAK	**Kodiak Island**	**2.36**	**177**	P	P	09 27 42.5	-2.8
LTI	**Latouche**	**2.50**	**90**	P	P	09 27 45.0	-2.3
KNK	**Knik Glacier**	**2.51**	**57**	P	P	09 27 44.7	-2.5
GHO	**Glory Hole Cre**	**2.52**	**48**	P	P	09 27 44.9	-2.6
CUT	**Chulitna**	**2.60**	**28**	P	P	09 27 46.4	-2.0
SML	**Sawmill**	**2.77**	**51**	P	P	09 27 47.9	-2.9
GLI	**Glacier Island**	**2.94**	**73**	P	P	09 27 51.4	-1.7
TT01	**Tatalina**	**3.17**	**333**	P	P	09 27 53.4	-2.8
HIN	**Hinchinbrook I**	**3.17**	**83**	P	P	09 27 52.9	-3.4
SCM	**Sheep Creek Mo**	**3.19**	**55**	P	P	09 27 53.5	-2.8
FID	**Port Fidalgo**	**3.22**	**76**	P	P	09 27 52.7	-4.1
JPK	**Jack Peak**	**3.22**	**71**	P	P	09 27 53.5	-3.4
HUR	**Hurricane**	**3.24**	**27**	P	P	09 27 54.9	-2.2
VLZ	**Valdez**	**3.36**	**70**	P	P	09 27 55.6	-3.2
MID	**Middleton Isla**	**3.37**	**99**	*e*P	P	09 27 57.6	-1.2
TRF	**Thorofare Moun**	**3.54**	**19**	P	P	09 27 58.8	-2.4
KTH	**Kantishna Hill**	**3.55**	**14**	P	P	09 27 58.5	-2.9
EYAK	**Cordova Ski Ar**	**3.56**	**80**	P	P	09 27 57.7	-3.7
DIV	**Divide**	**3.63**	**71**	P	P	09 27 58.9	-3.4
RND	**Reindeer**	**3.79**	**28**	P	P	09 28 01.5	-3.0
MCK	**McKinley**	**4.06**	**25**	P	P	09 28 05.3	-2.9
BWN	**Browne**	**4.35**	**20**	P	P	09 28 09.2	-2.9
PAX	**Paxson**	**4.53**	**48**	P	P	09 28 12.0	-2.6
GLB	**Gilahina Butte**	**4.62**	**70**	P	P	09 28 12.6	-3.2
THY	**Trims Highway**	**4.71**	**43**	P	P	09 28 15.4	-1.6
NEA	**Nenana**	**4.79**	**20**	P	P	09 28 15.1	-3.0
GCSA	**Galena City Sc**	**4.99**	**340**	P	P	09 28 18.0	-2.8
MLY	**Manley**	**5.01**	**10**	P	P	09 28 17.4	-3.6
CCB	**Clear Creek Bu**	**5.10**	**25**	P	P	09 28 18.8	-3.4
BALM	**Baldy**	**5.26**	**76**	P	P	09 28 21.2	-3.1
COLA	**College**	**5.29**	**24**	P	P	09 28 21.6	-3.2
MDM	**Murphy Dome**	**5.29**	**22**	P	P	09 28 21.9	-2.9
IL1	**Eielson Array**	**5.41**	**28**	P	P	09 28 23.2	-3.2
YAH	**Yahtse**	**5.54**	**83**	P	P	09 28 26.4	-1.7
CTGM	**Chitina Glacie**	**5.74**	**77**	P	P	09 28 29.6	-1.4
IM3	**Indian Mountai**	**5.89**	**356**	P	P	09 28 30.0	-2.8
IMA	**Indian Mountai**	**5.97**	**357**	*e*P	P	09 28 32.2	-1.8
BCA3	**Beaver Creek A**	**6.04**	**56**	P	P	09 28 32.1	-2.9
PNL	**Peninsula**	**6.79**	**88**	P	P	09 28 42.5	-2.8
COLD	**Coldfoot**	**7.22**	**8**	P	P	09 28 47.2	-3.9
DAWY	**Dawson**	**7.44**	**52**	P	P	09 28 50.8	-3.3
BM3	**Burnt Mountain**	**8.16**	**23**	P	P	09 28 59.2	-4.7
TNA	**Tin City**	**8.77**	**315**	P	P	09 29 08.5	-3.4
WHY	**Whitehorse**	**8.91**	**79**	P	P	09 29 10.9	-3.0
DLBC	**Dease Lake**	**11.78**	**88**	*e*P	P	09 29 51.8	-0.1

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*NIED **07** 09:39:00, 43.60N×147.50E, h44^{km}, Mw4.9 Best double couple: $M_0$2.36×10^{16} NP1:ϕ_s147°, δ67°, λ-36°. NP2: ϕ_s252°, δ58°, λ-152°.*

*BJI **07** 09:39:46.0, 43.72N×147.51E, h38^{km}, mB5.0, mb4.9, Ms4.4, Msz4.3*

*MOS **07** 09:39:46.3±0.8, 43.77N×147.48E, h38^{km}, mb5.3/76, MS4.1/13, Error ellipse: s-maj=7.3km s-min=4.7km az=98.2*

MOS Felt (III) at Malokuril'skoe; (II) at Yuzhno-Kuril'sk.

*JMA **07** 09:39:46.5±0.2, 43.61N×147.46E, h18^{km}±5^{km}, M5.0*

JMA Felt I J1.

*NEIC **07** 09:39:47.8±0.2, 43.79N×147.48E, mb5.1/109, MS4.3/3, Error ellipse: s-maj=5.1km s-min=2.5km az=166.0*

NEIC Felt [III] on Shikotan and [II] at Yuzhno-Kuril'sk, Kunashir. Recorded [1 JMA] in eastern Hokkaido.

*HRVD **07** 09:39:47.8±0.4, 43.77N×147.63E, h42^{km}±2^{km}, MW4.9/49, Centroid moment Tensor Solution. LP body waves: s18,c22;Mantle waves: s49,c85; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.03±.21; $M_{\theta\theta}$1.93±.15; $M_{\phi\phi}$-1.90±.13; $M_{r\theta}$-0.03±.15; $M_{\theta\phi}$-1.58±.09; $M_{\phi r}$1.60±.14; Best double couple: $M_0$2.915×10^{16} NP1:ϕ_s248°, δ61°, λ-171°. NP2:ϕ_s154°, δ82°, λ-29°. Principal axes: T 2.642, Plg14°, Azm204°; N .549, Plg60°, Azm320°; P -3.189, Plg26°, Azm107°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SKHL **07** 09:39:50.0±2.1, 43.98N×147.37E, h68^{km}±31^{km}, mb5.5/1, Ms4.6/3*

SKHL Felt (III) at Malokurilskoe, (II) at Yushno-Kurilsk.

ISC 07 09:39:46.0±0.1, 43.69N±0.03×147.58E±0.02, h37^{km}, h37^{km}±1.3^{km}:pP-P, n430, σ0^{s}94/457, mb5.0/133, MS4.2/18, 26C-33D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.29**	**286**	κ *i*PN	**P**	**09 40 08.0**	**+0.2**
YUK				*i* S	**S**	**09 40 21.5**	**-2.6**
YUK	comp=N,2μm,0.3s			pmax	pmax		
YUK	comp=E,10μm,0.3s			pmax	pmax		
YUK	comp=Z,20μm,0.3s			pmax	pmax		
YUK	comp=N,5μm,0.9s			pmax	pmax		
YUK	comp=E,32μm,0.9s			pmax	pmax		
YUK	comp=Z,40μm,0.9s			pmax	pmax		
YUK	comp=N,70μm,1.1s			smax			
YUK	comp=E,135μm,1.1s			smax			
YUK	**Yuzh-Kuril'sk**	**1.29**	**286**	⇓*i*P	**P**	**09 40 08.0**	**+0.2**
YUK				⇓*i*P		09 40 08.0	
YUK	comp=E,5μm,1.0s			AMB	AMB	09 40 09.0	
YUK	comp=E,32μm,1.0s			AMB	AMB	09 40 09.0	
YUK	comp=E,40μm,1.0s			AMB	AMB	09 40 09.0	
YUK	comp=E,2μm,0.2s			AMB	AMB	09 40 09.0	
YUK	comp=E,10μm,0.2s			AMB	AMB	09 40 09.0	
YUK	comp=E,20μm,0.2s			AMB	AMB	09 40 09.0	
YUK				*i* S	**S**	**09 40 21.5**	**-2.6**
YUK	comp=E,70μm,1.0s			A		09 40 24.4	
YUK	comp=E,135μm,1.0s			A		09 40 24.4	
NEM2	**Nemuro 2**	**1.37**	**257**	⇓P	**P**	**09 40 09.6**	**+0.5**
NEM2				*e*S	**S**	**09 40 26.0**	**-0.3**
KUR	**Kuril'sk**	**1.56**	**8**	α *i*PN	**P**	**09 40 08.7**	**-3.0**
KUR				*i* S	**S**	**09 40 27.0**	**-3.8**
KUR	comp=N,3μm,0.5s			pmax	pmax		
KUR	comp=E,2μm,0.5s			pmax	pmax		
KUR	comp=Z,6μm,0.5s			pmax	pmax		
KUR	comp=N,10μm,1.4s			pmax	pmax		
KUR	comp=E,9μm,1.4s			pmax	pmax		
KUR	comp=Z,14μm,1.4s			pmax	pmax		
KUR	comp=N,9μm,0.5s			smax			
KUR	comp=E,12μm,0.5s			smax			
KUR	comp=N,38μm,1.4s			smax			
KUR	comp=E,50μm,1.4s			smax			
KUR	**Kuril'sk**	**1.56**	**8**	*i* P	**P**	**09 40 08.7**	**-3.0**
KUR				*i* P		09 40 08.7	
KUR	comp=E,3μm,0.5s			AMB	AMB	09 40 16.0	
KUR	comp=E,2μm,0.5s			AMB	AMB	09 40 16.0	
KUR	comp=E,6μm,0.5s			AMB	AMB	09 40 16.0	
KUR				*e*S	**S**	**09 40 22.0**	**-8.8**
KUR	comp=E,9μm,0.5s			A		09 40 35.0	
KUR	comp=E,12μm,0.5s			A		09 40 35.0	
KUR	comp=E,38μm,1.0s			A		09 40 40.0	
KUR	comp=E,50μm,1.0s			A		09 40 40.0	
JRA	**Rausu**	**1.79**	**279**	⇓P	**P**	**09 40 16.3**	**+1.3**
JRA				*e*S	**S**	**09 40 37.5**	**+0.7**
JNK	**Nakash**	**2.08**	**268**	⇓P	**P**	**09 40 19.9**	**+0.8**
JNK				*e*S	**S**	**09 40 44.5**	**+0.5**
JAK	**Akkeshi**	**2.21**	**253**	⇓P	**P**	**09 40 21.5**	**+0.5**
JAK				*e*S	**S**	**09 40 47.4**	**0.0**
JTKR	**Abashiri--Toko**	**2.67**	**277**	⇓P	**P**	**09 40 29.2**	**+1.6**
JTKR				*e*S	**S**	**09 41 01.0**	**+2.0**
JAR	**Ashorobuto**	**2.80**	**263**	⇓P	**P**	**09 40 30.6**	**+1.2**
JAR				*e*S	**S**	**09 41 04.0**	**+1.7**
JOB	**Onbets**	**2.84**	**255**	P	**P**	**09 40 30.7**	**+0.7**
JOB				*e*S	**S**	**09 41 02.2**	**-1.2**
JMP	**Maruseppu**	**3.07**	**277**	⇓P	**P**	**09 40 34.9**	**+1.7**
JCH	**Churui**	**3.27**	**252**	P	**P**	**09 40 36.7**	**+0.7**
JCH				*e*S	**S**	**09 41 15.4**	**+1.2**
JKK2	**Kamakawa 2**	**3.50**	**275**	P	**P**	**09 40 41.1**	**+1.7**
ASAJ	**Asahikawa**	**3.62**	**278**	⇓P	**P**	**09 40 42.9**	**+1.8**
JEM	**Erimo**	**3.66**	**244**	P	**P**	**09 40 43.3**	**+1.7**
JFR	**Furan**	**3.67**	**263**	P	**P**	**09 40 43.5**	**+1.8**
JFR				*e*S	**S**	**09 41 26.9**	**+2.5**
JSE	**Soyaes**	**3.80**	**291**	⇓P	**P**	**09 40 44.7**	**+1.1**
JNBK	**Urakawa-nobuka**	**3.81**	**250**	P	**P**	**09 40 43.8**	**+0.1**
JHR	**Hokuryu**	**4.24**	**273**	P	**P**	**09 40 52.5**	**+2.6**
YSS	**Yuzh-Sakhalins**	**4.71**	**315**	⇓*i*PN	**P**	**09 40 57.0**	**+0.4**
YSS	comp=Z,160nm,0.6s			pmax	pmax		
YSS	comp=E,160nm,0.4s			pmax	pmax		
YSS	comp=N,1μm,14.0s			MLR	MLR		
YSS	comp=E,1μm,14.0s			MLR	MLR		
YSS	comp=Z,2μm,14.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**4.71**	**315**	⇓*i*Pn	**P**	**09 40 56.9**	**+0.3**
YSS				S	**S**	**09 41 46.6**	**-4.2**
JYM2	**Yakumo 2**	**5.52**	**256**	P	**P**	**09 41 08.8**	**+0.9**
UGL	**Uglegorsk**	**6.60**	**327**	*e*P	**P**	**09 41 21.0**	**-2.1**
UGL	comp=Z,70nm,0.9s			AMB	AMB	09 41 23.0	
UGL	comp=Z,160nm,0.7s			A		09 42 36.0	
UGL	comp=Z,180nm,0.7s			A		09 42 36.0	
UGL	comp=Z,1μm,15.0s			AMS	AMS	09 44 00.0	
UGL	comp=Z,2μm,15.0s			AMS	AMS	09 44 00.0	
UGL	comp=Z,1μm,15.0s			AMS	AMS	09 44 00.0	
TEY	**Ternei**	**7.98**	**284**	*e*P	**P**	**09 41 42.5**	**+0.2**
TEY	comp=Z,160nm,0.9s			AMB	AMB	09 41 45.5	
JNS	**Sasagawa**	**8.58**	**230**	P	**P**	**09 41 49.1**	**-1.5**
JSB	**Shiboa**	**8.90**	**224**	P	**P**	**09 41 53.9**	**-1.1**
JSD	**Sado**	**9.04**	**234**	P	**P**	**09 41 55.2**	**-1.7**
SKR	**Severo-Kuril's**	**9.09**	**37**	*e*PN	**P**	**09 41 52.5**	**-5.2**
SKR	comp=N,50nm,0.5s			pmax	pmax		
SKR	comp=Z,230nm,0.5s			pmax	pmax		
SKR	comp=E,70nm,0.3s			pmax	pmax		
SKR	comp=N,3μm,18.0s			MLR	MLR		
SKR	comp=Z,3μm,18.0s			MLR	MLR		
SKR	**Severo-Kuril's**	**9.09**	**37**	*e*P	**P**	**09 41 52.5**	**-5.2**
SKR	comp=Z,50nm,0.4s			AMB	AMB	09 41 55.0	
SKR	comp=Z,70nm,0.4s			AMB	AMB	09 41 55.0	
SKR	comp=Z,230nm,0.4s			AMB	AMB	09 41 55.0	
SKR				*e*S	**S**	**09 43 38.1**	**-1.8**
SKR	comp=Z,220nm,0.8s			A		09 44 13.5	
SKR	comp=Z,160nm,0.8s			A		09 44 13.5	
SKR	comp=Z,3μm,18.0s			AMS	AMS	09 45 14.0	
SKR	comp=Z,3μm,18.0s			AMS	AMS	09 45 14.0	
JIZZ	**Izumozaki**	**9.12**	**231**	P	**P**	**09 41 57.5**	**-0.6**
JHK	**Hiroka**	**9.16**	**228**	P	**P**	**09 41 56.8**	**-1.8**
JKT	**Katashina**	**9.40**	**225**	P	**P**	**09 42 01.3**	**-0.6**
JAG	**Ashikaga**	**9.56**	**223**	P	**P**	**09 42 01.6**	**-2.5**
JJN	**Nakama**	**9.73**	**231**	P	**P**	**09 42 06.0**	**-0.5**
JSZ	**Suzu**	**9.96**	**235**	P	**P**	**09 42 08.6**	**-1.0**
PAU	**Pauzhetka**	**9.96**	**35**	*i* P	**P**	**09 42 07.5**	**-2.1**
MAJO	**Matsushiro**	**10.12**	**228**	⇑*i*PN	**P**	**09 42 10.0**	**-1.8**
MAJO	comp=Z,69nm,0.8s			pmax	pmax		
MAJO	**Matsushiro** comp=Z,69nm,0.8s	**10.12**	**228**	⇑*i*Pn	**P**	**09 42 10.0**	**-1.8**
MAT	**Matsushiro**	**10.12**	**228**	*e*PN	**P**	**09 42 10.0**	**-1.8**
MAT	comp=Z,56nm,0.8s			pmax	pmax		
MAT	**Matsushiro** comp=Z,56nm,0.8s	**10.12**	**228**	*e*P	**P**	**09 42 10.0**	**-1.8**
MAT				*e*S	**S**	**09 44 02.0**	**-3.1**
MAT	**Matsushiro**	**10.12**	**228**	P	**P**	**09 42 09.9**	**-1.9**
MAT				S	**S**	**09 44 02.4**	**-2.7**
MAT	**Matsushiro**	**10.12**	**228**	P	**P**	**09 42 10.0**	**-1.8**
JNG	**Nsakai**	**10.28**	**228**	P	**P**	**09 42 12.4**	**-1.6**
GRNR	**Gornyy**	**10.37**	**317**	*e*P	**P**	**09 42 15.0**	**-0.2**
GRNR	comp=Z,16nm,0.8s			AMB	AMB	09 42 16.0	
JNT	**Takato**	**10.66**	**226**	P	**P**	**09 42 18.1**	**-1.1**
JGN	**Niukaw**	**10.84**	**230**	P	**P**	**09 42 20.3**	**-1.4**
JNY	**Yasuok**	**11.20**	**225**	P	**P**	**09 42 25.2**	**-1.3**
JGM	**Miyama**	**11.55**	**230**	P	**P**	**09 42 31.0**	**-0.3**
PET	**Petropavlovsk**	**11.88**	**34**	*e*PN	**P**	**09 42 31.6**	**-4.1**
PET	comp=Z,12nm,0.6s			pmax	pmax		
PET	comp=Z,1μm,17.0s			MLR	MLR		
PET	**Petropavlovsk** comp=Z,12nm,0.4s	**11.88**	**34**	*e*Pn	**P**	**09 42 31.6**	**-4.0**
PET	**Petropavlovsk**	**11.88**	**34**	*e*P	**P**	**09 42 31.6**	**-4.1**
PET	comp=Z,12nm,0.6s			AMB	AMB	09 42 32.6	
PET				*e*S	**S**	**09 44 39.5**	**-8.5**
PET	comp=Z,70nm,0.7s			A		09 44 58.0	
PET	comp=Z,60nm,0.7s			A		09 45 00.2	
PET	comp=Z,1μm,17.0s			AMS	AMS	09 47 13.6	
JFM	**Mihama**	**12.09**	**232**	P	**P**	**09 42 38.2**	**-0.4**
KLR	**Kul'dur**	**12.23**	**302**	*e*PN	**P**	**09 42 39.5**	**-0.9**
KLR				*e*		09 45 05.5	
KLR	comp=Z,600nm,5.5s			pmax	pmax		
KLR	comp=N,900nm,13.0s			MLR	MLR		
KLR	comp=Z,2μm,13.0s			MLR	MLR		
KLR	**Kul'dur**	**12.23**	**302**	*e*P	**P**	**09 42 39.5**	**-0.9**
KLR				*e*P		09 42 39.7	
KLR	comp=Z,600nm,5.5s			AMB	AMB	09 42 47.0	
KLR				*e*rx	rx	09 48 06.5	
JKY	**Yasaka**	**12.53**	**234**	P	**P**	**09 42 43.7**	**-0.7**
JWT	**Wachi**	**12.60**	**232**	P	**P**	**09 42 44.5**	**-0.9**
MDJ	**Mudanjiang**	**12.95**	**280**	P	**P**	**09 42 49.0**	**-1.1**
MDJ				AP		09 42 54.2	
MDJ				XP		09 43 00.3	
MDJ				PP	PP	09 43 01.5	+1.3
MDJ				S	**S**	**09 45 15.0**	**+1.1**
MDJ				SS	SS	09 45 32.2	+2.8
MDJ				PCP	PcP	09 48 22.3	+0.1
MDJ				SCP		09 51 52.8	
MDJ				PCS		09 51 58.4	
MDJ				SCS	ScS	09 55 30.5	+4.2
MDJ	comp=Z,21nm,1.0s			AMB	AMB		
MDJ	comp=Z,114nm,5.0s			AMB	AMB		
MDJ	comp=N,247nm,11.2s			LR	LR		
MDJ	comp=E,493nm,21.0s			LR	LR		
MDJ	comp=Z,883nm,14.7s			LR	LR		
MDJ	**Mudanjiang** comp=Z,29nm,0.7s	**12.95**	**280**	*e*Pn	**P**	**09 42 49.8**	**-0.3**
JKS	**Kasai**	**13.13**	**233**	P	**P**	**09 42 51.5**	**-0.9**
EKMR	**Ekimchan**	**13.49**	**319**	*e*P	**P**	**09 42 55.6**	**-1.5**
EKMR	comp=Z,38nm,0.7s			AMB	AMB	09 43 05.5	
CN2	**Changchun**	**15.99**	**278**	*e*P	**P**	**09 43 29.1**	**-0.5**
CN2				*e*AP		09 43 36.8	
CN2				*e*S	**S**	**09 46 24.0**	**-1.5**
CN2	comp=Z,20nm,1.2s			AMB	AMB		
CN2	comp=Z,110nm,5.0s			AMB	AMB		
CN2	comp=N,500nm,18.0s			LR	LR		
CN2	comp=E,800nm,18.0s			LR	LR		
CN2	comp=Z,600nm,19.0s			LR	LR		
MA2	**Magadan**	**16.03**	**6**	*e*P	**P**	**09 43 30.1**	**+0.2**
MA2	comp=Z,20nm,0.9s			pmax	pmax		
MA2	comp=Z,350nm,21.5s			MLR	MLR		
MA2	**Magadan** comp=Z,39nm,0.9s	**16.03**	**6**	*e*Pn	**P**	**09 43 29.2**	**-0.8**
YASR	**Yasnyy**	**16.11**	**313**	*e*P	**P**	**09 43 28.5**	**-2.5**
YASR	comp=Z,8.0nm,0.7s			AMB	AMB	09 43 43.0	
YASR	comp=Z,17nm,0.7s			AMB	AMB	09 43 43.0	
YASR	comp=Z,40nm,0.7s			AMB	AMB	09 43 43.0	
KS15	**Wonju Array Si**	**16.20**	**254**	*e*P	**P**	**09 43 31.1**	**-1.1**
BMKR	**Bomnak**	**16.42**	**319**	*e*P	**P**	**09 43 32.4**	**-2.5**
BMKR	comp=Z,41nm,0.6s			AMB	AMB	19 43 35.9	
ZEA	**Zeya**	**16.70**	**314**	*e*P	**P**	**09 43 37.3**	**-1.2**
ZEA	comp=Z,90nm,1.3s			AMB	AMB	09 43 49.8	
ZEA	comp=Z,160nm,1.3s			AMB	AMB	09 43 49.8	
ZEA	comp=Z,1μm,15.0s			AMS	AMS	09 50 33.0	
ZEA	comp=Z,700nm,15.0s			AMS	AMS	09 50 33.0	
ZEA	comp=Z,900nm,15.0s			AMS	AMS	09 50 33.0	
INCN	**Inchon** comp=Z,36nm,0.9s	**17.06**	**256**	*e*P	**P**	**09 43 44.9**	**+1.9**
KROS	**Kirovskiy**	**17.19**	**316**	*e*P	**P**	**09 43 43.0**	**-1.6**
KROS	comp=Z,6.0nm,0.9s			AMB	AMB	09 43 44.9	
KROS	comp=Z,10.0nm,0.9s			AMB	AMB	09 43 44.9	

SNY	Shenyang	17.71	272	⇓P	P	09 43 52.0	+0.8
SNY				AMB	AMB		
	comp=Z,10.0nm,0.8s						
SNY				LR	LR		
	comp=E,500nm,21.2s						
SNY				LR	LR		
	comp=Z,520nm,21.8s						
FX1	Attu Island--F	19.26	53	eP	P	09 44 07.6	-2.3
CLNS	Chul'man	19.46	320	eP	P	09 44 20.9	+8.9
CLNS				eS	S	09 47 50.7	+6.5
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,20nm,0.9s						
CLNS				pmax	pmax		
	comp=N,18nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.7s						
CLNS				pmax	pmax		
	comp=N,19nm,0.8s						
CLNS				pmax	pmax		
	comp=E,17nm,0.9s						
CLNS				smax			
	comp=N,72nm,1.1s						
CLNS				smax			
	comp=E,95nm,1.1s						
CLNS				smax			
	comp=Z,13nm,1.0s						
CLNS				MLR	MLR		
	comp=E,2µm,15.0s						
CLNS				MLR	MLR		
	comp=Z,200nm,15.0s						
CLNS				MLR	MLR		
	comp=N,100nm,13.0s						
SEY	Seymchan	19.48	7	eP	P	09 44 11.2	-1.0
SEY				eS	S	09 47 45.0	+0.4
SEY				pmax	pmax		
	comp=N,40nm,0.9s						
SEY				pmax	pmax		
	comp=Z,70nm,0.9s						
HIA	Hailar	19.90	296	eP	P	09 44 14.9	-2.0
HIA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HIA	Hailar	19.90	296	eP	P	09 44 14.8	-2.0
	comp=Z,6.4nm,0.5s						
DL2	Dalian	20.04	265	P	P	09 44 20.7	+2.3
DL2				AMB	AMB		
	comp=Z,40nm,0.7s						
YAK	Yakutsk	21.18	336	eP	P	09 44 26.8	-3.2
YAK				ePPP	PPP	09 44 53.5	-10
YAK				eS	S	09 48 13.1	-5.3
YAK				eSS	SS	09 48 33.3	-20
YAK				eSSS	SSS	09 48 43.8	-24
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
YAK				pmax	pmax		
	comp=Z,36nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK				smax			
	comp=N,12nm,0.9s						
YAK				smax			
	comp=E,20nm,1.1s						
YAK				smax			
	comp=Z,9.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,200nm,23.0s,MS3.4						
YAK	Yakutsk	21.18	336	P	P	09 44 28.2	-1.8
	comp=Z,22nm,0.6s,mb4.7						
BJI	Beijing	23.59	272	eP	P	09 44 53.5	-0.5
BJI				S	S	09 49 05.0	+2.6
BJI				AMB	AMB		
	comp=Z,49nm,0.8s,mb5.0						
BJI				LR	LR		
	comp=N,289nm,14.9s,MS4.0						
BJI				LR	LR		
	comp=E,410nm,19.8s,MS4.0						
BJI				LR	LR		
	comp=Z,400nm,19.6s,MS3.9						
BJI	Beijing	23.59	272	eP	P	09 44 53.5	-0.5
	comp=Z,49nm,0.8s,mb5.0						
BJI				S	S	09 49 05.0	+2.6
BJI				LR	LR		
	comp=Z,400nm,19.6s,MS3.9						
BJT	Baijiatuau	23.61	272	eP	P	09 44 54.6	+0.5
BJT				pmax	pmax		
	comp=Z,13nm,0.6s						
BJT	Baijiatuau	23.61	272	eP	P	09 44 54.6	+0.5
	comp=Z,13nm,0.6s,mb4.5						
SSE	Sheshan	24.33	248	P	P	09 45 02.6	+1.3
SSE				AP		09 45 13.4	
SSE				XP		09 45 18.7	
SSE				S	S	09 49 16.5	+1.3
SSE				XS		09 49 35.9	
SSE				AMB	AMB		
	comp=Z,23nm,1.3s,mb4.5						
SSE				AMB	AMB		
	comp=Z,118nm,3.4s						
SSE				LR	LR		
	comp=N,272nm,28.7s,MS3.7						
SSE				LR	LR		
	comp=E,193nm,28.7s,MS3.7						
SSE				LR	LR		
	comp=Z,237nm,27.2s,MS3.5						
SSE	Sheshan	24.33	248	P	P	09 45 02.6	+1.3
	comp=Z,23nm,1.3s,mb4.5						
SSE				pP		09 45 13.4	
SSE				sP		09 45 18.7	
SSE				S	S	09 49 16.5	+1.3
SSE				sS		09 49 35.9	
SSE				LR	LR		
	comp=Z,240nm,27.2s,MS3.5						
TIA	Tai'an	24.41	263	eP	P	09 45 02.4	+0.4
TIA				AMB	AMB		
	comp=Z,34nm,0.8s,mb4.8						
BOD	Bodaibo	25.19	316	eP	P	09 45 04.9	-4.3
BOD				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.2						
NJ2	Nanjing	25.35	252	eP	P	09 45 11.8	+0.8
NJ2				AP	pP	09 45 26.1	+4.9
NJ2				PP	PP	09 45 52.7	+2.4
NJ2				S	S	09 49 32.0	-0.3
NJ2				XS		09 49 52.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,2µm,6.8s						
NJ2				LR	LR		
	comp=N,1µm,18.0s						
NJ2				LR	LR		
	comp=E,870nm,11.8s						
NJ2				LR	LR		
	comp=Z,830nm,19.6s,MS4.3						
BILL	Bilibino	26.33	16	iP	P	09 45 19.3	-0.5
BILL				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
HHC	Hu-ho-hao-te	26.67	276	⇓P	P	09 45 23.7	+0.5
HHC				AP	pP	09 45 33.3	-0.1
HHC				XP	sP	09 45 36.9	-1.1
HHC				PP	PP	09 46 11.9	+3.9
HHC				PCP	PcP	09 48 43.5	-3.2
HHC				S	S	09 49 58.0	+4.1
HHC				XS		09 50 13.3	
HHC				SCP		09 52 19.8	
HHC				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,92nm,2.9s,mb4.8						
HHC				LR	LR		
	comp=N,235nm,16.2s,MS4.1						
HHC				LR	LR		
	comp=E,332nm,17.0s,MS4.1						
HHC				LR	LR		
	comp=Z,354nm,21.5s,MS3.9						
BTO	Baotou	27.86	277	eP	P	09 45 34.9	+0.8
BTO				AMB	AMB		
	comp=Z,21nm,0.7s,mb4.9						
TATO	Taipei	28.32	237	epP	pP	09 45 49.2	+0.6
	comp=Z,66nm,1.0s						
ULN	Ulaanbaatar	28.34	293	iP	P	09 45 38.0	-0.2
ULN	Ulaanbaatar	28.34	293	eP	P	09 45 36.8	-1.5
	comp=Z,4.3nm,0.6s,mb4.3						
WHN	Wuhan	29.36	255	⇑P	P	09 45 47.0	-0.5
WHN				LR	LR		
	comp=Z,1µm,15.4s,MS4.6						
TIXI	Tiksi	29.48	348	iP	P	09 45 46.7	-1.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,200nm,18.0s,MS3.8						
TLY	Talaya	30.25	301	iP	P	09 45 55.0	-0.2
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
TLY				MLR	MLR		
	comp=Z,300nm,13.0s,MS4.1						
TLY	Talaya	30.25	301	eP	P	09 45 55.7	+0.5
	comp=Z,3.4nm,0.6s,mb4.2						
ZAK	Zakamensk	30.55	298	eP	P	09 45 57.8	-0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
XAN	Xi'an	31.36	265	P	P	09 46 04.2	-1.1
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.6						
MOY	Mondy	31.89	301	eP	P	09 46 14.0	+4.3
TNA	Tin City	32.73	33	eP	P	09 46 16.4	-0.5
	comp=Z,7.3nm,0.6s,mb4.8						
ENH	Enshi	32.95	259	eP	P	09 46 17.8	-1.4
	comp=Z,8.8nm,0.6s,mb4.9						
LZH	Lanzhou	34.09	272	⇑P	P	09 46 29.2	+0.3
LZH				AP	pP	09 46 38.7	-0.7
LZH				XP	sP	09 46 44.1	-0.1
LZH				PP	PP	09 47 43.2	-0.5
LZH				eS	S	09 51 50.2	-0.9
LZH				eSS	SS	09 53 58.2	-2.2
LZH				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,220nm,4.5s						
LZH				LR	LR		
	comp=E,2µm,16.0s						
LZH				LR	LR		
	comp=Z,3µm,16.6s,MS5.0						
LZH	Lanzhou	34.09	272	⇑P	P	09 46 29.2	+0.3
	comp=Z,70nm,1.0s,mb5.5						
LZH				pP	pP	09 46 38.7	-0.7
LZH				sP	sP	09 46 44.1	-0.1
LZH				sS		09 47 43.2	
LZH				eS	S	09 51 50.2	-0.9
LZH				eSS	SS	09 53 58.2	-2.2
LZH				LR	LR		
	comp=Z,3µm,16.6s,MS5.0						
GTA	Gaotai	35.61	280	eP	P	09 46 42.0	+0.1
GTA				AP	pP	09 46 54.0	+1.5
GTA				XP	sP	09 46 57.6	+0.3
GTA				PP	PP	09 48 04.6	+1.7
GTA				PPP	PPP	09 48 24.0	+1.9
GTA				PCP	PcP	09 49 08.6	-1.8
GTA				S	S	09 52 15.6	+0.9
GTA				XS		09 52 35.7	
GTA				SS	SS	09 54 37.4	+2.0
GTA				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.7						
GTA				AMB	AMB		
	comp=Z,87nm,4.8s						
GTA				LR	LR		
	comp=N,161nm,16.7s,MS4.0						
GTA				LR	LR		
	comp=E,202nm,18.3s,MS4.0						
GTA				LR	LR		
	comp=Z,252nm,14.4s,MS4.1						
CD2	Chengdu	36.71	265	P	P	09 46 51.0	-0.2
CD2				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.9						
GYA	Guiyang	37.21	256	⇑iP	P	09 46 55.0	-0.5
GYA				AP	pP	09 47 05.8	-0.3
GYA				XP	sP	09 47 10.6	-0.2
GYA				PP	PP	09 48 22.4	-0.7
GYA				S	S	09 52 35.3	-4.0
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,100nm,4.8s						
GYA				LR	LR		
	comp=N,420nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=E,530nm,18.3s,MS4.5						
GYA				LR	LR		
	comp=Z,530nm,17.1s,MS4.4						
IMA	Indian Mountai	38.56	34	eP	P	09 47 07.3	+1.0
IMA				pmax	pmax		
	comp=Z,62nm,0.9s,mb5.3						
IMA	Indian Mountai	38.56	34	eP	P	09 47 07.3	+1.0
	comp=Z,62nm,0.9s,mb5.3						
RSO	Redoubt South	38.79	43	eP	P	09 47 08.5	+0.1
FIB	Fire Island	40.02	42	eP	P	09 47 19.3	+0.8
PWA	Palmer West	40.14	41	eP	P	09 47 20.4	+0.9
PWA				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
PWA	Palmer West	40.14	41	eP	P	09 47 20.4	+0.9
	comp=Z,28nm,0.9s,mb5.0						
MCK	McKinley	40.49	38	eP	P	09 47 22.6	+0.2
MCK				e	pP	09 47 32.8	-0.3
MCK				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.0						
MCK	McKinley	40.49	38	eP	P	09 47 22.6	+0.2
	comp=Z,31nm,0.9s,mb5.0						
MCK				e	pP	09 47 32.8	-0.3
KMI	Kunming	40.81	258	P	P	09 47 26.1	+0.7
KMI				AP	pP	09 47 36.4	+0.3
KMI				XP	sP	09 47 41.7	+0.9
KMI				PP	PP	09 49 06.4	+3.7
KMI				S	S	09 53 34.1	+0.5
KMI				XS		09 53 55.6	
KMI				SS	SS	09 56 29.2	-1.6
KMI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
KMI				AMB	AMB		
	comp=Z,130nm,5.2s						
KMI				LR	LR		
	comp=N,261nm,19.4s						
KMI				LR	LR		
	comp=E,222nm,24.7s						
KMI				LR	LR		
	comp=Z,224nm,15.6s,MS4.1						
KMI	Kunming	40.81	258	P	P	09 47 26.1	+0.7
	comp=Z,8.0nm,0.8s,mb4.4						
KMI				pP	pP	09 47 36.4	+0.3
KMI				sP	sP	09 47 41.7	+0.9
KMI				PP	PP	09 49 06.4	+3.7
KMI				SKS	S	09 53 17.8	-16
KMI				S	S	09 53 34.1	+0.5
KMI				sS		09 53 55.6	
KMI				SS	SS	09 56 29.2	-1.6
KMI				LR	LR		
	comp=Z,220nm,15.6s,MS4.1						
SML	Sawmill	40.86	41	eP	P	09 47 25.8	+0.3
COLA	College	40.94	36	d iP	P	09 47 26.7	+0.6
COLA	College	40.94	36	eP	P	09 47 26.9	+0.8
	comp=Z,125nm,0.9s,mb5.5						
THY	Trims Highway	41.93	38	eP	P	09 47 35.3	+1.2
DIV	Divide	42.15	42	eP	P	09 47 36.0	0.0
	comp=Z,73nm,0.9s,mb5.3						
WMQ	Urumqi	42.41	292	P	P	09 47 39.0	+0.7
WMQ				XP	sP	09 47 57.0	+3.3
WMQ				PP	PP	09 49 21.0	+1.5
WMQ				S	S	09 53 57.0	0.0
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.6						
WMQ				LR	LR		
	comp=N,262nm,18.0s,MS4.4						
WMQ				LR	LR		
	comp=E,348nm,20.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,447nm,18.0s,MS4.4						
MENT	Mentasta	42.89	39	eP	P	09 47 43.0	+1.0
DAWY	Dawson	44.66	37	eP	P	09 47 56.3	0.0
MKAR	Makanchi Array	44.89	298	iP	P	09 47 57.9	-0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KURK	Kurchatov	45.82	304	iP	P	09 48 05.4	-0.3
KURK	Kurchatov	45.82	304	eP	P	09 48 03.0	-2.7
	comp=Z,5.6nm,0.6s,mb4.7						
CHRT	Chiangrai	46.27	255	⇓P	P	09 48 10.5	+0.8
	comp=Z,118nm,0.9s,mb5.8						
INK	Inuvik	46.30	30	eP	P	09 48 09.5	+0.2
INK				pmax	pmax		
	comp=Z,47nm,1.0s						
INK	Inuvik	46.30	30	eP	P	09 48 09.5	+0.2
	comp=Z,47nm,1.0s,mb5.4						
LSA	Lhasa	46.50	272	P	P	09 48 12.6	+1.2
LSA	Lhasa	46.50	272	eP	P	09 48 11.9	+0.5
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LSA	Lhasa	46.50	272	eP	P	09 48 11.9	+0.5
	comp=Z,5.1nm,0.6s,mb4.6						
CHG	Chiang Mai	47.57	254	⇑P	P	09 48 20.3	+0.4
	comp=Z,12nm,0.8s,mb5.0						
CMAR	Chiang Mai Arr	47.81	254	iP	P	09 48 22.6	+0.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SHL	Shillong	48.34	267	eP	P	09 48 25.0	-0.8
DLBC	Dease Lake	50.51	42	eP	P	09 48 43.3	+1.2
ULHL	Ulahol	50.70	295	P	P	09 48 44.0	+0.3
	SNR=7.3						
TKM2	Tokmak 2	50.81	296	P	P	09 48 45.0	+0.4
	SNR=16						
JIRN	Jiri	51.25	273	eP	P	09 48 47.3	-0.8
	comp=Z,11nm,0.3s,mb5.3						
GUN	Gumba	51.33	274	eP	P	09 48 49.0	+0.3
	comp=Z,18nm,0.4s,mb5.3						
USP	Ospenovka	51.37	297	P	P	09 48 48.8	0.0
	SNR=13						
KZA	Kyzart	51.43	295	P	P	09 48 50.1	+0.9
	SNR=11						
AAK	Ala-Archa	51.66	296	P	P	09 48 51.1	+0.1
	SNR=7.8						
AAK	Ala-Archa	51.66	296	c iP	P	09 48 49.7	-1.3
AAK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
AAK				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.9						
AAK	Ala-Archa	51.66	296	eP	P	09 48 50.0	-1.0
	comp=Z,4.8nm,0.6s,mb4.6						
AAK				e		09 50 14.5	
KKN	Kakani	51.83	274	eP	P	09 48 51.0	-1.4
PKI	Pulchoki	51.86	274	eP	P	09 48 49.9	-2.8
EKS2	Erkin-Say	52.12	296	P	P	09 48 54.0	-0.4
	SNR=11						
KSH	Kashi	52.17	292	eP	P	09 48 56.0	+1.2
KSH				eAP	pP	09 49 05.1	-0.6
KSH				eXP	sP	09 49 09.0	-1.2
KSH				ePCP	PcP	09 50 07.1	+0.8
KSH				ePP	PP	09 50 55.2	+1.1
KSH				ePCS		09 54 04.1	
KSH				eS	S	09 56 16.4	+1.2
KSH				ePS	PS	09 56 26.6	-3.6
KSH				eXS		09 56 32.7	
KSH				eSCS	ScS	09 58 40.1	+1.6
KSH				eSS	SS	09 59 52.6	+1.6
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
KSH				AMB	AMB		
	comp=Z,70nm,4.0s						
KSH				LR	LR		
	comp=N,190nm,4.5s						
KSH				LR	LR		
	comp=E,280nm,5.3s						
GKN	Gorkha	52.17	274	eP	P	09 48 54.3	-0.7
	comp=E,15nm,0.4s,mb5.3						
AML	Almayashu	52.42	296	P	P	09 48 57.7	+1.0
	SNR=6.6						
KOLN	Koldanda	53.06	275	eP	P	09 49 01.4	-0.2
LGTI	Lohaghat	54.51	279	eP	P	09 49 07.5	-4.8
ARU	Arti	54.60	317	eP	P	09 49 03.0	-10
ARU				eSS	SS	10 00 32.3	+1.9
ARU				MLR	MLR		
	comp=N,100nm,18.0s,MS4.3						
ARU				MLR	MLR		
	comp=E,200nm,18.0s,MS4.3						
ARU				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
RES	Resolute Bay	54.94	17	eP	P	09 49 12.0	-2.8
RES				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
RES	Resolute Bay	54.94	17	eP	P	09 49 12.0	-2.8
	comp=Z,11nm,0.6s,mb5.1						
YKW3	Yellowknife Ar	55.64	34	eP	P	09 49 19.1	-1.0
YKA	Yellowknife Ar	55.68	34	iP	P	09 49 19.6	-0.7
YKA				pmax	pmax		
	comp=Z,14nm,0.6s						
BWNR	Bhubaneshwar	55.99	266	iP	P	09 49 22.5	-0.6
BWNR				AMb	AMB	09 49 26.2	
	comp=Z,6.5nm,0.1s,mb5.5						
BWNR				e		09 50 13.8	
THN	Thein Dam	56.06	284	e	P	09 49 30.8	+7.4
NDI	New Delhi	57.12	280	eP	P	09 49 33.0	+1.9
NDI				e		09 49 38.0	
KEV	Kevo	58.88	340	ep	P	09 49 40.6	-2.3
	comp=Z,2.7nm,0.3s,mb4.8						
KEV	Kevo	58.88	340	eP	P	09 49 40.6	-2.3
KEV				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.8						
BHPL	Bhopal	60.23	275	eP	P	09 49 53.8	+1.0
BHPL				e		09 49 56.7	
	comp=Z,9.8nm,0.6s						
BHPL				AMb	AMB	09 50 03.7	
	comp=Z,51nm,0.8s,mb5.6						
KTK1	Kautokeino	60.35	340	eP	P	09 49 52.6	-0.4
	comp=Z,57nm,1.7s,mb5.3						
KTK1	Kautokeino	60.35	340	eP	P	09 49 52.6	-0.4
KTK1				AMb	AMB	09 49 55.2	
	comp=Z,57nm,1.7s,mb5.3						
WPW	White Pass	60.55	52	P	P	09 49 54.9	+0.3
TRO	Tromso	60.91	342	eP	P	09 49 54.2	-2.6
EBG	Ellensburg	60.99	52	P	P	09 49 58.0	+0.4
VLL	Laurance Lake	61.16	53	P	P	09 49 59.4	+0.6
TDH	Tom, Dick, Har	61.19	54	P	P	09 49 59.5	+0.5
EDM	Edmonton	61.24	43	eP	P	09 49 58.4	-0.8
EDM				e	pP	09 50 08.3	-2.0
EDM				e		09 50 15.7	
OD2	Odessa Site #2	61.76	50	P	P	09 50 02.2	-0.6
WRD	Warden	61.85	51	P	P	09 50 02.6	-0.8
NEW	Newport	62.14	49	eP	P	09 50 04.3	-1.0
NEW				pmax	pmax		
	comp=Z,22nm,0.9s						
NEW	Newport	62.14	49	eP	P	09 50 04.3	-1.0
	comp=Z,22nm,0.9s,mb5.3						
JOF	Joensuu	62.29	332	ep	P	09 50 03.7	-2.4
	comp=Z,7.4nm,0.4s,mb5.2						
JOF	Joensuu	62.29	332	eP	P	09 50 03.7	-2.4
JOF				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.1						
KHMM	Horse Mountain	62.53	59	eP	P	09 50 08.7	+0.6
BUOR	Burton Butte	62.63	57	P	P	09 50 09.3	+0.6
YBH	Yreka Blue Hor	62.66	57	eP	P	09 50 09.6	+0.7
YBH				pmax	pmax		
	comp=Z,21nm,1.0s						
YBH	Yreka Blue Hor	62.66	57	eP	P	09 50 09.6	+0.7
	comp=Z,21nm,1.0s,mb5.2						
HYB	Hyderabad	63.09	269	iP	P	09 50 15.0	+3.0
HYB				e		09 50 22.0	
WALA	Waterton Lakes	63.40	47	eP	P	09 50 13.1	-0.6
	comp=Z,22nm,1.0s,mb5.2						
WALA				epP	pP	09 50 24.5	-0.3
WDC	Whiskeytown Da	63.44	58	eP	P	09 50 14.2	+0.1
WDC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.3						
WDC	Whiskeytown Da	63.44	58	eP	P	09 50 14.2	+0.1
	comp=Z,23nm,1.0s,mb5.3						
CTAO	Charters Tower	63.47	181	eP	P	09 50 14.7	+0.1
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
CTAO	Charters Tower	63.47	181	eP	P	09 50 14.7	+0.2
	comp=Z,3.7nm,0.8s,mb4.6						
LTIM	Timbered Crate	63.73	57	P	P	09 50 16.4	+0.5
MOD	Modoc	64.03	56	eP	P	09 50 18.0	+0.2
	comp=Z,22nm,0.9s,mb5.2						
BMO	Blue Mountains	64.04	52	P	P	09 50 17.2	-0.6
BMO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
BMO	Blue Mountains	64.04	52	P	P	09 50 17.2	-0.6
	comp=Z,10nm,1.0s,mb4.8						
WRAB	Tennant Creek	64.46	194	eP	P	09 50 21.5	+0.5
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
WRAB	Tennant Creek	64.46	194	eP	P	09 50 21.5	+0.5
	comp=Z,21nm,0.8s,mb5.2						
KAF	Kangasniemi	64.51	334	ep	P	09 50 18.0	-2.6
	comp=Z,4.0nm,0.4s,mb4.8,baz=42,slow=6.2						
KAF	Kangasniemi	64.51	334	eP	P	09 50 18.0	-2.6
KAF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
MOR8	Moi Rana	64.69	341	eP	P	09 50 18.1	-3.6
	comp=Z,36nm,1.5s,mb5.2						

MOR8	Moi Rana	64.69	341	eP	P	09 50 18.1	-3.6
MOR8				AMb	AMB	09 50 19.7	
	comp=Z,36nm,1.5s,mb5.2						
WVOR	Wild Horse Val	64.70	55	eP	P	09 50 22.4	+0.2
WVOR				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
WVOR	Wild Horse Val	64.70	55	eP	P	09 50 22.4	+0.2
	comp=Z,21nm,1.0s,mb5.1						
MDRS	Chennai	64.72	264	eP	P	09 50 21.1	-1.7
MDRS				AMb	AMB	09 50 30.4	
	comp=Z,46nm,1.3s,mb5.3						
MSO	Missoula	64.72	49	eP	P	09 50 21.9	-0.3
	comp=Z,22nm,1.0s,mb5.1						
CHMT	Chamberlain Mo	65.05	48	eP	P	09 50 24.0	-0.3
FINES	FINESS Array B	65.07	333	i P	P	09 50 22.2	-2.0
FINES				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN	Obninsk	65.55	324	⇓iP	P	09 50 26.6	-0.8
OBN				e	pP	09 50 36.8	-1.9
OBN				e		09 51 02.5	
OBN				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
FFC	Flin Flon	65.56	37	P	P	09 50 27.0	-0.5
	comp=Z,282nm,1.0s,SNR=38						
POO	Poona	65.78	273	eP	P	09 50 26.6	-2.9
POO				AMb	AMB	09 50 40.7	
	comp=Z,30nm,0.8s,mb5.4						
PAHR	Pah Rah Range	65.90	58	eP	P	09 50 29.1	-0.8
	comp=Z,33nm,1.1s,mb5.3						
WCN	Washoe City	65.92	58	eP	P	09 50 30.6	+0.5
WCN				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
WCN	Washoe City	65.92	58	eP	P	09 50 30.6	+0.6
	comp=Z,39nm,1.0s,mb5.4						
FCC	Fort Churchill	65.92	30	eP	P	09 50 28.6	-1.1
FCC				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
FCC	Fort Churchill	65.92	30	eP	P	09 50 28.6	-1.1
	comp=Z,14nm,0.6s,mb5.2						
CMB	Columbia Colle	66.30	60	eP	P	09 50 32.6	+0.1
CMB				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
CMB	Columbia Colle	66.30	60	eP	P	09 50 32.6	+0.1
	comp=Z,27nm,1.0s,mb5.2						
HLID	Hailey	66.47	52	eP	P	09 50 33.5	0.0
	comp=Z,12nm,1.0s,mb4.9						
MCMT	McKenzie Canyo	66.56	50	eP	P	09 50 33.9	-0.1
BOZ	Bozeman (W)	66.72	49	eP	P	09 50 35.2	+0.2
BOZ				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
BOZ	Bozeman (W)	66.72	49	eP	P	09 50 35.2	+0.3
	comp=Z,34nm,0.9s,mb5.4						
BMN	Battle Mountai	66.77	56	eP	P	09 50 35.8	+0.4
BMN				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.3						
BMN	Battle Mountai	66.77	56	eP	P	09 50 35.8	+0.4
	comp=Z,31nm,1.0s,mb5.3						
QLMT	Earthquake Lak	67.34	49	eP	P	09 50 39.2	+0.3
OMM	Old Mammoth Mi	67.42	59	eP	P	09 50 40.3	+0.7
MNV	Mina	67.44	58	eP	P	09 50 39.9	+0.3
MNV				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
MNV	Mina	67.44	58	eP	P	09 50 39.9	+0.2
	comp=Z,26nm,0.9s,mb5.2						
YMR	Madison River	67.70	49	eP	P	09 50 41.8	+0.6
YNR	Norris Junctio	67.83	49	eP	P	09 50 43.4	+1.4
YFT	Old Faithful	67.91	49	eP	P	09 50 44.4	+1.9
LKWY	Lake	68.08	49	eP	P	09 50 45.5	+1.9
LKWY				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
LKWY	Lake	68.08	49	eP	P	09 50 45.5	+1.9
	comp=Z,21nm,0.9s,mb5.2						
IMW	Indian Meadow	68.21	50	eP	P	09 50 45.4	+1.0
TPH	Tonopah	68.23	58	eP	P	09 50 45.1	+0.5
TPH				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.5						
TPH	Tonopah	68.23	58	eP	P	09 50 45.1	+0.5
	comp=Z,44nm,0.9s,mb5.5						
RRI2	Red Ridge	68.35	50	eP	P	09 50 45.9	+0.6
MOOW	Moose Ponds	68.41	50	eP	P	09 50 46.6	+0.9
HVU	Hansel Valley	68.53	52	eP	P	09 50 46.9	+0.5
WUWY	Wally Ulrich	68.55	50	eP	P	09 50 47.4	+0.9
LOHW	Long Hollow	68.58	50	eP	P	09 50 47.1	+0.4
DGMT	Dagmar	68.73	43	eP	P	09 50 47.0	-0.5
	comp=Z,66nm,0.9s,mb5.6						
AHID	Auburn Hatcher	68.85	51	eP	P	09 50 48.4	0.0
	comp=Z,20nm,1.0s,mb5.0						
LAO	LASA Array	68.90	45	eP	P	09 50 48.5	-0.1
	comp=Z,6.7nm,0.3s,mb5.0						
SPUT	South Promonto	69.02	53	eP	P	09 50 50.0	+0.5
TRCR	Troy Canyon	69.06	57	eP	P	09 50 50.0	+0.3
GOF	Gofitskoye	69.12	313	⇑iP	P	09 50 50.5	+0.5
GOF				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.4						
HWUT	Hardware Ranch	69.34	52	eP	P	09 50 51.5	+0.1
	comp=Z,19nm,1.0s,mb5.0						
MOL	Molde	69.35	341	eP	P	09 50 53.0	+1.8
NOQ	North Oquirrh	69.64	53	eP	P	09 50 53.7	+0.5
TCUT	Toone Canyon	69.74	52	eP	P	09 50 54.5	+0.6
NB2	NORSAR Subarra	69.77	339	P	P	09 50 52.0	-1.7
	comp=Z,4.7nm,0.5s,mb4.7,baz=32,slow=6.2						
NB2	NORSAR Subarra	69.77	339	P	P	09 50 52.0	-1.7
NB2				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
NB2	NORSAR Subarra	69.77	339	P	P	09 50 52.0	-1.7
	baz=32,slow=6.2						
NAO01	NORSAR Array S	70.02	339	P	P	09 50 53.8	-1.4
KIV	Kislovodsk	70.03	312	P	P	09 50 55.6	0.0
	comp=Z,417nm,0.7s,SNR=10						
KIV	Kislovodsk	70.03	312	eP	P	09 50 55.4	-0.2
KIV				pmax	pmax		
	comp=Z,27nm,0.5s,mb5.4						
KIV				pmax	pmax		
	comp=N,17nm,0.6s						
KIV				pmax	pmax		
	comp=E,18nm,1.0s						
KIV				MLR	MLR		
	comp=E,92nm,19.0s,MS4.4						
KIV				MLR	MLR		
	comp=Z,252nm,19.0s,MS4.5						
KIV				MLR	MLR		
	comp=N,161nm,17.0s,MS4.4						
KIV	Kislovodsk	70.03	312	eP	P	09 50 54.9	-0.7
	comp=N,44nm,0.6s,mb5.6						
JLU	Jordanelle	70.06	53	eP	P	09 50 55.8	0.0
NLU	North Lily Min	70.11	54	eP	P	09 50 56.4	+0.3
DAU	Daniels Canyon	70.29	53	eP	P	09 50 58.1	+0.9
MPU	Maple Canyon	70.33	53	eP	P	09 50 57.4	-0.1
TI2	Plekhanov	70.37	309	i P	P	09 50 58.8	+1.1
TI2				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.5						
MVU	Marysvale	70.98	55	eP	P	09 51 02.2	+0.8
	comp=Z,12nm,1.0s,mb4.8						
MSU	Marysvale	71.00	55	eP	P	09 51 02.2	+0.6
TMUT	Trail Mountain	71.05	54	eP	P	09 51 02.4	+0.5
NEN	Nelson	71.25	58	eP	P	09 51 03.3	+0.2
ULM	Lac du Bonnet	71.36	37	eP	P	09 51 02.4	-1.1
	comp=Z,23nm,1.1s,mb5.0						
LDFC	Landfair	71.45	59	eP	P	09 51 04.8	+0.4
PFO	Pinyon Flat Ob	71.56	61	eP	P	09 51 04.0	-1.0
PFO				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
PFO	Pinyon Flat Ob	71.56	61	eP	P	09 51 04.0	-1.1
	comp=Z,16nm,0.9s,mb5.0						
SRU	San Rafael	71.57	53	eP	P	09 51 05.4	+0.4
SUW	Suwalki	71.71	329	eP	P	09 51 05.4	-0.2
BAR	Barrett	72.03	62	eP	P	09 51 07.7	0.0
PV10	Paradox Valley	72.93	53	eP	P	09 51 14.0	+1.0
PHWY	Pilot Hill	72.96	49	eP	P	09 51 13.1	0.0
PV01	Paradox Valley	73.36	53	eP	P	09 51 15.9	+0.4
BANOM	Banah	73.46	290	P	P	09 51 17.0	+0.6
	SNR=6.6						
BANOM				S	pP	09 51 27.7	0.0
BANOM	Banah	73.46	290	⇑P	P	09 51 17.0	+0.7
	SNR=6.6						
BANOM				⇓S	pP	09 51 27.7	0.0
BIDO	Bidbid	73.77	287	⇑P	P	09 51 21.7	+3.5
ISCO	Idaho Springs	73.91	50	eP	P	09 51 19.5	+0.8
ISCO				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
ISCO	Idaho Springs	73.91	50	eP	P	09 51 19.5	+0.9
	comp=Z,23nm,1.2s,mb5.0						
ASHO	Ashiyiah	74.43	289	S	pP	09 51 33.4	+0.1
ASHO	Ashiyiah	74.43	289	⇑S	pP	09 51 33.4	0.0
JMDO	Jabal Madar	74.54	286	⇓P	pP	09 51 33.7	-0.3
	SNR=7.3						
KWP	Kalwaria	75.33	327	eP	P	09 51 26.8	+0.1
SDCO	Great Sand Dun	75.39	52	eP	P	09 51 27.7	+0.4
	comp=Z,15nm,1.3s,mb4.8						
BURAR	Bucovina Array	75.87	324	⇑P	P	09 51 29.8	0.0
BURAR	Bucovina Array	75.87	324	⇑P	P	09 51 29.8	0.0
TUC	Tucson	75.98	59	eP	P	09 51 30.3	-0.5
TUC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TUC	Tucson	75.98	59	eP	P	09 51 30.3	-0.5
	comp=Z,8.8nm,0.9s,mb4.7						
KOLS	Kolonicke sedl	76.06	326	i P	P	09 51 30.7	-0.1
BSEG	Bad Segeberg	76.11	336	eP	P	09 51 31.1	+0.1
BSEG				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
MALT	Malatya	76.25	310	P	P	09 51 32.4	+0.3
MALT				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MALT	Malatya	76.25	310	P	P	09 51 32.4	+0.3
	comp=Z,7.2nm,0.9s,mb4.6						
CRVS	Cervenica-Dubn	76.41	327	i P	P	09 51 32.7	-0.1
CFR	Carcaliu	76.44	321	⇓P	P	09 51 33.1	0.0
VRI	Vrincioaia	76.56	322	⇑P	P	09 51 33.9	+0.2
KSP	Ksiaz	76.77	331	eP	P	09 51 34.7	-0.1
KSP	Ksiaz	76.77	331	eP	P	09 51 35.2	+0.4
ANMO	Albuquerque	76.78	54	i P	P	09 51 36.3	+1.0
ANMO	Albuquerque	76.78	54	eP	P	09 51 35.7	+0.5
	comp=Z,10nm,0.9s,mb4.8						
OKC	Ostrava-Krasne	76.92	329	eP	P	09 51 36.4	+0.7
DPC	Dobruska-Polom	77.17	330	eP	P	09 51 36.6	-0.5
MLR	Muntele Rosu	77.20	322	⇑P	P	09 51 38.0	+0.6
MORC	Moravsky Berou	77.20	329	eP	P	09 51 37.0	-0.3
MORC				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
MORC	Moravsky Berou	77.20	329	eP	P	09 51 37.0	-0.3
	comp=Z,18nm,1.0s,mb5.0						
CLL	Collm	77.51	333	⇑iP	P	09 51 38.5	-0.5
CLL				e	pP	09 51 49.0	-1.3
CLL				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
CLL	Collm	77.51	333	⇑iP	P	09 51 38.5	-0.5
	comp=Z,33nm,1.1s,mb5.2						
CLL				e	pP	09 51 49.0	-1.3
CLL	Collm	77.51	333	⇑P	P	09 51 38.5	-0.5
	comp=Z,logA/T=1.5,mb5.2						
CLL				e*PP	pP	09 51 49.0	-1.3
CLL				e		09 51 57.0	
BRG	Berggiesshubel	77.56	332	eP	P	09 51 39.4	+0.1
BRG				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
BRG	Berggiesshubel	77.56	332	eP	P	09 51 39.4	+0.1
	comp=Z,11nm,0.8s,mb4.8						
SCHQ	Schefferville	77.58	20	eP	P	09 51 38.9	-0.3
	comp=Z,10.0nm,0.6s,mb4.9						
PVCC	Panska Ves	77.64	331	eP	P	09 51 39.3	-0.4
PSZ	Piszkesteto	77.82	327	⇑eP	P	09 51 41.1	+0.4
CLZ	Clausthal	77.90	334	eP	P	09 51 41.2	+0.1
	comp=Z,33nm,0.9s,mb5.3						
PRU	Pruhonice	78.10	331	eP	P	09 51 42.1	-0.1
SMOL	Smolenice	78.28	329	eP	P	09 51 44.3	+1.0
MOX	Moxa	78.54	333	i P	P	09 51 44.1	-0.5
KHC	Kasperske Hory	79.16	331	eP	P	09 51 47.9	-0.2
KHC				e	pP	09 51 58.5	-1.0
KHC				e		09 52 10.5	
KHC	Kasperske Hory	79.16	331	eP	P	09 51 47.9	-0.2
KHC				pP	pP	09 51 58.5	-1.0
KHC				x	x	09 52 10.5	
KSU1	Kansas State U	79.25	45	eP	P	09 51 47.8	-1.0
GEC2	GERESS Array S	79.36	331	eP	P	09 51 48.8	-0.4
GEC2				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
GEC2	GERESS Array S	79.36	331	eP	P	09 51 48.8	-0.4
	comp=Z,5.0nm,0.4s,mb4.8						
WET	Wettzell	79.39	332	eP	P	09 51 49.4	+0.1
WET				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
WET	Wettzell	79.39	332	eP	P	09 51 49.4	+0.1
	comp=Z,16nm,1.2s,mb4.8						
GRA1	Grafenberg Arr	79.48	333	eP	P	09 51 50.1	+0.3
	comp=Z,30nm,1.0s,mb5.2						
GRF	Grafenberg Arr	79.48	333	eP	P	09 51 50.1	+0.3
GRF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
GRF	Grafenberg Arr	79.48	333	eP	P	09 51 50.1	+0.3
GRF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
GRF	Grafenberg Arr	79.48	333	eP	P	09 51 50.1	+0.3
	comp=Z,30nm,1.0s,mb5.2						
AMTX	Amarillo	79.59	51	eP	P	09 51 51.2	+0.5
	comp=Z,32nm,0.9s,mb5.2						
AMTX				e	pP	09 52 04.1	+2.0
CPRX	Cap Rock	79.66	54	eP	P	09 51 51.5	+0.4
MNTX	Cornudas Mount	79.70	56	eP	P	09 51 51.2	-0.1
	comp=Z,17nm,0.9s,mb5.0						
TNS	Taunus Mts	79.91	335	eP	P	09 51 52.0	-0.1
TNS				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
TNS	Taunus Mts	79.91	335	eP	P	09 51 52.0	-0.1
	comp=Z,16nm,1.4s,mb4.8						
GDL2	Guadalupe Moun	79.96	55	eP	P	09 51 53.4	+0.6
MOA	Molln	80.00	330	⇓iP	P	09 51 52.3	-0.3
	comp=Z,5.9nm,0.9s,mb4.5						
HGN	Heimansgroeve	80.19	336	eP	P	09 51 53.3	-0.2
	comp=Z,11nm,1.0s,mb4.8						
PERS	Pernice	80.71	329	i P	P	09 51 56.3	-0.2
GROS	Grobnik	80.72	329	⇓iP	P	09 51 56.1	-0.4
DLF	Lyons Farm	80.86	345	eP	P	09 51 57.0	-0.1
DCN	Croghan	80.96	345	eP	P	09 51 58.0	+0.4
KBA	Koelnbreinsper	80.99	330	⇑iP	P	09 51 58.5	+0.6
	comp=Z,17nm,0.9s,mb5.0						
KBA	Koelnbreinsper	80.99	330	⇑iP	P	09 51 58.5	+0.6
KBA				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
GOLS	Golise	81.05	328	⇓iP	P	09 51 57.7	-0.5
GIVF	Givet	81.10	337	eP	P	09 51 59.2	+0.8
WMOK	Wichita Mounta	81.32	50	eP	P	09 51 59.9	0.0
WMOK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
WMOK	Wichita Mounta	81.32	50	eP	P	09 51 59.9	0.0
	comp=Z,15nm,1.0s,mb4.9						
WATA	Walderalm	81.39	331	⇓iP	P	09 52 00.0	0.0
	comp=Z,12nm,1.2s,mb4.7						
WATA				i	pP	09 52 11.6	+0.2
	comp=Z,8.8nm,1.1s						
WATA	Walderalm	81.39	331	⇓iP	P	09 52 00.0	0.0
WATA				i	pP	09 52 11.6	+0.2
WATA				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
WTTA	Wattenberg	81.44	331	⇓iP	P	09 52 00.4	+0.2
	comp=Z,10nm,0.5s,mb5.0						
WTTA				i	pP	09 52 12.2	+0.5
	comp=Z,9.6nm,0.5s						
WTTA	Wattenberg	81.44	331	⇓iP	P	09 52 00.4	+0.2
WTTA				i	pP	09 52 12.2	+0.5
WTTA				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
MOTA	Moosalm	81.55	332	⇓iP	P	09 52 00.9	+0.1
	comp=Z,5.6nm,1.0s,mb4.5						
MOTA	Moosalm	81.55	332	⇓iP	P	09 52 00.9	+0.1
MOTA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
BFO	Black Forest	81.61	334	eP	P	09 52 00.7	-0.4
BFO				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
BFO	Black Forest	81.61	334	eP	P	09 52 00.7	-0.4
	comp=Z,9.0nm,1.1s,mb4.6						
SQTA	Sankt Quirin	81.62	332	⇑iP	P	09 52 01.4	+0.2
	comp=Z,20nm,1.5s,mb4.8						
SQTA	Sankt Quirin	81.62	332	⇑iP	P	09 52 01.4	+0.2
SQTA				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
CDF	Champ du Feu	81.87	335	eP	P	09 52 02.3	-0.1
DAVA	Damuels	82.02	332	⇓iP	P	09 52 02.9	-0.3
	comp=Z,14nm,0.9s,mb4.9						
LTX	Lajitas	82.42	57	eP	P	09 52 06.5	+0.8
LTX				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
LTX	Lajitas	82.42	57	eP	P	09 52 06.5	+0.8
	comp=Z,27nm,0.9s,mb5.2						
CCM	Cathedral Cave	82.76	43	eP	P	09 52 06.9	-0.3
CCM				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
CCM	Cathedral Cave	82.76	43	eP	P	09 52 06.9	-0.3
	comp=Z,33nm,0.9s,mb5.4						
FVM	French Village	83.22	42	eP	P	09 52 09.6	+0.1
FVM				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
FVM	French Village	83.22	42	eP	P	09 52 09.6	0.0
	comp=Z,7.1nm,0.6s,mb4.9						
FLN	La Foliniere	83.76	339	eP	P	09 52 11.8	-0.2
	comp=Z,14nm,0.5s,mb5.1						
FLN				eR			
	comp=Z,193nm,21.7s						
FLN	La Foliniere	83.76	339	eP	P	09 52 11.8	-0.2
FLN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
FLN				MLR	MLR		
	comp=Z,190nm,21.7s,MS4.4						
LDF	La Druitiere	83.82	339	eP	P	09 52 12.5	+0.2
CABF	La Chapelle	83.84	334	eP	P	09 52 12.8	+0.3
JCT	Junction City	83.89	53	eP	P	09 52 13.5	+0.4
JCT				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.5						
JCT	Junction City	83.89	53	eP	P	09 52 13.5	+0.5
	comp=Z,38nm,0.9s,mb5.5						
GRR	Gorron	84.20	339	eP	P	09 52 14.4	+0.2
	comp=Z,22nm,0.5s,mb5.2						
GRR	Gorron	84.20	339	eP	P	09 52 14.4	+0.2
GRR				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.2						
SSF	Saint Saulge	84.22	336	eP	P	09 52 14.3	0.0
MIAR	Mount Ida	84.28	47	eP	P	09 52 15.2	+0.2
MIAR				e	pP	09 52 28.0	+1.5
MIAR				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.6						
MIAR	Mount Ida	84.28	47	eP	P	09 52 15.2	+0.2
	comp=Z,43nm,0.9s,mb5.6						
MIAR				e	pP	09 52 28.0	+1.5
EIL	Elat	84.49	306	eP	P	09 52 16.9	+0.8
	comp=Z,9.1nm,0.9s,mb4.9						
EIL				e	pP	09 52 28.0	+0.4
SMF	Signal de Mont	84.50	336	eP	P	09 52 15.9	+0.1
	comp=Z,11nm,0.5s,mb4.9						
SMF	Signal de Mont	84.50	336	eP	P	09 52 15.9	+0.1
SMF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb5.0						
AVF	Avril sur Loir	84.51	336	eP	P	09 52 15.9	+0.1
	comp=Z,11nm,0.6s,mb4.8						
AVF	Avril sur Loir	84.51	336	eP	P	09 52 15.9	+0.1
AVF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
LPL	La Plagne	84.61	334	eP	P	09 52 17.0	+0.7
	comp=Z,7.7nm,0.5s,mb4.8						
LPL	La Plagne	84.61	334	eP	P	09 52 17.0	+0.7
LPL				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.9						
LPG	La Plagne	84.62	333	eP	P	09 52 17.1	+0.7
	comp=Z,31nm,0.8s,mb5.2						
LPG	La Plagne	84.62	333	eP	P	09 52 17.1	+0.7
LPG				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.2						
SGMF	Saint Gilles	84.75	340	eP	P	09 52 17.4	+0.5
	comp=Z,23nm,0.6s,mb5.2						
SGMF	Saint Gilles	84.75	340	eP	P	09 52 17.4	+0.5
SGMF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2						
ROSF	Rostrenen	84.84	341	eP	P	09 52 17.9	+0.5
	comp=Z,44nm,1.0s,mb5.2						
ROSF	Rostrenen	84.84	341	eP	P	09 52 17.9	+0.5
ROSF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.2						
WCI	Wyandotte Cave	84.99	40	eP	P	09 52 18.6	+0.2
WCI				e	pP	09 52 31.3	+1.3
WCI				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.3						
WCI	Wyandotte Cave	84.99	40	eP	P	09 52 18.6	+0.2
	comp=Z,22nm,0.8s,mb5.3						
WCI				e	pP	09 52 31.3	+1.3
QUIF	Quistinic	85.21	341	eP	P	09 52 19.5	+0.3
	comp=Z,14nm,0.5s,mb5.0						
QUIF	Quistinic	85.21	341	eP	P	09 52 19.5	+0.3
QUIF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
TCF	Toulx Ste Croi	85.30	337	eP	P	09 52 20.2	+0.5
	comp=Z,14nm,0.9s,mb4.8						
TCF	Toulx Ste Croi	85.30	337	eP	P	09 52 20.2	+0.5
TCF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
MBDF	Montbardon	85.30	333	eP	P	09 52 19.7	-0.1
	comp=Z,12nm,0.6s,mb4.9						
MBDF	Montbardon	85.30	333	eP	P	09 52 19.7	-0.1
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
MDV	Middlebury	85.42	28	eP	P	09 52 20.1	-0.2
ORIF	Oris-en-Rattie	85.42	334	eP	P	09 52 20.9	+0.5
	comp=Z,9.3nm,0.7s,mb4.8						
ORIF				eR			
	comp=Z,126nm,20.5s						
MFF	Saint Martin d	85.66	338	eP	P	09 52 21.3	-0.2
	comp=Z,40nm,1.0s,mb5.3						
MFF	Saint Martin d	85.66	338	eP	P	09 52 21.3	-0.2
MFF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
SBF	Sospel	85.84	332	eP	P	09 52 22.0	-0.5
	comp=Z,24nm,0.6s,mb5.3						
SBF	Sospel	85.84	332	eP	P	09 52 22.0	-0.5
SBF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.3						
VIVF	Saint-Julien-l	85.85	335	eP	P	09 52 23.0	+0.5
	comp=Z,18nm,0.9s,mb5.0						
VIVF	Saint-Julien-l	85.85	335	eP	P	09 52 23.0	+0.5
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
WVT	Waverly	85.95	42	eP	P	09 52 23.4	+0.2
WVT				e	pP	09 52 35.5	+0.8
WVT				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
WVT	Waverly	85.95	42	eP	P	09 52 23.4	+0.2
	comp=Z,13nm,0.9s,mb5.2						
WVT				e	pP	09 52 35.5	+0.8
SMRF	Simiane la Rot	86.36	334	eP	P	09 52 25.1	+0.1
RJF	Les Rejaudoux	86.39	337	eP	P	09 52 25.8	+0.7
RJF				eR			
	comp=Z,156nm,21.2s						
OXF	Oxford	86.45	44	eP	P	09 52 25.8	+0.1
PGF	Pioggiola	86.46	331	eP	P	09 52 25.1	-0.4
CAF	Calviac	86.58	336	eP	P	09 52 26.4	+0.4
LMR	La Mourre	86.62	333	eP	P	09 52 26.3	0.0
MCWV	Mont Chateau	86.64	35	eP	P	09 52 26.6	+0.1
	comp=Z,12nm,0.6s,mb5.3						
LFF	La Frestale	86.95	337	eP	P	09 52 28.0	+0.2
	comp=Z,16nm,0.6s,mb5.2						
LFF	La Frestale	86.95	337	eP	P	09 52 28.0	+0.2
LFF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.1						
MVL	Millersville	87.75	32	eP	P	09 52 32.0	+0.2
MTLF	Montolieu	87.98	335	eP	P	09 52 33.0	+0.2
PWV	Princeton	88.08	37	eP	P	09 52 33.8	+0.3
EPF	Esparros	88.81	337	eP	P	09 52 36.7	-0.2
LRAL	Lakeview Retre	88.84	43	eP	P	09 52 36.8	-0.4
	comp=Z,11nm,1.1s,mb5.1						
SJPF	Ste Jean	89.18	338	eP	P	09 52 38.4	-0.2
ETSF	Etsaut	89.19	337	eP	P	09 52 38.1	-0.6
SDV	Santo Domingo	117.23	43	ePKPdf	PKPdf	09 58 28.9	+1.3
SAML	Samuel	136.24	47	ePKPdf	PKPdf	09 59 05.5	+1.5
SNAA	Sanae	148.49	197	ePKPdf	PKPdf	09 59 25.3	+1.7
SNAA				e		09 59 41.6	
BAO	Brasilia Array	149.05	30	P	PKPdf	09 59 32.1	+6.0
BAO				e		09 59 35.7	
BAO				i		09 59 45.5	
BAO				e		09 59 50.0	
VNA2	Neumayer--Watz	150.01	196	ePKPdf	PKPdf	09 59 33.2	+7.1
VNA2				e		09 59 47.1	
VNA3	Neumayer Olymp	150.19	195	ePKPdf	PKPdf	09 59 33.9	+7.5
VNA3				e		09 59 47.1	
PLCA	Paso Flores	151.77	97	ePKIKP	PKPdf	09 59 38.5	+8.9

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*SNSN **07** 10:26:53.1, 31.46N×35.14E, Ml4.2*

*HLW **07** 10:26:58.1, 31.24N×35.60E, h12^{km}, Mb4.0*

*NEIC **07** 10:26:59.7±0.6, 31.16N×35.46E, h15^{km}±4^{km}, Error ellipse: s-maj=8.3km s-min=2.8km az=105.0*

*GII **07** 10:26:59.4±0.1, 31.16N×35.49E, h11^{km}, mb4.2/4, ML4.0/6, Mw3.7/3*

GII Felt III.

*CSEM **07** 10:26:59.1±0.1, 31.17N×35.48E, h12^{km}, MD4.0/2, Mw3.7,*

Error ellipse: s-maj=2.2km s-min=1.6km az=92.0

GRAL ***07*** *10:27:01.6±8.8, 31.00N×35.25E, MD3.6*

ISC 07 10:26:58.5±0.4**, 31.13N**±0.02×**35.51E**±0.03**, h10**^{km}±3^{km}**, n75, σ0**^{s}**83**/100**, 9C-4D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MZDA	Masada	0.22	325	Pg	Pg	10 27 03.9	+0.6
MZDA	Masada	0.22	325	⇓Pg	Pg	10 27 03.9	+0.6
YTIR	Yattir	0.41	305	Pg	Pg	10 27 07.2	+0.3
YTIR	Yattir	0.41	305	⇓Pg	Pg	10 27 07.2	+0.3
MKRJ	Makawir	0.44	15	Pg	Pg	10 27 07.4	0.0
DSI	Dead Sea	0.46	346	Pg	Pg	10 27 08.4	+0.6
DSI	Dead Sea	0.46	346	⇓Pg	Pg	10 27 08.4	+0.6
QTRJ	Qatrana	0.46	68	eP	Pg	10 27 09.1	+1.2
	SNR=97						
DRGI	Dragot	0.48	348	Pg	Pg	10 27 08.3	+0.1
AMZI	Amatzia	0.61	303	⇑Pg	Pg	10 27 11.7	+0.9
AMZI	Amatzia	0.61	303	Pg	Pg	10 27 11.7	+0.8
AMZI				Sg	Sg	10 27 20.8	+1.8
MASH	Mash‘abbe Sade	0.64	258	Pg	Pg	10 27 11.6	+0.3
ZFRI	Zfri	0.64	207	Pg	Pg	10 27 12.5	+1.2
ZFRI	Zfri	0.64	207	⇑Pg	Pg	10 27 12.5	+1.1
RTMM	Retamin	0.71	264	Pg	Pg	10 27 13.0	+0.2
RMNI	Mount Ramon	0.83	231	Pg	Pg	10 27 15.7	+0.5
RMNI	Mount Ramon	0.83	231	⇑Pg	Pg	10 27 15.7	+0.5
PRNI	Paran	0.89	210	Pg	Pg	10 27 17.0	+0.7
PRNI	Paran	0.89	210	⇑Pg	Pg	10 27 17.0	+0.7
BYRJ	Bayer	0.98	119	eP	Pb	10 27 18.8	+1.7
	SNR=73						
KZIT	Kziot	0.98	257	Pg	Pg	10 27 17.6	-0.5
KZIT				Sg	Sg	10 27 31.1	-0.1
KZIT	Kziot	0.98	257	⇑Pg	Pg	10 27 17.6	-0.6
KZIT				Sg	Sg	10 27 31.1	-0.2
HMDT	Nahal Hemdat	1.12	1	Pg	Pg	10 27 19.8	-1.2
HRFI	Mount Harif	1.16	201	Pg	Pg	10 27 21.2	-0.6
HRFI				Sg	Sg	10 27 37.6	+0.3
SLTI	Sal’it	1.18	340	Pg	Pg	10 27 20.5	-1.6
SLTI				⇓Pg	Pg	10 27 20.7	-1.4
SLTI				Sg	Sg	10 27 36.4	-1.5
SLTI				Sg	Sg	10 27 37.1	-0.8
SLTI	Sal’it	1.18	340	Pg	Pg	10 27 20.7	-1.5
SLTI				Sg	Sg	10 27 37.1	-0.9
SLTI	Sal’it	1.18	340	Pg	Pg	10 27 20.5	-1.6
SLTI				Sg	Sg	10 27 37.1	-0.8
KMTI	Karmit	1.22	214	Pg	Pg	10 27 22.4	-0.6
KMTI				Sg	Sg	10 27 39.1	-0.2
KMTI	Karmit	1.22	214	⇑Pg	Pg	10 27 22.4	-0.6
KMTI				Sg	Sg	10 27 39.1	-0.2
MMLI	Mount Malkishu	1.31	357	Pg	Pg	10 27 22.5	-2.2
MMLI				Sg	Sg	10 27 40.9	-1.3
MMLI	Mount Malkishu	1.31	357	⇑Pg	Pg	10 27 22.5	-2.2
MMLI				Sg	Sg	10 27 40.9	-1.3
MBH	Mount Berech	1.43	201	Pn	Pn	10 27 25.4	+0.8
MBH	Mount Berech	1.43	201	Pn	Pn	10 27 25.3	+0.7
AQBJ	Aqaba	1.45	196	Pn	Pn	10 27 25.8	+0.9
EIL	Elat	1.53	199	ePn	Pn	10 27 26.7	+0.6
EIL				eSn	Sn	10 27 47.6	+1.4
EIL	Elat	1.53	199	Pn	Pn	10 27 26.6	+0.5
EIL	Elat	1.53	199	Pn	Pn	10 27 26.6	+0.5
EIL				eSn	Sn	10 27 47.6	+1.4
HRSH	Kfar Ka’horesh	1.54	264	⇑P	Pn	10 27 25.9	-0.3
HRSH				S	Sb	10 27 46.7	+0.4
RSH		1.54	264	P	Pn	10 27 25.9	-0.4
RSH				S	Sb	10 27 46.7	+0.4
QURS	Qurayyt al Mil	1.57	80	P	Pn	10 27 26.0	-0.7
QURS				S	Sb	10 27 52.0	+4.8
HAF	Haifa	1.70	346	Pn	Pn	10 27 28.8	+0.3
HAF	Haifa	1.70	346	Pn	Pn	10 27 28.7	+0.2
HNKL	Nakhl	1.78	228	⇑P	Pn	10 27 30.1	+0.4
HNKL				S	Sn	10 27 52.7	+0.2
HNKL	Nakhl	1.78	228	P	Pn	10 27 30.0	+0.4
HNKL				S	Sn	10 27 52.7	+0.2
ALWS	Ilw as Safayha	1.85	192	P	Pn	10 27 30.7	0.0
ALWS				S	Sn	10 27 58.7	+4.4
MMC4	Mount Meron ar	1.88	358	Pn	Pn	10 27 31.3	+0.3
MMA2	Mount Meron ar	1.88	357	Pn	Pn	10 27 31.6	+0.5
MMA0B	Mount Meron ar	1.89	357	Pn	Pn	10 27 32.1	+0.9
MMB1	Mount Meron ar	1.89	357	Pn	Pn	10 27 31.7	+0.5
MMC7	Mount Meron ar	1.89	357	Pn	Pn	10 27 31.7	+0.4
MMC2	Mount Meron ar	1.90	357	Pn	Pn	10 27 31.8	+0.5
HNTI	Hanita	1.97	352	Pn	Pn	10 27 33.1	+0.7
JMOS	Jabal al Moall	1.98	190	P	Pn	10 27 32.5	0.0
JMOS				S	Sn	10 28 02.3	+4.7
KSDI	Kefar Szold	2.06	3	Pn	Pn	10 27 33.3	-0.4
HAQS	Haql	2.12	194	P	Pn	10 27 34.4	-0.2
NUB		2.22	200	P	Pn	10 27 36.4	+0.4
JMQS	Jabal Moqyreh	2.25	172	P	Pn	10 27 36.8	+0.3
HDHB	Dhahab	2.52	198	P	Pn	10 27 40.0	-0.2
TAYS	Tayyib Ism	2.63	192	P	Pn	10 27 41.2	-0.5
SUZ		2.64	242	P	Pn	10 27 41.5	-0.5
BDAS	Al Bad‘	2.71	188	P	Pn	10 27 42.3	-0.7
BHL	Bhannes	2.77	2	ePN	Pn	10 27 45.8	+2.0
BHL				ePN	Pn	10 27 46.6	+2.8
BHL				SN	Sn	10 28 26.4	+8.7
AYUS	‘Aynunah	2.94	184	P	Pn	10 27 45.9	-0.3
TBKS	Tabuk	3.03	162	P	Pn	10 27 47.4	-0.1
TR2		3.14	210	P	Pn	10 27 48.3	-0.8
ZAF		3.15	235	P	Pn	10 27 48.7	-0.6
HWQ	Hawqa	3.16	7	ePN	Pn	10 27 55.3	+5.9
HWQ				SN	Sn	10 28 39.2	+12
HHAG	Hagoal	3.17	249	P	Pn	10 27 48.0	-1.4
TR1		3.39	204	P	Pn	10 27 51.4	-1.2
GLL	Jalalah	3.63	246	P	Pn	10 27 54.9	-1.1
GRB	Gharib	3.70	220	P	Pn	10 27 56.2	-0.9
DBAS	Duba	3.92	174	P	Pn	10 27 59.9	-0.3
HHRG	Al Ghardaqah	4.25	204	P	Pn	10 28 03.5	-1.3
HHRG	Al Ghardaqah	4.25	204	P	Pn	10 28 03.5	-1.3
KBRS	Khaybar	6.26	147	P	Pn	10 28 31.9	-1.4

BJI ***07*** *10:35:01.9, 56.30S×25.90W, h45*^{km}

NEIC ***07*** *10:35:02.0±3.3, 56.29S×25.88W, h47*^{km}*±29*^{km}*, mb4.6/6, Error ellipse: s-maj=28.1km s-min=10.5km az=216.0*

ISC 07 10:35:04.3±6.1**, 56.4S**±0.2×**26.3W**±0.4**, h76**^{km}±62^{km}**, n38, σ1**^{s}**10**/24**, mb4.9**/7**, 4C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.27	158	⇑iP	P	10 38 49.0	+0.1
VNA1	Neumayer--Stat	16.27	158	e	P	10 38 50.4	+1.5
VNA1	Neumayer--Stat	16.27	158	e	P	10 39 00.9	+12
VNA3	Neumayer Olymp	16.48	161	⇑iP	P	10 38 49.5	-2.0
VNA3	Neumayer Olymp	16.48	161	e	P	10 38 51.3	-0.2
VNA3	Neumayer Olymp	16.48	161	e	P	10 38 53.5	+2.0
VNA3	Neumayer Olymp	16.48	161	e	P	10 39 01.6	+10
VNA2	Neumayer--Watz	16.66	158	⇑iP	P	10 38 51.4	-2.4
VNA2	Neumayer--Watz	16.66	158	e	P	10 38 53.0	-0.8
VNA2	Neumayer--Watz	16.66	158	e	P	10 38 55.5	+1.7
VNA2	Neumayer--Watz	16.66	158	e	P	10 39 03.6	+10
SNAA	Sanae	18.20	156	e	P	10 39 12.2	-0.6
SNAA	Sanae	18.20	156	e	P	10 39 14.4	+1.6
SNAA	Sanae	18.20	156	e	P	10 39 21.0	+8.2
SNAA	Sanae	18.20	156	⇑iP	P	10 39 10.4	-2.4
	10nm,0.7s						
PMSA	Palmer Station	20.06	230	eP	P	10 39 34.5	+1.1
	48nm,0.9s						
TRQA	Tornquist	29.94	293	eP	P	10 41 05.6	-1.4
	4.6nm,0.4s,mb4.5						
PLCA	Paso Flores	32.58	280	eP	P	10 41 28.5	-1.6
	4.1nm,1.0s,mb4.2						
QSPA	South Pole Qui	33.84	180	eP	P	10 41 39.9	-0.7
	28nm,0.6s,mb5.3						
LVC	Limon Verde	45.93	299	eP	P	10 43 21.9	+0.9
	36nm,0.5s,mb5.4						
LPAZ	La Paz	51.01	304	eP	P	10 44 00.7	+0.3
	18nm,0.3s,mb5.6						
ARE	Arequipa	52.43	301	eP	P	10 44 12.0	+0.9
OTAV	Otavalo	70.29	303	eP	P	10 46 11.6	+0.2
	12nm,0.8s,mb4.8						
SDV	Santo Domingo	74.63	314	eP	P	10 46 36.9	0.0
	7.8nm,0.7s,mb4.5						
MOOW	Moose Ponds	122.28	301	ePKPdf	PKPdf	10 53 51.4	+1.6
WVOR	Wild Horse Val	125.17	295	ePKPdf	PKPdf	10 53 57.4	+2.1
RES	Resolute Bay	138.38	338	ePKPdf	PKPdf	10 54 20.4	+1.1
GTA	Gaotai	141.18	93	ePKP	PKPdf	10 54 26.3	+1.1
XAN	Xi’an	142.24	107	PKP	PKPdf	10 54 33.2	+6.0
NJ2	Nanjing	145.71	120	ePKP	PKPdf	10 54 35.3	+2.1
INK	Inuvik	146.41	320	ePKPbc	PKPbc	10 54 36.3	+1.7
DAWY	Dawson	147.42	311	ePKPbc	PKPdf	10 54 38.9	+3.8
BTO	Baotou	147.65	100	ePKP	PKPdf	10 54 39.8	+3.6
HHC	Hu-ho-hao-te	148.66	102	ePKP	PKPdf	10 54 41.2	+3.4
BJI	Beijing	150.56	108	ePKP	PKPdf	10 54 47.2	+6.4
TLY	Talaya	150.75	78	ePKPbc	PKPdf	10 54 46.9	+6.1
COLA	College	151.17	311	ePKPbc	PKPdf	10 54 48.2	+7.2
COLA				ePKPab	PKPab	10 54 55.4	-1.9
MCK	McKinley	151.40	309	ePKPbc	PKPdf	10 54 49.5	+8.2

CASC 07 10:45:23.8±1.6**, 13.36N×89.94W, h35**^{km}±11^{km}**, MD3.8, ML3.8, 6C-7D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.57	33	⇓iP	P	10 45 36.0	+0.6
SBLS				eS	S	10 45 45.4	+1.8
SNJE	San Jose	0.60	33	⇓eP	P	10 45 36.4	+0.6
RTR	El Retiro	0.61	28	⇓iP	P	10 45 36.6	+0.8
BOQS	Boqueron	0.74	60	⇓eP	P	10 45 38.1	+0.2
BOQS				eS	S	10 45 48.8	+0.7
SNET	Serv Nac Est T	0.77	65	eP	P	10 45 38.1	0.0
SNET				eS	S	10 45 49.4	+0.8
SNET				i		10 45 51.2	
	comp=Z,2µm,0.2s						
RBDL	Robledal	0.79	18	⇑eP	P	10 45 39.3	+0.8
LFU	La Fuente	0.90	64	⇑eP	P	10 45 40.2	+0.3
LFRS	El Faro	0.90	73	⇑eP	P	10 45 39.6	-0.4
LFRS				eS	S	10 45 51.6	-0.3
IXG	Ixpaco	0.95	329	⇓eP	P	10 45 40.2	-0.6
IXG				eS	S	10 45 53.2	-0.1
IXG				AML	AML	10 45 58.8	
	comp=E,6µm,0.4s						
LBRS	Las Brisas	0.95	67	eP	P	10 45 40.8	0.0
LBRS				eS	S	10 45 54.2	+0.8
LCBS	La Ceiba	0.98	72	⇑eP	P	10 45 41.0	-0.3
LCBS				eS	S	10 45 54.2	+0.1
SNVI	San Vicente	1.10	77	⇑eP	P	10 45 42.8	-0.2
SNVI				eS	S	10 45 58.1	+0.9
MTO2	Montecristo 2	1.18	29	eP	P	10 45 44.3	+0.3
MTO2				eS	S	10 46 00.5	+1.3
NBG	Las Nubes	1.28	342	⇓eP	P	10 45 46.4	+0.9
NBG				eS	S	10 46 03.6	+1.8
NBG				AML	AML	10 46 08.2	
	comp=E,2µm,0.5s						
BLLM	Bellamira	1.66	87	eP	P	10 45 51.0	0.0
BLLM				eS	S	10 46 13.4	+2.1
CAHU	Cacacuatique	1.73	76	⇓eP	P	10 45 51.9	-0.1
CAHU				eS	S	10 46 13.2	+0.1
JAT	Jato	1.90	300	⇑eP	P	10 45 54.0	-0.3
JAT				eS	S	10 46 17.1	-0.3
JAT				AML	AML	10 46 20.8	
	comp=E,696nm,0.2s						
CNCH	Conchagua	2.06	92	eP	P	10 45 56.3	-0.3
CNCH				eS	S	10 46 21.4	+0.2

DJA 07 11:24:18.5±1.0**, 8.28S×116.53E, h6**^{km}±5^{km}**, MD4.9**/3**, ML4.9**/1**, 1C-6D, Error ellipse: s-maj=29.3km s-min=18.0km az=145.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	0.46	243	⇓iPg	Pg	11 24 27.1	-0.7
KEDI				⇓iSg	Sg	11 24 34.0	0.0
RATI	Rata	1.08	246	⇑iPn	Pn	11 24 37.5	-2.5
	2µm,0.2s						
RATI				⇓iSn	Sn	11 24 50.2	-5.2
KELI	Kelakatan	2.02	272	⇓iPn	Pn	11 24 50.0	-3.4
KELI				⇓iSn	Sn	11 25 14.4	-4.8
SRDI	Scrawed	2.37	265	⇓iPn	Pn	11 24 56.0	-2.5

TAP ***07*** *11:58:34.5, 24.78N×122.33E, h8*^{km}*, ML2.7*

JMA 07 11:58:34.8±0.3**, 25.00N×122.79E, M2.3, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.57	159	P	Pg	11 58 46.2	0.0
YOJ				S	Sg	11 58 54.1	+0.2
IRIF	Iriomote-Funau	1.08	128	P	Pb	11 58 55.3	-0.8
IRIF				eS	Sb	11 59 11.2	+0.6
HATJ	Hateruma jima	1.32	135	eS	Sb	11 59 17.3	-0.2
JKRS	Kuro-shima	1.34	124	eS	Sb	11 59 19.0	+0.8
JIJ	Ishigaki jima	1.38	117	P	Pb	11 59 01.5	+0.2
JIJ				eS	Sb	11 59 20.1	+0.7

PGC 07 12:11:59.8, 51.22N×131.31W, h10^{km}**, Mw3.7, South of Moresby Island, British Columbia, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNB	Barry Inlet	1.39	349	Pn	Pn	12 12 23.5	-1.9
BNB				Sn	Sn	12 12 39.9	-4.0
	comp=Z,26nm,0.3s						
BNB				Trac		12 12 40.9	
	comp=Z,26nm,0.3s						
BNB	Barry Inlet	1.39	349	Pn	Pn	12 12 23.5	-1.9
BNB				Sn	Sn	12 12 39.9	-4.0
	comp=Z,26nm,0.3s						
BNB				Trac		12 12 40.9	
	comp=Z,26nm,0.3s						
MOBC	Moresby Island	2.02	350	Pn	Pn	12 12 32.2	-2.2
MOBC				Sn	Sn	12 12 54.5	-5.3
MOBC				Trac		12 12 59.2	
	comp=Z,8.0nm,0.2s						
MOBC	Moresby Island	2.02	350	Pn	Pn	12 12 32.2	-2.2
MOBC				Sn	Sn	12 12 54.5	-5.3
MOBC				Trac		12 12 59.2	
	comp=Z,8.0nm,0.2s						
HOLB	Holberg	2.09	105	Pn	Pn	12 12 33.1	-2.3
HOLB				Trac		12 13 00.7	
	comp=Z,54nm,0.5s						
HOLB	Holberg	2.09	105	Pn	Pn	12 12 33.1	-2.3
HOLB				Trac		12 13 00.7	
	comp=Z,54nm,0.5s						
BBB	Bella Bella	2.21	63	Pn	Pn	12 12 35.2	-2.0
BBB				Trac		12 13 18.3	
	comp=Z,80nm,0.7s						
BBB	Bella Bella	2.21	63	Pn	Pn	12 12 35.2	-2.0
BBB				Trac		12 13 18.3	
	comp=Z,80nm,0.7s						
BNAB	Bonilla	2.32	10	Pn	Pn	12 12 36.7	-1.9
BNAB				Trac		12 13 10.6	
	comp=Z,8.0nm,0.4s						
BNAB	Bonilla	2.32	10	Pn	Pn	12 12 36.7	-1.9
BNAB				Trac		12 13 10.6	
	comp=Z,8.0nm,0.4s						
BPBC	Brooks Peninsu	2.49	114	Pn	Pn	12 12 38.4	-2.6
BPBC				Trac		12 13 17.2	
	comp=Z,19nm,0.2s						
BPBC	Brooks Peninsu	2.49	114	Pn	Pn	12 12 38.4	-2.6
BPBC				Trac		12 13 17.2	
	comp=Z,19nm,0.2s						
PHC	Port Hardy	2.50	100	Pn	Pn	12 12 38.3	-3.0
PHC	Port Hardy	2.50	100	Pn	Pn	12 12 38.3	-3.0
MAYB	Maynard	2.75	106	Pn	Pn	12 12 42.8	-2.0
MAYB	Maynard	2.75	106	Pn	Pn	12 12 42.8	-2.0
MASB	Masset	2.84	351	Pn	Pn	12 12 42.8	-3.3
MASB	Masset	2.84	351	Pn	Pn	12 12 42.8	-3.3
NDB	Naden	2.92	341	Pn	Pn	12 12 44.7	-2.5
NDB	Naden	2.92	341	Pn	Pn	12 12 44.7	-2.5
RUBB	Prince Rupert	3.18	11	Pn	Pn	12 12 47.3	-3.6
RUBB				Trac		12 14 08.3	
	comp=Z,31nm,0.7s						
RUBB	Prince Rupert	3.18	11	Pn	Pn	12 12 47.3	-3.6
RUBB				Trac		12 14 08.3	
	comp=Z,31nm,0.7s						
WOSB	Woss	3.19	107	Pn	Pn	12 12 49.3	-1.8
WOSB	Woss	3.19	107	Pn	Pn	12 12 49.3	-1.8
NCRB	Newcastle Ridg	3.43	102	Pn	Pn	12 12 52.8	-1.7
NCRB	Newcastle Ridg	3.43	102	Pn	Pn	12 12 52.8	-1.7
GDR	Gold River	3.66	111	Pn	Pn	12 12 58.7	+0.9
GDR				Sn	Sn	12 13 43.6	+2.1
	comp=Z,13nm,0.6s						
GDR				Trac		12 13 44.9	
	comp=Z,13nm,0.6s						
GDR	Gold River	3.66	111	Pn	Pn	12 12 58.7	+0.9
GDR				Sn	Sn	12 13 43.6	+2.1
	comp=Z,13nm,0.6s						
GDR				Trac		12 13 44.9	
	comp=Z,13nm,0.6s						
BTB	Buttle Lake	4.10	113	Pn	Pn	12 13 03.1	-0.9
BTB				Sn	Sn	12 13 57.2	+4.6
	comp=Z,10.0nm,0.6s						
BTB				Trac		12 13 57.7	
	comp=Z,10.0nm,0.6s						
BTB	Buttle Lake	4.10	113	Pn	Pn	12 13 03.1	-0.9
BTB				Sn	Sn	12 13 57.2	+4.6
	comp=Z,10.0nm,0.6s						
BTB				Trac		12 13 57.7	
	comp=Z,10.0nm,0.6s						
MGB	Mount Grey	4.80	115	Pn	Pn	12 13 19.8	+5.8
MGB	Mount Grey	4.80	115	Pn	Pn	12 13 19.8	+5.8

DJA 07 12:16:34.8±0.9**, 9.58S×114.93E, h33**^{km}**, MD4.8**/4**, ML3.9**/1**, 1C-7D, Error ellipse: s-maj=20.6km s-min=8.0km az=6.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	1.04	35	⇓iPn	Pn	12 16 51.3	-2.0
RATI				⇓iSn	Sn	12 17 03.8	-2.9
SRDI	Scrawed	1.34	325	⇓iPn	Pn	12 16 56.0	-1.5
	122nm,0.2s						
SRDI				⇑iSn	Sn	12 17 11.4	-2.9
KELI	Kelakatan	1.42	342	⇓iPn	Pn	12 16 57.5	-1.2
KELI				⇓iSn	Sn	12 17 15.3	-1.1
KEDI	Kedomdong	1.60	47	⇓iPn	Pn	12 17 00.5	-0.7
KEDI				⇓iSn	Sn	12 17 17.3	-3.6

IGQ 07 12:44:38.5, 1.23S×81.12W, h21^{km}±4^{km}**, mb4.1, 2C, Error ellipse: s-maj=11.8km s-min=3.3km az=20.2, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.60	73	⇑P	Pb	12 44 49.7	-0.6
SALI	Salinas	0.96	172	P	Pb	12 44 56.4	+0.2
JAMA	Jama	1.33	44	P	Pn	12 45 03.2	+1.0
JAMA				S	Sb	12 45 20.7	+1.5
IGUA	Igualata	2.50	96	P	Pn	12 45 19.6	+0.8
ARRY	Arrayan	2.68	96	P	Pn	12 45 21.8	+0.3
RETU	Refugio	2.69	95	P	Pn	12 45 24.3	+2.8
NAS1	Nasa	2.71	77	P	Pn	12 45 23.7	+1.8
JUA2	San Juan 2	2.71	68	P	Pn	12 45 23.5	+1.6
TERV	Terraza Guagua	2.73	67	P	Pn	12 45 24.3	+2.2
PINO	Pino	2.73	67	P	Pn	12 45 22.8	+0.6
PISA	Pisayambo	2.74	86	P	Pn	12 45 25.5	+3.2
JOR1	San Jorge 1	2.77	64	P	Pn	12 45 22.2	-0.5
YANA	Yana	2.78	67	P	Pn	12 45 24.0	+1.1
VC1	Cotopaxi 1	2.78	78	P	Pn	12 45 25.0	+2.1
TAMB	Tambo	2.81	79	P	Pn	12 45 25.9	+2.7
ANTI	Antisana	3.06	75	P	Pn	12 45 30.2	+3.4
CAYR	Refugio Cayamb	3.35	68	⇑P	Pn	12 45 35.4	+4.4

BJI ***07*** *12:53:46.3, 10.10S×73.60W, h35*^{km}*, mB4.6, Ms4.4, Msz4.2*

NEIC ***07*** *12:53:46.3±0.2, 10.06S×73.61W, mb4.7/16, Error ellipse: s-maj=10.2km s-min=4.4km az=58.0*

NEIC Felt [III] at Atalaya.

ISC 07 12:53:44.2±0.4**, 10.05S**±0.07×**73.58W**±0.10**, h39**^{km}**, h39**^{km}±1.3^{km}**:pP-P, n53, σ0**^{s}**76**/43**, mb4.6**/15**, 1C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	6.70	163	eP	P	12 55 22.0	-0.6
LPAZ	La Paz	8.16	140	ePn	P	12 55 42.2	-0.8
	11nm,0.6s						
SAML	Samuel	10.32	85	ePn	P	12 56 11.7	-1.1
	0.5nm,0.8s						
OTAV	Otavalo	11.30	334	ePn	P	12 56 27.2	+0.9
	16nm,0.9s						
LVC	Limon Verde	13.27	161	Pn	P	12 56 53.7	+1.1
SDV	Santo Domingo	19.03	9	eP	P	12 58 05.5	-0.4
	4.1nm,0.8s						
JTS	JuntasAbangare	23.15	330	eP	P	12 58 45.2	-3.0
BAO	Brasilia Array	25.55	105	eP	P	12 59 13.1	+1.8
PLCA	Paso Flores	30.68	175	P	P	12 59 57.0	-0.4
	3.7nm,1.0s,mb4.2						
HKT	Hockley	45.17	332	eP	P	13 02 00.0	+0.8
	4.5nm,0.8s,mb4.3						
ELN	Prospectdale	47.50	352	eP	P	13 02 18.3	+0.8
JCT	Junction City	47.52	329	eP	P	13 02 18.2	+0.4
	2.8nm,0.4s,mb4.7						
LTX	Lajitas	48.73	324	eP	P	13 02 27.2	+0.1
	3.2nm,0.5s,mb4.6						
FVM	French Village	50.31	343	eP	P	13 02 37.9	-1.3
	10nm,0.6s,mb5.0						
GDL2	Guadalupe Moun	51.28	326	eP	P	13 02 47.0	+0.3
CPRX	Cap Rock	51.65	327	eP	P	13 02 50.2	+0.8
AMTX	Amarillo	52.01	331	eP	P	13 02 51.1	-1.0
	4.7nm,0.6s,mb4.6						
BINY	Binghamton	52.03	358	eP	P	13 02 52.2	0.0
	12nm,0.9s,mb4.8						
SDCO	Great Sand Dun	56.15	330	eP	P	13 03 22.2	-0.2
	7.2nm,0.8s,mb4.8						
SDCO				epP	pP	13 03 34.9	+1.0
PV01	Paradox Valley	58.01	328	eP	P	13 03 35.8	+0.1
PV01				epP	pP	13 03 48.1	+0.9
PHWY	Pilot Hill	58.92	332	eP	P	13 03 42.1	+0.2
SRU	San Rafael	59.77	327	eP	P	13 03 47.5	-0.3
MSU	Marysvale	60.24	326	eP	P	13 03 51.2	+0.2
MSU				epP	pP	13 04 03.8	+1.2
MVU	Marysvale	60.25	326	eP	P	13 03 51.6	+0.5
	6.0nm,1.1s,mb4.5						
MVU				epP	pP	13 04 03.2	+0.6
DAU	Daniels Canyon	61.10	328	eP	P	13 03 56.8	0.0
DAU				epP	pP	13 04 08.8	+0.4
TCUT	Toone Canyon	61.69	328	eP	P	13 04 00.8	0.0
HWUT	Hardware Ranch	62.13	329	eP	P	13 04 03.3	-0.4
	6.1nm,0.8s,mb4.8						
LOHW	Long Hollow	63.12	331	eP	P	13 04 10.0	-0.4
LOHW				epP	pP	13 04 21.1	-0.9
WUWY	Wally Ulrich	63.14	331	eP	P	13 04 10.0	-0.5
WUWY				epP	pP	13 04 22.1	0.0
RRI2	Red Ridge	63.28	330	eP	P	13 04 11.2	-0.2
MOOW	Moose Ponds	63.30	331	eP	P	13 04 11.1	-0.3
IMW	Indian Meadow	63.50	331	eP	P	13 04 12.5	-0.3
IMW				epP	pP	13 04 24.0	-0.4
LKWY	Lake	63.74	331	eP	P	13 04 14.9	+0.5
	2.2nm,0.7s,mb4.3						
LKWY				epP	pP	13 04 24.2	-1.9
YMR	Madison River	64.09	331	eP	P	13 04 17.1	+0.5
MCMT	McKenzie Canyo	65.11	330	eP	P	13 04 23.4	+0.1
MCMT				epP	pP	13 04 34.7	-0.3
BOZ	Bozeman (W)	65.13	332	eP	P	13 04 22.6	-0.8
	6.9nm,1.3s,mb4.5						
WVOR	Wild Horse Val	66.51	325	eP	P	13 04 32.0	-0.2
	15nm,1.5s,mb4.8						
MOD	Modoc	67.12	324	eP	P	13 04 36.3	+0.3
	9.6nm,1.1s,mb4.7						
MOD				epP	pP	13 04 47.3	-0.6
EDM	Edmonton	71.53	336	eP	P	13 05 01.9	-1.0
EDM				epP	pP	13 05 13.9	-0.8
YKW3	Yellowknife Ar	79.01	342	eP	P	13 05 45.1	-0.4
INK	Inuvik	88.71	341	eP	P	13 06 35.0	+0.6
	3.5nm,0.6s,mb4.9						
SYO	Syowa Base	88.74	161	⇑pP	pP	13 06 43.3	-3.4
CLL	Collm	95.63	39	eP	P	13 07 09.0	+2.3
CLL	Collm	95.63	39	P	P	13 07 09.0	+2.3
MDJ	Mudanjiang	140.17	334	PKP	PKPdf	13 13 06.8	-2.2
CN2	Changchun	142.53	337	ePKP	PKPdf	13 13 15.6	+2.4
CN2				PP	PP	13 16 27.2	+2.3
WMQ	Urumqi	142.63	23	ePKP	PKPdf	13 13 16.0	+2.6
BJI	Beijing	148.89	345	ePKP	PKPdf	13 13 30.0	+5.9
HHC	Hu-ho-hao-te	148.98	352	ePKP	PKPdf	13 13 30.9	+6.7
HHC				XPKP		13 13 44.3	
LZH	Lanzhou	153.97	5	ePKP	PKPdf	13 13 33.5	+1.8
LZH				APKP		13 13 44.3	
LZH				XPKP		13 13 47.9	
SSE	Sheshan	154.96	329	ePKP	PKPdf	13 13 36.4	+3.2
NJ2	Nanjing	155.26	334	ePKP	PKPdf	13 13 34.1	+0.6
KMI	Kunming	164.60	13	PKP	PKPdf	13 13 48.1	+3.8

NEIC ***07*** *13:59:20.1±1.2, 51.52N×16.15E, h5*^{km}*, ML3.1(VIE), ML2.8(SZGRF), ML2.5(CLL), Error ellipse: s-maj=13.0km s-min=6.2km az=195.0*

IPEC ***07*** *13:59:20.4±0.3, 51.53N×16.38E, ML2.1/4, Error ellipse: s-maj=4.0km s-min=2.1km az=86.0*

PRU ***07*** *13:59:21.1, 51.48N×16.14E*

CSEM ***07*** *13:59:21.4±0.2, 51.48N×16.13E, h2km, ML3.2/4, Error ellipse: s-maj=2.9km s-min=1.8km az=172.0*

WAR 07 13:59:21.1, 51.51N×16.12E, h1km, ML2.7, 2C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.68	171	ePG	Pg	13 59 33.0	-1.7
KSP				eSG	Sg	13 59 43.0	-0.8
KSP	Ksiaz	0.68	171	ePg	Pg	13 59 33.5	-1.2
KSP				eSg	Sg	13 59 42.9	-0.9
UPC	Upice	1.01	184	ePG	Pg	13 59 39.6	-1.7
DPC	Dobruska-Polom	1.17	174	ePG	Pg	13 59 42.3	-2.2
DPC				eSG	Sg	13 59 58.4	-1.7
	18nm,0.2s						
DPC	Dobruska-Polom	1.17	174	ePg	Pg	13 59 42.4	-2.1
DPC				eSg	Sg	13 59 57.7	-2.4
PVCC	Panska Ves	1.39	225	ePG	Pg	13 59 46.9	-2.0
PRU	Pruhonice	1.83	214	ePg	Pg	13 59 54.3	-3.3
PRU				eSg	Sg	14 00 19.0	-3.0
PRU	Pruhonice	1.83	214	ePg	Pg	13 59 54.3	-3.3
PRU				Sg	Sg	14 00 19.0	-3.0
MORC	Moravsky Berou	1.96	152	ePn	Pn	13 59 53.7	-2.1
MORC				eSn	Sn	14 00 20.8	-0.6
MORC	Moravsky Berou	1.96	152	ePn	Pn	13 59 53.7	-2.1
MORC				eSg	Sg	14 00 20.1	-6.3
	14nm,0.2s						
CLL	Collm	1.96	265	ePG	Pg	13 59 57.0	-3.3
CLL				i		13 59 59.8	
CLL				i SG	Sg	14 00 23.7	-2.8
CLL	Collm	1.96	265	ePg	Pg	13 59 57.0	-3.3
CLL				i Sg	Sg	14 00 23.7	-2.8
OKC	Ostrava-Krasne	2.12	142	ePG	Pg	13 59 59.2	-4.1
OKC				eSG	Sg	14 00 27.1	-4.4
VRAC	Vranov	2.23	172	ePn	Pn	13 59 58.6	-1.1
VRAC				eSg	Sg	14 00 29.8	-5.5
	11nm,0.3s						
KRUC	Moravsky	2.46	176	ePn	Pn	14 00 02.4	-0.6
KRUC				eSg	Sg	14 00 38.0	-5.0
	5.0nm,0.2s						
NKC	Novy Kostel	2.66	243	ePn	Pn	14 00 04.1	-1.7
NKC				ePg	Pg	14 00 08.7	-5.5
NKC				eSg	Sg	14 00 46.1	-3.5
NKC	Novy Kostel	2.66	243	ePN	Pn	14 00 04.1	-1.7
NKC				ePG	Pg	14 00 08.7	-5.5
NKC				eSG	Sg	14 00 46.1	-3.5
	28nm,0.3s						
OJC	Ojcow	2.67	118	ePn	Pn	14 00 03.9	-2.0
OJC				ePg	Pg	14 00 11.7	-2.6
OJC				eSn	Sn	14 00 35.0	-4.3
OJC				eSg	Sg	14 00 46.2	-3.6
KHC	Kasperske Hory	2.89	215	ePN	Pn	14 00 07.4	-1.7
KHC				ePG	Pg	14 00 13.1	-5.7
KHC				ex	x	14 00 43.5	
KHC				eSG	Sg	14 00 51.9	-5.4
KHC	Kasperske Hory	2.89	215	ePg	Pg	14 00 13.1	-5.7
KHC				eSg	Sg	14 00 51.9	-5.4
MOX	Moxa	2.97	255	Pg	Pg	14 00 17.0	-3.5
MOX				Sg	Sg	14 00 57.0	-3.1
GEC2	GERESS Array S	3.09	211	ePn	Pn	14 00 11.0	-1.0
WET	Wettzell	3.15	222	ePn	Pn	14 00 11.0	-1.9
WET				eSg	Sg	14 01 00.9	-5.2
MOA	Molln	3.86	199	⇑iPN	Pn	14 00 21.2	-1.7
MOA				i SG	Sg	14 01 24.1	-5.6
	12nm,0.5s						
ARSA	Arzberg	4.29	185	⇑iPN	Pn	14 00 26.4	-2.6
ARSA				i SG	Sg	14 01 36.4	-7.4
	5.8nm,0.5s						

MOS ***07*** *14:05:42.4±1.6, 19.00S×178.66W, h501km, mb4.9/5, Error ellipse: s-maj=16.5km s-min=14.7km az=72.7*

BJI ***07*** *14:05:45.5, 19.65S×178.40W, h578km, mB4.9, mb4.7*

NEIC ***07*** *14:05:46.2±0.9, 19.94S×178.55W, h580km±9km, mb4.6/49, Error ellipse: s-maj=8.8km s-min=6.3km az=151.0*

ISC 07 14:05:46.1±1.2**, 19.94S**±0.07×**178.55W**±0.07**, h588**km±16km**, h578**km±14.0km**: pP-P, n225, σ0.96**/124**, mb4.5**/57**, 22C-29D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.83	48	eP	P	14 07 51.3	-2.2
	23nm,0.4s						
OUZ	Omahuta	16.73	203	PN	P	14 09 13.3	+2.3
OUZ	Omahuta	16.73	203	PN	P	14 09 13.3	+2.3
MTAZ	Motutapu	17.74	197	PN	P	14 09 22.1	+1.6
MTAZ	Motutapu	17.74	197	PN	P	14 09 22.1	+1.6
OTAZ	Otara	17.89	197	PN	P	14 09 23.3	+1.4
OTAZ	Otara	17.89	197	PN	P	14 09 23.3	+1.4
MKAZ	Moumakai	17.97	196	PN	P	14 09 23.9	+1.2
MKAZ	Moumakai	17.97	196	PN	P	14 09 23.9	+1.2
WTAZ	Waiatarua	17.97	198	PN	P	14 09 24.4	+1.7
WTAZ	Waiatarua	17.97	198	PN	P	14 09 24.4	+1.7
PUZ	Puketiti	18.28	188	PN	P	14 09 23.1	-2.5
PUZ	Puketiti	18.28	188	PN	P	14 09 23.1	-2.5
MWZ	Matawai	18.64	190	SN	S	14 12 19.6	-8.7
MWZ	Matawai	18.64	190	SN	S	14 12 19.6	-8.7
QRZ	Quartz Range	22.17	198	PN	P	14 09 59.8	-1.6
QRZ	Quartz Range	22.17	198	PN	P	14 09 59.8	-1.6
NNZ	Nelson	22.30	196	SN	S	14 13 19.9	-8.2
NNZ	Nelson	22.30	196	SN	S	14 13 19.9	-8.2
THZ	Tophouse	22.93	197	PN	P	14 10 06.3	-1.9
THZ				SN	S	14 13 31.1	-7.1
THZ	Tophouse	22.93	197	PN	P	14 10 06.3	-1.9
THZ				SN	S	14 13 31.1	-7.1
DSZ	Denniston Nort	23.23	199	SN	S	14 13 36.5	-6.4
DSZ	Denniston Nort	23.23	199	SN	S	14 13 36.5	-6.4
LTZ	Lake Taylor	24.05	197	PN	P	14 10 17.2	-1.0
LTZ	Lake Taylor	24.05	197	PN	P	14 10 17.2	-1.0
CTAO	Charters Tower	33.04	264	⇓eP	P	14 11 36.2	+0.6
	18nm,0.7s,mb4.8						
PMG	Port Moresby	34.72	283	eP	P	14 11 50.3	+0.6
PMG	Port Moresby	34.72	283	⇓iP	P	14 11 50.3	+0.6
	41nm,0.9s,mb5.1						
WRAB	Tennant Creek	44.16	262	eP	P	14 13 04.7	-0.9
	14nm,0.9s,mb4.5						
VNDA	Vanda	58.42	185	eP	P	14 14 47.2	-0.6
	5.8nm,0.6s,mb3.9						
CASY	Casey	64.25	205	eP	P	14 15 24.2	-1.4
	24nm,0.9s,mb4.5						
MAJO	Matsushiro	69.46	324	eP	P	14 15 57.0	-1.0
	19nm,0.6s,mb4.7						
MAT	Matsushiro	69.46	324	eP	P	14 15 57.0	-1.0
	17nm,0.8s,mb4.5						
MAT	Matsushiro	69.46	324	P	P	14 15 57.2	-0.8
QSPA	South Pole Qui	70.13	180	eP	P	14 16 00.9	-0.3
	51nm,0.7s,mb5.1						
YSS	Yuzh-Sakhalins	75.17	334	⇓iP	P	14 16 30.9	+0.5
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.1						
YSS				pmax	pmax		
	comp=N,20nm,0.8s						
YSS	Yuzh-Sakhalins	75.17	334	⇓iP	P	14 16 30.7	+0.3
	comp=N,48nm,1.0s,mb5.0						
PET	Petropavlovsk	75.30	346	eP	P	14 16 30.0	-1.1
	comp=N,18nm,0.6s,mb4.8						
SSE	Sheshan	76.94	310	P	P	14 16 41.1	+0.7
SSE				XP	sP	14 19 41.6	-1.1
SSE				S	S	14 25 43.3	+1.9
SSE				XS		14 29 18.5	
SSE				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.1						
SSE				AMB	AMB		
	comp=Z,102nm,3.4s						
SSE	Sheshan	76.94	310	P	P	14 16 41.1	+0.7
	comp=Z,11nm,1.3s,mb4.1						
SSE				sP	sP	14 19 41.6	-1.1
SSE				S	S	14 25 43.3	+1.9
SSE				sS		14 29 18.5	
SSE				LR	LR		
	comp=Z,50nm,17.0s						
SAO	San Andreas Ge	77.97	44	eP	P	14 16 46.2	+0.4
NJ2	Nanjing	79.13	310	eP	P	14 16 52.2	+0.2
NJ2				AP	pP	14 18 59.0	+2.5
NJ2				PP	PP	14 20 03.0	+0.4
NJ2				S	S	14 25 57.0	-7.1
NJ2				XS		14 29 45.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,2µm,6.2s						
CMB	Columbia Colle	79.40	43	⇓eP	P	14 16 53.4	+0.1
	comp=Z,14nm,1.0s,mb4.3						
WDC	Whiskeytown Da	79.57	40	⇓eP	P	14 16 54.7	+0.5
	comp=Z,53nm,1.6s,mb4.6						
MDJ	Mudanjiang	79.77	325	P	P	14 16 55.2	+0.1
MDJ				AMB	AMB		
	comp=Z,21nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,74nm,5.9s						
MDJ	Mudanjiang	79.77	325	eP	P	14 16 55.5	+0.5
	comp=Z,15nm,0.8s,mb4.4						
YBH	Yreka Blue Hor	80.18	39	⇓eP	P	14 16 58.1	+0.8
	comp=Z,21nm,1.1s,mb4.4						
WCN	Washoe City	80.54	42	⇓eP	P	14 16 60.0	+0.8
	comp=Z,24nm,1.1s,mb4.5						
HUMO	Hull Mountain	80.57	38	eP	P	14 16 59.4	+0.2
	comp=Z,17nm,1.1s,mb4.4						
MNV	Mina	81.07	44	eP	P	14 17 00.0	-1.9
MNV	Mina	81.07	44	⇓eP	P	14 17 02.3	+0.4
	comp=Z,21nm,1.3s,mb4.4						
LDFC	Landfair	81.31	48	⇓iP	P	14 17 03.8	+0.6
TPH	Tonopah	81.48	44	eP	P	14 17 04.5	+0.5
TPH	Tonopah	81.48	44	⇓iP	P	14 17 04.5	+0.5
	comp=Z,22nm,1.2s,mb4.5						
CN2	Changchun	81.54	323	eP	P	14 17 04.4	+0.2
CN2				eS	S	14 26 30.0	+2.0
CN2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
MOD	Modoc	81.72	40	⇓iP	P	14 17 05.8	+0.7
	comp=Z,66nm,1.2s,mb5.0						
KLR	Kul'dur	81.79	330	eP	P	14 17 02.8	-2.5
NEN	Nelson	81.79	48	eP	P	14 17 05.8	+0.2
BMN	Battle Mountai	82.78	42	eP	P	14 17 10.9	+0.4
	comp=Z,21nm,1.0s,mb4.6						
RSO	Redoubt South	82.80	13	eP	P	14 17 08.6	-1.6
WVOR	Wild Horse Val	83.03	40	eP	P	14 17 11.9	+0.2
	comp=Z,15nm,0.9s,mb4.5						
MA2	Magadan	83.11	345	eP	P	14 17 10.7	-1.0
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
MA2	Magadan	83.11	345	⇓iP	P	14 17 10.8	-0.9
	comp=Z,12nm,0.8s,mb4.5						
MSU	Marysvale	85.09	46	eP	P	14 17 22.6	+0.7
BJI	Beijing	85.13	316	eP	P	14 17 22.5	+0.4
	comp=Z,18nm,0.7s,mb4.8						
BJI				LR	LR		
	comp=Z,100nm,21.7s						
BMO	Blue Mountains	85.20	39	eP	P	14 17 22.1	-0.2
	comp=Z,6.1nm,0.7s,mb4.3						
ENH	Enshi	85.30	304	eP	P	14 17 23.3	+0.2
	comp=Z,40nm,1.3s,mb4.9						
TNA	Tin City	85.62	4	eP	P	14 17 23.1	-0.7
	comp=Z,5.3nm,0.8s,mb4.2						
SEY	Seymchan	85.72	347	eP	P	14 17 26.5	+2.2
SEY				pmax	pmax		
	comp=N,8.0nm,0.8s						
SEY				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
GYA	Guiyang	85.93	300	⇑iP	P	14 17 27.3	+1.1
GYA				S	S	14 27 12.5	+2.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
TMUT	Trail Mountain	86.13	46	eP	P	14 17 27.7	+0.8
HLID	Hailey	86.24	41	eP	P	14 17 27.9	+0.7
	comp=Z,11nm,0.9s,mb4.5						
SRU	San Rafael	86.51	46	eP	P	14 17 28.8	+0.1
MCK	McKinley	86.54	13	eP	P	14 17 27.1	-1.1
	comp=Z,11nm,0.7s,mb4.7						
HWUT	Hardware Ranch	87.04	44	eP	P	14 17 30.7	-0.4
	comp=Z,1.5nm,0.5s,mb4.0						
SYO	Syowa Base	87.16	193	⇓P	P	14 17 29.4	-1.6
SYO	Syowa Base	87.16	193	⇓PcP	PcP	14 17 32.9	+0.3
SYO	Syowa Base	87.16	193	⇑pP	pP	14 19 37.4	-0.8
LTX	Lajitas	87.19	58	eP	P	14 17 32.5	+0.4
	comp=Z,7.9nm,1.0s,mb4.4						
XAN	Xi'an	87.39	308	P	P	14 17 33.7	+0.8
XAN				AMB	AMB		
	comp=Z,24nm,0.9s,mb4.9						
ANMO	Albuquerque	87.46	51	⇑iP	P	14 17 34.1	+0.9
ANMO	Albuquerque	87.46	51	eP	P	14 17 33.4	+0.2
	comp=Z,1.4nm,0.5s,mb4.0						
COLA	College	87.77	13	d iP	P	14 17 32.8	-1.2
COLA	College	87.77	13	eP	P	14 17 32.4	-1.5
	comp=Z,19nm,0.9s,mb4.8						
IMA	Indian Mountai	87.78	10	eP	P	14 17 33.6	-0.4
	comp=Z,7.4nm,0.6s,mb4.6						
GDL2	Guadalupe Moun	87.84	55	eP	P	14 17 35.5	+0.4
MCMT	McKenzie Canyo	87.86	40	eP	P	14 17 35.3	+0.5
HIA	Hailar	87.94	325	eP	P	14 17 34.5	-0.6
	comp=Z,10nm,1.1s,mb4.5						
RRI2	Red Ridge	88.06	42	eP	P	14 17 36.6	+0.8
BILL	Bilibino	88.43	354	i P	P	14 17 36.8	-0.2
BILL				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
BILL	Bilibino	88.43	354	eP	P	14 17 36.3	-0.7
	comp=Z,9.8nm,0.8s,mb4.6						
IMW	Indian Meadow	88.58	42	eP	P	14 17 38.5	+0.3
HHC	Hu-ho-hao-te	88.59	315	⇓P	P	14 17 38.8	+0.4
HHC				S	S	14 27 28.1	-6.3
HHC				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.5						
MOOW	Moose Ponds	88.62	42	eP	P	14 17 38.4	-0.1
KMI	Kunming	88.64	297	⇓P	P	14 17 40.4	+1.4
KMI				AP	pP	14 19 47.7	+1.1
KMI				S	S	14 27 37.1	+1.9
KMI				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.5						
KMI				AMB	AMB		
	comp=Z,76nm,5.3s						
KMI	Kunming	88.64	297	⇓P	P	14 17 40.4	+1.4
	comp=Z,11nm,1.3s,mb4.5						
KMI				pP	pP	14 19 47.7	+1.1
KMI				S	S	14 27 37.1	+1.9
KMI				LR	LR		
	comp=Z,180nm,15.2s						
LOHW	Long Hollow	88.65	42	eP	P	14 17 38.8	+0.2
CHMT	Chamberlain Mo	88.70	39	eP	P	14 17 38.2	-0.5
QLMT	Earthquake Lak	88.73	41	eP	P	14 17 40.1	+1.1
VNA3	Neumayer Olymp	88.73	176	⇑iP	P	14 17 37.7	-0.7
BW06	Boulder Array	88.91	43	eP	P	14 17 39.5	-0.4
	comp=Z,13nm,1.2s,mb4.6						
YMR	Madison River	88.94	41	eP	P	14 17 40.6	+0.6
BOZ	Bozeman (W)	89.02	40	eP	P	14 17 40.7	+0.4
	comp=Z,14nm,1.3s,mb4.6						
DAWY	Dawson	89.06	16	eP	P	14 17 39.5	-0.5
VNA2	Neumayer--Watz	89.17	177	⇑iP	P	14 17 40.0	-0.4
VNA2	Neumayer--Watz	89.17	177	⇓i	P	14 17 48.9	+8.5
LKWY	Lake	89.24	42	eP	P	14 17 42.5	+1.2
	comp=Z,5.0nm,0.8s,mb4.4						
SDCO	Great Sand Dun	89.38	49	eP	P	14 17 42.0	-0.2
	comp=Z,1.5nm,0.7s,mb3.9						
WALA	Waterton Lakes	89.44	36	eP	P	14 17 41.7	-0.5
	comp=Z,6.7nm,0.9s,mb4.5						
CM31	Chiang Mai Arr	89.44	290	eP	P	14 17 42.9	0.0
	comp=Z,10nm,0.9s,mb4.7						
CMAR	Chiang Mai Arr	89.44	290	i P	P	14 17 44.1	+1.2
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PLCA	Paso Flores	90.03	134	eP	P	14 17 45.0	-0.1
	comp=Z,4.9nm,0.7s,mb4.5						
YAK	Yakutsk	91.40	338	d iP	P	14 17 49.7	-1.1
YAK				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.3						
YAK	Yakutsk	91.40	338	eP	P	14 17 49.7	-1.1
	comp=Z,24nm,0.8s,mb5.2						
EDM	Edmonton	91.92	33	eP	P	14 17 52.5	-0.9
LZH	Lanzhou	92.02	308	eP	P	14 17 55.0	+0.7
LZH				PP	PP	14 21 47.0	+0.8
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
LZH	Lanzhou	92.02	308	eP	P	14 17 55.0	+0.7
	comp=Z,15nm,1.0s,mb5.0						
LZH				pP	pP	14 19 54.5	-8.1
LZH				sP	sP	14 20 48.0	-13
LZH				PP	PP	14 21 47.0	+0.8
INK	Inuvik	93.87	15	eP	P	14 18 00.5	-1.4
	comp=Z,11nm,1.3s,mb4.8						
ULN	Ulaanbaatar	94.61	319	i P	P	14 18 05.7	0.0
ULN	Ulaanbaatar	94.61	319	eP	P	14 18 05.4	-0.3
	comp=Z,1.8nm,0.6s,mb4.4						
YKA	Yellowknife Ar	96.22	25	i P	P	14 18 06.8	-5.8
GTA	Gaotai	96.22	310	eP	P	14 18 13.7	+0.5
GTA				AP	pP	14 20 16.6	-5.2
GTA				SKS	SKS	14 27 51.1	-2.4
GTA				S	S	14 28 33.7	-6.3
GTA				SS	SS	14 35 34.6	+0.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.5						
GTA				AMB	AMB		
	comp=Z,105nm,6.5s						
ZAK	Zakamensk	97.87	321	eP	P	14 18 16.6	-3.7
ZAK				e		14 22 22.1	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,2.4s,mb3.7						
TIXI	Tiksi	98.08	345	i P	P	14 18 19.3	-1.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.8						
KURK	Kurchatov	113.24	318	ePKP	PKPdf	14 23 16.7	-0.5
CHKZ	Chkalovo	118.14	321	ePKPdf	PKPdf	14 23 25.8	-0.9
ARU	Arti	124.45	326	i PKIKP	PKPdf	14 23 29.3	-10
SUR	Sutherland	124.78	200	PKPdf	PKPdf	14 23 41.1	+1.0
BOSA	Boshof	126.53	206	ePKPdf	PKPdf	14 23 44.8	+1.1
JOF	Joensuu	132.44	342	ep	PKPdf	14 23 51.5	-2.4
	comp=Z,3.3nm,0.5s						
JOF	Joensuu	132.44	342	ePKIKP	PKPdf	14 23 51.5	-2.4
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KAF	Kangasniemi	134.47	344	ep	PKPdf	14 23 53.5	-4.2
	comp=Z,2.2nm,0.6s						
KAF	Kangasniemi	134.47	344	ePKHKP		14 23 53.5	
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OBN	Obninsk	136.02	332	ePKIKP	PKPdf	14 24 01.2	+0.6
OBN						14 26 44.0	
OBN				pmax	pmax		
	comp=Z,17nm,1.3s						
NB2	NORSAR Subarra	138.37	353	PKP	PKPdf	14 23 54.4	-10
	comp=Z,1.3nm,0.7s,baz=16,slow=3.1						
NB2	NORSAR Subarra	138.37	353	⇑PKPab	PKPdf	14 23 54.4	-10
SOC	Sochi	140.32	315	i PKIKP	PKPdf	14 24 14.0	+5.2
SOC				e		14 27 12.0	
SOC				ePPP	PPP	14 30 26.4	-3.4
SOC				eSS	SS	14 44 50.3	-5.0
SOC				eSSS	SSS	14 50 12.7	-7.8
SOC				pmax	pmax		
	comp=Z,71nm,1.5s						
SOC				pmax	pmax		
	comp=N,43nm,1.1s						
SOC				pmax	pmax		
	comp=E,45nm,1.1s						
SUW	Suwalki	142.14	339	ePKP	PKPdf	14 24 09.4	-2.2
MUD	Monsted U'grnd	143.09	353	⇑iPKHKP	PKPdf	14 24 12.3	-0.9
MUD				pmax	pmax		
	comp=Z,31nm,0.5s						
MUD	Monsted U'grnd	143.09	353	⇑iP	PKPbc	14 24 12.3	+0.5
	comp=Z,31nm,0.5s						
MALT	Malatya	143.18	308	ePKPdf	PKPdf	14 24 13.8	-0.2
SIM	Simferopol'	143.24	320	ePKHKP	PKPdf	14 24 14.4	+0.6
SIM				pmax	pmax		
	comp=Z,51nm,0.6s						
COP	Copenhagen	143.36	350	ePKHKP	PKPdf	14 24 13.2	-0.5
COP				pmax	pmax		
	comp=Z,35nm,0.6s						
COP	Copenhagen	143.36	350	i P	PKPbc	14 24 13.2	+0.5
	comp=Z,35nm,0.6s						
BSD	Bornholm Skovb	143.43	347	⇓iPKHKP	PKPdf	14 24 12.8	-1.0
BSD				pmax	pmax		
	comp=Z,38nm,0.6s						
BSD	Bornholm Skovb	143.43	347	⇓iP	PKPbc	14 24 12.8	-0.1
	comp=Z,38nm,0.6s						
GKP	Gorka Klasztor	144.57	344	ePKP	PKPdf	14 24 17.1	+1.3
MBAR	Mbarara	144.78	238	ePKPdf	PKPdf	14 24 18.2	+0.8
BSEG	Bad Segeberg	145.39	351	ePKIKP	PKPdf	14 24 19.5	+2.3
DMUB	Kingscourt	145.50	9	eP	PKPdf	14 24 19.5	+2.1
KWP	Kalwaria	145.86	335	ePKP	PKPdf	14 24 20.9	+2.8
KWP				e		14 24 23.7	
KWP	Kalwaria	145.86	335	ePKP	PKPdf	14 24 20.9	+2.8
KWP				e		14 24 23.7	
DCN	Croghan	145.98	9	eP	PKPdf	14 24 21.0	+2.8
DLF	Lyons Farm	146.14	9	eP	PKPdf	14 24 21.0	+2.5
BURAR	Bucovina Array	146.32	331	⇑P	PKPdf	14 24 22.8	+3.9
BURAR	Bucovina Array	146.32	331	⇑P	PKPdf	14 24 22.8	+3.8
OJC	Ojcow	146.45	339	ePKP	PKPdf	14 24 22.4	+3.3
KOLS	Kolonicke sedl	146.59	335	i PKP	PKPdf	14 24 23.6	+4.2
KOLS				i		14 24 26.8	
VRI	Vrincioaia	146.82	327	⇓P	PKPdf	14 24 24.1	+4.2
VRI	Vrincioaia	146.82	327	⇓P	PKPdf	14 24 24.0	+4.1
CRVS	Cervenica-Dubn	146.93	336	ePKP	PKPdf	14 24 24.2	+4.2
CRVS				i		14 24 27.8	
NIE	Niedzica	146.94	337	ePKP	PKPdf	14 24 23.1	+3.1
HARR	Harsova	146.96	324	⇑P	PKPdf	14 24 24.3	+4.2
HARR	Harsova	146.96	324	⇑P	PKPdf	14 24 24.3	+4.2
KSP	Ksiaz	147.01	343	ePKP	PKPdf	14 24 24.4	+4.4
KSP				epPKP		14 26 35.4	
KSP	Ksiaz	147.01	343	ePKP	PKPdf	14 24 24.3	+4.3
OKC	Ostrava-Krasne	147.33	340	i PKIKP	PKPdf	14 24 24.4	+3.8
OKC				e		14 24 29.3	
OKC	Ostrava-Krasne	147.33	340	⇑iPKPB	PKPdf	14 24 24.4	+3.8
OKC				ePKPAB	PKPab	14 24 29.3	-1.2
UPC	Upice	147.39	343	i PKP	PKPdf	14 24 25.2	+4.6
UPC				e		14 24 29.8	
UPC				e		14 26 43.9	
UPC	Upice	147.39	343	⇑iPKPB	PKPdf	14 24 25.2	+4.6
UPC				ePKPAB	PKPab	14 24 29.8	-0.9
UPC				epPKP		14 26 43.9	
CLL	Collm	147.40	347	i PKIKP	PKPdf	14 24 25.1	+4.5
CLL				i		14 24 29.1	
CLL				pmax	pmax		
	comp=Z,43nm,0.9s						
CLL	Collm	147.40	347	⇓iPKP1	PKPdf	14 24 25.1	+4.5
CLL				i PKP2	PKPab	14 24 29.1	-1.6
CLL				i *PPKP		14 26 44.0	
CLL				e		14 27 08.0	
CLZ	Clausthal	147.40	350	ePKPbc	PKPdf	14 24 25.1	+4.5
CLZ				ePKPab	PKPab	14 24 29.3	-1.4
DPC	Dobruska-Polom	147.44	342	i PKP	PKPdf	14 24 25.5	+4.8
DPC				e		14 24 30.3	
DPC				e		14 26 45.1	
DPC	Dobruska-Polom	147.44	342	⇑iPKPB	PKPdf	14 24 25.5	+4.8
DPC				ePKPAB	PKPab	14 24 30.3	-0.6
DPC				epPKP		14 26 45.1	
MLR	Muntele Rosu	147.48	327	⇓P	PKPdf	14 24 25.3	+4.3
MORC	Moravsky Berou	147.58	340	ePKPbc	PKPdf	14 24 24.6	+3.6
BRG	Berggiesshubel	147.59	345	i PKIKP	PKPdf	14 24 25.8	+4.8
BRG				i		14 24 29.9	
BRG				pmax	pmax		
	comp=Z,19nm,0.9s						
PVCC	Panska Ves	147.75	344	epPKP		14 26 45.7	
EIL	Elat	148.18	294	ePKPbc	PKPdf	14 24 27.8	+5.2
PRU	Pruhonice	148.26	344	i PKP	PKPdf	14 24 27.1	+5.1
PRU				e		14 24 33.0	
PRU				e		14 26 48.1	
PRU	Pruhonice	148.26	344	⇑iPKPB	PKPdf	14 24 27.1	+5.1
PRU				ePKPAB	PKPab	14 24 33.0	-1.1
PRU				epPKP		14 26 48.1	
MOX	Moxa	148.32	348	ePKIKP	PKPdf	14 24 27.4	+5.3
MOX				e		14 24 32.8	
MOX				pmax	pmax		
	comp=Z,24nm,1.3s						
MOX	Moxa	148.32	348	PP2		14 24 27.0	
MOX				PKP2	PKPab	14 24 33.0	-1.4
KOLL	Kolacno	148.33	338	i PKP	PKPdf	14 24 28.4	+6.2
PSZ	Piszkesteto	148.34	336	ePKPbc	PKPdf	14 24 27.6	+5.4
PSZ				ePKPab	PKPab	14 24 32.8	-1.8
NKC	Novy Kostel	148.53	346	i PKIKP	PKPdf	14 24 28.0	+5.6
NKC				e		14 24 34.1	
NKC	Novy Kostel	148.53	346	⇑iPKPB		14 24 28.0	
NKC				ePKPAB	PKPab	14 24 34.1	-1.2
SMOL	Smolenice	148.72	339	ePKP	PKPdf	14 24 29.3	+6.5
HGN	Heimansgroeve	149.04	354	ePKP	PKPdf	14 24 29.3	+6.1
	comp=Z,21nm,0.9s						
TNS	Taunus Mts	149.28	351	ePKP2	PKPab	14 24 36.8	-1.5
TNS	Taunus Mts	149.28	351	ePKPbc	PKPdf	14 24 29.7	+6.1
TNS				ePKPab	PKPab	14 24 36.8	-1.5
KHC	Kasperske Hory	149.29	344	i PKP	PKPdf	14 24 29.9	+6.2
KHC				e		14 24 37.5	
KHC				e		14 26 51.7	
KHC	Kasperske Hory	149.29	344	⇑iPKPB	PKPdf	14 24 29.9	+6.2
KHC				ePKPAB	PKPab	14 24 37.5	-0.9
KHC				epPKP		14 26 51.7	
GRA1	Grafenberg Arr	149.31	348	ePKPbc	PKPdf	14 24 30.2	+6.5
GRA1				ePKPab	PKPab	14 24 37.7	-0.8
GRF	Grafenberg Arr	149.31	348	ePKP2	PKPab	14 24 37.7	-0.8
GRF	Grafenberg Arr	149.31	348	ePKP	PKPdf	14 24 30.2	+6.5
GRF				ePKP	PKPab	14 24 37.7	-0.8
WET	Wettzell	149.45	345	ePKP2	PKPab	14 24 38.3	-0.8
WET	Wettzell	149.45	345	ePKPbc	PKPdf	14 24 30.4	+6.5

WET				*e*PKPab	PKPab	14 24 38.3	-0.8
GEC2	**GERESS Array S**	**149.52**	**344**	*e*PKP2	PKPab	14 24 38.4	-1.0
GEC2	**GERESS Array S**	**149.52**	**344**	*e*PKPbc	PKPdf	14 24 30.3	+6.3
GEC2				*e*PKPab	PKPab	14 24 38.4	-1.0
GIVF	**Givet**	**149.78**	**356**	*e*PKIKP	PKPdf	14 24 30.8	+6.4
	comp=Z,61nm,0.8s						
BAIF	**Baives**	**149.87**	**356**	*e*PKIKP	PKPdf	14 24 31.2	+6.7
	comp=Z,47nm,0.9s						
WLF	**Walferdange**	**150.10**	**354**	*e*PKPbc	PKPdf	14 24 32.3	+7.4
WLF				*e*PKPab	PKPab	14 24 40.8	-1.0
MOA	**Molln**	**150.28**	**342**	⇓*i*P	PKPdf	14 24 31.8	+6.5
MOA				*i*		14 24 42.3	
FUR	**Furstenfeldbru**	**150.74**	**346**	*e*PKP2	PKPab	14 24 43.1	-1.4
BFO	**Black Forest**	**151.14**	**350**	*e*PKIKP	PKPdf	14 24 34.0	+7.5
BFO				*e*		14 24 44.6	
FLN	**La Foliniere**	**151.20**	**3**	*e*PKIKP	PKPdf	14 24 33.6	+7.0
CDF	**Champ du Feu**	**151.21**	**352**	*e*PKIKP	PKPdf	14 24 33.9	+7.3
	comp=Z,25nm,1.0s						
KBA	**Koelnbreinsper**	**151.24**	**343**	⇑*i*P	PKPdf	14 24 33.8	+7.1
KBA				*i*		14 24 46.9	
MEZF	**Maizieres J'vi**	**151.36**	**355**	*e*PKIKP	PKPdf	14 24 34.6	+7.8
LDF	**La Druitiere**	**151.39**	**2**	*e*PKIKP	PKPdf	14 24 33.9	+7.1
	comp=Z,12nm,0.5s						
ROSF	**Rostrenen**	**151.41**	**7**	*e*PKIKP	PKPdf	14 24 33.8	+6.9
	comp=Z,9.6nm,0.6s						
WATA	**Walderalm**	**151.46**	**346**	⇑*i*P	PKPdf	14 24 34.6	+7.6
WATA				*i*		14 24 46.9	
WTTA	**Wattenberg**	**151.51**	**345**	⇑*i*P	PKPdf	14 24 35.1	+8.0
WTTA				*i*		14 24 47.1	
MOTA	**Moosalm**	**151.56**	**346**	⇑*i*P	PKPdf	14 24 34.4	+7.3
MOTA				*i*		14 24 47.3	
GRR	**Gorron**	**151.56**	**3**	*e*PKIKP	PKPdf	14 24 34.5	+7.4
	comp=Z,13nm,0.6s						
SGMF	**Saint Gilles**	**151.57**	**6**	*e*PKIKP	PKPdf	14 24 34.3	+7.2
	comp=Z,20nm,0.7s						
SQTA	**Sankt Quirin**	**151.65**	**346**	⇓*i*P	PKPdf	14 24 35.0	+7.7
SQTA				*i*		14 24 47.3	
PDKS	**Podkum**	**151.66**	**340**	*i* PKPbc	PKPdf	14 24 34.9	+7.5
CRES	**Cresnjev**	**151.72**	**339**	*i* PKPbc	PKPdf	14 24 35.1	+7.7
LJU	**Ljubljana**	**151.83**	**341**	*i* PKPbc	PKPdf	14 24 35.4	+7.8
BNI	**Bardonecchia**	**154.59**	**351**	*e*PKPab	PKPab	14 24 59.9	-0.8
ORIF	**Oris-en-Rattie**	**154.82**	**353**	*e*PKIKP	PKPdf	14 24 42.0	+10
MBDF	**Montbardon**	**154.89**	**351**	*e*PKIKP	PKPdf	14 24 42.1	+10

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*BJI **07** 14:23:51.4,59.90S×27.10W,h115^{km},mB5.2*
*NEIC **07** 14:23:51.4±0.9,59.89S×27.08W,h118^{km}±8^{km},mb5.2/19, Error ellipse: s-maj=7.2km s-min=4.7km az=211.0*
*HRVD **07** 14:23:51.4±0.2,60.18S×26.61W,h89^{km}±3^{km},MW5.1/62, Centroid moment Tensor Solution. LP body waves: s39,c60;Mantle waves: s62,c104; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.63±.23; $M_{\theta\theta}$1.82±.29; $M_{\phi\phi}$-4.45±.24; $M_{r\theta}$3.42±.14; $M_{\theta\phi}$1.17±.23; $M_{\phi r}$3.34±.14; Best double couple: $M_0$6.218×10^{16} NP1:ϕ_s138°,δ37°,λ26°. NP2:ϕ_s27°,δ75°,λ124°. Principal axes: T 6.654, Plg48°, Azm334°; N -.873, Plg33°, Azm197°; P -5.782, Plg22°, Azm92°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*GUC **07** 14:23:54.7±0.0,59.85S×27.15W,h146^{km},mb5.1(NEIC)*
ISC 07 14:23:48.7±2.1**,59.87S**±0.07×**27.1W**±0.1**,h102**^{km}±21^{km}**, h89**^{km}±3.8^{km}**:pP-P,n110,**$\sigma0\overset{s}{.}$**79**/43**,mb5.2**/20**,12C-4D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.29**	**152**	⇑*i*P	**P**	**14 26 54.7**	**+0.6**
VNA1	**Neumayer--Stat**	**13.29**	**152**	⇑*i*	**P**	**14 26 59.2**	**+5.1**
VNA1	**Neumayer--Stat**	**13.29**	**152**	S	**S**	**14 29 15.5**	**-4.3**
VNA3	**Neumayer Olymp**	**13.41**	**155**	⇑*i*P	**P**	**14 26 55.6**	**-0.1**
VNA3	**Neumayer Olymp**	**13.41**	**155**	⇑*i*	**P**	**14 27 02.6**	**+6.9**
VNA3	**Neumayer Olymp**	**13.41**	**155**	⇑*i*S	**S**	**14 29 15.9**	**-6.8**
VNA2	**Neumayer--Watz**	**13.69**	**152**	⇑*i*P	**P**	**14 26 58.4**	**-0.7**
VNA2	**Neumayer--Watz**	**13.69**	**152**	⇑*i*	**P**	**14 27 00.7**	**+1.6**
VNA2	**Neumayer--Watz**	**13.69**	**152**	⇑*i*S	**S**	**14 29 26.5**	**-2.5**
SNAA	**Sanae**	**15.29**	**150**	*e*Pn	**P**	**14 27 19.6**	**0.0**
	3μm,0.6s						
PMSA	**Palmer Station**	**17.67**	**238**	*e*P	**P**	**14 27 50.0**	**+0.7**
	33nm,0.8s						
TRIS	**Tristan da Cun**	**24.71**	**29**	*e*P	**P**	**14 29 02.1**	**+0.8**
	171nm,0.9s,mb5.5						
SYO	**Syowa Base**	**28.67**	**136**	⇓P	**P**	**14 29 36.6**	**-0.7**
SYO	**Syowa Base**	**28.67**	**136**	⇑pP	pP	14 30 03.6	+3.7
SYO	**Syowa Base**	**28.67**	**136**	⇓pP	pP	14 30 08.7	+8.8
SYO	**Syowa Base**	**28.67**	**136**	⇓sP	sP	14 30 22.4	+11
QSPA	**South Pole Qui**	**30.37**	**180**	⇓*i*P	**P**	**14 29 53.6**	**+1.2**
	32nm,1.1s,mb4.9						
TRQA	**Tornquist**	**31.06**	**299**	*e*P	**P**	**14 29 58.5**	**-0.4**
	102nm,0.7s,mb5.7						
PLCA	**Paso Flores**	**32.92**	**286**	*e*P	**P**	**14 30 13.8**	**-1.2**
	65nm,0.8s,mb5.5						
MAW	**Mawson**	**37.09**	**141**	*e*P	**P**	**14 30 50.2**	**0.0**
	44nm,1.0s,mb5.3						
MDZ	**Mendoza**	**38.45**	**296**	*e*P	**P**	**14 31 00.8**	**-1.0**
FCH	**Farellones**	**38.74**	**294**	*e*P	**P**	**14 31 04.6**	**+0.4**
CLCH	**Cerro Calan**	**38.80**	**293**	*e*P	**P**	**14 31 04.9**	**+0.2**
CAM4	**Nova Friburgo**	**39.05**	**337**	*e*P	**P**	**14 31 07.0**	**+0.2**
CAM4				*i*		14 31 09.4	
PEL	**Peldehue**	**39.08**	**293**	*e*P	**P**	**14 31 07.2**	**+0.2**
ZON	**Zonda**	**39.50**	**297**	*e*P	**P**	**14 31 10.0**	**-0.5**
TLL	**Tololo Astrono**	**41.63**	**296**	⇑*e*P	**P**	**14 31 28.4**	**+0.5**
SUR	**Sutherland**	**41.72**	**71**	*e*P	**P**	**14 31 29.1**	**+0.4**
	16nm,0.8s,mb4.8						
VNDA	**Vanda**	**42.75**	**183**	*e*P	**P**	**14 31 37.8**	**+1.3**
	6.1nm,0.8s,mb4.4						
BAO	**Brasilia Array**	**46.74**	**332**	⇑P	**P**	**14 32 08.8**	**-0.4**
BAO				*i*		14 32 10.0	
BOSA	**Boshof**	**46.97**	**72**	*e*P	**P**	**14 32 10.8**	**0.0**
	13nm,0.9s,mb4.7						
LVC	**Limon Verde**	**47.36**	**303**	*e*P	**P**	**14 32 14.3**	**+0.3**
	79nm,0.8s,mb5.5						
LVC				*e*PcP	PcP	14 33 43.3	-0.2
LBTB	**Lobatse**	**50.16**	**70**	*e*P	**P**	**14 32 35.4**	**-0.1**
	14nm,0.9s,mb4.9						
CASY	**Casey**	**50.30**	**159**	*e*P	**P**	**14 32 36.1**	**+0.1**
	7.9nm,0.6s,mb4.8						
TSUM	**Tsumeb**	**51.58**	**58**	*e*P	**P**	**14 32 46.5**	**+0.2**
	11nm,1.1s,mb4.8						
LPAZ	**La Paz**	**52.70**	**308**	*e*P	**P**	**14 32 54.3**	**-0.4**
	61nm,0.6s,mb5.8						
DRV	**Dumont d'Urvil**	**53.41**	**174**	S	**S**	**14 40 16.0**	**-5.9**
DRV				R		14 50 00.0	
ARE	**Arequipa**	**53.92**	**304**	⇑*i*P	**P**	**14 33 04.0**	**+0.3**
SAML	**Samuel**	**57.58**	**316**	*e*P	**P**	**14 33 28.0**	**-2.0**
	81nm,1.0s,mb5.7						
SAML				*e*	pP	14 33 50.4	-4.6
LSZ	**Lusaka**	**59.77**	**67**	*e*P	**P**	**14 33 44.7**	**-0.4**
	18nm,0.9s,mb5.1						
LSZ				*e*	pP	14 34 05.3	-5.0
OTAV	**Otavalo**	**71.86**	**305**	*e*P	**P**	**14 35 02.2**	**-0.1**
	85nm,1.1s,mb5.5						
MBAR	**Mbarara**	**73.87**	**62**	P	**P**	**14 35 15.0**	**+0.9**
	2.6nm,0.6s,mb4.1						
SDV	**Santo Domingo**	**76.78**	**316**	*e*P	**P**	**14 35 29.6**	**-0.9**
	58nm,0.8s,mb5.4						
SDV				*e*	pP	14 35 54.5	-2.3
RKT	**Rikitea**	**78.80**	**243**	*e*P	**P**	**14 35 42.5**	**+1.0**
	74nm,0.9s,mb5.5						
JTS	**JuntasAbangare**	**83.64**	**303**	*e*P	**P**	**14 36 06.8**	**-0.1**
	65nm,1.2s,mb5.3						
STKA	**Stephens Creek**	**88.12**	**170**	*e*P	**P**	**14 36 29.0**	**+0.5**
SDCO	**Great Sand Dun**	**116.49**	**300**	*e*PKPdf	PKPdf	14 42 20.5	+0.6
SDCO				*e*PP	PP	14 43 30.2	-2.6
SRU	**San Rafael**	**119.85**	**297**	*e*PKPdf	PKPdf	14 42 26.6	+0.3
MSU	**Marysvale**	**120.11**	**295**	*e*PKPdf	PKPdf	14 42 27.6	+0.7
MVU	**Marysvale**	**120.12**	**295**	*e*PKPdf	PKPdf	14 42 28.4	+1.5
MVU				PP	PP	14 44 01.7	+4.5
TCUT	**Toone Canyon**	**121.87**	**298**	*e*PKPdf	PKPdf	14 42 30.2	0.0
HWUT	**Hardware Ranch**	**122.33**	**298**	*e*PKPdf	PKPdf	14 42 31.4	+0.3
BW06	**Boulder Array**	**122.38**	**300**	*e*PKPdf	PKPdf	14 42 31.0	-0.1
ULM	**Lac du Bonnet**	**123.02**	**314**	*e*PKPdf	PKPdf	14 42 31.4	-0.8
LOHW	**Long Hollow**	**123.52**	**300**	*e*PKPdf	PKPdf	14 42 33.9	+0.5
CM31	**Chiang Mai Arr**	**123.59**	**113**	*e*PKPdf	PKPdf	14 42 35.0	+0.9
RRI2	**Red Ridge**	**123.62**	**299**	*e*PKPdf	PKPdf	14 42 33.7	+0.1
MOOW	**Moose Ponds**	**123.69**	**300**	*e*PKPdf	PKPdf	14 42 34.2	+0.5
IMW	**Indian Meadow**	**123.89**	**300**	*e*PKPdf	PKPdf	14 42 34.8	+0.7
KOLN	**Koldanda**	**123.92**	**93**	*e*P	PKPdf	14 42 35.3	+0.8
NB2	**NORSAR Subarra**	**124.16**	**21**	PKPdf	PKPdf	14 42 34.5	+0.3
	9.6nm,1.0s,baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**124.16**	**21**	PKPd	PKPdf	14 42 34.5	+0.3
	baz=202,slow=1.9						
GKN	**Gorkha**	**124.63**	**93**	*e*P	PKPdf	14 42 36.6	+0.8
	16nm,0.6s						
PKI	**Pulchoki**	**124.66**	**94**	*e*P	PKPdf	14 42 37.1	+1.2
KKN	**Kakani**	**124.78**	**94**	*e*P	PKPdf	14 42 36.9	+0.8
	12nm,0.5s						
JIRN	**Jiri**	**125.13**	**95**	*e*P	PKPdf	14 42 38.5	+1.7
	28nm,0.6s						
GUN	**Gumba**	**125.18**	**94**	*e*P	PKPdf	14 42 38.0	+1.1
MCMT	**McKenzie Canyo**	**125.46**	**299**	*e*PKPdf	PKPdf	14 42 38.1	+1.1
BOZ	**Bozeman (W)**	**125.58**	**301**	*e*PKPdf	PKPdf	14 42 37.8	+0.6
WVOR	**Wild Horse Val**	**126.20**	**293**	*e*PKPdf	PKPdf	14 42 39.5	+1.1
MOD	**Modoc**	**126.56**	**292**	*e*PKPdf	PKPdf	14 42 40.0	+0.9
CHMT	**Chamberlain Mo**	**127.27**	**301**	*e*PKPdf	PKPdf	14 42 41.4	+1.0
BMO	**Blue Mountains**	**127.47**	**296**	*e*PKPdf	PKPdf	14 42 41.4	+0.6
MSO	**Missoula**	**127.50**	**300**	*e*PKPdf	PKPdf	14 42 41.5	+0.7
KAF	**Kangasniemi**	**128.35**	**29**	*e*pkp	PKPdf	14 42 42.0	0.0
	baz=217,slow=1.5						
WALA	**Waterton Lakes**	**129.20**	**302**	*e*PKPdf	PKPdf	14 42 44.8	+0.8
LSA	**Lhasa**	**129.28**	**98**	PKP	PKPdf	14 42 47.4	+2.7
KSH	**Kashi**	**129.44**	**77**	*e*PKP	PKPdf	14 42 46.4	+1.7
KSH				*e*PKS	PKS	14 46 21.1	+0.9
KSH				*e*SKS	SKS	14 49 41.1	-0.5
KSH				PP	PP		
	comp=Z,70nm,3.4s						
KSH				LR	LR		
	comp=N,190nm,5.3s						
KSH				LR	LR		
	comp=E,180nm,5.9s						
JOF	**Joensuu**	**130.28**	**31**	*e*pkp	PKPdf	14 42 45.6	-0.1
AAK	**Ala-Archa**	**131.09**	**74**	*e*PKPdf	PKPdf	14 42 48.0	+0.2
KMI	**Kunming**	**131.10**	**112**	PKP	PKPdf	14 42 49.4	+1.1
EDM	**Edmonton**	**132.08**	**306**	*e*PKPdf	PKPdf	14 42 49.7	+0.4
SUMG	**Summit**	**132.40**	**355**	*e*PKPdf	PKPdf	14 42 50.1	+0.6
CHKZ	**Chkalovo**	**137.23**	**60**	*e*PKPdf	PKPdf	14 42 58.6	-0.2
WMQ	**Urumqi**	**138.48**	**83**	*e*PKP	PKPdf	14 43 01.0	-0.4
KURK	**Kurchatov**	**138.87**	**69**	*e*PKPdf	PKPdf	14 43 02.0	+0.1
YKW3	**Yellowknife Ar**	**139.04**	**315**	*e*PKPdf	PKPdf	14 43 02.0	+0.1
LZH	**Lanzhou**	**140.71**	**105**	*e*PKP	PKPdf	14 43 05.0	-0.6
LZH				sPKP		14 44 04.2	
WHN	**Wuhan**	**140.97**	**121**	PKP	PKPdf	14 43 05.0	-1.2
GTA	**Gaotai**	**141.31**	**98**	PKP	PKPdf	14 43 03.1	-3.4
GTA				PP	PP		
	comp=Z,120nm,9.5s						
GTA				LR	LR		
	comp=N,101nm,14.1s						
GTA				LR	LR		
	comp=E,62nm,18.6s						
GTA				LR	LR		
	comp=Z,113nm,14.8s						
DLBC	**Dease Lake**	**142.54**	**303**	*e*PKPdf	PKPdf	14 43 09.0	+1.0
NJ2	**Nanjing**	**144.18**	**126**	*e*PKP	PKPdf	14 43 12.5	+0.8
NJ2				PKP2	PKPab	14 43 13.0	+1.1
NJ2				PP	PP	14 46 33.5	+3.0
NJ2				PKS	PKS	14 46 48.0	+1.7
NJ2				SKS	SKS	14 50 04.0	-5.0
NJ2				LR	LR		
	comp=N,330nm,17.8s						
NJ2				LR	LR		
	comp=E,310nm,28.4s						
NJ2				LR	LR		
	comp=Z,210nm,16.9s						
SSE	**Sheshan**	**144.27**	**129**	PKP	PKPdf	14 43 12.6	+0.7
SSE				PP	PP	14 46 31.9	+0.8
SSE				SS	SS	15 05 02.3	-4.6
SSE				PP	PP		
	comp=Z,91nm,4.6s						
SSE				LR	LR		
	comp=N,31nm,27.5s						
SSE				LR	LR		
	comp=E,41nm,27.5s						
SSE				LR	LR		
	comp=Z,34nm,19.5s						
TIA	**Tai'an**	**147.01**	**120**	*e*PKP	PKPdf	14 43 20.4	+4.0
BTO	**Baotou**	**147.26**	**107**	*e*PKP	PKPdf	14 43 21.8	+5.1
INK	**Inuvik**	**148.72**	**317**	*e*PKPbc	PKPdf	14 43 22.4	+4.2
DAWY	**Dawson**	**149.28**	**307**	*e*PKPbc	PKPdf	14 43 24.2	+5.0
DAWY				*e*PKPab	PKPab	14 43 29.8	-0.9
BJI	**Beijing**	**149.72**	**114**	*e*PKP	PKPdf	14 43 27.5	+6.9
BJI				LR	LR		
	comp=Z,103nm,21.6s						
EYAK	**Cordova Ski Ar**	**150.49**	**298**	*e*PKPbc	PKPdf	14 43 27.4	+6.3
DIV	**Divide**	**150.75**	**299**	*e*PKPbc	PKPdf	14 43 28.1	+6.6
DIV				*e*PKPab	PKPab	14 43 35.4	-1.5
ULN	**Ulaanbaatar**	**151.03**	**94**	*e*PKPdf	PKPdf	14 43 21.8	-0.6
ULN				*e*PKPbc	PKPdf	14 43 29.2	+6.8
THY	**Trims Highway**	**151.64**	**304**	*e*PKPbc	PKPdf	14 43 30.1	+7.3
THY				*e*PKPab	PKPab	14 43 39.9	-0.7
TLY	**Talaya**	**151.71**	**85**	*e*PKPdf	PKPdf	14 43 23.3	+0.1
TLY				*e*PKPbc	PKPdf	14 43 30.8	+7.6
SML	**Sawmill**	**152.15**	**300**	*e*PKPbc	PKPdf	14 43 31.4	+7.8
SML				*e*PKPab	PKPab	14 43 41.1	-1.6
COLA	**College**	**153.00**	**306**	*e*PKPbc	PKPdf	14 43 32.6	+7.9
COLA				*e*PKPab	PKPab	14 43 44.8	-1.5
MCK	**McKinley**	**153.09**	**303**	*e*PKPbc	PKPdf	14 43 33.3	+8.5
RSO	**Redoubt South**	**153.61**	**295**	*e*PKPbc	PKPdf	14 43 34.1	+8.5
RSO				*e*PKPab	PKPab	14 43 47.8	-1.1
IMA	**Indian Mountai**	**155.65**	**307**	*e*PKPdif	PKPdf	14 43 38.8	+11
IMA				*e*PKPab	PKPab	14 43 56.4	-1.0
CN2	**Changchun**	**156.87**	**122**	*e*PKP	PKPdf	14 43 29.7	-0.8
CN2				PP	PP	14 47 42.8	+0.4
CN2				PP	PP		
	comp=Z,140nm,4.0s						
MDJ	**Mudanjiang**	**159.26**	**127**	PKP	PKPdf	14 43 34.7	+1.3
MDJ				PP	PP	14 47 56.2	+0.9
MDJ				SS	SS	15 07 55.3	+5.1
MDJ				PP	PP		
	comp=Z,65nm,7.7s						
MDJ				LR	LR		
	comp=N,13nm,25.5s						
MDJ				LR	LR		
	comp=E,36nm,23.7s						
MDJ				LR	LR		
	comp=Z,45nm,29.1s						

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*NEIC **07** 14:28:21.8±1.1, 13.76N×92.97E, h30^{km}, mb4.3/8, Error ellipse: s-maj=19.4km s-min=10.6km az=33.0*
*BJI **07** 14:28:22.7, 13.51N×92.83E, h53^{km}, mB4.8, mb4.4, Ms3.7, Msz3.6*
ISC 07 14:28:21.4±2.4**,13.83N**±0.09×**92.96E**±0.05**,h31**^{km}±18^{km}**, n36,**$\sigma1\overset{s}{.}$**31**/41**,mb4.4**/8**,1C-2D,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.71**	**100**	P	**Pn**	**14 30 02.0**	**+1.5**
NST	**Nakhon Sawan**	**7.18**	**74**	P	**Pn**	**14 30 02.5**	**-4.5**
CM31	**Chiang Mai Arr**	**7.36**	**51**	*e*Pn	**Pn**	**14 30 07.1**	**-2.5**
	6.0nm,0.4s						
CHG	**Chiang Mai**	**7.59**	**48**	P	**Pn**	**14 30 11.7**	**-1.0**
CHRT	**Chiangrai**	**8.87**	**46**	⇓P	**P**	**14 30 35.5**	**+4.9**
NANT	**Nan**	**8.92**	**55**	P	**P**	**14 30 23.0**	**-8.3**
BWNR	**Bhubaneshwar**	**9.39**	**314**	*e*P	**P**	**14 30 35.1**	**-2.6**
BWNR				*e*S	**Sn**	**14 32 13.1**	**-10**
BWNR				*e*		14 32 18.2	
	comp=E,412nm,0.3s						
BWNR				*e*		14 32 18.3	
	comp=N,201nm,0.4s						
KKTK	**Khon Kaen**	**9.85**	**74**	P	**P**	**14 30 47.0**	**+2.9**
	comp=N,309nm,0.7s						
VIS	**Vishakhapatnam**	**10.04**	**294**	*e*P	**P**	**14 30 44.5**	**-2.4**
VIS				*e*S	**S**	**14 32 27.1**	**-12**
VIS				*e*		14 32 34.7	
	comp=E,122nm,0.2s						
VIS				*e*		14 32 34.8	
	comp=N,123nm,0.3s						
VIS				*e*T		14 40 50.5	
SHL	**Shillong**	**11.72**	**355**	*e*P	**P**	**14 31 11.0**	**+1.3**
SHL				*e*		14 33 16.0	
BLSP	**Bilaspur**	**13.19**	**310**	*e*P	**P**	**14 31 29.4**	**0.0**
BLSP				*e*S	**S**	**14 33 44.8**	**-11**
HYB	**Hyderabad**	**14.33**	**286**	*i* P	**P**	**14 31 44.5**	**+0.1**
HYB				*e*		14 34 10.0	
HYB				*e*S	**S**	**14 34 24.0**	**+1.0**
JIRN	**Jiri**	**15.14**	**336**	*e*P	**P**	**14 31 54.4**	**-0.5**
	comp=N,4.8nm,0.2s						
PKI	**Pulchoki**	**15.38**	**334**	*e*P	**P**	**14 31 57.5**	**-0.6**
	comp=N,19nm,0.6s						
GUN	**Gumba**	**15.49**	**336**	*e*P	**P**	**14 31 58.8**	**-0.6**
DMN	**Daman**	**15.54**	**333**	*e*P	**P**	**14 32 00.4**	**+0.2**
	comp=N,17nm,0.5s						
KKN	**Kakani**	**15.63**	**334**	*e*P	**P**	**14 32 00.4**	**-0.8**
LSA	**Lhasa**	**15.88**	**354**	P	**P**	**14 32 05.0**	**+0.5**
LSA	**Lhasa**	**15.88**	**354**	*e*Pn	**P**	**14 32 04.1**	**-0.4**
	comp=N,9.1nm,0.6s						
GKN	**Gorkha**	**16.09**	**332**	*e*P	**P**	**14 32 07.7**	**+0.5**
	comp=N,15nm,0.3s						
KOLN	**Koldanda**	**16.39**	**329**	*e*P	**P**	**14 32 12.4**	**+1.5**
	comp=N,9.3nm,0.5s						
BHPL	**Bhopal**	**17.44**	**305**	*e*P	**P**	**14 32 26.8**	**+2.6**
BHPL				*e*		14 32 28.9	
	comp=Z,14nm,1.1s						
BHPL				*e*S	**S**	**14 35 35.7**	**+0.5**
GYA	**Guiyang**	**17.96**	**44**	⇓*i*P	**P**	**14 32 33.3**	**+2.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
KAD	**Karad**	**18.41**	**283**	*e*P	**P**	**14 32 37.4**	**+1.0**
CD2	**Chengdu**	**19.69**	**29**	P	**P**	**14 32 50.4**	**-0.8**
DDI	**Dehra Dun**	**21.41**	**322**	*e*P	**P**	**14 33 09.2**	**+0.3**
ENH	**Enshi**	**22.36**	**40**	*e*P	**P**	**14 33 18.1**	**-0.4**
	comp=Z,9.4nm,0.7s,mb4.3						
SMLA	**Simla**	**22.52**	**322**	⇑*i*	**P**	**14 33 28.1**	**+8.1**
LZH	**Lanzhou**	**24.22**	**22**	*e*P	**P**	**14 33 39.0**	**+2.4**
LZH				AP		14 33 47.5	
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb4.6						
LZH	**Lanzhou**	**24.22**	**22**	*e*P	**P**	**14 33 39.0**	**+2.4**
	comp=Z,40nm,1.5s,mb4.6						
LZH				pP		14 33 47.5	
LZH				sP		14 33 52.0	
XAN	**Xi'an**	**24.79**	**33**	P	**P**	**14 33 42.3**	**+0.2**
XAN				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.7						
KURK	**Kurchatov**	**38.59**	**345**	P	**P**	**14 35 42.2**	**-1.1**
	comp=Z,4.2nm,1.0s,mb4.1						
CN2	**Changchun**	**40.79**	**37**	*e*P	**P**	**14 36 01.6**	**0.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	**43.49**	**341**	*e*P	**P**	**14 36 23.1**	**-0.5**
	comp=Z,3.4nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**52.76**	**129**	*e*P	**P**	**14 37 33.8**	**-2.3**
	comp=Z,3.6nm,0.5s,mb4.6						
MORC	**Moravsky Berou**	**70.16**	**318**	*e*P	**P**	**14 39 31.6**	**-1.5**
	comp=Z,1.1nm,0.5s,mb4.0						

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*KNET **07** 14:31:24.2, 36.55N×70.84E, h10^{km}*
*NNC **07** 14:31:32.1±22.0, 36.65N×71.38E, h218^{km}±206^{km}, mpv4.1, Error ellipse: s-maj=309.6km s-min=200.4km az=92.0*
ISC 07 14:31:27.6±2.2**,36.46N**±0.08×**71.0E**±0.4**,h221**^{km}±31^{km}**, n16,**$\sigma0\overset{s}{.}$**61**/17**,1C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.60**	**134**	*i*	**P**	**14 32 50.9**	**+0.1**
THN				*e*		14 33 51.0	
AML	**Almayashu**	**6.04**	**20**	P	**P**	**14 32 56.4**	**0.0**
	SNR=191						
UCH	**Uchtor**	**6.37**	**24**	P	**P**	**14 33 01.0**	**+0.4**
	SNR=36						
KZA	**Kyzart**	**6.51**	**29**	P	**P**	**14 33 02.4**	**0.0**
	SNR=24						
EKS2	**Erkin-Say**	**6.55**	**18**	P	**P**	**14 33 02.9**	**-0.1**
	SNR=38						
AAK	**Ala-Archa**	**6.73**	**23**	⇑P	**P**	**14 33 05.3**	**+0.1**
	5.3nm,0.3s						
AAK				⇓S	**S**	**14 34 19.9**	**-1.5**
	82nm,0.6s						
AAK	**Ala-Archa**	**6.73**	**23**	P	**P**	**14 33 05.2**	**0.0**
	SNR=21						
KBK	**Karagaybulak**	**6.90**	**25**	P	**P**	**14 33 08.2**	**+0.8**
	SNR=11						
SDNR	**Sundarnagar**	**7.01**	**133**	*e*	**P**	**14 33 08.0**	**-0.8**
SDNR				*e*		14 34 25.0	
ULHL	**Ulahol**	**7.06**	**34**	P	**P**	**14 33 10.3**	**+0.8**
	SNR=8.1						
CHMS	**Chumysh**	**7.14**	**23**	P	**P**	**14 33 10.7**	**+0.1**
	SNR=5.1						
USP	**Ospenovka**	**7.31**	**21**	P	**P**	**14 33 12.3**	**-0.4**
	SNR=10.0						
TKM2	**Tokmak 2**	**7.36**	**27**	P	**P**	**14 33 13.9**	**+0.5**
	SNR=15						
MK31	**Makanchi Array**	**13.33**	**36**	P	**P**	**14 34 30.3**	**+1.0**
	2.5nm,0.8s,baz=218,slow=13,SNR=23						
BVA0	**Borovoye Array**	**16.57**	**359**	⇓P	**P**	**14 35 08.4**	**-0.3**
	0.5nm,0.5s,baz=151,slow=9.2,SNR=37						
CHKZ	**Chkalovo**	**17.22**	**359**	⇓P	**P**	**14 35 15.5**	**-0.5**
	1.8nm,0.4s						

MAN 07 15:53:01.6,12.20N×123.78E,h13^{km}**,mb4.6,ML3.4, MS3.3,2C-2D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.22**	**317**	⇓*i*P	Pg	15 53 07.0	+0.4
MMPH				*i* S	Sg	15 53 16.5	+6.6
RCP	**Roxas**	**1.19**	**238**	⇓*e*P	Pb	15 53 24.6	+1.1
RCP				*e*S	Sb	15 53 41.9	+3.2
OCLP	**Ormoc**	**1.40**	**144**	*e*P	Pn	15 53 27.2	+0.3
OCLP				*e*S	Sb	15 53 48.0	+3.3
PVCP	**Virac**	**1.44**	**15**	*e*P	Pn	15 53 26.5	-1.0
KALP	**Kalibo**	**1.50**	**250**	*e*P	Pn	15 53 35.0	+6.6
PLP	**Palo**	**1.56**	**131**	*e*P	Pn	15 53 28.2	-1.1
PLP				*e*S	Sb	15 53 49.8	+0.4
LLP	**Lapu-Lapu**	**1.88**	**174**	⇑*e*P	Pn	15 53 33.3	-0.4
LLP				*e*S	Sn	15 53 57.8	+0.4
GUIM	**Jordan**	**1.95**	**217**	*e*P	Pn	15 53 36.4	+1.6
GUIM				*e*S	Sn	15 54 04.5	+5.3
BOAC	**Boac**	**2.27**	**304**	*e*P	Pn	15 53 39.8	+0.5
MSLP	**Maasin**	**2.31**	**152**	*e*P	Pn	15 53 39.6	-0.3
TBP	**Tagbilaran**	**2.49**	**178**	⇑*i*P	Pn	15 53 42.3	-0.2
TBP				*i* S	Sn	15 54 13.1	0.0
SJMP	**San Jose**	**2.61**	**276**	*e*P	Pn	15 53 48.4	+4.2

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*BJI **07** 15:57:49.7, 10.52N×92.63E, h34^{km}, mb4.4*
*NEIC **07** 15:57:52.2±1.3, 10.59N×92.63E, h30^{km}, mb4.4/4, Error ellipse: s-maj=25.0km s-min=18.3km az=59.0*
ISC 07 15:57:50.5±1.2**,10.7N**±0.1×**92.52E**±0.07**,h33**^{km}**,n15,** $\sigma1\overset{s}{.}$**15**/18**,mb4.6**/5**,1D,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**9.94**	**38**	*e*Pn	**P**	**16 00 13.5**	**-0.6**
	6.0nm,0.4s						
VIS	**Vishakhapatnam**	**11.34**	**309**	*e*P	**P**	**16 00 31.0**	**-2.3**
VIS				*e*S	**S**	**16 02 27.5**	**-12**
VIS				*e*		16 02 28.1	
	comp=N,32nm,0.2s						
VIS				*e*		16 02 28.2	
	comp=E,30nm,0.2s						
BWNR	**Bhubaneshwar**	**11.56**	**327**	*e*P	**P**	**16 00 33.5**	**-2.8**
BWNR				*e*S	**S**	**16 02 32.1**	**-13**
BWNR				*e*		16 02 32.3	
	comp=E,64nm,0.4s						
BWNR				*e*		16 02 32.7	
	comp=N,38nm,0.3s						
HYB	**Hyderabad**	**15.12**	**298**	*i* P	**P**	**16 01 25.0**	**+1.6**
HYB				*e*S	**S**	**16 04 10.0**	**-0.4**
BLSP	**Bilaspur**	**15.14**	**320**	*i* P	**P**	**16 01 24.0**	**+0.4**
BLSP				*e*		16 01 32.5	
	comp=Z,7.9nm,0.7s						
LSA	**Lhasa**	**18.99**	**356**	P	**P**	**16 02 12.8**	**+0.7**
LSA	**Lhasa**	**18.99**	**356**	*e*P	**P**	**16 02 12.9**	**+0.8**
	comp=Z,4.1nm,0.6s						
GYA	**Guiyang**	**20.63**	**38**	⇓*i*P	**P**	**16 02 29.4**	**-0.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CD2	**Chengdu**	**22.70**	**26**	P	**P**	**16 02 50.6**	**+0.1**
ENH	**Enshi**	**25.11**	**37**	*e*P	**P**	**16 03 13.4**	**-0.6**
	comp=Z,18nm,0.6s,mb4.8						
GTA	**Gaotai**	**29.37**	**12**	*e*P	**P**	**16 03 54.2**	**+1.5**
GTA				AP	pP	16 04 04.4	+2.2
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**35.53**	**337**	*e*P	**P**	**16 04 48.0**	**+1.6**
	comp=Z,2.0nm,0.8s,mb4.1						
AAK				*e*pP	pP	16 04 55.2	-1.0
CN2	**Changchun**	**43.61**	**35**	*e*P	**P**	**16 05 53.3**	**-0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CHKZ	**Chkalovo**	**46.35**	**342**	*e*P	**P**	**16 06 16.0**	**+0.8**
WRAB	**Tennant Creek**	**51.18**	**126**	*e*P	**P**	**16 06 52.4**	**-0.7**
	comp=Z,5.1nm,0.5s,mb4.7						

NDI 07 16:03:48.0±2.3**,32.24N×75.03E,h10**^{km}**,ML3.7,1C, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**0.62**	**71**	*e*P	Pb	16 04 00.0	-0.4
THN				*e*S	Sg	16 04 09.0	+0.3
PONG	**Pong**	**0.83**	**110**	*e*P	Pb	16 04 02.0	-2.1
SDNR	**Sundarnagar**	**1.81**	**113**	*e*PG	Pg	16 04 23.6	-0.6
SMLA	**Simla**	**2.13**	**121**	⇑*i*PG	Pg	16 04 30.6	0.0
SMLA				*i* S	Sn	16 04 50.2	-0.7
	733nm,0.3s						

BJI ***07*** *16:46:50.1, 3.75N×93.10E, h50*^{km}*, mB5.1, mb4.8, Ms5.0, Msz4.8*

MOS ***07*** *16:46:50.6±0.8, 4.27N×93.50E, h33*^{km}*, mb4.9/12, Error ellipse: s-maj=35.2km s-min=12.2km az=101.6*

NEIC ***07*** *16:46:52.1±0.5, 4.15N×93.19E, h30*^{km}*, mb4.7/23, Error ellipse: s-maj=11.4km s-min=9.5km az=171.0*

ISC 07 16:46:50.6±0.5**, 4.14N**±0.06×**93.28E**±0.05**, h32**^{km}**, h32**^{km}±.7^{km}**:pP-P, n92,** σ1^{s}**16**/115**, mb4.8**/43**, MS4.7**/18**, 5C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	**7.90**	**67**	P	**Pn**	**16 48 44.0**	**-2.1**
PALK	**Pallekele**	**12.90**	**285**	Pn	**P**	**16 49 50.5**	**-4.1**
	83nm,0.9s,SNR=22						
PALK	**Pallekele**	**12.90**	**285**	*e*P	**P**	**16 49 50.3**	**-4.3**
CM31	**Chiang Mai Arr**	**15.27**	**21**	*e*P	**P**	**16 50 24.7**	**-1.0**
	6.6nm,0.6s						
KKTK	**Khon Kaen**	**15.32**	**37**	PG	**P**	**16 50 32.0**	**+5.6**
KKTK				SG	rx	16 50 40.0	
CHG	**Chiang Mai**	**15.60**	**20**	P	**P**	**16 50 29.3**	**-0.7**
UBT	**Ubonrachathani**	**15.97**	**46**	P	**P**	**16 50 47.5**	**+13**
NANT	**Nan**	**16.27**	**26**	P	**P**	**16 50 39.0**	**+0.4**
VIS	**Vishakhapatnam**	**16.65**	**325**	*e*P	**P**	**16 50 41.4**	**-2.0**
VIS				*e*		16 50 43.5	
	comp=Z,19nm,0.3s						
VIS				*e*		16 53 30.7	
CAL	**Calcutta**	**18.91**	**346**	*e*	**P**	**16 51 15.3**	**+4.0**
CAL				*e*		16 54 18.8	
HYB	**Hyderabad**	**19.56**	**314**	*i* P	**P**	**16 51 18.0**	**-0.8**
HYB				*e*S	**S**	**16 54 58.0**	**+6.0**
SHL	**Shillong**	**21.35**	**357**	*e*P	**P**	**16 51 37.0**	**-0.4**
QIZ	**Qiongzhong**	**21.92**	**46**	P	**P**	**16 51 43.5**	**+0.3**
QIZ				S	**S**	**16 55 38.5**	**+0.2**
QIZ				AMB	AMB		
	comp=Z,182nm,5.8s						
QIZ				LR	LR		
	comp=E,2µm,10.5s						
QIZ				LR	LR		
	comp=Z,3µm,10.0s,MS5.0						
KMI	**Kunming**	**22.76**	**23**	⇑P	**P**	**16 51 55.7**	**+4.2**
KMI				AP		16 52 03.7	
KMI				XP		16 52 08.9	
KMI				PP	PP	16 52 27.6	+7.0
KMI				S	**S**	**16 55 55.4**	**+1.8**
KMI				SS	SS	16 56 40.0	+2.8
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.0						
KMI				AMB	AMB		
	comp=Z,325nm,5.0s						
KMI				LR	LR		
	comp=N,2µm,9.4s						
KMI				LR	LR		
	comp=E,1µm,14.6s						
KMI				LR	LR		
	comp=Z,2µm,10.6s,MS4.8						
KMI	**Kunming**	**22.76**	**23**	⇑P	**P**	**16 51 55.7**	**+4.2**
	comp=Z,7.0nm,1.2s,mb4.0						
KMI				pP		16 52 03.7	
KMI				sP		16 52 08.9	
KMI				PP	PP	16 52 27.6	+7.0
KMI				S	**S**	**16 55 55.4**	**+1.8**
KMI				sS		16 56 12.8	
KMI				SS	SS	16 56 40.0	+2.8
KMI				LR	LR		
	comp=Z,2µm,10.6s,MS4.8						
KAD	**Karad**	**22.84**	**306**	*e*P	**P**	**16 51 52.0**	**-0.4**
POO	**Poona**	**23.78**	**308**	*e*P	**P**	**16 52 01.5**	**0.0**
POO				*e*		16 52 04.6	
	comp=Z,8.0nm,0.7s						
JIRN	**Jiri**	**24.35**	**345**	*e*P	**P**	**16 52 08.3**	**+1.3**
	comp=Z,22nm,0.7s,mb4.7						
BHPL	**Bhopal**	**24.40**	**323**	*e*P	**P**	**16 52 09.4**	**+1.8**
BHPL				*e*		16 52 14.6	
	comp=Z,8.4nm,1.4s						
BHPL				*e*		16 54 31.6	
PKI	**Pulchoki**	**24.48**	**343**	*e*P	**P**	**16 52 09.3**	**+1.0**
DMN	**Daman**	**24.61**	**342**	*e*P	**P**	**16 52 10.7**	**+1.2**
	comp=Z,29nm,0.9s,mb4.8						
KKN	**Kakani**	**24.73**	**343**	*e*P	**P**	**16 52 10.7**	**+0.1**
	comp=Z,32nm,0.8s,mb4.9						
BOM	**Bombay**	**24.80**	**308**	*e*P	**P**	**16 52 13.7**	**+2.3**
BOM				*e*		16 56 57.6	
GKN	**Gorkha**	**25.12**	**342**	*e*P	**P**	**16 52 14.8**	**+0.5**
	comp=Z,53nm,0.8s,mb5.1						
KOLN	**Koldanda**	**25.25**	**340**	*e*P	**P**	**16 52 16.3**	**+0.8**
	comp=Z,26nm,0.8s,mb4.8						
LSA	**Lhasa**	**25.50**	**356**	P	**P**	**16 52 15.8**	**-2.1**
LSA				S	**S**	**16 56 47.4**	**+6.8**
LSA				AMB	AMB		
	comp=Z,230nm,6.1s						
LSA				LR	LR		
	comp=N,280nm,13.7s,MS4.4						
LSA				LR	LR		
	comp=E,670nm,13.7s,MS4.4						
LSA				LR	LR		
	comp=Z,490nm,12.8s,MS4.2						
LSA	**Lhasa**	**25.50**	**356**	*e*P	**P**	**16 52 19.6**	**+1.7**
	comp=Z,13nm,0.7s,mb4.6						
GYA	**Guiyang**	**25.63**	**29**	⇓*i*P	**P**	**16 52 20.4**	**+1.3**
GYA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,260nm,5.4s						
GYA				LR	LR		
	comp=N,1µm,11.4s,MS4.9						
GYA				LR	LR		
	comp=E,1µm,11.4s,MS4.9						
GYA				LR	LR		
	comp=Z,970nm,11.4s,MS4.6						
GZH	**Guangzhou**	**27.04**	**44**	P	**P**	**16 52 38.3**	**+6.2**
GZH				LR	LR		
	comp=N,2µm,18.8s,MS4.7						
GZH				LR	LR		
	comp=E,1µm,18.5s,MS4.7						
GZH				LR	LR		
	comp=Z,3µm,11.4s						
CD2	**Chengdu**	**28.40**	**19**	P	**P**	**16 52 43.6**	**-0.8**
ENH	**Enshi**	**30.17**	**29**	*e*P	**P**	**16 52 58.8**	**-1.4**
	comp=Z,5.4nm,0.7s,mb4.4						
QZH	**Quanzhou**	**31.94**	**47**	*e*P	**P**	**16 53 15.3**	**-0.5**
QZH				*e*S	**S**	**16 58 21.0**	**-2.7**
QZH				LR	LR		
	comp=N,2µm,8.5s						
QZH				LR	LR		
	comp=E,3µm,9.0s						
QZH				LR	LR		
	comp=Z,4µm,11.9s,MS5.3						
WHN	**Wuhan**	**32.94**	**35**	⇓P	**P**	**16 53 25.0**	**+0.5**
XAN	**Xi'an**	**33.12**	**24**	P	**P**	**16 53 24.7**	**-1.3**
XAN				S	**S**	**16 58 39.9**	**-2.1**
XAN				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.9						
XAN				LR	LR		
	comp=N,748nm,12.3s						
XAN				LR	LR		
	comp=E,465nm,8.5s						
XAN				LR	LR		
	comp=Z,1µm,10.9s,MS4.9						
LZH	**Lanzhou**	**33.25**	**16**	*e*P	**P**	**16 53 27.4**	**+0.2**
LZH				AP	pP	16 53 37.6	+0.9
LZH				XP	sP	16 53 41.7	+0.8
LZH				PP	PP	16 54 39.4	+0.5
LZH				*e*S	**S**	**16 58 45.4**	**+1.4**
LZH				*e*SS	SS	17 00 49.5	+2.8
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,105nm,4.5s						
LZH				LR	LR		
	comp=N,2µm,10.4s						
LZH				LR	LR		
	comp=Z,3µm,14.0s,MS5.2						
LZH	**Lanzhou**	**33.25**	**16**	*e*P	**P**	**16 53 27.4**	**+0.2**
	comp=Z,30nm,1.0s,mb5.2						
LZH				pP	pP	16 53 37.6	+0.9
LZH				sP	sP	16 53 41.7	+0.8
LZH				PP	PP	16 54 39.4	+0.5
LZH				*e*S	**S**	**16 58 45.4**	**+1.4**
LZH				sS		16 59 00.0	
LZH				*e*SS	SS	17 00 49.5	+2.8
LZH				LR	LR		
	comp=Z,3µm,14.0s,MS5.2						
GTA	**Gaotai**	**35.61**	**9**	*e*P	**P**	**16 53 48.6**	**+1.2**
GTA				AP	pP	16 53 58.5	+1.5
GTA				XP	sP	16 54 02.1	+1.0
GTA				PP	PP	16 55 07.6	-0.5
GTA				PCP	PcP	16 56 19.2	+3.3
GTA				S	**S**	**16 59 23.5**	**+3.0**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,165nm,4.9s						
GTA				LR	LR		
	comp=N,228nm,17.1s,MS4.3						
GTA				LR	LR		
	comp=E,352nm,17.9s,MS4.3						
GTA				LR	LR		
	comp=Z,391nm,17.1s,MS4.2						
NJ2	**Nanjing**	**36.69**	**38**	*e*P	**P**	**16 53 57.4**	**+0.8**
NJ2				AP	pP	16 54 07.1	+0.9
NJ2				XP	sP	16 54 11.1	+0.9
NJ2				S	**S**	**16 59 38.0**	**+0.8**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
NJ2				LR	LR		
	comp=N,5µm,11.2s,MS5.7						
NJ2				LR	LR		
	comp=E,4µm,11.0s,MS5.7						
NJ2				LR	LR		
	comp=Z,6µm,14.5s,MS5.5						
SSE	**Sheshan**	**37.53**	**41**	P	**P**	**16 54 02.9**	**-0.8**
SSE				S	**S**	**16 59 50.0**	**-0.1**
SSE				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.3						
SSE				AMB	AMB		
	comp=Z,75nm,6.5s						
SSE				LR	LR		
	comp=N,521nm,18.1s,MS4.4						
SSE				LR	LR		
	comp=E,319nm,18.1s,MS4.4						
SSE				LR	LR		
	comp=Z,381nm,17.1s,MS4.3						
SSE	**Sheshan**	**37.53**	**41**	P	**P**	**16 54 02.9**	**-0.8**
	comp=Z,4.0nm,0.7s,mb4.3						
SSE				sP	sP	16 54 15.7	-1.6
SSE				S	**S**	**16 59 50.0**	**-0.1**
SSE				sS		17 00 04.6	
SSE				LR	LR		
	comp=Z,380nm,17.1s,MS4.3						
KSH	**Kashi**	**38.55**	**338**	*e*P	**P**	**16 54 12.0**	**-0.1**
KSH				*e*AP	pP	16 54 21.1	-0.7
KSH				*e*PP	PP	16 55 44.2	0.0
KSH				*e*PCP	PcP	16 56 23.5	-1.4
KSH				*e*S	**S**	**17 00 05.0**	**-0.5**
KSH				*e*PCS		17 00 14.0	
KSH				*e*PS		17 00 20.0	
KSH				*e*XS		17 00 27.5	
KSH				*e*SS	SS	17 02 47.0	0.0
KSH				*e*SCS	ScS	17 04 16.2	-1.8
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.3						
KSH				AMB	AMB		
	comp=Z,170nm,4.1s						
KSH				LR	LR		
	comp=N,320nm,6.5s						
KSH				LR	LR		
	comp=E,320nm,6.7s						
WMQ	**Urumqi**	**39.83**	**354**	*e*P	**P**	**16 54 23.0**	**+0.3**
WMQ				XP	sP	16 54 37.0	+0.6
WMQ				PP	PP	16 56 00.0	+2.0
WMQ				S	**S**	**17 00 18.0**	**-6.7**
WMQ				SS	SS	17 03 15.0	0.0
WMQ				AMB	AMB		
	comp=Z,22nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,27nm,8.0s						
WMQ				LR	LR		
	comp=N,167nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=E,225nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,187nm,20.0s,MS3.9						
HHC	**Hu-ho-hao-te**	**40.08**	**22**	*e*P	**P**	**16 54 26.3**	**+1.5**
HHC				AP	pP	16 54 35.5	+1.0
HHC				XP	sP	16 54 40.3	+1.8
HHC				PP	PP	16 56 02.8	+2.2
HHC				PCP	PcP	16 56 31.5	+1.8
HHC				SCP		17 00 14.1	
HHC				S	**S**	**17 00 33.2**	**+4.7**
HHC				SS	SS	17 03 26.7	+6.2
HHC				SCS	ScS	17 04 27.7	+0.8
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,181nm,6.4s						
HHC				LR	LR		
	comp=N,738nm,16.8s,MS4.8						
HHC				LR	LR		
	comp=E,806nm,16.3s,MS4.8						
HHC				LR	LR		
	comp=Z,504nm,17.9s,MS4.4						
BJI	**Beijing**	**41.29**	**27**	P	**P**	**16 54 36.7**	**+2.0**
BJI				PP	PP	16 56 18.8	+5.8
BJI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
BJI				LR	LR		
	comp=N,706nm,12.7s,MS4.8						
BJI				LR	LR		
	comp=E,473nm,15.3s,MS4.8						
BJI				LR	LR		
	comp=Z,373nm,23.5s						
BJI	**Beijing**	**41.29**	**27**	P	**P**	**16 54 36.7**	**+2.0**
	comp=Z,9.0nm,0.8s,mb4.5						
BJI				PP	PP	16 56 18.8	+5.8
BJI				S	**S**	**17 01 03.5**	**+17**
BJI				SS	tx	17 04 24.4	
BJI				LR	LR		
	comp=Z,370nm,23.5s,MS4.2						
AAK	**Ala-Archa**	**41.82**	**339**	*i* P	**P**	**16 54 38.5**	**-0.6**
AAK				pmax	pmax		
	comp=Z,10.0nm,2.2s,mb4.1						
AAK	**Ala-Archa**	**41.82**	**339**	*e*P	**P**	**16 54 38.6**	**-0.5**
	comp=Z,4.4nm,1.3s,mb3.9						
MKAR	**Makanchi Array**	**43.55**	**349**	*i* P	**P**	**16 54 52.9**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
ULN	**Ulaanbaatar**	**45.14**	**13**	*i* P	**P**	**16 55 07.6**	**+1.6**
SNY	**Shenyang**	**46.27**	**31**	⇓P	**P**	**16 55 15.8**	**+0.8**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SNY				AMB	AMB		
	comp=Z,130nm,6.6s						
SNY				LR	LR		
	comp=E,740nm,14.2s						
SNY				LR	LR		
	comp=Z,560nm,11.0s,MS4.8						
WRAB	**Tennant Creek**	**46.91**	**122**	*e*P	**P**	**16 55 20.1**	**-0.2**
	comp=Z,9.6nm,0.6s,mb4.9						
KURK	**Kurchatov**	**48.03**	**347**	*i* P	**P**	**16 55 28.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
KURK	**Kurchatov**	**48.03**	**347**	*e*P	**P**	**16 55 27.7**	**-0.9**
	comp=Z,12nm,0.7s,mb5.0						
CN2	**Changchun**	**48.64**	**31**	*e*P	**P**	**16 55 33.6**	**+0.1**
CN2				AP	pP	16 55 43.4	+0.1
CN2				*e*S	**S**	**17 02 32.6**	**+0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				AMB	AMB		
	comp=Z,240nm,6.0s						
CN2				LR	LR		
	comp=N,600nm,11.0s,MS5.0						
CN2				LR	LR		
	comp=E,500nm,11.0s,MS5.0						
CN2				LR	LR		
	comp=Z,600nm,13.0s,MS4.8						
HIA	**Hailar**	**50.27**	**22**	*e*P	**P**	**16 55 46.0**	**0.0**
	comp=Z,6.6nm,0.7s,mb4.8						
NVS	**Novosibirsk**	**51.20**	**353**	⇑*i*P	**P**	**16 55 51.9**	**-1.0**
NVS				*e*S	**S**	**17 03 01.0**	**-6.6**
NVS				pmax	pmax		
	comp=N,11nm,0.8s						
NVS				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				smax			
	comp=E,30nm,2.6s						
MDJ	**Mudanjiang**	**51.38**	**33**	P	**P**	**16 55 53.5**	**-0.9**
MDJ				PCP	PcP	16 57 04.2	-4.7
MDJ				PP	PP	16 57 48.0	-4.2
MDJ				SCP		17 00 58.5	
MDJ				PCS		17 01 02.6	
MDJ				S	**S**	**17 03 13.5**	**+3.3**
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,170nm,5.7s						
MDJ				LR	LR		
	comp=N,364nm,11.5s						
MDJ				LR	LR		
	comp=E,377nm,20.0s						
MDJ				LR	LR		
	comp=Z,668nm,12.6s,MS4.9						
BVA0	**Borovoye Array**	**52.25**	**343**	P	**P**	**16 56 00.0**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
CHKZ	**Chkalovo**	**52.76**	**343**	*i* P	**P**	**16 56 03.9**	**-0.8**
CHKZ	**Chkalovo**	**52.76**	**343**	*e*P	**P**	**16 56 03.6**	**-1.1**
	comp=Z,21nm,0.9s,mb5.1						
KLR	**Kul'dur**	**55.52**	**30**	*e*P	**P**	**16 56 23.0**	**-2.0**
KLR				*e*S	**S**	**17 04 10.0**	**+3.7**
KLR				*e*SS	SS	17 07 48.5	-2.7
BOD	**Bodaibo**	**55.96**	**13**	*e*P	**P**	**16 56 28.0**	**0.0**
BOD				pmax	pmax		
	comp=Z,20nm,2.7s,mb4.7						
KMBO	**Kilima Mbogo**	**56.23**	**266**	*e*P	**P**	**16 56 30.8**	**+0.1**
CTAO	**Charters Tower**	**57.31**	**117**	*e*P	**P**	**16 56 38.5**	**+0.3**
	comp=Z,3.3nm,0.7s,mb4.5						
SVE	**Sverdlovsk**	**58.56**	**340**	⇓*e*P	**P**	**16 56 46.0**	**-0.4**
SVE				pmax	pmax		
	comp=Z,60nm,1.8s,mb5.3						
ARU	**Arti**	**59.00**	**338**	⇑*i*P	**P**	**16 56 40.0**	**-9.5**
ARU				*e*S	**S**	**17 04 46.9**	**-5.1**
ARU				*e*SS	SS	17 08 43.8	-3.9
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KIV	**Kislovodsk**	**59.55**	**320**	*e*P	**P**	**16 56 52.0**	**-1.5**
	comp=Z,4.9nm,0.7s,mb4.7						
YSS	**Yuzh-Sakhalins**	**60.25**	**37**	P	**P**	**16 57 01.0**	**+2.8**
YSS				*e*		16 57 07.0	
YSS	**Yuzh-Sakhalins**	**60.25**	**37**	*e*P	**P**	**16 56 58.5**	**+0.3**
	comp=Z,7.8nm,0.7s,mb4.8						
MALT	**Malatya**	**60.27**	**312**	P	**P**	**16 56 56.5**	**-2.0**
SOC	**Sochi**	**61.33**	**318**	*e*P	**P**	**16 56 58.3**	**-7.3**
SOC				*e*		16 59 15.8	
SOC				*e*S	**S**	**17 05 21.8**	**-0.3**
SOC				*e*		17 06 48.2	
SOC				*e*SS	SS	17 09 22.4	-1.8
SOC				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.6						
SOC				pmax	pmax		
	comp=N,18nm,0.7s						
SOC				pmax	pmax		
	comp=E,33nm,0.8s						
YAK	**Yakutsk**	**63.78**	**18**	*i* P	**P**	**16 57 20.4**	**-1.2**
YAK				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
YAK	**Yakutsk**	**63.78**	**18**	*e*P	**P**	**16 57 20.1**	**-1.5**
	comp=Z,14nm,0.6s,mb5.2						
OBN	**Obninsk**	**68.09**	**329**	P	**P**	**16 57 49.0**	**-0.3**
OBN				*e*		16 57 54.7	
OBN						16 58 09.0	
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
TIXI	**Tiksi**	**71.04**	**11**	⇓*i*P	**P**	**16 58 06.4**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
LBTB	**Lobatse**	**71.73**	**242**	P	**P**	**16 58 12.0**	**0.0**
JOF	**Joensuu**	**73.84**	**335**	*e*p	**P**	**16 58 22.3**	**-1.4**
	comp=Z,5.2nm,0.8s,mb4.5						
JOF	**Joensuu**	**73.84**	**335**	*e*P	**P**	**16 58 22.3**	**-1.4**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**75.72**	**333**	*e*p	**P**	**16 58 32.5**	**-2.0**
	comp=Z,2.6nm,0.6s,mb4.3						
KAF	**Kangasniemi**	**75.72**	**333**	*e*P	**P**	**16 58 32.5**	**-2.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
OJC	**Ojcow**	**76.29**	**321**	*e*P	**P**	**16 58 38.8**	**+0.8**
MORC	**Moravsky Berou**	**77.65**	**320**	P	**P**	**16 58 45.1**	**-0.5**
KSP	**Ksiaz**	**78.59**	**321**	*e*P	**P**	**16 58 52.0**	**+1.3**
BILL	**Bilibino**	**79.85**	**21**	*i* P	**P**	**16 58 55.0**	**-2.2**
BILL				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.5						
BILL	**Bilibino**	**79.85**	**21**	*e*P	**P**	**16 58 57.2**	**0.0**
	comp=Z,26nm,1.8s,mb4.8						
SYO	**Syowa Base**	**81.61**	**197**	⇑P	**P**	**16 59 08.9**	**+2.5**
GRA1	**Grafenberg Arr**	**81.72**	**319**	*e*P	**P**	**16 59 08.6**	**+1.2**
	comp=Z,6.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**81.72**	**319**	*e*P	**P**	**16 59 08.6**	**+1.2**
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
GRF	**Grafenberg Arr**	**81.72**	**319**	*e*P	**P**	**16 59 08.6**	**+1.2**
	comp=Z,6.0nm,0.9s,mb4.5						
LPG	**La Plagne**	**84.64**	**315**	*e*P	**P**	**16 59 23.3**	**+0.8**
	comp=Z,16nm,0.8s,mb4.9						
BNI	**Bardonecchia**	**84.70**	**315**	*e*P	**P**	**16 59 22.3**	**-0.5**
	comp=Z,5.6nm,0.7s,mb4.8						
PMR	**Palmer**	**99.09**	**25**	*e*P	**P**	**17 00 31.2**	**+1.7**

HLW 07 17:06:18.6, 33.52N×27.99E, h23^{km}**, Mb3.6, 2D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DABA	**Dabaa**	**2.52**	**174**	P	Pn	17 06 58.5	-0.5
HMAT	**Matruh**	**2.54**	**198**	⇓P	Pn	17 06 58.2	-1.1
HMAT				S	Sn	17 07 25.4	-4.4
SLUM		**3.10**	**230**	P	Pn	17 07 05.2	-2.2
SLUM				S	Sn	17 07 38.3	-5.8
HNAT	**Natroun**	**4.48**	**149**	P	Pn	17 07 24.2	-2.8
HNAT				S	Sn	17 08 12.9	-6.1
SWA1		**4.67**	**205**	⇓P	Pn	17 07 27.3	-2.4
SWA1				S	Sn	17 08 16.4	-7.5
GLL	**Jalalah**	**5.05**	**140**	P	Pn	17 07 31.6	-3.4
GLL				S	Sn	17 08 27.3	-6.1
AWBH		**5.24**	**171**	P	Pn	17 07 34.7	-3.0
AWBH				S	Sn	17 08 31.1	-7.1
HDK1	**Dakhla**	**8.04**	**171**	P	P	17 08 13.5	-3.6

DJA 07 17:15:40.4±1.8**, 8.72S×116.20E, h2**^{km}**, MD4.8**/4**, ML3.6**/1**, 7D, Error ellipse: s-maj=45.1km s-min=8.1km az=89.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	**0.25**	**339**	⇓*i*Pg	Pg	17 15 47.2	+1.8
	893nm,0.2s						
KEDI				⇓*i*Sg	Sg	17 15 52.3	+3.6
RATI	**Rata**	**0.66**	**270**	⇓*i*Pg	Pg	17 15 49.7	-4.0
	994nm,0.2s						
RATI				⇓*i*Sg	Sg	17 15 57.2	-5.3
KELI	**Kelakatan**	**1.77**	**286**	⇓*i*Pn	Pn	17 16 09.6	-2.6
	39nm,0.2s						
SRDI	**Scrawed**	**2.05**	**277**	⇓*i*Pn	Pn	17 16 12.9	-3.4
SRDI				⇓*i*Sn	Sn	17 16 38.5	-4.4

JMA ***07*** *17:58:33.7±0.4, 24.38N×121.72E, h82*^{km}

TAP 07 17:58:32.6, 24.08N×121.63E, h26^{km}**, ML3.2, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**1.32**	**73**	P	Pn	17 58 55.2	-0.4
YOJ				*e*S	Sn	17 59 11.3	-1.1
IRIF	**Iriomote-Funau**	**1.93**	**82**	P	Pn	17 59 04.2	-0.3
IRIF				*e*S	Sn	17 59 26.7	-1.4
HATJ	**Hateruma jima**	**1.99**	**90**	P	Pn	17 59 05.0	-0.2
JKRS	**Kuro-shima**	**2.18**	**85**	P	Pn	17 59 07.5	-0.5

JKRS				*e*S	Sn	17 59 33.2	-1.2
JIJ	**Ishigaki jima**	**2.31**	**82**	P	Pn	17 59 08.6	-1.3
JIJ				*e*S	Sn	17 59 34.8	-2.9

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*NEIC **07** 18:36:46.3,34.24S×69.62W,ML3.2(GUC),After GUC.*
GUC 07 18:36:46.3±0.7**,34.24S×69.62W,MD4.1,ML3.2,4C-1D,**
Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**0.62**	**309**	*e*P	Pg	18 36 58.9	+0.1
LMEL				*i* S	Sg	18 37 09.2	+2.2
LMEL				AMP		18 37 10.2	
	comp=N,2μm,0.3s						
CICH	**Cipreses**	**0.67**	**263**	⇑*i*P	Pg	18 36 60.0	+0.4
CICH				*i* S	Sg	18 37 10.7	+2.2
CACH	**El Canelo**	**0.82**	**279**	⇓*i*P	Pg	18 37 02.4	-0.3
CACH				*i* S	Sg	18 37 14.8	+1.2
CHCH	**Chadas Angostu**	**0.91**	**290**	⇑*i*P	Pg	18 37 04.4	-0.1
CHCH				*i* S	Sg	18 37 18.1	+1.5
PCH	**Pirque**	**0.97**	**310**	*e*P	Pg	18 37 05.2	-0.4
PCH				*i* S	Sg	18 37 19.9	+1.4
FCH	**Farellones**	**1.07**	**328**	⇑*i*P	Pb	18 37 06.5	-0.8
FCH				*i* S	Sb	18 37 21.2	-0.5
CLCH	**Cerro Calan**	**1.14**	**318**	*e*P	Pb	18 37 08.0	-0.5
CLCH				*i* S	Sb	18 37 24.6	+0.9
CLCH				AMP		18 37 26.8	
	comp=N,1μm,0.6s						
SFDO	**San Fernando**	**1.21**	**252**	⇑*i*P	Pb	18 37 09.5	-0.3
SFDO				*i* S	Sb	18 37 27.2	+1.4
TACH	**Talagante**	**1.24**	**298**	*e*P	Pb	18 37 09.9	-0.4
TACH				*i* S	Sb	18 37 27.4	+0.6
LNV	**Longovilo**	**1.51**	**280**	*e*P	Pn	18 37 14.3	-0.5
LNV				*i* S	Sb	18 37 36.3	+1.7
ZON	**Zonda**	**2.80**	**17**	*e*P	Pn	18 37 34.0	+0.8
ZON				*e*S	Sn	18 38 12.0	+3.8

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*BJI **07** 18:41:38.2,19.63N×145.78E,h104^{km},mB5.1,mb5.0*
*NEIC **07** 18:41:39.5±0.2,19.36N×145.60E,mb5.0/64,Error ellipse: s-maj=4.7km s-min=4.5km az=56.0*
*MOS **07** 18:41:39.5±1.1,19.35N×145.75E,h131^{km},mb5.2/26, Error ellipse: s-maj=15.5km s-min=6.3km az=112.7*
*HRVD **07** 18:41:39.5±0.3,19.35N×145.92E,h118^{km}±3^{km}, MW5.0/58,Centroid moment Tensor Solution. LP body waves: s27,c35;Mantle waves: s58,c103; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.93±.19; $M_{\theta\theta}$3.16±.17; $M_{\phi\phi}$-1.22±.19; $M_{r\theta}$-1.39±.13; $M_{\theta\phi}$1.92±.15; $M_{\phi r}$-2.69±.12; Best double couple: $M_0$4.508×10^{16} NP1: ϕ_s286°,δ40°,λ-26°. NP2:ϕ_s36°,δ74°,λ-127°. Principal axes: T 4.72, Plg20°, Azm153°; N -.414, Plg35°, Azm48°; P -4.296, Plg48°, Azm267°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 07 18:41:38.9±0.9**,19.53N**±0.05×**145.59E**±0.03**,h106**^{km}±8^{km}**,**
h110^{km}±1.9^{km}**:pP-P,n208,**σ**1**^{s}**00**/222**,mb5.1**/98**,10C-15D,**
Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	**2.82**	**176**	⇑*i*P	**P**	**18 42 23.1**	**-0.3**
GUMO	**Guam**	**5.95**	**187**	*e*P	**P**	**18 43 04.6**	**-1.2**
	342nm,0.7s						
MAJO	**Matsushiro**	**18.14**	**341**	*e*P	**P**	**18 45 45.3**	**+0.1**
	23nm,0.6s						
MAT	**Matsushiro**	**18.14**	**341**	*e*P	**P**	**18 45 46.0**	**+0.8**
	38nm,1.1s						
MAT				*e*S	**S**	**18 49 09.0**	**+8.3**
MAT	**Matsushiro**	**18.14**	**341**	P	**P**	**18 45 45.6**	**+0.4**
MAT				S	**S**	**18 49 08.8**	**+8.1**
PLP	**Palo**	**21.53**	**250**	*i* P	**P**	**18 46 23.8**	**+3.0**
KS15	**Wonju Array Si**	**23.60**	**323**	*e*P	**P**	**18 46 41.1**	**+0.3**
SSE	**Sheshan**	**24.82**	**302**	P	**P**	**18 46 51.6**	**-1.0**
SSE				AP		18 47 19.9	
SSE				S	**S**	**18 51 02.6**	**-2.1**
SSE				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.4						
SSE				AMB	AMB		
	comp=Z,119nm,6.6s						
SSE				LR	LR		
	comp=N,186nm,24.6s						
SSE				LR	LR		
	comp=E,241nm,24.4s						
SSE				LR	LR		
	comp=Z,251nm,25.9s						
SSE	**Sheshan**	**24.82**	**302**	P	**P**	**18 46 51.6**	**-1.0**
	comp=Z,18nm,1.1s,mb4.4						
SSE				pP		18 47 19.9	
SSE				sP		18 47 37.3	
SSE				S	**S**	**18 51 02.6**	**-2.1**
SSE				sS		18 51 53.9	
SSE				LR	LR		
	comp=Z,250nm,25.9s						
NJ2	**Nanjing**	**27.02**	**303**	*e*P	**P**	**18 47 15.4**	**+2.4**
NJ2				PP	PP	18 48 07.7	+4.8
NJ2				S	**S**	**18 51 38.0**	**-3.0**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,1μm,4.1s						
NJ2				LR	LR		
	comp=N,430nm,17.4s						
NJ2				LR	LR		
	comp=E,530nm,26.1s						
NJ2				LR	LR		
	comp=Z,450nm,12.0s						
YSS	**Yuzh-Sakhalins**	**27.45**	**356**	⇑*i*P	**P**	**18 47 17.3**	**+0.6**
YSS				*e*		18 48 09.8	
YSS				*e*		18 50 27.4	
YSS	**Yuzh-Sakhalins**	**27.45**	**356**	*e*P	**P**	**18 47 16.3**	**-0.4**
	comp=Z,12nm,0.8s,mb4.5						
MDJ	**Mudanjiang**	**28.34**	**336**	P	**P**	**18 47 25.3**	**+0.5**
MDJ				AP	pP	18 47 47.6	-0.6
MDJ				XP	sP	18 48 00.1	-0.5
MDJ				S	**S**	**18 52 07.7**	**+5.7**
MDJ				SCP		18 54 00.5	
MDJ				PCS		18 54 11.8	
MDJ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,97nm,4.1s						
MDJ				LR	LR		
	comp=N,99nm,31.5s						
MDJ				LR	LR		
	comp=E,106nm,25.4s						
MDJ				LR	LR		
	comp=Z,193nm,34.6s						
MDJ	**Mudanjiang**	**28.34**	**336**	*e*P	**P**	**18 47 25.1**	**+0.3**
	comp=Z,6.7nm,0.8s,mb4.2						
PMG	**Port Moresby**	**28.80**	**177**	*i* P	**P**	**18 47 24.0**	**-5.2**
PMG	**Port Moresby**	**28.80**	**177**	*e*P	**P**	**18 47 24.3**	**-4.9**
	comp=Z,30nm,0.8s,mb5.0						
SNY	**Shenyang**	**29.03**	**325**	⇑P	**P**	**18 47 30.2**	**-0.8**
CN2	**Changchun**	**29.50**	**330**	*e*P	**P**	**18 47 37.2**	**+2.1**
CN2				PCP	PcP	18 50 36.0	-2.1
CN2				*e*S	**S**	**18 52 21.2**	**+0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CN2				LR	LR		
	comp=N,200nm,18.0s						
CN2				LR	LR		
	comp=E,300nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
KKM	**Kota Kinabalu**	**31.55**	**249**	P	**P**	**18 47 54.4**	**+0.9**
KLR	**Kul’dur**	**31.64**	**343**	⇑*i*P	**P**	**18 47 51.2**	**-2.7**
KLR				pmax	pmax		
	comp=E,20nm,0.9s						
KLR				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.3						
BJT	**Baijiatuau**	**32.46**	**315**	*e*P	**P**	**18 48 01.1**	**0.0**
	comp=Z,4.1nm,0.6s,mb4.3						
BJI	**Beijing**	**32.46**	**315**	*e*P	**P**	**18 48 00.9**	**-0.3**
BJI				AMB	AMB		
	comp=Z,27nm,1.1s,mb4.9						
BJI				LR	LR		
	comp=Z,179nm,24.9s						
BJI	**Beijing**	**32.46**	**315**	*e*P	**P**	**18 48 00.9**	**-0.3**
	comp=Z,27nm,1.1s,mb4.9						
BJI				LR	LR		
	comp=Z,180nm,24.9s						
QIZ	**Qiongzhong**	**33.71**	**275**	P	**P**	**18 48 13.4**	**+1.3**
QIZ				XP	sP	18 48 52.8	+3.9
QIZ				*e*S	**S**	**18 53 27.2**	**+0.8**
QIZ				SS	SS	18 55 41.3	+2.7
QIZ				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.2						
ENH	**Enshi**	**34.31**	**295**	*e*P	**P**	**18 48 16.8**	**-0.4**
	comp=Z,25nm,1.2s,mb4.9						
PET	**Petropavlovsk**	**34.93**	**14**	*e*P	**P**	**18 48 21.9**	**-0.3**
PET				*e*S	**S**	**18 53 51.8**	**+6.9**
PET				pmax	pmax		
	comp=Z,34nm,1.5s,mb5.0						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
XAN	**Xi’an**	**35.57**	**302**	P	**P**	**18 48 27.5**	**-0.3**
XAN				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
HIA	**Hailar**	**36.18**	**331**	*e*P	**P**	**18 48 32.7**	**-0.1**
	comp=Z,12nm,0.6s,mb5.0						
HIA				*e*pP	pP	18 48 58.0	+0.8
GYA	**Guiyang**	**36.38**	**288**	⇓*i*P	**P**	**18 48 36.2**	**+1.5**
GYA				AP	pP	18 49 01.5	+2.3
GYA				XP	sP	18 49 14.6	+2.8
GYA				PCP	PcP	18 50 56.4	-0.9
GYA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
GYA				AMB	AMB		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,280nm,15.8s						
GYA				LR	LR		
	comp=E,460nm,16.0s						
GYA				LR	LR		
	comp=Z,371nm,16.2s						
BTO	**Baotou**	**36.91**	**312**	*e*P	**P**	**18 48 39.8**	**+0.8**
BTO				AMB	AMB		
	comp=Z,21nm,0.9s,mb5.1						
UBT	**Ubonrachathani**	**38.88**	**270**	⇑P	**P**	**18 48 58.5**	**+2.8**
CD2	**Chengdu**	**39.29**	**295**	P	**P**	**18 48 59.6**	**+0.7**
CD2				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.9						
CTAO	**Charters Tower**	**39.38**	**179**	*e*P	**P**	**18 48 56.2**	**-3.6**
	comp=Z,28nm,1.4s,mb4.9						
KMI	**Kunming**	**39.90**	**286**	P	**P**	**18 49 06.0**	**+2.0**
KMI				PP	PP	18 50 43.1	+2.0
KMI				S	**S**	**18 54 55.4**	**-5.3**
KMI				XS		18 55 47.6	
KMI				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.6						
KMI				AMB	AMB		
	comp=Z,148nm,4.4s						
KMI				LR	LR		
	comp=N,150nm,14.7s						
KMI				LR	LR		
	comp=E,133nm,15.2s						
KMI				LR	LR		
	comp=Z,145nm,27.8s						
KMI	**Kunming**	**39.90**	**286**	*e*P	**P**	**18 49 06.0**	**+2.0**
KMI				S	**S**	**18 54 55.4**	**-5.3**
KMI	**Kunming**	**39.90**	**286**	P	**P**	**18 49 06.0**	**+2.0**
	comp=Z,11nm,1.2s,mb4.6						
KMI				pP	pP	18 49 37.3	+8.6
KMI				sP	sP	18 49 49.1	+7.9
KMI				PP	PP	18 50 43.1	+2.0
KMI				S	**S**	**18 54 55.4**	**-5.3**
KMI				sS		18 55 47.6	
KMI				SS	SS	18 57 50.1	-5.5
KMI				LR	LR		
	comp=Z,150nm,27.8s						
LZH	**Lanzhou**	**40.10**	**303**	*e*P	**P**	**18 49 05.5**	**0.0**
LZH				PP	PP	18 50 43.5	+0.4
LZH				*e*S	**S**	**18 55 00.5**	**-3.0**
LZH				*e*SS	SS	18 57 57.0	-2.7
LZH				AMB	AMB		
	comp=Z,56nm,1.2s,mb5.3						
LZH				AMB	AMB		
	comp=Z,203nm,4.6s						
LZH	**Lanzhou**	**40.10**	**303**	*e*P	**P**	**18 49 05.5**	**0.0**
	comp=Z,56nm,1.2s,mb5.3						
LZH				pP	pP	18 49 36.5	+6.3
LZH				sP	sP	18 49 52.0	+9.3
LZH				PP	PP	18 50 43.5	+0.4
LZH				*e*S	**S**	**18 55 00.5**	**-3.0**
LZH				sS		18 55 54.8	
LZH				*e*SS	SS	18 57 57.0	-2.7
MA2	**Magadan**	**40.17**	**4**	*d* *i*P	**P**	**18 49 07.2**	**+1.3**
MA2				*e**PP	pP	18 49 32.2	+1.7
MA2				*e*S	**S**	**18 55 04.2**	**-0.1**
MA2				*e**SS		18 55 56.6	
MA2				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
MA2				pmax	pmax		
	comp=N,20nm,1.3s						
MA2	**Magadan**	**40.17**	**4**	*e*P	**P**	**18 49 06.8**	**+1.0**
	comp=N,46nm,0.8s,mb5.4						
CLNS	**Chul’man**	**40.31**	**343**	*e*P	**P**	**18 49 08.0**	**+1.0**
CLNS				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.4						
CLNS				pmax	pmax		
	comp=N,66nm,1.4s						
CLNS				pmax	pmax		
	comp=E,28nm,1.4s						
WRAB	**Tennant Creek**	**40.74**	**196**	*i* P	**P**	**18 49 09.3**	**-1.6**
WRAB	**Tennant Creek**	**40.74**	**196**	*e*P	**P**	**18 49 08.0**	**-2.9**
	comp=E,39nm,0.6s,mb5.4						
ULN	**Ulaanbaatar**	**42.05**	**321**	⇓*i*P	**P**	**18 49 22.6**	**+1.1**
ULN	**Ulaanbaatar**	**42.05**	**321**	*e*P	**P**	**18 49 21.7**	**+0.2**
	comp=E,24nm,0.8s,mb5.0						
NANT	**Nan**	**42.31**	**277**	P	**P**	**18 49 23.0**	**-1.0**
NST	**Nakhon Sawan**	**43.40**	**272**	⇑P	**P**	**18 49 34.7**	**+1.8**
	comp=E,133nm,0.5s,mb5.9						
SEY	**Seymchan**	**43.62**	**5**	*e*P	**P**	**18 49 37.9**	**+3.9**
SEY				*SP	sP	18 50 22.7	+12
SEY						18 51 18.8	
SEY				*e*S	**S**	**18 56 02.1**	**+7.3**
SEY				*e**SS		18 56 53.1	
SEY				SS	SS	18 59 21.5	+17
SEY				pmax	pmax		
	comp=N,20nm,0.7s						
SEY				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
SEY				pmax	pmax		
	comp=E,20nm,0.8s						
SEY				MLR	MLR		
	comp=Z,120nm,14.0s						
SEY				MLR	MLR		
	comp=N,30nm,16.0s						
SEY				MLR	MLR		
	comp=E,70nm,14.0s						
YAK	**Yakutsk**	**43.88**	**349**	*d* *i*P	**P**	**18 49 36.4**	**+0.3**
YAK				*e**PP	pP	18 50 07.6	+6.6
YAK				*e*		18 51 18.2	
YAK				*e*		18 51 24.7	
YAK				*e*S	**S**	**18 55 57.2**	**-1.5**
YAK				*e**SS		18 56 44.6	
YAK				*e*SS	SS	18 59 16.8	+7.1
YAK				*e*		18 59 17.6	
YAK				pmax	pmax		
	comp=Z,162nm,0.8s,mb5.8						
YAK				pmax	pmax		
	comp=N,55nm,1.1s						
YAK				pmax	pmax		
	comp=E,20nm,1.0s						
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
YAK				smax			
	comp=N,12nm,1.1s						
YAK				smax			
	comp=E,10.0nm,1.2s						
YAK	**Yakutsk**	**43.88**	**349**	*e*P	**P**	**18 49 35.8**	**-0.3**
	comp=E,333nm,0.8s,mb6.1						
CHG	**Chiang Mai**	**43.95**	**277**	⇓P	**P**	**18 49 38.3**	**+1.0**
	comp=E,15nm,1.2s,mb4.6						
GTA	**Gaotai**	**43.96**	**307**	*e*P	**P**	**18 49 38.1**	**+1.0**
GTA				PCP	PcP	18 51 20.1	-1.5
GTA				PP	PP	18 51 23.1	+0.4
GTA				PPP	PPP	18 52 04.9	+2.9
GTA				SCP		18 55 00.7	
GTA				PCS		18 55 14.5	
GTA				S	**S**	**18 55 59.9**	**-0.3**
GTA				XS		18 56 48.2	
GTA				SS	SS	18 59 10.4	-1.0
GTA				SCS	ScS	18 59 21.7	-0.7
GTA				AMB	AMB		
	comp=Z,33nm,1.3s,mb4.9						
GTA				AMB	AMB		
	comp=Z,111nm,8.0s						
GTA				LR	LR		
	comp=N,278nm,17.5s						
GTA				LR	LR		
	comp=E,182nm,15.2s						
GTA				LR	LR		
	comp=Z,456nm,14.1s						
CM31	**Chiang Mai Arr**	**44.01**	**277**	*e*P	**P**	**18 49 39.3**	**+1.5**
	comp=Z,53nm,1.1s,mb5.2						
CMAR	**Chiang Mai Arr**	**44.01**	**277**	*i* P	**P**	**18 49 39.2**	**+1.5**
CMAR				pmax	pmax		
	comp=Z,49nm,1.2s						
BOD	**Bodaibo**	**44.70**	**337**	*e*P	**P**	**18 49 41.4**	**-1.4**
BOD				pmax	pmax		
	comp=Z,25nm,2.5s,mb4.5						
KGM	**Kluang**	**44.84**	**252**	P	**P**	**18 49 46.8**	**+2.4**
ZAK	**Zakamensk**	**45.42**	**323**	*e*P	**P**	**18 49 47.5**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
IRK	**Irkutsk**	**45.76**	**325**	*e*P	**P**	**18 49 50.2**	**-1.0**
IRK				*e*	pP	18 50 18.9	+2.7
IRK				*e*		18 50 38.4	
IRK				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
TLY	**Talaya**	**45.82**	**325**	P	**P**	**18 49 52.6**	**+0.9**
	comp=Z,65nm,1.2s,mb5.2,SNR=12						
TLY	**Talaya**	**45.82**	**325**	*c* *i*P	**P**	**18 49 52.1**	**+0.4**
TLY				pmax	pmax		
	comp=Z,25nm,1.7s,mb4.7						
TLY	**Talaya**	**45.82**	**325**	*e*P	**P**	**18 49 52.2**	**+0.5**
	comp=Z,18nm,1.2s,mb4.7						
IPM	**Ipoh**	**45.87**	**257**	P	**P**	**18 49 54.8**	**+2.1**
NOUC	**Port Laguerre**	**46.07**	**153**	⇑*e*P	**P**	**18 49 51.3**	**-2.8**
DZM	**Mont Dzumac**	**46.10**	**153**	*e*P	**P**	**18 49 49.8**	**-4.6**
DZM	**Mont Dzumac**	**46.10**	**153**	*e*P	**P**	**18 49 49.8**	**-4.6**
MOY	**Mondy**	**47.29**	**323**	*e*P	**P**	**18 50 04.0**	**+0.8**
MOY				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
MBWA	**Marble Bar**	**47.71**	**213**	*e*P	**P**	**18 50 05.3**	**-1.6**
	comp=Z,11nm,0.7s,mb4.8						
UNV	**Unalaska Valle**	**50.03**	**35**	P	**P**	**18 50 23.4**	**-1.0**
LSA	**Lhasa**	**50.13**	**293**	P	**P**	**18 50 27.0**	**+1.5**
LSA	**Lhasa**	**50.13**	**293**	*e*P	**P**	**18 50 27.0**	**+1.5**
	comp=Z,25nm,1.0s,mb5.1						
BILL	**Bilibino**	**50.22**	**10**	*i* P	**P**	**18 50 25.8**	**+0.2**
BILL				pmax	pmax		
	comp=Z,93nm,1.1s,mb5.6						
BILL	**Bilibino**	**50.22**	**10**	*e*P	**P**	**18 50 25.6**	**0.0**
STKA	**Stephens Creek**	**51.26**	**184**	*e*P	**P**	**18 50 29.7**	**-4.3**
TIXI	**Tiksi**	**53.03**	**353**	⇓*i*P	**P**	**18 50 46.0**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
WMQ	**Urumqi**	**53.69**	**310**	⇓*i*P	**P**	**18 50 51.8**	**-0.1**
WMQ				AP	pP	18 51 18.0	+0.4
WMQ				XP	sP	18 51 31.0	+1.6
WMQ				PP	PP	18 52 56.0	+0.8
WMQ				S	**S**	**18 58 16.0**	**+0.2**
WMQ				SS	SS	19 01 58.0	+0.7
WMQ				AMB	AMB		
	comp=Z,65nm,1.2s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,57nm,8.0s						
WMQ				LR	LR		
	comp=N,154nm,22.0s						
WMQ				LR	LR		
	comp=E,113nm,22.0s						
WMQ				LR	LR		
	comp=Z,122nm,22.0s						
JIRN	**Jiri**	**54.59**	**290**	*e*P	**P**	**18 50 59.0**	**+0.2**
	comp=Z,107nm,1.3s,mb5.7						
TNA	**Tin City**	**55.08**	**22**	*e*P	**P**	**18 51 01.4**	**-0.3**
	comp=Z,11nm,0.9s,mb4.9						
PKI	**Pulchoki**	**55.29**	**290**	*e*P	**P**	**18 51 03.2**	**-0.6**
KKN	**Kakani**	**55.38**	**291**	*e*P	**P**	**18 51 03.6**	**-0.9**
	comp=Z,26nm,0.9s,mb5.2						
DMN	**Daman**	**55.56**	**291**	*e*P	**P**	**18 51 05.2**	**-0.5**
	comp=Z,41nm,1.1s,mb5.4						
GKN	**Gorkha**	**55.93**	**291**	*e*P	**P**	**18 51 08.1**	**-0.3**
	comp=Z,124nm,1.3s,mb5.8						
KOLN	**Koldanda**	**56.87**	**291**	*e*P	**P**	**18 51 14.4**	**-0.7**
	comp=Z,52nm,1.3s,mb5.4						
MKAR	**Makanchi Array**	**57.81**	**314**	*i* P	**P**	**18 51 21.0**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,22nm,0.7s						
NVS	**Novosibirsk**	**58.38**	**323**	⇓*i*P	**P**	**18 51 23.7**	**-1.6**
NVS				*i*		18 51 54.8	
NVS				*e*S	**S**	**18 59 09.3**	**-8.4**
NVS				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.4						
NVS				pmax	pmax		
	comp=N,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,43nm,1.3s						
NVS				smax			
	comp=N,19nm,2.2s						
NVS				smax			
	comp=E,18nm,2.1s						
IMA	**Indian Mountai**	**60.56**	**24**	*e*P	**P**	**18 51 40.5**	**+0.4**
	comp=E,9.6nm,0.8s,mb4.9						
KURK	**Kurchatov**	**60.58**	**318**	⇓*i*P	**P**	**18 51 39.5**	**-1.0**
KURK	**Kurchatov**	**60.58**	**318**	*e*P	**P**	**18 51 39.3**	**-1.2**
	comp=E,61nm,0.9s,mb5.6						
PWA	**Palmer West**	**60.95**	**30**	*e*P	**P**	**18 51 41.8**	**-1.0**
	comp=E,30nm,0.8s,mb5.4						
SML	**Sawmill**	**61.70**	**30**	*e*P	**P**	**18 51 46.4**	**-1.5**
MCK	**McKinley**	**61.85**	**27**	*e*P	**P**	**18 51 47.0**	**-1.8**
	comp=E,10nm,1.1s,mb4.8						
KSH	**Kashi**	**62.30**	**305**	*e*P	**P**	**18 51 53.2**	**+1.0**
KSH				*e*AP	pP	18 52 19.7	+1.1
KSH				*e*XP	sP	18 52 32.7	+2.3
KSH				*e*PP	PP	18 54 13.4	+0.9
KSH				*e*SCP		18 56 24.9	
KSH				*e*PCS		18 56 31.1	
KSH				*e*S	**S**	**19 00 09.3**	**+1.2**
KSH				*e*PS	PS	19 00 45.9	+4.3
KSH				*e*XS		19 00 58.3	
KSH				*e*SCS	ScS	19 01 30.6	+0.5
KSH				*e*SS	SS	19 04 18.3	+3.2
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.8						
KSH				AMB	AMB		
	comp=Z,50nm,5.2s						
KSH				LR	LR		
	comp=N,300nm,5.8s						
KSH				LR	LR		
	comp=E,230nm,5.6s						
NDI	**New Delhi**	**62.34**	**293**	*e*P	**P**	**18 51 51.0**	**-1.6**
TKM2	**Tokmak 2**	**62.45**	**309**	P	**P**	**18 51 53.4**	**+0.3**
	SNR=38						
COLA	**College**	**62.57**	**26**	*e*P	**P**	**18 51 52.4**	**-1.2**
	comp=E,12nm,0.8s,mb4.9						
KZA	**Kyzart**	**62.73**	**308**	P	**P**	**18 51 56.1**	**+1.1**
	SNR=21						
KBK	**Karagaybulak**	**62.93**	**309**	P	**P**	**18 51 56.4**	**0.0**
	SNR=28						
CHMS	**Chumysh**	**63.06**	**309**	P	**P**	**18 51 57.2**	**0.0**
	SNR=10						
THY	**Trims Highway**	**63.18**	**28**	*e*P	**P**	**18 51 57.0**	**-0.7**
USP	**Ospenovka**	**63.24**	**309**	P	**P**	**18 51 57.9**	**-0.4**
	SNR=24						
HYB	**Hyderabad**	**63.24**	**280**	*i* P	**P**	**18 51 58.0**	**-0.7**
AAK	**Ala-Archa**	**63.27**	**309**	P	**P**	**18 51 58.5**	**-0.1**
	SNR=13						
AAK	**Ala-Archa**	**63.27**	**309**	⇓*i*P	**P**	**18 51 57.1**	**-1.4**
AAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
AAK	**Ala-Archa**	**63.27**	**309**	*e*P	**P**	**18 51 56.9**	**-1.7**
	comp=Z,8.4nm,0.8s,mb4.7						
UCH	**Uchtor**	**63.27**	**308**	P	**P**	**18 51 59.3**	**+0.7**
	SNR=32						
EKS2	**Erkin-Say**	**63.79**	**309**	P	**P**	**18 52 01.9**	**-0.1**
	SNR=17						
AML	**Almayashu**	**63.88**	**308**	P	**P**	**18 52 03.2**	**+0.6**
	SNR=33						
CHKZ	**Chkalovo**	**65.63**	**321**	*i* P	**P**	**18 52 12.4**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.1						
CHKZ	**Chkalovo**	**65.63**	**321**	*e*P	**P**	**18 52 12.2**	**-1.4**
	comp=Z,43nm,1.1s,mb5.2						
BVA0	**Borovoye Array**	**65.77**	**320**	P	**P**	**18 52 13.8**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
DAWY	**Dawson**	**66.06**	**28**	*e*P	**P**	**18 52 15.7**	**-0.5**

DAWY				e	pP	18 52 44.8	+1.9
INK	**Inuvik**	68.65	23	eP	P	18 52 30.8	-1.5
	comp=Z,34nm,1.2s,mb5.0						
DLBC	**Dease Lake**	70.66	34	eP	P	18 52 44.6	0.0
DLBC				epP	pP	18 53 13.6	+1.9
SVE	**Sverdlovsk**	71.14	325	⇓iP	P	18 52 47.5	-0.1
SVE				pmax	pmax		
	comp=Z,120nm,1.6s,mb5.5						
ARU	**Arti**	72.33	324	P	P	18 52 53.9	-0.7
	comp=Z,231nm,1.3s,mb5.8,SNR=27						
ARU	**Arti**	72.33	324	⇑iP	P	18 52 45.2	-9.4
ARU				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.3						
SOKR	**Solikamsk**	72.77	328	⇑iP	P	18 52 55.4	-1.7
SOKR				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
YKW3	**Yellowknife Ar**	77.28	28	eP	P	18 53 21.9	-0.9
YKA	**Yellowknife Ar**	77.30	28	i P	P	18 53 22.6	-0.3
YKA				pmax	pmax		
	comp=Z,18nm,0.6s						
YBH	**Yreka Blue Hor**	78.50	50	eP	P	18 53 30.3	+0.4
	comp=Z,24nm,1.4s,mb4.7						
YBH				epP	pP	18 53 56.8	-0.6
RES	**Resolute Bay**	78.64	14	eP	P	18 53 29.9	-0.2
	comp=Z,36nm,0.8s,mb5.3						
MOD	**Modoc**	80.17	49	eP	P	18 53 38.7	-0.3
	comp=Z,23nm,1.2s,mb4.9						
APA	**Apatity**	80.20	339	⇑iP	P	18 53 38.0	-0.6
APA				i		18 54 14.5	
APA				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.2						
NEW	**Newport**	80.37	42	eP	P	18 53 39.6	-0.3
	comp=Z,27nm,1.1s,mb5.0						
NEW				epP	pP	18 54 07.3	-0.2
EDM	**Edmonton**	80.98	37	eP	P	18 53 42.6	-0.4
KEV	**Kevo**	81.11	342	ep	P	18 53 42.8	-0.6
	comp=Z,38nm,0.8s,mb5.3						
KEV	**Kevo**	81.11	342	eP	P	18 53 42.8	-0.6
KEV				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.3						
WVOR	**Wild Horse Val**	81.19	48	eP	P	18 53 44.2	-0.2
	comp=Z,62nm,1.5s,mb5.2						
CMB	**Columbia Colle**	81.28	53	eP	P	18 53 44.4	-0.5
	comp=Z,40nm,1.3s,mb5.1						
CMB				epP	pP	18 54 12.1	-0.5
BMO	**Blue Mountains**	81.34	46	eP	P	18 53 44.7	-0.4
	comp=Z,24nm,1.0s,mb5.0						
BMO				epP	pP	18 54 12.6	-0.1
WALA	**Waterton Lakes**	82.11	41	eP	P	18 53 49.5	+0.5
	comp=Z,41nm,1.3s,mb5.1						
MNV	**Mina**	82.82	52	eP	P	18 53 53.0	+0.2
	comp=Z,34nm,1.0s,mb5.1						
MNV				epP	pP	18 54 20.8	+0.2
BMN	**Battle Mountai**	82.84	50	eP	P	18 53 53.2	+0.3
	comp=Z,29nm,1.4s,mb4.9						
MTUM	**Tungsten Hills**	82.86	53	eP	P	18 53 53.4	+0.3
JOF	**Joensuu**	83.22	335	ep	P	18 53 53.0	-1.3
	comp=Z,46nm,0.7s,mb5.4						
JOF	**Joensuu**	83.22	335	eP	P	18 53 53.0	-1.3
JOF				pmax	pmax		
	comp=Z,46nm,0.7s,mb5.4						
CHMT	**Chamberlain Mo**	83.29	43	eP	P	18 53 54.7	-0.3
DAG	**Danmarks Havn**	83.43	356	⇓iP	P	18 53 55.2	0.0
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
DAG	**Danmarks Havn**	83.43	356	⇓iP	P	18 53 55.2	0.0
	comp=Z,4.7nm,0.6s,mb4.5						
TPH	**Tonopah**	83.63	52	eP	P	18 53 57.5	+0.5
	comp=Z,25nm,0.9s,mb5.0						
TPH				epP	pP	18 54 24.9	+0.2
MOS	**Moscow**	83.71	327	eP	P	18 53 53.5	-3.4
MOS				e*PP	pP	18 54 30.0	+5.3
MOS				e		18 57 11.2	
MOS				pmax	pmax		
	comp=Z,124nm,1.4s,mb5.5						
HLID	**Hailey**	83.73	46	eP	P	18 53 57.7	+0.4
	comp=Z,20nm,1.4s,mb4.8						
HLID				pP	pP	18 54 26.3	+1.2
MCMT	**McKenzie Canyo**	84.32	44	eP	P	18 54 00.4	+0.2
OBN	**Obninsk**	84.52	327	κ iP	P	18 54 00.1	-0.9
OBN				e*PP	pP	18 54 36.3	+7.5
OBN				e		18 54 49.4	
OBN				e		19 04 12.3	
OBN				pmax	pmax		
	comp=Z,66nm,1.6s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s						
TRCR	**Troy Canyon**	84.75	51	eP	P	18 54 03.0	+0.4
BOZ	**Bozeman (W)**	84.81	43	eP	P	18 54 02.7	0.0
	comp=Z,17nm,0.8s,mb5.0						
QLMT	**Earthquake Lak**	85.25	44	eP	P	18 54 05.9	+1.0
HVU	**Hansel Valley**	85.51	47	eP	P	18 54 06.6	+0.4
KAF	**Kangasniemi**	85.62	336	ep	P	18 54 04.9	-1.3
	comp=Z,15nm,0.7s,mb5.0,baz=54,slow=4.6						
KAF	**Kangasniemi**	85.62	336	eP	P	18 54 04.9	-1.3
KAF				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
YMR	**Madison River**	85.62	44	eP	P	18 54 08.2	+1.5
YMR				epP	pP	18 54 36.0	+1.4
BGU	**Big Grassy Mou**	85.65	48	eP	P	18 54 07.2	+0.3
YNR	**Norris Junctio**	85.79	44	eP	P	18 54 09.1	+1.6
YFT	**Old Faithful**	85.79	44	eP	P	18 54 10.2	+2.6
RRI2	**Red Ridge**	85.90	45	eP	P	18 54 09.1	+1.0
SPUT	**South Promonto**	85.91	48	eP	P	18 54 08.6	+0.4
SPUT				epP	pP	18 54 35.2	-0.9
IMW	**Indian Meadow**	85.94	45	eP	P	18 54 09.4	+1.2
LKWY	**Lake**	86.03	44	eP	P	18 54 11.0	+2.3
	comp=Z,12nm,0.6s,mb5.0						
FINES	**FINESS Array B**	86.09	335	i P	P	18 54 07.4	-1.1
FINES				pmax	pmax		
	comp=Z,6.0nm,0.4s						
TPAW	**Teton Pass**	86.09	45	eP	P	18 54 09.9	+0.9
MOOW	**Moose Ponds**	86.13	45	eP	P	18 54 09.9	+0.8
NEN	**Nelson**	86.27	54	eP	P	18 54 10.5	+0.4
LDFC	**Landfair**	86.27	54	eP	P	18 54 10.7	+0.6
LOHW	**Long Hollow**	86.28	45	eP	P	18 54 10.5	+0.6
LOHW				epP	pP	18 54 38.6	+0.7
AHID	**Auburn Hatcher**	86.28	46	eP	P	18 54 10.4	+0.5
	comp=Z,45nm,1.1s,mb5.3						
HWUT	**Hardware Ranch**	86.41	47	eP	P	18 54 10.9	+0.3
	comp=Z,52nm,0.9s,mb5.5						
FFC	**Flin Flon**	86.45	32	P	P	18 54 10.1	-0.4
	comp=Z,325nm,0.8s,mb6.3,SNR=44						
FFC	**Flin Flon**	86.45	32	eP	P	18 54 10.1	-0.3
	comp=Z,43nm,0.8s,mb5.4						
NLU	**North Lily Min**	86.69	49	eP	P	18 54 12.3	+0.3
TCUT	**Toone Canyon**	86.71	48	eP	P	18 54 12.4	+0.3
JLU	**Jordanelle**	86.88	48	eP	P	18 54 13.4	+0.5
MPU	**Maple Canyon**	86.98	49	eP	P	18 54 13.7	+0.3
DAU	**Daniels Canyon**	87.09	48	eP	P	18 54 14.4	+0.5
MVU	**Marysvale**	87.15	50	eP	P	18 54 15.0	+0.7
	comp=Z,15nm,0.9s,mb4.9						
MSU	**Marysvale**	87.17	50	eP	P	18 54 15.1	+0.6
BW06	**Boulder Array**	87.32	45	eP	P	18 54 14.8	-0.1
	comp=Z,4.0nm,0.4s,mb4.7						
TMUT	**Trail Mountain**	87.57	49	eP	P	18 54 17.2	+0.9
SOC	**Sochi**	87.66	316	eP	P	18 54 16.0	-0.6
SOC				eS	S	19 04 30.4	-17
SOC				e		19 04 52.5	
SOC				eSS	SS	19 10 42.3	+3.2
SOC				eSSS	SSS	19 14 13.4	+1.6
SOC				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.6						
SOC				pmax	pmax		
	comp=N,66nm,1.4s						
SOC				pmax	pmax		
	comp=E,48nm,1.4s						
LAO	**LASA Array**	87.80	41	eP	P	18 54 17.6	+0.4
	comp=E,34nm,1.0s,mb5.3						
FCC	**Fort Churchill**	87.97	27	eP	P	18 54 17.4	-0.3
	comp=E,26nm,0.9s,mb5.3						
SUMG	**Summit**	88.08	1	eP	P	18 54 18.9	+1.0
	comp=E,19nm,0.8s,mb5.2						
SRU	**San Rafael**	88.13	49	eP	P	18 54 19.1	+0.1
PV10	**Paradox Valley**	89.49	49	eP	P	18 54 25.9	+0.6
PV01	**Paradox Valley**	89.92	49	eP	P	18 54 27.7	+0.3
TUC	**Tucson**	90.65	55	eP	P	18 54 31.5	+0.5
	comp=E,14nm,1.3s,mb4.9						
PHWY	**Pilot Hill**	90.70	45	eP	P	18 54 31.3	+0.3
MALT	**Malatya**	90.78	311	eP	P	18 54 30.8	-0.7
ISCO	**Idaho Springs**	91.28	47	eP	P	18 54 34.5	+0.8
	comp=E,12nm,0.8s,mb5.1						
SUW	**Suwalki**	91.72	330	eP	P	18 54 34.2	-1.2
NB2	**NORSAR Subarra**	91.76	340	P	P	18 54 33.9	-1.5
	comp=E,2.1nm,0.6s,mb4.5,baz=54,slow=4.8						
SDCO	**Great Sand Dun**	92.28	49	eP	P	18 54 38.3	0.0
	comp=E,25nm,1.1s,mb5.3						
SDCO				epP	pP	18 55 12.7	+6.1
LAZ	**Ladron**	92.56	52	eP	P	18 54 40.6	+0.9
ANMO	**Albuquerque**	92.82	51	eP	P	18 54 41.2	+0.3
	comp=E,14nm,1.0s,mb5.2						
ANMO				epP	pP	18 55 11.6	+2.4
MNTX	**Cornudas Mount**	95.07	54	eP	P	18 54 50.9	-0.3
	comp=E,12nm,1.2s,mb5.2						
CPRX	**Cap Rock**	95.61	52	eP	P	18 54 53.5	-0.1
GDL2	**Guadalupe Moun**	95.62	53	eP	P	18 54 53.6	-0.1
KSP	**Ksiaz**	96.99	330	eP	P	18 54 58.5	-1.0
KSP	**Ksiaz**	96.99	330	eP	P	18 54 58.8	-0.7
CLL	**Collm**	98.16	332	i P	P	18 55 03.3	-1.4
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb5.0						
CLL	**Collm**	98.16	332	i P	P	18 55 03.3	-1.4
	comp=Z,6.0nm,1.1s,mb5.0						
CLL				epP	sP	18 55 44.0	-0.3
CLL	**Collm**	98.16	332	P	P	18 55 03.3	-1.4
	comp=Z,logA/T=0.7,mb5.0						
CLL				e*SP	sP	18 55 44.0	-0.3
CLL				ePP	PP	18 59 02.0	-5.8
CLL				e*SPP		18 59 41.0	
WMOK	**Wichita Mounta**	98.48	49	eP	P	18 55 05.8	-0.8
	comp=Z,7.6nm,1.3s,mb5.1						
LSZ	**Lusaka**	120.39	263	ePKPdf	PKPdf	19 00 18.4	-0.1
OTAV	**Otavalo**	132.58	71	ePKPdf	PKPdf	19 00 42.9	+0.8
SDV	**Santo Domingo**	134.50	55	ePKPdf	PKPdf	19 00 46.4	+0.8
ARE	**Arequipa**	144.65	91	P	PKPbc	19 01 05.0	+1.3
LVC	**Limon Verde**	147.71	102	ePKPdf	PKPdf	19 01 09.2	+0.5
LVC				ePKPbc	PKPdf	19 01 12.7	+4.0
TRQA	**Tornquist**	149.77	133	ePKPdf	PKPdf	19 01 11.2	-0.4
TRQA				ePKPbc	PKPdf	19 01 15.7	+4.1
TRQA				ePKPab	PKPab	19 01 22.4	-2.1
SAML	**Samuel**	150.25	73	ePKPdf	PKPdf	19 01 13.2	+0.1
SAML				ePKPbc	PKPdf	19 01 18.1	+5.1
SAML				ePKPab	PKPab	19 01 24.5	-2.5

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*NEIC **07** 18:47:49.1,34.46S×71.06W,h69$^{\text{km}}$,MD3.5(GUC),After GUC.*

GUC 07 18:47:49.1±0.5**,34.46S**×**71.06W,h69**$^{\text{km}}$±3$^{\text{km}}$**,MD3.5, ML3.1,2C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	**San Fernando**	0.16	166	⇓iP	P	18 47 59.5	+0.1
SFDO				i S	S	18 48 07.6	+0.5
CACH	**El Canelo**	0.51	49	eP	P	18 48 02.3	+0.2
CACH				i S	S	18 48 12.8	+1.2
CICH	**Cipreses**	0.55	76	⇑iP	P	18 48 03.0	+0.5
CICH				i S	S	18 48 13.3	+1.1
LNV	**Longovilo**	0.58	330	⇑iP	P	18 48 02.7	-0.1
LNV				i S	S	18 48 13.5	+0.8
CHCH	**Chadas Angostu**	0.62	33	eP	P	18 48 03.3	+0.1
CHCH				i S	S	18 48 14.2	+0.6
TACH	**Talagante**	0.81	7	⇓iP	P	18 48 05.5	+0.1
TACH				i S	S	18 48 17.9	+0.5
LMEL	**Las Melosas**	0.94	50	eP	P	18 48 07.7	+0.7
LMEL				i S	S	18 48 22.2	+2.0
LMEL				AMP		18 48 22.8	
	comp=N,2μm,0.2s						
RCDM	**Rinconada Maip**	0.99	12	⇓iP	P	18 48 07.7	0.0
RCDM				i S	S	18 48 21.3	-0.1
RCDM				AMP		18 48 22.2	
	comp=E,1μm,0.2s						
LCCH	**Las Cruces**	1.07	336	eP	P	18 48 08.5	-0.2
LCCH				i S	S	18 48 23.4	+0.3
CLCH	**Cerro Calan**	1.14	23	eP	P	18 48 09.9	+0.2
CLCH				i S	S	18 48 25.6	+0.6
CLCH				AMP		18 48 27.5	
	comp=E,294nm,0.3s						
FCH	**Farellones**	1.29	30	eP	P	18 48 12.3	+0.6
FCH				i S	S	18 48 30.0	+1.4
FCH				AMP		18 48 31.7	
	comp=N,356nm,0.1s						

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*NEIC **07** 19:04:14.1,34.21S×69.58W,h2$^{\text{km}}$,ML2.6(GUC),After GUC.*

GUC 07 19:04:14.1±0.7**,34.21S**×**69.58W,h2**$^{\text{km}}$±2$^{\text{km}}$**,MD3.7, ML2.6,1C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	0.63	304	i P	Pg	19 04 27.3	+0.6
LMEL				i S	Sg	19 04 37.2	+2.0
LMEL				AMP		19 04 38.4	
	comp=N,773nm,0.4s						
CICH	**Cipreses**	0.71	261	⇑iP	Pg	19 04 28.2	0.0
CACH	**El Canelo**	0.85	276	i P	Pg	19 04 30.6	-0.5
CACH				i S	Sg	19 04 43.5	+1.0
CHCH	**Chadas Angostu**	0.93	287	eP	Pb	19 04 32.3	-0.4
CHCH				i S	Sg	19 04 46.2	+1.0
PCH	**Pirque**	0.97	307	eP	Pb	19 04 33.3	0.0
FCH	**Farellones**	1.06	326	eP	Pb	19 04 34.7	-0.1
FCH				i S	Sb	19 04 50.4	+1.4
FCH				AMP		19 04 52.5	
	comp=N,93nm,0.3s						
CLCH	**Cerro Calan**	1.14	315	i P	Pb	19 04 36.6	+0.5
CLCH				i S	Sb	19 04 53.6	+2.4
CLCH				AMP		19 04 55.0	
	comp=N,497nm,0.5s						
RCDM	**Rinconada Maip**	1.25	305	eP	Pb	19 04 38.3	+0.3
RCDM				AMP		19 04 57.3	
	comp=E,278nm,0.2s						
SFDO	**San Fernando**	1.25	251	eP	Pb	19 04 37.6	-0.6
MDZ	**Mendoza**	1.45	25	eP	Pn	19 04 39.0	-2.4
MDZ				e		19 05 00.1	
MDZ				eS	Sb	19 05 01.4	+1.1
LNV	**Longovilo**	1.54	279	eP	Pn	19 04 42.0	-0.7
LNV				i S	Sb	19 05 02.9	-0.1

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*JMA **07** 19:10:15.9±0.4,24.08N×121.67E,h59$^{\text{km}}$,M3.1*
*TAP **07** 19:10:15.6,24.09N×121.63E,h26$^{\text{km}}$,ML3.9*
TAP Felt I J at Chiawan, I J at Hualien, I J at Shilin, I J at Hehuanshan, II J at Nanau, I J at Nanshan.

ISC 07 19:10:15.6±0.3**,24.04N**±0.02×**121.72E**±0.02**,h25**$^{\text{km}}$±2$^{\text{km}}$**, n65,**σ**0$^{\text{s}}$75**/110**,7C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWD	**Chiawan**	0.12	290	⇓iP	**Pb**	**19 10 20.4**	**+0.1**
TWD				S	**Sb**	**19 10 23.8**	**+0.2**
HWA	**Hwalien**	0.12	238	⇓iP	**Pb**	**19 10 20.9**	**+0.5**
HWA				S	**Sb**	**19 10 24.9**	**+1.4**
ESL	**Shilin**	0.34	229	⇑iP	**Pb**	**19 10 22.8**	**-0.4**
ESL				S	**Sb**	**19 10 28.3**	**-0.1**
ENA	**Nanau**	0.39	4	⇓iP	**Pb**	**19 10 24.0**	**+0.1**
ENA				S	**Sb**	**19 10 30.1**	**+0.5**
WHF	**Hehuan Shan**	0.42	284	⇑iP	**Pb**	**19 10 24.0**	**-0.5**
WHF				S	**Sb**	**19 10 29.8**	**-0.8**
NNS	**Nan Shan**	0.51	322	⇑iP	**Pb**	**19 10 25.4**	**-0.4**
NNS				S	**Sb**	**19 10 32.1**	**-0.7**
TWT	**Tachien**	0.54	293	⇑iP	**Pb**	**19 10 26.2**	**-0.1**
TWT				S	**Sb**	**19 10 33.2**	**-0.5**
TWC	**Suao**	0.58	12	⇓iP	**Pb**	**19 10 27.3**	**+0.3**
TWC				S	**Sb**	**19 10 35.8**	**+0.9**
ENTT	**Nioudou**	0.61	347	⇑iP	**Pb**	**19 10 27.3**	**-0.3**
ENTT				S	**Sb**	**19 10 36.0**	**+0.2**
EHY	**Hungye**	0.64	214	eP	**Pb**	**19 10 26.8**	**-1.3**
TWE	**Neicheng**	0.68	356	⇑iP	**Pb**	**19 10 28.4**	**-0.3**
NSK	**Sanguang**	0.71	333	⇑iP	**Pb**	**19 10 28.8**	**-0.5**
NSK				S	**Sb**	**19 10 37.4**	**-1.3**
ILA	**Ilan**	0.72	2	eP	**Pb**	**19 10 29.9**	**+0.4**
SMLT	**Sun Moon Lake**	0.76	258	⇓iP	**Pb**	**19 10 29.7**	**-0.4**
SMLT				S	**Sb**	**19 10 39.7**	**-0.4**
TWF1	**Yuli**	0.78	209	eP	**Pb**	**19 10 28.9**	**-1.6**
TYC	**Yuchr**	0.80	260	i P	**Pb**	**19 10 29.9**	**-0.7**
TYC				S	**Sb**	**19 10 39.9**	**-1.1**
NSTT	**Nanjuang**	0.88	312	eP	**Pb**	**19 10 31.8**	**-0.2**
NSTT				S	**Sb**	**19 10 42.4**	**-0.9**
YUS	**Yu-Shan**	0.89	232	⇓iP	**Pb**	**19 10 32.1**	**-0.1**
YUS				S	**Sb**	**19 10 43.2**	**-0.5**
TWQ1	**Liyutan**	0.91	290	eP	**Pb**	**19 10 32.8**	**+0.2**
TWQ1				S	**Sb**	**19 10 44.5**	**+0.1**
TWA	**Mucha**	0.94	353	P	**Pb**	**19 10 33.2**	**0.0**
TWA				S	**Sb**	**19 10 45.1**	**-0.2**
NSY	**Sanyi**	0.95	293	eP	**Pb**	**19 10 33.9**	**+0.7**
NSY				S	**Sb**	**19 10 45.7**	**+0.3**
TCU	**Taichung**	0.95	277	eP	**Pb**	**19 10 33.8**	**+0.4**
TCU				S	**Sb**	**19 10 46.6**	**+1.0**
WNT	**Mingjian**	0.96	261	eP	**Pb**	**19 10 33.7**	**+0.4**
WNT				S	**Sb**	**19 10 46.0**	**+0.4**
ALS	**Alishan**	0.99	238	⇓iP	**Pb**	**19 10 33.8**	**-0.1**
ALS				S	**Sb**	**19 10 46.3**	**-0.2**
CHKT	**Chengkung**	0.99	199	eP	**Pb**	**19 10 33.0**	**-0.9**
CHKT				S	**Sb**	**19 10 47.7**	**+1.1**
TWB1	**Santiao Chiao**	1.00	14	P	**Pb**	**19 10 34.6**	**+0.6**
TWB1				S	**Sb**	**19 10 48.0**	**+1.2**
TAP1	**Taipei**	1.01	350	eP	**Pb**	**19 10 33.8**	**-0.5**
TAP1				S	**Sb**	**19 10 46.6**	**-0.6**
TAP	**Taipei**	1.01	349	eP	**Pn**	**19 10 33.3**	**-1.0**
TAP				S	**Sb**	**19 10 46.9**	**-0.3**
HSN	**Hsinchu**	1.02	318	eP	**Pn**	**19 10 34.7**	**+0.3**
HSN				S	**Sb**	**19 10 47.8**	**+0.3**
NWF	**Wu-fen Shan**	1.03	3	eP	**Pn**	**19 10 34.5**	**-0.1**
NWF				S	**Sb**	**19 10 48.2**	**+0.5**
NCU	**National Centr**	1.04	333	eP	**Pn**	**19 10 34.3**	**-0.4**
NCU				S	**Sb**	**19 10 48.9**	**+0.8**
CHN5	**Tsauling**	1.05	245	eP	**Pn**	**19 10 34.8**	**0.0**
CHN5				S	**Sb**	**19 10 49.3**	**+1.0**
ELDTW	**Lidau**	1.06	217	eP	**Pn**	**19 10 33.3**	**-1.8**
ELDTW				S	**Sb**	**19 10 48.5**	**-0.1**
TWS1	**Kuangyinshan**	1.09	346	eP	**Pn**	**19 10 35.1**	**-0.3**
TWS1				S	**Sb**	**19 10 49.9**	**+0.4**
WGK	**Gukeng**	1.11	252	eP	**Pn**	**19 10 35.8**	**0.0**
TWY	**Chenhua**	1.23	355	eP	**Pn**	**19 10 36.8**	**-0.7**
CHN4	**Tsaushan**	1.24	237	eP	**Pn**	**19 10 38.2**	**+0.7**
CHN4				S	**Sn**	**19 10 54.0**	**+0.5**
STYT	**Tauyuan**	1.24	225	eP	**Pn**	**19 10 37.2**	**-0.3**
STYT				S	**Sn**	**19 10 53.2**	**-0.4**
CHN2	**Minshiung**	1.24	246	eP	**Pn**	**19 10 37.9**	**+0.3**
YOJ	**Yonaguni jima**	1.25	70	P	**Pn**	**19 10 38.0**	**+0.2**
YOJ				eS	**Sn**	**19 10 54.6**	**+0.6**
WTP	**Ta-pu**	1.28	232	eP	**Pn**	**19 10 38.3**	**+0.1**
CHY	**Chiayi**	1.30	246	eP	**Pn**	**19 10 38.7**	**+0.3**
WTCT	**Ta-ch’eng**	1.32	263	eP	**Pn**	**19 10 38.7**	**0.0**
WTCT				S	**Sn**	**19 10 56.4**	**+0.7**
TWG	**Pinlang**	1.35	206	eP	**Pn**	**19 10 37.6**	**-1.5**
TWG				S	**Sn**	**19 10 55.8**	**-0.5**
TWK	**Hsinying**	1.36	236	eP	**Pn**	**19 10 39.7**	**+0.4**
TWK				S	**Sn**	**19 10 57.5**	**+0.8**
CHN1	**Nanshi**	1.38	232	eP	**Pn**	**19 10 39.8**	**+0.2**
CHN1				S	**Sn**	**19 10 57.9**	**+0.7**
TTN	**Taitung**	1.38	202	eP	**Pn**	**19 10 40.9**	**+1.3**
SGST	**Jiashian**	1.41	228	eP	**Pn**	**19 10 40.9**	**+0.9**
WSF	**Szhu**	1.42	254	eP	**Pn**	**19 10 40.4**	**+0.2**
WSF				S	**Sn**	**19 10 59.9**	**+1.6**
CHN8	**Yiju**	1.54	244	eP	**Pn**	**19 10 41.6**	**-0.2**
CHN8				S	**Sn**	**19 11 02.5**	**+1.2**
CHN3	**Shinhua**	1.57	233	eP	**Pn**	**19 10 41.7**	**-0.5**
ECL	**Taimali**	1.60	206	eP	**Pn**	**19 10 41.2**	**-1.4**
SSD	**Sandimen**	1.63	218	eP	**Pn**	**19 10 43.0**	**-0.1**
TWM1	**Shoushan**	1.70	225	eP	**Pn**	**19 10 45.7**	**+1.6**
SGLT	**Jiouru**	1.73	221	eP	**Pn**	**19 10 46.6**	**+2.1**
EAST	**Anshuo**	1.83	206	eP	**Pn**	**19 10 44.7**	**-1.4**
IRIF	**Iriomote-Funau**	1.86	81	P	**Pn**	**19 10 46.4**	**-0.1**
IRIF				eS	**Sn**	**19 11 10.1**	**+0.7**
HATJ	**Hateruma jima**	1.91	89	P	**Pn**	**19 10 47.6**	**+0.4**
HATJ				eS	**Sn**	**19 11 10.0**	**-0.6**
SCZT	**Fangliau**	1.94	211	eP	**Pn**	**19 10 47.9**	**+0.3**
PNG	**Penghu**	2.03	257	eP	**Pn**	**19 10 48.1**	**-0.9**
PNG				S	**Sn**	**19 11 12.3**	**-1.5**
WDGT	**Dungji**	2.04	248	eP	**Pn**	**19 10 48.5**	**-0.5**
JKRS	**Kuro-shima**	2.10	84	P	**Pn**	**19 10 50.3**	**+0.3**
JKRS				eS	**Sn**	**19 11 16.7**	**+1.1**
HEN	**Hengchun**	2.22	204	eP	**Pn**	**19 10 54.8**	**+3.3**
JIJ	**Ishigaki jima**	2.24	81	P	**Pn**	**19 10 51.6**	**-0.3**
JIJ				S	**Sn**	**19 11 17.7**	**-1.3**
JTJ	**Tarama**	2.79	77	P	**Pn**	**19 10 59.5**	**-0.2**
JTJ				eS	**Sn**	**19 11 32.2**	**-0.8**

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*NIED **07** 19:33:00,24.80N×121.80E,h20$^{\text{km}}$,Mw3.8 Best double couple: M$_0$6.07×10^{14} NP1:φ$_s$288°,δ89°,λ28°. NP2:φ$_s$198°, δ62°,λ178°.*
*JMA **07** 19:33:21.9±0.4,24.80N×121.82E,h32$^{\text{km}}$,M3.6*
*TAP **07** 19:33:21.1,24.33N×121.80E,h7$^{\text{km}}$,ML4.0*
TAP Felt IV J at Nanau, I J at Suao, I J at Chiawan, II J at Nioudou, II J at Nanshan, I J at Neicheng, I J at Ilan, I J at Hehuanshan, I J at Sanguang, I J at Tachien, I J at Shilin, I J.

ISC 07 19:33:21.3±0.2**,24.34N**±0.01×**121.86E**±0.02**,h7**$^{\text{km}}$**,n67,** σ**0$^{\text{s}}$93**/103**,8C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	**Nanau**	0.14	309	⇓iP	**Pg**	**19 33 24.0**	**-0.4**
ENA				S	**Sg**	**19 33 25.8**	**-0.6**
TWC	**Suao**	0.27	358	⇑iP	**Pg**	**19 33 27.0**	**+0.2**
TWD	**Chiawan**	0.35	223	⇑iP	**Pg**	**19 33 27.8**	**-0.7**
TWD				S	**Sg**	**19 33 32.4**	**-0.9**
ENTT	**Nioudou**	0.40	318	⇓iP	**Pg**	**19 33 29.2**	**-0.2**
ENTT				S	**Sg**	**19 33 34.2**	**-0.7**
TWE	**Neicheng**	0.42	335	⇓iP	**Pg**	**19 33 29.7**	**-0.1**
TWE				S	**Sg**	**19 33 35.0**	**-0.4**
HWA	**Hwalien**	0.43	213	⇑iP	**Pg**	**19 33 29.7**	**-0.3**
ILA	**Ilan**	0.44	346	eP	**Pg**	**19 33 30.4**	**+0.3**
ILA				S	**Sg**	**19 33 36.5**	**+0.5**
NNS	**Nan Shan**	0.46	283	⇓iP	**Pg**	**19 33 29.6**	**-0.8**
NNS				S	**Sg**	**19 33 35.1**	**-1.5**
NSK	**Sanguang**	0.57	306	⇓iP	**Pg**	**19 33 32.2**	**-0.5**
NSK				S	**Sg**	**19 33 39.3**	**-1.0**
WHF	**Hehuan Shan**	0.58	251	⇑iP	**Pg**	**19 33 31.8**	**-1.0**
WHF				S	**Sg**	**19 33 39.5**	**-1.1**
TWT	**Tachien**	0.63	262	eP	**Pg**	**19 33 33.3**	**-0.6**
TWT				S	**Sg**	**19 33 41.6**	**-0.8**
ESL	**Shilin**	0.65	217	⇑iP	**Pg**	**19 33 33.1**	**-1.2**
ESL				S	**Sg**	**19 33 42.5**	**-0.7**
TWB1	**Santiao Chiao**	0.68	10	⇑iP	**Pg**	**19 33 34.6**	**-0.2**
TWB1				S	**Sg**	**19 33 43.9**	**+0.1**
TWA	**Mucha**	0.69	338	⇓iP	**Pg**	**19 33 35.0**	**0.0**
TWA				S	**Sg**	**19 33 43.6**	**-0.6**
NWF	**Wu-fen Shan**	0.73	354	eP	**Pb**	**19 33 36.1**	**+0.2**
NWF				S	**Sg**	**19 33 45.5**	**-0.2**
TAP1	**Taipei**	0.76	336	P	**Pb**	**19 33 36.6**	**+0.2**
TAP1				S	**Sb**	**19 33 46.3**	**-0.4**
TAP	**Taipei**	0.77	335	eP	**Pb**	**19 33 36.1**	**-0.4**
TAP				S	**Sb**	**19 33 46.2**	**-0.7**
NSTT	**Nanjuang**	0.84	291	⇓P	**Pb**	**19 33 37.5**	**-0.1**
NSTT				S	**Sb**	**19 33 47.6**	**-1.3**
TWS1	**Kuangyinshan**	0.86	332	eP	**Pb**	**19 33 39.0**	**+0.9**
NCU	**National Centr**	0.88	316	eP	**Pb**	**19 33 39.2**	**+0.8**
NCU				S	**Sb**	**19 33 50.3**	**+0.2**
HSN	**Hsinchu**	0.93	300	eP	**Pb**	**19 33 40.0**	**+0.7**
HSN				S	**Sb**	**19 33 54.3**	**+2.6**
TWY	**Chenhua**	0.96	346	eP	**Pb**	**19 33 40.5**	**+0.7**
TWY				S	**Sb**	**19 33 54.4**	**+1.9**
EHY	**Hungye**	0.96	211	eP	**Pb**	**19 33 39.0**	**-0.9**
SMLT	**Sun Moon Lake**	0.99	243	⇑iP	**Pb**	**19 33 39.8**	**-0.5**
SMLT				S	**Sb**	**19 33 52.3**	**-1.0**
TWQ1	**Liyutan**	0.99	271	eP	**Pb**	**19 33 40.6**	**+0.3**
TWQ1				S	**Sb**	**19 33 53.2**	**-0.3**
NSY	**Sanyi**	1.01	275	eP	**Pb**	**19 33 41.4**	**+0.8**
NSY				S	**Sb**	**19 33 53.4**	**-0.4**
TYC	**Yuchr**	1.01	245	⇑P	**Pb**	**19 33 40.1**	**-0.6**
TYC				S	**Sb**	**19 33 52.6**	**-1.4**
YOJ	**Yonaguni jima**	1.05	83	P	**Pb**	**19 33 41.9**	**+0.5**
YOJ				S	**Sb**	**19 33 56.4**	**+1.2**
TCU	**Taichung**	1.10	260	eP	**Pb**	**19 33 42.9**	**+0.7**
TCU				S	**Sb**	**19 33 57.2**	**+0.7**
TWF1	**Yuli**	1.11	208	eP	**Pb**	**19 33 40.9**	**-1.4**
WNT	**Mingjian**	1.17	247	eP	**Pb**	**19 33 44.1**	**+0.8**
WNT				S	**Sb**	**19 34 00.3**	**+1.7**
YUS	**Yu-Shan**	1.19	225	eP	**Pb**	**19 33 43.2**	**-0.5**
ALS	**Alishan**	1.27	230	eP	**Pb**	**19 33 45.1**	**0.0**
PCYT	**Pengchaiyu**	1.30	8	eP	**Pb**	**19 33 45.0**	**-0.6**
CHN5	**Tsauling**	1.31	236	eP	**Pb**	**19 33 46.4**	**+0.6**
CHN5				S	**Sb**	**19 34 04.0**	**+1.4**
CHKT	**Chengkung**	1.31	200	eP	**Pb**	**19 33 45.3**	**-0.6**
WGK	**Gukeng**	1.35	242	eP	**Pb**	**19 33 47.3**	**+0.8**
ELDTW	**Lidau**	1.38	214	eP	**Pn**	**19 33 45.6**	**-1.4**
CHN2	**Minshiung**	1.50	238	eP	**Pn**	**19 33 49.5**	**+0.8**
WTCT	**Ta-ch’eng**	1.52	252	eP	**Pn**	**19 33 48.7**	**-0.3**
WTCT				S	**Sb**	**19 34 09.8**	**+1.1**
CHN4	**Tsaushan**	1.52	230	eP	**Pn**	**19 33 50.3**	**+1.3**
CHN4				S	**Sb**	**19 34 12.3**	**+3.5**

STYT	**Tauyuan**	**1.55**	**221**	*e*P	**Pn**	**19 33 49.3**	**-0.1**
CHY	**Chiayi**	**1.56**	**238**	*e*P	**Pn**	**19 33 50.8**	**+1.3**
CHY				S	**Sb**	**19 34 09.6**	**-0.2**
WTP	**Ta-pu**	**1.58**	**227**	*e*P	**Pn**	**19 33 50.8**	**+1.0**
TWK	**Hsinying**	**1.65**	**230**	*e*P	**Pn**	**19 33 52.0**	**+1.1**
WSF	**Szhu**	**1.65**	**245**	*e*P	**Pn**	**19 33 51.3**	**+0.4**
TWG	**Pinlang**	**1.68**	**206**	*e*P	**Pn**	**19 33 49.4**	**-1.8**
CHN1	**Nanshi**	**1.68**	**227**	*e*P	**Pn**	**19 33 52.2**	**+1.0**
IRIF	**Iriomote-Funau**	**1.70**	**90**	P	**Pn**	**19 33 51.3**	**-0.3**
IRIF				S	**Sn**	**19 34 13.8**	**0.0**
SGST	**Jiashian**	**1.71**	**223**	*e*P	**Pn**	**19 33 52.7**	**+0.9**
HATJ	**Hateruma jima**	**1.80**	**99**	P	**Pn**	**19 33 54.4**	**+1.5**
CHN8	**Yiju**	**1.81**	**237**	*e*P	**Pn**	**19 33 53.6**	**+0.6**
CHN8				S	**Sn**	**19 34 18.3**	**+1.9**
CHN3	**Shinhua**	**1.86**	**228**	*e*P	**Pn**	**19 33 55.6**	**+1.7**
ECL	**Taimali**	**1.92**	**206**	*e*P	**Pn**	**19 33 53.8**	**-0.9**
SSD	**Sandimen**	**1.95**	**216**	*e*P	**Pn**	**19 33 54.4**	**-0.6**
JKRS	**Kuro-shima**	**1.96**	**93**	P	**Pn**	**19 33 55.5**	**+0.2**
JKRS				S	**Sn**	**19 34 19.9**	**-0.5**
TWM1	**Shoushan**	**2.00**	**221**	*e*P	**Pn**	**19 33 57.7**	**+1.8**
SGLT	**Jiouru**	**2.04**	**218**	*e*P	**Pn**	**19 33 56.9**	**+0.5**
JIJ	**Ishigaki jima**	**2.08**	**89**	P	**Pn**	**19 33 56.5**	**-0.5**
JIJ				S	**Sn**	**19 34 21.8**	**-1.6**
EAST	**Anshuo**	**2.16**	**206**	*e*P	**Pn**	**19 33 56.9**	**-1.2**
TAW	**Tawu**	**2.16**	**204**	*e*P	**Pn**	**19 34 00.5**	**+2.3**
PNG	**Penghu**	**2.25**	**250**	*e*P	**Pn**	**19 33 60.0**	**+0.6**
SCZT	**Fangliau**	**2.27**	**210**	*e*P	**Pn**	**19 34 00.4**	**+0.7**
WDGT	**Dungji**	**2.29**	**242**	*e*P	**Pn**	**19 34 00.1**	**+0.2**
LAY	**Lan-yu**	**2.31**	**187**	*e*P	**Pn**	**19 33 58.1**	**-2.2**
JTJ	**Tarama**	**2.60**	**83**	P	**Pn**	**19 34 04.3**	**-0.2**
JTJ				*e*S	**Sn**	**19 34 35.2**	**-1.5**
JOGS	**Gusukube**	**3.25**	**82**	P	**Pn**	**19 34 13.9**	**+0.1**
JOGS				*e*S	**Sn**	**19 34 53.3**	**+0.1**

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*BJI **07** 20:02:15.9, 4.25S×153.53E, h36^{km}, mB6.0, mb6.0, Ms5.8, Msz5.7*

*MOS **07** 20:02:16.3±1.3, 4.45S×153.15E, h33^{km}, mb5.9/43, MS5.7/50, Error ellipse: s-maj=8.1km s-min=6.5km az=94.9*

*BGS **07** 20:02:17.9, 4.52S×153.12E, h33^{km}*

*HRVD **07** 20:02:17.7±0.1, 4.53S×153.19E, h54^{km}, MW6.1/77, Centroid moment Tensor Solution. LP body waves: s75,c177; Mantle waves: s77,c276; Half duration: 2^{s}6 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.07±.01; M$_{\theta\theta}$0.02±.01; M$_{\phi\phi}$-0.08±.01; M$_{r\theta}$-0.51±.01; M$_{\theta\phi}$-1.06±.01; M$_{\phi r}$-1.17±.01; Best double couple: M$_0$1.593×10^{18} NP1:ϕ_s95°,δ41°, λ-180°. NP2:ϕ_s5°,δ90°,λ-49°. Principal axes: T 1.319, Plg32°, Azm62°; N .546, Plg41°, Azm185°; P -1.866, Plg33°, Azm308°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **07** 20:02:17.7±0.9, 4.53S×153.19E, h36^{km}±7^{km}, mb5.7/63, ME5.3, MS5.8/120, MW6.1 Error ellipse: s-maj=4.8km s-min=3.9km az=61.0 Broadband fault plane solution: P waves. NP1:ϕ_s25°,δ86°,λ-60°. NP2:ϕ_s122°,δ30°,λ-172°. Principal axes: T Plg34°, Azm90°; N Plg0°, Azm0°; P Plg41°, Azm323°; Moment Tensor Solution. s27 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-0.15; M$_{\theta\theta}$-0.54; M$_{\phi\phi}$0.69; M$_{r\theta}$-0.73; M$_{\theta\phi}$-0.62; M$_{\phi r}$-1.32; Best double couple: M$_0$1.7×10^{18} NP1:ϕ_s118°,δ30°,λ-175°. NP2:ϕ_s23°, δ88°,λ-60°. Principal axes: T 1.66, Plg35°, Azm87°; N .17, Plg30°, Azm202°; P -1.82, Plg40°, Azm321°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Kokopo and Rabaul, New Britain. Also felt at Port Moresby, New Guinea.

*CRAAG **07** 20:02:19.2, 3.92S×153.28E, Mb5.6*

ISC 07 20:02:19.0±0.9**, 4.56S**±0.03×**153.17E**±0.03**, h62**^{km}±7^{km}**, h49**^{km}±2.4^{km}**:pP-P, n859,** σ1^{s}**14**/395**, mb5.8**/104**, 61C-28D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.66**	**231**	*i* P	**P**	**20 04 10.5**	**+0.2**
PMG	**Port Moresby**	**7.66**	**231**	*e*P	**P**	**20 04 09.4**	**-0.9**
	1µm,0.8s						
YOMI	**Yo Moklole**	**12.73**	**278**	⇑*i*P	**P**	**20 05 18.2**	**-0.9**
	356nm,0.6s						
CTAO	**Charters Tower**	**16.84**	**203**	*e*P	**P**	**20 06 12.6**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,410nm,1.2s						
CTAO	**Charters Tower**	**16.84**	**203**	*e*P	**P**	**20 06 11.5**	**-0.6**
	comp=Z,407nm,1.2s						
GUMO	**Guam**	**19.83**	**336**	P	**P**	**20 06 44.7**	**-2.7**
GUMO				pmax	pmax		
	comp=Z,6µm,1.1s						
GUMO	**Guam**	**19.83**	**336**	P	**P**	**20 06 44.7**	**-2.7**
	comp=Z,6µm,1.1s						
NOUC	**Port Laguerre**	**21.59**	**145**	⇑*e*P	**P**	**20 07 04.3**	**-1.1**
NOUC	**Port Laguerre**	**21.59**	**145**	⇑*e*P	**P**	**20 07 04.3**	**-1.1**
DZM	**Mont Dzumac**	**21.64**	**145**	*e*P	**P**	**20 07 02.4**	**-3.5**
DZM	**Mont Dzumac**	**21.64**	**145**	*e*P	**P**	**20 07 02.4**	**-3.5**
SARN	**Sarigan**	**22.36**	**341**	*e*P	**P**	**20 07 15.3**	**+2.3**
WRAB	**Tennant Creek**	**23.86**	**229**	*e*P	**P**	**20 07 27.3**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,3µm,1.3s,mb6.5						
WRAB	**Tennant Creek**	**23.86**	**229**	*e*P	**P**	**20 07 27.3**	**-0.4**
	comp=Z,3µm,1.4s,mb6.5						
STKA	**Stephens Creek**	**29.26**	**200**	*e*P	**P**	**20 08 15.0**	**-2.6**
DAV	**Davao City (W)**	**29.86**	**293**	*e*P	**P**	**20 08 24.0**	**+0.9**
BUNI	**Buntu Taipa**	**32.77**	**270**	*e*P	**P**	**20 08 48.9**	**+0.3**
NINI	**Niniconang**	**33.31**	**269**	*e*P	**P**	**20 08 52.5**	**-0.7**
TANI	**Tanete Lipujan**	**33.72**	**271**	*e*P	**P**	**20 08 54.5**	**-2.3**
AFI	**Afiamalu**	**35.78**	**107**	*e*P	**P**	**20 09 13.6**	**-0.7**
	comp=Z,123nm,1.1s,mb5.8						
AFI				LR	LR		
	comp=Z,12µm,21.0s						
TSM	**Tawau**	**36.34**	**284**	P	**P**	**20 09 19.4**	**+0.3**
MBWA	**Marble Bar**	**36.41**	**240**	*e*P	**P**	**20 09 18.0**	**-1.6**
	comp=Z,313nm,0.8s,mb6.3						
MBWA				LR	LR		
	comp=Z,22µm,19.0s						
RAO	**Raoul Island**	**36.78**	**135**	PFAKE		20 09 30.0	+7.4
RAO				LR	LR		
	comp=Z,11µm,21.0s						
KEDI	**Kedomdong**	**37.01**	**262**	⇑*i*P	**P**	**20 09 22.4**	**-2.3**
PALP	**Palanan**	**37.20**	**306**	*e*P	**P**	**20 09 27.0**	**+0.7**
LUBP	**Lubang**	**37.39**	**300**	*e*P	**P**	**20 09 29.8**	**+2.0**
PCPH	**Palayan**	**37.53**	**303**	*i* P	**P**	**20 09 29.0**	**0.0**
CAUP	**Cauayan**	**37.63**	**305**	*e*P	**P**	**20 09 32.1**	**+2.3**
CVP	**Callao Caves**	**38.03**	**306**	*e*P	**P**	**20 09 34.5**	**+1.3**
BCPH	**Baguio City Da**	**38.36**	**304**	⇓*e*P	**P**	**20 09 37.2**	**+1.3**
KKM	**Kota Kinabalu**	**38.37**	**286**	P	**P**	**20 09 37.0**	**+0.9**
TAU	**Tasmania Unive**	**38.54**	**187**	*e*P	**P**	**20 09 35.9**	**-1.2**
TAU				pmax	pmax		
	comp=Z,149nm,1.0s,mb5.7						
TAU				MLR	MLR		
	comp=Z,1µm,19.0s						
TAU	**Tasmania Unive**	**38.54**	**187**	*e*P	**P**	**20 09 35.9**	**-1.3**
	comp=Z,149nm,1.0s,mb5.7						
TAU				LR	LR		
	comp=Z,1µm,19.0s						
APYP	**Conner**	**38.58**	**306**	*e*P	**P**	**20 09 39.5**	**+1.7**
KELI	**Kelakatan**	**38.60**	**263**	⇑*i*P	**P**	**20 09 36.0**	**-1.9**
	comp=Z,416nm,1.1s,mb6.1						
KELI				*e*pP	Px	20 09 38.7	
ABRA	**Dolores**	**38.90**	**305**	*e*P	**P**	**20 09 40.5**	**+0.1**
SRDI	**Scrawed**	**38.95**	**262**	⇑*i*P	**P**	**20 09 38.5**	**-2.4**
MGZ	**Maungaku**	**39.84**	**152**	P	**P**	**20 09 49.8**	**+1.8**
MGZ	**Maungaku**	**39.84**	**152**	PN	**P**	**20 09 49.9**	**+1.9**
MGZ	**Maungaku**	**39.84**	**152**	PN	**P**	**20 09 49.9**	**+1.9**
CNZ	**Chateau**	**40.00**	**153**	P	**P**	**20 09 50.7**	**+1.3**
CNZ	**Chateau**	**40.00**	**153**	PN	**P**	**20 09 51.1**	**+1.7**
CNZ	**Chateau**	**40.00**	**153**	PN	**P**	**20 09 51.1**	**+1.7**
NGZ	**Ngauruhoe**	**40.01**	**153**	*e*P	**P**	**20 09 50.3**	**+0.9**
NGZ				P		20 09 50.5	
NGZ	**Ngauruhoe**	**40.01**	**153**	PN	**P**	**20 09 50.2**	**+0.8**
NGZ	**Ngauruhoe**	**40.01**	**153**	PN	**P**	**20 09 50.2**	**+0.8**
DRZ	**Dome Shelter**	**40.07**	**153**	PN	**P**	**20 09 51.3**	**+1.3**
DRZ	**Dome Shelter**	**40.07**	**153**	PN	**P**	**20 09 51.3**	**+1.3**
QRZ	**Quartz Range**	**40.08**	**157**	*e*P	**P**	**20 09 50.8**	**+0.8**
QRZ	**Quartz Range**	**40.08**	**157**	PN	**P**	**20 09 50.9**	**+0.9**
QRZ	**Quartz Range**	**40.08**	**157**	PN	**P**	**20 09 50.9**	**+0.9**
TUVZ	**Tukino**	**40.11**	**153**	P	**P**	**20 09 52.4**	**+2.2**
TUVZ	**Tukino**	**40.11**	**153**	PN	**P**	**20 09 51.7**	**+1.5**
TUVZ	**Tukino**	**40.11**	**153**	PN	**P**	**20 09 51.7**	**+1.5**
MWZ	**Matawai**	**40.27**	**150**	*e*P	**P**	**20 09 51.3**	**-0.3**
MWZ	**Matawai**	**40.27**	**150**	PN	**P**	**20 09 51.3**	**-0.3**
MWZ	**Matawai**	**40.27**	**150**	PN	**P**	**20 09 51.3**	**-0.3**
BKZ	**Black Stump Fm**	**40.42**	**152**	P	**P**	**20 09 52.5**	**-0.3**
BKZ	**Black Stump Fm**	**40.42**	**152**	PN	**P**	**20 09 52.3**	**-0.5**
BKZ	**Black Stump Fm**	**40.42**	**152**	PN	**P**	**20 09 52.3**	**-0.5**
NNZ	**Nelson**	**40.75**	**156**	*e*P	**P**	**20 09 56.1**	**+0.6**
NNZ	**Nelson**	**40.75**	**156**	PN	**P**	**20 09 56.1**	**+0.7**
NNZ	**Nelson**	**40.75**	**156**	PN	**P**	**20 09 56.1**	**+0.7**
THZ	**Tophouse**	**41.03**	**157**	*e*P	**P**	**20 09 57.0**	**-0.8**
THZ	**Tophouse**	**41.03**	**157**	PN	**P**	**20 09 57.0**	**-0.8**
THZ	**Tophouse**	**41.03**	**157**	PN	**P**	**20 09 57.0**	**-0.8**
KIW	**Kapiti Island**	**41.08**	**155**	P	**P**	**20 09 58.7**	**+0.5**
KIW	**Kapiti Island**	**41.08**	**155**	PN	**P**	**20 09 58.5**	**+0.3**
KIW	**Kapiti Island**	**41.08**	**155**	PN	**P**	**20 09 58.5**	**+0.3**
MRZ	**Mangatainoka R**	**41.20**	**154**	*e*P	**P**	**20 09 58.3**	**-0.9**
MRZ	**Mangatainoka R**	**41.20**	**154**	PN	**P**	**20 09 58.3**	**-1.0**
MRZ	**Mangatainoka R**	**41.20**	**154**	PN	**P**	**20 09 58.3**	**-1.0**
MRW	**Makara Radio**	**41.30**	**155**	P	**P**	**20 10 00.1**	**+0.1**
MRW	**Makara Radio**	**41.30**	**155**	PN	**P**	**20 10 00.1**	**+0.1**
MRW	**Makara Radio**	**41.30**	**155**	PN	**P**	**20 10 00.1**	**+0.1**
CAW	**Cannon Point**	**41.35**	**155**	PN	**P**	**20 10 00.4**	**0.0**
CAW				PN	**P**	**20 10 00.4**	**0.0**
CAW	**Cannon Point**	**41.35**	**155**	PN	**P**	**20 10 00.4**	**0.0**
CAW				PN	**P**	**20 10 00.4**	**0.0**
BSWZ	**Blackbirch Sta**	**41.37**	**156**	PN	**P**	**20 09 59.4**	**-1.1**
BSWZ	**Blackbirch Sta**	**41.37**	**156**	PN	**P**	**20 09 59.4**	**-1.1**
FOZ	**Fox Glacier**	**41.50**	**162**	PN	**P**	**20 10 01.2**	**-0.4**
FOZ	**Fox Glacier**	**41.50**	**162**	PN	**P**	**20 10 01.2**	**-0.4**
BFZ	**Birch Farm**	**41.52**	**153**	P	**P**	**20 10 01.1**	**-0.7**
BFZ	**Birch Farm**	**41.52**	**153**	PN	**P**	**20 10 02.3**	**+0.4**
BFZ	**Birch Farm**	**41.52**	**153**	PN	**P**	**20 10 02.3**	**+0.4**
BHW	**Baring Head**	**41.52**	**155**	P	**P**	**20 10 01.3**	**-0.5**
BHW	**Baring Head**	**41.52**	**155**	PN	**P**	**20 10 01.4**	**-0.4**
BHW	**Baring Head**	**41.52**	**155**	PN	**P**	**20 10 01.4**	**-0.4**
MTW	**Mount Morrison**	**41.58**	**154**	P	**P**	**20 10 00.9**	**-1.4**
MTW	**Mount Morrison**	**41.58**	**154**	PN	**P**	**20 10 00.7**	**-1.6**
MTW	**Mount Morrison**	**41.58**	**154**	PN	**P**	**20 10 00.7**	**-1.6**
LTZ	**Lake Taylor**	**41.67**	**159**	*e*P	**P**	**20 10 02.9**	**-0.2**
LTZ	**Lake Taylor**	**41.67**	**159**	PN	**P**	**20 10 02.9**	**-0.2**
LTZ	**Lake Taylor**	**41.67**	**159**	PN	**P**	**20 10 02.9**	**-0.2**
MSWZ	**Moikau Station**	**41.68**	**155**	P	**P**	**20 10 02.2**	**-1.0**
MSWZ	**Moikau Station**	**41.68**	**155**	PN	**P**	**20 10 01.8**	**-1.4**
MSWZ	**Moikau Station**	**41.68**	**155**	PN	**P**	**20 10 01.8**	**-1.4**
JCZ	**Jackson Bay**	**41.68**	**163**	*e*P	**P**	**20 10 04.6**	**+1.5**
JCZ	**Jackson Bay**	**41.68**	**163**	PN	**P**	**20 10 03.6**	**+0.5**
JCZ	**Jackson Bay**	**41.68**	**163**	PN	**P**	**20 10 03.6**	**+0.5**
KHZ	**Kahutara**	**41.83**	**157**	*e*P	**P**	**20 10 03.2**	**-1.2**
KHZ	**Kahutara**	**41.83**	**157**	PN	**P**	**20 10 03.4**	**-1.0**
KHZ	**Kahutara**	**41.83**	**157**	PN	**P**	**20 10 03.4**	**-1.0**
MSZ	**Milford Sound**	**42.00**	**164**	PN	**P**	**20 10 05.9**	**+0.2**
MSZ	**Milford Sound**	**42.00**	**164**	PN	**P**	**20 10 05.9**	**+0.2**
RPZ	**Rata Peaks**	**42.07**	**161**	*e*P	**P**	**20 10 05.5**	**-0.8**
RPZ	**Rata Peaks**	**42.07**	**161**	PN	**P**	**20 10 05.9**	**-0.5**
RPZ	**Rata Peaks**	**42.07**	**161**	PN	**P**	**20 10 05.9**	**-0.5**
LBZ	**Lake Benmore**	**42.39**	**162**	*e*P	**P**	**20 10 07.9**	**-1.1**
LBZ	**Lake Benmore**	**42.39**	**162**	PN	**P**	**20 10 07.9**	**-1.1**
LBZ	**Lake Benmore**	**42.39**	**162**	PN	**P**	**20 10 07.9**	**-1.1**
WKZ	**Wanaka**	**42.45**	**163**	*e*P	**P**	**20 10 10.0**	**+0.6**
WKZ	**Wanaka**	**42.45**	**163**	PN	**P**	**20 10 09.4**	**0.0**
WKZ	**Wanaka**	**42.45**	**163**	PN	**P**	**20 10 09.4**	**0.0**
TATO	**Taipei**	**42.55**	**315**	*e*P	**P**	**20 10 08.5**	**-2.0**
	comp=Z,607nm,0.9s,mb6.3						
TATO				LR	LR		
	comp=Z,12µm,20.0s						
MQZ	**McQueen's Vall**	**42.61**	**159**	*e*P	**P**	**20 10 10.8**	**0.0**
MQZ	**McQueen's Vall**	**42.61**	**159**	PN	**P**	**20 10 10.7**	**-0.1**
MQZ	**McQueen's Vall**	**42.61**	**159**	PN	**P**	**20 10 10.7**	**-0.1**
MLZ	**Mavora Lakes**	**42.69**	**164**	*e*P	**P**	**20 10 11.6**	**+0.2**
MLZ	**Mavora Lakes**	**42.69**	**164**	PN	**P**	**20 10 11.1**	**-0.3**
MLZ	**Mavora Lakes**	**42.69**	**164**	PN	**P**	**20 10 11.1**	**-0.3**
ODZ	**Otahua Downs**	**43.13**	**162**	*e*P	**P**	**20 10 14.5**	**-0.5**
ODZ	**Otahua Downs**	**43.13**	**162**	PN	**P**	**20 10 14.4**	**-0.6**
ODZ	**Otahua Downs**	**43.13**	**162**	PN	**P**	**20 10 14.4**	**-0.6**
WHZ	**Wether Hill Ro**	**43.14**	**165**	*e*P	**P**	**20 10 15.0**	**0.0**
WHZ	**Wether Hill Ro**	**43.14**	**165**	PN	**P**	**20 10 15.1**	**0.0**
WHZ	**Wether Hill Ro**	**43.14**	**165**	PN	**P**	**20 10 15.1**	**0.0**
MAJO	**Matsushiro**	**43.22**	**342**	*e*P	**P**	**20 10 13.5**	**-2.4**
	comp=Z,142nm,1.1s,mb5.6						
MAJO				LR	LR		
	comp=Z,6µm,22.0s						
MAT	**Matsushiro**	**43.22**	**342**	*e*P	**P**	**20 10 14.0**	**-1.9**
MAT				*e*S	**S**	**20 16 43.0**	**+5.3**
MAT				pmax	pmax		
	comp=Z,123nm,1.4s,mb5.4						
MAT				MLR	MLR		
	comp=Z,6µm,20.0s						
MAT	**Matsushiro**	**43.22**	**342**	*e*P	**P**	**20 10 14.0**	**-1.9**
	comp=Z,123nm,1.4s,mb5.4						
MAT				*e*S	**S**	**20 16 43.0**	**+5.3**
MAT				LR	LR		
	comp=Z,6µm,20.0s						
MAT	**Matsushiro**	**43.22**	**342**	P	**P**	**20 10 14.2**	**-1.7**
MAT				S	**S**	**20 16 30.0**	**-7.7**
TUZ	**Tuapeka**	**43.65**	**163**	*e*P	**P**	**20 10 18.7**	**-0.5**
TUZ	**Tuapeka**	**43.65**	**163**	PN	**P**	**20 10 18.6**	**-0.6**
TUZ	**Tuapeka**	**43.65**	**163**	PN	**P**	**20 10 18.6**	**-0.6**
NWAO	**Narrogin (SRO)**	**43.81**	**225**	*e*P	**P**	**20 10 20.1**	**-0.6**
	comp=Z,44nm,0.9s,mb5.2						
NWAO				LR	LR		
	comp=Z,9µm,19.0s						
QZH	**Quanzhou**	**44.60**	**313**	*i* PR		20 10 28.4	
QZH				SCP		20 15 57.7	
QZH				S	**S**	**20 16 58.8**	**+0.9**
QZH				XS		20 17 24.0	
QZH				LR	LR		
	comp=N,2µm,12.9s						
QZH				LR	LR		
	comp=E,8µm,20.3s						
QZH				LR	LR		
	comp=Z,27µm,29.0s						
HKC	**Hong Kong**	**46.55**	**307**	*e*P	**P**	**20 10 46.0**	**+3.3**
HKC				*i* S	**S**	**20 17 30.0**	**+4.1**
SSE	**Sheshan**	**46.78**	**321**	P	**P**	**20 10 43.9**	**-0.5**
SSE				PP	PP	20 12 30.3	-4.4
SSE				S	**S**	**20 17 29.9**	**+0.9**
SSE				AMB	AMB		
	comp=Z,74nm,1.1s,mb5.5						
SSE				AMB	AMB		
	comp=Z,933nm,6.3s						
SSE				LR	LR		
	comp=N,4µm,22.9s						
SSE				LR	LR		
	comp=E,7µm,22.9s						
SSE				LR	LR		
	comp=Z,10µm,22.0s						
SSE	**Sheshan**	**46.78**	**321**	P	**P**	**20 10 43.9**	**-0.5**
	comp=Z,74nm,1.1s,mb5.5						
SSE				sP	sP	20 11 07.4	-0.1
SSE				PP	PP	20 12 30.3	-4.4
SSE				S	**S**	**20 17 29.9**	**+0.9**
SSE				sS		20 17 57.3	
SSE				SS	SS	20 21 02.4	+13
SSE				LR	LR		
	comp=Z,10µm,22.0s						
GZH	**Guangzhou**	**47.61**	**307**	P	**P**	**20 10 50.5**	**-0.5**
GZH				AMB	AMB		
	comp=Z,2µm,12.0s						
GZH				LR	LR		
	comp=N,4µm,26.7s						
GZH				LR	LR		
	comp=E,7µm,26.3s						
GZH				LR	LR		
	comp=Z,15µm,24.3s						
KS15	**Wonju Array Si**	**47.96**	**333**	*e*P	**P**	**20 10 53.1**	**-0.4**
INCN	**Inchon**	**48.58**	**332**	*e*P	**P**	**20 10 57.5**	**-0.8**
	comp=Z,1µm,0.9s						
INCN				LR	LR		
	comp=Z,4µm,21.0s						
QIZ	**Qiongzhong**	**48.67**	**300**	P	**P**	**20 11 00.4**	**+1.2**
QIZ				XP	sP	20 11 17.3	-5.0
QIZ				S	**S**	**20 17 57.5**	**+1.9**
QIZ				XS		20 18 22.8	
QIZ				AMB	AMB		
	comp=Z,81nm,1.1s,mb5.7						
QIZ				AMB	AMB		
	comp=Z,2µm,13.0s						
QIZ				LR	LR		
	comp=N,4µm,21.7s						
QIZ				LR	LR		
	comp=E,9µm,22.7s						
QIZ				LR	LR		
	comp=Z,16µm,23.7s						
QIZ	**Qiongzhong**	**48.67**	**300**	*e*P	**P**	**20 10 59.9**	**+0.7**
	comp=Z,107nm,1.1s,mb5.8						
YUK	**Yuzh-Kuril'sk**	**48.82**	**353**	*e*P	**P**	**20 11 03.0**	**+3.0**
YUK				*e*SP	sP	20 11 20.0	-3.2
YUK				*e*		20 12 24.0	
YUK				*e*S	**S**	**20 17 55.0**	**-2.5**
YUK				*e*SS	ScS	20 20 50.0	+6.4
YUK				smax			
	comp=N,3µm,12.0s						
YUK				smax			
	comp=E,3µm,12.0s						
NJ2	**Nanjing**	**48.89**	**321**	*e*P	**P**	**20 11 02.3**	**+1.5**
NJ2				S	**S**	**20 17 59.0**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,2µm,3.9s						
NJ2				LR	LR		
	comp=N,13µm,25.6s						
NJ2				LR	LR		
	comp=E,20µm,25.3s						
NJ2				LR	LR		
	comp=Z,29µm,27.4s						
KGM	**Kluang**	**50.24**	**276**	P	**P**	**20 11 12.3**	**+0.9**
WHN	**Wuhan**	**50.94**	**316**	⇓P	**P**	**20 11 17.5**	**+1.0**
WHN				SCP		20 16 25.0	
WHN				S	**S**	**20 18 26.0**	**-1.1**
WHN				LR	LR		
	comp=Z,32µm,40.0s						
VLA	**Vladivostok**	**51.22**	**340**	⇑*i*P	**P**	**20 11 19.0**	**+0.6**
VLA				*i*		20 13 20.0	
VLA				*i* S	**S**	**20 18 31.0**	**+0.3**
VLA				pmax	pmax		
	comp=Z,2µm,5.0s						
VLA				pmax	pmax		
	comp=N,1µm,4.0s						
VLA				pmax	pmax		
	comp=E,500nm,3.0s						
VLA				pmax	pmax		
	comp=Z,1µm,12.0s						
VLA				smax			
	comp=N,2µm,7.0s						
VLA				smax			
	comp=E,2µm,9.0s						
VLA				MLR	MLR		
	comp=Z,1µm,14.0s						
VLA				MLR	MLR		
	comp=N,900nm,13.0s						
VLA				MLR	MLR		
	comp=E,1µm,12.0s						
YSS	**Yuzh-Sakhalins**	**52.11**	**351**	α*e*P	**P**	**20 11 24.4**	**-0.7**
YSS				*e*		20 12 38.2	
YSS				*i* S	**S**	**20 18 44.0**	**+1.0**
YSS				*i*		20 21 12.0	
YSS				pmax	pmax		
	comp=N,90nm,1.0s						
YSS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.7						
YSS				pmax	pmax		
	comp=Z,1µm,5.0s						
YSS				smax			
	comp=N,2µm,16.0s						
YSS				smax			
	comp=E,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,1µm,18.0s						
YSS				MLR	MLR		
	comp=Z,2µm,18.0s						
YSS	**Yuzh-Sakhalins**	**52.11**	**351**	*e*P	**P**	**20 11 23.9**	**-1.1**
	comp=Z,79nm,0.8s,mb5.7						
DL2	**Dalian**	**52.16**	**329**	P	**P**	**20 11 24.6**	**-0.9**
DL2				SCP		20 16 31.0	
DL2				AMB	AMB		
	comp=Z,120nm,0.9s,mb5.8						
DL2				AMB	AMB		
	comp=Z,590nm,10.0s						
DL2				LR	LR		
	comp=N,2µm,25.2s						
DL2				LR	LR		
	comp=E,2µm,25.8s						
DL2				LR	LR		
	comp=Z,4µm,28.9s						
TIA	**Tai'an**	**52.74**	**323**	P	**P**	**20 11 30.0**	**+0.1**
TIA				SCP		20 16 31.4	
TIA				S	**S**	**20 18 50.8**	**-0.9**
TIA				AMB	AMB		
	comp=Z,133nm,0.8s,mb5.9						
TIA				LR	LR		
	comp=E,2µm,16.0s						
TIA				LR	LR		
	comp=N,1µm,27.5s						
IPM	**Ipoh**	**52.88**	**279**	P	**P**	**20 11 32.1**	**+0.9**
MDJ	**Mudanjiang**	**53.33**	**339**	P	**P**	**20 11 33.2**	**-1.0**
MDJ				AP	pP	20 11 46.6	-3.9
MDJ				XP	sP	20 11 52.4	-5.1
MDJ				PCP	PcP	20 12 42.0	+1.1
MDJ				PP	PP	20 13 34.7	-1.6
MDJ				SCP		20 16 31.3	
MDJ				PCS		20 16 37.8	
MDJ				AMB	AMB		
	comp=Z,232nm,1.0s,mb6.1						
MDJ				AMB	AMB		
	comp=Z,1µm,11.5s						
MDJ				LR	LR		
	comp=N,5µm,39.4s						
MDJ				LR	LR		
	comp=E,8µm,36.2s						
MDJ				LR	LR		
	comp=Z,5µm,23.3s						
MDJ	**Mudanjiang**	**53.33**	**339**	*e*P	**P**	**20 11 32.2**	**-2.0**
	comp=Z,176nm,0.8s,mb6.0						
SNY	**Shenyang**	**53.46**	**333**	⇑P	**P**	**20 11 34.6**	**-0.6**
SNY				S	**S**	**20 18 59.1**	**-2.2**
SNY				AMB	AMB		
	comp=Z,1µm,12.8s						
SNY				LR	LR		
	comp=N,3µm,20.6s						
SNY				LR	LR		
	comp=E,3µm,19.0s						
SNY				LR	LR		
	comp=Z,8µm,34.3s						
SNG	**Songkhla**	**53.73**	**282**	P	**P**	**20 11 37.0**	**-0.5**
	comp=Z,178nm,0.8s,mb6.0						
KKTK	**Khon Kaen**	**53.94**	**294**	P	**P**	**20 11 40.0**	**+1.0**
	comp=Z,679nm,0.6s,mb6.8						
CN2	**Changchun**	**54.23**	**335**	*e*P	**P**	**20 11 39.5**	**-1.3**
CN2				*e*AP	pP	20 11 56.0	-1.1
CN2				PCP	PcP	20 12 44.6	+0.2
CN2				SCP		20 16 39.0	
CN2				AMB	AMB		
	comp=Z,240nm,1.1s,mb6.0						
CN2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=N,2µm,19.0s						
CN2				LR	LR		
	comp=E,2µm,19.0s						
CN2				LR	LR		
	comp=Z,4µm,19.0s						
ENH	**Enshi**	**54.26**	**313**	*e*P	**P**	**20 11 39.9**	**-1.3**
	comp=Z,309nm,1.0s,mb6.2						
HON	**Honolulu**	**54.32**	**60**	P	**P**	**20 11 38.1**	**-3.6**
KIP	**Kipapa**	**54.34**	**60**	P	**P**	**20 11 40.1**	**-1.8**
KIP				pmax	pmax		
	comp=Z,87nm,0.7s,mb5.8						
KIP				MLR	MLR		
	comp=Z,8µm,21.0s						
KIP	**Kipapa**	**54.34**	**60**	P	**P**	**20 11 40.0**	**-1.9**
	comp=Z,87nm,0.7s,mb5.8						
KIP				LR	LR		
	comp=Z,8µm,21.0s						
GYA	**Guiyang**	**54.54**	**307**	⇓*i*P	**P**	**20 11 44.2**	**+0.9**
GYA				AP	pP	20 11 56.9	-2.8
GYA				XP	sP	20 12 02.2	-4.5
GYA				PP	PP	20 13 49.8	+2.3
GYA				S	**S**	**20 19 19.7**	**+3.6**
GYA				PS	PS	20 19 37.6	+1.0
GYA				SS	SS	20 23 03.3	+4.3
GYA				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.8						
GYA				AMB	AMB		
	comp=Z,1µm,9.0s						
GYA				LR	LR		
	comp=N,5µm,21.8s						
GYA				LR	LR		
	comp=E,7µm,21.6s						
GYA				LR	LR		

	comp=Z,11µm,22.0s						
SKR	**Severo-Kuril's**	**55.08**	**2**	*e*P	**P**	**20 11 43.0**	**-3.9**
SKR				*e*		20 11 54.0	
SKR				*e*		20 12 41.0	
SKR				*e*		20 13 54.0	
SKR				*e*S	**S**	**20 19 22.0**	**-1.0**
SKR				*e*		20 21 30.0	
SKR				pmax	pmax		
	comp=N,130nm,1.0s						
SKR				pmax	pmax		
	comp=E,180nm,1.0s						
SKR				pmax	pmax		
	comp=Z,220nm,1.0s,mb6.1						
SKR				pmax	pmax		
	comp=N,2µm,4.0s						
SKR				pmax	pmax		
	comp=E,2µm,4.0s						
SKR				pmax	pmax		
	comp=Z,2µm,4.0s						
SKR				smax			
	comp=N,3µm,12.0s						
SKR				smax			
	comp=E,5µm,12.0s						
SKR				pmax	pmax		
	comp=N,8µm,26.0s						
SKR				pmax	pmax		
	comp=E,4µm,26.0s						
SKR				MLR	MLR		
	comp=N,3µm,16.0s						
SKR				MLR	MLR		
	comp=E,3µm,16.0s						
SKR				MLR	MLR		
	comp=Z,4µm,16.0s						
HKL	**Haleakala**	**55.60**	**61**	*e*P	**P**	**20 11 48.9**	**-2.2**
KIH	**Kanekii**	**55.62**	**63**	⇑*e*P	**P**	**20 11 52.7**	**+1.5**
DAH	**Dandelion**	**55.65**	**63**	⇓*e*P	**P**	**20 11 52.2**	**+0.8**
SWH	**Southwest Rift**	**55.74**	**63**	⇑*e*P	**P**	**20 11 53.3**	**+1.3**
NNT	**Nongplab**	**55.76**	**288**	P	**P**	**20 11 53.5**	**+1.2**
WIH	**Wilkes Camp**	**55.77**	**63**	⇑*e*P	**P**	**20 11 53.5**	**+1.3**
BJT	**Baijiatuau**	**55.89**	**326**	*e*P	**P**	**20 11 51.4**	**-1.5**
BJT				pmax	pmax		
	comp=Z,26nm,0.8s						
BJT	**Baijiatuau**	**55.89**	**326**	*e*P	**P**	**20 11 51.4**	**-1.5**
	comp=Z,26nm,0.8s,mb5.3						
PLL	**Puu Ulaula**	**55.90**	**63**	⇑*e*P	**P**	**20 11 54.6**	**+1.4**
HMH	**Humuula**	**55.90**	**63**	⇑*e*P	**P**	**20 11 54.7**	**+1.5**
BJI	**Beijing**	**55.90**	**326**	P	**P**	**20 11 52.7**	**-0.2**
BJI				XP	sP	20 12 12.3	-4.1
BJI				PP	PP	20 13 57.5	-2.0
BJI				SCP		20 16 46.3	
BJI				S	**S**	**20 19 28.6**	**-5.5**
BJI				SCS	ScS	20 21 37.4	+4.7
BJI				SS	SS	20 23 21.0	+0.4
BJI				AMB	AMB		
	comp=Z,75nm,2.0s,mb5.4						
BJI				AMB	AMB		
	comp=Z,2µm,4.2s						
BJI				LR	LR		
	comp=N,4µm,25.8s						
BJI				LR	LR		
	comp=E,6µm,23.2s						
BJI				LR	LR		
	comp=Z,10µm,25.1s						
BJI	**Beijing**	**55.90**	**326**	P	**P**	**20 11 52.7**	**-0.2**
BJI						20 13 57.5	
BJI				S	**S**	**20 19 28.6**	**-5.5**
BJI						20 21 37.4	
BJI				SS	SS	20 23 21.0	+0.4
BJI				pmax	pmax		
	comp=Z,75nm,2.0s,mb5.4						
BJI				MLR	MLR		
	comp=Z,10µm,25.1s						
BJI	**Beijing**	**55.90**	**326**	P	**P**	**20 11 52.7**	**-0.2**
	comp=Z,75nm,2.0s,mb5.4						
BJI				sP	sP	20 12 12.3	-4.1
BJI				PP	PP	20 13 57.5	-2.0
BJI				ScP		20 16 46.3	
BJI				S	**S**	**20 19 28.6**	**-5.5**
BJI				ScS	ScS	20 21 37.4	+4.7
BJI				SS	SS	20 23 21.0	+0.4
BJI				LR	LR		
	comp=Z,10µm,25.1s						
POHA	**Pohakuloa**	**55.91**	**63**	PFAKE		20 12 00.0	+6.7
POHA				LR	LR		
	comp=Z,42µm,22.0s						
KKU	**Keanakolu**	**56.12**	**62**	⇑*e*P	**P**	**20 11 56.2**	**+1.4**
COCO	**West Island**	**56.16**	**258**	*e*P	**P**	**20 11 52.0**	**-3.1**
	comp=Z,560nm,1.4s,mb6.4						
COCO				LR	LR		
	comp=Z,1µm,22.0s						
NST	**Nakhon Sawan**	**56.21**	**292**	P	**P**	**20 11 56.1**	**+0.7**
NGH	**National Guard**	**56.34**	**63**	⇑*e*P	**P**	**20 11 57.3**	**+1.0**
XAN	**Xi'an**	**56.70**	**316**	P	**P**	**20 11 58.6**	**-0.2**
XAN				AP	pP	20 12 12.1	-3.1
XAN				AMB	AMB		
	comp=Z,213nm,1.1s,mb6.1						
XAN				LR	LR		
	comp=N,3µm,21.4s						
XAN				LR	LR		
	comp=E,4µm,20.9s						
XAN				LR	LR		
	comp=Z,7µm,20.9s						
KLR	**Kul'dur**	**56.72**	**343**	*e*P	**P**	**20 11 53.8**	**-4.9**
KLR				*e*S	**S**	**20 19 43.0**	**-1.8**
KLR				pmax	pmax		
	comp=Z,140nm,1.0s,mb6.0						
KLR				MLR	MLR		
	comp=Z,2µm,14.0s						
KMI	**Kunming**	**57.16**	**304**	⇓P	**P**	**20 12 03.6**	**+1.5**
KMI				AP	pP	20 12 18.2	-0.4
KMI				PCP	PcP	20 12 57.2	+1.3
KMI				PP	PP	20 14 12.6	+1.5
KMI				AMB	AMB		
	comp=Z,121nm,1.5s,mb5.7						
KMI				AMB	AMB		
	comp=Z,1µm,9.4s						
KMI				LR	LR		
	comp=N,4µm,23.7s						
KMI				LR	LR		
	comp=E,8µm,25.2s						
KMI				LR	LR		
	comp=Z,12µm,24.9s						
KMI	**Kunming**	**57.16**	**304**	⇓P	**P**	**20 12 03.6**	**+1.5**
KMI				*PP	pP	20 12 18.2	-0.4
KMI						20 12 57.2	
KMI						20 14 12.6	
KMI				S	**S**	**20 19 52.9**	**+2.0**
KMI				*SS		20 20 19.3	
KMI						20 21 44.4	
KMI				SS	SS	20 23 48.2	+6.3
KMI				pmax	pmax		
	comp=Z,121nm,1.5s,mb5.7						
KMI				MLR	MLR		
	comp=Z,12µm,24.9s						
KMI	**Kunming**	**57.16**	**304**	⇓P	**P**	**20 12 03.6**	**+1.5**
	comp=Z,121nm,1.5s,mb5.7						
KMI				pP	pP	20 12 18.2	-0.4
KMI				sP	sP	20 12 25.9	+0.2
KMI				PcP	PcP	20 12 57.2	+1.3
KMI				PP	PP	20 14 12.6	+1.5
KMI				S	**S**	**20 19 52.9**	**+2.0**
KMI				sS		20 20 19.3	
KMI				ScS	ScS	20 21 44.4	+2.4
KMI				SS	SS	20 23 48.2	+6.3
KMI				LR	LR		
	comp=Z,12µm,24.9s						
PPT	**Papeete**	**57.45**	**108**	*e*P	**P**	**20 12 05.2**	**+1.0**
	comp=Z,102nm,0.8s,mb5.9						
PPT	**Papeete**	**57.45**	**108**	*e*PP	PP	20 14 11.6	-2.1
PPT				*e*SS	SS	20 23 53.3	+6.7
PPT				*e*LQ		20 26 36.6	
PPT				*e*LR	LR	20 28 49.7	
	comp=Z,15µm,34.8s,baz=285						
PAE	**Paea**	**57.45**	**108**	*e*P	**P**	**20 12 05.0**	**+0.7**
	comp=Z,180nm,0.9s,mb6.1						
PET	**Petropavlovsk**	**57.56**	**4**	*e*P	**P**	**20 12 04.5**	**0.0**
PET				*e*		20 12 57.6	
PET				*e*S	**S**	**20 19 54.5**	**-1.2**
PET				*e**SS		20 20 19.3	
PET				*e*SS	SS	20 23 48.0	+0.1
PET				*e*SSS	SSS	20 26 00.8	-6.2
PET				pmax	pmax		
	comp=Z,86nm,0.8s,mb5.8						
PET				pmax	pmax		
	comp=Z,600nm,12.0s						
PET				pmax	pmax		
	comp=Z,800nm,11.8s						
PET				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.8						
PET				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.7						
PET				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.3						
PET				smax			
	comp=E,4µm,20.3s						
PET				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.4						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
PET	**Petropavlovsk**	**57.56**	**4**	*e*P	**P**	**20 12 02.7**	**-1.8**
	comp=Z,58nm,0.6s,mb5.8						
PET				LR	LR		
	comp=Z,3µm,20.0s						
TIAR	**Tiarei**	**57.66**	**108**	*e*P	**P**	**20 12 06.8**	**+1.0**
	comp=Z,985nm,0.8s						
TVO	**Taravao**	**57.78**	**108**	*e*P	**P**	**20 12 07.6**	**+1.1**
	comp=Z,521nm,0.7s,mb6.7						
CHRT	**Chiangrai**	**57.80**	**297**	⇓P	**P**	**20 12 08.0**	**+1.3**
	comp=Z,303nm,1.4s,mb6.1						
CM31	**Chiang Mai Arr**	**58.11**	**295**	*e*P	**P**	**20 12 08.3**	**-0.6**
	comp=Z,69nm,0.6s,mb5.9						
CM31				LR	LR		
	comp=Z,4µm,20.0s						
CHG	**Chiang Mai**	**58.22**	**295**	⇑P	**P**	**20 12 09.9**	**+0.3**
	comp=Z,22nm,1.0s,mb5.2						
TBI	**Tubuai**	**58.32**	**115**	*e*P	**P**	**20 12 10.4**	**+0.1**
	comp=Z,612nm,1.2s,mb6.5						
TBI				*e*PP	PP	20 14 23.8	+2.3
TBI				*e*SS	SS	20 24 23.1	+23
TBI				*e*LQ		20 27 20.1	
TBI				*e*LR	LR	20 29 39.2	
	comp=Z,22µm,31.0s,baz=281						
PMOR	**Pomariorio Ree**	**58.84**	**105**	*e*P	**P**	**20 12 14.7**	**+0.7**
	comp=Z,362nm,1.0s,mb6.4						
CD2	**Chengdu**	**58.86**	**310**	P	**P**	**20 12 14.2**	**+0.3**
CD2				AP	pP	20 12 28.0	-2.5
CD2				PP	PP	20 14 24.0	-2.3
CD2				S	**S**	**20 20 10.0**	**-3.1**
CD2				SCS	ScS	20 22 00.0	+5.6
CD2				AMB	AMB		
	comp=Z,520nm,1.2s,mb6.4						
CD2				AMB	AMB		
	comp=Z,1µm,8.0s						
CD2				LR	LR		
	comp=E,5µm,23.0s						
MEH	**Mehetia**	**58.91**	**108**	*e*P	**P**	**20 12 15.1**	**+0.7**
	comp=E,272nm,0.9s,mb6.3						
FX1	**Attu Island--F**	**59.68**	**14**	P	**P**	**20 12 19.1**	**-0.1**
BTO	**Baotou**	**59.83**	**323**	*e*P	**P**	**20 12 21.2**	**+0.7**
BTO				S	**S**	**20 20 26.0**	**+0.5**
BTO				AMB	AMB		
	comp=Z,118nm,1.3s,mb5.8						
HIA	**Hailar**	**60.97**	**336**	*e*P	**P**	**20 12 26.6**	**-1.5**
HIA				pmax	pmax		
	comp=Z,104nm,0.9s						
HIA	**Hailar**	**60.97**	**336**	*e*P	**P**	**20 12 26.6**	**-1.6**
	comp=Z,104nm,0.9s,mb6.0						
LZH	**Lanzhou**	**61.32**	**316**	⇑P	**P**	**20 12 31.7**	**+1.0**
LZH				AP	pP	20 12 44.7	-2.6
LZH				XP	sP	20 12 49.2	-5.2
LZH				PP	PP	20 14 48.0	-0.4
LZH				AMB	AMB		
	comp=Z,230nm,1.0s,mb6.3						
LZH				AMB	AMB		
	comp=Z,2µm,4.0s						
LZH				LR	LR		
	comp=E,9µm,16.0s						
LZH				LR	LR		
	comp=Z,12µm,17.0s						
LZH	**Lanzhou**	**61.32**	**316**	⇑P	**P**	**20 12 31.7**	**+1.0**
LZH				*PP	pP	20 12 44.7	-2.6
LZH						20 14 48.0	
LZH				S	**S**	**20 20 42.5**	**-2.1**
LZH				PS	PS	20 21 06.0	-3.6
LZH				*SS		20 21 10.0	
LZH						20 22 18.5	
LZH				SS	SS	20 24 44.0	-3.3
LZH				pmax	pmax		
	comp=Z,230nm,1.0s,mb6.3						
LZH				MLR	MLR		
	comp=Z,12µm,17.0s						
LZH	**Lanzhou**	**61.32**	**316**	⇑P	**P**	**20 12 31.7**	**+1.0**
	comp=Z,230nm,1.0s,mb6.3						
LZH				pP	pP	20 12 44.7	-2.6
LZH				sP	sP	20 12 49.2	-5.2
LZH				PP	PP	20 14 48.0	-0.4
LZH				ScP		20 17 11.5	
LZH				S	**S**	**20 20 42.5**	**-2.1**
LZH				PS	PS	20 21 06.0	-3.6
LZH				sS		20 21 10.0	
LZH				ScS	ScS	20 22 18.5	+6.0
LZH				SS	SS	20 24 44.0	-3.3
LZH				LR	LR		
	comp=Z,12µm,17.0s						
DRV	**Dumont d'Urvil**	**62.67**	**186**	P	**P**	**20 12 34.0**	**-5.3**
DRV				S	**S**	**20 21 12.0**	**+11**
DRV				L		20 28 00.0	
MA2	**Magadan**	**63.97**	**359**	d*e*P	**P**	**20 12 46.3**	**-1.6**
MA2				*i*		20 13 29.7	
MA2				*i* S	**S**	**20 21 16.2**	**-1.2**
MA2				*e*PS	PS	20 21 49.0	+3.1
MA2				*i*		20 22 30.5	
MA2				pmax	pmax		
	comp=E,7.0nm,0.9s						
MA2				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.8						
MA2				pmax	pmax		
	comp=N,50nm,1.1s						
MA2				MLR	MLR		
	comp=Z,5µm,26.0s						
MA2	**Magadan**	**63.97**	**359**	*e*P	**P**	**20 12 45.1**	**-2.7**
	comp=Z,169nm,0.9s,mb6.1						
MA2				LR	LR		
	comp=Z,3µm,20.0s						
IMP	**Imphal**	**64.50**	**300**	*e*P	**P**	**20 12 52.0**	**+0.1**
CLNS	**Chul'man**	**65.39**	**343**	*e*P	**P**	**20 12 58.0**	**+0.9**
CLNS				*e*		20 13 31.2	
CLNS				*e*		20 15 18.6	
CLNS				*e*S	S	20 21 36.3	+1.4
CLNS				*e*SS	SS	20 25 48.0	-2.7
CLNS				pmax	pmax		
	comp=N,69nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,178nm,0.8s,mb6.2						
CLNS				pmax	pmax		
	comp=E,52nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
CLNS				pmax	pmax		
	comp=N,53nm,1.4s						
CLNS				pmax	pmax		
	comp=E,22nm,1.0s						
CLNS				smax			
	comp=N,13nm,1.0s						
CLNS				smax			
	comp=Z,6.0nm,0.9s						
CLNS				smax			
	comp=E,19nm,1.2s						
CLNS				MLR	MLR		
	comp=Z,2µm,18.0s						
CLNS				MLR	MLR		
	comp=N,1µm,19.0s						
CLNS				MLR	MLR		
	comp=E,300nm,15.0s						
NIKO	**Nikolski**	**65.65**	**24**	P	**P**	**20 12 58.3**	**-0.6**
GTA	**Gaotai**	**65.73**	**317**	P	**P**	**20 13 00.1**	**+0.5**
GTA				PCP	PcP	20 13 30.6	+0.3
GTA				PP	PP	20 15 28.5	+1.4
GTA				SCP		20 17 27.8	
GTA				PCS		20 17 33.6	
GTA				S	S	20 21 41.1	+1.7
GTA				SCS	ScS	20 22 48.1	+2.1
GTA				AMB	AMB		
	comp=Z,291nm,1.2s,mb6.2						
GTA				AMB	AMB		
	comp=Z,2µm,8.0s						
GTA				LR	LR		
	comp=N,2µm,24.3s						
GTA				LR	LR		
	comp=E,2µm,23.2s						
GTA				LR	LR		
	comp=Z,6µm,31.2s						
ULN	**Ulaanbaatar**	**65.99**	**328**	*e*P	**P**	**20 13 01.1**	**0.0**
	comp=Z,72nm,0.8s,mb5.8						
ULN				LR	LR		
	comp=Z,4µm,20.0s						
TAOE	**Nuku Hiva Isla**	**66.30**	**98**	*e*P	**P**	**20 13 06.5**	**+2.9**
TAOE				*e*PP	PP	20 15 25.9	-6.4
TAOE				*e*SS	SS	20 26 05.0	-0.3
TAOE				*e*LR	LR	20 32 54.4	
	baz=277						
SHL	**Shillong**	**66.50**	**300**	*e*P	**P**	**20 13 05.0**	**+0.2**
SHL				*e*		20 21 54.0	
AGT	**Agartala**	**66.56**	**298**	⇓*i*	**P**	**20 13 08.0**	**+2.8**
AGT				*i*		20 14 12.0	
UNV	**Unalaska Valle**	**67.25**	**25**	*e*P	**P**	**20 13 07.7**	**-1.3**
	comp=Z,97nm,0.7s,mb5.9						
SEY	**Seymchan**	**67.31**	**360**	*e*P	**P**	**20 13 11.5**	**+2.3**
SEY						20 13 34.8	
SEY				*e*		20 15 40.1	
SEY				*e*S	S	20 22 05.3	+7.2
SEY						20 23 02.7	
SEY				SS	SS	20 26 28.4	+8.0
SEY				SSS	SSS	20 29 21.2	+2.2
SEY				pmax	pmax		
	comp=Z,160nm,0.9s,mb6.0						
SEY				pmax	pmax		
	comp=N,70nm,0.8s						
SEY				pmax	pmax		
	comp=E,20nm,0.8s						
SEY				smax			
	comp=N,2µm,21.4s						
SEY				smax			
	comp=E,12µm,31.3s						
CASY	**Casey**	**68.35**	**197**	PFAKE		20 13 30.0	+14
CASY				LR	LR		
	comp=Z,5µm,19.0s						
LSA	**Lhasa**	**68.41**	**304**	*e*P	**P**	**20 13 16.4**	**-0.2**
LSA				pmax	pmax		
	comp=Z,91nm,0.8s,mb5.9						
LSA	**Lhasa**	**68.41**	**304**	*e*P	**P**	**20 13 16.4**	**-0.2**
	comp=Z,91nm,0.8s,mb5.9						
CAL	**Calcutta**	**68.79**	**296**	*e*P	**P**	**20 13 16.3**	**-2.8**
CAL				*e*		20 16 20.5	
YAK	**Yakutsk**	**68.82**	**348**	*c* *i*P	**P**	**20 13 18.2**	**-0.3**
YAK				*e**PP	pP	20 13 27.3	-8.2
YAK				*e*		20 13 50.4	
YAK				*e*		20 15 46.2	
YAK				*i* S	S	20 22 15.2	-0.9
YAK				*e**SS		20 22 43.5	
YAK				*e*		20 23 15.7	
YAK				pmax	pmax		
	comp=N,48nm,1.2s						
YAK				pmax	pmax		
	comp=E,27nm,1.2s						
YAK				pmax	pmax		
	comp=Z,138nm,1.2s,mb5.8						
YAK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
YAK				smax			
	comp=N,738nm,9.0s						
YAK				smax			
	comp=Z,202nm,8.2s						
YAK				smax			
	comp=E,481nm,9.5s						
YAK	**Yakutsk**	**68.82**	**348**	*e*P	**P**	**20 13 18.1**	**-0.4**
	comp=E,256nm,1.1s,mb6.1						
ZAK	**Zakamensk**	**69.48**	**328**	⇓*i*P	**P**	**20 13 23.2**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,145nm,1.0s,mb5.9						
ZAK				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.5						
BOD	**Bodaibo**	**69.70**	**339**	*e*P	**P**	**20 13 22.5**	**-1.6**
BOD				pmax	pmax		
	comp=Z,156nm,2.5s,mb5.5						
TLY	**Talaya**	**70.06**	**330**	P	**P**	**20 13 27.8**	**+1.5**
	comp=Z,278nm,1.3s,mb6.0,SNR=40						
TLY	**Talaya**	**70.06**	**330**	*e*P	**P**	**20 13 26.3**	**0.0**
TLY				*e*		20 15 57.0	
TLY				*e*PPP	PPP	20 17 40.3	-3.6
TLY				*e*S	S	20 22 29.2	-1.7
TLY				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.5						
TLY	**Talaya**	**70.06**	**330**	*e*P	**P**	**20 13 26.6**	**+0.3**
	comp=Z,47nm,0.9s,mb5.4						
TLY				LR	LR		
	comp=Z,779nm,19.0s						
IRK	**Irkutsk**	**70.08**	**330**	*e*P	**P**	**20 13 26.2**	**-0.3**
IRK				*e*	pP	20 13 40.9	-2.6
IRK				pmax	pmax		
	comp=Z,103nm,1.1s,mb5.7						
BWNR	**Bhubaneshwar**	**70.56**	**293**	*e*P	**P**	**20 13 29.7**	**-0.2**
BWNR				*e*		20 13 34.5	
	comp=Z,192nm,1.5s						
BWNR				*e*S	S	20 22 40.3	+3.1
SDPT	**Sand Point**	**70.84**	**26**	*e*P	**P**	**20 13 30.6**	**-0.4**
	comp=Z,108nm,0.6s,mb6.0						
MOY	**Mondy**	**71.40**	**329**	*e*P	**P**	**20 13 35.3**	**+0.9**
MOY				pmax	pmax		
	comp=Z,15nm,2.2s						
RKT	**Rikitea**	**71.54**	**113**	*e*P	**P**	**20 13 36.0**	**+0.3**
	comp=Z,100nm,0.9s,mb5.8						
JIRN	**Jiri**	**71.98**	**301**	*e*P	**P**	**20 13 39.1**	**+0.8**
	comp=Z,86nm,0.6s,mb5.9						
VIS	**Vishakhapatnam**	**72.33**	**290**	*e*P	**P**	**20 13 40.6**	**+0.2**
VIS				*e*		20 22 55.0	
VIS				*e*S	S	20 22 57.4	-0.3
PKI	**Pulchoki**	**72.63**	**301**	*e*P	**P**	**20 13 42.8**	**+0.6**
	comp=Z,107nm,0.7s,mb5.9						
KKN	**Kakani**	**72.80**	**301**	*e*P	**P**	**20 13 42.6**	**-0.6**
	comp=Z,192nm,0.7s,mb6.1						
DMN	**Daman**	**72.90**	**301**	*e*P	**P**	**20 13 44.5**	**+0.7**
BILL	**Bilibino**	**73.02**	**5**	*i* P	**P**	**20 13 43.4**	**-0.3**
BILL				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.7						
BILL	**Bilibino**	**73.02**	**5**	*e*P	**P**	**20 13 41.8**	**-1.9**
	comp=Z,74nm,0.8s,mb5.7						
BILL				LR	LR		
	comp=Z,3µm,22.0s						
VNDA	**Vanda**	**73.05**	**178**	*e*P	**P**	**20 13 42.4**	**-1.3**
	comp=Z,57nm,0.7s,mb5.6						
VNDA				LR	LR		
	comp=Z,1µm,21.0s						
PALK	**Pallekele**	**73.26**	**279**	P	**P**	**20 13 47.8**	**+1.6**
	comp=Z,383nm,1.9s,mb6.0,SNR=14						
PALK	**Pallekele**	**73.26**	**279**	*e*P	**P**	**20 13 45.1**	**-1.0**
	comp=Z,127nm,1.3s,mb5.7						
PALK				LR	LR		
	comp=Z,297nm,19.0s						
GKN	**Gorkha**	**73.40**	**301**	*e*P	**P**	**20 13 46.2**	**-0.5**
	comp=Z,598nm,1.3s,mb6.3						
SBA	**Scott Base**	**73.59**	**177**	*e*P	**P**	**20 13 47.2**	**+0.3**
	comp=Z,243nm,1.3s,mb6.0						
SBA				LR	LR		
	comp=Z,2µm,22.0s						
KOLN	**Koldanda**	**74.23**	**300**	*e*P	**P**	**20 13 51.7**	**+0.1**
	comp=Z,296nm,1.0s,mb6.2						
MIR	**Mirnyy**	**74.28**	**201**	⇑*e*P	pP	20 14 10.4	+2.2
MIR				*e*S	S	20 23 23.0	+4.4
MIR				pmax	pmax		
	comp=Z,200nm,1.4s,mb5.8						
MIR				smax			
	comp=N,2µm,12.0s						
MIR				smax			
	comp=E,1µm,9.5s						
MIR				MLR	MLR		
	comp=N,1µm,15.0s						
MIR				MLR	MLR		
	comp=E,1µm,15.0s						
MIR				MLR	MLR		
	comp=Z,2µm,15.0s						
BLSP	**Bilaspur**	**74.29**	**294**	*e*P	**P**	**20 13 53.0**	**+0.9**
BLSP				*e*		20 13 57.3	
	comp=Z,179nm,0.9s						
MDRS	**Chennai**	**74.48**	**285**	*e*	**P**	**20 13 52.0**	**-1.2**
MDRS				*e*		20 23 22.0	
MDRS				*e*		20 31 29.0	
MDRS				*e*		20 37 25.0	
TNA	**Tin City**	**75.47**	**16**	*e*P	**P**	**20 13 56.3**	**-1.5**
	comp=Z,15nm,0.9s,mb4.9						
KDAK	**Kodiak Island**	**75.80**	**27**	*e*P	**P**	**20 13 58.7**	**-1.2**
	comp=Z,144nm,1.4s,mb5.7						
KDAK				LR	LR		
	comp=Z,760nm,20.0s						
WMQ	**Urumqi**	**75.82**	**317**	P	**P**	**20 14 01.0**	**+0.7**

WMQ				AMB	AMB		
	comp=Z,192nm,1.0s,mb6.0						
WMQ				AMB	AMB		
	comp=Z,747nm,9.0s						
WMQ				LR	LR		
	comp=N,3µm,24.0s						
WMQ				LR	LR		
	comp=E,4µm,25.0s						
WMQ				LR	LR		
	comp=Z,5µm,25.0s						
PTCN	**Pitcairn Islan**	**76.07**	**115**	PFAKE		20 14 10.0	+7.9
PTCN				LR	LR		
	comp=Z,6µm,21.0s						
SVW2	**Sparrevohn**	**76.46**	**23**	*e*P	**P**	**20 14 04.4**	**+0.8**
HYB	**Hyderabad**	**76.76**	**289**	*i* P	**P**	**20 14 05.0**	**-1.2**
	comp=Z,150nm,1.0s,mb5.9						
HYB				*e*PcP	PcP	20 14 20.0	+2.4
HYB				*e*S	S	20 23 44.0	-3.0
HYB				LR	LR	20 41 16.0	
	comp=Z,7.2nm,30.0s						
TRD	**Trivandrum**	**77.09**	**280**	*e*P	**P**	**20 14 09.5**	**+1.4**
TRD				*e*		20 14 13.4	
	comp=Z,222nm,1.5s						
TRD				*e*S	S	20 23 54.4	+3.7
RSO	**Redoubt South**	**77.22**	**24**	*e*P	**P**	**20 14 07.6**	**-0.3**
LGTI	**Lohaghat**	**77.49**	**301**	*e*P	**P**	**20 14 11.7**	**+1.7**
PTH	**Pithoragarh**	**77.53**	**301**	*e*P	**P**	**20 14 12.0**	**+1.8**
PTH				*e*		20 24 06.0	
TIXI	**Tiksi**	**77.71**	**352**	*e*P	**P**	**20 14 08.2**	**-2.2**
TIXI				*e*S	S	20 23 57.5	+1.3
TIXI				*e*SS	SS	20 28 58.0	-1.9
TIXI				*e*SSS	SSS	20 32 21.3	+3.5
TIXI				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.3						
TIXI	**Tiksi**	**77.71**	**352**	PFAKE		20 14 20.0	+10
TIXI				LR	LR		
	comp=Z,2µm,21.0s						
SPU	**Mount Spurr**	**77.91**	**24**	*e*P	**P**	**20 14 11.0**	**-0.6**
SLKM	**Skilak Lake**	**78.30**	**25**	*e*P	**P**	**20 14 11.7**	**-2.1**
FIB	**Fire Island**	**78.67**	**24**	*e*P	**P**	**20 14 15.2**	**-0.6**
FIB				LR	LR		
	comp=Z,2µm,19.0s						
PMR	**Palmer**	**79.32**	**24**	*e*P	**P**	**20 14 19.5**	**+0.1**
PMR				pmax	pmax		
	comp=Z,59nm,0.7s,mb5.6						
PMR	**Palmer**	**79.32**	**24**	*e*P	**P**	**20 14 19.5**	**+0.1**
	comp=Z,59nm,0.7s,mb5.6						
DDI	**Dehra Dun**	**79.53**	**302**	*e*P	**P**	**20 14 21.3**	**+0.1**
DDI				*e*		20 24 34.3	
SML	**Sawmill**	**79.76**	**24**	*e*P	**P**	**20 14 20.3**	**-1.4**
NDI	**New Delhi**	**79.93**	**300**	*e*P	**P**	**20 14 22.5**	**-0.8**
NDI				*e*		20 24 18.5	
IMA	**Indian Mountai**	**80.11**	**19**	P	**P**	**20 14 23.2**	**-0.3**
IMA				pmax	pmax		
	comp=Z,210nm,0.9s,mb6.1						
IMA	**Indian Mountai**	**80.11**	**19**	*e*P	**P**	**20 14 24.0**	**+0.5**
	comp=Z,30nm,0.7s,mb5.3						
DGAR	**Diego Garcia**	**80.23**	**263**	*i* P	**P**	**20 14 25.1**	**-0.2**
DGAR	**Diego Garcia**	**80.23**	**263**	*e*P	**P**	**20 14 25.1**	**-0.1**
	comp=Z,318nm,1.1s,mb6.2						
DGAR				LR	LR		
	comp=Z,732nm,22.0s						
MKAR	**Makanchi Array**	**80.39**	**319**	*e*P	**P**	**20 14 24.7**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,186nm,1.0s						
SMLA	**Simla**	**80.44**	**302**	⇑*i*		20 24 41.5	
DIV	**Divide**	**80.50**	**26**	*e*P	**P**	**20 14 25.7**	**0.0**
	comp=Z,163nm,0.7s,mb6.1						
MCK	**McKinley**	**80.50**	**22**	*e*P	**P**	**20 14 23.3**	**-2.4**
MCK				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.5						
MCK				MLR	MLR		
	comp=Z,1µm,20.0s						
MCK	**McKinley**	**80.50**	**22**	*e*P	**P**	**20 14 23.3**	**-2.4**
	comp=Z,56nm,0.8s,mb5.5						
MCK				LR	LR		
	comp=Z,1µm,20.0s						
SDNR	**Sundarnagar**	**80.67**	**303**	*e*P	**P**	**20 14 28.6**	**+1.3**
KAD	**Karad**	**80.88**	**288**	⇑*i*P	**P**	**20 14 28.0**	**-0.6**
MNCY	**Minicoy**	**80.92**	**279**	⇓*i*P	**P**	**20 14 28.0**	**-0.9**
MNCY				*i*		20 15 51.0	
GOA	**Goa**	**80.98**	**286**	*e*	**P**	**20 14 36.4**	**+7.3**
GOA				*e*S	S	20 24 36.3	+4.6
BHK	**Bhakra**	**81.12**	**303**	*e*	**P**	**20 14 40.1**	**+10**
POO	**Poona**	**81.35**	**289**	*e*P	**P**	**20 14 29.7**	**-1.3**
POO				*e*		20 14 36.7	
	comp=Z,160nm,1.8s						
COLA	**College**	**81.50**	**22**	*e*P	**P**	**20 14 29.7**	**-1.2**
COLA				pmax	pmax		
	comp=Z,71nm,0.7s,mb5.7						
COLA	**College**	**81.50**	**22**	*e*P	**P**	**20 14 29.7**	**-1.2**
	comp=Z,71nm,0.7s,mb5.7						
THY	**Trims Highway**	**81.58**	**23**	*e*P	**P**	**20 14 30.4**	**-1.0**
PONG	**Pong**	**81.61**	**303**	*e*P	**P**	**20 14 33.0**	**+0.8**
AJM	**Ajmer**	**81.80**	**297**	⇓*i*P	**P**	**20 14 33.0**	**-0.2**
THN	**Thein Dam**	**81.90**	**304**	*e*P	**P**	**20 14 32.1**	**-1.5**
THN				*e*S	S	20 24 45.8	+5.0
MENT	**Mentasta**	**82.19**	**24**	*e*P	**P**	**20 14 35.5**	**+1.0**
NVS	**Novosibirsk**	**82.33**	**327**	⇑*i*P	**P**	**20 14 34.7**	**-0.7**
NVS				*e*S	S	20 24 44.2	-0.6
NVS				*e*PS	PS	20 25 54.6	+11
NVS				pmax	pmax		
	comp=Z,305nm,2.1s,mb5.9						
NVS				pmax	pmax		
	comp=N,96nm,2.0s						
NVS				pmax	pmax		
	comp=E,130nm,1.8s						
NVS				pmax	pmax		
	comp=Z,59nm,2.0s,mb5.2						
NVS				smax			
	comp=E,590nm,2.6s						
BOM	**Bombay**	**82.38**	**290**	*e*P	**P**	**20 14 37.0**	**+0.7**
BOM				*e*S	S	20 24 49.8	+3.9
KSH	**Kashi**	**83.06**	**311**	PR	**P**	**20 14 43.1**	**+3.7**
KSH				*e*AP	pP	20 14 55.1	-1.7
KSH				*e*XP	sP	20 15 01.0	-2.6
KSH				*e*PP	PP	20 17 57.0	+4.4
KSH				*e*SKS	SKS	20 24 49.1	-2.5
KSH				*e*S	S	20 24 58.4	+6.0
KSH				*e*XS		20 25 20.0	
KSH				*e*PS	PS	20 25 56.6	+3.4
KSH				*e*SS	SS	20 30 27.3	+6.6
KSH				AMB	AMB		
	comp=Z,2µm,2.3s,mb6.7						
KSH				LR	LR		
	comp=N,3µm,25.7s						
KSH				LR	LR		
	comp=E,1µm,13.1s						
AAA	**Alma-Ata**	**83.14**	**314**	*i* P	**P**	**20 14 43.0**	**+3.3**
AAA				*i* S	S	20 24 59.0	+5.8
AAA				pmax	pmax		
	comp=Z,1µm,7.0s						
AAA				smax			
	comp=E,4µm,11.0s						
AAA				MLR	MLR		
	comp=Z,2µm,18.0s						
BHV	**Bhavnagar**	**83.37**	**292**	*e*P	**P**	**20 14 41.5**	**+0.2**
ULHL	**Ulahol**	**83.42**	**313**	P	**P**	**20 14 43.0**	**+1.8**
	SNR=12						
KURK	**Kurchatov**	**83.81**	**322**	P	**P**	**20 14 43.4**	**+0.5**
KURK				pmax	pmax		
	comp=Z,241nm,1.5s,mb6.1						
KURK	**Kurchatov**	**83.81**	**322**	*e*P	**P**	**20 14 42.7**	**-0.2**
	comp=Z,316nm,1.4s,mb6.2						
KURK				LR	LR		
	comp=Z,559nm,22.0s						
SIT	**Sitka**	**83.88**	**31**	PFAKE		20 14 50.0	+6.9
SIT				LR	LR		
	comp=Z,5µm,22.0s						
TKM2	**Tokmak 2**	**84.03**	**314**	P	**P**	**20 14 44.6**	**+0.3**
	SNR=92						
KZA	**Kyzart**	**84.11**	**313**	P	**P**	**20 14 47.5**	**+2.8**
	SNR=26						
DAWY	**Dawson**	**84.42**	**24**	*e*P	**P**	**20 14 45.9**	**+0.1**
KBK	**Karagaybulak**	**84.45**	**313**	P	**P**	**20 14 48.3**	**+2.0**
	SNR=10						
CHMS	**Chumysh**	**84.66**	**314**	P	**P**	**20 14 47.5**	**+0.1**
	SNR=82						
AAK	**Ala-Archa**	**84.77**	**313**	P	**P**	**20 14 50.0**	**+2.0**
	SNR=9.3						
AAK	**Ala-Archa**	**84.77**	**313**	P	**P**	**20 14 49.9**	**+1.9**
AAK				pmax	pmax		
	comp=Z,240nm,0.9s,mb6.3						
AAK	**Ala-Archa**	**84.77**	**313**	*e*P	**P**	**20 14 46.9**	**-1.1**
	comp=Z,7.5nm,1.0s,mb4.8						
AAK				LR	LR		
	comp=Z,621nm,20.0s						
USP	**Ospenovka**	**84.89**	**314**	P	**P**	**20 14 49.2**	**+0.6**
	SNR=148						
AML	**Almayashu**	**85.26**	**313**	P	**P**	**20 14 52.1**	**+1.7**
	SNR=12						
EKS2	**Erkin-Say**	**85.30**	**313**	P	**P**	**20 14 52.5**	**+2.0**
	SNR=14						
QSPA	**South Pole Qui**	**85.40**	**180**	*e*P	**P**	**20 14 51.0**	**+0.7**
	comp=Z,132nm,0.6s,mb6.2						
BHJ	**Bhuj**	**85.84**	**294**	⇑*e*	**P**	**20 14 57.7**	**+4.0**
	comp=Z,500nm,2.3s,mb6.3						
BHJ				*e*S	S	20 25 13.8	-6.5
DLBC	**Dease Lake**	**86.99**	**31**	*e*P	**P**	**20 14 58.3**	**-0.2**
KHMM	**Horse Mountain**	**87.75**	**49**	P	**P**	**20 15 02.9**	**+0.3**
HOPS	**Hopland**	**88.00**	**51**	PFAKE		20 15 20.0	+16
HOPS				LR	LR		
	comp=Z,7µm,20.0s						
INK	**Inuvik**	**88.10**	**21**	P	**P**	**20 15 03.2**	**-0.4**
INK				pmax	pmax		
	comp=Z,110nm,1.2s						
INK	**Inuvik**	**88.10**	**21**	*e*P	**P**	**20 15 02.4**	**-1.3**
	comp=Z,107nm,1.3s,mb5.9						
OCWA	**Octopus Mounta**	**88.41**	**42**	PFAKE		20 15 20.0	+14
OCWA				LR	LR		
	comp=Z,3µm,19.0s						
HUMO	**Hull Mountain**	**88.55**	**47**	*e*P	**P**	**20 15 06.4**	**+0.1**
	comp=Z,20nm,1.0s,mb5.4						
HUMO				LR	LR		
	comp=Z,3µm,20.0s						
COR	**Corvallis**	**88.57**	**45**	PFAKE		20 15 20.0	+14
COR				LR	LR		
	comp=Z,4µm,20.0s						
YBH	**Yreka Blue Hor**	**88.62**	**48**	P	**P**	**20 15 08.2**	**+1.5**
YBH				pmax	pmax		
	comp=Z,25nm,1.2s						
YBH	**Yreka Blue Hor**	**88.62**	**48**	*e*P	**P**	**20 15 06.1**	**-0.6**
	comp=Z,25nm,1.3s,mb5.4						
SAO	**San Andreas Ge**	**89.01**	**53**	PFAKE		20 15 20.0	+11
SAO				LR	LR		
	comp=Z,5µm,22.0s						
CHKZ	**Chkalovo**	**89.23**	**324**	P	**P**	**20 15 08.1**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,132nm,0.9s,mb6.3						
BVA0	**Borovoye Array**	**89.27**	**323**	*i* P	**P**	**20 15 08.2**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.8						
CMB	**Columbia Colle**	**89.98**	**52**	PFAKE		20 15 20.0	+6.8
CMB				LR	LR		
	comp=Z,7µm,21.0s						
MOD	**Modoc**	**90.43**	**48**	*e*P	**P**	**20 15 14.2**	**-1.0**
	comp=Z,22nm,1.0s,mb5.4						
MOD				LR	LR		
	comp=Z,4µm,22.0s						
WCN	**Washoe City**	**90.59**	**51**	*e*P	**P**	**20 15 19.2**	**+3.1**
WCN				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
WCN	**Washoe City**	**90.59**	**51**	*e*P	**P**	**20 15 16.7**	**+0.7**
	comp=Z,11nm,1.0s,mb5.2						
MTUM	**Tungsten Hills**	**91.36**	**53**	*e*P	**P**	**20 15 20.1**	**+0.4**
MWC	**Mount Wilson**	**91.52**	**56**	P	**P**	**20 15 21.7**	**+1.2**
MWC	**Mount Wilson**	**91.52**	**56**	*e*P	**P**	**20 15 20.4**	**-0.1**
WVOR	**Wild Horse Val**	**91.71**	**48**	P	**P**	**20 15 21.6**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
WVOR	**Wild Horse Val**	**91.71**	**48**	*e*P	**P**	**20 15 20.3**	**-0.9**
	comp=Z,7.4nm,0.8s,mb5.1						
WVOR				LR	LR		
	comp=Z,5µm,22.0s						
MNV	**Mina**	**91.77**	**52**	P	**P**	**20 15 22.2**	**+0.7**
MNV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.1						
MNV	**Mina**	**91.77**	**52**	*e*P	**P**	**20 15 21.3**	**-0.2**
	comp=Z,9.2nm,0.8s,mb5.2						
MNV				LR	LR		
	comp=Z,6µm,20.0s						
DAC	**Darwin (Calif)**	**92.05**	**54**	PFAKE		20 15 30.0	+7.1
DAC				LR	LR		
	comp=Z,5µm,22.0s						
TPH	**Tonopah**	**92.47**	**52**	P	**P**	**20 15 26.3**	**+1.5**
TPH				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.9						
TPH	**Tonopah**	**92.47**	**52**	*e*P	**P**	**20 15 22.6**	**-2.2**
	comp=Z,5.1nm,0.8s,mb4.9						
TPH				LR	LR		
	comp=Z,4µm,20.0s						
BMN	**Battle Mountai**	**92.63**	**50**	PFAKE		20 15 40.0	+15
BMN				LR	LR		
	comp=Z,5µm,21.0s						
PFO	**Pinyon Flat Ob**	**92.81**	**57**	PFAKE		20 15 40.0	+14
PFO				LR	LR		
	comp=Z,938nm,22.0s						
BMO	**Blue Mountains**	**92.85**	**45**	*e*P	**P**	**20 15 24.8**	**-1.5**
BMO				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.3						
BMO				MLR	MLR		
	comp=Z,4µm,20.0s						
BMO	**Blue Mountains**	**92.85**	**45**	*e*P	**P**	**20 15 24.8**	**-1.5**
	comp=Z,11nm,0.8s,mb5.3						
BMO				LR	LR		
	comp=Z,4µm,20.0s						
NEW	**Newport**	**93.17**	**42**	P	**P**	**20 15 27.7**	**0.0**
NEW				pmax	pmax		
	comp=Z,11nm,0.9s						
NEW	**Newport**	**93.17**	**42**	*e*P	**P**	**20 15 25.9**	**-1.8**
	comp=Z,11nm,0.8s,mb5.3						
NEW				LR	LR		
	comp=Z,2µm,20.0s						
SYO	**Syowa Base**	**94.01**	**199**	⇓P	**P**	**20 15 32.2**	**+1.2**
SYO	**Syowa Base**	**94.01**	**199**	⇓PcP	PcP	20 15 29.1	-2.7
SYO	**Syowa Base**	**94.01**	**199**	⇑PP	PP	20 19 17.0	-3.5
NEN	**Nelson**	**94.24**	**55**	*e*P	**P**	**20 15 34.0**	**+1.1**
HLID	**Hailey**	**94.87**	**47**	*e*P	**P**	**20 15 35.8**	**+0.3**
	comp=Z,2.6nm,0.8s,mb4.7						
HLID				LR	LR		
	comp=Z,3µm,22.0s						
YKW3	**Yellowknife Ar**	**95.04**	**28**	*e*P	**P**	**20 15 35.8**	**-0.1**
SVE	**Sverdlovsk**	**95.18**	**327**	⇑*e*P	**P**	**20 15 36.6**	**0.0**
SVE				*e*	pP	20 15 52.0	-2.4
SVE				*e*		20 26 07.0	
SVE				*e*PS	PS	20 28 42.0	+27
SVE				*e*SSS	SSS	20 37 00.0	+2.3
SVE				pmax	pmax		
	comp=Z,140nm,2.2s,mb6.0						
SVE				pmax	pmax		
	comp=N,600nm,8.0s						
SVE				pmax	pmax		
	comp=E,3µm,8.0s						
SVE				MLR	MLR		
	comp=N,1µm,20.0s						
SVE				MLR	MLR		
	comp=E,2µm,20.0s						
SVE				MLR	MLR		
	comp=Z,4µm,20.0s						
MSO	**Missoula**	**95.28**	**44**	PFAKE		20 15 50.0	+13
MSO				LR	LR		
	comp=Z,3µm,20.0s						
WALA	**Waterton Lakes**	**95.33**	**41**	*e*P	**P**	**20 15 36.8**	**-0.8**
	comp=Z,19nm,0.8s,mb5.6						
EDM	**Edmonton**	**95.71**	**37**	P	**P**	**20 15 39.7**	**+0.6**
EDM	**Edmonton**	**95.71**	**37**	*e*P	**P**	**20 15 38.4**	**-0.7**
CHMT	**Chamberlain Mo**	**95.75**	**43**	*e*P	**P**	**20 15 38.4**	**-1.0**
MCMT	**McKenzie Canyo**	**96.01**	**46**	*e*P	**P**	**20 15 40.9**	**+0.2**
HVU	**Hansel Valley**	**96.04**	**49**	P	**P**	**20 15 42.7**	**+1.8**
HVU	**Hansel Valley**	**96.04**	**49**	*e*P	**P**	**20 15 41.8**	**+0.9**
ARU	**Arti**	**96.33**	**326**	P	**P**	**20 15 41.1**	**-0.7**
	comp=Z,491nm,1.1s,mb6.8,SNR=13						
ARU	**Arti**	**96.33**	**326**	⇓*i*P	**P**	**20 15 31.5**	**-10**
ARU				pmax	pmax		
	comp=Z,75nm,0.9s,mb6.1						
ARU				MLR	MLR		
	comp=Z,3µm,20.0s						
ARU				MLR	MLR		
	comp=N,700nm,18.0s						
ARU				MLR	MLR		
	comp=E,2µm,20.0s						
MVU	**Marysvale**	**96.43**	**52**	P	**P**	**20 15 44.2**	**+1.5**
	comp=E,3.0nm,0.6s,mb4.9						
MVU				LR	LR		
	comp=Z,5µm,20.0s						
BOZ	**Bozeman (W)**	**96.88**	**45**	*e*P	**P**	**20 15 44.3**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb5.0						
BOZ				MLR	MLR		
	comp=Z,4µm,22.0s						
BOZ	**Bozeman (W)**	**96.88**	**45**	*e*P	**P**	**20 15 44.3**	**-0.3**
	comp=Z,4.6nm,0.8s,mb5.0						
BOZ				LR	LR		
	comp=Z,4µm,22.0s						
HWUT	**Hardware Ranch**	**96.94**	**49**	PFAKE		20 16 00.0	+15
HWUT				LR	LR		
	comp=Z,3µm,20.0s						
QLMT	**Earthquake Lak**	**97.02**	**46**	*e*P	**P**	**20 15 44.7**	**-0.6**
RRI2	**Red Ridge**	**97.12**	**47**	*e*P	**P**	**20 15 45.1**	**-0.6**
SOKR	**Solikamsk**	**97.14**	**329**	⇓*i*P	**P**	**20 15 44.3**	**-1.2**
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.7						
SOKR				MLR	MLR		
	comp=Z,3µm,20.0s						
TMUT	**Trail Mountain**	**97.22**	**51**	*e*P	**P**	**20 15 45.7**	**-0.7**
AHID	**Auburn Hatcher**	**97.28**	**48**	PFAKE		20 16 00.0	+13
AHID				LR	LR		
	comp=Z,4µm,20.0s						
YMR	**Madison River**	**97.36**	**46**	*e*P	**P**	**20 15 47.3**	**+0.5**
IMW	**Indian Meadow**	**97.39**	**46**	*e*P	**P**	**20 15 47.4**	**+0.4**
YFT	**Old Faithful**	**97.45**	**46**	*e*P	**P**	**20 15 48.5**	**+1.2**
TUC	**Tucson**	**97.53**	**58**	PFAKE		20 16 00.0	+12
TUC				LR	LR		
	comp=Z,3µm,19.0s						
MOOW	**Moose Ponds**	**97.53**	**47**	*e*P	**P**	**20 15 47.2**	**-0.4**
LKWY	**Lake**	**97.76**	**46**	*e*P	**P**	**20 15 50.0**	**+1.3**
LKWY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb5.0						
LKWY				MLR	MLR		
	comp=Z,5µm,20.0s						
LKWY	**Lake**	**97.76**	**46**	*e*P	**P**	**20 15 50.0**	**+1.4**
	comp=Z,3.6nm,0.8s,mb5.0						
LKWY				LR	LR		
	comp=Z,5µm,20.0s						
BANOM	**Banah**	**98.15**	**295**	⇓P	**P**	**20 15 51.7**	**+0.9**
	SNR=7.5						
ASHO	**Ashiyiah**	**98.34**	**294**	⇑P	**P**	**20 15 52.4**	**+0.6**
BW06	**Boulder Array**	**98.42**	**48**	PFAKE		20 16 00.0	+8.3
BW06				LR	LR		
	comp=Z,4µm,22.0s						
RBK	**Rabkut**	**99.90**	**287**	⇑P	**P**	**20 15 58.9**	**0.0**
	SNR=8.7						
RES	**Resolute Bay**	**100.09**	**15**	P	P	20 15 59.3	+0.8
RES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RES	**Resolute Bay**	**100.09**	**15**	*e*P	P	20 15 58.0	-0.6
RES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RES	**Resolute Bay**	**100.09**	**15**	*e*Pdif	P	20 15 58.0	-0.5
	comp=Z,4.4nm,0.7s						
WHFO	**Wadi Hawf**	**100.32**	**287**	⇑P	P	20 16 00.5	-0.4
	SNR=7.9						
LAO	**LASA Array**	**100.58**	**44**	PFAKE		20 16 10.0	+8.6
LAO				LR	LR		
	comp=Z,4µm,20.0s						
ABTO	**Aybut**	**100.76**	**287**	⇑P	P	20 16 04.3	+1.5
	SNR=11						
ANMO	**Albuquerque**	**101.10**	**55**	PFAKE		20 16 20.0	+16
ANMO				LR	LR		
	comp=Z,2µm,22.0s						
ISCO	**Idaho Springs**	**101.52**	**50**	PFAKE		20 16 20.0	+14
ISCO				LR	LR		
	comp=Z,3µm,20.0s						
SDCO	**Great Sand Dun**	**101.74**	**53**	PFAKE		20 16 20.0	+13
SDCO				LR	LR		
	comp=Z,6µm,22.0s						
DGMT	**Dagmar**	**101.78**	**42**	PFAKE		20 16 20.0	+13
DGMT				LR	LR		
	comp=Z,2µm,22.0s						
MNTX	**Cornudas Mount**	**102.12**	**59**	PFAKE		20 16 20.0	+11
MNTX				LR	LR		
	comp=Z,2µm,19.0s						
FFC	**Flin Flon**	**102.27**	**35**	PFAKE		20 16 20.0	+11
FFC				LR	LR		
	comp=Z,428nm,19.0s						
RSSD	**Black Hills**	**102.35**	**46**	PFAKE		20 16 20.0	+11
RSSD				LR	LR		
	comp=Z,2.0nm,22.0s						
VNA3	**Neumayer Olymp**	**103.50**	**186**	⇑*i*P	Pdif	20 16 16.8	+3.0
VNA3	**Neumayer Olymp**	**103.50**	**186**	⇑*i*	Pdif	20 16 24.3	+11
VNA3	**Neumayer Olymp**	**103.50**	**186**	⇑*i*		20 20 34.1	
VNA2	**Neumayer--Watz**	**103.56**	**186**	⇑*i*P	Pdif	20 16 16.7	+2.6
VNA2	**Neumayer--Watz**	**103.56**	**186**	⇑*i*	Pdif	20 16 21.3	+7.2
VNA2	**Neumayer--Watz**	**103.56**	**186**	⇑*i*		20 20 35.2	
VNA2	**Neumayer--Watz**	**103.56**	**186**	⇑*i*	Px	20 20 56.7	
LTX	**Lajitas**	**103.69**	**61**	PFAKE		20 16 30.0	+14
LTX				LR	LR		
	comp=Z,6µm,22.0s						
PECR	**Pechory**	**104.31**	**327**	*e*P	Pdif	20 16 17.6	-0.1
PECR				*i* S		20 26 53.2	
PECR				smax			
	comp=E,5µm,6.0s						
PECR				MLR	MLR		
	comp=E,8µm,20.0s						
PECR				MLR	MLR		
	comp=Z,4µm,20.0s						
AMTX	**Amarillo**	**105.02**	**55**	PFAKE		20 16 30.0	+8.7
AMTX				LR	LR		
	comp=Z,3µm,22.0s						
APA	**Apatity**	**105.24**	**340**	⇓*e*P	Pdif	20 16 18.8	-2.7
APA				*i*		20 27 00.0	
APA				*e*S	tx	20 28 03.0	
APA				pmax	pmax		
	comp=Z,70nm,1.5s						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
FCC	**Fort Churchill**	**105.56**	**30**	*e*P	Pdif	20 16 26.0	+2.9
FCC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FCC	**Fort Churchill**	**105.56**	**30**	*e*Pdif	Pdif	20 16 26.0	+2.9
	comp=Z,8.2nm,0.8s						
PMSA	**Palmer Station**	**105.59**	**164**	PFAKE		20 20 50.0	
PMSA				LR	LR		
	comp=Z,3µm,21.0s						
KEV	**Kevo**	**106.19**	**343**	*e*p		20 20 38.4	
	comp=Z,19nm,0.8s						
ULM	**Lac du Bonnet**	**106.83**	**39**	PFAKE		20 20 50.0	
ULM				LR	LR		
	comp=Z,4µm,22.0s						
GNI	**Garni**	**106.99**	**310**	PFAKE		20 20 50.0	
GNI				LR	LR		
	comp=Z,1µm,22.0s						
DAG	**Danmarks Havn**	**107.71**	**358**	*e*P	Pdif	20 16 33.0	+0.8
DAG				*e*P		20 20 39.0	
DAG	**Danmarks Havn**	**107.71**	**358**	*i* P	Pdif	20 16 33.0	+0.8
DAG	**Danmarks Havn**	**107.71**	**358**	*i* P		20 20 39.0	
KIV	**Kislovodsk**	**107.85**	**315**	PFAKE		20 20 50.0	
KIV				LR	LR		
	comp=Z,313nm,20.0s						
JOF	**Joensuu**	**108.12**	**336**	*e*p	Pdif	20 16 32.5	-1.8
	comp=Z,15nm,0.7s						
JOF	**Joensuu**	**108.12**	**336**	*e*p		20 20 41.2	
	comp=Z,3.5nm,0.6s						
JOF	**Joensuu**	**108.12**	**336**	*e*P	Pdif	20 16 32.5	-1.8
JOF				pmax	pmax		
	comp=Z,15nm,0.7s						
JOF	**Joensuu**	**108.12**	**336**	*e*P	Pdif	20 16 32.5	-1.8
JOF				*e*P		20 20 41.2	
OBN	**Obninsk**	**108.73**	**327**	⇑*i*P	Pdif	20 16 37.8	+0.7
OBN				*i*		20 21 11.9	
OBN				*i*		20 27 13.9	
OBN				*e*PS	PS	20 30 24.8	-8.1
OBN				*e*PPS	PPS	20 31 35.1	-3.4
OBN				*i* SS	SS	20 36 31.6	+10
OBN				pmax	pmax		
	comp=Z,40nm,1.2s						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s						
OBN	**Obninsk**	**108.73**	**327**	PFAKE		20 20 50.0	
OBN				LR	LR		
	comp=Z,755nm,20.0s						
MSL	**Mosul**	**108.85**	**307**	*e*P		20 20 43.5	
MSL				*e*S	SKS	20 28 02.5	+51
MSL				*e*sS		20 30 10.5	
ERZM	**Erzurum**	**109.59**	**311**	*i* P		20 20 46.6	
PUL	**Pulkovo**	**109.99**	**333**	*e*P	Pdif	20 16 53.3	+11
EYMN	**Ely**	**110.20**	**40**	PFAKE		20 21 00.0	+16
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
HKT	**Hockley**	**110.44**	**60**	PFAKE		20 21 00.0	+15
HKT				LR	LR		
	comp=Z,5µm,20.0s						
KAF	**Kangasniemi**	**110.54**	**336**	*e*p	Pdif	20 16 41.4	-3.6
	comp=Z,5.6nm,0.7s,baz=69,slow=4.9						
KAF	**Kangasniemi**	**110.54**	**336**	*e*p	PKPdf	20 20 45.5	+1.5
	comp=Z,7.3nm,0.6s						

KAF	**Kangasniemi**	**110.54**	**336**	*e*P	Pdif	20 16 41.4	-3.6
KAF				*e*		20 20 45.5	
NATX	**Nacogdoches**	**111.21**	**58**	PFAKE		20 21 00.0	+14
NATX				LR	LR		
	comp=Z,4µm,21.0s						
ELZG	**Elazig**	**111.68**	**310**	*i* P	PKPdf	20 20 50.6	+3.8
MALT	**Malatya**	**112.15**	**310**	*e*Pdif	Pdif	20 16 52.4	-0.3
MALT				*e*PKP	PKPdf	20 20 49.8	+2.1
MALT				P		20 20 51.9	
CCM	**Cathedral Cave**	**112.85**	**51**	PFAKE		20 21 00.0	+11
CCM				LR	LR		
	comp=Z,5µm,21.0s						
GZT	**Gaziantep**	**113.02**	**309**	*i* P	PKPdf	20 20 53.1	+3.6
KAHT	**Ahir Dag**	**113.50**	**309**	*i* P	PKPdf	20 20 44.1	-6.3
AVNT	**Avonos**	**114.76**	**311**	*i* P	PKPdf	20 20 55.3	+2.4
OXF	**Oxford**	**115.07**	**54**	PFAKE		20 21 10.0	+16
OXF				LR	LR		
	comp=Z,2µm,22.0s						
ELDT	**Eldivan**	**115.36**	**313**	*i* P	PKPdf	20 20 56.8	+2.8
BR131	**Keskin Array S**	**115.42**	**312**	PFAKE		20 21 10.0	+16
BR131				LR	LR		
	comp=Z,902nm,19.0s						
KMBO	**Kilima Mbogo**	**115.73**	**267**	*e*PKIKP	PKPdf	20 20 57.2	+1.8
KMBO				MLR	MLR		
	comp=Z,2µm,21.0s						
ANTO	**Ankara**	**116.00**	**312**	PKIKP	PKPdf	20 20 58.3	+3.0
SUW	**Suwalki**	**116.22**	**330**	*e*PKIKP	PKPdf	20 20 57.3	+2.0
SUW				*e*PS	PS	20 31 43.2	-1.1
SUW	**Suwalki**	**116.22**	**330**	*e*PKP	PKPdf	20 20 57.3	+2.0
SUW				*e*PKPdf	PKPdf	20 20 58.1	+2.8
SUW				*e*PS	PS	20 31 43.2	-1.1
SUW	**Suwalki**	**116.22**	**330**	*e*PKP	PKPdf	20 20 57.3	+2.0
SUW				*e*PKIKP	PKPdf	20 20 58.1	+2.8
SUW				*e*PS	PS	20 31 43.2	-1.0
SUW				MLR	MLR	21 02 57.5	
	comp=Z,4µm,30.8s						
PAYG	**Puerto Ayora**	**116.39**	**93**	PFAKE		20 21 10.0	+13
PAYG				LR	LR		
	comp=Z,2µm,21.0s						
WCI	**Wyandotte Cave**	**116.59**	**49**	*e*PKIKP	PKPdf	20 20 58.2	+1.8
WCI				MLR	MLR		
	comp=Z,4µm,22.0s						
NB2	**NORSAR Subarra**	**116.81**	**340**	PKPdf	PKPdf	20 20 57.4	+1.1
	comp=Z,6.6nm,0.7s,baz=45,slow=1.9						
NB2	**NORSAR Subarra**	**116.81**	**340**	PKPdf	PKPdf	20 20 57.4	+1.1
NB2	**NORSAR Subarra**	**116.81**	**340**	PKPd		20 20 57.4	
	baz=44,slow=1.9						
NAO01	**NORSAR Array S**	**117.07**	**340**	*e*PKPdf	PKPdf	20 20 57.7	+0.9
NAO01				LR	LR		
	comp=Z,3µm,21.0s						
AAM	**Ann Arbor**	**117.24**	**44**	PFAKE		20 21 10.0	+12
AAM				LR	LR		
	comp=Z,3µm,19.0s						
LRAL	**Lakeview Retre**	**117.35**	**55**	PFAKE		20 21 10.0	+12
LRAL				LR	LR		
	comp=Z,3µm,22.0s						
TIRR	**Tirgusor**	**117.52**	**318**	PKIKP	PKPdf	20 21 00.9	+2.9
ESKT	**Eskisehir**	**117.54**	**313**	*i* P	PKPdf	20 21 01.0	+2.8
HARR	**Harsova**	**117.75**	**319**	PKIKP	PKPdf	20 21 01.8	+3.3
PSN	**Preselentsi**	**117.97**	**318**	*i* P	PKPdf	20 21 01.5	+2.6
BURAR	**Bucovina Array**	**118.23**	**323**	P	PKPdf	20 21 03.3	+3.9
TEIG	**Tepich**	**118.33**	**70**	PFAKE		20 21 10.0	+10
TEIG				LR	LR		
	comp=Z,1µm,22.0s						
KONO	**Kongsberg**	**118.39**	**340**	PFAKE		20 21 10.0	+11
KONO				LR	LR		
	comp=Z,2µm,22.0s						
ACSO	**Alum Creek Sta**	**118.42**	**46**	*e*PKP	PKPdf	20 21 00.9	+1.0
ACSO				LR	LR		
	comp=Z,2µm,21.0s						
ULDT	**Uludag**	**118.58**	**314**	*i* P	PKPdf	20 21 02.6	+2.4
PRD	**Provadia**	**118.69**	**317**	*i* P	PKPdf	20 21 03.5	+3.1
MLR	**Muntele Rosu**	**118.71**	**320**	PKIKP	PKPdf	20 21 03.6	+3.3
KWP	**Kalwaria**	**118.73**	**326**	*e*PKP	PKPdf	20 21 02.3	+2.0
KWP				*e*		20 21 03.0	
KWP				*e*PKPdf	PKPdf	20 21 04.4	+4.1
KWP				*e*SP	SP	20 32 15.5	+16
KWP	**Kalwaria**	**118.73**	**326**	*e*PKP	PKPdf	20 21 02.3	+2.0
KWP				*e*		20 21 03.0	
KWP				*e*PKIKP	PKPdf	20 21 04.4	+4.1
KWP				*e*SP	SP	20 32 15.5	+16
KWP				MLR	MLR	21 04 50.0	
	comp=Z,6µm,33.7s						
KOLS	**Kolonicke sedl**	**119.33**	**325**	*i* P	Pdif	20 17 27.5	+3.6
KOLS				*i*		20 21 05.3	
KOLS	**Kolonicke sedl**	**119.33**	**325**	PDIF	Pdif	20 17 27.5	+3.6
KOLS	**Kolonicke sedl**	**119.33**	**325**	*i* PKP	PKPdf	20 21 05.3	+3.8
KOLS				*e*SKPDF		20 24 36.9	
BSD	**Bornholm Skovb**	**119.47**	**334**	*i* PKIKP	PKPdf	20 21 03.3	+1.7
BSD				*e*S	SP	20 32 06.7	+0.4
BSD				pmax	pmax		
	comp=Z,52nm,0.8s						
BSD	**Bornholm Skovb**	**119.47**	**334**	*i* P	PKPdf	20 21 03.3	+1.7
BSD				*e*S	SP	20 32 06.7	+0.4
BSD				*i*		20 33 22.5	
BSD	**Bornholm Skovb**	**119.47**	**334**	*i* P	PKPdf	20 21 03.3	+1.7
	comp=Z,52nm,0.8s						
GKP	**Gorka Klasztor**	**119.56**	**331**	*e*PKIKP	PKPdf	20 21 03.8	+2.0
GKP				*e*PS	PS	20 32 13.6	-0.7
GKP	**Gorka Klasztor**	**119.56**	**331**	*e*PKP	PKPdf	20 21 03.8	+2.0
GKP				*e*PKPdf	PKPdf	20 21 04.7	+2.9
GKP				*e*PS	PS	20 32 13.6	-0.7
GKP	**Gorka Klasztor**	**119.56**	**331**	*e*PKP	PKPdf	20 21 03.8	+2.0
GKP				*e*PKIKP	PKPdf	20 21 04.7	+2.9
GKP				*e*PS	PS	20 32 13.6	-0.8
GKP				MLR	MLR	21 03 55.7	
	comp=Z,4µm,33.9s						
SZH	**Strazhica**	**119.64**	**318**	*i* P	PKPdf	20 21 05.0	+2.8
PLCA	**Paso Flores**	**119.75**	**143**	*e*PKIKP	PKPdf	20 21 04.1	+1.6
PLCA				MLR	MLR		
	comp=Z,1µm,22.0s						
CRVS	**Cervenica-Dubn**	**119.80**	**325**	*i* P	Pdif	20 17 29.2	+3.2
CRVS				*i*		20 21 05.9	
CRVS	**Cervenica-Dubn**	**119.80**	**325**	PDIF	Pdif	20 17 29.2	+3.2
CRVS	**Cervenica-Dubn**	**119.80**	**325**	*i* PKP	PKPdf	20 21 05.9	+3.5
CRVS				*e*SKPDF		20 24 34.9	
OJC	**Ojcow**	**120.02**	**327**	*e*PKIKP	PKPdf	20 21 04.4	+1.6
OJC				*e*		20 22 31.7	
OJC				*e*		20 28 01.9	
OJC				*e*SS	SS	20 38 57.7	+7.3
OJC				MLR	MLR		
	comp=Z,3µm,22.1s						
OJC	**Ojcow**	**120.02**	**327**	*e*Pdiff	Pdif	20 17 30.3	+3.4
OJC				*e*PKPdf	PKPdf	20 21 04.4	+1.6
OJC				*e*PP	PP	20 22 31.7	-0.3
OJC				⇑*e*SKSa		20 28 01.9	
OJC				*e*SS	SS	20 38 57.7	+7.3
OJC				MLR	MLR	21 12 15.9	
	comp=Z,3µm,22.1s						
BOSA	**Boshof**	**120.06**	**233**	*e*PKIKP	PKPdf	20 21 04.9	+1.5
BOSA				MLR	MLR		
	comp=Z,3µm,20.0s						
PVL	**Pavlikeni**	**120.06**	**318**	*e*P	PKPdf	20 21 06.0	+3.0
GOGA	**Godfrey**	**120.12**	**54**	PFAKE		20 21 20.0	+17
GOGA				LR	LR		
	comp=Z,3µm,20.0s						
COP	**Copenhagen**	**120.15**	**336**	*i* PKIKP	PKPdf	20 21 08.6	+5.7
COP				pmax	pmax		
	comp=Z,44nm,0.8s						
COP				MLR	MLR		
	comp=Z,790nm,20.0s						
COP	**Copenhagen**	**120.15**	**336**	*i* P	PKPdf	20 21 08.6	+5.7
	comp=Z,44nm,0.8s						
	comp=Z,780nm,20.0s						
NIE	**Niedzica**	**120.17**	**326**	*e*PKP	PKPdf	20 21 03.6	+0.5
DIM	**Dimitrovgrad**	**120.41**	**317**	*i* P	PKPdf	20 21 06.0	+2.3
SCHQ	**Schefferville**	**120.42**	**26**	PFAKE		20 21 20.0	+17
SCHQ				LR	LR		
	comp=Z,2µm,20.0s						
KDAG	**Bornova**	**120.54**	**312**	*i* P	PKPdf	20 21 06.4	+2.3
KECS	**Kecovo**	**120.57**	**325**	*i* PKP	PKPdf	20 21 08.2	+4.3
MCWV	**Mont Chateau**	**120.88**	**46**	PFAKE		20 21 20.0	+15
MCWV				LR	LR		
	comp=Z,3µm,19.0s						
MUD	**Monsted U'grnd**	**120.89**	**338**	*i* PKIKP	PKPdf	20 21 07.0	+2.7
MUD				pmax	pmax		
	comp=Z,25nm,0.9s						
MUD				MLR	MLR		
	comp=Z,2µm,20.0s						
MUD	**Monsted U'grnd**	**120.89**	**338**	*i* P	PKPdf	20 21 07.0	+2.7
	comp=Z,25nm,0.9s						
MUD				*i*		20 32 11.5	
	comp=Z,2µm,20.0s						
RAC	**Raciborz**	**120.95**	**328**	*e*PKP	PKPdf	20 21 06.0	+1.4
RZN	**Rozhen**	**121.11**	**317**	*i* P	PKPdf	20 21 07.0	+1.9
OKC	**Ostrava-Krasne**	**121.12**	**328**	*e*PKIKP	PKPdf	20 21 06.2	+1.3
OKC				MLR	MLR		
	comp=Z,2µm,18.3s						
OKC	**Ostrava-Krasne**	**121.12**	**328**	*e*PKPdf	PKPdf	20 21 06.2	+1.3
OKC				*e*SKP		20 24 39.7	
OKC				AMS	AMS	21 16 10.0	
	comp=Z,2µm,18.3s						
PGB	**Panagyurishte**	**121.12**	**318**	*e*P	PKPdf	20 21 07.5	+2.4
LRW	**Lerwick**	**121.21**	**345**	*e*P	PKPdf	20 21 06.8	+1.9
PSZ	**Piszkesteto**	**121.21**	**325**	*e*PKIKP	PKPdf	20 21 06.1	+1.0
PSZ	**Piszkesteto**	**121.21**	**325**	⇑*i*PKP/D	PKPdf	20 21 07.8	+2.7
LBTB	**Lobatse**	**121.22**	**237**	*e*PKIKP	PKPdf	20 21 06.6	+0.9
LBTB				MLR	MLR		
	comp=Z,3µm,21.0s						
BLA	**Blacksburg**	**121.33**	**49**	*e*PKIKP	PKPdf	20 21 06.4	+0.7
BLA				MLR	MLR		
	comp=Z,5µm,21.0s						
MORC	**Moravsky Berou**	**121.47**	**328**	*e*PKIKP	PKPdf	20 21 06.3	+0.7
KSP	**Ksiaz**	**121.49**	**329**	*e*PKIKP	PKPdf	20 21 06.7	+1.1
KSP				*e*		20 22 37.0	
KSP				*e*SP	SP	20 32 25.0	+0.4
KSP				*e*SS	SS	20 39 04.0	-5.5
KSP				MLR	MLR		
	comp=Z,7µm,26.1s						
KSP	**Ksiaz**	**121.49**	**329**	*e*PKP	PKPdf	20 21 06.7	+1.1
KSP				*e*		20 21 08.5	
KSP				*e*pPKP		20 21 25.2	
KSP				*e*PP	PP	20 22 37.0	-5.3
KSP				*e*		20 24 39.3	
KSP				*e*SP	SP	20 32 25.0	+0.4
KSP				*e*SS	SS	20 39 04.0	-5.5
KSP				LR	LR		
	comp=Z,7µm,26.1s						
KSP	**Ksiaz**	**121.49**	**329**	*e*PKP	PKPdf	20 21 07.6	+2.0
KSP				*e*PKIKP	PKPdf	20 21 08.8	+3.1
KSP				MLR	MLR	21 12 31.5	
	comp=Z,6µm,26.1s						
JSC	**Jenkinsville**	**121.63**	**52**	*e*PKIKP	PKPdf	20 21 07.9	+1.6
KOLL	**Kolacno**	**121.69**	**326**	*i* PKP	PKPdf	20 21 09.3	+3.3
RUE	**Ruedersdorf**	**121.69**	**332**	*e*PKPdf	PKPdf	20 21 06.5	+0.5
VTS	**Vitosha**	**121.74**	**318**	PKIKP	PKPdf	20 21 08.8	+2.5
VTS	**Vitosha**	**121.74**	**318**	*i* P	PKPdf	20 21 09.0	+2.7
SUR	**Sutherland**	**121.75**	**227**	PFAKE		20 21 20.0	+13
SUR				LR	LR		
	comp=Z,904nm,21.0s						
DPC	**Dobruska-Polom**	**121.78**	**329**	*e*PKIKP	PKPdf	20 21 07.5	+1.3
DPC				MLR	MLR		
	comp=Z,3µm,23.8s						
DPC	**Dobruska-Polom**	**121.78**	**329**	*e*PKPdf	PKPdf	20 21 07.5	+1.3
DPC				*e*SKP		20 24 40.6	
DPC				AMS	AMS	21 12 30.0	
	comp=Z,3µm,23.8s						
MMB	**Musomiste**	**121.82**	**317**	*e*P	PKPdf	20 21 06.5	0.0
UPC	**Upice**	**121.84**	**329**	*e*PKPdf	PKPdf	20 21 08.4	+2.1
SSPA	**Standing Stone**	**121.88**	**44**	*e*PKPdf	PKPdf	20 21 07.2	+0.6
SSPA				LR	LR		
	comp=Z,4µm,21.0s						
LSZ	**Lusaka**	**122.06**	**249**	*e*PKIKP	PKPdf	20 21 07.9	+0.4
LSZ				MLR	MLR		
	comp=Z,2µm,22.0s						
KKB	**Krupnik**	**122.14**	**318**	*i* P	PKPdf	20 21 08.0	+0.9
SRO2	**Moca**	**122.14**	**326**	*i* PKP	PKPdf	20 21 09.9	+3.0
JTS	**JuntasAbangare**	**122.15**	**81**	PFAKE		20 21 20.0	+12
JTS				LR	LR		
	comp=Z,1µm,22.0s						
SRO	**Srobarova**	**122.16**	**326**	*i* PKP	PKPdf	20 21 10.2	+3.2
SRO				*e*SKPDF		20 24 43.6	
SRO1	**Iza**	**122.23**	**326**	*i* PKP	PKPdf	20 21 10.2	+3.1
SVIS	**Svilajnac**	**122.24**	**321**	⇑*i*P	PKPdf	20 21 09.7	+2.4
VRAC	**Vranov**	**122.25**	**328**	P	PKPdf	20 21 09.7	+2.6
SMOL	**Smolenice**	**122.26**	**327**	*i* PKP	PKPdf	20 21 10.5	+3.4
MBAR	**Mbarara**	**122.26**	**266**	*e*PKIKP	PKPdf	20 21 09.5	+1.5
MBAR				MLR	MLR		
	comp=Z,500nm,20.0s						
BEO	**Belgrade**	**122.46**	**322**	⇑*i*P	PKPdf	20 21 09.4	+1.8
BINY	**Binghamton**	**122.50**	**42**	*e*PKPdf	PKPdf	20 21 08.7	+0.9
BINY				LR	LR		
	comp=Z,2µm,21.0s						
BARS	**Barje**	**122.55**	**319**	⇓*i*P	PKPdf	20 21 09.6	+1.8
PVCC	**Panska Ves**	**122.55**	**330**	*e*PKIKP	PKPdf	20 21 09.5	+1.8
PVCC				MLR	MLR		
	comp=Z,2µm,18.1s						
PVCC	**Panska Ves**	**122.55**	**330**	*e*PKPdf	PKPdf	20 21 09.5	+1.8
PVCC				*e*SKP		20 24 42.1	
PVCC				AMS	AMS	21 20 10.0	
	comp=Z,2µm,18.1s						
ZST	**Bratislava**	**122.62**	**327**	*e*P	Pdif	20 17 41.1	+2.7
ZST				*i*		20 21 11.3	
ZST	**Bratislava**	**122.62**	**327**	PDIF	Pdif	20 17 41.1	+2.7
ZST	**Bratislava**	**122.62**	**327**	*i* PKP	PKPdf	20 21 11.3	+3.5
ZST				*e*SKPDF		20 24 43.7	
BRG	**Berggiesshubel**	**122.65**	**331**	*i* PKIKP	PKPdf	20 21 09.2	+1.4
BRG				*e*		20 28 11.7	
BRG				pmax	pmax		
	comp=Z,94nm,0.8s						
BRG				MLR	MLR		
	comp=N,2µm,19.3s						
BRG				MLR	MLR		
	comp=E,2µm,19.3s						
BRG				MLR	MLR		
	comp=Z,3µm,19.3s						
BRG	**Berggiesshubel**	**122.65**	**331**	*i* P	PKPdf	20 21 09.2	+1.4
BRG				*i*		20 21 26.8	
BRG				*e*		20 24 42.6	
BRG				*e*		20 28 11.7	
BRG				*e*		20 29 41.7	
BRG				*e*S	tx	20 32 54.0	
BRG				LR	LR		
	comp=Z,3µm,19.3s						
GRUS	**Gruza**	**122.76**	**321**	⇑*i*P	PKPdf	20 21 10.4	+2.2
NCB	**Newcomb**	**122.81**	**39**	*e*PKPdf	PKPdf	20 21 09.1	+0.8
NCB				LR	LR		
	comp=Z,2µm,20.0s						
CLL	**Collm**	**122.82**	**331**	*i* PKP	PKPdf	20 21 09.0	+0.8
CLL				*e*PP	PP	20 22 56.0	+4.4
CLL				LR	LR		
	comp=Z,3µm,19.2s						
CLL	**Collm**	**122.82**	**331**	*i* PKIKP	PKPdf	20 21 09.0	+0.8
	comp=Z,logA/T=1.3						
CLL				*i*		20 21 11.3	
CLL				*e*		20 22 25.0	
CLL				*e*PP	PP	20 22 56.0	+4.4
CLL				*i*		20 24 43.3	
CLL				*e*PPP	PPP	20 25 21.0	-7.8
CLL				*e*		20 29 41.0	
CLL				*e*SP	SP	20 32 36.0	-0.5
CLL				*e*		20 33 00.0	
CLL				*e*PPS	PPS	20 33 59.0	-13
CLL				*e*SS	SS	20 39 26.0	-0.8
CLL				*e*SSS	SSS	20 43 48.0	-13
NHSC	**New Hope**	**122.85**	**53**	PFAKE		20 21 20.0	+11
NHSC				LR	LR		
	comp=Z,3µm,20.0s						
PRU	**Pruhonice**	**122.90**	**329**	*e*PKPdf	PKPdf	20 21 10.0	+1.6
PRU				*e*SKP		20 24 43.5	
PRU				AMS	AMS	21 13 30.0	
	comp=Z,3µm,20.1s						
VKA	**Vienna**	**123.01**	**327**	⇑*i*PKP	PKPdf	20 21 11.8	+3.2
DIVS	**Divcibare**	**123.11**	**321**	⇓*i*P	PKPdf	20 21 10.0	+1.1
SDMD	**Soldier's Deli**	**123.11**	**45**	*e*PKPdf	PKPdf	20 21 10.2	+1.2
DWPF	**Disney**	**123.17**	**59**	PFAKE		20 21 20.0	+11
DWPF				LR	LR		
	comp=Z,2µm,21.0s						
SKO	**Skopje**	**123.19**	**318**	⇑*i*PKP	PKPdf	20 21 11.8	+2.7
	comp=Z,0.1nm,0.9s						
SKO				*i*		20 21 19.4	
	comp=Z,0.1nm,0.9s						
SKO				*i* PKS	PKS	20 24 44.0	-1.0
MVL	**Millersville**	**123.21**	**44**	*e*PKPdf	PKPdf	20 21 10.3	+1.1
SOP	**Sopron**	**123.21**	**326**	⇑*i*PKP/D		20 21 11.8	
CBN	**Corbin**	**123.21**	**47**	PFAKE		20 21 20.0	+11
CBN				LR	LR		
	comp=Z,3µm,20.0s						
IVA	**Berane**	**123.77**	**320**	⇑*i*PKP	PKPdf	20 21 12.3	+2.1
NKC	**Novy Kostel**	**123.79**	**331**	*e*PKPdf	PKPdf	20 21 11.4	+1.3
NKC				AMS	AMS	21 17 10.0	
	comp=Z,3µm,20.6s						
PVY	**Plav**	**123.86**	**320**	⇑*i*PKP	PKPdf	20 21 11.7	+1.3
PLE	**Pljevlja**	**123.87**	**321**	*e*PKP	PKPdf	20 21 12.3	+1.9
MVH1	**Achvaich**	**123.90**	**346**	*e*P	PKPdf	20 21 11.3	+1.2
MOX	**Moxa**	**123.92**	**332**	*e*P	PKPdf	20 21 12.4	+2.1
MOX				LR	LR		
	comp=Z,2µm,22.0s						
MOX	**Moxa**	**123.92**	**332**	*i* P	PKPdf	20 21 12.4	+2.1
	comp=Z,logA/T=1.5						
MOX				*e*		20 32 45.0	
MOX				SS	SS	20 39 46.0	+5.9
MOX				L		21 18 55.0	
KHC	**Kasperske Hory**	**123.93**	**329**	*e*PKP	PKPdf	20 21 11.2	+0.8
KHC				*e*		20 21 25.0	
KHC				*e*		20 24 43.6	
KHC	**Kasperske Hory**	**123.93**	**329**	*e*PKPdf	PKPdf	20 21 11.2	+0.8
KHC				*e*SKP		20 24 43.6	
KHC				PKKP	PKKP	20 30 57.5	-30
KHC				AMS	AMS	21 14 00.0	
	comp=Z,2µm,18.8s						
MCD	**Coleburn Disti**	**123.97**	**345**	*e*P	PKPdf	20 21 11.9	+1.6
OHR	**Ohrid**	**124.01**	**318**	*e*PKP	PKPdf	20 21 12.3	+1.5
ARSA	**Arzberg**	**124.04**	**326**	⇓*i*P	PKPdf	20 21 12.8	+2.2
HNH	**Hanover**	**124.16**	**39**	*e*PKPdf	PKPdf	20 21 12.7	+1.7
UPM	**Unac-Piva**	**124.24**	**321**	⇑*i*PKP	PKPdf	20 21 13.1	+2.0
MOA	**Molln**	**124.36**	**328**	⇓*i*P	PKPdf	20 21 12.8	+1.6
MDO	**Dochfour**	**124.38**	**346**	*e*P	PKPdf	20 21 12.2	+1.2
NKY	**Niksic**	**124.38**	**320**	⇑*i*PKP	PKPdf	20 21 13.1	+1.7
TTG	**Podgorica**	**124.40**	**320**	⇑*i*PKP	PKPdf	20 21 13.7	+2.2
PAL	**Palisades**	**124.43**	**42**	*e*PKPdf	PKPdf	20 21 13.1	+1.5
SISC	**Sisak**	**124.57**	**324**	*i* PKP	PKPdf	20 21 14.9	+3.2
BRY	**Bratogost**	**124.62**	**321**	⇑*i*PKP	PKPdf	20 21 13.2	+1.3
ULC	**Ulcinj**	**124.64**	**319**	⇑*i*PKP	PKPdf	20 21 14.2	+2.2
BUM	**Brajici-Budva**	**124.70**	**320**	⇑*i*PKP	PKPdf	20 21 14.3	+2.2
GRA1	**Grafenberg Arr**	**124.74**	**331**	*e*PKP	PKPdf	20 21 12.6	+0.7
GRA1				*e*PP	PP	20 23 06.3	+1.9
GRA1				*e*SKPdf		20 24 47.2	
GRA1				LR	LR		
	comp=Z,2µm,20.8s						
GRF	**Grafenberg Arr**	**124.74**	**331**	*e*PKP	PKPdf	20 21 12.6	+0.7
GRF				*e*PP	PP	20 23 06.3	+1.9
GRF				SKPdf		20 24 47.2	
GRF				LR	LR		
	comp=Z,2µm,20.8s						
HCY	**Herceg Novi**	**124.88**	**320**	⇑*i*PKP	PKPdf	20 21 13.6	+1.2
OBKA	**Obir**	**125.01**	**326**	⇓*i*P	PKPdf	20 21 14.6	+2.1
WTSB	**Winterswijk**	**125.14**	**335**	*e*PKP	PKPdf	20 21 14.5	+1.9
	comp=Z,74nm,0.6s						
BOJS	**Bojanci**	**125.20**	**325**	*e*PKPdf	PKPdf	20 21 15.4	+2.5
EBH	**Black Hill**	**125.21**	**344**	*e*P	PKPdf	20 21 14.9	+2.3
HRV	**Harvard--Oak R**	**125.23**	**40**	PFAKE		20 21 30.0	+17
HRV				LR	LR		
	comp=Z,2µm,20.0s						
LJU	**Ljubljana**	**125.30**	**326**	*i* PKPdf	PKPdf	20 21 15.3	+2.2
LJU				*e*pPKPdf		20 21 32.1	
LJU				*e*		20 23 11.1	
LJU				*e*		20 23 16.6	
KBA	**Koelnbreinsper**	**125.33**	**327**	⇑*i*P	PKPdf	20 21 15.0	+1.9
EAB	**Aberfoyle**	**125.48**	**345**	*e*P	PKPdf	20 21 15.4	+2.2
EAB				AMb	AMB	20 21 19.0	
	comp=Z,80nm,1.6s						
CEY	**Cerknica**	**125.54**	**325**	*e*PKPdf	PKPdf	20 21 15.4	+1.9
CEY				*e*SKSac		20 28 15.8	
CEY				*e*SKKSac		20 29 58.9	
EAU	**Auchinoon**	**125.54**	**344**	*e*P	PKPdf	20 21 15.2	+2.0
EAU				AMb	AMB	20 21 19.0	
	comp=Z,159nm,1.8s						
TLL	**Tololo Astrono**	**125.58**	**132**	*e*P	PKPdf	20 21 15.6	+1.6
VOY	**Vojsko**	**125.66**	**326**	*e*PKPdf	PKPdf	20 21 15.3	+1.5
PTCC	**Patocco-Chiusa**	**125.74**	**327**	*e*PKP	PKPdf	20 21 16.1	+2.2
SIND	**Sindeldorf**	**125.75**	**331**	*e*P	PKPdf	20 21 16.1	+2.2
FVI	**Forni Avoltri**	**125.93**	**327**	*e*PKP	PKPdf	20 21 15.8	+1.6
LCP	**Cassop**	**125.93**	**342**	*e*P	PKPdf	20 21 16.5	+2.5
LCP				AMb	AMB	20 21 19.6	
	comp=Z,197nm,1.6s						
ESK	**Eskdalemuir**	**125.94**	**344**	*e*PKPdf	PKPdf	20 21 15.2	+1.1
ESK				LR	LR		
	comp=Z,574nm,19.0s						
TOD	**Tromm**	**125.95**	**332**	PKP	PKPdf	20 21 15.5	+1.3
TOD	**Tromm**	**125.95**	**332**	*e*P	PKPdf	20 21 16.5	+2.3
HDH	**Heidenheim**	**125.98**	**330**	*e*P	PKPdf	20 21 16.5	+2.2
SWS	**Schriesheim**	**126.08**	**332**	*e*P	PKPdf	20 21 16.6	+2.1
WATA	**Walderalm**	**126.10**	**328**	⇑*i*P	PKPdf	20 21 15.5	+0.9
WTTA	**Wattenberg**	**126.12**	**328**	⇑*i*P	PKPdf	20 21 15.9	+1.3
ABH	**Alteburg**	**126.33**	**333**	PKP	PKPdf	20 21 16.6	+1.6
ABH	**Alteburg**	**126.33**	**333**	⇓*e*P	PKPdf	20 21 17.6	+2.6
MOTA	**Moosalm**	**126.34**	**329**	⇓*i*P	PKPdf	20 21 16.0	+0.9
STU	**Stuttgart**	**126.34**	**331**	*e*PKPdf	PKPdf	20 21 16.1	+1.1
SQTA	**Sankt Quirin**	**126.37**	**329**	⇑*i*P	PKPdf	20 21 16.3	+1.2
HGN	**Heimansgroeve**	**126.40**	**335**	*e*PKP	PKPdf	20 21 16.4	+1.3
	comp=Z,74nm,0.9s						
BUCH	**Bad Urach**	**126.49**	**331**	*e*P	PKPdf	20 21 17.7	+2.4
KTD	**Kalmit**	**126.49**	**332**	PKP	PKPdf	20 21 17.6	+2.3
KTD	**Kalmit**	**126.49**	**332**	*e*P	PKPdf	20 21 17.5	+2.2
TRQA	**Tornquist**	**126.51**	**146**	*e*PKPdf	PKPdf	20 21 17.0	+1.4
TRQA				LR	LR		
	comp=Z,2µm,22.0s						
LBG	**Lerchenberg**	**126.61**	**331**	*e*P	PKPdf	20 21 17.9	+2.4
UBR	**Uberruh**	**126.63**	**330**	*e*P	PKPdf	20 21 17.7	+2.1
HPK	**Haverah Park**	**126.64**	**342**	*e*P	PKPdf	20 21 17.1	+1.6
HPK				AMb	AMB	20 21 19.0	
	comp=Z,176nm,1.2s						
RUP	**Ruppelstein**	**126.68**	**333**	⇓*e*P	PKPdf	20 21 18.5	+2.9
LANF	**Langenberg**	**126.86**	**332**	PKP	PKPdf	20 21 18.4	+2.4
GUT	**Gutenstein**	**126.86**	**331**	*e*P	PKPdf	20 21 18.0	+2.0
CTI	**Castel Tesino**	**126.89**	**327**	*e*PKP	PKPdf	20 21 18.4	+2.3
SPAK	**Spaichingen**	**127.00**	**331**	PKP	PKPdf	20 21 18.0	+1.7
SPAK	**Spaichingen**	**127.00**	**331**	*e*P	PKPdf	20 21 18.4	+2.1
LHO	**Holmfirth**	**127.06**	**342**	*e*P	PKPdf	20 21 18.6	+2.3
LHO				AMb	AMB	20 21 19.8	
	comp=Z,56nm,1.3s						
WLF	**Walferdange**	**127.11**	**334**	*e*PKPdf	PKPdf	20 21 18.0	+1.5
KBI1	**Birley Grange**	**127.20**	**341**	*e*P	PKPdf	20 21 17.7	+1.1
BRMO	**Bormio**	**127.29**	**328**	*e*PKP	PKPdf	20 21 19.2	+2.2
GIVF	**Givet**	**127.37**	**335**	*e*PKIKP	PKPdf	20 21 18.5	+1.5
	comp=Z,177nm,0.8s						
WLS	**Welschbruch**	**127.47**	**332**	PKP	PKPdf	20 21 19.0	+1.8
CDF	**Champ du Feu**	**127.51**	**332**	*e*PKIKP	PKPdf	20 21 18.4	+1.1
	comp=Z,43nm,0.6s						
KWE	**Weaver Farm**	**127.51**	**341**	*e*P	PKPdf	20 21 19.2	+2.0
KIZ	**Kirchzarten**	**127.52**	**331**	*e*P	PKPdf	20 21 19.3	+2.0
FELD	**Feldberg**	**127.54**	**331**	PKP	PKPdf	20 21 19.3	+1.9
FELD	**Feldberg**	**127.54**	**331**	⇓*e*P	PKPdf	20 21 19.6	+2.2
LIBD	**Limburg**	**127.54**	**331**	PKP	PKPdf	20 21 19.4	+2.0
LIBD	**Limburg**	**127.54**	**331**	*e*P	PKPdf	20 21 19.9	+2.5
KTG1	**Tilbrook Grang**	**127.61**	**340**	*e*P	PKPdf	20 21 19.2	+1.9
NNA	**Nana**	**127.63**	**109**	*e*PKPdf	PKPdf	20 21 17.4	-1.0
TIP	**Timpagrande**	**127.66**	**317**	*e*PKPdf	PKPdf	20 21 19.3	+1.4
BAIF	**Baives**	**127.66**	**335**	*e*PKIKP	PKPdf	20 21 19.0	+1.5
	comp=Z,95nm,0.9s						
MRLC	**Muro Lucano**	**127.69**	**320**	*e*PKP	PKPdf	20 21 21.9	+4.0
FSSB	**Fossombrone**	**127.70**	**324**	*e*PKP	PKPdf	20 21 20.7	+2.9
ECH	**Echery**	**127.70**	**332**	PKP	PKPdf	20 21 20.2	+2.5
ARV	**Arcevia**	**127.72**	**324**	*e*PKP	PKPdf	20 21 20.8	+2.9
RSM	**Repubblica di**	**127.75**	**325**	*e*PKP	PKPdf	20 21 21.5	+3.6
SNTG	**Esanatoglia**	**127.86**	**324**	*e*PKP	PKPdf	20 21 21.4	+3.2
SGO	**Sicignano**	**127.91**	**320**	*e*PKP	PKPdf	20 21 20.3	+2.0
CII	**Carovilli**	**127.91**	**321**	*e*PKPdf	PKPdf	20 21 19.8	+1.5
MOF	**Molkenrain**	**127.97**	**331**	PKP	PKPdf	20 21 20.1	+1.9
NRCA	**Norcia**	**128.00**	**323**	*e*PKP	PKPdf	20 21 20.9	+2.4
SBD1	**Bryn Du**	**128.05**	**342**	*e*P	PKPdf	20 21 20.1	+1.9
GRI	**Girifalco**	**128.06**	**317**	*e*PKP	PKPdf	20 21 21.3	+2.6
BBS	**Basel-Blauen**	**128.06**	**331**	PKP	PKPdf	20 21 19.1	+0.7
BBS	**Basel-Blauen**	**128.06**	**331**	*e*P	PKPdf	20 21 20.5	+2.1
MENF	**Mencas**	**128.10**	**337**	PKP	PKPdf	20 21 20.7	+2.3
SFI	**Santa Sofia**	**128.11**	**325**	*e*PKP	PKPdf	20 21 21.9	+3.4
AQU	**L'Aquila**	**128.11**	**323**	*e*PKPdf	PKPdf	20 21 19.8	+1.2
HINF	**Hinteralfeld**	**128.13**	**332**	*e*PKIKP	PKPdf	20 21 19.7	+1.2
	comp=Z,184nm,1.0s						
PGD	**Poggio Sodo**	**128.20**	**325**	*e*PKP	PKPdf	20 21 22.3	+3.5
CRE	**Caprese Michel**	**128.22**	**325**	*e*PKP	PKPdf	20 21 21.6	+2.8
HAU	**Haudompre**	**128.23**	**332**	*e*PKIKP	PKPdf	20 21 20.0	+1.3
	comp=Z,177nm,0.9s						
HAU				*e*R			
	comp=Z,3µm,21.8s						
THEF	**They Montfort**	**128.24**	**333**	PKP	PKPdf	20 21 21.0	+2.3
VMG	**Vicchio**	**128.25**	**325**	*e*PKP	PKPdf	20 21 22.1	+3.2
OTAV	**Otavalo**	**128.26**	**93**	PFAKE		20 21 30.0	+10
OTAV				LR	LR		
	comp=Z,2µm,20.0s						
HLM1	**Long Mynd**	**128.26**	**342**	*e*P	PKPdf	20 21 21.1	+2.4
PTQR	**Pietraquaria**	**128.30**	**322**	*e*PKP	PKPdf	20 21 21.3	+2.2
ZCCA	**Zocca**	**128.32**	**326**	*e*PKP	PKPdf	20 21 22.5	+3.5
SSP1	**Stoney Pound**	**128.42**	**342**	*e*P	PKPdf	20 21 20.8	+1.9
MEZF	**Maizieres J'vi**	**128.46**	**333**	*e*PKIKP	PKPdf	20 21 21.1	+2.0
	comp=Z,142nm,0.7s						
LOMF	**Lomont**	**128.47**	**331**	PKP	PKPdf	20 21 21.4	+2.2

MNS	Montasola	128.53	323	ePKP	PKPdf	20 21 20.6	+1.1
VAI	Varese	128.53	329	ePKP	PKPdf	20 21 21.3	+2.0
GSCL	Gusciola	128.54	326	ePKP	PKPdf	20 21 22.9	+3.5
HAE	Alders End	128.57	341	eP	PKPdf	20 21 20.8	+1.6
HAE				AMb	AMB	20 21 24.5	
	comp=Z,56nm,1.7s						
ERBM	Eremo	128.59	326	ePKP	PKPdf	20 21 22.7	+3.2
DLF	Lyons Farm	128.64	345	eP	PKPdf	20 21 21.0	+1.7
SOI	Samo	128.68	317	ePKP	PKPdf	20 21 23.3	+3.4
VALM		128.73	326	P	PKPdf	20 21 22.2	+2.4
GRAM		128.74	327	P	PKPdf	20 21 22.2	+2.4
MCH1	Michaelchurch	128.75	341	eP	PKPdf	20 21 22.0	+2.4
SARO	Sassorosso	128.75	326	P	PKPdf	20 21 21.6	+1.8
HTR	Trewern Hill	128.76	342	eP	PKPdf	20 21 22.0	+2.4
VLC	Villacollemand	128.77	326	ePKPdf	PKPdf	20 21 20.7	+0.9
DCN	Croghan	128.79	345	eP	PKPdf	20 21 20.0	+0.4
MCGN	Macugnaga	128.87	329	ePKP	PKPdf	20 21 22.8	+2.8
BACM		128.87	326	P	PKPdf	20 21 23.0	+3.0
BOB	Bobbio (Coli)	128.90	327	ePKP	PKPdf	20 21 23.4	+3.3
VINC	Vinca	128.91	326	P	PKPdf	20 21 22.3	+2.1
MTTG	Motta San Giov	128.97	317	ePKP	PKPdf	20 21 23.7	+3.3
PII	Pisa	128.97	326	ePKP	PKPdf	20 21 21.6	+1.4
HGH	Gray Hill	128.99	341	eP	PKPdf	20 21 21.6	+1.6
HGH				AMb	AMB	20 21 24.5	
	comp=Z,145nm,1.2s						
GRFL	Gerfalco	129.07	325	ePKP	PKPdf	20 21 23.2	+2.7
ORX	Oropa	129.09	329	P	PKPdf	20 21 22.4	+1.9
ORO	Oropa	129.10	329	ePKP	PKPdf	20 21 22.4	+2.0
OG01	Vacheresse	129.26	330	PKP	PKPdf	20 21 20.4	-0.3
TRAV		129.29	329	P	PKPdf	20 21 22.6	+1.8
HSA	Swansea	129.33	342	eP	PKPdf	20 21 23.0	+2.3
HSA				AMb	AMB	20 21 24.1	
	comp=Z,106nm,1.3s						
CABF	La Chapelle	129.36	331	ePKIKP	PKPdf	20 21 22.9	+2.0
	comp=Z,250nm,1.0s						
GENL	Genova Univers	129.39	327	P	PKPdf	20 21 23.0	+2.0
PCP	Pian Castagno	129.53	328	P	PKPdf	20 21 22.7	+1.4
LSD	Ceresole Reale	129.64	329	P	PKPdf	20 21 23.8	+2.3
RSP	Reno Superiore	129.79	329	P	PKPdf	20 21 23.6	+1.8
HEX	Exmoor	129.81	341	eP	PKPdf	20 21 24.0	+2.4
HEX				AMb	AMB	20 21 25.1	
	comp=Z,61nm,1.2s						
LPL	La Plagne	129.81	330	ePKIKP	PKPdf	20 21 23.9	+2.1
	comp=Z,56nm,0.6s						
LPG	La Plagne	129.81	330	ePKIKP	PKPdf	20 21 24.0	+2.2
	comp=Z,58nm,0.6s						
FIN	Finale Ligure	129.93	327	P	PKPdf	20 21 24.2	+2.2
FENE	Fenestrelle	129.98	329	P	PKPdf	20 21 24.6	+2.5
BHB	Bricherasio	130.00	329	P	PKPdf	20 21 23.9	+1.7
ROB	Roburent	130.06	328	P	PKPdf	20 21 24.2	+1.9
OG05	Jujurieux	130.07	331	PKP	PKPdf	20 21 25.3	+3.0
BNI	Bardonecchia	130.16	329	PKIKP	PKPdf	20 21 23.8	+1.3
BNI	Bardonecchia	130.16	329	ePKPdf	PKPdf	20 21 23.2	+0.8
RRL	Cesana Torines	130.20	329	P	PKPdf	20 21 25.1	+2.5
SSF	Saint Saulge	130.23	333	ePKIKP	PKPdf	20 21 24.3	+1.8
	comp=Z,107nm,0.8s						
DOI	San Damiano	130.24	328	ePKP	PKPdf	20 21 24.7	+2.0
MONE	Monesi	130.26	328	P	PKPdf	20 21 24.8	+2.1
IMI	Imperia	130.30	327	P	PKPdf	20 21 25.1	+2.3
PZZ	Prazzo	130.32	328	P	PKPdf	20 21 24.7	+1.9
TSUM	Tsumeb	130.32	240	PKP	PKPdf	20 21 18.8	-4.7
TSUM				LR	LR		
	comp=Z,3μm,21.0s						
MBDF	Montbardon	130.34	329	ePKIKP	PKPdf	20 21 24.4	+1.6
	comp=Z,57nm,0.7s						
ENR	Entracque	130.34	328	P	PKPdf	20 21 24.2	+1.4
STV2	Anna di Valdie	130.38	328	P	PKPdf	20 21 24.6	+1.7
STV	Sta Anna Valdi	130.38	328	P	PKPdf	20 21 24.0	+1.1
SMF	Signal de Mont	130.39	333	ePKIKP	PKPdf	20 21 24.4	+1.5
	comp=Z,98nm,0.8s						
SAOF	Saorge	130.43	328	PKP	PKPdf	20 21 25.3	+2.3
NEGI	Negi	130.44	327	P	PKPdf	20 21 25.0	+1.9
HYF	Humbligny	130.46	334	ePKIKP	PKPdf	20 21 25.2	+2.2
AUTN	L'Aution	130.49	328	PKP	PKPdf	20 21 26.1	+3.0
AVF	Avril sur Loir	130.50	333	ePKIKP	PKPdf	20 21 24.4	+1.3
	comp=Z,51nm,0.8s						
LDF	La Druitiere	130.56	337	ePKIKP	PKPdf	20 21 24.5	+1.4
	comp=Z,45nm,0.8s						
FLN	La Foliniere	130.57	337	ePKIKP	PKPdf	20 21 24.6	+1.5
	comp=Z,119nm,0.7s						
FLN				eR			
	comp=Z,3μm,21.5s						
TOUF	Mont Tournerai	130.57	328	PKP	PKPdf	20 21 26.5	+3.2
SBF	Sospel	130.58	328	ePKIKP	PKPdf	20 21 24.7	+1.4
	comp=Z,207nm,0.9s						
PGF	Pioggiola	130.58	325	ePKIKP	PKPdf	20 21 25.0	+1.7
	comp=Z,243nm,0.8s						
ORIF	Oris-en-Rattie	130.66	330	ePKIKP	PKPdf	20 21 25.2	+1.8
	comp=Z,134nm,0.7s						
ORIF				eR			
	comp=Z,3μm,21.8s						
JLP	Les Platons	130.78	339	eP	PKPdf	20 21 24.8	+1.2
LVC	Limon Verde	130.80	125	ePKPdf	PKPdf	20 21 25.8	+1.5
LVC				LR	LR		
	comp=Z,3μm,22.0s						
JVM	Valle D.L. Mar	130.84	339	eP	PKPdf	20 21 25.6	+2.0
JSA	Saint Aubin	130.85	339	eP	PKPdf	20 21 25.8	+2.1
BGF	Bois d'Agland	130.91	333	ePKIKP	PKPdf	20 21 25.7	+1.9
	comp=Z,128nm,0.7s						
OG25	Le Caire	130.94	329	PKP	PKPdf	20 21 27.4	+3.4
PLDF	La Plantade	131.00	332	PKP	PKPdf	20 21 26.1	+2.1
GRR	Gorron	131.02	337	ePKIKP	PKPdf	20 21 25.7	+1.7
	comp=Z,105nm,0.7s						
OSPF	L'Ospedale	131.03	324	PKP	PKPdf	20 21 26.9	+2.7
ARE	Arequipa	131.16	116	P	PKPdf	20 21 30.0	+4.9
AGO	Saint Agoulin	131.16	332	PKP	PKPdf	20 21 26.0	+1.7
FRF	La Foret Royal	131.20	328	ePKIKP	PKPdf	20 21 26.1	+1.6
	comp=Z,177nm,0.8s						
VIVF	Saint-Julien-l	131.31	330	ePKIKP	PKPdf	20 21 25.9	+1.3
	comp=Z,65nm,0.8s						
TCF	Toulx Ste Croi	131.40	333	ePKIKP	PKPdf	20 21 26.7	+1.9
	comp=Z,147nm,0.7s						
LMR	La Mourre	131.43	328	ePKIKP	PKPdf	20 21 26.6	+1.7
	comp=Z,176nm,0.9s						
PYM	Petit Puy Mans	131.44	332	PKP	PKPdf	20 21 27.1	+2.2
TAVF	Tavernes	131.47	328	PKP	PKPdf	20 21 27.8	+2.8
SMRF	Simiane la Rot	131.48	329	ePKIKP	PKPdf	20 21 27.3	+2.3
	comp=Z,168nm,0.8s						
VILF	Villemus	131.49	329	PKP	PKPdf	20 21 28.0	+3.0
VERF	Verneugheol	131.69	333	PKP	PKPdf	20 21 29.4	+4.1
LBL	Lubilhac	131.72	332	PKP	PKPdf	20 21 27.6	+2.2
PUYF	Puyloubier	131.72	328	PKP	PKPdf	20 21 29.0	+3.5
SGMF	Saint Gilles	131.77	338	ePKIKP	PKPdf	20 21 26.9	+1.5
	comp=Z,74nm,0.7s						
PRAF	Pradon	131.81	329	PKP	PKPdf	20 21 28.9	+3.3
TREF	Trevaresse	131.82	329	PKP	PKPdf	20 21 29.4	+3.7
BERF	Bertagne	131.88	328	PKP	PKPdf	20 21 28.7	+2.9
FRNF	Fournols	131.92	332	PKP	PKPdf	20 21 29.7	+3.9
ROSF	Rostrenen	131.96	339	ePKIKP	PKPdf	20 21 27.2	+1.4
	comp=Z,42nm,0.7s						
MFF	Saint Martin d	132.17	335	ePKIKP	PKPdf	20 21 28.0	+1.8
	comp=Z,85nm,0.8s						
VSL	Villasalto	132.25	322	ePKP	PKPdf	20 21 26.0	-0.6
LASF	Ste Croix	132.27	330	ePKIKP	PKPdf	20 21 27.0	+0.5
	comp=Z,194nm,0.8s						
QUIF	Quistinic	132.27	339	ePKIKP	PKPdf	20 21 27.8	+1.4
	comp=Z,24nm,0.5s						
LCHF	La Chataignera	132.37	336	PKP	PKPdf	20 21 28.6	+2.0
RJF	Les Rejaudoux	132.47	333	ePKIKP	PKPdf	20 21 28.8	+2.0
	comp=Z,38nm,0.8s						
RJF				eR			
	comp=Z,2μm,21.2s						
CAF	Calviac	132.50	332	ePKIKP	PKPdf	20 21 29.1	+2.2
	comp=Z,31nm,0.7s						
LFF	La Frestale	133.10	333	ePKIKP	PKPdf	20 21 30.2	+2.2
	comp=Z,70nm,0.8s						
OLEF	Ile d'Oleron	133.20	336	PKP	PKPdf	20 21 31.2	+3.0
MTLF	Montolieu	133.62	331	ePKIKP	PKPdf	20 21 30.2	+1.1
	comp=Z,80nm,0.8s						
VALF	Valcebollere	134.41	330	PKP	PKPdf	20 21 33.8	+3.2
EPF	Esparros	134.75	332	ePKIKP	PKPdf	20 21 31.7	+0.5
	comp=Z,82nm,1.1s						
LABF	Labassere	134.86	332	PKP	PKPdf	20 21 35.5	+4.1
RESF	Ens	134.92	332	PKP	PKPdf	20 21 33.6	+2.1
VIEF	Viey	135.01	332	PKP	PKPdf	20 21 34.6	+2.9
EMIR	Miracle	135.02	330	PKP	PKPdf	20 21 35.0	+3.3
REYF	Montagne du Re	135.06	332	PKP	PKPdf	20 21 36.2	+4.5
BBSR	BB Station	135.08	47	PFAKE		20 21 50.0	+18
BBSR				LR	LR		
	comp=Z,4μm,22.0s						
EBIE	Bielsa	135.11	332	PKP	PKPdf	20 21 34.9	+3.1
CMAH	Djebel Manchou	135.22	320	P		20 25 00.0	
ETSF	Etsaut	135.27	332	ePKIKP	PKPdf	20 21 35.4	+3.3
	comp=Z,96nm,0.6s						
LARF	Larrau	135.36	333	PKP	PKPdf	20 21 35.9	+3.6
ABSA	Djebel Ababsia	135.40	320	P		20 25 02.0	
SJPF	Ste Jean	135.41	333	ePKIKP	PKPdf	20 21 34.3	+1.9
	comp=Z,47nm,0.6s						
EALK	Alkurruntz	135.45	334	PKP	PKPdf	20 21 35.6	+3.1
CAEH	'Ain El Ouahch	135.49	321	P		20 25 02.5	
EPOB	Poblet	135.66	330	PKP	PKPdf	20 21 35.8	+3.0
CKFL	Kef-Lekhel	135.81	320	P		20 25 04.0	
CASM	Ain Smara	136.04	320	P		20 25 04.0	
ESAC	San Caprasio	136.14	331	PKP	PKPdf	20 21 36.7	+3.0
CTEI	Djebel Teioual	136.21	320	P		20 25 05.0	
DFRA	Djebel Bou Aff	136.25	321	P		20 25 05.0	
ELAN	Lanestosa	136.27	335	PKP	PKPdf	20 21 36.3	+2.4
SDV	Santo Domingo	136.31	82	ePKPdf	PKPdf	20 21 36.1	+1.4
SDV				LR	LR		
	comp=Z,2μm,21.0s						
ERTA	Horta de San J	136.33	330	PKP	PKPdf	20 21 36.8	+2.7
EBR	Ebro Roquetas	136.35	330	ePKPDF	PKPdf	20 21 37.5	+3.4
EBR				i Ts		20 25 12.0	
TRIS	Tristan da Cun	136.43	197	ePKP	PKPdf	20 21 34.8	+0.4
SET	Setif	136.76	321	P		20 25 05.0	
CMER	Merouana	136.81	320	P		20 25 07.5	
CKHR	Kef el Ahmar	136.81	321	P		20 25 07.0	
EARI	Arriondas	136.93	337	PKP	PKPdf	20 21 38.3	+3.2
EMOS	Mosqueruela	137.18	330	PKP	PKPdf	20 21 35.4	-0.3
EIBI	Ibiza	137.23	327	PKP	PKPdf	20 21 38.8	+3.0
ABA	Alger-Bouzarea	137.82	323	P		20 25 10.0	
EMHD	Djebel Mahouad	138.27	323	P		20 25 11.0	
EBEN	Beniarda	138.30	328	PKP	PKPdf	20 21 38.8	+1.0
EINC	Incio	138.30	338	PKP	PKPdf	20 21 35.3	-2.3
ERUA	La Rua	138.45	338	PKP	PKPdf	20 21 36.8	-1.2
STS	Santiago	138.53	340	PKP	PKPdf	20 21 36.0	-2.1
PBRG	Braganca	138.80	337	ePKPdf	PKPdf	20 21 37.4	-1.2
PBRG				i -		20 25 12.1	
EBNR	Beni Rached	139.05	324	P		20 25 09.0	
ECHA	Ech Chlef	139.24	324	P		20 25 10.0	
ELOB	Lobios	139.25	338	PKP	PKPdf	20 21 40.7	+1.3
SJG	San Juan	139.28	67	PKIKP	PKPdf	20 21 50.0	+10
SJG				MLR	MLR		
	comp=Z,2μm,21.0s						
SJG	San Juan	139.28	67	PFAKE		20 21 50.0	+10
SJG				LR	LR		
	comp=Z,2μm,21.0s						
ESLA	Sonseca Array	139.39	333	PKP	PKPdf	20 21 33.4	-6.3
ESLA				LR	LR		
	comp=Z,10μm,22.0s						
EMUR	La Murta	139.47	328	PKP	PKPdf	20 21 37.9	-2.0
EVIA	Vianos	139.51	330	PKP	PKPdf	20 21 42.0	+2.0
EANR	'Ain N'Sour	139.54	324	P		20 25 10.0	
PVRL	Vila Real	139.63	338	ePKPdf	PKPdf	20 21 40.5	+0.4
PVRL				i -		20 25 15.0	
ETRT	Tiaret	139.81	323	P		20 25 08.0	
PVIS	Viseu	140.18	337	ePKPdf	PKPdf	20 21 38.6	-2.5
PVIS				i -		20 25 16.3	
MTE	Manteigas	140.32	337	ePKPdf	PKPdf	20 21 37.2	-4.2
MTE				i -		20 25 16.7	
	comp=Z,1μm,19.4s						
MTE	Manteigas	140.32	337	ePKP	PKPdf	20 21 36.4	-5.0
PCBR	Castelo Branco	140.77	336	ePKPdf	PKPdf	20 21 37.9	-4.4
PCBR				e-		20 21 47.6	
PCBR				i -		20 25 18.1	
SAML	Samuel	141.35	110	ePKP	PKPdf	20 21 37.6	-6.4
SAML				LR	LR		
	comp=Z,2μm,20.0s						
EVO	Evora	142.10	336	ePKIKP	PKPdf	20 21 42.2	-2.4
	comp=Z,44nm,0.9s						
EVO				eR			
	comp=Z,1μm,20.5s						
EMIN	Mina Concepcio	142.17	334	PKP	PKPdf	20 21 41.2	-3.6
MOE	Montemor	142.25	336	ePKPdf	PKPdf	20 21 44.4	-0.4
PBEJ	Beja	142.47	335	ePKPdf	PKPdf	20 21 43.1	-2.1
PBEJ				e-		20 21 52.0	
PBEJ				i -		20 25 22.6	
ESPR	Espera	142.53	332	PKP	PKPdf	20 21 43.3	-2.1
PTEO	Sao Teotonio	143.23	336	ePKPdf	PKPdf	20 21 45.3	-1.2
PTEO				i -		20 25 24.7	
GRW	Mount Saint Ca	144.75	75	eP	PKPdf	20 21 55.7	+5.9
GRW	Mount Saint Ca	144.75	75	e	PKPdf	20 21 55.7	+5.9
TPP	Pointe-a-Pierr	145.22	79	eP	PKPdf	20 21 53.2	+2.5
TRN	Trinidad (W)	145.22	78	eP	PKPdf	20 21 51.4	+0.8
TBH	Brigand Hill	145.57	78	e	PKPdf	20 21 58.6	+7.3
STGR	Santa Cruz	145.62	2	ePKP	PKPdf	20 21 54.9	+4.2
TPR	Prospect	145.76	77	e	PKPdf	20 22 04.1	+12
PBIS	Biscoitos	145.96	1	ePKP	PKPdf	20 21 55.7	+4.5
PVNV	Vila Nova	145.96	0	ePKP	PKPdf	20 21 56.5	+5.3
ROSA	Rosais	145.98	2	ePKP	PKPdf	20 21 55.3	+4.0
ASBA	Santa Barbara	146.00	1	ePKP	PKPdf	20 21 55.8	+4.5
PFAV	Pico das Favas	146.01	0	ePKP	PKPdf	20 21 56.3	+5.0
PPAD	Pico dos Padre	146.02	1	ePKP	PKPdf	20 21 56.0	+4.7
RIB2	Ribeirinha	146.05	0	ePKP	PKPdf	20 21 55.3	+3.9
ADH	Angra Heroismo	146.06	1	i PKP	PKPdf	20 21 56.4	+5.0
CALA	Caldeira	146.10	3	ePKP	PKPdf	20 21 56.8	+5.3
PICO	Pico	146.19	2	ePKP	PKPdf	20 21 56.1	+4.5
CAM4	Nova Friburgo	149.13	151	eP	PKPdf	20 21 58.9	+2.0
CAM4				i		20 22 04.3	
CAM4				i		20 22 28.2	
CAM4				i		20 22 43.4	
CAM4				i		20 22 53.9	
BAO	Brasilia Array	150.99	134	P	PKPdf	20 22 02.8	+2.9
BAO				i		20 22 07.8	
BAO				i		20 22 15.1	

ORF ***07*** *20:05:15.1, 33.82N×9.47E, h30^{km}, mb4.4, ML4.9*
BJI ***07*** *20:05:37.4, 36.10N×10.90E, h11^{km}, mB5.2, mb5.1, Ms5.3, Msz5.0*
ZUR_RM ***07*** *20:05:37, 36.10N×10.91E, h9^{km}, Mw4.9/31, Moment Tensor Solution. s31 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.24; M$_{\theta\theta}$-0.62; M$_{\phi\phi}$-0.61; M$_{r\theta}$-1.12; M$_{\theta\phi}$-1.87; M$_{\phi r}$-1.74; Best double couple: M$_0$2.83×10^{16} NP1:ϕ_s207°, δ71°, λ70°. NP2:ϕ_s76°, δ27°, λ135°. Principal axes: T 2.28, Plg59°, Azm90°; N 1.1, Plg19°, Azm214°; P -3.38, Plg24°, Azm313°;*
NEIC ***07*** *20:05:37.5±0.3, 36.10N×10.91E, h10^{km}, mb4.7/20 Error ellipse: s-maj=4.7km s-min=3.0km az=206.0*
NEIC Felt in many parts of Tunisia.
MOS ***07*** *20:05:39.1±1.1, 36.18N×10.85E, h33^{km}, mb4.8/18, MS4.2/14, Error ellipse: s-maj=5.9km s-min=2.4km az=96.5*
LDG ***07*** *20:05:40.9±0.4, 36.19N×11.21E, h30^{km}, Ml4.2/16, ms3.9/5, Error ellipse: s-maj=10.1km s-min=4.9km az=21.0*
CSEM ***07*** *20:05:41.6±0.1, 36.42N×10.89E, h40^{km}, mb4.8/6, ML3.7/11, Error ellipse: s-maj=2.9km s-min=1.4km az=179.0*
CRAAG ***07*** *20:05:42.0, 36.26N×11.15E, Mb4.7*
ISC 07 20:05:37.2±0.3, **36.23N**±0.02×**10.91E**±0.02, **h10^{km}, (h14^{km}**±2.1^{km}**:pP-P), n358,** σ**1^{s}33**/420, **mb4.7**/28, **MS4.4**/5, **15C-7D, Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTS	Pantelleria	1.05	56	ePn	Pn	20 05 56.2	-1.7
FAVR	Favara	2.44	64	ePn	Pn	20 06 18.6	+0.8
FAVR	Favara	2.44	64	ePn	Pn	20 06 18.6	+0.8
ABSA	Djebel Ababsia	2.78	272	P	Pn	20 06 26.1	+3.5
CMAH	Djebel Manchou	2.84	279	P	Pn	20 06 23.3	-0.3
WDD	Wield Dalam	2.95	96	ePn	Pn	20 06 23.7	-1.3
WDD	Wield Dalam	2.95	96	ePn	Pn	20 06 23.7	-1.3
CSLB	Castelbuono	3.04	55	ePn	Pn	20 06 26.4	0.0
GIB	Gibilmanna	3.05	54	eP	Pn	20 06 26.6	+0.2
CAEH	'Ain El Ouahch	3.32	281	P	Pn	20 06 29.7	-0.6
PZI	Palazzolo	3.35	75	eP	Pn	20 06 30.2	-0.5
CKFL	Kef-Lekhel	3.39	274	P	Pn	20 06 31.5	+0.2
MNO	Monte Soro	3.47	60	eP	Pn	20 06 33.6	+1.1
VSL	Villasalto	3.48	340	eP	Pn	20 06 31.7	-0.9
CTEI	Djebel Teioual	3.65	269	P	Pn	20 06 36.3	+1.3
SLNA	Salina	3.90	52	ePn	Pn	20 06 37.1	-1.4
SLNA	Salina	3.90	52	ePn	Pn	20 06 37.1	-1.4
DFRA	Djebel Bou Aff	4.08	276	P	Pn	20 06 41.0	0.0
MTTG	Motta San Giov	4.21	64	ePn	Pn	20 06 42.6	-0.4
MTTG	Motta San Giov	4.21	64	ePn	Pn	20 06 42.6	-0.4
SCLL	Scilla	4.33	61	ePn	Pn	20 06 44.6	-0.1
SCLL	Scilla	4.33	61	ePn	Pn	20 06 44.6	-0.1
CKHR	Kef el Ahmar	4.38	269	P	Pn	20 06 45.0	-0.3
SET	Setif	4.46	271	P	Pn	20 06 47.5	+1.0
SOI	Samo	4.50	64	eP	Pn	20 06 46.6	-0.5
MGR	Morigerati	5.35	42	ePn	Pn	20 06 57.7	-1.3
TIP	Timpagrande	5.49	56	eP	Pn	20 06 59.7	-1.4
SGO	Sicignano	5.53	37	eP	Pn	20 07 00.7	-1.0
OSPF	L'Ospedale	5.59	347	eP	Pn	20 07 02.1	-0.4
RFI	Roccamonfina	5.60	24	ePn	Pn	20 07 02.8	+0.1
MRLC	Muro Lucano	5.77	37	ePn	Pn	20 07 04.8	-0.2
ORI	Oriolo Calabro	5.80	47	eP	Pn	20 07 05.8	+0.3
SDI	San Donato	5.92	22	eP	Pn	20 07 06.8	-0.3
CII	Carovilli	6.09	25	eP	Pn	20 07 08.0	-1.5
PTQR	Pietraquaria	6.10	18	ePn	Pn	20 07 10.5	+0.8
MNS	Montasola	6.30	12	eP	Pn	20 07 12.3	-0.2
ABA	Alger-Bouzarea	6.37	277	P	Pn	20 07 13.0	-0.5
AQU	L'Aquila	6.41	17	eP	Pn	20 07 14.3	+0.2
EMHD	Djebel Mahouad	6.43	272	P	Pn	20 07 15.0	+0.6
PGF	Pioggiola	6.48	347	ePn	Pn	20 07 14.6	-0.5
PGF				eSn	Sn	20 08 25.4	-4.5
	119nm,0.6s						
NRCA	Norcia	6.81	14	ePn	Pn	20 07 20.6	+0.9
GRFL	Gerfalco	6.91	0	ePn	Pn	20 07 22.6	+1.6
SNTG	Esanatoglia	7.19	12	ePn	Pn	20 07 26.4	+1.3
CRE	Caprese Michel	7.42	6	eP	Pn	20 07 30.4	+2.1
ARV	Arcevia	7.43	11	ePn	Pn	20 07 30.5	+2.2
PII	Pisa	7.49	358	eP	Pn	20 07 30.2	+1.0
EBNR	Beni Rached	7.58	273	P	Pn	20 07 32.0	+1.5
FSSB	Fossombrone	7.59	10	ePn	Pn	20 07 33.1	+2.5
ECHA	Ech Chlef	7.72	272	P	Pn	20 07 40.0	+7.6
ETRT	Tiaret	7.85	267	P	Pn	20 07 36.0	+1.7
LMR	La Mourre	7.86	336	ePn	Pn	20 07 31.7	-2.7
LMR				eSn	Sn	20 08 56.9	-7.5
	14nm,0.4s						
VINC	Vinca	7.92	356	P	Pn	20 07 35.5	+0.2
VLC	Villacollemand	7.93	357	eP	Pn	20 07 34.5	-0.9
EANR	'Ain N'Sour	7.95	271	P	Pn	20 07 35.0	-0.6
SARO	Sassorosso	7.96	357	P	Pn	20 07 36.2	+0.4
REVF	Revere	7.98	341	eP	Pn	20 07 38.1	+2.0
NEGI	Negi	8.00	343	P	Pn	20 07 34.6	-1.7
NEGI	Negi	8.00	343	P	Pn	20 07 34.6	-1.7
IMI	Imperia	8.01	344	P	Pn	20 07 35.5	-1.0
IMI	Imperia	8.01	344	P	Pn	20 07 35.5	-1.0
FRF	La Foret Royal	8.02	337	ePn	Pn	20 07 34.6	-2.1
FRF				eSn	Sn	20 09 00.8	-7.6
	28nm,0.6s						
BACM		8.07	356	P	P	20 07 38.2	+0.9
BACM		8.07	356	P	P	20 07 38.2	+0.9
SBF	Sospel	8.08	342	ePn	P	20 07 35.4	-2.0
SBF				eSn	Sn	20 09 03.5	-6.3
	61nm,0.6s						
EIBI	Ibiza	8.09	293	⇑Pn	P	20 07 37.7	+0.1
EIBI				Sn	Sn	20 09 02.8	-7.2
EIBI	Ibiza	8.09	293	Pn	P	20 07 37.7	+0.1
	16nm,0.2s,SNR=18						
EIBI				Sn	Sn	20 09 02.8	-7.3
	8.6nm,0.3s,SNR=7.9						
VALM		8.13	357	P	P	20 07 38.4	+0.3
VALM		8.13	357	P	P	20 07 38.4	+0.3
SAOF	Saorge	8.16	343	eP	P	20 07 37.8	-0.8
MVIF	Mont Vial	8.18	341	eP	P	20 07 38.7	-0.2
AUTN	L'Aution	8.20	342	eP	P	20 07 38.6	-0.6
MONE	Monesi	8.21	344	P	P	20 07 37.9	-1.4
MONE	Monesi	8.21	344	P	P	20 07 37.8	-1.4
FIN	Finale Ligure	8.23	346	P	P	20 07 38.6	-1.0
TOUF	Mont Tournerai	8.27	341	eP	P	20 07 40.1	+0.1
TAVF	Tavernes	8.27	335	eP	P	20 07 38.6	-1.5
GRAM		8.28	356	P	P	20 07 40.4	+0.1
GRAM		8.28	356	P	P	20 07 40.4	+0.2
PUYF	Puyloubier	8.32	333	eP	P	20 07 39.2	-1.6
ROB	Roburent	8.38	345	P	P	20 07 40.7	-1.0
ENR	Entracque	8.42	343	P	P	20 07 41.2	-1.0
STV	Sta Anna Valdi	8.46	342	P	P	20 07 42.2	-0.6
STV2	Anna di Valdie	8.46	342	P	P	20 07 41.9	-0.9
STV2	Anna di Valdie	8.46	342	P	P	20 07 41.9	-0.9
PCP	Pian Castagno	8.50	348	P	P	20 07 43.5	+0.2
TREF	Trevaresse	8.52	332	eP	P	20 07 44.8	+1.2
VILF	Villemus	8.59	334	eP	P	20 07 44.0	-0.6
SMRF	Simiane la Rot	8.75	334	ePn	P	20 07 45.4	-1.4
SMRF				eSn	Sn	20 09 21.7	-4.8
	29nm,0.5s						
PZZ	Prazzo	8.76	342	P	P	20 07 46.3	-0.6
EJON	La Jonquera	8.78	317	Pn	P	20 07 42.8	-4.5
EJON				Sn	Sn	20 09 14.6	-13
EJON	La Jonquera	8.78	317	Pn	P	20 07 42.8	-4.5
	0.5nm,0.4s,SNR=7.9						
EJON				Sn	Sn	20 09 14.6	-13
	1.4nm,0.3s,SNR=7.9						
SURF	Saint Ours	8.81	340	eP	P	20 07 47.4	-0.3
OG25	Le Caire	8.93	337	eP	P	20 07 48.4	-0.9
BHB	Bricherasio	9.04	343	P	P	20 07 48.9	-1.9
MBDF	Montbardon	9.05	341	ePn	P	20 07 51.4	+0.4
MBDF				eSn	Sn	20 09 23.7	-10
	23nm,0.6s						
OG22	Abries	9.10	342	eP	P	20 07 51.4	-0.2
EBEN	Beniarda	9.19	289	Pn	P	20 07 53.2	+0.3
EBEN				Sn	Sn	20 09 30.6	-6.8
EBEN	Beniarda	9.19	289	Pn	P	20 07 53.2	+0.3
	3.3nm,0.2s,SNR=19						
EBEN				Sn	Sn	20 09 30.6	-6.9
	4.1nm,0.3s,SNR=7.9						
EPOB	Poblet	9.22	307	Pn	P	20 07 52.0	-1.3
EPOB				Sn	Sn	20 09 27.9	-10
EPOB	Poblet	9.22	307	Pn	P	20 07 52.0	-1.3
	3.0nm,0.3s,SNR=9.0						
EPOB				Sn	Sn	20 09 27.9	-10
	0.4nm,0.5s,SNR=7.9						
RRL	Cesana Torines	9.23	341	P	P	20 07 52.6	-0.8
EMIR	Miracle	9.24	311	Pn	P	20 07 51.7	-1.9
EMIR				Sn	Sn	20 09 28.0	-11
EMIR	Miracle	9.24	311	Pn	P	20 07 51.7	-1.9
	5.0nm,0.2s,SNR=13						
EMIR				Sn	Sn	20 09 28.0	-11
	4.5nm,0.2s,SNR=7.9						
FENE	Fenestrelle	9.27	343	P	P	20 07 53.2	-0.7
RSP	Reno Superiore	9.33	344	P	P	20 07 53.5	-1.4
EBR	Ebro Roquetas	9.36	302	ePN	P	20 07 56.7	+1.5
EBR				eSN	Sn	20 09 37.0	-4.6
BNI	Bardonecchia	9.38	341	eP	P	20 07 55.7	+0.2
ORIF	Oris-en-Rattie	9.48	338	ePn	P	20 07 56.2	-0.7
ORIF				eSn	Sn	20 09 37.7	-7.0
	40nm,0.9s						
ORIF				eR			
	4μm,23.7s						
LASF	Ste Croix	9.52	328	ePn	P	20 07 53.5	-3.8
LASF				eSn	Sn	20 09 37.9	-7.5
	21nm,0.7s						
ERTA	Horta de San J	9.53	303	Pn	P	20 07 57.8	+0.2
ERTA				Sn	Sn	20 09 36.0	-10
ERTA	Horta de San J	9.53	303	Pn	P	20 07 57.8	+0.3
	1.3nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	20 09 36.0	-10
	1.7nm,0.3s,SNR=7.9						
TRAV		9.58	347	P	P	20 07 59.2	+1.1
TRAV		9.58	347	P	P	20 07 59.2	+1.0
LSD	Ceresole Reale	9.65	344	P	P	20 07 58.3	-0.8
ORX	Oropa	9.65	348	P	P	20 07 59.8	+0.6
MTLF	Montolieu	9.75	319	ePn	P	20 07 56.9	-3.7
MTLF				eSn	Sn	20 09 43.2	-8.1
	36nm,0.7s						
LPG	La Plagne	9.78	343	ePn	P	20 08 02.9	+1.9
LPL	La Plagne	9.80	342	ePn	P	20 08 02.6	+1.3
GRN	Grenoble	9.82	338	eP	P	20 08 03.9	+2.4
VIVF	Saint-Julien-l	9.84	333	ePn	P	20 07 59.7	-2.0
VIVF				eSn	Sn	20 09 46.2	-7.1
	8.2nm,0.6s						
EMUR	La Murta	9.85	283	Pn	P	20 08 03.4	+1.4
EMUR				Sn	Sn	20 09 47.6	-6.1
EMUR	La Murta	9.85	283	Pn	P	20 08 03.3	+1.3
	4.5nm,0.3s,SNR=9.1						
EMUR				Sn	Sn	20 09 47.6	-6.1
	2.2nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	9.85	298	Pn	P	20 08 01.5	-0.5
EMOS				Sn	Sn	20 09 45.7	-8.1
EMOS	Mosqueruela	9.85	298	Pn	P	20 08 01.5	-0.5
	5.1nm,0.4s,SNR=24						
EMOS				Sn	Sn	20 09 45.7	-8.1
	0.9nm,0.3s,SNR=7.9						
SKO	Skopje	9.99	52	ePn	P	20 08 03.3	-0.5
RSL	Roselend	9.99	342	eP	P	20 08 05.2	+1.4
VISS	Visnje	10.01	16	i Pn	P	20 08 07.4	+3.2
LEGS	Legarje	10.26	18	ePn	P	20 08 06.5	-1.0
ESAC	San Caprasio	10.42	305	Pn	P	20 08 09.2	-0.6
	24nm,0.3s						
ESAC				Sn	S	20 09 58.0	-10
ESAC	San Caprasio	10.42	305	Pn	P	20 08 09.2	-0.5
	24nm,0.3s,SNR=12						
ESAC				Sn	S	20 09 58.0	-10

	17nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**10.53**	**311**	Pn	**P**	**20 08 10.8**	**-0.4**
	1.4nm,0.2s						
EBIE				Sn	**S**	**20 09 58.4**	**-12**
EBIE	**Bielsa**	**10.53**	**311**	Pn	**P**	**20 08 10.8**	**-0.4**
	1.4nm,0.2s,SNR=20						
EBIE				Sn	**S**	**20 09 58.4**	**-12**
	0.2nm,0.5s,SNR=7.9						
ENIJ	**Nijar**	**10.57**	**278**	P	**P**	**20 08 12.0**	**+0.1**
ENIJ						20 10 06.3	
ENIJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ENIJ	**Nijar**	**10.57**	**278**	Pn	**P**	**20 08 12.0**	**+0.1**
	comp=Z,2.3nm,0.3s						
ENIJ				Sn	**S**	**20 10 06.3**	**-5.2**
ENIJ	**Nijar**	**10.57**	**278**	Pn	**P**	**20 08 12.0**	**+0.1**
	comp=Z,2.3nm,0.3s,SNR=7.9						
ENIJ				Sn	**S**	**20 10 06.3**	**-5.2**
	comp=Z,0.6nm,0.6s,SNR=7.9						
EPF	**Esparros**	**10.61**	**313**	*e*Pn	**P**	**20 08 10.6**	**-1.7**
EPF				*e*Sn	**S**	**20 10 03.9**	**-8.3**
	comp=Z,18nm,0.8s						
OG05	**Jujurieux**	**10.63**	**339**	*e*P	**P**	**20 08 11.8**	**-0.8**
EVIA	**Vianos**	**10.94**	**287**	P	**P**	**20 08 18.4**	**+1.6**
EVIA						20 10 12.3	
EVIA				pmax	pmax		
	comp=Z,2.0nm,0.2s						
EVIA	**Vianos**	**10.94**	**287**	Pn	**P**	**20 08 18.4**	**+1.6**
	comp=Z,1.5nm,0.2s						
EVIA				Sn	**S**	**20 10 12.3**	**-8.0**
EVIA	**Vianos**	**10.94**	**287**	Pn	**P**	**20 08 18.4**	**+1.6**
	comp=Z,1.5nm,0.2s,SNR=7.9						
EVIA				Sn	**S**	**20 10 12.3**	**-8.0**
	comp=Z,2.4nm,0.3s,SNR=7.9						
CAF	**Calviac**	**10.98**	**325**	*e*Pn	**P**	**20 08 13.7**	**-3.7**
CAF				*e*Sn	**S**	**20 10 14.0**	**-7.4**
	comp=Z,4.1nm,0.4s						
CABF	**La Chapelle**	**10.98**	**342**	*e*Pn	**P**	**20 08 16.8**	**-0.7**
SQTA	**Sankt Quirin**	**10.99**	**1**⇓	*i*P	**P**	**20 08 18.9**	**+1.4**
	comp=Z,16nm,0.8s						
SQTA	**Sankt Quirin**	**10.99**	**1**⇓	*i*P	**P**	**20 08 18.9**	**+1.4**
SQTA				pmax	pmax		
	comp=Z,16nm,0.8s						
KBA	**Koelnbreinsper**	**10.99**	**9**⇑	*i*P	**P**	**20 08 18.5**	**+0.9**
	comp=Z,35nm,1.0s						
KBA	**Koelnbreinsper**	**10.99**	**9**⇑	*i*P	**P**	**20 08 18.5**	**+0.9**
KBA				pmax	pmax		
	comp=Z,35nm,1.0s						
WTTA	**Wattenberg**	**11.04**	**3**⇑	*i*P	**P**	**20 08 20.8**	**+2.6**
	comp=Z,31nm,1.3s						
WTTA	**Wattenberg**	**11.04**	**3**⇑	*i*P	**P**	**20 08 20.8**	**+2.6**
WTTA				pmax	pmax		
	comp=Z,31nm,1.3s						
ETSF	**Etsaut**	**11.07**	**310**	*e*Pn	**P**	**20 08 16.8**	**-1.9**
ETSF				*e*Sn	**S**	**20 10 17.2**	**-6.5**
	comp=Z,31nm,0.8s						
DAVA	**Damuels**	**11.08**	**356**⇑	*i*P	**P**	**20 08 20.9**	**+2.2**
	comp=Z,50nm,1.4s						
MOTA	**Moosalm**	**11.11**	**1**⇑	*i*P	**P**	**20 08 20.9**	**+1.7**
	comp=Z,24nm,1.3s						
MOTA	**Moosalm**	**11.11**	**1**⇑	*i*P	**P**	**20 08 20.9**	**+1.7**
MOTA				pmax	pmax		
	comp=Z,25nm,1.3s						
WATA	**Walderalm**	**11.11**	**2**⇑	*i*P	**P**	**20 08 20.7**	**+1.5**
	comp=Z,39nm,1.1s						
WATA	**Walderalm**	**11.11**	**2**⇑	*i*P	**P**	**20 08 20.7**	**+1.5**
WATA				pmax	pmax		
	comp=Z,39nm,1.1s						
EBER	**Berja**	**11.12**	**278**	Pn	**P**	**20 08 20.7**	**+1.3**
	comp=Z,0.9nm,0.2s						
EBER				Sn	**S**	**20 10 19.8**	**-5.1**
EBER	**Berja**	**11.12**	**278**	Pn	**P**	**20 08 20.7**	**+1.3**
	comp=Z,0.9nm,0.2s,SNR=6.6						
EBER				Sn	**S**	**20 10 19.8**	**-5.1**
	comp=Z,1.2nm,0.3s,SNR=7.9						
PLDF	**La Plantade**	**11.17**	**333**	*e*P	**P**	**20 08 18.6**	**-1.4**
EQES	**Quesada**	**11.29**	**282**	Pn	**P**	**20 08 23.5**	**+1.8**
	comp=Z,5.0nm,0.3s						
EQES				Sn	**S**	**20 10 23.6**	**-5.4**
EQES	**Quesada**	**11.29**	**282**	Pn	**P**	**20 08 23.5**	**+1.8**
	comp=Z,5.0nm,0.3s,SNR=28						
EQES				Sn	**S**	**20 10 23.6**	**-5.4**
	comp=Z,1.7nm,0.3s,SNR=7.9						
BBS	**Basel-Blauen**	**11.51**	**348**	*e*P	**P**	**20 08 25.1**	**+0.5**
LOMF	**Lomont**	**11.52**	**346**	*e*P	**P**	**20 08 26.2**	**+1.4**
RJF	**Les Rejaudoux**	**11.52**	**325**	*e*Pn	**P**	**20 08 19.5**	**-5.3**
RJF				*e*Sn	**S**	**20 10 25.2**	**-9.4**
	comp=Z,8.4nm,0.7s						
RJF				*e*R			
	comp=Z,3µm,22.9s						
SJPF	**Ste Jean**	**11.60**	**310**	*e*Pn	**P**	**20 08 23.4**	**-2.5**
SJPF				*e*Sn	**S**	**20 10 28.4**	**-8.1**
	comp=Z,10nm,0.7s						
LFF	**La Frestale**	**11.63**	**322**	*e*Pn	**P**	**20 08 24.1**	**-2.2**
LFF				*e*Sn	**S**	**20 10 28.9**	**-8.4**
	comp=Z,21nm,0.7s						
SMF	**Signal de Mont**	**11.68**	**335**	*e*Pn	**P**	**20 08 25.8**	**-1.1**
EALK	**Alkurruntz**	**11.83**	**310**	Pn	**P**	**20 08 28.4**	**-0.6**
	comp=Z,4.0nm,0.3s						
EALK				Sn	**S**	**20 10 29.4**	**-13**
EALK	**Alkurruntz**	**11.83**	**310**	Pn	**P**	**20 08 28.4**	**-0.6**
	comp=Z,4.0nm,0.3s,SNR=7.9						
EALK				Sn	**S**	**20 10 29.4**	**-13**
	comp=Z,1.3nm,0.3s,SNR=7.9						
FELD	**Feldberg**	**11.84**	**350**	*e*P	**P**	**20 08 30.9**	**+1.8**
MOA	**Molln**	**11.88**	**11**⇑	*i*P	**P**	**20 08 30.2**	**+0.6**
	comp=Z,37nm,1.1s						
EBAN	**Banos Encina**	**11.88**	**284**	P	**P**	**20 08 30.1**	**+0.4**
EBAN				pmax	pmax		
	comp=Z,1.0nm,0.2s						
EBAN	**Banos Encina**	**11.88**	**284**	Pn	**P**	**20 08 30.1**	**+0.4**
	comp=Z,1.2nm,0.2s						
EBAN	**Banos Encina**	**11.88**	**284**	Pn	**P**	**20 08 30.1**	**+0.4**
	comp=Z,1.2nm,0.2s,SNR=7.9						
MOF	**Molkenrain**	**11.95**	**348**	*e*P	**P**	**20 08 30.9**	**+0.4**
BGF	**Bois d’Agland**	**11.96**	**332**	*e*Pn	**P**	**20 08 29.7**	**-1.0**
HINF	**Hinteralfeld**	**11.96**	**347**	*e*Pn	**P**	**20 08 31.1**	**+0.3**
AVF	**Avril sur Loir**	**11.97**	**334**	*e*Pn	**P**	**20 08 29.0**	**-1.9**
TCF	**Toulx Ste Croi**	**11.99**	**330**	*e*Pn	**P**	**20 08 29.4**	**-1.7**
ELOJ	**Sierra Loja**	**12.13**	**279**	P	**P**	**20 08 35.6**	**+2.5**
ELOJ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ELOJ	**Sierra Loja**	**12.13**	**279**	Pn	**P**	**20 08 35.6**	**+2.6**
	comp=Z,2.8nm,0.4s						
ELOJ	**Sierra Loja**	**12.13**	**279**	Pn	**P**	**20 08 35.6**	**+2.5**
	comp=Z,2.8nm,0.4s,SNR=5.9						
SSF	**Saint Saulge**	**12.15**	**335**	*e*P	**P**	**20 08 31.8**	**-1.5**
ELUQ	**Luque**	**12.23**	**281**	P	**P**	**20 08 38.8**	**+4.4**
ELUQ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ELUQ	**Luque**	**12.23**	**281**	Pn	**P**	**20 08 38.8**	**+4.4**
	comp=Z,0.7nm,0.5s						
ELUQ	**Luque**	**12.23**	**281**	Pn	**P**	**20 08 38.8**	**+4.4**
	comp=Z,0.7nm,0.5s,SNR=6.6						
ESDC	**Sonseca Array**	**12.24**	**291**	Pn	**P**	**20 08 34.2**	**-0.2**
	comp=Z,2.0nm,0.3s						
ESDC				Sn	**S**	**20 10 42.3**	**-10**
ESDC	**Sonseca Array**	**12.24**	**291**	Pn	**P**	**20 08 34.2**	**-0.3**
	comp=Z,2.0nm,0.2s,SNR=21						
ESDC				Sn	**S**	**20 10 42.3**	**-10**
	SNR=7.9						
ESLA	**Sonseca Array**	**12.24**	**291**	*e*P	**P**	**20 08 34.3**	**-0.1**
	comp=Z,14nm,1.2s						
HAU	**Haudompre**	**12.24**	**345**	*e*Pn	**P**	**20 08 33.9**	**-0.6**
HAU				*e*R			
	comp=Z,2µm,20.8s						
ECH	**Echery**	**12.29**	**348**	*e*P	**P**	**20 08 34.8**	**-0.4**
WLS	**Welschbruch**	**12.46**	**349**	*e*P	**P**	**20 08 37.3**	**-0.1**
CDF	**Champ du Feu**	**12.47**	**349**	*e*Pn	**P**	**20 08 37.1**	**-0.4**
EADA	**Adamuz**	**12.50**	**284**	Pn	**P**	**20 08 40.5**	**+2.5**
	comp=Z,0.5nm,0.2s						
EADA				Sn	**S**	**20 10 50.3**	**-8.2**
EADA	**Adamuz**	**12.50**	**284**	Pn	**P**	**20 08 40.5**	**+2.4**
	comp=Z,0.5nm,0.2s,SNR=4.7						
EADA				Sn	**S**	**20 10 50.3**	**-8.2**
	comp=Z,0.1nm,0.2s,SNR=7.9						
THEF	**They Montfort**	**12.53**	**345**	*e*P	**P**	**20 08 38.7**	**+0.3**
EMIJ	**Mijas**	**12.65**	**276**	Pn	**P**	**20 08 44.0**	**+4.0**
	comp=Z,0.5nm,0.2s						
EMIJ				Sn	**S**	**20 10 55.3**	**-6.6**
EMIJ	**Mijas**	**12.65**	**276**	Pn	**P**	**20 08 44.0**	**+4.0**
	comp=Z,0.5nm,0.2s,SNR=7.9						
EMIJ				Sn	**S**	**20 10 55.3**	**-6.6**
	comp=Z,0.1nm,0.4s,SNR=7.9						
SFTF	**Sexfontaines**	**12.73**	**342**	*e*Pn	**P**	**20 08 40.4**	**-0.6**
MEZF	**Maizieres J’vi**	**13.00**	**342**	*e*Pn	**P**	**20 08 44.6**	**-0.1**
RFYF	**Reffroy**	**13.02**	**344**	*e*Pn	**P**	**20 08 45.1**	**+0.2**
KHC	**Kasperske Hory**	**13.04**	**8**	*e*P	**P**	**20 08 46.2**	**+1.0**
KHC				MLR	MLR		
	comp=Z,2µm,15.7s						
KHC	**Kasperske Hory**	**13.04**	**8**	*e*P	**P**	**20 08 46.2**	**+1.0**
KHC				*e*		20 08 55.5	
KHC				*e*		20 20 54.5	
KHC	**Kasperske Hory**	**13.04**	**8**	*e*P	**P**	**20 08 46.2**	**+1.0**
KHC				x	x	20 08 55.5	
KHC				AMS	AMS	20 14 20.0	
	comp=Z,2µm,15.7s						
ELAN	**Lanestosa**	**13.06**	**307**	Pn	**P**	**20 08 45.5**	**+0.1**
	comp=Z,2.6nm,0.2s						
ELAN				Sn	**S**	**20 10 58.4**	**-13**
ELAN	**Lanestosa**	**13.06**	**307**	Pn	**P**	**20 08 45.5**	**0.0**
	comp=Z,2.6nm,0.2s,SNR=14						
ELAN				Sn	**S**	**20 10 58.4**	**-13**
	comp=Z,0.1nm,0.5s,SNR=7.9						
MFF	**Saint Martin d**	**13.26**	**325**	*e*Pn	**P**	**20 08 47.7**	**-0.4**
PSZ	**Piszkesteto**	**13.44**	**27**	*e*P	**P**	**20 08 51.4**	**+1.0**
PSZ				pmax	pmax		
	comp=Z,14nm,0.9s						
PSZ	**Piszkesteto**	**13.44**	**27**	*e*P	**P**	**20 08 51.4**	**+0.9**
	comp=Z,14nm,0.9s						
PSZ	**Piszkesteto**	**13.44**	**27**	*e*P	**P**	**20 08 51.4**	**+1.0**
	comp=Z,14nm,0.9s						
GRA1	**Grafenberg Arr**	**13.46**	**1**	*e*P	**P**	**20 08 50.0**	**-0.7**
	comp=Z,13nm,1.1s						
GRF	**Grafenberg Arr**	**13.46**	**1**	*e*P	**P**	**20 08 50.0**	**-0.7**
GRF				pmax	pmax		
	comp=Z,13nm,1.1s						
GRF	**Grafenberg Arr**	**13.46**	**1**	*e*P	**P**	**20 08 50.0**	**-0.7**
GRF				pmax	pmax		
	comp=Z,13nm,1.1s						
GRF	**Grafenberg Arr**	**13.46**	**1**	*e*P	**P**	**20 08 50.0**	**-0.7**
	comp=Z,13nm,1.1s						
ESPR	**Espera**	**13.50**	**278**	Pn	**P**	**20 08 55.9**	**+4.6**
	comp=Z,0.1nm,0.4s						
ESPR	**Espera**	**13.50**	**278**	Pn	**P**	**20 08 55.9**	**+4.6**
	comp=Z,0.1nm,0.4s,SNR=5.5						
WLF	**Walferdange**	**13.87**	**347**	*e*P	**P**	**20 08 57.0**	**+1.0**
PRU	**Pruhonice**	**14.00**	**10**	*e*P	**P**	**20 09 05.3**	**+7.5**
PRU				AMS	AMS	20 14 50.0	
	comp=Z,2µm,16.4s						
NKC	**Novy Kostel**	**14.04**	**4**	*e*P	**P**	**20 09 06.1**	**+7.8**
NKC				AMS	AMS	20 15 50.0	
	comp=Z,2µm,11.6s						
KECS	**Kecovo**	**14.13**	**27**	*e*P	**P**	**20 09 07.6**	**+8.1**
EMIN	**Mina Concepcio**	**14.14**	**281**	Pn	**P**	**20 09 02.2**	**+2.5**
	comp=Z,0.3nm,0.2s						
EMIN				Sn	**S**	**20 11 31.5**	**-6.2**
EMIN	**Mina Concepcio**	**14.14**	**281**	Pn	**P**	**20 09 02.2**	**+2.5**
	comp=Z,0.3nm,0.2s,SNR=7.9						
EMIN				Sn	**S**	**20 11 31.5**	**-6.1**
	SNR=7.9						
EARI	**Arriondas**	**14.26**	**305**	Pn	**P**	**20 09 03.0**	**+1.8**
	comp=Z,0.5nm,0.2s						
EARI				Sn	**S**	**20 11 27.6**	**-13**
EARI	**Arriondas**	**14.26**	**305**	Pn	**P**	**20 09 03.0**	**+1.8**
	comp=Z,0.5nm,0.2s,SNR=7.6						
EARI				Sn	**S**	**20 11 27.6**	**-13**
	SNR=7.9						
MORC	**Moravsky Berou**	**14.38**	**18**	*e*P	**P**	**20 09 05.1**	**+2.4**
MORC				pmax	pmax		
	comp=Z,36nm,1.0s						
MORC	**Moravsky Berou**	**14.38**	**18**	*e*P	**P**	**20 09 05.1**	**+2.4**
	comp=Z,36nm,1.0s						
MORC	**Moravsky Berou**	**14.38**	**18**	*e*P	**P**	**20 09 05.1**	**+2.4**
	comp=Z,36nm,1.0s						
MOX	**Moxa**	**14.42**	**2**	*e*P	**P**	**20 09 05.2**	**+1.9**
MOX				pmax	pmax		
	comp=Z,23nm,1.4s						
MOX				MLR	MLR		
	comp=Z,800nm,18.0s						
MOX	**Moxa**	**14.42**	**2**	*i* P	**P**	**20 09 05.2**	**+1.9**
	comp=Z,logA/T=1.2						
MOX				L		20 15 02.0	
MOX	**Moxa**	**14.42**	**2**	*e*P	**P**	**20 09 05.2**	**+1.9**
	comp=Z,800nm,18.0s						
EBAD	**Badajoz**	**14.46**	**285**	Pn	**P**	**20 09 06.8**	**+3.0**
	comp=Z,0.2nm,0.2s						
EBAD	**Badajoz**	**14.46**	**285**	Pn	**P**	**20 09 06.8**	**+3.0**
	comp=Z,0.2nm,0.2s,SNR=6.4						
PVCC	**Panska Ves**	**14.54**	**9**	*e*P	**P**	**20 09 10.3**	**+5.5**
PVCC				AMS	AMS	20 15 00.0	
	comp=Z,2µm,15.6s						
GIVF	**Givet**	**14.55**	**344**	*e*Pn	**P**	**20 09 06.7**	**+1.7**
OKC	**Ostrava-Krasne**	**14.58**	**19**	*e*P	**P**	**20 09 11.8**	**+6.4**
OKC				AMS	AMS	20 17 10.0	
	comp=Z,1µm,11.7s						
MLR	**Muntele Rosu**	**14.64**	**46**⇑	*i*P	**P**	**20 09 09.9**	**+3.7**
DPC	**Dobruska-Polom**	**14.65**	**14**	*e*P	**P**	**20 09 11.4**	**+5.1**
DPC				AMS	AMS	20 16 00.0	
	comp=Z,1µm,12.2s						
BAIF	**Baives**	**14.65**	**343**	*e*Pn	**P**	**20 09 07.2**	**+0.9**
UPC	**Upice**	**14.74**	**13**	*e*P	**P**	**20 09 09.9**	**+2.4**
LDF	**La Druitiere**	**14.78**	**330**	*e*Pn	**P**	**20 09 08.0**	**0.0**
EGRO	**El Granado**	**14.78**	**281**	Pn	**P**	**20 09 11.6**	**+3.5**
	comp=Z,0.6nm,0.2s						
EGRO	**El Granado**	**14.78**	**281**	Pn	**P**	**20 09 11.6**	**+3.5**
	comp=Z,0.6nm,0.2s,SNR=7.9						
BRG	**Berggiesshubel**	**14.80**	**8**	*e*P	**P**	**20 09 10.3**	**+2.1**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,990nm,16.0s						
BRG				MLR	MLR		
	comp=E,4µm,16.0s						
BRG				MLR	MLR		
	comp=Z,2µm,11.5s						
BRG	**Berggiesshubel**	**14.80**	**8**	*e*P	**P**	**20 09 10.3**	**+2.1**
	comp=Z,9.5nm,1.4s						
BRG				*e*		20 09 15.8	
BRG	**Berggiesshubel**	**14.80**	**8**	*e*P	**P**	**20 09 10.3**	**+2.1**
	comp=Z,2µm,11.5s						
PBRG	**Braganca**	**14.80**	**297**	*e*P	**P**	**20 09 06.8**	**-1.5**
	comp=Z,8.0nm,1.4s						
PBRG				*e*pP		20 09 16.7	
RAC	**Raciborz**	**14.82**	**19**	*e*P	**P**	**20 09 14.5**	**+6.0**
RAC				MLR	MLR		
	comp=N,1µm,20.4s						
RAC				MLR	MLR		
	comp=E,3µm,19.4s						
RAC				MLR	MLR		
	comp=Z,2µm,13.5s						
ECAL	**Calabor**	**14.84**	**298**	Pn	**P**	**20 09 11.0**	**+2.2**
	comp=Z,1.1nm,0.2s						
ECAL	**Calabor**	**14.84**	**298**	Pn	**P**	**20 09 11.0**	**+2.2**
	comp=Z,1.1nm,0.2s,SNR=8.7						
CRVS	**Cervenica-Dubn**	**14.84**	**28**	*e*P	**P**	**20 09 15.7**	**+6.9**
ULDT	**Uludag**	**14.85**	**69**	*i* P	**P**	**20 09 15.6**	**+6.5**
NIE	**Niedzica**	**14.86**	**25**	*e*P	**P**	**20 09 12.0**	**+3.0**
GRR	**Gorron**	**14.93**	**328**	*e*Pn	**P**	**20 09 10.1**	**+0.2**
PCBR	**Castelo Branco**	**14.93**	**290**	*e*P	**P**	**20 09 10.5**	**+0.4**
	comp=Z,13nm,1.4s						
PCBR				*e*pP		20 09 16.8	
HGN	**Heimansgroeve**	**14.97**	**348**	*e*P	**P**	**20 09 11.0**	**+0.6**
	comp=Z,29nm,1.5s						
HGN				*e*S	**S**	**20 11 57.5**	**+0.4**
FLN	**La Foliniere**	**15.06**	**330**	*e*Pn	**P**	**20 09 10.5**	**-1.2**
FLN				*e*R			
	comp=Z,2µm,26.8s						
MTE	**Manteigas**	**15.07**	**292**	*e*P	**P**	**20 09 12.8**	**+0.9**
	comp=Z,14nm,1.2s						
MTE				*e*LQ		20 12 12.3	
MTE				*e*LR	LR	20 13 10.4	
	comp=Z,1µm,17.6s						
PBEJ	**Beja**	**15.09**	**282**	*e*P	**P**	**20 09 11.8**	**-0.3**
	comp=Z,17nm,1.4s						
PBEJ				*e*pP		20 09 15.2	
KSP	**Ksiaz**	**15.11**	**13**	*e*P	**P**	**20 09 13.9**	**+1.6**
KSP				*e*pP		20 09 21.5	
KSP	**Ksiaz**	**15.11**	**13**	*e*P	**P**	**20 09 13.7**	**+1.4**
CLL	**Collm**	**15.15**	**5**	*i* P	**P**	**20 09 18.2**	**+5.4**
CLL				pmax	pmax		
	comp=Z,27nm,1.5s						
CLL	**Collm**	**15.15**	**5**	P	**P**	**20 09 18.2**	**+5.4**
	comp=Z,27nm,1.5s						
CLL	**Collm**	**15.15**	**5**	P	**P**	**20 09 18.2**	**+5.4**
	comp=Z,logA/T=1.3						
CLL				*i*		20 09 26.0	
CLL				*i*		20 09 41.4	
KOLS	**Kolonicke sedl**	**15.18**	**30**	*e*Pn	**P**	**20 09 07.3**	**-6.0**
KOLS				*e*P		20 09 19.8	
KOLS	**Kolonicke sedl**	**15.18**	**30**	*e*	**P**	**20 09 07.3**	**-6.0**
KOLS	**Kolonicke sedl**	**15.18**	**30**	*e*P	**P**	**20 09 19.8**	**+6.5**
EVO	**Evora**	**15.22**	**284**	*e*Pn	**P**	**20 09 15.5**	**+1.6**
EVO				*e*R			
	comp=Z,824nm,23.2s						
ERUA	**La Rua**	**15.26**	**299**	P	**P**	**20 09 16.8**	**+2.5**
ERUA				pmax	pmax		
	comp=Z,1.0nm,0.2s						
ERUA	**La Rua**	**15.26**	**299**	Pn	**P**	**20 09 16.8**	**+2.5**
	comp=Z,1.0nm,0.2s						
ERUA	**La Rua**	**15.26**	**299**	Pn	**P**	**20 09 16.8**	**+2.5**
	comp=Z,1.0nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**15.38**	**295**	*e*P	**P**	**20 09 15.8**	**0.0**
	comp=Z,11nm,1.2s						
PVRL				*e*pP		20 09 21.1	
PVIS	**Viseu**	**15.39**	**293**	*e*P	**P**	**20 09 16.4**	**+0.3**
	comp=Z,14nm,1.7s						
PVIS				*e*pP		20 09 20.2	
OJC	**Ojcow**	**15.39**	**22**	*e*P	**P**	**20 09 17.9**	**+1.9**
HARR	**Harsova**	**15.45**	**52**⇑	*i*P	**P**	**20 09 25.4**	**+8.7**
EINC	**Incio**	**15.49**	**300**	Pn	**P**	**20 09 19.1**	**+1.8**
	comp=Z,0.3nm,0.3s						
EINC	**Incio**	**15.49**	**300**	Pn	**P**	**20 09 19.1**	**+1.8**
	comp=Z,0.3nm,0.3s,SNR=7.9						
BURAR	**Bucovina Array**	**15.55**	**39**⇓	*i*P	**P**	**20 09 20.3**	**+2.2**
BURAR	**Bucovina Array**	**15.55**	**39**⇓	*i*P	**P**	**20 09 20.3**	**+2.2**
EPON	**Pontenova**	**15.57**	**303**	Pn	**P**	**20 09 20.2**	**+1.8**
	comp=Z,0.6nm,0.3s						
EPON	**Pontenova**	**15.57**	**303**	Pn	**P**	**20 09 20.2**	**+1.8**
	comp=Z,0.6nm,0.3s,SNR=5.7						
CFR	**Carcaliu**	**15.80**	**50**⇑	*i*P	**P**	**20 09 25.4**	**+4.1**
KWP	**Kalwaria**	**15.91**	**29**	*e*P	**P**	**20 09 27.4**	**+4.7**
KWP				*e*		20 09 32.4	
KWP	**Kalwaria**	**15.91**	**29**	*e*P	**P**	**20 09 27.4**	**+4.7**
KWP				*e*		20 09 32.4	
WTSB	**Winterswijk**	**16.00**	**351**	*e*P	**P**	**20 09 26.3**	**+2.4**
	comp=Z,72nm,1.2s						
ESKT	**Eskisehir**	**16.08**	**72**	*i* P	**P**	**20 09 29.7**	**+4.8**
RUE	**Ruedersdorf**	**16.38**	**6**	*e*P	**P**	**20 09 28.9**	**+0.3**
KIS	**Kishinev**	**17.14**	**46**	*e*P	**P**	**20 09 38.0**	**-0.2**
KIS				MLR	MLR		
	comp=Z,900nm,13.0s						
KIS				MLR	MLR		
	comp=Z,600nm,14.0s						
BALT	**Daday**	**18.26**	**66**	*i* P	**P**	**20 09 54.9**	**+2.5**
MEST	**Erdemli**	**18.70**	**82**	*i* P	**P**	**20 09 51.0**	**-6.8**
AVNT	**Avonos**	**19.16**	**75**	*i* P	**P**	**20 10 07.3**	**+4.1**
SUW	**Suwalki**	**19.73**	**22**	*e*P	**P**	**20 10 05.7**	**-3.9**
SUW				*e*		20 10 08.1	
SUW	**Suwalki**	**19.73**	**22**	*e*P	**P**	**20 10 05.7**	**-4.0**
SUW				*e*		20 10 08.1	
KAHT	**Ahir Dag**	**20.78**	**78**	*i* P	**P**	**20 10 20.8**	**-0.2**
EIL	**Elat**	**21.18**	**101**	*e*P	**P**	**20 10 23.0**	**-2.0**
	comp=Z,10nm,0.9s,mb4.2						
GZT	**Gaziantep**	**21.35**	**79**	*i* P	**P**	**20 10 27.0**	**+0.2**
MNK	**Minsk**	**21.70**	**27**	*e*P	**P**	**20 10 24.0**	**-6.1**
MALT	**Malatya**	**21.97**	**76**	*e*P	**P**	**20 10 32.4**	**-0.5**
MALT				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
MALT	**Malatya**	**21.97**	**76**	*e*P	**P**	**20 10 32.4**	**-0.6**
	comp=Z,12nm,1.0s,mb4.3						
MALT	**Malatya**	**21.97**	**76**	*e*P	**P**	**20 10 32.4**	**-0.5**
	comp=Z,12nm,1.0s,mb4.3						
ELZG	**Elazig**	**22.39**	**76**	*i* P	**P**	**20 10 37.4**	**+0.2**
NB2	**NORSAR Subarra**	**24.83**	**0**	P	**P**	**20 10 59.2**	**-1.4**
	comp=Z,31nm,1.2s,mb4.7,baz=160,slow=10						
NB2	**NORSAR Subarra**	**24.83**	**0**	P	**P**	**20 10 59.2**	**-1.4**
NB2				pmax	pmax		
	comp=Z,31nm,1.2s,mb4.7						
VOR	**Voronezh**	**25.37**	**43**	*e*P	**P**	**20 11 05.5**	**-0.3**
VOR				pmax	pmax		
	comp=Z,50nm,2.0s,mb4.7						
VOR	**Voronezh**	**25.37**	**43**	*e*P	**P**	**20 11 05.5**	**-0.3**
	comp=Z,50nm,2.0s,mb4.7						
KIV	**Kislovodsk**	**25.39**	**62**	*e*P	**P**	**20 11 09.6**	**+3.5**
KIV				pmax	pmax		
	comp=E,13nm,1.2s						
KIV				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.4						
KIV				MLR	MLR		
	comp=E,213nm,17.0s						
KIV				MLR	MLR		
	comp=Z,284nm,17.0s,MS3.9						
KIV	**Kislovodsk**	**25.39**	**62**	P	**P**	**20 11 03.0**	**-3.1**
	comp=Z,46nm,1.3s,mb4.8						
GOF	**Gofitskoye**	**25.78**	**60**	*e*P	**P**	**20 11 10.5**	**+0.7**
GOF				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.1						
GOF				MLR	MLR		
	comp=Z,2µm,13.0s,MS4.8						
GOF	**Gofitskoye**	**25.78**	**60**	*e*P	**P**	**20 11 10.5**	**+0.7**
	comp=Z,2µm,13.0s						
OBN	**Obninsk**	**25.80**	**35**κ	*i*P	**P**	**20 11 09.0**	**-0.8**
OBN				*e*		20 11 14.4	
OBN				SS	**S**	**20 15 39.0**	**+2.4**
OBN				pmax	pmax		
	comp=Z,39nm,1.0s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,12.0s,MS4.0						
OBN	**Obninsk**	**25.80**	**35**	*e*P	**P**	**20 11 08.4**	**-1.3**
	comp=Z,71nm,1.4s,mb5.0						
OBN	**Obninsk**	**25.80**	**35**	*i* P	**P**	**20 11 09.0**	**-0.8**
	comp=Z,39nm,1.0s,mb4.9						
MSL	**Mosul**	**25.89**	**80**	*e*P	**P**	**20 11 13.0**	**+2.2**
MOS	**Moscow**	**26.65**	**35**	*e*P	**P**	**20 11 16.9**	**-0.8**
MOS				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.1						
TI2	**Plekhanov**	**26.76**	**68**	*e*P	**P**	**20 11 29.6**	**+11**
TI2				MLR	MLR		
	comp=N,1µm,18.0s,MS4.6						
TI2				MLR	MLR		
	comp=E,1µm,18.0s,MS4.6						
TI2				MLR	MLR		
	comp=Z,2µm,18.0s,MS4.6						
KAF	**Kangasniemi**	**27.64**	**16**	*e*p	**P**	**20 11 23.7**	**-3.0**
	baz=206,slow=9.0						
JOF	**Joensuu**	**29.54**	**19**	*e*p	**P**	**20 11 41.2**	**-2.6**
	comp=Z,5.2nm,0.9s,mb4.3						
JOF	**Joensuu**	**29.54**	**19**	*e*P	**P**	**20 11 41.2**	**-2.6**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
APA	**Apatity**	**33.90**	**15**⇑	*e*P	**P**	**20 12 21.7**	**-0.2**
APA				MLR	MLR		
	comp=Z,1µm,13.0s,MS4.8						
KEV	**Kevo**	**34.71**	**10**	*e*p	**P**	**20 12 25.2**	**-3.7**
	comp=Z,17nm,1.0s,mb4.9						
KEV	**Kevo**	**34.71**	**10**	*e*P	**P**	**20 12 25.2**	**-3.7**
KEV				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
ARU	**Arti**	**37.64**	**42**	*e*P	**P**	**20 12 43.8**	**-10**
SVE	**Sverdlovsk**	**38.84**	**42**⇓	*e*P	**P**	**20 13 03.0**	**-0.9**
SVE				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.1						
MBAR	**Mbarara**	**41.02**	**149**	P	**P**	**20 13 21.7**	**-0.7**
CHKZ	**Chkalovo**	**44.30**	**47**	*e*P	**P**	**20 13 47.1**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
CHKZ	**Chkalovo**	**44.30**	**47**	*e*P	**P**	**20 13 47.1**	**-1.6**
	comp=Z,4.2nm,0.6s,mb4.3						
KMBO	**Kilima Mbogo**	**44.52**	**141**	P	**P**	**20 13 48.5**	**-2.5**
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMBO	**Kilima Mbogo**	**44.52**	**141**	P	**P**	**20 13 48.5**	**-2.5**
	comp=Z,6.1nm,1.2s,mb4.3						
FRU	**Bishkek**	**48.54**	**62**	*e*P	**P**	**20 14 24.5**	**+2.2**
UCH	**Uchtor**	**48.62**	**62**	P	**P**	**20 14 23.8**	**+0.8**
	SNR=12						
KURK	**Kurchatov**	**49.52**	**51**	P	**P**	**20 14 28.2**	**-1.5**
KSH	**Kashi**	**50.46**	**65**	*e*P	**P**	**20 14 38.0**	**+0.9**
KSH				*e*AP	pP	20 14 43.0	+2.9
KSH				*e*XP	sP	20 14 45.3	+4.0
KSH				*e*PCP	PcP	20 15 54.8	-0.7
KSH				*e*PP	PP	20 16 33.9	+0.1
KSH				*e*SCP		20 19 48.8	
KSH				*e*PCS		20 19 56.2	
KSH				*e*S	**S**	**20 21 51.0**	**+1.6**
KSH				*e*XS		20 21 58.9	
KSH				*e*PS	PS	20 22 03.8	+5.1
KSH				*e*SCS	ScS	20 24 25.3	0.0
KSH				*e*SS	SS	20 25 22.5	+2.0
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.8						
KSH				LR	LR		
	comp=N,570nm,8.2s						
KSH				LR	LR		
	comp=E,650nm,9.0s						

LSZ	Lusaka	53.77	159	*e*P	P	20 15 01.1	-1.1
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
LSZ	Lusaka	53.77	159	*e*P	P	20 15 01.1	-1.1
	comp=Z,4.4nm,0.9s,mb4.4						
SCHQ	Schefferville	54.60	316	*e*P	P	20 15 04.5	-3.3
	comp=Z,7.7nm,1.0s,mb4.7						
TSUM	Tsumeb	55.49	172	*e*P	P	20 15 13.3	-1.4
WMQ	Urumqi	57.33	57	*e*P	P	20 15 27.0	-0.6
LBTB	Lobatse	62.47	165	P	P	20 16 00.6	-2.6
FCC	Fort Churchill	66.85	327	P	P	20 16 30.2	-0.8
FCC				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
LZH	Lanzhou	71.85	58	*e*P	P	20 17 00.0	-2.1
LZH				AP	pP	20 17 05.0	-0.3
LZH				PP	PP	20 19 41.0	-2.4
LZH				AMB	AMB		
	comp=Z,23nm,1.7s,mb4.8						
LZH	Lanzhou	71.85	58	*e*P	P	20 17 00.0	-2.1
LZH				*SP	sP	20 17 07.0	+0.6
LZH						20 19 41.0	
LZH				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.8						
LZH	Lanzhou	71.85	58	*e*P	P	20 17 00.0	-2.1
	comp=Z,23nm,1.7s,mb4.8						
LZH				pP	pP	20 17 05.0	-0.3
LZH				sP	sP	20 17 07.0	+0.6
LZH				PP	PP	20 19 41.0	-2.4
ULM	Lac du Bonnet	72.47	320	*e*P	P	20 17 03.4	-2.2
	comp=Z,16nm,1.2s,mb4.8						
GOGA	Godfrey	74.28	300	P	P	20 17 16.9	+0.4
GOGA	Godfrey	74.28	300	P	P	20 17 16.9	+0.4
BAO	Brasilia Array	75.83	238	P	P	20 17 27.1	+1.5
BAO				*i*	pP	20 17 30.1	+1.3
FVM	French Village	76.41	307	P	P	20 17 27.2	-1.3
CCM	Cathedral Cave	76.89	308	*e*P	P	20 17 29.4	-1.8
CCM				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
CCM	Cathedral Cave	76.89	308	*e*P	P	20 17 29.4	-1.8
	comp=Z,6.2nm,0.9s,mb4.5						
KMI	Kunming	76.99	68	P	P	20 17 34.3	+2.3
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.5						
KMI	Kunming	76.99	68	P	P	20 17 34.3	+2.3
	comp=Z,10.0nm,1.6s,mb4.5						
SDV	Santo Domingo	78.01	272	*e*P	P	20 17 38.4	+0.6
	comp=Z,8.7nm,1.2s,mb4.6						
CN2	Changchun	80.64	42	*e*P	P	20 17 49.0	-2.4
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MDJ	Mudanjiang	82.26	39	P	P	20 17 57.3	-2.6
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,123nm,5.0s						
PHWY	Pilot Hill	83.32	317	*e*P	P	20 18 06.0	+0.6
NJ2	Nanjing	84.31	54	*e*P	P	20 18 14.2	+3.5
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.7						
ISCO	Idaho Springs	84.44	316	*e*P	P	20 18 11.5	+0.4
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
ISCO	Idaho Springs	84.44	316	*e*P	P	20 18 11.5	+0.4
	comp=Z,4.3nm,0.8s,mb4.6						
BW06	Boulder Array	84.48	320	*e*P	P	20 18 09.2	-2.1
	comp=Z,14nm,1.4s,mb4.9						
HLID	Hailey	86.32	324	P	P	20 18 19.6	-0.8
SSE	Sheshan	86.44	54	P	P	20 18 17.6	-3.7
	comp=Z,13nm,0.9s,mb5.2						

MAN 07 20:09:05.0,16.19N×122.05E,h31$^{\mathrm{km}}$,mb5.1,ML4.1, MS4.2,Luzon

ORF ***07*** *20:45:30.7,31.30N×7.98E,h30$^{\mathrm{km}}$,mb4.6*
BJI ***07*** *20:46:23.5,36.45N×10.66E,h7$^{\mathrm{km}}$,mB5.6,mb4.9,Ms5.2, Msz4.9*
NEIC ***07*** *20:46:26.4±0.3,36.23N×10.87E,h10$^{\mathrm{km}}$,mb4.9/34, MS5.1/13,Error ellipse: s-maj=4.8km s-min=3.1km az=197.0*
NEIC Felt in many parts of Tunisia.
ZUR_RM ***07*** *20:46:26,36.23N×10.87E,h6$^{\mathrm{km}}$,Mw5.0/28,Moment Tensor Solution. s28 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.24; M$_{\theta\theta}$-0.97; M$_{\phi\phi}$-2.27; M$_{r\theta}$-2.08; M$_{\theta\phi}$-1.28; M$_{\phi r}$-1.88; Best double couple: M$_0$4.21×10^{16} NP1:ϕ_s222°, δ66°,λ98°. NP2:ϕ_s23°,δ25°,λ73°. Principal axes: T 4.354, Plg68°, Azm147°; N -.289, Plg7°, Azm39°; P -4.066, Plg21°, Azm306°;*
LDG ***07*** *20:46:27.5±0.2,36.14N×10.96E,h30$^{\mathrm{km}}$,Ml4.4/9,ms4.1/5 Error ellipse: s-maj=5.8km s-min=2.9km az=174.0*
MOS ***07*** *20:46:27.7±1.4,36.24N×10.78E,h31$^{\mathrm{km}}$,mb5.2/25, MS4.7/15,Error ellipse: s-maj=5.0km s-min=2.2km az=93.8*
CSEM ***07*** *20:46:28.1,36.17N×10.93E,h34$^{\mathrm{km}}$,mb5.1*
CRAAG ***07*** *20:46:28.1,36.17N×10.93E,Mb5.1*

ISC 07 20:46:26.1±0.2,36.23N±0.02×10.85E±0.02,h14$^{\mathrm{km}}$, h14$^{\mathrm{km}}$±3.3$^{\mathrm{km}}$:pP-P,n445,σ1^{s}30/469,mb5.0/56,MS4.9/21, 18C-9D,Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTS	Pantelleria	1.09	58	*e*P	Pb	20 46 45.8	-0.4
LVI	Isola Levanzo	2.12	34	P	Pn	20 47 01.0	-0.6
ERC	Erice	2.27	37	*e*Pn	Pn	20 47 02.6	-1.3
FAVR	Favara	2.49	65	*e*Pn	Pn	20 47 07.8	+0.8
FAVR	Favara	2.49	65	*e*Pn	Pn	20 47 07.8	+0.9
ABSA	Djebel Ababsia	2.73	272	P	Pn	20 47 14.0	+3.7
CMAH	Djebel Manchou	2.79	279	P	Pn	20 47 11.0	-0.3
CSLB	Castelbuono	3.08	55	*e*Pn	Pn	20 47 15.3	0.0
CSLB	Castelbuono	3.08	55	*e*Pn	Pn	20 47 15.3	0.0
GIB	Gibilmanna	3.09	54	*e*Pn	Pn	20 47 15.6	+0.2
USI	Ustica	3.09	36	*e*Pn	Pn	20 47 14.1	-1.4
USI	Ustica	3.09	36	*e*Pn	Pn	20 47 14.1	-1.4
CAEH	’Ain El Ouahch	3.27	281	P	Pn	20 47 18.0	-0.1
CKFL	Kef-Lekhel	3.34	274	P	Pn	20 47 19.0	-0.1
PZI	Palazzolo	3.40	75	*e*P	Pn	20 47 19.6	-0.3
VSL	Villasalto	3.46	341	*e*P	Pn	20 47 20.3	-0.5
VSL	Villasalto	3.46	341	*e*P	Pn	20 47 20.3	-0.5
MNO	Monte Soro	3.51	60	*e*P	Pn	20 47 22.6	+1.1
SSY	Sortino	3.52	74	P	Pn	20 47 20.3	-1.2
CASM	Ain Smara	3.52	272	P	Pn	20 47 21.5	-0.2
CTEI	Djebel Teioual	3.60	269	P	Pn	20 47 22.0	-0.8
AGST	Augusta-Monte	3.66	72	*e*Pn	Pn	20 47 22.7	-0.9
AGST	Augusta-Monte	3.66	72	*e*Pn	Pn	20 47 22.7	-0.9
SLNA	Salina	3.93	53	*e*Pn	Pn	20 47 26.5	-1.0
SLNA	Salina	3.93	53	*e*Pn	Pn	20 47 26.5	-1.0
DFRA	Djebel Bou Aff	4.03	276	P	Pn	20 47 29.0	+0.2
CMER	Merouana	4.06	263	P	Pn	20 47 31.5	+2.2
MTTG	Motta San Giov	4.25	64	*e*Pn	Pn	20 47 32.8	+0.8
MTTG	Motta San Giov	4.25	64	*e*Pn	Pn	20 47 32.8	+0.7
CKHR	Kef el Ahmar	4.33	269	P	Pn	20 47 33.0	-0.1
SCLL	Scilla	4.38	61	*e*Pn	Pn	20 47 33.5	-0.2
SCLL	Scilla	4.38	61	*e*Pn	Pn	20 47 33.5	-0.3
SET	Setif	4.41	271	P	Pn	20 47 35.0	+0.8
GMB	Gambarie	4.42	63	P	Pn	20 47 34.0	-0.4
CEL	Celeste	4.50	62	P	Pn	20 47 35.8	+0.2
SOI	Samo	4.54	65	*e*P	Pn	20 47 36.1	-0.1
GRI	Girifalco	5.13	58	*e*P	Pn	20 47 44.2	-0.2
MGR	Morigerati	5.38	42	*e*Pn	Pn	20 47 46.9	-1.0
MGR	Morigerati	5.38	42	*e*Pn	Pn	20 47 46.9	-1.0
CUC	Castrocucco	5.42	45	P	Pn	20 47 48.4	-0.2
TIP	Timpagrande	5.53	56	*e*P	Pn	20 47 48.9	-1.2
SGO	Sicignano	5.56	38	*e*Pn	Pn	20 47 49.8	-0.7
RFI	Roccamonfina	5.62	25	*e*Pn	Pn	20 47 51.0	-0.4
RFI	Roccamonfina	5.62	25	*e*Pn	Pn	20 47 51.0	-0.4
LAV9	Lanuvio	5.63	14	P	Pn	20 47 52.0	+0.6
MA9	Marino	5.71	14	P	Pn	20 47 52.8	+0.2
MRLC	Muro Lucano	5.80	37	P	Pn	20 47 53.9	0.0
ORI	Oriolo Calabro	5.84	47	P	Pn	20 47 55.0	+0.6
MRB1	Monte Rocchett	5.86	32	P	Pn	20 47 55.1	+0.4
PSB1	Pescosannita	5.87	31	P	Pn	20 47 54.5	-0.3
GUAR	Guarcino	5.88	18	P	Pn	20 47 54.9	-0.1
TOLF	Tolfa	5.89	8	P	Pn	20 47 54.6	-0.6
SDI	San Donato	5.94	22	P	Pn	20 47 55.4	-0.4
CERT	Cerreto	5.95	16	P	Pn	20 47 58.5	+2.6
ABMS	Boumerdes	5.96	277	P	Pn	20 47 56.0	-0.2
MIDA	Miranda	6.02	25	P	Pn	20 47 57.3	+0.3
VVLD	Villa Vallelon	6.03	20	P	Pn	20 47 56.5	-0.6
CII	Carovilli	6.11	25	*e*P	Pn	20 47 58.1	-0.2
PTQR	Pietraquaria	6.11	18	P	Pn	20 47 58.4	+0.1
MAON	Monte Argentar	6.19	2	P	Pn	20 47 59.6	+0.2
INTR	Introdacqua	6.24	21	P	Pn	20 48 00.4	+0.3
FIAM	Fiamignano	6.28	16	P	Pn	20 48 01.6	+0.9
MNS	Montasola	6.31	12	*e*Pn	Pn	20 48 00.8	-0.3
ABA	Alger-Bouzarea	6.32	277	P	Pn	20 48 02.5	+1.3
EMHD	Djebel Mahouad	6.38	272	P	Pn	20 48 03.0	+0.8
AQU	L’Aquila	6.43	17	*e*P	Pn	20 48 02.8	+0.1
PGF	Pioggiola	6.47	348	*e*Pn	Pn	20 47 59.8	-3.5
PGF				*e*P		20 48 03.3	
PGF				*e*Sn	Sn	20 49 14.0	-3.7
	114nm,0.5s						
PGF	Pioggiola	6.47	348	*e*P	Pn	20 47 59.8	-3.5
PGF				*e*		20 49 14.0	
TERO	Teramo	6.73	18	P	Pn	20 48 08.1	+1.1
NRCA	Norcia	6.82	14	P	Pn	20 48 08.6	+0.3
GRFL	Gerfalco	6.91	1	P	Pn	20 48 10.6	+1.1
MURB	Monte Urbino	7.14	10	P	Pn	20 48 13.8	+1.0
SNTG	Esanatoglia	7.20	12	P	Pn	20 48 14.9	+1.3
BADI	Badiali	7.35	8	P	Pn	20 48 17.0	+1.3
CING	Cingoli	7.36	13	P	Pn	20 48 17.3	+1.4
CRE	Caprese Michel	7.43	6	P	Pn	20 48 18.3	+1.5
PII	Pisa	7.49	358	P	Pn	20 48 18.3	+0.7
EBNR	Beni Rached	7.53	273	P	Pn	20 48 20.0	+1.8
FSSB	Fossombrone	7.60	11	P	Pn	20 48 21.2	+2.0
AOI	Ancona	7.61	15	P	Pn	20 48 19.7	+0.4
PGD	Poggio Sodo	7.66	5	P	Pn	20 48 22.1	+2.0
ECHA	Ech Chlef	7.67	272	P	Pn	20 48 28.0	+7.8
SFI	Santa Sofia	7.70	5	P	Pn	20 48 22.2	+1.6
VMG	Vicchio	7.74	4	P	Pn	20 48 23.4	+2.2
RSM	Repubblica di	7.79	9	P	Pn	20 48 24.4	+2.6
ETRT	Tiaret	7.80	267	P	Pn	20 48 25.0	+2.9
SEI	Scarperia	7.82	3	P	Pn	20 48 24.9	+2.6
BDI	Bagni Di Lucca	7.83	359	P	Pn	20 48 23.6	+1.2
LMR	La Mourre	7.84	336	*e*Pn	Pn	20 48 20.3	-2.3
LMR				*e*Sn	Sn	20 49 42.9	-9.0
	15nm,0.4s						
PESA	Pesaro	7.85	11	P	Pn	20 48 25.1	+2.4
EANR	’Ain N’Sour	7.90	271	P	Pn	20 48 23.0	-0.4
VINC	Vinca	7.92	356	P	Pn	20 48 23.4	-0.2
VLC	Villacollemand	7.93	358	*e*P	Pn	20 48 23.2	-0.5
FNVD	Fontana Vidola	7.93	1	P	Pn	20 48 26.1	+2.3
SARO	Sassorosso	7.95	358	P	Pn	20 48 24.1	-0.1
REVF	Revere	7.96	341	*e*P	Pn	20 48 22.7	-1.6
REVF				P		20 48 25.8	
REVF	Revere	7.96	341	P	Pn	20 48 25.8	+1.5
NEGI	Negi	7.98	343	P	Pn	20 48 22.9	-1.7
IMI	Imperia	8.00	344	P	Pn	20 48 23.2	-1.6
FRF	La Foret Royal	8.00	337	*e*Pn	Pn	20 48 22.1	-2.7
EIBI	Ibiza	8.04	293	P	P	20 48 26.6	+1.2
EIBI				S	Sn	20 49 57.6	+0.6
EIBI	Ibiza	8.04	293	P	P	20 48 26.6	+1.2
	32nm,0.4s,SNR=37						
EIBI				S	Sn	20 49 57.6	+0.6
	28nm,0.3s,SNR=7.9						
BACM		8.06	356	P	P	20 48 26.1	+0.5
SBF	Sospel	8.06	342	*e*Pn	P	20 48 22.8	-2.8
BERF	Bertagne	8.11	332	*e*P	P	20 48 25.4	-0.9
VALM		8.12	357	P	P	20 48 26.5	0.0
SAOF	Saorge	8.15	343	*e*P	P	20 48 25.2	-1.6
MVIF	Mont Vial	8.16	341	*e*P	P	20 48 25.3	-1.8
AUTN	L’Aution	8.19	342	*e*P	P	20 48 27.0	-0.4
ERBM	Eremo	8.19	358	P	P	20 48 29.9	+2.5
MONE	Monesi	8.19	344	P	P	20 48 26.1	-1.3
FIN	Finale Ligure	8.22	347	P	P	20 48 27.5	-0.4
TAVF	Tavernes	8.24	335	*e*P	P	20 48 26.9	-1.3
TOUF	Mont Tournerai	8.25	342	*e*P	P	20 48 27.0	-1.2
GELF	Grande-Etoile	8.27	331	P	P	20 48 30.1	+1.5
GRAM		8.27	356	P	P	20 48 28.1	-0.5
PUYF	Puyloubier	8.30	333	*e*P	P	20 48 27.4	-1.5
ROB	Roburent	8.37	345	P	P	20 48 29.0	-0.9
ENR	Entracque	8.40	343	P	P	20 48 30.1	-0.3
STV	Sta Anna Valdi	8.45	342	P	P	20 48 30.4	-0.6
STV2	Anna di Valdie	8.45	342	P	P	20 48 29.3	-1.7
PCP	Pian Castagno	8.49	349	P	P	20 48 31.1	-0.4
TREF	Trevaresse	8.49	332	*e*P	P	20 48 32.8	+1.2
VILF	Villemus	8.57	334	*e*P	P	20 48 31.0	-1.7
BOB	Bobbio (Coli)	8.59	353	P	P	20 48 34.5	+1.5
SMRF	Simiane la Rot	8.73	334	*e*Pn	P	20 48 31.0	-3.9
SMRF				*e*P		20 48 36.3	
SMRF				*e*Sn	Sn	20 50 05.4	-8.6
	72nm,0.9s						
PRAF	Pradon	8.73	332	*e*P	P	20 48 36.5	+1.6
PZZ	Prazzo	8.74	342	P	P	20 48 34.4	-0.7
EJON	La Jonquera	8.75	318	P	P	20 48 35.6	+0.4
EJON				S	Sn	20 50 10.8	-3.7
EJON	La Jonquera	8.75	318	P	P	20 48 35.6	+0.4
	14nm,0.6s,SNR=7.9						
SURF	Saint Ours	8.80	341	*e*P	P	20 48 35.8	-0.1
OG25	Le Caire	8.91	337	*e*P	P	20 48 36.7	-0.7
BHB	Bricherasio	9.02	344	P	P	20 48 38.5	-0.5
MBDF	Montbardon	9.04	341	*e*Pn	P	20 48 35.1	-4.1
MBDF				*e*P		20 48 39.9	
OG22	Abries	9.08	342	*e*P	P	20 48 40.8	+1.0
EBEN	Beniarda	9.15	289	P	P	20 48 42.8	+2.1
EBEN				S	Sn	20 50 23.1	-1.3
EPOB	Poblet	9.18	307	P	P	20 48 41.4	+0.2
EPOB				S	Sn	20 50 22.8	-2.5
EPOB	Poblet	9.18	307	P	P	20 48 41.4	+0.2
	13nm,0.5s,SNR=7.9						
EMIR	Miracle	9.21	311	P	P	20 48 41.8	+0.3
EMIR				S	Sn	20 50 22.1	-3.8
RRL	Cesana Torines	9.21	342	P	P	20 48 41.2	-0.4
FENE	Fenestrelle	9.25	343	P	P	20 48 41.8	-0.3
EBR	Ebro Roquetas	9.32	303	*e*PN	P	20 48 45.0	+1.9
EBR				*e*SN	Sn	20 50 29.4	+0.7
RSP	Reno Superiore	9.32	344	P	P	20 48 43.5	+0.4
BNI	Bardonecchia	9.36	342	*e*P	P	20 48 42.4	-1.3
ORIF	Oris-en-Rattie	9.46	338	*e*Pn	P	20 48 41.0	-4.1
ORIF				*e*P		20 48 46.2	
ORIF				*e*R			
	4μm,23.1s						
LASF	Ste Croix	9.49	328	*e*Pn	P	20 48 41.8	-3.6
LASF				*e*Sn	Sn	20 50 21.8	-11
	72nm,1.2s						
ERTA	Horta de San J	9.49	303	P	P	20 48 46.0	+0.6
ERTA				S	Sn	20 50 30.9	-2.0
ERTA	Horta de San J	9.49	303	P	P	20 48 46.0	+0.6
TRAV		9.56	347	P	P	20 48 48.0	+1.5
CART	Cartagena	9.59	282	*e*P	P	20 48 45.7	-1.1
CART	Cartagena	9.59	282	*e*P	P	20 48 45.7	-1.1
LSD	Ceresole Reale	9.63	344	P	P	20 48 48.8	+1.4
ORO	Oropa	9.63	348	P	P	20 48 48.3	+0.9
ORX	Oropa	9.64	348	P	P	20 48 49.5	+2.0
MTLF	Montolieu	9.72	320	*e*Pn	P	20 48 45.5	-3.1
MTLF				*e*Sn	Sn	20 50 28.1	-10
	38nm,0.8s						
VAI	Varese	9.75	351	P	P	20 48 50.5	+1.5
LPG	La Plagne	9.76	343	*e*Pn	P	20 48 45.3	-3.9
LPG				*e*P		20 48 50.9	
LPL	La Plagne	9.78	343	*e*Pn	P	20 48 46.1	-3.4
LPL				*e*P		20 48 50.9	
EMUR	La Murta	9.80	283	P	P	20 48 50.1	+0.4
	18nm,0.4s						
EMUR				S	Sn	20 50 41.1	+0.5
EMOS	Mosqueruela	9.81	298	P	P	20 48 50.2	+0.4
	13nm,0.5s						
EMOS				S	Sn	20 50 41.9	+1.1
VIVF	Saint-Julien-l	9.81	333	*e*Pn	P	20 48 46.4	-3.4
VIVF				*e*Sn	Sn	20 50 30.5	-10
	42nm,1.1s						
MABI	Malga Bissina	9.82	359	P	P	20 48 51.7	+1.8
MCGN	Macugnaga	9.95	348	P	P	20 48 53.3	+1.5
RSL	Roselend	9.97	343	*e*P	P	20 48 54.2	+2.2
SKO	Skopje	10.03	52	*i* Pn	P	20 48 54.0	+1.2
VISS	Visnje	10.03	16	*e*Pn	P	20 48 55.0	+2.2
VOY	Vojsko	10.06	12	*e*(Pn)	P	20 48 53.3	+0.1
LJU	Ljubljana	10.19	15	*e*Pn	P	20 48 55.0	0.0
APPI	Appiano	10.24	1	P	P	20 48 57.4	+1.6
BRMO	Bormio	10.24	358	P	P	20 48 57.3	+1.6
BRMO				P		20 48 58.2	
LEGS	Legarje	10.28	18	*e*Pn	P	20 48 55.2	-1.0
ESAC	San Caprasio	10.38	305	P	P	20 48 58.4	+0.8
	105nm,0.9s						
ESAC				S	S	20 50 52.9	-1.7
EBIE	Bielsa	10.49	311	P	P	20 48 58.9	-0.2
	2.8nm,0.4s						
EBIE	Bielsa	10.49	311	P	P	20 48 58.9	-0.2
	2.8nm,0.4s,SNR=7.9						
DIVS	Divcibare	10.51	39	*e*P	P	20 48 59.0	-0.5
ENIJ	Nijar	10.53	278	P	P	20 48 59.1	-0.6
ENIJ				pmax	pmax		
	comp=Z,11nm,0.4s						
ENIJ	Nijar	10.53	278	P	P	20 48 59.1	-0.5
	comp=Z,10nm,0.4s						
EPF	Esparros	10.57	313	*e*Pn	P	20 48 57.8	-2.4
LBL	Lubilhac	10.68	330	*e*P	P	20 48 59.7	-2.0
EVIA	Vianos	10.89	287	P	P	20 49 07.0	+2.4
EVIA				pmax	pmax		
	comp=Z,40nm,0.6s						
EVIA	Vianos	10.89	287	P	P	20 49 07.0	+2.4
	comp=Z,40nm,0.6s						
CAF	Calviac	10.95	325	*e*Pn	P	20 49 04.3	-1.1
CABF	La Chapelle	10.97	342	*e*Pn	P	20 49 04.6	-1.1
SQTA	Sankt Quirin	10.98	1	⇑*i*P	P	20 49 07.1	+1.2
	comp=Z,123nm,1.8s						
SQTA	Sankt Quirin	10.98	1	⇑*i*P	P	20 49 07.1	+1.2
SQTA				pmax	pmax		
	comp=Z,123nm,1.8s						
KBA	Koelnbreinsper	11.00	9	⇓*i*P	P	20 49 06.2	+0.1
	comp=Z,41nm,1.2s						
KBA	Koelnbreinsper	11.00	9	⇓*i*P	P	20 49 06.2	+0.1
KBA				pmax	pmax		
	comp=Z,41nm,1.2s						
ETSF	Etsaut	11.04	311	*e*Pn	P	20 49 04.8	-1.8
ETSF				*e*Sn	S	20 50 59.2	-12
	comp=Z,38nm,0.9s						
WTTA	Wattenberg	11.04	3	⇑*i*P	P	20 49 08.0	+1.3
	comp=Z,35nm,1.0s						
WTTA	Wattenberg	11.04	3	⇑*i*P	P	20 49 08.0	+1.3
WTTA				pmax	pmax		
	comp=Z,35nm,1.0s						
DAVA	Damuels	11.07	357	⇑*i*P	P	20 49 08.2	+1.1
	comp=Z,81nm,1.6s						
EBER	Berja	11.07	278	P	P	20 49 07.5	+0.4
	comp=Z,14nm,0.7s						
EBER				S	S	20 51 11.4	-0.3
MOTA	Moosalm	11.11	1	⇓*i*P	P	20 49 07.8	+0.2
	comp=Z,37nm,1.3s						
MOTA	Moosalm	11.11	1	⇓*i*P	P	20 49 07.8	+0.2
MOTA				pmax	pmax		
	comp=Z,37nm,1.3s						
WATA	Walderalm	11.11	3	⇑*i*P	P	20 49 08.5	+0.9
	comp=Z,81nm,1.4s						
WATA	Walderalm	11.11	3	⇑*i*P	P	20 49 08.5	+0.9
WATA				pmax	pmax		
	comp=Z,81nm,1.4s						
PLDF	La Plantade	11.15	333	*e*P	P	20 49 06.9	-1.2
PYM	Petit Puy Mans	11.20	331	*e*P	P	20 49 10.4	+1.6
EQES	Quesada	11.24	282	P	P	20 49 11.3	+1.8
	comp=Z,167nm,0.9s						
RHK1	Bakonya	11.25	27	*e*P	P	20 49 09.0	-0.5
BEO	Belgrade	11.26	37	⇑*i*P	P	20 49 11.2	+1.5
AGO	Saint Agoulin	11.40	332	*e*P	P	20 49 13.4	+1.8
UBR	Uberruh	11.46	357	P	P	20 49 13.3	+1.0
RJF	Les Rejaudoux	11.49	325	*e*Pn	P	20 49 10.5	-2.3
RJF				*e*R			
	comp=Z,3μm,23.8s						
BBS	Basel-Blauen	11.50	349	*e*P	P	20 49 14.0	+1.1
LOMF	Lomont	11.51	346	*e*P	P	20 49 13.8	+0.8
SISB	Singen-Sch Ber	11.53	354	P	P	20 49 14.2	+0.8
ARSA	Arzberg	11.55	16	⇓*i*P	P	20 49 12.7	-0.9
	comp=Z,29nm,1.3s						
SJPF	Ste Jean	11.56	310	*e*Pn	P	20 49 11.9	-1.9
SJPF				*e*Sn	S	20 51 11.6	-12
	comp=Z,16nm,0.7s						
LFF	La Frestale	11.60	322	*e*Pn	P	20 49 12.5	-1.8
LFF				*e*Sn	S	20 51 13.2	-11
	comp=Z,23nm,0.7s						
SMF	Signal de Mont	11.65	335	*e*Pn	P	20 49 14.6	-0.4
EALK	Alkurruntz	11.79	310	P	P	20 49 17.2	+0.3
	comp=Z,117nm,1.2s						
EALK				S	S	20 51 27.0	-2.3
FELD	Feldberg	11.83	351	*e*P	P	20 49 19.1	+1.8
EBAN	Banos Encina	11.83	284	P	P	20 49 18.1	+0.6
EBAN				pmax	pmax		
	comp=Z,46nm,1.0s						
EBAN	Banos Encina	11.83	284	P	P	20 49 18.1	+0.6
	comp=Z,46nm,1.0s						
MOA	Molln	11.88	11	⇑*i*P	P	20 49 18.6	+0.5
	comp=Z,38nm,1.0s						
GUT	Gutenstein	11.90	354	P	P	20 49 18.6	+0.3
KIZ	Kirchzarten	11.92	350	P	P	20 49 19.3	+0.7
BGF	Bois d’Agland	11.93	332	*e*Pn	P	20 49 17.7	-1.1
MOF	Molkenrain	11.93	348	*e*P	P	20 49 19.0	+0.2
AVF	Avril sur Loir	11.95	334	*e*Pn	P	20 49 16.5	-2.5
HINF	Hinteralfeld	11.95	347	*e*Pn	P	20 49 17.1	-1.9
TCF	Toulx Ste Croi	11.96	330	*e*Pn	P	20 49 16.5	-2.6
ELOJ	Sierra Loja	12.08	279	P	P	20 49 25.1	+4.3
ELOJ				pmax	pmax		
	comp=Z,16nm,0.8s						
ELOJ	Sierra Loja	12.08	279	P	P	20 49 25.1	+4.3
	comp=Z,16nm,0.8s						
SSF	Saint Saulge	12.13	335	*e*Pn	P	20 49 17.1	-4.3
ELUQ	Luque	12.18	281	P	P	20 49 23.3	+1.2
ELUQ				pmax	pmax		
	comp=Z,40nm,0.8s						
ELUQ	Luque	12.18	281	P	P	20 49 23.2	+1.1
	comp=Z,40nm,0.8s						
ESDC	Sonseca Array	12.19	291	P	P	20 49 23.1	+0.9
ESLA	Sonseca Array	12.19	291	*e*P	P	20 49 21.6	-0.6
	comp=Z,7.1nm,0.8s						
HAU	Haudompre	12.23	346	*e*Pn	P	20 49 20.7	-2.1
HAU				*e*R			
	comp=Z,2μm,21.2s						
BUCH	Bad Urach	12.26	355	P	P	20 49 23.4	+0.2
ECH	Echery	12.28	348	*e*P	P	20 49 21.4	-2.1
WLS	Welschbruch	12.44	349	*e*P	P	20 49 27.2	+1.6
CDF	Champ du Feu	12.46	349	*e*Pn	P	20 49 23.0	-2.8
EADA	Adamuz	12.46	284	P	P	20 49 27.9	+2.0
	comp=Z,2.7nm,0.5s						
THEF	They Montfort	12.51	345	*e*P	P	20 49 27.0	+0.4
GUD	Guadarrama	12.56	295	P	P	20 49 28.2	+1.0
GUD				pmax	pmax		
	comp=Z,24nm,0.8s						
GUD	Guadarrama	12.56	295	P	P	20 49 28.2	+0.9
	comp=Z,24nm,0.8s						
STU	Stuttgart	12.59	355	*e*P	P	20 49 25.7	-1.9
EMIJ	Mijas	12.60	276	P	P	20 49 30.8	+3.1
SFTF	Sexfontaines	12.71	342	*e*Pn	P	20 49 27.8	-1.4
	baz=161						
LANF	Langenberg	12.94	351	P	P	20 49 34.7	+2.5
MEZF	Maizieres J’vi	12.98	343	*e*Pn	P	20 49 31.3	-1.6
	baz=163						
RFYF	Reffroy	13.01	344	*e*Pn	P	20 49 31.6	-1.5
ELAN	Lanestosa	13.02	307	P	P	20 49 33.8	+0.5
	comp=Z,32nm,0.6s						
ELAN				S	S	20 51 59.1	+0.1
KHC	Kasperske Hory	13.05	8	*e*P	P	20 49 33.1	-0.6
KHC				MLR	MLR		
	comp=Z,2μm,16.5s						
KHC	Kasperske Hory	13.05	8	*e*P	P	20 49 33.1	-0.6
KHC				*e*P		20 49 41.0	
KHC				AMS	AMS	20 55 00.0	
	comp=Z,2μm,16.5s						
SMOL	Smolenice	13.20	19	*e*P	P	20 49 45.8	+10
SMOL	Smolenice	13.20	19	*e*	P	20 49 45.8	+10
MFF	Saint Martin d	13.23	325	*e*Pn	P	20 49 33.2	-2.9
GRA2	Grafenberg Arr	13.42	1	*e*P	P	20 49 36.6	-2.0
PSZ	Piszkesteto	13.46	27	*e*P	P	20 49 39.2	+0.1
PSZ				pmax	pmax		
	comp=Z,17nm,0.9s						
PSZ	Piszkesteto	13.46	27	*e*P	P	20 49 39.2	+0.1
	comp=Z,17nm,0.9s						
PSZ	Piszkesteto	13.46	27	*e*P	P	20 49 41.7	+2.6
PSZ	Piszkesteto	13.46	27	*e*P	P	20 49 39.2	+0.1
	comp=Z,17nm,0.9s						
VYHS	Vyhne	13.59	23	*e*PN	P	20 49 36.7	-4.1
VYHS				*e*		20 49 50.2	
VYHS				*e*		20 50 42.8	
RUP	Ruppelstein	13.74	350	P	P	20 49 45.0	+2.2
ABH	Alteburg	13.85	351	P	P	20 49 47.4	+3.1
WLF	Walferdange	13.86	347	*e*P	P	20 49 44.6	+0.3
WLF				pmax	pmax		
	comp=Z,149nm,1.9s						
WLF	Walferdange	13.86	347	*e*P	P	20 49 44.6	+0.3
	comp=Z,149nm,1.9s						
WLF	Walferdange	13.86	347	*e*P	P	20 49 44.6	+0.3
	comp=Z,149nm,1.9s						
PRU	Pruhonice	14.01	10	*e*P	P	20 49 47.4	+1.1
PRU				AMS	AMS	20 55 30.0	
	comp=Z,1μm,18.3s						
NKC	Novy Kostel	14.04	4	AMS	AMS	20 56 40.0	
	comp=Z,3μm,10.7s						

EMIN	Mina Concepcio	14.09	281	P	P	20 49 49.7	+2.2
	comp=Z,8.0nm,0.9s						
KECS	Kecovo	14.15	27	*e*P	P	20 49 58.3	+10
EARI	Arriondas	14.22	305	P	P	20 49 51.5	+2.5
	comp=Z,22nm,0.7s						
SNX	Sinaia	14.35	46	P	P	20 49 57.3	+6.5
MORC	Moravsky Berou	14.39	18	*e*P	P	20 49 50.2	-1.1
MORC				pmax	pmax		
	comp=Z,53nm,1.0s						
MORC	Moravsky Berou	14.39	18	*e*P	P	20 49 50.2	-1.0
	comp=Z,53nm,1.0s						
MORC	Moravsky Berou	14.39	18	*e*P	P	20 49 50.2	-1.1
	comp=Z,53nm,1.0s						
EBAD	Badajoz	14.41	285	P	P	20 49 55.3	+3.7
	comp=Z,8.0nm,0.9s						
MOX	Moxa	14.42	2	*e*P	P	20 49 50.8	-0.9
MOX				pmax	pmax		
	comp=Z,48nm,1.6s						
MOX	Moxa	14.42	2	*i* P	P	20 49 50.8	-0.9
	comp=Z,logA/T=1.5						
MOX	Moxa	14.42	2	*e*P	P	20 49 50.8	-0.9
	comp=Z,48nm,1.6s						
GIVF	Givet	14.54	344	*e*P	P	20 49 54.7	+1.5
PVCC	Panska Ves	14.54	9	*e*P	P	20 49 56.9	+3.6
PVCC				AMS	AMS	20 56 10.0	
	comp=Z,2µm,16.1s						
DOU	Dourbes	14.58	344	P	P	20 49 53.6	-0.2
OKC	Ostrava-Krasne	14.60	19	*e*P	P	20 49 53.7	-0.3
OKC				MLR	MLR		
	comp=Z,2µm,11.8s						
OKC	Ostrava-Krasne	14.60	19	*e*P	P	20 49 53.7	-0.3
OKC				*e*pP		20 50 00.9	
OKC				AMS	AMS	20 58 10.0	
	comp=Z,2µm,11.8s						
BAIF	Baives	14.64	343	*e*P	P	20 49 56.0	+1.5
DPC	Dobruska-Polom	14.66	14	*e*P	P	20 49 55.8	+1.0
DPC				AMS	AMS	20 56 50.0	
	comp=Z,1µm,15.6s						
MLR	Muntele Rosu	14.68	46	P	P	20 49 59.5	+4.4
UPC	Upice	14.75	13	*e*P	P	20 49 56.7	+0.7
LDF	La Druitiere	14.76	330	*e*Pn	P	20 49 53.7	-2.4
LDF				*e*P		20 49 58.3	
PBRG	Braganca	14.76	297	*e*P	P	20 49 58.9	+2.7
	comp=Z,46nm,1.8s						
MEM	Membach	14.79	348	P	P	20 49 58.1	+1.6
	comp=Z,47nm,1.8s						
ECAL	Calabor	14.79	298	P	P	20 49 59.5	+2.9
	comp=Z,47nm,1.0s						
BRG	Berggiesshubel	14.80	8	*e*P	P	20 49 58.0	+1.3
BRG				pmax	pmax		
	comp=Z,20nm,1.6s						
BRG	Berggiesshubel	14.80	8	*e*P	P	20 49 58.0	+1.3
	comp=Z,20nm,1.6s						
RAC	Raciborz	14.83	19	*e*P	P	20 50 03.7	+6.6
CRVS	Cervenica-Dubn	14.86	28	*i* P	P	20 50 04.4	+6.9
CRVS				*e*		20 51 07.2	
NIE	Niedzica	14.88	25	*e*P	P	20 50 00.0	+2.3
PCBR	Castelo Branco	14.89	290	*e*P	P	20 49 57.8	0.0
	comp=Z,18nm,1.7s						
GRR	Gorron	14.90	328	*e*P	P	20 49 59.9	+2.0
ULDT	Uludag	14.90	69	*i* P	P	20 50 04.3	+6.3
HGN	Heimansgroeve	14.95	348	*e*P	P	20 49 58.7	0.0
	comp=Z,38nm,1.4s						
MTE	Manteigas	15.03	292	*e*P	P	20 50 02.9	+3.2
	comp=Z,45nm,1.6s						
MTE				*e*LQ		20 52 06.0	
MTE				*e*LR	LR	20 54 08.9	
	comp=Z,2µm,19.1s						
MTE	Manteigas	15.03	292	*e*P	P	20 50 01.3	+1.6
	comp=Z,134nm,1.8s						
FLN	La Foliniere	15.03	330	*e*Pn	P	20 49 57.2	-2.5
FLN				*e*P		20 50 02.2	
	baz=148						
FLN				*e*R			
	comp=Z,3µm,23.1s						
PBEJ	Beja	15.04	282	*e*P	P	20 50 00.0	+0.1
KSP	Ksiaz	15.12	13	*e*P	P	20 50 01.5	+0.6
KSP				*e*pP		20 50 09.4	
KSP	Ksiaz	15.12	13	*e*P	P	20 50 01.6	+0.7
CLL	Collm	15.15	5	*e*P	P	20 49 59.0	-2.2
CLL				pmax	pmax		
	comp=Z,23nm,1.7s						
CLL	Collm	15.15	5	*e*P	P	20 49 59.0	-2.2
	comp=Z,23nm,1.7s						
CLL				*i*		20 50 07.1	
CLL	Collm	15.15	5	P	P	20 49 59.0	-2.2
CLL				*i*		20 50 02.7	
CLL				*i*		20 50 07.1	
CLL				*i*		20 50 17.5	
CLL				*i*		20 50 25.5	
EVO	Evora	15.17	284	*e*Pn	P	20 50 01.3	-0.3
EVO				*e*R			
	comp=Z,2µm,25.4s						
KOLS	Kolonicke sedl	15.21	30	*i* P	P	20 50 08.2	+6.2
KOLS				*e*		20 51 14.5	
ERUA	La Rua	15.22	299	P	P	20 50 05.9	+3.7
PVRL	Vila Real	15.33	295	*e*P	P	20 50 00.2	-3.5
	comp=Z,18nm,1.6s						
PVIS	Viseu	15.35	293	*e*P	P	20 50 06.7	+2.8
OJC	Ojcow	15.41	22	*e*P	P	20 50 05.2	+0.6
OJC				*e*S	S	20 52 56.9	+1.3
HARR	Harsova	15.48	52	P	P	20 50 11.4	+5.8
EPON	Pontenova	15.53	303	P	P	20 50 11.0	+4.7
	comp=Z,11nm,0.8s						
BURAR	Bucovina Array	15.58	39	P	P	20 50 13.0	+6.2
PTEO	Sao Teotonio	15.72	281	*e*P	P	20 50 07.5	-1.2
	comp=Z,58nm,1.8s						
ELOB	Lobios	15.72	297	P	P	20 50 11.3	+2.6
	comp=Z,15nm,1.0s						
KWP	Kalwaria	15.93	29	*e*P	P	20 50 15.5	+4.1
KWP				MLR	MLR		
	comp=Z,6µm,33.7s						
KWP	Kalwaria	15.93	29	*e*P	P	20 50 15.5	+4.1
	comp=Z,7.8nm,1.6s						
WTSB	Winterswijk	15.99	351	*e*P	P	20 50 12.1	0.0
	comp=Z,117nm,1.8s						
ESKT	Eskisehir	16.13	72	*i* P	P	20 50 18.2	+4.2
IAS	Iasi	16.57	43	P	P	20 50 20.7	+1.3
WIT	Witteveen	16.84	351	*e*P	P	20 50 26.3	+3.5
KIS	Kishinev	17.17	46	*e*P	P	20 50 26.0	-1.1
GKP	Gorka Klasztor	17.62	13	*e*P	P	20 50 34.9	+2.3
GKP				MLR	MLR		
	comp=Z,4µm,33.9s						
BALT	Daday	18.31	66	*i* P	P	20 50 43.5	+2.2
MEST	Erdemli	18.75	82	*i* P	P	20 50 47.7	+1.0
COP	Copenhagen	19.49	3	*e*P	P	20 50 55.0	-0.3
COP				pmax	pmax		
	comp=Z,36nm,0.8s						
COP	Copenhagen	19.49	3	*e*P	P	20 50 55.0	-0.3
	comp=Z,36nm,0.8s						
COP	Copenhagen	19.49	3	*i* P	P	20 50 55.0	-0.3
	comp=Z,36nm,0.8s						
SIM	Simferopol’	19.65	57	P	P	20 51 03.2	+6.0
SIM				pmax	pmax		
	comp=Z,20nm,1.1s						
SUW	Suwalki	19.74	22	*e*P	P	20 50 55.8	-2.4
SUW				MLR	MLR		
	comp=Z,4µm,30.8s						
MUD	Monsted U’grnd	20.26	357	*e*P	P	20 51 01.1	-2.6
MUD				pmax	pmax		
	comp=Z,29nm,1.3s						
MUD	Monsted U’grnd	20.26	357	*e*P	P	20 51 01.1	-2.6
	comp=Z,29nm,1.3s						
MUD	Monsted U’grnd	20.26	357	*i* P	P	20 51 01.1	-2.6
	comp=Z,29nm,1.3s						
EIL	Elat	21.23	101	*e*P	P	20 51 12.8	-1.0
	comp=Z,26nm,1.2s,mb4.4						
GZT	Gaziantep	21.40	79	*i* P	P	20 51 15.8	+0.3
MNK	Minsk	21.72	27⇓	*e*P	P	20 51 13.0	-5.6
MNK				*e*		20 51 24.0	
ANN	Anapa	21.87	59	*e*P	P	20 51 26.2	+6.0
ANN				pmax	pmax		
	comp=Z,122nm,1.5s,mb5.1						
MALT	Malatya	22.02	76	*e*P	P	20 51 21.8	+0.1
MALT				pmax	pmax		
	comp=Z,60nm,1.8s,mb4.7						
MALT	Malatya	22.02	76	*e*P	P	20 51 21.8	+0.1
	comp=Z,60nm,1.8s,mb4.7						
ELZG	Elazig	22.44	76	*i* P	P	20 51 28.5	+2.6
SOC	Sochi	23.25	63	*e*P	P	20 51 32.0	-1.8
SOC				*e*S	S	20 55 45.2	+4.0
SOC				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.1						
SOC				pmax	pmax		
	comp=N,15nm,1.0s						
SOC				pmax	pmax		
	comp=E,47nm,1.0s						
SOC				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.5						
SOC				MLR	MLR		
	comp=N,2µm,24.0s,MS4.6						
SOC				MLR	MLR		
	comp=E,2µm,22.0s,MS4.6						
NAO01	NORSAR Array S	24.63	0	*e*P	P	20 51 45.2	-1.8
	comp=E,12nm,0.8s,mb4.5						
NB2	NORSAR Subarra	24.83	0	P	P	20 51 47.2	-1.7
	comp=E,24nm,1.1s,mb4.6,baz=160,slow=10						
NB2	NORSAR Subarra	24.83	0	P	P	20 51 47.2	-1.7
NB2				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.6						
VOR	Voronezh	25.40	44	*e*P	P	20 51 54.0	-0.4
VOR				pmax	pmax		
	comp=Z,110nm,2.0s,mb5.0						
KIV	Kislovodsk	25.43	63	*e*P	P	20 51 55.7	+0.9
KIV				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.7						
KIV				MLR	MLR		
	comp=N,1µm,23.0s,MS4.7						
KIV				MLR	MLR		
	comp=E,2µm,23.0s,MS4.7						
KIV				MLR	MLR		
	comp=Z,2µm,23.0s,MS4.7						
KIV	Kislovodsk	25.43	63	*e*P	P	20 51 53.9	-0.9
	comp=Z,48nm,1.3s,mb4.9						
OBN	Obninsk	25.82	35α	*i*P	P	20 51 56.3	-2.0
OBN				*e*		20 52 07.9	
OBN				*e*		20 52 47.6	
OBN				pmax	pmax		
	comp=Z,118nm,1.7s,mb5.1						
OBN	Obninsk	25.82	35	*e*P	P	20 51 56.3	-2.0
	comp=Z,234nm,1.8s,mb5.4						
GOF	Gofitskoye	25.82	60	*e*P	P	20 52 00.0	+1.5
GOF				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.1						
MSL	Mosul	25.93	80	*e*P	P	20 52 01.5	+1.9
MOS	Moscow	26.68	35α	*i*P	P	20 52 05.3	-0.9
MOS				*e*		20 52 20.7	
MOS				*e*		20 52 46.7	
MOS				*e*PPP	PPP	20 52 57.3	-5.4
MOS				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.3						
MOS				pmax	pmax		
	comp=Z,106nm,0.9s,mb5.4						
FINES	FINESS Array B	27.01	16	P	P	20 52 10.3	+1.1
BHD	Baghdad	27.63	86	*e*P	P	20 52 17.5	+2.3
KAF	Kangasniemi	27.65	16	*e*p	P	20 52 12.1	-3.0
	comp=Z,10nm,1.0s,mb4.4,baz=211,slow=8.9						
KAF	Kangasniemi	27.65	16	*e*P	P	20 52 12.1	-3.0
KAF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
JOF	Joensuu	29.55	19	*e*p	P	20 52 30.3	-1.9
APA	Apatity	33.91	15⇓	*e*P	P	20 53 14.3	+4.0
APA				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.8						
KEV	Kevo	34.72	10	*e*p	P	20 53 14.4	-2.9
	comp=Z,22nm,0.9s,mb5.1						
KEV	Kevo	34.72	10	*e*P	P	20 53 14.4	-2.9
KEV				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
ARU	Arti	37.67	42	P	P	20 53 41.7	-0.7
	comp=Z,90nm,1.5s,mb5.3,SNR=9.1						
ARU	Arti	37.67	42⇑	*i*P	P	20 53 32.5	-10
ARU				*e*		21 03 53.9	
ARU				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
SUMG	Summit	43.95	341	*e*P	P	20 54 34.0	+0.1
	comp=Z,20nm,1.1s,mb4.8						
KMBO	Kilima Mbogo	44.55	141	*e*P	P	20 54 40.7	+1.2
KMBO				pmax	pmax		
	comp=Z,12nm,1.4s						
KMBO				MLR	MLR		
	comp=Z,2µm,21.0s						
KMBO	Kilima Mbogo	44.55	141	*e*P	P	20 54 40.7	+1.2
	comp=Z,12nm,1.4s,mb4.5						
KMBO				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
EKS2	Erkin-Say	48.03	62	P	P	20 55 07.4	+0.8
	SNR=13						
AAK	Ala-Archa	48.55	62	P	P	20 55 11.3	+0.6
	SNR=6.5						
AAK	Ala-Archa	48.55	62	*i* P	P	20 55 10.0	-0.6
AAK				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.9						
CHMS	Chumysh	48.64	61	P	P	20 55 11.5	+0.2
	SNR=13						
UCH	Uchtor	48.67	62	P	P	20 55 12.7	+1.2
	SNR=16						
KBK	Karagaybulak	48.87	62	P	P	20 55 13.2	+0.2
	SNR=7.9						
KZA	Kyzart	49.23	62	P	P	20 55 17.5	+1.6
	SNR=21						
TKM2	Tokmak 2	49.26	61	P	P	20 55 16.3	+0.2
	SNR=9.1						
KURK	Kurchatov	49.56	51*c*	*i*P	P	20 55 17.0	-1.3
KSH	Kashi	50.50	65	*e*P	P	20 55 26.2	+0.5
KSH				*e*AP	pP	20 55 31.3	+1.3
KSH				*e*XP	sP	20 55 34.1	+2.4
KSH				*e*PCP	PcP	20 56 44.5	+0.6
KSH				*e*PP	PP	20 57 22.5	+0.1
KSH				*e*SCP		21 00 37.8	
KSH				*e*S	S	21 02 39.0	+1.3
KSH				*e*XS		21 02 48.0	
KSH				*e*PS	PS	21 02 57.2	+9.4
KSH				*e*SCS	ScS	21 05 13.6	+0.2
KSH				*e*SS	SS	21 06 08.4	-0.8
KSH				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.7						
KSH				AMB	AMB		
	comp=Z,270nm,5.4s						
KSH				LR	LR		
	comp=N,380nm,13.4s						
KSH				LR	LR		
	comp=E,350nm,8.7s						
NVS	Novosibirsk	51.57	45⇑	*i*P	P	20 55 32.2	-1.4
NVS				*i*		20 57 27.2	
NVS				pmax	pmax		
	comp=Z,47nm,1.8s,mb5.1						
NVS				pmax	pmax		
	comp=N,13nm,2.0s						
NVS				pmax	pmax		
	comp=E,10.0nm,0.9s						
SDNR	Sundarnagar	54.16	74	*e*P	P	20 55 53.2	+0.1
SCHQ	Schefferville	54.57	316	*e*P	P	20 55 52.8	-3.0
	comp=E,8.1nm,0.9s,mb4.8						
WMQ	Urumqi	57.37	57	P	P	20 56 15.0	-1.2
WMQ				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.7						
KOLN	Koldanda	60.98	75	*e*P	P	20 56 40.0	-1.3
	comp=Z,59nm,1.5s,mb5.5						
GKN	Gorkha	61.68	75	*e*P	P	20 56 44.6	-1.5
	comp=Z,127nm,1.5s,mb5.8						
DMN	Daman	62.23	75	*e*P	P	20 56 48.7	-1.1
	comp=Z,153nm,1.4s,mb5.9						
KKN	Kakani	62.28	75	*e*P	P	20 56 48.8	-1.3
	comp=Z,76nm,1.4s,mb5.6						
PKI	Pulchoki	62.48	75	*e*P	P	20 56 50.7	-0.8
	comp=Z,118nm,1.2s,mb5.9						
LBTB	Lobatse	62.49	165	*e*P	P	20 56 50.0	-1.5
LBTB				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
MOY	Mondy	62.67	45	*e*P	P	20 56 53.0	+0.7
MOY				pmax	pmax		
	comp=Z,40nm,2.3s,mb5.1						
JIRN	Jiri	63.05	74	*e*P	P	20 56 54.4	-0.8
	comp=Z,124nm,1.4s,mb5.8						
TIXI	Tiksi	64.03	18	*e*P	P	20 56 59.9	-1.1
TIXI				pmax	pmax		
	comp=Z,22nm,1.9s,mb4.9						
TLY	Talaya	64.15	44	P	P	20 57 02.4	+0.3
	comp=Z,226nm,0.9s,SNR=24						
TLY	Talaya	64.15	44	*e*P	P	20 57 02.3	+0.2
TLY				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.4						
TLY	Talaya	64.15	44	*e*P	P	20 57 01.8	-0.3
	comp=Z,36nm,0.9s,mb5.4						
IRK	Irkutsk	64.25	43	*e*P	P	20 57 01.4	-1.3
IRK				pmax	pmax		
	comp=Z,56nm,1.5s,mb5.4						
ZAK	Zakamensk	64.53	45⇑	*i*P	P	20 57 04.3	-0.2
ZAK				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.8						
LSA	Lhasa	65.88	70	P	P	20 57 13.0	-0.6
BOD	Bodaibo	66.51	35	*e*P	P	20 57 14.8	-2.3
BOD				pmax	pmax		
	comp=Z,42nm,1.9s,mb5.1						
GTA	Gaotai	67.45	57	*e*P	P	20 57 23.3	-0.1
GTA				AP	pP	20 57 26.5	-1.4
GTA				XP	sP	20 57 28.4	-1.1
GTA				PP	PP	20 59 55.1	+1.1
GTA				PPP	PPP	21 01 34.0	+3.0
GTA				SCP		21 01 50.3	
GTA				S	S	21 06 23.0	+5.6
GTA				XS		21 06 30.9	
GTA				SCS	ScS	21 07 17.8	+0.3
GTA				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,474nm,4.6s						
GTA				LR	LR		
	comp=N,208nm,20.9s,MS4.7						
GTA				LR	LR		
	comp=E,398nm,20.5s,MS4.7						
GTA				LR	LR		
	comp=Z,382nm,16.7s,MS4.7						
ULN	Ulaanbaatar	67.90	46	*e*P	P	20 57 24.6	-1.5
ULN				pmax	pmax		
	comp=Z,47nm,1.8s,mb5.2						
ULN				MLR	MLR		
	comp=Z,481nm,21.0s,MS4.7						
ULN	Ulaanbaatar	67.90	46	*e*P	P	20 57 24.6	-1.4
	comp=Z,46nm,1.8s,mb5.2						
ULN				LR	LR		
	comp=Z,481nm,21.0s,MS4.7						
BLA	Blacksburg	70.12	302	*e*P	P	20 57 38.6	-1.3
BLA				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2						
BLA				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
BLA	Blacksburg	70.12	302	*e*P	P	20 57 38.5	-1.4
	comp=Z,22nm,0.7s,mb5.2						
BLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
ACSO	Alum Creek Sta	70.29	306	P	P	20 57 39.4	-1.6
	comp=Z,17nm,0.8s,mb5.0						
ACSO				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
YAK	Yakutsk	70.42	26	*i* P	P	20 57 39.9	-1.4
YAK				pmax	pmax		
	comp=Z,35nm,1.9s,mb5.0						
LZH	Lanzhou	71.89	58	*e*P	P	20 57 50.5	-0.1
LZH				AP	pP	20 58 00.5	+5.4
LZH				XP	sP	20 58 03.5	+6.8
LZH				PP	PP	21 00 31.5	-0.6
LZH				*e*S	S	21 07 08.5	-1.1
LZH				XS		21 07 16.5	
LZH				*e*SS	SS	21 11 47.0	-1.0
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,108nm,4.5s						
LZH				LR	LR		
	comp=N,600nm,13.4s						
LZH				LR	LR		
	comp=Z,750nm,15.7s,MS5.1						
LZH	Lanzhou	71.89	58	*e*P	P	20 57 50.5	-0.1
LZH				*PP	pP	20 58 00.5	+5.4
LZH				*SP	sP	20 58 03.5	+6.8
LZH						21 00 31.5	
LZH				*e*S	S	21 07 08.5	-1.1
LZH				*e*SS	SS	21 11 47.0	-1.0
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.0						
LZH				MLR	MLR		
	comp=Z,750nm,15.7s,MS5.1						
LZH	Lanzhou	71.89	58	*e*P	P	20 57 50.5	-0.1
	comp=Z,28nm,1.5s,mb5.0						
LZH				pP	pP	20 58 00.5	+5.4
LZH				sP	sP	20 58 03.5	+6.8
LZH				PP	PP	21 00 31.5	-0.6
LZH				*e*S	S	21 07 08.5	-1.1
LZH				sS		21 07 16.5	
LZH				*e*SS	SS	21 11 47.0	-1.0
LZH				LR	LR		
	comp=Z,750nm,15.7s,MS5.1						
YKW3	Yellowknife Ar	72.29	337	*e*P	P	20 57 51.3	-1.2
ULM	Lac du Bonnet	72.44	320	*e*P	P	20 57 50.9	-2.8
	comp=Z,14nm,1.1s,mb4.8						
WCI	Wyandotte Cave	73.54	305	P	P	20 58 01.2	+0.9
WCI				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
CD2	Chengdu	74.60	63	*e*P	P	20 58 04.5	-2.1
WVT	Waverly	75.72	304	*e*P	P	20 58 12.7	-0.2
WVT				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
XAN	Xi’an	76.49	58	P	P	20 58 16.6	-0.7
XAN				AP	pP	20 58 20.5	-1.3
XAN				AMB	AMB		
	comp=Z,15nm,1.4s,mb4.7						
KMI	Kunming	77.04	68	P	P	20 58 19.6	-0.9
KMI				AP	pP	20 58 23.2	-1.8
KMI				S	S	21 08 08.4	+1.2
KMI				AMB	AMB		
	comp=Z,5.0nm,2.0s,mb4.1						
KMI				AMB	AMB		
	comp=Z,299nm,11.3s						
KMI				LR	LR		
	comp=Z,250nm,45.5s,MS4.2						
KMI	Kunming	77.04	68	P	P	20 58 19.6	-0.9
KMI				S	S	21 08 08.4	+1.2
KMI				pmax	pmax		
	comp=Z,5.0nm,2.0s,mb4.1						
KMI				MLR	MLR		
	comp=Z,250nm,45.5s,MS4.2						
KMI	Kunming	77.04	68	P	P	20 58 19.6	-0.9
	comp=Z,5.0nm,2.0s,mb4.1						
KMI				pP	pP	20 58 23.2	-1.8
KMI				S	S	21 08 08.4	+1.2
KMI				LR	LR		
	comp=Z,250nm,45.5s,MS4.2						
IMA	Indian Mountai	77.33	354	*e*P	P	20 58 20.6	-0.7
IMA				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.4						
IMA	Indian Mountai	77.33	354	*e*P	P	20 58 20.6	-0.7
	comp=Z,72nm,1.3s,mb5.5						
BJI	Beijing	77.70	49	*e*P	P	20 58 23.8	-0.1
BJI				AMB	AMB		
	comp=Z,14nm,1.5s,mb4.7						
BJI	Beijing	77.70	49	*e*P	P	20 58 23.8	-0.1
	comp=Z,14nm,1.5s,mb4.7						
SDV	Santo Domingo	77.96	272	*e*P	P	20 58 26.3	+0.5
	comp=Z,15nm,1.0s,mb4.9						
SDV				LR	LR		
	comp=Z,893nm,21.0s,MS5.1						
MA2	Magadan	78.95	20	*e*P	P	20 58 30.8	+0.5
MA2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MA2	Magadan	78.95	20	*e*P	P	20 58 30.1	-0.1
	comp=Z,10.0nm,0.9s,mb4.8						
GYA	Guiyang	79.20	65⇓	*i*P	P	20 58 32.1	-0.3
GYA				AP	pP	20 58 36.8	-0.1
GYA				XP	sP	20 58 39.4	+1.0
GYA				PP	PP	21 01 34.7	+0.9
GYA				S	S	21 08 30.2	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GYA				AMB	AMB		
	comp=Z,310nm,4.8s						
GYA				LR	LR		
	comp=N,330nm,18.8s,MS5.0						
GYA				LR	LR		
	comp=E,500nm,17.3s,MS5.0						
GYA				LR	LR		
	comp=Z,530nm,19.1s,MS4.9						
KSU1	Kansas State U	79.58	311	*e*P	P	20 58 33.2	-0.9
CN2	Changchun	80.67	42	*e*P	P	20 58 39.8	0.0
CN2				XP	sP	20 58 46.8	+0.9
CN2				*e*S	S	21 08 43.8	-1.5
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS4.7						
SNY	Shenyang	80.94	44	⇓P	P	20 58 44.2	+2.9
SNY				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
MDJ	Mudanjiang	82.29	39	P	P	20 58 44.3	-4.0
MDJ				AMB	AMB		

	comp=Z,6.0nm,1.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,181nm,12.3s						
SAML	Samuel	82.60	253	eP	P	20 58 51.0	+0.5
	comp=Z,28nm,1.5s,mb5.1						
SAML				LR	LR		
	comp=Z,850nm,19.0s,MS5.1						
CHMT	Chamberlain Mo	83.25	325	eP	P	20 58 52.8	-0.4
PHWY	Pilot Hill	83.29	317	eP	P	20 58 54.0	+0.5
BOZ	Bozeman (W)	83.41	323	eP	P	20 58 53.8	-0.2
BOZ				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
BOZ				MLR	MLR		
	comp=Z,536nm,20.0s,MS4.9						
BOZ	Bozeman (W)	83.41	323	eP	P	20 58 53.8	-0.2
	comp=Z,11nm,1.2s,mb4.8						
BOZ				LR	LR		
	comp=Z,536nm,20.0s,MS4.9						
QLMT	Earthquake Lak	83.91	323	eP	P	20 58 56.2	-0.4
NJ2	Nanjing	84.34	54	eP	P	20 58 58.4	-0.7
NJ2				AP	pP	20 59 08.9	+5.2
NJ2				PP	PP	21 02 13.5	-2.3
NJ2				PS		21 09 16.0	
NJ2				S	S	21 09 18.0	-4.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,1µm,4.9s						
LOHW	Long Hollow	84.38	321	eP	P	20 58 59.6	+0.6
BW06	Boulder Array	84.45	320	eP	P	20 58 58.8	-0.5
	comp=Z,12nm,1.1s,mb4.9						
BW06				LR	LR		
	comp=Z,621nm,19.0s,MS5.0						
MCMT	McKenzie Canyo	84.59	324	eP	P	20 59 00.6	+0.5
RRI2	Red Ridge	84.93	322	eP	P	20 59 02.4	+0.7
HLID	Hailey	86.29	324	P	P	20 59 08.2	-0.3
HLID				LR	LR		
	comp=Z,484nm,22.0s,MS4.9						
SSE	Sheshan	86.48	54	P	P	20 59 08.0	-1.7
SSE				AMB	AMB		
	comp=Z,11nm,1.0s,mb5.0						
SSE				AMB	AMB		
	comp=Z,199nm,8.1s						
SSE	Sheshan	86.48	54	P	P	20 59 08.0	-1.7
	comp=Z,11nm,1.0s,mb5.0						
BMO	Blue Mountains	86.66	326	eP	P	20 59 09.3	-1.0
BMO				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
BMO				MLR	MLR		
	comp=Z,558nm,19.0s,MS5.0						
BMO	Blue Mountains	86.66	326	eP	P	20 59 09.3	-0.9
	comp=Z,10nm,1.4s,mb4.9						
BMO				LR	LR		
	comp=Z,558nm,19.0s,MS5.0						
SYO	Syowa Base	107.06	170	⇑PP	PP	21 05 08.6	-4.0

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*SNSN **07** 21:07:46.7, 16.73N×43.52E, Ml3.7*
*CSEM **07** 21:07:49.1±0.1, 16.94N×43.41E, h10^{km}, ML3.7, Error ellipse: s-maj=3.0km s-min=2.4km az=68.0*
*DHMR **07** 21:07:53.1±1.4, 16.90N×43.71E, h29^{km}±7^{km}, ML3.8*
ISC 07 21:07:50.0±0.6, **16.98N**±0.04×**43.42E**±0.05, **h10**^{km}**, n10, σ0^{s}.83**/16**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRSS	Farasan al Kab	1.27	259	P	Pb	21 08 12.9	-0.8
FRSS				S	Sb	21 08 30.1	+0.1
SANA	San‘a	1.75	154	eP	Pn	21 08 20.2	-0.6
SANA				i S	Sn	21 08 41.8	-1.4
SANA				AML	AML	21 08 44.1	
	comp=N,5µm,0.2s						
TATS	Tathlith	2.55	1	P	Pn	21 08 32.9	+0.7
TATS				S	Sn	21 09 09.5	+6.0
DHBB	Dhamar BB	2.57	159	i P	Pn	21 08 34.2	+1.8
DHBB				i S	Sn	21 09 05.1	+1.1
KAMS	Al Khamasin	3.49	18	P	Pn	21 08 45.4	-0.1
LBOS		3.56	150	i P	Pn	21 08 47.0	+0.5
LBOS				i S	Sn	21 09 29.2	+0.1
BDHA	Al Bayda’	3.63	145	i P	Pn	21 08 47.7	+0.2
BDHA				i S	Sn	21 09 29.8	-1.2
BDHA				AML	AML	21 09 44.0	
	comp=E,501nm,0.6s						
TRBA	At Turbah	3.79	170	i S	Sn	21 09 35.1	+0.3
TRBA				AML	AML	21 09 50.4	
	comp=E,100nm,0.4s						
MUKL	Al Mukalla	5.95	114	i S	Sn	21 10 22.3	-7.1
AFFS	‘Afif	6.92	357	P	Pn	21 09 33.5	-0.6

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*NEIC **07** 21:21:28.8, 17.86N×100.55W, h16^{km}, MD3.7(MEX), After MEX.*
MEX 07 21:21:28.6±0.6**, 17.78N×100.60W, h58**^{km}±14^{km}**, MD3.7, 2C, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.79	156	⇑iP	P	21 21 42.3	-1.7
CAIG				i S	S	21 21 53.2	-2.2
CAIG	El Cayaco	0.79	156	⇑iP	P	21 21 42.3	-1.7
CAIG				i S	S	21 21 53.3	-2.1
ZIIG	Zihuatanejo	0.84	258	i P	P	21 21 43.0	-1.6
ZIIG				i S	S	21 21 53.9	-2.7
ZIIG	Zihuatanejo	0.84	258	i P	P	21 21 43.0	-1.6
ZIIG				i S	S	21 21 54.3	-2.3
ACX	Acapulco	1.12	144	i P	P	21 21 46.5	-1.9
ACX				i S	S	21 21 58.5	-4.6
PLIG	Platanillo	1.21	60	eP	P	21 21 47.2	-2.4
PLIG				i S	S	21 22 01.7	-3.6
PLIG	Platanillo	1.21	60	eP	P	21 21 48.5	-1.1
PLIG				i S	S	21 22 02.5	-2.8
PPM	Popocatepetl	2.27	55	i P	P	21 22 01.6	-3.0
PPM				i S	S	21 22 24.3	-7.0
PPM	Popocatepetl	2.27	55	i P	P	21 22 01.6	-3.0
PPM				i S	S	21 22 28.6	-2.7

MAN 07 21:37:23.4, 9.33N×126.57E, h33^{km}**, mb4.5, ML3.3, MS3.2, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	1.01	249	eP	P	21 37 41.5	+0.3
BUTP				eS	S	21 37 59.9	+5.6
BIPH	Bislig	1.16	191	eP	P	21 37 43.0	-0.3
BIPH				eS	S	21 37 57.5	-0.7
SCPH	Surigao	1.16	293	eP	P	21 37 41.1	-2.3
SCPH				eS	S	21 37 54.8	-3.5
MSLP	Maasin	1.87	296	eP	P	21 37 53.4	-0.2
MSLP				eS	S	21 38 10.2	-6.0
BUKP	Musuan	2.08	226	eP	P	21 37 57.8	+1.3
BUKP				eS	S	21 38 21.3	-0.1
PLP	Palo	2.41	319	i P	P	21 37 58.1	-3.1
PLP				i S	S	21 38 31.4	+1.5
TBP	Tagbilaran	2.70	278	⇑eP	P	21 38 04.9	-0.5
TBP				eS	S	21 38 39.7	+2.5
GUIM	Jordan	4.13	289	eP	P	21 38 25.7	-0.1

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*ROM **07** 22:43:13.7±0.5, 43.27N×15.35E, h10^{km}, MD3.2/7, ML2.5/5, Error ellipse: s-maj=4.7km s-min=4.1km az=90.0*
*NEIC **07** 22:43:15.0±0.4, 43.17N×15.17E, h10^{km}, MD3.2(ROM), ML3.5(VIE), ML3.1(LDG), Error ellipse: s-maj=6.3km s-min=3.3km az=105.0*
*CSEM **07** 22:43:15.6±0.1, 43.18N×15.22E, h60^{km}, ML3.1/4, Error ellipse: s-maj=3.1km s-min=1.9km az=106.0*
*LDG **07** 22:43:17.1±0.3, 43.21N×15.13E, h10^{km}, Ml3.1/4, Error ellipse: s-maj=7.5km s-min=3.5km az=70.0*
ISC 07 22:43:13.8±0.4**, 43.15N**±0.02×**15.25E**±0.05**, h10**^{km}**, n62, σ1^{s}.18**/66**, 2C-3D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RGNG	Rignano Grg	1.49	170	ePN	Pn	22 43 41.8	+1.0
RGNG	Rignano Grg	1.49	170	ePn	Pn	22 43 41.8	+1.0
AQU	L’Aquila	1.58	240	eP	Pn	22 43 42.5	+0.5
AQU	L’Aquila	1.58	240	eP	Pn	22 43 42.5	+0.5
CII	Carovilli	1.58	207	ePN	Pn	22 43 43.7	+1.6
	79nm,0.7s						
CII	Carovilli	1.58	207	ePn	Pn	22 43 43.7	+1.6
CII	Carovilli	1.58	207	ePn	Pn	22 43 43.7	+1.6
	79nm,0.7s						
NRCA	Norcia	1.60	259	ePN	Pn	22 43 42.6	+0.3
	24nm,0.5s						
NRCA	Norcia	1.60	259	ePn	Pn	22 43 42.6	+0.3
NRCA	Norcia	1.60	259	ePn	Pn	22 43 42.6	+0.3
	24nm,0.5s						
SNTG	Esanatoglia	1.69	274	ePN	Pn	22 43 43.5	-0.2
SNTG	Esanatoglia	1.69	274	ePn	Pn	22 43 43.5	-0.1
ARV	Arcevia	1.72	283	ePN	Pn	22 43 43.9	-0.2
	22nm,0.7s						
ARV	Arcevia	1.72	283	ePn	Pn	22 43 43.9	-0.2
ARV	Arcevia	1.72	283	ePn	Pn	22 43 43.9	-0.2
	22nm,0.7s						
PTQR	Pietraquaria	1.77	231	ePN	Pn	22 43 46.5	+1.8
	39nm,0.7s						
PTQR	Pietraquaria	1.77	231	ePn	Pn	22 43 46.5	+1.7
PTQR	Pietraquaria	1.77	231	ePn	Pn	22 43 46.5	+1.8
	39nm,0.7s						
SDI	San Donato	1.79	217	ePN	Pn	22 43 45.9	+0.9
	51nm,0.5s						
SDI	San Donato	1.79	217	ePn	Pn	22 43 45.9	+0.9
SDI	San Donato	1.79	217	ePn	Pn	22 43 45.9	+0.9
	51nm,0.5s						
STON	Ston	1.82	98	i Pn	Pn	22 43 43.6	-1.9
STON				i Pg	Pg	22 43 45.1	-5.0
STON				i Sn	Sn	22 44 06.5	-2.1
STON				i Sg	Sg	22 44 08.0	-6.3
STON	Ston	1.82	98	i Pn	Pn	22 43 43.5	-1.9
FG5	Orsara di Pugl	1.86	180	ePN	Pn	22 43 46.9	+0.8
	106nm,0.6s						
FG5	Orsara di Pugl	1.86	180	ePn	Pn	22 43 46.9	+0.8
FG5	Orsara di Pugl	1.86	180	ePn	Pn	22 43 46.9	+0.8
	106nm,0.6s						
FSSB	Fossombrone	1.88	288	ePN	Pn	22 43 46.6	+0.2
	28nm,0.5s						
FSSB	Fossombrone	1.88	288	ePn	Pn	22 43 46.6	+0.2
FSSB	Fossombrone	1.88	288	ePn	Pn	22 43 46.6	+0.2
	28nm,0.5s						
BOJS	Bojanci	2.36	0	ePn	Pn	22 43 53.6	+0.4
BOJS				i Sn	Sn	22 44 24.7	+2.3
CEY	Cerknica	2.66	347	i Pn	Pn	22 43 58.0	+0.5
VISS	Visnje	2.67	354	i Pn	Pn	22 43 57.9	+0.2
VISS				eSn	Sn	22 44 32.0	+1.6
GCIS	Gornji Cirnik	2.73	6	i Pn	Pn	22 43 58.0	-0.6
GCIS				i Sn	Sn	22 44 34.1	+2.1
LEGS	Legarje	2.80	1	i Pn	Pn	22 43 59.9	+0.3
LEGS				i Sn	Sn	22 44 36.1	+2.4
GOLS	Golise	2.88	5	i Pn	Pn	22 44 00.7	+0.1
PDKS	Podkum	2.92	357	i Pn	Pn	22 44 01.4	+0.2
DOBS	Dobrina	3.01	3	i Pn	Pn	22 44 02.5	0.0
VOY	Vojsko	3.04	342	ePn	Pn	22 44 02.7	-0.3
VOY				e(Sn)	Sn	22 44 41.2	+1.3
VOY				e		22 44 55.7	
VOJS	Vojsko	3.05	342	i Pn	Pn	22 44 02.7	-0.3
CADS	Cadrg	3.27	341	i Pn	Pn	22 44 05.5	-0.7
CADS	Cadrg	3.27	341	i Pn	Pn	22 44 05.4	-0.7
OBKA	Obir	3.40	352	⇑iPN	Pn	22 44 07.9	-0.1
OBKA				i SN	Sn	22 44 49.5	+0.6
OBKA				i SG	Sg	22 45 06.0	-1.0
	25nm,0.5s						
PKSM	Moragy	3.90	37	eP	Pn	22 44 16.6	+1.4
ARSA	Arzberg	4.11	3	⇓iPN	Pn	22 44 17.5	-0.6
ARSA				i SN	Sn	22 45 06.8	0.0
KBA	Koelnbreinsper	4.16	342	⇓iPN	Pn	22 44 18.0	-0.8
KBA				i SN	Sn	22 45 07.4	-0.6
PGF	Pioggiola	4.64	265	ePn	Pn	22 44 23.8	-1.8
MOA	Molln	4.75	352	⇑iPN	Pn	22 44 26.3	-1.0
MOA				i SN	Sn	22 45 22.9	-0.2
DAVA	Damuels	5.62	319	⇓iPN	Pn	22 44 37.0	-2.4
DAVA				i SN	Sn	22 45 42.1	-2.7
SBF	Sospel	5.73	280	ePn	Pn	22 44 39.2	-1.8
KHC	Kasperske Hory	6.10	350	eP	Pn	22 44 44.0	-2.2
KHC				e		22 45 50.5	
KHC	Kasperske Hory	6.10	350	ePN	Pn	22 44 44.0	-2.2
KHC				SN	Sn	22 45 50.5	-6.4
FRF	La Foret Royal	6.29	277	ePn	Px	22 44 44.8	
FRF				eSn	Sx	22 45 53.8	
	11nm,0.8s						
MBDF	Montbardon	6.32	287	ePn	Px	22 44 45.9	
MBDF				eSn	Sx	22 45 54.4	
	1.1nm,0.3s						
LMR	La Mourre	6.39	275	ePn	Px	22 44 47.4	
LPG	La Plagne	6.54	294	ePn	Px	22 44 47.8	
LPG				eSn	Sx	22 45 59.0	
	6.5nm,0.6s						
LPL	La Plagne	6.55	294	ePn	Px	22 44 49.5	
LPL				eSn	Sx	22 46 00.2	
	5.2nm,0.5s						
ORIF	Oris-en-Rattie	6.98	288	ePn	Px	22 44 55.9	
CABF	La Chapelle	7.37	301	ePn	Px	22 45 00.4	
HINF	Hinteralfeld	7.53	311	ePn	Px	22 45 02.9	
CDF	Champ du Feu	7.67	316	ePn	Px	22 45 04.4	
CLL	Collm	8.31	350	eSG	Sx	22 47 44.0	
BGF	Bois d’Agland	9.45	295	ePn	Px	22 45 29.2	

IGQ 07 22:46:39.2, 1.05S×78.30W, h13^{km}±1^{km}**, mb4.0, 9C-10D, Error ellipse: s-maj=1.6km s-min=0.7km az=12.2, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PISA	Pisayambo	0.08	262	⇓P	Pg	22 46 43.0	+0.8
TAMB	Tambo	0.36	349	⇑P	Pg	22 46 47.2	+0.5
JUIV	Juive	0.41	203	⇓P	Pg	22 46 47.8	+0.1
JUIV				S	Sg	22 46 53.3	-0.1
VC1	Cotopaxi 1	0.41	346	⇑P	Pg	22 46 48.4	+0.6
RETU	Refugio	0.43	200	⇓P	Pb	22 46 48.5	+0.4
RETU				S	Sg	22 46 54.8	+0.8
CUSU	Cusua	0.43	204	⇑P	Pb	22 46 48.3	+0.2
CUSU				S	Sg	22 46 54.0	-0.2
NAS1	Nasa	0.45	337	⇓P	Pb	22 46 49.1	+0.7
PATA	Patacocha	0.47	196	⇓P	Pb	22 46 49.3	+0.5
ARRY	Arrayan	0.48	198	⇑P	Pb	22 46 48.9	-0.1
IGUA	Igualata	0.55	217	⇑P	Pb	22 46 50.9	+0.7
IGUA				S	Sb	22 46 58.2	+0.5
ANTI	Antisana	0.61	13	⇑P	Pb	22 46 51.3	+0.1
JUA2	San Juan 2	0.88	340	⇓P	Pb	22 46 56.6	+0.8
JUA2				S	Sb	22 47 09.1	+1.9
TERV	Terraza Guagua	0.92	341	⇑P	Pb	22 46 57.5	+1.0
TERV				S	Sb	22 47 10.2	+1.9
PINO	Pino	0.93	341	⇑P	Pb	22 46 57.8	+1.1
YANA	Yana	0.96	344	⇑P	Pb	22 46 58.1	+0.9
YANA				S	Sb	22 47 10.7	+1.2
JOR1	San Jorge 1	1.09	342	⇓P	Pb	22 46 56.6	-2.9
JOR1				S	Sb	22 47 08.8	-4.6
CAYR	Refugio Cayamb	1.09	16	⇓P	Pb	22 47 00.7	+1.2
CAYR				S	Sb	22 47 14.6	+1.2
CAYA	Cayambe	1.15	16	⇓P	Pb	22 47 01.6	+1.1
CAYA				S	Sb	22 47 17.5	+2.4
CONE	Cono NE Rev Vo	1.17	34	⇓P	Pb	22 47 02.2	+1.4
CONE				S	Sb	22 47 17.9	+2.2
HOJA	Cerro de Hojas	2.24	270	P	Pn	22 47 18.3	+1.7

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*NEIC **07** 23:14:28.9, 37.86N×1.80W, h0^{km}, ML2.8(LDG), MN2.6(MDD), After MDD.*
NEIC Felt [III] at Cehegin, La Paca and Zarcilla de Ramos; [II] at Caravaca.
*INMG **07** 23:14:29.3±1.4, 37.84N×1.79W, h12^{km}±4^{km}, ML2.4, Error ellipse: s-maj=2.4km s-min=2.1km az=144.0*
*LDG **07** 23:14:30.8±0.3, 37.85N×1.85W, h5^{km}, Md3.7/1, Ml2.8/4, Error ellipse: s-maj=7.3km s-min=3.1km az=142.0*
MDD 07 23:14:28.9±0.2**, 37.86N×1.80W, mbLg2.5**/23**, Error ellipse: s-maj=3.4km s-min=2.0km az=3.0, PRXIMO II CARAVACA DE LA CRUZ, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	La Murta	0.44	92	Pg	Pg	23 14 37.0	-0.8
	44nm,0.3s,SNR=58						
EMUR				Lg		23 14 43.1	
	366nm,0.3s,SNR=7.9						
CART	Cartagena	0.69	113	eP	Pg	23 14 41.6	-1.1
CART	Cartagena	0.69	113	P	Pg	23 14 42.1	-0.6
CART				S	Sg	23 14 49.7	-2.1
ENIJ	Nijar	0.95	200	Pg	Pg	23 14 45.9	-1.9
	36nm,0.4s,SNR=24						
ENIJ				Lg		23 14 58.9	
	87nm,0.5s,SNR=9.5						
EVIA	Vianos	0.95	325	Pg	Pg	23 14 46.7	-1.2
	53nm,0.4s,SNR=37						
EVIA				Lg		23 14 59.9	
	68nm,0.2s,SNR=12						
EQES	Quesada	1.01	267	Pg	Pg	23 14 47.7	-1.3
	22nm,0.3s,SNR=59						
EQES				Lg		23 15 02.0	
	58nm,0.2s,SNR=9.2						
EBER	Berja	1.30	222	Pg	Pg	23 14 52.1	-2.7
	16nm,0.3s,SNR=17						
EBER				Lg		23 15 12.4	
	76nm,0.5s,SNR=6.5						
EBEN	Beniarda	1.50	55	Pg	Pg	23 14 56.1	-2.7
	15nm,0.6s,SNR=19						
EBEN				Lg		23 15 17.4	
	22nm,0.4s,SNR=5.8						
EBAN	Banos Encina	1.60	282	Pg	Pg	23 14 56.9	-3.9
	50nm,0.5s,SNR=7.9						
EBAN				Lg		23 15 18.5	
	68nm,0.4s,SNR=7.9						
ELUQ	Luque	1.98	262	Pn	Pn	23 15 03.7	-0.3
	7.4nm,0.3s,SNR=8.8						
ELUQ				Sn	Sn	23 15 26.8	-3.1
	14nm,0.3s,SNR=5.9						
ELUQ				Lg		23 15 32.7	
	24nm,0.4s,SNR=6.7						
ELOJ	Sierra Loja	2.00	250	Pn	Pn	23 15 04.2	-0.2
	8.0nm,0.5s,SNR=12						
ELOJ				Lg		23 15 31.2	
	4.1nm,0.2s,SNR=4.6						
EADA	Adamuz	2.21	279	Pn	Pn	23 15 05.3	-2.1
	3.3nm,0.3s,SNR=23						
EADA				Sn	Sn	23 15 32.4	-3.4
	6.8nm,0.2s,SNR=7.6						
EADA				Lg		23 15 39.0	
	15nm,0.4s,SNR=8.4						
ESDC	Sonseca Array	2.48	318	Pn	Pn	23 15 08.6	-2.5
	0.7nm,0.4s,baz=130,slow=13,SNR=8.4						
ESDC				Pg	Pg	23 15 14.2	-4.1
	baz=134,slow=16,SNR=7.9						
ESDC				Lg		23 15 46.8	
	1.4nm,0.2s,baz=140,slow=16,SNR=8.1						
ESLA	Sonseca Array	2.48	318	eP	Pn	23 15 08.8	-2.3
EMIJ	Mijas	2.70	242	Pn	Pn	23 15 13.7	-0.6
	5.7nm,0.5s,SNR=6.0						
EMIJ				Sn	Sn	23 15 44.8	-3.5
	0.4nm,0.1s,SNR=5.8						
EMIJ				Lg		23 15 56.3	
	11nm,0.6s,SNR=4.0						
EMOS	Mosqueruela	2.70	22	Pn	Pn	23 15 12.3	-2.1
	7.1nm,0.8s,SNR=7.6						
EMOS				Sn	Sn	23 15 45.0	-3.3
	2.4nm,0.3s,SNR=6.5						
EMOS				Lg		23 15 54.4	
	4.3nm,0.3s,SNR=7.9						
EIBI	Ibiza	2.73	64	Pn	Pn	23 15 11.1	-3.6
	8.8nm,0.8s,SNR=7.9						
EIBI				Sn	Sn	23 15 44.3	-4.6
	2.6nm,0.4s,SNR=7.9						
ERTA	Horta de San J	3.50	27	Pn	Pn	23 15 25.2	-0.6
	9.0nm,0.8s,SNR=7.4						
ERTA				Sn	Sn	23 16 03.6	-5.0
	1.2nm,0.3s,SNR=7.9						
ERTA				Lg		23 16 18.3	
	59nm,1.4s,SNR=4.0						
EMIN	Mina Concepcio	3.86	270	Pn	Pn	23 15 27.9	-2.9
	3.9nm,0.7s,SNR=19						
EMIN				Sn	Sn	23 16 10.8	-6.8
	0.7nm,0.2s,SNR=7.9						
EMIN				Lg		23 16 29.2	
	8.9nm,0.5s,SNR=5.0						
EBAD	Badajoz	4.20	284	Pn	Pn	23 15 33.2	-2.4
	0.6nm,0.3s,SNR=5.8						
EBAD				Sn	Sn	23 16 18.6	-7.5
	8.6nm,0.2s,SNR=6.0						
EBAD				Lg		23 16 40.0	
	12nm,0.6s,SNR=5.0						
EGRO	El Granado	4.52	268	Pn	Pn	23 15 36.5	-3.7
	2.0nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	23 16 27.1	-7.2
	2.2nm,0.1s,SNR=7.9						
EGRO				Lg		23 16 51.6	
	2.6nm,0.1s,SNR=7.9						
PBEJ	Beja	4.80	274	ePn	Pn	23 15 40.6	-3.5
PBEJ				eSn	Sn	23 16 33.4	-7.9
PBEJ				eSg	Sg	23 16 57.5	-11
	6.5nm,0.5s						
PBEJ	Beja	4.80	274	Pn	Pn	23 15 40.6	-3.5
PBEJ				Sn	Sn	23 16 33.4	-7.9
PBEJ				Lg		23 16 57.5	
	3.2nm,0.5s						
PCBR	Castelo Branco	4.85	296	ePn	Pn	23 15 41.3	-3.6
PCBR				eSn	Sn	23 16 35.8	-6.9
PCBR				eSg	Sg	23 16 58.8	-12
	7.9nm,0.5s						
PCBR	Castelo Branco	4.85	296	Pn	Pn	23 15 41.3	-3.6
PCBR				Sn	Sn	23 16 35.8	-6.9
PCBR				Lg		23 16 58.8	
	4.0nm,0.5s						
EVO	Evora	4.94	280	ePn	Pn	23 15 43.7	-2.4
EVO				eSn	Sn	23 16 39.5	-5.4
EVO				eSg	Sg	23 17 07.2	-6.2
	17nm,0.4s						
EBIE	Bielsa	5.04	17	Pn	Pn	23 15 44.9	-2.7
	2.1nm,0.4s,SNR=7.9						
EBIE				Sn	Sn	23 16 40.2	-7.3
	2.1nm,0.4s,SNR=7.9						
ETSF	Etsaut	5.12	10	ePn	Pn	23 15 46.9	-1.8
ETSF				eSn	Sn	23 16 43.1	-6.3
ETSF				eSg	Sg	23 17 11.4	-7.9
	1.9nm,0.4s						
MTE	Manteigas	5.13	301	ePn	Pn	23 15 46.1	-2.8
MTE				eSg	Sg	23 17 07.1	-13
	7.9nm,0.6s						
MTE	Manteigas	5.13	301	Pn	Pn	23 15 46.1	-2.8
MTE				Lg		23 17 07.1	
	4.0nm,0.6s						
SJPF	Ste Jean	5.26	5	ePn	Pn	23 15 47.8	-2.9
SJPF				eSn	Sn	23 16 45.6	-7.4
SJPF				eSg	Sg	23 17 15.9	-8.3
	1.0nm,0.3s						
EALK	Alkurruntz	5.36	2	Pn	Pn	23 15 49.3	-2.7
	1.7nm,0.4s,SNR=7.9						
EALK				Sn	Sn	23 16 47.8	-7.6
	1.2nm,0.3s,SNR=7.9						
EPF	Esparros	5.42	17	ePn	Pn	23 15 51.1	-1.8
EPF				eSn	Sn	23 16 50.3	-6.5
EPF				eSg	Sg	23 17 20.2	-9.0
	1.7nm,0.4s						
PBRG	Braganca	5.47	318	ePn	Pn	23 15 50.2	-3.5
PBRG				eSn	Sn	23 16 53.0	-5.3
PBRG				eSg	Sg	23 17 21.0	-10
	4.3nm,0.5s						
PBRG	Braganca	5.47	318	Pn	Pn	23 15 50.2	-3.5
PBRG				Sn	Sn	23 16 53.0	-5.3
PBRG				Lg		23 17 21.0	
	2.2nm,0.5s						
ELAN	Lanestosa	5.51	347	Pn	Pn	23 15 50.8	-3.3
	1.7nm,0.4s,SNR=7.9						
ELAN				Sn	Sn	23 16 51.9	-7.2
	0.2nm,0.1s,SNR=7.9						
ELAN				Lg		23 17 25.1	
	0.3nm,0.1s,SNR=4.0						
PVIS	Viseu	5.52	303	ePn	Pn	23 15 50.5	-3.8
PVIS				eSn	Sn	23 16 51.5	-8.0
PVIS				eSg	Sg	23 17 21.0	-12
ECAL	Calabor	5.57	319	Pn	Pn	23 15 51.9	-3.1
	1.6nm,0.4s,SNR=7.9						
ECAL				Lg		23 17 22.6	
	1.7nm,0.2s,SNR=7.9						
PVRL	Vila Real	5.70	309	eSn	Sn	23 16 55.6	-8.4
PVRL				eSg	Sg	23 17 24.1	-15
	4.6nm,0.6s						
PVRL	Vila Real	5.70	309	Sn	Sn	23 16 55.6	-8.4
PVRL				Lg		23 17 24.1	
	2.3nm,0.6s						
EARI	Arriondas	6.02	336	Pn	Pn	23 15 58.2	-3.2
	0.9nm,0.5s,SNR=8.9						
EARI				Sn	Sn	23 17 02.2	-10
	2.8nm,0.9s,SNR=4.4						
EARI				Lg		23 17 37.3	
	88nm,1.8s,SNR=5.0						
ELOB	Lobios	6.26	312	Pn	Pn	23 16 00.6	-4.2
	0.4nm,0.4s,SNR=7.9						
ELOB				Sn	Sn	23 17 08.5	-10
	1.7nm,0.4s,SNR=4.0						
ELOB				Lg		23 17 43.4	
	0.5nm,0.2s,SNR=4.0						
EPON	Pontenova	6.81	325	Pn	Pn	23 16 08.5	-4.0
	2.3nm,0.5s,SNR=7.9						

CAF	Calviac	7.63	21	*e*Pn	Pn	23 16 20.6	-3.4
SMF	Signal de Mont	9.72	24	*e*Pn	P	23 16 48.8	-4.2
QUIF	Quistinic	10.10	355	*e*Pn	P	23 16 53.7	-4.5
ROSF	Rostrenen	10.53	355	*e*Pn	P	23 16 59.5	-4.5

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*BJI **07** 23:55:49.7, 31.18N×95.67E, h8^{km}, mB4.6, mb4.2, ML3.8, Ms3.8, Msz3.5*
*NEIC **07** 23:55:49.7±0.5, 31.29N×95.60E, h10^{km}, mb4.3/3, Error ellipse: s-maj=12.2km s-min=8.2km az=180.0*
ISC 07 23:55:46.8±0.5**, 31.11N**±0.09×**95.49E**±0.06**, h10^{km}, n18, σ1^{s}12**/19**, mb4.1**/2**, 1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.00	251	P	Pn	23 56 55.0	+5.4
LSA				S	Sn	23 57 44.2	+7.2
LSA				Smax			
	comp=N,30nm,1.0s						
LSA				Smax			
	comp=E,30nm,0.9s						
LSA	Lhasa	4.00	251	*e*P	Pn	23 56 54.5	+4.9
LZH	Lanzhou	8.56	52	*e*P	P	23 57 55.5	+1.8
LZH				AP		23 58 00.5	
LZH				XP		23 58 03.5	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s						
LZH	Lanzhou	8.56	52	*e*P	P	23 57 55.5	+1.8
	comp=Z,20nm,1.0s						
LZH				pP		23 58 00.5	
LZH				sP		23 58 03.5	
LZH				PP	rx	23 58 42.5	
KMI	Kunming	8.75	131	P	P	23 57 57.8	+1.5
KMI				AMB	AMB		
	comp=Z,3.0nm,1.0s						
KMI	Kunming	8.75	131	P	P	23 57 57.8	+1.5
	comp=Z,3.0nm,1.0s						
JIRN	Jiri	8.81	249	*e*P	P	23 57 58.4	+1.3
	comp=Z,12nm,0.3s						
PKI	Pulchoki	9.47	251	*e*P	P	23 58 06.7	+0.3
	comp=Z,15nm,0.3s						
KKN	Kakani	9.49	252	*e*P	P	23 58 06.2	-0.4
	comp=Z,24nm,0.4s						
GKN	Gorkha	9.94	255	*e*P	P	23 58 11.5	-1.3
	comp=Z,21nm,0.5s						
GYA	Guiyang	10.84	113	⇓*i*P	P	23 58 24.7	-0.5
GYA				AP		23 58 28.9	
GYA				XP		23 58 32.0	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
GYA				AMB	AMB		
	comp=Z,80nm,4.8s						
GYA				LR	LR		
	comp=N,190nm,10.2s						
GYA				LR	LR		
	comp=E,240nm,8.7s						
GYA				LR	LR		
	comp=Z,240nm,10.2s						
KOLN	Koldanda	10.88	255	*e*P	P	23 58 24.5	-1.2
	comp=Z,54nm,0.8s						
ENH	Enshi	12.08	90	*e*P	P	23 58 40.7	-1.3
BJT	Baijiatuau	19.00	56	P	P	00 00 09.6	-1.3
AAK	Ala-Archa	20.30	310	*e*P	P	00 00 26.3	+0.8
	comp=Z,19nm,1.0s						
KURK	Kurchatov	23.27	332	*e*P	P	00 00 56.2	+1.0
	comp=Z,4.0nm,0.6s,mb4.0						
HIA	Hailar	25.75	38	P	P	00 01 17.9	-1.1
	comp=Z,4.1nm,0.5s,mb4.2						
WRAB	Tennant Creek	62.99	139	P	P	00 06 17.0	+0.7

DJA 08 00:06:19.3±0.8**, 9.37S×113.87E, h33^{km}, MD4.7**/4**, ML4.3**/4**, 7C-2D, Error ellipse: s-maj=18.1km s-min=9.8km az=37.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	0.92	17	⇑*i*Pn	Pn	00 06 34.5	-1.5
	338nm,0.2s						
SRDI	Scrawed	0.92	17	⇑*i*Pg	P	00 06 34.9	-0.9
SRDI				⇑*i*Sn	Sn	00 06 45.2	-3.0
KELI	Kelakatan	1.29	28	⇑*i*Pn	Pn	00 06 40.2	-1.2
	282nm,0.2s						
KELI	Kelakatan	1.29	28	*e*P	P	00 06 41.3	+0.2
KELI				⇑*i*Sn	Sn	00 06 55.7	-2.0
RATI	Rata	1.76	69	⇑*i*Pn	Pn	00 06 46.4	-1.6
	888nm,0.2s						
RATI				⇓*i*Sn	Sn	00 07 05.5	-4.0
KEDI	Kedomdong	2.38	69	⇑*i*Pn	Pn	00 06 54.7	-2.2
	84nm,0.2s						
KEDI				⇓*i*Sn	Sn	00 07 21.6	-3.7

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*NEIC **08** 01:23:20.3, 18.17N×68.51W, h130^{km}, MD3.6(RSPR), After RSPR.*
RSPR 08 01:23:20.3, 18.17N×68.51W, h130^{km}±3^{km}, MD3.5/8**, MD3.5**/8**, 8C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGP	Maguayo	1.36	97	⇑*e*P	P	01 23 46.5	-0.7
MGP				*e*S	S	01 24 06.5	-1.2
AOPR	Arecibo Observ	1.68	84	⇑*e*P	P	01 23 50.5	-0.3
AOPR				*e*S	S	01 24 13.5	-0.5
PORP	Portuguez	1.78	93	⇑*e*P	P	01 23 51.5	-0.5
PORP				*e*S	S	01 24 16.3	+0.1
CELP	Cerrillos	1.84	93	⇑*e*P	P	01 23 52.3	-0.4
CELP				*e*S	S	01 24 16.6	-0.7
CSB	Colonia Sabana	2.24	87	⇑*e*P	P	01 23 56.6	-1.1
CSB				*e*S	S	01 24 25.7	-0.4
CBYP	Canovanas	2.52	87	⇑*e*P	P	01 23 59.7	-1.7
CBYP				*e*S	S	01 24 32.0	-0.7
HUMP	Col San Antoni	2.53	90	⇑*e*P	P	01 24 00.7	-0.8
HUMP				*e*S	S	01 24 32.7	-0.1
MTP	Monte Pirata	2.81	91	⇑*e*P	P	01 24 04.4	-0.8
MTP				*e*S	S	01 24 39.3	0.0

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*MAN **08** 01:29:20.2, 7.03N×126.54E, h168^{km}, mb4.6, ML3.5, MS3.4*
*BJI **08** 01:29:22.9, 7.16N×126.60E, h235^{km}, mB4.7, mb4.6*
*NEIC **08** 01:29:25.4±0.4, 6.93N×126.46E, h250^{km}, mb4.5/16, Error ellipse: s-maj=13.4km s-min=8.6km az=67.0*
ISC 08 01:29:17.7±0.7**, 6.95N**±0.08×**126.59E**±0.10**, h190^{km}**±4^{km}**, n46, σ0^{s}68**/51**, mb4.9**/26**, 7C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.33	270	*e*P	P	01 29 43.4	0.0
MATI				*e*S	S	01 30 02.0	-1.3
KCP	Kidapawan	1.49	273	⇓*e*P	P	01 29 51.2	+0.4
KCP				*i* S	S	01 30 16.1	-0.2
BUKP	Musuan	1.78	302	*e*P	P	01 29 54.2	+0.7
BUKP				*e*S	S	01 30 20.8	-0.3
CGP	Cagayan de Oro	2.40	309	*e*P	P	01 30 00.2	-0.1
SCPH	Surigao	3.02	339	*e*P	P	01 30 08.6	+1.0
SCPH				*e*S	S	01 30 31.8	-14
PAGZ	Pagadian	3.30	286	*e*P	P	01 30 12.4	+1.3
TBP	Tagbilaran	3.84	316	*e*P	P	01 30 17.7	0.0
NST	Nakhon Sawan	27.32	291	P	P	01 34 38.4	-8.7
WRAB	Tennant Creek	27.78	164	P	P	01 34 51.3	+0.1
	5.9nm,0.8s,mb4.4						
NANT	Nan	27.80	298	P	P	01 34 51.0	-0.5
ENH	Enshi	28.22	327	⇑*i*P	P	01 34 54.5	-0.6
	87nm,1.3s,mb5.3						
MBWA	Marble Bar	28.73	193	*e*P	P	01 34 59.9	+0.2
	6.6nm,0.6s,mb4.5						
KMI	Kunming	29.10	311	P	P	01 35 02.9	0.0
KMI				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.6						
KMI	Kunming	29.10	311	P	P	01 35 02.9	0.0
	comp=Z,15nm,1.1s,mb4.6						
XAN	Xi'an	31.52	331	P	P	01 35 23.5	-0.7
XAN				AMB	AMB		
	comp=Z,73nm,0.8s,mb5.5						
CD2	Chengdu	32.02	321	P	P	01 35 27.8	-0.7
CD2				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
BJI	Beijing	34.25	346	*e*P	P	01 35 46.7	-0.8
BJI				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
BJI	Beijing	34.25	346	*e*P	P	01 35 46.7	-0.8
	comp=Z,16nm,1.0s,mb4.7						
LZH	Lanzhou	35.70	328	⇑P	P	01 36 00.6	+0.8
LZH				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.0						
LZH	Lanzhou	35.70	328	⇑P	P	01 36 00.6	+0.8
	comp=Z,60nm,1.5s,mb5.0						
LZH				pP	pP	01 36 21.0	-19
LZH				sP	sP	01 36 30.0	-32
MDJ	Mudanjiang	37.62	4	P	P	01 36 15.5	-0.2
MDJ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,26nm,3.6s						
LSA	Lhasa	40.27	309	P	P	01 36 39.0	+1.1
LSA	Lhasa	40.27	309	*e*P	P	01 36 38.8	+1.0
	comp=Z,8.6nm,0.6s,mb4.6						
GTA	Gaotai	40.31	327	⇑*i*P	P	01 36 38.9	+0.9
GTA				AP	pP	01 37 26.8	+7.9
GTA				PCP	PcP	01 38 38.9	+0.6
GTA				S	S	01 42 26.7	-4.3
GTA				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.1						
GTA				AMB	AMB		
	comp=Z,81nm,6.5s						
GTA				LR	LR		
	comp=N,87nm,12.2s						
GTA				LR	LR		
	comp=E,112nm,16.0s						
GTA				LR	LR		
	comp=Z,107nm,15.2s						
JIRN	Jiri	43.44	303	*e*P	P	01 37 04.1	+0.4
	comp=Z,34nm,0.5s,mb5.2						
ULN	Ulaanbaatar	44.04	341	⇑*e*P	P	01 37 08.6	+0.4
	comp=Z,12nm,0.6s,mb4.7						
PKI	Pulchoki	44.06	303	*e*P	P	01 37 08.4	-0.2
	comp=Z,20nm,0.5s,mb5.0						
KKN	Kakani	44.24	303	*e*P	P	01 37 09.7	-0.4
	comp=Z,16nm,0.5s,mb4.9						
DMN	Daman	44.33	303	*e*P	P	01 37 10.5	-0.3
	comp=Z,20nm,0.6s,mb5.0						
GKN	Gorkha	44.85	303	*e*P	P	01 37 14.4	-0.5
	comp=Z,22nm,0.6s,mb5.0						
KOLN	Koldanda	45.64	302	*e*P	P	01 37 21.1	-0.1
	comp=Z,50nm,0.6s,mb5.3						
TLY	Talaya	48.46	341	*e*P	P	01 37 42.5	-0.1
	comp=Z,9.7nm,0.7s,mb4.5						
KZA	Kyzart	57.19	316	P	P	01 38 48.0	+0.9
	SNR=6.5						
TKM2	Tokmak 2	57.28	317	P	P	01 38 47.8	0.0
	SNR=7.1						
KBK	Karagaybulak	57.62	317	P	P	01 38 50.4	+0.3
	SNR=6.3						
UCH	Uchtor	57.75	316	P	P	01 38 51.8	+0.8
	SNR=11						
AAK	Ala-Archa	57.92	317	*e*P	P	01 38 50.4	-1.8
	comp=Z,2.9nm,0.7s,mb4.2						
USP	Ospenovka	58.16	317	P	P	01 38 53.3	-0.5
	SNR=12						
AML	Almayashu	58.28	316	P	P	01 38 55.5	+0.7
	SNR=8.9						
EKS2	Erkin-Say	58.42	316	P	P	01 38 56.2	+0.6
	SNR=8.3						
KURK	Kurchatov	58.98	327	⇑*i*P	P	01 38 58.8	-0.7
	comp=Z,34nm,0.8s,mb5.2						
CHKZ	Chkalovo	64.72	327	⇑*i*P	P	01 39 36.7	-0.9
	comp=Z,14nm,1.0s,mb4.7						
CHKZ				*e*		01 39 49.0	
ARU	Arti	72.17	327	P	P	01 40 22.4	-1.0
	comp=Z,220nm,0.5s,mb6.1,SNR=22						
IMA	Indian Mountai	79.52	24	*e*P	P	01 41 05.9	+1.5
	comp=Z,11nm,0.4s,mb4.8						
MCK	McKinley	81.37	27	*e*P	P	01 41 14.2	0.0
	comp=Z,12nm,0.9s,mb4.5						
INK	Inuvik	87.24	22	*e*P	P	01 41 43.3	-0.1
	comp=Z,4.7nm,0.7s,mb4.4						

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*CSEM **08** 01:31:41.6±0.1, 38.10N×22.05E, h60^{km}, ML3.3, Error ellipse: s-maj=2.2km s-min=1.5km az=26.0*
*ATH **08** 01:31:42.2, 38.12N×22.07E, h46^{km}±14^{km}, MD3.3/15, ML3.3*
*NEIC **08** 01:31:42.3, 38.13N×22.06E, h45^{km}, MD3.3(ATH), After ATH.*
*THE **08** 01:31:43.7, 38.12N×22.21E, h20^{km}, ML3.3*
ISC 08 01:31:41.9±0.6**, 38.11N**±0.03×**22.08E**±0.04**, h71^{km}**±10^{km}**, n43, σ0^{s}87**/65**, 2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.49	264	*e*P	P	01 31 53.8	-1.0
EVR	Evrytania	0.83	345	*e*P	P	01 31 59.5	+0.9
EVR	Evrytania	0.83	345	*e*P	P	01 31 59.8	+1.2
LKR	Lokris	0.90	53	*e*P	P	01 31 59.5	0.0
AGG	Agios Georgios	0.93	12	*e*Pg	P	01 32 00.1	+0.3
AGG				*e*Sg	S	01 32 12.6	-0.6
ITM	Ithomi	0.94	187	*e*P	P	01 32 00.7	+0.7
MGER	Gerania Oros	0.94	97	*e*P	P	01 31 59.5	-0.5
MGER				*e*S	S	01 32 13.4	0.0
MGER	Gerania Oros	0.94	97	*e*P	P	01 31 59.8	-0.2
MGER				*e*S	S	01 32 13.4	0.0
NAIG	Nisos Aigina	1.17	107	⇓*i*P	P	01 32 03.0	+0.1
NAIG	Nisos Aigina	1.17	107	⇓*i*P	P	01 32 03.2	+0.3
VLS	Valsamata	1.18	274	*e*P	P	01 32 02.6	-0.4
ATH	Athens Observa	1.30	96	*e*P	P	01 32 05.0	+0.2
MPAR	Parnis Oros	1.31	88	*e*P	P	01 32 05.2	+0.3
MPAR				*e*S	S	01 32 21.7	-0.3
MPAR	Parnis Oros	1.31	88	*e*P	P	01 32 05.8	+0.9
MPAR				*e*S	S	01 32 21.7	-0.3
PTL	Penteli	1.41	92	*e*P	P	01 32 06.2	-0.1
PTL				*e*S	S	01 32 23.7	-0.6
PTL	Penteli	1.41	92	*e*P	P	01 32 06.8	+0.5
PTL				*e*S	S	01 32 24.6	+0.3
NEO	Neokhori	1.49	37	*e*P	P	01 32 07.5	+0.1
XOR	Xorichti	1.52	34	*e*Pb	P	01 32 07.9	+0.1
XOR				*e*Sb	S	01 32 26.5	-0.4
VLI	Veliai	1.55	154	*e*P	P	01 32 07.9	-0.2
AOS	Alonnisos	1.76	53	*e*Pb	P	01 32 10.5	-0.5
AOS				*e*Sb	S	01 32 30.9	-1.5
JAN	Janina	1.82	329	*e*P	P	01 32 12.8	+1.1
KYTH	Kithira	1.98	157	*e*P	P	01 32 15.7	+1.7
KYTH	Kithira	1.98	157	*e*P	P	01 32 16.0	+2.0
LIT	Litokhoron	2.01	9	*e*Pn	P	01 32 14.4	0.0
LIT				*e*Sn	S	01 32 39.2	+0.9
KZN	Kozani	2.20	354	*e*P	P	01 32 18.4	+1.3
LSK	Leskovik	2.34	331	*i* Pn	P	01 32 19.7	+0.7
LSK				*i* Sn	S	01 32 47.6	+1.0
KEK	Kerkira	2.39	313	*e*P	P	01 32 19.2	-0.6
SRN	Sarande	2.40	318	*i* Pn	P	01 32 19.6	-0.2
SRN				*i* Sn	S	01 32 45.9	-2.1
PLG	Polygyros	2.50	25	*e*P	P	01 32 21.5	+0.3
THE	Thessaloniki	2.61	15	*e*Pn	P	01 32 21.8	-1.0
THE				*e*Sn	S	01 32 53.3	-0.1
OUR	Ouranopolis	2.67	33	*e*Pn	P	01 32 23.5	-0.1
FNA	Florina	2.72	349	*e*Pn	P	01 32 25.5	+1.1
FNA				*e*Sn	S	01 32 57.7	+1.4
SOH	Sokhos	2.88	20	*e*Pn	P	01 32 26.9	+0.3
SOH				*e*Sn	S	01 33 00.1	-0.1
KNT	Kendrikon	3.11	11	*e*Pn	P	01 32 30.5	+0.6
KNT				*e*Sn	S	01 33 05.8	-0.2
SRS	Serrai	3.22	21	*e*Pn	P	01 32 31.1	-0.2
SRS				*e*Sn	S	01 33 09.1	+0.4
SRS	Serrai	3.22	21	*e*Pn	P	01 32 31.1	-0.3
SRS				*e*Sn	S	01 33 09.1	+0.4
MMB	Musomiste	3.70	20	*i* P	P	01 32 37.5	-0.5
MMB				*e*Sg	S	01 33 20.0	-0.7
KKB	Krupnik	3.83	11	*e*P	P	01 32 40.0	+0.1
KKB				*e*Sg	S	01 33 24.0	+0.1
RZN	Rozhen	4.11	29	*i* P	P	01 32 44.0	+0.3
ALN	Alexandroupoli	4.14	47	*e*Pn	P	01 32 43.8	-0.5
ALN				*e*Sn	S	01 33 30.4	-1.3
VTS	Vitosha	4.56	11	*e*P	P	01 32 50.0	0.0
VTS				*e*S	S	01 33 45.0	+2.8
SG1	Sgolgore (BA)	4.99	305	*e*Pn	P	01 32 53.6	-2.4
CDT	Castel del Mon	5.38	305	*e*Pn	P	01 32 59.0	-2.3

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*NEIC **08** 01:36:49.3±0.6, 22.97N×94.33E, h97^{km}±7^{km}, mb4.4/8, Error ellipse: s-maj=10.7km s-min=5.9km az=210.0*
*BJI **08** 01:36:53.4, 23.56N×94.50E, h95^{km}, mB4.6, mb4.0*
ISC 08 01:36:48.0±0.8**, 22.95N**±0.08×**94.34E**±0.07**, h103^{km}**±9^{km}**, n24, σ0^{s}80**/30**, mb4.3**/8**, 1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.87	349	*e*P	P	01 37 20.0	+0.5
CHRT	Chiangrai	5.93	120	⇓P	P	01 38 14.0	-0.6
	153nm,1.1s						
CM31	Chiang Mai Arr	6.21	135	P	P	01 38 18.7	+0.1
LSA	Lhasa	7.31	338	*e*P	P	01 38 33.6	-0.1
KMI	Kunming	7.98	73	P	P	01 38 43.9	+1.1
KMI				AMB	AMB		
	comp=Z,4.0nm,1.4s						
KMI	Kunming	7.98	73	P	P	01 38 43.9	+1.1
	comp=Z,4.0nm,1.4s						
JIRN	Jiri	8.74	304	*e*Pn	P	01 38 52.8	-0.2
JIRN				*e*Sn	S	01 40 25.7	-4.8
	comp=Z,215nm,0.5s						
PKI	Pulchoki	9.30	302	*e*Pn	P	01 39 00.8	+0.2
PKI				*e*Sn	S	01 40 39.1	-5.0
	comp=Z,58nm,0.5s						
KKN	Kakani	9.50	302	*e*Pn	P	01 39 04.0	+0.6
KKN				*e*Sn	S	01 40 42.7	-6.3
	comp=Z,64nm,0.3s						
DMN	Daman	9.55	301	*e*Pn	P	01 39 04.3	+0.2
DMN				*e*Sn	S	01 40 43.6	-6.7
	comp=Z,72nm,0.5s						
GKN	Gorkha	10.10	302	*e*Pn	P	01 39 10.3	-1.2
GKN				*e*Sn	S	01 40 57.4	-6.1
	comp=Z,128nm,0.3s						
KOLN	Koldanda	10.83	299	*e*Pn	P	01 39 20.5	-0.7
KOLN				*e*Sn	S	01 41 13.1	-7.7
	comp=Z,48nm,0.4s						
ENH	Enshi	15.38	58	*e*P	P	01 40 20.1	-0.5
	comp=Z,6.1nm,0.5s						
WMQ	Urumqi	21.53	347	*e*P	P	01 41 30.0	0.0
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.2						
KSH	Kashi	22.72	321	*e*P	P	01 41 45.3	+3.6
KSH				AMB	AMB		
	comp=Z,120nm,3.8s						
AAK	Ala-Archa	25.65	325	*e*P	P	01 42 11.2	+1.5
	comp=Z,2.1nm,0.7s,mb3.7						
ULN	Ulaanbaatar	26.87	19	P	P	01 42 19.5	-1.3
	comp=Z,1.3nm,0.4s,mb3.8						
KURK	Kurchatov	30.31	340	*e*P	P	01 42 51.1	-0.5
	comp=Z,3.6nm,0.7s,mb4.1						
CHKZ	Chkalovo	35.55	336	*e*P	P	01 43 37.2	+0.4
	comp=Z,2.7nm,0.3s,mb4.7						
MBWA	Marble Bar	50.34	149	P	P	01 45 35.9	-0.7
	comp=Z,9.0nm,0.9s,mb4.7						
WRAB	Tennant Creek	57.80	134	*e*P	P	01 46 30.8	-0.3
	comp=Z,9.4nm,0.6s,mb5.0						
WB2	Warramunga Arr	57.81	134	*e*P	P	01 46 31.3	+0.1
ASPA	Alice Springs	60.21	138	*e*P	P	01 46 48.2	+0.5
BOSA	Boshof	83.99	236	P	P	01 49 09.3	+0.9
	comp=Z,8.3nm,1.0s,mb4.5						

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*DMN **08** 01:51:34.7±0.6, 27.76N×86.07E, h20^{km}±3^{km}, Ml5.2/3, Error ellipse: s-maj=32.1km s-min=5.4km az=3.0*
*BJI **08** 01:51:35.0, 27.58N×86.07E, h21^{km}, mB4.6, mb4.1, ML3.2*
*NEIC **08** 01:51:35.9±1.8, 27.82N×86.03E, h14^{km}±14^{km}, mb4.2/8, Error ellipse: s-maj=23.2km s-min=10.1km az=174.0*
*NDI **08** 01:51:36.7±3.7, 27.56N×85.99E, h6^{km}±18^{km}, ML4.2, mb4.2(NEIC)*
ISC 08 01:51:34.3±0.4**, 27.86N**±0.04×**85.99E**±0.03**, h10^{km}, n40, σ1^{s}56**/57**, mb4.2**/7**, 1D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRN	Jiri	0.27	139	*e*Pg	Pg	01 51 40.0	0.0
JIRN				*e*Sg	Sg	01 51 43.0	-0.8
	55µm,0.3s						
PKI	Pulchoki	0.59	241	*e*Sg	Sg	01 51 58.0	+3.7
	6µm,0.4s						
PKI	Pulchoki	0.59	241	*e*Pg	Pg	01 51 48.1	+1.8
PKI				*e*Sg	Sg	01 51 58.0	+3.7
KKN	Kakani	0.63	264	*e*Sg	Sg	01 52 00.3	+4.7
	4µm,0.2s						
KKN	Kakani	0.63	264	*e*Pg	Pg	01 51 49.2	+2.1
KKN				*e*Sg	Sg	01 52 00.3	+4.7
DMN	Daman	0.82	252	*e*Sg	Sg	01 52 05.8	+3.9
	3µm,0.3s						
DMN	Daman	0.82	252	*e*Pg	Pg	01 51 53.3	+2.4
DMN				*e*Sg	Sg	01 52 05.8	+3.9
GKN	Gorkha	1.21	277	*e*Sn	Sn	01 52 23.0	+9.3
	9µm,0.3s						
GKN	Gorkha	1.21	277	*e*Pg	Pg	01 52 00.8	+2.3
GKN				*e*Sn	Sn	01 52 23.0	+9.3
KOLN	Koldanda	2.12	268	*e*Sn	Sn	01 52 43.6	+6.7
	5µm,0.4s						
KOLN	Koldanda	2.12	268	*e*Pn	Pn	01 52 14.2	+3.9
KOLN				*e*Sn	Sn	01 52 43.6	+6.7
GTK	Gangtok	2.39	102	*e*	Pn	01 52 11.0	-3.2
GTK				*e*S	Sn	01 52 44.5	+0.7
LSA	Lhasa	4.88	67	P	Pn	01 52 51.4	+1.8
LSA				S	Sn	01 53 47.6	+0.7
LSA				Smax			
	comp=N,20nm,0.9s						
LSA				Smax			
	comp=E,40nm,1.0s						
LSA	Lhasa	4.88	67	*e*P	Pn	01 52 51.4	+1.7
LGTI	Lohaghat	5.29	289	*e*P	Pn	01 53 00.0	+4.6
LGTI				*e*		01 54 02.0	
PTH	Pithoragarh	5.34	290	*e*P	Pn	01 52 59.0	+2.9
PTH				*e*S	Sn	01 53 59.0	+0.5
BLSP	Bilaspur	6.70	212	*e*	Pn	01 53 02.6	-13
BLSP				*e*		01 54 51.0	
NDI	New Delhi	7.78	278	*e*P	Pn	01 53 29.0	-1.4
NDI				*e*S	Sn	01 54 53.0	-6.5
AYAN	Aya Nagar	7.85	277	*e*P	Pn	01 53 31.9	+0.6
AYAN				*e*	Sn	01 54 52.6	-8.5
SONA	Sohna	7.88	275	*e*P	Pn	01 53 31.6	-0.2
SONA				*e*S	Sn	01 54 55.9	-6.0
SONA				*e*		01 56 02.3	
	comp=E,57nm,0.5s						
SONA				*e*		01 56 03.1	
	comp=N,101nm,0.5s						
KUDL	Kundal	8.40	274	*e*P	P	01 53 38.0	-1.1
KUDL				*e*S	Sn	01 55 08.0	-7.0
SDNR	Sundarnagar	8.64	297	*e*P	P	01 53 43.6	+1.2
SDNR				*e*	Sn	01 55 18.0	-2.9
BHPL	Bhopal	9.00	241	*e*	Px	01 54 18.3	
BHPL				*e*S	Sn	01 55 17.8	-12
KHET	Khetri	9.01	274	*e*P	P	01 53 47.1	-0.4
KHET				*e*	Sn	01 55 20.5	-10
NGP	Nagpur	9.20	225	*e*P	P	01 53 48.7	-1.4
NGP				*e*	Sn	01 55 26.5	-8.2
	comp=N,800nm,5.0s						
THN	Thein Dam	9.99	300	*e*	Px	01 54 46.1	
THN				*e*S	Sn	01 55 48.5	-5.8
AJM	Ajmer	10.20	265	⇓*i*P	P	01 54 02.0	-1.9
AJM				*i* S	S	01 55 48.0	-11
HYB	Hyderabad	12.45	215	*i* P	P	01 54 35.0	+0.4
HYB				*e*		01 56 41.0	
HYB				*e*S	S	01 56 56.0	+1.5
POO	Poona	14.51	233	*e*	S	01 57 27.0	-17
GTA	Gaotai	16.26	41	*e*P	P	01 55 27.4	+3.0
GTA				AP		01 55 30.9	
GTA				AMB	AMB		
	comp=Z,3.0nm,0.6s						
AAK	Ala-Archa	17.45	331	P	P	01 55 36.9	-2.5
	comp=Z,7.9nm,1.1s						
ENH	Enshi	20.67	78	*e*P	P	01 56 17.9	+0.9
	comp=Z,3.0nm,0.3s						
KURK	Kurchatov	23.50	348	*e*P	P	01 56 46.3	+1.3
	comp=Z,5.2nm,0.5s,mb4.2						
ULN	Ulaanbaatar	25.84	34	P	P	01 57 06.1	-1.3
	comp=Z,4.0nm,0.7s,mb4.1						
CHKZ	Chkalovo	28.17	340	P	P	01 57 29.0	+0.3
	comp=Z,1.8nm,0.5s,mb4.0						
NB2	NORSAR Subarra	58.72	327	P	P	02 01 32.6	-1.7
	comp=Z,0.9nm,0.5s,mb4.1,baz=89,slow=7.4						
WRAB	Tennant Creek	66.68	130	*e*P	P	02 02 24.8	-3.0
	comp=Z,10.0nm,0.8s,mb4.9						
LSZ	Lusaka	70.52	240	*e*P	P	02 02 49.9	-1.7
	comp=Z,1.8nm,0.5s,mb4.3						
INK	Inuvik	79.77	14	P	P	02 03 42.3	-1.3
	comp=Z,2.6nm,0.9s,mb4.2						
SAML	Samuel	145.39	297	*e*PKP	PKPdf	02 11 12.6	-3.7

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*TRN **08** 02:18:05.4, 15.57N×61.00W, h98^{km}*
*NEIC **08** 02:18:06.1±0.8, 15.60N×61.04W, h115^{km}, mb4.1/6, Error ellipse: s-maj=19.3km s-min=7.0km az=79.0*
ISC 08 02:18:04.6±0.6**, 15.56N**±0.04×**61.0W**±0.1**, h118^{km}**±3^{km}**, n39, σ0^{s}91**/48**, mb4.2**/6**, 2C-11D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBCT	Belle View Cho	0.43	228	eP	P	02 18 23.2	+1.1
BBL	Barber's Block	0.44	266	⇓iP	P	02 18 23.0	+0.9
BBL				eS	S	02 18 34.9	-0.4
BBL	Barber's Block	0.44	266	⇓iP	P	02 18 21.9	-0.2
BBL	Barber's Block	0.44	266	⇓iP	P	02 18 23.0	+0.9
BBL				i S	S	02 18 33.9	-1.3
BBL				eS	S	02 18 34.9	-0.4
DSHT	Scott's Head	0.49	226	eP	P	02 18 23.2	+0.8
DSHT				eS	S	02 18 35.0	-0.8
DOG	Dongo Capester	0.75	309	⇓eP	P	02 18 24.1	-0.2
DEG	La Desirade	0.75	356	⇑iP	P	02 18 24.9	+0.6
DEG				i S	S	02 18 38.6	-0.5
BCG	Bois Riant Cap	0.79	312	eP	P	02 18 24.4	-0.2
SCG	Saint Claude	0.80	306	⇓eP	P	02 18 24.5	-0.2
CRM	Caravelle	0.81	173	⇓iP	P	02 18 25.0	+0.2
CRM				i S	S	02 18 38.9	-1.1
FDF	Fort de France	0.83	189	⇓eP	P	02 18 25.2	+0.2
FDF				eS	S	02 18 39.0	-1.4
SEG	Port Louis	0.96	331	⇑eP	P	02 18 26.6	+0.2
MVM	Montagne Vaucl	1.00	174	⇓iP	P	02 18 27.1	+0.3
MVM				i S	S	02 18 42.8	-0.6
BIM	Bigot	1.04	183	⇓iP	P	02 18 27.6	+0.5
BIM				i S	S	02 18 43.5	-0.5
ANG	Antigua	1.77	334	⇓iP	P	02 18 34.4	-1.2
CPB	Codrington	2.21	339	⇓iP	P	02 18 40.7	-0.5
NVRH	Round Hill, Ne	2.22	317	eP	P	02 18 42.7	+1.4
SVV	Soufriere Volc	2.24	185	eP	P	02 18 44.0	+2.4
SKTB	Turtle Beach	2.25	317	eP	P	02 18 42.0	+0.3
BSK	Brimstone Hill	2.50	316	eP	P	02 18 46.8	+1.8
SKDB	Saint Kitts 2	2.51	317	eP	P	02 18 46.7	+1.5
GRW	Mount Saint Ca	3.44	191	eP	P	02 18 58.4	+0.8
CBYP	Canovanas	5.37	301	eP	P	02 19 24.2	+0.6
SJG	San Juan	5.54	298	eP	P	02 19 25.4	-0.5
SDV	Santo Domingo	11.50	236	eP	P	02 20 46.0	-0.2
BBSR	BB Station	17.07	349	P	P	02 21 57.1	-0.3
JTS	JuntasAbangare	23.91	260	P	P	02 23 03.5	-5.1
SAML	Samuel	24.44	185	eP	P	02 23 15.1	+1.2
	2.4nm,0.9s,mb3.5						
FVM	French Village	34.23	316	eP	P	02 24 40.5	-0.6
JCT	Junction City	38.46	300	eP	P	02 25 16.2	-0.5
	5.7nm,0.3s,mb4.9						
WMOK	Wichita Mounta	38.86	306	eP	P	02 25 18.3	-1.7
	1.6nm,0.5s,mb4.1						
MNTX	Cornudas Mount	43.39	300	eP	P	02 25 57.0	-0.3
	2.7nm,0.4s,mb4.3						
PV01	Paradox Valley	47.41	308	eP	P	02 26 27.3	-1.6
TUC	Tucson	48.02	300	eP	P	02 26 32.7	-1.1
	1.4nm,0.7s,mb3.9						
JLU	Jordanelle	50.19	310	eP	P	02 26 50.8	+0.4
LOHW	Long Hollow	50.43	314	eP	P	02 26 51.4	-0.7
TPAW	Teton Pass	50.63	314	P	P	02 26 53.4	-0.3
QLMT	Earthquake Lak	51.37	315	eP	P	02 27 01.0	+1.7
HLID	Hailey	53.08	313	eP	P	02 27 11.8	-0.2
	2.2nm,1.0s,mb4.1						

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*MOS **08** 02:18:16.3±0.7, 16.42N×61.22W, h33^{km}, mb5.3/12, Error ellipse: s-maj=28.4km s-min=9.5km az=52.2*

*LDG **08** 02:18:19.2, 15.58N×61.46W, h100^{km}*

*TRN **08** 02:18:20.4, 15.60N×60.91W, h109^{km}, MD4.9*

TRN Felt (II) & (III) in Guadeloupe, (II) in Martinique. Also felt in Dominica.

*BJI **08** 02:18:23.0, 15.50N×61.30W, h110^{km}, mB4.9*

*NEIC **08** 02:18:23.1±0.2, 15.48N×61.31W, h115^{km}±1^{km}, mb5.0/116, MD4.9(TRN), Error ellipse: s-maj=2.8km s-min=2.1km az=210.0*

NEIC Felt [III] on Martinique and [II] on Guadeloupe.

*HRVD **08** 02:18:23.1±0.3, 15.64N×61.26W, h95^{km}±3^{km}, MW5.0/55, Centroid moment Tensor Solution. LP body waves: s32,c41;Mantle waves: s55,c89; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.53±.13; M$_{\theta\theta}$3.43±.11; M$_{\phi\phi}$-0.90±.13; M$_{r\theta}$-0.41±.10; M$_{\theta\phi}$-1.59±.13; M$_{\phi r}$-1.38±.08; Best double couple: M$_0$3.735×10^{16} NP1:φ$_s$79°,δ54°, λ-134°. NP2:φ$_s$318°,δ55°,λ-46°. Principal axes: T 3.951, Plg0°, Azm18°; N -.435, Plg34°, Azm108°; P -3.52, Plg56°, Azm288°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 08 02:18:22.1±0.2**, 15.48N**±0.02×**61.28W**±0.03**, h124**^{km}±2^{km}**, h107**^{km}±1.4^{km}**:pP-P, n319, σ0^{s}75**/305**, mb5.0**/127**, 13C-53D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBL	Barber's Block	0.18	283	eP	P	02 18 38.8	-0.6
MDN	Morne-Daniel	0.19	213	⇓iP	P	02 18 38.9	-0.5
MDN				eS	S	02 18 51.3	-1.1
DBCT	Belle View Cho	0.22	196	eP	P	02 18 38.4	-1.0
DSHT	Scott's Head	0.28	198	eP	P	02 18 39.1	-0.4
BPA	Boggy Peak	1.65	341	⇑iP	P	02 18 50.3	-1.7
BPA				eS	S	02 19 11.3	-3.4
NVRH	Round Hill, Ne	2.11	323	⇑iP	P	02 18 58.3	+0.6
NVRH				eS	S	02 19 25.0	+0.4
SKTB	Turtle Beach	2.14	323	⇑iP	P	02 18 58.3	+0.2
SVV	Soufriere Volc	2.15	178	⇑iP	P	02 18 59.8	+1.5
SVB	Belmont	2.20	179	i P	P	02 19 00.3	+1.5
CPB	Codrington	2.21	346	⇓iP	P	02 18 56.5	-2.5
SKI	Saint Kitts	2.31	323	eP	P	02 19 00.9	+0.6
SKI				eS	S	02 19 29.6	+0.4
BSK	Brimstone Hill	2.38	321	eP	P	02 19 02.2	+0.9
BSK				eS	S	02 19 32.9	+2.0
SKDB	Saint Kitts 2	2.40	323	eP	P	02 19 02.4	+0.9
STAT	Sint Eustatius	2.58	321	eP	P	02 19 04.9	+1.0
STAT				eS	S	02 19 37.2	+1.8
SABS	Saba	2.84	319	eP	P	02 19 08.2	+0.9
SABS				eS	S	02 19 42.5	+1.0
SABT	Saba	2.84	319	eP	P	02 19 08.2	+0.9
SABT				eS	S	02 19 42.5	+1.0
BBSP	Saint Philip	2.95	143	eP	P	02 19 06.7	-2.1
BBSP				eS	S	02 19 35.9	-8.4
STMA	St. Maarten, A	3.09	326	eP	P	02 19 09.9	-0.7
STMA				eS	S	02 19 44.1	-3.3
GRSS	Sisters	3.18	186	⇓iP	P	02 19 11.9	+0.1
GRHS	Sauteurs	3.26	186	⇓iP	P	02 19 13.2	+0.3
GRHS				eS	S	02 19 52.5	+1.0
GRW	Mount Saint Ca	3.32	186	eP	P	02 19 13.3	-0.4
TPR	Prospect	4.30	173	eP	P	02 19 25.4	-1.4
BOT	Bacolet	4.33	173	eP	P	02 19 26.4	-0.8
TRN	Trinidad (W)	4.81	181	eP	P	02 19 33.9	+0.2
TBH	Brigand Hill	4.97	178	eP	P	02 19 35.2	-0.7
TPP	Pointe-a-Pierr	5.14	182	eP	P	02 19 38.4	+0.3
CBYP	Canovanas	5.18	303	⇓ePn	P	02 19 38.6	-0.1
SJG	San Juan	5.34	300	⇓eP	P	02 19 40.0	-0.8
AGP	Aguadilla	6.32	298	P	P	02 19 54.7	+0.7
SDV	Santo Domingo	11.24	235	⇑iP	P	02 21 01.2	+1.1
BBSR	BB Station	17.10	350	eP	P	02 22 12.5	-2.4
	53nm,0.4s						
OTAV	Otavalo	22.74	230	eP	P	02 23 15.1	+0.7
	52nm,1.0s,mb4.8						
JTS	JuntasAbangare	23.63	260	eP	P	02 23 24.1	+1.1
	28nm,0.8s,mb4.6						
SAML	Samuel	24.35	185	⇑iP	P	02 23 30.4	+0.5
	27nm,0.8s,mb4.6						
CSU	Charleston Sou	24.37	319	eP	P	02 23 31.0	+1.1
RGRS	Roger Stewart	24.39	319	eP	P	02 23 30.8	+0.6
TWB	Tillmans-White	24.47	319	eP	P	02 23 31.8	+0.9
NHSC	New Hope	24.51	319	eP	P	02 23 31.0	-0.3
	315nm,1.0s,mb5.7						
COW	Cow Castle Cre	25.02	319	eP	P	02 23 35.8	-0.4
JSC	Jenkinsville	25.96	320	eP	P	02 23 44.7	-0.2
TEIG	Tepich	26.11	284	⇓eP	P	02 23 46.4	+0.1
	25nm,0.9s,mb4.6						
CBN	Corbin	26.72	331	P	P	02 23 51.4	-0.3
	38nm,0.9s,mb4.9						
GOGA	Godfrey	26.85	316	eP	P	02 23 53.1	0.0
	20nm,0.2s,mb5.3						
SDMD	Soldier's Deli	27.46	333	eP	P	02 23 57.5	-1.0
BLA	Blacksburg	27.50	325	⇓eP	P	02 23 58.8	-0.2
	22nm,0.7s,mb4.8						
PAL	Palisades	27.69	339	⇓eP	P	02 24 00.2	-0.4
	18nm,0.8s,mb4.7						
ELN	Prospectdale	27.70	325	eP	P	02 24 00.7	-0.1
PWV	Princeton	27.94	325	eP	P	02 24 03.0	+0.1
FWV	Forest Hill	27.99	326	eP	P	02 24 03.3	-0.1
CPCT	Cooper Cave	28.77	318	eP	P	02 24 09.8	-0.6
SSPA	Standing Stone	28.92	333	eP	P	02 24 11.7	+0.1
	5.1nm,0.6s,mb4.3						
LRAL	Lakeview Retre	29.11	311	eP	P	02 24 13.3	-0.1
	27nm,0.7s,mb5.0						
LRAL				ePcP	PcP	02 27 18.1	-0.2
BINY	Binghamton	29.48	337	⇓eP	P	02 24 16.7	+0.1
	64nm,1.4s,mb5.1						
BINY				ePcP	PcP	02 27 18.9	-0.2
HNH	Hanover	29.65	344	eP	P	02 24 18.0	-0.2
	3.8nm,1.3s,mb3.9						
HNH				ePcP	PcP	02 27 19.6	0.0
ACCN	Adirondack Com	29.75	342	eP	P	02 24 19.0	-0.1
ACCN				ePcP	PcP	02 27 18.8	-1.1
MDV	Middlebury	30.17	343	eP	P	02 24 22.5	-0.3
MIV	Mineville/With	30.34	342	eP	P	02 24 24.6	+0.3
NCB	Newcomb	30.46	341	eP	P	02 24 25.1	-0.1
	35nm,1.0s,mb4.9						
NCB				ePcP	PcP	02 27 21.1	-0.5
GENY	Geneseo	30.67	336	eP	P	02 24 26.6	-0.5
ACSO	Alum Creek Sta	31.07	327	eP	P	02 24 30.5	-0.2
	95nm,1.4s,mb5.3						
WVT	Waverly	31.35	316	⇓iP	P	02 24 32.5	-0.7
	50nm,0.7s,mb5.3						
WVT				i PcP	PcP	02 27 23.6	-0.5
OXF	Oxford	31.59	312	⇓iP	P	02 24 34.7	-0.6
	177nm,0.6s,mb6.0						
WCI	Wyandotte Cave	31.61	321	⇓iP	P	02 24 35.4	0.0
	61nm,0.8s,mb5.4						
WCI				ePcP	PcP	02 27 24.5	-0.3
TUIG	Tuzandepetl	31.81	279	i P	P	02 24 37.5	+0.2
UTMT	University of	32.16	315	⇓iP	P	02 24 40.0	-0.3
	297nm,1.0s,mb6.0						
USIN	University of	32.30	319	⇓iP	P	02 24 41.2	-0.2
	119nm,1.0s,mb5.6						
BLO	Bloomington	32.35	322	⇓iP	P	02 24 41.7	-0.1
	59nm,0.6s,mb5.5						
GNAR	Gosnell	32.76	314	eP	P	02 24 43.8	-1.6
AAM	Ann Arbor	32.93	329	eP	P	02 24 46.6	-0.2
	29nm,0.8s,mb5.2						
HBAR	Harrisburg	33.00	313	eP	P	02 24 46.8	-0.7
UALR	University of	33.85	310	⇓eP	P	02 24 54.2	-0.5
	27nm,0.8s,mb5.1						
OXX	Oaxaca	34.03	278	i P	P	02 24 55.5	-0.9
FVM	French Village	34.10	317	⇓iP	P	02 24 56.3	-0.5
	46nm,0.6s,mb5.5						
NATX	Nacogdoches	34.43	304	⇓iP	P	02 25 00.1	+0.4
	92nm,0.6s,mb5.8						
MIAR	Mount Ida	34.66	309	⇓eP	P	02 25 01.2	-0.4
	39nm,1.1s,mb5.2						
MIAR				ePcP	PcP	02 27 33.8	+0.5
CCM	Cathedral Cave	34.69	316	⇓iP	P	02 25 01.4	-0.5
	65nm,0.7s,mb5.6						
CCM				ePcP	PcP	02 27 33.8	+0.5
HKT	Hockley	34.81	300	⇓iP	P	02 25 02.8	-0.2
	67nm,1.1s,mb5.4						
IIB	San Bernardino	35.53	281	i P	P	02 25 09.0	-0.1
PPM	Popocatepetl	35.79	281	eP	P	02 25 11.5	+0.2
JCT	Junction City	38.27	300	⇓iP	P	02 25 31.6	-0.4
	198nm,0.9s,mb5.9						
JCT				ePcP	PcP	02 27 44.9	+0.7
ZIIG	Zihuatanejo	38.53	279	i P	P	02 25 34.3	0.0
WMOK	Wichita Mounta	38.70	307	⇓iP	P	02 25 34.8	-0.7
	44nm,0.6s,mb5.5						
WMOK				ePcP	PcP	02 27 45.8	+0.3
KSU1	Kansas State U	38.86	314	eP	P	02 25 35.7	-1.1
SCHQ	Schefferville	39.50	355	eP	P	02 25 42.4	+0.5
	60nm,1.2s,mb5.3						
SFJM	Santa Fe	39.95	284	i P	P	02 25 46.5	+0.5
EYMN	Ely	40.84	329	eP	P	02 25 53.5	+0.5
CBKS	Cedar Bluff	40.93	312	⇓iP	P	02 25 53.7	-0.1
	87nm,0.8s,mb5.6						
AMTX	Amarillo	41.00	306	⇓eP	P	02 25 54.0	-0.5
	107nm,1.2s,mb5.5						
LTX	Lajitas	41.31	297	eP	P	02 25 56.9	-0.1
	30nm,1.1s,mb5.0						
LTX				ePcP	PcP	02 27 55.1	+1.2
CPRX	Cap Rock	42.24	302	eP	P	02 26 04.2	-0.6
GDL2	Guadalupe Moun	42.46	301	eP	P	02 26 06.4	-0.1
MNTX	Cornudas Mount	43.20	300	⇓iP	P	02 26 12.7	+0.1
	35nm,0.5s,mb5.3						
MNTX				ePP	PP	02 27 57.0	+0.1
MNTX				i PcP	PcP	02 28 00.3	0.0
ULM	Lac du Bonnet	44.52	329	ePcP	PcP	02 28 03.9	-0.6
	26nm,0.6s						
LPM	Los Pinos Moun	44.79	303	eP	P	02 26 26.3	+1.0
ANMO	Albuquerque	44.80	304	i P	P	02 26 25.9	+0.6
ANMO	Albuquerque	44.80	304	⇓eP	P	02 26 25.7	+0.4
	40nm,1.3s,mb5.0						
ANMO				ePcP	PcP	02 28 06.7	+1.0
SDCO	Great Sand Dun	44.81	308	⇑iP	P	02 26 25.4	+0.1
	36nm,0.8s,mb5.2						
SDCO				ePcP	PcP	02 28 06.5	+0.8
LENM	Lemitar	45.03	303	eP	P	02 26 27.7	+0.5
ISCO	Idaho Springs	45.53	311	eP	P	02 26 31.5	+0.4
	23nm,0.9s,mb4.9						
PHWY	Pilot Hill	45.94	313	eP	P	02 26 34.4	+0.2
PV01	Paradox Valley	47.24	308	eP	P	02 26 45.2	+0.7
PV10	Paradox Valley	47.66	308	eP	P	02 26 47.5	-0.3
PV10				ePcP	PcP	02 28 16.6	+0.8
TUC	Tucson	47.83	300	⇓iP	P	02 26 49.8	+0.6
	35nm,0.8s,mb5.2						
TUC				i PcP	PcP	02 28 17.3	+0.9
DGMT	Dagmar	48.09	322	⇓iP	P	02 26 51.1	+0.1
	104nm,0.9s,mb5.7						
LAO	LASA Array	48.53	320	⇓iP	P	02 26 54.7	+0.3
	54nm,0.7s,mb5.6						
SRU	San Rafael	48.97	309	⇓iP	P	02 26 58.1	+0.1
SRU				ePcP	PcP	02 28 20.8	+0.3
TMUT	Trail Mountain	49.53	309	eP	P	02 27 02.7	+0.5
FCC	Fort Churchill	49.55	338	⇓eP	P	02 27 01.1	-1.0
	38nm,0.9s,mb5.3						
FCC				ePcP	PcP	02 28 20.8	-1.4
DAU	Daniels Canyon	49.85	310	eP	P	02 27 05.4	+0.7
MPU	Maple Canyon	50.03	310	eP	P	02 27 06.1	+0.1
MPU				ePcP	PcP	02 28 24.9	+0.7
JLU	Jordanelle	50.04	310	eP	P	02 27 06.3	+0.2
MSU	Marysvale	50.09	307	eP	P	02 27 07.2	+0.7
MSU				ePcP	PcP	02 28 26.2	+1.7
MVU	Marysvale	50.11	307	⇓eP	P	02 27 07.3	+0.7
	40nm,1.3s,mb5.2						
TCUT	Toone Canyon	50.15	311	eP	P	02 27 06.7	-0.2
FFC	Flin Flon	50.20	331	P	P	02 27 06.0	-1.1
	120nm,1.0s,mb5.8,SNR=20						
FFC	Flin Flon	50.20	331	eP	P	02 27 05.6	-1.4
	22nm,0.9s,mb5.1						
FFC				ePcP	PcP	02 28 24.8	+0.1
CTU	Camp Tracy	50.29	310	eP	P	02 27 08.1	+0.2
LOHW	Long Hollow	50.30	314	eP	P	02 27 07.8	-0.2
NLU	North Lily Min	50.34	309	eP	P	02 27 08.5	+0.2
NLU				ePcP	PcP	02 28 25.9	+0.4
WUWY	Wally Ulrich	50.37	314	eP	P	02 27 08.4	-0.2
AHID	Auburn Hatcher	50.39	313	eP	P	02 27 08.2	-0.5
	55nm,0.9s,mb5.5						
HWUT	Hardware Ranch	50.39	312	⇓eP	P	02 27 08.4	-0.3
	22nm,0.7s,mb5.2						
MOOW	Moose Ponds	50.44	314	eP	P	02 27 08.5	-0.5
LKWY	Lake	50.46	316	eP	P	02 27 09.8	+0.6
	11nm,0.7s,mb4.9						
TPAW	Teton Pass	50.50	314	eP	P	02 27 09.7	+0.2
NOQ	North Oquirrh	50.55	310	⇓eP	P	02 27 10.0	+0.1
IMW	Indian Meadow	50.62	315	eP	P	02 27 10.3	-0.1
YNR	Norris Junctio	50.70	316	eP	P	02 27 11.4	+0.3
RRI2	Red Ridge	50.71	314	eP	P	02 27 11.2	+0.1
YFT	Old Faithful	50.72	315	eP	P	02 27 12.7	+1.5
YMR	Madison River	50.88	315	eP	P	02 27 13.0	+0.7
QLMT	Earthquake Lak	51.24	316	eP	P	02 27 16.6	+1.5
BGU	Big Grassy Mou	51.28	310	eP	P	02 27 15.5	0.0
HVU	Hansel Valley	51.31	311	⇓iP	P	02 27 15.5	-0.2
BOZ	Bozeman (W)	51.63	316	⇓eP	P	02 27 17.9	-0.1
	36nm,0.9s,mb5.4						
PBEJ	Beja	51.94	54	eP	P	02 27 21.1	+0.7
	14nm,1.0s,mb4.9						
MCMT	McKenzie Canyo	52.20	315	eP	P	02 27 23.0	+0.7
PVIS	Viseu	52.45	50	eP	P	02 27 24.4	+0.2
	31nm,1.6s,mb5.1						
MTE	Manteigas	52.64	51	eP	P	02 27 25.9	+0.2
	20nm,1.6s,mb4.9						
TRCR	Troy Canyon	52.68	307	eP	P	02 27 26.2	+0.2
PVRL	Vila Real	52.70	50	eP	P	02 27 26.5	+0.4
	5.2nm,0.7s,mb4.7						
HLID	Hailey	52.94	313	⇓iP	P	02 27 27.8	0.0
	35nm,0.9s,mb5.4						
CHMT	Chamberlain Mo	53.10	318	eP	P	02 27 29.0	0.0
TRQA	Tornquist	53.26	181	eP	P	02 27 29.6	-0.7
	3.8nm,0.6s,mb4.6						
MSO	Missoula	53.53	317	eP	P	02 27 31.0	-1.1
	18nm,1.2s,mb5.0						
MSO				ePcP	PcP	02 28 37.5	+0.4
TPH	Tonopah	53.91	306	⇓iP	P	02 27 35.1	+0.1
	18nm,0.8s,mb5.2						
WALA	Waterton Lakes	54.21	320	eP	P	02 27 36.2	-0.8
	47nm,1.2s,mb5.4						
BMN	Battle Mountai	54.30	309	⇓iP	P	02 27 37.8	0.0
	82nm,1.0s,mb5.7						
MNV	Mina	54.69	306	⇓iP	P	02 27 40.7	0.0
	64nm,1.1s,mb5.6						
OMM	Old Mammoth Mi	55.23	305	eP	P	02 27 45.1	+0.5
BMO	Blue Mountains	55.27	314	⇓iP	P	02 27 43.3	-1.6
	26nm,1.0s,mb5.2						
EDM	Edmonton	55.36	325	eP	P	02 27 44.0	-1.4
WVOR	Wild Horse Val	55.71	311	eP	P	02 27 47.2	-0.9
	16nm,1.2s,mb4.9						
NEW	Newport	56.01	318	⇓iP	P	02 27 49.2	-0.9
	87nm,0.7s,mb5.9						
WCN	Washoe City	56.05	307	P	P	02 27 50.2	-0.3
	8.9nm,0.9s,mb4.8						
CMB	Columbia Colle	56.38	306	eP	P	02 27 52.0	-0.8
	17nm,1.1s,mb5.0						
LRV	Little Rabbit	56.72	304	eP	P	02 27 55.3	0.0
OD2	Odessa Site #2	56.82	317	P	P	02 27 55.3	-0.5
MOD	Modoc	56.84	310	eP	P	02 27 54.8	-1.2
	13nm,0.8s,mb5.0						
OHCM	Honcut	57.38	307	eP	P	02 27 59.9	0.0
QUIF	Quistinic	57.39	43	eP	P	02 27 59.3	-0.5
ROSF	Rostrenen	57.42	42	eP	P	02 28 00.1	+0.1
SJPF	Ste Jean	57.79	49	eP	P	02 28 02.4	-0.3
	18nm,0.8s,mb4.8						
SGMF	Saint Gilles	57.87	42	eP	P	02 28 03.2	0.0
TBM	Table Mountain	58.02	316	P	P	02 28 04.2	0.0
LHEM	Herd Peak	58.22	310	P	P	02 28 05.8	+0.1
ETSF	Etsaut	58.24	49	eP	P	02 28 06.4	+0.6
WDC	Whiskeytown Da	58.33	308	⇓eP	P	02 28 04.1	-2.4
	23nm,1.0s,mb5.2						
WPW	White Pass	58.56	316	P	P	02 28 08.0	0.0
YBH	Yreka Blue Hor	58.59	310	eP	P	02 28 06.5	-1.8
	19nm,0.8s,mb5.2						
SUMG	Summit	58.62	8	eP	P	02 28 08.3	+0.2
	54nm,1.1s,mb5.5						
SUMG				ePcP	PcP	02 28 57.3	+0.7
HUMO	Hull Mountain	58.89	311	eP	P	02 28 08.4	-1.9
	18nm,1.1s,mb5.0						
EPF	Esparros	58.91	49	eP	P	02 28 11.2	+0.7
	24nm,0.9s,mb4.9						
GRR	Gorron	59.01	43	eP	P	02 28 11.1	0.0
	6.7nm,0.6s,mb4.5						
MFF	Saint Martin d	59.13	45	eP	P	02 28 12.2	+0.2
	3.0nm,0.4s,mb4.3						
KHMM	Horse Mountain	59.26	309	eP	P	02 28 12.2	-0.8
FLN	La Foliniere	59.33	42	eP	P	02 28 13.3	0.0
	18nm,0.7s,mb4.9						
FLN				eR			
	139nm,19.9s						
LFF	La Frestale	59.47	47	eP	P	02 28 14.4	+0.1
	35nm,1.2s,mb5.0						
LDF	La Druitiere	59.53	42	eP	P	02 28 14.5	-0.2
KBO	Bosley Butte	59.77	310	eP	P	02 28 16.8	+0.3
YKW3	Yellowknife Ar	59.88	335	eP	P	02 28 15.3	-1.5
KEBM	Edson Butte	59.93	311	eP	P	02 28 17.7	+0.2
SNB	Saturna Island	60.03	318	P	P	02 28 17.1	-1.0
RJF	Les Rejaudoux	60.07	46	eP	P	02 28 18.3	-0.1
	12nm,0.8s,mb4.7						
RJF				eR			
	195nm,19.0s						
PGC	Sidney	60.19	317	⇓iP	P	02 28 18.0	-1.2
	173nm,0.9s						
MTLF	Montolieu	60.31	49	eP	P	02 28 20.0	-0.1
	26nm,1.0s,mb4.9						
CAF	Calviac	60.40	47	eP	P	02 28 20.6	-0.1
OCWA	Octopus Mounta	60.51	316	eP	P	02 28 21.8	+0.4
	209nm,1.3s,mb6.0						
OOW	Octopus West	60.52	316	P	P	02 28 22.1	+0.7
TCF	Toulx Ste Croi	60.69	45	eP	P	02 28 22.5	-0.1
	6.5nm,0.8s,mb4.4						
HYF	Humbligny	61.12	44	eP	P	02 28 25.7	+0.1
BGF	Bois d'Agland	61.16	45	eP	P	02 28 25.8	0.0
AVF	Avril sur Loir	61.54	45	eP	P	02 28 27.9	-0.5
	16nm,0.8s,mb4.8						
LASF	Ste Croix	61.57	48	eP	P	02 28 29.5	+0.9
	54nm,1.3s,mb5.1						
SSF	Saint Saulge	61.68	45	eP	P	02 28 28.9	-0.4
	19nm,0.8s,mb4.8						
SMF	Signal de Mont	61.85	45	eP	P	02 28 30.1	-0.4
	32nm,1.1s,mb5.0						
RES	Resolute Bay	62.02	350	⇓iP	P	02 28 30.2	-1.0
	13nm,0.8s,mb5.0						
VIVF	Saint-Julien-l	62.23	47	eP	P	02 28 33.7	+0.7
	11nm,0.8s,mb4.7						
BAIF	Baives	62.57	41	eP	P	02 28 34.7	-0.5
SMRF	Simiane la Rot	62.80	48	eP	P	02 28 37.6	+0.8
MEZF	Maizieres J'vi	62.90	43	eP	P	02 28 37.2	-0.2
	31nm,0.7s,mb5.0						
GIVF	Givet	62.97	41	eP	P	02 28 37.4	-0.4
	25nm,0.8s,mb4.9						
ORIF	Oris-en-Rattie	63.09	47	eP	P	02 28 39.8	+1.1
	9.2nm,0.8s,mb4.5						
ORIF				eR			
	116nm,17.2s						
CABF	La Chapelle	63.39	45	eP	P	02 28 40.5	-0.1
FRF	La Foret Royal	63.54	49	eP	P	02 28 42.7	+1.0
	35nm,1.0s,mb4.8						
HAU	Haudompre	63.71	44	eP	P	02 28 42.0	-0.7
	9.7nm,0.8s,mb4.4						
HAU				eR			
	126nm,17.0s						
MBDF	Montbardon	63.71	48	eP	P	02 28 43.4	+0.7
	16nm,0.8s,mb4.6						
LPL	La Plagne	63.74	47	eP	P	02 28 43.8	+0.9
	18nm,0.9s,mb4.6						
LPG	La Plagne	63.75	47	eP	P	02 28 44.0	+1.0
	18nm,0.9s,mb4.6						
HGN	Heimansgroeve	63.77	41	eP	P	02 28 37.9	-5.0
	16nm,1.1s,mb4.8						
WLF	Walferdange	63.77	42	P	P	02 28 43.8	+0.8
HINF	Hinteralfeld	64.03	44	eP	P	02 28 43.9	-0.8
	13nm,0.8s,mb4.5						
CDF	Champ du Feu	64.36	43	eP	P	02 28 46.4	-0.5
	16nm,0.9s,mb4.5						
WTSB	Winterswijk	64.46	40	eP	P	02 28 46.3	-1.2
	23nm,1.3s,mb4.8						
BFO	Black Forest	65.06	44	eP	P	02 28 51.3	-0.1
BFO				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
BFO	Black Forest	65.06	44	eP	P	02 28 51.3	-0.1
	comp=Z,7.0nm,1.3s,mb4.3						
TNS	Taunus Mts	65.30	42	eP	P	02 28 53.2	+0.2
TNS				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
TNS	Taunus Mts	65.30	42	eP	P	02 28 53.2	+0.2
	comp=Z,16nm,0.9s,mb4.8						
DLBC	Dease Lake	65.83	327	eP	P	02 28 56.4	+0.2
DAVA	Damuels	66.03	45	⇑iP	P	02 28 57.5	-0.2
	comp=Z,16nm,0.8s,mb4.9						
CLZ	Clausthal	66.65	40	eP	P	02 29 01.7	+0.2
	comp=Z,23nm,1.4s,mb4.8						
BSEG	Bad Segeberg	66.80	38	eP	P	02 29 02.4	0.0
BSEG				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
MOTA	Moosalm	66.86	45	⇓iP	P	02 29 01.7	-1.2
	comp=Z,3.4nm,1.0s,mb4.1						
SQTA	Sankt Quirin	66.93	45	⇑iP	P	02 29 03.6	+0.2
	comp=Z,11nm,1.0s,mb4.6						
GRA1	Grafenberg Arr	67.05	42	eP	P	02 29 04.2	+0.2
	comp=Z,34nm,1.5s,mb5.0						
GRA1				epP	pP	02 29 30.5	-4.1
GRF	Grafenberg Arr	67.05	42	eP	P	02 29 04.2	+0.2
GRF				e*PP	pP	02 29 30.5	-4.1
GRF				pmax	pmax		
	comp=Z,34nm,1.5s,mb5.0						
GRF	Grafenberg Arr	67.05	42	eP	P	02 29 04.2	+0.2
	comp=Z,34nm,1.5s,mb5.0						
GRF				epP	pP	02 29 30.5	-4.1
MOX	Moxa	67.35	41	i P	P	02 29 05.9	0.0
MOX				L		03 12 26.0	
NKC	Novy Kostel	67.86	42	eP	P	02 29 06.4	-2.7
NKC				P		02 29 09.8	
NB2	NORSAR Subarra	68.11	30	P	P	02 29 10.7	+0.3
	comp=Z,1.3nm,0.7s,mb3.9,baz=259,slow=6.5						
WET	Wettzell	68.11	43	eP	P	02 29 10.6	0.0
WET				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
WET	Wettzell	68.11	43	eP	P	02 29 10.6	0.0
	comp=Z,6.0nm,0.9s,mb4.4						
CLL	Collm	68.26	41	⇓iP	P	02 29 11.2	-0.3

CLL				*i*	pP	02 29 37.5	-4.7
CLL				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
CLL	**Collm**	**68.26**	**41**	⇓*i*P	**P**	**02 29 11.2**	**-0.3**
	comp=Z,11nm,0.8s,mb4.7						
CLL				*i*	pP	02 29 37.5	-4.7
CLL	**Collm**	**68.26**	**41**	⇓P	**P**	**02 29 11.2**	**-0.3**
	comp=Z,logA/T=1.1,mb4.7						
CLL				*i* *PP	pP	02 29 37.5	-4.7
KBA	**Koelnbreinsper**	**68.39**	**45**	⇑*i*P	**P**	**02 29 12.3**	**-0.1**
	comp=Z,17nm,1.0s,mb4.8						
KHC	**Kasperske Hory**	**68.57**	**43**	*e*P	**P**	**02 29 13.3**	**-0.1**
KHC				*e*pP	pP	02 29 38.9	-5.3
GEC2	**GERESS Array S**	**68.64**	**43**	*e*P	**P**	**02 29 13.8**	**-0.1**
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
GEC2	**GERESS Array S**	**68.64**	**43**	*e*P	**P**	**02 29 13.8**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.4						
CADS	**Cadrg**	**68.66**	**46**	*e*P	**P**	**02 29 13.9**	**-0.1**
BRG	**Berggiesshubel**	**68.84**	**41**	*i* P	**P**	**02 29 15.4**	**+0.3**
BRG				*e*		02 29 21.4	
BRG				*e*		02 29 39.4	
BRG				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
BRG	**Berggiesshubel**	**68.84**	**41**	*i* P	**P**	**02 29 15.4**	**+0.3**
	comp=Z,12nm,0.9s,mb4.7						
BRG				*e*		02 29 21.4	
BRG				*e*		02 29 39.4	
MOA	**Molln**	**69.01**	**44**	⇑*i*P	**P**	**02 29 15.7**	**-0.5**
	comp=Z,6.7nm,1.1s,mb4.4						
INK	**Inuvik**	**69.17**	**338**	⇓*i*P	**P**	**02 29 15.8**	**-1.0**
	comp=Z,53nm,0.9s,mb5.4						
PRU	**Pruhonice**	**69.20**	**42**	*e*P	**P**	**02 29 17.3**	**0.0**
PRU				*e*pP	pP	02 29 45.5	-2.6
OBKA	**Obir**	**69.22**	**46**	⇑*i*P	**P**	**02 29 17.3**	**-0.2**
	comp=Z,8.1nm,0.7s,mb4.7						
PVCC	**Panska Ves**	**69.23**	**41**	*e*P	**P**	**02 29 17.6**	**+0.1**
ARSA	**Arzberg**	**69.87**	**45**	⇑*i*P	**P**	**02 29 20.6**	**-0.8**
	comp=Z,3.2nm,0.6s,mb4.3						
UPC	**Upice**	**70.15**	**41**	*e*P	**P**	**02 29 23.6**	**+0.5**
UPC				*e*pP	pP	02 29 50.8	-3.2
KSP	**Ksiaz**	**70.33**	**41**	P	**P**	**02 29 25.2**	**+1.1**
DPC	**Dobruska-Polom**	**70.35**	**42**	*e*P	**P**	**02 29 24.3**	**0.0**
DPC				*e*pP	pP	02 29 51.5	-3.7
VRAC	**Vranov**	**70.54**	**43**	P	**P**	**02 29 26.2**	**+0.7**
ZST	**Bratislava**	**70.91**	**44**	*i* P	**P**	**02 29 27.9**	**+0.2**
DAWY	**Dawson**	**71.00**	**333**	*e*P	**P**	**02 29 28.2**	**+0.3**
SMOL	**Smolenice**	**71.12**	**44**	*i* P	**P**	**02 29 29.5**	**+0.6**
MORC	**Moravsky Berou**	**71.15**	**42**	*e*P	**P**	**02 29 29.0**	**-0.1**
	comp=Z,7.8nm,0.9s,mb4.5						
JAVC	**Velka Javorina**	**71.26**	**43**	P	**P**	**02 29 31.4**	**+1.6**
OKC	**Ostrava-Krasne**	**71.54**	**42**	*e*P	**P**	**02 29 31.5**	**+0.1**
SRO1	**Iza**	**71.69**	**44**	*i* P	**P**	**02 29 32.9**	**+0.6**
VYHS	**Vyhne**	**72.05**	**44**	*i* P	**P**	**02 29 34.8**	**+0.4**
VYHS				*e*pP	pP	02 30 02.7	-2.8
PKSM	**Moragy**	**72.06**	**46**	P	**P**	**02 29 35.3**	**+0.8**
BUD	**Budapest**	**72.24**	**45**	P	**P**	**02 29 36.5**	**+0.9**
OJC	**Ojcow**	**72.58**	**42**	*e*P	**P**	**02 29 38.3**	**+0.8**
NIE	**Niedzica**	**72.97**	**43**	*e*P	**P**	**02 29 39.9**	**+0.1**
KECS	**Kecovo**	**73.15**	**43**	*i* P	**P**	**02 29 39.7**	**-1.2**
CRVS	**Cervenica-Dubn**	**73.76**	**43**	*i* P	**P**	**02 29 45.4**	**+1.0**
CRVS				*e*		02 29 56.0	
THY	**Trims Highway**	**73.82**	**332**	*e*P	**P**	**02 29 44.7**	**+0.3**
DIV	**Divide**	**73.92**	**330**	*e*P	**P**	**02 29 45.2**	**0.0**
	comp=Z,33nm,0.6s,mb5.2						
KOLS	**Kolonicke sedl**	**74.29**	**43**	*i* P	**P**	**02 29 48.6**	**+1.1**
KOLS				*e*		02 30 00.3	
KWP	**Kalwaria**	**74.50**	**42**	*e*P	**P**	**02 29 49.9**	**+1.2**
	comp=Z,34nm,1.1s,mb5.0						
COLA	**College**	**74.66**	**334**	*i* P	**P**	**02 29 48.9**	**-0.4**
COLA	**College**	**74.66**	**334**	*e*P	**P**	**02 29 48.8**	**-0.5**
KEV	**Kevo**	**75.01**	**21**	*e*p	**P**	**02 29 51.1**	**-0.1**
MCK	**McKinley**	**75.22**	**333**	*e*P	**P**	**02 29 52.1**	**-0.4**
	comp=Z,22nm,1.0s,mb4.8						
FINES	**FINESS Array B**	**75.29**	**30**	P	**P**	**02 29 53.2**	**+0.3**
KAF	**Kangasniemi**	**75.33**	**29**	*e*p	**P**	**02 29 51.6**	**-1.5**
	comp=Z,3.9nm,0.5s,mb4.4,baz=275,slow=5.6						
KAF	**Kangasniemi**	**75.33**	**29**	*e*P	**P**	**02 29 51.6**	**-1.5**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
ITM	**Ithomi**	**75.48**	**55**	P	**P**	**02 29 52.9**	**-1.6**
PMR	**Palmer**	**75.50**	**330**	*e*P	**P**	**02 29 54.4**	**+0.3**
SLKM	**Skilak Lake**	**76.15**	**329**	*e*P	**P**	**02 29 58.4**	**+0.6**
IMA	**Indian Mountai**	**76.95**	**335**	*e*P	**P**	**02 30 02.8**	**+0.6**
MLR	**Muntele Rosu**	**77.21**	**46**	P	**P**	**02 30 06.3**	**+2.3**
RSO	**Redoubt South**	**77.40**	**329**	*e*P	**P**	**02 30 05.2**	**+0.4**
JOF	**Joensuu**	**77.53**	**28**	*e*p	**P**	**02 30 04.4**	**-1.0**
	comp=Z,7.7nm,0.8s,mb4.5						
JOF	**Joensuu**	**77.53**	**28**	*e*P	**P**	**02 30 04.4**	**-1.0**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
SVW2	**Sparrevohn**	**78.65**	**330**	*e*P	**P**	**02 30 12.0**	**+0.4**
OBN	**Obninsk**	**81.87**	**35**	*i* P	**P**	**02 30 29.8**	**+1.0**
OBN				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.4						
OBN	**Obninsk**	**81.87**	**35**	*e*P	**P**	**02 30 29.6**	**+0.8**
	comp=Z,39nm,0.8s,mb5.3						
OBN				*e*pP	pP	02 30 58.9	-1.7
BRTR	**Keskin Array B**	**83.97**	**51**	*i* P	**P**	**02 30 40.7**	**+0.9**
TSUM	**Tsumeb**	**84.88**	**111**	*e*P	**P**	**02 30 46.4**	**+1.6**
	comp=Z,13nm,1.0s,mb4.8						
ANN	**Anapa**	**85.28**	**45**	*e*P	**P**	**02 30 40.5**	**-5.7**
ANN				pmax	pmax		
	comp=Z,121nm,1.4s,mb5.6						
KIV	**Kislovodsk**	**89.12**	**45**	*e*P	**P**	**02 31 05.9**	**+1.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
BILL	**Bilibino**	**89.94**	**344**	*i* P	**P**	**02 31 08.9**	**+0.9**
BILL				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.3						
BILL				MLR	MLR		
	comp=Z,500nm,21.0s						
BILL	**Bilibino**	**89.94**	**344**	*e*P	**P**	**02 31 08.8**	**+0.8**
	comp=Z,13nm,0.7s,mb5.2						
TIXI	**Tiksi**	**92.81**	**357**	*d* *i*P	**P**	**02 31 21.7**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
TIXI	**Tiksi**	**92.81**	**357**	*i* Pr		02 31 21.8	
WMQ	**Urumqi**	**114.52**	**24**	*e*PKP	PKPdf	02 36 49.0	+1.4
MDJ	**Mudanjiang**	**119.38**	**351**	PKP	PKPdf	02 36 59.1	+2.2
CN2	**Changchun**	**120.69**	**354**	*e*PKP	PKPdf	02 36 59.0	-0.5
GTA	**Gaotai**	**122.61**	**17**	PKP	PKPdf	02 37 05.2	+1.9
GTA				PP	PP	02 38 45.8	-0.8
GTA				SKS	SKS	02 44 05.8	+15
GTA				SKKS		02 45 26.4	
GTA				PP	PP		
	comp=Z,87nm,6.8s						
GTA				LR	LR		
	comp=N,304nm,20.9s						
GTA				LR	LR		
	comp=E,233nm,22.4s						
GTA				LR	LR		
	comp=Z,329nm,18.2s						
LZH	**Lanzhou**	**126.82**	**15**	PKP	PKPdf	02 37 13.5	+1.9
LZH				XPKP		02 37 57.0	
LSA	**Lhasa**	**127.80**	**31**	P	PKPdf	02 37 07.0	-6.7
LSA				AMB	AMB		
	comp=Z,70nm,1.0s						
LSA	**Lhasa**	**127.80**	**31**	*e*P	PKPdf	02 37 07.1	-6.6
NJ2	**Nanjing**	**132.74**	**360**	*e*PKP	PKPdf	02 37 24.3	+1.3
NJ2				PKS	PKS	02 40 59.0	+0.7
NJ2				SKS	SKS	02 44 24.0	+4.4
NJ2				LR	LR		
	comp=N,3µm,21.6s						
NJ2				LR	LR		
	comp=E,6µm,22.7s						
NJ2				LR	LR		
	comp=Z,870nm,27.0s						
SSE	**Sheshan**	**133.63**	**357**	*e*PKP	PKPdf	02 37 27.9	+3.2
GYA	**Guiyang**	**136.69**	**16**	PKP	PKPdf	02 37 32.9	+2.5
GYA				PKS	PKS	02 41 07.6	+2.0
GYA				PP	PP		
	comp=Z,160nm,8.6s						
GYA				LR	LR		
	comp=N,180nm,20.2s						
GYA				LR	LR		
	comp=E,270nm,22.4s						
GYA				LR	LR		
	comp=Z,170nm,21.3s						
NST	**Nakhon Sawan**	**144.01**	**31**	P	PKPbc	02 37 43.2	+0.1
	comp=Z,42nm,0.8s						
QIZ	**Qiongzhong**	**144.61**	**15**	PKP	PKPdf	02 37 45.7	+0.9
RIV	**Riverview**	**145.52**	**232**	*e*P	PKPdf	02 37 49.3	+3.4
CNB	**Canberra Magne**	**146.21**	**229**	*e*P	PKPdf	02 37 51.5	+4.5
	comp=Z,434nm,0.6s						
TOO	**Toolangi**	**147.68**	**222**	*e*P	PKPdf	02 37 55.1	+5.7
	comp=Z,0.9nm,0.6s						
CTA	**Charters Tower**	**153.40**	**256**	*e*P	PKPdf	02 38 08.8	+10
	comp=Z,6.9nm,0.6s						
CTAO	**Charters Tower**	**153.40**	**256**	*e*PKPdf	PKPdf	02 38 01.2	+2.7
CTAO				*i* PKPbc	PKPdf	02 38 09.0	+10
CTAO				*e*PKPab	PKPab	02 38 21.6	+0.3
STKA	**Stephens Creek**	**153.53**	**228**	*e*P	PKPdf	02 38 09.0	+11
	comp=Z,10nm,0.8s						
STKA	**Stephens Creek**	**153.53**	**228**	*e*PKPdf	PKPdf	02 38 01.2	+2.9
STKA				*e*PKPbc	PKPdf	02 38 08.5	+10
STKA				*e*PKPab	PKPab	02 38 21.3	-0.3
FORT	**Forrest**	**162.53**	**208**	*e*P	PKPdf	02 38 11.5	+2.3
	comp=Z,61nm,0.7s						
ASPA	**Alice Springs**	**163.55**	**238**	*e*P	PKPdf	02 38 12.8	+2.4
WB2	**Warramunga Arr**	**164.46**	**251**	*e*P	PKPdf	02 38 13.6	+2.2
WRAB	**Tennant Creek**	**164.46**	**251**	*e*PKPdf	PKPdf	02 38 13.1	+1.8

NIED ***08*** *02:29:00,36.10N×140.10E,h65^{km},Mw4.9 Best double couple:* M_0*2.2×10*^{16} *NP1:*ϕ_s*6°,δ66°,λ92°. NP2:*ϕ_s*180°, δ24°,λ85°.*

MOS ***08*** *02:29:23.1±0.8,36.11N×139.93E,h38^{km},mb5.3/56,Error ellipse: s-maj=10.5km s-min=5.0km az=110.8*

BJI ***08*** *02:29:27.9,36.12N×140.15E,h103^{km},mB4.9,mb5.0*

JMA ***08*** *02:29:28.5±0.1,36.14N×140.09E,h67^{km}±1^{km},M4.8 Broadband fault plane solution: P waves. NP1:*ϕ_s*195°, δ20°,λ98°. NP2:*ϕ_s*7°,δ70°,λ87°. Principal axes: T Plg65°, Azm272°; N Plg3°, Azm8°; P Plg25°, Azm99°;*

JMA Felt IV J1.

NEIC ***08*** *02:29:29.4±0.7,36.15N×139.98E,h81^{km}±5^{km},mb4.9/69, MW4.8(NIED) Error ellipse: s-maj=6.7km s-min=4.6km az=158.0*

NEIC Felt in the Tokyo area. Recorded [4 JMA] in Ibaraki, Saitama and Tochigi; [3 JMA] in Chiba, Gumma and Tokyo; [2 JMA] in Fukushima, Kanagawa, Nagano and Yamanashi; [1 JMA] in Miyagi and Yamagata Prefectures. Also recorded [1 JMA] on O-shima.

HRVD ***08*** *02:29:29.4±0.4,36.15N×140.17E,h62^{km}±1^{km},MW5.0/56, Centroid moment Tensor Solution. LP body waves: s31,c37;Mantle waves: s56,c90; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*3.27±.18;* $M_{\theta\theta}$*-0.71±.13;* $M_{\phi\phi}$*-2.56±.12;* $M_{r\theta}$*-0.29±.10;* $M_{\theta\phi}$*-0.52±.10;* $M_{\phi r}$*1.47±.09; Best double couple:* M_0*3.327×10*^{16} *NP1:*ϕ_s*202°,δ33°, λ104°. NP2:*ϕ_s*5°,δ58°,λ81°. Principal axes: T 3.657, Plg75°, Azm249°; N -.663, Plg8°, Azm10°; P -2.996, Plg12°, Azm101°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 08 02:29:27.5±0.3**,36.10N**±0.03×**140.03E**±0.03**,h78**^{km}±2^{km}**, h69**^{km}±3.7^{km}**:pP-P,n279,**σ**0**^{s}**98**/305**,mb4.8**/93**,38C-11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.19**	**46**	⇑P	**P**	**02 29 38.6**	**-0.4**
JYT				*e*S	**S**	**02 29 45.8**	**-1.9**
JAG	**Ashikaga**	**0.57**	**305**	⇓P	**P**	**02 29 42.1**	**+0.2**
JAG				*e*S	**S**	**02 29 52.1**	**-0.4**
JKT	**Katashina**	**0.92**	**317**	⇓P	**P**	**02 29 46.0**	**+0.3**
JKT				*e*S	**S**	**02 29 59.7**	**+0.4**
JRY	**Ryogami san**	**0.92**	**265**	⇓P	**P**	**02 29 46.6**	**+0.9**
JRY				*e*S	**S**	**02 30 00.4**	**+1.1**
JOD2	**Odawara 2**	**1.13**	**223**	⇓P	**P**	**02 29 49.1**	**+0.8**
JOD2				*e*S	**S**	**02 30 04.2**	**+0.3**
JFY	**Yanaizu**	**1.33**	**349**	⇓P	**P**	**02 29 51.2**	**+0.1**
JFY				*e*S	**S**	**02 30 08.5**	**-0.1**
JYN	**Shimob**	**1.35**	**244**	⇓P	**P**	**02 29 52.6**	**+1.3**
JYN				*e*S	**S**	**02 30 10.5**	**+1.6**
BSO3	**Boso 3**	**1.35**	**163**	P	**P**	**02 29 51.3**	**0.0**
JHK	**Hiroka**	**1.41**	**325**	⇓P	**P**	**02 29 52.5**	**+0.4**
JHK				*e*S	**S**	**02 30 11.5**	**+1.3**
JFK	**Kawauchi**	**1.44**	**28**	⇑P	**P**	**02 29 51.7**	**-0.7**
JFK				*e*S	**S**	**02 30 10.1**	**-0.8**
JFT	**Otama**	**1.44**	**10**	⇑P	**P**	**02 29 52.3**	**-0.2**
JFT				*e*S	**S**	**02 30 10.2**	**-0.7**
JIM2	**Oshima 3**	**1.46**	**200**	P	**P**	**02 29 52.9**	**+0.1**
JIM2				*e*S	**S**	**02 30 11.5**	**+0.1**
MAJO	**Matsushiro**	**1.54**	**287**	⇓*i*P	**P**	**02 29 54.4**	**+0.6**
MAT	**Matsushiro**	**1.54**	**287**	*e*P	**P**	**02 29 54.0**	**+0.2**
MAT				S	**S**	**02 30 12.0**	**-1.1**
MAT	**Matsushiro**	**1.54**	**287**	P	**P**	**02 29 54.3**	**+0.5**
MAT				*e*S	**S**	**02 30 12.0**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**9.10**	**28**	*e*P	**P**	**02 31 30.8**	**-7.2**
YUK				pmax	pmax		
	comp=Z,210nm,0.5s						
KS15	**Wonju Array Si**	**9.84**	**281**	*e*P	**P**	**02 31 50.1**	**+2.0**
YSS	**Yuzh-Sakhalins**	**11.04**	**10**	*e*P	**P**	**02 32 01.0**	**-3.2**
YSS				*e*S	**S**	**02 33 59.0**	**-7.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**11.04**	**10**	*e*P	**P**	**02 32 01.0**	**-3.2**
	comp=E,40nm,0.8s						
MDJ	**Mudanjiang**	**11.64**	**320**	P	**P**	**02 32 13.7**	**+1.4**
MDJ				AP		02 32 26.2	
MDJ				XP		02 32 40.8	
MDJ				S	**S**	**02 34 24.2**	**+3.1**
MDJ				AMB	AMB		
	comp=Z,39nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,166nm,3.2s						
MDJ				LR	LR		
	comp=N,519nm,17.1s						
MDJ				LR	LR		
	comp=Z,614nm,15.8s						
MDJ	**Mudanjiang**	**11.64**	**320**	*e*P	**P**	**02 32 13.5**	**+1.2**
CN2	**Changchun**	**13.56**	**309**	*e*P	**P**	**02 32 39.2**	**+1.6**
CN2				XP		02 33 04.0	
CN2				*e*S	**S**	**02 35 06.2**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.3s						
CN2				AMB	AMB		
	comp=Z,140nm,6.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s						
CN2				LR	LR		
	comp=E,400nm,16.0s						
CN2				LR	LR		
	comp=Z,440nm,17.0s						
SNY	**Shenyang**	**14.01**	**299**	⇑P	**P**	**02 32 44.9**	**+1.4**
SNY				AP		02 32 52.6	
SNY				PP	PP	02 32 56.4	+1.1
SNY				S	**S**	**02 35 22.7**	**+5.3**
SNY				AMB	AMB		
	comp=Z,30nm,1.3s						
SNY				AMB	AMB		
	comp=Z,80nm,2.7s						
SNY				LR	LR		
	comp=E,460nm,13.9s						
SNY				LR	LR		
	comp=Z,460nm,15.9s						
KLR	**Kul'dur**	**14.46**	**338**	*e*P	**P**	**02 32 46.2**	**-3.0**
KLR				MLR	MLR		
	comp=N,800nm,12.0s						
KLR				MLR	MLR		
	comp=E,500nm,12.0s						
DL2	**Dalian**	**14.87**	**286**	P	**P**	**02 32 58.8**	**+4.1**
DL2				AMB	AMB		
	comp=Z,60nm,1.0s						
SSE	**Sheshan**	**16.47**	**258**	P	**P**	**02 33 16.3**	**+1.5**
SSE				S	**S**	**02 36 17.4**	**+3.0**
SSE				AMB	AMB		
	comp=Z,30nm,1.3s						
SSE				AMB	AMB		
	comp=Z,128nm,6.9s						
SSE				LR	LR		
	comp=N,329nm,21.0s						
SSE				LR	LR		
	comp=E,220nm,21.0s						
SSE				LR	LR		
	comp=Z,474nm,14.8s						
SSE	**Sheshan**	**16.47**	**258**	P	**P**	**02 33 16.3**	**+1.5**
	comp=Z,30nm,1.3s						
SSE				pP		02 33 36.1	
SSE				sP		02 33 44.6	
SSE				S	**S**	**02 36 17.4**	**+3.0**
NJ2	**Nanjing**	**18.00**	**263**	*e*P	**P**	**02 33 33.3**	**-0.5**
NJ2				S	**S**	**02 36 48.0**	**-0.6**
NJ2				AMB	AMB		
	comp=Z,100nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,1µm,4.7s						
NJ2				LR	LR		
	comp=N,710nm,16.0s						
NJ2				LR	LR		
	comp=E,810nm,15.3s						
NJ2				LR	LR		
	comp=Z,820nm,12.6s						
TIA	**Tai'an**	**18.50**	**277**	⇓P	**P**	**02 33 38.2**	**-1.5**
TIA				AMB	AMB		
	comp=Z,34nm,1.2s						
HIA	**Hailar**	**19.81**	**318**	*e*P	**P**	**02 33 51.3**	**-2.7**
HIA				pmax	pmax		
	comp=Z,22nm,0.8s						
HIA	**Hailar**	**19.81**	**318**	*e*P	**P**	**02 33 51.3**	**-2.7**
	comp=Z,22nm,0.8s						
PET	**Petropavlovsk**	**21.40**	**32**	*e*P	**P**	**02 34 11.6**	**+1.4**
PET				*e**SP		02 34 36.5	
PET				*e*S	**S**	**02 38 05.5**	**+7.6**
PET				*e**SS		02 38 33.3	
PET				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
PET				pmax	pmax		
	comp=Z,38nm,1.1s,mb4.6						
PET				MLR	MLR		
	comp=N,300nm,17.0s						
PET				MLR	MLR		
	comp=Z,300nm,22.0s						
PET				MLR	MLR		
	comp=E,200nm,21.0s						
WHN	**Wuhan**	**22.13**	**263**	P	**P**	**02 34 17.2**	**-0.4**
HHC	**Hu-ho-hao-te**	**22.74**	**291**	*e*P	**P**	**02 34 20.4**	**-3.0**
HHC				PP	PP	02 34 54.0	-0.6
HHC				PCP	PcP	02 38 07.7	-6.9
HHC				S	**S**	**02 38 23.3**	**+1.3**
HHC				SS	SS	02 39 12.3	+1.8
HHC				SCP		02 41 37.1	
HHC				AMB	AMB		
	comp=Z,27nm,0.9s,mb4.6						
HHC				AMB	AMB		
	comp=Z,130nm,2.7s,mb4.8						
HHC				LR	LR		
	comp=N,140nm,12.0s						
HHC				LR	LR		
	comp=E,206nm,13.2s						
HHC				LR	LR		
	comp=Z,252nm,14.3s						
CLNS	**Chul'man**	**23.11**	**339**	*e*P	**P**	**02 34 26.5**	**-0.4**
CLNS				*e**PP		02 34 32.6	
CLNS				*e*		02 34 42.7	
CLNS				*e*PPP	PPP	02 34 53.7	-17
CLNS				*e*S	**S**	**02 38 17.2**	**-11**
CLNS				*e*		02 38 30.0	
CLNS				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.0						
CLNS				pmax	pmax		
	comp=N,36nm,1.1s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.5s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,26nm,0.8s,mb4.6						
CLNS				MLR	MLR		
	comp=Z,200nm,17.0s						
CLNS				MLR	MLR		
	comp=N,100nm,14.0s						
BTO	**Baotou**	**23.90**	**290**	*e*P	**P**	**02 34 34.7**	**+0.1**
BTO				AMB	AMB		
	comp=Z,32nm,0.7s,mb4.8						
MA2	**Magadan**	**24.51**	**13**	*e*P	**P**	**02 34 40.2**	**-0.2**
MA2				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.7						
MA2	**Magadan**	**24.51**	**13**	*e*P	**P**	**02 34 39.9**	**-0.5**
	comp=Z,32nm,0.8s,mb4.8						
XAN	**Xi'an**	**25.49**	**275**	P	**P**	**02 34 48.8**	**-1.2**
XAN				AMB	AMB		
	comp=Z,58nm,0.8s,mb5.1						
ENH	**Enshi**	**26.15**	**266**	⇑*i*P	**P**	**02 34 54.5**	**-1.6**
	comp=Z,135nm,0.8s,mb5.4						
YAK	**Yakutsk**	**26.76**	**349**	*e*P	**P**	**02 34 58.8**	**-2.6**
YAK				*i* *PP	pP	02 35 08.4	-11
YAK				*e*		02 35 41.7	
YAK				*i* PPP	PPP	02 35 51.1	-10
YAK				*e*S	**S**	**02 39 37.8**	**+8.3**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.6						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
YAK				smax			
	comp=N,12nm,1.1s						
YAK				smax			
	comp=E,12nm,1.1s						
YAK				pmax	pmax		
	comp=E,119nm,17.1s						
YAK				pmax	pmax		
	comp=N,373nm,17.9s						
YAK	**Yakutsk**	**26.76**	**349**	*e*P	**P**	**02 34 58.3**	**-3.1**
	comp=N,42nm,0.6s,mb5.1						
ULN	**Ulaanbaatar**	**26.98**	**306**	*e*P	**P**	**02 35 02.0**	**-1.6**
ULN				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
ULN	**Ulaanbaatar**	**26.98**	**306**	*e*P	**P**	**02 35 02.0**	**-1.6**
	comp=Z,17nm,0.9s,mb4.6						
BOD	**Bodaibo**	**27.75**	**330**	⇑*i*P	**P**	**02 35 09.0**	**-1.5**
BOD				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.7						
LZH	**Lanzhou**	**29.14**	**281**	⇑P	**P**	**02 35 21.7**	**-1.4**
LZH				AP	pP	02 35 41.8	+0.4
LZH				PP	PP	02 36 17.1	-3.0
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,120nm,4.5s						
LZH				LR	LR		
	comp=E,700nm,14.0s						
LZH				LR	LR		
	comp=Z,1µm,16.4s						
LZH	**Lanzhou**	**29.14**	**281**	⇑P	**P**	**02 35 21.7**	**-1.4**
LZH				*PP	pP	02 35 41.8	+0.4
LZH						02 36 17.1	
LZH				*e*S	**S**	**02 40 05.0**	**-3.0**
LZH				*e*SS	SS	02 41 40.0	-3.3
LZH				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.0						
LZH				MLR	MLR		
	comp=Z,1µm,16.4s						
LZH	**Lanzhou**	**29.14**	**281**	⇑P	**P**	**02 35 21.7**	**-1.4**
	comp=Z,40nm,1.0s,mb5.0						
LZH				pP	pP	02 35 41.8	+0.4
LZH				sP	sP	02 35 48.6	-2.1
LZH				PP	PP	02 36 17.1	-3.0
LZH				*e*S	**S**	**02 40 05.0**	**-3.0**
LZH				sS		02 40 36.5	
LZH				*e*SS	SS	02 41 40.0	-3.3
LZH				LR	LR		
	comp=Z,1µm,16.4s						
GYA	**Guiyang**	**29.97**	**261**	⇑*i*P	**P**	**02 35 28.8**	**-1.8**
GYA				PP	PP	02 36 27.8	-3.2
GYA				AMB	AMB		
	comp=Z,140nm,0.9s,mb5.6						
GYA				AMB	AMB		
	comp=Z,130nm,3.9s						
GYA				LR	LR		
	comp=N,370nm,13.7s						
GYA				LR	LR		
	comp=E,670nm,13.0s						
GYA				LR	LR		
	comp=Z,860nm,12.8s						
ZAK	**Zakamensk**	**30.00**	**310**	*e*P	**P**	**02 35 28.2**	**-2.4**
ZAK				*e*	pP	02 35 47.4	-1.6
ZAK				*e*		02 38 29.8	
ZAK				pmax	pmax		

	comp=Z,3.0nm,1.3s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TLY	**Talaya**	**30.12**	**313**	*e*P	**P**	**02 35 30.9**	**-0.8**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,123nm,15.0s						
TLY	**Talaya**	**30.12**	**313**	*e*P	**P**	**02 35 29.9**	**-1.8**
	comp=Z,7.0nm,0.7s,mb4.4						
CD2	**Chengdu**	**30.57**	**271**	P	**P**	**02 35 33.4**	**-2.5**
GTA	**Gaotai**	**31.79**	**288**	*e*P	**P**	**02 35 45.1**	**-1.3**
GTA				PP	PP	02 36 53.8	-0.1
GTA				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,86nm,6.1s						
GTA				LR	LR		
	comp=N,191nm,14.8s						
GTA				LR	LR		
	comp=E,158nm,12.2s						
GTA				LR	LR		
	comp=Z,158nm,12.2s						
KMI	**Kunming**	**33.72**	**262**	⇑P	**P**	**02 36 02.1**	**-1.3**
KMI				S	**S**	**02 41 23.3**	**+3.4**
KMI				AMB	AMB		
	comp=Z,82nm,1.0s,mb5.5						
KMI				AMB	AMB		
	comp=Z,107nm,3.1s						
KMI				LR	LR		
	comp=N,149nm,16.6s						
KMI				LR	LR		
	comp=E,194nm,16.6s						
KMI				LR	LR		
	comp=Z,263nm,22.5s						
KMI	**Kunming**	**33.72**	**262**	⇑P	**P**	**02 36 02.1**	**-1.3**
	comp=Z,82nm,1.0s,mb5.5						
KMI				sP	sP	02 36 23.6	-8.1
KMI				S	**S**	**02 41 23.3**	**+3.4**
KMI				SS	SS	02 43 51.5	+22
KMI				LR	LR		
	comp=Z,260nm,22.5s						
BILL	**Bilibino**	**35.24**	**17**	*i* P	**P**	**02 36 14.5**	**-1.4**
BILL				*e*		02 38 44.9	
BILL				*e*S	**S**	**02 41 43.8**	**+0.9**
BILL				*e*SS	SS	02 44 04.9	+1.0
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
BILL				MLR	MLR		
	comp=Z,600nm,26.0s						
BILL	**Bilibino**	**35.24**	**17**	*e*P	**P**	**02 36 15.3**	**-0.6**
	comp=Z,4.8nm,0.8s,mb4.4						
TIXI	**Tiksi**	**36.09**	**354**	*i* P	**P**	**02 36 21.3**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
KKTK	**Khon Kaen**	**38.44**	**249**	P	**P**	**02 36 43.0**	**-0.2**
	comp=Z,432nm,1.0s						
NANT	**Nan**	**38.62**	**254**	P	**P**	**02 36 43.0**	**-1.6**
CHRT	**Chiangrai**	**38.74**	**256**	⇑P	**P**	**02 36 46.0**	**+0.3**
	comp=Z,287nm,0.9s						
CHG	**Chiang Mai**	**39.98**	**256**	P	**P**	**02 36 55.7**	**-0.3**
WMQ	**Urumqi**	**40.28**	**298**	⇓P	**P**	**02 36 59.5**	**+1.3**
WMQ				AP	pP	02 37 18.0	+0.7
WMQ				PP	PP	02 38 37.0	+1.4
WMQ				S	**S**	**02 43 01.0**	**+1.5**
WMQ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.3						
WMQ				AMB	AMB		
	comp=Z,26nm,7.0s						
WMQ				LR	LR		
	comp=N,126nm,18.0s						
WMQ				LR	LR		
	comp=E,145nm,16.0s						
WMQ				LR	LR		
	comp=Z,204nm,16.0s						
SHL	**Shillong**	**42.28**	**269**	*e*	sP	02 37 40.5	-2.7
NVS	**Novosibirsk**	**42.69**	**314**	⇑*i*P	**P**	**02 37 16.4**	**-1.4**
NVS				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.0						
NVS				pmax	pmax		
	comp=E,38nm,1.3s						
NNT	**Nongplab**	**43.10**	**248**	P	**P**	**02 37 22.0**	**+0.3**
MKAR	**Makanchi Array**	**43.68**	**303**	*i* P	**P**	**02 37 25.9**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,50nm,0.9s						
KURK	**Kurchatov**	**45.64**	**309**	⇑*e*P	**P**	**02 37 40.8**	**-0.8**
KURK				pmax	pmax		
	comp=Z,103nm,0.9s,mb5.6						
KURK	**Kurchatov**	**45.64**	**309**	⇑*e*P	**P**	**02 37 40.8**	**-0.8**
	comp=Z,103nm,0.9s,mb5.6						
JIRN	**Jiri**	**45.99**	**275**	*e*P	**P**	**02 37 45.2**	**+0.5**
	comp=Z,232nm,0.9s,mb5.9						
PKI	**Pulchoki**	**46.66**	**276**	*e*P	**P**	**02 37 49.6**	**-0.4**
	comp=Z,56nm,0.8s,mb5.3						
KKN	**Kakani**	**46.67**	**276**	*e*P	**P**	**02 37 50.2**	**+0.1**
	comp=Z,149nm,1.0s,mb5.7						
DMN	**Daman**	**46.89**	**276**	*e*P	**P**	**02 37 51.9**	**+0.1**
	comp=Z,42nm,0.8s,mb5.2						
GKN	**Gorkha**	**47.10**	**277**	*e*P	**P**	**02 37 53.5**	**0.0**
	comp=Z,322nm,1.0s						
BOK	**Bokaro**	**47.94**	**271**	*e*P	**P**	**02 37 58.0**	**-2.1**
BOK				*e*		02 38 02.1	
	comp=Z,52nm,0.3s						
KOLN	**Koldanda**	**48.03**	**277**	*e*P	**P**	**02 38 01.0**	**+0.3**
	comp=Z,236nm,1.4s,mb5.8						
IMA	**Indian Mountai**	**48.06**	**30**	*e*P	**P**	**02 38 01.6**	**+1.2**
IMA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
IMA	**Indian Mountai**	**48.06**	**30**	*e*P	**P**	**02 38 01.6**	**+1.2**
	comp=Z,2.1nm,0.8s,mb4.0						
TKM2	**Tokmak 2**	**49.10**	**299**	P	**P**	**02 38 09.6**	**+0.9**
	SNR=36						
KZA	**Kyzart**	**49.57**	**298**	P	**P**	**02 38 13.9**	**+1.5**
	SNR=11						
KBK	**Karagaybulak**	**49.63**	**299**	P	**P**	**02 38 13.2**	**+0.3**
	SNR=38						
CHMS	**Chumysh**	**49.68**	**299**	P	**P**	**02 38 13.2**	**0.0**
	SNR=9.0						
KSH	**Kashi**	**49.77**	**294**	*e*P	**P**	**02 38 15.0**	**+1.0**
KSH				*e*AP	pP	02 38 34.1	+0.6
KSH				*e*PCP	PcP	02 39 35.1	+1.1
KSH				*e*PP	PP	02 40 10.7	+0.8
KSH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
KSH				AMB	AMB		
	comp=Z,120nm,5.6s						
KSH				LR	LR		
	comp=N,570nm,3.9s						
KSH				LR	LR		
	comp=E,660nm,6.5s						
USP	**Ospenovka**	**49.78**	**299**	P	**P**	**02 38 14.0**	**0.0**
	SNR=16						
AAK	**Ala-Archa**	**49.96**	**299**	P	**P**	**02 38 15.5**	**+0.2**
	SNR=13						
AAK	**Ala-Archa**	**49.96**	**299**	*i* P	**P**	**02 38 14.3**	**-1.0**
AAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
AAK	**Ala-Archa**	**49.96**	**299**	*e*P	**P**	**02 38 14.1**	**-1.3**
	comp=Z,12nm,0.8s,mb4.9						
MCK	**McKinley**	**50.03**	**33**	*e*P	**P**	**02 38 15.1**	**-0.5**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MCK	**McKinley**	**50.03**	**33**	*e*P	**P**	**02 38 15.1**	**-0.5**
	comp=Z,5.2nm,0.9s,mb4.5						
UCH	**Uchtor**	**50.05**	**298**	P	**P**	**02 38 16.4**	**+0.3**
	SNR=14						
CHKZ	**Chkalovo**	**50.14**	**313**	*e*P	**P**	**02 38 15.2**	**-1.4**
CHKZ				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
CHKZ	**Chkalovo**	**50.14**	**313**	*e*P	**P**	**02 38 15.2**	**-1.4**
	comp=Z,22nm,0.8s,mb5.2						
BVA0	**Borovoye Array**	**50.38**	**313**	*i* P	**P**	**02 38 17.5**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
EKS2	**Erkin-Say**	**50.46**	**299**	P	**P**	**02 38 19.1**	**0.0**
	SNR=8.6						
COLA	**College**	**50.46**	**32**	*i* P	**P**	**02 38 19.3**	**+0.4**
COLA	**College**	**50.46**	**32**	*e*P	**P**	**02 38 18.6**	**-0.2**
	comp=Z,11nm,0.7s,mb4.9						
AML	**Almayashu**	**50.67**	**298**	P	**P**	**02 38 21.6**	**+0.8**
	SNR=44						
SDNR	**Sundarnagar**	**51.80**	**284**	*e*P	**P**	**02 38 29.0**	**-0.4**
THN	**Thein Dam**	**52.41**	**286**	*e*P	**P**	**02 38 31.5**	**-2.5**
NDI	**New Delhi**	**52.76**	**281**	*e*P	**P**	**02 38 34.0**	**-2.6**
NDI				*e*P		02 38 34.0	
VIS	**Vishakhapatnam**	**53.04**	**266**	*e*P	**P**	**02 38 38.8**	**-0.1**
VIS				*e*		02 38 40.2	
	comp=Z,43nm,0.6s						
BHPL	**Bhopal**	**55.05**	**275**	*e*P	**P**	**02 38 50.6**	**-2.9**
BHPL				*e*		02 38 54.2	
	comp=Z,35nm,1.8s						
FITZ	**Fitzroy Crossi**	**55.60**	**197**	*e*P	**P**	**02 38 56.9**	**-0.6**
	comp=Z,10nm,0.4s,mb5.2						
INK	**Inuvik**	**55.73**	**27**	*e*P	**P**	**02 38 57.0**	**-0.8**
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	**Inuvik**	**55.73**	**27**	*e*P	**P**	**02 38 57.0**	**-0.8**
	comp=Z,11nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	**55.98**	**186**	*e*P	**P**	**02 38 58.6**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
WRAB	**Tennant Creek**	**55.98**	**186**	*e*P	**P**	**02 38 58.6**	**-1.6**
	comp=Z,24nm,0.8s,mb5.3						
WB2	**Warramunga Arr**	**55.99**	**186**	*e*P	**P**	**02 38 58.9**	**-1.4**
ARU	**Arti**	**56.32**	**319**	P	**P**	**02 39 01.2**	**-1.0**
	comp=Z,291nm,0.7s,SNR=24						
ARU	**Arti**	**56.32**	**319**	⇑*i*P	**P**	**02 38 52.5**	**-10**
ARU				*e*SS	SS	02 50 29.4	-3.4
ARU				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
HYB	**Hyderabad**	**57.06**	**268**	*i* P	**P**	**02 39 07.0**	**-1.0**
	comp=Z,50nm,1.0s,mb5.5						
ASPA	**Alice Springs**	**59.72**	**187**	*e*P	**P**	**02 39 24.9**	**-1.5**
KEV	**Kevo**	**63.92**	**339**	*e*p	**P**	**02 39 50.7**	**-3.1**
JOF	**Joensuu**	**66.26**	**332**	*e*p	**P**	**02 40 07.2**	**-1.7**
	comp=Z,7.1nm,0.5s,mb4.8						
JOF	**Joensuu**	**66.26**	**332**	*e*P	**P**	**02 40 07.2**	**-1.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**67.63**	**179**	*e*P	**P**	**02 40 17.4**	**-0.7**
OBN	**Obninsk**	**68.17**	**323**	*i* P	**P**	**02 40 20.2**	**-0.8**
OBN				*e*		02 42 51.5	
OBN				*e*		02 49 22.3	
OBN				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.2						
OBN	**Obninsk**	**68.17**	**323**	*e*P	**P**	**02 40 20.0**	**-1.0**
	comp=Z,24nm,0.8s,mb5.1						
KAF	**Kangasniemi**	**68.62**	**332**	*e*p	**P**	**02 40 22.6**	**-1.1**
	comp=Z,11nm,0.6s,mb4.9,baz=52,slow=5.9						
KAF	**Kangasniemi**	**68.62**	**332**	*e*P	**P**	**02 40 22.6**	**-1.1**
KAF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
GOF	**Gofitskoye**	**69.89**	**311**	⇑*i*P	**P**	**02 40 31.5**	**-0.2**
GOF				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.2						
KIV	**Kislovodsk**	**70.67**	**311**	P	**P**	**02 40 35.0**	**-1.5**
	comp=Z,281nm,0.8s,SNR=9.7						
KIV	**Kislovodsk**	**70.67**	**311**	*i* P	**P**	**02 40 36.3**	**-0.2**
KIV				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.3						
KIV	**Kislovodsk**	**70.67**	**311**	*e*P	**P**	**02 40 36.7**	**+0.2**
	comp=Z,50nm,1.0s,mb5.3						
EDM	**Edmonton**	**70.77**	**38**	P	**P**	**02 40 35.8**	**-1.1**
SUMG	**Summit**	**71.61**	**360**	*e*P	**P**	**02 40 41.9**	**+0.3**
	comp=Z,24nm,0.8s,mb5.1						
SOC	**Sochi**	**72.69**	**312**	*e*P	**P**	**02 40 45.6**	**-2.8**
SOC				*e*S	S	02 50 08.6	+2.5
SOC				*e*		02 50 58.3	
SOC				*e*SSS	SSS	02 58 07.1	+7.5
SOC				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.3						
SOC				pmax	pmax		
	comp=N,55nm,1.1s						
SOC				pmax	pmax		
	comp=E,54nm,1.0s						
ANN	**Anapa**	**73.37**	**314**	*e*P	**P**	**02 40 47.1**	**-5.3**
ANN				*i* *PP	pP	02 40 56.0	-17
ANN				*i*		02 41 02.7	
ANN				pmax	pmax		
	comp=Z,102nm,1.2s,mb5.5						
BMO	**Blue Mountains**	**73.38**	**46**	*e*P	**P**	**02 40 52.8**	**+0.3**
BMO				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
BMO	**Blue Mountains**	**73.38**	**46**	*e*P	**P**	**02 40 52.8**	**+0.4**
	comp=Z,5.4nm,1.1s,mb4.3						
AKASG	**Malin Array Be**	**74.35**	**322**	*i* P	**P**	**02 40 57.3**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,71nm,1.1s						
NB2	**NORSAR Subarra**	**74.61**	**337**	P	**P**	**02 40 59.0**	**-0.3**
	comp=Z,24nm,0.7s,mb5.0,baz=41,slow=5.6						
NB2	**NORSAR Subarra**	**74.61**	**337**	P	**P**	**02 40 59.0**	**-0.3**
NB2				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.0						
NB2	**NORSAR Subarra**	**74.61**	**337**	P	**P**	**02 40 59.0**	**-0.3**
	baz=41,slow=5.9						
SUW	**Suwalki**	**75.07**	**327**	*e*P	**P**	**02 40 52.5**	**-10**
FFC	**Flin Flon**	**75.09**	**32**	*e*P	**P**	**02 41 01.6**	**-0.5**
FFC				*e*	pP	02 41 19.9	-3.2
FFC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
FFC	**Flin Flon**	**75.09**	**32**	*e*P	**P**	**02 41 01.6**	**-0.5**
	comp=Z,8.0nm,1.0s,mb4.4						
FFC				*e*	pP	02 41 19.9	-3.2
CMB	**Columbia Colle**	**75.32**	**54**	*e*P	**P**	**02 41 04.3**	**+0.5**
CMB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
CMB	**Columbia Colle**	**75.32**	**54**	*e*P	**P**	**02 41 04.3**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.0						
FCC	**Fort Churchill**	**75.33**	**26**	*e*P	**P**	**02 41 02.8**	**-0.6**
FCC				*e*	pP	02 41 20.7	-3.7
FCC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
FCC	**Fort Churchill**	**75.33**	**26**	*e*P	**P**	**02 41 02.8**	**-0.6**
	comp=Z,6.9nm,0.9s,mb4.4						
FCC				*e*	pP	02 41 20.7	-3.7
HLID	**Hailey**	**75.82**	**46**	*e*P	**P**	**02 41 07.5**	**+0.9**
	comp=Z,3.4nm,1.0s,mb4.0						
BOZ	**Bozeman (W)**	**76.16**	**43**	*e*P	**P**	**02 41 08.9**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
BOZ	**Bozeman (W)**	**76.16**	**43**	*e*P	**P**	**02 41 08.8**	**+0.4**
	comp=Z,3.1nm,0.8s,mb4.1						
MALT	**Malatya**	**76.47**	**308**	P	**P**	**02 41 11.9**	**+1.6**
TPH	**Tonopah**	**77.34**	**52**	P	**P**	**02 41 15.2**	**0.0**
TPH				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
TPH	**Tonopah**	**77.34**	**52**	P	**P**	**02 41 15.2**	**0.0**
	comp=Z,6.5nm,1.0s,mb4.3						
IAS	**Iasi**	**77.41**	**320**	P	**P**	**02 41 15.2**	**-0.2**
IMW	**Indian Meadow**	**77.62**	**44**	*e*P	**P**	**02 41 18.2**	**+1.6**
IMW				*e*	pP	02 41 35.9	-1.8
BSD	**Bornholm Skovb**	**77.73**	**331**	*i* P	**P**	**02 41 16.0**	**-1.0**
BSD				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.2						
BSD	**Bornholm Skovb**	**77.73**	**331**	*i* P	**P**	**02 41 16.0**	**-1.0**
	comp=Z,38nm,0.8s,mb5.2						
KWP	**Kalwaria**	**78.23**	**324**	*e*P	**P**	**02 41 20.4**	**+0.6**
BURAR	**Bucovina Array**	**78.35**	**321**	P	**P**	**02 41 21.2**	**+0.7**
HWUT	**Hardware Ranch**	**78.68**	**47**	*e*P	**P**	**02 41 23.4**	**+0.9**
	comp=Z,5.4nm,1.1s,mb4.3						
HWUT				*e*	pP	02 41 41.7	-1.9
KOLS	**Kolonicke sedl**	**78.92**	**324**	*i* P	**P**	**02 41 24.1**	**+0.5**
KOLS				*e*		02 41 28.4	
OJC	**Ojcow**	**79.19**	**326**	*e*P	**P**	**02 41 25.2**	**+0.1**
CRVS	**Cervenica-Dubn**	**79.33**	**324**	*i* P	**P**	**02 41 26.3**	**+0.4**
CRVS				*e**PP	pP	02 41 34.9	-12
CRVS	**Cervenica-Dubn**	**79.33**	**324**	*i* P	**P**	**02 41 26.3**	**+0.4**
CRVS				*e*		02 41 30.0	
CRVS				*e*		02 41 34.9	
JLU	**Jordanelle**	**79.38**	**47**	*e*P	**P**	**02 41 27.1**	**+0.8**
NLU	**North Lily Min**	**79.40**	**48**	*e*P	**P**	**02 41 27.4**	**+0.9**
NIE	**Niedzica**	**79.51**	**325**	⇑*e*P	**P**	**02 41 26.2**	**-0.6**
RAYN	**Ar Rayn**	**79.97**	**292**	P	**P**	**02 41 30.0**	**+0.1**
	comp=Z,124nm,0.8s,mb5.8,SNR=18						
OKC	**Ostrava-Krasne**	**80.21**	**326**	*e*P	**P**	**02 41 30.5**	**-0.1**
MSU	**Marysvale**	**80.24**	**49**	*e*P	**P**	**02 41 32.4**	**+1.4**
KSP	**Ksiaz**	**80.30**	**328**	⇑*e*P	**P**	**02 41 31.4**	**+0.4**
KSP				*e**PP	pP	02 41 48.0	-4.2
KSP	**Ksiaz**	**80.30**	**328**	⇑*e*P	**P**	**02 41 31.4**	**+0.4**
KSP				*e*PcP	PcP	02 41 36.7	-1.5
KSP				*e*pP	pP	02 41 48.0	-4.2
KSP	**Ksiaz**	**80.30**	**328**	*e*P	**P**	**02 41 31.4**	**+0.3**
NEN	**Nelson**	**80.32**	**53**	*e*P	**P**	**02 41 31.3**	**-0.1**
BSEG	**Bad Segeberg**	**80.38**	**333**	*e*P	**P**	**02 41 31.6**	**+0.2**
BSEG				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
PFO	**Pinyon Flat Ob**	**80.49**	**55**	*e*P	**P**	**02 41 32.7**	**+0.3**
PFO				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
PFO	**Pinyon Flat Ob**	**80.49**	**55**	*e*P	**P**	**02 41 32.7**	**+0.3**
	comp=Z,7.3nm,1.1s,mb4.4						
MORC	**Moravsky Berou**	**80.53**	**326**	*e*P	**P**	**02 41 31.9**	**-0.4**
MORC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.7						
MORC	**Moravsky Berou**	**80.53**	**326**	*e*P	**P**	**02 41 31.9**	**-0.4**
	comp=Z,12nm,0.9s,mb4.7						
DPC	**Dobruska-Polom**	**80.65**	**327**	*e*P	**P**	**02 41 33.3**	**+0.4**
UPC	**Upice**	**80.67**	**328**	*e*P	**P**	**02 41 33.7**	**+0.7**
PSZ	**Piszkesteto**	**80.76**	**324**	*e*P	**P**	**02 41 33.6**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.1						
PSZ	**Piszkesteto**	**80.76**	**324**	*e*P	**P**	**02 41 33.6**	**0.0**
	comp=Z,43nm,1.4s,mb5.1						
PSZ	**Piszkesteto**	**80.76**	**324**	⇓*e*P	**P**	**02 41 34.4**	**+0.9**
PSZ				*i*		02 42 25.3	
VYHS	**Vyhne**	**80.86**	**325**	*i* P	**P**	**02 41 34.6**	**+0.6**
SRU	**San Rafael**	**80.87**	**48**	*e*P	**P**	**02 41 35.1**	**+0.8**
PVCC	**Panska Ves**	**81.28**	**328**	*e*P	**P**	**02 41 36.7**	**+0.5**
BRG	**Berggiesshubel**	**81.28**	**329**	*i* P	**P**	**02 41 36.7**	**+0.5**
BRG				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
BRG	**Berggiesshubel**	**81.28**	**329**	*i* P	**P**	**02 41 36.7**	**+0.5**
	comp=Z,13nm,0.9s,mb4.8						
VRAC	**Vranov**	**81.29**	**326**	P	**P**	**02 41 37.0**	**+0.7**
CLL	**Collm**	**81.34**	**330**	⇑*i*P	**P**	**02 41 36.2**	**-0.3**
CLL				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2						
CLL	**Collm**	**81.34**	**330**	⇑*i*P	**P**	**02 41 36.2**	**-0.3**
	comp=Z,32nm,0.9s,mb5.2						
CLL				*e*		02 43 18.0	
CLL				*e*		02 43 50.0	
CLL	**Collm**	**81.34**	**330**	⇑P	**P**	**02 41 36.2**	**-0.3**
	comp=Z,logA/T=1.6,mb5.2						
CLL				*e**PP	Px	02 43 50.0	
SMOL	**Smolenice**	**81.49**	**325**	*i* P	**P**	**02 41 38.4**	**+1.1**
SRO1	**Iza**	**81.66**	**325**	*e*P	**P**	**02 41 40.1**	**+1.9**
PRU	**Pruhonice**	**81.69**	**328**	*e*P	**P**	**02 41 38.6**	**+0.2**
ZST	**Bratislava**	**81.87**	**325**	*i* P	**P**	**02 41 40.6**	**+1.3**
CLZ	**Clausthal**	**81.99**	**331**	*e*P	**P**	**02 41 40.2**	**+0.3**
	comp=Z,20nm,1.0s,mb4.9						
PV10	**Paradox Valley**	**82.23**	**48**	*e*P	**P**	**02 41 43.0**	**+1.6**
NKC	**Novy Kostel**	**82.39**	**329**	*e*P	**P**	**02 41 41.8**	**-0.2**
MOX	**Moxa**	**82.42**	**330**	*e*P	**P**	**02 41 42.0**	**-0.1**
RZN	**Rozhen**	**82.57**	**317**	*i* P	**P**	**02 41 43.5**	**+0.4**
PV01	**Paradox Valley**	**82.67**	**48**	P	**P**	**02 41 45.0**	**+1.4**
KHC	**Kasperske Hory**	**82.75**	**328**	*i* P	**P**	**02 41 44.2**	**+0.4**
KHC	**Kasperske Hory**	**82.75**	**328**	*e*P	**P**	**02 41 44.1**	**+0.3**
VTS	**Vitosha**	**82.78**	**318**	*i* P	**P**	**02 41 45.5**	**+1.4**
GEC2	**GERESS Array S**	**82.91**	**328**	*e*P	**P**	**02 41 44.6**	**0.0**
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
GEC2	**GERESS Array S**	**82.91**	**328**	*e*P	**P**	**02 41 44.6**	**0.0**
	comp=Z,8.0nm,0.9s,mb4.5						
WET	**Wettzell**	**83.04**	**328**	*e*P	**P**	**02 41 45.7**	**+0.4**
WET				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.7						
WET	**Wettzell**	**83.04**	**328**	*e*P	**P**	**02 41 45.7**	**+0.4**
	comp=Z,18nm,1.4s,mb4.7						
MMB	**Musomiste**	**83.18**	**317**	*i* P	**P**	**02 41 46.5**	**+0.3**
ARSA	**Arzberg**	**83.29**	**326**	⇑*i*P	**P**	**02 41 47.0**	**+0.4**
	comp=Z,11nm,1.7s,mb4.4						
GRA1	**Grafenberg Arr**	**83.31**	**329**	*e*P	**P**	**02 41 47.2**	**+0.6**
	comp=Z,33nm,0.9s,mb5.2						
GRF	**Grafenberg Arr**	**83.31**	**329**	*e*P	**P**	**02 41 47.2**	**+0.6**
GRF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.2						
GRF	**Grafenberg Arr**	**83.31**	**329**	*e*P	**P**	**02 41 47.2**	**+0.6**
GRF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.2						
GRF	**Grafenberg Arr**	**83.31**	**329**	*e*P	**P**	**02 41 47.2**	**+0.6**
	comp=Z,33nm,0.9s,mb5.2						
KKB	**Krupnik**	**83.34**	**318**	*i* P	**P**	**02 41 47.2**	**+0.2**
MOA	**Molln**	**83.41**	**327**	⇑*i*P	**P**	**02 41 47.5**	**+0.3**
	comp=Z,10nm,0.9s,mb4.7						
GROS	**Grobnik**	**83.89**	**325**	*e*P	**P**	**02 41 49.5**	**0.0**
PERS	**Pernice**	**83.93**	**325**	*e*P	**P**	**02 41 49.9**	**+0.1**
EIL	**Elat**	**83.94**	**302**	*e*P	**P**	**02 41 50.6**	**+0.4**
	comp=Z,25nm,0.9s,mb5.0						
TNS	**Taunus Mts**	**84.02**	**331**	*e*P	**P**	**02 41 50.4**	**+0.3**
TNS				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
TNS	**Taunus Mts**	**84.02**	**331**	*e*P	**P**	**02 41 50.4**	**+0.3**
	comp=Z,8.0nm,1.0s,mb4.5						
SKO	**Skopje**	**84.16**	**319**	⇑*i*P	**P**	**02 41 52.0**	**+1.0**
SKO				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.3						
SKO	**Skopje**	**84.16**	**319**	⇑*i*P	**P**	**02 41 52.0**	**+1.0**
	comp=Z,0.0nm,0.8s						
KBA	**Koelnbreinsper**	**84.40**	**327**	⇑*i*P	**P**	**02 41 52.4**	**+0.3**
	comp=Z,8.4nm,0.7s,mb4.7						
KBA	**Koelnbreinsper**	**84.40**	**327**	⇑*i*P	**P**	**02 41 52.4**	**+0.3**
KBA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
FUR	**Furstenfeldbru**	**84.47**	**328**	*e*P	**P**	**02 41 53.1**	**+0.7**
FUR				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.1						
FUR	**Furstenfeldbru**	**84.47**	**328**	*e*P	**P**	**02 41 53.1**	**+0.7**
	comp=Z,28nm,0.9s,mb5.1						
LJU	**Ljubljana**	**84.65**	**325**	*e*P	**P**	**02 41 53.1**	**-0.3**
JAVS	**Javornik**	**84.97**	**325**	*i* P	**P**	**02 41 54.9**	**-0.1**
TUC	**Tucson**	**85.03**	**53**	*e*P	**P**	**02 41 56.6**	**+1.0**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
TUC	**Tucson**	**85.03**	**53**	*e*P	**P**	**02 41 56.6**	**+1.0**
	comp=Z,6.3nm,1.0s,mb4.5						
GIVF	**Givet**	**85.49**	**333**	*e*P	**P**	**02 41 57.4**	**0.0**
BFO	**Black Forest**	**85.57**	**330**	*e*P	**P**	**02 41 57.9**	**+0.1**
BFO				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
BFO	**Black Forest**	**85.57**	**330**	*e*P	**P**	**02 41 57.9**	**+0.1**
	comp=Z,27nm,1.3s,mb5.0						
DAVA	**Damuels**	**85.75**	**329**	⇑*i*P	**P**	**02 41 58.8**	**0.0**
	comp=Z,10nm,0.9s,mb4.8						
BAIF	**Baives**	**85.75**	**333**	*e*P	**P**	**02 41 58.7**	**0.0**
CDF	**Champ du Feu**	**85.92**	**331**	⇑*i*P	**P**	**02 41 59.8**	**+0.2**
	comp=Z,30nm,0.9s,mb4.9						
CDF	**Champ du Feu**	**85.92**	**331**	⇑*i*P	**P**	**02 41 59.8**	**+0.2**
CDF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
ANMO	**Albuquerque**	**86.04**	**49**	*e*P	**P**	**02 42 01.9**	**+1.4**
ANMO				*e*	pP	02 42 20.4	-1.5
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANMO	**Albuquerque**	**86.04**	**49**	*e*P	**P**	**02 42 01.9**	**+1.4**
	comp=Z,4.4nm,1.1s,mb4.3						
ANMO				*e*	pP	02 42 20.4	-1.6
HINF	**Hinteralfeld**	**86.57**	**331**	*e*P	**P**	**02 42 02.5**	**-0.3**
	comp=Z,13nm,1.0s,mb4.5						
HINF	**Hinteralfeld**	**86.57**	**331**	*e*P	**P**	**02 42 02.5**	**-0.3**
HINF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
HAU	**Haudompre**	**86.62**	**331**	*e*P	**P**	**02 42 02.7**	**-0.3**
	comp=Z,12nm,0.7s,mb4.7						
HAU	**Haudompre**	**86.62**	**331**	*e*P	**P**	**02 42 02.7**	**-0.3**
HAU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MEZF	**Maizieres J'vi**	**86.72**	**332**	⇑*i*P	**P**	**02 42 03.8**	**+0.3**
	comp=Z,16nm,0.8s,mb4.7						
VAI	**Varese**	**87.34**	**328**	*e*P	**P**	**02 42 06.0**	**-0.6**
SNTG	**Esanatoglia**	**87.50**	**324**	*e*P	**P**	**02 42 07.8**	**+0.4**
PGD	**Poggio Sodo**	**87.59**	**325**	*e*P	**P**	**02 42 09.2**	**+1.4**
SDI	**San Donato**	**88.25**	**323**	*e*P	**P**	**02 42 11.1**	**+0.1**
LPL	**La Plagne**	**88.48**	**329**	*e*P	**P**	**02 42 12.2**	**+0.2**
	comp=Z,4.9nm,0.7s,mb4.3						
LPL	**La Plagne**	**88.48**	**329**	*e*P	**P**	**02 42 12.2**	**+0.2**
LPL				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
LPG	**La Plagne**	**88.48**	**329**	*e*P	**P**	**02 42 12.3**	**+0.3**
	comp=Z,7.6nm,0.7s,mb4.5						
LPG	**La Plagne**	**88.48**	**329**	*e*P	**P**	**02 42 12.3**	**+0.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
SSF	**Saint Saulge**	**88.49**	**332**	*e*P	**P**	**02 42 12.0**	**0.0**
	comp=Z,4.7nm,0.8s,mb4.2						
SSF	**Saint Saulge**	**88.49**	**332**	*e*P	**P**	**02 42 12.0**	**0.0**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
SMF	**Signal de Mont**	**88.71**	**332**	*e*P	**P**	**02 42 13.4**	**+0.3**
AVF	**Avril sur Loir**	**88.78**	**332**	⇑*i*P	**P**	**02 42 13.3**	**-0.1**
	comp=Z,18nm,0.8s,mb4.8						
AVF	**Avril sur Loir**	**88.78**	**332**	⇑*i*P	**P**	**02 42 13.3**	**-0.1**
AVF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
GRR	**Gorron**	**88.95**	**335**	*e*P	**P**	**02 42 13.5**	**-0.6**
MBDF	**Montbardon**	**89.10**	**329**	*e*P	**P**	**02 42 15.0**	**+0.1**
ORIF	**Oris-en-Rattie**	**89.31**	**329**	*e*P	**P**	**02 42 15.9**	**0.0**

	comp=Z,13nm,0.9s,mb4.7						
ORIF	Oris-en-Rattie	89.31	329	eP	P	02 42 15.9	0.0
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
SGMF	Saint Gilles	89.63	336	eP	P	02 42 17.8	+0.4
TCF	Toulx Ste Croi	89.63	332	eP	P	02 42 17.8	+0.4
	comp=Z,27nm,1.3s,mb4.9						
TCF	Toulx Ste Croi	89.63	332	eP	P	02 42 17.8	+0.4
TCF				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
ROSF	Rostrenen	89.79	336	eP	P	02 42 18.6	+0.5
VIVF	Saint-Julien-l	89.86	330	eP	P	02 42 18.4	-0.1
MFF	Saint Martin d	90.23	334	eP	P	02 42 20.7	+0.5
	comp=Z,19nm,0.9s,mb4.9						
MFF	Saint Martin d	90.23	334	eP	P	02 42 20.7	+0.5
MFF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
RJF	Les Rejaudoux	90.72	332	eP	P	02 42 23.0	+0.4
	comp=Z,31nm,1.2s,mb5.0						
RJF	Les Rejaudoux	90.72	332	eP	P	02 42 23.0	+0.4
RJF				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.0						
CAF	Calviac	90.83	332	eP	P	02 42 23.9	+0.8
	comp=Z,14nm,0.9s,mb4.8						
CAF	Calviac	90.83	332	eP	P	02 42 23.9	+0.8
CAF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
LASF	Ste Croix	90.83	330	eP	P	02 42 23.3	+0.2
LFF	La Frestale	91.32	332	⇑iP	P	02 42 26.1	+0.7
	comp=Z,12nm,0.7s,mb4.8						
LFF	La Frestale	91.32	332	⇑iP	P	02 42 26.1	+0.7
LFF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
MTLF	Montolieu	92.10	331	eP	P	02 42 29.5	+0.5
	comp=Z,30nm,1.1s,mb5.1						
MTLF	Montolieu	92.10	331	eP	P	02 42 29.5	+0.5
MTLF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.1						
SJPF	Ste Jean	93.62	333	eP	P	02 42 35.6	-0.3
VNA2	Neumayer--Watz	141.11	196	P	PKPdf	02 48 47.2	-0.5
VNA3	Neumayer Olymp	141.37	195	P	PKPdf	02 48 44.5	-3.7
SAML	Samuel	145.69	44	ePKPdf	PKPdf	02 48 58.9	+1.6

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*NEIC **08** 02:42:13.0±0.2, 39.27N×75.59E, mb4.9/84, Error ellipse: s-maj=7.3km s-min=3.6km az=221.0*

*MOS **08** 02:42:14.2±0.9, 39.51N×75.43E, h33$^{\text{km}}$, mb5.0/66, MS4.2/9, Error ellipse: s-maj=9.1km s-min=4.7km az=130.4*

*BJI **08** 02:42:15.3, 39.57N×75.53E, h31$^{\text{km}}$, mB4.7, mb4.6, ML4.8, Ms4.6, Msz4.3*

*NNC **08** 02:42:20.4±2.9, 39.89N×75.56E, mpv4.9, Error ellipse: s-maj=49.4km s-min=19.6km az=70.0*

ISC 08 02:42:12.3±0.2, **39.42N**±0.02×**75.44E**±0.03, **h22**$^{\text{km}}$, **h22**$^{\text{km}}$±.9$^{\text{km}}$**:pP-P, n262,** σ1§**13**/282, **mb4.8**/104, **MS4.2**/12, **31C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	0.42	76	PG	Pb	02 42 20.8	-0.3
KSH				SG	Sb	02 42 28.5	+1.4
KSH				Smax			
	comp=N,147µm,1.0s						
KSH				Smax			
	comp=E,80µm,0.9s						
KZA	Kyzart	2.66	357	P	Pn	02 42 58.7	+3.8
	SNR=167						
ULHL	Ulahol	2.89	12	P	Pn	02 43 02.1	+4.0
	SNR=88						
UCH	Uchtor	2.89	346	P	Pn	02 43 01.9	+3.7
	SNR=807						
AML	Almayashu	3.02	335	P	Pn	02 43 03.0	+3.0
	SNR=37						
KBK	Karagaybulak	3.26	354	P	Pn	02 43 07.3	+3.9
	SNR=406						
AAK	Ala-Archa	3.29	348	⇑Pn	Pn	02 43 07.8	+3.9
	comp=E,1µm,0.7s						
AAK				⇑Lg		02 43 50.8	
	comp=E,3µm,1.0s						
AAK	Ala-Archa	3.29	348	P	Pn	02 43 07.7	+3.8
	SNR=268						
AAK	Ala-Archa	3.29	348	⇑iPN	Pn	02 43 06.7	+2.9
AAK				pmax	pmax		
	comp=Z,1µm,0.7s						
AAK	Ala-Archa	3.29	348	⇑iP	Pn	02 43 06.7	+2.8
FRU	Bishkek	3.47	350	i PN	Pn	02 43 10.0	+3.6
FRU				i		02 43 50.0	
FRU				pmax	pmax		
	comp=Z,2µm,2.0s						
FRU				smax			
	comp=N,14µm,2.0s						
FRU				MLR	MLR		
	comp=Z,14µm,8.0s						
EKS2	Erkin-Say	3.48	339	P	Pn	02 43 10.3	+3.8
	SNR=21						
TKM2	Tokmak 2	3.50	2	P	Pn	02 43 10.5	+3.7
	SNR=297						
CHMS	Chumysh	3.62	352	P	Pn	02 43 12.0	+3.6
	SNR=151						
USP	Ospenovka	3.91	350	P	Pn	02 43 15.7	+3.1
	SNR=118						
AAA	Alma-Ata	4.01	16	ePN	Pn	02 43 22.0	+7.9
AAA				pmax	pmax		
	comp=Z,1µm,2.0s						
AAA				MLR	MLR		
	comp=N,5µm,10.0s						
AAA				MLR	MLR		
	comp=E,4µm,10.0s						
AAA				MLR	MLR		
	comp=Z,6µm,10.0s						
CHCP	Chirah Chowk	6.01	198	⇑P	Pn	02 43 46.8	+4.5
CEP	Cherat	6.26	208	⇑P	Pn	02 43 49.1	+3.2
THN	Thein Dam	6.97	178	eP	Pn	02 43 57.0	+1.1
THN				e		02 45 19.5	
THW	Thamme Wali	7.25	205	P	Pn	02 44 01.5	+1.7
PONG	Pong	7.46	177	e	Pn	02 44 07.0	+4.3
PONG				e		02 45 33.0	
SARP	Sargodha	7.81	198	P	Pn	02 44 08.2	+0.6
SDNR	Sundarnagar	8.00	171	eP	Pn	02 44 11.4	+1.2
SDNR				e		02 45 42.0	
BHK	Bhakra	8.02	174	eP	P	02 44 14.0	+3.5
BHK				e		02 45 42.4	
SBDP	Sheikh Budin	8.03	209	⇑P	P	02 44 12.3	+1.6
SBDP				S	Sn	02 45 41.0	-0.8
SMLA	Simla	8.39	170	⇑i	P	02 44 31.6	+16
SMLA				i		02 46 04.3	
DRP	Derazinda	8.76	211	P	P	02 44 23.8	+3.0
MK31	Makanchi Array	8.91	32	⇓Pn	P	02 44 23.5	+0.6
	comp=Z,12nm,0.6s,baz=207,slow=11,SNR=48						
MK31				⇑Lg		02 46 52.1	
	comp=Z,119nm,1.4s						
MKAR	Makanchi Array	8.91	32	i P	P	02 44 22.9	0.0
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
DDI	Dehra Dun	9.32	166	eP	P	02 44 29.7	+1.1
DDI				e		02 46 15.0	
WMQ	Urumqi	10.18	60	eP	P	02 44 42.6	+2.4
WMQ				S	S	02 46 30.0	-4.7
LGTI	Lohaghat	10.70	157	eP	P	02 44 48.7	+1.2
LGTI				e		02 46 53.0	
NDI	New Delhi	10.81	172	eP	P	02 44 47.0	-1.9
NDI				e		02 46 43.5	
KURK	Kurchatov	11.52	10	⇓Pn	P	02 44 57.4	-1.2
	comp=Z,8.2nm,0.9s						
KURK				⇑Lg		02 48 15.4	
	comp=Z,189nm,1.5s						
KURK	Kurchatov	11.52	10	i P	P	02 44 57.8	-0.8
KURK	Kurchatov	11.52	10	eP	P	02 44 57.3	-1.3
	comp=Z,18nm,1.0s						
AJM	Ajmer	12.92	183	⇓i	P	02 45 13.0	-4.4
AJM				i		02 47 35.0	
KOLN	Koldanda	13.45	147	eP	P	02 45 20.8	-3.7
	comp=Z,36nm,0.4s						
GKN	Gorkha	13.71	143	eP	P	02 45 23.8	-4.0
	comp=Z,127nm,0.6s						
BVA0	Borovoye Array	14.05	347	⇓Pn	P	02 45 36.5	+4.4
	comp=Z,12nm,0.8s,baz=155,slow=10,SNR=79						
BVA0				⇑Lg		02 49 32.4	
	comp=Z,31nm,1.7s,baz=159,slow=31,SNR=3.6						
BVA0	Borovoye Array	14.05	347	i P	P	02 45 30.3	-1.8
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKN	Kakani	14.19	142	eP	P	02 45 29.6	-4.6
	comp=Z,56nm,0.5s						
DMN	Daman	14.26	143	eP	P	02 45 30.6	-4.5
	comp=Z,88nm,0.7s						
PKI	Pulchoki	14.44	142	eP	P	02 45 33.2	-4.2
	comp=Z,91nm,0.8s						
CHKZ	Chkalovo	14.64	349	⇑Pn	P	02 45 39.4	-0.5
	comp=Z,21nm,1.2s						
CHKZ				⇓Lg		02 49 50.2	
	comp=Z,176nm,1.6s						
CHKZ	Chkalovo	14.64	349	P	P	02 45 38.5	-1.4
CHKZ				pmax	pmax		
	comp=Z,25nm,1.2s						
CHKZ	Chkalovo	14.64	349	eP	P	02 45 37.3	-2.6
JIRN	Jiri	14.74	139	eP	P	02 45 37.5	-3.9
	comp=Z,198nm,0.7s						
LSA	Lhasa	16.15	122	P	P	02 46 00.6	+1.0
LSA				S	S	02 49 04.3	+6.5
LSA				AMB	AMB		
	comp=Z,20nm,1.4s						
LSA				LR	LR		
	comp=N,280nm,13.1s						
LSA				LR	LR		
	comp=E,670nm,15.3s						
LSA				LR	LR		
	comp=Z,930nm,11.8s						
LSA	Lhasa	16.15	122	eP	P	02 46 00.3	+0.7
LSA				pmax	pmax		
	comp=Z,18nm,0.9s						
LSA	Lhasa	16.15	122	eP	P	02 46 00.3	+0.7
	comp=Z,18nm,0.9s						
BHPL	Bhopal	16.21	173	eP	P	02 46 02.7	+2.2
BHPL				AMb	AMB	02 46 04.2	
	comp=Z,61nm,0.8s						
BHPL				e		02 48 49.0	
NVS	Novosibirsk	16.30	16	⇑iP	P	02 46 03.2	+1.9
NVS				pmax	pmax		
	comp=Z,32nm,1.3s						
NVS				pmax	pmax		
	comp=N,59nm,1.7s						
BOK	Bokaro	17.91	147	eP	P	02 46 19.4	-2.4
BOK				eS	S	02 49 30.1	-8.2
GTA	Gaotai	18.83	82	eP	P	02 46 33.0	+0.1
GTA				AP		02 46 38.5	
GTA				S	S	02 50 05.6	+6.9
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s						
GTA				LR	LR		
	comp=N,803nm,12.9s						
GTA				LR	LR		
	comp=E,626nm,16.4s						
GTA				LR	LR		
	comp=Z,158nm,12.2s						
SHL	Shillong	19.53	130	eP	P	02 46 40.5	-0.7
	comp=Z,50nm,1.0s						
SHL				eS	S	02 50 14.0	-0.7
ARU	Arti	20.34	332	Pn	P	02 46 51.4	+1.7
	comp=Z,219nm,0.8s,SNR=13						
ARU	Arti	20.34	332	⇑iP	P	02 46 40.4	-9.3
ARU				eS	S	02 50 23.5	-7.9
ARU				eSS	SS	02 50 53.6	-7.7
ARU				pmax	pmax		
	comp=Z,22nm,0.7s						
ARU				MLR	MLR		
	comp=Z,500nm,16.5s,MS4.0						
ARU				MLR	MLR		
	comp=N,300nm,16.0s						
POO	Poona	20.86	184	eP	P	02 46 55.0	-0.3
POO				i		02 49 49.0	
MOY	Mondy	21.56	47	eP	P	02 47 03.5	+1.3
MOY				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.4						
HYB	Hyderabad	22.09	172	i P	P	02 47 07.0	-0.7
HYB				eS	S	02 51 03.0	-2.0
ZAK	Zakamensk	22.43	52	eP	P	02 47 11.5	+0.6
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
LZH	Lanzhou	22.66	89	⇑P	P	02 47 15.0	+1.7
LZH				AP		02 47 24.3	
LZH				XP		02 47 28.5	
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,250nm,4.8s						
LZH				LR	LR		
	comp=N,1µm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,14.7s,MS4.7						
LZH	Lanzhou	22.66	89	⇑P	P	02 47 15.0	+1.7
	comp=Z,30nm,1.0s,mb4.7						
LZH				pP		02 47 24.3	
LZH				sP		02 47 28.5	
LZH				PP	PP	02 47 50.0	+8.1
LZH				S	S	02 51 26.5	+11
LZH				sS		02 51 40.0	
LZH				SS	SS	02 52 16.0	+18
LZH				LR	LR		
	comp=Z,2µm,14.7s,MS4.7						
VIS	Vishakhapatnam	22.68	160	eP	P	02 47 13.2	-0.4
VIS				AMb	AMB	02 47 21.4	
	comp=Z,28nm,0.8s,mb4.7						
VIS				e		02 51 25.8	
TLY	Talaya	23.09	49	i P	P	02 47 15.1	-2.1
TLY				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.0						
MTA	Mtatsminda	23.34	285	P	P	02 47 20.9	+1.2
TI2	Plekhanov	23.37	286	⇑iP	P	02 47 22.6	+2.6
TI2				pmax	pmax		
	comp=Z,50nm,1.2s,mb4.8						
SOKR	Solikamsk	23.37	336	i P	P	02 47 19.9	0.0
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
GNI	Garni	23.55	282	eP	P	02 47 23.7	+1.9
GNI				pmax	pmax		
	comp=Z,102nm,1.7s						
GNI	Garni	23.55	282	eP	P	02 47 24.1	+2.3
	comp=Z,54nm,0.8s,mb5.0						
ULN	Ulaanbaatar	24.25	59	eP	P	02 47 29.9	+1.3
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	24.25	59	eP	P	02 47 29.9	+1.3
	comp=Z,7.6nm,0.8s,mb4.2						
AKH	Akhalkalaki	24.34	285	P	P	02 47 32.3	+2.8
GOF	Gofitskoye	24.54	294	eP	P	02 47 32.0	+0.6
GOF				pmax	pmax		
	comp=Z,40nm,1.1s,mb4.9						
CD2	Chengdu	24.58	101	P	P	02 47 34.0	+2.0
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
KIV	Kislovodsk	24.78	291	P	P	02 47 35.5	+1.8
	comp=Z,213nm,0.6s,mb5.8,SNR=7.9						
KIV	Kislovodsk	24.78	291	eP	P	02 47 34.8	+1.1
KIV				eS	S	02 51 58.1	+6.1
KIV				pmax	pmax		
	comp=N,16nm,0.9s						
KIV				pmax	pmax		
	comp=E,20nm,0.9s						
KIV				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,150nm,15.0s,MS3.6						
KIV	Kislovodsk	24.78	291	eP	P	02 47 33.4	-0.4
	comp=Z,38nm,0.7s,mb5.0						
SOC	Sochi	26.94	291	eP	P	02 47 52.9	-1.0
SOC				e		02 48 39.7	
SOC				eS	S	02 52 30.4	+2.5
SOC				eSS	SS	02 53 38.7	-3.1
SOC				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.1						
SOC				pmax	pmax		
	comp=N,27nm,0.7s						
SOC				pmax	pmax		
	comp=E,17nm,0.7s						
SOC				MLR	MLR		
	comp=Z,446nm,22.0s,MS4.0						
SOC				MLR	MLR		
	comp=N,556nm,19.0s						
KMI	Kunming	27.00	114	⇑P	P	02 47 58.2	+3.6
KMI				AP	pP	02 48 05.0	+3.9
KMI				XP	sP	02 48 09.4	+5.4
KMI				PP	PP	02 48 40.7	0.0
KMI				S	S	02 52 28.2	-0.8
KMI				SS	SS	02 53 45.6	+2.2
KMI				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.4						
KMI				AMB	AMB		
	comp=Z,83nm,3.2s						
KMI				LR	LR		
	comp=N,487nm,14.7s,MS4.4						
KMI				LR	LR		
	comp=E,526nm,15.1s,MS4.4						
KMI				LR	LR		
	comp=Z,782nm,15.1s,MS4.4						
KMI	Kunming	27.00	114	⇑P	P	02 47 58.2	+3.6
KMI				*SP	sP	02 48 09.4	+5.4
KMI						02 48 40.7	
KMI				S	S	02 52 28.2	-0.8
KMI				SS	SS	02 53 45.6	+2.2
KMI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
KMI				MLR	MLR		
	comp=Z,780nm,15.1s,MS4.4						
KMI	Kunming	27.00	114	⇑P	P	02 47 58.2	+3.6
	comp=Z,13nm,1.0s,mb4.4						
KMI				pP	pP	02 48 05.0	+3.9
KMI				sP	sP	02 48 09.4	+5.4
KMI				PP	PP	02 48 40.7	0.0
KMI				S	S	02 52 28.2	-0.8
KMI				SS	SS	02 53 45.6	+2.2
KMI				LR	LR		
	comp=Z,780nm,15.1s,MS4.4						
XAN	Xi’an	27.27	91	P	P	02 48 01.1	+4.1
XAN				AP	pP	02 48 05.8	+2.4
XAN				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.2						
HHC	Hu-ho-hao-te	27.54	75	eP	P	02 48 05.2	+5.9
HHC				SCS	ScS	02 58 41.7	-4.1
HHC				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
HHC				AMB	AMB		
	comp=Z,164nm,12.0s						
HHC				LR	LR		
	comp=N,530nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=E,360nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=Z,536nm,13.2s,MS4.3						
ENH	Enshi	29.25	98	eP	P	02 48 19.5	+4.6
	comp=Z,8.2nm,1.0s,mb4.4						
RAYN	Ar Rayn	29.87	247	P	P	02 48 20.0	-0.5
	comp=Z,80nm,1.0s,mb5.4,SNR=13						
OBN	Obninsk	30.22	314	i P	P	02 48 22.5	-0.7
OBN				i	pP	02 48 29.4	-0.4
OBN				e		02 49 20.4	
OBN				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7						
OBN				MLR	MLR		
	comp=Z,200nm,11.0s,MS4.0						
SIM	Simferopol’	30.86	294	deP	P	02 48 29.8	+0.7
SIM				eS	S	02 53 37.0	+6.5
SIM				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.3						
BOD	Bodaibo	30.87	41	eP	P	02 48 26.8	-2.1
JOF	Joensuu	35.24	326	ep	P	02 49 06.4	-0.4
	comp=Z,17nm,0.9s,mb5.0						
JOF	Joensuu	35.24	326	eP	P	02 49 06.4	-0.4
JOF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
FINES	FINESS Array B	37.15	323	i P	P	02 49 22.7	-0.3
FINES				pmax	pmax		
	comp=Z,11nm,0.5s						
CN2	Changchun	37.19	67	eP	P	02 49 24.0	+0.5
CN2				eS	S	02 55 07.0	-1.5
CN2				LR	LR		
	comp=N,500nm,14.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.5						
CN2				LR	LR		
	comp=Z,400nm,15.0s,MS4.3						
KAF	Kangasniemi	37.21	324	ep	P	02 49 21.9	-1.6
	comp=Z,3.0nm,0.6s,mb4.3,baz=104,slow=8.6						
KAF	Kangasniemi	37.21	324	eP	P	02 49 21.9	-1.6
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
SSE	Sheshan	37.94	88	eP	P	02 49 26.8	-3.1
SSE				AP	pP	02 49 36.3	-0.2
SSE				S	S	02 55 18.7	-1.3
SSE				XS		02 55 38.2	
SSE				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.6						
SSE				AMB	AMB		
	comp=Z,52nm,3.1s						
SSE				LR	LR		
	comp=N,343nm,16.7s,MS4.3						
SSE				LR	LR		
	comp=E,195nm,16.7s,MS4.3						
SSE				LR	LR		
	comp=Z,395nm,15.5s,MS4.3						
SSE	Sheshan	37.94	88	eP	P	02 49 26.8	-3.1
	comp=Z,20nm,1.6s,mb4.6						
SSE				pP	pP	02 49 36.3	-0.2
SSE				S	S	02 55 18.7	-1.3
SSE				sS		02 55 38.2	
SSE				SS	SS	02 58 08.2	+11
SSE				LR	LR		
	comp=Z,400nm,15.5s,MS4.3						
KWP	Kalwaria	38.23	303	eP	P	02 49 32.2	0.0
KOLS	Kolonicke sedl	38.59	302	i P	P	02 49 36.2	+1.0
KOLS				i pP	pP	02 49 42.9	+1.1
CRVS	Cervenica-Dubn	39.12	302	i P	P	02 49 41.2	+1.5
CRVS				e	pP	02 49 47.1	+0.8
CRVS				e		02 51 13.1	
CRVS				e		02 51 39.3	
KEV	Kevo	39.49	336	ep	P	02 49 40.7	-1.8
YAK	Yakutsk	39.55	37	i P	P	02 49 40.2	-2.8
YAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
YAK				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.3						
NIE	Niedzica	39.81	303	eP	P	02 49 45.2	-0.2
KECS	Kecovo	39.82	302	eP	P	02 49 47.6	+2.2
KECS	Kecovo	39.82	302	epP	P	02 49 47.6	+2.2
MDJ	Mudanjiang	39.95	64	P	P	02 49 45.5	-1.1
MDJ				AP	pP	02 49 54.3	+1.1
MDJ				XP	sP	02 49 59.4	+3.5
MDJ				S	S	02 55 47.1	-3.2
MDJ				XS		02 56 01.9	
MDJ				SS	SS	02 58 37.6	-3.4
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,76nm,3.7s						
MDJ				LR	LR		
	comp=N,111nm,16.8s,MS4.0						
MDJ				LR	LR		
	comp=E,143nm,18.1s,MS4.0						
MDJ				LR	LR		
	comp=Z,148nm,19.3s,MS3.8						
OJC	Ojcow	40.05	304	eP	P	02 49 47.2	-0.1
VYHS	Vyhne	40.90	302	i P	P	02 49 55.2	+0.9
VYHS				i pP	pP	02 50 01.6	+0.6
VYHS				ePP	PP	02 51 33.0	+1.2
VYHS				e		02 51 49.0	
DIVS	Divcibare	40.97	295	⇑iP	P	02 49 55.9	+1.0
GKP	Gorka Klasztor	41.34	309	eP	P	02 49 58.1	+0.2
KSP	Ksiaz	42.19	306	eP	P	02 50 04.9	+0.1
KSP	Ksiaz	42.19	306	eP	P	02 50 05.2	+0.4
DPC	Dobruska-Polom	42.24	305	eP	P	02 50 06.2	+1.0
DPC				epP	pP	02 50 12.6	+0.7
UPC	Upice	42.41	305	eP	P	02 50 07.5	+0.8
UPC				epP	pP	02 50 13.8	+0.5
PVCC	Panska Ves	43.32	306	eP	P	02 50 15.0	+1.0
ARSA	Arzberg	43.32	301	⇑iP	P	02 50 14.4	+0.3
	comp=Z,8.8nm,1.0s,mb4.4						
PRU	Pruhonice	43.43	305	eP	P	02 50 15.3	+0.4
PRU				epP	pP	02 50 21.9	+0.3
DOBS	Dobrina	43.61	299	eP	P	02 50 16.9	+0.5
BRG	Berggiesshubel	43.66	306	i P	P	02 50 17.4	+0.6
BRG				e		02 52 04.3	
BRG				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
BRG	Berggiesshubel	43.66	306	i P	P	02 50 17.4	+0.6
	comp=Z,14nm,1.0s,mb4.7						
BRG				e		02 52 04.3	
LEGS	Legarje	43.76	299	eP	P	02 50 15.2	-2.5
MOA	Molln	44.03	302	⇑iP	P	02 50 19.8	0.0
	comp=Z,9.6nm,1.2s,mb4.4						
CLL	Collm	44.17	307	⇑iP	P	02 50 20.3	-0.6
CLL				e	pP	02 50 27.0	-0.5
CLL				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6						

CLL	Collm	44.17	307	⇑iP	P	02 50 20.3	-0.6
	comp=Z,17nm,1.3s,mb4.6						
CLL				e	pP	02 50 27.0	-0.5
CLL	Collm	44.17	307	⇑P	P	02 50 20.3	-0.6
	comp=Z,logA/T=1.1,mb4.6						
CLL				e*PP	pP	02 50 27.0	-0.5
CLL				ePP	PP	02 52 08.0	+2.6
GEC2	GERESS Array S	44.19	303	eP	P	02 50 21.7	+0.6
GEC2				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
GEC2	GERESS Array S	44.19	303	eP	P	02 50 21.7	+0.6
	comp=Z,20nm,1.0s,mb4.8						
KHC	Kasperske Hory	44.21	304	eP	P	02 50 22.0	+0.7
KHC				epP	pP	02 50 28.5	+0.6
KHC				ex	x	02 50 45.0	
NB2	NORSAR Subarra	44.24	321	P	P	02 50 20.6	-0.8
	comp=Z,20nm,0.6s,mb5.0,baz=89,slow=7.9						
NB2	NORSAR Subarra	44.24	321	P	P	02 50 20.6	-0.8
NB2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
NB2	NORSAR Subarra	44.24	321	P	P	02 50 20.6	-0.8
	baz=89,slow=7.9						
NAO01	NORSAR Array S	44.41	321	eP	P	02 50 21.5	-1.2
	comp=Z,22nm,0.6s,mb5.1						
WET	Wettzell	44.66	304	eP	P	02 50 25.0	+0.1
WET				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
WET	Wettzell	44.66	304	eP	P	02 50 25.0	+0.1
	comp=Z,13nm,1.0s,mb4.7						
NKC	Novy Kostel	44.71	306	eP	P	02 50 26.0	+0.7
KBA	Koelnbreinsper	44.81	301	⇓iP	P	02 50 25.3	-0.9
	comp=Z,10nm,1.3s,mb4.5						
KBA	Koelnbreinsper	44.81	301	⇓iP	P	02 50 25.3	-0.9
KBA				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
MOX	Moxa	45.15	306	i P	P	02 50 28.8	0.0
BSEG	Bad Segeberg	45.36	311	eP	P	02 50 31.1	+0.7
BSEG				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
GRA1	Grafenberg Arr	45.60	305	eP	P	02 50 33.2	+0.9
	comp=Z,35nm,1.0s,mb5.2						
GRA1				epP	pP	02 50 39.4	+0.4
GRF	Grafenberg Arr	45.60	305	eP	P	02 50 33.2	+0.9
GRF				e*PP	pP	02 50 39.4	+0.4
GRF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
GRF	Grafenberg Arr	45.60	305	eP	P	02 50 33.2	+0.9
GRF				e*PP	pP	02 50 39.4	+0.4
GRF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
GRF	Grafenberg Arr	45.60	305	eP	P	02 50 33.2	+0.9
	comp=Z,35nm,1.0s,mb5.2						
GRF				epP	pP	02 50 39.4	+0.4
CLZ	Clausthal	45.69	308	eP	P	02 50 33.2	+0.2
	comp=Z,8.0nm,1.0s,mb4.6						
WTTA	Wattenberg	45.90	302	⇑iP	P	02 50 31.8	-2.9
	comp=Z,8.6nm,0.7s,mb4.8						
WTTA	Wattenberg	45.90	302	⇑iP	P	02 50 31.8	-2.9
WTTA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
FUR	Furstenfeldbru	45.91	303	eP	P	02 50 35.7	+0.9
FUR				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
FUR	Furstenfeldbru	45.91	303	eP	P	02 50 35.7	+0.9
	comp=Z,30nm,0.9s,mb5.2						
SQTA	Sankt Quirin	46.19	302	⇓iP	P	02 50 36.8	-0.3
	comp=Z,7.4nm,1.1s,mb4.5						
SQTA	Sankt Quirin	46.19	302	⇓iP	P	02 50 36.8	-0.3
SQTA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
MOTA	Moosalm	46.23	302	⇑iP	P	02 50 35.9	-1.5
	comp=Z,3.6nm,1.1s,mb4.2						
MOTA	Moosalm	46.23	302	⇑iP	P	02 50 35.9	-1.5
MOTA				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
DAVA	Damuels	47.05	302	⇑iP	P	02 50 43.5	-0.3
	comp=Z,21nm,0.8s,mb5.1						
TNS	Taunus Mts	47.22	306	eP	P	02 50 45.4	+0.2
TNS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TNS	Taunus Mts	47.22	306	eP	P	02 50 45.4	+0.2
	comp=Z,7.0nm,1.0s,mb4.5						
BFO	Black Forest	47.77	304	eP	P	02 50 49.8	+0.2
BFO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
BFO	Black Forest	47.77	304	eP	P	02 50 49.8	+0.2
	comp=Z,9.0nm,0.9s,mb4.8						
CDF	Champ du Feu	48.43	304	eP	P	02 50 54.5	-0.1
	comp=Z,20nm,0.9s,mb4.8						
CDF	Champ du Feu	48.43	304	eP	P	02 50 54.5	-0.1
CDF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
HINF	Hinteralfeld	48.87	304	eP	P	02 50 57.8	-0.2
	comp=Z,30nm,1.0s,mb5.0						
HINF	Hinteralfeld	48.87	304	eP	P	02 50 57.8	-0.2
HINF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
HAU	Haudompre	49.14	304	eP	P	02 50 59.9	-0.2
	comp=Z,24nm,0.9s,mb4.9						
HAU				eR			
	comp=Z,261nm,18.5s						
GIVF	Givet	49.50	307	eP	P	02 51 03.1	+0.2
	comp=Z,33nm,0.9s,mb5.0						
GIVF	Givet	49.50	307	eP	P	02 51 03.1	+0.2
GIVF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
LPG	La Plagne	49.64	301	eP	P	02 51 04.4	+0.4
	comp=Z,29nm,0.9s,mb5.0						
LPG	La Plagne	49.64	301	eP	P	02 51 04.4	+0.4
LPG				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
LPL	La Plagne	49.65	301	eP	P	02 51 04.4	+0.3
	comp=Z,18nm,0.7s,mb4.9						
LPL	La Plagne	49.65	301	eP	P	02 51 04.4	+0.3
LPL				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
SBF	Sospel	49.72	298	eP	P	02 51 04.7	+0.1
	comp=Z,67nm,0.9s,mb5.4						
SBF	Sospel	49.72	298	eP	P	02 51 04.7	+0.1
SBF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
CABF	La Chapelle	49.73	302	eP	P	02 51 04.4	-0.3
	comp=Z,25nm,1.0s,mb4.9						
CABF	La Chapelle	49.73	302	eP	P	02 51 04.4	-0.3
CABF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
MEZF	Maizieres J'vi	49.82	305	eP	P	02 51 05.5	+0.1
	comp=Z,62nm,1.1s,mb5.2						
BNI	Bardonecchia	49.83	300	eP	P	02 51 05.4	-0.1
BNI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
BNI	Bardonecchia	49.83	300	eP	P	02 51 05.4	-0.2
	comp=Z,11nm,0.8s,mb4.9						
MBDF	Montbardon	49.88	300	eP	P	02 51 06.1	+0.2
	comp=Z,32nm,1.1s,mb5.0						
MBDF	Montbardon	49.88	300	eP	P	02 51 06.1	+0.2
MBDF				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
BAIF	Baives	49.90	307	eP	P	02 51 06.1	+0.2
	comp=Z,22nm,0.9s,mb4.9						
BAIF	Baives	49.90	307	eP	P	02 51 06.1	+0.2
BAIF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
FRF	La Foret Royal	50.36	298	eP	P	02 51 09.9	+0.4
	comp=Z,42nm,1.0s,mb5.1						
FRF	La Foret Royal	50.36	298	eP	P	02 51 09.9	+0.4
FRF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
ORIF	Oris-en-Rattie	50.41	300	eP	P	02 51 10.7	+0.8
	comp=Z,29nm,1.1s,mb4.9						
ORIF				eR			
	comp=Z,281nm,21.0s						
SMRF	Simiane la Rot	50.94	299	eP	P	02 51 13.8	-0.1
	comp=Z,26nm,0.9s,mb4.9						
SMF	Signal de Mont	51.18	303	eP	P	02 51 15.0	-0.7
	comp=Z,31nm,1.1s,mb4.8						
SMF	Signal de Mont	51.18	303	eP	P	02 51 15.0	-0.7
SMF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
VIVF	Saint-Julien-l	51.24	301	eP	P	02 51 16.1	-0.1
	comp=Z,16nm,0.8s,mb4.7						
VIVF	Saint-Julien-l	51.24	301	eP	P	02 51 16.1	-0.1
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
SSF	Saint Saulge	51.26	304	eP	P	02 51 15.5	-0.8
	comp=Z,11nm,0.8s,mb4.5						
SSF	Saint Saulge	51.26	304	eP	P	02 51 15.5	-0.8
SSF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
AVF	Avril sur Loir	51.45	303	eP	P	02 51 17.2	-0.6
	comp=Z,42nm,0.8s,mb5.1						
AVF	Avril sur Loir	51.45	303	eP	P	02 51 17.2	-0.6
AVF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
HYF	Humbligny	51.75	304	eP	P	02 51 19.7	-0.3
BGF	Bois d'Agland	51.86	303	eP	P	02 51 20.1	-0.8
	comp=Z,8.5nm,0.8s,mb4.4						
BGF	Bois d'Agland	51.86	303	eP	P	02 51 20.1	-0.8
BGF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LASF	Ste Croix	52.06	300	eP	P	02 51 22.4	-0.1
	comp=Z,36nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	52.36	303	eP	P	02 51 24.3	-0.4
	comp=Z,33nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	52.36	303	eP	P	02 51 24.3	-0.4
TCF				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
CAF	Calviac	52.95	301	eP	P	02 51 29.0	-0.1
	comp=Z,16nm,0.9s,mb4.7						
CAF	Calviac	52.95	301	eP	P	02 51 29.0	-0.1
CAF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LDF	La Druitiere	53.05	306	eP	P	02 51 28.8	-0.9
RJF	Les Rejaudoux	53.17	302	eP	P	02 51 30.7	0.0
	comp=Z,11nm,0.8s,mb4.5						
RJF				eR			
	comp=Z,104nm,18.5s						
FLN	La Foliniere	53.21	307	eP	P	02 51 29.8	-1.2
	comp=Z,12nm,0.8s,mb4.6						
FLN				eR			
	comp=Z,276nm,18.2s						
MTLF	Montolieu	53.44	300	eP	P	02 51 32.3	-0.4
	comp=Z,30nm,1.1s,mb4.8						
MTLF	Montolieu	53.44	300	eP	P	02 51 32.3	-0.4
MTLF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
GRR	Gorron	53.58	306	eP	P	02 51 32.6	-1.0
	comp=Z,34nm,0.9s,mb5.0						
GRR	Gorron	53.58	306	eP	P	02 51 32.6	-1.0
GRR				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
MFF	Saint Martin d	53.77	304	eP	P	02 51 34.0	-1.1
	comp=Z,34nm,1.2s,mb4.9						
MFF	Saint Martin d	53.77	304	eP	P	02 51 34.0	-1.1
MFF				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
LFF	La Frestale	53.82	302	eP	P	02 51 35.2	-0.2
	comp=Z,48nm,1.0s,mb5.1						
LFF	La Frestale	53.82	302	eP	P	02 51 35.2	-0.2
LFF				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
BILL	Bilibino	54.43	28	i P	P	02 51 37.0	-2.6
BILL				S	S	02 59 13.1	-2.1
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
BILL				MLR	MLR		
	comp=Z,800nm,22.0s,MS4.7						
BILL	Bilibino	54.43	28	P	P	02 51 38.7	-0.9
	comp=Z,2.9nm,0.3s,mb4.7						
SGMF	Saint Gilles	54.68	307	eP	P	02 51 40.9	-0.9
	comp=Z,49nm,1.0s,mb5.2						
SGMF	Saint Gilles	54.68	307	eP	P	02 51 40.9	-0.9
SGMF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
EPF	Esparros	54.83	300	eP	P	02 51 43.2	+0.3
ROSF	Rostrenen	55.10	307	eP	P	02 51 43.8	-1.0
	comp=Z,64nm,1.2s,mb5.2						
ROSF	Rostrenen	55.10	307	eP	P	02 51 43.8	-1.0
ROSF				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.2						
EBIE	Bielsa	55.10	300	P	P	02 51 44.8	-0.1
	comp=Z,22nm,0.9s,mb5.2						
QUIF	Quistinic	55.19	307	eP	P	02 51 44.3	-1.2
ETSF	Etsaut	55.48	300	eP	P	02 51 47.3	-0.4
	comp=Z,31nm,1.0s,mb5.0						
ETSF	Etsaut	55.48	300	eP	P	02 51 47.3	-0.4
ETSF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
ERTA	Horta de San J	55.69	298	P	P	02 51 50.5	+1.4
	comp=Z,22nm,1.3s,mb5.0						
SJPF	Ste Jean	55.84	301	eP	P	02 51 49.0	-1.2
EALK	Alkurruntz	55.98	301	P	P	02 51 51.4	+0.1
	comp=Z,27nm,1.8s,mb5.0						
ELAN	Lanestosa	57.26	302	P	P	02 52 00.2	-0.2
	comp=Z,17nm,0.9s,mb5.1						
EARI	Arriondas	58.40	302	P	P	02 52 05.4	-2.9
	comp=Z,25nm,1.6s,mb5.0						
EVIA	Vianos	58.67	296	P	P	02 52 10.3	0.0
EVIA				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
EVIA	Vianos	58.67	296	P	P	02 52 10.3	0.0
	comp=Z,20nm,1.1s,mb5.0						
ESDC	Sonseca Array	59.20	298	P	P	02 52 13.3	-0.7
	comp=Z,5.0nm,0.6s,mb4.7						
EQES	Quesada	59.45	296	P	P	02 52 14.9	-0.8
	comp=Z,13nm,0.9s,mb5.0						
EBER	Berja	59.76	295	P	P	02 52 18.1	+0.2
	comp=Z,22nm,1.0s,mb5.2						
EBAN	Banos Encina	59.78	296	P	P	02 52 18.0	0.0
EBAN				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
EBAN	Banos Encina	59.78	296	P	P	02 52 18.0	0.0
	comp=Z,11nm,0.7s,mb5.0						
ECAL	Calabor	60.02	301	P	P	02 52 19.0	-0.6
	comp=Z,8.2nm,0.8s,mb4.8						
PBRG	Braganca	60.08	301	eP	P	02 52 19.5	-0.5
	comp=Z,13nm,1.4s,mb4.8						
EINC	Incio	60.09	302	P	P	02 52 18.7	-1.3
	comp=Z,9.5nm,0.8s,mb4.9						
EALB	Alboran	60.32	294	P	P	02 52 20.2	-1.5
	comp=Z,48nm,1.0s,mb5.5						
EADA	Adamuz	60.33	297	P	P	02 52 20.5	-1.3
	comp=Z,10nm,0.8s,mb4.9						
ELUQ	Luque	60.40	296	P	P	02 52 21.5	-0.8
ELUQ				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
ELUQ	Luque	60.40	296	P	P	02 52 21.5	-0.8
	comp=Z,12nm,0.7s,mb5.0						
ELOB	Lobios	60.92	302	P	P	02 52 25.2	-0.5
	comp=Z,23nm,0.9s,mb5.3						
PVRL	Vila Real	60.98	301	eP	P	02 52 25.7	-0.4
	comp=Z,14nm,1.7s,mb4.8						
EMAZ	Mazaricos	61.01	303	P	P	02 52 22.9	-3.4
	comp=Z,5.4nm,1.1s,mb4.6						
PVIS	Viseu	61.36	301	eP	P	02 52 28.4	-0.3
	comp=Z,17nm,1.1s,mb5.1						
EBAD	Badajoz	61.72	298	P	P	02 52 30.9	-0.3
	comp=Z,12nm,0.9s,mb5.0						
EMIN	Mina Concepcio	61.97	297	P	P	02 52 32.6	-0.3
	comp=Z,10nm,0.8s,mb5.0						
INK	Inuvik	70.42	11	eP	P	02 53 25.6	-0.6
INK				pmax	pmax		
	comp=Z,12nm,1.0s						
INK	Inuvik	70.42	11	eP	P	02 53 25.6	-0.6
	comp=Z,12nm,1.0s,mb4.8						
EHIG	Higuera	74.80	294	P	P	02 53 51.5	-1.2
	comp=Z,13nm,0.4s,mb5.2						
YKW3	Yellowknife Ar	78.05	5	eP	P	02 54 10.2	0.0
WRA	Warramunga Arr	80.68	125	i P	P	02 54 25.2	-0.1
WRA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FFC	Flin Flon	86.20	358	P	P	02 54 53.3	+0.6
	comp=Z,60nm,0.9s,mb5.8,SNR=12						
FFC	Flin Flon	86.20	358	eP	P	02 54 52.8	+0.1
FFC				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
FFC	Flin Flon	86.20	358	eP	P	02 54 52.8	+0.1
	comp=Z,12nm,1.0s,mb5.1						
EDM	Edmonton	87.42	5	eP	P	02 54 58.3	-0.4
EDM				e	pP	02 55 05.7	-0.1
WALA	Waterton Lakes	91.52	6	eP	P	02 55 18.0	0.0
	comp=Z,9.0nm,1.2s,mb5.0						
WALA				e	pP	02 55 25.4	+0.3
MDV	Middlebury	92.27	338	eP	P	02 55 22.1	+0.5
CHMT	Chamberlain Mo	93.70	6	eP	P	02 55 28.8	+0.7
CHMT				e	pP	02 55 34.7	-0.5
BOZ	Bozeman (W)	95.08	5	eP	P	02 55 34.7	+0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
BOZ	Bozeman (W)	95.08	5	eP	P	02 55 34.7	+0.2
	comp=Z,3.8nm,1.0s,mb4.8						
TRQA	Tornquist	146.98	259	ePKPbc	PKPbc	03 01 54.7	+2.1

MAN 08 02:53:38.4, 12.90N×122.88E, h14^{km}, mb5.0, ML4.0, MS4.1, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	San Andres	0.47	335	eP	Pb	02 53 48.0	+0.1
MMPH	Masbate	0.90	126	eP	Pb	02 53 55.0	-0.4
MMPH				eS	Sb	02 54 07.0	0.0
OTRP	Odiongan	0.99	238	eP	Pb	02 53 56.6	-0.2
OTRP				eS	Sb	02 54 10.7	+1.1
GQP	Guinayangan	1.08	337	⇓eP	Pb	02 53 57.9	-0.5
GQP				eS	Sb	02 54 14.1	+1.8
BOAC	Boac	1.15	299	eP	Pb	02 53 58.3	-1.3
KALP	Kalibo	1.32	204	eP	Pb	02 53 48.0	-15
KALP				eS	Sb	02 54 02.5	-17
RCP	Roxas	1.34	186	⇑eP	Pn	02 54 01.4	-1.4
RCP				eS	Sb	02 54 20.0	+0.4
SJMP	San Jose	1.77	256	eP	Pn	02 54 08.6	-0.4
LQP	Lukban	1.78	313	eP	Pn	02 54 09.1	+0.1
LQP				eS	Sn	02 54 34.1	+2.7
POLP	Polilio Island	2.04	333	eP	Pn	02 54 13.2	+0.5
POLP				eS	Sn	02 54 42.5	+4.4
TGY	Tagaytay City	2.24	303	⇓eP	Pn	02 54 19.1	+3.5
GUIM	Jordan	2.28	187	eP	Pn	02 54 17.9	+1.7
OCLP	Ormoc	2.50	137	eP	Pn	02 54 19.8	+0.4
AAP	Anini-y	2.63	200	eP	Pn	02 54 19.0	-2.2
PLP	Palo	2.68	130	i P	Pn	02 54 20.9	-1.1
PLP				i S	Sn	02 55 02.9	+8.4
LLP	Lapu-Lapu	2.78	157	eP	Pn	02 54 22.5	-0.9
LLP				eS	Sn	02 54 50.2	-6.7
BALP	Baler	3.10	336	eP	Pn	02 54 28.5	+0.7
PCPH	Palayan	3.16	327	eP	Pn	02 54 31.6	+2.7
TBP	Tagbilaran	3.33	163	eP	Pn	02 54 31.1	-0.1
MSLP	Maasin	3.36	145	eP	Pn	02 54 31.8	+0.1
SNPH	Sibulan	3.55	174	eP	Pn	02 54 35.0	+0.7
CAUP	Cauayan	4.15	346	eP	Pn	02 54 42.0	-0.8
CVP	Callao Caves	4.88	348	eP	Pn	02 54 52.0	-1.3
ABRA	Dolores	5.17	336	eP	Pn	02 54 55.9	-1.4
APYP	Conner	5.18	342	eP	Pn	02 54 56.6	-0.9
BUKP	Musuan	5.43	157	eP	Pn	02 54 60.0	-1.0

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*STR **08** 02:56:26.1±0.2, 42.61N×0.83E, h5^{km}±1^{km}, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **08** 02:56:26.1±0.1, 42.61N×0.83E, h5^{km}, Md2.8/1, Ml2.6/12, Error ellipse: s-maj=1.2km s-min=0.9km az=41.0*

*NEIC **08** 02:56:26.1, 42.61N×0.83E, h5^{km}, ML2.6(LDG), ML2.3(STR), MN2.4(MDD), After LDG.*

*CSEM **08** 02:56:26.4±0.1, 42.62N×0.82E, h5^{km}, ML2.5/11, Error ellipse: s-maj=1.3km s-min=1.0km az=2.0*

MDD 08 02:56:26.5±0.2**, 42.62N×0.82E, h8^{km}**±2^{km}**, mbLg2.2**/21**, 1C, Error ellipse: s-maj=1.9km s-min=1.2km az=21.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MELF	Melles	0.26	350	Pg	Pg	02 56 32.2	+0.3
MELF				Sg	Sg	02 56 36.0	+0.5
MELF	Melles	0.26	350	P	Pg	02 56 32.2	+0.3
MELF				S	Sg	02 56 35.9	+0.4
SALF	Salau	0.31	62	Pg	Pg	02 56 32.5	-0.3
SALF				Sg	Sg	02 56 36.0	-1.1
SALF	Salau	0.31	62	P	Pg	02 56 32.6	-0.3
SALF				S	Sg	02 56 36.6	-0.5
CSOR	Sort	0.34	136	Pg	Pg	02 56 32.7	-0.6
CSOR				Lg		02 56 37.2	
	72nm,0.1s						
MLS	Moulis	0.40	31	Pg	Pg	02 56 34.3	-0.3
MLS				Sg	Sg	02 56 39.5	-0.5
MLS	Moulis	0.40	31	P	Pg	02 56 34.4	-0.2
MLS				S	Sg	02 56 39.2	-0.8
RESF	Ens	0.40	299	Pg	Pg	02 56 34.5	-0.1
RESF				Sg	Sg	02 56 40.0	-0.1
RESF	Ens	0.40	299	P	Pg	02 56 34.5	-0.1
RESF				S	Sg	02 56 40.0	-0.1
EBIE	Bielsa	0.50	278	⇑Pg	Pg	02 56 36.1	-0.5
	6.1nm,0.3s,SNR=18						
EBIE				Lg		02 56 42.0	
	57nm,0.2s,SNR=64						
EBIE	Bielsa	0.50	278	Pg	Pg	02 56 36.1	-0.5
	6.1nm,0.3s,SNR=18						
CORG	Organya	0.53	136	Pg	Pg	02 56 36.3	-0.9
CORG				Lg		02 56 43.5	
	24nm,0.1s						
EPF	Esparros	0.54	320	ePg	Pg	02 56 37.0	-0.4
EPF				eSg	Sg	02 56 43.4	-1.4
	32nm,0.2s						
PAND	Andorre	0.55	100	P	Pg	02 56 36.3	-1.2
PAND				S	Sg	02 56 43.0	-1.8
GRBF	Gourbit	0.57	67	P	Pg	02 56 37.3	-0.7
GRBF				S	Sg	02 56 44.6	-1.2
VIEF	Viey	0.64	295	Pg	Pg	02 56 38.6	-0.8
VIEF				Sg	Sg	02 56 47.0	-1.0
VIEF	Viey	0.64	295	P	Pg	02 56 38.6	-0.8
VIEF				S	Sg	02 56 47.1	-1.0
LABF	Labassere	0.70	308	Pg	Pg	02 56 40.0	-0.5
LABF				Sg	Sg	02 56 49.1	-0.7
LABF	Labassere	0.70	308	P	Pb	02 56 39.9	-0.5
LABF				S	Sg	02 56 49.4	-0.5
CAVN	Les Avellanes	0.73	184	Pg	Pg	02 56 40.4	-0.8
CAVN				Lg		02 56 51.5	
	12nm,0.1s						
CLLI	Llivia	0.86	99	Pg	Pg	02 56 41.9	-1.9
CLLI				Lg		02 56 53.5	
	2.5nm,0.0s						
EMIR	Miracle	0.88	143	Pg	Pg	02 56 42.8	-1.2
EMIR				Lg		02 56 54.9	
EMIR	Miracle	0.88	143	Pg	Pg	02 56 42.8	-1.2
	5.8nm,0.6s,SNR=21						
EMIR				Lg		02 56 54.9	
	22nm,0.1s,SNR=8.9						
EMIR	Miracle	0.88	143	Pg	Pg	02 56 42.8	-1.2
	5.8nm,0.6s,SNR=21						
VALF	Valcebollere	0.91	103	Pg	Pg	02 56 42.8	-1.9
VALF				Sg	Sg	02 56 55.6	-1.3
VALF	Valcebollere	0.91	103	P	Pb	02 56 42.9	-1.1
VALF				S	Sb	02 56 54.3	-1.8
CARF	Carcanieres	0.95	84	Pg	Pg	02 56 44.3	-1.3
CARF				Sg	Sg	02 56 56.6	-1.7
CARF	Carcanieres	0.95	84	P	Pb	02 56 44.2	-0.6
CARF				S	Sb	02 56 56.4	-1.0
REYF	Montagne du Re	1.00	297	S	Sb	02 56 58.4	-0.3
ETSF	Etsaut	1.05	286	ePg	Pg	02 56 45.9	-1.6
ETSF				eSg	Sg	02 56 59.8	-1.8
ETSF				eSn	Sn	02 57 00.6	-1.7
	31nm,0.2s						
CBRU	Bruguera	1.06	108	Pg	Pg	02 56 45.5	-2.2
CBRU				Lg		02 56 59.8	
	8.2nm,0.1s						
ATE	Arette	1.21	293	S	Sb	02 57 05.0	+0.1
MTLF	Montolieu	1.26	54	ePn	Pn	02 56 48.8	-1.5
MTLF				ePg	Pg	02 56 49.9	-1.7
MTLF				eSn	Sn	02 57 05.0	-2.5
MTLF				eSg	Sg	02 57 06.1	-2.3
	14nm,0.3s						
EPOB	Poblet	1.28	171	Pg	Pg	02 56 50.0	-2.0
	5.4nm,0.8s,SNR=20						
EPOB				Lg		02 57 07.5	
	6.4nm,0.1s,SNR=11						
EPOB	Poblet	1.28	171	Pg	Pg	02 56 50.0	-2.0
	5.4nm,0.8s,SNR=20						
ESAC	San Caprasio	1.31	227	Pg	Pg	02 56 51.7	-0.9
	23nm,0.3s,SNR=13						
ESAC				Lg		02 57 08.9	
	106nm,0.2s,SNR=8.8						
ESAC	San Caprasio	1.31	227	Pg	Pg	02 56 51.7	-0.9
	23nm,0.3s,SNR=13						
LARF	Larrau	1.39	288	S	Sb	02 57 11.8	+1.6
CFON	Fontmartina	1.47	125	Pg	Pg	02 56 53.3	-2.6
CFON				Lg		02 57 12.9	
	56nm,0.2s						
EJON	La Jonquera	1.54	96	Pg	Pg	02 56 55.5	-1.8
	5.7nm,0.3s,SNR=31						
EJON				Lg		02 57 16.2	
	10nm,0.2s,SNR=7.2						
EJON	La Jonquera	1.54	96	Pg	Pg	02 56 55.5	-1.7
	5.7nm,0.3s,SNR=31						
SJPF	Ste Jean	1.58	289	ePg	Pg	02 56 55.2	-2.9
SJPF				eSn	Sn	02 57 12.7	-3.1
SJPF				eSg	Sg	02 57 16.3	-2.9
	31nm,0.4s						

ERTA	**Horta de San J**	**1.70**	**193**	Pg	Pg	02 56 58.0	-2.4
	21nm,1.1s,SNR=18						
ERTA				Lg		02 57 19.9	
	10nm,0.2s,SNR=14						
ERTA	**Horta de San J**	**1.70**	**193**	Pg	Pg	02 56 58.0	-2.4
	21nm,1.1s,SNR=18						
EALK	**Alkurruntz**	**1.81**	**290**	Pg	Pg	02 56 59.6	-3.0
	6.6nm,0.7s,SNR=12						
EALK				Lg		02 57 24.1	
	36nm,0.4s,SNR=4.6						
LFF	**La Frestale**	**2.32**	**359**	*e*Pn	Pn	02 57 03.7	-1.9
LFF				*e*Pg	Pg	02 57 09.0	-3.9
LFF				*e*Sn	Sn	02 57 30.6	-4.0
LFF				*e*Sg	Sg	02 57 39.9	-4.0
	13nm,0.5s						
EMOS	**Mosqueruela**	**2.45**	**204**	Pg	Pg	02 57 11.2	-4.2
	6.0nm,0.8s,SNR=7.3						
EMOS				Lg		02 57 44.5	
	3.4nm,0.3s,SNR=9.1						
EMOS	**Mosqueruela**	**2.45**	**204**	Pg	Pg	02 57 11.2	-4.2
	6.0nm,0.8s,SNR=7.3						
CAF	**Calviac**	**2.48**	**21**	*e*Pn	Pn	02 57 04.9	-2.9
CAF				*e*Pg	Pg	02 57 12.1	-3.9
CAF				*e*Sg	Sg	02 57 44.7	-4.4
	5.1nm,0.2s						
LASF	**Ste Croix**	**2.65**	**56**	*e*Pn	Pn	02 57 08.2	-2.1
LASF				*e*Pg	Pg	02 57 14.6	-4.9
LASF				*e*Sg	Sg	02 57 49.2	-5.7
	1.6nm,0.2s						
RJF	**Les Rejaudoux**	**2.73**	**10**	*e*Pn	Pn	02 57 08.7	-2.8
RJF				*e*Pg	Pg	02 57 16.2	-4.9
RJF				*e*Sn	Sn	02 57 40.7	-4.3
RJF				*e*Sg	Sg	02 57 53.2	-4.4
	3.2nm,0.2s						
ELAN	**Lanestosa**	**3.18**	**283**	Pg	Pg	02 57 24.4	-5.6
	0.4nm,0.5s,SNR=7.9						
ELAN				Sn	Sn	02 57 54.4	-1.9
	0.1nm,0.1s,SNR=7.9						
ELAN				Lg		02 58 05.4	
	0.5nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**3.18**	**283**	Pg	Pg	02 57 24.4	-5.6
	0.4nm,0.5s,SNR=7.9						
ELAN				Sn	Sn	02 57 54.4	-2.0
	0.1nm,0.1s,SNR=7.9						
VIVF	**Saint-Julien-l**	**3.58**	**50**	*e*Pg	Pg	02 57 31.9	-6.1
VIVF				*e*Sg	Sg	02 58 18.6	-7.1
	0.9nm,0.2s						
SMRF	**Simiane la Rot**	**3.73**	**67**	*e*Pn	Pn	02 57 22.3	-3.3
TCF	**Toulx Ste Croi**	**3.81**	**15**	*e*Sn	Sn	02 58 06.6	-5.5
TCF				*e*Sg	Sg	02 58 25.7	-7.5
	1.1nm,0.2s						
MFF	**Saint Martin d**	**4.04**	**351**	*e*Pn	Pn	02 57 27.5	-2.6
MFF				*e*Sn	Sn	02 58 12.2	-6.0
MFF				*e*Sg	Sg	02 58 33.2	-8.0
	1.3nm,0.3s						
BGF	**Bois d'Agland**	**4.20**	**19**	*e*Pg	Pg	02 57 43.8	-6.5
BGF				*e*Sg	Sg	02 58 38.1	-8.2
	6.3nm,0.4s						
EARI	**Arriondas**	**4.48**	**281**	Pn	Pn	02 57 34.8	-1.4
	0.1nm,0.8s,SNR=7.9						
EARI				Sn	Sn	02 58 24.1	-5.1
	0.4nm,0.7s,SNR=7.9						
EARI	**Arriondas**	**4.48**	**281**	Pn	Pn	02 57 34.8	-1.4
	0.1nm,0.8s,SNR=7.9						
EARI				Sn	Sn	02 58 24.1	-5.1
GRR	**Gorron**	**5.89**	**349**	*e*Pn	Pn	02 57 51.6	-4.6
LDF	**La Druitiere**	**6.01**	**354**	*e*Pn	Pn	02 57 53.2	-4.7

MAN 08 02:58:04.0, 12.88N×122.87E, h20^{km}, mb4.0, ML2.7, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.48**	**337**	*e*P	Pb	02 58 13.9	+0.3
AUQP				*e*S	Sb	02 58 23.1	+2.9
OTRP	**Odiongan**	**0.98**	**238**	*e*P	Pb	02 58 22.2	+0.1
OTRP				*e*S	Sb	02 58 35.9	+1.3
GQP	**Guinayangan**	**1.09**	**338**⇓	*e*P	Pb	02 58 23.7	-0.4
GQP				*e*S	Sb	02 58 38.9	+0.9
BOAC	**Boac**	**1.15**	**300**	*e*P	Pb	02 58 24.4	-0.7
BOAC				*e*S	Sb	02 58 41.0	+1.4

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*ATH **08** 03:08:04.8, 39.12N×25.01E, h10^{km}, MD3.1/5*
*NEIC **08** 03:08:04.8, 39.12N×25.01E, h10^{km}, MD3.1(ATH), After ATH.*
*SOF **08** 03:08:04.8, 39.34N×25.05E, h15^{km}, MD2.9*
*CSEM **08** 03:08:04.8±0.2, 39.20N×24.98E, h2^{km}, ML3.2, Error ellipse: s-maj=3.5km s-min=3.2km az=145.0*
*THE **08** 03:08:07.9, 39.27N×24.74E, h10^{km}, ML3.2*
ISC 08 03:08:03.8±0.7, **39.17N**±0.04×**24.94E**±0.05, **h7**^{km}±6^{km}, **n25**, σ1^{s}**28**/40, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	**Limnos**	**0.77**	**8**	*e*Pg	**Pg**	**03 08 20.4**	**+1.1**
LOS				*e*Sg	**Sg**	**03 08 31.0**	**+1.5**
AOS	**Alonnisos**	**0.82**	**270**	*e*Pg	**Pg**	**03 08 20.4**	**+0.2**
AOS				*e*Sg	**Sg**	**03 08 31.2**	**0.0**
PRK	**Paraskevi**	**1.04**	**85**	*e*PG	**Pg**	**03 08 23.2**	**-1.4**
XOR	**Xorichti**	**1.37**	**279**	*e*Pb	**Pb**	**03 08 30.7**	**+1.4**
XOR				*e*Sb	**Sb**	**03 08 48.0**	**+1.1**
OUR	**Ouranopolis**	**1.38**	**328**	*e*Pb	**Pb**	**03 08 30.5**	**+1.1**
OUR				*e*Sb	**Sb**	**03 08 47.2**	**+0.1**
MPAR	**Parnis Oros**	**1.38**	**223**	*e*PB	**Pb**	**03 08 31.0**	**+1.4**
PTL	**Penteli**	**1.40**	**217**	*e*PG	**Pg**	**03 08 31.4**	**-0.3**
PLG	**Polygyros**	**1.66**	**317**	*e*PG	**Pg**	**03 08 37.0**	**0.0**
MGER	**Gerania Oros**	**1.77**	**229**	*e*PB	**Pb**	**03 08 36.1**	**0.0**
ALN	**Alexandroupoli**	**1.93**	**26**	*e*Pb	**Pb**	**03 08 41.5**	**+2.7**
ALN				*e*Sb	**Sb**	**03 09 06.6**	**+3.6**
ALN	**Alexandroupoli**	**1.93**	**26**	*e*Pb	**Pb**	**03 08 41.5**	**+2.7**
ALN				*e*Sb	**Sb**	**03 09 06.6**	**+3.6**
AGG	**Agios Georgios**	**2.03**	**267**	*e*Pb	**Pb**	**03 08 40.7**	**+0.1**
AGG				*e*Sb	**Sb**	**03 09 04.7**	**-1.4**
SOH	**Sokhos**	**2.05**	**324**	*e*Pb	**Pb**	**03 08 39.7**	**-1.3**
SOH				*e*Sb	**Sb**	**03 09 07.6**	**+0.9**
LIT	**Litokhoron**	**2.11**	**297**	*e*Pb	**Pb**	**03 08 41.4**	**-0.5**
THE	**Thessaloniki**	**2.11**	**315**	*e*Pb	**Pb**	**03 08 42.0**	**+0.1**
THE				*e*Sb	**Sb**	**03 09 06.6**	**-1.7**
SRS	**Serrai**	**2.20**	**333**	*e*Pn	**Pn**	**03 08 44.3**	**+3.1**
SRS				*e*Sn	**Sn**	**03 09 11.1**	**+2.1**
KDZ	**Kurdzhali**	**2.50**	**8**	*e*P	**Pn**	**03 08 50.0**	**+4.4**
RZN	**Rozhen**	**2.52**	**356**	*e*P	**Pn**	**03 08 45.5**	**-0.3**
RZN				*e*Pg	**Pg**	**03 08 49.5**	**-4.6**
RZN	**Rozhen**	**2.52**	**356**	*e*Pg	**Pg**	**03 08 49.5**	**-4.6**
RZN				*e*Sg	**Sg**	**03 09 23.5**	**-4.2**
KNT	**Kendrikon**	**2.53**	**323**	*e*Pn	**Pn**	**03 08 46.5**	**+0.5**
MMB	**Musomiste**	**2.59**	**339**	*i* P	**Pn**	**03 08 45.0**	**-1.8**
MMB				*e*S	**Sn**	**03 09 15.0**	**-3.8**
KKB	**Krupnik**	**3.04**	**333**	*e*P	**Pn**	**03 08 52.0**	**-1.3**
KKB				*e*Pg	**Pg**	**03 09 03.0**	**-1.5**
FNA	**Florina**	**3.17**	**302**	*e*Pn	**Pn**	**03 08 56.0**	**+0.9**
PGB	**Panagyurishte**	**3.43**	**350**	*e*P	**Pn**	**03 08 57.0**	**-1.7**
VTS	**Vitosha**	**3.66**	**340**	*e*P	**Pn**	**03 09 02.0**	**-0.1**
VTS				*i* S	**Sn**	**03 09 44.0**	**-2.0**

MAN 08 03:12:31.0, 12.85N×122.81E, h15^{km}, mb4.3, ML3.1, MS2.9, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.49**	**344**	*e*P	Pb	03 12 40.5	-0.3
AUQP				*e*S	Sb	03 12 50.4	+2.9
OTRP	**Odiongan**	**0.91**	**238**	*e*P	Pb	03 12 48.4	+0.4
OTRP				*e*S	Sb	03 13 02.6	+3.0
GQP	**Guinayangan**	**1.11**	**341**⇓	*e*P	Pb	03 12 50.4	-1.0
GQP				*e*S	Sb	03 13 05.5	+0.1
BOAC	**Boac**	**1.12**	**303**	*e*P	Pb	03 12 50.8	-0.7
BOAC				*e*S	Sb	03 13 07.8	+2.1
RCP	**Roxas**	**1.28**	**183**⇓	*e*P	Pb	03 12 53.6	-0.7
RCP				*e*S	Sb	03 13 11.5	+1.1
PVCP	**Virac**	**1.50**	**60**	*e*P	Pn	03 12 56.7	-0.8
PVCP				*e*S	Sb	03 13 18.1	+1.3
POLP	**Polilio Island**	**2.05**	**336**	*e*P	Pn	03 13 05.6	+0.2
POLP				*e*S	Sn	03 13 34.1	+3.2
GUIM	**Jordan**	**2.22**	**186**	*e*P	Pn	03 13 07.2	-0.7

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*NEIC **08** 03:30:17.9, 16.26N×61.61W, h171^{km}, MD3.8(TRN), After TRN.*

TRN 08 03:30:17.3, 16.21N×61.68W, h176^{km}, MD3.8, M3.2(FDF)**, 1C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCG	**Bois Riant Cap**	**0.14**	**155**	*e*P	P	03 30 41.5	+0.6
SCG	**Saint Claude**	**0.18**	**180**⇓	*e*P	P	03 30 41.5	+0.5
DOG	**Dongo Capester**	**0.19**	**161**	*e*P	P	03 30 41.7	+0.6
SEG	**Port Louis**	**0.25**	**42**⇑	*e*P	P	03 30 41.9	+0.8
DEG	**La Desirade**	**0.60**	**81**⇓	*e*P	P	03 30 43.6	+1.2
DEG				*e*S	S	03 31 02.3	+0.5
BBL	**Barber's Block**	**0.71**	**163**	*e*P	P	03 30 44.2	+1.2
BBL				*e*S	S	03 31 03.3	+0.5
BBL	**Barber's Block**	**0.71**	**163**⇓	*e*P	P	03 30 43.5	+0.5
BBL	**Barber's Block**	**0.71**	**163**	*e*P	P	03 30 44.2	+1.2
BBL				*e*S	S	03 31 03.3	+0.5
BPA	**Boggy Peak**	**0.84**	**348**	*e*P	P	03 30 44.5	+0.8
BPA				*e*S	S	03 31 03.4	-0.8
NVBH	**Bath Hotel, Ne**	**1.27**	**315**	*e*P	P	03 30 47.4	+0.2
NVBH				*e*S	S	03 31 11.2	+1.1
CPB	**Codrington**	**1.43**	**354**	*e*P	P	03 30 49.8	+1.2
CPB				*e*S	S	03 31 12.4	-0.3
CBYP	**Canovanas**	**4.48**	**298**	*e*Pn	P	03 31 22.0	-3.3

DJA 08 03:32:29.2±0.9**, 8.34S×115.49E, h223**^{km}±7^{km}**, MD4.6**/4**, 3C-1D, Error ellipse: s-maj=59.5km s-min=12.8km az=6.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**0.38**	**174**⇑	*e*Pg	P	03 32 59.1	+0.2
	360nm,0.2s						
RATI				*e*Sg	S	03 33 20.0	-1.9
KEDI	**Kedomdong**	**0.63**	**103**⇑	*e*Pg	P	03 32 58.6	-1.1
	396nm,0.1s						
KEDI				*e*Sg	S	03 33 22.4	-1.0
KELI	**Kelakatan**	**1.00**	**277**⇓	*e*Pn	P	03 33 02.2	+0.7
KELI				*e*Sn	S	03 33 24.7	-1.9
SRDI	**Scrawed**	**1.34**	**264**⇑	*e*Pn	P	03 33 03.7	-0.4
SRDI				*e*Sn	S	03 33 28.9	-2.1

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*BJI **08** 03:35:03.7, 27.75N×86.16E, h15^{km}, mB4.7, mb4.6, Ms4.2, Msz4.1*
*DMN **08** 03:35:03.8±0.4, 27.78N×86.12E, h26^{km}±2^{km}, Ml5.6/3, Error ellipse: s-maj=10.4km s-min=6.3km az=24.0*
*NEIC **08** 03:35:04.8±0.2, 27.74N×86.09E, h10^{km}, mb4.9/63, Error ellipse: s-maj=6.3km s-min=3.8km az=189.0*
*LDG **08** 03:35:06.4±0.3, 28.35N×85.68E, h10^{km}, Mb4.9/29, Ms3.3/1, Error ellipse: s-maj=12.4km s-min=5.4km az=124.0*
*MOS **08** 03:35:06.8±0.8, 27.75N×86.03E, h33^{km}, mb4.9/17, Error ellipse: s-maj=18.4km s-min=8.1km az=116.8*
*NDI **08** 03:35:06.2±4.7, 27.69N×86.06E, h10^{km}, mb5.0, ML4.8, mb4.9(NEIC)*
ISC 08 03:35:05.1±0.4, **27.71N**±0.03×**86.05E**±0.02, **h26**^{km}±2^{km}, **n185**, σ1^{s}**06**/219, **mb4.8**/79, **MS4.1**/6, **7C-4D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRN	**Jiri**	**0.13**	**112**	*e*Sg	**Sb**	**03 35 13.1**	**-0.4**
	93µm,0.4s						
JIRN	**Jiri**	**0.13**	**112**	*e*Pg	**Pb**	**03 35 09.7**	**-0.4**
JIRN				*e*Sg	**Sb**	**03 35 13.1**	**-0.4**
GUN	**Gumba**	**0.25**	**323**	*e*Sg	**Sb**	**03 35 15.7**	**-0.1**
	68µm,0.5s						
GUN	**Gumba**	**0.25**	**323**	*e*Pg	**Pb**	**03 35 11.5**	**0.0**
GUN				*e*Sg	**Sb**	**03 35 15.7**	**-0.1**
PKI	**Pulchoki**	**0.59**	**256**	*e*Sg	**Sb**	**03 35 28.1**	**+3.4**
	32µm,0.5s						
PKI	**Pulchoki**	**0.59**	**256**	*e*Pg	**Pb**	**03 35 17.9**	**+1.2**
PKI				*e*Sg	**Sb**	**03 35 28.1**	**+3.4**
KKN	**Kakani**	**0.69**	**277**	*e*Sg	**Sb**	**03 35 29.7**	**+2.2**
	11µm,0.2s						
KKN	**Kakani**	**0.69**	**277**	*e*Pg	**Pb**	**03 35 18.9**	**+0.5**
KKN				*e*Sg	**Sb**	**03 35 29.7**	**+2.2**
DMN	**Daman**	**0.84**	**263**	*e*Sg	**Sb**	**03 35 36.1**	**+4.1**
	12µm,0.4s						
DMN	**Daman**	**0.84**	**263**	*e*Pg	**Pb**	**03 35 22.9**	**+1.9**
DMN				*e*Sg	**Sb**	**03 35 36.1**	**+4.1**
GKN	**Gorkha**	**1.28**	**283**	*e*Sn	**Sn**	**03 35 50.5**	**+6.3**
	28µm,0.3s						
GKN	**Gorkha**	**1.28**	**283**	*e*Pn	**Pn**	**03 35 30.6**	**+2.9**
GKN				*e*Sn	**Sn**	**03 35 50.5**	**+6.3**
KOLN	**Koldanda**	**2.17**	**272**	*e*Sn	**Sn**	**03 36 13.2**	**+6.4**
	18µm,0.6s						
KOLN	**Koldanda**	**2.17**	**272**	*e*Pn	**Pn**	**03 35 43.9**	**+3.5**
KOLN				*e*Sn	**Sn**	**03 36 13.2**	**+6.4**
GTK	**Gangtok**	**2.31**	**99**	*e*	**Pn**	**03 35 41.0**	**-1.3**
GTK				*e*S	**Sn**	**03 36 12.0**	**+1.8**
SLGI	**Shiliguri**	**2.33**	**115**	*e*P	**Pn**	**03 35 47.6**	**+4.9**
SLGI				*e*S	**Sn**	**03 36 15.0**	**+4.1**
BOK	**Bokaro**	**3.90**	**182**	*e*P	**Pn**	**03 36 08.0**	**+3.0**
LSA	**Lhasa**	**4.90**	**65**	*e*P	**Pn**	**03 36 21.1**	**+2.0**
LGTI	**Lohaghat**	**5.39**	**290**	*e*P	**Pn**	**03 36 29.7**	**+3.6**
LGTI				*e*S	**Sn**	**03 37 28.7**	**+0.6**
CAL	**Calcutta**	**5.55**	**158**	*e*	Px	03 36 59.7	
CAL				*e*	**Sn**	**03 37 49.2**	**+17**
CAL				*e*		03 38 01.0	
SHL	**Shillong**	**5.64**	**111**	*e*P	**Pn**	**03 36 29.0**	**-0.6**
SHL				*e*S	**Sn**	**03 37 31.0**	**-3.3**
AGT	**Agartala**	**6.04**	**128**	*e*	**Pn**	**03 36 38.0**	**+2.8**
AGT				*i*		03 38 31.0	
BLSP	**Bilaspur**	**6.60**	**213**	*e*P	**Pn**	**03 36 44.4**	**+1.3**
BLSP				*e*		03 37 57.6	
AGRA	**Agra**	**7.22**	**268**	*e*P	**Pn**	**03 36 51.9**	**+0.1**
AGRA				*e*S	**Sn**	**03 38 08.6**	**-5.1**
AGRA				*e*		03 39 05.7	
	comp=N,2µm,0.6s						
AGRA				*e*		03 39 05.8	
	comp=E,3µm,1.1s						
BWNR	**Bhubaneshwar**	**7.39**	**182**	*e*P	**Pn**	**03 36 50.0**	**-4.1**
BWNR				*e*S	**Sn**	**03 38 10.0**	**-8.0**
DDI	**Dehra Dun**	**7.47**	**292**	*e*P	**Pn**	**03 36 55.4**	**+0.1**
DDI				*e*		03 38 18.5	
IMP	**Imphal**	**7.65**	**111**	*e*P	**Pn**	**03 36 59.0**	**+1.1**
NDI	**New Delhi**	**7.86**	**279**	*e*P	**Pn**	**03 37 01.0**	**+0.3**
NDI				*e*SN	**Sn**	**03 38 22.0**	**-7.7**
NDI				*e*		03 39 06.0	
AYAN	**Aya Nagar**	**7.92**	**278**	*e*P	**Pn**	**03 36 58.7**	**-2.9**
SONA	**Sohna**	**7.95**	**276**	*e*P	**Pn**	**03 37 00.6**	**-1.4**
SONA				*e*S	**Sn**	**03 38 26.2**	**-5.8**
SONA				*e*		03 39 23.4	
	comp=N,318nm,0.8s						
SONA				*e*		03 39 23.6	
	comp=E,229nm,0.5s						
KKR	**Kurukshetra**	**8.40**	**288**	*e*P	**P**	**03 37 07.6**	**-0.7**
KKR				*e*S	**Sn**	**03 38 36.0**	**-7.3**
SMLA	**Simla**	**8.46**	**296**⇑	*i*	**P**	**03 37 22.6**	**+13**
SMLA				*i*		03 38 54.5	
	comp=E,3µm,0.3s						
KUDL	**Kundal**	**8.47**	**275**	*e*P	**P**	**03 37 08.2**	**-1.0**
KUDL				*e*S	**Sn**	**03 38 38.2**	**-6.8**
SDNR	**Sundarnagar**	**8.76**	**298**	*e*P	**P**	**03 37 14.2**	**+1.0**
SDNR				*e*		03 38 48.2	
BHPL	**Bhopal**	**8.97**	**242**⇓	*i*P	**P**	**03 37 13.6**	**-2.7**
BHPL				*e*P		03 37 13.8	
BHPL				*e*S	**Sn**	**03 38 49.6**	**-7.9**
KHET	**Khetri**	**9.07**	**275**	*e*P	**P**	**03 37 16.4**	**-1.1**
KHET				*e*S	**Sn**	**03 38 51.7**	**-8.3**
KHET				*e*		03 38 57.9	
	comp=N,224nm,0.3s						
KHET				*e*		03 38 57.9	
	comp=E,150nm,0.2s						
NGP	**Nagpur**	**9.13**	**226**	*e*P	**P**	**03 37 17.4**	**-1.0**
NGP				*e*S	**Sn**	**03 38 51.2**	**-10**
BHK	**Bhakra**	**9.16**	**296**	*e*S	**Sn**	**03 38 55.4**	**-6.8**
PONG	**Pong**	**9.74**	**298**	*e*P	**P**	**03 37 26.0**	**-0.8**
PONG				*e*		03 39 13.0	
THN	**Thein Dam**	**10.11**	**300**	*e*P	**P**	**03 37 28.1**	**-3.8**
THN				*e*		03 39 20.0	
AJM	**Ajmer**	**10.24**	**266**⇑	*i*	**P**	**03 37 29.0**	**-4.7**
AJM				*i* S	**S**	**03 39 20.0**	**-8.7**
VIS	**Vishakhapatnam**	**10.26**	**195**	*i* P	**P**	**03 37 34.2**	**+0.3**
VIS				*i*		03 39 22.9	
HYB	**Hyderabad**	**12.36**	**216**	*e*P	**P**	**03 37 59.5**	**-3.0**
HYB				*e*		03 38 04.0	
HYB	**Hyderabad**	**12.36**	**216**	*i* P	**P**	**03 37 59.5**	**-3.0**
HYB				*e*		03 38 04.0	
HYB				*e*		03 40 12.5	
HYB				*e*S	**S**	**03 40 21.0**	**+0.6**
LATR	**Latur**	**12.72**	**225**	*e*P	**P**	**03 38 06.8**	**-0.5**
LATR				*e*S	**S**	**03 40 19.8**	**-9.2**
BHV	**Bhavnagar**	**13.96**	**248**	*e*	**P**	**03 38 20.0**	**-3.7**
KSH	**Kashi**	**14.45**	**327**	*e*P	**P**	**03 38 28.0**	**-2.0**
KSH				*e*AP		03 38 33.5	
KSH				*e*XP		03 38 36.7	
KSH				*e*PP	PP	03 38 40.5	-0.8
KSH				*e*S	**S**	**03 41 07.0**	**-3.2**
KSH				AMB	AMB		
	comp=Z,30nm,1.0s						
KSH				LR	LR		
	comp=N,510nm,8.2s						
KSH				LR	LR		
	comp=E,530nm,7.6s						
POO	**Poona**	**14.46**	**233**⇓	*i*	**P**	**03 38 27.0**	**-3.3**
	comp=E,30nm,1.0s						
POO				*i*		03 40 58.0	
BOM	**Bombay**	**14.99**	**237**	*e*P	**P**	**03 38 24.6**	**-13**
BOM				*e*S	**S**	**03 41 12.7**	**-10**
KAD	**Karad**	**15.07**	**229**	*e*	**P**	**03 38 35.0**	**-3.3**
KAD				*e*		03 41 06.7	
KMI	**Kunming**	**15.17**	**96**	P	**P**	**03 38 38.5**	**-1.1**
KMI				AP		03 38 44.9	
KMI				XP		03 38 49.1	
KMI				AMB	AMB		
	comp=Z,5.0nm,0.9s						
KMI				AMB	AMB		
	comp=Z,46nm,6.0s						
KMI				LR	LR		
	comp=N,253nm,11.2s						
KMI				LR	LR		
	comp=E,181nm,16.9s						
KMI				LR	LR		
	comp=Z,240nm,14.1s						
KMI	**Kunming**	**15.17**	**96**	P	**P**	**03 38 38.5**	**-1.1**
	comp=Z,5.0nm,0.9s						
KMI				pP		03 38 44.9	
KMI				sP		03 38 49.1	
KMI				S	**S**	**03 41 34.6**	**+7.2**
KMI				sS		03 41 48.0	
CD2	**Chengdu**	**15.77**	**74**	*e*P	**P**	**03 38 45.2**	**-2.1**
WMQ	**Urumqi**	**16.13**	**4**	*e*P	**P**	**03 38 51.0**	**-0.8**
WMQ				XP		03 38 58.0	
WMQ				PP	PP	03 39 05.0	+0.2
WMQ				PCP	PcP	03 43 47.0	-0.5
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s						
WMQ				LR	LR		
	comp=N,178nm,7.0s						
WMQ				LR	LR		
	comp=E,121nm,9.0s						
WMQ				LR	LR		
	comp=Z,158nm,7.0s						
GTA	**Gaotai**	**16.34**	**41**	*e*P	**P**	**03 38 52.0**	**-2.5**
GTA				AP		03 38 55.7	
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s						
LZH	**Lanzhou**	**17.25**	**57**	*e*P	**P**	**03 39 06.5**	**+0.6**
LZH				AP		03 39 10.5	
LZH				XP		03 39 13.5	
LZH				PP	PP	03 39 21.0	+0.8
LZH				*e*S	**S**	**03 42 16.5**	**+1.3**
LZH				XS		03 42 23.5	
LZH				AMB	AMB		
	comp=Z,70nm,1.2s						
LZH				AMB	AMB		
	comp=Z,222nm,4.5s						
LZH				LR	LR		
	comp=E,1µm,11.2s						
LZH				LR	LR		
	comp=Z,1µm,12.5s						
LZH	**Lanzhou**	**17.25**	**57**	*e*P	**P**	**03 39 06.5**	**+0.6**
	comp=Z,70nm,1.2s						
LZH				pP		03 39 10.5	
LZH				sP		03 39 13.5	
LZH				PP	PP	03 39 21.0	+0.8
LZH				*e*S	**S**	**03 42 16.5**	**+1.3**
LZH				sS		03 42 23.5	
LZH				*e*SS	SS	03 42 39.5	+2.7
AAK	**Ala-Archa**	**17.61**	**331**	*i* P	**P**	**03 39 11.6**	**+1.3**
AAK				pmax	pmax		
	comp=Z,25nm,1.3s						
AAK	**Ala-Archa**	**17.61**	**331**	*e*P	**P**	**03 39 08.2**	**-2.1**
	comp=Z,18nm,1.0s						
GYA	**Guiyang**	**18.40**	**89**⇑	*i*P	**P**	**03 39 18.6**	**-1.7**
GYA				AP		03 39 22.8	
GYA				XP		03 39 25.6	
GYA				S	**S**	**03 42 46.7**	**+5.2**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s						
GYA				LR	LR		
	comp=N,330nm,9.7s						
GYA				LR	LR		
	comp=E,180nm,12.3s						
GYA				LR	LR		
	comp=Z,280nm,13.5s						
XAN	**Xi'an**	**20.60**	**67**	P	**P**	**03 39 43.7**	**-1.3**
XAN				AP		03 39 48.3	
XAN				AMB	AMB		
	comp=Z,9.0nm,0.9s						
ENH	**Enshi**	**20.65**	**77**	*e*P	**P**	**03 39 43.7**	**-1.8**
	comp=Z,14nm,0.6s						
QIZ	**Qiongzhong**	**23.46**	**107**	*e*P	**P**	**03 40 14.6**	**+1.0**
QIZ	**Qiongzhong**	**23.46**	**107**	*e*P	**P**	**03 40 14.8**	**+1.3**
BTO	**Baotou**	**23.55**	**51**	*e*P	**P**	**03 40 15.7**	**+1.4**
BTO				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	**23.66**	**348***d*	*i*P	**P**	**03 40 16.2**	**+1.0**
KURK	**Kurchatov**	**23.66**	**348**	*e*P	**P**	**03 40 16.1**	**+0.8**
	comp=Z,21nm,0.7s,mb4.7						
HHC	**Hu-ho-hao-te**	**24.72**	**51**	*e*P	**P**	**03 40 27.3**	**+1.7**
HHC				AP		03 40 31.3	
HHC				XP		03 40 34.2	
HHC				PP	PP	03 41 04.9	+2.5
HHC				AMB	AMB		
	comp=Z,15nm,1.3s,mb4.4						
HHC				AMB	AMB		
	comp=Z,140nm,7.8s						
HHC				LR	LR		
	comp=N,309nm,14.4s,MS4.1						
HHC				LR	LR		
	comp=E,326nm,15.6s,MS4.1						
HHC				LR	LR		
	comp=Z,407nm,13.2s,MS4.1						
ULN	**Ulaanbaatar**	**25.93**	**33**	*e*P	**P**	**03 40 36.6**	**-0.4**
	comp=Z,8.1nm,0.6s,mb4.4						
ZAK	**Zakamensk**	**26.17**	**25**⇑	*i*P	**P**	**03 40 40.2**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
MOY	**Mondy**	**26.44**	**21**	*e*P	**P**	**03 40 43.5**	**+1.9**
MOY				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.3						
NVS	**Novosibirsk**	**27.18**	**356**	*e*P	**P**	**03 40 47.5**	**-0.9**
NVS				*e*		03 41 49.4	
NVS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
NVS				pmax	pmax		
	comp=N,6.0nm,0.7s						
CHKZ	**Chkalovo**	**28.33**	**341**	*e*P	**P**	**03 40 59.2**	**+0.5**
	comp=N,6.2nm,0.6s,mb4.4						
NJ2	**Nanjing**	**28.71**	**73**	*e*P	**P**	**03 41 00.5**	**-1.9**
NJ2				AP	pP	03 41 09.9	0.0
NJ2				XP	sP	03 41 13.9	+0.6
NJ2				PP	PP	03 41 52.7	-2.6
NJ2				S	**S**	**03 45 44.0**	**-4.5**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				LR	LR		
	comp=N,580nm,16.5s						
NJ2				LR	LR		
	comp=E,630nm,11.3s						
SSE	**Sheshan**	**30.72**	**75**	*e*P	**P**	**03 41 18.9**	**-1.5**
SSE				AP	pP	03 41 21.9	-6.0
SSE				S	**S**	**03 46 22.9**	**+2.4**
SSE				XS		03 46 28.2	
SSE				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.4						
SSE				AMB	AMB		
	comp=Z,40nm,2.9s,mb4.7						
SSE				LR	LR		
	comp=N,89nm,13.2s,MS4.0						
SSE				LR	LR		
	comp=E,219nm,13.2s,MS4.0						

SSE				LR	LR		
	comp=Z,242nm,12.8s,MS4.0						
SSE	Sheshan	30.72	75	*e*P	P	03 41 18.9	-1.5
	comp=Z,8.0nm,1.2s,mb4.4						
SSE				pP	pP	03 41 21.9	-6.0
SSE				PP	PP	03 42 27.3	+5.8
SSE				S	S	03 46 22.9	+2.4
SSE				sS		03 46 28.2	
SSE				SS	SS	03 48 34.7	+32
HIA	Hailar	33.62	41	*e*P	P	03 41 44.9	-0.6
	comp=Z,6.2nm,0.8s,mb4.6						
SVE	Sverdlovsk	34.25	335	⇑*e*P	P	03 41 51.3	+0.4
ARU	Arti	34.76	333	P	P	03 41 56.2	+0.9
	comp=Z,158nm,0.6s,SNR=11						
ARU	Arti	34.76	333	⇑*i*P	P	03 41 47.0	-8.3
ARU				*e*		03 52 10.8	
ARU				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
CN2	Changchun	35.40	52	*e*P	P	03 42 01.0	+0.1
CN2				*e*XP	sP	03 42 10.0	-1.8
CN2				*e*S	S	03 47 34.0	+0.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				AMB	AMB		
	comp=Z,80nm,6.0s						
CN2				LR	LR		
	comp=Z,170nm,14.0s,MS4.0						
BOD	Bodaibo	35.92	25	*e*P	P	03 42 05.3	+0.2
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
SOKR	Solikamsk	37.64	336	⇑*i*P	P	03 42 20.5	+1.0
SOKR				*e*		03 42 31.7	
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
MDJ	Mudanjiang	38.49	52	P	P	03 42 26.5	-0.3
MDJ				XP	sP	03 42 39.7	+2.0
MDJ				PP	PP	03 43 53.8	-4.8
MDJ				S	S	03 48 20.8	+0.5
MDJ				SS	SS	03 50 59.4	-1.7
MDJ				SCS	ScS	03 52 31.4	-2.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,54nm,3.2s						
MDJ				LR	LR		
	comp=N,95nm,20.6s						
MDJ				LR	LR		
	comp=Z,70nm,18.2s,MS3.5						
SOC	Sochi	40.31	306	*e*P	P	03 42 40.0	-1.9
SOC				*i*		03 44 13.8	
SOC				*e*PPP	PPP	03 44 45.6	+0.3
SOC				*e*S	S	03 48 47.5	-0.2
SOC				*e*		03 52 46.8	
SOC				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.2						
SOC				pmax	pmax		
	comp=N,70nm,1.1s						
SOC				pmax	pmax		
	comp=E,41nm,1.1s						
OBN	Obninsk	44.80	322	*i* P	P	03 43 18.6	+0.1
OBN				*e*		03 44 55.0	
OBN				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.8						
JOF	Joensuu	49.80	331	*e*p	P	03 43 58.0	+0.6
	comp=Z,5.5nm,0.5s,mb4.8						
JOF	Joensuu	49.80	331	*e*P	P	03 43 58.0	+0.6
JOF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
FINES	FINESS Array B	51.77	328	*e*P	P	03 44 12.2	-0.2
KAF	Kangasniemi	51.81	329	*e*p	P	03 44 20.8	+8.1
KWP	Kalwaria	52.41	313	*e*P	P	03 44 18.1	+0.7
	comp=Z,23nm,0.8s,mb5.2						
KOLS	Kolonicke sedl	52.70	312	*i* P	P	03 44 20.4	+0.8
CRVS	Cervenica-Dubn	53.23	312	*e*P	P	03 44 24.7	+1.2
KEV	Kevo	53.67	338	*e*p	P	03 44 25.7	-0.8
KMBO	Kilima Mbogo	54.91	247	*i* P	P	03 44 38.2	+1.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VYHS	Vyhne	54.99	312	*i* P	P	03 44 36.3	-0.2
MORC	Moravsky Berou	55.75	313	*e*P	P	03 44 42.0	0.0
	comp=Z,3.4nm,0.7s,mb4.5						
PRU	Pruhonice	57.67	314	*e*P	P	03 44 56.0	+0.4
PERS	Pernice	57.67	310	*e*P	P	03 44 55.8	+0.1
BOJS	Bojanci	57.73	308	*e*P	P	03 44 56.6	+0.6
BRG	Berggiesshubel	57.97	315	*i* P	P	03 44 58.0	+0.4
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
BRG	Berggiesshubel	57.97	315	*i* P	P	03 44 58.0	+0.4
	comp=Z,7.6nm,0.8s,mb4.8						
LJU	Ljubljana	58.16	309	*e*P	P	03 44 59.6	+0.5
CEY	Cerknica	58.27	309	*i* P	P	03 45 00.1	+0.3
GEC2	GERESS Array S	58.34	312	*e*P	P	03 45 00.6	+0.3
GEC2				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
GEC2	GERESS Array S	58.34	312	*e*P	P	03 45 00.6	+0.3
	comp=Z,16nm,1.5s,mb4.8						
KHC	Kasperske Hory	58.39	313	*i* P	P	03 44 59.8	-0.8
KHC	Kasperske Hory	58.39	313	*e*P	P	03 45 00.0	-0.6
CLL	Collm	58.51	315	*e*P	P	03 45 01.0	-0.4
CLL	Collm	58.51	315	P	P	03 45 01.0	-0.4
WET	Wettzell	58.84	313	*e*P	P	03 45 03.4	-0.4
WET				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
WET	Wettzell	58.84	313	*e*P	P	03 45 03.4	-0.4
	comp=Z,11nm,1.2s,mb4.8						
NB2	NORSAR Subarra	58.87	327	P	P	03 45 02.8	-1.0
	comp=Z,2.6nm,0.5s,mb4.5,baz=88,slow=7.0						
MOX	Moxa	59.46	315	*e*P	P	03 45 08.0	-0.1
GRA1	Grafenberg Arr	59.84	314	*e*P	P	03 45 11.6	+0.9
	comp=Z,9.0nm,0.9s,mb4.8						
GRF	Grafenberg Arr	59.84	314	*e*P	P	03 45 11.6	+0.9
GRF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
GRF	Grafenberg Arr	59.84	314	*e*P	P	03 45 11.7	+1.0
	comp=Z,9.0nm,0.9s,mb4.8						
BSEG	Bad Segeberg	59.85	318	*e*P	P	03 45 11.2	+0.5
BSEG				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
FUR	Furstenfeldbru	60.03	312	*e*P	P	03 45 13.7	+1.7
FUR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
FUR	Furstenfeldbru	60.03	312	*e*P	P	03 45 13.7	+1.7
	comp=Z,9.0nm,0.6s,mb5.0						
CLZ	Clausthal	60.08	316	*e*P	P	03 45 12.9	+0.6
	comp=Z,13nm,0.9s,mb5.0						
BILL	Bilibino	60.97	25	*e*P	P	03 45 17.4	-0.7
BILL				*e*S	S	03 53 30.3	-2.8
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.0						
TNS	Taunus Mts	61.53	314	*e*P	P	03 45 22.5	+0.4
TNS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
TNS	Taunus Mts	61.53	314	*e*P	P	03 45 22.5	+0.4
	comp=Z,9.0nm,0.9s,mb4.9						
CDF	Champ du Feu	62.62	313	*e*P	P	03 45 28.8	-0.7
	comp=Z,7.6nm,0.8s,mb4.6						
HINF	Hinteralfeld	63.02	312	*e*P	P	03 45 31.4	-0.7
	comp=Z,17nm,1.0s,mb4.8						
HAU	Haudompre	63.31	312	*e*P	P	03 45 33.4	-0.6
	comp=Z,16nm,0.7s,mb5.0						
SBF	Sospel	63.51	308	*e*P	P	03 45 35.1	-0.3
LPG	La Plagne	63.60	310	*e*P	P	03 45 36.2	+0.2
	comp=Z,23nm,0.8s,mb5.0						
LPL	La Plagne	63.61	310	*e*P	P	03 45 36.1	+0.1
	comp=Z,26nm,0.7s,mb5.1						
MBDF	Montbardon	63.77	309	*e*P	P	03 45 37.7	+0.6
	comp=Z,17nm,0.8s,mb4.8						
CABF	La Chapelle	63.80	311	*e*P	P	03 45 36.8	-0.4
	comp=Z,12nm,0.8s,mb4.7						
MEZF	Maizieres J'vi	64.05	313	*e*P	P	03 45 38.5	-0.3
	comp=Z,22nm,0.7s,mb5.0						
FRF	La Foret Royal	64.14	307	*e*P	P	03 45 38.9	-0.7
	comp=Z,54nm,1.0s,mb5.2						
BAIF	Baives	64.23	315	*e*P	P	03 45 39.7	-0.3
	comp=Z,8.6nm,0.9s,mb4.5						
SMRF	Simiane la Rot	64.79	308	*e*P	P	03 45 43.8	0.0
	comp=Z,11nm,0.6s,mb4.8						
VIVF	Saint-Julien-l	65.19	309	*e*P	P	03 45 45.7	-0.6
SMF	Signal de Mont	65.29	311	*e*P	P	03 45 46.1	-0.8
	comp=Z,32nm,1.2s,mb4.9						
SSF	Saint Saulge	65.40	312	*e*P	P	03 45 46.9	-0.8
	comp=Z,22nm,0.8s,mb4.9						
AVF	Avril sur Loir	65.58	312	*e*P	P	03 45 47.9	-0.9
	comp=Z,9.6nm,0.6s,mb4.7						
HYF	Humbligny	65.92	312	*e*P	P	03 45 50.9	-0.1
LASF	Ste Croix	65.96	309	*e*P	P	03 45 51.1	-0.1
	comp=Z,10nm,0.7s,mb4.7						
BGF	Bois d'Agland	65.97	311	*e*P	P	03 45 50.6	-0.7
TCF	Toulx Ste Croi	66.47	311	*e*P	P	03 45 54.3	-0.2
	comp=Z,24nm,1.1s,mb4.8						
WRAB	Tennant Creek	66.54	130	*e*P	P	03 45 55.1	-0.3
	comp=Z,14nm,0.5s,mb5.2						
WB2	Warramunga Arr	66.55	130	⇓*i*P	P	03 45 55.4	0.0
CAF	Calviac	66.95	310	*e*P	P	03 45 57.4	-0.2
	comp=Z,12nm,0.7s,mb4.7						
EJON	La Jonquera	67.10	307	P	P	03 45 59.8	+1.2
	comp=Z,9.9nm,1.3s,mb4.7						
RJF	Les Rejaudoux	67.21	310	*e*P	P	03 45 59.3	+0.1
	comp=Z,11nm,0.7s,mb4.7						
MTLF	Montolieu	67.31	308	*e*P	P	03 45 59.7	-0.2
LDF	La Druitiere	67.34	314	*e*P	P	03 45 59.3	-0.7
	comp=Z,25nm,0.8s,mb5.0						
FLN	La Foliniere	67.52	314	*e*P	P	03 46 00.3	-0.8
LFF	La Frestale	67.85	310	*e*P	P	03 46 03.2	0.0
	comp=Z,16nm,0.7s,mb4.9						
GRR	Gorron	67.87	314	*e*P	P	03 46 02.6	-0.7
	comp=Z,14nm,0.6s,mb4.8						
MFF	Saint Martin d	67.94	312	*e*P	P	03 46 03.1	-0.7
	comp=Z,12nm,0.7s,mb4.8						
EMIR	Miracle	68.22	307	P	P	03 46 06.3	+0.7
	comp=Z,33nm,1.1s,mb5.3						
EPOB	Poblet	68.72	306	P	P	03 46 09.0	+0.3
	comp=Z,7.3nm,0.6s,mb4.8						
ASPA	Alice Springs	68.84	133	*e*P	P	03 46 09.9	+0.1
EBIE	Bielsa	68.95	308	P	P	03 46 09.0	-1.1
	comp=Z,2.6nm,0.5s,mb4.4						
SGMF	Saint Gilles	68.99	314	*e*P	P	03 46 10.0	-0.3
	comp=Z,21nm,0.7s,mb4.9						
EIBI	Ibiza	69.28	304	P	P	03 46 13.2	+1.0
	comp=Z,326nm,2.8s,mb5.8						
ETSF	Etsaut	69.38	308	*e*P	P	03 46 12.9	+0.2
	comp=Z,15nm,0.7s,mb4.7						
ERTA	Horta de San J	69.38	306	P	P	03 46 13.5	+0.7
	comp=Z,11nm,0.9s,mb4.8						
ROSF	Rostrenen	69.42	315	*e*P	P	03 46 12.5	-0.4
	comp=Z,18nm,0.7s,mb4.8						
QUIF	Quistinic	69.49	314	*e*P	P	03 46 12.6	-0.7
ESAC	San Caprasio	69.70	307	P	P	03 46 17.4	+2.7
	comp=Z,94nm,2.8s,mb5.2						
SJPF	Ste Jean	69.77	309	*e*P	P	03 46 14.3	-0.8
	comp=Z,7.9nm,0.6s,mb4.5						
LSZ	Lusaka	70.48	240	*e*P	P	03 46 19.8	-0.1
	comp=Z,6.5nm,0.4s,mb4.9						
EMUR	La Murta	71.59	304	P	P	03 46 27.6	+1.3
	comp=Z,14nm,3.7s						
EARI	Arriondas	72.43	310	P	P	03 46 30.4	-0.7
	comp=Z,8.9nm,0.8s,mb4.8						
ESDC	Sonseca Array	72.91	306	P	P	03 46 34.7	+0.7
	comp=Z,3.7nm,0.8s,mb4.4						
EQES	Quesada	72.96	304	P	P	03 46 35.0	+0.7
	comp=Z,7.0nm,0.6s,mb4.8						
EPON	Pontenova	73.73	311	P	P	03 46 39.5	+0.7
	comp=Z,3.8nm,0.5s,mb4.6						
EADA	Adamuz	73.92	305	P	P	03 46 39.5	-0.4
	comp=Z,8.1nm,1.0s,mb4.6						
ECAL	Calabor	73.99	309	P	P	03 46 40.4	+0.1
	comp=Z,62nm,2.3s,mb5.1						
PBRG	Braganca	74.05	309	*e*P	P	03 46 41.0	+0.4
	comp=Z,11nm,1.9s,mb4.5						
MTE	Manteigas	75.16	308	*e*P	P	03 46 48.4	+1.4
PCBR	Castelo Branco	75.34	307	*e*P	P	03 46 49.1	+1.0
	comp=Z,16nm,1.6s,mb4.7						
EBAD	Badajoz	75.44	306	P	P	03 46 49.5	+0.7
	comp=Z,6.4nm,0.6s,mb4.7						
EMIN	Mina Concepcio	75.60	305	P	P	03 46 50.5	+0.9
	comp=Z,2.7nm,0.4s,mb4.5						
PBEJ	Beja	76.35	306	*e*P	P	03 46 53.9	0.0
	comp=Z,23nm,1.9s,mb4.8						
STKA	Stephens Creek	79.42	134	*e*P	P	03 47 11.1	+0.2
	comp=Z,2.9nm,0.5s,mb4.5						
INK	Inuvik	79.90	14	*e*P	P	03 47 13.4	+0.7
	comp=Z,7.4nm,1.0s,mb4.6						
SAML	Samuel	145.50	297	*e*PKP	PKPdf	03 54 43.4	-3.0
OTAV	Otavalo	148.48	329	*e*PKPbc	PKPdf	03 54 53.4	+2.0

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*PRU **08** 03:39:11.3, 50.22N×19.21E*

WAR 08 03:39:12.0, 50.16N×19.32E, h0^{km}, ML2.5, 1C-2D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.31	79	⇓*i*PG	Pg	03 39 18.3	0.0
OJC				⇓*e*SG	Sg	03 39 23.3	+0.9
OJC	Ojcow	0.31	79	*i* Pg	Pg	03 39 18.3	0.0
OJC				*e*Sg	Sg	03 39 23.0	+0.6
OKC	Ostrava-Krasne	0.82	247	*e*PG	Pg	03 39 27.4	-1.0
OKC				*e*SG	Sg	03 39 38.7	-0.7
NIE	Niedzica	0.98	139	*e*(PG)	Pg	03 39 29.0	-2.6
NIE				*e*SG	Sg	03 39 45.0	+0.3
VYHS	Vyhne	1.70	191	*i* PG	Pg	03 39 41.9	-4.0
VYHS				*i* SG	Sg	03 40 05.7	-2.8
KECS	Kecovo	1.84	155	*e*SG	Sg	03 40 13.1	-0.3
CRVS	Cervenica-Dubn	1.88	131	*e*PG	Pg	03 39 47.5	-2.0
CRVS				*e*SG	Sg	03 40 14.5	-0.1
DPC	Dobruska-Polom	1.93	277	*e*PG	Pg	03 39 44.4	-6.2
DPC				*e*SG	Sg	03 40 10.3	-6.1
	19nm,0.4s						
KSP	Ksiaz	2.05	291	*e*PN	Pn	03 39 49.0	+0.9
KSP				*e*PG	Pg	03 39 52.0	-0.9
KSP				*e*SN	Sn	03 40 16.0	+1.3
UPC	Upice	2.15	281	*e*SG	Sg	03 40 17.8	-5.7
KOLS	Kolonicke sedl	2.28	121	*e*PG	Pg	03 39 56.6	-1.0
KOLS				*e*SN	Sn	03 40 23.4	+2.8
PRU	Pruhonice	3.08	269	*e*SG	Sg	03 40 45.8	-8.8
KHC	Kasperske Hory	3.87	257	*e*PN	Pn	03 40 12.0	-2.0
KHC				*e*PG	Pg	03 40 26.0	-3.3
KHC				*e*SN	Sn	03 40 55.5	-5.3
KHC				*e*SG	Sg	03 41 12.3	-8.6
MOA	Molln	4.05	237	⇑*i*PN	Pn	03 40 13.8	-2.8
MOA				*i* SG	Sg	03 41 19.4	-7.5
	3.2nm,0.5s						
CLL	Collm	4.17	288	*e*SG	Sg	03 41 25.0	-6.0

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*ATH **08** 03:56:26.8, 40.46N×19.52E, h5^{km}, MD3.4/3*
*THE **08** 03:56:31.6, 40.52N×19.43E, h22^{km}, ML3.5*
*PDG **08** 03:56:32.7±0.4, 40.28N×19.76E, h12^{km}±1^{km}*
*NEIC **08** 03:56:32.7, 40.28N×19.76E, h12^{km}, MD3.4(ATH), MD2.9(PDG), After PDG.*
*CSEM **08** 03:56:33.2±0.1, 40.20N×20.04E, h2^{km}, MD3.4, Error ellipse: s-maj=2.0km s-min=1.5km az=63.0*

TIR 08 03:56:31.5, 40.27N×19.96E, h12^{km}, Ml2.4, 9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	Tepelena	0.05	57	*i* Pg	Pg	03 56 33.1	-0.7
TPE				*i* Sg	Sg	03 56 37.2	+1.8
SRN	Sarande	0.39	175	*i* Pg	Pg	03 56 39.6	0.0
SRN				*i* Sg	Sg	03 56 47.0	+2.0
LSK	Leskovik	0.51	104	*i* Pg	Pg	03 56 42.1	+0.3
LSK				*i* Sg	Sg	03 56 53.8	+5.1
KEK	Kerkira	0.57	193	*e*PB	Pb	03 56 41.5	-1.4
KEK				*e*SB	Sb	03 56 52.0	+1.3
KBN	Korca	0.72	61	*e*Pg	Pg	03 56 46.5	+0.4
KBN				*i* Sg	Sg	03 57 03.5	+7.6
JAN	Janina	0.92	132	*e*PN	Pn	03 56 50.2	+0.1
JAN				*e*SB	Sb	03 57 08.8	+8.0
OHR	Ohrid	1.05	37	*i* Pn	Pn	03 56 52.0	0.0
OHR				*e*Sn	Sn	03 57 10.4	+3.7
TIR	Tirane	1.08	356	⇓*i*Pg	Pg	03 56 54.7	+1.6
TIR				*i* Sg	Sg	03 57 12.0	+4.4
FNA	Florina	1.20	64	*e*Pb	Pb	03 56 55.5	+1.8
FNA				*e*Sb	Sb	03 57 17.0	+8.2
QSH	Qafa e Shtames	1.25	358	*i* Pg	Pg	03 56 55.4	-1.2
QSH				*i* Sg	Sg	03 57 15.4	+2.1
KZN	Kozani	1.39	88	*e*PN	Pn	03 56 59.6	+2.8
PUK	Puka	1.77	358	*i* Pg	Pn	03 57 03.7	+1.4
PUK				*i* Sg	Sg	03 57 30.4	-0.2
ULC	Ulcinj	1.77	343	⇓*i*Pn	Pn	03 57 02.7	+0.4
ULC				*e*Sn	Sn	03 57 27.9	+2.9
LIT	Litokhoron	1.95	94	*e*Pn	Pn	03 57 08.3	+3.5
LIT				*e*Sn	Sn	03 57 39.1	+10
EVR	Evrytania	1.97	133	*e*PN	Pn	03 57 09.0	+3.9
PE1	Pezze di Greco	2.01	286	*e*Pn	Pn	03 57 08.4	+2.8
SKO	Skopje	2.04	33	*i* Pn	Pn	03 57 08.5	+2.4
SKO				*i* Sn	Sn	03 57 37.2	+5.6
BUM	Brajici-Budva	2.18	339	⇓*i*Pn	Pn	03 57 10.1	+1.9
BUM				*e*Sn	Sn	03 57 38.0	+2.7
AGG	Agios Georgios	2.21	123	*e*Pn	Pn	03 57 13.1	+4.4
AGG				*e*Sn	Sn	03 57 45.2	+9.1
TTG	Podgorica	2.22	347	*e*Pn	Pn	03 57 10.2	+1.4
TTG				*e*Sn	Sn	03 57 38.7	+2.4
THE	Thessaloniki	2.32	80	*e*Pn	Pn	03 57 13.1	+3.0
PVY	Plav	2.32	0	⇓*i*Pn	Pn	03 57 11.3	+1.2
PVY				*e*Sn	Sn	03 57 42.4	+3.5
KNT	Kendrikon	2.40	67	*e*Pn	Pn	03 57 14.3	+2.9
KNT				*e*Sn	Sn	03 57 45.3	+4.3
HCY	Herceg Novi	2.44	334	⇓*i*Pn	Pn	03 57 11.9	+0.1
HCY				*e*Sn	Sn	03 57 43.1	+1.3
SG1	Sgolgore (BA)	2.56	284	*e*Pn	Pn	03 57 15.4	+1.8
IVA	Berane	2.60	359	⇓*i*Pn	Pn	03 57 15.6	+1.5
IVA				*e*Sn	Sn	03 57 49.0	+3.0
NKY	Niksic	2.64	344	*e*Pn	Pn	03 57 15.0	+0.3
NKY				*e*Sn	Sn	03 57 48.5	+1.5
SOH	Sokhos	2.64	77	*e*Pn	Pn	03 57 18.6	+3.8
SOH				*e*Sn	Sn	03 57 54.0	+6.9
SOH	Sokhos	2.64	77	*e*Pn	Pn	03 57 18.5	+3.7
XOR	Xorichti	2.65	109	*e*Pn	Pn	03 57 19.3	+4.5
TIP	Timpagrande	2.70	247	*e*Pn	Pn	03 57 13.2	-2.3
TIP	Timpagrande	2.70	247	*e*Pn	Pn	03 57 13.2	-2.4
BRY	Bratogost	2.83	338	⇓*i*Pn	Pn	03 57 18.8	+1.3
BRY				*e*Sn	Sn	03 57 53.2	+1.3
KKB	Krupnik	2.85	55	*e*P	Pn	03 57 20.5	+2.8
SRS	Serrai	2.89	72	*e*Pn	Pn	03 57 21.1	+2.8
SRS				*e*Sn	Sn	03 57 57.6	+4.3
UPM	Unac-Piva	3.03	345	⇓*i*Pn	Pn	03 57 21.7	+1.4
UPM				*e*Sn	Sn	03 57 57.8	+0.9
OUR	Ouranopolis	3.08	88	*e*Pn	Pn	03 57 24.5	+3.6
PLE	Pljevlja	3.09	352	⇓*i*Pn	Pn	03 57 22.3	+1.3
PLE				*e*Sn	Sn	03 58 00.2	+1.9
STON	Ston	3.10	328	*i* Pn	Pn	03 57 18.3	-3.0
STON				*i* Sn	Sn	03 57 54.7	-4.0
STON	Ston	3.10	328	*i* Pn	Pn	03 57 18.3	-3.0
STON				*i* Sn	Sn	03 57 54.6	-4.1
MMB	Musomiste	3.14	64	*e*P	Pn	03 57 24.5	+2.6
MMB				*e*S	Sn	03 58 03.0	+3.3
VTS	Vitosha	3.37	45	*i* P	Pn	03 57 28.0	+2.9
RZN	Rozhen	3.87	67	*e*P	Pn	03 57 35.5	+3.3
RZN				*e*S	Sn	03 58 18.0	0.0

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*TAP **08** 03:59:30.8, 23.92N×122.45E, h18^{km}±1^{km}, ML2.9*

JMA 08 03:59:31.5±0.3**, 24.10N×122.48E, h33^{km}, M2.0, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.60	53	P	P	03 59 43.4	-0.1
YOJ				S	S	03 59 51.8	-0.4
IRIF	Iriomote-Funau	1.17	78	P	P	03 59 52.0	+0.5
IRIF				S	S	04 00 07.4	+0.9
HATJ	Hateruma jima	1.21	92	S	S	04 00 08.0	+0.3
JKRS	Kuro-shima	1.40	84	S	S	04 00 13.2	+0.7
JIJ	Ishigaki jima	1.54	80	P	P	03 59 57.1	+0.2
JIJ				S	S	04 00 16.1	+0.1

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*BJI **08** 04:13:48.5, 27.20N×85.61E, h15^{km}, mB4.7, mb4.4, ML3.6, Ms4.0, Msz3.5*
*DMN **08** 04:13:54.9±0.3, 27.75N×86.09E, h20^{km}±1^{km}, Ml5.1/3, Error ellipse: s-maj=8.5km s-min=5.0km az=16.0*
*NEIC **08** 04:13:56.4±0.7, 27.76N×86.07E, h15^{km}±6^{km}, mb4.1/6, Error ellipse: s-maj=12.9km s-min=7.2km az=191.0*
*NDI **08** 04:13:58.2±4.8, 27.74N×86.05E, h16^{km}±25^{km}, MD4.2, ML4.1, mb4.1(NEIC)*

ISC 08 04:13:55.7±0.3**, 27.72N**±0.03×**86.11E**±0.03**, h20^{km}, n54, σ1§48**/73**, mb4.2**/6**, 3C, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIRN	Jiri	0.09	130	*e*Sg	Sb	04 14 02.8	+0.5
	69µm,0.3s						
JIRN	Jiri	0.09	130	*e*Pg	Pb	04 14 00.1	+0.4
JIRN				*e*Sg	Sb	04 14 02.8	+0.5
GUN	Gumba	0.28	313	*e*Sg	Sb	04 14 05.7	-0.9
	8µm,0.2s						
GUN	Gumba	0.28	313	*e*Pg	Pb	04 14 01.8	-0.4
GUN				*e*Sg	Sb	04 14 05.7	-0.9
PKI	Pulchoki	0.64	257	*e*Sg	Sb	04 14 18.0	+1.4
	8µm,0.4s						
PKI	Pulchoki	0.64	257	*e*Pg	Pb	04 14 08.9	+0.8
PKI				*e*Sg	Sb	04 14 18.0	+1.4
KKN	Kakani	0.74	276	*e*Sg	Sb	04 14 21.3	+1.8
	3µm,0.2s						
KKN	Kakani	0.74	276	*e*Pg	Pb	04 14 10.3	+0.5
KKN				*e*Sg	Sb	04 14 21.3	+1.8
DMN	Daman	0.90	263	*e*Sg	Sb	04 14 26.1	+2.0
	7µm,0.6s						
DMN	Daman	0.90	263	*e*Pg	Pb	04 14 13.3	+0.8
DMN				*e*Sg	Sb	04 14 26.1	+2.0
GKN	Gorkha	1.34	283	*e*Sn	Sn	04 14 42.8	+6.0
	4µm,0.2s						
GKN	Gorkha	1.34	283	*e*Pg	Pn	04 14 20.9	+1.4
GKN				*e*Sn	Sn	04 14 42.8	+6.0
KOLN	Koldanda	2.23	272	*e*Sn	Sn	04 15 04.7	+5.3
	5µm,0.4s						
KOLN	Koldanda	2.23	272	*e*Pn	Pn	04 14 34.3	+2.0
KOLN				*e*Sn	Sn	04 15 04.7	+5.3
SLGI	Shiliguri	2.29	116	*e*	Px	04 14 53.4	
BOK	Bokaro	3.91	183	*e*P	Pn	04 14 58.8	+2.6
BOK				*e*S	Sn	04 15 43.9	+1.8
BOK				*e*		04 16 01.7	
	comp=E,3µm,0.2s						
BOK				*e*		04 16 01.7	
	comp=N,3µm,0.5s						
LSA	Lhasa	4.84	65	P	Pn	04 15 11.8	+2.3
LSA				S	Sn	04 16 05.4	-0.3
LSA				Smax			
	comp=N,50nm,0.7s						
LSA				Smax			
	comp=E,70nm,0.7s						
LSA	Lhasa	4.84	65	*e*Pn	Pn	04 15 11.5	+2.0
LSA				*e*Sn	Sn	04 16 07.4	+1.7
LGTI	Lohaghat	5.44	290	*e*P	Pn	04 15 20.0	+2.1
LGTI				*e*		04 16 23.0	
PTH	Pithoragarh	5.50	291	*e*P	Pn	04 15 19.4	+0.8
PTH				*e*S	Sn	04 16 18.2	-3.8
SHL	Shillong	5.59	111	*e*P	Pn	04 15 20.0	0.0
SHL				*e*S	Sn	04 16 21.0	-3.4
BLSP	Bilaspur	6.63	214	*e*P	Pn	04 15 34.1	-0.6
BLSP				*e*		04 17 17.5	
AGRA	Agra	7.27	268	*e*	Pb	04 16 02.5	+1.3
AGRA				*e*S	Sn	04 16 59.2	-7.3
DDI	Dehra Dun	7.52	292	*e*P	Pn	04 15 47.0	-0.1
DDI				*e*		04 17 08.0	
NDI	New Delhi	7.91	279	*e*S	Sn	04 17 13.0	-9.4
AYAN	Aya Nagar	7.97	278	*e*	Pn	04 15 56.6	+3.2
AYAN				*e*		04 18 29.3	
	comp=Z,51nm,0.4s						
SONA	Sohna	8.00	276	*e*P	Pn	04 15 51.5	-2.3
SONA				*e*S	Sn	04 17 15.7	-9.0
SONA				*e*		04 18 30.6	
	comp=E,66nm,0.6s						
SONA				*e*		04 18 30.8	
	comp=N,81nm,0.5s						
SMLA	Simla	8.51	296	⇑*i*	P	04 16 12.1	+11
KUDL	Kundal	8.52	275	*e*P	P	04 16 00.0	-1.1
KUDL				*e*S	Sn	04 17 29.2	-8.4
KUDL				*e*		04 18 51.6	
	comp=Z,44nm,0.6s						
SDNR	Sundarnagar	8.80	298	*e*P	P	04 16 04.2	-0.8
SDNR				*e*		04 17 38.2	
BHPL	Bhopal	9.03	242	*e*P	P	04 16 04.0	-4.1
BHPL				*e*S	Sn	04 17 39.5	-11
KHET	Khetri	9.13	275	*e*P	P	04 16 06.7	-2.8
KHET				*e*S	Sn	04 17 41.8	-11
KHET				*e*		04 17 47.9	
	comp=E,63nm,0.3s						
KHET				*e*		04 17 48.0	
	comp=N,60nm,0.3s						
NGP	Nagpur	9.17	226	*e*P	P	04 16 08.4	-1.6
THN	Thein Dam	10.16	300	*e*	S	04 18 09.4	-8.6
VIS	Vishakhapatnam	10.27	195	*e*P	P	04 16 24.3	-1.0
VIS				*e*		04 18 13.5	
VIS				*e*		04 19 23.2	

	comp=E,85nm,0.5s						
VIS				*e*		04 19 23.7	
	comp=N,34nm,0.6s						
VIS				*e*		04 21 32.3	
AJM	Ajmer	10.29	266	*e*	S	04 18 09.0	-12
HYB	Hyderabad	12.40	216	*e*P	P	04 16 57.0	+2.9
HYB				*e*S	S	04 18 53.0	-20
HYB	Hyderabad	12.40	216	*i* P	P	04 16 57.0	+2.9
HYB				*e*S	S	04 19 11.0	-1.7
LATR	Latur	12.76	226	*e*	S	04 19 10.5	-11
POO	Poona	14.51	234	*e*	P	04 17 17.0	-5.1
POO				*i*		04 19 52.0	
BOM	Bombay	15.04	237	*e*S	S	04 20 14.2	-1.4
WMQ	Urumqi	16.12	4	*e*P	P	04 17 43.5	+0.7
GTA	Gaotai	16.30	41	*e*P	P	04 17 47.7	+2.6
GTA				AP		04 17 51.8	
GTA				XP		04 17 54.1	
GTA				S	S	04 20 59.9	+15
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s						
GTA				LR	LR		
	comp=N,147nm,5.8s						
GTA				LR	LR		
	comp=E,116nm,7.3s						
GTA				LR	LR		
	comp=Z,141nm,12.2s						
AAK	Ala-Archa	17.63	331	P	P	04 17 58.4	-3.4
	comp=Z,5.0nm,0.8s						
GYA	Guiyang	18.34	89	⇑*i*P	P	04 18 11.4	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
ENH	Enshi	20.60	77	*e*P	P	04 18 34.8	-1.4
	comp=Z,4.9nm,0.7s						
KURK	Kurchatov	23.66	348	*e*P	P	04 19 07.0	+0.4
	comp=Z,8.4nm,1.1s,mb4.1						
ULN	Ulaanbaatar	25.90	33	*e*P	P	04 19 28.5	+0.6
	comp=Z,4.8nm,0.9s,mb4.0						
CHKZ	Chkalovo	28.34	340	*e*P	P	04 19 49.2	-1.0
	comp=Z,1.9nm,0.5s,mb4.0						
MDJ	Mudanjiang	38.44	52	P	P	04 21 16.3	-1.5
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,56nm,3.3s						
JOF	Joensuu	49.82	331	*e*p	P	04 22 48.4	-0.5
NB2	NORSAR Subarra	58.90	327	P	P	04 23 52.9	-2.5
	comp=Z,0.9nm,0.6s,mb4.0,baz=89,slow=7.0						
WRAB	Tennant Creek	66.50	130	*e*P	P	04 24 45.3	-1.2
	comp=Z,6.2nm,0.5s,mb4.9						
WB2	Warramunga Arr	66.51	130	⇑*i*P	P	04 24 45.5	-1.0

NIED ***08*** *04:31:00,34.40N×139.20E,h5^{km},Mw3.7 Best double couple: $M_0$3.98×10^{14} NP1:ϕ_s289°,δ86°,λ130°. NP2:ϕ_s24°, δ40°,λ6°.*

JMA ***08*** *04:31:51.8,34.40N×139.16E,M3.1*

JMA Felt II J1.

ISC 08 04:31:52.2±0.7,**34.39N**±0.04×**139.18E**±0.05,**h5^{km},n9, σ0^{s}78**/16,**1C-3D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NJJJ	Nii jima 2	0.09	83	⇑P	Pg	04 31 54.0	-0.2
NJJJ				S	Sg	04 31 56.1	+0.6
JKO	Kozu shima	0.21	190	⇓P	Pg	04 31 56.7	+0.2
JIM2	Oshima 3	0.39	32	P	Pg	04 31 59.9	-0.1
JIM2				S	Sg	04 32 05.9	+0.7
JIZS	Izushimoda	0.41	323	⇓P	Pg	04 32 00.1	-0.4
JIZS				S	Sg	04 32 06.5	+0.5
JMY	Miyakejima3	0.42	139	P	Pg	04 32 00.5	-0.2
KTJJ	Kamata 2	0.54	350	⇓P	Pg	04 32 02.3	-0.8
KTJJ				S	Sg	04 32 10.0	-0.3
JOD2	Odawara 2	0.87	355	P	Pb	04 32 08.2	-1.3
JOD2				S	Sb	04 32 20.3	-0.9
SHZ3	Shizuoka 3	1.04	310	P	Pb	04 32 12.0	-0.4
SHZ3				S	Sb	04 32 27.1	+0.9
MAT	Matsushiro	2.29	340	P	Pn	04 32 31.6	+0.4
MAT				S	Sn	04 33 03.2	+3.1

BJI ***08*** *04:39:29.1,4.44N×94.39E,h55^{km},mB4.7,mb4.8,Ms4.0, Msz4.0*

NEIC ***08*** *04:39:31.4±0.5,4.92N×94.34E,h30^{km},mb4.6/17,Error ellipse: s-maj=16.3km s-min=7.9km az=58.0*

ISC 08 04:39:29.7±0.6,**4.90N**±0.08×**94.4E**±0.1,**h30^{km},n35, σ1^{s}03**/35,**mb4.7**/24,**MS3.6**/2,**5C,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	14.19	18	*e*P	P	04 42 52.3	+1.2
	29nm,0.9s						
CHG	Chiang Mai	14.53	17	⇑P	P	04 43 01.5	+6.1
	27nm,0.8s						
NANT	Nan	15.13	24	P	P	04 43 06.0	+2.7
KMI	Kunming	21.65	21	P	P	04 44 20.6	+0.8
KMI				AP		04 44 32.7	
KMI				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.2						
KMI				AMB	AMB		
	comp=Z,124nm,6.8s						
KMI				LR	LR		
	comp=N,122nm,19.2s,MS3.4						
KMI				LR	LR		
	comp=E,107nm,19.2s,MS3.4						
KMI				LR	LR		
	comp=Z,128nm,22.0s,MS3.3						
KMI	Kunming	21.65	21	P	P	04 44 20.6	+0.8
	comp=Z,11nm,1.2s,mb4.2						
KMI				pP		04 44 32.7	
JIRN	Jiri	23.94	342	*e*P	P	04 44 43.3	+0.9
	comp=Z,59nm,1.0s,mb5.0						
PKI	Pulchoki	24.11	340	*e*P	P	04 44 46.2	+2.1
	comp=Z,12nm,0.6s,mb4.5						
GUN	Gumba	24.27	341	*e*P	P	04 44 46.4	+0.7
	comp=Z,23nm,0.7s,mb4.7						
KKN	Kakani	24.36	340	*e*P	P	04 44 47.0	+0.5
	comp=Z,20nm,0.8s,mb4.6						
GYA	Guiyang	24.44	27	⇑*i*P	P	04 44 47.4	+0.1
GYA				AP		04 44 57.8	
GYA				XP		04 45 03.2	
GYA				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,2.7s,mb4.7						
GYA				LR	LR		
	comp=N,200nm,15.3s,MS3.9						
GYA				LR	LR		
	comp=E,170nm,14.6s,MS3.9						
GYA				LR	LR		
	comp=Z,370nm,15.3s,MS4.0						
GKN	Gorkha	24.77	339	*e*P	P	04 44 49.0	-1.5
	comp=Z,45nm,1.0s,mb5.0						
LSA	Lhasa	24.85	353	*e*P	P	04 44 49.6	-1.6
	comp=Z,12nm,0.6s,mb4.6						
KOLN	Koldanda	24.95	337	*e*P	P	04 44 52.1	-0.1
	comp=Z,35nm,1.0s,mb4.8						
ENH	Enshi	28.98	28	*e*P	P	04 45 27.3	-1.8
	comp=Z,11nm,0.7s,mb4.7						
XAN	Xi'an	31.98	23	P	P	04 45 53.6	-2.0
XAN				AMB	AMB		
	comp=Z,23nm,0.9s,mb5.0						
GTA	Gaotai	34.70	7	*e*P	P	04 46 18.1	-1.0
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.8						
MBWA	Marble Bar	35.90	137	P	P	04 46 28.8	-0.7
	comp=Z,5.3nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	38.38	127	*e*P	P	04 46 50.3	-0.1
	comp=Z,15nm,0.6s,mb4.9						
WMQ	Urumqi	39.20	352	*e*P	P	04 46 57.7	+0.7
AAK	Ala-Archa	41.52	338	*e*P	P	04 47 16.3	+0.2
	comp=Z,2.3nm,0.6s,mb4.0						
ULN	Ulaanbaatar	44.16	12	*e*P	P	04 47 36.2	-1.4
	comp=Z,3.2nm,0.7s,mb4.2						
WRAB	Tennant Creek	46.40	123	⇑*e*P	P	04 47 56.4	+0.6
	comp=Z,42nm,0.8s,mb5.4						
WB2	Warramunga Arr	46.40	123	⇑*i*P	P	04 47 56.5	+0.7
KURK	Kurchatov	47.53	346	*e*P	P	04 48 03.7	-0.7
	comp=Z,5.0nm,0.7s,mb4.7						
ASPA	Alice Springs	47.87	128	⇑*i*P	P	04 48 07.7	+0.4
HIA	Hailar	49.16	22	*e*P	P	04 48 16.8	-0.2
	comp=Z,2.7nm,0.4s,mb4.6						
CHKZ	Chkalovo	52.36	342	*e*P	P	04 48 40.2	-0.9
	comp=Z,9.7nm,0.8s,mb4.8						
MA2	Magadan	69.28	27	P	P	04 50 31.6	-4.4
	comp=Z,5.6nm,0.8s,mb4.5						
OJC	Ojcow	76.40	320	*e*P	P	04 51 18.5	+0.4
BRG	Berggiesshubel	80.18	321	*e*P	P	04 51 39.7	+0.9
	comp=Z,22nm,1.9s,mb4.8						
KHC	Kasperske Hory	80.29	319	*e*P	P	04 51 39.0	-0.4
CLL	Collm	80.80	321	P	P	04 51 42.0	-0.1
GRA1	Grafenberg Arr	81.86	319	*e*P	P	04 51 48.4	+0.8
	comp=Z,6.0nm,1.1s,mb4.4						
GRF	Grafenberg Arr	81.86	319	*e*P	P	04 51 48.4	+0.8
	comp=Z,6.0nm,1.1s,mb4.4						
NB2	NORSAR Subarra	82.42	331	P	P	04 51 49.8	-0.5
	comp=Z,2.6nm,0.8s,mb4.2,baz=93,slow=5.8						

GUC ***08*** *04:47:50.5±0.9,33.44S×66.33W,h33^{km},ML5.0*

NEIC ***08*** *04:47:52.4,33.08S×66.60W,h38^{km},mb4.3/1, MD4.8(SJA),After SJA.*

NEIC Felt [IV] in the San Luis area and [III] at Villa Mercedes and La Paz.

ISC 08 04:47:50.9±1.1,**33.09S**±0.06×**66.39W**±0.09,**h33^{km},n18, σ0^{s}84**/23,**mb4.2**/1,**5C,San Luis Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDZ	Mendoza	2.08	275	⇑*i*P	P	04 48 23.5	-0.6
MDZ				*i*		04 48 47.3	
MDZ				*i* S	S	04 48 58.6	+9.5
ZON	Zonda	2.48	308	*e*P	P	04 48 29.0	-0.8
ZON				*e*S	S	04 48 59.0	-0.2
LMEL	Las Melosas	3.28	256	*e*P	P	04 48 41.6	+0.4
LMEL				*i* S	S	04 49 19.7	+0.2
LMEL				AMP		04 49 28.2	
	comp=N,2µm,0.6s						
FCH	Farellones	3.28	265	*e*P	P	04 48 41.6	+0.4
FCH				*i* S	S	04 49 21.1	+1.5
FCH				AMP		04 49 24.7	
	comp=N,3µm,0.3s						
CLCH	Cerro Calan	3.49	264	⇑*i*P	P	04 48 44.2	0.0
CLCH				AMP		04 49 46.6	
	comp=E,4µm,0.2s						
PCH	Pirque	3.50	260	*e*P	P	04 48 44.2	-0.1
JACH	Jahuel	3.56	275	⇑*i*P	P	04 48 46.0	+0.8
STL	Santa Lucia	3.58	263	*e*P	P	04 48 45.8	+0.2
CHCH	Chadas Angostu	3.66	256	*e*P	P	04 48 46.7	0.0
RCDM	Rinconada Maip	3.72	263	*e*P	P	04 48 47.4	-0.2
TACH	Talagante	3.85	260	⇑*i*P	P	04 48 48.8	-0.5
LNV	Longovilo	4.29	257	⇑*i*P	P	04 48 54.3	-1.2
TLL	Tololo Astrono	4.77	307	*e*P	P	04 49 02.4	+0.1
TLL				*i* S	S	04 50 02.4	+5.3
CCHI	Chillan	5.84	232	*e*P	P	04 49 15.8	-1.6
TRQA	Tornquist	6.12	145	*e*Pn	Pn	04 49 26.3	+4.8
PLCA	Paso Flores	8.32	202	*e*P	P	04 49 52.7	+0.6
LVC	Limon Verde	10.68	347	*e*P	P	04 50 23.8	-0.9
SAML	Samuel	24.21	8	*e*P	P	04 53 08.2	+2.5
	comp=E,5.6nm,0.6s,mb4.2						
SAML				*e*		04 53 16.6	

JSN 08 05:59:01.3±0.3,**18.09N**×**79.61W,h31^{km}**±10^{km},**MD4.2,5D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCJ	Malvern	1.83	95	⇓*e*P	Pn	05 59 30.1	-1.2
MCJ				*e*S	Sn	05 59 51.4	-2.2
CVJ	Coleyville	1.97	86	⇓*e*P	Pn	05 59 31.8	-1.5
BBJ	Bamboo Saint A	2.24	82	⇓*i*P	Pn	05 59 35.9	-1.3
STH	Stony Hill	2.66	90	⇓*i*P	Pn	05 59 41.6	-1.5
STH				*i* S	Sn	06 00 12.0	-2.7
HOJ	Hope	2.72	91	⇓*e*P	Pn	05 59 42.6	-1.4

MAN 08 06:04:56.1,9.68N×125.63E,h14^{km},mb4.5,ML3.4,MS3.3, 2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.17	306	*e*P	Pg	06 05 01.9	+1.5
SCPH				*e*S	Sg	06 05 06.5	+3.3
BUTP	Butuan	0.71	181	*e*P	Pb	06 05 08.7	-1.0
MSLP	Maasin	0.88	301	*e*P	Pb	06 05 13.6	+0.9
MSLP				*e*S	Sb	06 05 26.1	+2.0
CGP	Cagayan de Oro	1.53	217	*e*P	Pn	06 05 22.3	-0.9
CGP				*e*S	Sb	06 05 43.8	+1.0
PLP	Palo	1.61	337	*e*P	Pn	06 05 24.1	-0.3
PLP				*i* S	Sn	06 05 44.7	-0.3
BIPH	Bislig	1.65	154	⇑*e*P	Pn	06 05 23.2	-1.8
BIPH				*e*S	Sn	06 05 45.3	-0.8
OCLP	Ormoc	1.69	324	*e*P	Pn	06 05 27.1	+1.5
TBP	Tagbilaran	1.74	271	*e*P	Pn	06 05 25.4	-0.9
TBP				*e*S	Sn	06 05 49.2	+0.8
LLP	Lapu-Lapu	1.76	291	*e*P	Pn	06 05 26.2	-0.3
LLP				*e*S	Sn	06 05 45.9	-2.9
BUKP	Musuan	1.88	197	*e*P	Pn	06 05 27.4	-0.8
SNPH	Sibulan	2.38	262	*e*P	Pn	06 05 34.5	-1.0
DCPH	Dipolog City	2.50	244	⇑*e*P	Pn	06 05 35.9	-1.2
DCPH				*e*S	Sn	06 06 01.3	-6.3
MATI	Mati	2.79	167	*e*P	Pn	06 05 43.7	+2.5
PAGZ	Pagadian	2.87	231	*e*P	Pn	06 05 42.5	0.0
GUIM	Jordan	3.14	288	*e*P	Pn	06 05 44.5	-1.7
RCP	Roxas	3.40	304	⇓*e*P	Pn	06 05 38.9	-11

BJI ***08*** *06:40:47.5,4.70N×94.70E,h30^{km},mb4.7*

NEIC ***08*** *06:40:48.5±1.0,4.68N×94.74E,h30^{km},mb4.6/5,Error ellipse: s-maj=37.5km s-min=19.1km az=71.0*

ISC 08 06:40:46.9±1.0,**4.7N**±0.1×**94.8E**±0.2,**h30^{km},n10, σ1^{s}02**/10,**mb4.5**/8,**1C,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	14.25	16	P	P	06 44 16.7	+7.7
	6.1nm,0.5s						
GYA	Guiyang	24.42	26	⇑*i*P	P	06 46 05.9	+1.5
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
LSA	Lhasa	25.09	352	*e*P	P	06 46 11.3	+0.6
	comp=Z,5.7nm,0.5s,mb4.4						
ENH	Enshi	28.96	27	*e*P	P	06 46 44.8	-1.3
	comp=Z,6.3nm,0.6s,mb4.5						
XAN	Xi'an	32.00	22	P	P	06 47 11.6	-1.4
XAN				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.7						
GTA	Gaotai	34.84	7	*e*P	P	06 47 37.0	-0.5
GTA				AP	pP	06 47 43.2	-3.2
GTA				XP	sP	06 47 46.1	-4.2
GTA				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
AAK	Ala-Archa	41.85	337	*e*P	P	06 48 37.1	+1.1
	comp=Z,1.3nm,0.7s,mb3.7						
WRAB	Tennant Creek	45.94	124	*e*P	P	06 49 10.3	+1.0
	comp=Z,6.1nm,0.6s,mb4.7						
KURK	Kurchatov	47.82	346	*e*P	P	06 49 23.7	-0.1
	comp=Z,6.4nm,0.6s,mb4.8						
SNAA	Sanae	96.85	198	P	P	06 54 15.1	-0.9
	comp=Z,52nm,0.9s						

CSEM ***08*** *07:09:37.8±0.1,41.28N×32.15E,h2^{km},MD3.7,Error ellipse: s-maj=2.7km s-min=1.8km az=23.0*

NEIC ***08*** *07:09:39.0,41.18N×32.16E,h5^{km},mb3.7/1,ML3.9(ISK), After ISK.*

ISK ***08*** *07:09:39.1,41.19N×32.15E,h4^{km},MD3.7,ML3.9*

ISC 08 07:09:38.5±0.3,**41.28N**±0.03×**32.09E**±0.03,**h5^{km},n67, σ1^{s}09**/78,**mb3.7**/1,**11C-4D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAFT	Safranbolu	0.46	95	*i* PG	Pg	07 09 47.1	-0.5
SAFT	Safranbolu	0.46	95	Pg	Pg	07 09 47.1	-0.5
BALT	Daday	1.01	75	*i* P	Pb	07 09 57.5	-0.6
BALT				*i* S	Sb	07 10 11.3	-0.2
HENT	Hendek	1.01	243	*i* P	Pb	07 09 57.8	-0.3
HENT				*i* S	Sb	07 10 17.1	+5.6
MDU	Mudurnu	1.05	219	*i* PG	Pg	07 09 59.0	-0.5
ELDT	Eldivan	1.29	128	*i* P	Pb	07 10 02.1	-0.8
ELDT				*i* S	Sb	07 10 19.3	-0.3
CANT	Cankiri	1.34	120	*i* PN	Pn	07 10 03.7	-0.3
CANT				*i* SN	Sn	07 10 21.9	-0.5
TOS	Tosya	1.48	99	*i* PN	Pn	07 10 06.0	0.0
LOD	Lodumlu	1.48	159	*i* PN	Pn	07 10 05.3	-0.7
LOD	Lodumlu	1.48	159	Pn	Pn	07 10 05.4	-0.6
LOD	Lodumlu	1.48	159	Pn	Pn	07 10 05.4	-0.6
ANTO	Ankara	1.51	159	*i* PN	Pn	07 10 06.7	+0.3
ANTO				*i* SN	Sb	07 10 25.7	-0.4
ANTO	Ankara	1.51	159	Pn	Pn	07 10 06.8	+0.4
ANTO				Sg	Sg	07 10 25.8	-3.1
ANTO	Ankara	1.51	159	*i* P	Pn	07 10 05.5	-0.9
ANTO				*i* S	Sb	07 10 25.7	-0.4
BZK	Bozkurt	1.59	64	*i* PN	Pn	07 10 09.4	+1.9
BZK	Bozkurt	1.59	64	Pn	Pn	07 10 09.5	+2.0
GPA	Golpazari	1.68	234	PN	Pn	07 10 10.2	+1.5
GPA	Golpazari	1.68	234	Pn	Pn	07 10 10.7	+2.0
HRT	Hereke	1.89	257	PN	Pn	07 10 13.2	+1.5
HRT	Hereke	1.89	257	Pn	Pn	07 10 13.3	+1.5
ESKT	Eskisehir	2.00	209	PN	Pn	07 10 13.8	+0.5
ESKT	Eskisehir	2.00	209	Pn	Pn	07 10 13.8	+0.5
ESKT	Eskisehir	2.00	209	*i* P	Pn	07 10 13.6	+0.2
ESKT				*i* S	Sn	07 10 45.4	+6.4
BYBT	Boyabat	2.02	84	PN	Pn	07 10 14.8	+1.1
BYBT	Boyabat	2.02	84	Pn	Pn	07 10 14.9	+1.1
BOYT	Boyabat	2.12	85	*i* P	Pn	07 10 15.3	+0.2
BOYT				*i* S	Sn	07 10 44.5	+2.3
CTKT	Corum	2.15	107	*i* P	Pn	07 10 17.7	+2.2
CTKT				*i* S	Sn	07 10 46.5	+3.6
YLV	Yalova	2.18	252	*e*PN	Pn	07 10 17.4	+1.5
CORM	Corum	2.23	119	*e*PN	Pn	07 10 17.1	+0.5
KAMT	Kaman	2.28	146	*e*PN	Pn	07 10 17.3	-0.1
KAMT	Kaman	2.28	146	Pn	Pn	07 10 17.4	0.0
KAMT	Kaman	2.28	146	Pn	Pn	07 10 17.4	0.0
ISK	Istanbul-Kandi	2.30	266	*e*PN	Pn	07 10 18.7	+1.1
KIZT	Kizilcal	2.41	184	*e*PN	Pn	07 10 18.4	-0.8
KIZT	Kizilcal	2.41	184	Pn	Pn	07 10 18.5	-0.7
KIZT	Kizilcal	2.41	184	Pn	Pn	07 10 18.5	-0.7
ULDT	Uludag	2.52	244	*i* P	Pn	07 10 20.6	-0.1
ALT	Altintas	2.69	215	*e*PN	Pn	07 10 24.3	+1.0
ALT	Altintas	2.69	215	Pn	Pn	07 10 24.3	+1.0
AVNT	Avonos	3.28	139	*i* P	Pn	07 10 36.5	+4.8
AVNT				*i* S	Sn	07 11 19.5	+7.9
PSN	Preselentsi	3.75	311	P	Pn	07 10 38.0	-0.3
BNN	Bunyan	3.77	129	*e*PN	Pn	07 10 38.2	-0.4
BNN	Bunyan	3.77	129	Pn	Pn	07 10 38.2	-0.3
PRD	Provadia	3.97	300	P	Pn	07 10 41.0	-0.5
TIRR	Tirgusor	4.17	321	⇑*i*P	Pn	07 10 44.3	+0.1
TIRR	Tirgusor	4.17	321	⇑*i*P	Pn	07 10 44.3	+0.1
HARR	Harsova	4.57	320	⇓P	Pn	07 10 49.1	-0.8
HARR	Harsova	4.57	320	⇓P	Pn	07 10 49.1	-0.9
TLCR		4.58	330	⇑*i*P	Pn	07 10 48.7	-1.3
TLCR		4.58	330	⇑*i*P	Pn	07 10 48.7	-1.3
CFR	Carcaliu	4.85	325	⇑P	Pn	07 10 52.9	-1.0
SZH	Strazhica	4.98	296	P	Pn	07 10 53.5	-2.2
PVL	Pavlikeni	5.37	293	*e*P	Pn	07 11 01.0	-0.3
RZN	Rozhen	5.55	277	P	Pn	07 11 02.0	-1.8
ISR	Istrita	5.58	315	⇑P	Pn	07 11 04.2	0.0
ISR	Istrita	5.58	315	⇑P	Pn	07 11 04.2	0.0
MALT	Malatya	5.71	119	P	Pb	07 11 17.0	-1.5
VRI	Vrincioaia	6.01	321	⇓P	Pn	07 11 10.6	+0.3
VRI	Vrincioaia	6.01	321	⇓P	Pn	07 11 10.6	+0.3
MLR	Muntele Rosu	6.14	315	⇑P	Pn	07 11 12.3	+0.1
MLR	Muntele Rosu	6.14	315	⇑P	Pn	07 11 12.3	+0.2
MMB	Musomiste	6.29	276	*e*P	Pn	07 11 16.0	+1.7
KKB	Krupnik	6.78	278	*e*P	Pn	07 11 24.0	+2.9
BURAR	Bucovina Array	8.01	324	⇑*i*P	P	07 11 37.6	-0.8
BURAR	Bucovina Array	8.01	324	⇑*i*P	P	07 11 37.6	-0.8
KAF	Kangasniemi	21.15	352	*e*p	P	07 14 24.9	-1.6
	1.6nm,0.4s,mb3.7						
JOF	Joensuu	21.67	359	*e*p	P	07 14 32.4	+0.6

ATH ***08*** *07:16:42.2,40.90N×20.61E,h4^{km},MD3.4/5*

PDG ***08*** *07:16:44.6±0.1,40.44N×20.40E,h4^{km}±1^{km}*

NEIC ***08*** *07:16:44.6,40.44N×20.40E,h4^{km},MD3.4(ATH), MD2.9(PDG),After PDG.*

TIR ***08*** *07:16:44.6,40.65N×20.66E,h17^{km}*

THE ***08*** *07:16:46.6,40.65N×20.71E,h7^{km},ML3.2*

CSEM ***08*** *07:16:47.3±0.1,40.62N×20.79E,h5^{km},ML3.2,Error ellipse: s-maj=2.8km s-min=1.6km az=41.0*

ISC 08 07:16:46.6±0.3,**40.61N**±0.02×**20.76E**±0.03,**h10^{km},n35, σ1^{s}21**/58,**6C-4D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	Korca	0.03	53	*i* Pg	Pg	07 16 48.4	-0.1
KBN				*i* Sg	Sg	07 16 51.1	+1.4
LSK	Leskovik	0.47	195	*i* Pg	Pg	07 16 55.1	-1.1
LSK				*i* Sg	Sg	07 17 03.9	+1.2
LSK	Leskovik	0.47	195	*e*Pg	Pg	07 16 55.1	-1.1
LSK				*i* Sg	Sg	07 17 03.9	+1.2
FNA	Florina	0.50	69	*e*Pg	Pg	07 16 56.1	-0.6
FNA				*e*Sg	Sg	07 17 04.8	+1.3
OHR	Ohrid	0.50	3	*i* Pg	Pg	07 16 54.4	-2.4
OHR				*i* Sg	Sg	07 17 01.9	-1.7
KZN	Kozani	0.83	111	⇑*i*PG	Pg	07 17 02.5	-0.7
JAN	Janina	0.95	176	*e*PB	Pb	07 17 05.1	+0.3
TIR	Tirane	1.00	318	*e*Pg	Pg	07 17 03.3	-3.4
QSH	Qafa e Shtames	1.12	325	*i* pg?	Pg	07 17 07.0	-2.0
QSH				*i* Sg	Sg	07 17 24.0	0.0
KEK	Kerkira	1.16	220	*e*PN	Pn	07 17 08.0	-0.9
LIT	Litokhoron	1.42	110	*e*Pb	Pb	07 17 13.4	+0.7
LIT				*e*Sb	Sb	07 17 32.7	+2.1
SKO	Skopje	1.46	20	*i* Pn	Pn	07 17 12.5	-0.6
SKO				*i* Sn	Sn	07 17 32.0	-0.3
SKO				Lg		07 17 33.5	
	comp=Z,0.1nm,0.5s						
THE	Thessaloniki	1.68	88	*e*Pb	Pb	07 17 15.5	-1.7
THE				*e*Sb	Sb	07 17 39.1	+0.8
KNT	Kendrikon	1.71	70	*e*Pb	Pb	07 17 16.4	-1.4
KNT				*e*Sb	Sb	07 17 40.0	+0.7
ULC	Ulcinj	1.77	320	⇓*i*Pn	Pn	07 17 16.8	-0.8
ULC				*e*Sn	Sn	07 17 42.2	+1.9
EVR	Evrytania	1.87	154	*e*PG	Pg	07 17 22.4	-1.6
SOH	Sokhos	1.98	83	*e*Pn	Pn	07 17 18.7	-1.9
SOH				*e*Sn	Sn	07 17 47.5	+1.7
AGG	Agios Georgios	1.99	142	*e*Pn	Pn	07 17 21.6	+0.9
AGG				*e*Sn	Sn	07 17 47.1	+1.1
PVY	Plav	2.07	344	⇓*i*Pn	Pn	07 17 22.6	+0.7
PVY				*e*Sn	Sn	07 17 52.4	+4.4
TTG	Podgorica	2.14	329	⇑*i*Pn	Pn	07 17 22.3	-0.6
TTG				*e*Sn	Sn	07 17 52.4	+2.7
KKB	Krupnik	2.16	54	P	Pn	07 17 22.5	-0.6
BUM	Brajici-Budva	2.19	321	⇑*i*Pn	Pn	07 17 22.4	-1.3
BUM				*e*Sn	Sn	07 17 52.4	+1.2
SRS	Serrai	2.21	76	*e*Pn	Pn	07 17 23.9	+0.1
XOR	Xorichti	2.24	123	*e*Pn	Pn	07 17 24.0	-0.4
IVA	Berane	2.35	344	⇑*i*Pn	Pn	07 17 26.7	+0.8
IVA				*e*Sn	Sn	07 17 59.5	+4.4
VLS	Valsamata	2.43	183	*e*PN	Pn	07 17 27.9	+0.8
MMB	Musomiste	2.45	65	P	Pn	07 17 26.0	-1.3
OUR	Ouranopolis	2.47	95	*e*Pn	Pn	07 17 28.0	+0.3
OUR				*e*Sn	Sn	07 17 58.1	0.0
HCY	Herceg Novi	2.50	318	⇓*i*Pn	Pn	07 17 26.6	-1.5
HCY				*e*Sn	Sn	07 17 59.3	+0.3
NKY	Niksic	2.57	330	*e*Pn	Pn	07 17 28.1	-0.9
NKY				*e*Sn	Sn	07 18 02.6	+2.0
VTS	Vitosha	2.70	42	P	Pn	07 17 30.0	-0.9
BRY	Bratogost	2.83	325	⇑*i*Pn	Pn	07 17 31.9	-0.9
BRY				*e*Sn	Sn	07 18 08.3	+1.1
PLE	Pljevlja	2.90	340	⇓*i*Pn	Pn	07 17 33.8	0.0
PLE				*e*Sn	Sn	07 18 11.7	+2.6
UPM	Unac-Piva	2.94	333	⇑*i*Pn	Pn	07 17 34.1	-0.2
UPM				*e*Sn	Sn	07 18 11.6	+1.6
RZN	Rozhen	3.18	69	*e*P	Pn	07 17 38.0	+0.3

CRAAG ***08*** *07:20:56.9,19.99N×95.75E,Mb5.3*

BJI ***08*** *07:20:57.9,19.62N×95.67E,h29^{km},mB5.1,mb4.7,ML5.7, Ms4.8,Msz4.6*

NEIC ***08*** *07:20:58.9±1.4,19.82N×95.80E,h16^{km}±8^{km},mb5.2/102, Error ellipse: s-maj=4.9km s-min=3.3km az=209.0*

HRVD ***08*** *07:20:58.9±0.5,19.61N×96.05E,h16^{km}±1^{km},MW4.8/42, Centroid moment Tensor Solution. LP body waves: s14,c14;Mantle waves: s42,c59; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.40±.15; $M_{\theta\theta}$-0.30±.09; $M_{\phi\phi}$-1.10±.10; $M_{r\theta}$0.65±.34; $M_{\theta\phi}$0.64±.06; $M_{\phi r}$0.61±.28; Best double couple: $M_0$1.653×10^{16} NP1:ϕ_s129°,δ46°,λ53°. NP2:ϕ_s356°,δ55°,λ122°. Principal axes: T 1.833, Plg64°, Azm323°; N -.361, Plg25°, Azm156°; P -1.474, Plg5°,* *Azm64°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***08*** *07:20:59.1±1.1, 19.78N×95.80E, h33^{km}, mb5.3/29, MS4.0/7 Error ellipse: s-maj=13.1km s-min=6.2km az=118.0*

ISC 08 07:20:56.7±0.2**, 19.77N**±0.03×**95.73E**±0.02**, h11^{km}, h11^{km}**±2.0^{km}**:pP-P, n321,** σ**0**^{s}**95**/341**, mb5.1**/125**, MS4.2**/13**, 77C-9D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHG	**Chiang Mai**	**3.18**	**107**	PN	**Pn**	**07 21 46.5**	**-1.2**
CHG				PG	**Pg**	**07 21 55.0**	**-5.3**
CHG				SG	**Sg**	**07 22 34.3**	**-8.4**
CM31	**Chiang Mai Arr**	**3.31**	**113**	*e*Pn	**Pn**	**07 21 48.2**	**-1.3**
CHRT	**Chiangrai**	**3.82**	**88**	⇑PN	**Pn**	**07 21 55.0**	**-1.7**
CHRT				PG	**Pb**	**07 22 00.0**	**-3.7**
CHRT				SG	**Pg**	**07 22 09.5**	**-3.4**
IMP	**Imphal**	**5.26**	**342**	*e*	**Pn**	**07 22 21.0**	**+3.8**
AGT	**Agartala**	**5.84**	**315**	*i* P	**Pn**	**07 22 28.0**	**+2.7**
AGT				*i*		07 24 01.0	
NST	**Nakhon Sawan**	**5.85**	**133**	PN	**Pn**	**07 22 23.2**	**-2.3**
	642nm,0.5s						
NST				PG	**Pg**	**07 22 42.8**	**-11**
NST				SG	**Sb**	**07 23 50.6**	**+1.3**
SHL	**Shillong**	**6.77**	**329**	*e*P	**Pn**	**07 22 40.0**	**+1.5**
	197nm,0.8s						
SHL				*e*		07 23 56.0	
KKTK	**Khon Kaen**	**7.56**	**116**	P	**Pn**	**07 22 51.0**	**+1.4**
	679nm,0.9s						
NNT	**Nongplab**	**8.11**	**151**	P	**P**	**07 22 57.0**	**-0.3**
LSA	**Lhasa**	**10.72**	**338**	P	**P**	**07 23 33.2**	**-0.2**
LSA				LR	LR		
	comp=N,470nm,17.0s						
LSA				LR	LR		
	comp=E,1µm,11.3s						
LSA				LR	LR		
	comp=Z,770nm,14.2s						
LSA	**Lhasa**	**10.72**	**338**	*e*P	**P**	**07 23 33.5**	**+0.1**
JIRN	**Jiri**	**11.74**	**314**	*e*P	**P**	**07 23 46.0**	**-1.3**
	comp=Z,44nm,0.4s						
VIS	**Vishakhapatnam**	**11.92**	**262**	*e*P	**P**	**07 23 47.9**	**-1.9**
VIS				*e*S	**S**	**07 25 53.0**	**-11**
GYA	**Guiyang**	**12.06**	**54**	⇑*i*P	**P**	**07 23 51.9**	**+0.4**
GYA				AP		07 23 57.5	
GYA				XP		07 24 01.2	
GYA				PPP	PPP	07 24 08.8	+0.5
GYA				S	**S**	**07 26 08.0**	**+1.0**
GYA				AMB	AMB		
	comp=Z,20nm,1.1s						
GYA				AMB	AMB		
	comp=Z,200nm,4.8s						
GYA				LR	LR		
	comp=N,1µm,8.4s						
GYA				LR	LR		
	comp=E,2µm,7.2s						
GYA				LR	LR		
	comp=Z,2µm,7.5s						
GUN	**Gumba**	**12.11**	**314**	*e*P	**P**	**07 23 50.8**	**-1.5**
	comp=Z,112nm,0.5s						
PKI	**Pulchoki**	**12.23**	**311**	*e*P	**P**	**07 23 52.6**	**-1.2**
	comp=Z,175nm,0.6s						
KKN	**Kakani**	**12.45**	**312**	*e*P	**P**	**07 23 55.9**	**-0.9**
	comp=Z,45nm,0.4s						
DMN	**Daman**	**12.47**	**311**	*e*P	**P**	**07 23 55.8**	**-1.2**
	comp=Z,116nm,0.6s						
BLSP	**Bilaspur**	**12.92**	**283**	*e*P	**P**	**07 24 03.9**	**+0.8**
BLSP				*e*S	**S**	**07 26 19.1**	**-8.8**
GKN	**Gorkha**	**13.04**	**311**	*e*P	**P**	**07 24 03.2**	**-1.4**
	comp=Z,92nm,0.4s						
CD2	**Chengdu**	**13.25**	**32**	⇑*i*P	**P**	**07 24 08.0**	**+0.6**
CD2				S	**S**	**07 26 35.7**	**0.0**
CD2				AMB	AMB		
	comp=Z,30nm,1.0s						
CD2				LR	LR		
	comp=E,6µm,7.0s						
QIZ	**Qiongzhong**	**13.34**	**91**	P	**P**	**07 24 08.2**	**-0.4**
QIZ				S	**S**	**07 26 38.7**	**+0.8**
QIZ				LR	LR		
	comp=E,1µm,7.2s						
QIZ				LR	LR		
	comp=Z,1µm,8.0s						
KOLN	**Koldanda**	**13.66**	**308**	*e*P	**P**	**07 24 12.0**	**-0.9**
	comp=Z,76nm,0.3s						
ALBI	**Allahabad**	**13.99**	**296**	*e*P	**P**	**07 24 16.5**	**-0.8**
ENH	**Enshi**	**16.25**	**47**	*e*P	**P**	**07 24 45.0**	**-1.6**
	comp=Z,38nm,0.8s						
HYB	**Hyderabad**	**16.45**	**265**	*e*P	**P**	**07 24 53.0**	**+3.7**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**07 27 45.0**	**-6.4**
HYB	**Hyderabad**	**16.45**	**265**	*i* P	**P**	**07 24 53.0**	**+3.7**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**07 27 50.0**	**-1.4**
LGTI	**Lohaghat**	**17.04**	**307**	*e*P	**P**	**07 24 59.3**	**+2.6**
BHPL	**Bhopal**	**17.38**	**285**	*e*P	**P**	**07 25 02.3**	**+1.4**
BHPL				*e*		07 25 07.2	
	comp=Z,42nm,0.7s						
BHPL				*e*S	**S**	**07 28 18.4**	**+5.7**
LZH	**Lanzhou**	**17.75**	**22**	*e*P	**P**	**07 25 08.3**	**+2.8**
LZH				AP		07 25 15.9	
LZH				XP		07 25 20.3	
LZH				PP	PP	07 25 24.0	+3.8
LZH				AMB	AMB		
	comp=Z,50nm,1.1s						
LZH				AMB	AMB		
	comp=Z,250nm,4.2s						
LZH				LR	LR		
	comp=E,2µm,9.9s						
LZH				LR	LR		
	comp=Z,2µm,10.7s						
LZH	**Lanzhou**	**17.75**	**22**	*e*P	**P**	**07 25 08.3**	**+2.8**
	comp=Z,50nm,1.1s						
LZH				pP		07 25 15.9	
LZH				sP		07 25 20.3	
LZH				PP	PP	07 25 24.0	+3.8
LZH				S	**S**	**07 28 34.0**	**+13**
LZH				sS		07 28 47.0	
LZH				SS	SS	07 28 59.0	+15
XAN	**Xi’an**	**18.42**	**37**	P	**P**	**07 25 12.5**	**-1.3**
XAN				AP		07 25 23.7	
XAN				S	**S**	**07 28 41.0**	**+4.8**
XAN				AMB	AMB		
	comp=Z,52nm,1.0s						
XAN				LR	LR		
	comp=N,451nm,8.0s						
XAN				LR	LR		
	comp=E,670nm,9.3s						
XAN				LR	LR		
	comp=Z,1µm,7.4s						
NDI	**New Delhi**	**19.05**	**301**	*e*P	**P**	**07 25 21.0**	**-0.5**
NDI				*e*		07 28 47.0	
DDI	**Dehra Dun**	**19.13**	**307**	*e*P	**P**	**07 25 21.5**	**-0.9**
DDI				*e*		07 28 52.6	
PALK	**Pallekele**	**19.16**	**232**	*e*P	**P**	**07 25 21.5**	**-1.3**
	comp=Z,60nm,1.2s						
GTA	**Gaotai**	**19.89**	**9**	*e*P	**P**	**07 25 30.8**	**-0.2**
GTA				AP		07 25 40.1	
GTA				XP		07 25 43.0	
GTA				S	**S**	**07 29 13.2**	**+4.3**
GTA				XS		07 29 24.4	
GTA				PCP	PcP	07 29 42.7	-5.0
GTA				SCP		07 33 20.3	
GTA				PCS		07 33 24.1	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
GTA				AMB	AMB		
	comp=Z,209nm,4.6s						
GTA				LR	LR		
	comp=N,555nm,12.6s						
GTA				LR	LR		
	comp=E,688nm,17.5s						
GTA				LR	LR		
	comp=Z,778nm,17.9s						
WHN	**Wuhan**	**19.95**	**54**	*e*P	**P**	**07 25 32.6**	**+0.9**
WHN				S	**S**	**07 29 19.3**	**+9.0**
WHN				LR	LR		
	comp=N,1µm,10.5s						
WHN				LR	LR		
	comp=E,4µm,6.7s						
WHN				LR	LR		
	comp=Z,5µm,8.0s						
SMLA	**Simla**	**20.19**	**308**	⇓*i*	**P**	**07 25 48.8**	**+15**
	comp=Z,216nm,1.5s						
SMLA				*i* S	**S**	**07 29 21.8**	**+6.6**
AJM	**Ajmer**	**20.50**	**293**	⇑*i*P	**P**	**07 25 38.0**	**+0.5**
SDNR	**Sundarnagar**	**20.52**	**308**	*e*P	**P**	**07 25 39.2**	**+1.5**
SDNR				*e*		07 29 24.2	
POO	**Poona**	**20.71**	**270**	*e*P	**P**	**07 25 41.3**	**+1.6**
POO				*e*		07 25 43.3	
	comp=Z,82nm,0.9s						
POO				*e*		07 29 27.8	
BHK	**Bhakra**	**20.89**	**308**	*e*	**P**	**07 25 43.1**	**+1.6**
GOA	**Goa**	**21.30**	**262**	*e*	**P**	**07 25 54.2**	**+8.5**
PONG	**Pong**	**21.50**	**308**	*e*P	**P**	**07 25 48.0**	**+0.3**
PONG				*e*		07 29 52.0	
BOM	**Bombay**	**21.64**	**272**	*e*P	**P**	**07 25 52.2**	**+3.0**
BOM				*e*		07 29 40.8	
QZH	**Quanzhou**	**21.75**	**72**	*e*P	**P**	**07 25 51.8**	**+1.5**
QZH				S	**S**	**07 29 54.5**	**+8.8**
QZH				LR	LR		
	comp=N,840nm,3.5s						
QZH				LR	LR		
	comp=E,3µm,6.3s						
QZH				LR	LR		
	comp=Z,3µm,7.0s						
THN	**Thein Dam**	**21.91**	**309**	⇑*i*P	**P**	**07 25 50.2**	**-1.6**
THN				*e*S	**S**	**07 29 55.5**	**+7.0**
NJ2	**Nanjing**	**24.07**	**55**	*e*P	**P**	**07 26 15.1**	**+2.1**
NJ2				AP		07 26 24.4	
NJ2				XP		07 26 28.4	
NJ2				PP	PP	07 26 49.6	+2.2
NJ2				S	**S**	**07 30 27.0**	**-0.1**
NJ2				XS		07 30 42.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb4.9						
NJ2				LR	LR		
	comp=N,2µm,18.3s,MS4.7						
NJ2				LR	LR		
	comp=E,2µm,18.1s,MS4.7						
NJ2				LR	LR		
	comp=Z,2µm,14.7s,MS4.7						
BTO	**Baotou**	**24.10**	**27**	*e*P	**P**	**07 26 13.9**	**+0.7**
BTO				AMB	AMB		
	comp=Z,63nm,0.8s,mb5.1						
BTO				LR	LR		
	comp=N,658nm,8.2s						
BTO				LR	LR		
	comp=E,2µm,12.7s						
WMQ	**Urumqi**	**24.91**	**346**	⇑*i*P	**P**	**07 26 22.0**	**+1.0**
WMQ				AP		07 26 29.0	
WMQ				XP		07 26 32.0	
WMQ				PP	PP	07 27 00.0	+1.8
WMQ				S	**S**	**07 30 42.0**	**+0.8**
WMQ				SS	SS	07 31 41.0	+1.6
WMQ				AMB	AMB		
	comp=Z,25nm,0.6s,mb4.9						
WMQ				LR	LR		
	comp=N,156nm,15.0s,MS3.8						
WMQ				LR	LR		
	comp=E,230nm,18.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,169nm,16.0s,MS3.6						
TIA	**Tai’an**	**24.91**	**44**	*e*P	**P**	**07 26 22.5**	**+1.3**
HHC	**Hu-ho-hao-te**	**24.98**	**29**	*e*P	**P**	**07 26 23.3**	**+1.5**
HHC				AP		07 26 28.1	
HHC				XP		07 26 30.5	
HHC				PP	PP	07 27 00.5	+1.2
HHC				PCP	PcP	07 29 57.9	-0.1
HHC				S	**S**	**07 30 48.2**	**+5.6**
HHC				XS		07 30 55.5	
HHC				SS	SS	07 31 48.2	+6.8
HHC				SCP		07 33 32.5	
HHC				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.4						
HHC				AMB	AMB		
	comp=Z,233nm,4.2s						
HHC				LR	LR		
	comp=N,953nm,12.0s,MS4.7						
HHC				LR	LR		
	comp=E,1µm,15.6s,MS4.7						
HHC				LR	LR		
	comp=Z,565nm,10.4s						
SSE	**Sheshan**	**25.54**	**59**	*e*P	**P**	**07 26 26.7**	**-0.5**
SSE				AP	pP	07 26 35.5	+5.1
SSE				S	**S**	**07 30 53.6**	**+1.6**
SSE				XS		07 31 08.8	
SSE				SCS	ScS	07 37 23.9	-1.0
SSE				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.6						
SSE				AMB	AMB		
	comp=Z,72nm,5.6s						
SSE				LR	LR		
	comp=N,708nm,5.7s						
SSE				LR	LR		
	comp=E,136nm,5.7s						
SSE				LR	LR		
	comp=Z,782nm,9.4s						
SSE	**Sheshan**	**25.54**	**59**	*e*P	**P**	**07 26 26.7**	**-0.5**
	comp=Z,18nm,1.0s,mb4.6						
SSE				pP	pP	07 26 35.5	+5.1
SSE				S	**S**	**07 30 53.6**	**+1.6**
SSE				sS		07 31 08.8	
SSE				ScS	ScS	07 37 23.9	-1.0
KSH	**Kashi**	**26.01**	**323**	*e*P	**P**	**07 26 32.5**	**+1.1**
KSH				*e*AP	pP	07 26 40.4	+5.7
KSH				*e*XP	sP	07 26 44.0	+7.8
KSH				*e*PP	PP	07 27 13.3	+0.7
KSH				*e*S	**S**	**07 30 59.1**	**-0.6**
KSH				*e*PS		07 31 08.3	
KSH				*e*SS	SS	07 32 04.0	-2.0
KSH				*e*PCS		07 33 41.2	
KSH				*e*SCS	ScS	07 37 25.5	-1.3
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
KSH				LR	LR		
	comp=N,520nm,8.0s						
KSH				LR	LR		
	comp=E,500nm,6.7s						
BJT	**Baijiatuau**	**26.73**	**37**	*e*P	**P**	**07 26 38.1**	**0.0**
	comp=E,37nm,0.9s,mb4.9						
BJI	**Beijing**	**26.75**	**37**	*e*P	**P**	**07 26 38.7**	**+0.4**
BJI				AMB	AMB		
	comp=Z,27nm,1.1s,mb4.7						
BJI				LR	LR		
	comp=N,649nm,14.2s,MS4.5						
BJI				LR	LR		
	comp=E,676nm,13.8s,MS4.5						
BJI				LR	LR		
	comp=Z,217nm,20.5s						
BJI	**Beijing**	**26.75**	**37**	*e*P	**P**	**07 26 38.7**	**+0.4**
	comp=Z,27nm,1.1s,mb4.7						
BJI				S	S	07 31 35.0	+23
TKM2	**Tokmak 2**	**28.64**	**328**	P	**P**	**07 26 55.4**	**+0.1**
	SNR=12						
UCH	**Uchtor**	**28.69**	**326**	P	**P**	**07 26 56.4**	**+0.5**
	SNR=7.9						
AAK	**Ala-Archa**	**28.99**	**327**	P	**P**	**07 26 59.0**	**+0.6**
	SNR=11						
AAK	**Ala-Archa**	**28.99**	**327**	*c* *i*P	**P**	**07 26 58.1**	**-0.4**
AAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
AAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS3.8						
AAK	**Ala-Archa**	**28.99**	**327**	⇑*e*P	**P**	**07 26 57.9**	**-0.6**
	comp=Z,10nm,0.6s,mb4.7						
AML	**Almayashu**	**29.06**	**325**	P	**P**	**07 26 59.5**	**+0.4**
	SNR=26						
MKAR	**Makanchi Array**	**29.11**	**341**	*e*P	**P**	**07 26 58.9**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MKAR	**Makanchi Array**	**29.11**	**341**	*i* P	**P**	**07 26 58.0**	**-1.6**
EKS2	**Erkin-Say**	**29.38**	**326**	P	**P**	**07 27 02.3**	**+0.3**
	SNR=20						
USP	**Ospenovka**	**29.44**	**327**	P	**P**	**07 27 02.2**	**-0.3**
	SNR=11						
ULN	**Ulaanbaatar**	**29.49**	**16**	⇑*e*P	**P**	**07 27 02.8**	**-0.2**
	comp=Z,11nm,1.1s,mb4.5						
ZAK	**Zakamensk**	**31.13**	**9**	⇑*i*P	**P**	**07 27 17.8**	**+0.4**
ZAK				*e*		07 27 36.2	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
MOY	**Mondy**	**32.10**	**6**	*e*P	**P**	**07 27 26.5**	**+0.6**
MOY				pmax	pmax		
	comp=Z,15nm,1.8s,mb4.5						
TLY	**Talaya**	**32.45**	**9**	⇑*e*P	**P**	**07 27 29.8**	**+0.9**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
TLY				MLR	MLR		
	comp=Z,100nm,13.0s,MS3.7						
TLY	**Talaya**	**32.45**	**9**	*e*P	**P**	**07 27 29.7**	**+0.7**
	comp=Z,8.5nm,0.8s,mb4.6						
KURK	**Kurchatov**	**33.72**	**340**	P	**P**	**07 27 39.1**	**-0.9**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
KURK	**Kurchatov**	**33.72**	**340**	⇑*i*P	**P**	**07 27 39.1**	**-0.9**
	comp=Z,40nm,0.6s,mb5.5						
CN2	**Changchun**	**34.50**	**39**	*e*P	**P**	**07 27 48.2**	**+1.3**
CN2				*e*XP	sP	07 27 59.2	+7.6
CN2				*e*S	**S**	**07 33 14.4**	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,100nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,12.0s,MS4.6						
CN2				LR	LR		
	comp=E,400nm,12.0s,MS4.6						
CN2				LR	LR		
	comp=Z,450nm,13.0s,MS4.4						
HIA	**Hailar**	**35.15**	**28**	*e*P	**P**	**07 27 52.2**	**-0.2**
	comp=Z,4.9nm,0.8s,mb4.5						
HIA				*e*PcP	PcP	07 30 22.7	-1.3
SMDO	**Samad**	**35.17**	**282**	⇓P	**P**	**07 27 55.3**	**+2.5**
	SNR=7.7						
BSY	**Bisya**	**35.97**	**282**	⇑P	**P**	**07 28 02.3**	**+2.8**
	SNR=9.7						
NVS	**Novosibirsk**	**36.28**	**348**	⇑*i*P	**P**	**07 28 00.4**	**-1.5**
NVS				*e*S	**S**	**07 33 37.2**	**-4.4**
NVS				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
NVS				pmax	pmax		
	comp=N,14nm,0.8s						
NVS				pmax	pmax		
	comp=E,9.0nm,0.7s						
NVS				smax			
	comp=N,11nm,1.1s						
ASHO	**Ashiyiah**	**36.96**	**285**	⇓P	**P**	**07 28 11.7**	**+3.8**
MDJ	**Mudanjiang**	**37.45**	**41**	P	**P**	**07 28 13.4**	**+1.6**
MDJ				AP	pP	07 28 23.2	+8.1
MDJ				XP	sP	07 28 27.5	+11
MDJ				PP	PP	07 29 38.4	-1.4
MDJ				S	**S**	**07 33 59.4**	**-0.3**
MDJ				SS	SS	07 36 35.4	+3.3
MDJ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,57nm,3.4s						
MDJ				LR	LR		
	comp=N,270nm,19.2s,MS4.1						
MDJ				LR	LR		
	comp=E,92nm,19.2s,MS4.1						
MDJ				LR	LR		
	comp=Z,149nm,20.8s,MS3.8						
BVA0	**Borovoye Array**	**38.55**	**335**	P	**P**	**07 28 20.0**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CHKZ	**Chkalovo**	**38.96**	**336**	P	**P**	**07 28 23.9**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.1						
WHFO	**Wadi Hawf**	**39.68**	**274**	⇑P	**P**	**07 28 32.2**	**+1.5**
	SNR=8.2						
BOD	**Bodaibo**	**40.30**	**15**	*e*P	**P**	**07 28 35.5**	**0.0**
BOD				pmax	pmax		
	comp=Z,40nm,1.6s,mb4.9						
KLR	**Kul’dur**	**41.12**	**36**	*e*P	**P**	**07 28 38.8**	**-3.5**
CLNS	**Chul’man**	**42.87**	**23**	*e*P	**P**	**07 28 56.6**	**+0.1**
CLNS				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.8						
CLNS				pmax	pmax		
	comp=N,17nm,1.3s						
CLNS				pmax	pmax		
	comp=E,14nm,0.9s						
SVE	**Sverdlovsk**	**45.21**	**334**	*e*P	**P**	**07 29 15.0**	**-0.4**
ARU	**Arti**	**45.85**	**332**	P	**P**	**07 29 19.6**	**-0.9**
	comp=E,279nm,0.5s,SNR=12						
ARU	**Arti**	**45.85**	**332**	⇓*i*P	**P**	**07 29 10.8**	**-10**
ARU				*e*		07 30 57.1	
ARU				*e*SS	SS	07 39 08.0	-12
ARU				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
RAYN	**Ar Rayn**	**46.65**	**284**	P	**P**	**07 29 28.8**	**+1.6**
	comp=Z,40nm,0.7s,mb5.5,SNR=7.5						
FITZ	**Fitzroy Crossi**	**47.73**	**140**	*e*P	**P**	**07 29 35.3**	**-0.6**
	comp=Z,10.0nm,0.6s,mb5.0						
TI2	**Plekhanov**	**48.18**	**309**	*e*P	**P**	**07 29 40.2**	**+1.1**
YAK	**Yakutsk**	**48.33**	**21**	*e*P	**P**	**07 29 38.2**	**-1.7**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=E,4.0nm,1.8s						
YAK				pmax	pmax		
	comp=N,132nm,17.7s						
YAK				pmax	pmax		
	comp=E,199nm,17.2s						
YAK				MLR	MLR		
	comp=Z,52nm,14.0s,MS3.7						
YAK				MLR	MLR		
	comp=N,68nm,16.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,62nm,15.0s,MS3.9						
YAK	**Yakutsk**	**48.33**	**21**	*e*P	**P**	**07 29 39.0**	**-0.9**
	comp=E,43nm,0.6s,mb5.7						
KIV	**Kislovodsk**	**50.10**	**311**	*c* *i*P	**P**	**07 29 54.1**	**+0.3**
KIV				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.6						
KIV	**Kislovodsk**	**50.10**	**311**	⇑*e*P	**P**	**07 29 54.0**	**+0.3**
	comp=Z,54nm,0.8s,mb5.6						
SOC	**Sochi**	**52.15**	**310**	*e*P	**P**	**07 30 06.0**	**-3.4**
SOC				*e*		07 32 02.2	
SOC				*e*PPP	PPP	07 33 06.8	-5.5
SOC				*e*S	**S**	**07 37 31.9**	**-0.1**
SOC				*e*		07 39 56.4	
SOC				*e*SS	SS	07 41 07.9	+0.2
SOC				pmax	pmax		
	comp=Z,94nm,1.4s,mb5.5						
SOC				pmax	pmax		
	comp=N,57nm,0.8s						
SOC				pmax	pmax		
	comp=E,55nm,0.9s						
MALT	**Malatya**	**52.57**	**304**	*e*P	**P**	**07 30 12.9**	**+0.3**
	comp=E,8.1nm,0.7s,mb4.8						
WRAB	**Tennant Creek**	**54.67**	**134**	⇑*e*P	**P**	**07 30 25.8**	**-2.5**
WRAB	**Tennant Creek**	**54.67**	**134**	*e*P	**P**	**07 30 27.1**	**-1.2**
	comp=E,18nm,0.8s,mb5.2						
WB2	**Warramunga Arr**	**54.68**	**134**	⇑*i*P	**P**	**07 30 27.1**	**-1.2**
MUN	**Mundaring**	**55.07**	**159**	*e*P	**P**	**07 30 30.6**	**-0.5**
	comp=E,18nm,0.8s,mb5.2						
MA2	**Magadan**	**55.66**	**30**	*c* *i*P	**P**	**07 30 33.8**	**-1.2**
MA2				*e*S	**S**	**07 38 15.7**	**-3.4**
MA2				pmax	pmax		
	comp=E,9.0nm,1.3s						
MA2				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
MA2				MLR	MLR		
	comp=Z,400nm,24.0s,MS4.4						
MA2	**Magadan**	**55.66**	**30**	⇑*e*P	**P**	**07 30 33.9**	**-1.1**
	comp=Z,24nm,0.8s,mb5.3						
OBN	**Obninsk**	**56.45**	**324**	⇓*e*P	**P**	**07 30 39.1**	**-1.6**
OBN				*e*		07 31 36.2	
OBN				*e*S	**S**	**07 38 27.7**	**-2.1**
OBN				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
OBN	**Obninsk**	**56.45**	**324**	⇓*e*P	**P**	**07 30 39.2**	**-1.5**
ASPA	**Alice Springs**	**57.00**	**137**	⇑*i*P	**P**	**07 30 44.1**	**-1.0**
PET	**Petropavlovsk**	**58.20**	**39**	*e*P	**P**	**07 30 53.0**	**-0.1**
PET				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.5						
PET	**Petropavlovsk**	**58.20**	**39**	⇑*e*P	**P**	**07 30 52.8**	**-0.3**
FORT	**Forrest**	**59.09**	**148**	*e*P	**P**	**07 30 59.4**	**-0.2**
	comp=Z,37nm,0.5s,mb5.7						
AKASG	**Malin Array Be**	**60.12**	**318**	*i* P	**P**	**07 31 04.4**	**-2.0**
AKASG				pmax	pmax		
	comp=Z,11nm,0.6s						
CFR	**Carcaliu**	**60.55**	**311**	⇑*i*P	**P**	**07 30 59.8**	**-10**
CFR	**Carcaliu**	**60.55**	**311**	⇑*i*P	**P**	**07 30 59.8**	**-10**
HARR	**Harsova**	**60.69**	**311**	⇑*i*P	**P**	**07 31 00.2**	**-10**
HARR	**Harsova**	**60.69**	**311**	⇑*i*P	**P**	**07 31 00.2**	**-10**
KMBO	**Kilima Mbogo**	**60.94**	**257**	*i* P	**P**	**07 31 13.4**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,6.0nm,0.3s						
JOF	**Joensuu**	**60.98**	**332**	*e*p	**P**	**07 31 09.8**	**-2.3**

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       comp=Z,12nm,0.5s,mb5.3
JOF    Joensuu         60.98 332 eP      P      07 31 09.8 -2.3
JOF                               pmax   pmax
       comp=Z,12nm,0.5s,mb5.3
VRI    Vrincioaia      61.55 312⇑iP      P      07 31 16.3 +0.1
VRI    Vrincioaia      61.55 312⇑iP      P      07 31 16.3 +0.1
MLR    Muntele Rosu    62.10 312⇑iP      P      07 31 19.6 -0.3
MLR    Muntele Rosu    62.10 312⇑iP      P      07 31 19.6 -0.3
BURAR  Bucovina Array  62.60 314⇑iP      P      07 31 22.4 -0.9
BURAR  Bucovina Array  62.60 314⇑iP      P      07 31 22.4 -0.8
KAF    Kangasniemi     63.10 330 ep      P      07 31 24.5 -1.8
       comp=Z,7.1nm,0.6s,mb5.0,baz=98,slow=6.6
KAF    Kangasniemi     63.10 330 eP      P      07 31 24.5 -1.8
KAF                               pmax   pmax
       comp=Z,7.0nm,0.6s,mb5.0
RZN    Rozhen          63.11 307 eP      P      07 31 26.0 -0.6
CTA    Charters Tower  63.39 126 eP      P      07 31 28.2 -0.6
       comp=Z,4.4nm,0.8s,mb4.6
SUW    Suwalki         64.02 321 eP      P      07 31 31.0 -1.4
SUW    Suwalki         64.02 321 eP      P      07 31 31.0 -1.5
VTS    Vitosha         64.18 309 eP      P      07 31 33.0 -0.7
KWP    Kalwaria        64.26 316 eP      P      07 31 33.5 -0.6
KEV    Kevo            64.27 339 ep      P      07 31 30.4 -3.4
KKB    Krupnik         64.32 308 eP      P      07 31 34.0 -0.6
KOLS   Kolonicke sedl  64.56 316 i P     P      07 31 35.3 -0.7
BILL   Bilibino        64.56  23⇑eP      P      07 31 34.3 -1.4
BILL                             e              07 31 43.2
BILL                             e              07 33 53.9
BILL                             eS      S      07 40 13.1 -0.3
BILL                              pmax   pmax
       comp=Z,17nm,1.0s,mb5.0
BILL                              MLR    MLR
       comp=Z,100nm,13.0s,MS4.2
BILL   Bilibino        64.56  23⇑eP      P      07 31 34.4 -1.3
CRVS   Cervenica-Dubn  65.09 316 i P     P      07 31 39.4 -0.1
CRVS                             i pP    pP     07 31 42.4 -0.6
SKO    Skopje          65.53 308 i P     P      07 31 39.0 -3.4
NIE    Niedzica        65.83 316⇑eP      P      07 31 42.9 -1.3
OJC    Ojcow           66.12 317 eP      P      07 31 45.3 -0.8
PSZ    Piszkesteto     66.18 315 eP      P      07 31 45.6 -0.9
       comp=Z,15nm,0.8s,mb5.1
PSZ    Piszkesteto     66.18 315 eP      P      07 31 46.1 -0.4
MBAR   Mbarara         66.76 260c iP     P      07 31 50.6 -0.2
MBAR   Mbarara         66.76 260⇑eP      P      07 31 50.3 -0.5
       comp=Z,18nm,0.7s,mb5.2
VYHS   Vyhne           66.85 315 i P     P      07 31 50.0 -0.8
VYHS                             i pP    pP     07 31 53.1 -1.1
OKC    Ostrava-Krasne  67.21 317 eP      P      07 31 52.7 -0.3
STKA   Stephens Creek  67.59 139 eP      P      07 31 55.2 -0.5
       comp=Z,8.0nm,0.8s,mb4.8
MORC   Moravsky Berou  67.60 317 eP      P      07 31 54.8 -0.7
       comp=Z,27nm,1.2s,mb5.2
ZST    Bratislava      68.03 315 eP      P      07 31 57.8 -0.4
KSP    Ksiaz           68.31 318⇑eP      P      07 31 59.7 -0.2
KSP    Ksiaz           68.31 318 eP      P      07 31 59.7 -0.2
DPC    Dobruska-Polom  68.34 317 eP      P      07 32 00.0 -0.1
DPC                              epP     pP     07 32 03.2 -0.4
UPC    Upice           68.52 318 eP      P      07 32 01.0 -0.2
BSD    Bornholm Skovb  68.80 323 i P     P      07 32 01.1 -1.8
BSD                               pmax   pmax
       comp=Z,40nm,1.0s,mb5.3
BSD    Bornholm Skovb  68.80 323 i P     P      07 32 01.1 -1.8
       comp=Z,40nm,1.0s,mb5.3
ARSA   Arzberg         69.19 314⇑iP      P      07 32 04.9 -0.5
       comp=Z,12nm,0.8s,mb4.9
PVCC   Panska Ves      69.44 318 eP      P      07 32 06.8  0.0
PVCC                             epP     pP     07 32 09.2 -1.1
PRU    Pruhonice       69.52 317 eP      P      07 32 07.2 -0.1
PRU                              epP     pP     07 32 10.2 -0.6
PERS   Pernice         69.54 313⇑iP      P      07 32 07.2 -0.4
PDKS   Podkum          69.70 313 i P     P      07 32 08.6 +0.1
RUE    Ruedersdorf     69.72 320 eP      P      07 32 08.0 -0.5
       comp=Z,40nm,0.8s,mb5.4
BRG    Berggiesshubel  69.79 318 i P     P      07 32 08.9 -0.1
BRG                               pmax   pmax
       comp=Z,34nm,0.7s,mb5.4
BRG    Berggiesshubel  69.79 318 i P     P      07 32 08.9 -0.1
       comp=Z,34nm,0.7s,mb5.4
BRG                              i       pP     07 32 12.0 -0.5
OBKA   Obir            69.95 313⇑iP      P      07 32 09.9 -0.1
       comp=Z,19nm,1.0s,mb5.0
MOA    Molln           69.96 315⇑iP      P      07 32 09.5 -0.6
       comp=Z,30nm,1.0s,mb5.2
LJU    Ljubljana       70.03 313⇑eP      P      07 32 10.4 -0.1
CEY    Cerknica        70.14 313⇑eP      P      07 32 11.0 -0.2
GEC2   GERESS Array S  70.20 316 eP      P      07 32 11.6 +0.1
GEC2                              pmax   pmax
       comp=Z,37nm,0.8s,mb5.4
GEC2   GERESS Array S  70.20 316 eP      P      07 32 11.6 +0.1
       comp=Z,37nm,0.8s,mb5.4
KHC    Kasperske Hory  70.24 316 eP      P      07 32 11.3 -0.5
KHC                              epP     pP     07 32 14.1 -1.2
NB2    NORSAR Subarra  70.27 329  P      P      07 32 10.1 -1.6
       comp=Z,13nm,0.6s,mb5.0,baz=84,slow=6.2
NB2    NORSAR Subarra  70.27 329  P      P      07 32 10.1 -1.6
       baz=84,slow=6.5
CLL    Collm           70.33 319⇑iP      P      07 32 11.7 -0.6
CLL                               pmax   pmax
       comp=Z,25nm,1.2s,mb5.0
CLL    Collm           70.33 319⇑iP      P      07 32 11.7 -0.6
       comp=Z,25nm,1.2s,mb5.0
CLL                              i       pP     07 32 15.5 -0.2
CLL    Collm           70.33 319 ⇑P      P      07 32 11.7 -0.6
       comp=Z,logA/T=1.3,mb5.0
CLL                              i *PP   pP     07 32 15.5 -0.2
CLL                              e              07 32 20.0
NAO01  NORSAR Array S  70.45 329 eP      P      07 32 11.0 -1.9
       comp=Z,8.5nm,0.7s,mb4.8
VOY    Vojsko          70.46 313 eP      P      07 32 12.6 -0.6
CADS   Cadrg           70.54 313⇑eP      P      07 32 12.9 -0.8
KBA    Koelnbreinsper  70.69 314⇓iP      P      07 32 13.4 -1.1
       comp=Z,18nm,1.0s,mb5.0
WET    Wettzell        70.70 316 eP      P      07 32 14.6 +0.1
WET                               pmax   pmax
       comp=Z,26nm,1.0s,mb5.1
WET    Wettzell        70.70 316 eP      P      07 32 14.6 +0.1
       comp=Z,26nm,1.0s,mb5.1
PTCC   Patocco-Chiusa  70.78 313 eP      P      07 32 14.3 -0.8
NKC    Novy Kostel     70.82 318 eP      P      07 32 15.0 -0.3
MOX    Moxa            71.29 318 eP      P      07 32 17.8 -0.3
MOX                               pmax   pmax
       comp=Z,27nm,1.1s,mb5.1
MOX    Moxa            71.29 318 eP      P      07 32 17.8 -0.3
       comp=Z,27nm,1.1s,mb5.1
MOX    Moxa            71.29 318 i P     P      07 32 17.8 -0.3
       comp=Z,logA/T=1.4,mb5.1
PTQR   Pietraquaria    71.46 309 eP      P      07 32 19.0 -0.3
ARV    Arcevia         71.54 310 eP      P      07 32 19.5 -0.2
SNTG   Esanatoglia     71.58 310 eP      P      07 32 20.1 +0.1
BSEG   Bad Segeberg    71.60 322 eP      P      07 32 20.2 +0.3
BSEG                              pmax   pmax
       comp=Z,57nm,0.8s,mb5.5
GRA1   Grafenberg Arr  71.69 317 eP      P      07 32 20.9 +0.4
       comp=Z,72nm,1.6s,mb5.3
GRF    Grafenberg Arr  71.69 317 eP      P      07 32 20.9 +0.4
GRF                               pmax   pmax
       comp=Z,72nm,1.6s,mb5.3
GRF    Grafenberg Arr  71.69 317 eP      P      07 32 20.9 +0.4
       comp=Z,72nm,1.6s,mb5.3
WTTA   Wattenberg      71.81 315⇑iP      P      07 32 20.5 -0.8
       comp=Z,44nm,1.3s,mb5.2
WATA   Walderalm       71.84 315⇑iP      P      07 32 20.4 -1.0
       comp=Z,13nm,1.0s,mb4.8
MUD    Monsted U'grnd  71.88 324 i P     P      07 32 21.5  0.0
MUD                               pmax   pmax
       comp=Z,38nm,0.8s,mb5.4
MUD    Monsted U'grnd  71.88 324 i P     P      07 32 21.5  0.0
       comp=Z,38nm,0.8s,mb5.4
CLZ    Clausthal       71.88 319 eP      P      07 32 21.8 +0.2
       comp=Z,58nm,1.3s,mb5.3
MNS    Montasola       71.92 309 eP      P      07 32 21.0 -1.1
SQTA   Sankt Quirin    72.10 315⇑iP      P      07 32 22.1 -0.9
       comp=Z,11nm,0.9s,mb4.8
MOTA   Moosalm         72.15 315⇑iP      P      07 32 22.4 -0.9
       comp=Z,14nm,1.0s,mb4.8
CRE    Caprese Michel  72.23 311 eP      P      07 32 24.3 +0.5
SFI    Santa Sofia     72.25 311 eP      P      07 32 24.8 +0.9
PGD    Poggio Sodo     72.34 311 eP      P      07 32 25.7 +1.2
VMG    Vicchio         72.45 311 eP      P      07 32 26.6 +1.4
DAVA   Damuels         72.98 315⇑iP      P      07 32 27.8 -0.4
       comp=Z,31nm,0.9s,mb5.2
GSCL   Gusciola        73.05 312 eP      P      07 32 29.6 +0.9
STU    Stuttgart       73.15 316 eP      P      07 32 29.2 +0.1
TOD    Tromm           73.25 317 eP      P      07 32 32.7 +3.0
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TNS    Taunus Mts      73.36 318 eP      P      07 32 30.6 +0.3
TNS                               pmax   pmax
       comp=Z,28nm,1.0s,mb5.2
TNS    Taunus Mts      73.36 318 eP      P      07 32 30.6 +0.3
       comp=Z,28nm,1.0s,mb5.2
TOO    Toolangi        73.79 141 eP      P      07 32 33.8 +0.7
       comp=Z,0.7nm,0.6s
BFO    Black Forest    73.80 316 eP      P      07 32 32.6 -0.4
BFO                               pmax   pmax
       comp=Z,16nm,1.1s,mb4.9
BFO    Black Forest    73.80 316 eP      P      07 32 32.6 -0.4
       comp=Z,16nm,1.1s,mb4.9
LANF   Langenberg      74.01 317 eP      P      07 32 34.3 +0.2
VAI    Varese          74.01 313 eP      P      07 32 33.5 -0.7
FELD   Feldberg        74.11 316 eP      P      07 32 34.4 -0.3
RUP    Ruppelstein     74.34 318 eP      P      07 32 36.2 +0.2
WLS    Welschbruch     74.42 316 eP      P      07 32 36.3 -0.2
CDF    Champ du Feu    74.47 316⇑iP      P      07 32 36.5 -0.3
       comp=Z,29nm,0.9s,mb4.9
MCGN   Macugnaga       74.53 314 eP      P      07 32 37.0 -0.2
MOF    Molkenrain      74.69 316 eP      P      07 32 37.5 -0.6
WLF    Walferdange     74.92 318 eP      P      07 32 39.8 +0.4
       comp=Z,37nm,1.0s,mb5.3
LSZ    Lusaka          74.98 247 eP      P      07 32 41.3 +0.9
       comp=Z,19nm,0.5s,mb5.3
HAU    Haudompre       75.17 316⇑iP      P      07 32 40.5 -0.4
       comp=Z,36nm,0.9s,mb5.0
SBF    Sospel          75.38 312 eP      P      07 32 42.3 +0.1
LPG    La Plagne       75.47 313⇑iP      P      07 32 43.1 +0.4
       comp=Z,47nm,0.9s,mb5.1
LPL    La Plagne       75.48 313⇑iP      P      07 32 43.0 +0.3
       comp=Z,44nm,0.8s,mb5.2
MBDF   Montbardon      75.64 313⇑iP      P      07 32 43.8 +0.2
       comp=Z,25nm,0.8s,mb4.9
GIVF   Givet           75.66 318 eP      P      07 32 43.6  0.0
       comp=Z,37nm,0.9s,mb5.0
CABF   La Chapelle     75.66 315⇑iP      P      07 32 43.8 +0.1
       comp=Z,81nm,1.1s,mb5.2
MEZF   Maizieres J'vi  75.90 317 eP      P      07 32 44.9 -0.1
       comp=Z,46nm,0.8s,mb5.2
FRF    La Foret Royal  76.00 311⇑iP      P      07 32 45.5 -0.2
BAIF   Baives          76.06 318⇑iP      P      07 32 46.0 +0.1
       comp=Z,48nm,1.0s,mb5.1
LMR    La Mourre       76.16 311 eP      P      07 32 46.4 -0.2
ORIF   Oris-en-Rattie  76.21 313 eP      P      07 32 46.2 -0.6
       comp=Z,18nm,1.0s,mb4.7
SMRF   Simiane la Rot  76.65 312 eP      P      07 32 49.5 +0.1
VIVF   Saint-Julien-l  77.06 313⇑iP      P      07 32 51.5 -0.1
SMF    Signal de Mont  77.15 315⇑iP      P      07 32 51.8 -0.3
       comp=Z,30nm,0.7s,mb5.0
SSF    Saint Saulge    77.27 316⇑iP      P      07 32 52.6 -0.1
       comp=Z,76nm,1.1s,mb5.2
AVF    Avril sur Loir  77.44 315⇑iP      P      07 32 53.4 -0.2
       comp=Z,75nm,1.1s,mb5.2
PLDF   La Plantade     77.48 314 eP      P      07 32 54.1 +0.2
HYF    Humbligny       77.78 316 eP      P      07 32 56.1 +0.6
AGO    Saint Agoulin   77.79 315 eP      P      07 32 56.1 +0.5
LASF   Ste Croix       77.83 313 eP      P      07 32 56.2 +0.4
       comp=Z,90nm,1.3s,mb5.2
BGF    Bois d'Agland   77.84 315⇑iP      P      07 32 55.8  0.0
       comp=Z,45nm,1.1s,mb5.0
LBL    Lubilhac        77.93 314 eP      P      07 32 56.9 +0.5
PYM    Petit Puy Mans  77.95 314 eP      P      07 32 56.9 +0.4
TCF    Toulx Ste Croi  78.34 315⇑iP      P      07 32 59.0 +0.4
       comp=Z,76nm,1.0s,mb5.3
CAF    Calviac         78.82 314⇑iP      P      07 33 01.7 +0.4
       comp=Z,50nm,1.1s,mb5.0
RJF    Les Rejaudoux   79.08 314⇑iP      P      07 33 03.4 +0.7
       comp=Z,43nm,0.8s,mb5.1
MTLF   Montolieu       79.17 312 eP      P      07 33 03.4 +0.2
       comp=Z,77nm,1.3s,mb5.2
LDF    La Druitiere    79.18 318⇑iP      P      07 33 03.1 -0.1
       comp=Z,46nm,0.8s,mb5.1
FLN    La Foliniere    79.36 318 eP      P      07 33 04.1  0.0
GRR    Gorron          79.71 318 eP      P      07 33 06.0  0.0
       comp=Z,23nm,0.8s,mb4.8
LFF    La Frestale     79.72 314⇑iP      P      07 33 06.7 +0.6
       comp=Z,59nm,1.0s,mb5.2
MFF    Saint Martin d  79.80 316⇑iP      P      07 33 06.6  0.0
EMIR   Miracle         80.08 311  P      P      07 33 08.3 +0.1
IMA    Indian Mountai  80.10  23 eP      P      07 33 08.0 +0.3
       comp=Z,87nm,1.4s,mb5.5
EPOB   Poblet          80.57 310  P      P      07 33 10.2 -0.5
       comp=Z,79nm,1.3s,mb5.5
EPF    Esparros        80.58 312 eP      P      07 33 10.3 -0.5
       comp=Z,18nm,1.1s,mb4.6
EBIE   Bielsa          80.82 312  P      P      07 33 13.4 +1.4
       comp=Z,187nm,2.7s,mb5.5
SGMF   Saint Gilles    80.83 318⇑iP      P      07 33 12.4 +0.4
       comp=Z,47nm,0.9s,mb5.1
ETSF   Etsaut          81.24 312⇑iP      P      07 33 15.1 +0.8
       comp=Z,39nm,0.9s,mb5.0
ROSF   Rostrenen       81.25 318⇑iP      P      07 33 14.6 +0.4
       comp=Z,49nm,0.8s,mb5.2
QUIF   Quistinic       81.32 318 eP      P      07 33 14.6  0.0
LBTB   Lobatse         81.43 240 eP      P      07 33 16.9 +1.3
       comp=Z,39nm,1.1s,mb5.2
SJPF   Ste Jean        81.64 313 eP      P      07 33 16.4 +0.1
EALK   Alkurruntz      81.80 313  P      P      07 33 18.2 +1.0
       comp=Z,25nm,0.9s,mb5.1
COLA   College         82.81  23⇑eP      P      07 33 21.7 -0.2
COLA   College         82.81  23 eP      P      07 33 21.1 -0.9
       comp=Z,20nm,1.4s,mb5.0
SUMG   Summit          82.94 347 eP      P      07 33 21.5 -1.0
       comp=Z,8.8nm,0.6s,mb5.0
MCK    McKinley        83.00  24 eP      P      07 33 22.7 -0.2
       comp=Z,8.3nm,0.6s,mb4.9
RSO    Redoubt South   83.06  28  P      P      07 33 23.1 -0.1
ELAN   Lanestosa       83.11 313  P      P      07 33 24.8 +0.8
       comp=Z,68nm,1.5s,mb5.5
BOSA   Boshof          83.31 237 eP      P      07 33 26.2 +0.9
       comp=Z,16nm,0.7s,mb5.2
EARI   Arriondas       84.30 314  P      P      07 33 30.4 +0.4
       comp=Z,22nm,1.4s,mb5.1
THY    Trims Highway   84.38  23  P      P      07 33 30.3 +0.4
ESDC   Sonseca Array   84.75 310  P      P      07 33 33.1 +0.8
       comp=Z,8.2nm,0.9s,mb4.9
EQES   Quesada         84.77 308  P      P      07 33 33.1 +0.6
       comp=Z,86nm,2.2s,mb5.5
EBER   Berja           84.96 307  P      P      07 33 34.1 +0.7
       comp=Z,52nm,1.2s,mb5.5
INK    Inuvik          85.20  16 eP      P      07 33 33.5 -0.4
       comp=Z,18nm,1.0s,mb5.2
EALB   Alboran         85.41 306  P      P      07 33 37.0 +1.2
EPON   Pontenova       85.60 314  P      P      07 33 37.9 +1.4
       comp=Z,15nm,0.8s,mb5.3
EADA   Adamuz          85.75 309  P      P      07 33 37.3 -0.1
       comp=Z,8.2nm,0.7s,mb5.1
TSUM   Tsumeb          85.82 248 eP      P      07 33 38.4 +0.3
       comp=Z,6.9nm,0.8s,mb4.9
ECAL   Calabor         85.86 313  P      P      07 33 39.0 +1.1
       comp=Z,19nm,1.6s,mb5.1
PBRG   Braganca        85.91 313 eP      P      07 33 38.6 +0.5
       comp=Z,30nm,1.5s,mb5.3
EINC   Incio           86.00 314  P      P      07 33 38.5  0.0
DAWY   Dawson          86.26  21 eP      P      07 33 39.3  0.0
STS    Santiago        86.72 314  P      P      07 33 43.4 +1.4
       comp=Z,12nm,0.7s,mb5.2
PVRL   Vila Real       86.80 313 eP      P      07 33 43.7 +1.2
       comp=Z,20nm,1.3s,mb5.2
ELOB   Lobios          86.80 313  P      P      07 33 43.5 +1.0
       comp=Z,4.9nm,0.7s,mb4.8
EMAZ   Mazaricos       86.98 315  P      P      07 33 45.0 +1.8
       comp=Z,30nm,1.0s,mb5.5
MTE    Manteigas       87.02 312 eP      P      07 33 44.3 +0.7
       comp=Z,44nm,0.8s,mb5.7
MTE    Manteigas       87.02 312 eP      P      07 33 44.8 +1.2
       comp=Z,25nm,0.9s,mb5.4
PVIS   Viseu           87.14 312 eP      P      07 33 45.0 +0.8
       comp=Z,25nm,1.4s,mb5.2
PCBR   Castelo Branco  87.20 311 eP      P      07 33 45.7 +1.3
       comp=Z,41nm,1.4s,mb5.5
EBAD   Badajoz         87.29 310  P      P      07 33 44.6 -0.4
       comp=Z,12nm,0.7s,mb5.2
EMIN   Mina Concepcio  87.43 309  P      P      07 33 46.6 +1.0
       comp=Z,8.9nm,0.7s,mb5.1
EVO    Evora           88.10 310 eP      P      07 33 50.3 +1.5
       comp=Z,40nm,1.0s,mb5.3
EGRO   El Granado      88.12 309  P      P      07 33 49.8 +0.8
PBEJ   Beja            88.20 310 eP      P      07 33 50.7 +1.4
       comp=Z,15nm,0.8s,mb5.3
PTEO   Sao Teotonio    89.02 310 eP      P      07 33 54.8 +1.6
       comp=Z,52nm,1.3s,mb5.7
VNA2   Neumayer--Watz 112.82 200 e       PKPdf  07 39 42.9 +6.7
VNA2   Neumayer--Watz 112.82 200⇓iPKPdf  PKPdf  07 39 34.5 -1.7
VNA2                             e              07 39 42.9
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VNA2                             e              07 43 06.3
VNA3   Neumayer Olymp 113.52 200 e       PKPdf  07 39 43.9 +6.3
VNA3   Neumayer Olymp 113.52 200⇓iPKPdf  PKPdf  07 39 35.5 -2.1
VNA3                             e              07 39 43.9
VNA3                             e              07 43 07.6
MSU    Marysvale      116.38  24 ePKP    PKPdf  07 39 42.8 -1.1
ANMO   Albuquerque    121.64  21 ePKP    PKPdf  07 39 52.2 -2.0
LPM    Los Pinos Moun 122.16  22 ePKP    PKPdf  07 39 52.1 -3.1
CPRX   Cap Rock       124.25  20 ePKP    PKPdf  07 39 56.5 -2.8
WVT    Waverly        124.30   3 ePKP    PKPdf  07 39 54.7 -4.7
GDL2   Guadalupe Moun 124.86  21 ePKP    PKPdf  07 39 57.5 -3.1
MNTX   Cornudas Mount 124.96  22 ePKP    PKPdf  07 39 58.1 -2.7
JCT    Junction City  127.85  17 ePKP    PKPdf  07 40 04.2 -2.2
JCT                              e              07 40 07.6
SDV    Santo Domingo  148.51 334 ePKPbc  PKPdf  07 40 45.3 +1.3
SAML   Samuel         156.94 295 ePKPab  PKPab  07 41 23.8 -1.7
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PGC 08 07:51:57.3, 49.25N×129.88W, h10^{km}, Mw3.8, 2C, West of Vancouver Island, British Columbia, Vancouver Island region

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Code   Station Name       Δ°  AZ°   Phase ID         Time       Res
                                   Op     ISC      h  m  s     ISC
BPBC   Brooks Peninsu    1.64  56  Pn     Pn      07 52 24.1  -2.4
BPBC                               Sg     Sg      07 52 46.9  -5.2
BPBC                               Trac           07 52 49.5
       comp=Z,198nm,0.2s
BPBC   Brooks Peninsu    1.64  56  Pn     Pn      07 52 24.1  -2.4
BPBC                               Sg     Sg      07 52 46.9  -5.2
BPBC                               Trac           07 52 49.5
       comp=Z,198nm,0.2s
HOLB   Holberg           1.79  38  Pn     Pn      07 52 26.6  -2.0
HOLB                               Sn     Sn      07 52 47.2  -4.3
HOLB                               Trac           07 52 54.0
       comp=Z,49nm,0.2s
HOLB   Holberg           1.79  38  Pn     Pn      07 52 26.6  -2.0
HOLB                               Sn     Sn      07 52 47.2  -4.3
HOLB                               Trac           07 52 54.0
       comp=Z,49nm,0.2s
EDB    Eliza Dome        1.90  70  Pn     Pn      07 52 27.3  -2.9
EDB                                Sn     Sn      07 52 49.8  -4.6
EDB                                Trac           07 52 51.0
       comp=Z,7.0nm,0.1s
EDB    Eliza Dome        1.90  70  Pn     Pn      07 52 27.3  -2.9
EDB                                Sn     Sn      07 52 49.8  -4.6
EDB                                Trac           07 52 51.0
       comp=Z,7.0nm,0.1s
MAYB   Maynard           2.10  56  Pn     Pn      07 52 30.7  -2.3
MAYB                               Sn     Sn      07 52 55.9  -3.5
       comp=Z,31nm,0.3s
MAYB                               Trac           07 53 00.2
       comp=Z,31nm,0.3s
MAYB   Maynard           2.10  56  Pn     Pn      07 52 30.7  -2.3
MAYB                               Sn     Sn      07 52 55.9  -3.5
       comp=Z,31nm,0.3s
MAYB                               Trac           07 53 00.2
       comp=Z,31nm,0.3s
PHC    Port Hardy        2.15  46  Pn     Pn      07 52 31.6  -2.1
PHC                                Sn     Sn      07 52 56.1  -4.5
PHC                                Trac           07 52 59.6
       comp=Z,25nm,0.2s
PHC    Port Hardy        2.15  46  Pn     Pn      07 52 31.6  -2.1
PHC                                Sn     Sn      07 52 56.1  -4.5
PHC                                Trac           07 52 59.6
       comp=Z,25nm,0.2s
WOSB   Woss              2.33  66 ⇑Pn     Pn      07 52 34.4  -2.0
WOSB                               Trac           07 53 05.2
       comp=Z,33nm,0.3s
WOSB   Woss              2.33  66 ⇑Pn     Pn      07 52 34.4  -2.0
WOSB                               Trac           07 53 05.2
       comp=Z,33nm,0.3s
GDR    Gold River        2.56  77  Pn     Pn      07 52 36.5  -3.2
GDR                                Trac           07 53 12.1
       comp=Z,6.0nm,0.2s
GDR    Gold River        2.56  77  Pn     Pn      07 52 36.5  -3.2
GDR                                Trac           07 53 12.1
       comp=Z,6.0nm,0.2s
NCRB   Newcastle Ridg    2.73  64 ⇑Pn     Pn      07 52 40.5  -1.5
NCRB                               Sn     Sn      07 53 12.4  -3.1
       comp=Z,49nm,0.4s
NCRB                               Trac           07 53 13.2
       comp=Z,49nm,0.4s
NCRB   Newcastle Ridg    2.73  64 ⇑Pn     Pn      07 52 40.5  -1.5
NCRB                               Sn     Sn      07 53 12.4  -3.1
       comp=Z,49nm,0.4s
NCRB                               Trac           07 53 13.2
       comp=Z,49nm,0.4s
BTB    Buttle Lake       2.86  84  Pn     Pn      07 52 40.8  -3.1
BTB                                Sn     Sn      07 53 15.3  -3.4
       comp=Z,23nm,0.3s
BTB                                Trac           07 53 15.9
       comp=Z,23nm,0.3s
BTB    Buttle Lake       2.86  84  Pn     Pn      07 52 40.8  -3.1
BTB                                Sn     Sn      07 53 15.3  -3.4
       comp=Z,23nm,0.3s
BTB                                Trac           07 53 15.9
       comp=Z,23nm,0.3s
OZB    Mount Ozzard      2.90  94  Pn     Pn      07 52 40.7  -3.8
OZB                                Sn     Sn      07 53 12.5  -7.2
OZB                                Trac           07 53 14.4
       comp=Z,10.0nm,0.1s
OZB    Mount Ozzard      2.90  94  Pn     Pn      07 52 40.7  -3.8
OZB                                Sn     Sn      07 53 12.5  -7.2
OZB                                Trac           07 53 14.4
       comp=Z,10.0nm,0.1s
CBB    Campbell River    3.04  73  Pn     Pn      07 52 44.5  -1.9
CBB                                Sn     Sn      07 53 19.6  -3.6
CBB                                Trac           07 53 25.9
       comp=Z,9.0nm,0.3s
CBB    Campbell River    3.04  73  Pn     Pn      07 52 44.5  -1.9
CBB                                Sn     Sn      07 53 19.6  -3.6
CBB                                Trac           07 53 25.9
       comp=Z,9.0nm,0.3s
BBB    Bella Bella       3.14  20  Pn     Pn      07 52 46.2  -1.7
BBB                                Sn     Sn      07 53 20.1  -5.9
BBB                                Trac           07 53 23.5
       comp=Z,32nm,0.3s
BBB    Bella Bella       3.14  20  Pn     Pn      07 52 46.2  -1.7
BBB                                Sn     Sn      07 53 20.1  -5.9
BBB                                Trac           07 53 23.5
       comp=Z,32nm,0.3s
ALB    Alberni           3.31  88  Pn     Pn      07 52 47.9  -2.3
ALB    Alberni           3.31  88  Pn     Pn      07 52 47.9  -2.3
MGB    Mount Grey        3.42  92  Pn     Pn      07 52 48.2  -3.6
MGB                                Sn     Sn      07 53 26.0  -6.8
       comp=Z,8.0nm,0.2s
MGB                                Trac           07 53 28.5
       comp=Z,8.0nm,0.2s
MGB    Mount Grey        3.42  92  Pn     Pn      07 52 48.2  -3.6
MGB                                Sn     Sn      07 53 26.0  -6.8
       comp=Z,8.0nm,0.2s
MGB                                Trac           07 53 28.5
       comp=Z,8.0nm,0.2s
TXB    Texada            3.58  81  Pn     Pn      07 52 51.8  -2.3
TXB                                Sn     Sn      07 53 31.3  -5.6
       comp=Z,4.0nm,0.2s
TXB                                Trac           07 53 34.5
       comp=Z,4.0nm,0.2s
TXB    Texada            3.58  81  Pn     Pn      07 52 51.8  -2.3
TXB                                Sn     Sn      07 53 31.3  -5.6
       comp=Z,4.0nm,0.2s
TXB                                Trac           07 53 34.5
       comp=Z,4.0nm,0.2s
PFB    Port Renfrew      3.65  99  Pn     Pn      07 52 50.9  -4.3
PFB                                Sn     Sn      07 53 31.7  -7.1
PFB                                Trac           07 53 34.5
       comp=Z,2.0nm,0.2s
PFB    Port Renfrew      3.65  99  Pn     Pn      07 52 50.9  -4.3
PFB                                Sn     Sn      07 53 31.7  -7.1
PFB                                Trac           07 53 34.5
       comp=Z,2.0nm,0.2s
NLLB   Nanaimo Lost L    3.86  88  Pn     Pn      07 52 56.0  -2.1
NLLB                               Sn     Sn      07 53 40.0  -4.1
NLLB                               Trac           07 53 43.3
       comp=Z,5.0nm,0.3s
NLLB   Nanaimo Lost L    3.86  88  Pn     Pn      07 52 56.0  -2.1
NLLB                               Sn     Sn      07 53 40.0  -4.1
NLLB                               Trac           07 53 43.3
       comp=Z,5.0nm,0.3s
SHB    Sechelt           3.94  83  Pn     Pn      07 52 57.2  -2.0
SHB                                Sn     Sn      07 53 41.4  -4.6
SHB                                Trac           07 53 45.4
       comp=Z,7.0nm,0.2s
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SHB	Sechelt	3.94	83	Pn	Pn	07 52 57.2	-2.0
SHB				Sn	Sn	07 53 41.4	-4.6
SHB				Trac		07 53 45.4	
	comp=Z,7.0nm,0.2s						
LZB	Mount Lazard	4.04	97	Pn	Pn	07 52 57.4	-3.3
LZB				Sn	Sn	07 53 41.8	-7.0
LZB				Trac		07 53 44.5	
	comp=Z,1.0nm,0.2s						
LZB	Mount Lazard	4.04	97	Pn	Pn	07 52 57.4	-3.3
LZB				Sn	Sn	07 53 41.8	-7.0
LZB				Trac		07 53 44.5	
	comp=Z,1.0nm,0.2s						
GOBB	Galiano Island	4.20	92	Pn	Pn	07 52 58.3	-4.6
GOBB	Galiano Island	4.20	92	Pn	Pn	07 52 58.3	-4.6
PGC	Sidney	4.28	96	Pn	Pn	07 53 00.6	-3.5
PGC				Sn	Sn	07 53 47.3	-7.4
PGC				Trac		07 53 51.5	
	comp=Z,2.0nm,0.2s						
PGC	Sidney	4.28	96	Pn	Pn	07 53 00.6	-3.5
PGC				Sn	Sn	07 53 47.3	-7.4
PGC				Trac		07 53 51.5	
	comp=Z,2.0nm,0.2s						
BIB	Bowen Island	4.30	85	Pn	Pn	07 53 01.6	-2.7
BIB				Trac		07 53 52.8	
	comp=Z,1.0nm,0.2s						
BIB	Bowen Island	4.30	85	Pn	Pn	07 53 01.6	-2.7
BIB				Trac		07 53 52.8	
	comp=Z,1.0nm,0.2s						
WPB	Watts Point	4.37	82	Pn	Pn	07 53 04.4	-0.9
WPB				Sn	Sn	07 53 51.7	-5.2
	comp=Z,2.0nm,0.2s						
WPB				Trac		07 53 56.6	
	comp=Z,2.0nm,0.2s						
WPB	Watts Point	4.37	82	Pn	Pn	07 53 04.4	-0.9
WPB				Sn	Sn	07 53 51.7	-5.2
	comp=Z,2.0nm,0.2s						
WPB				Trac		07 53 56.6	
	comp=Z,2.0nm,0.2s						
SNB	Saturna Island	4.44	94	Pn	Pn	07 53 04.7	-1.6
SNB				Trac		07 53 58.6	
	comp=Z,3.0nm,0.3s						
SNB	Saturna Island	4.44	94	Pn	Pn	07 53 04.7	-1.6
SNB				Trac		07 53 58.6	
	comp=Z,3.0nm,0.3s						
WSLR	Whistler	4.60	76	Pn	Pn	07 53 07.4	-1.2
WSLR	Whistler	4.60	76	Pn	Pn	07 53 07.4	-1.2
HNB	Haney	4.78	87	Pn	Pn	07 53 09.1	-2.1
HNB				Sn	Sn	07 54 01.4	-5.9
HNB				Trac		07 54 07.4	
	comp=Z,3.0nm,0.2s						
HNB	Haney	4.78	87	Pn	Pn	07 53 09.1	-2.1
HNB				Sn	Sn	07 54 01.4	-5.9
HNB				Trac		07 54 07.4	
	comp=Z,3.0nm,0.2s						
VDB	Vedder Mountai	5.11	90	Pn	Pn	07 53 13.3	-2.5
VDB				Sn	Sn	07 54 10.5	-5.1
	comp=Z,1.0nm,0.2s						
VDB				Trac		07 54 14.2	
	comp=Z,1.0nm,0.2s						
VDB	Vedder Mountai	5.11	90	Pn	Pn	07 53 13.3	-2.5
VDB				Sn	Sn	07 54 10.5	-5.1
	comp=Z,1.0nm,0.2s						
VDB				Trac		07 54 14.2	
	comp=Z,1.0nm,0.2s						
LLLB	Lillooet	5.34	72	Pn	Pn	07 53 17.2	-1.9
LLLB				Sn	Sn	07 54 17.7	-3.7
LLLB				Trac		07 54 22.2	
	comp=Z,3.0nm,0.4s						
LLLB	Lillooet	5.34	72	Pn	Pn	07 53 17.2	-1.9
LLLB				Sn	Sn	07 54 17.7	-3.7
LLLB				Trac		07 54 22.2	
	comp=Z,3.0nm,0.4s						
HOPB	Hope	5.54	85	Pn	Pn	07 53 20.2	-1.6
HOPB	Hope	5.54	85	Pn	Pn	07 53 20.2	-1.6
FSB	Fort Saint Jam	6.26	31	Pn	Pn	07 53 34.4	+2.3
FSB	Fort Saint Jam	6.26	31	Pn	Pn	07 53 34.4	+2.3

SKHL 08 08:53:47.7±0.1**,53.01N**×**143.34E,h10**^{km}±2^{km}**,mb3.6**/3**, Sakhalin Island**

SKHL 08 08:57:20.7±0.1**,53.00N**×**143.35E,h10**^{km}**,mb3.7**/2**, Sakhalin Island**

NEIC ***08*** *09:11:19.6,36.86N×21.58E,h2^{km},MD3.4(ATH),After ATH.*
CSEM ***08*** *09:11:19.2±0.3,36.83N×21.56E,h2^{km},MD3.4,Error ellipse: s-maj=7.5km s-min=3.5km az=43.0*
ATH 08 09:11:19.4,36.88N×**21.57E,h5**^{km}**,MD3.4**/9**,1D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	Ithomi	0.41	44	⇓iPB	Pb	09 11 27.6	-1.2
VLI	Veliai	1.11	98	ePB	Pb	09 11 41.7	+1.0
RLS	Riolos of Patr	1.18	356	ePB	Pb	09 11 42.2	+0.3
KYTH	Kithira	1.32	116	ePN	Pn	09 11 43.5	-1.1
VLS	Valsamata	1.51	329	ePB	Pb	09 11 47.9	+0.3
MGER	Gerania Oros	1.74	50	ePG	Pg	09 11 51.0	-3.2
MGER	Gerania Oros	1.74	50	ePg	Pg	09 11 51.9	-2.3
NAIG	Nisos Aigina	1.76	60	ePN	Pn	09 11 53.0	+2.1
EVR	Evrytania	2.04	5	ePG	Pg	09 11 57.5	-2.7
EVR	Evrytania	2.04	5	ePg	Pg	09 12 00.1	-0.1
MPAR	Parnis Oros	2.14	53	ePG	Pg	09 11 59.0	-3.1
CSS	Prodhromos	9.73	98	P	P	09 13 31.0	-12
MORC	Moravsky Berou	13.22	349	ePg	Px	09 15 22.9	

WAR ***08*** *09:15:10.0,50.07N×18.46E,h0^{km},ML2.5,Mining Induced*
PRU ***08*** *09:15:11.7,50.04N×18.34E*
ISC 08 09:15:09.0±0.5**,50.04N**±0.04×**18.43E**±0.03**,n15,**σ**1**^{s}**21**/27**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.15	286	ePG	Pg	09 15 14.0	+1.9
RAC				eSG	Sg	09 15 18.0	+3.8
OKC	Ostrava-Krasne	0.27	222	ePG	Pg	09 15 16.5	+2.1
OKC				eSG	Sg	09 15 21.5	+3.4
	131nm,0.6s						
OJC	Ojcow	0.90	78	ePG	Pg	09 15 27.0	0.0
OJC				eSG	Sg	09 15 39.0	0.0
NIE	Niedzica	1.37	116	ePg	Pg	09 15 34.8	-1.6
NIE				eSg	Sg	09 15 53.9	-0.8
DPC	Dobruska-Polom	1.39	284	ePG	Pg	09 15 36.1	-0.6
DPC				eSG	Sg	09 15 54.6	-0.6
	55nm,0.3s						
VYHS	Vyhne	1.57	170	i PG	Pg	09 15 39.1	-1.3
VYHS				i SG	Sg	09 16 01.9	+0.5
KSP	Ksiaz	1.58	301	ePg	Pg	09 15 41.1	+0.5
KSP				eSn	Sn	09 16 00.5	+0.6
KSP				eSg	Sg	09 16 02.9	+1.2
UPC	Upice	1.62	288	ePG	Pg	09 15 39.2	-2.1
CRVS	Cervenica-Dubn	2.29	119	ePN	Pn	09 15 52.6	+4.1
CRVS				eSG	Sg	09 16 25.7	+0.6
PRU	Pruhonice	2.51	270	eSG	Sg	09 16 28.0	-4.4
KOLS	Kolonicke sedl	2.74	112	ePG	Pg	09 16 04.1	+0.3
KOLS				eSG	Sg	09 16 41.2	+0.9
KHC	Kasperske Hory	3.28	256	ePN	Pn	09 16 02.0	-0.7
KHC				ePG	Pg	09 16 09.7	-4.9
KHC				ex	x	09 16 41.5	
KHC				eSG	Sg	09 16 52.8	-5.5
MOA	Molln	3.51	233	i	Pn	09 16 14.3	+8.3
MOA	Molln	3.51	233	i SG	Sg	09 17 05.1	-0.8
	6.3nm,0.6s						
CLL	Collm	3.67	292	eSG	Sg	09 17 08.0	-3.4

NEIC ***08*** *09:15:46.5±2.3,17.87N×147.79E,h52^{km}±22^{km},mb4.5/9, Error ellipse: s-maj=27.6km s-min=13.7km az=90.0*
ISC 08 09:15:45.3±3.1**,17.8N**±0.1×**147.6E**±0.2**,h59**^{km}±29^{km}**,n13,** σ**1**^{s}**24**/14**,mb4.5**/7**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.96	212	Pn	P	09 17 00.1	+1.1
GUMO				eSn	S	09 17 53.6	-2.1
MAJO	Matsushiro	20.42	338	eP	P	09 20 19.9	0.0
	6.3nm,0.5s						
MAT	Matsushiro	20.42	338	eP	P	09 20 20.0	+0.1
	6.8nm,0.7s						
MAT	Matsushiro	20.42	338	P	P	09 20 19.7	-0.2
HIA	Hailar	38.60	331	eP	P	09 23 05.2	+1.1
	9.7nm,0.8s,mb4.6						
WRAB	Tennant Creek	39.71	200	P	P	09 23 15.3	+1.7
	10.0nm,0.9s,mb4.5						
WRAB				e	pP	09 23 29.5	+0.7
ULN	Ulaanbaatar	44.58	321	eP	P	09 23 52.2	-0.9
	3.5nm,0.8s,mb4.2						
LSA	Lhasa	52.56	294	eP	P	09 24 57.5	+2.4
	3.6nm,0.5s,mb4.6						
KURK	Kurchatov	63.13	318	eP	P	09 26 08.8	-0.3
	9.4nm,0.9s,mb4.9						
HYB	Hyderabad	65.44	281	i P	P	09 26 22.5	-2.1
DAWY	Dawson	66.70	27	P	P	09 26 31.0	-0.8
CHKZ	Chkalovo	68.16	321	eP	P	09 26 41.5	+0.4
	6.8nm,1.0s,mb4.6						
INK	Inuvik	69.47	23	P	P	09 26 48.2	-0.8
	1.5nm,0.8s,mb4.0						

NEIC 08 09:41:50.4±0.4**,34.69N**×**111.01W,h5**^{km}**,ML3.6,Error ellipse: s-maj=6.0km s-min=5.5km az=184.0,Eastern Arizona**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVA	Apache Junctio	1.35	200	Pn	Pn	09 42 15.6	-0.3
GVA				S	Sb	09 42 33.2	0.0
TUC	Tucson	2.38	175	ePn	Pn	09 42 29.9	-0.8
TUC				i Pg	Pg	09 42 34.6	-3.3
LAZ	Ladron	3.21	94	Pn	Pn	09 42 40.7	-1.8
LAZ				ePb	Pb	09 42 47.3	-0.3
LAZ				ePg	Pg	09 42 51.4	-3.0
LAZ				eSg	Sg	09 43 29.4	-7.9
NEN	Nelson	3.28	288	ePn	Pn	09 42 42.5	-1.0
NEN				ePg	Pg	09 42 50.4	-5.5
NEN				eSg	Sg	09 43 32.6	-7.0
LENM	Lemitar	3.38	98	ePn	Pn	09 42 43.4	-1.5
LENM				ePg	Pg	09 42 53.0	-4.8
LDFC	Landfair	3.39	278	ePn	Pn	09 42 44.4	-0.6
LDFC				ePg	Pg	09 42 54.9	-3.2
LDFC				eSg	Sg	09 43 40.4	-2.8
LPM	Los Pinos Moun	3.64	95	ePn	Pn	09 42 48.1	-0.5
LPM				ePg	Pg	09 42 56.7	-6.3
LPM				eS	Sn	09 43 40.5	+8.1
ANMO	Albuquerque	3.75	85	ePn	Pn	09 42 49.5	-0.7
ANMO				ePg	Pg	09 42 59.5	-5.8
ANMO				eSg	Sg	09 43 42.8	-13
MVU	Marysvale	3.93	346	Pn	Pn	09 42 53.5	+0.8
MVU				ePb	Pb	09 42 59.7	-0.2
MVU				ePg	Pg	09 43 02.8	-6.0
MSU	Marysvale	3.93	347	Pn	Pn	09 42 52.7	0.0
MSU				ePb	Pb	09 42 59.2	-0.7
MSU				ePg	Pg	09 43 02.7	-6.1
PV01	Paradox Valley	3.96	29	ePn	Pn	09 42 51.5	-1.7
PV01				ePb	Pb	09 42 58.4	-2.1
PV01				ePg	Pg	09 43 00.8	-8.7
PV10	Paradox Valley	4.01	23	ePn	Pn	09 42 51.4	-2.4
PV10				ePg	Pg	09 42 58.0	-12
SRU	San Rafael	4.43	5	ePn	Pn	09 42 58.3	-1.5
SRU				ePg	Pg	09 43 08.7	-10
SRU				eSg	Sg	09 44 04.9	-13
TMUT	Trail Mountain	4.60	358	ePn	Pn	09 43 01.1	-1.1
TMUT				ePg	Pg	09 43 11.8	-10
PFO	Pinyon Flat Ob	4.64	258	ePn	Pn	09 43 00.9	-1.9
PFO				eSg	Sg	09 44 17.8	-7.1
NLU	North Lily Min	5.32	351	ePg	Pg	09 43 25.6	-11
MPU	Maple Canyon	5.34	355	ePg	Pg	09 43 26.6	-10
SDCO	Great Sand Dun	5.40	54	ePn	Pn	09 43 12.4	-1.1
SDCO				ePg	Pg	09 43 27.8	-10
SDCO				eSg	Sg	09 44 34.1	-16
MNTX	Cornudas Mount	5.58	121	ePn	Pn	09 43 15.3	-0.8
MNTX				ePg	Pg	09 43 32.8	-9.0
MNTX				eSg	Sg	09 44 43.6	-13
DAU	Daniels Canyon	5.72	358	ePg	Pg	09 43 35.3	-9.2
JLU	Jordanelle	5.91	357	Pn	Pn	09 43 26.3	+5.5
JLU				ePg	Pg	09 43 38.2	-10
NOQ	North Oquirrh	6.02	352	ePg	Pg	09 43 40.4	-10
CPRX	Cap Rock	6.17	104	ePg	Pg	09 43 42.4	-11
CPRX				eSg	Sg	09 45 01.5	-14
TCUT	Toone Canyon	6.43	357	Pn	Pn	09 43 29.2	+1.2
TCUT				ePg	Pg	09 43 47.6	-11
BGU	Big Grassy Mou	6.43	346	ePg	Pg	09 43 48.3	-10
ISCO	Idaho Springs	6.67	39	Pn	Pn	09 43 31.7	+0.2
ISCO				ePg	Pg	09 43 50.0	-14
ISCO				eSg	Sg	09 45 21.7	-11
HWUT	Hardware Ranch	6.92	357	Pn	Pn	09 43 33.1	-1.9
HWUT				ePg	Pg	09 43 58.5	-10
LTX	Lajitas	8.21	129	eSg	Sg	09 46 10.8	-13
WMOK	Wichita Mounta	10.07	86	Pn	P	09 44 14.8	-4.0

NIED ***08*** *09:46:00,36.70N×142.10E,h26^{km},Mw4.0 Best double couple: M$_0$1.22×10^{15} NP1:ϕ$_s$16°,δ70°,λ84°. NP2:ϕ$_s$214°, δ21°,λ107°.*
JMA ***08*** *09:46:34.9±0.3,36.67N×142.07E,h30^{km},M4.2*
ISC 08 09:46:35.3±1.2**,36.64N**±0.05×**142.1E**±0.1**,h30**^{km}**,n14,** σ**0**^{s}**87**/19**,1C-6D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	1.13	294	⇓P	Pn	09 46 54.3	-1.0
JHO	Hitachi	1.22	269	⇓P	Pn	09 46 55.9	-0.7
JMM	Marumori	1.60	320	⇓P	Pn	09 47 01.3	-0.7
JFT	Otama	1.65	303	⇓P	Pn	09 47 02.8	+0.1
JIO	Ouri	1.90	342	⇓P	Pn	09 47 05.8	-0.6
JIO				eS	Sn	09 47 28.9	-0.6
JFY	Yanaizu	2.05	293	P	Pn	09 47 09.0	+0.5
JFY				eS	Sn	09 47 36.1	+2.8
JOU	Okura	2.06	327	P	Pn	09 47 08.6	0.0
JOU				S	Sn	09 47 34.6	+1.1
JAG	Ashikaga	2.13	265	P	Pn	09 47 09.8	+0.2
JAG				eS	Sn	09 47 35.0	-0.3
BSO1	Boso 1	2.18	205	P	Pn	09 47 10.5	+0.2
BSO3	Boso 3	2.24	215	⇑P	Pn	09 47 11.8	+0.6
JYS	Shirataka	2.25	315	⇓P	Pn	09 47 11.7	+0.3
JMK	Ichinoseki	2.41	344	P	Pn	09 47 13.3	-0.3
JNS	Sasagawa	2.50	299	P	Pn	09 47 15.5	+0.6
MAT	Matsushiro	3.12	269	P	Pn	09 47 24.4	+0.7
MAT				S	Sn	09 47 58.1	-2.3

BJI ***08*** *09:59:06.0,31.40S×177.70W,h40^{km},mb5.0,Ms5.0, Msz4.6*
NEIC ***08*** *09:59:07.1±0.6,31.41S×177.74W,mb5.0/10,Error ellipse: s-maj=16.5km s-min=12.6km az=216.0*
HRVD ***08*** *09:59:07.1±0.8,31.07S×177.41W,h28^{km}±2^{km},MW4.9/44, Centroid moment Tensor Solution. LP body waves: s20,c28;Mantle waves: s44,c64; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.14±.24; M$_{\theta\theta}$-0.25±.15; M$_{\phi\phi}$-1.88±.15; M$_{r\theta}$0.69±.30; M$_{\theta\phi}$-0.32±.13; M$_{\phi r}$1.59±.21; Best double couple: M$_0$2.674×10^{16} NP1:ϕ$_s$184°,δ25°,λ77°. NP2:ϕ$_s$18°,δ65°,λ96°. Principal axes: T 2.793, Plg69°, Azm300°; N -.231, Plg5°, Azm196°; P -2.555, Plg20°, Azm104°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 08 09:59:06.6±0.7**,31.78S**±0.04×**178.1W**±0.1**,h33**^{km}**, (h39**^{km}±2.1^{km}**:pP-P),n80,**σ**1**^{s}**12**/76**,mb5.0**/9**,2C-4D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	6.94	204	ePN	Pn	10 00 48.7	-0.1
PUZ				SN	Sn	10 02 15.5	+8.1
PUZ	Puketiti	6.94	204	ePN	Pn	10 00 48.7	-0.1
PUZ				SN	Sn	10 02 15.5	+8.1
MWZ	Matawai	7.45	207	ePN	Pn	10 00 56.6	+0.8
MWZ				SN	Sn	10 02 28.9	+8.8
MWZ	Matawai	7.45	207	ePN	Pn	10 00 56.6	+0.8
MWZ				SN	Sn	10 02 28.9	+8.8
WCZ	Waipu Caves	7.51	234	PN	Pn	10 01 05.5	+8.7
WCZ	Waipu Caves	7.51	234	PN	Pn	10 01 05.5	+8.7
OUZ	Omahuta	7.72	241	PN	Pn	10 01 09.1	+10
OUZ	Omahuta	7.72	241	PN	Pn	10 01 09.1	+10
KNZ	Kokohu	8.00	204	ePN	P	10 01 04.2	+0.9
KNZ				SN	Sn	10 02 40.0	+6.3
KNZ	Kokohu	8.00	204	ePN	P	10 01 04.2	+0.9
KNZ				SN	Sn	10 02 40.0	+6.3
BKZ	Black Stump Fm	8.57	209	ePN	P	10 01 11.6	+0.3
BKZ				SN	Sn	10 02 53.5	+5.3
BKZ	Black Stump Fm	8.57	209	ePN	P	10 01 11.6	+0.3
BKZ				SN	Sn	10 02 53.5	+5.3
PWZ	Pawanui	9.18	205	SN	Sn	10 03 07.3	+4.2
PWZ	Pawanui	9.18	205	SN	Sn	10 03 07.3	+4.2
TSZ	Takapari Road	9.55	208	ePN	P	10 01 23.4	-1.5
TSZ	Takapari Road	9.55	208	ePN	P	10 01 23.4	-1.5
BFZ	Birch Farm	9.97	205	SN	Sn	10 03 24.3	+1.7
BFZ	Birch Farm	9.97	205	SN	Sn	10 03 24.3	+1.7
MRZ	Mangatainoka R	10.21	208	ePN	P	10 01 32.2	-1.7
MRZ				SN	S	10 03 29.2	+0.7
MRZ	Mangatainoka R	10.21	208	ePN	P	10 01 32.2	-1.7
MRZ				SN	S	10 03 29.2	+0.7
KIW	Kapiti Island	10.66	210	SN	S	10 03 40.2	+0.9
KIW	Kapiti Island	10.66	210	SN	S	10 03 40.2	+0.9
MTW	Mount Morrison	10.67	207	SN	S	10 03 39.6	+0.1
MTW	Mount Morrison	10.67	207	SN	S	10 03 39.6	+0.1
CAW	Cannon Point	10.80	209	SN	S	10 03 42.9	+0.2
CAW	Cannon Point	10.80	209	SN	S	10 03 42.9	+0.2
MRW	Makara Radio	11.05	209	SN	S	10 03 50.2	+1.4
MRW	Makara Radio	11.05	209	SN	S	10 03 50.2	+1.4
TUWZ	Tuamarina	11.54	211	SN	S	10 04 00.5	-0.3
TUWZ	Tuamarina	11.54	211	SN	S	10 04 00.5	-0.3
NNZ	Nelson	11.63	214	SN	S	10 04 03.1	+0.1
NNZ	Nelson	11.63	214	SN	S	10 04 03.1	+0.1
THZ	Tophouse	12.28	213	ePN	P	10 02 01.0	-1.0
THZ				SN	S	10 04 16.9	-1.7
THZ	Tophouse	12.28	213	ePN	P	10 02 01.0	-1.0
THZ				SN	S	10 04 16.9	-1.7
KHZ	Kahutara	12.52	210	ePN	P	10 02 04.4	-0.9
KHZ				SN	S	10 04 22.4	-2.0
KHZ	Kahutara	12.52	210	ePN	P	10 02 04.4	-0.9
KHZ				SN	S	10 04 22.4	-2.0
LTZ	Lake Taylor	13.37	212	SN	S	10 04 41.6	-3.2
LTZ	Lake Taylor	13.37	212	SN	S	10 04 41.6	-3.2
MQZ	McQueen’s Vall	13.95	209	SN	S	10 04 53.5	-5.2
MQZ	McQueen’s Vall	13.95	209	SN	S	10 04 53.5	-5.2
JCZ	Jackson Bay	16.03	216	ePN	P	10 02 50.2	-0.8
JCZ	Jackson Bay	16.03	216	ePN	P	10 02 50.2	-0.8
DZM	Mont Dzumac	16.80	301	eP	P	10 02 59.5	-1.5
DZM	Mont Dzumac	16.80	301	eP	P	10 02 59.5	-1.5
NOUC	Port Laguerre	16.88	301	eP	P	10 03 03.3	+1.3
AFI	Afiamalu	18.72	20	P	P	10 03 18.7	-6.2
	25nm,0.6s						
CTA	Charters Tower	33.94	281	eP	P	10 05 49.7	+0.7
	21nm,0.7s,mb5.2						
CTAO	Charters Tower	33.94	281	⇑eP	P	10 05 49.2	+0.2
	56nm,1.1s,mb5.4						
CTAO				epP	pP	10 06 00.9	+2.2
STKA	Stephens Creek	34.08	259	eP	P	10 05 52.6	+2.5
	10nm,0.8s,mb4.8						
ASPA	Alice Springs	42.95	268	⇓iP	P	10 07 04.8	+0.5
WB2	Warramunga Arr	44.05	274	eP	P	10 07 13.2	-0.1
WRAB	Tennant Creek	44.05	274	eP	P	10 07 12.6	-0.7
	30nm,1.0s,mb5.0						
FITZ	Fitzroy Crossi	52.26	271	eP	P	10 08 16.6	-0.4
CASY	Casey	53.87	208	eP	P	10 08 29.8	+1.3
	27nm,1.0s,mb5.1						
MBWA	Marble Bar	55.98	265	P	P	10 08 43.5	-0.8
	9.6nm,0.9s,mb4.8						
QSPA	South Pole Qui	58.33	180	eP	P	10 09 02.1	+1.9
	42nm,0.6s,mb5.6						
QSPA				e	pP	10 09 12.6	+2.2
VNA3	Neumayer Olymp	76.94	176	⇓iP	P	10 10 56.4	-0.5
VNA3				e	pP	10 11 08.6	+1.4
VNA3				e		10 11 19.6	
VNA3				e		10 11 42.0	
VNA3				e		10 11 49.7	
VNA2	Neumayer--Watz	77.37	177	⇓iP	P	10 10 58.7	-0.6
VNA2				e		10 11 11.4	
VNA2				e		10 11 22.1	
VNA2				e		10 11 44.0	
VNA2				e		10 11 51.2	
VNA1	Neumayer--Stat	77.60	177	⇓i	pP	10 11 11.8	+0.9
VNA1	Neumayer--Stat	77.60	177	e	sP	10 11 19.9	+5.4
PLCA	Paso Flores	81.65	133	eP	P	10 11 22.1	-0.8
	7.7nm,1.1s,mb4.5						
CN2	Changchun	91.17	323	eP	P	10 12 05.2	-4.2
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
KMI	Kunming	94.34	297	P	P	10 12 25.4	+1.1
KMI				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.7						
KMI	Kunming	94.34	297	P	P	10 12 25.4	+1.1
	comp=Z,3.0nm,1.0s,mb4.7						
KURK	Kurchatov	121.92	313	PKP	PKPdf	10 17 54.9	-2.5
CHKZ	Chkalovo	127.22	316	ePKP	PKPdf	10 18 05.3	-2.2
KEV	Kevo	139.44	347	epkp	PKPdf	10 18 54.1	+24
JOF	Joensuu	143.65	338	epkp	PKPdf	10 18 47.5	+10
	comp=Z,6.5nm,0.8s						
HILS	Ha’il	145.14	273	P	PKPdf	10 18 41.2	+0.2
MSL	Mosul	145.73	289	ePKP	PKPdf	10 18 40.5	-1.3
KAF	Kangasniemi	145.81	340	epkp	PKPdf	10 18 38.2	-2.9
	comp=Z,18nm,0.9s,baz=38,slow=3.3						
OBN	Obninsk	146.23	324	ePKP	PKPdf	10 18 40.6	-1.4
UMJS	Umm Lajj	148.28	267	P	PKPdf	10 18 50.8	+4.5
MALT	Malatya	149.51	293	ePKPbc	PKPdf	10 18 52.4	+4.5
TBKS	Tabuk	149.84	272	P	PKPdf	10 18 54.2	+5.5
NB2	NORSAR Subarra	150.09	351	PKP	PKPdf	10 18 49.9	+1.8
	comp=Z,8.5nm,0.9s,baz=21,slow=3.8						
NB2	NORSAR Subarra	150.09	351	⇑PKPab	PKPdf	10 18 49.9	+1.8
CRVS	Cervenica-Dubn	157.41	325	ePKP	PKPab	10 19 28.4	-4.2
CLL	Collm	158.83	340	ePKP2	PKPab	10 19 33.0	-5.6
CLL				e*PPKP2		10 19 40.0	
KHC	Kasperske Hory	160.56	336	ePKPab	PKPab	10 19 40.5	-5.6

NEIC ***08*** *11:20:16.0,30.85S×71.76W,h23^{km},ML3.2(GUC),After GUC.*
GUC 08 11:20:16.0±1.0**,30.85S**×**71.76W,h23**^{km}±6^{km}**,MD4.0, ML3.2,1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILCH	Illapel	0.93	147	eP	Pb	11 20 32.9	-0.4
ILCH				i S	Sb	11 20 45.0	-0.3
ILCH				AMP		11 20 47.6	
	comp=N,539nm,0.2s						
TLL	Tololo Astrono	1.07	51	⇓iP	Pb	11 20 35.8	+0.1
TLL				i S	Sb	11 20 49.7	+0.5
TLL				AMP		11 20 55.4	
	comp=N,1µm,0.6s						
PTCH	Petorca	1.58	154	eP	Pn	11 20 42.7	-0.4
PTCH				i S	Sn	11 21 03.6	+0.7
PTCH				AMP		11 21 08.2	
	comp=N,962nm,0.3s						
PACH	Papudo	1.70	171	i P	Pn	11 20 44.6	-0.2
PACH				i S	Sn	11 21 05.7	-0.5
JACH	Jahuel	2.08	152	eP	Pn	11 20 51.0	+0.8
ROCH	El Roble	2.21	163	eP	Pn	11 20 52.6	+0.5
ZON	Zonda	2.73	106	eP	Pn	11 21 02.0	+2.5
ZON				eS	Sn	11 21 39.0	+6.8
FCH	Farellones	2.77	154	eP	Pn	11 21 01.3	+1.2
FCH				i S	Sn	11 21 35.1	+2.0
FCH				AMP		11 21 46.2	
	comp=E,129nm,0.2s						
TACH	Talagante	2.88	166	eP	Pn	11 21 01.9	+0.3
TACH				i S	Sn	11 21 36.3	+0.3
CHCH	Chadas Angostu	3.21	163	i S	Sn	11 21 45.0	+0.6

DJA ***08*** *11:58:38.2±0.8,10.52S×121.10E,h320^{km},ML5.4/4,Error ellipse: s-maj=110.5km s-min=18.6km az=17.0*
NEIC ***08*** *11:58:41.8±1.3,8.20S×121.55E,h176^{km}±23^{km},mb4.0/1, Error ellipse: s-maj=26.2km s-min=12.1km az=200.0*
ISC 08 11:58:42.7±1.4**,8.6S**±0.1×**121.48E**±0.09**,h192**^{km}±23^{km}**, n17,**σ**1**^{s}**10**/29**,mb4.8**/1**,2C-11D,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	Kedomdong	5.31	270	⇓ePn	P	12 00 02.3	+0.7
KEDI				eSn	S	12 01 05.0	+2.2
KEDI	Kedomdong	5.31	270	⇓ePn	P	12 00 02.3	+0.7
	611nm,0.2s						
KEDI	Kedomdong	5.31	270	ePg	P	12 00 04.0	+2.4
KEDI				⇑eSn	S	12 01 04.4	+1.6
RATI	Rata	5.88	268	⇑ePn	P	12 00 08.6	-0.4
RATI				eSn	S	12 01 15.4	-0.8
RATI	Rata	5.88	268	⇓ePn	P	12 00 08.4	-0.6
	458nm,0.2s						

RATI	**Rata**	5.88	268	ePg	P	12 00 09.8	+0.8
RATI				⇓eSn	S	12 01 15.3	-0.9
KELI	**Kelakatan**	6.92	272	⇓eP	P	12 00 22.3	-0.3
	79nm,0.2s						
KELI				eS	S	12 01 40.0	-0.6
KELI	**Kelakatan**	6.92	272	⇓ePn	P	12 00 23.0	+0.4
	79nm,0.2s						
KELI				⇓eSn	S	12 01 39.5	-1.1
SRDI	**Scrawed**	7.26	270	⇓ePn	P	12 00 24.6	-2.4
	177nm,0.2s						
SRDI				⇓eSn	S	12 01 44.4	-4.1
FITZ	**Fitzroy Crossi**	10.31	157	eP	P	12 01 08.6	+1.6
	4.3nm,0.3s						
FITZ				eS	S	12 02 59.5	-0.5
KAKA	**Kakadu**	11.54	112	eP	P	12 01 22.1	-0.6
	13nm,0.6s						
KAKA				eS	S	12 03 22.4	-6.0
MBWA	**Marble Bar**	12.64	187	eP	P	12 01 41.0	+4.2
WRAB	**Tennant Creek**	16.82	134	eP	P	12 02 28.6	0.0
	3.3nm,0.4s						
WRAB				eS	S	12 05 28.3	+0.1
WB2	**Warramunga Arr**	16.83	134	⇓iP	P	12 02 28.7	0.0
WB2				eS	S	12 05 27.0	-1.4
ASPA	**Alice Springs**	19.16	143	eP	P	12 02 54.7	+1.1
ASPA				eS	S	12 06 28.8	+13
STKA	**Stephens Creek**	29.80	144	⇓iP	P	12 04 34.8	+0.9
	7.8nm,0.3s,mb4.8						
STKA	**Stephens Creek**	29.80	144	eP	P	12 04 34.4	+0.5

*NEIC **08** 12:24:31.3,30.78S×71.67W,h33^{km},ML3.5(GUC),After GUC.*

GUC 08 12:24:31.3±0.6**,30.78S**×**71.67W,h33^{km}**±4^{km}**,MD4.1, ML3.5,1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILCH	**Illapel**	0.95	153	eP	P	12 24 48.5	+0.1
ILCH				i S	S	12 25 01.5	+0.6
ILCH				AMP		12 25 03.4	
	comp=N,2µm,0.2s						
TLL	**Tololo Astrono**	0.96	51	⇓iP	P	12 24 49.4	+0.9
TLL				i S	S	12 25 02.7	+1.5
TLL				AMP		12 25 07.0	
	comp=N,2µm,0.7s						
PTCH	**Petorca**	1.61	157	eP	P	12 24 58.9	+1.2
PTCH				i S	S	12 25 19.7	+2.2
PTCH				AMP		12 25 24.8	
	comp=E,2µm,0.2s						
PACH	**Papudo**	1.76	174	eP	P	12 25 00.8	+0.9
JACH	**Jahuel**	2.11	154	eP	P	12 25 05.5	+0.7
CLCH	**Cerro Calan**	2.78	160	eP	P	12 25 18.1	+3.6
CLCH				i S	S	12 25 51.3	+4.1
CLCH				AMP		12 26 01.2	
	comp=E,310nm,0.3s						
FCH	**Farellones**	2.80	156	eP	P	12 25 15.9	+1.2
FCH				AMP		12 26 05.4	
	comp=E,127nm,0.5s						
TACH	**Talagante**	2.93	168	eP	P	12 25 16.8	+0.2
CHCH	**Chadas Angostu**	3.26	165	eP	P	12 25 21.8	+0.5

CASC 08 12:25:14.7±1.1**,12.00N**×**87.85W,h17^{km}**±5^{km}**,MD3.7,2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	**Leon**	1.02	66	eP	Pb	12 25 32.7	-0.8
CRIN	**San Cristobal**	1.05	48	eP	Pb	12 25 33.2	-0.8
TEL3	**Telica 3**	1.14	60	eP	Pb	12 25 34.2	-1.3
MIRN	**Miramar**	1.20	68	⇓eP	Pb	12 25 35.5	-1.0
MIRN				eS	Sb	12 25 52.8	+1.2
COPN	**Copaltepe**	1.24	81	⇓eP	Pb	12 25 36.3	-1.0
COPN				eS	Sb	12 25 54.6	+1.7
CNCH	**Conchagua**	1.27	1	eP	Pb	12 25 37.4	-0.4
CNCH				eS	Sb	12 25 54.5	+0.8
MOMJ	**Momotombo**	1.34	72	eP	Pn	12 25 38.2	-0.6
APYN	**Apoyeque**	1.48	81	eP	Pn	12 25 39.9	-0.9
BLLM	**Bellamira**	1.49	345	eP	Pn	12 25 40.6	-0.3
BLLM				eS	Sn	12 26 00.5	+0.5
MGAN	**Managua**	1.57	84	eS	Sn	12 26 02.1	-0.1
LCBS	**La Ceiba**	1.98	326	eP	Pn	12 25 47.4	-0.6
LCBS				eS	Sn	12 26 12.6	0.0
LFRS	**El Faro**	2.00	324	eP	Pn	12 25 48.5	+0.3
LFRS				eS	Sn	12 26 13.6	+0.5

*NNC **08** 12:52:35.6±9.1,38.16N×78.70E,mpv3.4,Error ellipse: s-maj=87.8km s-min=23.1km az=27.0*

BJI 08 12:52:33.0,37.73N×**78.28E,h10^{km},ML3.4,4C, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	2.54	315	PG	Pg	12 53 18.2	-5.5
KSH				S	Sn	12 53 47.1	+0.8
KSH				Smax			
	comp=N,220nm,0.7s						
KSH				Smax			
	comp=E,140nm,0.4s						
AAK	**Ala-Archa**	5.69	331	⇑Pg	Pg	12 54 16.3	-10
	comp=E,2.9nm,0.6s						
AAK				⇑Lg		12 55 30.3	
	comp=E,8.3nm,0.8s						
MK31	**Makanchi Array**	9.53	17	⇑Pn	P	12 54 49.7	-3.6
	comp=E,0.2nm,0.4s,baz=204,slow=15						
MK31				⇑Sn	Sn	12 56 36.1	-5.5
	comp=E,0.2nm,0.5s,baz=192,slow=22						

MAN 08 13:00:29.1,12.88N×**122.79E,h15^{km},mb4.0,ML2.7, MS2.5,1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	0.45	346	eP	Pb	13 00 38.3	0.0
AUQP				eS	Sb	13 00 47.6	+3.1
OTRP	**Odiongan**	0.91	236	eP	Pb	13 00 46.6	+0.6
OTRP				eS	Sb	13 00 60.0	+2.2
MMPH	**Masbate**	0.96	122	eP	Pb	13 00 56.0	+9.0
GQP	**Guinayangan**	1.07	342	⇓eP	Pb	13 00 48.2	-0.7
GQP				eS	Sb	13 01 02.7	+0.2
BOAC	**Boac**	1.09	302	eP	Pb	13 00 48.7	-0.4
BOAC				eS	Sb	13 01 04.4	+1.5
PVCP	**Virac**	1.51	62	eP	Pn	13 00 55.2	-0.6
PVCP				eS	Sb	13 01 15.7	+0.6
POLP	**Polilio Island**	2.01	336	eP	Pn	13 01 04.2	+1.1
POLP				eS	Sn	13 01 32.2	+4.1

IGQ 08 13:26:21.6,3.24S×**80.82W,h8^{km}**±5^{km}**,mb4.7,4C-3D, Error ellipse: s-maj=13.4km s-min=3.4km az=145.8, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	1.06	351	P	Pb	13 26 43.4	+1.6
SALI				S	Sb	13 26 55.3	-0.4
HOJA	**Cerro de Hojas**	2.19	7	P	Pn	13 26 58.7	-0.2
HOJA				S	Sn	13 27 26.7	+0.2
IGUA	**Igualata**	2.79	51	P	Pn	13 27 09.1	+1.6
ARRY	**Arrayan**	2.92	54	⇓P	Pn	13 27 10.5	+1.1
CUSU	**Cusua**	2.94	53	P	Pn	13 27 11.9	+2.3
RETU	**Refugio**	2.96	53	P	Pn	13 27 11.6	+1.7
JUIV	**Juive**	2.97	53	P	Pn	13 27 10.5	+0.6
JAMA	**Jama**	3.02	12	P	Pn	13 27 11.2	+0.4
JAMA				S	Sn	13 27 48.3	+0.8
PISA	**Pisayambo**	3.26	48	⇓P	Pn	13 27 16.4	+2.3
NAS1	**Nasa**	3.49	42	⇑P	Pn	13 27 19.7	+2.3
TAMB	**Tambo**	3.52	44	⇓P	Pn	13 27 20.1	+2.2
VC1	**Cotopaxi 1**	3.54	43	⇑P	Pn	13 27 20.1	+2.0
JUA2	**San Juan 2**	3.73	36	P	Pn	13 27 22.6	+1.8
TERV	**Terraza Guagua**	3.77	36	⇑P	Pn	13 27 22.7	+1.4
PINO	**Pino**	3.78	36	⇑P	Pn	13 27 22.8	+1.3
YANA	**Yana**	3.83	36	P	Pn	13 27 23.2	+1.0
ANTI	**Antisana**	3.84	44	P	Pn	13 27 24.6	+2.2
CAYR	**Refugio Cayamb**	4.29	41	P	Pn	13 27 30.9	+2.1
CAYA	**Cayambe**	4.34	41	P	Pn	13 27 31.1	+1.6

*NEIC **08** 13:46:44.6,37.86N×1.80W,MN2.4(MDD),After MDD.*
NEIC Felt [III] at Lorca.
*CSEM **08** 13:46:44.4±0.1,37.84N×1.79W,h1^{km}±1^{km},ML2.8/4, Error ellipse: s-maj=2.4km s-min=1.7km az=160.0*
*SFS **08** 13:46:44.0,37.80N×1.80W*

MDD 08 13:46:44.6±0.3**,37.87N**×**1.80W,mbLg2.4**/17**,2C,Error ellipse: s-maj=4.2km s-min=2.2km az=3.0,PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta**	0.44	93	⇑Pg	Pg	13 46 52.5	-1.0
	13nm,0.3s,SNR=18						
EMUR				Lg		13 46 58.9	
	175nm,0.3s						
EMUR	**La Murta**	0.44	93	Pg	Pg	13 46 52.5	-1.0
	13nm,0.3s,SNR=18						
CART	**Cartagena**	0.69	114	ePg	Pg	13 46 58.5	+0.1
CART	**Cartagena**	0.69	114	P	Pg	13 46 58.6	+0.2
CART				S	Sg	13 47 06.3	-1.4
CART	**Cartagena**	0.69	114	ePg	Pg	13 46 58.5	+0.1
CART	**Cartagena**	0.69	114	i P	Pg	13 46 58.7	+0.3
EVIA	**Vianos**	0.95	325	⇑Pg	Pg	13 47 02.3	-1.2
	88nm,0.6s,SNR=18						
EVIA				Lg		13 47 15.5	
	43nm,0.4s						
ENIJ	**Nijar**	0.95	200	Pg	Pg	13 47 01.2	-2.4
	7.8nm,0.2s,SNR=7.9						
ENIJ				Lg		13 47 15.5	
	65nm,0.4s,SNR=7.9						
EQES	**Quesada**	1.01	267	Pg	Pg	13 47 03.2	-1.5
	4.3nm,0.1s,SNR=30						
EQES				Lg		13 47 17.0	
	7.9nm,0.1s						
EQES	**Quesada**	1.01	267	Pg	Pg	13 47 03.2	-1.5
	4.3nm,0.1s,SNR=30						
EBER	**Berja**	1.30	222	Pg	Pg	13 47 08.1	-2.5
	15nm,0.4s,SNR=17						
EBER				Lg		13 47 26.4	
	56nm,0.4s						
EBER	**Berja**	1.30	222	Pg	Pg	13 47 08.1	-2.5
	15nm,0.4s,SNR=17						
EBEN	**Beniarda**	1.50	56	Pg	Pg	13 47 11.7	-2.7
EBEN				Lg		13 47 33.1	
EBEN	**Beniarda**	1.50	56	Pg	Pg	13 47 11.7	-2.7
	0.4nm,0.0s,SNR=9.3						
EBEN				Lg		13 47 33.1	
	2.7nm,0.5s						
EBEN	**Beniarda**	1.50	56	Pg	Pg	13 47 11.7	-2.8
	0.4nm,0.0s,SNR=9.3						
EBAN	**Banos Encina**	1.60	281	Pg	Pg	13 47 12.7	-3.8
	5.4nm,0.2s,SNR=7.9						
EBAN				Lg		13 47 34.8	
	37nm,0.2s,SNR=7.9						
ELUQ	**Luque**	1.98	262	Pn	Pn	13 47 19.3	-0.5
	6.6nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	13 47 43.6	-2.0
	4.7nm,0.2s,SNR=7.9						
ELUQ				Lg		13 47 48.9	
	15nm,0.2s,SNR=5.8						
ELOJ	**Sierra Loja**	2.00	250	Pn	Pn	13 47 19.5	-0.6
	1.2nm,0.2s,SNR=7.9						
ELOJ				Lg		13 47 46.4	
	5.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	2.21	279	Pn	Pn	13 47 20.7	-2.3
	0.9nm,0.1s,SNR=16						
EADA				Sn	Sn	13 47 47.9	-3.7
	4.0nm,0.2s,SNR=5.0						
EADA				Lg		13 47 55.3	
	14nm,0.2s,SNR=7.9						
EADA	**Adamuz**	2.21	279	Pn	Pn	13 47 20.8	-2.3
EADA				Sn	Sn	13 47 47.9	-3.7
	4.0nm,0.2s,SNR=5.0						
ESDC	**Sonseca Array**	2.47	318	Pn	Pn	13 47 24.5	-2.3
	baz=129,slow=13,SNR=7.9						
ESDC				Pg	Pg	13 47 29.1	-4.9
	baz=134,slow=17,SNR=7.9						
ESDC				Lg		13 48 01.7	
	12nm,0.2s,baz=130,slow=30,SNR=7.9						
ESDC	**Sonseca Array**	2.47	318	Pn	Pn	13 47 24.5	-2.3
	slow=13,SNR=7.9						
ESDC	**Sonseca Array**	2.47	318	Pg	Pg	13 47 29.1	-4.9
	slow=17,SNR=7.9						
ESLA	**Sonseca Array**	2.47	318	ePn	Pn	13 47 28.2	+1.4
ESLA	**Sonseca Array**	2.47	318	ePn	Pn	13 47 28.2	+1.4
EMOS	**Mosqueruela**	2.70	22	Pn	Pn	13 47 29.7	-0.4
	86nm,1.6s,SNR=7.9						
EMOS				Pg	Pg	13 47 34.4	-4.1
	113nm,1.6s,SNR=7.9						
EMOS				Lg		13 48 10.5	
	1.2nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	2.70	22	Pn	Pn	13 47 29.7	-0.3
	86nm,1.6s,SNR=7.9						
EMOS	**Mosqueruela**	2.70	22	Pg	Pg	13 47 34.4	-4.1
	113nm,1.6s,SNR=7.9						
EIBI	**Ibiza**	2.73	64	Sn	Sn	13 48 01.6	-3.0
	4.3nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	2.73	64	Sn	Sn	13 48 01.6	-3.0
	4.3nm,0.3s,SNR=7.9						
ESPR	**Espera**	3.38	254	Pn	Pn	13 47 39.3	-0.4
	0.0nm,0.1s,SNR=4.0						
ESPR				Sn	Sn	13 48 17.3	-3.8
	0.8nm,0.2s,SNR=7.9						
ESPR	**Espera**	3.38	254	Pn	Pn	13 47 39.3	-0.4
	SNR=4.0						
ESPR				Sn	Sn	13 48 17.3	-3.9
	0.8nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	13 47 44.0	-2.5
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	13 48 26.3	-6.9
	1.2nm,0.2s,SNR=7.9						
EMIN				Lg		13 48 43.6	
	5.8nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	3.86	270	Pn	Pn	13 47 44.0	-2.5
	SNR=7.9						
EMIN				Sn	Sn	13 48 26.4	-6.9
ESAC	**San Caprasio**	3.98	14	Lg		13 48 51.2	
	54nm,0.5s,SNR=4.0						
EBAD	**Badajoz**	4.20	284	Pn	Pn	13 47 47.3	-4.0
	0.1nm,0.1s,SNR=7.9						
EBAD				Pg	Pg	13 48 01.2	-7.2
	0.3nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	13 48 36.0	-5.8
	9.8nm,0.2s,SNR=7.9						
EBAD				Lg		13 48 56.4	
	8.2nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	5.50	347	Lg		13 49 41.3	
	1.3nm,0.2s,SNR=4.0						
ECAL	**Calabor**	5.56	319	Lg		13 49 40.2	
	3.9nm,0.4s,SNR=4.0						

*NIED **08** 13:49:00,33.90N×142.50E,h8^{km},Mw4.2 Best double couple: $M_0 2.6\times10^{15}$ NP1:ϕ_s198°,δ64°,λ-87°. NP2:ϕ_s12°, δ26°,λ-96°.*
*JMA **08** 13:49:08.9±0.2,33.89N×142.50E,h12^{km},M4.1*
*MOS **08** 13:49:11.1±1.3,33.99N×142.63E,h33^{km},mb4.6/9,Error ellipse: s-maj=31.7km s-min=11.1km az=130.8*
*NEIC **08** 13:49:14.6±1.0,33.92N×142.41E,h40^{km},mb4.4/10,Error ellipse: s-maj=22.9km s-min=16.3km az=212.0*
*BJI **08** 13:49:16.4,34.35N×142.11E,h40^{km},mB4.7,mb4.4, Ms3.9,Msz3.8*

ISC 08 13:49:10.9±0.6**,33.98N**±0.04×**142.59E**±0.05**,h33^{km},n51,** σ**1^{s}22**/71**,mb4.3**/16**,MS3.2**/1**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	1.50	297	P	P	13 49 35.4	-0.3
BSO1				S	S	13 49 55.1	+0.9
BSO3	**Boso 3**	1.91	296	P	P	13 49 41.8	+0.2
BSO3				S	S	13 50 06.1	+1.5
BSO4	**Boso 4**	2.12	299	P	P	13 49 45.3	+0.7
BSO4				S	S	13 50 10.8	+0.8
KTR	**Katsuura**	2.21	302	P	P	13 49 46.5	+0.6
KTR				S	S	13 50 13.9	+1.6
CHOJ	**Chosi**	2.23	321	P	P	13 49 47.3	+1.1
CHOJ				S	S	13 50 15.2	+2.3
JHJ2	**Mitsune**	2.47	250	P	P	13 49 49.3	-0.4
JHJ2				S	S	13 50 17.4	-1.6
JMY	**Miyakejima3**	2.56	273	P	P	13 49 50.1	-0.8
JMY				eS	S	13 50 21.9	+0.7
JIM2	**Oshima 3**	2.72	287	P	P	13 49 51.9	-1.2
JIM2				S	S	13 50 25.0	-0.2
JOD2	**Odawara 2**	3.16	295	P	P	13 49 58.3	-1.2
JOD2				S	S	13 50 35.1	-1.4
JAG	**Ashikaga**	3.54	314	P	P	13 50 04.4	-0.5
JAG				eS	S	13 50 47.4	+1.2
JRY	**Ryogami san**	3.65	305	P	P	13 50 05.8	-0.6
JRY				eS	S	13 50 49.7	+0.8
JYN	**Shimob**	3.66	296	P	P	13 50 06.4	-0.2
JYN				S	S	13 50 48.7	-0.5
JMM	**Marumori**	4.14	340	P	P	13 50 11.4	-2.1
JMM				S	S	13 50 56.8	-4.7
MAJO	**Matsushiro**	4.41	307	eP	P	13 50 16.9	-0.3
MAT	**Matsushiro**	4.41	307	eP	P	13 50 16.0	-1.2
MAT				eS	S	13 51 06.0	-2.0
MAT	**Matsushiro**	4.41	307	P	P	13 50 16.4	-0.8
MAT				S	S	13 51 05.8	-2.2
MAT	**Matsushiro**	4.41	307	P	P	13 50 17.8	+0.6
MAT				eS	S	13 51 06.7	-1.3
JNS	**Sasagawa**	4.66	326	P	P	13 50 20.6	-0.2
JNS				eS	S	13 51 13.5	-1.0
JIE	**Ise**	4.89	276	P	P	13 50 23.5	-0.6
JMK	**Ichinoseki**	5.08	348	P	P	13 50 24.7	-2.1
JMK				S	S	13 51 20.6	-4.5
JGM	**Miyama**	5.13	291	P	P	13 50 27.7	+0.4
JGM				S	S	13 51 25.5	-0.7
JYK	**Kaneyama**	5.25	341	P	P	13 50 27.9	-1.1
JYK				S	S	13 51 26.3	-2.9
BJI	**Beijing**	21.90	294	eP	P	13 54 06.7	+3.9
BJI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.1						
BJI				LR	LR		
	comp=Z,86nm,16.2s,MS3.2						
BJI	**Beijing**	21.90	294	eP	P	13 54 06.7	+3.9
	comp=Z,6.0nm,0.7s,mb4.1						
BJT	**Baijiatuau**	21.91	294	P	P	13 54 05.1	+2.3
BJT				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BJT	**Baijiatuau**	21.91	294	P	P	13 54 05.1	+2.3
	comp=Z,4.4nm,0.5s,mb4.1						
HIA	**Hailar**	22.79	319	eP	P	13 54 12.3	+0.8
HIA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HIA	**Hailar**	22.79	319	eP	P	13 54 12.3	+0.9
	comp=Z,8.1nm,1.0s,mb4.1						
CLNS	**Chul'man**	25.86	337	eP	P	13 54 40.8	-0.2
CLNS				e*PP	pP	13 54 47.2	-3.2
CLNS				ePPP	PcP	13 58 16.6	+6.4
CLNS				e		13 58 56.5	
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.3s						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.7s						
CLNS				smax			
	comp=E,25nm,12.4s						
CLNS				smax			
	comp=N,115nm,14.3s						
BTO	**Baotou**	26.64	294	eP	P	13 54 49.6	+1.2
BTO				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
XAN	**Xi'an**	27.84	280	P	P	13 54 57.8	-1.6
XAN				AMB	AMB		
	comp=Z,8.0nm,1.5s,mb4.1						
ENH	**Enshi**	28.21	272	eP	P	13 55 01.3	-1.4
	comp=Z,6.6nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	29.93	308	eP	P	13 55 19.7	+1.8
ULN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
ULN	**Ulaanbaatar**	29.93	308	eP	P	13 55 19.7	+1.8
	comp=Z,7.4nm,0.9s,mb4.4						
BOD	**Bodaibo**	30.64	330	eP	P	13 55 21.6	-2.4
LZH	**Lanzhou**	31.66	285	eP	P	13 55 33.5	+0.2
LZH				AP	pP	13 55 43.5	+0.6
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.0						
LZH	**Lanzhou**	31.66	285	eP	P	13 55 33.5	+0.2
LZH				*PP	pP	13 55 43.5	+0.6
LZH				*SP	sP	13 55 48.0	+0.7
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
LZH	**Lanzhou**	31.66	285	eP	P	13 55 33.5	+0.2
	comp=Z,25nm,1.0s,mb5.0						
LZH				pP	pP	13 55 43.5	+0.6
LZH				sP	sP	13 55 48.0	+0.7
ZAK	**Zakamensk**	32.97	312	eP	P	13 55 46.3	+1.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
GTA	**Gaotai**	34.48	292	eP	P	13 55 59.6	+1.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.1						
WMQ	**Urumqi**	43.14	300	eP	P	13 57 14.0	+4.2
WMQ				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
NVS	**Novosibirsk**	45.67	316	i P	P	13 57 30.5	+0.5
KURK	**Kurchatov**	48.61	310	eP	P	13 57 53.6	+0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
KURK	**Kurchatov**	48.61	310	eP	P	13 57 53.6	+0.5
	comp=Z,7.4nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	53.12	315	eP	P	13 58 28.6	+1.3
CHKZ				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
CHKZ	**Chkalovo**	53.12	315	eP	P	13 58 28.6	+1.3
	comp=Z,9.4nm,1.3s,mb4.6						
WRAB	**Tennant Creek**	54.18	190	eP	P	13 58 34.7	-0.8
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
WRAB	**Tennant Creek**	54.18	190	eP	P	13 58 34.7	-0.8
	comp=Z,4.1nm,0.5s,mb4.6						
INK	**Inuvik**	56.68	26	P	P	13 58 53.6	+0.6
INK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	**Inuvik**	56.68	26	P	P	13 58 53.6	+0.6
	comp=Z,4.4nm,1.3s,mb4.3						
PV10	**Paradox Valley**	82.06	49	eP	P	14 01 32.3	+3.0

MAN 08 14:18:27.4,13.76N×**120.45E,h94^{km},mb4.1,ML2.8, MS2.6,1C,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.20	261	eP	P	14 18 42.7	+1.8
LUBP	**Lubang**	0.20	261	eP	P	14 18 42.7	+1.8
TGY	**Tagaytay City**	0.58	55	⇑iP	P	14 18 44.7	+1.3
TGY				i S	S	14 18 57.7	+2.4
BOAC	**Boac**	1.39	102	eP	P	14 18 52.4	0.0
BOAC				eS	S	14 19 11.6	+0.7
SJMP	**San Jose**	1.45	153	eP	P	14 18 53.6	+0.4
OTRP	**Odiongan**	2.07	132	eP	P	14 19 00.9	-0.3
CUYO	**Cuyo Island**	2.95	169	eP	P	14 19 12.5	-0.9

*MOS **08** 14:48:09.7±1.1,14.19S×167.29E,h107^{km},mb6.4/42, MS5.9/19,Error ellipse: s-maj=8.0km s-min=6.5km az=86.2*
*CSEM **08** 14:48:16.1,14.16S×167.19E,h160^{km},ML6.7*
*CRAAG **08** 14:48:16.1,14.16S×167.19E,Mb6.7*
*LDG **08** 14:48:17.5±0.3,13.91S×167.32E,h170^{km},Mb6.3/4, Ms5.9/7,Error ellipse: s-maj=43.5km s-min=11.4km az=88.0*
*BGS **08** 14:48:18.7,14.25S×167.26E,h205^{km}*
*BJI **08** 14:48:21.5,13.70S×167.16E,h193^{km},mB6.8,mb6.1*
*IGIL **08** 14:48:21.0,14.30S×167.25E,h200^{km},MS6.0*
*NEIC **08** 14:48:22.0±0.1,14.25S×167.26E,mb6.1/82,ME6.1, MW6.7,Error ellipse: s-maj=5.0km s-min=3.9km az=109.0 Broadband fault plane solution: P waves. NP1:ϕ_s355°, δ45°,λ90°. NP2:ϕ_s175°,δ45°,λ90°. Principal axes: T Plg90°, Azm0°; N Plg0°, Azm0°; P Plg0°, Azm85°; Moment Tensor Solution. s52 Moment tensor: Scale 10^{19} Nm; M_{rr}1.42; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-1.36; $M_{r\theta}$-0.42; $M_{\theta\phi}$-0.10; $M_{\phi r}$0.23; Best double couple: $M_0 1.5\times10^{19}$ NP1: ϕ_s199°,δ43°,λ112°. NP2:ϕ_s349°,δ51°,λ71°. Principal axes: T 1.55, Plg74°, Azm198°; N -.17, Plg15°, Azm2°; P -1.38, Plg4°, Azm93°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
*HRVD **08** 14:48:22.0±0.1,14.18S×167.13E,h197^{km},MW6.7/85, Centroid moment Tensor Solution. LP body waves: s82,c224;Mantle waves: s85,c406; Half duration: 5^{s}3 Moment tensor: Scale 10^{19}Nm; M_{rr}1.23±.01; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$-1.20±.01; $M_{r\theta}$-0.34±.01; $M_{\theta\phi}$0.28±.01; $M_{\phi r}$0.06±.01; Best double couple: $M_0 1.294\times10^{19}$ NP1: ϕ_s181°,δ43°,λ110°. NP2:ϕ_s334°,δ50°,λ72°. Principal*

axes: T 1.316, Plg76°, Azm179°; N -.045, Plg14°, Azm346°; P -1.271, Plg3°, Azm76°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.

ISC 08 14:48:21.4±0.8**, 14.32S**±0.03×**167.26E**±0.02**, h215**^{km}±7^{km}**, h205**^{km}±.8^{km}**:pP-P, n1099,** σ1^{s}**02**/495**, mb6.0**/121**, 99C-42D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.75	186	eP	P	14 50 12.9	+0.6
DZM				eS	S	14 51 41.8	+2.9
DZM	Mont Dzumac	7.75	186	eP	P	14 50 12.8	+0.6
DZM				eS	S	14 51 41.8	+2.9
NOUC	Port Laguerre	7.79	187	eP	P	14 50 12.8	0.0
NOUC				eS	S	14 51 44.3	+4.5
PMG	Port Moresby	20.26	282d	iP	P	14 52 42.6	+0.7
PMG	Port Moresby	20.26	282	eP	P	14 52 42.7	+0.8
AFI	Afiamalu	20.34	91	eP	P	14 52 43.4	+0.8
CTA	Charters Tower	20.86	251	eP	P	14 52 48.6	+0.9
	766nm,0.8s						
CTA				i S	S	14 56 31.6	+9.0
CTA	Charters Tower	20.86	251	eP	P	14 52 48.6	+0.9
CTA				i S	S	14 56 31.6	+9.0
CTA				pmax	pmax		
	comp=Z,766nm,0.8s						
CTAO	Charters Tower	20.86	251	eP	P	14 52 48.3	+0.6
CTAO				pmax	pmax		
	comp=Z,1μm,0.9s						
CTAO	Charters Tower	20.86	251	eP	P	14 52 48.3	+0.6
	comp=Z,1μm,0.9s						
ARMA	Armidale	21.54	219⇑	iP	P	14 52 56.4	+2.1
ARMA				i S	S	14 56 47.3	+13
OUZ	Omahuta	21.58	166	PN	P	14 52 56.3	+1.7
OUZ				ScP		15 00 11.7	
OUZ	Omahuta	21.58	166	PN	P	14 52 56.3	+1.7
OUZ				ScP		15 00 11.7	
WCZ	Waipu Caves	22.45	165	eP	P	14 53 06.9	+3.8
WCZ	Waipu Caves	22.45	165	PN	P	14 53 05.1	+2.0
WCZ				ScP		15 00 13.9	
WCZ	Waipu Caves	22.45	165	PN	P	14 53 05.1	+2.0
WCZ				ScP		15 00 13.9	
RIV	Riverview	24.30	214⇑	iP	P	14 53 21.8	+1.1
HIZ	Hauiti	25.02	166	ePN	P	14 53 29.7	+2.3
HIZ				ScP		15 00 18.7	
HIZ	Hauiti	25.02	166	ePN	P	14 53 29.7	+2.3
HIZ				ScP		15 00 18.7	
PUZ	Puketiti	25.59	160	P	P	14 53 33.1	+0.4
PUZ	Puketiti	25.59	160	ePN	P	14 53 31.3	-1.4
PUZ	Puketiti	25.59	160	ePN	P	14 53 31.3	-1.4
MWZ	Matawai	25.59	161	eP	P	14 53 32.1	-0.6
MWZ	Matawai	25.59	161	ePN	P	14 53 30.9	-1.8
MWZ				ScP		15 00 38.8	
MWZ	Matawai	25.59	161	ePN	P	14 53 30.9	-1.8
MWZ				ScP		15 00 38.8	
MGZ	Maungaku	25.65	165	P	P	14 53 36.4	+3.2
MGZ	Maungaku	25.65	165	PN	P	14 53 33.3	+0.1
MGZ	Maungaku	25.65	165	PN	P	14 53 33.3	+0.1
NGZ	Ngauruhoe	25.83	165	P	P	14 53 37.4	+2.6
NGZ	Ngauruhoe	25.83	165	ePN	P	14 53 34.9	0.0
NGZ	Ngauruhoe	25.83	165	ePN	P	14 53 34.9	0.0
TUVZ	Tukino	25.93	165	P	P	14 53 40.6	+4.8
BKZ	Black Stump Fm	26.06	164	eP	P	14 53 35.3	-1.6
BKZ	Black Stump Fm	26.06	164	ePN	P	14 53 35.1	-1.8
BKZ	Black Stump Fm	26.06	164	ePN	P	14 53 35.1	-1.8
MOVZ	Moawhango	26.09	165	P	P	14 53 39.4	+2.2
WAZ	Wanganui	26.23	166	eP	P	14 53 42.5	+4.0
KNZ	Kokohu	26.27	161	eP	P	14 53 40.7	+1.9
KNZ	Kokohu	26.27	161	ePN	P	14 53 40.6	+1.8
KNZ	Kokohu	26.27	161	ePN	P	14 53 40.6	+1.8
CNB	Canberra Magne	26.39	214⇑	iP	P	14 53 40.3	+0.3
	comp=Z,22μm,1.7s						
TSZ	Takapari Road	26.76	165	P	P	14 53 42.0	-1.3
TSZ	Takapari Road	26.76	165	ePN	P	14 53 41.8	-1.4
TSZ	Takapari Road	26.76	165	ePN	P	14 53 41.8	-1.4
QRZ	Quartz Range	26.81	171	eP	P	14 53 49.5	+5.8
QRZ	Quartz Range	26.81	171	ePN	P	14 53 45.8	+2.1
QRZ	Quartz Range	26.81	171	ePN	P	14 53 45.8	+2.1
PWZ	Pawanui	26.96	164	ePN	P	14 53 41.9	-3.3
PWZ	Pawanui	26.96	164	ePN	P	14 53 41.9	-3.3
MRZ	Mangatainoka R	27.23	166	eP	P	14 53 47.6	0.0
MRZ	Mangatainoka R	27.23	166	ePN	P	14 53 46.6	-1.0
MRZ	Mangatainoka R	27.23	166	ePN	P	14 53 46.6	-1.0
KIW	Kapiti Island	27.28	167	P	P	14 53 52.1	+4.1
KIW	Kapiti Island	27.28	167	ePN	P	14 53 50.6	+2.7
KIW	Kapiti Island	27.28	167	ePN	P	14 53 50.6	+2.7
NNZ	Nelson	27.33	170	eP	P	14 53 50.2	+1.8
NNZ	Nelson	27.33	170	ePN	P	14 53 49.9	+1.5
NNZ	Nelson	27.33	170	ePN	P	14 53 49.9	+1.5
BFZ	Birch Farm	27.41	165	eP	P	14 53 49.2	0.0
BFZ	Birch Farm	27.41	165	ePN	P	14 53 47.3	-1.9
BFZ				ScP		15 00 26.2	
BFZ	Birch Farm	27.41	165	ePN	P	14 53 47.3	-1.9
BFZ				ScP		15 00 26.2	
CAW	Cannon Point	27.55	167	P	P	14 53 50.5	+0.1
CAW	Cannon Point	27.55	167	ePN	P	14 53 50.3	-0.1
CAW	Cannon Point	27.55	167	ePN	P	14 53 50.3	-0.1
MRW	Makara Radio	27.59	168	P	P	14 53 51.6	+0.9
MRW	Makara Radio	27.59	168	ePN	P	14 53 51.4	+0.6
MRW	Makara Radio	27.59	168	ePN	P	14 53 51.4	+0.6
DSZ	Denniston Nort	27.61	173	eP	P	14 53 52.0	+1.0
DSZ	Denniston Nort	27.61	173	ePN	P	14 53 52.2	+1.2
DSZ	Denniston Nort	27.61	173	ePN	P	14 53 52.2	+1.2
TUWZ	Tuamarina	27.63	169	ePN	P	14 53 52.9	+1.7
TUWZ	Tuamarina	27.63	169	ePN	P	14 53 52.9	+1.7
MTW	Mount Morrison	27.69	167	P	P	14 53 49.8	-1.9
MTW	Mount Morrison	27.69	167	ePN	P	14 53 50.0	-1.7
MTW	Mount Morrison	27.69	167	ePN	P	14 53 50.0	-1.7
THZ	Tophouse	27.78	171	eP	P	14 53 51.9	-0.6
THZ	Tophouse	27.78	171	PN	P	14 53 50.6	-1.9
THZ				SN	S	14 58 24.9	+7.0
THZ	Tophouse	27.78	171	PN	P	14 53 50.6	-1.9
THZ				SN	S	14 58 24.9	+7.0
MSWZ	Moikau Station	27.88	167	P	P	14 53 53.7	+0.3
MSWZ	Moikau Station	27.88	167	ePN	P	14 53 53.5	+0.2
MSWZ	Moikau Station	27.88	167	ePN	P	14 53 53.5	+0.2
PAWZ	Paruwai Farm	27.89	167	ePN	P	14 53 52.4	-1.0
PAWZ	Paruwai Farm	27.89	167	ePN	P	14 53 52.4	-1.0
KHZ	Kahutara	28.52	170	eP	P	14 54 00.0	+0.9
KHZ	Kahutara	28.52	170	ePN	P	14 53 58.1	-1.0
KHZ	Kahutara	28.52	170	ePN	P	14 53 58.1	-1.0
LTZ	Lake Taylor	28.69	172	eP	P	14 53 57.3	-3.3
LTZ	Lake Taylor	28.69	172	PN	P	14 53 58.7	-2.0
LTZ	Lake Taylor	28.69	172	PN	P	14 53 58.7	-2.0
YOMI	Yo Moklole	28.80	291	eP	P	14 53 58.7	-3.2
	comp=Z,95nm,0.5s,mb5.7						
WVZ	Waitaha Valley	28.81	175	eP	P	14 54 00.6	-1.1
WVZ	Waitaha Valley	28.81	175	ePN	P	14 54 01.0	-0.7
WVZ	Waitaha Valley	28.81	175	ePN	P	14 54 01.0	-0.7
FOZ	Fox Glacier	29.22	176	PN	P	14 54 04.3	-1.0
FOZ	Fox Glacier	29.22	176	PN	P	14 54 04.3	-1.0
STKA	Stephens Creek	29.25	229	eP	P	14 54 05.9	+0.2
	comp=Z,528nm,0.4s,mb6.5						
STKA				i sP	sP	14 55 08.4	-5.8
STKA				i S	S	14 58 47.1	+5.8
STKA				i SCS	ScS	15 04 26.7	+6.5
RPZ	Rata Peaks	29.48	174	eP	P	14 54 06.5	-1.1
RPZ	Rata Peaks	29.48	174	PN	P	14 54 05.9	-1.7
RPZ	Rata Peaks	29.48	174	PN	P	14 54 05.9	-1.7
JCZ	Jackson Bay	29.68	178	eP	P	14 54 09.0	-0.4
JCZ	Jackson Bay	29.68	178	PN	P	14 54 08.9	-0.5
JCZ	Jackson Bay	29.68	178	PN	P	14 54 08.9	-0.5
LBZ	Lake Benmore	30.07	176	eP	P	14 54 11.9	-0.9
LBZ	Lake Benmore	30.07	176	PN	P	14 54 12.1	-0.7
LBZ	Lake Benmore	30.07	176	PN	P	14 54 12.1	-0.7
TOO	Toolangi	30.18	216⇑	iP	P	14 54 13.9	+0.1
	comp=Z,38nm,1.0s,mb5.0						
TOO				esP	sP	14 55 17.1	-5.3
TOO				i S	S	14 59 01.8	+6.0
MSZ	Milford Sound	30.26	179	ePN	P	14 54 14.2	-0.2
MSZ	Milford Sound	30.26	179	ePN	P	14 54 14.2	-0.2
WKZ	Wanaka	30.45	178	eP	P	14 54 16.2	+0.2
WKZ	Wanaka	30.45	178	ePN	P	14 54 15.4	-0.7
WKZ	Wanaka	30.45	178	ePN	P	14 54 15.4	-0.7
ODZ	Otahua Downs	30.76	175	eP	P	14 54 17.4	-1.4
ODZ	Otahua Downs	30.76	175	ePN	P	14 54 17.4	-1.4
ODZ	Otahua Downs	30.76	175	ePN	P	14 54 17.4	-1.4
EAZ	Earnscleugh	30.86	177	eP	P	14 54 18.9	-0.8
EAZ	Earnscleugh	30.86	177	PN	P	14 54 18.6	-1.0
EAZ	Earnscleugh	30.86	177	PN	P	14 54 18.6	-1.0
TUZ	Tuapeka	31.60	177	eP	P	14 54 25.3	-0.8
TUZ	Tuapeka	31.60	177	PN	P	14 54 24.9	-1.2
TUZ	Tuapeka	31.60	177	PN	P	14 54 24.9	-1.2
WB2	Warramunga Arr	31.91	255⇑	iP	P	14 54 26.9	-2.1
WB2				i sP	sP	14 55 27.1	-11
WB2				eS	S	14 59 20.7	-2.2
WRAB	Tennant Creek	31.91	255⇑	iP	P	14 54 27.2	-1.8
WRAB				eS	S	14 59 23.5	+0.5
WRAB				pmax	pmax		
	comp=Z,3μm,1.4s,mb6.6						
WRAB	Tennant Creek	31.91	255⇑	iP	P	14 54 27.2	-1.8
	comp=Z,3μm,1.4s,mb6.6						
WRAB				eS	S	14 59 23.5	+0.6
RAR	Rarotonga	32.09	107	P	P	14 54 29.6	-1.0
RAR				pmax	pmax		
	comp=Z,564nm,1.6s						
RAR	Rarotonga	32.09	107	P	P	14 54 29.6	-0.9
	comp=Z,564nm,1.6s,mb5.8						
ASPA	Alice Springs	32.81	248⇑	iP	P	14 54 35.2	-1.6
ASPA				eS	S	14 59 35.4	-1.6
ASPA				eSCS	ScS	15 04 43.1	+5.2
TAU	Tasmania Unive	33.26	207	eP	P	14 54 40.3	-0.1
TAU				pmax	pmax		
	comp=Z,1μm,1.3s,mb6.2						
TAU	Tasmania Unive	33.26	207	eP	P	14 54 40.3	-0.1
	comp=Z,1μm,1.3s,mb6.2						
KAKA	Kakadu	33.88	268⇑	iP	P	14 54 45.2	-0.7
	comp=Z,537nm,0.7s,mb6.2						
GUMO	Guam	35.50	320	eP	P	14 54 59.6	-0.1
GUMO				pmax	pmax		
	comp=Z,316nm,0.7s,mb6.0						
GUMO	Guam	35.50	320	eP	P	14 54 59.6	0.0
	comp=Z,316nm,0.7s,mb6.0						
FORT	Forrest	39.50	239⇑	iP	P	14 55 32.6	-0.2
	comp=Z,4μm,0.9s,mb6.8						
FORT				i sP	sP	14 56 35.5	-7.8
FORT				i PCP	Px	14 58 13.2	
FORT				i S	S	15 01 18.8	+0.2
FITZ	Fitzroy Crossi	40.08	259⇑	iP	P	14 55 37.1	-0.6
	comp=Z,945nm,1.0s,mb6.2						
FITZ				esP	sP	14 56 38.0	-10
FITZ				ePCP	Px	14 58 13.1	
FITZ				i S	S	15 01 28.8	+1.4
MCQ	Macquarie Isla	40.62	187	eP	P	14 55 41.4	-0.3
MCQ				esP	sP	14 56 49.6	-2.8
MCQ				e		14 58 21.3	
MCQ				eS	S	15 01 42.0	+7.2
MCQ				esS		15 02 56.1	
MCQ	Macquarie Isla	40.62	187	eP	P	14 55 41.4	-0.3
MCQ				eS	S	15 01 42.0	+7.2
PAE	Paea	41.56	101	eP	P	14 55 49.8	-0.1
	comp=Z,396nm,1.4s,mb5.7						
PAE				epP	pP	14 56 37.0	+1.3
	comp=Z,310nm,1.0s						
PPT	Papeete	41.57	100	eP	P	14 55 50.2	+0.3
	comp=Z,227nm,1.4s,mb5.4						
PPT	Papeete	41.57	100	eLR	LR	15 08 09.3	
	comp=Z,369μm,69.2s						
TIAR	Tiarei	41.79	100	eP	P	14 55 51.9	+0.2
	comp=Z,369nm,1.1s,mb5.7						
TIAR				epP	pP	14 56 38.1	+0.6
	comp=Z,787nm,1.2s						
TBI	Tubuai	41.80	109	eP	P	14 55 52.0	+0.2
	comp=Z,409nm,1.0s,mb5.8						
TBI				eLR	LR	15 08 27.2	
	comp=Z,69μm,62.0s						
TVO	Taravao	41.87	101	eP	P	14 55 52.7	+0.3
	comp=Z,169nm,0.7s,mb5.6						
MEH	Mehetia	42.99	101	eP	P	14 56 01.6	+0.1
	comp=Z,299nm,1.2s,mb5.6						
MEH				epP	pP	14 56 48.9	+1.4
	comp=Z,290nm,1.1s						
PMOR	Pomariorio Ree	43.34	97	eP	P	14 56 04.2	-0.1
	comp=Z,844nm,1.3s,mb6.0						
PMOR				epP	pP	14 56 49.5	-0.8
	comp=Z,1μm,1.4s						
MBWA	Marble Bar	45.65	254	P	P	14 56 22.4	-0.2
MBWA				pP	pP	14 57 07.8	-1.2
MBWA				sP	sP	14 57 26.9	-6.7
MBWA	Marble Bar	45.65	254⇑	eP	P	14 56 22.2	-0.3
	comp=Z,2μm,1.3s,mb6.2						
MATI	Mati	45.84	295	eP	P	14 56 23.1	-1.1
BIPH	Bislig	46.33	296⇑	eP	P	14 56 28.2	+0.3
DAV	Davao City (W)	46.49	294⇓	eP	P	14 56 30.8	+1.6
KCP	Kidapawan	46.90	294⇑	iP	P	14 56 34.5	+2.2
BUKP	Musuan	47.32	295	eP	P	14 56 37.4	+1.7
BUTP	Butuan	47.34	297	eP	P	14 56 36.6	+0.7
SCPH	Surigao	47.85	298	eP	P	14 56 39.7	-0.1
SCPH				eS	pP	14 57 28.7	+1.9
CGP	Cagayan de Oro	47.91	296	eP	P	14 56 42.0	+1.8
MSLP	Maasin	48.56	298	eP	P	14 56 45.2	0.0
PAGZ	Pagadian	48.78	294	eP	P	14 56 47.7	+0.8
NWAO	Narrogin (SRO)	48.95	239	P	P	14 56 47.0	-1.0
NWAO				pP	pP	14 57 33.9	-1.2
NWAO				sP	sP	14 57 52.6	-6.7
NWAO				S	S	15 03 36.9	+2.6
NWAO				sS		15 04 52.0	
NWAO	Narrogin (SRO)	48.95	239⇑	eP	P	14 56 47.1	-0.9
NWAO				pmax	pmax		
	comp=Z,1μm,1.0s						
NWAO	Narrogin (SRO)	48.95	239⇑	eP	P	14 56 47.0	-0.9
	comp=Z,1μm,1.0s,mb6.2						
PLP	Palo	48.97	299	eP	P	14 56 47.4	-0.9
DCPH	Dipolog City	49.14	295	eP	P	14 56 49.5	-0.1
TBP	Tagbilaran	49.21	297	eP	P	14 56 49.7	-0.4
OCLP	Ormoc	49.23	299	eP	P	14 56 51.5	+1.3
KIP	Kipapa	49.23	44	eP	P	14 56 49.2	-1.0
KIP				pmax	pmax		
	comp=Z,138nm,0.7s,mb5.4						
KIP	Kipapa	49.23	44	eP	P	14 56 49.1	-1.0
	comp=Z,138nm,0.7s,mb5.4						
LLP	Lapu-Lapu	49.42	297	eP	P	14 56 52.3	+0.6
IPIL	Ipil	49.48	294	eP	P	14 56 51.2	-1.0
DAH	Dandelion	49.51	48	eP	P	14 56 51.4	-1.0
KIH	Kanekii	49.54	48	eP	P	14 56 51.9	-0.7
MUN	Mundaring	49.66	240⇑	iP	P	14 56 52.3	-1.0
	comp=Z,558nm,0.8s,mb5.9						
MUN				esP	sP	14 57 57.2	-7.6
MUN				i S	S	15 03 46.6	+2.6
MUN				esS		15 05 02.3	
MUN	Mundaring	49.66	240⇑	iP	P	14 56 52.3	-1.0
MUN				i S	S	15 03 46.6	+2.6
MUN				pmax	pmax		
	comp=Z,558nm,0.8s,mb5.9						
HKL	Haleakala	49.97	47	eP	P	14 56 56.2	+0.4
KEDI	Kedomdong	50.39	271⇑	eP	P	14 56 58.4	-0.7
KEDI				pmax	pmax		
	comp=Z,1μm,0.5s,mb6.4						
KEDI	Kedomdong	50.39	271⇑	eP	P	14 56 58.4	-0.7
	comp=Z,1μm,0.5s,mb6.4						
MMPH	Masbate	50.71	299⇑	eP	P	14 57 03.5	+2.0
GUIM	Jordan	50.75	297	eP	P	14 57 00.9	-0.9
PVCP	Virac	50.90	301	eP	P	14 57 02.7	-0.1
RATI	Rata	50.91	270⇑	eP	P	14 57 03.7	+0.7
	comp=Z,3μm,0.5s,mb7.0						
AUQP	San Andres	51.99	300	eP	P	14 57 13.2	+2.2
KELI	Kelakatan	52.02	271⇓	eP	P	14 57 10.3	-0.9
OTRP	Odiongan	52.07	298	eP	P	14 57 11.1	-0.5
CUYO	Cuyo Island	52.22	296	eP	P	14 57 13.9	+1.2
SRDI	Scrawed	52.30	270⇓	eP	P	14 57 11.1	-2.2
SRDI				pmax	pmax		
	comp=Z,260nm,0.7s,mb5.8						
SRDI	Scrawed	52.30	270⇓	eP	P	14 57 11.1	-2.2
	comp=Z,260nm,0.7s,mb5.8						
TSM	Tawau	52.34	287	P	P	14 57 14.1	+0.4
GQP	Guinayangan	52.48	300⇑	eP	P	14 57 15.7	+1.1
BOAC	Boac	52.76	299	eP	P	14 57 17.1	+0.4
POLP	Polilio Island	53.32	301	eP	P	14 57 20.1	-0.7
PPR	Puerto Princes	53.75	294⇑	iP	P	14 57 24.2	+0.2
ENPP	El Nido	53.77	296	eP	P	14 57 24.1	0.0
TGY	Tagaytay City	53.84	300⇑	eP	P	14 57 26.0	+1.4
BALP	Baler	54.14	302	eP	P	14 57 26.7	0.0
PALP	Palanan	54.14	304	eP	P	14 57 25.9	-0.9
BATP	Bataraza	54.17	292	eP	P	14 57 27.4	+0.4
LUBP	Lubang	54.25	299	eP	P	14 57 26.5	-1.0
LUBP	Lubang	54.25	299	eP	P	14 57 26.7	-0.8
PCPH	Palayan	54.44	301⇑	eP	P	14 57 28.5	-0.4
KKM	Kota Kinabalu	54.52	288	P	P	14 57 30.6	+1.0
CAUP	Cauayan	54.56	303	eP	P	14 57 30.1	+0.3
CVP	Callao Caves	54.96	304⇑	iP	P	14 57 33.0	+0.3
SGCP	Mt. Cagua	55.08	305	eP	P	14 57 34.5	+1.1
BCPH	Baguio City Da	55.28	302⇓	eP	P	14 57 34.4	-0.6
DRV	Dumont d'Urvil	55.34	193	P	P	14 57 34.0	-0.7
DRV				S	S	15 04 59.0	-1.3
DRV				SS	SS	15 08 44.0	-4.5
DRV				L		15 11 00.0	
APYP	Conner	55.52	304	eP	P	14 57 35.5	-1.1
SCZP	Santa Cruz	55.53	301	eP	P	14 57 33.1	-3.7
ABRA	Dolores	55.83	303	eP	P	14 57 38.3	-0.5
BOLP	Bolinao	55.84	301	eP	P	14 57 37.5	-1.4
BBP	Basco	56.35	307	eP	P	14 57 42.2	-0.3
MAJO	Matsushiro	57.54	332	P	P	14 57 49.1	-1.6
MAJO				pP	pP	14 58 33.9	-5.5
MAJO				S	S	15 05 30.6	+1.0
MAJO	Matsushiro	57.54	332	eP	P	14 57 49.1	-1.6
MAJO				pmax	pmax		
	comp=Z,532nm,0.5s,mb6.4						
MAJO	Matsushiro	57.54	332	eP	P	14 57 49.1	-1.6
	comp=Z,532nm,0.5s,mb6.4						
MAT	Matsushiro	57.54	332	eP	P	14 57 49.0	-1.7
MAT				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.4						
MAT	Matsushiro	57.54	332	eP	P	14 57 49.0	-1.7
	comp=Z,1μm,1.2s,mb6.4						
MAT				eS	S	15 05 25.0	-4.7
MAT	Matsushiro	57.54	332	P	P	14 57 49.0	-1.7
MAT				S	S	15 05 25.4	-4.3
TATO	Taipei	59.31	311	eP	P	14 58 01.9	-1.2
	comp=Z,1μm,1.2s,mb6.4						
YUK	Yuzh-Kuril'sk	61.27	343⇑	iP	P	14 58 16.3	+0.3
YUK				e		14 58 42.0	
YUK				i		15 06 18.5	
YUK				pmax	pmax		
	comp=N,350nm,0.5s						
YUK				pmax	pmax		
	comp=Z,420nm,0.5s,mb6.3						
YUK				pmax	pmax		
	comp=E,6μm,3.0s						
YUK				pmax	pmax		
	comp=Z,15μm,3.0s						
YUK				pmax	pmax		
	comp=N,15μm,4.0s						
YUK				smax			
	comp=N,9μm,19.0s						
YUK				smax			
	comp=E,8μm,19.0s						
QZH	Quanzhou	61.44	309⇑	iP	P	14 58 18.3	+0.9
QZH				AP	pP	14 59 01.4	-5.5
QZH				XP	sP	14 59 23.5	-6.5
QZH				S	S	15 06 19.0	-0.8
QZH				XS		15 07 35.0	
QZH				AMB	AMB		
	comp=Z,550nm,0.7s,mb6.3						
QZH				AMB	AMB		
	comp=Z,14μm,5.9s						
SSE	Sheshan	63.22	316	⇑P	P	14 58 27.6	-1.6
SSE				AP	pP	14 59 15.4	-3.5
SSE				XP	sP	14 59 36.8	-5.1
SSE				PP	PP	15 00 54.1	+1.9
SSE				S	S	15 06 44.5	+2.6
SSE				SCS	ScS	15 08 02.0	+5.0
SSE				AMB	AMB		
	comp=Z,324nm,1.5s,mb5.7						
SSE				AMB	AMB		
	comp=Z,5μm,10.2s						
SSE				LR	LR		
	comp=N,13μm,40.0s						
SSE				LR	LR		
	comp=E,14μm,40.1s						
SSE				LR	LR		
	comp=Z,13μm,25.5s						
SSE	Sheshan	63.22	316	⇑P	P	14 58 27.6	-1.6
	comp=Z,324nm,1.5s,mb5.7						
SSE				pP	pP	14 59 15.4	-3.5
SSE				sP	sP	14 59 36.8	-5.1
SSE				PP	PP	15 00 54.1	+1.9
SSE				S	S	15 06 44.5	+2.6
SSE				ScS	ScS	15 08 02.0	+5.0
SSE				sS		15 08 07.4	
SSE				SS	SS	15 11 13.8	+19
SSE				LR	LR		
	comp=Z,13μm,25.5s						
VNDA	Vanda	63.27	181	eP	P	14 58 27.9	-1.0
VNDA				pmax	pmax		
	comp=Z,321nm,1.4s						
VNDA	Vanda	63.27	181	eP	P	14 58 27.9	-1.0
	comp=Z,321nm,1.4s,mb5.8						
KS15	Wonju Array Si	63.41	326	eP	P	14 58 29.5	-0.8
HKC	Hong Kong	63.49	304⇑	iP	P	14 58 33.0	+2.0
HKC				i S	S	15 06 50.0	+4.7
HKC	Hong Kong	63.49	304	eP	P	14 58 32.0	+1.0
SBA	Scott Base	63.55	180	eP	P	14 58 30.6	0.0
SBA				pmax	pmax		
	comp=Z,319nm,0.8s,mb6.0						
SBA	Scott Base	63.55	180	eP	P	14 58 30.6	0.0
	comp=Z,319nm,0.8s,mb6.0						
CASY	Casey	63.90	202⇑	iP	P	14 58 32.1	-1.0
CASY				eS	S	15 06 50.9	+1.1
INCN	Inchon	64.13	325	eP	P	14 58 34.0	-1.0
	comp=Z,263nm,0.7s,mb6.0						
INCN				ePcP	PcP	14 59 10.9	+2.7
INCN				epP	pP	14 59 20.4	-4.5
GZH	Guangzhou	64.54	304	P	P	14 58 39.9	+2.0
GZH				AMB	AMB		
	comp=Z,304nm,1.4s,mb5.7						
GZH				LR	LR		
	comp=N,5μm,22.6s						
GZH				LR	LR		
	comp=E,6μm,22.5s						
GZH				LR	LR		
	comp=Z,15μm,25.7s						
YSS	Yuzh-Sakhalins	64.84	342⇑	eP	P	14 58 39.0	-0.4
YSS				i S	S	15 07 06.0	+4.5
YSS				e		15 08 22.0	
YSS				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.3						
YSS				pmax	pmax		
	comp=Z,1μm,0.9s,mb6.6						
YSS				pmax	pmax		
	comp=N,1μm,1.2s						
YSS				pmax	pmax		
	comp=E,1μm,1.2s						
YSS				pmax	pmax		
	comp=Z,14μm,5.0s						
YSS				pmax	pmax		
	comp=N,7μm,4.0s						
YSS				smax			
	comp=E,8μm,7.0s						
YSS				smax			
	comp=N,230nm,1.7s						
YSS				MLR	MLR		
	comp=Z,5μm,20.0s						
YSS	Yuzh-Sakhalins	64.84	342	eP	P	14 58 39.4	+0.1
	comp=Z,2μm,1.0s,mb6.7						
KGM	Kluang	65.36	279	P	P	14 58 44.0	+0.8
NJ2	Nanjing	65.38	316	eP	P	14 58 42.8	-0.3
NJ2				AP	pP	14 59 22.7	-10
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,5μm,4.5s						
NJ2				LR	LR		
	comp=N,4μm,26.5s						
NJ2				LR	LR		
	comp=E,3μm,21.3s						
NJ2				LR	LR		
	comp=Z,3μm,24.0s						
SKR	Severo-Kuril's	65.45	352	eP	P	14 58 40.0	-3.2
SKR				e		14 59 10.0	
SKR				e		15 01 09.0	
SKR				eS	S	15 07 11.0	+2.0
SKR				e*SS		15 08 21.0	
SKR				eSSS	SSS	15 14 29.0	+3.3
SKR				pmax	pmax		
	comp=N,270nm,1.0s						
SKR				pmax	pmax		
	comp=Z,760nm,1.0s,mb6.3						
SKR				pmax	pmax		
	comp=N,4μm,4.0s						
SKR				pmax	pmax		
	comp=E,8μm,4.0s						
SKR				pmax	pmax		
	comp=Z,10μm,4.0s						
SKR				smax			
	comp=E,12μm,12.0s						
SKR				MLR	MLR		
	comp=N,6μm,20.0s						
SKR				MLR	MLR		

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      comp=E,4µm,20.0s
SKR                                      MLR    MLR
      comp=Z,9µm,20.0s
QIZ   Qiongzhong         65.53 299       P      P      14 58 44.3  0.0
QIZ                                      AP     pP     14 59 32.1 -2.3
QIZ                                      XP     sP     14 59 51.0 -6.2
QIZ                                      S      S      15 07 10.6 +0.2
QIZ                                      SS     SS     15 11 25.7 -4.6
QIZ                                      AMB    AMB
      comp=Z,188nm,1.5s,mb5.5
QIZ                                      AMB    AMB
      comp=Z,7µm,12.9s
QIZ   Qiongzhong         65.53 299      eP      P      14 58 44.0 -0.2
      comp=Z,339nm,1.3s,mb5.8
VLA   Vladivostok        65.71 332⇓    iP      P      14 58 47.0 +2.0
VLA                                     i S     S      15 07 13.0 +0.8
VLA                                      pmax   pmax
      comp=N,5µm,5.0s
VLA                                      pmax   pmax
      comp=Z,14µm,5.0s
VLA                                      pmax   pmax
      comp=E,3µm,4.4s
VLA                                      smax
      comp=N,13µm,15.0s
VLA                                      smax
      comp=E,6µm,14.0s
VLA                                      MLR    MLR
      comp=Z,3µm,15.0s
VLA                                      MLR    MLR
      comp=N,2µm,17.0s
VLA                                      MLR    MLR
      comp=E,2µm,17.0s
SMY   Shemya             67.03   5      eP      P      14 58 54.4 +1.2
FX1   Attu Island--F     67.11   4      eP      P      14 58 53.4 -0.3
KIWB  Kanaga Island      67.27  10      eP      P      14 58 55.2 +0.4
PET   Petropavlovsk      67.47 354c     iP      P      14 58 54.8 -1.2
PET                                     e              15 01 29.6
PET                                     ePPP    PPP    15 03 02.2 -5.4
PET                                     i S     S      15 07 36.2 +2.9
PET                                     eSS     SS     15 11 59.4 -0.4
PET                                     eSSS    SSS    15 15 09.0 +6.9
PET                                      pmax   pmax
      comp=Z,8µm,4.7s
PET                                      pmax   pmax
      comp=N,257nm,1.0s
PET                                      pmax   pmax
      comp=Z,610nm,1.0s,mb6.2
PET                                      pmax   pmax
      comp=N,2µm,13.9s
PET                                      pmax   pmax
      comp=Z,5µm,13.1s
PET                                      pmax   pmax
      comp=Z,4µm,14.7s
PET                                      pmax   pmax
      comp=Z,2µm,17.4s
PET                                      smax
      comp=N,8µm,8.4s
PET                                      smax
      comp=N,15nm,0.8s
PET                                      smax
      comp=N,7µm,14.7s
PET                                      smax
      comp=E,6µm,14.9s
PET   Petropavlovsk      67.47 354      eP      P      14 58 54.9 -1.1
      comp=E,942nm,1.0s,mb6.4
WHN   Wuhan              67.66 312       P      P      14 58 56.5 -1.0
WHN                                      S      S      15 07 36.7 +0.8
WHN                                      LR     LR
      comp=E,12µm,14.2s
WHN                                      LR     LR
      comp=Z,20µm,18.7s
MDJ   Mudanjiang         67.92 332       P      P      14 58 58.7 -0.1
MDJ                                      AP     pP     14 59 45.3 -4.0
MDJ                                      XP     sP     15 00 05.8 -6.2
MDJ                                      PP     PP     15 01 32.1 -0.7
MDJ                                      SCP           15 03 04.8
MDJ                                      S      S      15 07 42.4 +3.7
MDJ                                      SCS    ScS    15 08 34.8 +1.8
MDJ                                      SS     SS     15 12 03.3 -3.3
MDJ                                      AMB    AMB
      comp=Z,713nm,0.9s,mb6.3
MDJ                                      AMB    AMB
      comp=Z,9µm,4.1s
MDJ                                      LR     LR
      comp=E,8µm,19.3s
MDJ                                      LR     LR
      comp=Z,6µm,19.3s
MDJ   Mudanjiang         67.92 332      eP      P      14 58 57.7 -1.1
      comp=Z,718nm,0.9s,mb6.3
DL2   Dalian             67.97 323⇑    iP      P      14 58 58.7 -0.6
DL2                                      AP     pP     14 59 46.2 -3.5
DL2                                      XP     sP     15 00 07.4 -5.1
DL2                                      PP     PP     15 01 29.4 -3.9
DL2                                      S      S      15 07 41.1 +1.7
DL2                                      XS            15 08 57.5
DL2                                      SS     SS     15 12 03.8 -3.7
DL2                                      AMB    AMB
      comp=Z,480nm,0.7s,mb6.2
DL2                                      AMB    AMB
      comp=Z,4µm,6.8s
IPM   Ipoh               68.29 281       P      P      14 59 01.8 +0.1
COCO  West Island        68.34 262       P      P      14 59 03.0 +1.1
      comp=Z,3µm,1.4s,mb6.7,SNR=18
COCO  West Island        68.34 262      eP      P      14 59 02.4 +0.4
      comp=Z,1µm,1.4s,mb6.3
SNY   Shenyang           68.86 326 ⇑P           P      14 59 03.9 -0.8
SNY                                      S      S      15 07 53.7 +3.9
SNY                                      AMB    AMB
      comp=Z,110nm,1.1s,mb5.4
SNY                                      LR     LR
      comp=E,7µm,21.8s
SNY                                      LR     LR
      comp=Z,6µm,59.8s
TIA   Tai'an             69.03 318       P      P      14 59 04.8 -1.0
TIA                                      S      S      15 07 53.1 +1.2
TIA                                      AMB    AMB
      comp=Z,518nm,1.4s,mb6.0
TIA                                      LR     LR
      comp=N,4µm,19.0s
TIA                                      LR     LR
      comp=E,2µm,18.0s
CN2   Changchun          69.29 329      eP      P      14 59 06.8 -0.4
CN2                                     eAP     pP     14 59 55.0 -2.9
CN2                                      XP     sP     15 00 16.5 -4.1
CN2                                     eS      S      15 07 57.3 +2.5
CN2                                      AMB    AMB
      comp=Z,760nm,1.4s,mb6.1
CN2                                      AMB    AMB
      comp=Z,12µm,10.0s
CN2                                      LR     LR
      comp=N,8µm,19.0s
CN2                                      LR     LR
      comp=E,7µm,19.0s
CN2                                      LR     LR
      comp=Z,6µm,21.0s
NIKO  Nikolski           70.10  15      eP      P      14 59 11.4 -0.7
NIKO                                    epP     pP     14 59 57.5 -5.3
KLR   Kul'dur            70.63 336κ     iP      P      14 59 13.0 -2.3
KLR                                     e              14 59 56.0
KLR                                     i S     S      15 08 10.0 -0.3
KLR                                      pmax   pmax
      comp=N,5µm,8.0s
KLR                                      pmax   pmax
      comp=E,3µm,8.0s
KLR                                      pmax   pmax
      comp=Z,11µm,8.0s
KLR                                      pmax   pmax
      comp=N,450nm,2.0s
KLR                                      pmax   pmax
      comp=E,440nm,2.0s
KLR                                      pmax   pmax
      comp=Z,1µm,2.0s,mb6.1
KLR                                      smax
      comp=N,14µm,10.0s
KLR                                      smax
      comp=E,6µm,10.0s
MIR   Mirnyy             70.70 204α     iP      P      14 59 12.4 -3.0
MIR                                     e              15 01 52.0
MIR                                     eS      S      15 08 16.0 +5.2
MIR                                      pmax   pmax
      comp=Z,10µm,14.0s
MIR                                      pmax   pmax
      comp=Z,560nm,0.8s,mb6.2
MIR                                      smax
      comp=E,5µm,11.0s
MIR                                      smax
      comp=N,4µm,13.0s
MIR                                      MLR    MLR
      comp=N,2µm,15.0s
MIR                                      MLR    MLR
      comp=E,2µm,15.0s
MIR                                      MLR    MLR
      comp=Z,6µm,15.0s
ENH   Enshi              71.10 309⇑    eP      P      14 59 17.3 -1.1
      comp=Z,10nm,0.4s
ENH                                     epP     pP     15 00 06.0 -3.3
GYA   Guiyang            71.47 305⇑    iP      P      14 59 20.2 -0.5
GYA                                      AP     pP     15 00 08.9 -2.7
GYA                                      XP     sP     15 00 30.8 -3.5
GYA                                      PP     PP     15 02 04.4 +0.9
GYA                                      S      S      15 08 23.6 +3.3
GYA                                      AMB    AMB
      comp=Z,260nm,1.2s,mb5.7
GYA                                      AMB    AMB
      comp=Z,7µm,14.7s
GYA                                      LR     LR
      comp=N,11µm,22.7s
GYA                                      LR     LR
      comp=E,9µm,26.3s
GYA                                      LR     LR
      comp=Z,11µm,20.3s
UNV   Unalaska Valle     71.50  16      eP      P      14 59 20.7 +0.3
      comp=Z,519nm,1.1s,mb6.1
BJT   Baijiatuau         71.93 321      eP      P      14 59 22.7 -0.5
BJT                                      pmax   pmax
      comp=Z,612nm,1.1s
BJT   Baijiatuau         71.93 321      eP      P      14 59 22.7 -0.5
      comp=Z,612nm,1.1s,mb6.2
BJI   Beijing            71.94 321       P      P      14 59 23.2 -0.1
BJI                                      AP     pP     15 00 11.5 -2.7
BJI                                      S      S      15 08 22.7 -2.7
BJI                                      XS            15 09 48.2
BJI                                      AMB    AMB
      comp=Z,438nm,1.0s,mb6.0
BJI                                      AMB    AMB
      comp=Z,13µm,4.8s
BJI   Beijing            71.94 321       P      P      14 59 23.2 -0.1
BJI                                                    15 09 13.6
BJI                                      pmax   pmax
      comp=Z,438nm,1.0s,mb6.0
BJI   Beijing            71.94 321       P      P      14 59 23.2 -0.1
      comp=Z,438nm,1.0s,mb6.0
BJI                                      pP     pP     15 00 11.5 -2.7
BJI                                      sP     sP     15 00 35.6 -1.3
BJI                                      S      S      15 08 22.7 -2.7
BJI                                      ScS    ScS    15 09 13.6 +8.8
BJI                                      sS            15 09 48.2
BJI                                      SS     SS     15 13 26.2  +17
TIY   Taiyuan            72.95 317⇑    iP      P      14 59 24.8 -4.6
TIY                                      AP     pP     15 00 13.0 -7.4
TIY                                      XP     sP     15 00 34.0 -9.0
TIY                                      S      S      15 08 35.0 -1.9
TIY                                      AMB    AMB
      comp=Z,14µm,6.0s
TIY                                      LR     LR
      comp=N,6µm,16.0s
XAN   Xi'an              73.41 312       P      P      14 59 31.8 -0.3
XAN                                      AP     pP     15 00 17.4 -5.8
XAN                                      SP     sP     15 00 39.7 -6.1
XAN                                      S      S      15 08 44.4 +2.4
XAN                                      XS            15 10 04.9
XAN                                      AMB    AMB
      comp=Z,288nm,1.4s,mb5.7
XAN                                      LR     LR
      comp=N,3µm,26.6s
XAN                                      LR     LR
      comp=E,5µm,21.5s
XAN                                      LR     LR
      comp=Z,8µm,27.9s
KMI   Kunming            74.08 302 ⇑P           P      14 59 37.0 +0.8
KMI                                      PCP    PcP    14 59 49.0 -1.4
KMI                                      AP     pP     15 00 23.7 -3.6
KMI                                      XP     sP     15 00 44.8 -5.2
KMI                                      PP     PP     15 02 22.8 -2.7
KMI                                      S      S      15 08 54.8 +5.1
KMI                                      SKS    SKS    15 09 23.1 +5.2
KMI                                      SS     SS     15 13 34.0 -8.1
KMI                                      SSS    SSS    15 16 59.6 +2.8
KMI                                      AMB    AMB
      comp=Z,545nm,1.3s,mb6.0
KMI                                      AMB    AMB
      comp=Z,8µm,8.5s
KMI                                      LR     LR
      comp=N,6µm,27.0s
KMI                                      LR     LR
      comp=E,5µm,27.0s
KMI                                      LR     LR
      comp=Z,9µm,34.5s
KMI   Kunming            74.08 302 ⇑P           P      14 59 37.0 +0.8
KMI                                                    14 59 49.0
KMI                                                    15 02 22.8
KMI                                      S      S      15 08 54.8 +5.1
KMI                                                    15 09 23.1
KMI                                      SSS    SSS    15 16 59.6 +2.8
KMI                                      pmax   pmax
      comp=Z,545nm,1.3s,mb6.0
KMI   Kunming            74.08 302 ⇑P           P      14 59 37.0 +0.8
      comp=Z,545nm,1.3s,mb6.0
KMI                                      PcP    PcP    14 59 49.0 -1.4
KMI                                      pP     pP     15 00 23.7 -3.6
KMI                                      sP     sP     15 00 44.8 -5.2
KMI                                      PP     PP     15 02 22.8 -2.7
KMI                                      S      S      15 08 54.8 +5.1
KMI                                      SKS    SKS    15 09 23.1 +5.2
KMI                                      sS            15 10 16.8
KMI                                      SS     SS     15 13 34.0 -8.1
KMI                                      SSS    SSS    15 16 59.6 +2.8
KMI                                      LR     LR
      comp=Z,9µm,34.5s
CM31  Chiang Mai Arr     74.78 294      eP      P      14 59 40.7 +0.5
      comp=Z,73nm,0.5s,mb5.6
CMAR  Chiang Mai Arr     74.78 294      i P     P      14 59 40.8 +0.6
CMAR                                     pmax   pmax
      comp=Z,181nm,0.9s
MA2   Magadan            74.84 351      eP      P      14 59 38.6 -1.2
MA2                                     e              14 59 46.2
MA2                                     i S     S      15 08 55.3 -2.0
MA2                                      pmax   pmax
      comp=Z,300nm,0.9s,mb5.9
MA2                                      pmax   pmax
      comp=N,90nm,0.8s
MA2                                      pmax   pmax
      comp=E,30nm,0.8s
MA2   Magadan            74.84 351      eP      P      14 59 38.2 -1.5
      comp=E,422nm,0.8s,mb6.1
MA2                                     epP     pP     15 00 26.9 -4.0
HHC   Hu-ho-hao-te       75.27 320 ⇑P           P      14 59 42.9 +0.3
HHC                                      PCP    PcP    14 59 54.5 -0.7
HHC                                      AP     pP     15 00 28.0 -5.8
HHC                                      XP     sP     15 00 54.0 -2.5
HHC                                      PP     PP     15 02 35.8 +0.2
HHC                                      S      S      15 09 07.2 +4.9
HHC                                      SKS    SKS    15 09 30.3 +4.1
HHC                                      SCS    ScS    15 09 35.2 +3.7
HHC                                      AMB    AMB
      comp=Z,272nm,1.7s,mb5.6
HHC                                      AMB    AMB
      comp=Z,8µm,13.6s
HHC                                      LR     LR
      comp=N,7µm,24.8s
HHC                                      LR     LR
      comp=E,7µm,22.3s
HHC                                      LR     LR
      comp=Z,5µm,19.8s
QSPA  South Pole Qui     75.71 180      eP      P      14 59 43.9 -0.4
      comp=Z,123nm,1.9s,mb5.2
CD2   Chengdu            75.75 307⇑    iP      P      14 59 44.5 -1.0
CD2                                      AP     pP     15 00 30.0 -6.8
CD2                                      XP     sP     15 00 51.5 -8.0
CD2                                      PP     PP     15 02 39.4 -0.3
CD2                                      S      S      15 09 07.0 -0.9
CD2                                      XS            15 10 30.6
CD2                                      AMB    AMB
      comp=Z,516nm,1.2s,mb6.0
CD2                                      AMB    AMB
      comp=Z,7µm,7.0s
CD2                                      LR     LR
      comp=E,14µm,18.0s
HIA   Hailar             75.93 330      eP      P      14 59 45.5 -0.6
HIA                                      pmax   pmax
      comp=Z,310nm,0.8s
HIA   Hailar             75.93 330      eP      P      14 59 45.5 -0.5
      comp=Z,310nm,0.8s,mb6.0
BTO   Baotou             76.11 319      eP      P      14 59 47.9 +0.6
BTO                                      S      S      15 09 07.7 -3.8
BTO                                      AMB    AMB
      comp=Z,245nm,1.2s,mb5.7
SEY   Seymchan           77.87 353      eP      P      14 59 59.1 +2.6
SEY                                     e              15 09 38.8
SEY                                     e              15 17 58.5
LZH   Lanzhou            78.04 312 ⇑P           P      14 59 59.2 +1.2
LZH                                      AP     pP     15 00 44.4 -5.2
LZH                                      XP     sP     15 01 06.0 -6.2
LZH                                      PP     PP     15 02 58.0 -0.9
LZH                                      S      S      15 09 32.3  0.0
LZH                                      SKS    SKS    15 09 48.0 +1.6
LZH                                      SCS    ScS    15 09 56.7 +2.7
LZH                                      PS     PS     15 10 46.3 +0.9
LZH                                      XS            15 10 59.0
LZH                                      SS     SS     15 14 39.1 -2.7
LZH                                      AMB    AMB
      comp=Z,2µm,1.2s,mb6.6
LZH                                      AMB    AMB
      comp=Z,15µm,6.1s
LZH                                      LR     LR
      comp=N,12µm,18.8s
LZH                                      LR     LR
      comp=Z,16µm,19.9s
LZH   Lanzhou            78.04 312 ⇑P           P      14 59 59.2 +1.2
LZH                                                    15 02 58.0
LZH                                      S      S      15 09 32.3  0.0
LZH                                                    15 09 56.7
LZH                                      PS     PS     15 10 46.3 +0.9
LZH                                      pmax   pmax
      comp=Z,2µm,1.2s,mb6.6
LZH                                      MLR    MLR
      comp=Z,16µm,19.9s
LZH   Lanzhou            78.04 312 ⇑P           P      14 59 59.2 +1.2
      comp=Z,2µm,1.2s,mb6.6
LZH                                      pP     pP     15 00 44.4 -5.2
LZH                                      sP     sP     15 01 06.0 -6.2
LZH                                      PP     PP     15 02 58.0 -0.9
LZH                                      S      S      15 09 32.3  0.0
LZH                                      SKS    SKS    15 09 48.0 +1.6
LZH                                      ScS    ScS    15 09 56.7 +2.7
LZH                                      PS     PS     15 10 46.3 +0.9
LZH                                      sS            15 10 59.0
LZH                                      SS     SS     15 14 39.1 -2.7
LZH                                      LR     LR
      comp=Z,16µm,19.9s
KDAK  Kodiak Island      79.08  21      eP      P      15 00 02.0 -1.1
      comp=Z,141nm,1.1s,mb5.5
CLNS  Chul'man           79.14 338      eP      P      15 00 04.2 +0.7
CLNS                                    e*PP    PcP    15 00 12.1 +0.6
CLNS                                    e              15 03 05.1
CLNS                                    e              15 10 00.7
CLNS                                    ePS     tx     15 10 16.3
CLNS                                    eSSS    SSS    15 18 18.2 -1.0
CLNS                                     pmax   pmax
      comp=N,254nm,0.8s
CLNS                                     pmax   pmax
      comp=E,70nm,0.8s
CLNS                                     pmax   pmax
      comp=Z,508nm,0.8s,mb6.2
CLNS                                     pmax   pmax
      comp=Z,79nm,1.0s,mb5.3
CLNS                                     pmax   pmax
      comp=N,54nm,0.9s
CLNS                                     pmax   pmax
      comp=E,58nm,1.3s
SVW2  Sparrevohn         80.76  17      eP      P      15 00 12.3 +0.3
RSO   Redoubt South      81.11  19      eP      P      15 00 13.2 -0.6
IMP   Imphal             81.35 298      eP      P      15 00 15.0 -0.8
YAK   Yakutsk            81.64 343      eP      P      15 00 16.0 -0.5
YAK                                     eS      S      15 10 11.8 +2.7
YAK                                     e              15 10 15.4
YAK                                      pmax   pmax
      comp=Z,806nm,0.7s,mb6.5
YAK                                      pmax   pmax
      comp=N,320nm,1.1s
YAK                                      pmax   pmax
      comp=E,223nm,1.1s
YAK                                      smax
      comp=N,58nm,1.3s
YAK                                      smax
      comp=E,27nm,1.2s
YAK                                      smax
      comp=Z,12nm,1.2s
YAK   Yakutsk            81.64 343      eP      P      15 00 15.6 -0.9
      comp=Z,2µm,0.8s,mb6.8
ULN   Ulaanbaatar        81.80 324      eP      P      15 00 18.1 +0.5
ULN                                      pmax   pmax
      comp=Z,989nm,1.3s,mb6.3
ULN   Ulaanbaatar        81.80 324      eP      P      15 00 18.1 +0.4
      comp=Z,989nm,1.3s,mb6.3
SLKM  Skilak Lake        81.95  20      eP      P      15 00 17.4 -0.7
BILL  Bilibino           82.13 360⇓    eP      P      15 00 19.1 +0.2
BILL                                    e*PP    pP     15 00 58.7  -12
BILL                                    i              15 03 29.4
BILL                                    eS      S      15 10 16.5 +2.5
BILL                                    eSS     SS     15 15 40.0 -2.2
BILL                                     pmax   pmax
      comp=Z,1µm,1.2s,mb6.4
BILL                                     MLR    MLR
      comp=Z,6µm,21.0s
BILL  Bilibino           82.13 360⇓    eP      P      15 00 19.2 +0.3
MAW   Mawson             82.26 202      eP      P      15 00 19.9 +0.3
MAW                                      pmax   pmax
      comp=Z,875nm,1.2s
MAW   Mawson             82.26 202      eP      P      15 00 19.9 +0.4
      comp=Z,875nm,1.2s,mb6.3
GTA   Gaotai             82.38 314 ⇑P           P      15 00 21.8 +1.0
GTA                                      AP     pP     15 01 10.3 -2.7
GTA                                      XP     sP     15 01 32.8 -2.6
GTA                                      PP     PP     15 03 32.9 -1.4
GTA                                      S      S      15 10 19.5 +2.5
GTA                                      SKS    SKS    15 10 20.1 +3.4
GTA                                      SS     SS     15 15 39.8 -6.7
GTA                                      AMB    AMB
      comp=Z,551nm,1.2s,mb6.1
GTA                                      AMB    AMB
      comp=Z,9µm,8.0s
GTA                                      LR     LR
      comp=N,3µm,20.5s
GTA                                      LR     LR
      comp=E,5µm,21.7s
GTA                                      LR     LR
      comp=Z,6µm,26.2s
FIB   Fire Island        82.46  19      eP      P      15 00 19.7 -1.1
PMR   Palmer             83.12  19      eP      P      15 00 24.4 +0.3
AGT   Agartala           83.36 297⇑    iP      P      15 00 28.0 +1.8
AGT                                     i              15 02 29.0
EYAK  Cordova Ski Ar     83.50  21      eP      P      15 00 26.7 +0.7
SML   Sawmill            83.53  20      eP      P      15 00 25.9 -0.3
SAC   San Andreas        83.68  49      eP      P      15 00 27.2 -0.3
HOPS  Hopland            83.77  47      eP      P      15 00 27.8 -0.2
      comp=Z,1µm,1.5s,mb6.4
HOPS                                    epP     pP     15 01 18.6 -1.7
DIV   Divide             83.91  21      eP      P      15 00 28.3 +0.2
      comp=Z,492nm,0.9s,mb6.2
DIV                                     epP     pP     15 01 16.6 -3.8
NSHM  Saint Helena R     83.92  48      eP      P      15 00 28.8 +0.2
SAO   San Andreas Ge     84.08  50      eP      P      15 00 29.1 -0.4
SAO                                      pmax   pmax
      comp=Z,825nm,1.6s,mb6.2
SAO   San Andreas Ge     84.08  50      eP      P      15 00 29.1 -0.5
      comp=Z,825nm,1.6s,mb6.2
SAO                                     epP     pP     15 01 19.9 -2.0
KHMM  Horse Mountain     84.08  45      eP      P      15 00 29.7 +0.3
KHMM                                    epP     pP     15 01 20.0 -1.8
BOD   Bodaibo            84.10 334      eP      P      15 00 28.9 -0.2
BOD                                      pmax   pmax
      comp=Z,1µm,2.2s,mb6.2
LRV   Little Rabbit      84.27  50      eP      P      15 00 30.6 +0.2
LRV                                     epP     pP     15 01 20.9 -2.0
KBO   Bosley Butte       84.30  44      eP      P      15 00 30.7 +0.2
KEBM  Edson Butte        84.51  43      eP      P      15 00 32.0 +0.4
KEBM                                    e              15 00 47.1
KEBM                                    epP     pP     15 01 22.8 -1.2
MCK   McKinley           84.77  18      eP      P      15 00 32.1 -0.2
MCK                                      pmax   pmax
      comp=Z,999nm,0.3s,mb7.0
MCK   McKinley           84.77  18      eP      P      15 00 32.1 -0.2
      comp=Z,999nm,0.3s,mb7.0
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MCK				*e*pP	pP	15 01 20.2	-4.6
WDC	**Whiskeytown Da**	**84.79**	**46**	*e*P	**P**	**15 00 32.4**	**-0.6**
WDC				pmax	pmax		
	comp=Z,839nm,1.7s,mb6.2						
WDC	**Whiskeytown Da**	**84.79**	**46**	*e*P	**P**	**15 00 32.4**	**-0.6**
	comp=Z,839nm,1.7s,mb6.2						
WDC				*e*pP	pP	15 01 23.7	-1.7
OHCM	**Honcut**	**85.04**	**47**	*e*P	**P**	**15 00 33.5**	**-0.7**
YBH	**Yreka Blue Hor**	**85.13**	**45**	*e*P	**P**	**15 00 34.4**	**-0.3**
YBH				pmax	pmax		
	comp=Z,643nm,1.6s						
YBH	**Yreka Blue Hor**	**85.13**	**45**	*e*P	**P**	**15 00 34.4**	**-0.3**
	comp=Z,643nm,1.6s,mb6.1						
YBH				*e*		15 00 50.9	
YBH				*e*pP	pP	15 01 25.4	-1.7
ZAK	**Zakamensk**	**85.21**	**325**	*e*P	**P**	**15 00 35.1**	**+0.3**
ZAK				*e*		15 10 44.9	
ZAK				*e*		15 12 10.3	
ZAK				pmax	pmax		
	comp=Z,405nm,1.2s,mb6.0						
IMA	**Indian Mountai**	**85.26**	**15**	*e*P	**P**	**15 00 34.6**	**-0.1**
HUMO	**Hull Mountain**	**85.32**	**44**	*e*P	**P**	**15 00 35.1**	**-0.5**
	comp=Z,467nm,1.4s,mb6.0						
HUMO				*e*pP	pP	15 01 26.4	-1.7
LSA	**Lhasa**	**85.33**	**302**	*e*P	**P**	**15 00 36.8**	**+0.8**
LSA				pmax	pmax		
	comp=Z,229nm,0.8s,mb6.0						
LSA	**Lhasa**	**85.33**	**302**	*e*P	**P**	**15 00 36.8**	**+0.8**
	comp=Z,229nm,0.8s,mb6.0						
CMB	**Columbia Colle**	**85.34**	**49**	P	**P**	**15 00 35.0**	**-0.8**
CMB				pP	pP	15 01 26.0	-2.2
CMB				SKSac		15 10 42.5	
CMB				sS		15 12 21.6	
CMB	**Columbia Colle**	**85.34**	**49**	*e*P	**P**	**15 00 35.0**	**-0.8**
CMB				pmax	pmax		
	comp=Z,112nm,0.8s,mb5.7						
CMB	**Columbia Colle**	**85.34**	**49**	*e*P	**P**	**15 00 35.0**	**-0.8**
	comp=Z,112nm,0.8s,mb5.7						
CMB				*e*pP	pP	15 01 25.5	-2.8
LHEM	**Herd Peak**	**85.43**	**45**	P	**P**	**15 00 36.1**	**0.0**
CAL	**Calcutta**	**85.50**	**294**	*i*	**P**	**15 00 40.4**	**+3.4**
CAL				*i*		15 01 22.8	
CAL				*e*		15 01 49.0	
CAL				*i*		15 10 57.0	
CAL				*e*		15 12 26.4	
THY	**Trims Highway**	**85.52**	**19**	*e*P	**P**	**15 00 33.3**	**-2.7**
IRK	**Irkutsk**	**85.59**	**327**	*e*P	**P**	**15 00 36.0**	**-0.6**
IRK				*e*		15 01 20.3	
IRK				*e*		15 04 02.2	
IRK				pmax	pmax		
	comp=Z,679nm,2.3s,mb6.0						
PAS	**Pasadena**	**85.61**	**53**	P	**P**	**15 00 38.2**	**+1.0**
PAS				pP	pP	15 01 27.6	-2.1
PAS				SKSac		15 10 44.6	
TLY	**Talaya**	**85.65**	**326**	P	**P**	**15 00 37.5**	**+0.6**
	comp=Z,3µm,0.8s,mb7.0						
TLY	**Talaya**	**85.65**	**326**	*c i*P	**P**	**15 00 36.8**	**-0.1**
TLY				*e*S	S	15 10 43.8	-5.1
TLY				*e*		15 11 50.6	
TLY				pmax	pmax		
	comp=Z,561nm,1.1s,mb6.2						
BUOR	**Burton Butte**	**85.67**	**45**	P	**P**	**15 00 37.4**	**+0.1**
MPOR	**Mary's Peak**	**85.71**	**42**	P	**P**	**15 00 38.3**	**+0.8**
MWC	**Mount Wilson**	**85.72**	**53**	*e*P	**P**	**15 00 36.7**	**-1.1**
MWC				*e*pP	pP	15 01 29.3	-1.0
MENT	**Mentasta**	**85.86**	**20**	*e*P	**P**	**15 00 38.4**	**+0.7**
COR	**Corvallis**	**85.91**	**42**	*e*P	**P**	**15 00 38.2**	**-0.2**
COR				pmax	pmax		
	comp=Z,765nm,1.8s,mb6.1						
COR	**Corvallis**	**85.91**	**42**	*e*P	**P**	**15 00 38.2**	**-0.2**
	comp=Z,765nm,1.8s,mb6.1						
COR				*e*pP	pP	15 01 29.1	-1.8
COLA	**College**	**85.93**	**18**	*i* P	**P**	**15 00 37.4**	**-0.6**
OMM	**Old Mammoth Mi**	**86.21**	**50**	*e*P	**P**	**15 00 39.6**	**-0.4**
OMM				*e*pP	pP	15 01 31.2	-1.4
WCN	**Washoe City**	**86.27**	**48**	*e*P	**P**	**15 00 40.0**	**-0.3**
WCN				pmax	pmax		
	comp=Z,2µm,2.1s,mb6.4						
WCN	**Washoe City**	**86.27**	**48**	*e*P	**P**	**15 00 40.0**	**-0.3**
	comp=Z,2µm,2.1s,mb6.4						
WCN				*e*pP	pP	15 01 30.9	-2.0
BAR	**Barrett**	**86.29**	**55**	*e*P	**P**	**15 00 39.7**	**-0.8**
BAR				*e*pP	pP	15 01 32.1	-1.0
PAHR	**Pah Rah Range**	**86.69**	**48**	*e*P	**P**	**15 00 43.6**	**+1.4**
	comp=Z,92nm,1.2s,mb5.4						
PAHR				*e*pP	pP	15 01 33.3	-1.6
OCWA	**Octopus Mounta**	**86.69**	**39**	*e*P	**P**	**15 00 42.2**	**+0.2**
	comp=Z,179nm,0.8s,mb5.8						
OCWA				*e*pP	pP	15 01 33.1	-1.6
GTK	**Gangtok**	**86.70**	**299**	*e*P	**P**	**15 00 40.0**	**-2.6**
PFO	**Pinyon Flat Ob**	**86.77**	**54**	*e*P	**P**	**15 00 42.3**	**-0.5**
PFO				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.4						
PFO	**Pinyon Flat Ob**	**86.77**	**54**	*e*P	**P**	**15 00 42.3**	**-0.5**
	comp=Z,60nm,0.8s,mb5.4						
PFO				*e*pP	pP	15 01 33.0	-2.5
DAC	**Darwin (Calif)**	**86.79**	**51**	*e*P	**P**	**15 00 41.9**	**-0.9**
DAC				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.3						
DAC	**Darwin (Calif)**	**86.79**	**51**	*e*P	**P**	**15 00 41.9**	**-0.9**
	comp=Z,66nm,1.0s,mb5.3						
DAC				*e*pP	pP	15 01 34.2	-1.2
MOD	**Modoc**	**86.86**	**45**	*e*P	**P**	**15 00 42.5**	**-0.5**
	comp=Z,976nm,1.9s,mb6.2						
MOD				*e*pP	pP	15 01 33.5	-2.2
MOY	**Mondy**	**87.09**	**325**	*e*P	**P**	**15 00 43.8**	**-0.1**
MOY				pmax	pmax		
	comp=Z,904nm,2.8s,mb6.0						
BWNR	**Bhubaneshwar**	**87.11**	**292**	*e*P	**P**	**15 00 44.8**	**+0.1**
BWNR				*e*		15 00 47.9	
	comp=Z,307nm,1.1s						
BWNR				*e*		15 10 55.0	
MNV	**Mina**	**87.12**	**49**	*e*P	**P**	**15 00 44.1**	**-0.3**
MNV				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.4						
MNV	**Mina**	**87.12**	**49**	*e*P	**P**	**15 00 44.1**	**-0.2**
	comp=Z,76nm,0.9s,mb5.4						
MNV				*e*pP	pP	15 01 35.0	-2.0
PGC	**Sidney**	**87.51**	**38**	*e*P	**P**	**15 00 45.8**	**-0.2**
	comp=Z,885nm,1.4s,mb6.4						
PGC				*e*pP	pP	15 01 36.0	-2.6
SQM	**Sequim**	**87.52**	**39**	P	**P**	**15 00 48.0**	**+2.0**
TPH	**Tonopah**	**87.68**	**50**	*e*P	**P**	**15 00 46.9**	**-0.1**
TPH				pmax	pmax		
	comp=Z,145nm,1.4s,mb5.6						
TPH	**Tonopah**	**87.68**	**50**	*e*P	**P**	**15 00 46.9**	**-0.1**
	comp=Z,145nm,1.4s,mb5.6						
TPH				*e*pP	pP	15 01 38.0	-1.7
WPW	**White Pass**	**87.89**	**41**	P	**P**	**15 00 47.7**	**0.0**
TTW	**Tolt Reservoir**	**88.20**	**40**	P	**P**	**15 00 50.6**	**+1.4**
WVOR	**Wild Horse Val**	**88.20**	**45**	*e*P	**P**	**15 00 49.1**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,202nm,1.4s,mb5.8						
WVOR	**Wild Horse Val**	**88.20**	**45**	*e*P	**P**	**15 00 49.1**	**-0.2**
	comp=Z,202nm,1.4s,mb5.8						
WVOR				*e*pP	pP	15 01 40.2	-1.9
LDFC	**Landfair**	**88.30**	**53**	*e*P	**P**	**15 00 50.1**	**+0.2**
PALK	**Pallekele**	**88.46**	**278**	P	**P**	**15 00 53.2**	**+2.0**
	comp=Z,1µm,1.7s,mb6.4,SNR=19						
PALK	**Pallekele**	**88.46**	**278**	*e*P	**P**	**15 00 52.1**	**+0.9**
	comp=Z,400nm,1.4s,mb6.1						
PALK				*e*pP	pP	15 01 42.5	-1.6
BMN	**Battle Mountai**	**88.49**	**48**	*e*P	**P**	**15 00 51.1**	**+0.3**
BMN				pmax	pmax		
	comp=Z,187nm,1.3s,mb5.8						
BMN	**Battle Mountai**	**88.49**	**48**	*e*P	**P**	**15 00 51.0**	**+0.3**
	comp=Z,187nm,1.3s,mb5.8						
BMN				*e*pP	pP	15 01 41.8	-1.8
VIS	**Vishakhapatnam**	**88.66**	**289**	*e*P	**P**	**15 00 52.4**	**+0.4**
VIS				*e*		15 00 56.0	
	comp=Z,224nm,1.2s						
VIS				*e*S	S	15 11 03.5	-14
VIS				*e*		15 23 16.1	
	comp=Z,3µm,21.9s						
NEN	**Nelson**	**88.69**	**53**	*e*P	**P**	**15 00 51.8**	**0.0**
NEN				*e*pP	pP	15 01 42.5	-2.1
JIRN	**Jiri**	**88.86**	**299**	*e*P	**P**	**15 00 53.3**	**+0.5**
	comp=Z,324nm,0.7s,mb6.3						
TRCR	**Troy Canyon**	**88.99**	**50**	*e*P	**P**	**15 00 53.1**	**-0.1**
PKI	**Pulchoki**	**89.49**	**299**	*e*P	**P**	**15 00 55.7**	**-0.1**
	comp=Z,1µm,1.2s,mb6.5						
TIXI	**Tiksi**	**89.57**	**349**	⇑*i*P	**P**	**15 00 56.1**	**+1.0**
TIXI				*e**PP	pP	15 01 40.3	-7.7
TIXI				*e*		15 04 23.4	
TIXI				*e*		15 11 06.5	
TIXI				*e*S	S	15 11 25.9	+1.0
TIXI				*e**SS		15 12 46.3	
TIXI				*e*SS	SS	15 17 30.2	+0.2
TIXI				pmax	pmax		
	comp=Z,353nm,0.9s,mb6.2						
TIXI				pmax	pmax		
	comp=N,106nm,1.0s						
TIXI				pmax	pmax		
	comp=E,110nm,1.1s						
TIXI				pmax	pmax		
	comp=Z,3µm,3.3s						
KKN	**Kakani**	**89.67**	**299**	*e*P	**P**	**15 00 56.6**	**0.0**
	comp=Z,469nm,0.8s,mb6.3						
DMN	**Daman**	**89.76**	**298**	*e*P	**P**	**15 00 57.3**	**+0.3**
	comp=Z,2µm,1.3s,mb6.7						
BMO	**Blue Mountains**	**89.96**	**44**	*e*P	**P**	**15 00 56.5**	**-1.0**
	comp=Z,1.1nm,0.3s						
BMO				*e*pP	pP	15 01 47.8	-2.7
GKN	**Gorkha**	**90.27**	**299**	*e*P	**P**	**15 00 58.8**	**-0.6**
	comp=Z,782nm,1.2s,mb6.4						
MDRS	**Chennai**	**90.34**	**283**	*e*	**P**	**15 01 01.0**	**+1.0**
MDRS				*e*		15 07 42.0	
BLSP	**Bilaspur**	**90.90**	**292**	*e*P	**P**	**15 01 01.3**	**-1.1**
BLSP				*e*		15 01 05.6	
	comp=Z,268nm,0.8s						
TUC	**Tucson**	**90.91**	**57**	P	**P**	**15 01 02.5**	**+0.3**
TUC				pP	pP	15 01 50.0	-5.2
TUC				pP	pP	15 01 53.9	-1.4
TUC				SKSac		15 11 17.8	
KOLN	**Koldanda**	**91.09**	**298**	*e*P	**P**	**15 01 02.3**	**-0.9**
	comp=Z,632nm,1.4s,mb6.3						
NEW	**Newport**	**91.26**	**40**	*e*P	**P**	**15 01 03.0**	**-0.4**
NEW				pmax	pmax		
	comp=Z,92nm,1.0s						
NEW	**Newport**	**91.26**	**40**	*e*P	**P**	**15 01 03.0**	**-0.4**
	comp=Z,92nm,1.0s,mb5.7						
NEW				*e*pP	pP	15 01 53.3	-3.1
HLID	**Hailey**	**91.50**	**45**	*e*P	**P**	**15 01 04.5**	**-0.2**
	comp=Z,63nm,1.1s,mb5.5						
HLID				*e*pP	pP	15 01 55.8	-1.9
MVU	**Marysvale**	**91.56**	**51**	*e*P	**P**	**15 01 05.5**	**+0.4**
	comp=Z,93nm,1.2s,mb5.6						
MVU				*e*pP	pP	15 01 57.3	-0.9
MSU	**Marysvale**	**91.59**	**51**	*e*P	**P**	**15 01 05.5**	**+0.3**
MSU				*e*pP	pP	15 01 57.9	-0.4
BGU	**Big Grassy Mou**	**91.67**	**48**	*e*P	**P**	**15 01 05.1**	**-0.5**
BGU				*e*pP	pP	15 01 57.2	-1.4
ALBI	**Allahabad**	**92.00**	**295**	*e*	**P**	**15 01 16.5**	**+9.0**
NLU	**North Lily Min**	**92.08**	**49**	*e*P	**P**	**15 01 07.3**	**-0.2**
NLU				*e*pP	pP	15 01 59.2	-1.4
HVU	**Hansel Valley**	**92.11**	**47**	*e*P	**P**	**15 01 07.6**	**0.0**
HVU				*e*pP	pP	15 01 59.0	-1.7
SPUT	**South Promonto**	**92.20**	**48**	*e*P	**P**	**15 01 09.5**	**+1.5**
SPUT				*e*pP	pP	15 01 59.7	-1.4
NOQ	**North Oquirrh**	**92.25**	**49**	*e*P	**P**	**15 01 09.5**	**+1.2**
NOQ				*e*pP	pP	15 01 59.4	-1.9
MPU	**Maple Canyon**	**92.42**	**49**	*e*P	**P**	**15 01 09.6**	**+0.5**
MPU				*e*pP	pP	15 02 01.0	-1.1
WMQ	**Urumqi**	**92.43**	**315**	⇑*i*P	**P**	**15 01 09.0**	**-0.1**
WMQ				AP	pP	15 02 00.0	-2.1
WMQ				XP	sP	15 02 21.0	-3.5
WMQ				PP	PP	15 04 55.0	0.0
WMQ				S	S	15 11 52.0	+1.1
WMQ				SS	SS	15 18 12.0	+0.7
WMQ				AMB	AMB		
	comp=Z,371nm,1.2s,mb6.2						
WMQ				AMB	AMB		
	comp=Z,2µm,10.0s						
WMQ				LR	LR		
	comp=N,8µm,25.0s						
WMQ				LR	LR		
	comp=E,6µm,25.0s						
WMQ				LR	LR		
	comp=Z,5µm,24.0s						
INK	**Inuvik**	**92.50**	**19**	*e*P	**P**	**15 01 08.2**	**-0.6**
TMUT	**Trail Mountain**	**92.53**	**50**	*e*P	**P**	**15 01 10.4**	**+0.8**
CJM	**Chamela**	**92.57**	**71**	*e*P	**P**	**15 01 13.2**	**+3.0**
CJM				*i* S	Px	15 01 50.0	
JLU	**Jordanelle**	**92.72**	**49**	*e*P	**P**	**15 01 10.1**	**-0.4**
JLU				*e*pP	pP	15 02 01.9	-1.6
DAU	**Daniels Canyon**	**92.81**	**49**	*e*P	**P**	**15 01 11.5**	**+0.6**
DAU				*e*pP	pP	15 02 03.7	-0.3
MSO	**Missoula**	**92.83**	**42**	*e*P	**P**	**15 01 10.8**	**0.0**
	comp=Z,24nm,1.2s,mb5.1						
TCUT	**Toone Canyon**	**92.90**	**48**	*e*P	**P**	**15 01 11.3**	**0.0**
TCUT				*e*pP	pP	15 02 02.4	-1.9
HWUT	**Hardware Ranch**	**92.92**	**48**	*e*P	**P**	**15 01 11.2**	**-0.1**
	comp=Z,13nm,0.7s,mb5.1						
HWUT				*e*pP	pP	15 02 02.5	-1.9
MCMT	**McKenzie Canyo**	**92.96**	**45**	*e*P	**P**	**15 01 11.7**	**+0.3**
HYB	**Hyderabad**	**92.99**	**287**	⇑*e*P	**P**	**15 01 11.5**	**-0.7**
HYB				*e*		15 04 56.0	
HYB				*e*S	SKS	15 11 28.0	+4.3
HYB				pmax	pmax		
	comp=Z,210nm,1.0s,mb6.1						
HYB	**Hyderabad**	**92.99**	**287**	⇑*e*P	**P**	**15 01 11.5**	**-0.7**
	comp=Z,210nm,1.0s,mb6.1						
HYB				*e*pP	pP	15 02 01.5	-3.8
HYB				*e*PP	PP	15 04 56.0	-4.0
HYB				*e*S	SKS	15 11 28.0	+4.3
HYB	**Hyderabad**	**92.99**	**287**	⇑*i*P	**P**	**15 01 11.5**	**-0.7**
	comp=Z,210nm,1.0s,mb6.1						
HYB				*e*pP	pP	15 02 01.5	-3.8
HYB				*e*sP	sP	15 02 24.0	-3.7
HYB				*e*PP	PP	15 04 56.0	-4.0
HYB				*e*		15 05 56.0	
HYB				*e*SKS	SKS	15 11 28.0	+4.3
HYB				*e*S	S	15 12 00.0	+3.7
HYB				*e*		15 12 38.0	
HYB				*e*		15 12 58.0	
HYB				*e*SP	SP	15 13 10.0	-5.2
HYB				*e*sS		15 13 24.0	
HYB				*e*SS	SS	15 18 20.0	-0.3
SRU	**San Rafael**	**93.00**	**51**	*e*P	**P**	**15 01 11.8**	**+0.1**
SRU				*e*pP	pP	15 02 02.3	-2.5
CHMT	**Chamberlain Mo**	**93.31**	**42**	*e*P	**P**	**15 01 12.6**	**-0.4**
NGP	**Nagpur**	**93.43**	**291**	*e*P	**P**	**15 01 15.2**	**+1.0**
	comp=Z,505nm,0.3s,mb7.0						
NGP				*e*		15 11 31.4	
WALA	**Waterton Lakes**	**93.53**	**40**	*e*P	**P**	**15 01 14.9**	**+1.0**
	comp=Z,0.2nm,0.3s						
WALA				*e*pP	pP	15 02 04.6	-2.3
PV10	**Paradox Valley**	**93.92**	**52**	*e*P	**P**	**15 01 15.8**	**-0.1**
QLMT	**Earthquake Lak**	**93.92**	**45**	*e*P	**P**	**15 01 16.1**	**+0.3**
QLMT				*e*pP	pP	15 02 07.3	-1.5
BOZ	**Bozeman (W)**	**94.02**	**44**	*e*P	**P**	**15 01 16.3**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.3						
BOZ	**Bozeman (W)**	**94.02**	**44**	*e*P	**P**	**15 01 16.3**	**+0.1**
	comp=Z,32nm,1.1s,mb5.3						
WUWY	**Wally Ulrich**	**94.04**	**46**	*e*P	**P**	**15 01 17.0**	**+0.6**
WUWY				*e*pP	pP	15 02 08.1	-1.3
MOOW	**Moose Ponds**	**94.10**	**46**	*e*P	**P**	**15 01 17.9**	**+1.3**
MOOW				*e*pP	pP	15 02 05.2	-4.4
YMR	**Madison River**	**94.20**	**45**	*e*P	**P**	**15 01 19.4**	**+2.3**
YMR				*e*pP	pP	15 02 09.4	-0.7
PV01	**Paradox Valley**	**94.21**	**52**	*e*P	**P**	**15 01 17.2**	**-0.1**
YFT	**Old Faithful**	**94.23**	**45**	*e*P	**P**	**15 01 18.0**	**+0.8**
YFT				*e*pP	pP	15 02 10.3	+0.1
LGTI	**Lohaghat**	**94.37**	**299**	*e*P	**P**	**15 01 19.7**	**+1.5**
LAZ	**Ladron**	**94.40**	**56**	*e*P	**P**	**15 01 18.3**	**+0.1**
YNR	**Norris Junctio**	**94.41**	**45**	*e*P	**P**	**15 01 20.1**	**+2.1**
PTH	**Pithoragarh**	**94.42**	**299**	*e*P	**P**	**15 01 21.7**	**+3.3**
LENM	**Lemitar**	**94.47**	**56**	*e*P	**P**	**15 01 18.7**	**+0.1**
LKWY	**Lake**	**94.56**	**45**	*e*P	**P**	**15 01 21.3**	**+2.6**
LKWY				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
LKWY	**Lake**	**94.56**	**45**	*e*P	**P**	**15 01 21.3**	**+2.6**
	comp=Z,15nm,0.9s,mb5.1						
VNA3	**Neumayer Olymp**	**94.62**	**181**	⇓*i*P	**P**	**15 01 18.4**	**0.0**
VNA3	**Neumayer Olymp**	**94.62**	**181**	⇑*i*	pP	15 02 10.2	-1.2
SFJM	**Santa Fe**	**94.63**	**70**	*e*P	**P**	**15 01 22.0**	**+2.4**
BW06	**Boulder Array**	**94.67**	**47**	*e*P	**P**	**15 01 18.9**	**-0.4**
	comp=Z,2µm,1.2s						
BW06				*e*pP	pP	15 02 09.9	-2.4
LPM	**Los Pinos Moun**	**94.78**	**56**	*e*P	**P**	**15 01 20.0**	**0.0**
LPM				*e*pP	pP	15 02 11.6	-1.5
VNA2	**Neumayer--Watz**	**94.89**	**182**	P	**P**	**15 01 19.8**	**+0.2**
VNA2	**Neumayer--Watz**	**94.89**	**182**	⇑*i*	pP	15 02 12.7	0.0
VNA2	**Neumayer--Watz**	**94.89**	**182**	⇑*i*	sP	15 02 33.0	-2.0
VNA2	**Neumayer--Watz**	**94.89**	**182**	S	S	15 12 10.2	-1.1
ANMO	**Albuquerque**	**95.08**	**55**	*e*P	**P**	**15 01 21.3**	**0.0**
ANMO				pmax	pmax		
	comp=Z,19nm,1.0s						
ANMO	**Albuquerque**	**95.08**	**55**	*e*P	**P**	**15 01 21.3**	**-0.1**
	comp=Z,19nm,1.0s,mb5.2						
ANMO				*e*pP	pP	15 02 10.4	-4.0
EDM	**Edmonton**	**95.11**	**36**	*e*P	**P**	**15 01 20.3**	**-0.7**
MNTX	**Cornudas Mount**	**95.19**	**59**	*e*P	**P**	**15 01 20.5**	**-1.4**
	comp=Z,72nm,0.6s,mb6.0						
VNA1	**Neumayer--Stat**	**95.19**	**181**	⇑*i*P	**P**	**15 01 21.6**	**+0.6**
BHPL	**Bhopal**	**95.39**	**292**	*e*P	**P**	**15 01 22.4**	**-0.6**
BHPL				*e*		15 01 26.0	
	comp=Z,136nm,1.2s						
BHPL				*e*S		15 11 39.9	
BHPL				*e*		15 23 42.3	
	comp=Z,2µm,20.6s						
MNGI	**Mangalore**	**95.44**	**282**	*i*	pP	15 02 13.7	-2.7
MNGI				*i*	PP	15 05 18.6	-0.1
LTX	**Lajitas**	**96.09**	**61**	*e*P	**P**	**15 01 27.2**	**+1.2**
LTX				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.3						
LTX	**Lajitas**	**96.09**	**61**	*e*P	**P**	**15 01 27.2**	**+1.1**
	comp=Z,22nm,1.2s,mb5.3						
LTX				*e*pP	pP	15 02 16.3	-2.8
GDL2	**Guadalupe Moun**	**96.14**	**58**	*e*P	**P**	**15 01 26.2**	**0.0**
DDI	**Dehra Dun**	**96.42**	**300**	*e*P	**P**	**15 01 26.4**	**-1.1**
DDI				*e*		15 05 19.7	
SDCO	**Great Sand Dun**	**96.47**	**53**	*e*P	**P**	**15 01 28.4**	**+0.8**
	comp=Z,9.0nm,1.1s,mb4.9						
CPRX	**Cap Rock**	**96.74**	**58**	*e*P	**P**	**15 01 26.4**	**-2.5**
NDI	**New Delhi**	**96.78**	**298**	*e*P	**P**	**15 01 26.0**	**-3.2**
NDI				*e*S		15 11 46.0	
ISCO	**Idaho Springs**	**96.85**	**51**	*e*P	**P**	**15 01 29.5**	**+0.2**
ISCO				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.2						
ISCO	**Idaho Springs**	**96.85**	**51**	*e*P	**P**	**15 01 29.5**	**+0.3**
	comp=Z,16nm,1.1s,mb5.2						
ISCO				*e*pP	pP	15 02 19.8	-2.5
MKAR	**Makanchi Array**	**96.90**	**316**	*i* P	**P**	**15 01 29.5**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,60nm,0.5s						
MKAR	**Makanchi Array**	**96.90**	**316**	*i* P	**P**	**15 01 29.6**	**+0.3**
KAD	**Karad**	**97.03**	**286**	*e*P	**P**	**15 01 29.8**	**-0.8**
KAD				*e*		15 01 33.6	
	comp=Z,142nm,1.2s						
PHWY	**Pilot Hill**	**97.29**	**49**	*e*P	**P**	**15 01 30.6**	**-0.6**
SMLA	**Simla**	**97.34**	**300**	⇓*i*	**P**	**15 01 46.8**	**+15**
	comp=Z,53nm,0.4s,mb6.1						
SMLA				*i*		15 05 42.5	
SDNR	**Sundarnagar**	**97.58**	**300**	*e*P	**P**	**15 01 33.2**	**+0.4**
SDNR				*e*		15 11 54.4	
POO	**Poona**	**97.61**	**287**	*e*P	**P**	**15 01 32.9**	**-0.3**
POO				*e*		15 01 36.3	
	comp=Z,165nm,1.4s						
POO				*e*		15 23 28.3	
	comp=Z,2µm,18.5s						
LAO	**LASA Array**	**97.91**	**44**	*e*P	**P**	**15 01 35.4**	**+1.4**
	comp=Z,26nm,1.2s,mb5.4						
BHK	**Bhakra**	**98.03**	**300**	*e*	sP	15 02 54.0	+3.8
BHK				*e*		15 11 55.0	
NVS	**Novosibirsk**	**98.17**	**324**	*e*P	**P**	**15 01 33.8**	**-1.0**
NVS				*e*		15 12 43.9	
NVS				pmax	pmax		
	comp=N,150nm,2.2s						
NVS				pmax	pmax		
	comp=E,275nm,2.2s						
NVS				pmax	pmax		
	comp=Z,480nm,2.2s,mb6.4						
PONG	**Pong**	**98.53**	**301**	*e*P	**P**	**15 01 37.0**	**-0.1**
BOM	**Bombay**	**98.64**	**287**	*e*P	**P**	**15 01 39.2**	**+1.4**
BOM				*e*		15 12 40.0	
THN	**Thein Dam**	**98.81**	**301**	*e*P	**P**	**15 01 36.8**	**-1.6**
JCT	**Junction City**	**99.61**	**61**	*e*P	**P**	**15 01 40.8**	**-1.2**
JCT				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.7						
JCT	**Junction City**	**99.61**	**61**	*e*P	**P**	**15 01 40.8**	**-1.2**
	comp=Z,29nm,1.0s,mb5.7						
AAA	**Alma-Ata**	**99.89**	**312**	*e*P	**P**	**15 01 44.0**	**+1.0**
AAA				*e*		15 05 50.0	
AAA				*e*		15 12 06.0	
AAA				*e*S	S	15 13 10.0	+16
AAA				*e*SSS	SS	15 19 56.0	+0.5
AAA				pmax	pmax		
	comp=Z,2µm,8.0s						
KSH	**Kashi**	**99.94**	**308**	⇑P	**P**	**15 01 46.2**	**+2.9**
KSH				*e*PP	PP	15 05 53.8	+0.8
KSH				*e*S	S	15 12 57.5	+2.9
KSH				AMB	AMB		
	comp=Z,2µm,7.6s						
KSH				LR	LR		
	comp=N,5µm,19.3s						
KSH				LR	LR		
	comp=E,4µm,13.0s						
KURK	**Kurchatov**	**100.08**	**320**	*e*P	P	15 01 42.7	-0.9
KURK				pmax	pmax		
	comp=Z,119nm,1.3s						
KURK	**Kurchatov**	**100.08**	**320**	*e*Pdif	P	15 01 42.6	-1.0
	comp=Z,119nm,1.3s						
TKM2	**Tokmak 2**	**100.80**	**312**	P	P	15 01 48.4	+1.3
	SNR=25						
KZA	**Kyzart**	**100.92**	**311**	P	P	15 01 50.0	+2.3
	SNR=17						
KBK	**Karagaybulak**	**101.23**	**311**	P	P	15 01 50.4	+1.3
	SNR=14						
CHMS	**Chumysh**	**101.43**	**312**	P	P	15 01 51.0	+1.1
	SNR=16						
UCH	**Uchtor**	**101.48**	**311**	P	P	15 01 52.5	+2.3
	SNR=16						
AAK	**Ala-Archa**	**101.56**	**311**	P	P	15 01 50.2	-0.3
	SNR=14						
AAK	**Ala-Archa**	**101.56**	**311**	*e*P	P	15 01 49.0	-1.5
AAK				pmax	pmax		
	comp=Z,120nm,0.8s						
AAK	**Ala-Archa**	**101.56**	**311**	*e*Pdif	P	15 01 49.0	-1.4
	comp=Z,120nm,0.8s						
USP	**Ospenovka**	**101.65**	**312**	P	P	15 01 51.1	+0.3
	SNR=22						
AML	**Almayashu**	**102.07**	**311**	P	Pdif	15 01 54.8	+2.1
	SNR=24						
EKS2	**Erkin-Say**	**102.08**	**311**	P	Pdif	15 01 53.8	+1.0
	SNR=9.9						
ULM	**Lac du Bonnet**	**105.24**	**41**	*e*PKPdf		15 06 17.9	
CHKZ	**Chkalovo**	**105.32**	**322**	P	Pdif	15 02 06.1	-0.6
CHKZ				pmax	pmax		
	comp=Z,105nm,2.0s						
CHKZ	**Chkalovo**	**105.32**	**322**	*e*Pdif	Pdif	15 02 05.5	-1.2
BVA0	**Borovoye Array**	**105.42**	**322**	*i* P	Pdif	15 02 06.3	-0.9
BVA0				pmax	pmax		
	comp=Z,18nm,1.5s						
FCC	**Fort Churchill**	**106.60**	**33**	*e*PKPdf		15 06 21.1	
SVE	**Sverdlovsk**	**110.96**	**326**	*e*P	Pdif	15 02 33.2	+1.7
SVE				*e*PS	PS	15 16 47.0	+2.5
SVE				*e*		15 17 34.0	
SVE				*e*		15 17 53.0	
SVE				*e*SS	SS	15 22 30.0	+4.7
SVE				pmax	pmax		
	comp=Z,50nm,2.5s						
SVE				MLR	MLR		
	comp=N,1µm,21.0s						
SVE				MLR	MLR		
	comp=E,2µm,21.0s						
SVE				MLR	MLR		
	comp=Z,4µm,21.0s						
SOKR	**Solikamsk**	**112.59**	**329**	⇑*i*PKIKP	PKPdf	15 06 32.5	+0.8
SOKR				pmax	pmax		
	comp=Z,150nm,0.9s						
SOKR				MLR	MLR		
	comp=Z,3µm,19.0s						
JMDO	**Jabal Madar**	**112.79**	**288**	⇓P	PKPdf	15 06 35.7	+2.7
	SNR=10						
BIDO	**Bidbid**	**112.90**	**290**	⇑P	PKPdf	15 06 36.2	+3.0
BSY	**Bisya**	**113.67**	**289**	⇑P	PKPdf	15 06 36.0	+1.3
	SNR=33						
ARQ	**Araqi**	**114.35**	**289**	⇑P	PKPdf	15 06 37.7	+1.7
	SNR=5.9						
SHAO	**Shalim**	**114.56**	**283**	⇑P	PKPdf	15 06 40.8	+4.2
ASHO	**Ashiyiah**	**114.89**	**291**	⇓P	PKPdf	15 06 38.3	+1.2
	SNR=22						
LPA	**La Plata**	**114.93**	**140**	*c e*P	Pdif	15 02 49.0	-0.5
LPA				*e*pP		15 03 40.0	
LPA				*e*PP	PP	15 07 37.0	-6.3
RBK	**Rabkut**	**115.83**	**283**	⇓P	PKPdf	15 06 40.4	+1.3
	SNR=24						
WHFO	**Wadi Hawf**	**116.30**	**283**	⇓P	PKPdf	15 06 42.0	+2.1
	SNR=23						
ABTO	**Aybut**	**116.67**	**282**	⇑P	PKPdf	15 06 42.4	+1.7

	SNR=24						
DAG	**Danmarks Havn**	**117.46**	**2**	⇑*e*PKIKP	PKPdf	15 06 41.3	+0.4
DAG				pmax	pmax		
	comp=Z,41nm,0.7s						
DAG				MLR	MLR		
	comp=Z,3µm,23.0s						
DAG	**Danmarks Havn**	**117.46**	**2**	⇑*i*P	PKPdf	15 06 41.3	+0.4
	comp=Z,41nm,0.7s						
	comp=Z,3µm,23.0s						
GENY	**Geneseo**	**117.84**	**49**	*e*PKP	PKPdf	15 06 42.7	+0.4
SSPA	**Standing Stone**	**118.00**	**51**	*e*PKP	PKPdf	15 06 43.4	+0.7
LVZ	**Lovozero**	**118.41**	**342**	*i* PKIKP	PKPdf	15 06 44.2	+1.3
LVZ	**Lovozero**	**118.41**	**342**	⇑*e*PKP	PKPdf	15 06 44.2	+1.3
APA	**Apatity**	**118.99**	**342**	⇑*i*PKIKP	PKPdf	15 06 44.0	0.0
APA				*i* *PP		15 07 23.0	
APA				*i* SP	SP	15 17 52.0	+19
APA				*e*SS	SS	15 24 15.0	+4.6
APA				pmax	pmax		
	comp=Z,210nm,1.1s						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
MVL	**Millersville**	**119.23**	**52**	*e*PKP	PKPdf	15 06 45.8	+0.7
BINY	**Binghamton**	**119.25**	**50**	*e*PKP	PKPdf	15 06 45.6	+0.4
KEV	**Kevo**	**119.33**	**345**	*e*p	PKPdf	15 06 45.9	+1.3
	comp=Z,119nm,0.6s						
KEV	**Kevo**	**119.33**	**345**	*e*PKIKP	PKPdf	15 06 45.9	+1.3
KEV				pmax	pmax		
	comp=Z,119nm,0.6s						
SUMG	**Summit**	**119.83**	**9**	*e*PKP	PKPdf	15 06 47.0	+1.5
PECR	**Pechory**	**119.97**	**327**	*e*PKIKP	PKPdf	15 06 46.8	+0.7
PECR				*e*		15 08 12.0	
PECR				*e*		15 13 51.0	
PECR				pmax	pmax		
	comp=Z,1µm,7.0s						
PECR				MLR	MLR		
	comp=E,8µm,19.0s						
PECR				MLR	MLR		
	comp=Z,4µm,19.0s						
PECR				MLR	MLR		
	comp=N,1µm,14.0s						
NCB	**Newcomb**	**120.28**	**47**	*e*PKP	PKPdf	15 06 48.2	+1.2
MIV	**Mineville/With**	**120.75**	**47**	*e*PKP	PKPdf	15 06 48.4	+0.4
ACCN	**Adirondack Com**	**120.77**	**48**	*e*PKP	PKPdf	15 06 48.1	0.0
KTK1	**Kautokeino**	**120.79**	**346**	*e*P	PKPdf	15 06 49.0	+1.5
KTK1				AMb	AMB	15 06 54.2	
	comp=Z,232nm,1.8s						
PAL	**Palisades**	**120.96**	**51**	*e*PKIKP	PKPdf	15 06 48.3	-0.2
MDV	**Middlebury**	**121.01**	**47**	*e*PKP	PKPdf	15 06 49.5	+1.0
TRO	**Tromso**	**121.27**	**348**	*e*P	PKPdf	15 06 48.2	-0.2
MAK	**Makhachkala**	**121.33**	**312**	*e*P	Pdif	15 03 24.0	+6.5
MAK				*e*		15 06 51.0	
MAK				*i*		15 08 29.8	
MAK				*i* PPP	PPP	15 10 57.0	-7.0
MAK				*i* PS	PS	15 18 13.0	-6.2
MAK				pmax	pmax		
	comp=Z,1µm,5.0s						
MAK				pmax	pmax		
	comp=Z,2µm,6.0s						
MAK				pmax	pmax		
	comp=E,2µm,8.0s						
MAK				pmax	pmax		
	comp=Z,4µm,8.0s						
MAK				MLR	MLR		
	comp=N,3µm,20.0s						
MAK				MLR	MLR		
	comp=E,2µm,20.0s						
MAK				MLR	MLR		
	comp=Z,3µm,20.0s						
QUA2	**Belchertown**	**121.91**	**49**	*e*PKP	PKPdf	15 06 50.9	+0.6
SCHQ	**Schefferville**	**121.96**	**34**	*e*PKP	PKPdf	15 06 51.7	+1.6
HRV	**Harvard--Oak R**	**122.45**	**49**	*e*PKIKP	PKPdf	15 06 53.5	+2.2
JOF	**Joensuu**	**122.50**	**338**	*e*p	PKPdf	15 06 52.3	+1.4
	comp=Z,319nm,0.7s						
JOF	**Joensuu**	**122.50**	**338**	*e*PKIKP	PKPdf	15 06 52.3	+1.4
JOF				pmax	pmax		
	comp=Z,319nm,0.7s						
WES	**Weston**	**122.64**	**49**	*e*PKIKP	PKPdf	15 06 53.7	+2.0
SDV	**Santo Domingo**	**123.15**	**89**	*e*PKP	PKPdf	15 06 54.0	+0.7
DUS	**Dusheti**	**123.53**	**311**	P	PKPdf	15 06 55.4	+1.9
MTA	**Mtatsminda**	**123.54**	**311**	P	PKPdf	15 06 55.7	+2.2
SUR	**Sutherland**	**123.54**	**214**	*e*PKP	PKPdf	15 06 55.1	+1.4
SUR				*e*		15 07 48.0	
TI2	**Plekhanov**	**123.57**	**311**	⇑*i*PKIKP	PKPdf	15 06 55.2	+1.7
TI2				*i*		15 08 44.0	
SCO	**Scoresbysund**	**123.58**	**4**	*i* PKIKP	PKPdf	15 06 54.5	+1.6
SCO				pmax	pmax		
	comp=Z,86nm,0.9s						
SCO	**Scoresbysund**	**123.58**	**4**	*i* P	PKPdf	15 06 54.5	+1.6
	comp=Z,86nm,0.9s						
LOF	**Lofoten**	**123.61**	**349**	*e*P	PKPdf	15 06 58.0	+5.1
BOSA	**Boshof**	**123.68**	**221**	*e*PKP	PKPdf	15 06 55.3	+1.2
BOSA				*e*		15 07 47.2	
GNI	**Garni**	**123.86**	**309**	c *i*PKIKP	PKPdf	15 06 56.2	+2.1
GNI	**Garni**	**123.86**	**309**	⇑*i*PKP	PKPdf	15 06 56.3	+2.2
LBOS		**123.89**	**277**	⇑*e*P	PKPdf	15 06 57.8	+3.1
GOF	**Gofitskoye**	**124.04**	**315**	*i* PKIKP	PKPdf	15 06 57.0	+2.6
GOF				pmax	pmax		
	comp=Z,2µm,3.0s						
ONI	**Oni**	**124.34**	**312**	P	PKPdf	15 06 57.5	+2.5
VOR	**Voronezh**	**124.34**	**324**	*e*PKIKP	PKPdf	15 06 56.0	+1.3
VOR				pmax	pmax		
	comp=Z,1µm,1.2s						
OBN	**Obninsk**	**124.35**	**328**	⇑*i*PKIKP	PKPdf	15 06 55.6	+0.9
OBN				*e*		15 08 45.8	
OBN				*e*		15 13 43.0	
OBN				pmax	pmax		
	comp=Z,347nm,0.7s						
OBN				MLR	MLR		
	comp=Z,4µm,19.0s						
OBN	**Obninsk**	**124.35**	**328**	*e*PKP	PKPdf	15 06 55.5	+0.8
AKH	**Akhalkalaki**	**124.56**	**311**	P	PKPdf	15 06 58.0	+2.5
KIV	**Kislovodsk**	**124.56**	**314**	*i* PKIKP	PKPdf	15 06 57.0	+1.6
KIV				*e*		15 08 46.4	
KIV				*e*SP	SP	15 18 26.7	+4.8
KIV				*e*SS	SS	15 25 28.6	+6.7
KIV				pmax	pmax		
	comp=N,137nm,1.2s						
KIV				pmax	pmax		
	comp=Z,283nm,1.2s						
KIV				MLR	MLR		
	comp=N,2µm,24.0s						
KIV				MLR	MLR		
	comp=E,2µm,24.0s						
KIV				MLR	MLR		
	comp=Z,3µm,24.0s						
KIV	**Kislovodsk**	**124.56**	**314**	*e*PKP	PKPdf	15 06 56.8	+1.4
PUL	**Pulkovo**	**124.78**	**335**	⇑*e*PKIKP	PKPdf	15 06 57.3	+1.9
DHBB	**Dhamar BB**	**124.81**	**278**	⇓*e*P	PKPdf	15 07 00.8	+4.2
KAF	**Kangasniemi**	**124.81**	**339**	*e*p	PKPdf	15 06 56.4	+1.0
	comp=Z,160nm,0.6s,baz=45,slow=1.9						
KAF	**Kangasniemi**	**124.81**	**339**	*e*PKIKP	PKPdf	15 06 56.4	+1.0
KAF				pmax	pmax		
	comp=Z,160nm,0.6s						
KARS	**Kars**	**125.01**	**310**	*e*P	PKPdf	15 06 58.6	+2.2
HKR	**Hakkari**	**125.07**	**306**	*e*P	PKPdf	15 06 57.8	+1.2
MOR8	**Moi Rana**	**125.09**	**347**	*e*P	PKPdf	15 06 56.7	+0.9
MOR8				AMb	AMB	15 07 01.3	
	comp=Z,197nm,1.4s						
BHD	**Baghdad**	**125.10**	**301**	*e*PKP	PKPdf	15 06 53.0	-3.7
BHD				*e*PKS	PKS	15 10 28.0	-3.9
BHD				*e*SKS1		15 13 36.0	
BHD				*e*SKS2		15 15 01.0	
VANB	**Van**	**125.17**	**307**	*e*P	PKPdf	15 06 57.8	+1.0
VANT	**Van**	**125.20**	**307**	*e*P	PKPdf	15 06 55.3	-1.5
MSL	**Mosul**	**125.78**	**305**	*i* PKP	PKPdf	15 07 00.0	+2.1
MSL				*e*PP	PP	15 08 22.5	-35
MSL				*e*PKS	PKS	15 10 34.0	+0.9
MSL				*e*SKS1		15 13 42.0	
MSL				*e*SKS2		15 15 04.0	
LBTB	**Lobatse**	**125.91**	**224**	*e*PKIKP	PKPdf	15 06 59.5	+1.0
BCA	**Borcka**	**125.92**	**311**	*e*P	PKPdf	15 06 58.6	+0.5
ERZM	**Erzurum**	**126.45**	**309**	*i* P	PKPdf	15 07 01.6	+2.5
EZM	**Erzurum**	**126.46**	**309**	*e*P	PKPdf	15 07 02.9	+3.8
VRT	**Varto**	**126.49**	**308**	*e*P	PKPdf	15 07 00.2	+1.0
BTMT	**Batman**	**126.71**	**307**	*e*P	PKPdf	15 07 01.8	+2.2
SOC	**Sochi**	**126.73**	**314**	*i* PKIKP	PKPdf	15 07 01.7	+2.2
SOC				*e*		15 08 56.1	
SOC				*e*PS	PS	15 18 45.9	-20
SOC				*e*SS	SS	15 26 12.1	+23
SOC				pmax	pmax		
	comp=N,85nm,1.3s						
SOC				pmax	pmax		
	comp=Z,241nm,1.3s						
SOC				pmax	pmax		
	comp=E,29nm,0.9s						
BEST	**Besiri**	**126.94**	**307**	*i* P	PKPdf	15 07 02.1	+2.1
NSS	**Namsos**	**127.04**	**347**	*e*P	PKPdf	15 07 00.2	+0.6
NSS				AMb	AMB	15 07 04.6	
	comp=Z,396nm,0.9s						
BINT	**Bingol**	**127.34**	**308**	*e*P	PKPdf	15 06 59.4	-1.5
EZC	**Erzincan**	**127.65**	**309**	*e*P	PKPdf	15 07 03.4	+2.0
GUMT	**Gumushane**	**127.73**	**310**	*e*P	PKPdf	15 07 02.6	+1.0
ANN	**Anapa**	**127.92**	**316**	*i* PKIKP	PKPdf	15 06 59.8	-2.1
ANN				pmax	pmax		
	comp=Z,275nm,1.8s						
PTK	**Pertek**	**128.17**	**308**	*e*P	PKPdf	15 07 06.7	+4.1
KMBO	**Kilima Mbogo**	**128.19**	**257**	PKPdf	PKPdf	15 07 06.0	+2.8
KMBO				pPKPdf		15 07 58.2	
KMBO	**Kilima Mbogo**	**128.19**	**257**	*e*PKP	PKPdf	15 07 05.0	+1.7
KMBO				*e*		15 07 57.4	
ELZG	**Elazig**	**128.57**	**308**	*i* P	PKPdf	15 07 05.3	+2.0
SJG	**San Juan**	**128.72**	**78**	*e*PKIKP	PKPdf	15 07 03.7	-0.4
URFA	**Urfa**	**128.93**	**307**	*e*P	PKPdf	15 07 08.4	+4.4
IZAR	**Zarasai**	**128.95**	**333**	*e*P	PKPdf	15 07 05.6	+2.1
IZAR				AMPb	AMB	15 07 10.2	
	comp=Z,131nm,1.1s						
MNK	**Minsk**	**128.98**	**331**	⇑*i*PKIKP	PKPdf	15 07 03.0	-0.6
MNK				pmax	pmax		
	comp=Z,2µm,1.0s						
IDID	**Didziasalis**	**129.00**	**332**	*e*P	PKPdf	15 07 05.9	+2.3
IDID				AMPb	AMB	15 07 10.2	
	comp=Z,136nm,1.0s						
MYA	**Malataya**	**129.04**	**308**	*e*P	PKPdf	15 07 05.9	+1.7
MALT	**Malatya**	**129.04**	**308**	*e*PKIKP	PKPdf	15 07 06.8	+2.6
ISAL	**Salakas**	**129.12**	**333**	*e*P	PKPdf	15 07 06.0	+2.2
ISAL				AMPb	AMB	15 07 10.6	
	comp=Z,106nm,1.2s						
IIGN	**Ignalina**	**129.21**	**332**	*e*P	PKPdf	15 07 06.5	+2.5
IIGN				AMPb	AMB	15 07 10.6	
	comp=Z,176nm,0.7s						
DOMB	**Dombas**	**129.86**	**347**	*e*	PKPdf	15 06 57.2	-7.8
GZT	**Gaziantep**	**129.93**	**307**	*i* P	PKPdf	15 07 08.8	+2.9
LSZ	**Lusaka**	**129.98**	**236**	*e*PKP	PKPdf	15 07 08.7	+2.2
LSZ				*e*		15 07 59.4	
NB2	**NORSAR Subarra**	**130.23**	**345**	PKPdf	PKPdf	15 07 07.7	+1.9
	comp=Z,117nm,1.1s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**130.23**	**345**	PKPd		15 07 07.7	
	baz=31,slow=1.9						
GAZ	**Gaziantep**	**130.24**	**307**	*e*P	PKPdf	15 07 09.1	+2.6
NAO01	**NORSAR Array S**	**130.48**	**345**	*e*PKP	PKPdf	15 07 07.9	+1.6
NAO01				*e*SKP		15 10 14.1	
BOYT	**Boyabat**	**130.78**	**313**	*i* P	PKPdf	15 07 10.9	+3.5
BNN	**Bunyan**	**130.86**	**309**	*e*P	PKPdf	15 07 09.1	+1.5
BYBT	**Boyabat**	**130.86**	**313**	*e*P	PKPdf	15 07 08.3	+0.8
YOZ	**Yozgat**	**131.03**	**310**	*e*P	PKPdf	15 07 09.9	+2.0
CTKT	**Corum**	**131.11**	**312**	*i* P	PKPdf	15 07 12.2	+4.2
COBT	**Iskenderun**	**131.14**	**306**	*i* P	PKPdf	15 07 11.4	+3.1
BZK	**Bozkurt**	**131.23**	**314**	*e*P	PKPdf	15 07 07.5	-0.7
HTY	**Hatay**	**131.33**	**306**	*e*P	PKPdf	15 07 08.3	-0.3
CORM	**Corum**	**131.37**	**311**	*e*P	PKPdf	15 07 10.8	+2.2
CEYT	**Ceyhan**	**131.42**	**307**	*e*P	PKPdf	15 07 11.6	+2.8
SUW	**Suwalki**	**131.43**	**332**	*e*PKP	PKPdf	15 07 12.0	+3.8
SUW				*e*PKPdf	PKPdf	15 07 13.8	+5.5
SUW	**Suwalki**	**131.43**	**332**	*e*PKP	PKPdf	15 07 12.0	+3.7
SUW				*e*PKIKP	PKPdf	15 07 13.8	+5.5
SUW				*e*		15 10 19.6	
TOS	**Tosya**	**131.53**	**313**	*e*P	PKPdf	15 07 09.1	+0.3
AVNT	**Avonos**	**131.62**	**309**	*i* P	PKPdf	15 07 10.4	+1.3
BALT	**Daday**	**131.81**	**313**	*i* P	PKPdf	15 07 09.9	+0.5
CANT	**Cankiri**	**131.96**	**312**	*e*P	PKPdf	15 07 10.8	+1.1
NIG	**Nigde**	**132.00**	**309**	*e*P	PKPdf	15 07 09.1	-0.7
ELDT	**Eldivan**	**132.14**	**312**	*i* P	PKPdf	15 07 10.9	+0.9
BHL	**Bhannes**	**132.20**	**303**	*e*P	PKPdf	15 07 13.2	+2.9
KAMT	**Kaman**	**132.29**	**311**	*e*P	PKPdf	15 07 10.8	+0.4
SAFT	**Safranbolu**	**132.41**	**313**	*e*P	PKPdf	15 07 09.1	-1.4
KIS	**Kishinev**	**132.50**	**322**	*e*PKIKP	PKPdf	15 07 10.0	-0.5
KIS				*e*		15 09 37.0	
KIS				pmax	pmax		
	comp=Z,930nm,2.5s						
KIS				pmax	pmax		
	comp=Z,2µm,7.0s						
MEST	**Erdemli**	**132.77**	**307**	*i* P	PKPdf	15 07 12.7	+1.4
BLS5	**Blasjo**	**132.78**	**347**	*e*	PKPdf	15 07 02.7	-8.0
ANTO	**Ankara**	**132.80**	**312**	*e*P	PKPdf	15 07 05.1	-6.2
ANTO	**Ankara**	**132.80**	**312**	PKIKP	PKPdf	15 07 13.5	+2.2
LOD	**Lodumlu**	**132.82**	**312**	*e*P	PKPdf	15 07 10.8	-0.6
IAS	**Iasi**	**133.15**	**323**	PKIKP	PKPdf	15 07 13.7	+2.0
TLCR		**133.37**	**320**	⇓PKIKP	PKPdf	15 07 06.7	-5.5
WAL1	**Walls**	**133.41**	**352**	*e*P	PKPdf	15 07 14.1	+2.3
LRW	**Lerwick**	**133.47**	**352**	*e*P	PKPdf	15 07 14.0	+2.1
EIL	**Elat**	**133.54**	**297**	*e*PKPdf	PKPdf	15 07 14.2	+1.3
EIL				*e*SKP		15 10 29.2	
WAR	**Warsaw**	**133.58**	**332**	*e*PKP	PKPdf	15 07 16.1	+3.8
WAR				*e*PKIKP	PKPdf	15 07 19.0	+6.7
WAR				*e*		15 10 28.7	
LVV	**L'vov**	**133.64**	**328**	*i* PKIKP	PKPdf	15 07 15.0	+2.5
LVV	**L'vov**	**133.64**	**328**	*e*P	PKPdf	15 07 15.0	+2.5
MDU	**Mudurnu**	**133.73**	**313**	*e*P	PKPdf	15 07 13.2	+0.2
KONT	**Konya--Tatoy**	**133.74**	**309**	*e*P	PKPdf	15 07 14.8	+1.8
CFR	**Carcaliu**	**133.80**	**320**	⇑PKHKP		15 07 02.7	
KIZT	**Kizilcal**	**133.80**	**311**	*e*P	PKPdf	15 07 14.0	+0.9
HENT	**Hendek**	**133.82**	**313**	*i* P	PKPdf	15 07 14.5	+1.4
CSS	**Prodhromos**	**133.83**	**305**	*e*PKP	PKPdf	15 07 15.6	+2.3
CSS				*e*SKP		15 10 27.7	
TIRR	**Tirgusor**	**133.96**	**319**	⇑PKIKP	PKPdf	15 07 16.4	+3.1
LEF	**Lefka**	**134.14**	**305**	*e*P	PKPdf	15 07 05.9	-8.0
HARR	**Harsova**	**134.16**	**320**	PKIKP	PKPdf	15 07 16.6	+3.0
HARR	**Harsova**	**134.16**	**320**	⇓P	PKPdf	15 07 17.1	+3.5
SZAC	**Souni-Zanaja**	**134.24**	**305**	P	PKPdf	15 07 16.1	+2.1
CVD	**Cernavoda**	**134.27**	**319**	⇑P	PKPdf	15 07 17.2	+3.4
VRI	**Vrincioaia**	**134.32**	**322**	PKIKP	PKPdf	15 07 19.5	+5.7
VRI	**Vrincioaia**	**134.32**	**322**	⇑P	PKPdf	15 07 09.2	-4.7
VRI				⇓P		15 07 19.5	
ESKT	**Eskisehir**	**134.33**	**312**	*e*P	PKPdf	15 07 11.6	-2.5
ESKT	**Eskisehir**	**134.33**	**312**	*i* P	PKPdf	15 07 14.9	+0.8
ALFC	**Alevga**	**134.36**	**305**	P	PKPdf	15 07 10.0	-4.2
KWP	**Kalwaria**	**134.44**	**328**	*e*PKP	PKPdf	15 07 17.4	+3.5
KWP				*e*PKPdf	PKPdf	15 07 20.1	+6.2
KWP	**Kalwaria**	**134.44**	**328**	*e*PKP	PKPdf	15 07 17.4	+3.4
KWP				*e*PKIKP	PKPdf	15 07 20.1	+6.2
KWP				*e*		15 10 30.3	
MBAR	**Mbarara**	**134.49**	**255**	*e*PKPdf	PKPdf	15 07 16.1	+1.0
MBAR				*e*		15 08 08.8	
MBAR				*e*SKP		15 10 31.2	
GKP	**Gorka Klasztor**	**134.49**	**335**	*e*PKP	PKPdf	15 07 17.3	+3.4
GKP				*e*PKIKP	PKPdf	15 07 20.5	+6.5
GKP				*e*		15 10 30.1	
HRT	**Hereke**	**134.68**	**314**	*e*P	PKPdf	15 07 09.1	-5.5
MUD	**Monsted U'grnd**	**134.72**	**343**	⇓*e*PKIKP	PKPdf	15 07 14.8	+0.5
MUD				*e*		15 07 59.4	
MUD				pmax	pmax		
	comp=Z,100nm,0.8s						
MUD	**Monsted U'grnd**	**134.72**	**343**	⇓*e*P	PKPdf	15 07 14.8	+0.5
MUD				*e*		15 07 59.4	
MUD				*i*		15 10 27.9	
MUD	**Monsted U'grnd**	**134.72**	**343**	⇓*i*P	PKPdf	15 07 14.8	+0.5
	comp=Z,103nm,0.8s						
MUD				*e*		15 07 59.4	
MUD				*i*		15 10 27.9	
MLR	**Muntele Rosu**	**134.98**	**322**	PKIKP	PKPdf	15 07 17.1	+2.0
MLR	**Muntele Rosu**	**134.98**	**322**	⇑P	PKPdf	15 07 07.9	-7.2
ALT	**Altintas**	**135.03**	**311**	*e*P	PKPdf	15 07 15.6	+0.3
KOLS	**Kolonicke sedl**	**135.09**	**328**	*i* PKP	PKPdf	15 07 18.8	+3.6
KOLS				*e*		15 08 14.2	
KOLS				*i* SKP		15 10 32.7	
ISP	**Isparta**	**135.16**	**310**	*e*PKPdf	PKPdf	15 07 17.3	+1.7
ISP				*e*SKP		15 10 33.6	
BCK	**Bucak**	**135.23**	**309**	*e*P	PKPdf	15 07 13.2	-2.6
UZH	**Uzhgorod**	**135.27**	**327**	*e*PKHKP		15 07 07.0	
UZH				*i*		15 07 18.0	
SNX	**Sinaia**	**135.31**	**322**	PKIKP	PKPdf	15 07 18.2	+2.5
OJC	**Ojcow**	**135.50**	**330**	*e*Pdiff	Pdif	15 04 37.0	+17
OJC				*e*PKPdf	PKPdf	15 07 19.2	+3.3
OJC				*e*PP	PP	15 09 58.3	-0.5
OJC				*e*PS	PS	15 20 35.6	+15
OJC				*e*SS	SS	15 28 03.2	+28
OJC				MLR	MLR	16 06 56.3	
	comp=Z,5µm,21.1s						
ORLT	**Orhaneli**	**135.53**	**313**	*e*P	PKPdf	15 07 18.1	+1.8
CRVS	**Cervenica-Dubn**	**135.53**	**328**	*e*PKIKP	PKPdf	15 07 19.6	+3.6
CRVS				*e*		15 09 53.0	
CRVS	**Cervenica-Dubn**	**135.53**	**328**	*e*PKP	PKPdf	15 07 19.6	+3.6
CRVS				*e*		15 08 09.0	
CRVS				*e*PP	PP	15 09 53.0	-6.1
CRVS				*e*SKP		15 10 34.4	
MTUR	**Matau**	**135.65**	**322**	PKIKP	PKPdf	15 07 21.6	+5.2
NIE	**Niedzica**	**135.78**	**329**	*e*PP	PP	15 09 54.5	-6.0
ELL	**Elmali**	**135.98**	**308**	*e*P	PKPdf	15 07 14.0	-3.2
MVH1	**Achvaich**	**136.00**	**353**	*e*P	PKPdf	15 07 15.5	-1.1
BNT	**Bandirma**	**136.09**	**314**	*e*P	PKPdf	15 07 10.8	-6.6
SZH	**Strazhica**	**136.11**	**319**	*e*P	PKPdf	15 07 12.0	-5.3
EDRB	**Edirne**	**136.25**	**317**	*e*P	PKPdf	15 07 18.1	+0.5
BTOK	**Tokmak**	**136.25**	**313**	*i* P	PKPdf	15 07 24.4	+6.8
ZIMR		**136.27**	**320**	⇓P	PKPdf	15 07 19.1	+1.6
KECS	**Kecovo**	**136.30**	**328**	*e*PKP	PKPdf	15 07 22.0	+4.6
KECS				*e*		15 08 11.6	
KECS				*i* SKP		15 10 37.4	
KECS				*e*		15 10 44.4	
DNZL	**Cakiroluk**	**136.30**	**310**	*i* P	PKPdf	15 07 21.7	+4.0
RAC	**Raciborz**	**136.35**	**331**	*e*PKPdf	PKPdf	15 07 19.9	+2.4
RAC				*e*PP	PP	15 10 03.2	-0.7
RAC				MLR	MLR	16 07 03.5	
	comp=Z,4µm,22.7s						
MANT	**Manisa**	**136.37**	**311**	*i* P	PKPdf	15 07 20.7	+2.9
MME1	**Meikle Cairn**	**136.45**	**352**	*e*P	PKPdf	15 07 12.0	-5.5
RUE	**Ruedersdorf**	**136.46**	**337**	*e*PKP	PKPdf	15 07 20.8	+3.2
MDO	**Dochfour**	**136.49**	**353**	*e*P	PKPdf	15 07 09.8	-7.7
PVL	**Pavlikeni**	**136.51**	**319**	*e*P	PKPdf	15 07 10.0	-8.0
OKC	**Ostrava-Krasne**	**136.54**	**331**	*e*PKHKP		15 07 10.4	
OKC				*e*		15 10 04.9	
OKC	**Ostrava-Krasne**	**136.54**	**331**	*e*PKPpre		15 07 10.4	
OKC				*e*PKPDF	PKPdf	15 07 22.8	+5.0
OKC				*e*PP	PP	15 10 04.9	-0.1
OKC				*e*PKS	PKS	15 10 58.6	+6.1
KSP	**Ksiaz**	**136.67**	**333**	*e*PKP	PKPdf	15 07 21.6	+3.5
KSP				*e*PKiKP		15 07 23.2	
KSP				*e*		15 10 36.8	
AKS	**Akhisar**	**136.76**	**312**	*e*P	PKPdf	15 07 19.7	+1.1
MORC	**Moravsky Berou**	**136.87**	**331**	*e*PKHKP		15 07 10.1	
MORC				*e*		15 10 05.3	
DIM	**Dimitrovgrad**	**136.95**	**317**	*e*P	PKPdf	15 07 11.0	-7.8
PSZ	**Piszkesteto**	**136.97**	**328**	*e*PKPdf	PKPdf	15 07 19.9	+1.3
PSZ	**Piszkesteto**	**136.97**	**328**	*e*PKP/D	PKPdf	15 07 13.4	-5.3
DPC	**Dobruska-Polom**	**137.01**	**333**	*e*PKPpre		15 07 09.7	
DPC				*e*PKPDF	PKPdf	15 07 21.1	+2.4
DPC				*e*PP	PP	15 10 06.0	-1.8
DPC				*e*PKS	PKS	15 10 58.3	+5.0
UPC	**Upice**	**137.03**	**333**	*e*PKPpre		15 07 09.7	
UPC				*e*PKPDF	PKPdf	15 07 20.7	+2.0
UPC				*e*PP	PP	15 10 07.4	-0.5
ALN	**Alexandroupoli**	**137.14**	**316**	*e*P	PKPdf	15 07 10.2	-9.0
AYDN	**Tasoluk**	**137.18**	**311**	*i* P	PKPdf	15 07 21.1	+1.7
KDZ	**Kurdzhali**	**137.22**	**317**	*e*P	PKPdf	15 07 10.0	-9.3
KOLL	**Kolacno**	**137.28**	**330**	*e*PKP	PKPdf	15 07 22.4	+3.2
KOLL				*e*		15 07 23.2	
KOLL				*i* SKP		15 10 39.1	
KOLL				*i*		15 10 45.7	
KDAG	**Bornova**	**137.34**	**312**	*i* P	PKPdf	15 07 13.7	-5.9
AYVA	**Ayvalik**	**137.38**	**313**	*i* P	PKPdf	15 07 24.2	+4.5
BZS	**Buzias**	**137.45**	**324**	⇑PKIKP	PKPdf	15 07 18.6	-1.0
PLD	**Plovdiv**	**137.47**	**318**	*e*P	PKPdf	15 07 14.0	-5.7
PGB	**Panagyurishte**	**137.59**	**319**	*e*P	PKPdf	15 07 12.5	-7.4
BRG	**Berggiesshubel**	**137.64**	**335**	*i* PKHKP		15 07 12.2	
BRG				pmax	pmax		
	comp=Z,251nm,0.9s						
BRG				MLR	MLR		
	comp=N,3µm,20.6s						
BRG				MLR	MLR		
	comp=E,4µm,20.6s						
BRG				MLR	MLR		
	comp=Z,3µm,20.6s						
VRAC	**Vranov**	**137.64**	**332**	⇑PKHKP		15 07 12.6	
PVCC	**Panska Ves**	**137.64**	**334**	*e*PKHKP		15 07 12.3	
PVCC				*e*		15 10 11.2	
PVCC	**Panska Ves**	**137.64**	**334**	*e*PKPpre		15 07 12.3	
PVCC				*e*PKPDF	PKPdf	15 07 24.7	+4.9
PVCC				*e*PP	PP	15 10 11.2	-0.9
PVCC				*e*PKS	PKS	15 10 58.0	+3.5
RZN	**Rozhen**	**137.66**	**317**	P	PKPdf	15 07 10.0	-10
CLL	**Collm**	**137.68**	**336**	*i* PKIKP	PKPdf	15 07 24.1	+4.3
CLL				pmax	pmax		
	comp=Z,267nm,0.8s						
CLL	**Collm**	**137.68**	**336**	*i* PKP	PKPdf	15 07 24.1	+4.3
CLL				*e*pPKP		15 08 13.0	
CLL				*i* SKP		15 10 39.5	
CLL				*e*PKS	PKS	15 10 58.0	+3.5
CLL	**Collm**	**137.68**	**336**	*e*	PKPdf	15 07 14.0	-5.8
CLL				*i* PKIKP	PKPdf	15 07 24.1	+4.3
CLL				e*PPKP		15 08 13.0	
CLL				*e*PP	PP	15 10 10.0	-2.3
CLL				*i*		15 10 39.5	
CLL				*e*		15 10 49.0	
CLL				*e*PKS	PKS	15 10 58.0	+3.5
CLL				*e*		15 11 43.0	
CLL				*e*		15 11 54.0	
CLL				*e*		15 12 12.0	
CLL				*e*		15 13 57.0	
CLL				*e*PCPPKP		15 19 33.0	
CLL				*e*PPS	PPS	15 22 25.0	-2.2
CLL				*e*		15 22 50.0	
CLL				*e*		15 23 30.0	
CLL				e*SSS		15 29 30.0	
BUD	**Budapest**	**137.69**	**328**	⇑*e*PKP/D		15 07 24.1	
BDRM	**Kayabasi**	**137.72**	**310**	*i* P	PKPdf	15 07 24.9	+4.6
EAB	**Aberfoyle**	**137.72**	**353**	*e*P	PKPdf	15 07 18.3	-1.5
EAB				AMb	AMB	15 07 27.1	
	comp=Z,359nm,1.1s						
SMOL	**Smolenice**	**137.80**	**330**	*i* PKP	PKPdf	15 07 25.8	+5.7
SMOL				*e*PP	PP	15 10 14.8	+1.6
SMOL				*e*SKPpB		15 10 43.1	
SMOL				*i*		15 10 48.6	
SRO	**Srobarova**	**137.84**	**329**	*i* PKIKP	PKPdf	15 07 25.2	+5.0
SRO				*e*		15 10 15.6	
SRO	**Srobarova**	**137.84**	**329**	*e*PKP	PKPdf	15 07 25.2	+5.0
SRO				*e*PP	PP	15 10 15.6	+2.1
PCOU	**Corrie**	**137.89**	**353**	*e*P	PKPdf	15 07 23.9	+3.8
SRO1	**Iza**	**137.91**	**329**	*i* PKP	PKPdf	15 07 26.0	+5.6
SRO1				*e*SKP		15 10 42.5	
EAU	**Auchinoon**	**137.94**	**352**	*e*P	PKPdf	15 07 13.7	-6.5
EAU				AMb	AMB	15 07 27.8	
	comp=Z,457nm,1.3s						
PRA	**Prague**	**138.04**	**334**	PKPDF	PKPdf	15 07 25.0	+4.5
PRA				PP	PP	15 10 16.0	+1.2
PRU	**Pruhonice**	**138.05**	**334**	*e*PKPpre		15 07 12.9	
PRU				*e*PKPDF	PKPdf	15 07 23.6	+3.0
PRU				*e*PP	PP	15 10 14.0	-0.9
PRU				*e*PKS	PKS	15 10 58.6	+3.4
PMSU	**Muirshiel**	**138.10**	**353**	*e*P	PKPdf	15 07 24.4	+3.9
VTS	**Vitosha**	**138.18**	**319**	⇑P	PKPdf	15 07 14.3	-6.7
ZST	**Bratislava**	**138.18**	**330**	*i* PKIKP	PKPdf	15 07 26.3	+5.4
ZST				*e*		15 10 16.5	
ZST	**Bratislava**	**138.18**	**330**	*i* PKP	PKPdf	15 07 26.3	+5.4
ZST				*e*		15 08 16.6	
ZST				*e*PP	PP	15 10 16.5	+0.8
ZST				*e*SKP		15 10 42.4	
LOS	**Limnos**	**138.23**	**315**	*e*P	PKPdf	15 07 15.0	-6.2
BOLS	**Boljevac**	**138.28**	**322**	⇓*i*P	PKPdf	15 07 13.5	-7.7
MMB	**Musomiste**	**138.35**	**318**	P	PKPdf	15 07 14.0	-7.4
ESK	**Eskdalemuir**	**138.42**	**352**	*e*PKPpre		15 07 13.1	
ESK	**Eskdalemuir**	**138.42**	**352**	*e*P	PKPdf	15 07 11.6	-10
VKA	**Vienna**	**138.50**	**331**	⇓*i*PKP	PKPdf	15 07 14.4	-7.1
VKA				*i*		15 07 23.4	
VKA				*i*		15 07 26.6	
VKA				*i*		15 08 15.4	
VKA				*i*		15 10 19.2	
BEO	**Belgrade**	**138.58**	**324**	⇑*i*P	PKPdf	15 07 18.0	-3.7
WIT	**Witteveen**	**138.61**	**342**	*e*PKP	PKPdf	15 07 25.3	+3.8
	comp=Z,1µm,0.9s						
WIT				*e*PP	PP	15 10 20.1	+2.0
BWH	**Wardlaw**	**138.62**	**352**	*e*P	PKPdf	15 07 19.1	-2.4
KKB	**Krupnik**	**138.63**	**319**	P	PKPdf	15 07 14.0	-7.9
SRS	**Serrai**	**138.68**	**317**	*e*P	PKPdf	15 07 13.2	-8.9
PKSM	**Moragy**	**138.72**	**327**	⇓PKIKP	PKPdf	15 07 18.9	-3.0
NKC	**Novy Kostel**	**138.74**	**336**	*e*PP	PP	15 10 16.2	-2.7
MOX	**Moxa**	**138.74**	**337**	*e*PKHKP		15 07 15.7	
MOX				pmax	pmax		
	comp=Z,265nm,1.6s						
MOX				MLR	MLR		
	comp=Z,2µm,20.0s						
MOX	**Moxa**	**138.74**	**337**	⇓*i*P	PKPdf	15 07 15.7	-6.2
MOX				*e*		15 07 26.0	
MOX				PP	PP	15 10 01.0	-18
MOX				PPS	tx	15 23 30.0	
MOX				LR	LR	15 52 36.0	

MOX				L		16 15 40.0	
BTA	**Talkin**	**138.75**	**351**	*e*P	PKPdf	15 07 16.6	-5.1
SOP	**Sopron**	**138.79**	**330**	*e*PKP/D		15 07 25.6	
SOP				*i* PP	PP	15 10 19.7	+0.4
OUR	**Ouranopolis**	**138.80**	**316**	*e*P	PKPdf	15 07 14.5	-7.7
BDL	**Dobcross Hall**	**138.89**	**351**	*e*P	PKPdf	15 07 16.3	-5.7
BARS	**Barje**	**138.91**	**321**	⇓*i*P	PKPdf	15 07 15.9	-6.5
SOH	**Sokhos**	**138.98**	**317**	*e*P	PKPdf	15 07 15.8	-6.8
GRUS	**Gruza**	**138.98**	**323**	⇑*i*P	PKPdf	15 07 15.7	-6.8
BBO1	**Bothel**	**138.99**	**352**	*e*P	PKPdf	15 07 17.3	-4.9
GAL1	**Galloway**	**139.06**	**353**	*e*P	PKPdf	15 07 16.7	-5.6
KNT	**Kendrikon**	**139.11**	**318**	*e*P	PKPdf	15 07 15.4	-7.4
KHC	**Kasperske Hory**	**139.11**	**334**	*e*PKHKP		15 07 15.7	
KHC				*e*		15 07 24.0	
KHC				*e*		15 10 15.5	
KHC	**Kasperske Hory**	**139.11**	**334**	*e*PKPpre		15 07 15.7	
KHC				*e*PKPDF	PKPdf	15 07 24.0	+1.4
KHC				*e*pPKP		15 08 15.5	
KHC				*e*PP	PP	15 10 15.5	-5.7
KHC				*e*SKP		15 10 41.5	
KHC				*e*PKS	PKS	15 11 02.6	+5.6
PAIG	**Paliouri**	**139.19**	**316**	*e*P	PKPdf	15 07 18.0	-5.0
VAY	**Valandovo**	**139.24**	**318**	*i* PKP	PKPdf	15 07 17.6	-5.5
VAY				*i*		15 07 27.3	
VAY				*i* PKS	PP	15 10 14.4	-7.8
DIVS	**Divcibare**	**139.28**	**323**	⇑*i*P	PKPdf	15 07 15.1	-8.0
WTSB	**Winterswijk**	**139.31**	**341**	*e*PKP	PKPdf	15 07 18.7	-4.2
WTSB				*e*x	x	15 07 26.0	
	comp=Z,341nm,1.1s						
WTSB				*e*PP	PP	15 10 20.1	-2.1
THE	**Thessaloniki**	**139.33**	**317**	*e*P	PKPdf	15 07 20.6	-2.6
AOS	**Alonnisos**	**139.41**	**315**	*e*P	PKPdf	15 07 20.5	-3.0
HPK	**Haverah Park**	**139.49**	**350**	*e*P	PKPdf	15 07 18.3	-4.8
ARSA	**Arzberg**	**139.60**	**330**	⇑*i*P	PKPdf	15 07 17.3	-6.2
SKO	**Skopje**	**139.62**	**320**	⇑*i*PKP	PKPdf	15 07 18.0	-5.7
SKO				*i*		15 07 27.6	
	comp=Z,0.3nm,1.2s						
SKO				*i*		15 08 21.5	
SKO				*i* PKS	PKS	15 10 47.0	-11
	comp=Z,0.2nm,1.0s						
GRF	**Grafenberg Arr**	**139.65**	**336**	*e*PKHKP		15 07 16.0	
GRF				*e*		15 10 21.5	
MOA	**Molln**	**139.76**	**332**	⇓*i*P	PKPdf	15 07 18.0	-5.8
MOA				*i*		15 10 26.4	
XOR	**Xorichti**	**139.79**	**315**	*e*P	PKPdf	15 07 17.8	-6.3
LIT	**Litokhoron**	**139.91**	**317**	*e*P	PKPdf	15 07 17.2	-7.1
LHO	**Holmfirth**	**139.93**	**350**	*e*P	PKPdf	15 07 17.7	-6.3
IVA	**Berane**	**140.06**	**322**	⇓*i*P	PKPdf	15 07 19.5	-5.0
PLE	**Pljevlja**	**140.09**	**323**	⇓*i*P	PKPdf	15 07 19.7	-4.8
PVY	**Plav**	**140.17**	**321**	⇓*i*P	PKPdf	15 07 19.4	-5.3
DMUB	**Kingscourt**	**140.24**	**355**	*e*P	PKPdf	15 07 21.4	-3.1
FNA	**Florina**	**140.29**	**318**	*e*P	PKPdf	15 07 19.1	-5.8
DOBS	**Dobrina**	**140.40**	**329**	*e*PKP	PKPdf	15 07 21.9	-3.0
SISC	**Sisak**	**140.40**	**328**	*i* PKP	PKPdf	15 07 20.9	-4.0
UPM	**Unac-Piva**	**140.44**	**323**	⇓*i*P	PKPdf	15 07 20.4	-4.7
WME	**Myndd Eilian**	**140.44**	**352**	*e*P	PKPdf	15 07 23.3	-1.5
WME				AMb	AMB	15 07 30.1	
	comp=Z,127nm,1.2s						
OHR	**Ohrid**	**140.49**	**319**	*i* PKP	PKPdf	15 07 20.2	-5.1
OHR				*i*		15 07 28.5	
OHR				*i* PKS	PP	15 10 22.8	-6.8
WCB1	**Church Bay**	**140.50**	**352**	*e*P	PKPdf	15 07 22.7	-2.2
WCB1				AMb	AMB	15 07 29.7	
	comp=Z,197nm,1.4s						
AGG	**Agios Georgios**	**140.54**	**315**	*e*P	PKPdf	15 07 20.7	-4.8
SIND	**Sindeldorf**	**140.55**	**337**	*e*P	PKPdf	15 07 20.8	-4.3
OBKA	**Obir**	**140.60**	**330**	⇑*i*P	PKPdf	15 07 20.1	-5.2
OBKA				*i*		15 10 29.6	
HGN	**Heimansgroeve**	**140.63**	**341**	*e*PKP	PKPdf	15 07 21.7	-3.5
	comp=Z,114nm,1.6s						
HGN				*e*PP	PP	15 10 29.2	-1.0
NKY	**Niksic**	**140.63**	**322**	⇓*i*P	PKPdf	15 07 20.0	-5.5
TOD	**Tromm**	**140.64**	**338**	*e*P	PKPdf	15 07 20.1	-5.2
YLL	**Llanberis**	**140.68**	**352**	*e*P	PKPdf	15 07 21.8	-3.4
YLL				AMb	AMB	15 07 25.4	
	comp=Z,106nm,1.2s						
TTG	**Podgorica**	**140.70**	**322**	⇓*i*P	PKPdf	15 07 20.2	-5.4
KBA	**Koelnbreinsper**	**140.75**	**332**	⇑*i*P	PKPdf	15 07 19.8	-5.7
KBA				*i*		15 10 27.1	
SBD1	**Bryn Du**	**140.77**	**351**	*e*P	PKPdf	15 07 23.5	-1.9
SWS	**Schriesheim**	**140.78**	**338**	*e*P	PKPdf	15 07 21.4	-4.1
DLF	**Lyons Farm**	**140.80**	**354**	*e*P	PKPdf	15 07 21.9	-3.5
DCN	**Croghan**	**140.83**	**355**	*e*P	PKPdf	15 07 22.1	-3.4
DSB	**Dublin**	**140.84**	**354**	*e*PKPdf	PKPdf	15 07 27.7	+2.2
BRY	**Bratogost**	**140.84**	**323**	⇓*i*P	PKPdf	15 07 20.8	-5.0
ABH	**Alteburg**	**140.86**	**339**	*e*P	PKPdf	15 07 21.2	-4.4
YRE	**Yr Eifl**	**140.87**	**352**	*e*P	PKPdf	15 07 21.6	-3.9
HDH	**Heidenheim**	**140.94**	**336**	*e*P	PKPdf	15 07 22.9	-2.9
LJU	**Ljubljana**	**140.94**	**330**	*e*PKPdf	PKPdf	15 07 22.1	-3.8
LJU				*e*		15 07 27.3	
LJU				*e*		15 08 22.5	
LJU				*e*		15 08 45.0	
LJU				*e*PP	PP	15 10 30.5	-1.6
LJU				*e*		15 10 47.9	
LJU				*e*SKPbc		15 10 48.3	
LJU				*e*PKSab		15 11 09.8	
LJU				*e*		15 11 15.9	
LJU				*e*		15 11 36.5	
LJU				*e*		15 11 55.8	
LJU				*e*		15 12 18.5	
LJU				*e*		15 30 02.8	
BOJS	**Bojanci**	**140.96**	**328**	*e*PKPdf	PKPdf	15 07 22.0	-4.0
BOJS				*e*		15 08 24.7	
BOJS				*e*PP	PP	15 10 30.7	-1.5
BOJS				*e*		15 11 10.0	
ULC	**Ulcinj**	**140.97**	**321**	⇓*i*P	PKPdf	15 07 22.2	-3.9
BUM	**Brajici-Budva**	**140.99**	**322**	⇓*i*P	PKPdf	15 07 22.8	-3.3
HLM1	**Long Mynd**	**141.09**	**350**	*e*P	PKPdf	15 07 22.5	-3.4
HCY	**Herceg Novi**	**141.14**	**322**	⇓*i*P	PKPdf	15 07 23.2	-3.1
KTD	**Kalmit**	**141.14**	**338**	PKP	PKPdf	15 07 23.0	-3.1
RUP	**Ruppelstein**	**141.18**	**339**	PKHKP		15 07 22.8	
RUP	**Ruppelstein**	**141.18**	**339**	*e*P	PKPdf	15 07 22.4	-3.8
STU	**Stuttgart**	**141.18**	**337**	*e*PKHKP		15 07 23.5	
SSP1	**Stoney Pound**	**141.22**	**351**	*e*P	PKPdf	15 07 22.6	-3.6
PTCC	**Patocco-Chiusa**	**141.24**	**331**	*e*PKP	PKPdf	15 07 23.3	-3.1
VOY	**Vojsko**	**141.26**	**330**	*e*PKPdf	PKPdf	15 07 22.9	-3.5
JAVS	**Javornik**	**141.27**	**330**	*e*PKPdf	PKPdf	15 07 21.8	-4.7
WATA	**Walderalm**	**141.35**	**333**	⇑*i*P	PKPdf	15 07 24.4	-2.1
WATA				*i*		15 10 35.8	
STON	**Ston**	**141.35**	**323**	*i* PKP	PKPdf	15 07 19.7	-7.0
FVI	**Forni Avoltri**	**141.37**	**332**	*e*PKHKP		15 07 23.9	
WTTA	**Wattenberg**	**141.38**	**333**	⇑*i*P	PKPdf	15 07 23.2	-3.4
WTTA				*i*		15 10 33.9	
BUCH	**Bad Urach**	**141.38**	**336**	*e*P	PKPdf	15 07 23.5	-3.1
GMNA	**Gemona**	**141.39**	**331**	*e*PKP	PKPdf	15 07 24.2	-2.4
LBG	**Lerchenberg**	**141.42**	**337**	*e*P	PKPdf	15 07 24.4	-2.2
HAE	**Alders End**	**141.50**	**350**	*e*P	PKPdf	15 07 23.6	-3.1
HAE				AMb	AMB	15 07 27.0	
	comp=Z,184nm,1.5s						
WLF	**Walferdange**	**141.51**	**340**	*e*PKP	PKPdf	15 07 23.2	-3.5
WLF				*e*SKP		15 10 49.7	
LANF	**Langenberg**	**141.53**	**338**	PKP	PKPdf	15 07 24.7	-2.1
MOTA	**Moosalm**	**141.55**	**334**	⇑*i*P	PKPdf	15 07 22.9	-4.0
MOTA				*i*		15 10 49.8	
GIVF	**Givet**	**141.55**	**342**	*e*PKP1	PKPdf	15 07 24.1	-2.7
	comp=Z,538nm,0.9s						
TRI	**Trieste**	**141.55**	**330**	*e*PKIKP	PKPdf	15 07 25.4	-1.5
HTR	**Trewern Hill**	**141.58**	**351**	*e*P	PKPdf	15 07 23.4	-3.4
HTR				AMb	AMB	15 07 32.2	
	comp=Z,255nm,1.2s						
SQTA	**Sankt Quirin**	**141.60**	**334**	⇑*i*P	PKPdf	15 07 23.8	-3.2
SQTA				*i*		15 10 49.7	
MCH1	**Michaelchurch**	**141.61**	**350**	P	PKPdf	15 07 24.1	-2.8
MCH1	**Michaelchurch**	**141.61**	**350**	*e*P	PKPdf	15 07 23.5	-3.3
MCH1				*e*P		15 07 24.1	
IGT	**Igoumenitsa**	**141.63**	**317**	*e*P	PKPdf	15 07 24.0	-3.3
UBR	**Uberruh**	**141.70**	**335**	*e*P	PKPdf	15 07 24.7	-2.4
BAIF	**Baives**	**141.77**	**342**	*e*PKP1	PKPdf	15 07 24.8	-2.4
	comp=Z,835nm,1.3s						
GUT	**Gutenstein**	**141.78**	**336**	*e*P	PKPdf	15 07 25.3	-2.0
MENF	**Mencas**	**141.88**	**345**	PKP	PKPdf	15 07 24.1	-3.3
SPAK	**Spaichingen**	**141.89**	**337**	PKP	PKPdf	15 07 26.6	-0.8
SPAK	**Spaichingen**	**141.89**	**337**	*e*P	PKPdf	15 07 25.7	-1.7
HGH	**Gray Hill**	**141.93**	**350**	*e*P	PKPdf	15 07 25.2	-2.2
HGH				AMb	AMB	15 07 30.4	
	comp=Z,205nm,1.3s						
HPE	**Pembroke**	**141.94**	**352**	*e*P	PKPdf	15 07 25.4	-2.0
DAVA	**Damuels**	**142.11**	**335**	⇑*i*P	PKPdf	15 07 25.1	-2.7
DAVA				*i*		15 10 34.3	
WLS	**Welschbruch**	**142.16**	**338**	PKP	PKPdf	15 07 24.8	-3.1
CDF	**Champ du Feu**	**142.19**	**338**	*e*PKP1	PKPdf	15 07 24.9	-3.0
	comp=Z,396nm,0.9s						
LIBD	**Limburg**	**142.29**	**338**	PKIKP	PKPdf	15 07 26.7	-1.4
LIBD	**Limburg**	**142.29**	**338**	*e*P	PKPdf	15 07 26.8	-1.3
CTI	**Castel Tesino**	**142.30**	**332**	*e*PKIKP	PKPdf	15 07 27.0	-1.2
KIZ	**Kirchzarten**	**142.34**	**337**	*e*P	PKPdf	15 07 25.4	-2.8
FELD	**Feldberg**	**142.37**	**337**	*e*P	PKPdf	15 07 26.7	-1.6
ECH	**Echery**	**142.40**	**338**	PKP	PKPdf	15 07 25.2	-3.1
BRMO	**Bormio**	**142.54**	**334**	*e*PKP	PKPdf	15 07 27.5	-1.1
HEX	**Exmoor**	**142.64**	**351**	*e*P	PKPdf	15 07 26.5	-2.1
MOF	**Molkenrain**	**142.72**	**338**	PKP	PKPdf	15 07 27.2	-1.6
THEF	**They Montfort**	**142.81**	**339**	PKP	PKPdf	15 07 27.8	-1.2
HINF	**Hinteralfeld**	**142.85**	**338**	*e*PKP1	PKPdf	15 07 27.0	-2.1
	comp=Z,189nm,0.7s						
HAU	**Haudompre**	**142.87**	**339**	*e*PKP1	PKPdf	15 07 27.6	-1.5
	comp=Z,664nm,1.0s						
HAU				*e*R			
	comp=Z,4µm,19.8s						
MEZF	**Maizieres J'vi**	**142.88**	**340**	*e*PKP1	PKPdf	15 07 28.2	-0.9
	comp=Z,1µm,1.1s						
BBS	**Basel-Blauen**	**142.90**	**337**	PKIKP	PKPdf	15 07 28.7	-0.5
BBS	**Basel-Blauen**	**142.90**	**337**	*e*P	PKPdf	15 07 28.5	-0.7
FGMS	**Monte Sant'Ang**	**143.09**	**323**	*e*PKP	PKPdf	15 07 28.8	-0.9
SAL	**Salo**	**143.14**	**332**	*e*PKIKP	PKPdf	15 07 29.0	-0.7
AOI	**Ancona**	**143.16**	**327**	P	PKPbc	15 07 32.4	+4.2
LOMF	**Lomont**	**143.25**	**338**	PKP	PKPdf	15 07 28.7	-1.1
LTRZ	**Laterza**	**143.25**	**321**	*e*PKP	PKPdf	15 07 29.5	-0.6
RGNG	**Rignano Grg**	**143.32**	**323**	*e*PKP	PKPdf	15 07 29.6	-0.5
BRSN	**Barisano**	**143.41**	**330**	P	PKPbc	15 07 32.7	+3.8
RSM	**Repubblica di**	**143.48**	**329**	PKIKP	PKPdf	15 07 32.3	+2.0
FSSB	**Fossombrone**	**143.49**	**328**	*e*PKP	PKPdf	15 07 30.4	+0.1
CSA1	**St Austell**	**143.50**	**352**	*e*P	PKPbc	15 07 29.7	+0.7
ARV	**Arcevia**	**143.54**	**328**	*e*PKIKP	PKPdf	15 07 30.7	+0.2
VAI	**Varese**	**143.70**	**334**	*e*PKIKP	PKPdf	15 07 29.9	-0.8
FG4	**Candela**	**143.71**	**323**	PKIKP	PKPdf	15 07 30.6	-0.2
CCA1	**Carnmenellis**	**143.71**	**352**	*e*P	PKPbc	15 07 30.1	+0.5
SNTG	**Esanatoglia**	**143.71**	**328**	P	PKPbc	15 07 30.8	+1.0
CRQ2	**Rosemanowes 2**	**143.72**	**352**	*e*P	PKPbc	15 07 30.3	+0.7
CRQ2				AMb	AMB	15 07 36.7	
	comp=Z,646nm,1.7s						
CIGN	**Sant'Elia a Pi**	**143.73**	**324**	P	PKPbc	15 07 32.1	+2.2
FG5	**Orsara di Pugl**	**143.76**	**323**	*e*PKIKP	PKPdf	15 07 32.2	+1.3
CPZ	**Penzance**	**143.79**	**352**	*e*P	PKPbc	15 07 31.4	+1.6
CPZ				AMb	AMB	15 07 37.0	
	comp=Z,420nm,1.6s						
CGW	**Gweek**	**143.79**	**352**	*e*P	PKPbc	15 07 31.5	+1.7
CMA1	**Manaccan**	**143.80**	**352**	*e*P	PKPbc	15 07 31.1	+1.3
SFI	**Santa Sofia**	**143.80**	**329**	*e*PKIKP	PKPdf	15 07 31.8	+0.9
ORI	**Oriolo Calabro**	**143.80**	**321**	*e*PKIKP	PKPdf	15 07 31.5	+0.4
CGH1	**Goonhilly**	**143.83**	**352**	*e*P	PKPbc	15 07 30.8	+0.9
PGD	**Poggio Sodo**	**143.88**	**329**	*e*PKIKP	PKPdf	15 07 32.0	+0.9
ZCCA	**Zocca**	**143.89**	**331**	*e*PKP	PKPdf	15 07 32.6	+1.6
VMG	**Vicchio**	**143.91**	**330**	*e*PKP	PKPdf	15 07 32.7	+1.6
NRCA	**Norcia**	**143.91**	**327**	*e*PKP	PKPdf	15 07 31.2	+0.1
SEI	**Scarperia**	**143.93**	**330**	P	PKPbc	15 07 32.4	+2.0
MCGN	**Macugnaga**	**143.95**	**335**	*e*PKP	PKPdf	15 07 31.6	+0.5
CRE	**Caprese Michel**	**143.95**	**329**	*e*PKIKP	PKPdf	15 07 31.5	+0.3
MRLC	**Muro Lucano**	**143.96**	**322**	*e*PKP	PKPdf	15 07 32.0	+0.7
CII	**Carovilli**	**144.02**	**325**	*e*PKPdf	PKPdf	15 07 33.5	+2.1
GSCL	**Gusciola**	**144.07**	**331**	*e*PKP	PKPdf	15 07 32.4	+1.0
AQU	**L'Aquila**	**144.09**	**326**	⇓PKIKP	PKPdf	15 07 33.5	+2.0
AQU	**L'Aquila**	**144.09**	**326**	*e*PKP	PKPdf	15 07 31.5	+0.1
JLP	**Les Platons**	**144.09**	**348**	*e*P	PKPbc	15 07 31.5	+0.7
JLP				AMb	AMB	15 07 35.8	
	comp=Z,850nm,2.4s						
ERBM	**Eremo**	**144.10**	**331**	*e*PKP	PKPdf	15 07 32.7	+1.3
JQE	**Queens East**	**144.12**	**348**	*e*P	PKPbc	15 07 31.5	+0.7
TIP	**Timpagrande**	**144.13**	**319**	*e*PKP	PKPdf	15 07 32.4	+0.7
JRS	**Jersey**	**144.14**	**348**	*e*P	PKPbc	15 07 33.1	+2.2
JVM	**Valle D.L. Mar**	**144.14**	**348**	*e*P	PKPbc	15 07 31.8	+0.9
JVM				AMb	AMB	15 07 35.4	
	comp=Z,1µm,1.3s						
CABF	**La Chapelle**	**144.15**	**338**	*e*PKP1	PKPbc	15 07 32.7	+1.7
	comp=Z,2µm,1.2s						
JSA	**Saint Aubin**	**144.16**	**348**	*e*P	PKPbc	15 07 31.7	+0.8
SGO	**Sicignano**	**144.19**	**322**	PKIKP	PKPdf	15 07 31.7	0.0
FLN	**La Foliniere**	**144.20**	**346**	*e*PKP1	PKPbc	15 07 31.2	+0.2
	comp=Z,436nm,0.6s						
FLN				*e*R			
	comp=Z,6µm,20.8s						
ORX	**Oropa**	**144.22**	**335**	PKIKP	PKPdf	15 07 31.8	+0.2
ORO	**Oropa**	**144.22**	**335**	PKIKP	PKPdf	15 07 30.8	-0.8
VALM		**144.23**	**331**	P	PKPbc	15 07 32.5	+1.2
LDF	**La Druitiere**	**144.27**	**346**	*e*PKP1	PKPbc	15 07 31.3	0.0
	comp=Z,457nm,0.6s						
BOB	**Bobbio (Coli)**	**144.28**	**333**	*e*PKIKP	PKPdf	15 07 32.5	+0.8
SARO	**Sassorosso**	**144.29**	**331**	P	PKPbc	15 07 32.3	+0.8
BDI	**Bagni Di Lucca**	**144.29**	**331**	*e*PKIKP	PKPdf	15 07 31.6	-0.2
VVLD	**Villa Vallelon**	**144.30**	**325**	P	PKPbc	15 07 32.0	+0.4
MGR	**Morigerati**	**144.31**	**321**	*e*PKP	PKPdf	15 07 31.4	-0.6
SDI	**San Donato**	**144.31**	**325**	PKIKP	PKPdf	15 07 31.9	0.0
VLC	**Villacollemand**	**144.31**	**331**	*e*PKP	PKPdf	15 07 32.0	+0.2
PTQR	**Pietraquaria**	**144.32**	**326**	*e*PKP	PKPdf	15 07 32.6	+0.7
BACM		**144.37**	**331**	P	PKPbc	15 07 33.5	+1.8
CSNT	**Castellina Chi**	**144.39**	**329**	P	PKPbc	15 07 31.9	+0.1
TRAV		**144.41**	**335**	P	PKPbc	15 07 32.2	+0.4
VINC	**Vinca**	**144.44**	**331**	P	PKPbc	15 07 31.8	-0.1
MNS	**Montasola**	**144.46**	**327**	*e*PKIKP	PKPdf	15 07 32.4	+0.3
RFI	**Roccamonfina**	**144.48**	**324**	*e*PKP	PKPdf	15 07 34.2	+2.1
GUAR	**Guarcino**	**144.52**	**326**	P	PKPbc	15 07 32.9	+0.7
GRI	**Girifalco**	**144.55**	**319**	*e*PKIKP	PKPdf	15 07 34.0	+1.6
PII	**Pisa**	**144.58**	**330**	*e*PKIKP	PKPdf	15 07 32.1	-0.2
GRR	**Gorron**	**144.63**	**346**	*e*PKP1	PKPbc	15 07 33.0	+0.7
	comp=Z,3µm,0.8s						
SSF	**Saint Saulge**	**144.65**	**341**	*e*PKP1	PKPbc	15 07 33.6	+1.2
	comp=Z,4µm,0.9s						
LSD	**Ceresole Reale**	**144.70**	**336**	PKIKP	PKPdf	15 07 34.7	+2.3
HYF	**Humbligny**	**144.73**	**342**	*e*PKP1	PKPbc	15 07 34.0	+1.4
GENL	**Genova Univers**	**144.77**	**333**	P	PKPbc	15 07 33.6	+1.0
GRFL	**Gerfalco**	**144.78**	**329**	*e*PKP	PKPdf	15 07 33.5	+0.8
LPL	**La Plagne**	**144.82**	**336**	*e*PKP1	PKPbc	15 07 34.6	+1.7
	comp=Z,1µm,0.8s						
LPG	**La Plagne**	**144.82**	**336**	*e*PKP1	PKPbc	15 07 34.7	+1.8
	comp=Z,2µm,0.8s						
PCP	**Pian Castagno**	**144.85**	**333**	PKIKP	PKPdf	15 07 34.3	+1.6
MA9	**Marino**	**144.90**	**326**	*e*PKP	PKPdf	15 07 34.7	+1.9
SMF	**Signal de Mont**	**144.90**	**340**	*e*PKP1	PKPbc	15 07 34.2	+1.1
	comp=Z,7µm,1.3s						
RSP	**Reno Superiore**	**144.91**	**335**	PKIKP	PKPdf	15 07 34.5	+1.7
AVF	**Avril sur Loir**	**144.93**	**341**	*e*PKP1	PKPbc	15 07 34.2	+1.0
	comp=Z,2µm,0.8s						
LAV9	**Lanuvio**	**144.94**	**326**	*e*PKP	PKPdf	15 07 35.1	+2.1
FENE	**Fenestrelle**	**145.08**	**335**	P	PKPdf	15 07 35.0	+2.0
SGMF	**Saint Gilles**	**145.13**	**348**	*e*PKP1	PKPbc	15 07 34.7	+1.1
	comp=Z,3µm,0.6s						
VENT	**Ventotene**	**145.13**	**324**	P	PKPdf	15 07 35.2	+1.9
BHB	**Bricherasio**	**145.16**	**335**	P	PKPdf	15 07 33.7	+0.5
ROSF	**Rostrenen**	**145.19**	**349**	*e*PKP1	PKPbc	15 07 34.8	+1.0
	comp=Z,4µm,1.0s						
SOI	**Samo**	**145.22**	**318**	*e*PKIKP	PKPdf	15 07 35.7	+2.2
BNI	**Bardonecchia**	**145.22**	**336**	*e*PKIKP	PKPdf	15 07 35.5	+2.2
FIN	**Finale Ligure**	**145.26**	**333**	*e*PKP2	PKPab	15 07 34.8	-1.5
RRL	**Cesana Torines**	**145.29**	**335**	PKIKP	PKPdf	15 07 36.2	+2.8
BGF	**Bois d'Agland**	**145.30**	**341**	*e*PKP1	PKPbc	15 07 35.5	+1.4
	comp=Z,4µm,0.9s						
OG22	**Abries**	**145.30**	**335**	PKP	PKPdf	15 07 35.7	+2.2
GDM	**Grand'Maison**	**145.32**	**336**	PKP	PKPdf	15 07 36.2	+2.7
GDM				PKP	PKPdf	15 07 36.4	+2.9
SCLL	**Scilla**	**145.33**	**319**	*e*PKP	PKPdf	15 07 34.9	+1.2
ROB	**Roburent**	**145.34**	**334**	PKP2	PKPab	15 07 34.9	-1.7
DOI	**San Damiano**	**145.44**	**334**	*e*PKP2	PKPab	15 07 34.2	-2.8
MBDF	**Montbardon**	**145.45**	**335**	*e*PKP1	PKPbc	15 07 36.1	+1.5
	comp=Z,2µm,0.8s						
MSI	**Messina ING**	**145.47**	**319**	PKP2	PKPab	15 07 35.6	-1.7
MTTG	**Motta San Giov**	**145.49**	**318**	*e*PKP	PKPdf	15 07 36.6	+2.6
PZZ	**Prazzo**	**145.50**	**335**	PKIKP	PKPdf	15 07 35.4	+1.6
MONE	**Monesi**	**145.56**	**333**	P	PKPdf	15 07 36.4	+2.5
PLDF	**La Plantade**	**145.57**	**340**	PKP	PKPdf	15 07 36.9	+3.0
QUIF	**Quistinic**	**145.57**	**349**	*e*PKP1	PKPbc	15 07 36.0	+1.2
	comp=Z,2µm,1.1s						
ENR	**Entracque**	**145.59**	**334**	PKIKP	PKPdf	15 07 35.1	+1.1
STV2	**Anna di Valdie**	**145.61**	**334**	P	PKPdf	15 07 35.0	+1.0
STV	**Sta Anna Valdi**	**145.62**	**334**	PKIKP	PKPdf	15 07 35.0	+1.0
SURF	**Saint Ours**	**145.64**	**335**	PKP	PKPdf	15 07 37.3	+3.3
IMI	**Imperia**	**145.64**	**333**	*e*PKP	PKPdf	15 07 36.5	+2.4
ORIF	**Oris-en-Rattie**	**145.65**	**336**	*e*PKP1	PKPbc	15 07 36.0	+1.0
	comp=Z,3µm,0.6s						
ORIF				*e*R			
	comp=Z,3µm,22.2s						
AGO	**Saint Agoulin**	**145.66**	**340**	PKP	PKPdf	15 07 36.9	+2.9
SLNA	**Salina**	**145.71**	**320**	*e*PKP	PKPdf	15 07 36.8	+2.5
SAOF	**Saorge**	**145.72**	**334**	PKP	PKPdf	15 07 36.5	+2.3
TCF	**Toulx Ste Croi**	**145.74**	**341**	*e*PKP1	PKPbc	15 07 35.7	+0.5
	comp=Z,4µm,1.3s						
AUTN	**L'Aution**	**145.77**	**334**	PKP	PKPdf	15 07 37.0	+2.7
TOUF	**Mont Tournerai**	**145.83**	**334**	PKP	PKPdf	15 07 37.3	+2.9
SBF	**Sospel**	**145.87**	**334**	*e*PKP1	PKPbc	15 07 35.8	+0.2
	comp=Z,4µm,0.8s						
COLF	**Collangettes**	**145.94**	**339**	PKP	PKPdf	15 07 38.0	+3.5
PYM	**Petit Puy Mans**	**145.97**	**340**	PKP	PKPdf	15 07 36.7	+2.2
MVIF	**Mont Vial**	**145.97**	**334**	PKP	PKPdf	15 07 37.6	+3.0
REVF	**Revere**	**146.00**	**334**	PKP	PKPdf	15 07 37.7	+3.0
REVF				PKP	PKPdf	15 07 39.2	+4.5
OG25	**Le Caire**	**146.03**	**336**	PKP	PKPdf	15 07 38.0	+3.3
MFF	**Saint Martin d**	**146.13**	**344**	*e*PKP1	PKPbc	15 07 36.5	+0.3
	comp=Z,2µm,0.8s						
VERF	**Verneugheol**	**146.14**	**341**	PKP	PKPdf	15 07 38.2	+3.4
OCF	**Saint Nazaire**	**146.16**	**337**	PKP	PKPdf	15 07 39.0	+4.1
OG26	**St.-Nazaire-De**	**146.16**	**337**	PKP	PKPdf	15 07 39.0	+4.1
VIVF	**Saint-Julien-l**	**146.16**	**338**	*e*PKP1	PKPbc	15 07 36.9	+0.6
	comp=Z,3µm,1.1s						
PGF	**Pioggiola**	**146.19**	**331**	*e*PKP1	PKPbc	15 07 36.7	+0.2
	comp=Z,4µm,0.8s						
LCHF	**La Chataignera**	**146.22**	**345**	PKP	PKPdf	15 07 39.2	+4.3
AGST	**Augusta-Monte**	**146.23**	**318**	*e*PKP	PKPdf	15 07 39.8	+4.6
LBL	**Lubilhac**	**146.34**	**339**	PKP	PKPdf	15 07 38.3	+3.1
FRNF	**Fournols**	**146.43**	**340**	PKP	PKPdf	15 07 39.7	+4.3
FRF	**La Foret Royal**	**146.46**	**334**	*e*PKP1	PKPbc	15 07 35.6	-1.4
	comp=Z,4µm,0.8s						
LRYF	**La Roche-sur-Y**	**146.50**	**346**	PKP	PKPdf	15 07 39.0	+3.6
SMRF	**Simiane la Rot**	**146.55**	**336**	*e*PKP1	PKPbc	15 07 38.4	+1.2
	comp=Z,2µm,0.7s						
VILF	**Villemus**	**146.60**	**335**	PKP	PKPdf	15 07 40.9	+5.2
USI	**Ustica**	**146.63**	**322**	*e*PKP	PKPdf	15 07 39.7	+3.8
TAVF	**Tavernes**	**146.66**	**335**	PKP	PKPdf	15 07 39.4	+3.6
LMR	**La Mourre**	**146.70**	**334**	*e*PKP1	PKPbc	15 07 36.4	-1.2
	comp=Z,3µm,0.8s						
RJF	**Les Rejaudoux**	**146.84**	**341**	*e*PKP1	PKPbc	15 07 38.5	+0.7
	comp=Z,4µm,1.1s						
RJF				*e*R			
	comp=Z,5µm,19.5s						
PRAF	**Pradon**	**146.86**	**336**	PKP	PKPdf	15 07 41.1	+5.0
PUYF	**Puyloubier**	**146.87**	**335**	PKP	PKPdf	15 07 40.8	+4.6
MATF	**Mathat**	**146.88**	**344**	PKP	PKPdf	15 07 41.0	+4.9
TREF	**Trevaresse**	**146.92**	**336**	PKP	PKPdf	15 07 42.0	+5.8
CAF	**Calviac**	**147.00**	**341**	*e*PKP1		15 07 39.1	
	comp=Z,1µm,1.0s						
OLEF	**Ile d'Oleron**	**147.04**	**345**	PKP	PKPdf	15 07 41.6	+5.2
BERF	**Bertagne**	**147.06**	**335**	PKP	PKPdf	15 07 41.3	+4.8
LASF	**Ste Croix**	**147.13**	**338**	*e*PKP1	PKPdf	15 07 38.3	+1.7
	comp=Z,1µm,0.7s						
LFF	**La Frestale**	**147.40**	**342**	*e*PKP1	PKPdf	15 07 40.0	+3.0
	comp=Z,2µm,0.6s						
DGI	**Dorgali Grotta**	**147.55**	**327**	P	PKPdf	15 07 38.4	+1.0
MTLF	**Montolieu**	**148.35**	**339**	*e*PKP1	PKPdf	15 07 40.3	+1.7
	comp=Z,2µm,0.7s						
LRDF	**Laroque-de-Fa**	**148.59**	**338**	PKP	PKPdf	15 07 41.6	+2.6
LPEF	**Le Peyrat**	**148.81**	**339**	PKP	PKPdf	15 07 42.8	+3.5
SJAF	**Saint Jean de**	**148.86**	**337**	PKP	PKPdf	15 07 43.8	+4.4
EJON	**La Jonquera**	**148.89**	**337**	PKP	PKPdf	15 07 45.8	+6.4
FILF	**Fillols**	**148.91**	**338**	PKP	PKPdf	15 07 43.1	+3.6
MLS	**Moulis**	**149.07**	**340**	PKP	PKPdf	15 07 43.1	+3.4
SALF	**Salau**	**149.22**	**340**	PKP	PKPdf	15 07 46.9	+6.9
VALF	**Valcebollere**	**149.25**	**338**	PKP	PKPdf	15 07 45.4	+5.4
EPF	**Esparros**	**149.25**	**341**	*e*PKP1	PKPdf	15 07 43.0	+3.0
	comp=Z,725nm,0.7s						
MELF	**Melles**	**149.26**	**340**	PKP	PKPdf	15 07 46.2	+6.2
LABF	**Labassere**	**149.32**	**341**	PKP	PKPdf	15 07 44.5	+4.4
REYF	**Montagne du Re**	**149.44**	**342**	PKP	PKPdf	15 07 44.4	+4.1
RESF	**Ens**	**149.46**	**341**	PKP	PKPdf	15 07 45.0	+4.7
VIEF	**Viey**	**149.49**	**341**	PKP	PKPdf	15 07 44.7	+4.3
OSSF	**Osses**	**149.52**	**343**	PKP	PKPdf	15 07 45.3	+4.9
RCBR	**Riachuelo**	**149.53**	**129**	*e*PKPdf	PKPdf	15 07 42.7	+1.4
EALK	**Alkurruntz**	**149.62**	**344**	PKP	PKPdf	15 07 46.5	+5.9
EBIE	**Bielsa**	**149.63**	**341**	PKP	PKPdf	15 07 46.7	+6.1
SJPF	**Ste Jean**	**149.64**	**343**	*e*PKP1	PKPdf	15 07 42.6	+2.0
	comp=Z,1µm,1.0s						
LARF	**Larrau**	**149.65**	**343**	PKP	PKPdf	15 07 44.9	+4.3
ETSF	**Etsaut**	**149.65**	**342**	*e*PKP1	PKPdf	15 07 44.8	+4.1
EMIR	**Miracle**	**149.85**	**339**	PKP	PKPdf	15 07 47.9	+6.9
ELAN	**Lanestosa**	**150.10**	**346**	PKP	PKPdf	15 07 46.3	+4.9
EARI	**Arriondas**	**150.40**	**349**	PKP	PKPdf	15 07 45.6	+3.8
EPOB	**Poblet**	**150.50**	**339**	PKP	PKPdf	15 07 47.5	+5.5
ESAC	**San Caprasio**	**150.69**	**341**	PKP	PKPdf	15 07 47.2	+4.9
EPON	**Pontenova**	**150.69**	**352**	PKP	PKPdf	15 07 46.5	+4.3
ERTA	**Horta de San J**	**151.12**	**339**	PKP	PKPdf	15 07 46.1	+3.2
EBR	**Ebro Roquetas**	**151.18**	**339**	*e*PKPDF	PKPdf	15 07 45.5	+2.5
EMAZ	**Mazaricos**	**151.28**	**354**	PKP	PKPdf	15 07 47.2	+4.0
STS	**Santiago**	**151.30**	**354**	PKIKP	PKPdf	15 07 45.4	+2.2
EINC	**Incio**	**151.38**	**352**	PKP	PKPdf	15 07 46.3	+3.1
CMAH	**Djebel Manchou**	**151.40**	**325**	P	PKPdf	15 07 47.0	+3.5
ERUA	**La Rua**	**151.61**	**351**	PKIKP	PKPdf	15 07 47.8	+4.2
EMOS	**Mosqueruela**	**151.92**	**340**	PKP	PKPdf	15 07 50.3	+6.1
PCED	**Cedros**	**151.97**	**27**	*e*PKP	PKPdf	15 07 53.0	+8.7
ECAL	**Calabor**	**151.99**	**350**	PKP	PKPdf	15 07 48.3	+4.1
CALA	**Caldeira**	**152.01**	**27**	*e*PKP	PKPdf	15 07 51.5	+7.1
EZAM	**Zamans**	**152.05**	**354**	PKIKP	PKPdf	15 07 47.8	+3.5
ROSA	**Rosais**	**152.10**	**27**	*e*PKP	PKPdf	15 07 50.0	+5.5
PBRG	**Braganca**	**152.12**	**350**	*e*PKPdf	PKPdf	15 07 47.8	+3.4
PBRG				*e*-		15 07 56.2	
PBRG				*e*PKPab	PKPab	15 08 07.1	+3.0
PBRG				*e*PP	PP	15 11 36.4	-1.0
PICO	**Pico**	**152.20**	**27**	*e*PKP	PKPdf	15 07 51.5	+6.9
PMAN	**Manadas**	**152.24**	**26**	*e*PKP	PKPdf	15 07 44.1	-0.6
ELOB	**Lobios**	**152.25**	**352**	PKP	PKPdf	15 07 45.9	+1.3
EIBI	**Ibiza**	**152.43**	**336**	PKP	PKPdf	15 07 50.7	+5.7
PSBA	**Serra de Santa**	**152.45**	**25**	*e*PKP	PKPdf	15 07 42.7	-2.3
ADH	**Angra Heroismo**	**152.58**	**25**	*e*PKP	PKPdf	15 07 47.8	+2.6
ADH				*i*		15 08 00.0	
ADH	**Angra Heroismo**	**152.58**	**25**	*e*PP	PP	15 11 30.0	-10
ADH	**Angra Heroismo**	**152.58**	**25**	*e*		15 32 10.0	
ADH	**Angra Heroismo**	**152.58**	**25**	*i* LR	LR	15 59 21.0	
PVRL	**Vila Real**	**152.79**	**352**	*e*PKPdf	PKPdf	15 07 49.1	+3.7
PVRL				*e*-		15 07 58.1	
PVRL				*e*PKPab	PKPab	15 08 10.0	+3.1
PVRL				*e*PP	PP	15 11 39.1	-2.3
SET	**Setif**	**152.82**	**327**	P	PKPdf	15 07 47.0	+1.4
CKHR	**Kef el Ahmar**	**152.90**	**326**	P	PKPdf	15 07 48.0	+2.3
EBEN	**Beniarda**	**153.31**	**338**	PKP	PKPdf	15 07 51.5	+5.4
PVIS	**Viseu**	**153.36**	**352**	*e*PKPdf	PKPdf	15 07 50.0	+3.8
PVIS				*e*-		15 07 59.8	
PVIS				*e*PKPab	PKPab	15 08 10.8	+1.4
PVIS				*e*PP	PP	15 11 42.6	-2.3
ESDC	**Sonseca Array**	**153.59**	**345**	PKP	PKPdf	15 07 50.2	+3.7
ESLA	**Sonseca Array**	**153.59**	**345**	*e*PKPdf	PKPdf	15 07 47.8	+1.3
MTE	**Manteigas**	**153.62**	**351**	*e*PKPdf	PKPdf	15 07 48.5	+2.0
MTE				*e*-		15 08 00.6	
MTE				*e*PKPab	PKPab	15 08 13.7	+3.2
MTE				*e*PP	PP	15 11 44.3	-2.1
MTE				*e*SS	SS	15 31 20.7	+19
MTE	**Manteigas**	**153.62**	**351**	*e*PKPdf	PKPdf	15 07 48.6	+2.1
PSET	**Sete Cidades**	**153.90**	**24**	*e*PKP	PKPdf	15 07 48.9	+1.9
PDA	**Ponta Delgada**	**153.99**	**24**	*i* PKP	PKPdf	15 07 53.0	+5.9
PDA				*i* pPKP		15 08 45.0	
PDA				*i*		15 12 42.0	
EMHD	**Djebel Mahouad**	**154.07**	**330**	P	PKPdf	15 07 52.0	+4.8
EVIA	**Vianos**	**154.14**	**341**	PKIKP	PKPdf	15 07 51.5	+4.3
BART	**Pico Bartolome**	**154.16**	**23**	*e*PKP	PKPdf	15 07 50.6	+3.3
PCBR	**Castelo Branco**	**154.16**	**351**	*e*PKPdf	PKPdf	15 07 49.6	+2.4
PCBR				*e*-		15 08 01.4	
PCBR				*e*PKPab	PKPab	15 08 15.8	+3.1
PCBR				*e*PP	PP	15 11 48.2	-1.3
PCBR	**Castelo Branco**	**154.16**	**351**	*e*P	PKPdf	15 07 49.5	+2.3
CART	**Cartagena**	**154.58**	**338**	*e*PKPdf	PKPdf	15 07 50.3	+2.5
EBNR	**Beni Rached**	**154.66**	**332**	P	PKPdf	15 07 51.6	+3.6
ECHA	**Ech Chlef**	**154.85**	**332**	P	PKPdf	15 07 51.8	+3.6
EBAN	**Banos Encina**	**154.96**	**343**	PKIKP	PKPdf	15 07 50.6	+2.3
ALMR	**Almeirim**	**154.99**	**352**	*e*P	PKPdf	15 07 48.3	0.0
EQES	**Quesada**	**155.08**	**342**	PKP	PKPdf	15 07 52.8	+4.3
EANR	**'Ain N'Sour**	**155.14**	**333**	P	PKPdf	15 07 51.5	+2.9
EBAD	**Badajoz**	**155.14**	**349**	PKP	PKPdf	15 07 51.2	+2.7
EADA	**Adamuz**	**155.17**	**345**	PKP	PKPdf	15 07 52.6	+4.0
PLOU	**Loures**	**155.32**	**353**	*e*PKPdf	PKPdf	15 07 52.8	+4.0
PLOU				*e*PKPab	PKPab	15 08 19.4	+1.7
PLOU				*e*PP	PP	15 11 58.3	+2.6
LIS	**Lisbon**	**155.49**	**353**	*e*P	PKPdf	15 07 48.7	-0.3
LIS				*e*PP	PP	15 11 53.1	-3.6
LIS				*e*SS	SS	15 31 24.3	+2.4
LIS				*e*SS	SS	15 31 24.5	+2.7
LIS				AMS	AMS	15 44 33.2	
	comp=N,2µm,16.8s						
LIS	**Lisbon**	**155.49**	**353**	*e*P	PKPdf	15 07 48.7	-0.3
LIS				*e*PP	PP	15 11 53.1	-3.6

LIS				*e*SS	SS	15 31 24.3	+2.4
ETRT	Tiaret	155.51	331	P	PKPdf	15 07 52.0	+2.8
EVO	Evora	155.52	351	*e*PKIKP	PKPdf	15 07 51.2	+2.1
	comp=N,411nm,1.3s						
EVO				*e*R			
	comp=N,6µm,21.0s						
ENIJ	Nijar	155.56	339	PKIKP	PKPdf	15 07 53.1	+3.9
MOE	Montemor	155.58	352	*e*PKPdf	PKPdf	15 07 51.6	+2.5
MOE				*e*PKPab	PKPab	15 08 20.0	+1.2
MOE	Montemor	155.58	352	*e*P	PKPdf	15 07 51.9	+2.8
ELUQ	Luque	155.66	343	PKIKP	PKPdf	15 07 52.3	+3.0
EBER	Berja	155.85	340	PKP	PKPdf	15 07 54.6	+5.0
PBEJ	Beja	155.99	351	*e*PKPdf	PKPdf	15 07 52.3	+2.5
PBEJ				*e*PKPab	PKPab	15 08 22.0	+1.4
PBEJ				*e*PP	PP	15 11 59.4	-0.4
ELOJ	Sierra Loja	156.01	343	PKIKP	PKPdf	15 07 53.5	+3.7
EMIN	Mina Concepcio	156.03	348	PKP	PKPdf	15 07 53.4	+3.5
PTEO	Sao Teotonio	156.59	352	*e*PKPdf	PKPdf	15 07 54.5	+3.9
PTEO				*e*PKPab	PKPab	15 08 25.2	+2.0
ESPR	Espera	156.72	346	PKP	PKPdf	15 07 54.0	+3.3
EMIJ	Mijas	156.73	344	PKP	PKPdf	15 07 54.8	+4.0
EALB	Alboran	156.77	340	PKP	PKPdf	15 07 56.1	+5.3
EBAJ	Bajamar	165.46	13	PKP	PKPdf	15 08 01.8	+1.4
EGOM	La Gomera	165.61	16	PKP	PKPdf	15 08 03.0	+2.6
CCAN	Las Canadas	165.71	14	PKP	PKPdf	15 08 00.8	+0.3
CFTV	Fuerteventura	165.92	5	PKP	PKPdf	15 08 03.2	+2.5
EOSO	Osorio	166.07	10	PKP	PKPdf	15 08 04.3	+3.5
DBIC	Dimbokro	169.15	226	*e*PKIKP	PKPdf	15 08 04.0	+0.8
DBIC				*e*		15 09 19.9	

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*NEIC **08** 16:01:24.9, 35.87N×26.24E, h2^{km}, MD3.5(ATH), After ATH.*

*CSEM **08** 16:01:24.9, 35.87N×26.24E, h2^{km}, MD3.5/5, After ATH*

ATH 08 16:01:24.8, 35.87N×26.23E, h14^{km}, MD3.5/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	Neapolis	0.79	220	*e*PB	Pb	16 01 39.5	-0.3
NPS	Neapolis	0.79	220	*e*Pg	Pg	16 01 39.6	-1.1
KARP	Karpathos	0.82	113	*e*PB	Pb	16 01 40.5	+0.1
APE	Apeiranthos	1.32	335	*e*PB	Pb	16 01 50.0	+1.1
ARG	Arkhangelos	1.57	77	*e*PB	Pb	16 01 54.5	+1.3
VLI	Veliai	2.79	289	*e*PN	Pn	16 02 11.5	+1.6
VLI	Veliai	2.79	289	*e*Pb	Pb	16 02 14.5	+0.5

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*JMA **08** 16:13:49.4±0.4, 33.93N×142.53E, h67^{km}, M4.2*

*MOS **08** 16:13:50.6±1.3, 33.87N×142.35E, h37^{km}, mb4.5/8, Error ellipse: s-maj=26.0km s-min=10.7km az=130.8*

*NEIC **08** 16:13:52.5±0.5, 33.91N×142.39E, h35^{km}, mb4.4/12, Error ellipse: s-maj=12.7km s-min=8.8km az=46.0*

*BJI **08** 16:13:55.8, 34.40N×141.94E, h35^{km}, mb4.3*

ISC 08 16:13:48.0±1.8**, 33.95N**±0.06×**142.50E**±0.06**, h17^{km}**±12^{km}**, h19^{km}**±2.3^{km}**:pP-P, n58, **σ1^{s}**21**/65**, mb4.5**/21**, 1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.44	299	P	Pn	16 14 14.1	+0.6
BSO1				S	Sb	16 14 33.3	+1.4
BSO3	Boso 3	1.85	298	P	Pn	16 14 20.3	+0.9
BSO4	Boso 4	2.06	301	P	Pn	16 14 23.8	+1.3
JHJ2	Mitsune	2.39	250	P	Pn	16 14 27.5	+0.3
JHJ2				S	Sn	16 14 55.4	-0.9
JIM2	Oshima 3	2.65	288	P	Pn	16 14 30.1	-0.8
JOD2	Odawara 2	3.10	296	P	Pn	16 14 36.6	-0.7
JOD2				S	Sn	16 15 14.3	0.0
JAG	Ashikaga	3.51	316	P	Pn	16 14 42.7	-0.3
JRY	Ryogami san	3.60	306	P	Pn	16 14 44.3	0.0
JYN	Shimob	3.60	296	P	Pn	16 14 44.1	-0.3
JYN				S	Sn	16 15 26.6	-0.4
JMM	Marumori	4.14	341	P	Pn	16 14 50.0	-2.1
MAJO	Matsushiro	4.36	308	*e*P	Pn	16 14 55.0	-0.2
MAT	Matsushiro	4.36	308	*e*P	Pn	16 14 55.0	-0.2
MAT				*e*S	Sn	16 15 43.0	-3.1
MAT	Matsushiro	4.36	308	P	Pn	16 14 54.9	-0.3
MAT				S	Sn	16 15 43.3	-2.8
MAT	Matsushiro	4.36	308	P	Pn	16 14 55.6	+0.4
JNS	Sasagawa	4.64	327	P	Pn	16 14 59.4	+0.3
JIE	Ise	4.82	277	P	Pn	16 15 01.4	-0.3
JGM	Miyama	5.06	292	P	Pn	16 15 06.3	+1.2
JMK	Ichinoseki	5.09	349	P	Pn	16 15 03.3	-2.2
JYK	Kaneyama	5.25	341	P	Pn	16 15 06.2	-1.5
JYK				S	Sn	16 16 03.6	-4.9
JSD	Sado	5.33	321	P	Pn	16 15 07.6	-1.3
YSS	Yuzh-Sakhalins	12.99	1	*e*P	P	16 16 51.0	-3.5
MDJ	Mudanjiang	14.58	321	*e*P	P	16 17 17.1	+1.6
	3.3nm,0.6s						
BJI	Beijing	21.84	294	*e*P	P	16 18 42.2	+0.7
BJI				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.0						
BJI	Beijing	21.84	294	*e*P	P	16 18 42.2	+0.7
	comp=Z,5.0nm,0.7s,mb4.0						
BJT	Baijiatuau	21.84	294	*e*P	P	16 18 39.1	-2.4
BJT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJT	Baijiatuau	21.84	294	*e*P	P	16 18 39.1	-2.4
	comp=Z,6.3nm,0.5s,mb4.3						
HIA	Hailar	22.75	319	*e*P	P	16 18 50.6	+0.2
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HIA	Hailar	22.75	319	*e*P	P	16 18 50.6	+0.2
	comp=Z,5.6nm,0.9s,mb4.0						
HHC	Hu-ho-hao-te	25.43	295	*e*P	P	16 19 18.3	+1.9
HHC				AP	pP	16 19 23.1	+1.7
HHC				XP	sP	16 19 32.7	+9.1
HHC				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,246nm,14.4s						
CLNS	Chul'man	25.86	338	*e*P	P	16 19 21.4	+1.2
CLNS				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
CLNS				pmax	pmax		
	comp=N,4.0nm,1.1s						
BTO	Baotou	26.58	294	*e*P	P	16 19 28.7	+1.7
BTO				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.5						
XAN	Xi'an	27.77	280	P	P	16 19 40.3	+2.4
XAN				AP	pP	16 19 47.5	+4.5
XAN				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.0						
ENH	Enshi	28.13	272	*e*P	P	16 19 39.6	-1.6
	comp=Z,11nm,0.9s,mb4.5						
ULN	Ulaanbaatar	29.89	308	*e*P	P	16 19 58.4	+1.5
ULN				*e*		16 20 08.3	
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ULN	Ulaanbaatar	29.89	308	*e*P	P	16 19 58.4	+1.5
	comp=Z,5.2nm,0.7s,mb4.4						
ULN				*e*		16 20 08.3	
BOD	Bodaibo	30.62	330	*e*P	P	16 20 01.1	-2.1
GTA	Gaotai	34.42	292	*e*P	P	16 20 38.3	+1.7
GTA				AP	pP	16 20 43.3	+1.7
GTA				XP	sP	16 20 46.1	+2.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.5						
WMQ	Urumqi	43.08	300	*e*P	P	16 21 53.7	+5.0
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.6						
NVS	Novosibirsk	45.63	316	*i* P	P	16 22 09.3	+0.2
JIRN	Jiri	48.26	278	*e*P	P	16 22 30.3	+0.2
	comp=Z,13nm,0.7s,mb5.0						
KURK	Kurchatov	48.56	310	*e*P	P	16 22 31.7	-0.4
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
KURK	Kurchatov	48.56	310	*e*P	P	16 22 31.7	-0.4
	comp=Z,5.4nm,0.5s,mb4.8						
KKN	Kakani	48.96	279	*e*P	P	16 22 36.0	+0.5
	comp=Z,7.6nm,0.7s,mb4.8						
DMN	Daman	49.17	279	*e*P	P	16 22 37.8	+0.6
GKN	Gorkha	49.41	280	*e*P	P	16 22 39.1	+0.1
	comp=Z,8.1nm,0.8s,mb4.8						
KOLN	Koldanda	50.35	280	*e*P	P	16 22 46.2	0.0
	comp=Z,35nm,1.6s,mb5.1						
AAK	Ala-Archa	52.78	301	P	P	16 23 02.1	-2.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
AAK	Ala-Archa	52.78	301	P	P	16 23 02.1	-2.2
	comp=Z,2.1nm,0.8s,mb4.1						
WRAB	Tennant Creek	54.15	189	*e*P	P	16 23 13.3	-1.4
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.9						
WRAB	Tennant Creek	54.15	189	*e*P	P	16 23 13.3	-1.4
	comp=Z,8.0nm,0.5s,mb4.9						
WB2	Warramunga Arr	54.15	189	⇓*i*P	P	16 23 13.4	-1.3
FITZ	Fitzroy Crossi	54.20	200	*e*P	P	16 23 14.7	-0.4
	comp=Z,10nm,1.0s,mb4.7						
ASPA	Alice Springs	57.88	189	*e*P	P	16 23 40.4	-1.1
HLID	Hailey	75.82	47	P	P	16 25 35.5	+0.6
	comp=Z,2.1nm,1.0s,mb4.0						
BOZ	Bozeman (W)	76.31	44	*e*P	P	16 25 38.2	+0.7
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BOZ	Bozeman (W)	76.31	44	*e*P	P	16 25 38.2	+0.7
	comp=Z,2.2nm,0.9s,mb4.1						
SRU	San Rafael	80.77	49	*e*P	P	16 26 03.0	+1.0
PV10	Paradox Valley	82.14	49	*e*P	P	16 26 11.2	+2.0

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*NEIC **08** 16:26:04.6, 37.82N×1.82W, h2^{km}, MN2.1(MDD), After MDD.*

NEIC Felt [II] at La Paca and Zarcilla de Ramos.

*INMG **08** 16:26:04.6±1.3, 37.82N×1.83W, h5^{km}±3^{km}, ML2.6, Error ellipse: s-maj=3.0km s-min=2.2km az=165.0*

*SFS **08** 16:26:04.0, 37.80N×1.80W*

*CSEM **08** 16:26:06.0±0.2, 37.76N×1.71W, h20^{km}, ML2.8/7, Error ellipse: s-maj=6.8km s-min=4.0km az=1.0*

MDD 08 16:26:04.6±0.3**, 37.82N×1.83W, mbLg2.3**/18**, Error ellipse: s-maj=4.4km s-min=2.6km az=3.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	La Murta	0.47	87	Pg	Pg	16 26 12.6	-1.3
	10.0nm,0.2s,SNR=7.9						
EMUR				Lg		16 26 19.5	
	69nm,0.2s,SNR=7.9						
EMUR	La Murta	0.47	87	Pg	Pg	16 26 12.6	-1.3
	10.0nm,0.2s,SNR=7.9						
CART	Cartagena	0.70	109	*e*Pg	Pg	16 26 17.8	-0.7
CART				*e*Sg	Sg	16 26 27.6	-0.2
CART	Cartagena	0.70	109	P	Pg	16 26 18.3	-0.2
CART				S	Sg	16 26 26.1	-1.6
CART	Cartagena	0.70	109	*e*Pg	Pg	16 26 17.8	-0.7
CART	Cartagena	0.70	109	*i* P	Pg	16 26 18.3	-0.2
CART				*e*S	Sg	16 26 26.1	-1.6
CART				*e*Sg	Sg	16 26 27.6	-0.1
ENIJ	Nijar	0.90	200	Pg	Pg	16 26 21.3	-1.2
	3.1nm,0.3s,SNR=7.9						
ENIJ				Lg		16 26 31.7	
	14nm,0.4s,SNR=7.9						
EVIA	Vianos	0.97	327	Pg	Pg	16 26 22.1	-1.9
	10nm,0.3s,SNR=7.9						
EVIA				Lg		16 26 36.5	
	62nm,0.3s,SNR=7.9						
EQES	Quesada	0.98	269	Pg	Pg	16 26 23.3	-1.0
	1.0nm,0.2s,SNR=7.9						
EQES				Lg		16 26 39.0	
	26nm,0.1s,SNR=7.9						
EQES	Quesada	0.98	269	Pg	Pg	16 26 23.3	-0.9
	1.0nm,0.2s,SNR=7.9						
EBER	Berja	1.25	223	Pn	Pn	16 26 27.7	-1.6
	1.5nm,0.2s,SNR=7.9						
EBER				Lg		16 26 46.4	
	2.8nm,0.2s,SNR=7.9						
EBER	Berja	1.25	223	Pn	Pn	16 26 27.7	-1.6
	1.5nm,0.2s,SNR=7.9						
EBEN	Beniarda	1.54	55	Pn	Pn	16 26 31.5	-1.8
EBEN				Lg		16 26 55.2	
EBEN	Beniarda	1.54	55	Pn	Pn	16 26 31.5	-1.8
	3.3nm,0.3s,SNR=7.9						
EBEN				Lg		16 26 55.2	
	8.7nm,0.3s,SNR=7.9						
EBEN	Beniarda	1.54	55	Pn	Pn	16 26 31.5	-1.9
	3.3nm,0.3s,SNR=7.9						
EBAN	Banos Encina	1.58	283	Pn	Pn	16 26 34.0	0.0
	14nm,0.1s,SNR=7.9						
EBAN				Lg		16 26 54.9	
	8.9nm,0.2s,SNR=7.9						
ELUQ	Luque	1.95	263	Lg		16 27 07.9	
	6.1nm,0.2s,SNR=7.9						
EADA	Adamuz	2.20	280	Pn	Pn	16 26 40.6	-2.2
	2.0nm,0.1s,SNR=7.9						
EADA				Sn	Sn	16 27 06.7	-4.5
	5.5nm,0.3s,SNR=7.9						
EADA				Lg		16 27 15.1	
	8.7nm,0.2s,SNR=7.9						
EADA	Adamuz	2.20	280	Pn	Pn	16 26 40.6	-2.2
	2.0nm,0.1s,SNR=7.9						
EADA				Sn	Sn	16 27 06.7	-4.5
	5.5nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	2.49	319	Pg	Pg	16 26 49.7	-4.6
	8.1nm,0.2s,baz=130,slow=17,SNR=7.9						
ESDC				Lg		16 27 23.4	
	10nm,0.1s,baz=135,slow=29,SNR=7.9						
ESDC	Sonseca Array	2.49	319	Pg	Pg	16 26 49.7	-4.6
	8.1nm,0.2s,SNR=7.9						
ESLA	Sonseca Array	2.49	319	*e*P	Pn	16 26 49.8	+2.7
ESLA	Sonseca Array	2.49	319	*e*P	Pn	16 26 49.8	+2.8
EMOS	Mosqueruela	2.75	22	Pn	Pn	16 26 47.7	-3.0
	0.4nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	16 27 21.2	-3.9
	0.6nm,0.5s,SNR=7.9						
EMOS				Lg		16 27 32.6	
	0.1nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	2.75	22	Pn	Pn	16 26 47.7	-3.0
	0.4nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	16 27 21.2	-3.9
	0.6nm,0.5s,SNR=7.9						
EBR	Ebro Roquetas	3.49	30	*e*S*	Sb	16 27 52.0	+1.6
ERTA	Horta de San J	3.55	27	Pn	Pn	16 26 59.7	-2.4
	1.1nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	16 27 40.8	-4.6
	2.4nm,0.2s,SNR=7.9						
ERTA				Lg		16 27 54.1	
	0.6nm,0.1s,SNR=7.9						
ERTA	Horta de San J	3.55	27	Pn	Pn	16 26 59.7	-2.4
	1.1nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	16 27 40.8	-4.6
	SNR=7.9						
EMIN	Mina Concepcio	3.84	271	Pn	Pn	16 27 02.4	-3.7
	0.1nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	16 27 47.1	-5.6
	1.2nm,0.2s,SNR=7.9						
EMIN				Lg		16 28 06.6	
	0.6nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.84	271	Pn	Pn	16 27 02.4	-3.8
	0.1nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	16 27 47.1	-5.6
	1.2nm,0.2s,SNR=7.9						
ESAC	San Caprasio	4.03	15	Lg		16 28 14.8	
	10nm,0.6s,SNR=7.9						
EBAD	Badajoz	4.19	284	Pn	Pn	16 27 08.2	-2.9
	0.0nm,0.2s,SNR=7.9						
EBAD				Pg	Pg	16 27 22.2	-5.9
	0.4nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	16 27 55.7	-5.8
	0.2nm,0.3s,SNR=7.9						
EBAD				Lg		16 28 18.1	
	0.5nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.19	284	Pn	Pn	16 27 08.2	-2.9
	SNR=7.9						
EBAD	Badajoz	4.19	284	Pg	Pg	16 27 22.2	-5.9
	SNR=7.9						
EBAD				Sn	Sn	16 27 55.7	-5.8
	0.2nm,0.3s,SNR=7.9						
PBEJ	Beja	4.78	274	*e*Pn	Pn	16 27 17.2	-2.3
PBEJ				*e*Sn	Sn	16 28 09.7	-6.8
PBEJ				*e*Sg	Sg	16 28 36.9	-6.8
	9.6nm,0.7s						
PBEJ	Beja	4.78	274	*e*Pn	Pn	16 27 17.2	-2.3
PBEJ				*e*Sn	Sn	16 28 09.7	-6.8
PBEJ				*e*Sg	Sg	16 28 36.9	-6.8
	9.6nm,0.7s						
PCBR	Castelo Branco	4.85	296	*e*Pn	Pn	16 27 16.7	-3.9
PCBR				*e*Sn	Sn	16 28 11.9	-6.4
PCBR				*e*Sg	Sg	16 28 37.8	-8.3
	13nm,0.8s						
PCBR	Castelo Branco	4.85	296	*e*Pn	Pn	16 27 16.7	-3.9
PCBR				*e*Sn	Sn	16 28 11.9	-6.4
PCBR				*e*Sg	Sg	16 28 37.8	-8.3
	13nm,0.8s						
MTE	Manteigas	5.14	302	*e*Sg	Sg	16 28 47.3	-8.3
	11nm,0.6s						
MTE	Manteigas	5.14	302	*e*Sg	Sg	16 28 47.3	-8.3
	11nm,0.6s						
MOE	Montemor	5.19	280	*e*Sn	Sn	16 28 19.7	-7.1
MOE				*e*Sg	Sg	16 28 49.1	-8.2
PTEO	Sao Teotonio	5.48	269	*e*Sg	Sg	16 28 59.5	-7.4
	8.7nm,0.7s						
PTEO	Sao Teotonio	5.48	269	Lg		16 28 59.5	
	4.3nm,0.7s						
PBRG	Braganca	5.49	318	*e*Pn	Pn	16 27 27.7	-1.9
PBRG				*e*Sg	Sg	16 28 57.2	-10
	6.8nm,0.6s						
PBRG	Braganca	5.49	318	Pn	Pn	16 27 27.7	-1.9
PBRG				Lg		16 28 57.2	
	3.4nm,0.6s						
PVIS	Viseu	5.52	303	*e*Pn	Pn	16 27 26.5	-3.6
PVIS				*e*Sg	Sg	16 28 57.0	-11
	6.1nm,0.4s						
PVIS	Viseu	5.52	303	Pn	Pn	16 27 26.5	-3.6
PVIS				Lg		16 28 57.0	
	3.0nm,0.4s						
PVRL	Vila Real	5.71	309	*e*Sg	Sg	16 29 05.2	-9.5
	4.4nm,0.1s						
PVRL	Vila Real	5.71	309	Lg		16 29 05.2	
	2.2nm,0.1s						
EARI	Arriondas	6.05	336	Pn	Pn	16 27 34.3	-3.2
	0.8nm,0.4s,SNR=7.9						
EARI	Arriondas	6.05	336	Pn	Pn	16 27 34.3	-3.2

IGQ 08 16:28:12.5, 1.50S×81.49W, h12^{km}±6^{km}, mb4.2, 1C-1D, Error ellipse: s-maj=6.2km s-min=2.7km az=5.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	Salinas	0.85	144	⇑P	Pb	16 28 28.5	-0.2
SALI				S	Sb	16 28 39.0	-0.8
HOJA	Cerro de Hojas	1.04	65	⇓P	Pb	16 28 31.9	0.0
HOJA				S	Sb	16 28 44.9	-0.4
JAMA	Jama	1.77	46	P	Pn	16 28 44.2	+0.8
JAMA				S	Sn	16 29 07.2	+1.2
IGUA	Igualata	2.85	90	P	Pn	16 28 59.9	+1.2
ARRY	Arrayan	3.03	90	P	Pn	16 29 02.3	+1.0
ARRY				S	Sn	16 29 36.8	-1.1
RETU	Refugio	3.04	89	P	Pn	16 29 03.8	+2.3
NAS1	Nasa	3.13	74	P	Pn	16 29 05.9	+3.2
NAS1				S	Sn	16 29 44.1	+3.8
PISA	Pisayambo	3.13	82	P	Pn	16 29 04.4	+1.7
JUA2	San Juan 2	3.15	66	P	Pn	16 29 03.7	+0.7
TERV	Terraza Guagua	3.17	66	P	Pn	16 29 05.9	+2.7
PINO	Pino	3.17	65	P	Pn	16 29 04.3	+1.0
VC1	Cotopaxi 1	3.20	75	P	Pn	16 29 06.7	+3.0
TAMB	Tambo	3.22	76	P	Pn	16 29 06.2	+2.3
YANA	Yana	3.22	65	P	Pn	16 29 05.6	+1.6
ANTI	Antisana	3.48	73	P	Pn	16 29 10.7	+3.0
CAYR	Refugio Cayamb	3.79	67	P	Pn	16 29 15.3	+3.2
CAYA	Cayambe	3.83	66	P	Pn	16 29 15.6	+3.0

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*PDG **08** 16:38:21.5±0.2, 34.09N×26.13E, h18^{km}±2^{km}*

*CSEM **08** 16:38:23.7, 34.30N×26.47E, h10^{km}, mb4.7*

*CRAAG **08** 16:38:23.7, 34.30N×26.47E, Mb4.7*

*BJI **08** 16:38:23.4, 34.26N×25.61E, h36^{km}, mB5.3, mb4.8, Ms5.2, Msz5.0*

*MOS **08** 16:38:26.0±1.1, 34.40N×26.42E, h23^{km}, mb4.8/40, MS4.2/4, Error ellipse: s-maj=4.8km s-min=2.3km az=112.0*

*HLW **08** 16:38:28.3, 34.65N×26.53E, h33^{km}, Mb5.3*

*ATH **08** 16:38:29.6, 34.55N×26.55E, h80^{km}±5^{km}, ML4.6*

*NEIC **08** 16:38:29.7±0.4, 34.44N×26.50E, h36^{km}±4^{km}, mb4.5/95, Error ellipse: s-maj=5.9km s-min=2.6km az=194.0*

*GRAL **08** 16:38:29.1±1.9, 34.19N×26.74E, MD4.7*

*ZUR_RM **08** 16:38:29, 34.44N×26.50E, h21^{km}, Mw5.0/15, Moment Tensor Solution. s15 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.23; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$2.58; $M_{r\theta}$1.57; $M_{\theta\phi}$-1.99; $M_{\phi r}$-0.21; Best double couple: $M_0$3.49×10^{16} NP1:ϕ_s304°,δ62°, λ-129°. NP2:ϕ_s184°,δ46°,λ-40°. Principal axes: T 3.73, Plg9°, Azm61°; N -.48, Plg34°, Azm325°; P -3.25, Plg55°, Azm164°;*

*NIC **08** 16:38:33.8±0.3, 34.12N×27.03E, h25^{km}, mb4.7, ML4.4, MW4.0*

ISC 08 16:38:29.3±0.1**, 34.42N**±0.02×**26.69E**±0.02**, h80^{km}, (h9^{km}**±6.6^{km}**:pP-P), n531, **σ1^{s}**32**/564**, mb4.6**/102**, 33C-13D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	1.19	19	*e*P	P	16 38 51.0	+0.1
NPS	Neapolis	1.22	314	*e*P	P	16 38 49.0	-2.4
ARG	Arkhangelos	2.14	33	*e*P	P	16 39 05.3	+1.6
ARG	Arkhangelos	2.14	33	*e*P	P	16 39 05.2	+1.5
SANT	Santorini	2.19	333	*e*Pn	P	16 39 03.1	-1.3
VAM	Vamos	2.27	296	⇓*i*P	P	16 39 06.0	+0.4
VAM	Vamos	2.27	296	⇓*i*P	P	16 39 05.6	0.0
BDRM	Kayabasi	2.71	13	*i* P	P	16 39 12.7	+1.0
APE	Apeiranthos	2.80	341	PN	P	16 39 11.6	-1.5
APE	Apeiranthos	2.80	341	P	P	16 39 09.3	-3.7
APE				*e*P		16 39 11.5	
APE	Apeiranthos	2.80	341	*e*P	P	16 39 11.5	-1.5
APE	Apeiranthos	2.80	341	P	P	16 39 09.4	-3.6
KSL	Kastellorizon	2.93	53	*e*P	P	16 39 15.1	+0.3
YER	Yerkesik	3.00	25	PN	P	16 39 16.4	+0.6
YER	Yerkesik	3.00	25	P	P	16 39 16.3	+0.5
SLUM		3.18	203	P	P	16 39 17.6	-0.6
SLUM				S	S	16 39 53.8	-1.3
SMG	Samos	3.28	2	*e*P	P	16 39 18.5	-1.2
HMAT	Matruh	3.34	174	P	P	16 39 20.5	0.0
HMAT				S	S	16 40 00.3	+1.2
AYDN	Tasoluk	3.37	16	*i* P	P	16 39 20.7	-0.2
ELL	Elmali	3.50	48	PN	P	16 39 24.4	+1.7
KYTH	Kithira	3.52	303	*e*P	P	16 39 21.0	-1.9
DABA	Dabaa	3.66	158	P	P	16 39 25.0	+0.1
DNZL	Cakiroluk	3.78	30	*i* P	P	16 39 25.6	-0.9
VLI	Veliai	3.82	308	⇓*i*P	P	16 39 25.1	-2.1
DENT	Denizli	3.83	29	PN	P	16 39 28.1	+0.8
IZM	Izmir	3.99	6	PN	P	16 39 29.6	+0.1
KDAG	Bornova	4.00	6	*i* P	P	16 39 27.8	-1.8
ANTB	Antalya	4.06	51	PN	P	16 39 32.7	+2.2
NAIG	Nisos Aigina	4.22	323	*e*P	P	16 39 31.9	-0.8
PTL	Penteli	4.28	329	*e*P	P	16 39 32.2	-1.3
ATH	Athens Observa	4.28	327	*e*P	P	16 39 32.4	-1.1
MANT	Manisa	4.33	20	*i* P	P	16 39 33.6	-0.6
BCK	Bucak	4.38	45	*e*PN	P	16 39 36.8	+1.9
MPAR	Parnis Oros	4.42	328	⇑*i*P	P	16 39 34.9	-0.6
MGER	Gerania Oros	4.51	323	*e*P	P	16 39 35.2	-1.5
KHL	Karahalli	4.51	30	*e*PN	P	16 39 37.4	+0.7
AKS	Akhisar	4.54	11	*e*PN	P	16 39 37.4	+0.3
ISP	Isparta	4.60	41	*e*PN	P	16 39 39.7	+1.7
HBRG	Burj al 'Arab	4.67	144	P	P	16 39 39.2	+0.3
PPCY	Paphos	4.68	83	⇓P	P	16 39 39.2	+0.1
PPCY	Paphos	4.68	83	*e*P	P	16 39 39.2	+0.1
ITM	Ithomi	4.75	307	⇓*i*P	P	16 39 38.3	-1.7
PRK	Paraskevi	4.83	356	*e*P	P	16 39 39.5	-1.6
ALFC	Alevga	4.92	80	P	P	16 39 42.0	-0.3
	28nm,0.3s						
ALFC				S	S	16 40 36.4	-2.0
ALFC	Alevga	4.92	80	*e*P	P	16 39 42.0	-0.3
ALFC				S	S	16 40 36.4	-2.0
SZAC	Souni-Zanaja	5.12	85	P	P	16 39 44.6	-0.5
	24nm,0.3s						
SZAC				S	S	16 40 40.6	-2.8
LEF	Lefka	5.15	81	*e*PN	P	16 39 45.2	-0.3
LKR	Lokris	5.16	326	*e*P	P	16 39 45.0	-0.7
SWA1		5.21	189	P	P	16 39 46.0	-0.4
AOS	Alonnisos	5.25	335	*e*P	P	16 39 46.0	-0.8
SWA2		5.27	192	P	P	16 39 46.5	-0.7
BALB	Balikesir	5.29	10	*e*PN	P	16 39 47.5	+0.1
HDMB	Hadim	5.35	60	*e*PN	P	16 39 49.1	+0.8
ALT	Altintas	5.38	30	P	P	16 39 48.0	-0.6
DST	Dursunbey	5.40	16	*e*PN	P	16 39 48.4	-0.6
MAMC	Mammari	5.42	80	*e*P	P	16 39 49.6	+0.4
BTOK	Tokmak	5.43	11	*i* P	P	16 39 56.0	+6.6
CSS	Prodhromos	5.50	83	P	P	16 39 50.6	+0.4
	15nm,0.5s						
CSS				S	S	16 40 50.3	-2.5
CSS	Prodhromos	5.50	83	*e*P	P	16 39 50.6	+0.4
RLS	Riolos of Patr	5.56	312	*e*P	P	16 39 50.4	-0.8
NEO	Neokhori	5.61	331	*e*P	P	16 39 50.7	-1.1
NEO	Neokhori	5.61	331	*e*P	P	16 39 46.9	-4.9
XOR	Xorichti	5.67	331	*e*P	P	16 39 51.5	-1.1
AGG	Agios Georgios	5.77	324	*e*P	P	16 39 53.1	-0.9

AGG	Agios Georgios	5.77	324	P	P	16 39 53.1	-1.0
AGG				S	S	16 40 56.4	-3.2
KONT	Konya--Tatoy	5.78	51	ePN	P	16 39 55.5	+1.4
KONT	Konya--Tatoy	5.78	51	P	P	16 39 56.4	+2.3
HNAT	Natroun	5.82	144	P	P	16 39 54.3	-0.5
ORLT	Orhaneli	5.88	17	ePN	P	16 39 55.7	+0.1
SQR		5.92	139	P	P	16 39 56.0	-0.1
EVR	Evrytania	5.96	320	eP	P	16 39 55.5	-1.1
EVR	Evrytania	5.96	320	eP	P	16 39 54.3	-2.3
FYM	Al Fayyum	5.99	141	P	P	16 39 57.3	+0.3
BNT	Bandirma	6.00	9	ePN	P	16 39 56.9	-0.3
ULDT	Uludag	6.03	18	i P	P	16 39 57.1	-0.6
PHNC	Paralimni	6.07	82	eP	P	16 39 59.6	+1.4
ESKT	Eskisehir	6.08	32	i P	P	16 39 57.7	-0.6
KIZT	Kizilcal	6.10	42	PN	P	16 39 59.2	+0.6
VLS	Valsamata	6.19	309	eP	P	16 39 57.9	-2.0
OUR	Ouranopolis	6.28	341	eP	P	16 40 00.6	-0.5
HSAF	As Saff	6.32	138	P	P	16 40 01.2	-0.5
AWBH		6.37	162	P	P	16 40 02.1	-0.3
HHAG	Hagoal	6.39	133	P	P	16 40 03.5	+0.7
GLL	Jalalah	6.44	137	P	P	16 40 02.7	-0.7
MEST	Erdemli	6.45	68	i P	P	16 40 05.3	+1.7
PLG	Polygyros	6.48	337	eP	P	16 40 02.5	-1.4
ALN	Alexandroupoli	6.48	356	eP	P	16 40 04.2	+0.3
YLV	Yalova	6.49	18	ePN	P	16 40 04.7	+0.6
LIT	Litokhoron	6.58	331	eP	P	16 40 03.5	-1.9
LIT	Litokhoron	6.58	331	P	P	16 40 03.5	-1.9
LIT				S	S	16 41 20.9	+1.3
HBNS	Bani Suwayf	6.68	144	P	P	16 40 07.0	+0.3
RDO	Rodhopi	6.77	353	eP	P	16 40 08.6	+0.6
RDO	Rodhopi	6.77	353	eP	P	16 40 07.0	-1.0
HRSH	Kfar Ka'horesh	6.86	118	P	P	16 40 07.7	-1.5
THE	Thessaloniki	6.87	336	eP	P	16 40 08.2	-1.1
SOH	Sokhos	6.91	338	eP	P	16 40 09.6	-0.4
SUZ		6.93	130	P	P	16 40 10.2	0.0
JAN	Janina	7.00	320	eP	P	16 40 08.7	-2.5
JAN	Janina	7.00	320	eP	P	16 40 09.0	-2.2
MDU	Mudurnu	7.02	29	ePN	P	16 40 11.7	+0.2
KZN	Kozani	7.06	328	eP	P	16 40 13.6	+1.6
KZN	Kozani	7.06	328	eP	P	16 40 11.5	-0.5
SRS	Serrai	7.12	341	eP	P	16 40 11.6	-1.2
ZAF		7.15	134	P	P	16 40 12.6	-0.6
OFRI	'Ofer	7.16	102	P	P	16 40 12.6	-0.7
OFRI	'Ofer	7.16	102	Pn	P	16 40 11.8	-1.5
ZNM		7.28	132	P	P	16 40 14.4	-0.6
ANTO	Ankara	7.30	40	ePN	P	16 40 15.6	+0.3
SLTI	Sal'it	7.32	105	Pn	P	16 40 14.3	-1.2
SLTI				Sn	S	16 41 31.6	-6.1
KNT	Kendrikon	7.37	337	eP	P	16 40 15.9	-0.3
NIG	Nigde	7.38	58	ePN	P	16 40 16.4	0.0
KZIT	Kziot	7.38	116	Pn	P	16 40 15.0	-1.4
KZIT				Sn	S	16 41 34.5	-4.8
RZN	Rozhen	7.42	348	P	P	16 40 16.0	-0.9
BHL	Bhannes	7.45	91	ePN	P	16 40 15.5	-1.8
BHL				ePN	P	16 40 16.7	-0.6
BHL				SN	S	16 41 37.1	-3.8
KAMT	Kaman	7.48	47	ePN	P	16 40 17.7	-0.1
MMB	Musomiste	7.53	343	P	P	16 40 17.0	-1.4
RTMM	Retamin	7.53	114	Pn	P	16 40 18.1	-0.3
MMLI	Mount Malkishu	7.56	103	P	P	16 40 18.2	-0.7
MMLI	Mount Malkishu	7.56	103	Pn	P	16 40 18.1	-0.8
KSDI	Kefar Szold	7.56	97	P	P	16 40 18.4	-0.5
KSDI	Kefar Szold	7.56	97	Pn	P	16 40 17.9	-1.0
FNA	Florina	7.62	328	eP	P	16 40 17.0	-2.7
FNA	Florina	7.62	328	P	P	16 40 17.0	-2.7
FNA				S	S	16 41 41.5	-3.7
MASH	Mash'abbe Sade	7.63	114	Pn	P	16 40 18.1	-1.7
KEK	Kerkira	7.63	316	eP	P	16 40 15.5	-4.3
HNKL	Nakhl	7.63	124	P	P	16 40 19.0	-0.8
HWQ	Hawqa	7.66	88	ePN	P	16 40 20.0	-0.1
HWQ				SN	S	16 41 43.6	-2.4
BRTR	Keskin Array B	7.67	44	i P	P	16 40 20.3	0.0
DIM	Dimitrovgrad	7.67	354	eP	P	16 40 20.0	-0.3
KSHT	Keshet	7.73	98	P	P	16 40 21.5	+0.3
KSHT	Keshet	7.73	98	Pn	P	16 40 21.3	+0.1
CEYT	Ceyhan	7.80	68	ePN	P	16 40 22.0	-0.2
DRGI	Dragot	7.83	109	P	P	16 40 21.8	-0.8
DRGI	Dragot	7.83	109	Pn	P	16 40 21.9	-0.7
HTY	Hatay	7.91	75	eP	P	16 40 22.6	-1.0
MZDA	Masada	7.93	111	P	P	16 40 23.3	-0.6
MZDA	Masada	7.93	111	Pn	P	16 40 23.1	-0.8
MZDA				Sn	S	16 41 48.2	-4.5
KKB	Krupnik	7.96	340	P	P	16 40 23.0	-1.2
HRDS	Abu Rudays	8.01	134	P	P	16 40 24.3	-0.7
GRB	Gharib	8.05	138	P	P	16 40 24.9	-0.6
ZFRI	Zfri	8.14	116	Pn	P	16 40 26.3	-0.5
ASUT		8.16	148	P	P	16 40 26.5	-0.5
PGB	Panagyurishte	8.35	347	eP	P	16 40 27.5	-2.1
MBH	Mount Berech	8.36	121	Pn	P	16 40 30.1	+0.3
EIL	Elat	8.46	122	ePn	P	16 40 30.9	-0.2
EIL	Elat	8.46	122	Pn	P	16 40 30.9	-0.2
TR2		8.50	133	P	P	16 40 30.9	-0.8
HKAT	Jabal Katrina	8.57	131	P	P	16 40 31.8	-0.8
HBST	Basata	8.59	125	P	P	16 40 32.8	-0.1
SKO	Skopje	8.59	333	ePn	P	16 40 29.0	-3.9
VTS	Vitosha	8.60	343	P	P	16 40 34.0	+1.0
NUB		8.65	126	P	P	16 40 33.2	-0.5
TIR	Tirane	8.77	324	P	P	16 40 34.8	-0.5
ZEIT		8.78	136	P	P	16 40 33.9	-1.6
PRD	Provadia	8.78	3	eP	P	16 40 30.0	-5.5
HDHB	Dhahab	8.83	128	P	P	16 40 36.3	+0.1
TR1		8.92	134	P	P	16 40 36.2	-1.2
LCI	Lecce	9.02	313	P	P	16 40 36.7	-2.0
HDK1	Dakhla	9.16	164	P	P	16 40 39.8	-0.7
TIP	Timpagrande	9.27	304	eP	P	16 40 37.5	-4.7
HHRG	Al Ghardaqah	9.30	139	P	P	16 40 40.8	-1.7
SOI	Samo	9.33	296	eP	P	16 40 38.8	-4.1
GRI	Girifalco	9.35	301	eP	P	16 40 40.0	-3.2
AKRG	Al Kharijah	9.48	159	P	P	16 40 44.1	-0.9
GTR	Jabal at Tayr	9.49	158	P	P	16 40 44.9	-0.3
ULC	Ulcinj	9.53	324	⇑iPn	P	16 40 40.2	-5.5
ULC				eSn	S	16 42 23.9	-8.1
MTTG	Motta San Giov	9.58	295	ePn	P	16 40 42.6	-3.7
SCLL	Scilla	9.64	297	ePn	P	16 40 44.0	-3.2
PVY	Plav	9.71	329	ePn	P	16 40 43.6	-4.4
PVY				eSn	S	16 42 29.0	-7.1
AGST	Augusta-Monte	9.73	290	ePn	P	16 40 44.1	-4.2
TTG	Podgorica	9.89	326	ePn	P	16 40 45.5	-5.0
TTG				eSn	S	16 42 32.6	-8.0
PZI	Palazzolo	9.90	289	eP	P	16 40 47.3	-3.4
ORI	Oriolo Calabro	9.91	308	eP	P	16 40 47.7	-3.2
BUM	Brajici-Budva	9.96	324	⇑iPn	P	16 40 46.0	-5.4
BUM				eSn	S	16 42 34.2	-8.1
IVA	Berane	9.96	330	⇑iPn	P	16 40 47.0	-4.5
IVA				eSn	S	16 42 35.2	-7.2
LTRZ	Laterza	9.97	311	ePn	P	16 40 46.3	-5.3
HSFG		10.01	140	P	P	16 40 51.6	-0.6
MALT	Malatya	10.23	64	eP	P	16 40 55.3	+0.2
HCY	Herceg Novi	10.26	324	ePn	P	16 40 50.2	-5.4
HCY				eSn	S	16 42 41.1	-8.6
HARR	Harsova	10.30	5	⇓iP	P	16 41 03.5	+7.5
HARR	Harsova	10.30	5	⇓iP	P	16 41 03.5	+7.5
CUC	Castrocucco	10.30	306	P	P	16 40 53.1	-3.0
NKY	Niksic	10.31	327	⇑iPn	P	16 40 51.5	-4.7
NKY				eSn	S	16 42 42.7	-8.0
MGR	Morigerati	10.54	306	ePn	P	16 40 54.9	-4.5
PLE	Pljevlja	10.55	330	⇑iPn	P	16 40 55.2	-4.3
PLE				eSn	S	16 42 49.5	-7.0
BRY	Bratogost	10.59	325	ePn	P	16 40 55.0	-4.9
BRY				eSn	S	16 42 49.3	-8.1
UPM	Unac-Piva	10.66	328	⇑iPn	P	16 40 56.0	-4.9
UPM				eSn	S	16 42 51.3	-7.8
CFR	Carcaliu	10.80	5	⇑iP	P	16 41 05.4	+2.7
CFR	Carcaliu	10.80	5	⇑iP	P	16 41 05.4	+2.6
MTUR	Matau	10.86	354	⇑iP	P	16 41 02.9	-0.7
MTUR	Matau	10.86	354	⇑iP	P	16 41 02.9	-0.7
MRLC	Muro Lucano	10.90	309	ePn	P	16 40 59.7	-4.4
SGO	Sicignano	10.92	307	eP	P	16 41 00.7	-3.7
STON	Ston	10.97	323	i Pn	P	16 40 60.0	-5.2
STON				i Sn	S	16 42 52.1	-15
MLR	Muntele Rosu	11.07	357	⇑iP	P	16 41 08.3	+1.9
MLR	Muntele Rosu	11.07	357	⇑iP	P	16 41 08.3	+1.9
MRB1	Monte Rocchett	11.43	309	P	P	16 41 08.1	-3.1
VRI	Vrincioaia	11.43	0	⇑P	Px	16 41 26.1	
PSB1	Pescosannita	11.58	309	P	P	16 41 11.8	-1.5
EMRS	Mersa Alam	11.74	141	P	P	16 41 14.6	-0.9
BZS	Buzias	11.83	342	⇓P	P	16 41 16.0	-0.6
ASHG	Umm Shaghir	11.94	157	P	P	16 41 18.3	+0.2
CII	Carovilli	12.17	310	eP	P	16 41 19.2	-2.0
CII				eS	S	16 43 24.1	-11
HMSM	Jabal Masmas	12.37	157	P	P	16 41 23.7	-0.1
HMSM	Jabal Masmas	12.37	157	P	P	16 41 23.7	-0.2
HKFR	Khafra	12.47	160	P	P	16 41 25.1	-0.1
SDI	San Donato	12.48	309	eP	P	16 41 22.0	-3.2
INTR	Introdacqua	12.58	311	P	P	16 41 25.7	-0.9
VVLD	Villa Vallelon	12.68	310	P	P	16 41 26.4	-1.5
BURAR	Bucovina Array	13.22	356	⇑P	Px	16 41 46.3	
MSL	Mosul	13.52	77	eP	P	16 41 43.0	+4.2
NRCA	Norcia	13.52	312	P	P	16 41 37.5	-1.3
MNS	Montasola	13.55	310	P	P	16 41 39.3	+0.1
SOC	Sochi	13.63	44	eP	P	16 41 40.3	0.0
SOC				e		16 44 11.1	
SOC				pmax	pmax		
	comp=Z,78nm,1.2s						
SOC				pmax	pmax		
	comp=N,96nm,1.3s						
SOC				pmax	pmax		
	comp=E,40nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,15.0s						
SOC				MLR	MLR		
	comp=N,580nm,12.0s						
SOC				MLR	MLR		
	comp=E,727nm,15.0s						
SNTG	Esanatoglia	13.86	314	P	P	16 41 43.2	-0.1
ARV	Arcevia	14.00	314	P	P	16 41 42.7	-2.4
FSSB	Fossombrone	14.21	315	P	P	16 41 48.6	+0.8
PSZ	Piszkesteto	14.41	341	eP	P	16 41 49.1	-1.3
PSZ	Piszkesteto	14.41	341	eP	P	16 41 52.2	+1.8
BHD	Baghdad	14.75	90	eP	P	16 42 32.0	+37
BHD				eS	S	16 44 54.0	+17
KOLS	Kolonicke sedl	14.86	349	eP	P	16 41 59.3	+3.1
KOLS				e		16 43 10.3	
CRVS	Cervenica-Dubn	14.98	347	eP	P	16 42 03.4	+5.7
VOY	Vojsko	15.14	324	ePn	P	16 41 55.3	-4.5
VOY				e		16 41 59.6	
OBKA	Obir	15.18	326	⇑iP	P	16 41 57.1	-3.2
	comp=E,8.4nm,0.5s						
ARSA	Arzberg	15.33	330	⇑iP	P	16 41 58.3	-3.8
	comp=E,4.6nm,0.6s						
ARSA				P		16 42 01.4	
KIV	Kislovodsk	15.61	48	eP	P	16 42 09.4	+3.7
KIV				eS	S	16 45 00.6	+4.3
KIV				pmax	pmax		
	comp=N,14nm,1.0s						
KIV				pmax	pmax		
	comp=Z,57nm,1.0s						
KIV				MLR	MLR		
	comp=E,555nm,15.0s						
KIV				MLR	MLR		
	comp=Z,620nm,15.0s						
PTCC	Patocco-Chiusa	15.67	324	P	P	16 42 05.0	-1.5
CMAH	Djebel Manchou	15.85	283	P	P	16 42 14.0	+5.2
TI2	Plekhanov	15.97	58	eP	P	16 42 13.0	+2.7
PGF	Pioggiola	16.03	306	eP	P	16 42 09.2	-1.9
	comp=Z,118nm,1.1s						
PGF	Pioggiola	16.03	306	eP	P	16 42 09.2	-1.9
PGF				pmax	pmax		
	comp=Z,59nm,1.1s						
FVI	Forni Avoltri	16.09	323	P	P	16 42 12.6	+0.9
KBA	Koelnbreinsper	16.16	325	⇑iP	P	16 42 10.7	-1.9
	comp=Z,11nm,0.5s						
KBA	Koelnbreinsper	16.16	325	⇑iP	P	16 42 10.7	-1.9
KBA				pmax	pmax		
	comp=Z,11nm,0.5s						
CTI	Castel Tesino	16.30	320	P	P	16 42 14.5	+0.1
CAEH	'Ain El Ouahch	16.31	284	P	P	16 42 18.0	+3.4
MOA	Molln	16.33	329	⇑iP	P	16 42 13.2	-1.5
	comp=Z,6.0nm,0.8s						
KIEV	Kiev	16.36	6	P	P	16 42 15.0	-0.1
CKFL	Kef-Lekhel	16.40	283	P	P	16 42 19.0	+3.3
GOF	Gofitskoye	16.42	45	eP	P	16 42 18.0	+2.1
OJC	Ojcow	16.57	344	eP	P	16 42 25.1	+7.3
CASM	Ain Smara	16.59	282	P	P	16 42 21.0	+3.0
OKC	Ostrava-Krasne	16.64	340	eP	P	16 42 18.5	0.0
CTEI	Djebel Teioual	16.66	281	P	P	16 42 22.0	+3.1
MORC	Moravsky Berou	16.75	339	eP	P	16 42 18.8	-1.2
MORC				pmax	pmax		
	comp=Z,12nm,0.8s						
MORC	Moravsky Berou	16.75	339	eP	P	16 42 18.8	-1.2
	comp=Z,12nm,0.8s						
CMER	Merouana	17.07	280	P	P	16 42 30.0	+5.9
DFRA	Djebel Bou Aff	17.09	283	P	P	16 42 28.0	+3.7
WTTA	Wattenberg	17.11	323	⇑iP	P	16 42 23.6	-0.9
	comp=Z,12nm,0.6s						
WTTA	Wattenberg	17.11	323	⇑iP	P	16 42 23.6	-0.9
WTTA				pmax	pmax		
	comp=Z,13nm,0.6s						
WATA	Walderalm	17.19	323	⇑iP	P	16 42 24.2	-1.4
	comp=Z,6.9nm,0.5s						
WATA	Walderalm	17.19	323	⇑iP	P	16 42 24.2	-1.4
WATA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SQTA	Sankt Quirin	17.30	322	⇑iP	P	16 42 25.7	-1.2
	comp=Z,14nm,0.5s						
SQTA	Sankt Quirin	17.30	322	⇑iP	P	16 42 25.7	-1.2
SQTA				pmax	pmax		
	comp=Z,14nm,0.5s						
GEC2	GERESS Array S	17.34	330	eP	P	16 42 29.1	+1.7
GEC2				pmax	pmax		
	comp=Z,12nm,0.7s						
GEC2	GERESS Array S	17.34	330	eP	P	16 42 29.1	+1.7
	comp=Z,12nm,0.7s						
CKHR	Kef el Ahmar	17.38	281	P	P	16 42 32.0	+4.0
MOTA	Moosalm	17.44	322	⇓iP	P	16 42 27.8	-0.8
	comp=Z,11nm,0.8s						
MOTA	Moosalm	17.44	322	⇓iP	P	16 42 27.8	-0.8
MOTA				pmax	pmax		
	comp=Z,11nm,0.8s						
SET	Setif	17.47	282	P	P	16 42 30.0	+0.9
KHC	Kasperske Hory	17.61	330	eP	P	16 42 29.1	-1.7
KHC				e		16 42 32.0	
KHC	Kasperske Hory	17.61	330	eP	P	16 42 29.1	-1.7
KHC				x	x	16 42 32.0	
SBF	Sospel	17.63	308	eP	P	16 42 29.3	-1.7
	comp=Z,55nm,0.7s						
SBF	Sospel	17.63	308	eP	P	16 42 29.3	-1.7
SBF				pmax	pmax		
	comp=Z,27nm,0.7s						
DPC	Dobruska-Polom	17.63	338	eP	P	16 42 30.6	-0.4
UPC	Upice	17.87	337	eP	P	16 42 33.2	-0.7
WET	Wettzell	17.91	329	eP	P	16 42 34.3	-0.1
WET				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WET	Wettzell	17.91	329	eP	P	16 42 34.3	-0.1
	comp=Z,9.0nm,0.8s						
FUR	Furstenfeldbru	17.91	325	eP	P	16 42 34.8	+0.3
FUR				pmax	pmax		
	comp=Z,46nm,1.0s						
FUR	Furstenfeldbru	17.91	325	eP	P	16 42 34.8	+0.3
	comp=Z,46nm,1.0s						
PRU	Pruhonice	17.93	334	eP	P	16 42 33.0	-1.6
FRF	La Foret Royal	18.02	306	eP	P	16 42 34.0	-1.8
	comp=Z,32nm,0.7s						
FRF	La Foret Royal	18.02	306	eP	P	16 42 34.0	-1.8
FRF				pmax	pmax		
	comp=Z,16nm,0.7s						
LMR	La Mourre	18.02	306	eP	P	16 42 34.1	-1.7
KSP	Ksiaz	18.07	338	eP	P	16 42 35.8	-0.5
KSP	Ksiaz	18.07	338	eP	P	16 42 34.8	-1.5
UBR	Uberruh	18.16	322	P	P	16 42 38.8	+1.4
MCGN	Macugnaga	18.30	315	P	P	16 42 38.6	-0.5
PVCC	Panska Ves	18.37	335	eP	P	16 42 39.1	-0.7
MBDF	Montbardon	18.44	310	eP	P	16 42 39.8	-0.9
	comp=Z,70nm,0.9s						
MBDF	Montbardon	18.44	310	eP	P	16 42 39.8	-0.9
MBDF				pmax	pmax		
	comp=Z,35nm,0.9s						
LPG	La Plagne	18.81	312	eP	P	16 42 44.6	-0.4
	comp=Z,12nm,0.3s						
LPG	La Plagne	18.81	312	eP	P	16 42 44.6	-0.4
LPG				pmax	pmax		
	comp=Z,6.0nm,0.3s						
LPL	La Plagne	18.84	312	eP	P	16 42 44.4	-0.8
	comp=Z,12nm,0.3s						
LPL	La Plagne	18.84	312	eP	P	16 42 44.4	-0.8
LPL				pmax	pmax		
	comp=Z,6.0nm,0.3s						
BRG	Berggiesshubel	18.88	334	eP	P	16 42 45.3	-0.3
BRG				pmax	pmax		
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	18.88	334	eP	P	16 42 45.3	-0.3
	comp=Z,12nm,1.1s						
SMRF	Simiane la Rot	18.90	307	eP	P	16 42 45.8	-0.1
GUT	Gutenstein	18.93	321	P	P	16 42 46.2	0.0
NKC	Novy Kostel	18.93	331	eP	P	16 42 44.9	-1.3
RSL	Roselend	18.98	312	eP	P	16 42 47.0	+0.1
GRA1	Grafenberg Arr	19.04	328	eP	P	16 42 46.2	-1.2
	comp=Z,63nm,1.6s						
GRF	Grafenberg Arr	19.04	328	eP	P	16 42 46.2	-1.2
GRF				pmax	pmax		
	comp=Z,63nm,1.6s						
GRF	Grafenberg Arr	19.04	328	eP	P	16 42 46.2	-1.2
GRF				pmax	pmax		
	comp=Z,63nm,1.6s						
GRF	Grafenberg Arr	19.04	328	eP	P	16 42 46.2	-1.2
	comp=Z,63nm,1.6s						
ORIF	Oris-en-Rattie	19.09	309	eP	P	16 42 49.1	+1.1
	comp=Z,11nm,0.5s						
ORIF	Oris-en-Rattie	19.09	309	eP	P	16 42 49.1	+1.1
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STU	Stuttgart	19.34	323	eP	P	16 42 51.2	+0.5
STU				pmax	pmax		
	comp=Z,27nm,0.6s						
STU	Stuttgart	19.34	323	eP	P	16 42 51.1	+0.4
	comp=Z,27nm,0.6s						
FELD	Feldberg	19.39	319	P	P	16 42 51.6	+0.3
BBS	Basel-Blauen	19.42	318	eP	P	16 42 51.1	-0.4
EMHD	Djebel Mahouad	19.45	282	P	P	16 42 53.0	+1.1
BFO	Black Forest	19.50	321	eP	P	16 42 53.0	+0.6
BFO				pmax	pmax		
	comp=Z,24nm,1.1s						
BFO	Black Forest	19.50	321	eP	P	16 42 53.0	+0.6
	comp=Z,24nm,1.1s						
CLL	Collm	19.57	334	⇑iP	P	16 42 53.0	-0.2
CLL				pmax	pmax		
	comp=Z,12nm,0.6s						
CLL	Collm	19.57	334	⇑iP	P	16 42 53.0	-0.2
	comp=Z,12nm,0.6s						
CLL				i		16 42 59.8	
CLL	Collm	19.57	334	⇑P	P	16 42 53.0	-0.2
	comp=Z,logA/T=1.3						
CLL				i *PP		16 42 59.8	
CLL				e		16 43 07.0	
CLL				i		16 43 26.0	
MOX	Moxa	19.59	330	eP	P	16 42 54.4	+1.1
MOX				pmax	pmax		
	comp=Z,67nm,1.9s						
MOX	Moxa	19.59	330	P	P	16 42 54.4	+1.1
	comp=Z,67nm,1.9s						
MOX	Moxa	19.59	330	i P	P	16 42 54.4	+1.1
	comp=Z,logA/T=1.6						
RAYN	Ar Rayn	19.69	119	Pn	P	16 43 00.5	+5.9
	comp=Z,127nm,1.1s,SNR=16						
LOMF	Lomont	19.74	317	eP	P	16 42 55.1	+0.2
SUW	Suwalki	19.74	354	eP	P	16 42 53.9	-1.0
CABF	La Chapelle	19.77	314	eP	P	16 42 54.2	-1.1
	comp=Z,58nm,0.8s						
CABF	La Chapelle	19.77	314	eP	P	16 42 54.2	-1.1
CABF				pmax	pmax		
	comp=Z,29nm,0.8s						
VIVF	Saint-Julien-l	19.84	308	eP	P	16 42 56.3	+0.2
	comp=Z,11nm,0.5s						
VIVF	Saint-Julien-l	19.84	308	eP	P	16 42 56.3	+0.2
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MOF	Molkenrain	19.85	318	eP	P	16 42 56.0	-0.1
HINF	Hinteralfeld	19.98	318	eP	P	16 42 57.3	-0.2
	comp=Z,28nm,0.6s						
HINF	Hinteralfeld	19.98	318	eP	P	16 42 57.3	-0.2
HINF				pmax	pmax		
	comp=Z,14nm,0.6s						
ECH	Echery	20.05	319	eP	P	16 42 59.1	+0.9
WLS	Welschbruch	20.06	320	eP	P	16 42 58.9	+0.5
LASF	Ste Croix	20.08	305	eP	P	16 42 59.3	+0.7
MNK	Minsk	20.09	2	⇓eP	P	16 42 54.0	-4.6
CDF	Champ du Feu	20.10	320	eP	P	16 42 59.0	+0.2
	comp=Z,83nm,0.9s						
CDF	Champ du Feu	20.10	320	eP	P	16 42 59.0	+0.2
CDF				pmax	pmax		
	comp=Z,42nm,0.9s						
RUE	Ruedersdorf	20.28	337	P	P	16 43 01.1	+0.5
	comp=Z,23nm,0.6s						
RUE	Ruedersdorf	20.28	337	P	P	16 43 01.1	+0.5
	comp=Z,23nm,0.6s						
HAU	Haudompre	20.37	318	eP	P	16 43 01.9	+0.3
	comp=Z,39nm,0.6s						
HAU	Haudompre	20.37	318	eP	P	16 43 01.9	+0.3
HAU				pmax	pmax		
	comp=Z,20nm,0.6s						
UBBA	Unterbreizbach	20.40	328	eP	P	16 43 03.9	+2.1
	comp=Z,43nm,1.8s						
EBNR	Beni Rached	20.59	282	P	P	16 42 57.0	-6.9
TNS	Taunus Mts	20.68	325	eP	P	16 43 05.3	+0.6
TNS				pmax	pmax		
	comp=Z,36nm,1.1s						
TNS	Taunus Mts	20.68	325	eP	P	16 43 05.3	+0.6
	comp=Z,36nm,1.1s						
THEF	They Montfort	20.70	318	eP	P	16 43 05.7	+0.8
ECHA	Ech Chlef	20.73	282	P	P	16 42 57.5	-7.8
ETRT	Tiaret	20.84	280	P	P	16 43 08.0	+1.6
LBL	Lubilhac	20.92	308	eP	P	16 43 07.9	+0.7
EANR	'Ain N'Sour	20.96	282	P	P	16 43 05.0	-2.6
MTLF	Montolieu	20.97	302	eP	P	16 43 08.0	+0.3
CLZ	Clausthal	21.01	331	eP	P	16 43 08.5	+0.5
	comp=Z,21nm,1.1s,mb4.4						
RUP	Ruppelstein	21.01	323	eP	P	16 43 09.2	+1.1
EMIR	Miracle	21.10	298	P	P	16 43 10.4	+1.3
	comp=Z,23nm,0.6s,mb4.7						
EMIR	Miracle	21.10	298	P	P	16 43 10.4	+1.3
	comp=Z,23nm,0.6s,mb4.7,SNR=7.9						
SMF	Signal de Mont	21.14	312	eP	P	16 43 09.0	-0.4
	comp=Z,22nm,0.6s,mb4.4						
SMF	Signal de Mont	21.14	312	eP	P	16 43 09.0	-0.4
SMF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
EPOB	Poblet	21.32	296	P	P	16 43 12.2	+1.0
	comp=Z,28nm,0.6s,mb4.8						
EPOB	Poblet	21.32	296	P	P	16 43 12.2	+1.0
	comp=Z,28nm,0.6s,mb4.8,SNR=17						
AGO	Saint Agoulin	21.32	310	eP	P	16 43 12.9	+1.7
MEZF	Maizieres J'vi	21.37	318	eP	P	16 43 12.3	+0.7
	comp=Z,51nm,0.5s,mb4.8						
WLF	Walferdange	21.45	321	eP	P	16 43 12.3	-0.1
WLF				pmax	pmax		
	comp=Z,35nm,0.8s,mb4.7						
WLF	Walferdange	21.45	321	eP	P	16 43 12.2	-0.2
	comp=Z,34nm,0.8s,mb4.7						
WLF	Walferdange	21.45	321	eP	P	16 43 12.3	-0.1
	comp=Z,35nm,0.8s,mb4.7						
AVF	Avril sur Loir	21.51	312	eP	P	16 43 13.1	+0.1
	comp=Z,14nm,0.6s,mb4.2						
AVF	Avril sur Loir	21.51	312	eP	P	16 43 13.1	+0.1
AVF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
SSF	Saint Saulge	21.54	313	eP	P	16 43 13.8	+0.5
SSF				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.6						
SSF	Saint Saulge	21.54	313	eP	P	16 43 13.8	+0.5
	comp=Z,19nm,0.6s,mb4.6						
CAF	Calviac	21.59	306	eP	P	16 43 14.8	+1.0
	comp=Z,16nm,0.8s,mb4.1						
CAF	Calviac	21.59	306	eP	P	16 43 14.8	+1.0
CAF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
NRDL	Niedersach Rie	21.61	332	eP	P	16 43 13.6	-0.4
	comp=Z,22nm,1.2s,mb4.4						
BGF	Bois d'Agland	21.72	311	eP	P	16 43 16.0	+0.9
	comp=Z,29nm,0.7s,mb4.4						
BGF	Bois d'Agland	21.72	311	eP	P	16 43 16.0	+0.9
BGF				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.4						
OBN	Obninsk	21.80	15	⇓eP	P	16 43 16.9	+1.0
OBN				e		16 43 39.6	
OBN				e		16 47 17.9	
OBN				pmax	pmax		
	comp=Z,33nm,0.8s,mb4.7						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
OBN	Obninsk	21.80	15	eP	P	16 43 16.3	+0.4
	comp=Z,36nm,0.5s,mb5.0						
OBN	Obninsk	21.80	15	eP	P	16 43 16.9	+1.0
	comp=Z,33nm,0.8s,mb4.7						
ERTA	Horta de San J	21.81	295	P	P	16 43 17.5	+1.5
	comp=Z,27nm,0.7s,mb4.7						
ERTA	Horta de San J	21.81	295	P	P	16 43 17.5	+1.5
	comp=Z,27nm,0.7s,mb4.7,SNR=7.8						
TCF	Toulx Ste Croi	22.01	310	eP	P	16 43 19.4	+1.4

	comp=Z,8.4nm,0.7s,mb3.9						
TCF	**Toulx Ste Croi**	22.01	310	*e*P	P	16 43 19.4	+1.4
TCF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
BUG	**Bochum--Univer**	22.06	326	*e*P	P	16 43 20.0	+1.6
	comp=Z,426nm,3.8s						
RJF	**Les Rejaudoux**	22.08	307	*e*P	P	16 43 19.7	+1.0
	comp=Z,36nm,0.8s,mb4.5						
RJF	**Les Rejaudoux**	22.08	307	*e*P	P	16 43 19.7	+1.0
RJF				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
MEM	**Membach**	22.11	323	P	P	16 43 20.6	+1.6
	comp=Z,50nm,1.3s,mb4.7						
EPF	**Esparros**	22.21	301	*e*P	P	16 43 21.6	+1.6
	comp=Z,6.0nm,0.5s,mb3.9						
EPF	**Esparros**	22.21	301	*e*P	P	16 43 21.6	+1.6
EPF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
HGN	**Heimansgroeve**	22.25	324	*e*P	P	16 43 22.7	+2.5
	comp=Z,31nm,1.2s,mb4.5						
EBIE	**Bielsa**	22.27	300	P	P	16 43 21.9	+1.3
	comp=Z,12nm,0.6s,mb4.4						
EBIE	**Bielsa**	22.27	300	P	P	16 43 21.9	+1.3
	comp=Z,12nm,0.6s,mb4.4,SNR=18						
EMOS	**Mosqueruela**	22.33	293	P	P	16 43 24.6	+3.4
	comp=Z,7.0nm,1.5s,mb3.8,SNR=7.9						
GIVF	**Givet**	22.40	321	*e*P	P	16 43 22.4	+0.6
LFF	**La Frestale**	22.48	306	*e*P	P	16 43 24.3	+1.7
	comp=Z,48nm,0.7s,mb4.6						
LFF	**La Frestale**	22.48	306	*e*P	P	16 43 24.3	+1.7
LFF				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.6						
DOU	**Dourbes**	22.52	321	P	P	16 43 23.6	+0.7
	comp=Z,19nm,1.1s,mb4.3						
WTSB	**Winterswijk**	22.63	327	*e*P	P	16 43 31.2	+7.3
	comp=Z,39nm,1.7s,mb4.5						
BSEG	**Bad Segeberg**	22.66	334	*e*P	P	16 43 25.4	+1.1
BSEG				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.4						
BSEG	**Bad Segeberg**	22.66	334	*e*P	P	16 43 25.4	+1.1
	comp=Z,19nm,1.0s,mb4.4						
BAIF	**Baives**	22.70	320	*e*P	P	16 43 25.8	+1.2
	comp=Z,109nm,0.8s,mb5.0						
BAIF	**Baives**	22.70	320	*e*P	P	16 43 25.8	+1.2
BAIF				pmax	pmax		
	comp=Z,54nm,0.8s,mb4.9						
ETSF	**Etsaut**	22.82	300	*e*P	P	16 43 27.7	+1.8
	comp=Z,9.8nm,0.5s,mb4.1						
ETSF	**Etsaut**	22.82	300	*e*P	P	16 43 27.7	+1.8
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.1						
SNF	**Seneffe**	22.92	321	P	P	16 43 29.0	+2.2
	comp=Z,19nm,1.3s,mb4.3						
UCC	**Uccle**	23.05	322	P	P	16 43 31.4	+3.3
SJPF	**Ste Jean**	23.35	300	*e*P	P	16 43 32.8	+1.8
	comp=Z,28nm,0.7s,mb4.4						
SJPF	**Ste Jean**	23.35	300	*e*P	P	16 43 32.8	+1.8
SJPF				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
EALK	**Alkurruntz**	23.57	300	P	P	16 43 33.2	0.0
	comp=Z,6.9nm,0.5s,mb4.2						
EALK	**Alkurruntz**	23.57	300	P	P	16 43 33.2	+0.1
	comp=Z,6.9nm,0.5s,mb4.2,SNR=7.9						
MFF	**Saint Martin d**	23.63	309	*e*P	P	16 43 35.2	+1.6
	comp=Z,27nm,0.6s,mb4.4						
MFF	**Saint Martin d**	23.63	309	*e*P	P	16 43 35.2	+1.6
MFF				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.4						
EBER	**Berja**	24.12	284	P	P	16 43 43.5	+5.0
	comp=Z,16nm,0.6s,mb4.5						
EBER	**Berja**	24.12	284	P	P	16 43 43.5	+5.0
	comp=Z,16nm,0.6s,mb4.6,SNR=9.8						
EQES	**Quesada**	24.23	287	P	P	16 43 43.1	+3.5
	comp=Z,11nm,0.7s,mb4.3						
EQES	**Quesada**	24.23	287	P	P	16 43 43.1	+3.5
	comp=Z,11nm,0.7s,mb4.3,SNR=7.9						
LDF	**La Druitiere**	24.41	314	*e*P	P	16 43 42.6	+1.4
	comp=Z,23nm,0.6s,mb4.4						
LDF	**La Druitiere**	24.41	314	*e*P	P	16 43 42.6	+1.4
LDF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
FLN	**La Foliniere**	24.70	314	*e*P	P	16 43 45.6	+1.6
	comp=Z,44nm,0.6s,mb4.7						
FLN	**La Foliniere**	24.70	314	*e*P	P	16 43 45.6	+1.6
FLN				pmax	pmax		
	comp=Z,22nm,0.6s,mb4.8						
GRR	**Gorron**	24.77	313	*e*P	P	16 43 46.5	+1.8
	comp=Z,14nm,0.4s,mb4.4						
GRR	**Gorron**	24.77	313	*e*P	P	16 43 46.5	+1.8
GRR				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.4						
ESDC	**Sonseca Array**	24.95	291	P	P	16 43 49.1	+2.6
	comp=Z,7.8nm,0.3s,mb4.6						
ESDC	**Sonseca Array**	24.95	291	P	P	16 43 49.1	+2.5
	comp=Z,7.8nm,0.3s,mb4.5,SNR=27						
ESLA	**Sonseca Array**	24.95	291	*e*P	P	16 43 48.7	+2.1
	comp=Z,4.5nm,0.9s,mb3.9						
ESLA	**Sonseca Array**	24.95	291	*e*P	P	16 43 48.7	+2.1
	comp=Z,4.5nm,0.9s,mb3.9						
ELAN	**Lanestosa**	24.96	300	P	P	16 43 47.6	+1.0
	comp=Z,3.5nm,0.9s,mb3.8						
ELAN	**Lanestosa**	24.96	300	P	P	16 43 47.6	+1.0
	comp=Z,3.5nm,0.9s,mb3.8,SNR=7.9						
ELOJ	**Sierra Loja**	25.12	285	P	P	16 43 51.7	+3.6
ELOJ				pmax	pmax		
	comp=Z,4.0nm,0.2s,mb4.5						
ELOJ	**Sierra Loja**	25.12	285	P	P	16 43 51.7	+3.5
	comp=Z,3.6nm,0.2s,mb4.5						
ELOJ	**Sierra Loja**	25.12	285	P	P	16 43 51.7	+3.6
	comp=Z,3.6nm,0.2s,mb4.4,SNR=7.0						
ELUQ	**Luque**	25.19	286	P	P	16 43 52.4	+3.6
ELUQ				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.4						
ELUQ	**Luque**	25.19	286	P	P	16 43 52.4	+3.6
	comp=Z,5.4nm,0.3s,mb4.5						
ELUQ	**Luque**	25.19	286	P	P	16 43 52.4	+3.6
	comp=Z,5.4nm,0.3s,mb4.5,SNR=5.5						
EADA	**Adamuz**	25.41	288	P	P	16 43 54.6	+3.7
	comp=Z,12nm,1.2s,mb4.2						
EADA	**Adamuz**	25.41	288	P	P	16 43 54.6	+3.7
	comp=Z,12nm,1.2s,mb4.2,SNR=6.0						
PUL	**Pulkovo**	25.47	4⇑	*e*P	P	16 43 54.0	+2.8
EMIJ	**Mijas**	25.65	284	P	P	16 43 55.5	+2.4
	comp=Z,52nm,0.6s,mb5.1						
EMIJ	**Mijas**	25.65	284	P	P	16 43 55.5	+2.4
	comp=Z,52nm,0.6s,mb5.2,SNR=21						
SGMF	**Saint Gilles**	25.76	311	*e*P	P	16 43 55.7	+1.7
	comp=Z,17nm,0.6s,mb4.4						
SGMF	**Saint Gilles**	25.76	311	*e*P	P	16 43 55.7	+1.7
SGMF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
QUIF	**Quistinic**	26.02	310	*e*P	P	16 43 57.4	+1.0
	comp=Z,33nm,0.6s,mb4.6						
QUIF	**Quistinic**	26.02	310	*e*P	P	16 43 57.4	+1.0
QUIF				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.7						
ROSF	**Rostrenen**	26.24	311	*e*P	P	16 43 59.3	+0.9
	comp=Z,18nm,0.6s,mb4.4						
ROSF	**Rostrenen**	26.24	311	*e*P	P	16 43 59.3	+0.9
ROSF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
EARI	**Arriondas**	26.25	299	P	P	16 43 59.8	+1.2
	comp=Z,7.4nm,0.8s,mb4.2,SNR=7.9						
ESPR	**Espera**	26.50	285	P	P	16 44 05.8	+4.8
	comp=Z,15nm,0.6s,mb4.6						
ESPR	**Espera**	26.50	285	P	P	16 44 05.8	+4.9
	comp=Z,15nm,0.6s,mb4.6,SNR=11						
EMIN	**Mina Concepcio**	27.08	287	P	P	16 44 08.7	+2.3
	comp=Z,9.9nm,0.6s,mb4.5						
EMIN	**Mina Concepcio**	27.08	287	P	P	16 44 08.7	+2.4
	comp=Z,9.9nm,0.6s,mb4.5,SNR=9.9						
PBRG	**Braganca**	27.19	296	*e*P	P	16 44 08.7	+1.4
	comp=Z,22nm,1.4s,mb4.5						
ECAL	**Calabor**	27.20	296	P	P	16 44 09.7	+2.3
	comp=Z,9.6nm,0.6s,mb4.5						
ECAL	**Calabor**	27.20	296	P	P	16 44 09.7	+2.3
	comp=Z,9.6nm,0.6s,mb4.5,SNR=8.2						
EBAD	**Badajoz**	27.31	289	P	P	16 44 10.1	+1.7
	comp=Z,11nm,0.6s,mb4.6						
EBAD	**Badajoz**	27.31	289	P	P	16 44 10.1	+1.7
	comp=Z,11nm,0.6s,mb4.6,SNR=15						
EPON	**Pontenova**	27.65	299	P	P	16 44 11.9	+0.4
EPON	**Pontenova**	27.65	299	P	P	16 44 11.9	+0.4
	SNR=7.9						
PCBR	**Castelo Branco**	27.66	291	*e*P	P	16 44 13.8	+2.2
	comp=Z,12nm,1.9s,mb4.1						
KAF	**Kangasniemi**	27.71	360	*e*p	P	16 44 12.7	+0.9
	comp=Z,1.0nm,0.2s,mb4.0						
KAF	**Kangasniemi**	27.71	360	*e*P	P	16 44 12.7	+0.9
KAF				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.0						
MTE	**Manteigas**	27.72	293	*e*P	P	16 44 14.3	+2.2
MTE				*e*pP	pP	16 44 16.6	-14
PVRL	**Vila Real**	27.89	294	*e*P	P	16 44 12.1	-1.5
PVIS	**Viseu**	28.00	293	*e*P	P	16 44 16.5	+1.9
	comp=Z,20nm,1.4s,mb4.5						
PBEJ	**Beja**	28.01	287	*e*P	P	16 44 15.8	+1.0
	comp=Z,24nm,1.8s,mb4.4						
EVO	**Evora**	28.10	289	*e*P	P	16 44 18.0	+2.4
	comp=Z,9.9nm,0.6s,mb4.2						
NAO01	**NORSAR Array S**	28.34	344	*e*P	P	16 44 17.6	+0.1
	comp=Z,6.3nm,0.4s,mb4.5						
NAO01	**NORSAR Array S**	28.34	344	*e*P	P	16 44 17.6	+0.1
	comp=Z,6.2nm,0.4s,mb4.5						
NB2	**NORSAR Subarra**	28.44	344	P	P	16 44 17.5	-0.8
	comp=Z,2.5nm,0.5s,mb4.0,baz=148,slow=9.3						
NB2	**NORSAR Subarra**	28.44	344	P	P	16 44 17.5	-0.8
NB2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
JOF	**Joensuu**	28.66	4	*e*p	P	16 44 21.9	+1.6
	comp=Z,2.2nm,0.2s,mb4.4						
JOF	**Joensuu**	28.66	4	*e*P	P	16 44 21.9	+1.6
JOF				pmax	pmax		
	comp=Z,2.0nm,0.2s,mb4.4						
PTEO	**Sao Teotonio**	28.72	287	*e*P	P	16 44 23.1	+2.0
	comp=Z,61nm,1.6s,mb5.0						
PLOU	**Loures**	28.98	289	*e*P	P	16 44 25.0	+1.6
	comp=Z,100nm,1.7s,mb5.2						
ESK	**Eskdalemuir**	29.38	324	*e*P	P	16 44 27.1	+0.3
ESK				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.1						
ESK	**Eskdalemuir**	29.38	324	*e*P	P	16 44 27.1	+0.3
	comp=Z,68nm,1.3s,mb5.1						
ESK	**Eskdalemuir**	29.38	324	*e*P	P	16 44 27.1	+0.3
	comp=Z,68nm,1.3s,mb5.1						
SOKR	**Solikamsk**	31.96	29	*i* P	P	16 44 51.9	+2.5
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
SOKR	**Solikamsk**	31.96	29	*i* P	P	16 44 51.9	+2.5
	comp=Z,20nm,1.0s,mb4.8						
SVE	**Sverdlovsk**	32.11	35	*e*P	P	16 45 05.0	+14
SVE				*e*		16 46 08.0	
SVE				pmax	pmax		
	comp=Z,50nm,2.5s,mb4.8						
APA	**Apatity**	33.41	5⇑	*i*P	P	16 45 03.4	+1.4
APA				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.0						
APA	**Apatity**	33.41	5	*i* P	P	16 45 03.4	+1.4
	comp=Z,26nm,1.0s,mb5.0						
KEV	**Kevo**	35.39	0	*e*p	P	16 45 20.3	+1.5
	comp=Z,2.4nm,0.4s,mb4.4						
KEV	**Kevo**	35.39	0	*e*P	P	16 45 20.3	+1.5
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
BVA0	**Borovoye Array**	35.95	45	*i* P	P	16 45 28.0	+4.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BVA0	**Borovoye Array**	35.95	45	*i* P	P	16 45 28.0	+4.2
	comp=Z,1.0nm,0.8s,mb3.8						
CHKZ	**Chkalovo**	36.24	44	P	P	16 45 30.5	+4.3
CHKZ				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
CHKZ	**Chkalovo**	36.24	44	P	P	16 45 30.5	+4.3
	comp=Z,21nm,1.1s,mb5.0						
AAK	**Ala-Archa**	37.86	63*d*	*i*P	P	16 45 44.9	+5.1
AAK				pmax	pmax		
	comp=Z,6µm,1.1s						
AAK				MLR	MLR		
	comp=Z,1µm,22.0s						
AAK	**Ala-Archa**	37.86	63	*e*P	P	16 45 44.0	+4.2
	comp=Z,13nm,1.0s,mb4.7						
FRU	**Bishkek**	37.94	63	*e*P	P	16 45 47.0	+6.5
FRU				*e*		16 45 59.0	
KSH	**Kashi**	39.31	68	*e*P	P	16 45 59.0	+7.1
KSH				*e*AP	pP	16 46 04.2	-7.1
KSH				*e*PCP	PcP	16 48 06.4	+6.6
KSH				*e*PCS		16 51 55.0	
KSH				*e*S	S	16 52 01.2	+15
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
KSH				LR	LR		
	comp=N,680nm,8.6s						
KSH				LR	LR		
	comp=E,640nm,7.2s						
DBIC	**Dimbokro**	40.12	234	*e*P	P	16 46 01.9	+3.0
DBIC				pmax	pmax		
	comp=Z,28nm,0.6s						
DBIC	**Dimbokro**	40.12	234	*e*P	P	16 46 01.9	+3.0
	comp=Z,28nm,0.6s,mb5.3						
KURK	**Kurchatov**	40.67	50	P	P	16 46 07.8	+4.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
KURK	**Kurchatov**	40.67	50	*e*P	P	16 46 07.6	+4.5
	comp=Z,9.7nm,0.6s,mb4.8						
MKAR	**Makanchi Array**	43.13	56	*i* P	P	16 46 28.4	+5.2
NVS	**Novosibirsk**	43.73	44⇑	*i*P	P	16 46 32.4	+4.5
NVS				*i*		16 48 13.5	
NVS				*i* S	S	16 52 59.9	+8.3
NVS				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
NVS				pmax	pmax		
	comp=N,10.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
NVS				smax			
	comp=N,19nm,1.8s						
NVS				smax			
	comp=E,30nm,1.7s						
WMQ	**Urumqi**	47.29	60	*e*P	P	16 47 01.0	+4.6
WMQ				PP	PP	16 48 52.0	+4.2
WMQ				S	S	16 53 53.0	+10
WMQ				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,678nm,18.0s						
WMQ				LR	LR		
	comp=E,688nm,17.0s						
WMQ				LR	LR		
	comp=Z,668nm,16.0s						
KOLN	**Koldanda**	48.64	82	*e*P	P	16 47 12.4	+5.3
	comp=Z,36nm,0.9s,mb5.3						
HYB	**Hyderabad**	49.09	97	*e*P	P	16 47 17.0	+6.3
HYB	**Hyderabad**	49.09	97	*i* P	P	16 47 17.0	+6.3
GKN	**Gorkha**	49.40	81	*e*P	P	16 47 18.7	+5.7
	comp=Z,48nm,0.8s,mb5.5						
DMN	**Daman**	49.94	81	*e*P	P	16 47 22.7	+5.6
	comp=Z,57nm,0.8s,mb5.6						
KKN	**Kakani**	50.01	81	*e*P	P	16 47 23.2	+5.6
	comp=Z,45nm,0.8s,mb5.5						
SUMG	**Summit**	50.12	339	*e*P	P	16 47 19.6	+1.7
	comp=Z,20nm,0.8s,mb5.1						
PKI	**Pulchoki**	50.20	81	*e*P	P	16 47 25.1	+6.0
	comp=Z,57nm,0.9s,mb5.5						
JIRN	**Jiri**	50.80	80	*e*P	P	16 47 29.4	+5.7
	comp=Z,46nm,0.8s,mb5.6						
TSUM	**Tsumeb**	54.03	191	*e*P	P	16 47 52.6	+4.9
	comp=Z,27nm,1.1s,mb5.2						
MOY	**Mondy**	54.58	47	*e*P	P	16 47 57.9	+6.5
MOY				pmax	pmax		
	comp=Z,17nm,2.0s,mb4.7						
MOY	**Mondy**	54.58	47	*e*P	P	16 47 57.9	+6.5
	comp=Z,17nm,2.0s,mb4.7						
TLY	**Talaya**	56.18	47	*e*P	P	16 48 09.0	+6.0
TLY				*e*		16 49 06.0	
TLY				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
TLY	**Talaya**	56.18	47	*e*P	P	16 48 08.9	+6.0
	comp=Z,7.2nm,1.0s,mb4.7						
TLY	**Talaya**	56.18	47	*e*P	P	16 48 08.9	+5.9
	comp=Z,7.2nm,1.0s,mb4.7						
ZAK	**Zakamensk**	56.29	48	*e*	P	16 48 09.3	+5.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
IRK	**Irkutsk**	56.42	46	*e*P	P	16 48 08.7	+4.1
IRK				*e*		16 49 01.2	
IRK				pmax	pmax		
	comp=Z,33nm,1.9s,mb5.0						
IRK	**Irkutsk**	56.42	46	*e*P	P	16 48 08.7	+4.1
	comp=Z,33nm,1.9s,mb5.0						
GTA	**Gaotai**	57.20	62	*e*P	P	16 48 16.1	+5.8
GTA				AP	pP	16 48 21.9	-8.8
GTA				PCP	PcP	16 49 05.2	+1.4
GTA				PP	PP	16 50 27.8	+8.2
GTA				PPP	PPP	16 51 50.7	+10
GTA				SCP		16 53 06.8	
GTA				PCS		16 53 11.2	
GTA				S	S	16 56 16.9	+19
GTA				XS		16 56 30.9	
GTA				SCS	ScS	16 57 59.7	+11
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.8						
GTA				LR	LR		
	comp=N,255nm,18.2s						
GTA				LR	LR		
	comp=E,439nm,19.4s						
GTA				LR	LR		
	comp=Z,6µm,26.2s						
BOD	**Bodaibo**	60.26	38	*e*P	P	16 48 32.4	+1.1
BOD				pmax	pmax		
	comp=Z,16nm,2.7s,mb4.6						
LZH	**Lanzhou**	61.39	64	*e*P	P	16 48 42.5	+3.3
LZH				PP	PP	16 50 59.5	+2.1
LZH				*e*S	S	16 57 00.5	+8.5
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,103nm,4.5s						
LZH				LR	LR		
	comp=E,1µm,15.0s						
LZH				LR	LR		
	comp=Z,2µm,18.0s						
LZH	**Lanzhou**	61.39	64	*e*P	P	16 48 42.5	+3.3
LZH				*PP	pP	16 48 49.5	-10
LZH				*SP	sP	16 48 52.5	-16
LZH						16 50 59.5	
LZH				*e*S	S	16 57 00.5	+8.5
LZH				*e*SS	SS	17 01 02.5	+7.1
LZH				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.1						
LZH	**Lanzhou**	61.39	64	*e*P	P	16 48 42.5	+3.3
	comp=Z,30nm,1.5s,mb5.1						
LZH				pP	pP	16 48 49.5	-10
LZH				sP	sP	16 48 52.5	-16
LZH				PP	PP	16 50 59.5	+2.1
LZH				*e*S	S	16 57 00.5	+8.5
LZH				sS		16 57 08.5	
LZH				*e*SS	SS	17 01 02.5	+7.1
CD2	**Chengdu**	63.47	69	P	P	16 48 59.0	+5.8
HHC	**Hu-ho-hao-te**	65.00	56	*e*P	P	16 49 09.2	+6.3
HHC				AP	pP	16 49 15.9	-7.8
HHC				XP	sP	16 49 18.3	-14
HHC				AMB	AMB		
	comp=Z,23nm,1.1s,mb4.9						
HHC				AMB	AMB		
	comp=Z,477nm,11.8s						
KMI	**Kunming**	65.28	76	P	P	16 49 10.2	+5.2
KMI				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.2						
KMI				LR	LR		
	comp=Z,470nm,32.0s						
KMI	**Kunming**	65.28	76	P	P	16 49 10.2	+5.2
	comp=Z,4.0nm,1.0s,mb4.2						
KMI				pP	pP	16 49 13.6	-12
CM31	**Chiang Mai Arr**	65.40	84	P	P	16 49 10.5	+4.6
	comp=Z,4.8nm,0.8s,mb4.4						
CMAR	**Chiang Mai Arr**	65.40	84	*i* P	P	16 49 10.7	+4.8
CMAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CLNS	**Chul'man**	66.09	37	*e*P	P	16 49 15.5	+5.9
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
CLNS				pmax	pmax		
	comp=N,4.0nm,0.7s						
GYA	**Guiyang**	67.77	72⇑	*i*P	P	16 49 26.3	+5.7
GYA				S	S	16 58 23.4	+13
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,80nm,3.0s						
BJI	**Beijing**	68.51	56	*e*P	P	16 49 31.4	+6.3
BJI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.6						
BJI	**Beijing**	68.51	56	*e*P	P	16 49 31.4	+6.3
	comp=Z,8.0nm,0.8s,mb4.6						
CN2	**Changchun**	72.72	49	*e*P	P	16 49 55.7	+5.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
MDJ	**Mudanjiang**	74.81	46	P	P	16 50 07.4	+5.0
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,44nm,3.9s						
SSE	**Sheshan**	76.49	62	*e*P	P	16 50 15.7	+3.4
SSE				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.3						
SSE				AMB	AMB		
	comp=Z,118nm,7.2s						
SSE	**Sheshan**	76.49	62	*e*P	P	16 50 15.7	+3.4
	comp=Z,10.0nm,1.4s,mb4.3						
YKA	**Yellowknife Ar**	78.53	343	*i* P	P	16 50 26.4	+3.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
IMA	**Indian Mountai**	79.83	0	*e*P	P	16 50 35.7	+5.8
IMA				pmax	pmax		
	comp=Z,189nm,1.8s,mb5.6						
IMA	**Indian Mountai**	79.83	0	*e*P	P	16 50 35.6	+5.8
	comp=Z,189nm,1.8s,mb5.6						
FFC	**Flin Flon**	80.87	333	*e*P	P	16 50 39.3	+3.7
FFC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
FFC	**Flin Flon**	80.87	333	*e*P	P	16 50 39.3	+3.7
	comp=Z,6.4nm,0.7s,mb4.6						
EDM	**Edmonton**	86.07	337	*e*P	P	16 51 06.8	+5.0
LRAL	**Lakeview Retre**	88.49	310	P	P	16 51 19.2	+5.2
	comp=Z,5.1nm,0.7s,mb4.7						
LAO	**LASA Array**	88.82	330	*e*P	P	16 51 21.3	+6.0
SDV	**Santo Domingo**	91.02	281	*e*P	P	16 51 31.6	+5.3
	comp=Z,8.7nm,1.1s,mb4.8						
PHWY	**Pilot Hill**	92.75	326	P	P	16 51 39.2	+5.5

NEIC 08 16:45:59.3±6.2,11.93N×143.85E,h34km±45km,mb4.4/6, Error ellipse: s-maj=30.7km s-min=18.4km az=105.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	**Guam**	1.92	31	*e*Pn	P	16 46 29.6	-0.6
WRAB	**Tennant Creek**	33.02	197	*e*P	P	16 52 31.5	-2.3
	4.3nm,0.8s						
ULN	**Ulaanbaatar**	47.19	327	*e*P	P	16 54 29.4	-1.2
	1.4nm,0.8s						
KURK	**Kurchatov**	65.21	321	*e*P	P	16 56 37.1	-2.4
	5.1nm,0.8s						
CHKZ	**Chkalovo**	70.55	323	*e*P	P	16 57 10.7	-2.0
	1.3nm,0.6s						
INK	**Inuvik**	76.27	22	*e*P	P	16 57 43.1	-2.8
	10nm,1.2s						
BMO	**Blue Mountains**	87.86	45	*e*P	P	16 58 46.6	0.0
	1.0nm,0.5s						

OTT 08 16:58:10.7±0.4,52.83N×67.28W,MN2.5/5,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	2.02	7	PN	Pn	16 58 45.7	-0.8
SCHQ				SG	Sg	16 59 12.8	-5.4
SCHQ				Trac		16 59 15.6	
	comp=Z,10nm,0.1s						
MNQ	**Manicouagan**	2.48	203	PN	Pn	16 58 51.3	-1.7
MNQ				SN	Sn	16 59 22.0	-2.4
MNQ				Trac		16 59 26.6	
	comp=Z,8.8nm,0.2s						
SMQ	**Clarke City**	2.63	172	PN	Pn	16 58 54.3	-0.9
SMQ				SN	Sn	16 59 28.2	-0.1
SMQ				Trac		16 59 38.3	
	comp=Z,4.6nm,0.2s						
ICQ	**Pointe Anglais**	3.31	180	PN	Pn	16 59 01.3	-3.5
GSQ	**Grosses Roches**	3.92	178	PN	Pn	16 59 10.6	-3.0
GSQ				Trac		17 00 13.9	
	comp=Z,4.1nm,0.2s						
LG4Q	**La Grande 4**	4.18	284	PN	Pn	16 59 14.4	-2.7
LG4Q				PG	Pg	16 59 23.3	-11
LG4Q				SN	Sn	17 00 04.5	-2.8
LG4Q				SG	Sg	17 00 18.0	-12
LG4Q				Trac		17 00 20.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.4nm,0.2s						
LMQ	**La Malbaie**	**5.64**	**202**	PN	Pn	16 59 33.6	-4.1
VIMO	**Victor Mine**	**9.97**	**276**	PN	P	17 00 31.5	-6.6

ISC 08 17:20:04.0±3.4, 19.0S±0.3×169.6E±0.5, h33^{km}, n6, σ0^{s}57/8, mb4.5/2, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.26**	**223**	*e*P	**P**	**17 21 07.6**	**-0.7**
DZM				*e*S	**S**	**17 21 57.8**	**+0.2**
NOUC	**Port Laguerre**	**4.38**	**224**	⇑*e*P	**P**	**17 21 09.9**	**0.0**
NOUC				*e*S	**S**	**17 22 00.5**	**0.0**
STKA	**Stephens Creek**	**28.26**	**237**	⇑*i*P	**P**	**17 25 57.3**	**+0.9**
	3.6nm,0.7s,mb4.1						
WB2	**Warramunga Arr**	**33.19**	**262**	*e*P	**P**	**17 26 39.2**	**-0.8**
ASPA	**Alice Springs**	**33.50**	**256**	*e*P	**P**	**17 26 42.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.58**	**264**	*e*P	**P**	**17 27 51.4**	**+0.7**
	19nm,0.6s,mb4.9						

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*NEIC **08** 17:37:28.5±0.9, 4.77S×153.47E, mb4.4/10, Error ellipse: s-maj=23.7km s-min=11.9km az=107.0*

ISC 08 17:37:25.1±5.1, 4.7S±0.1×153.6E±0.2, h61^{km}±39^{km}, n13, σ0^{s}71/14, mb4.5/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.85**	**233**	*e*Pn	**P**	**17 39 18.9**	**-0.1**
PMG				*e*S	**S**	**17 40 47.6**	**+0.3**
KAKA	**Kakadu**	**22.30**	**248**	*e*P	**P**	**17 42 19.7**	**+1.0**
	16nm,0.4s,mb4.8						
WRAB	**Tennant Creek**	**24.03**	**229**	*e*P	**P**	**17 42 34.4**	**-1.2**
	7.2nm,0.5s,mb4.4						
WB2	**Warramunga Arr**	**24.04**	**229**	*e*P	**P**	**17 42 36.4**	**+0.8**
ASPA	**Alice Springs**	**26.70**	**223**	*e*P	**P**	**17 43 00.2**	**-0.5**
STKA	**Stephens Creek**	**29.23**	**201**	*e*P	**P**	**17 43 23.3**	**-0.2**
	1.8nm,0.8s,mb3.9						
FITZ	**Fitzroy Crossi**	**30.34**	**242**	*e*P	**P**	**17 43 32.2**	**-1.3**
	3.7nm,0.4s,mb4.5						
ENH	**Enshi**	**54.66**	**312**	P	**P**	**17 46 50.8**	**+0.4**
	7.1nm,1.1s,mb4.6						
LSA	**Lhasa**	**68.82**	**304**	*e*P	**P**	**17 48 25.4**	**0.0**
	2.1nm,0.7s,mb4.2						
KURK	**Kurchatov**	**84.18**	**322**	*e*P	**P**	**17 49 50.9**	**-0.2**
	2.9nm,0.9s,mb4.4						
KURK				*e*	pP	17 50 12.2	+3.9
AAK	**Ala-Archa**	**85.17**	**313**	*e*P	**P**	**17 49 56.7**	**+0.5**
	2.1nm,0.7s,mb4.4						
QSPA	**South Pole Qui**	**85.22**	**180**	*e*P	**P**	**17 49 56.6**	**+1.0**
	9.1nm,0.5s,mb5.2						
CHKZ	**Chkalovo**	**89.60**	**324**	*e*P	**P**	**17 50 16.5**	**-0.7**
	2.6nm,1.0s,mb4.5						
CHKZ				*e*	pP	17 50 37.2	+2.5

IGQ 08 17:40:17.0, 1.46S×81.55W, h11^{km}±8^{km}, mb4.0, 1D, Error ellipse: s-maj=7.6km s-min=3.2km az=25.1, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.91**	**143**	P	Pb	17 40 33.6	-0.7
HOJA	**Cerro de Hojas**	**1.08**	**68**	⇓P	Pb	17 40 37.1	-0.1
HOJA				S	Sb	17 40 51.0	0.0
JAMA	**Jama**	**1.79**	**48**	P	Pn	17 40 49.7	+1.6
JAMA				S	Sn	17 41 12.5	+1.5
ARRY	**Arrayan**	**3.09**	**91**	P	Pn	17 41 07.3	+0.6
NAS1	**Nasa**	**3.18**	**75**	P	Pn	17 41 11.1	+3.2
JUA2	**San Juan 2**	**3.19**	**67**	P	Pn	17 41 09.6	+1.5
TERV	**Terraza Guagua**	**3.21**	**67**	P	Pn	17 41 13.6	+5.2
PINO	**Pino**	**3.21**	**66**	P	Pn	17 41 09.5	+1.1
VC1	**Cotopaxi 1**	**3.25**	**76**	P	Pn	17 41 10.9	+2.0
YANA	**Yana**	**3.26**	**66**	P	Pn	17 41 09.6	+0.6
TAMB	**Tambo**	**3.27**	**77**	P	Pn	17 41 12.2	+3.0
ANTI	**Antisana**	**3.53**	**74**	P	Pn	17 41 16.2	+3.3
CAYR	**Refugio Cayamb**	**3.83**	**68**	P	Pn	17 41 21.2	+4.0

IGQ 08 17:44:23.5, 1.50S×81.44W, h6^{km}±4^{km}, mb4.0, 2C, Error ellipse: s-maj=6.0km s-min=2.4km az=10.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.82**	**147**	⇑P	Pb	17 44 38.7	-1.1
SALI				S	Sb	17 44 49.3	-1.5
HOJA	**Cerro de Hojas**	**1.00**	**64**	⇑P	Pb	17 44 42.1	-0.7
HOJA				S	Sb	17 44 56.5	+0.5
JAMA	**Jama**	**1.74**	**45**	P	Pn	17 44 54.6	0.0
JAMA				S	Sn	17 45 17.4	+0.2
ARRY	**Arrayan**	**2.98**	**90**	P	Pn	17 45 12.7	+0.4
ARRY				S	Sn	17 45 48.8	-0.1
NAS1	**Nasa**	**3.08**	**74**	P	Pn	17 45 16.7	+3.0
TERV	**Terraza Guagua**	**3.12**	**65**	P	Pn	17 45 16.6	+2.3
PINO	**Pino**	**3.13**	**65**	P	Pn	17 45 16.2	+1.9
VC1	**Cotopaxi 1**	**3.15**	**74**	P	Pn	17 45 17.1	+2.3
TAMB	**Tambo**	**3.17**	**76**	P	Pn	17 45 17.1	+2.1
YANA	**Yana**	**3.18**	**65**	P	Pn	17 45 17.2	+2.2

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*NIED **08** 17:59:00, 33.90N×142.50E, h5^{km}, Mw4.5 Best double couple: M$_0$5.83×10^{15} NP1:φ$_s$120°, δ75°, λ-95°. NP2: φ$_s$320°, δ16°, λ-70°.*

*MOS **08** 17:59:28.1±1.3, 34.00N×142.92E, h33^{km}, mb4.4/4, Error ellipse: s-maj=37.0km s-min=14.4km az=124.3*

*JMA **08** 17:59:29.2±0.4, 33.89N×142.50E, h26^{km}, M4.0*

*BJI **08** 17:59:30.9, 33.99N×142.29E, h17^{km}, mB4.4, mb4.2*

*NEIC **08** 17:59:32.8±2.9, 33.73N×142.30E, h36^{km}±22^{km}, mb4.3/6, Error ellipse: s-maj=29.6km s-min=23.7km az=69.0*

ISC 08 17:59:29.2±1.1, 33.94N±0.06×142.60E±0.07, h36^{km}±10^{km}, n33, σ1^{s}25/45, mb4.2/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.52**	**298**	P	**P**	**17 59 54.7**	**+0.4**
BSO1				S	**S**	**18 00 13.2**	**+0.2**
BSO3	**Boso 3**	**1.93**	**297**	P	**P**	**18 00 01.0**	**+0.9**
BSO3				S	**S**	**18 00 24.4**	**+1.0**
BSO4	**Boso 4**	**2.14**	**300**	P	**P**	**18 00 04.7**	**+1.5**
BSO4				S	**S**	**18 00 30.3**	**+1.6**
KTR	**Katsuura**	**2.24**	**303**	P	**P**	**18 00 04.3**	**-0.2**
KTR				S	**S**	**18 00 32.3**	**+1.1**
CHOJ	**Chosi**	**2.27**	**321**	P	**P**	**18 00 06.4**	**+1.4**
JHJ2	**Mitsune**	**2.47**	**251**	P	**P**	**18 00 08.2**	**+0.3**
JHJ2				S	**S**	**18 00 35.7**	**-1.4**
JIM2	**Oshima 3**	**2.73**	**287**	P	**P**	**18 00 11.2**	**-0.4**
JIM2				S	**S**	**18 00 40.8**	**-3.0**
JOD2	**Odawara 2**	**3.18**	**295**	P	**P**	**18 00 17.6**	**-0.4**
JOD2				S	**S**	**18 00 53.9**	**-1.3**
JAG	**Ashikaga**	**3.57**	**315**	P	**P**	**18 00 24.1**	**+0.5**
JRY	**Ryogami san**	**3.67**	**305**	P	**P**	**18 00 25.4**	**+0.4**
JRY				S	**S**	**18 01 07.1**	**-0.6**
JYN	**Shimob**	**3.68**	**296**	P	**P**	**18 00 25.2**	**+0.1**
JYN				S	**S**	**18 01 06.8**	**-1.1**
JMM	**Marumori**	**4.18**	**340**	P	**P**	**18 00 30.8**	**-1.4**
JMM				S	**S**	**18 01 14.8**	**-5.7**
MAJO	**Matsushiro**	**4.43**	**307**	*e*P	**P**	**18 00 37.2**	**+1.4**
MAT	**Matsushiro**	**4.43**	**307**	*e*P	**P**	**18 00 36.0**	**+0.2**
MAT				*e*S	**S**	**18 01 23.0**	**-3.9**
MAT	**Matsushiro**	**4.43**	**307**	P	**P**	**18 00 36.3**	**+0.5**
MAT				S	**S**	**18 01 23.2**	**-3.7**
JMK	**Ichinoseki**	**5.12**	**348**	P	**P**	**18 00 43.8**	**-1.7**
JYK	**Kaneyama**	**5.28**	**341**	P	**P**	**18 00 47.3**	**-0.4**
YSS	**Yuzh-Sakhalins**	**13.00**	**0**	*e*P	**P**	**18 02 32.0**	**-1.9**
HIA	**Hailar**	**22.82**	**319**	P	**P**	**18 04 27.6**	**-2.1**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HIA	**Hailar**	**22.82**	**319**	P	**P**	**18 04 27.6**	**-2.1**
	comp=Z,2.6nm,0.6s,mb3.8						
ENH	**Enshi**	**28.22**	**272**	*e*P	**P**	**18 05 19.9**	**-0.8**
	comp=Z,6.2nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**29.96**	**308**	*e*P	**P**	**18 05 38.6**	**+2.5**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**29.96**	**308**	*e*P	**P**	**18 05 38.6**	**+2.6**
	comp=Z,3.0nm,0.7s,mb4.1						
BOD	**Bodaibo**	**30.67**	**330**	*e*P	**P**	**18 05 41.1**	**-1.1**
ZAK	**Zakamensk**	**33.00**	**312**	*e*P	**P**	**18 06 04.8**	**+2.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5						
WMQ	**Urumqi**	**43.16**	**300**	*e*P	**P**	**18 07 31.2**	**+3.3**
KURK	**Kurchatov**	**48.63**	**310**	*e*P	**P**	**18 08 11.3**	**+0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	**48.63**	**310**	*e*P	**P**	**18 08 11.3**	**+0.1**
	comp=Z,3.5nm,0.6s,mb4.6						
CHKZ	**Chkalovo**	**53.15**	**315**	*e*P	**P**	**18 08 46.4**	**+1.0**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**53.15**	**315**	*e*P	**P**	**18 08 46.4**	**+1.1**
	comp=Z,1.9nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	**54.15**	**190**	*e*P	**P**	**18 08 52.7**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**54.15**	**190**	*e*P	**P**	**18 08 52.6**	**-0.5**
	comp=Z,9.9nm,0.8s,mb4.8						
PV10	**Paradox Valley**	**82.08**	**49**	*e*P	**P**	**18 11 51.7**	**+4.5**

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*BJI **08** 18:04:22.4, 2.20S×63.60W, h20^{km}, mB4.6, Msz4.5*

*NEIC **08** 18:04:22.4±0.8, 2.22S×63.62W, mb4.4/10, Error ellipse: s-maj=22.6km s-min=14.0km az=70.0*

ISC 08 18:04:20.4±0.8, 2.2S±0.1×63.6W±0.1, h18^{km}, h18^{km}±1.0^{km}:pP-P, n17, σ1^{s}17/13, mb4.4/8, 1C, Western Brazil

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**13.07**	**328**	*e*P	**P**	**18 07 26.5**	**-1.6**
OTAV	**Otavalo**	**15.06**	**279**	P	**P**	**18 07 52.7**	**-1.6**
	3.6nm,0.8s						
LVC	**Limon Verde**	**20.93**	**194**	*e*P	**P**	**18 09 05.9**	**+1.1**
	4.5nm,0.6s						
PLCA	**Paso Flores**	**38.86**	**188**	*e*P	**P**	**18 11 45.5**	**-1.0**
	3.2nm,0.6s,mb4.2						
WVT	**Waverly**	**44.34**	**332**	P	**P**	**18 12 32.2**	**+0.6**
	6.8nm,0.6s,mb4.5						
WVT				*e*	pP	18 12 37.6	+0.7
WMOK	**Wichita Mounta**	**49.40**	**321**	P	**P**	**18 13 11.8**	**+0.5**
	2.3nm,0.6s,mb4.4						
ISCO	**Idaho Springs**	**56.81**	**322**	P	**P**	**18 14 05.2**	**-1.1**
	2.5nm,0.9s,mb4.2						
DBIC	**Dimbokro**	**59.28**	**81**	P	**P**	**18 14 22.4**	**-1.5**
	1.8nm,0.5s,mb4.4						
HWUT	**Hardware Ranch**	**61.56**	**321**	*e*P	**P**	**18 14 40.0**	**+1.0**
	3.6nm,0.8s,mb4.5						
HWUT				*e*	pP	18 14 44.8	+0.1
IMW	**Indian Meadow**	**62.42**	**323**	*e*P	**P**	**18 14 45.7**	**+0.9**
IMW				*e*	pP	18 14 52.1	+1.6
MCMT	**McKenzie Canyo**	**64.08**	**323**	*e*P	**P**	**18 14 57.3**	**+1.6**
HLID	**Hailey**	**64.37**	**321**	*e*P	**P**	**18 14 59.2**	**+1.5**
	3.1nm,1.0s,mb4.3						
HLID				*e*	pP	18 15 05.0	+1.7
INK	**Inuvik**	**84.73**	**339**	*e*P	**P**	**18 16 53.8**	**-0.6**
	2.2nm,0.6s,mb4.5						
WMQ	**Urumqi**	**131.36**	**28**	*e*PKP	PKPdf	18 23 36.7	+0.5
ASPA	**Alice Springs**	**149.16**	**213**	*e*P	PKPdf	18 24 10.2	+1.9
WB2	**Warramunga Arr**	**151.81**	**218**	⇑*i*P	PKPdf	18 24 17.0	+4.5
WRAB	**Tennant Creek**	**151.82**	**218**	*e*PKPbc	PKPdf	18 24 17.0	+4.5

WEL 08 18:27:54.0±0.3, 37.73S×176.80E, h161^{km}±3^{km}, ML3.8/12, Error ellipse: s-maj=3.0km s-min=2.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	**Matawai**	**0.83**	**137**	PN	P	18 28 18.6	-0.1
MWZ				SN	S	18 28 37.9	+0.1
PUZ	**Puketiti**	**1.20**	**107**	*e*PN	P	18 28 21.5	-0.3
PUZ				SN	S	18 28 41.2	-2.0
MXZ	**Matakaoa Point**	**1.20**	**82**	PN	P	18 28 21.5	-0.3
BKZ	**Black Stump Fm**	**1.45**	**190**	PN	P	18 28 24.2	-0.1
BKZ				SN	S	18 28 46.2	-1.4
KNZ	**Kokohu**	**1.46**	**152**	PN	P	18 28 24.1	-0.2
KNZ				SN	S	18 28 46.4	-1.3
MGZ	**Maungaku**	**1.61**	**218**	PN	P	18 28 25.9	0.0
OTVZ	**Oturere**	**1.69**	**212**	PN	P	18 28 26.4	-0.2
TWVZ	**Taurewa**	**1.72**	**218**	PN	P	18 28 26.7	-0.2
NGZ	**Ngauruhoe**	**1.73**	**213**	*e*PN	P	18 28 27.5	+0.4
NGZ				PN	P	18 28 27.6	+0.5
NGZ				PN	P	18 28 27.7	+0.6
CNZ	**Chateau**	**1.77**	**214**	PN	P	18 28 27.4	-0.1
TUVZ	**Tukino**	**1.78**	**210**	PN	P	18 28 27.2	-0.5
MOVZ	**Moawhango**	**1.87**	**206**	PN	P	18 28 27.4	-1.1
PWZ	**Pawanui**	**2.29**	**179**	PN	P	18 28 33.4	-0.3
PWZ				SN	S	18 29 02.0	-2.2
PWZ				SN	S	18 29 02.2	-1.9
TSZ	**Takapari Road**	**2.42**	**196**	PN	P	18 28 34.0	-1.1
TSZ				SN	S	18 29 04.2	-2.6
TSZ				SN	S	18 29 04.4	-2.4
BFZ	**Birch Farm**	**2.98**	**188**	PN	P	18 28 40.3	-1.8
MRZ	**Mangatainoka R**	**3.08**	**198**	PN	P	18 28 40.6	-2.8
MRZ				SN	S	18 29 17.2	-4.1
KIW	**Kapiti Island**	**3.46**	**205**	*e*PN	P	18 28 44.9	-3.3
KIW				SN	S	18 29 25.3	-4.7
MTW	**Mount Morrison**	**3.57**	**196**	PN	P	18 28 46.4	-3.3
CAW	**Cannon Point**	**3.63**	**201**	PN	P	18 28 47.3	-3.2
CAW				SN	S	18 29 29.0	-5.0
PAWZ	**Paruwai Farm**	**3.80**	**196**	PN	P	18 28 49.8	-3.0
PAWZ				SN	S	18 29 32.7	-5.2
MRW	**Makara Radio**	**3.85**	**204**	*e*PN	P	18 28 50.5	-3.0
MSWZ	**Moikau Station**	**3.87**	**198**	PN	P	18 28 50.3	-3.4
MSWZ				SN	S	18 29 33.5	-6.0
BHW	**Baring Head**	**3.96**	**202**	PN	P	18 28 51.1	-3.7
NNZ	**Nelson**	**4.38**	**216**	*e*PN	P	18 29 00.6	+0.3
NNZ				SN	S	18 29 46.6	-4.7
QRZ	**Quartz Range**	**4.53**	**226**	*e*PN	P	18 29 02.5	+0.2
THZ	**Tophouse**	**5.03**	**216**	*e*PN	P	18 29 05.2	-3.5
KHZ	**Kahutara**	**5.31**	**207**	PN	P	18 29 08.1	-4.3
LTZ	**Lake Taylor**	**6.12**	**213**	*e*PN	P	18 29 18.8	-4.5
MQZ	**McQueen's Vall**	**6.75**	**207**	*e*PN	P	18 29 25.3	-6.3

MAN 08 18:34:27.9, 16.88N×122.57E, h9^{km}, mb4.1, ML3.0, MS2.6, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.23**	**321**	*e*P	Pg	18 34 33.5	+0.8
CAUP	**Cauayan**	**0.72**	**275**	*e*P	Pb	18 34 41.8	-0.4
CVP	**Callao Caves**	**1.09**	**319**	⇓*e*P	Pb	18 34 48.0	-0.4
CVP				*e*S	Sb	18 35 03.0	+0.5
BALP	**Baler**	**1.49**	**220**	*e*P	Pn	18 34 54.3	-0.6
ABRA	**Dolores**	**1.94**	**293**	*e*P	Pn	18 35 00.8	-0.5
ABRA				*e*S	Sn	18 35 26.0	0.0
PCPH	**Palayan**	**1.94**	**227**	⇓*e*P	Pn	18 35 00.9	-0.4
PCPH				*i* S	Sn	18 35 26.0	0.0
POLP	**Polilio Island**	**2.23**	**196**	*e*P	Pn	18 35 04.5	-1.1
BOLP	**Bolinao**	**2.60**	**259**	*e*P	Pn	18 35 12.7	+1.9
SCZP	**Santa Cruz**	**2.78**	**247**	*e*P	Pn	18 35 14.5	+1.0

OTT 08 18:39:28.7±0.5, 47.52N×92.67W, MN2.7/9, Blast, Minnesota, U.S. Mining explosion., Minnesota

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EYMN	**Ely**	**0.90**	**61**	PG	Pg	18 39 44.5	-2.1
EYMN				SG	Sg	18 39 56.0	-2.6
EYMN				Trac		18 39 59.4	
	comp=Z,336nm,0.1s						
ATKO	**Atikokan Iron**	**1.49**	**28**	PG	Pg	18 39 55.9	-2.4
ATKO				SG	Sg	18 40 15.1	-3.1
ATKO				Trac		18 40 15.7	
	comp=Z,20nm,0.2s						
EPLO	**Experimental L**	**2.27**	**342**	PN	Pn	18 40 07.7	-0.2
EPLO				SG	Sg	18 40 38.1	-6.1
EPLO				SN	Sn	18 40 38.2	+1.3
EPLO				Trac		18 40 41.0	
	comp=Z,5.4nm,0.2s						
TBO	**Thunder Bay**	**2.46**	**61**	PN	Pn	18 40 09.3	-1.3
TBO				PG	Pg	18 40 12.2	-5.5
TBO				SN	Sn	18 40 39.8	-2.1
TBO				SG	Sg	18 40 43.3	-7.2
TBO				Trac		18 40 47.3	
	comp=Z,13nm,0.1s						
SOLO	**Sioux Lookout**	**2.53**	**9**	PN	Pn	18 40 11.0	-0.7
SOLO				SN	Sn	18 40 42.1	-1.7
SOLO				Trac		18 40 55.0	
	comp=Z,10nm,0.2s						
LDIO	**Lac des Isle M**	**2.63**	**50**	PN	Pn	18 40 11.0	-2.2
LDIO				PG	Pg	18 40 14.3	-6.9
LDIO				SN	Sn	18 40 43.4	-2.9
LDIO				SG	Sg	18 40 48.5	-7.9
LDIO				Trac		18 40 50.6	
	comp=N,24nm,0.2s						
ULM	**Lac du Bonnet**	**3.46**	**323**	PN	Pn	18 40 22.5	-2.3
ULM				SN	Sn	18 41 02.4	-4.7
ULM				SG	Sg	18 41 17.7	-6.1
ULM				Trac		18 41 18.1	
	comp=Z,4.4nm,0.3s						
RLKO	**Red Lake**	**3.63**	**349**	PN	Pn	18 40 26.0	-1.2
RLKO				SN	Sn	18 41 08.5	-2.9
RLKO				SG	Sg	18 41 19.6	-10
RLKO				Trac		18 41 28.3	
	comp=Z,2.6nm,0.1s						
PKLO	**Pickle Lake**	**4.26**	**20**	PN	Pn	18 40 33.6	-2.6
PKLO				SN	Sn	18 41 21.4	-6.1
PKLO				SG	Sg	18 41 38.0	-12
GTO	**Geraldton**	**4.39**	**57**	PN	Pn	18 40 34.8	-3.3
GTO				PG	Pg	18 40 46.0	-10
GTO				SN	Sn	18 41 31.8	+1.1
GTO				SG	Sg	18 41 44.0	-11
GTO				Trac		18 41 50.0	
	comp=Z,13nm,0.3s						
PNPO	**Pukaskwa Natio**	**4.41**	**74**	PN	Pn	18 40 37.5	-0.9
PNPO				SN	Sn	18 41 29.2	-2.1
PNPO				SG	Sg	18 41 41.1	-14
PNPO				Trac		18 41 46.9	
	comp=Z,9.4nm,0.3s						
KAPO	**Kapuskasing**	**7.02**	**70**	PN	Pn	18 41 10.6	-4.7
KAPO				SN	Sn	18 42 23.9	-13
KAPO				SG	Sg	18 43 04.9	-18
VIMO	**Victor Mine**	**7.80**	**44**	PN	Pn	18 41 20.5	-5.7
VIMO				SN	Sn	18 42 44.2	-12
SILO	**Sutton Inlier**	**8.51**	**32**	PN	P	18 41 29.8	-6.2
SILO				SN	Sn	18 43 01.7	-12
SILO				SG	Sg	18 43 47.2	-25
FCC	**Fort Churchill**	**11.29**	**356**	PN	P	18 42 07.8	-6.5

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*CSEM **08** 18:40:04.6, 36.21N×10.92E, h0^{km}, MD4.2, After SBS*

TUN 08 18:40:04.6, 36.21N×10.92E, h0^{km}, MD4.2, Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBZ	**Menzel Bouzelf**	**0.51**	**336**	*i* P	Pg	18 40 14.1	-0.7
ZGN	**Zaghouan**	**0.69**	**284**	*i* P	Pg	18 40 16.8	-1.5
KCHT	**Kechabta**	**1.20**	**319**	*i* P	Pb	18 40 27.0	-0.8
TROT	**Trozza**	**1.25**	**239**	*i* P	Pb	18 40 28.0	-0.8
KRIT	**Krib**	**1.50**	**275**	*i* P	Pn	18 40 32.0	-0.8

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*NEIC **08** 18:47:19.2±6.5, 16.96S×178.96W, h453^{km}±66^{km}, mb4.1/7, Error ellipse: s-maj=72.3km s-min=26.2km az=146.0*

ISC 08 18:47:13.3±2.2, 17.0S±0.6×178.9W±0.4, h400^{km}, n52, σ0^{s}88/9, mb4.0/7, 3C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**44.30**	**259**	*e*P	**P**	**18 54 47.6**	**+0.3**
WRAB	**Tennant Creek**	**44.30**	**259**	*e*P	**P**	**18 54 46.5**	**-0.8**
	8.6nm,1.0s,mb4.0						
ASPA	**Alice Springs**	**44.57**	**253**	*e*P	**P**	**18 54 50.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**52.69**	**260**	*e*P	**P**	**18 55 51.3**	**+0.4**
	6.5nm,1.1s,mb3.8						
MBWA	**Marble Bar**	**57.82**	**255**	P	**P**	**18 56 25.5**	**-1.4**
	13nm,1.1s,mb4.2						
ENH	**Enshi**	**83.32**	**304**	*e*P	**P**	**18 58 59.0**	**+1.1**
	4.6nm,0.8s,mb4.3						
MCK	**McKinley**	**83.73**	**13**	P	**P**	**18 58 58.4**	**-0.9**
	2.2nm,0.8s,mb3.9						
HLID	**Hailey**	**84.25**	**41**	*e*P	**P**	**18 59 03.4**	**+1.0**
	2.4nm,0.7s,mb4.0						
INK	**Inuvik**	**91.11**	**15**	*e*P	**P**	**18 59 33.5**	**-0.7**
	1.6nm,0.7s,mb4.0						
KOLS	**Kolonicke sedl**	**143.74**	**336**	*e*PKP	PKPdf	19 06 00.5	-0.7
KSP	**Ksiaz**	**144.06**	**344**	*e*P	PKPbc	19 06 00.9	-0.4
CRVS	**Cervenica-Dubn**	**144.07**	**337**	*e*PKP	PKPdf	19 06 01.8	+0.1
CRVS				*e*		19 06 24.8	
CLL	**Collm**	**144.43**	**347**	*i* PKIKP	PKPdf	19 06 02.0	-0.3
	logA/T=1.2						
UPC	**Upice**	**144.44**	**344**	*e*PKP	PKPdf	19 06 02.2	-0.1
DPC	**Dobruska-Polom**	**144.50**	**343**	*e*PKP	PKPdf	19 06 02.7	+0.3
BRG	**Berggiesshubel**	**144.63**	**346**	*e*P	PKPdf	19 06 03.0	+0.4
PVCC	**Panska Ves**	**144.79**	**345**	*e*PKP	PKPdf	19 06 03.2	+0.3
PRU	**Pruhonice**	**145.30**	**345**	*e*PKP	PKPdf	19 06 04.7	+0.9
GRA1	**Grafenberg Arr**	**146.33**	**348**	*e*PKP	PKPdf	19 06 06.9	+1.3
GRF	**Grafenberg Arr**	**146.33**	**348**	*e*PKP	PKPdf	19 06 06.9	+1.3
KHC	**Kasperske Hory**	**146.33**	**345**	*e*PKP	PKPdf	19 06 08.0	+2.4
GIVF	**Givet**	**146.80**	**356**	*e*PKP1	PKPbc	19 06 08.6	+0.3
BAIF	**Baives**	**146.88**	**356**	*e*PKP1	PKPbc	19 06 09.0	+0.5
	6.8nm,0.7s						
PERS	**Pernice**	**148.19**	**341**	*i* P	PKPdf	19 06 11.9	+3.2
CDF	**Champ du Feu**	**148.22**	**352**	*e*PKP1	PKPdf	19 06 12.4	+3.7
FLN	**La Foliniere**	**148.25**	**2**	*e*PKP1	PKPdf	19 06 12.1	+3.4
	17nm,0.7s						
KBA	**Koelnbreinsper**	**148.29**	**344**	⇑*i*P	PKPdf	19 06 12.4	+3.6
LDF	**La Druitiere**	**148.43**	**2**	*e*PKP1	PKPdf	19 06 12.5	+3.5
	9.5nm,0.4s						
WATA	**Walderalm**	**148.49**	**346**	⇑*i*P	PKPdf	19 06 13.0	+3.9
ROSF	**Rostrenen**	**148.50**	**6**	*e*PKP1	PKPdf	19 06 12.4	+3.3
	10nm,0.7s						
DOBS	**Dobrina**	**148.52**	**341**	*i* P	PKPdf	19 06 12.8	+3.6
WTTA	**Wattenberg**	**148.54**	**346**	⇓*i*P	PKPdf	19 06 13.4	+4.2
MOTA	**Moosalm**	**148.58**	**347**	⇑*i*P	PKPdf	19 06 13.4	+4.1
GRR	**Gorron**	**148.61**	**2**	*e*PKP1	PKPdf	19 06 13.1	+3.8
	13nm,0.6s						
SGMF	**Saint Gilles**	**148.65**	**5**	*e*PKP1	PKPdf	19 06 13.0	+3.6
	11nm,0.6s						
SQTA	**Sankt Quirin**	**148.68**	**347**	⇓*i*P	PKPdf	19 06 13.7	+4.3
HAU	**Haudompre**	**148.73**	**353**	*e*PKP1	PKPdf	19 06 13.4	+3.9
PDKS	**Podkum**	**148.74**	**341**	*i* P	PKPdf	19 06 13.5	+3.9
HINF	**Hinteralfeld**	**148.86**	**352**	*e*PKP1	PKPdf	19 06 13.6	+3.9
	5.6nm,0.6s						
HYF	**Humbligny**	**149.75**	**358**	*e*PKP1	PKPdf	19 06 16.5	+5.3
SSF	**Saint Saulge**	**149.91**	**357**	*e*PKP1	PKPdf	19 06 16.6	+5.2
	11nm,0.6s						
CABF	**La Chapelle**	**150.14**	**353**	*e*PKP1	PKPdf	19 06 17.5	+5.7
	18nm,0.9s						
AVF	**Avril sur Loir**	**150.19**	**357**	*e*PKP1	PKPdf	19 06 16.7	+4.8
	4.7nm,0.6s						
SMF	**Signal de Mont**	**150.31**	**356**	*e*PKP1	PKPdf	19 06 17.0	+4.9
MFF	**Saint Martin d**	**150.42**	**2**	*e*PKP1	PKPdf	19 06 17.4	+5.2
	21nm,1.0s						
BGF	**Bois d'Agland**	**150.45**	**358**	*e*PKP1	PKPdf	19 06 17.7	+5.4
	18nm,0.8s						
TCF	**Toulx Ste Croi**	**150.74**	**358**	*e*PKP1	PKPdf	19 06 18.1	+5.4
	8.1nm,0.6s						
LPL	**La Plagne**	**151.13**	**352**	*e*PKP1	PKPdf	19 06 20.2	+6.9
LPG	**La Plagne**	**151.15**	**352**	*e*PKP1	PKPdf	19 06 20.2	+6.9
RJF	**Les Rejaudoux**	**151.74**	**359**	*e*PKP1	PKPdf	19 06 20.4	+6.2
ORIF	**Oris-en-Rattie**	**151.83**	**353**	*e*PKP1	PKPdf	19 06 21.1	+6.8
MBDF	**Montbardon**	**151.90**	**351**	*e*PKP1	PKPdf	19 06 21.2	+6.8

DJA 08 18:56:50.6±1.1, 8.62S×114.68E, h159^{km}±9^{km}, MD5.0/3, ML3.8/1, 7D, Error ellipse: s-maj=50.9km s-min=12.4km az=4.0, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELI	**Kelakatan**	**0.44**	**335**	⇓*e*Pg	P	18 57 12.8	-0.3
	278nm,0.2s						
KELI				⇓*e*Sg	S	18 57 28.6	-1.8
SRDI	**Scrawed**	**0.55**	**284**	⇓*e*Pg	P	18 57 13.0	-0.6
SRDI				⇓*e*Sg	S	18 57 29.4	-1.9
RATI	**Rata**	**0.84**	**97**	⇓*e*Pg	P	18 57 15.1	-0.2
KEDI	**Kedomdong**	**1.42**	**85**	⇓*e*Pn	P	18 57 19.6	-0.7
	92nm,0.2s						
KEDI				⇓*e*Sn	S	18 57 41.3	-2.0

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*NEIC **08** 19:03:50.2, 31.35S×69.19W, h152^{km}, MD3.6(GUC), After GUC.*

GUC 08 19:03:50.2±0.8, 31.35S×69.19W, h152^{km}±16^{km}, MD3.6, ML3.5, 1C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTCH	**Petorca**	**1.74**	**238**	*e*P	P	19 04 23.2	+0.3
PTCH				*i* S	S	19 04 47.9	-0.1
PTCH				AMP		19 04 52.0	
	comp=N,862nm,0.3s						
JACH	**Jahuel**	**1.79**	**222**	*e*P	P	19 04 23.8	+0.5
TLL	**Tololo Astrono**	**1.82**	**310**	⇑*i*P	P	19 04 24.3	+0.6
TLL				*i* S	S	19 04 50.2	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
TLL				AMP		19 04 54.1	
FCH	**Farellones**	**2.19**	**205**	*e*P	P	19 04 28.8	+0.7
FCH				*i* S	S	19 04 58.1	+1.0
FCH				AMP		19 05 08.2	
	comp=N,122nm,0.3s						
PACH	**Papudo**	**2.25**	**238**	*e*P	P	19 04 28.9	+0.1
CLCH	**Cerro Calan**	**2.34**	**209**	*e*P	P	19 04 30.4	+0.4
CLCH				*i* S	S	19 04 59.7	-0.8
CLCH				AMP		19 05 11.8	
	comp=N,162nm,0.6s						
RCDM	**Rinconada Maip**	**2.54**	**212**	*e*P	P	19 04 32.4	-0.1
TACH	**Talagante**	**2.73**	**212**	*i* P	P	19 04 34.5	-0.4
CHCH	**Chadas Angostu**	**2.86**	**205**	*e*P	P	19 04 36.7	+0.1
LCCH	**Las Cruces**	**2.93**	**223**	*e*P	P	19 04 37.0	-0.4
LNV	**Longovilo**	**3.21**	**215**	*e*P	P	19 04 39.1	-1.9
TRQA	**Tornquist**	**8.94**	**140**	*e*P	P	19 05 50.9	-6.2

PGC 08 19:10:52.5, 64.97N×126.82W, h1^{km}, ML3.6/1, MN2.6/3, Mackenzie Mountains, Northwest Territories, Northwest Territories

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INK	**Inuvik**	**4.28**	**325**	Pn	Pn	19 11 58.9	-1.4
INK				Sn	Sn	19 12 46.1	-5.6
INK				Sg	Sg	19 13 05.2	-10
INK				Trac		19 13 16.2	
	comp=Z,28nm,0.5s						
DAWY	**Dawson**	**5.50**	**266**	Pn	Pn	19 12 14.9	-2.6
DAWY				Sn	Sn	19 13 14.9	-7.5
DAWY				Sg	Sg	19 13 43.4	-12
DAWY				Trac		19 13 57.0	
	comp=Z,6.0nm,0.3s						
WHY	**Whitehorse**	**5.69**	**224**	Pn	Pn	19 12 16.3	-3.8
WHY				Sn	Sn	19 13 18.1	-8.9
WHY				Sg	Sg	19 13 49.9	-12
WHY				Trac		19 14 01.2	
	comp=Z,8.0nm,0.6s						
YKW3	**Yellowknife Ar**	**5.93**	**108**	Pn	Pn	19 12 19.8	-3.7
YKW3				Pn	Pn	19 12 19.8	-3.7
YKW3				Sn	Sn	19 13 21.4	-12
YKW3				Sn	Sn	19 13 23.0	-10
YKW3				Sg	Sg	19 13 56.7	-13
YKW3				Sg	Sg	19 13 56.8	-13
YKW3				Trac		19 14 08.9	
	comp=Z,9.0nm,0.7s						
YKW3				Trac		19 14 08.9	
	comp=Z,9.0nm,0.7s						
YKW3				Trac		19 14 10.4	
	comp=Z,6.0nm,0.5s						
YKW3				Trac		19 14 10.4	
	comp=Z,6.0nm,0.5s						
FNBB	**Fort Nelson**	**6.36**	**162**	Pn	Pn	19 12 25.9	-3.7
FNBB				Sn	Sn	19 13 34.6	-9.2
FNBB				Sg	Sg	19 14 09.7	-15
FNBB				Trac		19 14 22.9	
	comp=Z,6.0nm,0.8s						
FNBB				Trac		19 14 22.9	
	comp=Z,6.0nm,0.8s						
HYT	**Haines Junctio**	**6.41**	**234**	Pn	Pn	19 12 26.4	-3.9
HYT				Sg	Sg	19 14 09.6	-16
HYT				Trac		19 14 15.4	
	comp=Z,2.0nm,0.4s						

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*NEIC **08** 19:13:04.1, 16.77N×100.09W, h8^{km}, MD3.8(MEX), After MEX.*

MEX 08 19:13:04.2±0.8**, 16.78N×100.09W, h7^{km}**±5^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.19**	**63**	*i* P	Pg	19 13 07.5	-0.7
ACX				*i* S	Sg	19 13 11.0	+0.1
CAIG	**El Cayaco**	**0.31**	**328**	*i* P	Pg	19 13 09.8	-0.8
CAIG				*i* S	Sg	19 13 14.0	-0.8
ZIIG	**Zihuatanejo**	**1.55**	**302**	*e*P	Pn	19 13 29.1	-3.2
ZIIG				*i* S	Sb	19 13 47.1	-5.4
PLIG	**Platanillo**	**1.70**	**19**	*i* P	Pn	19 13 31.5	-3.0
PLIG				*i* S	Sn	19 13 50.8	-5.8
PNIG	**Pinotepa**	**1.92**	**101**	*i* P	Pn	19 13 33.0	-4.7
PNIG				*e*S	Sn	19 13 54.6	-7.8
PNIG	**Pinotepa**	**1.92**	**101**	*i* P	Pn	19 13 33.0	-4.7
PNIG				*i* S	Sn	19 13 56.0	-6.4
PPM	**Popocatepetl**	**2.67**	**31**	*e*P	Pn	19 13 45.8	-2.6
PPM				*e*S	Sn	19 14 16.4	-4.9
PPM	**Popocatepetl**	**2.67**	**31**	*e*P	Pn	19 13 45.8	-2.6
PPM				*e*P		19 13 47.0	
PPM				*e*S	Sn	19 14 16.4	-4.9
IIB	**San Bernardino**	**2.74**	**37**	*e*P	Pn	19 13 44.5	-4.8
OXX	**Oaxaca**	**3.24**	**84**	*e*P	Pn	19 13 54.0	-2.5

JMA 08 19:24:51.8±0.6**, 31.80N×141.63E, M3.8, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.02**	**311**	*e*S	Sn	19 25 53.9	+0.2
BSO1	**Boso 1**	**2.90**	**349**	*e*S	Sn	19 26 17.3	+1.2
BSO3	**Boso 3**	**3.14**	**343**	P	Pn	19 25 44.0	+0.6
BSO4	**Boso 4**	**3.36**	**342**	*e*S	Sn	19 26 31.9	+4.1
JIM2	**Oshima 3**	**3.44**	**328**	P	Pn	19 25 48.6	+0.8
JOD2	**Odawara 2**	**4.05**	**329**	P	Pn	19 25 55.9	-0.6
JOD2				*e*S	Sn	19 26 49.3	+3.9
JYN	**Shimob**	**4.50**	**326**	P	Pn	19 26 04.2	+1.4
JYT	**Yasato**	**4.57**	**345**	P	Pn	19 26 02.4	-1.5
JYT				*e*S	Sn	19 27 00.5	+1.9
JRY	**Ryogami san**	**4.78**	**332**	P	Pn	19 26 05.8	-1.0
JRY				*e*S	Sn	19 27 05.3	+1.6
JHO	**Hitachi**	**4.88**	**350**	P	Pn	19 26 04.2	-4.0
JHO				*e*S	Sn	19 27 02.8	-3.4
JAG	**Ashikaga**	**4.95**	**339**	P	Pn	19 26 06.8	-2.4
JFK	**Kawauchi**	**5.59**	**354**	P	Pn	19 26 12.9	-5.3
JFK				*e*S	Sn	19 27 17.6	-6.5

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*CSEM **08** 19:32:57.9±0.2, 76.12N×25.28E, h10^{km}, ML2.7, Error ellipse: s-maj=11.6km s-min=1.8km az=70.0*

*NAO **08** 19:32:58.5±1.8, 76.17N×25.74E, ML2.2*

*BER **08** 19:32:59.6±3.1, 76.14N×26.30E, MD2.1, ML2.2(NAO)*

*HEL **08** 19:33:03.1±0.9, 76.02N×23.48E, h10^{km}, ML2.7, MD2.1(BER), ML2.2(NAO)*

ISC 08 19:32:57.1±0.6**, 75.96N**±0.03×**24.5E**±0.4**, h10^{km}, n15, σ1^{s}67**/29**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPEN	**Hopen**	**0.57**	**12**	*e*P	**Pg**	**19 33 09.4**	**+0.9**
HOPEN				*e*S	**Sg**	**19 33 14.7**	**-1.5**
HSP	**Hornsund**	**2.36**	**301**	*e*P	**Pn**	**19 33 38.5**	**+2.0**
SPA0	**Spitsbergen Ar**	**2.89**	**325**	Pn	**Pn**	**19 33 44.8**	**+0.8**
	baz=132,slow=14						
SPA0				Pg	**Pg**	**19 33 52.2**	**-2.5**
	baz=134,slow=16						
SPA0				Sn	**Sb**	**19 34 23.0**	**-0.8**
	baz=127,slow=18						
SPA0	**Spitsbergen Ar**	**2.89**	**325**	*e*P	**Pn**	**19 33 44.8**	**+0.8**
SPA0				*e*PG	**Pg**	**19 33 52.2**	**-2.5**
SPA0				*e*SB	**Sb**	**19 34 23.0**	**-0.8**
KEV	**Kevo**	**6.28**	**172**	*e*P	**Pn**	**19 34 37.4**	**+5.4**
KEV				MPN		19 34 38.1	
	comp=Z,0.3nm,0.1s						
KEV				*e*S	**Sn**	**19 35 44.0**	**-0.6**
KEV	**Kevo**	**6.28**	**172**	P	**Pn**	**19 34 37.4**	**+5.4**
KEV				S	**Sn**	**19 35 44.0**	**-0.6**
ARA0	**ARCESS Array S**	**6.46**	**177**	Pn	**Pn**	**19 34 38.1**	**+3.4**
	baz=358,slow=11						
ARA0				Sn	**Sn**	**19 35 47.7**	**-1.6**
	baz=8.5,slow=22						
ARA0	**ARCESS Array S**	**6.46**	**177**	*e*P	**Pn**	**19 34 38.1**	**+3.4**
ARA0				*e*S	**Sn**	**19 35 47.7**	**-1.6**
ARA0	**ARCESS Array S**	**6.46**	**177**	P	**Pn**	**19 34 38.0**	**+3.3**
ARA0				S	**Sn**	**19 35 47.7**	**-1.6**
	SNR=9.2						
KIF	**Kilpisjarvi**	**7.08**	**191**	*e*P	**Pn**	**19 34 47.1**	**+3.8**
KIF				*e*S	**Sn**	**19 36 02.9**	**-1.7**
KIF	**Kilpisjarvi**	**7.08**	**191**	P	**Pn**	**19 34 47.0**	**+3.7**
KIF				S	**Sn**	**19 36 02.9**	**-1.7**
SGF	**Sodankyl**	**8.58**	**175**	*e*S	**Sn**	**19 36 41.7**	**-0.5**
MSF	**Maaselka**	**10.20**	**169**	*e*P	**P**	**19 35 29.4**	**+3.1**
MSF				*e*S	**S**	**19 37 18.1**	**-3.8**
MSF	**Maaselka**	**10.20**	**169**	P	**P**	**19 35 29.4**	**+3.0**
MSF				S	**S**	**19 37 18.0**	**-3.9**
KJN	**Kajaani**	**11.98**	**173**	*e*P	**P**	**19 35 52.8**	**+2.2**
KJN				MPN		19 35 52.9	
	comp=Z,0.3nm,0.2s						

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*JMA **08** 19:37:16.0±0.3, 24.09N×122.57E, h38^{km}, M1.9*

TAP 08 19:37:15.7, 23.94N×122.58E, h28^{km}±1^{km}**, ML2.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.65**	**37**	P	Pb	19 37 27.1	-1.3
YOJ				S	Sb	19 37 34.9	-2.2
IRIF	**Iriomote-Funau**	**1.12**	**69**	P	Pn	19 37 34.9	-0.8
IRIF				S	Sn	19 37 49.6	-0.8
HATJ	**Hateruma jima**	**1.13**	**84**	*e*S	Sn	19 37 49.7	-0.8
JKRS	**Kuro-shima**	**1.34**	**77**	P	Pn	19 37 38.6	-0.3
JKRS				*e*S	Sn	19 37 56.0	+0.1
JIJ	**Ishigaki jima**	**1.49**	**73**	P	Pn	19 37 40.2	-0.8
JIJ				S	Sn	19 37 58.9	-0.8

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*CSEM **08** 20:06:38.7±0.1, 32.90N×48.26E, h16^{km}, ML3.1, Error ellipse: s-maj=2.8km s-min=1.7km az=97.0*

*THR **08** 20:06:39.7±0.9, 32.88N×48.28E, h32^{km}±7^{km}, ML3.1*

*TEH **08** 20:06:44.4, 33.32N×48.21E, h16^{km}, Mn3.1*

ISC 08 20:06:40.2±1.1**, 32.90N**±0.03×**48.31E**±0.06**, h26^{km}**±12^{km}**, n19, σ0^{s}95**/25**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGO	**Shushtar**	**0.89**	**152**	*e*PG	**Pb**	**20 06 56.4**	**-0.4**
SHGO				AML	AML	20 07 27.8	
	comp=N,357nm,0.5s						
SHGR	**Shooshtar-Gavs**	**0.89**	**152**	*e*PG	**Pb**	**20 06 56.4**	**-0.4**
SHGR				AML	AML	20 07 25.8	
	comp=N,485nm,0.5s						
IKOM	**Komasi**	**1.44**	**333**	Pg	**Pn**	**20 07 03.1**	**-1.9**
IVIS	**Veys**	**2.03**	**324**	Pn	**Pn**	**20 07 12.7**	**-0.7**
IGHG	**Ghaleghazi**	**2.04**	**315**	Pn	**Pn**	**20 07 13.3**	**-0.2**
ASAO	**Ashtian**	**2.18**	**41**	*e*PG	**Pn**	**20 07 18.8**	**+3.2**
ASAO				*e*SG	**Sn**	**20 07 48.3**	**+6.3**
ASAO				AML	AML	20 07 52.9	
	comp=N,99nm,0.6s						
SNGE	**Sanandaj**	**2.33**	**340**	*e*PN	**Pn**	**20 07 18.5**	**+0.7**
SNGE				AML	AML	20 07 58.3	
	comp=N,144nm,0.6s						
IDHR	**Dehrash**	**2.41**	**319**	Pn	**Pn**	**20 07 19.3**	**+0.5**
IRAZ	**Razeghan**	**2.84**	**28**	Pn	**Pn**	**20 07 26.4**	**+1.4**
BHD	**Baghdad**	**3.32**	**278**	*e*P	**Pn**	**20 07 20.5**	**-11**
BHD				*e*S	**Sn**	**20 08 17.0**	**+6.1**
IMHD	**Mahdasht**	**3.40**	**34**	Sn	**Sn**	**20 08 08.4**	**-4.5**
IVRN	**Varamin**	**3.53**	**53**	Pn	**Pn**	**20 07 35.4**	**+0.6**
IVRN				Sn	**Sn**	**20 08 14.3**	**-1.9**
RST	**Umm Al-Ruwaisa**	**3.57**	**199**	*e*P	**Pn**	**20 07 36.0**	**+0.7**
NAY	**Al-Naaiem**	**3.75**	**194**	*e*P	**Pn**	**20 07 38.7**	**+0.8**
NAY				*e*S	**Sn**	**20 08 21.1**	**-0.6**
NASN	**Na’in**	**3.79**	**90**	*e*PN	**Pn**	**20 07 38.9**	**+0.4**
RDF	**Al-Radifah**	**4.01**	**190**	*e*P	**Pn**	**20 07 40.9**	**-0.7**
RDF				*e*S	**Sn**	**20 08 28.7**	**+0.3**
DAMV	**Damavand**	**4.08**	**47**	*e*PN	**Pn**	**20 07 42.3**	**-0.3**
IDMV	**Damavand**	**4.08**	**48**	Pn	**Pn**	**20 07 43.0**	**+0.3**
IFIR	**Firoozkooh**	**4.59**	**52**	Pn	**Pn**	**20 07 50.2**	**+0.4**
IFIR				Sn	**Sn**	**20 08 39.0**	**-4.0**

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*NIED **08** 20:22:00, 35.60N×140.10E, h65^{km}, Mw3.9 Best double couple: M$_0$9.24×10^{14} NP1:ϕ_s349°, δ64°, λ82°. NP2:ϕ_s188°, δ27°, λ107°.*

*JMA **08** 20:22:10.9±0.2, 35.67N×140.13E, h71^{km}±2^{km}, M3.9 Broadband fault plane solution: P waves. NP1:ϕ_s223°, δ23°, λ140°. NP2:ϕ_s350°, δ75°, λ72°. Principal axes: T Plg56°, Azm237°; N Plg18°, Azm355°; P Plg28°, Azm95°;*

JMA Felt I J1.

ISC 08 20:22:10.3±0.6**, 35.60N**±0.05×**140.14E**±0.07**, h77^{km}**±5^{km}**, n15, σ0^{s}82**/22**, 3C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.19**	**164**	⇑P	**P**	**20 22 22.4**	**+0.7**
JCN				S	**S**	**20 22 31.4**	**+1.1**
TOK	**Tokyo**	**0.32**	**285**	P	**P**	**20 22 23.0**	**+0.5**
TOK				S	**S**	**20 22 31.8**	**+0.2**
JYT	**Yasato**	**0.63**	**4**	⇑P	**P**	**20 22 24.5**	**-0.7**
JYT				S	**S**	**20 22 34.0**	**-2.2**
BSO3	**Boso 3**	**0.85**	**159**	⇑P	**P**	**20 22 27.9**	**+0.2**
BSO3				S	**S**	**20 22 41.3**	**+0.6**
JOD2	**Odawara 2**	**0.92**	**249**	⇓P	**P**	**20 22 28.4**	**0.0**
JOD2				S	**S**	**20 22 40.7**	**-1.4**
JAG	**Ashikaga**	**0.99**	**326**	⇓P	**P**	**20 22 29.2**	**-0.1**
JIM2	**Oshima 3**	**1.05**	**213**	⇓P	**P**	**20 22 29.7**	**-0.4**
JIM2				S	**S**	**20 22 43.7**	**-1.2**
JRY	**Ryogami san**	**1.09**	**293**	⇓P	**P**	**20 22 31.1**	**+0.6**
BSO1	**Boso 1**	**1.17**	**144**	P	**P**	**20 22 31.4**	**-0.2**
JYN	**Shimob**	**1.30**	**266**	⇓P	**P**	**20 22 33.6**	**+0.1**
JKT	**Katashina**	**1.37**	**329**	⇓P	**P**	**20 22 34.1**	**-0.2**
MAT	**Matsushiro**	**1.82**	**302**	P	**P**	**20 22 41.0**	**+0.7**
MAT				S	**S**	**20 23 04.1**	**+1.7**
FITZ	**Fitzroy Crossi**	**55.15**	**197**	*e*P	**P**	**20 31 37.2**	**-0.1**
	3.5nm,0.5s						
WB2	**Warramunga Arr**	**55.51**	**187**	*e*P	**P**	**20 31 39.1**	**-0.7**
ASPA	**Alice Springs**	**59.24**	**187**	*e*P	**P**	**20 32 06.5**	**+0.5**

IGQ 08 20:46:27.4, 1.04S×78.32W, h15^{km}±1^{km}**, mb4.0, 7C-8D, Error ellipse: s-maj=1.7km s-min=0.7km az=13.4, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.07**	**257**	⇓P	Pb	20 46 30.7	+0.3
TAMB	**Tambo**	**0.35**	**352**	⇑P	Pb	20 46 35.2	+0.5
JUIV	**Juive**	**0.40**	**201**	⇓P	Pb	20 46 35.7	0.0
VC1	**Cotopaxi 1**	**0.41**	**348**	⇑P	Pb	20 46 36.4	+0.7
RETU	**Refugio**	**0.42**	**197**	⇑P	Pb	20 46 36.4	+0.3
CUSU	**Cusua**	**0.43**	**202**	⇓P	Pb	20 46 36.2	+0.1
NAS1	**Nasa**	**0.44**	**339**	⇓P	Pb	20 46 37.0	+0.8
PATA	**Patacocha**	**0.47**	**194**	P	Pb	20 46 38.4	+1.5
ARRY	**Arrayan**	**0.48**	**196**	⇓P	Pb	20 46 36.9	-0.1
IGUA	**Igualata**	**0.55**	**216**	⇓P	Pb	20 46 38.8	+0.7
ANTI	**Antisana**	**0.61**	**15**	⇑P	Pb	20 46 39.4	+0.2
JUA2	**San Juan 2**	**0.87**	**341**	⇑P	Pb	20 46 45.1	+1.4
TERV	**Terraza Guagua**	**0.91**	**342**	P	Pb	20 46 45.6	+1.3
PINO	**Pino**	**0.93**	**342**	P	Pb	20 46 45.4	+0.8
YANA	**Yana**	**0.95**	**345**	P	Pb	20 46 45.9	+0.9
JOR1	**San Jorge 1**	**1.08**	**343**	⇓P	Pb	20 46 44.5	-2.8
CAYR	**Refugio Cayamb**	**1.10**	**17**	⇑P	Pb	20 46 49.1	+1.6
CAYR				S	Sb	20 47 03.5	+2.1
CAYA	**Cayambe**	**1.16**	**17**	⇑P	Pb	20 46 49.9	+1.4
CAYA				S	Sb	20 47 05.0	+1.9
CONE	**Cono NE Rev Vo**	**1.18**	**35**	⇓P	Pb	20 46 50.1	+1.2
CONE				S	Sb	20 47 06.0	+2.1
HOJA	**Cerro de Hojas**	**2.23**	**270**	P	Pn	20 47 05.4	+1.1
HOJA				S	Sn	20 47 29.0	-2.6

IGQ 08 20:50:37.8, 1.05S×78.34W, h16^{km}±1^{km}**, mb4.1, 10C-9D, Error ellipse: s-maj=1.7km s-min=0.6km az=15.0, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.04**	**264**	⇓P	Pb	20 50 41.1	+0.3
TAMB	**Tambo**	**0.36**	**356**	⇓P	Pb	20 50 45.6	+0.3
JUIV	**Juive**	**0.39**	**198**	⇓P	Pb	20 50 46.0	+0.2
RETU	**Refugio**	**0.41**	**195**	⇑P	Pb	20 50 46.6	+0.5
CUSU	**Cusua**	**0.41**	**200**	⇑P	Pb	20 50 46.5	+0.3
VC1	**Cotopaxi 1**	**0.41**	**352**	⇓P	Pb	20 50 46.8	+0.5
NAS1	**Nasa**	**0.44**	**342**	⇓P	Pb	20 50 47.4	+0.7
PATA	**Patacocha**	**0.46**	**191**	P	Pb	20 50 47.6	+0.7
ARRY	**Arrayan**	**0.46**	**194**	⇑P	Pb	20 50 47.2	+0.1
IGUA	**Igualata**	**0.52**	**214**	⇓P	Pb	20 50 49.1	+0.9
ANTI	**Antisana**	**0.63**	**17**	⇑P	Pb	20 50 49.9	-0.1
JUA2	**San Juan 2**	**0.88**	**343**	⇑P	Pb	20 50 55.4	+1.2
TERV	**Terraza Guagua**	**0.91**	**343**	⇓P	Pb	20 50 56.1	+1.3
PINO	**Pino**	**0.93**	**343**	⇓P	Pb	20 50 56.1	+1.0
YANA	**Yana**	**0.96**	**346**	⇓P	Pb	20 50 56.6	+1.1
JOR1	**San Jorge 1**	**1.09**	**344**	⇑P	Pb	20 50 55.1	-2.7
CAYR	**Refugio Cayamb**	**1.11**	**18**	⇑P	Pb	20 50 59.5	+1.2
CAYR				S	Sb	20 51 15.6	+3.3
CAYA	**Cayambe**	**1.17**	**18**	⇑P	Pb	20 51 00.6	+1.4
CONE	**Cono NE Rev Vo**	**1.20**	**36**	⇑P	Pb	20 51 00.7	+1.0
CONE				S	Sb	20 51 17.1	+2.2
HOJA	**Cerro de Hojas**	**2.20**	**270**	⇑P	Pn	20 51 16.2	+1.8
HOJA				S	Sn	20 51 41.3	-0.1

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*CSEM **08** 20:53:50.1±1.1, 38.58N×28.53W, h7^{km}±5^{km}, ML1.9, Error ellipse: s-maj=3.1km s-min=2.9km az=164.0, After PDA*

*PDA **08** 20:53:50.1±1.1, 38.58N×28.53W, h7^{km}±5^{km}, MD2.8, ML1.9, Error ellipse: s-maj=3.1km s-min=2.9km az=164.0*

SVSA 08 20:53:50.1±1.1**, 38.58N×28.53W, h7^{km}**±5^{km}**, MD2.8, ML1.9, Error ellipse: s-maj=3.1km s-min=2.9km az=164.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOR	**Horta**	**0.09**	**235**	*i* P	Pg	20 53 51.8	-0.5
HOR				*e*S	Sg	20 53 54.0	+0.2
HOR	**Horta**	**0.09**	**235**	*e*S	Sg	20 53 54.0	+0.2
PICO	**Pico**	**0.12**	**133**	*i* P	Pg	20 53 52.3	-0.4
PICO				*e*S	Sg	20 53 54.6	+0.2
PICO	**Pico**	**0.12**	**133**	*e*S	Sg	20 53 54.6	+0.2
CALA	**Caldeira**	**0.13**	**271**	*e*P	Pg	20 53 52.8	-0.2
CALA				*e*S	Sg	20 53 55.1	+0.2
PCED	**Cedros**	**0.14**	**290**	*e*P	Pg	20 53 52.6	-0.5
PCED				*e*S	Sg	20 53 55.2	0.0
	105nm,0.2s						
PCED	**Cedros**	**0.14**	**290**	*e*P	Pg	20 53 52.6	-0.5
PCED				*e*S	Sg	20 53 55.2	0.0
	105nm,0.2s						
ROSA	**Rosais**	**0.27**	**59**	*i* P	Pg	20 53 54.8	-0.8
ROSA				*e*S	Sg	20 53 58.9	-0.3
ROSA	**Rosais**	**0.27**	**59**	*e*S	Sg	20 53 58.9	-0.3
PMAN	**Manadas**	**0.35**	**81**	*e*P	Pg	20 53 56.4	-0.8
PMAN				*e*S	Sg	20 54 01.3	-0.7
	54nm,0.1s						

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*NEIC **08** 21:18:41.4, 36.81S×73.71W, h24^{km}, ML3.5(GUC), After GUC.*

GUC 08 21:18:41.4±0.7**, 36.81S×73.71W, h24^{km}**±6^{km}**, ML3.5, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	**Chillan**	**1.33**	**81**	*e*P	Pn	21 19 04.6	-0.1
CCHI				*i* S	Sn	21 19 21.3	-0.4
CCHI				AMP		21 19 35.8	
	comp=N,1µm,0.4s						
LNCH	**Linares**	**1.95**	**61**	*e*P	Pn	21 19 14.2	+0.6
LNCH				*i* S	Sn	21 19 39.5	+1.8
LNCH				AMP		21 19 46.5	
	comp=N,788nm,0.9s						
TMCH	**Temuco**	**2.12**	**156**	*e*P	Pn	21 19 14.9	-1.2
TMCH				*i* S	Sn	21 19 41.3	-0.5
LNV	**Longovilo**	**3.41**	**34**	*e*P	Pn	21 19 34.4	0.0
CICH	**Cipreses**	**3.66**	**48**	*e*P	Pn	21 19 37.5	-0.4
CHCH	**Chadas Angostu**	**3.81**	**42**	*e*P	Pn	21 19 39.8	-0.2
FCH	**Farellones**	**4.46**	**40**	⇓*i*P	Pn	21 19 49.3	-0.1
PLCA	**Paso Flores**	**4.63**	**149**	P	Pn	21 19 53.0	+1.3

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*MOS **08** 21:20:37.1±1.6, 8.32N×94.50E, h33^{km}, mb4.7/13, MS4.5/9, Error ellipse: s-maj=20.1km s-min=9.9km az=106.1*

*BJI **08** 21:20:38.8, 8.02N×93.94E, h59^{km}, mB5.1, mb4.7, Ms5.1, Msz4.7*

*NEIC **08** 21:20:40.2±0.7, 8.47N×94.11E, h30^{km}, mb4.7/27, Error ellipse: s-maj=14.3km s-min=13.0km az=135.0*

ISC 08 21:20:39.0±0.5**, 8.48N**±0.06×**94.13E**±0.04**, h33^{km}, (h32^{km}**±.9^{km}**:pP-P), n96, σ1^{s}32**/113**, mb4.7**/42**, MS4.6**/19**, 5C-3D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.55**	**101**	P	**P**	**21 22 14.0**	**-1.6**
NST	**Nakhon Sawan**	**9.25**	**39**	P	**P**	**21 22 51.5**	**-1.6**
CM31	**Chiang Mai Arr**	**10.97**	**25**	*e*P	**P**	**21 23 17.3**	**+0.5**
CHG	**Chiang Mai**	**11.29**	**24**	⇑P	**P**	**21 23 22.3**	**+1.2**
	36nm,1.0s						
KKTK	**Khon Kaen**	**11.53**	**47**	P	**P**	**21 23 25.0**	**+0.6**
NANT	**Nan**	**12.08**	**31**	P	**P**	**21 23 34.7**	**+2.9**
VIS	**Vishakhapatnam**	**13.96**	**312**	*e*P	**P**	**21 23 55.0**	**-1.9**
VIS				*e*		21 24 01.1	
	comp=Z,57nm,0.9s						
CAL	**Calcutta**	**15.05**	**339**	*e*	**S**	**21 27 17.0**	**+20**
HYB	**Hyderabad**	**17.58**	**302**	*i* P	**P**	**21 24 45.0**	**+1.8**
HYB				*e*S	**S**	**21 27 49.5**	**-6.2**
HYB				*e*		21 28 12.0	
BLSP	**Bilaspur**	**17.82**	**321**	*e*P	**P**	**21 24 47.5**	**+1.3**
BLSP				*e*		21 24 51.3	
	comp=Z,29nm,0.8s						
KMI	**Kunming**	**18.48**	**25**	⇑P	**P**	**21 24 58.6**	**+4.1**
KMI				AP		21 25 05.3	
KMI				PP	PP	21 25 19.5	+10
KMI				AMB	AMB		
	comp=Z,29nm,1.4s						
KMI				AMB	AMB		
	comp=Z,477nm,4.6s						
KMI				LR	LR		
	comp=N,2µm,15.6s						
KMI				LR	LR		
	comp=E,3µm,16.3s						
KMI				LR	LR		
	comp=Z,2µm,14.2s						
KMI	**Kunming**	**18.48**	**25**	⇑P	**P**	**21 24 58.6**	**+4.1**
	comp=Z,29nm,1.4s						
KMI				pP		21 25 05.3	
KMI				PP	PP	21 25 19.5	+10
KMI				S	**S**	**21 28 33.8**	**+18**
KMI				sS		21 28 47.3	
KMI				SS	SS	21 29 02.9	+23
QIZ	**Qiongzhong**	**18.50**	**54**	P	**P**	**21 24 55.9**	**+1.1**
QIZ				S	**S**	**21 28 18.5**	**+1.9**
QIZ				LR	LR		
	comp=N,6µm,12.0s						
QIZ				LR	LR		
	comp=E,2µm,14.0s						
QIZ	**Qiongzhong**	**18.50**	**54**	*e*P	**P**	**21 24 56.0**	**+1.2**
	comp=E,53nm,1.0s						
NGP	**Nagpur**	**19.25**	**313**	*e*P	**P**	**21 25 01.8**	**-1.7**
NGP				*e*	**S**	**21 28 46.0**	**+13**
JIRN	**Jiri**	**20.50**	**340**	*e*P	**P**	**21 25 16.8**	**-0.2**
	comp=E,155nm,1.1s						
PKI	**Pulchoki**	**20.70**	**338**	*e*P	**P**	**21 25 19.0**	**-0.1**
	comp=E,110nm,1.1s						
DMN	**Daman**	**20.86**	**337**	*e*P	**P**	**21 25 20.6**	**0.0**
	comp=E,140nm,1.0s						
KKN	**Kakani**	**20.95**	**338**	*e*P	**P**	**21 25 20.4**	**-1.2**
	comp=E,56nm,0.8s						
LSA	**Lhasa**	**21.30**	**353**	*e*P	**P**	**21 25 24.5**	**-0.6**
	comp=E,38nm,0.6s,mb4.9						
KAD	**Karad**	**21.32**	**296**	*e*P	**P**	**21 25 27.5**	**+2.1**
KAD				*e*		21 25 30.9	
	comp=Z,23nm,1.0s						
GKN	**Gorkha**	**21.39**	**336**	*e*P	**P**	**21 25 25.2**	**-0.8**
	comp=Z,129nm,1.0s,mb5.2						
KOLN	**Koldanda**	**21.62**	**334**	*e*P	**P**	**21 25 27.1**	**-1.2**
	comp=Z,72nm,0.7s,mb5.2						
BHPL	**Bhopal**	**21.73**	**314**	*e*P	**P**	**21 25 29.7**	**+0.2**
BHPL				*e*		21 25 36.3	
	comp=Z,26nm,0.8s						
CD2	**Chengdu**	**24.06**	**21**	P	**P**	**21 25 53.2**	**+0.8**
CD2				AMB	AMB		
	comp=Z,38nm,1.2s,mb4.7						
LGTI	**Lohaghat**	**24.60**	**330**	*e*P	**P**	**21 25 59.5**	**+1.8**
NDI	**New Delhi**	**25.64**	**324**	*e*P	**P**	**21 26 07.0**	**-0.6**
ENH	**Enshi**	**26.01**	**31**	*e*P	**P**	**21 26 09.6**	**-1.4**
	comp=Z,26nm,0.8s,mb4.8						
DDI	**Dehra Dun**	**26.43**	**327**	*e*P	**P**	**21 26 16.8**	**+2.0**
SDNR	**Sundarnagar**	**27.93**	**327**	*e*	**P**	**21 26 33.2**	**+4.7**
XAN	**Xi’an**	**28.86**	**26**	P	**P**	**21 26 35.3**	**-1.5**
XAN				S	**S**	**21 31 27.7**	**+4.4**
XAN				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.6						
XAN				LR	LR		
	comp=N,1µm,14.0s,MS4.9						
XAN				LR	LR		
	comp=E,2µm,15.8s,MS4.9						

XAN				LR	LR		
	comp=Z,2μm,14.3s,MS4.8						
LZH	**Lanzhou**	**28.88**	**16**	*e*P	**P**	**21 26 38.0**	**+1.1**
LZH				*e*S	**S**	**21 31 29.0**	**+5.5**
LZH				*e*SS	SS	21 33 03.0	+11
LZH				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
LZH				AMB	AMB		
	comp=Z,220nm,5.8s						
LZH				LR	LR		
	comp=E,3μm,14.8s						
LZH				LR	LR		
	comp=Z,4μm,15.3s,MS5.1						
LZH	**Lanzhou**	**28.88**	**16**	*e*P	**P**	**21 26 38.0**	**+1.1**
	comp=Z,30nm,1.1s,mb4.9						
LZH				pP	pP	21 26 47.0	+0.5
LZH				sP	sP	21 26 51.1	+0.3
LZH				PP	PP	21 27 56.0	+25
LZH				*e*S	**S**	**21 31 29.0**	**+5.5**
LZH				sS		21 31 46.0	
LZH				*e*SS	SS	21 33 03.0	+11
GTA	**Gaotai**	**31.22**	**9**	*e*P	**P**	**21 26 57.3**	**-0.4**
GTA				S	**S**	**21 32 10.2**	**+10**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.0						
GTA				LR	LR		
	comp=N,506nm,17.5s,MS4.4						
GTA				LR	LR		
	comp=E,597nm,20.1s,MS4.4						
GTA				LR	LR		
	comp=Z,185nm,14.8s						
NJ2	**Nanjing**	**32.82**	**41**	*e*P	**P**	**21 27 12.4**	**+0.6**
NJ2				PP	PP	21 28 24.0	+2.1
NJ2				S	**S**	**21 32 30.0**	**+4.3**
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,1μm,5.1s						
NJ2				LR	LR		
	comp=N,2μm,22.9s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,18.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,2μm,11.8s						
SSE	**Sheshan**	**33.80**	**45**	*e*P	**P**	**21 27 17.2**	**-3.0**
SSE				S	**S**	**21 32 42.1**	**+1.2**
SSE				AMB	AMB		
	comp=Z,12nm,2.5s,mb4.4						
SSE				AMB	AMB		
	comp=Z,56nm,2.9s,mb5.0						
SSE				LR	LR		
	comp=N,949nm,15.4s,MS4.7						
SSE				LR	LR		
	comp=E,575nm,15.4s,MS4.7						
SSE				LR	LR		
	comp=Z,896nm,11.2s,MS4.7						
SSE	**Sheshan**	**33.80**	**45**	*e*P	**P**	**21 27 17.2**	**-3.0**
	comp=Z,12nm,2.5s,mb4.4						
SSE				pP	pP	21 27 26.5	-3.4
SSE				sP	sP	21 27 30.0	-4.2
SSE				S	**S**	**21 32 42.1**	**+1.2**
SSE				sS		21 32 58.3	
SSE				SS	SS	21 35 17.1	+29
SSE				ScS	ScS	21 37 47.2	+7.0
KSH	**Kashi**	**34.92**	**335**	*e*P	**P**	**21 27 30.1**	**+0.3**
KSH				*e*AP	pP	21 27 40.3	+0.8
KSH				*e*S	**S**	**21 32 58.0**	**-0.2**
KSH				*e*SS	SS	21 35 14.6	+1.2
KSH				*e*SCS	ScS	21 37 45.6	-0.5
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
KSH				AMB	AMB		
	comp=Z,140nm,3.8s						
KSH				LR	LR		
	comp=N,760nm,7.3s						
KSH				LR	LR		
	comp=E,570nm,6.3s						
WMQ	**Urumqi**	**35.65**	**352**	*e*P	**P**	**21 27 36.0**	**0.0**
WMQ				PP	PP	21 28 57.0	0.0
WMQ				S	**S**	**21 33 09.0**	**-0.4**
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.8						
WMQ				LR	LR		
	comp=N,342nm,18.0s,MS4.6						
WMQ				LR	LR		
	comp=E,818nm,17.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,462nm,17.0s,MS4.3						
HHC	**Hu-ho-hao-te**	**35.77**	**23**	*e*P	**P**	**21 27 37.0**	**0.0**
HHC				PP	PP	21 29 00.8	+2.4
HHC				PCP	PcP	21 29 59.6	-5.1
HHC				S	**S**	**21 33 16.2**	**+5.0**
HHC				SCP		21 33 44.9	
HHC				SS	SS	21 35 40.0	+7.2
HHC				SCS	ScS	21 37 47.1	-3.5
HHC				AMB	AMB		
	comp=Z,9.0nm,1.9s,mb4.4						
HHC				AMB	AMB		
	comp=Z,86nm,5.4s						
HHC				LR	LR		
	comp=N,963nm,14.4s,MS4.8						
HHC				LR	LR		
	comp=E,1μm,16.8s,MS4.8						
HHC				LR	LR		
	comp=Z,831nm,18.0s,MS4.5						
BJT	**Baijiatuau**	**37.06**	**29**	*e*P	**P**	**21 27 49.1**	**+1.2**
	comp=Z,9.9nm,0.8s,mb4.7						
BJI	**Beijing**	**37.08**	**29**	*e*P	**P**	**21 27 49.3**	**+1.2**
BJI				PP	PP	21 29 22.9	+7.7
BJI				S	**S**	**21 33 40.1**	**+8.7**
BJI				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.7						
BJI				AMB	AMB		
	comp=Z,175nm,6.8s						
BJI				LR	LR		
	comp=N,1μm,15.5s,MS4.9						
BJI				LR	LR		
	comp=E,1μm,16.6s,MS4.9						
BJI				LR	LR		
	comp=Z,636nm,19.8s,MS4.4						
BJI	**Beijing**	**37.08**	**29**	*e*P	**P**	**21 27 49.3**	**+1.2**
	comp=Z,12nm,1.0s,mb4.7						
BJI				PP	PP	21 29 22.9	+7.7
BJI				S	**S**	**21 33 40.1**	**+8.7**
BJI				SS	SS	21 36 32.3	+30
AAK	**Ala-Archa**	**38.15**	**336**	⇓*e*P	**P**	**21 27 57.1**	**+0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.0						
AAK				MLR	MLR		
	comp=Z,1μm,22.0s,MS4.7						
AAK	**Ala-Archa**	**38.15**	**336**	P	**P**	**21 27 57.0**	**0.0**
	comp=Z,6.6nm,0.8s,mb4.4						
MBWA	**Marble Bar**	**38.73**	**140**	P	**P**	**21 28 02.9**	**+0.9**
	comp=Z,6.9nm,0.8s,mb4.4						
MKAR	**Makanchi Array**	**39.50**	**347**	*i* P	**P**	**21 28 06.1**	**-2.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ULN	**Ulaanbaatar**	**40.76**	**13**	*e*P	**P**	**21 28 17.0**	**-1.5**
	comp=Z,2.9nm,0.7s,mb4.0						
SNY	**Shenyang**	**42.17**	**33**	⇑P	**P**	**21 28 31.2**	**+0.9**
SNY				AMB	AMB		
	comp=Z,120nm,4.9s						
SNY				LR	LR		
	comp=N,790nm,16.8s						
SNY				LR	LR		
	comp=Z,640nm,15.9s,MS4.6						
ZAK	**Zakamensk**	**42.46**	**9**	*e*P	**P**	**21 28 32.6**	**+0.1**
ZAK				*e*		21 30 25.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
TLY	**Talaya**	**43.78**	**9**	*e*P	**P**	**21 28 44.1**	**+0.8**
TLY				*e*SS	SS	21 38 26.4	+6.9
TLY				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.7						
TLY				MLR	MLR		
	comp=Z,267nm,18.0s,MS4.2						
KURK	**Kurchatov**	**44.03**	**346**	P	**P**	**21 28 44.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
KURK	**Kurchatov**	**44.03**	**346**	*e*P	**P**	**21 28 43.3**	**-2.0**
	comp=Z,10nm,0.9s,mb4.5						
CN2	**Changchun**	**44.53**	**32**	*e*P	**P**	**21 28 49.2**	**-0.2**
HIA	**Hailar**	**45.97**	**23**	*e*P	**P**	**21 29 01.1**	**+0.2**
	comp=Z,11nm,1.0s,mb4.7						
NVS	**Novosibirsk**	**47.05**	**351**	⇓*i*P	**P**	**21 29 07.6**	**-1.6**
NVS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
MDJ	**Mudanjiang**	**47.32**	**34**	P	**P**	**21 29 11.1**	**-0.4**
MDJ				PP	PP	21 31 00.7	-1.3
MDJ				S	**S**	**21 36 01.2**	**-0.7**
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,35nm,2.7s,mb4.8						
MDJ				LR	LR		
	comp=N,251nm,19.3s,MS4.2						
MDJ				LR	LR		
	comp=E,81nm,16.9s,MS4.2						
MDJ				LR	LR		
	comp=Z,390nm,19.3s,MS4.4						
WRA	**Warramunga Arr**	**48.62**	**126**	*i* P	**P**	**21 29 16.2**	**-5.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	**Tennant Creek**	**48.62**	**126**	*e*P	**P**	**21 29 15.8**	**-6.1**
	comp=Z,10nm,0.9s,mb4.9						
CHKZ	**Chkalovo**	**48.90**	**342**	P	**P**	**21 29 22.6**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
CHKZ	**Chkalovo**	**48.90**	**342**	*e*P	**P**	**21 29 22.7**	**-1.0**
	comp=Z,24nm,0.6s,mb5.4						
BOD	**Bodaibo**	**51.57**	**13**	*e*P	**P**	**21 29 41.5**	**-2.4**
CLNS	**Chul'man**	**53.88**	**20**	*e*P	**P**	**21 29 58.6**	**-2.6**
CLNS				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,700nm,13.0s,MS4.9						
CLNS				MLR	MLR		
	comp=N,400nm,12.0s,MS4.7						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS4.7						
KIV	**Kislovodsk**	**56.87**	**318**	*e*P	**P**	**21 30 26.0**	**+3.0**
KIV				pmax	pmax		
	comp=N,2.0nm,0.9s						
KIV				pmax	pmax		
	comp=E,8.0nm,0.9s						
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KIV				MLR	MLR		
	comp=Z,218nm,19.0s,MS4.3						
KIV				MLR	MLR		
	comp=E,172nm,16.0s						
KMBO	**Kilima Mbogo**	**57.48**	**263**	*i* P	**P**	**21 30 26.8**	**-1.0**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	**Kilima Mbogo**	**57.48**	**263**	*e*P	**P**	**21 30 26.6**	**-1.2**
	comp=Z,9.9nm,1.0s,mb4.8						
SOKR	**Solikamsk**	**58.24**	**339**	⇓*e*P	**P**	**21 30 28.1**	**-4.3**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,870nm,21.0s,MS4.8						
YAK	**Yakutsk**	**59.43**	**19**	*e*P	**P**	**21 30 38.3**	**-2.4**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,204nm,14.8s						
YAK				pmax	pmax		
	comp=N,125nm,16.4s						
YAK				MLR	MLR		
	comp=N,121nm,14.0s,MS4.4						
YAK				MLR	MLR		
	comp=Z,165nm,14.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,167nm,17.0s,MS4.4						
OBN	**Obninsk**	**64.87**	**328**	*e*P	**P**	**21 31 14.2**	**-2.8**
OBN				*e*		21 31 46.1	
OBN				*e*		21 33 37.0	
OBN				*e*S	**S**	**21 39 56.0**	**+1.6**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
OBN				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.5						
MA2	**Magadan**	**66.24**	**28**	*i* P	**P**	**21 31 25.4**	**-0.3**
MA2				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.7						
TIXI	**Tiksi**	**66.65**	**11**	*c* *i*P	**P**	**21 31 26.5**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.6						
FINES	**FINESS Array B**	**72.18**	**332**	*i* P	**P**	**21 32 00.6**	**-1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OKC	**Ostrava-Krasne**	**74.53**	**319**	*e*P	**P**	**21 32 18.5**	**+2.3**
MORC	**Moravsky Berou**	**74.92**	**319**	*e*P	**P**	**21 32 18.6**	**+0.2**
	comp=Z,5.3nm,0.9s,mb4.5						
BILL	**Bilibino**	**75.53**	**22**	*e*P	**P**	**21 32 20.7**	**-0.9**
BILL				*e*	pP	21 32 30.4	-1.5
BILL				S	S	21 42 03.3	+4.7
BILL				*e*SS	SS	21 46 55.5	+3.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BILL	**Bilibino**	**75.53**	**22**	*e*P	**P**	**21 32 20.0**	**-1.6**
	comp=Z,4.4nm,1.1s,mb4.3						
DPC	**Dobruska-Polom**	**75.74**	**320**	*e*P	**P**	**21 32 24.2**	**+1.1**
KSP	**Ksiaz**	**75.80**	**320**	*e*P	**P**	**21 32 25.6**	**+2.2**
BOSA	**Boshof**	**75.90**	**238**	P	**P**	**21 32 26.1**	**+1.6**
	comp=Z,1.9nm,0.6s,mb4.2						
UPC	**Upice**	**75.95**	**320**	*e*P	**P**	**21 32 25.7**	**+1.4**
PRU	**Pruhonice**	**76.87**	**319**	*e*P	**P**	**21 32 29.1**	**-0.4**
PVCC	**Panska Ves**	**76.87**	**320**	*e*P	**P**	**21 32 28.3**	**-1.3**
BRG	**Berggiesshubel**	**77.28**	**320**	*e*P	**P**	**21 32 34.4**	**+2.5**
BRG				pmax	pmax		
	comp=Z,21nm,1.9s,mb4.7						
BRG	**Berggiesshubel**	**77.28**	**320**	*e*P	**P**	**21 32 34.4**	**+2.5**
	comp=Z,21nm,1.8s,mb4.8						
KHC	**Kasperske Hory**	**77.46**	**318**	*e*P	**P**	**21 32 32.8**	**-0.1**
CLL	**Collm**	**77.89**	**321**	P	**P**	**21 32 36.0**	**+0.8**
NKC	**Novy Kostel**	**78.22**	**320**	*e*P	**P**	**21 32 38.5**	**+1.5**
MOX	**Moxa**	**78.76**	**320**	*e*P	**P**	**21 32 40.0**	**+0.1**
MOX				pP	pP	21 32 50.0	-0.3
GRA1	**Grafenberg Arr**	**79.01**	**319**	*e*P	**P**	**21 32 41.8**	**+0.4**
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**79.01**	**319**	*e*P	**P**	**21 32 41.8**	**+0.4**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
GRF	**Grafenberg Arr**	**79.01**	**319**	*e*P	**P**	**21 32 41.8**	**+0.4**
	comp=Z,7.0nm,1.2s,mb4.5						
NB2	**NORSAR Subarra**	**79.20**	**331**	P	**P**	**21 32 39.3**	**-2.9**
	comp=Z,12nm,1.2s,mb4.7,baz=91,slow=5.6						
LPG	**La Plagne**	**82.19**	**315**	*e*P	**P**	**21 32 58.6**	**+0.3**
	comp=Z,18nm,0.7s,mb4.8						
IMA	**Indian Mountai**	**91.07**	**22**	*e*P	**P**	**21 33 40.2**	**-0.9**
	comp=Z,32nm,1.1s,mb5.6						
INK	**Inuvik**	**96.42**	**16**	P	**P**	**21 34 05.5**	**0.0**
	comp=Z,4.3nm,1.0s,mb4.8						
PLCA	**Paso Flores**	**145.11**	**201**	*e*PKP	PKPdf	21 40 12.3	-1.1

MAN 08 21:28:58.8, 13.32N×124.25E, h22^{km}, mb4.5, ML3.4, MS3.3, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.29**	**342**	*e*P	Pb	21 29 06.4	+1.0
PVCP				*e*S	Sb	21 29 12.8	+2.9
MMPH	**Masbate**	**1.13**	**212**	⇑*i*P	Pn	21 29 14.8	-4.7
MMPH				*i* S	Sb	21 29 26.5	-7.3
AUQP	**San Andres**	**1.53**	**270**	*e*P	Pn	21 29 25.4	+0.2
GQP	**Guinayangan**	**1.84**	**289**	⇓*e*P	Pn	21 29 29.2	-0.4
GQP				*e*S	Sn	21 29 53.9	+1.4
PLP	**Palo**	**2.26**	**161**	*e*P	Pn	21 29 34.2	-1.4
PLP				*i* S	Sn	21 30 01.5	-1.5
OCLP	**Ormoc**	**2.28**	**171**	*e*P	Pn	21 29 35.7	-0.2
BOAC	**Boac**	**2.34**	**274**	*e*P	Pn	21 29 35.1	-1.7
OTRP	**Odiongan**	**2.37**	**247**	*e*P	Pn	21 29 36.2	-1.0
KALP	**Kalibo**	**2.48**	**229**	*e*P	Pn	21 29 48.0	+9.3
POLP	**Polilio Island**	**2.64**	**302**	*e*P	Pn	21 29 43.9	+2.9
LLP	**Lapu-Lapu**	**3.00**	**185**	*e*P	Pn	21 29 45.7	-0.5
MSLP	**Maasin**	**3.22**	**169**	*e*P	Pn	21 29 49.9	+0.6
TBP	**Tagbilaran**	**3.63**	**186**	*e*P	Pn	21 29 50.6	-4.5
CUYO	**Cuyo Island**	**4.00**	**232**	*e*P	Pn	21 29 56.0	-4.4
CAUP	**Cauayan**	**4.30**	**327**	*e*P	Pn	21 30 05.0	+0.5
APYP	**Conner**	**5.36**	**328**	*e*P	Pn	21 30 20.1	+0.5
BUKP	**Musuan**	**5.47**	**171**	*e*P	Pn	21 30 22.1	+1.0
ABRA	**Dolores**	**5.49**	**322**	*e*P	Pn	21 30 22.3	+0.9

MAN 08 21:51:43.0, 12.78N×123.12E, h15^{km}, mb4.2, ML3.0, MS2.8, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.64**	**130**	⇑*e*P	Pb	21 52 01.5	+6.1
AUQP	**San Andres**	**0.70**	**321**	*e*P	Pb	21 51 56.4	+0.1
AUQP				*e*S	Sb	21 52 09.6	+4.1
RCP	**Roxas**	**1.26**	**197**	⇑*e*P	Pb	21 52 04.8	-1.2
PVCP	**Virac**	**1.29**	**51**	*e*P	Pb	21 52 05.4	-1.1
GQP	**Guinayangan**	**1.30**	**330**	⇓*e*P	Pb	21 52 06.0	-0.7
GQP				*e*S	Sb	21 52 24.0	+1.0
BOAC	**Boac**	**1.42**	**299**	*e*P	Pn	21 52 07.6	-0.8
BOAC				*e*S	Sb	21 52 26.9	+0.4
SJMP	**San Jose**	**1.98**	**261**	*e*P	Pn	21 52 16.6	+0.2
POLP	**Polilio Island**	**2.26**	**329**	*e*P	Pn	21 52 22.0	+1.7

NEIC 08 22:00:48.9, 35.95N×120.51W, h10^{km}, ML3.5(NCEDC), MW3.5(BRK), After NCEDC., Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LRV	**Little Rabbit**	**0.63**	**319**	*e*P	Pb	22 01 01.2	-0.3
SAO	**San Andreas Ge**	**1.11**	**317**	*e*P	Pb	22 01 08.7	-1.1
OMM	**Old Mammoth Mi**	**2.06**	**36**	*e*Pn	Pn	22 01 23.7	-0.4
CMB	**Columbia Colle**	**2.08**	**3**	*e*Pn	Pn	22 01 23.8	-0.6
SAC	**San Andreas**	**2.24**	**317**	*e*Pn	Pn	22 01 24.5	-2.1
DAC	**Darwin (Calif)**	**2.38**	**81**	*e*Pn	Pn	22 01 28.5	-0.1
MWC	**Mount Wilson**	**2.65**	**130**	*e*Pn	Pn	22 01 30.9	-1.5
NSHM	**Saint Helena R**	**3.06**	**327**	Pn	Pn	22 01 35.4	-3.0
MNV	**Mina**	**3.11**	**36**	*e*Pn	Pn	22 01 38.3	-0.7
TPH	**Tonopah**	**3.38**	**50**	*e*Pn	Pn	22 01 39.9	-2.9
WCN	**Washoe City**	**3.40**	**10**	*e*Pn	Pn	22 01 41.8	-1.3
OHCM	**Honcut**	**3.47**	**347**	Pn	Pn	22 01 43.3	-0.8
HOPS	**Hopland**	**3.66**	**327**	Pn	Pn	22 01 44.2	-2.6
PFO	**Pinyon Flat Ob**	**4.07**	**124**	*e*Pn	Pn	22 01 50.2	-2.4
NEN	**Nelson**	**4.61**	**92**	Pn	Pn	22 01 58.2	-2.2

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*CSEM **08** 22:18:33.8±0.2, 34.91N×2.86W, h5^{km}, MD2.8, Error ellipse: s-maj=4.2km s-min=3.6km az=159.0*
*CNRM **08** 22:18:33.8, 34.93N×2.58W, h5^{km}, MD2.8*
*MDD **08** 22:18:35.7±0.9, 34.94N×2.73W, h6^{km}±3^{km}, mb3.4/6, Error ellipse: s-maj=9.1km s-min=6.2km az=117.0, PRXIMO*
*NEIC **08** 22:18:36.3, 34.94N×2.99W, MG3.4(MDD), After MDD.*

ISC 08 22:18:35.0±0.6, 34.98N±0.04×2.83W±0.05, h6^{km}, n27, σ1ˢ25/41, Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAI	**Zaio**	**0.07**	**100**	P	**Pg**	**22 18 36.5**	**-0.3**
ZAI				S	**Sg**	**22 18 38.0**	**0.0**
ZAI	**Zaio**	**0.07**	**100**	*i* P	**Pg**	**22 18 36.5**	**-0.3**
EMLI	**Melilla**	**0.33**	**343**	P	**Pg**	**22 18 42.9**	**+1.2**
	32nm,0.1s,SNR=7.9						
EMEL	**Melilla**	**0.33**	**342**	P	**Pg**	**22 18 42.9**	**+1.2**
	32nm,0.1s,SNR=7.9						
EMEL				S	**Sg**	**22 18 48.1**	**+1.9**
	124nm,0.2s,SNR=7.9						
TAF	**Taforalt**	**0.38**	**116**	S	**Sg**	**22 18 54.0**	**+6.1**
TOU	**Touzarine**	**0.76**	**269**	P	**Pg**	**22 18 52.0**	**+1.9**
TOU				S	**Sg**	**22 19 04.0**	**+3.8**
TZK	**Tazeka**	**1.43**	**232**	*i* P	**Pn**	**22 19 00.0**	**-1.6**
TZK				*i* S	**Sb**	**22 19 21.0**	**+1.0**
EBER	**Berja**	**1.91**	**359**	P	**Pn**	**22 19 08.8**	**+0.3**
	5.9nm,0.4s,SNR=6.0						
EBER				S	**Sn**	**22 19 31.6**	**-1.5**
	6.7nm,0.4s,SNR=4.5						
EBER	**Berja**	**1.91**	**359**	P	**Pn**	**22 19 08.8**	**+0.3**
	5.9nm,0.4s,SNR=6.0						
EBER				S	**Sn**	**22 19 31.6**	**-1.6**
	6.7nm,0.4s,SNR=4.5						
EMIJ	**Mijas**	**2.23**	**316**	P	**Pn**	**22 19 12.4**	**-0.7**
EMIJ				S	**Sn**	**22 19 38.6**	**-2.7**
EMIJ	**Mijas**	**2.23**	**316**	P	**Pn**	**22 19 12.4**	**-0.7**
	0.2nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**22 19 39.8**	**-1.5**
	2.5nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**2.23**	**316**	P	**Pn**	**22 19 12.4**	**-0.7**
	0.2nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**22 19 38.6**	**-2.7**
	2.5nm,0.4s,SNR=7.9						
EQES	**Quesada**	**2.82**	**356**	P	**Pn**	**22 19 22.9**	**+1.4**
EQES				S	**Sn**	**22 19 57.0**	**+0.8**
EQES	**Quesada**	**2.82**	**356**	P	**Pn**	**22 19 22.9**	**+1.4**
	1.5nm,0.2s,SNR=12						
EQES				S	**Sn**	**22 19 57.0**	**+0.8**
	7.0nm,0.5s,SNR=11						
EQES	**Quesada**	**2.82**	**356**	P	**Pn**	**22 19 22.9**	**+1.4**
	1.5nm,0.2s,SNR=12						
EQES				S	**Sn**	**22 19 57.0**	**+0.7**
	7.0nm,0.5s,SNR=11						
ESPR	**Espera**	**3.09**	**308**	P	**Pn**	**22 19 23.8**	**-1.5**
	0.6nm,0.1s,SNR=4.0						
ESPR	**Espera**	**3.09**	**308**	P	**Pn**	**22 19 23.8**	**-1.5**
	0.6nm,0.1s,SNR=4.0						
EMUR	**La Murta**	**3.13**	**24**	P	**Pn**	**22 19 26.4**	**+0.5**
	3.1nm,0.4s,SNR=4.0						
EMUR	**La Murta**	**3.13**	**24**	P	**Pn**	**22 19 26.4**	**+0.5**
	3.1nm,0.4s,SNR=4.0						
EADA	**Adamuz**	**3.48**	**337**	P	**Pn**	**22 19 30.8**	**+0.1**
	1.3nm,0.4s,SNR=4.0						
EADA				S	**Sn**	**22 20 09.8**	**-3.0**
	2.0nm,0.5s,SNR=4.0						
EADA	**Adamuz**	**3.48**	**337**	P	**Pn**	**22 19 30.8**	**0.0**
	1.3nm,0.4s,SNR=4.0						
EADA				S	**Sn**	**22 20 09.8**	**-3.0**
	2.0nm,0.5s,SNR=4.0						
EMIN	**Mina Concepcio**	**4.16**	**313**	P	**Pn**	**22 19 39.7**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.16**	**313**	P	**Pn**	**22 19 39.7**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.77**	**349**	P	**Pn**	**22 19 49.2**	**0.0**
	0.8nm,0.3s,baz=172,slow=12,SNR=3.6						
ESDC	**Sonseca Array**	**4.77**	**349**	P	**Pn**	**22 19 49.2**	**0.0**
	0.8nm,0.3s,SNR=3.6						
EBAD	**Badajoz**	**5.04**	**320**	P	**Pn**	**22 19 51.9**	**-1.1**
	1.5nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**5.04**	**320**	P	**Pn**	**22 19 51.9**	**-1.1**

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*TEH **08** 22:20:37.2, 32.34N×49.69E, h10^{km}, Mn3.8*
*THR **08** 22:20:37.8±1.1, 32.73N×49.77E, h14^{km}±8^{km}, ML3.6*
*CSEM **08** 22:20:40.7±0.1, 32.72N×49.78E, h60^{km}, mb4.6/12, Error ellipse: s-maj=2.2km s-min=1.6km az=94.0*

ISC 08 22:20:38.3±0.3, 32.82N±0.03×49.52E±0.05, h14^{km}, n48, σ1ˢ35/53, mb4.6/12, 2C-3D, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGO	**Shushtar**	**0.93**	**221**	*e*PG	**Pg**	**22 20 57.0**	**-0.1**
SHGO				AML	AML	22 21 22.5	
	comp=N,899nm,0.1s						
SHGR	**Shooshtar-Gavs**	**0.93**	**221**	*e*PG	**Pg**	**22 20 57.0**	**-0.1**
SHGR				AML	AML	22 21 19.5	
	comp=N,1μm,0.5s						
ASAO	**Ashtian**	**1.78**	**14**	*e*PG	**Pg**	**22 21 10.4**	**-3.4**
ASAO				*e*SG	**Sg**	**22 21 35.9**	**-1.7**
ASAO				AML	AML	22 21 47.3	
	comp=N,586nm,0.6s						
ASAO	**Ashtian**	**1.78**	**14**	*e*Pg	**Pg**	**22 21 10.4**	**-3.5**
	SNR=90						
ASAO				*e*Sg	**Sg**	**22 21 35.9**	**-1.7**
	SNR=90						
IBRJ	**Borojen**	**1.81**	**125**	Pn	**Pn**	**22 21 03.8**	**-5.6**
IKOM	**Komasi**	**2.16**	**309**	Pn	**Pn**	**22 21 19.9**	**+5.5**
NASN	**Na'in**	**2.77**	**89**	*e*PN	**Pn**	**22 21 21.2**	**-1.9**
NASN				*e*SG	**Sn**	**22 21 58.1**	**+1.5**
IVIS	**Veys**	**2.80**	**308**	Pn	**Pn**	**22 21 27.7**	**+4.1**
IVRN	**Varamin**	**2.84**	**40**	Pn	**Pn**	**22 21 26.0**	**+1.8**
IVRN	**Varamin**	**2.84**	**40**	Sn	**Sn**	**22 22 03.1**	**+4.6**
IGHG	**Ghaleghazi**	**2.89**	**302**	Pn	**Pn**	**22 21 30.5**	**+5.7**
SNGE	**Sanandaj**	**2.90**	**322**	*e*PN	**Pn**	**22 21 28.8**	**+3.8**
SNGE				AML	AML	22 22 38.0	
	comp=N,236nm,0.7s						

IMHD	Mahdasht	3.01	18	Sn	Sn	22 22 09.8	+7.0
IMHD	Mahdasht	3.01	18	Pn	Pn	22 21 29.2	+2.6
IDHR	Dehrash	3.22	307	Pn	Pn	22 21 32.9	+3.4
IDMV	Damavand	3.45	36	Pn	Pn	22 21 34.4	+1.6
DAMV	Damavand	3.46	35	*e*PN	Pn	22 21 33.4	+0.4
DAMV				AML	AML	22 22 27.7	
	comp=N,97nm,0.5s						
IAFJ	Afjeh	3.53	30	Pn	Pn	22 21 35.7	+1.7
IAFJ	Afjeh	3.53	30	Sn	Sn	22 22 20.4	+4.5
ISAD	Sadrabad	3.64	103	Pn	Pn	22 21 33.1	-2.4
IFIR	Firoozkooh	3.89	43	Sn	Sn	22 22 27.1	+2.2
IFIR	Firoozkooh	3.89	43	Pn	Pn	22 21 39.9	+0.9
RST	Umm Al-Ruwaisa	3.95	214	*e*P	Pn	22 21 41.2	+1.3
RST				*e*S	Sn	22 22 28.1	+1.6
NAY	Al-Naaiem	4.06	209	*e*P	Pn	22 21 42.0	+0.5
NAY				*e*S	Sn	22 22 30.2	+0.9
RDF	Al-Radifah	4.23	204	*e*P	Pn	22 21 44.5	+0.6
RDF				*e*S	Sn	22 22 34.0	+0.3
QRN	Al-Qurain	4.29	199	*e*P	Pn	22 21 44.7	0.0
QRN				*e*S	Sn	22 22 34.5	-0.6
BHD	Baghdad	4.34	277	*e*P	Px	22 22 01.0	
IBAF	Bafgh	5.27	102	Pn	Pn	22 21 55.1	-3.5
GRMI	Germi	6.12	348	*e*PN	Pn	22 22 11.9	+1.3
MSL	Mosul	6.34	305	*e*P	Px	22 22 34.0	
KBA	Koelnbreinsper	30.87	308	⇓*i*P	P	22 26 56.8	+0.6
	comp=N,7.4nm,0.6s,mb4.7						
WTTA	Wattenberg	32.05	308	⇑*i*P	P	22 27 06.5	-0.1
	comp=N,13nm,1.0s,mb4.7						
WATA	Walderalm	32.11	308	⇓*i*P	P	22 27 06.6	-0.5
	comp=N,6.3nm,0.6s,mb4.6						
SQTA	Sankt Quirin	32.33	308	⇑*i*P	P	22 27 08.4	-0.6
	comp=N,9.0nm,0.6s,mb4.8						
MOTA	Moosalm	32.42	308	⇓*i*P	P	22 27 09.4	-0.4
	comp=N,4.5nm,0.8s,mb4.3						
SBF	Sospel	34.47	301	*e*P	P	22 27 27.1	-0.5
	comp=N,36nm,0.9s,mb5.0						
LPG	La Plagne	35.10	304	*e*P	P	22 27 32.5	-0.5
	comp=N,27nm,1.2s,mb4.8						
LPL	La Plagne	35.11	304	*e*P	P	22 27 32.7	-0.4
	comp=N,7.1nm,0.7s,mb4.4						
CDF	Champ du Feu	35.16	309	*e*P	P	22 27 33.0	-0.5
CABF	La Chapelle	35.68	306	*e*P	P	22 27 37.6	-0.3
	comp=N,27nm,0.9s,mb4.9						
MEZF	Maizieres J'vi	36.63	309	*e*P	P	22 27 45.0	-0.9
SMF	Signal de Mont	37.22	305	*e*P	P	22 27 50.1	-0.8
BAIF	Baives	37.43	311	*e*P	P	22 27 51.4	-1.2
	comp=N,18nm,1.2s,mb4.5						
SSF	Saint Saulge	37.49	306	*e*P	P	22 27 52.0	-1.2
	comp=N,5.8nm,1.0s,mb4.4						
AVF	Avril sur Loir	37.57	306	*e*P	P	22 27 52.6	-1.2
	comp=N,9.0nm,1.0s,mb4.2						
BGF	Bois d'Agland	37.90	305	*e*P	P	22 27 56.1	-0.5
TCF	Toulx Ste Croi	38.32	305	*e*P	P	22 27 59.0	-1.2
CAF	Calviac	38.36	303	*e*P	P	22 27 59.4	-1.1

DJA 08 23:56:51.2±1.1**, 8.43S**×**116.50E, h15**^{km}**, ML4.9**/1**, 1C-3D, Error ellipse: s-maj=40.6km s-min=21.6km az=158.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	Kedomdong	0.39	262	*e*Pg	Pg	23 56 58.3	-1.1
KEDI				⇓*e*Sg	Sg	23 57 05.1	+0.3
RATI	Rata	1.00	253	⇓*e*Pn	Pn	23 57 08.6	-2.0
	2µm,0.2s						
RATI				⇓*e*Sn	Sn	23 57 20.6	-3.8
KELI	Kelakatan	2.00	276	⇑*e*Pn	Pn	23 57 22.9	-2.0
SRDI	Scrawed	2.33	269	*e*Pn	Pn	23 57 26.5	-3.2

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*JMA **09** 00:01:33.2±0.4, 33.94N×142.47E, h65^{km}, M3.6*

ISC 09 00:01:33.1±1.7**, 33.93N**±0.09×**142.5E**±0.1**, h73**^{km}±32^{km}**, n11, σ0^{s}52**/18**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.42	301	P	P	00 01 57.2	-0.5
BSO1				*e*S	S	00 02 16.1	+0.3
BSO3	Boso 3	1.83	299	P	P	00 02 03.5	+0.4
BSO3				*e*S	S	00 02 25.3	0.0
BSO4	Boso 4	2.05	302	P	P	00 02 06.9	+0.8
JHJ2	Mitsune	2.36	250	P	P	00 02 11.1	+0.7
JHJ2				*e*S	S	00 02 38.2	0.0
JIM2	Oshima 3	2.63	288	P	P	00 02 13.6	-0.7
JIM2				*e*S	S	00 02 44.0	-1.0
JIZS	Izushimoda	3.07	286	P	P	00 02 20.0	-0.4
JOD2	Odawara 2	3.08	296	P	P	00 02 20.1	-0.5
JOD2				*e*S	S	00 02 56.8	+0.3
JAG	Ashikaga	3.50	316	P	P	00 02 25.9	-0.6
JYN	Shimob	3.58	297	P	P	00 02 27.6	0.0
JYN				*e*S	S	00 03 09.6	+0.6
JRY	Ryogami san	3.59	306	P	P	00 02 27.5	-0.2
MAT	Matsushiro	4.35	308	P	P	00 02 39.0	+0.7
MAT				S	S	00 03 28.1	0.0

IDC 09 00:03:46.1±1.7**, 6.19N**×**92.42E, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.6**/17**, mbtmp3.5**/4**, ML3.8**/1**, Error ellipse: s-maj=54.9km s-min=32.2km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.75	27	Pn	P	00 07 04.7	-0.3
	0.1nm,0.3s,baz=230,slow=15,SNR=7.8						
SONM	Songino Array	43.18	14	P	P	00 11 47.8	-2.6
	0.3nm,0.6s,baz=206,slow=6.9,SNR=3.7						
WRA	Warramunga Arr	48.72	123	P	P	00 12 32.8	-1.9
	0.8nm,0.9s,baz=302,slow=9.2,SNR=3.4						
GERES	GERESS Array B	77.95	319	P	P	00 15 46.6	-1.1
	0.4nm,0.6s,baz=79,slow=5.0,SNR=6.1						

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*IDC **09** 00:10:31.5±10.0, 20.60S×175.48W, h94^{km}±92^{km}, mb4.0/13, mb1 4.2/14, mb1mx4.1/21, mbtmp4.3/14, ML4.7/1, Error ellipse: s-maj=33.6km s-min=21.3km az=172.0*

*NEIC **09** 00:10:45.7±3.8, 20.64S×175.63W, h221^{km}±35^{km}, mb4.4/8, Error ellipse: s-maj=16.8km s-min=12.3km az=149.0*

ISC 09 00:10:43.0±4.0**, 20.58S**±0.10×**175.7W**±0.1**, h207**^{km}±37^{km}**, n51, σ0^{s}70**/33**, mb4.0**/18**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	16.72	262	*e*P	P	00 14 27.0	+0.1
NOUC	Port Laguerre	16.85	262	*e*P	P	00 14 29.6	+1.2
URZ	Urewera	18.69	198	P	P	00 14 41.2	-6.6
	2.4nm,0.3s,baz=40,slow=2.2,SNR=7.8						
URZ				S	S	00 18 05.5	+0.4
	0.9nm,0.3s,baz=60,slow=23,SNR=6.5						
RPZ	Rata Peaks	25.59	203	P	P	00 15 53.3	-1.5
	6.3nm,0.4s,mb4.6,baz=150,slow=1.3,SNR=8.0						
CTA	Charters Tower	35.64	264	*e*P	P	00 17 23.4	+0.4
	3.6nm,0.3s,mb4.4						
CTA	Charters Tower	35.64	264	P	P	00 17 22.9	-0.2
	4.5nm,0.3s,mb4.4,baz=88,slow=11,SNR=11						
CTAO	Charters Tower	35.64	264	*e*P	P	00 17 23.3	+0.3
	4.5nm,0.4s,mb4.3						
STKA	Stephens Creek	39.71	245	*e*P	P	00 17 56.5	-0.3
	3.6nm,0.7s,mb3.9						
STKA	Stephens Creek	39.71	245	P	P	00 17 56.0	-0.8
	3.7nm,0.6s,mb4.0,baz=89,slow=8.8,SNR=8.4						
ASAR	Alice Springs	46.61	256	P	P	00 18 51.8	-0.5
	4.4nm,0.7s,mb3.9,baz=94,slow=8.2,SNR=38						
WB2	Warramunga Arr	46.73	262	*e*P	P	00 18 52.7	-0.5
WRAB	Tennant Creek	46.73	262	*e*P	P	00 18 53.0	-0.2
	9.6nm,0.9s,mb4.1						
WRA	Warramunga Arr	46.74	262	P	P	00 18 52.3	-1.0
	3.3nm,0.7s,mb3.8,baz=96,slow=5.1,SNR=37						
KAKA	Kakadu	50.15	270	*e*P	P	00 19 19.4	-0.1
	9.5nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	55.17	262	*e*P	P	00 19 58.2	+1.7
	11nm,1.4s,mb4.2						
QSPA	South Pole Qui	69.49	180	P	P	00 21 31.0	+0.7
	6.5nm,0.6s,mb4.4						
SAO	San Andreas Ge	76.61	42	*e*P	P	00 22 12.1	-0.3
	7.8nm,1.0s,mb4.3						
YBH	Yreka Blue Hor	79.01	37	P	P	00 22 25.0	-0.5
	1.6nm,0.6s,mb3.8,baz=253,slow=4.7,SNR=7.5						
NVAR	Mina Array Bea	79.61	42	P	P	00 22 28.6	-0.1
	4.7nm,0.8s,mb4.2,baz=214,slow=7.6,SNR=26						
NEN	Nelson	80.27	46	*e*P	P	00 22 32.8	+0.5
TMUT	Trail Mountain	84.67	45	*e*P	P	00 22 55.9	+1.1
TXAR	Lajitas Array	85.28	56	P	P	00 22 57.7	-0.3
	2.2nm,0.8s,mb3.9,baz=217,slow=8.6,SNR=26						
TXAR	Lajitas Array	85.28	56	P	P	00 22 57.7	-0.4
GDL2	Guadalupe Moun	86.03	54	*e*P	P	00 23 02.1	+0.4
CPRX	Cap Rock	86.78	53	*e*P	P	00 23 05.9	+0.6
PDAR	Pinedale Array	87.54	42	P	P	00 23 07.6	-1.0
	0.6nm,0.8s,mb3.5,baz=207,slow=3.3,SNR=4.9						
PLCA	Paso Flores	87.64	133	P	P	00 23 09.0	0.0
	1.1nm,0.8s,mb3.7,baz=257,slow=5.0,SNR=3.6						
PLCA	Paso Flores	87.64	133	P	P	00 23 09.0	-0.1
ILAR	Eielson Array	87.92	12	P	P	00 23 10.0	+0.2
	0.9nm,0.9s,mb3.6,baz=224,slow=5.3,SNR=5.6						
INK	Inuvik	93.79	14	P	P	00 23 36.6	-0.4
	0.6nm,0.7s,mb3.8,baz=214,slow=3.6,SNR=3.6						
YKA	Yellowknife Ar	95.69	24	P	P	00 23 45.7	0.0
	0.7nm,1.0s,mb3.9,baz=241,slow=4.7,SNR=7.3						
YKA	Yellowknife Ar	95.69	24	P	P	00 23 45.7	0.0
AKASG	Malin Array Be	144.10	333	PKP	PKPdf	00 29 53.6	0.0
	1.4nm,0.6s,baz=38,slow=4.5,SNR=9.2						
BRTR	Keskin Array B	148.48	314	PKPbc	PKPdf	00 30 07.8	+6.5
	0.5nm,0.5s,baz=291,slow=24,SNR=4.3						
CLL	Collm	148.58	350	*i* PKP1	PKPdf	00 30 07.5	+6.5
CLL				*e*PKP2	PKPab	00 30 11.0	-0.4
CLL				*e*		00 30 37.0	
PRU	Pruhonice	149.55	347	*e*PKPbc	PKPdf	00 30 10.5	+7.9
GRA1	Grafenberg Arr	150.44	351	*e*PKP	PKPdf	00 30 13.1	+9.1
GRF	Grafenberg Arr	150.44	351	*e*PKP	PKPdf	00 30 13.1	+9.1
GIVF	Givet	150.54	359	*e*PKP1	PKPdf	00 30 12.4	+8.2
KHC	Kasperske Hory	150.56	348	*e*PKPbc	PKPdf	00 30 12.5	+8.3
BAIF	Baives	150.58	0	*e*PKP1	PKPdf	00 30 12.8	+8.6
GERES	GERESS Array B	150.81	347	PKPbc	PKPdf	00 30 13.1	+8.5
	2.4nm,0.9s,baz=45,slow=1.9,SNR=16						
FLN	La Foliniere	151.62	7	*e*PKP1	PKPdf	00 30 14.4	+8.6
	18nm,1.0s						
LDF	La Druitiere	151.82	6	*e*PKP1	PKPdf	00 30 14.8	+8.7
GRR	Gorron	151.94	7	*e*PKP1	PKPdf	00 30 15.2	+8.9
	7.6nm,0.5s						
QUIF	Quistinic	152.06	11	*e*PKP1	PKPdf	00 30 15.3	+8.8
	22nm,1.1s						
CDF	Champ du Feu	152.13	356	*e*PKP1	PKPdf	00 30 16.1	+10
	6.4nm,0.8s						
HAU	Haudompre	152.59	357	*e*PKP1	PKPdf	00 30 17.8	+11
SSF	Saint Saulge	153.58	1	*e*PKP1	PKPdf	00 30 20.0	+11
LPG	La Plagne	155.07	356	*e*PKP1	PKPdf	00 30 24.1	+14
ORIF	Oris-en-Rattie	155.69	357	*e*PKP1	PKPdf	00 30 24.8	+13
	9.5nm,0.9s						

CASC 09 00:30:09.8, 13.18N×**91.01W, MD4.0, ML3.7, mb7.5**(GCG)**, 2C-5D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	1.13	28	⇓*e*P	Pb	00 30 32.0	+0.1
IXG				*e*S	Sb	00 30 48.3	+1.3
IXG				AMP		00 31 05.7	
	comp=N,11µm,0.4s						
JAT	Jato	1.29	332	⇑*e*P	Pb	00 30 34.5	-0.1
JAT				*e*S	Sb	00 30 52.9	+1.3
JAT				AML	AML	00 31 00.5	
	comp=E,625nm,0.3s						
SBLS	San Blas	1.50	64	⇑*e*P	Pn	00 30 37.0	-1.1
SBLS				*e*S	Sb	00 31 00.1	+2.3
RTR	El Retiro	1.51	61	⇓*e*P	Pn	00 30 37.2	-0.9
SNJE	San Jose	1.53	63	*e*P	Pn	00 30 37.4	-1.0
NBG	Las Nubes	1.54	25	⇓*e*P	Pn	00 30 38.8	+0.1
NBG				*e*S	Sb	00 31 02.0	+2.9
NBG				AML	AML	00 31 09.1	
	comp=E,1µm,0.4s						
RBDL	Robledal	1.59	54	*e*P	Pn	00 30 38.6	-0.7
TP2	Tecpan 2	1.60	360	⇓*e*P	Pn	00 30 39.1	-0.3
TP2				*e*S	Sb	00 31 02.4	+1.8
TP2				AML	AML	00 31 06.2	
	comp=E,353nm,0.6s						
LFRS	El Faro	1.95	77	⇓*e*P	Pn	00 30 44.2	-0.2
LFRS				*e*S	Sn	00 31 11.4	+1.4
LCBS	La Ceiba	2.03	76	*e*P	Pn	00 30 45.0	-0.7
SNVI	San Vicente	2.16	78	*e*P	Pn	00 30 48.9	+1.4

DJA 09 00:32:54.5±1.0**, 9.09S**×**115.49E, h104**^{km}±8^{km}**, ML3.9**/1**, 2C-5D, Error ellipse: s-maj=49.6km s-min=10.8km az=179.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATI	Rata	0.36	7	⇓*e*Pg	P	00 33 09.9	-0.2
RATI				⇑*e*Sg	S	00 33 21.1	-0.6
KEDI	Kedomdong	0.86	46	⇓*e*Pg	P	00 33 13.5	-0.6
KEDI				⇑*e*Sg	S	00 33 26.6	-2.1
KELI	Kelakatan	1.31	311	⇓*e*Pn	P	00 33 19.1	0.0
	130nm,0.2s						
SRDI	Scrawed	1.46	294	⇓*e*Pn	P	00 33 19.9	-1.0
SRDI				⇓*e*Sn	S	00 33 39.2	-1.5

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*NEIC **09** 00:57:06.5±0.6, 3.14N×95.13E, h30^{km}, mb4.4/6, Error ellipse: s-maj=17.9km s-min=11.2km az=61.0*

*IDC **09** 00:57:09.8±7.9, 3.21N×95.19E, h57^{km}±71^{km}, mb3.7/12, mb1 3.9/13, mb1mx3.8/19, mbtmp4.0/13, ML4.1/1, Error ellipse: s-maj=34.8km s-min=16.6km az=52.0*

*BJI **09** 00:57:11.8, 4.05N×95.22E, h30^{km}, mb4.5*

ISC 09 00:57:04.5±0.6**, 3.11N**±0.10×**95.1E**±0.1**, h30**^{km}**, n29, σ0^{s}92**/29**, mb4.2**/23**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.71	14	P	P	01 00 48.1	+2.5
	0.3nm,0.3s,baz=208,slow=12,SNR=28						
KMI	Kunming	23.09	18	P	P	01 02 07.2	-1.7
KMI				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.6						
KMI	Kunming	23.09	18	P	P	01 02 07.2	-1.7
	comp=Z,3.0nm,1.1s,mb3.6						
JIRN	Jiri	25.86	342	*e*P	P	01 02 35.7	+0.3
	comp=Z,13nm,0.7s,mb4.6						
PKI	Pulchoki	26.03	340	*e*P	P	01 02 36.3	-0.8
	comp=Z,5.4nm,0.5s,mb4.3						
DMN	Daman	26.17	340	*e*P	P	01 02 38.4	+0.1
KKN	Kakani	26.27	340	*e*P	P	01 02 39.0	-0.3
	comp=Z,20nm,0.9s,mb4.6						
GKN	Gorkha	26.69	339	*e*P	P	01 02 43.1	-0.1
	comp=Z,17nm,0.7s,mb4.7						
LSA	Lhasa	26.71	352	*e*P	P	01 02 44.5	+1.2
	comp=Z,26nm,0.9s,mb4.8						
KOLN	Koldanda	26.87	337	*e*P	P	01 02 44.7	-0.1
	comp=Z,11nm,0.7s,mb4.5						
BJI	Beijing	41.42	25	P	P	01 04 51.4	+1.4
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.3						
BJI	Beijing	41.42	25	P	P	01 04 51.4	+1.4
	comp=Z,7.0nm,0.9s,mb4.3						
WRA	Warramunga Arr	44.82	122	P	P	01 05 17.8	-0.2
	comp=Z,1.1nm,0.8s,mb3.7,baz=299,slow=9.2,SNR=4.2						
WRA	Warramunga Arr	44.82	122	P	P	01 05 17.8	-0.2
SONM	Songino Array	45.60	11	P	P	01 05 23.4	-0.5
	comp=Z,2.7nm,0.9s,mb4.2,baz=190,slow=8.6,SNR=24						
SONM				PcP	PcP	01 07 03.2	+0.8
	comp=Z,0.8nm,0.5s,baz=198,slow=3.8,SNR=9.9						
ASAR	Alice Springs	46.21	127	P	P	01 05 28.8	-0.2
	comp=Z,0.8nm,0.9s,mb3.6,baz=299,slow=7.8,SNR=5.7						
CN2	Changchun	48.61	29	*e*P	P	01 05 47.5	0.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
BVAR	Borovoye Array	53.78	342	P	P	01 06 25.6	-0.8
	comp=Z,2.0nm,0.8s,mb4.1,baz=141,slow=9.5,SNR=13						
CHKZ	Chkalovo	54.27	342	*e*P	P	01 06 29.1	-0.9
	comp=Z,2.6nm,0.6s,mb4.3						
STKA	Stephens Creek	56.18	132	P	P	01 06 44.4	+0.1
	comp=Z,4.5nm,1.0s,mb4.5,baz=206,slow=6.6,SNR=2.9						
KMBO	Kilima Mbogo	57.99	267	P	P	01 06 59.0	+1.8
	comp=Z,0.8nm,0.8s,mb3.8,baz=57,slow=17,SNR=3.8						
BRTR	Keskin Array B	66.29	312	P	P	01 07 51.8	-0.7
	comp=Z,1.0nm,0.9s,mb3.8,baz=124,slow=10,SNR=3.6						
AKASG	Malin Array Be	72.48	323	P	P	01 08 29.2	-1.1
	comp=Z,1.9nm,0.8s,mb4.1,baz=88,slow=4.9,SNR=6.2						
FINES	FINESS Array B	77.35	333	P	P	01 08 57.9	-0.1
	comp=Z,1.5nm,0.5s,mb4.2,baz=96,slow=6.8,SNR=16						
KAF	Kangasniemi	77.45	333	*e*p	P	01 08 57.7	-0.8
	comp=Z,5.3nm,0.9s,mb4.5						
ARCES	ARCESS Array B	80.05	340	P	P	01 09 12.5	0.0
	comp=Z,2.3nm,0.6s,mb4.3,baz=90,slow=4.9,SNR=9.7						
ARCES	ARCESS Array B	80.05	340	P	P	01 09 12.5	0.0
GERES	GERESS Array B	82.01	319	P	P	01 09 24.9	+1.7
	comp=Z,0.5nm,0.5s,mb3.7,baz=124,slow=4.8,SNR=7.6						
HFS	Hagfors	83.03	330	P	P	01 09 28.4	+0.1
	comp=Z,1.1nm,0.5s,mb4.2,baz=90,slow=1.5,SNR=6.9						

IDC 09 01:00:10.5±44.0**, 15.90S**×**162.71E, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.9**/11**, mbtmp3.9**/3**, Error ellipse: s-maj=736.5km s-min=97.4km az=63.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	24.94	227	P	P	01 05 35.3	-1.6
	1.9nm,0.4s,baz=66,slow=8.8,SNR=6.3						
WRA	Warramunga Arr	27.27	257	P	P	01 05 57.0	-1.7
	0.6nm,0.5s,baz=86,slow=9.5,SNR=6.6						
ASAR	Alice Springs	28.14	249	P	P	01 06 04.7	-1.9
	0.6nm,0.4s,baz=76,slow=9.3,SNR=11						

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*IDC **09** 01:01:13.3±1.8, 2.20N×123.40E, mb4.1/4, mb1 4.3/4, mb1mx4.0/15, mbtmp4.1/4, Error ellipse: s-maj=248.7km s-min=25.0km az=70.0*

ISC 09 01:01:13.2±1.6**, 1.0N**±0.3×**120.2E**±0.8**, h33**^{km}**, n7, σ0^{s}52**/7**, mb4.0**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.68	165	*e*P	P	01 05 42.3	-0.2
	6.7nm,0.8s						
WRA	Warramunga Arr	24.96	147	P	P	01 06 34.4	-0.9
	3.4nm,0.5s,mb4.2,baz=336,slow=9.5,SNR=34						
WB2	Warramunga Arr	24.97	147	*e*P	P	01 06 35.8	+0.4
ASPA	Alice Springs	27.86	152	*e*P	P	01 07 02.1	0.0
ASAR	Alice Springs	27.86	152	P	P	01 07 02.0	-0.1
	1.3nm,0.4s,mb3.9,baz=336,slow=10,SNR=12						
STKA	Stephens Creek	38.43	150	P	P	01 08 34.5	+0.9
	3.2nm,0.7s,mb4.2,baz=336,slow=12,SNR=4.9						
SONM	Songino Array	48.20	348	P	P	01 09 52.5	-0.1
	0.5nm,0.6s,mb3.7,baz=167,slow=9.4,SNR=4.9						

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*BJI **09** 01:02:24.1, 2.17N×95.09E, h36^{km}, mB5.2, mb5.0, Ms5.2, Msz5.0*

*MOS **09** 01:02:25.2±1.1, 2.32N×95.14E, h33^{km}, mb5.4/30, MS4.9/10, Error ellipse: s-maj=13.4km s-min=6.2km az=107.1*

*IDC **09** 01:02:25.9±0.3, 2.31N×95.08E, h28^{km}±2^{km}, mb4.5/18, mb1 4.6/19, mb1mx4.6/21, mbtmp4.7/19, ML4.6/1, MS4.4/13, Ms1 4.5/13, ms1mx4.2/24, Error ellipse: s-maj=17.5km s-min=9.0km az=44.0*

*NEIC **09** 01:02:26.2±0.2, 2.28N×95.16E, mb5.0/40, Error ellipse: s-maj=6.4km s-min=4.4km az=48.0*

*HRVD **09** 01:02:26.2±0.3, 2.09N×95.05E, h12^{km}, MW5.0/61, Centroid moment Tensor Solution. LP body waves: s29,c45;Mantle waves: s61,c108; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.76±.14; M$_{\theta\theta}$-4.15±.10; M$_{\phi\phi}$1.39±.15; M$_{r\theta}$0.60±.33; M$_{\theta\phi}$1.68±.11; M$_{\phi r}$-1.02±.43; Best double couple: M$_0$4.016×10^{16} NP1: φ$_s$258°, δ46°, λ48°. NP2: φ$_s$131°, δ58°, λ125°. Principal axes: T 3.315, Plg60°, Azm95°; N 1.403, Plg29°, Azm290°; P -4.718, Plg7°, Azm196°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 09 01:02:24.4±0.2**, 2.28N**±0.04×**95.18E**±0.03**, h28**^{km}**, h28**^{km}±.4^{km}**:pP-P, n233, σ1^{s}03**/231**, mb5.0**/87**, MS4.8**/37**, 15C-9D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	6.26	68	P	Pn	01 03 57.3	-0.2
SNG	Songkhla	7.28	48	P	Pn	01 04 10.0	-1.7
	204nm,0.8s						
KGM	Kluang	8.14	92	P	P	01 04 23.5	-0.1
NST	Nakhon Sawan	14.17	20	P	P	01 05 44.0	-1.6
PALK	Pallekele	15.25	289	P	P	01 05 57.0	-2.8
	34nm,1.3s						
CM31	Chiang Mai Arr	16.49	13	*e*P	P	01 06 15.0	-0.6
	152nm,1.0s						
CMAR	Chiang Mai Arr	16.49	13	Pn	P	01 06 14.3	-1.3
	0.8nm,0.3s,baz=206,slow=11,SNR=32						
CMAR				LR	LR	01 13 00.6	
	comp=Z,3µm,19.4s,baz=195,slow=38						
NANT	Nan	17.28	18	P	P	01 06 24.0	-1.6
CHRT	Chiangrai	18.05	14	P	P	01 06 31.5	-3.7
	260nm,1.3s						
MDRS	Chennai	18.25	307	*e*	P	01 06 42.0	+4.3
MDRS				*e*		01 09 46.0	
MDRS				*e*		01 11 37.0	
VIS	Vishakhapatnam	19.25	324	*e*P	P	01 06 48.1	-1.5
VIS				*e*		01 07 13.2	
	comp=Z,156nm,2.1s						
KOD	Kodaikanal	19.29	295	*e*P	P	01 06 51.0	+1.0
BWNR	Bhubaneshwar	20.11	334	*e*P	P	01 06 57.2	-1.8
BWNR				*e*		01 07 07.8	
	comp=Z,172nm,1.7s						
CAL	Calcutta	21.21	342	*e*P	P	01 07 11.2	+1.0
CAL				*e*S	S	01 11 04.0	+4.4
KKM	Kota Kinabalu	21.31	79	P	P	01 07 11.9	+0.5
AGT	Agartala	21.81	350	⇑*i*P	P	01 07 17.0	+0.7
AGT				*i*		01 09 05.0	
QIZ	Qiongzhong	21.98	40	P	P	01 07 18.5	+0.4
QIZ				AP		01 07 28.0	
QIZ				S	S	01 11 15.9	+1.9
QIZ				AMB	AMB		
	comp=Z,219nm,5.5s						
QIZ				LR	LR		
	comp=N,3µm,17.9s,MS5.0						
QIZ				LR	LR		
	comp=E,4µm,13.9s,MS5.0						
QIZ	Qiongzhong	21.98	40	*e*P	P	01 07 18.3	+0.2
	comp=E,95nm,1.4s,mb5.0						
HYB	Hyderabad	22.20	314	⇓*e*P	P	01 07 20.5	+0.2
	comp=E,70nm,1.0s,mb5.0						
HYB				*e*S	S	01 11 28.0	+10
HYB	Hyderabad	22.20	314	⇓*i*P	P	01 07 20.5	+0.2
	comp=E,70nm,1.0s,mb5.0						
TSM	Tawau	22.74	84	P	P	01 07 27.9	+2.1
MNGI	Mangalore	22.76	299	*i* P	P	01 07 27.0	+1.1
MNGI				*i*		01 11 44.2	
BOK	Bokaro	23.20	338	*e*P	P	01 07 30.3	+0.2
BOK				*e*		01 07 45.9	
	comp=Z,245nm,1.4s						
BOK				*e*S	S	01 11 44.2	+8.1
SHL	Shillong	23.37	352	*e*P	P	01 07 32.0	+0.3
SHL				*e*S	S	01 11 45.0	+6.0
BLSP	Bilaspur	23.45	328	*e*P	P	01 07 33.2	+0.6
KMI	Kunming	23.85	17	⇑P	P	01 07 38.6	+2.2
KMI				AP		01 07 47.4	
KMI				XP		01 07 51.3	
KMI				PP	PP	01 08 15.1	+4.9
KMI				S	S	01 11 53.9	+6.6
KMI				XS		01 12 06.8	
KMI				AMB	AMB		
	comp=Z,125nm,1.5s,mb5.1						
KMI				AMB	AMB		
	comp=Z,631nm,3.3s						
KMI				LR	LR		
	comp=N,3µm,19.0s,MS4.9						
KMI				LR	LR		
	comp=E,3µm,15.5s,MS4.9						
KMI				LR	LR		
	comp=Z,3µm,16.4s,MS4.9						
KMI	Kunming	23.85	17	*e*P	P	01 07 38.6	+2.2
KMI				*e*S	S	01 11 53.9	+6.6
KMI	Kunming	23.85	17	⇑P	P	01 07 38.6	+2.2
	comp=Z,125nm,1.5s,mb5.1						
KMI				pP		01 07 47.4	
KMI				sP		01 07 51.3	
KMI				PP	PP	01 08 15.1	+4.9
KMI				S	S	01 11 53.9	+6.6
KMI				sS		01 12 06.8	
KMI				SS	SS	01 12 47.5	+10
KMI				LR	LR		
	comp=Z,3µm,16.4s,MS4.9						
NGP	Nagpur	24.47	321	*e*P	P	01 07 45.5	+3.0
	comp=Z,137nm,2.4s,mb5.0						
NGP				*e*		01 12 14.1	
GOA	Goa	24.81	303	*e*	P	01 07 55.2	+9.4
	comp=Z,56nm,1.0s,mb5.0						
GOA				*e*		01 12 25.4	
KAD	Karad	25.46	307	*e*	P	01 07 58.0	+6.0
AKL	Akola	25.48	317	*i* S	S	01 12 17.6	+2.7

GYA	**Guiyang**	**26.45**	**24**⇑	*i*P	**P**	**01 08 01.0**	**0.0**
GYA				AP	pP	01 08 09.9	+0.6
GYA				XP	sP	01 08 14.5	+1.4
GYA				PP	PP	01 08 47.2	+2.7
GYA				S	**S**	**01 12 34.3**	**+3.4**
GYA				XS		01 12 50.4	
GYA				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.8						
GYA				AMB	AMB		
	comp=Z,230nm,3.3s						
GYA				LR	LR		
	comp=N,3µm,16.8s,MS5.0						
GYA				LR	LR		
	comp=E,2µm,13.8s,MS5.0						
GYA				LR	LR		
	comp=Z,3µm,17.1s,MS4.9						
JIRN	**Jiri**	**26.66**	**342**	*e*P	**P**	**01 08 03.6**	**+0.6**
	comp=Z,204nm,0.7s,mb5.7						
PKI	**Pulchoki**	**26.83**	**341**	*e*P	**P**	**01 08 04.5**	**0.0**
	comp=Z,601nm,1.7s,mb5.9						
DMN	**Daman**	**26.97**	**340**	*e*P	**P**	**01 08 06.1**	**+0.3**
	comp=Z,242nm,1.2s,mb5.6						
BHPL	**Bhopal**	**27.02**	**322**	*e*P	**P**	**01 08 04.1**	**-2.2**
BHPL				*e*		01 08 21.3	
	comp=Z,63nm,1.3s						
KKN	**Kakani**	**27.07**	**340**	*e*P	**P**	**01 08 06.5**	**-0.3**
	comp=Z,559nm,1.5s,mb5.9						
GKN	**Gorkha**	**27.49**	**339**	*e*P	**P**	**01 08 10.3**	**-0.2**
	comp=Z,502nm,1.3s,mb5.9						
LSA	**Lhasa**	**27.54**	**352**	*e*P	**P**	**01 08 12.4**	**+1.5**
	comp=Z,452nm,1.4s,mb5.9						
KOLN	**Koldanda**	**27.66**	**337**	*e*P	**P**	**01 08 11.8**	**-0.3**
	comp=Z,113nm,0.8s,mb5.5						
CD2	**Chengdu**	**29.61**	**15**	P	**P**	**01 08 29.0**	**-0.6**
CD2				AP	pP	01 08 37.0	-1.0
CD2				S	**S**	**01 13 24.0**	**+2.3**
CD2				AMB	AMB		
	comp=Z,174nm,1.4s,mb5.6						
LGTI	**Lohaghat**	**30.52**	**334**	*e*P	**P**	**01 08 37.7**	**0.0**
ENH	**Enshi**	**30.97**	**25**	*e*P	**P**	**01 08 40.1**	**-1.5**
	comp=Z,48nm,1.4s,mb5.1						
NDI	**New Delhi**	**31.34**	**329**	*e*P	**P**	**01 08 42.0**	**-3.0**
DDI	**Dehra Dun**	**32.27**	**332**	*e*P	**P**	**01 08 52.4**	**-0.6**
WHN	**Wuhan**	**33.46**	**31**	P	**P**	**01 09 02.5**	**-0.9**
WHN				S	**S**	**01 14 25.3**	**+3.2**
WHN				LR	LR		
	comp=Z,6µm,14.0s,MS5.5						
SDNR	**Sundarnagar**	**33.76**	**331**	*e*P	**P**	**01 09 06.8**	**+0.8**
XAN	**Xi'an**	**34.10**	**21**	P	**P**	**01 09 07.9**	**-1.0**
XAN				S	**S**	**01 14 31.7**	**-0.3**
XAN				AMB	AMB		
	comp=Z,27nm,1.2s,mb5.0						
XAN				LR	LR		
	comp=N,1µm,15.9s,MS4.9						
XAN				LR	LR		
	comp=E,1µm,16.3s,MS4.9						
XAN				LR	LR		
	comp=Z,3µm,17.2s,MS5.0						
LZH	**Lanzhou**	**34.58**	**12**	*e*P	**P**	**01 09 11.9**	**-1.1**
LZH				AP	pP	01 09 20.5	-1.0
LZH				XP	sP	01 09 23.8	-1.3
LZH				PP	PP	01 10 30.0	+0.3
LZH				*e*S	**S**	**01 14 40.2**	**+0.9**
LZH				XS		01 14 56.0	
LZH				SS	SS	01 16 56.0	+4.2
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,200nm,4.2s						
LZH				LR	LR		
	comp=E,2µm,12.0s						
LZH				LR	LR		
	comp=Z,3µm,17.5s						
LZH	**Lanzhou**	**34.58**	**12**	*e*P	**P**	**01 09 11.9**	**-1.1**
LZH				*e*S	**S**	**01 14 40.2**	**+0.9**
LZH	**Lanzhou**	**34.58**	**12**	*e*P	**P**	**01 09 11.9**	**-1.1**
	comp=Z,30nm,1.0s,mb5.2						
LZH				pP	pP	01 09 20.5	-1.0
LZH				sP	sP	01 09 23.8	-1.3
LZH				PP	PP	01 10 30.0	+0.3
LZH				*e*S	**S**	**01 14 40.2**	**+0.9**
LZH				sS		01 14 56.0	
LZH				SS	SS	01 16 56.0	+4.2
LZH				LR	LR		
	comp=Z,3µm,17.5s,MS5.1						
THN	**Thein Dam**	**35.13**	**331**	*e*P	**P**	**01 09 15.9**	**-1.9**
FITZ	**Fitzroy Crossi**	**36.20**	**125**	*e*P	**P**	**01 09 26.7**	**-0.2**
	comp=Z,22nm,0.9s,mb5.1						
NJ2	**Nanjing**	**37.06**	**34**	*e*P	**P**	**01 09 34.3**	**+0.2**
NJ2				AP	pP	01 09 44.1	+1.5
NJ2				XP	sP	01 09 47.6	+1.5
NJ2				PP	PP	01 11 01.1	+0.2
NJ2				PPP	PPP	01 11 22.3	+1.2
NJ2				S	**S**	**01 15 21.0**	**+3.4**
NJ2				XS		01 15 38.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,520nm,5.2s						
NJ2				LR	LR		
	comp=N,3µm,14.6s,MS5.4						
NJ2				LR	LR		
	comp=E,4µm,14.4s,MS5.4						
NJ2				LR	LR		
	comp=Z,3µm,12.2s,MS5.3						
GTA	**Gaotai**	**37.20**	**6**	*e*P	**P**	**01 09 34.9**	**-0.2**
GTA				AP	pP	01 09 43.7	+0.1
GTA				XP	sP	01 09 48.0	+0.8
GTA				PP	PP	01 11 00.8	-1.7
GTA				PCP	PcP	01 11 55.4	+0.3
GTA				S	**S**	**01 15 17.4**	**-2.2**
GTA				XS		01 15 33.4	
GTA				SCS	ScS	01 19 45.5	+0.3
GTA				AMB	AMB		
	comp=Z,15nm,1.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,204nm,7.2s						
GTA				LR	LR		
	comp=N,1µm,13.7s,MS4.8						
GTA				LR	LR		
	comp=E,535nm,15.2s,MS4.8						
GTA				LR	LR		
	comp=Z,1µm,14.8s,MS4.9						
SSE	**Sheshan**	**37.75**	**38**	*e*P	**P**	**01 09 40.3**	**+0.5**
SSE				AP	pP	01 09 50.2	+1.9
SSE				S	**S**	**01 15 30.1**	**+2.0**
SSE				XS		01 15 47.2	
SSE				SCS	ScS	01 19 43.2	-5.2
SSE				AMB	AMB		
	comp=Z,11nm,1.6s,mb4.3						
SSE				AMB	AMB		
	comp=Z,69nm,2.6s,mb4.9						
SSE				LR	LR		
	comp=N,2µm,15.6s,MS5.1						
SSE				LR	LR		
	comp=E,1µm,15.7s,MS5.1						
SSE				LR	LR		
	comp=Z,2µm,15.3s,MS4.9						
SSE	**Sheshan**	**37.75**	**38**	*e*P	**P**	**01 09 40.3**	**+0.5**
	comp=Z,11nm,1.6s,mb4.3						
SSE				pP	pP	01 09 50.2	+1.9
SSE				S	**S**	**01 15 30.1**	**+2.0**
SSE				sS		01 15 47.2	
SSE				SS	SS	01 18 16.8	+13
SSE				ScS	ScS	01 19 43.2	-5.2
SSE				LR	LR		
	comp=Z,2µm,15.3s,MS4.9						
KAKA	**Kakadu**	**39.88**	**113**	*e*P	**P**	**01 09 57.0**	**-0.8**
	comp=Z,12nm,0.6s,mb4.8						
JOW	**Kunigami**	**40.02**	**49**	LR	LR	01 27 45.6	
	comp=Z,312nm,18.4s,MS4.2,baz=184,slow=38						
BTO	**Baotou**	**40.44**	**17**	*e*P	**P**	**01 10 02.8**	**+0.6**
BTO				S	**S**	**01 16 12.2**	**+3.6**
BTO				AMB	AMB		
	comp=Z,17nm,1.7s,mb4.5						
NWAO	**Narrogin (SRO)**	**40.76**	**151**	*e*P	**P**	**01 10 05.3**	**+0.5**
NWAO	**Narrogin (SRO)**	**40.76**	**151**	pP	pP	01 10 14.3	+0.9
	comp=Z,9.2nm,0.6s,baz=322,slow=7.4,SNR=3.5						
KSH	**Kashi**	**40.98**	**337**	*e*P	**P**	**01 10 07.0**	**+0.5**
KSH				*e*AP	pP	01 10 17.0	+1.9
KSH				*e*XP	sP	01 10 21.0	+2.4
KSH				*e*PP	PP	01 11 44.9	+0.9
KSH				*e*SCP		01 15 53.3	
KSH				*e*PCS		01 16 00.4	
KSH				*e*S	**S**	**01 16 15.7**	**-0.9**
KSH				*e*PS		01 16 24.0	
KSH				*e*XS		01 16 33.2	
KSH				*e*SS	SS	01 19 15.4	+0.9
KSH				*e*SCS	ScS	01 20 06.3	-0.8
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
KSH				AMB	AMB		
	comp=Z,180nm,4.2s						
KSH				LR	LR		
	comp=N,720nm,6.2s						
KSH				LR	LR		
	comp=E,970nm,8.6s						
HHC	**Hu-ho-hao-te**	**41.15**	**19**	⇑P	**P**	**01 10 09.5**	**+1.6**
HHC				AP	pP	01 10 18.7	+2.2
HHC				XP	sP	01 10 23.3	+3.3
HHC				PP	PP	01 11 49.8	+3.9
HHC				PCP	PcP	01 12 03.0	-4.6
HHC				SCP		01 15 54.4	
HHC				S	**S**	**01 16 24.3**	**+5.2**
HHC				XS		01 16 38.7	
HHC				SS	SS	01 19 24.2	+6.4
HHC				SCS	ScS	01 20 10.9	+2.8
HHC				AMB	AMB		
	comp=Z,38nm,1.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,468nm,9.6s						
HHC				LR	LR		
	comp=N,2µm,18.0s,MS5.2						
HHC				LR	LR		
	comp=E,2µm,19.2s,MS5.2						
HHC				LR	LR		
	comp=Z,2µm,20.4s,MS5.0						
BJT	**Baijiatuau**	**42.12**	**24**	*e*P	**P**	**01 10 17.2**	**+1.3**
	comp=Z,94nm,1.2s,mb5.3						
ULHL	**Ulahol**	**43.26**	**339**	P	**P**	**01 10 26.9**	**+1.7**
	SNR=7.6						
KZA	**Kyzart**	**43.47**	**338**	P	**P**	**01 10 28.5**	**+1.6**
	SNR=8.1						
UCH	**Uchtor**	**43.87**	**338**	P	**P**	**01 10 31.2**	**+1.0**
	SNR=21						
TKM2	**Tokmak 2**	**44.08**	**339**	P	**P**	**01 10 33.0**	**+1.1**
	SNR=18						
KBK	**Karagaybulak**	**44.08**	**338**	P	**P**	**01 10 33.1**	**+1.2**
	SNR=38						
AML	**Almayashu**	**44.10**	**337**	P	**P**	**01 10 33.0**	**+0.9**
	SNR=28						
AAK	**Ala-Archa**	**44.23**	**338**	P	**P**	**01 10 34.5**	**+1.4**
	SNR=10						
AAK	**Ala-Archa**	**44.23**	**338***c*	*i*P	**P**	**01 10 33.1**	**0.0**
AAK				pmax	pmax		
	comp=Z,42nm,2.4s,mb4.7						
AAK				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.6						
AAK	**Ala-Archa**	**44.23**	**338**	*e*P	**P**	**01 10 32.2**	**-0.9**
	comp=Z,202nm,1.8s,mb5.5						
WRA	**Warramunga Arr**	**44.32**	**122**	P	**P**	**01 10 33.2**	**-0.9**
	comp=Z,29nm,1.1s,mb4.9,baz=299,slow=9.0,SNR=55						
WRA				pP	pP	01 10 43.5	+0.8
	comp=Z,16nm,0.8s,baz=302,slow=8.7,SNR=14						
WRAB	**Tennant Creek**	**44.32**	**122***c*	*i*P	**P**	**01 10 34.5**	**+0.3**
WRAB	**Tennant Creek**	**44.32**	**122**	*e*P	**P**	**01 10 34.3**	**+0.2**
	comp=Z,102nm,1.3s,mb5.4						
WRAB				*e*pP	pP	01 10 44.8	+2.1
WB2	**Warramunga Arr**	**44.33**	**122**	*e*P	**P**	**01 10 34.3**	**+0.1**
FRU	**Bishkek**	**44.36**	**338**	*e*P	**P**	**01 10 35.0**	**+0.9**
FRU				*i*	pP	01 10 44.0	+1.3
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.0						
CHMS	**Chumysh**	**44.45**	**339**	P	**P**	**01 10 35.5**	**+0.6**
	SNR=9.6						
EKS2	**Erkin-Say**	**44.52**	**337**	P	**P**	**01 10 36.1**	**+0.6**
	SNR=12						
USP	**Ospenovka**	**44.77**	**339**	P	**P**	**01 10 37.5**	**0.0**
	SNR=32						
ASPA	**Alice Springs**	**45.65**	**127**	*e*P	**P**	**01 10 45.3**	**+0.6**
ASAR	**Alice Springs**	**45.66**	**127**	P	**P**	**01 10 44.2**	**-0.5**
	comp=Z,6.5nm,1.1s,mb4.5,baz=298,slow=6.8,SNR=22						
ASAR				pP	pP	01 10 54.1	+0.8
	comp=Z,4.2nm,0.7s,baz=297,slow=7.8,SNR=8.3						
ASAR				PcP	PcP	01 12 24.0	+0.9
	comp=Z,1.2nm,0.8s,baz=301,slow=5.3,SNR=2.9						
ASAR				pPcP		01 12 32.0	
	comp=Z,1.9nm,0.8s,baz=300,slow=2.5,SNR=4.4						
ASAR				LR	LR	01 29 52.0	
	comp=Z,286nm,20.3s,MS4.2,baz=300,slow=36						
MKAR	**Makanchi Array**	**45.73**	**348**	*e*P	**P**	**01 10 45.0**	**0.0**
MKAR				pmax	pmax		
	comp=Z,61nm,0.8s						
KS15	**Wonju Array Si**	**46.12**	**37**	*e*P	**P**	**01 10 49.0**	**+0.7**
SONM	**Songino Array**	**46.40**	**10**	P	**P**	**01 10 50.3**	**0.0**
	comp=Z,38nm,1.2s,mb5.2,baz=198,slow=7.8,SNR=75						
SONM				pP	pP	01 10 59.2	+0.3
	comp=Z,17nm,0.8s,baz=194,slow=5.6,SNR=20						
SONM				PcP	PcP	01 12 26.0	+0.7
	comp=Z,4.0nm,1.1s,baz=194,slow=3.0,SNR=2.5						
SONM				pPcP		01 12 34.0	
	comp=Z,5.7nm,0.8s,baz=188,slow=3.5,SNR=5.6						
ULN	**Ulaanbaatar**	**46.55**	**11**	*e*P	**P**	**01 10 50.7**	**-0.8**
	comp=Z,131nm,1.9s,mb5.5						
SNY	**Shenyang**	**46.91**	**29**	⇑P	**P**	**01 10 54.2**	**-0.2**
SNY				AP	pP	01 11 02.5	-0.5
SNY				PP	PP	01 12 45.0	+0.7
SNY				S	**S**	**01 17 46.6**	**+4.0**
SNY				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
SNY				LR	LR		
	comp=N,1µm,15.9s,MS5.1						
SNY				LR	LR		
	comp=E,720nm,15.6s,MS5.1						
SNY				LR	LR		
	comp=Z,1µm,15.3s,MS4.9						
ZAK	**Zakamensk**	**48.42**	**7**	*e*P	**P**	**01 11 06.2**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
CN2	**Changchun**	**49.30**	**29**	*e*P	**P**	**01 11 12.5**	**-0.5**
CN2				*e*AP	pP	01 11 21.8	+0.2
CN2				*e*S	**S**	**01 18 16.5**	**+0.3**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
CN2				AMB	AMB		
	comp=Z,190nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,16.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,17.0s,MS4.9						
MOY	**Mondy**	**49.45**	**5**	*e*P	**P**	**01 11 14.5**	**+0.5**
MOY				pmax	pmax		
	comp=Z,63nm,3.0s						
TLY	**Talaya**	**49.74**	**7**	P	**P**	**01 11 17.1**	**+0.9**
	comp=Z,212nm,1.0s,mb6.1,SNR=15						
TLY	**Talaya**	**49.74**	**7**⇑	*i*P	**P**	**01 11 17.1**	**+0.9**
TLY				*e*	pP	01 11 25.9	+1.0
TLY				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
TLY				MLR	MLR		
	comp=Z,818nm,16.0s,MS4.8						
TLY	**Talaya**	**49.74**	**7**	*e*P	**P**	**01 11 17.0**	**+0.8**
	comp=Z,8.9nm,0.8s,mb4.8						
TLY				*e*pP	pP	01 11 25.6	+0.7
KURK	**Kurchatov**	**50.25**	**346**	P	**P**	**01 11 20.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,82nm,1.4s,mb5.6						
KURK	**Kurchatov**	**50.25**	**346**	*e*P	**P**	**01 11 19.9**	**-0.3**
	comp=Z,148nm,1.4s,mb5.8						
KURK				*e*pP	pP	01 11 28.4	-0.5
IRK	**Irkutsk**	**50.37**	**7**	*e*P	**P**	**01 11 21.0**	**0.0**
IRK				pmax	pmax		
	comp=Z,116nm,1.9s,mb5.6						
HIA	**Hailar**	**51.30**	**20**	*e*P	**P**	**01 11 28.3**	**+0.1**
	comp=Z,46nm,1.1s,mb5.3						
HIA				*e*pP	pP	01 11 37.5	+0.6
MDJ	**Mudanjiang**	**51.95**	**31**	P	**P**	**01 11 33.8**	**+0.7**
MDJ				AP	pP	01 11 39.8	-2.0
MDJ				XP	sP	01 11 42.6	-2.6
MDJ				PCP	PcP	01 12 45.8	+0.3
MDJ				PP	PP	01 13 32.3	+0.6
MDJ				SCP		01 16 41.1	
MDJ				PCS		01 16 43.3	
MDJ				S	**S**	**01 18 56.6**	**+3.8**
MDJ				SCS	ScS	01 21 20.8	+3.0
MDJ				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,147nm,5.4s						
MDJ				LR	LR		
	comp=N,1µm,16.5s,MS5.2						
MDJ				LR	LR		
	comp=E,1µm,16.5s,MS5.2						
MDJ				LR	LR		
	comp=Z,740nm,20.0s,MS4.7						
MDJ	**Mudanjiang**	**51.95**	**31**	*e*P	**P**	**01 11 34.0**	**+0.9**
	comp=Z,7.6nm,0.8s,mb4.7						
MDJ				*e*pP	pP	01 11 42.6	+0.7
PMG	**Port Moresby**	**53.07**	**103**	P	**P**	**01 11 41.5**	**-0.4**
	comp=Z,14nm,0.8s,mb4.9,baz=310,slow=9.7,SNR=3.1						
NVS	**Novosibirsk**	**53.29**	**351**⇑	*i*P	**P**	**01 11 41.4**	**-1.6**
NVS				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.5						
NVS				pmax	pmax		
	comp=N,71nm,1.5s						
NVS				pmax	pmax		
	comp=E,40nm,1.4s						
BVA0	**Borovoye Array**	**54.59**	**342**	*i* P	**P**	**01 11 51.2**	**-1.3**
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BVAR	**Borovoye Array**	**54.59**	**342**	P	**P**	**01 11 50.9**	**-1.6**
	comp=Z,7.4nm,0.7s,mb4.8,baz=149,slow=8.6,SNR=55						
BVAR				pP	pP	01 11 59.7	-1.5
	comp=Z,16nm,0.8s,baz=143,slow=7.4,SNR=27						
CTA	**Charters Tower**	**54.79**	**116**	*e*P	**P**	**01 11 54.6**	**+0.1**
	comp=Z,9.6nm,1.0s,mb4.8						
CTA	**Charters Tower**	**54.79**	**116**	P	**P**	**01 11 54.3**	**-0.2**
	comp=Z,9.1nm,0.8s,mb4.8,baz=286,slow=8.9,SNR=7.9						
CTA				pP	pP	01 12 03.7	+0.5
	comp=Z,4.2nm,0.7s,baz=292,slow=6.8,SNR=3.2						
CTA				LR	LR	01 36 25.4	
	comp=Z,352nm,18.1s,MS4.5,baz=47,slow=37						
CTAO	**Charters Tower**	**54.79**	**116**	*e*P	**P**	**01 11 54.6**	**+0.2**
	comp=Z,16nm,1.3s,mb4.9						
CTAO				*e*pP	pP	01 12 03.6	+0.4
CHKZ	**Chkalovo**	**55.08**	**342**	P	**P**	**01 11 55.1**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
CHKZ	**Chkalovo**	**55.08**	**342**	*e*P	**P**	**01 11 54.8**	**-1.3**
CHKZ				*e*P		01 11 55.1	
CHKZ				*e*pP	pP	01 12 03.7	-1.1
STKA	**Stephens Creek**	**55.58**	**132**	*e*P	**P**	**01 11 59.8**	**-0.3**
	comp=Z,6.5nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**55.58**	**132**	P	**P**	**01 11 59.9**	**-0.1**
	comp=Z,37nm,1.3s,mb5.2,baz=312,slow=7.6,SNR=9.9						
STKA				pP	pP	01 12 07.8	-0.9
	comp=Z,21nm,1.1s,baz=4.4,slow=11,SNR=6.7						
STKA				LR	LR	01 40 08.4	
	comp=Z,363nm,18.1s,MS4.5,baz=116,slow=41						
KLR	**Kul'dur**	**56.22**	**28**	*e*P	**P**	**01 12 01.0**	**-3.4**
KLR				*e*	pP	01 12 10.4	-2.8
KLR				*e*S	**S**	**01 19 54.0**	**+3.6**
KLR				MLR	MLR		
	comp=E,800nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.3						
BOD	**Bodaibo**	**57.35**	**12**	*e*P	**P**	**01 12 11.6**	**-0.7**
BOD				pmax	pmax		
	comp=Z,115nm,2.2s,mb5.5						
KMBO	**Kilima Mbogo**	**58.01**	**267**	*i* P	**P**	**01 12 15.6**	**-2.0**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMBO	**Kilima Mbogo**	**58.01**	**267**	P	**P**	**01 12 16.2**	**-1.4**
	comp=Z,2.2nm,0.9s,mb4.2,baz=67,slow=11,SNR=3.2						
KMBO				pP	pP	01 12 25.8	-0.6
	comp=Z,3.1nm,0.8s,baz=63,slow=9.6,SNR=6.3						
KMBO				LR	LR	01 33 49.0	
	comp=Z,362nm,19.3s,MS4.5,baz=95,slow=32						
KMBO	**Kilima Mbogo**	**58.01**	**267**	P	**P**	**01 12 16.2**	**-1.4**
KMBO				pP	pP	01 12 25.8	-0.6
KMBO				LR	LR	01 33 49.0	
GNI	**Garni**	**59.12**	**316**	LR	LR	01 42 01.2	
	comp=Z,125nm,19.6s,MS4.0,baz=259,slow=40						
CLNS	**Chul'man**	**59.34**	**18**	*e*P	**P**	**01 12 20.8**	**-5.4**
CLNS				*e**PP	pP	01 12 32.4	-2.7
CLNS				*e*		01 13 10.8	
CLNS				*e*S	**S**	**01 20 23.8**	**-7.3**
CLNS				*e*SS	SS	01 24 28.2	+0.7
CLNS				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
CLNS				pmax	pmax		
	comp=E,3.0nm,1.0s						
CLNS				smax			
	comp=N,189nm,11.7s						
CLNS				smax			
	comp=Z,132nm,13.0s						
CLNS				smax			
	comp=E,74nm,10.9s						
CLNS				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.6						
CLNS				MLR	MLR		
	comp=N,2µm,14.0s,MS5.3						
CLNS				MLR	MLR		
	comp=E,300nm,13.0s,MS5.3						
TI2	**Plekhanov**	**59.82**	**318**	*e*P	**P**	**01 12 29.0**	**-0.8**
YSS	**Yuzh-Sakhalins**	**60.62**	**35**⇓	*e*P	**P**	**01 12 34.5**	**-0.6**
YSS				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.6						
SVE	**Sverdlovsk**	**60.95**	**339**	*e*P	**P**	**01 12 36.0**	**-1.2**
SVE				*e*		01 13 17.9	
SVE				pmax	pmax		
	comp=Z,50nm,2.0s,mb5.3						
KIV	**Kislovodsk**	**62.18**	**320**	*e*P	**P**	**01 12 44.2**	**-1.5**
KIV				*e*		01 14 57.2	
KIV				*e*PPP	PPP	01 16 27.9	-6.1
KIV				*e*S	**S**	**01 21 16.5**	**+8.9**
KIV				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.4						
ASF	**Jabal al Asfar**	**62.20**	**305**	P	**P**	**01 12 46.2**	**+0.2**
	comp=Z,3.6nm,0.8s,mb4.5,baz=251,slow=5.8,SNR=3.9						
ASF				pP	pP	01 12 53.0	-1.9
	comp=Z,12nm,1.0s,baz=335,slow=2.6,SNR=6.2						
GOF	**Gofitskoye**	**62.45**	**321**	*e*P	**P**	**01 12 52.5**	**+5.0**
SOC	**Sochi**	**63.97**	**318**	*e*P	**P**	**01 12 53.7**	**-3.9**
SOC				*e*		01 13 36.3	
SOC				*e*		01 15 12.8	
SOC				*e*PPP	PPP	01 16 45.1	-6.9
SOC				*e*S	**S**	**01 21 26.3**	**-3.8**
SOC				*e*		01 22 44.6	
SOC				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.5						
SOC				pmax	pmax		
	comp=N,24nm,0.9s						
SOC				pmax	pmax		
	comp=E,27nm,1.0s						
SOKR	**Solikamsk**	**64.36**	**339**⇓	*i*P	**P**	**01 12 57.6**	**-2.2**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,520nm,21.0s,MS4.7						
YAK	**Yakutsk**	**64.97**	**17***d*	*i*P	**P**	**01 13 03.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,72nm,1.9s,mb5.4						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.4						
BRTR	**Keskin Array B**	**66.89**	**313**	P	**P**	**01 13 14.4**	**-2.0**
	comp=Z,7.2nm,1.1s,mb4.6,baz=135,slow=6.4,SNR=16						
BRTR				pP	pP	01 13 22.8	-2.6
	comp=Z,11nm,0.9s,baz=132,slow=7.7,SNR=18						
VRSR	**Storozhevoye**	**67.53**	**326**	*e*P	**P**	**01 13 17.8**	**-2.4**
VRSR				*e**PP	pP	01 13 25.8	-3.3
VRSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
VRSR				pmax	pmax		
	comp=E,8.0nm,1.0s						
MOS	**Moscow**	**70.38**	**330**	*e*P	**P**	**01 13 35.3**	**-2.4**
MOS				*e*	pP	01 13 45.5	-1.1
MOS				*e*		01 13 56.0	
MOS				*e*		01 16 08.6	
MOS				*e*PPP	PPP	01 17 55.7	-0.2
MOS				pmax	pmax		
	comp=Z,72nm,1.9s,mb5.3						
MOS				MLR	MLR		
	comp=Z,800nm,23.7s,MS4.9						

OBN	**Obninsk**	**70.65**	**329**	⇓*e*P	**P**	**01 13 38.1**	**-1.3**
OBN				*e*		01 16 23.6	
OBN				*e*SS	SS	01 27 18.7	-5.2
OBN				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.2						
MA2	**Magadan**	**71.25**	**26**	⇑*i*P	**P**	**01 13 42.7**	**-0.2**
MA2				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
MA2				MLR	MLR		
	comp=Z,700nm,20.0s,MS4.9						
KIS	**Kishinev**	**72.36**	**319**	*e*P	**P**	**01 13 47.0**	**-2.8**
KIS				*e*	pP	01 13 55.0	-3.7
KIS				*e*		01 14 08.0	
PET	**Petropavlovsk**	**72.48**	**35**	*e*P	**P**	**01 13 49.6**	**-0.8**
PET				*e*	pP	01 13 58.9	-0.4
PET				*e*		01 14 05.2	
PET				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
PET				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
PET				pmax	pmax		
	comp=Z,100nm,16.7s						
PET				MLR	MLR		
	comp=Z,400nm,23.0s,MS4.6						
PET				MLR	MLR		
	comp=Z,400nm,17.1s						
PET	**Petropavlovsk**	**72.48**	**35**	*e*P	**P**	**01 13 49.5**	**-0.9**
	comp=Z,9.7nm,0.5s,mb5.0						
TIXI	**Tiksi**	**72.49**	**11**	⇑*i*P	**P**	**01 13 49.1**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,851nm,14.0s,MS5.2						
LBTB	**Lobatse**	**72.56**	**243**	P	**P**	**01 13 51.3**	**-0.2**
	comp=Z,9.9nm,1.2s,mb4.6,baz=115,slow=8.7,SNR=4.7						
LBTB				pP	pP	01 13 59.5	-0.9
	comp=Z,16nm,0.9s,baz=101,slow=5.7,SNR=15						
LBTB	**Lobatse**	**72.56**	**243**	*e*P	**P**	**01 13 51.8**	**+0.4**
	comp=Z,16nm,0.9s,mb5.0						
LBTB				*e*pP	pP	01 13 59.5	-0.9
IDI	**Anoyia**	**72.64**	**306**	P	**P**	**01 13 51.3**	**-0.4**
	comp=Z,15nm,0.6s,mb5.1,baz=95,slow=6.2,SNR=10.0						
IDI				pP	pP	01 14 00.4	-0.2
	comp=Z,31nm,0.8s,baz=90,slow=8.3,SNR=4.3						
AKASG	**Malin Array Be**	**73.18**	**323**	P	**P**	**01 13 53.1**	**-1.4**
	comp=Z,2.4nm,0.6s,mb4.3,baz=86,slow=4.8,SNR=12						
AKASG				pP	pP	01 14 01.7	-1.7
	comp=Z,6.8nm,0.8s,baz=88,slow=4.4,SNR=9.8						
MAW	**Mawson**	**73.32**	**192**	LR	LR	01 42 15.0	
	comp=Z,219nm,18.1s,MS4.5,baz=65,slow=33						
VRI	**Vrincioaia**	**73.46**	**317**	⇑P	**P**	**01 13 56.6**	**+0.3**
BOSA	**Boshof**	**73.58**	**239**	P	**P**	**01 13 55.5**	**-1.8**
	comp=Z,5.9nm,1.1s,mb4.4						
BOSA				*e*pP	pP	01 14 03.9	-2.4
MLR	**Muntele Rosu**	**73.90**	**317**	⇑P	**P**	**01 13 59.2**	**+0.4**
BURAR	**Bucovina Array**	**74.89**	**319**	⇑P	**P**	**01 14 05.2**	**+0.7**
BZS	**Buzias**	**76.90**	**316**	⇓P	**P**	**01 14 15.3**	**-0.6**
KWP	**Kalwaria**	**76.95**	**320**	*e*P	**P**	**01 14 16.8**	**+0.7**
KWP				*e*	pP	01 14 24.5	-0.7
KWP	**Kalwaria**	**76.95**	**320**	*e*P	**P**	**01 14 16.8**	**+0.7**
KWP				*e*pP	pP	01 14 19.3	-5.8
KWP				*e*PcP	PcP	01 14 24.5	-3.0
KWP	**Kalwaria**	**76.95**	**320**	*e*P	**P**	**01 14 16.8**	**+0.7**
KWP				*e*pP	pP	01 14 19.3	-5.9
KWP				*e*PcP	PcP	01 14 24.4	-3.0
KOLS	**Kolonicke sedl**	**77.09**	**320**	*i* P	**P**	**01 14 17.7**	**+0.8**
KOLS				*i* pP	pP	01 14 25.7	-0.2
CRVS	**Cervenica-Dubn**	**77.61**	**320**	*i* P	**P**	**01 14 20.5**	**+0.7**
CRVS				*i* pP	pP	01 14 29.8	+1.0
SUW	**Suwalki**	**77.63**	**325**	*e*P	**P**	**01 14 18.6**	**-1.2**
SUW				*e*	pP	01 14 27.7	-1.1
SUW	**Suwalki**	**77.63**	**325**	*e*P	**P**	**01 14 18.6**	**-1.2**
SUW				*e*pP	pP	01 14 20.6	-8.2
SUW				*e*PcP	PcP	01 14 27.7	-2.6
SUW	**Suwalki**	**77.63**	**325**	*e*P	**P**	**01 14 18.6**	**-1.2**
SUW				*e*pP	pP	01 14 20.6	-8.2
SUW				*e*PcP	PcP	01 14 27.7	-2.6
FINES	**FINESS Array B**	**78.11**	**333**	P	**P**	**01 14 21.1**	**-1.1**
	comp=Z,5.5nm,1.0s,mb4.4,baz=108,slow=6.0,SNR=9.5						
FINES				pP	pP	01 14 31.0	-0.3
	comp=Z,10nm,0.8s,baz=107,slow=5.8,SNR=9.5						
FINES				LR	LR	01 56 07.5	
	comp=Z,315nm,18.3s,MS4.7,baz=90,slow=41						
KECS	**Kecovo**	**78.17**	**319**	*i* pP	pP	01 14 33.5	+1.6
NIE	**Niedzica**	**78.44**	**320**	*e*P	**P**	**01 14 24.7**	**+0.4**
PSZ	**Piszkesteto**	**78.46**	**318**	*e*P	**P**	**01 14 24.5**	**+0.1**
	comp=Z,18nm,1.1s,mb4.9						
PSZ	**Piszkesteto**	**78.46**	**318**	⇓*e*P	**P**	**01 14 24.8**	**+0.3**
OJC	**Ojcow**	**78.91**	**321**	*e*P	pP	01 14 35.2	-0.7
OKC	**Ostrava-Krasne**	**79.90**	**320**	*e*P	**P**	**01 14 32.6**	**+0.3**
OKC				*e*pP	pP	01 14 40.6	-0.7
MORC	**Moravsky Berou**	**80.28**	**320**	*e*P	**P**	**01 14 33.8**	**-0.5**
	comp=Z,27nm,1.8s,mb4.9						
ZST	**Bratislava**	**80.36**	**318**	*i* P	**P**	**01 14 34.9**	**+0.2**
ZST				*i* pP	pP	01 14 43.8	0.0
ARCES	**ARCESS Array B**	**80.84**	**340**	P	**P**	**01 14 37.2**	**+0.3**
	comp=Z,4.4nm,0.7s,mb4.5,baz=90,slow=2.4,SNR=8.4						
ARCES				pP	pP	01 14 46.3	+0.4
	comp=Z,29nm,1.1s,baz=94,slow=4.9,SNR=8.8						
ARCES	**ARCESS Array B**	**80.84**	**340**	P	**P**	**01 14 37.2**	**+0.3**
ARCES				pP	pP	01 14 46.3	+0.4
BILL	**Bilibino**	**80.88**	**21**	⇓*e*P	**P**	**01 14 37.4**	**+0.3**
BILL				pmax	pmax		
	comp=Z,12nm,1.6s,mb4.6						
BILL				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.3						
DPC	**Dobruska-Polom**	**81.14**	**320**	*e*P	**P**	**01 14 39.4**	**+0.6**
DPC				*e*pP	pP	01 14 47.5	-0.4
KSP	**Ksiaz**	**81.22**	**321**	*e*P	**P**	**01 14 39.1**	**-0.1**
KSP				*e*pP	pP	01 14 48.4	+0.1
KSP	**Ksiaz**	**81.22**	**321**	*e*P	**P**	**01 14 40.4**	**+1.2**
KSP				*e*PcP	PcP	01 14 47.8	+2.0
BOJS	**Bojanci**	**81.31**	**316**	*e*P	**P**	**01 14 40.2**	**+0.4**
BOJS				*e*pP	pP	01 14 48.9	0.0
UPC	**Upice**	**81.35**	**321**	*e*P	**P**	**01 14 39.9**	**0.0**
UPC				*e*pP	pP	01 14 49.4	+0.4
RPZ	**Rata Peaks**	**81.40**	**135**	pP	pP	01 14 49.6	+0.2
	comp=Z,8.4nm,0.8s,baz=111,slow=16,SNR=3.1						
LJU	**Ljubljana**	**81.87**	**316**	*e*P	**P**	**01 14 43.6**	**+0.9**
LJU				*e*pP	pP	01 14 52.0	+0.2
PRU	**Pruhonice**	**82.23**	**320**	*e*P	**P**	**01 14 45.0**	**+0.5**
PRU				*e*pP	pP	01 14 53.7	+0.1
PVCC	**Panska Ves**	**82.27**	**321**	*e*P	**P**	**01 14 44.5**	**-0.2**
PVCC				*e*pP	pP	01 14 53.9	+0.1
AQU	**L'Aquila**	**82.39**	**312**	*e*P	**P**	**01 14 46.1**	**+0.6**
	comp=Z,70nm,1.2s,mb5.5						
AQU				*e*pP	pP	01 14 55.2	+0.6
GEC2	**GERESS Array S**	**82.67**	**319**	*e*P	**P**	**01 14 47.8**	**+1.0**
GEC2				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
GEC2	**GERESS Array S**	**82.67**	**319**	*e*P	**P**	**01 14 47.8**	**+1.0**
	comp=Z,14nm,0.9s,mb5.0						
GERES	**GERESS Array B**	**82.67**	**319**	P	**P**	**01 14 46.2**	**-0.6**
	comp=Z,3.9nm,0.8s,mb4.5,baz=104,slow=5.5,SNR=35						
GERES				pP	pP	01 14 55.6	-0.3
	comp=Z,12nm,0.9s,baz=104,slow=5.5,SNR=21						
BRG	**Berggiesshubel**	**82.70**	**321**	*e*P	**P**	**01 14 47.7**	**+0.8**
BRG				*i*	pP	01 14 56.2	+0.2
BRG				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
BRG	**Berggiesshubel**	**82.70**	**321**	*e*P	**P**	**01 14 47.7**	**+0.8**
	comp=Z,19nm,1.3s,mb5.0						
BRG				*i*	pP	01 14 56.2	+0.2
KHC	**Kasperske Hory**	**82.78**	**319**	*e*P	**P**	**01 14 47.9**	**+0.6**
KHC				*e*pP	pP	01 14 55.8	-0.6
ARV	**Arcevia**	**82.80**	**313**	*e*P	**P**	**01 14 48.1**	**+0.6**
FSSB	**Fossombrone**	**82.93**	**314**	*e*P	**P**	**01 14 48.5**	**+0.3**
WET	**Wettzell**	**83.24**	**319**	*e*P	**P**	**01 14 50.7**	**+1.0**
WET				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
WET	**Wettzell**	**83.24**	**319**	*e*P	**P**	**01 14 50.7**	**+1.0**
	comp=Z,6.0nm,0.9s,mb4.6						
CLL	**Collm**	**83.33**	**321**	*i* P	pP	01 14 58.7	-0.5
CLL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
CLL	**Collm**	**83.33**	**321**	*i* *PP	pP	01 14 58.7	-0.5
NKC	**Novy Kostel**	**83.60**	**320**	*e*P	**P**	**01 14 52.1**	**+0.6**
NKC				*e*pP	pP	01 15 00.6	0.0
SFI	**Santa Sofia**	**83.62**	**314**	*e*P	**P**	**01 14 53.1**	**+1.3**
PGD	**Poggio Sodo**	**83.70**	**314**	*e*P	**P**	**01 14 52.6**	**+0.3**
HFS	**Hagfors**	**83.78**	**330**	P	**P**	**01 14 52.2**	**0.0**
	comp=Z,36nm,1.3s,mb5.3,baz=56,slow=5.3,SNR=5.8						
HFS				pP	pP	01 15 01.5	+0.2
	comp=Z,7.7nm,0.7s,baz=117,slow=6.6,SNR=6.5						
CTI	**Castel Tesino**	**83.87**	**316**	*e*P	**P**	**01 14 53.7**	**+0.7**
MOX	**Moxa**	**84.16**	**321**	*e*P	pP	01 15 03.2	-0.3
MOX				pmax	pmax		
	comp=Z,27nm,1.9s,mb5.0						
MOX	**Moxa**	**84.16**	**321**	*i* P	**P**	**01 14 55.5**	**+1.2**
	comp=Z,logA/T=1.1,mb5.0						
MOX				pP	pP	01 15 03.0	-0.5
FUR	**Furstenfeldbru**	**84.24**	**318**	*e*P	**P**	**01 14 55.4**	**+0.6**
GRA1	**Grafenberg Arr**	**84.35**	**320**	*e*P	**P**	**01 14 56.3**	**+1.0**
	comp=Z,14nm,0.9s,mb5.1						
GRA1				*e*pP	pP	01 15 04.9	+0.4
GRF	**Grafenberg Arr**	**84.35**	**320**	*e*P	**P**	**01 14 56.3**	**+1.0**
GRF				*e**PP	pP	01 15 04.9	+0.4
GRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
GRF	**Grafenberg Arr**	**84.35**	**320**	*e*P	**P**	**01 14 56.3**	**+1.0**
	comp=Z,14nm,0.9s,mb5.1						
GRF				*e*pP	pP	01 15 04.9	+0.4
BRMO	**Bormio**	**84.77**	**316**	*e*P	**P**	**01 14 58.2**	**+0.7**
CLZ	**Clausthal**	**85.00**	**322**	*e*P	**P**	**01 14 59.7**	**+1.2**
	comp=Z,11nm,0.9s,mb5.0						
NB2	**NORSAR Subarra**	**85.08**	**331**	P	**P**	**01 14 58.3**	**-0.4**
	comp=Z,19nm,1.2s,mb5.1,baz=94,slow=5.6						
NB2	**NORSAR Subarra**	**85.08**	**331**	P	**P**	**01 14 58.3**	**-0.4**
	baz=94,slow=5.9						
NOA	**NORSAR Array B**	**85.08**	**331**	P	**P**	**01 14 58.8**	**+0.1**
	comp=Z,3.0nm,1.0s,mb4.4,baz=95,slow=5.2,SNR=3.1						
NOA				pP	pP	01 15 07.4	-0.5
	comp=Z,4.9nm,0.9s,baz=96,slow=5.3,SNR=7.2						
NOA				LR	LR	01 58 17.6	
	comp=Z,194nm,18.4s,MS4.5,baz=270,slow=39						
TNS	**Taunus Mts**	**86.16**	**320**	*e*P	**P**	**01 15 05.7**	**+1.3**
BFO	**Black Forest**	**86.21**	**318**	*e*P	**P**	**01 15 05.2**	**+0.6**
BFO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
BFO	**Black Forest**	**86.21**	**318**	*e*P	**P**	**01 15 05.2**	**+0.6**
	comp=Z,5.0nm,0.9s,mb4.7						
VNDA	**Vanda**	**87.28**	**168**	pP	pP	01 15 19.5	+1.1
	comp=Z,6.3nm,1.2s,baz=304,slow=7.3,SNR=5.2						
VNDA				LR	LR	01 52 09.9	
	comp=Z,326nm,18.2s,MS4.8,baz=299,slow=34						
VNDA	**Vanda**	**87.28**	**168**	P	**P**	**01 15 09.6**	**+0.3**
	comp=Z,7.3nm,1.1s,mb4.8						
LPG	**La Plagne**	**87.28**	**315**	*e*P	**P**	**01 15 10.1**	**+0.2**
	comp=Z,22nm,1.0s,mb5.0						
TNA	**Tin City**	**90.80**	**24**	*e*P	**P**	**01 15 26.2**	**+0.1**
	comp=Z,4.1nm,1.3s,mb4.6						
ESDC	**Sonseca Array**	**95.59**	**310**	pP	pP	01 15 58.3	+0.5
	comp=Z,2.4nm,0.9s,baz=50,slow=5.6,SNR=5.9						
ILAR	**Eielson Array**	**99.49**	**23**	PP	PP	01 20 12.6	+0.8
	comp=Z,0.9nm,1.1s,baz=194,slow=5.6,SNR=5.0						
ILAR				LR	LR	02 09 03.9	
	comp=Z,221nm,18.5s,MS4.7,baz=242,slow=40						
DBIC	**Dimbokro**	**99.69**	**277**	LR	LR	01 57 54.0	
	comp=Z,205nm,19.7s,MS4.6,baz=64,slow=33						
YKA	**Yellowknife Ar**	**111.57**	**14**	PP	PP	01 21 41.6	-0.3
	comp=Z,0.3nm,0.5s,baz=336,slow=7.5,SNR=8.2						
YKA				PKKPbc		01 31 51.1	
	comp=Z,0.3nm,0.8s,baz=142,slow=3.4,SNR=3.9						
YKA				PKKPab		01 32 00.7	
	comp=Z,0.7nm,0.8s,baz=142,slow=3.3,SNR=14						
BOZ	**Bozeman (W)**	**126.68**	**23**	*e*PKPdf	PKPdf	01 21 28.2	-2.3
ULM	**Lac du Bonnet**	**126.82**	**9**	PKP	PKPdf	01 21 24.6	-6.0
	comp=Z,2.4nm,1.0s,baz=357,slow=2.7,SNR=4.7						
ULM				pPKP		01 21 36.1	
	comp=Z,2.9nm,0.8s,baz=346,slow=3.7,SNR=4.2						
NVAR	**Mina Array Bea**	**129.06**	**34**	PKP	PKPdf	01 21 32.8	-2.6
	comp=Z,0.6nm,0.6s,baz=280,slow=0.2,SNR=3.9						
NVAR				pPKP		01 21 42.2	
	comp=Z,1.8nm,0.8s,baz=307,slow=1.4,SNR=3.2						
PDAR	**Pinedale Array**	**129.91**	**24**	PKP	PKPdf	01 21 31.4	-5.4
	comp=Z,0.8nm,0.9s,baz=270,slow=1.5,SNR=6.1						
PDAR				pPKP		01 21 43.0	
	comp=Z,1.1nm,0.8s,baz=315,slow=2.1,SNR=7.6						
MSU	**Marysvale**	**132.20**	**29**	*e*PKPdf	PKPdf	01 21 39.9	-1.5
PV10	**Paradox Valley**	**133.77**	**27**	*e*PKPdf	PKPdf	01 21 43.4	-0.8
PLCA	**Paso Flores**	**139.61**	**197**	PKP	PKPdf	01 21 52.0	-3.0
	comp=Z,2.4nm,1.0s,baz=175,slow=16,SNR=4.1						
PLCA				pPKP		01 21 58.8	
	comp=Z,7.0nm,1.3s,baz=270,slow=4.2,SNR=3.4						
GDL2	**Guadalupe Moun**	**141.02**	**27**	*e*PKPpre		01 21 48.9	
GDL2				*e*PKPdf	PKPdf	01 21 55.1	-2.6
MIAR	**Mount Ida**	**142.46**	**12**	*e*PKPpre		01 21 53.2	
TXAR	**Lajitas Array**	**143.75**	**28**	PKP	PKPdf	01 21 56.2	-6.2
	comp=Z,2.2nm,0.9s,baz=314,slow=1.0,SNR=15						
JCT	**Junction City**	**144.42**	**23**	*e*PKPpre		01 21 58.4	
LRAL	**Lakeview Retre**	**144.81**	**3**	*e*PKPpre		01 21 58.9	
NATX	**Nacogdoches**	**144.88**	**15**	*e*PKPdf	PKPdf	01 22 00.7	-3.7
MDZ	**Mendoza**	**146.07**	**205**	*e*P	PKPbc	01 22 07.0	+4.5
MDZ				*e*		01 22 14.1	
HKT	**Hockley**	**146.26**	**17**	*e*PKPdf	PKPdf	01 22 03.1	-3.8
LVC	**Limon Verde**	**154.56**	**216**	PKPab	PKPab	01 22 39.7	-0.5
	comp=Z,2.6nm,0.8s,baz=162,slow=3.2,SNR=3.6						

TAP 09 01:13:37.8, 24.24N×121.75E, h11^{km}, ML3.5, Taiwan

NEIC ***09*** *01:15:38.4±0.5, 8.87S×115.74E, h30^{km}, mb4.3/5, Error ellipse: s-maj=19.6km s-min=7.4km az=54.0*
IDC ***09*** *01:15:43.7±4.8, 8.80S×116.02E, h80^{km}±44^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.9/14, mbtmp4.2/6, Error ellipse: s-maj=35.5km s-min=13.3km az=49.0*
DJA ***09*** *01:15:51.0±1.2, 8.66S×115.76E, h87^{km}±10^{km}, MD4.7/4, ML5.1/2, Error ellipse: s-maj=39.0km s-min=12.8km az=0.0*
ISC 09 01:15:45.7±0.5, **8.89S**±0.10×**115.85E**±0.09, **h119**^{km}±6^{km}, **n24, σ1^{s}19**/26, **mb4.1**/9, **1C-6D, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**0.35**	**297**	⇓*e*Pg	**P**	**01 16 03.7**	**+0.9**
	6µm,0.2s						
KEDI	**Kedomdong**	**0.47**	**33**	⇓*e*Pg	**P**	**01 16 04.2**	**+0.7**
	4µm,0.2s						
KELI	**Kelakatan**	**1.50**	**296**	⇑*i*Pn	**P**	**01 16 14.7**	**+1.2**
	2µm,0.2s						
KELI				⇓*e*Sn	**S**	**01 16 31.0**	**-3.5**
SRDI	**Scrawed**	**1.74**	**283**	⇓*e*Pn	**P**	**01 16 17.6**	**+1.3**
	2µm,0.2s						
SRDI				⇓*e*Sn	**S**	**01 16 37.9**	**-1.5**
MBWA	**Marble Bar**	**12.76**	**163**	*e*P	**P**	**01 18 38.5**	**-5.4**
	12nm,0.4s						
FITZ	**Fitzroy Crossi**	**13.21**	**135**	⇓*i*P	**P**	**01 18 47.0**	**-2.6**
	6.1nm,0.6s						
FITZ				*e*S	**S**	**01 21 05.3**	**-8.7**
WRA	**Warramunga Arr**	**20.98**	**124**	P	**P**	**01 20 20.2**	**-0.9**
	1.7nm,0.4s,baz=297,slow=12,SNR=46						
WRA				S	**S**	**01 24 08.8**	**+5.9**
	0.8nm,0.5s,baz=306,slow=24,SNR=4.7						
WRAB	**Tennant Creek**	**20.99**	**124**	*e*P	**P**	**01 20 20.9**	**-0.3**
WB2	**Warramunga Arr**	**21.00**	**124**	*e*P	**P**	**01 20 20.6**	**-0.6**
WB2				*e*S	**S**	**01 24 05.1**	**+2.0**
ASPA	**Alice Springs**	**22.68**	**133**	*e*P	**P**	**01 20 38.5**	**+0.7**
ASAR	**Alice Springs**	**22.68**	**133**	P	**P**	**01 20 38.2**	**+0.4**
	4.8nm,0.6s,mb4.0,baz=307,slow=9.1,SNR=32						
ASAR				PcP	PcP	01 24 27.5	-0.5
	0.6nm,0.4s,baz=318,slow=1.8,SNR=5.0						
ASAR				S	S	01 24 55.6	+22
	0.9nm,0.7s,baz=304,slow=22,SNR=4.6						
NWAO	**Narrogin (SRO)**	**23.96**	**177**	P	**P**	**01 20 50.2**	**+0.2**
	9.4nm,0.6s,mb4.3,baz=341,slow=13,SNR=6.9						
NWAO	**Narrogin (SRO)**	**23.96**	**177**	*e*P	**P**	**01 20 50.1**	**0.0**
	6.6nm,0.6s,mb4.1						
CMAR	**Chiang Mai Arr**	**31.88**	**328**	P	**P**	**01 22 02.3**	**+0.3**
	0.9nm,0.4s,mb3.9,baz=161,slow=7.9,SNR=4.3						
STKA	**Stephens Creek**	**33.08**	**137**	P	**P**	**01 22 11.8**	**-0.6**
	2.0nm,0.4s,mb4.3,baz=320,slow=8.4,SNR=11						
STKA	**Stephens Creek**	**33.08**	**137**	*e*P	**P**	**01 22 12.1**	**-0.2**
ENH	**Enshi**	**39.41**	**351**	*e*P	**P**	**01 23 05.3**	**-0.2**
	4.7nm,0.5s,mb4.6						
LSA	**Lhasa**	**45.13**	**329**	*e*P	**P**	**01 23 53.2**	**+1.0**
	1.9nm,0.6s,mb4.0						
SONM	**Songino Array**	**57.09**	**352**	P	**P**	**01 25 20.7**	**-1.1**
	2.3nm,0.8s,mb4.2,baz=173,slow=8.8,SNR=22						
CHKZ	**Chkalovo**	**73.10**	**334**	*e*P	**P**	**01 27 03.6**	**-1.1**
	0.6nm,0.5s,mb3.7						
LBTB	**Lobatse**	**86.53**	**245**	*e*P	**P**	**01 28 19.6**	**+2.6**
	2.5nm,0.6s,mb4.3						
LVC	**Limon Verde**	**148.35**	**172**	PKPbc	PKPdf	01 35 23.3	+8.1
	2.3nm,0.7s,baz=234,slow=1.4,SNR=6.1						
LVC	**Limon Verde**	**148.35**	**172**	PKPbc	PKPdf	01 35 23.3	+8.1
BDFB	**Brasilia**	**150.86**	**213**	PKPbc	PKPdf	01 35 28.1	+8.8
	0.5nm,0.4s,baz=186,slow=26,SNR=3.1						

IDC ***09*** *01:39:05.5±0.7, 13.49N×92.75E, mb4.2/14, mb1 4.3/15, mb1mx4.2/21, mbtmp4.2/15, ML4.6/1, MS3.6/2, Ms1 3.7/2, ms1mx3.1/22, Error ellipse: s-maj=28.3km s-min=14.4km az=46.0*
BJI ***09*** *01:39:08.7, 13.25N×92.74E, h53^{km}, mB5.0, mb4.4*
NEIC ***09*** *01:39:10.1±0.3, 13.55N×92.83E, h30^{km}, mb4.5/11, Error ellipse: s-maj=9.3km s-min=6.3km az=47.0*
ISC 09 01:39:08.3±0.5, **13.56N**±0.06×**92.76E**±0.04, **h33**^{km}, **n52, σ0^{s}99**/53, **mb4.3**/26, **MS3.8**/1, **1C-2D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NST	**Nakhon Sawan**	**7.44**	**73**	P	**P**	**01 40 58.0**	**+0.8**
CM31	**Chiang Mai Arr**	**7.68**	**50**	*e*P	**P**	**01 40 59.2**	**-1.3**
	16nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.68**	**50**	Pn	**Pn**	**01 40 59.4**	**-1.4**
	2.2nm,0.3s,baz=241,slow=15,SNR=44						
CMAR				Sn	**Sn**	**01 42 22.7**	**-4.9**
	1.1nm,0.3s,baz=243,slow=29,SNR=8.0						
CMAR				LR	LR	01 44 25.2	
	comp=Z,328nm,20.3s,baz=216,slow=41						
CHRT	**Chiangrai**	**9.20**	**46**	P	**P**	**01 41 20.0**	**-1.6**
BWNR	**Bhubaneshwar**	**9.44**	**316**	*e*P	**P**	**01 41 17.0**	**-8.0**
BWNR				*e*S	**S**	**01 42 53.0**	**-18**
VIS	**Vishakhapatnam**	**9.98**	**296**	*i* P	**P**	**01 41 29.5**	**-3.1**
VIS				*e*S	**S**	**01 43 12.5**	**-12**
HYB	**Hyderabad**	**14.22**	**287**	*e*P	**P**	**01 42 28.0**	**-1.6**
HYB				*e*S	**S**	**01 45 07.0**	**-0.1**
HYB	**Hyderabad**	**14.22**	**287**	*i* P	**P**	**01 42 28.0**	**-1.6**
HYB				*e*S	**S**	**01 45 07.0**	**-0.1**
KMI	**Kunming**	**14.86**	**38**	P	**P**	**01 42 46.1**	**+8.3**
KMI				AMB	AMB		
	comp=Z,16nm,0.9s						
KMI	**Kunming**	**14.86**	**38**	P	**P**	**01 42 46.1**	**+8.3**
	comp=Z,16nm,0.9s						
JIRN	**Jiri**	**15.31**	**337**	*e*P	**P**	**01 42 43.4**	**-0.4**
	comp=Z,23nm,0.3s						
PKI	**Pulchoki**	**15.54**	**335**	*e*P	**P**	**01 42 45.3**	**-1.4**
	comp=Z,13nm,0.2s						
DMN	**Daman**	**15.70**	**334**	*e*P	**P**	**01 42 46.5**	**-2.3**
	comp=Z,20nm,0.4s						
KKN	**Kakani**	**15.79**	**335**	*e*P	**P**	**01 42 48.7**	**-1.2**
	comp=Z,5.0nm,0.2s						
LSA	**Lhasa**	**16.13**	**355**	*e*P	**P**	**01 42 53.1**	**-1.1**
	comp=Z,8.2nm,0.6s						
GKN	**Gorkha**	**16.25**	**333**	*e*P	**P**	**01 42 55.7**	**0.0**
	comp=Z,41nm,0.3s						
KOLN	**Koldanda**	**16.52**	**330**	*e*P	**P**	**01 42 59.9**	**+0.7**
	comp=Z,35nm,0.5s						
GYA	**Guiyang**	**18.29**	**43**	⇓*i*P	**P**	**01 43 21.8**	**+0.4**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
CD2	**Chengdu**	**20.02**	**29**	P	**P**	**01 43 40.4**	**-0.8**
CD2				AMB	AMB		
	comp=Z,24nm,0.6s						
ENH	**Enshi**	**22.70**	**40**	*e*P	**P**	**01 44 07.9**	**-0.4**
	comp=Z,38nm,1.0s,mb4.8						
LZH	**Lanzhou**	**24.54**	**22**	*e*P	**P**	**01 44 27.5**	**+1.2**
LZH				AP		01 44 40.0	
LZH				XP		01 44 44.5	
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb4.8						
LZH	**Lanzhou**	**24.54**	**22**	*e*P	**P**	**01 44 27.5**	**+1.2**
	comp=Z,42nm,1.5s,mb4.8						
LZH				pP		01 44 40.0	
LZH				sP		01 44 44.5	
XAN	**Xi'an**	**25.12**	**33**	P	**P**	**01 44 31.7**	**-0.1**
XAN				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.6						
GTA	**Gaotai**	**26.49**	**12**	*e*P	**P**	**01 44 45.8**	**+1.2**
GTA				AP	pP	01 44 56.1	+2.1
GTA				XP	sP	01 45 00.8	+2.8
GTA				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.0						
HHC	**Hu-ho-hao-te**	**31.77**	**28**	⇓P	**P**	**01 45 32.1**	**+0.3**
HHC				AP	pP	01 45 41.4	-0.1
HHC				AMB	AMB		
	comp=Z,121nm,12.3s						
JOW	**Kunigami**	**35.72**	**63**	P	**P**	**01 46 07.0**	**+1.1**
	comp=Z,8.7nm,0.4s,mb5.1,baz=116,slow=25,SNR=4.6						
SONM	**Songino Array**	**36.01**	**16**	P	**P**	**01 46 09.1**	**+0.8**
	comp=Z,4.4nm,1.0s,mb4.3,baz=199,slow=7.4,SNR=24						
SONM				PcP	PcP	01 48 35.3	+0.7
	comp=Z,0.3nm,0.5s,baz=197,slow=3.6,SNR=4.0						
KURK	**Kurchatov**	**38.80**	**346**	*e*P	**P**	**01 46 32.8**	**+1.2**
	comp=Z,4.7nm,1.0s,mb4.2						
CN2	**Changchun**	**41.12**	**36**	*e*P	**P**	**01 46 51.6**	**+0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
HIA	**Hailar**	**41.95**	**26**	*e*P	**P**	**01 46 58.4**	**+0.7**
	comp=Z,3.8nm,0.9s,mb4.0						
BVAR	**Borovoye Array**	**43.21**	**340**	P	**P**	**01 47 08.6**	**+0.7**
	comp=Z,1.2nm,0.6s,mb3.8,baz=142,slow=9.6,SNR=12						
CHKZ	**Chkalovo**	**43.69**	**341**	*e*P	**P**	**01 47 12.5**	**+0.7**
	comp=Z,5.6nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	**45.18**	**133**	⇑*i*P	**P**	**01 47 23.5**	**-0.7**
	comp=Z,9.2nm,1.1s,mb4.5						
WRA	**Warramunga Arr**	**52.74**	**128**	P	**P**	**01 48 21.9**	**-0.6**
	comp=Z,3.4nm,0.6s,mb4.4,baz=308,slow=7.6,SNR=83						
WRA				PcP	PcP	01 49 32.1	+0.2
	comp=Z,0.9nm,0.6s,baz=320,slow=3.1,SNR=7.1						
WRAB	**Tennant Creek**	**52.74**	**128**	*e*P	**P**	**01 48 22.0**	**-0.5**
	comp=Z,7.6nm,0.6s,mb4.8						
WB2	**Warramunga Arr**	**52.75**	**128**	*e*P	**P**	**01 48 21.5**	**-1.1**
ASAR	**Alice Springs**	**54.65**	**132**	P	**P**	**01 48 35.9**	**-0.7**
	comp=Z,1.3nm,0.4s,mb4.3,baz=307,slow=6.7,SNR=19						
KMBO	**Kilima Mbogo**	**56.91**	**260**	LR	LR	02 11 09.8	
	comp=Z,67nm,18.0s,MS3.8,baz=90,slow=34						
BRTR	**Keskin Array B**	**57.78**	**309**	P	**P**	**01 48 58.7**	**-0.1**
	comp=Z,2.3nm,0.7s,mb4.3,baz=121,slow=8.3,SNR=10						
MLR	**Muntele Rosu**	**64.22**	**314**	P	**P**	**01 49 44.1**	**+1.9**
	comp=Z,3.2nm,0.9s,mb4.4,baz=186,slow=9.3,SNR=4.8						
STKA	**Stephens Creek**	**65.03**	**135**	P	**P**	**01 49 47.5**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.1,baz=137,slow=17,SNR=5.2						
FINES	**FINESS Array B**	**67.09**	**331**	P	**P**	**01 50 00.5**	**+0.1**
	comp=Z,1.3nm,0.8s,mb4.0,baz=169,slow=31,SNR=7.6						
ARCES	**ARCESS Array B**	**69.50**	**340**	P	**P**	**01 50 16.0**	**+0.8**
	comp=Z,1.2nm,0.5s,mb4.1,baz=100,slow=7.5,SNR=13						
GERES	**GERESS Array B**	**72.74**	**317**	P	**P**	**01 50 35.8**	**+0.9**
	comp=Z,1.6nm,0.6s,mb4.1,baz=90,slow=5.3,SNR=18						
HFS	**Hagfors**	**72.90**	**329**	P	**P**	**01 50 36.6**	**+0.8**
	comp=Z,2.0nm,0.8s,mb4.1,baz=90,slow=7.2,SNR=3.8						
NOA	**NORSAR Array B**	**74.15**	**330**	P	**P**	**01 50 43.7**	**+0.7**
	comp=Z,0.8nm,0.8s,mb3.7,baz=96,slow=4.5,SNR=2.6						
LPG	**La Plagne**	**77.69**	**314**	*e*P	**P**	**01 51 04.4**	**+0.9**
	comp=Z,6.5nm,0.7s,mb4.3						
ILAR	**Eielson Array**	**90.01**	**22**	P	**P**	**01 52 05.8**	**+0.4**
	comp=Z,0.6nm,0.7s,mb4.0,baz=297,slow=4.8,SNR=8.3						
INK	**Inuvik**	**91.93**	**16**	*e*P	**P**	**01 52 15.2**	**+0.9**
	comp=Z,0.6nm,0.5s,mb4.2						
NVAR	**Mina Array Bea**	**120.67**	**28**	PKP	PKPdf	01 58 01.0	+3.7
	comp=Z,1.3nm,0.8s,baz=129,slow=5.1,SNR=13						
NVAR	**Mina Array Bea**	**120.67**	**28**	PKP	PKPdf	01 58 01.0	+3.7
TXAR	**Lajitas Array**	**134.50**	**20**	PKP	PKPdf	01 58 28.3	+4.3
	comp=Z,0.3nm,0.6s,baz=135,slow=2.6,SNR=3.5						

JMA ***09*** *01:43:33.4±0.4, 33.97N×142.58E, h80^{km}, M3.3*
IDC ***09*** *01:43:33.1±1.3, 33.90N×142.23E, mb3.5/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.5/4, MS4.0/2, Ms1 4.0/2, ms1mx3.1/29, Error ellipse: s-maj=29.1km s-min=17.0km az=154.0*
ISC 09 01:43:34.8±0.9, **33.98N**±0.06×**142.51E**±0.07, **h33**^{km}, **n14, σ1^{s}17**/18, **mb3.4**/4, **MS4.1**/1, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.44**	**298**	P	**P**	**01 43 58.9**	**+0.2**
BSO1				*e*S	**S**	**01 44 18.5**	**+1.9**
BSO3	**Boso 3**	**1.85**	**297**	P	**P**	**01 44 05.2**	**+0.6**
BSO3				*e*S	**S**	**01 44 28.9**	**+1.9**
JHJ2	**Mitsune**	**2.41**	**250**	P	**P**	**01 44 12.6**	**-0.1**
JHJ2				*e*S	**S**	**01 44 40.0**	**-1.3**
JHJ	**Hachijo jima 2**	**2.44**	**250**	Pg	**P**	**01 44 12.6**	**-0.4**
	23nm,0.3s,baz=49,slow=19,SNR=5.6						
JHJ				LR	LR	01 44 38.4	
	comp=Z,4µm,20.6s,baz=155,slow=30						
JHJ				Lg		01 44 39.7	
	26nm,0.3s,baz=51,slow=23,SNR=6.0						
JIM2	**Oshima 3**	**2.65**	**287**	P	**P**	**01 44 15.7**	**-0.4**
JHO	**Hitachi**	**3.07**	**329**	P	**P**	**01 44 21.1**	**-1.0**
JHO				*e*S	**S**	**01 44 55.2**	**-2.9**
JRY	**Ryogami san**	**3.59**	**305**	P	**P**	**01 44 29.4**	**-0.1**

JYN	**Shimob**	**3.60**	**296**	P	**P**	**01 44 29.3**	**-0.3**
JYN				*e*S	**S**	**01 45 11.0**	**-0.6**
JFK	**Kawauchi**	**3.63**	**339**	P	**P**	**01 44 28.5**	**-1.6**
SONM	**Songino Array**	**30.30**	**308**	P	**P**	**01 49 47.0**	**+1.9**
	0.3nm,0.7s,mb3.1,baz=98,slow=7.6,SNR=3.9						
ILAR	**Eielson Array**	**51.62**	**31**	P	**P**	**01 52 40.6**	**+0.9**
	0.6nm,1.1s,mb3.5,baz=257,slow=6.7,SNR=4.3						
WRA	**Warramunga Arr**	**54.18**	**189**	P	**P**	**01 52 58.3**	**-1.1**
	0.4nm,0.5s,mb3.6,baz=6.6,slow=7.5,SNR=4.8						
ASAR	**Alice Springs**	**57.91**	**189**	P	**P**	**01 53 27.6**	**+1.5**
	0.2nm,0.5s,mb3.4,baz=17,slow=9.4,SNR=3.2						
BBB	**Bella Bella**	**63.65**	**43**	LR	LR	02 18 13.5	
	comp=Z,138nm,21.6s,MS4.1,baz=65,slow=33						

NEIC ***09*** *01:48:25.8±7.7, 11.35N×87.07W, h35^{km}±56^{km}, mb4.3/4, Error ellipse: s-maj=49.1km s-min=14.4km az=46.0*

CASC ***09*** *01:48:26.0±3.1, 11.36N×87.02W, h20^{km}±11^{km}, MD4.4, ML3.6, mb4.3(NEIC)*

IDC ***09*** *01:48:36.0±5.6, 12.22N×86.55W, h92^{km}±49^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.5/22, mbtmp3.9/9, Error ellipse: s-maj=71.5km s-min=24.6km az=41.0*

ISC 09 01:48:26.9±0.5**, 11.38N**±0.04×**86.98W**±0.04**, h55**^{km}±6^{km}**, n54, σ1^{s}22**/66**, mb3.9**/10**, 8C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**0.88**	**26**	⇑*e*P	**P**	**01 48 43.0**	**-0.3**
COPN				*e*S	**S**	**01 48 57.6**	**+2.0**
TICN	**Ticuantepe**	**0.98**	**48**	⇑*e*P	**P**	**01 48 44.2**	**-0.4**
XAVN	**Gruta Xavier**	**1.00**	**40**	⇑*e*P	**P**	**01 48 44.4**	**-0.5**
MASN	**Masaya**	**1.01**	**53**	⇓*e*P	**P**	**01 48 44.2**	**-1.0**
LEON	**Leon**	**1.04**	**5**	⇑*e*P	**P**	**01 48 45.2**	**-0.2**
APON	**Apoyo**	**1.04**	**59**	*e*P	**P**	**01 48 44.5**	**-1.1**
MGAN	**Managua**	**1.05**	**43**	*e*P	**P**	**01 48 44.5**	**-1.1**
MGAN				⇓*i*P		01 48 45.4	
MGAN				*e*S	**S**	**01 49 00.3**	**+0.7**
MGAN				*e*S	**S**	**01 49 00.8**	**+1.3**
MGAN				*i*		01 49 01.6	
	comp=N,3µm,0.5s						
APYN	**Apoyeque**	**1.05**	**36**	⇓*e*P	**P**	**01 48 44.9**	**-0.7**
APYN				*e*S	**S**	**01 48 58.3**	**-1.3**
MIRN	**Miramar**	**1.09**	**14**	⇓*e*P	**P**	**01 48 45.7**	**-0.4**
WILN	**Americas 2**	**1.10**	**45**	⇑*e*P	**P**	**01 48 45.5**	**-0.8**
WILN				*e*S	**S**	**01 49 03.7**	**+2.9**
MOMJ	**Momotombo**	**1.11**	**23**	⇑*e*P	**P**	**01 48 46.0**	**-0.4**
MOMJ				*e*S	**S**	**01 49 02.0**	**+1.0**
SSNN	**San Juan del S**	**1.11**	**94**	*e*P	**P**	**01 48 44.6**	**-1.9**
SSNN				*e*S	**S**	**01 49 02.2**	**+1.1**
SSNN				*i*		01 49 05.1	
	comp=Z,3µm,0.8s						
CNGN	**Cerro Negro**	**1.15**	**14**	*e*P	**P**	**01 48 47.0**	**0.0**
TEL3	**Telica 3**	**1.20**	**6**	⇑*e*P	**P**	**01 48 47.3**	**-0.2**
TELN	**Telica**	**1.23**	**7**	⇑*e*P	**P**	**01 48 48.0**	**-0.1**
CRIN	**San Cristobal**	**1.32**	**357**	*e*P	**P**	**01 48 49.6**	**+0.1**
CONN	**Concepcion**	**1.34**	**82**	*e*P	**P**	**01 48 48.1**	**-1.7**
MADN	**Villa Maderas**	**1.42**	**89**	*e*P	**P**	**01 48 49.2**	**-1.7**
PYTN	**Playitas**	**1.47**	**38**	*e*P	**P**	**01 48 50.7**	**-0.8**
QUIN	**Quiabu**	**1.82**	**18**	*e*P	**P**	**01 48 56.3**	**-0.1**
CNCH	**Conchagua**	**2.06**	**336**	*e*P	**P**	**01 48 58.3**	**-1.5**
CNCH				*e*S	**S**	**01 49 26.4**	**+2.1**
JTS	**JuntasAbangare**	**2.27**	**118**	*e*P	**P**	**01 49 00.9**	**-1.9**
JCR	**Jicaral**	**2.38**	**129**	*e*P	**P**	**01 49 06.5**	**+2.1**
BLLM	**Bellamira**	**2.39**	**329**	*e*P	**P**	**01 49 05.0**	**+0.5**
BLLM				*e*S	**S**	**01 49 33.3**	**+0.7**
VSM	**San Miguel**	**2.40**	**328**	*e*P	**P**	**01 49 06.6**	**+2.0**
CAHU	**Cacacuatique**	**2.66**	**333**	*e*P	**P**	**01 49 09.9**	**+1.5**
CGA2	**Cerro Gallo 2**	**2.82**	**118**	*e*P	**P**	**01 49 12.2**	**+1.6**
SNVI	**San Vicente**	**2.87**	**321**	*e*P	**P**	**01 49 11.7**	**+0.5**
SNVI				*e*S	**S**	**01 49 44.7**	**0.0**
PRS1	**Puriscal**	**2.97**	**118**	*e*P	**P**	**01 49 12.7**	**0.0**
LCBS	**La Ceiba**	**2.99**	**319**	*e*P	**P**	**01 49 12.1**	**-0.9**
LCBS				*e*S	**S**	**01 49 47.0**	**-0.7**
LFRS	**El Faro**	**3.02**	**318**	*e*P	**P**	**01 49 12.6**	**-0.8**
LFRS				*e*S	**S**	**01 49 47.8**	**-0.7**
LAJ	**Bijagual**	**3.19**	**118**	*e*P	**P**	**01 49 10.5**	**-5.3**
SJS	**Escuela Geolog**	**3.21**	**116**	*e*S	**S**	**01 49 55.4**	**+1.9**
BOQS	**Boqueron**	**3.24**	**316**	*e*P	**P**	**01 49 18.0**	**+1.4**
TRTC	**Tortuguero**	**3.31**	**104**	*e*P	**P**	**01 49 14.4**	**-3.0**
LCR2	**La Lucha 2**	**3.35**	**119**	*e*P	**P**	**01 49 17.7**	**-0.4**
ICR	**Volcan Irazu**	**3.40**	**114**	*e*P	**P**	**01 49 20.9**	**+2.2**
SBLS	**San Blas**	**3.55**	**314**	*e*P	**P**	**01 49 20.6**	**-0.4**
SBLS				*e*S	**S**	**01 50 01.9**	**-0.1**
BUS	**Buena Vista**	**3.65**	**119**	*e*P	**P**	**01 49 24.9**	**+2.6**
ROSC	**El Rosal**	**14.10**	**116**	P	**P**	**01 51 53.3**	**+7.9**
	comp=Z,0.3nm,0.3s,baz=107,slow=23,SNR=7.2						
SDV	**Santo Domingo**	**16.28**	**97**	P	**P**	**01 52 14.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=308,slow=12,SNR=4.6						
HKT	**Hockley**	**20.23**	**337**	*e*P	**P**	**01 52 55.9**	**-4.2**
	comp=Z,15nm,1.6s						
TXAR	**Lajitas Array**	**23.69**	**321**	P	**P**	**01 53 36.1**	**+1.6**
	comp=Z,2.2nm,0.9s,mb3.6,baz=134,slow=9.8,SNR=18						
TXAR				PcP	PcP	01 57 21.3	+2.0
	comp=Z,0.4nm,0.7s,baz=124,slow=4.5,SNR=4.4						
MIAR	**Mount Ida**	**23.83**	**346**	*e*P	**P**	**01 53 35.9**	**+0.1**
	comp=Z,6.2nm,0.8s,mb4.1						
CPCT	**Cooper Cave**	**24.07**	**5**	*e*P	**P**	**01 53 38.9**	**+0.8**
WMOK	**Wichita Mounta**	**25.62**	**337**	*e*P	**P**	**01 53 53.9**	**+0.9**
	comp=Z,10nm,1.0s,mb4.3						
ANMO	**Albuquerque**	**29.40**	**326**	P	**P**	**01 54 28.6**	**+1.3**
	comp=Z,1.1nm,0.8s,mb3.6,baz=187,slow=8.1,SNR=3.5						
PDAR	**Pinedale Array**	**36.93**	**332**	P	**P**	**01 55 32.0**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=121,slow=8.8,SNR=6.9						
HWUT	**Hardware Ranch**	**37.02**	**329**	*e*P	**P**	**01 55 33.1**	**0.0**
	comp=Z,4.6nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	**38.81**	**319**	P	**P**	**01 55 47.2**	**-0.8**
	comp=Z,0.4nm,0.8s,mb3.2,baz=131,slow=9.6,SNR=2.2						
ULM	**Lac du Bonnet**	**39.44**	**351**	P	**P**	**01 55 50.8**	**-2.5**
	comp=Z,3.6nm,0.9s,mb4.1,baz=164,slow=8.0,SNR=7.1						
BDFB	**Brasilia**	**47.00**	**124**	P	**P**	**01 56 53.7**	**-1.2**
	comp=Z,2.9nm,0.9s,mb4.2,baz=297,slow=11,SNR=5.5						
YKA	**Yellowknife Ar**	**54.76**	**345**	P	**P**	**01 57 50.6**	**-2.4**
	comp=Z,0.9nm,0.8s,mb3.9,baz=141,slow=7.3,SNR=21						
YKA				PcP	PcP	01 58 54.1	-0.7
	comp=Z,0.3nm,0.6s,baz=142,slow=3.9,SNR=7.9						
CMAR	**Chiang Mai Arr**	**149.78**	**349**	PKPbc	PKPdf	02 08 13.7	+6.8
	comp=Z,0.9nm,0.3s,baz=332,slow=3.3,SNR=4.4						

IDC 09 01:53:17.9±4.8**, 18.24S×69.33W, h119**^{km}±50^{km}**, mb3.5**/5**, mb1 3.8**/7**, mb1mx3.6**/17**, mbtmp3.9**/7**, Error ellipse: s-maj=78.7km s-min=35.7km az=70.0, Putative timing error at LPAZ, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.25**	**31**	P	P	01 53 19.5	-36
LPAZ				S	S	01 53 47.0	-36
	7.0nm,0.3s,baz=282,slow=24,SNR=7.0						
LVC	**Limon Verde**	**4.37**	**175**	P	P	01 54 24.5	+1.0
	20nm,0.3s,baz=337,slow=9.9,SNR=245						
LVC				S	S	01 55 12.6	-1.2
	28nm,0.3s,baz=135,slow=18,SNR=17						
TXAR	**Lajitas Array**	**57.75**	**324**	P	P	02 02 57.0	-1.9
	0.2nm,0.8s,baz=158,slow=9.7,SNR=3.4						
ULM	**Lac du Bonnet**	**72.10**	**342**	P	P	02 04 28.6	-2.4
	1.5nm,0.4s,baz=140,slow=5.4,SNR=5.5						
NVAR	**Mina Array Bea**	**72.70**	**322**	P	P	02 04 32.8	-2.0
	0.9nm,0.8s,baz=40,slow=14,SNR=5.3						
SCHQ	**Schefferville**	**72.80**	**2**	P	P	02 04 32.4	-2.6
	2.4nm,1.0s,baz=183,slow=3.7,SNR=3.6						
YKA	**Yellowknife Ar**	**87.99**	**341**	P	P	02 05 54.2	-1.1
	0.8nm,0.6s,baz=134,slow=4.9,SNR=23						
YKA				pP	pP	02 06 29.4	+3.1
	0.5nm,0.8s,baz=136,slow=4.8,SNR=3.6						
WRA	**Warramunga Arr**	**135.51**	**213**	PKP	PKPdf	02 12 24.9	+0.1
	0.3nm,0.5s,baz=138,slow=1.5,SNR=8.2						
SONM	**Songino Array**	**150.27**	**6**	PKPbc	PKPdf	02 12 55.7	+6.2
	0.3nm,0.4s,baz=305,slow=1.7,SNR=5.4						

JMA 09 01:56:00.3±0.5**, 33.92N×142.59E, h67**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.52**	**299**	P	P	01 56 25.8	-0.2
BSO1				*e*S	S	01 56 45.0	0.0
BSO3	**Boso 3**	**1.93**	**298**	P	P	01 56 32.1	+0.5
BSO3				*e*S	S	01 56 55.8	+1.1
BSO4	**Boso 4**	**2.15**	**300**	P	P	01 56 35.5	+0.9
BSO4				*e*S	S	01 57 01.2	+1.2
JHJ2	**Mitsune**	**2.45**	**252**	P	P	01 56 39.0	+0.1
JHJ2				*e*S	S	01 57 07.2	-0.6
JHO	**Hitachi**	**3.15**	**329**	P	P	01 56 47.8	-1.0
JOD2	**Odawara 2**	**3.18**	**296**	P	P	01 56 48.8	-0.4
JOD2				*e*S	S	01 57 25.8	-0.4

BJI ***09*** *02:45:55.6, 6.87N×92.64E, h21^{km}, mB5.4, mb5.1, Ms5.4, Msz5.2*

CSEM ***09*** *02:45:57.6, 6.88N×92.71E, h33^{km}, mb5.6*

NEIC ***09*** *02:45:57.8±0.1, 6.80N×92.62E, mb5.4/97, MS4.9/100, Error ellipse: s-maj=4.6km s-min=3.3km az=211.0*

MOS ***09*** *02:45:57.2±1.1, 6.81N×92.59E, h33^{km}, mb5.5/49, MS4.8/11, Error ellipse: s-maj=9.8km s-min=5.3km az=115.1*

IDC ***09*** *02:45:57.9±0.3, 6.92N×92.72E, h24^{km}±1^{km}, mb4.8/29, mb1 4.9/30, mb1mx4.9/31, mbtmp5.0/30, ML5.2/1, MS4.6/14, Ms1 4.7/14, ms1mx4.4/23, Error ellipse: s-maj=17.9km s-min=7.5km az=44.0, Putative timing error on LPAZ*

HRVD ***09*** *02:45:57.8±0.2, 6.79N×92.53E, h12^{km}, MW5.1/62, Centroid moment Tensor Solution. LP body waves: s38,c63; Mantle waves: s62,c115; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.96±.12; $M_{\theta\theta}$-0.08±.11; $M_{\phi\phi}$-4.88±.12; $M_{r\theta}$-0.60±.36; $M_{\theta\phi}$1.35±.10; $M_{\phi r}$-1.77±.32; Best double couple: $M_0$5.433×10^{16} NP1: ϕ_s334°, δ38°, λ72°. NP2: ϕ_s176°, δ55°, λ103°. Principal axes: T 5.395, Plg76°, Azm129°; N .078, Plg11°, Azm349°; P -5.471, Plg9°, Azm257°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 09 02:45:55.9±0.2**, 6.76N**±0.03×**92.64E**±0.03**, h25**^{km}**, h25**^{km}±.3^{km}**:pP-P, n448, σ0^{s}89**/376**, mb5.2**/151**, MS5.0**/132**, 33C-17D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	**7.93**	**87**	P	**Pn**	**02 47 59.0**	**+6.4**
	214nm,0.8s						
IPM	**Ipoh**	**8.62**	**104**	P	**P**	**02 48 02.1**	**-0.1**
NNT	**Nongplab**	**9.08**	**50**	P	**P**	**02 48 09.5**	**+0.9**
NST	**Nakhon Sawan**	**11.51**	**39**	P	**P**	**02 48 42.0**	**+0.1**
PALK	**Pallekele**	**11.86**	**273**	Pn	**P**	**02 48 44.7**	**-2.0**
	287nm,1.2s,SNR=27						
PALK	**Pallekele**	**11.86**	**273**	*e*P	**P**	**02 48 42.8**	**-3.9**
	57nm,0.6s						
CM31	**Chiang Mai Arr**	**13.15**	**27**	*e*P	**P**	**02 49 08.2**	**+4.3**
	420nm,0.9s						
CM31				*e*pP		02 49 15.8	
CMAR	**Chiang Mai Arr**	**13.15**	**27**	*i* P	**P**	**02 49 06.1**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,70nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.15**	**27**	Pn	**P**	**02 49 03.9**	**-0.1**
	comp=Z,4.5nm,0.3s,baz=217,slow=13,SNR=105						
CMAR				LR	LR	02 54 32.5	
	comp=Z,1µm,18.1s,baz=210,slow=40						
MDRS	**Chennai**	**13.72**	**298**	*e*P	**P**	**02 49 08.0**	**-3.5**
MDRS				*e*		02 51 28.0	
VIS	**Vishakhapatnam**	**14.19**	**321**	*e*P	**P**	**02 49 14.0**	**-3.6**
VIS				*e*		02 49 17.6	
	comp=Z,220nm,0.6s						
VIS				*e*		02 51 42.5	
CHRT	**Chiangrai**	**14.77**	**27**	⇓P	**P**	**02 49 24.0**	**-1.2**
	comp=Z,650nm,1.0s						
BWNR	**Bhubaneshwar**	**15.00**	**334**	*e*P	**P**	**02 49 24.0**	**-4.3**
BWNR				*e*		02 49 29.6	
	comp=Z,37nm,0.6s						
BWNR				*e*		02 51 55.8	
KOD	**Kodaikanal**	**15.40**	**284**	*e*P	**P**	**02 49 30.0**	**-3.5**
TRD	**Trivandrum**	**15.64**	**277**	*e*	**P**	**02 49 29.6**	**-7.0**
TRD				*e*		02 49 37.4	
	comp=Z,111nm,1.1s						
TRD				*e*		02 52 17.9	
AGT	**Agartala**	**17.08**	**356**	⇑*i*	**P**	**02 49 59.0**	**+4.2**
AGT				*i* S	**S**	**02 53 03.0**	**+0.5**
HYB	**Hyderabad**	**17.36**	**309**	*e*P	**P**	**02 49 57.0**	**-1.4**
	comp=Z,275nm,1.4s						
HYB				*e*S	**S**	**02 53 09.0**	**0.0**
HYB	**Hyderabad**	**17.36**	**309**	*i* P	**P**	**02 49 57.0**	**-1.4**
	comp=Z,275nm,1.4s						
HYB				*e*S	**S**	**02 53 09.0**	**0.0**
HYB				LR	LR	03 00 34.0	
	comp=Z,4.1nm,14.0s						
BLSP	**Bilaspur**	**18.34**	**327**	*e*P	**P**	**02 50 10.2**	**-0.4**
BLSP				*e*		02 50 12.8	
	comp=Z,174nm,1.8s						
BLSP				*e*		02 53 24.1	
MNGI	**Mangalore**	**18.59**	**291**	*i* P	**P**	**02 50 15.9**	**+2.2**
MNGI				*e*		02 53 30.9	
LATR	**Latur**	**19.48**	**308**	*e*P	**P**	**02 50 23.8**	**-0.4**
KMI	**Kunming**	**20.66**	**27**	⇑P	**P**	**02 50 37.6**	**+1.0**
KMI				AP		02 50 45.7	
KMI				XP		02 50 48.5	
KMI				AMB	AMB		
	comp=Z,98nm,1.0s						
KMI				AMB	AMB		
	comp=Z,443nm,3.1s						
KMI				LR	LR		
	comp=N,5µm,13.3s,MS5.1						
KMI				LR	LR		
	comp=E,4µm,12.7s,MS5.1						
KMI				LR	LR		
	comp=Z,5µm,13.3s,MS5.1						
KMI	**Kunming**	**20.66**	**27**	⇑P	**P**	**02 50 37.6**	**+1.0**
	comp=Z,98nm,1.0s						
KMI				pP		02 50 45.7	
KMI				sP		02 50 48.5	
KMI				PP	PP	02 51 04.0	+5.7
KMI				S	**S**	**02 54 31.5**	**+10**
KMI				sS		02 54 44.6	
KMI				SS	SS	02 55 08.4	+16
KMI				LR	LR		
	comp=Z,5µm,13.3s,MS5.1						
QIZ	**Qiongzhong**	**20.71**	**52**	P	**P**	**02 50 37.7**	**+0.5**
QIZ				AP		02 50 46.0	
QIZ				XP		02 50 48.9	
QIZ				S	**S**	**02 54 20.9**	**-1.4**
QIZ				XS		02 54 34.2	
QIZ				SS	SS	02 54 50.0	-3.6
QIZ				LR	LR		
	comp=N,8µm,13.4s						
QIZ				LR	LR		
	comp=Z,8µm,11.8s,MS5.3						
QIZ	**Qiongzhong**	**20.71**	**52**	*e*P	**P**	**02 50 36.9**	**-0.2**
	comp=Z,442nm,1.3s						
QIZ				LR	LR		
	comp=Z,3µm,19.0s,MS4.6						
GTK	**Gangtok**	**20.82**	**350**	*e*	**P**	**02 50 33.0**	**-5.2**
KAD	**Karad**	**20.85**	**302**	⇑*i*P	**P**	**02 50 38.4**	**-0.2**
KAD				*i*		02 54 15.4	
ALBI	**Allahabad**	**21.16**	**332**	*e*P	**P**	**02 50 41.0**	**-0.7**
POO	**Poona**	**21.72**	**304**	*i* P	**P**	**02 50 47.0**	**-0.4**
	comp=Z,91nm,1.2s,mb5.1						
POO				*i* S	**S**	**02 54 45.0**	**+3.6**
BHPL	**Bhopal**	**21.97**	**320**	*e*P	**P**	**02 50 49.4**	**-0.5**
BOM	**Bombay**	**22.75**	**304**	*e*P	**P**	**02 50 59.0**	**+1.2**
BOM				*e*		02 55 12.8	
LSA	**Lhasa**	**22.86**	**357**	*e*P	**P**	**02 50 57.8**	**-0.9**
	comp=Z,165nm,1.3s,mb5.3						
LSA				LR	LR		
	comp=Z,1µm,20.0s,MS4.3						
KKM	**Kota Kinabalu**	**23.44**	**90**	P	**P**	**02 51 06.7**	**+2.2**
GYA	**Guiyang**	**23.71**	**33**	⇑*i*P	**P**	**02 51 07.9**	**+0.9**
GYA				AP		02 51 16.1	
GYA				XP		02 51 21.2	
GYA				PP	PP	02 51 42.4	+2.2
GYA				S	**S**	**02 55 19.5**	**+2.3**
GYA				AMB	AMB		
	comp=Z,100nm,1.2s,mb5.1						
GYA				AMB	AMB		
	comp=Z,510nm,3.9s						
GYA				LR	LR		
	comp=N,5µm,11.8s,MS5.3						
GYA				LR	LR		
	comp=E,4µm,12.9s,MS5.3						
GYA				LR	LR		
	comp=Z,6µm,11.4s,MS5.3						
DGAR	**Diego Garcia**	**24.57**	**235**	PFAKE		02 51 30.0	+15
DGAR				LR	LR		
	comp=Z,290nm,22.0s						
TSM	**Tawau**	**25.23**	**94**	P	**P**	**02 51 21.9**	**+0.1**
LGTI	**Lohaghat**	**25.41**	**334**	⇓*i*P	**P**	**02 51 24.0**	**+0.6**
AJM	**Ajmer**	**26.05**	**321**	⇓*i*P	**P**	**02 51 31.0**	**+1.7**
CD2	**Chengdu**	**26.19**	**22**	P	**P**	**02 51 30.0**	**-0.6**
CD2				PP	PP	02 52 11.0	-1.8
CD2				PPP	PPP	02 52 25.5	+0.7
CD2				S	**S**	**02 56 01.0**	**+2.1**
CD2				SS	SS	02 57 07.0	-0.2
CD2				AMB	AMB		
	comp=Z,195nm,1.2s,mb5.5						
CD2				LR	LR		
	comp=E,8µm,12.0s						
NDI	**New Delhi**	**26.23**	**328**	⇑*i*P	**P**	**02 51 30.2**	**-0.8**
DDI	**Dehra Dun**	**27.15**	**332**	*e*P	**P**	**02 51 40.0**	**+0.6**
ENH	**Enshi**	**28.24**	**32**	*e*P	**P**	**02 51 47.8**	**-1.5**
	comp=E,104nm,1.2s,mb5.3						
ENH				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
SDNR	**Sundarnagar**	**28.64**	**331**	*e*P	**P**	**02 51 53.2**	**+0.3**
TGY	**Tagaytay City**	**28.75**	**73**	pP	pP	02 52 02.5	+1.2
	comp=Z,174nm,0.4s,baz=196,slow=12,SNR=1.8						
TGY				LR	LR	03 03 20.2	
	comp=Z,2µm,18.2s,MS4.8,baz=278,slow=36						
THN	**Thein Dam**	**30.02**	**331**	*e*P	**P**	**02 52 04.2**	**-1.0**
QZH	**Quanzhou**	**30.72**	**51**	P	**P**	**02 52 12.1**	**+0.7**
QZH				S	**S**	**02 57 17.0**	**+5.4**
QZH				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.7						
QZH				LR	LR		
	comp=Z,22µm,13.1s,MS6.0						
LZH	**Lanzhou**	**30.94**	**18**	*e*P	**P**	**02 52 12.5**	**-0.8**
LZH				AP	pP	02 52 20.3	-0.4
LZH				XP	sP	02 52 24.8	+0.9
LZH				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.5						
LZH				AMB	AMB		
	comp=Z,550nm,4.2s						
LZH				LR	LR		
	comp=E,5µm,11.8s						
LZH				LR	LR		
	comp=Z,6µm,12.0s,MS5.5						
LZH	**Lanzhou**	**30.94**	**18**	*e*P	**P**	**02 52 12.5**	**-0.8**
	comp=Z,90nm,1.2s,mb5.5						
LZH				pP	pP	02 52 20.3	-0.4
LZH				sP	sP	02 52 24.8	+0.9
LZH				PP	tx	02 53 50.0	
LZH				*e*S	tx	02 58 23.0	
LZH				sS		02 58 35.0	
LZH				SS	tx	03 01 22.0	
LZH				LR	LR		
	comp=Z,6µm,12.0s,MS5.5						
XAN	**Xi'an**	**31.05**	**27**	P	**P**	**02 52 12.4**	**-1.8**
XAN				S	**S**	**02 57 12.2**	**-4.4**
XAN				AMB	AMB		
	comp=Z,22nm,1.1s,mb4.9						
XAN				LR	LR		
	comp=N,4µm,13.4s,MS5.4						
XAN				LR	LR		
	comp=E,3µm,14.4s,MS5.4						
XAN				LR	LR		
	comp=Z,7µm,13.4s,MS5.5						
WHN	**Wuhan**	**31.22**	**38**	P	**P**	**02 52 15.5**	**-0.3**
WHN				S	**S**	**02 57 19.0**	**-0.5**
WHN				LR	LR		
	comp=Z,10µm,12.2s,MS5.7						
TATO	**Taipei**	**33.01**	**53**	PFAKE		02 52 40.0	+8.5
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS5.0						
GTA	**Gaotai**	**33.15**	**10**	*e*P	**P**	**02 52 32.6**	**+0.1**
GTA				AP	pP	02 52 40.3	+0.4
GTA				XP	sP	02 52 42.9	-0.3
GTA				PP	PP	02 53 44.2	+0.4
GTA				PPP	PPP	02 54 00.3	+0.2
GTA				PCP	PcP	02 55 15.1	-0.3
GTA				S	**S**	**02 57 50.8**	**+1.5**
GTA				XS		02 58 01.1	
GTA				SCP		02 58 57.5	
GTA				PCS		02 59 00.5	
GTA				SS	SS	02 59 52.8	+1.9
GTA				SCS	ScS	03 03 00.1	+4.3
GTA				AMB	AMB		
	comp=Z,35nm,1.5s,mb5.1						
GTA				AMB	AMB		
	comp=Z,309nm,6.5s						
GTA				LR	LR		
	comp=N,2µm,14.4s,MS4.9						
GTA				LR	LR		
	comp=E,1µm,14.8s,MS4.9						
GTA				LR	LR		
	comp=Z,1µm,13.7s,MS4.8						
NJ2	**Nanjing**	**35.08**	**41**	*e*P	**P**	**02 52 49.8**	**+0.5**
NJ2				AP	pP	02 52 57.4	+0.7
NJ2				XP	sP	02 53 04.1	+4.2
NJ2				PP	PP	02 54 09.0	+0.9
NJ2				S	**S**	**02 58 20.0**	**+0.6**
NJ2				XS		02 58 36.0	
NJ2				AMB	AMB		
	comp=Z,130nm,1.2s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,540nm,4.0s						
NJ2				LR	LR		
	comp=N,4µm,20.0s,MS5.5						
NJ2				LR	LR		
	comp=E,6µm,18.0s,MS5.5						
NJ2				LR	LR		
	comp=Z,6µm,14.8s,MS5.5						
KSH	**Kashi**	**35.90**	**338**	⇑P	**P**	**02 52 57.1**	**+0.9**
KSH				*e*AP	pP	02 53 04.0	+0.4
KSH				*e*XP	sP	02 53 08.6	+1.8
KSH				*e*PP	PP	02 54 19.0	+1.2
KSH				*e*PCP	PcP	02 55 23.0	-0.3
KSH				*e*S	**S**	**02 58 33.4**	**+1.4**
KSH				*e*XS		02 58 45.0	
KSH				*e*SCP		02 59 06.5	
KSH				*e*PCS		02 59 13.0	
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				AMB	AMB		
	comp=Z,400nm,3.0s						
KSH				LR	LR		
	comp=N,540nm,5.7s						
KSH				LR	LR		
	comp=E,670nm,7.1s						
SSE	**Sheshan**	**36.05**	**44**	P	**P**	**02 52 55.4**	**-2.2**
SSE				AP	pP	02 53 05.8	+0.8
SSE				S	**S**	**02 58 36.1**	**+1.6**
SSE				AMB	AMB		
	comp=Z,31nm,1.4s,mb5.0						
SSE				AMB	AMB		
	comp=Z,78µm,3.0s						
SSE				LR	LR		
	comp=N,1µm,12.1s,MS5.3						
SSE				LR	LR		
	comp=E,3µm,12.1s,MS5.3						
SSE				LR	LR		
	comp=Z,4µm,12.4s,MS5.4						
SSE	**Sheshan**	**36.05**	**44**	P	**P**	**02 52 55.4**	**-2.2**
	comp=Z,31nm,1.4s,mb5.0						
SSE				pP	pP	02 53 05.8	+0.8
SSE				S	**S**	**02 58 36.1**	**+1.6**
SSE				sS		02 58 53.0	
SSE				SS	tx	03 01 47.5	
SSE				LR	LR		
	comp=Z,4µm,12.4s,MS5.4						
TIA	**Tai'an**	**36.90**	**34**	*e*P	**P**	**02 53 02.3**	**-2.3**
BTO	**Baotou**	**37.12**	**22**	*e*P	**P**	**02 53 05.4**	**-1.0**
BTO				AMB	AMB		
	comp=Z,11nm,1.7s,mb4.4						
WMQ	**Urumqi**	**37.17**	**354**	⇑*i*P	**P**	**02 53 07.0**	**+0.2**
WMQ				XP	sP	02 53 18.0	+0.6
WMQ				PP	PP	02 54 34.0	0.0
WMQ				S	**S**	**02 58 51.0**	**-0.4**
WMQ				SS	SS	03 01 20.0	-2.4
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,394nm,18.0s,MS4.6						
WMQ				LR	LR		
	comp=E,843nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,475nm,18.0s,MS4.3						
HHC	**Hu-ho-hao-te**	**37.92**	**24**	⇑P	**P**	**02 53 13.2**	**+0.1**
HHC				AP	pP	02 53 20.7	+0.1
HHC				XP	sP	02 53 23.5	-0.3
HHC				PP	PP	02 54 43.4	+0.3
HHC				PCP	PcP	02 55 26.6	-2.8
HHC				S	**S**	**02 59 06.0**	**+3.1**
HHC				SCP		02 59 15.6	
HHC				XS		02 59 16.8	

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HHC                                  SCS    ScS    03 03 20.1  -1.6
HHC                                  AMB    AMB
      comp=Z,18nm,1.8s,mb4.5
HHC                                  AMB    AMB
      comp=Z,273nm,3.7s
HHC                                  LR     LR
      comp=N,2µm,13.5s,MS5.4
HHC                                  LR     LR
      comp=E,3µm,12.4s,MS5.4
HHC                                  LR     LR
      comp=Z,1µm,13.2s,MS4.9
ULHL  Ulahol             38.21 340   P      P      02 53 16.7  +1.2
      SNR=6.3
KZA   Kyzart             38.41 339   P      P      02 53 18.5  +1.3
      SNR=24
MBWA  Marble Bar         38.43 137  eP      P      02 53 16.7  -0.9
      comp=Z,63nm,1.7s,mb5.1
MBWA                                 LR     LR
      comp=Z,966nm,19.0s,MS4.6
UCH   Uchtor             38.80 338   P      P      02 53 21.9  +1.4
      SNR=39
KBK   Karagaybulak       39.02 339   P      P      02 53 23.9  +1.6
      SNR=64
AML   Almayashu          39.02 337   P      P      02 53 24.0  +1.6
      SNR=84
TKM2  Tokmak 2           39.03 340   P      P      02 53 23.2  +0.8
      SNR=31
AAK   Ala-Archa          39.16 339   P      P      02 53 24.8  +1.2
      SNR=51
AAK   Ala-Archa          39.16 339c iP      P      02 53 23.8  +0.3
AAK                                  pmax   pmax
      comp=Z,127nm,1.6s,mb5.4
AAK                                  MLR    MLR
      comp=Z,700nm,9.0s
AAK   Ala-Archa          39.16 339  eP      P      02 53 23.6   0.0
      comp=Z,184nm,1.5s,mb5.6
AAK                                  LR     LR
      comp=Z,264nm,20.0s,MS4.1
BJT   Baijiatuau         39.27  29  eP      P      02 53 25.2  +0.8
      comp=Z,59nm,1.3s,mb5.2
BJT                                  LR     LR
      comp=Z,888nm,20.0s,MS4.6
BJI   Beijing            39.29  29   P      P      02 53 25.5  +0.9
BJI                                  AP     pP     02 53 33.3  +1.2
BJI                                  PP     PP     02 54 54.0  -4.7
BJI                                  S      S      02 59 24.5  +0.9
BJI                                  AMB    AMB
      comp=Z,31nm,1.7s,mb4.8
BJI                                  AMB    AMB
      comp=Z,426nm,3.9s
BJI                                  LR     LR
      comp=N,2µm,13.0s,MS5.2
BJI                                  LR     LR
      comp=E,1µm,13.0s,MS5.2
BJI                                  LR     LR
      comp=Z,647nm,19.5s
BJI   Beijing            39.29  29   P      P      02 53 25.5  +0.9
      comp=Z,31nm,1.7s,mb4.8
BJI                                  pP     pP     02 53 33.3  +1.2
BJI                                  PP     PP     02 54 54.0  -4.7
BJI                                  S      S      02 59 24.5  +0.9
BJI                                  SS     SS     03 02 22.1   +12
BJI                                  LR     LR
      comp=Z,650nm,19.5s,MS4.5
FRU   Bishkek            39.29 339  eP      P      02 53 26.0  +1.4
FRU                                  pmax   pmax
      comp=Z,220nm,1.9s,mb5.6
CHMS  Chumysh            39.39 339   P      P      02 53 25.8  +0.3
      SNR=19
EKS2  Erkin-Say          39.45 338   P      P      02 53 27.4  +1.4
      SNR=22
USP   Ospenovka          39.71 339   P      P      02 53 28.7  +0.6
      SNR=56
MKAR  Makanchi Array     40.87 349  eP      P      02 53 37.2  -0.3
MKAR                                 pmax   pmax
      comp=Z,16nm,0.8s
MKAR  Makanchi Array     40.87 349  i P     P      02 53 37.2  -0.3
FITZ  Fitzroy Crossi     40.88 128  eP      P      02 53 37.5  -0.4
      comp=Z,48nm,0.9s,mb5.1
DL2   Dalian             41.33  35  eP      P      02 53 41.3  -0.1
DL2                                 eS      S      02 59 53.5  -0.6
DL2                                  AMB    AMB
      comp=Z,30nm,1.5s,mb4.7
DL2                                  LR     LR
      comp=N,1µm,12.9s,MS4.9
DL2                                  LR     LR
      comp=E,510nm,12.0s,MS4.9
DL2                                  LR     LR
      comp=Z,870nm,12.9s,MS4.8
SONM  Songino Array      42.58  14   P      P      02 53 51.6   0.0
      comp=Z,12nm,1.0s,mb4.6,baz=198,slow=7.7,SNR=74
SONM                                 pP     pP     02 53 59.6  +0.5
      comp=Z,13nm,0.8s,baz=194,slow=7.2,SNR=20
SONM                                 PcP    PcP    02 55 44.4  +0.1
      comp=Z,2.2nm,0.6s,baz=202,slow=4.1,SNR=5.5
SONM                                 pPcP          02 55 52.4
      comp=Z,1.8nm,0.7s,baz=204,slow=4.2,SNR=4.4
ULN   Ulaanbaatar        42.77  14  eP      P      02 53 52.7  -0.5
      comp=Z,22nm,1.2s,mb4.8
ULN                                  LR     LR
      comp=Z,699nm,19.0s,MS4.6
INCN  Inchon             43.46  40   PFAKE         02 54 10.0   +11
INCN                                 LR     LR
      comp=Z,1µm,19.0s,MS4.8
KAKA  Kakadu             44.03 116  eP      P      02 54 02.6  -1.2
      comp=Z,32nm,1.2s,mb4.9
ZAK   Zakamensk          44.38  10⇓iP      P      02 54 05.8  -0.4
ZAK                                 e              02 55 50.4
ZAK                                  pmax   pmax
      comp=Z,13nm,1.6s,mb4.4
ZAK                                  pmax   pmax
      comp=Z,6.0nm,1.2s,mb4.2
SNY   Shenyang           44.41  33 ⇓P       P      02 54 07.0  +0.4
SNY                                  S      S      03 00 45.0  +5.8
SNY                                  LR     LR
      comp=N,1µm,13.8s,MS5.3
SNY                                  LR     LR
      comp=E,2µm,14.4s,MS5.3
SNY                                  LR     LR
      comp=Z,2µm,14.7s,MS5.1
MOY   Mondy              45.30   7  eP      P      02 54 14.2  +0.7
MOY                                  pmax   pmax
      comp=Z,72nm,1.9s,mb5.2
KURK  Kurchatov          45.35 347  eP      P      02 54 13.7  -0.2
KURK                                 LR     LR
      comp=Z,219nm,21.0s,MS4.1
TLY   Talaya             45.70  10   P      P      02 54 17.8  +1.2
      comp=Z,94nm,1.0s,mb5.7,SNR=15
TLY   Talaya             45.70  10⇑iP      P      02 54 17.9  +1.3
TLY                                 e              02 55 55.3
TLY                                 ePPP    PPP    02 56 40.8  -6.2
TLY                                 eS      S      03 01 03.7  +6.2
TLY                                 eSS     SS     03 04 12.2  -1.2
TLY                                 eSSS    SSS    03 05 14.8  -1.6
TLY                                  pmax   pmax
      comp=Z,51nm,1.9s,mb5.1
TLY                                  MLR    MLR
      comp=Z,423nm,11.0s,MS4.6
TLY   Talaya             45.70  10  eP      P      02 54 17.6  +1.0
      comp=Z,33nm,1.4s,mb5.1
TLY                                  LR     LR
      comp=Z,149nm,20.0s,MS3.9
NWAO  Narrogin (SRO)     45.87 151   P      P      02 54 18.2  -0.1
      comp=Z,24nm,1.2s,mb5.0,baz=336,slow=7.7,SNR=4.3
NWAO                                 pP     pP     02 54 26.6  +0.8
      comp=Z,7.6nm,0.7s,baz=310,slow=13,SNR=3.0
NWAO  Narrogin (SRO)     45.87 151  eP      P      02 54 17.4  -0.9
      comp=Z,48nm,1.5s,mb5.2
NWAO                                 LR     LR
      comp=Z,727nm,20.0s,MS4.6
IRK   Irkutsk            46.34  10  eP      P      02 54 22.2  +0.5
IRK                                 e              02 55 50.6
IRK                                 e              02 56 16.9
IRK                                  pmax   pmax
      comp=Z,79nm,2.0s,mb5.3
CN2   Changchun          46.76  33  eP      P      02 54 25.0  -0.2
CN2                                  XP     sP     02 54 33.1  -2.7
CN2                                 eS      S      03 01 13.0  +0.2
CN2                                  AMB    AMB
      comp=Z,30nm,1.5s,mb5.0
CN2                                  AMB    AMB
      comp=Z,350nm,6.0s
CN2                                  LR     LR
      comp=N,1µm,14.0s,MS5.3
CN2                                  LR     LR
      comp=E,2µm,14.0s,MS5.3
CN2                                  LR     LR
      comp=Z,2µm,14.0s,MS5.2
HIA   Hailar             48.13  24  eP      P      02 54 35.1  -0.7
      comp=Z,110nm,1.3s,mb5.7
HIA                                  LR     LR
      comp=Z,1µm,19.0s,MS4.9
RAYN  Ar Rayn            48.20 296   P      P      02 54 37.4  +0.6
      comp=Z,141nm,1.1s,mb5.9,SNR=20
NVS   Novosibirsk        48.54 353⇑iP      P      02 54 37.4  -1.5
NVS                                 i S     S      03 01 34.6  -3.1
NVS                                  pmax   pmax
      comp=N,70nm,1.7s
NVS                                  pmax   pmax
      comp=Z,65nm,1.7s,mb5.4
NVS                                  pmax   pmax
      comp=E,24nm,1.6s
NVS                                  smax
      comp=E,24nm,1.8s
WRA   Warramunga Arr     48.86 124  i P     P      02 54 41.5  -0.3
WRA                                  pmax   pmax
      comp=Z,36nm,1.0s
WRA   Warramunga Arr     48.86 124   P      P      02 54 41.5  -0.3
      comp=Z,36nm,1.0s,mb5.4,baz=305,slow=8.8,SNR=83
WRA                                  pP     pP     02 54 49.0  -0.5
      comp=Z,47nm,1.0s,baz=302,slow=9.2,SNR=21
WRA                                  PcP    PcP    02 56 06.8  +0.3
      comp=Z,6.3nm,0.7s,baz=311,slow=2.8,SNR=9.8
WRA                                  pPcP          02 56 14.3
      comp=Z,15nm,1.1s,baz=312,slow=2.8,SNR=4.9
WRAB  Tennant Creek      48.86 124c iP      P      02 54 41.6  -0.3
WRAB  Tennant Creek      48.86 124  eP      P      02 54 41.3  -0.6
      comp=Z,213nm,1.3s,mb6.0
WRAB                                 LR     LR
      comp=Z,220nm,20.0s,MS4.2
WB2   Warramunga Arr     48.87 124  eP      P      02 54 41.6  -0.3
MDJ   Mudanjiang         49.56  34   P      P      02 54 47.2  +0.3
MDJ                                  XP     sP     02 54 55.6  -2.0
MDJ                                  PCP    PcP    02 56 09.4  +0.6
MDJ                                  PP     PP     02 56 41.6  -0.3
MDJ                                  SCP           03 00 01.2
MDJ                                  PCS           03 00 05.0
MDJ                                  S      S      03 01 55.0  +2.8
MDJ                                  XS            03 02 06.2
MDJ                                  SCS    ScS    03 04 37.5  +3.5
MDJ                                  AMB    AMB
      comp=Z,37nm,1.8s,mb5.1
MDJ                                  AMB    AMB
      comp=Z,184nm,5.1s
MDJ                                  LR     LR
      comp=N,1µm,13.0s,MS5.4
MDJ                                  LR     LR
      comp=E,2µm,12.1s,MS5.4
MDJ                                  LR     LR
      comp=Z,2µm,12.8s,MS5.3
MDJ   Mudanjiang         49.56  34  eP      P      02 54 47.4  +0.4
      comp=Z,62nm,1.3s,mb5.5
MDJ                                  LR     LR
      comp=Z,496nm,20.0s,MS4.5
BVA0  Borovoye Array     49.58 343   P      P      02 54 46.1  -0.9
BVA0                                 pmax   pmax
      comp=Z,4.0nm,1.0s,mb4.4
BVAR  Borovoye Array     49.58 343   P      P      02 54 46.1  -0.8
      comp=Z,9.6nm,0.7s,mb4.9,baz=143,slow=7.4,SNR=48
BVAR                                 pP     pP     02 54 54.1  -0.5
      comp=Z,14nm,0.8s,baz=144,slow=13,SNR=19
CHKZ  Chkalovo           50.08 343  eP      P      02 54 50.0  -0.8
CHKZ                                 pmax   pmax
      comp=Z,80nm,1.0s,mb5.7
CHKZ  Chkalovo           50.08 343  eP      P      02 54 50.0  -0.8
      comp=Z,80nm,1.0s,mb5.7
ASPA  Alice Springs      50.37 128⇑iP      P      02 54 53.2  -0.2
ASAR  Alice Springs      50.37 128   P      P      02 54 53.3  -0.1
      comp=Z,29nm,0.8s,mb5.3,baz=306,slow=7.2,SNR=81
ASAR                                 pP     pP     02 55 01.2  +0.1
      comp=Z,39nm,0.8s,baz=303,slow=7.5,SNR=22
ASAR                                 PcP    PcP    02 56 12.2  +0.2
      comp=Z,7.5nm,0.7s,baz=302,slow=3.5,SNR=5.3
ASAR                                 pPcP          02 56 20.1
      comp=Z,12nm,0.9s,baz=307,slow=3.9,SNR=4.6
JHJ   Hachijo jima 2     50.92  52   LR     LR     03 17 32.1
      comp=Z,662nm,19.7s,MS4.7,baz=288,slow=37
MAJO  Matsushiro         51.01  48   PFAKE         02 55 10.0   +12
MAJO                                 LR     LR
      comp=Z,785nm,19.0s,MS4.8
MAT   Matsushiro         51.01  48   P      P      02 54 59.0  +0.9
      comp=Z,106nm,2.0s,mb5.4
MAT                                  S      S      03 02 15.0  +2.7
MAT                                  LR     LR
      comp=Z,350nm,20.0s,MS4.4
MAT   Matsushiro         51.01  48   P      P      02 54 59.2  +1.1
MAT                                 eS      S      03 02 14.6  +2.3
GUMO  Guam               51.77  78   PFAKE         02 55 20.0   +16
GUMO                                 LR     LR
      comp=Z,2µm,20.0s,MS5.1
BOD   Bodaibo            53.58  14  eP      P      02 55 15.8  -1.2
BOD                                 e       pP     02 55 24.8  +0.1
BOD                                  pmax   pmax
      comp=Z,105nm,1.8s,mb5.5
BOD                                  pmax   pmax
      comp=Z,122nm,1.6s,mb5.6
KLR   Kul'dur            53.60  31  eP      P      02 55 14.3  -3.0
KLR                                 e       pP     02 55 22.2  -2.8
KLR                                  pmax   pmax
      comp=E,50nm,1.8s
KLR                                  pmax   pmax
      comp=Z,64nm,1.8s,mb5.2
KLR                                  MLR    MLR
      comp=N,4µm,13.0s,MS5.7
KLR                                  MLR    MLR
      comp=E,2µm,13.0s,MS5.7
KLR                                  MLR    MLR
      comp=Z,4µm,13.0s,MS5.7
GNI   Garni              54.16 315⇑eP      P      02 55 20.9  -0.6
GNI                                  pmax   pmax
      comp=Z,53nm,1.5s
GNI                                  MLR    MLR
      comp=Z,600nm,22.0s
GNI   Garni              54.16 315   P      P      02 55 20.2  -1.3
      comp=Z,20nm,1.1s,mb5.0,baz=341,slow=11,SNR=5.2
GNI                                  pP     pP     02 55 29.3  +0.1
      comp=Z,47nm,1.2s,baz=260,slow=4.2,SNR=4.7
GNI   Garni              54.16 315  eP      P      02 55 19.9  -1.6
      comp=Z,30nm,1.2s,mb5.1
GNI                                  LR     LR
      comp=Z,523nm,19.0s,MS4.6
TI2   Plekhanov          54.83 317  eP      P      02 55 25.8  -0.7
TI2                                 e       pP     02 55 32.8  -1.3
KMBO  Kilima Mbogo       55.82 264  i P     P      02 55 35.3  +1.3
KMBO                                 pmax   pmax
      comp=Z,4.0nm,0.9s
KMBO  Kilima Mbogo       55.82 264   P      P      02 55 35.2  +1.2
      comp=Z,4.3nm,0.9s,mb4.5,baz=56,slow=10,SNR=10
KMBO                                 pP     pP     02 55 43.2  +1.5
      comp=Z,4.0nm,0.8s,baz=50,slow=10,SNR=5.3
KMBO                                 LR     LR     03 18 08.2
      comp=Z,757nm,18.1s,MS4.8,baz=95,slow=34
KMBO  Kilima Mbogo       55.82 264  eP      P      02 55 35.0  +1.0
      comp=Z,50nm,1.9s,mb5.2
KMBO                                 LR     LR
      comp=Z,1µm,22.0s,MS4.9
SVE   Sverdlovsk         55.90 339⇑eP      P      02 55 34.0   0.0
SVE                                 e       pP     02 55 41.0  -0.7
SVE                                 e              02 56 35.0
SVE                                  pmax   pmax
      comp=Z,340nm,1.6s,mb6.1
SVE                                  MLR    MLR
      comp=N,600nm,22.0s,MS4.6
SVE                                  MLR    MLR
      comp=E,100nm,22.0s,MS4.6
SVE                                  MLR    MLR
      comp=Z,1µm,22.0s,MS4.9
CLNS  Chul'man           55.99  21  eP      P      02 55 34.7  +0.1
CLNS                                e*PP    pP     02 55 41.7  -0.6
CLNS                                e              02 56 33.4
CLNS                                e              02 57 34.9
CLNS                                eS      S      03 03 19.5   0.0
CLNS                                 pmax   pmax
      comp=Z,63nm,1.1s,mb5.6
CLNS                                 pmax   pmax
      comp=N,26nm,1.0s
CLNS                                 pmax   pmax
      comp=E,31nm,1.1s
CLNS                                 pmax   pmax
      comp=N,6.0nm,1.0s
CLNS                                 pmax   pmax
      comp=E,5.0nm,1.0s
CLNS                                 pmax   pmax
      comp=Z,6.0nm,1.0s,mb4.6
CLNS                                 smax
      comp=N,5.0nm,0.9s
CLNS                                 smax
      comp=Z,3.0nm,0.9s
CLNS                                 smax
      comp=E,3.0nm,0.8s
CLNS                                 MLR    MLR
      comp=N,1µm,13.0s,MS5.1
CLNS                                 MLR    MLR
      comp=E,300nm,13.0s,MS5.1
CLNS                                 MLR    MLR
      comp=Z,2µm,13.0s,MS5.3
ARU   Arti               56.34 338   P      P      02 55 36.3  -0.9
      comp=Z,402nm,1.1s,SNR=20
PMG   Port Moresby       56.65 106  i P     P      02 55 39.4  -0.5
PMG   Port Moresby       56.65 106   P      P      02 55 39.3  -0.6
      comp=Z,28nm,0.8s,mb5.4,baz=290,slow=5.5,SNR=7.5
PMG                                  pP     pP     02 55 47.0  -0.6
      comp=Z,47nm,1.0s,baz=295,slow=3.9,SNR=4.9
PMG   Port Moresby       56.65 106  eP      P      02 55 39.2  -0.7
      comp=Z,70nm,1.1s,mb5.6
PMG                                  LR     LR
      comp=Z,315nm,20.0s,MS4.4
KIV   Kislovodsk         57.16 319  eP      P      02 55 41.6  -1.6
KIV                                 e              02 56 35.0
KIV                                 e              02 57 49.8
KIV                                 eS      S      03 03 35.4  +0.4
KIV                                  pmax   pmax
      comp=E,19nm,1.1s
KIV                                  pmax   pmax
      comp=Z,36nm,1.1s,mb5.3
GOF   Gofitskoye         57.41 320⇑iP      P      02 55 43.5  -1.4
GOF                                  pmax   pmax
      comp=Z,30nm,1.2s,mb5.2
ASF   Jabal al Asfar     57.58 304   P      P      02 55 47.1  +0.8
      comp=Z,6.5nm,0.9s,mb4.7,baz=349,slow=9.3,SNR=5.5
ASF                                  pP     pP     02 55 55.3  +1.3
      comp=Z,5.3nm,0.8s,baz=351,slow=0.9,SNR=3.8
YSS   Yuzh-Sakhalins     58.57  38⇑eP      P      02 55 52.6  -0.4
YSS                                 e       pP     02 56 01.0  +0.2
YSS                                 eS      S      03 03 58.0  +4.4
YSS                                  pmax   pmax
      comp=Z,50nm,1.2s,mb5.4
YSS                                  MLR    MLR
      comp=N,2µm,13.0s
YSS                                  MLR    MLR
      comp=Z,1µm,13.0s,MS5.2
YSS   Yuzh-Sakhalins     58.57  38  eP      P      02 55 52.8  -0.2
      comp=Z,12nm,0.8s,mb5.0
YSS                                  LR     LR
      comp=Z,464nm,19.0s,MS4.6
EIL   Elat               58.70 301  eP      P      02 55 53.2  -1.0
      comp=Z,40nm,1.2s,mb5.3
SOC   Sochi              58.97 317  eP      P      02 55 52.2  -3.7
SOC                                 e              02 56 40.5
SOC                                 e              02 58 03.2
SOC                                 eS      S      03 03 58.6  -0.3
SOC                                 e              03 05 39.4
SOC                                 eSS     SS     03 07 52.2  -2.4
SOC                                  pmax   pmax
      comp=Z,45nm,1.0s,mb5.5
SOC                                  pmax   pmax
      comp=N,38nm,0.8s
SOC                                  pmax   pmax
      comp=E,49nm,0.9s
CTA   Charters Tower     59.08 118  eP      P      02 55 56.5  -0.4
      comp=E,34nm,1.1s,mb5.3
CTA   Charters Tower     59.08 118   P      P      02 55 56.7  -0.2
      comp=E,41nm,1.1s,mb5.4,baz=297,slow=7.8,SNR=15
CTA                                  pP     pP     02 56 04.2  -0.5
      comp=E,30nm,0.9s,baz=294,slow=7.7,SNR=9.2
CTA                                  LR     LR     03 25 09.2
      comp=E,343nm,19.0s,MS4.5,baz=47,slow=40
CTAO  Charters Tower     59.08 118  eP      P      02 55 55.4  -1.5
      comp=E,89nm,1.3s,mb5.6
CTAO                                 LR     LR
      comp=Z,518nm,21.0s,MS4.6
SOKR  Solikamsk          59.31 340⇓iP      P      02 55 55.2  -2.8
SOKR                                 pmax   pmax
      comp=Z,50nm,1.2s,mb5.4
SOKR                                 MLR    MLR
      comp=Z,610nm,20.0s,MS4.7
STKA  Stephens Creek     60.44 132  eP      P      02 56 06.0  -0.1
      comp=Z,18nm,0.9s,mb5.1
STKA  Stephens Creek     60.44 132   P      P      02 56 06.1   0.0
      comp=Z,16nm,1.0s,mb5.0,baz=301,slow=9.1,SNR=9.8
STKA                                 pP     pP     02 56 13.8  -0.2
      comp=Z,14nm,0.9s,baz=296,slow=7.1,SNR=6.8
STKA                                 LR     LR     03 23 45.2
      comp=Z,583nm,18.5s,MS4.8,baz=234,slow=38
YAK   Yakutsk            61.52  19c iP      P      02 56 11.9  -1.1
YAK                                 e*PP    pP     02 56 19.2  -1.6
YAK                                 eSS            03 04 41.5
YAK                                 e              03 05 06.5
YAK                                  pmax   pmax
      comp=N,17nm,1.2s
YAK                                  pmax   pmax
      comp=Z,28nm,1.2s,mb5.3
YAK                                  pmax   pmax
      comp=E,15nm,1.3s
YAK                                  pmax   pmax
      comp=Z,5.0nm,1.0s,mb4.6
YAK                                  pmax   pmax
      comp=N,4.0nm,0.9s
YAK                                  pmax   pmax
      comp=E,7.0nm,1.2s
YAK                                  pmax   pmax
      comp=E,337nm,11.6s
YAK                                  pmax   pmax
      comp=Z,198nm,16.1s
YAK                                  pmax   pmax
      comp=N,303nm,13.6s
YAK                                  MLR    MLR
      comp=N,1µm,13.0s,MS5.3
YAK                                  MLR    MLR
      comp=Z,1µm,13.0s,MS5.3
YAK                                  MLR    MLR
      comp=E,372nm,11.0s,MS5.3
YAK   Yakutsk            61.52  19  eP      P      02 56 11.3  -1.7
      comp=E,183nm,1.4s,mb6.0
YAK                                  LR     LR
      comp=Z,735nm,22.0s,MS4.8
BRTR  Keskin Array B     62.04 312   P      P      02 56 15.3  -1.5
      comp=Z,3.0nm,0.7s,mb4.5,baz=136,slow=7.8,SNR=12
BRTR                                 pP     pP     02 56 23.2  -1.4
      comp=Z,4.2nm,0.9s,baz=136,slow=8.0,SNR=9.3
MBAR  Mbarara            62.19 266   PFAKE         02 56 30.0   +12
MBAR                                 LR     LR
      comp=Z,321nm,21.0s,MS4.5
VRSR  Storozhevoye       62.43 325  eP      P      02 56 17.1  -2.2
VRSR                                 pmax   pmax
      comp=Z,10.0nm,1.2s,mb4.8
VRSR                                 pmax   pmax
      comp=N,10.0nm,1.0s
VRSR                                 pmax   pmax
      comp=E,10.0nm,1.1s
ISP   Isparta            63.96 309⇓eP      P      02 56 29.1  -0.5
MOS   Moscow             65.26 329  eP      P      02 56 36.3  -1.4
MOS                                 e       pP     02 56 44.3  -1.2
MOS                                 e              02 56 49.6
MOS                                 eS      S      03 05 20.7  +2.7
MOS                                  pmax   pmax
      comp=Z,70nm,1.1s,mb5.6
OBN   Obninsk            65.53 328c iP      P      02 56 37.5  -2.0
OBN                                 e              02 59 04.5
OBN                                 eS      S      03 05 20.3  -1.1
OBN                                  pmax   pmax
      comp=Z,56nm,1.1s,mb5.5
OBN                                  MLR    MLR
      comp=Z,500nm,16.0s,MS4.8
OBN   Obninsk            65.53 328⇑iP      P      02 56 37.6  -1.9
OBN                                  LR     LR
      comp=Z,500nm,16.0s,MS4.8
HARR  Harsova            67.38 316 ⇑P       P      02 56 50.4  -1.0
LSZ   Lusaka             67.49 250  eP      P      02 56 52.9  +0.3
      comp=Z,39nm,1.4s,mb5.2
LSZ                                  LR     LR
      comp=Z,1µm,19.0s,MS5.2
IDI   Anoyia             67.98 305   P      P      02 56 55.2  -0.2
      comp=Z,11nm,0.6s,mb5.1,baz=173,slow=4.1,SNR=6.2
AKASG Malin Array Be     68.11 322   P      P      02 56 53.7  -2.2
      comp=Z,5.0nm,0.8s,mb4.6,baz=91,slow=4.5,SNR=35
AKASG                                pP     pP     02 57 01.4  -2.3
      comp=Z,6.7nm,0.8s,baz=90,slow=4.7,SNR=11
AKASG                                PP     PP     02 59 26.2  -1.9
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	comp=Z,1.3nm,0.8s,baz=87,slow=8.3,SNR=4.5						
MA2	**Magadan**	68.44	28	*e*P	P	02 56 57.0	-0.8
	comp=Z,53nm,1.0s,mb5.5						
MA2				*e*pP	pP	02 57 05.5	-0.1
MA2				LR	LR		
	comp=Z,488nm,19.0s,MS4.8						
VRI	**Vrincioaia**	68.48	317	⇓P	P	02 56 58.2	-0.1
VRI	**Vrincioaia**	68.48	317	P	P	02 56 58.2	0.0
KDZ	**Kurdzhali**	68.56	312	*e*P	P	02 56 58.2	-0.6
TIXI	**Tiksi**	68.61	12	PFAKE		02 57 10.0	+11
TIXI				LR	LR		
	comp=Z,282nm,21.0s,MS4.5						
MLR	**Muntele Rosu**	68.93	316	P	P	02 57 01.0	-0.1
	comp=Z,31nm,1.0s,mb5.2,baz=105,slow=2.5,SNR=24						
MLR				pP	pP	02 57 08.8	-0.1
	comp=Z,45nm,1.1s,baz=56,slow=2.4,SNR=11						
MLR	**Muntele Rosu**	68.93	316	P	P	02 57 01.1	0.0
RZN	**Rozhen**	69.08	312	*e*P	P	02 57 01.2	-0.9
SNX	**Sinaia**	69.20	316	P	P	02 57 02.7	0.0
PGB	**Panagyurishte**	69.63	313	*e*P	P	02 57 05.0	-0.4
MMB	**Musomiste**	69.80	312	*e*P	P	02 57 05.0	-1.4
BURAR	**Bucovina Array**	69.88	318	P	P	02 57 07.1	+0.3
MNK	**Minsk**	70.03	326	⇓*e*P	P	02 57 03.0	-4.6
PET	**Petropavlovsk**	70.30	36	*e*P	P	02 57 08.3	-1.0
PET				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
PET				pmax	pmax		
	comp=Z,100nm,9.2s						
PET				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.7						
PET	**Petropavlovsk**	70.30	36	⇓*e*P	P	02 57 08.6	-0.7
PET				LR	LR		
	comp=Z,351nm,19.0s,MS4.6						
KKB	**Krupnik**	70.31	312	*e*P	P	02 57 08.3	-1.3
VTS	**Vitosha**	70.34	313	*e*P	P	02 57 09.0	-0.7
BOLS	**Boljevac**	71.43	314	⇓*i*P	P	02 57 15.8	-0.5
KWP	**Kalwaria**	71.92	320	*e*P	P	02 57 18.4	-0.7
KWP				*e*pP	pP	02 57 26.4	-0.5
BZS	**Buzias**	71.94	316	⇑P	P	02 57 18.7	-0.6
KOLS	**Kolonicke sedl**	72.06	319	*i* P	P	02 57 20.1	+0.1
KOLS				*i* pP	pP	02 57 28.2	+0.4
LVZ	**Lovozero**	72.09	340	⇓*e*P	P	02 57 18.9	-1.0
LVZ				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.8						
LVZ	**Lovozero**	72.09	340	⇓*e*P	P	02 57 18.0	-1.9
LBTB	**Lobatse**	72.40	241	*e*P	P	02 57 23.2	+0.7
	comp=Z,122nm,1.7s,mb5.5						
LBTB				*e*pP	pP	02 57 31.4	+1.1
LBTB				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
SUW	**Suwalki**	72.54	325	*e*P	P	02 57 21.0	-1.7
SUW				*e*pP	pP	02 57 29.2	-1.4
SUW	**Suwalki**	72.54	325	*e*P	P	02 57 21.0	-1.7
SUW				*e*pP	pP	02 57 29.2	-1.4
CRVS	**Cervenica-Dubn**	72.59	319	*i* P	P	02 57 23.2	+0.1
CRVS				*e*pP	pP	02 57 29.5	-1.5
WAKE	**Wake Island**	72.74	72	PFAKE		02 57 40.0	+15
WAKE				LR	LR		
	comp=Z,128μm,22.0s						
FINES	**FINESS Array B**	73.00	333	*i* P	P	02 57 24.3	-1.0
FINES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FINES	**FINESS Array B**	73.00	333	P	P	02 57 24.3	-1.0
	comp=Z,9.8nm,0.8s,mb4.8,baz=90,slow=7.6,SNR=26						
FINES				pP	pP	02 57 32.1	-1.1
	comp=Z,14nm,0.8s,baz=104,slow=7.9,SNR=14						
FINES				LR	LR	03 32 11.3	
	comp=Z,528nm,18.3s,MS4.8,baz=127,slow=38						
FINES	**FINESS Array B**	73.00	333	P	P	02 57 24.3	-1.0
FINES				pP	pP	02 57 32.1	-1.1
FINES				LR	LR	03 32 11.3	
KECS	**Kecovo**	73.16	319	*i* P	P	02 57 23.6	-2.8
NIE	**Niedzica**	73.42	320	*e*P	P	02 57 26.6	-1.3
PSZ	**Piszkesteto**	73.46	318	*e*P	P	02 57 27.5	-0.7
PSZ				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
PSZ	**Piszkesteto**	73.46	318	*e*P	P	02 57 27.5	-0.7
	comp=Z,18nm,1.1s,mb4.9						
PSZ	**Piszkesteto**	73.46	318	⇓*e*P	P	02 57 28.2	0.0
BOSA	**Boshof**	73.73	238	*e*P	P	02 57 30.9	+0.7
	comp=Z,125nm,1.8s,mb5.5						
BOSA				LR	LR		
	comp=Z,757nm,20.0s,MS5.0						
OJC	**Ojcow**	73.87	320	*e*P	P	02 57 30.1	-0.4
CASY	**Casey**	74.01	173	*e*P	P	02 57 31.8	+0.7
	comp=Z,86nm,1.8s,mb5.4						
CASY				LR	LR		
	comp=Z,343nm,20.0s,MS4.6						
OKC	**Ostrava-Krasne**	74.87	320	*e*P	P	02 57 36.0	-0.3
OKC				*e*pP	pP	02 57 43.2	-1.0
SMOL	**Smolenice**	75.17	318	*i* P	P	02 57 38.2	+0.1
SMOL				*e*pP	pP	02 57 45.9	-0.1
MORC	**Moravsky Berou**	75.25	320	*e*P	P	02 57 38.1	-0.4
MORC				pmax	pmax		
	comp=Z,68nm,1.6s,mb5.3						
MORC	**Moravsky Berou**	75.25	320	*e*P	P	02 57 38.1	-0.4
	comp=Z,68nm,1.6s,mb5.3						
ZST	**Bratislava**	75.35	318	*i* P	P	02 57 39.3	+0.1
ZST				*i* pP	pP	02 57 46.8	-0.3
ARCES	**ARCESS Array B**	75.81	340	P	P	02 57 41.4	0.0
	comp=Z,14nm,0.9s,mb4.9,baz=101,slow=6.2,SNR=12						
ARCES				pP	pP	02 57 49.1	-0.1
	comp=Z,13nm,0.8s,baz=79,slow=6.2,SNR=7.2						
ARCES				LR	LR	03 33 30.0	
	comp=Z,660nm,19.6s,MS5.0,baz=15,slow=38						
VRAC	**Vranov**	75.81	319	P	P	02 57 41.6	-0.2
	comp=Z,3.3nm,0.8s,mb4.3,baz=76,slow=9.4,SNR=4.2						
VRAC				pP	pP	02 57 49.5	-0.1
	comp=Z,6.2nm,1.1s,baz=108,slow=9.4,SNR=3.3						
VKA	**Vienna**	75.88	318	⇑*i*P	P	02 57 42.4	+0.2
DPC	**Dobruska-Polom**	76.10	320	*e*P	P	02 57 43.7	+0.4
DPC				*e*pP	pP	02 57 49.8	-1.4
GOLS	**Golise**	76.15	316	*e*P	P	02 57 43.6	-0.1
KSP	**Ksiaz**	76.17	321	*e*P	P	02 57 43.9	+0.2
KSP				*e*pP	pP	02 57 51.3	-0.3
KSP	**Ksiaz**	76.17	321	*e*P	P	02 57 43.8	+0.1
KSP				*e*pP	pP	02 57 51.5	-0.1
UPC	**Upice**	76.31	320	*e*P	P	02 57 44.8	+0.3
UPC				*e*pP	pP	02 57 52.8	+0.4
ARSA	**Arzberg**	76.32	317	⇑*i*P	P	02 57 44.9	+0.2
	comp=Z,43nm,1.5s,mb5.2						
PERS	**Pernice**	76.55	316	*i* P	P	02 57 45.8	-0.1
LJU	**Ljubljana**	76.92	316	*e*P	P	02 57 48.1	+0.1
OBKA	**Obir**	76.93	316	⇑*i*P	P	02 57 48.0	-0.1
	comp=Z,43nm,1.4s,mb5.2						
MAW	**Mawson**	77.15	191	LR	LR	03 23 34.7	
	comp=Z,236nm,20.8s,MS4.5,baz=164,slow=29						
PRU	**Pruhonice**	77.20	320	*e*P	P	02 57 49.8	+0.3
PRU				*e*pP	pP	02 57 57.1	-0.3
MOA	**Molln**	77.22	317	⇑*i*P	P	02 57 49.5	-0.1
	comp=Z,23nm,1.4s,mb4.9						
PVCC	**Panska Ves**	77.23	320	*e*P	P	02 57 49.9	+0.3
PVCC				*e*pP	pP	02 57 57.5	-0.1
VOY	**Vojsko**	77.36	316	*e*P	P	02 57 49.9	-0.5
VOY				*e*	pP	02 57 58.0	-0.4
BSD	**Bornholm Skovb**	77.47	325	*e*P	P	02 57 50.0	-0.8
BSD				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
BSD	**Bornholm Skovb**	77.47	325	*e*P	P	02 57 50.0	-0.8
	comp=Z,35nm,1.0s,mb5.2						
BSD	**Bornholm Skovb**	77.47	325	*i* P	P	02 57 50.0	-0.8
	comp=Z,35nm,1.0s,mb5.2						
BRG	**Berggiesshubel**	77.66	321	*i* P	P	02 57 52.1	+0.1
BRG				pmax	pmax		
	comp=Z,121nm,2.0s,mb5.5						
BRG	**Berggiesshubel**	77.66	321	*i* P	P	02 57 52.1	+0.1
	comp=Z,121nm,2.0s,mb5.5						
BRG				*e*		02 58 35.2	
GEC2	**GERESS Array S**	77.66	318	*e*P	P	02 57 52.5	+0.4
GEC2				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
GEC2	**GERESS Array S**	77.66	318	*e*P	P	02 57 52.5	+0.4
	comp=Z,24nm,1.0s,mb5.1						
GERES	**GERESS Array B**	77.66	318	P	P	02 57 52.4	+0.3
	comp=Z,11nm,0.9s,mb4.8,baz=90,slow=5.3,SNR=88						
GERES				pP	pP	02 58 00.4	+0.4
	comp=Z,15nm,0.9s,baz=83,slow=5.3,SNR=24						
BILL	**Bilibino**	77.67	22	*e*P	P	02 57 51.6	-0.1
BILL				pmax	pmax		
	comp=Z,77nm,1.6s,mb5.4						
BILL	**Bilibino**	77.67	22	*e*P	P	02 57 51.6	-0.1
	comp=Z,77nm,1.6s,mb5.4						
BILL				LR	LR		
	comp=Z,379nm,19.0s,MS4.7						
PTCC	**Patocco-Chiusa**	77.75	316	*e*P	P	02 57 52.3	-0.3
KHC	**Kasperske Hory**	77.76	319	*e*P	P	02 57 52.5	-0.1
KHC				*e*pP	pP	02 57 59.9	-0.6
KBA	**Koelnbreinsper**	77.79	317	⇑*i*P	P	02 57 52.4	-0.4
	comp=Z,24nm,1.3s,mb5.0						
SNTG	**Esanatoglia**	77.90	313	*e*P	P	02 57 53.3	-0.2
ARV	**Arcevia**	77.91	313	*e*P	P	02 57 53.5	0.0
FSSB	**Fossombrone**	78.04	313	*e*P	P	02 57 54.0	-0.2
FVI	**Forni Avoltri**	78.16	316	*e*P	P	02 57 54.2	-0.6
WET	**Wettzell**	78.22	319	*e*P	P	02 57 55.6	+0.5
WET				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
WET	**Wettzell**	78.22	319	*e*P	P	02 57 55.6	+0.5
	comp=Z,18nm,1.0s,mb5.0						
TSUM	**Tsumeb**	78.24	249	PFAKE		02 58 10.0	+14
TSUM				LR	LR		
	comp=Z,829nm,19.0s,MS5.1						
CLL	**Collm**	78.28	321	⇑*i*P	P	02 57 55.0	-0.4
CLL				*i*	pP	02 58 02.4	-0.9
CLL				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.1						
CLL	**Collm**	78.28	321	⇑*i*P	P	02 57 55.0	-0.4
	comp=Z,38nm,1.5s,mb5.1						
CLL				*i*	pP	02 58 02.4	-0.9
CLL	**Collm**	78.28	321	⇑P	P	02 57 55.0	-0.4
	comp=Z,logA/T=1.4,mb5.1						
CLL				*i* *PP	pP	02 58 02.4	-0.9
CLL				*e*		02 58 09.0	
CLL				*e*		02 58 37.0	
SUR	**Sutherland**	78.48	235	*e*P	P	02 57 58.9	+2.1
	comp=Z,47nm,1.2s,mb5.3						
NKC	**Novy Kostel**	78.56	320	*e*P	P	02 57 57.1	+0.1
CRE	**Caprese Michel**	78.63	313	*e*P	P	02 57 57.4	-0.1
HFS	**Hagfors**	78.67	330	P	P	02 57 56.9	-0.4
	comp=Z,14nm,1.0s,mb4.8,baz=117,slow=6.4,SNR=10						
HFS				pP	pP	02 58 04.7	-0.6
	comp=Z,10nm,0.8s,baz=90,slow=4.4,SNR=7.4						
SFI	**Santa Sofia**	78.72	313	*e*P	P	02 57 58.7	+0.7
PGD	**Poggio Sodo**	78.81	313	*e*P	P	02 57 59.3	+0.9
CTI	**Castel Tesino**	78.92	315	*e*P	P	02 57 59.3	+0.3
VMG	**Vicchio**	78.94	313	*e*P	P	02 58 00.1	+1.0
WTTA	**Wattenberg**	78.97	317	⇑*i*P	P	02 57 58.9	-0.3
	comp=Z,43nm,1.2s,mb5.2						
WTTA				*i*	pP	02 58 06.5	-0.7
	comp=Z,44nm,1.1s						
WATA	**Walderalm**	79.01	317	⇑*i*P	P	02 57 58.9	-0.6
	comp=Z,40nm,1.3s,mb5.2						
WATA				*i*	pP	02 58 06.5	-0.9
	comp=Z,30nm,1.2s						
SEI	**Scarperia**	79.07	313	*e*P	P	02 58 01.1	+1.2
MOX	**Moxa**	79.12	320	*e*P	P	02 58 00.1	+0.1
MOX				*e*	pP	02 58 07.6	-0.3
MOX				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.1						
MOX	**Moxa**	79.12	320	*e*P	P	02 58 00.1	+0.1
	comp=Z,37nm,1.6s,mb5.1						
MOX				*e*	pP	02 58 07.6	-0.3
MOX	**Moxa**	79.12	320	*i* P	P	02 58 00.1	+0.1
	comp=Z,logA/T=1.4,mb5.1						
MOX				pP	pP	02 58 08.0	+0.1
FUR	**Furstenfeldbru**	79.24	318	*e*P	P	02 58 00.7	0.0
SQTA	**Sankt Quirin**	79.26	317	⇑*i*P	P	02 58 00.5	-0.3
	comp=Z,34nm,1.2s,mb5.2						
SQTA				*i*	pP	02 58 08.2	-0.6
	comp=Z,25nm,1.0s						
GRA1	**Grafenberg Arr**	79.33	319	*e*P	P	02 58 02.0	+0.8
	comp=Z,35nm,1.0s,mb5.2						
GRA1				*e*pP	pP	02 58 10.0	+0.9
GRF	**Grafenberg Arr**	79.33	319	*e*P	P	02 58 02.0	+0.8
GRF				*e**PP	pP	02 58 10.0	+0.9
GRF				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
GRF	**Grafenberg Arr**	79.33	319	*e*P	P	02 58 02.0	+0.8
	comp=Z,35nm,1.0s,mb5.2						
GRF				*e*pP	pP	02 58 10.0	+0.9
MOTA	**Moosalm**	79.33	317	⇓*i*P	P	02 58 00.7	-0.5
	comp=Z,20nm,1.1s,mb5.0						
MOTA				*i*	pP	02 58 08.9	-0.3
	comp=Z,16nm,1.0s						
ZCCA	**Zocca**	79.35	314	*e*P	P	02 58 02.7	+1.3
GSCL	**Gusciola**	79.63	314	*e*P	P	02 58 03.9	+1.0
BRMO	**Bormio**	79.81	316	*e*P	P	02 58 04.2	+0.3
CLZ	**Clausthal**	79.94	321	*e*P	P	02 58 04.7	+0.3
	comp=Z,18nm,1.0s,mb5.0						
NB2	**NORSAR Subarra**	79.97	331	P	P	02 58 02.8	-1.6
	comp=Z,21nm,1.1s,mb5.0,baz=93,slow=5.8						
NB2	**NORSAR Subarra**	79.97	331	P	P	02 58 02.8	-1.6
	baz=93,slow=5.9						
NOA	**NORSAR Array B**	79.97	331	P	P	02 58 03.3	-1.0
	comp=Z,7.2nm,0.9s,mb4.6,baz=94,slow=5.3,SNR=9.2						
NOA				pP	pP	02 58 11.4	-0.9
	comp=Z,7.1nm,0.8s,baz=94,slow=5.4,SNR=7.6						
NOA				LR	LR	03 37 21.0	
	comp=Z,491nm,20.8s,MS4.8,baz=80,slow=39						
DAVOX	**Davos**	80.16	316	P	P	02 58 06.3	+0.7
	comp=Z,21nm,0.8s,mb5.1,baz=121,slow=5.9,SNR=23						
DAVOX				pP	pP	02 58 14.1	+0.4
	comp=Z,23nm,0.9s,baz=355,slow=20,SNR=10						
STU	**Stuttgart**	80.64	318	*e*P	P	02 58 07.6	-0.6
PGF	**Pioggiola**	80.79	312	*e*P	P	02 58 09.4	+0.3
MUD	**Monsted U’grnd**	80.79	326	*e*P	P	02 58 09.1	+0.3
MUD				*i*	pP	02 58 17.5	+0.7
MUD				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
MUD	**Monsted U’grnd**	80.79	326	*e*P	P	02 58 09.1	+0.3
	comp=Z,26nm,1.2s,mb5.0						
MUD				*i*	pP	02 58 17.5	+0.7
MUD	**Monsted U’grnd**	80.79	326	*i* P	P	02 58 09.1	+0.3
	comp=Z,26nm,1.2s,mb5.0						
MUD				*i*	pP	02 58 17.5	+0.7
TOD	**Tromm**	80.90	319	*e*P	P	02 58 09.7	+0.2
VAI	**Varese**	80.92	315	*e*P	P	02 58 08.9	-0.9
TNS	**Taunus Mts**	81.13	320	*e*P	P	02 58 11.2	+0.5
BFO	**Black Forest**	81.21	318	*e*P	P	02 58 11.2	0.0
BFO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BFO	**Black Forest**	81.21	318	*e*P	P	02 58 11.2	0.0
	comp=Z,10.0nm,0.9s,mb4.8						
FELD	**Feldberg**	81.43	317	*e*P	P	02 58 12.6	+0.2
MCGN	**Macugnaga**	81.47	315	*e*P	P	02 58 12.7	+0.1
LANF	**Langenberg**	81.56	318	*e*P	P	02 58 13.3	+0.3
LIBD	**Limburg**	81.70	318	*e*P	P	02 58 14.3	+0.6
ABH	**Alteburg**	81.71	319	*e*P	P	02 58 14.1	+0.3
WLS	**Welschbruch**	81.86	318	*e*P	P	02 58 14.6	0.0
SBF	**Sospel**	81.91	313	*e*P	P	02 58 15.1	+0.2
	comp=Z,118nm,1.1s,mb5.4						
CDF	**Champ du Feu**	81.91	318	*e*P	P	02 58 14.6	-0.2
	comp=Z,40nm,1.3s,mb4.9						
MOF	**Molkenrain**	82.02	317	*e*P	P	02 58 15.3	-0.1
RUP	**Ruppelstein**	82.03	319	*e*P	P	02 58 15.7	+0.3
HINF	**Hinteralfeld**	82.21	317	*e*P	P	02 58 16.0	-0.4
	comp=Z,54nm,1.6s,mb4.9						
LOMF	**Lomont**	82.24	317	*e*P	P	02 58 16.6	0.0
LPG	**La Plagne**	82.35	315	*e*P	P	02 58 17.8	+0.7
	comp=Z,96nm,1.1s,mb5.3						
MBDF	**Montbardon**	82.36	314	*e*P	P	02 58 16.9	-0.3
	comp=Z,104nm,1.5s,mb5.2						
LPL	**La Plagne**	82.36	315	*e*P	P	02 58 17.8	+0.6
	comp=Z,113nm,1.1s,mb5.4						
BNI	**Bardonecchia**	82.41	314	*e*P	P	02 58 17.5	0.0
BNI				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.3						
BNI	**Bardonecchia**	82.41	314	*e*P	P	02 58 17.5	0.0
	comp=Z,50nm,1.2s,mb5.3						
FRF	**La Foret Royal**	82.49	313	*e*P	P	02 58 18.2	+0.3
	comp=Z,164nm,1.4s,mb5.5						
HAU	**Haudompre**	82.54	317	*e*P	P	02 58 17.9	-0.2
	comp=Z,93nm,1.2s,mb5.4						
LMR	**La Mourre**	82.60	313	*e*P	P	02 58 18.7	+0.2
	comp=Z,126nm,1.4s,mb5.5						
WLF	**Walferdange**	82.62	319	*e*P	P	02 58 18.3	-0.2
WLF				pmax	pmax		
	comp=Z,88nm,1.6s,mb5.5						
WLF	**Walferdange**	82.62	319	*e*P	P	02 58 18.3	-0.2
	comp=Z,88nm,1.6s,mb5.5						
CABF	**La Chapelle**	82.77	316	*e*P	P	02 58 19.9	+0.6
	comp=Z,84nm,1.4s,mb5.3						
THEF	**They Montfort**	82.78	318	*e*P	P	02 58 19.1	-0.2
OG25	**Le Caire**	82.87	314	*e*P	P	02 58 20.7	+0.8
ORIF	**Oris-en-Rattie**	82.98	314	*e*P	P	02 58 20.4	-0.1
	comp=Z,32nm,1.0s,mb5.0						
SMRF	**Simiane la Rot**	83.25	313	*e*P	P	02 58 22.9	+1.1
	comp=Z,181nm,1.7s,mb5.5						
MEZF	**Maizieres J’vi**	83.39	318	*e*P	P	02 58 22.5	0.0
GIVF	**Givet**	83.47	320	*e*P	P	02 58 22.9	+0.1
VIVF	**Saint-Julien-l**	83.84	314	*e*P	P	02 58 25.2	+0.3
	comp=Z,59nm,1.2s,mb5.3						
BAIF	**Baives**	83.86	320	*e*P	P	02 58 25.1	+0.2
	comp=Z,82nm,1.5s,mb5.3						
SMF	**Signal de Mont**	84.31	316	*e*P	P	02 58 27.1	-0.1
	comp=Z,82nm,1.3s,mb5.4						
LASF	**Ste Croix**	84.48	314	*e*P	P	02 58 28.8	+0.7
	comp=Z,127nm,1.4s,mb5.5						
PLDF	**La Plantade**	84.51	316	*e*P	P	02 58 29.6	+1.4
SSF	**Saint Saulge**	84.52	317	*e*P	P	02 58 28.4	+0.2
	comp=Z,124nm,1.6s,mb5.5						
AVF	**Avril sur Loir**	84.64	316	*e*P	P	02 58 28.8	0.0
	comp=Z,88nm,1.4s,mb5.4						
LBL	**Lubilhac**	84.83	315	*e*P	P	02 58 31.7	+1.9
AGO	**Saint Agoulin**	84.85	316	*e*P	P	02 58 31.4	+1.5
BGF	**Bois d’Agland**	85.00	316	*e*P	P	02 58 31.2	+0.5
	comp=Z,125nm,1.4s,mb5.5						
HYF	**Humbligny**	85.09	317	*e*P	P	02 58 31.7	+0.6
TCF	**Toulx Ste Croi**	85.47	316	*e*P	P	02 58 33.5	+0.5
	comp=Z,55nm,1.4s,mb5.2						
CAF	**Calviac**	85.69	315	*e*P	P	02 58 34.8	+0.7
	comp=Z,45nm,1.2s,mb5.3						
MTLF	**Montolieu**	85.72	313	*e*P	P	02 58 34.8	+0.5
	comp=Z,66nm,1.1s,mb5.5						
RJF	**Les Rejaudoux**	86.04	315	*e*P	P	02 58 36.5	+0.6
	comp=Z,58nm,1.1s,mb5.4						
RPZ	**Rata Peaks**	86.32	135	P	P	02 58 38.5	+1.2
	comp=Z,27nm,1.1s,mb5.4,baz=117,slow=0.7,SNR=6.8						
RPZ				pP	pP	02 58 46.3	+0.9
	comp=Z,22nm,1.0s,baz=43,slow=16,SNR=5.1						
LFF	**La Frestale**	86.62	315	*e*P	P	02 58 39.5	+0.8
	comp=Z,108nm,1.4s,mb5.6						
LDF	**La Druitiere**	86.81	318	*e*P	P	02 58 39.6	0.0
	comp=Z,70nm,1.3s,mb5.4						
FLN	**La Foliniere**	87.03	319	*e*P	P	02 58 40.7	+0.1
	comp=Z,94nm,1.5s,mb5.5						
MFF	**Saint Martin d**	87.05	316	*e*P	P	02 58 41.0	+0.2
	comp=Z,76nm,1.3s,mb5.5						
EPF	**Esparros**	87.12	313	*e*P	P	02 58 41.5	+0.3
	comp=Z,38nm,1.4s,mb5.1						
EKA	**Eskdalemuir Ar**	87.79	325	P	P	02 58 44.6	+0.5
	comp=Z,9.9nm,0.7s,mb5.1,baz=95,slow=5.2,SNR=19						
EKA				pP	pP	02 58 52.6	+0.5
	comp=Z,13nm,0.7s,baz=101,slow=5.1,SNR=11						
ETSF	**Etsaut**	87.79	313	*e*P	P	02 58 45.2	+0.8
	comp=Z,40nm,1.0s,mb5.3						
TNA	**Tin City**	87.79	24	*e*P	P	02 58 44.5	+0.6
	comp=Z,25nm,1.1s,mb5.3						
TNA				*e*pP	pP	02 58 52.7	+0.8
TNA				LR	LR		
	comp=Z,239nm,20.0s,MS4.6						
DAG	**Danmarks Havn**	88.24	348	⇓*i*P	P	02 58 45.6	-0.3
DAG				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.2						
DAG	**Danmarks Havn**	88.24	348	⇓*i*P	P	02 58 45.6	-0.3
	comp=Z,5.9nm,0.4s,mb5.2						
SJPF	**Ste Jean**	88.25	313	*e*P	P	02 58 46.3	-0.3
	comp=Z,41nm,1.1s,mb5.3						
SGMF	**Saint Gilles**	88.46	318	*e*P	P	02 58 47.8	+0.3
	comp=Z,122nm,1.7s,mb5.6						
QUIF	**Quistinic**	88.92	318	*e*P	P	02 58 49.6	-0.1
	comp=Z,118nm,1.5s,mb5.7						
ROSF	**Rostrenen**	88.92	318	*e*P	P	02 58 50.0	+0.3
	comp=Z,79nm,1.4s,mb5.5						
URZ	**Urewera**	89.81	128	P	P	02 58 54.0	-0.2
	comp=Z,12nm,1.1s,mb5.1,baz=339,slow=5.6,SNR=3.6						
URZ				LR	LR	03 40 10.3	
	comp=Z,273nm,19.7s,MS4.7,baz=203,slow=36						
ESDC	**Sonseca Array**	90.79	310	P	P	02 58 59.6	+1.0
	comp=Z,11nm,0.9s,mb5.2,baz=59,slow=4.3,SNR=33						
ESDC				pP	pP	02 59 07.5	+0.8
	comp=Z,8.3nm,0.8s,baz=64,slow=4.0,SNR=15						
VNDA	**Vanda**	92.14	168	P	P	02 59 05.5	+1.4
	comp=Z,4.0nm,1.2s,mb4.6,baz=272,slow=5.4,SNR=3.0						
VNDA				LR	LR	03 39 16.9	
	comp=Z,211nm,18.1s,MS4.6,baz=298,slow=35						
VNDA	**Vanda**	92.14	168	*e*P	P	02 59 05.0	+0.9
VNDA				LR	LR		
	comp=Z,253nm,19.0s,MS4.7						
PBRG	**Braganca**	92.49	312	*e*P	P	02 59 07.2	+0.8
	comp=Z,31nm,1.6s,mb5.4						
IMA	**Indian Mountai**	93.21	22	*e*P	P	02 59 10.6	+1.5
PVRL	**Vila Real**	93.31	312	*e*P	P	02 59 11.8	+1.6
	comp=Z,30nm,1.6s,mb5.5						
MTE	**Manteigas**	93.36	311	*e*P	P	02 59 11.0	+0.6
	comp=Z,24nm,1.5s,mb5.4						
PCBR	**Castelo Branco**	93.42	311	*e*P	P	02 59 08.9	-1.8
	comp=Z,18nm,1.6s,mb5.3						
PBEJ	**Beja**	94.09	309	*e*P	P	02 59 14.4	+0.6
	comp=Z,18nm,1.6s,mb5.2						
MCK	**McKinley**	96.07	23	*e*P	P	02 59 20.5	-1.8
MCK				LR	LR		
	comp=Z,204nm,21.0s,MS4.6						
ILAR	**Eielson Array**	96.33	22	P	P	02 59 22.6	-0.9
	comp=Z,1.6nm,1.1s,mb4.4,baz=297,slow=4.5,SNR=6.0						
ILAR				pP	pP	02 59 31.1	-0.4
	comp=Z,1.4nm,0.8s,baz=302,slow=4.1,SNR=7.1						
ILAR				PP	PP	03 03 04.5	-15
	comp=Z,1.7nm,1.1s,baz=281,slow=6.4,SNR=5.0						
ILAR				LR	LR	03 48 06.9	
	comp=Z,236nm,18.8s,MS4.7,baz=160,slow=39						
DBIC	**Dimbokro**	96.61	278	P	P	02 59 27.7	+1.8
	comp=Z,14nm,1.3s,mb5.2,baz=38,slow=5.9,SNR=4.6						
DBIC				pP	pP	02 59 35.4	+1.3
	comp=Z,4.6nm,0.9s,baz=41,slow=6.3,SNR=4.3						
DBIC				LR	LR	03 41 52.9	
	comp=Z,413nm,18.9s,MS4.9,baz=66,slow=35						
QSPA	**South Pole Qui**	96.67	180	PFAKE		02 59 40.0	+15
QSPA				LR	LR		
	comp=Z,430nm,19.0s,MS5.0						
FIB	**Fire Island**	96.76	26	PFAKE		02 59 40.0	+15
FIB				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
INK	**Inuvik**	98.47	16	*e*P	P	02 59 32.8	-0.2
INK				pmax	pmax		
	comp=Z,27nm,1.4s						
INK	**Inuvik**	98.47	16	*e*P	P	02 59 32.8	-0.2
	comp=Z,27nm,1.5s,mb5.6						
RES	**Resolute Bay**	98.57	2	*e*P	P	02 59 33.9	+0.5
RES				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.2						
RES	**Resolute Bay**	98.57	2	*e*P	P	02 59 33.9	+0.5
	comp=Z,10.0nm,1.3s,mb5.2						
DIV	**Divide**	98.64	25	PFAKE		02 59 50.0	+16
DIV				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
YKA	**Yellowknife Ar**	107.84	13	PP	PP	03 04 41.0	-5.8
	comp=Z,0.9nm,1.0s,baz=334,slow=5.9,SNR=7.8						
YKA				PKKPbc		03 15 35.5	
	comp=Z,0.1nm,0.4s,baz=154,slow=2.6,SNR=3.7						
YKA				PKKP	PKKP	03 15 49.5	+6.8
	comp=Z,4.0nm,1.3s,baz=143,slow=3.7,SNR=8.9						
YKA				PKKPab		03 15 57.4	
	comp=Z,0.6nm,0.8s,baz=147,slow=4.2,SNR=7.8						
SCHQ	**Schefferville**	116.28	347	PFAKE		03 04 50.0	+8.1
SCHQ				LR	LR		
	comp=Z,690nm,21.0s,MS5.2						
FFC	**Flin Flon**	117.53	10	PFAKE		03 04 50.0	+5.7
FFC				LR	LR		
	comp=Z,493nm,21.0s,MS5.1						
TBI	**Tubuai**	118.24	113	*e*LR	LR	03 40 39.3	
	comp=Z,231nm,29.0s						
PPT	**Papeete**	118.47	106	*e*LR	LR	03 40 42.4	
	comp=Z,302nm,30.2s						
NEW	**Newport**	119.28	22	PFAKE		03 05 00.0	+12
NEW				LR	LR		
	comp=Z,410nm,19.0s,MS5.1						
HUMO	**Hull Mountain**	121.16	30	PFAKE		03 05 00.0	+8.3
HUMO				LR	LR		
	comp=Z,144nm,19.0s,MS4.6						
CHMT	**Chamberlain Mo**	121.83	21	*e*PKPdf	PKPdf	03 04 49.8	-3.1
BMO	**Blue Mountains**	122.00	25	PFAKE		03 05 00.0	+6.7
BMO				LR	LR		
	comp=Z,410nm,20.0s,MS5.1						
ULM	**Lac du Bonnet**	122.75	6	PKP	PKPdf	03 04 50.9	-3.6
	comp=Z,0.9nm,0.5s,baz=311,slow=2.3,SNR=4.2						
ULM	**Lac du Bonnet**	122.75	6	PKP	PKPdf	03 04 50.9	-3.6
ULM				LR	LR		
	comp=Z,374nm,20.0s,MS5.0						
MOD	**Modoc**	122.98	29	*e*PKPdf	PKPdf	03 04 52.5	-2.6
MOD				LR	LR		
	comp=Z,259nm,19.0s,MS4.9						
DGMT	**Dagmar**	123.05	13	PFAKE		03 05 00.0	+4.9
DGMT				LR	LR		
	comp=Z,627nm,22.0s,MS5.2						
WVOR	**Wild Horse Val**	123.35	27	*e*PKPdf	PKPdf	03 04 53.8	-2.2
WVOR				LR	LR		

	comp=Z,370nm,20.0s,MS5.0						
BOZ	**Bozeman (W)**	123.49	20	*e*PKPdf	PKPdf	03 04 53.6	-2.5
BOZ				LR	LR		
	comp=Z,291nm,19.0s,MS5.0						
HOPS	**Hopland**	123.72	33	PFAKE		03 05 10.0	+13
HOPS				LR	LR		
	comp=Z,244nm,19.0s,MS4.9						
PQI	**Presque Isle**	124.09	344	PFAKE		03 05 10.0	+13
PQI				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
LAO	**LASA Array**	124.21	16	*e*PKPdf	PKPdf	03 04 54.0	-3.5
LAO				LR	LR		
	comp=Z,231nm,19.0s,MS4.9						
HLID	**Hailey**	124.24	24	*e*PKPdf	PKPdf	03 04 55.6	-2.0
HLID				LR	LR		
	comp=Z,266nm,19.0s,MS4.9						
LKWY	**Lake**	124.86	20	*e*PKPdf	PKPdf	03 04 58.1	-0.7
LKWY				LR	LR		
	comp=Z,593nm,20.0s,MS5.2						
EYMN	**Ely**	125.41	3	PFAKE		03 05 10.0	+10
EYMN				LR	LR		
	comp=Z,271nm,21.0s,MS4.9						
BMN	**Battle Mountai**	125.59	28	PFAKE		03 05 10.0	+10
BMN				LR	LR		
	comp=Z,267nm,20.0s,MS4.9						
LOHW	**Long Hollow**	125.62	21	*e*PKPdf	PKPdf	03 04 57.9	-2.4
EMMW	**East Machias**	125.72	343	PFAKE		03 05 10.0	+10
EMMW				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
AHID	**Auburn Hatcher**	126.19	22	PFAKE		03 05 10.0	+8.6
AHID				LR	LR		
	comp=Z,171nm,20.0s,MS4.7						
WVL	**Waterville**	126.48	344	PFAKE		03 05 10.0	+8.1
WVL				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
NVAR	**Mina Array Bea**	126.63	30	PKP	PKPdf	03 05 01.1	-1.2
	comp=Z,2.4nm,0.8s,baz=316,slow=0.7,SNR=23						
NVAR				pPKP		03 05 08.1	
	comp=Z,2.8nm,0.8s,baz=329,slow=0.4,SNR=11						
MNV	**Mina**	126.70	30	*e*PKPdf	PKPdf	03 05 00.4	-2.1
MNV				LR	LR		
	comp=Z,288nm,21.0s,MS4.9						
BW06	**Boulder Array**	126.73	20	PFAKE		03 05 10.0	+7.6
BW06				LR	LR		
	comp=Z,303nm,21.0s,MS5.0						
PDAR	**Pinedale Array**	126.73	20	PKP	PKPdf	03 04 59.9	-2.5
	comp=Z,2.3nm,0.8s,slow=1.5,SNR=21						
PDAR				pPKP		03 05 07.5	
	comp=Z,3.0nm,0.9s,slow=1.5,SNR=12						
HWUT	**Hardware Ranch**	127.01	23	PFAKE		03 05 10.0	+7.0
HWUT				LR	LR		
	comp=Z,320nm,20.0s,MS5.0						
TPH	**Tonopah**	127.44	30	PFAKE		03 05 10.0	+6.0
TPH				LR	LR		
	comp=Z,235nm,19.0s,MS4.9						
TAOE	**Nuku Hiva Isla**	127.69	96	*e*SP	SP	03 16 39.0	-26
TAOE				*e*LR	LR	03 44 59.0	
TRCR	**Troy Canyon**	128.01	28	*e*PKPdf	PKPdf	03 05 03.1	-2.0
NCB	**Newcomb**	128.13	348	PFAKE		03 05 10.0	+4.8
NCB				LR	LR		
	comp=Z,294nm,20.0s,MS5.0						
DAC	**Darwin (Calif)**	128.65	31	PFAKE		03 05 20.0	+14
DAC				LR	LR		
	comp=Z,351nm,21.0s,MS5.0						
RCBR	**Riachuelo**	128.86	268	PFAKE		03 05 20.0	+13
RCBR				LR	LR		
	comp=Z,503nm,21.0s,MS5.2						
WES	**Weston**	128.95	345	PFAKE		03 05 20.0	+13
WES				LR	LR		
	comp=Z,920nm,22.0s,MS5.4						
MVU	**Marysvale**	129.39	25	*e*PKPdf	PKPdf	03 05 07.2	-0.6
MVU				LR	LR		
	comp=Z,244nm,19.0s,MS4.9						
BINY	**Binghamton**	130.18	349	PFAKE		03 05 20.0	+11
BINY				LR	LR		
	comp=Z,405nm,20.0s,MS5.1						
JFWS	**Jewell Farm**	130.50	3	PFAKE		03 05 20.0	+10
JFWS				LR	LR		
	comp=Z,314nm,20.0s,MS5.0						
NEN	**Nelson**	130.52	30	*e*PKPdf	PKPdf	03 05 08.2	-1.8
ISCO	**Idaho Springs**	130.70	19	PFAKE		03 05 20.0	+10
ISCO				LR	LR		
	comp=Z,272nm,20.0s,MS5.0						
PV10	**Paradox Valley**	130.78	23	*e*PKPdf	PKPdf	03 05 08.4	-2.0
ERPA	**Erie**	130.90	353	PFAKE		03 05 20.0	+10
ERPA				LR	LR		
	comp=Z,286nm,20.0s,MS5.0						
PV01	**Paradox Valley**	131.17	22	PKPdf	PKPdf	03 05 04.8	-6.3
SSPA	**Standing Stone**	132.04	350	PFAKE		03 05 20.0	+7.3
SSPA				LR	LR		
	comp=Z,207nm,22.0s,MS4.8						
SDCO	**Great Sand Dun**	132.60	20	*e*PKPdf	PKPdf	03 05 12.2	-1.7
SDCO				LR	LR		
	comp=Z,357nm,20.0s,MS5.1						
ACSO	**Alum Creek Sta**	133.07	355	PFAKE		03 05 20.0	+5.4
ACSO				LR	LR		
	comp=Z,341nm,19.0s,MS5.1						
CBKS	**Cedar Bluff**	133.23	13	PFAKE		03 05 20.0	+5.0
CBKS				LR	LR		
	comp=Z,265nm,20.0s,MS5.0						
MCWV	**Mont Chateau**	133.30	352	PFAKE		03 05 20.0	+5.0
MCWV				LR	LR		
	comp=Z,505nm,19.0s,MS5.2						
CBN	**Corbin**	134.31	349	PFAKE		03 05 30.0	+13
CBN				LR	LR		
	comp=Z,212nm,19.0s,MS4.9						
ANMO	**Albuquerque**	134.77	22	*e*PKPdf	PKPdf	03 05 16.4	-1.6
ANMO				LR	LR		
	comp=Z,276nm,19.0s,MS5.0						
TUC	**Tucson**	135.19	29	*e*PKIKP	PKPdf	03 05 16.9	-1.9
WCI	**Wyandotte Cave**	135.23	359	PFAKE		03 05 30.0	+11
WCI				LR	LR		
	comp=Z,364nm,19.0s,MS5.1						
CCM	**Cathedral Cave**	135.27	4	PFAKE		03 05 30.0	+11
CCM				LR	LR		
	comp=Z,263nm,19.0s,MS5.0						
BLA	**Blacksburg**	135.78	352	PFAKE		03 05 30.0	+10
BLA				LR	LR		
	comp=Z,240nm,21.0s,MS4.9						
WVT	**Waverly**	137.34	1	PFAKE		03 05 30.0	+7.4
WVT				LR	LR		
	comp=Z,298nm,19.0s,MS5.0						
WMOK	**Wichita Mounta**	137.34	14	PFAKE		03 05 30.0	+7.4
WMOK				LR	LR		
	comp=Z,303nm,21.0s,MS5.0						
GDL2	**Guadalupe Moun**	138.00	22	*e*PKPdf	PKPdf	03 05 21.2	-2.7
MNTX	**Cornudas Mount**	138.06	23	*e*PKPdf	PKPdf	03 05 20.2	-3.8
MNTX				LR	LR		
	comp=Z,170nm,19.0s,MS4.8						
MIAR	**Mount Ida**	138.50	8	PFAKE		03 05 30.0	+5.2
MIAR				LR	LR		
	comp=Z,414nm,21.0s,MS5.2						
OXF	**Oxford**	138.91	3	PFAKE		03 05 30.0	+4.5
OXF				LR	LR		
	comp=Z,262nm,20.0s,MS5.0						
NHSC	**New Hope**	139.77	351	PFAKE		03 05 40.0	+13
NHSC				LR	LR		
	comp=Z,434nm,20.0s,MS5.2						
GOGA	**Godfrey**	139.88	355	PFAKE		03 05 40.0	+13
GOGA				LR	LR		
	comp=Z,418nm,19.0s,MS5.2						
LRAL	**Lakeview Retre**	140.43	360	PFAKE		03 05 40.0	+12
LRAL				LR	LR		
	comp=Z,330nm,19.0s,MS5.1						
BDFB	**Brasilia**	140.47	254	PKP	PKPdf	03 05 26.4	-2.4
	comp=Z,2.1nm,0.8s,baz=107,slow=14,SNR=2.5						
BDFB				pPKP		03 05 34.1	
	comp=Z,3.6nm,0.9s,baz=233,slow=4.6,SNR=3.7						
LTX	**Lajitas**	140.84	23	*e*PKPdf	PKPdf	03 05 27.1	-2.2
LTX				LR	LR		
	comp=Z,308nm,20.0s,MS5.0						
TXAR	**Lajitas Array**	140.84	23	PKhKP		03 05 21.7	
	comp=Z,0.3nm,0.6s,baz=329,slow=1.0,SNR=6.2						
TXAR				PKP	PKPdf	03 05 27.4	-1.8
	comp=Z,0.6nm,0.6s,SNR=11						
TXAR				PP	PP	03 08 24.1	-4.8
	comp=Z,1.2nm,1.1s,slow=5.0,SNR=3.6						
NATX	**Nacogdoches**	141.07	10	PFAKE		03 05 40.0	+10
NATX				LR	LR		
	comp=Z,320nm,20.0s,MS5.1						
JCT	**Junction City**	141.10	17	*e*PKPdf	PKPdf	03 05 27.7	-1.9
JCT				LR	LR		
	comp=Z,258nm,20.0s,MS5.0						
TRQA	**Tornquist**	141.27	213	PFAKE		03 05 40.0	+10
TRQA				LR	LR		
	comp=Z,374nm,19.0s,MS5.2						
HKT	**Hockley**	142.61	12	PFAKE		03 05 40.0	+7.8
HKT				LR	LR		
	comp=Z,254nm,19.0s,MS5.0						
PLCA	**Paso Flores**	142.98	201	PKhKP		03 05 25.9	
	comp=Z,2.8nm,1.1s,baz=185,slow=6.7,SNR=4.1						
PLCA	**Paso Flores**	142.98	201	PKP	PKPdf	03 05 25.9	-6.6
DWPF	**Disney**	144.87	351	PFAKE		03 05 40.0	+8.3
DWPF				LR	LR		
	comp=Z,373nm,19.0s,MS5.2						
CPUP	**Villa Florida**	145.41	232	PKPbc	PKPbc	03 05 34.2	+1.1
CPUP				sPKPdf		03 05 42.2	
SFJM	**Santa Fe**	148.85	29	*e*P	PKPdf	03 05 41.0	-2.0
FCH	**Farellones**	149.18	209	*e*P	PKPdf	03 05 44.1	+1.0
TEIG	**Tepich**	153.17	2	PFAKE		03 06 00.0	+11
TEIG				LR	LR		
	comp=Z,103nm,19.0s,MS4.7						
SAML	**Samuel**	155.95	263	*e*PKPdf	PKPdf	03 05 50.3	-3.1
SAML				LR	LR		
	comp=Z,401nm,21.0s,MS5.2						
LVC	**Limon Verde**	156.24	227	PKPab	PKPab	03 06 21.1	+1.7
	comp=Z,10nm,1.0s,baz=133,slow=3.9,SNR=9.4						
SDV	**Santo Domingo**	157.21	313	PFAKE		03 06 00.0	+4.9
SDV				LR	LR		
	comp=Z,337nm,22.0s,MS5.1						
LPAZ	**La Paz**	158.93	242	PKP	PKPdf	03 05 17.1	-40
	comp=Z,4.1nm,1.1s,baz=180,slow=3.0,SNR=6.4						
LPAZ				PKPab	PKPab	03 05 54.2	-37
	comp=Z,6.3nm,1.0s,baz=75,slow=4.8,SNR=7.3						
LPAZ	**La Paz**	158.93	242	PFAKE		03 06 10.0	+13
LPAZ				LR	LR		
	comp=Z,314nm,20.0s,MS5.2						
ROSC	**El Rosal**	162.61	311	PKP	PKPdf	03 05 59.3	-1.7
	comp=Z,6.3nm,0.9s,baz=100,slow=20,SNR=5.1						
ROSC				pPKP		03 06 07.5	
	comp=Z,3.2nm,0.5s,baz=112,slow=23,SNR=2.7						
JTS	**JuntasAbangare**	162.90	352	PFAKE		03 06 10.0	+8.7
JTS				LR	LR		
	comp=Z,62nm,21.0s						
NNA	**Nana**	168.40	243	PFAKE		03 06 10.0	+4.2
NNA				LR	LR		
	comp=Z,60nm,20.0s						
OTAV	**Otavalo**	168.72	308	*e*PKPdf	PKPdf	03 06 04.6	-1.5
OTAV				LR	LR		
	comp=Z,214nm,19.0s						

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*IDC **09** 02:47:08.8±0.8, 49.43S×161.44E, mb4.4/6, mb1 4.6/8, mb1mx4.5/12, mbtmp4.5/8, ML4.3/2, MS4.0/1, Ms1 4.1/1, ms1mx2.8/17, Error ellipse: s-maj=25.6km s-min=21.9km az=42.0*

*NEIC **09** 02:47:09.6±0.4, 49.77S×161.20E, h10^{km}, mb4.7/5, Error ellipse: s-maj=9.5km s-min=5.0km az=163.0*

ISC 09 02:47:10.5±0.7**, 49.33S**±0.08×**161.37E**±0.07**, h10^{km}, n82, σ1^{s}55**/97**, mb4.4**/9**, MS3.9**/1**, 3C, North of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	5.62	55	P	**Pn**	**02 48 37.7**	**+1.4**
WHZ				S	**Sn**	**02 49 37.7**	**-4.0**
WHZ	**Wether Hill Ro**	5.62	55	PN	**Pn**	**02 48 37.7**	**+1.5**
WHZ				SN	**Sn**	**02 49 40.6**	**-1.1**
WHZ	**Wether Hill Ro**	5.62	55	PN	**Pn**	**02 48 37.7**	**+1.5**
WHZ				SN	**Sn**	**02 49 40.6**	**-1.1**
MLZ	**Mavora Lakes**	6.10	52	*e*P	**Pn**	**02 48 44.7**	**+1.6**
MLZ				S	**Sn**	**02 49 50.9**	**-2.9**
MLZ	**Mavora Lakes**	6.10	52	PN	**Pn**	**02 48 44.7**	**+1.6**
MLZ				SN	**Sn**	**02 49 50.9**	**-2.9**
MLZ	**Mavora Lakes**	6.10	52	PN	**Pn**	**02 48 44.7**	**+1.6**
MLZ				SN	**Sn**	**02 49 50.9**	**-2.9**
MSZ	**Milford Sound**	6.47	46	PN	**Pn**	**02 48 50.8**	**+2.6**
MSZ				SN	**Sn**	**02 50 02.2**	**-0.6**
MSZ	**Milford Sound**	6.47	46	PN	**Pn**	**02 48 50.8**	**+2.6**
MSZ				SN	**Sn**	**02 50 02.2**	**-0.6**
TUZ	**Tuapeka**	6.53	62	*e*P	**Pn**	**02 48 49.6**	**+0.6**
TUZ				S	**Sn**	**02 50 01.9**	**-2.4**
TUZ	**Tuapeka**	6.53	62	PN	**Pn**	**02 48 49.6**	**+0.6**
TUZ				SN	**Sn**	**02 50 01.9**	**-2.4**
TUZ	**Tuapeka**	6.53	62	PN	**Pn**	**02 48 49.6**	**+0.6**
TUZ				SN	**Sn**	**02 50 01.9**	**-2.4**
EAZ	**Earnscleugh**	6.78	56	*e*P	**Pn**	**02 48 53.8**	**+1.2**
EAZ	**Earnscleugh**	6.78	56	PN	**Pn**	**02 48 53.1**	**+0.5**
EAZ				SN	**Sn**	**02 50 08.7**	**-1.9**
EAZ	**Earnscleugh**	6.78	56	PN	**Pn**	**02 48 53.1**	**+0.5**
EAZ				SN	**Sn**	**02 50 08.7**	**-1.9**
WKZ	**Wanaka**	6.90	52	*e*P	**Pn**	**02 48 56.8**	**+2.6**
WKZ	**Wanaka**	6.90	52	PN	**Pn**	**02 48 56.5**	**+2.2**
WKZ				SN	**Sn**	**02 50 12.1**	**-1.4**
WKZ	**Wanaka**	6.90	52	PN	**Pn**	**02 48 56.5**	**+2.2**
WKZ				SN	**Sn**	**02 50 12.1**	**-1.4**
JCZ	**Jackson Bay**	7.31	47	P	**Pn**	**02 49 02.6**	**+2.6**
JCZ	**Jackson Bay**	7.31	47	PN	**Pn**	**02 49 02.6**	**+2.6**
JCZ				SN	**Sn**	**02 50 23.3**	**-0.7**
JCZ	**Jackson Bay**	7.31	47	PN	**Pn**	**02 49 02.6**	**+2.6**
JCZ				SN	**Sn**	**02 50 23.3**	**-0.7**
ODZ	**Otahua Downs**	7.64	59	*e*P	**Pn**	**02 49 03.2**	**-1.4**
ODZ	**Otahua Downs**	7.64	59	PN	**Pn**	**02 49 03.2**	**-1.4**
ODZ				SN	**Sn**	**02 50 28.0**	**-4.1**
ODZ	**Otahua Downs**	7.64	59	PN	**Pn**	**02 49 03.2**	**-1.4**
ODZ				SN	**Sn**	**02 50 28.0**	**-4.1**
LBZ	**Lake Benmore**	7.81	54	PN	**Pn**	**02 49 05.6**	**-1.3**
LBZ	**Lake Benmore**	7.81	54	PN	**Pn**	**02 49 05.6**	**-1.3**
FOZ	**Fox Glacier**	8.14	48	PN	**P**	**02 49 13.5**	**+1.9**
FOZ				SN	**Sn**	**02 50 45.0**	**+0.4**
FOZ	**Fox Glacier**	8.14	48	PN	**P**	**02 49 13.5**	**+1.9**
FOZ				SN	**Sn**	**02 50 45.0**	**+0.4**
RPZ	**Rata Peaks**	8.72	54	Pn	**P**	**02 49 17.9**	**-1.8**
	3.3nm,0.3s,baz=226,slow=7.3,SNR=13						
RPZ				Sn	**Sn**	**02 50 55.9**	**-3.3**
	15nm,0.3s,baz=80,slow=20,SNR=8.0						
RPZ	**Rata Peaks**	8.72	54	*e*P	**P**	**02 49 21.6**	**+1.9**
RPZ				Sn	**Sn**	**02 50 55.9**	**-3.3**
RPZ	**Rata Peaks**	8.72	54	PN	**P**	**02 49 17.8**	**-1.9**
RPZ				SN	**Sn**	**02 50 55.0**	**-4.2**
RPZ	**Rata Peaks**	8.72	54	PN	**P**	**02 49 17.8**	**-1.9**
RPZ				SN	**Sn**	**02 50 55.0**	**-4.2**
WVZ	**Waitaha Valley**	9.02	50	SN	**Sn**	**02 51 03.1**	**-3.3**
WVZ	**Waitaha Valley**	9.02	50	SN	**Sn**	**02 51 03.1**	**-3.3**
LTZ	**Lake Taylor**	10.01	53	*e*P	**P**	**02 49 37.3**	**-0.1**
LTZ	**Lake Taylor**	10.01	53	PN	**P**	**02 49 37.6**	**+0.2**
LTZ	**Lake Taylor**	10.01	53	PN	**P**	**02 49 37.6**	**+0.2**
DSZ	**Denniston Nort**	10.53	48	*e*P	**P**	**02 49 44.6**	**0.0**
DSZ	**Denniston Nort**	10.53	48	PN	**P**	**02 49 44.6**	**0.0**
DSZ	**Denniston Nort**	10.53	48	PN	**P**	**02 49 44.6**	**0.0**
THZ	**Tophouse**	11.07	51	*e*P	**P**	**02 49 50.9**	**-1.0**
THZ	**Tophouse**	11.07	51	PN	**P**	**02 49 50.9**	**-1.0**
THZ	**Tophouse**	11.07	51	PN	**P**	**02 49 50.9**	**-1.0**
QRZ	**Quartz Range**	11.59	47	PN	**P**	**02 49 59.1**	**+0.1**
QRZ	**Quartz Range**	11.59	47	PN	**P**	**02 49 59.1**	**+0.1**
TAU	**Tasmania Unive**	11.66	298	*e*P	**P**	**02 49 55.2**	**-4.8**
	143nm,0.6s						
NNZ	**Nelson**	11.71	51	*e*P	**P**	**02 50 02.4**	**+1.7**
NNZ	**Nelson**	11.71	51	PN	**P**	**02 50 02.4**	**+1.7**
NNZ	**Nelson**	11.71	51	PN	**P**	**02 50 02.4**	**+1.7**
MRZ	**Mangatainoka R**	13.26	55	*e*P	**P**	**02 50 21.5**	**+0.1**
CNZ	**Chateau**	14.32	50	P	**P**	**02 50 43.2**	**+7.9**
TUVZ	**Tukino**	14.32	51	P	**P**	**02 50 37.6**	**+2.3**
MGZ	**Maungaku**	14.47	50	P	**P**	**02 50 39.9**	**+2.7**
URZ	**Urewera**	15.83	52	Pn	**P**	**02 50 55.0**	**+0.1**
	1.0nm,0.3s,baz=239,slow=7.3,SNR=5.1						
WCZ	**Waipu Caves**	16.41	40	*e*P	**P**	**02 51 05.8**	**+3.5**
WCZ	**Waipu Caves**	16.41	40	PN	**P**	**02 51 05.0**	**+2.7**
WCZ	**Waipu Caves**	16.41	40	PN	**P**	**02 51 05.0**	**+2.7**
TOO	**Toolangi**	16.42	310	*e*P	**P**	**02 51 03.7**	**+1.2**
	3.5nm,0.5s						
CNB	**Canberra Magne**	16.55	323	*e*P	**P**	**02 51 05.3**	**+1.1**
	104nm,0.3s						
STKA	**Stephens Creek**	22.89	312	P	**P**	**02 52 16.8**	**+1.5**
	5.7nm,0.8s,mb4.1,baz=128,slow=11,SNR=6.6						
STKA	**Stephens Creek**	22.89	312	*e*P	**P**	**02 52 16.5**	**+1.2**
VNDA	**Vanda**	28.30	180	P	**P**	**02 53 04.3**	**-1.3**
	2.4nm,0.8s,mb3.9,baz=337,slow=6.1,SNR=6.1						
VNDA				LR	LR	03 01 27.4	
	comp=Z,312nm,19.8s,MS3.9,baz=12,slow=30						
VNDA	**Vanda**	28.30	180	*e*P	**P**	**02 53 00.4**	**-5.3**
VNDA				LR	LR	03 01 27.4	
CTA	**Charters Tower**	31.59	332	P	**P**	**02 53 35.1**	**-0.3**
	0.9nm,0.4s,mb4.0,baz=163,slow=5.3,SNR=4.7						
ASAR	**Alice Springs**	33.48	310	P	**P**	**02 53 50.6**	**-1.3**
	11nm,0.8s,mb4.8,baz=146,slow=8.3,SNR=73						
ASPA	**Alice Springs**	33.48	310	*e*P	**P**	**02 53 50.9**	**-1.0**
WRA	**Warramunga Arr**	36.42	314	P	**P**	**02 54 15.6**	**-1.5**
	6.1nm,0.8s,mb4.6,baz=148,slow=8.8,SNR=31						
WRAB	**Tennant Creek**	36.42	314	*e*P	**P**	**02 54 15.5**	**-1.6**
	17nm,0.9s,mb5.0						
QSPA	**South Pole Qui**	40.79	180	⇑*i*P	**P**	**02 54 53.8**	**+0.8**
	11nm,0.9s,mb4.5						
MBWA	**Marble Bar**	43.30	295	*e*P	**P**	**02 55 11.4**	**-2.7**
	19nm,1.2s,mb4.7						
VNA3	**Neumayer Olymp**	59.56	183	⇑*i*P	**P**	**02 57 06.9**	**-9.1**
VNA2	**Neumayer--Watz**	59.78	184	⇑*i*P	**P**	**02 57 10.2**	**-7.3**
CMAR	**Chiang Mai Arr**	87.16	303	P	**P**	**02 59 57.7**	**-0.4**
	2.2nm,0.9s,mb4.4,baz=149,slow=3.9,SNR=6.6						
ILAR	**Eielson Array**	120.65	23	PKP	PKPdf	03 06 00.5	-4.3
	1.4nm,1.0s,baz=279,slow=3.0,SNR=9.3						
YKA	**Yellowknife Ar**	129.66	37	PKP	PKPdf	03 06 17.8	-4.2
	0.1nm,0.5s,baz=256,slow=1.7,SNR=5.1						
YKA	**Yellowknife Ar**	129.66	37	PKP	PKPdf	03 06 17.8	-4.2
AKASG	**Malin Array Be**	149.63	291	PKPbc	PKPdf	03 06 58.1	+0.4
	3.5nm,0.8s,baz=78,slow=2.7,SNR=14						
MLR	**Muntele Rosu**	149.92	280	PKPbc	PKPdf	03 07 00.3	+1.9
	1.2nm,0.6s,baz=162,slow=3.2,SNR=3.3						
SCHQ	**Schefferville**	150.36	61	PKPbc	PKPdf	03 07 01.0	+2.3
	1.4nm,0.8s,baz=240,slow=8.1,SNR=3.8						
ARCES	**ARCESS Array B**	150.82	330	PKPbc	PKPdf	03 07 00.5	+1.5
	8.8nm,0.6s,baz=84,slow=2.6,SNR=35						
ARCES	**ARCESS Array B**	150.82	330	PKPbc	PKPdf	03 07 00.5	+1.5
FINES	**FINESS Array B**	152.46	313	PKPbc	PKPdf	03 07 04.9	+3.3
	2.4nm,0.5s,baz=97,slow=4.7,SNR=27						
GERES	**GERESS Array B**	158.90	281	PKPab	PKPab	03 07 43.3	-2.7
	0.9nm,1.0s,baz=162,slow=6.2,SNR=3.7						

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*NEIC **09** 03:36:50.5, 31.23S×68.88W, h150^{km}, MD4.0(GUC), After GUC.*

GUC 09 03:36:50.5±0.6**, 31.23S×68.88W, h150^{km}, MD4.0, ML4.0, 3C-2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDZ	**Mendoza**	1.65	179	⇓*i*P	P	03 37 18.1	-3.9
MDZ				*i*		03 37 40.0	
MDZ				*i* S	S	03 37 44.0	-2.3
TLL	**Tololo Astrono**	1.97	302	*e*P	P	03 37 26.5	+0.9
TLL				*i* S	S	03 37 53.2	+0.7
TLL				AMP		03 37 57.1	
	comp=N,826nm,0.7s						
ILCH	**Illapel**	2.00	258	*e*P	P	03 37 26.3	+0.3
ILCH				*i* S	S	03 37 53.0	-0.2
ILCH				AMP		03 37 56.6	
	comp=N,592nm,0.3s						
PTCH	**Petorca**	2.03	239	*e*P	P	03 37 26.5	+0.1
PTCH				*i* S	S	03 37 53.6	-0.3
PTCH				AMP		03 37 56.8	
	comp=N,1µm,0.3s						
JACH	**Jahuel**	2.06	225	*e*P	P	03 37 26.9	+0.2
FCH	**Farellones**	2.42	209	⇑*i*P	P	03 37 31.8	+0.7
FCH				*i* S	S	03 38 03.4	+1.2
FCH				AMP		03 38 10.7	
	comp=N,384nm,0.2s						
ROCH	**El Roble**	2.51	226	*e*P	P	03 37 32.5	+0.1
PACH	**Papudo**	2.54	238	⇑*i*P	P	03 37 32.3	-0.4
CLCH	**Cerro Calan**	2.58	213	*e*P	P	03 37 33.6	+0.4
CLCH				*i* S	S	03 38 06.0	+0.1
CLCH				AMP		03 38 09.1	
	comp=E,787nm,0.6s						
PCH	**Pirque**	2.76	210	*e*P	P	03 37 35.8	+0.3
RCDM	**Rinconada Maip**	2.79	215	*e*P	P	03 37 35.9	0.0
RCDM				*i* S	S	03 38 10.3	-0.2
RCDM				AMP		03 38 11.4	
	comp=E,609nm,0.3s						
LMEL	**Las Melosas**	2.84	203	*e*P	P	03 37 36.5	-0.1
LMEL				*i* S	S	03 38 13.9	+2.1
LMEL				AMP		03 38 24.2	
	comp=N,210nm,0.3s						
TACH	**Talagante**	2.98	215	⇑*i*P	P	03 37 37.9	-0.4
CHCH	**Chadas Angostu**	3.09	209	⇓*i*P	P	03 37 39.6	-0.1
LVC	**Limon Verde**	8.58	360	*e*P	P	03 38 50.1	-2.5

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*MOS **09** 03:41:14.4±0.8, 32.10N×137.50E, h398^{km}, mb3.8/13, Error ellipse: s-maj=19.1km s-min=10.3km az=105.5*

*JMA **09** 03:41:14.8±0.4, 32.20N×137.59E, h421^{km}±5^{km}, M3.6*

*NEIC **09** 03:41:16.2±0.8, 32.15N×137.45E, h396^{km}±7^{km}, mb3.9/7, Error ellipse: s-maj=10.7km s-min=10.2km az=61.0*

*IDC **09** 03:41:17.0±0.8, 32.16N×137.47E, h403^{km}±9^{km}, mb3.3/11, mb1 3.5/14, mb1mx3.4/24, mbtmp4.2/14, Error ellipse: s-maj=20.6km s-min=12.0km az=92.0*

ISC 09 03:41:15.0±0.5**, 32.15N**±0.06×**137.64E**±0.07**, h406^{km}**±4^{km}**, n67, σ0^{s}93**/76**, mb3.9**/24**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	**Tokai 2**	1.80	3	*e*S	**S**	**03 42 56.7**	**+2.2**
JHJ	**Hachijo jima 2**	2.06	61	P	**P**	**03 42 13.2**	**+0.9**
	30nm,0.3s,baz=307,slow=20,SNR=5.2						
JHJ				S	**S**	**03 43 01.5**	**+4.3**
	53nm,0.3s,baz=52,slow=19,SNR=5.3						
JHJ2	**Mitsune**	2.08	62	P	**P**	**03 42 13.3**	**+0.9**
JWZ	**Kozaga**	2.13	311	P	**P**	**03 42 12.9**	**+0.2**
JIE	**Ise**	2.37	341	P	**P**	**03 42 15.0**	**+0.7**
JAI	**Aioi**	3.14	302	P	**P**	**03 42 20.6**	**+0.4**
JOD2	**Odawara 2**	3.34	21	P	**P**	**03 42 22.4**	**+0.5**
JOD2				*e*S	**S**	**03 43 15.9**	**+1.3**
BSO1	**Boso 1**	3.75	47	P	**P**	**03 42 24.1**	**-1.5**
BSO1				*e*S	**S**	**03 43 18.0**	**-3.1**
JRY	**Ryogami san**	4.00	15	P	**P**	**03 42 28.4**	**+0.5**
JRY				*e*S	**S**	**03 43 25.1**	**-0.2**
MAJO	**Matsushiro**	4.41	6	*e*P	**P**	**03 42 31.7**	**-0.3**
MAT	**Matsushiro**	4.41	6	*e*P	**P**	**03 42 32.0**	**0.0**
MAT				*e*S	**S**	**03 43 31.0**	**-1.4**
MAT	**Matsushiro**	4.41	6	P	**P**	**03 42 31.8**	**-0.2**
MAT				S	**S**	**03 43 31.3**	**-1.1**
JHS	**Saijyo**	4.72	308	P	**P**	**03 42 35.4**	**+0.3**
CBIJ	**Chichi jima**	6.40	141	P	**P**	**03 42 51.6**	**-1.2**
	19nm,0.3s,baz=302,slow=14,SNR=14						
CBIJ				S	**S**	**03 44 06.8**	**-3.2**
	50nm,0.3s,baz=273,slow=23,SNR=16						
CBIJ	**Chichi jima**	6.40	141	P	**P**	**03 42 50.5**	**-2.4**
CBIJ				*e*S	**S**	**03 44 05.8**	**-4.2**
JMK	**Ichinoseki**	7.39	22	P	**P**	**03 43 02.9**	**-1.1**
JMK				*e*S	**S**	**03 44 26.9**	**-3.1**
KS15	**Wonju Array Si**	9.60	306	*e*P	**P**	**03 43 29.2**	**-0.1**
JOT	**Ohata**	9.61	16	P	**P**	**03 43 29.3**	**-0.2**
JKB	**Kayabe**	10.09	15	P	**P**	**03 43 34.4**	**-0.7**
INCN	**Inchon**	10.49	304	*e*P	**P**	**03 43 38.6**	**-1.2**
	45nm,0.8s						
ASAJ	**Asahikawa**	12.57	17	P	**P**	**03 44 03.1**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ	**Asahikawa**	12.57	17	P	**P**	**03 44 03.1**	**-0.2**
	comp=Z,4.9nm,0.3s,baz=255,slow=12,SNR=22						
JTKR	**Abashiri--Toko**	12.79	21	P	**P**	**03 44 06.4**	**+0.6**
BJT	**Baijiatuau**	19.02	300	*e*P	**P**	**03 45 07.4**	**-2.2**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJT	**Baijiatuau**	19.02	300	*e*P	**P**	**03 45 07.4**	**-2.2**
	comp=Z,4.4nm,0.8s						
HIA	**Hailar**	21.74	327	*e*P	**P**	**03 45 36.5**	**+0.7**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HIA	**Hailar**	21.74	327	*e*P	**P**	**03 45 36.5**	**+0.8**
	comp=Z,3.3nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	27.97	313	*e*P	**P**	**03 46 32.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
ULN	**Ulaanbaatar**	27.97	313	*e*P	**P**	**03 46 32.1**	**+0.2**
	comp=Z,3.2nm,0.5s,mb3.9						
SONM	**Songino Array**	28.36	313	P	**P**	**03 46 35.4**	**+0.1**
	comp=Z,2.1nm,0.8s,mb3.5,baz=113,slow=7.0,SNR=20						
ZAK	**Zakamensk**	31.23	316	*e*P	**P**	**03 47 00.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.1						
JIRN	**Jiri**	44.48	278	*e*P	**P**	**03 48 50.0**	**+0.4**
	comp=Z,39nm,0.6s,mb4.9						
PKI	**Pulchoki**	45.17	278	*e*P	**P**	**03 48 54.3**	**-0.7**
	comp=Z,11nm,0.6s,mb4.3						
KKN	**Kakani**	45.20	279	*e*P	**P**	**03 48 55.2**	**-0.1**
	comp=Z,26nm,0.8s,mb4.6						
DMN	**Daman**	45.41	278	*e*P	**P**	**03 48 56.5**	**-0.4**
	comp=Z,14nm,0.6s,mb4.5						
GKN	**Gorkha**	45.67	279	*e*P	**P**	**03 48 58.8**	**-0.1**
	comp=Z,21nm,0.6s,mb4.6						
KOLN	**Koldanda**	46.62	279	*e*P	**P**	**03 49 05.7**	**-0.5**
	comp=Z,8.0nm,0.5s,mb4.3						

KURK	Kurchatov	46.66	311	*e*P	P	03 49 05.3	-0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
KURK	Kurchatov	46.66	311	*e*P	P	03 49 05.3	-0.9
	comp=Z,2.4nm,0.6s,mb3.7						
CHKZ	Chkalovo	51.49	316	*e*P	P	03 49 41.4	-1.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.6						
CHKZ	Chkalovo	51.49	316	*e*P	P	03 49 41.4	-1.2
	comp=Z,1.6nm,0.5s,mb3.5						
WRAB	Tennant Creek	51.88	184	*e*P	P	03 49 45.4	-0.5
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.8						
WRAB	Tennant Creek	51.88	184	*e*P	P	03 49 45.4	-0.4
	comp=Z,3.1nm,0.5s,mb3.8						
WRA	Warramunga Arr	51.89	184	P	P	03 49 45.9	0.0
WRA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA	Warramunga Arr	51.89	184	P	P	03 49 45.9	-0.1
	comp=Z,1.8nm,0.3s,mb3.8,baz=0.1,slow=7.6,SNR=100						
ILAR	Eielson Array	55.28	30	P	P	03 50 10.1	+0.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	55.28	30	P	P	03 50 10.1	+0.4
	comp=Z,0.5nm,0.5s,mb3.0,baz=270,slow=5.9,SNR=9.2						
ASAR	Alice Springs	55.61	184	P	P	03 50 13.7	+1.1
	comp=Z,0.6nm,0.5s,mb3.1,baz=12,slow=12,SNR=9.1						
INK	Inuvik	60.14	25	P	P	03 50 44.1	+1.3
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	60.14	25	P	P	03 50 44.1	+1.3
	comp=Z,1.2nm,0.4s,mb3.7,baz=208,slow=4.3,SNR=15						
STKA	Stephens Creek	63.79	176	*e*P	P	03 51 12.5	+5.4
ARCES	ARCESS Array B	67.46	339	P	P	03 51 30.4	+0.8
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	67.46	339	P	P	03 51 30.4	+0.8
	comp=Z,3.9nm,0.9s,mb4.0,baz=65,slow=8.5,SNR=5.8						
JOF	Joensuu	68.80	332	*e*p	P	03 51 37.6	-0.2
YKA	Yellowknife Ar	69.58	28	P	P	03 51 43.8	+1.2
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	69.58	28	P	P	03 51 43.8	+1.2
	comp=Z,1.0nm,1.0s,mb3.3,baz=300,slow=6.2,SNR=11						
YKA	Yellowknife Ar	69.58	28	P	P	03 51 43.8	+1.2
KAF	Kangasniemi	71.20	332	*e*p	P	03 51 51.7	-0.5
	comp=Z,5.5nm,0.8s,mb4.1						
KAF	Kangasniemi	71.20	332	*e*P	P	03 51 51.7	-0.5
KAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
FINES	FINESS Array B	71.66	332	P	P	03 51 55.3	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	71.66	332	P	P	03 51 55.3	+0.4
	comp=Z,1.9nm,0.4s,mb4.0,baz=72,slow=6.4,SNR=38						
AKASG	Malin Array Be	76.22	322	P	P	03 52 21.3	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	76.22	322	P	P	03 52 21.3	+0.4
	comp=Z,1.0nm,0.3s,mb3.9,baz=47,slow=6.0,SNR=5.9						
NOA	NORSAR Array B	77.44	336	P	P	03 52 28.4	+1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	77.44	336	P	P	03 52 28.4	+0.9
	comp=Z,0.6nm,0.8s,mb3.3,baz=15,slow=2.9,SNR=3.2						
BRTR	Keskin Array B	79.70	310	P	P	03 52 41.2	+1.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	79.70	310	P	P	03 52 41.2	+1.3
	comp=Z,1.0nm,0.7s,mb3.5,baz=124,slow=4.5,SNR=3.8						

BJI ***09*** *03:45:29.7, 5.17S×154.73E, h121^{km}, mB5.2, mb4.8*

IDC ***09*** *03:45:30.0±4.2, 5.93S×154.62E, h128^{km}±38^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.4/19, mbtmp4.6/17, MS3.2/2, Ms1 3.2/2, ms1mx2.9/19, Error ellipse: s-maj=22.1km s-min=13.5km az=72.0*

NEIC ***09*** *03:45:31.7±1.8, 5.96S×154.53E, h146^{km}±16^{km}, mb4.6/18, Error ellipse: s-maj=10.3km s-min=7.6km az=69.0*

ISC 09 03:45:30.7±2.5**, 5.93S**±0.07×**154.53E**±0.09**, h151**^{km}±23^{km}**, n51, σ0^{s}95**/51**, mb4.5**/33**, 6C, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.07	244	P	P	03 47 26.1	0.0
	25nm,0.3s,baz=46,slow=9.4,SNR=37						
PMG				S	S	03 48 56.8	+0.7
	15nm,0.3s,baz=220,slow=16,SNR=4.6						
CTA	Charters Tower	16.20	209	*e*P	P	03 49 11.5	+0.3
	6.9nm,1.4s						
CTA	Charters Tower	16.20	209	P	P	03 49 11.9	+0.7
	0.8nm,0.3s,baz=43,slow=13,SNR=9.2						
CTA				LR	LR	03 54 14.9	
	comp=Z,72nm,21.1s,baz=50,slow=32						
CTAO	Charters Tower	16.20	209	*e*P	P	03 49 11.5	+0.3
	8.1nm,0.7s						
DZM	Mont Dzumac	19.75	145	*e*P	P	03 49 49.5	-1.4
DZM	Mont Dzumac	19.75	145	*e*P	P	03 49 49.5	-1.5
KAKA	Kakadu	22.80	251	⇑*i*P	P	03 50 20.9	-0.3
	19nm,0.4s,mb4.9						
WRAB	Tennant Creek	24.05	233	*e*P	P	03 50 33.7	+0.5
	53nm,0.5s,mb5.3						
WB2	Warramunga Arr	24.05	233	⇑*i*P	P	03 50 33.9	+0.7
WRA	Warramunga Arr	24.06	233	P	P	03 50 34.0	+0.7
	31nm,0.4s,mb5.2,baz=57,slow=10,SNR=189						
ARMA	Armidale	24.51	186	*e*P	P	03 50 38.0	+0.5
ASAR	Alice Springs	26.54	226	P	P	03 50 56.0	-0.4
	19nm,0.4s,mb5.0,baz=56,slow=9.1,SNR=215						
ASAR				LR	LR	04 00 25.9	
	comp=Z,77nm,21.0s,baz=40,slow=34						
ASPA	Alice Springs	26.55	226	⇑*i*P	P	03 50 56.0	-0.4
STKA	Stephens Creek	28.50	204	⇑*i*P	P	03 51 12.8	-1.3
	7.1nm,1.1s,mb4.3						
STKA	Stephens Creek	28.50	204	P	P	03 51 12.8	-1.3
	5.8nm,0.5s,mb4.6,baz=16,slow=7.7,SNR=2.9						
STKA	Stephens Creek	28.50	204	⇑*i*P	P	03 51 12.8	-1.3
	7.1nm,1.1s,mb4.3						
FITZ	Fitzroy Crossi	30.67	244	⇑*i*P	P	03 51 32.0	-1.5
	40nm,0.8s,mb5.2						
MBWA	Marble Bar	36.94	242	*e*P	P	03 52 25.9	-1.0
	52nm,1.4s,mb5.0						
URZ	Urewera	38.15	151	P	P	03 52 36.8	-0.1
	10nm,0.9s,mb4.4,baz=5.7,slow=10,SNR=5.2						
RPZ	Rata Peaks	40.34	161	P	P	03 52 54.7	-0.2
	3.9nm,0.5s,mb4.3,baz=356,slow=11,SNR=5.1						
JOW	Kunigami	41.32	323	P	P	03 53 03.8	+0.7
	11nm,0.5s,mb4.8,baz=199,slow=7.6,SNR=6.7						
ASAJ	Asahikawa	50.97	349	P	P	03 54 18.1	-0.7
	3.8nm,0.7s,mb4.1,baz=200,slow=12,SNR=3.7						
CN2	Changchun	56.04	335	*e*P	P	03 54 55.1	-1.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
ENH	Enshi	56.18	313	*e*P	P	03 54 57.4	+0.1
	comp=Z,3.6nm,0.4s,mb4.5						
BJT	Baijiatuau	57.78	326	P	P	03 55 07.3	-1.0
	comp=Z,7.2nm,0.8s,mb4.5						
BJI	Beijing	57.79	326	P	P	03 55 07.3	-1.1
BJI				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.6						
BJI	Beijing	57.79	326	P	P	03 55 07.3	-1.1
	comp=Z,7.0nm,0.7s,mb4.6						
XAN	Xi’an	58.62	316	P	P	03 55 12.9	-1.4
XAN				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.7						
CMAR	Chiang Mai Arr	59.91	295	P	P	03 55 24.9	+1.5
	comp=Z,3.1nm,0.7s,mb4.3,baz=115,slow=5.5,SNR=16						
HIA	Hailar	62.77	335	*e*P	P	03 55 40.5	-1.7
	comp=Z,11nm,0.8s,mb4.7						
LZH	Lanzhou	63.24	315	*e*P	P	03 55 46.5	+1.1
LZH				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.7						
LZH	Lanzhou	63.24	315	*e*P	P	03 55 46.5	+1.1
	comp=Z,15nm,1.2s,mb4.7						
LZH				pP	Px	03 55 51.5	
LZH				sP	Px	03 55 54.0	
GTA	Gaotai	67.65	317	*e*P	P	03 56 14.6	+1.0
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
ULN	Ulaanbaatar	67.86	328	*e*P	P	03 56 15.2	+0.4
	comp=Z,4.5nm,0.9s,mb4.2						
SONM	Songino Array	68.20	327	P	P	03 56 16.5	-0.3
	comp=Z,1.6nm,0.4s,mb4.1,baz=139,slow=4.4,SNR=26						
LSA	Lhasa	70.29	304	*e*P	P	03 56 31.4	+1.4
	comp=Z,3.4nm,0.7s,mb4.2						
VNDA	Vanda	71.65	178	P	P	03 56 37.2	0.0
	comp=Z,1.7nm,0.9s,mb3.8,baz=326,slow=10.0,SNR=7.2						
VNDA	Vanda	71.65	178	P	P	03 56 37.2	0.0
BILL	Bilibino	74.27	5	*e*P	P	03 56 53.1	+0.6
	comp=Z,8.4nm,0.9s,mb4.5						
IMA	Indian Mountai	80.95	19	*e*P	P	03 57 30.5	+1.1
	comp=Z,20nm,0.8s,mb4.8						
MCK	McKinley	81.25	22	*e*P	P	03 57 30.9	-0.1
	comp=Z,7.1nm,0.9s,mb4.3						
ILAR	Eielson Array	82.56	22	P	P	03 57 37.1	-0.6
	comp=Z,2.8nm,0.8s,mb4.1,baz=247,slow=5.3,SNR=46						
QSPA	South Pole Qui	84.03	180	*e*P	P	03 57 45.9	+1.1
	comp=Z,6.0nm,0.6s,mb4.5						
INK	Inuvik	88.90	21	P	P	03 58 09.0	+0.4
	comp=Z,1.0nm,0.7s,mb3.9,baz=242,slow=5.4,SNR=7.7						
CHKZ	Chkalovo	91.13	324	*e*P	P	03 58 17.2	-2.2
NVAR	Mina Array Bea	91.43	52	P	P	03 58 23.2	+2.0
	comp=Z,2.2nm,0.8s,mb4.2,baz=251,slow=3.7,SNR=12						
NVAR	Mina Array Bea	91.43	52	P	P	03 58 23.2	+2.0
YKA	Yellowknife Ar	95.62	28	P	P	03 58 40.2	+0.5
	comp=Z,0.6nm,0.9s,mb3.9,baz=267,slow=4.6,SNR=8.5						
YKA	Yellowknife Ar	95.62	28	P	P	03 58 40.2	+0.5
PDAR	Pinedale Array	98.34	48	P	P	03 58 53.5	+1.0
	comp=Z,0.5nm,0.6s,mb4.1,baz=270,slow=1.8,SNR=5.5						
BDFB	Brasilia	149.05	134	PKPbc	PKPdf	04 05 04.1	+6.6
	comp=Z,3.4nm,0.9s,baz=180,slow=4.0,SNR=3.1						

IDC 09 03:53:34.9±2.6**, 23.11S**×**173.92W, mb4.1**/5**, mb1 4.3**/5**, mb1mx4.0**/15**, mbtmp4.1**/5**, Error ellipse: s-maj=152.7km s-min=27.2km az=154.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.08	267	P	P	04 00 48.0	-0.8
	4.1nm,0.4s,baz=92,slow=12,SNR=8.6						
STKA	Stephens Creek	40.19	247	P	P	04 01 12.3	-2.4
	1.3nm,0.4s,baz=78,slow=9.3,SNR=4.9						
ASAR	Alice Springs	47.67	258	P	P	04 02 12.8	-2.4
	0.7nm,0.8s,baz=96,slow=8.6,SNR=6.3						
WRA	Warramunga Arr	48.04	263	P	P	04 02 16.3	-1.9
	1.5nm,0.4s,baz=100,slow=7.0,SNR=50						
NVAR	Mina Array Bea	80.40	41	P	P	04 05 48.7	-1.2
	0.3nm,0.6s,baz=229,slow=8.3,SNR=3.7						

IDC 09 03:57:46.5±1.3**, 22.96N**×**143.63E, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, ML3.3**/1**, Error ellipse: s-maj=75.7km s-min=25.4km az=101.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.32	343	Pn	Pn	03 58 53.0	-2.0
	3.3nm,0.3s,baz=233,slow=19,SNR=3.4						
CBIJ				Sn	Sn	03 59 40.0	-6.8
	8.4nm,0.3s,baz=289,slow=22,SNR=6.1						
WRA	Warramunga Arr	43.59	193	P	P	04 05 52.5	-1.9
	0.6nm,0.8s,baz=16,slow=9.0,SNR=11						
ILAR	Eielson Array	60.73	27	P	P	04 07 59.9	-2.0
	0.8nm,0.8s,baz=276,slow=5.9,SNR=5.7						
YKA	Yellowknife Ar	75.15	28	P	P	04 09 30.3	-1.7
	0.2nm,0.4s,baz=291,slow=5.6,SNR=6.7						

JMA ***09*** *04:12:59.2±0.6, 23.91N×122.05E, h72^{km}, M2.5*

TAP 09 04:12:58.8, 23.87N×**121.99E, h24**^{km}**, ML3.4, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.10	58	*e*S	Sb	04 13 32.8	-0.3
IRIF	Iriomote-Funau	1.66	73	P	Pn	04 13 26.0	-0.8
IRIF				*e*S	Sn	04 13 46.1	-1.4
HATJ	Hateruma jima	1.67	83	P	Pn	04 13 25.8	-1.2
HATJ				*e*S	Sn	04 13 46.3	-1.6
JKRS	Kuro-shima	1.88	78	P	Pn	04 13 29.8	-0.3
JKRS				*e*S	Sn	04 13 52.5	-0.7
JIJ	Ishigaki jima	2.03	76	P	Pn	04 13 30.5	-1.7
JIJ				*e*S	Sn	04 13 54.0	-3.0
JTJ	Tarama	2.59	72	P	Pn	04 13 38.6	-1.6
JTJ				*e*S	Sn	04 14 08.0	-3.3

JMA ***09*** *04:17:00.1±0.4, 22.94N×122.69E, h68^{km}, M2.6*

TAP 09 04:17:00.1, 22.99N×**122.38E, h15**^{km}±1^{km}**, ML3.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.57	21	P	Pn	04 17 26.0	-1.7
HATJ	Hateruma jima	1.69	51	P	Pn	04 17 25.5	-3.8
HATJ				S	Sn	04 17 44.4	-6.2
IRIF	Iriomote-Funau	1.82	42	P	Pn	04 17 27.9	-3.3
IRIF				S	Sn	04 17 49.0	-5.2
JKRS	Kuro-shima	1.94	50	P	Pn	04 17 29.5	-3.5
JKRS				*e*S	Sn	04 17 50.9	-6.3
JIJ	Ishigaki jima	2.12	49	P	Pn	04 17 31.2	-4.3
JIJ				S	Sn	04 17 54.3	-7.3
JTJ	Tarama	2.69	52	P	Pn	04 17 39.6	-4.0
JTJ				*e*S	Sn	04 18 09.0	-7.1

IDC ***09*** *04:18:56.5±1.2, 2.65N×95.79E, mb4.0/7, mb1 4.2/8, mb1mx4.0/17, mbtmp4.0/8, ML4.0/1, MS3.1/1, Ms1 3.3/1, ms1mx2.6/16, Error ellipse: s-maj=56.4km s-min=20.4km az=53.0*

BJI ***09*** *04:18:59.3, 2.93N×95.97E, h17^{km}, mB4.9, mb4.7*

NEIC ***09*** *04:19:01.3±0.6, 2.68N×95.95E, h30^{km}, mb4.5/9, Error ellipse: s-maj=18.9km s-min=8.9km az=56.0*

ISC 09 04:19:00.3±0.8**, 2.7N**±0.1×**96.0E**±0.1**, h33**^{km}**, n27, σ0^{s}82**/25**, mb4.4**/22**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.90	10	Pn	P	04 22 45.3	+2.0
	0.2nm,0.3s,baz=193,slow=10,SNR=11						
CMAR				LR	LR	04 28 50.1	
	comp=Z,59nm,18.0s,baz=185,slow=37						
JIRN	Jiri	26.50	340	*e*P	P	04 24 37.7	+0.9
	32nm,0.6s,mb5.0						
PKI	Pulchoki	26.70	339	*e*P	P	04 24 38.6	0.0
	15nm,0.7s,mb4.7						
DMN	Daman	26.84	338	*e*P	P	04 24 40.9	+1.0
	11nm,0.6s,mb4.5						
KKN	Kakani	26.94	339	*e*P	P	04 24 41.1	+0.3
	29nm,0.8s,mb4.8						
LSA	Lhasa	27.22	351	*e*P	P	04 24 43.2	-0.1
	6.2nm,0.6s,mb4.3						
GKN	Gorkha	27.37	338	*e*P	P	04 24 44.9	+0.1
	34nm,0.8s,mb5.0						
KOLN	Koldanda	27.57	336	*e*P	P	04 24 46.7	+0.1
	13nm,0.5s,mb4.8						
ENH	Enshi	30.23	24	*e*P	P	04 25 08.4	-1.9
	2.4nm,0.5s,mb4.2						
GTA	Gaotai	36.68	5	*e*P	P	04 26 05.5	-0.4
GTA				AP	pP	04 26 12.6	-3.0
GTA				XP	sP	04 26 16.4	-3.5
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.4						
BJT	Baijiatuau	41.38	24	*e*P	P	04 26 45.3	+0.3
	comp=Z,13nm,0.7s,mb4.7						
BJI	Beijing	41.40	24	P	P	04 26 45.3	+0.1
BJI				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.8						
BJI	Beijing	41.40	24	P	P	04 26 45.3	+0.1
	comp=Z,18nm,0.7s,mb4.8						
WRA	Warramunga Arr	43.86	123	P	P	04 27 06.0	+0.3
	comp=Z,0.9nm,0.6s,mb3.7,baz=302,slow=9.2,SNR=13						
WRAB	Tennant Creek	43.87	123	*e*P	P	04 27 05.8	+0.2
	comp=Z,4.5nm,0.8s,mb4.2						
ASAR	Alice Springs	45.27	128	P	P	04 27 17.1	+0.3
	comp=Z,0.4nm,0.4s,mb3.6,baz=303,slow=7.9,SNR=5.5						
SONM	Songino Array	45.82	10	P	P	04 27 21.0	+0.1
	comp=Z,4.3nm,0.7s,mb4.5,baz=189,slow=8.9,SNR=45						
SONM				PcP	PcP	04 28 58.5	+0.1
	comp=Z,0.9nm,0.8s,baz=186,slow=3.6,SNR=4.9						
KURK	Kurchatov	50.02	346	*e*P	P	04 27 53.1	-0.4
	comp=Z,2.1nm,0.5s,mb4.4						
HIA	Hailar	50.61	20	*e*P	P	04 27 57.6	-0.5
	comp=Z,1.3nm,0.5s,mb4.1						
BVAR	Borovoye Array	54.42	341	P	P	04 28 24.7	-1.8
	comp=Z,1.2nm,0.5s,mb4.0,baz=140,slow=12,SNR=8.8						
CHKZ	Chkalovo	54.91	342	*e*P	P	04 28 28.9	-1.1
	comp=Z,5.8nm,0.9s,mb4.6						
FINES	FINESS Array B	78.10	333	P	P	04 30 56.4	-0.9
	comp=Z,1.3nm,0.6s,mb4.0,baz=90,slow=3.8,SNR=8.9						
FINES	FINESS Array B	78.10	333	P	P	04 30 56.4	-0.9
ARCES	ARCESS Array B	80.70	340	P	P	04 31 11.7	+0.4
	comp=Z,5.8nm,1.0s,mb4.5,baz=107,slow=6.8,SNR=9.2						
GERES	GERESS Array B	82.88	319	P	P	04 31 24.0	+1.0
	comp=Z,0.6nm,0.7s,mb3.7,baz=104,slow=4.0,SNR=4.5						
TXAR	Lajitas Array	142.97	29	PKP	PKPdf	04 38 31.4	+0.1
	comp=Z,0.2nm,0.5s,baz=190,slow=1.0,SNR=4.0						
TXAR	Lajitas Array	142.97	29	PKP	PKPdf	04 38 31.4	+0.1

BJI ***09*** *04:39:49.7, 3.19N×93.74E, h33^{km}, mB4.9, mb4.9, Ms4.6, Msz4.4*

NEIC ***09*** *04:39:51.9±0.2, 3.31N×93.71E, mb4.8/41, Error ellipse: s-maj=5.8km s-min=4.0km az=48.0*

MOS ***09*** *04:39:51.0±1.0, 3.34N×93.71E, h33^{km}, mb5.1/16, Error ellipse: s-maj=13.1km s-min=6.3km az=108.3*

IDC ***09*** *04:39:51.9±0.4, 3.41N×93.73E, h27^{km}±2^{km}, mb4.5/21, mb1 4.6/22, mb1mx4.6/25, mbtmp4.7/22, ML3.8/1, MS3.8/8, Ms1 3.8/8, ms1mx3.4/27, Error ellipse: s-maj=21.5km s-min=8.9km az=44.0, Putative timing error on LPAZ*

ISC 09 04:39:50.1±0.2**, 3.33N**±0.04×**93.72E**±0.04**, h29**^{km}**, h29**^{km}±.3^{km}**:pP-P, n207, σ0^{s}96**/207**, mb4.8**/85**, MS4.1**/19**, 18C-9D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	7.39	80	P	Pn	04 41 38.7	-0.3
KGM	Kluang	9.68	98	P	P	04 42 10.9	+0.1
PALK	Pallekele	13.54	287	*e*P	P	04 42 59.6	-3.5
NST	Nakhon Sawan	13.79	27	P	P	04 43 05.0	-1.3
KKTK	Khon Kaen	15.72	34	P	P	04 43 36.0	+4.5
	556nm,0.8s						
COCO	West Island	15.73	169	P	P	04 43 31.1	-0.5
CM31	Chiang Mai Arr	15.88	18	*e*P	P	04 43 31.1	-2.4
	62nm,0.9s						
CMAR	Chiang Mai Arr	15.88	18	*e*P	P	04 43 31.7	-1.8
CMAR	Chiang Mai Arr	15.88	18	Pn	P	04 43 31.6	-1.9
	0.1nm,0.3s,baz=214,slow=13,SNR=56						
CMAR				LR	LR	04 50 29.9	
	comp=Z,177nm,18.4s,baz=205,slow=40						
CHRT	Chiangrai	17.47	19	⇓P	P	04 43 53.5	-0.1
VIS	Vishakhapatnam	17.56	325	*e*P	P	04 43 52.3	-2.4
VIS				*e*		04 44 03.0	
	comp=Z,57nm,1.3s						
VIS				*e*S	S	04 47 11.5	+4.4
BWNR	Bhubaneshwar	18.54	336	*e*	P	04 44 02.6	-4.3
BWNR				*e*		04 44 05.8	
	comp=Z,67nm,0.8s						
HYB	Hyderabad	20.43	314	*e*P	P	04 44 27.0	-1.1
HYB				*e*S	S	04 48 29.0	+19
HYB	Hyderabad	20.43	314	*i* P	P	04 44 27.0	-1.1
BLSP	Bilaspur	21.81	330	*e*P	P	04 44 42.0	-0.1
BLSP				*e*		04 44 43.5	
	comp=Z,33nm,0.9s						
BLSP				*e*S	S	04 48 45.7	+9.1
BLSP				*e*S		04 49 06.3	
QIZ	Qiongzhong	22.18	44	P	P	04 44 46.4	+0.7
QIZ				*e*S	S	04 48 43.3	0.0
QIZ				LR	LR		
	comp=N,694nm,15.9s,MS4.1						
QIZ				LR	LR		
	comp=E,221nm,20.1s,MS4.1						
QIZ				LR	LR		
	comp=Z,715nm,10.6s						
QIZ	Qiongzhong	22.18	44	P	P	04 44 46.0	+0.3
	comp=Z,33nm,1.3s,mb4.6						
KKM	Kota Kinabalu	22.58	82	P	P	04 44 53.3	+3.5
KMI	Kunming	23.34	21	P	P	04 44 59.0	+1.8
KMI				AP		04 45 08.5	
KMI				PP	PP	04 45 33.5	+4.8
KMI				S	S	04 49 11.2	+7.0
KMI				AMB	AMB		
	comp=Z,21nm,1.6s,mb4.3						
KMI				AMB	AMB		
	comp=Z,137nm,3.1s						
KMI				LR	LR		
	comp=N,461nm,10.9s,MS4.3						
KMI				LR	LR		
	comp=E,460nm,10.9s,MS4.3						
KMI				LR	LR		
	comp=Z,400nm,8.9s						
KMI	Kunming	23.34	21	*e*P	P	04 44 59.0	+1.8
KMI	Kunming	23.34	21	P	P	04 44 59.0	+1.8
	comp=Z,21nm,1.6s,mb4.3						
KMI				pP		04 45 08.5	
KMI				PP	PP	04 45 33.5	+4.8
KMI				S	S	04 49 11.2	+7.0
KMI				sS		04 49 27.5	
TSM	Tawau	24.12	87	P	P	04 45 08.6	+3.7
JIRN	Jiri	25.24	344	*e*P	P	04 45 16.0	+0.5
	comp=Z,41nm,0.8s,mb5.0						
BHPL	Bhopal	25.30	323	*e*P	P	04 45 17.4	+1.2
BHPL				*e*		04 45 18.4	
	comp=Z,24nm,0.9s						
PKI	Pulchoki	25.38	343	*e*P	P	04 45 17.0	+0.2
	comp=Z,43nm,1.2s,mb4.9						
DMN	Daman	25.50	342	*e*P	P	04 45 18.1	+0.1
	comp=Z,28nm,0.8s,mb4.8						
KKN	Kakani	25.62	342	*e*P	P	04 45 19.0	-0.1
	comp=Z,51nm,1.1s,mb5.0						
GKN	Gorkha	26.02	341	*e*P	P	04 45 22.9	+0.1
	comp=Z,70nm,0.9s,mb5.2						
GYA	Guiyang	26.13	27	⇑*i*P	P	04 45 23.7	-0.1
GYA				AP	pP	04 45 32.8	+0.7
GYA				XP	sP	04 45 37.0	+1.1
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,2.8s,mb4.8						
GYA				LR	LR		
	comp=N,330nm,10.8s,MS4.4						
GYA				LR	LR		
	comp=E,470nm,10.5s,MS4.4						
GYA				LR	LR		
	comp=Z,330nm,9.9s						
KOLN	Koldanda	26.15	339	*e*P	P	04 45 24.3	+0.3
	comp=Z,117nm,1.4s,mb5.2						
LSA	Lhasa	26.34	355	*e*P	P	04 45 27.6	+1.9
	comp=Z,147nm,0.8s,mb5.6						
LSA				*e*pP	pP	04 45 36.8	+2.8
CD2	Chengdu	29.02	18	P	P	04 45 49.0	-1.0
CD2				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.0						
SONA	Sohna	29.42	329	*e*P	P	04 45 52.6	-1.0
AYAN	Aya Nagar	29.58	329	*e*P	P	04 45 53.1	-2.0
KUDL	Kundal	29.64	328	*e*P	P	04 45 55.0	-0.6
NDI	New Delhi	29.70	330	*e*P	P	04 45 54.0	-2.2
NDI				*e*		04 45 59.0	
KHET	Khetri	29.95	327	*e*P	P	04 45 57.3	-1.1
DDI	Dehra Dun	30.66	333	*e*P	P	04 46 04.0	-0.7
DDI				*e*		04 47 05.5	
ENH	Enshi	30.67	27	*e*P	P	04 46 03.1	-1.5
	comp=Z,12nm,0.7s,mb4.8						
WHN	Wuhan	33.36	34	*e*P	P	04 46 28.5	+0.3
XAN	Xi’an	33.68	23	P	P	04 46 29.7	-1.3
XAN				AMB	AMB		
	comp=Z,35nm,0.9s,mb5.3						
LZH	Lanzhou	33.91	15	*e*P	P	04 46 32.0	-0.9
LZH				AP	pP	04 46 40.5	-0.9
LZH				XP	sP	04 46 46.5	+1.5
LZH				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.2						
LZH	Lanzhou	33.91	15	*e*P	P	04 46 32.0	-0.9
	comp=Z,28nm,1.0s,mb5.2						
LZH				pP	pP	04 46 40.5	-0.9
LZH				sP	sP	04 46 46.5	+1.5
GTA	Gaotai	36.34	8	*e*P	P	04 46 53.6	0.0
GTA				AP	pP	04 47 02.5	+0.4
GTA				XP	sP	04 47 06.6	+0.9
GTA				PP	PP	04 48 17.6	+0.4
GTA				PCP	PcP	04 49 19.2	+1.0
GTA				S	S	04 52 33.1	+1.0
GTA				SS	SS	04 54 54.6	-2.9
GTA				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,107nm,6.5s						
GTA				LR	LR		
	comp=N,155nm,17.1s,MS4.2						
GTA				LR	LR		
	comp=E,226nm,13.3s,MS4.2						

GTA				LR	LR		
	comp=Z,169nm,16.0s,MS3.9						
NJ2	**Nanjing**	**37.06**	**37**	*e*P	**P**	**04 47 00.4**	**+0.6**
NJ2				AP	pP	04 47 09.3	+1.0
NJ2				XP	sP	04 47 14.3	+2.4
NJ2				PP	PP	04 48 28.4	+1.8
NJ2				PPP	PPP	04 48 48.2	+1.4
NJ2				S	**S**	**04 52 47.0**	**+3.7**
NJ2				XS		04 53 04.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,390nm,4.6s						
NJ2				LR	LR		
	comp=N,760nm,15.0s,MS4.7						
NJ2				LR	LR		
	comp=E,760nm,18.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,390nm,16.5s,MS4.3						
SSE	**Sheshan**	**37.86**	**40**	*e*P	**P**	**04 47 06.1**	**-0.3**
SSE				AP	pP	04 47 15.9	+0.9
SSE				S	**S**	**04 52 57.8**	**+2.3**
SSE				XS		04 53 14.9	
SSE				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.2						
SSE				AMB	AMB		
	comp=Z,10.0nm,2.7s,mb4.1						
SSE				LR	LR		
	comp=N,252nm,12.2s,MS4.5						
SSE				LR	LR		
	comp=E,324nm,12.2s,MS4.5						
SSE				LR	LR		
	comp=Z,494nm,11.3s,MS4.6						
SSE	**Sheshan**	**37.86**	**40**	*e*P	**P**	**04 47 06.1**	**-0.3**
	comp=Z,6.0nm,1.2s,mb4.2						
SSE				pP	pP	04 47 15.9	+0.9
SSE				S	**S**	**04 52 57.8**	**+2.3**
SSE				sS		04 53 14.9	
SSE				SS	SS	04 55 53.5	+22
SSE				LR	LR		
	comp=Z,490nm,11.3s,MS4.6						
FITZ	**Fitzroy Crossi**	**37.99**	**125**	*e*P	**P**	**04 47 06.9**	**-0.8**
	comp=Z,10nm,0.8s,mb4.6						
KSH	**Kashi**	**39.46**	**338**	*e*P	**P**	**04 47 20.1**	**+0.3**
KSH				*e*AP	pP	04 47 30.2	+1.9
KSH				*e*XP	sP	04 47 34.2	+2.3
KSH				*e*PP	PP	04 48 54.8	+0.6
KSH				*e*PCP	PcP	04 49 30.3	+2.4
KSH				*e*SCP		04 53 13.1	
KSH				*e*S	**S**	**04 53 18.7**	**-0.9**
KSH				*e*XS		04 53 37.1	
KSH				*e*SS	SS	04 56 04.0	-3.2
KSH				*e*SCS	ScS	04 57 24.7	+0.8
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.3						
KSH				AMB	AMB		
	comp=Z,160nm,4.6s						
KSH				LR	LR		
	comp=N,590nm,6.4s						
KSH				LR	LR		
	comp=E,710nm,6.4s						
HHC	**Hu-ho-hao-te**	**40.66**	**21**	*e*P	**P**	**04 47 30.4**	**+0.7**
HHC				AP	pP	04 47 39.8	+1.6
HHC				XP	sP	04 47 44.0	+2.2
HHC				PP	PP	04 49 07.2	+0.6
HHC				PCP	PcP	04 49 36.0	+4.3
HHC				S	**S**	**04 53 38.2**	**+0.6**
HHC				XS		04 53 53.7	
HHC				SS	SS	04 56 30.8	-2.7
HHC				SCS	ScS	04 57 29.5	-1.4
HHC				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.5						
HHC				AMB	AMB		
	comp=Z,100nm,5.8s						
HHC				LR	LR		
	comp=N,275nm,15.6s,MS4.5						
HHC				LR	LR		
	comp=E,458nm,19.2s,MS4.5						
HHC				LR	LR		
	comp=Z,207nm,19.2s,MS4.0						
WMQ	**Urumqi**	**40.67**	**353**	P	**P**	**04 47 31.0**	**+1.3**
WMQ				AP	pP	04 47 41.0	+2.8
WMQ				XP	sP	04 47 45.0	+3.2
WMQ				PP	PP	04 49 08.0	+1.4
WMQ				S	**S**	**04 53 38.0**	**+0.3**
WMQ				SS	SS	04 56 34.0	+0.4
WMQ				AMB	AMB		
	comp=Z,28nm,1.2s,mb4.8						
WMQ				LR	LR		
	comp=N,105nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=E,108nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,69nm,18.0s,MS3.5						
KAKA	**Kakadu**	**41.63**	**113**	*e*P	**P**	**04 47 37.0**	**-1.0**
	comp=Z,25nm,0.9s,mb4.8						
BJT	**Baijiatuau**	**41.79**	**26**	*e*P	**P**	**04 47 40.2**	**+1.3**
	comp=Z,27nm,0.9s,mb4.9						
BJT				*e*pP	pP	04 47 49.2	+1.6
BJI	**Beijing**	**41.81**	**26**	P	**P**	**04 47 40.3**	**+1.2**
BJI				S	**S**	**04 53 54.8**	**+0.1**
BJI				AMB	AMB		
	comp=Z,37nm,1.0s,mb5.0						
BJI				LR	LR		
	comp=Z,130nm,19.4s,MS3.8						
BJI	**Beijing**	**41.81**	**26**	*e*P	**P**	**04 47 40.3**	**+1.2**
BJI				*e*S	**S**	**04 53 54.8**	**+0.1**
BJI	**Beijing**	**41.81**	**26**	P	**P**	**04 47 40.3**	**+1.2**
	comp=Z,37nm,1.0s,mb5.0						
BJI				S	**S**	**04 53 54.8**	**+0.1**
BJI				LR	LR		
	comp=Z,130nm,19.4s,MS3.8						
UCH	**Uchtor**	**42.36**	**339**	P	**P**	**04 47 44.7**	**+1.0**
	SNR=12						
NWAO	**Narrogin (SRO)**	**42.38**	**150**	*e*P	**P**	**04 47 44.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**42.38**	**150**	P	**P**	**04 47 44.0**	**+0.1**
	comp=Z,12nm,1.1s,mb4.5,baz=279,slow=7.3,SNR=3.4						
NWAO				pP	pP	04 47 53.0	+0.5
	comp=Z,5.0nm,0.6s,baz=154,slow=20,SNR=2.2						
NWAO	**Narrogin (SRO)**	**42.38**	**150**	P	**P**	**04 47 44.0**	**+0.1**
NWAO				pP	pP	04 47 53.0	+0.5
AML	**Almayashu**	**42.58**	**338**	P	**P**	**04 47 46.6**	**+1.1**
	SNR=15						
TKM2	**Tokmak 2**	**42.59**	**340**	P	**P**	**04 47 46.6**	**+1.1**
	SNR=10.0						
AAK	**Ala-Archa**	**42.73**	**339**	⇓*e*P	**P**	**04 47 47.0**	**+0.4**
AAK				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.5						
AAK	**Ala-Archa**	**42.73**	**339**	*e*P	**P**	**04 47 45.5**	**-1.1**
	comp=Z,11nm,1.2s,mb4.5						
FRU	**Bishkek**	**42.86**	**339**	*e*P	**P**	**04 47 49.0**	**+1.3**
EKS2	**Erkin-Say**	**43.01**	**338**	P	**P**	**04 47 49.9**	**+1.0**
	SNR=9.2						
USP	**Ospenovka**	**43.28**	**339**	P	**P**	**04 47 51.3**	**+0.3**
	SNR=17						
MKAR	**Makanchi Array**	**44.41**	**349**	*i* P	**P**	**04 48 00.6**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,21nm,0.8s						
SONM	**Songino Array**	**45.66**	**12**	P	**P**	**04 48 10.4**	**+0.3**
	comp=Z,11nm,0.8s,mb4.9,baz=192,slow=8.8,SNR=102						
SONM				pP	pP	04 48 19.3	+0.6
	comp=Z,20nm,0.9s,baz=194,slow=7.5,SNR=32						
SONM				PcP	PcP	04 49 49.0	+0.6
	comp=Z,8.7nm,1.2s,baz=196,slow=3.9,SNR=3.9						
SONM				pPcP		04 49 57.6	
	comp=Z,3.5nm,0.8s,baz=198,slow=3.9,SNR=4.2						
ULN	**Ulaanbaatar**	**45.83**	**13**	*e*P	**P**	**04 48 11.3**	**-0.2**
	comp=Z,6.8nm,0.8s,mb4.6						
ULN				*e*pP	pP	04 48 20.3	+0.2
WRA	**Warramunga Arr**	**46.10**	**122**	*e*P	**P**	**04 48 13.9**	**-0.1**
WRA	**Warramunga Arr**	**46.10**	**122**	P	**P**	**04 48 13.9**	**-0.1**
	comp=Z,27nm,0.7s,mb5.3,baz=299,slow=8.8,SNR=155						
WRA				pP	pP	04 48 22.5	-0.2
	comp=Z,22nm,0.7s,baz=299,slow=8.8,SNR=21						
WRA				PcP	PcP	04 49 50.1	-0.3
	comp=Z,3.2nm,0.8s,baz=303,slow=3.1,SNR=5.0						
WRA				pPcP		04 49 58.9	
	comp=Z,1.9nm,0.8s,baz=324,slow=2.4,SNR=3.4						
WRAB	**Tennant Creek**	**46.11**	**122**	c *i*P	**P**	**04 48 14.0**	**-0.1**
WRAB	**Tennant Creek**	**46.11**	**122**	*e*P	**P**	**04 48 14.0**	**-0.1**
	comp=Z,38nm,0.7s,mb5.4						
WRAB				*e*pP	pP	04 48 23.0	+0.3
WB2	**Warramunga Arr**	**46.12**	**122**	⇑*i*P	**P**	**04 48 13.9**	**-0.2**
WB2				*i*	pP	04 48 22.8	+0.1
SNY	**Shenyang**	**46.73**	**31**	⇓P	**P**	**04 48 18.8**	**+0.1**
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
ASPA	**Alice Springs**	**47.45**	**127**	⇑*i*P	**P**	**04 48 24.2**	**-0.4**
ASPA				*i*	pP	04 48 33.1	-0.1
ASAR	**Alice Springs**	**47.45**	**127**	P	**P**	**04 48 24.4**	**-0.3**
	comp=Z,9.8nm,0.8s,mb4.8,baz=303,slow=7.7,SNR=62						
ASAR				pP	pP	04 48 32.9	-0.4
	comp=Z,14nm,1.0s,baz=292,slow=7.9,SNR=12						
ASAR				PcP	PcP	04 49 55.3	+0.2
	comp=Z,6.0nm,0.8s,baz=300,slow=3.2,SNR=11						
ASAR				pPcP		04 50 04.0	
	comp=Z,4.2nm,0.8s,baz=305,slow=3.6,SNR=4.2						
ZAK	**Zakamensk**	**47.57**	**8**	*e*P	**P**	**04 48 24.0**	**-1.2**
ZAK				*e*		04 49 55.7	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
TLY	**Talaya**	**48.89**	**8**	⇓*e*P	**P**	**04 48 36.9**	**+1.5**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
TLY	**Talaya**	**48.89**	**8**	P	**P**	**04 48 36.1**	**+0.7**
	comp=Z,2µm,0.8s						
KURK	**Kurchatov**	**48.90**	**347**	c *i*P	**P**	**04 48 35.6**	**+0.1**
KURK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
KURK	**Kurchatov**	**48.90**	**347**	*e*P	**P**	**04 48 35.6**	**+0.1**
	comp=Z,26nm,1.0s,mb5.2						
KURK				*e*pP	pP	04 48 43.9	-0.3
CN2	**Changchun**	**49.10**	**30**	*e*P	**P**	**04 48 37.2**	**0.0**
CN2				*e*AP	pP	04 48 45.5	-0.4
CN2				*e*S	**S**	**04 55 40.3**	**+1.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				LR	LR		
	comp=Z,370nm,17.0s,MS4.5						
RAYN	**Ar Rayn**	**50.69**	**298**	P	**P**	**04 48 49.3**	**-0.3**
	comp=Z,92nm,0.9s,mb5.7,SNR=11						
HIA	**Hailar**	**50.85**	**22**	*e*P	**P**	**04 48 50.4**	**0.0**
	comp=Z,18nm,0.9s,mb5.0						
HIA				*e*pP	pP	04 48 59.3	+0.1
MDJ	**Mudanjiang**	**51.82**	**32**	P	**P**	**04 48 58.3**	**+0.5**
MDJ				AP	pP	04 49 04.6	-2.0
MDJ				PCP	PcP	04 50 10.7	0.0
MDJ				PP	PP	04 50 56.1	-0.2
MDJ				SCP		04 54 06.5	
MDJ				PCS		04 54 09.3	
MDJ				S	**S**	**04 56 20.2**	**+3.5**
MDJ				XS		04 56 31.2	
MDJ				SCS	ScS	04 58 45.9	+3.3
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,60nm,3.9s						
MDJ				LR	LR		
	comp=N,205nm,13.3s,MS4.5						
MDJ				LR	LR		
	comp=E,205nm,11.1s,MS4.5						
MDJ				LR	LR		
	comp=Z,325nm,12.9s,MS4.5						
MDJ	**Mudanjiang**	**51.82**	**32**	P	**P**	**04 48 56.3**	**-1.5**
NVS	**Novosibirsk**	**52.05**	**352**	⇑*i*P	**P**	**04 48 58.0**	**-1.5**
NVS				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
NVS				pmax	pmax		
	comp=N,15nm,0.9s						
JHJ	**Hachijo jima 2**	**52.21**	**50**	LR	LR	05 09 33.9	
	comp=N,118nm,21.0s,MS3.9,baz=53,slow=34						
BVA0	**Borovoye Array**	**53.15**	**343**	*i* P	**P**	**04 49 06.6**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CHKZ	**Chkalovo**	**53.65**	**343**	P	**P**	**04 49 10.7**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CHKZ	**Chkalovo**	**53.65**	**343**	*e*P	**P**	**04 49 10.5**	**-0.8**
	comp=Z,48nm,1.1s,mb5.3						
CHKZ				*e*pP	pP	04 49 19.5	-0.5
KLR	**Kul'dur**	**56.01**	**29**	*e*P	**P**	**04 49 25.8**	**-2.8**
CTA	**Charters Tower**	**56.56**	**117**	⇓*i*P	**P**	**04 49 32.7**	**-0.2**
	comp=Z,5.8nm,1.0s,mb4.6						
CTA	**Charters Tower**	**56.56**	**117**	P	**P**	**04 49 32.6**	**-0.3**
	comp=Z,5.7nm,0.9s,mb4.6,baz=265,slow=7.8,SNR=5.3						
CTA				pP	pP	04 49 41.5	-0.3
	comp=Z,9.9nm,1.1s,baz=295,slow=7.5,SNR=4.4						
CTA				LR	LR	05 13 53.7	
	comp=Z,42nm,19.1s,MS3.5,baz=228,slow=36						
KMBO	**Kilima Mbogo**	**56.62**	**266**	P	**P**	**04 49 33.7**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.4,baz=62,slow=16,SNR=8.5						
KMBO				pP	pP	04 49 42.7	+0.5
	comp=Z,2.3nm,0.8s,baz=78,slow=8.7,SNR=3.7						
KMBO				LR	LR	05 08 33.3	
	comp=Z,65nm,18.9s,MS3.7,baz=91,slow=30						
KMBO	**Kilima Mbogo**	**56.62**	**266**	*e*P	**P**	**04 49 33.6**	**+0.2**
	comp=Z,6.0nm,1.1s,mb4.5						
KMBO				*e*pP	pP	04 49 42.6	+0.3
BOD	**Bodaibo**	**56.64**	**13**	*e*P	**P**	**04 49 31.5**	**-1.5**
BOD				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.5						
STKA	**Stephens Creek**	**57.36**	**131**	*e*P	**P**	**04 49 37.3**	**-1.2**
	comp=Z,8.4nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**57.36**	**131**	P	**P**	**04 49 38.0**	**-0.5**
	comp=Z,9.7nm,0.7s,mb4.9,baz=308,slow=6.8,SNR=20						
STKA				pP	pP	04 49 46.8	-0.5
	comp=Z,6.0nm,0.6s,baz=290,slow=6.0,SNR=4.6						
TI2	**Plekhanov**	**58.08**	**318**	*e*P	**P**	**04 49 43.0**	**-0.3**
TI2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
ASAJ	**Asahikawa**	**59.14**	**39**	LR	LR	05 14 14.2	
	comp=Z,75nm,19.2s,MS3.8,baz=346,slow=35						
ASF	**Jabal al Asfar**	**60.40**	**305**	P	**P**	**04 50 00.5**	**+1.0**
	comp=Z,4.4nm,0.8s,mb4.6,baz=31,slow=5.5,SNR=6.6						
ASF				pP	pP	04 50 09.3	+0.8
	comp=Z,5.5nm,0.9s,baz=30,slow=2.0,SNR=3.0						
KIV	**Kislovodsk**	**60.44**	**320**	*e*P	**P**	**04 49 58.8**	**-0.9**
KIV				pmax	pmax		
	comp=N,7.0nm,1.0s						
KIV				pmax	pmax		
	comp=E,12nm,1.0s						
KIV				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
YSS	**Yuzh-Sakhalins**	**60.63**	**36**	⇑*e*P	**P**	**04 50 02.0**	**+1.1**
YSS				*e*	pP	04 50 10.0	+0.2
YSS	**Yuzh-Sakhalins**	**60.63**	**36**	P	**P**	**04 50 01.3**	**+0.4**
MALT	**Malatya**	**61.13**	**312**	*e*P	**P**	**04 50 03.5**	**-0.9**
	comp=Z,18nm,1.1s,mb5.1						
EIL	**Elat**	**61.38**	**302**	LR	LR	05 13 22.6	
	comp=Z,69nm,21.6s,MS3.8,baz=198,slow=33						
EIL	**Elat**	**61.38**	**302**	*e*P	**P**	**04 50 05.8**	**-0.5**
	comp=Z,22nm,1.0s,mb5.2						
SOC	**Sochi**	**62.22**	**318**	*e*P	**P**	**04 50 08.3**	**-3.4**
SOC				*e*		04 50 47.2	
SOC				*e*		04 52 26.0	
SOC				*e*PPP	PPP	04 53 54.0	-6.2
SOC				*e*S	**S**	**04 58 29.7**	**-4.1**
SOC				*e*		04 59 56.1	
SOC				*e*SSS	SSS	05 05 24.8	+3.4
SOC				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.6						
SOC				pmax	pmax		
	comp=N,41nm,1.0s						
SOC				pmax	pmax		
	comp=E,30nm,1.0s						
YAK	**Yakutsk**	**64.41**	**18**	*e*P	**P**	**04 50 23.0**	**-2.8**
YAK				*e*	pP	04 50 33.2	-1.5
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
BRTR	**Keskin Array B**	**65.12**	**313**	P	**P**	**04 50 29.4**	**-1.3**
	comp=E,4.8nm,0.9s,mb4.5,baz=128,slow=7.5,SNR=16						
BRTR				pP	pP	04 50 38.6	-1.1
	comp=E,3.1nm,0.8s,baz=141,slow=7.2,SNR=6.1						
OBN	**Obninsk**	**69.00**	**329**	⇓*e*P	**P**	**04 50 53.1**	**-1.9**
OBN				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.6						
CFR	**Carcaliu**	**70.57**	**317**	⇑P	**P**	**04 51 04.6**	**-0.2**
KIS	**Kishinev**	**70.61**	**319**	*e*P	**P**	**04 50 56.0**	**-9.0**
KIS				*e*		04 51 13.0	
IDI	**Anoyia**	**70.84**	**306**	P	**P**	**04 51 06.7**	**0.0**
	comp=Z,13nm,0.7s,mb5.0,baz=63,slow=15,SNR=4.4						
MA2	**Magadan**	**70.97**	**27**	P	**P**	**04 51 06.0**	**-1.0**
MA2				pmax	pmax		
	comp=Z,33nm,2.2s,mb4.9						
AKASG	**Malin Array Be**	**71.46**	**323**	*i* P	**P**	**04 51 08.4**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AKASG	**Malin Array Be**	**71.46**	**323**	P	**P**	**04 51 08.1**	**-2.0**
	comp=Z,8.6nm,1.0s,mb4.7,baz=90,slow=4.7,SNR=20						
AKASG				pP	pP	04 51 17.1	-1.9
	comp=Z,3.1nm,0.7s,baz=92,slow=4.8,SNR=5.4						
VRI	**Vrincioaia**	**71.70**	**317**	⇑P	**P**	**04 51 12.3**	**+0.7**
TIXI	**Tiksi**	**71.74**	**11**	⇑*i*P	**P**	**04 51 10.5**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
LBTB	**Lobatse**	**71.75**	**242**	*e*P	**P**	**04 51 11.2**	**-1.0**
	comp=Z,10nm,0.9s,mb4.8						
MLR	**Muntele Rosu**	**72.14**	**317**	⇑P	**P**	**04 51 15.0**	**+0.8**
BOSA	**Boshof**	**72.86**	**239**	*e*P	**P**	**04 51 18.0**	**-0.8**
	comp=Z,7.7nm,1.0s,mb4.6						
BURAR	**Bucovina Array**	**73.14**	**319**	⇓P	**P**	**04 51 20.9**	**+0.8**
MAW	**Mawson**	**74.03**	**192**	LR	LR	05 17 27.9	
	comp=Z,82nm,18.8s,MS4.0,baz=225,slow=30						
BZS	**Buzias**	**75.14**	**316**	⇓P	**P**	**04 51 31.1**	**-0.6**
KWP	**Kalwaria**	**75.22**	**321**	*e*P	**P**	**04 51 32.0**	**-0.1**
KWP	**Kalwaria**	**75.22**	**321**	*e*P	**P**	**04 51 32.0**	**-0.1**
KOLS	**Kolonicke sedl**	**75.35**	**320**	*i* P	**P**	**04 51 33.5**	**+0.7**
KOLS				*i* pP	pP	04 51 42.4	+0.6
CRVS	**Cervenica-Dubn**	**75.87**	**320**	*i* P	**P**	**04 51 37.1**	**+1.3**
CRVS				*e*pP	pP	04 51 45.9	+1.1
SUW	**Suwalki**	**75.94**	**325**	*e*P	**P**	**04 51 34.9**	**-1.2**
FINES	**FINESS Array B**	**76.52**	**333**	P	**P**	**04 51 38.3**	**-0.9**
	comp=Z,4.0nm,0.7s,mb4.5,baz=90,slow=3.8,SNR=14						
FINES				pP	pP	04 51 46.8	-1.4
	comp=Z,2.7nm,0.7s,baz=104,slow=7.9,SNR=3.8						
KAF	**Kangasniemi**	**76.63**	**333**	*e*p	**P**	**04 51 39.0**	**-0.8**
	comp=Z,16nm,1.1s,mb4.9						
OJC	**Ojcow**	**77.18**	**321**	*e*P	**P**	**04 51 42.8**	**-0.3**
SRO	**Srobarova**	**77.75**	**318**	*e*P	**P**	**04 51 47.3**	**+1.0**
SRO				*e*pP	pP	04 51 56.7	+1.4
OKC	**Ostrava-Krasne**	**78.17**	**320**	*e*P	**P**	**04 51 48.9**	**+0.4**
OKC				*e*pP	pP	04 51 57.7	+0.1
ZST	**Bratislava**	**78.61**	**318**	*i* P	**P**	**04 51 51.4**	**+0.4**
ZST				*i* pP	pP	04 52 00.0	0.0
ARCES	**ARCESS Array B**	**79.38**	**341**	P	**P**	**04 51 54.4**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.5,baz=72,slow=3.8,SNR=7.2						
ARCES				pP	pP	04 52 03.2	-0.6
	comp=Z,4.2nm,1.0s,baz=76,slow=5.0,SNR=1.6						
DPC	**Dobruska-Polom**	**79.41**	**321**	*e*P	**P**	**04 51 55.8**	**+0.5**
DPC				*e*pP	pP	04 52 04.7	+0.4
KSP	**Ksiaz**	**79.49**	**321**	*e*P	**P**	**04 51 55.8**	**+0.1**
KSP				*e*pP	pP	04 52 04.1	-0.7
KSP	**Ksiaz**	**79.49**	**321**	*e*P	**P**	**04 51 56.2**	**+0.5**
ARSA	**Arzberg**	**79.55**	**317**	⇑*i*P	**P**	**04 51 56.9**	**+0.8**
	comp=Z,20nm,1.1s,mb5.0						
UPC	**Upice**	**79.62**	**321**	*e*P	**P**	**04 51 56.9**	**+0.5**
UPC				*e*pP	pP	04 52 05.7	+0.2
PERS	**Pernice**	**79.76**	**317**	⇑*e*P	**P**	**04 51 57.4**	**+0.1**
LJU	**Ljubljana**	**80.11**	**316**	⇑*e*P	**P**	**04 51 59.2**	**+0.1**
BILL	**Bilibino**	**80.44**	**21**	⇓*e*P	**P**	**04 52 01.1**	**+0.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
PRU	**Pruhonice**	**80.50**	**320**	*e*P	**P**	**04 52 01.3**	**+0.2**
PRU				*e*pP	pP	04 52 09.6	-0.6
PVCC	**Panska Ves**	**80.54**	**321**	*e*P	**P**	**04 52 01.9**	**+0.6**
PVCC				*e*pP	pP	04 52 10.4	0.0
GEC2	**GERESS Array S**	**80.93**	**319**	*e*P	**P**	**04 52 04.0**	**+0.6**
GEC2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
GEC2	**GERESS Array S**	**80.93**	**319**	*e*P	**P**	**04 52 04.0**	**+0.6**
	comp=Z,10.0nm,0.8s,mb4.8						
GERES	**GERESS Array B**	**80.93**	**319**	P	**P**	**04 52 04.2**	**+0.8**
	comp=Z,8.0nm,0.7s,mb4.8,baz=104,slow=5.5,SNR=77						
GERES				pP	pP	04 52 13.0	+0.5
	comp=Z,5.4nm,0.7s,baz=99,slow=4.8,SNR=13						
PTCC	**Patocco-Chiusa**	**80.95**	**316**	*e*P	**P**	**04 52 04.0**	**+0.4**
BRG	**Berggiesshubel**	**80.97**	**321**	*e*P	**P**	**04 52 04.0**	**+0.4**
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BRG	**Berggiesshubel**	**80.97**	**321**	*e*P	**P**	**04 52 04.0**	**+0.4**
	comp=Z,8.7nm,1.2s,mb4.6						
KBA	**Koelnbreinsper**	**81.01**	**317**	⇑*i*P	**P**	**04 52 03.7**	**-0.2**
	comp=Z,11nm,1.5s,mb4.6						
ARV	**Arcevia**	**81.02**	**313**	*e*P	**P**	**04 52 04.3**	**+0.3**
KHC	**Kasperske Hory**	**81.04**	**319**	*e*P	**P**	**04 52 03.9**	**-0.1**
KHC				*e*pP	pP	04 52 12.9	-0.2
WET	**Wettzell**	**81.50**	**319**	*e*P	**P**	**04 52 06.9**	**+0.5**
WET				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
WET	**Wettzell**	**81.50**	**319**	*e*P	**P**	**04 52 06.9**	**+0.5**
	comp=Z,4.0nm,0.9s,mb4.3						
CLL	**Collm**	**81.60**	**321**	*i* P	**P**	**04 52 07.2**	**+0.3**
CLL	**Collm**	**81.60**	**321**	P	**P**	**04 52 07.2**	**+0.3**
CLL				*e**SP	sP	04 52 18.0	-1.0
SFI	**Santa Sofia**	**81.84**	**314**	*e*P	**P**	**04 52 10.0**	**+1.7**
NKC	**Novy Kostel**	**81.86**	**320**	*e*P	**P**	**04 52 08.7**	**+0.5**
NKC				*e*pP	pP	04 52 17.3	-0.1
PGD	**Poggio Sodo**	**81.93**	**314**	*e*P	**P**	**04 52 10.3**	**+1.6**
VMG	**Vicchio**	**82.06**	**314**	*e*P	**P**	**04 52 10.9**	**+1.5**
HFS	**Hagfors**	**82.15**	**330**	P	**P**	**04 52 09.3**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.4,baz=117,slow=6.6,SNR=4.7						
WTTA	**Wattenberg**	**82.19**	**317**	⇑*i*P	**P**	**04 52 09.7**	**-0.3**
	comp=Z,17nm,1.1s,mb4.9						
WTTA				*i*	pP	04 52 18.7	-0.4
	comp=Z,13nm,0.8s						
MOX	**Moxa**	**82.42**	**320**	*i* P	**P**	**04 52 11.5**	**+0.4**
SQTA	**Sankt Quirin**	**82.48**	**317**	⇑*i*P	**P**	**04 52 11.5**	**0.0**
	comp=Z,8.0nm,0.9s,mb4.7						
SQTA				*i*	pP	04 52 20.3	-0.3
	comp=Z,5.2nm,0.9s						
FUR	**Furstenfeldbru**	**82.49**	**318**	*e*P	**P**	**04 52 10.9**	**-0.6**
MOTA	**Moosalm**	**82.56**	**317**	⇑*i*P	**P**	**04 52 11.6**	**-0.3**
	comp=Z,5.3nm,1.0s,mb4.5						
MOTA				*i*	pP	04 52 20.3	-0.7
	comp=Z,4.8nm,1.0s						
GRA1	**Grafenberg Arr**	**82.61**	**320**	*e*P	**P**	**04 52 13.2**	**+1.0**
	comp=Z,7.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**82.61**	**320**	*e*P	**P**	**04 52 13.2**	**+1.0**
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
GRF	**Grafenberg Arr**	**82.61**	**320**	*e*P	**P**	**04 52 13.2**	**+1.0**
	comp=Z,7.0nm,0.9s,mb4.7						
BRMO	**Bormio**	**83.01**	**316**	*e*P	**P**	**04 52 14.8**	**+0.6**
RPZ	**Rata Peaks**	**83.17**	**135**	P	**P**	**04 52 16.2**	**+1.0**
	comp=Z,7.6nm,0.7s,mb4.8,baz=74,slow=4.4,SNR=4.3						
CLZ	**Clausthal**	**83.28**	**322**	*e*P	**P**	**04 52 15.9**	**+0.4**
	comp=Z,5.0nm,0.8s,mb4.6						
DAVOX	**Davos**	**83.36**	**317**	P	**P**	**04 52 16.9**	**+0.9**
	comp=Z,20nm,0.7s,mb5.2,baz=115,slow=5.2,SNR=30						
DAVOX				pP	pP	04 52 25.6	+0.4
	comp=Z,17nm,0.7s,baz=145,slow=5.7,SNR=9.8						
NB2	**NORSAR Subarra**	**83.47**	**331**	P	**P**	**04 52 15.5**	**-0.8**
	comp=Z,7.4nm,1.1s,mb4.6,baz=94,slow=5.6						
NOA	**NORSAR Array B**	**83.47**	**331**	P	**P**	**04 52 16.0**	**-0.3**
	comp=Z,3.7nm,0.9s,mb4.4,baz=95,slow=5.2,SNR=5.3						
NOA				pP	pP	04 52 24.3	-1.1
	comp=Z,1.9nm,0.8s,baz=87,slow=8.0,SNR=3.6						
TNS	**Taunus Mts**	**84.43**	**320**	*e*P	**P**	**04 52 21.9**	**+0.5**
BFO	**Black Forest**	**84.46**	**318**	*e*P	**P**	**04 52 21.9**	**+0.3**
BFO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
BFO	**Black Forest**	**84.46**	**318**	*e*P	**P**	**04 52 21.9**	**+0.3**
	comp=Z,3.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**85.52**	**315**	*e*P	**P**	**04 52 27.5**	**+0.5**
	comp=Z,14nm,0.8s,mb5.0						
URZ	**Urewera**	**86.86**	**128**	P	**P**	**04 52 33.7**	**-0.1**
	comp=Z,11nm,0.9s,mb5.1,baz=26,slow=4.8,SNR=4.4						
TNA	**Tin City**	**90.45**	**24**	*e*P	**P**	**04 52 50.9**	**+0.7**
	comp=Z,5.0nm,1.0s,mb4.8						
TNA				*e*pP	pP	04 52 59.9	+0.5
ESDC	**Sonseca Array**	**93.80**	**310**	P	**P**	**04 53 07.6**	**+1.4**
	comp=Z,0.7nm,0.6s,mb4.2,baz=79,slow=5.2,SNR=4.8						
IMA	**Indian Mountai**	**95.96**	**22**	*e*P	**P**	**04 53 17.4**	**+1.9**
BORG	**Borgarnes**	**97.42**	**337**	LR	LR	05 42 20.7	
	comp=Z,111nm,19.5s,MS4.4,baz=60,slow=38						
MCK	**McKinley**	**98.76**	**24**	*e*P	**P**	**04 53 31.0**	**+2.9**
ILAR	**Eielson Array**	**99.08**	**22**	P	**P**	**04 53 29.1**	**-0.5**
	comp=Z,0.5nm,0.8s,mb4.1,baz=298,slow=3.8,SNR=4.3						
ILAR				PP	PP	04 57 30.1	-4.2
	comp=Z,0.4nm,1.0s,baz=315,slow=7.7,SNR=3.2						
YKA	**Yellowknife Ar**	**110.91**	**14**	PKiKP		04 58 21.0	
	comp=Z,0.2nm,0.8s,baz=329,slow=1.9,SNR=4.0						

YKA				PP	PP	04 58 52.6	-10
	comp=Z,0.3nm,0.8s,baz=329,slow=8.1,SNR=4.8						
YKA				PKKPab		05 09 28.6	
	comp=Z,0.1nm,0.5s,baz=146,slow=4.5,SNR=5.4						
YKA				PKKP	PKKP	05 09 38.3	+8.0
	comp=Z,0.1nm,0.6s,baz=143,slow=4.1,SNR=3.8						
YKA	Yellowknife Ar	110.91	14	PKPdf	PKPdf	04 58 21.1	-4.2
YKA				PP	PP	04 58 52.6	-10
YKA				PKKPab		05 09 28.6	
YKA				PKKP	PKKP	05 09 38.3	+8.0
ULM	Lac du Bonnet	125.99	8	PKP	PKPdf	04 58 51.5	-3.4
	comp=Z,2.6nm,0.8s,baz=79,slow=1.3,SNR=5.0						
NVAR	Mina Array Bea	128.98	32	PKP	PKPdf	04 58 59.6	-1.3
	comp=Z,1.0nm,0.8s,baz=9.1,slow=1.8,SNR=7.9						
NVAR				pPKP		04 59 08.0	
	comp=Z,1.4nm,1.0s,baz=315,slow=0.4,SNR=4.2						
NVAR	Mina Array Bea	128.98	32	PKP	PKPdf	04 58 59.6	-1.3
NVAR				pPKP		04 59 08.0	
PDAR	Pinedale Array	129.51	22	PKP	PKPdf	04 58 59.2	-2.6
	comp=Z,1.5nm,1.0s,baz=45,slow=2.1,SNR=8.8						
PV10	Paradox Valley	133.46	25	*e*PKPdf	PKPdf	04 59 08.3	-1.1
WMOK	Wichita Mounta	140.35	16	*e*PKPpre		04 59 11.3	
MIAR	Mount Ida	141.70	10	*e*PKPpre		04 59 16.6	
TXAR	Lajitas Array	143.49	26	PKP	PKPdf	04 59 22.7	-5.0
	comp=Z,1.3nm,0.7s,baz=196,slow=1.6,SNR=18						
JCT	Junction City	143.98	20	*e*PKPpre		04 59 23.2	
HKT	Hockley	145.67	15	*e*PKPdf	PKPdf	04 59 28.7	-2.8
SAML	Samuel	156.38	255	*e*PKPab	PKPab	05 00 12.8	-1.1
LPAZ	La Paz	158.00	233	PKPab	PKPab	04 59 43.8	-37
	comp=Z,2.0nm,0.7s,baz=127,slow=2.6,SNR=4.8						

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*NEIC **09** 05:00:14.3, 16.03N×97.13W, h45^{km}, MD3.7(MEX), After MEX.*

MEX 09 05:00:14.7±0.7**, 16.03N×97.13W, h27^{km}**±24^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.01	105	*e*P	Pn	05 00 30.3	-2.9
HUIG				*e*S	Sb	05 00 43.6	-2.8
PNIG	Pinotepa	1.03	291	*i* P	Pn	05 00 30.7	-2.8
PNIG				*i* S	Sb	05 00 43.6	-3.3
VHO	Vista Hermosa	1.11	20	*i* P	Pn	05 00 31.6	-3.0
VHO				*i* S	Sn	05 00 45.2	-3.9
OXX	Oaxaca	1.12	20	*i* P	Pn	05 00 32.0	-2.8
OXX				*i* S	Sn	05 00 46.0	-3.4
CMIG	Matias Romero	2.40	63	*e*P	Pn	05 00 50.0	-3.0
CMIG				*i* S	Sn	05 01 17.8	-4.0
ACX	Acapulco	2.81	288	*e*P	Pn	05 00 51.0	-7.9
ACX	Acapulco	2.81	288	*e*P	Pn	05 00 55.0	-3.9
IIB	San Bernardino	3.15	338	*e*P	Pn	05 01 02.0	-1.7
PPM	Popocatepetl	3.35	335	*e*P	Pn	05 01 03.0	-3.6

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*IDC **09** 05:08:26.2±0.7, 13.95N×145.20E, mb4.1/13, mb1 4.3/13, mb1mx4.2/20, mbtmp4.1/13, Error ellipse: s-maj=29.9km s-min=17.2km az=104.0*

*NEIC **09** 05:08:39.8±1.0, 13.81N×145.16E, h111^{km}±9^{km}, mb4.3/4, Error ellipse: s-maj=18.9km s-min=12.3km az=94.0*

ISC 09 05:08:39.1±1.1**, 13.80N**±0.09×**145.1E**±0.2**, h118^{km}**±9^{km}**, n21,** σ**1^{s}12**/20**, mb4.0**/17**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.29	225	*e*P	P	05 08 55.9	0.0
WRAB	Tennant Creek	35.14	198	*e*P	P	05 15 23.0	-0.4
	3.3nm,0.8s,mb4.2						
WRA	Warramunga Arr	35.15	198	P	P	05 15 23.0	-0.6
	1.6nm,0.7s,mb3.9,baz=26,slow=9.0,SNR=23						
ENH	Enshi	36.65	302	P	P	05 15 36.6	+0.5
	4.5nm,0.9s,mb4.4						
ASAR	Alice Springs	38.80	196	P	P	05 15 55.2	+1.1
	0.6nm,0.5s,mb3.7,baz=18,slow=13,SNR=4.1						
CMAR	Chiang Mai Arr	44.48	282	PcP	PcP	05 18 24.4	+1.8
	0.8nm,0.4s,baz=102,slow=1.4,SNR=6.3						
STKA	Stephens Creek	45.53	184	P	P	05 16 48.0	-0.8
	1.8nm,0.4s,mb4.1,baz=355,slow=2.2,SNR=4.5						
STKA	Stephens Creek	45.53	184	*e*P	P	05 16 47.8	-1.0
SONM	Songino Array	46.68	325	P	P	05 16 58.0	+0.4
	0.4nm,0.5s,mb3.4,baz=144,slow=8.9,SNR=7.4						
SONM				PcP	PcP	05 18 29.7	-0.1
	0.4nm,0.6s,baz=149,slow=3.4,SNR=4.8						
LSA	Lhasa	52.09	297	*e*P	P	05 17 41.2	+1.8
	3.6nm,0.8s,mb4.5						
KURK	Kurchatov	64.56	320	*e*P	P	05 19 04.8	-1.1
	2.4nm,0.7s,mb4.1						
ILAR	Eielson Array	68.29	25	P	P	05 19 26.8	-2.4
	1.2nm,0.5s,mb4.0,baz=265,slow=6.3,SNR=26						
BVAR	Borovoye Array	69.89	322	P	P	05 19 38.9	-0.2
	2.0nm,0.4s,mb4.3,baz=109,slow=7.9,SNR=18						
INK	Inuvik	74.10	22	P	P	05 20 02.5	-1.2
	0.9nm,0.7s,mb3.6,baz=186,slow=1.5,SNR=6.3						
YBH	Yreka Blue Hor	82.58	49	P	P	05 20 51.8	+1.3
	0.4nm,0.5s,mb3.5,baz=318,slow=5.5,SNR=3.6						
YKA	Yellowknife Ar	82.58	27	P	P	05 20 49.7	-0.4
	0.4nm,0.3s,mb3.7,baz=284,slow=5.1,SNR=14						
NVAR	Mina Array Bea	86.63	51	P	P	05 21 12.3	+1.6
	0.7nm,0.5s,mb3.9,baz=268,slow=5.9,SNR=11						
NVAR	Mina Array Bea	86.63	51	P	P	05 21 12.3	+1.6
ARCES	ARCESS Array B	86.95	342	P	P	05 21 11.1	-0.4
	2.5nm,0.8s,mb4.2,baz=54,slow=7.8,SNR=5.1						
FINES	FINESS Array B	91.06	335	P	P	05 21 30.1	-1.1
	4.5nm,1.1s,mb4.5,baz=90,slow=5.7,SNR=6.0						
PDAR	Pinedale Array	91.67	45	P	P	05 21 36.4	+2.0
	0.2nm,0.4s,mb3.7,baz=117,slow=2.0,SNR=3.3						

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*ISK **09** 05:13:24.6, 35.79N×29.66E, h29^{km}, MD3.7*

*HLW **09** 05:13:24.0, 35.99N×29.71E, h33^{km}, Mb4.4*

*CSEM **09** 05:13:24.4±0.1, 35.85N×29.67E, h60^{km}, Mw3.3, Error ellipse: s-maj=2.3km s-min=1.4km az=75.0*

*NEIC **09** 05:13:25.5, 36.00N×29.59E, h35^{km}, MD3.6(ATH), ML3.5(ISK), After ATH.*

*ATH **09** 05:13:26.3, 36.05N×29.51E, h31^{km}±2^{km}, MD3.6/5*

*NIC **09** 05:13:27.2±0.1, 36.24N×29.89E, h25^{km}, mb4.0, ML3.6, MW3.3*

ISC 09 05:13:24.6±0.3**, 35.74N**±0.02×**29.65E**±0.03**, h33^{km}, n63,** σ**1^{s}12**/79**, 8C-6D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.41	352	⇓*i*PB	Pb	05 13 32.0	-1.9
ELL	Elmali	1.02	12	PG	P	05 13 41.6	-1.1
ELL	Elmali	1.02	12	Pg	P	05 13 40.6	-2.0
ARG	Arkhangelos	1.32	291	*e*PN	Pn	05 13 47.9	+0.8
ANTB	Antalya	1.41	35	PN	Pn	05 13 48.8	+0.5
ANTB				SN	Sn	05 14 05.3	-0.6
YER	Yerkesik	1.77	322	PN	Pn	05 13 54.4	+0.8
YER	Yerkesik	1.77	322	Pn	Pn	05 13 53.0	-0.6
BCK	Bucak	1.87	23	PN	Pn	05 13 55.6	+0.6
KARP	Karpathos	2.04	265	*e*PN	Pn	05 13 59.5	+2.1
KARP				*e*SN	Sn	05 14 24.0	+2.1
KARP	Karpathos	2.04	265	*e*Pn	Pn	05 13 58.3	+0.9
KARP				*e*Sn	Sn	05 14 24.0	+2.1
DENT	Denizli	2.07	346	PN	Pn	05 13 57.6	-0.2
MLSB	Milas	2.16	316	PN	Pn	05 13 58.7	-0.5
MLSB	Milas	2.16	316	Pn	Pn	05 13 58.8	-0.4
MLSB	Milas	2.16	316	Pn	Pn	05 13 58.8	-0.4
ISP	Isparta	2.21	18	PN	Pn	05 13 59.2	-0.6
ISP	Isparta	2.21	18	Pn	Pn	05 13 59.3	-0.5
PPCY	Paphos	2.36	110	P	P	05 14 03.9	+2.1
ALFC	Alevga	2.48	103	⇑*i*P	P	05 14 04.5	+1.1
	16nm,0.4s						
ALFC				S	S	05 14 33.6	+0.8
KHL	Karahalli	2.58	358	*e*PN	Pn	05 14 05.2	+0.1
KHL	Karahalli	2.58	358	Pn	Pn	05 14 05.3	+0.2
HDMB	Hadim	2.59	61	PN	Pn	05 14 05.1	-0.2
HDMB	Hadim	2.59	61	Pn	Pn	05 14 05.1	-0.1
LEF	Lefka	2.72	102	*e*PN	Pn	05 14 06.8	-0.2
LEF	Lefka	2.72	102	Pn	Pn	05 14 06.9	-0.2
LEF	Lefka	2.72	102	Pn	Pn	05 14 06.9	-0.1
SZAC	Souni-Zanaja	2.82	109	P	P	05 14 09.7	+1.3
	14nm,0.2s						
SZAC				S	S	05 14 43.4	+1.8
SMG	Samos	2.99	312	*e*PN	Pn	05 14 10.2	-0.8
KONT	Konya--Tatoy	3.09	44	*e*PN	Pn	05 14 12.3	0.0
KONT	Konya--Tatoy	3.09	44	Pn	Pn	05 14 12.3	0.0
CSS	Prodhromos	3.11	103	P	P	05 14 13.0	+0.6
CSS				S	S	05 14 49.0	+0.2
IZM	Izmir	3.27	325	*e*PN	Pn	05 14 15.0	+0.2
ALT	Altintas	3.33	6	*e*PN	Pn	05 14 15.1	-0.6
ALT	Altintas	3.33	6	Pn	Pn	05 14 15.1	-0.6
NPS	Neapolis	3.33	263	*e*PN	Pn	05 14 18.0	+2.2
AKS	Akhisar	3.46	335	*e*PN	Pn	05 14 16.9	-0.6
AKS	Akhisar	3.46	335	Pn	Pn	05 14 17.0	-0.6
AKS	Akhisar	3.46	335	Pn	Pn	05 14 17.0	-0.5
KIZT	Kizilcal	3.60	29	*e*PN	Pn	05 14 19.5	-0.1
KIZT	Kizilcal	3.60	29	Pn	Pn	05 14 19.5	0.0
ESKT	Eskisehir	3.89	14	*e*PN	Pn	05 14 22.8	-0.9
ESKT	Eskisehir	3.89	14	Pn	Pn	05 14 22.8	-0.9
DST	Dursunbey	3.94	348	*e*PN	Pn	05 14 23.8	-0.6
DST	Dursunbey	3.94	348	Pn	Pn	05 14 24.1	-0.3
ORLT	Orhaneli	4.34	352	*e*PN	Pn	05 14 29.0	-1.1
ORLT	Orhaneli	4.34	352	Pn	Pn	05 14 30.6	+0.5
DABA	Dabaa	4.86	194	⇓P	P	05 14 38.7	+1.4
MDU	Mudurnu	4.87	14	*e*PN	Pn	05 14 36.9	-0.7
MDU	Mudurnu	4.87	14	Pn	Pn	05 14 37.5	-0.2
HMAT	Matruh	5.11	205	⇓P	P	05 14 41.9	+1.1
HMAT				S	S	05 15 39.0	-0.4
HMAT	Matruh	5.11	205	P	P	05 14 41.8	+1.0
HMAT				S	S	05 15 39.0	-0.4
BHL	Bhannes	5.27	109	*e*PN	Pn	05 14 41.7	-1.4
HWQ	Hawqa	5.37	104	*e*PN	Pn	05 14 44.0	-0.7
FYM	Al Fayyum	6.15	169	P	P	05 14 56.7	+1.3
FYM				S	S	05 16 03.3	-2.2
HSAF	As Saff	6.31	165	⇑P	P	05 14 58.5	+0.8
HSAF				S	S	05 16 07.4	-2.2
GLL	Jalalah	6.39	164	⇓P	P	05 14 59.7	+0.9
GLL				S	S	05 16 09.4	-2.1
HNKL	Nakhl	6.85	147	⇑P	P	05 15 05.9	+0.7
HNKL				S	S	05 16 19.5	-3.3
ZAF		6.89	158	⇑P	P	05 15 06.2	+0.3
ZAF				S	S	05 16 20.2	-3.8
SWA1		7.27	208	⇑P	P	05 15 11.2	0.0
SWA1				S	S	05 16 30.7	-2.7
SWA2		7.39	210	⇑P	P	05 15 13.1	+0.3
SWA2				S	S	05 16 33.6	-2.7
AWBH		7.43	185	⇑P	P	05 15 13.5	+0.1
HKAT	Jabal Katrina	8.08	152	⇓P	P	05 15 22.3	-0.2
HKAT				S	S	05 16 49.5	-4.2
TR2		8.11	154	⇓P	P	05 15 23.1	+0.3
TR1		8.53	153	⇑P	P	05 15 28.7	0.0

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*IDC **09** 05:19:29.5±3.0, 33.50S×178.41W, mb4.2/3, mb1 4.4/4, mb1mx3.9/15, mbtmp4.2/4, ML3.9/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/23, Error ellipse: s-maj=63.8km s-min=36.0km az=117.0*

ISC 09 05:19:29.6±2.9**, 33.7S**±0.1×**178.0W**±0.4**, h33^{km}, n8,** σ**0^{s}83**/10**, mb4.2**/3**, MS3.0**/1**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	5.32	214	*e*PN	Pn	05 20 49.0	+0.2
PUZ				SN	Sn	05 21 53.2	+3.5
MWZ	Matawai	5.88	217	*e*PN	Pn	05 20 55.6	-1.2
MWZ				SN	Sn	05 22 03.2	-0.5
URZ	Urewera	6.04	220	Pn	Pn	05 21 00.1	+1.1
	3.4nm,0.3s,baz=2.3,slow=5.1,SNR=21						
URZ				Sn	Sn	05 22 07.7	0.0
	2.0nm,0.3s,baz=168,slow=20,SNR=7.2						
MRZ	Mangatainoka R	8.63	215	SN	Sn	05 23 05.7	-6.9
CTA	Charters Tower	34.46	284	P	P	05 26 17.0	+0.6
	2.4nm,0.6s,mb4.3,baz=116,slow=10,SNR=3.7						
ASAR	Alice Springs	43.03	270	P	P	05 27 28.0	+0.1
	2.9nm,0.7s,mb4.1,baz=111,slow=7.6,SNR=25						
ASAR				LR	LR	05 43 27.0	
	comp=Z,21nm,20.2s,MS3.0,baz=94,slow=34						
WRA	Warramunga Arr	44.32	276	P	P	05 27 37.6	-0.7
	2.9nm,0.7s,mb4.1,baz=117,slow=8.0,SNR=20						
FINES	FINESS Array B	148.22	338	PKPbc	PKPdf	05 39 14.9	+7.0
	1.5nm,0.8s,baz=72,slow=4.4,SNR=5.6						

IDC 09 05:23:28.7±8.6**, 17.27S×178.69W, h502^{km}**±92^{km}**, mb3.3**/6**, mb1 3.6**/6**, mb1mx3.3**/16**, mbtmp4.2**/6**, 1D, Error ellipse: s-maj=83.8km s-min=38.8km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.29	260	P	P	05 29 24.7	-0.7
	2.8nm,0.8s,baz=75,slow=15,SNR=3.9						
STKA	Stephens Creek	38.70	240	P	P	05 30 08.8	-1.2
	1.4nm,0.5s,baz=134,slow=22,SNR=4.4						
WRA	Warramunga Arr	44.48	259	P	P	05 30 54.8	-1.5
	1.8nm,0.7s,baz=94,slow=7.7,SNR=8.3						
ASAR	Alice Springs	44.71	254	P	P	05 30 56.5	-1.6
	14nm,0.5s,baz=89,slow=8.1,SNR=168						
ASPA	Alice Springs	44.71	254	⇓*i*P	P	05 30 56.3	-1.7
ILAR	Eielson Array	85.33	13	P	P	05 35 11.1	-1.4
	0.4nm,0.5s,baz=221,slow=5.5,SNR=7.2						
TXAR	Lajitas Array	85.89	58	P	P	05 35 15.7	-0.4
	0.2nm,0.6s,baz=223,slow=5.4,SNR=4.1						
BVAR	Borovoye Array	116.18	321	PKP	PKPdf	05 41 13.5	-0.5
	0.5nm,0.4s,baz=94,slow=4.1,SNR=5.3						
BRTR	Keskin Array B	144.14	315	PKP	PKPdf	05 42 06.9	+0.3
	2.0nm,0.8s,baz=108,slow=3.9,SNR=7.6						
GERES	GERESS Array B	146.93	345	PKPbc	PKPbc	05 42 14.4	+1.1
	0.8nm,0.4s,baz=25,slow=2.6,SNR=12						

IDC 09 05:39:11.0±2.2**, 47.12N×153.66E, mb3.5**/3**, mb1 4.0**/4**, mb1mx3.6**/21**, mbtmp3.7**/4**, ML3.8**/1**, Error ellipse: s-maj=110.9km s-min=33.8km az=152.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	8.31	253	Pn	P	05 41 12.5	-3.2
	1.2nm,0.3s,baz=92,slow=20,SNR=7.6						
ILAR	Eielson Array	36.03	39	P	P	05 46 12.8	-2.5
	1.3nm,1.1s,baz=260,slow=8.6,SNR=4.7						
YKA	Yellowknife Ar	50.41	37	P	P	05 48 09.8	-1.7
	0.4nm,0.6s,baz=296,slow=7.3,SNR=5.9						
TXAR	Lajitas Array	76.99	61	P	P	05 51 05.9	-1.2
	0.3nm,0.5s,baz=301,slow=4.6,SNR=11						

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*IDC **09** 06:22:25.3±1.2, 23.53S×111.96W, mb4.1/8, mb1 4.4/8, mb1mx4.1/17, mbtmp4.1/8, MS3.8/4, Ms1 3.9/4, ms1mx3.3/28, Error ellipse: s-maj=47.8km s-min=24.4km az=57.0, putative timing error @ LPAZ*

*NEIC **09** 06:22:26.7±0.4, 23.64S×111.92W, h10^{km}, mb5.0/5, Error ellipse: s-maj=20.2km s-min=9.3km az=74.0*

*BJI **09** 06:22:28.6, 23.60S×111.90W, h10^{km}*

ISC 09 06:22:24.8±0.7**, 23.6S**±0.1×**112.0W**±0.2**, h10^{km}, n37,** σ**0^{s}87**/27**, mb4.4**/12**, MS3.8**/4**, 4C-1D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	38.60	126	P	P	06 29 50.2	+0.5
	4.3nm,1.1s,mb4.1,baz=288,slow=7.5,SNR=4.7						
PLCA				LR	LR	06 41 28.3	
	comp=Z,121nm,21.4s,MS3.7,baz=278,slow=30						
LVC	Limon Verde	39.51	97	P	P	06 29 58.4	+0.9
	6.1nm,1.2s,mb4.2,baz=270,slow=13,SNR=3.9						
LVC				LR	LR	06 41 57.1	
	comp=Z,110nm,20.6s,MS3.7,baz=346,slow=30						
LPAZ	La Paz	41.73	88	P	Px	06 29 38.0	
	3.6nm,1.1s,baz=271,slow=8.4,SNR=11						
LPAZ				LR	LR	06 42 48.5	
	comp=Z,138nm,20.1s,MS3.8,baz=80,slow=29						
USHA	Ushuaia	44.80	146	LR	LR	06 44 30.2	
	comp=Z,206nm,19.5s,MS4.1,baz=198,slow=30						
SAML	Samuel	48.81	81	*e*P	P	06 31 11.5	-1.0
	15nm,1.3s,mb4.9						
TXAR	Lajitas Array	53.24	9	P	P	06 31 46.1	+0.2
	0.7nm,0.9s,mb3.6,baz=188,slow=8.8,SNR=6.1						
JCT	Junction City	55.04	13	*e*P	P	06 31 59.9	+0.8
	25nm,1.4s,mb5.0						
CPRX	Cap Rock	56.85	8	P	P	06 32 11.1	-1.1
ARUT	Antelope Range	61.09	359	P	P	06 32 42.6	+1.2
NVAR	Mina Array Bea	62.00	354	P	P	06 32 47.7	+0.1
	2.4nm,0.7s,mb4.4,baz=166,slow=8.8,SNR=16						
JLU	Jordanelle	63.88	0	*e*P	P	06 32 58.6	-1.3
MOD	Modoc	65.64	353	*e*P	P	06 33 10.3	-1.0
	11nm,1.2s,mb4.8						
WVOR	Wild Horse Val	66.00	355	*e*P	P	06 33 14.8	+1.2
PDAR	Pinedale Array	66.08	2	P	P	06 33 12.4	-1.7
	0.8nm,0.7s,mb3.8,baz=180,slow=5.9,SNR=7.8						
QSPA	South Pole Qui	66.55	180	⇓*i*P	P	06 33 16.9	+0.4
	26nm,1.3s,mb5.1						
MCMT	McKenzie Canyo	68.11	359	*e*P	P	06 33 27.7	+0.7
QLMT	Earthquake Lak	68.11	0	P	P	06 33 27.9	+1.0
BMO	Blue Mountains	68.30	356	*e*P	P	06 33 28.8	+0.6
	9.5nm,1.5s,mb4.6						
CHMT	Chamberlain Mo	70.20	359	*e*P	P	06 33 39.6	-0.1
VNA3	Neumayer Olymp	71.72	161	*e*	P	06 33 53.7	+5.1
VNA3	Neumayer Olymp	71.72	161	⇑*i*P	P	06 33 48.2	-0.4
VNA3				*e*		06 33 53.7	
VNA1	Neumayer--Stat	72.36	160	*e*	P	06 33 57.0	+4.6
VNA1	Neumayer--Stat	72.36	160	⇑*i*P	P	06 33 50.6	-1.8
VNA1				*e*		06 33 57.0	
VNA2	Neumayer--Watz	72.53	161	*e*	P	06 33 58.9	+5.6
VNA2	Neumayer--Watz	72.53	161	⇑*i*P	P	06 33 53.3	0.0
VNA2				*e*		06 33 58.9	
ULM	Lac du Bonnet	74.91	11	P	P	06 34 06.8	-0.7
	0.9nm,0.4s,mb4.0,baz=228,slow=6.8,SNR=3.5						
EDM	Edmonton	76.52	359	*e*P	P	06 34 16.6	0.0
YKA	Yellowknife Ar	85.83	359	P	P	06 35 05.5	+0.1
	2.8nm,1.0s,mb4.4,baz=174,slow=4.6,SNR=32						
YKA	Yellowknife Ar	85.83	359	P	P	06 35 05.5	+0.1
GERES	GERESS Array B	130.72	45	PKP	PKPdf	06 41 37.8	-1.5
	0.1nm,0.3s,baz=284,slow=5.5,SNR=3.7						
AKASG	Malin Array Be	139.64	38	PKP	PKPdf	06 41 53.2	-2.6
	0.3nm,0.3s,baz=271,slow=2.8,SNR=5.8						
SONM	Songino Array	141.15	318	PKhKP		06 41 47.9	
	0.4nm,0.8s,baz=135,slow=6.1,SNR=3.7						
LZH	Lanzhou	146.72	300	⇑P	PKPbc	06 42 09.5	+2.6
LZH				pP		06 42 19.5	
LZH				sP		06 42 23.0	
BRTR	Keskin Array B	146.86	53	PKPbc	PKPbc	06 42 09.1	+2.0
	5.3nm,0.9s,baz=225,slow=1.7,SNR=16						
GTA	Gaotai	148.85	308	*e*PKP	PKPdf	06 42 14.1	+2.2
GTA				APKP		06 42 20.4	
CMAR	Chiang Mai Arr	150.72	266	PKPbc	PKPdf	06 42 20.2	+4.8
	28nm,1.3s,baz=88,slow=0.3,SNR=31						
KURK	Kurchatov	151.72	346	*e*PKPbc	PKPdf	06 42 20.6	+4.7

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*IDC **09** 06:26:45.1±1.3, 23.62S×111.87W, mb4.2/7, mb1 4.5/7, mb1mx4.1/16, mbtmp4.2/7, Error ellipse: s-maj=50.7km s-min=26.1km az=58.0, putative timing error @ LPAZ*

*BJI **09** 06:26:46.4, 23.70S×111.80W, h11^{km}*

*NEIC **09** 06:26:46.4±0.5, 23.73S×111.85W, h10^{km}, mb4.9/4, Error ellipse: s-maj=29.5km s-min=11.5km az=77.0*

ISC 09 06:26:44.8±0.8**, 23.7S**±0.1×**111.9W**±0.3**, h10^{km}, n30,** σ**0^{s}90**/21**, mb4.4**/10**, 4C-1D, Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	38.48	126	P	P	06 34 10.3	+1.6
	1.7nm,0.9s,mb3.8,baz=320,slow=6.0,SNR=3.3						
PLCA	Paso Flores	38.48	126	P	P	06 34 10.3	+1.6
LPAZ	La Paz	41.62	88	P	Px	06 33 59.5	
	4.2nm,1.1s,baz=271,slow=5.6,SNR=10						
LPAZ	La Paz	41.62	88	P	Px	06 33 59.5	
TXAR	Lajitas Array	53.28	9	P	P	06 36 06.7	+0.5
	4.3nm,1.4s,mb4.2,baz=186,slow=11,SNR=6.2						
CPRX	Cap Rock	56.89	8	*e*P	P	06 36 31.7	-0.7
BDFB	Brasilia	60.24	95	P	P	06 36 55.0	-0.9
	3.5nm,0.9s,mb4.4,baz=238,slow=12,SNR=3.8						
SDCO	Great Sand Dun	61.38	6	*e*P	P	06 37 03.8	+0.5
	3.8nm,1.3s,mb4.4						
NVAR	Mina Array Bea	62.06	354	P	P	06 37 08.2	+0.2
	2.5nm,0.8s,mb4.4,baz=166,slow=8.8,SNR=15						
WVOR	Wild Horse Val	66.06	355	*e*P	P	06 37 34.9	+0.8
	10nm,1.3s,mb4.7						
PDAR	Pinedale Array	66.13	2	P	P	06 37 32.6	-1.9
	1.0nm,0.8s,mb3.9,baz=166,slow=6.1,SNR=8.0						
QSPA	South Pole Qui	66.49	180	⇓*i*P	P	06 37 36.8	+0.6
	16nm,1.3s,mb4.9						
MCMT	McKenzie Canyo	68.17	359	*e*P	P	06 37 47.6	+0.3
BMO	Blue Mountains	68.36	356	*e*P	P	06 37 48.5	0.0
	16nm,1.7s,mb4.8						
VNA3	Neumayer Olymp	71.64	161	*e*	P	06 38 14.9	+6.8
VNA3	Neumayer Olymp	71.64	161	⇑*i*P	P	06 38 06.7	-1.4
VNA3				*e*		06 38 14.9	
VNA1	Neumayer--Stat	72.27	160	*e*	P	06 38 17.6	+5.7
VNA1	Neumayer--Stat	72.27	160	⇑*i*P	P	06 38 09.0	-2.9
VNA1				*e*		06 38 17.6	
VNA2	Neumayer--Watz	72.44	160	*e*	P	06 38 18.5	+5.6
VNA2	Neumayer--Watz	72.44	160	⇑*i*P	P	06 38 12.2	-0.7
VNA2				*e*		06 38 18.5	
EDM	Edmonton	76.57	359	*e*P	P	06 38 37.0	+0.1
YKA	Yellowknife Ar	85.89	359	P	P	06 39 25.9	+0.3
	2.0nm,0.9s,mb4.3,baz=171,slow=4.7,SNR=29						
YKA	Yellowknife Ar	85.89	359	P	P	06 39 25.9	+0.3
AKASG	Malin Array Be	139.61	38	PKP	PKPdf	06 46 13.2	-2.5
	1.3nm,0.7s,baz=285,slow=2.9,SNR=7.5						
SONM	Songino Array	141.27	318	PKhKP		06 46 09.9	
	0.7nm,1.0s,slow=1.2,SNR=3.9						
GYA	Guiyang	145.08	283	⇑*i*PKP	PKPdf	06 46 24.3	-1.7
BRTR	Keskin Array B	146.81	53	PKPbc	PKPbc	06 46 28.5	+1.5
	5.5nm,0.9s,baz=243,slow=2.8,SNR=16						
LZH	Lanzhou	146.84	300	*e*P	PKPbc	06 46 29.0	+1.8
LZH				pP		06 46 40.5	
LZH				sP		06 46 46.5	
GTA	Gaotai	148.97	308	*e*PKP	PKPdf	06 46 35.3	+3.2
CMAR	Chiang Mai Arr	150.83	266	PKPbc	PKPdf	06 46 40.0	+4.4
	26nm,1.2s,baz=32,slow=0.2,SNR=26						

DJA 09 06:30:26.7±1.0**, 9.44S×114.34E, h34^{km}**±83^{km}**, MD4.5**/2**, ML3.8**/3**, 7C-2D, Error ellipse: s-maj=34.7km s-min=10.6km az=8.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	0.97	348	⇓*i*Pn	P	06 30 42.9	-1.1
	144nm,0.2s						
SRDI				⇑*e*Sn	S	06 30 53.9	-2.9
KELI	Kelakatan	1.22	7	⇑*i*Pn	P	06 30 46.5	-1.0
	75nm,0.2s						
KELI				⇑*e*Sn	S	06 31 01.1	-2.1
RATI	Rata	1.37	59	⇓*i*Pn	P	06 30 48.7	-1.1
	214nm,0.2s						
RATI	Rata	1.37	59	⇑*e*P	P	06 30 49.1	-0.7
RATI				⇑*e*Sn	S	06 31 04.4	-2.6
KEDI	Kedomdong	1.99	62	⇑*i*Pn	P	06 30 57.0	-1.6
KEDI				⇑*e*Sn	S	06 31 19.1	-3.4

IDC 09 06:43:01.3±4.0**, 19.09S×176.19W, mb4.4**/5**, mb1 4.6**/5**, mb1mx4.1**/16**, mbtmp4.4**/5**, 1D, Error ellipse: s-maj=159.8km s-min=34.5km az=141.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARMA	Armidale	31.22	243	⇓*i*P	P	06 49 25.7	+1.0
CTA	Charters Tower	35.35	262	P	P	06 49 59.5	-1.1
	1.8nm,0.4s,baz=82,slow=11,SNR=5.2						
STKA	Stephens Creek	39.94	243	P	P	06 50 38.4	-0.7
	3.4nm,0.6s,baz=40,slow=8.5,SNR=4.2						
WRA	Warramunga Arr	46.50	260	P	P	06 51 29.4	-3.1
	2.1nm,0.3s,baz=98,slow=6.0,SNR=28						
ASAR	Alice Springs	46.51	255	P	P	06 51 30.5	-2.0
	20nm,0.7s,baz=92,slow=8.2,SNR=127						
ASPA	Alice Springs	46.51	255	*e*P	P	06 51 30.4	-2.1
ILAR	Eielson Array	86.58	12	P	P	06 55 46.2	-1.0
	1.6nm,1.2s,baz=227,slow=6.1,SNR=5.4						

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*IDC **09** 07:01:19.9±1.5, 25.10S×175.91W, mb4.0/12, mb1 4.3/14, mb1mx4.2/20, mbtmp4.1/14, ML4.4/2, MS3.9/13, Ms1 3.9/13, ms1mx3.7/27, Error ellipse: s-maj=81.0km s-min=17.2km az=160.0*

*NEIC **09** 07:01:30.4±4.0, 24.73S×176.11W, h71^{km}±35^{km}, mb4.8/3, Error ellipse: s-maj=20.3km s-min=15.9km az=180.0*

ISC 09 07:01:21.3±0.5**, 24.8S**±0.1×**176.1W**±0.1**, h10^{km}, n33,** σ**1^{s}00**/23**, mb4.2**/15**, MS4.1**/10**, 2C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.65	202	Pn	P	07 04 54.7	+4.2
	0.9nm,0.3s,baz=251,slow=3.7,SNR=7.1						
URZ				Sn	S	07 07 24.9	-9.0
	1.1nm,0.3s,baz=194,slow=20,SNR=7.1						
URZ				LR	LR	07 09 32.8	
	comp=Z,681nm,20.0s,baz=204,slow=34						
URZ	Urewera	14.65	202	Pn	P	07 04 54.7	+4.2
URZ				Sn	S	07 07 24.9	-9.0
URZ				LR	LR	07 09 32.8	
RAR	Rarotonga	15.42	80	Pn	P	07 04 48.8	-12
	3.4nm,0.3s,baz=276,slow=8.3,SNR=3.9						
RAR				LR	LR	07 09 20.6	
	comp=Z,542nm,21.6s,baz=279,slow=31						
CTA	Charters Tower	35.06	270	P	P	07 08 17.3	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	2.6nm,0.5s,mb4.4,baz=95,slow=7.6,SNR=6.0						
CTA				LR	LR	07 20 39.5	
	comp=Z,88nm,20.2s,MS3.5,baz=232,slow=33						
STKA	Stephens Creek	37.75	249	P	P	07 08 39.2	+0.1
	2.1nm,0.7s,mb4.0,baz=95,slow=15,SNR=5.5						
STKA				LR	LR	07 23 49.9	
	comp=Z,216nm,18.2s,MS4.0,baz=290,slow=36						
STKA	Stephens Creek	37.75	249	eP	P	07 08 39.5	+0.3
STKA				LR	LR	07 23 49.9	
PMG	Port Moresby	38.16	287	P	P	07 08 42.7	-0.1
	16nm,0.8s,mb4.8,baz=154,slow=7.9,SNR=4.2						
PMG				LR	LR	07 20 46.3	
	comp=Z,155nm,18.8s,MS3.8,baz=32,slow=30						
ASAR	Alice Springs	45.42	261	P	P	07 09 40.5	-1.7
	1.2nm,0.7s,mb3.8,baz=102,slow=8.2,SNR=8.8						
ASAR				LR	LR	07 28 40.6	
	comp=Z,156nm,19.0s,MS4.0,baz=97,slow=36						
WRA	Warramunga Arr	45.91	266	P	P	07 09 44.0	-2.2
	0.8nm,0.5s,mb4.0,baz=99,slow=7.2,SNR=13						
NWAO	Narrogin (SRO)	58.14	245	LR	LR	07 34 51.9	
	comp=Z,1.6nm,18.9s,baz=249,slow=35						
QSPA	South Pole Qui	65.33	180	eP	P	07 12 05.4	+0.1
	12nm,1.0s,mb4.9						
QSPA				eP		07 12 29.6	
MAW	Mawson	78.17	200	LR	LR	07 48 41.0	
	comp=Z,187nm,18.9s,MS4.4,baz=252,slow=36						
YBH	Yreka Blue Hor	82.54	37	P	P	07 13 46.1	+0.4
	0.3nm,0.3s,mb3.7,baz=117,slow=2.3,SNR=2.2						
NVAR	Mina Array Bea	82.94	42	P	P	07 13 47.4	-0.5
	0.9nm,1.0s,mb3.8,baz=214,slow=9.8,SNR=3.5						
NVAR				LR	LR	07 47 40.9	
	comp=Z,108nm,18.5s,MS4.2,baz=290,slow=34						
VNA3	Neumayer Olymp	83.79	176	e	pP	07 13 56.2	+1.5
VNA3	Neumayer Olymp	83.79	176	⇑iP	P	07 13 51.5	0.0
VNA3				e	pP	07 13 56.2	+1.5
VNA2	Neumayer--Watz	84.25	176	e	pP	07 14 00.3	+3.3
VNA2	Neumayer--Watz	84.25	176	⇑iP	P	07 13 54.5	+0.7
VNA2				e		07 14 00.3	
PLCA	Paso Flores	85.08	133	LR	LR	07 44 59.8	
	comp=Z,76nm,19.3s,MS4.1,baz=104,slow=31						
TXAR	Lajitas Array	87.89	56	P	P	07 14 10.9	-1.8
	0.9nm,1.0s,mb4.0,baz=219,slow=8.0,SNR=4.2						
ANMO	Albuquerque	88.70	50	P	P	07 14 16.0	-0.5
	0.2nm,0.3s,mb3.9,baz=248,slow=5.4,SNR=2.6						
NEW	Newport	89.80	35	LR	LR	07 47 52.4	
	comp=Z,138nm,20.8s,MS4.4,baz=195,slow=31						
ENH	Enshi	89.88	304	eP	P	07 14 23.3	+1.2
	10nm,1.0s,mb5.1						
PDAR	Pinedale Array	90.86	42	P	P	07 14 26.8	+0.5
	0.4nm,0.9s,mb3.7,baz=180,slow=3.0,SNR=3.1						
BOZ	Bozeman (W)	91.25	39	eP	P	07 14 27.6	-0.4
	3.7nm,1.0s,mb4.7						
DLBC	Dease Lake	91.28	22	LR	LR	07 48 42.5	
	comp=Z,104nm,21.4s,MS4.2,baz=192,slow=31						
ILAR	Eielson Array	92.07	12	P	P	07 14 32.4	+1.0
	0.9nm,1.1s,mb4.0,baz=292,slow=4.9,SNR=3.4						
CMAR	Chiang Mai Arr	93.18	289	P	P	07 14 39.0	+1.5
	7.7nm,1.2s,mb5.0,baz=133,slow=3.5,SNR=12						
YKA	Yellowknife Ar	99.63	24	LR	LR	07 56 17.1	
	comp=Z,93nm,18.0s,MS4.3,baz=220,slow=33						
ARCES	ARCESS Array B	133.41	350	PKP	PKPdf	07 20 37.8	-2.5
	4.1nm,0.9s,baz=333,slow=2.7,SNR=3.6						
AKASG	Malin Array Be	147.58	330	PKPbc	PKPdf	07 21 05.0	-1.0
	1.7nm,0.5s,baz=40,slow=3.7,SNR=9.8						
BRTR	Keskin Array B	150.94	308	PKPbc	PKPdf	07 21 15.4	+3.9
	0.3nm,0.4s,baz=120,slow=38,SNR=3.5						
CLL	Collm	152.59	348	ePKP1	PKPdf	07 21 20.0	+6.4
CLL				ePKP2	PKPab	07 21 27.0	-3.5

IDC 09 07:19:06.5±2.3**, 33.47S**×**178.42W, mb4.5**/3**, mb1 4.6**/4**,**
mb1mx4.2/15**, mbtmp4.5**/4**, ML4.1**/1**, Error ellipse:**
s-maj=56.0km s-min=34.2km az=126.0, South of
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.00	216	Pn	Pn	07 20 37.2	-1.5
	5.2nm,0.3s,baz=34,slow=3.5,SNR=27						
URZ				Sn	Sn	07 21 45.0	-4.0
	6.7nm,0.3s,baz=173,slow=18,SNR=8.5						
CTA	Charters Tower	34.06	284	P	P	07 25 53.3	-1.4
	15nm,1.3s,baz=118,slow=11,SNR=2.1						
ASAR	Alice Springs	42.68	270	P	P	07 27 05.2	-1.6
	1.1nm,0.6s,baz=108,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	43.94	276	P	P	07 27 14.8	-2.3
	4.1nm,0.8s,baz=117,slow=7.5,SNR=9.8						
FINES	FINESS Array B	147.88	338	PKPbc	PKPdf	07 38 51.2	-0.3
	4.1nm,1.1s,baz=207,slow=4.3,SNR=4.5						
AKASG	Malin Array Be	153.44	319	PKPbc	PKPdf	07 39 07.0	+6.8
	0.3nm,0.3s,baz=18,slow=6.0,SNR=5.1						

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*NEIC **09** 07:19:49.9±4.6, 24.45S×179.85E, h495^{km}±59^{km}, mb4.6/5,*
Error ellipse: s-maj=50.0km s-min=18.3km az=184.0
*IDC **09** 07:19:49.2±2.7, 24.44S×179.87E, h483^{km}±29^{km}, mb3.7/9,*
mb1 3.9/10, mb1mx3.7/16, mbtmp4.5/10, Error ellipse:
s-maj=32.5km s-min=18.2km az=166.0
ISC 09 07:19:49.0±4.1**, 24.4S**±0.1×**179.8E**±0.1**, h494**^{km}±49^{km}**,**
n21, σ1^{s}12/21**, mb4.1**/12**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.99	189	P	P	07 22 48.8	-0.5
	0.6nm,0.3s,baz=359,slow=14,SNR=1.9						
URZ				S	S	07 25 14.8	+0.2
	0.6nm,0.3s,baz=156,slow=12,SNR=4.2						
ARMA	Armidale	25.65	250	eP	P	07 24 42.3	+2.3
CTA	Charters Tower	31.27	271	⇓iP	P	07 25 30.5	+1.4
	18nm,0.5s,mb4.8						
CTA	Charters Tower	31.27	271	P	P	07 25 30.0	+0.9
	23nm,0.5s,mb4.9,baz=97,slow=11,SNR=57						
CTAO	Charters Tower	31.27	271	eP	P	07 25 30.1	+1.0
	25nm,0.6s,mb4.8						
STKA	Stephens Creek	34.34	249	eP	P	07 25 55.8	+1.0
	5.0nm,0.4s,mb4.3						
STKA	Stephens Creek	34.34	249	P	P	07 25 55.7	+0.9
	6.7nm,0.4s,mb4.4,baz=96,slow=9.0,SNR=25						
STKA	Stephens Creek	34.34	249	eP	P	07 25 55.6	+0.8
PMG	Port Moresby	34.46	290	P	P	07 25 56.1	+0.1
	19nm,0.9s,mb4.5,baz=44,slow=2.3,SNR=4.1						
ASAR	Alice Springs	41.74	261	P	P	07 26 55.9	+0.3
	3.1nm,0.5s,mb4.0,baz=92,slow=6.9,SNR=44						
ASPA	Alice Springs	41.75	261	eP	P	07 26 53.4	-2.2
WB2	Warramunga Arr	42.15	267	⇓iP	P	07 26 58.7	-0.1
WRAB	Tennant Creek	42.16	267	eP	P	07 26 58.6	-0.2
	9.4nm,0.5s,mb4.5						
WRA	Warramunga Arr	42.16	267	P	P	07 26 58.2	-0.7
	6.6nm,0.4s,mb4.4,baz=100,slow=8.2,SNR=51						
WRA				ScP		07 31 45.8	
	2.5nm,0.9s,baz=101,slow=4.0,SNR=9.0						
FITZ	Fitzroy Crossi	50.58	266	eP	P	07 28 01.5	-1.9
	13nm,0.8s,mb4.3						
MBWA	Marble Bar	55.08	260	eP	P	07 28 34.8	-0.9
	2.6nm,0.5s,mb3.8						
NVAR	Mina Array Bea	85.27	44	P	P	07 31 33.7	-0.2
	0.4nm,0.6s,mb3.2,baz=231,slow=11,SNR=4.2						
CMAR	Chiang Mai Arr	89.50	290	P	P	07 31 56.5	+2.2
	0.9nm,0.4s,mb4.0,baz=128,slow=3.8,SNR=6.2						
TXAR	Lajitas Array	90.88	58	P	P	07 32 01.3	+0.9
	1.0nm,0.7s,mb3.9,baz=217,slow=6.6,SNR=17						
PDAR	Pinedale Array	93.20	44	P	P	07 32 10.0	-0.8
	0.5nm,1.0s,mb3.5,baz=270,slow=1.5,SNR=3.9						
AKASG	Malin Array Be	145.28	327	PKPbc	PKPbc	07 38 31.4	+1.1
	0.3nm,0.4s,baz=42,slow=3.8,SNR=4.8						

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*NEIC **09** 07:42:46.9±1.3, 18.43N×145.80E, h168^{km}±11^{km}, mb4.3/2,*
Error ellipse: s-maj=23.7km s-min=12.6km az=87.0
*IDC **09** 07:42:48.0±0.8, 18.45N×145.57E, h178^{km}±8^{km}, mb3.6/8,*
mb1 3.8/10, mb1mx3.7/20, mbtmp4.2/10, Error ellipse:
s-maj=26.0km s-min=11.8km az=95.0
ISC 09 07:42:46.3±1.0**, 18.42N**±0.06×**145.7E**±0.2**, h176**^{km}±9^{km}**,**
h175^{km}±4.5^{km}**:pP-P, n20, σ1^{s}09**/20**, mb3.8**/11**, 1C-2D,**
Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	1.71	179	⇑eP	P	07 43 19.4	-1.0
GUMO	Guam	4.88	190	eP	P	07 43 59.6	+0.2
CBIJ	Chichi jima	9.23	340	P	P	07 44 58.4	+1.8
	6.2nm,0.3s,baz=244,slow=16,SNR=3.0						
CBIJ				S	S	07 46 37.6	-0.8
	6.1nm,0.3s,baz=272,slow=22,SNR=4.4						
JOW	Kunigami	18.14	301	P	P	07 46 49.8	+2.0
	1.7nm,0.3s,baz=138,slow=14,SNR=5.2						
CTA	Charters Tower	38.27	179	P	P	07 49 52.3	+1.0
	1.2nm,0.5s,mb3.8,baz=354,slow=9.2,SNR=2.6						
WB2	Warramunga Arr	39.73	197	⇓iP	P	07 50 03.6	+0.3
WRA	Warramunga Arr	39.73	197	P	P	07 50 02.9	-0.4
	6.6nm,0.7s,mb4.4,baz=18,slow=9.0,SNR=36						
FITZ	Fitzroy Crossi	41.32	210	eP	P	07 50 17.2	+0.8
	3.3nm,0.3s,mb4.4						
SONM	Songino Array	43.37	322	P	P	07 50 32.1	-0.6
	0.3nm,0.8s,mb3.0,baz=121,slow=8.4,SNR=3.7						
SONM				pP	pP	07 51 11.9	+0.7
	1.2nm,1.2s,baz=129,slow=9.2,SNR=2.3						
ASAR	Alice Springs	43.39	196	P	P	07 50 32.6	-0.6
	1.8nm,0.5s,mb4.0,baz=18,slow=9.0,SNR=25						
ASPA	Alice Springs	43.40	196	eP	P	07 50 33.4	+0.1
STKA	Stephens Creek	50.17	185	P	P	07 51 25.1	-0.9
	2.4nm,0.9s,mb3.8,baz=345,slow=10,SNR=4.7						
KURK	Kurchatov	61.49	318	eP	P	07 52 44.6	-1.9
	3.8nm,1.1s,mb4.1						
ILAR	Eielson Array	63.88	26	P	P	07 53 01.2	-0.8
	0.9nm,1.0s,mb3.5,baz=256,slow=5.9,SNR=5.5						
YKA	Yellowknife Ar	78.22	28	P	P	07 54 27.8	+0.3
	0.3nm,0.5s,mb3.2,baz=288,slow=5.6,SNR=12						
YKA				pP	pP	07 55 11.0	+0.4
	0.7nm,0.8s,baz=289,slow=5.5,SNR=4.3						
YKA	Yellowknife Ar	78.22	28	P	P	07 54 27.8	+0.3
YKA				pP	pP	07 55 11.0	+0.4
NVAR	Mina Array Bea	83.29	52	P	P	07 54 57.0	+2.3
	0.9nm,0.6s,mb3.7,baz=264,slow=7.8,SNR=6.9						
NVAR				pP	pP	07 55 38.7	+0.4
	1.3nm,0.9s,baz=270,slow=3.7,SNR=3.7						
NVAR	Mina Array Bea	83.29	52	P	P	07 54 57.0	+2.3
NVAR				pP	pP	07 55 38.7	+0.4
FINES	FINESS Array B	87.14	335	P	P	07 55 11.9	-1.2
	4.6nm,1.1s,mb4.2,baz=192,slow=35,SNR=3.6						
QSPA	South Pole Qui	108.23	180	⇓iP		08 00 50.8	

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*IDC **09** 07:50:51.7±1.7, 33.66S×178.31W, mb4.7/3, mb1 4.8/5,*
mb1mx4.2/16, mbtmp4.6/5, ML4.3/2, MS3.5/2, Ms1 3.5/2,
ms1mx2.9/15, Error ellipse: s-maj=46.1km s-min=28.9km
az=130.0
*NEIC **09** 07:50:52.8±1.2, 33.74S×178.27W, h10^{km}, mb4.7/2, Error*
ellipse: s-maj=26.6km s-min=15.2km az=108.0
ISC 09 07:50:50.6±2.3**, 33.60S**±0.08×**178.2W**±0.3**, h10**^{km}**, n29,**
σ1^{s}08/29**, mb4.6**/4**, MS3.5**/2**, 2C-3D, South of Kermadec**
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	5.31	212	PN	Pn	07 52 12.7	+0.9
PUZ				SN	Sn	07 53 15.9	+2.1
PUZ	Puketiti	5.31	212	PN	Pn	07 52 12.7	+0.9
PUZ				SN	Sn	07 53 15.9	+2.1
MWZ	Matawai	5.86	215	PN	Pn	07 52 20.0	+0.4
MWZ				SN	Sn	07 53 29.4	+1.9
MWZ	Matawai	5.86	215	PN	Pn	07 52 20.0	+0.4
MWZ				SN	Sn	07 53 29.4	+1.9
URZ	Urewera	6.00	218	Pn	Pn	07 52 21.2	-0.5
	9.7nm,0.3s,baz=25,slow=2.9,SNR=44						
URZ				Sn	Sn	07 53 29.5	-1.7
	10nm,0.3s,baz=152,slow=20,SNR=11						
KNZ	Kokohu	6.35	210	PN	Pn	07 52 25.6	-0.9
KNZ				SN	Sn	07 53 39.6	-0.3
KNZ	Kokohu	6.35	210	PN	Pn	07 52 25.6	-0.9
KNZ				SN	Sn	07 53 39.6	-0.3
MRZ	Mangatainoka R	8.62	213	SN	Sn	07 54 29.9	-6.7
MRZ	Mangatainoka R	8.62	213	SN	Sn	07 54 29.9	-6.7
LTZ	Lake Taylor	11.83	216	SN	S	07 55 43.3	-12
LTZ	Lake Taylor	11.83	216	SN	S	07 55 43.3	-12
MQZ	McQueen's Vall	12.36	213	SN	S	07 55 55.2	-13
MQZ	McQueen's Vall	12.36	213	SN	S	07 55 55.2	-13
RPZ	Rata Peaks	13.12	217	Pn	P	07 53 56.1	-3.5
	1.1nm,0.3s,baz=65,slow=4.5,SNR=5.3						
RPZ				Sn	S	07 56 12.9	-14
	1.0nm,0.3s,baz=335,slow=13,SNR=5.5						
STKA	Stephens Creek	33.71	262	LR	LR	08 10 52.2	
	comp=Z,104nm,19.3s,MS3.6,baz=133,slow=36						
CTA	Charters Tower	34.27	284	P	P	07 57 39.9	+0.9
	7.6nm,0.7s,mb4.7,baz=116,slow=12,SNR=16						
CTAO	Charters Tower	34.27	284	eP	P	07 57 40.1	+1.1
	4.9nm,0.6s,mb4.6						
ASAR	Alice Springs	42.86	270	P	P	07 58 51.1	+0.3
	8.0nm,0.7s,mb4.6,baz=111,slow=7.3,SNR=85						
ASAR				PcP	PcP	08 00 43.0	+0.7
	1.9nm,0.8s,baz=117,slow=4.3,SNR=4.9						
ASAR				LR	LR	08 16 11.1	
	comp=Z,48nm,18.0s,MS3.4,baz=185,slow=36						
ASPA	Alice Springs	42.87	270	⇑iP	P	07 58 51.0	+0.2
WB2	Warramunga Arr	44.13	276	⇑iP	P	07 59 00.9	-0.2
WRAB	Tennant Creek	44.13	276	eP	P	07 59 00.8	-0.3
	10.0nm,0.7s,mb4.7						
WRA	Warramunga Arr	44.14	276	P	P	07 59 00.5	-0.6
	7.5nm,0.5s,mb4.7,baz=116,slow=7.6,SNR=55						
VNA3	Neumayer Olymp	75.13	176	⇓i	PcP	08 02 49.2	+1.3
VNA2	Neumayer--Watz	75.56	177	⇓i	PcP	08 02 51.8	+2.0
VNA1	Neumayer--Stat	75.79	177	⇓i	PcP	08 02 54.0	+3.2
KURK	Kurchatov	123.10	312	ePKPdf	PKPdf	08 09 48.5	-1.6
FINES	FINESS Array B	148.06	338	PKPbc	PKPdf	08 10 38.2	+2.9
	2.5nm,0.5s,baz=51,slow=4.9,SNR=22						
AKASG	Malin Array Be	153.66	319	PKPbc	PKPdf	08 10 50.8	+6.6
	4.3nm,0.8s,baz=61,slow=2.7,SNR=7.0						
BRTR	Keskin Array B	153.82	293	PKPbc	PKPdf	08 10 53.2	+8.5
	0.6nm,0.5s,baz=141,slow=7.5,SNR=3.1						

WEL 09 08:08:52.6±0.5**, 36.95S**×**177.18E, h317**^{km}±4^{km}**, ML4.0**/12**,**
1C, Error ellipse: s-maj=6.6km s-min=5.5km az=0.0, Off
east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	1.11	201	PN	P	08 09 35.1	-0.4
TAZ	Tarawera	1.39	202	PN	P	08 09 37.3	+0.2
MWZ	Matawai	1.41	169	PN	P	08 09 36.9	-0.2
MWZ				SN	S	08 10 12.0	0.0
PUZ	Puketiti	1.41	143	⇑PN	P	08 09 36.7	-0.5
PUZ				SN	S	08 10 10.9	-1.2
PATZ	Paeroa	1.60	207	PN	P	08 09 38.6	+0.2
KNZ	Kokohu	2.10	169	PN	P	08 09 42.1	+0.1
BKZ	Black Stump Fm	2.28	194	PN	P	08 09 42.8	-0.6
BKZ				SN	S	08 10 22.6	-0.6
MGZ	Maungaku	2.42	212	PN	P	08 09 44.6	0.0
NGZ	Ngauruhoe	2.55	209	PN	P	08 09 45.7	-0.1
CNZ	Chateau	2.59	209	PN	P	08 09 45.8	-0.3
TUVZ	Tukino	2.61	207	PN	P	08 09 46.0	-0.3
MOVZ	Moawhango	2.70	204	PN	P	08 09 46.6	-0.5
PWZ	Pawanui	3.08	185	PN	P	08 09 50.5	-0.2
TSZ	Takapari Road	3.25	197	PN	P	08 09 51.6	-0.8
WAZ	Wanganui	3.29	211	PN	P	08 09 52.3	-0.5
BFZ	Birch Farm	3.79	191	PN	P	08 09 57.4	-0.6
MRZ	Mangatainoka R	3.91	198	PN	P	08 09 57.9	-1.3
DSZ	Denniston Nort	6.34	219	PN	P	08 10 24.6	-2.5

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*NEIC **09** 08:41:30.7±0.7, 15.52S×70.25W, h205^{km}±7^{km}, mb4.2/3,*
Error ellipse: s-maj=12.9km s-min=10.2km az=68.0
*IDC **09** 08:41:30.0±2.7, 15.57S×70.31W, h198^{km}±29^{km}, mb3.3/6,*
mb1 3.6/7, mb1mx3.4/19, mbtmp3.9/7, Error ellipse:
s-maj=31.3km s-min=17.8km az=82.0, putative timing error
@ LPAZ
ISC 09 08:41:30.1±0.7**, 15.56S**±0.07×**70.3W**±0.1**, h216**^{km}±9^{km}**,**
n18, σ0^{s}96/15**, mb3.6**/6**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	1.49	233	⇑iP	P	08 42 06.4	+0.9
ARE				iS	S	08 42 33.4	+0.6
LPAZ	La Paz	2.17	110	P	Px	08 41 37.1	
	104nm,0.3s,baz=276,slow=7.9,SNR=3854						
LPAZ				S	Sx	08 42 10.1	
	43nm,0.3s,baz=160,slow=21,SNR=5.5						
LVC	Limon Verde	7.13	170	P	P	08 43 13.6	+0.7
	18nm,0.3s,baz=348,slow=6.9,SNR=184						
LVC				S	S	08 44 31.7	-1.5
	22nm,0.3s,baz=118,slow=19,SNR=12						
NNA	Nana	7.31	298	eP	P	08 43 13.3	-1.9
	22nm,0.4s						
SAML	Samuel	9.53	47	eP	P	08 43 42.7	-1.4
	3.2nm,0.5s						
OTAV	Otavalo	17.66	332	eP	P	08 45 24.6	+0.8
	5.1nm,0.6s						
BDFB	Brasilia	21.43	93	P	P	08 46 03.2	+1.3
	0.8nm,0.3s,mb3.7,baz=280,slow=15,SNR=3.5						
SDV	Santo Domingo	24.29	359	P	P	08 46 29.8	+0.4
	3.8nm,0.5s,mb4.2,baz=286,slow=7.4,SNR=13						
PLCA	Paso Flores	25.09	181	P	P	08 46 36.6	+0.1
	1.5nm,1.1s,mb3.5,baz=355,slow=16,SNR=2.2						
TXAR	Lajitas Array	55.06	324	P	P	08 50 41.2	-0.6
	0.3nm,0.6s,mb3.0,baz=152,slow=9.3,SNR=6.9						
TXAR	Lajitas Array	55.06	324	P	P	08 50 41.2	-0.6
PDAR	Pinedale Array	68.35	330	P	P	08 52 10.6	+0.5
	0.3nm,0.5s,mb3.2,baz=113,slow=9.4,SNR=4.8						
YKA	Yellowknife Ar	85.18	341	P	P	08 53 42.7	-0.2
	0.8nm,0.5s,mb3.7,baz=135,slow=5.2,SNR=57						
YKA	Yellowknife Ar	85.18	341	P	P	08 53 42.7	-0.2
ASAR	Alice Springs	134.42	212	PKP	PKPdf	09 00 24.1	+0.9
	0.4nm,0.5s,baz=118,slow=1.7,SNR=9.7						
WRA	Warramunga Arr	137.23	215	PKP	PKPdf	09 00 30.6	+2.2
	0.9nm,0.5s,baz=144,slow=1.8,SNR=4.9						
HIA	Hailar	145.40	348	P	PKPdf	09 00 44.8	+2.8
SONM	Songino Array	147.69	4	PKPbc	PKPdf	09 00 51.5	+5.6
	0.6nm,0.5s,baz=317,slow=1.8,SNR=9.3						

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*IDC **09** 09:07:51.5±4.3, 39.71N×50.96E, mb3.9/6, mb1 4.0/7,*
mb1mx3.8/19, mbtmp3.9/7, ML4.1/1, MS3.6/1, Ms1 3.6/1,
ms1mx2.8/25, Error ellipse: s-maj=96.2km s-min=30.4km
az=6.0
*CSEM **09** 09:07:54.3±0.9, 39.94N×50.65E, h20^{km}, ML3.0, Error*
ellipse: s-maj=23.2km s-min=4.1km az=9.0
*THR **09** 09:07:56.2±0.3, 39.74N×50.55E, h14^{km}±13^{km}, ML3.0*
*TEH **09** 09:08:13.8, 38.55N×50.90E, h10^{km}, Mn3.6*
ISC 09 09:07:53.2±0.5**, 39.98N**±0.04×**50.86E**±0.07**, h10**^{km}**, n23,**
σ0^{s}78/24**, mb3.8**/6**, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRMI	Germi	2.58	244	ePG	Pn	09 08 37.2	+1.4
GRMI				eSG	Sn	09 09 07.1	-0.4
GRMI				AML	AML	09 09 09.3	
	comp=E,36nm,0.2s						
IPRN	Paran-Amol	3.89	163	Pn	Pn	09 08 53.6	-0.7
IAFJ	Afjeh	4.17	170	Pn	Pn	09 08 58.2	-0.2
IGLO	Galoogah	4.21	150	Pn	Pn	09 08 57.9	-1.1
IMHD	Mahdasht	4.29	182	Pn	Pn	09 09 00.7	+0.6
IMHD				Sn	Sn	09 09 32.8	-18
DAMV	Damavand	4.43	168	ePN	Pn	09 09 02.7	+0.6
DAMV				AML	AML	09 09 53.9	
	comp=N,116nm,0.2s						
IDMV	Damavand	4.49	168	Pn	Pn	09 09 03.8	+0.9
IFIR	Firoozkooh	4.58	160	Pn	Pn	09 09 04.5	+0.3
IFIR				Sn	Sn	09 09 42.2	-16
ISHM	Shahmirzad	4.59	154	Pn	Pn	09 09 05.0	+0.7
IRAZ	Razeghan	4.63	189	Pn	Pn	09 09 04.2	-0.7
IRAZ	Razeghan	4.63	189	Lg		09 09 54.4	
ILAS	Lasjerd	4.88	159	Pn	Pn	09 09 09.0	+0.5
IANJ	Anjiloo	5.11	151	Pn	Pn	09 09 12.6	+0.9
ASAO	Ashtian	5.46	187	ePN	Pn	09 09 15.8	-0.8
ASAO				AML	AML	09 10 26.6	
	comp=N,6.5nm,0.6s						
SNGE	Sanandaj	5.62	211	ePN	Pn	09 09 17.1	-1.7
SNGE				AML	AML	09 10 31.9	
	comp=N,3.8nm,0.6s						
BVAR	Borovoye Array	18.65	39	P	P	09 12 12.5	-0.5
	comp=N,0.6nm,0.3s,baz=225,slow=8.4,SNR=7.8						
MLR	Muntele Rosu	19.08	295	LR	LR	09 21 45.6	
	comp=N,175nm,19.6s,baz=157,slow=43						
FINES	FINESS Array B	26.30	333	P	P	09 13 30.8	+0.4
	comp=N,1.2nm,0.8s,mb3.5,baz=135,slow=11,SNR=4.0						
HFS	Hagfors	30.63	324	P	P	09 14 08.8	-0.6
	comp=N,3.4nm,0.9s,mb4.2,baz=90,slow=8.6,SNR=3.7						
ARCES	ARCESS Array B	32.51	344	P	P	09 14 26.6	+0.8
	comp=N,7.2nm,1.1s,mb4.5,baz=142,slow=10,SNR=2.8						
EKA	Eskdalemuir Ar	38.45	312	P	P	09 15 17.1	+0.6
	comp=N,1.2nm,0.7s,mb3.8,baz=90,slow=7.5,SNR=3.7						
SONM	Songino Array	40.01	60	P	P	09 15 28.9	-0.8
	comp=N,0.3nm,0.6s,mb3.2,baz=278,slow=9.4,SNR=4.3						
YKA	Yellowknife Ar	77.21	353	P	P	09 19 47.9	-0.4
	comp=N,0.4nm,0.6s,mb3.5,baz=10.0,slow=6.1,SNR=18						

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*STR **09** 09:13:10.2±2.3, 48.07N×3.09W, h5^{km}±1^{km}, Ml3.5, Error*
ellipse: s-maj=0.0km s-min=0.0km az=1.0
*LDG **09** 09:13:10.6±0.1, 47.93N×3.34W, h10^{km}, Md3.4/2, Ml3.4/25,*
Error ellipse: s-maj=2.1km s-min=1.3km az=95.0
*NEIC **09** 09:13:10.6, 47.93N×3.34W, h10^{km}, ML3.4(LDG),*
ML3.4(STR), After LDG.
*CSEM **09** 09:13:11.0±0.1, 47.94N×3.30W, h10^{km}, ML3.4/23, Error*
ellipse: s-maj=2.2km s-min=1.5km az=96.0
ISC 09 09:13:08.1±0.5**, 47.72N**±0.02×**3.14W**±0.03**, h10**^{km}±2^{km}**,**
n47, σ1^{s}48/125**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QUIF	Quistinic	0.20	355	ePg	Pg	09 13 14.1	+1.6
QUIF				eSg	Sg	09 13 16.1	+0.7
	1µm,0.2s						
ROSF	Rostrenen	0.62	352	ePg	Pg	09 13 17.5	-3.2
ROSF				eSg	Sg	09 13 22.9	-6.2
	626nm,0.2s						
SGMF	Saint Gilles	0.66	36	ePg	Pg	09 13 22.8	+1.3
SGMF				ePn	Pn	09 13 23.8	+0.5
SGMF				eSg	Sg	09 13 30.4	0.0
SGMF				eSn	Sn	09 13 33.4	-0.3
	344nm,0.3s						
RENF	Rennes	1.09	68	Pg	Pg	09 13 25.5	-4.4
RENF				Sg	Sg	09 13 42.2	-2.3
LRYF	La Roche-sur-Y	1.58	136	Pn	Pn	09 13 40.0	+3.7
LRYF				Pg	Pg	09 13 44.0	+4.3
LRYF				Sg	Sg	09 14 08.9	+8.2
LRYF	La Roche-sur-Y	1.58	136	Pg	Pg	09 13 44.0	+4.3
LRYF				Sg	Sg	09 14 08.9	+8.2
GRR	Gorron	1.67	66	ePn	Pn	09 13 38.9	+1.2
GRR				ePg	Pg	09 13 42.7	+1.2
GRR				eSn	Sn	09 13 59.6	+0.3
GRR				eSg	Sg	09 14 04.9	+1.1
	70nm,0.2s						
FLN	La Foliniere	2.06	59	ePn	Pn	09 13 44.3	+1.0
FLN				ePg	Pg	09 13 49.3	0.0
	baz=249						
FLN				eSn	Sn	09 14 08.2	-1.0
FLN				eSg	Sg	09 14 15.5	-1.3
	45nm,0.2s,baz=245						
LDF	La Druitiere	2.20	65	ePn	Pn	09 13 46.7	+1.4
LDF				ePg	Pg	09 13 53.2	+1.1
LDF				eSn	Sn	09 14 12.1	-0.7
LDF				eSg	Sg	09 14 21.5	0.0
	51nm,0.3s						
MFF	Saint Martin d	2.33	118	ePn	Pn	09 13 50.3	+3.2
MFF				ePg	Pg	09 13 57.6	+2.9
MFF				eSn	Sn	09 14 19.0	+2.9
MFF				eSg	Sg	09 14 31.0	+5.3
	50nm,0.2s						
LFF	La Frestale	3.87	135	ePn	Pn	09 14 11.9	+2.9
LFF				ePg	Pg	09 14 25.8	+0.4
LFF				eSn	Sn	09 14 56.6	+1.6
LFF				eSg	Sg	09 15 18.7	+1.8
	43nm,0.4s						
TCF	Toulx Ste Croi	3.93	109	ePn	Pn	09 14 11.8	+1.9
TCF				ePg	Pg	09 14 27.0	+0.4
TCF				eSn	Sn	09 14 57.0	+0.4
TCF				eSg	Sg	09 15 20.4	+1.4
	19nm,0.3s						
HYF	Humbligny	3.94	94	ePn	Pn	09 14 11.2	+1.1
HYF				eSg	Sg	09 15 18.7	-0.8
RJF	Les Rejaudoux	4.02	125	ePn	Pn	09 14 13.9	+2.7
RJF				ePg	Pg	09 14 29.2	+0.8
RJF				eSn	Sn	09 14 59.9	+1.0
RJF				eSg	Sg	09 15 24.7	+2.6
	28nm,0.3s						
BGF	Bois d'Agland	4.25	104	ePn	Pn	09 14 17.0	+2.6
BGF				eSn	Sn	09 15 04.4	-0.3
BGF				eSg	Sg	09 15 29.6	0.0
	38nm,0.4s						
ELAN	Lanestosa	4.49	183	Sn	Sn	09 15 07.3	-3.6
	0.3nm,0.1s,SNR=4.0						
AVF	Avril sur Loir	4.52	99	ePn	Pn	09 14 19.6	+1.3
AVF				ePg	Pg	09 14 37.2	-1.2
AVF				eSn	Sn	09 15 09.7	-1.8
AVF				eSg	Sg	09 15 37.3	-1.3
	13nm,0.5s						
CAF	Calviac	4.56	126	ePn	Pn	09 14 21.3	+2.4
CAF				eSn	Sn	09 15 12.6	0.0
CAF				eSg	Sg	09 15 40.6	+0.6
	31nm,0.5s						

SSF	**Saint Saulge**	**4.56**	**96**	*e*Pn	**Pn**	**09 14 20.0**	**+1.1**
SSF				*e*Pg	**Pg**	**09 14 37.5**	**-1.7**
SSF				*e*Sn	**Sn**	**09 15 11.2**	**-1.4**
SSF				*e*Sg	**Sg**	**09 15 38.5**	**-1.6**
	12nm,0.4s						
AGO	**Saint Agoulin**	**4.61**	**109**	Pn	**Pn**	**09 14 23.0**	**+3.4**
AGO				Sg	**Sg**	**09 15 45.7**	**+4.0**
EALK	**Alkurruntz**	**4.64**	**165**	Pn	**Pn**	**09 14 21.8**	**+1.7**
EALK				Sn	**Sn**	**09 15 14.3**	**-0.4**
EALK	**Alkurruntz**	**4.64**	**165**	Pn	**Pn**	**09 14 21.8**	**+1.7**
	4.2nm,0.2s,SNR=12						
EALK				Sn	**Sn**	**09 15 14.3**	**-0.4**
	1.5nm,0.1s,SNR=5.6						
EARI	**Arriondas**	**4.65**	**199**	Pn	**Pn**	**09 14 17.7**	**-2.5**
EARI				Sn	**Sn**	**09 15 09.0**	**-5.9**
SJPF	**Ste Jean**	**4.80**	**163**	*e*Pn	**Pn**	**09 14 22.4**	**+0.1**
SJPF				*e*Pg	**Pg**	**09 14 43.6**	**-0.4**
SJPF				*e*Sn	**Sn**	**09 15 18.7**	**+0.1**
SJPF				*e*Sg	**Sg**	**09 15 48.2**	**+0.2**
	7.1nm,0.6s						
SMF	**Signal de Mont**	**4.88**	**100**	*e*Pn	**Pn**	**09 14 24.6**	**+1.2**
SMF				*e*Pg	**Pg**	**09 14 43.5**	**-2.1**
SMF				*e*Sn	**Sn**	**09 15 19.5**	**-1.1**
SMF				*e*Sg	**Sg**	**09 15 49.2**	**-1.4**
	10nm,0.4s						
LBL	**Lubilhac**	**5.07**	**117**	Pn	**Pn**	**09 14 28.5**	**+2.5**
ETSF	**Etsaut**	**5.15**	**158**	*e*Pn	**Pn**	**09 14 27.8**	**+0.6**
ETSF				*e*Pg	**Pg**	**09 14 50.4**	**-0.6**
ETSF				*e*Sn	**Sn**	**09 15 26.8**	**-0.7**
ETSF				*e*Sg	**Sg**	**09 15 59.7**	**0.0**
	2.4nm,0.3s						
EPON	**Pontenova**	**5.22**	**214**	Pn	**Pn**	**09 14 24.6**	**-3.6**
EPON				Sn	**Sn**	**09 15 20.1**	**-9.0**
EPON	**Pontenova**	**5.22**	**214**	Pn	**Pn**	**09 14 24.6**	**-3.6**
	0.1nm,0.1s,SNR=7.9						
EPF	**Esparros**	**5.29**	**151**	*e*Pn	**Pn**	**09 14 30.4**	**+1.2**
EPF				*e*Pg	**Pg**	**09 14 53.6**	**-0.2**
EPF				*e*Sn	**Sn**	**09 15 30.7**	**-0.3**
EPF				*e*Sg	**Sg**	**09 16 04.1**	**-0.2**
	5.2nm,0.3s						
BAIF	**Baives**	**5.38**	**62**	*e*Pg	**Pg**	**09 14 50.6**	**-5.0**
SFTF	**Sexfontaines**	**5.52**	**82**	*e*Pn	**Pn**	**09 14 32.1**	**-0.2**
SFTF				*e*Sn	**Sn**	**09 15 32.1**	**-4.5**
EBIE	**Bielsa**	**5.54**	**154**	Pn	**Pn**	**09 14 34.8**	**+2.1**
EBIE				Sn	**Sn**	**09 15 38.1**	**+0.8**
MEZF	**Maizieres J'vi**	**5.54**	**79**	*e*Pn	**Pn**	**09 14 32.4**	**-0.3**
MEZF				*e*Sg	**Sg**	**09 16 06.9**	**-5.8**
	15nm,0.4s						
GIVF	**Givet**	**5.77**	**63**	*e*Pg	**Pg**	**09 14 57.2**	**-6.0**
GIVF				*e*Sn	**Sn**	**09 15 36.8**	**-6.1**
MTLF	**Montolieu**	**5.77**	**137**	*e*Pn	**Pn**	**09 14 37.9**	**+1.9**
MTLF				*e*Pg	**Pg**	**09 15 01.5**	**-1.9**
MTLF				*e*Sn	**Sn**	**09 15 41.5**	**-1.6**
MTLF				*e*Sg	**Sg**	**09 16 19.0**	**-1.4**
	3.6nm,0.3s						
RFYF	**Reffroy**	**5.83**	**78**	*e*Pn	**Pn**	**09 14 36.0**	**-0.8**
EINC	**Incio**	**5.87**	**212**	Pn	**Pn**	**09 14 33.8**	**-3.5**
EINC				Sn	**Sn**	**09 15 35.4**	**-10**
LASF	**Ste Croix**	**6.09**	**124**	*e*Pn	**Pn**	**09 14 42.3**	**+1.8**
LASF				*e*Sn	**Sn**	**09 15 48.8**	**-2.2**
LASF				*e*Sg	**Sg**	**09 16 29.0**	**-2.0**
	13nm,0.5s						
VIVF	**Saint-Julien-l**	**6.12**	**115**	*e*Pn	**Pn**	**09 14 42.2**	**+1.3**
VIVF				*e*Sn	**Sn**	**09 15 50.1**	**-1.8**
VIVF				*e*Sg	**Sg**	**09 16 29.0**	**-3.1**
	13nm,0.6s						
EMAZ	**Mazaricos**	**6.30**	**223**	Pn	**Pn**	**09 14 39.0**	**-4.4**
EMAZ				Sn	Px	09 15 44.4	
ECAL	**Calabor**	**6.32**	**205**	Pn	**Pn**	**09 14 41.4**	**-2.3**
ECAL				Sn	**Sn**	**09 15 48.3**	**-8.4**
CABF	**La Chapelle**	**6.39**	**97**	*e*Pn	**Pn**	**09 14 45.1**	**+0.4**
CABF				*e*Pg	**Pg**	**09 15 11.7**	**-4.0**
CABF				*e*Sn	**Sn**	**09 15 54.8**	**-3.7**
CABF				*e*Sg	**Sg**	**09 16 35.0**	**-5.9**
	1.3nm,0.3s						
HAU	**Haudompre**	**6.39**	**84**	*e*Pn	**Pn**	**09 14 44.0**	**-0.7**
HAU				*e*Sg	**Sg**	**09 16 33.9**	**-7.0**
	5.0nm,0.3s						
HINF	**Hinteralfeld**	**6.74**	**85**	*e*Pn	**Pn**	**09 14 48.3**	**-1.3**
HINF				*e*Pg	**Pg**	**09 15 17.2**	**-5.5**
HINF				*e*Sn	**Sn**	**09 16 01.3**	**-5.9**
	3.1nm,0.3s						
HINF				*e*Sg	**Sg**	**09 16 45.0**	**-7.5**
	3.1nm,0.3s						
CDF	**Champ du Feu**	**7.02**	**80**	*e*Pn	**Pn**	**09 14 52.0**	**-1.5**
SMRF	**Simiane la Rot**	**7.14**	**118**	*e*Pn	**Pn**	**09 14 55.7**	**+0.4**

WEL 09 09:30:57.7±0.8**, 34.84S**×**178.44E, h33**^{km}**, ML3.6**/4**, Error ellipse: s-maj=17.6km s-min=5.2km az=90.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**3.23**	**183**	*e*PN	Pn	09 31 45.0	-2.4
PUZ				SN	Sn	09 32 21.2	-3.9
PUZ				SN	Sn	09 32 21.3	-3.8
MWZ	**Matawai**	**3.56**	**192**	P*	Pb	09 31 50.8	-9.1
MWZ				S*	Sb	09 32 30.8	-12
MWZ				S*	Sb	09 32 31.3	-12
BKZ	**Black Stump Fm**	**4.59**	**199**	S*	Sb	09 32 54.2	-19
MRZ	**Mangatainoka R**	**6.23**	**200**	*e*PN	Pn	09 32 22.3	-7.7
MRZ				*e*SN	Sn	09 33 27.2	-14
MRZ				*e*SN	Sn	09 33 28.2	-13
KHZ	**Kahutara**	**8.48**	**205**	*e*PN	P	09 32 51.4	-10
LTZ	**Lake Taylor**	**9.27**	**209**	*e*PN	P	09 33 02.1	-10
MQZ	**McQueen's Vall**	**9.92**	**205**	SN	Sn	09 34 51.2	-21

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*NEIC **09** 09:45:44.3, 29.35S×70.41W, h92^{km}, After GUC.*

GUC 09 09:45:44.3±1.0**, 29.35S**×**70.41W, h92**^{km}±14^{km}**, ML4.2, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**0.83**	**339**	*e*P	P	09 46 03.1	+0.5
VACH				*i* S	S	09 46 16.3	+0.3
VACH				AMP		09 46 17.3	
	comp=N,11µm,0.2s						
TLL	**Tololo Astrono**	**0.88**	**203**	*e*P	P	09 46 04.0	+0.9
TLL				*i* S	S	09 46 18.2	+1.2
TLL				AMP		09 46 19.1	
	comp=E,3µm,0.1s						
CPCH	**Copiapo**	**1.99**	**2**	*e*P	P	09 46 16.9	0.0
CPCH				*i* S	S	09 46 41.0	0.0
CPCH				AMP		09 46 46.2	
	comp=N,5µm,0.1s						
ILCH	**Illapel**	**2.37**	**196**	*e*P	P	09 46 21.9	-0.3
ILCH				*i* S	S	09 46 49.3	-1.0
ILCH				AMP		09 46 56.1	
	comp=E,793nm,0.2s						
PTCH	**Petorca**	**2.94**	**189**	*e*P	P	09 46 29.2	-0.8
PTCH				*i* S	S	09 47 03.2	-1.1
PTCH				AMP		09 47 13.5	
	comp=E,1µm,0.2s						
PACH	**Papudo**	**3.29**	**195**	*e*P	P	09 46 33.8	-1.1
JACH	**Jahuel**	**3.32**	**183**	*e*P	P	09 46 35.1	-0.3
FCH	**Farellones**	**3.96**	**179**	*e*P	P	09 46 44.7	+0.5
FCH				*i* S	S	09 47 29.9	+0.1
CLCH	**Cerro Calan**	**4.03**	**181**	*e*P	P	09 46 44.9	-0.2
CLCH				AMP		09 47 51.0	
	comp=E,245nm,0.4s						
RCDM	**Rinconada Maip**	**4.14**	**185**	*e*P	P	09 46 45.9	-0.7
RCDM				*i* S	S	09 47 32.7	-1.4
TACH	**Talagante**	**4.31**	**186**	*e*P	P	09 46 47.9	-1.0
LVC	**Limon Verde**	**6.85**	**12**	*e*P	P	09 47 20.1	-3.7
	comp=E,7.4nm,0.6s						

IDC 09 09:50:09.1±3.0**, 8.10N**×**92.73E, mb3.9**/4**, mb1 4.1**/5**, mb1mx3.9**/19**, mbtmp3.9**/5**, ML4.5**/1**, Error ellipse: s-maj=112.8km s-min=24.3km az=64.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.94**	**30**	Pn	P	09 53 07.1	+3.4
	0.8nm,0.3s,baz=238,slow=14,SNR=2.8						
SONM	**Songino Array**	**41.26**	**14**	P	P	09 57 56.2	-1.5
	2.4nm,0.9s,baz=196,slow=8.2,SNR=20						
BVAR	**Borovoye Array**	**48.34**	**342**	P	P	09 58 52.2	-2.1
	0.3nm,0.5s,baz=149,slow=8.6,SNR=4.1						
WRA	**Warramunga Arr**	**49.53**	**125**	P	P	09 59 02.5	-1.5
	2.5nm,0.7s,baz=304,slow=8.7,SNR=14						
ASAR	**Alice Springs**	**51.13**	**129**	P	P	09 59 13.5	-2.7
	1.2nm,0.8s,baz=310,slow=7.0,SNR=7.8						

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*IDC **09** 10:02:07.7±0.9, 6.10S×149.99E, h34^{km}±6^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.9/13, mbtmp4.0/8, ML3.8/2, MS3.5/4, Ms1 3.5/4, ms1mx3.4/13, Error ellipse: s-maj=36.9km s-min=17.2km az=117.0*

*NEIC **09** 10:02:10.4±2.1, 6.12S×149.86E, h60^{km}±18^{km}, mb4.4/3, Error ellipse: s-maj=17.9km s-min=14.4km az=125.0*

ISC 09 10:02:09.6±3.1**, 6.1S**±0.1×**149.8E**±0.2**, h66**^{km}±26^{km}**, n19,** σ**0**^{s}**93**/18**, mb3.8**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.18**	**219**	Pn	**P**	**10 03 12.9**	**+0.4**
	35nm,0.3s,baz=34,slow=6.0,SNR=68						
PMG				Sn	**S**	**10 04 00.9**	**+0.4**
	37nm,0.3s,baz=320,slow=21,SNR=11						
PMG	**Port Moresby**	**4.18**	**219**	*e*P	**P**	**10 03 12.5**	**0.0**
PMG				Sn	**S**	**10 04 00.9**	**+0.4**
CTA	**Charters Tower**	**14.30**	**194**	Pn	**P**	**10 05 29.8**	**-0.5**
	0.3nm,0.3s,baz=25,slow=12,SNR=3.0						
CTA				LR	LR	10 10 21.6	
	comp=Z,78nm,19.7s,baz=50,slow=34						
KAKA	**Kakadu**	**18.33**	**248**	*e*P	**P**	**10 06 20.5**	**-0.5**
	13nm,0.9s						
WRAB	**Tennant Creek**	**20.34**	**226**	*e*P	**P**	**10 06 41.8**	**-1.3**
	15nm,0.7s						
WB2	**Warramunga Arr**	**20.35**	**226**	*e*P	**P**	**10 06 42.9**	**-0.3**
WRA	**Warramunga Arr**	**20.36**	**226**	P	**P**	**10 06 43.3**	**+0.1**
	3.7nm,0.5s,baz=50,slow=11,SNR=27						
ASAR	**Alice Springs**	**23.20**	**220**	P	**P**	**10 07 12.8**	**+1.3**
	1.7nm,0.7s,mb3.5,baz=52,slow=8.9,SNR=22						
ASAR				LR	LR	10 17 24.3	
	comp=Z,50nm,19.3s,baz=351,slow=39						
ASPA	**Alice Springs**	**23.20**	**220**	*e*P	**P**	**10 07 13.3**	**+1.8**
FITZ	**Fitzroy Crossi**	**26.41**	**241**	*e*P	**P**	**10 07 41.9**	**-0.3**
	16nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**26.75**	**196**	P	**P**	**10 07 43.4**	**-1.7**
	1.5nm,0.6s,mb3.7,baz=1.0,slow=15,SNR=3.0						
STKA				LR	LR	10 19 08.8	
	comp=Z,88nm,18.5s,baz=28,slow=38						
STKA	**Stephens Creek**	**26.75**	**196**	*e*P	**P**	**10 07 43.7**	**-1.4**
STKA				LR	LR	10 19 08.8	
URZ	**Urewera**	**40.46**	**146**	LR	LR	10 23 03.5	
	comp=Z,561nm,21.9s,baz=281,slow=31						
SONM	**Songino Array**	**65.89**	**330**	P	**P**	**10 12 50.9**	**+0.2**
	0.5nm,0.5s,mb3.6,baz=138,slow=3.9,SNR=5.4						
VNDA	**Vanda**	**71.64**	**177**	P	**P**	**10 13 25.9**	**+0.2**
	1.8nm,1.1s,mb3.8,baz=103,slow=22,SNR=3.4						
VNDA				pP	pP	10 13 36.4	-7.3
	3.4nm,1.1s,baz=323,slow=2.8,SNR=3.5						
ILAR	**Eielson Array**	**84.51**	**23**	P	**P**	**10 14 35.2**	**-1.2**
	0.8nm,0.7s,mb3.8,baz=256,slow=5.2,SNR=7.3						
NVAR	**Mina Array Bea**	**95.25**	**52**	P	**P**	**10 15 29.0**	**+1.5**
	0.4nm,0.8s,mb3.9,baz=225,slow=2.6,SNR=3.3						
SDV	**Santo Domingo**	**139.83**	**84**	PKP	PKPdf	10 21 32.4	+1.0
	0.9nm,0.3s,baz=198,slow=19,SNR=4.1						
SDV				pPKP		10 21 44.0	
	4.2nm,0.9s,baz=297,slow=5.2,SNR=2.5						
BDFB	**Brasilia**	**152.09**	**141**	PKPbc	PKPdf	10 22 00.7	+9.0
	1.9nm,0.6s,baz=155,slow=4.3,SNR=5.4						
BDFB				pPKPbc		10 22 11.5	
	6.2nm,0.9s,baz=145,slow=1.5,SNR=4.2						

IDC 09 10:17:55.1±5.4**, 19.21S**×**69.78W, h145**^{km}±55^{km}**, mb3.5**/1**, mb1 3.4**/3**, mb1mx3.1**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=192.5km s-min=56.4km az=77.0, Putative timing error at LPAZ, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.31**	**29**	P	P	10 17 59.8	-47
	0.7nm,0.3s,baz=149,slow=16,SNR=25						
LVC	**Limon Verde**	**3.48**	**167**	P	P	10 18 49.2	0.0
	2.6nm,0.3s,baz=349,slow=9.4,SNR=26						
LVC				S	S	10 19 30.5	-0.2
	7.5nm,0.3s,baz=147,slow=19,SNR=15						
YKA	**Yellowknife Ar**	**88.77**	**341**	P	P	10 30 31.5	-1.6
	0.4nm,0.6s,baz=132,slow=4.7,SNR=11						
YKA				pP	pP	10 31 01.9	-8.1
	0.2nm,0.5s,baz=132,slow=5.0,SNR=4.4						
WRA	**Warramunga Arr**	**134.47**	**213**	PKP	PKPdf	10 36 56.6	-0.3
	0.6nm,0.8s,baz=134,slow=2.3,SNR=6.1						
SONM	**Songino Array**	**151.28**	**5**	PKPbc	PKPdf	10 37 31.6	+6.7
	1.0nm,0.5s,baz=332,slow=1.1,SNR=14						

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*BJI **09** 10:20:48.6, 16.46S×74.26W, h56^{km}, mB4.7, Ms4.9, Msz4.6*

*NEIC **09** 10:20:48.7±0.3, 16.14S×73.65W, mb4.7/26, Error ellipse: s-maj=10.6km s-min=5.3km az=62.0*

NEIC Felt [III] at Atico and Caraveli.

*IDC **09** 10:20:49.0±0.4, 16.13S×73.62W, h47^{km}±3^{km}, mb4.1/17, mb1 4.2/19, mb1mx4.2/21, mbtmp4.3/19, MS3.9/7, Ms1 3.9/7, ms1mx3.5/23, Error ellipse: s-maj=20.6km s-min=10.0km az=72.0, Putative timing error at LPAZ*

ISC 09 10:20:47.0±0.3**, 16.15S**±0.05×**73.72W**±0.06**, h50**^{km}**, h50**^{km}±1.0^{km}**:pP-P, n87,** σ**1**^{s}**14**/68**, mb4.5**/34**, MS4.0**/6**, 4C-1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**2.16**	**99**	⇓*i*P	**P**	**10 21 22.8**	**+1.5**
ARE				*i* S	**S**	**10 21 46.8**	**-0.2**
NNA	**Nana**	**5.12**	**323**	Pn	**P**	**10 22 04.4**	**+1.2**
	3µm,0.9s,SNR=14						
NNA	**Nana**	**5.12**	**323**	*e*P	**P**	**10 22 02.6**	**-0.6**
	372nm,0.7s						
LPAZ	**La Paz**	**5.37**	**92**	P	Px	10 21 34.9	
	4.6nm,0.3s,baz=270,slow=11,SNR=103						
LPAZ				S	Sx	10 22 36.8	
	baz=161,slow=21,SNR=1.3						
LPAZ				LR	LR	10 24 10.3	
	comp=Z,298nm,18.3s,baz=260,slow=38						
LPAZ	**La Paz**	**5.37**	**92**	*e*P	Px	10 21 33.6	
LVC	**Limon Verde**	**7.87**	**146**	P	**P**	**10 22 41.3**	**-0.2**
	5.3nm,0.3s,baz=328,slow=11,SNR=17						
LVC				S	**S**	**10 24 03.2**	**-6.8**
	16nm,0.3s,baz=70,slow=21,SNR=16						
LVC	**Limon Verde**	**7.87**	**146**	*e*P	**P**	**10 22 40.3**	**-1.1**
SAML	**Samuel**	**12.52**	**56**	*e*P	**P**	**10 23 41.8**	**-3.1**
	14nm,0.8s						
OTAV	**Otavalo**	**16.93**	**344**	*e*P	**P**	**10 24 43.2**	**+1.1**
	20nm,0.9s						
ROSC	**El Rosal**	**20.88**	**358**	P	**P**	**10 25 28.6**	**+1.2**
	12nm,0.7s,baz=104,slow=21,SNR=3.3						
TRQA	**Tornquist**	**24.16**	**157**	*e*P	**P**	**10 25 58.5**	**-1.0**
PLCA	**Paso Flores**	**24.65**	**174**	P	**P**	**10 26 05.1**	**+0.8**
	12nm,0.9s,mb4.4,baz=341,slow=11,SNR=19						
PLCA				sP		10 26 23.1	
	12nm,0.8s,baz=340,slow=11,SNR=9.8						
PLCA				LR	LR	10 33 46.5	
	comp=Z,210nm,22.0s,MS3.6,baz=5.0,slow=32						
PLCA	**Paso Flores**	**24.65**	**174**	*e*P	**P**	**10 26 04.5**	**+0.2**
	12nm,0.8s,mb4.5						
PLCA				*e*		10 26 21.1	
BDFB	**Brasilia**	**24.72**	**92**	P	**P**	**10 26 06.3**	**+1.1**
	2.1nm,0.5s,mb4.0,baz=258,slow=9.4,SNR=5.0						
BDFB				sP		10 26 24.6	
	6.8nm,0.6s,baz=262,slow=15,SNR=5.6						
SDV	**Santo Domingo**	**25.06**	**7**	P	**P**	**10 26 09.8**	**+1.3**
	9.4nm,1.0s,mb4.3,baz=291,slow=4.0,SNR=7.4						
SDV	**Santo Domingo**	**25.06**	**7**	*e*P	**P**	**10 26 08.9**	**+0.5**
	11nm,0.8s,mb4.5						
JTS	**JuntasAbangare**	**28.52**	**336**	P	**P**	**10 26 39.1**	**-1.1**
	3.7nm,0.9s,mb4.1,baz=290,slow=18,SNR=1.8						
USHA	**Ushuaia**	**38.82**	**175**	P	**P**	**10 28 09.1**	**+0.5**
	20nm,1.2s,mb4.7,baz=217,slow=11,SNR=3.9						
TEIG	**Tepich**	**38.87**	**338**	P	**P**	**10 28 11.0**	**+1.7**
	15nm,1.1s,mb4.6						
TEIG				*e*pP	pP	10 28 23.4	+0.7
NHSC	**New Hope**	**49.36**	**353**	P	**P**	**10 29 34.6**	**+1.0**
	96nm,1.0s						
NHSC				*e*pP	pP	10 29 47.7	+0.5
GOGA	**Godfrey**	**50.15**	**349**	P	**P**	**10 29 41.5**	**+1.8**
	4.6nm,0.7s,mb4.6						
GOGA				*e*pP	pP	10 29 52.7	-0.5
LRAL	**Lakeview Retre**	**50.52**	**346**	P	**P**	**10 29 43.7**	**+1.2**
	13nm,1.3s,mb4.7						
LRAL				*e*pP	pP	10 29 55.1	-0.9
JSC	**Jenkinsville**	**50.66**	**352**	P	**P**	**10 29 44.0**	**+0.5**
JSC				*e*pP	pP	10 29 57.0	0.0
OXF	**Oxford**	**52.54**	**344**	*e*pP	pP	10 30 09.7	-1.6
JCT	**Junction City**	**52.72**	**332**	P	**P**	**10 29 58.9**	**-0.1**
	5.5nm,0.3s,mb5.0						
JCT				*e*pP	pP	10 30 12.6	-0.2
LTX	**Lajitas**	**53.67**	**327**	P	**P**	**10 30 06.1**	**-0.1**
	6.6nm,1.1s,mb4.5						
LTX				*e*pP	pP	10 30 19.9	0.0
TXAR	**Lajitas Array**	**53.67**	**327**	P	**P**	**10 30 06.4**	**+0.3**
	0.6nm,0.6s,mb3.7,baz=146,slow=8.6,SNR=9.7						
TXAR				pP	pP	10 30 19.9	+0.1
	4.5nm,0.6s,baz=152,slow=9.1,SNR=39						
WVT	**Waverly**	**53.68**	**346**	*e*P	**P**	**10 30 04.5**	**-1.5**
	5.4nm,1.0s,mb4.4						
WVT				*e*pP	pP	10 30 17.7	-2.1
MIAR	**Mount Ida**	**53.83**	**340**	P	**P**	**10 30 06.1**	**-1.1**
	4.2nm,0.7s,mb4.5						
MIAR				*e*pP	pP	10 30 20.5	-0.5
WCI	**Wyandotte Cave**	**55.36**	**348**	*e*P	**P**	**10 30 17.2**	**-1.1**
	32nm,0.8s,mb5.4						
WCI				*e*pP	pP	10 30 30.6	-1.6
USIN	**University of**	**55.39**	**347**	P	**P**	**10 30 17.5**	**-1.1**
	16nm,0.4s,mb5.4						
USIN				*e*pP	pP	10 30 30.9	-1.4
WMOK	**Wichita Mounta**	**55.93**	**335**	P	**P**	**10 30 20.8**	**-1.6**
	1.5nm,1.0s,mb4.0						
WMOK				*e*pP	pP	10 30 36.5	+0.2
GDL2	**Guadalupe Moun**	**56.33**	**329**	*e*P	**P**	**10 30 25.5**	**+0.1**
GDL2				*e*pP	pP	10 30 39.0	-0.2
MNTX	**Cornudas Mount**	**56.44**	**328**	P	**P**	**10 30 24.2**	**-2.0**
	5.3nm,1.1s,mb4.5						
MNTX				*e*pP	pP	10 30 38.2	-1.8
SSPA	**Standing Stone**	**56.62**	**356**	P	**P**	**10 30 23.8**	**-3.6**
	4.8nm,0.8s,mb4.6						
SSPA				*e*pP	pP	10 30 39.9	-1.3
ACSO	**Alum Creek Sta**	**56.74**	**352**	P	**P**	**10 30 25.0**	**-3.2**
	25nm,0.9s,mb5.2						
ACSO				*e*pP	pP	10 30 37.9	-4.2
CPRX	**Cap Rock**	**56.76**	**330**	P	**P**	**10 30 26.9**	**-1.5**
CPRX				*e*pP	pP	10 30 42.7	+0.4
ERPA	**Erie**	**58.26**	**355**	P	**P**	**10 30 38.1**	**-0.7**
	8.5nm,0.7s,mb4.9						
ERPA				*e*pP	pP	10 30 51.5	-1.2
LPM	**Los Pinos Moun**	**59.15**	**328**	P	**P**	**10 30 44.9**	**-0.3**
LPM				*e*pP	pP	10 30 59.2	+0.2
ANMO	**Albuquerque**	**59.57**	**329**	pP	pP	10 31 02.1	+0.2
	4.0nm,0.9s,baz=146,slow=7.9,SNR=12						
ANMO	**Albuquerque**	**59.57**	**329**	*e*P	**P**	**10 30 46.8**	**-1.3**
	6.9nm,1.1s,mb4.6						
ANMO				*e*pP	pP	10 31 00.8	-1.2
TUC	**Tucson**	**59.84**	**324**	P	**P**	**10 30 49.8**	**-0.2**
	0.9nm,0.9s,mb3.8						
TUC				pP	pP	10 31 03.6	-0.2
SADO	**Sadowa**	**60.82**	**356**	P	**P**	**10 30 55.2**	**-1.3**
	1.9nm,0.6s,mb4.4,baz=3.3,slow=3.3,SNR=3.1						
SADO				pP	pP	10 31 08.2	-2.2
	7.0nm,0.7s,baz=192,slow=3.9,SNR=6.3						
SADO	**Sadowa**	**60.82**	**356**	P	**P**	**10 30 55.2**	**-1.3**
SADO				pP	pP	10 31 08.2	-2.2
SDCO	**Great Sand Dun**	**61.37**	**332**	*e*P	**P**	**10 31 00.2**	**0.0**
	14nm,1.2s,mb5.0						
SDCO				*e*pP	pP	10 31 13.6	-0.6
PV01	**Paradox Valley**	**63.13**	**330**	*e*P	**P**	**10 31 12.8**	**+0.8**
PV01				*e*pP	pP	10 31 26.2	+0.2
MVU	**Marysvale**	**65.24**	**327**	P	**P**	**10 31 25.6**	**-0.2**
	0.6nm,0.7s,mb3.7						
MVU				*e*pP	pP	10 31 40.2	+0.3
ARUT	**Antelope Range**	**65.35**	**326**	*e*pP	pP	10 31 41.9	+1.3
DAU	**Daniels Canyon**	**66.21**	**329**	P	**P**	**10 31 31.9**	**0.0**
DAU				*e*pP	pP	10 31 47.0	+0.9
VNA3	**Neumayer Olymp**	**66.58**	**162**	⇑*i*P	**P**	**10 31 31.1**	**-2.6**
VNA3				*e*	pP	10 31 48.9	+1.0
VNA3				*e*		10 31 57.8	
VNA1	**Neumayer--Stat**	**66.82**	**161**	⇑*i*P	**P**	**10 31 33.4**	**-1.8**
VNA1				*e*	pP	10 31 51.3	+1.9
TCUT	**Toone Canyon**	**66.82**	**330**	*e*pP	pP	10 31 51.2	+1.3
VNA2	**Neumayer--Watz**	**67.18**	**161**	⇑*i*P	**P**	**10 31 38.0**	**+0.5**
VNA2				*e*	pP	10 31 56.4	+4.7
VNA2				*e*		10 32 05.1	
PDAR	**Pinedale Array**	**67.25**	**332**	P	**P**	**10 31 40.1**	**+1.8**
	0.2nm,0.7s,baz=194,slow=6.1,SNR=4.4						
PDAR				pP	pP	10 31 52.6	0.0
	0.6nm,0.7s,baz=124,slow=5.3,SNR=4.2						
NVAR	**Mina Array Bea**	**68.50**	**324**	pP	pP	10 32 02.0	+1.5
	0.5nm,0.8s,baz=207,slow=3.3,SNR=3.2						
RRI2	**Red Ridge**	**68.50**	**331**	*e*P	**P**	**10 31 46.3**	**+0.1**
RRI2				*e*pP	pP	10 32 01.0	+0.6
SNAA	**Sanae**	**68.79**	**161**	P	**P**	**10 31 47.9**	**+0.4**
	4.0nm,0.5s,mb4.6,baz=276,slow=6.2,SNR=25						
SNAA				pP	pP	10 32 02.5	+0.7
	2.1nm,0.6s,baz=250,slow=5.6,SNR=3.3						
SNAA				LR	LR	10 59 30.1	
	comp=Z,50nm,18.1s,MS3.8,baz=225,slow=34						
ULM	**Lac du Bonnet**	**68.93**	**345**	P	**P**	**10 31 48.3**	**-0.4**
	0.6nm,0.3s,mb3.9,baz=137,slow=6.2,SNR=3.4						
ULM				pP	pP	10 32 02.0	-1.0
	9.1nm,0.8s,baz=148,slow=5.2,SNR=12						
ULM	**Lac du Bonnet**	**68.93**	**345**	*e*P	**P**	**10 31 48.2**	**-0.5**
	21nm,1.1s,mb5.0						
ULM				*e*pP	pP	10 32 01.9	-1.1
SCHQ	**Schefferville**	**70.94**	**4**	P	**P**	**10 32 01.1**	**+0.3**
	2.1nm,0.9s,mb4.0,baz=210,slow=9.6,SNR=3.6						
SCHQ				pP	pP	10 32 14.7	-0.4
	6.8nm,0.7s,baz=206,slow=4.2,SNR=12						
SCHQ	**Schefferville**	**70.94**	**4**	*e*P	**P**	**10 32 00.8**	**0.0**
	6.9nm,0.7s,mb4.7						
SCHQ				*e*pP	pP	10 32 14.5	-0.6
DBIC	**Dimbokro**	**71.80**	**77**	P	**P**	**10 32 05.8**	**-0.8**
	4.3nm,0.7s,mb4.5,baz=224,slow=6.8,SNR=12						
DBIC				pP	pP	10 32 19.4	-1.6
	4.0nm,0.7s,baz=206,slow=9.7,SNR=4.2						
DBIC	**Dimbokro**	**71.80**	**77**	P	**P**	**10 32 05.8**	**-0.8**
DBIC				pP	pP	10 32 19.4	-1.6
QSPA	**South Pole Qui**	**74.02**	**180**	⇑*i*P	**P**	**10 32 20.2**	**+1.6**
	13nm,1.1s,mb4.8						
EDM	**Edmonton**	**77.04**	**337**	*e*P	**P**	**10 32 36.6**	**+0.3**
EDM				*e*pP	pP	10 32 50.4	-0.3
RAR	**Rarotonga**	**80.73**	**251**	LR	LR	11 02 48.4	
	comp=Z,243nm,19.4s,MS4.6,baz=90,slow=31						
VNDA	**Vanda**	**81.28**	**190**	P	**P**	**10 32 59.9**	**+0.9**
	3.1nm,0.8s,mb4.3,baz=65,slow=2.7,SNR=6.3						
VNDA				LR	LR	11 04 51.7	
	comp=Z,82nm,18.0s,MS4.1,baz=165,slow=32						
VNDA	**Vanda**	**81.28**	**190**	*e*P	**P**	**10 33 00.7**	**+1.8**
	5.9nm,1.1s,mb4.4						
YKA	**Yellowknife Ar**	**84.69**	**342**	P	**P**	**10 33 17.2**	**+0.9**
	1.5nm,0.7s,mb4.3,baz=137,slow=5.0,SNR=44						
YKA				pP	pP	10 33 31.2	+0.2
	2.4nm,0.7s,baz=135,slow=6.0,SNR=16						
YKA	**Yellowknife Ar**	**84.69**	**342**	P	**P**	**10 33 17.2**	**+0.9**
YKA				pP	pP	10 33 31.2	+0.2
SUR	**Sutherland**	**85.24**	**122**	LR	LR	11 07 22.6	
	comp=Z,34nm,21.3s,MS3.7,baz=9.2,slow=33						
ESDC	**Sonseca Array**	**85.36**	**47**	pP	pP	10 33 36.1	+1.2
	3.5nm,0.8s,baz=252,slow=5.5,SNR=4.3						
DLBC	**Dease Lake**	**87.40**	**334**	P	**P**	**10 33 31.9**	**+2.1**
	3.4nm,0.9s,mb4.6,baz=172,slow=8.9,SNR=4.9						
DLBC				pP	pP	10 33 46.3	+1.8
	4.3nm,0.8s,baz=141,slow=7.8,SNR=5.6						
MAW	**Mawson**	**90.70**	**165**	LR	LR	11 13 45.7	
	comp=Z,118nm,18.0s,MS4.4,baz=57,slow=35						
DAWY	**Dawson**	**94.25**	**336**	P	**P**	**10 34 02.2**	**+0.7**
INK	**Inuvik**	**94.41**	**341**	P	**P**	**10 34 02.9**	**+0.7**
	0.9nm,0.8s,mb4.2,baz=66,slow=2.4,SNR=3.6						
INK				pP	pP	10 34 17.6	+0.6
	1.8nm,0.7s,baz=134,slow=5.0,SNR=6.0						
INK	**Inuvik**	**94.41**	**341**	P	**P**	**10 34 02.4**	**+0.2**
	9.2nm,1.6s,mb5.0						
INK				*e*pP	pP	10 34 17.0	0.0
ILAR	**Eielson Array**	**97.49**	**336**	pP	pP	10 34 32.1	+1.0
	0.5nm,0.7s,baz=126,slow=2.0,SNR=3.1						
ASAR	**Alice Springs**	**132.10**	**215**	PKP	PKPdf	10 39 57.5	+1.4
	1.1nm,0.7s,baz=159,slow=2.6,SNR=8.2						
ASAR				pPKP		10 40 12.7	
	0.4nm,0.6s,baz=122,slow=1.9,SNR=2.3						
WRA	**Warramunga Arr**	**134.76**	**219**	PKP	PKPdf	10 40 02.9	+1.7
	2.0nm,0.7s,baz=143,slow=1.9,SNR=20						
WRA				pPKP		10 40 18.2	
	0.9nm,0.7s,baz=137,slow=2.1,SNR=3.1						
ZAL	**Zalesovo**	**138.73**	**19**	PKP	PKPdf	10 40 08.9	+1.4
	1.4nm,0.8s,baz=176,slow=2.3,SNR=6.0						
MDJ	**Mudanjiang**	**145.47**	**330**	PKP	PKPdf	10 40 20.3	+0.7
WMQ	**Urumqi**	**148.22**	**26**	*e*PKP	PKPdf	10 40 27.0	+2.8
ULN	**Ulaanbaatar**	**148.36**	**359**	*e*PKPdf	PKPdf	10 40 27.4	+3.1
ULN				*e*pPKPdf		10 40 44.1	

SONM	Songino Array	148.40	360	PKP	PKPdf	10 40 27.5	+3.2
	2.2nm,0.6s,baz=258,slow=1.3,SNR=23						
SONM				PKPbc	PKPdf	10 40 30.8	+6.5
	2.7nm,0.7s,baz=341,slow=1.9,SNR=23						
SONM				pPKPbc		10 40 44.5	
	2.5nm,0.7s,baz=345,slow=1.4,SNR=10						
NJ2	Nanjing	160.47	326	*e*PKP	PKPdf	10 40 43.1	+1.8
KMI	Kunming	170.47	20	PKP	PKPdf	10 40 50.3	+0.7

*IDC **09** 10:37:27.9±1.1, 16.15N×93.31E, mb4.0/5, mb1 4.2/6, mb1mx3.9/18, mbtmp3.9/6, ML3.6/1, Error ellipse: s-maj=34.3km s-min=21.0km az=61.0*

*NEIC **09** 10:37:28.2±0.9, 16.19N×93.06E, h10^{km}, mb4.4/2, Error ellipse: s-maj=23.4km s-min=11.5km az=63.0*

ISC 09 10:37:26.2±0.8**, 16.69N**±0.10×**92.87E**±0.07**, h33^{km}, n17, σ0^{s}68**/18**, mb4.1**/7**, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.06	72	Pn	Pn	10 38 57.5	+1.5
	0.4nm,0.3s,baz=254,slow=15,SNR=6.3						
CMAR				Sn	Sn	10 40 04.0	-0.8
	2.0nm,0.3s,baz=247,slow=19,SNR=9.6						
JIRN	Jiri	12.55	332	*e*P	P	10 40 25.5	+0.3
	25nm,0.6s						
PKI	Pulchoki	12.84	329	*e*P	P	10 40 28.9	-0.3
	12nm,0.3s						
GUN	Gumba	12.90	331	*e*P	P	10 40 29.7	-0.3
DMN	Daman	13.03	328	*e*P	P	10 40 31.6	0.0
	20nm,0.4s						
LSA	Lhasa	13.05	353	P	P	10 40 41.1	+9.2
GKN	Gorkha	13.59	327	*e*P	P	10 40 38.5	-0.5
	31nm,0.5s						
KOLN	Koldanda	13.97	324	*e*P	P	10 40 44.3	+0.3
	36nm,0.6s						
SONM	Songino Array	33.00	17	P	P	10 44 08.6	+8.3
	0.6nm,0.7s,mb3.6,baz=189,slow=9.1,SNR=3.2						
KURK	Kurchatov	35.82	344	*e*P	P	10 44 31.3	+6.8
	11nm,1.1s,mb4.7						
ZAL	Zalesovo	37.70	352	P	P	10 44 48.2	+8.0
	2.8nm,0.5s,mb4.2,baz=339,slow=3.8,SNR=4.9						
ZAL	Zalesovo	37.70	352	P	P	10 44 48.2	+8.0
CHKZ	Chkalovo	40.79	340	*e*P	P	10 45 09.6	+3.7
	4.3nm,0.7s,mb4.2						
WRA	Warramunga Arr	54.63	130	P	P	10 46 53.9	-0.4
	1.9nm,0.7s,mb4.2,baz=311,slow=7.6,SNR=13						
WRA				PcP	PcP	10 47 57.1	+0.2
	0.5nm,0.6s,baz=326,slow=3.5,SNR=5.7						
WRAB	Tennant Creek	54.63	130	P	P	10 46 54.1	-0.2
ASAR	Alice Springs	56.70	134	P	P	10 47 09.2	0.0
	1.3nm,0.7s,mb4.0,baz=311,slow=6.6,SNR=11						
GERES	GERESS Array B	70.53	317	P	P	10 48 50.5	+11
	0.6nm,0.8s,mb3.5,baz=90,slow=5.3,SNR=4.4						

*UCR **09** 10:38:01.7, 7.26N×82.53W, h2^{km}, MD4.1*

CASC 09 10:38:06.4±2.1**, 7.34N×82.74W, MD4.1, 3C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.91	20	*e*P	Pg	10 38 24.8	+0.3
DVD	David	1.12	15	⇑*e*P	Pb	10 38 26.5	-1.9
ACR	Cerro Adams	1.37	342	⇑*e*P	Pb	10 38 31.3	-1.3
ACR				*e*S	Sb	10 38 51.5	+0.9
BUS	Buena Vista	2.42	335	*e*P	Pn	10 38 48.0	+0.2
AZU	Azuero	2.48	79	*e*P	Pn	10 38 47.1	-1.6
LCR2	La Lucha 2	2.69	332	*e*P	Pn	10 38 52.1	+0.4
PRS1	Puriscal	3.05	329	⇑*e*P	Pn	10 38 55.9	-1.0
PRS1				*e*S	Sn	10 39 33.1	-1.6
UPA	Univ. de Panam	3.56	63	*e*P	Pn	10 39 04.5	+0.4

*CSEM **09** 10:54:00.3, 12.11N×43.83E, h4^{km}, ML3.5, After DHMR*

DHMR 09 10:54:00.3±1.3**, 12.11N×43.83E, h5^{km}**±7^{km}**, MD3.4, ML3.5, 4D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.14	14	⇓*i*P	Pb	10 54 22.0	-0.2
TRBA				*i* S	Sb	10 54 38.2	+0.9
TRBA				AML	AML	10 54 43.4	
	comp=E,1μm,0.5s						
UDYN	Al ‘Udayn	1.85	4	*i* P	Pn	10 54 33.4	+0.4
UDYN				*i* S	Sn	10 54 59.1	+2.1
LBOS		2.23	38	⇓*i*P	Pn	10 54 40.2	+1.7
LBOS				*i* S	Sn	10 55 11.1	+4.5
DHBB	Dhamar BB	2.50	12	*i* S	Sn	10 55 19.0	+5.4
BDHA	Al Bayda’	2.50	42	⇓*i*P	Pn	10 54 43.7	+1.3
BDHA				*i* S	Sn	10 55 17.8	+4.0
BDHA				AML	AML	10 55 29.4	
	comp=E,261nm,0.4s						
BDHA	Al Bayda’	2.50	42	⇓*i*P	Pn	10 54 43.7	+1.3
BDHA				*i* S	Sn	10 55 17.8	+4.0
	comp=E,130nm,0.4s						

MAN 09 11:06:50.5, 12.99N×122.70E, h12^{km}, mb4.1, ML2.9, MS2.7, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.33	356	*e*P	Pg	11 06 57.8	+0.4
AUQP				*e*S	Sg	11 07 03.1	+1.1
OTRP	Odiongan	0.91	227	*e*P	Pb	11 07 07.5	-0.2
OTRP				*e*S	Sb	11 07 20.4	+0.8
GQP	Guinayangan	0.94	345	⇓*e*P	Pb	11 07 07.8	-0.4
GQP				*e*S	Sb	11 07 23.3	+2.9
BOAC	Boac	0.95	299	*e*P	Pb	11 07 08.0	-0.5
BOAC				*e*S	Sb	11 07 22.6	+1.9
PVCP	Virac	1.54	67	*e*P	Pn	11 07 16.8	-1.1
SJMP	San Jose	1.63	251	*e*P	Pn	11 07 19.7	+0.5
POLP	Polilio Island	1.88	337	*e*P	Pn	11 07 23.0	+0.3
POLP				*e*S	Sn	11 07 50.7	+4.2

*CSEM **09** 11:17:51.6±0.8, 39.12N×28.46W, ML3.2, Error ellipse: s-maj=18.8km s-min=7.0km az=154.0, After PDA*

*PDA **09** 11:17:51.6±1.1, 39.12N×28.46W, MD3.5, ML3.2, Error ellipse: s-maj=6.5km s-min=2.4km az=138.0*

SVSA 09 11:17:51.6±1.1**, 39.12N×28.46W, MD3.5, ML3.2, Error ellipse: s-maj=6.5km s-min=2.4km az=138.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STGR	Santa Cruz	0.36	96	*i* P	Pg	11 17 58.3	-0.4
STGR				*i* S	Sg	11 18 03.7	+0.2
	2μm,0.2s						
PGRA	Graciosa	0.38	104	*i* P	Pg	11 17 58.5	-0.7
PGRA				*i* S	Sg	11 18 04.1	-0.2
	4μm,0.3s						
ROSA	Rosais	0.43	157	*i* P	Pg	11 17 59.7	-0.6
ROSA				*e*S	Sg	11 18 05.4	-0.7
PCED	Cedros	0.53	201	*i* P	Pg	11 18 00.8	-1.3
PCED				*i* S	Sg	11 18 08.7	-0.4
	4μm,0.4s						
PMAN	Manadas	0.57	149	*e*P	Pg	11 18 01.6	-1.3
PMAN				*e*S	Sg	11 18 09.0	-1.4
	1μm,0.2s						
CALA	Caldeira	0.57	200	*e*P	Pg	11 18 01.8	-1.2
HOR	Horta	0.61	193	*e*P	Pg	11 18 01.9	-1.8
HOR				*e*S	Sg	11 18 10.5	-1.3
PICO	Pico	0.62	178	*e*P	Pg	11 18 02.5	-1.5
PICO				*e*S	Sg	11 18 11.1	-1.1
PIED	Piedade	0.77	156	*e*rx		11 18 06.4	
ASBA	Santa Barbara	0.97	114	*i* S	Sg	11 18 19.9	-4.0
	159nm,0.1s						
PPAD	Pico dos Padre	1.01	114	*e*P	Pb	11 18 08.3	-3.3
PPAD				*i* S	Sg	11 18 20.0	-5.1
	64nm,0.1s						
PBIS	Biscoitos	1.01	110	*e*P	Pb	11 18 08.1	-3.5
PBIS				*i* S	Sg	11 18 20.3	-4.8
	203nm,0.2s						
ADH	Angra Heroismo	1.06	116	*e*S	Sb	11 18 20.5	-6.3
PVNV	Vila Nova	1.08	109	*e*P	Pb	11 18 09.1	-3.7
PVNV				*i* S	Sb	11 18 22.1	-5.2
	89nm,0.4s						
RIB2	Ribeirinha	1.10	114	*i* S	Sb	11 18 22.1	-5.8
	66nm,0.2s						
PSCM	Serra do Cume	1.13	111	*e*P	Pb	11 18 09.6	-4.1
PSCM				*e*S	Sb	11 18 23.3	-5.4
	140nm,0.2s						
PFAV	Pico das Favas	1.15	110	*e*P	Pb	11 18 09.8	-4.2
PFAV				*i* S	Sb	11 18 23.7	-5.6
	79nm,0.2s						
PSET	Sete Cidades	2.51	120	*e*rx		11 18 25.3	

*IDC **09** 11:23:58.6±0.8, 39.60N×74.16E, mb4.2/15, mb1 4.4/17, mb1mx4.2/24, mbtmp4.2/17, ML3.9/2, Error ellipse: s-maj=20.4km s-min=16.0km az=23.0*

*NNC **09** 11:23:59.5±17.0, 39.26N×73.54E, h99^{km}±252^{km}, mpv4.8, Error ellipse: s-maj=304.1km s-min=165.6km az=82.0*

*NEIC **09** 11:24:01.7±4.1, 39.67N×74.19E, h19^{km}±26^{km}, mb3.5/1, Error ellipse: s-maj=12.9km s-min=9.0km az=52.0*

*BJI **09** 11:24:04.4, 39.84N×74.17E, h20^{km}, mb3.9, ML4.2, Ms4.0*

*MOS **09** 11:24:04.2±1.5, 39.93N×73.82E, h33^{km}, mb4.4/12, Error ellipse: s-maj=15.0km s-min=8.5km az=91.1*

ISC 09 11:24:03.9±0.5**, 39.57N**±0.02×**73.98E**±0.07**, h50^{km}**±6^{km}**, n84, σ1^{s}24**/97**, mb4.2**/17**, 2C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	1.54	91	PG	P	11 24 28.8	-0.7
KSH				*e*SG	S	11 24 48.7	+0.2
KSH				Smax			
	comp=N,3μm,1.0s						
KSH				Smax			
	comp=E,2μm,0.6s						
AML	Almayashu	2.56	355	P	P	11 24 43.3	-0.7
	SNR=242						
KZA	Kyzart	2.68	21	P	P	11 24 46.1	+0.4
	SNR=142						
UCH	Uchtor	2.68	8	P	P	11 24 45.9	+0.2
	SNR=40						
AAK	Ala-Archa	3.08	7	⇑P	P	11 24 51.4	+0.1
	comp=E,156nm,0.6s						
AAK				⇓S	S	11 25 32.0	+4.8
	comp=E,472nm,0.9s						
AAK	Ala-Archa	3.08	7	P	P	11 24 51.5	+0.2
	SNR=33						
AAK	Ala-Archa	3.08	7	*e*PN	P	11 24 49.9	-1.4
AAK				*e*S	S	11 25 29.8	+2.6
EKS2	Erkin-Say	3.09	357	P	P	11 24 51.0	-0.5
	SNR=59						
KBK	Karagaybulak	3.17	13	P	P	11 24 52.8	+0.3
	SNR=88						
ULHL	Ulahol	3.17	32	P	P	11 24 52.8	+0.2
	SNR=96						
FRU	Bishkek	3.29	8	*e*PN	P	11 24 55.5	+1.2
FRU				*i*		11 24 59.5	
FRU				*i* S	S	11 25 40.5	+7.9
FRU				pmax	pmax		
	comp=Z,280nm,1.7s						
FRU				smax			
	comp=E,2μm,1.4s						
FRU				smax			
	comp=E,3μm,2.1s						
CHMS	Chumysh	3.47	9	P	P	11 24 57.6	+0.8
	SNR=15						
TKM2	Tokmak 2	3.56	19	P	P	11 24 58.9	+0.8
	SNR=19						
USP	Ospenovka	3.71	6	P	P	11 24 59.7	-0.5
	SNR=21						
DLH	Dalhousie	7.20	166	*e*P	P	11 25 52.0	+2.9
DLH				*e*	S	11 27 13.0	+2.7
THN	Thein Dam	7.26	168	*e*P	P	11 25 50.4	+0.5
THN				*e*	S	11 27 14.0	+2.1
PONG	Pong	7.77	168	*e*P	P	11 25 59.0	+2.0
PONG				*e*	S	11 27 29.0	+4.5
BHK	Bhakra	8.38	166	*e*	S	11 27 37.6	-1.9
SDNR	Sundarnagar	8.41	162	*e*P	P	11 26 06.8	+0.9
SDNR				*e*S	S	11 27 37.2	-3.3
SMLA	Simla	8.82	162	⇓*i*P	P	11 26 25.8	+14
SMLA				*i* S	S	11 28 00.7	+10
	comp=E,474nm,0.4s						
MK31	Makanchi Array	9.43	37	⇑P	P	11 26 18.5	-1.3
	comp=E,2.4nm,0.7s,baz=210,slow=14,SNR=43						
MKAR	Makanchi Array	9.43	37	*e*P	P	11 26 18.5	-1.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DDI	Dehra Dun	9.81	159	*e*P	P	11 26 25.2	+0.1
KKR	Kurukshetra	9.87	165	*e*P	P	11 26 27.5	+1.6
RTK	Rohtak	10.70	168	*e*P	P	11 26 35.4	-1.8
BHGR	Bahadurgarh	11.13	166	*e*P	P	11 26 44.0	+0.9
NDI	New Delhi	11.19	165	*e*P	P	11 26 42.0	-1.8
NDI				*e*S	S	11 28 40.5	-7.8
ASOR	Ausora	11.23	163	*e*P	P	11 26 43.2	-1.2
AYAN	Aya Nagar	11.36	166	*e*P	P	11 26 45.4	-0.8
AYAN				*e*S	S	11 28 44.5	-8.1
KHET	Khetri	11.57	172	*e*P	P	11 26 46.7	-2.2
KHET				*e*		11 26 49.9	
	comp=Z,14nm,0.5s						
KHET				*e*S	S	11 28 49.4	-8.2
KHET				*e*		11 28 58.9	
SONA	Sohna	11.58	166	*e*P	P	11 26 47.8	-1.4
SONA				*e*		11 26 48.7	
	comp=Z,24nm,0.4s						
SONA				*e*S	S	11 28 50.3	-7.6
SONA				*e*		11 28 59.4	
	comp=N,30nm,0.5s						
SONA				*e*		11 28 59.6	
	comp=E,76nm,0.6s						
KUDL	Kundal	11.59	169	*e*P	P	11 26 48.4	-0.8
KUDL				*e*S	S	11 28 47.3	-11
AGRA	Agra	12.74	164	*e*S	S	11 29 15.6	-10
AGRA				*e*		11 29 20.0	
	comp=E,96nm,0.5s						
AGRA				*e*		11 29 20.1	
	comp=N,61nm,0.3s						
JASL	Jaisalmer	12.87	192	*e*P	P	11 27 03.3	-3.1
BVA0	Borovoye Array	13.68	351	⇓P	P	11 27 11.7	-5.1
	comp=N,0.6nm,0.7s,baz=162,slow=14,SNR=104						
BVA0	Borovoye Array	13.68	351	*i* P	P	11 27 11.6	-5.2
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	Borovoye Array	13.68	351	Pn	P	11 27 12.9	-3.9
	comp=Z,0.5nm,0.3s,baz=154,slow=12,SNR=13						
BVAR				Lg		11 31 06.1	
	comp=Z,0.3nm,0.3s,baz=159,slow=21,SNR=5.4						
CHKZ	Chkalovo	14.29	352	⇓P	P	11 27 21.3	-3.5
	comp=Z,6.1nm,1.7s						
CHKZ	Chkalovo	14.29	352	*e*P	P	11 27 19.8	-5.0
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHKZ	Chkalovo	14.29	352	*e*P	P	11 27 19.8	-5.1
	comp=Z,2.0nm,0.7s						
ZAL	Zalesovo	16.14	24	Pn	P	11 27 44.4	-4.2
	comp=Z,1.3nm,0.3s,baz=112,slow=12,SNR=2.3						
ZAL				Lg		11 32 22.6	
	comp=Z,0.4nm,0.3s,baz=174,slow=18,SNR=1.4						
NVS	Novosibirsk	16.49	19	*e*P	P	11 27 52.5	-0.5
NVS				pmax	pmax		
	comp=Z,18nm,2.0s						
NVS				pmax	pmax		
	comp=N,10.0nm,1.7s						
LSA	Lhasa	17.20	120	*e*P	P	11 28 06.0	+3.9
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	Lhasa	17.20	120	*e*P	P	11 28 06.0	+3.9
	comp=Z,3.0nm,0.8s						
GTA	Gaotai	19.92	82	*e*P	P	11 28 34.4	+0.3
GTA				AP		11 28 43.3	
GTA				XP		11 28 46.5	
GTA				AMB	AMB		
	comp=Z,3.0nm,2.3s						
MOY	Mondy	22.29	48	*e*P	P	11 29 00.5	+2.5
HYB	Hyderabad	22.43	168	*i* P	P	11 29 02.5	+2.9
ZAK	Zakamensk	23.23	53	*e*P	P	11 29 08.1	+1.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.4						
KIV	Kislovodsk	23.67	291	*e*P		11 29 27.1	
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.3						
SONM	Songino Array	24.70	60	P	P	11 29 21.5	+0.1
	comp=Z,0.1nm,0.3s,baz=19,slow=27,SNR=4.4						
BRTR	Keskin Array B	30.88	283	P	P	11 30 18.6	+0.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	30.88	283	P	P	11 30 18.6	+0.9
	comp=Z,1.6nm,0.8s,mb3.9,baz=78,slow=11,SNR=4.9						
AKASG	Malin Array Be	33.00	305	P	P	11 30 34.9	-1.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	33.00	305	P	P	11 30 34.9	-1.2
	comp=Z,3.0nm,0.8s,mb4.3,baz=79,slow=7.4,SNR=10						
MLR	Muntele Rosu	35.46	296	P	P	11 30 58.9	+1.7
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MLR	Muntele Rosu	35.46	296	P	P	11 30 58.9	+1.6
	comp=Z,6.3nm,0.9s,mb4.5,baz=162,slow=5.0,SNR=6.7						
FINES	FINESS Array B	36.35	323	P	P	11 31 04.3	-0.3
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FINES	FINESS Array B	36.35	323	P	P	11 31 04.3	-0.3
	comp=Z,2.7nm,0.4s,mb4.5,baz=110,slow=10,SNR=50						
ARCES	ARCESS Array B	39.27	335	P	P	11 31 29.0	+0.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	ARCESS Array B	39.27	335	P	P	11 31 29.0	+0.1
	comp=Z,3.0nm,0.6s,mb4.2,baz=107,slow=8.7,SNR=22						
HFS	Hagfors	42.18	320	P	P	11 31 52.3	-0.6
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS	Hagfors	42.18	320	P	P	11 31 52.3	-0.6
	comp=Z,3.3nm,0.6s,mb4.2,baz=108,slow=9.4,SNR=9.9						
GERES	GERESS Array B	43.16	303	P	P	11 32 02.1	+1.1
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES	GERESS Array B	43.16	303	P	P	11 32 02.1	+1.0
	comp=Z,1.6nm,0.6s,mb3.9,baz=68,slow=7.2,SNR=11						
NB2	NORSAR Subarra	43.41	321	P	P	11 32 02.3	-0.7
	comp=Z,2.1nm,0.5s,mb4.1,baz=90,slow=7.9						
NOA	NORSAR Array B	43.41	321	P	P	11 32 02.6	-0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	43.41	321	P	P	11 32 02.6	-0.4
	comp=Z,2.3nm,0.6s,mb4.1,baz=91,slow=7.9,SNR=8.3						
DAVOX	Davos	46.14	301	P	P	11 32 24.7	-0.3
	comp=Z,2.6nm,0.5s,mb4.5,baz=112,slow=6.8,SNR=6.3						
DAVOX	Davos	46.14	301	P	P	11 32 24.7	-0.3
DAVOS	Davos	46.18	301	*e*P	P	11 32 24.7	-0.6
INK	Inuvik	70.48	10	P	P	11 35 13.5	-1.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	70.48	10	P	P	11 35 13.5	-1.0
	comp=Z,0.7nm,0.6s,mb3.8,baz=12,slow=6.5,SNR=5.5						
INK	Inuvik	70.48	10	P	P	11 35 13.5	-1.0
ILAR	Eielson Array	71.17	17	P	P	11 35 17.0	-1.7
ILAR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ILAR	Eielson Array	71.17	17	P	P	11 35 17.0	-1.7
	comp=Z,8.7nm,0.4s,mb5.1,baz=314,slow=4.2,SNR=23						
DBIC	Dimbokro	77.18	268	P	P	11 35 56.6	+2.1
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC	Dimbokro	77.18	268	P	P	11 35 56.6	+2.1
	comp=Z,3.7nm,1.0s,mb4.2,baz=44,slow=7.3,SNR=3.2						
YKA	Yellowknife Ar	78.05	4	P	P	11 35 57.5	-0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	78.05	4	P	P	11 35 57.5	-0.7
	comp=Z,0.8nm,0.4s,mb4.0,baz=348,slow=5.6,SNR=41						
YKA	Yellowknife Ar	78.05	4	P	P	11 35 57.5	-0.7
WRA	Warramunga Arr	81.69	124	P	P	11 36 19.0	+0.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	81.69	124	P	P	11 36 19.0	+0.4
	comp=Z,0.7nm,0.6s,mb3.7,baz=323,slow=4.8,SNR=9.0						
ASAR	Alice Springs	84.15	127	P	P	11 36 31.4	+0.3
	comp=Z,0.7nm,0.7s,mb3.9,baz=311,slow=4.7,SNR=9.0						
EDM	Edmonton	87.36	4	*e*P	P	11 36 46.2	0.0

*IDC **09** 11:43:22.7±0.8, 27.10S×176.21W, mb4.2/12, mb1 4.4/13, mb1mx4.4/18, mbtmp4.2/13, ML3.2/1, MS3.8/10, Ms1 3.9/10, ms1mx3.7/21, Error ellipse: s-maj=39.3km s-min=17.7km az=159.0*

*NEIC **09** 11:43:24.6±0.5, 26.96S×176.30W, h10^{km}, mb4.8/5, Error ellipse: s-maj=18.9km s-min=10.5km az=147.0*

ISC 09 11:43:26.9±0.5**, 27.0S**±0.1×**176.4W**±0.1**, h33^{km}, n37, σ1^{s}00**/27**, mb4.4**/17**, MS4.2**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.61	211	*e*PKPdf	P	11 44 07.8	+0.1
URZ	Urewera	12.48	204	Pn	P	11 46 11.5	-13
	0.1nm,0.3s,baz=354,slow=14,SNR=1.9						
URZ				Sn	S	11 48 33.3	-11
	0.9nm,0.3s,baz=356,slow=22,SNR=7.5						
RAR	Rarotonga	16.21	73	LR	LR	11 51 07.2	
	comp=Z,104nm,20.9s,baz=276,slow=29						
NOUC	Port Laguerre	16.50	284	*e*P	P	11 47 24.4	+6.8
NOUC	Port Laguerre	16.50	284	*e*P	P	11 47 24.4	+6.8
RPZ	Rata Peaks	19.52	208	LR	LR	11 54 24.2	
	comp=Z,350nm,18.9s,baz=9.8,slow=34						
CTA	Charters Tower	34.86	273	P	P	11 50 18.8	+1.5
	7.5nm,0.5s,mb4.9,baz=100,slow=12,SNR=18						
CTA				LR	LR	12 03 15.3	
	comp=Z,334nm,18.2s,MS4.1,baz=53,slow=34						
STKA	Stephens Creek	36.76	252	P	P	11 50 34.1	+0.9
	6.2nm,1.3s,mb4.3,baz=323,slow=18,SNR=3.1						
STKA				LR	LR	12 04 28.5	
	comp=Z,252nm,19.8s,MS4.0,baz=37,slow=34						
PMG	Port Moresby	38.63	290	LR	LR	12 04 05.9	
	comp=Z,154nm,18.3s,MS3.9,baz=93,slow=32						
ASAR	Alice Springs	44.84	263	P	P	11 51 39.0	-0.9
	1.7nm,0.5s,mb4.1,baz=100,slow=7.2,SNR=33						
ASAR				LR	LR	12 10 45.6	
	comp=Z,160nm,20.8s,MS3.9,baz=278,slow=36						
ASPA	Alice Springs	44.84	263	*e*P	P	11 51 40.4	+0.5
WB2	Warramunga Arr	45.52	268	*e*P	P	11 51 44.8	-0.6
WRAB	Tennant Creek	45.52	268	*e*P	P	11 51 42.9	-2.5
	6.4nm,0.7s,mb4.7						
WRA	Warramunga Arr	45.53	268	P	P	11 51 44.0	-1.5
	2.5nm,0.5s,mb4.4,baz=108,slow=6.0,SNR=27						
FITZ	Fitzroy Crossi	53.90	267	*e*P	P	11 52 49.4	-0.2
	7.8nm,1.1s,mb4.5						
NWAO	Narrogin (SRO)	56.99	247	LR	LR	12 18 11.1	
	comp=Z,2.4nm,20.2s,baz=189,slow=37						
QSPA	South Pole Qui	63.08	180	*e*P	P	11 53 53.6	+0.7
	19nm,1.0s,mb5.2						
SNAA	Sanae	81.48	178	P	P	11 55 41.1	-0.7
	1.8nm,0.9s,mb4.0						
CMB	Columbia Colle	83.29	41	*e*P	P	11 55 52.0	+0.3
	5.8nm,1.4s,mb4.4						
PLCA	Paso Flores	83.75	133	LR	LR	12 25 57.7	
	comp=Z,146nm,18.8s,MS4.4,baz=88,slow=31						
YBH	Yreka Blue Hor	84.49	37	P	P	11 55 59.0	+1.2
	1.8nm,1.0s,mb4.1,baz=266,slow=8.4,SNR=2.7						
NVAR	Mina Array Bea	84.78	42	P	P	11 55 58.9	-0.4
	9.9nm,1.4s,mb4.8,baz=204,slow=6.5,SNR=8.3						
NVAR				LR	LR	12 30 14.7	
	comp=Z,220nm,18.2s,MS4.6,baz=125,slow=33						
NVAR	Mina Array Bea	84.78	42	P	P	11 55 58.9	-0.4
NVAR				LR	LR	12 30 14.7	
MSU	Marysvale	88.60	45	*e*P	P	11 56 17.4	-0.4
TXAR	Lajitas Array	89.35	56	P	P	11 56 21.0	-0.6
	1.3nm,1.0s,mb4.2,baz=198,slow=7.9,SNR=8.2						
ANMO	Albuquerque	90.34	50	P	P	11 56 25.9	-0.2
	1.3nm,0.9s,mb4.2,baz=230,slow=6.3,SNR=3.2						
ANMO	Albuquerque	90.34	50	P	P	11 56 25.9	-0.2
ENH	Enshi	90.90	304	*e*P	P	11 56 30.0	+1.0
	3.4nm,0.5s,mb4.9						
PDAR	Pinedale Array	92.69	43	P	P	11 56 37.0	+0.2
	1.0nm,1.2s,mb4.1,baz=270,slow=3.0,SNR=4.2						
PDAR				LR	LR	12 32 16.6	
	comp=Z,112nm,19.7s,MS4.3,baz=253,slow=32						
CMAR	Chiang Mai Arr	93.66	289	P	P	11 56 43.9	+2.1
	3.0nm,1.1s,mb4.7,baz=139,slow=3.8,SNR=10						
ILAR	Eielson Array	94.33	12	P	P	11 56 42.6	-1.1
	0.4nm,0.6s,mb4.0,baz=226,slow=5.3,SNR=7.9						
BVAR	Borovoye Array	124.94	317	PKP	PKPdf	12 02 23.8	+0.2
	0.8nm,0.7s,baz=45,slow=2.0,SNR=4.9						
NB2	NORSAR Subarra	145.60	353	PKP	PKPdf	12 03 01.6	+0.4
	11nm,1.2s,baz=10.0,slow=3.1						
NOA	NORSAR Array B	145.60	353	PKPbc	PKPbc	12 03 01.7	-0.1
	4.2nm,0.9s,baz=13,slow=4.5,SNR=3.9						
HFS	Hagfors	146.18	351	PKPbc	PKPbc	12 03 03.0	-0.3
	5.5nm,0.7s,baz=45,slow=4.2,SNR=7.6						
AKASG	Malin Array Be	149.36	327	PKPbc	PKPdf	12 03 12.5	+4.8
	0.6nm,0.3s,baz=38,slow=3.6,SNR=9.6						
BRTR	Keskin Array B	152.06	305	PKPab	PKPab	12 03 30.0	-0.6
	1.8nm,1.0s,baz=90,slow=3.7,SNR=4.6						

*IDC **09** 11:46:43.1±2.8, 27.61S×175.86W, mb4.2/5, mb1 4.4/5, mb1mx4.2/14, mbtmp4.2/5, Error ellipse: s-maj=173.5km s-min=27.8km az=165.0*

*NEIC **09** 11:46:49.7±1.8, 27.88S×175.88W, h50^{km}, mb4.8/3, Error*

ellipse: s-maj=99.4km s-min=18.2km az=164.0

ISC 09 11:46:46.4±2.2**,27.9S**±0.9×**175.9W**±0.3**,h33^{km},n14,** σ**0^{s}83**/12**,mb4.4**/8**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	35.31	274	P	P	11 53 40.4	-0.2
	4.9nm,0.4s,mb4.8,baz=98,slow=11,SNR=13						
CTA	Charters Tower	35.31	274	P	P	11 53 40.4	-0.2
CTAO	Charters Tower	35.31	274	*e*P	P	11 53 40.5	-0.1
ASAR	Alice Springs	45.12	264	P	P	11 55 02.1	+0.5
	0.8nm,0.3s,mb4.0,baz=92,slow=7.1,SNR=18						
ASPA	Alice Springs	45.13	264	*e*P	P	11 55 02.4	+0.7
WB2	Warramunga Arr	45.89	269	*e*P	P	11 55 07.1	-0.7
WRAB	Tennant Creek	45.89	269	*e*P	P	11 55 07.5	-0.3
	16nm,1.3s,mb4.8						
WRA	Warramunga Arr	45.90	269	P	P	11 55 07.1	-0.8
	1.2nm,0.4s,mb4.1,baz=110,slow=6.4,SNR=16						
KAKA	Kakadu	50.38	277	*e*P	P	11 55 42.2	-0.6
	12nm,1.1s,mb4.8						
TXAR	Lajitas Array	89.53	56	P	P	11 59 41.4	-0.5
	0.2nm,0.8s,mb3.5,baz=225,slow=5.1,SNR=2.9						
ENH	Enshi	91.75	303	*e*P	P	11 59 52.3	+0.1
	2.3nm,0.8s,mb4.6						
CMAR	Chiang Mai Arr	94.33	288	P	P	12 00 06.6	+2.3
	0.7nm,0.4s,mb4.4,baz=143,slow=3.3,SNR=6.9						
HFS	Hagfors	147.16	351	PKPbc	PKPdf	12 06 25.7	+2.4
	3.7nm,0.7s,baz=18,slow=4.7,SNR=3.7						
AKASG	Malin Array Be	150.35	327	PKPbc	PKPdf	12 06 34.9	+6.2
	0.3nm,0.3s,baz=39,slow=3.4,SNR=4.2						

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*IDC **09** 12:06:37.5±0.9, 7.75N×93.93E, mb3.9/9, mb1 4.1/10, mb1mx4.0/18, mbtmp3.9/10, ML3.8/1, MS2.9/1, Ms1 3.1/1, ms1mx2.9/21, Error ellipse: s-maj=41.1km s-min=20.0km az=52.0*

*NEIC **09** 12:06:42.3±0.6, 7.80N×94.04E, h30^{km}, mb4.2/3, Error ellipse: s-maj=18.8km s-min=12.3km az=72.0*

ISC 09 12:06:41.4±0.8**,7.9N**±0.1×**94.2E**±0.1**,h33^{km},n17,** σ**1^{s}06**/15**,mb4.1**/13**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.50	23	Pn	P	12 09 27.4	+1.0
	0.2nm,0.3s,baz=213,slow=14,SNR=7.0						
CMAR				LR	LR	12 14 50.9	
	comp=Z,50nm,19.2s,baz=225,slow=42						
LSA	Lhasa	21.92	353	*e*P	P	12 11 33.5	-0.1
	11nm,1.0s,mb4.2						
ENH	Enshi	26.51	31	*e*P	P	12 12 17.4	-0.5
	2.3nm,0.6s,mb3.9						
SONM	Songino Array	41.17	12	P	P	12 14 24.0	-0.3
	0.4nm,0.7s,mb3.2,baz=187,slow=10.0,SNR=3.9						
KURK	Kurchatov	44.64	346	*e*P	P	12 14 53.4	+0.9
	6.6nm,1.2s,mb4.3						
ZAL	Zalesovo	46.57	352	P	P	12 15 08.3	+0.5
	1.2nm,0.8s,mb3.9,baz=299,slow=8.0,SNR=4.6						
WRA	Warramunga Arr	48.20	126	P	P	12 15 21.5	+0.4
	1.6nm,1.0s,mb4.0,baz=304,slow=8.9,SNR=7.3						
ASAR	Alice Springs	49.86	130	P	P	12 15 33.4	-0.4
	0.7nm,0.6s,mb3.9,baz=303,slow=7.4,SNR=7.2						
KMBO	Kilima Mbogo	57.48	264	P	P	12 16 33.8	+3.7
	3.1nm,0.7s,mb4.4,baz=67,slow=12,SNR=12						
BRTR	Keskin Array B	62.49	311	P	P	12 17 01.8	-2.2
	0.8nm,0.5s,mb4.1,baz=112,slow=6.7,SNR=3.4						
FINES	FINESS Array B	72.75	332	P	P	12 18 07.3	-0.6
	0.6nm,0.3s,mb3.9,baz=101,slow=7.1,SNR=9.5						
FINES	FINESS Array B	72.75	332	P	P	12 18 07.3	-0.6
ARCES	ARCESS Array B	75.30	340	P	P	12 18 21.7	-0.9
	2.9nm,0.7s,mb4.3,baz=41,slow=13,SNR=3.3						
GERES	GERESS Array B	77.88	318	P	P	12 18 37.5	0.0
	1.4nm,0.7s,mb4.0,baz=90,slow=5.3,SNR=7.2						
LPG	La Plagne	82.67	315	*e*P	P	12 19 08.3	+5.2
	12nm,0.8s,mb4.7						
PDAR	Pinedale Array	125.16	21	PKP	PKPdf	12 25 41.6	+2.6
	0.3nm,0.6s,baz=315,slow=2.1,SNR=3.4						
PLCA	Paso Flores	144.55	200	PKP	PKPdf	12 26 16.9	+2.1
	2.6nm,0.8s,baz=93,slow=1.9,SNR=6.2						

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*MOS **09** 12:12:08.6±1.3, 44.17N×147.24E, h67^{km}, mb4.5/1, Error ellipse: s-maj=41.6km s-min=27.2km az=58.3*

*IDC **09** 12:12:08.8±3.3, 45.41N×146.79E, mb3.7/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=98.9km s-min=29.0km az=152.0*

*JMA **09** 12:12:09.0±0.2, 43.73N×147.26E, h55^{km}±5^{km}, M3.9*

ISC 09 12:12:06.9±1.0**,43.89N**±0.09×**147.3E**±0.1**,h64^{km}**±10^{km}**, n21,** σ**1^{s}05**/32**,mb3.5**/3**,1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.07	278	⇓*i*PN	P	12 12 26.7	+0.3
YUK				*i* S	S	12 12 39.9	-0.8
YUK				pmax	pmax		
	comp=Z,1µm,0.3s						
YUK				pmax	pmax		
	comp=N,600nm,0.2s						
YUK				pmax	pmax		
	comp=E,390nm,0.4s						
YUK				smax			
	comp=N,1µm,0.4s						
YUK				smax			
	comp=E,2µm,0.3s						
YUK				smax			
	comp=E,3µm,0.6s						
NEM2	Nemuro 2	1.27	246	P	P	12 12 29.2	+0.2
NEM2				*e*S	S	12 12 44.0	-1.4
KUR	Kuril'sk	1.40	16	*e*PN	P	12 12 29.7	-1.2
KUR				*e*S	S	12 12 47.0	-1.6
KUR				pmax	pmax		
	comp=Z,270nm,0.4s						
KUR				smax			
	comp=N,1µm,0.4s						
KUR				smax			
	comp=E,370nm,0.4s						
JRA	Rausu	1.60	272	P	P	12 12 34.8	+1.2
JRA				*e*S	S	12 12 54.3	+1.0
JNK	Nakash	1.92	262	P	P	12 12 38.7	+0.7
JNK				*e*S	S	12 13 00.5	-0.4
JAK	Akkeshi	2.12	246	P	P	12 12 40.8	0.0
JAK				*e*S	S	12 13 04.7	-1.2
JTKR	Abashiri--Toko	2.48	273	P	P	12 12 47.1	+1.2
JAR	Ashorobuto	2.66	258	P	P	12 12 49.4	+1.0
JAR				*e*S	S	12 13 19.3	-0.2
JOB	Onbets	2.73	250	P	P	12 12 50.0	+0.5
JOB				*e*S	S	12 13 20.7	-0.7
JMP	Maruseppu	2.87	274	P	P	12 12 52.8	+1.3
JCH	Churui	3.17	248	P	P	12 12 55.5	-0.1
JCH				*e*S	S	12 13 31.2	-1.2
ASAJ	Asahikawa	3.42	275	Pn	P	12 13 01.2	+2.0
	comp=E,3.6nm,0.3s,baz=83,slow=15,SNR=24						
ASAJ				Sn	S	12 13 49.1	+10
	comp=E,3.9nm,0.3s,baz=227,slow=31,SNR=4.6						
ASAJ	Asahikawa	3.42	275	P	P	12 13 00.9	+1.7
JFR	Furan	3.52	260	*e*S	S	12 13 41.3	0.0
JSE	Soyaes	3.57	289	P	P	12 13 02.3	+1.1
JEM	Erimo	3.59	240	P	P	12 13 03.0	+1.4
JNBK	Urakawa-nobuka	3.72	246	P	P	12 13 03.0	-0.4
JNBK				*e*S	S	12 13 43.3	-3.0
ILAR	Eielson Array	41.30	36	P	P	12 19 47.8	+0.6
	comp=E,0.5nm,0.7s,mb3.2,baz=285,slow=9.4,SNR=8.3						
YKA	Yellowknife Ar	55.61	34	P	P	12 21 37.8	-0.1
	comp=E,0.1nm,0.4s,mb3.2,baz=298,slow=6.7,SNR=5.5						
FINES	FINESS Array B	64.81	333	P	P	12 22 38.8	-1.8
FINES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FINES	FINESS Array B	64.81	333	P	P	12 22 38.8	-1.8
	comp=Z,2.8nm,1.1s,mb4.2,baz=9.5,slow=8.5,SNR=2.6						

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*IDC **09** 12:49:21.5±2.4, 10.71N×93.08E, mb3.9/6, mb1 4.1/7, mb1mx3.8/19, mbtmp3.9/7, ML3.9/1, Error ellipse: s-maj=58.8km s-min=43.4km az=147.0*

*NEIC **09** 12:49:26.7±1.7, 10.82N×93.17E, h30^{km}, mb4.6/1, Error ellipse: s-maj=39.7km s-min=19.8km az=150.0*

ISC 09 12:49:27.3±5.4**,11.1N**±0.7×**93.1E**±0.4**,h33^{km},n11,** σ**0^{s}69**/9**,mb4.0**/7**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.22	37	Pn	P	12 51 40.3	-0.6
	0.3nm,0.3s,baz=227,slow=15,SNR=9.0						
SONM	Songino Array	38.27	14	P	P	12 56 47.7	+1.6
	0.2nm,0.5s,mb3.1,baz=205,slow=7.5,SNR=2.6						
SONM				PcP	PcP	12 58 58.4	-2.0
	0.3nm,0.5s,baz=195,slow=3.5,SNR=3.7						
ZAL	Zalesovo	43.23	353	P	P	12 57 26.2	-0.8
	0.7nm,0.5s,mb3.6,baz=312,slow=9.1,SNR=4.4						
BVAR	Borovoye Array	45.62	341	P	P	12 57 46.3	+0.1
	1.0nm,0.5s,mb4.0,baz=139,slow=9.0,SNR=8.2						
CHKZ	Chkalovo	46.11	342	*e*P	P	12 57 50.6	+0.5
	4.5nm,0.6s,mb4.6						
FINES	FINESS Array B	69.40	332	P	P	13 00 33.2	-0.4
	1.6nm,0.7s,mb4.1,baz=101,slow=9.7,SNR=6.5						
ARCES	ARCESS Array B	71.90	340	P	P	13 00 48.7	+0.1
	22nm,1.4s,mb4.9,baz=63,slow=5.4,SNR=3.6						
ARCES	ARCESS Array B	71.90	340	P	P	13 00 48.7	+0.1
GERES	GERESS Array B	74.77	318	P	P	13 01 05.5	-0.3
	0.2nm,0.3s,mb3.5,baz=79,slow=6.8,SNR=5.1						
NVAR	Mina Array Bea	122.64	29	PKP	PKPdf	13 08 20.4	+0.3
	0.7nm,1.0s,baz=333,slow=2.0,SNR=4.2						
NVAR	Mina Array Bea	122.64	29	PKP	PKPdf	13 08 20.4	+0.3

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*NEIC **09** 12:52:52.0±1.8, 5.26S×147.05E, h196^{km}±19^{km}, mb4.3/6, Error ellipse: s-maj=22.8km s-min=13.7km az=113.0*

*IDC **09** 12:52:53.6±1.5, 5.54S×147.21E, h216^{km}±18^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.7/14, mbtmp4.2/8, Error ellipse: s-maj=38.1km s-min=11.1km az=111.0*

ISC 09 12:52:49.7±1.4**,5.28S**±0.09×**147.1E**±0.2**,h191^{km}**±15^{km}**, n16,** σ**1^{s}00**/19**,mb4.0**/7**,3D,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.10	179	P	P	12 53 54.5	+1.4
	5.0nm,0.3s,baz=1.8,slow=6.0,SNR=41						
PMG				S	S	12 54 40.7	-1.5
	51nm,0.3s,baz=72,slow=24,SNR=17						
CTA	Charters Tower	14.74	183	*e*P	P	12 56 13.4	+3.0
	5.0nm,1.0s						
CTA	Charters Tower	14.74	183	P	P	12 56 10.8	+0.4
	0.6nm,0.3s,baz=6.0,slow=14,SNR=6.7						
CTAO	Charters Tower	14.74	183	*e*P	P	12 56 11.9	+1.5
	4.8nm,0.9s						
KAKA	Kakadu	16.26	242	⇓*i*P	P	12 56 28.7	-0.4
	8.0nm,0.4s						
WRAB	Tennant Creek	19.14	219	*e*P	P	12 57 00.1	-0.5
	33nm,0.4s						
WB2	Warramunga Arr	19.15	219	⇓*i*P	P	12 57 00.3	-0.3
WRA	Warramunga Arr	19.16	219	P	P	12 57 00.3	-0.4
	3.3nm,0.3s,baz=38,slow=11,SNR=141						
WRA				S	S	13 00 22.5	-0.3
	0.0nm,0.3s,baz=39,slow=20,SNR=5.5						
ASAR	Alice Springs	22.27	214	P	P	12 57 33.1	+1.4
	9.5nm,0.8s,mb4.3,baz=49,slow=7.9,SNR=114						
ASAR				S	S	13 01 19.8	+0.6
	2.5nm,0.8s,baz=33,slow=18,SNR=4.3						
ASPA	Alice Springs	22.28	214	⇓*i*P	P	12 57 33.0	+1.2
FITZ	Fitzroy Crossi	24.55	237	*e*P	P	12 57 53.8	+0.3
	12nm,0.4s,mb4.8						
STKA	Stephens Creek	26.96	190	P	P	12 58 14.2	-1.4
	0.6nm,0.4s,mb3.6,baz=17,slow=19,SNR=4.0						
HIA	Hailar	59.32	340	P	P	13 02 32.3	-1.4
	1.8nm,0.7s,mb4.0						
SONM	Songino Array	63.83	331	P	P	13 03 05.1	+1.2
	1.9nm,0.9s,mb3.9,baz=148,slow=6.5,SNR=12						
ZAL	Zalesovo	78.47	328	P	P	13 04 30.2	-0.7
	0.8nm,0.3s,mb3.8,baz=357,slow=8.4,SNR=3.4						
ILAR	Eielson Array	84.78	23	P	P	13 05 03.5	+0.1
	0.8nm,0.7s,mb3.5,baz=252,slow=5.3,SNR=20						

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*IDC **09** 12:53:36.7±1.4, 4.09N×95.71E, mb4.1/8, mb1 4.2/9, mb1mx4.0/19, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=68.4km s-min=20.4km az=55.0*

*NEIC **09** 12:53:40.8±0.7, 3.94N×95.56E, h30^{km}, mb4.3/3, Error ellipse: s-maj=24.6km s-min=10.0km az=61.0*

ISC 09 12:53:39.0±0.9**,4.0N**±0.1×**95.6E**±0.2**,h30^{km},n12,** σ**0^{s}78**/12**,mb4.0**/11**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.79	13	Pn	P	12 57 09.1	+1.0
	0.2nm,0.3s,baz=198,slow=11,SNR=10						
LSA	Lhasa	25.95	351	*e*P	P	12 59 11.1	+0.3
	2.1nm,0.6s,mb3.8						
SONM	Songino Array	44.70	10	P	P	13 01 50.4	-0.7
	0.5nm,0.4s,mb3.7,baz=194,slow=9.3,SNR=17						
SONM				PcP	PcP	13 03 33.4	-0.3
	0.4nm,0.5s,baz=197,slow=3.5,SNR=4.7						
WRA	Warramunga Arr	44.88	123	P	P	13 01 53.0	0.0
	1.6nm,0.6s,mb4.0,baz=302,slow=9.1,SNR=9.0						
WRAB	Tennant Creek	44.88	123	*e*P	P	13 01 52.9	-0.1
	3.0nm,0.7s,mb4.2						
ASAR	Alice Springs	46.35	128	P	P	13 02 04.7	+0.1
	0.4nm,0.4s,mb3.7,baz=300,slow=7.1,SNR=6.5						
ZAL	Zalesovo	50.60	352	P	P	13 02 36.0	-1.1
	2.1nm,0.4s,mb4.5,baz=301,slow=4.1,SNR=12						
BVAR	Borovoye Array	53.14	341	P	P	13 02 55.8	-0.5
	1.4nm,0.6s,mb4.0,baz=129,slow=9.5,SNR=8.4						
CHKZ	Chkalovo	53.62	342	*e*P	P	13 02 58.7	-1.0
	2.9nm,0.7s,mb4.3						
FINES	FINESS Array B	76.82	332	P	P	13 05 29.3	-0.2
	2.5nm,0.8s,mb4.2,baz=273,slow=34,SNR=2.9						
ARCES	ARCESS Array B	79.41	340	P	P	13 05 44.2	+0.6
	4.7nm,1.0s,mb4.4,baz=100,slow=5.5,SNR=3.2						
GERES	GERESS Array B	81.69	319	P	P	13 05 57.6	+1.7
	0.6nm,0.7s,mb3.6,baz=101,slow=5.0,SNR=3.0						

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*CSEM **09** 13:01:26.2, 67.18N×20.73E, h0^{km}, ML2.9, Suspected Mining explosion. After UPP*

*UPP **09** 13:01:26.2, 67.18N×20.73E, h0^{km}, ML2.9, Suspected Mining explosion.*

HEL 09 13:01:27.0±0.2**,67.18N×20.69E,ML2.9**(UPP)**, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.07	218	*i* P	Pg	13 01 28.1	-0.4
DUNU				*i* S	Sg	13 01 29.6	+0.1
DUNU	Dundret	0.07	218	P	Pg	13 01 28.1	-0.4
	baz=41						
DUNU				S	Sg	13 01 29.6	+0.1
KUA	Kurravaara	0.79	350	*i* P	Pg	13 01 40.8	-1.9
SALU	Saltoluokta	0.87	284	*i* P	Pg	13 01 42.9	-1.5
SALU	Saltoluokta	0.87	284	P	Pg	13 01 42.9	-1.5
	baz=50						
LANU	Lannavaara	1.01	29	*e*P	Pb	13 01 44.9	-2.1
KIF	Kilpisjarvi	1.83	1	*e*P	Pn	13 01 59.8	-0.2
KIF				*e*S	Sn	13 02 25.2	+0.9
KTK1	Kautokeino	2.07	26	*e*P	Pn	13 02 04.7	+1.2
SGF	Sodankyl	2.28	81	*e*S	Sn	13 02 35.1	-0.5
OUL	Oulu	2.98	132	*e*	Sg	13 03 07.9	+1.5
KEV	Kevo	3.48	39	*e*SG	Sg	13 03 16.2	-6.7

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*CSEM **09** 13:07:49.3±0.2, 33.34N×47.79E, h20^{km}, ML3.2, Error ellipse: s-maj=5.4km s-min=2.7km az=52.0*

*THR **09** 13:07:49.5±0.4, 33.39N×47.91E, h14^{km}±5^{km}, ML3.1*

*TEH **09** 13:07:52.6, 33.55N×47.82E, h14^{km}, Mn3.2*

ISC 09 13:07:50.7±0.8**,33.31N**±0.06×**47.81E**±0.07**,h20^{km},n17,** σ**1^{s}01**/18**,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKOM	Komasi	0.90	344	Pg	Pb	13 08 05.0	-2.5
IGHG	Ghaleghazi	1.45	315	Pn	Pn	13 08 17.6	+1.5
IVIS	Veys	1.45	327	Pn	Pn	13 08 15.7	-0.4
SHGO	Shushtar	1.46	145	*e*PG	Pn	13 08 16.6	+0.3
SHGO				AML	AML	13 08 40.6	
	comp=N,232nm,0.7s						
SHGR	Shooshtar-Gavs	1.46	145	*e*PG	Pn	13 08 16.6	+0.3
SHGR				AML	AML	13 08 40.7	
	comp=N,359nm,0.7s						
IDHR	Dehrash	1.82	320	Pn	Pn	13 08 21.4	0.0
SNGE	Sanandaj	1.82	348	*e*PG	Pn	13 08 21.9	+0.5
SNGE				AML	AML	13 08 52.0	
	comp=N,273nm,0.4s						
ASAO	Ashtian	2.22	56	*e*PG	Pn	13 08 27.7	+0.6
ASAO				*e*SG	Sn	13 08 55.9	+1.6
ASAO				AML	AML	13 09 02.1	
	comp=N,93nm,0.6s						
IRAZ	Razeghan	2.73	39	Lg		13 09 12.0	
IRAZ	Razeghan	2.73	39	Pn	Pn	13 08 35.7	+1.3
BHD	Baghdad	2.87	270	*e*Pn	Pn	13 08 43.0	+6.6
BHD				*e*Sn	Sn	13 09 19.0	+8.3
IBRJ	Borojen	3.30	117	Pn	Pn	13 08 34.5	-8.0
IVRN	Varamin	3.66	62	Pn	Pn	13 08 46.9	-0.8
ISFB	Sefidab	3.83	73	Pn	Pn	13 08 49.6	-0.5
IAFJ	Afjeh	4.11	51	Pn	Pn	13 08 53.6	-0.4
NASN	Na'in	4.23	96	*e*PN	Pn	13 08 55.0	-0.7
IFIR	Firoozkooh	4.70	59	Pn	Pn	13 09 01.0	-1.4

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*NEIC **09** 13:18:39.7, 31.63S×70.35W, h126^{km}, MD4.0(GUC), After GUC.*

GUC 09 13:18:39.7±0.8**,31.63S×70.35W,h126^{km}**±6^{km}**,MD4.0, ML4.0,4C-8D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	1.07	191	⇑*i*P	P	13 19 03.6	+0.3
JACH				*i* S	S	13 19 21.2	+0.3
PACH	Papudo	1.29	225	*e*P	P	13 19 06.0	+0.4
PACH				*i* S	S	13 19 25.7	+0.5
ZON	Zonda	1.43	87	⇓*i*P	P	13 19 04.0	-3.1
ZON				*e*S	S	13 19 22.0	-6.0
ROCH	El Roble	1.45	203	⇑*i*P	P	13 19 07.5	+0.1
ROCH				*i* S	S	13 19 29.0	+0.5
TLL	Tololo Astrono	1.51	345	⇓*i*P	P	13 19 09.1	+1.0
TLL				*i* S	S	13 19 29.9	+0.4
TLL				AMP		13 19 33.5	
	comp=N,3µm,0.5s						
FCH	Farellones	1.69	178	⇓*i*P	P	13 19 10.8	+0.7
FCH				*i* S	S	13 19 34.7	+1.3
FCH				AMP		13 19 36.3	
	comp=E,2µm,0.3s						
CLCH	Cerro Calan	1.77	185	⇓*i*P	P	13 19 11.2	+0.2
CLCH				*i* S	S	13 19 35.2	+0.3
CLCH				AMP		13 19 38.9	
	comp=E,1µm,0.3s						
MDZ	Mendoza	1.78	135	*e*P	P	13 19 08.2	-3.0
MDZ				*i*		13 19 32.1	
MDZ				S	S	13 19 42.9	+7.7
STL	Santa Lucia	1.82	188	*i* P	P	13 19 11.8	+0.1
STL				*i* S	S	13 19 35.8	-0.2
STL				AMP		13 19 37.2	
	comp=N,514nm,0.2s						
RCDM	Rinconada Maip	1.90	192	*e*P	P	13 19 12.4	-0.1
RCDM				*i* S	S	13 19 37.5	-0.1
ANTU	Antumapu	1.95	187	*e*P	P	13 19 13.1	-0.1
ANTU				*i* S	S	13 19 39.0	+0.3
ANTU				AMP		13 19 40.1	
	comp=E,2µm,0.4s						
PCH	Pirque	1.99	184	⇑*i*P	P	13 19 14.0	+0.2
PCH				*i* S	S	13 19 40.2	+0.6
SJCH	San Jose de Ma	2.01	180	*e*P	P	13 19 14.0	0.0
SJCH				*i* S	S	13 19 40.6	+0.6
TACH	Talagante	2.08	194	⇑*i*P	P	13 19 14.5	-0.4
LCCH	Las Cruces	2.11	209	⇓*i*P	P	13 19 15.2	-0.1
LMEL	Las Melosas	2.22	177	⇓*i*P	P	13 19 16.9	+0.2
LMEL				*i* S	S	13 19 45.5	+0.7
LMEL				AMP		13 19 49.9	
	comp=N,898nm,0.2s						
CHCH	Chadas Angostu	2.31	186	⇓*i*P	P	13 19 17.7	-0.3
CHCH				*i* S	S	13 19 46.6	-0.4
LNV	Longovilo	2.49	201	⇓*i*P	P	13 19 19.3	-1.0
LNV				*i* S	S	13 19 49.5	-1.6
CICH	Cipreses	2.69	181	*e*P	P	13 19 22.8	-0.1
CICH				*i* S	S	13 19 55.9	+0.3
SFDO	San Fernando	3.03	190	*i* P	P	13 19 26.4	-1.0
VACH	Vallenar	3.06	353	*e*P	P	13 19 26.2	-1.7

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*MOS **09** 13:27:22.6±0.9, 4.86N×95.16E, h33^{km}, mb6.0/110, MS5.4/22, Error ellipse: s-maj=7.4km s-min=3.2km az=127.1*

*BJI **09** 13:27:23.7, 4.69N×95.03E, h53^{km}, mB6.1, mb5.9, Ms5.9, Msz5.7*

*NEIC **09** 13:27:25.3±0.7, 4.80N×95.12E, h44^{km}±5^{km}, mb5.7/135, ME5.5, MS5.5/39, MW6.0, Error ellipse: s-maj=4.3km s-min=2.5km az=218.0 Broadband fault plane solution: P waves. NP1:ϕ_s130°,δ65°,λ90°. NP2:ϕ_s310°,δ25°,λ90°. Principal axes: T Plg70°, Azm40°; N Plg0°, Azm0°; P Plg20°, Azm220°; Moment Tensor Solution. s29 Moment tensor: Scale 10^{18} Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.1×10^{18} NP1:ϕ_s323°,δ23°,λ100°. NP2:ϕ_s132°,δ67°, λ86°. Principal axes: T 1.26, Plg68°, Azm33°; N -.28, Plg4°, Azm133°; P -.98, Plg22°, Azm225°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt strongly in Aceh.

*IDC **09** 13:27:26.0±0.3, 4.75N×95.24E, h54^{km}±2^{km}, mb5.3/27, mb1 5.2/28, mb1mx5.2/28, mbtmp5.5/28, MS5.4/20, Ms1 5.4/20, ms1mx5.4/21 Error ellipse: s-maj=9.2km s-min=5.6km az=44.0, Putative timing error at LPAZ*

*HRVD **09** 13:27:25.3±0.1, 4.51N×95.03E, h47^{km}, MW6.0/74, Centroid moment Tensor Solution. LP body waves: s74,c175;Mantle waves: s73,c174; Half duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}0.78±.01; $M_{\theta\theta}$-0.45±.01; $M_{\phi\phi}$-0.33±.01; $M_{r\theta}$0.52±.01; $M_{\theta\phi}$0.47±.01; $M_{\phi r}$-0.47±.01; Best double couple: $M_0$1.084×10^{18} NP1: ϕ_s310°,δ25°,λ89°. NP2:ϕ_s132°,δ65°,λ91°. Principal axes: T 1.042, Plg70°, Azm43°; N .083, Plg1°, Azm312°; P -1.125, Plg20°, Azm222°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 09 13:27:24.2±0.1**,4.75N**±0.02×**95.12E**±0.02**,h48^{km}, h48^{km}**±1.3^{km}**:pP-P,n890,** σ**1^{s}04**/812**,mb5.7**/211**,MS5.6**/89**, 200C-34D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSI	Banda Aceh	0.77	13	*e*Pg	Px	13 27 27.0	
IPM	Ipoh	5.88	91	P	P	13 28 51.8	+0.9
PPI	Padang Panjang	7.38	134	*e*P	P	13 29 12.0	+0.1
KGM	Kluang	8.62	108	P	P	13 29 30.0	+1.0
NNT	Nongplab	9.03	30	P	P	13 29 37.5	+2.9
KKTK	Khon Kaen	13.78	33	PN	P	13 30 44.0	+5.2
KKTK				PG	Px	13 30 50.0	
KKTK				SG	Px	13 30 57.5	
CM31	Chiang Mai Arr	14.13	15	*e*P	P	13 30 43.0	-0.4
	495nm,0.7s						
CMAR	Chiang Mai Arr	14.13	15	P	P	13 30 44.6	+1.1
	0.6nm,0.3s,baz=204,slow=9.9,SNR=108						
CMAR				LR	LR	13 36 12.1	
	comp=Z,24µm,20.5s,baz=200,slow=37						
CMAR				ScP		13 39 30.4	
	0.3nm,0.3s,baz=220,slow=3.2,SNR=7.4						
CMAR				sScP		13 39 44.6	
	0.7nm,0.3s,baz=226,slow=2.8,SNR=10						
CMAR				ScS	ScS	13 43 04.5	-0.6
	0.1nm,0.3s,slow=4.3,SNR=2.7						
UBT	Ubonrachathani	14.27	42	P	P	13 30 49.0	+3.7
PENI	Pendagan	14.34	135	*e*P	P	13 30 43.6	-2.7
PALK	Pallekele	14.56	281	Pn	P	13 30 49.6	+0.5
	632nm,1.1s,SNR=11						
PALK	Pallekele	14.56	281	*e*P	P	13 30 49.1	0.0
	153nm,0.8s						
NANT	Nan	14.99	21	⇑P	P	13 30 56.5	+1.8
	338nm,1.0s						
PASI	Pasiripis	15.43	137	*e*P	P	13 30 55.4	-5.0
PULI	Pulasari	15.45	135	*e*P	P	13 31 03.8	+3.1
CHRT	Chiangrai	15.70	16	⇑P	P	13 31 06.5	+2.6
	2µm,1.0s						
MDRS	Chennai	16.85	300	*i* P	P	13 31 19.9	+1.5
MDRS				*e*S	S	13 34 25.9	+3.0
	84nm,0.2s						
MDRS				*e*		13 39 42.9	
COCO	West Island	16.91	174	Pn	P	13 31 18.4	-0.7
	4µm,1.2s,SNR=15						
COCO	West Island	16.91	174	*e*P	P	13 31 17.6	-1.5
	1µm,1.4s						
VIS	Vishakhapatnam	17.31	319	*e*P	P	13 31 24.5	+0.4
VIS				*e*		13 31 32.2	
	comp=Z,443nm,1.3s						
VIS				*e*		13 34 23.9	
BWNR	Bhubaneshwar	17.92	330	*e*P	P	13 31 29.0	-2.7
BWNR				*e*		13 34 35.0	
KOD	Kodaikanal	18.33	288	⇑*i*P	P	13 31 39.0	+2.2
TRD	Trivandrum	18.42	283	*e*	P	13 31 40.5	+2.5
TRD				*e*		13 31 43.6	
	comp=Z,200nm,1.3s						
TRD				*e*		13 34 43.8	
CAL	Calcutta	18.87	340	*e*P	P	13 31 40.7	-2.5

	comp=Z,607nm,0.4s						
CAL				*e*S	S	13 35 11.7	+3.3
AGT	**Agartala**	19.39	349	⇑*i*P	P	13 31 50.0	+1.0
AGT				*i*		13 33 30.0	
QIZ	**Qiongzhong**	20.20	44	*e*P	P	13 31 58.3	+0.6
	comp=Z,741nm,1.4s						
HYB	**Hyderabad**	20.54	309	⇑*i*P	P	13 32 02.0	+0.7
HYB				*e*S	S	13 35 46.0	+2.6
HYB				*e*		13 43 25.0	
HYB				pmax	pmax		
	comp=Z,400nm,1.0s						
HYB	**Hyderabad**	20.54	309	⇑*i*P	P	13 32 02.0	+0.7
	comp=Z,400nm,1.0s						
HYB				*e*S	S	13 35 46.0	+2.6
HYB				*e*ScS	ScS	13 43 25.0	+1.0
HYB	**Hyderabad**	20.54	309	⇑*i*P	P	13 32 02.0	+0.7
	comp=Z,400nm,1.0s						
HYB				*e*S	S	13 35 46.0	+2.6
HYB				LR	LR	13 39 58.0	
	comp=Z,9.5nm,22.0s						
HYB				*e*		13 43 25.0	
HYB				*e*		13 43 50.0	
KKM	**Kota Kinabalu**	21.04	86	P	P	13 32 06.4	0.0
BLSP	**Bilaspur**	21.38	325	*e*P	P	13 32 10.4	+0.7
BLSP				*e*		13 32 15.6	
	comp=Z,785nm,0.8s						
BLSP				*i*		13 36 06.3	
BLSP				*e*		13 36 09.5	
KMI	**Kunming**	21.54	19	⇑P	P	13 32 13.5	+2.1
KMI				XP		13 32 27.1	
KMI				PP	PP	13 32 38.2	+1.5
KMI				S	S	13 36 05.2	+3.0
KMI				XS		13 36 20.8	
KMI				SS	SS	13 36 42.0	+1.9
KMI				AMB	AMB		
	comp=Z,269nm,1.3s,mb5.5						
KMI				AMB	AMB		
	comp=Z,4µm,5.5s						
KMI				LR	LR		
	comp=N,27µm,15.4s,MS5.8						
KMI				LR	LR		
	comp=E,16µm,18.5s,MS5.8						
KMI				LR	LR		
	comp=Z,31µm,24.6s						
KMI	**Kunming**	21.54	19	⇑P	P	13 32 13.5	+2.1
	comp=Z,269nm,1.3s,mb5.5						
KMI				sP		13 32 27.1	
KMI				PP	PP	13 32 38.2	+1.5
KMI				S	S	13 36 05.2	+3.0
KMI				sS		13 36 20.8	
KMI				SS	SS	13 36 42.0	+1.9
KMI				LR	LR		
	comp=Z,31µm,24.6s,MS5.6						
MNGI	**Mangalore**	21.63	293	*i*	P	13 32 16.6	+4.3
MNGI				*i* S	S	13 36 10.4	+6.4
	comp=Z,337nm,1.5s						
MNCY	**Minicoy**	22.22	280	⇓*i*P	P	13 32 18.0	-0.2
MNCY				*i*		13 34 57.0	
NGP	**Nagpur**	22.57	318	*e*P	P	13 32 23.1	+1.4
	comp=Z,399nm,1.0s,mb5.8						
NGP				*e*S	S	13 36 28.6	+7.4
LATR	**Latur**	22.66	308	*e*P	P	13 32 23.7	+1.1
LATR				*e*		13 36 37.0	
BATP	**Bataraza**	22.87	79	*e*P	P	13 32 26.3	+1.6
SRDI	**Scrawed**	23.07	125	⇑*e*P	P	13 32 24.9	-1.8
SRDI				pmax	pmax		
	comp=Z,301nm,1.0s,mb5.7						
SRDI	**Scrawed**	23.07	125	⇑*e*P	P	13 32 24.9	-1.8
	comp=Z,301nm,1.0s,mb5.7						
SRDI	**Scrawed**	23.07	125	⇑*e*P	P	13 32 27.1	+0.4
	comp=Z,601nm,1.0s,mb5.7						
KELI	**Kelakatan**	23.22	124	⇑*e*P	P	13 32 30.4	+2.4
	comp=Z,455nm,1.1s,mb5.8						
KELI	**Kelakatan**	23.22	124	⇑*e*P	P	13 32 29.4	+1.4
GTK	**Gangtok**	23.30	345	*e*	P	13 32 25.0	-3.8
GOA	**Goa**	23.50	299	*e*	P	13 32 38.9	+8.2
	comp=Z,308nm,1.7s,mb5.5						
GOA				*i*		13 36 51.2	
PPR	**Puerto Princes**	23.94	77	⇑*e*P	P	13 32 36.4	+1.4
KAD	**Karad**	24.01	303	*e*P	P	13 32 38.2	+2.5
KAD				*i* S	S	13 36 51.3	+4.9
ALBI	**Allahabad**	24.11	329	*e*	P	13 32 30.5	-6.1
GYA	**Guiyang**	24.25	26	⇑*i*P	P	13 32 38.6	+0.6
GYA				AP		13 32 47.9	
GYA				XP		13 32 51.8	
GYA				PP	PP	13 33 17.0	+3.0
GYA				S	S	13 36 53.1	+2.7
GYA				XS		13 37 16.2	
GYA				AMB	AMB		
	comp=Z,280nm,0.7s,mb5.8						
GYA				AMB	AMB		
	comp=Z,4µm,8.1s						
GYA				LR	LR		
	comp=N,14µm,16.7s,MS5.7						
GYA				LR	LR		
	comp=E,13µm,15.8s,MS5.7						
GYA				LR	LR		
	comp=Z,25µm,19.1s,MS5.7						
JIRN	**Jiri**	24.32	340	*e*P	P	13 32 36.7	-2.0
	comp=Z,528nm,0.8s,mb6.0						
RATI	**Rata**	24.36	123	⇑*e*P	P	13 32 39.7	+0.6
	comp=Z,764nm,0.2s,mb6.4						
RATI				⇓*e*S	S	13 36 55.2	+2.9
PKI	**Pulchoki**	24.51	339	*e*P	P	13 32 39.4	-1.1
	comp=Z,270nm,0.9s,mb5.8						
DMN	**Daman**	24.66	338	*e*P	P	13 32 41.2	-0.7
	comp=Z,211nm,0.8s,mb5.7						
GUN	**Gumba**	24.66	340	*e*P	P	13 32 40.5	-1.5
	comp=Z,458nm,0.7s,mb6.1						
KEDI	**Kedomdong**	24.72	122	⇑*e*P	P	13 32 41.1	-1.5
KEDI				pmax	pmax		
	comp=Z,227nm,0.9s,mb5.7						
KEDI	**Kedomdong**	24.72	122	⇑*e*P	P	13 32 41.1	-1.5
	comp=Z,227nm,0.9s,mb5.7						
KEDI	**Kedomdong**	24.72	122	⇑*e*P	P	13 32 41.2	-1.4
	comp=Z,724nm,0.7s,mb6.0						
KEDI				⇓*e*S	S	13 37 03.2	+4.7
KKN	**Kakani**	24.76	339	*e*P	P	13 32 41.7	-1.2
	comp=Z,283nm,0.7s,mb5.9						
POO	**Poona**	24.89	305	*e*		13 37 30.0	
ENPP	**El Nido**	24.89	74	*e*P	P	13 32 45.2	+0.9
BHPL	**Bhopal**	25.10	319	⇑*i*P	P	13 32 47.5	+1.2
BHPL				*i*		13 37 21.6	
	comp=Z,252nm,1.0s						
LSA	**Lhasa**	25.10	352	*e*P	P	13 32 46.2	0.0
LSA				pmax	pmax		
	comp=Z,155nm,0.6s,mb5.7						
LSA	**Lhasa**	25.10	352	*e*P	P	13 32 46.2	0.0
	comp=Z,155nm,0.6s,mb5.7						
GKN	**Gorkha**	25.19	338	*e*P	P	13 32 46.5	-0.5
	comp=Z,176nm,0.3s,mb6.0						
KOLN	**Koldanda**	25.39	336	*e*P	P	13 32 48.7	-0.2
	comp=Z,805nm,0.7s,mb6.3						
DGAR	**Diego Garcia**	25.64	242	*e*P	P	13 32 52.5	+1.1
	comp=Z,2µm,1.5s,mb6.4						
DGAR				LR	LR		
	comp=Z,5µm,22.0s,MS5.0						
BUSP	**Coron**	25.82	72	*e*P	P	13 32 53.8	+0.8
BOM	**Bombay**	25.92	305	*e*P	P	13 32 56.5	+2.5
BOM				*e*S	S	13 37 24.4	+5.9
JHNI	**Jhansi**	26.03	324	⇑*i*P	P	13 32 54.0	-0.9
JHNI				*e*		13 33 30.0	
LUBP	**Lubang**	26.33	68	*e*P	P	13 32 58.7	+0.9
LUBP	**Lubang**	26.33	68	*e*P	P	13 32 58.4	+0.6
CUYO	**Cuyo Island**	26.35	75	*e*P	P	13 32 58.6	+0.7
SCZP	**Santa Cruz**	26.70	64	*e*P	P	13 33 01.5	+0.3
SJMP	**San Jose**	26.80	72	*e*P	P	13 33 02.7	+0.6
BOLP	**Bolinao**	26.93	63		P	13 33 04.1	+0.8
TGY	**Tagaytay City**	27.08	68	⇑*e*P	P	13 33 05.4	+0.8
TGY	**Tagaytay City**	27.08	68	LR	LR	13 43 20.7	
	comp=Z,10µm,20.5s,MS5.4,baz=76,slow=35						
CD2	**Chengdu**	27.27	16	P	P	13 33 05.2	-1.0
CD2				PP	PP	13 33 50.0	-4.2
CD2				S	S	13 37 39.0	-1.3
CD2				AMB	AMB		
	comp=Z,427nm,1.0s,mb5.9						
CD2				AMB	AMB		
	comp=Z,1µm,8.0s						
CD2				LR	LR		
	comp=E,26µm,15.0s						
IPIL	**Ipil**	27.45	82	*e*P	P	13 33 06.4	-1.6
BCPH	**Baguio City Da**	27.52	63	⇓*i*P	P	13 33 09.2	+0.5
OTRP	**Odiongan**	27.63	72	*e*P	P	13 33 09.7	0.0
BOAC	**Boac**	27.74	70	*e*P	P	13 33 10.8	+0.1
GUIM	**Jordan**	27.82	76	*e*P	P	13 33 12.9	+1.5
BHV	**Bhavnagar**	27.96	309	*e*	P	13 33 15.5	+2.9
ABRA	**Dolores**	28.13	61	*e*P	P	13 33 15.0	+0.8
RCP	**Roxas**	28.15	74	⇑*e*P	P	13 33 15.1	+0.7
BALP	**Baler**	28.19	65	*e*P	P	13 33 15.5	+0.8
POLP	**Polilio Island**	28.19	67	*e*P	P	13 33 15.7	+1.0
PAGZ	**Pagadian**	28.25	82	*e*P	P	13 33 14.1	-1.2
LGTI	**Lohaghat**	28.32	332	⇓*i*P	P	13 33 15.5	-0.2
PTH	**Pithoragarh**	28.42	332	*e*P	P	13 33 16.0	-0.6
PTH				*e*S	S	13 38 00.0	+1.2
AUQP	**San Andres**	28.49	71	*e*P	P	13 33 17.1	-0.3
APYP	**Conner**	28.68	61	*e*P	P	13 33 19.4	+0.4
CAUP	**Cauayan**	28.84	63	*e*P	P	13 33 20.9	+0.4
CVP	**Callao Caves**	29.12	62	*e*P	P	13 33 33.0	+10
AJM	**Ajmer**	29.16	320	⇑*i*P	P	13 33 23.0	-0.3
NDI	**New Delhi**	29.25	326	*e*P	P	13 33 22.2	-1.8
NDI				*e*	S	13 38 10.0	-2.1
PALP	**Palanan**	29.42	63	*e*P	P	13 33 24.4	-1.2
SGCP	**Mt. Cagua**	29.53	61	*e*P	P	13 33 25.1	-1.5
OCLP	**Ormoc**	29.85	76	*e*P	P	13 33 30.1	+0.6
BUKP	**Musuan**	29.91	82	*e*P	P	13 33 31.8	+1.7
PVCP	**Virac**	29.95	71	*e*P	P	13 33 30.4	+0.1
DDI	**Dehra Dun**	30.11	330	*e*P	P	13 33 30.9	-0.7
DDI				*e*		13 38 38.2	
QZH	**Quanzhou**	30.19	46	P	P	13 33 33.0	+0.6
QZH				S	S	13 38 29.4	+2.4
QZH				AMB	AMB		
	comp=Z,230nm,1.0s,mb5.9						
QZH				AMB	AMB		
	comp=Z,4µm,3.8s						
QZH				LR	LR		
	comp=N,25µm,20.6s,MS6.0						
QZH				LR	LR		
	comp=E,22µm,20.0s,MS6.0						
QZH				LR	LR		
	comp=Z,35µm,24.8s,MS5.9						
DAV	**Davao City (W)**	30.38	84	P	P	13 33 36.0	+1.8
BBP	**Basco**	30.41	57	*e*P	P	13 33 34.9	+0.5
MATI	**Mati**	31.05	84	*e*P	P	13 33 41.0	+0.9
SMLA	**Simla**	31.21	329	⇑*i*	P	13 33 54.0	+13
	comp=Z,64nm,0.3s,mb5.9						
SMLA				*i*		13 38 57.2	
WHN	**Wuhan**	31.41	33	⇑P	P	13 33 43.5	+0.3
WHN				S	S	13 38 49.0	+2.8
WHN				AMB	AMB		
	comp=Z,190nm,1.0s,mb5.9						
WHN				LR	LR		
	comp=Z,37µm,20.9s,MS6.0						
SDNR	**Sundarnagar**	31.61	329	*e*P	P	13 33 45.0	+0.1
SDNR				*e*		13 38 55.4	
BHK	**Bhakra**	31.82	329	*e*P	P	13 33 45.8	-1.0
BHK				*e*		13 38 58.0	
XAN	**Xi’an**	31.84	22	P	P	13 33 45.9	-1.0
XAN				XP	sP	13 34 01.3	-4.3
XAN				S	S	13 38 49.7	-3.2
XAN				AMB	AMB		
	comp=Z,753nm,0.7s,mb6.6						
XAN				LR	LR		
	comp=N,4µm,6.9s						
XAN				LR	LR		
	comp=E,8µm,7.5s						
XAN				LR	LR		
	comp=Z,11µm,15.0s,MS5.7						
LZH	**Lanzhou**	32.21	13	⇑P	P	13 33 48.8	-1.3
LZH				AP	pP	13 34 02.4	-0.3
LZH				XP	sP	13 34 10.2	+1.4
LZH				PP	PP	13 34 55.0	-3.1
LZH				PCP	PcP	13 36 38.5	+0.5
LZH				S	S	13 38 51.2	-7.3
LZH				XS		13 39 17.0	
LZH				SCP		13 40 17.5	
LZH				PCS		13 40 24.0	
LZH				SCS	ScS	13 44 15.5	+1.7
LZH				AMB	AMB		
	comp=Z,230nm,1.0s,mb6.0						
LZH				AMB	AMB		
	comp=Z,2µm,4.6s						
LZH				LR	LR		
	comp=N,14µm,13.0s						
LZH				LR	LR		
	comp=Z,29µm,15.4s,MS6.1						
LZH	**Lanzhou**	32.21	13	⇑P	P	13 33 48.8	-1.3
LZH				*PP	pP	13 34 02.4	-0.3
LZH						13 34 55.0	
LZH						13 36 38.5	
LZH				S	S	13 38 51.2	-7.3
LZH						13 44 15.5	
LZH				pmax	pmax		
	comp=Z,230nm,1.0s,mb6.0						
LZH				MLR	MLR		
	comp=Z,29µm,15.4s,MS6.1						
LZH	**Lanzhou**	32.21	13	⇑P	P	13 33 48.8	-1.3
	comp=Z,230nm,1.0s,mb6.0						
LZH				pP	pP	13 34 02.4	-0.3
LZH				sP	sP	13 34 10.2	+1.4
LZH				PP	PP	13 34 55.0	-3.1
LZH				PcP	PcP	13 36 38.5	+0.5
LZH				S	S	13 38 51.2	-7.3
LZH				sS		13 39 17.0	
LZH				ScP		13 40 17.5	
LZH				PcS		13 40 24.0	
LZH				SS	SS	13 40 44.0	-11
LZH				ScS	ScS	13 44 15.5	+1.7
LZH				LR	LR		
	comp=Z,29µm,15.4s,MS6.1						
TATO	**Taipei**	32.34	49	*e*P	P	13 33 52.6	+1.3
	comp=Z,158nm,1.1s,mb5.8						
TATO				LR	LR		
	comp=Z,12µm,22.0s,MS5.5						
PONG	**Pong**	32.49	329	*e*P	P	13 33 51.0	-1.6
PONG				*e*		13 39 09.0	
DLH	**Dalhousie**	32.95	329	*e*P	P	13 33 57.0	+0.4
THN	**Thein Dam**	32.99	329	*e*P	P	13 33 55.0	-1.9
THN				*e*		13 38 06.5	
GTA	**Gaotai**	34.77	6	⇑*i*P	P	13 34 11.4	-0.7
GTA				AP	pP	13 34 23.7	-1.2
GTA				XP	sP	13 34 28.7	-2.2
GTA				PP	PP	13 35 26.7	-3.7
GTA				PCP	PcP	13 36 45.2	+0.1
GTA				S	S	13 39 35.2	-3.0
GTA				SCP		13 40 26.3	
GTA				PCS		13 40 30.7	
GTA				SCS	ScS	13 44 27.1	0.0
GTA				AMB	AMB		
	comp=Z,189nm,0.9s,mb6.0						
GTA				AMB	AMB		
	comp=Z,2µm,8.4s						
GTA				LR	LR		
	comp=N,6µm,19.4s,MS5.4						
GTA				LR	LR		
	comp=E,5µm,23.6s,MS5.4						
GTA				LR	LR		
	comp=Z,9µm,30.4s						
NJ2	**Nanjing**	35.10	36	*e*P	P	13 34 15.4	+0.4
NJ2				AP	pP	13 34 24.6	-3.2
NJ2				XP	sP	13 34 30.2	-3.7
NJ2				PP	PP	13 35 34.8	+0.1
NJ2				PPP	PPP	13 35 54.5	+1.5
NJ2				S	S	13 39 48.0	+4.5
NJ2				XS		13 40 06.0	
NJ2				AMB	AMB		
	comp=Z,300nm,0.9s,mb6.2						
NJ2				AMB	AMB		
	comp=Z,3µm,7.4s						
NJ2				LR	LR		
	comp=N,23µm,18.2s						
NJ2				LR	LR		
	comp=E,33µm,11.9s						
NJ2				LR	LR		
	comp=Z,37µm,13.8s,MS6.3						
MBWA	**Marble Bar**	35.29	138	*e*P	P	13 34 15.5	-1.3
	comp=Z,56nm,1.1s,mb5.4						
MBWA				*e*	pP	13 34 31.3	+1.8
MBWA				LR	LR		
	comp=Z,7µm,22.0s,MS5.4						
SSE	**Sheshan**	35.88	40	⇑P	P	13 34 22.3	+0.6
SSE				AP	pP	13 34 31.5	-3.0
SSE				S	S	13 39 56.8	+1.3
SSE				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.6						
SSE				AMB	AMB		
	comp=Z,1µm,8.0s						
SSE				LR	LR		
	comp=N,11µm,18.6s,MS5.7						
SSE				LR	LR		
	comp=E,5µm,18.5s,MS5.7						
SSE				LR	LR		
	comp=Z,11µm,16.7s,MS5.7						
SSE	**Sheshan**	35.88	40	⇑P	P	13 34 22.3	+0.6
	comp=Z,80nm,1.0s,mb5.6						
SSE				pP	pP	13 34 31.5	-3.0
SSE				PP	PP	13 35 49.4	+5.3
SSE				S	S	13 39 56.8	+1.3
SSE				sS		13 40 12.7	
SSE				SS	SS	13 42 51.5	+32
SSE				LR	LR		
	comp=Z,11µm,16.7s,MS5.7						
TIA	**Tai’an**	37.28	30	P	P	13 34 33.6	+0.2
TIA				S	S	13 40 10.9	-6.0
TIA				AMB	AMB		
	comp=Z,112nm,0.8s,mb5.8						
TIA				LR	LR		
	comp=E,4µm,19.7s,MS5.5						
TIA				LR	LR		
	comp=N,6µm,16.0s,MS5.5						
TIA				LR	LR		
	comp=E,10µm,16.0s						
FITZ	**Fitzroy Crossi**	37.70	128	⇑*i*P	P	13 34 35.9	-1.2
FITZ				*i*	pP	13 34 51.3	+1.4
FITZ				*i* S	S	13 40 17.6	-5.8
BTO	**Baotou**	38.13	18	*e*P	P	13 34 40.1	-0.4
BTO				S	S	13 40 33.2	+3.4
BTO				AMB	AMB		
	comp=Z,131nm,0.7s,mb5.8						
BTO				LR	LR		
	comp=N,4µm,14.1s,MS5.9						
BTO				LR	LR		
	comp=E,12µm,14.3s,MS5.9						
JOW	**Kunigami**	38.51	52	P	P	13 34 44.4	+0.6
	comp=E,218nm,0.7s,mb6.0,baz=253,slow=9.1,SNR=59						
JOW				S	S	13 40 36.6	+1.0
	comp=E,18nm,1.1s,baz=301,slow=25,SNR=1.4						
KSH	**Kashi**	38.71	336	⇑P	P	13 34 46.1	+0.9
KSH				*e*AP	pP	13 34 58.0	-0.1
KSH				*e*XP	sP	13 35 04.2	+0.2
KSH				*e*PP	PP	13 36 18.8	+0.7
KSH				*e*S	S	13 40 39.0	+0.5
KSH				*e*PCS		13 40 48.6	
KSH				*e*PS		13 40 56.4	
KSH				*e*XS		13 41 05.1	
KSH				*e*SS	SS	13 43 21.1	-1.1
KSH				*e*SCS	ScS	13 44 49.7	+0.7
KSH				AMB	AMB		
	comp=Z,3µm,4.0s						
KSH				LR	LR		
	comp=N,6µm,20.4s						
KSH				LR	LR		
	comp=E,4µm,14.1s						
HHC	**Hu-ho-hao-te**	38.86	20	⇑*i*P	P	13 34 47.2	+0.7
HHC				AP	pP	13 34 59.2	-0.2
HHC				XP	sP	13 35 04.2	-1.1
HHC				PP	PP	13 36 22.0	+2.1
HHC				PCP	PcP	13 37 00.4	+3.0
HHC				S	S	13 40 41.0	+0.2
HHC				SCP		13 40 42.2	
HHC				XS		13 41 00.1	
HHC				SCS	ScS	13 44 52.7	+2.8
HHC				AMB	AMB		
	comp=Z,151nm,1.4s,mb5.5						
HHC				AMB	AMB		
	comp=Z,2µm,7.4s						
HHC				LR	LR		
	comp=N,21µm,15.2s,MS6.1						
HHC				LR	LR		
	comp=E,14µm,18.0s,MS6.1						
HHC				LR	LR		
	comp=Z,22µm,22.8s,MS5.9						
WBK	**Wadi Bani Khal**	39.19	300	⇓P	P	13 34 51.7	+2.3
	SNR=12						
WMQ	**Urumqi**	39.46	352	⇑*i*P	P	13 34 51.6	+0.1
WMQ				AP	pP	13 35 04.0	-0.4
WMQ				XP	sP	13 35 09.0	-1.2
WMQ				PP	PP	13 36 27.0	+0.6
WMQ				S	S	13 40 50.0	+0.1
WMQ				SS	SS	13 43 38.0	-0.7
WMQ				AMB	AMB		
	comp=Z,265nm,0.8s,mb6.0						
WMQ				AMB	AMB		
	comp=Z,879nm,12.0s						
WMQ				LR	LR		
	comp=N,4µm,18.0s,MS5.7						
WMQ				LR	LR		
	comp=E,11µm,20.0s,MS5.7						
WMQ				LR	LR		
	comp=Z,5µm,18.0s,MS5.3						
JMDO	**Jabal Madar**	39.86	300	P	P	13 34 57.4	+2.4
	SNR=10						
BJI	**Beijing**	39.94	25	P	P	13 34 57.1	+1.6
BJI				XP	sP	13 35 11.7	-2.5
BJI				PP	PP	13 36 31.8	+0.3
BJI				S	S	13 40 52.4	-4.6
BJI				AMB	AMB		
	comp=Z,524nm,0.9s,mb6.3						
BJI				AMB	AMB		
	comp=Z,4µm,4.7s						
BJI				LR	LR		
	comp=N,12µm,18.9s,MS5.8						
BJI				LR	LR		
	comp=E,5µm,18.4s,MS5.8						
BJI				LR	LR		
	comp=Z,14µm,25.7s						
BJI	**Beijing**	39.94	25	P	P	13 34 57.1	+1.6
	comp=Z,524nm,0.9s,mb6.3						
BJI				sP	sP	13 35 11.7	-2.5
BJI				PP	PP	13 36 31.8	+0.3
BJI				S	S	13 40 52.4	-4.6
BJI				SS	SS	13 44 15.6	+26
BJI				LR	LR		
	comp=Z,14µm,25.7s,MS5.7						
SMDO	**Samad**	40.15	301	⇑P	P	13 35 00.2	+2.8
BIDO	**Bidbid**	40.25	301	P	P	13 35 01.2	+3.0
	SNR=11						
BSY	**Bisya**	40.77	300	P	P	13 35 05.4	+2.9
	SNR=18						
KAKA	**Kakadu**	40.93	115	⇑*i*P	P	13 35 02.6	-1.3
	comp=Z,128nm,0.8s,mb5.6						
ULHL	**Ulahol**	40.95	338	P	P	13 35 06.1	+2.3
	SNR=30						
KZA	**Kyzart**	41.18	337	P	P	13 35 07.7	+2.0
	SNR=26						
ARQ	**Araqi**	41.56	300	P	P	13 35 11.6	+2.5
	SNR=10						
UCH	**Uchtor**	41.59	337	P	P	13 35 10.7	+1.6
	SNR=561						
AAA	**Alma-Ata**	41.60	340	*i* P	P	13 35 09.0	-0.2
AAA				*i* S	S	13 41 23.0	+1.2
AAA				pmax	pmax		
	comp=Z,5µm,3.0s						
AAA				smax			
	comp=N,5µm,7.0s						
AAA				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.3						
DL2	**Dalian**	41.65	32	P	P	13 35 10.8	+1.2
DL2				S	S	13 41 21.6	-0.9
DL2				AMB	AMB		
	comp=Z,330nm,0.7s,mb6.1						
DL2				AMB	AMB		
	comp=Z,1µm,5.5s						
DL2				LR	LR		
	comp=N,5µm,16.5s,MS5.6						
DL2				LR	LR		
	comp=E,4µm,17.1s,MS5.6						
DL2				LR	LR		
	comp=Z,6µm,20.8s,MS5.5						
MUN	**Mundaring**	41.67	153	*e*P	P	13 35 10.3	+0.4
	comp=Z,30nm,0.5s,mb5.2						
MUN				*e*S	S	13 41 18.9	-4.1
MUN	**Mundaring**	41.67	153	*e*P	P	13 35 10.3	+0.4
MUN				*e*S	S	13 41 18.9	-4.1
MUN				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.2						
TKM2	**Tokmak 2**	41.78	338	P	P	13 35 12.1	+1.5
	SNR=25						
KBK	**Karagaybulak**	41.79	338	P	P	13 35 12.5	+1.8
	SNR=770						
AML	**Almayashu**	41.84	336	P	P	13 35 12.7	+1.6
	SNR=55						
AAK	**Ala-Archa**	41.95	337	P	P	13 35 13.2	+1.2

	SNR=472						
AAK	**Ala-Archa**	**41.95**	**337**	*c* *i*P	**P**	**13 35 12.1**	**+0.1**
AAK				pmax	pmax		
	comp=Z,309nm,0.8s,mb6.0						
AAK				MLR	MLR		
	comp=Z,5µm,18.0s,MS5.5						
AAK	**Ala-Archa**	**41.95**	**337**	⇑*i*P	**P**	**13 35 12.3**	**+0.3**
	comp=Z,30nm,1.9s						
AAK				LR	LR		
	comp=Z,1µm,19.0s						
RBK	**Rabkut**	**41.99**	**291**	⇑P	**P**	**13 35 14.7**	**+2.0**
	SNR=7.7						
FRU	**Bishkek**	**42.07**	**337**	α *i*P	**P**	**13 35 14.5**	**+1.5**
FRU				*i* S	**S**	**13 41 32.0**	**+3.4**
FRU				pmax	pmax		
	comp=Z,3µm,2.8s,mb6.4						
FRU				pmax	pmax		
	comp=Z,5µm,4.0s						
FRU				smax			
	comp=N,6µm,7.0s						
FRU				MLR	MLR		
	comp=E,6µm,19.0s						
FRU				MLR	MLR		
	comp=Z,6µm,18.0s,MS5.5						
CHMS	**Chumysh**	**42.16**	**338**	P	**P**	**13 35 14.9**	**+1.2**
	SNR=10						
EKS2	**Erkin-Say**	**42.25**	**336**	P	**P**	**13 35 16.0**	**+1.5**
	SNR=54						
USP	**Ospenovka**	**42.48**	**338**	P	**P**	**13 35 17.4**	**+0.9**
	SNR=546						
WHFO	**Wadi Hawf**	**42.49**	**291**	⇓P	**P**	**13 35 18.4**	**+1.6**
	SNR=24						
ABTO	**Aybut**	**42.81**	**290**	P	**P**	**13 35 21.3**	**+1.9**
	SNR=13						
NWAO	**Narrogin (SRO)**	**42.94**	**152**	P	**P**	**13 35 19.4**	**-1.0**
	comp=Z,50nm,1.0s,mb5.2,baz=328,slow=9.8,SNR=12						
NWAO				S	**S**	**13 41 40.7**	**-0.8**
	comp=Z,7.9nm,1.1s,baz=77,slow=23,SNR=2.0						
NWAO				ScS	ScS	13 45 14.9	+0.6
	comp=Z,4.9nm,0.9s,baz=185,slow=23,SNR=2.2						
NWAO				LR	LR	13 53 51.7	
	comp=Z,34nm,18.9s,baz=341,slow=37						
NWAO	**Narrogin (SRO)**	**42.94**	**152**	*e*P	**P**	**13 35 18.9**	**-1.4**
	comp=Z,105nm,0.9s,mb5.6						
NWAO				LR	LR		
	comp=Z,5µm,20.0s,MS5.4						
MKAR	**Makanchi Array**	**43.33**	**347**	*i* P	**P**	**13 35 23.0**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,29nm,0.5s						
INCN	**Inchon**	**43.47**	**37**	*e*P	**P**	**13 35 24.0**	**-0.6**
	comp=Z,146nm,0.8s,mb5.8						
INCN				LR	LR		
	comp=Z,11µm,21.0s,MS5.8						
SONM	**Songino Array**	**44.01**	**11**	P	**P**	**13 35 28.0**	**-0.7**
	comp=Z,39nm,0.9s,mb5.2,baz=191,slow=7.9,SNR=245						
SONM				PcP	PcP	13 37 14.0	-0.2
	comp=Z,52nm,0.8s,baz=210,slow=3.6,SNR=15						
SONM				ScP		13 41 00.8	
	comp=Z,5.9nm,0.9s,baz=204,slow=5.2,SNR=3.8						
SONM				ScS	ScS	13 45 20.5	-0.3
	comp=Z,1.4nm,1.0s,baz=153,slow=2.8,SNR=3.2						
ULN	**Ulaanbaatar**	**44.16**	**12**	*e*P	**P**	**13 35 28.9**	**-1.1**
	comp=Z,29nm,0.7s,mb5.1						
ULN				LR	LR		
	comp=Z,11µm,20.0s,MS5.8						
KS15	**Wonju Array Si**	**44.21**	**38**	*e*P	**P**	**13 35 30.4**	**-0.1**
SNY	**Shenyang**	**44.81**	**30**	⇑P	**P**	**13 35 35.1**	**-0.2**
SNY				AP	pP	13 35 46.3	-2.0
SNY				XP	sP	13 35 54.1	+0.1
SNY				PP	PP	13 37 16.8	-4.5
SNY				S	**S**	**13 42 07.2**	**-1.3**
SNY				AMB	AMB		
	comp=Z,290nm,0.6s,mb6.3						
SNY				LR	LR		
	comp=N,6µm,19.8s,MS5.8						
SNY				LR	LR		
	comp=E,8µm,18.6s,MS5.8						
SNY				LR	LR		
	comp=Z,10µm,20.5s,MS5.7						
WRA	**Warramunga Arr**	**45.69**	**124**	P	**P**	**13 35 41.9**	**-0.7**
WRA				*PP	pP	13 35 54.4	-1.2
WRA				S	**S**	**13 42 17.4**	**-4.0**
WRA				*SS		13 42 39.2	
WRA						13 45 30.9	
WRA	**Warramunga Arr**	**45.69**	**124**	P	**P**	**13 35 41.9**	**-0.7**
	comp=Z,602nm,1.0s,mb6.5,baz=303,slow=9.0,SNR=590						
WRA				pP	pP	13 35 54.4	-1.2
	comp=Z,275nm,1.0s,baz=301,slow=9.2,SNR=4.8						
WRA				sP	sP	13 36 00.9	-0.4
	comp=Z,141nm,0.7s,baz=302,slow=9.1,SNR=3.7						
WRA				S	**S**	**13 42 17.4**	**-4.0**
	comp=Z,12nm,1.0s,baz=295,slow=16,SNR=12						
WRA				sS		13 42 39.2	
	comp=Z,16nm,0.9s,baz=294,slow=16,SNR=6.1						
WRA				ScS	ScS	13 45 30.9	-0.9
	comp=Z,0.5nm,0.8s,baz=31,slow=31,SNR=3.5						
WRA				sScS		13 45 55.9	
	comp=Z,0.7nm,0.6s,baz=340,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**45.69**	**124**	P	**P**	**13 35 41.9**	**-0.7**
WRA				pP	pP	13 35 54.4	-1.2
WRA				sP	sP	13 36 00.9	-0.4
WRA				S	**S**	**13 42 17.4**	**-4.0**
WRA				sS		13 42 39.2	
WRA				ScS	ScS	13 45 30.9	-0.9
WRA				sScS		13 45 55.9	
WRAB	**Tennant Creek**	**45.69**	**124**	*e*P	**P**	**13 35 42.4**	**-0.2**
	comp=Z,851nm,0.9s,mb6.7						
WRAB				LR	LR		
	comp=Z,3µm,22.0s,MS5.1						
WB2	**Warramunga Arr**	**45.70**	**124**	⇑*i*P	**P**	**13 35 42.5**	**-0.2**
WB2				*i* S	**S**	**13 42 10.2**	**-11**
ZAK	**Zakamensk**	**45.99**	**7**	⇓*i*P	**P**	**13 35 42.6**	**-2.0**
ZAK				*e*		13 37 20.6	
ZAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
MOY	**Mondy**	**47.02**	**5**	*e*P	**P**	**13 35 51.8**	**-0.8**
MOY				*e*		13 37 25.0	
MOY				pmax	pmax		
	comp=Z,134nm,3.1s						
CN2	**Changchun**	**47.19**	**30**	*e*P	**P**	**13 35 53.9**	**-0.2**
CN2				*e*AP	pP	13 36 06.9	-0.2
CN2				PCP	PcP	13 37 23.9	-1.5
CN2				PP	PP	13 37 44.6	-0.2
CN2				AMB	AMB		
	comp=Z,340nm,0.7s,mb6.4						
CN2				AMB	AMB		
	comp=Z,2µm,4.0s						
CN2				LR	LR		
	comp=N,5µm,14.0s,MS5.9						
CN2				LR	LR		
	comp=E,9µm,14.0s,MS5.9						
CN2				LR	LR		
	comp=Z,10µm,16.0s,MS5.8						
ASPA	**Alice Springs**	**47.19**	**128**	⇑*i*P	**P**	**13 35 53.9**	**-0.5**
ASPA				*e*S	**S**	**13 42 40.2**	**-2.5**
ASAR	**Alice Springs**	**47.19**	**128**	P	**P**	**13 35 54.0**	**-0.4**
	comp=Z,109nm,0.9s,mb5.8,baz=305,slow=7.6,SNR=352						
ASAR				S	**S**	**13 42 39.3**	**-3.4**
	comp=Z,1.4nm,0.8s,baz=184,slow=40,SNR=2.7						
ASAR				ScS	ScS	13 45 43.0	+1.5
	comp=Z,1.3nm,0.9s,baz=326,slow=33,SNR=2.6						
ASAR				LR	LR	13 59 15.5	
	comp=Z,3µm,20.0s,MS5.3,baz=299,slow=40						
FORT	**Forrest**	**47.31**	**140**	*e*P	**P**	**13 35 54.9**	**-0.3**
	comp=Z,4µm,0.7s						
FORT				*e*S	**S**	**13 42 42.8**	**-1.5**
FORT				*i* SS	SS	13 46 14.3	+8.7
TLY	**Talaya**	**47.31**	**7**	P	**P**	**13 35 54.8**	**-0.1**
	comp=Z,318nm,0.8s,mb6.3,SNR=61						
TLY	**Talaya**	**47.31**	**7**	*c* *i*P	**P**	**13 35 54.3**	**-0.6**
TLY				*e*PPP	PP	13 37 46.4	+0.6
TLY				*e*S	**S**	**13 42 34.0**	**-10**
TLY				*e*SS	SS	13 45 42.9	-23
TLY				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
TLY				MLR	MLR		
	comp=Z,14µm,24.0s,MS5.8						
TLY	**Talaya**	**47.31**	**7**	*e*P	**P**	**13 35 54.6**	**-0.3**
	comp=Z,44nm,0.8s,mb5.4						
TLY				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
KURK	**Kurchatov**	**47.86**	**346**	*e*P	**P**	**13 35 59.0**	**-0.3**
	comp=Z,204nm,0.8s,mb6.2						
KURK				LR	LR		
	comp=Z,990nm,19.0s,MS4.8						
IRK	**Irkutsk**	**47.95**	**8**	*e*P	**P**	**13 35 59.0**	**-0.9**
IRK				pmax	pmax		
	comp=Z,150nm,2.7s,mb5.5						
ZAL	**Zalesovo**	**49.76**	**352**	*i* P	**P**	**13 36 12.9**	**-0.9**
ZAL				pmax	pmax		
	comp=Z,65nm,0.6s						
ZAL	**Zalesovo**	**49.76**	**352**	P	**P**	**13 36 12.8**	**-1.0**
	comp=Z,65nm,0.6s,mb5.8,baz=299,slow=6.9,SNR=256						
ZAL				ScP		13 41 25.2	
	comp=Z,3.9nm,0.9s,baz=336,slow=19,SNR=2.7						
ZAL				S	**S**	**13 43 17.4**	**-0.9**
	comp=Z,3.9nm,0.7s,baz=207,slow=22,SNR=8.2						
ZAL				ScS	ScS	13 45 55.2	-2.7
	comp=Z,1.4nm,0.3s,baz=136,slow=19,SNR=4.6						
ZAL				LR	LR	14 01 55.1	
	comp=Z,6µm,21.7s,MS5.6,baz=292,slow=42						
GUMO	**Guam**	**49.80**	**76**	PFAKE		13 36 30.0	+15
GUMO				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
MDJ	**Mudanjiang**	**49.88**	**32**	P	**P**	**13 36 15.4**	**+0.5**
MDJ				AP	pP	13 36 26.8	-1.3
MDJ				XP	sP	13 36 30.7	-3.0
MDJ				PCP	PcP	13 37 35.8	+0.7
MDJ				PP	PP	13 38 11.1	+0.3
MDJ				SCP		13 41 26.5	
MDJ				PCS		13 41 30.7	
MDJ				S	**S**	**13 43 23.2**	**+3.1**
MDJ				XS		13 43 43.4	
MDJ				AMB	AMB		
	comp=Z,147nm,1.2s,mb5.9						
MDJ				AMB	AMB		
	comp=Z,2µm,6.0s						
MDJ				LR	LR		
	comp=N,5µm,23.7s,MS5.7						
MDJ				LR	LR		
	comp=E,6µm,21.3s,MS5.7						
MDJ				LR	LR		
	comp=Z,10µm,24.4s,MS5.7						
LBOS		**49.96**	**284**	*e*P	**P**	**13 36 18.1**	**+2.3**
CBIJ	**Chichi jima**	**50.02**	**58**	P	**P**	**13 36 15.5**	**-0.8**
	comp=Z,340nm,0.8s,mb6.5,baz=265,slow=6.5,SNR=13						
CBIJ				S	**S**	**13 43 20.0**	**-2.3**
	comp=Z,109nm,1.2s,baz=287,slow=20,SNR=2.1						
VLA	**Vladivostok**	**50.17**	**35**	⇓*i*P	**P**	**13 36 19.0**	**+1.9**
VLA				*i*	pP	13 36 35.0	+4.7
VLA				*i*		13 38 13.0	
VLA				*i* S	**S**	**13 43 23.0**	**-1.1**
VLA				pmax	pmax		
	comp=Z,2µm,7.0s						
VLA				pmax	pmax		
	comp=N,900nm,5.0s						
VLA				pmax	pmax		
	comp=E,2µm,4.0s						
VLA				pmax	pmax		
	comp=Z,1µm,6.0s						
VLA				smax			
	comp=E,2µm,11.0s						
VLA				smax			
	comp=N,1µm,9.0s						
VLA				MLR	MLR		
	comp=E,4µm,14.0s,MS5.7						
VLA				MLR	MLR		
	comp=Z,7µm,14.0s,MS5.8						
VLA				MLR	MLR		
	comp=N,4µm,16.0s,MS5.7						
JHJ	**Hachijo jima 2**	**50.24**	**50**	P	**P**	**13 36 17.9**	**+0.1**
	comp=N,269nm,0.8s,mb6.3,baz=164,slow=9.6,SNR=5.1						
MAJO	**Matsushiro**	**50.59**	**45**	*e*P	**P**	**13 36 19.3**	**-1.1**
	comp=N,53nm,0.8s,mb5.5						
MAJO				LR	LR		
	comp=Z,9µm,21.0s,MS5.8						
MAT	**Matsushiro**	**50.59**	**45**	*e*P	**P**	**13 36 20.0**	**-0.4**
MAT				pmax	pmax		
	comp=Z,181nm,1.5s,mb5.8						
MAT				MLR	MLR		
	comp=Z,7µm,20.0s,MS5.7						
MAT	**Matsushiro**	**50.59**	**45**	*e*P	**P**	**13 36 20.0**	**-0.4**
	comp=Z,181nm,1.5s,mb5.8						
MAT				*e*S	**S**	**13 43 19.0**	**-11**
MAT				LR	LR		
	comp=Z,7µm,20.0s,MS5.7						
MAT	**Matsushiro**	**50.59**	**45**	P	**P**	**13 36 19.6**	**-0.8**
MAT				S	**S**	**13 43 18.0**	**-12**
DHBB	**Dhamar BB**	**50.85**	**285**	*e*P	**P**	**13 36 25.0**	**+2.3**
NVS	**Novosibirsk**	**50.86**	**351**	⇑*i*P	**P**	**13 36 20.3**	**-1.9**
NVS				*i* S	**S**	**13 43 31.2**	**-2.3**
NVS				pmax	pmax		
	comp=Z,133nm,1.0s,mb5.8						
NVS				pmax	pmax		
	comp=N,151nm,1.4s						
NVS				smax			
	comp=N,160nm,1.6s						
RAYN	**Ar Rayn**	**51.30**	**296**	P	**P**	**13 36 26.0**	**0.0**
	comp=N,239nm,1.0s,mb6.1,SNR=29						
BVA0	**Borovoye Array**	**52.24**	**341**	*i* P	**P**	**13 36 32.0**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.4						
BVAR	**Borovoye Array**	**52.24**	**341**	P	**P**	**13 36 31.6**	**-1.1**
	comp=Z,133nm,0.7s,mb6.0,baz=127,slow=7.4,SNR=7.1						
BVAR				S	**S**	**13 43 52.9**	**+0.4**
	comp=Z,7.4nm,0.7s,baz=131,slow=14,SNR=8.0						
BVAR				sS		13 44 14.6	
	comp=Z,4.3nm,0.8s,baz=40,slow=33,SNR=3.8						
BVAR				ScS	ScS	13 46 16.0	+1.0
	comp=Z,1.4nm,0.9s,baz=270,slow=38,SNR=2.2						
BVAR				sScS		13 46 40.6	
	comp=Z,0.7nm,0.7s,baz=38,slow=43,SNR=2.2						
CHKZ	**Chkalovo**	**52.73**	**342**	*e*P	**P**	**13 36 35.7**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,775nm,0.9s,mb6.6						
CHKZ	**Chkalovo**	**52.73**	**342**	*e*P	**P**	**13 36 35.7**	**-0.6**
	comp=Z,775nm,0.9s,mb6.6						
PMG	**Port Moresby**	**53.73**	**105**	P	**P**	**13 36 43.1**	**-1.1**
	comp=Z,39nm,0.6s,mb5.5,baz=300,slow=4.3,SNR=33						
PMG				S	**S**	**13 44 12.9**	**-0.3**
	comp=Z,6.2nm,0.7s,baz=187,slow=19,SNR=5.7						
PMG				ScS	ScS	13 46 30.5	+4.7
	comp=Z,6.2nm,0.8s,baz=166,slow=16,SNR=2.5						
PMG				sScS		13 46 55.0	
	comp=Z,8.0nm,1.0s,baz=176,slow=23,SNR=2.1						
PMG	**Port Moresby**	**53.73**	**105**	*e*P	**P**	**13 36 42.8**	**-1.4**
	comp=Z,101nm,0.8s,mb5.8						
PMG				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
KLR	**Kul'dur**	**54.10**	**29**	κ *i*P	**P**	**13 36 43.5**	**-3.0**
KLR				*e*S	**S**	**13 44 08.0**	**-10**
KLR				*e*PS	PS	13 44 40.0	+4.5
KLR				pmax	pmax		
	comp=N,1µm,7.5s						
KLR				pmax	pmax		
	comp=E,1µm,7.5s						
KLR				pmax	pmax		
	comp=Z,3µm,7.5s						
KLR				MLR	MLR		
	comp=E,5µm,13.0s						
KLR				MLR	MLR		
	comp=Z,800nm,13.0s,MS5.0						
BOD	**Bodaibo**	**54.96**	**12**	*e*P	**P**	**13 36 50.6**	**-2.1**
BOD				pmax	pmax		
	comp=Z,206nm,2.6s,mb5.7						
BHD	**Baghdad**	**55.02**	**308**	*i* P	**P**	**13 36 47.0**	**-6.4**
BHD				*e*S	**S**	**13 44 18.0**	**-12**
CTA	**Charters Tower**	**55.96**	**118**	⇑*i*P	**P**	**13 36 59.4**	**-0.9**
	comp=Z,66nm,0.9s,mb5.7						
CTA				*i* S	**S**	**13 44 43.2**	**+0.1**
CTA	**Charters Tower**	**55.96**	**118**	⇑*i*P	**P**	**13 36 59.4**	**-0.9**
CTA				*i* S	**S**	**13 44 43.2**	**+0.1**
CTA				pmax	pmax		
	comp=Z,66nm,0.9s						
CTA	**Charters Tower**	**55.96**	**118**	P	**P**	**13 36 59.6**	**-0.8**
	comp=Z,93nm,0.9s,mb5.8,baz=285,slow=9.1,SNR=44						
CTA				pP	pP	13 37 11.6	-2.1
	comp=Z,42nm,0.9s,baz=300,slow=6.6,SNR=5.1						
CTA				S	**S**	**13 44 41.2**	**-1.9**
	comp=Z,2.9nm,0.7s,baz=34,slow=21,SNR=4.0						
CTA				sS		13 45 05.1	
	comp=Z,5.0nm,0.9s,baz=74,slow=19,SNR=2.1						
CTA				ScS	ScS	13 46 43.4	+1.8
	comp=Z,3.6nm,0.9s,baz=91,slow=22,SNR=1.7						
CTA				sScS		13 47 08.9	
	comp=Z,4.8nm,0.9s,baz=148,slow=22,SNR=1.9						
CTA				LR	LR	14 02 12.6	
	comp=Z,8µm,21.7s,MS5.8,baz=286,slow=37						
CTAO	**Charters Tower**	**55.96**	**118**	*e*P	**P**	**13 36 59.1**	**-1.2**
	comp=Z,140nm,1.1s,mb5.9						
CTAO				LR	LR		
	comp=Z,8µm,22.0s,MS5.8						
CLNS	**Chul'man**	**57.03**	**19**	*e*P	**P**	**13 37 06.8**	**-0.8**
CLNS				*e**PP	pP	13 37 15.8	-5.2
CLNS				*e*		13 38 07.0	
CLNS				*e*S	**S**	**13 44 58.7**	**+1.9**
CLNS				pmax	pmax		
	comp=Z,60nm,0.7s,mb5.7						
CLNS				pmax	pmax		
	comp=N,27nm,0.6s						
CLNS				pmax	pmax		
	comp=E,17nm,1.0s						
CLNS				smax			
	comp=N,633nm,10.7s						
CLNS				smax			
	comp=Z,470nm,11.8s						
CLNS				smax			
	comp=E,109nm,11.4s						
CLNS				MLR	MLR		
	comp=N,10µm,16.0s,MS6.0						
CLNS				MLR	MLR		
	comp=E,2µm,16.0s,MS6.0						
CLNS				MLR	MLR		
	comp=Z,22µm,16.0s,MS6.4						
HKR	**Hakkari**	**57.04**	**312**	*e*P	**P**	**13 37 06.2**	**-1.6**
MSL	**Mosul**	**57.06**	**311**	*e*P	**P**	**13 37 06.0**	**-2.0**
MSL				*e*S	**S**	**13 44 45.0**	**-12**
MSL				*e*ScS	ScS	13 46 47.5	-1.9
ASAJ	**Asahikawa**	**57.16**	**39**	P	**P**	**13 37 08.4**	**-0.2**
	comp=Z,81nm,0.7s,mb5.8,baz=251,slow=12,SNR=49						
STKA	**Stephens Creek**	**57.26**	**133**	⇑*i*P	**P**	**13 37 08.4**	**-1.1**
	comp=Z,43nm,0.9s,mb5.5						
STKA				*i* S	**S**	**13 44 57.0**	**-3.1**
STKA	**Stephens Creek**	**57.26**	**133**	P	**P**	**13 37 08.5**	**-1.0**
	comp=Z,38nm,0.9s,mb5.5,baz=307,slow=7.1,SNR=46						
STKA				pP	pP	13 37 22.6	-0.4
	comp=Z,53nm,0.8s,baz=295,slow=5.2,SNR=11						
STKA				S	**S**	**13 44 58.4**	**-1.7**
	comp=Z,2.2nm,0.9s,baz=234,slow=20,SNR=1.7						
STKA				LR	LR	14 04 46.6	
	comp=Z,4µm,20.8s,MS5.5,baz=302,slow=39						
GNI	**Garni**	**57.32**	**315**	PFAKE		13 37 20.0	+10
GNI				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
MTA	**Mtatsminda**	**57.93**	**317**	P	**P**	**13 37 13.2**	**-0.8**
MTA				S	**S**	**13 45 08.3**	**-0.4**
TI2	**Plekhanov**	**57.98**	**317**	⇑*i*P	**P**	**13 37 14.2**	**-0.2**
TI2				*i* S	**S**	**13 45 07.4**	**-1.9**
TI2				*i* S	**S**	**13 45 08.6**	**-0.7**
TI2				pmax	pmax		
	comp=Z,150nm,1.0s,mb6.0						
KMBO	**Kilima Mbogo**	**58.11**	**266**	*i* P	**P**	**13 37 17.0**	**+1.3**
KMBO				pmax	pmax		
	comp=Z,25nm,1.2s						
KMBO	**Kilima Mbogo**	**58.11**	**266**	P	**P**	**13 37 16.6**	**+0.9**
	comp=Z,25nm,1.2s,mb5.1,baz=57,slow=8.3,SNR=25						
KMBO				pP	pP	13 37 30.6	+1.5
	comp=Z,37nm,1.1s,baz=55,slow=9.3,SNR=7.9						
KMBO				S	**S**	**13 45 14.8**	**+3.4**
	comp=Z,0.3nm,0.3s,baz=55,slow=21,SNR=3.9						
KMBO				sS		13 45 39.3	
	comp=Z,0.2nm,0.3s,baz=36,slow=23,SNR=2.0						
KMBO				LR	LR	13 57 56.3	
	comp=Z,7µm,21.7s,MS5.7,baz=90,slow=31						
KMBO	**Kilima Mbogo**	**58.11**	**266**	*e*P	**P**	**13 37 16.3**	**+0.6**
	comp=Z,180nm,1.7s,mb5.8						
KMBO				LR	LR		
	comp=Z,8µm,22.0s,MS5.8						
DUS	**Dusheti**	**58.16**	**318**	P	**P**	**13 37 14.3**	**-1.3**
SVE	**Sverdlovsk**	**58.65**	**339**	⇑*i*P	**P**	**13 37 18.0**	**-0.8**
SVE				*e*	pP	13 37 30.9	-1.4
SVE				*e*		13 38 09.7	
SVE				*e*		13 39 30.5	
SVE				*e*S	**S**	**13 45 18.0**	**+0.1**
SVE				*e*PS	PS	13 45 42.0	+3.2
SVE				*e*SS	SS	13 49 11.0	-1.9
SVE				pmax	pmax		
	comp=N,900nm,6.0s						
SVE				pmax	pmax		
	comp=E,2µm,6.0s						
SVE				pmax	pmax		
	comp=Z,2µm,6.0s						
SVE				MLR	MLR		
	comp=N,2µm,18.0s,MS5.5						
SVE				MLR	MLR		
	comp=E,2µm,18.0s,MS5.5						
SVE				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.5						
YSS	**Yuzh-Sakhalins**	**58.67**	**36**	*c* *i*P	**P**	**13 37 18.8**	**-0.3**
YSS				pmax	pmax		
	comp=Z,168nm,0.8s,mb6.1						
YSS	**Yuzh-Sakhalins**	**58.67**	**36**	*e*P	**P**	**13 37 18.9**	**-0.2**
	comp=Z,155nm,0.7s,mb6.1						
YSS				LR	LR		
	comp=Z,6µm,22.0s,MS5.6						
AKH	**Akhalkalaki**	**58.70**	**316**	P	**P**	**13 37 19.0**	**-0.5**
BTMT	**Batman**	**58.92**	**312**	*e*P	**P**	**13 37 19.8**	**-1.2**
ONI	**Oni**	**59.21**	**318**	P	**P**	**13 37 22.5**	**-0.4**
ONI				S	**S**	**13 45 25.5**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**59.21**	**41**	⇑*i*P	**P**	**13 37 22.0**	**-0.9**
YUK				*e*		13 38 15.0	
YUK				*e*		13 39 34.0	
YUK				*i* S	**S**	**13 45 30.0**	**+4.6**
YUK				*e*PS	PS	13 45 45.0	-1.9
YUK				*e*SSS	SSS	13 51 49.0	-0.6
YUK				pmax	pmax		
	comp=Z,160nm,0.7s,mb6.2						
YUK				pmax	pmax		
	comp=Z,3µm,2.5s,mb6.8						
EZM	**Erzurum**	**59.62**	**314**	*e*P	**P**	**13 37 25.3**	**-0.5**
BINT	**Bingol**	**59.89**	**313**	*e*P	**P**	**13 37 26.6**	**-1.1**
BCA	**Borcka**	**60.01**	**316**	*e*P	**P**	**13 37 25.8**	**-2.7**
KIV	**Kislovodsk**	**60.29**	**319**	P	**P**	**13 37 29.3**	**-1.0**
	comp=Z,808nm,0.8s,mb6.8,SNR=21						
KIV	**Kislovodsk**	**60.29**	**319**	*c* *i*P	**P**	**13 37 29.4**	**-0.9**
KIV				*e*		13 38 13.7	
KIV				*e*		13 39 45.2	
KIV				*i* S	**S**	**13 45 38.4**	**-0.9**
KIV				*e*SS	SS	13 49 41.8	+3.5
KIV				pmax	pmax		
	comp=Z,116nm,0.9s,mb5.9						
KIV				smax			
	comp=N,1µm,4.8s						
KIV				smax			
	comp=E,455nm,4.8s						
GOF	**Gofitskoye**	**60.53**	**320**	⇓*i*P	**P**	**13 37 31.0**	**-0.9**
GOF				*i*	pP	13 37 45.0	-0.4
GOF				*e*S	S	13 46 04.0	+22
GOF				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.8						
GOF				pmax	pmax		
	comp=Z,2µm,4.0s						
URFA	**Urfa**	**60.67**	**311**	*e*P	**P**	**13 37 32.6**	**-0.4**
EZC	**Erzincan**	**60.68**	**313**	*e*P	**P**	**13 37 34.8**	**+1.7**
PTK	**Pertek**	**60.70**	**312**	*e*P	**P**	**13 37 31.9**	**-1.3**
ASF	**Jabal al Asfar**	**60.75**	**304**	P	**P**	**13 37 34.5**	**+0.9**
	comp=Z,11nm,1.0s,mb4.9,baz=346,slow=1.5,SNR=6.1						
ASF				S	**S**	**13 45 48.6**	**+3.2**
ASF				LR	LR	14 06 02.9	
	comp=Z,3µm,18.3s,MS5.5,baz=332,slow=38						
GUMT	**Gumushane**	**61.17**	**314**	*e*P	**P**	**13 37 34.2**	**-2.1**
MALT	**Malatya**	**61.23**	**311**	*e*P	**P**	**13 37 34.7**	**-2.1**
GAZ	**Gaziantep**	**61.81**	**310**	*e*P	**P**	**13 37 40.7**	**0.0**
EIL	**Elat**	**61.84**	**301**	*e*P	**P**	**13 37 40.7**	**-0.3**
	comp=Z,105nm,1.3s,mb5.8						
SOKR	**Solikamsk**	**62.05**	**339**	⇑*i*P	**P**	**13 37 39.9**	**-2.1**
SOKR				pmax	pmax		
	comp=Z,210nm,1.0s,mb6.2						
SOKR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
SOC	**Sochi**	**62.12**	**317**	*i* P	**P**	**13 37 40.5**	**-2.2**
SOC				*e*		13 38 14.8	
SOC				*e*		13 39 55.2	
SOC				*e*S	**S**	**13 45 57.8**	**-4.7**
SOC				*e*		13 47 26.6	
SOC				*e*SS	SS	13 50 11.1	+3.5
SOC				pmax	pmax		
	comp=Z,127nm,1.1s,mb6.0						
SOC				pmax	pmax		
	comp=N,16nm,0.7s						
SOC				pmax	pmax		
	comp=E,35nm,0.9s						
SOC	**Sochi**	**62.12**	**317**	⇑*i*P	**P**	**13 37 40.2**	**-2.5**
BHL	**Bhannes**	**62.18**	**306**	*e*P	**P**	**13 37 41.6**	**-1.6**
YAK	**Yakutsk**	**62.65**	**18**	*c* *i*P	**P**	**13 37 43.0**	**-3.0**
YAK				*e**PP	pP	13 37 54.1	-5.4
YAK				*e*	pP	13 38 01.3	+1.8

YAK				*e*		13 38 30.1	
YAK				*e*S	**S**	**13 46 04.9**	**-4.0**
YAK				*e**SS		13 46 26.1	
YAK				*e*		13 47 32.9	
YAK				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.9						
YAK				pmax	pmax		
	comp=N,24nm,1.0s						
YAK				pmax	pmax		
	comp=E,22nm,1.1s						
YAK				smax			
	comp=E,16nm,1.3s						
YAK				smax			
	comp=Z,5.0nm,1.0s						
YAK				smax			
	comp=N,29nm,1.2s						
YAK				MLR	MLR		
	comp=N,5µm,18.0s,MS6.0						
YAK				MLR	MLR		
	comp=Z,10µm,18.0s,MS6.0						
YAK				MLR	MLR		
	comp=E,7µm,16.0s,MS6.0						
YAK	**Yakutsk**	**62.65**	**18**	*e*P	**P**	**13 37 43.7**	**-2.2**
	comp=E,167nm,0.7s,mb6.3						
YAK				LR	LR		
	comp=Z,17µm,20.0s,MS6.2						
CEYT	**Ceyhan**	**62.89**	**309**	*e*P	**P**	**13 37 47.7**	**-0.2**
TOO	**Toolangi**	**62.92**	**137**	*e*P	**P**	**13 37 48.4**	**+0.3**
	comp=Z,3.3nm,0.9s						
TOO				*i* S	**S**	**13 46 16.9**	**+4.2**
TOKT	**Tokat**	**63.24**	**313**	*e*P	**P**	**13 37 49.4**	**-0.8**
BNN	**Bunyan**	**63.33**	**311**	*e*P	**P**	**13 37 49.8**	**-1.0**
NIG	**Nigde**	**64.06**	**310**	*e*P	**P**	**13 37 55.1**	**-0.5**
ANN	**Anapa**	**64.09**	**318**	*e*P	**P**	**13 38 10.2**	**+15**
ANN				*e*S	S	13 46 51.3	+24
ANN				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.6						
CSS	**Prodhromos**	**64.29**	**307**	*e*P	**P**	**13 37 56.0**	**-1.2**
	comp=Z,135nm,1.0s,mb5.9						
ARMA	**Armidale**	**64.30**	**127**	⇑*i*P	**P**	**13 37 58.0**	**+0.7**
ARMA				*i* S	**S**	**13 46 34.5**	**+4.5**
MBAR	**Mbarara**	**64.53**	**267**	*e*P	**P**	**13 37 58.7**	**-0.4**
	comp=Z,67nm,1.2s,mb5.5						
MBAR				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
CNB	**Canberra Magne**	**64.59**	**133**	*e*P	**P**	**13 37 58.6**	**-0.5**
	comp=Z,2µm,1.6s						
CORM	**Corum**	**64.60**	**312**	*e*P	**P**	**13 37 57.0**	**-2.1**
KAMT	**Kaman**	**65.06**	**311**	*e*P	**P**	**13 37 59.8**	**-2.3**
BR131	**Keskin Array S**	**65.21**	**312**	PFAKE		13 38 10.0	+6.9
BR131				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
BRTR	**Keskin Array B**	**65.21**	**312**	P	**P**	**13 38 01.9**	**-1.2**
	comp=Z,27nm,0.6s,mb5.5,baz=128,slow=7.4,SNR=91						
TOS	**Tosya**	**65.28**	**313**	*e*P	**P**	**13 38 01.6**	**-1.9**
RIV	**Riverview**	**65.30**	**131**	*e*P	**P**	**13 38 04.9**	**+1.2**
HDMB	**Hadim**	**65.41**	**309**	*e*P	**P**	**13 38 03.0**	**-1.4**
CANT	**Cankiri**	**65.46**	**313**	*e*P	**P**	**13 38 03.6**	**-1.0**
VRSR	**Storozhevoye**	**65.48**	**325**	*e*P	**P**	**13 38 02.3**	**-2.3**
VRSR				*e*PP	Px	13 38 10.5	
VRSR				*e*PP	PcP	13 38 33.8	-2.2
VRSR				*e*S	S	13 46 39.1	-5.0
VRSR				*e*		13 47 53.1	
BZK	**Bozkurt**	**65.56**	**314**	*e*P	**P**	**13 38 03.4**	**-1.8**
KONT	**Konya--Tatoy**	**65.74**	**310**	*e*P	**P**	**13 38 05.6**	**-0.8**
ANTO	**Ankara**	**65.88**	**312**	*e*P	**P**	**13 38 04.4**	**-2.9**
SAFT	**Safranbolu**	**66.31**	**313**	*e*P	**P**	**13 38 08.7**	**-1.3**
KIZT	**Kizilcal**	**66.32**	**310**	*e*P	**P**	**13 38 08.0**	**-2.2**
SIM	**Simferopol’**	**66.37**	**317**	*c* *i*P	**P**	**13 38 10.0**	**-0.3**
SIM				*i* S	S	13 46 52.0	-3.0
SIM				pmax	pmax		
	comp=Z,105nm,1.0s,mb5.8						
TAU	**Tasmania Unive**	**66.86**	**141**	*e*P	**P**	**13 38 13.5**	**+0.1**
	comp=Z,65nm,1.0s,mb5.6						
TAU				LR	LR		
	comp=Z,795nm,20.0s,MS4.9						
ISP	**Isparta**	**67.14**	**309**	*e*P	**P**	**13 38 13.4**	**-1.9**
ISP	**Isparta**	**67.14**	**309**	*e*P	**P**	**13 38 15.4**	**+0.1**
ISP				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.8						
MDU	**Mudurnu**	**67.20**	**312**	*e*P	**P**	**13 38 14.2**	**-1.4**
ESKT	**Eskisehir**	**67.25**	**311**	*e*P	**P**	**13 38 14.8**	**-1.1**
ELL	**Elmali**	**67.39**	**308**	*e*P	**P**	**13 38 16.4**	**-0.4**
ALT	**Altintas**	**67.71**	**310**	*e*P	**P**	**13 38 17.9**	**-0.9**
SKR	**Severo-Kuril’s**	**68.23**	**37**	*e*P	**P**	**13 38 17.6**	**-4.3**
SKR				*e*	pP	13 38 28.0	-7.7
SKR				*e*		13 38 41.6	
SKR				*e*		13 40 49.0	
SKR				*e*PPP	PPP	13 42 26.0	-6.2
SKR				pmax	pmax		
	comp=N,70nm,0.9s						
SKR				pmax	pmax		
	comp=E,130nm,0.9s						
SKR				pmax	pmax		
	comp=Z,200nm,0.9s,mb6.2						
SKR				pmax	pmax		
	comp=N,2µm,4.0s						
SKR				pmax	pmax		
	comp=E,2µm,4.0s						
SKR				pmax	pmax		
	comp=Z,4µm,4.0s						
MOS	**Moscow**	**68.24**	**329**	α *i*P	**P**	**13 38 21.0**	**-0.9**
MOS				*e*	pP	13 38 35.2	-0.5
MOS				*e*		13 40 49.9	
MOS				*e*S	S	13 47 14.5	-2.9
MOS				*e*		13 48 15.8	
MOS				*e*SS	SS	13 51 43.4	+0.9
MOS				pmax	pmax		
	comp=Z,239nm,1.1s,mb6.1						
MOS				smax			
	comp=N,3µm,4.7s						
MOS				MLR	MLR		
	comp=Z,3µm,22.6s,MS5.4						
MOS	**Moscow**	**68.24**	**329**	*e*P	**P**	**13 38 20.1**	**-1.8**
OBN	**Obninsk**	**68.53**	**328**	P	**P**	**13 38 22.8**	**-0.9**
	comp=Z,628nm,0.6s,mb6.7,SNR=9.0						
OBN	**Obninsk**	**68.53**	**328**	*c* *i*P	**P**	**13 38 22.6**	**-1.1**
OBN				*e*		13 40 56.9	
OBN				*i* S	S	13 47 16.0	-4.8
OBN				pmax	pmax		
	comp=Z,168nm,1.2s,mb5.8						
OBN				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.3						
OBN	**Obninsk**	**68.53**	**328**	*e*P	**P**	**13 38 22.4**	**-1.3**
	comp=Z,88nm,0.7s,mb5.8						
OBN				LR	LR		
	comp=Z,573nm,19.0s,MS4.8						
ISK	**Istanbul-Kandi**	**68.93**	**312**	*e*P	**P**	**13 38 25.0**	**-1.4**
MA2	**Magadan**	**69.08**	**27**	*c* *i*P	**P**	**13 38 26.3**	**-0.7**
MA2				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.6						
MA2	**Magadan**	**69.08**	**27**	*e*P	**P**	**13 38 25.9**	**-1.1**
	comp=Z,71nm,0.8s,mb5.7						
MA2				LR	LR		
	comp=Z,5µm,21.0s,MS5.7						
LSZ	**Lusaka**	**69.19**	**252**	*e*P	**P**	**13 38 29.3**	**+0.9**
	comp=Z,81nm,1.1s,mb5.6						
LSZ				LR	LR		
	comp=Z,9µm,20.0s,MS6.0						
AKS	**Akhisar**	**69.42**	**310**	*e*P	**P**	**13 38 28.8**	**-0.7**
BNT	**Bandirma**	**69.63**	**311**	P	**P**	**13 38 29.4**	**-1.3**
IZM	**Izmir**	**69.76**	**309**	*e*P	**P**	**13 38 31.3**	**-0.3**
TLCR		**70.04**	**316**	⇑P	**P**	**13 38 32.9**	**-0.2**
TIXI	**Tiksi**	**70.09**	**11**	⇑*i*P	**P**	**13 38 31.1**	**-1.9**
TIXI				*e*		13 41 05.9	
TIXI				*e*S	S	13 47 38.7	-0.3
TIXI				*e*SS	SS	13 52 10.4	-0.4
TIXI				pmax	pmax		
	comp=Z,149nm,0.8s,mb6.0						
TIXI				pmax	pmax		
	comp=N,28nm,0.7s						
TIXI				pmax	pmax		
	comp=E,22nm,0.7s						
TIXI				MLR	MLR		
	comp=E,7µm,16.0s,MS6.0						
TIXI				MLR	MLR		
	comp=Z,9µm,16.0s,MS6.1						
TIXI				MLR	MLR		
	comp=N,5µm,19.0s,MS6.0						
TIXI	**Tiksi**	**70.09**	**11**	⇑*i*P	**P**	**13 38 31.2**	**-1.8**
TIXI				LR	LR		
	comp=Z,11µm,19.0s,MS6.1						
PSN	**Preselentsi**	**70.14**	**315**	*i* P	**P**	**13 38 33.5**	**-0.2**
TIRR	**Tirgusor**	**70.15**	**316**	⇑P	**P**	**13 38 33.0**	**-0.8**
KIS	**Kishinev**	**70.48**	**318**	*e*P	**P**	**13 38 33.0**	**-2.8**
KIS				*e*		13 38 55.0	
KIS				S	S	13 47 37.0	-7.0
KIS				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.9						
PET	**Petropavlovsk**	**70.50**	**35**	*c* *i*P	**P**	**13 38 34.6**	**-1.1**
PET				pmax	pmax		
	comp=Z,106nm,1.3s,mb5.6						
PET	**Petropavlovsk**	**70.50**	**35**	*e*P	**P**	**13 38 34.6**	**-1.1**
	comp=Z,91nm,0.9s,mb5.7						
PET				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
CFR	**Carcaliu**	**70.51**	**316**	⇑P	**P**	**13 38 35.3**	**-0.6**
HARR	**Harsova**	**70.54**	**316**	⇓P	**P**	**13 38 35.9**	**-0.2**
PRD	**Provadia**	**70.59**	**314**	*i* P	**P**	**13 38 36.3**	**-0.2**
JMB	**Yambol**	**71.03**	**313**	*i* P	**P**	**13 38 39.0**	**-0.2**
ALN	**Alexandroupoli**	**71.13**	**312**	*e*P	**P**	**13 38 36.4**	**-3.4**
AKASG	**Malin Array Be**	**71.20**	**322**	P	**P**	**13 38 38.2**	**-1.8**
	comp=Z,36nm,0.5s,mb5.6,baz=90,slow=5.3,SNR=137						
AKASG				pP	pP	13 38 53.0	-0.9
	comp=Z,18nm,0.7s,baz=78,slow=4.4,SNR=3.7						
AKASG				PP	PP	13 41 14.2	-6.2
	comp=Z,3.6nm,0.7s,baz=88,slow=6.5,SNR=2.8						
AKASG				S	S	13 47 45.4	-6.8
	comp=Z,0.2nm,0.2s,baz=191,slow=39,SNR=2.5						
SEY	**Seymchan**	**71.36**	**24**	*e*P	**P**	**13 38 42.4**	**+1.6**
SEY				*e*		13 47 44.5	
SEY				*e*		13 52 26.5	
IAS	**Iasi**	**71.36**	**318**	P	**P**	**13 38 40.6**	**-0.5**
ISR	**Istrita**	**71.59**	**316**	⇓P	**P**	**13 38 44.0**	**+1.5**
VRI	**Vrincioaia**	**71.63**	**317**	⇑P	**P**	**13 38 42.9**	**+0.2**
SZH	**Strazhica**	**71.65**	**314**	*i* P	**P**	**13 38 42.7**	**-0.2**
DIM	**Dimitrovgrad**	**71.72**	**313**	P	**P**	**13 38 43.4**	**+0.1**
CASY	**Casey**	**71.73**	**173**	*e*P	**P**	**13 38 43.7**	**+0.8**
CASY				*e*	pP	13 38 57.1	+0.4
CASY				*i* S	S	13 47 58.3	+0.3
KDZ	**Kurdzhali**	**71.73**	**312**	P	**P**	**13 38 43.0**	**-0.4**
BUC1	**Bucharest**	**71.80**	**315**	P	**P**	**13 38 43.7**	**0.0**
MLR	**Muntele Rosu**	**72.08**	**316**	P	**P**	**13 38 45.5**	**+0.1**
	comp=Z,200nm,1.2s,mb5.9,baz=91,slow=1.6,SNR=86						
MLR				pP	pP	13 38 58.7	-0.5
	comp=Z,136nm,1.1s,baz=110,slow=1.9,SNR=8.6						
MLR	**Muntele Rosu**	**72.08**	**316**	⇑P	**P**	**13 38 45.5**	**+0.1**
RZN	**Rozhen**	**72.26**	**312**	*i* P	**P**	**13 38 46.3**	**-0.2**
OUR	**Ouranopolis**	**72.59**	**311**	*e*P	**P**	**13 38 47.5**	**-1.1**
MTUR	**Matau**	**72.64**	**316**	P	**P**	**13 38 48.7**	**0.0**
PAIG	**Paliouri**	**72.76**	**310**	*e*P	**P**	**13 38 48.9**	**-0.6**
PGB	**Panagyurishte**	**72.80**	**313**	*i* P	**P**	**13 38 49.0**	**-0.7**
SRS	**Serrai**	**73.00**	**311**	*e*P	**P**	**13 38 48.8**	**-2.1**
BURAR	**Bucovina Array**	**73.01**	**318**	P	**P**	**13 38 51.3**	**+0.4**
MNK	**Minsk**	**73.07**	**326**	⇑*e*P	**P**	**13 38 46.0**	**-5.0**
MNK				pmax	pmax		
	comp=Z,1µm,0.8s						
SOH	**Sokhos**	**73.13**	**311**	*e*P	**P**	**13 38 50.3**	**-1.4**
THE	**Thessaloniki**	**73.40**	**311**	*e*P	**P**	**13 38 51.8**	**-1.5**
PUL	**Pulkovo**	**73.41**	**331**	*i* P	**P**	**13 38 52.8**	**-0.1**
PUL	**Pulkovo**	**73.41**	**331**	*i* Pr		13 38 52.8	
KKB	**Krupnik**	**73.49**	**312**	*i* P	**P**	**13 38 52.7**	**-1.1**
VTS	**Vitosha**	**73.51**	**313**	P	**P**	**13 38 53.4**	**-0.5**
VTS	**Vitosha**	**73.51**	**313**	*i* P	**P**	**13 38 53.5**	**-0.4**
KNT	**Kendrikon**	**73.52**	**311**	*e*P	**P**	**13 38 52.4**	**-1.6**
LBTB	**Lobatse**	**73.64**	**242**	*e*P	**P**	**13 38 55.7**	**+0.7**
	comp=Z,146nm,1.3s,mb5.8						
LBTB				LR	LR		
	comp=Z,11µm,22.0s,MS6.1						
AGG	**Agios Georgios**	**73.67**	**309**	*e*P	**P**	**13 38 52.7**	**-2.2**
LIT	**Litokhoron**	**73.69**	**310**	*e*P	**P**	**13 38 53.2**	**-1.8**
VAY	**Valandovo**	**73.79**	**312**	*i* P	**P**	**13 38 54.4**	**-1.1**
GRG	**Griva**	**73.87**	**311**	*e*P	**P**	**13 38 54.5**	**-1.4**
IDID	**Didziasalis**	**73.90**	**326**	*i* P	**P**	**13 38 55.5**	**-0.4**
IDID				AMPb	AMB	13 38 57.5	
	comp=Z,44nm,1.0s,mb5.3						
JOF	**Joensuu**	**74.07**	**335**	*e*p	**P**	**13 38 55.7**	**-1.0**
	comp=Z,108nm,0.7s,mb5.9						
IIGN	**Ignalina**	**74.19**	**326**	*i* P	**P**	**13 38 57.3**	**-0.3**
IIGN				AMPb	AMB	13 38 58.8	
	comp=Z,48nm,0.7s,mb5.5						
IZAR	**Zarasai**	**74.28**	**327**	*e*P	**P**	**13 38 57.6**	**-0.5**
IZAR				AMPb	AMB	13 38 59.1	
	comp=Z,32nm,0.8s,mb5.3						
ISAL	**Salakas**	**74.31**	**327**	*e*P	**P**	**13 38 57.6**	**-0.6**
ISAL				AMPb	AMB	13 38 59.3	
	comp=Z,30nm,0.9s,mb5.2						
NOUC	**Port Laguerre**	**74.49**	**114**	⇑*e*P	**P**	**13 39 00.2**	**+0.3**
BOLS	**Boljevac**	**74.60**	**314**	⇓*i*P	**P**	**13 38 59.1**	**-1.0**
DZM	**Mont Dzumac**	**74.61**	**114**	*e*P	**P**	**13 39 01.3**	**+0.6**
FNA	**Florina**	**74.62**	**311**	*e*P	**P**	**13 38 58.0**	**-2.3**
SKO	**Skopje**	**74.72**	**312**	*i* P	**P**	**13 38 59.2**	**-1.7**
SKO				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.3						
SKO	**Skopje**	**74.72**	**312**	*i* P	**P**	**13 38 59.2**	**-1.7**
	comp=Z,0.0nm,0.8s						
BOSA	**Boshof**	**74.78**	**239**	*e*P	**P**	**13 39 02.1**	**+0.5**
	comp=Z,70nm,1.0s,mb5.5						
BOSA				LR	LR		
	comp=Z,4µm,21.0s,MS5.7						
LVZ	**Lovozero**	**74.81**	**340**	P	**P**	**13 39 00.7**	**-0.2**
	comp=Z,2µm,0.5s,SNR=20						
LVZ	**Lovozero**	**74.81**	**340**	*e*P	**P**	**13 38 50.4**	**-11**
LVZ				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.7						
LVZ				MLR	MLR		
	comp=N,2µm,20.0s						
LVZ				MLR	MLR		
	comp=E,4µm,27.0s						
KWP	**Kalwaria**	**75.04**	**320**	*e*P	**P**	**13 39 02.5**	**0.0**
KWP				pmax	pmax		
	comp=Z,280nm,1.0s,mb6.2						
KWP	**Kalwaria**	**75.04**	**320**	⇑*e*P	**P**	**13 39 02.7**	**+0.2**
KWP	**Kalwaria**	**75.04**	**320**	⇑*e*P	**P**	**13 39 02.7**	**+0.1**
KWP				MLR	MLR	14 20 16.8	
	comp=Z,2µm,21.1s,MS5.3						
OHR	**Ohrid**	**75.09**	**311**	*i* P	**P**	**13 39 01.2**	**-1.8**
BZS	**Buzias**	**75.10**	**316**	⇑P	**P**	**13 39 02.7**	**-0.3**
UZH	**Uzhgorod**	**75.13**	**319**	*e*P	**P**	**13 39 05.0**	**+1.9**
UZH				*e*S	S	13 48 40.0	+3.4
SVIS	**Svilajnac**	**75.19**	**314**	⇑*i*P	**P**	**13 39 02.5**	**-1.1**
KOLS	**Kolonicke sedl**	**75.19**	**319**	*i* P	**P**	**13 39 04.0**	**+0.5**
KOLS				*i*		13 39 09.6	
GRUS	**Gruza**	**75.50**	**314**	⇑*i*P	**P**	**13 39 04.5**	**-0.8**
SUW	**Suwalki**	**75.60**	**325**	*e*P	**P**	**13 39 04.8**	**-0.9**
SUW				*e*pP	pP	13 39 07.3	-12
SUW	**Suwalki**	**75.60**	**325**	*e*P	**P**	**13 39 04.8**	**-0.8**
SUW				*e*pP	pP	13 39 07.3	-12
SUW				MLR	MLR	14 20 29.9	
	comp=Z,2µm,24.0s,MS5.2						
MAW	**Mawson**	**75.70**	**192**	*e*P	**P**	**13 39 10.4**	**+4.4**
MAW				*i* PCP	PcP	13 39 23.0	+4.1
MAW				*i* S	S	13 48 44.4	+1.9
MAW	**Mawson**	**75.70**	**192**	P	**P**	**13 39 07.0**	**+1.0**
	comp=Z,15nm,1.0s,mb4.9,baz=50,slow=6.7,SNR=4.1						
MAW				S	S	13 48 44.9	+2.5
	comp=Z,5.3nm,0.9s,baz=195,slow=18,SNR=1.3						
MAW				LR	LR	14 06 00.2	
	comp=Z,3µm,21.6s,MS5.6,baz=24,slow=31						
MAW	**Mawson**	**75.70**	**192**	P	**P**	**13 39 07.2**	**+1.3**
MAW				*i* PcP	PcP	13 39 23.0	+4.1
MAW				*i* S	S	13 48 44.4	+1.9
CRVS	**Cervenica-Dubn**	**75.72**	**319**	*i* P	**P**	**13 39 06.7**	**+0.3**
CRVS				*i*		13 39 13.1	
BEO	**Belgrade**	**75.80**	**315**	⇓*i*P	**P**	**13 39 06.1**	**-0.9**
PVY	**Plav**	**75.88**	**313**	⇓*i*P	**P**	**13 39 05.6**	**-1.9**
FINES	**FINESS Array B**	**75.92**	**332**	*i* P	**P**	**13 39 06.7**	**-0.6**
FINES				pmax	pmax		
	comp=Z,42nm,0.4s						
FINES	**FINESS Array B**	**75.92**	**332**	P	**P**	**13 39 06.7**	**-0.7**
	comp=Z,42nm,0.4s,mb5.8,baz=105,slow=6.4,SNR=368						
FINES				pP	pP	13 39 21.4	+0.2
	comp=Z,36nm,0.6s,baz=104,slow=7.9,SNR=7.5						
FINES				LR	LR	14 17 34.8	
	comp=Z,2µm,20.7s,MS5.4,baz=102,slow=40						
FINES	**FINESS Array B**	**75.92**	**332**	P	**P**	**13 39 06.7**	**-0.6**
FINES				pP	pP	13 39 21.4	+0.2
FINES				LR	LR	14 17 34.8	
IVA	**Berane**	**75.96**	**313**	⇓*i*P	**P**	**13 39 06.9**	**-1.1**
KAF	**Kangasniemi**	**76.00**	**333**	*e*p	**P**	**13 39 06.7**	**-1.1**
	comp=Z,121nm,1.0s,mb5.8,baz=106,slow=6.2						
KAF	**Kangasniemi**	**76.00**	**333**	*e*P	**P**	**13 39 06.7**	**-1.1**
KAF				pmax	pmax		
	comp=Z,121nm,1.0s,mb5.8						
DIVS	**Divcibare**	**76.04**	**314**	⇓*i*P	**P**	**13 39 07.4**	**-1.0**
KECS	**Kecovo**	**76.29**	**319**	*i* P	**P**	**13 39 10.0**	**+0.3**
KECS				*i* pP	pP	13 39 12.9	-11
ULC	**Ulcinj**	**76.34**	**312**	⇓*i*P	**P**	**13 39 09.7**	**-0.4**
PLE	**Pljevlja**	**76.38**	**313**	⇓*i*P	**P**	**13 39 10.9**	**+0.5**
TTG	**Podgorica**	**76.38**	**312**	⇓*i*P	**P**	**13 39 09.3**	**-1.1**
NIE	**Niedzica**	**76.54**	**320**	⇑*i*P	**P**	**13 39 10.2**	**-0.9**
PSZ	**Piszkesteto**	**76.60**	**318**	*e*P	**P**	**13 39 11.4**	**-0.1**
PSZ				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.8						
PSZ	**Piszkesteto**	**76.60**	**318**	*e*P	**P**	**13 39 11.4**	**-0.1**
	comp=Z,105nm,0.9s,mb5.8						
PSZ	**Piszkesteto**	**76.60**	**318**	⇑*i*P	**P**	**13 39 11.6**	**+0.1**
NKY	**Niksic**	**76.61**	**313**	⇓*i*P	**P**	**13 39 10.9**	**-0.8**
BUM	**Brajici-Budva**	**76.63**	**312**	⇓*i*P	**P**	**13 39 10.5**	**-1.3**
UPM	**Unac-Piva**	**76.72**	**313**	⇓*i*P	**P**	**13 39 11.0**	**-1.2**
HCY	**Herceg Novi**	**76.94**	**312**	⇓*i*P	**P**	**13 39 11.4**	**-2.1**
BRY	**Bratogost**	**76.95**	**313**	⇓*i*P	**P**	**13 39 11.3**	**-2.3**
OJC	**Ojcow**	**76.99**	**320**	⇑*i*P	**P**	**13 39 13.8**	**+0.2**
OJC				*e*S	S	13 48 55.1	-1.8
OJC				MLR	MLR	14 23 31.7	
	comp=Z,1µm,20.6s,MS5.3						
STON	**Ston**	**77.57**	**313**	*i* P	**P**	**13 39 15.5**	**-1.5**
SRO2	**Moca**	**77.58**	**318**	*i* P	**P**	**13 39 17.1**	**+0.1**
SRO	**Srobarova**	**77.64**	**318**	*i* P	**P**	**13 39 18.1**	**+0.8**
SRO				*i*		13 39 23.2	
KOLL	**Kolacno**	**77.67**	**319**	*i* P	**P**	**13 39 17.6**	**+0.1**
KOLL				*i*		13 39 23.3	
SRO1	**Iza**	**77.69**	**318**	*e*P	**P**	**13 39 17.8**	**+0.2**
OKC	**Ostrava-Krasne**	**77.99**	**320**	⇑*i*P	**P**	**13 39 19.4**	**+0.2**
OKC				*e*pP	pP	13 39 35.6	+2.5
RAC	**Raciborz**	**77.99**	**320**	*e*P	**P**	**13 39 19.9**	**+0.7**
TIP	**Timpagrande**	**78.00**	**309**	*e*P	**P**	**13 39 19.4**	**0.0**
KEV	**Kevo**	**78.09**	**341**	*e*p	**P**	**13 39 18.1**	**-1.2**
	comp=Z,113nm,0.9s,mb5.8						
KEV	**Kevo**	**78.09**	**341**	*e*P	**P**	**13 39 18.1**	**-1.2**
KEV				pmax	pmax		
	comp=Z,113nm,0.9s,mb5.8						
DRV	**Dumont d’Urvil**	**78.12**	**163**	P	**P**	**13 39 19.0**	**-0.5**
DRV				S	S	13 49 10.0	+1.3
DRV				SS	SS	13 54 10.0	-3.9
GRI	**Girifalco**	**78.24**	**309**	*e*P	**P**	**13 39 21.7**	**+0.9**
ORI	**Oriolo Calabro**	**78.29**	**310**	*e*P	**P**	**13 39 22.2**	**+1.2**
SMOL	**Smolenice**	**78.31**	**318**	*e*P	**P**	**13 39 21.8**	**+0.9**
MORC	**Moravsky Berou**	**78.37**	**320**	*e*P	**P**	**13 39 21.2**	**0.0**
	comp=Z,93nm,1.1s,mb5.6						
ZST	**Bratislava**	**78.49**	**318**	*i* P	**P**	**13 39 22.5**	**+0.5**
ZST				*i*		13 39 24.9	
ARCES	**ARCESS Array B**	**78.52**	**340**	P	**P**	**13 39 21.7**	**0.0**
	comp=Z,81nm,0.7s,mb5.8,baz=94,slow=5.8,SNR=220						
ARCES				pP	pP	13 39 35.5	-0.1
	comp=Z,33nm,0.7s,baz=100,slow=7.4,SNR=4.4						
ARCES				LR	LR	14 17 34.0	
	comp=Z,3µm,21.2s,MS5.6,baz=111,slow=38						
ARCES	**ARCESS Array B**	**78.52**	**340**	P	**P**	**13 39 21.7**	**0.0**
ARCES				pP	pP	13 39 35.5	-0.1
ARCES				LR	LR	14 17 34.0	
ARE0	**ARCESS Array S**	**78.52**	**340**	*e*P	**P**	**13 39 21.4**	**-0.3**
BILL	**Bilibino**	**78.62**	**21**	*c* *i*P	**P**	**13 39 21.4**	**-0.9**
BILL				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.4						
BILL				MLR	MLR		
	comp=Z,13µm,17.0s,MS6.3						
BILL	**Bilibino**	**78.62**	**21**	*e*P	**P**	**13 39 21.9**	**-0.4**
	comp=Z,45nm,0.8s,mb5.5						
BILL				LR	LR		
	comp=Z,16µm,20.0s,MS6.4						
SOP	**Sopron**	**78.81**	**318**	⇑*e*P	**P**	**13 39 23.7**	**0.0**
VRAC	**Vranov**	**78.94**	**319**	P	**P**	**13 39 24.6**	**+0.2**
GKP	**Gorka Klasztor**	**78.97**	**323**	*e*P	**P**	**13 39 24.1**	**-0.4**
GKP				LR	LR		
	comp=Z,2µm,24.9s,MS5.3						
GKP	**Gorka Klasztor**	**78.97**	**323**	*e*P	**P**	**13 39 24.1**	**-0.3**
GKP				MLR	MLR	14 19 23.3	
	comp=Z,2µm,24.9s,MS5.3						
MGR	**Morigerati**	**78.98**	**310**	*e*P	**P**	**13 39 23.9**	**-1.0**
FX1	**Attu Island--F**	**79.02**	**37**	*e*P	**P**	**13 39 24.7**	**0.0**
VKA	**Vienna**	**79.02**	**318**	⇑*i*P	**P**	**13 39 24.5**	**-0.4**
	comp=Z,2µm,3.5s						
VKA	**Vienna**	**79.02**	**318**	⇑*i*P	**P**	**13 39 24.5**	**-0.4**
VKA				pmax	pmax		
	comp=Z,2µm,3.5s						
MCQ	**Macquarie Isla**	**79.07**	**148**	*e*P	**P**	**13 39 25.8**	**+0.8**
MCQ				*i* S	S	13 49 24.3	+5.2
KTK1	**Kautokeino**	**79.15**	**340**	⇑*i*P	**P**	**13 39 25.8**	**+0.7**
	comp=Z,236nm,1.1s,mb6.0						
KTK1	**Kautokeino**	**79.15**	**340**	⇑*i*P	**P**	**13 39 25.8**	**+0.7**
KTK1				AMb	AMB	13 39 27.9	
	comp=Z,236nm,1.1s,mb6.0						
SGO	**Sicignano**	**79.19**	**310**	*e*P	**P**	**13 39 25.9**	**-0.1**
DPC	**Dobruska-Polom**	**79.22**	**320**	⇑*i*P	**P**	**13 39 26.6**	**+0.7**
DPC				*e*pP	pP	13 39 40.6	+0.8
DPC				AMS	AMS	14 25 20.0	
	comp=Z,1µm,22.1s						
KSP	**Ksiaz**	**79.28**	**321**	⇓*e*P	**P**	**13 39 26.3**	**+0.1**
KSP				*e*pP	pP	13 39 40.2	0.0
KSP				*e*S	S	13 49 17.0	-4.4
KSP				*e*SS	SS	13 54 34.0	+2.3
KSP				*e*SSS	SSS	13 57 57.0	+5.5
KSP				LR	LR		
	comp=Z,3µm,21.1s,MS5.7						
KSP	**Ksiaz**	**79.28**	**321**	⇑*e*P	**P**	**13 39 25.9**	**-0.3**
KSP				*e*pP	pP	13 39 29.9	-10
KSP				MLR	MLR	14 20 55.3	
	comp=Z,3µm,21.1s,MS5.6						
SUR	**Sutherland**	**79.38**	**236**	LR	LR	14 12 17.1	
	comp=Z,2µm,19.4s,MS5.5,baz=85,slow=34						
SUR	**Sutherland**	**79.38**	**236**	*e*P	**P**	**13 39 27.8**	**+0.6**
	comp=Z,105nm,1.1s,mb5.7						
SUR				LR	LR		
	comp=Z,749nm,20.0s,MS5.0						
UPC	**Upice**	**79.43**	**320**	⇑*e*P	**P**	**13 39 27.6**	**+0.6**
UPC				*e*pP	pP	13 39 43.4	+2.4
ARSA	**Arzberg**	**79.47**	**317**	⇑*i*P	**P**	**13 39 27.7**	**+0.4**
	comp=Z,2µm,3.9s						
BOJS	**Bojanci**	**79.53**	**315**	*i* P	**P**	**13 39 27.9**	**+0.1**
SMY	**Shemya**	**79.56**	**37**	*e*P	**P**	**13 39 27.4**	**-0.3**
SMY				pmax	pmax		
	comp=Z,240nm,0.8s,mb6.2						
SMY	**Shemya**	**79.56**	**37**	*e*P	**P**	**13 39 27.5**	**-0.2**
TSUM	**Tsumeb**	**79.84**	**250**	*e*P	**P**	**13 39 31.0**	**+1.1**
	comp=Z,48nm,1.1s,mb5.3						
TSUM				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
CII	**Carovilli**	**80.01**	**311**	P	**P**	**13 39 29.8**	**-0.5**
	comp=Z,41nm,0.8s,mb5.4						
LJU	**Ljubljana**	**80.07**	**316**	⇓*i*P	**P**	**13 39 31.0**	**+0.4**
OBKA	**Obir**	**80.09**	**316**	⇑*i*P	**P**	**13 39 31.1**	**+0.4**
	comp=Z,2µm,4.1s						
PRU	**Pruhonice**	**80.33**	**320**	⇑*i*P	**P**	**13 39 32.0**	**+0.1**
PRU				*e*pP	pP	13 39 42.5	-3.3
PRU				LR	LR		
	comp=Z,1µm,22.6s,MS5.2						
PRU	**Pruhonice**	**80.33**	**320**	⇑*i*P	**P**	**13 39 32.0**	**+0.1**
PRU				*e*pP	pP	13 39 42.5	-3.3
PRU				AMS	AMS	14 20 50.0	
	comp=Z,1µm,22.6s						
PVCC	**Panska Ves**	**80.35**	**320**	⇑*i*P	**P**	**13 39 32.4**	**+0.4**
PVCC				*e*pP	pP	13 39 44.6	-1.4
MOA	**Molln**	**80.36**	**318**	⇑*i*P	**P**	**13 39 31.9**	**-0.2**
	comp=Z,878nm,4.0s						
SDI	**San Donato**	**80.38**	**311**	*e*P	**P**	**13 39 31.4**	**-0.9**
VOY	**Vojsko**	**80.51**	**316**	*e*P	**P**	**13 39 32.8**	**-0.1**
VOY				*e*		13 39 38.4	
BSD	**Bornholm Skovb**	**80.52**	**325**	*i* P	**P**	**13 39 32.3**	**-0.5**
BSD				*i*	pP	13 39 46.1	-0.7
BSD				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.6						
BSD	**Bornholm Skovb**	**80.52**	**325**	*i* P	**P**	**13 39 32.3**	**-0.5**
	comp=Z,76nm,0.9s,mb5.6						
BSD				*i*	pP	13 39 46.1	-0.7
TRI	**Trieste**	**80.59**	**315**	*e*P	**P**	**13 39 32.8**	**-0.5**
PTQR	**Pietraquaria**	**80.69**	**312**	*e*P	**P**	**13 39 34.1**	**+0.1**
AQU	**L’Aquila**	**80.70**	**312**	*e*P	**P**	**13 39 33.9**	**-0.1**
AQU				pmax	pmax		
	comp=Z,86nm,0.7s,mb5.8						
AQU	**L’Aquila**	**80.70**	**312**	*e*P	**P**	**13 39 34.4**	**+0.3**
BRG	**Berggiesshubel**	**80.77**	**321**	⇑*i*P	**P**	**13 39 34.6**	**+0.4**
BRG				*i*	pP	13 39 48.6	+0.4
BRG				pmax	pmax		
	comp=Z,107nm,1.4s,mb5.6						
BRG	**Berggiesshubel**	**80.77**	**321**	⇑*i*P	**P**	**13 39 34.6**	**+0.4**
	comp=Z,107nm,1.4s,mb5.6						
BRG				*i*	pP	13 39 48.6	+0.4
BRG				*i*		13 40 06.7	
BRG				*e*S	S	13 50 01.0	+24
BRG				*e*		13 50 02.5	

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BRG                                   e        13 50 09.1
BRG                                   eSS   SS 13 55 02.0 +8.0
BRG                                   eP'P'    14 06 05.9
BRG                                    LR   LR
       comp=Z,2µm,19.9s,MS5.4
TRO    Tromso            80.78 340    eP    P  13 39 32.4 -1.5
GEC2   GERESS Array S    80.80 319    eP    P  13 39 34.8 +0.4
GEC2                                  eS    S  13 49 38.0 +0.7
GEC2                                   pmax pmax
       comp=Z,129nm,1.1s,mb5.8
GEC2   GERESS Array S    80.80 319    eP    P  13 39 34.8 +0.4
       comp=Z,129nm,1.1s,mb5.8
GEC2                                  eS    S  13 49 38.0 +0.7
GERES  GERESS Array B    80.80 319     P    P  13 39 34.8 +0.4
       comp=Z,53nm,0.9s,mb5.5,baz=90,slow=5.3,SNR=211
GERES                                 pP    pP 13 39 48.8 +0.4
       comp=Z,19nm,0.6s,baz=93,slow=5.1,SNR=5.6
GERES                                 S     S  13 49 37.0 -0.3
       comp=Z,0.3nm,0.6s,baz=20,slow=16,SNR=3.2
GERES                                 sS       13 50 02.7
       comp=Z,0.3nm,0.3s,baz=149,slow=7.8,SNR=2.3
KHC    Kasperske Hory    80.90 319⇑iP   P  13 39 35.0 +0.1
KHC                                   epP   pP 13 39 47.9 -1.0
PTCC   Patocco-Chiusa    80.91 316    eP    P  13 39 35.1 +0.1
NRCA   Norcia            80.93 312    eP    P  13 39 35.0 -0.2
KBA    Koelnbreinsper    80.94 317⇑iP   P  13 39 34.9 -0.3
       comp=Z,610nm,3.7s
RUE    Ruedersdorf       80.98 322    eP    P  13 39 35.5 +0.3
       comp=Z,201nm,1.0s,mb6.0
GMNA   Gemona            80.98 316    eP    P  13 39 35.5 +0.1
SNTG   Esanatoglia       81.07 313    eP    P  13 39 36.0 +0.1
ARV    Arcevia           81.08 313    eP    P  13 39 36.6 +0.6
FSSB   Fossombrone       81.21 313    eP    P  13 39 37.2 +0.5
MNS    Montasola         81.24 312    eP    P  13 39 36.2 -0.6
FVI    Forni Avoltri     81.31 316    eP    P  13 39 37.0 -0.1
WET    Wettzell          81.36 319    eP    P  13 39 37.6 +0.3
WET                                   eS    S  13 49 44.0 +1.0
WET                                    pmax pmax
       comp=Z,87nm,1.3s,mb5.5
WET    Wettzell          81.36 319    eP    P  13 39 37.6 +0.3
       comp=Z,87nm,1.3s,mb5.5
WET                                   eS    S  13 49 44.0 +1.0
CLL    Collm             81.39 321⇑iP   P  13 39 37.3 -0.1
CLL                                   e     pP 13 39 51.0 -0.4
CLL                                    pmax pmax
       comp=Z,68nm,1.3s,mb5.4
CLL    Collm             81.39 321⇑iP   P  13 39 37.3 -0.1
       comp=Z,68nm,1.3s,mb5.4
CLL                                   e     pP 13 39 51.0 -0.4
CLL    Collm             81.39 321 ⇑P   P  13 39 37.3 -0.1
       comp=Z,logA/T=1.7,mb5.4
CLL                                   i        13 39 39.9
CLL                                   e*SP  sP 13 39 51.0 -5.7
CLL                                   e        13 39 58.0
RSM    Repubblica di     81.45 314    eP    P  13 39 38.8 +0.9
NKC    Novy Kostel       81.69 320⇑iP   P  13 39 39.2 +0.2
NKC                                   e*PP  pP 13 39 53.3 +0.3
NKC                                    MLR  MLR
       comp=Z,2µm,11.1s,MS5.8
CRE    Caprese Michel    81.81 313    eP    P  13 39 39.8  0.0
SFI    Santa Sofia       81.89 314    eP    P  13 39 41.3 +1.1
MOR8   Moi Rana          81.91 336⇑iP   P  13 39 39.0 -0.8
       comp=Z,152nm,0.9s,mb5.9
MOR8   Moi Rana          81.91 336⇑iP   P  13 39 39.0 -0.8
MOR8                                   AMb  AMB 13 39 41.0
       comp=Z,152nm,0.9s,mb6.0
PGD    Poggio Sodo       81.98 313    eP    P  13 39 41.8 +1.2
COP    Copenhagen        81.98 325    eP    pP 13 39 57.0 +2.6
COP                                    pmax pmax
       comp=Z,65nm,0.9s,mb5.6
COP    Copenhagen        81.98 325    i P   pP 13 39 57.0 +2.6
       comp=Z,65nm,0.9s
CTI    Castel Tesino     82.08 316    eP    P  13 39 41.7 +0.6
WTTA   Wattenberg        82.12 317⇑iP   P  13 39 41.0 -0.3
       comp=Z,580nm,3.0s
WTTA   Wattenberg        82.12 317⇑iP   P  13 39 41.0 -0.3
WTTA                                   pmax pmax
       comp=Z,580nm,3.0s
WATA   Walderalm         82.16 317⇑iP   P  13 39 40.8 -0.7
       comp=Z,113nm,1.7s,mb5.5
WATA   Walderalm         82.16 317⇑iP   P  13 39 40.8 -0.7
WATA                                   pmax pmax
       comp=Z,113nm,1.7s,mb5.5
MOX    Moxa              82.23 320    eP    P  13 39 42.0 +0.2
       comp=Z,74nm,1.6s,mb5.4
MOX                                   e     pP 13 39 59.4 +3.5
MOX                                    LR   LR
       comp=Z,1µm,19.0s,MS5.3
MOX    Moxa              82.23 320    i P   P  13 39 42.0 +0.2
MOX                                    pP   pP 13 39 59.0 +3.1
MOX                                    S    S  13 49 57.0 +5.0
MOX                                    L       14 24 04.0
FUR    Furstenfeldbru    82.38 318    eP    P  13 39 43.2 +0.6
SQTA   Sankt Quirin      82.41 317⇑iP   P  13 39 42.5 -0.3
       comp=Z,67nm,1.3s,mb5.4
SQTA   Sankt Quirin      82.41 317⇑iP   P  13 39 42.5 -0.3
SQTA                                   pmax pmax
       comp=Z,67nm,1.3s,mb5.4
GRA1   Grafenberg Arr    82.46 319    eP    P  13 39 43.6 +0.6
       comp=Z,131nm,1.3s,mb5.7
GRA1                                  epP   pP 13 39 57.9 +0.9
GRA1                                  eS    S  13 49 56.3 +2.0
GRA1                                   LR   LR
       comp=Z,2µm,20.5s,MS5.4
GRF    Grafenberg Arr    82.46 319    eP    P  13 39 43.6 +0.6
GRF                                   e*PP  pP 13 39 57.9 +0.9
GRF                                   eS    S  13 49 56.3 +2.0
GRF                                    pmax pmax
       comp=Z,131nm,1.3s,mb5.7
GRF                                    MLR  MLR
       comp=Z,2µm,20.5s,MS5.4
GRF    Grafenberg Arr    82.46 319    eP    P  13 39 43.6 +0.6
       comp=Z,131nm,1.3s,mb5.7
GRF                                   epP   pP 13 39 57.9 +0.9
GRF                                   eS    S  13 49 56.3 +2.0
GRF                                    LR   LR
       comp=Z,2µm,20.5s,MS5.4
LOF    Lofoten           82.48 338    eP    P  13 39 45.3 +2.6
MOTA   Moosalm           82.48 317⇓iP   P  13 39 42.7 -0.4
       comp=Z,28nm,1.0s,mb5.2
MOTA   Moosalm           82.48 317⇓iP   P  13 39 42.7 -0.4
MOTA                                   pmax pmax
       comp=Z,28nm,1.0s,mb5.2
GRFL   Gerfalco          82.51 313    eP    P  13 39 42.9 -0.5
ZCCA   Zocca             82.52 314    eP    P  13 39 45.0 +1.6
BDI    Bagni Di Lucca    82.79 314    eP    P  13 39 44.1 -0.7
NSS    Namsos            82.79 334    eP    P  13 39 43.2 -1.2
       comp=Z,172nm,1.2s,mb6.0
NSS    Namsos            82.79 334    eP    P  13 39 43.2 -1.2
NSS                                    AMb  AMB 13 39 48.1
       comp=Z,172nm,1.2s,mb6.0
GSCL   Gusciola          82.80 314    eP    P  13 39 46.1 +1.3
SAL    Salo              82.85 315    eP    P  13 39 45.9 +0.8
NB2    NORSAR Subarra    82.92 331     P    P  13 39 44.6 -0.5
       comp=Z,84nm,1.2s,mb5.6,baz=89,slow=5.8
NB2    NORSAR Subarra    82.92 331     P    P  13 39 44.6 -0.5
NB2                                    pmax pmax
       comp=Z,84nm,1.2s,mb5.7
NB2    NORSAR Subarra    82.92 331     P    P  13 39 44.6 -0.5
       baz=89,slow=5.9
NOA    NORSAR Array B    82.92 331     P    P  13 39 44.6 -0.5
       comp=Z,28nm,0.9s,mb5.3,baz=92,slow=5.6,SNR=28
NOA                                    pP   pP 13 40 00.7 +1.5
       comp=Z,34nm,0.8s,baz=95,slow=4.9,SNR=9.0
NOA                                    PP   PP 13 42 56.9 -0.9
       comp=Z,14nm,0.9s,baz=87,slow=8.5,SNR=5.4
NOA                                    LR   LR 14 22 39.5
       comp=Z,1µm,18.2s,MS5.3,baz=85,slow=40
ERBM   Eremo             82.92 314    eP    P  13 39 46.8 +1.3
SARO   Sassorosso        82.93 314     P    P  13 39 45.4 -0.2
VLC    Villacollemand    82.94 314    eP    P  13 39 45.0 -0.6
       comp=Z,78nm,1.1s,mb5.7
BRMO   Bormio            82.97 316    eP    P  13 39 46.2 +0.6
VALM                     83.04 314     P    P  13 39 47.0 +0.9
FUORN  Ofenpass          83.05 316⇑iP   P  13 39 46.8 +0.8
CLZ    Clausthal         83.05 322    eP    P  13 39 46.2 +0.3
       comp=Z,106nm,1.3s,mb5.7
NAO01  NORSAR Array S    83.07 331    eP    P  13 39 45.3 -0.5
       comp=Z,47nm,0.9s,mb5.5
VINC   Vinca             83.11 314     P    P  13 39 47.5 +1.1
RPZ    Rata Peaks        83.16 135     P    P  13 39 46.5 -0.1
       comp=Z,46nm,1.0s,mb5.5,baz=53,slow=2.9,SNR=13
RPZ                                    S    S  13 50 08.2 +6.7
       comp=Z,12nm,0.9s,baz=345,slow=16,SNR=3.2
RPZ                                    LR   LR 14 16 05.7
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       comp=Z,3µm,21.7s,MS5.6,baz=286,slow=35
BACM                     83.17 314     P    P  13 39 48.3 +1.6
GRAM                     83.17 314     P    P  13 39 47.9 +1.2
BERNI  Berninapass       83.21 316⇑iP   P  13 39 47.7 +0.8
DAVOX  Davos             83.31 316     P    P  13 39 48.2 +0.9
DAVOX                                  S    S  13 50 01.4 -1.5
       comp=Z,12nm,1.0s,baz=233,slow=23,SNR=8.4
DAVOX  Davos             83.31 316    i Pu     13 39 48.0
DAVOX  Davos             83.31 316⇑iP   P  13 39 48.0 +0.6
DAVA   Damuels           83.31 317⇑iP   P  13 39 47.5 +0.1
       comp=Z,2µm,4.4s
LIENZ  Alp Oberkamor     83.58 317⇑iP   P  13 39 49.2 +0.5
VDL    Val di Lei        83.59 316    i Pu  P  13 39 49.2 +0.4
VDL    Val di Lei        83.59 316⇑iP   P  13 39 49.2 +0.4
QRZ    Quartz Range      83.61 132     PN   P  13 39 49.0  0.0
QRZ    Quartz Range      83.61 132     PN   P  13 39 49.0  0.0
BOB    Bobbio (Coli)     83.61 314    eP    P  13 39 49.8 +0.8
PLONS  Plons             83.65 317⇑iP   P  13 39 49.5 +0.4
MUD    Monsted U'grnd    83.83 326    i P   P  13 39 55.7 +5.9
MUD                                    pmax pmax
       comp=Z,82nm,1.0s,mb5.8
MUD    Monsted U'grnd    83.83 326    i P   P  13 39 55.7 +5.9
       comp=Z,82nm,1.0s,mb5.8
MUD    Monsted U'grnd    83.83 326⇓iP   pP 13 40 08.3 +4.4
       comp=Z,111nm,1.1s
MUGIO  Muggio            83.89 316⇑iP   P  13 39 49.5 -0.9
LLS    Linth-Limmern     83.91 316    i Pu     13 39 50.8
LLS    Linth-Limmern     83.91 316⇑iP   P  13 39 50.8 +0.4
WEIN   Weingarten        83.92 317⇑iP   P  13 39 50.5  0.0
PGF    Pioggiola         83.96 312⇑iP   P  13 39 51.0 +0.2
       comp=Z,65nm,0.7s,mb5.6
PGF    Pioggiola         83.96 312⇑iP   P  13 39 51.0 +0.2
PGF                                    pmax pmax
       comp=Z,32nm,0.7s,mb5.6
WILA   Wila              83.97 317⇑iP   P  13 39 50.9 +0.2
TOD    Tromm             84.03 319    eP    P  13 39 51.0  0.0
SPAK   Spaichingen       84.05 318    eP    P  13 39 51.5 +0.4
VAI    Varese            84.08 315    eP    P  13 39 50.6 -0.7
MUO    Muotathal         84.16 317⇑iP   P  13 39 52.3 +0.6
FLACH  Flaach            84.20 317    i Pu     13 39 51.8
TNS    Taunus Mts        84.25 320    eP    P  13 39 52.5 +0.4
PCP    Pian Castagno     84.26 314     P    P  13 39 52.7 +0.4
BNALP  Bannalp           84.31 316⇑iP   P  13 39 52.8 +0.4
BFO    Black Forest      84.35 318    eP    P  13 39 52.4 -0.2
BFO                                    pmax pmax
       comp=Z,47nm,1.2s,mb5.5
BFO    Black Forest      84.35 318    eP    P  13 39 52.4 -0.2
       comp=Z,47nm,1.2s,mb5.5
HASLI  Hasliberg         84.50 316⇑iP   P  13 39 53.6 +0.2
FIN    Finale Ligure     84.51 314    eP    P  13 39 53.6 +0.1
SULZ   Sulz-Cheisache    84.51 317⇑iP   P  13 39 53.3 -0.1
FELD   Feldberg          84.58 318    eP    P  13 39 53.7 -0.1
MCGN   Macugnaga         84.63 316    eP    P  13 39 54.6 +0.6
ORX    Oropa             84.64 315     P    P  13 39 54.5 +0.4
LANF   Langenberg        84.69 319    eP    P  13 39 54.6 +0.3
IMI    Imperia           84.75 314     P    P  13 39 54.5 -0.2
ROB    Roburent          84.75 314     P    P  13 39 55.0 +0.3
TRAV                     84.81 315     P    P  13 39 54.0 -0.9
MONE   Monesi            84.84 314     P    P  13 39 55.8 +0.7
ABH    Alteburg          84.84 320    eP    P  13 39 55.2 +0.2
LIBD   Limburg           84.84 318    eP    P  13 39 55.3 +0.2
WIMIS  Wimmis            84.86 316⇑iP   P  13 39 55.5 +0.3
LKBD   Leukerbad         84.87 316⇑iP   P  13 39 55.7 +0.5
NEGI   Negi              84.88 313     P    P  13 39 55.6 +0.3
KIWB   Kanaga Island     84.89  38    eP    P  13 39 55.0 -0.2
BBS    Basel-Blauen      84.92 317    eP    P  13 39 55.4 -0.1
SAOF   Saorge            84.98 314    eP    P  13 39 56.1 +0.2
WLS    Welschbruch       85.00 318    eP    P  13 39 55.6 -0.3
DIX    Grande Dixence    85.03 316    i Pu     13 39 57.0
DIX    Grande Dixence    85.03 316⇑iP   P  13 39 57.0 +1.0
CDF    Champ du Feu      85.05 318⇑iP   P  13 39 56.0 -0.1
       comp=Z,32nm,0.8s,mb5.2
CDF    Champ du Feu      85.05 318⇑iP   P  13 39 56.0 -0.1
CDF                                    pmax pmax
       comp=Z,16nm,0.8s,mb5.2
ENR    Entracque         85.08 314     P    P  13 39 56.3  0.0
SBF    Sospel            85.08 313⇑iP   P  13 39 56.6 +0.3
       comp=Z,174nm,0.7s,mb6.0
SBF    Sospel            85.08 313⇑iP   P  13 39 56.6 +0.3
SBF                                    pmax pmax
       comp=Z,87nm,0.7s,mb6.0
AUTN   L'Aution          85.08 314    eP    P  13 39 56.9 +0.6
SENIN  Lac Senin         85.09 316⇑iP   P  13 39 57.0 +0.6
ECH    Echery            85.14 318    eP    P  13 39 56.3 -0.2
STV2   Anna di Valdie    85.14 314     P    P  13 39 57.3 +0.6
STV    Sta Anna Valdi    85.14 314     P    P  13 39 57.3 +0.6
RUP    Ruppelstein       85.16 319    eP    P  13 39 56.9 +0.3
RSP    Reno Superiore    85.16 315     P    P  13 39 56.6 -0.1
MOF    Molkenrain        85.17 318    eP    P  13 39 56.5 -0.2
BHB    Bricherasio       85.17 314     P    P  13 39 54.8 -2.0
ODD1   Odda              85.17 330    eP    P  13 39 57.0 +0.6
TOUF   Mont Tournerai    85.21 314    eP    P  13 39 57.6 +0.6
LSD    Ceresole Reale    85.22 315     P    P  13 39 57.5 +0.5
GRYON  Gryon             85.23 316⇑iP   P  13 39 57.4 +0.4
WTSB   Winterswijk       85.26 322    eP    P  13 39 57.5 +0.5
       comp=Z,72nm,1.2s,mb5.7
WTSB                                  ex    x  13 40 14.1
BLS5   Blasjo            85.27 329    eP    P  13 39 58.3 +1.4
       comp=Z,61nm,1.1s,mb5.7
BLS5   Blasjo            85.27 329    eP    P  13 39 58.3 +1.4
BLS5                                   AMb  AMB 13 40 00.7
       comp=Z,61nm,1.1s,mb5.7
BLS5                                  esP   sP 13 40 15.4 -0.8
MVIF   Mont Vial         85.28 314    eP    P  13 39 57.8 +0.5
PZZ    Prazzo            85.30 314     P    P  13 39 57.8 +0.4
FENE   Fenestrelle       85.30 315     P    P  13 39 57.2 -0.3
TORNY  Torny             85.32 316⇑iP   P  13 39 57.8 +0.3
SALAN  Lac Salanfe       85.33 316⇑iP   P  13 39 58.0 +0.5
HINF   Hinteralfeld      85.35 317⇑iP   P  13 39 57.3 -0.3
LOMF   Lomont            85.39 317    eP    P  13 39 57.9 +0.1
CALN   Calern            85.47 313    eP    P  13 39 59.0 +0.7
SURF   Saint Ours        85.50 314    eP    P  13 39 59.1 +0.7
RRL    Cesana Torines    85.50 315     P    P  13 39 57.7 -0.7
LPG    La Plagne         85.51 315⇑iP   P  13 39 59.1 +0.7
       comp=Z,123nm,0.8s,mb5.9
LPG    La Plagne         85.51 315⇑iP   P  13 39 59.1 +0.7
LPG                                    pmax pmax
       comp=Z,62nm,0.8s,mb5.9
LPL    La Plagne         85.52 315⇑iP   P  13 39 59.0 +0.5
       comp=Z,148nm,0.8s,mb6.0
LPL    La Plagne         85.52 315⇑iP   P  13 39 59.0 +0.5
LPL                                    pmax pmax
       comp=Z,74nm,0.8s,mb6.0
MBDF   Montbardon        85.52 314⇑iP   P  13 39 58.2 -0.3
       comp=Z,54nm,0.7s,mb5.6
MBDF   Montbardon        85.52 314⇑iP   P  13 39 58.2 -0.3
MBDF                                   pmax pmax
       comp=Z,27nm,0.7s,mb5.6
BNI    Bardonecchia      85.58 315    eP    P  13 39 58.4 -0.4
BNI                                    pmax pmax
       comp=Z,42nm,0.8s,mb5.7
BNI    Bardonecchia      85.58 315    eP    P  13 39 58.4 -0.4
       comp=Z,42nm,0.8s,mb5.7
FRF    La Foret Royal    85.66 313⇑iP   P  13 39 59.6 +0.4
       comp=Z,290nm,1.3s,mb6.0
FRF    La Foret Royal    85.66 313⇑iP   P  13 39 59.6 +0.4
FRF                                    pmax pmax
       comp=Z,145nm,1.3s,mb6.0
HAU    Haudompre         85.69 318⇑iP   P  13 39 59.2  0.0
       comp=Z,100nm,0.8s,mb5.8
HAU                                   eR
       comp=Z,1µm,23.0s
HAU    Haudompre         85.69 318⇑iP   P  13 39 59.2  0.0
HAU                                    pmax pmax
       comp=Z,50nm,0.8s,mb5.8
HAU                                    MLR  MLR
       comp=Z,1µm,23.0s,MS5.3
WLF    Walferdange       85.75 319    eP    P  13 39 59.7 +0.2
WLF                                    pmax pmax
       comp=Z,45nm,1.1s,mb5.6
WLF    Walferdange       85.75 319    eP    P  13 39 59.7 +0.2
       comp=Z,46nm,1.1s,mb5.6
LMR    La Mourre         85.77 313⇑iP   P  13 40 00.1 +0.3
       comp=Z,167nm,1.2s,mb5.8
LMR    La Mourre         85.77 313⇑iP   P  13 40 00.1 +0.3
LMR                                    pmax pmax
       comp=Z,84nm,1.2s,mb5.8
HGN    Heimansgroeve     85.85 320    eP    P  13 39 59.2 -0.8
       comp=Z,66nm,3.6s
HGN                                   ex    x  13 40 16.5
THEF   They Montfort     85.92 318    eP    P  13 40 00.3 -0.1
CABF   La Chapelle       85.92 316⇑iP   P  13 40 00.9 +0.5
       comp=Z,74nm,0.9s,mb5.6
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CABF   La Chapelle       85.92 316⇑iP   P  13 40 00.9 +0.5
CABF                                   pmax pmax
       comp=Z,37nm,0.9s,mb5.6
GDM    Grand'Maison      85.97 315    eP    P  13 40 01.0 +0.3
OG25   Le Caire          86.04 314    eP    P  13 40 01.7 +0.7
TAVF   Tavernes          86.08 313    eP    P  13 40 02.2 +0.9
CASM   Ain Smara         86.12 306     P    P  13 40 04.0 +2.3
ORIF   Oris-en-Rattie    86.15 315⇑iP   P  13 40 02.2 +0.6
       comp=Z,134nm,1.2s,mb5.7
ORIF                                  eR
       comp=Z,2µm,20.8s
CTEI   Djebel Teioual    86.20 306     P    P  13 40 06.0 +4.0
GRN    Grenoble          86.23 315    eP    P  13 40 02.6 +0.7
BKZ    Black Stump Fm    86.30 130     PN   P  13 40 01.4 -1.0
BKZ    Black Stump Fm    86.30 130     PN   P  13 40 01.4 -1.0
PUYF   Puyloubier        86.35 313    eP    P  13 40 02.9 +0.3
SMRF   Simiane la Rot    86.41 314⇑iP   P  13 40 03.8 +0.9
       comp=Z,140nm,1.3s,mb5.7
MEZF   Maizieres J'vi    86.53 318⇑iP   P  13 40 03.8 +0.5
GIVF   Givet             86.59 320⇑iP   P  13 40 04.0 +0.4
       comp=Z,47nm,0.9s,mb5.4
GIVF   Givet             86.59 320⇑iP   P  13 40 04.0 +0.4
GIVF                                   pmax pmax
       comp=Z,23nm,0.9s,mb5.4
URZ    Urewera           86.64 129     P    P  13 40 03.4 -0.7
       comp=Z,104nm,1.1s,mb6.0,baz=342,slow=2.5,SNR=23
URZ                                    pP   pP 13 40 18.5 +0.2
       comp=Z,81nm,0.9s,baz=360,slow=13,SNR=9.8
URZ                                    LR   LR 14 18 13.4
       comp=Z,4µm,21.8s,MS5.7,baz=117,slow=35
MWZ    Matawai           86.97 129     PN   P  13 40 04.8 -0.9
MWZ    Matawai           86.97 129     PN   P  13 40 04.8 -0.9
BAIF   Baives            86.99 320⇑iP   P  13 40 06.0 +0.5
       comp=Z,80nm,0.9s,mb5.6
BAIF   Baives            86.99 320⇑iP   P  13 40 06.0 +0.5
BAIF                                   pmax pmax
       comp=Z,40nm,0.9s,mb5.7
SET    Setif             87.01 306     P    P  13 40 08.0 +2.0
VIVF   Saint-Julien-l    87.01 315⇑iP   P  13 40 06.2 +0.4
       comp=Z,115nm,1.2s,mb5.7
VIVF   Saint-Julien-l    87.01 315⇑iP   P  13 40 06.2 +0.4
VIVF                                   pmax pmax
       comp=Z,58nm,1.2s,mb5.7
SMF    Signal de Mont    87.47 316⇑iP   P  13 40 08.0 +0.1
       comp=Z,74nm,0.8s,mb5.7
SMF    Signal de Mont    87.47 316⇑iP   P  13 40 08.0 +0.1
SMF                                    pmax pmax
       comp=Z,37nm,0.8s,mb5.7
LASF   Ste Croix         87.64 314⇑iP   P  13 40 09.6 +0.7
       comp=Z,71nm,1.1s,mb5.5
SSF    Saint Saulge      87.66 317⇑iP   P  13 40 09.3 +0.4
       comp=Z,39nm,0.9s,mb5.4
SSF    Saint Saulge      87.66 317⇑iP   P  13 40 09.3 +0.4
SSF                                    pmax pmax
       comp=Z,20nm,0.9s,mb5.3
PLDF   La Plantade       87.67 316    eP    P  13 40 09.6 +0.7
AVF    Avril sur Loir    87.79 317⇑iP   P  13 40 09.6 +0.1
       comp=Z,180nm,1.5s,mb5.8
AVF    Avril sur Loir    87.79 317⇑iP   P  13 40 09.6 +0.1
AVF                                    pmax pmax
       comp=Z,90nm,1.5s,mb5.8
LBL    Lubilhac          87.99 315    eP    P  13 40 11.4 +0.9
AGO    Saint Agoulin     88.00 316    eP    P  13 40 11.1 +0.6
PYM    Petit Puy Mans    88.11 316    eP    P  13 40 11.8 +0.7
BGF    Bois d'Agland     88.16 316⇑iP   P  13 40 11.9 +0.6
       comp=Z,220nm,1.5s,mb5.9
BGF    Bois d'Agland     88.16 316⇑iP   P  13 40 11.9 +0.6
BGF                                    pmax pmax
       comp=Z,110nm,1.5s,mb5.9
HYF    Humbligny         88.24 317    eP    P  13 40 12.3 +0.7
TNA    Tin City          88.59  24    eP    P  13 40 12.8  0.0
       comp=Z,20nm,0.7s,mb5.5
TCF    Toulx Ste Croi    88.62 316⇑iP   P  13 40 14.3 +0.8
       comp=Z,125nm,1.5s,mb5.7
TCF    Toulx Ste Croi    88.62 316⇑iP   P  13 40 14.3 +0.8
TCF                                    pmax pmax
       comp=Z,62nm,1.5s,mb5.7
CAF    Calviac           88.85 315⇑iP   P  13 40 15.5 +0.9
       comp=Z,54nm,1.1s,mb5.5
CAF    Calviac           88.85 315⇑iP   P  13 40 15.5 +0.9
CAF                                    pmax pmax
       comp=Z,27nm,1.1s,mb5.5
MTLF   Montolieu         88.89 313⇑iP   P  13 40 15.5 +0.7
       comp=Z,103nm,1.2s,mb5.7
MTLF   Montolieu         88.89 313⇑iP   P  13 40 15.5 +0.7
MTLF                                   pmax pmax
       comp=Z,52nm,1.2s,mb5.7
RJF    Les Rejaudoux     89.20 315⇑iP   P  13 40 17.1 +0.9
       comp=Z,194nm,1.5s,mb5.9
RJF                                   eR
       comp=Z,1µm,23.0s
RJF    Les Rejaudoux     89.20 315⇑iP   P  13 40 17.1 +0.9
RJF                                    pmax pmax
       comp=Z,97nm,1.5s,mb5.9
RJF                                    MLR  MLR
       comp=Z,1µm,23.0s,MS5.2
EMIR   Miracle           89.54 312     P    P  13 40 18.2 +0.2
       comp=Z,26nm,0.6s,mb5.7
VNDA   Vanda             89.69 168    eP    P  13 40 17.7 -0.2
VNDA                                   pmax pmax
       comp=Z,83nm,1.3s
VNDA   Vanda             89.69 168     P    P  13 40 18.2 +0.3
       comp=Z,5.1nm,0.8s,mb4.9,baz=272,slow=9.6,SNR=5.4
VNDA                                   pP   pP 13 40 33.8 +1.7
       comp=Z,60nm,1.3s,baz=321,slow=5.6,SNR=12
VNDA                                   S       13 50 40.5
       comp=Z,1.7nm,1.0s,baz=94,slow=21,SNR=3.0
VNDA                                   sS      13 51 04.4
       comp=Z,1.1nm,0.9s,baz=84,slow=18,SNR=3.0
VNDA                                   LR   LR 14 19 09.7
       comp=Z,4µm,18.1s,MS5.9,baz=301,slow=35
VNDA   Vanda             89.69 168    eP    P  13 40 17.7 -0.1
       comp=Z,83nm,1.4s,mb5.9
LFF    La Frestale       89.78 315⇑iP   P  13 40 20.1 +1.1
EPOB   Poblet            89.93 311     P    P  13 40 20.9 +1.1
       comp=Z,9.2nm,0.7s,mb5.2
LDF    La Druitiere      89.94 319⇑iP   P  13 40 20.2 +0.5
       comp=Z,91nm,0.9s,mb5.8
LDF    La Druitiere      89.94 319⇑iP   P  13 40 20.2 +0.5
LDF                                    pmax pmax
       comp=Z,45nm,0.9s,mb5.8
EIBI   Ibiza             89.98 309     P    P  13 40 21.4 +1.3
       comp=Z,61nm,1.1s,mb5.8
FLN    La Foliniere      90.16 319⇑iP   P  13 40 21.0 +0.3
       comp=Z,136nm,1.0s,mb6.0
FLN                                   eR
       comp=Z,2µm,22.5s
FLN    La Foliniere      90.16 319⇑iP   P  13 40 21.0 +0.3
FLN                                    pmax pmax
       comp=Z,68nm,1.0s,mb5.9
FLN                                    MLR  MLR
       comp=Z,2µm,22.5s,MS5.5
HPK    Haverah Park      90.17 324    eP    P  13 40 21.1 +0.5
HPK                                    AMb  AMB 13 40 25.9
       comp=Z,278nm,1.3s,mb6.4
MFF    Saint Martin d    90.20 317⇑iP   P  13 40 21.4 +0.5
       comp=Z,111nm,1.1s,mb5.8
MFF    Saint Martin d    90.20 317⇑iP   P  13 40 21.4 +0.5
MFF                                    pmax pmax
       comp=Z,56nm,1.1s,mb5.8
KBI1   Birley Grange     90.21 323    eP    P  13 40 20.9 +0.2
KBI1                                   AMb  AMB 13 40 22.2
       comp=Z,78nm,2.0s,mb5.7
EPF    Esparros          90.29 313    eP    P  13 40 23.0 +1.6
LHO    Holmfirth         90.36 324    eP    P  13 40 21.9 +0.4
LHO                                    AMb  AMB 13 40 23.1
       comp=Z,68nm,1.1s,mb5.9
EBR    Ebro Roquetas     90.43 311    eP    P  13 40 24.2 +2.1
KWE    Weaver Farm       90.43 323    eP    P  13 40 22.0 +0.2
KWE                                    AMb  AMB 13 40 28.6
       comp=Z,76nm,2.2s,mb5.6
GRR    Gorron            90.46 318⇑iP   P  13 40 22.7 +0.6
       comp=Z,89nm,1.0s,mb5.7
GRR    Gorron            90.46 318⇑iP   P  13 40 22.7 +0.6
GRR                                    pmax pmax
       comp=Z,45nm,1.0s,mb5.8
EBIE   Bielsa            90.47 313     P    P  13 40 22.1 -0.2
       comp=Z,15nm,0.8s,mb5.4
ERTA   Horta de San J    90.54 311     P    P  13 40 24.0 +1.4
       comp=Z,36nm,1.7s,mb5.4
DAG    Danmarks Havn     90.72 348⇓iP   P  13 40 22.4 -0.3
DAG                                    pmax pmax
       comp=Z,23nm,0.6s,mb5.7
DAG    Danmarks Havn     90.72 348⇓iP   P  13 40 22.4 -0.3
       comp=Z,23nm,0.6s,mb5.7
SBA    Scott Base        90.79 168     P    P  13 40 24.6 +1.6
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SBA				pmax	pmax		
	comp=Z,110nm,1.4s,mb6.0						
SBA	Scott Base	90.79	168	P	P	13 40 24.6	+1.6
	comp=Z,112nm,1.4s,mb6.0						
ESK	Eskdalemuir	90.86	326	*e*P	P	13 40 24.3	+0.5
ESK				AMb	AMB	13 40 24.6	
	comp=Z,72nm,2.5s,mb5.6						
ETSF	Etsaut	90.96	313	⇑*i*P	P	13 40 25.6	+1.0
	comp=Z,74nm,1.1s,mb5.6						
ETSF	Etsaut	90.96	313	⇑*i*P	P	13 40 25.6	+1.0
ETSF				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.6						
EMOS	Mosqueruela	91.22	310	P	P	13 40 28.0	+2.1
	comp=Z,59nm,1.2s,mb5.8						
SJPF	Ste Jean	91.42	313	⇑*i*P	P	13 40 26.8	+0.1
	comp=Z,152nm,1.4s,mb5.8						
SJPF	Ste Jean	91.42	313	⇑*i*P	P	13 40 26.8	+0.1
SJPF				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.8						
SGMF	Saint Gilles	91.60	319	⇑*i*P	P	13 40 27.9	+0.5
	comp=Z,167nm,1.2s,mb5.9						
SGMF	Saint Gilles	91.60	319	⇑*i*P	P	13 40 27.9	+0.5
SGMF				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.9						
EALK	Alkurruntz	91.61	313	P	P	13 40 28.0	+0.4
	comp=Z,21nm,1.1s,mb5.4						
QUIF	Quistinic	92.05	318	⇑*i*P	P	13 40 29.7	+0.2
	comp=Z,261nm,1.7s,mb6.0						
QUIF	Quistinic	92.05	318	⇑*i*P	P	13 40 29.7	+0.2
QUIF				pmax	pmax		
	comp=Z,131nm,1.7s,mb6.0						
ROSF	Rostrenen	92.06	319	*e*P	P	13 40 30.0	+0.5
	comp=Z,93nm,1.2s,mb5.7						
ROSF	Rostrenen	92.06	319	*e*P	P	13 40 30.0	+0.5
ROSF				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.7						
ELAN	Lanestosa	93.00	314	P	P	13 40 34.2	+0.2
	comp=Z,19nm,1.0s,mb5.5						
EVIA	Vianos	93.01	309	P	P	13 40 35.6	+1.5
EVIA				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.5						
EVIA	Vianos	93.01	309	P	P	13 40 35.6	+1.5
	comp=Z,17nm,0.9s,mb5.5						
EBER	Berja	93.57	307	P	P	13 40 37.5	+0.8
	comp=Z,48nm,1.1s,mb5.8						
EQES	Quesada	93.58	308	P	P	13 40 37.1	+0.4
	comp=Z,14nm,1.7s,mb5.1						
ESDC	Sonseca Array	93.97	310	P	P	13 40 39.1	+0.7
	comp=Z,2.5nm,0.6s,mb4.8,baz=62,slow=3.5,SNR=11						
ESDC				pP	pP	13 40 55.2	+2.5
	comp=Z,5.3nm,0.8s,baz=59,slow=4.2,SNR=6.3						
ESDC				PKKPbc		13 57 42.3	
	comp=Z,2.1nm,0.8s,baz=275,slow=2.8,SNR=7.0						
ESDC	Sonseca Array	93.97	310	P	P	13 40 38.6	+0.2
	comp=Z,16nm,1.3s,mb5.3						
ESLA	Sonseca Array	93.97	310	PFAKE		13 40 50.0	+12
ESLA				LR	LR		
	comp=Z,7µm,19.0s,MS6.1						
IMA	Indian Mountai	94.13	22	*e*P	P	13 40 39.5	+1.0
EARI	Arriondas	94.26	314	P	P	13 40 37.3	-2.4
	comp=Z,13nm,1.1s,mb5.3						
SCO	Scoresbysund	94.30	343	*i* P	P	13 40 40.4	+1.2
SCO				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.4						
SCO	Scoresbysund	94.30	343	*i* P	P	13 40 40.4	+1.2
	comp=Z,12nm,0.8s,mb5.4						
QSPA	South Pole Qui	94.67	180	*e*P	P	13 40 41.9	+1.1
	comp=Z,22nm,1.2s,mb5.5						
EADA	Adamuz	94.69	309	P	P	13 40 39.4	-2.3
	comp=Z,10nm,1.1s,mb5.2						
SVW2	Sparrevohn	95.06	27	*e*P	P	13 40 43.5	+0.6
EMIJ	Mijas	95.11	307	P	P	13 40 40.4	-3.3
	comp=Z,9.3nm,0.7s,mb5.3						
EMIN	Mina Concepcio	96.39	309	P	P	13 40 48.5	-1.0
	comp=Z,2.6nm,0.8s,mb4.7						
EBAD	Badajoz	96.47	310	P	P	13 40 50.1	+0.3
	comp=Z,4.6nm,1.0s,mb4.9						
RSO	Redoubt South	96.58	28	*e*P	P	13 40 50.3	+0.5
COLA	College	96.84	23	*e*P	P	13 40 50.8	-0.1
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.1						
COLA	College	96.84	23	*e*P	P	13 40 50.8	-0.1
	comp=Z,6.1nm,0.8s,mb5.1						
MCK	McKinley	96.92	24	*e*P	P	13 40 50.5	-0.8
MCK				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.6						
MCK	McKinley	96.92	24	*e*P	P	13 40 50.5	-0.8
	comp=Z,35nm,1.4s,mb5.6						
SNAA	Sanae	96.99	198	S		13 51 21.5	
	comp=Z,0.4nm,0.7s,baz=287,slow=21,SNR=2.7						
SNAA				PKKPbc		13 57 31.9	
	comp=Z,1.3nm,0.8s,baz=354,slow=7.0,SNR=7.2						
SNAA				LR	LR	14 19 54.1	
	comp=Z,869nm,20.4s,MS5.2,baz=78,slow=32						
ILAR	Eielson Array	97.25	22	P	P	13 40 51.2	-1.6
	comp=Z,6.2nm,0.8s,mb5.1,baz=300,slow=4.9,SNR=7.4						
ILAR				PP	PP	13 44 49.0	-3.3
	comp=Z,2.8nm,0.7s,baz=292,slow=7.3,SNR=3.8						
ILAR				LR	LR	14 27 30.0	
	comp=Z,3µm,21.9s,MS5.7,baz=321,slow=37						
SUMG	Summit	97.39	347	*e*P	P	13 40 53.9	+0.6
	comp=Z,329nm,2.2s,mb6.4						
SLKM	Skilak Lake	97.72	27	*e*P	P	13 40 54.2	-0.8
PMR	Palmer	97.75	26	*e*P	P	13 40 53.9	-1.2
SML	Sawmill	98.00	25	*e*P	P	13 40 56.5	+0.3
DBIC	Dimbokro	99.33	278	P	P	13 41 03.3	-0.1
	comp=Z,1.8nm,1.0s,baz=113,slow=6.5,SNR=2.8						
DBIC				LR	LR	14 25 44.7	
	comp=Z,2µm,19.0s,MS5.7,baz=66,slow=35						
INK	Inuvik	99.70	16	*e*P	P	13 41 03.5	-0.3
INK				pmax	pmax		
	comp=Z,13nm,0.9s						
INK	Inuvik	99.70	16	P	P	13 41 03.7	-0.1
	comp=Z,8.6nm,0.8s,mb5.2,baz=309,slow=6.9,SNR=34						
INK	Inuvik	99.70	16	*e*P	P	13 41 03.5	-0.3
	comp=Z,13nm,0.9s,mb5.3						
DAWY	Dawson	100.40	21	*e*Pdif	P	13 41 05.9	-1.2
DLBC	Dease Lake	107.45	23	PKiKP		13 45 46.2	
	comp=Z,3.6nm,1.0s,baz=225,slow=7.1,SNR=3.0						
DLBC	Dease Lake	107.45	23	PKPdf		13 45 46.2	
YKA	Yellowknife Ar	109.21	14	P	Pdif	13 41 48.4	+2.4
YKA						13 56 55.9	
YKA	Yellowknife Ar	109.21	14	Pdiff	Pdif	13 41 48.4	+2.4
	comp=Z,0.6nm,0.8s,baz=327,slow=4.7,SNR=16						
YKA				PKiKP		13 45 49.4	
	comp=Z,1.3nm,0.9s,baz=324,slow=2.4,SNR=6.7						
YKA				PP	PP	13 46 14.3	-8.5
	comp=Z,2.4nm,1.0s,baz=322,slow=4.9,SNR=7.1						
YKA				PKKPbc		13 56 55.9	
	comp=Z,0.6nm,0.8s,baz=144,slow=3.0,SNR=7.6						
YKA				PKKP	PKKP	13 57 11.6	+8.5
	comp=Z,1.3nm,0.8s,baz=146,slow=3.1,SNR=9.9						
YKA	Yellowknife Ar	109.21	14	Pdif	Pdif	13 41 48.4	+2.4
YKA				PKPdf		13 45 49.4	
YKA				PP	PP	13 46 14.3	-8.5
YKA				PKKPbc		13 56 55.9	
YKA				PKKP	PKKP	13 57 11.6	+8.5
TBI	Tubuai	115.18	113	*e*PP	PP	13 47 01.5	-5.1
TBI				*e*PS	PS	13 56 49.5	+7.3
TBI				*e*SS	SS	14 03 05.4	+9.0
TBI				*e*LR	LR	14 20 46.9	
	comp=Z,3µm,23.5s						
FCC	Fort Churchill	116.27	5	*e*PKIKP	PKPdf	13 46 02.9	+0.6
OCWA	Octopus Mounta	117.38	29	*e*PKPdf	PKPdf	13 46 07.7	+3.1
EDM	Edmonton	117.46	19	*e*PKIKP	PKPdf	13 46 05.5	+0.8
SCHQ	Schefferville	118.77	348	PKP	PKPdf	13 46 08.2	+1.0
	comp=Z,5.2nm,0.4s,baz=12,slow=1.9,SNR=43						
SCHQ				PP	PP	13 47 26.4	-4.5
	comp=Z,5.4nm,0.7s,baz=14,slow=9.8,SNR=3.4						
SCHQ				PKKPbc		13 56 24.5	
	comp=Z,1.7nm,0.8s,baz=184,slow=4.9,SNR=5.2						
SCHQ	Schefferville	118.77	348	*e*PKPdf	PKPdf	13 46 08.0	+0.8
TBM	Table Mountain	119.47	27	P	PKPdf	13 46 10.5	+1.7
EBG	Ellensburg	119.68	27	P	PKPdf	13 46 11.1	+1.8
EPH	Ephrata	119.78	26	P	PKPdf	13 46 10.9	+1.5
NEW	Newport	120.14	24	*e*PKIKP	PKPdf	13 46 11.0	+0.9
WALA	Waterton Lakes	120.75	22	PKPdf	PKPdf	13 46 13.0	+1.8
HUMO	Hull Mountain	121.58	32	*e*PKPdf	PKPdf	13 46 14.7	+1.8
YBH	Yreka Blue Hor	122.32	33	PKP	PKPdf	13 46 13.6	-0.9
	comp=Z,3.2nm,0.8s,baz=149,slow=1.9,SNR=6.6						
KHMM	Horse Mountain	122.34	34	*e*PKPdf	PKPdf	13 46 16.7	+2.2
MSO	Missoula	122.57	23	*e*PKPdf	PKPdf	13 46 15.7	+0.9
BMO	Blue Mountains	122.72	27	*e*PKIKP	PKPdf	13 46 15.9	+0.8
CHMT	Chamberlain Mo	122.77	23	*e*PKPdf	PKPdf	13 46 16.1	+0.9
LASM	Arnica Sink	123.02	32	P	PKPdf	13 46 17.7	+1.9
WDC	Whiskeytown Da	123.20	34	*e*PKIKP	PKPdf	13 46 17.2	+1.0
MOD	Modoc	123.47	31	*e*PKPdf	PKPdf	13 46 18.4	+1.7
LBCM	Butte Creek Ri	123.68	33	P	PKPdf	13 46 19.1	+2.0
WVOR	Wild Horse Val	123.93	30	*e*PKIKP	PKPdf	13 46 19.4	+1.9
HOPS	Hopland	123.98	36	*e*PKPdf	PKPdf	13 46 19.8	+2.0
DGMT	Dagmar	124.37	15	*e*PKPdf	PKPdf	13 46 19.7	+1.5
ULM	Lac du Bonnet	124.41	9	PKP	PKPdf	13 46 18.9	+0.6
	comp=Z,19nm,0.9s,baz=345,slow=2.3,SNR=34						
ULM	Lac du Bonnet	124.41	9	*e*PKPdf	PKPdf	13 46 18.3	+0.1
NSHM	Saint Helena R	124.56	36	*e*PKPdf	PKPdf	13 46 21.4	+2.4
OHCM	Honcut	124.65	34	*e*PKPdf	PKPdf	13 46 20.3	+1.3
MCMT	McKenzie Canyo	124.65	24	*e*PKPdf	PKPdf	13 46 20.6	+1.8
TAOE	Nuku Hiva Isla	125.01	97	*e*PP	PP	13 48 03.1	-11
TAOE				*e*PS	PS	13 58 17.3	+7.4
TAOE				*e*SS	SS	14 04 59.0	-4.3
TAOE				*e*LR	LR	14 25 01.6	
HLID	Hailey	125.02	26	*e*PKPdf	PKPdf	13 46 21.5	+1.8
QLMT	Earthquake Lak	125.21	23	*e*PKPdf	PKPdf	13 46 22.3	+2.3
LAO	LASA Array	125.41	18	*e*PKPdf	PKPdf	13 46 22.5	+2.3
YMR	Madison River	125.53	23	*e*PKPdf	PKPdf	13 46 22.8	+2.2
WCN	Washoe City	125.63	33	*e*PKIKP	PKPdf	13 46 22.9	+2.0
YFT	Old Faithful	125.76	23	*e*PKPdf	PKPdf	13 46 23.9	+2.9
LKWY	Lake	125.83	22	*e*PKIKP	PKPdf	13 46 24.3	+3.2
CMB	Columbia Colle	126.17	35	*e*PKIKP	PKPdf	13 46 23.3	+1.3
IMW	Indian Meadow	126.19	23	*e*PKPdf	PKPdf	13 46 23.6	+1.7
MOOW	Moose Ponds	126.39	23	*e*PKPdf	PKPdf	13 46 23.7	+1.5
SAO	San Andreas Ge	126.43	36	*e*PKIKP	PKPdf	13 46 24.4	+1.9
RRI2	Red Ridge	126.50	24	*e*PKPdf	PKPdf	13 46 24.1	+1.6
LOHW	Long Hollow	126.56	23	*e*PKPdf	PKPdf	13 46 23.9	+1.3
WUWY	Wally Ulrich	126.56	23	*e*PKPdf	PKPdf	13 46 24.6	+2.0
NVAR	Mina Array Bea	127.04	33	PKP	PKPdf	13 46 25.7	+2.0
	comp=Z,17nm,0.9s,baz=45,slow=0.6,SNR=25						
NVAR				pPKP		13 46 41.1	
	comp=Z,26nm,1.0s,baz=15,slow=0.9,SNR=6.4						
NVAR				PP	PP	13 48 23.3	-3.0
	comp=Z,1.2nm,0.5s,baz=333,slow=4.0,SNR=4.0						
NVAR				PKKPbc		13 55 53.4	
	comp=Z,1.1nm,1.0s,baz=158,slow=4.9,SNR=2.5						
NVAR	Mina Array Bea	127.04	33	PKP	PKPdf	13 46 25.7	+2.0
NVAR				pPKP		13 46 41.1	
NVAR				PP	PP	13 48 23.3	-3.0
NVAR				PKKPbc		13 55 53.4	
MNV	Mina	127.12	33	*e*PKIKP	PKPdf	13 46 26.0	+2.2
HVU	Hansel Valley	127.17	26	*e*PKIKP	PKPdf	13 46 25.4	+1.6
EYMN	Ely	127.21	6	*e*PKPdf	PKPdf	13 46 24.1	+0.4
PDAR	Pinedale Array	127.68	23	PKhKP		13 46 19.4	
	comp=Z,0.5nm,0.7s,baz=135,slow=2.1,SNR=4.0						
PDAR				PKP	PKPdf	13 46 26.0	+1.2
	comp=Z,18nm,1.0s,SNR=70						
PDAR				pPKP		13 46 41.5	
	comp=Z,22nm,0.9s,baz=45,slow=2.1,SNR=8.2						
PDAR				SKPbc		13 49 38.9	
	comp=Z,0.9nm,0.7s,slow=1.8,SNR=4.1						
PDAR	Pinedale Array	127.68	23	PKP	PKPdf	13 46 26.0	+1.2
PDAR				pPKP		13 46 41.5	
PDAR				SKPbc		13 49 38.9	
SPUT	South Promonto	127.70	26	*e*PKPdf	PKPdf	13 46 24.8	-0.1
BGU	Big Grassy Mou	127.75	27	*e*PKPdf	PKPdf	13 46 26.6	+1.6
HWUT	Hardware Ranch	127.84	25	*e*PKPdf	PKPdf	13 46 26.2	+1.1
TPH	Tonopah	127.88	32	*e*PKIKP	PKPdf	13 46 27.5	+2.2
TCUT	Toone Canyon	128.31	25	*e*PKPdf	PKPdf	13 46 27.8	+1.7
NOQ	North Oquirrh	128.38	26	*e*PKPdf	PKPdf	13 46 27.1	+0.9
TRCR	Troy Canyon	128.53	31	*e*PKPdf	PKPdf	13 46 28.9	+2.3
JLU	Jordanelle	128.71	26	*e*PKPdf	PKPdf	13 46 28.5	+1.7
DAU	Daniels Canyon	128.95	26	*e*PKPdf	PKPdf	13 46 28.9	+1.6
NLU	North Lily Min	128.96	27	*e*PKPdf	PKPdf	13 46 29.0	+1.7
MPU	Maple Canyon	129.11	26	*e*PKPdf	PKPdf	13 46 30.0	+2.4
TMUT	Trail Mountain	129.89	27	*e*PKPdf	PKPdf	13 46 31.1	+2.0
ARUT	Antelope Range	130.04	30	*e*PKIKP	PKPdf	13 46 31.7	+2.3
MVU	Marysvale	130.07	28	*e*PKPdf	PKPdf	13 46 31.9	+2.4
MSU	Marysvale	130.08	28	*e*PKIKP	PKPdf	13 46 31.9	+2.4
MWC	Mount Wilson	130.18	36	*e*PKIKP	PKPdf	13 46 29.9	+0.1
MIV	Mineville/With	130.34	349	*e*PKPdf	PKPdf	13 46 30.9	+1.0
SRU	San Rafael	130.34	26	*e*PKIKP	PKPdf	13 46 31.8	+1.8
MDV	Middlebury	130.35	349	*e*PKPdf	PKPdf	13 46 31.9	+2.1
PHWY	Pilot Hill	130.46	20	*e*PKPdf	PKPdf	13 46 31.1	+0.9
NCB	Newcomb	130.57	350	*e*PKPdf	PKPdf	13 46 31.0	+0.7
NEN	Nelson	130.96	33	*e*PKPdf	PKPdf	13 46 33.0	+1.7
HRV	Harvard--Oak R	131.44	347	*e*PKIKP	PKPdf	13 46 34.2	+2.2
PFO	Pinyon Flat Ob	131.55	36	*e*PKIKP	PKPdf	13 46 34.6	+2.2
PV10	Paradox Valley	131.60	25	*e*PKPpre		13 46 24.0	
PV10				*e*PKPdf	PKPdf	13 46 34.6	+2.2
ISCO	Idaho Springs	131.73	21	*e*PKIKP	PKPdf	13 46 33.8	+1.2
PV01	Paradox Valley	132.00	25	*e*PKPdf	PKPdf	13 46 35.8	+2.7
BAR	Barrett	132.08	37	*e*PKPdf	PKPdf	13 46 37.2	+3.7
JFWS	Jewell Farm	132.31	5	*e*PKIKP	PKPdf	13 46 34.1	+0.5
ERPA	Erie	133.15	355	*e*PKPdf	PKPdf	13 46 36.2	+1.0
SDCO	Great Sand Dun	133.58	23	*e*PKPdf	PKPdf	13 46 33.6	-2.5
SSPA	Standing Stone	134.39	353	*e*PKPdf	PKPdf	13 46 38.1	+0.5
MVL	Millersville	134.79	351	*e*PKPdf	PKPdf	13 46 39.5	+1.2
KSU1	Kansas State U	135.04	13	*e*PKPdf	PKPdf	13 46 40.1	+1.3
ACSO	Alum Creek Sta	135.21	358	*e*PKPdf	PKPdf	13 46 40.0	+1.0
ANMO	Albuquerque	135.59	26	*e*PKHKP		13 46 28.8	
ANMO				*e*		13 46 41.7	
TUC	Tucson	135.68	32	*e*PKIKP	PKPdf	13 46 42.5	+2.4
LAZ	Ladron	135.76	27	*e*PKPdf	PKPdf	13 46 43.3	+3.0
LENM	Lemitar	136.03	27	*e*PKPdf	PKPdf	13 46 43.1	+2.4
LPM	Los Pinos Moun	136.06	26	*e*PKPpre		13 46 36.8	
LPM				PKPdf	PKPdf	13 46 42.9	+2.1
CCM	Cathedral Cave	137.01	7	*e*PKIKP	PKPdf	13 46 43.3	+0.9
FVM	French Village	137.18	6	*e*PKIKP	PKPdf	13 46 43.7	+0.9
WCI	Wyandotte Cave	137.22	2	*e*PKIKP	PKPdf	13 46 44.0	+1.2
AMTX	Amarillo	137.52	21	*e*PKPpre		13 46 36.7	
BLA	Blacksburg	138.05	355	*e*PKIKP	PKPdf	13 46 44.9	+0.5
CPRX	Cap Rock	138.34	24	*e*PKPdf	PKPdf	13 46 48.5	+3.5
WMOK	Wichita Mounta	138.60	17	*e*PKHKP		13 46 35.9	
MNTX	Cornudas Mount	138.83	27	*e*PKPpre		13 46 38.6	
GDL2	Guadalupe Moun	138.85	25	*e*PKPpre		13 46 41.0	
GDL2				*e*PKPdf	PKPdf	13 46 48.4	+2.5
WVT	Waverly	139.25	4	*e*PKHKP		13 46 38.3	
HBAR	Harrisburg	139.55	7	*e*PKPdf	PKPdf	13 46 45.7	-1.4
CPCT	Cooper Cave	140.02	360	*e*PKPpre		13 46 44.5	
UALR	University of	140.07	10	*e*PKPdf	PKPdf	13 46 49.5	+1.4
MIAR	Mount Ida	140.07	11	*e*PKHKP		13 46 40.2	
OXF	Oxford	140.72	6	*e*PKHKP		13 46 42.7	
TRQA	Tornquist	140.82	209	*e*PKPpre		13 46 46.0	
TRQA				*e*PKPdf	PKPdf	13 46 52.6	+3.2
JSC	Jenkinsville	141.03	355	*e*PKHKP		13 46 44.5	
LTX	Lajitas	141.61	27	*e*PKIKP	PKPdf	13 46 49.8	-1.2
TXAR	Lajitas Array	141.61	27	PKhKP		13 46 46.9	
	comp=Z,3.5nm,0.5s,SNR=17						
TXAR				PP	PP	13 49 56.9	-1.8
	comp=Z,1.9nm,0.8s,baz=315,slow=2.6,SNR=3.1						
TXAR				SKPbc		13 50 27.2	
	comp=Z,2.8nm,0.7s,slow=0.9,SNR=4.7						
PLCA	Paso Flores	141.93	198	*e*PKHKP		13 46 47.7	
PLCA	Paso Flores	141.93	198	PKhKP		13 46 48.0	
	comp=Z,6.7nm,1.0s,baz=149,slow=2.5,SNR=8.2						
JCT	Junction City	142.17	21	*e*PKHKP		13 46 47.8	
BDFB	Brasilia	142.21	251	PKP	PKPdf	13 46 52.7	+0.3
	comp=Z,18nm,1.2s,baz=48,slow=4.4,SNR=6.4						
BDFB				pPKP		13 47 10.1	
	comp=Z,14nm,0.8s,baz=124,slow=4.2,SNR=6.0						
LRAL	Lakeview Retre	142.37	3	*e*PKPpre		13 46 48.0	
NATX	Nacogdoches	142.52	14	*e*PKPpre		13 46 49.5	
HKT	Hockley	143.94	16	*e*PKIKP	PKPdf	13 46 53.6	-1.4
CPUP	Villa Florida	146.02	228	PKPdf	PKPdf	13 47 00.9	+2.2
DWPF	Disney	147.17	354	PKPdf	PKPdf	13 47 04.5	+3.9
DWPF				pPKPbc		13 47 21.8	
DWPF	Disney	147.17	354	*e*PKPbc	PKPdf	13 47 04.5	+3.9
MDZ	Mendoza	148.26	206	*e*P	PKPdf	13 47 06.8	+4.6
MDZ				*e*		13 47 27.1	
SFJM	Santa Fe	149.23	35	*e*P	PKPdf	13 47 05.0	+0.9
COLM	Colima	149.86	37	*i* P	PKPdf	13 47 11.5	+6.4
CBYP	Canovanas	150.42	321	*e*PKPbc	PKPdf	13 47 12.4	+6.4
SJG	San Juan	150.72	321	PKPbc	PKPdf	13 47 13.6	+7.1
	comp=Z,45nm,0.7s,baz=308,slow=23,SNR=9.6						
SJG				pPKPbc		13 47 30.3	
	comp=Z,62nm,0.8s,baz=315,slow=20,SNR=3.4						
CRX	Cerrillo	151.92	31	*e*P	PKPdf	13 47 14.0	+5.8
PPM	Popocatepetl	152.74	29	*i* P	PKPdf	13 47 11.4	+2.0
EVV	El Vigia	154.74	24	*e*P	PKPdf	13 47 11.0	-1.1
TEIG	Tepich	154.96	8	*e*PKPbc	PKPdf	13 47 22.6	+10
OXX	Oaxaca	155.35	28	*e*P	PKPdf	13 47 20.0	+7.0
LVC	Limon Verde	156.46	220	*e*PKPdf	PKPdf	13 47 17.5	+3.2
HUIG	Huatulco	156.78	28	*i* P	PKPdf	13 47 16.5	+1.6
LPAZ	La Paz	159.96	234	PKP	PKPdf	13 46 46.6	-32
	comp=Z,7.1nm,0.8s,baz=56,slow=3.4,SNR=26						
LPAZ				pPKP		13 47 03.4	
	comp=Z,63nm,1.3s,baz=38,slow=15,SNR=12						
SDV	Santo Domingo	160.38	314	PKP	PKPdf	13 47 20.9	+1.6
	comp=Z,15nm,0.9s,baz=337,slow=15,SNR=6.6						
SDV				pPKP		13 47 37.9	
	comp=Z,21nm,1.0s,baz=347,slow=14,SNR=4.6						
SDV				PKPab	PKPab	13 48 00.7	-1.9
	comp=Z,15nm,0.9s,baz=92,slow=1.1,SNR=4.4						
SDV				pPKPab		13 48 18.5	
	comp=Z,36nm,1.1s,baz=359,slow=2.5,SNR=3.5						
SDV				PP	PP	13 51 42.1	-3.6
	comp=Z,3.7nm,0.6s,baz=22,slow=5.5,SNR=3.1						
ROSC	El Rosal	165.79	312	PKP	PKPdf	13 47 26.9	+2.3
	comp=Z,32nm,0.9s,baz=262,slow=21,SNR=17						
ROSC				pPKP		13 47 43.7	
	comp=Z,96nm,1.2s,baz=282,slow=8.5,SNR=5.3						
NNA	Nana	169.28	227	*e*PKPdf	PKPdf	13 47 28.6	+1.8
OTAV	Otavalo	171.89	307	*e*PKPdf	PKPdf	13 47 30.9	+2.5

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*NEIC **09** 13:27:26.5±0.7, 13.96S×166.51E, h300^{km}, mb4.6/3, Error ellipse: s-maj=38.4km s-min=10.9km az=144.0*

*IDC **09** 13:27:26.3±20.0, 14.06S×166.75E, h314^{km}±187^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/15, mbtmp4.4/5, Error ellipse: s-maj=91.7km s-min=66.2km az=85.0*

ISC 09 13:27:27.2±1.8, **14.1S**±0.3×**166.8E**±0.3, **h350**^{km}**, n27,** σ**0^{s}69**/7, **mb4.1**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	20.53	250	P	P	13 31 42.1	+1.6
	2.8nm,0.8s,baz=66,slow=12,SNR=4.6						
STKA	Stephens Creek	29.07	228	P	P	13 32 58.4	-0.1
	11nm,0.6s,mb4.3,baz=48,slow=7.4,SNR=22						
WRAB	Tennant Creek	31.55	255	*e*P	P	13 33 19.4	-0.7
	16nm,1.0s,mb4.2						
WRA	Warramunga Arr	31.56	255	P	P	13 33 19.7	-0.4
	4.3nm,0.6s,mb3.8,baz=86,slow=9.3,SNR=33						
ASAR	Alice Springs	32.49	248	P	P	13 33 27.6	-0.4
	4.7nm,0.7s,mb3.8,baz=79,slow=9.5,SNR=85						
ENH	Enshi	70.64	309	*e*P	P	13 38 07.2	-0.1
	72nm,1.2s,mb5.3						
YKA	Yellowknife Ar	97.20	27	P	P	13 40 21.5	+0.2
	0.1nm,0.3s,mb3.4,baz=255,slow=4.4,SNR=4.9						
ARCES	ARCESS Array B	119.55	345	PKP	PKPdf	13 45 38.7	+3.5
	3.2nm,0.9s,baz=63,slow=2.0,SNR=6.6						
CABF	La Chapelle	143.79	337	*e*PKP1	PKPbc	13 46 24.9	+4.8
SSF	Saint Saulge	144.31	340	*e*PKP1	PKPbc	13 46 26.1	+4.5
	27nm,1.0s						
GRR	Gorron	144.33	346	*e*PKP1	PKPbc	13 46 25.6	+4.0
LPL	La Plagne	144.46	336	*e*PKP1	PKPbc	13 46 27.2	+5.2
	8.1nm,0.6s						
LPG	La Plagne	144.46	336	*e*PKP1	PKPbc	13 46 27.2	+5.1
	14nm,0.8s						
SMF	Signal de Mont	144.56	340	*e*PKP1	PKPbc	13 46 26.8	+4.5
	26nm,1.0s						
AVF	Avril sur Loir	144.60	340	*e*PKP1	PKPbc	13 46 26.7	+4.3
	19nm,1.0s						
SGMF	Saint Gilles	144.84	348	*e*PKP1	PKPbc	13 46 26.1	+3.1
MBDF	Montbardon	145.09	335	*e*PKP1	PKPbc	13 46 28.5	+4.7
	10nm,0.7s						
ORIF	Oris-en-Rattie	145.29	336	*e*PKP1	PKPbc	13 46 29.4	+5.1
	26nm,0.9s						
TCF	Toulx Ste Croi	145.41	341	*e*PKP1	PKPbc	13 46 29.5	+4.9
SBF	Sospel	145.50	333	*e*PKP1	PKPbc	13 46 29.4	+4.5
	36nm,0.8s						
VIVF	Saint-Julien-l	145.81	337	*e*PKP1	PKPbc	13 46 30.9	+5.3
MFF	Saint Martin d	145.81	344	*e*PKP1	PKPbc	13 46 30.4	+4.8
FRF	La Foret Royal	146.09	334	*e*PKP1	PKPbc	13 46 31.2	+4.9
SMRF	Simiane la Rot	146.19	335	*e*PKP1	PKPbc	13 46 32.1	+5.5
	43nm,1.2s						
LMR	La Mourre	146.33	334	*e*PKP1	PKPbc	13 46 32.1	+5.2
	40nm,1.1s						
LASF	Ste Croix	146.78	337	*e*PKP1	PKPbc	13 46 33.0	+5.1
	8.9nm,0.8s						
MTLF	Montolieu	148.01	339	*e*PKP1	PKPdf	13 46 36.9	+8.8
	24nm,0.9s						

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*CSEM **09** 13:28:17.5±0.2, 36.67N×24.43E, h147^{km}±4^{km}, ML4.2, Error ellipse: s-maj=7.2km s-min=3.4km az=87.0*

*ATH **09** 13:28:20.2, 36.69N×24.48E, h105^{km}±2^{km}*

*HLW **09** 13:28:21.0, 36.52N×24.48E, h30^{km}, Mb4.2*

ISC 09 13:28:19.1±0.9, **36.53N**±0.06×**24.49E**±0.09, **h122**^{km}±16^{km}, **n16,** σ**1^{s}36**/24, **1C-2D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APE	Apeiranthos	1.00	57	⇑*i*P	P	13 28 41.1	-0.4
VAM	Vamos	1.14	192	*e*P	P	13 28 45.1	+2.1
KYTH	Kithira	1.20	259	*e*P	P	13 28 44.5	+0.9
KYTH				*e*S	S	13 29 02.0	0.0
VLI	Veliai	1.26	279	⇓*i*P	P	13 28 44.0	-0.3
NAIG	Nisos Aigina	1.47	327	*e*P	P	13 28 45.6	-1.1
NAIG				*e*S	S	13 29 04.1	-3.5
NPS	Neapolis	1.56	144	*e*P	P	13 28 50.0	+2.3
MPAR	Parnis Oros	1.73	340	*e*P	P	13 28 48.5	-1.2
ITM	Ithomi	2.15	288	⇓*i*P	P	13 28 55.7	+0.6
KARP	Karpathos	2.38	113	*e*P	P	13 29 00.0	+2.0
SLUM		5.06	173	P	P	13 29 34.8	+0.8
SLUM				S	S	13 30 28.9	-2.7
HMAT	Matruh	5.84	157	P	P	13 29 44.6	+0.2
HMAT				S	S	13 30 47.2	-3.4
DABA	Dabaa	6.34	149	P	P	13 29 51.1	-0.3
DABA				S	S	13 30 58.7	-4.2
SWA2		7.31	173	P	P	13 30 04.7	+0.2
SWA2				S	S	13 31 20.8	-5.5
SWA1		7.32	172	P	P	13 30 04.9	+0.3
SWA1				S	S	13 31 21.5	-5.1
GLL	Jalalah	9.20	137	P	P	13 30 29.9	0.0
GLL				S	S	13 32 06.3	-5.8
HDK1	Dakhla	11.73	158	P	P	13 31 04.8	+1.4

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*IDC **09** 14:06:23.9±0.8, 8.76N×93.82E, mb4.0/10, mb1 4.2/11, mb1mx4.1/18, mbtmp4.0/11, ML4.1/1, Error ellipse: s-maj=40.0km s-min=18.4km az=54.0*

*BJI **09** 14:06:27.3, 8.70N×93.80E, h30^{km}, mb4.1*

*NEIC **09** 14:06:28.3±0.6, 8.69N×93.77E, h30^{km}, mb4.4/8, Error ellipse: s-maj=13.8km s-min=9.5km az=61.0*

ISC 09 14:06:26.8±0.7, **8.68N**±0.09×**93.79E**±0.09, **h33**^{km}**, n37,** σ**0^{s}99**/36, **mb4.2**/20, **1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.93	27	Pn	P	14 09 04.0	-0.1
	0.5nm,0.3s,baz=212,slow=15,SNR=12						
VIS	Vishakhapatnam	13.58	312	*i* P	P	14 09 40.1	+0.5
VIS				*i* S	S	14 11 57.8	-13
KMI	Kunming	18.45	26	P	P	14 10 43.6	+1.8
KMI				AMB	AMB		
	comp=Z,8.0nm,1.6s						
KMI	Kunming	18.45	26	P	P	14 10 43.6	+1.8
	comp=Z,8.0nm,1.6s						
JIRN	Jiri	20.20	340	*e*P	P	14 11 00.3	-1.3
	comp=Z,40nm,0.9s						
PKI	Pulchoki	20.40	338	*e*P	P	14 11 02.8	-0.9
	comp=Z,60nm,1.3s						
GUN	Gumba	20.54	340	*e*P	P	14 11 04.8	-0.4
	comp=Z,39nm,0.8s						
KKN	Kakani	20.64	338	*e*P	P	14 11 05.7	-0.5
	comp=Z,29nm,1.0s						
LSA	Lhasa	21.06	354	*e*P	P	14 11 09.7	-0.8
	comp=Z,6.4nm,0.6s,mb4.1						
GKN	Gorkha	21.08	337	*e*P	P	14 11 10.2	-0.5
	comp=Z,36nm,0.7s,mb4.8						
KOLN	Koldanda	21.29	334	*e*P	P	14 11 12.7	-0.1
	comp=Z,30nm,0.9s,mb4.6						
GYA	Guiyang	21.49	33	⇑*i*P	P	14 11 16.1	+1.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
CD2	Chengdu	24.00	21	*e*P	P	14 11 39.4	-0.1
ENH	Enshi	26.02	32	*e*P	P	14 11 57.6	-1.3
	comp=Z,8.3nm,1.0s,mb4.2						
GTA	Gaotai	31.07	9	*e*P	P	14 12 43.0	-1.2
GTA				AMB	AMB		
	comp=Z,3.0nm,1.5s,mb3.9						
KBK	Karagaybulak	37.68	337	P	P	14 13 42.2	+1.4
	SNR=6.0						
AML	Almayashu	37.74	335	P	P	14 13 42.5	+1.1
	SNR=13						
AAK	Ala-Archa	37.84	337	P	P	14 13 43.5	+1.4
	SNR=5.7						
EKS2	Erkin-Say	38.15	336	P	P	14 13 46.1	+1.3
	SNR=5.9						
USP	Ospenovka	38.37	337	P	P	14 13 47.0	+0.3
	SNR=6.7						
SONM	Songino Array	40.46	13	P	P	14 14 04.5	+0.5

	comp=Z,1.1nm,1.0s,mb3.5,baz=194,slow=9.1,SNR=6.8						
SONM				PcP	PcP	14 16 07.2	+0.3
	comp=Z,0.4nm,0.6s,baz=196,slow=4.6,SNR=4.5						
KURK	Kurchatov	43.75	346	eP	P	14 14 30.3	-0.6
	comp=Z,11nm,1.5s,mb4.4						
ZAL	Zalesovo	45.71	353	P	P	14 14 45.9	-0.7
	comp=Z,4.1nm,0.8s,mb4.4,baz=305,slow=6.5,SNR=22						
HIA	Hailar	45.92	24	eP	P	14 14 46.6	-1.7
	comp=Z,6.7nm,1.1s,mb4.5						
CHKZ	Chkalovo	48.61	342	eP	P	14 15 08.6	-0.6
	comp=Z,2.3nm,0.4s,mb4.6						
WRA	Warramunga Arr	49.01	126	P	P	14 15 12.4	-0.3
	comp=Z,0.4nm,0.5s,mb3.8,baz=305,slow=8.8,SNR=6.9						
ASAR	Alice Springs	50.69	130	P	P	14 15 24.9	-0.7
	comp=Z,0.4nm,0.8s,mb3.4,baz=306,slow=7.2,SNR=6.5						
ASAR				PcP	PcP	14 16 43.1	+0.3
	comp=Z,0.4nm,0.6s,baz=306,slow=3.7,SNR=5.4						
BRTR	Keskin Array B	61.65	311	P	P	14 16 43.3	-0.6
	comp=Z,3.4nm,1.1s,mb4.4,baz=121,slow=7.2,SNR=6.0						
AKASG	Malin Array Be	67.32	322	P	P	14 17 18.8	-1.6
	comp=Z,0.4nm,0.3s,mb3.9,baz=86,slow=5.1,SNR=4.4						
FINES	FINESS Array B	71.85	332	P	P	14 17 47.9	-0.1
	comp=Z,1.4nm,0.8s,mb3.9,baz=90,slow=6.9,SNR=3.8						
ARCES	ARCESS Array B	74.40	340	P	P	14 18 02.5	-0.3
	comp=Z,2.3nm,0.8s,mb4.1,baz=111,slow=7.7,SNR=3.2						
GERES	GERESS Array B	77.00	318	P	P	14 18 19.1	+0.9
	comp=Z,1.4nm,0.7s,mb4.0,baz=90,slow=4.0,SNR=11						
LPG	La Plagne	81.81	315	eP	P	14 18 45.1	+1.0
	comp=Z,18nm,1.0s,mb4.6						
IMA	Indian Mountai	91.01	22	eP	P	14 19 31.0	+2.4
ILAR	Eielson Array	94.13	22	P	P	14 19 44.0	+1.1
	comp=Z,0.6nm,0.7s,mb4.1,baz=289,slow=3.7,SNR=4.3						
PLCA	Paso Flores	145.17	201	PKPbc	PKPbc	14 26 04.7	+3.1
	comp=Z,5.5nm,0.9s,baz=220,slow=1.8,SNR=13						
PLCA	Paso Flores	145.17	201	PKPbc	PKPbc	14 26 04.7	+3.0

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*NEIC **09** 14:38:35.1, 35.63N×29.72E, h5^{km}, MD3.7(ATH), After ATH.*
*CSEM **09** 14:38:39.0±0.1, 35.80N×29.70E, h40^{km}, MD3.7, Error ellipse: s-maj=2.6km s-min=1.7km az=138.0*
*ISK **09** 14:38:40.2, 35.85N×29.73E, h32^{km}, ML3.7*
*HLW **09** 14:38:40.0, 35.96N×29.38E, h17^{km}, Mb3.8*
*IDC **09** 14:38:41.7±1.7, 35.83N×29.76E, h49^{km}±20^{km}, mb3.6/4, mb1 3.7/10, mb1mx3.5/23, mbtmp3.7/10, ML3.4/6, Error ellipse: s-maj=18.6km s-min=16.6km az=151.0*
ISC 09 14:38:36.5±0.8, **35.77N**±0.02×**29.67E**±0.03, **h8**^{km}±6^{km}, **n43**, σ**1^{s}13**/59, **mb3.7**/4, **2C-1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.39	350	⇓iPb	Pb	14 38 45.5	+0.3
ELL	Elmali	1.00	11	PG	Pg	14 38 57.1	+0.6
ELL				SG	Sg	14 39 08.5	-1.4
ARG	Arkhangelos	1.33	290	ePg	Pg	14 39 01.6	-1.5
ARG				eSb	Sb	14 39 22.0	+3.8
ANTB	Antalya	1.39	35	PN	Pn	14 39 02.7	+0.5
YER	Yerkesik	1.76	321	ePN	Pn	14 39 07.8	+0.2
YER				eSN	Sn	14 39 30.4	0.0
BCK	Bucak	1.85	23	ePN	Pn	14 39 09.4	+0.6
DNZL	Cakiroluk	1.98	346	i P	Pn	14 39 12.4	+1.7
DNZL				i S	Sn	14 39 36.2	+0.2
DENT	Denizli	2.05	346	ePN	Pn	14 39 12.2	+0.5
KARP	Karpathos	2.05	265	ePn	Pn	14 39 13.0	+1.3
MLSB	Milas	2.15	316	ePN	Pn	14 39 13.9	+0.7
ISP	Isparta	2.18	18	ePN	Pn	14 39 13.9	+0.3
BDRM	Kayabasi	2.21	307	i P	Pn	14 39 13.6	-0.4
BDRM				i S	Sn	14 39 44.2	+2.4
AYDN	Tasoluk	2.37	323	i P	Pn	14 39 18.2	+1.9
AYDN				i S	Sn	14 39 47.2	+1.3
KHL	Karahalli	2.56	357	ePN	Pn	14 39 19.3	+0.4
HDMB	Hadim	2.57	61	ePN	Pn	14 39 19.8	+0.6
LEF	Lefka	2.71	103	ePN	Pn	14 39 21.9	+0.7
MANT	Manisa	2.86	342	i P	Pn	14 39 24.1	+0.8
MANT				i S	Sn	14 39 57.3	-1.0
KONT	Konya--Tatoy	3.07	44	ePN	Pn	14 39 26.1	-0.1
KDAG	Bornova	3.26	325	i P	Pn	14 39 27.2	-1.8
KDAG				i S	Sn	14 40 08.6	+0.3
NPS	Neapolis	3.34	263	ePb	Pb	14 39 32.0	-3.7
XRY	Khrisi	3.37	256	ePb	Pb	14 39 32.1	-4.0
KIZT	Kizilcal	3.58	29	ePN	Pn	14 39 33.9	+0.5
APE	Apeiranthos	3.58	293	ePb	Pb	14 39 38.0	-1.8
MEST	Erdemli	3.72	76	i P	Pn	14 39 36.4	+1.0
MEST				i S	Sn	14 40 19.3	-0.6
ESKT	Eskisehir	3.86	14	i P	Pn	14 39 36.8	-0.7
ESKT				i S	Sn	14 40 18.6	-5.0
ESKT	Eskisehir	3.86	14	ePn	Pn	14 39 38.3	+0.8
IDI	Anoyia	3.92	264	P	Pn	14 39 39.0	+0.6
	7.1nm,0.3s,baz=85,slow=15,SNR=32						
IDI				S	Sn	14 40 21.2	-4.0
	7.2nm,0.3s,baz=328,slow=23,SNR=6.5						
KAMT	Kaman	4.82	41	ePN	Pn	14 39 50.7	-0.5
DABA	Dabaa	4.88	194	⇑P	Pn	14 39 53.7	+1.7
DABA				S	Sn	14 40 47.8	-1.7
BRTR	Keskin Array B	5.05	37	P	Pn	14 39 53.6	-0.8
	1.6nm,0.3s,baz=220,slow=16,SNR=51						
BRTR				S	Sn	14 40 50.1	-3.6
	2.1nm,0.3s,baz=212,slow=24,SNR=28						
HMAT	Matruh	5.13	205	⇑P	Pn	14 39 56.9	+1.4
VLI	Veliai	5.52	282	ePn	Pn	14 40 01.0	0.0
SLUM		5.65	222	P	Pn	14 40 02.4	-0.5
SLUM				S	Sn	14 41 03.0	-5.8
ASF	Jabal al Asfar	7.00	119	P	Pn	14 40 21.0	-0.8
	0.8nm,0.3s,baz=197,slow=7.5,SNR=3.2						
SWA1		7.29	208	P	Pn	14 40 25.9	-0.1
SWA1				S	Sn	14 41 44.5	-5.3
SWA2		7.41	210	P	Pn	14 40 27.8	+0.1
SWA2				S	Sn	14 41 46.5	-6.2
EIL	Elat	7.53	142	P	Pn	14 40 30.9	+1.6
	0.3nm,0.3s,baz=341,slow=23,SNR=4.8						
MLR	Muntele Rosu	10.12	345	P	P	14 41 05.0	-0.1
	0.1nm,0.3s,baz=163,slow=11,SNR=2.1						
GERES	GERESS Array B	17.57	323	P	P	14 42 42.7	-0.5
	0.1nm,0.3s,baz=141,slow=6.3,SNR=2.7						
FINES	FINESS Array B	25.80	356	P	P	14 44 07.1	-2.2
	1.9nm,0.8s,mb3.6,baz=225,slow=14,SNR=3.0						
HFS	Hagfors	26.48	342	P	P	14 44 14.1	-1.5
	2.4nm,0.7s,mb3.8,baz=146,slow=16,SNR=7.5						
ESDC	Sonseca Array	26.79	289	P	P	14 44 17.5	-1.2
	0.5nm,0.3s,mb3.5,baz=84,slow=8.8,SNR=5.6						
CMAR	Chiang Mai Arr	62.85	86	P	P	14 49 02.0	-3.3
	0.6nm,0.8s,mb3.8,baz=297,slow=8.1,SNR=4.3						

MAN 09 15:13:35.6, 17.46N×120.06E, h19^{km}, mb4.2, ML3.0, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.66	73	eP	Pb	15 13 48.7	+0.4
ABRA				eS	Sb	15 13 58.3	+1.4
BOLP	Bolinao	1.08	187	eP	Pb	15 13 55.4	-0.1
BOLP				eS	Sb	15 14 09.0	-0.1
APYP	Conner	1.20	70	eP	Pb	15 13 53.3	-4.2
APYP				eS	Sb	15 14 11.2	-1.5
SCZP	Santa Cruz	1.68	185	eP	Pn	15 14 03.3	-1.1
CVP	Callao Caves	1.70	81	eP	Pn	15 14 03.5	-1.3
CAUP	Cauayan	1.77	107	eP	Pn	15 14 05.7	+0.1

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*NEIC **09** 15:18:42.2±1.6, 13.81S×70.57W, h71^{km}±17^{km}, mb3.9/1, Error ellipse: s-maj=23.8km s-min=13.0km az=53.0*
*IDC **09** 15:18:43.9±3.8, 13.90S×70.49W, h91^{km}±37^{km}, mb3.5/6, mb1 3.9/8, mb1mx3.7/20, mbtmp4.0/8, MS3.1/1, Ms1 3.2/1, ms1mx3.1/17, Error ellipse: s-maj=38.7km s-min=22.1km az=65.0, Putative timing error at LPAZ*
ISC 09 15:18:44.6±2.1, **14.0S**±0.2×**70.6W**±0.2, **h118**^{km}±24^{km}, **n17**, σ**0^{s}62**/13, **mb3.7**/7, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.58	200	eP	P	15 19 26.0	-0.2
LPAZ	La Paz	3.26	134	P	Px	15 19 02.5	
	5.7nm,0.3s,baz=328,slow=13,SNR=62						
LPAZ				S	Sx	15 19 51.5	
	62nm,0.3s,baz=125,slow=10,SNR=4.2						
LPAZ				LR	LR	15 20 31.7	
	comp=Z,236nm,18.2s,baz=340,slow=33						
NNA	Nana	6.44	288	P	P	15 20 11.9	-6.4
LVC	Limon Verde	8.69	170	P	P	15 20 49.1	+0.4
	1.5nm,0.3s,baz=336,slow=9.3,SNR=25						
LVC	Limon Verde	8.69	170	eP	P	15 20 48.7	0.0
	21nm,0.9s						
BDFB	Brasilia	21.86	97	P	P	15 23 29.1	+0.3
	4.5nm,1.0s,mb3.8,baz=260,slow=7.5,SNR=3.0						
SDV	Santo Domingo	22.76	360	P	P	15 23 37.3	-0.3
	2.2nm,0.4s,mb3.8,baz=252,slow=3.2,SNR=4.3						
TXAR	Lajitas Array	53.66	324	P	P	15 27 55.7	-0.7
	0.5nm,0.4s,mb3.9,baz=146,slow=9.0,SNR=7.5						
TXAR	Lajitas Array	53.66	324	P	P	15 27 55.7	-0.8
MSU	Marysvale	65.17	325	eP	P	15 29 16.1	+0.6
NVAR	Mina Array Bea	68.67	321	P	P	15 29 38.5	+1.1
	0.7nm,0.8s,mb3.6,baz=103,slow=9.2,SNR=5.7						
SNAA	Sanae	69.83	162	P	P	15 29 43.5	-0.5
	1.1nm,1.0s,mb3.6,baz=282,slow=8.3,SNR=3.0						
HLID	Hailey	69.91	328	eP	P	15 29 45.6	+0.6
	1.6nm,0.9s,mb3.9						
YKA	Yellowknife Ar	83.64	341	P	P	15 30 59.9	-1.0
	0.6nm,0.7s,mb3.5,baz=134,slow=5.2,SNR=15						
ZAL	Zalesovo	135.71	21	PKP	PKPdf	15 37 53.9	+2.7
	0.6nm,0.5s,baz=281,slow=7.4,SNR=3.4						
WRA	Warramunga Arr	138.29	217	PKP	PKPdf	15 38 01.7	+4.9
	1.1nm,1.1s,baz=142,slow=1.8,SNR=5.3						
SONM	Songino Array	146.20	4	PKPbc	PKPbc	15 38 14.3	+3.1
	1.2nm,0.7s,baz=320,slow=2.6,SNR=14						

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*LDG **09** 15:20:44.8±0.1, 41.98N×2.59E, h4^{km}, Md3.4/3, Ml3.5/27, Error ellipse: s-maj=1.1km s-min=0.8km az=151.0*
*NEIC **09** 15:20:44.8, 41.98N×2.59E, h4^{km}, ML3.6(STR), ML3.5(LDG), ML2.9(MRB), MN3.2(MDD), After LDG.*
NEIC Felt [II] at Amer and Angles.
*MRB **09** 15:20:44.9, 41.98N×2.58E, h5^{km}±4^{km}, ML2.9/8*
*MDD **09** 15:20:45.1±0.3, 41.97N×2.59E, h6^{km}±2^{km}, mbLg3.0/32, Error ellipse: s-maj=2.5km s-min=1.5km az=126.0, PRXIMO*
MDD EMS: II S LA CELLERA DE TER AMER.
*CSEM **09** 15:20:45.3±0.1, 41.99N×2.58E, h10^{km}, ML3.5/29, Error ellipse: s-maj=1.2km s-min=0.8km az=143.0*
*STR **09** 15:20:48.6±0.5, 42.15N×2.54E, h10^{km}±1^{km}, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 09 15:20:42.7±0.4, **41.99N**±0.02×**2.67E**±0.02, **h8**^{km}±2^{km}, **n148**, σ**1^{s}51**/268, **3C-1D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFON	Fontmartina	0.28	218	Pg	Pg	15 20 49.3	+0.8
CFON				Sg	Sg	15 20 52.6	+0.2
CFON	Fontmartina	0.28	218	Pg	Pg	15 20 49.2	+0.7
CFON				Lg		15 20 52.5	
	162nm,0.2s						
CFON	Fontmartina	0.28	218	Pg	Pg	15 20 49.3	+0.8
CFON				Sg	Sg	15 20 52.6	+0.2
CBRU	Bruguera	0.47	310	Pg	Pg	15 20 52.9	+0.7
CBRU				Sg	Sg	15 20 58.8	+0.2
CBRU	Bruguera	0.47	310	Pg	Pg	15 20 52.9	+0.7
CBRU				Lg		15 20 58.8	
	97nm,0.1s						
CBRU	Bruguera	0.47	310	Pg	Pg	15 20 52.9	+0.7
CBRU				Sg	Sg	15 20 58.8	+0.2
EJON	La Jonquera	0.49	19	⇑Pg	Pg	15 20 55.0	+2.4
	47nm,0.1s,SNR=18						
EJON				Lg		15 21 02.7	
	312nm,0.1s,SNR=19						
EJON	La Jonquera	0.49	19	Pg	Pg	15 20 55.0	+2.4
	47nm,0.1s,SNR=18						
SJAF	Saint Jean de	0.52	17	Pg	Pg	15 20 55.4	+2.2
SJAF				Sg	Sg	15 21 02.8	+2.5
SJAF	Saint Jean de	0.52	17	P	Pg	15 20 55.4	+2.2
SJAF				S	Sg	15 21 02.1	+1.9
FILF	Fillols	0.58	352	Pg	Pg	15 20 56.1	+1.8
FILF				Sg	Sg	15 21 04.3	+2.2
FILF	Fillols	0.58	352	P	Pg	15 20 56.1	+1.8
FILF				S	Sg	15 21 04.2	+2.1
VALF	Valcebollere	0.64	311	Pg	Pg	15 20 55.9	+0.4
VALF				Sg	Sg	15 21 04.2	+0.1
VALF	Valcebollere	0.64	311	P	Pg	15 20 56.0	+0.4
VALF				S	Sg	15 21 04.3	+0.2
CLLI	Llivia	0.71	314	Pg	Pg	15 20 57.4	+0.3
CLLI				Sg	Sg	15 21 06.8	+0.2
CLLI	Llivia	0.71	314	Pg	Pg	15 20 57.3	+0.3
CLLI				Lg		15 21 06.8	
	68nm,0.1s						
CLLI	Llivia	0.71	314	Pg	Pg	15 20 57.3	+0.3
CLLI				Sg	Sg	15 21 06.8	+0.2
CARF	Carcanieres	0.84	330	Pg	Pg	15 21 01.0	+1.5
CARF	Carcanieres	0.84	330	P	Pb	15 21 00.9	+1.8
CARF				S	Sb	15 21 11.1	+0.7
EMIR	Miracle	0.86	266	⇑Pg	Pg	15 20 59.6	-0.3
	20nm,0.1s,SNR=18						
EMIR				Lg		15 21 11.6	
	82nm,0.1s,SNR=26						
EMIR	Miracle	0.86	266	Pg	Pg	15 20 59.6	-0.2
	20nm,0.1s,SNR=18						
LRDF	Laroque-de-Fa	0.96	354	Pg	Pg	15 21 03.1	+1.3
LRDF				Sg	Sg	15 21 15.9	+1.3
LRDF	Laroque-de-Fa	0.96	354	P	Pb	15 21 03.1	+2.1
LRDF				S	Sb	15 21 15.9	+2.2
PAND	Andorre	0.99	303	P	Pb	15 21 02.8	+1.1
PAND				S	Sb	15 21 15.1	+0.4
CORG	Organya	1.04	284	Pg	Pg	15 21 03.1	-0.3
CORG				Sg	Sg	15 21 16.2	-1.1
CORG	Organya	1.04	284	Pg	Pg	15 21 03.1	-0.3
CORG				Lg		15 21 16.1	
	97nm,0.1s						
CORG	Organya	1.04	284	Pg	Pg	15 21 03.1	-0.3
CORG				Sg	Sg	15 21 16.2	-1.0
LPEF	Le Peyrat	1.12	330	Pg	Pg	15 21 06.5	+1.5
LPEF	Le Peyrat	1.12	330	P	Pb	15 21 05.8	+2.0
LPEF				S	Sb	15 21 20.7	+2.4
GRBF	Gourbit	1.20	316	P	Pb	15 21 06.4	+1.2
CSOR	Sort	1.21	289	Pg	Pg	15 21 06.2	-0.6
CSOR				Sg	Sg	15 21 22.2	-0.7
CSOR	Sort	1.21	289	Pg	Pg	15 21 06.2	-0.6
CSOR				Lg		15 21 22.2	
	168nm,0.1s						
CSOR	Sort	1.21	289	Pg	Pg	15 21 06.2	-0.6
CSOR				Sg	Sg	15 21 22.2	-0.7
CGAR	Garraf	1.34	240	Pg	Pb	15 21 00.5	-7.2
CGAR				Lg		15 21 11.7	
	352nm,0.2s						
SALF	Salau	1.34	306	Pg	Pg	15 21 09.6	+0.1
SALF				Sg	Sg	15 21 26.9	-0.6
SALF	Salau	1.34	306	P	Pb	15 21 08.7	+1.0
SALF				S	Sb	15 21 25.4	+0.5
EPOB	Poblet	1.35	243	⇑Pg	Pg	15 21 08.6	-1.1
	17nm,0.2s,SNR=18						
EPOB				Lg		15 21 26.7	
	107nm,0.2s,SNR=34						
EPOB	Poblet	1.35	243	Pg	Pg	15 21 08.6	-1.0
	17nm,0.2s,SNR=18						
MTLF	Montolieu	1.40	346	ePn	Pn	15 21 09.3	+0.8
MTLF				ePg	Pg	15 21 10.8	+0.2
MTLF				eSn	Sn	15 21 26.8	-0.5
MTLF				eSg	Sg	15 21 28.8	-0.4
	227nm,0.3s						
CAVN	Les Avellanes	1.44	267	Pg	Pg	15 21 10.4	-1.0
CAVN				Sg	Sg	15 21 28.8	-1.7
CAVN	Les Avellanes	1.44	267	Pg	Pg	15 21 10.3	-1.1
CAVN				Lg		15 21 28.8	
	287nm,0.2s						
CAVN	Les Avellanes	1.44	267	Pg	Pg	15 21 10.4	-1.0
CAVN				Sg	Sg	15 21 28.8	-1.7
MLS	Moulis	1.52	310	Pn	Pn	15 21 12.6	+2.3
MLS	Moulis	1.52	310	P	Pn	15 21 12.1	+1.8
MLS				S	Sb	15 21 31.8	+1.8
MELF	Melles	1.67	303	Pn	Pn	15 21 14.9	+2.5
MELF	Melles	1.67	303	P	Pn	15 21 15.0	+2.5
MELF				S	Sn	15 21 35.9	+1.6
RESF	Ens	1.91	296	Pn	Pn	15 21 18.2	+2.3
RESF				Sg	Sg	15 21 44.7	-1.7
RESF	Ens	1.91	296	P	Pn	15 21 18.4	+2.5
RESF				S	Sn	15 21 44.7	+4.3
EBIE	Bielsa	2.00	291	⇓Pn	Pn	15 21 19.1	+1.9
	4.5nm,0.1s,SNR=18						
EBIE				Pg	Pg	15 21 21.1	-1.6
	6.6nm,0.1s,SNR=7.9						
EBIE				Lg		15 21 46.3	
	169nm,0.4s,SNR=44						
EBIE	Bielsa	2.00	291	Pn	Pn	15 21 19.1	+1.9
	4.5nm,0.1s,SNR=18						
EBIE	Bielsa	2.00	291	Pg	Pg	15 21 21.1	-1.5
	6.6nm,0.1s,SNR=7.9						
EBR	Ebro Roquetas	2.01	235	eP*	Pb	15 21 21.2	+2.1
EBR				i S*	Sb	15 21 46.3	+2.1
EPF	Esparros	2.02	302	ePn	Pn	15 21 17.3	-0.1
EPF				eP		15 21 19.4	
EPF				ePg	Pg	15 21 21.3	-1.6
EPF				eSn	Sn	15 21 40.6	-2.4
EPF				eSg	Sg	15 21 46.5	-3.3
	138nm,0.2s						
EPF	Esparros	2.02	302	ePn	Pn	15 21 17.3	-0.1
EPF				ePg	Pg	15 21 21.3	-1.6
EPF				eSn	Sn	15 21 40.6	-2.4
EPF				eSg	Sg	15 21 46.5	-3.3
EPF	Esparros	2.02	302	Pn	Pn	15 21 17.3	-0.1
EPF				Pg	Pg	15 21 21.3	-1.6
EPF				Sn	Sn	15 21 40.6	-2.4
EPF				Lg		15 21 46.5	
	69nm,0.2s						
ERTA	Horta de San J	2.04	240	Pn	Pn	15 21 19.7	+2.0
	2.8nm,0.1s,SNR=52						
ERTA				Pg	Pg	15 21 21.4	-1.9
	2.3nm,0.1s,SNR=7.9						
ERTA				Lg		15 21 47.1	
	319nm,0.3s,SNR=38						
ERTA	Horta de San J	2.04	240	Pn	Pn	15 21 19.7	+2.0
	2.8nm,0.1s,SNR=52						
ERTA	Horta de San J	2.04	240	Pg	Pg	15 21 21.4	-1.9
	2.3nm,0.1s,SNR=7.9						
VIEF	Viey	2.15	296	Pn	Pn	15 21 21.3	+1.9
VIEF	Viey	2.15	296	P	Pn	15 21 21.5	+2.1
VIEF				S	Sn	15 21 50.2	+3.6
LABF	Labassere	2.19	300	Pn	Pn	15 21 22.6	+2.7
LABF	Labassere	2.19	300	P	Pn	15 21 22.8	+2.9
LASF	Ste Croix	2.26	22	ePn	Pn	15 21 21.3	+0.4
LASF				eSn	Sn	15 21 47.9	-1.4
LASF				eSg	Sg	15 21 57.4	-0.7
	43nm,0.4s						
ESAC	San Caprasio	2.36	265	Pn	Pn	15 21 22.9	+0.6
	72nm,0.3s,SNR=15						
ESAC				Pg	Pg	15 21 27.3	-2.5
	48nm,0.3s,SNR=18						
ESAC				Lg		15 21 57.0	
	435nm,0.3s,SNR=12						
ESAC	San Caprasio	2.36	265	Pn	Pn	15 21 22.9	+0.6
	72nm,0.3s,SNR=15						
ESAC	San Caprasio	2.36	265	Pg	Pg	15 21 27.3	-2.5
	48nm,0.3s,SNR=18						
REYF	Montagne du Re	2.51	297	Pn	Pn	15 21 27.3	+2.8
REYF				Sg	Sg	15 22 02.2	-4.1
ETSF	Etsaut	2.56	292	ePn	Pn	15 21 24.6	-0.6
ETSF				eP		15 21 26.8	
ETSF				ePg	Pg	15 21 31.8	-2.0
ETSF				eSn	Sn	15 21 53.4	-3.4
ETSF				eSg	Sg	15 22 03.3	-4.6
	118nm,0.2s						
ETSF	Etsaut	2.56	292	ePn	Pn	15 21 24.6	-0.6
ETSF				ePg	Pg	15 21 31.8	-2.0
ETSF				eSn	Sn	15 21 53.4	-3.4
ETSF				eSg	Sg	15 22 03.3	-4.6
ETSF	Etsaut	2.56	292	Pn	Pn	15 21 24.6	-0.6
ETSF				Pg	Pg	15 21 31.8	-2.0
ETSF				Sn	Sn	15 21 53.4	-3.4
ETSF				Lg		15 22 03.3	
	59nm,0.2s						
EMOS	Mosqueruela	2.87	237	Pn	Pn	15 21 31.4	+1.8
EMOS				Pg	Pg	15 21 37.2	-2.8
EMOS				Sn	Sn	15 22 05.0	+0.2
EMOS				Lg		15 22 14.3	
EMOS	Mosqueruela	2.87	237	Pn	Pn	15 21 31.4	+1.8
	6.0nm,0.3s,SNR=18						
EMOS				Pg	Pg	15 21 37.2	-2.8
	65nm,0.4s,SNR=29						
EMOS				Sn	Sn	15 22 03.8	-1.0
	77nm,0.8s,SNR=6.8						
EMOS				Lg		15 22 14.3	
	13nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.87	237	Pn	Pn	15 21 31.4	+1.8
	6.0nm,0.3s,SNR=18						
EMOS	Mosqueruela	2.87	237	Pg	Pg	15 21 37.2	-2.8
	65nm,0.4s,SNR=29						
EMOS				Sn	Sn	15 22 05.0	+0.2
	77nm,0.8s,SNR=6.8						
LARF	Larrau	2.90	292	Pn	Pn	15 21 31.5	+1.4
SMRF	Simiane la Rot	2.92	46	ePn	Pn	15 21 31.4	+1.1
SMRF				ePg	Pg	15 21 39.9	-1.0
SMRF				eSn	Sn	15 22 04.5	-1.4
SMRF				eSg	Sg	15 22 18.2	-1.6
	39nm,0.5s						
ORDF	Ordiarp	2.93	296	Pn	Pn	15 21 32.1	+1.6
CAF	Calviac	2.97	352	ePn	Pn	15 21 30.7	-0.4
CAF				eP		15 21 33.2	
CAF				ePg	Pg	15 21 39.9	-2.1
CAF				eSn	Sn	15 22 04.7	-2.6
CAF				eSg	Sg	15 22 17.5	-4.2
	59nm,0.3s						
CAF	Calviac	2.97	352	ePn	Pn	15 21 30.7	-0.4
CAF				ePg	Pg	15 21 39.9	-2.1
CAF				eSn	Sn	15 22 04.7	-2.6
CAF				eSg	Sg	15 22 17.5	-4.2
CAF	Calviac	2.97	352	Pn	Pn	15 21 30.7	-0.4
CAF				Pg	Pg	15 21 39.9	-2.1
CAF				Sn	Sn	15 22 04.7	-2.6
CAF				Lg		15 22 17.5	
	29nm,0.3s						
SJPF	Ste Jean	3.09	293	ePn	Pn	15 21 33.1	+0.3
SJPF				ePg	Pg	15 21 40.9	-3.5
SJPF				eSn	Sn	15 22 05.9	-4.4
SJPF				eSg	Sg	15 22 19.5	-6.1
	49nm,0.2s						
EIBI	Ibiza	3.12	199	Pn	Pn	15 21 32.7	-0.5
	3.1nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	15 22 07.8	-3.3
	28nm,0.7s,SNR=8.2						
EIBI	Ibiza	3.12	199	Pn	Pn	15 21 32.7	-0.5
	SNR=7.9						
EIBI				Sn	Sn	15 22 07.8	-3.3
	28nm,0.7s,SNR=8.2						
LMR	La Mourre	3.14	63	ePn	Pn	15 21 34.2	+0.8
LMR				eSn	Sn	15 22 10.0	-1.4
	24nm,0.2s						
VIVF	Saint-Julien-l	3.22	26	ePn	Pn	15 21 34.9	+0.3
VIVF				ePg	Pg	15 21 44.8	-2.1
VIVF				eSn	Sn	15 22 10.0	-3.5
VIVF				eSg	Sg	15 22 26.9	-3.0
	13nm,0.3s						
LFF	La Frestale	3.27	335	ePn	Pn	15 21 34.7	-0.6
LFF				ePg	Pg	15 21 45.0	-3.0
LFF				eSn	Sn	15 22 11.3	-3.5
LFF				eSg	Sg	15 22 26.3	-5.3
	90nm,0.4s						
LBL	Lubilhac	3.27	7	Pn	Pn	15 21 36.2	+0.9
EALK	Alkurruntz	3.32	293	Pn	Pn	15 21 37.3	+1.3
EALK				Sn	Sn	15 22 16.4	+0.2
EALK				Lg		15 22 28.2	
EALK	Alkurruntz	3.32	293	Pn	Pn	15 21 37.3	+1.3
	15nm,0.4s,SNR=24						
EALK				Sn	Sn	15 22 14.4	-1.7
	14nm,0.3s,SNR=7.9						
EALK				Lg		15 22 28.2	
	26nm,0.3s,SNR=4.0						
EALK	Alkurruntz	3.32	293	Pn	Pn	15 21 37.3	+1.3
	15nm,0.4s,SNR=24						
EALK				Sn	Sn	15 22 16.4	+0.3
	14nm,0.3s,SNR=7.9						
FRF	La Foret Royal	3.32	60	ePn	Pn	15 21 36.9	+0.8
FRF				eSn	Sn	15 22 14.5	-1.7
	13nm,0.2s						
RJF	Les Rejaudoux	3.42	346	ePn	Pn	15 21 36.8	-0.7
RJF				ePg	Pg	15 21 47.9	-3.1
RJF				eSn	Sn	15 22 15.2	-3.5
RJF				eSg	Sg	15 22 32.1	-4.5
	30nm,0.2s						
ORIF	Oris-en-Rattie	3.75	37	ePn	Pn	15 21 43.9	+1.8
ORIF				eSn	Sn	15 22 24.0	-3.0
	12nm,0.3s						
PYM	Petit Puy Mans	3.77	4	Pn	Pn	15 21 44.2	+1.8
EBEN	Beniarda	3.95	215	Pn	Pn	15 21 45.3	+0.3
	29nm,0.9s,SNR=4.0						
EBEN				Sn	Sn	15 22 30.1	-2.0
	4.1nm,0.3s,SNR=4.0						
EBEN	Beniarda	3.95	215	Pn	Pn	15 21 45.3	+0.3
	29nm,0.9s,SNR=4.0						
EBEN				Sn	Sn	15 22 30.1	-2.0
	4.1nm,0.3s,SNR=4.0						
SBF	Sospel	3.97	60	ePn	Pn	15 21 45.3	+0.1
SBF				eSn	Sn	15 22 30.9	-1.7

	20nm,0.2s						
PLDF	**La Plantade**	**4.04**	**9**	Pn	**Pn**	**15 21 46.7**	**+0.4**
MBDF	**Montbardon**	**4.06**	**46**	*e*Pn	**Pn**	**15 21 48.1**	**+1.6**
MBDF				*e*Sn	**Sn**	**15 22 32.6**	**-2.1**
	11nm,0.5s						
STV	**Sta Anna Valdi**	**4.09**	**55**	P	**Pn**	**15 21 47.8**	**+0.9**
STV	**Sta Anna Valdi**	**4.09**	**55**	P	**Pn**	**15 21 47.8**	**+0.9**
STV2	**Anna di Valdie**	**4.09**	**55**	P	**Pn**	**15 21 47.8**	**+0.9**
STV2	**Anna di Valdie**	**4.09**	**55**	P	**Pn**	**15 21 47.8**	**+0.9**
PZZ	**Prazzo**	**4.10**	**51**	P	**Pn**	**15 21 49.8**	**+2.7**
PZZ	**Prazzo**	**4.10**	**51**	P	**Pn**	**15 21 49.8**	**+2.7**
ENR	**Entracque**	**4.14**	**56**	P	**Pn**	**15 21 48.9**	**+1.2**
ENR	**Entracque**	**4.14**	**56**	P	**Pn**	**15 21 48.8**	**+1.2**
MONE	**Monesi**	**4.28**	**59**	P	**Pn**	**15 21 50.6**	**+1.0**
MONE	**Monesi**	**4.28**	**59**	P	**Pn**	**15 21 50.6**	**+1.0**
IMI	**Imperia**	**4.29**	**62**	P	**Pn**	**15 21 50.1**	**+0.4**
IMI	**Imperia**	**4.29**	**62**	P	**Pn**	**15 21 50.1**	**+0.4**
TCF	**Toulx Ste Croi**	**4.32**	**356**	*e*Pn	**Pn**	**15 21 49.0**	**-1.1**
TCF				*e*Pg	**Pg**	**15 22 04.0**	**-4.8**
TCF				*e*Sn	**Sn**	**15 22 36.9**	**-4.4**
TCF				*e*Sg	**Sg**	**15 23 00.0**	**-6.3**
	19nm,0.3s						
BHB	**Bricherasio**	**4.40**	**48**	P	**Pn**	**15 21 53.0**	**+1.7**
BHB	**Bricherasio**	**4.40**	**48**	P	**Pn**	**15 21 53.0**	**+1.7**
ROB	**Roburent**	**4.45**	**57**	P	**Pn**	**15 21 53.4**	**+1.4**
ROB	**Roburent**	**4.45**	**57**	P	**Pn**	**15 21 53.4**	**+1.3**
BGF	**Bois d'Agland**	**4.57**	**2**	*e*Pn	**Pn**	**15 21 53.5**	**-0.3**
BGF				*e*Sn	**Sn**	**15 22 43.0**	**-4.8**
BGF				*e*Sg	**Sg**	**15 23 08.9**	**-6.0**
	31nm,0.3s						
LPG	**La Plagne**	**4.59**	**39**	*e*Pn	**Pn**	**15 21 54.0**	**0.0**
LPG				*e*P		15 21 57.9	
LPL	**La Plagne**	**4.59**	**38**	*e*Pn	**Pn**	**15 21 53.8**	**-0.3**
LPL				*e*P		15 21 57.7	
RSP	**Reno Superiore**	**4.60**	**45**	P	**Pn**	**15 21 55.5**	**+1.3**
RSP	**Reno Superiore**	**4.60**	**45**	P	**Pn**	**15 21 55.5**	**+1.4**
FIN	**Finale Ligure**	**4.62**	**59**	P	**Pn**	**15 21 55.8**	**+1.3**
FIN	**Finale Ligure**	**4.62**	**59**	P	**Pn**	**15 21 55.8**	**+1.3**
ELAN	**Lanestosa**	**4.67**	**288**	Pn	**Pn**	**15 21 55.4**	**+0.2**
	1.1nm,0.1s,SNR=12						
ELAN				Sn	**Sn**	**15 22 47.6**	**-2.8**
	5.2nm,0.3s,SNR=7.9						
ELAN				Lg		15 23 10.1	
	6.3nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**4.67**	**288**	Pn	**Pn**	**15 21 55.4**	**+0.2**
	1.1nm,0.1s,SNR=12						
ELAN				Sn	**Sn**	**15 22 47.6**	**-2.8**
	SNR=7.9						
PGF	**Pioggiola**	**4.73**	**81**	*e*Pn	**Pn**	**15 21 54.9**	**-1.1**
PGF				*e*Sn	**Sn**	**15 22 47.2**	**-4.6**
	14nm,0.2s						
SMF	**Signal de Mont**	**4.73**	**10**	*e*Pn	**Pn**	**15 21 56.4**	**+0.3**
SMF				*e*Sn	**Sn**	**15 22 47.0**	**-4.9**
SMF				*e*Sg	**Sg**	**15 23 13.8**	**-6.5**
	11nm,0.5s						
AVF	**Avril sur Loir**	**4.83**	**6**	*e*Pn	**Pn**	**15 21 57.2**	**-0.2**
AVF				*e*Sn	**Sn**	**15 22 48.9**	**-5.4**
AVF				*e*Sg	**Sb**	**15 23 16.1**	**+10**
	11nm,0.5s						
PCP	**Pian Castagno**	**4.99**	**57**	P	**Pn**	**15 22 00.1**	**+0.3**
PCP	**Pian Castagno**	**4.99**	**57**	P	**Pn**	**15 22 00.1**	**+0.4**
MFF	**Saint Martin d**	**5.04**	**337**	*e*Pn	**Pn**	**15 21 58.3**	**-2.1**
MFF				*e*Pg	**Pg**	**15 22 17.7**	**-5.6**
MFF				*e*Sn	**Sn**	**15 22 53.7**	**-5.9**
MFF				*e*Sg	**Sb**	**15 23 21.7**	**+10**
	8.9nm,0.3s						
SSF	**Saint Saulge**	**5.11**	**6**	*e*Pn	**Pn**	**15 21 59.7**	**-1.7**
SSF				*e*Sn	**Sn**	**15 22 55.9**	**-5.5**
SSF				*e*Sg	**Sb**	**15 23 24.5**	**+10**
	4.7nm,0.4s						
EMUR	**La Murta**	**5.11**	**217**	Pn	**Pn**	**15 22 00.7**	**-0.8**
	10nm,0.6s,SNR=4.0						
EMUR	**La Murta**	**5.11**	**217**	Pn	**Pn**	**15 22 00.7**	**-0.8**
	SNR=4.0						
CABF	**La Chapelle**	**5.23**	**27**	*e*Pn	**Pn**	**15 22 02.5**	**-0.7**
ESDC	**Sonseca Array**	**5.54**	**248**	Pn	**Pn**	**15 22 06.5**	**-0.9**
	1.3nm,0.3s,baz=68,slow=14,SNR=4.0						
ESDC				Pg	**Pg**	**15 22 27.2**	**-6.0**
	0.9nm,0.3s,baz=54,slow=18,SNR=5.4						
ESDC				Lg		15 23 35.4	
	7.8nm,0.4s,baz=58,slow=30,SNR=6.9						
ESDC	**Sonseca Array**	**5.54**	**248**	Pn	**Pn**	**15 22 06.5**	**-0.9**
	1.3nm,0.3s,slow=14,SNR=4.0						
ESDC	**Sonseca Array**	**5.54**	**248**	Pg	**Pg**	**15 22 27.2**	**-6.0**
EARI	**Arriondas**	**5.96**	**285**	Pn	**Pn**	**15 22 12.6**	**-0.7**
	2.6nm,0.4s,SNR=8.8						
EARI				Sn	**Sn**	**15 23 16.8**	**-5.9**
	1.4nm,0.3s,SNR=7.9						
EARI				Lg		15 23 53.7	
	1.5nm,0.3s,SNR=4.0						
EARI	**Arriondas**	**5.96**	**285**	Pn	**Pn**	**15 22 12.6**	**-0.8**
EARI				Sn	**Sn**	**15 23 16.8**	**-5.9**
HINF	**Hinteralfeld**	**6.54**	**26**	*e*Pn	**Pn**	**15 22 19.9**	**-1.7**
HAU	**Haudompre**	**6.56**	**22**	*e*Pn	**Pn**	**15 22 20.0**	**-1.8**
GRR	**Gorron**	**6.87**	**340**	*e*Pn	**Pn**	**15 22 23.3**	**-2.9**
GRR				*e*Sg	**Sb**	**15 24 19.9**	**+15**
	5.2nm,0.3s						
LDF	**La Druitiere**	**6.89**	**344**	*e*Pn	**Pn**	**15 22 24.0**	**-2.6**
FLN	**La Foliniere**	**7.13**	**343**	*e*Pn	**Pn**	**15 22 27.2**	**-2.7**
	baz=161						
FLN				*e*Sg	**Sb**	**15 24 27.7**	**+15**
	5.2nm,0.4s						
QUIF	**Quistinic**	**7.23**	**327**	*e*Pn	**Pn**	**15 22 28.5**	**-2.8**
QUIF				*e*Sg	**Sb**	**15 24 30.0**	**+14**
	3.5nm,0.3s						
SGMF	**Saint Gilles**	**7.28**	**331**	*e*Pn	**Pn**	**15 22 29.3**	**-2.6**
SGMF				*e*Sg	**Sb**	**15 24 31.8**	**+15**
	2.4nm,0.3s						
ROSF	**Rostrenen**	**7.61**	**329**	*e*Pn	**Pn**	**15 22 34.1**	**-2.5**

IDC 09 15:40:09.7±1.6**,0.50N**×**126.91E,mb3.6**/3**,mb1 3.9**/3**,**
mb1mx3.7/15**,mbtmp3.7**/3**,Error ellipse:**
s-maj=153.0km s-min=25.8km az=73.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.58**	**161**	P	P	15 45 00.6	-2.6
	1.8nm,0.5s,baz=339,slow=11,SNR=25						
WB2	**Warramunga Arr**	**21.58**	**161**	*e*P	P	15 45 00.4	-2.9
ASAR	**Alice Springs**	**24.96**	**165**	P	P	15 45 35.5	-0.9
	1.4nm,0.6s,baz=354,slow=16,SNR=32						
SONM	**Songino Array**	**50.40**	**342**	P	P	15 49 08.9	-2.0
	0.6nm,0.8s,baz=151,slow=9.4,SNR=5.1						

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*IDC **09** 15:44:07.6±1.4,25.06S×176.71W,mb4.2/6,mb1 4.4/7,*
mb1mx4.2/16,mbtmp4.2/7,ML3.6/1,Error ellipse:
s-maj=61.1km s-min=25.0km az=151.0

ISC 09 15:44:19.4±1.3**,25.4S**±0.2×**176.9W**±0.2**,h100**^{km}**,n14,**
σ**0ˢ82**/9**,mb4.0**/6**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.74**	**200**	Pn	**P**	**15 47 31.0**	**0.0**
	0.3nm,0.3s,baz=169,slow=16,SNR=2.7						
CTA	**Charters Tower**	**34.28**	**271**	P	**P**	**15 50 58.4**	**+0.2**
	2.5nm,0.6s,mb4.3,baz=98,slow=6.5,SNR=6.7						
STKA	**Stephens Creek**	**36.78**	**250**	P	**P**	**15 51 19.9**	**+0.7**
	1.5nm,0.5s,mb4.2,baz=112,slow=8.7,SNR=9.7						
ASAR	**Alice Springs**	**44.55**	**261**	P	**P**	**15 52 22.8**	**-0.4**
	4.1nm,0.4s,mb4.5,baz=91,slow=7.1,SNR=112						
ASPA	**Alice Springs**	**44.55**	**261**	*e*P	**P**	**15 52 22.7**	**-0.5**
WB2	**Warramunga Arr**	**45.08**	**267**	*e*P	**P**	**15 52 26.6**	**-0.8**
WRA	**Warramunga Arr**	**45.09**	**267**	P	**P**	**15 52 27.0**	**-0.5**
	0.7nm,0.4s,mb3.8,baz=100,slow=7.1,SNR=22						
NVAR	**Mina Array Bea**	**83.97**	**42**	P	**P**	**15 56 39.2**	**-0.5**
	0.2nm,0.5s,mb3.2,baz=201,slow=5.3,SNR=3.9						
CMAR	**Chiang Mai Arr**	**92.67**	**289**	P	**P**	**15 57 23.9**	**+2.1**
	1.3nm,0.7s,mb4.4,baz=139,slow=4.1,SNR=10						
ARCES	**ARCESS Array B**	**133.94**	**349**	PKP	PKPdf	16 03 23.3	-1.0
	4.5nm,0.9s,baz=342,slow=3.8,SNR=5.2						
NOA	**NORSAR Array B**	**143.98**	**353**	PKP	PKPdf	16 03 41.7	-0.7
	2.2nm,0.7s,baz=15,slow=2.4,SNR=6.1						
AKASG	**Malin Array Be**	**147.76**	**328**	PKPbc	PKPdf	16 03 53.1	+4.0
	1.5nm,0.6s,baz=49,slow=4.0,SNR=5.8						
BRTR	**Keskin Array B**	**150.73**	**307**	PKPab	PKPab	16 04 08.3	-1.2
	0.9nm,0.5s,baz=103,slow=4.6,SNR=4.1						
GERES	**GERESS Array B**	**155.20**	**343**	PKPbc	PKPdf	16 04 09.0	+8.8
	0.1nm,0.3s,baz=139,slow=26,SNR=2.7						

CASC 09 15:48:01.9±1.8**,11.11N**×**85.92W,h52**^{km}±12^{km}**,MD3.9,**
ML3.3,5C-3D,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSNN	**San Juan del S**	**0.19**	**21**	⇓*i*P	P	15 48 10.4	+0.1
SSNN				*e*S	S	15 48 17.2	+0.7
MADN	**Villa Maderas**	**0.48**	**52**	⇓*i*P	P	15 48 12.7	-0.4
MADN				*e*S	S	15 48 22.0	+0.8
CONN	**Concepcion**	**0.53**	**32**	⇓*i*P	P	15 48 13.3	-0.5
CONN				*e*S	S	15 48 23.0	+0.7
APON	**Apoyo**	**0.81**	**350**	⇑*i*P	P	15 48 17.2	-0.1
APON				*e*S	S	15 48 30.1	+1.4
MASN	**Masaya**	**0.90**	**345**	*e*P	P	15 48 18.8	+0.3
MASN				*e*S	S	15 48 29.6	-1.2
TICN	**Ticuantepe**	**0.97**	**341**	⇑*e*P	P	15 48 19.3	-0.1
WILN	**Americas 2**	**1.07**	**346**	*e*P	P	15 48 20.4	-0.5
WILN				*e*S	S	15 48 36.4	+1.3
MGAN	**Managua**	**1.08**	**343**	*e*S	S	15 48 35.9	+0.8
MGAN				*i*		15 48 36.8	
	comp=N,657nm,0.5s						
XAVN	**Gruta Xavier**	**1.11**	**339**	*e*P	P	15 48 20.4	-1.0
XAVN				*e*S	S	15 48 35.3	-0.5
APYN	**Apoyeque**	**1.19**	**339**	*e*P	P	15 48 22.5	0.0
APYN				*e*S	S	15 48 37.2	-0.7
COPN	**Copaltepe**	**1.25**	**328**	*e*P	P	15 48 22.6	-0.8
COPN				*e*S	S	15 48 39.1	-0.3
COPN				*i*		15 48 40.4	
	comp=Z,1µm,0.3s						
MOMJ	**Momotombo**	**1.43**	**335**	⇑*e*P	P	15 48 25.1	-0.8
MOMJ				*e*S	S	15 48 43.5	-0.3
MOMJ				*i*		15 48 44.4	
	comp=Z,149nm,0.4s						
MIRN	**Miramar**	**1.53**	**330**	⇑*e*P	P	15 48 27.0	-0.5
CNGN	**Cerro Negro**	**1.58**	**331**	*e*P	P	15 48 27.5	-0.5
LEON	**Leon**	**1.61**	**324**	*e*P	P	15 48 27.9	-0.6
TEL3	**Telica 3**	**1.71**	**328**	*e*P	P	15 48 29.5	-0.5
CRIN	**San Cristobal**	**1.93**	**325**	*e*P	P	15 48 32.8	-0.2
CRIN				*e*S	S	15 48 58.2	+2.2
BLLM	**Bellamira**	**3.24**	**316**	*e*P	P	15 48 52.5	+0.9
BLLM				*e*S	S	15 49 28.2	-1.0
LCBS	**La Ceiba**	**3.92**	**311**	⇑*e*P	P	15 49 00.4	-0.7
LFRS	**El Faro**	**3.96**	**309**	*e*P	P	15 49 00.9	-0.7

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*IDC **09** 15:55:52.6±0.8,34.74N×73.57E,mb4.3/13,mb1 4.5/14,*
mb1mx4.3/20,mbtmp4.3/14,ML4.3/1,Error ellipse:
s-maj=25.4km s-min=15.3km az=42.0
*BJI **09** 15:55:55.1,34.70N×73.60E,h15^{km},mb4.4,ML4.0*
*NEIC **09** 15:55:55.1±6.5,34.73N×73.58E,h18^{km}±39^{km},mb4.3/12,*
Error ellipse: s-maj=16.8km s-min=7.6km az=221.0
*NDI **09** 15:55:55.8±4.5,34.79N×73.19E,h96^{km}±47^{km},MD4.1,*
ML4.2,mb4.3(NEIC)
*MOS **09** 15:55:55.0±1.2,34.70N×73.76E,h33^{km},mb4.4/16,Error*
ellipse: s-maj=13.9km s-min=9.4km az=105.8
*NNC **09** 15:56:00.8±15.0,34.75N×73.85E,h85^{km}±136^{km},mpv4.0,*
Error ellipse: s-maj=297.4km s-min=130.9km az=86.0

ISC 09 15:55:56.5±0.5**,34.72N**±0.03×**73.82E**±0.04**,h39**^{km}±6^{km}**,**
n99,σ**1ˢ47**/115**,mb4.2**/23**,6C-3D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	**1.16**	**204**	P	**P**	**15 56 16.5**	**+0.1**
CEP	**Cherat**	**1.82**	**241**	⇑P	**P**	**15 56 25.4**	**-0.5**
THW	**Thamme Wali**	**2.59**	**223**	P	**P**	**15 56 38.0**	**+1.1**
THW				S	**S**	**15 57 15.0**	**+7.7**
THN	**Thein Dam**	**2.78**	**145**	*e*P	**P**	**15 56 43.5**	**+3.9**
THN				*e*		15 57 25.5	
DLH	**Dalhousie**	**2.82**	**140**	*e*P	**P**	**15 56 46.0**	**+5.8**
DLH				*e*S	**S**	**15 57 18.0**	**+4.7**
SARP	**Sargodha**	**2.95**	**199**	P	**P**	**15 56 43.3**	**+1.2**
SARP				S	**S**	**15 57 22.0**	**+5.3**
PONG	**Pong**	**3.29**	**147**	*e*P	**P**	**15 56 51.0**	**+4.2**
PONG				*e*		15 56 59.0	
PONG				*e*		15 57 34.0	
PONG				*e*		15 57 46.0	
BHK	**Bhakra**	**3.95**	**146**	*e*	**P**	**15 57 08.8**	**+13**
BHK				*e*		15 58 46.0	
SDNR	**Sundarnagar**	**4.16**	**140**	*e*P	**P**	**15 57 02.4**	**+3.2**
SDNR				*e*S	**S**	**15 57 51.4**	**+4.1**
DRP	**Derazinda**	**4.24**	**227**	P	**P**	**15 57 00.3**	**-0.1**
DRP				S	**S**	**15 57 50.0**	**+0.7**
SMLA	**Simla**	**4.56**	**141**	⇑*i*P	**P**	**15 57 21.9**	**+17**
KSH	**Kashi**	**5.08**	**19**	P	**P**	**15 57 16.5**	**+4.2**
KSH				*e*S	**S**	**15 58 16.4**	**+5.9**
KSH				Smax			
	comp=N,150nm,1.0s						
KSH				Smax			
	comp=E,170nm,1.1s						
KKR	**Kurukshetra**	**5.38**	**151**	*e*P	**P**	**15 57 18.7**	**+2.3**
KKR				*e*		15 58 22.3	
KKR				*e*		15 58 56.7	
	comp=Z,342nm,0.5s						
DDI	**Dehra Dun**	**5.66**	**140**	*e*P	**P**	**15 57 22.2**	**+1.9**
DDI				*e*S	**S**	**15 58 27.2**	**+2.2**
RTK	**Rohtak**	**6.09**	**158**	*e*P	**P**	**15 57 26.0**	**-0.3**
RTK				*e*		15 59 00.7	
NDI	**New Delhi**	**6.68**	**153**	*e*	**P**	**15 57 38.5**	**+3.8**
NDI				*e*		15 57 58.0	
NDI				*e*S	**S**	**15 58 48.5**	**-1.9**
AYAN	**Aya Nagar**	**6.83**	**155**	*e*P	**P**	**15 57 37.0**	**+0.2**
AYAN				*e*		15 58 54.2	
AYAN				*e*		15 59 42.8	
	comp=Z,105nm,0.5s						
KHET	**Khetri**	**6.84**	**165**	*e*P	**P**	**15 57 33.9**	**-3.1**
KHET				*e*S	**S**	**15 58 48.9**	**-5.5**
KHET				*e*		15 59 44.8	
	comp=N,73nm,0.5s						
KHET				*e*		15 59 45.0	
	comp=E,108nm,0.6s						
KUDL	**Kundal**	**6.94**	**160**	*e*P	**P**	**15 57 35.8**	**-2.6**
KUDL				*e*S	**S**	**15 58 52.3**	**-4.6**
KUDL				*e*		15 59 37.8	
	comp=Z,81nm,1.0s						
SONA	**Sohna**	**7.03**	**156**	*e*P	**P**	**15 57 39.2**	**-0.3**
SONA				*e*		15 58 57.5	
SONA				*e*		15 59 00.5	
	comp=E,266nm,0.3s						
SONA				*e*		15 59 00.6	
	comp=N,141nm,0.3s						
AML	**Almayashu**	**7.40**	**359**	P	**P**	**15 57 45.9**	**+1.2**
	SNR=22						
KZA	**Kyzart**	**7.43**	**8**	P	**P**	**15 57 45.8**	**+0.7**
	SNR=13						
PTH	**Pithoragarh**	**7.49**	**132**	*e*P	**P**	**15 57 48.3**	**+2.4**
PTH				*e*S	**S**	**15 59 08.0**	**-2.4**
UCH	**Uchtor**	**7.51**	**4**	P	**P**	**15 57 47.2**	**+1.0**
	SNR=12						
LGTI	**Lohaghat**	**7.57**	**132**	*e*P	**P**	**15 57 46.5**	**-0.6**
LGTI				*e*		15 59 13.5	
AAK	**Ala-Archa**	**7.92**	**4**	⇓P	**P**	**15 57 52.9**	**+1.0**
	comp=N,6.2nm,0.8s						
AAK				⇑S	**S**	**15 59 21.3**	**+0.2**
	comp=N,18nm,1.1s						
AAK	**Ala-Archa**	**7.92**	**4**	*e*P	**P**	**15 57 51.2**	**-0.6**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AAK	**Ala-Archa**	**7.92**	**4**	*e*P	**P**	**15 57 51.1**	**-0.7**
	comp=Z,9.6nm,0.6s						
EKS2	**Erkin-Say**	**7.93**	**360**	P	**P**	**15 57 53.3**	**+1.3**
	SNR=16						
AJM	**Ajmer**	**8.25**	**175**	⇓*i*P	**P**	**15 57 55.0**	**-1.4**
AJM				*i*		15 59 25.0	
AGRA	**Agra**	**8.27**	**154**	*e*P	**P**	**15 57 57.1**	**+0.5**
AGRA				*e*		15 59 27.5	
AGRA				*e*		16 00 29.9	
	comp=E,454nm,1.1s						
AGRA				*e*		16 00 30.0	
	comp=N,339nm,1.0s						
TKM2	**Tokmak 2**	**8.30**	**9**	P	**P**	**15 57 57.7**	**+0.5**
	SNR=8.7						
KOLN	**Koldanda**	**10.86**	**127**	*e*Pn	**P**	**15 58 30.5**	**-2.0**
KOLN				*e*Sn	**S**	**16 00 29.8**	**-4.0**
	comp=N,47nm,0.4s						
GKN	**Gorkha**	**11.41**	**123**	*e*Pn	**P**	**15 58 38.2**	**-1.7**
GKN				*e*Sn	**S**	**16 00 41.2**	**-5.9**
	comp=N,118nm,0.3s						
DMN	**Daman**	**11.98**	**123**	*e*Pn	**P**	**15 58 46.1**	**-1.5**
KKN	**Kakani**	**11.99**	**122**	*e*Pn	**P**	**15 58 45.8**	**-1.9**
PKI	**Pulchoki**	**12.22**	**123**	*e*Pn	**P**	**15 58 48.5**	**-2.2**
PKI				*e*Sn	**S**	**16 01 02.2**	**-4.4**
	comp=N,87nm,0.7s						
GUN	**Gumba**	**12.34**	**120**	*e*Pn	**P**	**15 58 50.1**	**-2.3**
JIRN	**Jiri**	**12.71**	**120**	*e*Pn	**P**	**15 58 55.4**	**-2.0**
MK31	**Makanchi Array**	**13.65**	**25**	⇑P	**P**	**15 59 10.2**	**+0.6**
	comp=N,0.9nm,0.8s,baz=205,slow=12,SNR=25						
LSA	**Lhasa**	**15.50**	**104**	*e*P	**P**	**15 59 32.9**	**-0.9**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LSA	**Lhasa**	**15.50**	**104**	*e*P	**P**	**15 59 32.9**	**-0.9**
	comp=Z,7.0nm,0.7s						
KURK	**Kurchatov**	**16.36**	**11**	⇑P	**P**	**15 59 46.9**	**+2.2**
KURK	**Kurchatov**	**16.36**	**11**	*e*P	**P**	**15 59 43.8**	**-0.8**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**16.36**	**11**	*e*P	**P**	**15 59 43.8**	**-0.8**
	comp=Z,5.5nm,0.8s						
HYB	**Hyderabad**	**17.75**	**165**	*i* P	**P**	**16 00 11.0**	**+8.7**
HYB				*e*		16 03 06.5	
HYB				*e*S	**S**	**16 03 19.0**	**+2.8**
BVA0	**Borovoye Array**	**18.46**	**353**	P	**P**	**16 00 09.0**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=157,slow=12,SNR=33						
BVAR	**Borovoye Array**	**18.46**	**353**	P	**P**	**16 00 08.2**	**-2.7**
	comp=Z,0.9nm,0.3s,baz=159,slow=10.0,SNR=29						
CHKZ	**Chkalovo**	**19.08**	**354**	P	**P**	**16 00 16.5**	**-1.8**
CHKZ	**Chkalovo**	**19.08**	**354**	*e*P	**P**	**16 00 15.3**	**-3.0**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHKZ	**Chkalovo**	**19.08**	**354**	*e*P	**P**	**16 00 15.3**	**-3.0**
	comp=Z,3.7nm,0.7s						
ZAL	**Zalesovo**	**20.71**	**19**	P	**P**	**16 00 34.1**	**-1.6**
ZAL				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ZAL	**Zalesovo**	**20.71**	**19**	P	**P**	**16 00 34.1**	**-1.5**
	comp=Z,8.2nm,0.3s,baz=258,slow=5.6,SNR=29						
NVS	**Novosibirsk**	**21.16**	**15**	*e*P	**P**	**16 00 38.5**	**-1.8**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.0						
NVS				pmax	pmax		
	comp=N,5.0nm,0.7s						
GTA	**Gaotai**	**21.23**	**70**	*e*P	**P**	**16 00 42.6**	**+1.5**
GTA				AP		16 00 46.7	
GTA				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.2						
LZH	**Lanzhou**	**24.47**	**78**	*e*P	**P**	**16 01 14.0**	**+1.1**
LZH				AP		16 01 22.5	
LZH				XP		16 01 25.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.3						
LZH	**Lanzhou**	**24.47**	**78**	*e*P	**P**	**16 01 14.0**	**+1.1**
	comp=Z,20nm,1.5s,mb4.3						
LZH				pP		16 01 22.5	
LZH				sP		16 01 25.0	
ZAK	**Zakamensk**	**26.53**	**45**	⇑*e*P	**P**	**16 01 33.2**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.4						
KMI	**Kunming**	**26.75**	**103**	P	**P**	**16 01 32.6**	**-1.9**
KMI				*SP	sP	16 01 42.0	-8.0
KMI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
KMI	**Kunming**	**26.75**	**103**	P	**P**	**16 01 32.6**	**-1.9**
	comp=Z,4.0nm,1.0s,mb3.9						
KMI				sP	sP	16 01 42.0	-8.0
SONM	**Songino Array**	**27.54**	**52**	P	**P**	**16 01 43.1**	**+1.6**
	comp=Z,1.7nm,0.6s,mb3.9,baz=254,slow=9.1,SNR=20						
CM31	**Chiang Mai Arr**	**27.59**	**120**	*e*P	**P**	**16 01 42.8**	**+0.6**
	comp=Z,6.4nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**27.59**	**120**	P	**P**	**16 01 43.6**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**27.59**	**120**	P	**P**	**16 01 43.6**	**+1.4**
	comp=Z,3.2nm,0.9s,mb4.0,baz=305,slow=10,SNR=22						
ENH	**Enshi**	**30.31**	**88**	*e*P	**P**	**16 02 08.2**	**+1.8**
	comp=Z,2.1nm,0.7s,mb4.0						
AKASG	**Malin Array Be**	**35.84**	**310**	P	**P**	**16 02 52.1**	**-2.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**35.84**	**310**	P	**P**	**16 02 52.1**	**-2.0**
	comp=Z,0.8nm,0.4s,mb4.0,baz=79,slow=7.4,SNR=6.0						
FINES	**FINESS Array B**	**40.23**	**327**	P	**P**	**16 03 30.0**	**-0.7**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**40.23**	**327**	P	**P**	**16 03 30.0**	**-0.6**
	comp=Z,3.3nm,0.8s,mb4.1,baz=117,slow=11,SNR=11						
FINES	**FINESS Array B**	**40.23**	**327**	P	**P**	**16 03 30.0**	**-0.6**
ARCES	**ARCESS Array B**	**43.66**	**338**	P	**P**	**16 03 58.7**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARCES	**ARCESS Array B**	**43.66**	**338**	P	**P**	**16 03 58.7**	**+0.1**
	comp=Z,5.0nm,0.7s,mb4.3,baz=113,slow=8.3,SNR=14						
ARCES	**ARCESS Array B**	**43.66**	**338**	P	**P**	**16 03 58.7**	**+0.1**
NB2	**NORSAR Subarra**	**47.17**	**324**	P	**P**	**16 04 25.2**	**-1.4**
	comp=Z,1.9nm,0.5s,mb4.3,baz=94,slow=7.4						
NB2	**NORSAR Subarra**	**47.17**	**324**	P	**P**	**16 04 25.2**	**-1.4**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
NOA	**NORSAR Array B**	**47.17**	**324**	P	**P**	**16 04 25.4**	**-1.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**47.17**	**324**	P	**P**	**16 04 25.4**	**-1.2**
	comp=Z,2.4nm,0.6s,mb4.3,baz=95,slow=7.6,SNR=7.3						
NOA	**NORSAR Array B**	**47.17**	**324**	P	**P**	**16 04 25.4**	**-1.2**
ESDC	**Sonseca Array**	**60.32**	**300**	P	**P**	**16 06 01.6**	**-2.0**
	comp=Z,0.3nm,0.3s,mb3.8,baz=54,slow=7.4,SNR=5.0						
IMA	**Indian Mountai**	**73.10**	**18**	*e*P	**P**	**16 07 24.7**	**+0.8**
IMA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
IMA	**Indian Mountai**	**73.10**	**18**	*e*P	**P**	**16 07 24.7**	**+0.9**
	comp=Z,8.8nm,0.8s,mb4.7						
COLA	**College**	**75.52**	**17**	*e*P	**P**	**16 07 38.6**	**+0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
COLA	**College**	**75.52**	**17**	*e*P	**P**	**16 07 38.6**	**+0.7**
	comp=Z,3.0nm,0.6s,mb4.4						
ILAR	**Eielson Array**	**75.84**	**17**	P	**P**	**16 07 39.8**	**+0.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**75.84**	**17**	P	**P**	**16 07 39.8**	**+0.1**
	comp=Z,1.2nm,0.7s,mb3.9,baz=312,slow=4.7,SNR=12						
DBIC	**Dimbokro**	**76.93**	**269**	P	**P**	**16 07 46.2**	**-0.8**
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DBIC	**Dimbokro**	**76.93**	**269**	P	**P**	**16 07 46.2**	**-0.8**
	comp=Z,2.0nm,0.7s,mb4.2,baz=27,slow=3.9,SNR=5.5						
NWAO	**Narrogin (SRO)**	**78.67**	**144**	*e*P	**P**	**16 07 54.9**	**-1.3**
NWAO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NWAO	**Narrogin (SRO)**	**78.67**	**144**	*e*P	**P**	**16 07 54.9**	**-1.3**
	comp=Z,6.5nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	**79.10**	**123**	P	**P**	**16 08 00.2**	**+1.4**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**79.10**	**123**	P	**P**	**16 08 00.2**	**+1.5**
	comp=Z,5.3nm,0.6s,mb4.7,baz=322,slow=4.8,SNR=137						
WRAB	**Tennant Creek**	**79.10**	**123**	*e*P	**P**	**16 07 59.8**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	**79.10**	**123**	*e*P	**P**	**16 07 59.8**	**+1.0**
	comp=Z,9.4nm,0.5s,mb5.0						
WB2	**Warramunga Arr**	**79.11**	**123**	⇓*i*P	**P**	**16 08 00.1**	**+1.3**
ASPA	**Alice Springs**	**81.35**	**127**	*e*P	**P**	**16 08 11.8**	**+1.1**
ASAR	**Alice Springs**	**81.36**	**126**	P	**P**	**16 08 12.1**	**+1.3**
	comp=Z,2.5nm,0.6s,mb4.3,baz=309,slow=5.2,SNR=64						
YKA	**Yellowknife Ar**	**82.89**	**4**	P	**P**	**16 08 18.7**	**+0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**82.89**	**4**	P	**P**	**16 08 18.7**	**+0.9**
	comp=Z,0.8nm,0.5s,mb4.0,baz=347,slow=5.3,SNR=20						
YKA	**Yellowknife Ar**	**82.89**	**4**	P	**P**	**16 08 18.7**	**+0.9**

MAN 09 15:56:53.0,12.94N×**122.69E,h4**^{km}**,mb4.8,ML3.7,MS3.7,**
1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	**San Andres**	**0.39**	**358**	*e*P	Pg	15 57 01.5	+0.7
BOAC	**Boac**	**0.97**	**303**	*e*P	Pb	15 57 11.5	-0.5
BOAC				*e*S	Sb	15 57 26.4	+1.3
RCP	**Roxas**	**1.37**	**178**	⇓*e*P	Pb	15 57 18.1	-0.8
PVCP	**Virac**	**1.57**	**65**	*e*P	Pn	15 57 20.9	-1.0
SJMP	**San Jose**	**1.60**	**253**	*e*P	Pn	15 57 23.3	+1.0
POLP	**Polilio Island**	**1.92**	**338**	*e*P	Pn	15 57 27.1	+0.2
TGY	**Tagaytay City**	**2.06**	**304**	⇑*e*P	Pn	15 57 27.6	-1.3
GUIM	**Jordan**	**2.30**	**182**	*e*P	Pn	15 57 32.8	+0.6
LUBP	**Lubang**	**2.50**	**289**	*e*P	Pn	15 57 37.3	+2.1
LUBP	**Lubang**	**2.50**	**289**	*e*P	Pn	15 57 34.8	-0.4
CUYO	**Cuyo Island**	**2.64**	**218**	*e*P	Pn	15 57 36.0	-1.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENPP	El Nido	3.62	242	*e*P	Pn	15 57 47.5	-3.7

IDC 09 16:08:36.8±1.6, 10.19S×161.20E, h87^{km}±6^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.6/15, mbtmp3.8/6, Error ellipse: s-maj=52.0km s-min=20.9km az=132.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	17.45	234	P	P	16 12 32.9	-3.3
	0.1nm,0.3s,baz=114,slow=16,SNR=2.0						
CTA				pP		16 12 54.1	
	0.1nm,0.3s,baz=38,slow=10,SNR=3.6						
WRA	Warramunga Arr	27.66	246	P	P	16 14 16.6	-2.1
	1.2nm,0.9s,baz=76,slow=8.9,SNR=11						
WRA				pP	pP	16 14 37.1	-1.3
	1.4nm,0.7s,baz=77,slow=9.5,SNR=5.3						
ASAR	Alice Springs	29.28	239	P	P	16 14 30.5	-2.7
	0.3nm,0.5s,baz=61,slow=10,SNR=9.0						
ASAR				pP	pP	16 14 52.0	-1.1
	0.7nm,0.6s,baz=63,slow=9.8,SNR=4.8						
SONM	Songino Array	75.38	325	P	P	16 20 12.1	-0.6
	1.6nm,0.9s,baz=141,slow=5.5,SNR=12						
SONM				pP	pP	16 20 31.9	-3.6
	0.7nm,0.8s,baz=132,slow=5.8,SNR=3.3						
NVAR	Mina Array Bea	88.91	51	P	P	16 21 22.4	-0.6
	0.4nm,0.7s,baz=240,slow=7.3,SNR=3.8						
YKA	Yellowknife Ar	96.28	28	P	P	16 21 54.4	-1.9
	0.1nm,0.6s,baz=259,slow=4.8,SNR=4.3						

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*IDC **09** 16:40:29.0±0.9, 5.01N×94.50E, mb3.9/7, mb1 4.1/8, mb1mx3.9/19, mbtmp3.8/8, ML3.4/1, Error ellipse: s-maj=36.3km s-min=22.0km az=55.0*

*NEIC **09** 16:40:33.7±0.7, 5.06N×94.59E, h30^{km}, mb4.1/3, Error ellipse: s-maj=28.3km s-min=14.4km az=61.0*

ISC 09 16:40:32.0±0.8, 5.1N±0.1×94.6E±0.2, h30^{km}, n12, σ0^{s}75/12, mb3.9/10, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.96	17	Pn	P	16 43 55.6	+5.3
	0.1nm,0.3s,baz=210,slow=11,SNR=10.0						
LSA	Lhasa	24.72	353	P	P	16 45 52.2	0.0
	2.3nm,0.6s,mb3.9						
SONM	Songino Array	43.79	11	P	P	16 48 36.1	-0.7
	0.4nm,0.7s,mb3.3,baz=192,slow=8.0,SNR=5.5						
WRA	Warramunga Arr	46.29	124	P	P	16 48 57.4	+0.3
	1.2nm,0.7s,mb4.0,baz=303,slow=9.3,SNR=8.9						
KURK	Kurchatov	47.43	346	*e*P	P	16 49 06.0	+0.2
	1.2nm,0.4s,mb4.2						
ASAR	Alice Springs	47.79	128	P	P	16 49 08.9	0.0
	0.3nm,0.6s,mb3.5,baz=291,slow=7.5,SNR=7.8						
ZAL	Zalesovo	49.37	352	P	P	16 49 20.4	-0.4
	1.5nm,0.3s,mb4.5,baz=318,slow=7.7,SNR=7.3						
CHKZ	Chkalovo	52.27	342	*e*P	P	16 49 42.5	-0.3
	1.7nm,0.6s,mb4.2						
ARCES	ARCESS Array B	78.05	340	P	P	16 52 29.4	+0.3
	4.0nm,1.0s,mb4.3,baz=104,slow=7.4,SNR=3.6						
TSUM	Tsumeb	79.48	250	P	P	16 52 36.8	-1.1
	1.1nm,0.5s,mb4.1,baz=62,slow=12,SNR=3.1						
TSUM	Tsumeb	79.48	250	P	P	16 52 36.8	-1.1
GERES	GERESS Array B	80.22	319	P	P	16 52 43.3	+2.0
	0.5nm,0.7s,mb3.6,baz=97,slow=7.9,SNR=3.9						

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*NEIC **09** 17:23:01.4±1.7, 6.32S×130.13E, h128^{km}±18^{km}, mb4.2/12, Error ellipse: s-maj=12.3km s-min=8.9km az=60.0*

*IDC **09** 17:23:08.6±6.8, 6.45S×130.16E, h202^{km}±74^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.8/16, mbtmp4.4/10, Error ellipse: s-maj=25.6km s-min=18.5km az=83.0*

ISC 09 17:22:59.1±1.7, 6.43S±0.06×130.22E±0.07, h129^{km}±18^{km}, n29, σ1^{s}21/35, mb4.0/13, 2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.62	161	⇓*i*P	P	17 24 36.9	+1.8
	85nm,0.2s						
KAKA				*e*S	S	17 25 47.4	-2.1
FITZ	Fitzroy Crossi	12.44	201	*e*P	P	17 25 51.9	-0.7
	12nm,0.3s						
FITZ				*e*S	S	17 28 01.6	-7.1
WRAB	Tennant Creek	14.01	164	*e*P	P	17 26 11.9	-1.1
	37nm,0.6s						
WRA	Warramunga Arr	14.02	164	P	P	17 26 11.8	-1.3
	2.7nm,0.3s,baz=341,slow=13,SNR=119						
WRA				S	S	17 28 40.0	-5.7
	7.6nm,0.3s,baz=348,slow=22,SNR=10						
WB2	Warramunga Arr	14.02	164	*e*P	P	17 26 11.3	-1.8
WB2				*e*S	S	17 28 41.4	-4.4
PMG	Port Moresby	17.03	101	P	P	17 26 54.5	+3.6
	1.5nm,0.3s,baz=272,slow=6.5,SNR=8.5						
PMG				S	S	17 29 54.0	-0.5
	1.0nm,0.3s,baz=188,slow=23,SNR=6.1						
PMG	Port Moresby	17.03	101	*e*P	P	17 26 53.7	+2.8
	15nm,0.9s						
ASAR	Alice Springs	17.50	169	P	P	17 26 58.3	+1.7
	4.2nm,0.3s,baz=350,slow=10,SNR=215						
ASAR				S	S	17 30 05.7	+0.8
	2.3nm,0.3s,baz=348,slow=26,SNR=6.4						
ASPA	Alice Springs	17.50	169	*e*P	P	17 26 58.1	+1.5
ASPA				*e*S	S	17 30 03.5	-1.4
MBWA	Marble Bar	17.82	214	*e*P	P	17 27 01.6	+1.2
CTA	Charters Tower	20.66	133	*e*P	P	17 27 33.0	+2.7
	4.0nm,0.4s						
CTA	Charters Tower	20.66	133	P	P	17 27 33.1	+2.8
	6.1nm,0.6s,baz=310,slow=11,SNR=11						
CTAO	Charters Tower	20.66	133	P	P	17 27 32.6	+2.3
STKA	Stephens Creek	27.46	159	⇓*i*P	P	17 28 36.0	+0.9
	2.8nm,0.4s,mb4.2						
STKA	Stephens Creek	27.46	159	P	P	17 28 36.1	+1.0
	3.6nm,0.5s,mb4.3,baz=328,slow=9.5,SNR=19						
NWAO	Narrogin (SRO)	29.00	203	P	P	17 28 49.6	+0.7
	3.0nm,0.7s,mb4.2,baz=42,slow=9.6,SNR=4.4						
CM31	Chiang Mai Arr	39.54	309	*e*P	P	17 30 18.6	-0.4
	2.0nm,0.6s,mb3.9						
CMAR	Chiang Mai Arr	39.54	309	P	P	17 30 19.8	+0.7
	2.7nm,0.6s,mb4.1,baz=145,slow=6.6,SNR=44						
BJT	Baijiatuau	48.00	345	*e*P	P	17 31 26.4	-0.5
	3.6nm,0.6s,mb4.2						
BJI	Beijing	48.02	345	P	P	17 31 25.8	-1.2
LSA	Lhasa	51.94	316	*e*P	P	17 31 58.1	+1.0
	4.5nm,0.9s,mb4.1						
ULN	Ulaanbaatar	57.79	342	*e*P	P	17 32 39.4	+0.3
	3.4nm,0.7s,mb4.3						
SONM	Songino Array	57.97	341	P	P	17 32 40.5	+0.2
	1.2nm,0.6s,mb3.9,baz=160,slow=7.0,SNR=26						
AAK	Ala-Archa	70.25	320	*e*P	P	17 33 60.0	-0.3
	1.4nm,0.8s,mb3.7						
ZAL	Zalesovo	71.17	334	P	P	17 34 04.0	-1.6
	0.6nm,0.4s,mb3.7,baz=346,slow=13,SNR=4.8						
KURK	Kurchatov	72.14	328	*e*P	P	17 34 11.0	-0.4
	4.5nm,1.2s,mb4.1						
BVAR	Borovoye Array	77.70	328	P	P	17 34 42.9	-0.1
	0.9nm,0.8s,mb3.5,baz=108,slow=5.2,SNR=4.5						
CHKZ	Chkalovo	77.89	328	*e*P	P	17 34 43.3	-0.8
	0.7nm,0.6s,mb3.5						
BOZ	Bozeman (W)	114.09	43	*e*P	Pdif	17 37 36.1	+3.0

OTT 09 17:25:58.7±0.2, 53.01N×66.98W, MN2.9/9, Blast, Labrador City, NI Mining explosion., Labrador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	1.83	3	PN	Pn	17 26 31.4	-0.2
SCHQ				SG	Sg	17 26 55.5	-4.1
SCHQ				Trac		17 26 58.8	
	comp=Z,45nm,0.3s						
MNQ	Manicouagan	2.72	205	PN	Pn	17 26 44.2	-0.1
MNQ				SN	Sn	17 27 19.4	+0.9
MNQ				Trac		17 27 25.5	
	comp=Z,17nm,0.3s						
SMQ	Clarke City	2.79	176	PN	Pn	17 26 40.9	-4.6
SMQ				SN	Sn	17 27 19.7	-0.6
SMQ				Trac		17 27 25.1	
	comp=Z,17nm,0.2s						
ICQ	Pointe Anglais	3.50	183	PN	Pn	17 26 52.8	-2.6
ICQ				SN	Sn	17 27 35.3	-2.8
ICQ				Trac		17 27 54.1	
	comp=Z,12nm,0.3s						
CNQ	Baie Comeau	3.77	191	PN	Pn	17 26 58.7	-0.7
CNQ				SN	Sn	17 27 43.3	-1.9
CNQ				Trac		17 28 02.9	
	comp=Z,6.6nm,0.2s						
GSQ	Grosses Roches	4.10	181	PN	Pn	17 27 02.5	-1.5
GSQ				SN	Sn	17 27 52.6	-0.9
GSQ				SG	Sg	17 28 06.9	-8.4
GSQ				Trac		17 28 09.6	
	comp=Z,13nm,0.3s						
LG4Q	La Grande 4	4.32	281	PN	Pn	17 27 04.6	-2.5
LG4Q				PG	Pg	17 27 12.5	-12
LG4Q				SN	Sn	17 27 54.4	-4.5
LG4Q				SG	Sg	17 28 12.4	-10
LG4Q				Trac		17 28 18.2	
	comp=Z,4.4nm,0.2s						
LMQ	La Malbaie	5.87	203	PN	Pn	17 27 25.8	-3.3
LMQ				SN	Sn	17 28 32.8	-5.2
LMQ				Trac		17 29 15.7	
	comp=Z,14nm,0.6s						
DRLN	Deer Lake	7.04	118	PN	Pn	17 27 41.5	-4.1
DRLN				SN	Sn	17 28 58.9	-8.5
DRLN				LG		17 29 36.8	
DRLN				Trac		17 29 41.9	
	comp=Z,4.5nm,0.3s						
LMN	Caledonia Moun	7.30	168	PN	Pn	17 27 45.9	-3.3
LMN				SN	Sn	17 29 04.3	-9.4
MALO	McAlpine Lake	8.52	255	PN	P	17 28 00.8	-5.4
MALO				SN	Sn	17 29 32.3	-12
MALO				LG		17 30 21.0	
VIMO	Victor Mine	10.13	276	PN	P	17 28 22.2	-6.2
SILO	Sutton Inlier	10.73	285	PN	P	17 28 30.1	-6.4
SILO				SN	S	17 30 24.3	-14
FRB	Frobisher Bay	10.80	356	PN	P	17 28 29.4	-8.1

KRSC 09 17:27:31.8±1.3, 55.78N×162.30E, h47^{km}±5^{km}, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.52	34	*e*P	P	17 27 43.6	+0.5
KBTR				*e*S	S	17 27 52.9	+1.7
KBG	Krutoberegovo	0.53	25	*i* P	P	17 27 43.5	+0.3
KBG				*i* S	S	17 27 52.5	+1.1
KBG				Smax			
	4μm,0.9s						
KBG	Krutoberegovo	0.53	25	*i* P	P	17 27 43.6	+0.4
KBG				*e*S	S	17 27 52.9	+1.5
ZLN	Zelenaya	0.88	286	*e*P	P	17 27 47.0	-0.9
ZLN				*e*S	S	17 27 58.6	-1.2
CIRR	Tsirk	0.94	292	*e*P	P	17 27 50.1	+1.4
CIRR				*e*S	S	17 28 03.5	+2.2
LGNR	Loginova	0.96	289	*e*P	P	17 27 48.9	-0.1
LGNR				*e*S	S	17 28 02.7	+0.9
SVLR	Shiveluch	1.00	323	*e*P	P	17 27 50.4	+0.7
SVLR				*e*S	S	17 28 04.2	+1.3
KLY	Klyuchi	1.07	301	*i* P	P	17 27 49.5	-1.1
KLY				*e*S	S	17 28 02.7	-1.9
KRSR	Krestovskiy	1.07	295	*e*P	P	17 27 50.2	-0.4
KRSR				*e*S	S	17 28 03.8	-0.8
KMNR	Kamenistaya	1.17	270	*i* P	P	17 27 52.7	+0.8
KMNR				*e*S	S	17 28 08.3	+1.3
KPT	Kopyto	1.19	280	*e*P	P	17 27 52.9	+0.7
KPT				*e*S	S	17 28 08.3	+0.8
TUMR	Tumrok	1.32	249	*e*P	P	17 27 54.6	+0.3
TUMR				*e*S	S	17 28 11.4	+0.4
KOZ	Kozyrevsk	1.39	283	*e*P	P	17 27 56.4	+1.1
KOZ				*e*S	S	17 28 14.6	+1.8
SRDR	Sredinnyy	1.55	291	*e*P	P	17 27 58.4	+1.0
SRDR				*e*S	S	17 28 17.7	+1.2
ESO	Esso	2.04	276	*e*P	P	17 28 05.6	+1.3
ESO				*e*S	S	17 28 28.0	-0.6
SPN	Mys Shipunski	3.00	207	*e*P	P	17 28 16.7	-1.4
SPN				*e*S	S	17 28 49.9	-3.1
NLC	Nalytchevo	3.13	215	*e*P	P	17 28 19.0	-0.9
NLC				*e*S	S	17 28 54.4	-2.0
SDLR	Sedlovina	3.20	220	*e*P	P	17 28 22.0	+1.1
SDLR				*e*S	S	17 28 58.4	+0.2
AVH	Avacha	3.27	221	*e*P	P	17 28 22.0	+0.2
AVH				*e*S	S	17 28 58.5	-1.3
GNL	Ganaly	3.28	232	*e*P	P	17 28 21.7	-0.3
GNL				*e*S	S	17 29 00.2	+0.1
UGLR	Uglovaya	3.28	220	*e*P	P	17 28 23.8	+1.8
UGLR				*e*S	S	17 29 00.7	+0.6
KOK	Koryaka	3.28	222	*e*P	P	17 28 22.9	+0.8
KOK				*e*S	S	17 28 59.6	-0.6
PET	Petropavlovsk	3.49	219	*e*P	P	17 28 25.3	+0.3
PET				*e*S	S	17 29 03.7	-1.7
OSSR	Ossora	3.50	6	*e*P	P	17 28 23.6	-1.6
KRMR	Karymshinskiy	3.83	221	*e*P	P	17 28 31.8	+1.9
KRMR				*e*S	S	17 29 12.7	-1.5
RUS	Russkaya	4.03	215	*e*P	P	17 28 32.4	-0.2
RUS				*e*S	S	17 29 17.5	-1.5
GRL	Gorelyy	4.08	219	*e*P	P	17 28 34.6	+1.3
GRL				*e*S	S	17 29 21.0	+0.7
APC	Apacha	4.15	229	*e*P	P	17 28 36.5	+2.2
APC				*e*S	S	17 29 22.6	+0.4

IDC 09 17:58:17.4±9.7, 5.03N×96.61E, mb3.5/3, mb1 3.6/4, mb1mx3.5/17, mbtmp3.4/4, ML3.3/1, MS2.8/1, Ms1 3.0/1, ms1mx2.3/16, Error ellipse: s-maj=336.3km s-min=29.7km az=69.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.54	9	Pn	P	18 01 35.6	+2.2
	0.1nm,0.3s,baz=193,slow=16,SNR=3.0						
CMAR				LR	LR	18 07 30.7	
	comp=Z,43nm,19.1s,baz=295,slow=41						
SONM	Songino Array	43.47	10	P	P	18 06 22.2	-1.7
	0.2nm,0.5s,baz=192,slow=7.4,SNR=3.6						
WRA	Warramunga Arr	44.62	125	P	P	18 06 31.7	-2.0
	0.8nm,0.9s,baz=304,slow=9.3,SNR=7.0						
ASAR	Alice Springs	46.22	130	P	P	18 06 44.6	-1.7
	0.7nm,0.4s,baz=300,slow=7.1,SNR=34						

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*IDC **09** 18:01:41.6±1.0, 23.62S×111.96W, mb4.0/8, mb1 4.3/8, mb1mx4.0/17, mbtmp4.0/8, MS3.9/7, Ms1 3.9/7, ms1mx3.7/20, Error ellipse: s-maj=33.6km s-min=26.0km az=29.0*

*BJI **09** 18:01:43.3, 23.60S×111.90W, h12^{km}, Ms5.3, Msz4.6*

*NEIC **09** 18:01:43.3±0.5, 23.62S×111.91W, h10^{km}, mb4.9/5, Error ellipse: s-maj=19.5km s-min=11.9km az=74.0*

ISC 09 18:01:41.4±0.9, 23.6S±0.1×112.0W±0.2, h10^{km}, n48, σ0^{s}51/23, mb4.3/13, MS4.0/9, 7C, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAOE	Nuku Hiva Isla	30.65	294	*e*LR	LR	18 15 34.5	
TBI	Tubuai	34.28	263	*e*LR	LR	18 17 22.6	
	489nm,28.5s,baz=106						
PPT	Papeete	35.60	273	*e*LR	LR	18 17 53.7	
	194nm,25.5s						
PLCA	Paso Flores	38.63	126	LR	LR	18 20 18.4	
	comp=Z,120nm,18.7s,MS3.7,baz=300,slow=29						
LVC	Limon Verde	39.55	97	P	P	18 09 14.5	+0.1
	4.7nm,1.0s,mb4.2,baz=288,slow=6.6,SNR=4.8						
LVC				LR	LR	18 20 48.9	
	comp=Z,337nm,21.9s,MS4.1,baz=215,slow=29						
LVC	Limon Verde	39.55	97	P	P	18 09 14.5	+0.1
LVC				LR	LR	18 20 48.9	
LPAZ	La Paz	41.77	88	P	P	18 09 33.2	+0.4
	1.2nm,0.7s,mb3.6,baz=248,slow=7.8,SNR=7.5						
LPAZ				LR	LR	18 22 42.1	
	comp=Z,163nm,21.5s,MS3.9,baz=274,slow=30						
LPAZ	La Paz	41.77	88	P	P	18 09 33.2	+0.4
LPAZ				LR	LR	18 22 42.1	
JTS	JuntasAbangare	42.85	41	LR	LR	18 22 46.5	
	comp=Z,257nm,21.4s,MS4.1,baz=249,slow=30						
RAR	Rarotonga	44.05	263	LR	LR	18 23 47.4	
	comp=Z,28nm,18.9s,MS3.2,baz=286,slow=30						
ROSC	El Rosal	46.39	57	LR	LR	18 26 05.0	
	comp=Z,216nm,18.1s,MS4.1,baz=289,slow=32						
TXAR	Lajitas Array	53.25	9	P	P	18 11 02.0	-0.6
	0.5nm,0.8s,mb3.5,baz=201,slow=11,SNR=6.1						
JCT	Junction City	55.05	13	*e*P	P	18 11 16.3	+0.5
	19nm,1.3s,mb5.0						
CPRX	Cap Rock	56.86	8	*e*P	P	18 11 28.3	-0.5
BDFB	Brasilia	60.39	95	LR	LR	18 35 50.9	
	comp=Z,133nm,20.7s,MS4.1,baz=276,slow=34						
NVAR	Mina Array Bea	62.00	354	P	P	18 12 05.1	+0.9
	2.8nm,0.8s,mb4.4,baz=195,slow=10,SNR=15						
SRU	San Rafael	62.41	1	*e*P	P	18 12 07.3	+0.3
DAU	Daniels Canyon	63.70	1	*e*P	P	18 12 15.9	+0.5
WVOR	Wild Horse Val	66.00	355	*e*P	P	18 12 30.9	+0.7
	7.5nm,1.1s,mb4.6						
PDAR	Pinedale Array	66.09	2	P	P	18 12 30.2	-0.6
	0.6nm,0.8s,mb3.7,baz=180,slow=7.4,SNR=6.5						
QSPA	South Pole Qui	66.54	180	⇑*i*P	P	18 12 39.1	+6.0
	16nm,1.2s,mb4.9						
BMO	Blue Mountains	68.31	356	*e*P	P	18 12 45.2	+0.4
	18nm,1.8s,mb4.8						
CHMT	Chamberlain Mo	70.21	359	*e*P	P	18 12 55.8	-0.6
NEW	Newport	71.69	356	*e*P	P	18 13 05.6	+0.2
	2.8nm,0.7s,mb4.3						
VNA3	Neumayer Olymp	71.73	161	⇑*i*	P	18 13 05.1	-0.2
VNA3	Neumayer Olymp	71.73	161	⇑*i*	Px	18 13 11.3	
VNA3	Neumayer Olymp	71.73	161	⇑*i*	Px	18 13 25.3	
VNA2	Neumayer--Watz	72.54	161	⇑*i*	P	18 13 10.0	0.0
VNA2	Neumayer--Watz	72.54	161	⇑*i*	Px	18 13 16.7	
ULM	Lac du Bonnet	74.92	11	P	P	18 13 23.2	-0.9
	1.6nm,0.7s,mb4.1,baz=168,slow=6.6,SNR=4.8						
EDM	Edmonton	76.52	359	*e*P	P	18 13 32.6	-0.6
YKA	Yellowknife Ar	85.83	359	P	P	18 14 22.4	+0.4
	2.0nm,0.9s,mb4.4,baz=171,slow=4.7,SNR=27						
YKA	Yellowknife Ar	85.83	359	P	P	18 14 22.4	+0.4
SCHQ	Schefferville	87.18	24	P	P	18 14 28.6	-0.2
	1.8nm,0.9s,mb4.3,baz=182,slow=5.5,SNR=3.9						
AKASG	Malin Array Be	139.66	38	PKP	PKPdf	18 21 09.7	-2.8
	1.3nm,0.8s,baz=285,slow=2.9,SNR=4.3						
SONM	Songino Array	141.13	318	PKhKP		18 21 07.7	
	0.8nm,0.8s,baz=90,slow=2.5,SNR=4.3						
GYA	Guiyang	144.93	283	⇑*i*PKP	PKPdf	18 21 20.8	-1.6
LZH	Lanzhou	146.69	300	*e*P	PKPbc	18 21 25.0	+1.5
LZH				pP		18 21 37.5	
LZH				sP		18 21 43.0	
BRTR	Keskin Array B	146.89	53	PKPbc	PKPbc	18 21 25.6	+1.7
	2.3nm,0.8s,baz=269,slow=2.9,SNR=8.7						
ZAL	Zalesovo	147.18	342	PKPbc	PKPdf	18 21 24.9	-0.4
	1.7nm,0.7s,baz=95,slow=4.0,SNR=9.5						
ZAL	Zalesovo	147.18	342	PKPbc	PKPdf	18 21 24.9	-0.4
KMI	Kunming	148.35	280	PKP	PKPdf	18 21 30.5	+2.4
KMI				LR	LR		
	comp=Z,35nm,22.9s,MS4.1						
GTA	Gaotai	148.83	308	*e*PKP	PKPdf	18 21 31.2	+2.7
GTA				LR	LR		
	comp=N,191nm,13.3s,MS5.1						
GTA				LR	LR		
	comp=E,110nm,15.6s,MS5.1						
GTA				LR	LR		
	comp=Z,164nm,12.9s,MS5.0						
BVAR	Borovoye Array	150.58	357	PKPbc	PKPdf	18 21 34.7	+4.0
	comp=Z,2.4nm,0.7s,baz=45,slow=2.1,SNR=13						
CM31	Chiang Mai Arr	150.69	266	*e*PKPbc	PKPdf	18 21 36.2	+4.2
CMAR	Chiang Mai Arr	150.69	266	PKPbc	PKPdf	18 21 36.4	+4.4
	comp=Z,4.1nm,0.9s,baz=106,slow=0.4,SNR=23						
CMAR				PKPab	PKPab	18 21 43.2	-0.5
	comp=Z,3.5nm,0.9s,baz=26,slow=1.1,SNR=13						
ASF	Jabal al Asfar	151.31	66	PKPbc	PKPdf	18 21 38.0	+5.5
	comp=Z,6.7nm,1.2s,baz=188,slow=7.5,SNR=3.4						
KURK	Kurchatov	151.71	346	*e*PKPbc	PKPdf	18 21 36.3	+3.8

DJA 09 18:04:13.8±0.9, 9.71S×112.66E, h80^{km}, ML5.0/4, 1C-7D, Error ellipse: s-maj=24.1km s-min=17.5km az=161.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.91	50	⇓*e*Pn	P	18 04 43.7	-1.3
	894nm,0.2s						
SRDI	Scrawed	1.91	50	*e*Pg	P	18 04 44.5	-0.5
SRDI				⇓*e*Sn	S	18 05 07.0	-0.9
KELI	Kelakatan	2.34	51	⇑*e*Pn	P	18 04 50.8	-0.2
	1μm,0.3s						
KELI				⇓*e*Sn	S	18 05 16.3	-2.3
RATI	Rata	3.00	71	⇓*e*Pn	P	18 04 59.4	-0.8
	771nm,0.3s						
RATI				⇓*e*Sn	S	18 05 32.0	-3.1
KEDI	Kedomdong	3.62	71	⇓*e*Pn	P	18 05 07.7	-1.1
	151nm,0.3s						
KEDI				⇓*e*Sn	S	18 05 48.0	-2.5

IDC 09 18:04:34.8±1.0, 24.29S×111.35W, mb3.9/6, mb1 4.2/6, mb1mx3.9/16, mbtmp3.9/6, Error ellipse: s-maj=43.9km s-min=29.7km az=77.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	37.74	126	P	P	18 11 51.8	-2.2
	0.9nm,0.7s,baz=65,slow=14,SNR=2.8						
TXAR	Lajitas Array	53.82	8	P	P	18 14 00.5	-1.2
	0.4nm,0.8s,baz=196,slow=6.6,SNR=3.1						
NVAR	Mina Array Bea	62.72	354	P	P	18 15 02.0	-2.0
	1.8nm,0.8s,baz=182,slow=8.9,SNR=8.0						
PDAR	Pinedale Array	66.74	1	P	P	18 15 26.8	-3.1
	0.6nm,0.7s,baz=170,slow=6.8,SNR=4.6						
ULM	Lac du Bonnet	75.46	10	P	P	18 16 19.9	-2.4
	0.7nm,0.4s,baz=245,slow=6.3,SNR=3.8						
YKA	Yellowknife Ar	86.52	358	P	P	18 17 18.7	-1.7
	1.2nm,0.9s,baz=171,slow=4.7,SNR=13						
SONM	Songino Array	142.03	318	PKhKP		18 24 04.4	
	0.6nm,1.0s,baz=88,slow=4.7,SNR=3.6						
BRTR	Keskin Array B	146.80	54	PKPbc	PKPbc	18 24 20.4	+1.8
	3.0nm,1.1s,baz=252,slow=3.9,SNR=4.4						
ZAL	Zalesovo	148.01	342	PKPbc	PKPdf	18 24 20.3	-0.2
	0.7nm,0.6s,baz=101,slow=9.0,SNR=4.0						
CMAR	Chiang Mai Arr	151.23	264	PKPbc	PKPdf	18 24 30.5	+3.9
	2.3nm,1.0s,baz=113,slow=0.6,SNR=8.2						
CMAR				PKPab	PKPab	18 24 39.0	-2.0
	5.7nm,1.3s,baz=62,slow=0.5,SNR=7.3						

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*NEIC **09** 18:08:29.7±1.0, 51.55N×16.15E, h5^{km}, ML2.9(SZGRF), ML2.8(VIE), ML2.4(BRG), ML2.4(CLL), Error ellipse: s-maj=11.2km s-min=4.9km az=197.0*

*MOS **09** 18:08:29.2±2.7, 51.65N×16.11E, h10^{km}, mb4.0/1, Error ellipse: s-maj=13.1km s-min=6.0km az=80.8*

*CSEM **09** 18:08:30.0±0.2, 51.51N×16.11E, h6^{km}, ML3.1/4, Error ellipse: s-maj=2.9km s-min=1.8km az=21.0*

*IPEC **09** 18:08:30.3±0.3, 51.50N×16.06E, ML2.2/4, Error ellipse: s-maj=2.1km s-min=1.6km az=130.0*

*WAR **09** 18:08:31.2, 51.50N×16.09E, h1^{km}, ML2.9, Mining Induced*

*PRU **09** 18:08:31.2, 51.47N×16.10E*

*IDC **09** 18:08:31.8±1.1, 51.41N×16.02E, mb1 3.6/5, mb1mx3.3/20, mbtmp3.4/5, ML2.9/5, Error ellipse: s-maj=13.4km s-min=9.4km az=122.0*

ISC 09 18:08:29.0±0.6, 51.43N±0.03×16.10E±0.03, n48, σ1^{s}32/92, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.60	168	⇓*i*P	Pg	18 08 43.5	+2.4
KSP				*e*		18 08 58.0	
KSP	Ksiaz	0.60	168	*i* PG	Pg	18 08 43.5	+2.4
KSP				*e*SG	Sg	18 08 52.5	+3.4
KSP	Ksiaz	0.60	168	*e*Pg	Pg	18 08 43.5	+2.5
KSP				*e*Sg	Sg	18 08 52.5	+3.4
KSP	Ksiaz	0.60	168	⇓*i*Pg	Pg	18 08 43.5	+2.4
KSP				*e*Sg	Sg	18 08 52.4	+3.3
KSP				*e*S	Sg	18 08 58.0	+8.9
UPC	Upice	0.93	184	*e*Pg	Pg	18 08 49.4	+1.8
DPC	Dobruska-Polom	1.09	173	*e*Pg	Pg	18 08 52.3	+1.4
DPC				*e*S	Sg	18 09 07.1	+1.7
DPC				*e*Sg	Sg	18 09 07.1	+1.7
PVCC	Panska Ves	1.33	227	*e*PG	Pg	18 08 56.4	+0.9
BRG	Berggiesshubel	1.47	248	*e*P	Pn	18 08 57.9	+1.1
BRG				*i*		18 09 18.9	
BRG	Berggiesshubel	1.47	248	*e*Pn	Pn	18 08 57.9	+1.1
BRG				*i* Pg	Pg	18 08 58.8	+0.4
BRG				*i* Sg	Sg	18 09 18.9	+0.9
BRG	Berggiesshubel	1.47	248	*i* Pg	Pg	18 08 58.8	+0.4
BRG				*i* S	Sg	18 09 18.9	+0.9
PRU	Pruhonice	1.75	215	*e*P	Pn	18 09 01.8	+0.9
PRU				*e*		18 09 27.6	
PRU	Pruhonice	1.75	215	*e*Pn	Pn	18 09 01.8	+0.9
PRU				*e*Pg	Pg	18 09 03.5	-0.5
PRU				*e*		18 09 20.8	
PRU				*e*Sg	Sg	18 09 27.6	+0.2
PRU	Pruhonice	1.75	215	*e*Pg	Pg	18 09 03.5	-0.5
PRU				*e*Sg	Sg	18 09 27.6	+0.2
MORC	Moravsky Berou	1.90	150	*e*P	Pn	18 09 03.9	+1.0
MORC				*e*Sg	Sg	18 09 31.3	-0.8
	15nm,0.3s						
CLL	Collm	1.95	267	*e*P	Pn	18 09 03.0	-0.7

CLL				*i*		18 09 32.6	
CLL	Collm	1.95	267	*e*Pn	Pn	18 09 03.0	-0.7
CLL				*i* Pg	Pg	18 09 06.8	-1.1
CLL				*i* Sg	Sg	18 09 32.6	-1.2
CLL	Collm	1.95	267	*e*PN	Pn	18 09 03.0	-0.7
CLL				*i* PG	Pg	18 09 06.8	-1.1
CLL				*i*		18 09 09.9	
CLL				*i* SG	Sg	18 09 32.6	-1.2
CLL	Collm	1.95	267	*i* Pg	Pg	18 09 06.8	-1.1
CLL				*i* S	Sg	18 09 32.6	-1.2
OKC	Ostrava-Krasne	2.06	140	*e*PG	Pg	18 09 09.8	-0.4
OKC				*e*SG	Sg	18 09 37.5	-0.2
VRAC	Vranov	2.15	171	P	Pn	18 09 08.0	+1.4
VRAC						18 09 35.8	
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC				smax			
	comp=N,1.0nm,0.3s						
VRAC	Vranov	2.15	171	Pn	Pn	18 09 08.0	+1.5
	comp=N,1.1nm,0.3s,baz=343,slow=16,SNR=11						
VRAC				Pg	Pg	18 09 11.5	-0.5
	comp=N,1.4nm,0.3s,baz=346,slow=16,SNR=11						
VRAC				Sn	Sn	18 09 35.8	+1.4
	comp=N,1.2nm,0.3s,baz=77,slow=22,SNR=4.0						
VRAC				Lg		18 09 40.9	
	comp=N,2.7nm,0.3s,baz=82,slow=19,SNR=7.1						
VRAC	Vranov	2.15	171	Pg	Pg	18 09 11.5	-0.5
VRAC				S	Sn	18 09 35.8	+1.4
VRAC				*e*Sg	Sg	18 09 39.5	-1.1
	comp=N,9.7nm,0.3s						
KRUC	Moravsky	2.38	175	*e*Pn	Pn	18 09 12.1	+2.2
	baz=355						
KRUC				*e*Sg	Sg	18 09 47.4	-0.9
	comp=N,9.2nm,0.4s						
NKC	Novy Kostel	2.61	244	*e*P	Pn	18 09 14.3	+1.1
NKC				*e*		18 09 56.1	
NKC	Novy Kostel	2.61	244	*e*PN	Pn	18 09 14.3	+1.1
NKC				*e*PG	Pg	18 09 20.5	-0.6
NKC				*e*SG	Sg	18 09 56.1	+0.2
NKC	Novy Kostel	2.61	244	*e*Pg	Pg	18 09 20.5	-0.6
NKC				*e*Sg	Sg	18 09 56.1	+0.2
OJC	Ojcow	2.64	116	*e*Pg	Pg	18 09 20.8	-0.9
OJC				*e*Sg	Sg	18 09 56.8	-0.1
OJC	Ojcow	2.64	116	*e*Pg	Pg	18 09 20.2	-1.5
OJC				*e*Sg	Sg	18 09 54.7	-2.2
KHC	Kasperske Hory	2.82	216	*e*P	Pn	18 09 16.9	+0.8
KHC				*e*		18 09 51.0	
KHC	Kasperske Hory	2.82	216	*e*Pn	Pn	18 09 16.9	+0.8
KHC				*e*Pg	Pg	18 09 23.2	-2.1
KHC				*e*		18 09 51.0	
KHC				*e*Sg	Sg	18 10 00.6	-2.2
KHC	Kasperske Hory	2.82	216	*e*PN	Pn	18 09 16.9	+0.8
KHC				*e*PG	Pg	18 09 23.2	-2.1
KHC				x	x	18 09 51.0	
KHC				*e*SG	Sg	18 10 00.6	-2.2
KHC	Kasperske Hory	2.82	216	*e*Pg	Pg	18 09 23.2	-2.1
KHC				*e*S	Sn	18 09 51.0	-0.3
KHC				*e*Sg	Sg	18 10 00.6	-2.2
MOX	Moxa	2.94	256	*i* P	Pn	18 09 26.6	+8.7
GEC2	GERESS Array S	3.02	212	*e*P	Pn	18 09 20.4	+1.4
GEC2				*e*Sg	Sg	18 10 07.2	-2.2
GERES	GERESS Array B	3.02	212	P	Pn	18 09 19.4	+0.4
GERES						18 09 56.0	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GERES				smax			
	comp=N,1.0nm,0.3s						
GERES	GERESS Array B	3.02	212	Pn	Pn	18 09 19.4	+0.5
	comp=N,1.1nm,0.3s,baz=32,slow=12,SNR=38						
GERES				Pg	Pg	18 09 26.9	-2.4
	comp=N,2.2nm,0.3s,baz=30,slow=16,SNR=28						
GERES				Sn	Sn	18 09 56.0	-0.3
	comp=N,1.1nm,0.3s,baz=32,slow=24,SNR=5.8						
GERES				Lg		18 10 07.3	
	comp=N,2.2nm,0.3s,baz=31,slow=28,SNR=6.7						
GERES	GERESS Array B	3.02	212	Pg	Pg	18 09 26.9	-2.3
GERES				S	Sn	18 09 56.0	-0.3
SMOL	Smolenice	3.05	163	*e*Pn	Pn	18 09 23.5	+4.1
SMOL				*e*Sg	Sg	18 10 11.9	+1.5
SMOL	Smolenice	3.05	163	*e*	Pn	18 09 23.5	+4.1
SMOL	Smolenice	3.05	163	*e*SG	Sg	18 10 11.9	+1.5
WET	Wettzell	3.09	223	*e*Pn	Pn	18 09 20.8	+0.9
WET				*e*Sg	Sg	18 10 10.6	-1.2
ZST	Bratislava	3.31	168	*i* S	Sn	18 10 05.3	+1.7
NIE	Niedzica	3.37	125	*e*P	Pg	18 09 33.5	-2.7
NIE				*e*S	Sg	18 10 19.5	-1.5
MOA	Molln	3.78	199	⇑*i*PN	Pn	18 09 30.9	+1.1
MOA				*i* SG	Sg	18 10 34.3	-0.6
	comp=N,6.0nm,0.5s						
ARSA	Arzberg	4.21	185	⇑*i*PN	Pn	18 09 36.6	+0.8
ARSA				*i* SG	Sg	18 10 46.3	-2.7
	comp=N,8.0nm,0.7s						
AKASG	Malin Array Be	8.30	90	Pn	P	18 10 31.7	-1.8
	comp=N,0.3nm,0.3s,baz=277,slow=12,SNR=4.1						
FINES	FINESS Array B	11.43	25	Pn	P	18 11 11.3	-5.2
	comp=N,0.1nm,0.3s,baz=207,slow=12,SNR=3.6						
ARCES	ARCESS Array B	18.70	10	P	P	18 12 44.4	-6.2
	comp=N,0.1nm,0.3s,baz=205,slow=13,SNR=2.7						

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*IDC **09** 18:19:37.0±1.5, 8.08N×93.95E, mb3.6/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.6/6, ML4.0/1, MS2.9/1, Ms1 3.1/1, ms1mx2.3/25, Error ellipse: s-maj=53.3km s-min=23.1km az=62.0*

ISC 09 18:19:40.3±1.0,**8.2N**±0.1×**94.1E**±0.2,**h33**^{km},**n12**, σ**0^{s}41**/12,**mb3.9**/9,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.28	24	Pn	P	18 22 22.2	0.0
	0.3nm,0.3s,baz=213,slow=14,SNR=8.8						
CMAR				LR	LR	18 26 44.6	
	comp=Z,62nm,19.0s,baz=215,slow=38						
JIRN	Jiri	20.77	340	*e*P	P	18 24 20.7	-0.3
	16nm,1.0s						
PKI	Pulchoki	20.97	338	*e*P	P	18 24 22.6	-0.4
	46nm,1.3s						
DMN	Daman	21.12	337	*e*P	P	18 24 24.5	0.0
	12nm,0.7s,mb4.3						
KKN	Kakani	21.21	338	*e*P	P	18 24 25.5	0.0
	7.0nm,0.6s,mb4.2						
GKN	Gorkha	21.65	337	*e*P	P	18 24 29.5	-0.4
	20nm,0.8s,mb4.6						
KOLN	Koldanda	21.87	334	*e*P	P	18 24 32.6	+0.6
	22nm,1.1s,mb4.5						
SONM	Songino Array	40.90	13	P	P	18 27 21.7	+0.7
	0.3nm,0.8s,mb3.0,baz=198,slow=6.1,SNR=3.5						
ZAL	Zalesovo	46.25	352	P	P	18 28 03.8	-0.5
	3.7nm,1.2s,mb4.2,baz=291,slow=8.2,SNR=7.1						
WRA	Warramunga Arr	48.49	126	P	P	18 28 22.0	-0.2
	0.3nm,0.6s,mb3.5,baz=309,slow=8.0,SNR=4.7						
ASAR	Alice Springs	50.16	130	P	P	18 28 34.9	-0.1
	0.4nm,0.9s,mb3.5,baz=307,slow=8.1,SNR=2.9						
GERES	GERESS Array B	77.56	318	P	P	18 31 35.4	+0.7
	0.6nm,0.7s,mb3.6,baz=76,slow=5.5,SNR=5.5						

WEL 09 18:25:31.2±0.8,**37.54S**×**177.73E**,**h105**^{km}±6^{km},**ML3.5**/5, **Error ellipse: s-maj=4.0km s-min=3.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.46	93	PN	P	18 25 47.1	-0.3
MXZ				SN	S	18 25 59.6	+0.1
PUZ	Puketiti	0.68	142	PN	P	18 25 48.9	-0.1
PUZ				SN	S	18 26 01.8	-0.6
MARZ	Manawahe	0.95	242	PN	P	18 25 51.1	-0.6
EDRZ	Edgecumbe	0.97	234	PN	P	18 25 51.5	-0.4
TAZ	Tarawera	1.19	234	PN	P	18 25 54.6	+0.1
PATZ	Paeroa	1.44	234	PN	P	18 25 57.3	-0.1
KNZ	Kokohu	1.48	182	PN	P	18 25 57.1	-0.8
KNZ				SN	S	18 26 16.9	-1.0
KRVZ	Karewarewa	2.26	226	PN	P	18 26 07.5	-0.5
KRVZ				SN	S	18 26 35.7	+0.1
TUVZ	Tukino	2.38	223	PN	P	18 26 08.7	-0.8
MOVZ	Moawhango	2.43	219	PN	P	18 26 08.4	-1.9
MOVZ				SN	S	18 26 36.9	-2.6
TSZ	Takapari Road	2.87	208	PN	P	18 26 13.2	-3.1
BFZ	Birch Farm	3.34	200	PN	P	18 26 18.7	-4.0
BFZ				SN	S	18 26 57.3	-4.5
MRZ	Mangatainoka R	3.54	208	PN	P	18 26 21.2	-4.2
MRZ				SN	S	18 27 01.1	-5.5
KIW	Kapiti Island	3.98	213	PN	P	18 26 26.8	-4.5
MTW	Mount Morrison	4.01	205	PN	P	18 26 26.5	-5.2
QRZ	Quartz Range	5.21	229	PN	P	18 26 43.3	-4.8
THZ	Tophouse	5.63	220	PN	P	18 26 48.1	-5.6
LTZ	Lake Taylor	6.70	217	*e*PN	P	18 27 01.1	-7.5

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*THE **09** 18:26:18.2, 40.69N×23.78E, h8^{km}, ML2.7*
*ATH **09** 18:26:18.1, 40.71N×23.66E, h25^{km}±2^{km}, MD3.0/4*
*NEIC **09** 18:26:18.1, 40.71N×23.66E, h25^{km}, MD3.0(ATH), After ATH.*
*CSEM **09** 18:26:18.7±0.1, 40.70N×23.76E, h12^{km}, ML2.7, Error ellipse: s-maj=2.9km s-min=2.5km az=123.0*

ISC 09 18:26:17.5±0.5,**40.71N**±0.02×**23.78E**±0.03,**h7**^{km}±5^{km}, **n19**,σ**1^{s}15**/36,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOH	Sokhos	0.34	289	*e*Pg	Pg	18 26 25.2	+0.8
SOH				*e*Sg	Sg	18 26 29.9	+0.9
OUR	Ouranopolis	0.41	158	*e*Pg	Pg	18 26 26.0	+0.3
OUR				*e*Sg	Sg	18 26 30.8	-0.4
PLG	Polygyros	0.42	217	*e*PB	Pb	18 26 26.2	-0.6
PLG				*e*SB	Sb	18 26 31.4	-1.7
THE	Thessaloniki	0.62	263	*e*Pg	Pg	18 26 30.0	0.0
THE				*e*Sg	Sg	18 26 38.0	-0.4
NVR	Nevrokopi	0.64	6	*e*PN	Pn	18 26 30.9	-1.7
NVR				*e*SN	Sn	18 26 41.1	-2.0
KNT	Kendrikon	0.81	304	*e*Pg	Pg	18 26 33.8	+0.2
KNT				*e*Sg	Sg	18 26 45.4	+1.1
MMB	Musomiste	0.88	358	*i* Pg	Pg	18 26 35.0	0.0
MMB				Sg	Sg	18 26 47.5	+0.7
GRG	Griva	1.07	284	*e*Pg	Pg	18 26 38.1	-0.8
GRG				*e*Sg	Sg	18 26 54.0	+0.7
LIT	Litokhoron	1.16	239	*e*Pg	Pg	18 26 40.6	0.0
LIT				*e*Sg	Sg	18 26 55.5	-0.6
RZN	Rozhen	1.21	36	*i* Pg	Pg	18 26 42.3	+0.7
RZN				Sg	Sg	18 26 58.5	+0.9
KKB	Krupnik	1.27	336	*i* Pg	Pg	18 26 42.3	-0.5
KKB				*i* Sg	Sg	18 26 58.0	-1.7
RDO	Rodhopi	1.40	71	*e*PN	Pn	18 26 45.0	+1.5
RDO				*e*SN	Sn	18 27 04.9	+2.5
XOR	Xorichti	1.42	199	*e*Pb	Pb	18 26 43.9	+0.1
XOR				*e*Sb	Sb	18 27 02.1	+0.1
NEO	Neokhori	1.47	197	*e*PN	Pn	18 26 45.0	+0.5
KDZ	Kurdzhali	1.55	52	P	Pn	18 26 47.5	+1.8
KDZ				Sg	Sg	18 27 07.5	-1.7
ALN	Alexandroupoli	1.73	83	*e*Pb	Pb	18 26 48.1	-1.1
ALN				*e*Sb	Sb	18 27 09.8	-1.3
PGB	Panagyurishte	1.86	9	*i* P	Pn	18 26 53.5	+3.4
PGB				Sg	Sg	18 27 19.5	+0.1
VTS	Vitosha	1.93	347	*i* P	Pn	18 26 53.0	+2.0
VTS				Sg	Sg	18 27 19.0	-2.6
AGG	Agios Georgios	2.02	214	*e*Pn	Pn	18 26 53.4	+1.0

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*IDC **09** 18:37:08.7±0.8, 14.52N×92.60E, mb3.9/8, mb1 4.1/9, mb1mx3.9/18, mbtmp3.8/9, ML3.6/1, Error ellipse: s-maj=29.8km s-min=16.6km az=52.0*
*NEIC **09** 18:37:13.3±0.6, 14.63N×92.67E, h30^{km}, mb4.5/3, Error ellipse: s-maj=14.3km s-min=10.0km az=53.0*

ISC 09 18:37:08.9±0.7,**14.78N**±0.07×**92.39E**±0.07,**h30**^{km},**n21**, σ**1^{s}29**/23,**mb4.0**/10,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	7.27	59	*e*P	Pn	18 38 55.1	-0.8
	3.6nm,0.4s						
CMAR	Chiang Mai Arr	7.27	59	Pn	Pn	18 38 56.2	+0.3
	0.3nm,0.3s,baz=244,slow=15,SNR=10						
CMAR				Sn	Sn	18 40 18.4	+0.2
	0.4nm,0.3s,baz=255,slow=31,SNR=4.3						
VIS	Vishakhapatnam	9.19	290	*i* P	P	18 39 18.5	-4.1
VIS				*i* S	Sn	18 40 56.0	-10
JIRN	Jiri	14.06	337	*e*P	P	18 40 27.1	-1.4
	12nm,0.3s						
PKI	Pulchoki	14.29	334	*e*P	P	18 40 30.4	-1.1
	11nm,0.3s						
DMN	Daman	14.46	333	*e*P	P	18 40 33.2	-0.5
	22nm,0.4s						
KKN	Kakani	14.54	334	*e*P	P	18 40 34.1	-0.7
	13nm,0.4s						
LSA	Lhasa	14.90	356	*e*P	P	18 40 43.0	+3.6
	7.2nm,0.7s						
GKN	Gorkha	15.01	333	*e*P	P	18 40 40.4	-0.4
	40nm,0.3s						
KOLN	Koldanda	15.30	329	*e*P	P	18 40 45.0	+0.3
	17nm,0.3s						
SONM	Songino Array	34.95	17	P	P	18 44 03.9	+3.5
	1.1nm,1.0s,mb3.8,baz=195,slow=9.4,SNR=7.3						
KURK	Kurchatov	37.54	346	*e*P	P	18 44 25.4	+3.3
	8.0nm,1.1s,mb4.4						
ZAL	Zalesovo	39.53	353	P	P	18 44 43.2	+4.4
	0.9nm,0.6s,mb3.7,baz=316,slow=8.2,SNR=4.8						
BVAR	Borovoye Array	41.95	340	P	P	18 45 04.4	+5.8
	0.5nm,0.7s,mb3.3,baz=153,slow=9.7,SNR=3.3						
FITZ	Fitzroy Crossi	46.27	134	*e*P	P	18 45 33.3	-0.6
	5.3nm,0.6s,mb4.7						
WRA	Warramunga Arr	53.77	129	P	P	18 46 31.2	-0.1
	2.8nm,0.6s,mb4.3,baz=295,slow=9.5,SNR=41						
WRA				PcP	PcP	18 47 37.6	+0.7
	0.6nm,0.8s,baz=318,slow=3.2,SNR=7.8						
WB2	Warramunga Arr	53.78	129	*e*P	P	18 46 31.2	-0.1
ASAR	Alice Springs	55.73	133	P	P	18 46 45.4	-0.2
	2.3nm,0.4s,mb4.6,baz=310,slow=7.1,SNR=87						
ASAR				PcP	PcP	18 47 45.1	+0.8
	1.1nm,0.7s,baz=317,slow=4.1,SNR=8.0						
BRTR	Keskin Array B	56.75	308	P	P	18 46 56.0	+3.3
	1.1nm,0.8s,mb3.9,baz=354,slow=11,SNR=2.9						
FINES	FINESS Array B	65.86	331	P	P	18 47 57.4	+3.6
	1.3nm,0.9s,mb3.9,baz=67,slow=11,SNR=3.5						
GERES	GERESS Array B	71.61	317	P	P	18 48 35.4	+5.8
	1.1nm,0.8s,mb3.8,baz=59,slow=5.7,SNR=3.7						

IDC 09 18:43:18.9±15.0,**1.07N**×**127.41E**,**mb3.8**/3,**mb1 4.1**/3, **mb1mx3.6**/14,**mbtmp3.9**/3,**Error ellipse: s-maj=241.8km s-min=161.5km az=159.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.95	162	P	P	18 48 14.1	-2.1
	4.4nm,0.8s,baz=341,slow=12,SNR=16						
WB2	Warramunga Arr	21.96	162	*e*P	P	18 48 14.2	-2.0
ASAR	Alice Springs	25.38	166	P	P	18 48 48.0	-1.6
	0.7nm,0.3s,baz=348,slow=15,SNR=20						
STKA	Stephens Creek	35.41	159	P	P	18 50 17.1	-1.7
	1.9nm,1.0s,baz=316,slow=8.6,SNR=5.0						

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*NIED **09** 18:46:00, 26.60N×144.20E, h8^{km}, Mw6.2 Best double couple: M$_0$1.9×10^{18} NP1:φ$_s$299°, δ72°, λ-68°. NP2:φ$_s$66°, δ28°, λ-139°.*
*CRAAG **09** 18:46:06.8, 26.14N×144.05E, Mb6.3*
*BJI **09** 18:46:08.2, 26.17N×143.70E, h8^{km}, mB6.3, mb5.8, Ms6.2, Msz6.0*
*JMA **09** 18:46:08.2±0.1, 26.55N×144.23E, M6.5*
JMA Felt II J1.
*NEIC **09** 18:46:10.0±0.1, 26.09N×144.00E, h24^{km}, mb6.2/166, ME6.0, MS6.3/15, MW6.3, MW6.1(NIED), Error ellipse: s-maj=2.9km s-min=2.5km az=173.0 Broadband fault plane solution: P waves. NP1:φ$_s$295°, δ55°, λ-90°. NP2: φ$_s$115°, δ35°, λ-90°. Principal axes: T Plg10°, Azm25°; N Plg0°, Azm0°; P Plg80°, Azm205°; Moment Tensor Solution. s66 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-2.90; M$_{\theta\theta}$2.01; M$_{\phi\phi}$0.89; M$_{r\theta}$-0.32; M$_{\theta\phi}$-1.55; M$_{\phi r}$-0.54; Best double couple: M$_0$3.1×10^{18} NP1:φ$_s$113°, δ46°, λ-107°. NP2:φ$_s$317°, δ47°, λ-73°. Principal axes: T 3.1, Plg0°, Azm35°; N -.06, Plg12°, Azm125°; P -3.04, Plg78°, Azm303°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Recorded [1 JMA] in Chiba Prefecture, Honshu.
*MOS **09** 18:46:09.8±0.8, 26.04N×144.06E, h33^{km}, mb6.5/97, MS6.2/47 Error ellipse: s-maj=6.9km s-min=3.7km az=110.7*
*GUC **09** 18:46:10.0±0.0, 26.09N×144.01E, h24^{km}, mb5.7(NEIC), MS6.3(NEIC), MW6.3(NEIC)*
*BGS **09** 18:46:10.0, 26.09N×144.00E, h24^{km}, mb6.1*
*HRVD **09** 18:46:10.0±0.1, 26.21N×144.20E, h20^{km}, MW6.3/81, Centroid moment Tensor Solution. LP body waves: s76,c186;Mantle waves: s81,c342; Half duration: 3^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-2.74±.02; M$_{\theta\theta}$2.62±.01; M$_{\phi\phi}$0.12±.01; M$_{r\theta}$-1.15±.03; M$_{\theta\phi}$-0.90±.01; M$_{\phi r}$-0.32±.04; Best double couple: M$_0$3.069×10^{18} NP1: φ$_s$300°, δ37°, λ-69°. NP2:φ$_s$95°, δ56°, λ-105°. Principal axes: T 3.084, Plg10°, Azm196°; N -.025, Plg12°, Azm104°; P -3.055, Plg74°, Azm324°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **09** 18:46:11.4±1.4, 25.96N×144.12E, h36^{km}±10^{km}, mb5.6/32, mb1 5.6/36, mb1mx5.6/37, mbtmp5.8/36, ML5.2/4, MS5.9/31, Ms1 5.9/31, ms1mx5.8/33 Error ellipse: s-maj=11.0km s-min=6.8km az=87.0*

ISC 09 18:46:07.8±0.6,**26.13N**±0.02×**144.06E**±0.02,**h17**^{km}±4^{km}, **h26**^{km}±1.9^{km}**:pP-P**,**n1002**,σ**0^{s}96**/970,**mb6.1**/236,**MS6.1**/81, **50C-155D**,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.77	287	⇓P	Pn	18 46 41.4	+3.5
JHHJ				*e*S	Sn	18 47 05.7	+5.6
CBIJ	Chichi jima	1.94	300	Pn	Pn	18 46 42.5	+2.1
	4µm,0.3s,baz=123,slow=2.3,SNR=502						
CBIJ				Sn	Sn	18 47 07.1	+2.5
	6µm,0.3s,baz=295,slow=23,SNR=16						
CBIJ				LR	LR	18 47 41.0	
	comp=Z,474µm,21.7s,baz=308,slow=43						
CBIJ	Chichi jima	1.94	300	⇓P	Pn	18 46 42.4	+2.0
CBIJ				*e*S	Sn	18 47 07.2	+2.6
JHJ2	Mitsune	7.88	333	P	Pn	18 48 03.4	-1.1
JHJ2				*e*S	Sn	18 49 29.3	-4.8
JHJ	Hachijo jima 2	7.90	333	Pn	Pn	18 48 03.5	-1.3
	80nm,0.3s,baz=260,slow=23,SNR=19						
JHJ				Sn	Sn	18 49 27.9	-6.7
	754nm,0.3s,baz=87,slow=19,SNR=11						
JHJ				LR	LR	18 50 54.2	
	comp=Z,87µm,21.8s,baz=154,slow=35						
JMY	Miyakejima3	8.85	335	P	P	18 48 17.2	-0.7
JMY				*e*S	Sn	18 49 52.1	-6.0
JKO	Kozu shima	9.09	333	P	P	18 48 22.2	+0.9
JKO				S	Sn	18 49 57.7	-6.6
TK01	Tokai 1	9.46	325	P	P	18 48 25.7	-0.6
TK01				*e*S	Sn	18 50 11.3	-2.0
SARN	Sarigan	9.51	170	*e*P	P	18 48 24.8	-2.3
JOD2	Odawara 2	10.06	336	*e*S	S	18 50 23.1	-5.1
JWZ	Kozaga	10.34	317	*e*S	S	18 50 33.9	-1.1
JIE	Ise	10.40	324	*e*S	S	18 50 33.8	-2.8
JWM	Minabe	10.78	318	P	P	18 48 42.9	-1.6
JRY	Ryogami san	10.80	337	*e*S	S	18 50 40.2	-6.2
JHE	Heguri	11.16	322	P	P	18 48 48.0	-1.6
MRT2	Murotomisaki 2	11.25	312	P	P	18 48 50.4	-0.5
JAI	Aioi	11.30	315	P	P	18 48 50.8	-0.8
JAJ2	Tsuna	11.45	318	P	P	18 48 52.6	-1.1
MAJO	Matsushiro	11.53	336	Pn	P	18 48 43.8	-11
MAJO				Pn	P	18 48 47.6	-7.1
MAJO	Matsushiro	11.53	336	*e*P	P	18 48 54.1	-0.6
MAT	Matsushiro	11.53	336	*e*P	P	18 48 44.0	-11
MAT				*e*S	S	18 50 56.0	-7.9
MAT				pmax	pmax		
	comp=Z,15nm,0.8s						
MAT	Matsushiro	11.53	336	*e*P	P	18 48 44.0	-11
	comp=Z,15nm,0.8s						
MAT				*e*S	S	18 50 56.0	-7.9
MAT	Matsushiro	11.53	336	P	P	18 48 43.7	-11
MAT				S	S	18 50 55.6	-8.3
MAT	Matsushiro	11.53	336	*e*S	S	18 50 56.7	-7.2
JMN	Monobe	11.63	313	P	P	18 48 55.9	-0.2
JWT	Wachi	11.78	323	P	P	18 48 56.8	-1.3
JKS	Kasai	11.87	320	P	P	18 48 58.1	-1.2
JTO	Tosashimizu	11.88	307	P	P	18 48 59.8	+0.3
JKU	Kubokawa	11.94	309	P	P	18 49 00.5	+0.2
JKY	Yasaka	12.20	323	P	P	18 49 02.3	-1.4
JET	Tanbara	12.22	311	P	P	18 49 04.4	+0.4
GUMO	Guam	12.49	176	⇑*e*P	P	18 49 06.1	-1.7
GUMO				pmax	pmax		
	comp=Z,3µm,1.3s						
GUMO	Guam	12.49	176	⇑*e*P	P	18 49 06.1	-1.7
	comp=Z,3µm,1.3s						
JHM	Kurahashi	12.78	311	P	P	18 49 12.0	+0.5
JOW	Kunigami	14.16	276	Pn	P	18 49 29.9	0.0
	comp=Z,4.2nm,0.3s,baz=118,slow=12,SNR=17						
JOW				Sn	S	18 52 15.9	+8.5
	comp=Z,2.4nm,0.3s,baz=30,slow=24,SNR=4.0						
JOW				LR	LR	18 54 10.6	
	comp=Z,64µm,21.8s,baz=127,slow=34						
JAGN	Aguni-jima	15.09	275	P	P	18 49 43.8	+1.8
KS15	Wonju Array Si	17.76	313	*e*P	P	18 50 15.9	0.0
YUK	Yuzh-Kuril'sk	17.93	4	*e*P	P	18 50 15.4	-2.5
YUK				pmax	pmax		
	comp=N,390nm,0.5s						
YUK				pmax	pmax		
	comp=E,620nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.5s						
YUK				pmax	pmax		
	comp=Z,20µm,2.5s						
YUK				pmax	pmax		
	comp=N,40µm,3.0s						
YUK				pmax	pmax		
	comp=E,6µm,1.6s						
YUK				MLR	MLR		
	comp=Z,89µm,13.0s						
YUK				MLR	MLR		
	comp=N,92µm,15.0s						
YUK				MLR	MLR		
	comp=E,53µm,12.0s						
ASAJ	Asahikawa	17.99	357	P	P	18 50 17.7	-1.0
	comp=E,21nm,0.3s,baz=229,slow=7.7,SNR=32						
ASAJ				S	S	18 53 31.8	-4.4
	comp=E,10nm,0.3s,baz=89,slow=25,SNR=5.1						
ASAJ				LR	LR	18 56 47.0	
	comp=E,88µm,20.9s,baz=185,slow=35						
JKRS	Kuro-shima	18.25	268	P	P	18 50 24.3	+2.2
INCN	Inchon	18.61	312	*e*P	P	18 50 25.9	-0.6
	comp=E,3µm,1.4s						
YOJ	Yonaguni jima	19.11	270	P	P	18 50 33.6	+1.1
VLA	Vladivostok	19.65	333	⇓*i*P	P	18 50 39.0	+0.4
VLA				*i* S	S	18 54 13.0	-0.6
VLA				pmax	pmax		
	comp=Z,8µm,6.0s						
VLA				pmax	pmax		
	comp=N,7µm,5.0s						
VLA				pmax	pmax		
	comp=E,2µm,5.6s						
VLA				pmax	pmax		
	comp=Z,24µm,5.0s						
VLA				smax			
	comp=N,21µm,11.0s						
VLA				smax			
	comp=E,29µm,11.0s						
VLA				MLR	MLR		
	comp=Z,49µm,13.0s						
VLA				MLR	MLR		
	comp=N,36µm,14.0s						
VLA				MLR	MLR		
	comp=E,26µm,14.0s						
TATO	Taipei	20.40	272	*e*P	P	18 50 45.7	-1.0
	comp=E,1µm,1.1s						
SSE	Sheshan	20.67	289	⇑P	P	18 50 47.0	-2.5
SSE				AP		18 50 55.1	
SSE				XP		18 51 00.2	
SSE				S	S	18 54 37.9	+3.1
SSE				AMB	AMB		
	comp=Z,94nm,1.1s						
SSE				AMB	AMB		
	comp=Z,6µm,12.0s						
SSE				LR	LR		
	comp=N,21µm,16.8s,MS5.8						
SSE				LR	LR		
	comp=E,25µm,16.8s,MS5.8						
SSE				LR	LR		
	comp=Z,38µm,19.6s,MS5.8						
SSE	Sheshan	20.67	289	⇑P	P	18 50 47.0	-2.5
	comp=Z,94nm,1.1s						
SSE				pP		18 50 55.1	
SSE				sP		18 51 00.2	
SSE				S	S	18 54 37.9	+3.1

SSE				sS		18 54 53.4	
SSE				LR	LR		
	comp=Z,38μm,19.6s,MS5.8						
YSS	**Yuzh-Sakhalins**	**20.82**	**357**	*d* *i*P	**P**	**18 50 50.8**	**0.0**
YSS				pmax	pmax		
	comp=Z,276nm,1.3s						
YSS	**Yuzh-Sakhalins**	**20.82**	**357**	*e*P	**P**	**18 50 49.8**	**-1.0**
	comp=Z,3μm,1.3s						
BBP	**Basco**	**21.06**	**259**	*e*P	**P**	**18 50 53.6**	**+0.1**
SGCP	**Mt. Cagua**	**21.82**	**253**	*e*P	**P**	**18 51 02.6**	**+1.4**
MDJ	**Mudanjiang**	**21.84**	**331**	P	**P**	**18 51 02.5**	**+1.3**
MDJ				AP		18 51 08.2	
MDJ				XP		18 51 11.1	
MDJ				PCP	PcP	18 55 00.4	-1.0
MDJ				S	**S**	**18 55 04.9**	**+8.1**
MDJ				SCP		18 58 36.1	
MDJ				PCS		18 58 39.0	
MDJ				SCS	ScS	19 02 21.2	+1.5
MDJ				AMB	AMB		
	comp=Z,383nm,1.6s,mb5.6						
MDJ				AMB	AMB		
	comp=Z,25μm,12.2s						
MDJ				LR	LR		
	comp=N,36μm,20.5s,MS5.9						
MDJ				LR	LR		
	comp=E,31μm,22.1s,MS5.9						
MDJ				LR	LR		
	comp=Z,47μm,25.8s,MS5.8						
PALP	**Palanan**	**22.02**	**250**	*e*P	**P**	**18 51 04.9**	**+1.7**
CAUP	**Cauayan**	**22.59**	**251**	*e*P	**P**	**18 51 11.0**	**+2.1**
APYP	**Conner**	**22.68**	**253**	*e*P	**P**	**18 51 09.8**	**+0.1**
DL2	**Dalian**	**22.74**	**310**	*i* PR		18 51 07.9	
DL2				S	**S**	**18 55 10.7**	**-2.6**
DL2				AMB	AMB		
	comp=Z,140nm,1.4s,mb5.2						
DL2				LR	LR		
	comp=N,14μm,15.3s,MS5.7						
DL2				LR	LR		
	comp=E,15μm,15.6s,MS5.7						
DL2				LR	LR		
	comp=Z,18μm,18.1s,MS5.5						
NJ2	**Nanjing**	**22.78**	**291**	*e*P	**P**	**18 51 09.5**	**-1.2**
NJ2				AP		18 51 19.1	
NJ2				PP	PP	18 51 39.1	-0.7
NJ2				S	**S**	**18 55 11.0**	**-3.1**
NJ2				AMB	AMB		
	comp=Z,980nm,1.0s,mb6.2						
NJ2				AMB	AMB		
	comp=Z,14μm,10.6s						
NJ2				LR	LR		
	comp=N,41μm,21.5s,MS6.1						
NJ2				LR	LR		
	comp=E,52μm,18.4s,MS6.1						
NJ2				LR	LR		
	comp=Z,62μm,21.5s,MS6.0						
QZH	**Quanzhou**	**23.01**	**273**	⇓*i*P	**P**	**18 51 12.9**	**0.0**
QZH				S	**S**	**18 55 23.0**	**+4.8**
QZH				AMB	AMB		
	comp=Z,1μm,1.2s,mb6.1						
QZH				AMB	AMB		
	comp=Z,13μm,6.1s						
QZH				LR	LR		
	comp=N,15μm,15.5s,MS6.0						
QZH				LR	LR		
	comp=E,42μm,15.1s,MS6.0						
QZH				LR	LR		
	comp=Z,65μm,16.8s,MS6.2						
SNY	**Shenyang**	**23.02**	**318**	⇓P	**P**	**18 51 12.4**	**-0.5**
SNY				S	**S**	**18 55 15.1**	**-3.1**
SNY				AMB	AMB		
	comp=Z,430nm,1.6s,mb5.6						
SNY				LR	LR		
	comp=N,28μm,18.9s						
SNY				LR	LR		
	comp=Z,25μm,22.9s,MS5.6						
ABRA	**Dolores**	**23.22**	**253**	*e*P	**P**	**18 51 15.1**	**0.0**
CN2	**Changchun**	**23.23**	**324**	⇓P	**P**	**18 51 15.4**	**+0.5**
CN2				*e*S	**S**	**18 55 24.3**	**+2.4**
CN2				AMB	AMB		
	comp=Z,560nm,1.2s,mb5.9						
CN2				AMB	AMB		
	comp=Z,28μm,10.0s						
CN2				LR	LR		
	comp=N,27μm,16.0s,MS6.0						
CN2				LR	LR		
	comp=E,28μm,16.0s,MS6.0						
CN2				LR	LR		
	comp=Z,38μm,18.0s,MS5.9						
PLP	**Palo**	**23.37**	**234**	*e*P	**P**	**18 51 17.5**	**+1.0**
BALP	**Baler**	**23.37**	**248**	*e*P	**P**	**18 51 18.3**	**+1.8**
POLP	**Polilio Island**	**23.59**	**246**	*e*P	**P**	**18 51 20.3**	**+1.6**
AUQP	**San Andres**	**23.78**	**242**	*e*P	**P**	**18 51 23.6**	**+3.1**
BCPH	**Baguio City Da**	**23.90**	**251**	⇓*i*P	**P**	**18 51 25.4**	**+3.7**
SCPH	**Surigao**	**23.95**	**231**	*i* P	**P**	**18 51 19.5**	**-2.8**
SCPH				*e*S	Px	18 51 53.1	
MSLP	**Maasin**	**24.15**	**232**	*e*P	**P**	**18 51 26.9**	**+2.7**
BOAC	**Boac**	**24.36**	**243**	*e*P	**P**	**18 51 26.9**	**+0.7**
BUTP	**Butuan**	**24.44**	**229**	*e*P	**P**	**18 51 28.9**	**+1.9**
BOLP	**Bolinao**	**24.47**	**251**	*e*P	**P**	**18 51 27.9**	**+0.6**
BIPH	**Bislig**	**24.53**	**226**	⇑*i*P	**P**	**18 51 28.4**	**+0.5**
LLP	**Lapu-Lapu**	**24.67**	**234**	⇓*e*P	**P**	**18 51 29.4**	**+0.2**
SCZP	**Santa Cruz**	**24.75**	**250**	*e*P	**P**	**18 51 30.4**	**+0.4**
RCP	**Roxas**	**24.78**	**238**	⇑*e*P	**P**	**18 51 33.2**	**+2.9**
OTRP	**Odiongan**	**24.86**	**241**	*e*P	**P**	**18 51 34.4**	**+3.5**
KLR	**Kul'dur**	**24.98**	**341**	α *i*P	**P**	**18 51 35.8**	**+4.0**
KLR				*e*S	**S**	**18 55 51.5**	**-0.3**
KLR				pmax	pmax		
	comp=N,280nm,1.8s						
KLR				pmax	pmax		
	comp=E,280nm,1.8s						
KLR				pmax	pmax		
	comp=Z,460nm,1.8s,mb5.7						
KLR				pmax	pmax		
	comp=N,12μm,8.0s						
KLR				pmax	pmax		
	comp=E,8μm,8.0s						
KLR				pmax	pmax		
	comp=Z,16μm,8.0s						
KALP	**Kalibo**	**25.02**	**239**	*e*P	**P**	**18 51 39.0**	**+6.5**
TIA	**Tai'an**	**25.08**	**300**	P	**P**	**18 51 32.4**	**-0.5**
TIA				S	**S**	**18 55 55.3**	**+1.6**
TIA				AMB	AMB		
	comp=Z,428nm,1.0s,mb5.9						
TIA				LR	LR		
	comp=N,10μm,15.9s,MS5.5						
TIA				LR	LR		
	comp=E,8μm,16.2s,MS5.5						
TBP	**Tagbilaran**	**25.17**	**233**	*e*P	**P**	**18 51 34.0**	**0.0**
GUIM	**Jordan**	**25.49**	**237**	*e*P	**P**	**18 51 39.4**	**+2.5**
LUBP	**Lubang**	**25.51**	**246**	*e*P	**P**	**18 51 38.0**	**+0.9**
LUBP	**Lubang**	**25.51**	**246**	*e*P	**P**	**18 51 38.1**	**+1.0**
SJMP	**San Jose**	**25.51**	**242**	*e*P	**P**	**18 51 39.1**	**+1.9**
MATI	**Mati**	**25.53**	**225**	*e*P	**P**	**18 51 37.2**	**-0.2**
BUKP	**Musuan**	**25.61**	**228**	*e*P	**P**	**18 51 37.7**	**-0.4**
DAV	**Davao City (W)**	**25.87**	**226**	⇑*e*P	**P**	**18 51 42.5**	**+2.0**
SKR	**Severo-Kuril's**	**26.21**	**18**	*e*P	**P**	**18 51 39.0**	**-4.3**
SKR				*e*		18 52 36.0	
SKR				*e*S	**S**	**18 56 10.0**	**-2.4**
SKR				pmax	pmax		
	comp=N,800nm,1.5s						
SKR				pmax	pmax		
	comp=E,800nm,1.5s						
SKR				pmax	pmax		
	comp=Z,1μm,1.5s,mb6.2						
SKR				pmax	pmax		
	comp=N,10μm,14.0s						
SKR				pmax	pmax		
	comp=E,8μm,14.0s						
SKR				pmax	pmax		
	comp=Z,14μm,14.0s						
SKR				smax			
	comp=N,32μm,18.0s						
SKR				smax			
	comp=E,32μm,18.0s						
SKR				MLR	MLR		
	comp=N,28μm,16.0s,MS6.1						
SKR				MLR	MLR		
	comp=Z,51μm,16.0s,MS6.2						
SKR				MLR	MLR		
	comp=E,27μm,14.0s,MS6.1						
SKR	**Severo-Kuril's**	**26.21**	**18**	*e*P	**P**	**18 51 43.0**	**-0.3**
KCP	**Kidapawan**	**26.24**	**227**	⇓*i*P	**P**	**18 51 45.7**	**+1.8**
KCP	**Kidapawan**	**26.24**	**227**	*e*P	**P**	**18 51 35.8**	**-8.1**
DCPH	**Dipolog City**	**26.29**	**232**	⇑*e*P	**P**	**18 51 43.6**	**-0.8**
WHN	**Wuhan**	**26.48**	**286**	⇓P	**P**	**18 51 45.8**	**-0.2**
WHN				S	**S**	**18 56 09.0**	**-8.1**
WHN				LR	LR		
	comp=Z,105μm,18.4s,MS6.4						
BUSP	**Coron**	**26.51**	**242**	*e*P	**P**	**18 51 45.7**	**-0.7**
CUYO	**Cuyo Island**	**26.55**	**239**	*e*P	**P**	**18 51 47.9**	**+1.1**
PAGZ	**Pagadian**	**26.79**	**231**	*e*P	**P**	**18 51 51.5**	**+2.6**
BJI	**Beijing**	**27.05**	**308**	P	**P**	**18 51 49.5**	**-1.6**
BJI				AP	pP	18 51 58.2	+2.1
BJI				XP	sP	18 52 01.9	+3.5
BJI				S	**S**	**18 56 25.5**	**-0.7**
BJI				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.3						
BJI				LR	LR		
	comp=N,27μm,17.8s,MS5.9						
BJI				LR	LR		
	comp=E,12μm,18.0s,MS5.9						
BJI				LR	LR		
	comp=Z,35μm,20.4s,MS5.9						
BJI	**Beijing**	**27.05**	**308**	P	**P**	**18 51 49.5**	**-1.6**
	comp=Z,100nm,1.0s,mb5.3						
BJI				pP	pP	18 51 58.2	+2.1
BJI				sP	sP	18 52 01.9	+3.5
BJI				S	**S**	**18 56 25.5**	**-0.7**
BJI				LR	LR		
	comp=Z,35μm,20.4s,MS5.9						
IPIL	**Ipil**	**27.40**	**232**	*e*P	**P**	**18 51 53.3**	**-1.3**
HKC	**Hong Kong**	**27.50**	**268**	⇓*i*P	**P**	**18 51 56.0**	**+0.6**
HKC				*i* S	S	18 56 07.0	-27
ENPP	**El Nido**	**27.58**	**242**	*e*P	**P**	**18 51 56.5**	**+0.3**
GZH	**Guangzhou**	**28.06**	**270**	P	**P**	**18 51 56.8**	**-3.7**
GZH				S	**S**	**18 56 38.9**	**-3.8**
GZH				LR	LR		
	comp=N,14μm,17.4s,MS5.8						
GZH				LR	LR		
	comp=E,16μm,17.6s,MS5.8						
GZH				LR	LR		
	comp=Z,31μm,18.8s,MS5.9						
PPR	**Puerto Princes**	**28.98**	**241**	⇑*e*P	**P**	**18 52 09.6**	**+0.7**
PET	**Petropavlovsk**	**29.01**	**18**	κ *i*P	**P**	**18 52 08.7**	**0.0**
PET				*e*		18 55 16.0	
PET				*e*S	**S**	**18 56 59.0**	**+1.4**
PET				pmax	pmax		
	comp=Z,200nm,1.8s,mb5.5						
PET				pmax	pmax		
	comp=N,157nm,1.9s						
PET				pmax	pmax		
	comp=Z,11μm,17.5s						
PET				pmax	pmax		
	comp=N,7μm,17.9s						
PET				pmax	pmax		
	comp=Z,9μm,14.8s						
PET				pmax	pmax		
	comp=N,5μm,13.4s						
PET				smax			
	comp=N,30μm,21.4s						
PET				smax			
	comp=E,13μm,21.4s						
PET				smax			
	comp=N,22μm,19.4s						
PET				smax			
	comp=E,9μm,16.6s						
PET				MLR	MLR		
	comp=E,32μm,17.0s,MS6.2						
PET				MLR	MLR		
	comp=Z,42μm,17.0s,MS6.1						
PET				MLR	MLR		
	comp=E,40μm,17.0s						
PET				MLR	MLR		
	comp=N,30μm,16.0s,MS6.2						
PET				MLR	MLR		
	comp=Z,45μm,17.0s						
PET	**Petropavlovsk**	**29.01**	**18**	*e*P	**P**	**18 52 08.1**	**-0.6**
	comp=Z,352nm,1.4s,mb5.9						
HHC	**Hu-ho-hao-te**	**30.62**	**307**	⇓P	**P**	**18 52 22.5**	**-0.7**
HHC				AP	pP	18 52 31.8	+3.5
HHC				XP	sP	18 52 36.1	+5.5
HHC				PCP	PcP	18 55 19.0	-2.6
HHC				S	**S**	**18 57 26.0**	**+2.6**
HHC				SCS	ScS	19 02 53.3	-3.7
HHC				AMB	AMB		
	comp=Z,107nm,1.1s,mb5.6						
HHC				AMB	AMB		
	comp=Z,6μm,11.3s						
HHC				LR	LR		
	comp=N,18μm,20.1s,MS5.9						
HHC				LR	LR		
	comp=E,23μm,20.6s,MS5.9						
HHC				LR	LR		
	comp=Z,32μm,21.6s,MS5.9						
XAN	**Xi'an**	**31.30**	**293**	P	**P**	**18 52 28.2**	**-1.0**
XAN				S	**S**	**18 57 21.8**	**-12**
XAN				XS		18 57 46.7	
XAN				SS	SS	18 59 09.6	-11
XAN				AMB	AMB		
	comp=Z,329nm,1.3s,mb6.0						
XAN				AMB	AMB		
	comp=Z,3μm,14.2s						
XAN				LR	LR		
	comp=N,10μm,19.9s,MS5.8						
XAN				LR	LR		
	comp=E,17μm,17.4s,MS5.8						
XAN				LR	LR		
	comp=Z,27μm,17.8s,MS6.0						
BTO	**Baotou**	**31.67**	**306**	*e*P	**P**	**18 52 31.6**	**-0.8**
BTO				AMB	AMB		
	comp=Z,123nm,1.1s,mb5.7						
BTO				LR	LR		
	comp=N,3μm,15.2s,MS5.8						
BTO				LR	LR		
	comp=E,17μm,16.5s,MS5.8						
QIZ	**Qiongzhong**	**32.31**	**265**	P	**P**	**18 52 37.9**	**-0.3**
QIZ				S	**S**	**18 57 47.3**	**-2.7**
QIZ				AMB	AMB		
	comp=Z,4μm,14.5s						
QIZ				LR	LR		
	comp=E,18μm,19.4s						
QIZ				LR	LR		
	comp=Z,26μm,19.4s,MS5.9						
TSM	**Tawau**	**33.17**	**234**	P	**P**	**18 52 46.0**	**+0.2**
KKM	**Kota Kinabalu**	**33.24**	**238**	P	**P**	**18 52 47.4**	**+1.0**
GYA	**Guiyang**	**33.46**	**279**	⇑*i*P	**P**	**18 52 47.4**	**-0.8**
GYA				AP	pP	18 52 57.1	+3.8
GYA				AMB	AMB		
	comp=Z,160nm,1.2s,mb5.8						
GYA				AMB	AMB		
	comp=Z,3μm,12.8s						
GYA				LR	LR		
	comp=N,23μm,18.8s,MS6.1						
GYA				LR	LR		
	comp=E,25μm,18.5s,MS6.1						
GYA				LR	LR		
	comp=Z,27μm,20.0s,MS6.0						
CLNS	**Chul'man**	**33.64**	**341**	*e*P	**P**	**18 52 50.3**	**+0.9**
CLNS				*e*PPP	PP	18 54 05.1	+2.9
CLNS				*e*		18 55 28.6	
CLNS				*e*S	**S**	**18 58 04.5**	**-5.7**
CLNS				*e*SS	SS	19 00 45.4	+30
CLNS				pmax	pmax		
	comp=Z,150nm,0.8s,mb6.0						
CLNS				pmax	pmax		
	comp=N,136nm,0.9s						
CLNS				pmax	pmax		
	comp=E,43nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,126nm,0.9s,mb5.8						
CLNS				pmax	pmax		
	comp=N,143nm,1.0s						
CLNS				pmax	pmax		
	comp=E,51nm,0.8s						
CLNS				smax			
	comp=N,6μm,13.2s						
CLNS				smax			
	comp=Z,3μm,12.9s						
CLNS				smax			
	comp=E,738nm,12.7s						
CLNS				MLR	MLR		
	comp=Z,25μm,15.0s,MS6.1						
CLNS				MLR	MLR		
	comp=N,19μm,16.0s,MS6.0						
CLNS				MLR	MLR		
	comp=E,2μm,13.0s,MS6.0						
MA2	**Magadan**	**33.76**	**6**	⇓*i*P	**P**	**18 52 50.6**	**+0.2**
MA2				pmax	pmax		
	comp=Z,190nm,0.9s,mb6.0						
MA2	**Magadan**	**33.76**	**6**	⇓*i*P	**P**	**18 52 50.6**	**+0.2**
	comp=Z,189nm,0.9s,mb6.0						
FX1	**Attu Island--F**	**34.47**	**31**	P	**P**	**18 52 55.9**	**-0.7**
	comp=Z,242nm,0.8s,mb6.2,baz=246,slow=1.8,SNR=25						
FX1				S	**S**	**18 58 27.6**	**+4.4**
	comp=Z,10nm,0.7s,baz=285,slow=23,SNR=1.9						
FX1				LR	LR	19 07 04.0	
	comp=Z,2μm,18.2s,baz=249,slow=36						
FX1	**Attu Island--F**	**34.47**	**31**	*e*P	**P**	**18 52 55.7**	**-0.9**
SMY	**Shemya**	**34.82**	**32**	*e*P	**P**	**18 53 00.2**	**+0.6**
SMY				pmax	pmax		
	comp=Z,2μm,1.6s,mb6.8						
SMY	**Shemya**	**34.82**	**32**	*e*P	**P**	**18 53 01.1**	**+1.5**
PMG	**Port Moresby**	**35.45**	**175**	⇑*e*P	**P**	**18 53 02.6**	**-2.8**
PMG				pmax	pmax		
	comp=Z,1μm,1.2s						
PMG	**Port Moresby**	**35.45**	**175**	P	**P**	**18 53 02.6**	**-2.7**
	comp=Z,97nm,0.9s,mb5.7,baz=339,slow=6.5,SNR=17						
PMG				S	**S**	**18 58 34.8**	**-3.9**
	comp=Z,15nm,1.1s,baz=253,slow=22,SNR=2.6						
PMG				LR	LR	19 05 20.5	
	comp=Z,20μm,21.1s,MS5.9,baz=25,slow=33						
PMG	**Port Moresby**	**35.45**	**175**	⇑*e*P	**P**	**18 53 02.6**	**-2.7**
	comp=Z,1μm,1.3s,mb6.6						
CD2	**Chengdu**	**35.60**	**287**	⇓*i*P	**P**	**18 53 05.4**	**-1.1**
CD2				S	**S**	**18 58 42.0**	**+1.1**
CD2				AMB	AMB		
	comp=Z,694nm,1.2s,mb6.5						
CD2				AMB	AMB		
	comp=Z,3μm,12.0s						
CD2				LR	LR		
	comp=E,50μm,15.0s						
LZH	**Lanzhou**	**35.62**	**296**	⇓P	**P**	**18 53 06.1**	**-0.6**
LZH				S	**S**	**18 58 41.0**	**-0.3**
LZH				AMB	AMB		
	comp=Z,1μm,1.6s,mb6.7						
LZH				AMB	AMB		
	comp=Z,3μm,4.8s						
LZH				LR	LR		
	comp=E,60μm,16.2s						
LZH				LR	LR		
	comp=Z,91μm,18.3s,MS6.6						
LZH	**Lanzhou**	**35.62**	**296**	⇓P	**P**	**18 53 06.1**	**-0.6**
LZH				*PP	pP	18 53 19.4	+7.6
LZH						18 54 33.0	
LZH				S	**S**	**18 58 41.0**	**-0.3**
LZH				*SS		18 59 01.1	
LZH				SS	SS	19 01 06.0	+4.9
LZH				pmax	pmax		
	comp=Z,1μm,1.6s,mb6.7						
LZH				MLR	MLR		
	comp=Z,91μm,18.3s,MS6.6						
LZH	**Lanzhou**	**35.62**	**296**	⇓P	**P**	**18 53 06.1**	**-0.6**
	comp=Z,1μm,1.6s,mb6.7						
LZH				pP	pP	18 53 19.4	+7.6
LZH				sP	sP	18 53 25.5	+11
LZH				PP	PP	18 54 33.0	+5.7
LZH				S	**S**	**18 58 41.0**	**-0.3**
LZH				sS		18 59 01.1	
LZH				SS	SS	19 01 06.0	+4.9
LZH				LR	LR		
	comp=Z,91μm,18.3s,MS6.6						
ULN	**Ulaanbaatar**	**36.18**	**317**	*e*P	**P**	**18 53 11.9**	**+0.7**
ULN				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.8						
ULN	**Ulaanbaatar**	**36.18**	**317**	*e*P	**P**	**18 53 11.9**	**+0.7**
	comp=Z,1μm,1.3s,mb6.7						
SONM	**Songino Array**	**36.58**	**316**	P	**P**	**18 53 15.5**	**+0.9**
	comp=Z,150nm,1.0s,mb5.8,baz=116,slow=5.2,SNR=459						
SONM				S	**S**	**18 58 57.0**	**+1.3**
	comp=Z,3.9nm,0.9s,baz=85,slow=16,SNR=2.1						
SONM				PKiKP		19 02 55.2	
	comp=Z,2.0nm,0.9s,baz=153,slow=3.2,SNR=5.0						
SONM				P3KPbc		19 23 45.9	
	comp=Z,1.0nm,0.8s,baz=288,slow=3.9,SNR=7.8						
KMI	**Kunming**	**37.16**	**278**	⇓P	**P**	**18 53 20.3**	**+0.6**
KMI				AP	pP	18 53 29.0	+4.1
KMI				XP	sP	18 53 32.6	+5.5
KMI				PP	PP	18 54 47.4	+0.6
KMI				PCP	PcP	18 55 41.1	+0.9
KMI				S	**S**	**18 59 05.5**	**+0.5**
KMI				AMB	AMB		
	comp=Z,222nm,1.3s,mb5.8						
KMI				AMB	AMB		
	comp=Z,3μm,5.0s						
KMI				LR	LR		
	comp=N,16μm,16.7s,MS6.0						
KMI				LR	LR		
	comp=E,14μm,15.2s,MS6.0						
KMI				LR	LR		
	comp=Z,16μm,21.0s						
KMI	**Kunming**	**37.16**	**278**	⇓P	**P**	**18 53 20.3**	**+0.6**
	comp=Z,222nm,1.3s,mb5.8						
KMI				pP	pP	18 53 29.0	+4.1
KMI				sP	sP	18 53 32.6	+5.5
KMI				PP	PP	18 54 47.4	+0.6
KMI				PcP	PcP	18 55 41.1	+0.9
KMI				S	**S**	**18 59 05.5**	**+0.5**
KMI				sS		18 59 18.7	
KMI				SS	SS	19 01 46.0	+10
KMI				ScS	ScS	19 03 38.4	+6.9
KMI				LR	LR		
	comp=Z,16μm,21.0s,MS5.8						
YAK	**Yakutsk**	**37.18**	**349**	*d* *i*P	**P**	**18 53 19.5**	**0.0**
YAK				*e*		18 54 53.8	
YAK				*e*S	**S**	**18 59 04.0**	**-0.8**
YAK				*e*		18 59 24.5	
YAK				*e*SS	SS	19 02 07.2	+32
YAK				pmax	pmax		
	comp=E,49nm,0.9s						
YAK				pmax	pmax		
	comp=Z,324nm,0.9s,mb6.2						
YAK				pmax	pmax		
	comp=N,210nm,1.2s						
YAK				pmax	pmax		
	comp=N,100nm,1.1s						
YAK				pmax	pmax		
	comp=Z,233nm,1.1s,mb5.9						
YAK				pmax	pmax		
	comp=E,121nm,1.3s						
YAK				smax			
	comp=N,11μm,13.5s						
YAK				smax			
	comp=Z,2μm,10.3s						
YAK				smax			
	comp=E,6μm,15.6s						
YAK				MLR	MLR		
	comp=E,16μm,17.0s,MS6.0						
YAK				MLR	MLR		
	comp=Z,19μm,17.0s,MS6.0						
YAK				MLR	MLR		
	comp=N,12μm,15.0s,MS6.0						
YAK	**Yakutsk**	**37.18**	**349**	⇓*i*P	**P**	**18 53 19.2**	**-0.2**
	comp=N,871nm,1.1s,mb6.5						
SEY	**Seymchan**	**37.22**	**6**	*e*P	**P**	**18 53 23.3**	**+3.5**
SEY				*e*		18 55 03.4	
BOD	**Bodaibo**	**38.15**	**334**	*e*P	**P**	**18 53 27.3**	**-0.4**
BOD				pmax	pmax		
	comp=Z,374nm,1.6s,mb5.9						
KIWB	**Kanaga Island**	**38.91**	**38**	*e*P	**P**	**18 53 34.6**	**+0.5**
GTA	**Gaotai**	**39.12**	**301**	⇓*i*P	**P**	**18 53 35.8**	**-0.2**
GTA				AP	pP	18 53 44.8	+3.6
GTA				XP	sP	18 53 49.0	+5.6
GTA				PP	PP	18 55 10.3	+0.5
GTA				PCP	PcP	18 55 47.2	+1.1
GTA				S	**S**	**18 59 31.5**	**-3.1**
GTA				SCP		18 59 33.1	
GTA				PCS		18 59 37.9	
GTA				XS		18 59 48.6	
GTA				SS	SS	19 02 13.5	-5.9
GTA				SCS	ScS	19 03 44.2	+1.6
GTA				AMB	AMB		
	comp=Z,138nm,1.1s,mb5.6						
GTA				AMB	AMB		
	comp=Z,4μm,6.5s						
GTA				LR	LR		
	comp=N,15μm,18.6s,MS6.2						
GTA				LR	LR		
	comp=E,25μm,15.2s,MS6.2						
GTA				LR	LR		
	comp=Z,32μm,15.6s,MS6.2						
ZAK	**Zakamensk**	**39.45**	**319**	⇑*i*P	**P**	**18 53 39.4**	**+0.8**
ZAK				*e*		18 55 46.6	
ZAK				*e*		18 59 41.8	
ZAK				pmax	pmax		
	comp=Z,513nm,1.3s,mb6.1						
KKTK	**Khon Kaen**	**39.51**	**264**	⇓P	**P**	**18 53 40.0**	**+0.5**

	comp=Z,3µm,0.4s						
GSTR	**Great Sitkin T**	**39.62**	**38**	*e*P	**P**	**18 53 41.9**	**+1.9**
IRK	**Irkutsk**	**39.64**	**322**	*e*P	**P**	**18 53 41.0**	**+0.8**
IRK				*e*		18 55 14.0	
IRK				*e*S	**S**	**18 59 47.2**	**+5.0**
IRK				pmax	pmax		
	comp=Z,1µm,2.2s,mb6.2						
TLY	**Talaya**	**39.75**	**321**	P	**P**	**18 53 42.3**	**+1.2**
	comp=Z,3µm,1.5s,mb6.8						
TLY	**Talaya**	**39.75**	**321**	*d i*P	**P**	**18 53 42.5**	**+1.4**
TLY				*e*PPP	PP	18 55 24.5	+8.1
TLY				*e*S	**S**	**18 59 41.7**	**-2.2**
TLY				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.4						
TLY				MLR	MLR		
	comp=Z,19µm,16.0s,MS6.0						
TLY	**Talaya**	**39.75**	**321**	⇓*i*P	**P**	**18 53 42.4**	**+1.3**
	comp=Z,2µm,1.6s,mb6.6						
KAKA	**Kakadu**	**40.23**	**198**	⇓*i*P	**P**	**18 53 44.4**	**-1.0**
	comp=Z,498nm,0.6s,mb6.4						
CHRT	**Chiangrai**	**41.09**	**271**	⇓P	**P**	**18 53 53.5**	**+1.1**
	comp=Z,1µm,0.7s,mb6.7						
NST	**Nakhon Sawan**	**42.16**	**265**	P	**P**	**18 54 02.0**	**+0.7**
	comp=Z,200nm,1.0s,mb5.7						
CM31	**Chiang Mai Arr**	**42.27**	**269**	⇓*i*P	**P**	**18 54 02.5**	**+0.3**
	comp=Z,148nm,0.7s,mb5.7						
CMAR	**Chiang Mai Arr**	**42.27**	**269**	*i* P	**P**	**18 54 02.6**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,104nm,0.8s						
CMAR	**Chiang Mai Arr**	**42.27**	**269**	P	**P**	**18 54 02.6**	**+0.4**
	comp=Z,104nm,0.8s,mb5.5,baz=59,slow=8.5,SNR=310						
CMAR				PcP	PcP	18 55 57.7	+1.1
	comp=Z,31nm,1.0s,baz=101,slow=2.1,SNR=4.6						
CMAR				S	**S**	**19 00 26.3**	**+4.5**
	comp=Z,3.8nm,1.0s,baz=62,slow=2.5,SNR=2.6						
CMAR				PKiKP		19 03 01.1	
	comp=Z,0.7nm,0.8s,baz=128,slow=23,SNR=3.0						
CMAR				LR	LR	19 12 19.3	
	comp=Z,15µm,18.7s,MS5.9,baz=80,slow=37						
NNT	**Nongplab**	**43.73**	**261**	P	**P**	**18 54 15.3**	**+1.2**
NIKO	**Nikolski**	**44.03**	**40**	*e*P	**P**	**18 54 15.6**	**-0.5**
BILL	**Bilibino**	**44.04**	**12**	*d i*P	**P**	**18 54 16.4**	**+0.5**
BILL				pmax	pmax		
	comp=Z,435nm,1.7s,mb5.9						
BILL				MLR	MLR		
	comp=Z,20µm,19.0s,MS6.0						
BILL	**Bilibino**	**44.04**	**12**	⇓*i*P	**P**	**18 54 15.9**	**0.0**
	comp=Z,813nm,1.4s,mb6.3						
IMP	**Imphal**	**45.06**	**280**	*e*P	**P**	**18 54 23.0**	**-1.7**
SNG	**Songkhla**	**45.41**	**253**	P	**P**	**18 54 28.0**	**+0.3**
	comp=Z,206nm,0.9s,mb6.0						
UNV	**Unalaska Valle**	**45.64**	**39**	*e*P	**P**	**18 54 28.2**	**-0.7**
	comp=Z,3µm,1.5s,mb7.0						
KGM	**Kluang**	**45.89**	**245**	P	**P**	**18 54 33.1**	**+1.6**
CTA	**Charters Tower**	**45.99**	**177**	⇓*i*P	**P**	**18 54 30.8**	**-1.3**
	comp=Z,107nm,1.2s,mb5.7						
CTA	**Charters Tower**	**45.99**	**177**	⇓*i*P	**P**	**18 54 30.8**	**-1.3**
CTA				pmax	pmax		
	comp=Z,107nm,1.2s						
CTA	**Charters Tower**	**45.99**	**177**	P	**P**	**18 54 30.4**	**-1.7**
	comp=Z,39nm,0.7s,mb5.4,baz=359,slow=8.2,SNR=19						
CTA				S	**S**	**19 01 10.7**	**-4.8**
	comp=Z,4.2nm,0.9s,baz=244,slow=18,SNR=1.7						
CTA				LR	LR	19 11 53.9	
	comp=Z,6µm,21.9s,MS5.5,baz=356,slow=34						
CTAO	**Charters Tower**	**45.99**	**177**	*e*P	**P**	**18 54 29.9**	**-2.2**
CTAO				pmax	pmax		
	comp=Z,501nm,1.4s,mb6.2						
CTAO	**Charters Tower**	**45.99**	**177**	*e*P	**P**	**18 54 29.9**	**-2.3**
	comp=Z,501nm,1.4s,mb6.2						
AKUT	**Akutan**	**46.13**	**39**	*e*P	**P**	**18 54 34.4**	**+1.6**
TIXI	**Tiksi**	**46.35**	**353**	⇓*i*P	**P**	**18 54 34.3**	**-0.1**
TIXI				*e*		18 56 28.7	
TIXI				*e*S	**S**	**19 01 17.8**	**-2.3**
TIXI				*e*SS	SS	19 04 45.2	+7.0
TIXI				pmax	pmax		
	comp=N,147nm,1.3s						
TIXI				pmax	pmax		
	comp=Z,319nm,1.3s,mb6.1						
TIXI				pmax	pmax		
	comp=E,167nm,1.7s						
TIXI				pmax	pmax		
	comp=Z,13µm,17.8s						
TIXI	**Tiksi**	**46.35**	**353**	*i* Pr		18 54 34.4	
IPM	**Ipoh**	**46.39**	**250**	P	**P**	**18 54 36.3**	**+0.9**
WRAB	**Tennant Creek**	**46.74**	**193**	*e*P	**P**	**18 54 36.4**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,2µm,1.2s,mb6.9						
WRAB	**Tennant Creek**	**46.74**	**193**	*e*P	**P**	**18 54 36.4**	**-1.7**
	comp=Z,2µm,1.2s,mb6.9						
WB2	**Warramunga Arr**	**46.75**	**193**	⇑*i*P	**P**	**18 54 36.0**	**-2.2**
WB2				*e*S	**S**	**19 01 23.4**	**-3.1**
WB2				*e*SS	SS	19 04 58.4	+13
WRA	**Warramunga Arr**	**46.76**	**193**	P	**P**	**18 54 35.6**	**-2.6**
	comp=Z,71nm,0.6s,mb5.8,baz=8.9,slow=8.7,SNR=438						
WRA				S	**S**	**19 01 22.1**	**-4.4**
	comp=Z,14nm,1.1s,baz=14,slow=14,SNR=6.6						
FITZ	**Fitzroy Crossi**	**47.47**	**204**	⇓*i*P	**P**	**18 54 43.6**	**-0.3**
	comp=Z,2µm,1.9s,mb6.7						
FITZ				*e*S	**S**	**19 01 36.7**	**+0.1**
FITZ				*e*SCS	ScS	19 04 38.7	+4.3
FITZ				*e*SS	SS	19 05 14.1	+16
AGT	**Agartala**	**47.65**	**279**	⇑*i*P	**P**	**18 54 47.0**	**+1.8**
AGT				*i*		18 55 28.0	
WMQ	**Urumqi**	**48.50**	**306**	⇓*i*P	**P**	**18 54 51.7**	**+0.1**
WMQ				AP	pP	18 55 01.8	+4.9
WMQ				PP	PP	18 56 44.0	-0.2
WMQ				SCP		19 00 09.0	
WMQ				S	**S**	**19 01 50.0**	**-0.9**
WMQ				SCS	ScS	19 04 39.0	-1.8
WMQ				SS	SS	19 05 14.0	-2.1
WMQ				AMB	AMB		
	comp=Z,1µm,1.2s,mb6.8						
WMQ				AMB	AMB		
	comp=Z,3µm,10.0s						
WMQ				LR	LR		
	comp=N,11µm,20.0s,MS6.0						
WMQ				LR	LR		
	comp=E,11µm,20.0s,MS6.0						
WMQ				LR	LR		
	comp=Z,16µm,20.0s,MS6.0						
SDPT	**Sand Point**	**49.41**	**38**	*e*P	**P**	**18 54 57.8**	**-0.6**
TNA	**Tin City**	**49.58**	**24**	⇓*i*P	**P**	**18 55 00.0**	**+0.5**
	comp=Z,258nm,1.2s,mb6.1						
ASAR	**Alice Springs**	**50.46**	**192**	P	**P**	**18 55 05.2**	**-1.7**
	comp=Z,11nm,0.7s,baz=13,slow=12,SNR=136						
ASAR				PcP	PcP	18 56 25.1	-0.1
	comp=Z,62nm,0.9s,slow=3.6,SNR=6.8						
ASAR				S	**S**	**19 02 16.0**	**-2.4**
	comp=Z,3.1nm,1.0s,baz=11,slow=24,SNR=2.5						
ASAR				LR	LR	19 17 38.2	
	comp=Z,7µm,19.1s,MS5.7,baz=280,slow=38						
ASPA	**Alice Springs**	**50.47**	**192**	*e*P	**P**	**18 55 05.2**	**-1.7**
ASPA				*e*S	**S**	**19 02 13.7**	**-4.7**
CAL	**Calcutta**	**50.59**	**279**	*e*	**S**	**19 02 10.5**	**-10**
CAL				*e*		19 02 26.8	
JIRN	**Jiri**	**51.22**	**286**	*e*P	**P**	**18 55 13.2**	**+0.6**
	comp=Z,1µm,1.1s,mb6.8						
ZAL	**Zalesovo**	**51.33**	**319**	P	**P**	**18 55 12.6**	**-0.5**
	comp=Z,28nm,0.8s,mb5.2,baz=12,slow=7.9,SNR=215						
ZAL				PcP	PcP	18 56 27.9	-0.1
	comp=Z,49nm,0.8s,baz=15,slow=2.5,SNR=4.2						
ZAL				LR	LR	19 17 49.3	
	comp=Z,20µm,20.4s,MS6.1,baz=269,slow=37						
PKI	**Pulchoki**	**51.92**	**286**	*e*P	**P**	**18 55 17.6**	**-0.3**
	comp=Z,1µm,1.6s,mb6.5						
KKN	**Kakani**	**51.98**	**286**	*e*P	**P**	**18 55 17.8**	**-0.6**
	comp=Z,925nm,1.2s,mb6.6						
DMN	**Daman**	**52.17**	**286**	*e*P	**P**	**18 55 19.5**	**-0.3**
	comp=Z,1µm,1.5s,mb6.6						
NVS	**Novosibirsk**	**52.36**	**320**	⇓*i*P	**P**	**18 55 20.3**	**-0.5**
NVS				*e*S	**S**	**19 02 52.7**	**+8.6**
NVS				pmax	pmax		
	comp=Z,1µm,1.9s,mb6.5						
NVS				pmax	pmax		
	comp=E,811nm,1.8s						
NVS				smax			
	comp=N,590nm,3.0s						
NVS				smax			
	comp=E,623nm,3.0s						
MKAR	**Makanchi Array**	**52.39**	**310**	*i* P	**P**	**18 55 21.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2µm,1.2s						
GKN	**Gorkha**	**52.49**	**286**	*e*P	**P**	**18 55 21.6**	**-0.6**
	comp=Z,4µm,1.8s,mb7.0						
NOUC	**Port Laguerre**	**52.56**	**154**	*e*P	**P**	**18 55 21.6**	**-1.2**
NOUC	**Port Laguerre**	**52.56**	**154**	*e*P	**P**	**18 55 21.6**	**-1.2**
DZM	**Mont Dzumac**	**52.59**	**154**	*e*P	**P**	**18 55 22.3**	**-0.7**
DZM	**Mont Dzumac**	**52.59**	**154**	*e*P	**P**	**18 55 22.3**	**-0.7**
MBWA	**Marble Bar**	**52.60**	**209**	*e*P	**P**	**18 55 21.6**	**-1.5**
	comp=Z,617nm,1.5s,mb6.3						
KIP	**Kipapa**	**52.85**	**82**	*e*P	**P**	**18 55 24.8**	**-0.2**
KIP				pmax	pmax		
	comp=Z,434nm,1.2s,mb6.3						
KIP	**Kipapa**	**52.85**	**82**	*e*P	**P**	**18 55 24.8**	**-0.2**
	comp=Z,434nm,1.2s,mb6.3						
SVW2	**Sparrevohn**	**53.22**	**32**	*e*P	**P**	**18 55 27.7**	**+0.6**
KOLN	**Koldanda**	**53.44**	**286**	*e*P	**P**	**18 55 28.6**	**-0.6**
	comp=Z,3µm,1.7s,mb6.9						
KDAK	**Kodiak Island**	**54.14**	**36**	*e*P	**P**	**18 55 34.7**	**+0.8**
RSO	**Redoubt South**	**54.45**	**33**	*e*P	**P**	**18 55 35.4**	**-0.8**
KURK	**Kurchatov**	**54.86**	**315**	P	**P**	**18 55 39.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,7µm,2.4s						
KURK	**Kurchatov**	**54.86**	**315**	⇓*i*P	**P**	**18 55 39.0**	**-0.3**
	comp=Z,5µm,1.9s,mb7.2						
IMA	**Indian Mountai**	**55.21**	**26**	*e*P	**P**	**18 55 42.0**	**+0.3**
ALBI	**Allahabad**	**55.60**	**284**	*e*P	**P**	**18 55 42.0**	**-3.1**
SLKM	**Skilak Lake**	**55.70**	**33**	*e*P	**P**	**18 55 44.2**	**-1.1**
FIB	**Fire Island**	**55.81**	**32**	*e*P	**P**	**18 55 45.7**	**-0.4**
LGTI	**Lohaghat**	**55.93**	**289**	*e*P	**P**	**18 55 48.0**	**+0.6**
PTH	**Pithoragarh**	**55.93**	**289**	*e*P	**P**	**18 55 47.6**	**+0.2**
PTH				*e*S	**S**	**19 03 32.0**	**-0.6**
BLSP	**Bilaspur**	**56.20**	**280**	*e*P	**P**	**18 55 48.8**	**-0.7**
BLSP				*e*	pP	18 55 55.2	+0.4
	comp=Z,451nm,1.7s						
AAA	**Alma-Ata**	**56.33**	**306**	*i* P	**P**	**18 55 50.0**	**0.0**
AAA				*i* S	**S**	**19 03 47.0**	**+9.3**
AAA				pmax	pmax		
	comp=Z,4µm,6.0s						
AAA				smax			
	comp=E,4µm,14.0s						
AAA				MLR	MLR		
	comp=Z,6µm,18.0s,MS5.8						
PMR	**Palmer**	**56.36**	**32**	*e*P	**P**	**18 55 48.9**	**-1.1**
VIS	**Vishakhapatnam**	**56.54**	**275**	*e*P	**P**	**18 55 51.7**	**-0.1**
VIS				*e*	pP	18 55 58.4	+1.2
	comp=Z,472nm,1.7s						
MCK	**McKinley**	**56.74**	**29**	⇓*i*P	**P**	**18 55 51.7**	**-1.0**
MCK				pmax	pmax		
	comp=Z,17nm,1.0s						
MCK	**McKinley**	**56.74**	**29**	⇓*i*P	**P**	**18 55 51.7**	**-1.0**
	comp=Z,17nm,1.0s						
SML	**Sawmill**	**56.77**	**32**	⇓*i*P	**P**	**18 55 52.1**	**-0.8**
ULHL	**Ulahol**	**56.95**	**305**	P	**P**	**18 55 55.9**	**+1.3**
	SNR=9.2						
TKM2	**Tokmak 2**	**57.35**	**306**	P	**P**	**18 55 58.3**	**+0.9**
	SNR=257						
COLA	**College**	**57.37**	**28**	*e*P	**P**	**18 55 56.1**	**-1.1**
COLA				pmax	pmax		
	comp=Z,101nm,0.8s,mb5.9						
COLA	**College**	**57.37**	**28**	*e*P	**P**	**18 55 56.1**	**-1.1**
	comp=Z,100nm,0.8s,mb5.9						
KSH	**Kashi**	**57.52**	**302**	PR		18 56 00.0	
KSH				*e*AP	pP	18 56 10.3	+6.4
KSH				*e*PP	PP	18 58 09.1	+1.2
KSH				*e*S	**S**	**19 03 54.0**	**+0.6**
KSH				*e*XS		19 04 03.1	
KSH				*e*PS	PS	19 04 12.5	+4.0
KSH				*e*SCS	ScS	19 05 43.0	-0.7
KSH				*e*SS	SS	19 07 44.9	0.0
KSH				AMB	AMB		
	comp=Z,1µm,2.0s,mb6.7						
KSH				LR	LR		
	comp=N,11µm,14.5s,MS6.3						
KSH				LR	LR		
	comp=E,14µm,15.6s,MS6.3						
KZA	**Kyzart**	**57.71**	**305**	P	**P**	**18 56 01.6**	**+1.7**
	SNR=165						
STKA	**Stephens Creek**	**57.72**	**182**	*e*P	**P**	**18 55 58.0**	**-2.1**
	comp=E,96nm,1.5s,mb5.6						
STKA				*e*S	**S**	**19 03 52.4**	**-3.8**
STKA	**Stephens Creek**	**57.72**	**182**	P	**P**	**18 55 58.1**	**-2.0**
	comp=E,30nm,0.9s,mb5.3,baz=344,slow=8.0,SNR=30						
STKA				S	**S**	**19 03 52.5**	**-3.7**
	comp=E,5.9nm,0.9s,baz=119,slow=15,SNR=2.2						
STKA				LR	LR	19 21 06.8	
	comp=E,17µm,19.1s,MS6.2,baz=0.7,slow=36						
ILAR	**Eielson Array**	**57.76**	**28**	P	**P**	**18 55 58.5**	**-1.5**
	comp=E,274nm,0.8s,mb6.4,baz=261,slow=5.9,SNR=628						
ILAR				PP	PP	18 58 04.3	-5.4
	comp=E,81nm,0.8s,baz=260,slow=6.2,SNR=6.7						
ILAR				S	**S**	**19 04 03.0**	**+6.7**
	comp=E,0.9nm,1.0s,baz=284,slow=7.4,SNR=2.5						
ILAR				LR	LR	19 22 05.2	
	comp=E,18µm,18.4s,MS6.2,baz=238,slow=37						
KBK	**Karagaybulak**	**57.85**	**306**	P	**P**	**18 56 01.6**	**+0.8**
	SNR=256						
EYAK	**Cordova Ski Ar**	**57.91**	**33**	*e*P	**P**	**18 56 00.5**	**-0.5**
DIV	**Divide**	**57.93**	**33**	*e*P	**P**	**18 56 00.7**	**-0.4**
	comp=E,2µm,1.3s,mb7.1						
CHMS	**Chumysh**	**57.95**	**306**	P	**P**	**18 56 01.8**	**+0.2**
	SNR=192						
FRU	**Bishkek**	**58.07**	**306**	κ *i*P	**P**	**18 56 03.5**	**+1.1**
FRU				*e*S	**S**	**19 04 08.5**	**+7.8**
FRU				pmax	pmax		
	comp=Z,2µm,1.8s,mb6.8						
FRU				pmax	pmax		
	comp=Z,5µm,13.0s						
FRU				MLR	MLR		
	comp=E,17µm,17.0s						
FRU				MLR	MLR		
	comp=Z,20µm,17.0s,MS6.3						
USP	**Ospenovka**	**58.10**	**306**	P	**P**	**18 56 02.8**	**+0.2**
	SNR=234						
THY	**Trims Highway**	**58.11**	**30**	*e*P	**P**	**18 56 02.3**	**-0.1**
SMLA	**Simla**	**58.14**	**292**	*i*	**S**	**19 04 18.9**	**+17**
AAK	**Ala-Archa**	**58.19**	**306**	P	**P**	**18 56 03.7**	**+0.5**
	SNR=89						
AAK	**Ala-Archa**	**58.19**	**306**	*d i*P	**P**	**18 56 02.5**	**-0.7**
AAK				pmax	pmax		
	comp=Z,313nm,1.7s,mb6.1						
AAK	**Ala-Archa**	**58.19**	**306**	*e*P	**P**	**18 56 02.5**	**-0.7**
SDNR	**Sundarnagar**	**58.22**	**292**	*e*P	**P**	**18 56 03.8**	**+0.2**
SDNR				*e*S	**S**	**19 04 03.6**	**+0.8**
UCH	**Uchtor**	**58.23**	**305**	P	**P**	**18 56 05.2**	**+1.8**
	SNR=150						
JHNI	**Jhansi**	**58.40**	**285**	*e*P	**P**	**18 56 02.0**	**-2.9**
JHNI				⇑*e*P		18 56 02.0	
JHNI				*e*		18 56 53.0	
AFI	**Afiamalu**	**58.56**	**128**	*e*P	**P**	**18 56 06.0**	**-0.1**
AFI				pmax	pmax		
	comp=Z,231nm,1.4s,mb6.0						
AFI	**Afiamalu**	**58.56**	**128**	*e*P	**P**	**18 56 06.0**	**-0.1**
	comp=Z,231nm,1.4s,mb6.0						
FORT	**Forrest**	**58.62**	**196**	⇓*i*P	**P**	**18 56 04.6**	**-1.8**
	comp=Z,16µm,1.6s						
NDI	**New Delhi**	**58.69**	**289**	*e*P	**P**	**18 56 05.5**	**-1.4**
	comp=Z,1µm,1.0s,mb6.8						
NDI				*e*		19 00 56.0	
NDI				*e*S	**S**	**19 04 08.5**	**-0.4**
BHK	**Bhakra**	**58.70**	**292**	*e*P	**P**	**18 56 07.3**	**+0.3**
BHK				*e*		19 04 12.7	
EKS2	**Erkin-Say**	**58.71**	**306**	P	**P**	**18 56 07.4**	**+0.5**
	SNR=130						
DLH	**Dalhousie**	**58.82**	**294**	*e*P	**P**	**18 56 08.0**	**+0.2**
DLH				*e*		18 56 27.0	
AML	**Almayashu**	**58.84**	**305**	P	**P**	**18 56 09.3**	**+1.5**
	SNR=86						
PONG	**Pong**	**58.97**	**293**	*e*P	**P**	**18 56 08.0**	**-0.8**
PONG				*e*		19 04 46.0	
MENT	**Mentasta**	**59.00**	**31**	*e*P	**P**	**18 56 08.9**	**+0.3**
THN	**Thein Dam**	**59.05**	**294**	*e*P	**P**	**18 56 07.0**	**-2.4**
THN				*e*S	**S**	**19 04 13.0**	**-0.6**
NGP	**Nagpur**	**59.23**	**280**	*e*	**S**	**19 04 21.0**	**+4.9**
COCO	**West Island**	**59.67**	**236**	*e*P	**P**	**18 56 12.6**	**-1.2**
	comp=Z,871nm,1.3s,mb6.6						
CHKZ	**Chkalovo**	**59.71**	**319**	P	**P**	**18 56 12.8**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,617nm,1.3s,mb6.5						
CHKZ	**Chkalovo**	**59.71**	**319**	⇓*i*P	**P**	**18 56 12.7**	**-0.9**
	comp=Z,310nm,0.9s,mb6.3						
BVA0	**Borovoye Array**	**59.89**	**318**	*i* P	**P**	**18 56 15.0**	**+0.1**
BVA0				pmax	pmax		
	comp=Z,145nm,1.2s,mb5.9						
BVAR	**Borovoye Array**	**59.89**	**318**	P	**P**	**18 56 14.1**	**-0.8**
	comp=Z,292nm,0.7s,mb6.4,baz=90,slow=7.4,SNR=1107						
BVAR				PP	PP	18 58 20.7	-8.3
	comp=Z,112nm,0.8s,baz=90,slow=6.0,SNR=5.7						
BVAR				S	**S**	**19 04 26.0**	**+1.9**
	comp=Z,2.1nm,0.9s,baz=104,slow=5.9,SNR=2.2						
RIV	**Riverview**	**60.00**	**173**	*e*P	**P**	**18 56 20.5**	**+4.6**
BHPL	**Bhopal**	**60.02**	**283**	*e*P	**P**	**18 56 15.2**	**-0.9**
BHPL				*e*	pP	18 56 21.5	0.0
	comp=Z,277nm,1.2s						
HYB	**Hyderabad**	**60.92**	**276**	⇓*e*P	**P**	**18 56 21.5**	**-0.8**
HYB				*e*S	**S**	**19 04 38.0**	**+0.2**
HYB				pmax	pmax		
	comp=Z,271nm,1.2s,mb6.2						
HYB	**Hyderabad**	**60.92**	**276**	⇓*e*P	**P**	**18 56 21.5**	**-0.8**
	comp=Z,271nm,1.2s,mb6.2						
HYB				*e*S	**S**	**19 04 38.0**	**+0.2**
HYB	**Hyderabad**	**60.92**	**276**	⇓*i*P	**P**	**18 56 21.5**	**-0.8**
	comp=Z,271nm,1.2s,mb6.2						
HYB				*e*		18 57 44.0	
HYB				*e*PP	PP	18 58 34.0	-4.7
HYB				*e*S	**S**	**19 04 38.0**	**+0.2**
HYB				*e*ScS	ScS	19 06 08.0	-1.0
HYB				*e*SS	SS	19 08 42.0	+3.4
HYB				*e*PKPPKP		19 25 35.0	
HYB				LR	LR	19 29 34.0	
	comp=Z,8.9nm,18.0s						
DAWY	**Dawson**	**60.97**	**29**	*e*P	**P**	**18 56 21.7**	**-0.4**
MDRS	**Chennai**	**60.99**	**271**	*e*P	**P**	**18 56 20.9**	**-2.0**
MDRS				*e*		18 58 41.9	
CNB	**Canberra Magne**	**61.31**	**175**	*e*P	**P**	**18 56 25.0**	**+0.2**
	comp=Z,2µm,1.5s,mb7.1						
AJM	**Ajmer**	**61.48**	**287**	⇓*i*P	**P**	**18 56 25.0**	**-1.1**
LATR	**Latur**	**62.35**	**278**	*e*P	**P**	**18 56 31.0**	**-1.0**
PALK	**Pallekele**	**62.94**	**265**	P	**P**	**18 56 35.7**	**-0.2**
	comp=Z,556nm,1.2s,mb6.6,SNR=9.9						
PALK	**Pallekele**	**62.94**	**265**	*e*P	**P**	**18 56 34.8**	**-1.1**
	comp=Z,386nm,1.6s,mb6.3						
INK	**Inuvik**	**63.21**	**24**	P	**P**	**18 56 36.3**	**-0.7**
INK				pmax	pmax		
	comp=Z,540nm,1.3s						
INK	**Inuvik**	**63.21**	**24**	P	**P**	**18 56 36.6**	**-0.4**
	comp=Z,191nm,1.1s,mb6.2,baz=278,slow=6.6,SNR=139						
INK				S	**S**	**19 05 07.4**	**+1.3**
	comp=Z,7.7nm,1.3s,baz=152,slow=6.3,SNR=3.2						
INK				LR	LR	19 25 50.8	
	comp=Z,17µm,19.8s,MS6.2,baz=244,slow=38						
INK	**Inuvik**	**63.21**	**24**	*e*P	**P**	**18 56 36.1**	**-0.9**
	comp=Z,540nm,1.3s,mb6.5						
TOO	**Toolangi**	**63.37**	**179**	*e*P	**P**	**18 56 37.2**	**-1.3**
	comp=Z,6.1nm,1.0s						
MUN	**Mundaring**	**63.60**	**206**	*e*P	**P**	**18 56 38.7**	**-1.4**
	comp=Z,107nm,1.5s,mb5.7						
MUN				*e*S	**S**	**19 05 09.7**	**-1.7**
MUN	**Mundaring**	**63.60**	**206**	*e*P	**P**	**18 56 38.7**	**-1.4**
MUN				*e*S	**S**	**19 05 09.7**	**-1.7**
MUN				pmax	pmax		
	comp=Z,107nm,1.5s,mb5.7						
NWAO	**Narrogin (SRO)**	**64.04**	**205**	*e*P	**P**	**18 56 40.7**	**-2.3**
NWAO				pmax	pmax		
	comp=Z,325nm,1.3s						
NWAO	**Narrogin (SRO)**	**64.04**	**205**	P	**P**	**18 56 40.6**	**-2.4**
	comp=Z,53nm,1.0s,mb5.5,baz=26,slow=9.5,SNR=10						
NWAO				LR	LR	19 25 53.3	
	comp=Z,29nm,18.1s,baz=45,slow=37						
NWAO	**Narrogin (SRO)**	**64.04**	**205**	*e*P	**P**	**18 56 40.7**	**-2.3**
	comp=Z,325nm,1.3s,mb6.2						
KOD	**Kodaikanal**	**64.61**	**269**	*e*P	**P**	**18 56 48.0**	**+1.0**
POO	**Poona**	**64.72**	**279**	⇓*i*P	**P**	**18 56 46.5**	**-1.1**
	comp=Z,320nm,1.0s,mb6.3						
POO				*i* S	**S**	**19 05 27.0**	**+1.5**
KAD	**Karad**	**64.86**	**278**	*e*P	**P**	**18 56 47.7**	**-0.8**
KAD				*e*	pP	18 56 51.9	-2.0
	comp=Z,606nm,1.2s						
SVE	**Sverdlovsk**	**65.01**	**323**	⇓*i*P	**P**	**18 56 49.0**	**+0.1**
SVE				*e*		18 57 27.0	
SVE				*e*		18 59 16.0	
SVE				*e*S	S	19 05 28.0	-0.5
SVE				*e*		19 05 48.0	
SVE				pmax	pmax		
	comp=Z,940nm,1.0s,mb6.8						
SVE				MLR	MLR		
	comp=N,8µm,19.0s,MS6.0						
SVE				MLR	MLR		
	comp=E,800nm,19.0s,MS6.0						
SVE				MLR	MLR		
	comp=Z,12µm,19.0s,MS6.1						
BHV	**Bhavnagar**	**65.12**	**283**	*e*P	**P**	**18 56 50.5**	**+0.3**
BOM	**Bombay**	**65.51**	**280**	*e*P	**P**	**18 56 52.1**	**-0.6**
BOM				*e*		19 05 30.0	
GOA	**Goa**	**65.84**	**276**	*i*		19 05 50.8	
MNGI	**Mangalore**	**65.91**	**273**	*i* P	**P**	**18 56 55.0**	**-0.3**
DLBC	**Dease Lake**	**66.03**	**35**	LR	LR	19 25 07.7	
	comp=Z,30µm,19.6s,MS6.5,baz=283,slow=35						
DLBC	**Dease Lake**	**66.03**	**35**	*e*P	**P**	**18 56 55.8**	**+0.4**
SOKR	**Solikamsk**	**66.50**	**326**	⇓*i*P	**P**	**18 56 55.7**	**-2.6**
SOKR				pmax	pmax		
	comp=Z,340nm,1.1s,mb6.3						
SOKR				MLR	MLR		
	comp=Z,17µm,22.0s,MS6.2						
BHJ	**Bhuj**	**66.79**	**285**	*e*S	S	19 05 52.9	+2.1
BBB	**Bella Bella**	**68.52**	**41**	LR	LR	19 26 12.0	
	comp=Z,14µm,18.4s,MS6.2,baz=301,slow=35						
TAU	**Tasmania Unive**	**68.75**	**177**	*e*P	**P**	**18 57 13.2**	**+0.4**
TAU				pmax	pmax		
	comp=Z,582nm,1.4s,mb6.3						
TAU	**Tasmania Unive**	**68.75**	**177**	*e*P	**P**	**18 57 13.2**	**+0.4**
	comp=Z,582nm,1.4s,mb6.3						
MNCY	**Minicoy**	**69.40**	**269**	⇓*i*P	**P**	**18 57 13.0**	**-4.3**
MNCY				*i*		18 58 55.0	
HIZ	**Hauiti**	**70.47**	**155**	PN	**P**	**18 57 22.3**	**-1.1**
HIZ	**Hauiti**	**70.47**	**155**	PN	**P**	**18 57 22.3**	**-1.1**
URZ	**Urewera**	**71.14**	**153**	LR	LR	19 27 20.9	
	comp=Z,7µm,18.6s,MS6.0,baz=133,slow=35						
RAR	**Rarotonga**	**71.97**	**125**	LR	LR	19 25 33.9	
	comp=Z,9µm,18.3s,MS6.1,baz=306,slow=33						
YKW3	**Yellowknife Ar**	**72.16**	**29**	*e*P	**P**	**18 57 32.2**	**-0.9**
YKA	**Yellowknife Ar**	**72.19**	**29**	*i* P	**P**	**18 57 32.6**	**-0.7**
YKA				pmax	pmax		
	comp=Z,56nm,0.8s						
YKA	**Yellowknife Ar**	**72.19**	**29**	P	**P**	**18 57 32.6**	**-0.7**
	comp=Z,56nm,0.8s,mb5.5,baz=293,slow=5.7,SNR=375						
YKA				LR	LR	19 33 11.4	
	comp=Z,7µm,18.0s,MS6.0,baz=275,slow=39						
OCWA	**Octopus Mounta**	**72.27**	**45**	*e*P	**P**	**18 57 34.6**	**+0.6**
	comp=Z,452nm,1.3s,mb6.2						
NNZ	**Nelson**	**72.31**	**157**	PN	**P**	**18 57 32.0**	**-2.4**
NNZ	**Nelson**	**72.31**	**157**	PN	**P**	**18 57 32.0**	**-2.4**
PGC	**Sidney**	**72.43**	**44**	*e*P	**P**	**18 57 35.2**	**+0.2**
	comp=Z,381nm,1.3s,mb6.2						
HSP	**Hornsund**	**72.55**	**349**	*e*P	**P**	**18 57 35.6**	**+0.5**
RES	**Resolute Bay**	**72.60**	**14**	*e*P	**P**	**18 57 35.2**	**-0.3**
RES				pmax	pmax		
	comp=Z,776nm,1.6s,mb6.4						
RES	**Resolute Bay**	**72.60**	**14**	*e*P	**P**	**18 57 35.2**	**-0.3**
	comp=Z,776nm,1.6s,mb6.4						
LVZ	**Lovozero**	**73.00**	**338**	P	**P**	**18 57 38.4**	**+0.5**
	comp=Z,750nm,1.2s,mb6.5,SNR=12						
LVZ	**Lovozero**	**73.00**	**338**	*e*P	**P**	**18 57 35.6**	**-2.3**
LVZ				*e*S	S	19 07 02.6	-0.1
LVZ				*e*SS	SS	19 11 41.9	-4.3
LVZ				pmax	pmax		
	comp=Z,179nm,1.2s,mb5.9						
LVZ				pmax	pmax		
	comp=N,56nm,1.4s						
LVZ				pmax	pmax		
	comp=E,53nm,1.5s						
LVZ				pmax	pmax		
	comp=E,224nm,2.4s						
LVZ				pmax	pmax		
	comp=Z,853nm,2.4s,mb6.2						
LVZ				pmax	pmax		
	comp=N,248nm,2.3s						
FOZ	**Fox Glacier**	**73.23**	**161**	PN	**P**	**18 57 38.6**	**-1.2**
FOZ	**Fox Glacier**	**73.23**	**161**	PN	**P**	**18 57 38.6**	**-1.2**
KHZ	**Kahutara**	**73.43**	**158**	PN	**P**	**18 57 38.4**	**-2.5**
KHZ	**Kahutara**	**73.43**	**158**	PN	**P**	**18 57 38.4**	**-2.5**
RPZ	**Rata Peaks**	**73.78**	**160**	P	**P**	**18 57 40.8**	**-2.2**
	comp=N,42nm,0.4s,mb5.7,baz=236,slow=15,SNR=8.2						
RPZ				LR	LR	19 26 04.8	
	comp=N,9µm,20.9s,MS6.0,baz=336,slow=32						
KEBM	**Edson Butte**	**73.83**	**50**	*e*P	**P**	**18 57 43.9**	**+0.6**
TTW	**Tolt Reservoir**	**73.86**	**45**	P	**P**	**18 57 43.8**	**+0.4**
COR	**Corvallis**	**73.93**	**48**	*e*P	**P**	**18 57 44.3**	**+0.5**
COR				pmax	pmax		
	comp=Z,240nm,1.1s,mb6.0						
COR	**Corvallis**	**73.93**	**48**	*e*P	**P**	**18 57 44.3**	**+0.6**
	comp=Z,240nm,1.1s,mb6.0						
PECR	**Pechory**	**73.93**	**325**	*d i*P	**P**	**18 57 43.2**	**-0.3**
PECR				*e*		19 00 37.0	
PECR				*e*PPP	PPP	19 02 20.0	+4.8

PECR				eS	S	19 07 16.6	+3.3
PECR				e		19 07 43.0	
PECR				ePS	PS	19 07 52.0	+2.5
PECR				pmax	pmax		
	comp=E,2µm,8.0s						
PECR				pmax	pmax		
	comp=Z,6µm,11.0s						
PECR				smax			
	comp=N,4µm,12.0s						
PECR				smax			
	comp=E,4µm,12.0s						
PECR				MLR	MLR		
	comp=Z,19µm,22.0s,MS6.3						
PECR				MLR	MLR		
	comp=N,5µm,19.0s						
PECR				MLR	MLR		
	comp=Z,13µm,20.0s						
PECR				MLR	MLR		
	comp=N,7µm,17.0s						
PECR				MLR	MLR		
	comp=Z,22µm,18.0s						
PECR				MLR	MLR		
	comp=N,7µm,20.0s						
KBO	**Bosley Butte**	**74.14**	**51**	eP	**P**	**18 57 45.8**	**+0.7**
KEV	**Kevo**	**74.44**	**341**	ep	**P**	**18 57 46.1**	**-0.1**
	comp=N,190nm,1.2s,mb5.9						
KEV	**Kevo**	**74.44**	**341**	eP	**P**	**18 57 46.1**	**-0.1**
KEV				pmax	pmax		
	comp=Z,190nm,1.2s,mb5.9						
HBO	**Huckleberry Mo**	**74.86**	**48**	P	**P**	**18 57 49.6**	**+0.5**
EBG	**Ellensburg**	**74.86**	**45**	P	**P**	**18 57 49.6**	**+0.5**
HUMO	**Hull Mountain**	**74.88**	**50**	eP	**P**	**18 57 49.9**	**+0.5**
	comp=Z,250nm,1.3s,mb6.0						
BBOR	**Butler Butte**	**74.96**	**49**	P	**P**	**18 57 50.2**	**+0.4**
KHMM	**Horse Mountain**	**74.97**	**52**	eP	**P**	**18 57 50.5**	**+0.6**
ARCES	**ARCESS Array B**	**75.00**	**341**	P	**P**	**18 57 50.0**	**+0.5**
	comp=Z,122nm,0.9s,mb5.8,baz=59,slow=7.1,SNR=52						
ARCES				LR	LR	19 36 22.3	
	comp=Z,20µm,19.5s,MS6.4,baz=56,slow=40						
ARCES	**ARCESS Array B**	**75.00**	**341**	P	**P**	**18 57 50.0**	**+0.5**
ARCES				LR	LR	19 36 22.3	
ARE0	**ARCESS Array S**	**75.00**	**341**	eP	**P**	**18 57 49.6**	**+0.1**
YBH	**Yreka Blue Hor**	**75.37**	**51**	eP	**P**	**18 57 52.8**	**+0.6**
YBH				pmax	pmax		
	comp=Z,82nm,0.9s						
YBH	**Yreka Blue Hor**	**75.37**	**51**	P	**P**	**18 57 52.9**	**+0.7**
	comp=Z,60nm,0.8s,mb5.6,baz=307,slow=1.6,SNR=80						
YBH	**Yreka Blue Hor**	**75.37**	**51**	eP	**P**	**18 57 52.8**	**+0.6**
	comp=Z,82nm,0.9s,mb5.7						
LHEM	**Herd Peak**	**75.75**	**51**	P	**P**	**18 57 55.0**	**+0.7**
PINOR	**Pine Mountain**	**75.84**	**48**	P	**P**	**18 57 55.9**	**+1.1**
OD2	**Odessa Site #2**	**75.85**	**44**	P	**P**	**18 57 54.6**	**-0.1**
WDC	**Whiskeytown Da**	**75.92**	**52**	P	**P**	**18 57 55.6**	**+0.3**
WDC				pmax	pmax		
	comp=Z,190nm,1.4s,mb5.8						
WDC	**Whiskeytown Da**	**75.92**	**52**	eP	**P**	**18 57 55.4**	**+0.1**
	comp=Z,192nm,1.4s,mb5.8						
KTK1	**Kautokeino**	**75.96**	**341**	eP	**P**	**18 57 56.1**	**+1.1**
	comp=Z,378nm,1.5s,mb6.1						
KTK1	**Kautokeino**	**75.96**	**341**	eP	**P**	**18 57 56.1**	**+1.1**
KTK1				AMb	AMB	18 57 59.7	
	comp=Z,378nm,1.5s,mb6.1						
HOPS	**Hopland**	**76.15**	**53**	eP	**P**	**18 57 56.5**	**-0.1**
	comp=Z,137nm,1.3s,mb5.7						
WBK	**Wadi Bani Khal**	**76.20**	**289**	P	**P**	**18 57 58.5**	**+1.2**
	SNR=63						
LTIM	**Timbered Crate**	**76.43**	**51**	P	**P**	**18 57 58.6**	**+0.5**
NEW	**Newport**	**76.48**	**43**	eP	**P**	**18 57 58.1**	**-0.2**
NEW				pmax	pmax		
	comp=Z,272nm,1.2s						
NEW	**Newport**	**76.48**	**43**	P	**P**	**18 57 58.5**	**+0.2**
	comp=Z,72nm,0.8s,mb5.6,baz=298,slow=3.9,SNR=53						
NEW				LR	LR	19 30 53.7	
	comp=Z,17µm,18.9s,MS6.4,baz=302,slow=35						
NEW	**Newport**	**76.48**	**43**	eP	**P**	**18 57 58.1**	**-0.1**
	comp=Z,272nm,1.2s,mb6.1						
BIDO	**Bidbid**	**76.57**	**290**	P	**P**	**18 58 00.5**	**+1.2**
	SNR=107						
EDM	**Edmonton**	**76.58**	**37**	⇓iP	**P**	**18 57 58.6**	**-0.1**
NSHM	**Saint Helena R**	**76.66**	**54**	eP	**P**	**18 57 59.9**	**+0.3**
JOF	**Joensuu**	**76.69**	**334**	ep	**P**	**18 57 58.6**	**-0.5**
	comp=Z,240nm,1.1s,mb6.0						
TRO	**Tromso**	**76.76**	**343**	eP	**P**	**18 57 58.8**	**-0.6**
	comp=Z,283nm,1.5s,mb6.0						
TRO	**Tromso**	**76.76**	**343**	eP	**P**	**18 57 58.8**	**-0.6**
TRO				AMb	AMB	18 58 05.2	
	comp=Z,283nm,1.6s,mb6.0						
DAG	**Danmarks Havn**	**76.79**	**356**	⇑eP	**P**	**18 57 59.6**	**+0.1**
DAG				pmax	pmax		
	comp=Z,240nm,1.3s,mb6.0						
DAG	**Danmarks Havn**	**76.79**	**356**	⇑eP	**P**	**18 57 59.6**	**+0.1**
	comp=Z,238nm,1.3s,mb6.0						
DAG	**Danmarks Havn**	**76.79**	**356**	⇑iP	**P**	**18 57 59.6**	**+0.1**
	comp=Z,238nm,1.3s,mb6.0						
SMDO	**Samad**	**76.81**	**289**	P	**P**	**18 58 01.6**	**+0.9**
	SNR=23						
MOD	**Modoc**	**76.97**	**50**	⇓iP	**P**	**18 58 01.3**	**+0.1**
	comp=Z,196nm,0.6s,mb6.2						
DGAR	**Diego Garcia**	**76.99**	**255**	eP	**P**	**18 58 00.6**	**-1.2**
DGAR				pmax	pmax		
	comp=Z,355nm,1.1s,mb6.2						
DGAR	**Diego Garcia**	**76.99**	**255**	eP	**P**	**18 58 00.6**	**-1.2**
	comp=Z,355nm,1.1s,mb6.2						
JMDO	**Jabal Madar**	**77.04**	**289**	⇓P	**P**	**18 58 02.7**	**+0.8**
	SNR=44						
OHCM	**Honcut**	**77.15**	**52**	eP	**P**	**18 58 01.8**	**-0.4**
SAC	**San Andreas**	**77.17**	**54**	P	**P**	**18 58 02.3**	**0.0**
SAC				e		18 58 15.4	
SAC	**San Andreas**	**77.17**	**54**	eP	**P**	**18 58 01.6**	**-0.8**
BANOM	**Banah**	**77.17**	**293**	P	**P**	**18 58 03.6**	**+1.0**
	SNR=105						
HOQ	**Hoqain**	**77.24**	**290**	⇓P	**P**	**18 58 04.0**	**+1.0**
	SNR=136						
MOS	**Moscow**	**77.45**	**326**	eP	**P**	**18 58 03.8**	**+0.3**
MOS				e		19 01 00.4	
MOS				ePPP	PPP	19 02 46.6	-1.8
MOS				eS	S	19 07 52.0	-0.1
MOS				e		19 08 17.0	
MOS				smax			
	comp=N,3µm,6.2s						
MOS				MLR	MLR		
	comp=Z,16µm,19.6s,MS6.4						
BSY	**Bisya**	**77.66**	**289**	P	**P**	**18 58 06.0**	**+0.6**
	SNR=114						
PPT	**Papeete**	**77.73**	**117**	eP	**P**	**18 58 04.7**	**-1.1**
	comp=Z,198nm,1.3s,mb5.9						
PPT	**Papeete**	**77.73**	**117**	eSS	SS	19 12 59.5	+0.5
PPT				eLQ		19 18 37.0	
PPT				eLR	LR	19 22 18.0	
	comp=Z,15µm,21.2s,baz=300						
BMO	**Blue Mountains**	**77.77**	**46**	⇓iP	**P**	**18 58 05.7**	**+0.2**
BMO				pmax	pmax		
	comp=Z,312nm,1.4s,mb6.0						
BMO	**Blue Mountains**	**77.77**	**46**	⇓iP	**P**	**18 58 05.7**	**+0.2**
	comp=Z,312nm,1.4s,mb6.0						
PAE	**Paea**	**77.78**	**117**	eP	**P**	**18 58 04.9**	**-1.2**
	comp=Z,429nm,1.4s,mb6.2						
ASHO	**Ashiyiah**	**77.86**	**292**	⇓P	**P**	**18 58 07.1**	**+0.7**
	SNR=165						
WVOR	**Wild Horse Val**	**77.89**	**49**	P	**P**	**18 58 06.2**	**0.0**
WVOR				pmax	pmax		
	comp=Z,320nm,1.3s,mb6.1						
WVOR	**Wild Horse Val**	**77.89**	**49**	eP	**P**	**18 58 06.2**	**0.0**
	comp=Z,323nm,1.4s,mb6.1						
TIAR	**Tiarei**	**77.91**	**116**	eP	**P**	**18 58 05.8**	**-1.0**
	comp=Z,326nm,1.2s,mb6.1						
ARQ	**Araqi**	**78.00**	**290**	⇑P	**P**	**18 58 08.3**	**+1.1**
	SNR=119						
WALA	**Waterton Lakes**	**78.07**	**41**	⇓iP	**P**	**18 58 07.7**	**+0.6**
	comp=Z,472nm,1.3s,mb6.3						
TVO	**Taravao**	**78.11**	**117**	eP	**P**	**18 58 07.3**	**-0.6**
	comp=Z,147nm,0.9s,mb5.9						
SAO	**San Andreas Ge**	**78.20**	**55**	eP	**P**	**18 58 08.1**	**+0.1**
SAO				pmax	pmax		
	comp=Z,115nm,1.2s,mb5.7						
SAO	**San Andreas Ge**	**78.20**	**55**	eP	**P**	**18 58 08.1**	**+0.1**
	comp=Z,115nm,1.2s,mb5.7						
OBN	**Obninsk**	**78.28**	**326**	P	**P**	**18 58 08.0**	**-0.1**
	comp=Z,3µm,1.5s,mb7.0,SNR=39						
OBN	**Obninsk**	**78.28**	**326**	d iP	**P**	**18 58 08.4**	**+0.3**
OBN				i		19 01 14.2	
OBN				i S	S	19 08 04.9	+3.9
OBN				eSS	SS	19 13 02.0	-4.5
OBN				pmax	pmax		
	comp=Z,836nm,1.7s,mb6.4						
OBN				MLR	MLR		
	comp=Z,20µm,21.0s,MS6.4						
OBN	**Obninsk**	**78.28**	**326**	eP	**P**	**18 58 07.9**	**-0.2**
	comp=Z,1µm,1.4s,mb6.7						
WCN	**Washoe City**	**78.39**	**52**	⇓iP	**P**	**18 58 09.6**	**+0.6**
WCN				pmax	pmax		
	comp=Z,179nm,1.2s,mb5.9						
WCN	**Washoe City**	**78.39**	**52**	⇓iP	**P**	**18 58 09.6**	**+0.5**
	comp=Z,179nm,1.2s,mb5.9						
CMB	**Columbia Colle**	**78.46**	**53**	P	**P**	**18 58 09.8**	**+0.4**
CMB				S	S	19 08 05.7	+2.4
CMB	**Columbia Colle**	**78.46**	**53**	⇓iP	**P**	**18 58 09.6**	**+0.2**
CMB				pmax	pmax		
	comp=Z,218nm,0.9s,mb6.1						
CMB	**Columbia Colle**	**78.46**	**53**	⇓iP	**P**	**18 58 09.6**	**+0.2**
	comp=Z,218nm,0.9s,mb6.1						
PAHR	**Pah Rah Range**	**78.49**	**51**	eP	**P**	**18 58 09.8**	**+0.2**
	comp=Z,107nm,1.2s,mb5.7						
VOR	**Voronezh**	**78.49**	**322**	⇓iP	**P**	**18 58 10.0**	**+0.7**
VOR				eS	S	19 08 22.0	+19
VOR				pmax	pmax		
	comp=Z,1µm,2.0s,mb6.4						
LRV	**Little Rabbit**	**78.65**	**55**	eP	**P**	**18 58 11.1**	**+0.6**
VRSR	**Storozhevoye**	**78.74**	**322**	i P	**P**	**18 58 11.2**	**+0.5**
VRSR				e	pP	18 58 16.7	+0.5
VRSR				eSS	SS	19 13 16.8	+3.3
PUL	**Pulkovo**	**78.78**	**332**	i P	**P**	**18 58 11.7**	**+1.0**
MSO	**Missoula**	**79.04**	**43**	eP	**P**	**18 58 12.2**	**-0.2**
	comp=Z,143nm,1.3s,mb5.7						
KAF	**Kangasniemi**	**79.07**	**335**	ep	**P**	**18 58 11.2**	**-1.1**
	comp=Z,388nm,1.4s,mb6.1,baz=51,slow=5.0						
KAF	**Kangasniemi**	**79.07**	**335**	eP	**P**	**18 58 11.2**	**-1.1**
KAF				pmax	pmax		
	comp=Z,388nm,1.4s,mb6.1						
MEH	**Mehetia**	**79.11**	**116**	eP	**P**	**18 58 12.3**	**-1.1**
	comp=Z,100nm,1.0s,mb5.7						
GOF	**Gofitskoye**	**79.22**	**315**	⇑iP	**P**	**18 58 15.0**	**+1.6**
GOF				i		19 03 08.0	
GOF				i S	S	19 08 09.0	-2.2
GOF				pmax	pmax		
	comp=Z,440nm,1.2s,mb6.3						
GOF				pmax	pmax		
	comp=Z,9µm,6.0s						
GOF				smax			
	comp=N,6µm,10.0s						
GOF				smax			
	comp=E,6µm,10.0s						
GOF				MLR	MLR		
	comp=N,18µm,18.0s,MS6.5						
GOF				MLR	MLR		
	comp=E,12µm,18.0s,MS6.5						
GOF				MLR	MLR		
	comp=Z,14µm,18.0s,MS6.3						
DUS	**Dusheti**	**79.42**	**312**	P	**P**	**18 58 15.6**	**+1.0**
CHMT	**Chamberlain Mo**	**79.43**	**43**	eP	**P**	**18 58 13.9**	**-0.6**
MTA	**Mtatsminda**	**79.53**	**311**	P	**P**	**18 58 16.0**	**+0.8**
MTA				S	S	19 08 32.9	+18
TI2	**Plekhanov**	**79.54**	**311**	⇓iP	**P**	**18 58 16.8**	**+1.5**
TI2				i		18 58 18.6	
TI2				i S	S	19 08 21.0	+6.3
TI2				eS	S	19 08 32.4	+18
TI2				MLR	MLR		
	comp=N,7µm,16.0s,MS6.3						
TI2				MLR	MLR		
	comp=Z,20µm,16.0s,MS6.5						
TI2				MLR	MLR		
	comp=E,10µm,17.0s,MS6.3						
FINES	**FINESS Array B**	**79.55**	**334**	i P	**P**	**18 58 15.1**	**+0.2**
FINES				pmax	pmax		
	comp=Z,132nm,0.8s						
FINES	**FINESS Array B**	**79.55**	**334**	P	**P**	**18 58 15.1**	**+0.2**
	comp=Z,132nm,0.8s,mb5.9,baz=68,slow=5.8,SNR=261						
FINES				PKKPbc		19 17 03.6	
	comp=Z,1.2nm,0.7s,slow=1.9,SNR=4.0						
FINES				LR	LR	19 38 36.4	
	comp=Z,11µm,21.0s,MS6.2,baz=52,slow=39						
OMM	**Old Mammoth Mi**	**79.64**	**53**	eP	**P**	**18 58 16.1**	**+0.2**
BMN	**Battle Mountai**	**79.69**	**50**	eP	**P**	**18 58 16.5**	**+0.4**
BMN				pmax	pmax		
	comp=Z,223nm,1.4s,mb5.9						
BMN	**Battle Mountai**	**79.69**	**50**	eP	**P**	**18 58 16.5**	**+0.4**
	comp=Z,223nm,1.4s,mb5.9						
NVAR	**Mina Array Bea**	**79.79**	**52**	P	**P**	**18 58 17.3**	**+0.6**
	comp=Z,108nm,0.8s,mb5.8,baz=270,slow=8.0,SNR=216						
NVAR				LR	LR	19 31 07.0	
	comp=Z,13µm,18.8s,MS6.3,baz=240,slow=34						
MNV	**Mina**	**79.89**	**52**	eP	**P**	**18 58 17.4**	**+0.2**
MNV				pmax	pmax		
	comp=Z,170nm,1.2s,mb5.8						
MNV	**Mina**	**79.89**	**52**	eP	**P**	**18 58 17.4**	**+0.2**
	comp=Z,170nm,1.2s,mb5.8						
KIV	**Kislovodsk**	**79.93**	**314**	P	**P**	**18 58 18.1**	**+0.8**
	comp=Z,3µm,1.7s,mb7.0,SNR=88						
KIV	**Kislovodsk**	**79.93**	**314**	c iP	**P**	**18 58 17.9**	**+0.6**
KIV				e		19 01 20.6	
KIV				ePPP	PPP	19 03 11.7	+0.2
KIV				i S	S	19 08 21.4	+2.7
KIV				pmax	pmax		
	comp=Z,2µm,1.8s,mb6.6						
KIV				pmax	pmax		
	comp=N,75nm,1.0s						
KIV				pmax	pmax		
	comp=E,129nm,1.0s						
KIV				pmax	pmax		
	comp=Z,334nm,1.0s,mb6.2						
KIV				smax			
	comp=N,156nm,2.3s						
KIV				MLR	MLR		
	comp=N,6µm,24.0s,MS6.2						
KIV				MLR	MLR		
	comp=E,11µm,24.0s,MS6.2						
KIV				MLR	MLR		
	comp=Z,14µm,24.0s,MS6.2						
ONI	**Oni**	**80.04**	**313**	P	**P**	**18 58 19.8**	**+1.8**
ONI				S	S	19 08 34.6	+15
MTUM	**Tungsten Hills**	**80.06**	**53**	eP	**P**	**18 58 18.4**	**+0.3**
HLID	**Hailey**	**80.20**	**46**	eP	**P**	**18 58 19.2**	**+0.5**
	comp=Z,74nm,1.1s,mb5.5						
GNI	**Garni**	**80.23**	**310**	eP	**P**	**18 58 19.3**	**+0.3**
GNI	**Garni**	**80.23**	**310**	d iP	**P**	**18 58 20.9**	**+1.9**
GNI				pmax	pmax		
	comp=Z,454nm,1.7s						
GNI				MLR	MLR		
	comp=Z,7µm,23.0s						
GNI	**Garni**	**80.23**	**310**	P	**P**	**18 58 20.0**	**+1.0**
	comp=Z,105nm,0.8s,mb5.8,baz=352,slow=1.0,SNR=21						
GNI				LR	LR	19 39 11.2	
	comp=Z,7µm,18.6s,MS6.0,baz=260,slow=40						
MOR8	**Moi Rana**	**80.37**	**341**	eP	**P**	**18 58 18.2**	**-1.0**
	comp=Z,516nm,1.3s,mb6.3						
MOR8	**Moi Rana**	**80.37**	**341**	eP	**P**	**18 58 18.2**	**-1.0**
MOR8				AMb	AMB	18 58 31.2	
	comp=Z,516nm,1.3s,mb6.3						
AKH	**Akhalkalaki**	**80.53**	**311**	P	**P**	**18 58 22.4**	**+1.9**
AKH				S	S	19 08 40.7	+16
MCMT	**McKenzie Canyo**	**80.63**	**45**	eP	**P**	**18 58 21.0**	**0.0**
TPH	**Tonopah**	**80.71**	**52**	eP	**P**	**18 58 21.7**	**+0.1**
TPH				pmax	pmax		
	comp=Z,212nm,1.3s,mb5.9						
TPH	**Tonopah**	**80.71**	**52**	eP	**P**	**18 58 21.7**	**+0.1**
	comp=Z,212nm,1.3s,mb5.9						
SHAO	**Shalim**	**80.91**	**286**	⇓P	**P**	**18 58 23.4**	**+0.5**
	SNR=5.8						
TBI	**Tubuai**	**80.95**	**121**	eSS	SS	19 13 49.7	+2.4
TBI				eLQ		19 19 36.6	
TBI				eLR	LR	19 22 42.0	
	comp=Z,15µm,23.8s,baz=302						
BOZ	**Bozeman (W)**	**81.01**	**43**	eP	**P**	**18 58 23.1**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6						
BOZ	**Bozeman (W)**	**81.01**	**43**	eP	**P**	**18 58 23.1**	**+0.1**
	comp=Z,80nm,1.1s,mb5.6						
DAC	**Darwin (Calif)**	**81.22**	**54**	eP	**P**	**18 58 24.9**	**+0.6**
DAC				pmax	pmax		
	comp=Z,126nm,1.2s,mb5.7						
DAC	**Darwin (Calif)**	**81.22**	**54**	eP	**P**	**18 58 24.9**	**+0.6**
	comp=Z,126nm,1.2s,mb5.7						
JMIC	**Jan Mayen**	**81.24**	**351**	LR	LR	19 32 23.8	
	comp=Z,2µm,21.8s,MS5.4,baz=193,slow=34						
TAOE	**Nuku Hiva Isla**	**81.31**	**104**	ePP	PP	19 01 34.3	+1.1
TAOE				eSS	SS	19 13 51.7	-1.1
TAOE				eLQ		19 20 09.2	
TAOE				eLR	LR	19 23 18.1	
	baz=307						
MCQ	**Macquarie Isla**	**81.31**	**171**	eP	**P**	**18 58 25.1**	**+0.7**
MCQ				eS	S	19 08 34.7	+1.9
QLMT	**Earthquake Lak**	**81.52**	**44**	eP	**P**	**18 58 26.7**	**+1.1**
SUMG	**Summit**	**81.55**	**1**	eP	**P**	**18 58 26.2**	**+1.0**
	comp=Z,460nm,1.3s,mb6.2						
FFC	**Flin Flon**	**81.67**	**32**	P	**P**	**18 58 26.9**	**+0.7**
	comp=Z,1µm,1.4s,mb6.6						
FFC	**Flin Flon**	**81.67**	**32**	P	**P**	**18 58 25.9**	**-0.3**
FFC				pmax	pmax		
	comp=Z,380nm,1.1s,mb6.2						
FFC	**Flin Flon**	**81.67**	**32**	eP	**P**	**18 58 25.9**	**-0.3**
	comp=Z,378nm,1.1s,mb6.2						
TRCR	**Troy Canyon**	**81.75**	**51**	eP	**P**	**18 58 27.4**	**+0.4**
BCA	**Borcka**	**81.77**	**312**	eP	**P**	**18 58 28.6**	**+1.6**
MWC	**Mount Wilson**	**81.78**	**56**	⇓eP	**P**	**18 58 27.4**	**+0.2**
VANB	**Van**	**81.86**	**309**	eP	**P**	**18 58 28.1**	**+0.6**
TVAN	**Van**	**81.88**	**309**	i P	**P**	**18 58 28.8**	**+1.1**
YMR	**Madison River**	**81.89**	**44**	eP	**P**	**18 58 28.7**	**+1.1**
VANT	**Van**	**81.93**	**309**	eP	**P**	**18 58 29.6**	**+1.7**
SOC	**Sochi**	**82.01**	**315**	i P	**P**	**18 58 28.3**	**+0.1**
SOC				e		19 01 33.5	
SOC				ePPP	PPP	19 03 25.4	-4.9
SOC				i S	S	19 08 42.9	+2.6
SOC				eSS	SS	19 14 01.2	-1.6
SOC				pmax	pmax		
	comp=Z,482nm,1.5s,mb6.2						
SOC				pmax	pmax		
	comp=N,146nm,1.2s						
SOC				pmax	pmax		
	comp=E,119nm,1.4s						
SOC				MLR	MLR		
	comp=Z,12µm,19.0s,MS6.3						
SOC				MLR	MLR		
	comp=N,4µm,18.0s,MS6.2						
SOC				MLR	MLR		
	comp=E,8µm,17.0s,MS6.2						
SOC	**Sochi**	**82.01**	**315**	⇓iP	**P**	**18 58 28.7**	**+0.5**
YNR	**Norris Junctio**	**82.05**	**44**	eP	**P**	**18 58 30.1**	**+1.7**
HKR	**Hakkari**	**82.07**	**308**	eP	**P**	**18 58 29.9**	**+1.3**
YFT	**Old Faithful**	**82.07**	**44**	eP	**P**	**18 58 31.1**	**+2.6**
HVU	**Hansel Valley**	**82.09**	**47**	eP	**P**	**18 58 29.4**	**+0.7**
IMW	**Indian Meadow**	**82.28**	**45**	⇓eP	**P**	**18 58 30.8**	**+1.2**
NSS	**Namsos**	**82.28**	**341**	eP	**P**	**18 58 28.6**	**-0.6**
	comp=E,434nm,1.8s,mb6.1						
NSS	**Namsos**	**82.28**	**341**	eP	**P**	**18 58 28.6**	**-0.6**
NSS				AMb	AMB	18 58 33.2	
	comp=Z,434nm,1.8s,mb6.1						
LKWY	**Lake**	**82.29**	**44**	eP	**P**	**18 58 32.1**	**+2.4**
LKWY				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.8						
LKWY	**Lake**	**82.29**	**44**	eP	**P**	**18 58 32.1**	**+2.5**
	comp=Z,140nm,1.0s,mb5.8						
RRI2	**Red Ridge**	**82.30**	**45**	eP	**P**	**18 58 30.3**	**+0.6**
BGU	**Big Grassy Mou**	**82.32**	**48**	eP	**P**	**18 58 30.3**	**+0.4**
RBK	**Rabkut**	**82.36**	**286**	P	**P**	**18 58 31.0**	**+0.4**
	SNR=54						
TPAW	**Teton Pass**	**82.46**	**45**	eP	**P**	**18 58 31.6**	**+1.0**
MOOW	**Moose Ponds**	**82.47**	**45**	eP	**P**	**18 58 31.4**	**+0.8**
SPUT	**South Promonto**	**82.53**	**48**	eP	**P**	**18 58 31.7**	**+0.7**
WHFO	**Wadi Hawf**	**82.56**	**286**	P	**P**	**18 58 31.5**	**0.0**
	SNR=115						
WUWY	**Wally Ulrich**	**82.57**	**45**	eP	**P**	**18 58 32.1**	**+1.0**
LOHW	**Long Hollow**	**82.63**	**45**	eP	**P**	**18 58 32.1**	**+0.7**
ERZM	**Erzurum**	**82.66**	**311**	i P	**P**	**18 58 32.6**	**+0.9**
EZM	**Erzurum**	**82.66**	**311**	eP	**P**	**18 58 34.1**	**+2.4**
AHID	**Auburn Hatcher**	**82.72**	**46**	eP	**P**	**18 58 32.4**	**+0.5**
FCC	**Fort Churchill**	**82.73**	**27**	eP	**P**	**18 58 30.7**	**-0.9**
FCC				pmax	pmax		
	comp=Z,224nm,1.3s,mb6.0						
FCC	**Fort Churchill**	**82.73**	**27**	eP	**P**	**18 58 30.7**	**-1.0**
	comp=Z,224nm,1.3s,mb6.0						
ANN	**Anapa**	**82.86**	**317**	d iP	**P**	**18 58 33.1**	**+0.5**
ANN				e		18 58 41.3	
ANN				e		19 01 44.7	
ANN				eS	S	19 08 50.8	+2.0
ANN				eSSS	SSS	19 17 36.0	-4.1
ANN				pmax	pmax		
	comp=Z,1µm,1.7s,mb6.7						
ANN	**Anapa**	**82.86**	**317**	i Pr	**P**	**18 58 33.1**	**+0.5**
IZAR	**Zarasai**	**82.88**	**330**	⇓iP	**P**	**18 58 33.0**	**+0.6**
IZAR				AMPb	AMB	18 58 37.6	
	comp=Z,309nm,1.5s,mb6.1						
MNK	**Minsk**	**82.88**	**328**	⇓eP	**P**	**18 58 30.0**	**-2.5**
MNK				e		19 01 38.0	
MNK				eS	S	19 08 40.0	-8.9
MNK				eSS	SS	19 14 12.0	-3.5
MNK				MLR	MLR		
	comp=Z,26µm,21.0s,MS6.6						
VRT	**Varto**	**82.91**	**310**	eP	**P**	**18 58 34.1**	**+1.2**
IDID	**Didziasalis**	**82.91**	**329**	⇓iP	**P**	**18 58 33.1**	**+0.4**
IDID				AMPb	AMB	18 58 37.9	
	comp=Z,196nm,1.6s,mb5.9						
IDID				ePP	PP	19 01 44.0	-1.2
HWUT	**Hardware Ranch**	**82.97**	**47**	eP	**P**	**18 58 33.8**	**+0.5**
	comp=Z,254nm,1.3s,mb6.1						
ISAL	**Salakas**	**83.04**	**330**	⇓iP	**P**	**18 58 33.8**	**+0.5**
ISAL				AMPb	AMB	18 58 38.5	
	comp=Z,282nm,1.5s,mb6.1						
ISAL				ePP	PP	19 01 44.6	-1.6
NOQ	**North Oquirrh**	**83.06**	**48**	eP	**P**	**18 58 34.2**	**+0.4**
MSL	**Mosul**	**83.12**	**307**	eP	**P**	**18 58 54.0**	**+20**
MSL	**Mosul**	**83.12**	**307**	eSKS	SKS	19 08 56.0	-1.5
MSL				eS	S	19 09 04.0	+12
IIGN	**Ignalina**	**83.13**	**329**	⇓iP	**P**	**18 58 34.2**	**+0.5**
IIGN				AMPb	AMB	18 58 38.2	
	comp=Z,177nm,1.3s,mb5.9						
SCO	**Scoresbysund**	**83.15**	**355**	i P	**P**	**18 58 34.5**	**+0.9**
	comp=Z,22nm,0.8s,mb5.2						
ABTO	**Aybut**	**83.20**	**286**	⇓P	**P**	**18 58 34.9**	**0.0**
	SNR=138						
PFO	**Pinyon Flat Ob**	**83.24**	**56**	eP	**P**	**18 58 34.8**	**0.0**
PFO				pmax	pmax		
	comp=Z,168nm,1.1s,mb6.0						
PFO	**Pinyon Flat Ob**	**83.24**	**56**	eP	**P**	**18 58 34.8**	**-0.1**
	comp=Z,168nm,1.1s,mb6.0						
CTU	**Camp Tracy**	**83.29**	**48**	eP	**P**	**18 58 35.4**	**+0.5**
TCUT	**Toone Canyon**	**83.31**	**47**	eP	**P**	**18 58 35.7**	**+0.7**
BTMT	**Batman**	**83.37**	**309**	eP	**P**	**18 58 36.9**	**+1.5**
NLU	**North Lily Min**	**83.42**	**49**	eP	**P**	**18 58 36.0**	**+0.4**
BAR	**Barrett**	**83.50**	**57**	eP	**P**	**18 58 35.9**	**-0.3**
NEN	**Nelson**	**83.50**	**54**	eP	**P**	**18 58 36.5**	**+0.5**
ARUT	**Antelope Range**	**83.51**	**51**	eP	**P**	**18 58 36.6**	**+0.5**
JLU	**Jordanelle**	**83.53**	**48**	eP	**P**	**18 58 36.6**	**+0.5**
BHD	**Baghdad**	**83.55**	**304**	i P	**P**	**18 58 31.0**	**-5.4**
BHD	**Baghdad**	**83.55**	**304**	eSKS	SKS	19 08 53.0	-7.5
BHD				eS	S	19 09 02.0	+5.9
LDFC	**Landfair**	**83.57**	**54**	eP	**P**	**18 58 36.8**	**+0.3**
GUMT	**Gumushane**	**83.66**	**312**	eP	**P**	**18 58 38.6**	**+1.8**
BEST	**Besiri**	**83.67**	**309**	i P	**P**	**18 58 37.1**	**+0.2**
MPU	**Maple Canyon**	**83.69**	**48**	eP	**P**	**18 58 37.4**	**+0.4**
BW06	**Boulder Array**	**83.71**	**45**	eP	**P**	**18 58 36.8**	**-0.2**
	comp=Z,62nm,1.5s,mb5.5						
PDAR	**Pinedale Array**	**83.71**	**45**	P	**P**	**18 58 37.0**	**0.0**
	comp=Z,23nm,0.8s,mb5.4,baz=266,slow=3.1,SNR=72						
PDAR				PP	PP	19 01 49.0	-2.8
	comp=Z,13nm,1.1s,baz=328,slow=8.5,SNR=5.2						
PDAR				PKKPbc		19 16 52.2	
	comp=Z,2.4nm,0.9s,baz=153,slow=3.3,SNR=7.2						
PDAR				LR	LR	19 33 55.9	
	comp=Z,19µm,19.3s,MS6.5,baz=311,slow=34						
BINT	**Bingol**	**83.74**	**310**	eP	**P**	**18 58 39.3**	**+2.0**
LAO	**LASA Array**	**83.75**	**41**	eP	**P**	**18 58 37.3**	**+0.2**
	comp=Z,356nm,1.2s,mb6.4						
DAU	**Daniels Canyon**	**83.75**	**48**	eP	**P**	**18 58 38.0**	**+0.7**
EZC	**Erzincan**	**83.78**	**311**	eP	**P**	**18 58 41.0**	**+3.5**
DGMT	**Dagmar**	**83.96**	**38**	eP	**P**	**18 58 37.9**	**-0.2**
	comp=Z,262nm,1.3s,mb6.2						
MVU	**Marysvale**	**84.02**	**50**	eP	**P**	**18 58 39.0**	**+0.3**
	comp=Z,114nm,1.3s,mb5.8						
MSU	**Marysvale**	**84.04**	**50**	eP	**P**	**18 58 39.4**	**+0.6**
TMUT	**Trail Mountain**	**84.33**	**49**	eP	**P**	**18 58 40.7**	**+0.5**
AKASG	**Malin Array Be**	**84.39**	**325**	P	**P**	**18 58 40.0**	**-0.2**
	comp=Z,157nm,0.9s,mb6.1,baz=42,slow=5.3,SNR=335						
AKASG				PKKPbc		19 16 51.2	
	comp=Z,2.6nm,0.7s,baz=262,slow=2.8,SNR=12						
DIY	**Diyarbakir**	**84.39**	**309**	eP	**P**	**18 58 42.4**	**+1.8**
KIEV	**Kiev**	**84.40**	**325**	P	**P**	**18 58 40.0**	**-0.3**
PTK	**Pertek**	**84.48**	**311**	eP	**P**	**18 58 42.2**	**+1.2**
SIM	**Simferopol’**	**84.81**	**318**	d iP	**P**	**18 58 43.8**	**+1.3**
SIM				eS	S	19 09 13.0	+4.8
SIM				pmax	pmax		
	comp=Z,305nm,1.0s,mb6.4						
SIM	**Simferopol’**	**84.81**	**318**	ePr	**P**	**18 58 43.9**	**+1.4**
SRU	**San Rafael**	**84.88**	**49**	P	**P**	**18 58 43.3**	**+0.3**
SRU	**San Rafael**	**84.88**	**49**	eP	**P**	**18 58 43.2**	**+0.2**
ELZG	**Elazig**	**84.95**	**310**	i P	**P**	**18 58 41.7**	**-1.7**
DOMB	**Dombas**	**85.03**	**340**	eP	**P**	**18 58 43.5**	**+0.3**

	comp=Z,664nm,1.5s,mb6.5						
DOMB	**Dombas**	85.03	340	eP	P	**18 58 43.5**	**+0.3**
DOMB				AMb	AMB	18 58 47.1	
	comp=Z,664nm,1.5s,mb6.5						
NB2	**NORSAR Subarra**	85.12	339	P	P	**18 58 44.0**	**+0.4**
	comp=Z,584nm,1.0s,mb6.7,baz=43,slow=4.8						
NB2	**NORSAR Subarra**	85.12	339	P	P	**18 58 44.0**	**+0.4**
NB2				pmax	pmax		
	comp=Z,584nm,1.0s,mb6.7						
NB2	**NORSAR Subarra**	85.12	339	P	P	**18 58 44.0**	**+0.4**
	baz=43,slow=4.8						
NOA	**NORSAR Array B**	85.12	339	P	P	**18 58 43.8**	**+0.1**
	comp=Z,265nm,0.9s,mb6.3,baz=44,slow=4.7,SNR=219						
NOA				PP	PP	19 02 00.4	-2.3
	comp=Z,16nm,0.9s,baz=43,slow=7.5,SNR=3.5						
NOA				PKKPbc		19 16 51.2	
	comp=Z,1.6nm,0.9s,baz=180,slow=5.1,SNR=3.4						
NOA				LR	LR	19 40 56.6	
	comp=Z,8µm,19.1s,MS6.1,baz=40,slow=38						
NOA	**NORSAR Array B**	85.12	339	P	P	**18 58 43.8**	**+0.1**
NOA				PP	PP	19 02 00.4	-2.3
NOA				PKKPbc		19 16 51.2	
NOA				LR	LR	19 40 56.5	
SUW	**Suwalki**	85.34	329⇓	eP	P	**18 58 44.9**	**0.0**
SUW				e*PP	pP	18 58 53.1	+2.6
SUW				e		19 02 01.3	
SUW				e		19 09 07.6	
SUW				eS	S	19 09 17.8	+4.5
SUW				eSS	SS	19 14 45.2	-6.3
SUW				pmax	pmax		
	comp=Z,1µm,1.1s,mb7.0						
SUW				MLR	MLR		
	comp=Z,12µm,24.1s,MS6.2						
SUW	**Suwalki**	85.34	329⇓	eP	P	**18 58 44.9**	**0.0**
SUW				ePcP	PcP	18 58 47.3	-1.2
SUW				epP	pP	18 58 53.1	+2.6
SUW				ePP	PP	19 02 01.3	-3.3
SUW				eSKS	SKS	19 09 07.6	-4.5
SUW				eS	S	19 09 17.8	+4.5
SUW				eSS	SS	19 14 45.2	-6.3
SUW	**Suwalki**	85.34	329⇓	eP	P	**18 58 44.9**	**0.0**
	comp=Z,1µm,1.1s,mb7.0						
SUW				ePcP	PcP	18 58 47.3	-1.3
SUW				epP	pP	18 58 53.1	+2.6
SUW				ePP	PP	19 02 01.3	-3.4
SUW				eSKS	SKS	19 09 07.6	-4.5
SUW				eS	S	19 09 17.8	+4.5
SUW				eSS	SS	19 14 45.2	-6.3
SUW				MLR	MLR	19 36 43.8	
	comp=Z,12µm,24.1s,MS6.2						
NAO01	**NORSAR Array S**	85.38	339	eP	P	**18 58 45.2**	**+0.3**
	comp=Z,260nm,1.0s,mb6.3						
MYA	**Malataya**	85.42	311	eP	P	**18 58 45.9**	**+0.2**
MALT	**Malatya**	85.42	311	eP	P	**18 58 46.2**	**+0.5**
MALT	**Malatya**	85.42	311	P	P	**18 58 47.3**	**+1.6**
MALT				pmax	pmax		
	comp=Z,490nm,1.6s,mb6.4						
URFA	**Urfa**	85.58	310	eP	P	**18 58 48.1**	**+1.5**
TOKT	**Tokat**	85.68	313	eP	P	**18 58 47.2**	**+0.3**
SVST	**Sivas**	85.69	312	i P	P	**18 58 44.0**	**-3.0**
OSL	**Oslo**	86.12	338	eP	P	**18 58 49.2**	**+0.6**
	comp=Z,124nm,1.6s,mb5.9						
OSL	**Oslo**	86.12	338	eP	P	**18 58 49.2**	**+0.6**
OSL				AMb	AMB	18 58 53.4	
	comp=Z,124nm,1.6s,mb5.9						
BOYT	**Boyabat**	86.17	315	i P	P	**18 58 48.5**	**-0.8**
BYBT	**Boyabat**	86.24	315	eP	P	**18 58 44.2**	**-5.4**
PV10	**Paradox Valley**	86.25	49	eP	P	**18 58 50.5**	**+0.7**
GZT	**Gaziantep**	86.50	310	i P	P	**18 58 50.1**	**-1.0**
PV01	**Paradox Valley**	86.69	49	eP	P	**18 58 52.0**	**0.0**
KIS	**Kishinev**	86.74	322	eP	P	**18 58 49.0**	**-3.0**
KIS				e		19 02 16.0	
KIS						19 09 16.0	
KIS				eS	S	19 09 24.0	-2.9
KIS				ePS	PS	19 10 32.0	+1.5
KIS				eSS	SS	19 15 05.0	-6.9
KIS				pmax	pmax		
	comp=Z,400nm,2.0s,mb6.3						
GAZ	**Gaziantep**	86.83	310	eP	P	**18 58 53.5**	**+0.8**
BNN	**Bunyan**	86.90	312	eP	P	**18 58 53.7**	**+0.7**
TOS	**Tosya**	86.94	315	eP	P	**18 58 50.1**	**-3.0**
CORM	**Corum**	87.00	314	eP	P	**18 58 53.0**	**-0.4**
PHWY	**Pilot Hill**	87.08	45	eP	P	**18 58 54.3**	**+0.5**
BALT	**Daday**	87.08	315	i P	P	**18 58 53.9**	**+0.1**
RAYN	**Ar Rayn**	87.08	295	P	P	**18 58 55.8**	**+1.6**
	comp=Z,2µm,0.9s						
KMPD	**K-Podol'skiy**	87.10	324	P	P	**18 58 54.0**	**+0.3**
IAS	**Iasi**	87.32	322	P	P	**18 58 55.0**	**+0.2**
ULM	**Lac du Bonnet**	87.33	34	P	P	**18 58 54.6**	**-0.1**
	comp=Z,84nm,1.2s,mb5.9,baz=309,slow=5.0,SNR=40						
ULM				PKKPbc		19 16 46.4	
	comp=Z,11nm,1.3s,baz=212,slow=3.3,SNR=4.8						
ULM				LR	LR	19 42 21.0	
	comp=Z,7µm,18.3s,MS6.1,baz=320,slow=38						
ULM	**Lac du Bonnet**	87.33	34	eP	P	**18 58 54.4**	**-0.4**
	comp=Z,175nm,1.3s,mb6.1						
CANT	**Cankiri**	87.43	314	eP	P	**18 58 55.0**	**-0.5**
ODD1	**Odda**	87.44	340	eP	P	**18 58 55.3**	**+0.3**
	comp=Z,364nm,1.6s,mb6.4						
ODD1	**Odda**	87.44	340	eP	P	**18 58 55.3**	**+0.3**
ODD1				AMb	AMB	18 58 58.2	
	comp=Z,364nm,1.6s,mb6.3						
WAR	**Warsaw**	87.48	329	eP	P	**18 58 56.1**	**+0.7**
WAR				eS	S	19 09 33.4	-0.4
WAR				pmax	pmax		
	comp=Z,2µm,1.6s,mb7.0						
WAR				MLR	MLR		
	comp=Z,12µm,22.0s,MS6.2						
WAR	**Warsaw**	87.48	329	eP	P	**18 58 56.1**	**+0.7**
	comp=Z,1.8nm,1.6s						
WAR				ePcP	PcP	18 58 57.7	-0.2
WAR				eS	S	19 09 33.4	-0.4
WAR				eSS		19 09 47.3	
WAR				LR	LR		
	comp=Z,12µm,22.0s,MS6.2						
WAR	**Warsaw**	87.48	329	eP	P	**18 58 56.1**	**+0.6**
	comp=Z,2µm,1.6s,mb7.0						
WAR				ePcP	PcP	18 58 57.7	-0.2
WAR				eS	S	19 09 33.4	-0.4
WAR				esS		19 09 47.3	
WAR				MLR	MLR	19 39 14.5	
	comp=Z,12µm,22.0s,MS6.2						
LVV	**L'vov**	87.58	326	eP	P	**18 58 56.0**	**0.0**
LVV				eS	S	19 09 28.0	-6.8
AVNT	**Avonos**	87.59	312	i P	P	**18 58 54.6**	**-1.7**
ELDT	**Eldivan**	87.62	314	i P	P	**18 58 54.6**	**-1.8**
SAFT	**Safranbolu**	87.68	315	eP	P	**18 58 57.2**	**+0.5**
ISCO	**Idaho Springs**	87.78	46	eP	P	**18 58 57.9**	**+0.7**
ISCO				pmax	pmax		
	comp=Z,79nm,1.3s,mb5.8						
ISCO	**Idaho Springs**	87.78	46	eP	P	**18 58 57.9**	**+0.7**
	comp=Z,79nm,1.3s,mb5.8						
COBT	**Iskenderun**	87.82	310	i P	P	**18 58 56.1**	**-1.3**
BLS5	**Blasjo**	87.88	340	eP	P	**18 58 59.2**	**+2.0**
	comp=Z,165nm,1.7s,mb6.0						
BLS5	**Blasjo**	87.88	340	eP	P	**18 58 59.2**	**+2.0**
BLS5				AMb	AMB	18 59 03.7	
	comp=Z,165nm,1.7s,mb6.0						
BRTR	**Keskin Array B**	87.89	314	P	P	**18 58 57.8**	**0.0**
	comp=Z,54nm,0.9s,mb5.8,baz=90,slow=3.7,SNR=106						
BRTR				PKKPbc		19 16 45.2	
	comp=Z,2.0nm,0.6s,baz=189,slow=2.0,SNR=7.8						
CEYT	**Ceyhan**	87.92	310	eP	P	**18 58 58.8**	**+0.8**
KAMT	**Kaman**	88.03	313	eP	P	**18 58 58.3**	**-0.2**
TUC	**Tucson**	88.05	55	eP	P	**18 58 59.2**	**+0.5**
TUC				pmax	pmax		
	comp=Z,111nm,1.4s,mb5.9						
TUC	**Tucson**	88.05	55	eP	P	**18 58 59.2**	**+0.5**
	comp=Z,111nm,1.4s,mb5.9						
HTY	**Hatay**	88.11	310	eP	P	**18 58 58.9**	**0.0**
NIG	**Nigde**	88.11	312	eP	P	**18 58 59.9**	**+1.1**
BSD	**Bornholm Skovb**	88.15	334⇓	iP	P	**18 58 57.7**	**-0.9**
BSD				i		19 02 29.7	
BSD				pmax	pmax		
	comp=Z,140nm,0.9s,mb6.2						
BSD				MLR	MLR		
	comp=Z,6µm,18.0s,MS6.0						
BSD	**Bornholm Skovb**	88.15	334⇓	iP	P	**18 58 57.7**	**-0.9**
	comp=Z,143nm,0.9s,mb6.2						
BSD				i		19 02 29.7	
	comp=Z,6µm,18.0s						
CFR	**Carcaliu**	88.19	320	⇑P	P	**18 58 59.2**	**+0.2**
BURAR	**Bucovina Array**	88.34	324	⇑P	P	**18 59 00.4**	**+0.7**
ANTO	**Ankara**	88.36	314	P	P	**18 59 01.2**	**+1.2**
ANTO	**Ankara**	88.36	314	P	P	**18 59 00.6**	**+0.6**
KWP	**Kalwaria**	88.36	326⇓	eP	P	**18 59 00.2**	**+0.5**
KWP				e*PP	pP	18 59 08.8	+3.5
KWP				e		19 02 25.3	
KWP				e		19 09 26.4	
KWP				eS	S	19 09 40.3	-1.8
KWP				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.9						
KWP				MLR	MLR		
	comp=Z,20µm,22.5s,MS6.5						
KWP	**Kalwaria**	88.36	326⇓	eP	P	**18 59 00.2**	**+0.5**
KWP				ePcP	PcP	18 59 02.1	+0.3
KWP				epP	pP	18 59 08.8	+3.5
KWP				ePP	PP	19 02 25.3	-4.6
KWP				eSKS	SKS	19 09 26.4	-5.5
KWP				eS	S	19 09 40.3	-1.8
KWP				eSS		19 10 00.0	
KWP	**Kalwaria**	88.36	326⇓	eP	P	**18 59 00.2**	**+0.5**
	comp=Z,1µm,1.3s,mb6.9						
KWP				ePcP	PcP	18 59 02.1	+0.3
KWP				epP	pP	18 59 08.8	+3.5
KWP				ePP	PP	19 02 25.3	-4.7
KWP				eSKS	SKS	19 09 26.4	-5.6
KWP				eS	S	19 09 40.3	-1.9
KWP				esS		19 10 00.0	
KWP				MLR	MLR	19 40 20.0	
	comp=Z,20µm,22.5s,MS6.5						
TIRR	**Tirgusor**	88.45	320	⇑P	P	**18 59 00.6**	**+0.3**
GKP	**Gorka Klasztor**	88.48	331	eP	P	**18 59 00.1**	**-0.1**
GKP				eS	S	19 09 41.4	-1.7
GKP				eSS	SS	19 15 38.2	+1.1
GKP				MLR	MLR		
	comp=Z,21µm,18.8s,MS6.6						
GKP	**Gorka Klasztor**	88.48	331	eP	P	**18 59 00.1**	**-0.1**
GKP				ePcP	PcP	18 59 01.9	-0.4
GKP				eS	S	19 09 41.4	-1.7
GKP				eSS	SS	19 15 38.2	+1.1
GKP				LR	LR		
	comp=Z,21µm,18.8s,MS6.6						
GKP	**Gorka Klasztor**	88.48	331	eP	P	**18 59 00.1**	**-0.1**
GKP				ePcP	PcP	18 59 01.9	-0.4
GKP				eS	S	19 09 41.5	-1.7
GKP				eSS	SS	19 15 38.2	+1.2
GKP				MLR	MLR	19 43 33.7	
	comp=Z,21µm,18.8s,MS6.6						
VRI	**Vrincioaia**	88.58	322	⇑P	P	**18 59 01.3**	**+0.4**
HARR	**Harsova**	88.60	320	⇑P	P	**18 59 01.5**	**+0.5**
COP	**Copenhagen**	88.70	335	i P	P	**18 59 01.2**	**0.0**
COP				i		19 02 33.6	
COP				i S	S	19 09 34.9	-10
COP				i		19 15 35.7	
COP				pmax	pmax		
	comp=Z,100nm,0.7s,mb6.2						
COP				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.8						
COP	**Copenhagen**	88.70	335	i P	P	**18 59 01.2**	**0.0**
	comp=Z,104nm,0.7s,mb6.3						
COP				i		19 02 33.6	
COP				i S	S	19 09 34.9	-10
COP				i		19 15 35.7	
	comp=Z,4µm,19.0s						
SDCO	**Great Sand Dun**	88.96	48	eP	P	**18 59 03.2**	**+0.3**
	comp=Z,90nm,1.5s,mb5.9						
KOLS	**Kolonicke sedl**	89.03	326	i P	P	**18 59 03.1**	**+0.1**
HENT	**Hendek**	89.04	316	i P	P	**18 58 54.6**	**-8.6**
PSN	**Preselentsi**	89.04	319	i P	P	**18 59 04.0**	**+0.8**
UZH	**Uzhgorod**	89.22	326	eP	P	**18 59 05.0**	**+1.2**
UZH				eS	S	19 09 51.0	+0.9
MEST	**Erdemli**	89.23	311	i P	P	**18 58 59.2**	**-5.1**
MLR	**Muntele Rosu**	89.24	322	P	P	**18 59 04.0**	**-0.1**
	comp=Z,97nm,1.3s,mb6.0,baz=43,slow=2.5,SNR=25						
MLR	**Muntele Rosu**	89.24	322	⇓P	P	**18 59 04.0**	**0.0**
MUD	**Monsted U'grnd**	89.31	337⇓	iP	P	**18 59 03.9**	**-0.2**
MUD				i		19 02 33.5	
MUD				i S	S	19 09 55.0	+4.3
MUD				i		19 15 59.8	
MUD				pmax	pmax		
	comp=Z,100nm,1.1s,mb6.1						
MUD				MLR	MLR		
	comp=Z,9µm,22.0s,MS6.2						
MUD	**Monsted U'grnd**	89.31	337⇓	iP	P	**18 59 03.9**	**-0.2**
	comp=Z,102nm,1.1s,mb6.1						
MUD				i		19 02 33.5	
MUD				i S	S	19 09 55.0	+4.3
MUD				i		19 11 14.7	
MUD				i		19 15 59.8	
	comp=Z,9µm,22.0s						
OJC	**Ojcow**	89.40	328⇓	iP	P	**18 59 04.8**	**+0.1**
OJC				ePP	PP	19 02 36.0	-2.2
OJC				eS	S	19 09 52.6	+0.9
OJC				MLR	MLR	19 42 29.5	
	comp=Z,15µm,19.2s,MS6.4						
CRVS	**Cervenica-Dubn**	89.46	326	i P	P	**18 59 05.6**	**+0.6**
CRVS				eS	S	19 09 49.5	-2.8
CRVS				i SS	SS	19 16 04.2	+13
KIZT	**Kizilcal**	89.49	314	eP	P	**18 59 05.1**	**-0.3**
ASF	**Jabal al Asfar**	89.60	306	P	P	**18 59 05.6**	**-0.4**
	comp=Z,48nm,0.9s,mb5.8,baz=291,slow=2.1,SNR=27						
ASF				PP	PP	19 02 38.5	-1.7
	comp=Z,19nm,1.0s,baz=347,slow=6.9,SNR=3.8						
ASF				LR	LR	19 44 34.5	
	comp=Z,2µm,20.8s,MS5.5,baz=75,slow=39						
BHL	**Bhannes**	89.60	308	eP	P	**18 59 04.7**	**-1.4**
LAZ	**Ladron**	89.61	52	eP	P	**18 59 06.8**	**+0.7**
NIE	**Niedzica**	89.69	327⇓	eP	P	**18 59 05.3**	**-0.7**
KONT	**Konya--Tatoy**	89.69	313	eP	P	**18 59 04.9**	**-1.4**
PRD	**Provadia**	89.79	319	i P	P	**18 59 07.5**	**+0.8**
ANMO	**Albuquerque**	89.80	51	P	P	**18 59 07.5**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,90nm,1.1s						
ANMO	**Albuquerque**	89.80	51	eP	P	**18 59 07.5**	**+0.5**
	comp=Z,90nm,1.1s,mb6.0						
ESKT	**Eskisehir**	89.80	315	eP	P	**18 59 06.1**	**-0.7**
ESKT	**Eskisehir**	89.80	315	i P	P	**18 59 05.3**	**-1.6**
HRT	**Hereke**	89.81	316	eP	P	**18 59 06.0**	**-0.8**
LENM	**Lemitar**	89.85	52	eP	P	**18 59 08.0**	**+0.8**
BUC1	**Bucharest**	89.89	321	P	P	**18 59 07.7**	**+0.6**
MTUR	**Matau**	89.89	322	P	P	**18 59 07.4**	**+0.3**
LPM	**Los Pinos Moun**	90.02	51	eP	P	**18 59 08.3**	**+0.4**
ISK	**Istanbul-Kandi**	90.04	317	eP	P	**18 58 57.5**	**-10**
PHNC	**Paralimni**	90.16	310	P	P	**18 59 06.5**	**-2.1**
KECS	**Kecovo**	90.22	326	i P	P	**18 59 09.1**	**+0.6**
KECS				i PP	PP	19 02 43.0	-1.8
RAC	**Raciborz**	90.25	329	eP	P	**18 59 09.3**	**+0.7**
RAC				eS	S	19 09 59.9	+0.4
RAC				MLR	MLR	19 45 25.0	
	comp=Z,14µm,17.7s,MS6.5						
OKC	**Ostrava-Krasne**	90.44	328⇓	iP	P	**18 59 09.4**	**-0.1**
OKC				eSKKS		19 09 56.8	
OKC				ePS	PS	19 11 19.2	+5.4
OKC				eSS	SS	19 16 01.0	-4.6
OKC				AMS	AMS	19 43 10.0	
	comp=Z,9µm,17.1s						
RUE	**Ruedersdorf**	90.52	332	eP	P	**18 59 09.7**	**-0.1**
	comp=Z,294nm,1.4s,mb6.4						
ULDT	**Uludag**	90.53	316	i P	P	**18 59 07.5**	**-2.6**
ALT	**Altintas**	90.54	315	eP	P	**18 59 07.7**	**-2.5**
KSP	**Ksiaz**	90.60	330⇓	iP	P	**18 59 10.4**	**+0.2**
KSP				e*PP	pP	18 59 18.2	+2.4
KSP				e		19 02 45.5	
KSP				eS	S	19 09 58.0	-4.5
KSP				e*SP	SP	19 11 05.0	-8.0
KSP				eSS	SS	19 16 06.0	-1.8
KSP				MLR	MLR		
	comp=Z,23µm,23.1s,MS6.5						
KSP	**Ksiaz**	90.60	330⇓	iP	P	**18 59 10.4**	**+0.2**
KSP				epP	pP	18 59 18.2	+2.4
KSP				ePP	PP	19 02 45.5	-2.3
KSP				eS	S	19 09 58.0	-4.5
KSP				esP	SP	19 11 05.0	-8.0
KSP				eSS	SS	19 16 06.0	-1.8
KSP				e		19 23 00.0	
KSP				LR	LR		
	comp=Z,23µm,23.1s,MS6.5						
KSP	**Ksiaz**	90.60	330⇓	eP	P	**18 59 10.5**	**+0.2**
KSP				ePcP	PcP	18 59 11.9	+0.3
KSP				epP	pP	18 59 18.3	+2.5
KSP				ePP	PP	19 02 46.0	-1.8
KSP				eS	S	19 10 02.0	-0.5
KSP				esS		19 10 20.2	
KSP				eSS	SS	19 16 16.9	+9.1
KSP				MLR	MLR	19 40 35.9	
	comp=Z,20µm,23.1s,MS6.5						
SZH	**Strazhica**	90.60	320	i P	P	**18 59 10.5**	**+0.1**
MAMC	**Mammari**	90.63	310	P	P	**18 59 09.7**	**-1.1**
CSS	**Prodhromos**	90.66	310	eP	P	**18 59 10.1**	**-0.8**
	comp=Z,277nm,1.4s,mb6.4						
JMB	**Yambol**	90.71	319	i P	P	**18 59 12.0**	**+1.1**
MORC	**Moravsky Berou**	90.77	329	P	P	**18 59 11.0**	**0.0**
MORC				pmax	pmax		
	comp=Z,460nm,1.7s,mb6.5						
MORC	**Moravsky Berou**	90.77	329	eP	P	**18 59 11.0**	**0.0**
	comp=Z,460nm,1.8s,mb6.5						
BSEG	**Bad Segeberg**	90.82	335	eP	P	**18 59 11.0**	**-0.2**
LEF	**Lefka**	90.88	310	eP	P	**18 59 03.5**	**-8.4**
PSZ	**Piszkesteto**	90.89	326	P	P	**18 59 11.3**	**-0.3**
PSZ				pmax	pmax		
	comp=Z,530nm,1.4s,mb6.7						
PSZ	**Piszkesteto**	90.89	326	eP	P	**18 59 11.6**	**0.0**
	comp=Z,530nm,1.4s,mb6.7						
PSZ	**Piszkesteto**	90.89	326⇑	ePcP	PcP	18 59 12.5	-0.5
DPC	**Dobruska-Polom**	90.93	330⇓	iP	P	**18 59 11.9**	**+0.1**
DPC				ePP	PP	19 02 50.4	0.0
DPC				eSKKS		19 09 55.8	
DPC				eSP	SP	19 11 13.7	-3.4
DPC				AMS	AMS	19 40 40.0	
	comp=Z,13µm,21.2s						
UPC	**Upice**	90.96	330⇓	iP	P	**18 59 12.2**	**+0.3**
ISP	**Isparta**	90.97	313	eP	P	**18 59 09.2**	**-3.1**
ISP	**Isparta**	90.97	313	P	P	**18 59 13.4**	**+1.2**
ISP				pmax	pmax		
	comp=Z,160nm,1.5s,mb6.1						
PVL	**Pavlikeni**	90.98	320	P	P	**18 59 13.5**	**+1.3**
EYMN	**Ely**	91.01	34	eP	P	**18 59 12.3**	**+0.2**
	comp=Z,278nm,1.3s,mb6.4						
ALFC	**Alevga**	91.06	310	P	P	**18 59 12.0**	**-0.7**
	comp=Z,7.0nm,0.8s,mb5.1						
SZAC	**Souni-Zanaja**	91.08	310	P	P	**18 59 10.9**	**-2.0**
BNT	**Bandirma**	91.16	317	eP	P	**18 59 09.1**	**-4.0**
KOLL	**Kolacno**	91.18	327	i P	P	**18 59 13.4**	**+0.4**
KOLL				i PP	PP	19 02 51.6	-0.9
JAVC	**Velka Javorina**	91.34	328	P	P	**18 59 14.9**	**+1.2**
PPCY	**Paphos**	91.38	310	P	P	**18 59 13.4**	**-0.8**
	comp=Z,4.4nm,1.0s						
BTOK	**Tokmak**	91.44	316	i P	P	**18 59 11.3**	**-3.0**
VRAC	**Vranov**	91.54	329	P	P	**18 59 14.9**	**+0.3**
	comp=Z,91nm,1.1s,mb6.0,baz=48,slow=5.9,SNR=54						
DIM	**Dimitrovgrad**	91.58	319	i P	P	**18 59 16.0**	**+1.0**
PVCC	**Panska Ves**	91.59	330⇓	iP	P	**18 59 14.7**	**-0.1**
PVCC				MLR	MLR		
	comp=Z,12µm,16.1s,MS6.4						
PVCC	**Panska Ves**	91.59	330⇓	iP	P	**18 59 14.7**	**-0.1**
PVCC				eSKKS		19 09 57.2	
PVCC				AMS	AMS	19 45 10.0	
	comp=Z,12µm,16.1s						
BALB	**Balikesir**	91.61	316	eP	P	**18 59 10.6**	**-4.5**
BRG	**Berggiesshubel**	91.62	331	i P	P	**18 59 15.0**	**+0.1**
BRG				e		19 02 51.5	
BRG				i S	S	19 10 07.0	-4.6
BRG				i PS	PS	19 11 23.0	-4.9
BRG				i SS	SS	19 16 26.0	+4.0
BRG				pmax	pmax		
	comp=Z,200nm,1.8s,mb6.2						
BRG				MLR	MLR		
	comp=N,8µm,18.6s,MS6.3						
BRG				MLR	MLR		
	comp=E,8µm,18.6s,MS6.3						
BRG				MLR	MLR		
	comp=Z,13µm,18.6s,MS6.4						
BRG	**Berggiesshubel**	91.62	331	i P	P	**18 59 15.0**	**+0.1**
	comp=Z,200nm,1.8s,mb6.2						
BRG				ePP	PP	19 02 51.5	-4.4
BRG				i S	S	19 10 07.0	-4.6
BRG				i PS	PS	19 11 23.0	-4.9
BRG				i SS	SS	19 16 26.0	+4.0
BRG				ePKKP	PKKP	19 16 46.9	+22
BRG				eP'P'		19 24 48.1	
BRG				LR	LR		
	comp=Z,13µm,18.6s,MS6.4						
BUD	**Budapest**	91.62	326	P	P	**18 59 15.7**	**+0.7**
BUD	**Budapest**	91.62	326⇑	ePcP	PcP	18 59 15.6	-0.6
LBOS		91.69	286⇑	eP	P	**18 59 17.0**	**+0.9**
SMOL	**Smolenice**	91.70	328	i P	P	**18 59 15.9**	**+0.6**
SMOL				i PP	PP	19 02 56.5	-0.1
CLL	**Collm**	91.70	332⇓	iP	P	**18 59 14.9**	**-0.4**
CLL				i		18 59 25.1	
CLL				i		19 16 36.1	
CLL				pmax	pmax		
	comp=Z,201nm,1.3s,mb6.3						
CLL				MLR	MLR		
	comp=Z,12µm,17.2s,MS6.4						
CLL	**Collm**	91.70	332⇓	iP	P	**18 59 14.9**	**-0.4**
	comp=Z,201nm,1.3s,mb6.3						
CLL				i		18 59 25.1	
CLL				eSKKS		19 09 57.0	
CLL				i PKKP	PKKP	19 16 36.1	+11
CLL				LR	LR		
	comp=Z,12µm,17.2s,MS6.4						
CLL	**Collm**	91.70	332	⇓P	P	**18 59 14.9**	**-0.4**
	comp=Z,logA/T=2.2,mb6.3						
CLL				i *SP	sP	18 59 25.1	+2.5
CLL				ePP	PP	19 02 51.0	-5.6
CLL				e*PPP		19 02 59.0	
CLL				i		19 03 05.5	
CLL				e		19 09 57.0	
CLL				ePS	PS	19 11 28.0	-0.9
CLL				eSS	SS	19 16 30.0	+6.7
CLL				i PKKP	PKKP	19 16 36.1	+11
SRO	**Srobarova**	91.75	327	i P	P	**18 59 17.0**	**+1.4**
KRUC	**Moravsky**	91.81	329	P	P	**18 59 15.8**	**0.0**
SRO1	**Iza**	91.82	327	eP	P	**18 59 18.5**	**+2.6**
MANT	**Manisa**	91.85	315	i P	P	**18 59 15.2**	**-1.2**
KDZ	**Kurdzhali**	91.89	319	i P	P	**18 59 17.5**	**+1.1**
ALN	**Alexandroupoli**	91.98	318	eP	P	**18 59 16.2**	**-0.6**
ELL	**Elmali**	91.98	313	P	P	**18 59 16.7**	**-0.2**
PRA	**Prague**	91.98	330	⇓P	P	**18 59 20.0**	**+3.4**
PRA				AMS	AMS	19 45 30.0	
PRU	**Pruhonice**	91.99	330⇓	iP	P	**18 59 16.5**	**-0.2**
PRU				eSP	SP	19 11 26.5	-3.3
PRU				eSS	SS	19 16 35.6	+8.3
PRU				AMS	AMS	19 45 20.0	
	comp=Z,11µm,17.4s						
DNZL	**Cakiroluk**	92.00	314	i P	P	**18 59 14.4**	**-2.6**
PGB	**Panagyurishte**	92.07	320	P	P	**18 59 17.7**	**+0.5**
ZST	**Bratislava**	92.07	328	i P	P	**18 59 18.0**	**+0.9**
ZST				i PP	PP	19 02 59.6	0.0
ZST				i S	S	19 10 05.3	-10
ZST				i		19 16 38.8	
AKS	**Akhisar**	92.10	316	eP	P	**18 59 15.0**	**-2.4**
CBKS	**Cedar Bluff**	92.10	45	P	P	**18 59 17.5**	**+0.1**
CBKS				pmax	pmax		
	comp=Z,250nm,1.3s,mb6.4						
CBKS	**Cedar Bluff**	92.10	45	eP	P	**18 59 17.2**	**-0.2**
	comp=Z,250nm,1.3s,mb6.4						
DHBB	**Dhamar BB**	92.11	287	eP	P	**18 59 19.5**	**+1.6**
RZN	**Rozhen**	92.28	319	i P	P	**18 59 18.5**	**+0.3**
MNTX	**Cornudas Mount**	92.30	53	eP	P	**18 59 18.8**	**+0.3**
	comp=Z,151nm,1.2s,mb6.2						
EIL	**Elat**	92.32	305	eP	P	**18 59 17.9**	**-0.8**
	comp=Z,36nm,0.8s,mb5.8						
CLZ	**Clausthal**	92.40	333	eP	P	**18 59 18.5**	**0.0**
	comp=Z,272nm,1.6s,mb6.3						
VKA	**Vienna**	92.40	328⇓	iP	P	**18 59 19.0**	**+0.4**
	comp=Z,1µm,4.0s						
VKA	**Vienna**	92.40	328⇓	iP	P	**18 59 19.0**	**+0.4**
VKA				pmax	pmax		
	comp=Z,1µm,4.0s						
BOLS	**Boljevac**	92.50	322⇓	iP	P	**18 59 18.4**	**-0.7**
DRV	**Dumont d'Urvil**	92.55	182	P	Px	18 59 34.0	
VTS	**Vitosha**	92.59	321	i P	P	**18 59 20.3**	**+0.7**
SVIS	**Svilajnac**	92.60	323⇑	iP	P	**18 59 19.2**	**-0.4**
CPRX	**Cap Rock**	92.65	51	eP	P	**18 59 20.2**	**+0.1**
SOP	**Sopron**	92.69	328	ePcP	PcP	18 59 20.7	-0.2
IZM	**Izmir**	92.73	315	eP	P	**18 59 19.9**	**-0.5**
NKC	**Novy Kostel**	92.74	331⇓	iP	P	**18 59 20.1**	**0.0**
NKC				e		19 11 42.1	
NKC				e		19 16 37.6	
NKC				MLR	MLR		
	comp=Z,11µm,22.2s,MS6.3						
NKC	**Novy Kostel**	92.74	331⇓	iP	P	**18 59 20.1**	**0.0**
NKC				eSKKS		19 10 09.3	
NKC				ePS	PS	19 11 42.1	+1.5
NKC				eSS	SS	19 16 37.6	-0.9
NKC				AMS	AMS	19 44 20.0	
	comp=Z,11µm,22.2s						

GDL2	Guadalupe Moun	92.75	52	eP	P	18 59 21.1	+0.5
MOX	Moxa	92.79	332	eP	P	18 59 19.8	-0.5
MOX				e		19 03 02.3	
MOX				pmax	pmax		
	comp=Z,211nm,1.6s,mb6.3						
MOX				MLR	MLR		
	comp=Z,8µm,20.0s,MS6.2						
MOX	Moxa	92.79	332	eP	P	18 59 19.8	-0.5
	comp=Z,211nm,1.6s,mb6.3						
MOX				e		19 03 02.3	
MOX				LR	LR		
	comp=Z,8µm,20.0s,MS6.2						
MOX	Moxa	92.79	332	⇓iP	P	18 59 19.8	-0.5
	comp=Z,logA/T=2.1,mb6.3						
MOX				PP	PP	19 03 02.0	-3.3
MOX				S	S	19 10 09.0	-13
MOX				PS	PS	19 11 45.0	+3.9
MOX				SS	SS	19 16 42.0	+2.8
MOX				L		19 50 18.0	
MMB	Musomiste	92.92	320	i P	P	18 59 21.0	-0.1
KHC	Kasperske Hory	93.05	330	⇓iP	P	18 59 21.2	-0.3
KHC				e		19 03 01.5	
KHC				e		19 11 44.6	
KHC				e		19 16 45.7	
KHC				MLR	MLR		
	comp=Z,12µm,17.3s,MS6.4						
KHC	Kasperske Hory	93.05	330	⇓iP	P	18 59 21.2	-0.3
KHC				ePP	PP	19 03 01.5	-5.9
KHC				eSKKS		19 10 10.9	
KHC				ePS	PS	19 11 44.6	+0.5
KHC				eSS	SS	19 16 45.7	+2.6
KHC				AMS	AMS	19 45 50.0	
	comp=Z,12µm,17.3s						
WIT	Witteveen	93.07	336	eP	P	18 59 21.8	+0.2
AMTX	Amarillo	93.11	49	⇓iP	P	18 59 22.8	+0.6
	comp=Z,312nm,1.2s,mb6.6						
KKB	Krupnik	93.12	320	i P	P	18 59 12.3	-10
GRUS	Gruza	93.14	323	⇑iP	P	18 59 21.8	-0.3
GEC2	GERESS Array S	93.20	330	eP	P	18 59 21.9	-0.3
GEC2				pmax	pmax		
	comp=Z,194nm,1.7s,mb6.3						
GEC2	GERESS Array S	93.20	330	eP	P	18 59 21.9	-0.3
	comp=Z,194nm,1.7s,mb6.3						
GERES	GERESS Array B	93.20	330	P	P	18 59 22.0	-0.2
	comp=Z,26nm,0.7s,mb5.7,baz=45,slow=3.8,SNR=116						
GERES				PP	PP	19 03 06.6	-2.0
	comp=Z,3.9nm,0.9s,baz=45,slow=5.7,SNR=5.0						
GERES				PKKPbc		19 16 30.7	
	comp=Z,1.9nm,0.8s,baz=225,slow=1.9,SNR=5.9						
BARS	Barje	93.23	321	⇓iP	P	18 59 22.3	-0.2
SRS	Serrai	93.30	319	eP	P	18 59 22.0	-0.9
WET	Wettzell	93.35	330	eP	P	18 59 23.1	+0.2
WET				pmax	pmax		
	comp=Z,357nm,2.1s,mb6.4						
WET	Wettzell	93.35	330	eP	P	18 59 23.1	+0.2
	comp=Z,357nm,2.1s,mb6.4						
DIVS	Divcibare	93.39	323	⇑iP	P	18 59 23.1	-0.1
ARSA	Arzberg	93.50	328	⇑iP	P	18 59 23.7	+0.1
	comp=Z,627nm,2.2s,mb6.7						
OUR	Ouranopolis	93.56	318	eP	P	18 59 23.5	-0.6
SOH	Sokhos	93.63	319	eP	P	18 59 23.2	-1.2
MOA	Molln	93.66	329	⇑iP	P	18 59 24.6	+0.2
	comp=Z,748nm,2.6s,mb6.7						
GRA1	Grafenberg Arr	93.67	332	eP	P	18 59 24.6	+0.2
	comp=Z,385nm,1.5s,mb6.6						
GRA1				ePP	PP	19 03 07.2	-5.1
GRA1				LR	LR		
	comp=Z,9µm,19.3s,MS6.2						
GRF	Grafenberg Arr	93.67	332	eP	P	18 59 24.6	+0.2
GRF				e		19 03 07.2	
GRF				pmax	pmax		
	comp=Z,385nm,1.5s,mb6.6						
GRF				MLR	MLR		
	comp=Z,9µm,19.3s,MS6.2						
GRF	Grafenberg Arr	93.67	332	eP	P	18 59 24.6	+0.2
GRF				e		19 03 07.2	
GRF				pmax	pmax		
	comp=Z,385nm,1.5s,mb6.6						
GRF				MLR	MLR		
	comp=Z,9µm,19.3s,MS6.2						
GRF	Grafenberg Arr	93.67	332	eP	P	18 59 24.6	+0.2
	comp=Z,385nm,1.5s,mb6.6						
GRF				ePP	PP	19 03 07.2	-5.1
GRF				LR	LR		
	comp=Z,9µm,19.3s,MS6.2						
GRFO	Grafenberg	93.67	332	eP	P	18 59 24.6	+0.2
KNT	Kendrikon	93.68	320	eP	P	18 59 24.1	-0.6
KNT	Kendrikon	93.68	320	P	P	18 59 24.1	-0.6
WTSB	Winterswijk	93.70	335	eP	P	18 59 24.6	+0.2
	comp=Z,113nm,2.3s,mb5.9						
EAB	Aberfoyle	93.73	343	eP	P	18 59 24.7	+0.2
VAY	Valandovo	93.77	320	i P	P	18 59 24.8	-0.2
EAU	Auchinoon	93.79	342	eP	P	18 59 25.1	+0.3
EAU				AMb	AMB	18 59 28.8	
	comp=Z,328nm,1.8s,mb6.5						
KSU1	Kansas State U	93.87	43	eP	P	18 59 25.2	-0.4
THE	Thessaloniki	93.97	319	eP	P	18 59 25.2	-0.8
SKO	Skopje	93.99	321	⇓iP	P	18 59 26.5	+0.4
SKO				i		19 03 18.0	
SKO				pmax	pmax		
	comp=Z,84nm,1.0s,mb6.1						
SKO	Skopje	93.99	321	⇓iP	P	18 59 26.5	+0.4
	comp=Z,0.1nm,1.0s						
SKO				i PP	PP	19 03 18.0	+2.9
GRG	Griva	94.10	320	eP	P	18 59 25.7	-0.9
GRG	Griva	94.10	320	P	P	18 59 25.7	-0.9
PERS	Pernice	94.13	327	eP	P	18 59 26.3	-0.2
ESK	Eskdalemuir	94.19	342	eP	P	18 59 27.0	+0.4
ESK				AMb	AMB	18 59 32.3	
	comp=Z,97nm,1.7s,mb6.0						
PLE	Pljevlja	94.23	323	⇓iP	P	18 59 26.0	-1.1
IVA	Berane	94.26	322	⇓iP	P	18 59 26.2	-1.1
PVY	Plav	94.40	322	⇓iP	P	18 59 26.0	-1.9
TNS	Taunus Mts	94.42	333	eP	P	18 59 27.7	-0.1
TNS				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.9						
TNS	Taunus Mts	94.42	333	eP	P	18 59 27.7	-0.1
	comp=Z,70nm,1.4s,mb5.9						
OBKA	Obir	94.50	328	⇑iP	P	18 59 27.8	-0.4
	comp=Z,219nm,2.8s,mb6.1						
UPM	Unac-Piva	94.58	323	⇓iP	P	18 59 26.8	-2.0
LIT	Litokhoron	94.59	319	eP	P	18 59 30.6	+1.7
SIND	Sindeldorf	94.62	332	P	P	18 59 28.9	+0.2
SIND	Sindeldorf	94.62	332	eP	P	18 59 28.5	-0.2
XOR	Xorichti	94.64	318	eP	P	18 59 28.0	-1.2
KBA	Koelnbreinsper	94.65	329	⇑iP	P	18 59 28.6	-0.4
	comp=Z,335nm,2.0s,mb6.4						
KBA	Koelnbreinsper	94.65	329	⇑iP	P	18 59 28.6	-0.4
KBA				pmax	pmax		
	comp=Z,335nm,2.0s,mb6.4						
TOD	Tromm	94.75	333	eP	P	18 59 29.1	-0.2
TOD	Tromm	94.75	333	⇓eP	P	18 59 29.3	0.0
FUR	Furstenfeldbru	94.79	330	eP	P	18 59 29.6	0.0
FUR				pmax	pmax		
	comp=Z,367nm,1.5s,mb6.6						
FUR	Furstenfeldbru	94.79	330	eP	P	18 59 29.6	0.0
	comp=Z,367nm,1.5s,mb6.6						
NKY	Niksic	94.79	323	⇓iP	P	18 59 28.6	-1.1
FNA	Florina	94.80	320	eP	P	18 59 29.0	-0.8
FNA	Florina	94.80	320	P	P	18 59 29.0	-0.8
LTX	Lajitas	94.82	54	eP	P	18 59 30.5	+0.3
LTX				pmax	pmax		
	comp=Z,130nm,1.3s,mb6.2						
LTX	Lajitas	94.82	54	eP	P	18 59 30.5	+0.4
	comp=Z,130nm,1.3s,mb6.2						
TXAR	Lajitas Array	94.82	54	P	P	18 59 30.9	+0.7
	comp=Z,37nm,0.9s,mb5.8,baz=297,slow=2.8,SNR=82						
TXAR				PKKPbc		19 16 27.3	
	comp=Z,3.5nm,0.9s,baz=117,slow=2.0,SNR=8.0						
TXAR	Lajitas Array	94.82	54	P	P	18 59 30.9	+0.7
TXAR				PKKPbc		19 16 27.3	
LJU	Ljubljana	94.84	327	eP	P	18 59 29.2	-0.7
SWS	Schriesheim	94.89	333	P	P	18 59 30.6	+0.6
SWS	Schriesheim	94.89	333	eP	P	18 59 29.7	-0.3
TTG	Podgorica	94.91	322	⇓iP	P	18 59 29.6	-0.6
HPK	Haverah Park	94.91	340	eP	P	18 59 30.4	+0.4
OHR	Ohrid	94.92	321	i P	P	18 59 30.0	-0.3
HDH	Heidenheim	94.94	331	P	P	18 59 30.3	+0.1
HDH	Heidenheim	94.94	331	eP	P	18 59 29.9	-0.3
BRY	Bratogost	94.98	323	⇓iP	P	18 59 27.9	-2.6
HGN	Heimansgroeve	94.98	335	eP	P	18 59 29.9	-0.5
	comp=Z,134nm,2.2s,mb6.0						
HGN				ex	x	18 59 39.4	
HGN				ePP	PP	19 03 31.7	+10
HGN				eS	S	19 10 25.7	-15
HGN				eSS	SS	19 17 21.4	+11
ABH	Alteburg	95.05	333	eP	P	18 59 30.6	-0.1
ABH	Alteburg	95.05	333	⇓eP	P	18 59 30.4	-0.3
JFWS	Jewell Farm	95.06	37	eP	P	18 59 30.7	-0.2
JFWS				pmax	pmax		
	comp=Z,173nm,1.4s,mb6.3						
JFWS	Jewell Farm	95.06	37	eP	P	18 59 30.7	-0.2
	comp=Z,173nm,1.4s,mb6.3						
SCHQ	Schefferville	95.11	17	P	P	18 59 30.8	-0.1
	comp=Z,12nm,0.8s,mb5.3,baz=350,slow=4.5,SNR=14						
SCHQ				PKKPbc		19 16 24.9	
	comp=Z,3.5nm,0.6s,baz=143,slow=2.0,SNR=12						
SCHQ				LR	LR	19 45 55.3	
	comp=Z,13µm,19.7s,MS6.4,baz=320,slow=38						
SCHQ	Schefferville	95.11	17	eP	P	18 59 30.9	+0.1
	comp=Z,52nm,1.2s,mb5.8						
WMOK	Wichita Mounta	95.14	47	eP	P	18 59 31.4	-0.1
WMOK				pmax	pmax		
	comp=Z,125nm,1.4s,mb6.2						
WMOK	Wichita Mounta	95.14	47	eP	P	18 59 31.4	-0.1
	comp=Z,125nm,1.4s,mb6.2						
PTCC	Patocco-Chiusa	95.14	328	eP	P	18 59 29.9	-1.3
VOY	Vojsko	95.16	328	eP	P	18 59 29.8	-1.5
VOY				e		18 59 41.5	
BUM	Brajici-Budva	95.19	322	eP	P	18 59 30.3	-1.2
ULC	Ulcinj	95.22	322	⇓iP	P	18 59 31.0	-0.7
STU	Stuttgart	95.23	332	P	P	18 59 31.7	+0.1
STU				pmax	pmax		
	comp=Z,280nm,1.5s,mb6.5						
STU	Stuttgart	95.23	332	eP	P	18 59 31.3	-0.3
	comp=Z,277nm,1.5s,mb6.5						
FVI	Forni Avoltri	95.27	329	eP	P	18 59 30.6	-1.2
KTD	Kalmit	95.27	333	eP	P	18 59 32.1	+0.4
KTD	Kalmit	95.27	333	eP	P	18 59 31.6	-0.1
WATA	Walderalm	95.28	330	⇓iP	P	18 59 31.4	-0.4
	comp=Z,112nm,1.5s,mb6.1						
WATA	Walderalm	95.28	330	⇓iP	P	18 59 31.4	-0.4
WATA				pmax	pmax		
	comp=Z,112nm,1.5s,mb6.1						
GMNA	Gemona	95.29	328	eP	P	18 59 30.8	-1.1
WTTA	Wattenberg	95.30	330	⇓iP	P	18 59 31.6	-0.3
	comp=Z,859nm,3.4s						
WTTA	Wattenberg	95.30	330	⇓iP	P	18 59 31.6	-0.3
WTTA				pmax	pmax		
	comp=Z,859nm,3.4s						
HCY	Herceg Novi	95.31	323	⇓iP	P	18 59 30.2	-1.9
LHO	Holmfirth	95.33	340	eP	P	18 59 31.9	0.0
LHO				AMb	AMB	18 59 35.0	
	comp=Z,112nm,1.6s,mb6.0						
AGG	Agios Georgios	95.38	318	eP	P	18 59 31.1	-1.4
AGG	Agios Georgios	95.38	318	P	P	18 59 31.1	-1.4
RUP	Ruppelstein	95.39	334	eP	P	18 59 32.1	-0.2
RUP	Ruppelstein	95.39	334	⇓eP	P	18 59 32.2	-0.1
BUCH	Bad Urach	95.41	332	P	P	18 59 32.8	+0.4
BUCH	Bad Urach	95.41	332	⇓eP	P	18 59 32.5	+0.1
STON	Ston	95.45	324	i P	P	18 59 31.4	-1.3
TRI	Trieste	95.45	328	eP	P	18 59 31.8	-0.9
LBG	Lerchenberg	95.48	332	P	P	18 59 33.1	+0.4
LBG	Lerchenberg	95.48	332	⇓eP	P	18 59 32.6	-0.1
MOTA	Moosalm	95.48	330	⇓iP	P	18 59 32.3	-0.5
	comp=Z,31nm,1.3s,mb5.6						
MOTA	Moosalm	95.48	330	⇓iP	P	18 59 32.3	-0.5
MOTA				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.6						
KBI1	Birley Grange	95.48	340	eP	P	18 59 33.2	+0.6
KBI1				AMb	AMB	18 59 35.7	
	comp=Z,165nm,1.7s,mb6.2						
SQTA	Sankt Quirin	95.53	330	⇓iP	P	18 59 32.7	-0.3
	comp=Z,150nm,1.6s,mb6.2						
SQTA	Sankt Quirin	95.53	330	⇓iP	P	18 59 32.7	-0.3
SQTA				pmax	pmax		
	comp=Z,150nm,1.6s,mb6.2						
LANF	Langenberg	95.65	333	eP	P	18 59 33.2	-0.3
UBR	Uberruh	95.67	331	P	P	18 59 33.7	+0.1
UBR	Uberruh	95.67	331	⇓eP	P	18 59 33.3	-0.3
BRES	Bressanone	95.68	329	P	P	18 59 33.2	-0.5
WLF	Walferdange	95.78	334	eP	P	18 59 34.3	+0.2
WLF				pmax	pmax		
	comp=Z,352nm,1.7s,mb6.5						
WLF	Walferdange	95.78	334	eP	P	18 59 34.3	+0.3
	comp=Z,352nm,1.7s,mb6.5						
KWE	Weaver Farm	95.79	340	eP	P	18 59 33.6	-0.4
KWE				AMb	AMB	18 59 39.4	
	comp=Z,68nm,1.5s,mb5.9						
GUT	Gutenstein	95.81	332	P	P	18 59 34.1	-0.1
GUT	Gutenstein	95.81	332	⇓eP	P	18 59 33.6	-0.6
SPAK	Spaichingen	95.92	332	P	P	18 59 35.0	+0.2
SPAK	Spaichingen	95.92	332	eP	P	18 59 34.5	-0.3
BFO	Black Forest	95.94	332	eP	P	18 59 34.4	-0.4
BFO				pmax	pmax		
	comp=Z,116nm,1.3s,mb6.2						
BFO	Black Forest	95.94	332	eP	P	18 59 34.4	-0.4
	comp=Z,116nm,1.3s,mb6.2						
GIVF	Givet	95.94	335	eP	P	18 59 34.5	-0.3
	comp=Z,542nm,1.9s,mb6.4						
GIVF	Givet	95.94	335	eP	P	18 59 34.5	-0.3
GIVF				pmax	pmax		
	comp=Z,271nm,1.9s,mb6.3						
DAVA	Damuels	96.07	331	i P	P	18 59 35.4	-0.1
	comp=Z,806nm,2.8s,mb6.7						
APPI	Appiano	96.08	329	P	P	18 59 34.8	-0.7
SISB	Singen-Sch Ber	96.17	331	P	P	18 59 35.8	-0.1
CTI	Castel Tesino	96.20	329	eP	P	18 59 35.3	-0.8
BAIF	Baives	96.21	335	eP	P	18 59 35.5	-0.5
	comp=Z,119nm,1.6s,mb5.8						
BAIF	Baives	96.21	335	eP	P	18 59 35.5	-0.5
BAIF				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.8						
IGT	Igoumenitsa	96.22	320	eP	P	18 59 35.4	-1.0
IGT	Igoumenitsa	96.22	320	P	P	18 59 35.4	-1.0
WLS	Welschbruch	96.28	333	eP	P	18 59 36.2	-0.2
CDF	Champ du Feu	96.31	333	eP	P	18 59 36.2	-0.3
	comp=Z,396nm,1.6s,mb6.3						
CDF	Champ du Feu	96.31	333	eP	P	18 59 36.2	-0.3
CDF				pmax	pmax		
	comp=Z,198nm,1.6s,mb6.3						
LIBD	Limburg	96.38	332	eP	P	18 59 37.0	+0.1
LIBD	Limburg	96.38	332	eP	P	18 59 36.9	0.0
KIZ	Kirchzarten	96.40	332	P	P	18 59 36.8	-0.2
KIZ	Kirchzarten	96.40	332	⇓eP	P	18 59 36.5	-0.5
FELD	Feldberg	96.43	332	eP	P	18 59 36.6	-0.5
BRMO	Bormio	96.47	330	eP	P	18 59 37.4	+0.1
ECH	Echery	96.52	333	eP	P	18 59 36.9	-0.6
MOF	Molkenrain	96.81	332	eP	P	18 59 38.3	-0.5
DLF	Lyons Farm	96.88	343	eP	P	18 59 40.1	+1.1
JCT	Junction City	96.94	51	eP	P	18 59 39.5	-0.3
JCT				pmax	pmax		
	comp=Z,65nm,1.0s,mb6.0						
JCT	Junction City	96.94	51	eP	P	18 59 39.5	-0.3
	comp=Z,65nm,1.0s,mb6.0						
HINF	Hinteralfeld	96.96	333	eP	P	18 59 38.7	-0.7
	comp=Z,193nm,1.7s,mb6.0						
HINF	Hinteralfeld	96.96	333	eP	P	18 59 38.7	-0.7
HINF				pmax	pmax		
	comp=Z,96nm,1.7s,mb6.0						
BBS	Basel-Blauen	96.96	332	eP	P	18 59 39.0	-0.5
THEF	They Montfort	96.99	333	eP	P	18 59 39.0	-0.6
HAU	Haudompre	97.02	333	eP	P	18 59 39.1	-0.6
HAU				eR			
	comp=Z,15µm,19.8s						
DCN	Croghan	97.04	343	eP	P	18 59 39.2	-0.5
SAL	Salo	97.05	329	P	P	18 59 40.0	+0.1
MEZF	Maizieres J'vi	97.14	334	eP	P	18 59 40.2	0.0
FGMS	Monte Sant'Ang	97.19	324	eP	P	18 59 40.2	-0.4
LOMF	Lomont	97.34	332	eP	P	18 59 40.8	-0.4
RSM	Repubblica di	97.39	327	eP	P	18 59 42.2	+0.7
FSSB	Fossombrone	97.40	327	P	P	18 59 42.0	+0.5
RGNG	Rignano Grg	97.41	324	eP	P	18 59 41.5	-0.1
ARV	Arcevia	97.46	326	eP	P	18 59 42.1	+0.3
LTRZ	Laterza	97.49	322	eP	P	18 59 42.0	-0.1
SNTG	Esanatoglia	97.64	326	eP	P	18 59 42.9	+0.2
VAI	Varese	97.65	330	eP	P	18 59 41.7	-0.9
SFI	Santa Sofia	97.70	327	eP	P	18 59 43.6	+0.8
CCM	Cathedral Cave	97.77	41	eP	P	18 59 42.2	-1.1
CCM				pmax	pmax		
	comp=Z,80nm,1.1s,mb6.2						
CCM	Cathedral Cave	97.77	41	eP	P	18 59 42.2	-1.1
	comp=Z,80nm,1.1s,mb6.2						
PGD	Poggio Sodo	97.78	327	eP	P	18 59 44.3	+1.0
ZCCA	Zocca	97.79	328	eP	P	18 59 46.2	+2.9
FG4	Candela	97.83	323	eP	P	18 59 43.9	+0.3
FG5	Orsara di Pugl	97.86	324	eP	P	18 59 44.2	+0.5
NRCA	Norcia	97.86	326	eP	P	18 59 44.0	+0.3
CRE	Caprese Michel	97.86	327	eP	P	18 59 43.8	+0.2
MCGN	Macugnaga	97.93	331	eP	P	18 59 44.0	+0.1
GSCL	Gusciola	97.97	328	eP	P	18 59 44.9	+0.8
ERBM	Eremo	98.00	328	eP	P	18 59 45.0	+0.7
CII	Carovilli	98.05	324	eP	P	18 59 44.9	+0.3
AQU	L'Aquila	98.06	325	eP	P	18 59 45.0	+0.4
ORI	Oriolo Calabro	98.07	322	eP	P	18 59 45.6	+0.9
MRLC	Muro Lucano	98.11	323	eP	P	18 59 44.5	-0.3
MIDA	Miranda	98.14	324	P	P	18 59 45.4	+0.5
RNI2	Rionero Sannit	98.14	325	P	P	18 59 45.2	+0.3
BOB	Bobbio (Coli)	98.19	329	eP	P	18 59 45.1	0.0
ORO	Oropa	98.19	331	eP	P	18 59 44.0	-1.0
CABF	La Chapelle	98.23	332	eP	P	18 59 44.8	-0.4
	comp=Z,156nm,1.5s,mb6.0						
FVM	French Village	98.29	41	eP	P	18 59 45.5	-0.2
	comp=Z,43nm,1.2s,mb5.8						
PTQR	Pietraquaria	98.30	325	eP	P	18 59 45.8	+0.1
SDI	San Donato	98.32	325	eP	P	18 59 44.6	-1.1
SGO	Sicignano	98.34	323	eP	P	18 59 45.8	-0.1
TIP	Timpagrande	98.51	321	eP	P	18 59 46.6	0.0
MIAR	Mount Ida	98.63	45	eP	P	18 59 47.3	0.0
	comp=Z,33nm,1.1s,mb5.8						
GRFL	Gerfalco	98.69	327	P	P	18 59 46.8	-0.5
LPL	La Plagne	98.82	331	eP	P	18 59 47.8	-0.1
	comp=Z,120nm,1.3s,mb6.0						
LPG	La Plagne	98.83	331	eP	P	18 59 47.9	0.0
	comp=Z,63nm,0.8s,mb5.9						
SSF	Saint Saulge	98.92	334	eP	P	18 59 47.9	-0.4
	comp=Z,74nm,1.2s,mb5.8						
GRI	Girifalco	98.94	321	eP	P	18 59 49.2	+0.6
FLN	La Foliniere	98.99	337	eP	P	18 59 48.2	-0.3
FLN				eR			
	comp=Z,13µm,22.5s						
LDF	La Druitiere	99.00	337	eP	P	18 59 47.9	-0.7
	comp=Z,175nm,1.6s,mb6.0						
HYF	Humbligny	99.09	335	eP	P	18 59 49.1	0.0
SMF	Signal de Mont	99.12	333	eP	P	18 59 48.6	-0.6
	comp=Z,151nm,1.4s,mb6.0						
AVF	Avril sur Loir	99.20	334	eP	P	18 59 49.1	-0.5
	comp=Z,180nm,1.4s,mb6.1						
BNI	Bardonecchia	99.21	331	eP	P	18 59 49.6	0.0
	comp=Z,33nm,1.2s,mb5.7						
MBDF	Montbardon	99.43	331	eP	P	18 59 49.6	-1.1
	comp=Z,84nm,1.3s,mb5.8						
GRR	Gorron	99.44	337	eP	P	18 59 50.5	-0.1
	comp=Z,191nm,1.6s,mb6.1						
BGF	Bois d'Agland	99.59	334	eP	P	18 59 51.1	-0.3
	comp=Z,146nm,1.7s,mb5.8						
ORIF	Oris-en-Rattie	99.66	331	eP	P	18 59 51.2	-0.6
	comp=Z,42nm,1.1s,mb5.5						
ORIF				eR			
	comp=Z,14µm,22.5s						
SOI	Samo	99.67	321	eP	P	18 59 52.6	+0.7
PLDF	La Plantade	99.76	333	eP	P	18 59 51.9	-0.3
AGO	Saint Agoulin	99.89	334	eP	P	18 59 52.8	0.0
HKT	Hockley	100.01	50	ePdif	P	18 59 53.9	+0.2
	comp=Z,51nm,1.6s						
TCF	Toulx Ste Croi	100.06	334	eP	P	18 59 53.5	-0.1
	comp=Z,46nm,1.1s						
SGMF	Saint Gilles	100.13	338	eP	P	18 59 53.4	-0.4
	comp=Z,185nm,1.6s						
VIVF	Saint-Julien-l	100.23	332	eP	P	18 59 53.6	-0.7
	comp=Z,87nm,1.4s						
ROSF	Rostrenen	100.30	339	eP	P	18 59 54.1	-0.5
	comp=Z,125nm,1.3s						
FRF	La Foret Royal	100.40	330	eP	P	18 59 53.9	-1.2
	comp=Z,50nm,1.3s						
WCI	Wyandotte Cave	100.48	38	ePdif	P	18 59 55.6	0.0
	comp=Z,16nm,1.0s						
LBL	Lubilhac	100.52	333	eP	P	18 59 55.6	0.0
SMRF	Simiane la Rot	100.55	331	eP	P	18 59 55.3	-0.5
	comp=Z,146nm,1.8s						
QUIF	Quistinic	100.63	338	eP	P	18 59 55.8	-0.3
MFF	Saint Martin d	100.70	336	eP	P	18 59 56.4	0.0
	comp=Z,85nm,1.2s						
ACSO	Alum Creek Sta	100.79	35	ePdif	P	18 59 57.1	+0.1
	comp=Z,32nm,1.2s						
WVT	Waverly	101.07	40	ePdif	P	18 59 58.2	-0.2
RJF	Les Rejaudoux	101.15	334	eP	P	18 59 58.4	-0.1
	comp=Z,98nm,1.4s						
RJF				eR			
	comp=Z,13µm,19.0s						
LASF	Ste Croix	101.20	332	eP	P	18 59 58.3	-0.4
OXF	Oxford	101.24	43	ePdif	P	18 59 58.8	-0.4
	comp=Z,164nm,1.7s						
CAF	Calviac	101.25	334	eP	P	18 59 59.0	+0.1
	comp=Z,72nm,1.4s						
LFF	La Frestale	101.76	334	eP	P	19 00 01.1	-0.1
	comp=Z,22nm,0.8s						
MTLF	Montolieu	102.49	333	eP	Pdif	19 00 04.3	-0.3
SSPA	Standing Stone	102.99	31	ePdif	Pdif	19 00 07.2	+0.3
	comp=Z,29nm,1.4s						
EPF	Esparros	103.51	333	eP	Pdif	19 00 08.6	-0.5
ETSF	Etsaut	103.98	334	eP	Pdif	19 00 10.7	-0.4
SJPF	Ste Jean	104.06	335	eP	Pdif	19 00 10.7	-0.8
KMBO	Kilima Mbogo	105.58	277	P	Pdif	19 00 19.2	+0.4
KMBO				e		19 04 35.5	
KMBO				pmax	pmax		
	comp=Z,34nm,1.7s						
KMBO	Kilima Mbogo	105.58	277	Pdiff	Pdif	19 00 19.2	+0.4
	comp=Z,2.7nm,1.0s,baz=226,slow=23,SNR=8.5						
KMBO				PP	PP	19 04 35.0	-8.9
	comp=Z,3.4nm,1.0s,baz=45,slow=6.8,SNR=6.0						
KMBO	Kilima Mbogo	105.58	277	ePdif	Pdif	19 00 19.1	+0.2
	comp=Z,34nm,1.8s						
CASM	Ain Smara	106.17	325	P	PP	19 04 42.0	-5.7
DFRA	Djebel Bou Aff	106.26	326	P		19 04 36.0	
SET	Setif	106.77	326	P	PP	19 04 49.0	-3.5
CKHR	Kef el Ahmar	106.85	326	P		19 04 39.0	
CMER	Merouana	106.97	325	P		19 04 30.0	
NHSC	New Hope	107.61	38	PKiKP		19 04 37.2	
EMHD	Djebel Mahouad	107.97	328	P	PP	19 04 57.3	-3.8
ESDC	Sonseca Array	108.07	335	PP	PP	19 04 56.2	-5.6
	comp=Z,6.0nm,0.9s,baz=31,slow=6.7,SNR=6.9						
ESDC				PKKPbc		19 15 49.7	
	comp=Z,3.1nm,0.8s,baz=212,slow=2.0,SNR=8.8						
EBNR	Beni Rached	108.57	329	P	PP	19 05 03.0	-2.9
ECHA	Ech Chlef	108.76	329	P	PP	19 05 05.0	-2.4
EANR	'Ain N'Sour	109.05	329	P	PP	19 05 05.5	-4.2
ETRT	Tiaret	109.41	328	P	PP	19 05 06.0	-6.2
ADH	Angra Heroismo	115.05	352	i		19 15 47.5	
ADH				i SS	tx	19 22 37.5	
ADH	Angra Heroismo	115.05	352	i LR	LR	19 40 40.0	
PDA	Ponta Delgada	115.74	351	ePP	PP	19 06 00.0	+2.5
PDA				i		19 15 44.4	
PDA				eSS	tx	19 22 29.0	
QSPA	South Pole Qui	115.90	180	⇓iP	PKPdf	19 04 49.3	-3.4
SYO	Syowa Base	119.31	204	⇓P	Pdif	19 01 09.8	-8.2
SYO	Syowa Base	119.31	204	⇑PKPdf	PKPdf	19 04 55.9	-3.6
SYO	Syowa Base	119.31	204	⇓PP	PP	19 06 19.3	-2.1
LSZ	Lusaka	119.56	267	ePKIKP	PKPdf	19 04 58.9	-2.2
LBTB	Lobatse	124.95	257	PKIKP	PKPdf	19 05 09.4	-2.1
LBTB	Lobatse	124.95	257	ePKPdf	PKPdf	19 05 09.1	-2.4
BOSA	Boshof	126.12	253	ePKPdf	PKPdf	19 05 11.0	-2.6
SJG	San Juan	127.12	37	PKP	PKPdf	19 05 12.8	-3.0
	comp=Z,32nm,0.8s,baz=310,slow=20,SNR=7.8						
SJG	San Juan	127.12	37	ePKPdf	PKPdf	19 05 12.3	-3.5
MAIT	Maitri	127.86	198	ePKP	PKPdf	19 05 14.6	-1.3
TSUM	Tsumeb	130.41	266	ePKPdf	PKPdf	19 05 21.0	-1.1
SUR	Sutherland	130.58	249	PKP	PKPdf	19 05 20.4	-1.7
	comp=Z,12nm,1.1s,baz=32,slow=11,SNR=4.8						
SUR				PP	PP	19 07 37.5	0.0
	comp=Z,16nm,1.2s,baz=280,slow=21,SNR=2.4						
DEG	La Desirade	131.25	33	eP	PKPdf	19 05 22.8	-1.0
OTAV	Otavalo	131.37	64	ePKPpre		19 05 11.0	
SDV	Santo Domingo	131.54	49	PKP	PKPdf	19 05 21.1	-3.3
	comp=Z,97nm,1.1s,baz=334,slow=2.0,SNR=18						
SDV	Santo Domingo	131.54	49	ePKPdf	PKPdf	19 05 22.3	-2.1
ROSC	El Rosal	131.70	56	PKP	PKPdf	19 05 21.8	-2.9
	comp=Z,29nm,1.1s,baz=95,slow=22,SNR=22						
BBL	Barber's Block	131.72	34	eP	PKPdf	19 05 21.1	-3.6
VNA2	Neumayer--Watz	132.32	192	⇑iP	PKPdf	19 05 23.7	-0.7
VNA2	Neumayer--Watz	132.32	192	⇑i	PKPdf	19 05 26.9	+2.5
VNA2	Neumayer--Watz	132.32	192	⇑i	PKPdf	19 05 33.3	+8.9
VNA2	Neumayer--Watz	132.32	192	⇑i	PP	19 07 36.0	-11
VNA3	Neumayer Olymp	132.47	191	⇑iP	PKPdf	19 05 23.5	-1.2
VNA3	Neumayer Olymp	132.47	191	⇑i	PKPdf	19 05 26.8	+2.1
VNA3	Neumayer Olymp	132.47	191	⇑i	PP	19 07 45.3	-2.9
VNA1	Neumayer--Stat	132.71	192	⇑iP	PKPdf	19 05 25.4	+0.2
VNA1	Neumayer--Stat	132.71	192	⇑i	PKPdf	19 05 28.4	+3.2
DBIC	Dimbokro	135.58	313	PKhKP		19 05 18.2	
	comp=Z,5.6nm,1.0s,baz=109,slow=4.9,SNR=4.2						
DBIC				PKP	PKPdf	19 05 29.3	-2.6

	comp=Z,11nm,0.8s,baz=295,slow=6.2,SNR=8.7						
DBIC				PP	PP	19 07 59.2	-10
	comp=Z,20nm,1.1s,baz=2.8,slow=8.6,SNR=5.3						
DBIC	**Dimbokro**	**135.58**	**313**	PKP	PKPdf	19 05 29.3	-2.6
DBIC				PP	PP	19 07 59.2	-10
NNA	**Nana**	**139.04**	**78**	*e*PKPpre		19 05 24.7	
COYC	**Coyhaique**	**145.25**	**133**	⇓*i*P	PKPbc	19 05 46.0	+1.2
PLCA	**Paso Flores**	**147.88**	**126**	PKPbc	PKPdf	19 05 50.5	-2.3
	comp=Z,75nm,1.0s,baz=237,slow=3.3,SNR=77						
PLCA	**Paso Flores**	**147.88**	**126**	*e*PKPdf	PKPdf	19 05 50.8	-2.0
LPAZ	**La Paz**	**148.51**	**78**	*e*PKIKP	PKPdf	19 05 53.1	-1.4
LPAZ	**La Paz**	**148.51**	**78**	PKPbc	PKPdf	19 05 53.3	-1.2
	comp=Z,90nm,1.0s,baz=334,slow=2.5,SNR=33						
TLL	**Tololo Astrono**	**149.07**	**106**	*e*P	PKPdf	19 05 54.0	-1.0
CLCH	**Cerro Calan**	**149.20**	**112**	*e*P	PKPdf	19 05 54.6	-0.6
FCH	**Farellones**	**149.41**	**112**	*e*P	PKPdf	19 05 53.6	-1.9
LVC	**Limon Verde**	**149.81**	**90**	PKPbc	PKPdf	19 05 56.0	-0.5
	comp=Z,50nm,1.2s,baz=208,slow=1.2,SNR=19						
LVC	**Limon Verde**	**149.81**	**90**	*e*PKPdf	PKPdf	19 05 55.8	-0.7
MDZ	**Mendoza**	**150.66**	**111**	*e*P	PKPdf	19 05 57.0	-0.5
MDZ				*e*		19 05 59.1	
ZON	**Zonda**	**150.88**	**108**	*e*P	PKPdf	19 05 55.0	-2.8
TRQA	**Tornquist**	**155.02**	**125**	*e*PKPdf	PKPdf	19 06 00.8	-2.7
LPA	**La Plata**	**159.16**	**120**	*de*PKP	PKPdf	19 06 07.0	-1.9
LPA	**La Plata**	**159.16**	**120**	*e*PKP	PKPab	19 06 46.0	+1.6
LPA				*e*PP	PP	19 10 27.0	+0.8
	comp=Z,6μm,20.0s						
RCBR	**Riachuelo**	**159.82**	**360**	*e*PKPdf	PKPdf	19 06 08.5	-1.7
BDFB	**Brasilia**	**164.64**	**50**	PKP	PKPdf	19 06 13.4	-1.6
	comp=Z,29nm,1.2s,baz=356,slow=2.9,SNR=9.4						
BDFB				PKPab	PKPab	19 07 07.6	-1.0
	comp=Z,13nm,0.8s,baz=211,slow=6.4,SNR=4.9						
BDFB				PP	PP	19 10 56.0	-0.1
	comp=Z,13nm,1.2s,baz=293,slow=2.8,SNR=2.4						

JMA 09 18:48:03.9±0.1**, 35.24N**×**140.85E, h45**^{km}±2^{km}**, M4.3, 6C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTR	**Katsuura**	**0.45**	**258**	⇑P	P	18 48 14.1	-0.1
KTR				*e*S	S	18 48 21.3	-0.2
CHOJ	**Chosi**	**0.46**	**1**	⇑P	P	18 48 14.3	-0.1
CHOJ				*e*S	S	18 48 21.9	+0.1
BSO4	**Boso 4**	**0.49**	**239**	⇑P	P	18 48 15.1	+0.4
BSO4				*e*S	S	18 48 23.5	+1.1
BSO3	**Boso 3**	**0.52**	**213**	⇑P	P	18 48 15.2	+0.1
JCN	**Nagara**	**0.56**	**289**	⇑P	P	18 48 16.1	+0.5
JCN				*e*S	S	18 48 25.2	+1.1
BSO1	**Boso 1**	**0.59**	**170**	⇓P	P	18 48 15.7	-0.4
JYT	**Yasato**	**1.12**	**332**	⇓P	P	18 48 23.3	-0.1
JIM2	**Oshima 3**	**1.28**	**246**	*e*S	S	18 48 39.9	-2.0
JOD2	**Odawara 2**	**1.44**	**271**	⇑P	P	18 48 27.4	-0.7
JOD2				*e*S	S	18 48 43.8	-2.2

IDC ***09*** *19:07:11.2±1.4, 13.71N×121.53E, mb3.4/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=44.2km s-min=9.7km az=42.0*

MAN ***09*** *19:07:12.4, 13.52N×120.59E, h7*^{km}*, mb4.5, ML3.4, MS3.2 MAN PUERTO GALERA INTENSITY II.*

ISC 09 19:07:12.1±1.2**, 13.55N**±0.03×**120.60E**±0.04**, h13**^{km}±8^{km}**, n20, σ0**^{s}**95**/27**, mb3.5**/4**, 3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.39**	**298**	*e*P	**Pb**	**19 07 20.9**	**+0.5**
LUBP				*e*S	Sx	19 07 51.7	
TGY	**Tagaytay City**	**0.64**	**31**	⇓*i*P	**Sb**	**19 07 32.9**	**-0.4**
TGY				*i* S	**Sb**	**19 07 32.9**	**-0.4**
TGY	**Tagaytay City**	**0.64**	**31**	Pg	**Pg**	**19 07 25.2**	**+0.1**
	337nm,0.3s,baz=206,slow=18,SNR=40						
TGY				Lg		19 07 34.1	
	646nm,0.3s,baz=199,slow=21,SNR=19						
LQP	**Lukban**	**1.07**	**58**	*e*P	**Pb**	**19 07 32.0**	**-0.1**
LQP				*e*S	**Sb**	**19 07 44.5**	**-1.2**
SJMP	**San Jose**	**1.19**	**155**	*e*P	**Pb**	**19 07 34.8**	**+0.7**
BOAC	**Boac**	**1.22**	**94**	*e*P	**Pb**	**19 07 33.2**	**-1.3**
BOAC				*e*S	**Sb**	**19 07 49.9**	**0.0**
BUSP	**Coron**	**1.58**	**194**	*e*P	**Pn**	**19 07 40.2**	**+0.2**
BUSP				*e*S	**Sn**	**19 08 00.6**	**0.0**
POLP	**Polilio Island**	**1.75**	**48**	*e*P	**Pn**	**19 07 43.1**	**+0.6**
OTRP	**Odiongan**	**1.82**	**130**	*e*P	**Pn**	**19 07 43.6**	**+0.1**
OTRP				*e*S	**Sn**	**19 08 07.9**	**+1.4**
GQP	**Guinayangan**	**1.83**	**79**	⇓*e*P	**Pn**	**19 07 43.7**	**+0.1**
GQP				*e*S	**Sn**	**19 08 07.1**	**+0.3**
AUQP	**San Andres**	**2.03**	**96**	*e*P	**Pn**	**19 07 48.4**	**+1.8**
PCPH	**Palayan**	**2.06**	**13**	⇓*e*P	**Pn**	**19 07 45.8**	**-1.1**
PCPH				*e*S	**Sn**	**19 08 13.5**	**+0.8**
SCZP	**Santa Cruz**	**2.31**	**343**	*e*P	**Pn**	**19 07 52.0**	**+1.5**
ENPP	**El Nido**	**2.59**	**206**	*e*P	**Pn**	**19 07 54.1**	**-0.5**
CUYO	**Cuyo Island**	**2.71**	**171**	*e*P	**Pn**	**19 07 55.5**	**-0.7**
GUIM	**Jordan**	**3.50**	**146**	*e*P	**Pn**	**19 08 08.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**21.37**	**286**	P	**P**	**19 12 08.2**	**+6.6**
	1.3nm,1.1s,mb3.2,baz=104,slow=7.4,SNR=4.8						
WRA	**Warramunga Arr**	**35.92**	**158**	P	**P**	**19 14 11.7**	**-2.6**
	1.0nm,0.8s,mb3.8,baz=334,slow=9.9,SNR=7.5						
SONM	**Songino Array**	**36.17**	**344**	P	**P**	**19 14 15.9**	**-0.3**
	0.2nm,0.5s,mb3.3,baz=166,slow=9.6,SNR=3.5						
ASAR	**Alice Springs**	**39.21**	**160**	P	**P**	**19 14 40.4**	**-1.6**
	0.4nm,0.4s,mb3.5,baz=341,slow=7.5,SNR=14						

DJA 09 19:20:30.6±1.2**, 9.33S**×**116.21E, h33**^{km}**, ML4.0**/4**, 3C-5D, Error ellipse: s-maj=29.2km s-min=12.3km az=142.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	**0.84**	**354**	⇑*e*Pg	P	19 20 45.0	-1.0
	471nm,0.2s						
KEDI				⇓*e*Sg	S	19 20 55.0	-2.4
RATI	**Rata**	**0.90**	**312**	⇓*e*Pg	P	19 20 48.4	+1.6
	177nm,0.2s						
RATI				⇑*e*Sg	S	19 21 01.5	+2.7
KELI	**Kelakatan**	**2.03**	**303**	⇓*e*Pn	Pn	19 21 00.3	-2.9
	45nm,0.2s						
KELI				⇑*e*Sn	Sn	19 21 22.1	-5.5
SRDI	**Scrawed**	**2.21**	**292**	⇓*e*Pn	Pn	19 21 03.8	-2.0
	144nm,0.2s						
SRDI				⇓*e*Sn	Sn	19 21 29.1	-3.2

IDC 09 19:22:43.4±6.0**, 19.70S**×**177.13W, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.6**/14**, mbtmp3.6**/2**, Error ellipse: s-maj=294.7km s-min=61.0km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.50**	**256**	P	P	19 31 04.0	-2.6
	0.5nm,0.7s,baz=91,slow=8.7,SNR=9.8						
WRA	**Warramunga Arr**	**45.53**	**261**	P	P	19 31 06.0	-0.8
	0.2nm,0.4s,baz=96,slow=7.6,SNR=6.0						
AKASG	**Malin Array Be**	**142.70**	**332**	PKP	PKPdf	19 42 15.9	-4.4
	1.7nm,0.5s,baz=38,slow=4.2,SNR=16						
BRTR	**Keskin Array B**	**146.89**	**314**	PKPbc	PKPbc	19 42 27.9	+0.4
	0.6nm,0.5s,baz=198,slow=3.9,SNR=4.0						

IDC 09 19:41:02.3±1.7**, 0.08S**×**125.29E, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.5**/14**, mbtmp3.5**/3**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx3.8**/7**, Error ellipse: s-maj=174.4km s-min=27.1km az=71.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.64**	**156**	P	P	19 45 54.2	-2.2
	1.5nm,0.7s,baz=334,slow=11,SNR=12						
PMG	**Port Moresby**	**23.66**	**114**	LR	LR	19 54 35.8	
	comp=Z,959nm,20.3s,baz=195,slow=34						
ASAR	**Alice Springs**	**24.89**	**161**	P	P	19 46 27.2	-1.1
	1.0nm,0.7s,baz=350,slow=10,SNR=22						
SONM	**Songino Array**	**50.47**	**344**	P	P	19 50 02.0	-2.0
	0.2nm,0.6s,baz=147,slow=8.3,SNR=3.5						

NEIC ***09*** *19:56:52.7, 37.88N×1.76W, h5*^{km}*, MN2.5(MDD), After MDD.*

CSEM ***09*** *19:56:52.3±0.1, 37.87N×1.76W, h5*^{km}*, ML2.9/9, Error ellipse: s-maj=2.1km s-min=1.4km az=147.0*

SFS ***09*** *19:56:52.0, 37.88N×1.76W*

MDD 09 19:56:52.7±0.3**, 37.88N**×**1.76W, h5**^{km}±5^{km}**, mbLg2.5**/13**, 2C, Error ellipse: s-maj=4.3km s-min=2.5km az=175.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	**La Murta**	**0.41**	**96**	⇑Pg	Pg	19 57 00.2	-0.8
	38nm,0.3s,SNR=18						
EMUR				Lg		19 57 06.1	
	350nm,0.4s						
EMUR	**La Murta**	**0.41**	**96**	Pg	Pg	19 57 00.2	-0.8
	38nm,0.3s,SNR=18						
CART	**Cartagena**	**0.67**	**116**	⇑P	Pg	19 57 05.8	-0.3
CART				S	Sg	19 57 13.3	-1.7
CART	**Cartagena**	**0.67**	**116**	*i* P	Pg	19 57 05.8	-0.3
EVIA	**Vianos**	**0.95**	**322**	Pg	Pg	19 57 10.0	-1.8
	55nm,0.3s,SNR=47						
EVIA				Lg		19 57 23.3	
	63nm,0.5s						
ENIJ	**Nijar**	**0.98**	**202**	Pg	Pg	19 57 10.1	-2.2
	32nm,0.4s,SNR=13						
ENIJ				Lg		19 57 24.0	
	83nm,0.4s						
EQES	**Quesada**	**1.04**	**266**	Pg	Pg	19 57 11.6	-2.0
	52nm,0.3s,SNR=82						
EQES				Lg		19 57 25.6	
	78nm,0.3s						
EQES	**Quesada**	**1.04**	**266**	Pg	Pg	19 57 11.6	-2.0
	52nm,0.3s,SNR=82						
EBER	**Berja**	**1.33**	**223**	Pg	Pg	19 57 16.8	-2.6
	5.8nm,0.2s,SNR=7.3						
EBER				Lg		19 57 36.0	
	30nm,0.3s						
EBER	**Berja**	**1.33**	**223**	Pg	Pg	19 57 16.8	-2.6
	5.8nm,0.2s,SNR=7.3						
EBEN	**Beniarda**	**1.46**	**55**	Pg	Pg	19 57 19.3	-2.5
	4.8nm,0.3s,SNR=12						
EBEN				Lg		19 57 40.1	
	7.1nm,0.5s,SNR=7.9						
EBEN	**Beniarda**	**1.46**	**55**	Pg	Pg	19 57 19.3	-2.5
	4.8nm,0.3s,SNR=12						
EBAN	**Banos Encina**	**1.63**	**281**	Pn	Pn	19 57 21.0	-1.2
	7.0nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	19 57 42.8	-1.0
	23nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**2.02**	**262**	Pn	Pn	19 57 26.4	-1.4
	6.5nm,0.2s,SNR=6.0						
ELUQ				Sn	Sn	19 57 53.0	-0.7
	7.1nm,0.2s,SNR=5.0						
ELUQ				Lg		19 58 02.7	
	11nm,0.2s,SNR=4.0						
ELOJ	**Sierra Loja**	**2.04**	**250**	Pn	Pn	19 57 27.9	-0.3
	1.9nm,0.2s,SNR=4.7						
ELOJ				Sn	Sn	19 57 53.4	-0.9
	1.6nm,0.2s,SNR=4.6						
EADA	**Adamuz**	**2.25**	**278**	Pn	Pn	19 57 28.8	-2.3
	1.4nm,0.1s,SNR=24						
EADA				Sn	Sn	19 57 55.2	-4.3
	8.2nm,0.1s,SNR=9.2						
EADA				Lg		19 58 03.6	
	22nm,0.4s,SNR=4.0						
EADA	**Adamuz**	**2.25**	**278**	Pn	Pn	19 57 28.8	-2.3
	1.4nm,0.1s,SNR=24						
EADA				Sn	Sn	19 57 55.2	-4.3
	8.2nm,0.1s,SNR=9.2						
ESDC	**Sonseca Array**	**2.48**	**317**	Pn	Pn	19 57 31.0	-3.5
	3.8nm,0.4s,baz=129,slow=13,SNR=8.5						
ESDC				Pb	Pb	19 57 36.5	-1.1
	baz=135,slow=17,SNR=4.0						
ESDC				Pg	Pg	19 57 39.1	-3.3
	11nm,0.2s,baz=134,slow=17,SNR=40						
ESDC				Lg		19 58 08.6	
	8.1nm,0.4s,baz=137,slow=28,SNR=7.9						
ESDC	**Sonseca Array**	**2.48**	**317**	Pn	Pn	19 57 31.0	-3.5
	3.8nm,0.4s,slow=13,SNR=8.5						
ESDC	**Sonseca Array**	**2.48**	**317**	Pb	Pb	19 57 36.5	-1.0
	SNR=4.0						
ESDC	**Sonseca Array**	**2.48**	**317**	Pg	Pg	19 57 39.1	-3.2
	11nm,0.2s,baz=134,slow=17,SNR=40						
EMOS	**Mosqueruela**	**2.67**	**22**	Pn	Pn	19 57 36.2	-1.0
	0.9nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	19 58 07.2	-3.1
	2.9nm,0.5s,SNR=7.9						
EMOS				Lg		19 58 17.3	
	14nm,0.8s,SNR=7.9						
EMOS	**Mosqueruela**	**2.67**	**22**	Pn	Pn	19 57 36.2	-1.0
	0.9nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	19 58 07.2	-3.1
	2.9nm,0.5s,SNR=7.9						
EIBI	**Ibiza**	**2.69**	**64**	Sn	Sn	19 58 06.4	-4.4
	4.6nm,0.4s,SNR=4.0						
EIBI	**Ibiza**	**2.69**	**64**	Sn	Sn	19 58 06.4	-4.4
	4.6nm,0.4s,SNR=4.0						
EMIJ	**Mijas**	**2.74**	**242**	Pg	Pg	19 57 42.9	-4.6
	2.1nm,0.3s,SNR=7.9						
ESPR	**Espera**	**3.42**	**254**	Pn	Pn	19 57 44.7	-3.1
	0.5nm,0.2s,SNR=7.9						
ESPR	**Espera**	**3.42**	**254**	Pn	Pn	19 57 44.7	-3.1
	0.5nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**3.47**	**27**	Pn	Pn	19 57 46.4	-2.1
	0.6nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	19 58 26.3	-4.2
	5.1nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**3.47**	**27**	Pn	Pn	19 57 46.4	-2.1
	0.6nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	19 58 26.3	-4.3
	5.1nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.89**	**270**	Pn	Pn	19 57 51.1	-3.4
	1.2nm,0.3s,SNR=12						
EMIN				Sn	Sn	19 58 34.6	-6.7
	2.0nm,0.3s,SNR=6.8						
EMIN				Lg		19 58 52.7	
	3.9nm,0.3s						
EMIN	**Mina Concepcio**	**3.89**	**270**	Pn	Pn	19 57 51.1	-3.5
	1.2nm,0.3s,SNR=12						
EMIN				Sn	Sn	19 58 34.6	-6.7
	2.0nm,0.3s,SNR=6.8						
ESAC	**San Caprasio**	**3.96**	**14**	Lg		19 58 56.4	
	14nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**4.10**	**31**	Pn	Pn	19 57 54.6	-2.9
	0.7nm,0.3s,SNR=7.9						
EPOB				Sn	Sn	19 58 41.3	-5.2
	2.0nm,0.5s,SNR=7.9						
EPOB	**Poblet**	**4.10**	**31**	Pn	Pn	19 57 54.6	-2.9
	0.7nm,0.3s,SNR=7.9						
EPOB				Sn	Sn	19 58 41.3	-5.2
	2.0nm,0.5s,SNR=7.9						
EBAD	**Badajoz**	**4.22**	**284**	Pn	Pn	19 57 55.7	-3.6
	0.2nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	19 58 42.1	-7.6
	6.4nm,0.2s,SNR=7.9						
EBAD				Lg		19 59 03.2	
	8.0nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.22**	**284**	Pn	Pn	19 57 55.7	-3.6
EBAD				Sn	Sn	19 58 42.1	-7.6
ECAL	**Calabor**	**5.57**	**318**	Lg		19 59 46.7	
	9.5nm,0.6s,SNR=7.9						

IDC ***09*** *20:03:04.7±0.5, 55.52S×26.67W, mb4.7/12, mb1 4.7/13, mb1mx4.5/18, mbtmp4.7/13, ML3.7/1, Error ellipse: s-maj=22.0km s-min=15.4km az=44.0*

GUC ***09*** *20:03:05.5±0.0, 55.45S×26.55W, h10*^{km}*, mb5.1(NEIC)*

BJI ***09*** *20:03:06.0, 55.40S×26.70W, h12*^{km}*, mB4.8, Ms5.3, Msz5.1*

NEIC ***09*** *20:03:06.0±0.2, 55.40S×26.70W, h10*^{km}*, mb5.2/9, MS5.3/115, Error ellipse: s-maj=10.5km s-min=7.3km az=50.0*

ISC 09 20:03:04.3±0.4**, 55.50S**±0.08×**26.7W**±0.1**, h10**^{km}**, n184, σ0**^{s}**97**/34**, mb4.8**/16**, MS5.3**/116**, 5C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.81**	**278**	Pn	**Pn**	**20 04 31.6**	**-1.1**
	1μm,0.8s,SNR=48						
VNA1	**Neumayer--Stat**	**17.20**	**159**	⇑*i*P	**P**	**20 07 10.2**	**+4.3**
VNA3	**Neumayer Olymp**	**17.41**	**162**	⇑*i*P	**P**	**20 07 13.0**	**+4.4**
VNA3	**Neumayer Olymp**	**17.41**	**162**	⇑*i*	**P**	**20 07 14.2**	**+5.6**
VNA2	**Neumayer--Watz**	**17.59**	**159**	P	**P**	**20 07 14.2**	**+3.4**
VNA2	**Neumayer--Watz**	**17.59**	**159**	⇑*i*	**P**	**20 07 17.0**	**+6.2**
SNAA	**Sanae**	**19.13**	**157**	P	**P**	**20 07 29.1**	**-0.6**
	0.2nm,0.3s,baz=340,slow=12,SNR=17						
PMSA	**Palmer Station**	**20.49**	**228**	*e*P	**P**	**20 07 44.4**	**-0.4**
	133nm,1.1s						
PMSA				LR	LR		
	comp=Z,3μm,20.0s,MS4.7						
TRIS	**Tristan da Cun**	**20.85**	**34**	PFAKE		20 08 00.0	+11
TRIS				LR	LR		
	comp=Z,3μm,20.0s,MS4.7						
USHA	**Ushuaia**	**23.62**	**254**	P	**P**	**20 08 15.9**	**0.0**
	comp=Z,13nm,0.8s,mb4.4,baz=95,slow=8.9,SNR=5.1						
TRQA	**Tornquist**	**29.39**	**292**	*e*P	**P**	**20 09 08.8**	**-0.9**
	comp=Z,29nm,0.9s,mb5.0						
TRQA				LR	LR		
	comp=Z,4μm,21.0s,MS5.1						
SYO	**Syowa Base**	**31.82**	**141**	⇑P	**P**	**20 09 29.4**	**-1.4**
PLCA	**Paso Flores**	**32.21**	**279**	P	**P**	**20 09 34.8**	**+0.3**
	comp=Z,1.6nm,0.9s,mb3.9,baz=148,slow=12,SNR=3.1						
PLCA				PcP	PcP	20 12 22.9	-0.3
	comp=Z,3.6nm,1.1s,baz=153,slow=4.4,SNR=3.5						
PLCA	**Paso Flores**	**32.21**	**279**	P	**P**	**20 09 31.9**	**-2.6**
	comp=Z,5.5nm,1.1s,mb4.3						
PLCA				LR	LR		
	comp=Z,3μm,19.0s,MS4.9						
QSPA	**South Pole Qui**	**34.75**	**180**	⇓*i*P	**P**	**20 09 56.6**	**+0.5**
	comp=Z,64nm,0.9s,mb5.5						
MDZ	**Mendoza**	**36.96**	**290**	*e*P	**P**	**20 10 14.1**	**-1.2**
TLL	**Tololo Astrono**	**40.12**	**291**	*e*P	**P**	**20 10 42.0**	**+0.2**
SUR	**Sutherland**	**40.20**	**75**	PFAKE		20 10 50.0	+7.6
SUR				LR	LR		
	comp=Z,698nm,19.0s,MS4.5						
MAW	**Mawson**	**40.41**	**144**	P	**P**	**20 10 44.1**	**+0.4**
	comp=Z,19nm,1.1s,mb4.7,baz=248,slow=13,SNR=2.6						
BDFB	**Brasilia**	**43.04**	**329**	P	**P**	**20 11 06.6**	**+0.8**
	comp=Z,6.4nm,0.9s,mb4.3,baz=158,slow=7.7,SNR=5.9						
LVC	**Limon Verde**	**45.29**	**299**	P	**P**	**20 11 25.2**	**+1.3**
	comp=Z,20nm,0.7s,mb5.1,baz=140,slow=5.0,SNR=37						
LVC	**Limon Verde**	**45.29**	**299**	*e*P	**P**	**20 11 24.6**	**+0.7**
	comp=Z,25nm,0.6s,mb5.2						
LVC				LR	LR		
	comp=Z,3μm,21.0s,MS5.2						
BOSA	**Boshof**	**45.54**	**76**	*e*P	**P**	**20 11 24.1**	**-1.7**
	comp=Z,10.0nm,0.7s,mb4.8						
BOSA				LR	LR		
	comp=Z,3μm,19.0s,MS5.2						
SBA	**Scott Base**	**46.65**	**184**	*e*P	**P**	**20 11 33.9**	**0.0**
	comp=Z,38nm,1.0s,mb5.3						
SBA				LR	LR		
	comp=Z,932nm,20.0s,MS4.7						
VNDA	**Vanda**	**47.14**	**183**	P	**P**	**20 11 38.2**	**+0.4**
	comp=Z,18nm,0.8s,mb5.1,baz=192,slow=6.8,SNR=58						
VNDA	**Vanda**	**47.14**	**183**	P	**P**	**20 11 38.2**	**+0.4**
LBTB	**Lobatse**	**48.56**	**73**	P	**P**	**20 11 49.0**	**-0.6**
	comp=Z,5.5nm,0.8s,mb4.6,baz=229,slow=8.4,SNR=7.2						
LBTB	**Lobatse**	**48.56**	**73**	P	**P**	**20 11 49.0**	**-0.6**
LBTB				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
TSUM	**Tsumeb**	**49.15**	**61**	PFAKE		20 12 10.0	+16
TSUM				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
RCBR	**Riachuelo**	**50.08**	**348**	PFAKE		20 12 10.0	+8.6
RCBR				LR	LR		
	comp=Z,4μm,20.0s,MS5.5						
LPAZ	**La Paz**	**50.31**	**304**	P	**P**	**20 12 04.3**	**+1.2**
	comp=Z,19nm,0.9s,mb5.1,baz=143,slow=6.2,SNR=70						
LPAZ	**La Paz**	**50.31**	**304**	*e*P	**P**	**20 12 03.9**	**+0.8**
	comp=Z,24nm,0.8s,mb5.3						
LPAZ				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
ARE	**Arequipa**	**51.78**	**301**	*e*P	**P**	**20 12 15.0**	**+0.8**
SAML	**Samuel**	**54.63**	**314**	PFAKE		20 12 50.0	+15
SAML				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
LSZ	**Lusaka**	**57.89**	**69**	PFAKE		20 13 10.0	+11
LSZ				LR	LR		
	comp=Z,2μm,19.0s,MS5.3						
NNA	**Nana**	**58.26**	**298**	PFAKE		20 13 10.0	+8.7
NNA				LR	LR		
	comp=Z,425nm,20.0s,MS4.6						
DBIC	**Dimbokro**	**64.54**	**24**	P	**P**	**20 13 44.5**	**+0.8**
	comp=Z,3.8nm,0.8s,mb4.5,baz=173,slow=6.8,SNR=6.6						
OTAV	**Otavalo**	**69.61**	**303**	PFAKE		20 14 30.0	+14
OTAV				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
MBAR	**Mbarara**	**71.63**	**63**	PFAKE		20 14 40.0	+12
MBAR				LR	LR		
	comp=Z,518nm,20.0s,MS4.8						
SDV	**Santo Domingo**	**73.84**	**314**	P	**P**	**20 14 40.8**	**-0.2**
	comp=Z,31nm,1.1s,mb5.1,baz=290,slow=5.5,SNR=6.4						
SDV	**Santo Domingo**	**73.84**	**314**	*e*P	**P**	**20 14 40.6**	**-0.3**
	comp=Z,14nm,0.9s,mb4.9						
SDV				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
KMBO	**Kilima Mbogo**	**74.56**	**69**	PFAKE		20 15 00.0	+15
KMBO				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
PAYG	**Puerto Ayora**	**74.79**	**292**	PFAKE		20 15 00.0	+13
PAYG				LR	LR		
	comp=Z,1μm,22.0s,MS5.1						
SJG	**San Juan**	**80.59**	**322**	PFAKE		20 15 30.0	+12
SJG				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
JTS	**JuntasAbangare**	**81.47**	**302**	PFAKE		20 15 30.0	+6.9
JTS				LR	LR		
	comp=Z,326nm,21.0s,MS4.7						
TAU	**Tasmania Unive**	**81.83**	**176**	PFAKE		20 15 40.0	+16
TAU				LR	LR		
	comp=Z,360nm,19.0s,MS4.8						
NWAO	**Narrogin (SRO)**	**86.66**	**150**	PFAKE		20 16 00.0	+11
NWAO				LR	LR		
	comp=Z,484nm,20.0s,MS4.9						
DGAR	**Diego Garcia**	**89.08**	**102**	PFAKE		20 16 10.0	+9.0
DGAR				LR	LR		
	comp=Z,265nm,21.0s,MS4.6						
TEIG	**Tepich**	**91.64**	**304**	PFAKE		20 16 20.0	+7.2
TEIG				LR	LR		
	comp=Z,506nm,19.0s,MS5.0						
STKA	**Stephens Creek**	**92.39**	**170**	P	**P**	**20 16 18.0**	**+2.0**
	comp=Z,2.2nm,1.0s,mb4.4,baz=172,slow=6.0,SNR=4.8						
BBSR	**BB Station**	**93.38**	**329**	PFAKE		20 16 30.0	+9.5
BBSR				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
DWPF	**Disney**	**95.48**	**314**	PFAKE		20 16 40.0	+10
DWPF				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
ESLA	**Sonseca Array**	**96.76**	**17**	PFAKE		20 16 50.0	+14
ESLA				LR	LR		
	comp=Z,5μm,20.0s,MS6.0						
COCO	**West Island**	**97.72**	**125**	PFAKE		20 16 50.0	+9.3
COCO				LR	LR		
	comp=Z,193nm,19.0s,MS4.6						
MBWA	**Marble Bar**	**98.46**	**149**	PFAKE		20 17 00.0	+16
MBWA				LR	LR		
	comp=Z,615nm,20.0s,MS5.1						
NHSC	**New Hope**	**99.39**	**317**	PFAKE		20 17 00.0	+12
NHSC				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
ASAR	**Alice Springs**	**99.42**	**162**	P	**P**	**20 16 48.2**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.6,baz=194,slow=5.3,SNR=9.0						
ASAR				PP	PP	20 20 50.4	-3.6
	comp=Z,1.3nm,0.8s,baz=191,slow=7.3,SNR=6.3						
GOGA	**Godfrey**	**100.96**	**315**	PFAKE		20 17 10.0	+15
GOGA				LR	LR		
	comp=Z,961nm,20.0s,MS5.3						
LRAL	**Lakeview Retre**	**102.11**	**312**	PFAKE		20 17 10.0	+10
LRAL				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
CBN	**Corbin**	**102.87**	**321**	PFAKE		20 17 10.0	+6.6
CBN				LR	LR		
	comp=Z,2μm,19.0s,MS5.5						
BLA	**Blacksburg**	**103.10**	**319**	PFAKE		20 17 20.0	+16
BLA				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
WRA	**Warramunga Arr**	**103.14**	**162**	Pdiff	Pdif	20 17 08.7	+3.8
	comp=Z,0.4nm,0.7s,baz=196,slow=4.5,SNR=3.5						
WRAB	**Tennant Creek**	**103.15**	**162**	PFAKE		20 17 20.0	+15
WRAB				LR	LR		
	comp=Z,307nm,21.0s,MS4.8						
HKT	**Hockley**	**103.47**	**303**	PFAKE		20 17 20.0	+14
HKT				LR	LR		
	comp=Z,820nm,20.0s,MS5.3						
OXF	**Oxford**	**104.40**	**311**	PFAKE		20 17 20.0	+10
OXF				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
NATX	**Nacogdoches**	**104.43**	**305**	PFAKE		20 17 20.0	+10
NATX				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
CTAO	**Charters Tower**	**104.47**	**173**	PFAKE		20 17 20.0	+9.2
CTAO				LR	LR		
	comp=Z,714nm,20.0s,MS5.2						
HRV	**Harvard--Oak R**	**104.81**	**327**	PFAKE		20 17 20.0	+8.2
HRV				LR	LR		

	comp=Z,1µm,19.0s,MS5.4						
MCWV	**Mont Chateau**	**105.05**	**320**	PFAKE		20 17 20.0	+7.1
MCWV				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SSPA	**Standing Stone**	**105.21**	**322**	PFAKE		20 21 40.0	
SSPA				LR	LR		
	comp=Z,899nm,20.0s,MS5.3						
EMMW	**East Machias**	**105.63**	**331**	PFAKE		20 21 40.0	
EMMW				LR	LR		
	comp=Z,5µm,19.0s,MS6.1						
PALK	**Pallekele**	**105.77**	**100**	PFAKE		20 21 40.0	
PALK				LR	LR		
	comp=Z,204nm,20.0s,MS4.7						
JCT	**Junction City**	**105.82**	**301**	PFAKE		20 21 40.0	
JCT				LR	LR		
	comp=Z,716nm,19.0s,MS5.2						
BINY	**Binghamton**	**105.95**	**324**	PFAKE		20 21 40.0	
BINY				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
WVL	**Waterville**	**106.12**	**330**	PFAKE		20 21 40.0	
WVL				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
MIAR	**Mount Ida**	**106.27**	**308**	PFAKE		20 21 40.0	
MIAR				LR	LR		
	comp=Z,770nm,21.0s,MS5.2						
ACSO	**Alum Creek Sta**	**106.71**	**318**	PFAKE		20 21 40.0	
ACSO				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
LTX	**Lajitas**	**106.81**	**297**	PFAKE		20 21 40.0	
LTX				LR	LR		
	comp=Z,571nm,19.0s,MS5.2						
NCB	**Newcomb**	**106.97**	**326**	PFAKE		20 21 40.0	
NCB				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
ERPA	**Erie**	**107.26**	**321**	PFAKE		20 21 40.0	
ERPA				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
PQI	**Presque Isle**	**107.59**	**331**	PFAKE		20 21 40.0	
PQI				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
CCM	**Cathedral Cave**	**108.19**	**311**	PFAKE		20 21 40.0	
CCM				LR	LR		
	comp=Z,966nm,19.0s,MS5.4						
AAM	**Ann Arbor**	**108.76**	**319**	PFAKE		20 21 50.0	
AAM				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
MNTX	**Cornudas Mount**	**109.58**	**297**	PFAKE		20 21 50.0	
MNTX				LR	LR		
	comp=Z,732nm,19.0s,MS5.3						
JFWS	**Jewell Farm**	**111.84**	**315**	PFAKE		20 21 50.0	+8.3
JFWS				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
CBKS	**Cedar Bluff**	**112.58**	**306**	PFAKE		20 21 50.0	+6.7
CBKS				LR	LR		
	comp=Z,949nm,20.0s,MS5.4						
ANMO	**Albuquerque**	**112.72**	**299**	PFAKE		20 21 50.0	+6.3
ANMO				LR	LR		
	comp=Z,870nm,19.0s,MS5.4						
TUC	**Tucson**	**112.84**	**294**	PFAKE		20 21 50.0	+6.0
TUC				LR	LR		
	comp=Z,679nm,19.0s,MS5.3						
GNI	**Garni**	**112.89**	**52**	PFAKE		20 21 50.0	+6.1
GNI				LR	LR		
	comp=Z,819nm,19.0s,MS5.3						
SDCO	**Great Sand Dun**	**114.46**	**301**	PFAKE		20 22 00.0	+13
SDCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
SCHQ	**Schefferville**	**114.79**	**336**	PKP	PKPdf	20 21 44.2	-2.9
	comp=Z,1.5nm,0.7s,baz=330,slow=1.4,SNR=3.8						
SCHQ	**Schefferville**	**114.79**	**336**	PKP	PKPdf	20 21 44.2	-2.9
SCHQ				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
PMG	**Port Moresby**	**115.13**	**173**	PFAKE		20 22 00.0	+11
PMG				LR	LR		
	comp=Z,690nm,20.0s,MS5.3						
ISCO	**Idaho Springs**	**116.13**	**303**	PFAKE		20 22 00.0	+10
ISCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
EYMN	**Ely**	**116.50**	**317**	PFAKE		20 22 00.0	+9.2
EYMN				LR	LR		
	comp=Z,885nm,21.0s,MS5.3						
PFO	**Pinyon Flat Ob**	**116.83**	**291**	PFAKE		20 22 00.0	+8.2
PFO				LR	LR		
	comp=Z,147nm,19.0s,MS4.6						
MVU	**Marysvale**	**118.38**	**297**	PFAKE		20 22 00.0	+5.3
MVU				LR	LR		
	comp=Z,921nm,20.0s,MS5.4						
DAC	**Darwin (Calif)**	**119.47**	**292**	PFAKE		20 22 10.0	+13
DAC				LR	LR		
	comp=Z,716nm,19.0s,MS5.3						
ULM	**Lac du Bonnet**	**120.06**	**316**	PFAKE		20 22 10.0	+12
ULM				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
BW06	**Boulder Array**	**120.31**	**302**	PKP	PKPdf	20 21 55.7	-2.5
BW06				LR	LR		
	comp=Z,915nm,19.0s,MS5.4						
PDAR	**Pinedale Array**	**120.31**	**302**	PKP	PKPdf	20 21 55.5	-2.7
	comp=Z,0.3nm,0.6s,baz=139,slow=4.5,SNR=4.2						
HWUT	**Hardware Ranch**	**120.41**	**300**	PFAKE		20 22 10.0	+12
HWUT				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
TPH	**Tonopah**	**120.63**	**293**	PFAKE		20 22 10.0	+11
TPH				LR	LR		
	comp=Z,821nm,19.0s,MS5.4						
AHID	**Auburn Hatcher**	**121.05**	**301**	PFAKE		20 22 10.0	+10
AHID				LR	LR		
	comp=Z,642nm,20.0s,MS5.3						
MNV	**Mina**	**121.38**	**293**	PFAKE		20 22 10.0	+9.5
MNV				LR	LR		
	comp=Z,980nm,21.0s,MS5.4						
LOHW	**Long Hollow**	**121.44**	**302**	*e*PKP	PKPdf	20 21 58.5	-1.9
LAO	**LASA Array**	**121.71**	**307**	PFAKE		20 22 10.0	+9.1
LAO				LR	LR		
	comp=Z,825nm,19.0s,MS5.4						
OBN	**Obninsk**	**121.72**	**37**	PFAKE		20 22 10.0	+9.3
OBN				LR	LR		
	comp=Z,258nm,20.0s,MS4.9						
LKWY	**Lake**	**122.06**	**303**	PFAKE		20 22 10.0	+8.4
LKWY				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
DGMT	**Dagmar**	**122.15**	**310**	PFAKE		20 22 10.0	+8.3
DGMT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
CMB	**Columbia Colle**	**122.26**	**291**	PFAKE		20 22 10.0	+7.9
CMB				LR	LR		
	comp=Z,763nm,20.0s,MS5.3						
BMN	**Battle Mountai**	**122.38**	**295**	PFAKE		20 22 10.0	+7.7
BMN				LR	LR		
	comp=Z,737nm,19.0s,MS5.3						
FRB	**Frobisher Bay**	**123.24**	**339**	PKP	PKPdf	20 21 60.0	-3.4
	comp=Z,2.8nm,0.7s,baz=121,slow=5.8,SNR=6.8						
FRB	**Frobisher Bay**	**123.24**	**339**	PKP	PKPdf	20 21 60.0	-3.4
HLID	**Hailey**	**123.27**	**300**	PFAKE		20 22 10.0	+6.1
HLID				LR	LR		
	comp=Z,815nm,21.0s,MS5.4						
MCMT	**McKenzie Canyo**	**123.43**	**302**	*e*PKP	PKPdf	20 21 59.5	-4.8
BOZ	**Bozeman (W)**	**123.44**	**303**	PFAKE		20 22 10.0	+5.7
BOZ				LR	LR		
	comp=Z,857nm,20.0s,MS5.4						
FINES	**FINESS Array B**	**123.75**	**27**	PKP	PKPdf	20 22 02.2	-2.3
	comp=Z,2.1nm,0.8s,baz=135,slow=2.7,SNR=7.9						
FINES	**FINESS Array B**	**123.75**	**27**	PKP	PKPdf	20 22 02.2	-2.3
KOLN	**Koldanda**	**123.76**	**89**	*e*P	PKPdf	20 22 03.0	-2.3
	comp=Z,10.0nm,0.7s						
HOPS	**Hopland**	**124.40**	**290**	PFAKE		20 22 20.0	+14
HOPS				LR	LR		
	comp=Z,615nm,19.0s,MS5.3						
GKN	**Gorkha**	**124.52**	**90**	*e*P	PKPdf	20 22 04.5	-2.3
	comp=Z,52nm,1.0s						
WVOR	**Wild Horse Val**	**124.57**	**296**	*e*PKP	PKPdf	20 22 05.2	-1.2
WVOR				LR	LR		
	comp=Z,895nm,20.0s,MS5.4						
CM31	**Chiang Mai Arr**	**124.97**	**110**	PFAKE		20 22 20.0	+12
CM31				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
CMAR	**Chiang Mai Arr**	**124.97**	**110**	PKP	PKPdf	20 22 05.7	-2.1
	comp=Z,1.2nm,0.8s,baz=257,slow=2.1,SNR=3.1						
MOD	**Modoc**	**125.04**	**294**	*e*PKP	PKPdf	20 22 06.6	-0.8
MOD				LR	LR		
	comp=Z,667nm,19.0s,MS5.3						
CHMT	**Chamberlain Mo**	**125.14**	**303**	*e*PKP	PKPdf	20 22 05.7	-1.7
MSO	**Missoula**	**125.41**	**303**	PFAKE		20 22 20.0	+12
MSO				LR	LR		
	comp=Z,487nm,19.0s,MS5.2						
BMO	**Blue Mountains**	**125.64**	**299**	*e*PKP	PKPdf	20 22 06.8	-1.7
BMO				LR	LR		
	comp=Z,759nm,20.0s,MS5.4						
FFC	**Flin Flon**	**125.89**	**316**	PFAKE		20 22 20.0	+11
FFC				LR	LR		
	comp=Z,224nm,21.0s,MS4.8						
HUMO	**Hull Mountain**	**126.93**	**293**	PFAKE		20 22 20.0	+9.2
HUMO				LR	LR		
	comp=Z,533nm,19.0s,MS5.2						
NEW	**Newport**	**127.95**	**302**	PFAKE		20 22 20.0	+7.2
NEW				LR	LR		
	comp=Z,784nm,20.0s,MS5.4						
COR	**Corvallis**	**128.49**	**295**	PFAKE		20 22 20.0	+6.1
COR				LR	LR		
	comp=Z,531nm,19.0s,MS5.2						
AAK	**Ala-Archa**	**129.50**	**70**	PFAKE		20 22 30.0	+14
AAK				LR	LR		
	comp=Z,295nm,22.0s,MS4.9						
LSA	**Lhasa**	**129.51**	**94**	PFAKE		20 22 30.0	+14
LSA				LR	LR		
	comp=Z,643nm,21.0s,MS5.3						
EDM	**Edmonton**	**129.59**	**309**	*e*PKP	PKPdf	20 22 12.8	-3.0
ARCES	**ARCESS Array B**	**130.32**	**21**	PKP	PKPdf	20 22 15.3	-1.4
	comp=Z,5.1nm,0.8s,baz=207,slow=2.7,SNR=7.2						
QIZ	**Qiongzhong**	**131.07**	**120**	PFAKE		20 22 30.0	+11
QIZ				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
OCWA	**Octopus Mounta**	**131.08**	**297**	PFAKE		20 22 30.0	+11
OCWA				LR	LR		
	comp=Z,878nm,21.0s,MS5.4						
KMI	**Kunming**	**132.42**	**108**	PKP	PKPdf	20 22 20.1	-1.9
BVAR	**Borovoye Array**	**134.23**	**57**	PKP	PKPdf	20 22 22.0	-2.5
	comp=Z,2.8nm,0.9s,baz=225,slow=2.1,SNR=8.6						
YKA	**Yellowknife Ar**	**135.96**	**318**	PKhKP		20 22 14.0	
	comp=Z,0.3nm,0.6s,baz=126,slow=2.7,SNR=5.4						
YKA				PKP	PKPdf	20 22 25.2	-2.2
	comp=Z,3.4nm,0.9s,baz=120,slow=1.8,SNR=15						
YKA				PP	PP	20 25 04.1	-3.2
	comp=Z,0.8nm,0.9s,baz=117,slow=6.9,SNR=8.2						
YKA				SKPbc		20 25 56.2	
	comp=Z,0.5nm,0.7s,baz=125,slow=2.0,SNR=4.3						
YKA	**Yellowknife Ar**	**135.96**	**318**	PKP	PKPdf	20 22 25.2	-2.2
YKA				PP	PP	20 25 04.1	-3.2
YKA				SKPbc		20 25 56.2	
YKW3	**Yellowknife Ar**	**136.01**	**318**	*e*PKP	PKPdf	20 22 24.2	-3.3
KURK	**Kurchatov**	**136.89**	**64**	PFAKE		20 22 40.0	+11
KURK				LR	LR		
	comp=Z,166nm,20.0s,MS4.8						
RES	**Resolute Bay**	**137.46**	**339**	*e*PKPdf	PKPdf	20 22 27.4	-2.5
WMQ	**Urumqi**	**137.49**	**77**	*e*PKP	PKPdf	20 22 31.0	+0.3
GUMO	**Guam**	**137.66**	**168**	PFAKE		20 22 40.0	+8.2
GUMO				LR	LR		
	comp=Z,720nm,19.0s,MS5.4						
ENH	**Enshi**	**140.12**	**111**	*e*P	PKPdf	20 22 34.3	-1.7
ENH				LR	LR		
	comp=Z,787nm,20.0s,MS5.5						
ZAL	**Zalesovo**	**141.84**	**63**	PKP	PKPdf	20 22 38.0	-0.1
	comp=Z,0.9nm,0.9s,baz=299,slow=2.0,SNR=3.6						
ZAL	**Zalesovo**	**141.84**	**63**	PKP	PKPdf	20 22 38.0	-0.1
INK	**Inuvik**	**145.57**	**321**	PKPbc	PKPbc	20 22 43.5	+1.8
	comp=Z,48nm,1.1s,baz=88,slow=2.5,SNR=42						
INK	**Inuvik**	**145.57**	**321**	*e*PKP	PKPdf	20 22 43.1	-1.0
NJ2	**Nanjing**	**146.36**	**120**	*e*PKP	PKPdf	20 22 41.8	-4.8
DAWY	**Dawson**	**146.65**	**312**	*e*PKPbc	PKPbc	20 22 46.4	+2.0
BTO	**Baotou**	**148.03**	**99**	*e*PKP	PKPdf	20 22 51.9	+2.8
MENT	**Mentasta**	**148.18**	**309**	*e*P	PKPdf	20 22 51.5	+2.9
DIV	**Divide**	**148.58**	**306**	*e*PKPbc	PKPdf	20 22 52.5	+3.2
DIV				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
HHC	**Hu-ho-hao-te**	**149.05**	**101**	*e*PKP	PKPdf	20 22 52.0	+1.3
SML	**Sawmill**	**149.95**	**306**	*e*PKPbc	PKPdf	20 22 55.0	+3.6
ILAR	**Eielson Array**	**149.97**	**312**	PKPbc	PKPdf	20 22 54.6	+3.2
	comp=Z,20nm,1.0s,baz=112,slow=1.1,SNR=18						
SONM	**Songino Array**	**150.38**	**85**	PKP	PKPdf	20 22 53.3	+0.7
	comp=Z,2.5nm,0.6s,baz=248,slow=0.8,SNR=6.7						
SONM				PKPbc	PKPdf	20 22 57.5	+4.9
	comp=Z,2.5nm,0.6s,baz=220,slow=3.7,SNR=42						
COLA	**College**	**150.40**	**312**	*e*P	PKPdf	20 22 56.5	+4.4
COLA				LR	LR		
	comp=Z,610nm,20.0s,MS5.4						
PWA	**Palmer West**	**150.63**	**306**	*e*P	PKPdf	20 22 56.1	+3.6
FIB	**Fire Island**	**150.64**	**304**	PFAKE		20 23 00.0	+7.5
FIB				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
MCK	**McKinley**	**150.65**	**310**	*e*PKPbc	PKPdf	20 22 56.3	+3.8
MCK				LR	LR		
	comp=Z,415nm,20.0s,MS5.2						
TLY	**Talaya**	**150.76**	**76**	PFAKE		20 23 00.0	+7.0
TLY				LR	LR		
	comp=Z,129nm,21.0s,MS4.7						
ULN	**Ulaanbaatar**	**150.77**	**86**	PFAKE		20 23 00.0	+6.8
ULN				LR	LR		
	comp=Z,648nm,20.0s,MS5.4						
KDAK	**Kodiak Island**	**150.84**	**297**	PFAKE		20 23 00.0	+7.1
KDAK				LR	LR		
	comp=Z,236nm,19.0s,MS5.0						
BJT	**Baijiatuau**	**151.03**	**107**	PFAKE		20 23 00.0	+6.2
BJT				LR	LR		
	comp=Z,833nm,19.0s,MS5.6						
BJI	**Beijing**	**151.05**	**107**	PKP	PKPdf	20 22 54.3	+0.5
BJI				PP	PP	20 26 43.8	+5.5
BJI				LR	LR		
	comp=Z,248nm,22.9s,MS5.0						
IMA	**Indian Mountai**	**152.95**	**314**	*e*P	PKPdf	20 23 02.4	+6.6
INCN	**Inchon**	**154.50**	**124**	PFAKE		20 23 10.0	+11
INCN				LR	LR		
	comp=Z,913nm,19.0s,MS5.6						
UNV	**Unalaska Valle**	**156.95**	**283**	PFAKE		20 23 10.0	+8.5
UNV				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
MAJO	**Matsushiro**	**158.41**	**145**	PFAKE		20 23 10.0	+6.1
MAJO				LR	LR		
	comp=Z,629nm,20.0s,MS5.5						
HIA	**Hailar**	**158.71**	**93**	PFAKE		20 23 10.0	+6.1
HIA				LR	LR		
	comp=Z,917nm,22.0s,MS5.6						
TNA	**Tin City**	**158.82**	**314**	PFAKE		20 23 10.0	+6.5
TNA				LR	LR		
	comp=Z,396nm,19.0s,MS5.3						
TIXI	**Tiksi**	**160.74**	**23**	PFAKE		20 23 20.0	+15
TIXI				LR	LR		
	comp=Z,456nm,20.0s						
MDJ	**Mudanjiang**	**161.36**	**116**	PKP	PKPdf	20 23 04.4	-2.4
MDJ	**Mudanjiang**	**161.36**	**116**	PFAKE		20 23 20.0	+13
MDJ				LR	LR		
	comp=Z,883nm,19.0s						
BILL	**Bilibino**	**166.06**	**340**	PFAKE		20 23 20.0	+9.3
BILL				LR	LR		
	comp=Z,481nm,19.0s						
SMY	**Shemya**	**167.52**	**266**	PFAKE		20 23 20.0	+7.9
SMY				LR	LR		
	comp=Z,2µm,21.0s						
MA2	**Magadan**	**175.69**	**18**	PFAKE		20 23 30.0	+14
MA2				LR	LR		
	comp=Z,526nm,21.0s						
PET	**Petropavlovsk**	**176.02**	**234**	PFAKE		20 23 30.0	+14
PET				LR	LR		
	comp=Z,564nm,21.0s						

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*HLW **09** 20:08:27.5, 34.63N×26.47E, h21^{km}, Mb3.3*
*CSEM **09** 20:08:27.6±0.1, 34.34N×26.47E, h15^{km}, ML3.3, Error ellipse: s-maj=3.8km s-min=1.9km az=74.0*
*ATH **09** 20:08:28.2, 34.40N×26.42E, h31^{km}, MD3.6/3*
ISC 09 20:08:28.9±0.7**, 34.37N**±0.04×**26.47E**±0.09**, h33^{km}, n9, σ0^{s}84**/13**, 1C-4D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.81**	**309**	⇓*i*PN	**Pn**	**20 08 43.0**	**-1.1**
XRY				*e*SN	**Sn**	**20 08 54.6**	**-0.4**
NPS	**Neapolis**	**1.14**	**322**	*e*PN	**Pn**	**20 08 49.0**	**+0.3**
NPS	**Neapolis**	**1.14**	**322**	*e*Pn	**Pn**	**20 08 49.2**	**+0.5**
KARP	**Karpathos**	**1.31**	**26**	*e*PN	**Pn**	**20 08 52.0**	**+0.8**
SLUM		**3.06**	**201**	⇓P	**P**	**20 09 17.2**	**+1.3**
SLUM				S	**S**	**20 09 53.0**	**+1.2**
SWA1		**5.13**	**187**	⇓P	**P**	**20 09 45.8**	**+0.4**
SWA1				S	**S**	**20 10 43.5**	**-0.7**
SWA2		**5.18**	**190**	⇓P	**P**	**20 09 46.4**	**+0.3**
SWA2				S	**S**	**20 10 44.3**	**-1.2**
AWBH		**6.38**	**160**	⇑P	**P**	**20 10 02.9**	**-0.1**
SUZ		**7.04**	**128**	P	**P**	**20 10 11.2**	**-1.0**

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*BJI **09** 20:16:19.6, 1.28N×94.80E, h30^{km}, mb4.6*
*NEIC **09** 20:16:28.9±0.3, 2.22N×95.00E, mb4.7/7, Error ellipse: s-maj=10.2km s-min=5.6km az=63.0*
*IDC **09** 20:16:28.8±0.5, 2.26N×94.97E, h29^{km}±3^{km}, mb4.3/15, mb1 4.4/16, mb1mx4.3/22, mbtmp4.4/16, ML4.1/1, Error ellipse: s-maj=24.1km s-min=10.2km az=54.0*
ISC 09 20:16:27.1±0.4**, 2.19N**±0.07×**95.00E**±0.09**, h30^{km}, h30^{km}**±.4^{km}**:pP-P, n44, σ0^{s}94**/43**, mb4.5**/27**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**16.62**	**13**	*e*P	**P**	**20 20 19.4**	**-0.5**
	43nm,1.1s						
CMAR	**Chiang Mai Arr**	**16.62**	**13**	Pn	**P**	**20 20 19.2**	**-0.6**
	0.2nm,0.3s,baz=205,slow=11,SNR=39						
HYB	**Hyderabad**	**22.14**	**314**	*i* P	**P**	**20 21 23.0**	**+0.9**
KMI	**Kunming**	**23.99**	**17**	P	**P**	**20 21 41.6**	**+1.3**
KMI				AP		20 21 50.3	
KMI				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.3						
KMI	**Kunming**	**23.99**	**17**	P	**P**	**20 21 41.6**	**+1.3**
	comp=Z,12nm,1.0s,mb4.3						
KMI				pP		20 21 50.3	
GYA	**Guiyang**	**26.60**	**24**	P	**P**	**20 22 07.9**	**+2.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
JIRN	**Jiri**	**26.69**	**342**	*e*P	**P**	**20 22 06.1**	**+0.3**
	comp=Z,36nm,0.7s,mb5.0						
PKI	**Pulchoki**	**26.86**	**341**	*e*P	**P**	**20 22 06.1**	**-1.2**
	comp=Z,20nm,0.8s,mb4.7						
DMN	**Daman**	**26.99**	**340**	*e*P	**P**	**20 22 05.1**	**-3.4**
	comp=Z,29nm,1.0s,mb4.8						
KKN	**Kakani**	**27.10**	**341**	*e*P	**P**	**20 22 05.4**	**-4.1**
	comp=Z,71nm,1.3s,mb5.0						
LSA	**Lhasa**	**27.60**	**353**	*e*P	**P**	**20 22 14.6**	**+0.6**
	comp=Z,18nm,0.7s,mb4.8						
CD2	**Chengdu**	**29.74**	**15**	*e*P	**P**	**20 22 34.0**	**+0.7**
NWAO	**Narrogin (SRO)**	**40.77**	**151**	P	**P**	**20 24 07.9**	**+0.5**
	comp=Z,4.8nm,0.7s,mb4.3,baz=153,slow=12,SNR=5.3						
NWAO				pP	pP	20 24 17.5	+1.1
	comp=Z,4.8nm,0.8s,baz=284,slow=7.6,SNR=1.7						
NWAO	**Narrogin (SRO)**	**40.77**	**151**	*e*P	**P**	**20 24 08.0**	**+0.6**
NWAO				pP	pP	20 24 17.5	+1.1
NWAO				*e*pP	pP	20 24 17.6	+1.3
UCH	**Uchtor**	**43.89**	**338**	P	**P**	**20 24 34.2**	**+1.3**
	SNR=8.2						
KBK	**Karagaybulak**	**44.10**	**339**	P	**P**	**20 24 36.1**	**+1.5**
	SNR=8.3						
AML	**Almayashu**	**44.12**	**337**	P	**P**	**20 24 35.8**	**+1.1**
	SNR=8.9						
WRA	**Warramunga Arr**	**44.42**	**122**	P	**P**	**20 24 37.5**	**0.0**
	comp=Z,4.6nm,0.9s,mb4.2,baz=298,slow=9.2,SNR=18						
WRA				pP	pP	20 24 46.5	0.0
	comp=Z,12nm,0.8s,baz=299,slow=9.2,SNR=33						
WRAB	**Tennant Creek**	**44.43**	**122**	*e*P	**P**	**20 24 36.7**	**-0.8**
WRAB				*e*pP	pP	20 24 46.3	-0.2
WB2	**Warramunga Arr**	**44.43**	**122**	*e*P	**P**	**20 24 37.8**	**+0.2**
EKS2	**Erkin-Say**	**44.54**	**338**	P	**P**	**20 24 38.7**	**+0.6**
	SNR=5.7						
USP	**Ospenovka**	**44.79**	**339**	P	**P**	**20 24 40.5**	**+0.3**
	SNR=15						
ASAR	**Alice Springs**	**45.74**	**126**	P	**P**	**20 24 48.1**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=297,slow=7.9,SNR=14						
ASAR				pP	pP	20 24 57.2	+0.3
	comp=Z,2.9nm,0.9s,baz=300,slow=7.8,SNR=13						
ASAR				PcP	PcP	20 26 25.9	+0.1
	comp=Z,0.7nm,0.8s,baz=277,slow=2.7,SNR=4.3						
ASAR				pPcP		20 26 34.5	
	comp=Z,1.2nm,0.8s,baz=307,slow=3.4,SNR=5.8						
SONM	**Songino Array**	**46.52**	**11**	P	**P**	**20 24 53.7**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.3,baz=191,slow=9.7,SNR=8.8						
SONM				pP	pP	20 25 02.2	-0.6
	comp=Z,5.8nm,0.7s,baz=187,slow=8.6,SNR=12						
KURK	**Kurchatov**	**50.30**	**347**	*e*P	**P**	**20 25 22.6**	**-0.4**
	comp=Z,9.7nm,1.1s,mb4.8						
KURK				*e*pP	pP	20 25 31.6	-0.5
HIA	**Hailar**	**51.45**	**21**	*e*P	**P**	**20 25 31.0**	**-0.8**
	comp=Z,10nm,1.0s,mb4.7						
HIA				*e*pP	pP	20 25 40.2	-0.7
ZAL	**Zalesovo**	**52.26**	**352**	P	**P**	**20 25 36.5**	**-1.3**
	comp=Z,5.9nm,0.5s,mb4.8,baz=305,slow=5.7,SNR=21						
ZAL				pP	pP	20 25 46.0	-1.0
	comp=Z,4.8nm,0.6s,baz=302,slow=5.4,SNR=9.2						
ZAL	**Zalesovo**	**52.26**	**352**	P	**P**	**20 25 36.5**	**-1.3**
ZAL				pP	pP	20 25 46.0	-1.0
BVAR	**Borovoye Array**	**54.62**	**342**	P	**P**	**20 25 53.8**	**-1.4**
	comp=Z,2.9nm,0.6s,mb4.5,baz=141,slow=9.5,SNR=20						
BVAR				pP	pP	20 26 02.8	-1.6
	comp=Z,1.8nm,0.6s,baz=141,slow=9.5,SNR=7.3						
CTAO	**Charters Tower**	**54.91**	**116**	*e*P	**P**	**20 25 58.1**	**+0.3**
	comp=Z,8.0nm,0.9s,mb4.8						
CHKZ	**Chkalovo**	**55.11**	**343**	*e*P	**P**	**20 25 57.8**	**-1.1**
	comp=Z,5.2nm,0.7s,mb4.7						
CHKZ				*e*pP	pP	20 26 06.9	-1.2
STKA	**Stephens Creek**	**55.65**	**132**	P	**P**	**20 26 02.7**	**-0.4**
	comp=Z,4.5nm,0.7s,mb4.6,baz=307,slow=6.7,SNR=14						
STKA				pP	pP	20 26 11.9	-0.3
	comp=Z,5.7nm,0.6s,baz=316,slow=9.0,SNR=9.5						
STKA	**Stephens Creek**	**55.65**	**132**	*e*P	**P**	**20 26 02.3**	**-0.8**
STKA				pP	pP	20 26 11.9	-0.3
BRTR	**Keskin Array B**	**66.82**	**313**	P	**P**	**20 27 17.6**	**-1.0**
	comp=Z,1.9nm,0.7s,mb4.2,baz=128,slow=5.9,SNR=8.3						
BRTR				pP	pP	20 27 26.3	-1.5
	comp=Z,1.7nm,0.8s,baz=129,slow=7.9,SNR=4.7						
LBTB	**Lobatse**	**72.36**	**243**	P	**P**	**20 27 53.0**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.4,baz=90,slow=4.6,SNR=6.8						
IDI	**Anoyia**	**72.54**	**306**	P	**P**	**20 27 53.6**	**-0.1**
	comp=Z,9.1nm,0.8s,mb4.8,baz=65,slow=10,SNR=7.1						
AKASG	**Malin Array Be**	**73.14**	**323**	P	**P**	**20 27 54.9**	**-1.9**
	comp=Z,1.1nm,0.6s,mb4.0,baz=87,slow=4.9,SNR=5.5						
MLR	**Muntele Rosu**	**73.84**	**317**	P	**P**	**20 28 01.0**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.1,baz=244,slow=22,SNR=4.4						
FINES	**FINESS Array B**	**78.11**	**333**	P	**P**	**20 28 23.7**	**-1.1**
	comp=Z,2.2nm,0.7s,mb4.2,baz=117,slow=4.3,SNR=5.9						
FINES	**FINESS Array B**	**78.11**	**333**	P	**P**	**20 28 23.7**	**-1.1**
ARCES	**ARCESS Array B**	**80.87**	**341**	P	**P**	**20 28 40.0**	**+0.5**
	comp=Z,7.3nm,1.1s,mb4.5,baz=18,slow=3.8,SNR=4.8						
GERES	**GERESS Array B**	**82.62**	**319**	P	**P**	**20 28 49.8**	**+0.8**
	comp=Z,2.2nm,0.8s,mb4.2,baz=104,slow=5.5,SNR=19						
GERES				pP	pP	20 28 58.8	+0.2
	comp=Z,2.1nm,0.9s,baz=104,slow=5.5,SNR=6.8						
DAVOX	**Davos**	**85.07**	**317**	P	**P**	**20 29 02.1**	**+0.7**
	comp=Z,4.7nm,0.7s,mb4.8,baz=122,slow=7.9,SNR=7.3						
TXAR	**Lajitas Array**	**143.92**	**28**	PKP	PKPdf	20 36 00.7	-4.7
	comp=Z,0.2nm,0.3s,baz=315,slow=1.8,SNR=3.7						

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*ATH **09** 20:19:10.3, 38.60N×22.61E, h26^{km}±1^{km}, MD3.6/15, ML3.5*
*NEIC **09** 20:19:10.3, 38.60N×22.62E, h27^{km}, ML3.5(ATH), After ATH.*
*CSEM **09** 20:19:10.9±0.1, 38.58N×22.65E, h15^{km}, ML3.5, Error ellipse: s-maj=1.6km s-min=1.3km az=93.0*
*THE **09** 20:19:12.3, 38.69N×22.68E, h11^{km}, ML3.6*
*SOF **09** 20:19:22.9, 39.52N×23.11E, h15^{km}, MD3.0*
ISC 09 20:19:10.4±0.5**, 38.60N**±0.02×**22.61E**±0.03**, h16^{km}**±5^{km}**, n44, σ1^{s}06**/65**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKR	**Lokris**	**0.31**	**81**	*e*PB	**Pb**	**20 19 17.5**	**+0.5**
LKR				*e*SB	**Sb**	**20 19 22.6**	**+1.1**
AGG	**Agios Georgios**	**0.47**	**332**	*e*Pg	**Pb**	**20 19 20.1**	**+0.3**
AGG				*e*Sg	**Sb**	**20 19 26.6**	**+0.3**
EVR	**Evrytania**	**0.70**	**297**	*e*PN	**Pn**	**20 19 23.7**	**-1.7**
EVR				*e*SN	**Sn**	**20 19 34.9**	**-0.9**
MGER	**Gerania Oros**	**0.80**	**140**	*e*PB	**Pb**	**20 19 25.0**	**-0.4**
MGER				*e*SN	**Sn**	**20 19 38.3**	**0.0**
MGER	**Gerania Oros**	**0.80**	**140**	*e*Pb	**Pb**	**20 19 25.0**	**-0.4**
MGER				*e*Sn	**Sn**	**20 19 38.5**	**+0.2**
NEO	**Neokhori**	**0.85**	**34**	*e*PN	**Pn**	**20 19 27.0**	**-0.5**
NEO				*e*SN	**Sn**	**20 19 39.1**	**-0.4**
XOR	**Xorichti**	**0.89**	**31**	*e*Pg	**Pb**	**20 19 27.7**	**+0.9**
XOR				*e*Sg	**Sb**	**20 19 39.8**	**+1.6**
MPAR	**Parnis Oros**	**0.99**	**117**	*e*PN	**Pn**	**20 19 30.1**	**+0.6**
RLS	**Riolos of Patr**	**1.05**	**239**	*e*PN	**Pn**	**20 19 29.9**	**-0.5**
RLS				*e*SN	**Sn**	**20 19 45.7**	**+1.0**
ATH	**Athens Observa**	**1.07**	**126**	*e*PN	**Pn**	**20 19 31.1**	**+0.4**
ATH				*e*SN	**Sn**	**20 19 45.6**	**+0.4**
NAIG	**Nisos Aigina**	**1.09**	**140**	⇑*i*PN	**Pn**	**20 19 31.0**	**+0.1**
PTL	**Penteli**	**1.13**	**119**	*e*PN	**Pn**	**20 19 32.5**	**+1.0**
AOS	**Alonnisos**	**1.14**	**60**	*e*Pg	**Pb**	**20 19 31.6**	**+0.4**
AOS				*e*Sg	**Sb**	**20 19 47.0**	**+1.4**
LIT	**Litokhoron**	**1.50**	**356**	*e*Pb	**Pb**	**20 19 37.1**	**-0.3**

LIT				*e*Sb	**Sb**	**20 19 56.6**	**+0.6**
ITM	**Ithomi**	**1.52**	**201**	*e*PN	**Pn**	**20 19 37.8**	**+0.7**
PAIG	**Paliouri**	**1.56**	**32**	*e*Pb	**Pb**	**20 19 37.5**	**-0.8**
PAIG				*e*Sb	**Sb**	**20 19 58.8**	**+1.0**
PAIG	**Paliouri**	**1.56**	**32**	*e*Pb	**Pb**	**20 19 37.5**	**-0.9**
PAIG				*e*Sb	**Sb**	**20 19 58.8**	**+1.0**
VLS	**Valsamata**	**1.65**	**256**	*e*PN	**Pn**	**20 19 40.0**	**+1.1**
JAN	**Janina**	**1.73**	**308**	*e*PN	**Pn**	**20 19 42.0**	**+2.0**
JAN	**Janina**	**1.73**	**308**	*e*Pn	**Pn**	**20 19 42.5**	**+2.5**
KZN	**Kozani**	**1.82**	**339**	*e*PB	**Pb**	**20 19 42.0**	**-0.8**
VLI	**Veliai**	**1.90**	**172**	*e*PB	**Pb**	**20 19 42.5**	**-1.7**
IGT	**Igoumenitsa**	**2.00**	**298**	*e*Pn	**Pn**	**20 19 46.1**	**+2.1**
IGT				*e*Sn	**Sn**	**20 20 12.9**	**+4.0**
OUR	**Ouranopolis**	**2.03**	**31**	*e*Pb	**Pb**	**20 19 44.3**	**-2.0**
THE	**Thessaloniki**	**2.04**	**8**	*e*Pb	**Pb**	**20 19 44.0**	**-2.7**
LSK	**Leskovik**	**2.19**	**315**	*e*Pn	**Pn**	**20 19 50.5**	**+3.8**
SOH	**Sokhos**	**2.29**	**14**	*e*Pn	**Pn**	**20 19 48.5**	**+0.4**
SOH				*e*Sn	**Sn**	**20 20 16.2**	**+0.1**
KYTH	**Kithira**	**2.34**	**172**	*e*PB	**Pb**	**20 19 49.8**	**-1.9**
GRG	**Griva**	**2.36**	**356**	*e*Pn	**Pn**	**20 19 48.9**	**-0.2**
GRG				*e*Sn	**Sn**	**20 20 19.1**	**+1.3**
FNA	**Florina**	**2.38**	**337**	*e*Pn	**Pn**	**20 19 49.8**	**+0.5**
FNA				*e*Sn	**Sn**	**20 20 18.8**	**+0.4**
SRN	**Sarande**	**2.40**	**303**	*i* Pn	**Pn**	**20 19 51.7**	**+2.1**
SRN				*i* Sn	**Sn**	**20 20 22.9**	**+4.1**
KEK	**Kerkira**	**2.45**	**298**	*e*PB	**Pb**	**20 19 52.1**	**-1.5**
KNT	**Kendrikon**	**2.56**	**5**	*e*Pn	**Pn**	**20 19 52.2**	**+0.2**
KNT				*e*Sn	**Sn**	**20 20 22.0**	**-1.2**
SRS	**Serrai**	**2.62**	**16**	*e*Pn	**Pn**	**20 19 52.7**	**-0.2**
SRS				*e*Sn	**Sn**	**20 20 23.2**	**-1.4**
APE	**Apeiranthos**	**2.77**	**123**	*e*PN	**Pn**	**20 19 54.3**	**-0.7**
NVR	**Nevrokopi**	**2.91**	**19**	*e*PN	**Pn**	**20 19 56.6**	**-0.3**
PRK	**Paraskevi**	**2.93**	**76**	*e*Pn	**Pn**	**20 19 56.0**	**-1.2**
MMB	**Musomiste**	**3.10**	**16**	*i* P	**Pn**	**20 19 59.0**	**-0.7**
KKB	**Krupnik**	**3.28**	**6**	*i* P	**Pn**	**20 20 02.3**	**+0.1**
RZN	**Rozhen**	**3.48**	**27**	*i* P	**Pn**	**20 20 05.0**	**0.0**
RZN				S	**Sn**	**20 20 41.5**	**-4.7**
SKO	**Skopje**	**3.48**	**345**	*e*Pn	**Pn**	**20 20 05.0**	**-0.1**
ALN	**Alexandroupoli**	**3.50**	**48**	*e*Pn	**Pn**	**20 20 04.9**	**-0.5**
VTS	**Vitosha**	**4.01**	**6**	P	**Pn**	**20 20 18.7**	**+6.1**
VTS	**Vitosha**	**4.01**	**6**	S	**Sn**	**20 20 57.5**	**-2.2**

IDC 09 20:32:45.5±1.3**,26.08N**×**144.19E,mb3.5**/4**,mb1 3.7**/5**, mb1mx3.5**/21**,mbtmp3.5**/5**,ML3.6**/1**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.4**/17**,Error ellipse: s-maj=32.9km s-min=29.1km az=92.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.06**	**300**	Pn	Pn	20 33 21.6	-0.2
	17nm,0.3s,baz=278,slow=19,SNR=8.6						
CBIJ				Sn	Sn	20 33 44.9	-3.7
	41nm,0.3s,baz=273,slow=22,SNR=7.7						
CBIJ				LR	LR	20 33 53.6	
	comp=Z,644nm,19.3s,baz=94,slow=33						
SONM	**Songino Array**	**36.69**	**316**	P	P	20 39 53.6	-2.2
	0.4nm,0.7s,baz=128,slow=6.9,SNR=3.8						
WRA	**Warramunga Arr**	**46.73**	**193**	P	P	20 41 16.5	-1.9
	0.6nm,0.5s,baz=17,slow=8.8,SNR=6.0						
ILAR	**Eielson Array**	**57.75**	**28**	P	P	20 42 38.0	-2.3
	0.7nm,0.7s,baz=248,slow=6.7,SNR=6.1						
YKA	**Yellowknife Ar**	**72.18**	**29**	P	P	20 44 12.0	-1.7
	0.2nm,0.7s,baz=290,slow=5.6,SNR=4.4						

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*MOS **09** 20:59:43.0±0.9, 13.67N×120.74E, h33*^{km}*, mb5.7/27, Error ellipse: s-maj=17.6km s-min=6.9km az=113.2*

*BJI **09** 20:59:51.2, 13.67N×120.97E, h114*^{km}*, mB5.5, mb5.3*

*ORF **09** 20:59:52.2, 14.48N×119.49E, h30*^{km}*, mb5.5*

*IDC **09** 20:59:52.4±0.4, 13.63N×120.80E, h104*^{km}*±3*^{km}*, mb4.8/25, mb1 4.8/26, mb1mx4.8/28, mbtmp5.1/26, MS4.5/4, Ms1 4.5/4, ms1mx3.8/27, Error ellipse: s-maj=13.1km s-min=7.5km az=69.0*

*HRVD **09** 20:59:52.2±0.2, 13.82N×120.72E, h111*^{km}*±1*^{km}*, MW5.5/74, Centroid moment Tensor Solution. LP body waves: s55,c75;Mantle waves: s74,c141; Half duration: 1*^{s}*3 Moment tensor: Scale 10*^{17}*Nm; M*$_{rr}$*1.75±.05; M*$_{\theta\theta}$*-1.08±.05; M*$_{\phi\phi}$*-0.67±.05; M*$_{r\theta}$*0.93±.04; M*$_{\theta\phi}$*0.59±.04; M*$_{\phi r}$*-0.01±.04; Best double couple: M*$_0$*1.862×10*^{17}* NP1: *ϕ_s*316°,*δ*33°,*λ*111°. NP2:*ϕ_s*111°,*δ*59°,*λ*77°. Principal axes: T 2.04, Plg72°, Azm349°; N -.357, Plg11°, Azm118°; P -1.683, Plg13°, Azm210°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **09** 20:59:52.2±0.2, 13.69N×120.79E, mb5.1/53 Error ellipse: s-maj=6.4km s-min=4.5km az=69.0*

NEIC Felt [IV PIVS] at Nasugbu, [III PIVS] at Pasay and [II PIVS] at Clark Field, Makati, Quezon City and Tagaytay, Luzon. Felt [III PIVS] at Puerto Galera.

*MAN **09** 20:59:53.3, 13.70N×120.54E, h89*^{km}*, mb5.7, ML4.8, MS5.4*

MAN INTENSITY IV NASUGBU BATANGAS INTENSITY III PTO GALERA PASAY CITY INTENSITY II QUEZON CITY MAKATI TAGAYTAY CLARK PAMPANGA.

ISC 09 20:59:52.7±0.2**,13.67N**±0.02×**120.76E**±0.03**,h118**^{km}±2^{km}**, h102**^{km}±1.9^{km}**:pP-P,n313,**σ**1**^{s}**10**/342**,mb5.2**/104**,42C-20D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.47**	**22**	*e*P	**P**	**21 00 10.2**	**-0.2**
TGY				*e*S	**S**	**21 00 22.3**	**-1.5**
TGY	**Tagaytay City**	**0.47**	**22**	P	**P**	**21 00 10.2**	**-0.2**
	19μm,0.3s,baz=268,slow=10,SNR=685						
TGY				S	**S**	**21 00 22.1**	**-1.6**
	60μm,0.3s,baz=248,slow=21,SNR=30						
LUBP	**Lubang**	**0.50**	**278**	*i* P	**P**	**21 00 08.4**	**-2.2**
LUBP	**Lubang**	**0.50**	**278**	*e*P	**P**	**21 00 08.4**	**-2.2**
LUBP				*e*S	**S**	**21 00 19.1**	**-5.0**
LQP	**Lukban**	**0.88**	**60**	⇓*e*P	**P**	**21 00 13.8**	**+0.2**
LQP				*e*S	**P**	**21 00 13.8**	**+0.2**
BOAC	**Boac**	**1.08**	**101**	*e*P	**P**	**21 00 17.0**	**+1.4**
SJMP	**San Jose**	**1.25**	**164**	*e*P	**P**	**21 00 18.3**	**+0.8**
SJMP				*e*S	**S**	**21 00 36.2**	**0.0**
POLP	**Polilio Island**	**1.56**	**47**	*e*P	**P**	**21 00 22.8**	**+1.7**
GQP	**Guinayangan**	**1.66**	**82**	⇓*e*P	**P**	**21 00 24.7**	**+2.4**
GQP				*e*S	**S**	**21 00 48.6**	**+3.9**
BUSP	**Coron**	**1.74**	**198**	*e*P	**P**	**21 00 22.5**	**-0.8**
BUSP				*e*S	**S**	**21 00 44.0**	**-2.5**
OTRP	**Odiongan**	**1.79**	**136**	*e*P	**P**	**21 00 25.4**	**+1.5**
OTRP				*e*S	**S**	**21 00 48.4**	**+1.0**
AUQP	**San Andres**	**1.90**	**100**	*e*P	**P**	**21 00 29.7**	**+4.5**
PCPH	**Palayan**	**1.91**	**10**	⇓*e*P	**P**	**21 00 24.6**	**-0.8**
PCPH				*i* S	**S**	**21 00 49.7**	**-0.4**
BALP	**Baler**	**2.21**	**21**	*e*P	**P**	**21 00 30.4**	**+1.2**
SCZP	**Santa Cruz**	**2.25**	**339**	*e*P	**P**	**21 00 28.2**	**-1.6**
KALP	**Kalibo**	**2.51**	**142**	*e*P	**P**	**21 00 21.0**	**-12**
KALP				*e*S	**S**	**21 00 49.0**	**-15**
BCPH	**Baguio City Da**	**2.70**	**356**	⇑*i*P	**P**	**21 00 43.9**	**+8.0**
BCPH				*i* S	**S**	**21 01 07.1**	**-1.4**
ENPP	**El Nido**	**2.77**	**208**	*e*P	**P**	**21 00 35.9**	**-0.9**
CUYO	**Cuyo Island**	**2.81**	**175**	*e*P	**P**	**21 00 37.4**	**+0.1**
BOLP	**Bolinao**	**2.82**	**343**	*e*P	**P**	**21 00 36.6**	**-0.8**
RCP	**Roxas**	**2.85**	**137**	⇑*e*P	**P**	**21 00 40.1**	**+2.2**
MMPH	**Masbate**	**3.08**	**115**	⇓*e*P	**P**	**21 00 44.0**	**+3.1**
MMPH				*e*S	**S**	**21 01 14.3**	**-3.2**
PVCP	**Virac**	**3.30**	**91**	*e*P	**P**	**21 00 46.9**	**+3.0**
CAUP	**Cauayan**	**3.42**	**17**	*e*P	**P**	**21 00 46.3**	**+0.9**
AAP	**Anini-y**	**3.43**	**160**	*e*P	**P**	**21 00 42.0**	**-3.6**
GUIM	**Jordan**	**3.51**	**149**	*e*P	**P**	**21 00 49.4**	**+2.6**
PALP	**Palanan**	**3.74**	**25**	*e*P	**P**	**21 00 50.6**	**+0.8**
ABRA	**Dolores**	**3.96**	**359**	*e*P	**P**	**21 00 52.1**	**-0.7**
CVP	**Callao Caves**	**4.14**	**14**	*e*P	**P**	**21 00 55.0**	**-0.2**
CVP	**Callao Caves**	**4.14**	**14**	*e*P	**P**	**21 00 57.8**	**+2.6**
CVP				*e*S	**S**	**21 01 52.5**	**+9.4**
APYP	**Conner**	**4.20**	**6**	*e*P	**P**	**21 00 53.2**	**-2.7**
PPR	**Puerto Princes**	**4.35**	**207**	⇑*i*P	**P**	**21 00 57.4**	**-0.5**
PPR				*i* S	**S**	**21 01 45.3**	**-2.7**
OCLP	**Ormoc**	**4.58**	**124**	*e*P	**P**	**21 01 07.9**	**+6.8**
LLP	**Lapu-Lapu**	**4.58**	**136**	⇑*e*P	**P**	**21 01 04.4**	**+3.3**
SGCP	**Mt. Cagua**	**4.71**	**15**	*e*P	**P**	**21 01 03.6**	**+0.7**
MSLP	**Maasin**	**5.33**	**131**	*e*P	**P**	**21 01 15.5**	**+4.2**
BATP	**Bataraza**	**5.64**	**211**	*e*P	**P**	**21 01 14.8**	**-0.6**
DCPH	**Dipolog City**	**5.66**	**153**	⇑*i*P	**P**	**21 01 18.5**	**+2.9**
DCPH				*e*S	**S**	**21 02 18.3**	**-1.5**
PAGZ	**Pagadian**	**6.33**	**156**	*e*P	**P**	**21 01 28.9**	**+4.1**
BBP	**Basco**	**6.83**	**10**	*e*P	**P**	**21 01 31.2**	**-0.5**
BUKP	**Musuan**	**7.14**	**143**	*e*P	**P**	**21 01 40.6**	**+4.7**
KKM	**Kota Kinabalu**	**8.80**	**211**	P	**P**	**21 01 59.9**	**+1.7**
TSM	**Tawau**	**9.74**	**197**	P	**P**	**21 02 14.1**	**+3.3**
TATO	**Taipei**	**11.27**	**3**	P	**P**	**21 02 30.2**	**-1.0**
QZH	**Quanzhou**	**11.40**	**350**	⇑*i*P	**P**	**21 02 32.2**	**-0.7**
QZH				AMB	AMB		
	comp=Z,310nm,1.5s						
QZH				LR	LR		
	comp=N,1μm,5.0s						
QZH				LR	LR		
	comp=E,2μm,14.0s						
QZH				LR	LR		
	comp=Z,6μm,34.2s						
GZH	**Guangzhou**	**11.71**	**324**	P	**P**	**21 02 39.8**	**+2.8**
GZH				S	**S**	**21 04 45.9**	**+0.1**
GZH				LR	LR		
	comp=N,3μm,15.7s						
GZH				LR	LR		
	comp=E,3μm,14.9s						
GZH				LR	LR		
	comp=Z,2μm,15.0s						
QIZ	**Qiongzhong**	**11.75**	**298**	P	**P**	**21 02 37.2**	**-0.4**
QIZ				PP	PP	21 02 51.1	+2.9
QIZ				S	**S**	**21 04 42.3**	**-4.4**
QIZ				LR	LR		
	comp=N,1μm,14.9s						
QIZ				LR	LR		
	comp=Z,949nm,14.3s						
JOW	**Kunigami**	**14.87**	**27**	P	**P**	**21 03 19.0**	**+1.0**
	comp=Z,2.7nm,0.3s,baz=200,slow=8.2,SNR=8.6						
UBT	**Ubonrachathani**	**15.32**	**278**	P	**P**	**21 03 27.5**	**+3.7**
SSE	**Sheshan**	**17.35**	**1**	⇑P	**P**	**21 03 47.5**	**-1.4**
SSE				XP		21 04 18.8	
SSE				S	**S**	**21 07 01.5**	**+5.5**
SSE				AMB	AMB		
	comp=Z,42nm,2.2s						
SSE				AMB	AMB		
	comp=Z,768nm,7.3s						
SSE				LR	LR		
	comp=N,1μm,32.0s						
SSE				LR	LR		
	comp=E,755nm,32.1s						
SSE				LR	LR		
	comp=Z,2μm,31.9s						
SSE	**Sheshan**	**17.35**	**1**	⇑P	**P**	**21 03 47.5**	**-1.4**
	comp=Z,42nm,2.2s						
SSE				pP		21 04 07.4	
SSE				sP		21 04 18.8	
SSE				S	**S**	**21 07 01.5**	**+5.5**
SSE				sS		21 07 35.8	
KKTK	**Khon Kaen**	**17.52**	**281**	P	**P**	**21 03 52.0**	**+0.9**
WHN	**Wuhan**	**17.80**	**342**	P	**P**	**21 03 55.0**	**+0.6**
WHN				S	**S**	**21 07 10.0**	**+3.9**
WHN				AMB	AMB		
	comp=Z,440nm,1.5s						
WHN				AMB	AMB		
	comp=Z,3μm,7.6s						
WHN				LR	LR		
	comp=Z,2μm,12.0s						
GYA	**Guiyang**	**18.34**	**316**	⇑*i*P	**P**	**21 04 01.4**	**+0.9**
GYA				AP		21 04 15.1	
GYA				S	**S**	**21 07 25.0**	**+7.2**
GYA				AMB	AMB		
	comp=Z,130nm,1.0s						
GYA				AMB	AMB		
	comp=Z,2μm,5.4s						
GYA				LR	LR		
	comp=N,850nm,12.4s						
GYA				LR	LR		
	comp=E,1μm,13.8s						
GYA				LR	LR		
	comp=Z,1μm,14.4s						
NJ2	**Nanjing**	**18.38**	**355**	*e*P	**P**	**21 04 01.1**	**+0.2**
NJ2				AP		21 04 15.2	
NJ2				PP	PP	21 04 20.2	+1.6
NJ2				XP		21 04 31.1	
NJ2				S	**S**	**21 07 23.0**	**+4.3**
NJ2				XS		21 07 44.0	
NJ2				AMB	AMB		
	comp=Z,150nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,3μm,5.8s						
NJ2				LR	LR		
	comp=N,1μm,14.0s						
NJ2				LR	LR		
	comp=E,2μm,16.4s						
NJ2				LR	LR		
	comp=Z,2μm,16.2s						
NANT	**Nan**	**19.92**	**288**	⇑P	**P**	**21 04 15.0**	**-2.3**
	comp=Z,331nm,1.0s						
NST	**Nakhon Sawan**	**20.05**	**278**	⇓P	**P**	**21 04 19.5**	**+0.8**
	comp=Z,100nm,1.0s						
KMI	**Kunming**	**20.43**	**307**	⇑P	**P**	**21 04 24.3**	**+1.8**
KMI				S	**S**	**21 08 00.4**	**+0.8**
KMI				AMB	AMB		
	comp=Z,124nm,1.4s						
KMI				AMB	AMB		
	comp=Z,1μm,4.7s						
KMI				LR	LR		
	comp=N,646nm,17.1s						
KMI				LR	LR		
	comp=E,741nm,19.7s						
KMI				LR	LR		
	comp=Z,2μm,31.6s						
KMI	**Kunming**	**20.43**	**307**	⇑P	**P**	**21 04 24.3**	**+1.8**
	comp=Z,124nm,1.4s						
KMI				pP		21 04 32.1	
KMI				sP		21 04 35.8	
KMI				S	**S**	**21 08 00.4**	**+0.8**
KMI				LR	LR		
	comp=Z,2μm,31.6s						
NNT	**Nongplab**	**20.50**	**269**	P	**P**	**21 04 25.5**	**+2.2**
KGM	**Kluang**	**20.77**	**238**	P	**P**	**21 04 27.9**	**+1.8**
CHRT	**Chiangrai**	**21.00**	**290**	⇑P	**P**	**21 04 29.5**	**+1.2**
	comp=Z,400nm,0.8s						
IPM	**Ipoh**	**21.45**	**247**	P	**P**	**21 04 34.6**	**+1.8**
CM31	**Chiang Mai Arr**	**21.49**	**286**	*e*P	**P**	**21 04 34.4**	**+1.2**
	comp=Z,23nm,0.5s,mb4.8						
CMAR	**Chiang Mai Arr**	**21.49**	**286**	P	**P**	**21 04 34.7**	**+1.6**
	comp=Z,34nm,0.7s,mb4.8,baz=95,slow=9.2,SNR=136						
CMAR				pP		21 04 54.4	
	comp=Z,33nm,1.0s,baz=93,slow=8.8,SNR=6.2						
CMAR				PcP	PcP	21 08 32.8	+0.2
	comp=Z,4.1nm,0.6s,baz=117,slow=0.5,SNR=20						
CMAR				ScP		21 11 59.8	
	comp=Z,2.6nm,0.9s,baz=65,slow=3.0,SNR=7.4						
XAN	**Xi’an**	**22.95**	**334**	P	**P**	**21 04 47.4**	**+0.1**
XAN				S	**S**	**21 08 44.8**	**0.0**
XAN				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.1						
XAN				AMB	AMB		
	comp=Z,773nm,8.0s						
XAN				LR	LR		
	comp=N,548nm,12.6s						
XAN				LR	LR		
	comp=E,1μm,14.4s						
XAN				LR	LR		
	comp=Z,1μm,15.4s						
CD2	**Chengdu**	**23.22**	**320**	⇑*i*P	**P**	**21 04 50.0**	**0.0**
CD2				XP		21 05 25.5	
CD2				S	**S**	**21 08 58.0**	**+8.5**
CD2				AMB	AMB		
	comp=Z,402nm,1.0s,mb5.7						
CD2				AMB	AMB		
	comp=Z,1μm,5.0s						
CD2				LR	LR		
	comp=E,845nm,12.0s						
CBIJ	**Chichi jima**	**24.07**	**53**	P	**P**	**21 04 59.1**	**+0.9**
	comp=E,82nm,0.4s,mb5.4,baz=247,slow=7.4,SNR=15						
CBIJ				LR	LR	21 14 19.2	
	comp=E,818nm,19.6s,baz=250,slow=36						
DL2	**Dalian**	**25.15**	**2**	P	**P**	**21 05 07.9**	**-0.5**
DL2				S	**S**	**21 09 28.0**	**+6.0**
BJI	**Beijing**	**26.58**	**352**	P	**P**	**21 05 21.2**	**-0.4**
BJI				AP	pP	21 05 43.4	-3.5
BJI				XP	sP	21 05 55.4	-5.4
BJI				S	**S**	**21 09 48.2**	**+2.7**
BJI				XS		21 10 32.5	
BJI				AMB	AMB		
	comp=Z,99nm,1.5s,mb5.1						
BJI				AMB	AMB		
	comp=Z,645nm,4.2s						
BJI	**Beijing**	**26.58**	**352**	P	**P**	**21 05 21.2**	**-0.4**
	comp=Z,99nm,1.5s,mb5.1						
BJI				pP	pP	21 05 43.4	-3.5
BJI				sP	sP	21 05 55.4	-5.4
BJI				S	**S**	**21 09 48.2**	**+2.7**
BJI				sS		21 10 32.5	
LZH	**Lanzhou**	**27.00**	**329**	⇑P	**P**	**21 05 25.5**	**0.0**
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.6						
LZH	**Lanzhou**	**27.00**	**329**	⇑P	**P**	**21 05 25.5**	**0.0**
	comp=Z,30nm,1.4s,mb4.6						
LZH				pP	pP	21 05 40.0	-11
LZH				sP	sP	21 05 46.0	-19
LZH				PcS		21 09 55.0	
MAJO	**Matsushiro**	**27.63**	**31**	*e*P	**P**	**21 05 28.8**	**-2.4**
MAT	**Matsushiro**	**27.63**	**31**	*e*P	**P**	**21 05 30.0**	**-1.2**
	comp=Z,56nm,1.5s,mb4.9						
MAT				*e*S	**S**	**21 10 14.0**	**+11**
MAT	**Matsushiro**	**27.63**	**31**	P	**P**	**21 05 29.9**	**-1.3**
MAT				S	**S**	**21 10 14.0**	**+11**
SNY	**Shenyang**	**28.16**	**4**	⇑P	**P**	**21 05 34.1**	**-1.9**
SNY				AMB	AMB		
	comp=Z,30nm,1.6s,mb4.6						
SNY				LR	LR		
	comp=N,660nm,12.0s						
SNY				LR	LR		
	comp=E,840nm,14.7s						
SNY				LR	LR		
	comp=Z,860nm,19.8s						
HHC	**Hu-ho-hao-te**	**28.25**	**345**	⇑*i*P	**P**	**21 05 36.4**	**-0.3**
HHC				S	**S**	**21 10 13.2**	**+0.8**
HHC				AMB	AMB		
	comp=Z,83nm,1.6s,mb5.0						
HHC				AMB	AMB		
	comp=Z,318nm,8.4s						
HHC				LR	LR		
	comp=N,642nm,16.8s						
HHC				LR	LR		
	comp=E,694nm,12.0s						
HHC				LR	LR		
	comp=Z,706nm,18.0s						
BTO	**Baotou**	**28.44**	**343**	*e*P	**P**	**21 05 37.4**	**-1.0**
BTO				AMB	AMB		
	comp=Z,47nm,1.0s,mb5.0						
KAKA	**Kakadu**	**28.65**	**156**	⇓*i*P	**P**	**21 05 38.9**	**-1.7**
	comp=Z,14nm,0.6s,mb4.8						
AGT	**Agartala**	**29.67**	**294**	⇓*i*P	**P**	**21 05 51.0**	**+1.4**
AGT				*i*		21 06 23.0	
CN2	**Changchun**	**30.30**	**7**	*e*P	**P**	**21 05 53.0**	**-1.9**
CN2				*e*AP	pP	21 06 14.1	-6.8
CN2				*e*S	**S**	**21 10 45.3**	**+0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.3						
CN2				LR	LR		
	comp=N,800nm,19.0s						
CN2				LR	LR		
	comp=E,900nm,19.0s						
CN2				LR	LR		
	comp=Z,1μm,21.0s						
GTA	**Gaotai**	**31.60**	**328**	⇑*i*P	**P**	**21 06 06.6**	**+0.3**
GTA				AP	pP	21 06 30.0	-2.5
GTA				XP	sP	21 06 40.9	-5.4
GTA				PP	PP	21 07 17.1	+2.4
GTA				PPP	PPP	21 07 33.5	+2.9
GTA				PCP	PcP	21 08 54.7	-1.3
GTA				S	**S**	**21 11 06.9**	**+1.7**
GTA				XS		21 11 50.9	
GTA				SCP		21 12 29.6	
GTA				PCS		21 12 38.9	
GTA				SS	SS	21 13 07.0	+4.1
GTA				SCS	ScS	21 16 25.1	+1.6
GTA				AMB	AMB		
	comp=Z,143nm,1.2s,mb5.6						
GTA				AMB	AMB		
	comp=Z,935nm,8.0s						
GTA				LR	LR		
	comp=N,955nm,16.0s						
GTA				LR	LR		
	comp=E,1μm,15.6s						
GTA				LR	LR		
	comp=Z,1μm,15.6s						
MDJ	**Mudanjiang**	**31.75**	**12**	P	**P**	**21 06 06.7**	**-1.0**
MDJ				AP	pP	21 06 27.7	-6.1
MDJ				XP	sP	21 06 41.7	-6.0
MDJ				PP	PP	21 07 19.2	+2.6
MDJ				PCP	PcP	21 08 54.4	-1.9
MDJ				S	**S**	**21 11 11.1**	**+3.5**
MDJ				XS		21 11 51.1	
MDJ				SCP		21 12 28.2	
MDJ				PCS		21 12 37.1	
MDJ				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,151nm,4.6s						
MDJ				LR	LR		
	comp=N,1μm,23.7s						
MDJ				LR	LR		
	comp=E,485nm,13.6s						
MDJ				LR	LR		
	comp=Z,1μm,31.6s						
FITZ	**Fitzroy Crossi**	**31.93**	**171**	*e*P	**P**	**21 06 10.2**	**+0.7**
	comp=Z,20nm,1.8s,mb4.5						
MBWA	**Marble Bar**	**34.62**	**182**	*e*P	**P**	**21 06 31.5**	**-1.0**
	comp=Z,34nm,0.8s,mb5.2						
PMG	**Port Moresby**	**34.82**	**130**	P	**P**	**21 06 31.2**	**-3.0**
JIRN	**Jiri**	**35.07**	**299**	*e*P	**P**	**21 06 37.0**	**+0.7**
	comp=Z,480nm,0.5s						
HIA	**Hailar**	**35.51**	**359**	*i* P	**P**	**21 06 38.8**	**-0.9**
ASAJ	**Asahikawa**	**35.63**	**27**	P	**P**	**21 06 41.4**	**+0.5**
	comp=Z,25nm,0.9s,mb5.1,baz=234,slow=14,SNR=7.3						
PKI	**Pulchoki**	**35.72**	**298**	*e*P	**P**	**21 06 41.8**	**+0.1**
	comp=Z,258nm,0.5s						
KKN	**Kakani**	**35.88**	**299**	*e*P	**P**	**21 06 43.2**	**0.0**
	comp=Z,162nm,0.5s,mb6.2						
ULN	**Ulaanbaatar**	**35.95**	**344**	*e*P	**P**	**21 06 43.2**	**-0.3**
	comp=Z,81nm,1.0s,mb5.6						
WRAB	**Tennant Creek**	**35.97**	**158**	*i* P	**P**	**21 06 43.3**	**-0.6**
WRAB	**Tennant Creek**	**35.97**	**158**	*e*P	**P**	**21 06 42.8**	**-1.1**
	comp=Z,38nm,0.6s,mb5.5						
WRA	**Warramunga Arr**	**35.97**	**158**	*i* P	**P**	**21 06 43.0**	**-1.0**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WRA	**Warramunga Arr**	**35.97**	**158**	P	**P**	**21 06 43.0**	**-1.0**
	comp=Z,9.5nm,0.5s,mb5.0,baz=337,slow=9.5,SNR=38						
WRA				pP	pP	21 07 06.6	-4.1
	comp=Z,15nm,0.7s,baz=329,slow=11,SNR=8.9						
WRA				S	**S**	**21 12 11.2**	**-1.8**
	comp=Z,4.3nm,0.8s,baz=349,slow=14,SNR=8.7						
WB2	**Warramunga Arr**	**35.98**	**158**	*e*P	**P**	**21 06 43.1**	**-0.9**
WB2				*i* pP	pP	21 07 07.7	-3.0
WB2				*e*S	**S**	**21 12 09.0**	**-4.1**
DMN	**Daman**	**35.98**	**298**	*e*P	**P**	**21 06 44.0**	**0.0**
	comp=Z,255nm,0.5s						
SONM	**Songino Array**	**36.10**	**344**	P	**P**	**21 06 44.8**	**0.0**
	comp=Z,91nm,0.9s,mb5.7,baz=160,slow=10,SNR=461						
VIS	**Vishakhapatnam**	**36.22**	**281**	*e*P	**P**	**21 06 46.7**	**+0.7**
VIS				*e*		21 06 49.7	
	comp=Z,130nm,0.9s						
GKN	**Gorkha**	**36.49**	**299**	*e*P	**P**	**21 06 47.9**	**-0.4**
	comp=Z,148nm,0.6s,mb6.1						
KLR	**Kul’dur**	**36.60**	**12**	*e*P	**P**	**21 06 45.6**	**-3.4**
KLR				pmax	pmax		
	comp=E,21nm,1.2s						
KLR				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
KOLN	**Koldanda**	**37.32**	**298**	*e*P	**P**	**21 06 55.3**	**+0.1**
	comp=Z,1μm,1.8s						
BLSP	**Bilaspur**	**37.62**	**289**	*e*P	**P**	**21 06 57.6**	**-0.2**
BLSP				*e*		21 06 59.7	
	comp=Z,75nm,1.8s						
BLSP				*e*		21 12 36.6	
YSS	**Yuzh-Sakhalins**	**37.96**	**25**	⇓*e*P	**P**	**21 07 01.0**	**+0.6**
YSS	**Yuzh-Sakhalins**	**37.96**	**25**	*e*P	**P**	**21 06 57.8**	**-2.6**
	comp=Z,35nm,1.2s,mb5.1						
ASAR	**Alice Springs**	**39.27**	**161**	P	**P**	**21 07 11.3**	**-0.1**
	comp=Z,10nm,0.6s,mb4.8,baz=337,slow=6.6,SNR=60						
ASAR				pP	pP	21 07 35.9	-2.6
	comp=Z,16nm,0.6s,baz=337,slow=7.1,SNR=6.8						
ASAR				PcP	PcP	21 09 18.6	-0.1
	comp=Z,5.0nm,0.8s,baz=342,slow=3.3,SNR=4.0						
ASAR				S	**S**	**21 13 01.6**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=333,slow=12,SNR=7.2						
ASPA	**Alice Springs**	**39.27**	**161**	*e*P	**P**	**21 07 11.4**	**-0.1**
ASPA				*i* pP	pP	21 07 36.2	-2.2
ASPA				*e*S	**S**	**21 13 02.7**	**-0.2**
ZAK	**Zakamensk**	**39.29**	**342**	⇓*i*P	**P**	**21 07 10.6**	**-0.8**
ZAK				*e*		21 08 47.8	
ZAK				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						

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ZAK                                pmax    pmax
       comp=Z,35nm,2.0s,mb4.8
TLY    Talaya             40.35 344  P      P         21 07 20.2 +0.2
       comp=Z,238nm,0.5s,mb6.3,SNR=19
TLY    Talaya             40.35 344⇑iP      P         21 07 20.3 +0.3
TLY                                pmax    pmax
       comp=Z,44nm,1.3s,mb5.1
TLY                                MLR     MLR
       comp=Z,678nm,20.0s
TLY    Talaya             40.35 344 eP      P         21 07 19.9 -0.2
       comp=Z,29nm,0.8s,mb5.2
IRK    Irkutsk            40.69 344 eP      P         21 07 21.8 -1.0
IRK                                 e                 21 08 59.3
IRK                                 eS      S         21 13 23.8  0.0
IRK                                pmax    pmax
       comp=Z,72nm,2.1s,mb5.1
HYB    Hyderabad          40.77 281⇑eP      P         21 07 25.0 +1.1
       comp=Z,110nm,1.0s,mb5.6
HYB                                 e       pP        21 07 49.0 -1.9
HYB                                 e                 21 08 08.0
HYB    Hyderabad          40.77 281⇑iP      P         21 07 25.0 +1.1
       comp=Z,110nm,1.0s,mb5.6
HYB                                 epP     pP        21 07 49.0 -1.9
HYB                                 e       pP        21 07 55.0 +4.1
HYB                                 esP     sP        21 07 59.5 -5.4
HYB                                 e                 21 08 08.0
HYB                                 ePcP    PcP       21 09 23.5  0.0
MOY    Mondy              41.11 341 eP      P         21 07 26.9 +0.6
MOY                                pmax    pmax
       comp=Z,110nm,2.6s,mb5.2
WMQ    Urumqi             41.27 323⇑iP      P         21 07 28.5 +0.8
WMQ                                 S       S         21 13 36.0 +3.6
WMQ                                 SS      SS        21 16 38.0 +2.9
WMQ                                 AMB     AMB
       comp=Z,87nm,1.0s,mb5.5
WMQ                                 AMB     AMB
       comp=Z,275nm,8.0s
WMQ                                 LR      LR
       comp=N,897nm,20.0s
WMQ                                 LR      LR
       comp=E,892nm,18.0s
WMQ                                 LR      LR
       comp=Z,958nm,21.0s
CTA    Charters Tower     41.88 143 eP      P         21 07 34.3 +1.2
       comp=Z,11nm,1.1s,mb4.5
BHPL   Bhopal             42.06 290 eP      P         21 07 33.5 -1.0
BHPL                                e                 21 07 36.0
       comp=Z,93nm,1.8s
BHPL                                i       pP        21 08 03.8 +2.2
LATR   Latur              42.66 282 eP      P         21 07 40.3 +0.9
NDI    New Delhi          43.01 297 eP      P         21 07 39.5 -2.7
SMLA   Simla              43.57 301⇑i       P         21 08 00.8  +14
SDNR   Sundarnagar        43.82 301 eP      P         21 07 49.4 +0.7
BHK    Bhakra             44.26 301 eP      P         21 07 52.3 +0.1
BOD    Bodaibo            44.36 355 eP      P         21 07 51.6 -1.0
BOD                                pmax    pmax
       comp=Z,51nm,2.0s,mb4.9
FORT   Forrest            44.74 171 eP      P         21 07 55.8 -0.3
       comp=Z,1µm,0.6s
PONG   Pong               44.77 302 eP      P         21 07 56.0 -0.3
DLH    Dalhousie          44.90 303 e       P         21 07 53.0 -4.3
KAD    Karad              44.95 281 eP      P         21 07 57.8 -0.1
KAD                                 e                 21 08 00.1
       comp=Z,90nm,1.5s
POO    Poona              45.23 283 eP      P         21 07 59.8 -0.3
POO                                 e                 21 08 03.9
       comp=Z,143nm,2.7s
POO                                 eS      S         21 14 30.4  0.0
MUN    Mundaring          45.59 185 eP      P         21 08 02.7 -0.1
       comp=Z,14nm,1.0s,mb4.7
MKAR   Makanchi Array     46.09 324 i P     P         21 08 07.2 +0.7
MKAR                               pmax    pmax
       comp=Z,4.0nm,0.3s
NWAO   Narrogin (SRO)     46.45 184 eP      P         21 08 09.2 -0.4
       comp=Z,46nm,1.0s,mb5.2
KSH    Kashi              46.96 312 ⇑P      P         21 08 15.6 +2.1
KSH                                 eAP     pP        21 08 38.2 -2.8
KSH                                 eXP     sP        21 08 50.6 -3.8
KSH                                 ePCP    PcP       21 09 46.2 +1.8
KSH                                 ePP     PP        21 10 08.0 +3.0
KSH                                 eSCP              21 13 30.2
KSH                                 ePCS              21 13 40.0
KSH                                 eS      S         21 14 58.6 +3.9
KSH                                 AMB     AMB
       comp=Z,60nm,0.6s,mb5.5
KSH                                 AMB     AMB
       comp=Z,1µm,4.7s
KSH                                 LR      LR
       comp=N,820nm,7.4s
KSH                                 LR      LR
       comp=E,850nm,6.6s
ULHL   Ulahol             47.78 315  P      P         21 08 21.1 +1.3
       SNR=66
KZA    Kyzart             48.40 315  P      P         21 08 26.4 +1.8
       SNR=21
TKM2   Tokmak 2           48.49 316  P      P         21 08 26.3 +1.0
       SNR=89
YAK    Yakutsk            48.72   6c iP     P         21 08 25.6 -1.2
YAK                                pmax    pmax
       comp=Z,32nm,0.9s,mb5.2
YAK    Yakutsk            48.72   6 eP      P         21 08 24.9 -1.8
       comp=Z,49nm,0.8s,mb5.5
KBK    Karagaybulak       48.83 315  P      P         21 08 29.2 +1.3
       SNR=186
UCH    Uchtor             48.97 315  P      P         21 08 30.7 +1.7
       SNR=146
CHMS   Chumysh            49.09 316  P      P         21 08 30.8 +0.9
       SNR=7.9
ZAL    Zalesovo           49.11 333  P      P         21 08 28.7 -1.3
       comp=Z,44nm,0.4s,mb5.8,baz=354,slow=5.4,SNR=217
ZAL                                 LR      LR        21 32 49.0
       comp=Z,451nm,19.0s,baz=299,slow=40
ZAL    Zalesovo           49.11 333  P      P         21 08 28.7 -1.3
ZAL                                 LR      LR        21 32 49.0
FRU    Bishkek            49.12 315⇑iP      P         21 08 31.2 +1.1
FRU                                pmax    pmax
       comp=Z,200nm,2.1s,mb5.7
AAK    Ala-Archa          49.13 315  P      P         21 08 31.2 +1.0
       SNR=65
AAK    Ala-Archa          49.13 315c iP     P         21 08 30.0 -0.2
AAK                                pmax    pmax
       comp=Z,52nm,1.3s,mb5.3
AAK    Ala-Archa          49.13 315 eP      P         21 08 29.8 -0.4
       comp=Z,24nm,0.6s,mb5.3
USP    Ospenovka          49.36 316  P      P         21 08 32.7 +0.7
       SNR=15
PET    Petropavlovsk      49.42  29 i P     P         21 08 32.3  0.0
PET                                pmax    pmax
       comp=Z,56nm,2.2s,mb5.1
STKA   Stephens Creek     49.49 157⇑iP      P         21 08 32.3 -0.9
       comp=Z,4.2nm,0.9s,mb4.4
STKA   Stephens Creek     49.49 157  P      P         21 08 31.9 -1.2
       comp=Z,3.1nm,0.5s,mb4.5,baz=328,slow=8.2,SNR=14
AML    Almayashu          49.50 314  P      P         21 08 34.5 +1.4
       SNR=11
EKS2   Erkin-Say          49.63 315  P      P         21 08 35.1 +1.1
       SNR=109
KURK   Kurchatov          50.25 326  P      P         21 08 38.9 +0.2
KURK                               pmax    pmax
       comp=Z,127nm,0.7s,mb6.0
KURK   Kurchatov          50.25 326 eP      P         21 08 38.8 +0.1
       comp=Z,239nm,0.6s,mb6.3
NVS    Novosibirsk        50.40 333⇑iP      P         21 08 38.3 -1.4
NVS                                 eS      S         21 15 41.2 -1.1
NVS                                pmax    pmax
       comp=Z,247nm,2.0s,mb5.8
NVS                                pmax    pmax
       comp=N,138nm,1.9s
NVS                                pmax    pmax
       comp=E,109nm,1.4s
NVS                                smax
       comp=E,13nm,1.6s
NVS                                smax
       comp=N,17nm,1.9s
MA2    Magadan            50.91  19ceP      P         21 08 43.4 -0.2
MA2                                 eS      S         21 15 51.7 +2.3
MA2                                 MLR     MLR
       comp=Z,1µm,37.5s
MA2    Magadan            50.91  19 eP      P         21 08 43.7 +0.1
       comp=Z,12nm,0.7s,mb5.0
BVA0   Borovoye Array     55.83 326 i P     P         21 09 19.6 -0.3
BVA0                               pmax    pmax
       comp=Z,72nm,1.7s,mb5.4
BVAR   Borovoye Array     55.83 326  P      P         21 09 19.3 -0.6
       comp=Z,37nm,0.6s,mb5.6,baz=117,slow=9.9,SNR=304
BVAR                                S       S         21 16 57.5 +1.6
       comp=Z,2.4nm,1.1s,baz=126,slow=12,SNR=7.0
CHKZ   Chkalovo           55.99 327  P      P         21 09 20.5 -0.6
CHKZ                               pmax    pmax
       comp=Z,424nm,1.9s,mb6.2
FX1    Attu Island--F     56.90  35  P      P         21 09 27.6 +0.1
       comp=Z,30nm,0.6s,mb5.5,baz=248,slow=6.2,SNR=7.9
FX1    Attu Island--F     56.90  35 eP      P         21 09 28.0 +0.5
TIXI   Tiksi              58.16   3⇑iP      P         21 09 33.8 -2.3
TIXI                               pmax    pmax
       comp=Z,68nm,1.2s,mb5.5
BIDO   Bidbid             59.78 289  P      P         21 09 47.2 -0.7
       SNR=15
JMDO   Jabal Madar        59.86 288  P      P         21 09 47.1 -1.3
       SNR=20
SMDO   Samad              59.87 289  P      P         21 09 47.5 -1.1
       SNR=6.7
ARQ    Araqi              61.26 289  P      P         21 09 57.2 -0.7
       SNR=13
BANOM  Banah              61.34 292  P      P         21 09 58.8 +0.3
       SNR=6.9
ASHO   Ashiyiah           61.61 291  P      P         21 09 59.5 -0.8
       SNR=15
BILL   Bilibino           61.72  18c iP     P         21 09 59.9 -0.6
BILL                               pmax    pmax
       comp=Z,47nm,1.1s,mb5.4
BILL   Bilibino           61.72  18 eP      P         21 09 59.6 -0.8
       comp=Z,40nm,0.7s,mb5.5
SVE    Sverdlovsk         62.46 327⇑iP      P         21 10 04.8 -0.7
SVE                                 e                 21 10 42.5
SVE                                pmax    pmax
       comp=Z,260nm,2.0s,mb5.9
SHAO   Shalim             62.54 283  P      P         21 10 06.5  0.0
       SNR=28
RBK    Rabkut             63.94 283  P      P         21 10 15.4 -0.4
       SNR=11
WHFO   Wadi Hawf          64.30 283  P      P         21 10 17.2 -1.0
       SNR=29
ABTO   Aybut              64.82 283  P      P         21 10 21.1 -0.5
       SNR=30
TNA    Tin City           69.94  25 eP      P         21 10 52.7 -0.1
       comp=Z,4.9nm,0.6s,mb4.5
GNI    Garni              70.68 308 i P     P         21 10 58.4 +0.8
GNI                                pmax    pmax
       comp=Z,65nm,1.6s
GNI    Garni              70.68 308  P      P         21 10 58.8 +1.1
       comp=Z,16nm,0.4s,mb5.2,baz=246,slow=23,SNR=12
GNI    Garni              70.68 308 eP      P         21 10 58.1 +0.4
       comp=Z,234nm,1.6s,mb5.8
RAYN   Ar Rayn            71.32 290  P      P         21 11 02.8 +1.1
       comp=Z,349nm,1.7s,mb5.9,SNR=62
GOF    Gofitskoye         71.81 313⇑iP      P         21 11 03.0 -1.3
GOF                                pmax    pmax
       comp=Z,34nm,1.2s,mb5.0
KIV    Kislovodsk         72.09 312  P      P         21 11 06.8 +0.8
       comp=Z,650nm,0.6s,SNR=8.8
KIV    Kislovodsk         72.09 312 eP      P         21 11 06.0  0.0
KIV                                pmax    pmax
       comp=Z,60nm,0.7s,mb5.5
KIV                                pmax    pmax
       comp=N,60nm,1.1s
VRSR   Storozhevoye       74.20 320 eP      P         21 11 17.3 -0.9
VRSR                               pmax    pmax
       comp=Z,80nm,0.6s,mb5.6
VRSR                               pmax    pmax
       comp=N,10.0nm,0.4s
VRSR                               pmax    pmax
       comp=E,20nm,0.9s
SOC    Sochi              74.26 312 eP      P         21 11 17.9 -0.8
SOC                                pmax    pmax
       comp=N,24nm,0.4s
SOC                                pmax    pmax
       comp=Z,61nm,0.4s,mb5.7
SOC                                pmax    pmax
       comp=E,19nm,0.3s
MOS    Moscow             74.97 324 eP      P         21 11 19.9 -2.5
MOS                                 e                 21 11 30.8
MOS                                 e                 21 14 12.0
MOS                                 e                 21 16 01.1
MOS                                 eS      S         21 20 52.6 +3.9
MOS                                 e                 21 21 26.0
MOS                                 e*SS              21 21 46.0
MOS                                 eSS     SS        21 25 53.3  +12
MOS                                 eSSS    SSS       21 29 03.6 +6.5
MOS                                pmax    pmax
       comp=Z,85nm,0.7s,mb5.6
OBN    Obninsk            75.60 324  P      P         21 11 25.9 -0.1
       comp=Z,544nm,0.6s,SNR=9.0
OBN    Obninsk            75.60 324 i P     P         21 11 25.2 -0.8
OBN                                 e                 21 14 18.0
OBN                                 eS      S         21 20 55.3 -0.4
OBN                                pmax    pmax
       comp=Z,56nm,1.2s,mb5.2
OBN    Obninsk            75.60 324 eP      P         21 11 24.4 -1.6
       comp=Z,50nm,0.6s,mb5.4
ANN    Anapa              75.80 313c iP     P         21 11 26.4 -1.0
ANN                                 e                 21 14 13.3
ANN                                 ePPP    PPP       21 16 01.0 -6.7
ANN                                pmax    pmax
       comp=Z,61nm,0.6s,mb5.5
IMA    Indian Mountai     75.82  25 eP      P         21 11 28.2 +1.2
JOF    Joensuu            77.70 332 ep      P         21 11 36.1 -1.5
       comp=Z,29nm,0.4s,mb5.4
ASF    Jabal al Asfar     77.73 300  P      P         21 11 39.8 +1.5
       comp=Z,25nm,0.7s,mb5.0,baz=312,slow=3.5,SNR=38
MCK    McKinley           78.00  27 eP      P         21 11 39.2  0.0
       comp=Z,22nm,0.9s,mb4.9
COLA   College            78.33  26 i P     P         21 11 41.4 +0.4
COLA   College            78.33  26 eP      P         21 11 40.6 -0.4
       comp=Z,13nm,0.9s,mb4.7
COLA                                LR      LR
       comp=Z,560nm,21.0s
KEV    Kevo               78.58 339 ep      P         21 11 41.1 -1.2
       comp=Z,14nm,0.4s,mb5.1
ILAR   Eielson Array      78.76  26  P      P         21 11 42.5 -0.8
       comp=Z,4.4nm,0.8s,mb4.3,baz=284,slow=3.8,SNR=33
ARCES  ARCESS Array B     79.14 339  P      P         21 11 45.2 -0.1
       comp=Z,20nm,0.5s,mb5.2,baz=75,slow=7.0,SNR=241
ARCES  ARCESS Array B     79.14 339  P      P         21 11 45.2 -0.1
BRTR   Keskin Array B     79.21 308  P      P         21 11 46.2 -0.1
       comp=Z,9.1nm,0.5s,mb4.8,baz=155,slow=7.6,SNR=34
THY    Trims Highway      79.45  27 eP      P         21 11 46.8 -0.3
DIV    Divide             79.82  29 eP      P         21 11 49.5 +0.3
       comp=Z,51nm,0.7s,mb5.5
KTK1   Kautokeino         80.03 339 eP      P         21 11 50.9 +0.7
KAF    Kangasniemi        80.11 332 ep      P         21 11 49.1 -1.6
       comp=Z,7.6nm,0.5s,mb4.8
FINES  FINESS Array B     80.34 331  P      P         21 11 51.0 -1.0
       comp=Z,6.7nm,0.5s,mb4.7,baz=58,slow=6.1,SNR=105
FINES                               LR      LR        21 49 11.3
       comp=Z,265nm,19.8s,baz=227,slow=37
AKASG  Malin Array Be     80.52 320  P      P         21 11 52.1 -1.0
       comp=Z,5.0nm,0.5s,mb4.6,baz=62,slow=4.6,SNR=34
AKASG                               PP      PP        21 14 59.0 -0.3
       comp=Z,1.7nm,0.8s,baz=68,slow=7.1,SNR=6.1
TRO    Tromso             81.36 340 eP      P         21 11 57.0 -0.1
TRO                                 AMb     AMB       21 12 13.7
       comp=Z,120nm,1.4s,mb5.5
KIS    Kishinev           81.45 316 eP      P         21 11 56.0 -2.1
KIS                                 e                 21 15 05.0
DAWY   Dawson             82.08  26 eP      P         21 12 01.3 +0.3
TIRR   Tirgusor           82.22 314 ⇓P      P         21 12 03.4 +1.3
TIRR   Tirgusor           82.22 314 ⇓P      P         21 12 03.4 +1.3
CFR    Carcaliu           82.27 315 ⇓P      P         21 12 02.5 +0.2
CFR    Carcaliu           82.27 315 ⇓P      P         21 12 02.5 +0.2
VRI    Vrincioaia         83.09 315 ⇓P      P         21 12 07.7 +1.1
VRI    Vrincioaia         83.09 315 ⇓P      P         21 12 07.7 +1.2
INK    Inuvik             83.11  21  P      P         21 12 06.7 +0.5
       comp=Z,12nm,0.7s,mb4.8,baz=303,slow=5.5,SNR=34
INK    Inuvik             83.11  21 eP      P         21 12 06.2 +0.1
       comp=Z,32nm,1.1s,mb5.1
SUW    Suwalki            83.46 324 eP      P         21 12 07.8 -0.3
MLR    Muntele Rosu       83.71 315  P      P         21 12 10.0 +0.4
       comp=Z,19nm,0.6s,mb5.1,baz=336,slow=3.5,SNR=65
MLR    Muntele Rosu       83.71 315 ⇓P      Px        21 12 20.3
KMBO   Kilima Mbogo       83.95 267  P      P         21 12 14.0 +2.4
       comp=Z,7.4nm,0.7s,mb4.6,baz=53,slow=8.9,SNR=35
KMBO   Kilima Mbogo       83.95 267 eP      P         21 12 13.4 +1.8
       comp=Z,81nm,1.7s,mb5.3
KMBO                                epP     pP        21 12 39.4 -2.8
MOR8   Moi Rana           84.06 337 eP      P         21 12 09.8 -1.1
       comp=Z,72nm,1.9s,mb5.2
MOR8   Moi Rana           84.06 337 eP      P         21 12 09.8 -1.1
MOR8                                AMb     AMB       21 12 12.0
       comp=Z,72nm,1.9s,mb5.2
KWP    Kalwaria           84.84 320 eP      P         21 12 16.2 +1.1
KOLS   Kolonicke sedl     85.30 319 i P     P         21 12 19.1 +1.6
KOLS                                e                 21 15 43.2
KOLS   Kolonicke sedl     85.30 319 i P     P         21 12 19.1 +1.6
KOLS                                e                 21 12 20.9
KOLS                                ePP     PP        21 15 43.2 +5.1
NSS    Namsos             85.62 336 eP      P         21 12 16.9 -1.7
CRVS   Cervenica-Dubn     85.83 319 e       P         21 12 24.7 +4.7
NIE    Niedzica           86.40 320⇑eP      P         21 12 22.5 -0.3
OJC    Ojcow              86.49 321 eP      P         21 12 23.8 +0.6
KECS   Kecovo             86.56 319 i P     P         21 12 24.5 +0.9
NB2    NORSAR Subarra     87.31 333  P      P         21 12 26.0 -1.0
       comp=Z,9.6nm,0.6s,mb4.9,baz=68,slow=4.6
NB2    NORSAR Subarra     87.31 333  P      P         21 12 26.0 -1.0
       baz=68,slow=4.6
NOA    NORSAR Array B     87.31 333  P      P         21 12 25.8 -1.2
       comp=Z,7.1nm,0.6s,mb4.8,baz=68,slow=4.6,SNR=32
NOA                                 pP      pP        21 12 54.0 -3.8
       comp=Z,2.7nm,0.7s,baz=156,slow=20,SNR=1.5
NOA                                 sP      sP        21 13 04.9 -5.8
       comp=Z,12nm,0.8s,baz=67,slow=4.7,SNR=6.2
NOA                                 LR      LR        21 57 30.0
       comp=Z,223nm,18.6s,baz=60,slow=40
NOA    NORSAR Array B     87.31 333  P      P         21 12 25.8 -1.2
NOA                                 pP      pP        21 12 54.0 -3.8
NOA                                 sP      sP        21 13 04.9 -5.8
NOA                                 LR      LR        21 57 30.0
NAO01  NORSAR Array S     87.54 333 eP      P         21 12 26.7 -1.3
       comp=Z,5.6nm,0.6s,mb4.8
OKC    Ostrava-Krasne     87.62 321 eP      P         21 12 28.6 -0.1
SKO    Skopje             87.76 313 i P     P         21 12 30.0 +0.4
KSP    Ksiaz              88.42 322 eP      P         21 12 32.1 -0.4
KSP                                 epP     pP        21 13 00.4 -3.0
KSP                                 ePP     PP        21 15 58.0 -5.9
KSP    Ksiaz              88.42 322 eP      P         21 12 32.8 +0.4
DPC    Dobruska-Polom     88.56 322 eP      P         21 12 33.8 +0.6
UPC    Upice              88.70 322 eP      P         21 12 34.5 +0.7
VRAC   Vranov             88.75 321  P      P         21 12 34.2 +0.1
       comp=Z,3.4nm,0.5s,mb4.6,baz=74,slow=7.7,SNR=7.8
ZST    Bratislava         88.80 319 eP      P         21 12 37.9 +3.6
RES    Resolute Bay       89.06   9 eP      P         21 12 34.6 -0.4
       comp=Z,23nm,1.2s,mb5.1
PVCC   Panska Ves         89.55 322 eP      P         21 12 38.6 +0.8
PRU    Pruhonice          89.76 322 eP      P         21 12 39.7 +0.9
BRG    Berggiesshubel     89.80 323 i P     P         21 12 39.9 +0.9
BRG                                 e                 21 16 11.0
BRG                                pmax    pmax
       comp=Z,272nm,1.5s,mb6.2
BRG    Berggiesshubel     89.80 323 i P     P         21 12 39.9 +0.9
       comp=Z,272nm,1.5s,mb6.2
BRG                                 e                 21 13 16.3
BRG                                 e                 21 16 11.0
MBAR   Mbarara            90.16 269 eP      P         21 12 41.4 -0.1
CLL    Collm              90.19 323 eP      P         21 12 41.0 +0.2
CLL                                 e                 21 12 46.0
CLL    Collm              90.19 323  P      P         21 12 41.0 +0.2
CLL                                 ePP     PP        21 16 15.0 -3.1
KHC    Kasperske Hory     90.66 321 eP      P         21 12 43.1  0.0
KHC                                 e                 21 13 20.5
KHC    Kasperske Hory     90.66 321 eP      P         21 12 43.1  0.0
KHC                                 sP      sP        21 13 20.5 -6.4
GEC2   GERESS Array S     90.69 321 eP      P         21 12 44.3 +1.1
GEC2                               pmax    pmax
       comp=Z,11nm,1.1s,mb4.9
GEC2   GERESS Array S     90.69 321 eP      P         21 12 44.3 +1.1
       comp=Z,11nm,1.1s,mb4.9
GERES  GERESS Array B     90.69 321  P      P         21 12 43.5 +0.3
       comp=Z,2.9nm,0.8s,mb4.5,baz=72,slow=5.0,SNR=22
GERES                               pP      pP        21 13 09.9 -4.3
       comp=Z,0.7nm,0.7s,baz=45,slow=3.8,SNR=1.5
GERES                               PP      PP        21 16 21.0 -1.1
       comp=Z,0.7nm,0.8s,baz=45,slow=5.7,SNR=4.6
MOA    Molln              90.71 320⇑iP      P         21 12 43.7 +0.4
       comp=Z,11nm,0.6s,mb5.2
NKC    Novy Kostel        90.92 322 eP      P         21 12 35.1 -9.2
WET    Wettzell           91.08 321 eP      P         21 12 45.3 +0.3
WET                                pmax    pmax
       comp=Z,21nm,1.4s,mb5.1
WET    Wettzell           91.08 321 eP      P         21 12 45.3 +0.3
       comp=Z,21nm,1.4s,mb5.1
LJU    Ljubljana          91.19 318 eP      P         21 12 45.8 +0.1
MOX    Moxa               91.25 323 i P     P         21 12 46.7 +0.9
KBA    Koelnbreinsper     91.57 319⇑iP      P         21 12 46.6 -0.7
       comp=Z,9.8nm,1.2s,mb4.9
CADS   Cadrg              91.64 318 eP      P         21 12 47.8 +0.1
GRA1   Grafenberg Arr     91.87 322 eP      P         21 12 49.4 +0.8
       comp=Z,16nm,1.3s,mb5.1
GRA1                                epP     pP        21 13 25.9 +6.2
GRA1                                ePP     PP        21 16 30.8 -0.7
GRF    Grafenberg Arr     91.87 322 eP      P         21 12 49.4 +0.8
GRF                                 e                 21 16 30.8
GRF                                pmax    pmax
       comp=Z,16nm,1.3s,mb5.1
GRF    Grafenberg Arr     91.87 322 eP      P         21 12 49.4 +0.8
       comp=Z,16nm,1.3s,mb5.1
GRF                                 epP     pP        21 13 25.9 +6.2
GRF                                 ePP     PP        21 16 30.8 -0.7
WTTA   Wattenberg         92.58 320⇑iP      P         21 12 52.0 +0.1
       comp=Z,8.3nm,0.6s,mb5.2
YKW3   Yellowknife Ar     92.74  22 eP      P         21 12 52.7 +0.4
YKA    Yellowknife Ar     92.79  22  P      P         21 12 53.3 +0.8
       comp=Z,2.6nm,0.6s,mb4.7,baz=306,slow=4.3,SNR=74
YKA                                 PKKPbc            21 30 02.0
       comp=Z,1.9nm,0.6s,baz=128,slow=2.7,SNR=39
SQTA   Sankt Quirin       92.86 320⇑iP      P         21 12 53.1 -0.2
       comp=Z,15nm,1.1s,mb5.2
MOTA   Moosalm            92.88 320⇓iP      P         21 12 53.0 -0.3
       comp=Z,8.7nm,1.2s,mb5.0
DAVA   Damuels            93.66 320⇓iP      P         21 12 57.5 +0.6
       comp=Z,12nm,1.3s,mb5.0
BFO    Black Forest       94.17 322 eP      P         21 12 59.8 +0.7
BFO                                pmax    pmax
       comp=Z,38nm,1.9s,mb5.4
BFO    Black Forest       94.17 322 eP      P         21 12 59.8 +0.7
       comp=Z,38nm,1.9s,mb5.4
CDF    Champ du Feu       94.76 322 eP      P         21 13 00.8 -1.0
HINF   Hinteralfeld       95.28 322 eP      P         21 13 04.0 -0.2
GIVF   Givet              95.40 324 eP      P         21 13 04.9 +0.2
BAIF   Baives             95.77 325 eP      P         21 13 05.3 -1.1
       comp=Z,8.6nm,0.8s,mb4.9
LSZ    Lusaka             95.94 256 eP      P         21 13 08.5 +0.6
       comp=Z,6.4nm,0.6s,mb5.2
PGF    Pioggiola          96.20 316 eP      P         21 13 08.3 -0.3
       comp=Z,33nm,1.0s,mb5.4
LPG    La Plagne          96.39 320 eP      P         21 13 08.9 -0.4
       comp=Z,11nm,0.8s,mb5.0
LPL    La Plagne          96.39 320 eP      P         21 13 09.1 -0.2
       comp=Z,6.6nm,0.5s,mb5.1
SBF    Sospel             96.67 318 eP      P         21 13 10.0 -0.7
MBDF   Montbardon         96.72 319 eP      P         21 13 10.3 -0.6
ORIF   Oris-en-Rattie     97.20 319 eP      P         21 13 12.5 -0.6
       comp=Z,6.7nm,0.7s,mb4.9
LMR    La Mourre          97.51 318 eP      P         21 13 13.7 -0.8
SMRF   Simiane la Rot     97.83 319 eP      P         21 13 14.9 -1.0
AVF    Avril sur Loir     97.86 322 eP      P         21 13 15.3 -0.7
YBH    Yreka Blue Hor     99.75  43  P      P         21 13 26.4 +1.7
       comp=Z,0.7nm,0.5s,mb4.6,baz=112,slow=4.3,SNR=3.3
NVAR   Mina Array Bea    104.31  44  Pdiff  Pdif      21 13 48.6 +3.6
       comp=Z,0.6nm,0.6s,baz=315,slow=3.3,SNR=3.6
ESDC   Sonseca Array     106.14 319  PP     PP        21 18 19.6 -1.1
       comp=Z,1.3nm,0.7s,baz=47,slow=6.3,SNR=5.9
PDAR   Pinedale Array    107.35  36  PKKPbc           21 29 22.8
       comp=Z,0.5nm,0.6s,baz=146,slow=3.3,SNR=6.2
PDAR                                PKKP    PKKP      21 29 37.5  +18
       comp=Z,1.8nm,0.6s,baz=127,slow=4.5,SNR=17
LAZ    Ladron            114.01  42  PKP    PKPdf     21 18 19.8 +1.6
VNA2   Neumayer--Watz    114.78 197⇓iP      PKPdf     21 18 21.8 +3.0
VNA2   Neumayer--Watz    114.78 197⇑i       Px        21 18 54.0
VNA2   Neumayer--Watz    114.78 197⇓i       PP        21 19 22.7 -0.6
VNA3   Neumayer Olymp    115.22 196⇑iP      PKPdf     21 18 22.5 +2.9
SADO   Sadowa            119.10  16  PKP    PKPdf     21 18 28.1 +0.3
       comp=Z,3.1nm,0.6s,baz=300,slow=1.6,SNR=3.9
TXAR   Lajitas Array     119.46  45  PKP    PKPdf     21 18 30.7 +2.0
       comp=Z,2.1nm,0.6s,baz=238,slow=0.6,SNR=19
TXAR                                PKKPbc            21 28 42.9
       comp=Z,0.5nm,0.6s,baz=141,slow=5.8,SNR=4.6
JCT    Junction City     121.27  41 ePKP    PKPdf     21 18 33.8 +1.5
DBIC   Dimbokro          122.36 287  PKP    PKPdf     21 18 35.9 +1.2
       comp=Z,4.3nm,0.6s,baz=104,slow=1.4,SNR=16
USHA   Ushuaia           138.30 172  PKP    PKPdf     21 19 06.3 +2.4
       comp=Z,5.8nm,0.7s,baz=341,slow=5.8,SNR=4.1
PLCA   Paso Flores       151.28 162  PKP    PKPdf     21 19 28.9 +2.7
       comp=Z,3.5nm,0.9s,baz=187,slow=12,SNR=3.8
PLCA                                PKPbc   PKPdf     21 19 35.5 +9.3
       comp=Z,13nm,0.7s,baz=201,slow=2.9,SNR=33
PLCA   Paso Flores       151.28 162 ePKPdf  PKPdf     21 19 28.5 +2.4
PLCA                                ePKPbc  PKPdf     21 19 34.8 +8.6
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz** comp=Z,0.9nm,0.6s,baz=334,slow=0.7,SNR=3.1	171.03	108	PKP	PKPdf	21 19 50.2	+2.9

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*CSEM **09** 21:09:03.4±0.2, 37.84N×1.77W, h5^{km}, ML2.6/2, Error ellipse: s-maj=5.2km s-min=3.9km az=4.0*

MDD 09 21:09:03.3±0.4**, 37.85N×1.77W, mbLg1.7**/5**, Error ellipse: s-maj=6.3km s-min=2.4km az=3.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	**La Murta** 4.1nm,0.2s,SNR=12	0.42	91	Pg	Pg	21 09 11.0	-0.6
EMUR	14nm,0.2s,SNR=16			Lg		21 09 16.6	
EMUR	**La Murta** 4.1nm,0.2s,SNR=12	0.42	91	Pg	Pg	21 09 11.0	-0.6
EMUR	14nm,0.2s,SNR=16			Lg		21 09 16.6	
ENIJ	**Nijar** 4.2nm,0.4s,SNR=7.9	0.94	202	Pg	Pg	21 09 20.5	-1.7
ENIJ	5.3nm,0.4s,SNR=7.9			Lg		21 09 34.0	
EVIA	**Vianos** 3.9nm,0.3s,SNR=7.9	0.98	324	Pg	Pg	21 09 20.8	-2.0
EVIA	9.5nm,0.2s,SNR=9.6			Lg		21 09 35.8	
EQES	**Quesada** 1.3nm,0.1s,SNR=8.9	1.03	268	Pg	Pg	21 09 22.9	-1.0
EQES	6.0nm,0.2s,SNR=8.7			Lg		21 09 39.4	
EQES	**Quesada** 1.3nm,0.1s,SNR=8.9	1.03	268	Pg	Pg	21 09 22.9	-1.0
EBAN	**Banos Encina** 1.5nm,0.1s,SNR=7.9	1.62	282	Pn	Pn	21 09 30.9	-2.5
EBAN	2.8nm,0.2s,SNR=7.9			Sn	Sn	21 09 53.2	-2.1
EADA	**Adamuz** 0.4nm,0.1s,SNR=7.9	2.24	279	Pn	Pn	21 09 39.3	-2.9
EADA	1.5nm,0.1s,SNR=4.5			Sn	Sn	21 10 06.8	-4.2
EADA	3.1nm,0.2s,SNR=4.0			Lg		21 10 14.9	
EADA	**Adamuz** 0.4nm,0.1s,SNR=7.9	2.24	279	Pn	Pn	21 09 39.3	-2.9
EADA	1.5nm,0.1s,SNR=4.5			Sn	Sn	21 10 06.8	-4.1
ESDC	**Sonseca Array** 1.8nm,0.5s,baz=138,slow=16,SNR=9.0	2.50	317	Pg	Pg	21 09 49.7	-3.6
ESDC	0.7nm,0.2s,baz=136,slow=30,SNR=6.4			Lg		21 10 19.8	
ESDC	**Sonseca Array** 1.8nm,0.5s,baz=138,slow=16,SNR=9.0	2.50	317	Pg	Pg	21 09 49.7	-3.5

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*NEIC **09** 21:19:50.1±0.4, 26.09N×144.18E, mb4.3/2, Error ellipse: s-maj=15.4km s-min=11.1km az=89.0*

*JMA **09** 21:19:50.1±0.2, 26.63N×144.24E, h18^{km}, M4.1*

*IDC **09** 21:19:50.2±0.7, 26.02N×144.11E, h26^{km}±5^{km}, mb3.8/12, mb1 3.9/13, mb1mx3.8/23, mbtmp3.9/13, ML4.0/1, Error ellipse: s-maj=21.8km s-min=15.8km az=93.0*

ISC 09 21:19:50.1±2.8**, 26.66N**±0.05×**144.24E**±0.07**, h20**^{km}±20^{km}**, h25**^{km}±3.0^{km}**:pP-P, n27, σ0^{s}87**/31**, mb3.9**/14**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	1.85	270	P	Pn	21 20 21.5	+0.4
JHHJ				*e*S	Sn	21 20 45.4	+1.3
CBIJ	**Chichi jima** 41nm,0.3s,baz=289,slow=20,SNR=19	1.89	284	Pn	Pn	21 20 22.1	+0.3
CBIJ	39nm,0.3s,baz=87,slow=24,SNR=5.9			Sn	Sn	21 20 43.6	-1.5
CBIJ	**Chichi jima**	1.89	284	P	Pn	21 20 22.3	+0.6
CBIJ				*e*S	Sn	21 20 45.2	+0.1
JHU	**Hanno**	10.10	336	P	P	21 22 15.6	-1.6
JHU				*e*S	S	21 24 10.5	-0.4
JRY	**Ryogami san**	10.38	335	P	P	21 22 21.7	+0.6
JRY				*e*S	S	21 24 18.0	+0.1
JHO	**Hitachi**	10.40	343	*e*S	S	21 24 18.4	0.0
JAG	**Ashikaga**	10.56	338	P	P	21 22 23.4	-0.1
JAG				*e*S	S	21 24 22.5	+0.3
SONM	**Songino Array** 0.7nm,0.6s,mb3.8,baz=112,slow=6.6,SNR=7.1	36.30	316	P	P	21 26 55.6	+1.4
CMAR	**Chiang Mai Arr** 0.6nm,0.7s,mb3.3,baz=62,slow=5.7,SNR=6.0	42.44	269	P	P	21 27 42.7	-2.8
WRAB	**Tennant Creek**	47.30	193	*e*P	P	21 28 18.6	-5.8
WRAB				*e*pP	pP	21 28 23.7	-6.8
WB2	**Warramunga Arr**	47.30	193	*e*P	P	21 28 23.7	-0.7
WRA	**Warramunga Arr** 0.4nm,0.5s,mb3.6,baz=12,slow=8.6,SNR=8.4	47.31	193	P	P	21 28 16.8	-7.6
WRA	2.7nm,0.5s,baz=13,slow=8.7,SNR=14			pP	pP	21 28 23.3	-7.3
ASAR	**Alice Springs** 0.2nm,0.7s,mb3.2,baz=12,slow=31,SNR=3.5	51.02	192	P	P	21 28 45.5	-7.5
ASAR	0.3nm,0.6s,baz=13,slow=15,SNR=3.4			pP	pP	21 28 52.8	-6.4
KURK	**Kurchatov** 4.1nm,1.1s,mb4.4	54.60	315	*e*P	P	21 29 19.2	-0.1
ILAR	**Eielson Array** 1.4nm,0.7s,mb4.1,baz=263,slow=6.2,SNR=4.1	57.22	28	P	P	21 29 38.4	+0.3
CHKZ	**Chkalovo** 1.6nm,0.8s,mb4.1	59.42	318	*e*P	P	21 29 53.0	-0.4
BVAR	**Borovoye Array** 2.2nm,0.5s,mb4.4,baz=89,slow=6.6,SNR=22	59.60	318	P	P	21 29 54.7	-0.1
YKA	**Yellowknife Ar** 0.8nm,0.9s,mb3.6,baz=292,slow=5.8,SNR=7.5	71.65	29	P	P	21 31 12.5	+0.6
YKA	0.3nm,0.7s,baz=296,slow=6.4,SNR=2.8			pP	pP	21 31 22.0	+3.7
FINES	**FINESS Array B** 2.1nm,0.9s,mb4.1,baz=63,slow=4.3,SNR=9.0	79.14	334	P	P	21 31 54.9	+0.4
FINES	1.0nm,0.7s,baz=45,slow=2.7,SNR=0.9			pP	pP	21 32 04.9	+3.9
FINES	**FINESS Array B**	79.14	334	P	P	21 31 54.9	+0.4
FINES				pP	pP	21 32 04.9	+4.0
NVAR	**Mina Array Bea** 0.2nm,0.4s,mb3.4,baz=300,slow=5.3,SNR=3.9	79.34	52	P	P	21 31 57.3	+1.2
AKASG	**Malin Array Be** 0.7nm,0.6s,mb4.0,baz=46,slow=5.5,SNR=5.7	84.05	325	P	P	21 32 18.7	-1.6
HFS	**Hagfors** 3.6nm,0.6s,mb4.7,baz=90,slow=3.0,SNR=7.7	84.54	338	P	P	21 32 22.7	+0.1
NOA	**NORSAR Array B** 2.3nm,1.0s,mb4.2,baz=40,slow=4.9,SNR=3.4	84.69	339	P	P	21 32 23.5	+0.2
NOA	**NORSAR Array B**	84.69	339	P	P	21 32 23.5	+0.2
LPAZ	**La Paz** 0.8nm,0.6s,baz=304,slow=3.6,SNR=5.0	148.24	78	PKPbc	PKPdf	21 39 36.8	+0.6
LVC	**Limon Verde**	149.65	90	*e*PKPdf	PKPdf	21 39 32.5	-5.8

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*NNC **09** 21:21:06.8±81.0, 36.85N×70.20E, h126^{km}±999^{km}, mpv4.2, Error ellipse: s-maj=1483.7km s-min=696.5km az=128.0*

*NEIC **09** 21:21:06.3±2.1, 36.53N×71.02E, h194^{km}±20^{km}, mb4.0/3, Error ellipse: s-maj=29.7km s-min=8.4km az=63.0*

*IDC **09** 21:21:16.8±20.0, 37.05N×71.18E, h274^{km}±145^{km}, mb3.1/4, mb1 3.3/6, mb1mx3.0/20, mbtmp3.8/6, Error ellipse: s-maj=165.8km s-min=29.3km az=10.0*

ISC 09 21:21:06.6±0.5**, 36.56N**±0.03×**71.00E**±0.09**, h213**^{km}±7^{km}**, n38, σ0^{s}99**/47**, mb3.4**/4**, 2C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	2.83	164	⇓P	P	21 21 56.6	+1.1
CEP				S	S	21 22 33.0	-0.3
CHCP	**Chirah Chowk**	3.44	147	P	P	21 22 03.9	+1.2
THW	**Thamme Wali**	3.81	170	⇓P	P	21 22 07.7	+0.6
THW				S	S	21 22 53.0	-0.9
SARP	**Sargodha**	4.83	163	⇓P	P	21 22 19.7	-0.1
DRP	**Derazinda**	4.85	188	P	P	21 22 21.2	+1.1
DRP				S	S	21 23 15.0	-2.1
THN	**Thein Dam**	5.67	135	*e*P	P	21 22 30.5	0.0
THN				*e*S	S	21 23 35.0	-0.8
DLH	**Dalhousie**	5.73	133	*e*P	P	21 22 34.0	+2.6
DLH				*e*S	S	21 23 40.0	+2.7
AML	**Almayashu** SNR=126	5.94	20	P	P	21 22 33.9	-0.2
UCH	**Uchtor** SNR=34	6.28	25	P	P	21 22 38.6	+0.2
KZA	**Kyzart** SNR=23	6.42	30	P	P	21 22 39.8	-0.4
EKS2	**Erkin-Say** SNR=9.8	6.46	19	P	P	21 22 40.8	+0.1
AAK	**Ala-Archa** 7.1nm,0.3s	6.64	23	⇓P	P	21 22 43.0	0.0
AAK	7.8nm,0.8s			⇑S	S	21 23 56.5	-1.7
AAK	**Ala-Archa** SNR=28	6.64	23	P	P	21 22 43.0	0.0
AAK	**Ala-Archa** 11nm,0.5s	6.64	23	*e*P	P	21 22 41.6	-1.4
KBK	**Karagaybulak** SNR=9.4	6.81	25	P	P	21 22 45.4	+0.2
ULHL	**Ulahol** SNR=12	6.98	34	P	P	21 22 47.3	-0.1
CHMS	**Chumysh** SNR=9.1	7.05	23	P	P	21 22 48.5	+0.2
SDNR	**Sundarnagar**	7.07	134	*e*P	P	21 22 48.4	-0.2
SDNR				*e*S	S	21 24 04.0	-4.3
USP	**Ospenovka** SNR=7.0	7.22	21	P	P	21 22 50.3	-0.2
TKM2	**Tokmak 2** SNR=20	7.27	28	P	P	21 22 51.1	-0.1
SMLA	**Simla**	7.46	135	⇑*i*P	P	21 23 07.8	+14
SMLA	276nm,0.3s			*i* S	S	21 24 27.6	+10
MK31	**Makanchi Array** 0.2nm,0.4s,baz=206,slow=10,SNR=12	13.24	36	P	P	21 24 09.7	+2.1
MK31	0.6nm,0.8s			⇓S	S	21 26 43.6	+13
KOLN	**Koldanda** 4.4nm,0.3s	13.80	126	*e*P	P	21 24 13.7	-0.8
GKN	**Gorkha** 16nm,0.3s	14.34	123	*e*P	P	21 24 19.8	-1.4
DMN	**Daman** 7.1nm,0.3s	14.91	123	*e*P	P	21 24 27.8	-0.4
KKN	**Kakani** 14nm,0.6s	14.91	122	*e*P	P	21 24 27.7	-0.6
PKI	**Pulchoki** 5.4nm,0.2s	15.14	122	*e*P	P	21 24 30.2	-0.9
JIRN	**Jiri** 29nm,0.4s	15.62	120	*e*P	P	21 24 37.0	0.0
BVA0	**Borovoye Array** 0.2nm,1.0s,baz=160,slow=11,SNR=6.4	16.47	359	P	P	21 24 47.6	+0.6
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=160,slow=11,SNR=6.9	16.47	359	P	P	21 24 47.7	+0.7
LSA	**Lhasa** 1.2nm,0.6s	18.20	106	P	P	21 25 08.5	+2.6
ZAL	**Zalesovo** 0.8nm,0.3s,baz=236,slow=5.4,SNR=6.7	19.85	25	P	P	21 25 21.3	-1.3
ZAL	**Zalesovo**	19.85	25	P	P	21 25 21.3	-1.3
SONM	**Songino Array** 0.2nm,0.8s,mb2.8,baz=270,slow=7.4,SNR=3.7	28.30	55	P	P	21 26 42.4	+0.1
FINES	**FINESS Array B** 3.3nm,1.1s,mb3.8,baz=126,slow=9.8,SNR=7.0	37.43	326	P	P	21 28 00.4	-0.1
ARCES	**ARCESS Array B** 6.1nm,1.0s,mb4.0,baz=124,slow=6.5,SNR=4.8	41.09	338	P	P	21 28 30.8	+0.2
YKA	**Yellowknife Ar** 0.2nm,0.4s,mb3.1,baz=350,slow=5.5,SNR=7.4	81.19	3	P	P	21 32 59.0	-0.2
YKA	**Yellowknife Ar**	81.19	3	P	P	21 32 59.0	-0.2

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*NEIC **09** 21:45:45.0±2.6, 10.77N×93.37E, h46^{km}±23^{km}, mb4.2/2, Error ellipse: s-maj=22.3km s-min=10.5km az=57.0*

*IDC **09** 21:45:46.0±5.5, 10.78N×93.40E, h56^{km}±48^{km}, mb3.6/10, mb1 3.7/11, mb1mx3.6/20, mbtmp3.8/11, ML4.0/1, Error ellipse: s-maj=34.6km s-min=18.5km az=56.0*

ISC 09 21:45:42.9±2.9**, 10.8N**±0.1×**93.4E**±0.1**, h44**^{km}±25^{km}**, n16, σ0^{s}60**/15**, mb3.9**/11**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=225,slow=15,SNR=12	9.31	34	P	P	21 47 57.4	0.0
VIS	**Vishakhapatnam**	11.97	306	*i* P	P	21 48 34.0	+0.3
LSA	**Lhasa** 4.4nm,0.9s	18.94	354	*e*P	P	21 50 02.6	-0.4
SONM	**Songino Array** 0.1nm,0.4s,mb2.9,baz=209,slow=8.7,SNR=3.1	38.51	14	P	P	21 53 03.9	+1.3
SONM	0.3nm,0.8s,baz=214,slow=5.2,SNR=3.0			PcP	PcP	21 55 13.1	-2.4
ZAL	**Zalesovo** 1.3nm,0.3s,mb4.1,baz=304,slow=6.7,SNR=6.7	43.59	353	P	P	21 53 44.5	0.0
ZAL	**Zalesovo**	43.59	353	P	P	21 53 44.5	0.0
BVAR	**Borovoye Array** 1.1nm,0.6s,mb4.0,baz=136,slow=9.1,SNR=5.0	46.03	341	P	P	21 54 03.5	-0.5
CHKZ	**Chkalovo** 5.5nm,0.5s,mb4.7	46.51	341	*e*P	P	21 54 07.5	-0.2
WRA	**Warramunga Arr** 0.4nm,0.5s,mb3.6,baz=306,slow=8.8,SNR=5.4	50.54	127	P	P	21 54 39.3	-0.1
ASAR	**Alice Springs** 0.5nm,0.7s,mb3.6,baz=313,slow=8.0,SNR=5.4	52.33	131	P	P	21 54 52.5	-0.3
BRTR	**Keskin Array B** 0.8nm,0.9s,mb3.8,baz=139,slow=8.0,SNR=2.7	60.02	310	P	P	21 55 46.3	-1.4
FINES	**FINESS Array B** 1.1nm,0.5s,mb4.1,baz=90,slow=7.6,SNR=9.2	69.83	332	P	P	21 56 50.5	-0.2
ARCES	**ARCESS Array B** 2.5nm,0.8s,mb4.2,baz=80,slow=7.4,SNR=4.4	72.31	340	P	P	21 57 05.7	+0.2
LBTB	**Lobatse** 1.3nm,0.6s,mb4.1,baz=103,slow=18,SNR=4.1	75.03	240	P	P	21 57 22.8	+0.6
GERES	**GERESS Array B** 0.8nm,0.9s,mb3.7,baz=90,slow=6.7,SNR=7.1	75.21	318	P	P	21 57 23.4	+0.7
PDAR	**Pinedale Array** 0.6nm,0.9s,SNR=4.5	122.71	20	PKP	PKPdf	22 04 36.5	+2.1

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*CASC **09** 22:22:41.8±2.5, 12.23N×88.87W, h29^{km}±20^{km}, MD4.2, ML3.5, mb4.3(NEIC)*

*IDC **09** 22:22:41.4±2.7, 12.93N×88.22W, mb3.8/7, mb1 4.2/7, mb1mx3.8/19, mbtmp3.9/7, Error ellipse: s-maj=59.3km s-min=46.1km az=19.0*

*NEIC **09** 22:22:43.5±1.3, 13.02N×88.17W, h10^{km}, mb4.3/2, Error ellipse: s-maj=33.9km s-min=23.4km az=46.0*

ISC 09 22:22:40.9±1.7**, 12.18N**±0.05×**88.88W**±0.04**, h29**^{km}±14^{km}**, n31, σ1^{s}04**/38**, mb3.9**/8**, 7C-3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	**San Miguel**	1.38	25	⇑*e*P	Pn	22 23 04.6	0.0
VSM				*e*S	Sn	22 23 22.8	+0.9
BLLM	**Bellamira**	1.41	26	⇑*i*P	Pn	22 23 04.4	-0.6
BLLM				*e*S	Sn	22 23 24.0	+1.3
SNVI	**San Vicente**	1.43	2	⇓*e*P	Pn	22 23 04.7	-0.6
LFRS	**El Faro**	1.45	353	*e*P	Pn	22 23 04.5	-1.1
LFRS				*e*S	Sn	22 23 23.1	-0.6
LCBS	**La Ceiba**	1.47	356	⇑*e*P	Pn	22 23 04.8	-1.1
CNCH	**Conchagua**	1.50	43	⇓*e*P	Pn	22 23 06.0	-0.3
LFU	**La Fuente**	1.58	352	*e*P	Pn	22 23 07.1	-0.3
BOQS	**Boqueron**	1.60	346	*e*P	Pn	22 23 07.6	-0.1
CAHU	**Cacacuatique**	1.72	22	⇑*e*P	Pn	22 23 09.6	+0.2
SBLS	**San Blas**	1.80	337	⇑*e*P	Pn	22 23 10.5	-0.1
SBLS				*e*S	Sn	22 23 34.7	+2.0
SNJE	**San Jose**	1.82	337	⇑*e*P	Pn	22 23 10.7	-0.2
SNJE				*e*S	Sn	22 23 36.7	+3.4
RTR	**El Retiro**	1.87	337	⇑*e*P	Pn	22 23 11.6	+0.1
RTR				*e*S	Sn	22 23 34.1	-0.1
RBDL	**Robledal**	2.08	338	⇓*e*P	Pn	22 23 14.5	0.0
RBDL				*e*S	Sn	22 23 38.3	-1.4
COPN	**Copaltepe**	2.24	90	*e*P	Pn	22 23 17.7	+0.9
MTO2	**Montecristo 2**	2.26	348	*e*P	Pn	22 23 17.3	+0.1
MOMJ	**Momotombo**	2.30	84	*e*P	Pn	22 23 18.4	+0.7
APYN	**Apoyeque**	2.48	88	*e*P	Pn	22 23 21.4	+1.1
APYN				*e*S	Sn	22 23 49.1	-0.7
MGAN	**Managua**	2.58	90	*e*S	Sn	22 23 52.6	+0.3
MGAN	comp=N,356nm,0.5s			*i*		22 23 54.3	
TICN	**Ticuantepe**	2.60	93	*e*P	Pn	22 23 23.2	+1.2
TICN				*e*S	Sn	22 23 52.2	-0.6
CONN	**Concepcion**	3.25	100	*e*S	Sn	22 24 08.1	-1.2
JCT	**Junction City** comp=N,18nm,0.8s	20.84	333	*e*P	P	22 27 21.0	-1.9
LTX	**Lajitas** comp=N,7.4nm,0.8s,mb4.2	21.93	323	*e*P	P	22 27 35.1	+1.3
TXAR	**Lajitas Array** comp=N,13nm,1.1s,mb4.3,baz=147,slow=12,SNR=42	21.93	323	P	P	22 27 34.8	+0.9
PDAR	**Pinedale Array** comp=N,0.5nm,0.8s,mb3.5,baz=117,slow=9.9,SNR=4.4	35.37	333	P	P	22 29 36.0	0.0
NVAR	**Mina Array Bea** comp=N,0.4nm,0.4s,mb3.6,baz=142,slow=7.1,SNR=4.7	37.00	320	P	P	22 29 51.8	+2.0
ULM	**Lac du Bonnet** comp=N,1.9nm,0.6s,mb4.0,baz=173,slow=9.9,SNR=6.5	38.40	353	P	P	22 29 57.8	-3.6
SCHQ	**Schefferville** comp=N,2.6nm,0.7s,mb4.3,baz=213,slow=5.1,SNR=9.3	45.95	18	P	P	22 30 59.6	-3.4
YKA	**Yellowknife Ar** comp=N,1.4nm,0.8s,mb3.9,baz=144,slow=7.2,SNR=18	53.52	345	P	P	22 31 58.6	-2.3
ILAR	**Eielson Array** comp=N,0.7nm,1.1s,mb3.6,baz=135,slow=7.7,SNR=3.5	65.71	336	P	P	22 33 25.7	+0.9
WRA	**Warramunga Arr** comp=N,0.5nm,0.6s,baz=86,slow=2.2,SNR=7.6	137.85	254	PKP	PKPdf	22 42 11.7	+3.1
CMAR	**Chiang Mai Arr** comp=N,2.1nm,0.7s,baz=343,slow=3.8,SNR=18	148.60	346	PKPbc	PKPdf	22 42 28.2	+0.9

IGQ 09 23:09:35.8, 1.50S×81.05W, h23^{km}±6^{km}**, mb4.2, 7C-1D, Error ellipse: s-maj=9.0km s-min=2.7km az=6.4, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	0.68	48	⇑P	Pb	23 09 48.4	-0.4
SALI	**Salinas**	0.68	175	⇑P	Pb	23 09 48.4	-0.5
SALI				S	Sb	23 09 58.5	+0.6
JAMA	**Jama**	1.50	35	⇑P	Pn	23 10 02.8	+1.1
JAMA				S	Sn	23 10 22.7	+2.1
IGUA	**Igualata**	2.42	90	⇑P	Pn	23 10 14.9	+0.1
IGUA				S	Sn	23 10 46.3	+2.4
JUIV	**Juive**	2.59	88	P	Pn	23 10 19.9	+2.6
ARRY	**Arrayan**	2.60	90	⇑P	Pn	23 10 17.4	+0.1
ARRY				S	Sn	23 10 49.4	+0.8
RETU	**Refugio**	2.61	89	⇑P	Pn	23 10 19.6	+2.1
PISA	**Pisayambo**	2.71	81	P	Pn	23 10 21.3	+2.4
NAS1	**Nasa**	2.72	71	⇓P	Pn	23 10 21.7	+2.6
NAS1				S	Sn	23 11 00.7	+9.1
JUA2	**San Juan 2**	2.76	62	P	Pn	23 10 21.4	+1.7
TERV	**Terraza Guagua**	2.78	62	P	Pn	23 10 21.3	+1.3
TERV				S	Sn	23 11 00.8	+7.5
VC1	**Cotopaxi 1**	2.79	72	P	Pn	23 10 22.1	+2.1
PINO	**Pino**	2.79	61	P	Pn	23 10 20.9	+0.8
TAMB	**Tambo**	2.80	73	P	Pn	23 10 21.9	+1.6
YANA	**Yana**	2.84	61	P	Pn	23 10 21.7	+0.9
JOR1	**San Jorge 1**	2.84	58	⇑P	Pn	23 10 19.8	-1.1
ANTI	**Antisana**	3.08	70	P	Pn	23 10 27.5	+3.3
CAYR	**Refugio Cayamb**	3.40	64	P	Pn	23 10 32.3	+3.5
CAYA	**Cayambe**	3.44	63	P	Pn	23 10 32.5	+3.2

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*NEIC **09** 23:12:31.8±0.5, 14.57N×92.42E, mb4.5/5, Error ellipse: s-maj=15.1km s-min=9.5km az=58.0*

*IDC **09** 23:12:31.8±0.8, 14.52N×92.35E, h24^{km}±4^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.8/19, mbtmp3.9/10, Error ellipse: s-maj=26.8km s-min=15.5km az=57.0*

ISC 09 23:12:28.8±0.5**, 14.62N**±0.07×**92.24E**±0.06**, h25**^{km}**, h25**^{km}±1.1^{km}**:pP-P, n26, σ1^{s}35**/26**, mb4.2**/13**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** baz=248,slow=15,SNR=3.7	7.48	58	Pn	Pn	23 14 19.3	+0.1
VIS	**Vishakhapatnam**	9.10	291	*i* P	P	23 14 39.9	-1.8
VIS				*i* S	Sn	23 16 18.5	-5.9
HYB	**Hyderabad**	13.45	284	*i* P	P	23 15 40.0	-0.7
HYB				*e*		23 17 59.0	
HYB				*e*S	S	23 18 11.0	+0.7
JIRN	**Jiri** 6.2nm,0.3s	14.15	338	*e*P	P	23 15 47.7	-2.2
PKI	**Pulchoki**	14.37	335	*e*P	P	23 15 51.5	-1.4
DMN	**Daman** 19nm,0.4s	14.53	334	*e*P	P	23 15 53.9	-1.1
KKN	**Kakani** 7.5nm,0.4s	14.62	335	*e*P	P	23 15 54.8	-1.3
LSA	**Lhasa** 18nm,0.9s	15.05	356	*e*P	P	23 16 01.9	+0.2
GKN	**Gorkha** 20nm,0.3s	15.08	333	*e*P	P	23 16 00.8	-1.3
KOLN	**Koldanda** 22nm,0.5s	15.36	330	*e*P	P	23 16 05.6	-0.2
ENH	**Enshi** 5.7nm,0.8s,mb4.0	22.25	43	*e*P	P	23 17 23.9	-1.5
SONM	**Songino Array** 0.8nm,0.8s,mb3.7,baz=205,slow=7.4,SNR=8.7	35.15	17	P	P	23 19 24.2	+1.7
SONM	1.2nm,0.7s,baz=207,slow=7.5,SNR=10			pP	pP	23 19 31.8	+2.0
KURK	**Kurchatov** 14nm,1.1s,mb4.6	37.66	346	*e*P	P	23 19 46.1	+2.4
ZAL	**Zalesovo** 0.9nm,0.5s,mb3.7,baz=310,slow=5.4,SNR=7.1	39.67	353	P	P	23 20 01.5	+1.1
ZAL	2.0nm,0.6s,baz=304,slow=7.0,SNR=6.4			pP	pP	23 20 09.8	+1.9
BVAR	**Borovoye Array** 0.6nm,0.8s,mb3.3,baz=127,slow=7.4,SNR=5.4	42.05	340	P	P	23 20 21.7	+1.8
BVAR	0.5nm,0.4s,baz=141,slow=9.5,SNR=6.7			pP	pP	23 20 30.2	+2.8
CHKZ	**Chkalovo** 5.4nm,0.8s,mb4.3	42.53	341	*e*P	P	23 20 25.3	+1.4
NWAO	**Narrogin (SRO)** 7.4nm,0.9s,mb4.6,baz=348,slow=7.5,SNR=3.7	52.97	154	P	P	23 21 45.5	-0.2
WRA	**Warramunga Arr** 5.0nm,0.7s,mb4.5,baz=309,slow=7.6,SNR=30	53.79	129	P	P	23 21 51.4	-0.5
WRAB	**Tennant Creek** 12nm,0.8s,mb4.9	53.80	129	*e*P	P	23 21 51.3	-0.7
WB2	**Warramunga Arr**	53.80	129	*e*P	P	23 21 51.2	-0.8
ASAR	**Alice Springs** 2.4nm,0.7s,mb4.3,baz=312,slow=6.9,SNR=18	55.74	132	P	P	23 22 05.5	-0.6
BRTR	**Keskin Array B** 1.8nm,0.8s,baz=127,slow=7.9,SNR=6.1	56.73	308	pP	pP	23 22 21.6	+1.0
MLR	**Muntele Rosu** 2.3nm,1.0s,mb4.3,baz=159,slow=14,SNR=2.0	63.13	314	P	P	23 22 59.3	+2.6
MLR	4.7nm,1.0s,baz=67,slow=2.8,SNR=3.9			pP	pP	23 23 06.8	+2.3
FINES	**FINESS Array B** 3.4nm,1.0s,mb4.3,baz=113,slow=11,SNR=3.7	65.93	331	P	P	23 23 16.7	+2.0
FINES	1.5nm,0.6s,baz=108,slow=4.4,SNR=1.8			pP	pP	23 23 23.2	+0.8
ARCES	**ARCESS Array B** 3.5nm,0.9s,baz=90,slow=6.3,SNR=1.6	68.33	340	pP	pP	23 23 38.8	+1.2
GERES	**GERESS Array B** 0.5nm,0.7s,mb3.5,baz=72,slow=8.4,SNR=4.3	71.62	317	P	P	23 23 52.7	+2.6
GERES	1.1nm,0.7s,baz=90,slow=5.3,SNR=7.2			pP	pP	23 23 59.9	+2.0

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*CSEM **09** 23:19:57.6±0.2, 67.11N×20.86E, h2^{km}, ML2.6, Error ellipse: s-maj=6.3km s-min=4.8km az=39.0, Mining explosion.*

*UPP **09** 23:19:58.4, 67.19N×20.70E, h0^{km}, ML2.6, Mining explosion.*

HEL 09 23:19:58.8±0.0**, 67.18N×20.69E, ML2.6**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	0.07	218	*i* P	Pg	23 20 00.2	-0.1
MASU	**Masugnsbyn**	0.58	61	*i* P	Pg	23 20 09.4	-1.0
KUA	**Kurravaara**	0.79	350	*i* P	Pg	23 20 12.9	-1.6
ERTU	**Ertsjaerv**	0.86	136	*i* P	Pg	23 20 14.2	-1.9
PAJU	**Pajala**	0.96	98	*e*P	Pg	23 20 16.0	-2.0
LANU	**Lannavaara**	1.01	29	*e*P	Pb	23 20 16.9	-1.9
SJUU	**Sjulsmark**	1.72	167	*e*P	Pn	23 20 29.4	-0.8
KIF	**Kilpisjarvi**	1.83	1	*e*P	Pn	23 20 31.7	-0.1
KIF				*e*S	Sn	23 20 56.8	+0.7
KIF	**Kilpisjarvi**	1.83	1	P	Pn	23 20 31.6	-0.2
KIF				S	Sn	23 20 56.8	+0.7
KTK1	**Kautokeino**	2.07	26	*e*P	Pn	23 20 36.5	+1.2
KTK1	**Kautokeino**	2.07	26	P	Pn	23 20 36.4	+1.1
SGF	**Sodankyl**	2.28	81	*e*P	Pn	23 20 38.5	+0.3
SGF				*e*SG	Sg	23 21 09.0	-5.7
SGF	**Sodankyl**	2.28	81	P	Pn	23 20 38.5	+0.3
SGF				Sg	Sg	23 21 08.9	-5.8
MOR8	**Moi Rana**	2.68	251	*e*SG	Sg	23 21 16.6	-12
OUL	**Oulu**	2.99	132	*e*SG	Sg	23 21 29.3	-8.9
KEV	**Kevo**	3.48	39	*e*SB	Sb	23 21 42.7	-1.6

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*IDC **09** 23:21:03.9±3.7, 6.34S×133.65E, mb3.3/1, mb1 3.7/3, mb1mx3.6/11, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=301.6km s-min=30.6km az=82.0*

ISC 09 23:21:13.7±2.1**, 7.18S**±0.08×**130.3E**±0.1**, h74**^{km}±23^{km}**, n7, σ1^{s}19**/13**, mb3.3**/1**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu** 12nm,0.2s	5.91	159	*e*P	P	23 22 40.5	+0.2
KAKA				*e*S	S	23 23 48.0	+0.6
FITZ	**Fitzroy Crossi** 2.8nm,0.3s	11.75	202	*e*P	P	23 24 01.8	+1.5
FITZ				*e*S	S	23 26 09.4	-0.9
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=354,slow=13,SNR=25	13.29	163	Pn	P	23 24 18.2	-2.5
WRA				Sn	S	23 26 42.0	-5.1

	0.9nm,0.3s,baz=333,slow=22,SNR=12						
WB2	**Warramunga Arr**	**13.30**	**163**	*e*P	**P**	**23 24 19.0**	**-1.7**
WB2				*e*S	**S**	**23 26 41.9**	**-5.2**
ASAR	**Alice Springs**	**16.77**	**168**	P	**P**	**23 25 05.7**	**+0.6**
	0.3nm,0.3s,baz=6.6,slow=13,SNR=10.0						
ASAR				S	**S**	**23 28 09.3**	**+1.4**
	0.2nm,0.3s,baz=356,slow=27,SNR=7.1						
ASPA	**Alice Springs**	**16.77**	**168**	*e*P	**P**	**23 25 06.1**	**+1.0**
ASPA				*e*S	**S**	**23 28 07.2**	**-0.7**
SONM	**Songino Array**	**58.69**	**341**	P	**P**	**23 31 05.9**	**+0.1**
	0.2nm,0.6s,mb3.3,baz=154,slow=7.0,SNR=3.4						

GUC 09 23:38:42.6±0.7**,34.99S**×**70.52W,h2**^{km}±5^{km}**,MD3.6, ML2.4,2C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	**San Fernando**	**0.56**	**313**	⇑*i*P	Pg	23 38 54.2	+0.5
SFDO				*i* S	Sg	23 39 02.5	+1.3
CACH	**El Canelo**	**0.88**	**355**	⇑*i*P	Pg	23 38 59.3	-0.8
CHCH	**Chadas Angostu**	**1.06**	**354**	*i* P	Pb	23 39 02.5	-0.9
CHCH				*i* S	Sb	23 39 17.8	+0.3
LMEL	**Las Melosas**	**1.17**	**13**	⇓*i*P	Pb	23 39 04.5	-0.7
LMEL				*i* S	Sb	23 39 21.5	+0.9
LMEL				AMP		23 39 23.2	
	comp=N,77nm,0.1s						
LNV	**Longovilo**	**1.27**	**324**	*e*P	Pb	23 39 05.9	-1.0
LNV				*i* S	Sb	23 39 23.8	+0.2
TACH	**Talagante**	**1.38**	**345**	*e*P	Pb	23 39 07.9	-0.9
TACH				*i* S	Sb	23 39 27.1	+0.4
RCDM	**Rinconada Maip**	**1.52**	**351**	*e*P	Pn	23 39 10.6	-0.3
RCDM				*i* S	Sb	23 39 31.1	+0.3
RCDM				AMP		23 39 32.4	
	comp=E,130nm,0.1s						
FCH	**Farellones**	**1.67**	**6**	*e*P	Pn	23 39 13.3	+0.2
FCH				*i* S	Sb	23 39 36.6	+1.4
FCH				AMP		23 39 37.9	
	comp=E,82nm,0.1s						
LCCH	**Las Cruces**	**1.75**	**330**	*e*P	Pn	23 39 13.4	-0.7

IDC 09 23:51:54.2±4.8**,17.35S**×**175.93W,mb4.5**/5**,mb1 4.6**/5**, mb1mx4.1**/17**,mbtmp4.5**/5**,Error ellipse: s-maj=93.3km s-min=22.4km az=79.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**21.70**	**195**	P	P	23 56 45.4	-3.5
	9.1nm,0.4s,baz=37,slow=3.8,SNR=14						
URZ				S	S	00 00 49.1	+4.0
	2.2nm,0.4s,baz=109,slow=20,SNR=3.0						
RPZ	**Rata Peaks**	**28.50**	**200**	P	P	23 57 52.3	-0.9
	12nm,0.9s,baz=162,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**40.97**	**241**	P	P	23 59 40.1	-0.3
	17nm,1.4s,baz=87,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	**47.06**	**259**	P	P	00 00 27.6	-2.3
	0.4nm,0.4s,baz=97,slow=7.0,SNR=6.8						
ASAR	**Alice Springs**	**47.22**	**254**	P	P	00 00 28.6	-2.5
	9.9nm,0.6s,baz=88,slow=8.4,SNR=120						

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*IDC **09** 23:55:33.7±1.2,2.63N×97.08E,mb4.1/10,mb1 4.2/11, mb1mx4.1/19,mbtmp4.0/11,ML4.1/1,Error ellipse: s-maj=63.2km s-min=17.4km az=53.0*

*NEIC **09** 23:55:36.6±1.0,2.13N×96.64E,h30^{km},mb4.3/1,Error ellipse: s-maj=43.5km s-min=13.3km az=57.0*

ISC 09 23:55:36.3±0.9**,2.6N**±0.2×**97.2E**±0.3**,h30**^{km}**,n15, σ1^{s}14**/15**,mb4.1**/11**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.83**	**6**	Pn	**P**	**23 59 25.6**	**+6.7**
	0.3nm,0.3s,baz=228,slow=15,SNR=3.0						
WRA	**Warramunga Arr**	**42.82**	**123**	P	**P**	**00 03 33.9**	**+0.3**
	2.6nm,0.6s,mb4.2,baz=301,slow=9.2,SNR=23						
WRAB	**Tennant Creek**	**42.83**	**123**	*e*P	**P**	**00 03 31.0**	**-2.7**
	4.9nm,0.8s,mb4.3						
WB2	**Warramunga Arr**	**42.83**	**123**	*e*P	**P**	**00 03 33.8**	**+0.1**
ASAR	**Alice Springs**	**44.28**	**128**	P	**P**	**00 03 45.9**	**+0.5**
	0.8nm,0.8s,mb3.5,baz=303,slow=8.0,SNR=5.1						
SONM	**Songino Array**	**45.73**	**9**	P	**P**	**00 03 56.2**	**-0.5**
	0.5nm,0.5s,mb3.7,baz=190,slow=9.6,SNR=9.1						
SONM				PcP	PcP	00 05 35.3	+0.7
	0.3nm,0.5s,baz=197,slow=4.0,SNR=5.2						
KURK	**Kurchatov**	**50.42**	**345**	*e*P	**P**	**00 04 32.8**	**-0.3**
ZAL	**Zalesovo**	**52.15**	**351**	P	**P**	**00 04 45.6**	**-0.5**
	2.4nm,0.4s,mb4.5,baz=314,slow=5.8,SNR=12						
STKA	**Stephens Creek**	**54.33**	**133**	P	**P**	**00 05 03.4**	**+0.8**
	1.3nm,0.5s,mb4.1,baz=301,slow=7.7,SNR=4.2						
STKA	**Stephens Creek**	**54.33**	**133**	*e*P	**P**	**00 05 02.9**	**+0.3**
BVAR	**Borovoye Array**	**54.90**	**341**	P	**P**	**00 05 06.1**	**-0.4**
	1.7nm,0.6s,mb4.2,baz=149,slow=8.6,SNR=12						
AKASG	**Malin Array Be**	**74.12**	**322**	P	**P**	**00 07 11.6**	**-0.1**
	0.3nm,0.4s,mb3.6,baz=83,slow=4.9,SNR=4.0						
FINES	**FINESS Array B**	**78.73**	**332**	P	**P**	**00 07 38.0**	**+0.8**
	3.4nm,0.9s,mb4.2,baz=162,slow=6.0,SNR=4.8						
ARCES	**ARCESS Array B**	**81.19**	**340**	P	**P**	**00 07 51.8**	**+1.5**
	3.8nm,0.9s,mb4.3,baz=45,slow=5.1,SNR=3.7						
DAVOX	**Davos**	**86.25**	**317**	P	**P**	**00 08 15.5**	**-1.0**
	2.0nm,0.8s,mb4.4,baz=185,slow=12,SNR=3.1						

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*IDC **10** 00:01:04.3±16.0,1.16N×121.63E,h103^{km}±155^{km}, mb3.4/5,mb1 3.6/5,mb1mx3.4/16,mbtmp3.8/5,Error ellipse: s-maj=225.7km s-min=24.7km az=68.0*

ISC 10 00:01:01.0±1.1**,0.6N**±0.3×**120.4E**±0.7**,h100**^{km}**,n7, σ0^{s}53**/7**,mb3.7**/5**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.33**	**165**	*e*P	**P**	**00 05 21.0**	**0.0**
	3.5nm,0.9s						
WRA	**Warramunga Arr**	**24.62**	**147**	P	**P**	**00 06 12.6**	**-0.9**
	1.6nm,0.9s,mb3.4,baz=334,slow=9.6,SNR=12						
WB2	**Warramunga Arr**	**24.62**	**147**	*e*P	**P**	**00 06 13.6**	**0.0**
ASAR	**Alice Springs**	**27.51**	**152**	P	**P**	**00 06 40.5**	**+0.1**
	0.6nm,0.7s,mb3.3,baz=332,slow=8.8,SNR=5.3						
STKA	**Stephens Creek**	**38.08**	**150**	P	**P**	**00 08 12.4**	**+0.8**
	1.9nm,0.9s,mb3.9,baz=352,slow=9.6,SNR=3.1						
SONM	**Songino Array**	**48.55**	**347**	P	**P**	**00 09 36.4**	**+0.4**
	0.7nm,0.6s,mb3.8,baz=166,slow=8.5,SNR=8.2						
SONM				PcP	PcP	00 11 00.8	+0.1
	0.3nm,0.5s,baz=162,slow=4.1,SNR=4.0						
ZAL	**Zalesovo**	**60.67**	**337**	P	**P**	**00 11 03.3**	**-0.5**
	0.7nm,0.3s,mb4.1,baz=11,slow=6.6,SNR=4.5						

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*NEIC **10** 00:01:25.8±2.4,21.72N×143.29E,h134^{km}±23^{km},mb4.3/2, Error ellipse: s-maj=30.3km s-min=12.2km az=92.0*

*IDC **10** 00:01:43.4±1.8,21.61N×143.11E,h306^{km}±17^{km}, mb3.3/10,mb1 3.4/11,mb1mx3.3/23,mbtmp4.0/11,Error ellipse: s-maj=26.9km s-min=11.4km az=88.0*

ISC 10 00:01:42.9±1.3**,21.60N**±0.08×**143.1E**±0.3**,h317**^{km}±13^{km}**, n16,σ0^{s}44**/17**,mb3.6**/12**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.54**	**352**	P	**P**	**00 03 07.8**	**-0.1**
	24nm,0.3s,baz=261,slow=16,SNR=12						
CBIJ				S	**S**	**00 04 14.6**	**+0.1**
	5.5nm,0.3s,baz=90,slow=20,SNR=2.5						
SONM	**Songino Array**	**39.36**	**321**	P	**P**	**00 08 44.0**	**+0.4**
	0.3nm,0.5s,mb3.0,baz=135,slow=8.0,SNR=8.3						
WRAB	**Tennant Creek**	**42.15**	**192**	*e*P	**P**	**00 09 07.1**	**+0.4**
WB2	**Warramunga Arr**	**42.16**	**192**	*e*P	**P**	**00 09 07.0**	**+0.2**
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**00 09 06.9**	**0.0**
	1.2nm,0.4s,mb3.5,baz=17,slow=9.7,SNR=27						
FITZ	**Fitzroy Crossi**	**43.00**	**205**	*e*P	**P**	**00 09 13.5**	**0.0**
	9.8nm,1.3s,mb3.9						
ASAR	**Alice Springs**	**45.87**	**192**	P	**P**	**00 09 35.9**	**-0.3**
	0.5nm,0.5s,mb3.1,baz=16,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**53.19**	**182**	P	**P**	**00 10 30.8**	**-0.3**
	1.0nm,0.6s,mb3.3,baz=355,slow=12,SNR=2.2						
ZAL	**Zalesovo**	**54.24**	**322**	P	**P**	**00 10 37.2**	**-1.2**
	0.4nm,0.4s,mb3.1,baz=321,slow=18,SNR=3.3						
KURK	**Kurchatov**	**57.49**	**317**	*e*P	**P**	**00 11 07.4**	**+6.2**
	3.8nm,0.9s,mb3.8						
KURK				*e*		00 11 24.0	
ILAR	**Eielson Array**	**62.17**	**27**	P	**P**	**00 11 32.1**	**-0.5**
	0.4nm,0.8s,mb3.1,baz=270,slow=5.4,SNR=3.5						
BVAR	**Borovoye Array**	**62.69**	**320**	P	**P**	**00 11 36.5**	**+0.3**
	3.5nm,0.3s,mb4.4,baz=98,slow=7.8,SNR=37						
YKA	**Yellowknife Ar**	**76.58**	**28**	P	**P**	**00 13 00.4**	**+0.4**
	0.4nm,0.5s,mb3.4,baz=290,slow=5.7,SNR=9.2						
ARCES	**ARCESS Array B**	**78.99**	**341**	P	**P**	**00 13 13.4**	**+0.7**
	2.1nm,0.5s,mb4.1,baz=73,slow=8.4,SNR=12						
FINES	**FINESS Array B**	**83.23**	**334**	P	**P**	**00 13 34.7**	**-0.2**
	1.3nm,0.6s,mb4.0,baz=70,slow=4.8,SNR=12						
FINES	**FINESS Array B**	**83.23**	**334**	P	**P**	**00 13 34.7**	**-0.2**

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*TIF **10** 00:04:32.2,40.07N×42.05E,h8^{km}±4^{km}*

*CSEM **10** 00:04:32.5±0.1,40.09N×42.10E,h5^{km},MD3.5,Error ellipse: s-maj=2.4km s-min=1.6km az=43.0*

*ISK **10** 00:04:33.5,40.07N×42.03E,h9^{km},MD3.5*

*NEIC **10** 00:04:33.6,40.07N×42.07E,h10^{km},MD3.4(ISK),After ISK.*

ISC 10 00:04:35.0±0.5**,40.09N**±0.03×**41.90E**±0.04**,h8**^{km}**,n31, σ1^{s}37**/41**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.45**	**246**	*i* P	**Pg**	**00 04 44.4**	**+0.2**
ERZM				*i* S	**Sg**	**00 04 48.0**	**-2.2**
EZM	**Erzurum**	**0.46**	**246**	*i* PG	**Pg**	**00 04 44.3**	**+0.1**
EZM				*i* SG	**Sg**	**00 04 51.3**	**+1.0**
VRT	**Varto**	**1.00**	**197**	*i* PG	**Pg**	**00 04 54.0**	**-1.0**
BCA	**Borcka**	**1.37**	**351**	Pn	**Pn**	**00 05 00.6**	**+0.1**
BCA				Sg	**Sg**	**00 05 19.6**	**-1.2**
BCA	**Borcka**	**1.37**	**351**	*i* Pn	**Pn**	**00 05 00.5**	**0.0**
BCA				*i* Sn	**Sn**	**00 05 19.1**	**+0.2**
BCA				Sg	**Sg**	**00 05 19.6**	**-1.1**
BINT	**Bingol**	**1.63**	**223**	PN	**Pn**	**00 05 04.5**	**+0.3**
BINT	**Bingol**	**1.63**	**223**	Pn	**Pn**	**00 05 04.6**	**+0.3**
EZC	**Erzincan**	**1.64**	**259**	*e*PN	**Pn**	**00 05 09.5**	**+5.2**
EZC	**Erzincan**	**1.64**	**259**	Pn	**Pn**	**00 05 09.6**	**+5.2**
VANB	**Van**	**1.88**	**142**	PN	**Pn**	**00 05 05.1**	**-2.7**
VANB	**Van**	**1.88**	**142**	Pn	**Pn**	**00 05 05.2**	**-2.7**
VANB	**Van**	**1.88**	**142**	Pn	**Pn**	**00 05 05.2**	**-2.6**
GUMT	**Gumushane**	**1.89**	**282**	PN	**Pn**	**00 05 08.8**	**+0.9**
GUMT	**Gumushane**	**1.89**	**282**	Pn	**Pn**	**00 05 09.6**	**+1.7**
BTMT	**Batman**	**1.92**	**190**	PN	**Pn**	**00 05 08.9**	**+0.6**
TVAN	**Van**	**1.94**	**143**	*i* P	**Pn**	**00 05 10.0**	**+1.3**
TVAN				*i* S	**Sn**	**00 05 36.0**	**+2.5**
VANT	**Van**	**2.00**	**144**	PN	**Pn**	**00 05 07.0**	**-2.6**
GNI	**Garni**	**2.18**	**88**	PN	**Pn**	**00 05 08.9**	**-3.1**
GNI	**Garni**	**2.18**	**88**	Pn	**Pn**	**00 05 08.9**	**-3.1**
BEST	**Besiri**	**2.25**	**193**	*i* P	**Pn**	**00 05 14.6**	**+1.5**
BEST				*i* S	**Sn**	**00 05 44.8**	**+3.6**
PTK	**Pertek**	**2.28**	**239**	*e*PN	**Pn**	**00 05 13.3**	**-0.2**
DIY	**Diyarbakir**	**2.55**	**211**	*e*PN	**Pn**	**00 05 17.1**	**-0.2**
DIY	**Diyarbakir**	**2.55**	**211**	Pn	**Pn**	**00 05 17.2**	**-0.2**
MTA	**Mtatsminda**	**2.71**	**53**	P	**Pn**	**00 05 20.3**	**+0.6**
MTA				S	**Sg**	**00 06 08.9**	**+3.5**
ONI	**Oni**	**2.75**	**25**	P	**Pn**	**00 05 21.5**	**+1.4**
ONI				S	**Sn**	**00 06 02.9**	**+9.0**
ELZG	**Elazig**	**2.77**	**236**	*i* P	**Pn**	**00 05 19.0**	**-1.5**
ELZG				*i* S	**Sn**	**00 05 55.5**	**+1.1**
HKR	**Hakkari**	**2.89**	**150**	*e*PN	**Pn**	**00 05 19.7**	**-2.5**
HKR	**Hakkari**	**2.89**	**150**	Pn	**Pn**	**00 05 19.1**	**-3.1**
MYA	**Malataya**	**3.23**	**238**	*e*PN	**Pn**	**00 05 27.2**	**+0.2**
MYA	**Malataya**	**3.23**	**238**	Pn	**Pn**	**00 05 27.3**	**+0.3**
MYA	**Malataya**	**3.23**	**238**	Pn	**Pn**	**00 05 27.3**	**+0.3**

IDC 10 00:15:05.5±4.6**,25.37N**×**109.44W,mb3.4**/1**,mb1 3.7**/5**, mb1mx3.5**/19**,mbtmp3.3**/5**,ML3.8**/2**,MS3.4**/2**,Ms1 3.4**/2**, ms1mx2.8**/20**,Error ellipse: s-maj=69.7km s-min=24.6km az=165.0,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.47**	**51**	Pn	Pn	00 16 40.8	-3.6
	0.4nm,0.3s,baz=231,slow=13,SNR=11						
TXAR				Lg		00 18 30.6	
	1.0nm,0.3s,baz=247,slow=26,SNR=6.6						
ANMO	**Albuquerque**	**9.89**	**14**	Pn	P	00 17 30.7	-1.3
	baz=158,slow=6.7,SNR=2.0						
ANMO				Lg		00 20 09.8	
	baz=93,slow=15,SNR=2.8						
ANMO				LR	LR	00 20 53.5	
	comp=Z,135nm,18.3s,slow=35						
NVAR	**Mina Array Bea**	**15.03**	**332**	Pn	P	00 18 40.3	-0.6
	baz=156,slow=11,SNR=3.2						
PDAR	**Pinedale Array**	**17.36**	**360**	Pn	P	00 19 12.1	+1.4
	0.0nm,0.3s,baz=165,slow=10,SNR=6.4						
YKA	**Yellowknife Ar**	**37.28**	**356**	P	P	00 22 18.9	-1.7
	0.4nm,0.8s,baz=176,slow=8.5,SNR=13						
SCHQ	**Schefferville**	**42.88**	**35**	LR	LR	00 41 39.0	
	comp=Z,68nm,20.5s,baz=267,slow=37						
ILAR	**Eielson Array**	**46.15**	**339**	P	P	00 23 32.1	-1.0
	1.0nm,0.8s,baz=147,slow=6.4,SNR=8.7						

MEX 10 00:24:35.8±0.4**,15.48N**×**93.34W,h10**^{km}±11^{km}**,MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.40**	**55**	*i* P	Pn	00 24 58.0	-3.5
CCIG				*i* S	Sb	00 25 15.3	-4.2
SCX	**San Cristobal**	**1.42**	**28**	*e*P	Pn	00 24 58.0	-3.7
SCX				*i* S	Sb	00 25 16.0	-3.9
HUIG	**Huatulco**	**2.69**	**276**	*i* P	Pn	00 25 16.9	-3.0
HUIG				*i* S	Sn	00 25 46.7	-6.0

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*NIED **10** 00:25:00,42.90N×145.00E,h89^{km},Mw4.0 Best double couple: $M_0$1.07×10^{15} NP1:ϕ_s307°,δ86°,λ-77°. NP2:ϕ_s55°, δ14°,λ-162°.*

JMA 10 00:25:21.8±0.1**,42.95N**×**144.98E,h93**^{km}±1^{km}**,M3.5, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.21**	**283**	P	P	00 25 35.3	+0.1
JAK				*e*S	S	00 25 45.3	-0.1
JNK	**Nakash**	**0.66**	**343**	P	P	00 25 37.9	-0.6
JNK				*e*S	S	00 25 50.1	-0.7
NEM2	**Nemuro 2**	**0.70**	**53**	P	P	00 25 38.4	-0.4
NEM2				*e*S	S	00 25 50.2	-1.2
JOB	**Onbets**	**0.84**	**267**	P	P	00 25 40.2	0.0
JOB				*e*S	S	00 25 53.9	0.0
JAR	**Ashorobuto**	**0.95**	**292**	P	P	00 25 41.3	-0.1
JAR				*e*S	S	00 25 55.7	-0.4
JRA	**Rausu**	**0.99**	**6**	P	P	00 25 42.0	+0.1
JRA				*e*S	S	00 25 56.9	0.0
JCH	**Churui**	**1.24**	**255**	P	P	00 25 44.5	-0.4
JCH				*e*S	S	00 26 00.8	-1.3
JTKR	**Abashiri--Toko**	**1.28**	**323**	P	P	00 25 45.5	0.0
JTKR				*e*S	S	00 26 02.8	-0.4
JMP	**Maruseppu**	**1.58**	**312**	P	P	00 25 49.0	-0.2
JMP				*e*S	S	00 26 09.2	-0.2
JEM	**Erimo**	**1.64**	**236**	P	P	00 25 50.3	+0.4
JEM				*e*S	S	00 26 11.7	+1.0
JFR	**Furan**	**1.76**	**278**	P	P	00 25 50.9	-0.6
JFR				*e*S	S	00 26 12.7	-0.7
JNBK	**Urakawa-nobuka**	**1.77**	**249**	P	P	00 25 50.4	-1.3
JNBK				*e*S	S	00 26 11.3	-2.4
JKK2	**Kamakawa 2**	**1.87**	**300**	P	P	00 25 53.0	+0.1

KRSC 10 00:28:44.0±2.2**,50.18N**×**156.94E,ML3.8,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.73**	**314**	*i* P	Pg	00 28 58.7	+0.2
SKR				*i* S	Sg	00 29 11.3	+3.0
ALID	**Alaid**	**1.12**	**308**	*e*P	Pb	00 29 07.8	+1.8
ALID				*e*S	Sb	00 29 25.5	+4.5
PAU	**Pauzhetka**	**1.29**	**356**	*i* P	Pb	00 29 11.3	+2.4
PAU				*i* S	Sb	00 29 31.1	+5.2
PAU				Smax			
	2μm,0.4s						
RUS	**Russkaya**	**2.46**	**23**	*e*P	Pn	00 29 26.3	+0.3
RUS				*e*S	Sn	00 29 57.9	+0.6
GRL	**Gorelyy**	**2.48**	**16**	*e*P	Pn	00 29 28.2	+1.9
GRL				*e*S	Sn	00 30 00.8	+3.1
APC	**Apacha**	**2.75**	**3**	*e*P	Pn	00 29 32.2	+2.0
APC				*e*S	Sn	00 30 07.2	+2.6
KRMR	**Karymshinskiy**	**2.76**	**15**	*e*P	Pn	00 29 32.7	+2.5
KRMR				*e*S	Sn	00 30 06.3	+1.6
PET	**Petropavlovsk**	**3.04**	**20**	*e*P	Pn	00 29 35.4	+1.1
PET				*e*S	Sn	00 30 13.7	+1.7
UGLR	**Uglovaya**	**3.25**	**20**	*e*P	Pn	00 29 40.2	+2.9
UGLR				*e*S	Sn	00 30 17.6	+0.3
AVH	**Avacha**	**3.29**	**19**	*e*P	Pn	00 29 40.3	+2.5
AVH				*e*S	Sn	00 30 17.6	-0.5
KOK	**Koryaka**	**3.29**	**18**	*e*P	Pn	00 29 40.4	+2.6
KOK				*e*S	Sn	00 30 17.9	-0.3
SDLR	**Sedlovina**	**3.33**	**21**	*e*P	Pn	00 29 39.6	+1.2
SDLR				*e*S	Sn	00 30 19.8	+0.6
NLC	**Nalytchevo**	**3.35**	**26**	*e*P	Pn	00 29 39.6	+0.9
NLC				*e*S	Sn	00 30 19.9	+0.2
SPN	**Mys Shipunski**	**3.50**	**32**	*e*P	Pn	00 29 40.0	-0.8
SPN				*e*S	Sn	00 30 22.0	-1.5
GNL	**Ganaly**	**3.58**	**10**	*e*P	Pn	00 29 44.3	+2.4
KBTR	**Krutoberegovo**	**6.99**	**28**	*e*P	Pn	00 30 29.3	-0.9

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*BJI **10** 00:35:44.4,5.76N×127.88E,h203^{km},mb4.5*

*NEIC **10** 00:35:46.5±3.1,5.59N×127.27E,h192^{km}±32^{km},mb4.2/8, Error ellipse: s-maj=20.5km s-min=6.3km az=73.0*

*IDC **10** 00:35:49.0±9.9,5.58N×127.35E,h215^{km}±99^{km},mb3.5/9, mb1 3.7/9,mb1mx3.5/17,mbtmp4.0/9,Error ellipse: s-maj=48.3km s-min=16.5km az=71.0*

ISC 10 00:35:40.0±1.7**,5.65N**±0.08×**127.4E**±0.2**,h142**^{km}±16^{km}**, n29,σ0^{s}68**/31**,mb4.0**/19**,2C-1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.66**	**301**	⇓*i*P	**P**	**00 36 23.7**	**+0.3**
BIPH	**Bislig**	**2.72**	**338**	⇑*e*P	**P**	**00 36 33.1**	**+9.0**
BIPH				*i* S	**S**	**00 36 55.0**	**-2.8**
BIPH	**Bislig**	**2.72**	**338**	⇑*e*P	**P**	**00 36 33.1**	**+9.0**
BIPH				*e*S	**S**	**00 36 55.0**	**-2.8**
QIZ	**Qiongzhong**	**21.67**	**309**	P	**P**	**00 40 20.7**	**+0.6**
	23nm,1.3s,mb4.5						
WRAB	**Tennant Creek**	**26.33**	**165**	P	**P**	**00 41 05.1**	**+0.5**
WRA	**Warramunga Arr**	**26.34**	**165**	P	**P**	**00 41 04.4**	**-0.3**
	0.6nm,0.5s,mb3.5,baz=344,slow=10,SNR=11						
ENH	**Enshi**	**29.74**	**328**	*e*P	**P**	**00 41 35.2**	**-0.1**
	5.4nm,0.7s,mb4.4						
ASAR	**Alice Springs**	**29.82**	**168**	P	**P**	**00 41 35.8**	**-0.3**
	0.3nm,0.4s,mb3.4,baz=347,slow=7.2,SNR=6.0						
KS15	**Wonju Array Si**	**31.64**	**1**	P	**P**	**00 41 52.8**	**+0.9**
XAN	**Xi'an**	**33.03**	**331**	P	**P**	**00 42 03.6**	**-0.4**
XAN				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.5						
BJT	**Baijiatuau**	**35.68**	**345**	*e*P	**P**	**00 42 26.9**	**+0.5**
	comp=Z,7.7nm,0.9s,mb4.3						
NWAO	**Narrogin (SRO)**	**39.56**	**193**	P	**P**	**00 42 58.9**	**+0.1**
	comp=Z,3.4nm,0.6s,mb4.2,baz=237,slow=7.9,SNR=4.0						
NWAO	**Narrogin (SRO)**	**39.56**	**193**	P	**P**	**00 42 58.3**	**-0.6**
STKA	**Stephens Creek**	**39.70**	**161**	P	**P**	**00 43 00.1**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.6,baz=306,slow=20,SNR=2.7						
HIA	**Hailar**	**43.94**	**353**	*e*P	**P**	**00 43 34.7**	**+0.4**
	comp=Z,1.9nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**45.52**	**341**	*e*P	**P**	**00 43 47.4**	**+0.4**
	comp=Z,2.8nm,0.6s,mb4.1						
SONM	**Songino Array**	**45.71**	**340**	P	**P**	**00 43 49.3**	**+0.9**
	comp=Z,1.0nm,0.6s,mb3.6,baz=154,slow=8.7,SNR=18						
YAK	**Yakutsk**	**56.28**	**1**	P	**P**	**00 45 07.5**	**-0.3**
ZAL	**Zalesovo**	**59.20**	**332**	P	**P**	**00 45 27.1**	**-1.2**
	comp=Z,1.2nm,0.4s,mb4.1,baz=0.9,slow=6.1,SNR=6.7						
AAK	**Ala-Archa**	**59.40**	**317**	P	**P**	**00 45 25.6**	**-4.3**
KURK	**Kurchatov**	**60.50**	**327**	*e*P	**P**	**00 45 36.9**	**-0.3**
	comp=Z,14nm,1.0s,mb4.8						
BILL	**Bilibino**	**67.53**	**15**	P	**P**	**00 46 20.6**	**-2.1**
MCK	**McKinley**	**82.16**	**27**	*e*P	**P**	**00 47 46.3**	**+0.3**
	comp=Z,3.0nm,1.0s,mb3.9						
ILAR	**Eielson Array**	**83.09**	**26**	P	**P**	**00 47 50.8**	**0.0**
	comp=Z,1.0nm,0.5s,mb3.8,baz=251,slow=5.5,SNR=21						
INK	**Inuvik**	**88.14**	**22**	*e*P	**P**	**00 48 15.9**	**+0.5**
	comp=Z,0.8nm,0.7s,mb3.7						
ARCES	**ARCESS Array B**	**88.88**	**340**	P	**P**	**00 48 18.7**	**-0.1**
	comp=Z,4.4nm,1.0s,mb4.3,baz=82,slow=6.4,SNR=4.8						
FINES	**FINESS Array B**	**90.46**	**332**	P	**P**	**00 48 26.0**	**-0.4**
	comp=Z,8.0nm,1.2s,mb4.5,baz=63,slow=3.1,SNR=3.9						
YKA	**Yellowknife Ar**	**97.48**	**24**	P	**P**	**00 48 58.9**	**+0.4**
	comp=Z,0.1nm,0.4s,mb3.5,baz=301,slow=4.5,SNR=5.5						
YKA	**Yellowknife Ar**	**97.48**	**24**	P	**P**	**00 48 58.9**	**+0.4**

DJA 10 00:40:14.7±1.7**,10.81S**×**116.01E,h33**^{km}**,ML4.4**/4**,4C-1D, Error ellipse: s-maj=47.6km s-min=21.3km az=179.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**2.12**	**347**	⇑*e*Pn	Pn	00 40 47.5	-1.2
	306nm,0.2s						
KEDI	**Kedomdong**	**2.31**	**3**	⇑*e*Pn	Pn	00 40 49.7	-1.6
	399nm,0.2s						
SRDI	**Scrawed**	**2.96**	**321**	⇓*e*Pn	Pn	00 40 58.5	-2.1
	90nm,0.2s						
SRDI				⇑*e*Sn	Sn	00 41 31.3	-4.0
KELI	**Kelakatan**	**2.98**	**330**	⇑*e*Pn	Pn	00 41 00.0	-0.9
	54nm,0.3s						

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*THE **10** 00:55:37.6,39.00N×21.29E,h8^{km},ML3.2*

*ATH **10** 00:55:38.0,39.22N×21.36E,h26^{km}±3^{km},MD3.3/7*

*NEIC **10** 00:55:38.3,39.24N×21.41E,h25^{km},MD3.3(ATH),After ATH.*

*CSEM **10** 00:55:38.9±0.1,39.19N×21.33E,h10^{km},MD3.3,Error ellipse: s-maj=3.2km s-min=2.0km az=25.0*

ISC 10 00:55:38.0±0.5**,39.14N**±0.03×**21.30E**±0.03**,h10**^{km}**,n24, σ1^{s}32**/37**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.46**	**119**	*e*PB	**Pb**	**00 55 46.9**	**-0.8**
EVR				*e*SB	**Sb**	**00 55 55.2**	**+1.0**
JAN	**Janina**	**0.62**	**326**	*e*PN	**Pn**	**00 55 49.5**	**-3.1**
JAN				*e*SN	**Sn**	**00 55 59.3**	**-3.3**
AGG	**Agios Georgios**	**0.81**	**98**	*e*Pg	**Pg**	**00 55 53.0**	**-1.4**
AGG				*e*Sg	**Sg**	**00 56 04.5**	**-0.8**
IGT	**Igoumenitsa**	**0.84**	**298**	*e*Pg	**Pg**	**00 55 54.4**	**-0.6**
IGT				*e*Sg	**Sg**	**00 56 08.8**	**+2.5**
RLS	**Riolos of Patr**	**1.09**	**173**	*e*PN	**Pn**	**00 56 00.9**	**+1.6**
VLS	**Valsamata**	**1.11**	**210**	*e*PB	**Pb**	**00 55 59.4**	**+0.6**
LSK	**Leskovik**	**1.14**	**332**	*e*Pn	**Pn**	**00 55 58.6**	**-1.5**
LSK				*i* Sn	**Sn**	**00 56 14.6**	**-1.2**
KZN	**Kozani**	**1.22**	**17**	*e*PN	**Pn**	**00 55 59.6**	**-1.6**
KEK	**Kerkira**	**1.29**	**297**	*e*Pb	**Pb**	**00 56 02.1**	**+0.1**
KEK				*e*Pn	**Pn**	**00 56 04.3**	**+2.1**
KEK	**Kerkira**	**1.29**	**297**	*e*Pn	**Pn**	**00 56 04.3**	**+2.1**
LIT	**Litokhoron**	**1.33**	**43**	*e*Pb	**Pb**	**00 56 01.7**	**-0.9**
LKR	**Lokris**	**1.42**	**110**	*e*PN	**Pn**	**00 56 04.3**	**+0.3**
XOR	**Xorichti**	**1.49**	**81**	*e*Pb	**Pb**	**00 56 05.1**	**-0.3**
XOR				*e*Sb	**Sb**	**00 56 25.1**	**+0.9**
NEO	**Neokhori**	**1.51**	**83**	*e*PN	**Pn**	**00 56 04.5**	**-0.8**
FNA	**Florina**	**1.64**	**2**	*e*Pb	**Pb**	**00 56 07.5**	**-0.5**
FNA				*e*Sb	**Sb**	**00 56 30.7**	**+2.0**
THE	**Thessaloniki**	**1.97**	**40**	*e*Pn	**Pn**	**00 56 13.1**	**+1.2**
THE				*e*Sn	**Sn**	**00 56 39.3**	**+2.5**
GRG	**Griva**	**2.00**	**25**	*e*Pn	**Pn**	**00 56 11.2**	**-1.2**
GRG				*e*Sn	**Sn**	**00 56 41.2**	**+3.5**
AOS	**Alonnisos**	**2.01**	**88**	*e*Pn	**Pn**	**00 56 12.1**	**-0.3**
AOS				*e*Sn	**Sn**	**00 56 37.0**	**-0.8**
ITM	**Ithomi**	**2.02**	**166**	*e*PB	**Pb**	**00 56 15.0**	**+0.6**
SOH	**Sokhos**	**2.31**	**43**	*e*Pn	**Pn**	**00 56 17.5**	**+0.8**
SOH				*e*Sn	**Sn**	**00 56 48.1**	**+2.7**
KNT	**Kendrikon**	**2.36**	**31**	*e*Pn	**Pn**	**00 56 16.5**	**-1.1**
KNT				*e*Sn	**Sn**	**00 56 49.0**	**+2.1**
OUR	**Ouranopolis**	**2.39**	**59**	*e*Pn	**Pn**	**00 56 17.1**	**-0.8**
SRS	**Serrai**	**2.65**	**41**	*e*Pn	**Pn**	**00 56 22.3**	**+0.7**
SKO	**Skopje**	**2.83**	**2**	*e*Pn	**Pn**	**00 56 23.0**	**-1.2**

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*IDC **10** 01:34:29.0±0.5,8.08N×94.18E,h15^{km}±2^{km},mb4.5/19, mb1 4.6/20,mb1mx4.6/24,mbtmp4.6/20,ML4.4/1,MS4.3/11, Ms1 4.3/11,ms1mx4.0/24,Error ellipse: s-maj=20.9km s-min=12.2km az=52.0*

*MOS **10** 01:34:29.4±1.1,8.07N×94.23E,h33^{km},mb5.2/19, MS4.5/6,Error ellipse: s-maj=16.0km s-min=7.0km az=120.7*

*BJI **10** 01:34:30.5,7.90N×94.11E,h44^{km},mb4.7,mB5.1,Ms4.5, Msz4.5*

*NEIC **10** 01:34:31.0±0.2,8.11N×94.29E,h30^{km},mb5.0/55, MS4.0/2,Error ellipse: s-maj=6.3km s-min=4.8km az=57.0*

*HRVD **10** 01:34:31.0±0.4,8.01N×94.20E,h12^{km},MW5.0/45, Centroid moment Tensor Solution. LP body waves: s15,c17;Mantle waves: s45,c71; Half duration: 0 Moment* *tensor: Scale 10^{16}Nm; M_{rr}-2.31±.14; $M_{\theta\theta}$0.20±.11; $M_{\phi\phi}$2.11±.11; $M_{r\theta}$-1.39±.43; $M_{\theta\phi}$2.24±.10; $M_{\phi r}$-0.04±.34; Best double couple: $M_0$3.407×10^{16} NP1:ϕ_s184°,δ46°, λ-136°. NP2:ϕ_s60°,δ60°,λ-53°. Principal axes: T 3.701, Plg8°, Azm125°; N -.589, Plg31°, Azm220°; P -3.112, Plg58°, Azm23°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 10 01:34:27.4±0.2**, 8.02N**±0.04×**94.24E**±0.03**, h18**^{km}**, h18**^{km}±.5^{km}**:pP-P, n227,** σ**1**^{s}**03**/219**, mb4.9**/90**, MS4.4**/27**, 8C-15D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**7.56**	**116**	P	**Pn**	**01 36 19.1**	**-0.5**
CM31	**Chiang Mai Arr**	**11.34**	**23**	*e*P	**P**	**01 37 06.2**	**-5.5**
	37nm,1.1s						
CMAR	**Chiang Mai Arr**	**11.34**	**23**	*i* P	**P**	**01 37 14.3**	**+2.6**
CMAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**11.34**	**23**	Pn	**P**	**01 37 13.8**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=212,slow=14,SNR=33						
CMAR				LR	LR	01 41 46.1	
	comp=Z,862nm,19.1s,baz=215,slow=39						
CMAR	**Chiang Mai Arr**	**11.34**	**23**	Pn	**P**	**01 37 13.8**	**+2.1**
CMAR				LR	LR	01 41 46.1	
VIS	**Vishakhapatnam**	**14.35**	**313**	*e*P	**P**	**01 37 50.9**	**-1.0**
VIS				*e*		01 37 59.2	
	comp=Z,75nm,1.6s						
VIS				*e*		01 40 10.4	
VIS				*i*		01 41 37.1	
MDRS	**Chennai**	**14.64**	**291**	*e*P	**P**	**01 38 00.9**	**+5.1**
MDRS				*e*		01 40 52.9	
MDRS				*e*		01 46 30.9	
CAL	**Calcutta**	**15.51**	**339**	*e*	**P**	**01 38 13.8**	**+6.7**
CAL				*e*		01 41 11.9	
CAL				*e*		01 41 24.1	
BOK	**Bokaro**	**17.61**	**334**	*e*P	**P**	**01 38 36.1**	**+2.5**
BOK				*e*		01 38 43.6	
	comp=Z,104nm,1.3s						
BOK				*e*		01 41 36.9	
BOK				*i*		01 44 09.2	
HYB	**Hyderabad**	**17.91**	**303**	*e*P	**P**	**01 38 39.0**	**+1.5**
HYB				*e*S	**S**	**01 41 55.0**	**+0.9**
HYB	**Hyderabad**	**17.91**	**303**	*i* P	**P**	**01 38 39.0**	**+1.5**
HYB				*e*S	**S**	**01 41 55.0**	**+0.9**
BLSP	**Bilaspur**	**18.24**	**322**	*e*P	**P**	**01 38 42.9**	**+1.3**
BLSP				*e*		01 38 49.4	
	comp=Z,86nm,1.7s						
BLSP				*e*S	**S**	**01 42 01.8**	**+0.2**
BLSP				*i*		01 43 54.4	
QIZ	**Qiongzhong**	**18.68**	**53**	P	**P**	**01 38 47.2**	**+0.2**
QIZ				S	**S**	**01 42 09.7**	**-1.9**
QIZ				AMB	AMB		
	comp=Z,199nm,5.3s						
QIZ				LR	LR		
	comp=Z,2µm,10.1s						
QIZ	**Qiongzhong**	**18.68**	**53**	P	**P**	**01 38 43.0**	**-4.1**
	comp=Z,71nm,1.4s						
KMI	**Kunming**	**18.84**	**25**	P	**P**	**01 38 49.3**	**+0.4**
KMI				PP	PP	01 39 07.9	+2.7
KMI				AMB	AMB		
	comp=Z,17nm,2.0s						
KMI				AMB	AMB		
	comp=Z,415nm,4.1s						
KMI				LR	LR		
	comp=N,928nm,12.9s						
KMI				LR	LR		
	comp=E,962nm,12.0s						
KMI				LR	LR		
	comp=Z,903nm,12.9s						
KMI	**Kunming**	**18.84**	**25**	P	**P**	**01 38 49.3**	**+0.4**
	comp=Z,17nm,2.0s						
KMI				pP		01 38 54.4	
KMI				sP		01 38 57.0	
KMI				PP	PP	01 39 07.9	+2.7
KMI				S	**S**	**01 42 15.3**	**+0.2**
KMI				sS		01 42 23.9	
KMI				SS	SS	01 42 41.6	+1.2
NGP	**Nagpur**	**19.63**	**313**	*e*P	**P**	**01 38 58.7**	**+0.6**
NGP				*e*		01 42 49.6	
MNGI	**Mangalore**	**19.70**	**286**	*e*	**P**	**01 38 49.0**	**-10**
MNGI				*e*S	**S**	**01 42 43.0**	**+8.6**
ALBI	**Allahabad**	**20.88**	**327**	*e*P	**P**	**01 39 10.0**	**-1.3**
JIRN	**Jiri**	**20.96**	**340**	*e*P	**P**	**01 39 11.6**	**-0.5**
	comp=Z,210nm,1.1s						
PKI	**Pulchoki**	**21.16**	**338**	*e*P	**P**	**01 39 13.4**	**-0.7**
	comp=Z,184nm,1.0s,mb5.4						
DMN	**Daman**	**21.31**	**337**	*e*P	**P**	**01 39 15.6**	**0.0**
	comp=Z,193nm,0.9s,mb5.4						
KKN	**Kakani**	**21.41**	**338**	*e*P	**P**	**01 39 16.3**	**-0.3**
	comp=Z,94nm,0.8s,mb5.2						
KAD	**Karad**	**21.61**	**297**	*e*P	**P**	**01 39 19.0**	**+0.3**
LSA	**Lhasa**	**21.76**	**353**	P	**P**	**01 39 20.0**	**-0.1**
LSA				AP		01 39 30.3	
LSA				XP		01 39 32.9	
LSA				S	**S**	**01 43 19.2**	**+4.2**
LSA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.0						
LSA				LR	LR		
	comp=E,470nm,17.3s						
LSA				LR	LR		
	comp=Z,300nm,13.9s,MS3.9						
LSA	**Lhasa**	**21.76**	**353**	*e*P	**P**	**01 39 20.0**	**-0.1**
	comp=Z,119nm,1.1s,mb5.2						
GYA	**Guiyang**	**21.81**	**31**	⇑*i*P	**P**	**01 39 24.3**	**+3.7**
GYA				AP		01 39 33.5	
GYA				XP		01 39 37.6	
GYA				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,180nm,5.4s						
GYA				LR	LR		
	comp=N,1µm,12.0s,MS4.5						
GYA				LR	LR		
	comp=E,800nm,12.6s,MS4.5						
GYA				LR	LR		
	comp=Z,1µm,11.7s,MS4.5						
GKN	**Gorkha**	**21.85**	**337**	*e*P	**P**	**01 39 21.0**	**0.0**
	comp=Z,96nm,0.6s,mb5.4						
KKM	**Kota Kinabalu**	**21.90**	**94**	P	**P**	**01 39 25.9**	**+4.3**
KOLN	**Koldanda**	**22.07**	**334**	*e*P	**P**	**01 39 23.6**	**+0.4**
	comp=Z,392nm,1.3s,mb5.7						
BHPL	**Bhopal**	**22.12**	**315**	*e*P	**P**	**01 39 25.4**	**+1.6**
BHPL				*e*		01 39 32.1	
	comp=Z,89nm,1.6s						
BHPL				*e*S	**S**	**01 43 26.5**	**+4.8**
POO	**Poona**	**22.40**	**300**	*e*P	**P**	**01 39 26.0**	**-0.5**
BOM	**Bombay**	**23.44**	**300**	*e*P	**P**	**01 39 39.9**	**+3.1**
CD2	**Chengdu**	**24.45**	**20**	*e*P	**P**	**01 39 48.6**	**+2.1**
CD2				AMB	AMB		
	comp=Z,38nm,1.2s,mb4.7						
LGTI	**Lohaghat**	**25.05**	**330**	*e*	**P**	**01 39 53.0**	**+0.7**
PTH	**Pithoragarh**	**25.14**	**330**	*e*P	**P**	**01 39 53.0**	**-0.2**
PTH				*e*		01 42 54.0	
NDI	**New Delhi**	**26.07**	**324**	*e*P	**P**	**01 40 01.0**	**-0.9**
NDI				*e*		01 43 04.5	
ENH	**Enshi**	**26.34**	**31**	*e*P	**P**	**01 40 05.6**	**+1.2**
	comp=Z,27nm,0.8s,mb4.8						
SDNR	**Sundarnagar**	**28.37**	**328**	*e*P	**P**	**01 40 23.6**	**+0.8**
XAN	**Xi’an**	**29.22**	**26**	P	**P**	**01 40 30.7**	**+0.3**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
WHN	**Wuhan**	**29.26**	**37**	*e*P	**P**	**01 40 29.5**	**-1.3**
LZH	**Lanzhou**	**29.28**	**16**	*e*P	**P**	**01 40 33.4**	**+2.4**
LZH				AP	pP	01 40 40.6	+4.4
LZH				XP	sP	01 40 45.5	+6.9
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,99nm,4.5s						
LZH				LR	LR		
	comp=Z,1µm,13.7s,MS4.6						
LZH	**Lanzhou**	**29.28**	**16**	*e*P	**P**	**01 40 33.4**	**+2.4**
	comp=Z,30nm,1.0s,mb5.0						
LZH				pP	pP	01 40 40.6	+4.4
LZH				sP	sP	01 40 45.5	+6.9
LZH				LR	LR		
	comp=Z,1µm,13.7s,MS4.6						
GTA	**Gaotai**	**31.65**	**8**	*e*P	**P**	**01 40 52.9**	**+1.0**
GTA				PP	PP	01 41 57.9	+1.1
GTA				PCP	PcP	01 43 44.8	+0.9
GTA				S	**S**	**01 45 58.7**	**-0.4**
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.2						
GTA				AMB	AMB		
	comp=Z,207nm,6.1s						
GTA				LR	LR		
	comp=N,310nm,16.3s,MS4.3						
GTA				LR	LR		
	comp=E,348nm,12.9s,MS4.3						
GTA				LR	LR		
	comp=Z,357nm,16.7s,MS4.1						
NJ2	**Nanjing**	**33.09**	**40**	*e*P	**P**	**01 41 04.4**	**-0.2**
NJ2				PP	PP	01 42 14.5	-1.1
NJ2				AMB	AMB		
	comp=Z,450nm,4.7s						
NJ2				LR	LR		
	comp=Z,1µm,11.9s,MS4.8						
SSE	**Sheshan**	**34.05**	**44**	P	**P**	**01 41 12.1**	**-0.8**
SSE				S	**S**	**01 46 38.3**	**+1.9**
SSE				XS		01 46 52.9	
SSE				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.9						
SSE				AMB	AMB		
	comp=Z,117nm,4.6s						
SSE				LR	LR		
	comp=N,240nm,19.4s,MS4.1						
SSE				LR	LR		
	comp=E,265nm,19.1s,MS4.1						
SSE				LR	LR		
	comp=Z,220nm,21.4s,MS3.9						
SSE	**Sheshan**	**34.05**	**44**	P	**P**	**01 41 12.1**	**-0.8**
	comp=Z,16nm,1.1s,mb4.9						
SSE				sP	sP	01 41 24.8	+4.3
SSE				S	**S**	**01 46 38.3**	**+1.9**
SSE				sS		01 46 52.9	
SSE				LR	LR		
	comp=Z,220nm,21.4s,MS3.9						
KSH	**Kashi**	**35.38**	**335**	*e*P	**P**	**01 41 23.7**	**-0.5**
KSH				*e*PP	PP	01 42 42.5	-1.4
KSH				*e*PCP	PcP	01 43 55.6	+1.2
KSH				*e*S	**S**	**01 46 54.3**	**-2.7**
KSH				*e*SCS	ScS	01 51 42.1	+1.1
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				AMB	AMB		
	comp=Z,140nm,4.4s						
WMQ	**Urumqi**	**36.12**	**352**	P	**P**	**01 41 31.0**	**+0.6**
WMQ				PP	PP	01 42 53.0	+0.2
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,215nm,18.0s,MS4.3						
WMQ				LR	LR		
	comp=E,394nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,239nm,18.0s,MS4.0						
HHC	**Hu-ho-hao-te**	**36.15**	**23**	*e*P	**P**	**01 41 32.9**	**+2.3**
HHC				PP	PP	01 42 54.1	+0.9
HHC				PCP	PcP	01 43 57.3	+0.7
HHC				AMB	AMB		
	comp=Z,12nm,1.9s,mb4.5						
HHC				AMB	AMB		
	comp=Z,190nm,5.4s						
HHC				LR	LR		
	comp=N,453nm,14.9s,MS4.5						
HHC				LR	LR		
	comp=E,581nm,17.2s,MS4.5						
HHC				LR	LR		
	comp=Z,338nm,19.5s,MS4.1						
BJT	**Baijiatuau**	**37.41**	**28**	*e*P	**P**	**01 41 42.4**	**+1.1**
	comp=Z,34nm,1.0s,mb5.1						
BJI	**Beijing**	**37.43**	**28**	P	**P**	**01 41 44.0**	**+2.6**
BJI				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.4						
BJI				LR	LR		
	comp=N,488nm,16.4s,MS4.5						
BJI				LR	LR		
	comp=E,360nm,16.4s,MS4.5						
BJI				LR	LR		
	comp=Z,361nm,20.9s,MS4.2						
BJI	**Beijing**	**37.43**	**28**	P	**P**	**01 41 44.0**	**+2.6**
	comp=Z,7.0nm,1.1s,mb4.4						
BJI				S	**S**	**01 47 37.0**	**+8.5**
BJI				LR	LR		
	comp=Z,360nm,20.9s,MS4.2						
UCH	**Uchtor**	**38.26**	**336**	P	**P**	**01 41 49.0**	**+0.6**
	SNR=8.3						
KBK	**Karagaybulak**	**38.45**	**337**	P	**P**	**01 41 50.8**	**+0.8**
	SNR=11						
AML	**Almayashu**	**38.51**	**335**	P	**P**	**01 41 51.4**	**+0.9**
	SNR=22						
AAK	**Ala-Archa**	**38.61**	**336**	P	**P**	**01 41 52.4**	**+1.0**
	SNR=11						
AAK	**Ala-Archa**	**38.61**	**336**	*i* P	**P**	**01 41 51.0**	**-0.3**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**38.61**	**336**	*e*P	**P**	**01 41 50.9**	**-0.5**
	comp=Z,33nm,1.2s,mb4.9						
FRU	**Bishkek**	**38.73**	**337**	*e*P	**P**	**01 41 54.0**	**+1.7**
CHMS	**Chumysh**	**38.82**	**337**	P	**P**	**01 41 53.1**	**0.0**
	SNR=5.3						
EKS2	**Erkin-Say**	**38.92**	**336**	P	**P**	**01 41 54.6**	**+0.7**
	SNR=7.9						
USP	**Ospenovka**	**39.14**	**337**	P	**P**	**01 41 55.7**	**0.0**
	SNR=15						
SONM	**Songino Array**	**41.00**	**12**	P	**P**	**01 42 11.5**	**+0.5**
	comp=Z,3.3nm,0.9s,mb4.0,baz=196,slow=10,SNR=24						
SONM				pP	pP	01 42 17.2	+0.8
	comp=Z,8.4nm,1.0s,baz=207,slow=11,SNR=25						
SONM				PcP	PcP	01 44 12.3	+0.7
	comp=Z,1.3nm,0.6s,baz=189,slow=3.8,SNR=9.0						
SONM				pPcP		01 44 17.6	
	comp=Z,2.2nm,0.6s,baz=198,slow=3.9,SNR=7.0						
ULN	**Ulaanbaatar**	**41.17**	**13**	*e*P	**P**	**01 42 12.9**	**+0.5**
	comp=Z,10nm,1.0s,mb4.4						
KS15	**Wonju Array Si**	**42.26**	**41**	P	**P**	**01 42 18.5**	**-3.0**
ZAK	**Zakamensk**	**42.89**	**9**	*e*P	**P**	**01 42 24.2**	**-2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	**Talaya**	**44.21**	**8**	P	**P**	**01 42 36.8**	**-0.4**
	comp=Z,5.9nm,1.0s,mb4.3						
KURK	**Kurchatov**	**44.49**	**346**	*e*P	**P**	**01 42 39.0**	**-0.5**
	comp=Z,77nm,1.3s,mb5.3						
CN2	**Changchun**	**44.85**	**32**	*e*P	**P**	**01 42 43.4**	**+0.9**
CN2				*e*S	**S**	**01 49 19.6**	**+1.0**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
CN2				LR	LR		
	comp=Z,500nm,16.0s,MS4.5						
NWAO	**Narrogin (SRO)**	**46.23**	**153**	P	**P**	**01 42 54.8**	**+1.2**
	comp=Z,10nm,0.7s,mb4.9,baz=318,slow=12,SNR=5.0						
HIA	**Hailar**	**46.35**	**23**	*e*P	**P**	**01 42 51.1**	**-3.1**
	comp=Z,47nm,1.4s,mb5.2						
ZAL	**Zalesovo**	**46.41**	**352**	P	**P**	**01 42 54.3**	**-0.4**
	comp=Z,5.7nm,0.6s,mb4.7,baz=304,slow=5.6,SNR=31						
ZAL				LR	LR	02 07 17.0	
	comp=Z,268nm,18.7s,MS4.2,baz=287,slow=42						
NVS	**Novosibirsk**	**47.51**	**351**	*e*P	**P**	**01 43 02.5**	**-0.9**
NVS				pmax	pmax		
	comp=N,27nm,1.5s						
NVS				pmax	pmax		
	comp=Z,38nm,1.5s,mb5.2						
NVS				pmax	pmax		
	comp=E,13nm,1.3s						
MDJ	**Mudanjiang**	**47.63**	**34**	P	**P**	**01 43 03.4**	**-1.1**
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,69nm,3.4s						
MDJ				LR	LR		
	comp=N,88nm,19.5s,MS4.1						
MDJ				LR	LR		
	comp=E,188nm,17.8s,MS4.1						
MDJ				LR	LR		
	comp=Z,190nm,16.1s,MS4.2						
MDJ	**Mudanjiang**	**47.63**	**34**	*e*P	**P**	**01 42 59.2**	**-5.3**
	comp=Z,24nm,1.2s,mb5.1						
WRA	**Warramunga Arr**	**48.27**	**126**	*i* P	**P**	**01 43 09.5**	**-0.2**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**48.27**	**126**	P	**P**	**01 43 09.0**	**-0.8**
	comp=Z,3.3nm,0.9s,mb4.4,baz=305,slow=9.2,SNR=17						
WRAB	**Tennant Creek**	**48.27**	**126**	*i* P	**P**	**01 43 09.6**	**-0.2**
WRAB	**Tennant Creek**	**48.27**	**126**	*e*P	**P**	**01 43 09.3**	**-0.5**
	comp=Z,19nm,1.1s,mb5.0						
WB2	**Warramunga Arr**	**48.28**	**126**	*e*P	**P**	**01 43 09.3**	**-0.5**
BVAR	**Borovoye Array**	**48.88**	**341**	P	**P**	**01 43 13.1**	**-1.0**
	comp=Z,3.6nm,0.8s,mb4.5,baz=143,slow=7.4,SNR=22						
BVAR				pP	pP	01 43 18.3	-1.2
	comp=Z,8.4nm,1.0s,baz=158,slow=8.0,SNR=17						
BVAR				PcP	PcP	01 44 38.5	-0.3
	comp=Z,1.1nm,0.6s,baz=124,slow=5.2,SNR=3.1						
BVAR				pPcP		01 44 43.9	
	comp=Z,2.6nm,0.7s,baz=146,slow=5.3,SNR=4.7						
RAYN	**Ar Rayn**	**49.12**	**294**	P	**P**	**01 43 17.8**	**+1.6**
	comp=Z,198nm,0.6s,SNR=24						
CHKZ	**Chkalovo**	**49.36**	**342**	*e*P	**P**	**01 43 16.9**	**-0.8**
	comp=Z,54nm,1.1s,mb5.5						
CHKZ				*e*PcP	PcP	01 44 39.6	-0.9
ASAR	**Alice Springs**	**49.94**	**130**	P	**P**	**01 43 22.0**	**-0.6**
	comp=Z,2.9nm,0.8s,mb4.3,baz=307,slow=7.1,SNR=20						
ASAR				PcP	PcP	01 44 43.6	+0.7
	comp=Z,1.3nm,1.0s,baz=296,slow=3.2,SNR=2.6						
ASAR				pPcP		01 44 48.5	
	comp=Z,2.3nm,1.0s,baz=302,slow=4.3,SNR=4.5						
ASAR				LR	LR	02 04 57.3	
	comp=Z,210nm,18.4s,MS4.2,baz=300,slow=37						
KLR	**Kul’dur**	**51.71**	**31**	*e*P	**P**	**01 43 35.2**	**-0.5**
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,900nm,13.0s,MS5.0						
BOD	**Bodaibo**	**51.98**	**13**	*e*P	**P**	**01 43 37.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,23nm,2.4s,mb4.7						
GNI	**Garni**	**54.40**	**314**	P	**P**	**01 43 56.3**	**+0.5**
	comp=Z,95nm,1.4s,mb5.5,baz=224,slow=15,SNR=4.0						
TI2	**Plekhanov**	**55.01**	**316**	*e*P	**P**	**01 44 00.0**	**-0.2**
PMG	**Port Moresby**	**55.48**	**107**	P	**P**	**01 44 06.9**	**+2.9**
	comp=Z,7.0nm,0.7s,mb4.8,baz=326,slow=23,SNR=2.6						
KIV	**Kislovodsk**	**57.27**	**318**	*e*P	**P**	**01 44 15.4**	**-1.1**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
KIV				MLR	MLR		
	comp=Z,254nm,20.0s,MS4.3						
KIV				MLR	MLR		
	comp=N,119nm,15.0s,MS4.3						
KIV				MLR	MLR		
	comp=E,171nm,20.0s,MS4.3						
KMBO	**Kilima Mbogo**	**57.54**	**264**	*i* P	**P**	**01 44 21.1**	**+2.4**
KMBO				pmax	pmax		
	comp=Z,13nm,0.7s						
KMBO	**Kilima Mbogo**	**57.54**	**264**	P	**P**	**01 44 20.0**	**+1.3**
	comp=Z,13nm,0.7s,mb5.1,baz=57,slow=11,SNR=60						
KMBO				LR	LR	02 06 29.2	
	comp=Z,315nm,19.4s,MS4.4,baz=281,slow=33						
KMBO	**Kilima Mbogo**	**57.54**	**264**	*e*P	**P**	**01 44 20.5**	**+1.8**
	comp=Z,23nm,0.9s,mb5.2						
ASF	**Jabal al Asfar**	**58.22**	**303**	P	**P**	**01 44 23.2**	**-0.1**
	comp=Z,4.7nm,0.9s,mb4.5,baz=210,slow=2.2,SNR=5.6						
CTA	**Charters Tower**	**58.30**	**119**	LR	LR	02 10 18.0	
	comp=Z,272nm,21.5s,MS4.3,baz=229,slow=37						
MALT	**Malatya**	**58.44**	**310**	*e*P	**P**	**01 44 23.3**	**-1.4**
	comp=Z,12nm,1.2s,mb4.8						
SOKR	**Solikamsk**	**58.70**	**339**	⇓*i*P	**P**	**01 44 25.2**	**-1.0**
SOKR				*e*	pP	01 44 31.1	-0.7
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,700nm,22.0s,MS4.7						
SOC	**Sochi**	**59.14**	**316**	*e*P	**P**	**01 44 26.4**	**-3.1**
SOC				*e*		01 45 11.3	
SOC				*e*		01 46 38.3	
SOC				*e*PPP	PPP	01 47 59.1	-7.5
SOC				*e*S	**S**	**01 52 30.2**	**-4.0**
SOC				*e*		01 54 14.3	
SOC				*e*SS	SS	01 56 24.8	-5.5
SOC				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
SOC				pmax	pmax		
	comp=N,48nm,1.1s						
SOC				pmax	pmax		
	comp=E,30nm,1.0s						
SOC				MLR	MLR		
	comp=Z,550nm,21.0s,MS4.7						
SOC				MLR	MLR		
	comp=N,291nm,18.0s,MS4.5						
SOC				MLR	MLR		
	comp=E,145nm,20.0s,MS4.5						
EIL	**Elat**	**59.44**	**300**	*e*P	**P**	**01 44 30.9**	**-0.9**
	comp=E,30nm,1.2s,mb5.2						
EIL				*e*	pP	01 44 37.4	0.0
YAK	**Yakutsk**	**59.82**	**18**	*e*P	**P**	**01 44 32.9**	**-1.1**
YAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,118nm,18.6s						
YAK				pmax	pmax		
	comp=N,108nm,15.7s						
YAK				MLR	MLR		
	comp=Z,134nm,12.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,145nm,13.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,144nm,13.0s,MS4.5						
YAK	**Yakutsk**	**59.82**	**18**	*e*P	**P**	**01 44 33.7**	**-0.3**
	comp=E,45nm,0.9s,mb5.5						
STKA	**Stephens Creek**	**60.14**	**134**	P	**P**	**01 44 36.4**	**-0.2**
	comp=E,3.6nm,1.0s,mb4.4,baz=337,slow=10,SNR=5.6						
STKA				LR	LR	02 14 21.6	
	comp=E,392nm,19.0s,MS4.6,baz=113,slow=40						
STKA	**Stephens Creek**	**60.14**	**134**	*e*P	**P**	**01 44 36.2**	**-0.4**
ANN	**Anapa**	**61.09**	**317**	*e*P	**P**	**01 44 48.2**	**+5.4**
VRSR	**Storozhevoye**	**62.31**	**324**	*e*P	**P**	**01 44 48.8**	**-2.2**
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
VRSR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
BRTR	**Keskin Array B**	**62.41**	**311**	P	**P**	**01 44 49.4**	**-2.4**
	comp=E,12nm,1.0s,mb5.0,baz=125,slow=7.4,SNR=34						
BRTR				pP	pP	01 44 54.4	-3.0
	comp=E,3.8nm,0.9s,baz=113,slow=7.1,SNR=9.0						
MBAR	**Mbarara**	**63.87**	**265**	*e*P	**P**	**01 45 02.5**	**+0.5**
	comp=E,32nm,1.6s,mb5.1						
MOS	**Moscow**	**65.00**	**329**	*e*P	**P**	**01 45 05.9**	**-2.6**
MOS				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.6						
OBN	**Obninsk**	**65.31**	**328**	*e*P	**P**	**01 45 09.2**	**-1.3**
OBN				*i*	pP	01 45 15.2	-0.9
OBN				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
OBN	**Obninsk**	**65.31**	**328**	*e*P	**P**	**01 45 07.9**	**-2.6**
	comp=Z,63nm,1.2s,mb5.5						
MA2	**Magadan**	**66.59**	**28**	*e*P	pP	01 45 25.3	+1.1
MA2				*e*		01 47 42.3	
MA2				MLR	MLR		
	comp=Z,400nm,28.0s,MS4.5						
MA2	**Magadan**	**66.59**	**28**	*e*P	**P**	**01 45 19.4**	**+0.8**
	comp=Z,18nm,0.9s,mb5.1						
CFR	**Carcaliu**	**67.56**	**316**	⇓P	**P**	**01 45 24.0**	**-1.0**
CFR	**Carcaliu**	**67.56**	**316**	⇓P	**P**	**01 45 24.0**	**-1.0**
AKASG	**Malin Array Be**	**68.10**	**322**	P	**P**	**01 45 26.1**	**-2.3**
	comp=Z,5.1nm,0.7s,mb4.7,baz=89,slow=4.9,SNR=22						
AKASG				pP	pP	01 45 31.4	-2.5
	comp=Z,2.3nm,0.7s,baz=92,slow=4.7,SNR=9.8						
AKASG				PP	PP	01 47 56.1	-4.5
	comp=Z,0.5nm,0.6s,baz=90,slow=7.3,SNR=4.2						
VRI	**Vrincioaia**	**68.66**	**316**	⇓P	**P**	**01 45 31.6**	**-0.3**
MLR	**Muntele Rosu**	**69.13**	**316**	⇑P	**P**	**01 45 34.6**	**-0.2**
MLR	**Muntele Rosu**	**69.13**	**316**	⇑P	**P**	**01 45 34.6**	**-0.2**
LSZ	**Lusaka**	**69.41**	**250**	*e*P	**P**	**01 45 37.6**	**+0.7**
	comp=Z,4.1nm,0.7s,mb4.5						
RZN	**Rozhen**	**69.43**	**311**	*i* P	**P**	**01 45 35.5**	**-1.2**
BURAR	**Bucovina Array**	**70.00**	**318**	⇑P	**P**	**01 45 40.0**	**-0.1**
MMB	**Musomiste**	**70.15**	**311**	P	**P**	**01 45 40.0**	**-1.1**
VTS	**Vitosha**	**70.66**	**312**	P	**P**	**01 45 43.0**	**-1.1**
KKB	**Krupnik**	**70.66**	**311**	*i* P	**P**	**01 45 42.7**	**-1.5**
JOF	**Joensuu**	**70.76**	**334**	*e*p	**P**	**01 45 42.7**	**-1.7**
KWP	**Kalwaria**	**71.98**	**320**	*e*P	**P**	**01 45 51.6**	**-0.4**
KOLS	**Kolonicke sedl**	**72.16**	**319**	*i* P	**P**	**01 45 52.7**	**-0.3**
BZS	**Buzias**	**72.16**	**315**	⇑P	**P**	**01 45 52.7**	**-0.4**
SUW	**Suwalki**	**72.44**	**324**	*e*P	**P**	**01 45 53.3**	**-1.3**
	comp=Z,108nm,1.1s,mb5.7						
FINES	**FINESS Array B**	**72.63**	**332**	*i* P	**P**	**01 45 54.9**	**-0.7**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	**FINESS Array B**	**72.63**	**332**	P	**P**	**01 45 54.9**	**-0.7**
	comp=Z,5.8nm,0.7s,mb4.6,baz=94,slow=6.5,SNR=38						
FINES				pP	pP	01 46 00.0	-1.2
	comp=Z,8.3nm,0.9s,baz=117,slow=8.5,SNR=8.3						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES				LR	LR	02 22 20.0	
	comp=Z,336nm,18.8s,MS4.6,baz=308,slow=40						
CRVS	Cervenica-Dubn	72.68	319	i P	P	01 45 55.8	-0.4
CRVS				i	pP	01 46 02.1	+0.3
KAF	Kangasniemi	72.70	333	ep	P	01 45 55.0	-1.0
	comp=Z,5.6nm,0.6s,mb4.7,baz=104,slow=5.6						
KAF	Kangasniemi	72.70	333	eP	P	01 45 55.0	-1.0
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
NIE	Niedzica	73.50	319	⇑eP	P	01 45 59.7	-1.2
OJC	Ojcow	73.92	320	eP	P	01 46 03.0	-0.4
LBTB	Lobatse	74.40	241	eP	P	01 46 07.5	+0.8
	comp=Z,9.6nm,0.7s,mb4.8						
OKC	Ostrava-Krasne	74.94	319	eP	P	01 46 08.7	-0.6
OKC				epP	pP	01 46 14.3	-0.6
CASY	Casey	75.06	173	P	P	01 46 10.0	+0.3
ARCES	ARCESS Array B	75.16	340	P	P	01 46 10.3	+0.1
	comp=Z,3.5nm,0.6s,mb4.5,baz=91,slow=5.5,SNR=18						
ARCES				LR	LR	02 21 47.7	
	comp=Z,547nm,20.8s,MS4.8,baz=187,slow=38						
ARCES	ARCESS Array B	75.16	340	P	P	01 46 10.3	+0.1
ARCES				LR	LR	02 21 47.7	
SMOL	Smolenice	75.30	318	i P	P	01 46 11.4	+0.1
MORC	Moravsky Berou	75.33	319	eP	P	01 46 11.3	-0.2
	comp=Z,27nm,1.1s,mb5.1						
ZST	Bratislava	75.49	318	i P	P	01 46 12.8	+0.4
ZST				i	pP	01 46 18.4	+0.3
BOSA	Boshof	75.75	238	eP	P	01 46 15.3	+0.9
	comp=Z,9.2nm,0.8s,mb4.8						
BILL	Bilibino	75.91	22	eP	P	01 46 15.1	+0.6
	comp=Z,7.4nm,0.8s,mb4.7						
DPC	Dobruska-Polom	76.16	320	eP	P	01 46 16.7	+0.5
DPC				epP	pP	01 46 22.2	+0.4
KSP	Ksiaz	76.21	320	eP	P	01 46 16.5	0.0
KSP				epP	pP	01 46 21.3	-0.8
KSP	Ksiaz	76.21	320	eP	P	01 46 16.8	+0.3
UPC	Upice	76.37	320	eP	P	01 46 17.5	+0.2
UPC				epP	pP	01 46 23.0	0.0
ARSA	Arzberg	76.50	317	⇓iP	P	01 46 18.2	+0.1
	comp=Z,14nm,1.1s,mb4.8						
PERS	Pernice	76.75	316	⇓iP	P	01 46 19.6	0.0
VAE	Valguarnera	77.11	307	LR	LR	02 19 51.3	
	comp=Z,156nm,21.5s,MS4.3,baz=307,slow=35						
PRU	Pruhonice	77.28	319	eP	P	01 46 22.8	+0.4
PRU				epP	pP	01 46 27.7	-0.4
PVCC	Panska Ves	77.29	320	eP	P	01 46 22.2	-0.3
PVCC				epP	pP	01 46 27.9	-0.2
MOA	Molln	77.37	317	⇓iP	P	01 46 22.3	-0.7
	comp=Z,16nm,1.1s,mb4.8						
BRG	Berggiesshubel	77.70	320	i P	P	01 46 25.0	+0.3
BRG				i		01 46 28.5	
BRG				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
BRG	Berggiesshubel	77.70	320	i P	P	01 46 25.0	+0.3
	comp=Z,17nm,1.1s,mb4.9						
BRG				i		01 46 28.5	
GEC2	GERESS Array S	77.78	318	eP	P	01 46 25.3	+0.1
GEC2				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
GEC2	GERESS Array S	77.78	318	eP	P	01 46 25.3	+0.1
	comp=Z,20nm,1.1s,mb5.0						
GERES	GERESS Array B	77.78	318	P	P	01 46 25.4	+0.2
	comp=Z,10nm,0.8s,mb4.8,baz=86,slow=5.3,SNR=88						
GERES				pP	pP	01 46 30.7	-0.2
	comp=Z,2.4nm,0.7s,baz=79,slow=6.8,SNR=17						
KHC	Kasperske Hory	77.87	318	eP	P	01 46 24.1	-1.6
KHC				epP	pP	01 46 30.8	-0.6
RUE	Ruedersdorf	77.87	322	eP	P	01 46 22.4	-3.2
	comp=Z,74nm,1.0s,mb5.6						
PTCC	Patocco-Chiusa	77.96	316	eP	P	01 46 26.1	-0.1
KBA	Koelnbreinsper	77.98	316	⇓iP	P	01 46 25.8	-0.5
	comp=Z,15nm,1.3s,mb4.8						
CLL	Collm	78.31	321	⇓iP	P	01 46 27.8	-0.2
CLL				i	pP	01 46 33.3	-0.4
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
CLL	Collm	78.31	321	⇓iP	P	01 46 27.8	-0.2
	comp=Z,9.0nm,0.8s,mb4.8						
CLL				i	pP	01 46 33.3	-0.4
CLL	Collm	78.31	321	⇓P	P	01 46 27.8	-0.2
	comp=Z,logA/T=1.1,mb4.8						
CLL				i *SP	sP	01 46 33.3	-2.4
WET	Wettzell	78.33	318	eP	P	01 46 28.4	+0.2
WET				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
WET	Wettzell	78.33	318	eP	P	01 46 28.4	+0.2
	comp=Z,16nm,1.2s,mb4.8						
FVI	Forni Avoltri	78.36	316	eP	P	01 46 28.2	-0.2
NKC	Novy Kostel	78.63	320	eP	P	01 46 30.1	+0.2
SFI	Santa Sofia	79.01	313	eP	P	01 46 33.0	+0.9
PGD	Poggio Sodo	79.11	313	eP	P	01 46 33.9	+1.3
CTI	Castel Tesino	79.14	315	eP	P	01 46 33.0	+0.3
WTTA	Wattenberg	79.14	317	⇑iP	P	01 46 32.1	-0.6
	comp=Z,25nm,1.5s,mb4.9						
MOX	Moxa	79.17	320	eP	P	01 46 33.1	+0.3
MOX				e	pP	01 46 38.6	+0.1
MOX				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
MOX	Moxa	79.17	320	eP	P	01 46 33.1	+0.3
	comp=Z,19nm,1.5s,mb4.8						
MOX				e	pP	01 46 38.6	+0.1
MOX	Moxa	79.17	320	i P	P	01 46 33.1	+0.3
MOX				pP	pP	01 46 39.0	+0.5
WATA	Walderalm	79.18	317	⇓iP	P	01 46 32.3	-0.6
	comp=Z,9.1nm,1.0s,mb4.7						
GRA1	Grafenberg Arr	79.42	319	eP	P	01 46 34.7	+0.5
	comp=Z,19nm,0.9s,mb5.0						
GRA1				epP	pP	01 46 40.1	+0.2
GRF	Grafenberg Arr	79.42	319	eP	P	01 46 34.7	+0.5
GRF				e*PP	pP	01 46 40.1	+0.2
GRF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
GRF	Grafenberg Arr	79.42	319	eP	P	01 46 34.7	+0.5
	comp=Z,19nm,0.9s,mb5.0						
GRF				epP	pP	01 46 40.1	+0.2
SQTA	Sankt Quirin	79.44	317	⇓iP	P	01 46 33.8	-0.5
	comp=Z,14nm,1.2s,mb4.8						
MOTA	Moosalm	79.50	317	⇓iP	P	01 46 34.1	-0.6
	comp=Z,8.0nm,1.0s,mb4.6						
ZCCA	Zocca	79.63	314	eP	P	01 46 37.0	+1.6
NB2	NORSAR Subarra	79.65	331	P	P	01 46 34.4	-0.8
	comp=Z,0.7nm,0.7s,baz=90,slow=6.5						
NOA	NORSAR Array B	79.65	331	P	P	01 46 34.4	-0.8
	comp=Z,12nm,1.2s,mb4.7,baz=97,slow=5.4,SNR=7.4						
NOA				LR	LR	02 23 53.5	
	comp=Z,210nm,20.4s,MS4.5,baz=115,slow=37						
NOA	NORSAR Array B	79.65	331	P	P	01 46 34.4	-0.8
NOA				LR	LR	02 23 53.5	
GSCL	Gusciola	79.91	314	eP	P	01 46 37.8	+0.8
CLZ	Clausthal	79.96	321	eP	P	01 46 37.4	+0.4
	comp=Z,33nm,1.3s,mb5.1						
BSEG	Bad Segeberg	79.99	323	eP	P	01 46 37.7	+0.6
BSEG				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
BRMO	Bormio	80.02	316	eP	P	01 46 38.0	+0.6
TSUM	Tsumeb	80.17	249	eP	P	01 46 40.3	+1.5
	comp=Z,11nm,1.3s,mb4.6						
DAVA	Damuels	80.34	317	⇑iP	P	01 46 39.6	+0.5
	comp=Z,17nm,0.9s,mb5.0						
SUR	Sutherland	80.50	235	P	P	01 46 40.6	+0.3
	comp=Z,22nm,1.1s,mb5.0						
VAI	Varese	81.15	315	eP	P	01 46 42.9	-0.6
TNS	Taunus Mts	81.20	320	eP	P	01 46 43.9	+0.3
TNS				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
TNS	Taunus Mts	81.20	320	eP	P	01 46 43.9	+0.3
	comp=Z,18nm,1.2s,mb4.9						
LPG	La Plagne	82.58	315	⇓iP	P	01 46 51.5	+0.6
	comp=Z,33nm,0.7s,mb5.2						
BNI	Bardonecchia	82.67	314	eP	P	01 46 51.0	-0.3
	comp=Z,9.9nm,0.7s,mb5.0						
JMIC	Jan Mayen	86.60	341	LR	LR	02 29 30.9	
	comp=Z,55nm,20.3s,MS4.0,baz=270,slow=38						
ESDC	Sonseca Array	91.20	310	P	P	01 47 33.6	+0.5
	comp=Z,2.7nm,0.7s,mb4.7,baz=63,slow=4.2,SNR=20						
ESDC				pP	pP	01 47 39.3	+0.5
	comp=Z,2.5nm,0.7s,baz=64,slow=4.6,SNR=7.4						
ESLA	Sonseca Array	91.20	310	eP	P	01 47 33.4	+0.3
	comp=Z,9.0nm,1.5s,mb4.9						
IMA	Indian Mountai	91.45	22	eP	P	01 47 35.6	+2.0
	comp=Z,64nm,1.0s,mb5.9						
INK	Inuvik	96.82	16	P	P	01 47 59.0	+0.9
	comp=Z,4.6nm,1.0s,mb4.8,baz=319,slow=2.3,SNR=4.3						
RES	Resolute Bay	97.25	2	eP	P	01 48 01.1	+1.2
	comp=Z,5.0nm,0.9s,mb4.9						
YKA	Yellowknife Ar	106.26	13	PP	PP	01 53 00.6	-6.9
	comp=Z,0.3nm,0.8s,baz=333,slow=8.0,SNR=4.0						
SCHQ	Schefferville	115.40	348	PKP	PKPdf	01 53 10.1	-2.0
	comp=Z,2.4nm,1.2s,baz=256,slow=14,SNR=2.8						
ULM	Lac du Bonnet	121.31	8	PKP	PKPdf	01 53 21.1	-2.6
	comp=Z,2.0nm,0.8s,baz=44,slow=3.6,SNR=4.5						
NVAR	Mina Array Bea	124.74	31	PKP	PKPdf	01 53 28.9	-1.8
	comp=Z,1.3nm,0.7s,baz=312,slow=2.0,SNR=12						
NVAR				pPKP		01 53 35.5	
	comp=Z,4.0nm,1.1s,baz=350,slow=0.2,SNR=14						
NVAR	Mina Array Bea	124.74	31	PKP	PKPdf	01 53 28.9	-1.8
NVAR				pPKP		01 53 35.5	
PDAR	Pinedale Array	124.99	21	PKP	PKPdf	01 53 28.9	-2.1
	comp=Z,1.0nm,0.6s,baz=154,slow=0.4,SNR=12						
PDAR				pPKP		01 53 34.5	
	comp=Z,2.0nm,0.8s,baz=30,slow=0.7,SNR=12						
MSU	Marysvale	127.58	26	eP	PKPdf	01 53 36.0	-0.1
TXAR	Lajitas Array	139.05	24	PKP	PKPdf	01 53 56.7	-1.1
	comp=Z,0.6nm,0.5s,baz=144,slow=1.2,SNR=7.3						
TXAR	Lajitas Array	139.05	24	PKP	PKPdf	01 53 56.7	-1.1
JCT	Junction City	139.41	19	eP	PKPdf	01 53 54.4	-4.0
BDFB	Brasilia	142.34	255	PKhKP		01 53 56.4	
	comp=Z,5.3nm,0.8s,baz=193,slow=7.6,SNR=3.7						
BDFB				PKP	PKPdf	01 54 02.9	-1.1
	comp=Z,4.3nm,0.8s,baz=123,slow=4.8,SNR=6.9						
BDFB	Brasilia	142.34	255	PKP	PKPdf	01 54 02.9	-1.1
PLCA	Paso Flores	144.72	200	PKP	PKPdf	01 54 04.6	-2.8
	comp=Z,13nm,1.1s,baz=151,slow=7.1,SNR=15						
PLCA				pPKP		01 54 10.6	
	comp=Z,14nm,1.2s,baz=132,slow=4.8,SNR=6.3						
PLCA	Paso Flores	144.72	200	eP	PKPbc	01 54 04.9	+1.4
CPUP	Villa Florida	147.43	233	PKPbc	PKPdf	01 54 12.2	-0.3
	comp=Z,0.0nm,0.5s,baz=226,slow=14,SNR=2.3						
TEIG	Tepich	151.82	5	ePKPbc	PKPdf	01 54 24.2	+4.8
LPAZ	La Paz	160.92	243	PKP	PKPdf	01 54 30.9	-0.2
	comp=Z,0.9nm,0.7s,baz=27,slow=6.8,SNR=3.3						
LPAZ				PKPab	PKPab	01 55 12.5	+0.3
	comp=Z,2.0nm,0.8s,baz=121,slow=7.7,SNR=4.1						
LPAZ	La Paz	160.92	243	PKP	PKPdf	01 54 30.9	-0.2
LPAZ				PKPab	PKPab	01 55 12.5	+0.3
ROSC	El Rosal	162.86	318	PKP	PKPdf	01 54 32.8	-0.4
	comp=Z,1.3nm,0.3s,baz=103,slow=18,SNR=2.4						

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*IDC **10** 01:37:22.1±0.6, 8.00N×94.18E, mb4.2/15, mb1 4.3/16, mb1mx4.3/21, mbtmp4.2/16, ML4.2/1, Error ellipse: s-maj=27.5km s-min=15.2km az=49.0*

*BJI **10** 01:37:26.4, 7.78N×94.34E, h43^{km}, mB5.0, mb4.5, Ms4.8, Msz4.5*

*NEIC **10** 01:37:27.3±0.5, 7.98N×94.40E, h30^{km}, mb4.8/18, Error ellipse: s-maj=13.1km s-min=11.9km az=52.0*

ISC 10 01:37:28.2±1.9**, 7.98N**±0.07×**94.40E**±0.07**, h55**^{km}±17^{km}**, n54,** σ**1^{s}34**/49**, mb4.5**/34**, MS4.3**/2**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	11.31	23	eP	P	01 40 20.8	+11
CM31				e		01 40 33.2	
CMAR	Chiang Mai Arr	11.31	23	Pn	P	01 40 08.9	-0.8
	0.4nm,0.3s,baz=214,slow=14,SNR=6.2						
PALK	Pallekele	13.60	268	P	P	01 40 40.3	0.0
	8.8nm,0.8s						
KMI	Kunming	18.82	24	P	P	01 41 49.0	+2.9
KMI				AMB	AMB		
	comp=Z,4.0nm,0.8s						
KMI	Kunming	18.82	24	P	P	01 41 49.0	+2.9
	comp=Z,4.0nm,0.8s						
LSA	Lhasa	21.82	352	eP	P	01 42 18.6	+1.0
	comp=Z,12nm,0.8s,mb4.4						
ENH	Enshi	26.30	31	eP	P	01 43 00.1	-0.7
	comp=Z,22nm,1.3s,mb4.5						
NJ2	Nanjing	33.02	40	eP	P	01 44 01.1	+0.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
HHC	Hu-ho-hao-te	36.12	22	eP	P	01 44 24.8	-2.2
HHC				AP	pP	01 44 34.7	-6.5
HHC				PP	PP	01 45 46.6	-4.0
HHC				PCP	PcP	01 46 52.3	+0.1
HHC				S	S	01 50 01.1	-0.8
HHC				SCS	ScS	01 54 35.3	-1.6
HHC				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
HHC				AMB	AMB		
	comp=Z,125nm,6.4s						
HHC				LR	LR		
	comp=N,399nm,15.3s,MS4.5						
HHC				LR	LR		
	comp=E,581nm,16.2s,MS4.5						
HHC				LR	LR		
	comp=Z,356nm,16.2s,MS4.2						
WMQ	Urumqi	36.18	352	eP	P	01 44 28.8	+1.4
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
BJT	Baijiatuau	37.37	28	P	P	01 44 39.0	+1.5
	comp=Z,10nm,0.9s,mb4.7						
BJI	Beijing	37.39	28	P	P	01 44 43.0	+5.4
BJI				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.3						
SONM	Songino Array	41.01	12	P	P	01 45 07.9	+0.4
	comp=Z,3.6nm,1.0s,mb4.0,baz=204,slow=5.8,SNR=5.2						
KS15	Wonju Array Si	42.19	41	P	P	01 45 17.0	-0.4
KURK	Kurchatov	44.58	346	eP	P	01 45 35.2	-1.4
	comp=Z,18nm,1.1s,mb4.8						
NWAO	Narrogin (SRO)	46.12	153	P	P	01 45 49.0	-0.2
	comp=Z,6.4nm,0.7s,mb4.7,baz=152,slow=7.9,SNR=5.2						
NWAO	Narrogin (SRO)	46.12	153	eP	P	01 45 50.3	+1.2
	comp=Z,15nm,1.1s,mb4.8						
HIA	Hailar	46.33	23	P	P	01 45 49.3	-1.2
	comp=Z,18nm,1.6s,mb4.8						
ZAL	Zalesovo	46.48	352	P	P	01 45 49.9	-1.8
	comp=Z,1.2nm,0.8s,mb3.9,baz=278,slow=15,SNR=2.3						
MDJ	Mudanjiang	47.58	34	P	P	01 46 00.0	-0.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,123nm,4.9s						
MDJ				LR	LR		
	comp=N,88nm,17.4s,MS4.2						
MDJ				LR	LR		
	comp=E,188nm,17.4s,MS4.2						
MDJ				LR	LR		
	comp=Z,190nm,14.9s,MS4.2						
WRA	Warramunga Arr	48.11	126	P	P	01 46 04.6	-0.3
	comp=Z,1.2nm,0.7s,mb4.0,baz=307,slow=8.8,SNR=5.7						
WRAB	Tennant Creek	48.11	126	P	P	01 46 04.6	-0.3
	comp=Z,12nm,1.2s,mb4.8						
BVAR	Borovoye Array	48.98	341	P	P	01 46 11.1	0.0
	comp=Z,1.9nm,0.8s,mb4.2,baz=135,slow=6.3,SNR=4.4						
CHKZ	Chkalovo	49.46	342	eP	P	01 46 15.7	+0.8
	comp=Z,18nm,1.1s,mb5.0						
ASAR	Alice Springs	49.78	130	P	P	01 46 17.0	-0.7
	comp=Z,1.9nm,0.9s,mb4.1,baz=306,slow=7.4,SNR=5.7						
PMG	Port Moresby	55.31	107	P	P	01 47 00.7	+1.6
	comp=Z,11nm,0.8s,mb5.0,baz=239,slow=19,SNR=2.9						
PMG	Port Moresby	55.31	107	eP	P	01 46 58.5	-0.6
	comp=Z,24nm,1.0s,mb5.2						
KMBO	Kilima Mbogo	57.69	264	P	P	01 47 14.6	-1.5
	comp=Z,5.0nm,0.9s,mb4.5,baz=59,slow=10,SNR=12						
KMBO	Kilima Mbogo	57.69	264	eP	P	01 47 16.5	+0.4
	comp=Z,12nm,1.2s,mb4.8						
BRTR	Keskin Array B	62.56	311	P	P	01 47 46.5	-2.4
	comp=Z,2.5nm,0.8s,mb4.4,baz=127,slow=6.2,SNR=7.4						
AKASG	Malin Array Be	68.23	322	P	P	01 48 23.9	-1.2
	comp=Z,4.2nm,0.9s,mb4.5,baz=89,slow=4.9,SNR=6.6						
SUW	Suwalki	72.58	324	eP	P	01 48 53.3	+2.0
	comp=Z,40nm,1.1s,mb5.3						
FINES	FINESS Array B	72.74	332	P	P	01 48 50.0	-2.2
	comp=Z,3.3nm,0.9s,mb4.3,baz=135,slow=5.4,SNR=3.5						
FINES	FINESS Array B	72.74	332	P	P	01 48 50.0	-2.2
LBTB	Lobatse	74.52	241	eP	P	01 49 03.4	+0.1
	comp=Z,8.4nm,1.1s,mb4.6						
ARCES	ARCESS Array B	75.26	340	P	P	01 49 05.9	-0.8
	comp=Z,4.6nm,0.9s,mb4.4,baz=98,slow=6.4,SNR=3.5						
MORC	Moravsky Berou	75.47	319	eP	P	01 49 10.3	+2.1
	comp=Z,11nm,1.0s,mb4.8						
BILL	Bilibino	75.90	22	P	P	01 49 12.3	+1.9
	comp=Z,12nm,1.6s,mb4.6						
BRG	Berggiesshubel	77.84	320	eP	P	01 49 23.3	+1.8
	comp=Z,2.7nm,0.9s,mb4.2						
GERES	GERESS Array B	77.92	318	P	P	01 49 20.6	-1.4
	comp=Z,3.2nm,0.9s,mb4.2,baz=90,slow=5.9,SNR=11						
CLL	Collm	78.45	321	eP	P	01 49 27.0	+2.1
CLL	Collm	78.45	321	P	P	01 49 27.0	+2.1
MOX	Moxa	79.31	320	eP	P	01 49 32.0	+2.4
GRA1	Grafenberg Arr	79.56	319	eP	P	01 49 35.2	+4.2
	comp=Z,10.0nm,1.1s,mb4.7						
GRF	Grafenberg Arr	79.56	319	eP	P	01 49 35.2	+4.2
	comp=Z,10.0nm,1.1s,mb4.7						
NOA	NORSAR Array B	79.77	331	P	P	01 49 30.2	-1.6
	comp=Z,0.9nm,0.7s,mb3.8,baz=97,slow=5.1,SNR=2.6						
LPG	La Plagne	82.73	315	eP	P	01 49 46.6	-1.1
	comp=Z,30nm,1.2s,mb4.9						
ILAR	Eielson Array	94.55	22	P	P	01 50 44.6	+1.0
	comp=Z,0.2nm,0.6s,mb3.7,baz=282,slow=5.5,SNR=4.1						
ULM	Lac du Bonnet	121.33	8	PKP	PKPdf	01 56 17.0	+1.6
	comp=Z,0.7nm,0.4s,baz=64,slow=0.6,SNR=2.6						
NVAR	Mina Array Bea	124.70	31	PKP	PKPdf	01 56 25.9	+3.6
	comp=Z,1.1nm,1.0s,baz=255,slow=4.3,SNR=4.7						
PDAR	Pinedale Array	124.98	21	PKP	PKPdf	01 56 25.1	+2.3
	comp=Z,0.7nm,0.8s,baz=218,slow=0.2,SNR=4.0						
TXAR	Lajitas Array	139.03	24	PKiKP		01 56 54.2	
	comp=Z,0.6nm,0.8s,baz=135,slow=1.8,SNR=4.3						
PLCA	Paso Flores	144.73	200	PKP	PKPdf	01 57 00.2	+1.1
	comp=Z,3.0nm,0.9s,baz=213,slow=1.9,SNR=3.8						
CPUP	Villa Florida	147.53	232	PKPbc	PKPdf	01 57 09.2	+4.8
	comp=Z,0.0nm,0.3s,baz=219,slow=14,SNR=2.1						

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*JMA **10** 01:40:02.8±0.1, 25.35N×124.95E, h83^{km}±3^{km}, M3.4*

*IDC **10** 01:40:03.0±4.4, 25.33N×125.09E, h91^{km}±42^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.4/22, mbtmp3.8/6, Error ellipse: s-maj=37.7km s-min=18.0km az=79.0*

ISC 10 01:40:01.4±0.4**, 25.32N**±0.07×**125.03E**±0.06**, h94**^{km}±6^{km}**, n21,** σ**0^{s}91**/31**, mb3.7**/5**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	0.56	155	P	P	01 40 17.9	+0.7
JMJ				S	S	01 40 28.9	-0.1
JOGS	Gusukube	0.66	149	P	P	01 40 19.1	+1.0
JOGS				S	S	01 40 31.0	+0.5
JTJ	Tarama	0.74	204	P	P	01 40 19.2	+0.3
JTJ				S	S	01 40 31.3	-0.6
JIJ	Ishigaki jima	1.25	220	P	P	01 40 24.7	0.0
JIJ				S	S	01 40 40.6	-1.5
JKRS	Kuro-shima	1.43	221	P	P	01 40 27.1	+0.3
JKRS				S	S	01 40 45.4	-0.3
IRIF	Iriomote-Funau	1.54	230	P	P	01 40 28.5	+0.3
IRIF				S	S	01 40 48.0	-0.1
HATJ	Hateruma jima	1.68	222	eS	S	01 40 51.7	+0.4
JKE	Kume jima 2	1.87	57	P	P	01 40 33.5	+1.0
JKE				eS	S	01 40 57.4	+1.9
YOJ	Yonaguni jima	2.03	245	eS	S	01 40 58.9	-0.2
JAGN	Aguni-jima	2.36	57	eS	S	01 41 08.0	+0.8
JIH	Iheya	3.14	56	eS	S	01 41 25.1	-1.4
JOW	Kunigami	3.28	62	P	P	01 40 51.6	-0.2
	4.3nm,0.3s,baz=123,slow=15,SNR=13						
JOW				S	S	01 41 30.1	+0.1
JOW	Kunigami	3.28	62	P	P	01 40 51.8	-0.1
JTK	Tokunoshima	4.28	54	P	P	01 41 04.9	-0.7
JTK				eS	S	01 41 51.7	-3.0
JAM	Amami Oshima	5.11	52	P	P	01 41 15.7	-1.3
JMZ	Minamidaito 2	5.61	84	P	P	01 41 20.6	-3.2
JMZ				eS	S	01 42 18.3	-9.2
SONM	Songino Array	26.86	332	P	P	01 45 35.5	+0.6
	1.0nm,1.0s,mb3.3,baz=151,slow=9.3,SNR=3.3						
WRA	Warramunga Arr	45.90	168	P	P	01 48 15.9	-0.5
	0.9nm,0.5s,mb3.7,baz=350,slow=8.3,SNR=7.9						
ASAR	Alice Springs	49.45	169	P	P	01 48 44.5	+0.4
	1.1nm,0.5s,mb4.0,baz=355,slow=7.8,SNR=20						
FINES	FINESS Array B	72.22	330	P	P	01 51 18.0	+0.3
	3.0nm,1.1s,mb4.0,baz=111,slow=12,SNR=3.0						
YKA	Yellowknife Ar	80.54	24	P	P	01 52 05.0	+0.7
	0.4nm,0.6s,mb3.4,baz=303,slow=5.4,SNR=8.5						

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*BJI **10** 02:11:39.3, 8.70N×93.60E, h30^{km}, mb4.3*

*NEIC **10** 02:11:41.3±0.6, 8.72N×93.64E, h30^{km}, mb4.2/2, Error ellipse: s-maj=19.0km s-min=11.4km az=81.0*

*IDC **10** 02:11:43.5±5.7, 8.85N×93.86E, h43^{km}±51^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.6/20, mbtmp3.8/10, ML4.2/1, Error ellipse: s-maj=44.5km s-min=16.7km az=61.0*

ISC 10 02:11:40.6±5.0**, 8.8N**±0.1×**93.7E**±0.2**, h41**^{km}±42^{km}**, n17,** σ**0^{s}68**/15**, mb3.9**/11**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	10.90	27	P	P	02 14 18.7	+1.6
CMAR	Chiang Mai Arr	10.90	27	P	P	02 14 16.0	-1.1
	0.5nm,0.3s,baz=205,slow=14,SNR=5.8						
LSA	Lhasa	20.98	354	P	P	02 16 21.4	-1.3
LSA	Lhasa	20.98	354	eP	P	02 16 21.8	-0.9
	7.0nm,0.7s						
GYA	Guiyang	21.47	33	⇑iP	P	02 16 28.2	+0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
SONM	Songino Array	40.40	13	P	P	02 19 16.3	-0.1
	comp=Z,0.8nm,1.2s,mb3.3,baz=191,slow=7.3,SNR=3.9						
SONM				PcP	PcP	02 21 19.4	-0.2
	comp=Z,0.2nm,0.6s,baz=183,slow=3.2,SNR=3.6						
ZAL	Zalesovo	45.62	353	P	P	02 19 58.7	-0.1
	comp=Z,2.5nm,0.7s,mb4.2,baz=302,slow=7.0,SNR=12						
NWAO	Narrogin (SRO)	47.12	153	P	P	02 20 10.8	0.0
	comp=Z,6.3nm,0.8s,mb4.6,baz=316,slow=7.7,SNR=3.7						
BVAR	Borovoye Array	48.02	341	P	P	02 20 17.4	-0.3
	comp=Z,0.4nm,0.4s,mb3.8,baz=140,slow=11,SNR=3.5						
CHKZ	Chkalovo	48.51	342	eP	P	02 20 21.1	-0.4
	comp=Z,1.7nm,0.6s,mb4.2						
WRA	Warramunga Arr	49.11	126	P	P	02 20 26.3	-0.2
	comp=Z,0.5nm,0.7s,mb3.7,baz=305,slow=8.6,SNR=6.8						
WRA				PcP	PcP	02 21 50.9	+1.0
	comp=Z,0.5nm,1.0s,baz=304,slow=3.1,SNR=4.8						
ASAR	Alice Springs	50.80	130	P	P	02 20 39.1	-0.2
	comp=Z,0.2nm,0.3s,mb3.5,baz=298,slow=7.1,SNR=4.1						
BRTR	Keskin Array B	61.54	311	P	P	02 21 56.7	+0.6
	comp=Z,2.3nm,1.1s,mb4.2,baz=128,slow=7.7,SNR=4.8						
GERES	GERESS Array B	76.90	318	P	P	02 23 31.2	+0.7
	comp=Z,0.4nm,0.6s,mb3.6,baz=76,slow=4.0,SNR=4.8						
ILAR	Eielson Array	94.09	22	P	P	02 24 55.9	+0.2
	comp=Z,0.4nm,1.1s,mb3.8,baz=290,slow=4.2,SNR=4.7						
PLCA	Paso Flores	145.22	201	PKPbc	PKPbc	02 31 17.5	+2.9
	comp=Z,2.8nm,0.8s,baz=217,slow=4.8,SNR=5.3						
PLCA	Paso Flores	145.22	201	PKPbc	PKPbc	02 31 17.5	+2.9

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*IDC **10** 02:15:46.5±0.8, 8.88N×93.94E, mb3.9/10, mb1 4.0/11, mb1mx3.9/19, mbtmp3.8/11, Error ellipse: s-maj=33.2km s-min=21.0km az=58.0*

*NEIC **10** 02:15:51.0±0.6, 8.92N×94.00E, h30^{km}, mb4.0/1, Error ellipse: s-maj=16.7km s-min=12.9km az=85.0*

ISC 10 02:15:49.7±1.0**, 9.0N**±0.1×**94.1E**±0.2**, h33**^{km}**, n15,** σ**0^{s}90**/13**, mb3.9**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.57	26	Pn	P	02 18 21.0	-1.1
	baz=211,slow=16,SNR=3.5						
LSA	Lhasa	20.82	353	eP	P	02 20 30.7	-0.2
	4.9nm,0.6s						
SONM	Songino Array	40.13	13	P	P	02 23 24.3	+0.3
	0.1nm,0.4s,mb2.9,baz=35,slow=41,SNR=4.1						
SONM				PcP	PcP	02 25 29.9	+1.1
	0.1nm,0.4s,baz=200,slow=3.7,SNR=5.5						
SONM	Songino Array	40.13	13	P	P	02 23 24.3	+0.2
SONM				PcP	PcP	02 25 29.9	+1.1
ZAL	Zalesovo	45.47	352	P	P	02 24 08.4	+0.9
	4.0nm,1.1s,mb4.2,baz=286,slow=7.6,SNR=11						
BVAR	Borovoye Array	47.95	341	P	P	02 24 26.8	-0.2
	0.5nm,0.5s,mb3.8,baz=139,slow=9.5,SNR=4.8						
WRA	Warramunga Arr	48.96	126	P	P	02 24 34.7	-0.5
	0.6nm,0.7s,mb3.7,baz=305,slow=8.5,SNR=10						
WRA				PcP	PcP	02 25 59.1	-0.3
	0.2nm,0.4s,baz=319,slow=3.0,SNR=7.0						
BRTR	Keskin Array B	61.67	310	P	P	02 26 04.7	-2.2
	0.5nm,0.5s,mb3.9,baz=101,slow=7.3,SNR=2.7						
IDI	Anoyia	67.89	304	P	P	02 26 47.0	-0.2
	8.2nm,0.9s,mb4.8,baz=266,slow=19,SNR=2.9						
FINES	FINESS Array B	71.72	332	P	P	02 27 10.3	+0.1
	1.6nm,0.8s,mb4.0,baz=117,slow=9.3,SNR=2.9						
ARCES	ARCESS Array B	74.23	340	P	P	02 27 25.5	+0.8
	1.9nm,0.8s,mb4.1,baz=100,slow=5.5,SNR=2.9						
GERES	GERESS Array B	76.97	318	P	P	02 27 41.2	+0.3
	0.6nm,0.8s,mb3.6,baz=68,slow=5.3,SNR=2.9						
ILAR	Eielson Array	93.78	22	P	P	02 29 05.9	+1.6
	1.0nm,1.2s,mb4.1,baz=292,slow=4.5,SNR=5.7						
PDAR	Pinedale Array	124.19	21	PKP	PKPdf	02 34 47.8	+2.4
	0.1nm,0.5s,baz=304,slow=3.3,SNR=2.5						
PLCA	Paso Flores	145.52	201	PKPbc	PKPbc	02 35 27.1	+1.7
	2.7nm,0.6s,baz=183,slow=5.7,SNR=6.4						

IDC ***10*** *02:19:40.6±0.6,8.92N×94.01E,mb4.1/15,mb1 4.3/16,mb1mx4.2/22,mbtmp4.1/16,ML4.1/1,Error ellipse: s-maj=28.2km s-min=16.2km az=61.0*

BJI ***10*** *02:19:44.1,8.73N×93.82E,h37^{km},mB4.9,mb4.4,Ms4.4,Msz4.0*

NEIC ***10*** *02:19:45.0±0.3,8.85N×94.03E,h30^{km},mb4.4/12,Error ellipse: s-maj=12.8km s-min=7.2km az=69.0*

ISC 10 02:19:43.8±0.5**,8.79N**±0.06×**93.87E**±0.07**,h33^{km},n49,**σ**1^{s}15**/47**,mb4.3**/31**,MS4.0**/1**,1C,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**10.80**	**27**	*e*P	**P**	**02 22 20.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**10.80**	**27**	Pn	**P**	**02 22 20.1**	**+0.9**
	0.4nm,0.3s,baz=210,slow=14,SNR=10						
PALK	**Pallekele**	**13.12**	**264**	P	**P**	**02 23 00.1**	**+10**
	20nm,1.1s						
VIS	**Vishakhapatnam**	**13.56**	**312**	*i* P	**P**	**02 22 54.0**	**-2.3**
VIS				*i* S	**S**	**02 25 16.0**	**-11**
KMI	**Kunming**	**18.31**	**26**	P	**P**	**02 24 01.3**	**+4.1**
KMI				AMB	AMB		
	comp=Z,7.0nm,1.3s						
KMI				LR	LR		
	comp=N,211nm,21.0s						
KMI				LR	LR		
	comp=E,164nm,22.7s						
KMI				LR	LR		
	comp=Z,145nm,23.3s						
KMI	**Kunming**	**18.31**	**26**	P	**P**	**02 24 01.3**	**+4.1**
	comp=Z,7.0nm,1.3s						
KMI				S	rx	02 31 28.3	
JIRN	**Jiri**	**20.12**	**340**	*e*P	**P**	**02 24 18.1**	**+0.3**
	comp=Z,60nm,1.1s						
PKI	**Pulchoki**	**20.32**	**338**	*e*P	**P**	**02 24 17.8**	**-2.0**
	comp=Z,35nm,1.1s						
KKN	**Kakani**	**20.57**	**338**	*e*P	**P**	**02 24 21.3**	**-1.1**
LSA	**Lhasa**	**20.96**	**353**	P	**P**	**02 24 26.2**	**-0.2**
LSA	**Lhasa**	**20.96**	**353**	*e*P	**P**	**02 24 26.4**	**-0.1**
	comp=Z,28nm,1.0s						
GKN	**Gorkha**	**21.00**	**337**	*e*P	**P**	**02 24 26.5**	**-0.4**
	comp=Z,27nm,0.6s,mb4.7						
KOLN	**Koldanda**	**21.22**	**334**	*e*P	**P**	**02 24 29.5**	**+0.4**
	comp=Z,11nm,0.7s,mb4.3						
GYA	**Guiyang**	**21.36**	**33**	⇑*i*P	**P**	**02 24 32.6**	**+2.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
ENH	**Enshi**	**25.89**	**32**	*e*P	**P**	**02 25 14.1**	**-0.5**
	comp=Z,12nm,0.9s,mb4.4						
GTA	**Gaotai**	**30.95**	**9**	*e*P	**P**	**02 26 01.0**	**+0.9**
GTA				AP	pP	02 26 10.3	+0.6
GTA				XP	sP	02 26 14.1	0.0
GTA				PP	PP	02 27 06.1	+3.8
GTA				S	**S**	**02 31 04.5**	**+3.4**
GTA				XS		02 31 19.7	
GTA				SS	SS	02 32 50.6	+4.7
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.1						
GTA				AMB	AMB		
	comp=Z,252nm,5.7s						
GTA				LR	LR		
	comp=N,155nm,15.6s,MS3.9						
GTA				LR	LR		
	comp=E,141nm,14.5s,MS3.9						
GTA				LR	LR		
	comp=Z,188nm,11.4s,MS4.0						
NJ2	**Nanjing**	**32.76**	**42**	*e*P	**P**	**02 26 16.6**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
WMQ	**Urumqi**	**35.31**	**352**	*e*P	**P**	**02 26 39.5**	**+1.7**
AAK	**Ala-Archa**	**37.76**	**336**	*e*P	**P**	**02 26 58.7**	**+0.2**
	comp=Z,6.7nm,1.0s,mb4.3						
SONM	**Songino Array**	**40.34**	**13**	P	**P**	**02 27 19.5**	**-0.4**
	comp=Z,1.1nm,1.0s,mb3.5,baz=195,slow=9.1,SNR=7.5						
SONM				PcP	PcP	02 29 24.1	+0.6
	comp=Z,0.7nm,0.6s,baz=204,slow=3.5,SNR=8.8						
KURK	**Kurchatov**	**43.66**	**346**	*e*P	**P**	**02 27 46.8**	**-0.3**
	comp=Z,6.9nm,1.1s,mb4.3						
ZAL	**Zalesovo**	**45.61**	**353**	P	**P**	**02 28 02.5**	**-0.2**
	comp=Z,5.8nm,0.9s,mb4.5,baz=302,slow=8.1,SNR=28						
HIA	**Hailar**	**45.79**	**24**	*e*P	**P**	**02 28 04.2**	**0.0**
	comp=Z,3.2nm,0.8s,mb4.3						
NWAO	**Narrogin (SRO)**	**47.08**	**153**	P	**P**	**02 28 14.4**	**-0.1**
	comp=Z,11nm,1.2s,mb4.7,baz=240,slow=17,SNR=3.5						
MDJ	**Mudanjiang**	**47.21**	**35**	P	**P**	**02 28 14.3**	**-1.1**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,47nm,3.5s						
BVAR	**Borovoye Array**	**48.04**	**341**	P	**P**	**02 28 20.5**	**-1.3**
	comp=Z,1.0nm,0.7s,mb4.0,baz=135,slow=8.4,SNR=7.7						
BVAR				PcP	PcP	02 29 49.8	+0.1
	comp=Z,0.5nm,0.6s,baz=153,slow=3.2,SNR=4.4						
CHKZ	**Chkalovo**	**48.52**	**342**	*e*P	**P**	**02 28 24.8**	**-0.7**
	comp=Z,4.5nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**49.01**	**126**	P	**P**	**02 28 28.6**	**-1.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=305,slow=8.5,SNR=17						
WRA				PcP	PcP	02 29 53.6	-0.1
	comp=Z,0.3nm,0.5s,baz=320,slow=2.7,SNR=8.8						
WRAB	**Tennant Creek**	**49.02**	**126**	*e*P	**P**	**02 28 28.9**	**-0.9**
	comp=Z,7.6nm,1.1s,mb4.6						
BRTR	**Keskin Array B**	**61.63**	**310**	P	**P**	**02 29 59.5**	**-1.2**
	comp=Z,3.0nm,1.0s,mb4.4,baz=112,slow=6.7,SNR=7.2						
AKASG	**Malin Array Be**	**67.27**	**321**	P	**P**	**02 30 35.7**	**-1.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=92,slow=5.7,SNR=4.3						
MLR	**Muntele Rosu**	**68.33**	**315**	P	**P**	**02 30 44.0**	**+0.1**
	comp=Z,4.6nm,1.0s,mb4.5,baz=59,slow=5.5,SNR=3.2						
LSZ	**Lusaka**	**69.32**	**250**	P	**P**	**02 30 52.8**	**+2.4**
	comp=Z,1.6nm,0.9s,mb4.0						
TAU	**Tasmania Unive**	**70.77**	**141**	P	**P**	**02 30 57.0**	**-1.9**
FINES	**FINESS Array B**	**71.78**	**332**	P	**P**	**02 31 04.3**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=90,slow=13,SNR=4.4						
ARCES	**ARCESS Array B**	**74.32**	**340**	P	**P**	**02 31 17.8**	**-1.5**
	comp=Z,8.5nm,1.1s,mb4.6,baz=51,slow=7.8,SNR=4.1						
LBTB	**Lobatse**	**74.44**	**241**	P	**P**	**02 31 23.2**	**+2.3**
	comp=Z,1.3nm,0.6s,mb4.1,baz=165,slow=22,SNR=3.4						
LBTB	**Lobatse**	**74.44**	**241**	P	**P**	**02 31 22.1**	**+1.1**
	comp=Z,4.9nm,1.1s,mb4.3						
BOSA	**Boshof**	**75.84**	**238**	*e*P	**P**	**02 31 30.6**	**+1.7**
	comp=Z,3.8nm,1.0s,mb4.3						
VAE	**Valguarnera**	**76.36**	**306**	P	**P**	**02 31 33.8**	**+2.1**
	comp=Z,28nm,1.1s,mb5.1,baz=160,slow=7.1,SNR=3.5						
GERES	**GERESS Array B**	**76.97**	**318**	P	**P**	**02 31 35.6**	**+0.7**
	comp=Z,4.2nm,1.1s,mb4.3,baz=90,slow=4.0,SNR=12						
NOA	**NORSAR Array B**	**78.81**	**331**	P	**P**	**02 31 44.8**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.8,baz=116,slow=6.2,SNR=3.0						
LPG	**La Plagne**	**81.78**	**315**	*e*P	**P**	**02 32 02.1**	**+1.2**
	comp=Z,13nm,1.0s,mb4.5						
EKA	**Eskdalemuir Ar**	**86.82**	**325**	P	**P**	**02 32 27.2**	**+1.3**
	comp=Z,2.2nm,0.7s,mb4.5,baz=100,slow=5.1,SNR=4.7						
ILAR	**Eielson Array**	**94.00**	**22**	P	**P**	**02 32 59.1**	**-0.2**
	comp=Z,0.9nm,0.8s,mb4.2,baz=310,slow=4.3,SNR=10						
PDAR	**Pinedale Array**	**124.42**	**21**	PKP	PKPdf	02 38 40.6	+0.7
	comp=Z,0.6nm,0.9s,baz=90,slow=3.0,SNR=4.3						
PV01	**Paradox Valley**	**128.84**	**23**	*e*PKPdf	PKPdf	02 38 48.8	+0.2
PLCA	**Paso Flores**	**145.30**	**201**	PKPbc	PKPbc	02 39 21.0	+2.0
	comp=Z,5.2nm,0.8s,baz=166,slow=2.5,SNR=10						
PLCA	**Paso Flores**	**145.30**	**201**	*e*PKPdf	PKPdf	02 39 20.7	+2.2

STR ***10*** *02:24:31.1±0.2,48.92N×7.89E,h5^{km}±1^{km},Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG ***10*** *02:24:31.3±0.1,48.92N×7.80E,h2^{km},Md2.8/3,Ml2.8/18,Error ellipse: s-maj=1.0km s-min=0.8km az=171.0*

NEIC ***10*** *02:24:31.1,48.92N×7.89E,h5^{km},ML2.8(LDG),ML2.7(VIE),ML2.5(STR),ML2.4(LEDBW),After STR.*

ZUR ***10*** *02:24:31.3,48.82N×7.81E,h2^{km},ML2.1/11*

LEDBW ***10*** *02:24:31.8±0.4,48.93N×7.87E,h7^{km}±4^{km},ML2.4,Error ellipse: s-maj=10.0km s-min=8.0km az=44.0*

CSEM ***10*** *02:24:31.2±0.0,48.91N×7.81E,h2^{km},ML2.9/15,Error ellipse: s-maj=1.0km s-min=0.7km az=172.0*

PRU ***10*** *02:24:32.2,48.85N×7.96E*

BGR 10 02:24:31.4±0.2**,48.93N×7.87E,h10^{km},ML2.2**/4**,6C-15D,Error ellipse: s-maj=2.2km s-min=1.1km az=96.0,France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANF	**Langenberg**	**0.07**	**324**	*e*Pg	Pg	02 24 33.4	-0.3
	SNR=4.3						
LANF				*e*Sg	Sg	02 24 34.6	-0.6
	SNR=242						
LANF	**Langenberg**	**0.07**	**324**	⇓*i*P	Pg	02 24 33.6	-0.1
KTD	**Kalmit**	**0.42**	**20**	*e*Sg	Sg	02 24 45.1	-0.7
	SNR=4.1						
KTD	**Kalmit**	**0.42**	**20**	S	Sg	02 24 45.4	-0.3
WLS	**Welschbruch**	**0.61**	**214**	*e*Pg	Pg	02 24 43.1	-0.7
WLS	**Welschbruch**	**0.61**	**214**	P	Pb	02 24 43.2	-0.6
WLS	**Welschbruch**	**0.61**	**214**	Pg	Pg	02 24 42.9	-0.9
CDF	**Champ du Feu**	**0.65**	**218**	*e*Pg	Pg	02 24 43.7	-0.7
CDF				*e*Pn	Pn	02 24 45.5	-0.8
CDF				*e*Sg	Sg	02 24 51.5	-1.6
CDF				*e*Sn	Sn	02 24 54.6	-2.0
	114nm,0.2s						
LBG	**Lerchenberg**	**0.67**	**113**	⇑*i*Pg	Pg	02 24 44.4	-0.4
LBG				Sg	Sg	02 24 53.1	-0.7
LBG				SmS		02 24 55.4	
BFO	**Black Forest**	**0.67**	**153**	*e*Pg	Pg	02 24 44.2	-0.7
BFO				*e*Sg	Sg	02 24 53.0	-1.0
	SNR=3.6						
BFO				SmS		02 24 54.6	
BFO	**Black Forest**	**0.67**	**153**	P	Pb	02 24 44.2	-0.5
BFO				S	Sb	02 24 52.9	-0.9
BFO	**Black Forest**	**0.67**	**153**	*e*Pg	Pg	02 24 45.3	+0.4
BFO				*e*Sg	Sg	02 24 53.0	-0.9
LIBD	**Limburg**	**0.80**	**193**	Pg	Pg	02 24 46.2	-1.2
ECH	**Echery**	**0.85**	**214**	Pg	Pg	02 24 47.8	-0.7
ECH				*i* Sg	Sg	02 25 00.6	+0.7
ECH	**Echery**	**0.85**	**214**	Pg	Pg	02 24 48.2	-0.3
ECH				Sg	Sg	02 24 59.5	-0.4
STU	**Stuttgart**	**0.89**	**99**	*e*Pg	Pg	02 24 48.6	-0.7
STU				*e*Sg	Sg	02 24 60.0	-1.3
	SNR=8.2						
TUBL	**Tuebingen Lnz**	**0.90**	**116**	Pg	Pg	02 24 49.5	0.0
TUBL				Sg	Sg	02 25 01.7	+0.1
TOD	**Tromm**	**0.92**	**42**	*e*Pg	Pg	02 24 48.7	-1.2
	SNR=10						
TOD				⇓*i*PmP		02 24 49.5	
TOD				*e*Sg	Sg	02 25 01.1	-1.0
	SNR=2.4						
TOD	**Tromm**	**0.92**	**42**	P	Pb	02 24 48.8	-0.2
TOD				⇓*i*P		02 24 49.5	
TOD	**Tromm**	**0.92**	**42**	Pg	Pg	02 24 48.6	-1.2
TOD				Sg	Sg	02 25 01.0	-1.1
MSG	**Mossingen**	**0.94**	**124**	⇓*e*P	Pb	02 24 49.9	+0.6
MSG				*e*S	Sb	02 25 01.7	+0.2
MSG				*e*S	Sb	02 25 03.1	+1.5
RUP	**Ruppelstein**	**0.94**	**326**	*e*Pg	Pg	02 24 49.4	-0.9
	SNR=5.3						
RUP				*e*Sg	Sg	02 25 02.2	-0.6
	SNR=2.6						
RUP	**Ruppelstein**	**0.94**	**326**	P	Pb	02 24 49.8	+0.5
RUP	**Ruppelstein**	**0.94**	**326**	Pg	Pg	02 24 49.7	-0.6
KIZ	**Kirchzarten**	**0.97**	**178**	⇓*i*Pn	Pn	02 24 49.5	-1.5
KIZ				Pg	Pg	02 24 50.1	-0.7
KIZ				Sn	Sn	02 25 02.0	-2.8
KIZ				Sg	Sg	02 25 03.1	-0.7
ABH	**Alteburg**	**0.98**	**348**	*e*Pg	Pg	02 24 50.3	-0.8
ABH				⇓*e*Pn	Pn	02 24 50.3	-0.8
ABH	**Alteburg**	**0.98**	**348**	⇓*e*P	Pb	02 24 50.3	+0.3
SPAK	**Spaichingen**	**1.03**	**143**	Pn	Pn	02 24 51.4	-0.4
SPAK				*e*Sg	Sg	02 25 04.2	-1.5
	SNR=4.3						
FELD	**Feldberg**	**1.05**	**175**	⇓*e*Pn	Pn	02 24 50.9	-1.3
FELD				*e*Pg	Pg	02 24 51.5	-1.0
	SNR=6.3						
FELD				*e*Sg	Sg	02 25 05.1	-1.5
	SNR=2.9						
FELD	**Feldberg**	**1.05**	**175**	Pg	Pg	02 24 50.9	-1.6
FELD				Sg	Sg	02 25 05.4	-1.2
BUCH	**Bad Urach**	**1.09**	**115**	Pg	Pg	02 24 52.7	-0.7
BUCH				Sg	Sg	02 25 07.5	-0.4
MOF	**Molkenrain**	**1.18**	**205**	*e*Pn	Pn	02 24 52.4	-1.6
	SNR=5.1						
MOF				*e*Sg	Sg	02 25 08.5	-2.3
	SNR=2.4						
MOF	**Molkenrain**	**1.18**	**205**	P	Pb	02 24 51.8	-1.7
MOF	**Molkenrain**	**1.18**	**205**	Pg	Pg	02 24 52.2	-2.8
GUT	**Gutenstein**	**1.19**	**135**	Pn	Pn	02 24 53.2	-0.9
GUT				Sg	Sg	02 25 09.9	-1.4
SIND	**Sindeldorf**	**1.22**	**69**	*e*Pg	Pg	02 24 54.3	-1.6
SIND				Sg	Sg	02 25 10.4	-1.7
SLE	**Schleitheim**	**1.23**	**160**	*e*Pn	Pn	02 24 53.6	-1.1
	SNR=12						
SLE	**Schleitheim**	**1.23**	**160**	⇓*i*Pn	Pn	02 24 53.7	-1.0
SLE				*e*Sn	Sn	02 25 08.8	-2.7
HINF	**Hinteralfeld**	**1.30**	**212**	*e*Pn	Pn	02 24 53.7	-2.0
HINF				*e*Pg	Pg	02 24 55.1	-2.3
HINF				*e*Sn	Sn	02 25 10.4	-2.8
HINF				*e*Sg	Sg	02 25 11.6	-3.2
	55nm,0.3s						
WLF	**Walferdange**	**1.34**	**304**	*e*Pg	Pg	02 24 56.8	-1.5
WLF				*e*Sg	Sg	02 25 14.4	-1.8
	SNR=6.1						
WLF	**Walferdange**	**1.34**	**304**	P	Pb	02 24 56.8	+0.5
WLF				S	Sb	02 25 13.7	+0.3
TNS	**Taunus Mts**	**1.35**	**16**	Pg	Pg	02 24 56.4	-2.1
TNS				*e*Sg	Sg	02 25 15.2	-1.4
	SNR=4.0						
TNS	**Taunus Mts**	**1.35**	**16**	P	Pb	02 24 56.4	0.0
TNS				S	Sb	02 25 14.8	+1.2
HAU	**Haudompre**	**1.37**	**228**	*e*Pn	Pn	02 24 54.9	-1.7
HAU				*e*Pg	Pg	02 24 56.1	-2.7
HAU				*e*Sn	Sn	02 25 12.5	-2.4
HAU				*e*Sg	Sg	02 25 13.4	-3.6
	44nm,0.2s						
SULZ	**Sulz-Cheisache**	**1.41**	**173**	*e*Sg	Sg	02 25 16.1	-2.3
	SNR=3.0						
SULZ	**Sulz-Cheisache**	**1.41**	**173**	⇓*i*Pn	Pn	02 24 55.9	-1.3
THEF	**They Montfort**	**1.43**	**241**	*e*Pn	Pn	02 24 56.0	-1.5
	SNR=8.2						
THEF	**They Montfort**	**1.43**	**241**	P	Pn	02 24 55.8	-1.8
THEF	**They Montfort**	**1.43**	**241**	Pn	Pn	02 24 55.7	-1.9
FLACH	**Flaach**	**1.43**	**161**	⇓*i*P	Pn	02 24 56.6	-1.0
SISB	**Singen-Sch Ber**	**1.44**	**149**	Pn	Pn	02 24 58.4	+0.7
SISB				Sg	Sg	02 25 17.9	-1.5
HDH	**Heidenheim**	**1.59**	**102**	Pg	Pg	02 25 01.7	-1.5
HDH				Sg	Sg	02 25 21.9	-2.4
BOURR	**Bourrignon**	**1.59**	**196**	*e*Sg	Sg	02 25 22.9	-1.6
	SNR=3.9						
BALST	**Balsthal**	**1.59**	**184**	*e*P	Pn	02 24 58.4	-1.5
BALST	**Balsthal**	**1.59**	**184**	*e*Pn	Pn	02 24 58.3	-1.6
RFYF	**Reffroy**	**1.61**	**260**	*e*Pn	Pn	02 24 58.3	-1.8
RFYF				*e*Pg	Pg	02 25 00.5	-3.1
	baz=78						
RFYF				*e*Sg	Sg	02 25 20.5	-4.6
	40nm,0.2s,baz=75						
RFYF	**Reffroy**	**1.61**	**260**	*e*Pg	Pg	02 25 00.5	-3.1
RFYF				*e*Sg	Sg	02 25 20.5	-4.6
	20nm,0.2s						
ZUR	**Zurich**	**1.63**	**163**	*e*Sg	Sg	02 25 23.4	-2.4
	SNR=4.8						
WILA	**Wila**	**1.66**	**155**	*e*Sg	Sg	02 25 24.5	-2.4
	SNR=7.8						
LOMF	**Lomont**	**1.72**	**204**	*e*Sg	Sg	02 25 25.9	-2.9
	SNR=2.2						
NORI	**Noerdlinger Ri**	**1.83**	**95**	⇓*i*Pn	Pn	02 25 06.2	+2.9
MEZF	**Maizieres J'vi**	**1.91**	**258**	*e*Pn	Pn	02 25 02.7	-1.7
	baz=80						
MEZF				*e*Pg	Pg	02 25 05.7	-3.9
MEZF				*e*Sn	Sn	02 25 25.2	-3.5
MEZF				*e*Sg	Sg	02 25 29.8	-5.3
	30nm,0.6s						
UBR	**Uberruh**	**1.95**	**129**	Pg	Pg	02 25 08.6	-1.8
UBR				Sg	Sg	02 25 34.2	-2.1
LIENZ	**Alp Oberkamor**	**1.96**	**146**	*e*Pn	Pn	02 25 05.2	+0.1
SFTF	**Sexfontaines**	**2.01**	**250**	*e*Pn	Pn	02 25 04.5	-1.4
SFTF				*e*Pg	Pg	02 25 07.9	-3.7
SFTF				*e*Sn	Sn	02 25 27.8	-3.5
SFTF				*e*Sg	Sg	02 25 33.2	-5.3
	15nm,0.2s,baz=69						
SFTF	**Sexfontaines**	**2.01**	**250**	*e*Pg	Pg	02 25 07.9	-3.7
SFTF				*e*Sn	Sn	02 25 27.8	-3.5
SFTF				*e*Sg	Sg	02 25 33.2	-5.3
	7.4nm,0.2s						
MUO	**Muotathal**	**2.03**	**165**	⇓*i*Pn	Pn	02 25 05.5	-0.6
BNALP	**Bannalp**	**2.09**	**169**	⇓*i*Pn	Pn	02 25 06.3	-0.7
DAVA	**Damuels**	**2.12**	**140**	⇑*i*PN	Pn	02 25 07.5	0.0
DAVA				*i* SG	Sg	02 25 31.8	-10
	10nm,0.3s						
PLONS	**Plons**	**2.13**	**151**	⇑*i*Pn	Pn	02 25 07.4	-0.2
HASLI	**Hasliberg**	**2.18**	**175**	*e*Pn	Pn	02 25 07.1	-1.1
LLS	**Linth-Limmern**	**2.22**	**159**	⇑*i*Pn	Pn	02 25 08.4	-0.4
GIVF	**Givet**	**2.31**	**302**	*e*Pn	Pn	02 25 08.4	-1.7
GIVF				*e*Pg	Pg	02 25 14.0	-3.5
GIVF				*e*Sg	Sg	02 25 43.4	-4.9
	8.0nm,0.3s						
UBBA	**Unterbreizbach**	**2.35**	**35**	*e*Sg	Sg	02 25 46.0	-3.6
	SNR=1.7						
FUR	**Furstenfeldbru**	**2.39**	**107**	*e*Sg	Sg	02 25 47.8	-3.2
	SNR=2.9						
FUSIO	**Fusio**	**2.53**	**167**	⇓*i*Pn	Pn	02 25 12.8	-0.5
CABF	**La Chapelle**	**2.61**	**208**	*e*Pn	Pn	02 25 11.8	-2.6
CABF				*e*Sn	Sn	02 25 41.7	-4.7
CABF				*e*Sg	Sg	02 25 53.0	-5.3
	5.1nm,0.3s						
GIMEL	**Gimel**	**2.63**	**205**	*e*Pn	Pn	02 25 12.4	-2.2
BAIF	**Baives**	**2.64**	**297**	*e*Pn	Pn	02 25 12.9	-2.0
BAIF				*e*Pg	Pg	02 25 20.0	-4.2
BAIF				*e*Sn	Sn	02 25 43.0	-4.3
BAIF				*e*Sg	Sg	02 25 52.7	-6.7
	3.2nm,0.3s						
MOTA	**Moosalm**	**2.68**	**125**	⇑*i*PN	Pn	02 25 14.6	-0.9
MOTA				*i* SG	Sg	02 25 51.8	-9.0
	7.5nm,0.3s						
SQTA	**Sankt Quirin**	**2.82**	**126**	⇑*i*PN	Pn	02 25 16.7	-0.7
SQTA				*i* SG	Sg	02 25 55.7	-10
	8.6nm,0.3s						
MOX	**Moxa**	**2.98**	**53**	*e*Sg	Sg	02 26 06.4	-4.2
	SNR=1.9						
GUNZ	**Gunzen**	**3.24**	**62**	*e*Sg	Sg	02 26 13.5	-5.8
	SNR=2.5						
NKC	**Novy Kostel**	**3.26**	**65**	*e*PG	Pg	02 25 31.2	-5.3
NKC				*e*SG	Sg	02 26 13.6	-6.3
TANN	**Tannenbergstha**	**3.34**	**62**	*e*Sg	Sg	02 26 16.4	-6.2
	SNR=3.2						
SSF	**Saint Saulge**	**3.47**	**239**	*e*Pn	Pn	02 25 23.3	-3.4
SSF				*e*Pg	Pg	02 25 34.9	-5.8
SSF				*e*Sn	Sn	02 26 03.0	-5.3
SSF				*e*Sg	Sg	02 26 18.9	-8.1
	7.5nm,0.4s						
SMF	**Signal de Mont**	**3.54**	**231**	*e*Pn	Pn	02 25 24.8	-2.9
SMF				*e*Pg	Pg	02 25 36.1	-6.1
SMF				*e*Sn	Sn	02 26 04.3	-5.9
SMF				*e*Sg	Sg	02 26 22.4	-7.1
	5.4nm,0.2s						
AVF	**Avril sur Loir**	**3.71**	**237**	*e*Pn	Pn	02 25 27.1	-3.0
AVF				*e*Pg	Pg	02 25 39.6	-6.0
AVF				*e*Sn	Sn	02 26 07.9	-6.5
AVF				*e*Sg	Sg	02 26 26.6	-8.5
	2.3nm,0.3s						
KHC	**Kasperske Hory**	**3.77**	**85**	*e*PN	Pn	02 25 29.0	-1.8
KHC				*e*PG	Pg	02 25 41.7	-4.9
KHC				*e*SG	Sg	02 26 30.6	-6.2
GEC2	**GERESS Array S**	**3.85**	**89**	*e*Pg	Pg	02 25 43.1	-5.3
GEC2				*e*Sg	Sg	02 26 33.7	-6.0
	SNR=2.3						
HYF	**Humbligny**	**3.88**	**247**	*e*Pn	Pn	02 25 28.6	-3.8
BGF	**Bois d'Agland**	**4.13**	**237**	*e*Pn	Pn	02 25 32.6	-3.5
BGF				*e*Sn	Sn	02 26 18.5	-6.5
BGF				*e*Sg	Sg	02 26 39.2	-10
	12nm,0.4s						
ORIF	**Oris-en-Rattie**	**4.23**	**199**	*e*Sg	Sg	02 26 43.0	-9.4
	1.2nm,0.4s						
TCF	**Toulx Ste Croi**	**4.65**	**238**	*e*Pn	Pn	02 25 38.9	-4.5
TCF				*e*Pg	Pg	02 25 56.8	-7.4
TCF				*e*Sn	Sn	02 26 30.4	-7.7
TCF				*e*Sg	Sg	02 26 55.5	-11
	2.7nm,0.4s						
FLN	**La Foliniere**	**5.51**	**271**	*e*Pn	Pn	02 25 50.6	-5.0
RJF	**Les Rejaudoux**	**5.65**	**232**	*e*Pn	Pn	02 25 52.2	-5.3
RJF				*e*Sg	Sg	02 27 27.0	-12
	2.1nm,0.4s						
LFF	**La Frestale**	**6.30**	**233**	*e*Sg	Sg	02 27 47.7	-13
	3.4nm,0.4s						
SGMF	**Saint Gilles**	**6.95**	**268**	*e*Pn	Pn	02 26 10.9	-4.9

GUC ***10*** *02:32:13.9±0.0,5.19N×82.59W,h10^{km},mb5.4(NEIC),MW5.2(NEIC),MW5.8(NEIC)*

IDC ***10*** *02:32:13.2±0.5,5.28N×82.56W,mb4.8/18,mb1 5.0/20,mb1mx4.9/24,mbtmp4.8/20,ML3.6/2,MS5.2/16,Ms1 5.2/16,ms1mx4.9/26,Error ellipse: s-maj=19.9km s-min=11.4km az=64.0*

BJI ***10*** *02:32:14.6,5.30N×82.60W,h12^{km},mB5.8,Ms5.7,Msz5.3*

HRVD ***10*** *02:32:14.6±0.1,5.30N×82.61W,h15^{km},MW5.7/77, Centroid moment Tensor Solution. LP body waves: s66,c122;Mantle waves: s77,c167; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.28±.06; M$_{\theta\theta}$0.27±.05; M$_{\phi\phi}$0.01±.07; M$_{r\theta}$0.95±.17; M$_{\theta\phi}$4.24±.05; M$_{\phi r}$0.46±.19; Best double couple: M$_0$4.359×10^{17} NP1:φ$_s$0°, δ78°,λ175°. NP2:φ$_s$91°,δ85°,λ12°. Principal axes: T 4.589, Plg12°, Azm316°; N -.459, Plg77°, Azm112°; P -4.13, Plg5°, Azm225°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***10*** *02:32:14.6±0.2,5.27N×82.63W,h10^{km},mb5.3/116,MS5.2/120,MW5.7 Error ellipse: s-maj=5.8km s-min=3.5km az=225.0,Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.69; M$_{\theta\theta}$0.49; M$_{\phi\phi}$-1.18; M$_{r\theta}$0.67; M$_{\theta\phi}$5.02; M$_{\phi r}$0.71; Best double couple: M$_0$5.2×10^{17} NP1:φ$_s$95°,δ80°,λ8°. NP2:φ$_s$4°,δ82°,λ170°. Principal axes: T 4.96, Plg13°, Azm320°; N .47, Plg77°, Azm145°; P -5.44, Plg1°, Azm50°;*

CASC ***10*** *02:32:17.1±2.8,5.32N×82.56W,h35^{km}±41^{km},MD4.8,ML4.5,MW5.2,mb5.3(NEIC)*

ISC 10 02:32:15.3±0.8**,5.33N**±0.02×**82.64W**±0.02**,h23^{km}**±5^{km}**,n436,**σ**1^{s}16**/367**,mb5.2**/125**,MS5.2**/138**,18C-9D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTP1	**Petroterminal**	**2.86**	**4**	⇑*e*P	**Pn**	**02 32 59.3**	**-1.4**
DVD	**David**	**3.09**	**3**	⇑*e*P	**Pn**	**02 33 02.9**	**-1.0**
ACR	**Cerro Adams**	**3.34**	**351**	*e*P	**Pn**	**02 33 05.9**	**-1.6**
ACR	**Cerro Adams**	**3.34**	**351**	⇓*e*P	**Pn**	**02 33 05.7**	**-1.8**
ACR				*e*S	**Sn**	**02 33 46.6**	**-0.3**
AZU	**Azuero**	**3.39**	**44**	⇑*e*P	**Pn**	**02 33 07.1**	**-1.0**
AZU				*e*S	**Sn**	**02 33 47.7**	**-0.4**
AZU2	**Pedas**	**3.39**	**50**	*e*P	**Pn**	**02 33 06.3**	**-2.0**
AZU2				*e*S	**Sn**	**02 33 44.6**	**-3.6**
BRU2	**Volcan**	**3.44**	**359**	⇓*e*P	**Pn**	**02 33 08.1**	**-0.8**
BRU2				*e*S	**Sn**	**02 33 50.0**	**+0.6**
CNI	**Changuinola**	**4.06**	**2**	*e*P	**Pn**	**02 33 18.4**	**+0.7**
CNI				*e*S	**Sn**	**02 34 07.2**	**+2.1**
QCR	**Quepos**	**4.34**	**340**	*e*P	**Pn**	**02 33 20.0**	**-1.7**
BUS	**Buena Vista**	**4.34**	**345**	⇑*e*P	**Pn**	**02 33 21.1**	**-0.6**
BUS	**Buena Vista**	**4.34**	**345**	⇑*e*P	**Pn**	**02 33 21.2**	**-0.5**
LCR2	**La Lucha 2**	**4.59**	**343**	*e*P	**Pn**	**02 33 24.2**	**-1.0**
LCR2	**La Lucha 2**	**4.59**	**343**	⇓*e*P	**Pn**	**02 33 24.2**	**-1.0**
LIO	**Limon**	**4.66**	**355**	*e*P	**Pn**	**02 33 28.4**	**+2.2**
LIO				*e*S	**Sn**	**02 34 24.7**	**+4.5**
LIO	**Limon**	**4.66**	**355**	*e*P	**Pn**	**02 33 28.1**	**+1.9**
LAJ	**Bijagual**	**4.74**	**342**	*e*P	**Pn**	**02 33 25.5**	**-1.8**
LAJ	**Bijagual**	**4.74**	**342**	⇑*e*P	**Pn**	**02 33 25.4**	**-1.9**
UPA	**Univ. de Panam**	**4.75**	**40**	⇓*e*P	**Pn**	**02 33 27.3**	**-0.3**
ICR	**Volcan Irazu**	**4.77**	**346**	⇓*e*P	**Pn**	**02 33 28.0**	**+0.2**
ICR	**Volcan Irazu**	**4.77**	**346**	⇓*e*P	**Pn**	**02 33 27.9**	**+0.2**
ICR				*e*S	**Sn**	**02 34 24.8**	**+1.8**
SJS	**Escuela Geolog**	**4.79**	**343**	*e*P	**Pn**	**02 33 26.3**	**-1.7**
SJS	**Escuela Geolog**	**4.79**	**343**	⇑*e*P	**Pn**	**02 33 27.9**	**-0.1**
SJS				*e*S	**Sn**	**02 34 22.9**	**-0.6**
PRS1	**Puriscal**	**4.91**	**340**	⇑*e*P	**Pn**	**02 33 27.1**	**-2.7**
PRS1	**Puriscal**	**4.91**	**340**	⇑*e*P	**Pn**	**02 33 27.2**	**-2.6**
CGA2	**Cerro Gallo 2**	**4.99**	**339**	*e*P	**Pn**	**02 33 29.7**	**-1.2**
CGA2				*e*S	**Sn**	**02 34 28.3**	**-0.4**
CGA2	**Cerro Gallo 2**	**4.99**	**339**	⇑*e*P	**Pn**	**02 33 29.7**	**-1.3**
CGA2				*e*S	**Sn**	**02 34 27.5**	**-1.2**
VPS2	**Volcan Poas 2**	**5.08**	**342**	*e*P	**Pn**	**02 33 31.6**	**-0.5**
VPS2	**Volcan Poas 2**	**5.08**	**342**	*e*P	**Pn**	**02 33 31.6**	**-0.6**
JCR	**Jicaral**	**5.12**	**331**	*e*P	**Pn**	**02 33 30.6**	**-2.1**
JCR	**Jicaral**	**5.12**	**331**	*e*P	**Pn**	**02 33 30.4**	**-2.2**
TRTC	**Tortuguero**	**5.32**	**348**	*e*P	**Pn**	**02 33 34.8**	**-0.7**
TRTC	**Tortuguero**	**5.32**	**348**	*e*P	**Pn**	**02 33 34.8**	**-0.7**
JTS	**JuntasAbangare**	**5.43**	**335**	*e*Pn	**Pn**	**02 33 34.2**	**-2.9**
JTS				*e*Sn	**Sn**	**02 34 38.3**	**-1.5**
FORC	**Fortuna**	**5.49**	**339**	⇓*e*P	**Pn**	**02 33 37.5**	**-0.4**
FORC	**Fortuna**	**5.49**	**339**	⇓*e*P	**Pn**	**02 33 37.6**	**-0.3**
VCR	**Vista de Mar**	**5.61**	**328**	*e*P	**Pn**	**02 33 38.0**	**-1.7**
VCR	**Vista de Mar**	**5.61**	**328**	*e*P	**Pn**	**02 33 37.9**	**-1.7**
OTAV	**Otavalo**	**6.56**	**140**	*e*Pn	**Pn**	**02 33 46.9**	**-6.2**
	62nm,0.6s						
OTAV				*e*Sn	**Sn**	**02 35 00.7**	**-7.3**
MADN	**Villa Maderas**	**6.68**	**335**	*e*P	**Pn**	**02 33 56.0**	**+1.2**
SSNN	**San Juan del S**	**6.72**	**332**	⇓*e*P	**Pn**	**02 33 55.8**	**+0.5**
CONN	**Concepcion**	**6.86**	**335**	*e*P	**Pn**	**02 33 58.6**	**+1.4**
APON	**Apoyo**	**7.37**	**333**	*e*P	**Pn**	**02 34 06.2**	**+1.8**

TICN	**Ticuantepe**	7.55	332	*e*P	Pn	02 34 08.7	+1.8
TICN				*e*S	Sn	02 35 32.5	-0.1
WILN	**Americas 2**	7.64	333	*e*P	Pn	02 34 06.8	-1.3
WILN				*e*S	Sn	02 35 34.8	-0.1
MGAN	**Managua**	7.65	332	*e*P	Pn	02 34 09.2	+0.8
MGAN				*e*S	Sn	02 35 35.1	-0.2
MGAN				*i*		02 35 37.3	
	comp=N,392nm,0.6s						
XAVN	**Gruta Xavier**	7.69	332	*e*P	Pn	02 34 10.9	+2.0
APYN	**Apoyeque**	7.78	332	*e*P	Pn	02 34 12.0	+1.9
COPN	**Copaltepe**	7.85	330	*e*P	Pn	02 34 11.7	+0.7
COPN				*e*S	Sn	02 35 38.0	-2.1
PYTN	**Playitas**	7.92	335	*e*P	Pn	02 34 12.4	+0.4
MOMJ	**Momotombo**	8.02	332⇑	*e*P	P	02 34 13.8	+0.3
MIRN	**Miramar**	8.13	331	*e*P	P	02 34 15.2	+0.3
CNGN	**Cerro Negro**	8.17	331⇑	*e*P	P	02 34 16.5	+0.9
CNGN				*e*S	Sn	02 35 46.3	-1.9
LEON	**Leon**	8.20	329	*e*P	P	02 34 16.2	+0.2
ROSC	**El Rosal**	8.29	93	Pn	P	02 34 17.1	-0.1
	comp=N,6.2nm,0.3s,baz=67,slow=3.5,SNR=23						
ROSC				Sn	Sn	02 35 51.2	+0.1
	baz=283,slow=18,SNR=3.0						
TEL3	**Telica 3**	8.31	330⇑	*e*P	P	02 34 18.7	+1.3
TELN	**Telica**	8.33	330	*e*P	P	02 34 18.1	+0.3
CRIN	**San Cristobal**	8.52	330⇑	*e*P	P	02 34 21.3	+0.9
CRIN				*e*S	Sn	02 35 55.4	-1.4
CNCH	**Conchagua**	9.41	327	*e*P	P	02 34 32.4	-0.4
PAYG	**Puerto Ayora**	9.69	232	*e*P	P	02 34 34.5	-2.3
	comp=N,448nm,1.3s						
BLLM	**Bellamira**	9.77	326	*e*P	P	02 34 37.7	-0.1
BLLM				*e*S	Sn	02 36 28.3	+0.4
VSM	**San Miguel**	9.78	326	*e*P	P	02 34 38.7	+0.8
VSM				*e*S	Sn	02 36 28.3	+0.2
CAHU	**Cacacuatique**	10.02	327	*e*P	P	02 34 41.8	+0.5
SNVI	**San Vicente**	10.25	324	*e*P	P	02 34 45.0	+0.6
SNVI				*e*S	S	02 36 37.6	-2.0
LCBS	**La Ceiba**	10.37	323	*e*P	P	02 34 46.0	0.0
LFRS	**El Faro**	10.39	323	*e*P	P	02 34 46.8	+0.5
LFRS				*e*S	S	02 36 40.1	-3.0
LBRS	**Las Brisas**	10.47	323	*e*P	P	02 34 48.8	+1.4
BOQS	**Boqueron**	10.61	322	*e*P	P	02 34 50.5	+1.1
BOQS				*e*S	S	02 36 47.1	-1.3
SBLS	**San Blas**	10.90	321	*e*P	P	02 34 54.9	+1.6
SBLS				*e*S	S	02 36 53.9	-1.7
SNJE	**San Jose**	10.91	321	*e*P	P	02 34 55.3	+1.9
SNJE				*e*S	S	02 36 53.4	-2.5
RTR	**El Retiro**	10.96	321	*e*P	P	02 34 55.3	+1.2
RTR				*e*S	S	02 36 54.7	-2.3
RBDL	**Robledal**	11.15	322	*e*P	P	02 34 58.2	+1.5
MTO2	**Montecristo 2**	11.18	324	*e*P	P	02 34 58.6	+1.5
SDV	**Santo Domingo**	12.42	73	Pn	P	02 35 12.7	-1.1
	comp=N,1.5nm,0.3s,baz=263,slow=9.2,SNR=60						
SDV				Sn	S	02 37 30.3	-2.3
	comp=N,3.8nm,0.3s,baz=36,slow=15,SNR=3.3						
SDV				LR	LR	02 39 52.0	
	comp=N,10µm,20.7s,baz=267,slow=37						
SDV	**Santo Domingo**	12.42	73	*e*P	P	02 35 12.9	-1.0
	comp=N,852nm,1.4s						
SDV				*e*S	S	02 37 19.7	-13
LMGC	**Las Mercedes**	15.63	20	*e*P	P	02 35 56.2	0.0
LMGC				*e*S	S	02 38 50.8	+1.8
	comp=N,4µm,9.9s						
	comp=E,6µm,5.3s						
TEIG	**Tepich**	15.79	340	*e*P	P	02 35 59.0	+0.9
	comp=E,74nm,1.3s						
CMIG	**Matias Romero**	16.75	315	*i* P	P	02 36 08.7	-1.6
HUIG	**Huatulco**	16.81	309	*i* P	P	02 36 07.5	-3.6
MASC	**Masc**	16.87	28	*e*P	P	02 36 14.6	+2.8
MASC				*e*S	S	02 39 22.0	+4.5
	comp=N,9µm,14.5s						
	comp=E,6µm,6.9s						
MGV	**Manicaragua**	16.88	9	*e*P	P	02 36 12.7	+0.8
MGV				*e*S	S	02 39 21.6	+3.9
	comp=N,3µm,8.4s						
	comp=E,15µm,11.0s						
SOR	**Soroa**	17.36	359	*e*P	P	02 36 17.9	-0.1
SOR				*e*S	S	02 39 40.5	+12
	comp=N,5µm,4.5s						
	comp=E,8µm,10.2s						
OXX	**Oaxaca**	18.07	311	*e*P	P	02 36 29.0	+2.0
NNA	**Nana**	18.14	162	*e*P	P	02 36 24.6	-3.3
	comp=E,107nm,1.1s						
PNIG	**Pinotepa**	18.75	307	*i* P	P	02 36 35.0	-0.2
ACX	**Acapulco**	20.44	305	*e*P	P	02 36 47.0	-7.1
IIB	**San Bernardino**	20.45	313	*e*P	P	02 36 48.0	-6.2
SJG	**San Juan**	20.51	50	P	P	02 36 54.5	-0.3
	comp=E,227nm,0.9s,baz=256,slow=3.8,SNR=36						
SJG				LR	LR	02 44 21.6	
	comp=E,6µm,21.9s,MS4.9,baz=228,slow=36						
SJG	**San Juan**	20.51	50	*e*P	P	02 36 54.1	-0.7
	comp=E,296nm,0.9s						
SJG				LR	LR		
	comp=Z,6µm,22.0s,MS4.9						
PPM	**Popocatepetl**	20.72	313	*e*P	P	02 36 57.0	0.0
UNM	**Universidad Na**	21.29	312	*e*P	P	02 37 05.0	+2.2
CRX	**Cerrillo**	21.71	312	*e*P	P	02 37 07.0	0.0
ZIIG	**Zihuatanejo**	22.09	305	*i* P	P	02 37 11.2	+0.4
DWPF	**Disney**	22.68	3	*e*P	P	02 37 17.9	+1.2
	comp=Z,369nm,1.1s,mb5.7						
DWPF				LR	LR		
	comp=Z,2µm,20.0s,MS4.5						
BBL	**Barber's Block**	23.12	62	*e*P	P	02 37 23.3	+2.2
DEG	**La Desirade**	23.80	61	*e*P	P	02 37 29.7	+2.0
SAML	**Samuel**	24.03	126	*e*P	P	02 37 26.1	-3.8
	comp=Z,439nm,1.4s,mb5.7						
SAML				LR	LR		
	comp=Z,9µm,20.0s,MS5.2						
ARE	**Arequipa**	24.30	153	*e*P	P	02 37 33.0	+0.5
COLM	**Colima**	24.71	306	*i* P	P	02 37 38.5	+2.0
SFJM	**Santa Fe**	24.90	309	*e*P	P	02 37 38.5	+0.2
LPAZ	**La Paz**	25.83	146	P	P	02 37 46.6	-0.5
	comp=Z,6.7nm,0.9s,mb4.2,baz=342,slow=12,SNR=18						
LPAZ				LR	LR	02 49 05.8	
	comp=Z,13µm,20.3s,MS5.5,baz=309,slow=39						
LPAZ	**La Paz**	25.83	146	*e*P	P	02 37 44.8	-2.3
	comp=Z,353nm,1.9s,mb5.6						
LPAZ				LR	LR		
	comp=Z,13µm,20.0s,MS5.5						
HKT	**Hockley**	27.47	335	*e*P	P	02 38 01.3	-0.7
	comp=Z,54nm,1.4s,mb4.9						
HKT				LR	LR		
	comp=Z,3µm,21.0s,MS4.9						
NHSC	**New Hope**	27.73	4	*e*P	P	02 38 04.2	-0.2
	comp=Z,192nm,1.2s,mb5.6						
NHSC				LR	LR		
	comp=Z,3µm,19.0s,MS5.0						
LRAL	**Lakeview Retre**	27.86	352	*e*P	P	02 38 04.7	-0.8
	comp=Z,124nm,1.0s,mb5.5						
LRAL				LR	LR		
	comp=Z,2µm,21.0s,MS4.6						
GOGA	**Godfrey**	27.95	359	*e*P	P	02 38 06.0	-0.3
	comp=Z,88nm,1.2s,mb5.3						
GOGA				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
NATX	**Nacogdoches**	28.60	338	*e*P	P	02 38 12.1	-0.2
	comp=Z,66nm,1.1s,mb5.3						
NATX				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
JSC	**Jenkinsville**	28.83	2	*e*P	P	02 38 12.8	-1.4
OXF	**Oxford**	29.70	349	*e*P	P	02 38 20.0	-2.1
	comp=Z,128nm,1.0s,mb5.6						
OXF				*e*		02 38 35.0	
OXF				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
JCT	**Junction City**	29.78	329	*e*P	P	02 38 22.5	-0.3
	comp=Z,42nm,1.1s,mb5.1						
JCT				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
CPCT	**Cooper Cave**	30.02	357	*e*P	P	02 38 24.0	-0.9
MET	**Memphis--Engin**	30.40	348	*e*P	P	02 38 25.6	-2.6
UALR	**University of**	30.64	344	*e*P	P	02 38 28.9	-1.5
	comp=Z,53nm,1.0s,mb5.3						
MIAR	**Mount Ida**	30.78	342	*e*P	P	02 38 29.9	-1.8
	comp=Z,66nm,1.4s,mb5.3						
MIAR				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
LVC	**Limon Verde**	30.85	155	P	P	02 38 31.2	-1.1
	comp=Z,7.9nm,0.9s,mb4.5,baz=275,slow=6.7,SNR=9.2						
LVC	**Limon Verde**	30.85	155	*e*P	P	02 38 30.8	-1.5
	comp=Z,60nm,1.5s,mb5.2						
LVC				LR	LR		
	comp=Z,4µm,22.0s,MS5.0						
HBAR	**Harrisburg**	30.97	347	*e*P	P	02 38 32.3	-1.0
WVT	**Waverly**	31.02	352	*e*P	P	02 38 31.6	-2.1
	comp=Z,180nm,1.3s,mb5.7						
WVT				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
HALT	**Halls**	31.05	349	*e*P	P	02 38 33.3	-0.7
LTX	**Lajitas**	31.07	323	*e*P	P	02 38 35.5	+1.3
	comp=Z,22nm,1.3s,mb4.8						
LTX				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
TXAR	**Lajitas Array**	31.07	323	P	P	02 38 34.5	+0.3
	comp=Z,2.5nm,0.8s,mb4.1,baz=143,slow=6.3,SNR=19						
TXAR	**Lajitas Array**	31.07	323	P	P	02 38 34.5	+0.3
GNAR	**Gosnell**	31.23	348	*e*P	P	02 38 36.0	+0.5
UTMT	**University of**	31.39	350	*e*P	P	02 38 35.4	-1.6
	comp=Z,411nm,1.1s,mb6.2						
GLAT	**Glass**	31.39	350	*e*P	P	02 38 36.3	-0.6
BBSR	**BB Station**	31.70	30	*e*P	P	02 38 39.8	+0.1
	comp=Z,81nm,1.4s,mb5.4						
BBSR				LR	LR		
	comp=Z,5µm,22.0s,MS5.1						
BLA	**Blacksburg**	31.79	3	*e*P	P	02 38 40.9	+0.5
	comp=Z,151nm,1.2s,mb5.7						
BLA				LR	LR		
	comp=Z,3µm,22.0s,MS4.9						
USIN	**University of**	32.80	353	*e*P	P	02 38 46.6	-2.7
	comp=Z,350nm,1.2s,mb6.2						
WMOK	**Wichita Mounta**	32.85	335	*e*P	P	02 38 48.1	-1.6
	comp=Z,28nm,0.9s,mb5.2						
WMOK				*e*PP	PP	02 40 00.8	+1.0
WMOK				*e*PcP	PcP	02 41 35.9	+1.5
WMOK				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
WCI	**Wyandotte Cave**	32.91	355	*e*P	P	02 38 48.8	-1.4
	comp=Z,178nm,1.2s,mb5.9						
WCI				*e*PcP	PcP	02 41 33.4	-1.1
WCI				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
CBN	**Corbin**	33.07	8	*e*P	P	02 38 52.7	+1.1
	comp=Z,206nm,1.5s,mb5.8						
CBN				LR	LR		
	comp=Z,5µm,20.0s,MS5.2						
FVM	**French Village**	33.27	349	*e*P	P	02 38 51.6	-1.7
	comp=Z,145nm,1.4s,mb5.7						
CCM	**Cathedral Cave**	33.50	348	*e*P	P	02 38 53.3	-2.1
	comp=Z,131nm,1.0s,mb5.8						
CCM				*e*PcP	PcP	02 41 34.4	-1.8
CCM				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
GDL2	**Guadalupe Moun**	33.58	325	*e*P	P	02 38 56.1	+0.1
GDL2				*e*PP	PP	02 40 15.3	+6.6
MNTX	**Cornudas Mount**	33.80	324	*e*P	P	02 38 57.4	-0.6
	comp=Z,88nm,1.5s,mb5.5						
MNTX				LR	LR		
	comp=Z,3µm,20.0s,MS5.0						
SLM	**Saint Louis**	33.86	349	*e*P	P	02 38 57.0	-1.5
	comp=Z,237nm,1.0s,mb6.1						
BLO	**Bloomington**	33.87	355	*e*P	P	02 38 57.2	-1.3
	comp=Z,181nm,1.2s,mb5.9						
CPRX	**Cap Rock**	33.92	327	*e*P	P	02 38 59.8	+0.8
MCWV	**Mont Chateau**	34.26	4	*e*P	P	02 39 02.3	+0.4
	comp=Z,80nm,1.2s,mb5.5						
MCWV				LR	LR		
	comp=Z,3µm,19.0s,MS5.1						
AMTX	**Amarillo**	34.27	332	*e*P	P	02 38 59.0	-3.1
	comp=Z,36nm,1.0s,mb5.3						
AMTX				*e*PP	PP	02 40 16.5	-0.8
SDMD	**Soldier's Deli**	34.33	8	*e*P	P	02 39 01.9	-0.5
ACSO	**Alum Creek Sta**	34.75	360	*e*P	P	02 39 05.5	-0.5
	comp=Z,186nm,1.1s,mb5.9						
ACSO				LR	LR		
	comp=Z,3µm,20.0s,MS5.0						
SSPA	**Standing Stone**	35.41	6	*e*P	P	02 39 11.8	+0.1
	comp=Z,79nm,1.2s,mb5.5						
SSPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
KSU1	**Kansas State U**	35.92	341	*e*P	P	02 39 14.8	-1.2
BRNJ	**Basking Ridge**	35.93	10	*e*P	P	02 39 12.4	-3.7
ALLY	**Alegheny Colle**	36.23	3	P	P	02 39 18.8	+0.2
PAL	**Palisades**	36.37	11	*e*P	P	02 39 21.0	+1.2
	comp=Z,55nm,1.3s,mb5.3						
LPM	**Los Pinos Moun**	36.41	325	*e*P	P	02 39 21.7	+1.5
LPM				*e*PP	PP	02 40 45.4	+1.3
LENM	**Lemitar**	36.50	325	*e*P	P	02 39 22.8	+1.8
ERPA	**Erie**	36.70	3	*e*P	P	02 39 20.4	-2.2
	comp=Z,101nm,1.7s,mb5.4						
ERPA				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
CBKS	**Cedar Bluff**	36.76	337	*e*P	P	02 39 22.8	-0.3
	comp=Z,113nm,1.2s,mb5.6						
CBKS				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
LAZ	**Ladron**	36.77	325	*e*P	P	02 39 26.6	+3.3
ANMO	**Albuquerque**	36.78	326	*e*P	P	02 39 24.5	+1.1
	comp=Z,59nm,1.2s,mb5.3						
ANMO				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
AAM	**Ann Arbor**	36.82	359	*e*P	P	02 39 22.7	-0.9
	comp=Z,85nm,1.1s,mb5.5						
AAM				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
GENY	**Geneseo**	37.52	6	*e*P	P	02 39 29.0	-0.5
TUC	**Tucson**	37.58	319	PFAKE		02 39 40.0	+10
TUC				LR	LR		
	comp=Z,9µm,19.0s,MS5.6						
BRYW	**Bryant College**	37.75	14	*e*P	P	02 39 33.2	+1.8
	comp=Z,83nm,1.3s,mb5.3						
QUA2	**Belchertown**	37.91	12	*e*P	P	02 39 34.0	+1.3
	comp=Z,31nm,1.2s,mb4.9						
JFWS	**Jewell Farm**	38.03	351	*e*P	P	02 39 31.8	-1.9
	comp=Z,150nm,1.3s,mb5.6						
JFWS				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
WES	**Weston**	38.24	14	*e*P	P	02 39 36.5	+0.9
	comp=Z,48nm,1.2s,mb5.1						
HRV	**Harvard--Oak R**	38.30	13	*e*P	P	02 39 37.8	+1.7
	comp=Z,54nm,1.3s,mb5.1						
HRV				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
SDCO	**Great Sand Dun**	38.41	330	*e*P	P	02 39 38.2	+1.2
	comp=Z,163nm,1.4s,mb5.6						
SDCO				LR	LR		
	comp=Z,3µm,21.0s,MS5.1						
ACCN	**Adirondack Com**	38.72	10	*e*P	P	02 39 40.6	+1.1
NCB	**Newcomb**	39.19	10	*e*P	P	02 39 44.1	+0.7
	comp=Z,39nm,1.3s,mb5.0						
NCB				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
FFD	**Franklin Falls**	39.20	13	*e*P	P	02 39 44.5	+1.0
	comp=Z,56nm,1.2s,mb5.2						
HNH	**Hanover**	39.29	12	*e*P	P	02 39 45.1	+0.8
	comp=Z,5.5nm,1.1s,mb4.2						
MDV	**Middlebury**	39.40	11	*e*P	P	02 39 45.5	+0.3
CPUP	**Villa Florida**	39.90	143	P	P	02 39 48.0	-1.5
	comp=Z,0.0nm,0.3s,baz=226,slow=13,SNR=2.4						
CPUP	**Villa Florida**	39.90	143	P	P	02 39 48.0	-1.5
CPUP				LR	LR		
	comp=Z,1.0nm,22.0s						
ISCO	**Idaho Springs**	40.08	332	*e*P	P	02 39 52.3	+1.4
	comp=Z,32nm,1.1s,mb5.0						
ISCO				LR	LR		
	comp=Z,3µm,22.0s,MS5.1						
MSNY	**Massena**	40.09	9	*e*P	P	02 39 51.8	+0.9
BDFB	**Brasilia**	40.12	122	P	P	02 39 49.5	-1.9
	comp=Z,5.2nm,0.8s,mb4.3,baz=290,slow=9.8,SNR=8.5						
BDFB				LR	LR	02 56 22.7	
	comp=Z,5µm,21.4s,MS5.3,baz=302,slow=36						
BDFB	**Brasilia**	40.12	122	P	P	02 39 49.5	-1.9
BDFB				LR	LR	02 56 22.7	
MDZ	**Mendoza**	40.20	162	*e*P	P	02 39 49.9	-2.0
PV01	**Paradox Valley**	40.28	328	*e*P	P	02 39 54.4	+1.9
PV01				*e*PP	PP	02 41 32.5	+3.7
PV10	**Paradox Valley**	40.71	328	*e*P	P	02 39 55.9	-0.1
PV10				*e*PP	PP	02 41 30.7	-2.4
PHWY	**Pilot Hill**	41.22	334	*e*P	P	02 40 01.7	+1.5
SRU	**San Rafael**	42.04	327	*e*P	P	02 40 07.5	+0.5
PFO	**Pinyon Flat Ob**	42.16	316	PFAKE		02 40 20.0	+12
PFO				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
NEN	**Nelson**	42.29	320	*e*P	P	02 40 10.4	+1.3
MSU	**Marysvale**	42.53	325	*e*P	P	02 40 12.0	+0.9
MSU				*e*PP	PP	02 41 52.3	-0.1
MVU	**Marysvale**	42.55	325	*e*P	P	02 40 12.8	+1.6
	comp=Z,21nm,1.0s,mb4.8						
MVU				LR	LR		
	comp=Z,10µm,19.0s,MS5.7						
ARUT	**Antelope Range**	42.78	323	*e*P	P	02 40 14.3	+1.2
ARUT				*e*PP	PP	02 41 54.6	-0.3
RSSD	**Black Hills**	42.97	337	PFAKE		02 40 30.0	+15
RSSD				LR	LR		
	comp=Z,2.0nm,20.0s						
EYMN	**Ely**	43.13	351	*e*P	P	02 40 12.0	-3.8
	comp=Z,39nm,1.1s,mb5.0						
EYMN				*e*PP	PP	02 41 57.4	-0.9
EYMN				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
MPU	**Maple Canyon**	43.28	327	*e*P	P	02 40 18.2	+1.0
DAU	**Daniels Canyon**	43.36	328	*e*P	P	02 40 19.2	+1.4
DAU				*e*		02 40 31.0	
DAU				*e*PP	PP	02 41 51.8	-8.9
NLU	**North Lily Min**	43.48	327	*e*P	P	02 40 20.0	+1.2
JLU	**Jordanelle**	43.60	328	*e*P	P	02 40 20.5	+0.8
MWC	**Mount Wilson**	43.61	316	*e*P	P	02 40 21.2	+1.3
TCUT	**Toone Canyon**	43.95	328	*e*P	P	02 40 23.3	+0.8
BW06	**Boulder Array**	44.26	331	PFAKE		02 40 40.0	+15
BW06				LR	LR		
	comp=Z,4µm,22.0s,MS5.3						
PDAR	**Pinedale Array**	44.26	331	P	P	02 40 25.7	+0.7
	comp=Z,11nm,0.9s,mb4.6,baz=126,slow=10,SNR=51						
PDAR				LR	LR	03 01 16.7	
	comp=Z,4µm,19.1s,MS5.3,baz=316,slow=39						
HWUT	**Hardware Ranch**	44.39	329	*e*P	P	02 40 26.2	+0.2
	comp=Z,93nm,1.2s,mb5.4						
HWUT				LR	LR		
	comp=Z,7µm,19.0s,MS5.6						
DAC	**Darwin (Calif)**	44.45	319	PFAKE		02 40 40.0	+13
DAC				LR	LR		
	comp=Z,5µm,19.0s,MS5.4						
SPUT	**South Promonto**	44.64	328	*e*P	P	02 40 26.9	-1.2
BGU	**Big Grassy Mou**	44.68	327	*e*P	P	02 40 28.5	+0.1
AHID	**Auburn Hatcher**	45.00	330	*e*P	P	02 40 31.3	+0.3
	comp=Z,58nm,1.4s,mb5.2						
AHID				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
HVU	**Hansel Valley**	45.14	328	*e*P	P	02 40 31.1	-1.0
TPH	**Tonopah**	45.28	321	*e*P	P	02 40 33.1	-0.1
	comp=Z,29nm,1.0s,mb5.1						
TPH				LR	LR		
	comp=Z,5µm,21.0s,MS5.4						
LOHW	**Long Hollow**	45.39	331	*e*P	P	02 40 34.6	+0.5
RRI2	**Red Ridge**	45.54	331	*e*P	P	02 40 34.7	-0.6
LAO	**LASA Array**	45.96	337	*e*P	P	02 40 38.7	+0.2
	comp=Z,169nm,1.4s,mb5.8						
LAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
LKWY	**Lake**	46.02	332	*e*P	P	02 40 40.9	+1.9
	comp=Z,22nm,0.9s,mb5.1						
LKWY				LR	LR		
	comp=Z,7µm,22.0s,MS5.5						
MNV	**Mina**	46.08	321	*e*P	P	02 40 40.1	+0.5
	comp=Z,47nm,1.1s,mb5.3						
MNV				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
ULM	**Lac du Bonnet**	46.13	348	P	P	02 40 37.9	-1.9
	comp=Z,23nm,0.9s,mb5.1,baz=163,slow=7.8,SNR=35						
ULM				PcP	PcP	02 42 15.6	-0.6
	comp=Z,5.0nm,0.9s,baz=233,slow=1.8,SNR=2.7						
ULM	**Lac du Bonnet**	46.13	348	*e*P	P	02 40 37.5	-2.3
	comp=Z,61nm,1.1s,mb5.4						
ULM				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
OMM	**Old Mammoth Mi**	46.14	319	*e*P	P	02 40 40.3	+0.2
NVAR	**Mina Array Bea**	46.17	321	P	P	02 40 41.2	+0.9
	comp=Z,24nm,0.9s,mb5.1,baz=128,slow=7.7,SNR=84						
NVAR				PcP	PcP	02 42 16.7	+0.2
	comp=Z,0.5nm,0.6s,baz=345,slow=21,SNR=2.0						
NVAR	**Mina Array Bea**	46.17	321	P	P	02 40 41.2	+0.9
NVAR				PcP	PcP	02 42 16.7	+0.2
YNR	**Norris Junctio**	46.27	332	*e*P	P	02 40 42.7	+1.8
YMR	**Madison River**	46.36	332	*e*P	P	02 40 42.2	+0.5
QLMT	**Earthquake Lak**	46.70	332	*e*P	P	02 40 45.9	+1.5
BMN	**Battle Mountai**	46.73	323	*e*P	P	02 40 44.9	+0.2
	comp=Z,74nm,1.2s,mb5.5						
BMN				LR	LR		
	comp=Z,6µm,19.0s,MS5.6						
DGMT	**Dagmar**	46.75	340	*e*P	P	02 40 44.7	-0.1
	comp=Z,157nm,1.3s,mb5.8						
DGMT				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
LRV	**Little Rabbit**	46.83	317	*e*P	P	02 40 46.1	+0.6
PLCA	**Paso Flores**	47.16	167	P	P	02 40 45.7	-2.4
	comp=Z,17nm,1.1s,mb4.9,baz=341,slow=8.3,SNR=12						
PLCA	**Paso Flores**	47.16	167	*e*P	P	02 40 43.8	-4.4
	comp=Z,40nm,1.3s,mb5.2						
PLCA				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
TRQA	**Tornquist**	47.25	158	*e*P	P	02 40 45.1	-3.7
	comp=Z,48nm,1.3s,mb5.3						
TRQA				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
HLID	**Hailey**	47.26	329	*e*P	P	02 40 49.1	+0.3
	comp=Z,15nm,1.1s,mb4.8						
HLID				LR	LR		
	comp=Z,7µm,20.0s,MS5.6						
CMB	**Columbia Colle**	47.29	319	*e*P	P	02 40 48.4	-0.7
	comp=Z,59nm,1.8s,mb5.2						
CMB				LR	LR		
	comp=Z,4µm,20.0s,MS5.4						
SAO	**San Andreas Ge**	47.31	317	*e*P	P	02 40 50.2	+0.9
	comp=Z,21nm,1.1s,mb5.0						
SAO				LR	LR		
	comp=Z,5µm,22.0s,MS5.5						
BOZ	**Bozeman (W)**	47.41	332	*e*P	P	02 40 49.4	-0.7
	comp=Z,56nm,1.1s,mb5.4						
BOZ				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
RCBR	**Riachuelo**	47.96	103	*e*P	P	02 40 54.2	-0.5
	comp=Z,47nm,1.5s,mb5.3						
RCBR				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
OHCM	**Honcut**	48.72	320	*e*P	P	02 41 00.1	-0.2
WVOR	**Wild Horse Val**	48.82	325	*e*P	P	02 41 01.1	+0.1
	comp=Z,135nm,1.3s,mb5.8						
WVOR				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
CHMT	**Chamberlain Mo**	49.10	332	*e*P	P	02 41 02.0	-1.1
MSO	**Missoula**	49.36	332	*e*P	P	02 41 04.4	-0.7
	comp=Z,34nm,1.3s,mb5.2						
MSO				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
MOD	**Modoc**	49.47	323	*e*P	P	02 41 04.6	-1.4
	comp=Z,15nm,1.3s,mb4.9						
MOD				LR	LR		
	comp=Z,5µm,21.0s,MS5.5						
HOPS	**Hopland**	49.58	318	*e*P	P	02 41 03.6	-3.3
	comp=Z,42nm,1.4s,mb5.3						
HOPS				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
BMO	**Blue Mountains**	49.66	328	*e*P	P	02 41 06.0	-1.4
	comp=Z,28nm,1.5s,mb5.1						
BMO				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
WDC	**Whiskeytown Da**	50.09	320	PFAKE		02 41 20.0	+9.2
WDC				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
YBH	**Yreka Blue Hor**	50.84	322	PFAKE		02 41 30.0	+14
YBH				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
BUOR	**Burton Butte**	50.86	322	P	P	02 41 16.9	+0.3
SCHQ	**Schefferville**	50.98	12	P	P	02 41 17.2	-0.1
	comp=Z,31nm,1.0s,mb5.2,baz=204,slow=6.2,SNR=36						
SCHQ				LR	LR	03 01 52.8	
	comp=Z,2µm,20.3s,MS5.0,baz=204,slow=35						
SCHQ	**Schefferville**	50.98	12	*e*P	P	02 41 16.3	-1.0
	comp=Z,92nm,1.3s,mb5.5						
SCHQ				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
WALA	**Waterton Lakes**	51.00	334	*e*P	P	02 41 16.9	-0.6
	comp=Z,28nm,1.0s,mb5.2						
KHMM	**Horse Mountain**	51.01	320	*e*P	P	02 41 18.2	+0.5
VIPM	**Ingram Point**	51.24	326	P	P	02 41 21.7	+2.2
HUMO	**Hull Mountain**	51.48	322	PFAKE		02 41 30.0	+8.7
HUMO				LR	LR		
	comp=Z,4µm,20.0s,MS5.4						
FFC	**Flin Flon**	51.67	346	P	P	02 41 22.9	+0.3
	comp=Z,120nm,1.2s,mb5.7,SNR=24						
FFC	**Flin Flon**	51.67	346	*e*P	P	02 41 21.1	-1.4
	comp=Z,30nm,1.2s,mb5.1						
FFC				LR	LR		
	comp=Z,482nm,20.0s,MS4.5						
CROR	**Criterion Ridg**	51.74	326	P	P	02 41 24.3	+1.1
HBO	**Huckleberry Mo**	51.82	324	P	P	02 41 23.4	-0.4
NEW	**Newport**	51.90	331	*e*P	P	02 41 23.6	-0.8
	comp=Z,9.0nm,1.0s,mb4.7						
NEW				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						

BROR	**Big Rock Looko**	**52.14**	**324**	P	**P**	**02 41 25.5**	**-0.8**
MXC	**Moxie City**	**52.37**	**328**	P	**P**	**02 41 28.8**	**+0.8**
EBG	**Ellensburg**	**52.72**	**328**	P	**P**	**02 41 31.6**	**+1.0**
COR	**Corvallis**	**52.82**	**324**	P	**P**	**02 41 28.1**	**-3.3**
	comp=Z,119nm,1.5s,mb5.6						
COR				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
EDM	**Edmonton**	**53.95**	**338**	*e*P	**P**	**02 41 38.0**	**-1.5**
FCC	**Fort Churchill**	**54.03**	**353**	*e*P	**P**	**02 41 38.7**	**-1.3**
	comp=Z,68nm,1.2s,mb5.5						
PTCN	**Pitcairn Islan**	**55.14**	**235**	PFAKE		02 42 00.0	+11
PTCN				LR	LR		
	comp=Z,6µm,22.0s,MS5.6						
OCWA	**Octopus Mounta**	**55.17**	**327**	PFAKE		02 42 00.0	+11
OCWA				LR	LR		
	comp=Z,4µm,22.0s,MS5.4						
RKT	**Rikitea**	**58.39**	**239**	*e*P	**P**	**02 42 07.3**	**-4.5**
	comp=Z,137nm,1.2s,mb5.9						
FRB	**Frobisher Bay**	**59.19**	**7**	LR	LR	03 06 36.8	
	comp=Z,1µm,19.3s,MS5.1,baz=199,slow=35						
USHA	**Ushuaia**	**61.11**	**171**	P	**P**	**02 42 29.5**	**-0.5**
	comp=Z,5.9nm,0.9s,mb4.7,baz=339,slow=11,SNR=3.2						
YKA	**Yellowknife Ar**	**61.71**	**344**	P	**P**	**02 42 32.7**	**-1.3**
	comp=Z,20nm,0.9s,mb5.2,baz=138,slow=6.5,SNR=97						
YKA				LR	LR	03 11 18.6	
	comp=Z,1µm,19.4s,MS5.0,baz=160,slow=38						
YKA	**Yellowknife Ar**	**61.71**	**344**	P	**P**	**02 42 32.7**	**-1.3**
YKA				LR	LR	03 11 18.6	
DLBC	**Dease Lake**	**64.34**	**335**	*e*P	**P**	**02 42 52.0**	**+0.6**
SIT	**Sitka**	**65.98**	**332**	PFAKE		02 43 10.0	+8.0
SIT				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
RES	**Resolute Bay**	**69.66**	**357**	*e*P	**P**	**02 43 21.6**	**-3.3**
	comp=Z,23nm,1.1s,mb5.0						
TBI	**Tubuai**	**71.11**	**243**	*e*SS	SS	02 57 20.3	-3.7
TBI				*e*LQ		03 02 39.2	
TBI				*e*LR	LR	03 05 21.5	
	comp=Z,6µm,28.5s,baz=72						
INK	**Inuvik**	**71.38**	**342**	LR	LR	03 17 32.4	
	comp=Z,3µm,19.9s,MS5.6,baz=132,slow=38						
INK	**Inuvik**	**71.38**	**342**	*e*P	**P**	**02 43 34.8**	**-0.6**
	comp=Z,36nm,1.1s,mb5.2						
SUMG	**Summit**	**72.35**	**13**	*e*P	**P**	**02 43 39.8**	**-1.3**
	comp=Z,53nm,1.0s,mb5.4						
ILAR	**Eielson Array**	**74.41**	**336**	P	**P**	**02 43 53.0**	**-0.1**
	comp=Z,7.8nm,0.8s,mb4.7,baz=115,slow=3.9,SNR=38						
ILAR				LR	LR	03 19 38.7	
	comp=Z,2µm,18.7s,MS5.4,baz=125,slow=38						
SLKM	**Skilak Lake**	**74.45**	**332**	P	**P**	**02 43 48.7**	**-4.7**
FIB	**Fire Island**	**74.62**	**332**	PFAKE		02 44 10.0	+16
FIB				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
EVO	**Evora**	**74.67**	**52**	*e*P	**P**	**02 43 54.0**	**-1.2**
	comp=Z,45nm,0.8s,mb5.2						
EVO				*e*R			
	comp=Z,1µm,20.8s						
COLA	**College**	**74.83**	**336**	P	**P**	**02 43 56.0**	**+0.5**
	comp=Z,23nm,1.3s,mb5.0						
COLA				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
MCK	**McKinley**	**74.88**	**335**	*e*P	**P**	**02 43 55.1**	**-0.8**
	comp=Z,34nm,1.5s,mb5.0						
MCK				LR	LR		
	comp=Z,983nm,20.0s,MS5.1						
EBAD	**Badajoz**	**75.47**	**51**	P	**P**	**02 44 01.7**	**+1.9**
	comp=Z,26nm,1.5s,mb5.0						
SPU	**Mount Spurr**	**75.50**	**332**	*e*P	**P**	**02 43 59.9**	**+0.5**
EINC	**Incio**	**75.59**	**47**	P	**P**	**02 43 58.5**	**-1.9**
RSO	**Redoubt South**	**75.64**	**331**	*e*P	**P**	**02 44 00.9**	**+0.6**
EMIN	**Mina Concepcio**	**75.66**	**53**	P	**P**	**02 44 01.6**	**+0.8**
	comp=Z,12nm,0.8s,mb4.9						
ERUA	**La Rua**	**75.71**	**48**	P	**P**	**02 44 01.4**	**+0.3**
	comp=Z,9.8nm,0.8s,mb4.8						
ECAL	**Calabor**	**75.97**	**48**	P	**P**	**02 44 02.8**	**+0.3**
ESPR	**Espera**	**76.25**	**53**	P	**P**	**02 44 06.1**	**+1.9**
	comp=Z,11nm,1.0s,mb4.7						
DBIC	**Dimbokro**	**77.29**	**84**	P	**P**	**02 44 09.4**	**-1.0**
	comp=Z,20nm,0.9s,mb5.0,baz=254,slow=6.2,SNR=9.2						
DBIC				LR	LR	03 20 35.0	
	comp=Z,476nm,18.2s,MS4.8,baz=254,slow=38						
EADA	**Adamuz**	**77.34**	**52**	P	**P**	**02 44 10.8**	**+0.6**
	comp=Z,6.2nm,0.7s,mb4.7						
IMA	**Indian Mountai**	**77.51**	**337**	*e*P	**P**	**02 44 11.3**	**+0.6**
	comp=Z,64nm,1.1s,mb5.5						
ELOJ	**Sierra Loja**	**77.62**	**53**	P	**P**	**02 44 13.1**	**+1.2**
	comp=Z,3.4nm,0.7s,mb4.4						
TRIS	**Tristan da Cun**	**77.71**	**130**	PFAKE		02 44 20.0	+7.7
TRIS				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
ESDC	**Sonseca Array**	**77.90**	**51**	P	**P**	**02 44 12.9**	**-0.4**
	comp=Z,8.7nm,0.8s,mb4.8,baz=272,slow=5.2,SNR=32						
ESDC	**Sonseca Array**	**77.90**	**51**	P	**P**	**02 44 13.3**	**0.0**
	comp=Z,13nm,0.8s,mb4.9						
ESLA	**Sonseca Array**	**77.90**	**51**	*e*P	**P**	**02 44 12.8**	**-0.5**
	comp=Z,6.2nm,1.1s,mb4.5						
ESLA				LR	LR		
	comp=Z,9µm,20.0s,MS6.1						
EBAN	**Banos Encina**	**77.96**	**52**	P	**P**	**02 44 12.5**	**-1.2**
ELAN	**Lanestosa**	**78.50**	**47**	P	**P**	**02 44 17.4**	**+0.9**
EQES	**Quesada**	**78.51**	**53**	P	**P**	**02 44 17.7**	**+1.0**
	comp=Z,24nm,0.8s,mb5.2						
EBER	**Berja**	**78.62**	**54**	P	**P**	**02 44 18.6**	**+1.2**
ROSF	**Rostrenen**	**78.97**	**42**	*e*P	**P**	**02 44 18.9**	**-0.1**
EVIA	**Vianos**	**78.99**	**52**	P	**P**	**02 44 21.7**	**+2.4**
QUIF	**Quistinic**	**79.00**	**42**	*e*P	**P**	**02 44 19.2**	**0.0**
ESK	**Eskdalemuir**	**79.62**	**35**	*e*P	**P**	**02 44 21.9**	**-0.4**
	comp=Z,85nm,1.5s,mb5.5						
EKA	**Eskdalemuir Ar**	**79.65**	**35**	P	**P**	**02 44 22.5**	**0.0**
	comp=Z,9.1nm,0.9s,mb4.7,baz=262,slow=5.9,SNR=9.2						
JMIC	**Jan Mayen**	**79.83**	**19**	LR	LR	03 16 47.9	
	comp=Z,905nm,20.8s,MS5.1,baz=264,slow=34						
RAR	**Rarotonga**	**80.00**	**247**	LR	LR	03 11 15.3	
	comp=Z,1µm,20.4s,MS5.2,baz=89,slow=29						
SJPF	**Ste Jean**	**80.11**	**47**	*e*P	**P**	**02 44 25.5**	**+0.3**
	comp=Z,42nm,0.9s,mb5.1						
GRR	**Gorron**	**80.58**	**42**	*e*P	**P**	**02 44 28.4**	**+0.8**
ETSF	**Etsaut**	**80.59**	**48**	*e*P	**P**	**02 44 27.6**	**-0.2**
FLN	**La Foliniere**	**80.84**	**42**	*e*P	**P**	**02 44 28.2**	**-0.8**
	comp=Z,54nm,1.3s,mb5.0						
FLN				*e*R			
	comp=Z,857nm,19.5s						
MFF	**Saint Martin d**	**80.99**	**44**	*e*P	**P**	**02 44 29.8**	**0.0**
	comp=Z,31nm,1.1s,mb4.9						
LDF	**La Druitiere**	**81.07**	**42**	*e*P	**P**	**02 44 30.2**	**0.0**
	comp=Z,29nm,0.9s,mb4.9						
EBIE	**Bielsa**	**81.10**	**48**	P	**P**	**02 44 33.1**	**+2.6**
EPF	**Esparros**	**81.25**	**47**	*e*P	**P**	**02 44 31.4**	**+0.1**
	comp=Z,41nm,1.1s,mb5.0						
LFF	**La Frestale**	**81.57**	**45**	*e*P	**P**	**02 44 32.8**	**-0.1**
	comp=Z,19nm,0.9s,mb4.7						
RJF	**Les Rejaudoux**	**82.12**	**45**	*e*P	**P**	**02 44 35.8**	**0.0**
	comp=Z,62nm,1.6s,mb5.0						
RJF				*e*R			
	comp=Z,988nm,22.5s						
CAF	**Calviac**	**82.51**	**46**	*e*P	**P**	**02 44 38.0**	**+0.2**
	comp=Z,21nm,1.1s,mb4.8						
TCF	**Toulx Ste Croi**	**82.61**	**44**	*e*P	**P**	**02 44 37.9**	**-0.4**
	comp=Z,10.0nm,0.7s,mb4.6						
MTLF	**Montolieu**	**82.63**	**47**	*e*P	**P**	**02 44 38.3**	**-0.1**
	comp=Z,39nm,1.1s,mb5.0						
HYF	**Humbligny**	**82.91**	**43**	*e*P	**P**	**02 44 40.1**	**+0.3**
BGF	**Bois d'Agland**	**83.05**	**44**	*e*P	**P**	**02 44 40.5**	**0.0**
	comp=Z,12nm,0.8s,mb4.7						
AVF	**Avril sur Loir**	**83.40**	**44**	*e*P	**P**	**02 44 42.4**	**+0.1**
	comp=Z,16nm,1.1s,mb4.7						
SSF	**Saint Saulge**	**83.50**	**43**	*e*P	**P**	**02 44 42.7**	**-0.2**
	comp=Z,8.0nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**83.74**	**44**	*e*P	**P**	**02 44 44.1**	**0.0**
LASF	**Ste Croix**	**83.81**	**46**	*e*P	**P**	**02 44 44.6**	**+0.1**
BAIF	**Baives**	**83.92**	**40**	*e*P	**P**	**02 44 45.1**	**+0.2**
GIVF	**Givet**	**84.31**	**40**	*e*P	**P**	**02 44 47.1**	**+0.2**
VIVF	**Saint-Julien-l**	**84.37**	**46**	*e*P	**P**	**02 44 47.2**	**-0.1**
	comp=Z,32nm,1.1s,mb5.1						
MEZF	**Maizieres J'vi**	**84.51**	**42**	*e*P	**P**	**02 44 48.1**	**+0.2**
	comp=Z,18nm,0.8s,mb4.9						
SMRF	**Simiane la Rot**	**85.05**	**46**	*e*P	**P**	**02 44 50.5**	**-0.2**
ORIF	**Oris-en-Rattie**	**85.22**	**45**	*e*P	**P**	**02 44 51.4**	**-0.1**
	comp=Z,34nm,1.2s,mb5.1						
ORIF				*e*R			
	comp=Z,887nm,19.2s						
CABF	**La Chapelle**	**85.29**	**44**	*e*P	**P**	**02 44 52.1**	**+0.3**
	comp=Z,50nm,1.3s,mb5.2						
HAU	**Haudompre**	**85.40**	**42**	*e*P	**P**	**02 44 52.7**	**+0.4**
HAU				*e*R			
	comp=Z,1µm,21.2s						
HINF	**Hinteralfeld**	**85.75**	**43**	*e*P	**P**	**02 44 54.2**	**+0.1**
LPL	**La Plagne**	**85.79**	**45**	*e*P	**P**	**02 44 54.2**	**-0.2**
	comp=Z,16nm,1.0s,mb4.9						
LPG	**La Plagne**	**85.81**	**45**	*e*P	**P**	**02 44 54.9**	**+0.4**
FRF	**La Foret Royal**	**85.84**	**47**	*e*P	**P**	**02 44 54.1**	**-0.6**
MBDF	**Montbardon**	**85.87**	**46**	*e*P	**P**	**02 44 54.7**	**-0.1**
CDF	**Champ du Feu**	**85.99**	**42**	*e*P	**P**	**02 44 55.5**	**+0.2**
SBF	**Sospel**	**86.40**	**46**	*e*P	**P**	**02 44 56.9**	**-0.5**
NB2	**NORSAR Subarra**	**87.24**	**29**	P	**P**	**02 45 01.8**	**+0.7**
	comp=Z,12nm,1.1s,mb5.0,baz=278,slow=4.8						
NOA	**NORSAR Array B**	**87.24**	**29**	P	**P**	**02 45 02.8**	**+1.7**
	comp=Z,5.5nm,0.9s,mb4.8,baz=275,slow=4.6,SNR=5.7						
NOA				LR	LR	03 16 20.4	
	comp=Z,688nm,20.9s,MS5.0,baz=280,slow=30						
NOA	**NORSAR Array B**	**87.24**	**29**	P	**P**	**02 45 02.8**	**+1.7**
NOA				LR	LR	03 16 20.4	
PGF	**Pioggiola**	**87.64**	**48**	*e*P	**P**	**02 45 02.9**	**-0.6**
GRA1	**Grafenberg Arr**	**88.47**	**40**	*e*P	**P**	**02 45 12.1**	**+4.8**
	comp=Z,15nm,1.7s,mb5.0						
GRA1				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
GRF	**Grafenberg Arr**	**88.47**	**40**	*e*P	**P**	**02 45 12.1**	**+4.8**
	comp=Z,15nm,1.7s,mb5.0						
GRF				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
MOX	**Moxa**	**88.61**	**39**	P	**P**	**02 45 11.8**	**+3.9**
MOX				LR	LR		
	comp=Z,1µm,23.0s,MS5.2						
MOX	**Moxa**	**88.61**	**39**	*i* P	**P**	**02 45 11.8**	**+3.9**
MOX				L		03 19 49.0	
CLL	**Collm**	**89.40**	**39**	*i* P	**P**	**02 45 14.3**	**+2.7**
	comp=Z,18nm,1.4s,mb5.2						
CLL				*i*	pP	02 45 23.3	+4.3
CLL	**Collm**	**89.40**	**39**	P	**P**	**02 45 14.3**	**+2.7**
	comp=Z,logA/T=1.1,mb5.2						
CLL				*i*	pP	02 45 23.3	+4.3
CLL				*i*		02 45 32.6	
CLL				*e*SS	SS	03 02 18.0	+21
VNA3	**Neumayer Olymp**	**89.60**	**162**	⇑*i*P	**P**	**02 45 11.6**	**-0.5**
VNA3	**Neumayer Olymp**	**89.60**	**162**	*e*	**P**	**02 45 18.6**	**+6.5**
KHC	**Kasperske Hory**	**90.07**	**41**	*e*P	**P**	**02 45 15.5**	**+0.7**
KHC				*e*		02 45 19.5	
KHC	**Kasperske Hory**	**90.07**	**41**	*e*P	**P**	**02 45 15.5**	**+0.7**
KHC				pP	pP	02 45 19.5	-2.7
GERES	**GERESS Array B**	**90.19**	**41**	P	**P**	**02 45 15.9**	**+0.5**
	comp=Z,2.1nm,0.8s,mb4.5,baz=225,slow=1.9,SNR=15						
VNA2	**Neumayer--Watz**	**90.22**	**161**	⇑*i*P	**P**	**02 45 10.8**	**-4.2**
VNA2	**Neumayer--Watz**	**90.22**	**161**	*e*	**P**	**02 45 15.6**	**+0.6**
VNA2	**Neumayer--Watz**	**90.22**	**161**	*e*	**P**	**02 45 18.0**	**+3.0**
ARCES	**ARCESS Array B**	**91.30**	**20**	LR	LR	03 20 48.8	
	comp=Z,980nm,21.5s,MS5.2,baz=104,slow=32						
SNAA	**Sanae**	**91.82**	**162**	⇑*i*P	**P**	**02 45 18.4**	**-4.0**
SNAA	**Sanae**	**91.82**	**162**	*e*	**P**	**02 45 29.5**	**+7.1**
BILL	**Bilibino**	**92.82**	**339**	*e*P	**P**	**02 45 28.7**	**+1.7**
	comp=Z,37nm,1.4s,mb5.6						
BILL				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
SMY	**Shemya**	**93.77**	**324**	PFAKE		02 45 40.0	+8.3
SMY				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
FINES	**FINESS Array B**	**94.16**	**27**	LR	LR	03 22 19.0	
	comp=Z,1µm,20.8s,MS5.3,baz=282,slow=32						
RAO	**Raoul Island**	**97.18**	**241**	PFAKE		02 46 00.0	+12
RAO				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
TIXI	**Tiksi**	**100.45**	**350**	PFAKE		02 46 10.0	+8.3
TIXI				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
TSUM	**Tsumeb**	**101.37**	**108**	PFAKE		02 46 20.0	+13
TSUM				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
OBN	**Obninsk**	**101.75**	**31**	PFAKE		02 46 20.0	+12
OBN				LR	LR		
	comp=Z,413nm,20.0s,MS5.0						
PET	**Petropavlovsk**	**102.44**	**327**	PFAKE		02 46 20.0	+9.0
PET				LR	LR		
	comp=Z,479nm,21.0s,MS5.0						
MA2	**Magadan**	**102.86**	**335**	PFAKE		02 46 20.0	+7.3
MA2				LR	LR		
	comp=Z,762nm,22.0s,MS5.2						
SUR	**Sutherland**	**104.19**	**122**	PFAKE		02 46 30.0	+11
SUR				LR	LR		
	comp=Z,530nm,20.0s,MS5.1						
WAKE	**Wake Island**	**107.60**	**292**	PFAKE		02 50 50.0	
WAKE				LR	LR		
	comp=Z,197µm,21.0s						
BOSA	**Boshof**	**108.24**	**118**	PFAKE		02 51 00.0	
BOSA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
YAK	**Yakutsk**	**108.38**	**345**	PFAKE		02 50 50.0	
YAK				LR	LR		
	comp=Z,967nm,19.0s,MS5.4						
LBTB	**Lobatse**	**108.75**	**114**	PFAKE		02 51 00.0	
LBTB				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
LSZ	**Lusaka**	**111.46**	**104**	PFAKE		02 51 00.0	+7.1
LSZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MBAR	**Mbarara**	**113.33**	**88**	PFAKE		02 51 10.0	+13
MBAR				LR	LR		
	comp=Z,223nm,21.0s,MS4.7						
GNI	**Garni**	**113.83**	**42**	PFAKE		02 51 10.0	+13
GNI				LR	LR		
	comp=Z,510nm,21.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**114.32**	**328**	PFAKE		02 51 10.0	+12
YSS				LR	LR		
	comp=Z,878nm,19.0s,MS5.4						
BVAR	**Borovoye Array**	**117.55**	**18**	PKP	PKPdf	02 50 59.6	-4.3
	comp=Z,0.2nm,0.3s,baz=214,slow=43,SNR=5.0						
CASY	**Casey**	**118.47**	**186**	PFAKE		02 51 10.0	+4.6
CASY				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
KMBO	**Kilima Mbogo**	**119.86**	**88**	PFAKE		02 51 20.0	+11
KMBO				LR	LR		
	comp=Z,685nm,19.0s,MS5.3						
ZAL	**Zalesovo**	**120.01**	**9**	PKP	PKPdf	02 51 05.7	-2.9
	comp=Z,1.8nm,0.4s,baz=237,slow=5.9,SNR=7.4						
ZAL	**Zalesovo**	**120.01**	**9**	PKP	PKPdf	02 51 05.7	-2.9
KURK	**Kurchatov**	**121.88**	**14**	*e*P	PKPdf	02 51 09.7	-2.8
KURK				LR	LR		
	comp=Z,214nm,22.0s,MS4.8						
TAU	**Tasmania Unive**	**122.23**	**222**	PFAKE		02 51 20.0	+6.7
TAU				LR	LR		
	comp=Z,219nm,19.0s,MS4.8						
HIA	**Hailar**	**122.23**	**343**	PFAKE		02 51 20.0	+6.9
HIA				LR	LR		
	comp=Z,950nm,20.0s,MS5.4						
MDJ	**Mudanjiang**	**122.48**	**333**	PKP	PKPdf	02 51 08.3	-5.4
MDJ				PKS	PKS	02 54 45.0	-0.1
MDJ				SKS	SKS	02 58 20.3	+5.6
MDJ				SS	SS	03 09 26.0	-1.2
MDJ				PP	PP		
	comp=Z,153nm,5.5s						
MDJ				LR	LR		
	comp=N,370nm,27.9s,MS5.4						
MDJ				LR	LR		
	comp=E,1µm,29.3s,MS5.4						
MDJ				LR	LR		
	comp=Z,542nm,29.3s,MS5.0						
MDJ	**Mudanjiang**	**122.48**	**333**	PFAKE		02 51 20.0	+6.3
MDJ				LR	LR		
	comp=Z,512nm,20.0s,MS5.2						
TLY	**Talaya**	**122.96**	**355**	PFAKE		02 51 20.0	+5.6
TLY				LR	LR		
	comp=Z,147nm,22.0s,MS4.6						
MAJO	**Matsushiro**	**123.50**	**321**	PFAKE		02 51 20.0	+4.1
MAJO				LR	LR		
	comp=Z,706nm,19.0s,MS5.3						
CN2	**Changchun**	**124.92**	**335**	*e*PKP	PKPdf	02 51 10.0	-8.5
CN2				PP	PP	02 53 03.0	-3.7
CN2				LR	LR		
	comp=N,400nm,19.0s,MS5.4						
CN2				LR	LR		
	comp=E,600nm,19.0s,MS5.4						
CN2				LR	LR		
	comp=Z,670nm,21.0s,MS5.3						
ULN	**Ulaanbaatar**	**126.35**	**352**	*e*P	PKPdf	02 51 16.9	-4.2
ULN				LR	LR		
	comp=Z,768nm,19.0s,MS5.4						
SONM	**Songino Array**	**126.47**	**352**	PKP	PKPdf	02 51 18.0	-3.3
	comp=Z,1.6nm,0.8s,baz=326,slow=1.2,SNR=12						
AAK	**Ala-Archa**	**127.93**	**21**	*e*P	PKPdf	02 51 21.6	-2.7
AAK				LR	LR		
	comp=Z,220nm,20.0s,MS4.8						
GUMO	**Guam**	**129.24**	**292**	PFAKE		02 51 40.0	+12
GUMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
INCN	**Inchon**	**129.42**	**330**	PFAKE		02 51 40.0	+13
INCN				LR	LR		
	comp=Z,626nm,22.0s,MS5.3						
WMQ	**Urumqi**	**130.30**	**9**	*e*PKP	PKPdf	02 51 24.0	-4.8
WMQ				PP	PP	02 53 42.0	-0.3
WMQ				SKS	SKS	02 58 34.0	-3.3
WMQ				SKKS		03 00 34.0	
WMQ				SS	SS	03 11 07.0	+2.3
WMQ				PP	PP		
	comp=Z,68nm,9.0s						
WMQ				LR	LR		
	comp=N,646nm,25.0s,MS5.4						
WMQ				LR	LR		
	comp=E,784nm,26.0s,MS5.4						
WMQ				LR	LR		
	comp=Z,1µm,26.0s,MS5.4						
CTAO	**Charters Tower**	**130.31**	**248**	PFAKE		02 51 40.0	+11
CTAO				LR	LR		
	comp=Z,371nm,21.0s,MS5.1						
PMG	**Port Moresby**	**130.48**	**262**	PFAKE		02 51 40.0	+10
PMG				LR	LR		
	comp=Z,480nm,19.0s,MS5.2						
STKA	**Stephens Creek**	**130.96**	**232**	PKP	PKPdf	02 51 26.0	-4.4
	comp=Z,2.5nm,1.0s,baz=234,slow=11,SNR=3.3						
STKA	**Stephens Creek**	**130.96**	**232**	PKP	PKPdf	02 51 26.0	-4.4
KSH	**Kashi**	**131.20**	**22**	*e*PKP	PKPdf	02 51 32.2	+1.5
KSH				*e*PKS	PKS	02 55 07.0	+5.4
KSH				LR	LR		
	comp=N,400nm,5.4s						
KSH				LR	LR		
	comp=E,560nm,7.3s						
BJI	**Beijing**	**131.64**	**341**	PKP	PKPdf	02 51 29.1	-2.4
BJI				PP	PP	02 53 53.1	+2.0
BJI				PP	PP		
	comp=Z,173nm,6.3s						
BJI				LR	LR		
	comp=N,731nm,19.8s,MS5.4						
BJI				LR	LR		
	comp=E,373nm,19.8s,MS5.4						
BJI				LR	LR		
	comp=Z,737nm,23.6s,MS5.3						
BJT	**Baijiatuau**	**131.66**	**341**	PFAKE		02 51 40.0	+8.5
BJT				LR	LR		
	comp=Z,943nm,21.0s,MS5.5						
GTA	**Gaotai**	**135.42**	**357**	PKP	PKPdf	02 51 37.9	-0.7
GTA				XPKP		02 51 43.4	
GTA				PP	PP	02 54 16.0	+1.1
GTA				PPP	PPP	02 57 14.3	+1.6
GTA				SKKS		03 01 04.3	
GTA				SS	SS	03 12 06.3	-0.6
GTA				PP	PP		
	comp=Z,224nm,10.3s						
GTA				LR	LR		
	comp=N,414nm,19.0s,MS5.4						
GTA				LR	LR		
	comp=E,503nm,20.5s,MS5.4						
GTA				LR	LR		
	comp=Z,745nm,29.3s						
SSE	**Sheshan**	**137.22**	**329**	PKP	PKPdf	02 51 39.5	-2.5
SSE				PP	PP	02 54 27.5	+1.4
SSE				SS	SS	03 12 32.2	+3.6
SSE				PP	PP		
	comp=Z,439nm,5.6s						
SSE				LR	LR		
	comp=N,357nm,29.7s,MS5.3						
SSE				LR	LR		
	comp=E,696nm,29.7s,MS5.3						
SSE				LR	LR		
	comp=Z,439nm,23.7s						
NJ2	**Nanjing**	**137.56**	**333**	*e*PKP	PKPdf	02 51 33.6	-9.1
NJ2				XPKP		02 51 48.0	
NJ2				PKS	PKS	02 55 17.0	+3.7
NJ2				SKKS		03 01 15.0	
NJ2				PP	PP		
	comp=Z,610nm,4.6s						
NJ2				LR	LR		
	comp=N,950nm,20.3s,MS5.6						
NJ2				LR	LR		
	comp=E,790nm,21.7s,MS5.6						
NJ2				LR	LR		
	comp=Z,600nm,24.2s,MS5.2						
XAN	**Xi'an**	**139.34**	**345**	PKP	PKPdf	02 51 45.9	0.0
NDI	**New Delhi**	**141.01**	**29**	*e*P	PKPdf	02 51 48.5	-0.6
WB2	**Warramunga Arr**	**141.22**	**245**	*e*P	PKPdf	02 51 43.2	-6.5
WRAB	**Tennant Creek**	**141.22**	**245**	*e*P	PKPdf	02 51 48.6	-1.1
WRAB				LR	LR		
	comp=Z,259nm,21.0s,MS5.0						
WRA	**Warramunga Arr**	**141.23**	**245**	PKhKP		02 51 43.3	
	comp=Z,1.9nm,0.8s,baz=103,slow=2.4,SNR=11						
WRA				PKP	PKPdf	02 51 47.6	-2.1
	comp=Z,2.7nm,0.8s,baz=105,slow=2.4,SNR=15						
ENH	**Enshi**	**142.74**	**343**	*e*P	PKPdf	02 51 45.4	-6.6
ENH				LR	LR		
	comp=Z,841nm,21.0s,MS5.5						
CD2	**Chengdu**	**143.45**	**351**	*e*PKP	PKPdf	02 51 48.7	-4.5
KOLN	**Koldanda**	**144.51**	**21**	*e*P	PKPbc	02 51 50.8	+0.4
	comp=Z,87nm,1.5s						
KAKA	**Kakadu**	**144.62**	**256**	*e*P	PKPbc	02 51 50.6	-0.5
	comp=Z,44nm,1.0s						
GKN	**Gorkha**	**144.66**	**20**	*e*P	PKPbc	02 51 50.7	-0.2
	comp=Z,199nm,1.5s						
LSA	**Lhasa**	**144.66**	**9**	PKP	PKPdf	02 51 52.4	-3.0
LSA	**Lhasa**	**144.66**	**9**	*e*P	PKPbc	02 51 52.3	+1.5
LSA				LR	LR		
	comp=Z,538nm,21.0s,MS5.3						
KKN	**Kakani**	**145.06**	**19**	*e*P	PKPbc	02 51 52.3	+0.3
	comp=Z,115nm,0.7s						
DMN	**Daman**	**145.18**	**19**	*e*P	PKPbc	02 51 52.9	+0.6
	comp=Z,131nm,0.9s						
PKI	**Pulchoki**	**145.31**	**19**	*e*P	PKPbc	02 51 53.2	+0.6
	comp=Z,90nm,1.0s						
JIRN	**Jiri**	**145.47**	**18**	*e*P	PKPbc	02 51 53.9	+0.9
	comp=Z,229nm,1.2s						
BHPL	**Bhopal**	**145.56**	**34**	*e*P	PKPbc	02 51 54.1	+0.8
BHPL				*e*		02 51 58.4	
	comp=Z,34nm,1.0s						
BOM	**Bombay**	**145.87**	**45**	*e*P	PKPbc	02 51 50.6	-3.7
POO	**Poona**	**146.84**	**44**	*e*P	PKPbc	02 51 58.0	+1.5
NWAO	**Narrogin (SRO)**	**146.88**	**212**	PKPbc	PKPbc	02 51 58.9	+2.7
	comp=Z,12nm,1.1s,baz=191,slow=1.7,SNR=3.0						
NWAO	**Narrogin (SRO)**	**146.88**	**212**	PFAKE		02 52 10.0	+14
NWAO				LR	LR		
	comp=Z,597nm,21.0s,MS5.3						
GYA	**Guiyang**	**147.14**	**345**	⇑*i*PKP	PKPdf	02 51 58.8	-0.9
GYA				PKS	PKS	02 55 33.8	+4.4
GYA				PP	PP		
	comp=Z,260nm,4.5s						
GYA				LR	LR		
	comp=N,370nm,23.4s,MS5.4						
GYA				LR	LR		
	comp=E,670nm,21.9s,MS5.4						
GYA				LR	LR		
	comp=Z,490nm,25.2s,MS5.2						
KAD	**Karad**	**147.90**	**45**	*e*P	PKPdf	02 52 01.4	+0.3
KAD				*e*		02 52 06.1	
	comp=Z,25nm,1.7s						
MUN	**Mundaring**	**148.16**	**211**	*e*P	PKPdf	02 52 01.0	-0.1
	comp=Z,19nm,1.2s						
SHL	**Shillong**	**148.83**	**10**	*e*P	PKPdf	02 52 02.0	-0.4
BLSP	**Bilaspur**	**148.90**	**28**	*e*P	PKPdf	02 52 01.3	-1.3
BLSP				AMb	AMB	02 52 06.8	
KMI	**Kunming**	**149.28**	**350**	PKP	PKPdf	02 51 59.6	-3.5
KMI				XPKP		02 52 03.1	
KMI				PKP2	PKPab	02 52 09.4	-0.4
KMI				PP	PP	02 55 36.9	-1.6
KMI				SKKS		03 02 28.1	
KMI				SS	SS	03 14 48.3	+1.2
KMI				PP	PP		
	comp=Z,146nm,7.0s						
KMI				LR	LR		
	comp=N,334nm,27.4s,MS5.2						
KMI				LR	LR		
	comp=E,452nm,29.7s,MS5.2						
KMI				LR	LR		
	comp=Z,611nm,27.2s,MS5.3						
FITZ	**Fitzroy Crossi**	**149.61**	**243**	*e*P	PKPdf	02 52 05.0	+1.2
	comp=Z,22nm,0.9s						
HYB	**Hyderabad**	**150.74**	**39**	*i* PKP	PKPdf	02 52 02.5	-3.1
HYB				*e*		02 52 08.0	
HYB				*e*PKPAB	PKPab	02 52 17.5	+1.4
BWNR	**Bhubaneshwar**	**152.11**	**24**	*e*P	PKPdf	02 52 07.7	+0.1
BWNR				AMb	AMB	02 52 13.2	
	comp=Z,29nm,1.1s						
QIZ	**Qiongzhong**	**152.85**	**333**	PFAKE		02 52 20.0	+11

QIZ				LR	LR		
	comp=Z,463nm,20.0s,MS5.3						
MBWA	Marble Bar	153.20	232	PFAKE		02 52 20.0	+11
MBWA				LR	LR		
	comp=Z,702nm,20.0s,MS5.5						
DGAR	Diego Garcia	155.16	96	PFAKE		02 52 20.0	+8.1
DGAR				LR	LR		
	comp=Z,240nm,21.0s,MS5.0						
CM31	Chiang Mai Arr	156.31	356	PFAKE		02 52 20.0	+6.7
CM31				LR	LR		
	comp=Z,535nm,19.0s,MS5.4						
CMAR	Chiang Mai Arr	156.31	356	PKP	PKPdf	02 52 12.0	-1.3
	comp=Z,1.3nm,0.4s,baz=305,slow=2.0,SNR=6.9						
CMAR				PKPab	PKPab	02 52 39.0	-0.5
	comp=Z,3.0nm,0.6s,baz=339,slow=4.2,SNR=4.5						
PALK	Pallekele	159.19	53	PFAKE		02 52 30.0	+13
PALK				LR	LR		
	comp=Z,187nm,21.0s,MS4.9						
COCO	West Island	173.17	176	PFAKE		02 52 40.0	+12
COCO				LR	LR		
	comp=Z,168nm,20.0s						

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*IDC **10** 02:44:43.0±0.9,55.44S×26.45W,mb4.1/4,mb1 4.1/4,mb1mx3.7/13,mbtmp4.1/4,Error ellipse: s-maj=39.8km s-min=30.0km az=62.0*

*NEIC **10** 02:44:48.4±0.6,55.24S×26.45W,h35^{km},mb4.6/4,Error ellipse: s-maj=24.2km s-min=12.0km az=66.0*

ISC 10 02:44:42.6±0.7,55.2S±0.1×26.3W±0.3,h10^{km},n17,σ1^{s}18/13,mb4.2/6,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	Neumayer Olymp	17.62	162	*e*	P	02 48 44.1	-5.3
VNA3	Neumayer Olymp	17.62	162	P	P	02 48 52.0	+2.6
VNA3	Neumayer Olymp	17.62	162	P	P	02 48 52.0	+2.6
VNA2	Neumayer--Watz	17.79	160	*e*	P	02 48 43.4	-8.1
VNA2	Neumayer--Watz	17.79	160	P	P	02 48 53.0	+1.5
SNAA	Sanae	19.31	158	*e*P	P	02 49 10.5	+0.5
	242nm,1.3s						
LVC	Limon Verde	45.34	298	P	P	02 53 03.3	+0.8
	2.8nm,0.8s,mb4.2,baz=191,slow=5.2,SNR=3.8						
LVC	Limon Verde	45.34	298	P	P	02 53 01.2	-1.3
	5.2nm,0.6s,mb4.5						
VNDA	Vanda	47.43	182	P	P	02 53 16.1	-2.3
	1.1nm,0.7s,mb3.9,baz=193,slow=7.3,SNR=7.7						
TSUM	Tsumeb	48.82	60	P	P	02 53 29.3	-0.6
	6.3nm,1.2s,mb4.5						
LPAZ	La Paz	50.33	304	P	P	02 53 42.3	+0.8
	1.2nm,0.6s,mb4.1,baz=207,slow=11,SNR=4.3						
SAML	Samuel	54.59	313	*e*P	P	02 54 13.5	+0.2
	1.8nm,1.0s,mb4.1						
DBIC	Dimbokro	64.19	24	P	P	02 55 19.9	+0.2
	1.8nm,0.8s,mb4.1,baz=186,slow=9.2,SNR=2.5						
BVAR	Borovoye Array	133.89	56	PKP	PKPdf	03 04 02.0	0.0
	0.3nm,0.5s,baz=243,slow=3.2,SNR=2.6						
YKA	Yellowknife Ar	135.89	318	PKP	PKPdf	03 04 04.8	-0.8
	0.1nm,0.5s,baz=111,slow=2.0,SNR=4.8						
ILAR	Eielson Array	149.94	313	PKPbc	PKPdf	03 04 33.4	+3.7
	0.9nm,0.7s,baz=128,slow=3.8,SNR=10						
SONM	Songino Array	150.15	84	PKP	PKPdf	03 04 29.8	-0.7
	0.3nm,1.0s,baz=207,slow=3.2,SNR=2.5						
SONM				PKPbc	PKPdf	03 04 35.3	+4.8
	0.3nm,0.4s,baz=226,slow=3.4,SNR=7.8						

IDC 10 02:48:34.5±1.7,8.59N×92.14E,mb3.9/3,mb1 4.1/4,mb1mx3.7/19,mbtmp3.9/4,ML4.7/1,Error ellipse: s-maj=65.8km s-min=25.2km az=78.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.83	33	Pn	P	02 51 26.2	-1.4
	1.4nm,0.3s,baz=228,slow=14,SNR=3.5						
SONM	Songino Array	40.94	15	P	P	02 56 18.1	-2.2
	0.8nm,0.6s,baz=196,slow=8.1,SNR=8.1						
SONM				PcP	PcP	02 58 19.8	-1.6
	0.4nm,0.5s,baz=213,slow=4.4,SNR=4.4						
NWAO	Narrogin (SRO)	47.70	151	P	P	02 57 13.3	-1.7
	3.6nm,0.9s,baz=208,slow=20,SNR=2.0						
WRA	Warramunga Arr	50.28	125	P	P	02 57 32.4	-2.7
	1.4nm,0.7s,baz=305,slow=8.4,SNR=17						
WB2	Warramunga Arr	50.29	125	*e*P	P	02 57 32.9	-2.3
PDAR	Pinedale Array	125.19	19	PKP	PKPdf	03 07 37.5	-1.9
	0.4nm,0.9s,baz=90,slow=1.5,SNR=3.5						
NVAR	Mina Array Bea	125.30	29	PKP	PKPdf	03 07 38.2	-1.5
	0.4nm,0.6s,baz=353,slow=2.8,SNR=4.9						

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*CSEM **10** 03:07:18.5±0.1,35.46N×56.69E,h2^{km},mb4.4/1,Ms4.4,Error ellipse: s-maj=3.8km s-min=2.1km az=160.0*

*IDC **10** 03:07:20.9±1.5,35.51N×56.96E,mb3.9/8,mb1 4.1/12,mb1mx3.9/22,mbtmp3.9/12,ML3.4/2,Error ellipse: s-maj=41.5km s-min=20.9km az=14.0*

*TEH **10** 03:07:22.6,35.51N×56.69E,h16^{km},Mn4.3*

*NEIC **10** 03:07:22.6,35.51N×56.69E,h16^{km},mb4.2/2,MS4.4/1,MN4.3(TEH),After TEH.*

*MOS **10** 03:07:25.0±1.6,35.82N×57.09E,h33^{km},mb4.2/9,Error ellipse: s-maj=18.6km s-min=13.3km az=105.6*

*THR **10** 03:07:32.6±0.6,35.93N×55.52E,h16^{km},ML3.7*

ISC 10 03:07:21.3±0.4,35.39N±0.05×56.69E±0.05,h16^{km},n51,σ1^{s}15/51,mb4.0/10,MS4.4/1,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISFR	Esferayen	1.96	32	Pn	Pn	03 07 55.4	+0.9
IMIN	Minoodasht	2.11	326	Pn	Pn	03 07 56.0	-0.6
IPAY	Payeh	2.15	60	Pn	Pn	03 07 56.8	-0.4
IQHU	Quchan	2.25	41	Pn	Pn	03 07 57.7	-0.8
IANJ	Anjiloo	2.27	273	Pn	Pn	03 07 59.7	+0.8
IMOG	Moghan	2.27	71	Pn	Pn	03 07 59.2	+0.3
MHI	Mashhad	2.44	67	Pn	Pn	03 08 01.9	+0.6
IMYA	Miamay	2.93	70	Pn	Pn	03 08 08.0	-0.3
ILAS	Lasjerd	3.05	271	Pn	Pn	03 08 10.3	+0.3
IFIR	Firoozkooh	3.22	276	Pn	Pn	03 08 12.3	-0.2
IFIR				Lg		03 09 02.7	
ICHK	Chekchek	3.67	212	Pn	Pn	03 08 18.9	+0.1
IDMV	Damavand	3.81	274	Pn	Pn	03 08 20.2	-0.6
DAMV	Damavand	3.86	275	*e*PN	Pn	03 08 20.7	-0.8
DAMV				AML	AML	03 09 40.3	
	comp=N,264nm,0.6s						
IBAF	Bafgh	3.90	194	Pn	Pn	03 08 23.0	+0.9
IVRN	Varamin	4.08	266	Pn	Pn	03 08 23.6	-1.1
ISAD	Sadrabad	4.28	217	Pn	Pn	03 08 26.8	-0.6
IMEH	Mehriz	4.35	204	Pn	Pn	03 08 28.8	+0.3
KRBR	Kerman	5.39	179	*e*PN	Pn	03 09 03.6	+20
IRAZ	Razeghan	5.52	272	Pn	Pn	03 08 43.2	-1.9
ASAO	Ashtian	5.54	263	*e*PN	Pn	03 08 44.9	-0.4
ASAO				AML	AML	03 10 38.5	
	comp=N,70nm,0.5s						
SNGE	Sanandaj	7.65	270	*e*PN	Pn	03 09 13.4	-1.6
GRMI	Germi	7.81	299	*e*PN	Pn	03 09 12.9	-4.4
GNI	Garni	10.58	300	Pn	P	03 09 54.1	-1.4
	comp=N,0.2nm,0.3s,baz=127,slow=5.1,SNR=3.3						
GNI	Garni	10.58	300	*e*P	P	03 09 52.3	-3.2
MALT	Malatya	14.91	287	P	P	03 11 04.7	+11
MALT				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MALT	Malatya	14.91	287	P	P	03 11 04.7	+11
AAK	Ala-Archa	15.60	57	*e*P	P	03 10 55.8	-6.4
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	15.60	57	*e*P	P	03 10 55.8	-6.4
	comp=Z,9.0nm,0.8s						
ASF	Jabal al Asfar	16.77	265	Pn	P	03 11 19.8	+2.6
	comp=Z,0.1nm,0.3s,baz=285,slow=10,SNR=3.1						
BRTR	Keskin Array B	18.77	290	P	P	03 11 44.2	+2.2
	comp=Z,0.1nm,0.3s,baz=117,slow=11,SNR=3.5						
BVAR	Borovoye Array	20.12	25	P	P	03 11 53.5	-3.8
	comp=Z,1.0nm,0.3s,baz=212,slow=9.8,SNR=18						
CHKZ	Chkalovo	20.74	24	*e*P	P	03 11 59.2	-4.5
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURK	Kurchatov	22.05	39	*e*P	P	03 12 14.6	-2.4
KURK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
OBN	Obninsk	24.12	331	*e*P	P	03 12 38.7	+1.5
OBN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.3						
OBN				MLR	MLR		
	comp=Z,1μm,20.0s,MS4.4						
OBN	Obninsk	24.12	331	*e*P	P	03 12 38.7	+1.5
	comp=Z,13nm,1.1s,mb4.3						
OBN				LR	LR		
	comp=Z,1μm,20.0s,MS4.4						
AKASG	Malin Array Be	25.05	316	P	P	03 12 46.4	+0.3
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG	Malin Array Be	25.05	316	P	P	03 12 46.4	+0.2
	comp=Z,4.5nm,0.7s,mb4.1,baz=121,slow=8.2,SNR=17						
MLR	Muntele Rosu	25.35	303	P	P	03 12 49.8	+0.8
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	25.35	303	P	P	03 12 49.8	+0.7
	comp=Z,1.6nm,0.7s,mb3.6,baz=238,slow=13,SNR=3.6						
FINES	FINESS Array B	32.49	333	P	P	03 13 52.1	-1.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	32.49	333	P	P	03 13 52.1	-1.0
	comp=Z,2.2nm,0.8s,mb4.0,baz=129,slow=12,SNR=5.2						
GERES	GERESS Array B	34.14	307	P	P	03 14 09.5	+1.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	34.14	307	P	P	03 14 09.5	+1.9
	comp=Z,0.6nm,0.8s,mb3.6,baz=90,slow=7.8,SNR=3.6						
CMAR	Chiang Mai Arr	40.93	103	P	P	03 15 03.2	-1.6
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	Chiang Mai Arr	40.93	103	P	P	03 15 03.2	-1.6
	comp=Z,2.0nm,0.5s,mb4.0,baz=297,slow=10,SNR=8.3						
INK	Inuvik	76.34	4	P	P	03 19 11.7	+1.0
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	Inuvik	76.34	4	P	P	03 19 11.7	+1.0
	comp=Z,1.0nm,1.0s,mb3.7,baz=349,slow=5.2,SNR=3.7						
SCHQ	Schefferville	77.93	330	P	P	03 19 21.0	+1.2
	comp=Z,9.4nm,1.5s,mb4.5,baz=39,slow=3.8,SNR=3.6						
YKA	Yellowknife Ar	82.21	356	P	P	03 19 43.3	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	82.21	356	P	P	03 19 43.3	+0.8
	comp=Z,0.6nm,0.8s,mb3.6,baz=0.2,slow=6.1,SNR=12						
YKA	Yellowknife Ar	82.21	356	P	P	03 19 43.3	+0.8

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*BJI **10** 03:09:26.6,19.10S×177.60W,h550^{km},mB4.6,mb4.1*

*NEIC **10** 03:09:27.6±0.9,19.15S×177.60W,h551^{km}±10^{km},mb4.1/17,Error ellipse: s-maj=11.6km s-min=6.9km az=150.0*

*IDC **10** 03:09:29.1±2.7,19.23S×177.54W,h564^{km}±31^{km},mb3.4/14,mb1 3.7/16,mb1mx3.6/21,mbtmp4.3/16,Error ellipse: s-maj=20.4km s-min=13.8km az=165.0*

ISC 10 03:09:26.1±0.9,19.16S±0.09×177.63W±0.08,h541^{km}±11^{km},n80,σ0^{s}89/46,mb3.9/26,6C-3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.66	48	*e*Pn	P	03 11 21.2	+0.2
	80nm,1.0s						
AFI				*e*Sn	S	03 12 51.7	-0.9
RAR	Rarotonga	16.88	100	P	P	03 12 56.1	+2.2
	0.7nm,0.3s,baz=291,slow=7.7,SNR=4.5						
URZ	Urewera	19.57	192	P	P	03 13 18.3	-1.2
	1.9nm,0.3s,baz=64,slow=2.8,SNR=9.4						
CTA	Charters Tower	33.99	262	P	P	03 15 27.5	+1.2
	6.6nm,0.5s,mb4.4,baz=101,slow=9.6,SNR=7.4						
CTA	Charters Tower	33.99	262	P	P	03 15 27.5	+1.2
CTAO	Charters Tower	33.99	262	*e*P	P	03 15 26.9	+0.6
	20nm,1.0s,mb4.6						
PMG	Port Moresby	35.41	281	P	P	03 15 39.9	+1.8
	24nm,0.9s,mb4.7,baz=168,slow=11,SNR=2.8						
PMG	Port Moresby	35.41	281	*e*P	P	03 15 37.1	-1.0
	20nm,0.8s,mb4.7						
STKA	Stephens Creek	38.70	243	*e*P	P	03 16 06.1	+1.3
	4.1nm,1.4s,mb3.8						
STKA	Stephens Creek	38.70	243	P	P	03 16 06.3	+1.5
	1.7nm,0.6s,mb3.8,baz=101,slow=9.2,SNR=9.7						
STKA				PcP	PcP	03 18 02.8	-0.7
	0.4nm,0.4s,baz=73,slow=8.4,SNR=3.0						
WB2	Warramunga Arr	45.14	261	*e*P	P	03 16 56.1	0.0
WRAB	Tennant Creek	45.14	261	*e*P	P	03 16 55.9	-0.3
	5.4nm,0.6s,mb4.2						
WRA	Warramunga Arr	45.15	261	P	P	03 16 55.9	-0.3
	2.3nm,0.5s,mb4.0,baz=95,slow=5.1,SNR=42						
WRA				PcP	PcP	03 18 24.4	-1.0
	1.3nm,0.8s,baz=100,slow=3.8,SNR=6.0						
FITZ	Fitzroy Crossi	53.57	261	*e*P	P	03 17 58.6	0.0
	9.4nm,1.3s,mb4.0						
DRV	Dumont d'Urvil	54.73	199	L		03 19 00.0	
DRV				R		03 26 00.0	
MBWA	Marble Bar	58.50	256	*e*P	P	03 18 31.2	-1.3
	30nm,1.2s,mb4.4						
VNDA	Vanda	59.27	185	P	P	03 18 37.0	0.0
	2.9nm,1.0s,mb3.5,baz=28,slow=5.3,SNR=5.7						
QSPA	South Pole Qui	70.90	180	⇓*i*P	P	03 19 49.6	0.0
	10.0nm,0.8s,mb4.4						
CMB	Columbia Colle	78.24	43	*e*P	P	03 20 31.1	-0.1
	3.7nm,0.9s,mb3.7						
YBH	Yreka Blue Hor	79.03	39	P	P	03 20 36.2	+0.9
	0.5nm,0.4s,mb3.2,baz=256,slow=4.2,SNR=5.0						
NJ2	Nanjing	79.30	309	*e*P	P	03 20 37.5	+0.6
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
NVAR	Mina Array Bea	79.81	43	P	P	03 20 40.2	+0.8
	comp=Z,1.5nm,0.8s,mb3.4,baz=228,slow=9.7,SNR=12						
NVAR	Mina Array Bea	79.81	43	P	P	03 20 40.2	+0.8
TUC	Tucson	81.88	52	*e*P	P	03 20 51.2	+1.1
	comp=Z,2.8nm,0.8s,mb3.7						
WVOR	Wild Horse Val	81.88	40	*e*P	P	03 20 49.7	-0.2
	comp=Z,2.7nm,0.8s,mb3.7						
ENH	Enshi	85.58	304	P	P	03 21 09.1	+0.6
	comp=Z,1.0nm,0.4s,mb3.8						
MCK	McKinley	85.59	12	*e*P	P	03 21 07.8	0.0
	comp=Z,3.3nm,0.9s,mb4.0						
PV10	Paradox Valley	86.01	47	P	P	03 21 09.6	-0.8
TXAR	Lajitas Array	86.04	57	P	P	03 21 11.7	+1.0
	comp=Z,1.9nm,0.7s,mb3.9,baz=210,slow=6.6,SNR=14						
PV01	Paradox Valley	86.22	48	P	P	03 21 10.0	-1.4
ANMO	Albuquerque	86.29	51	P	P	03 21 11.7	-0.1
	comp=Z,0.9nm,0.5s,mb3.6,baz=218,slow=6.5,SNR=6.6						
ANMO	Albuquerque	86.29	51	*e*P	P	03 21 11.5	-0.3
	comp=Z,2.8nm,1.0s,mb3.9						
GDL2	Guadalupe Moun	86.69	54	*e*P	P	03 21 14.5	+0.8
COLA	College	86.83	12	*e*P	P	03 21 12.3	-1.3
	comp=Z,4.3nm,0.7s,mb4.2						
ILAR	Eielson Array	86.94	13	P	P	03 21 13.3	-0.8
	comp=Z,0.8nm,0.6s,mb3.5,baz=234,slow=5.0,SNR=23						
QLMT	Earthquake Lak	87.58	41	*e*P	P	03 21 18.9	+1.3
PDAR	Pinedale Array	87.75	43	P	P	03 21 18.4	0.0
	comp=Z,1.4nm,1.0s,mb3.7,baz=218,slow=2.2,SNR=9.3						
SDCO	Great Sand Dun	88.22	49	*e*P	P	03 21 21.0	+0.3
	comp=Z,1.3nm,0.9s,mb3.7						
SNAA	Sanae	89.33	178	⇑*i*	P	03 21 24.2	-1.0
VNA3	Neumayer Olymp	89.45	176	⇑*i*	P	03 21 25.2	-0.5
VNA2	Neumayer--Watz	89.89	177	⇑*i*	P	03 21 27.6	-0.2
CMAR	Chiang Mai Arr	90.00	289	P	P	03 21 30.1	+0.7
	comp=Z,0.7nm,0.4s,mb3.9,baz=118,slow=4.0,SNR=4.5						
INK	Inuvik	92.89	15	P	P	03 21 40.3	-1.3
	comp=Z,0.6nm,0.5s,mb3.9,baz=218,slow=8.4,SNR=4.5						
INK	Inuvik	92.89	15	P	P	03 21 40.7	-0.9
	comp=Z,2.5nm,1.0s,mb4.2						
YKA	Yellowknife Ar	95.15	25	P	P	03 21 50.3	-1.7
	comp=Z,0.1nm,0.4s,mb3.3,baz=242,slow=4.0,SNR=3.9						
YKA	Yellowknife Ar	95.15	25	P	P	03 21 50.3	-1.7
ZAL	Zalesovo	109.68	322	PKiKP		03 26 54.0	
	comp=Z,0.9nm,0.4s,baz=263,slow=5.5,SNR=3.2						
BVAR	Borovoye Array	118.28	321	PKP	PKPdf	03 27 11.5	-0.1
	comp=Z,1.2nm,0.4s,baz=87,slow=1.9,SNR=9.6						
ARCES	ARCESS Array B	127.67	350	PKP	PKPdf	03 27 29.3	0.0
	comp=Z,1.3nm,0.5s,baz=7.7,slow=1.4,SNR=13						
FINES	FINESS Array B	134.59	344	PKP	PKPdf	03 27 42.8	+0.3
	comp=Z,4.0nm,1.0s,baz=180,slow=1.9,SNR=3.8						
AKASG	Malin Array Be	142.01	332	PKhKP		03 27 52.3	
	comp=Z,0.7nm,0.4s,baz=40,slow=4.1,SNR=9.8						
EKA	Eskdalemuir Ar	143.65	5	PKP	PKPdf	03 27 58.0	-0.6
	comp=Z,2.7nm,0.7s,baz=324,slow=2.6,SNR=5.8						
BRTR	Keskin Array B	146.19	314	PKPbc	PKPbc	03 28 06.5	+1.2
	comp=Z,1.9nm,0.6s,baz=137,slow=4.6,SNR=12						
ASF	Jabal al Asfar	146.45	300	PKPbc	PKPbc	03 28 08.3	+2.1
	comp=Z,2.3nm,0.8s,baz=8.1,slow=7.1,SNR=6.5						
CLL	Collm	146.84	348	⇓*i*PKP1	PKPbc	03 28 08.0	+1.5
CLL				*i* PKP2	PKPab	03 28 11.3	-1.3
BRG	Berggiesshubel	147.05	346	*e*PKP	PKPdf	03 28 08.8	+4.2
MLR	Muntele Rosu	147.28	329	PKPbc	PKPdf	03 28 09.3	+4.2
	comp=Z,3.9nm,0.8s,baz=332,slow=6.6,SNR=6.5						
EIL	Elat	148.64	296	PKPbc	PKPdf	03 28 14.2	+6.4
	comp=Z,2.9nm,0.8s,baz=268,slow=36,SNR=3.1						
KHC	Kasperske Hory	148.77	346	*e*P	PKPdf	03 28 13.0	+5.6
GERES	GERESS Array B	149.01	345	PKPbc	PKPdf	03 28 13.9	+6.1
	comp=Z,2.0nm,0.5s,baz=39,slow=2.2,SNR=24						
GIVF	Givet	149.07	357	*e*PKP1	PKPdf	03 28 14.1	+6.2
BAIF	Baives	149.14	358	*e*PKP1	PKPdf	03 28 13.8	+5.8
	comp=Z,9.4nm,0.7s						
FLN	La Foliniere	150.38	4	*e*PKP1	PKPdf	03 28 16.2	+6.2
	comp=Z,18nm,0.7s						
CDF	Champ du Feu	150.55	353	*e*PKP1	PKPdf	03 28 17.6	+7.3
	comp=Z,9.7nm,0.7s						
LDF	La Druitiere	150.57	3	*e*PKP1	PKPdf	03 28 16.4	+6.1
MEZF	Maizieres J'vi	150.65	356	*e*PKP1	PKPdf	03 28 18.2	+7.8
	comp=Z,7.1nm,0.5s						
SGMF	Saint Gilles	150.71	7	*e*PKP1	PKPdf	03 28 16.8	+6.3
	comp=Z,12nm,0.7s						
GRR	Gorron	150.73	4	*e*PKP1	PKPdf	03 28 17.1	+6.6
	comp=Z,18nm,0.7s						
KBA	Koelnbreinsper	150.74	345	⇑*i*P	PKPdf	03 28 17.4	+6.8
WTTA	Wattenberg	150.96	347	⇑*i*P	PKPdf	03 28 18.6	+7.7
MOTA	Moosalm	151.00	348	⇓*i*P	PKPdf	03 28 18.3	+7.3
HAU	Haudompre	151.05	354	*e*PKP1	PKPdf	03 28 18.5	+7.5
	comp=Z,8.1nm,0.6s						
SQTA	Sankt Quirin	151.09	347	⇑*i*P	PKPdf	03 28 18.7	+7.6
HINF	Hinteralfeld	151.19	354	*e*PKP1	PKPdf	03 28 18.8	+7.6
	comp=Z,6.0nm,0.7s						
HYF	Humbligny	151.97	360	*e*PKP1	PKPdf	03 28 21.1	+8.8
SSF	Saint Saulge	152.16	358	*e*PKP1	PKPdf	03 28 20.5	+7.9
	comp=Z,15nm,1.0s						
AVF	Avril sur Loir	152.43	359	*e*PKP1	PKPdf	03 28 21.6	+8.6
CABF	La Chapelle	152.45	354	*e*PKP1	PKPdf	03 28 21.7	+8.7
MFF	Saint Martin d	152.55	4	*e*PKP1	PKPdf	03 28 21.1	+7.9
	comp=Z,4.9nm,0.6s						
TCF	Toulx Ste Croi	152.95	0	*e*PKP1	PKPdf	03 28 22.0	+8.3

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*IDC **10** 03:20:59.7±1.5,8.34N×93.31E,mb3.6/6,mb1 3.9/6,mb1mx3.7/17,mbtmp3.6/6,Error ellipse: s-maj=72.0km s-min=22.7km az=55.0*

*NEIC **10** 03:21:03.8±1.0,8.38N×93.29E,h30^{km},mb4.2/1,Error ellipse: s-maj=48.9km s-min=10.5km az=57.0*

ISC 10 03:21:02.3±1.3,8.5N±0.3×93.4E±0.4,h30^{km},n12,σ1^{s}00/12,mb3.8/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIRN	Jiri	20.25	341	*e*P	P	03 25 37.2	-0.9
	19nm,0.9s						
PKI	Pulchoki	20.42	339	*e*P	P	03 25 39.3	-0.7
	5.6nm,0.5s						
DMN	Daman	20.57	339	*e*P	P	03 25 41.1	-0.4
	7.8nm,0.3s						
GKN	Gorkha	21.09	338	*e*P	P	03 25 46.5	-0.4
	7.3nm,0.4s,mb4.4						
KOLN	Koldanda	21.29	335	*e*P	P	03 25 48.7	-0.1
	9.0nm,0.7s,mb4.2						
SONM	Songino Array	40.73	13	P	P	03 28 44.7	+2.5
	0.2nm,0.5s,mb3.0,baz=201,slow=12,SNR=2.8						
ZAL	Zalesovo	45.85	353	P	P	03 29 23.0	-0.5
	0.6nm,0.4s,mb3.9,baz=303,slow=14,SNR=3.4						
ZAL	Zalesovo	45.85	353	P	P	03 29 23.0	-0.5
WRA	Warramunga Arr	49.22	125	P	P	03 29 50.7	+0.3
	0.2nm,0.4s,mb3.5,baz=306,slow=8.5,SNR=8.2						
ASAR	Alice Springs	50.88	130	P	P	03 30 01.8	-1.3
	0.5nm,0.7s,mb3.5,baz=306,slow=7.8,SNR=3.2						
ARCES	ARCESS Array B	74.44	340	P	P	03 32 40.1	+0.9
	2.1nm,0.7s,mb4.2,baz=106,slow=6.6,SNR=1.7						
GERES	GERESS Array B	76.87	318	P	P	03 32 54.9	+1.5
	0.4nm,0.7s,mb3.5,baz=90,slow=5.3,SNR=4.6						

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*CASC **10** 03:21:48.8±1.8,9.53N×84.23W,h13^{km}±8^{km},MD4.1*

*IDC **10** 03:21:56.4±6.2,10.30N×83.96W,h63^{km}±54^{km},mb3.3/6,mb1 3.6/7,mb1mx3.3/20,mbtmp3.7/7,ML4.0/1,Error ellipse: s-maj=95.1km s-min=27.3km az=19.0*

ISC 10 03:21:49.2±0.8,9.58N±0.06×84.20W±0.04,h31^{km}±4^{km},n32,σ0^{s}98/38,mb3.5/6,8C-8D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	La Lucha 2	0.25	49	⇓*i*P	Pb	03 21 55.8	-0.4
LAJ	Bijagual	0.30	15	⇑*e*P	Pb	03 21 56.8	0.0
SJS	Escuela Geolog	0.39	21	⇓*i*P	Pb	03 21 58.0	-0.1
SJS				*e*S	Sb	03 22 03.8	-0.2
PRS1	Puriscal	0.42	345	⇓*i*P	Pb	03 21 56.5	-2.0
BUS	Buena Vista	0.43	92	⇑*i*P	Pb	03 21 58.9	+0.2
BUS				*e*S	Sb	03 22 06.1	+1.0
CGA2	Cerro Gallo 2	0.51	329	⇓*i*P	Pb	03 21 59.1	-0.8
ICR	Volcan Irazu	0.54	42	⇓*e*P	Pb	03 22 00.8	+0.4
VPS2	Volcan Poas 2	0.61	357	⇑*e*P	Pb	03 22 01.5	0.0
JCR	Jicaral	0.94	287	⇑*i*P	Pn	03 22 05.4	-1.0
FORC	Fortuna	1.00	333	⇓*i*P	Pn	03 22 07.2	-0.1
FORC				*i* S	Sn	03 22 20.6	+0.1
TRTC	Tortuguero	1.10	26	⇑*i*P	Pn	03 22 09.7	+0.9
LIO	Limon	1.22	69	⇑*e*P	Pn	03 22 11.2	+0.7
ACR	Cerro Adams	1.37	132	⇑*e*P	Pn	03 22 11.2	-1.3
ACR				*e*S	Sn	03 22 31.2	+1.4
VCR	Vista de Mar	1.52	291	⇓*e*P	Pn	03 22 14.8	+0.1
VCR				*e*S	Sn	03 22 36.6	+3.1
MADN	Villa Maderas	2.25	324	*e*P	Pn	03 22 26.1	+0.9
SSNN	San Juan del S	2.35	316	*e*P	Pn	03 22 26.7	0.0
CONN	Concepcion	2.42	325	*e*P	Pn	03 22 28.8	+1.2
TICN	Ticuantepe	3.16	321	*e*P	Pn	03 22 39.1	+1.0
APYN	Apoyeque	3.38	322	⇓*e*P	Pn	03 22 41.9	+0.6
PYTN	Playitas	3.46	328	*e*P	Pn	03 22 43.5	+1.1
COPN	Copaltepe	3.50	318	*e*P	Pn	03 22 43.0	+0.1
MOMJ	Momotombo	3.64	321	*e*P	Pn	03 22 45.0	+0.1
MIRN	Miramar	3.77	319	⇑*e*P	Pn	03 22 46.7	-0.1
LEON	Leon	3.87	317	*e*P	Pn	03 22 48.1	-0.1
TEL3	Telica 3	3.95	319	*e*P	Pn	03 22 49.5	+0.1
SDV	Santo Domingo	13.41	92	P	P	03 25 01.3	+1.3
	0.9nm,0.3s,baz=239,slow=22,SNR=4.7						
SDV				S	S	03 27 27.7	-1.2
	0.2nm,0.3s,baz=302,slow=6.5,SNR=3.0						
TXAR	Lajitas Array	26.81	320	P	P	03 27 27.7	-1.2
	0.4nm,0.6s,mb3.2,baz=140,slow=12,SNR=6.0						
ULM	Lac du Bonnet	41.69	349	P	P	03 29 32.4	-4.3
	1.1nm,0.5s,mb3.8,baz=148,slow=10,SNR=4.4						
SCHQ	Schefferville	47.20	14	P	P	03 30 17.6	-3.4
	0.4nm,0.5s,mb3.6,baz=190,slow=9.7,SNR=3.2						
YKA	Yellowknife Ar	57.23	344	P	P	03 31 31.8	-4.0
	0.2nm,0.7s,mb3.3,baz=138,slow=7.0,SNR=7.8						
ILAR	Eielson Array	69.93	336	P	P	03 32 58.0	-1.3
	0.2nm,0.7s,mb3.2,baz=101,slow=4.6,SNR=4.6						
ESDC	Sonseca Array	76.46	51	P	P	03 33 35.9	-2.1
	1.1nm,0.6s,mb4.0,baz=282,slow=5.4,SNR=7.6						

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*IDC **10** 03:24:54.4±6.1,31.39S×178.86W,h230^{km}±50^{km},mb3.2/3,mb1 3.4/4,mb1mx3.2/15,mbtmp3.9/4,Error ellipse: s-maj=50.7km s-min=27.7km az=48.0*

ISC 10 03:24:47.9±4.2,31.1S±0.2×178.4W±0.3,h211^{km}±33^{km},n8,σ0^{s}80/8,mb3.3/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	7.47	201	PN	P	03 26 35.2	+0.1
URZ	Urewera	8.03	206	P	P	03 26 41.8	-0.5
	1.1nm,0.3s,baz=209,slow=15,SNR=12						
URZ				S	S	03 28 11.5	-0.2
	1.6nm,0.3s,baz=171,slow=22,SNR=8.4						
URZ	Urewera	8.03	206	*e*PN	P	03 26 42.3	0.0
KHZ	Kahutara	12.99	207	*e*PN	P	03 27 46.1	+0.4
STKA	Stephens Creek	33.98	258	P	P	03 31 14.2	+1.0
	1.3nm,1.0s,mb3.4,baz=93,slow=14,SNR=3.3						
WRA	Warramunga Arr	43.78	273	P	P	03 32 33.4	-0.9
	0.3nm,0.3s,mb3.1,baz=111,slow=8.0,SNR=14						
VNDA	Vanda	47.36	186	P	P	03 33 01.6	-0.1
	1.6nm,1.0s,mb3.3,baz=50,slow=7.9,SNR=3.3						
FINES	FINESS Array B	145.69	339	PKPbc	PKPbc	03 44 05.6	+4.5
	1.0nm,0.5s,baz=39,slow=2.6,SNR=9.1						

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*IDC **10** 03:30:21.0±5.4,4.00S×135.95E,h161^{km}±53^{km},mb3.1/3,mb1 3.6/6,mb1mx3.6/12,mbtmp3.9/6,MS3.9/1,Ms1 3.9/1,ms1mx3.2/19,Error ellipse: s-maj=51.9km s-min=14.0km az=88.0*

NEIC 10 03:30:07.7±1.0,3.95S×135.57E,h35^{km},mb4.6/1,Error ellipse: s-maj=46.5km s-min=15.9km az=85.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	Tennant Creek	15.93	184	*e*P	P	03 33 49.3	-1.7
	37nm,0.7s						

WRAB				*e*		03 33 56.5	
WRAB				*e*S	S	03 36 39.4	-6.9
WRA	Warramunga Arr	15.94	184	P	P	03 33 48.2	-2.9
	0.2nm,0.3s,baz=360,slow=13,SNR=15						
WRA				S	S	03 36 40.8	-5.7
	0.4nm,0.3s,baz=8.6,slow=23,SNR=8.5						
WRA				Lg		03 38 40.9	
	0.0nm,0.3s,baz=8.6,slow=28,SNR=3.5						
CTA	Charters Tower	19.12	148	P	P	03 34 27.8	-2.8
	0.2nm,0.3s,baz=48,slow=11,SNR=2.1						
CTA				Lg		03 40 19.7	
	0.1nm,0.3s,baz=170,slow=6.1,SNR=2.2						
ASAR	Alice Springs	19.66	185	P	P	03 34 38.0	+1.4
	2.6nm,0.3s,baz=11,slow=11,SNR=175						
ASAR				S	S	03 38 10.8	-0.3
	0.1nm,0.3s,baz=9.5,slow=27,SNR=4.5						
ASAR				LR	LR	03 42 56.8	
	comp=Z,346nm,21.8s,baz=142,slow=38						
STKA	Stephens Creek	28.35	169	P	P	03 36 00.2	-0.5
	1.8nm,0.8s,baz=347,slow=14,SNR=3.9						
SONM	Songino Array	57.57	337	P	P	03 39 54.7	-1.7
	0.2nm,0.6s,baz=153,slow=6.5,SNR=2.0						
ILAR	Eielson Array	88.26	25	P	P	03 42 54.0	-2.4
	0.4nm,0.7s,baz=265,slow=4.4,SNR=5.6						

IDC 10 03:31:02.2±2.1**,30.28S**×**176.98W,mb4.2**/4**,mb1 4.3**/5**, mb1mx4.1**/16**,mbtmp4.1**/5**,ML3.4**/1**,Error ellipse: s-maj=56.0km s-min=30.4km az=129.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	9.34	210	Pn	P	03 33 17.9	-3.2
	0.3nm,0.3s,baz=227,slow=5.4,SNR=3.9						
URZ				Sn	Sn	03 35 02.5	-5.6
	1.6nm,0.3s,baz=27,slow=20,SNR=6.8						
CTA	Charters Tower	34.66	278	P	P	03 37 53.4	-2.2
	6.4nm,1.1s,baz=117,slow=14,SNR=2.8						
STKA	Stephens Creek	35.37	257	P	P	03 38 01.0	-0.5
	1.7nm,0.6s,baz=117,slow=9.8,SNR=3.3						
ASAR	Alice Springs	44.00	266	P	P	03 39 11.4	-1.8
	1.1nm,0.6s,baz=106,slow=7.3,SNR=4.3						
WRA	Warramunga Arr	44.98	271	P	P	03 39 19.0	-2.2
	1.6nm,0.4s,baz=110,slow=8.0,SNR=6.2						
FINES	FINESS Array B	145.33	341	PKPbc	PKPbc	03 50 40.6	-1.0
	2.9nm,0.7s,baz=61,slow=5.1,SNR=14						
AKASG	Malin Array Be	151.74	324	PKPbc	PKPdf	03 50 58.3	+4.6
	0.3nm,0.3s,baz=46,slow=3.2,SNR=4.3						
AKASG				PKPab	PKPab	03 51 05.9	-3.5
	0.4nm,0.3s,baz=53,slow=2.7,SNR=5.4						

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*NEIC **10** 03:39:10.6±0.5,23.99S×66.64W,h199^{km}±5^{km},mb4.3/17, Error ellipse: s-maj=9.7km s-min=5.9km az=64.0*

*IDC **10** 03:39:10.2±0.9,24.00S×66.63W,h194^{km}±7^{km},mb3.7/12, mb1 3.9/16,mb1mx3.9/19,mbtmp4.3/16,Error ellipse: s-maj=14.2km s-min=10.5km az=59.0*

*GUC **10** 03:39:11.2±1.0,24.10S×67.20W,h225^{km}±16^{km},ML4.6*

ISC 10 03:39:09.6±0.6**,24.08S**±0.04×**66.77W**±0.06**,h204**^{km}±5^{km}**, n58,**$\sigma 1^{s}$**19**/63**,mb4.0**/26**,6C-1D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.75	311	⇑*i*P	P	03 39 48.8	+2.5
SPCH				*i* S	S	03 40 17.6	+3.0
SPCH				AMP		03 40 20.7	
	comp=N,1µm,0.7s						
LVC	Limon Verde	2.45	306	⇑*i*P	P	03 39 55.1	+1.5
LVC				*i* S	S	03 40 28.0	+0.4
LVC				AMP		03 40 31.9	
	comp=N,1µm,0.5s						
LVC	Limon Verde	2.45	306	P	P	03 39 55.2	+1.5
	comp=N,163nm,0.3s,baz=130,slow=5.7,SNR=1561						
LVC				S	S	03 40 28.5	+0.8
	comp=N,133nm,0.3s,baz=43,slow=23,SNR=40						
LVC	Limon Verde	2.45	306	*e*Pn	P	03 39 54.6	+1.0
LVC				*e*Sn	S	03 40 26.9	-0.7
ANCH	Antofagasta	3.35	276	*e*P	P	03 40 05.0	+0.8
ANCH				*i* S	S	03 40 45.4	-1.0
CPN1	Cerro Paranal	3.35	260	*e*P	P	03 40 04.7	+0.5
CPN1				*i* S	S	03 40 44.8	-1.6
CPN1				AMP		03 40 45.7	
	comp=E,2µm,0.4s						
CPCH	Copiapo	4.59	224	*e*P	P	03 40 17.8	-1.7
CPCH				*i* S	S	03 41 10.3	-3.5
ZON	Zonda	7.62	192	*e*S	P	03 41 00.0	+1.3
LPAZ	La Paz	7.86	350	P	P	03 41 02.4	+0.7
	comp=E,2.3nm,0.3s,baz=174,slow=11,SNR=31						
LPAZ				S	S	03 42 29.1	-0.4
	comp=E,1.3nm,0.3s,baz=185,slow=23,SNR=5.4						
LPAZ	La Paz	7.86	350	*e*Pn	P	03 41 02.1	+0.3
	comp=E,10nm,0.6s						
LPAZ				*e*Sn	S	03 42 29.1	-0.3
ARE	Arequipa	8.78	329	*e*P	P	03 41 13.0	-0.8
ARE				*e*S	S	03 42 48.0	-2.8
CPUP	Villa Florida	8.84	107	P	P	03 41 13.7	-0.9
	comp=E,0.0nm,0.3s,baz=223,slow=13,SNR=1.9						
PLCA	Paso Flores	16.90	190	P	P	03 42 54.8	-0.9
	comp=E,0.6nm,0.3s,baz=10,slow=12,SNR=12						
PLCA	Paso Flores	16.90	190	*e*P	P	03 42 54.7	-1.0
	comp=E,11nm,0.6s						
PLCA				*e*		03 43 01.4	
BDFB	Brasilia	19.52	68	P	P	03 43 22.4	-0.9
	comp=E,2.9nm,0.3s,baz=245,slow=12,SNR=54						
CAM4	Nova Friburgo	22.31	90	(P)	P	03 43 51.0	+0.2
CAM4				*i*		03 43 51.5	
CAM4				*i*		03 44 07.0	
USHA	Ushuaia	30.74	182	P	P	03 45 07.1	-0.4
	comp=E,3.7nm,0.7s,mb4.1,baz=298,slow=10,SNR=4.6						
VNA3	Neumayer Olymp	57.01	161	⇑*i*	P	03 48 35.3	-0.4
VNA1	Neumayer--Stat	57.20	160	⇑*i*	P	03 48 36.4	-0.7
VNA2	Neumayer--Watz	57.57	160	⇑*i*	P	03 48 39.1	-0.6
SNAA	Sanae	59.21	161	⇑*i*	P	03 48 50.8	-0.2
SNAA	Sanae	59.21	161	P	P	03 48 50.4	-0.6
	comp=E,1.2nm,0.9s,mb3.5,baz=266,slow=9.4,SNR=5.2						
OXF	Oxford	62.11	339	*e*P	P	03 49 08.6	-2.5
	comp=E,21nm,0.8s,mb4.8						
WVT	Waverly	63.10	341	*e*P	P	03 49 15.6	-2.0
	comp=E,8.2nm,0.7s,mb4.5						
MIAR	Mount Ida	63.62	335	*e*P	P	03 49 19.1	-1.9
	comp=E,1.7nm,0.6s,mb3.9						
TXAR	Lajitas Array	63.86	324	P	P	03 49 22.1	-0.6
	comp=E,0.3nm,0.4s,mb3.3,baz=145,slow=6.3,SNR=5.7						
QSPA	South Pole Qui	66.12	180	⇓*i*P	P	03 49 37.4	+1.0
	comp=E,16nm,0.6s,mb4.8						
DBIC	Dimbokro	67.63	71	P	P	03 49 45.1	-1.8
	comp=E,1.1nm,0.5s,mb3.8,baz=220,slow=11,SNR=7.0						
ANMO	Albuquerque	69.73	326	*e*P	P	03 49 59.5	+0.2
	comp=E,1.8nm,0.7s,mb3.8						
SDCO	Great Sand Dun	71.46	328	*e*P	P	03 50 10.2	+0.5
	comp=E,1.3nm,0.6s,mb3.7						
PV10	Paradox Valley	73.69	327	*e*P	P	03 50 23.5	+0.6
VNDA	Vanda	74.66	190	P	P	03 50 29.2	+1.6
	comp=E,2.2nm,1.1s,mb3.7,baz=95,slow=6.4,SNR=3.8						
VNDA	Vanda	74.66	190	*e*P	P	03 50 29.4	+1.8
	comp=E,5.5nm,1.0s,mb4.1						
MSU	Marysvale	75.41	325	*e*P	P	03 50 34.3	+1.6
PDAR	Pinedale Array	77.32	329	P	P	03 50 43.9	+0.8
	comp=E,0.7nm,0.7s,mb3.4,baz=134,slow=7.7,SNR=5.3						
HWUT	Hardware Ranch	77.41	327	*e*P	P	03 50 43.6	0.0
	comp=E,5.4nm,1.2s,mb4.0						
ULM	Lac du Bonnet	78.37	341	P	P	03 50 48.4	-0.3
	comp=E,2.2nm,0.4s,mb4.1,baz=161,slow=6.2,SNR=9.8						
LOHW	Long Hollow	78.46	329	*e*P	P	03 50 50.4	+1.1
SCHQ	Schefferville	78.59	360	P	P	03 50 49.1	-0.7
	comp=E,1.5nm,0.7s,mb3.7,baz=202,slow=5.6,SNR=8.6						
SCHQ	Schefferville	78.59	360	*e*P	P	03 50 49.0	-0.8
	comp=E,2.6nm,0.7s,mb4.0						
NVAR	Mina Array Bea	78.73	321	P	P	03 50 52.3	+1.4
	comp=E,0.9nm,0.9s,mb3.4,baz=141,slow=7.4,SNR=4.8						
DGMT	Dagmar	79.62	336	*e*P	P	03 50 55.8	+0.3
	comp=E,10nm,0.8s,mb4.5						
HLID	Hailey	80.27	327	*e*P	P	03 51 00.7	+1.7
	comp=E,4.3nm,0.8s,mb4.1						
MAW	Mawson	81.30	163	P	P	03 51 04.8	+0.9
	comp=E,5.1nm,0.8s,mb4.2,baz=249,slow=19,SNR=3.8						
LBTB	Lobatse	82.17	114	P	P	03 51 09.5	+0.3
	comp=E,0.7nm,0.5s,mb3.6,baz=276,slow=6.7,SNR=2.3						
LBTB	Lobatse	82.17	114	P	P	03 51 09.5	+0.3
WALA	Waterton Lakes	84.07	331	*e*P	P	03 51 17.2	-1.2
	comp=E,3.6nm,1.0s,mb4.1						
RAR	Rarotonga	84.18	249	P	P	03 51 22.6	+3.0
	comp=E,16nm,0.5s,mb5.0,baz=151,slow=8.0,SNR=4.6						
NEW	Newport	84.96	329	P	P	03 51 22.7	-0.2
	comp=E,2.5nm,0.9s,mb3.9						
FCC	Fort Churchill	85.59	346	*e*P	P	03 51 25.8	+0.1
	comp=E,3.5nm,0.7s,mb4.2						
CASY	Casey	89.90	179	*e*P	P	03 51 47.7	+1.7
	comp=E,6.6nm,0.8s,mb4.5						
YKA	Yellowknife Ar	94.27	340	P	P	03 52 06.4	+0.2
	comp=E,1.5nm,0.6s,mb4.2,baz=136,slow=4.5,SNR=59						
YKA	Yellowknife Ar	94.27	340	P	P	03 52 06.4	+0.2
ASAR	Alice Springs	128.47	204	PKP	PKPdf	03 57 54.1	+1.3
	comp=E,1.9nm,0.6s,baz=150,slow=2.4,SNR=20						
WRA	Warramunga Arr	131.65	207	PKP	PKPdf	03 58 00.5	+1.7
	comp=E,1.6nm,0.6s,baz=158,slow=1.8,SNR=39						
WRA				SKPbc		04 01 06.4	
	comp=E,0.5nm,0.7s,baz=156,slow=3.6,SNR=5.0						
ZAL	Zalesovo	143.37	28	PKP	PKPdf	03 58 18.8	-0.3
	comp=E,2.1nm,0.7s,baz=139,slow=4.2,SNR=8.7						
ZAL				SKPbc		04 01 41.4	
	comp=E,0.8nm,0.4s,baz=234,slow=1.8,SNR=3.9						
ZAL	Zalesovo	143.37	28	PKP	PKPdf	03 58 18.8	-0.3
ZAL				SKPbc		04 01 41.4	
SONM	Songino Array	155.68	11	PKPab	PKPab	03 59 08.3	+0.2
	comp=E,0.6nm,0.6s,baz=328,slow=3.7,SNR=6.2						

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*CSEM **10** 03:41:44.2±0.2,28.34N×52.27E,h2^{km},ML3.3,Error ellipse: s-maj=5.4km s-min=2.0km az=31.0*

*THR **10** 03:41:44.6±0.4,28.27N×52.25E,h15^{km},ML3.6*

*IDC **10** 03:41:46.5±3.0,28.43N×52.33E,mb4.1/6,mb1 4.2/6, mb1mx3.7/20,mbtmp4.1/6,Error ellipse: s-maj=76.2km s-min=33.0km az=130.0*

*TEH **10** 03:41:56.0,28.82N×52.60E,h3^{km},Mn3.3*

ISC 10 03:41:44.9±0.9**,28.36N**±0.07×**52.24E**±0.06**,h2**^{km}**,n18,** $\sigma 0^{s}$**91**/21**,mb4.0**/6**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.66	96	*e*PG	Pg	03 41 57.2	-0.9
GHIR				*e*SG	Sg	03 42 06.4	-0.5
GHIR				AML	AML	03 42 11.7	
	comp=N,5µm,0.4s						
GHIR	Ghir-Karzin	0.66	96	*e*Pg	Pg	03 41 57.2	-0.9
	SNR=91						
GHIR				*e*Sg	Sg	03 42 06.4	-0.5
	comp=N,5µm,0.4s,SNR=91						
IMOK	Mook	0.80	31	Pg	Pg	03 42 00.5	-0.4
ISRV	Sarvestan	1.28	37	Pn	Pn	03 42 10.7	+1.0
SHI	Shiraz	1.30	10	Pn	Pn	03 42 14.5	+4.4
IMEH	Mehriz	3.66	34	Pn	Pn	03 42 45.3	+1.6
ISAD	Sadrabad	3.76	19	Pn	Pn	03 42 47.0	+1.9
KRBR	Kerman	4.27	67	*e*PN	Pn	03 42 52.2	-0.2
KRBR				AML	AML	03 44 13.3	
	comp=N,42nm,0.7s						
ICHK	Chekchek	4.30	25	Pn	Pn	03 42 54.2	+1.3
NASN	Na’in	4.46	6	*e*PN	Pn	03 42 55.1	+0.1
NASN				SN	Sn	03 43 46.7	-1.5
IVRN	Varamin	6.63	356	Pn	Pn	03 43 25.2	-0.6
SNGE	Sanandaj	7.90	329	*e*PN	Pn	03 43 42.3	-1.3
BVAR	Borovoye Array	28.06	24	P	P	03 47 38.7	-0.8
	comp=N,0.5nm,0.7s,mb3.3,baz=234,slow=12,SNR=3.4						
FINES	FINESS Array B	37.40	340	P	P	03 49 00.4	-0.3
	comp=N,7.2nm,1.1s,mb4.4,baz=139,slow=10,SNR=4.2						
HFS	Hagfors	41.06	332	P	P	03 49 30.9	-0.2
	comp=N,3.5nm,0.8s,mb4.0,baz=139,slow=9.3,SNR=6.6						
ARCES	ARCESS Array B	44.02	347	P	P	03 49 55.2	+0.1
	comp=N,3.3nm,0.9s,mb4.1,baz=153,slow=8.1,SNR=2.1						
DBIC	Dimbokro	57.99	260	P	P	03 51 42.0	+0.4
	comp=N,2.8nm,0.8s,mb4.3,baz=56,slow=7.9,SNR=2.8						
YKA	Yellowknife Ar	88.86	354	P	P	03 54 41.7	+0.4
	comp=N,0.3nm,0.7s,mb3.7,baz=6.6,slow=5.0,SNR=8.3						

IDC 10 03:43:09.8±3.9**,28.88S**×**177.45W,mb3.6**/3**,mb1 3.8**/3**, mb1mx3.7**/13**,mbtmp3.6**/3**,Error ellipse: s-maj=174.8km s-min=47.0km az=155.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.32	255	P	P	03 50 06.1	-2.6
	1.0nm,0.8s,baz=90,slow=5.1,SNR=2.2						
ASAR	Alice Springs	43.70	265	P	P	03 51 16.9	-1.5
	0.3nm,0.4s,baz=104,slow=7.3,SNR=4.2						
WRA	Warramunga Arr	44.55	270	P	P	03 51 23.9	-1.5
	0.4nm,0.3s,baz=110,slow=7.9,SNR=17						
FINES	FINESS Array B	143.87	341	PKP	PKPdf	04 02 45.4	-2.7
	1.7nm,0.9s,baz=63,slow=4.3,SNR=4.7						
NOA	NORSAR Array B	147.32	352	PKPbc	PKPdf	04 02 53.9	-0.1
	4.0nm,1.1s,baz=30,slow=4.6,SNR=3.4						

IDC 10 04:03:31.7±2.7**,12.91N**×**92.92E,mb3.6**/3**,mb1 3.8**/4**, mb1mx3.6**/18**,mbtmp3.6**/4**,MS3.4**/1**,Ms1 3.6**/1**, ms1mx2.6**/24**,Error ellipse: s-maj=79.3km s-min=27.3km az=83.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.00	46	Pn	P	04 05 27.5	-4.5
	baz=236,slow=14,SNR=6.4						
CMAR				LR	LR	04 09 17.4	
	comp=Z,284nm,20.8s,baz=327,slow=43						
SONM	Songino Array	36.59	15	P	P	04 10 39.8	-1.5
	0.4nm,0.7s,baz=182,slow=9.0,SNR=4.7						
WRA	Warramunga Arr	52.22	128	P	P	04 12 44.8	-2.2
	0.6nm,0.5s,baz=300,slow=9.8,SNR=17						
WRA				PcP	PcP	04 13 55.6	-3.0
	0.5nm,1.0s,baz=318,slow=3.5,SNR=5.0						
ASAR	Alice Springs	54.10	132	P	P	04 12 59.3	-1.6
	0.5nm,0.4s,baz=311,slow=6.9,SNR=10						

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*IDC **10** 04:21:00.2±0.6,52.83N×162.43E,mb4.0/18,mb1 4.2/19, mb1mx4.1/25,mbtmp4.0/19,ML4.2/2,Error ellipse: s-maj=17.6km s-min=12.0km az=174.0*

*KRSC **10** 04:21:02.6±1.2,52.82N×162.66E,h45^{km}±42^{km},ML4.5*

*NEIC **10** 04:21:03.0±2.9,52.81N×162.45E,h20^{km}±18^{km},mb4.4/19, Error ellipse: s-maj=8.5km s-min=4.8km az=175.0*

*MOS **10** 04:21:03.0±1.3,52.86N×162.42E,h32^{km},mb4.6/20,Error ellipse: s-maj=10.9km s-min=7.9km az=91.2*

ISC 10 04:21:03.4±0.6**,52.85N**±0.03×**162.54E**±0.05**,h35**^{km}±6^{km}**, n114,**$\sigma 0^{s}$**95**/153**,mb4.2**/35**,1D,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	1.54	280	P	P	04 21 28.9	+0.1
SPN				S	S	04 21 47.3	-0.6
SPN	Mys Shipunski	1.54	280	*e*P	P	04 21 28.8	0.0
SPN				*e*S	S	04 21 48.3	+0.4
NLC	Nalytchevo	1.96	281	P	P	04 21 35.0	+0.2
NLC				S	S	04 21 57.8	-0.5
NLC	Nalytchevo	1.96	281	*e*P	P	04 21 34.9	+0.1
NLC				*e*S	S	04 21 58.3	0.0
SDLR	Sedlovina	2.25	282	*e*P	P	04 21 39.5	+0.6
SDLR				*e*S	S	04 22 06.6	+0.9
UGLR	Uglovaya	2.27	281	*e*P	P	04 21 40.0	+0.7
UGLR				*e*S	S	04 22 07.6	+1.2
AVH	Avacha	2.33	282	*i* P	P	04 21 41.0	+0.9
AVH				*e*S	S	04 22 08.5	+0.6
PET	Petropavlovsk	2.36	276	P	P	04 21 40.8	+0.3
PET				S	S	04 22 08.0	-0.6
PET	Petropavlovsk	2.36	276	⇓*i*PN	P	04 21 40.7	+0.2
PET				*e*S	S	04 22 08.5	-0.1
PET				pmax	pmax		
	comp=Z,218nm,0.3s						
PET				smax			
	comp=E,333nm,0.4s						
PET				smax			
	comp=N,389nm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
PET	Petropavlovsk	2.36	276	*e*Pn	P	04 21 40.5	0.0
PET	Petropavlovsk	2.36	276	*e*P	P	04 21 40.8	+0.3
PET				*e*S	S	04 22 07.9	-0.7
KOK	Koryaka	2.40	282	*e*P	P	04 21 41.8	+0.8
KOK				*e*S	S	04 22 10.0	+0.5
RUS	Russkaya	2.49	262	P	P	04 21 42.3	-0.1
RUS				S	S	04 22 10.8	-1.1
RUS	Russkaya	2.49	262	*i* P	P	04 21 42.5	+0.1
RUS				*e*S	S	04 22 11.3	-0.6
KRMR	Karymshinskiy	2.68	271	*e*P	P	04 21 45.6	+0.6
KRMR				*e*S	S	04 22 16.7	+0.1
GRL	Gorelyy	2.74	265	*e*P	P	04 21 46.7	+0.8
GRL				*e*S	S	04 22 18.2	+0.1
TUMR	Tumrok	2.82	331	*e*P	P	04 21 47.3	+0.3
TUMR				*e*S	S	04 22 20.4	+0.3
GNL	Ganaly	2.89	289	*e*P	P	04 21 49.0	+0.9
GNL				*e*S	S	04 22 22.8	+0.8
BKI	Bering	3.11	39	*i* P	P	04 21 48.6	-2.5
BKI				*i* S	S	04 22 21.2	-6.3
KMNR	Kamenistaya	3.21	336	*i* P	P	04 21 53.6	+1.0
KMNR				*e*S	S	04 22 31.3	+1.2
APC	Apacha	3.26	273	*i* P	P	04 21 54.4	+1.0
APC				*e*S	S	04 22 32.2	+0.7
ZLN	Zelenaya	3.33	343	*e*P	P	04 21 54.4	+0.1
ZLN				*e*S	S	04 22 33.9	+0.7
KPT	Kopyto	3.40	337	*e*P	P	04 21 55.4	0.0
KPT				*e*S	S	04 22 35.4	+0.3
KBG	Krutoberegovo	3.41	2	*i* P	P	04 21 53.9	-1.6
KBG				*e*S	S	04 22 30.9	-4.4
KBG				Smax			
	comp=Z,390nm,0.7s						
KBG	Krutoberegovo	3.41	2	*i* P	P	04 21 53.8	-1.7
KBG				*e*S	S	04 22 33.1	-2.2
KBG				Smax			
	comp=Z,290nm,0.8s						
CIRR	Tsirk	3.43	343	*e*P	P	04 21 54.5	-1.3
CIRR				*e*S	S	04 22 33.8	-2.0
KRSR	Krestovskiy	3.56	342	*e*P	P	04 21 58.2	+0.6
KRSR				*e*S	S	04 22 39.7	+0.6
KOZ	Kozyrevsk	3.57	335	P	P	04 21 58.4	+0.7
KOZ				S	S	04 22 39.4	+0.1
KOZ	Kozyrevsk	3.57	335	*i* P	P	04 21 58.5	+0.8
KOZ				*e*S	S	04 22 39.5	+0.2
KOZR	Kozyr	3.57	335	PN	P	04 21 58.4	+0.6
KOZR				S	S	04 22 39.4	0.0
KLY	Klyuchi	3.64	343	P	P	04 21 58.5	-0.2
KLY				S	S	04 22 38.8	-2.3
KLY	Klyuchi	3.64	343	*i* P	P	04 21 58.3	-0.4
KLY				*e*S	S	04 22 38.4	-2.7
PAU	Pauzhetka	3.79	251	*e*P	P	04 22 00.5	-0.4
PAU				*e*S	S	04 22 42.0	-2.9
ESO	Esso	3.81	325	*i* P	P	04 22 01.6	+0.4
ESO				*e*S	S	04 22 45.3	-0.1
ESO				Smax			
	comp=Z,80nm,0.6s						
SVLR	Shiveluch	3.81	349	*e*P	P	04 22 01.2	0.0
SVLR				*e*S	S	04 22 44.6	-0.8
SRDR	Sredinnyy	3.84	336	*e*P	P	04 22 01.5	-0.1
SRDR				*e*S	S	04 22 45.6	-0.6
SKR	Severo-Kuril’s	4.54	244	*e*PN	P	04 22 06.8	-4.8
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR	Severo-Kuril’s	4.54	244	*e*P	P	04 22 12.0	+0.4
SKR				*e*S	S	04 23 01.2	-2.7
ALID	Alaid	4.77	248	*e*P	P	04 22 14.6	-0.1
ALID				*e*S	S	04 23 06.6	-2.9
FX1	Attu Island--F	6.43	86	Pn	P	04 22 35.7	-2.4
	comp=Z,35nm,0.3s,baz=301,slow=3.0,SNR=184						
FX1				Sn	S	04 23 41.9	-9.4
	comp=Z,24nm,0.3s,baz=189,slow=21,SNR=7.7						
FX1	Attu Island--F	6.43	86	*e*Pn	P	04 22 35.6	-2.5
FX1				*e*Sn	S	04 23 41.5	-10
MA2	Magadan	9.39	320	*e*PN	P	04 23 18.5	-0.8
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
MA2	Magadan	9.39	320	*e*Pn	P	04 23 17.4	-1.9
	comp=Z,42nm,1.1s						
BILL	Bilibino	15.34	5	P	P	04 24 39.8	+1.2
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BILL	Bilibino	15.34	5	P	P	04 24 39.8	+1.2
	comp=Z,6.3nm,1.1s						
ASAJ	Asahikawa	15.81	244	P	P	04 24 43.7	-1.0
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	15.81	244	Pn	P	04 24 43.7	-1.0
	comp=Z,0.9nm,0.3s,baz=176,slow=33,SNR=3.6						
HIA	Hailar	26.84	280	P	P	04 26 41.5	-0.7
HIA				pmax	pmax		
	comp=Z,8.0nm,1.6s						
HIA	Hailar	26.84	280	P	P	04 26 41.5	-0.7
	comp=Z,8.4nm,1.6s,mb4.0						
COLA	College	27.53	45	P	P	04 26 48.1	-0.2
COLA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
COLA	College	27.53	45	P	P	04 26 48.1	-0.2
	comp=Z,9.3nm,1.3s,mb4.2						
BOD	Bodaibo	27.56	300	*e*P	P	04 26 45.8	-2.8
ILAR	Eielson Array	27.94	45	P	P	04 26 51.3	-0.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR	Eielson Array	27.94	45	P	P	04 26 51.3	-0.7
	comp=Z,0.9nm,1.1s,mb3.3,baz=241,slow=9.2,SNR=5.1						
INK	Inuvik	33.16	38	*e*P	P	04 27 37.8	-0.3
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	Inuvik	33.16	38	P	P	04 27 38.3	+0.2
	comp=Z,1.3nm,1.1s,mb3.8,baz=270,slow=6.7,SNR=4.4						
INK	Inuvik	33.16	38	*e*P	P	04 27 37.8	-0.3
	comp=Z,2.6nm,1.1s,mb4.1						
SONM	Songino Array	35.40	285	P	P	04 27 57.7	+0.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=59,slow=7.3,SNR=6.8						
SONM				PcP	PcP	04 30 27.9	+0.7
	comp=Z,0.9nm,1.1s,slow=1.2,SNR=4.1						
DLBC	Dease Lake	37.00	54	P	P	04 28 13.6	+2.7
YKA	Yellowknife Ar	42.33	43	P	P	04 28 55.7	+0.8
YKA	Yellowknife Ar	42.33	43	P	P	04 28 55.6	+0.7
	comp=Z,0.3nm,0.5s,mb3.2,baz=298,slow=8.1,SNR=7.7						
RES	Resolute Bay	42.99	22	P	P	04 29 01.1	+0.9
RES				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.4						
RES	Resolute Bay	42.99	22	P	P	04 29 01.1	+0.9
	comp=Z,3.2nm,0.4s,mb4.4						
NEW	Newport	48.73	61	P	P	04 29 45.8	-0.2
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	Newport	48.73	61	P	P	04 29 45.8	-0.2
	comp=Z,3.8nm,1.0s,mb4.4						
KURK	Kurchatov	49.11	303	*e*P	P	04 29 47.6	-1.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KURK	Kurchatov	49.11	303	*e*P	P	04 29 47.5	-1.4
	comp=Z,3.0nm,0.6s,mb4.5						
WALA	Waterton Lakes	49.93	59	P	P	04 29 55.7	+0.4
	comp=Z,2.9nm,0.9s,mb4.3						
CHKZ	Chkalovo	51.17	310	*e*P	P	04 30 03.2	-1.4
CHKZ				*e*	pP	04 30 15.5	+0.5
CHKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CHKZ	Chkalovo	51.17	310	*e*P	P	04 30 03.2	-1.4
	comp=Z,8.9nm,1.0s,mb4.7						
CHKZ				*e*	pP	04 30 15.5	+0.5
BVAR	Borovoye Array	51.69	310	P	P	04 30 07.6	-1.0
	comp=Z,1.3nm,0.5s,mb4.1,baz=52,slow=7.1,SNR=8.2						
FCC	Fort Churchill	52.73	40	*e*P	P	04 30 16.0	-0.3
FCC				*e*	pP	04 30 27.1	+0.4
FCC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
FCC	Fort Churchill	52.73	40	*e*P	P	04 30 16.0	-0.3
	comp=Z,3.2nm,0.9s,mb4.2						
FCC				*e*	pP	04 30 27.1	+0.4
ARCES	ARCESS Array B	53.97	343	P	P	04 30 25.5	+0.2
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARCES	ARCESS Array B	53.97	343	P	P	04 30 25.5	+0.2
	comp=Z,8.2nm,1.1s,mb4.6,baz=34,slow=8.7,SNR=6.5						
NVAR	Mina Array Bea	54.42	72	P	P	04 30 29.5	+0.4
	comp=Z,1.1nm,0.8s,mb3.8,baz=319,slow=7.1,SNR=8.4						
TPH	Tonopah	55.29	71	*e*P	P	04 30 35.1	-0.2
TPH				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
TPH	Tonopah	55.29	71	*e*P	P	04 30 35.1	-0.2
	comp=Z,12nm,1.2s,mb4.8						
HWUT	Hardware Ranch	56.04	64	*e*P	P	04 30 41.0	+0.3
	comp=Z,3.7nm,1.0s,mb4.4						
BW06	Boulder Array	56.34	62	*e*P	P	04 30 43.4	+0.5
	comp=Z,3.5nm,1.0s,mb4.3						
PDAR	Pinedale Array	56.34	62	P	P	04 30 43.7	+0.9
	comp=Z,1.8nm,0.9s,mb4.1,baz=318,slow=3.5,SNR=16						
AAK	Ala-Archa	56.51	298	*e*P	P	04 30 43.4	-0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
AAK	Ala-Archa	56.51	298	*e*P	P	04 30 43.4	-0.7
	comp=Z,3.6nm,1.0s,mb4.4						
TMUT	Trail Mountain	57.84	66	P	P	04 30 54.4	+0.8

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ULM    Lac du Bonnet      57.90  48   P        P        04 30 53.9 +0.2
       comp=Z,0.5nm,0.4s,mb3.9,baz=336,slow=5.5,SNR=2.4
ULM    Lac du Bonnet      57.90  48   P        P        04 30 53.9 +0.2
JOF    Joensuu            58.40 336  ep        P        04 30 56.1 -1.0
PV10   Paradox Valley     59.69  66  eP        P        04 31 07.4 +1.0
KAF    Kangasniemi        60.28 338  ep        P        04 31 09.5 -0.6
ISCO   Idaho Springs      60.53  62  eP        P        04 31 13.2 +1.0
ISCO                                  pmax     pmax
       comp=Z,4.0nm,1.1s,mb4.5
ISCO   Idaho Springs      60.53  62  eP        P        04 31 13.2 +1.0
       comp=Z,3.7nm,1.1s,mb4.4
FINES  FINESS Array B     60.92 338   P        P        04 31 13.2 -1.3
FINES                                 pmax     pmax
       comp=Z,2.0nm,0.5s
FINES  FINESS Array B     60.92 338   P        P        04 31 13.2 -1.3
       comp=Z,1.6nm,0.5s,mb4.4,baz=90,slow=8.3,SNR=28
SDCO   Great Sand Dun     62.08  64   P        P        04 31 23.4 +0.8
       comp=Z,3.9nm,1.2s,mb4.4
NOA    NORSAR Array B     64.18 345   P        P        04 31 35.4 -0.5
NOA                                   pmax     pmax
       comp=Z,1.0nm,0.6s
NOA    NORSAR Array B     64.18 345   P        P        04 31 35.4 -0.5
       comp=Z,1.2nm,0.6s,mb4.1,baz=21,slow=6.6,SNR=3.4
NOA    NORSAR Array B     64.18 345   P        P        04 31 35.4 -0.5
HFS    Hagfors            64.62 343   P        P        04 31 38.2 -0.6
HFS                                   pmax     pmax
       comp=Z,1.0nm,0.5s
HFS    Hagfors            64.62 343   P        P        04 31 38.2 -0.6
       comp=Z,1.2nm,0.5s,mb4.2,baz=45,slow=4.2,SNR=8.6
WMOK   Wichita Mounta     67.94  61  eP        P        04 32 00.1 -0.2
WMOK                                  pmax     pmax
       comp=Z,3.0nm,1.0s,mb4.3
WMOK   Wichita Mounta     67.94  61  eP        P        04 32 00.1 -0.3
       comp=Z,3.5nm,1.0s,mb4.3
LTX    Lajitas            69.36  69  eP        P        04 32 10.0 +0.8
LTX                                   pmax     pmax
       comp=Z,4.0nm,0.8s,mb4.4
LTX    Lajitas            69.36  69  eP        P        04 32 10.0 +0.7
       comp=Z,3.7nm,0.8s,mb4.4
TXAR   Lajitas Array      69.36  69   P        P        04 32 09.6 +0.3
       comp=Z,1.4nm,0.8s,mb4.0,baz=294,slow=3.9,SNR=11
TXAR   Lajitas Array      69.36  69   P        P        04 32 09.6 +0.3
AKASG  Malin Array Be     69.57 330   P        P        04 32 12.1 +2.0
AKASG                                 pmax     pmax
       comp=Z,1.0nm,0.4s
AKASG  Malin Array Be     69.57 330   P        P        04 32 12.1 +2.0
       comp=Z,1.1nm,0.4s,mb4.2,baz=30,slow=6.9,SNR=6.6
GERES  GERESS Array B     75.28 339   P        P        04 32 44.9 +1.1
       comp=Z,0.2nm,0.3s,mb3.5,baz=27,slow=6.0,SNR=3.8
WRAB   Tennant Creek      76.50 207  eP        P        04 32 50.5 -0.9
WRAB                                  pmax     pmax
       comp=Z,12nm,1.2s,mb4.7
WRAB   Tennant Creek      76.50 207  eP        P        04 32 50.5 -0.9
       comp=Z,12nm,1.2s,mb4.7
WRA    Warramunga Arr     76.51 207   P        P        04 32 50.9 -0.6
WRA                                   pmax     pmax
       comp=Z,2.0nm,0.6s
WRA    Warramunga Arr     76.51 207   P        P        04 32 50.9 -0.6
       comp=Z,1.6nm,0.6s,mb4.2,baz=24,slow=6.1,SNR=23
ASAR   Alice Springs      80.17 206   P        P        04 33 12.0 +0.5
       comp=Z,1.9nm,0.6s,mb4.2,baz=18,slow=5.2,SNR=17
STKA   Stephens Creek     86.33 198   P        P        04 33 43.4 +0.8
       comp=Z,2.0nm,1.0s,mb4.3,baz=8.1,slow=7.1,SNR=2.3
```

SKHL ***10*** *04:30:09.0±3.4, 45.59N×150.17E, h104^{km}±10^{km}, mb5.0/3*

NEIC ***10*** *04:30:10.9±2.1, 45.45N×149.90E, h96^{km}±20^{km}, mb4.3/11, Error ellipse: s-maj=13.0km s-min=9.3km az=127.0*

MOS ***10*** *04:30:11.3±1.2, 45.38N×150.05E, h119^{km}, mb4.1/12, Error ellipse: s-maj=17.1km s-min=12.8km az=69.1*

IDC ***10*** *04:30:14.9±3.4, 45.47N×149.98E, h128^{km}±31^{km}, mb3.5/13, mb1 3.8/13, mb1mx3.6/22, mbtmp3.9/13, Error ellipse: s-maj=21.3km s-min=15.6km az=124.0*

ISC 10 04:30:10.5±1.1**, 45.35N**±0.08×**150.1E**±0.1**, h108**^{km}±11^{km}**, n56,** $\sigma 0^{s}$**97**/57**, mb4.0**/22**, 1D, Kuril Islands**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC      h  m  s    ISC
KUR    Kuril'sk            1.58 267⇓iPN        P        04 30 37.7 -1.0
KUR                                iS          S        04 30 59.2 -0.6
KUR                                   pmax     pmax
       comp=N,410nm,0.5s
KUR                                   pmax     pmax
       comp=E,230nm,0.5s
KUR                                   pmax     pmax
       comp=Z,1µm,0.5s
KUR                                   pmax     pmax
       comp=Z,2µm,1.0s
KUR                                   smax
       comp=N,2µm,0.5s
KUR                                   smax
       comp=E,2µm,0.5s
KUR                                   smax
       comp=N,8µm,2.0s
KUR                                   smax
       comp=E,3µm,2.0s
KUR    Kuril'sk            1.58 267  iP        P        04 30 37.7 -1.0
KUR                                   AMB      AMB      04 30 38.2
       comp=E,410nm,0.5s
KUR                                   AMB      AMB      04 30 38.2
       comp=E,230nm,0.5s
KUR                                   AMB      AMB      04 30 38.2
       comp=E,1µm,0.5s
KUR                                   AMB      AMB      04 30 38.4
       comp=E,2µm,1.0s
KUR                                  iS        S        04 30 59.2 -0.6
KUR                                   A                 04 31 03.0
       comp=E,8µm,2.0s
KUR                                   A                 04 31 03.0
       comp=E,3µm,2.0s
KUR                                   A                 04 31 03.0
       comp=E,2µm,0.5s
KUR                                   A                 04 31 03.0
       comp=E,2µm,0.5s
YUK    Yuzh-Kuril'sk       3.29 248  ePN       P        04 31 08.6 +7.1
YUK                                  eS        S        04 31 39.5 -0.6
YUK                                   pmax     pmax
       comp=Z,170nm,0.4s
YUK                                   smax
       comp=E,1µm,0.5s
YUK                                   smax
       comp=N,410nm,0.3s
YUK                                   smax
       comp=E,710nm,0.4s
YUK    Yuzh-Kuril'sk       3.29 248  eP        P        04 31 08.6 +7.1
YUK                                   AMB      AMB      04 31 11.4
       comp=E,170nm,0.4s
YUK                                  eS        S        04 31 39.5 -0.6
YUK                                   A                 04 31 43.3
       comp=E,1µm,0.5s
YUK                                   A                 04 31 43.6
       comp=E,410nm,0.4s
YUK                                   A                 04 31 43.6
       comp=E,710nm,0.4s
YSS    Yuzh-Sakhalins      5.35 290  ePN       P        04 31 31.0 +1.7
YSS                                  eS        S        04 32 31.0 +0.7
YSS                                   smax
       comp=E,40nm,1.0s
ASAJ   Asahikawa           5.49 260   PN       P        04 31 34.0 +2.8
ASAJ                                  pmax     pmax
       comp=Z,1.0nm,0.3s
ASAJ   Asahikawa           5.49 260   P        P        04 31 34.0 +2.8
       comp=Z,1.3nm,0.3s,baz=83,slow=17,SNR=4.1
SKR    Severo-Kuril's      6.69  35  eP        P        04 31 41.8 -5.9
SKR                                   AMB      AMB      04 31 43.7
       comp=Z,60nm,0.6s
MAJO   Matsushiro         12.56 230   PN       P        04 33 06.3 -0.1
MAJO                                  pmax     pmax
       comp=Z,45nm,1.3s
MAJO   Matsushiro         12.56 230   P        P        04 33 06.2 -0.2
       comp=Z,45nm,1.3s
KS15   Wonju Array Si     18.41 252   P        P        04 34 15.4 -4.1
ILAR   Eielson Array      38.95  37   P        P        04 37 26.9  0.0
       comp=Z,0.3nm,0.6s,mb3.3,baz=266,slow=8.3,SNR=6.4
INK    Inuvik             43.95  31   P        P        04 38 08.8 +1.1
INK                                   pmax     pmax
       comp=Z,2.0nm,0.7s
INK    Inuvik             43.95  31   P        P        04 38 08.8 +1.1
       comp=Z,1.7nm,0.7s,mb3.9,baz=309,slow=3.6,SNR=19
INK    Inuvik             43.95  31  eP        P        04 38 08.3 +0.6
       comp=Z,2.0nm,0.6s,mb4.0
CHKZ   Chkalovo           49.73 310  eP        P        04 38 51.7 -1.5
CHKZ                                  pmax     pmax
       comp=Z,4.0nm,1.1s,mb4.3
CHKZ   Chkalovo           49.73 310  eP        P        04 38 51.6 -1.5
       comp=Z,4.4nm,1.1s,mb4.3
RES    Resolute Bay       52.82  18  eP        P        04 39 15.8 -0.5
RES                                   pmax     pmax
       comp=Z,6.0nm,0.9s,mb4.6
RES    Resolute Bay       52.82  18  eP        P        04 39 15.8 -0.5
       comp=Z,6.3nm,0.9s,mb4.7
YKA    Yellowknife Ar     53.29  35   P        P        04 39 19.4 -0.5
YKA                                   pmax     pmax
       comp=Z,1.0nm,0.5s
YKA    Yellowknife Ar     53.29  35   P        P        04 39 19.4 -0.4
       comp=Z,0.5nm,0.5s,mb3.8,baz=298,slow=7.0,SNR=12
YKA    Yellowknife Ar     53.29  35   P        P        04 39 19.4 -0.5
SUMG   Summit             62.23   3   P        P        04 40 23.1 +0.8
       comp=Z,13nm,1.1s,mb4.9
FCC    Fort Churchill     63.57  32  eP        P        04 40 30.4 -0.9
FCC                                   pmax     pmax
       comp=Z,1.0nm,0.6s,mb3.8
FCC    Fort Churchill     63.57  32  eP        P        04 40 30.4 -0.9
       comp=Z,1.0nm,0.6s,mb3.8
CMB    Columbia Colle     63.91  62   P        P        04 40 34.0 +0.1
CMB                                   pmax     pmax
       comp=Z,2.0nm,0.7s,mb4.1
CMB    Columbia Colle     63.91  62   P        P        04 40 34.0 +0.2
       comp=Z,1.7nm,0.7s,mb4.0
FINES  FINESS Array B     64.39 334   P        P        04 40 35.2 -1.4
FINES                                 pmax     pmax
       comp=Z,1.0nm,0.7s
FINES  FINESS Array B     64.39 334   P        P        04 40 35.2 -1.4
       comp=Z,1.3nm,0.7s,mb3.9,baz=37,slow=7.7,SNR=13
NVAR   Mina Array Bea     64.95  60   P        P        04 40 41.0 +0.5
       comp=Z,1.2nm,0.8s,mb3.8,baz=299,slow=7.2,SNR=7.3
WRAB   Tennant Creek      66.53 196  eP        P        04 40 50.5 -0.4
WRAB                                  pmax     pmax
       comp=Z,4.0nm,0.9s,mb4.2
WRAB   Tennant Creek      66.53 196  eP        P        04 40 50.5 -0.4
       comp=Z,4.5nm,0.9s,mb4.3
WRA    Warramunga Arr     66.54 196   P        P        04 40 50.9 -0.1
WRA                                   pmax     pmax
       comp=Z,1.0nm,0.6s
WRA    Warramunga Arr     66.54 196   P        P        04 40 50.9 -0.1
       comp=Z,0.8nm,0.6s,mb3.7,baz=14,slow=6.5,SNR=6.9
HWUT   Hardware Ranch     66.90  54   P        P        04 40 52.1 -0.9
       comp=Z,2.1nm,1.0s,mb3.9
PDAR   Pinedale Array     67.27  52   P        P        04 40 55.4 +0.2
       comp=Z,0.8nm,1.0s,mb3.5,baz=333,slow=3.3,SNR=4.9
NB2    NORSAR Subarra     68.85 340   P        P        04 41 03.7 -1.0
       comp=Z,3.0nm,0.7s,mb4.2,baz=29,slow=6.2
NB2    NORSAR Subarra     68.85 340   P        P        04 41 03.7 -1.0
NB2                                   pmax     pmax
       comp=Z,3.0nm,0.7s,mb4.2
NOA    NORSAR Array B     68.85 340   P        P        04 41 04.1 -0.6
NOA                                   pmax     pmax
       comp=Z,1.0nm,0.6s
NOA    NORSAR Array B     68.85 340   P        P        04 41 04.1 -0.5
       comp=Z,1.0nm,0.6s,mb3.8,baz=30,slow=6.2,SNR=3.7
ASAR   Alice Springs      70.25 196   P        P        04 41 15.1 +1.3
       comp=Z,0.6nm,0.7s,mb3.5,baz=3.9,slow=3.9,SNR=5.2
PV10   Paradox Valley     70.50  55  eP        P        04 41 15.7 +0.6
SUW    Suwalki            71.20 330   P        P        04 41 16.5 -2.5
SUW                                   pmax     pmax
       comp=Z,40nm,1.3s,mb5.1
SUW    Suwalki            71.20 330   P        P        04 41 16.5 -2.5
       comp=Z,40nm,1.3s,mb5.1
AKASG  Malin Array Be     71.52 325   P        P        04 41 20.5 -0.4
AKASG                                 pmax     pmax
       comp=Z,1.0nm,0.4s
AKASG  Malin Array Be     71.52 325   P        P        04 41 20.4 -0.5
       comp=Z,1.3nm,0.4s,mb4.1,baz=39,slow=6.2,SNR=12
ANMO   Albuquerque        74.36  56   P        P        04 41 37.5 -0.3
ANMO                                  pmax     pmax
       comp=Z,2.0nm,1.2s
ANMO   Albuquerque        74.36  56   P        P        04 41 37.5 -0.3
       comp=Z,2.4nm,1.2s,mb3.8
SCHQ   Schefferville      75.40  21   P        P        04 41 43.5 +0.2
       comp=Z,0.7nm,0.7s,mb3.5,baz=333,slow=11,SNR=2.2
CLL    Collm              76.84 334   P        P        04 41 53.0 +1.5
GERES  GERESS Array B     78.76 332   P        P        04 42 03.0 +0.9
       comp=Z,0.4nm,0.5s,mb3.5,baz=34,slow=4.8,SNR=5.5
TXAR   Lajitas Array      80.01  58   P        P        04 42 10.2 +0.9
       comp=Z,1.0nm,0.5s,mb3.9,baz=296,slow=4.4,SNR=16
BDFB   Brasilia          146.69  33   PKP2     PKPab    04 49 42.1 -1.2
BDFB                                  pmax     pmax
       comp=Z,2.0nm,0.8s
BDFB   Brasilia          146.69  33   PKPbc    PKPbc    04 49 42.1 +2.7
       comp=Z,1.6nm,0.8s,baz=358,slow=13,SNR=2.9
PLCA   Paso Flores       150.16  96   PKIKP    PKPdf    04 49 50.6 +7.8
PLCA                                  pmax     pmax
       comp=Z,3.0nm,1.2s
PLCA   Paso Flores       150.16  96   PKPbc    PKPdf    04 49 50.5 +7.8
       comp=Z,3.3nm,1.2s,baz=210,slow=7.7,SNR=2.6
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IDC ***10*** *04:41:57.8±0.6, 35.83S×104.25W, mb4.7/17, mb1 4.8/17, mb1mx4.7/20, mbtmp4.7/17, MS4.3/12, Ms1 4.3/12, ms1mx4.1/27, Error ellipse: s-maj=19.5km s-min=15.2km az=67.0*

BJI ***10*** *04:42:00.0, 35.80S×103.90W, h10^{km}, mB5.5, Msz4.8*

HRVD ***10*** *04:42:00.0±0.3, 35.62S×103.90W, h14^{km}±1^{km}, MW5.0/56, Centroid moment Tensor Solution. LP body waves: s27,c33;Mantle waves: s56,c81; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.94±.29; $M_{\theta\theta}$-0.14±.18; $M_{\phi\phi}$4.08±.21; $M_{r\theta}$2.14±.56; $M_{\theta\phi}$-0.25±.16; $M_{\phi r}$-1.11±.39; Best double couple: $M_0$4.649×10^{16} NP1:ϕ_s197°,δ40°, λ-55°. NP2:ϕ_s334°,δ58°,λ-116°. Principal axes: T 4.304, Plg10°, Azm82°; N .689, Plg22°, Azm348°; P -4.994, Plg66°, Azm194°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***10*** *04:42:00.0±0.2, 35.77S×103.92W, h10^{km}, mb5.2/57, MS4.5/19 Error ellipse: s-maj=9.5km s-min=5.9km az=68.0*

ISC 10 04:41:58.3±0.4**, 35.76S**±0.06×**104.0W**±0.1**, h10**^{km}**, n150,** $\sigma 0^{s}$**90**/113**, mb5.0**/68**, MS4.5**/28**, 3C, Southeast of Easter Island**

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Code   Station Name        Δ°   AZ°   Phase ID            Time     Res
                                      Op       ISC      h  m  s    ISC
PLCA   Paso Flores        26.59 111   P        P        04 47 41.0 +2.6
       10nm,1.0s,mb4.3,baz=277,slow=11,SNR=12
PLCA                                  LR       LR       04 55 29.9
       comp=Z,445nm,21.2s,MS4.0,baz=245,slow=30
PLCA   Paso Flores        26.59 111  eP        P        04 47 40.0 +1.6
       19nm,1.0s,mb4.6
USHA   Ushuaia            30.96 139   P        P        04 48 18.6 +1.1
       5.2nm,1.0s,mb4.3,baz=264,slow=8.1,SNR=2.6
USHA                                  LR       LR       04 58 37.4
       comp=Z,433nm,19.0s,MS4.1,baz=241,slow=32
LVC    Limon Verde        33.09  76   P        P        04 48 37.8 +1.3
       14nm,1.0s,mb4.8,baz=236,slow=8.9,SNR=9.9
LVC                                   LR       LR       04 58 32.7
       comp=Z,1µm,18.8s,MS4.6,baz=295,slow=30
LVC    Limon Verde        33.09  76  eP        P        04 48 37.5 +1.0
       23nm,1.1s,mb5.0
LVC                                   LR       LR
       comp=Z,1µm,19.0s,MS4.6
TRQA   Tornquist          33.43 107   P        P        04 48 38.1 -1.2
       comp=Z,13nm,1.3s,mb4.7
TRQA                                  LR       LR
       comp=Z,1µm,21.0s,MS4.6
NNA    Nana               34.05  53  eP        P        04 48 44.4 -0.5
       comp=Z,24nm,1.2s,mb5.0
ARE    Arequipa           34.67  65  eP        P        04 48 52.0 +1.7
LPAZ   La Paz             37.29  68   P        P        04 49 14.8 +2.4
       comp=Z,10nm,0.8s,mb4.7,baz=236,slow=5.4,SNR=18
LPAZ                                  LR       LR       05 01 35.9
       comp=Z,287nm,19.3s,MS4.1,baz=254,slow=31
LPAZ   La Paz             37.29  68  eP        P        04 49 14.4 +2.0
       comp=Z,44nm,1.4s,mb5.1
LPAZ                                  LR       LR
       comp=Z,389nm,19.0s,MS4.2
CPUP   Villa Florida      40.71  90   P        P        04 49 41.5 +0.7
       comp=Z,0.0nm,0.4s,baz=216,slow=11,SNR=2.7
OTAV   Otavalo            42.97  39  eP        P        04 49 59.7 +0.2
       comp=Z,31nm,1.5s,mb4.8
ROSC   El Rosal           49.03  41   P        P        04 50 49.6 +2.1
       comp=Z,12nm,0.8s,mb5.0,baz=136,slow=3.8,SNR=16
ROSC                                  LR       LR       05 07 25.4
       comp=Z,291nm,20.9s,MS4.2,baz=348,slow=31
JTS    JuntasAbangare     49.19  25   LR       LR       05 06 40.1
       comp=Z,300nm,18.6s,MS4.3,baz=276,slow=30
BDFB   Brasilia           53.50  83   P        P        04 51 21.5 +0.2
       comp=Z,6.1nm,0.8s,mb4.6,baz=243,slow=6.4,SNR=7.0
BDFB                                  LR       LR       05 11 54.4
       comp=Z,522nm,21.2s,MS4.6,baz=282,slow=33
SDV    Santo Domingo      54.38  42   P        P        04 51 25.9 -1.9
       comp=Z,6.5nm,0.7s,mb4.7,baz=272,slow=4.8,SNR=11
SDV                                   LR       LR       05 11 29.0
       comp=Z,138nm,18.8s,MS4.0,baz=26,slow=32
SDV    Santo Domingo      54.38  42  eP        P        04 51 25.3 -2.5
       comp=Z,8.0nm,0.8s,mb4.7
SDV                                  ePcP      PcP      04 52 32.8 +1.2
SDV                                   LR       LR
       comp=Z,186nm,22.0s,MS4.1
QSPA   South Pole Qui     54.45 180⇑iP         P        04 51 28.1 +0.6
       comp=Z,12nm,0.9s,mb4.8
VNDA   Vanda              56.30 195   P        P        04 51 40.0 -1.0
       comp=Z,2.2nm,1.1s,mb4.1,baz=116,slow=9.1,SNR=2.5
VNDA                                  LR       LR       05 10 34.4
       comp=Z,156nm,19.3s,MS4.1,baz=167,slow=31
TEIG   Tepich             57.62  17  eP        P        04 51 46.3 -4.8
       comp=Z,5.6nm,1.0s,mb4.5
VNA3   Neumayer Olymp     57.94 158  e         P        04 51 55.8 +3.2
VNA3   Neumayer Olymp     57.94 158⇑iP         P        04 51 51.1 -1.5
VNA3                                 e         pP       04 51 55.8 +0.1
VNA2   Neumayer--Watz     58.74 158  e         P        04 52 01.6 +3.4
VNA2   Neumayer--Watz     58.74 158⇑iP         P        04 51 57.0 -1.2
VNA2                                 e         pP       04 52 01.6 +0.3
SNAA   Sanae              59.85 159   P        P        04 52 05.1 -0.8
       comp=Z,1.7nm,0.8s,mb4.1,baz=271,slow=7.1,SNR=5.5
SJG    San Juan           64.44  40   LR       LR       05 15 17.2
       comp=Z,156nm,20.4s,MS4.2,baz=265,slow=31
SJG    San Juan           64.44  40  eP        P        04 52 34.3 -3.0
       comp=Z,50nm,1.3s,mb5.4
SJG                                   LR       LR
       comp=Z,231nm,20.0s,MS4.4
LTX    Lajitas            64.74   0  eP        P        04 52 38.9 -0.2
       comp=Z,22nm,1.2s,mb5.1
LTX                                   LR       LR
       comp=Z,155nm,19.0s,MS4.2
TXAR   Lajitas Array      64.74   0   P        P        04 52 39.5 +0.3
       comp=Z,5.8nm,0.8s,mb4.7,baz=184,slow=9.1,SNR=47
JCT    Junction City      66.00   4  eP        P        04 52 46.9 -0.3
       comp=Z,32nm,1.1s,mb5.3
DWPF   Disney             66.98  22  eP        P        04 52 52.7 -0.8
       comp=Z,28nm,1.0s,mb5.2
MNTX   Cornudas Mount     67.11 359  eP        P        04 52 52.8 -1.5
       comp=Z,9.0nm,1.2s,mb4.7
GDL2   Guadalupe Moun     67.60 360  eP        P        04 52 56.3 -1.0
NATX   Nacogdoches        67.72   9  eP        P        04 52 58.2  0.0
       comp=Z,108nm,1.3s,mb5.7
TUC    Tucson             68.01 354  eP        P        04 53 00.2 +0.2
       comp=Z,21nm,1.4s,mb5.0
CPRX   Cap Rock           68.43   0  eP        P        04 53 01.7 -0.8
BAR    Barrett            69.12 349  eP        P        04 53 06.8  0.0
LENM   Lemitar            69.62 357  eP        P        04 53 09.8  0.0
LRAL   Lakeview Retre     70.25  15  eP        P        04 53 13.5 -0.1
       comp=Z,23nm,1.2s,mb5.0
WMOK   Wichita Mounta     70.30   5  eP        P        04 53 12.8 -1.1
       comp=Z,8.5nm,1.1s,mb4.6
WMOK                                  LR       LR
       comp=Z,212nm,20.0s,MS4.4
AMTX   Amarillo           70.31   2  eP        P        04 53 14.3 +0.3
       comp=Z,53nm,1.3s,mb5.3
ANMO   Albuquerque        70.38 358  eP        P        04 53 14.6 +0.1
       comp=Z,16nm,1.4s,mb4.8
MIAR   Mount Ida          70.61   9  eP        P        04 53 14.8 -1.0
       comp=Z,19nm,1.3s,mb4.9
MIAR                                  LR       LR
       comp=Z,207nm,20.0s,MS4.4
OXF    Oxford             71.21  13  eP        P        04 53 18.4 -1.1
       comp=Z,62nm,1.3s,mb5.4
NEN    Nelson             71.76 351  eP        P        04 53 22.4 -0.4
WVT    Waverly            73.08  14  eP        P        04 53 29.9 -0.6
       comp=Z,12nm,1.0s,mb4.8
WVT                                  e                  04 53 37.3
SDCO   Great Sand Dun     73.15 359  eP        P        04 53 29.8 -1.1
       comp=Z,38nm,1.5s,mb5.1
LRV    Little Rabbit      73.55 346  eP        P        04 53 34.3 +1.0
PV01   Paradox Valley     73.65 356  eP        P        04 53 34.4 +0.6
ARUT   Antelope Range     73.70 352  eP        P        04 53 34.6 +0.5
PV10   Paradox Valley     73.91 356  eP        P        04 53 35.6 +0.2
MVU    Marysvale          74.28 353  eP        P        04 53 38.3 +0.9
       comp=Z,37nm,1.7s,mb5.0
MSU    Marysvale          74.29 353  eP        P        04 53 38.5 +1.0
CBKS   Cedar Bluff        74.30   3  eP        P        04 53 38.0 +0.5
       comp=Z,72nm,1.7s,mb5.3
CCM    Cathedral Cave     74.38  10  eP        P        04 53 37.7 -0.3
       comp=Z,34nm,1.1s,mb5.2
FVM    French Village     74.43  11  eP        P        04 53 38.1 -0.2
       comp=Z,20nm,1.0s,mb5.0
TPH    Tonopah            74.48 349  eP        P        04 53 39.9 +1.3
       comp=Z,23nm,1.1s,mb5.0
TPH                                  e                  04 53 47.1
TPH                                  e                  04 53 53.2
SRU    San Rafael         74.74 355  eP        P        04 53 39.8 -0.3
KSU1   Kansas State U     74.79   6  eP        P        04 53 40.4  0.0
CASY   Casey              74.88 194  eP        P        04 53 45.8 +5.5
       comp=Z,33nm,1.3s,mb5.1
USIN   University of      74.89  13  eP        P        04 53 40.7 -0.2
       comp=Z,74nm,1.3s,mb5.5
MNV    Mina               74.98 348  eP        P        04 53 42.1 +0.6
       comp=Z,22nm,1.0s,mb5.0
CMB    Columbia Colle     74.99 347  eP        P        04 53 41.6 +0.1
       comp=Z,16nm,1.0s,mb4.9
NVAR   Mina Array Bea     75.00 348   P        P        04 53 42.7 +1.1
       comp=Z,11nm,0.8s,mb4.8,baz=184,slow=6.6,SNR=76
ISCO   Idaho Springs      75.20 359  eP        P        04 53 43.5 +0.8
       comp=Z,22nm,1.5s,mb4.9
WCI    Wyandotte Cave     75.41  14  eP        P        04 53 43.0 -1.0
       comp=Z,25nm,1.0s,mb5.1
NLU    North Lily Min     75.71 354  eP        P        04 53 46.0 +0.4
DAU    Daniels Canyon     76.09 354  eP        P        04 53 48.8 +1.0
JLU    Jordanelle         76.30 354  eP        P        04 53 49.6 +0.6
NOQ    North Oquirrh      76.41 354  eP        P        04 53 49.5 -0.1
OHCM   Honcut             76.46 346  eP        P        04 53 50.3 +0.4
MAW    Mawson             76.47 175   P        P        04 53 49.2 -0.2
       comp=Z,8.3nm,0.8s,mb4.7,baz=190,slow=2.7,SNR=3.2
PHWY   Pilot Hill         76.70 359  eP        P        04 53 51.8 +0.6
BMN    Battle Mountai     76.79 350  eP        P        04 53 52.4 +0.7
       comp=Z,60nm,1.5s,mb5.3
BMN                                  e                  04 53 59.6
SPUT   South Promonto     77.09 353  eP        P        04 53 50.8 -2.6
BBSR   BB Station         77.11  33  eP        P        04 53 52.4 -1.3
       comp=Z,119nm,1.7s,mb5.5
HWUT   Hardware Ranch     77.31 354  eP        P        04 53 54.2 -0.3
       comp=Z,10nm,1.2s,mb4.6
HVU    Hansel Valley      77.59 353  eP        P        04 53 56.0 -0.1
WDC    Whiskeytown Da     77.87 346  eP        P        04 53 57.3 -0.3
       comp=Z,18nm,1.0s,mb5.0
ACSO   Alum Creek Sta     78.04  16  eP        P        04 53 57.5 -1.1
       comp=Z,24nm,1.1s,mb5.0
ACSO                                 e                  04 54 05.6
PDAR   Pinedale Array     78.32 356   P        P        04 54 00.2 +0.2
       comp=Z,10nm,0.7s,mb4.9,baz=156,slow=6.4,SNR=98
MOD    Modoc              78.72 348  eP        P        04 54 03.1 +0.8
       comp=Z,44nm,1.3s,mb5.2
WVOR   Wild Horse Val     78.97 349  eP        P        04 54 04.6 +1.0
       comp=Z,28nm,1.2s,mb5.1
RRI2   Red Ridge          79.02 355  eP        P        04 54 04.4 +0.5
TPAW   Teton Pass         79.13 355  eP        P        04 54 04.7 +0.2
WUWY   Wally Ulrich       79.16 355  eP        P        04 54 04.2 -0.5
LOHW   Long Hollow        79.23 355  eP        P        04 54 04.9 -0.2
LOHW                                 e                  04 54 13.2
MOOW   Moose Ponds        79.37 355  eP        P        04 54 05.8  0.0
HLID   Hailey             79.52 352  eP        P        04 54 07.4 +0.8
       comp=Z,33nm,1.0s,mb5.2
IMW    Indian Meadow      79.53 355  eP        P        04 54 07.1 +0.4
MVL    Millersville       79.56  21  eP        P        04 54 06.2 -0.7
MVL                                  e                  04 54 13.5
SSPA   Standing Stone     79.71  20  eP        P        04 54 06.8 -0.9
       comp=Z,17nm,1.2s,mb4.9
AAM    Ann Arbor          79.87  15  eP        P        04 54 08.6 +0.1
       comp=Z,65nm,1.3s,mb5.4
HUMO   Hull Mountain      79.90 346  eP        P        04 54 09.5 +0.8
       comp=Z,16nm,1.1s,mb4.8
YMR    Madison River      80.30 355  eP        P        04 54 12.4 +1.6
QLMT   Earthquake Lak     80.50 355  eP        P        04 54 03.4 -8.4
BMO    Blue Mountains     81.14 350  eP        P        04 54 15.8 +0.6
       comp=Z,37nm,1.7s,mb5.0
LAO    LASA Array         82.10 358  eP        P        04 54 20.8 +0.7
       comp=Z,33nm,1.0s,mb5.2
QUA2   Belchertown        82.86  23  eP        P        04 54 23.4 -0.9
       comp=Z,27nm,1.0s,mb5.2
NCB    Newcomb            83.83  21  eP        P        04 54 28.4 -0.7
       comp=Z,17nm,0.8s,mb5.2
DGMT   Dagmar             83.85 360  eP        P        04 54 30.0 +0.9
       comp=Z,24nm,1.0s,mb5.3
MIV    Mineville/With     84.13  22  eP        P        04 54 29.5 -1.1
FFD    Franklin Falls     84.16  23  eP        P        04 54 30.8  0.0
       comp=Z,32nm,0.9s,mb5.5
FFD                                  e                  04 54 38.1
```

MDV	**Middlebury**	**84.16**	**22**	*e*P	**P**	**04 54 29.8**	**-0.9**
NEW	**Newport**	**84.47**	**351**	*e*P	**P**	**04 54 33.1**	**+0.9**
	comp=Z,34nm,1.1s,mb5.4						
NEW				*e*		04 54 40.3	
WALA	**Waterton Lakes**	**84.91**	**353**	*e*P	**P**	**04 54 35.3**	**+0.9**
	comp=Z,54nm,1.6s,mb5.4						
ULM	**Lac du Bonnet**	**85.93**	**5**	P	**P**	**04 54 39.1**	**-0.3**
	comp=Z,7.4nm,0.8s,mb5.0,baz=199,slow=4.6,SNR=24						
ULM	**Lac du Bonnet**	**85.93**	**5**	*e*P	**P**	**04 54 39.3**	**-0.2**
	comp=Z,79nm,1.6s,mb5.7						
ULM				*e*		04 54 46.1	
EDM	**Edmonton**	**88.99**	**354**	*e*P	**P**	**04 54 53.7**	**-0.4**
CTAO	**Charters Tower**	**93.46**	**242**	PFAKE		04 55 30.0	+14
CTAO				LR	LR		
	comp=Z,196nm,19.0s,MS4.6						
FCC	**Fort Churchill**	**94.52**	**5**	*e*P	**P**	**04 55 18.3**	**-1.3**
	comp=Z,7.9nm,1.3s,mb5.0						
SUR	**Sutherland**	**94.72**	**136**	P	**P**	**04 55 20.4**	**-0.8**
	comp=Z,10nm,1.1s,mb5.2,baz=205,slow=6.2,SNR=2.4						
SCHQ	**Schefferville**	**95.69**	**21**	P	**P**	**04 55 24.0**	**-1.0**
	comp=Z,2.0nm,0.7s,mb4.6,baz=241,slow=8.8,SNR=4.9						
SCHQ				LR	LR	05 32 49.9	
	comp=Z,146nm,21.6s,MS4.4,baz=249,slow=32						
SCHQ	**Schefferville**	**95.69**	**21**	*e*P	**P**	**04 55 21.6**	**-3.5**
	comp=Z,4.3nm,0.9s,mb4.9						
SCHQ				LR	LR		
	comp=Z,497nm,22.0s,MS4.9						
YKA	**Yellowknife Ar**	**98.29**	**355**	P	**P**	**04 55 36.0**	**-0.5**
	comp=Z,0.9nm,0.7s,mb4.4,baz=165,slow=4.6,SNR=27						
YKA	**Yellowknife Ar**	**98.29**	**355**	P	**P**	**04 55 36.0**	**-0.5**
ASAR	**Alice Springs**	**99.48**	**232**	LR	LR	05 35 48.3	
	comp=Z,198nm,18.1s,MS4.7,baz=211,slow=33						
PMG	**Port Moresby**	**99.52**	**251**	PFAKE		04 55 50.0	+6.7
PMG				LR	LR		
	comp=Z,227nm,19.0s,MS4.7						
WRAB	**Tennant Creek**	**101.83**	**235**	PFAKE		04 56 10.0	+16
WRAB				LR	LR		
	comp=Z,104nm,19.0s,MS4.4						
GUMO	**Guam**	**114.94**	**269**	PFAKE		05 00 50.0	+7.1
GUMO				LR	LR		
	comp=Z,719nm,20.0s,MS5.3						
MBAR	**Mbarara**	**124.46**	**120**	PFAKE		05 01 10.0	+8.5
MBAR				LR	LR		
	comp=Z,39nm,20.0s,MS4.1						
KMBO	**Kilima Mbogo**	**128.49**	**127**	PFAKE		05 01 20.0	+11
KMBO				LR	LR		
	comp=Z,151nm,19.0s,MS4.7						
GRA1	**Grafenberg Arr**	**131.84**	**52**	*e*PKP	PKPdf	05 01 12.3	-2.4
GRF	**Grafenberg Arr**	**131.84**	**52**	*e*PKP	PKPdf	05 01 12.3	-2.4
GERES	**GERESS Array B**	**133.32**	**54**	PKP	PKPdf	05 01 15.1	-2.4
	comp=Z,0.7nm,0.9s,baz=180,slow=1.0,SNR=3.6						
MDJ	**Mudanjiang**	**138.80**	**299**	PFAKE		05 01 40.0	+12
MDJ				LR	LR		
	comp=Z,184nm,20.0s,MS4.8						
CN2	**Changchun**	**141.68**	**298**	*e*PKP	PKPdf	05 01 30.6	-2.2
AKASG	**Malin Array Be**	**143.40**	**51**	PKhKP		05 01 30.4	
	comp=Z,0.5nm,0.5s,baz=268,slow=3.9,SNR=8.5						
NJ2	**Nanjing**	**144.49**	**277**	*e*PKP	PKPdf	05 01 35.4	-2.6
EIL	**Elat**	**145.08**	**88**	*e*PKPdf	PKPdf	05 01 37.0	-2.1
CSS	**Prodhromos**	**145.35**	**79**	*e*PKPdf	PKPdf	05 01 37.7	-1.8
HIA	**Hailar**	**145.57**	**307**	*e*PKPdf	PKPdf	05 01 36.8	-2.5
BRTR	**Keskin Array B**	**146.45**	**70**	PKPbc	PKPbc	05 01 40.8	+1.3
	comp=Z,12nm,1.1s,baz=198,slow=3.9,SNR=26						
OBN	**Obninsk**	**146.81**	**42**	*e*PKPdf	PKPdf	05 01 40.6	-0.7
ASF	**Jabal al Asfar**	**147.47**	**85**	PKPbc	PKPdf	05 01 42.8	-0.2
	comp=Z,4.1nm,0.7s,baz=160,slow=4.0,SNR=5.8						
BJI	**Beijing**	**148.24**	**290**	PKP	PKPdf	05 01 44.4	+0.3
BJI				SKKS		05 12 07.7	
BJI				PP	PP		
	comp=Z,206nm,7.6s						
BJI				LR	LR		
	comp=Z,100nm,23.6s,MS4.5						
BJI	**Beijing**	**148.24**	**290**	PKP	PKPdf	05 01 44.4	+0.3
BJI				PP	PP	05 05 26.6	+10
BJI				SKKS		05 12 07.7	
BJI				LR	LR		
	comp=Z,100nm,23.6s,MS4.5						
BJT	**Baijiatuau**	**148.25**	**290**	*e*PKPdf	PKPdf	05 01 44.3	+0.2
MALT	**Malatya**	**149.99**	**74**	*e*PKPdf	PKPdf	05 01 50.5	+3.6
ENH	**Enshi**	**151.52**	**269**	*e*PKPdf	PKPdf	05 01 52.4	+2.9
ENH				LR	LR		
	comp=Z,162nm,20.0s,MS4.8						
HHC	**Hu-ho-hao-te**	**151.80**	**291**	*e*PKP	PKPdf	05 01 53.6	+4.1
HHC				PP	PP		
	comp=Z,125nm,13.2s						
KIV	**Kislovodsk**	**153.25**	**62**	PFAKE		05 02 00.0	+8.5
KIV				LR	LR		
	comp=Z,59nm,20.0s,MS4.4						
ULN	**Ulaanbaatar**	**154.10**	**307**	*e*PKPdf	PKPdf	05 01 58.4	+5.9
ULN				LR	LR		
	comp=Z,165nm,21.0s,MS4.8						
SONM	**Songino Array**	**154.53**	**308**	PKP	PKPdf	05 01 49.8	-3.3
	comp=Z,0.7nm,1.0s,baz=135,slow=1.7,SNR=5.1						
SONM				PKPbc	PKPdf	05 01 58.7	+5.6
	comp=Z,2.6nm,0.9s,baz=100,slow=1.3,SNR=14						
SONM				PKPab	PKPab	05 02 13.8	-1.8
	comp=Z,2.2nm,0.9s,baz=100,slow=3.1,SNR=6.3						
KMI	**Kunming**	**154.74**	**253**	PKP	PKPdf	05 01 56.0	+1.9
KMI				PP	PP	05 05 57.2	+3.4
KMI				PP	PP		
	comp=Z,118nm,5.6s						
KMI				LR	LR		
	comp=Z,32nm,22.7s,MS4.1						
ZAL	**Zalesovo**	**160.82**	**344**	PKP	PKPdf	05 01 56.1	-4.5
	comp=Z,0.8nm,0.3s,baz=328,slow=2.6,SNR=6.8						
ZAL				PKPab	PKPab	05 02 41.5	-0.8
	comp=Z,1.1nm,0.4s,baz=108,slow=4.5,SNR=5.8						
ZAL	**Zalesovo**	**160.82**	**344**	PKP	PKPdf	05 01 56.1	-4.5
ZAL				PKPab	PKPab	05 02 41.5	-0.9
GTA	**Gaotai**	**160.83**	**288**	PKP	PKPdf	05 01 57.9	-3.2
GTA				APKP		05 02 00.9	
GTA				XPKP		05 02 03.3	
GTA				PP	PP		
	comp=Z,206nm,7.6s						
GTA				LR	LR		
	comp=Z,158nm,18.2s						
BVAR	**Borovoye Array**	**162.28**	**11**	PKP	PKPdf	05 01 58.3	-3.8
	comp=Z,0.7nm,0.7s,baz=166,slow=6.1,SNR=5.3						
BVAR				PKPab	PKPab	05 02 48.5	-0.3
	comp=Z,4.8nm,0.8s,slow=3.0,SNR=16						
WMQ	**Urumqi**	**167.97**	**316**	*e*PKP	PKPdf	05 02 10.2	+2.9

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*IDC **10** 04:47:12.2±0.9, 2.41S×68.62E, mb4.0/10, mb1 4.2/10, mb1mx4.1/18, mbtmp4.0/10, MS4.1/9, Ms1 4.1/9, ms1mx4.0/15, Error ellipse: s-maj=29.4km s-min=19.2km az=28.0*

*BJI **10** 04:47:13.0, 2.50S×68.70E, h11^{km}, mB5.1, mb4.5, Ms4.9, Msz4.2*

*NEIC **10** 04:47:13.0±0.4, 2.53S×68.66E, h10^{km}, mb4.8/19, Error ellipse: s-maj=9.9km s-min=9.5km az=187.0*

ISC 10 04:47:10.8±0.4, **2.54S**±0.06×**68.66E**±0.07, **h10^{km}, (h20^{km}**±2.8^{km}**:pP-P), n60,** σ1^{s}**12**/46, **mb4.5**/30, **MS4.2**/10, **1C, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**6.14**	**142**	*e*Pn	**Pn**	**04 48 44.3**	**+0.4**
	184nm,0.3s						
DGAR				*e*		04 48 50.8	
PALK	**Pallekele**	**15.48**	**51**	Pn	**P**	**04 50 51.7**	**+0.6**
	182nm,0.3s,SNR=49						
PALK	**Pallekele**	**15.48**	**51**	*e*P	**P**	**04 50 51.4**	**+0.2**
	26nm,0.8s						
PALK				*e*S	**S**	**04 53 29.0**	**-14**
POO	**Poona**	**21.55**	**14**	*e*P	**P**	**04 52 06.0**	**+3.3**
BOM	**Bombay**	**21.69**	**11**	*e*S	**S**	**04 56 08.4**	**+9.3**
HYB	**Hyderabad**	**22.11**	**26**	*i* P	**P**	**04 52 09.0**	**+0.8**
COCO	**West Island**	**29.51**	**110**	P	**P**	**04 53 16.5**	**-1.4**
	30nm,0.6s,mb5.2						
KMBO	**Kilima Mbogo**	**31.42**	**272**	P	**P**	**04 53 35.4**	**+0.7**
	1.6nm,0.7s,mb4.0,baz=67,slow=13,SNR=7.1						
KMBO				LR	LR	05 03 31.4	
	comp=Z,224nm,21.7s,MS3.8,baz=283,slow=31						
KMBO	**Kilima Mbogo**	**31.42**	**272**	*e*P	**P**	**04 53 35.7**	**+1.0**
	3.9nm,1.0s,mb4.2						
DLH	**Dalhousie**	**35.57**	**11**	*e*S	**S**	**04 59 52.0**	**+6.4**
CM31	**Chiang Mai Arr**	**36.39**	**54**	P	**P**	**04 54 21.8**	**+4.2**
	15nm,0.9s,mb4.9						
CMAR	**Chiang Mai Arr**	**36.39**	**54**	P	**P**	**04 54 18.5**	**+0.9**
	0.7nm,0.3s,mb4.0,baz=244,slow=9.9,SNR=5.2						
CMAR				LR	LR	05 09 17.9	
	comp=Z,126nm,18.2s,MS3.7,baz=245,slow=36						
CMAR	**Chiang Mai Arr**	**36.39**	**54**	P	**P**	**04 54 18.5**	**+0.9**
CMAR				LR	LR	05 09 17.9	
MBAR	**Mbarara**	**37.95**	**272**	*e*P	**P**	**04 54 31.8**	**+1.0**
	30nm,1.8s,mb4.7						
LSA	**Lhasa**	**38.62**	**32**	P	**P**	**04 54 38.4**	**+2.2**
LSA	**Lhasa**	**38.62**	**32**	*e*P	**P**	**04 54 38.8**	**+2.7**
	12nm,1.2s,mb4.5						
LSZ	**Lusaka**	**41.84**	**250**	*e*P	**P**	**04 55 03.0**	**+0.1**
	3.0nm,0.7s,mb4.0						
KSH	**Kashi**	**42.39**	**8**	*e*P	**P**	**04 55 07.0**	**-0.2**
KSH				*e*AP	pP	04 55 12.9	+2.7
KSH				*e*XP	sP	04 55 16.5	+5.0
KSH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
KSH				AMB	AMB		
	comp=Z,230nm,6.2s						
KSH				LR	LR		
	comp=N,400nm,8.1s						
KSH				LR	LR		
	comp=E,740nm,8.4s						
ASF	**Jabal al Asfar**	**45.81**	**322**	LR	LR	05 12 43.8	
	comp=E,92nm,18.7s,MS3.8,baz=192,slow=34						
GNI	**Garni**	**47.80**	**335**	P	**P**	**04 55 53.5**	**+2.9**
	comp=E,25nm,1.2s,mb5.1						
BOSA	**Boshof**	**48.76**	**233**	*e*P	**P**	**04 55 57.0**	**-1.1**
	comp=E,4.4nm,0.9s,mb4.5						
MALT	**Malatya**	**49.32**	**329**	*e*P	**P**	**04 56 02.1**	**-0.2**
	comp=E,24nm,1.8s,mb4.9						
LZH	**Lanzhou**	**50.54**	**37**	*e*P	**P**	**04 56 11.5**	**-0.2**
LZH				AP	pP	04 56 19.5	+4.8
LZH				XP	sP	04 56 23.0	+7.1
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
LZH	**Lanzhou**	**50.54**	**37**	*e*P	**P**	**04 56 11.5**	**-0.2**
	comp=Z,15nm,1.0s,mb4.9						
LZH				pP	pP	04 56 19.5	+4.8
LZH				sP	sP	04 56 23.0	+7.1
GTA	**Gaotai**	**50.62**	**31**	*e*P	**P**	**04 56 12.3**	**+0.1**
GTA				AP	pP	04 56 17.9	+2.6
GTA				XP	sP	04 56 20.5	+4.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.5s,mb4.1						
ENH	**Enshi**	**50.81**	**47**	P	**P**	**04 56 13.5**	**-0.3**
	comp=Z,20nm,1.2s,mb4.9						
BRTR	**Keskin Array B**	**52.92**	**326**	P	**P**	**04 56 29.1**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=122,slow=12,SNR=5.2						
KURK	**Kurchatov**	**53.74**	**8**	*e*P	**P**	**04 56 34.1**	**-1.3**
	comp=Z,27nm,1.4s,mb5.0						
SUR	**Sutherland**	**53.78**	**231**	LR	LR	05 16 13.3	
	comp=Z,290nm,18.7s,MS4.4,baz=171,slow=32						
NWAO	**Narrogin (SRO)**	**54.57**	**129**	*e*P	**P**	**04 56 39.6**	**-2.2**
BVAR	**Borovoye Array**	**55.38**	**1**	P	**P**	**04 56 48.1**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.5,baz=180,slow=7.2,SNR=3.8						
CHKZ	**Chkalovo**	**56.04**	**1**	*e*P	**P**	**04 56 50.9**	**-1.3**
	comp=Z,5.4nm,1.0s,mb4.5						
ZAL	**Zalesovo**	**57.87**	**11**	P	**P**	**04 57 03.5**	**-1.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=286,slow=11,SNR=5.3						
ZAL	**Zalesovo**	**57.87**	**11**	P	**P**	**04 57 03.5**	**-1.7**
HHC	**Hu-ho-hao-te**	**58.24**	**37**	⇑P	**P**	**04 57 08.0**	**+0.1**
HHC				AP	pP	04 57 12.5	+1.5
HHC				XP	sP	04 57 14.9	+2.7
HHC				PP	PP	04 59 18.4	-0.3
HHC				AMB	AMB		
	comp=Z,6.0nm,1.8s,mb4.3						
HHC				AMB	AMB		
	comp=Z,57nm,3.0s						
HHC				LR	LR		
	comp=N,203nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=E,209nm,14.4s,MS4.5						
HHC				LR	LR		
	comp=Z,164nm,18.0s,MS4.2						
SONM	**Songino Array**	**60.02**	**28**	P	**P**	**04 57 20.6**	**+0.4**
	comp=Z,2.7nm,0.6s,mb4.5,baz=217,slow=7.7,SNR=28						
ULN	**Ulaanbaatar**	**60.35**	**29**	*e*P	**P**	**04 57 20.7**	**-1.7**
	comp=Z,2.0nm,0.6s,mb4.3						
BJT	**Baijiatuau**	**60.66**	**41**	*e*P	**P**	**04 57 23.3**	**-1.3**
	comp=Z,10nm,1.3s,mb4.8						
AKASG	**Malin Array Be**	**62.83**	**333**	P	**P**	**04 57 37.7**	**-1.3**
	comp=Z,0.3nm,0.4s,mb3.8,baz=130,slow=5.2,SNR=5.3						
MAW	**Mawson**	**65.06**	**182**	LR	LR	05 19 01.4	
	comp=Z,385nm,19.9s,MS4.6,baz=163,slow=29						
WRA	**Warramunga Arr**	**66.30**	**111**	P	**P**	**04 58 03.3**	**+1.2**
	comp=Z,1.8nm,0.6s,mb4.3,baz=290,slow=5.7,SNR=19						
WRAB	**Tennant Creek**	**66.31**	**111**	*e*P	**P**	**04 58 03.2**	**+1.1**
	comp=Z,16nm,1.1s,mb5.0						
ASAR	**Alice Springs**	**66.35**	**115**	P	**P**	**04 58 03.6**	**+1.2**
	comp=Z,1.6nm,0.5s,mb4.3,baz=284,slow=6.0,SNR=18						
HIA	**Hailar**	**67.80**	**33**	*e*P	**P**	**04 58 11.1**	**-0.1**
	comp=Z,7.6nm,1.2s,mb4.6						
CN2	**Changchun**	**68.55**	**41**	*e*P	**P**	**04 58 22.5**	**+6.6**
CASY	**Casey**	**70.05**	**163**	P	**P**	**04 58 24.6**	**-0.1**
	comp=Z,8.8nm,0.9s,mb4.7						
FINES	**FINESS Array B**	**71.65**	**340**	LR	LR	05 32 10.4	
	comp=Z,219nm,19.4s,MS4.4,baz=292,slow=38						
STKA	**Stephens Creek**	**74.19**	**122**	P	**P**	**04 58 54.3**	**+4.3**
ARCES	**ARCESS Array B**	**77.58**	**346**	LR	LR	05 33 38.7	
	comp=Z,247nm,21.8s,MS4.5,baz=195,slow=36						
ESDC	**Sonseca Array**	**78.33**	**311**	P	**P**	**04 59 14.1**	**+0.9**
	comp=Z,0.5nm,0.5s,mb3.7,baz=109,slow=5.7,SNR=3.4						
SNAA	**Sanae**	**81.83**	**198**	LR	LR	05 27 18.6	
	comp=Z,59nm,20.1s,MS3.9,baz=38,slow=29						
VNDA	**Vanda**	**88.23**	**167**	LR	LR	05 36 36.0	
	comp=Z,84nm,18.6s,MS4.2,baz=278,slow=34						
YKA	**Yellowknife Ar**	**120.14**	**2**	PKP	PKPdf	05 06 06.8	+1.9
	comp=Z,0.2nm,0.7s,baz=352,slow=2.0,SNR=2.7						
PDAR	**Pinedale Array**	**139.92**	**358**	PKP	PKPdf	05 06 44.4	+1.5
	comp=Z,0.2nm,0.5s,baz=315,slow=2.6,SNR=2.4						
NVAR	**Mina Array Bea**	**143.72**	**9**	PKP	PKPdf	05 06 51.2	+1.6
	comp=Z,0.4nm,0.7s,baz=18,slow=2.9,SNR=3.1						
WMOK	**Wichita Mounta**	**145.90**	**341**	*e*PKPdf	PKPdf	05 06 52.6	-0.9
NEN	**Nelson**	**146.90**	**5**	*e*PKPdf	PKPdf	05 06 54.1	-1.1
NEN				*e*PKPbc	PKPbc	05 06 56.8	+3.0
OTAV	**Otavalo**	**147.04**	**267**	*e*PKPdf	PKPdf	05 06 57.5	+1.4
MNTX	**Cornudas Mount**	**150.46**	**350**	*e*PKPbc	PKPdf	05 07 05.9	+4.9
TXAR	**Lajitas Array**	**152.38**	**345**	PKPbc	PKPdf	05 07 10.5	+6.6
	comp=Z,0.2nm,0.6s,slow=20,SNR=2.8						

DJA 10 05:09:44.4±0.9, **9.90S**×**114.59E, h33^{km}, MD4.6**/2, **ML3.8**/3, **3C-3D, Error ellipse: s-maj=22.6km s-min=10.9km az=21.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	**Scrawed**	**1.48**	**343**	⇓*e*Pn	Pn	05 10 06.7	-2.4
	82nm,0.2s						
SRDI				⇑*e*Sn	Sn	05 10 22.9	-4.6
RATI	**Rata**	**1.50**	**39**	⇑*e*Pn	Pn	05 10 07.6	-1.8
	143nm,0.2s						
RATI				⇓*e*Sn	Sn	05 10 25.2	-2.7
KELI	**Kelakatan**	**1.68**	**357**	⇓*e*Pn	Pn	05 10 10.6	-1.3
	52nm,0.2s						
KELI				*e*Sn	Sn	05 10 28.8	-3.7
KEDI	**Kedomdong**	**2.06**	**47**	⇑*e*Pn	Pn	05 10 15.8	-1.7

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*IDC **10** 05:20:36.7±2.8, 1.99N×92.96E, mb3.5/2, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=99.7km s-min=37.0km az=71.0*

ISC 10 05:20:41.7±1.1, **2.1N**±0.1×**93.3E**±0.3, **h33^{km}, n6,** σ1^{s}**39**/5, **mb3.6**/2, **2C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.20**	**18**	P	**P**	**05 24 41.9**	**+0.8**
	0.2nm,0.3s,baz=216,slow=16,SNR=9.5						
WRA	**Warramunga Arr**	**45.80**	**121**	P	**P**	**05 29 02.4**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=299,slow=8.5,SNR=1.8						
WRA				pP	pP	05 29 11.0	-1.4
	0.4nm,0.5s,baz=297,slow=8.7,SNR=5.6						
SONM	**Songino Array**	**46.98**	**12**	P	**P**	**05 29 10.3**	**-1.0**
	0.8nm,0.6s,mb3.8,baz=192,slow=8.2,SNR=9.5						
SONM				PcP	PcP	05 30 41.9	-1.9
	0.4nm,0.9s,baz=194,slow=5.9,SNR=2.4						
SNAA	**Sanae**	**93.89**	**198**	⇑*i*	**P**	**05 33 58.1**	**+1.5**
VNA2	**Neumayer--Watz**	**95.44**	**199**	⇑*i*	**P**	**05 34 02.7**	**-1.0**
TXAR	**Lajitas Array**	**144.80**	**26**	PKPbc	PKPbc	05 40 16.1	+0.2
	0.3nm,0.8s,baz=270,slow=2.7,SNR=2.5						

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*BER **10** 05:24:14.9±1.6, 68.30N×22.83E, h23^{km}±28^{km}, MD2.5*

HEL 10 05:24:10.3±0.1, **68.16N**×**22.87E, h36^{km}, ML1.5, MD2.5**(BER), **ML2.0**(UPP), **1C, Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.35**	**252**	⇑*i*P	P	05 24 18.4	-0.4
LANU				*i* S	S	05 24 24.5	-0.3
MASU	**Masugnsbyn**	**0.78**	**205**	*i* P	P	05 24 24.6	-0.2
MASU				*i* S	S	05 24 35.5	+0.1
KTK1	**Kautokeino**	**0.87**	**9**	*e*P	P	05 24 26.9	+0.8
KTK1				*e*S	S	05 24 37.5	-0.2
KTK1	**Kautokeino**	**0.87**	**9**	*e*P	P	05 24 26.9	+0.9
KTK1				*e*S	S	05 24 38.4	+0.7
KUA	**Kurravaara**	**0.97**	**259**	*e*P	P	05 24 27.8	+0.1
KUA				*e*S	S	05 24 40.5	+0.1
KIF	**Kilpisjarvi**	**1.14**	**319**	*e*P	P	05 24 30.7	+0.8
KIF				*e*S	S	05 24 45.9	+1.3
PAJU	**Pajala**	**1.14**	**175**	*e*P	P	05 24 30.2	+0.2
PAJU				*e*S	S	05 24 45.1	+0.4
DUNU	**Dundret**	**1.36**	**221**	*e*P	P	05 24 33.7	+0.5
DUNU				*e*S	S	05 24 51.6	+1.3
SGF	**Sodankyl**	**1.57**	**116**	*e*P	P	05 24 35.5	-0.6
SGF				*e*S	S	05 24 54.8	-0.6
SGF				*e*SB	S	05 24 57.1	+1.7
SGF				MSG		05 24 58.4	
	comp=Z,2.8nm,0.2s						
ERTU	**Ertsjaerv**	**1.63**	**190**	*e*P	P	05 24 37.3	+0.2
TRO	**Tromso**	**2.06**	**318**	*e*P	P	05 24 41.9	-1.2
TRO				*e*S	S	05 25 06.1	-1.6
TRO	**Tromso**	**2.06**	**318**	*e*S	S	05 25 07.0	-0.7
KEV	**Kevo**	**2.19**	**41**	*e*P	P	05 24 44.1	-0.9
KEV				*e*S	S	05 25 10.4	-0.8
KEV				*e*SB	S	05 25 13.7	+2.5
KEV				MSG		05 25 14.9	
	comp=Z,2.5nm,0.2s						
SJUU	**Sjulsmark**	**2.71**	**191**	*e*P	P	05 24 51.4	-1.0
LILU	**Lilltraesk**	**3.12**	**204**	*e*P	P	05 24 57.0	-1.4
KU4	**Oulanka**	**3.17**	**122**	*e*P	P	05 24 58.8	-0.2
KU4				*e*S	S	05 25 34.7	-1.3
MSF	**Maaselka**	**3.31**	**130**	*e*P	P	05 25 00.0	-0.9
MSF				*e*S	S	05 25 37.0	-2.6
MSF				*e*SB	S	05 25 48.5	+8.9
MSF				MSG		05 25 52.4	
	comp=Z,1.0nm,0.2s						
MOR8	**Moi Rana**	**3.84**	**243**	*e*	P	05 26 05.7	+57
MOR8	**Moi Rana**	**3.84**	**243**	*e*Sg	S	05 26 05.7	+13
KJN	**Kajaani**	**4.54**	**152**	*e*P	P	05 25 16.5	-2.0
KJN				*e*S	S	05 26 05.5	-5.3
KJN				MSG		05 26 29.4	
	comp=Z,0.9nm,0.2s						
VAF	**Ylistaro**	**5.14**	**181**	*e*P	P	05 25 25.7	-1.2

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*WAR **10** 05:25:28.1, 50.06N×18.45E, h0^{km}, ML2.6, Mining Induced*

*NEIC **10** 05:25:28.1±0.7, 50.09N×18.38E, h5^{km}, ML2.7(VIE), Error ellipse: s-maj=8.7km s-min=5.0km az=201.0*

*CSEM **10** 05:25:28.7±0.1, 50.11N×18.39E, h2^{km}, ML3.3/3, Error ellipse: s-maj=2.3km s-min=1.6km az=25.0*

*PRU **10** 05:25:29.4, 50.06N×18.36E*

*IPEC **10** 05:25:29.0±0.1, 50.04N×18.45E, h6^{km}±1^{km}, ML2.1/3, Error ellipse: s-maj=2.1km s-min=0.7km az=164.0*

ISC 10 05:25:26.9±0.4, **50.09N**±0.03×**18.40E**±0.03, **n28,** σ1^{s}**38**/54, **1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.13**	**267**	*e*Pg	**Pg**	**05 25 32.7**	**+3.2**
RAC				*e*Sg	**Sg**	**05 25 36.0**	**+4.8**
OKC	**Ostrava-Krasne**	**0.30**	**213**	*e*PG	**Pg**	**05 25 34.7**	**+1.8**
OKC				*e*SG	**Sg**	**05 25 39.3**	**+2.4**
MORC	**Moravsky Berou**	**0.64**	**241**	*e*Pg	**Pg**	**05 25 40.7**	**+1.1**
MORC				*e*Sg	**Sg**	**05 25 49.9**	**+1.8**
MORC	**Moravsky Berou**	**0.64**	**241**	*e*Pg	**Pg**	**05 25 40.8**	**+1.2**
MORC				*e*Sg	**Sg**	**05 25 49.9**	**+1.9**
OJC	**Ojcow**	**0.91**	**81**	*e*PG	**Pg**	**05 25 45.0**	**-0.1**
OJC				*e*SG	**Sg**	**05 25 58.0**	**+0.7**
OJC	**Ojcow**	**0.91**	**81**	*e*Pg	**Pg**	**05 25 45.1**	**0.0**
OJC				*e*Sg	**Sg**	**05 25 57.6**	**+0.3**
JAVC	**Velka Javorina**	**1.32**	**201**	*e*Pn	**Pn**	**05 25 53.7**	**+1.1**
DPC	**Dobruska-Polom**	**1.36**	**282**	*e*SG	**Sg**	**05 26 13.0**	**+0.9**
	69nm,0.3s						
VRAC	**Vranov**	**1.41**	**237**	*e*Pn	**Pn**	**05 25 54.7**	**+0.9**
VRAC				*e*Sg	**Sg**	**05 26 13.1**	**-0.7**
	25nm,0.4s						
NIE	**Niedzica**	**1.41**	**118**	*e*PG	**Pg**	**05 25 54.0**	**-1.1**
NIE				*e*SG	**Sg**	**05 26 13.0**	**-1.0**
KOLL	**Kolacno**	**1.51**	**180**	*i* PG	**Pg**	**05 25 57.2**	**+0.1**
KOLL				*i* SG	**Sg**	**05 26 17.2**	**-0.1**
KSP	**Ksiaz**	**1.54**	**300**	*e*Pn	**Pn**	**05 25 56.6**	**+0.9**
KSP				*e*		05 25 58.4	
KSP				*i* Pg	**Pg**	**05 25 59.9**	**+2.2**
KSP				*e*Sg	**Sg**	**05 26 18.2**	**0.0**
KSP	**Ksiaz**	**1.54**	**300**	*e*Pn	**Pn**	**05 25 56.8**	**+1.0**
KSP				*e*Pg	**Pg**	**05 25 59.9**	**+2.2**
KSP				*e*Sn	**Sn**	**05 26 18.9**	**+2.2**
KSP				*e*Sg	**Sg**	**05 26 20.9**	**+2.7**
KSP	**Ksiaz**	**1.54**	**300**	*i* Pg	**Pg**	**05 25 59.9**	**+2.2**
KSP				*e*Sg	**Sg**	**05 26 18.2**	**0.0**
UPC	**Upice**	**1.58**	**286**	*e*PG	**Pg**	**05 25 58.0**	**-0.6**
UPC				*e*SG	**Sg**	**05 26 18.8**	**-0.9**
KRUC	**Moravsky**	**1.66**	**232**	*e*Pn	**Pn**	**05 25 58.7**	**+1.2**
KRUC				*e*Sg	**Sg**	**05 26 20.9**	**-1.3**
	17nm,0.3s						
SMOL	**Smolenice**	**1.70**	**202**	*i* PG	**Pg**	**05 25 58.6**	**-2.3**
SMOL				*i* SG	**Sg**	**05 26 21.9**	**-1.6**
ZST	**Bratislava**	**2.08**	**205**	*e*SB	**Sb**	**05 26 32.2**	**+0.6**
KECS	**Kecovo**	**2.11**	**139**	*e*PG	**Pg**	**05 26 09.9**	**+0.8**
KECS				*e*SG	**Sg**	**05 26 38.6**	**+1.4**
SRO	**Srobarova**	**2.28**	**181**	*e*PG	**Pg**	**05 26 11.7**	**-0.7**
CRVS	**Cervenica-Dubn**	**2.33**	**120**	*i* PG	**Pg**	**05 26 11.9**	**-1.4**
CRVS				*e*		05 26 47.9	
PRU	**Pruhonice**	**2.49**	**269**	*e*PG	**Pg**	**05 26 13.2**	**-3.4**
PRU				*e*SG	**Sg**	**05 26 46.0**	**-3.7**
KOLS	**Kolonicke sedl**	**2.78**	**113**	*i* PG	**Pg**	**05 26 22.1**	**-0.3**
BRG	**Berggiesshubel**	**2.95**	**287**	*e*Pg	**Pg**	**05 26 23.1**	**-2.7**
BRG				*e*Sg	**Sg**	**05 27 01.4**	**-3.7**
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PN	**Pn**	**05 26 20.5**	**0.0**
KHC				*e*PG	**Pg**	**05 26 28.8**	**-3.5**
KHC				*e*x	x	05 27 01.5	
KHC				*e*SG	**Sg**	**05 27 11.9**	**-4.1**
KHC	**Kasperske Hory**	**3.28**	**255**	*e*Pg	**Pg**	**05 26 28.8**	**-3.5**
KHC				*e*Sg	**Sg**	**05 27 11.9**	**-4.1**
MOA	**Molln**	**3.53**	**232**	⇑*i*PN	**Pn**	**05 26 23.6**	**-0.5**
MOA				*i* SG	**Sg**	**05 27 20.6**	**-3.7**
	4.0nm,0.5s						
CLL	**Collm**	**3.64**	**292**	*i* PG	**Pg**	**05 26 38.8**	**-0.8**
CLL				*i* SG	**Sg**	**05 27 26.6**	**-1.5**

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*BJI **10** 05:27:16.9, 8.75N×93.47E, h45^{km}, mB4.7, mb4.4, Ms4.6, Msz4.1*

*NEIC **10** 05:27:17.3±0.4, 8.89N×94.02E, h30^{km}, mb4.6/21, Error ellipse: s-maj=10.8km s-min=7.2km az=64.0*

*IDC **10** 05:27:20.9±4.5, 8.92N×94.00E, h60^{km}±40^{km}, mb3.8/15, mb1 3.9/16, mb1mx3.9/21, mbtmp4.0/16, ML4.1/1, Error ellipse: s-maj=25.7km s-min=13.7km az=53.0*

ISC 10 05:27:18.2±2.1, **8.87N**±0.08×**93.90E**±0.06, **h53^{km}**±18^{km}, **n65,** σ1^{s}**21**/61, **mb4.4**/34, **3C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**10.72**	**27**	*e*P	**P**	**05 29 51.6**	**-0.2**
	8.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.72**	**27**	P	**P**	**05 29 52.4**	**+0.6**
	0.4nm,0.3s,baz=212,slow=15,SNR=21						
VIS	**Vishakhapatnam**	**13.53**	**312**	*e*P	**P**	**05 30 26.1**	**-3.3**
VIS				*e*		05 30 29.0	
	comp=Z,15nm,0.4s						
VIS				*e*		05 32 46.1	
SHL	**Shillong**	**16.72**	**354**	*e*P	**P**	**05 31 11.0**	**+0.6**
HYB	**Hyderabad**	**17.18**	**301**	*e*P	**P**	**05 31 16.0**	**-0.2**
HYB				*e*S	**S**	**05 34 23.0**	**-0.9**
HYB	**Hyderabad**	**17.18**	**301**	*i* P	**P**	**05 31 16.0**	**-0.2**
HYB				*e*S	**S**	**05 34 23.0**	**-0.9**
BLSP	**Bilaspur**	**17.38**	**321**	*e*P	**P**	**05 31 19.6**	**+0.9**
BLSP				*e*		05 31 22.1	
	comp=Z,16nm,0.7s						
BLSP				*e*S	**S**	**05 34 35.3**	**+7.0**
KMI	**Kunming**	**18.23**	**26**	⇑P	**P**	**05 31 33.2**	**+4.0**
KMI				AP		05 31 38.7	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s						
KMI				AMB	AMB		
	comp=Z,204nm,4.4s						

KMI	Kunming	18.23	26	⇑P	P	05 31 33.2	+4.0
	comp=Z,10.0nm,1.2s						
KMI				pP		05 31 38.7	
JIRN	Jiri	20.06	340	*e*P	P	05 31 49.8	0.0
	comp=Z,71nm,1.0s						
PKI	Pulchoki	20.26	338	*e*P	P	05 31 51.6	-0.3
	comp=Z,63nm,1.1s						
GUN	Gumba	20.40	339	*e*P	P	05 31 52.0	-1.4
	comp=Z,43nm,0.7s						
DMN	Daman	20.41	337	*e*P	P	05 31 52.9	-0.6
	comp=Z,25nm,0.7s						
KKN	Kakani	20.51	338	*e*P	P	05 31 53.9	-0.6
	comp=Z,21nm,0.6s						
LSA	Lhasa	20.89	353	P	P	05 31 58.0	-0.4
LSA	Lhasa	20.89	353	*e*P	P	05 31 57.8	-0.5
	comp=Z,32nm,0.8s						
GKN	Gorkha	20.95	337	*e*P	P	05 31 58.4	-0.6
	comp=Z,46nm,0.7s						
KOLN	Koldanda	21.17	334	*e*P	P	05 32 01.3	+0.1
	comp=Z,47nm,0.8s,mb4.9						
GYA	Guiyang	21.28	33	⇑*i*P	P	05 32 04.4	+2.1
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.4						
POO	Poona	21.70	298	*e*P	P	05 32 10.7	+4.1
POO				*e*		05 32 15.8	
	comp=Z,22nm,0.7s						
CD2	Chengdu	23.78	21	*e*P	P	05 32 30.0	+3.1
CD2				AMB	AMB		
	comp=Z,28nm,1.0s,mb4.7						
ENH	Enshi	25.81	32	*e*P	P	05 32 45.3	-1.0
	comp=Z,14nm,0.8s,mb4.5						
DDI	Dehra Dun	25.98	327	*e*	P	05 32 50.5	+2.5
GTA	Gaotai	30.87	9	*e*P	P	05 33 32.5	+0.6
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.2						
BJT	Baijiatuau	36.83	29	P	P	05 34 24.1	+1.0
	comp=Z,3.7nm,0.8s,mb4.3						
AAK	Ala-Archa	37.71	336	*e*P	P	05 34 30.6	+0.2
	comp=Z,5.0nm,0.7s,mb4.3						
SONM	Songino Array	40.26	13	P	P	05 34 52.3	+0.7
	comp=Z,0.6nm,0.7s,mb3.5,baz=204,slow=7.2,SNR=6.9						
SONM				PcP	PcP	05 36 55.7	+0.5
	comp=Z,0.5nm,0.5s,baz=207,slow=3.7,SNR=3.6						
KURK	Kurchatov	43.60	346	*e*P	P	05 35 17.3	-1.6
	comp=Z,8.2nm,1.2s,mb4.3						
ZAL	Zalesovo	45.54	352	P	P	05 35 34.3	-0.1
	comp=Z,4.7nm,0.8s,mb4.5,baz=293,slow=11,SNR=23						
HIA	Hailar	45.71	24	P	P	05 35 35.3	-0.6
	comp=Z,3.2nm,0.8s,mb4.3						
NWAO	Narrogin (SRO)	47.13	153	P	P	05 35 48.2	+0.9
	comp=Z,6.3nm,1.0s,mb4.5,baz=319,slow=12,SNR=2.6						
NWAO	Narrogin (SRO)	47.13	153	P	P	05 35 47.8	+0.5
	comp=Z,73nm,1.8s,mb5.3						
BVAR	Borovoye Array	47.98	341	P	P	05 35 53.0	-0.7
	comp=Z,1.0nm,0.7s,mb4.0,baz=135,slow=6.3,SNR=7.7						
CHKZ	Chkalovo	48.46	342	*e*P	P	05 35 56.6	-0.7
	comp=Z,7.5nm,0.6s,mb4.9						
WRA	Warramunga Arr	49.03	126	P	P	05 36 00.7	-1.5
	comp=Z,1.3nm,1.0s,mb3.9,baz=306,slow=8.5,SNR=18						
WRA				PcP	PcP	05 37 25.6	-0.1
	comp=Z,0.3nm,0.7s,baz=309,slow=2.9,SNR=4.0						
WRAB	Tennant Creek	49.03	126	P	P	05 36 00.5	-1.7
	comp=Z,34nm,1.5s,mb5.2						
ASAR	Alice Springs	50.73	130	P	P	05 36 12.8	-2.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=299,slow=7.1,SNR=8.1						
ASAR				PcP	PcP	05 37 30.9	-0.9
	comp=Z,0.7nm,0.6s,baz=316,slow=3.1,SNR=5.4						
GNI	Garni	53.58	314	*e*P	P	05 36 39.1	+2.8
	comp=Z,8.2nm,0.8s,mb4.7						
KMBO	Kilima Mbogo	57.30	263	P	P	05 37 05.6	+2.1
	comp=Z,1.5nm,0.8s,mb4.1,baz=56,slow=16,SNR=5.2						
KMBO	Kilima Mbogo	57.30	263	*e*P	P	05 37 05.8	+2.2
	comp=Z,2.0nm,0.8s,mb4.2						
ASF	Jabal al Asfar	57.48	302	P	P	05 37 03.6	-0.9
	comp=Z,1.3nm,0.5s,mb4.2,baz=46,slow=22,SNR=2.1						
BRTR	Keskin Array B	61.61	310	P	P	05 37 31.4	-1.3
	comp=Z,2.2nm,0.8s,mb4.3,baz=131,slow=6.9,SNR=9.3						
AKASG	Malin Array Be	67.23	321	P	P	05 38 07.3	-1.9
	comp=Z,0.9nm,0.7s,mb3.9,baz=80,slow=5.4,SNR=3.8						
LSZ	Lusaka	69.38	250	*e*P	P	05 38 25.0	+1.9
	comp=Z,3.3nm,1.0s,mb4.2						
FINES	FINESS Array B	71.73	332	P	P	05 38 36.4	0.0
	comp=Z,2.0nm,0.8s,mb4.1,baz=146,slow=6.9,SNR=4.0						
FINES	FINESS Array B	71.73	332	P	P	05 38 36.4	0.0
ARCES	ARCESS Array B	74.26	340	P	P	05 38 51.4	+0.3
	comp=Z,4.8nm,0.9s,mb4.4,baz=97,slow=7.3,SNR=4.4						
LBTB	Lobatse	74.51	241	*e*P	P	05 38 54.0	+0.5
	comp=Z,5.0nm,1.0s,mb4.4						
BOSA	Boshof	75.91	238	*e*P	P	05 39 04.1	+2.6
	comp=Z,2.9nm,0.6s,mb4.4						
CASY	Casey	75.93	173	*e*P	P	05 38 56.9	-3.9
	comp=Z,24nm,1.1s,mb5.0						
GERES	GERESS Array B	76.93	318	P	P	05 39 06.9	+0.1
	comp=Z,1.6nm,0.8s,mb4.0,baz=90,slow=5.3,SNR=11						
NB2	NORSAR Subarra	78.76	331	P	P	05 39 16.1	-0.5
	comp=Z,56nm,2.0s,mb5.2,baz=92,slow=5.6						
NB2	NORSAR Subarra	78.76	331	P	P	05 39 16.1	-0.5
	baz=92,slow=5.9						
NOA	NORSAR Array B	78.76	331	P	P	05 39 17.6	+1.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=129,slow=4.3,SNR=3.1						
TSUM	Tsumeb	80.16	249	P	P	05 39 30.9	+5.9
	comp=Z,6.6nm,1.3s,mb4.4						
LPG	La Plagne	81.75	315	*e*P	P	05 39 32.4	-0.5
	comp=Z,15nm,0.9s,mb4.6						
SYO	Syowa Base	86.28	197	⇓pP	pP	05 40 06.6	-3.8
IMA	Indian Mountai	90.80	22	*e*P	P	05 40 18.4	+1.7
	comp=Z,32nm,1.1s,mb5.6						
ILAR	Eielson Array	93.92	22	P	P	05 40 31.3	+0.3
	comp=Z,0.7nm,0.7s,mb4.2,baz=304,slow=4.8,SNR=12						
PDAR	Pinedale Array	124.33	21	PKP	PKPdf	05 46 13.7	+2.0
	comp=Z,0.4nm,0.8s,slow=3.0,SNR=4.3						
TXAR	Lajitas Array	138.42	23	PKP	PKPdf	05 46 39.7	+1.1
	comp=Z,0.2nm,0.5s,baz=104,slow=3.7,SNR=3.7						
BDFB	Brasilia	142.22	256	PKP	PKPdf	05 46 46.2	+0.4
	comp=Z,1.5nm,0.7s,baz=162,slow=3.2,SNR=2.9						
PLCA	Paso Flores	145.39	201	PKPbc	PKPbc	05 46 53.5	+2.3
	comp=Z,6.3nm,0.9s,baz=151,slow=3.9,SNR=12						
PLCA	Paso Flores	145.39	201	*e*P	PKPdf	05 46 53.4	+2.8
CPUP	Villa Florida	147.66	234	PKPbc	PKPdf	05 47 00.3	+5.5
	comp=Z,0.0nm,0.3s,baz=213,slow=14,SNR=2.1						

IDC 10 05:39:46.2±8.3**, 32.54S**×**178.22W, h44**^{km}±78^{km}**, mb4.0**/4**, mb1 4.1**/5**, mb1mx3.8**/15**, mbtmp4.2**/5**, ML3.9**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/25**, Error ellipse: s-maj=63.7km s-min=43.6km az=5.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.86	212	P	P	05 41 24.3	-2.6
	2.5nm,0.3s,baz=73,slow=4.4,SNR=16						
URZ				S	S	05 42 41.2	-3.3
	2.8nm,0.3s,baz=273,slow=22,SNR=7.7						
URZ				LR	LR	05 44 14.1	
	comp=Z,95nm,18.6s,baz=309,slow=39						
STKA	Stephens Creek	33.87	260	P	P	05 46 26.1	-0.7
	1.6nm,0.9s,baz=106,slow=7.4,SNR=2.6						
CTA	Charters Tower	34.02	282	P	P	05 46 26.8	-1.4
	2.9nm,0.5s,baz=121,slow=13,SNR=4.2						
ASAR	Alice Springs	42.86	269	P	P	05 47 39.8	-2.1
	2.1nm,0.6s,baz=106,slow=7.8,SNR=17						
WRA	Warramunga Arr	44.04	274	P	P	05 47 48.8	-2.7
	2.3nm,0.4s,baz=115,slow=7.6,SNR=26						
KAF	Kangasniemi	146.49	339	*e*p	PKPdf	05 59 19.6	-0.8
FINES	FINESS Array B	147.08	339	PKPbc	PKPdf	05 59 22.4	+1.0
	2.1nm,0.5s,baz=56,slow=5.0,SNR=33						
NOA	NORSAR Array B	150.83	351	PKPbc	PKPdf	05 59 33.1	+5.8
	1.7nm,0.9s,baz=349,slow=2.8,SNR=3.3						

IDC ***10*** *05:43:28.5±0.6, 8.68N×93.76E, mb4.1/15, mb1 4.2/16, mb1mx4.2/21, mbtmp4.1/16, ML4.3/1, MS3.4/3, Ms1 3.5/3, ms1mx3.2/19, Error ellipse: s-maj=32.5km s-min=14.8km az=59.0*

BJI ***10*** *05:43:30.9, 8.45N×93.53E, h46*^{km}*, mB4.6, mb4.1, Ms4.3, Msz3.8*

NEIC ***10*** *05:43:32.9±0.4, 8.71N×93.84E, h30*^{km}*, mb4.4/11, Error ellipse: s-maj=12.1km s-min=7.4km az=68.0*

ISC 10 05:43:26.6±5.9**, 8.67N**±0.09×**93.79E**±0.09**, h1**^{km}±36^{km}**, n46,** $\sigma 0^{s}$**81**/42**, mb4.3**/27**, MS3.7**/2**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.94	27	Pn	P	05 46 07.6	+0.1
	0.6nm,0.3s,baz=212,slow=15,SNR=12						
CMAR				LR	LR	05 50 33.1	
	comp=Z,66nm,18.4s,baz=205,slow=39						
VIS	Vishakhapatnam	13.58	313	*i* P	P	05 46 43.0	-0.1
KMI	Kunming	18.45	26	P	P	05 47 49.6	+4.1
KMI				AMB	AMB		
	comp=Z,8.0nm,1.2s						
KMI				AMB	AMB		
	comp=Z,146nm,3.3s						
KMI	Kunming	18.45	26	P	P	05 47 49.6	+4.1
	comp=Z,8.0nm,1.2s						
JIRN	Jiri	20.21	340	*e*P	P	05 48 05.9	+0.1
	comp=Z,45nm,1.1s						
PKI	Pulchoki	20.40	338	*e*P	P	05 48 06.8	-1.0
	comp=Z,29nm,0.9s						
GUN	Gumba	20.54	340	*e*P	P	05 48 09.3	0.0
	comp=Z,40nm,0.9s						
KKN	Kakani	20.65	338	*e*P	P	05 48 10.0	-0.4
	comp=Z,30nm,0.9s						
LSA	Lhasa	21.07	354	P	P	05 48 14.4	-0.3
LSA	Lhasa	21.07	354	*e*P	P	05 48 13.9	-0.8
	comp=Z,12nm,0.8s,mb4.3						
GKN	Gorkha	21.08	337	*e*P	P	05 48 15.3	+0.4
	comp=Z,51nm,0.9s,mb4.8						
KOLN	Koldanda	21.30	334	*e*P	P	05 48 17.9	+0.9
	comp=Z,20nm,0.7s,mb4.6						
GYA	Guiyang	21.50	33	⇑*i*P	P	05 48 20.8	+1.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
ENH	Enshi	26.03	32	*e*P	P	05 49 03.2	+0.1
	comp=Z,7.0nm,0.8s,mb4.2						
GTA	Gaotai	31.08	9	*e*P	P	05 49 48.3	-0.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.1						
AAK	Ala-Archa	37.84	337	*e*P	P	05 50 46.8	+0.2
	comp=Z,5.2nm,1.0s,mb4.2						
SONM	Songino Array	40.47	13	P	P	05 51 08.8	+0.3
	comp=Z,2.4nm,1.2s,mb3.8,baz=200,slow=8.5,SNR=5.8						
SONM				PcP	PcP	05 53 12.4	+0.5
	comp=Z,0.6nm,0.7s,baz=197,slow=2.9,SNR=4.9						
KURK	Kurchatov	43.76	346	P	P	05 51 35.5	+0.1
ZAL	Zalesovo	45.72	353	P	P	05 51 50.9	-0.1
	comp=Z,3.4nm,0.5s,mb4.5,baz=292,slow=9.3,SNR=9.0						
ZAL				PcP	PcP	05 53 30.3	+0.9
	comp=Z,2.6nm,0.8s,baz=149,slow=17,SNR=7.5						
ZAL	Zalesovo	45.72	353	P	P	05 51 50.9	-0.1
ZAL				PcP	PcP	05 53 30.3	+0.9
HIA	Hailar	45.93	24	*e*P	P	05 51 51.5	-1.2
	comp=Z,5.9nm,1.1s,mb4.4						
NWAO	Narrogin (SRO)	47.01	153	P	P	05 52 00.8	-0.7
	comp=Z,5.1nm,0.8s,mb4.5,baz=325,slow=7.9,SNR=3.3						
NWAO	Narrogin (SRO)	47.01	153	P	P	05 52 00.8	-0.7
BVAR	Borovoye Array	48.13	341	P	P	05 52 09.9	-0.2
	comp=Z,0.8nm,0.7s,mb3.9,baz=135,slow=10,SNR=4.5						
CHKZ	Chkalovo	48.61	342	*e*P	P	05 52 13.2	-0.5
	comp=Z,4.0nm,0.6s,mb4.6						
WRA	Warramunga Arr	49.00	126	P	P	05 52 16.9	-0.4
	comp=Z,0.9nm,0.5s,mb4.1,baz=305,slow=8.6,SNR=17						
WRA				PcP	PcP	05 53 41.6	0.0
	comp=Z,0.5nm,0.6s,baz=311,slow=3.0,SNR=4.9						
WRAB	Tennant Creek	49.01	126	*e*P	P	05 52 17.6	+0.3
ASAR	Alice Springs	50.69	130	P	P	05 52 29.8	-0.3
	comp=Z,0.4nm,0.5s,mb3.6,baz=304,slow=6.8,SNR=7.3						
ASAR				PcP	PcP	05 53 48.0	+0.3
	comp=Z,0.9nm,0.8s,baz=299,slow=3.1,SNR=6.8						
GNI	Garni	53.64	314	P	P	05 52 55.2	+3.2
	comp=Z,23nm,1.3s,mb5.0						
KMBO	Kilima Mbogo	57.17	263	P	P	05 53 23.6	+5.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=48,slow=20,SNR=4.9						
KMBO				LR	LR	06 14 56.7	
	comp=Z,58nm,19.4s,MS3.7,baz=250,slow=33						
KMBO	Kilima Mbogo	57.17	263	*e*P	P	05 53 23.7	+5.7
	comp=Z,2.2nm,0.9s,mb4.2						
CTA	Charters Tower	59.00	120	LR	LR	06 18 16.4	
	comp=Z,50nm,19.8s,MS3.6,baz=53,slow=35						
BRTR	Keskin Array B	61.65	311	P	P	05 53 47.1	-1.4
	comp=Z,1.9nm,0.9s,mb4.2,baz=121,slow=7.2,SNR=7.1						
MA2	Magadan	66.22	28	P	P	05 54 18.0	-0.2
	comp=Z,7.4nm,0.9s,mb4.7						
AKASG	Malin Array Be	67.32	322	P	P	05 54 23.2	-2.0
	comp=Z,0.4nm,0.4s,mb3.8,baz=89,slow=4.3,SNR=3.2						
FINES	FINESS Array B	71.85	332	P	P	05 54 53.6	+0.7
	comp=Z,2.1nm,0.9s,mb4.0,baz=90,slow=7.6,SNR=3.5						
LBTB	Lobatse	74.32	241	*e*P	P	05 55 09.8	+1.7
	comp=Z,5.4nm,1.2s,mb4.3						
ARCES	ARCESS Array B	74.40	340	P	P	05 55 08.3	+0.7
	comp=Z,3.2nm,0.9s,mb4.3,baz=72,slow=3.8,SNR=3.8						
GERES	GERESS Array B	77.00	318	P	P	05 55 23.5	+0.6
	comp=Z,1.6nm,0.9s,mb4.0,baz=90,slow=5.3,SNR=10						
NOA	NORSAR Array B	78.87	331	P	P	05 55 32.7	-0.1
	comp=Z,1.8nm,0.8s,mb4.1,baz=91,slow=5.8,SNR=3.9						
NOA	NORSAR Array B	78.87	331	P	P	05 55 32.7	-0.1
ILAR	Eielson Array	94.14	22	P	P	05 56 47.5	-0.5
	comp=Z,0.8nm,0.7s,mb4.2,baz=301,slow=4.1,SNR=11						
INK	Inuvik	96.33	16	P	P	05 56 58.6	+0.8
	comp=Z,1.4nm,0.7s,mb4.5,baz=304,slow=7.3,SNR=7.2						
NVAR	Mina Array Bea	124.41	30	PKP	PKPdf	06 02 31.2	+1.1
	comp=Z,0.3nm,0.4s,baz=288,slow=2.9,SNR=5.5						
TXAR	Lajitas Array	138.64	23	PKP	PKPdf	06 02 58.7	+1.5
	comp=Z,0.2nm,0.5s,baz=307,slow=0.2,SNR=3.7						
PLCA	Paso Flores	145.17	201	PKPbc	PKPbc	06 03 09.4	+2.9
	comp=Z,4.1nm,0.7s,baz=176,slow=4.1,SNR=12						

IDC 10 05:53:05.5±4.1**, 16.43S**×**178.42W, mb4.1**/4**, mb1 4.4**/4**, mb1mx3.9**/15**, mbtmp4.1**/4**, Error ellipse: s-maj=180.3km s-min=33.2km az=138.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.35	240	P	P	06 00 36.9	-1.5
	1.3nm,0.5s,baz=84,slow=8.5,SNR=4.0						
WRA	Warramunga Arr	44.91	258	P	P	06 01 22.2	-1.9
	0.9nm,0.5s,baz=91,slow=6.9,SNR=15						
ASAR	Alice Springs	45.20	253	P	P	06 01 24.4	-2.0
	7.3nm,0.4s,baz=89,slow=8.1,SNR=147						
ILAR	Eielson Array	84.45	13	P	P	06 05 39.7	-1.2
	0.4nm,0.9s,baz=223,slow=5.4,SNR=6.3						

NEIC ***10*** *05:54:19.0, 18.29N×103.29W, h27*^{km}*, MD4.1(MEX), After MEX.*

MEX 10 05:54:18.9±1.0**, 18.26N**×**103.32W, h20**^{km}±48^{km}**, MD4.1, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	Colima	0.98	339	*i* P	Pb	05 54 33.4	-3.6
COLM				*i* S	Sb	05 54 46.8	-2.7
CGX	Ciudad Guzman	1.44	353	*i* P	Pn	05 54 41.0	-3.1
CGX				*i* S	Sn	05 55 00.5	-2.0
CGX	Ciudad Guzman	1.44	353	*i* P	Pn	05 54 41.0	-3.1
CGX				*i* S	Sn	05 54 58.0	-4.5
ZIIG	Zihuatanejo	1.89	110	*e*P	Pn	05 54 47.3	-3.3
ZIIG				*e*S	Sn	05 55 11.5	-2.4
ZIIG	Zihuatanejo	1.89	110	*e*P	Pn	05 54 47.3	-3.3
ZIIG				*e*S	Sn	05 55 09.8	-4.1
CJM	Chamela	2.04	307	*e*P	Pn	05 54 50.0	-2.8
CJM				*e*S	Sn	05 55 15.4	-2.5
CJM	Chamela	2.04	307	*e*P	Pn	05 54 50.0	-2.8
CJM				*e*S	Sn	05 55 13.6	-4.3
SFJM	Santa Fe	2.23	7	*i* P	Pn	05 54 51.5	-4.0
SFJM				*i* S	Sn	05 55 19.5	-3.2
SFJM	Santa Fe	2.23	7	*i* P	Pn	05 54 51.5	-4.0
SFJM				*i* S	Sn	05 55 19.0	-3.7
ACX	Acapulco	3.53	113	*e*P	Pn	05 55 17.0	+3.0
ACX	Acapulco	3.53	113	*e*P	Pn	05 55 10.0	-4.0
ACX				*i* S	Sn	05 55 53.0	-2.7
CRX	Cerrillo	3.63	71	*e*P	Pn	05 55 10.0	-5.5
UNM	Universidad Na	4.07	74	*e*P	Pn	05 55 18.0	-3.7
UNM				*i* S	Sn	05 56 06.0	-3.3
UNM				*i* S	Sn	05 56 14.0	+4.7
PPM	Popocatepetl	4.53	79	*e*P	Pn	05 55 23.9	-4.2
PPM				*e*S	Sn	05 56 15.0	-5.8
PPM	Popocatepetl	4.53	79	*e*P	Pn	05 55 23.0	-5.1
PPM				*e*P		05 55 23.9	
PPM				*e*S	Sn	05 56 15.0	-5.8
IIB	San Bernardino	4.77	81	*e*P	Pn	05 55 30.0	-1.6

IDC 10 06:01:39.1±2.9**, 33.09S**×**178.26W, mb4.1**/3**, mb1 4.3**/4**, mb1mx4.0**/15**, mbtmp4.1**/4**, ML3.7**/1**, Error ellipse: s-maj=61.5km s-min=35.6km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.39	215	Pn	Pn	06 03 15.2	-1.6
	1.6nm,0.3s,baz=37,slow=5.0,SNR=6.7						
URZ				Sn	Sn	06 04 26.9	-4.5
	8.3nm,0.3s,baz=208,slow=22,SNR=17						
CTA	Charters Tower	34.10	283	P	P	06 08 26.9	-0.7
	4.4nm,0.9s,baz=107,slow=14,SNR=3.7						
ASAR	Alice Springs	42.81	270	P	P	06 09 38.5	-1.9
	1.1nm,0.6s,baz=114,slow=7.8,SNR=13						
WRA	Warramunga Arr	44.05	275	P	P	06 09 48.0	-2.5
	2.2nm,0.6s,baz=114,slow=7.7,SNR=47						
FINES	FINESS Array B	147.57	338	PKPbc	PKPdf	06 21 23.7	+0.1
	2.4nm,0.6s,slow=3.8,SNR=8.6						

IDC ***10*** *06:06:31.3±3.1, 5.97N×91.09E, mb3.7/4, mb1 3.9/5, mb1mx3.7/18, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=94.5km s-min=24.9km az=66.0*

ISC 10 06:06:34.0±2.0**, 6.0N**±0.2×**91.1E**±0.3**, h33**^{km}**, n7,** $\sigma 0^{s}$**88**/7**, mb4.0**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	Vishakhapatnam	13.92	328	*e*P	P	06 10 01.7	+10
VIS				*e*		06 10 03.1	
	comp=Z,23nm,0.8s						
VIS				*e*S	Sx	06 12 41.1	
CMAR	Chiang Mai Arr	14.61	31	Pn	P	06 10 00.3	0.0
	comp=Z,0.3nm,0.3s,baz=162,slow=33,SNR=2.5						
SONM	Songino Array	43.74	15	P	P	06 14 37.9	-0.1
	comp=Z,0.2nm,0.5s,mb3.1,baz=208,slow=8.3,SNR=3.6						
ZAL	Zalesovo	48.11	355	P	P	06 15 12.5	0.0
	comp=Z,2.1nm,0.5s,mb4.5,baz=326,slow=5.5,SNR=5.5						
WRA	Warramunga Arr	49.73	122	P	P	06 15 23.7	-1.8
	comp=Z,0.5nm,0.7s,mb3.7,baz=303,slow=9.2,SNR=5.9						
ASAR	Alice Springs	51.13	127	P	P	06 15 37.3	+1.2
	comp=Z,0.4nm,0.4s,mb3.7,baz=299,slow=7.5,SNR=6.1						
PMG	Port Moresby	57.94	105	P	P	06 16 26.4	+0.5
	comp=Z,11nm,0.7s,mb5.0,baz=178,slow=17,SNR=2.8						

NDI 10 06:20:05.4±6.5**, 22.92N**×**85.42E, h40**^{km}±146^{km}**, ML3.3, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BWNR	Bhubaneshwar	2.64	172	*e*P	P	06 20 45.8	-0.7
BWNR				*e*S	S	06 21 13.1	-4.5
BWNR				*e*		06 21 15.0	
	comp=E,749nm,0.3s						
BWNR				*e*		06 21 15.4	
	comp=N,565nm,0.3s						
BLSP	Bilaspur	3.14	256	*e*P	P	06 20 52.0	-1.6
BLSP				*e*S	S	06 21 26.8	-3.5
BLSP				*e*		06 21 32.9	
	comp=N,320nm,0.3s						
BLSP				*e*		06 21 33.4	
	comp=E,107nm,0.2s						
VIS	Vishakhapatnam	5.53	201	*e*S	S	06 22 24.8	-5.8
VIS				*e*		06 22 35.0	
	comp=N,15nm,0.3s						
VIS				*e*		06 22 35.4	
	comp=E,22nm,0.6s						
BHPL	Bhopal	7.37	274	*e*S	S	06 23 07.6	-8.7
BHPL				*e*		06 23 45.4	
	comp=N,19nm,0.2s						
BHPL				*e*		06 23 46.2	
	comp=E,12nm,0.2s						
AKL	Akola	8.11	256	*e*S	S	06 23 20.2	-15

WEL 10 06:21:16.1±0.5**, 37.65S**×**177.39E, h91**^{km}±4^{km}**, ML3.7**/7**, 2C-2D, Error ellipse: s-maj=2.5km s-min=2.3km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.20	307	*e*P*	P	06 21 28.2	-1.0
WIZ				*e*S*	S	06 21 38.0	-1.2
URZ	Urewera	0.65	200	⇓P*	P	06 21 32.1	-0.4
URZ				S*	S	06 21 45.0	+0.4
MARZ	Manawahe	0.66	239	P*	P	06 21 32.4	-0.1
EDRZ	Edgecumbe	0.69	228	P*	P	06 21 32.8	0.0
MXZ	Matakaoa Point	0.73	84	⇑P*	P	06 21 33.4	+0.1
MXZ				S*	S	06 21 47.6	+1.6
PUZ	Puketiti	0.81	122	⇑PN	P	06 21 33.6	-0.5
PUZ				SN	S	06 21 47.5	+0.2
LIRZ	Lichensteins R	0.87	246	P*	P	06 21 34.6	0.0
TGRZ	Tauranga	0.90	264	⇓P*	P	06 21 34.7	-0.2
TAZ	Tarawera	0.91	230	P*	P	06 21 35.0	0.0
MYRZ	Mayor Island	0.98	291	P*	P	06 21 35.8	-0.1
KNZ	Kokohu	1.39	171	PN	P	06 21 39.5	-1.5
KNZ				SN	S	06 21 57.5	-1.9
OTVZ	Oturere	2.03	221	PN	P	06 21 47.8	-1.4
NGZ	Ngauruhoe	2.08	222	PN	P	06 21 48.5	-1.4
TUVZ	Tukino	2.12	220	PN	P	06 21 48.6	-1.8
MOVZ	Moawhango	2.18	216	PN	P	06 21 48.7	-2.6
PWZ	Pawanui	2.42	190	PN	P	06 21 50.9	-3.7
PWZ				SN	S	06 22 19.3	-3.9
BFZ	Birch Farm	3.16	196	*e*PN	P	06 21 59.8	-5.1
MRZ	Mangatainoka R	3.32	204	PN	P	06 22 01.7	-5.4
MRZ				SN	S	06 22 38.9	-6.8
KIW	Kapiti Island	3.74	210	PN	P	06 22 07.1	-5.8
KIW				SN	S	06 22 49.0	-7.1
CAW	Cannon Point	3.90	207	PN	P	06 22 08.6	-6.4
PAWZ	Paruwai Farm	4.03	202	PN	P	06 22 10.1	-6.7
PAWZ				SN	S	06 22 55.1	-8.0
MSWZ	Moikau Station	4.11	203	SN	S	06 22 56.2	-9.0
MRW	Makara Radio	4.14	209	*e*SN	S	06 22 57.9	-7.9
NNZ	Nelson	4.73	220	PN	P	06 22 19.8	-6.6
NNZ				SN	S	06 23 12.6	-7.9
QRZ	Quartz Range	4.93	228	PN	P	06 22 23.0	-6.2
QRZ				SN	S	06 23 17.0	-8.4
THZ	Tophouse	5.37	219	PN	P	06 22 27.9	-7.3
KHZ	Kahutara	5.61	211	PN	P	06 22 30.8	-7.6
DSZ	Denniston Nort	5.94	225	PN	P	06 22 35.1	-7.9
LTZ	Lake Taylor	6.45	216	*e*PN	P	06 22 40.8	-9.3

IDC ***10*** *06:25:08.2±0.5, 4.13N×95.84E, mb4.6/17, mb1 4.7/18, mb1mx4.6/22, mbtmp4.6/18, ML4.4/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/25, Error ellipse: s-maj=22.5km s-min=12.8km az=58.0*

BJI ***10*** *06:25:12.8, 4.00N×95.80E, h25*^{km}*, mB4.7, mb4.7, Ms4.4, Msz4.1*

NEIC ***10*** *06:25:12.8±0.2, 4.01N×95.83E, h30*^{km}*, mb4.7/24, Error ellipse: s-maj=8.1km s-min=5.0km az=57.0*

ISC 10 06:25:11.5±0.3**, 3.98N**±0.05×**95.78E**±0.06**, h33**^{km}**, n84,** $\sigma 0^{s}$**98**/76**, mb4.7**/50**, MS3.7**/6**, 3C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	5.27	83	P	P	06 26 32.0	+2.0
KGM	Kluang	7.78	104	P	P	06 27 08.5	+3.3
CM31	Chiang Mai Arr	14.72	12	*e*P	P	06 28 42.4	+3.2
	32nm,1.2s						
CMAR	Chiang Mai Arr	14.72	12	Pn	P	06 28 43.3	+4.0
	0.5nm,0.3s,baz=204,slow=12,SNR=28						
CMAR				LR	LR	06 34 51.2	
	comp=Z,212nm,18.3s,baz=195,slow=40						
PALK	Pallekele	15.35	283	*e*P	P	06 28 54.7	+7.2
	37nm,1.0s						
QIZ	Qiongzhong	20.31	41	*e*P	P	06 29 51.4	+3.9
	19nm,1.0s						
HYB	Hyderabad	21.52	310	*e*P	P	06 30 02.0	+2.1
HYB	Hyderabad	21.52	310	*i* P	P	06 30 02.0	+2.1
KMI	Kunming	22.06	17	⇑P	P	06 30 09.6	+4.3
KMI				AP		06 30 17.9	
KMI				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.1						
KMI				AMB	AMB		
	comp=Z,91nm,4.9s						
KMI				LR	LR		
	comp=N,226nm,16.6s,MS3.8						
KMI				LR	LR		
	comp=E,141nm,12.3s,MS3.8						
KMI				LR	LR		
	comp=Z,247nm,19.8s						
KMI	Kunming	22.06	17	⇑P	P	06 30 09.6	+4.3
	comp=Z,11nm,1.3s,mb4.1						
KMI				pP		06 30 17.9	

KMI				S	S	06 33 31.9	-30
GYA	**Guiyang**	24.66	24	P	P	06 30 32.2	+1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
JIRN	**Jiri**	25.26	340	*e*P	P	06 30 37.0	+0.5
	comp=Z,48nm,0.4s,mb5.4						
PKI	**Pulchoki**	25.46	338	*e*P	P	06 30 39.1	+0.8
	comp=Z,27nm,0.4s,mb5.1						
GUN	**Gumba**	25.60	339	*e*P	P	06 30 39.7	0.0
	comp=Z,34nm,0.4s,mb5.2						
DMN	**Daman**	25.61	338	*e*P	P	06 30 40.4	+0.7
	comp=Z,22nm,0.4s,mb5.0						
KKN	**Kakani**	25.71	338	*e*P	P	06 30 40.5	-0.2
	comp=Z,29nm,0.4s,mb5.1						
DGAR	**Diego Garcia**	25.88	244	*e*P	P	06 30 41.8	-0.6
	comp=Z,336nm,1.3s,mb5.7						
LSA	**Lhasa**	25.95	351	*e*P	P	06 30 43.2	+0.3
	comp=Z,18nm,0.8s,mb4.7						
GKN	**Gorkha**	26.14	337	*e*P	P	06 30 44.5	-0.2
	comp=Z,59nm,0.4s,mb5.5						
KOLN	**Koldanda**	26.35	335	*e*P	P	06 30 46.9	+0.2
	comp=Z,44nm,0.6s,mb5.2						
CD2	**Chengdu**	27.82	15	*e*P	P	06 30 59.0	-1.1
XAN	**Xi'an**	32.31	21	P	P	06 31 38.7	-1.2
XAN				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.8						
LZH	**Lanzhou**	32.81	12	⇓P	P	06 31 43.0	-1.1
LZH				AP	pP	06 31 56.0	+2.2
LZH				XP	sP	06 32 03.5	+5.4
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
LZH	**Lanzhou**	32.81	12	⇓P	P	06 31 43.0	-1.1
	comp=Z,30nm,1.5s,mb5.0						
LZH				pP	pP	06 31 56.0	+2.2
LZH				sP	sP	06 32 03.5	+5.4
GTA	**Gaotai**	35.46	5	*e*P	P	06 32 06.2	-0.7
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
FITZ	**Fitzroy Crossi**	36.72	128	*e*P	P	06 32 16.5	-1.2
	comp=Z,6.1nm,0.8s,mb4.5						
HHC	**Hu-ho-hao-te**	39.36	19	⇑P	P	06 32 41.2	+1.6
HHC				AP	pP	06 32 50.6	+1.3
HHC				XP	sP	06 32 55.4	+1.8
HHC				S	S	06 38 42.7	+4.2
HHC				XS		06 39 00.5	
HHC				SCS	ScS	06 42 44.1	+0.6
HHC				AMB	AMB		
	comp=Z,9.0nm,1.5s,mb4.3						
HHC				AMB	AMB		
	comp=Z,118nm,10.7s						
HHC				LR	LR		
	comp=N,204nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=E,232nm,17.8s,MS4.2						
HHC				LR	LR		
	comp=Z,213nm,20.2s,MS4.0						
BJT	**Baijiatuau**	40.34	24	*e*P	P	06 32 48.9	+1.3
	comp=Z,13nm,0.6s,mb4.8						
BJI	**Beijing**	40.36	24	P	P	06 32 49.0	+1.2
BJI				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
BJI	**Beijing**	40.36	24	P	P	06 32 49.0	+1.2
	comp=Z,20nm,0.6s,mb5.0						
NWAO	**Narrogin (SRO)**	41.96	153	P	P	06 33 01.7	+0.5
	comp=Z,7.4nm,0.8s,mb4.3,baz=321,slow=5.4,SNR=5.1						
NWAO	**Narrogin (SRO)**	41.96	153	*e*P	P	06 33 01.4	+0.2
	comp=Z,19nm,1.1s,mb4.7						
AAK	**Ala-Archa**	42.90	337	*e*P	P	06 33 09.4	+0.6
	comp=Z,5.2nm,0.9s,mb4.3						
SONM	**Songino Array**	44.64	10	P	P	06 33 21.8	-0.9
	comp=Z,3.4nm,0.5s,mb4.5,baz=193,slow=9.1,SNR=61						
SONM				PcP	PcP	06 35 04.7	-0.9
	comp=Z,2.2nm,0.4s,baz=198,slow=3.9,SNR=13						
WRA	**Warramunga Arr**	44.73	124	P	P	06 33 23.6	-0.2
	comp=Z,8.5nm,0.6s,mb4.8,baz=303,slow=9.1,SNR=52						
WRAB	**Tennant Creek**	44.73	124	*e*P	P	06 33 23.1	-0.7
	comp=Z,16nm,0.6s,mb5.0						
WB2	**Warramunga Arr**	44.74	124	*e*P	P	06 33 23.8	-0.1
ULN	**Ulaanbaatar**	44.78	11	*e*P	P	06 33 22.9	-1.0
	comp=Z,2.8nm,0.6s,mb4.3						
ULN				*e*		06 33 35.7	
ULN				*e*PcP	PcP	06 35 04.8	-1.3
ASPA	**Alice Springs**	46.21	128	*e*P	P	06 33 35.6	0.0
ASAR	**Alice Springs**	46.21	128	P	P	06 33 35.3	-0.3
	comp=Z,2.9nm,0.9s,mb4.2,baz=299,slow=7.5,SNR=15						
ASAR				PcP	PcP	06 35 10.6	-0.8
	comp=Z,2.5nm,1.1s,baz=300,slow=2.6,SNR=4.6						
ASAR				LR	LR	06 54 08.3	
	comp=Z,50nm,20.5s,MS3.5,baz=123,slow=38						
FORT	**Forrest**	46.31	141	*e*P	P	06 33 36.8	+0.6
	comp=Z,390nm,0.7s						
CN2	**Changchun**	47.53	29	*e*P	P	06 33 45.2	-0.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
KURK	**Kurchatov**	48.76	346	*e*P	P	06 33 53.9	-1.2
	comp=Z,5.5nm,0.7s,mb4.7						
HIA	**Hailar**	49.52	20	*e*P	P	06 34 00.6	-0.4
	comp=Z,8.7nm,1.0s,mb4.7						
ZAL	**Zalesovo**	50.60	352	P	P	06 34 07.3	-1.9
	comp=Z,12nm,0.4s,mb5.2,baz=307,slow=6.1,SNR=42						
ZAL	**Zalesovo**	50.60	352	P	P	06 34 07.3	-1.9
BVAR	**Borovoye Array**	53.18	341	P	P	06 34 27.2	-1.3
	comp=Z,2.1nm,0.5s,mb4.3,baz=142,slow=10,SNR=15						
CTA	**Charters Tower**	55.03	118	LR	LR	07 03 15.0	
	comp=Z,58nm,18.2s,MS3.7,baz=39,slow=42						
CTAO	**Charters Tower**	55.03	118	*e*P	P	06 34 41.6	-0.9
	comp=Z,5.8nm,0.7s,mb4.7						
STKA	**Stephens Creek**	56.27	133	*e*P	P	06 34 50.7	-0.7
	comp=Z,4.5nm,0.6s,mb4.7						
STKA	**Stephens Creek**	56.27	133	P	P	06 34 50.5	-0.9
	comp=Z,7.3nm,0.8s,mb4.8,baz=314,slow=7.4,SNR=14						
STKA				LR	LR	07 01 36.5	
	comp=Z,46nm,19.1s,MS3.6,baz=315,slow=39						
STKA	**Stephens Creek**	56.27	133	*e*P	P	06 34 50.2	-1.1
ASAJ	**Asahikawa**	57.35	39	LR	LR	07 00 46.8	
	comp=Z,71nm,20.4s,MS3.8,baz=354,slow=37						
KMBO	**Kilima Mbogo**	58.70	266	P	P	06 35 09.4	+0.6
	comp=Z,1.0nm,0.6s,mb4.0,baz=45,slow=14,SNR=4.5						
KMBO	**Kilima Mbogo**	58.70	266	*e*P	P	06 35 09.8	+1.0
	comp=Z,2.0nm,0.8s,mb4.2						
MALT	**Malatya**	62.23	312	*e*P	P	06 35 32.5	0.0
	comp=Z,6.4nm,1.2s,mb4.6						
BRTR	**Keskin Array B**	66.20	312	P	P	06 35 57.4	-1.0
	comp=Z,3.4nm,0.6s,mb4.5,baz=132,slow=7.5,SNR=17						
MA2	**Magadan**	69.47	26	P	P	06 36 18.0	-0.4
	comp=Z,7.1nm,0.8s,mb4.7						
LSZ	**Lusaka**	69.57	252	*e*P	P	06 36 20.2	+0.5
	comp=Z,3.3nm,0.9s,mb4.3						
SANT	**Santorini**	71.83	307	*e*P	P	06 36 33.0	-0.1
	comp=Z,117nm,1.1s,mb5.7						
IDI	**Anoyia**	72.13	306	P	P	06 36 35.5	+0.7
	comp=Z,17nm,1.0s,mb4.9,baz=52,slow=7.8,SNR=4.4						
AKASG	**Malin Array Be**	72.20	322	P	P	06 36 33.5	-1.4
	comp=Z,1.5nm,0.4s,mb4.2,baz=87,slow=5.7,SNR=13						
LBTB	**Lobatse**	73.86	243	*e*P	P	06 36 45.8	+0.4
	comp=Z,13nm,1.1s,mb4.8						
BOSA	**Boshof**	74.95	239	P	P	06 36 52.0	+0.4
	comp=Z,16nm,1.4s,mb4.8						
JOF	**Joensuu**	75.04	335	*e*p	P	06 36 50.4	-1.0
MAW	**Mawson**	75.09	192	P	P	06 36 53.0	+1.4
	comp=Z,5.0nm,0.8s,mb4.5,baz=91,slow=3.9,SNR=3.2						
FINES	**FINESS Array B**	76.89	332	P	P	06 37 01.5	-0.5
	comp=Z,3.5nm,0.5s,mb4.5,baz=100,slow=6.4,SNR=37						
KAF	**Kangasniemi**	76.98	333	*e*p	P	06 37 01.4	-1.0
FX1	**Attu Island--F**	79.23	37	P	P	06 37 15.0	0.0
	comp=Z,16nm,0.9s,mb5.0,baz=66,slow=12,SNR=3.0						
ARCES	**ARCESS Array B**	79.46	340	P	P	06 37 15.5	-0.4
	comp=Z,3.0nm,0.6s,mb4.4,baz=88,slow=6.2,SNR=28						
ARCES	**ARCESS Array B**	79.46	340	P	P	06 37 15.5	-0.4
BOJS	**Bojanci**	80.53	315	*i* P	P	06 37 22.8	+0.7
GERES	**GERESS Array B**	81.80	319	P	P	06 37 27.7	-1.0
	comp=Z,2.2nm,0.8s,mb4.1,baz=104,slow=5.5,SNR=15						
GRA1	**Grafenberg Arr**	83.46	319	*e*P	P	06 37 38.6	+1.4
	comp=Z,10.0nm,1.4s,mb4.7						
GRA1				*e*		06 37 52.5	
GRF	**Grafenberg Arr**	83.46	319	*e*P	P	06 37 38.6	+1.4
	comp=Z,10.0nm,1.4s,mb4.7						
GRF				*e*		06 37 52.5	
LPG	**La Plagne**	86.50	315	*e*P	P	06 37 52.6	+0.2
	comp=Z,12nm,0.9s,mb4.8						
EKA	**Eskdalemuir Ar**	91.83	326	P	P	06 38 18.6	+1.1
	comp=Z,4.2nm,1.1s,mb4.7,baz=90,slow=5.0,SNR=3.6						
ULM	**Lac du Bonnet**	125.06	9	PKP	PKPdf	06 44 09.4	+0.7
	comp=Z,0.9nm,0.5s,baz=144,slow=2.1,SNR=3.9						
NVAR	**Mina Array Bea**	127.32	34	PKP	PKPdf	06 44 16.0	+2.5
	comp=Z,0.7nm,0.8s,baz=41,slow=1.2,SNR=4.8						
PDAR	**Pinedale Array**	128.12	24	PKP	PKPdf	06 44 17.0	+2.1
	comp=Z,0.2nm,0.5s,baz=304,slow=3.3,SNR=3.3						
TXAR	**Lajitas Array**	141.98	28	PKhKP		06 44 36.6	
	comp=Z,0.2nm,0.7s,baz=139,slow=12,SNR=3.3						
TXAR				PKP	PKPdf	06 44 43.8	+2.9
	comp=Z,0.4nm,0.5s,baz=29,slow=4.1,SNR=5.3						
CPUP	**Villa Florida**	145.98	227	PKPbc	PKPbc	06 44 50.0	+1.1
	comp=Z,0.0nm,0.3s,baz=228,slow=15,SNR=2.1						
LVC	**Limon Verde**	156.27	217	PKPab	PKPab	06 45 34.7	+0.8
	comp=Z,0.8nm,0.5s,baz=284,slow=2.6,SNR=3.9						
LPAZ	**La Paz**	160.01	231	PKPab	PKPab	06 45 51.8	+1.7
	comp=Z,1.1nm,0.5s,baz=202,slow=3.1,SNR=4.7						

IDC 10 06:39:54.9±12.0, 7.66N×94.17E, h50^{km}±92^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.4/17, mbtmp3.7/4, ML4.3/1, Error ellipse: s-maj=154.6km s-min=28.7km az=63.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	11.69	23	P	P	06 42 39.2	-2.6
	0.6nm,0.3s,baz=217,slow=15,SNR=6.3						
SONM	**Songino Array**	41.36	12	P	P	06 47 36.2	-1.5
	0.8nm,0.7s,baz=201,slow=7.1,SNR=7.5						
ZAL	**Zalesovo**	46.76	352	P	P	06 48 19.0	-2.1
	1.6nm,0.5s,baz=289,slow=9.5,SNR=8.6						
WRA	**Warramunga Arr**	48.12	125	P	P	06 48 30.1	-2.1
	0.3nm,0.5s,baz=305,slow=8.6,SNR=6.3						

*IDC **10** 07:10:33.9±0.5, 15.06S×173.75W, mb4.8/18, mb1 5.0/19, mb1mx5.0/20, mbtmp4.8/19, ML5.2/1, MS4.7/19, Ms1 4.7/19, ms1mx4.6/23, Error ellipse: s-maj=26.6km s-min=13.0km az=127.0*

*NEIC **10** 07:10:35.6±0.2, 15.11S×173.75W, h10^{km}, mb5.2/51, MS4.9/21, MW5.5, Error ellipse: s-maj=9.9km s-min=4.2km az=141.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.61; $M_{\theta\theta}$-0.32; $M_{\phi\phi}$0.93; $M_{r\theta}$-1.61; $M_{\theta\phi}$-0.80; $M_{\phi r}$0.81; Best double couple: $M_0$2.1×10^{17} NP1: ϕ_s11°, δ28°, λ-21°. NP2: ϕ_s120°, δ80°, λ-116°. Principal axes: T 2.18, Plg30°, Azm231°; N -.11, Plg26°, Azm125°; P -2.08, Plg48°, Azm2°;*

*HRVD **10** 07:10:35.6±0.3, 14.73S×173.44W, h12^{km}, MW5.6/72, Centroid moment Tensor Solution. LP body waves: s35,c48; Mantle waves: s72,c112; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.68±.03; $M_{\theta\theta}$0.58±.04; $M_{\phi\phi}$0.09±.03; $M_{r\theta}$-3.06±.09; $M_{\theta\phi}$-0.10±.03; $M_{\phi r}$1.11±.09; Best double couple: $M_0$3.317×10^{17} NP1: ϕ_s276°, δ6°, λ-104°. NP2: ϕ_s110°, δ84°, λ-89°. Principal axes: T 3.275, Plg39°, Azm198°; N .084, Plg1°, Azm290°; P -3.359, Plg50°, Azm21°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **10** 07:10:38.4±1.0, 15.07S×173.57W, h33^{km}, mb5.3/28, MS4.6/4 Error ellipse: s-maj=19.1km s-min=10.0km az=67.7*

*BJI **10** 07:10:39.0, 14.47S×174.26W, h10^{km}, mB5.6, mb4.9, Ms5.2, Msz4.9*

ISC 10 07:10:37.4±0.2, 15.19S±0.06×173.74W±0.06, h33^{km}, (h29^{km}±5.1^{km}:pP-P), n300, σ0^{s}85/171, mb5.0/69, MS4.8/43, 10C-16D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	2.29	56	*e*Pn	Pn	07 11 09.4	-4.3
AFI				*e*Sn	Sn	07 11 29.5	-12
RAR	**Rarotonga**	14.55	116	Pn	P	07 13 58.4	-4.6
	10.0nm,0.3s,baz=242,slow=2.7,SNR=11						
RAR				Sn	S	07 16 30.3	-14
	4.2nm,0.3s,baz=141,slow=18,SNR=3.7						
RAR				LR	LR	07 18 11.2	
	comp=Z,923nm,21.8s,baz=287,slow=31						
RAR	**Rarotonga**	14.55	116	*e*P	P	07 13 58.7	-4.3
	87nm,0.9s						
RAR				*e*S	S	07 16 27.9	-16
DZM	**Mont Dzumac**	19.97	247	*e*P	P	07 15 08.2	-1.6
URZ	**Urewera**	24.36	198	P	P	07 15 55.3	+1.8
	11nm,0.3s,mb4.7,baz=314,slow=2.9,SNR=11						
URZ				LR	LR	07 24 41.0	
	comp=Z,4µm,19.5s,MS4.9,baz=24,slow=35						
RPZ	**Rata Peaks**	31.25	202	P	P	07 16 56.2	-0.1
	24nm,1.0s,mb5.0,baz=41,slow=9.3,SNR=4.7						
RPZ				LR	LR	07 28 59.7	
	comp=Z,3µm,19.5s,MS5.0,baz=306,slow=35						
CTA	**Charters Tower**	38.37	257	LR	LR	07 31 39.0	
	comp=Z,236nm,21.1s,MS4.0,baz=69,slow=33						
CTAO	**Charters Tower**	38.37	257	P	P	07 17 57.5	+0.2
CTAO				LR	LR		
	comp=Z,412nm,22.0s,MS4.2						
PMG	**Port Moresby**	38.59	274	LR	LR	07 29 45.4	
	comp=Z,437nm,19.2s,MS4.3,baz=50,slow=30						
PMG	**Port Moresby**	38.59	274	*e*P	P	07 17 53.3	-6.0
	comp=Z,19nm,1.0s,mb4.8						
PMG				LR	LR		
	comp=Z,584nm,21.0s,MS4.4						
CNB	**Canberra Magne**	38.62	232	⇓*i*P	P	07 17 59.5	+0.3
	comp=Z,344nm,1.1s,mb6.0						
POHA	**Pohakuloa**	39.08	28	PFAKE		07 18 10.0	+6.8
POHA				LR	LR		
	comp=Z,15µm,19.0s,MS5.8						
TOO	**Toolangi**	42.34	230	⇓*i*P	P	07 18 30.1	0.0
	comp=Z,1.0nm,0.9s						
TAU	**Tasmania Unive**	43.24	222	*e*P	P	07 18 37.7	+0.3
	comp=Z,42nm,1.2s,mb5.0						
STKA	**Stephens Creek**	43.85	240	*e*P	P	07 18 43.2	+0.7
	comp=Z,7.6nm,0.6s,mb4.6						
STKA	**Stephens Creek**	43.85	240	P	P	07 18 41.7	-0.8
	comp=Z,20nm,1.2s,mb4.7,baz=70,slow=6.2,SNR=17						
STKA				LR	LR	07 34 44.6	
	comp=Z,700nm,20.7s,MS4.5,baz=63,slow=33						
WB2	**Warramunga Arr**	49.56	257	*e*P	P	07 19 26.7	-0.8
WRAB	**Tennant Creek**	49.56	257	⇓*i*P	P	07 19 26.6	-0.9
WRAB	**Tennant Creek**	49.56	257	*e*P	P	07 19 26.3	-1.2
	comp=Z,85nm,1.4s,mb5.6						
WRAB				LR	LR		
	comp=Z,248nm,19.0s,MS4.2						
WRA	**Warramunga Arr**	49.57	257	P	P	07 19 26.6	-1.0
	comp=Z,8.0nm,0.7s,mb4.9,baz=92,slow=7.3,SNR=42						
ASAR	**Alice Springs**	49.86	252	P	P	07 19 29.1	-0.7
	comp=Z,32nm,0.6s,mb5.5,baz=86,slow=8.0,SNR=288						
ASAR				LR	LR	07 39 09.0	
	comp=Z,610nm,21.8s,MS4.6,baz=91,slow=34						
ASPA	**Alice Springs**	49.86	252	*e*P	P	07 19 29.0	-0.8
KAKA	**Kakadu**	52.19	266	*e*P	P	07 19 48.7	+1.3
	comp=Z,6.0nm,0.4s,mb4.9						
FORT	**Forrest**	55.22	243	*e*P	P	07 20 07.9	-1.7
	comp=Z,396nm,0.6s						
CBIJ	**Chichi jima**	59.98	314	LR	LR	07 41 36.1	
	comp=Z,604nm,20.9s,MS4.7,baz=174,slow=31						
MBWA	**Marble Bar**	63.10	254	*e*P	P	07 21 02.3	-2.0
VNDA	**Vanda**	63.55	186	*e*P	P	07 21 07.1	+0.6
VNDA				pmax	pmax		
	comp=Z,33nm,1.3s						
VNDA	**Vanda**	63.55	186	P	P	07 21 07.4	+0.9
	comp=Z,13nm,1.1s,mb4.9,baz=8.3,slow=6.8,SNR=14						
VNDA				LR	LR	07 43 09.2	
	comp=Z,242nm,20.0s,MS4.4,baz=19,slow=31						
VNDA	**Vanda**	63.55	186	*e*P	P	07 21 07.1	+0.6
	comp=Z,33nm,1.4s,mb5.2						
MAJO	**Matsushiro**	68.57	320	PFAKE		07 21 50.0	+11
MAJO				LR	LR		
	comp=Z,925nm,20.0s,MS5.0						
MAT	**Matsushiro**	68.57	320	P	P	07 21 39.8	+0.7
MAT				*e*S	S	07 30 44.2	+6.5
SAO	**San Andreas Ge**	71.40	42	*e*P	P	07 21 56.4	+0.1
SAO				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
SAO	**San Andreas Ge**	71.40	42	*e*P	P	07 21 56.4	+0.1
	comp=Z,29nm,1.1s,mb5.1						
LRV	**Little Rabbit**	71.48	43	*e*P	P	07 21 56.8	0.0
HOPS	**Hopland**	71.72	39	*e*P	P	07 21 58.2	+0.1
	comp=Z,67nm,1.2s,mb5.5						
PET	**Petropavlovsk**	71.98	343	*e*P	P	07 21 59.6	+0.2
PET				*e*		07 22 19.0	
PET				*e*S	S	07 31 18.2	+0.9
PET				*e*PS	PS	07 31 48.9	-3.2
PET				*e*SS	SS	07 35 58.3	+2.2
PET				*e*SSS	SSS	07 39 09.0	+3.9
PET				pmax	pmax		
	comp=Z,100nm,14.6s						
PET				pmax	pmax		
	comp=Z,100nm,12.6s						
PET				smax			
	comp=E,100nm,5.8s						
PET				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.6						
MWC	**Mount Wilson**	72.23	46	*e*P	P	07 22 00.9	-0.3
CMB	**Columbia Colle**	72.83	42	*e*P	P	07 22 04.3	-0.5
CMB				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CMB	**Columbia Colle**	72.83	42	*e*P	P	07 22 04.3	-0.5
	comp=Z,28nm,1.1s,mb5.1						
OHCM	**Honcut**	72.91	40	*e*P	P	07 22 04.0	-1.3
WDC	**Whiskeytown Da**	73.02	38	*e*P	P	07 22 05.9	0.0
WDC				*e*		07 22 25.4	
WDC				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.2						
WDC	**Whiskeytown Da**	73.02	38	*e*P	P	07 22 05.9	0.0
	comp=Z,45nm,1.4s,mb5.2						
WDC				*e*		07 22 25.4	
YSS	**Yuzh-Sakhalins**	73.14	330	*e*P	P	07 22 07.0	+0.5
YSS				*e*		07 22 19.8	
OMM	**Old Mammoth Mi**	73.49	43	*e*P	P	07 22 08.8	+0.1
YBH	**Yreka Blue Hor**	73.63	37	*e*P	P	07 22 09.6	+0.1
YBH				pmax	pmax		
	comp=Z,43nm,1.1s						
YBH	**Yreka Blue Hor**	73.63	37	P	P	07 22 09.5	0.0
	comp=Z,28nm,1.0s,mb5.2,baz=172,slow=2.2,SNR=40						
YBH	**Yreka Blue Hor**	73.63	37	*e*P	P	07 22 09.6	+0.2
	comp=Z,43nm,1.1s,mb5.3						
LBCM	**Butte Creek Ri**	73.89	39	P	P	07 22 10.8	-0.1
WCN	**Washoe City**	73.97	41	*e*P	P	07 22 11.4	0.0
WCN				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.4						
WCN	**Washoe City**	73.97	41	*e*P	P	07 22 11.4	-0.1
	comp=Z,50nm,1.1s,mb5.4						
LTIM	**Timbered Crate**	74.02	38	P	P	07 22 11.7	0.0
HUMO	**Hull Mountain**	74.04	37	*e*P	P	07 22 12.4	+0.6
	comp=Z,31nm,1.1s,mb5.2						
BUOR	**Burton Butte**	74.25	37	P	P	07 22 13.6	+0.6
NVAR	**Mina Array Bea**	74.40	42	P	P	07 22 13.9	0.0
	comp=Z,20nm,1.0s,mb5.0,baz=214,slow=6.8,SNR=80						
MNV	**Mina**	74.50	42	*e*P	P	07 22 14.5	0.0
MNV				*e*	pP	07 22 26.4	+1.6
MNV				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.4						
MNV	**Mina**	74.50	42	*e*P	P	07 22 14.5	0.0
	comp=Z,58nm,1.2s,mb5.4						
MNV				*e*	pP	07 22 26.4	+1.6
HOG	**Hogback Mounta**	74.54	37	P	P	07 22 15.3	+0.7
TATO	**Taipei**	74.69	302	P	P	07 22 14.2	-1.7
	comp=Z,876nm,1.7s						
LDFC	**Landfair**	74.74	47	*e*P	P	07 22 16.1	+0.1
QSPA	**South Pole Qui**	74.85	180	*e*P	P	07 22 16.9	+1.1
	comp=Z,59nm,1.0s,mb5.5						
TPH	**Tonopah**	74.91	43	*e*P	P	07 22 16.9	0.0
TPH				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
TPH	**Tonopah**	74.91	43	*e*P	P	07 22 16.9	0.0
	comp=Z,80nm,1.2s,mb5.5						
MOD	**Modoc**	75.16	38	*e*P	P	07 22 18.1	-0.2
	comp=Z,38nm,1.1s,mb5.2						
MOD				*e*		07 22 30.6	
HBO	**Huckleberry Mo**	75.18	36	P	P	07 22 18.6	+0.3
NEN	**Nelson**	75.22	46	*e*P	P	07 22 18.7	-0.1
BMN	**Battle Mountai**	76.21	41	*e*P	P	07 22 23.9	-0.4
BMN				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
BMN	**Battle Mountai**	76.21	41	*e*P	P	07 22 23.9	-0.4
	comp=Z,31nm,1.2s,mb5.1						
WVOR	**Wild Horse Val**	76.48	39	*e*P	P	07 22 25.3	-0.5
WVOR				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
WVOR	**Wild Horse Val**	76.48	39	*e*P	P	07 22 25.3	-0.5
	comp=Z,41nm,1.3s,mb5.2						
TUC	**Tucson**	76.52	51	*e*P	P	07 22 26.1	-0.1
TUC				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
TUC	**Tucson**	76.52	51	*e*P	P	07 22 26.1	-0.2
	comp=Z,28nm,1.4s,mb5.0						
VFP	**Flag Point**	76.57	35	P	P	07 22 26.4	+0.2
CROR	**Criterion Ridg**	76.63	35	P	P	07 22 26.6	+0.1
ARUT	**Antelope Range**	77.29	45	*e*P	P	07 22 30.7	+0.2
SSE	**Sheshan**	77.57	307	P	P	07 22 32.1	-0.1
SSE				XP	sP	07 22 45.3	-0.9
SSE				PP	PP	07 25 29.0	+0.1
SSE				S	S	07 32 25.9	+6.0
SSE				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.8						
SSE				AMB	AMB		
	comp=Z,201nm,5.1s						
SSE				LR	LR		
	comp=N,237nm,27.6s,MS4.6						
SSE				LR	LR		
	comp=E,335nm,28.0s,MS4.6						
SSE				LR	LR		
	comp=Z,476nm,30.8s,MS4.6						
SSE	**Sheshan**	77.57	307	P	P	07 22 32.1	-0.1
	comp=Z,15nm,1.1s,mb4.8						
SSE				sP	sP	07 22 45.3	-0.9
SSE				PP	PP	07 25 29.0	+0.1
SSE				S	S	07 32 25.9	+6.0
SSE				sS		07 32 42.9	
SSE				LR	LR		
	comp=Z,480nm,30.8s,MS4.6						
PGC	**Sidney**	77.64	31	*e*P	P	07 22 31.5	-0.6
	comp=Z,32nm,1.1s,mb5.2						
BBB	**Bella Bella**	77.85	27	LR	LR	07 48 50.2	
	comp=Z,778nm,21.0s,MS5.0,baz=286,slow=30						
MVU	**Marysvale**	78.48	45	*e*P	P	07 22 37.8	+0.8
	comp=Z,28nm,1.2s,mb5.1						
MVU				*e*	pP	07 22 49.8	+2.5
MSU	**Marysvale**	78.51	45	*e*P	P	07 22 37.8	+0.7
BMO	**Blue Mountains**	78.66	37	*e*P	P	07 22 36.9	-0.9
BMO				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
BMO	**Blue Mountains**	78.66	37	*e*P	P	07 22 36.9	-0.9
	comp=Z,20nm,1.4s,mb4.9						
MDJ	**Mudanjiang**	78.66	323	P	P	07 22 40.3	+2.5
	comp=Z,24nm,1.3s,mb5.0						
MDJ				LR	LR		
	comp=Z,861nm,22.0s,MS5.0						
BGU	**Big Grassy Mou**	79.17	42	*e*P	P	07 22 40.3	-0.4
TMUT	**Trail Mountain**	79.56	44	*e*P	P	07 22 43.8	+0.9
HLID	**Hailey**	79.68	39	*e*P	P	07 22 43.5	+0.1
	comp=Z,15nm,1.0s,mb4.9						
HLID				LR	LR		
	comp=Z,761nm,19.0s,MS5.1						
SPUT	**South Promonto**	79.74	42	*e*P	P	07 22 43.1	-0.7
HVU	**Hansel Valley**	79.77	42	*e*P	P	07 22 44.1	+0.2
NJ2	**Nanjing**	79.78	307	*e*P	P	07 22 45.0	+0.8
NJ2				AP	pP	07 22 49.9	-4.7
NJ2				XP	sP	07 22 53.1	-5.1
NJ2				S	S	07 32 46.0	+2.7
NJ2				XS		07 32 54.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,720nm,5.5s						
NJ2				LR	LR		
	comp=N,2µm,20.1s						
NJ2				LR	LR		
	comp=E,2µm,25.3s						
NJ2				LR	LR		
	comp=Z,1µm,19.4s,MS5.3						
MA2	**Magadan**	79.87	343	*e*P	P	07 22 43.6	-0.5
MA2				*e*S	S	07 32 45.3	+1.7
MA2				*e*		07 32 56.7	
MA2				*e*PS	PS	07 33 29.7	-2.9
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
MA2				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.5						
MA2	**Magadan**	79.87	343	P	P	07 22 43.1	-1.0
	comp=Z,16nm,1.1s,mb4.8						
MA2				LR	LR		
	comp=Z,350nm,19.0s,MS4.7						
SRU	**San Rafael**	79.93	45	*e*P	P	07 22 44.9	+0.1
JLU	**Jordanelle**	80.04	43	*e*P	P	07 22 45.3	-0.1
LENM	**Lemitar**	80.20	51	*e*P	P	07 22 47.8	+1.4
TCUT	**Toone Canyon**	80.32	43	*e*P	P	07 22 47.3	+0.4
MNTX	**Cornudas Mount**	80.37	53	*e*P	P	07 22 47.4	0.0
	comp=Z,21nm,1.4s,mb4.9						
HWUT	**Hardware Ranch**	80.46	42	*e*P	P	07 22 47.3	-0.3
	comp=Z,4.6nm,0.8s,mb4.5						
LPM	**Los Pinos Moun**	80.52	51	*e*P	P	07 22 48.8	+0.7
PV10	**Paradox Valley**	80.60	46	*e*P	P	07 22 48.5	+0.1
TNA	**Tin City**	80.63	2	*e*P	P	07 22 48.5	+0.4

	comp=Z,26nm,1.2s,mb5.0						
TNA				*e*		07 23 03.2	
CN2	**Changchun**	80.72	320	*e*P	P	07 22 50.2	+1.3
CN2				XP	sP	07 22 57.0	-5.9
CN2				*e*S	S	07 32 57.5	+4.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				LR	LR		
	comp=N,500nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=E,500nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=Z,620nm,21.0s,MS4.9						
NEW	**Newport**	80.72	34	*e*P	P	07 22 48.1	-0.8
NEW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NEW	**Newport**	80.72	34	P	P	07 22 48.2	-0.6
	comp=Z,2.1nm,0.8s,mb4.1,baz=242,slow=8.0,SNR=3.6						
NEW	**Newport**	80.72	34	*e*P	P	07 22 48.0	-0.8
	comp=Z,5.0nm,1.1s,mb4.4						
LTX	**Lajitas**	80.77	56	PFAKE		07 23 00.0	+10
LTX				LR	LR		
	comp=Z,564nm,20.0s,MS4.9						
TXAR	**Lajitas Array**	80.77	56	P	P	07 22 49.3	-0.2
	comp=Z,2.8nm,0.8s,mb4.2,baz=211,slow=7.3,SNR=15						
PV01	**Paradox Valley**	80.82	46	*e*P	P	07 22 49.5	-0.1
ANMO	**Albuquerque**	80.92	50	⇑*e*P	P	07 22 48.8	-1.4
ANMO	**Albuquerque**	80.92	50	*e*P	P	07 22 49.9	-0.3
	comp=Z,11nm,1.0s,mb4.7						
ANMO				LR	LR		
	comp=Z,925nm,21.0s,MS5.1						
MCK	**McKinley**	80.98	11	*e*P	P	07 22 49.4	-0.5
	comp=Z,24nm,1.1s,mb5.0						
MCK				LR	LR		
	comp=Z,896nm,21.0s,MS5.1						
MCMT	**McKenzie Canyo**	81.30	39	*e*P	P	07 22 52.5	+0.5
GDL2	**Guadalupe Moun**	81.36	53	*e*P	P	07 22 53.0	+0.5
RRI2	**Red Ridge**	81.49	41	*e*P	P	07 22 53.0	0.0
MSO	**Missoula**	81.71	37	*e*P	P	07 22 52.3	-1.8
	comp=Z,13nm,1.3s,mb4.7						
TPAW	**Teton Pass**	81.80	41	*e*P	P	07 22 54.3	-0.3
WUWY	**Wally Ulrich**	81.95	41	*e*P	P	07 22 55.6	+0.2
IMW	**Indian Meadow**	82.01	40	*e*P	P	07 22 55.9	+0.3
MOOW	**Moose Ponds**	82.05	41	*e*P	P	07 22 56.0	+0.1
LOHW	**Long Hollow**	82.08	41	*e*P	P	07 22 55.9	-0.2
CPRX	**Cap Rock**	82.08	53	*e*P	P	07 22 56.4	+0.1
CHMT	**Chamberlain Mo**	82.16	37	*e*P	P	07 22 55.7	-0.7
QLMT	**Earthquake Lak**	82.17	39	*e*P	P	07 22 57.3	+0.9
COLA	**College**	82.22	11	*e*P	P	07 22 56.2	-0.1
SEY	**Seymchan**	82.23	345	*e*P	P	07 22 58.2	+1.8
SEY						07 23 04.6	
SEY				*e*		07 26 04.9	
SEY				*e*PPP	PPP	07 27 57.9	-1.3
SEY						07 33 09.3	
SEY				*e*S	S	07 33 13.3	+5.3
SEY				*e*PS	PS	07 34 04.0	+1.8
SEY				*e*		07 34 17.6	
SEY				*e*SS	SS	07 38 28.5	-3.1
SEY				*e*SSS	SSS	07 41 53.6	-1.5
SEY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SEY				smax			
	comp=N,800nm,26.6s						
SEY				smax			
	comp=E,800nm,24.9s						
SEY				MLR	MLR		
	comp=Z,500nm,23.0s,MS4.8						
SEY				MLR	MLR		
	comp=N,200nm,17.0s						
SEY				MLR	MLR		
	comp=E,2µm,18.0s						
ILAR	**Eielson Array**	82.31	11	P	P	07 22 55.9	-0.9
	comp=E,4.3nm,0.7s,mb4.5,baz=236,slow=5.9,SNR=52						
ILAR				LR	LR	07 51 54.9	
	comp=E,465nm,21.8s,MS4.8,baz=42,slow=30						
PDAR	**Pinedale Array**	82.33	42	P	P	07 22 56.5	-0.9
	comp=E,4.6nm,0.8s,mb4.5,baz=230,slow=2.9,SNR=24						
PDAR				LR	LR	07 53 01.6	
	comp=E,704nm,18.4s,MS5.1,baz=278,slow=31						
YFT	**Old Faithful**	82.35	40	P	P	07 22 57.4	0.0
YMR	**Madison River**	82.38	40	*e*P	P	07 22 57.6	+0.1
BOZ	**Bozeman (W)**	82.46	39	*e*P	P	07 22 57.9	0.0
BOZ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
BOZ	**Bozeman (W)**	82.46	39	*e*P	P	07 22 57.9	0.0
	comp=Z,9.0nm,0.8s,mb4.8						
LKWY	**Lake**	82.67	40	*e*P	P	07 23 00.3	+1.3
LKWY				*e*		07 23 13.4	
LKWY				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.2						
LKWY	**Lake**	82.67	40	*e*P	P	07 23 00.3	+1.2
	comp=Z,28nm,1.3s,mb5.1						
LKWY				*e*		07 23 13.4	
SDCO	**Great Sand Dun**	82.82	48	*e*P	P	07 22 58.9	-1.1
	comp=Z,13nm,1.3s,mb4.8						
WALA	**Waterton Lakes**	82.93	35	*e*P	P	07 22 59.0	-1.2
	comp=Z,17nm,1.3s,mb4.9						
DAWY	**Dawson**	83.30	14	*e*P	P	07 23 00.6	-1.3
ISCO	**Idaho Springs**	83.62	46	*e*P	P	07 23 04.0	0.0
ISCO				*e*		07 23 17.2	
ISCO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
ISCO	**Idaho Springs**	83.62	46	*e*P	P	07 23 04.0	0.0
	comp=Z,8.2nm,0.9s,mb4.9						
ISCO				*e*		07 23 17.2	
BILL	**Bilibino**	84.26	353	*d i*P	P	07 23 06.9	+0.3
BILL				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
BILL	**Bilibino**	84.26	353	*e*P	P	07 23 06.1	-0.5
	comp=Z,17nm,1.0s,mb5.1						
BILL				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
PHWY	**Pilot Hill**	84.38	45	*e*P	P	07 23 07.7	-0.1
AMTX	**Amarillo**	84.48	52	*e*P	P	07 23 08.4	-0.1
	comp=Z,15nm,0.8s,mb5.2						
BJT	**Baijiatuau**	85.08	314	*e*P	P	07 23 11.9	+0.5
BJT				pmax	pmax		
	comp=Z,46nm,1.7s						
BJT	**Baijiatuau**	85.08	314	*e*P	P	07 23 11.9	+0.6
	comp=Z,46nm,1.8s,mb5.3						
EDM	**Edmonton**	85.48	32	*e*P	P	07 23 12.3	-0.7
LAO	**LASA Array**	86.26	40	*e*P	P	07 23 17.3	+0.4
	comp=Z,48nm,1.3s,mb5.6						
LAO				*e*	pP	07 23 28.4	+0.9
USHA	**Ushuaia**	86.28	146	LR	LR	07 51 43.8	
	comp=Z,890nm,21.2s,MS5.1,baz=225,slow=29						
ENH	**Enshi**	86.53	302	P	P	07 23 21.9	+3.2
	comp=Z,13nm,1.1s,mb5.1						
ENH				LR	LR		
	comp=Z,346nm,19.0s,MS4.8						
HIA	**Hailar**	86.83	323	*e*P	P	07 23 21.2	+1.5
HIA				pmax	pmax		
	comp=Z,17nm,1.4s						
HIA	**Hailar**	86.83	323	*e*P	P	07 23 21.2	+1.5
	comp=Z,17nm,1.4s,mb5.1						
MAW	**Mawson**	87.88	199	*e*P	P	07 23 25.1	+0.8
MAW				pmax	pmax		
	comp=Z,50nm,1.1s						
MAW	**Mawson**	87.88	199	P	P	07 23 24.1	-0.2
	comp=Z,12nm,0.8s,mb5.2,baz=122,slow=8.3,SNR=10						
MAW				LR	LR	08 00 18.4	
	comp=Z,976nm,20.0s,MS5.2,baz=101,slow=34						
MAW	**Mawson**	87.88	199	*e*P	P	07 23 25.1	+0.7
	comp=Z,50nm,1.2s,mb5.6						
CLNS	**Chul’man**	87.90	331	*e*P	P	07 23 24.9	+0.3
CLNS				*e**PP	pP	07 23 33.1	-2.1
CLNS				*e*PPP	PPP	07 28 55.5	+4.2
CLNS				*e*PS	PS	07 35 28.8	+17
CLNS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.3						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.6s						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.8						
CLNS				MLR	MLR		
	comp=N,400nm,15.0s,MS5.0						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS5.0						
INK	**Inuvik**	88.15	14	*e*P	P	07 23 25.3	-0.3
INK				*e*		07 26 48.4	
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	**Inuvik**	88.15	14	P	P	07 23 25.4	-0.2
	comp=Z,9.3nm,1.1s,mb4.9,baz=212,slow=5.6,SNR=17						
INK	**Inuvik**	88.15	14	*e*P	P	07 23 25.3	-0.3
	comp=Z,11nm,1.1s,mb5.0						
INK				*e*PP	PP	07 26 48.4	-6.8
DGMT	**Dagmar**	88.27	39	*e*P	P	07 23 26.7	+0.1
	comp=Z,23nm,1.0s,mb5.4						
YAK	**Yakutsk**	88.80	337	*e*P	P	07 23 30.4	+1.6
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.3						
PLCA	**Paso Flores**	89.89	132	P	P	07 23 36.0	+1.5
	comp=Z,2.3nm,0.9s,mb4.5,baz=218,slow=19,SNR=3.0						
PLCA				LR	LR	07 56 20.2	
	comp=Z,334nm,20.2s,MS4.8,baz=198,slow=30						
YKA	**Yellowknife Ar**	90.04	23	P	P	07 23 34.5	-0.1
	comp=Z,3.2nm,0.8s,mb4.7,baz=237,slow=4.4,SNR=54						
YKA				LR	LR	07 58 39.9	
	comp=Z,659nm,19.1s,MS5.1,baz=240,slow=32						
YKA	**Yellowknife Ar**	90.04	23	P	P	07 23 34.5	-0.1
YKA				LR	LR	07 58 39.9	
YKW3	**Yellowknife Ar**	90.07	23	*e*P	P	07 23 32.3	-2.5
KMI	**Kunming**	90.64	296	P	P	07 23 41.8	+3.4
KMI				XP	sP	07 23 45.9	-6.5
KMI				S	S	07 34 34.7	+5.3
KMI				AMB	AMB		
	comp=Z,5.0nm,2.0s,mb4.5						
KMI				AMB	AMB		
	comp=Z,185nm,5.0s						
KMI				LR	LR		
	comp=N,184nm,16.2s,MS4.8						
KMI				LR	LR		
	comp=E,215nm,19.2s,MS4.8						
KMI				LR	LR		
	comp=Z,386nm,38.2s						
KMI	**Kunming**	90.64	296	P	P	07 23 41.8	+3.4
	comp=Z,5.0nm,2.0s,mb4.5						
KMI				sP	sP	07 23 45.9	-6.5
KMI				PP	PP	07 27 22.0	+5.9
KMI				S	S	07 34 34.7	+5.3
KMI				LR	LR		
	comp=Z,390nm,38.2s,MS4.6						
JTS	**JuntasAbangare**	91.50	80	LR	LR	07 54 05.8	
	comp=Z,249nm,19.9s,MS4.7,baz=314,slow=29						
CMAR	**Chiang Mai Arr**	92.24	288	*i* P	P	07 23 51.0	+5.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	92.24	288	P	P	07 23 50.7	+4.8
	comp=Z,0.7nm,0.3s,mb4.4,baz=90,slow=2.7,SNR=6.3						
CMAR				LR	LR	08 07 03.1	
	comp=Z,139nm,18.5s,MS4.4,baz=95,slow=37						
SYO	**Syowa Base**	92.73	191	⇓P	P	07 23 44.4	-2.6
VNA3	**Neumayer Olymp**	93.09	175	*e*	P	07 23 53.6	+5.0
VNA3	**Neumayer Olymp**	93.09	175	⇑*i*P	P	07 23 49.0	+0.4
VNA3				*e*		07 23 53.6	
VNA2	**Neumayer--Watz**	93.58	176	*e*	P	07 23 55.7	+4.8
VNA2	**Neumayer--Watz**	93.58	176	⇑*i*P	P	07 23 52.1	+1.2
VNA2				*e*		07 23 55.7	
BOD	**Bodaibo**	93.58	329	*e*P	P	07 23 50.9	-0.2
ULM	**Lac du Bonnet**	93.98	39	P	P	07 23 51.5	-1.5
	comp=Z,0.6nm,0.4s,mb4.3,baz=244,slow=3.8,SNR=4.2						
ULM				LR	LR	08 01 10.6	
	comp=Z,750nm,18.7s,MS5.2,baz=277,slow=32						
ULN	**Ulaanbaatar**	94.06	318	PFAKE		07 24 10.0	+16
ULN				LR	LR		
	comp=Z,474nm,22.0s,MS4.9						
SONM	**Songino Array**	94.47	318	P	P	07 23 56.0	+0.6
	comp=Z,0.4nm,1.0s,baz=101,slow=6.3,SNR=3.1						
TIXI	**Tiksi**	94.72	344	*e*P	P	07 23 56.6	+0.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.7						
GTA	**Gaotai**	96.79	309	*e*P	P	07 24 11.2	+5.0
GTA				AP	pP	07 24 18.5	+1.7
GTA				SKS	SKS	07 34 45.4	+6.1
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb4.5						
GTA				AMB	AMB		
	comp=Z,208nm,8.0s						
GTA				LR	LR		
	comp=N,219nm,14.1s,MS4.8						
GTA				LR	LR		
	comp=E,137nm,16.7s,MS4.8						
GTA				LR	LR		
	comp=Z,246nm,16.7s,MS4.8						
LVC	**Limon Verde**	97.40	116	PFAKE		07 24 20.0	+11
LVC				LR	LR		
	comp=Z,182nm,19.0s,MS4.6						
LPAZ	**La Paz**	100.19	110	PFAKE		07 24 30.0	+7.9
LPAZ				LR	LR		
	comp=Z,153nm,22.0s,MS4.5						
RES	**Resolute Bay**	101.62	15	*e*P	P	07 24 26.4	-0.9
RES				pmax	pmax		
	comp=Z,6.0nm,1.3s						
RES	**Resolute Bay**	101.62	15	*e*Pdif	P	07 24 26.4	-0.8
	comp=Z,5.9nm,1.3s						
SDV	**Santo Domingo**	104.85	85	PFAKE		07 24 50.0	+7.1
SDV				LR	LR		
	comp=Z,89nm,20.0s,MS4.3						
PALK	**Pallekele**	106.84	273	PFAKE		07 29 10.0	
PALK				LR	LR		
	comp=Z,48nm,21.0s,MS4.0						
AAK	**Ala-Archa**	116.10	310	*i* PKIKP	PKPdf	07 29 17.1	-0.3
ARCES	**ARCESS Array B**	124.36	352	PKP	PKPdf	07 29 33.3	+0.6
	comp=Z,5.4nm,0.8s,baz=45,slow=1.7,SNR=10						
LBTB	**Lobatse**	135.81	206	PFAKE		07 30 10.0	+14
LBTB				LR	LR		
	comp=Z,484nm,19.0s,MS5.2						
KIV	**Kislovodsk**	137.83	320	*i* PKIKP	PKPdf	07 30 00.6	+1.8
AKASG	**Malin Array Be**	140.02	337	*i* PKIKP	PKPdf	07 30 03.6	+1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	**Malin Array Be**	140.02	337	PKP	PKPdf	07 30 03.6	+1.1
	comp=Z,3.1nm,0.9s,baz=24,slow=2.5,SNR=9.6						
OJC	**Ojcow**	143.38	345	*e*PKP	PKPdf	07 30 08.1	-0.2
MALT	**Malatya**	143.49	315	*e*PKIKP	PKPdf	07 30 08.3	-0.6
CLL	**Collm**	143.57	353	*e*PKIKP	PKPdf	07 30 10.0	+1.4
CLL				*e*		07 30 28.0	
BRG	**Berggiesshubel**	143.88	352	*e*P	PKPbc	07 30 29.2	+21
KOLS	**Kolonicke sedl**	143.88	342	*e*P	PKPbc	07 30 07.9	-0.4
KOLS	**Kolonicke sedl**	143.88	342	*e*	PKPbc	07 30 07.9	-0.4
UPC	**Upice**	143.90	349	*e*PKP	PKPdf	07 30 10.3	+1.1
UPC				*e*x	x	07 30 31.5	
NIE	**Niedzica**	143.99	344	*e*PKP	PKPdf	07 30 09.0	-0.4
DPC	**Dobruska-Polom**	144.00	349	*e*PKP	PKPdf	07 30 10.2	+0.8
DPC				*e*x	x	07 30 23.4	
BURAR	**Bucovina Array**	144.06	338	⇓P	PKPbc	07 30 26.5	+18
BURAR	**Bucovina Array**	144.06	338	⇓P	PKPbc	07 30 26.5	+18
OKC	**Ostrava-Krasne**	144.12	347	*e*PKP	PKPdf	07 30 10.2	+0.6
PVCC	**Panska Ves**	144.12	351	*e*PKP	PKPdf	07 30 14.1	+4.5
CRVS	**Cervenica-Dubn**	144.14	343	*e*PKP	PKPdf	07 30 10.9	+1.2
CRVS				*e*		07 30 31.2	
CRVS				*e*		07 30 38.0	
CRVS				*e*		07 30 52.8	
MORC	**Moravsky Berou**	144.31	347	*e*PKIKP	PKPdf	07 30 10.8	+0.8
MOX	**Moxa**	144.38	354	*e*PKIKP	PKPdf	07 30 24.4	+14
MOX				pmax	pmax		
	comp=Z,57nm,2.2s						
MOX	**Moxa**	144.38	354	*i* P	PKPbc	07 30 24.4	+15
	comp=Z,logA/T=1.4						
PRU	**Pruhonice**	144.65	351	*e*PKP	PKPdf	07 30 11.8	+1.2
NKC	**Novy Kostel**	144.69	353	*e*PKP	PKPdf	07 30 10.9	+0.3
NKC				*e*x	x	07 30 25.5	
CFR	**Carcaliu**	144.87	333	⇓P	PKPdf	07 30 15.4	+4.3
CFR	**Carcaliu**	144.87	333	⇓P	PKPdf	07 30 15.4	+4.3
GIVF	**Givet**	145.16	2	*e*PKP1	PKPbc	07 30 12.9	+1.1
	comp=Z,80nm,1.2s						
BAIF	**Baives**	145.19	2	*e*PKP1	PKPbc	07 30 12.9	+1.0
KMBO	**Kilima Mbogo**	145.33	245	*e*PKIKP	PKPdf	07 30 14.4	+1.5
KMBO	**Kilima Mbogo**	145.33	245	PKPbc	PKPbc	07 30 15.2	+1.8
	comp=Z,6.3nm,1.1s,baz=55,slow=4.8,SNR=8.5						
HARR	**Harsova**	145.34	332	⇓P	PKPdf	07 30 14.2	+2.3
HARR	**Harsova**	145.34	332	⇓P	PKPdf	07 30 14.2	+2.3
GRA1	**Grafenberg Arr**	145.36	354	*e*PKP	PKPdf	07 30 14.8	+3.0
GRA1				*e*		07 30 27.2	
GRA1				*e*		07 30 36.3	
GRF	**Grafenberg Arr**	145.36	354	*e*PKIKP	PKPdf	07 30 14.8	+3.0
GRF				*e*		07 30 27.2	
GRF	**Grafenberg Arr**	145.36	354	*e*PKP	PKPdf	07 30 14.8	+3.0
GRF				*e*		07 30 27.3	
GRF				*e*		07 30 36.3	
ABH	**Alteburg**	145.39	359	PKP	PKPdf	07 30 15.3	+3.4
PSZ	**Piszkesteto**	145.47	344	*e*PKIKP	PKPdf	07 30 14.0	+1.9
SMOL	**Smolenice**	145.52	347	*e*PKP	PKPdf	07 30 15.2	+3.1
SMOL				*e*		07 30 28.5	
SMOL				*e*		07 30 36.5	
MLR	**Muntele Rosu**	145.54	335	PKPbc	PKPbc	07 30 15.0	+2.1
	comp=Z,26nm,1.0s,baz=48,slow=3.9,SNR=21						
MLR	**Muntele Rosu**	145.54	335	⇑P	PKPdf	07 30 15.2	+2.9
MLR	**Muntele Rosu**	145.54	335	⇑P	PKPdf	07 30 15.2	+2.9
RUP	**Ruppelstein**	145.58	359	PKP	PKPdf	07 30 16.2	+4.0
WLF	**Walferdange**	145.62	0	*e*PKIKP	PKPdf	07 30 15.2	+2.9
WLF				*e*		07 30 28.2	
KHC	**Kasperske Hory**	145.63	351	*e*PKP	PKPdf	07 30 15.4	+3.1
KHC				*e*x	x	07 30 28.3	
BRTR	**Keskin Array B**	145.79	321	PKPbc	PKPbc	07 30 15.8	+2.1
	comp=Z,6.3nm,0.7s,baz=96,slow=2.4,SNR=19						
GERES	**GERESS Array B**	145.89	351	PKPbc	PKPbc	07 30 15.2	+1.6
	comp=Z,2.2nm,0.7s,baz=19,slow=4.1,SNR=17						
ZST	**Bratislava**	145.90	347	*e*PKP	PKPdf	07 30 16.2	+3.4
ZST				*e*		07 30 30.3	
ZST				*e*		07 30 38.7	
ROSF	**Rostrenen**	146.03	11	*e*PKP1	PKPbc	07 30 14.6	+0.6
FLN	**La Foliniere**	146.07	8	*e*PKP1	PKPbc	07 30 14.8	+0.7
FLN				*e*R			
	comp=Z,1µm,20.8s						
SGMF	**Saint Gilles**	146.24	11	*e*PKP1	PKPbc	07 30 15.2	+0.7
	comp=Z,328nm,1.8s						
LDF	**La Druitiere**	146.28	8	*e*PKP1	PKPbc	07 30 15.5	+0.9
GRR	**Gorron**	146.38	9	*e*PKP1	PKPbc	07 30 15.8	+1.0
	comp=Z,133nm,1.4s						
QUIF	**Quistinic**	146.45	11	*e*PKP1	PKPbc	07 30 16.1	+1.1
	comp=Z,123nm,1.3s						
MOA	**Molln**	146.77	350	⇑*i*P	PKPdf	07 30 17.9	+3.6
MOA				*i*		07 30 31.9	
MEZF	**Maizieres J’vi**	146.77	1	*e*PKP1	PKPbc	07 30 17.6	+1.9
WLS	**Welschbruch**	146.86	359	PKP	PKPdf	07 30 20.3	+5.9
CDF	**Champ du Feu**	146.87	359	*e*PKP1	PKPbc	07 30 17.9	+2.0
	comp=Z,77nm,1.0s						
THEF	**They Montfort**	147.06	0	PKP	PKPdf	07 30 20.7	+6.0
ECH	**Echery**	147.06	359	PKP	PKPdf	07 30 20.1	+5.3
ARSA	**Arzberg**	147.12	348	⇓*i*P	PKPdf	07 30 19.4	+4.5
ARSA				*i*		07 30 32.9	
HAU	**Haudompre**	147.28	360	*e*PKP1	PKPdf	07 30 19.0	+3.9
	comp=Z,108nm,1.4s						
HAU				*e*R			
	comp=Z,484nm,18.9s						
FELD	**Feldberg**	147.38	358	PKP	PKPdf	07 30 20.5	+5.2
ASF	**Jabal al Asfar**	147.41	307	PKPbc	PKPdf	07 30 20.2	+4.4
	comp=Z,7.3nm,1.2s,baz=243,slow=4.5,SNR=2.0						
HINF	**Hinteralfeld**	147.47	359	*e*PKP1	PKPdf	07 30 19.4	+4.0
WATA	**Walderalm**	147.65	353	⇓*i*P	PKPdf	07 30 20.7	+5.0
WATA				*i*		07 30 34.3	
KBA	**Koelnbreinsper**	147.67	351	⇑*i*P	PKPdf	07 30 20.9	+5.1
KBA				*i*		07 30 32.7	
MOTA	**Moosalm**	147.69	354	⇑*i*P	PKPdf	07 30 21.3	+5.5
MOTA				*i*		07 30 34.2	
WTTA	**Wattenberg**	147.71	353	⇓*i*P	PKPdf	07 30 21.2	+5.4
SQTA	**Sankt Quirin**	147.80	354	⇑*i*P	PKPdf	07 30 21.2	+5.2
SQTA				*i*		07 30 34.9	
DAVA	**Damuels**	147.86	355	⇓*i*P	PKPdf	07 30 21.7	+5.6
DAVA				*i*		07 30 35.0	
HYF	**Humbligny**	147.88	5	*e*PKP1	PKPdf	07 30 20.7	+4.6
LOMF	**Lomont**	147.94	359	PKP	PKPdf	07 30 21.2	+5.0
OBKA	**Obir**	148.02	349	⇓*i*P	PKPdf	07 30 22.3	+6.0
OBKA				*i*		07 30 33.9	
SSF	**Saint Saulge**	148.15	4	*e*PKP1	PKPdf	07 30 21.4	+4.9
	comp=Z,127nm,1.4s						
MFF	**Saint Martin d**	148.23	8	*e*PKP1	PKPdf	07 30 21.2	+4.5
	comp=Z,147nm,1.6s						
AVF	**Avril sur Loir**	148.41	4	*e*PKP1	PKPdf	07 30 21.7	+4.8
	comp=Z,89nm,1.4s						
LJU	**Ljubljana**	148.47	349	*e*PKPbc	PKPdf	07 30 22.1	+5.1
LJU				*e*		07 30 36.0	
SMF	**Signal de Mont**	148.58	3	*e*PKP1	PKPdf	07 30 22.3	+5.1
	comp=Z,51nm,1.1s						
VOY	**Vojsko**	148.60	350	*e*PKPbc	PKPdf	07 30 19.7	+2.4
VOY				*e*		07 30 36.2	
BGF	**Bois d’Agland**	148.60	5	*e*PKP1	PKPdf	07 30 22.5	+5.2
BRMO	**Bormio**	148.62	355	*e*PKP	PKPdf	07 30 23.8	+6.4
CABF	**La Chapelle**	148.68	0	*e*PKP1	PKPdf	07 30 23.4	+6.0
	comp=Z,195nm,1.4s						
JAVS	**Javornik**	148.70	349	*e*PKPbc	PKPdf	07 30 22.6	+5.2
TCF	**Toulx Ste Croi**	148.82	5	*e*PKP1	PKPdf	07 30 22.8	+5.2
	comp=Z,58nm,1.2s						
BOJS	**Bojanci**	148.85	348	*e*PKPbc	PKPdf	07 30 24.1	+6.4
CTI	**Castel Tesino**	148.91	353	*e*PKP	PKPdf	07 30 23.7	+5.9
DIVS	**Divcibare**	148.91	341	⇑*i*P	PKPdf	07 30 24.1	+6.2
VTS	**Vitosha**	149.05	335	*e*P	PKPdf	07 30 24.0	+5.9
PLDF	**La Plantade**	149.24	4	PKP	PKPdf	07 30 27.8	+9.5
VAI	**Varese**	149.35	357	*e*PKP	PKPdf	07 30 24.9	+6.4
PYM	**Petit Puy Mans**	149.42	4	PKP	PKPdf	07 30 27.1	+8.5
MMB	**Musomiste**	149.66	334	*e*P	PKPdf	07 30 25.0	+5.9
KKB	**Krupnik**	149.71	335	*e*P	PKPdf	07 30 26.0	+6.8
RJF	**Les Rejaudoux**	149.72	7	*e*PKP1	PKPdf	07 30 25.4	+6.3
RJF				*e*R			
	comp=Z,1µm,22.7s						
LPL	**La Plagne**	149.77	359	*e*PKP1	PKPdf	07 30 26.7	+7.5
	comp=Z,109nm,1.4s						
LPG	**La Plagne**	149.79	359	*e*PKP1	PKPdf	07 30 26.7	+7.5
	comp=Z,145nm,1.5s						
EIL	**Elat**	149.93	304	*e*PKPbc	PKPdf	07 30 27.3	+7.4
LBL	**Lubilhac**	149.95	4	PKP	PKPdf	07 30 27.3	+7.8
CAF	**Calviac**	150.15	6	*e*PKP1	PKPdf	07 30 26.7	+6.9
BNI	**Bardonecchia**	150.24	359	*e*PKIKP	PKPdf	07 30 28.5	+8.6
ORIF	**Oris-en-Rattie**	150.37	1	*e*PKP1	PKPdf	07 30 27.5	+7.4
	comp=Z,88nm,1.3s						
ORIF				*e*R			
	comp=Z,393nm,22.7s						
VIVF	**Saint-Julien-l**	150.40	2	*e*PKP1	PKPdf	07 30 27.6	+7.4
	comp=Z,50nm,1.2s						
MBDF	**Montbardon**	150.56	359	*e*PKP1	PKPdf	07 30 28.0	+7.6
	comp=Z,29nm,1.1s						
LASF	**Ste Croix**	151.14	4	*e*PKP1	PKPdf	07 30 28.7	+7.4
SMRF	**Simiane la Rot**	151.31	1	*e*PKP1	PKPdf	07 30 30.0	+8.4
	comp=Z,170nm,1.6s						
SBF	**Sospel**	151.41	358	*e*PKP1	PKPdf	07 30 29.4	+7.7
	comp=Z,126nm,1.3s						
SJPF	**Ste Jean**	151.45	12	*e*PKP1	PKPdf	07 30 29.8	+8.0
FRF	**La Foret Royal**	151.73	359	*e*PKP1	PKPdf	07 30 30.2	+8.0
MTLF	**Montolieu**	151.74	6	*e*PKP1	PKPdf	07 30 29.7	+7.5
	comp=Z,69nm,1.3s						
ETSF	**Etsaut**	151.78	11	*e*PKP1	PKPdf	07 30 30.6	+8.3
	comp=Z,91nm,1.2s						
EPF	**Esparros**	151.80	9	*e*PKP1	PKPdf	07 30 30.4	+8.1
LMR	**La Mourre**	151.96	360	*e*PKP1	PKPdf	07 30 30.7	+8.2
	comp=Z,52nm,1.1s						
MTE	**Manteigas**	152.15	23	*e*PKPbc	PKPdf	07 30 31.1	+8.2
PGF	**Pioggiola**	152.64	356	*e*PKP1	PKPdf	07 30 32.3	+8.8
	comp=Z,63nm,1.1s						
ESDC	**Sonseca Array**	154.02	18	PKPab	PKPab	07 30 46.6	-2.9
	comp=Z,0.3nm,0.4s,baz=333,slow=11,SNR=3.3						

MEX 10 07:31:18.1±1.2, 17.08N×91.32W, h126^{km}±28^{km}, MD3.9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	1.12	225	*i* P	P	07 31 40.7	-1.4
CCIG				*i* S	S	07 31 58.5	-1.7
SCX	**San Cristobal**	1.31	255	*i* P	P	07 31 42.0	-2.2
SCX				*i* S	S	07 32 03.0	-1.0
SCIG		1.88	4	*i* P	P	07 31 49.8	-1.0
SCIG				*i* S	S	07 32 12.7	-2.9
OXX	**Oaxaca**	5.17	271	*e*P	P	07 32 37.0	+2.5

IDC 10 07:32:02.0±3.4, 5.94S×146.03E, h120^{km}±35^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.4/13, mbtmp3.6/7, Error ellipse: s-maj=34.7km s-min=25.5km az=107.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.62	162	P	P	07 32 57.7	+0.2
	7.8nm,0.3s,baz=24,slow=4.9,SNR=12						
PMG				S	S	07 33 39.0	-0.8
	15nm,0.3s,baz=133,slow=21,SNR=19						
WRA	**Warramunga Arr**	17.97	218	P	P	07 36 03.0	-2.6
	0.1nm,0.3s,baz=41,slow=12,SNR=6.2						
ASAR	**Alice Springs**	21.14	212	P	P	07 36 36.6	-2.2
	0.3nm,0.4s,baz=45,slow=8.0,SNR=9.4						
STKA	**Stephens Creek**	26.13	189	P	P	07 37 24.8	-1.9
	0.5nm,0.4s,baz=23,slow=15,SNR=4.3						
CMAR	**Chiang Mai Arr**	52.38	299	P	P	07 41 02.5	-1.9

	1.0nm,0.4s,baz=126,slow=5.9,SNR=4.8						
SONM	**Songino Array**	**63.89**	**331**	P	P	07 42 21.5	-2.7
	0.2nm,0.4s,baz=156,slow=5.7,SNR=4.6						
ILAR	**Eielson Array**	**85.81**	**23**	P	P	07 44 27.1	-1.6
	0.5nm,0.6s,baz=254,slow=5.0,SNR=12						
DBIC	**Dimbokro**	**151.06**	**273**	PKPbc	PKPdf	07 51 43.1	+7.3
	1.3nm,0.5s,baz=116,slow=13,SNR=5.1						

CASC 10 07:46:48.2±1.6,13.48N×90.92W,h22^{km}±12^{km},MD3.7, 2C-2D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.82**	**33**	eP	Pb	07 47 04.0	+0.3
IXG				eS	Sb	07 47 15.3	+1.0
JAT	**Jato**	**1.08**	**320**	⇑eP	Pb	07 47 07.5	-0.7
JAT				eS	Sb	07 47 22.6	+0.8
NBG	**Las Nubes**	**1.23**	**27**	⇓eP	Pn	07 47 10.8	+0.4
NBG				eS	Sb	07 47 27.7	+1.6
RTR	**El Retiro**	**1.30**	**71**	eP	Pn	07 47 11.0	-0.4
RTR				eS	Sb	07 47 30.6	+2.3
SBLS	**San Blas**	**1.31**	**74**	eP	Pn	07 47 10.8	-0.7
SBLS				eS	Sb	07 47 27.8	-0.6
SNJE	**San Jose**	**1.33**	**73**	⇑eP	Pn	07 47 11.2	-0.6
RBDL	**Robledal**	**1.35**	**62**	⇓eP	Pn	07 47 11.8	-0.3
RBDL				eS	Sn	07 47 31.0	+1.5
BOQS	**Boqueron**	**1.61**	**81**	eP	Pn	07 47 15.4	-0.4
MTO2	**Montecristo 2**	**1.77**	**59**	eP	Pn	07 47 18.0	0.0
LFU	**La Fuente**	**1.78**	**81**	eP	Pn	07 47 18.1	0.0
LFRS	**El Faro**	**1.81**	**85**	eP	Pn	07 47 18.4	-0.3
LCBS	**La Ceiba**	**1.90**	**85**	eP	Pn	07 47 19.5	-0.4
LCBS				eS	Sn	07 47 43.9	+0.6
SNVI	**San Vicente**	**2.03**	**86**	eP	Pn	07 47 21.8	0.0
SNVI				eS	Sn	07 47 47.8	+1.1

*NEIC **10** 07:46:55.5±0.8,55.94S×26.08W,h35^{km},mb4.6/5,Error ellipse: s-maj=35.6km s-min=12.3km az=57.0*

*IDC **10** 07:46:56.8±7.4,56.13S×25.99W,h47^{km}±69^{km},mb4.0/5, mb1 4.0/6,mb1mx3.8/15,mbtmp4.1/6,ML3.3/1,Error ellipse: s-maj=50.7km s-min=20.7km az=53.0*

ISC 10 07:46:50.3±1.1,55.9S±0.2×25.9W±0.4,h10^{km},n19, σ1^{s}67/15,mb4.3/7,2C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**16.91**	**162**	⇑iP	**P**	**07 50 50.5**	**+2.3**
VNA2	**Neumayer--Watz**	**17.07**	**159**	⇑iP	**P**	**07 50 52.8**	**+2.6**
SNAA	**Sanae**	**18.60**	**157**	P	**P**	**07 51 08.1**	**-1.1**
	0.1nm,0.3s,baz=314,slow=20,SNR=5.8						
SNAA	**Sanae**	**18.60**	**157**	eP	**P**	**07 51 07.4**	**-1.8**
	70nm,0.9s						
USHA	**Ushuaia**	**23.93**	**255**	P	**P**	**07 52 05.8**	**+1.0**
	5.4nm,0.8s,mb4.0,baz=154,slow=5.2,SNR=2.4						
TRQA	**Tornquist**	**29.94**	**291**	P	**P**	**07 52 58.0**	**-2.5**
CPUP	**Villa Florida**	**37.27**	**309**	P	**P**	**07 54 05.8**	**+1.9**
	0.0nm,0.5s,baz=268,slow=10,SNR=1.7						
BDFB	**Brasilia**	**43.60**	**328**	P	**P**	**07 54 56.2**	**0.0**
	1.7nm,0.6s,mb4.0,baz=170,slow=6.1,SNR=2.5						
LVC	**Limon Verde**	**45.86**	**299**	P	**P**	**07 55 14.1**	**-0.1**
	4.9nm,0.7s,mb4.5,baz=123,slow=8.1,SNR=9.9						
LVC	**Limon Verde**	**45.86**	**299**	eP	**P**	**07 55 14.0**	**-0.3**
	5.5nm,0.7s,mb4.6						
VNDA	**Vanda**	**46.76**	**182**	P	**P**	**07 55 17.8**	**-3.0**
	1.6nm,0.7s,mb4.0,baz=143,slow=6.3,SNR=4.3						
LPAZ	**La Paz**	**50.89**	**304**	P	**P**	**07 55 54.5**	**+1.1**
	2.5nm,0.5s,mb4.4,baz=113,slow=6.3,SNR=7.7						
LPAZ	**La Paz**	**50.89**	**304**	eP	**P**	**07 55 51.4**	**-2.0**
	3.8nm,0.6s,mb4.5						
OTAV	**Otavalo**	**70.18**	**302**	P	**P**	**07 58 05.6**	**+0.5**
	1.8nm,0.8s,mb4.0						
SDV	**Santo Domingo**	**74.42**	**314**	eP	**P**	**07 58 26.2**	**-4.1**
	16nm,1.4s,mb4.8						
YKA	**Yellowknife Ar**	**136.54**	**318**	PKP	PKPdf	08 06 11.8	-2.5
	0.3nm,0.4s,baz=131,slow=2.0,SNR=12						
INK	**Inuvik**	**146.14**	**321**	ePKPbc	PKPbc	08 06 30.2	+1.1
SONM	**Songino Array**	**149.99**	**85**	PKPbc	PKPdf	08 06 41.4	+3.5
	2.0nm,1.0s,baz=211,slow=3.5,SNR=13						
ILAR	**Eielson Array**	**150.55**	**312**	PKPbc	PKPdf	08 06 41.8	+3.5
	1.5nm,0.7s,baz=122,slow=1.5,SNR=16						

*NEIC **10** 08:19:31.8±0.9,2.19N×95.06E,h30^{km},mb4.3/5,Error ellipse: s-maj=34.3km s-min=10.5km az=62.0*

*IDC **10** 08:19:31.8±1.4,2.30N×95.12E,h26^{km}±4^{km},mb3.7/7, mb1 3.9/8,mb1mx3.7/19,mbtmp3.8/8,Error ellipse: s-maj=61.0km s-min=13.7km az=59.0*

ISC 10 08:19:29.2±1.1,2.2N±0.1×95.0E±0.2,h27^{km}, h27^{km}±.9^{km}:pP-P,n14,σ0^{s}93/13,mb4.0/11,1C,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.64**	**13**	Pn	**P**	**08 23 22.2**	**-0.3**
	baz=209,slow=11,SNR=6.9						
KMI	**Kunming**	**24.00**	**17**	⇑P		08 24 53.0	
	10.0nm,1.0s						
LSA	**Lhasa**	**27.63**	**353**	eP	**P**	**08 25 17.5**	**+0.7**
	8.1nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**44.28**	**338**	P	**P**	**08 27 37.9**	**-0.7**
	2.3nm,0.9s,mb3.9						
WRA	**Warramunga Arr**	**44.38**	**122**	P	**P**	**08 27 39.8**	**+0.1**
	1.0nm,0.6s,mb3.7,baz=304,slow=9.1,SNR=7.9						
WRA				pP	pP	08 27 48.4	+0.6
	1.7nm,0.7s,baz=302,slow=9.0,SNR=8.3						
ASAR	**Alice Springs**	**45.70**	**126**	P	**P**	**08 27 50.7**	**+0.6**
	0.6nm,0.8s,mb3.6,baz=291,slow=7.7,SNR=6.0						
ASAR				pP	pP	08 27 59.5	+1.3
	0.7nm,0.8s,baz=292,slow=7.5,SNR=5.1						
SONM	**Songino Array**	**46.54**	**11**	P	**P**	**08 27 55.9**	**-0.5**
	0.5nm,0.7s,mb3.6,baz=197,slow=9.5,SNR=5.8						
SONM				pP	pP	08 28 04.5	-0.1
	1.6nm,0.6s,baz=192,slow=8.8,SNR=13						
SONM				PcP	PcP	08 29 31.2	+0.3
	0.3nm,0.7s,baz=146,slow=5.2,SNR=2.3						
SONM				pPcP		08 29 39.4	
	0.5nm,0.6s,baz=197,slow=3.4,SNR=4.0						
ULN	**Ulaanbaatar**	**46.70**	**11**	eP	**P**	**08 27 59.7**	**+2.0**
	2.1nm,1.0s,mb4.0						
KURK	**Kurchatov**	**50.33**	**347**	eP	**P**	**08 28 25.5**	**-0.3**
	3.9nm,1.0s,mb4.4						
ZAL	**Zalesovo**	**52.29**	**352**	P	**P**	**08 28 39.9**	**-0.7**
	1.1nm,0.4s,mb4.2,baz=292,slow=4.9,SNR=4.0						
ZAL				pP	pP	08 28 47.8	-1.0
	3.7nm,0.4s,baz=318,slow=5.2,SNR=6.8						
BVAR	**Borovoye Array**	**54.65**	**342**	P	**P**	**08 28 57.1**	**-1.0**
	0.8nm,0.8s,mb3.8,baz=143,slow=7.4,SNR=4.1						
BVAR				pP	pP	08 29 04.9	-1.4
	1.6nm,0.6s,baz=143,slow=7.4,SNR=7.4						
CTAO	**Charters Tower**	**54.87**	**116**	P	**P**	**08 28 58.7**	**-1.4**
STKA	**Stephens Creek**	**55.61**	**132**	P	**P**	**08 29 05.5**	**+0.2**
	1.9nm,0.9s,mb4.1,baz=350,slow=9.1,SNR=4.4						
STKA				pP	pP	08 29 14.3	+0.8
	1.7nm,0.7s,baz=336,slow=6.3,SNR=3.5						
ARCES	**ARCESS Array B**	**80.91**	**341**	P	**P**	**08 31 43.9**	**+1.7**
	3.7nm,0.8s,mb4.4,baz=19,slow=26,SNR=2.2						
ARCES				pP	pP	08 31 51.1	+0.2
	1.3nm,0.6s,baz=90,slow=7.2,SNR=1.0						

*NEIC **10** 08:20:03.9,15.56N×94.86W,h22^{km},MD4.2(MEX),After MEX.*

*MEX **10** 08:20:03.9±1.0,15.58N×94.86W,h23^{km}±97^{km},MD4.3*

*IDC **10** 08:20:09.2±4.5,16.19N×94.10W,h94^{km}±53^{km},mb3.2/4, mb1 3.6/6,mb1mx3.3/22,mbtmp3.6/6,MS3.0/1,Ms1 3.0/1, ms1mx2.2/15,Error ellipse: s-maj=122.5km s-min=35.8km az=40.0*

ISC 10 08:20:01.5±0.9,15.60N±0.09×94.88W±0.04,h51^{km}±10^{km}, n23,σ1^{s}26/31,mb3.6/4,1C,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.19**	**278**	⇑iP	**P**	**08 20 22.3**	**+0.2**
HUIG				iS	**S**	**08 20 36.9**	**-0.7**
OXX	**Oaxaca**	**2.31**	**310**	iP	**P**	**08 20 39.5**	**+1.6**
OXX				iS	**S**	**08 21 05.0**	**-0.2**
SCX	**San Cristobal**	**2.44**	**62**	eP	**P**	**08 20 38.0**	**-1.8**
SCX				iS	**S**	**08 21 10.0**	**+1.4**
SCX	**San Cristobal**	**2.44**	**62**	eP	**P**	**08 20 40.0**	**+0.2**
SCX				iS	**S**	**08 21 10.0**	**+1.4**
TUIG	**Tuzandepetl**	**2.46**	**10**	eP	**P**	**08 20 36.1**	**-4.1**
TUIG	**Tuzandepetl**	**2.46**	**10**	eP	**P**	**08 20 38.8**	**-1.4**
CCIG	**Comitan**	**2.73**	**75**	iP	**P**	**08 20 43.1**	**-0.9**
CCIG				iS	**S**	**08 21 15.0**	**-0.9**
CCIG	**Comitan**	**2.73**	**75**	iP	**P**	**08 20 43.2**	**-0.7**
CCIG				iS	**S**	**08 21 15.3**	**-0.5**
EVV	**El Vigia**	**2.88**	**351**	eP	**P**	**08 20 46.5**	**+0.4**
IISM	**Ciudad Serdan**	**4.13**	**325**	eP	Px	08 21 21.0	
IISM	**Ciudad Serdan**	**4.13**	**325**	eP	**P**	**08 21 10.0**	**+6.2**
IIB	**San Bernardino**	**4.71**	**316**	eP	**P**	**08 21 15.5**	**+3.6**
IIB				iS	**S**	**08 22 05.0**	**-0.9**
PPM	**Popocatepetl**	**4.97**	**315**	iP	**P**	**08 21 16.9**	**+1.4**
PPM				iS	**S**	**08 22 10.6**	**-1.9**
PPM	**Popocatepetl**	**4.97**	**315**	iP	**P**	**08 21 16.9**	**+1.4**
PPM				eP		08 21 19.0	
PPM				iS	**S**	**08 22 10.6**	**-1.9**
TEIG	**Tepich**	**7.79**	**53**	ePn	**P**	**08 21 49.6**	**-5.3**
	21nm,0.4s						
JTS	**JuntasAbangare**	**11.02**	**117**	P	**P**	**08 22 39.1**	**-0.2**
	1.2nm,0.3s,baz=297,slow=14,SNR=5.4						
JTS				LR	LR	08 26 33.7	
	comp=Z,78nm,19.6s,baz=8.6,slow=36						
TXAR	**Lajitas Array**	**15.89**	**331**	P	**P**	**08 23 45.2**	**+1.8**
	0.1nm,0.3s,baz=153,slow=14,SNR=6.9						
TXAR	**Lajitas Array**	**15.89**	**331**	P	**P**	**08 23 45.2**	**+1.8**
ANMO	**Albuquerque**	**21.90**	**334**	P	**P**	**08 24 53.4**	**+1.4**
	0.6nm,0.5s,mb3.3,baz=139,slow=11,SNR=3.8						
NVAR	**Mina Array Bea**	**30.70**	**322**	P	**P**	**08 26 15.3**	**+1.4**
	0.7nm,0.8s,mb3.6,baz=127,slow=11,SNR=7.0						
NVAR	**Mina Array Bea**	**30.70**	**322**	P	**P**	**08 26 15.3**	**+1.4**
YKA	**Yellowknife Ar**	**48.87**	**348**	P	**P**	**08 28 41.9**	**-2.0**
	0.6nm,0.6s,mb3.8,baz=152,slow=7.3,SNR=17						
YKA				pP	pP	08 28 56.6	-0.9
	0.3nm,0.6s,baz=153,slow=7.3,SNR=6.2						
ILAR	**Eielson Array**	**60.29**	**337**	P	**P**	**08 30 05.7**	**-1.4**
	0.6nm,0.8s,mb3.7,baz=148,slow=4.3,SNR=4.8						

DJA 10 08:22:57.1±1.0,9.97S×117.03E,h15^{km},MD5.1/4, ML3.9/4,1C-6D,Error ellipse: s-maj=23.8km s-min=21.2km az=46.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	**1.72**	**328**	⇓iPn	Pn	08 23 24.5	-2.4
	82nm,0.3s						
KEDI				⇓iSn	Sn	08 23 45.3	-3.4
RATI	**Rata**	**1.93**	**310**	⇓iPn	Pn	08 23 26.9	-2.8
	110nm,0.2s						
RATI				⇓iSn	Sn	08 23 48.8	-5.0
KELI	**Kelakatan**	**3.05**	**305**	⇓iPn	Pn	08 23 43.4	-2.4
	29nm,0.2s						
SRDI	**Scrawed**	**3.21**	**297**	⇓iPn	Pn	08 23 45.5	-2.6
	35nm,0.2s						
SRDI				⇑iSn	Sn	08 24 20.7	-5.7

IDC 10 08:45:59.6±6.7,16.05S×173.22W,mb3.9/4,mb1 4.2/4, mb1mx3.9/17,mbtmp3.9/4,1C,Error ellipse: s-maj=337.9km s-min=28.4km az=143.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.87**	**257**	P	P	08 54 54.3	-2.8
	0.7nm,0.8s,baz=98,slow=6.2,SNR=9.8						
ASAR	**Alice Springs**	**50.08**	**252**	P	P	08 54 56.8	-1.9
	9.0nm,0.6s,baz=86,slow=8.0,SNR=160						
ASPA	**Alice Springs**	**50.09**	**252**	⇑iP	P	08 54 57.5	-1.1
ILAR	**Eielson Array**	**83.04**	**11**	P	P	08 58 26.3	-1.6
	0.3nm,0.7s,baz=209,slow=9.3,SNR=3.4						
YKA	**Yellowknife Ar**	**90.62**	**23**	P	P	08 59 01.9	-3.0
	0.3nm,1.0s,baz=230,slow=4.8,SNR=3.9						
BRTR	**Keskin Array B**	**146.77**	**321**	PKPbc	PKPbc	09 05 44.4	+0.8
	1.8nm,0.9s,baz=91,slow=3.8,SNR=5.1						
GERES	**GERESS Array B**	**146.81**	**352**	PKPbc	PKPbc	09 05 45.5	+2.2
	0.4nm,0.3s,baz=349,slow=6.8,SNR=3.8						

*CSEM **10** 08:49:53.7±0.8,38.61N×28.54W,h10^{km},ML1.2,Error ellipse: s-maj=3.0km s-min=2.4km az=3.0,After PDA*

*PDA **10** 08:49:53.7±0.8,38.61N×28.54W,h10^{km},MD2.6,ML1.2, Error ellipse: s-maj=3.0km s-min=2.4km az=3.0*

SVSA 10 08:49:53.7±0.8,38.61N×28.54W,h10^{km},MD2.6,ML1.2, Error ellipse: s-maj=3.0km s-min=2.4km az=3.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOR	**Horta**	**0.11**	**223**	eS	Sg	08 49 57.7	-0.6
PCED	**Cedros**	**0.13**	**280**	eP	Pg	08 49 56.3	-0.6
PCED				eS	Sg	08 49 58.9	-0.1
	25nm,0.2s						
PCED	**Cedros**	**0.13**	**280**	eP	Pg	08 49 56.3	-0.6
PCED				eS	Sg	08 49 58.9	-0.1
	25nm,0.2s						
CALA	**Caldeira**	**0.13**	**260**	eP	Pg	08 49 56.5	-0.4
PICO	**Pico**	**0.14**	**140**	eP	Pg	08 49 57.0	0.0
PICO				eS	Sg	08 49 58.8	-0.3
ROSA	**Rosais**	**0.26**	**64**	eS	Sg	08 50 01.7	-1.1

*IDC **10** 09:19:50.7±1.6,9.61S×123.58E,mb3.9/3,mb1 4.2/5, mb1mx4.0/13,mbtmp4.1/5,ML4.1/2,MS4.3/1,Ms1 4.3/1, ms1mx2.7/19,Error ellipse: s-maj=59.6km s-min=26.7km az=72.0*

*NEIC **10** 09:19:54.7±1.0,10.31S×122.68E,h55^{km},mb4.5/1,Error ellipse: s-maj=26.2km s-min=13.4km az=57.0*

ISC 10 09:19:50.3±1.0,10.60S±0.08×122.41E±0.10,h33^{km},n16, σ1^{s}50/21,mb3.9/3,MS4.3/1,1C-1D,Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.09**	**158**	eP	**P**	**09 21 54.0**	**+5.8**
	8.7nm,0.5s						
FITZ				eS	**S**	**09 23 20.3**	**+0.8**
KAKA	**Kakadu**	**10.04**	**103**	eP	**P**	**09 22 17.5**	**+2.1**
	17nm,1.1s						
KAKA				eS	**S**	**09 24 07.7**	**-0.4**
MBWA	**Marble Bar**	**10.81**	**193**	eP	**P**	**09 22 30.1**	**+4.1**
MBWA				eS	**S**	**09 24 22.6**	**-4.3**
WRA	**Warramunga Arr**	**14.78**	**130**	Pn	**P**	**09 23 19.3**	**+0.4**
	1.0nm,0.3s,baz=304,slow=15,SNR=45						
WRA				Sn	**S**	**09 25 54.8**	**-7.5**
	2.0nm,0.3s,baz=313,slow=24,SNR=14						
WRAB	**Tennant Creek**	**14.78**	**130**	eP	**P**	**09 23 19.4**	**+0.5**
	16nm,0.8s						
WRAB				eS	**S**	**09 25 53.0**	**-9.3**
WB2	**Warramunga Arr**	**14.79**	**130**	⇑iP	**P**	**09 23 19.6**	**+0.6**
WB2				eS	**S**	**09 25 54.9**	**-7.6**
ASPA	**Alice Springs**	**17.00**	**141**	⇓iP	**P**	**09 23 51.2**	**+4.0**
ASPA				eS	**S**	**09 26 50.8**	**-2.9**
ASAR	**Alice Springs**	**17.00**	**141**	P	**P**	**09 23 50.8**	**+3.6**
	1.3nm,0.3s,baz=321,slow=12,SNR=100						
ASAR				S	**S**	**09 26 50.5**	**-3.3**
	0.7nm,0.3s,baz=313,slow=23,SNR=22						
NWAO	**Narrogin (SRO)**	**22.73**	**191**	P		09 25 06.6	
	3.0nm,0.4s,baz=172,slow=23,SNR=3.3						
NWAO	**Narrogin (SRO)**	**22.73**	**191**	eP		09 25 06.7	
STKA	**Stephens Creek**	**27.62**	**143**	P	**P**	**09 25 41.3**	**+4.3**
	2.0nm,0.9s,mb3.7,baz=335,slow=14,SNR=3.1						
STKA	**Stephens Creek**	**27.62**	**143**	P	**P**	**09 25 41.4**	**+4.4**
KS15	**Wonju Array Si**	**48.06**	**6**	P	**P**	**09 28 20.6**	**-8.1**
LSA	**Lhasa**	**50.12**	**324**	P	**P**	**09 28 44.7**	**+0.1**
	3.0nm,0.6s,mb4.5						
RPZ	**Rata Peaks**	**53.35**	**137**	LR	LR	09 51 32.2	
	comp=Z,254nm,18.8s,MS4.3,baz=286,slow=36						
SONM	**Songino Array**	**59.89**	**348**	P	**P**	**09 29 53.6**	**-1.7**
	0.2nm,0.5s,mb3.4,baz=169,slow=9.2,SNR=3.9						

*NEIC **10** 09:26:16.6,46.95S×166.56E,h12^{km},ML4.3(WEL),After WEL.*

WEL 10 09:26:16.4±0.5,47.04S×166.32E,h33^{km},ML4.1/10,3D, Error ellipse: s-maj=5.0km s-min=3.0km az=90.0,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**1.60**	**45**	P	P	09 26 41.9	-0.8
WHZ				S	S	09 27 01.3	-1.2
WHZ	**Wether Hill Ro**	**1.60**	**45**	⇓PN	Pn	09 26 41.8	-1.0
WHZ				SN	Sn	09 27 01.3	-1.3
MLZ	**Mavora Lakes**	**2.13**	**38**	P	P	09 26 48.7	-1.5
MLZ				S	S	09 27 11.7	-4.0
MLZ	**Mavora Lakes**	**2.13**	**38**	PN	Pn	09 26 48.7	-1.7
MLZ				SN	Sn	09 27 11.7	-4.2
TUZ	**Tuapeka**	**2.53**	**66**	P	P	09 26 54.2	-1.8
TUZ	**Tuapeka**	**2.53**	**66**	PN	Pn	09 26 54.7	-1.4
TUZ				SN	Sn	09 27 22.7	-3.5
MSZ	**Milford Sound**	**2.62**	**26**	PN	Pn	09 26 55.7	-1.7
MSZ				SN	Sn	09 27 25.3	-3.1
EAZ	**Earnscleugh**	**2.75**	**50**	eP	P	09 26 57.1	-2.0
EAZ	**Earnscleugh**	**2.75**	**50**	⇓PN	Pn	09 26 57.1	-2.2
EAZ				SN	Sn	09 27 29.4	-2.4
WKZ	**Wanaka**	**2.90**	**41**	eP	P	09 27 00.0	-1.3
WKZ	**Wanaka**	**2.90**	**41**	PN	Pn	09 27 00.0	-1.4
JCZ	**Jackson Bay**	**3.42**	**31**	P	P	09 27 06.8	-1.9
JCZ	**Jackson Bay**	**3.42**	**31**	PN	Pn	09 27 06.7	-2.1
JCZ				SN	Sn	09 27 46.1	-2.6
ODZ	**Otahua Downs**	**3.61**	**58**	P	P	09 27 07.5	-3.9
ODZ	**Otahua Downs**	**3.61**	**58**	⇓PN	Pn	09 27 07.5	-4.0
ODZ				eSN	Sn	09 27 48.2	-5.3
LBZ	**Lake Benmore**	**3.79**	**47**	eP	P	09 27 08.9	-5.0
LBZ	**Lake Benmore**	**3.79**	**47**	PN	Pn	09 27 09.6	-4.4
LBZ				SN	Sn	09 27 51.5	-6.5
FOZ	**Fox Glacier**	**4.21**	**36**	PN	Pn	09 27 17.2	-2.8
RPZ	**Rata Peaks**	**4.71**	**47**	eP	P	09 27 21.2	-5.7
RPZ	**Rata Peaks**	**4.71**	**47**	PN	Pn	09 27 21.2	-5.9
WVZ	**Waitaha Valley**	**5.05**	**40**	eP	P	09 27 27.8	-3.9
WVZ	**Waitaha Valley**	**5.05**	**40**	PN	Pn	09 27 27.7	-4.1
LTZ	**Lake Taylor**	**6.00**	**47**	eP	P	09 27 39.0	-6.0
LTZ	**Lake Taylor**	**6.00**	**47**	PN	Pn	09 27 39.0	-6.2
DSZ	**Denniston Nort**	**6.59**	**39**	eP	P	09 27 47.9	-5.5
DSZ	**Denniston Nort**	**6.59**	**39**	PN	Pn	09 27 47.4	-6.2
THZ	**Tophouse**	**7.07**	**44**	P	P	09 27 54.5	-5.7
THZ	**Tophouse**	**7.07**	**44**	ePN	Pn	09 27 54.5	-5.8
QRZ	**Quartz Range**	**7.66**	**38**	ePN	Pn	09 28 01.3	-7.2
NNZ	**Nelson**	**7.72**	**44**	PN	Pn	09 28 04.5	-4.9

*IDC **10** 09:39:00.3±0.9,30.27S×177.20W,mb4.4/6,mb1 4.5/9, mb1mx4.3/18,mbtmp4.4/9,ML4.2/3,MS4.1/7,Ms1 4.0/7, ms1mx3.7/19,Error ellipse: s-maj=38.2km s-min=17.7km az=150.0*

*NEIC **10** 09:39:05.2±0.5,30.36S×177.19W,h35^{km},mb4.9/7,Error ellipse: s-maj=16.9km s-min=9.4km az=145.0*

ISC 10 09:39:04.0±0.7,30.52S±0.05×177.3W±0.1,h33^{km},n53, σ1^{s}52/43,mb4.6/9,MS4.1/6,2C-2D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**8.37**	**205**	PN	**P**	**09 41 06.2**	**+0.3**
PUZ				eSN	**Sn**	**09 42 44.4**	**+4.0**
PUZ	**Puketiti**	**8.37**	**205**	PN	**P**	**09 41 06.2**	**+0.3**
PUZ				eSN	**Sn**	**09 42 44.4**	**+4.0**
URZ	**Urewera**	**8.98**	**209**	Pn	**P**	**09 41 14.4**	**+0.1**
	0.8nm,0.3s,baz=59,slow=14,SNR=6.7						
URZ				Sn	**Sn**	**09 42 59.5**	**+4.0**
	2.9nm,0.3s,baz=139,slow=23,SNR=7.2						
MRZ	**Mangatainoka R**	**11.64**	**208**	ePN	**P**	**09 41 48.5**	**-2.3**
MRZ				SN	**S**	**09 43 59.0**	**-1.6**
MRZ	**Mangatainoka R**	**11.64**	**208**	ePN	**P**	**09 41 48.5**	**-2.3**
MRZ				SN	**S**	**09 43 59.0**	**-1.6**
NNZ	**Nelson**	**13.05**	**213**	ePN	**P**	**09 42 10.8**	**+1.1**
NNZ	**Nelson**	**13.05**	**213**	ePN	**P**	**09 42 10.8**	**+1.1**
THZ	**Tophouse**	**13.70**	**212**	ePN	**P**	**09 42 18.6**	**+0.4**
THZ				eSN	**S**	**09 44 49.3**	**-1.0**
THZ	**Tophouse**	**13.70**	**212**	ePN	**P**	**09 42 18.6**	**+0.4**
THZ				eSN	**S**	**09 44 49.3**	**-1.0**
MQZ	**McQueen's Vall**	**15.38**	**208**	eSN	**S**	**09 45 23.9**	**-5.8**
MQZ	**McQueen's Vall**	**15.38**	**208**	eSN	**S**	**09 45 23.9**	**-5.8**
RPZ	**Rata Peaks**	**16.08**	**212**	Pn	**P**	**09 42 50.5**	**+1.5**
	2.3nm,0.3s,baz=67,slow=22,SNR=11						
RPZ				Sn	**S**	**09 45 44.6**	**-1.4**
	0.7nm,0.3s,baz=281,slow=22,SNR=3.7						
DZM	**Mont Dzumac**	**16.79**	**296**	eP	**P**	**09 42 58.7**	**+0.6**
DZM	**Mont Dzumac**	**16.79**	**296**	eP	**P**	**09 42 58.7**	**+0.6**
AFI	**Afiamalu**	**17.31**	**18**	P	**P**	**09 43 00.3**	**-4.4**
	21nm,0.7s						
RAR	**Rarotonga**	**18.30**	**64**	P	**P**	**09 43 11.7**	**-5.4**
	1.3nm,0.3s,baz=222,slow=14,SNR=2.8						
RAR				LR	LR	09 48 24.3	
	comp=Z,392nm,18.9s,baz=108,slow=31						
CTA	**Charters Tower**	**34.38**	**279**	eP	**P**	**09 45 51.1**	**+0.9**
	4.1nm,0.4s,mb4.7						
CTA	**Charters Tower**	**34.38**	**279**	P	**P**	**09 45 50.8**	**+0.6**
	5.9nm,0.5s,mb4.8,baz=90,slow=11,SNR=23						
CTA				LR	LR	09 58 39.1	
	comp=Z,314nm,18.0s,MS4.1,baz=49,slow=34						
CTAO	**Charters Tower**	**34.38**	**279**	eP	**P**	**09 45 50.3**	**+0.1**
	28nm,1.2s,mb5.1						
STKA	**Stephens Creek**	**35.01**	**257**	⇓iP	**P**	**09 45 58.0**	**+2.5**
	2.9nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**35.01**	**257**	P	**P**	**09 45 57.2**	**+1.8**
	2.5nm,0.5s,mb4.4,baz=96,slow=9.7,SNR=18						
STKA				LR	LR	09 58 58.0	
	comp=Z,258nm,19.2s,MS4.0,baz=23,slow=34						
STKA	**Stephens Creek**	**35.01**	**257**	eP	**P**	**09 45 56.6**	**+1.2**
PMG	**Port Moresby**	**39.18**	**295**	LR	LR	09 59 39.3	
	comp=Z,203nm,19.6s,MS4.0,baz=51,slow=32						
ASAR	**Alice Springs**	**43.67**	**267**	P	**P**	**09 47 08.1**	**+0.5**
	2.4nm,0.4s,mb4.3,baz=102,slow=7.3,SNR=45						
ASAR				LR	LR	10 05 39.7	
	comp=Z,252nm,18.2s,MS4.2,baz=136,slow=36						
ASPA	**Alice Springs**	**43.68**	**267**	eP	**P**	**09 47 09.1**	**+1.5**
WB2	**Warramunga Arr**	**44.66**	**272**	eP	**P**	**09 47 14.4**	**-1.2**
WRAB	**Tennant Creek**	**44.67**	**272**	eP	**P**	**09 47 14.2**	**-1.4**
	8.8nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**44.67**	**272**	P	**P**	**09 47 15.1**	**-0.5**
	5.3nm,0.4s,mb4.7,baz=110,slow=7.7,SNR=73						
FORT	**Forrest**	**46.57**	**255**	eP	**P**	**09 47 30.6**	**0.0**
	160nm,0.5s						
MBWA	**Marble Bar**	**56.78**	**263**	P	**P**	**09 48 46.0**	**-1.5**
	26nm,1.4s,mb5.1						
QSPA	**South Pole Qui**	**59.59**	**180**	P	**P**	**09 49 12.0**	**+5.6**
	7.7nm,0.5s,mb5.0						
MAW	**Mawson**	**72.40**	**200**	eP	**P**	**09 50 25.2**	**-2.8**
SYO	**Syowa Base**	**77.13**	**193**	⇓P	**P**	**09 50 58.1**	**+2.8**
SYO	**Syowa Base**	**77.13**	**193**	⇑PcP	PcP	09 51 06.4	+0.1
PLCA	**Paso Flores**	**82.01**	**133**	LR	LR	10 18 07.3	
	comp=Z,97nm,20.6s,MS4.2,baz=183,slow=29						
CMB	**Columbia Colle**	**86.47**	**42**	P	**P**	**09 51 44.6**	**+0.1**
	7.1nm,1.6s,mb4.7						
NVAR	**Mina Array Bea**	**87.94**	**42**	P	**P**	**09 51 52.5**	**+0.9**
	0.6nm,0.8s,mb3.9,baz=200,slow=4.8,SNR=4.1						
TXAR	**Lajitas Array**	**91.97**	**57**	P	**P**	**09 52 11.6**	**+0.8**
	0.2nm,0.8s,baz=225,slow=12,SNR=3.5						
LVC	**Limon Verde**	**93.37**	**119**	LR	LR	10 23 56.0	
	comp=Z,69nm,18.6s,MS4.1,baz=227,slow=29						
BVAR	**Borovoye Array**	**126.89**	**316**	PKP	PKPdf	09 58 04.6	+0.3
	0.7nm,0.5s,slow=1.5,SNR=3.8						
ARCES	**ARCESS Array B**	**138.83**	**348**	PKP	PKPdf	09 58 28.5	+2.3
	5.2nm,0.9s,baz=350,slow=7.4,SNR=4.1						
GNI	**Garni**	**144.63**	**297**	PKPdf	PKPdf	09 58 39.7	+2.5
FINES	**FINESS Array B**	**145.45**	**340**	PKPbc	PKPbc	09 58 37.5	-0.9
	5.2nm,0.5s,baz=73,slow=4.1,SNR=42						
NB2	**NORSAR Subarra**	**148.95**	**352**	PKP	PKPdf	09 58 45.9	+2.3
	17nm,1.7s,baz=16,slow=3.1						
NB2	**NORSAR Subarra**	**148.95**	**352**	⇑PKPab	PKPdf	09 58 45.9	+2.3
NOA	**NORSAR Array B**	**148.95**	**352**	PKPbc	PKPdf	09 58 48.0	+4.4
	0.9nm,0.7s,baz=25,slow=3.4,SNR=3.4						
HFS	**Hagfors**	**149.47**	**349**	PKPbc	PKPdf	09 58 49.0	+4.5
	1.6nm,0.4s,baz=27,slow=3.3,SNR=9.9						
MALT	**Malatya**	**149.63**	**295**	ePKPbc	PKPdf	09 58 52.5	+7.0
AKASG	**Malin Array Be**	**151.74**	**323**	PKPbc	PKPdf	09 58 54.9	+6.7
	1.4nm,0.4s,baz=46,slow=3.2,SNR=7.5						
AKASG				PKPab	PKPab	09 59 03.6	-2.3
	1.0nm,0.4s,baz=47,slow=3.2,SNR=4.9						
EIL	**Elat**	**152.10**	**277**	PKPbc	PKPdf	09 58 58.9	+9.4
	2.6nm,0.5s,baz=30,slow=11,SNR=3.1						
EIL	**Elat**	**152.10**	**277**	ePKPdf	PKPdf	09 58 53.3	+3.8
EIL				PKPbc	PKPdf	09 58 58.9	+9.4
EIL				ePKPbc	PKPdf	09 58 59.1	+10
BRTR	**Keskin Array B**	**153.16**	**298**	PKPbc	PKPdf	09 58 59.5	+8.8
	0.4nm,0.5s,baz=135,slow=2.0,SNR=3.0						
EKA	**Eskdalemuir Ar**	**154.85**	**8**	PKPab	PKPab	09 59 16.3	-2.5
	2.2nm,0.9s,baz=333,slow=3.7,SNR=3.6						

*TEH **10** 10:12:13.2,28.60N×51.33E,h28^{km},Mn3.7*

*IDC **10** 10:12:16.5±1.2,29.43N×51.66E,mb3.9/10,mb1 4.0/11, mb1mx3.9/22,mbtmp3.9/11,ML3.5/1,Error ellipse: s-maj=32.5km s-min=26.5km az=169.0*

*CSEM **10** 10:12:16.5±0.2,29.32N×51.70E,h2^{km},ML3.7,Error ellipse: s-maj=5.8km s-min=2.2km az=39.0*

*THR **10** 10:12:18.3±0.7,29.38N×51.77E,h15^{km},ML3.6*

*OMAN **10** 10:12:20.1,28.86N×51.56E,h10^{km},Error ellipse: s-maj=59.7km s-min=3.4km az=326.0*

*NEIC **10** 10:12:21.7±1.1,29.30N×51.75E,h39^{km}±9^{km},mb4.3/7,*

Error ellipse: s-maj=13.5km s-min=8.4km az=207.0

ISC 10 10:12:18.8±0.6**,29.19N**±0.03×**51.65E**±0.05**,h36**^{km}±7^{km}**, n44,**σ**1**^{s}**23**/46**,mb4.0**/16**,4C-1D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMOK	Mook	0.94	98	Pn	P	10 12 35.7	+0.1
ISRV	Sarvestan	1.29	81	Pn	P	10 12 43.0	+2.4
GHIR	Ghir-Karzin	1.48	127	*e*PG	P	10 12 46.3	+3.0
GHIR				AML	AML	10 13 13.7	
	comp=N,3µm,0.4s						
IBRJ	Borojen	2.59	353	Pn	P	10 13 00.7	+1.4
ISAD	Sadrabad	3.24	32	Pn	P	10 13 06.5	-2.0
IMEH	Mehriz	3.38	49	Pn	P	10 13 11.8	+1.4
NASN	Na'in	3.74	15	*e*PN	P	10 13 14.8	-0.8
NASN				AML	AML	10 14 20.7	
	comp=N,32nm,0.8s						
SHGR	Shooshtar-Gavs	3.81	321	*e*PN	P	10 13 17.6	+1.0
SHGR				AML	AML	10 14 57.9	
	comp=N,132nm,0.6s						
ICHK	Chekchek	3.86	37	Pn	P	10 13 17.5	+0.1
IBAF	Bafgh	4.15	54	Pn	P	10 13 21.6	+0.2
KRBR	Kerman	4.52	79	*e*PN	P	10 13 27.2	+0.5
KRBR				AML	AML	10 15 07.1	
	comp=N,86nm,0.6s						
BANOM	Banah	5.25	127	P	P	10 13 37.1	+0.1
	SNR=16						
BANOM				⇑P		10 13 37.2	
	SNR=16						
BANOM				⇑S	S	10 14 37.3	+0.2
ASAO	Ashtian	5.52	346	*e*PN	P	10 13 40.0	-0.7
ASAO				AML	AML	10 14 45.0	
	comp=N,25nm,0.7s						
IVRN	Varamin	5.79	1	Pn	P	10 13 43.3	-1.3
IVRN				Sn	S	10 14 52.4	+1.6
ASHO	Ashiyiah	5.96	138	⇓P	P	10 13 46.5	-0.4
IRAZ	Razeghan	6.37	347	Pn	Px	10 14 13.9	
IDMV	Damavand	6.38	3	Pn	P	10 13 51.2	-1.7
DAMV	Damavand	6.43	2	*e*PN	P	10 13 51.7	-1.9
IFIR	Firoozkooh	6.50	8	Pn	P	10 13 54.3	-0.3
IFIR				Sn	S	10 15 09.7	+1.2
IFIR				Lg		10 15 55.2	
IVIS	Veys	6.71	324	Pn	P	10 13 56.8	-0.7
ARQ	Araqi	7.28	142	⇑P	P	10 14 04.9	-0.6
RAYN	Ar Rayn	7.89	226	Pn	P	10 14 14.2	+0.3
	comp=N,106nm,0.9s,SNR=17						
WHFO	Wadi Hawf	11.38	170	P	P	10 14 59.3	-2.7
	SNR=12						
RBK	Rabkut	11.86	168	⇑P	P	10 15 05.6	-2.8
GNI	Garni	12.32	334	P	P	10 15 14.9	+0.3
	comp=N,19nm,1.3s						
KIV	Kislovodsk	16.39	336	*e*P	P	10 16 08.4	+0.7
	comp=N,22nm,0.9s						
BRTR	Keskin Array B	18.17	310	P	P	10 16 30.2	+0.3
	comp=N,0.2nm,0.3s,baz=117,slow=13,SNR=2.9						
AAK	Ala-Archa	22.77	48	P	P	10 17 16.8	-2.2
	comp=N,7.8nm,0.9s,mb4.1						
BVAR	Borovoye Array	27.52	25	P	P	10 18 03.5	-0.4
	comp=N,2.7nm,0.5s,mb4.1,baz=219,slow=7.4,SNR=16						
KURK	Kurchatov	29.55	36	*e*P	P	10 18 21.4	-0.6
	comp=N,2.4nm,1.0s,mb3.9						
MORC	Moravsky Berou	32.99	318	P	P	10 18 44.2	-8.2
	comp=N,12nm,1.5s,mb4.6						
LSA	Lhasa	34.29	79	*e*P	P	10 19 04.5	+0.7
	comp=N,4.4nm,0.7s,mb4.5						
ZAL	Zalesovo	34.50	35	P	P	10 19 03.8	-1.6
	comp=N,1.0nm,0.4s,mb4.1,baz=164,slow=1.3,SNR=3.6						
HFS	Hagfors	40.09	331	P	P	10 19 50.9	-1.3
	comp=N,5.7nm,1.0s,mb4.3,baz=135,slow=10,SNR=4.3						
SONM	Songino Array	45.69	50	P	P	10 20 37.1	-0.8
	comp=N,0.4nm,0.7s,mb3.5,baz=270,slow=11,SNR=5.6						
ULN	Ulaanbaatar	46.13	50	P	P	10 20 40.6	-0.8
	comp=N,1.8nm,0.9s,mb4.0						
LSZ	Lusaka	49.67	210	P	P	10 21 10.9	+1.5
	comp=N,6.5nm,1.3s,mb4.5						
DBIC	Dimbokro	57.64	259	P	P	10 22 08.8	+0.7
	comp=N,2.8nm,0.9s,mb4.3,baz=43,slow=4.9,SNR=3.6						
INK	Inuvik	82.73	2	P	P	10 24 41.9	+2.2
	comp=N,0.6nm,0.9s,mb3.6,baz=329,slow=1.4,SNR=3.1						
ILAR	Eielson Array	85.24	8	P	P	10 24 52.5	+0.2
	comp=N,0.2nm,0.6s,mb3.4,baz=328,slow=4.8,SNR=4.6						
YKA	Yellowknife Ar	87.98	354	P	P	10 25 06.3	+0.6
	comp=N,0.3nm,0.7s,mb3.6,baz=6.4,slow=4.8,SNR=10						
YKA	Yellowknife Ar	87.98	354	P	P	10 25 06.3	+0.6
WRA	Warramunga Arr	93.43	111	P	P	10 25 36.0	+3.8
	comp=N,1.6nm,1.4s,mb4.3,baz=316,slow=4.0,SNR=2.9						
ASAR	Alice Springs	94.91	114	P	P	10 25 41.0	+2.1
	comp=N,0.5nm,1.1s,mb3.9,baz=286,slow=6.6,SNR=4.0						

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*PRU **10** 10:39:53.9,50.28N×19.18E*

WAR 10 10:39:52.8,50.16N×19.31E,h0^{km}**,ML2.5,2D,Mining Induced,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.32	80	⇓*i*PG	Pg	10 39 59.9	+0.8
OJC				⇓*e*(SG)	Sg	10 40 05.9	+2.5
OJC	Ojcow	0.32	80	*i* Pg	Pg	10 39 59.9	+0.8
OJC				*e*Sg	Sg	10 40 04.6	+1.2
OKC	Ostrava-Krasne	0.82	247	*e*PG	Pg	10 40 09.1	-0.1
OKC				*e*SG	Sg	10 40 19.9	-0.2
NIE	Niedzica	0.99	139	*e*PG	Pg	10 40 11.0	-1.5
NIE				*e*SG	Sg	10 40 26.0	+0.3
VYHS	Vyhne	1.70	191	*e*SN	Sn	10 40 46.6	0.0
CRVS	Cervenica-Dubn	1.89	131	*e*PN	Pn	10 40 30.8	+4.3
CRVS				*e*SN	Sn	10 40 55.2	+3.9
DPC	Dobruska-Polom	1.93	277	*e*PG	Pg	10 40 26.0	-5.3
DPC				*e*SG	Sg	10 40 51.9	-5.1
KSP	Ksiaz	2.04	291	*e*PG	Pg	10 40 31.0	-2.6
KSP				*e*SN	Sn	10 40 56.0	+0.7
KSP				*e*SG	Sg	10 40 58.0	-2.9
UPC	Upice	2.14	280	*e*SG	Sg	10 40 59.2	-4.9
KOLS	Kolonicke sedl	2.29	121	*e*SG	Sg	10 41 07.5	-1.5
PRU	Pruhonice	3.08	269	*e*SG	Sg	10 41 28.1	-7.2
KHC	Kasperske Hory	3.87	257	*e*SG	Sg	10 41 55.0	-6.6

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*NIED **10** 10:49:00,42.80N×146.10E,h5^{km},Mw3.6 Best double couple: M₀2.9×10^{14} NP1:φs173°,δ61°,λ93°. NP2:φs346°, δ29°,λ84°.*

*IDC **10** 10:49:21.2±4.4,42.51N×146.14E,mb3.5/5,mb1 3.7/6, mb1mx3.5/23,mbtmp3.5/6,ML3.5/1,Error ellipse: s-maj=102.1km s-min=24.1km az=179.0*

*JMA **10** 10:49:24.9±0.1,42.83N×146.10E,h33^{km}±2^{km},M3.5*

ISC 10 10:49:24.1±1.7**,42.78N**±0.08×**146.08E**±0.08**,h20**^{km}±10^{km}**, n14,**σ**0**^{s}**85**/21**,mb3.5**/5**,Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.63	337	P	Pb	10 49 36.7	+0.3
NEM2				S	Sb	10 49 45.5	+0.7
JAK	Akkeshi	1.04	282	P	Pb	10 49 43.2	-0.1
JAK				*e*S	Sb	10 49 57.2	+0.7
JNK	Nakash	1.28	309	P	Pn	10 49 46.4	-0.7
JNK				*e*S	Sb	10 50 02.7	-0.7
JRA	Rausu	1.35	329	P	Pn	10 49 47.8	-0.3
JRA				*e*S	Sb	10 50 04.5	-1.0
JOB	Onbets	1.66	275	P	Pn	10 49 52.1	-0.4
JAR	Ashorobuto	1.77	288	P	Pn	10 49 53.6	-0.5
JAR				*e*S	Sn	10 50 15.9	-0.3
JTKR	Abashiri--Toko	1.98	308	P	Pn	10 49 57.5	+0.4
JTKR				*e*S	Sn	10 50 22.4	+0.9
JCH	Churui	2.01	266	P	Pn	10 49 57.6	+0.1
ASAJ	Asahikawa	2.87	299	Pn	Pn	10 50 10.6	+0.8
	4.4nm,0.3s,baz=98,slow=11,SNR=17						
ASAJ				Sn	Sn	10 50 48.6	+4.6
	6.8nm,0.3s,baz=13,slow=23,SNR=10.0						
SONM	Songino Array	28.14	294	P	P	10 55 17.0	+0.3
	0.5nm,0.8s,mb3.2,baz=84,slow=7.4,SNR=6.5						
ILAR	Eielson Array	42.73	36	P	P	10 57 23.1	+2.0
	0.2nm,0.6s,mb3.0,baz=276,slow=7.9,SNR=5.3						
INK	Inuvik	47.63	30	P	P	10 58 00.7	+0.5
	0.2nm,0.3s,mb3.6,baz=283,slow=7.0,SNR=5.9						
YKA	Yellowknife Ar	57.04	33	P	P	10 59 08.0	-2.6
	0.1nm,0.4s,mb3.2,baz=299,slow=7.7,SNR=2.9						
FINES	FINESS Array B	65.38	333	P	P	11 00 06.0	-0.7
	2.1nm,0.8s,mb4.2,baz=31,slow=8.1,SNR=6.1						

JMA 10 10:51:01.4±0.3**,26.36N×124.54E,h138**^{km}**,M3.5, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	1.68	156	P	P	10 51 32.4	-0.1
JMJ				*e*S	S	10 51 55.5	-0.8
JTJ	Tarama	1.72	175	P	P	10 51 33.1	+0.2
JTJ				S	S	10 51 56.5	-0.5
JOGS	Gusukube	1.77	154	P	P	10 51 33.5	0.0
JOGS				*e*S	S	10 51 57.3	-0.8
JKE	Kume jima 2	2.02	90	P	P	10 51 35.9	-0.5
JIJ	Ishigaki jima	2.02	190	P	P	10 51 35.9	-0.5
JIJ				S	S	10 52 01.6	-1.6
IRIF	Iriomote-Funau	2.15	200	P	P	10 51 38.0	0.0
IRIF				*e*S	S	10 52 06.2	+0.2
JKRS	Kuro-shima	2.17	193	P	P	10 51 38.0	-0.3
JKRS				S	S	10 52 05.1	-1.4
HATJ	Hateruma jima	2.39	196	*e*S	S	10 52 09.9	-1.5
JAGN	Aguni-jima	2.43	84	*e*S	S	10 52 09.8	-2.7
NAH1	Naha	2.83	92	*e*S	S	10 52 17.2	-4.4
JJT2	Tamagusuku 2	2.89	94	P	P	10 51 45.9	-1.7
JJT2				*e*S	S	10 52 18.6	-4.3
JIH	Iheya	3.14	77	P	P	10 51 48.6	-2.3
JIH				*e*S	S	10 52 24.0	-4.7
JOW	Kunigami	3.38	81	P	P	10 51 51.5	-2.5
JOW				*e*S	S	10 52 27.8	-6.5

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*IDC **10** 11:00:16.6±37.0,9.59N×125.51E,mb3.7/3,mb1 3.9/3, mb1mx3.5/18,mbtmp3.7/3,Error ellipse: s-maj=644.4km s-min=315.0km az=150.0*

*MAN **10** 11:00:33.1,8.98N×126.09E,h27^{km},mb4.4,ML3.3,MS3.1*

ISC 10 11:00:30.8±1.0**,9.04N**±0.05×**126.26E**±0.10**,h78**^{km}±12^{km}**, n15,**σ**1**^{s}**14**/21**,mb3.5**/3**,1C-2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.64	264	*e*P	P	11 00 44.3	-1.6
BUTP				*e*S	S	11 00 52.4	-4.6
SCPH	Surigao	1.06	314	*e*P	P	11 00 50.0	-0.7
SCPH				*e*S	S	11 01 04.6	-1.1
BUKP	Musuan	1.65	226	*e*P	P	11 00 58.5	-0.1
CGP	Cagayan de Oro	1.65	250	*e*P	P	11 00 58.8	+0.3
CGP				*e*S	S	11 01 21.8	+2.7
MSLP	Maasin	1.76	308	*e*P	P	11 01 01.5	+1.5
MATI	Mati	2.08	180	*e*P	P	11 01 06.3	+1.9
KCP	Kidapawan	2.33	210	⇓*e*P	P	11 01 08.0	+0.2
KCP				*i* S	S	11 01 35.0	-0.3
TBP	Tagbilaran	2.45	286	⇓*e*P	P	11 01 09.4	-0.1
TBP				*i* S	S	11 01 37.9	-0.6
PLP	Palo	2.46	329	*e*P	P	11 01 10.4	+0.7
PLP				*e*S	S	11 01 41.8	+3.2
DCPH	Dipolog City	2.91	261	⇑*e*P	P	11 01 15.0	-1.0
PAGZ	Pagadian	3.08	248	*e*P	P	11 01 18.7	+0.3
GUIM	Jordan	3.95	294	*e*P	P	11 01 30.2	-0.2
WRA	Warramunga Arr	29.88	165	P	P	11 06 31.3	-2.0
	0.2nm,0.3s,mb3.2,baz=345,slow=7.9,SNR=10						
ASAR	Alice Springs	33.35	167	P	P	11 07 03.0	-0.7
	0.4nm,0.3s,mb3.7,baz=347,slow=6.9,SNR=27						
STKA	Stephens Creek	43.25	161	P	P	11 08 27.1	+0.9
	1.1nm,0.7s,mb3.7,baz=333,slow=6.8,SNR=2.9						

IDC 10 11:31:54.8±1.6**,16.53S×177.13W,mb3.7**/4**,mb1 4.0**/4**, mb1mx3.7**/15**,mbtmp3.7**/4**,Error ellipse: s-maj=46.8km s-min=38.2km az=131.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.10	258	P	P	11 40 20.5	-2.2
	0.2nm,0.4s,baz=96,slow=7.4,SNR=6.8						
ASAR	Alice Springs	46.35	253	P	P	11 40 23.2	-1.5
	0.7nm,0.5s,baz=90,slow=7.5,SNR=19						
VNDA	Vanda	61.91	185	P	P	11 42 15.8	-2.3
	1.7nm,0.9s,baz=23,slow=4.9,SNR=5.6						
ILAR	Eielson Array	84.28	13	P	P	11 44 28.0	-1.3
	0.2nm,0.5s,baz=225,slow=6.4,SNR=4.0						

IDC 10 11:46:32.9±4.5**,10.43N×92.28E,mb3.5**/4**,mb1 3.8**/4**, mb1mx3.6**/17**,mbtmp3.5**/4**,Error ellipse: s-maj=169.9km s-min=26.2km az=68.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	39.14	15	P	P	11 54 02.1	-1.8
	0.4nm,0.8s,baz=201,slow=8.8,SNR=4.5						
ZAL	Zalesovo	43.80	354	P	P	11 54 40.4	-1.7
	0.4nm,0.3s,baz=220,slow=1.9,SNR=3.7						
WRA	Warramunga Arr	51.24	126	P	P	11 55 38.8	-2.0
	0.4nm,0.6s,baz=306,slow=8.4,SNR=6.4						
ASAR	Alice Springs	52.96	130	P	P	11 55 51.5	-2.3
	0.7nm,0.8s,baz=303,slow=6.7,SNR=7.2						

JMA 10 11:46:44.0±0.4**,34.00N×142.61E,h53**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.50	296	P	P	11 47 09.0	-0.1
BSO1				S	S	11 47 27.3	-0.4
BSO2	Boso 2	1.71	297	S	S	11 47 33.9	+1.2
BSO3	Boso 3	1.91	295	P	P	11 47 15.4	+0.6
BSO3				S	S	11 47 38.8	+1.1
BSO4	Boso 4	2.12	298	S	S	11 47 44.5	+1.6
JHJ2	Mitsune	2.50	250	P	P	11 47 23.7	+0.6
JHJ2				S	S	11 47 51.8	-0.6
JIM2	Oshima 3	2.73	286	*e*S	S	11 47 57.3	-1.0
JOD2	Odawara 2	3.17	294	P	P	11 47 32.2	-0.4
JOD2				*e*S	S	11 48 09.2	-0.2
JIZS	Izushimoda	3.17	284	P	P	11 47 32.3	-0.4
JAG	Ashikaga	3.54	314	S	S	11 48 17.7	-1.2
JMM	Marumori	4.13	340	P	P	11 47 45.1	-1.1
JMM				*e*S	S	11 48 29.0	-4.7

IDC 10 11:50:49.0±45.0**,16.21S×175.07W,mb4.0**/3**,mb1 4.2**/3**, mb1mx3.7**/15**,mbtmp4.0**/3**,Error ellipse: s-maj=849.1km s-min=177.0km az=78.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.24	240	P	P	11 58 44.9	-0.9
	0.8nm,0.4s,baz=81,slow=13,SNR=3.2						
WRA	Warramunga Arr	48.10	258	P	P	11 59 30.5	-2.2
	0.4nm,0.6s,baz=96,slow=7.3,SNR=16						
ASAR	Alice Springs	48.34	253	P	P	11 59 32.5	-2.1
	3.4nm,0.5s,baz=88,slow=8.3,SNR=94						

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*TRN **10** 11:55:48.7,18.05N×62.34W,h36^{km},MD3.6*

*NEIC **10** 11:55:48.0,18.08N×62.29W,h28^{km},MD3.6(TRN),After TRN.*

ISC 10 11:55:48.2±0.9**,18.13N**±0.07×**62.35W**±0.04**,h62**^{km}±10^{km}**, n20,**σ**0**^{s}**78**/33**,mb4.1**/1**,3C,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPB	Codrington	0.70	134	*e*P	P	11 56 03.0	+0.3
CPB				*e*S	S	11 56 12.1	-1.4
STAT	Sint Eustatius	0.87	223	*e*P	P	11 56 07.2	+2.4
STAT				*e*S	S	11 56 20.2	+2.9
STAT	Sint Eustatius	0.87	223	*e*P	P	11 56 05.7	+0.8
STAT				*e*S	S	11 56 17.0	-0.3
SKI	Saint Kitts	0.88	205	*e*P	P	11 56 05.2	+0.3
SKI				*e*S	S	11 56 16.6	-0.8
BSK	Brimstone Hill	0.91	211	*e*P	P	11 56 05.9	+0.6
BSK				*e*S	S	11 56 17.9	-0.3
SKTB	Turtle Beach	0.95	196	*e*P	P	11 56 06.3	+0.3
SKTB				*e*S	S	11 56 18.7	-0.5
NVRH	Round Hill, Ne	0.97	194	*e*P	P	11 56 06.5	+0.3
NVRH				*e*S	S	11 56 18.6	-1.0
SABS	Saba	0.99	239	⇑*i*P	P	11 56 07.2	+0.7
SABS				*e*S	S	11 56 20.8	+0.7
SABT	Saba	0.99	239	⇑*i*P	P	11 56 07.2	+0.7
SABT				*e*S	S	11 56 20.8	+0.7
BPA	Boggy Peak	1.18	156	⇑*i*P	P	11 56 09.3	+0.3
BPA				*i* S	S	11 56 24.9	+0.4
SEG	Port Louis	1.90	155	*e*P	P	11 56 18.4	-0.6
SEG				*e*S	S	11 56 41.9	+0.2
BCG	Bois Riant Cap	2.15	161	*e*P	P	11 56 21.8	-0.7
SCG	Saint Claude	2.19	163	*e*P	P	11 56 23.2	+0.1
DEG	La Desirade	2.19	146	*e*P	P	11 56 15.3	-7.8
BBL	Barber's Block	2.73	162	*e*P	P	11 56 30.8	+0.1
CBYP	Canovanas	3.33	273	*e*Pn	P	11 56 38.0	-1.2
CBYP				*e*Sn	S	11 57 16.2	-1.7
SJG	San Juan	3.61	270	*e*Pn	P	11 56 43.0	-0.1
SJG				*e*Sn	S	11 57 24.4	-0.4
BBSR	BB Station	14.34	352	P	P	11 59 04.3	-5.1
LPAZ	La Paz	34.67	190	P	P	12 02 33.8	-0.2
	3.8nm,1.4s,mb4.1						
CLL	Collm	66.94	41	P	P	12 06 37.0	+0.8

IDC 10 12:04:15.1±11.0**,9.19N×92.89E,mb3.6**/3**,mb1 3.7**/3**, mb1mx3.5**/17**,mbtmp3.6**/3**,Error ellipse: s-maj=393.8km s-min=33.6km az=73.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	40.17	14	P	P	12 11 52.9	-1.8
	0.7nm,1.1s,baz=187,slow=8.2,SNR=3.6						
WRA	Warramunga Arr	50.03	126	P	P	12 13 11.1	-2.6
	0.2nm,0.4s,baz=300,slow=9.9,SNR=10						
ASAR	Alice Springs	51.70	130	P	P	12 13 24.9	-1.5
	0.3nm,0.4s,baz=307,slow=6.9,SNR=16						

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*IDC **10** 12:21:26.7±0.9,25.15N×122.46E,mb4.0/6,mb1 4.1/6, mb1mx3.8/22,mbtmp4.0/6,Error ellipse: s-maj=64.8km s-min=19.2km az=70.0*

*BJI **10** 12:21:29.3,24.83N×122.04E,h17^{km},ML3.9*

*TAP **10** 12:21:29.9,25.04N×122.10E,h14^{km},ML4.0*

*NEIC **10** 12:21:29.7±0.5,25.04N×122.19E,h20^{km},mb4.5/4,Error ellipse: s-maj=12.4km s-min=10.3km az=63.0*

ISC 10 12:21:27.0±0.6**,24.95N**±0.06×**122.28E**±0.06**,h14**^{km}**,n15,** σ**1**^{s}**04**/19**,mb4.1**/10**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATO	Taipei	0.72	273	*e*Pg	Pg	12 21 41.6	+0.1
TATO				*e*Sg	Sg	12 21 51.8	+0.6
QZH	Quanzhou	3.34	271	P	Pn	12 22 18.9	-1.1
QZH				S	Sn	12 22 55.1	-4.8
QZH				Smax			
	comp=N,250nm,0.6s						
QZH				Smax			
	comp=E,200nm,0.9s						
SSE	Sheshan	6.20	351	P	Pn	12 23 03.5	+3.1
SSE				S	Sn	12 24 13.2	+1.3
SSE				Smax			
	comp=N,79nm,0.8s						
SSE				Smax			
	comp=E,50nm,0.8s						
SSE	Sheshan	6.20	351	Pn	Pn	12 23 03.5	+3.1
	comp=E,79nm,0.8s						
SSE				Sn	Sn	12 24 13.2	+1.3
ULN	Ulaanbaatar	25.85	336	*e*P	P	12 26 59.9	+0.2
	comp=E,1.8nm,1.0s,mb3.6						
SONM	Songino Array	26.07	335	P	P	12 27 01.5	-0.2
	comp=E,0.9nm,0.8s,mb3.4,baz=145,slow=9.7,SNR=10						
YSS	Yuzh-Sakhalins	27.36	31	P	P	12 27 12.4	-1.1
	comp=E,9.0nm,0.9s,mb4.3						
WRAB	Tennant Creek	46.13	164	*e*P	P	12 29 53.4	+0.5
	comp=E,21nm,1.2s,mb4.9						
WRA	Warramunga Arr	46.13	164	P	P	12 29 54.1	+1.1
	comp=E,2.7nm,0.5s,mb4.5,baz=347,slow=8.8,SNR=46						
BVAR	Borovoye Array	47.72	320	P	P	12 30 04.8	-0.4
	comp=E,2.7nm,0.9s,mb4.3,baz=101,slow=7.6,SNR=9.1						
CHKZ	Chkalovo	47.77	321	*e*P	P	12 30 03.6	-1.8
	comp=E,4.8nm,0.8s,mb4.6						
CHKZ				*e*	pP	12 30 08.0	-1.7
ASAR	Alice Springs	49.62	166	P	P	12 30 21.2	+1.1
	comp=E,1.2nm,0.7s,mb4.0,baz=346,slow=7.3,SNR=12						
FINES	FINESS Array B	71.29	330	P	P	12 32 46.8	-0.9
	comp=E,1.9nm,0.8s,mb4.1,baz=90,slow=9.7,SNR=3.3						
YKA	Yellowknife Ar	81.88	23	P	P	12 33 46.2	-0.7
	comp=E,0.4nm,1.0s,mb3.3,baz=315,slow=4.6,SNR=8.1						
YKA	Yellowknife Ar	81.88	23	P	P	12 33 46.2	-0.7

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*NEIC **10** 12:23:30.3±1.2,24.37S×179.70W,h454^{km}±17^{km}, mb4.5/11,Error ellipse: s-maj=14.5km s-min=12.2km az=107.0*

*IDC **10** 12:23:35.9±2.0,24.58S×179.99E,h497^{km}±21^{km}, mb3.6/12,mb1 3.8/13,mb1mx3.7/17,mbtmp4.4/13,Error ellipse: s-maj=19.1km s-min=13.9km az=167.0*

ISC 10 12:23:35.5±2.0**,24.62S**±0.08×**179.9E**±0.1**,h503**^{km}±23^{km}**, n43,**σ**0**^{s}**93**/40**,mb4.3**/18**,2C-5D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	13.23	38	*e*P	P	12 26 17.7	-10
URZ	Urewera	13.80	189	P	P	12 26 32.2	-1.5
	0.4nm,0.3s,baz=17,slow=19,SNR=4.6						
URZ				S	S	12 29 00.5	+3.3
	1.3nm,0.3s,baz=215,slow=21,SNR=15						
QRZ	Quartz Range	17.30	199	*e*PN	P	12 27 09.5	+0.9
QRZ	Quartz Range	17.30	199	*e*PN	P	12 27 09.5	+0.9
THZ	Tophouse	18.06	197	PN	P	12 27 16.3	+0.3
THZ				*e*SN	S	12 30 13.4	-0.5
THZ	Tophouse	18.06	197	PN	P	12 27 16.3	+0.3
THZ				*e*SN	S	12 30 13.4	-0.5
LTZ	Lake Taylor	19.18	197	*e*PN	P	12 27 26.1	-0.7
LTZ	Lake Taylor	19.18	197	*e*PN	P	12 27 26.1	-0.7
RPZ	Rata Peaks	20.38	199	P	P	12 27 38.2	+0.1
	10.0nm,0.6s,baz=325,slow=0.8,SNR=7.2						
CNB	Canberra Magne	28.41	241	*e*P	P	12 28 51.8	+1.5
	30nm,0.5s,mb5.0						
CTA	Charters Tower	31.39	271	⇓*i*P	P	12 29 16.9	+0.8
	20nm,0.4s,mb4.9						
CTA	Charters Tower	31.39	271	P	P	12 29 16.9	+0.9
	33nm,0.6s,mb5.0,baz=95,slow=11,SNR=84						
CTAO	Charters Tower	31.39	271	*e*P	P	12 29 16.8	+0.8
	30nm,0.5s,mb5.0						
TAU	Tasmania Unive	32.38	228	*e*P	P	12 29 24.6	+0.5
	9.2nm,0.6s,mb4.4						
STKA	Stephens Creek	34.37	249	⇓*i*P	P	12 29 42.0	+1.0
	5.3nm,0.4s,mb4.3						
STKA	Stephens Creek	34.37	249	P	P	12 29 41.9	+0.9
	8.7nm,0.5s,mb4.4,baz=91,slow=9.5,SNR=28						
STKA	Stephens Creek	34.37	249	*e*P	P	12 29 41.8	+0.8
PMG	Port Moresby	34.65	290	P	P	12 29 44.0	+0.5
	9.4nm,0.8s,mb4.3,baz=342,slow=8.3,SNR=4.0						
PMG	Port Moresby	34.65	290	*e*P	P	12 29 43.6	+0.1
	4.9nm,0.6s,mb4.1						
ASAR	Alice Springs	41.83	261	P	P	12 30 42.4	+0.3
	4.4nm,0.5s,mb4.1,baz=88,slow=7.1,SNR=114						
ASPA	Alice Springs	41.83	261	⇑*i*P	P	12 30 42.3	+0.2
WB2	Warramunga Arr	42.26	267	⇓*i*P	P	12 30 45.0	-0.5
WRAB	Tennant Creek	42.26	267	*e*P	P	12 30 44.8	-0.7
	20nm,0.6s,mb4.7						
WRA	Warramunga Arr	42.27	267	P	P	12 30 45.2	-0.4
	12nm,0.5s,mb4.6,baz=99,slow=8.2,SNR=157						
WRA				ScP		12 35 33.0	
	2.3nm,0.7s,baz=101,slow=3.7,SNR=14						
WRA				S	S	12 36 29.9	-0.2
	0.7nm,0.9s,baz=126,slow=16,SNR=4.8						
FORT	Forrest	45.98	250	⇓*i*P	P	12 31 13.4	-1.0
	625nm,0.5s						
KAKA	Kakadu	46.29	276	⇓*i*P	P	12 31 15.9	-1.1
	5.8nm,0.3s,mb4.5						
FITZ	Fitzroy Crossi	50.69	266	⇑*i*P	P	12 31 49.7	-0.3
	21nm,0.7s,mb4.6						
MBWA	Marble Bar	55.16	261	*e*P	P	12 32 20.6	-1.5
	22nm,1.0s,mb4.4						
QSPA	South Pole Qui	65.46	180	*e*P	P	12 33 27.7	-1.5
	4.4nm,0.7s,mb4.2						
MAW	Mawson	77.04	201	P	P	12 34 37.8	+1.0
	1.9nm,0.5s,mb3.9,baz=307,slow=17,SNR=4.4						
NVAR	Mina Array Bea	85.33	44	P	P	12 35 18.3	-1.5
	0.2nm,0.5s,baz=228,slow=8.6,SNR=4.7						
ENH	Enshi	86.78	305	*e*P	P	12 35 27.1	+0.1
	8.0nm,1.1s,mb4.4						
CMAR	Chiang Mai Arr	89.69	290	P	P	12 35 41.9	+1.1
	1.1nm,0.5s,mb4.0,baz=129,slow=3.6,SNR=13						
TXAR	Lajitas Array	90.89	58	P	P	12 35 46.5	+0.4
	0.7nm,0.7s,mb3.7,baz=220,slow=7.1,SNR=10						
ILAR	Eielson Array	92.75	14	P	P	12 35 55.0	+1.2
	1.2nm,1.3s,mb3.8,baz=203,slow=6.9,SNR=4.0						
PDAR	Pinedale Array	93.27	44	P	P	12 35 57.2	+0.5
	0.3nm,0.8s,mb3.4,baz=252,slow=2.9,SNR=3.0						
BVAR	Borovoye Array	120.92	318	PKP	PKPdf	12 41 29.9	+0.1
	0.8nm,0.5s,baz=120,slow=1.9,SNR=6.5						
NOA	NORSAR Array B	142.78	351	PKhKP		12 42 08.2	
	1.9nm,0.9s,baz=298,slow=2.1,SNR=2.8						
HFS	Hagfors	143.23	348	PKhKP		12 42 09.1	

	2.6nm,0.4s,baz=72,slow=4.7,SNR=18						
MALT	Malatya	144.68	302	P	PKPdf	12 42 16.1	+1.9
AKASG	Malin Array Be	145.52	327	PKPbc	PKPbc	12 42 16.6	+0.1
	1.2nm,0.4s,baz=42,slow=4.2,SNR=8.3						
BRTR	Keskin Array B	147.93	306	PKPbc	PKPdf	12 42 24.4	+4.8
	1.3nm,0.6s,baz=145,slow=5.4,SNR=6.1						
BRTR				PKPab	PKPab	12 42 29.6	-0.6
	1.7nm,0.6s,baz=109,slow=3.1,SNR=7.7						
MLR	Muntele Rosu	150.42	321	PKPbc	PKPdf	12 42 28.6	+5.3
	1.1nm,0.5s,baz=278,slow=18,SNR=3.7						

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*NEIC **10** 12:54:02.6±3.9, 18.45N×145.60E, h256^{km}±39^{km}, mb4.0/9, Error ellipse: s-maj=17.4km s-min=6.9km az=90.0*

*IDC **10** 12:54:02.7±5.9, 18.46N×145.60E, h257^{km}±60^{km}, mb3.3/13, mb1 3.5/14, mb1mx3.4/24, mbtmp4.0/14, Error ellipse: s-maj=23.2km s-min=10.6km az=84.0*

ISC 10 12:54:00.7±5.2**, 18.45N**±0.06×**145.6E**±0.2**, h251**^{km}±52^{km}**, n27, σ0^{s}82**/27**, mb3.7**/21**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	17.99	301	P	P	12 57 54.9	-0.4
	1.7nm,0.3s,baz=73,slow=23,SNR=2.8						
ASAJ	Asahikawa	25.71	355	P	P	12 59 09.5	-0.3
	2.3nm,0.6s,mb4.0,baz=180,slow=9.1,SNR=2.7						
PMG	Port Moresby	27.73	177	P	P	12 59 28.7	+0.4
	8.1nm,0.8s,mb4.4,baz=249,slow=8.8,SNR=2.7						
YSS	Yuzh-Sakhalins	28.52	356	P	P	12 59 34.5	-0.6
	9.0nm,0.7s,mb4.5						
WRAB	Tennant Creek	39.70	197	eP	P	13 01 10.7	+0.3
	6.6nm,0.6s,mb4.2						
WB2	Warramunga Arr	39.71	197	eP	P	13 01 10.3	-0.2
WRA	Warramunga Arr	39.71	197	P	P	13 01 10.6	+0.1
	1.8nm,0.5s,mb3.8,baz=17,slow=8.8,SNR=44						
MA2	Magadan	41.24	4	P	P	13 01 25.1	+2.4
	5.3nm,0.7s,mb4.1						
FITZ	Fitzroy Crossi	41.27	209	eP	P	13 01 23.8	+0.5
	5.1nm,0.6s,mb4.1						
SONM	Songino Array	43.25	322	P	P	13 01 38.6	-0.4
	0.1nm,0.4s,mb2.6,baz=128,slow=4.9,SNR=6.9						
ASAR	Alice Springs	43.38	196	P	P	13 01 39.9	-0.5
	0.7nm,0.4s,mb3.5,baz=13,slow=6.0,SNR=23						
ASPA	Alice Springs	43.38	196	eP	P	13 01 40.9	+0.5
CMAR	Chiang Mai Arr	44.12	278	P	P	13 01 48.0	+1.7
	0.3nm,0.4s,mb3.0,baz=73,slow=6.9,SNR=4.5						
MBWA	Marble Bar	46.79	214	eP	P	13 02 06.9	-0.4
	6.9nm,0.8s,mb4.0						
STKA	Stephens Creek	50.18	184	P	P	13 02 31.6	-1.4
	0.9nm,0.5s,mb3.4,baz=9.5,slow=8.7,SNR=5.4						
STKA	Stephens Creek	50.18	184	eP	P	13 02 31.1	-1.9
BILL	Bilibino	51.28	10	eP	P	13 02 40.5	-0.1
	1.7nm,0.8s,mb3.5						
ZAL	Zalesovo	58.14	323	P	P	13 03 29.9	-0.1
	0.9nm,0.3s,mb3.9,baz=173,slow=5.0,SNR=2.9						
ILAR	Eielson Array	63.92	26	P	P	13 04 07.2	-1.3
	0.5nm,0.9s,mb3.2,baz=255,slow=5.6,SNR=5.3						
BVAR	Borovoye Array	66.58	320	P	P	13 04 25.0	-0.7
	1.4nm,0.6s,mb3.8,baz=100,slow=9.0,SNR=9.6						
INK	Inuvik	69.65	23	P	P	13 04 44.2	-0.1
	0.5nm,0.5s,mb3.4,baz=251,slow=8.8,SNR=6.8						
INK	Inuvik	69.65	23	eP	P	13 04 44.2	-0.1
	1.4nm,0.8s,mb3.6						
YKA	Yellowknife Ar	78.27	28	P	P	13 05 34.0	+0.1
	0.5nm,0.8s,mb3.2,baz=291,slow=5.4,SNR=6.7						
YKA	Yellowknife Ar	78.27	28	P	P	13 05 34.0	+0.1
RES	Resolute Bay	79.69	14	eP	P	13 05 41.2	-0.1
	1.9nm,1.0s,mb3.7						
NVAR	Mina Array Bea	83.40	52	P	P	13 06 02.8	+1.6
	0.6nm,0.6s,mb3.5,baz=276,slow=5.7,SNR=5.7						
FCC	Fort Churchill	88.94	27	P	P	13 06 27.6	+0.1
	2.0nm,1.0s,mb3.9						

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*MOS **10** 13:16:51.7±1.3, 31.32N×140.34E, h34^{km}, mb4.4/20, Error ellipse: s-maj=22.3km s-min=11.1km az=84.8*

*NIED **10** 13:17:00, 31.60N×140.50E, h83^{km}, Mw4.3 Best double couple: $M_0$3.3×10^{15} NP1:ϕ_s334°, δ80°, λ-117°. NP2: ϕ_s225°, δ28°, λ-21°.*

*NEIC **10** 13:17:00.7±1.9, 31.31N×140.17E, h97^{km}±16^{km}, mb4.2/13, Error ellipse: s-maj=14.5km s-min=10.6km az=115.0*

*IDC **10** 13:17:01.6±0.6, 31.38N×140.14E, h102^{km}±5^{km}, mb3.8/16, mb1 4.0/18, mb1mx3.9/25, mbtmp4.1/18, Error ellipse: s-maj=16.6km s-min=7.4km az=76.0*

*JMA **10** 13:17:02.6±0.2, 31.59N×140.52E, h107^{km}±3^{km}, M4.2*

ISC 10 13:17:00.2±0.5**, 31.40N**±0.04×**140.34E**±0.08**, h105**^{km}±4^{km}**, h104**^{km}±2.6^{km}**:pP-P, n73, σ1^{s}35**/80**, mb4.1**/30**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.76	346	P	P	13 17 31.5	+1.1
JHJ2				S	S	13 17 53.3	+0.4
JHJ	Hachijo jima 2	1.77	345	P	P	13 17 31.4	+0.8
	274nm,0.3s,baz=74,slow=20,SNR=36						
JHJ				S	S	13 17 52.8	-0.4
	510nm,0.3s,baz=159,slow=6.1,SNR=9.7						
BSO1	Boso 1	3.29	9	P	P	13 17 50.0	-1.0
BSO1				S	S	13 18 27.1	-2.3
TK01	Tokai 1	3.31	316	P	P	13 17 53.1	+1.9
TK01				S	S	13 18 32.0	+2.2
JIM2	Oshima 3	3.39	347	P	P	13 17 52.5	+0.1
JIM2				S	S	13 18 30.3	-1.7
JOD2	Odawara 2	3.99	345	P	P	13 18 00.8	+0.3
JIE	Ise	4.27	315	P	P	13 18 05.8	+1.5
JYN	Shimob	4.35	340	P	P	13 18 06.6	+1.1
CBIJ	Chichi jima	4.59	159	P	P	13 18 09.2	+0.6
	14nm,0.3s,baz=305,slow=21,SNR=11						
CBIJ				S	S	13 19 00.7	-0.5
	19nm,0.3s,baz=106,slow=23,SNR=6.6						
JRY	Ryogami san	4.75	346	P	P	13 18 11.5	+0.5
JAG	Ashikaga	5.06	352	P	P	13 18 13.6	-1.6
MAJO	Matsushiro	5.42	342	eP	P	13 18 19.8	-0.2
MAT	Matsushiro	5.42	342	P	P	13 18 20.1	+0.1
MAT				eS	S	13 19 21.1	-0.6
MAT	Matsushiro	5.42	342	P	P	13 18 20.5	+0.5
JMK	Ichinoseki	7.57	5	P	P	13 18 46.4	-3.0
ASAJ	Asahikawa	12.82	7	P	P	13 19 55.8	-3.8
ASAJ				S	S	13 22 10.4	-10
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	Asahikawa	12.82	7	P	P	13 19 55.8	-3.8
	comp=N,1.2nm,0.3s,baz=274,slow=21,SNR=8.4						
ASAJ				S	S	13 22 10.4	-10
	comp=N,0.5nm,0.3s,baz=309,slow=30,SNR=3.6						
ULN	Ulaanbaatar	30.16	313	P	P	13 23 01.3	-1.0
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ULN	Ulaanbaatar	30.16	313	P	P	13 23 01.2	-1.1
	comp=Z,0.9nm,0.5s,mb3.7						
SONM	Songino Array	30.56	312	P	P	13 23 05.2	-0.7
	comp=Z,0.5nm,0.5s,mb3.5,baz=117,slow=8.0,SNR=11						
TLY	Talaya	33.63	318	P	P	13 23 25.7	-6.8
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
TLY	Talaya	33.63	318	P	P	13 23 25.7	-6.8
	comp=Z,3.6nm,0.6s,mb4.4						
CMAR	Chiang Mai Arr	39.46	261	P	P	13 24 22.0	+0.1
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	Chiang Mai Arr	39.46	261	P	P	13 24 21.9	+0.1
	comp=Z,0.7nm,0.5s,mb3.7,baz=56,slow=7.3,SNR=5.7						
BILL	Bilibino	39.68	15	eP	P	13 24 23.9	+0.8
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
BILL	Bilibino	39.68	15	eP	P	13 24 23.9	+0.8
	comp=Z,1.9nm,0.7s,mb4.0						
KURK	Kurchatov	48.87	312	eP	P	13 25 34.7	-2.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KURK	Kurchatov	48.87	312	eP	P	13 25 34.7	-2.2
	comp=Z,2.9nm,0.7s,mb4.3						
WRAB	Tennant Creek	51.36	187	eP	P	13 25 54.2	-2.1
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
WRAB	Tennant Creek	51.36	187	eP	P	13 25 54.2	-2.1
	comp=Z,7.6nm,0.5s,mb5.0						
WRA	Warramunga Arr	51.37	187	P	P	13 25 54.4	-2.0
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WRA				pmax	pmax		
	comp=N,1.0nm,1.1s						
WRA	Warramunga Arr	51.37	187	P	P	13 25 54.4	-2.0
	comp=N,2.5nm,0.4s,mb4.6,baz=5.8,slow=7.6,SNR=36						
WRA				ScP		13 30 55.7	
	comp=N,1.0nm,1.1s,baz=0.1,slow=4.5,SNR=6.1						
BVAR	Borovoye Array	53.82	315	P	P	13 26 12.6	-1.5
	comp=N,0.4nm,0.3s,mb3.9,baz=92,slow=7.7,SNR=6.2						
MCK	McKinley	53.85	31	P	P	13 26 10.9	-3.3
MCK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
MCK	McKinley	53.85	31	P	P	13 26 10.9	-3.3
	comp=Z,6.0nm,1.3s,mb4.5						
COLA	College	54.35	30	P	P	13 26 15.2	-2.6
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
COLA	College	54.35	30	P	P	13 26 15.2	-2.7
	comp=Z,3.0nm,0.7s,mb4.4						
ILAR	Eielson Array	54.76	30	P	P	13 26 20.3	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	54.76	30	P	P	13 26 20.3	-0.5
	comp=Z,1.3nm,0.7s,mb4.1,baz=268,slow=6.2,SNR=24						
ILAR				pP	pP	13 26 46.6	+0.4
	comp=Z,0.9nm,0.7s,baz=268,slow=7.0,SNR=4.4						
ASAR	Alice Springs	55.10	187	P	P	13 26 21.9	-2.0
	comp=Z,0.8nm,0.5s,mb4.0,baz=4.7,slow=7.3,SNR=18						
INK	Inuvik	59.82	25	eP	P	13 26 56.3	-0.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	Inuvik	59.82	25	eP	P	13 26 56.3	-0.1
	comp=Z,2.6nm,0.5s,mb4.5						
RES	Resolute Bay	68.27	14	eP	P	13 27 51.2	0.0
RES				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
RES	Resolute Bay	68.27	14	eP	P	13 27 51.2	0.0
	comp=Z,1.8nm,0.7s,mb4.0						
ARCES	ARCESS Array B	68.96	340	P	P	13 27 55.5	0.0
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES	ARCESS Array B	68.96	340	P	P	13 27 55.5	0.0
	comp=Z,6.2nm,0.9s,mb4.4,baz=70,slow=6.6,SNR=10						
YKA	Yellowknife Ar	69.14	29	P	P	13 27 56.6	-0.2
YKA				*PP	pP	13 28 23.9	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	69.14	29	P	P	13 27 56.6	-0.2
	comp=Z,0.6nm,0.6s,mb3.6,baz=294,slow=5.9,SNR=21						
YKA				pP	pP	13 28 23.9	+0.6
	comp=Z,0.3nm,0.5s,baz=295,slow=6.4,SNR=4.4						
FINES	FINESS Array B	73.39	333	P	P	13 28 22.3	+0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	73.39	333	P	P	13 28 22.2	+0.3
	comp=Z,1.7nm,0.5s,mb4.2,baz=61,slow=6.0,SNR=27						
FINES				pP	pP	13 28 49.0	+0.1
	comp=Z,5.0nm,1.1s,baz=90,slow=5.7,SNR=1.4						
WALA	Waterton Lakes	76.24	41	P	P	13 28 37.9	-0.7
	comp=Z,2.4nm,0.7s,mb4.0						
CMB	Columbia Colle	77.92	53	eP	P	13 28 49.8	+1.6
CMB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
CMB	Columbia Colle	77.92	53	eP	P	13 28 49.8	+1.6
	comp=Z,2.2nm,0.6s,mb4.1						
AKASG	Malin Array Be	78.21	323	P	P	13 28 48.4	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	78.21	323	P	P	13 28 48.4	-1.1
	comp=Z,0.8nm,0.3s,mb3.9,baz=50,slow=5.6,SNR=6.2						
HFS	Hagfors	78.84	336	P	P	13 28 52.9	+0.1
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS	Hagfors	78.84	336	P	P	13 28 52.9	+0.1
	comp=Z,2.6nm,0.6s,mb4.3,baz=44,slow=3.4,SNR=12						
HLID	Hailey	78.90	46	eP	P	13 28 55.4	+2.0
	comp=Z,2.5nm,1.0s,mb4.0						
NB2	NORSAR Subarra	79.03	337	P	P	13 28 54.1	+0.4
	comp=Z,1.1nm,0.4s,mb4.0,baz=43,slow=5.0						
NOA	NORSAR Array B	79.03	337	P	P	13 28 54.1	+0.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	79.03	337	P	P	13 28 54.1	+0.4
	comp=Z,1.2nm,0.5s,mb4.0,baz=43,slow=5.4,SNR=4.2						
NVAR	Mina Array Bea	79.13	52	P	P	13 28 57.1	+2.3
	comp=Z,3.5nm,1.0s,mb4.2,baz=293,slow=5.7,SNR=12						
HWUT	Hardware Ranch	81.73	46	eP	P	13 29 10.5	+2.0
	comp=Z,3.9nm,1.0s,mb4.2						
PDAR	Pinedale Array	82.28	44	P	P	13 29 12.7	+1.4
	comp=Z,0.9nm,0.8s,mb3.6,baz=310,slow=3.2,SNR=6.6						
FRB	Frobisher Bay	82.45	13	P	P	13 29 12.7	+1.0
FRB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FRB				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FRB	Frobisher Bay	82.45	13	P	P	13 29 12.7	+0.9
	comp=Z,1.7nm,0.7s,mb4.0,baz=3.3,slow=4.3,SNR=4.9						
FRB				pP	pP	13 29 39.9	+0.8
	comp=Z,1.1nm,0.4s,baz=331,slow=7.4,SNR=3.2						
DAU	Daniels Canyon	82.61	47	eP	P	13 29 15.4	+2.4
MLR	Muntele Rosu	83.10	320	P	P	13 29 15.4	0.0
MLR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MLR	Muntele Rosu	83.10	320	P	P	13 29 15.4	0.0
	comp=Z,0.7nm,0.4s,mb3.8,baz=24,slow=16,SNR=3.3						
PV10	Paradox Valley	85.19	48	eP	P	13 29 28.5	+2.4
TXAR	Lajitas Array	94.28	52	P	P	13 30 11.7	+2.7
	comp=Z,5.0nm,1.0s,mb4.8,baz=293,slow=2.8,SNR=25						
TXAR				pP	pP	13 30 37.2	+0.3
	comp=Z,0.2nm,0.3s,baz=164,slow=30,SNR=6.8						
LPAZ	La Paz	150.04	66	PKIKP	PKPdf	13 36 43.2	+9.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LPAZ	La Paz	150.04	66	PKPbc	PKPdf	13 36 43.1	+9.3
	comp=Z,1.0nm,0.4s,baz=320,slow=4.1,SNR=3.7						

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*BJI **10** 13:38:45.7, 21.38N×143.41E, h363^{km}, mB5.0, mb4.4*

*JMA **10** 13:38:45.5±0.3, 21.65N×143.67E, h329^{km}, M4.9*

*IDC **10** 13:38:46.5±1.2, 21.50N×143.02E, h326^{km}±11^{km}, mb4.1/26, mb1 4.2/28, mb1mx4.2/34, mbtmp4.8/28, Error ellipse: s-maj=12.5km s-min=6.9km az=90.0*

*NEIC **10** 13:38:47.1±0.9, 21.50N×143.08E, h334^{km}±9^{km}, mb4.5/46, Error ellipse: s-maj=5.2km s-min=4.2km az=79.0*

ISC 10 13:38:45.3±0.6**, 21.48N**±0.03×**143.11E**±0.05**, h327**^{km}±5^{km}**, n143, σ1^{s}00**/154**, mb4.4**/75**, 2C-4D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	5.19	351	P	P	13 40 06.2	-0.4
JHHJ				eS	S	13 41 09.5	-1.0
CBIJ	Chichi jima	5.65	352	P	P	13 40 11.6	-0.4
	27nm,0.3s,baz=183,slow=4.4,SNR=68						
CBIJ				S	S	13 41 20.8	+0.9
	20nm,0.3s,baz=120,slow=23,SNR=5.2						
CBIJ	Chichi jima	5.65	352	P	P	13 40 11.3	-0.6
GUMO	Guam	8.03	168	ePn	P	13 40 41.5	+1.3
	314nm,1.4s						
JHJ	Hachijo jima 2	11.96	346	P	P	13 41 27.1	-1.0
	16nm,0.3s,baz=72,slow=19,SNR=4.9						
JHJ				S	S	13 43 38.5	+1.7
	9.5nm,0.3s,baz=264,slow=15,SNR=2.9						
BSO3	Boso 3	13.46	351	P	P	13 41 45.9	-0.3
BSO3				eS	S	13 44 13.4	+3.6
JWZ	Kozaga	13.67	333	P	P	13 41 49.7	+1.1
BSO4	Boso 4	13.67	350	P	P	13 41 48.3	-0.4
BSO4				eS	S	13 44 15.6	+1.1
JIE	Ise	14.04	338	P	P	13 41 53.4	+0.5
JOD2	Odawara 2	14.17	346	P	P	13 41 54.1	-0.3
JOD2				eS	S	13 44 24.9	-0.2
JTO	Tosashimizu	14.57	323	P	P	13 42 00.9	+2.1
JNY	Yasuok	14.57	343	P	P	13 41 59.5	+0.7
JHU	Hanno	14.70	348	P	P	13 41 58.7	-1.5
JHU				eS	S	13 44 33.8	-2.2
JRY	Ryogami san	14.94	347	P	P	13 42 01.9	-0.9
JRY				eS	S	13 44 40.0	-0.9
JAG	Ashikaga	15.22	349	P	P	13 42 04.3	-1.7
JAG				eS	S	13 44 43.5	-3.2
JHO	Hitachi	15.23	352	P	P	13 42 05.4	-0.7
JHO				eS	S	13 44 47.1	+0.2
MAJO	Matsushiro	15.60	345	eP	P	13 42 07.7	-2.4
	18nm,0.6s						
MAT	Matsushiro	15.60	345	P	P	13 42 08.7	-1.3
MAT				S	S	13 44 53.4	-0.8
MAT	Matsushiro	15.60	345	P	P	13 42 08.5	-1.5
KS15	Wonju Array Si	20.66	324	eP	P	13 43 01.6	+0.4
TGY	Tagaytay City	22.33	254	P	P	13 43 20.4	+2.9
	64nm,0.3s,mb5.3,baz=222,slow=11,SNR=3.5						
ASAJ	Asahikawa	22.57	359	P	P	13 43 20.2	+0.7
	6.5nm,0.6s,mb4.0,baz=116,slow=7.2,SNR=5.9						
NJ2	Nanjing	24.03	301	eP	P	13 43 34.9	+1.8
NJ2				PCP	PcP	13 47 05.0	-0.7
NJ2				S	S	13 47 26.0	+1.4
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,770nm,4.5s						
NJ2				LR	LR		
	comp=N,530nm,15.0s						
NJ2				LR	LR		
	comp=E,1µm,15.1s						
NJ2				LR	LR		
	comp=Z,570nm,13.8s						
MDJ	Mudanjiang	25.63	337	eP	P	13 43 47.5	0.0
	comp=Z,8.5nm,0.9s,mb4.0						
CN2	Changchun	26.66	331	eP	P	13 43 58.5	+1.7
CN2				eS	S	13 48 09.6	+2.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
PMG	Port Moresby	30.95	172	P	P	13 44 33.9	-1.0
	comp=Z,7.5nm,0.7s,mb4.0,baz=29,slow=6.4,SNR=3.9						
PMG	Port Moresby	30.95	172	eP	P	13 44 33.5	-1.4
	comp=Z,11nm,0.9s,mb4.1						
ENH	Enshi	31.40	293	eP	P	13 44 37.1	-1.5
	comp=Z,4.3nm,0.7s,mb3.8						
HHC	Hu-ho-hao-te	32.93	313	eP	P	13 44 56.4	+4.9
HHC				AMB	AMB		
	comp=Z,4.0nm,1.7s,mb3.4						
HIA	Hailar	33.37	332	eP	P	13 44 54.6	-0.6
	comp=Z,11nm,0.9s,mb4.1						
GYA	Guiyang	33.59	286	⇑iP	P	13 44 58.2	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.2						
KMI	Kunming	37.16	284	P	P	13 45 27.5	+0.2
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb3.8						
KMI	Kunming	37.16	284	P	P	13 45 27.5	+0.2
	comp=Z,7.0nm,1.2s,mb3.8						
MA2	Magadan	38.45	6	eP	P	13 45 37.1	-0.4
	comp=Z,13nm,0.7s,mb4.3						
FX1	Attu Island--F	38.91	29	eP	P	13 45 43.0	+1.6
ULN	Ulaanbaatar	39.09	321	eP	P	13 45 42.9	0.0
	comp=Z,2.6nm,0.7s,mb3.6						
SONM	Songino Array	39.46	321	P	P	13 45 46.1	+0.1
	comp=Z,1.5nm,0.4s,mb3.6,baz=126,slow=6.3,SNR=31						
GTA	Gaotai	40.94	306	eP	P	13 45 58.7	+0.5
GTA				AP	pP	13 47 06.9	+2.9
GTA				PP	PP	13 47 42.0	+2.1
GTA				XP	sP	13 47 47.5	+7.1
GTA				PCP	PcP	13 47 52.5	+0.3
GTA				S	S	13 51 44.2	-1.2
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.5						
GTA				AMB	AMB		
	comp=Z,88nm,4.6s						
GTA				LR	LR		
	comp=N,174nm,13.7s						
GTA				LR	LR		
	comp=E,201nm,10.3s						
GTA				LR	LR		
	comp=Z,178nm,15.2s						
CTA	Charters Tower	41.43	176	⇑iP	P	13 46 02.8	+0.5
	comp=Z,4.6nm,0.4s,mb4.1						
CTA	Charters Tower	41.43	176	P	P	13 46 02.7	+0.3
	comp=Z,7.3nm,0.6s,mb4.1,baz=19,slow=8.7,SNR=16						
CTAO	Charters Tower	41.43	176	eP	P	13 46 02.3	-0.1
	comp=Z,7.5nm,0.6s,mb4.1						
CM31	Chiang Mai Arr	41.52	274	eP	P	13 46 03.9	+0.7
	comp=Z,8.1nm,0.5s,mb4.1						
CMAR	Chiang Mai Arr	41.52	274	P	P	13 46 04.2	+1.0
	comp=Z,5.2nm,0.7s,mb3.8,baz=74,slow=6.5,SNR=41						
YAK	Yakutsk	41.56	351	eP	P	13 46 01.5	-1.5
	comp=Z,82nm,0.7s,mb5.0						
WRAB	Tennant Creek	42.04	192	eP	P	13 46 06.9	-0.5
	comp=Z,24nm,0.6s,mb4.5						
WB2	Warramunga Arr	42.05	192	⇓iP	P	13 46 07.1	-0.4
WB2				eS	S	13 51 59.7	-2.2
WRA	Warramunga Arr	42.06	192	P	P	13 46 07.2	-0.3
	comp=Z,7.4nm,0.4s,mb4.2,baz=17,slow=9.3,SNR=213						
WRA				ScP		13 51 16.1	
	comp=Z,1.3nm,0.8s,baz=13,slow=4.6,SNR=11						
WRA				S	S	13 52 00.3	-1.6
	comp=Z,0.8nm,0.8s,baz=357,slow=13,SNR=6.9						
TLY	Talaya	42.90	324	eP	P	13 46 14.0	+0.3
	comp=Z,4.7nm,0.8s,mb3.7						
FITZ	Fitzroy Crossi	42.90	205	eP	P	13 46 14.5	+0.2
	comp=Z,22nm,3.1s						
ASAR	Alice Springs	45.76	192	P	P	13 46 36.1	-0.8
	comp=Z,2.5nm,0.4s,mb3.7,baz=12,slow=7.1,SNR=56						
ASAR				ScP		13 51 31.0	
	comp=Z,0.6nm,0.7s,baz=359,slow=3.9,SNR=5.9						
ASAR				S	S	13 52 53.1	-1.8
	comp=Z,0.9nm,0.8s,baz=16,slow=20,SNR=7.8						
ASPA	Alice Springs	45.77	192	eP	P	13 46 36.4	-0.5
ASPA				eS	S	13 52 51.9	-2.9
LSA	Lhasa	47.25	291	eP	P	13 46 49.8	+1.5
	comp=Z,9.8nm,0.7s,mb4.2						
BILL	Bilibino	48.74	11	eP	P	13 46 58.8	-0.4
	comp=Z,41nm,0.6s,mb4.8						
WMQ	Urumqi	50.66	310	P	P	13 47 14.2	+0.3
WMQ				S	S	13 54 03.0	+0.5
WMQ				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.3						
JIRN	Jiri	51.75	289	eP	P	13 47 22.6	+0.4
	comp=Z,42nm,0.7s,mb4.9						
GUN	Gumba	52.00	289	eP	P	13 47 24.6	+0.6
	comp=Z,28nm,0.6s,mb4.7						
PKI	Pulchoki	52.45	289	eP	P	13 47 26.6	-0.7
	comp=Z,18nm,0.7s,mb4.5						
KKN	Kakani	52.54	289	eP	P	13 47 28.0	+0.1
	comp=Z,7.6nm,0.3s,mb4.5						
DMN	Daman	52.71	289	eP	P	13 47 29.1	-0.1
	comp=Z,12nm,0.6s,mb4.4						
STKA	Stephens Creek	53.08	182	eP	P	13 47 31.1	-0.7
	comp=Z,5.3nm,0.5s,mb4.1						
STKA	Stephens Creek	53.08	182	P	P	13 47 31.2	-0.6
	comp=Z,8.3nm,0.7s,mb4.2,baz=354,slow=6.9,SNR=35						
GKN	Gorkha	53.08	289	eP	P	13 47 31.8	-0.1
	comp=Z,73nm,1.0s,mb5.0						
KOLN	Koldanda	54.02	289	eP	P	13 47 38.7	+0.1
	comp=Z,20nm,0.7s,mb4.6						
ZAL	Zalesovo	54.34	322	P	P	13 47 39.5	-1.1
	comp=Z,5.1nm,0.6s,mb4.1,baz=2.4,slow=7.9,SNR=34						
ZAL				PcP	PcP	13 48 38.5	-1.7
	comp=Z,3.8nm,0.4s,baz=347,slow=3.6,SNR=8.5						
ZAL	Zalesovo	54.34	322	P	P	13 47 39.5	-1.1
ZAL				PcP	PcP	13 48 38.5	-1.7
KURK	Kurchatov	57.58	317	eP	P	13 48 02.6	-0.8
	comp=Z,24nm,0.8s,mb4.6						
KDAK	Kodiak Island	58.41	35	eP	P	13 48 08.3	-0.7
	comp=Z,16nm,0.5s,mb4.6						
KZA	Kyzart	59.71	307	P	P	13 48 19.8	+1.7
	SNR=13						
IMA	Indian Mountai	59.76	25	eP	P	13 48 18.5	+0.4
	comp=Z,85nm,0.9s,mb5.2						
KBK	Karagaybulak	59.91	308	P	P	13 48 20.1	+0.6
	SNR=7.7						
AAK	Ala-Archa	60.24	308	eP	P	13 48 21.0	-0.7
	comp=Z,3.2nm,0.7s,mb3.9						
UCH	Uchtor	60.25	307	P	P	13 48 23.2	+1.5
	SNR=6.7						
EKS2	Erkin-Say	60.77	308	P	P	13 48 25.7	+0.5
	SNR=5.1						
AML	Almayashu	60.86	307	P	P	13 48 27.1	+1.4
	SNR=9.8						
MCK	McKinley	61.21	28	eP	P	13 48 26.9	-0.8
	comp=Z,10nm,0.8s,mb4.3						
COLA	College	61.87	27	eP	P	13 48 31.2	-0.9
	comp=Z,13nm,0.7s,mb4.6						
ILAR	Eielson Array	62.26	27	P	P	13 48 33.1	-1.6
	comp=Z,9.2nm,0.6s,mb4.5,baz=255,slow=6.2,SNR=160						
THY	Trims Highway	62.57	29	eP	P	13 48 35.2	-1.5
CHKZ	Chkalovo	62.66	320	eP	P	13 48 36.2	-1.1
	comp=Z,15nm,0.9s,mb4.5						
CHKZ				ePcP	PcP	13 49 11.0	-2.1
TAU	Tasmania Unive	64.19	177	P	P	13 48 45.0	-2.4
	comp=Z,95nm,1.8s,mb5.1						
DAWY	Dawson	65.44	28	eP	P	13 48 55.2	+0.2
URZ	Urewera	67.46	152	P	P	13 49 07.3	-0.9
	comp=Z,2.9nm,0.8s,mb4.1,baz=173,slow=20,SNR=2.7						

INK	Inuvik	67.79	24	P	P	13 49 09.4	-0.3
	comp=Z,8.9nm,0.6s,mb4.6,baz=285,slow=6.1,SNR=58						
INK	Inuvik	67.79	24	eP	P	13 49 08.7	-1.0
	comp=Z,16nm,1.0s,mb4.7						
RPZ	Rata Peaks	69.77	159	P	P	13 49 22.6	+0.5
	comp=Z,8.3nm,0.7s,mb4.6,baz=108,slow=16,SNR=2.8						
RAR	Rarotonga	70.07	124	P	P	13 49 26.1	+1.7
	comp=Z,13nm,0.5s,mb4.9,baz=110,slow=20,SNR=4.2						
DLBC	Dease Lake	70.34	34	eP	P	13 49 26.3	+1.0
YKW3	Yellowknife Ar	76.65	28	eP	P	13 50 01.2	-0.5
YKA	Yellowknife Ar	76.68	28	P	P	13 50 01.6	-0.2
	comp=Z,16nm,0.5s,mb5.0,baz=291,slow=5.6,SNR=326						
YKA	Yellowknife Ar	76.68	28	P	P	13 50 01.6	-0.2
RES	Resolute Bay	77.30	13	eP	P	13 50 04.7	-0.3
	comp=Z,6.8nm,0.7s,mb4.5						
KEV	Kevo	78.54	341	ep	P	13 50 11.3	-0.5
HUMO	Hull Mountain	78.56	49	eP	P	13 50 12.8	+0.4
	comp=Z,3.2nm,0.6s,mb4.2						
YBH	Yreka Blue Hor	79.01	50	P	P	13 50 16.1	+1.3
	comp=Z,6.3nm,0.8s,mb4.4,baz=286,slow=1.6,SNR=14						
ARCES	ARCESS Array B	79.10	341	P	P	13 50 15.0	+0.3
	comp=Z,12nm,0.5s,mb4.9,baz=80,slow=9.0,SNR=115						
ARE0	ARCESS Array S	79.10	341	eP	P	13 50 14.5	-0.3
JOF	Joensuu	80.48	334	ep	P	13 50 21.1	-1.0
NEW	Newport	80.48	42	P	P	13 50 23.2	+0.8
	comp=Z,9.3nm,0.6s,mb4.7,baz=314,slow=4.0,SNR=10						
NEW	Newport	80.48	42	eP	P	13 50 22.5	0.0
	comp=Z,12nm,0.7s,mb4.7						
EDM	Edmonton	80.81	36	eP	P	13 50 23.9	-0.1
OBN	Obninsk	81.62	326	P	P	13 50 27.9	-0.4
	comp=Z,31nm,1.1s,mb5.0						
BMO	Blue Mountains	81.63	45	eP	P	13 50 28.9	+0.5
	comp=Z,8.9nm,0.8s,mb4.7						
CMB	Columbia Colle	81.95	52	eP	P	13 50 30.8	+0.5
	comp=Z,9.0nm,0.8s,mb4.7						
WALA	Waterton Lakes	82.15	40	eP	P	13 50 32.2	+1.1
	comp=Z,12nm,0.9s,mb4.7						
KIV	Kislovodsk	82.52	314	P	P	13 50 34.5	+1.4
	comp=Z,13nm,0.9s,mb4.8						
KAF	Kangasniemi	82.88	335	ep	P	13 50 33.2	-1.3
	comp=Z,5.2nm,0.7s,mb4.5,baz=55,slow=4.8						
NVAR	Mina Array Bea	83.33	51	P	P	13 50 38.4	+1.2
	comp=Z,7.0nm,0.8s,mb4.5,baz=277,slow=5.7,SNR=48						
NVAR	Mina Array Bea	83.33	51	P	P	13 50 38.4	+1.2
FINES	FINESS Array B	83.34	334	P	P	13 50 36.2	-0.6
	comp=Z,9.5nm,0.7s,mb4.8,baz=73,slow=5.7,SNR=77						
CHMT	Chamberlain Mo	83.42	42	eP	P	13 50 37.7	+0.2
HLID	Hailey	84.05	46	eP	P	13 50 41.6	+0.8
	comp=Z,5.5nm,1.0s,mb4.3						
TPH	Tonopah	84.25	51	eP	P	13 50 42.4	+0.4
	comp=Z,7.6nm,0.9s,mb4.5						
BOZ	Bozeman (W)	84.98	43	eP	P	13 50 46.0	+0.7
	comp=Z,6.2nm,0.7s,mb4.5						
QLMT	Earthquake Lak	85.46	43	eP	P	13 50 49.0	+1.3
YMR	Madison River	85.83	43	eP	P	13 50 51.2	+1.7
SUMG	Summit	86.18	0	eP	P	13 50 51.7	+1.2
	comp=Z,17nm,0.8s,mb4.9						
SPUT	South Promonto	86.31	47	eP	P	13 50 52.3	+0.5
HWUT	Hardware Ranch	86.78	46	eP	P	13 50 54.5	+0.4
	comp=Z,5.1nm,1.0s,mb4.3						
NEN	Nelson	86.97	53	eP	P	13 50 55.9	+0.8
LDFC	Landfair	87.00	54	P	P	13 50 55.8	+0.4
FCC	Fort Churchill	87.26	26	eP	P	13 50 55.1	-0.8
	comp=Z,7.8nm,0.8s,mb4.6						
BW06	Boulder Array	87.59	45	P	P	13 50 58.2	+0.2
PDAR	Pinedale Array	87.59	45	P	P	13 50 58.3	+0.3
	comp=Z,0.7nm,0.5s,mb3.8,baz=151,slow=1.3,SNR=16						
AKASG	Malin Array Be	87.64	324	P	P	13 50 56.6	-1.4
	comp=Z,1.0nm,0.4s,mb4.0,baz=51,slow=5.3,SNR=4.8						
MSU	Marysvale	87.70	49	eP	P	13 50 59.3	+0.7
SRU	San Rafael	88.59	48	eP	P	13 51 02.9	+0.2
HFS	Hagfors	88.90	337	P	P	13 51 02.2	-1.4
	comp=Z,2.7nm,0.4s,mb4.4,baz=90,slow=3.0,SNR=17						
NB2	NORSAR Subarra	89.12	339	P	P	13 51 03.5	-1.1
	comp=Z,1.6nm,0.7s,mb4.0,baz=49,slow=4.5						
NB2	NORSAR Subarra	89.12	339	P	P	13 51 03.5	-1.1
	baz=49,slow=4.6						
NOA	NORSAR Array B	89.12	339	P	P	13 51 03.4	-1.2
	comp=Z,1.2nm,0.8s,mb3.8,baz=51,slow=3.8,SNR=6.0						
PV10	Paradox Valley	89.96	48	eP	P	13 51 09.9	+0.8
PV01	Paradox Valley	90.40	48	eP	P	13 51 11.5	+0.3
BRTR	Keskin Array B	90.44	313	P	P	13 51 10.5	-0.8
	comp=Z,2.1nm,0.9s,mb4.1,baz=135,slow=3.5,SNR=5.5						
ISCO	Idaho Springs	91.62	46	eP	P	13 51 16.1	-0.7
	comp=Z,4.0nm,1.0s,mb4.3						
SDCO	Great Sand Dun	92.71	48	eP	P	13 51 22.3	+0.4
	comp=Z,1.0nm,0.7s,mb4.0						
LBTB	Lobatse	122.92	253	PKP	PKPdf	13 57 04.3	+1.0
	comp=Z,1.3nm,0.4s,baz=174,slow=3.3,SNR=6.2						
VNA2	Neumayer--Watz	127.62	192	⇓iP	PKPdf	13 57 13.1	+1.9
VNA3	Neumayer Olymp	127.77	191	⇓iP	PKPdf	13 57 11.9	+0.4
VNA1	Neumayer--Stat	128.01	192	⇓iP	PKPdf	13 57 11.5	-0.5
DBIC	Dimbokro	137.92	308	PKP	PKPdf	13 57 33.1	+1.0
	comp=Z,2.1nm,0.7s,baz=68,slow=1.8,SNR=4.0						
PLCA	Paso Flores	145.67	132	PKPbc	PKPbc	13 57 48.0	+2.1
	comp=Z,4.2nm,0.4s,baz=251,slow=2.6,SNR=15						
LPAZ	La Paz	150.03	85	PKP	PKPdf	13 57 55.8	+3.2
	comp=Z,9.5nm,0.5s,baz=270,slow=3.4,SNR=4.9						
LPAZ				PKPbc	PKPdf	13 58 00.9	+8.4
	comp=Z,11nm,0.5s,baz=332,slow=2.3,SNR=38						
LPAZ	La Paz	150.03	85	ePKPdf	PKPdf	13 57 55.5	+2.9

TRN 10 13:42:51.9,18.65N×62.16W,h35km,MD3.5,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STMA	St. Maarten, A	1.09	236	eP	P	13 43 11.6	+0.8
STMA				eS	S	13 43 24.0	-0.9
STAT	Sint Eustatius	1.39	214	eP	P	13 43 16.7	+1.5
STAT				eS	S	13 43 33.8	+1.2
SKI	Saint Kitts	1.43	203	eP	P	13 43 16.0	+0.3
SKI				eS	S	13 43 35.5	+2.1
BSK	Brimstone Hill	1.45	207	eP	P	13 43 17.7	+1.6
BSK				eS	S	13 43 35.7	+1.6
BSK				eS	S	13 43 37.0	+2.9
SABT	Saba	1.46	225	eP	P	13 43 17.8	+1.7
SABT				eS	S	13 43 36.3	+2.1
DEG	La Desirade	2.55	156	eP	P	13 43 30.1	-1.7

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*NEIC **10** 13:44:51.1±0.7,54.73N×53.11W,h10km,mb4.2/9, ML4.6(OTT),Error ellipse: s-maj=17.5km s-min=7.6km az=136.0*

*IDC **10** 13:44:51.3±1.3,55.04N×53.25W,mb3.8/8,mb1 4.1/11, mb1mx3.8/26,mbtmp3.9/11,ML3.7/3,Error ellipse: s-maj=36.4km s-min=13.1km az=169.0*

*OTT **10** 13:44:52.4±0.9,55.13N×53.21W,h18km,ML4.6/10, Labrador Sea. 345km east from Rigolet, Nl*

ISC 10 13:44:56.5±0.7,54.99N±0.04×54.62W±0.10,h10km,n55, σ1^{s}34/73,mb4.0/14,Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRLN	Deer Lake	6.01	198	PN	Pn	13 46 26.4	-1.2
DRLN				SN	Sn	13 47 36.0	-1.2
DRLN				Trac		13 48 14.6	
	comp=Z,42nm,0.3s						
SCHQ	Schefferville	7.04	274	Pn	Pn	13 46 46.1	+3.8
	6.6nm,0.3s,baz=84,slow=8.5,SNR=156						
SCHQ				Sn	Sn	13 48 08.9	+5.7
	9.3nm,0.3s,baz=74,slow=19,SNR=11						
SCHQ	Schefferville	7.04	274	ePn	Pn	13 46 45.6	+3.4
SCHQ				eSn	Sn	13 48 08.3	+5.1
SCHQ	Schefferville	7.04	274	PN	Pn	13 46 46.0	+3.7
SCHQ				SN	Sn	13 48 08.9	+5.7
SCHQ				Trac		13 48 15.9	
	comp=Z,19nm,0.2s						
KUQ	Kuujjuuaa	8.23	298	PN	P	13 46 58.9	0.0
KUQ				SN	Sn	13 48 31.1	-1.8
KUQ				Trac		13 48 35.6	
	comp=Z,27nm,0.2s						
SMQ	Clarke City	8.76	242	PN	P	13 47 07.5	+1.3
SMQ				SN	Sn	13 48 48.1	+2.1
SMQ				Trac		13 48 57.1	
	comp=Z,32nm,0.3s						
ICQ	Pointe Anglais	9.49	240	PN	P	13 47 16.5	+0.3
ICQ				SN	Sn	13 49 03.2	-0.8
ICQ				Trac		13 49 10.9	
	comp=Z,29nm,0.3s						
MNQ	Manicouagan	9.66	248	PN	P	13 47 20.2	+1.6
MNQ				SN	Sn	13 49 09.1	+0.8
MNQ				Trac		13 49 18.3	
	comp=Z,16nm,0.1s						
GSQ	Grosses Roches	9.81	237	PN	P	13 47 21.5	+0.9
GSQ				SN	Sn	13 49 11.6	-0.4
CNQ	Baie Comeau	10.03	241	PN	P	13 47 25.2	+1.7
CNQ				SN	S	13 49 18.6	+1.3
CNQ				Trac		13 49 20.8	
	comp=Z,26nm,0.4s						
LMN	Caledonia Moun	11.21	219	PN	P	13 47 37.8	-1.9
LMN				SN	S	13 49 41.4	-4.6
LMN				Trac		13 49 44.6	
	comp=Z,24nm,0.6s						
FRB	Frobisher Bay	11.27	327	Pn	P	13 47 37.3	-3.1
	0.4nm,0.3s,baz=142,slow=15,SNR=6.0						
FRB				Sn	S	13 49 35.4	-12
	0.5nm,0.3s,baz=204,slow=19,SNR=5.6						
FRB	Frobisher Bay	11.27	327	PN	P	13 47 32.3	-8.1
FRB				SN	S	13 49 35.4	-12
LG4Q	La Grande 4	11.46	271	PN	P	13 47 42.9	-0.1
LG4Q				SN	S	13 49 49.7	-2.4
LG4Q				Trac		13 49 54.4	
	comp=Z,26nm,0.3s						
HAL	Halifax	11.86	213	PN	P	13 47 47.4	-1.1
HAL				SN	S	13 49 59.0	-3.0
PQI	Presque Isle	11.86	231	eP	P	13 47 48.1	-0.4
A21	Saint Andre	11.90	238	PN	P	13 47 49.8	+0.8
A21				SN	S	13 50 01.7	-1.2
A21				Trac		13 50 10.6	
	comp=Z,13nm,0.3s						
A64	Saint Simeon	11.91	239	PN	P	13 47 49.8	+0.6
A61	Sainte Mathild	12.10	239	PN	P	13 47 52.3	+0.5
A61				SN	S	13 50 06.6	-1.2
A61				Trac		13 50 38.2	
	comp=Z,6.9nm,0.3s						
LMQ	La Malbaie	12.32	239	PN	P	13 47 55.4	+0.7
LMQ				SN	S	13 50 09.8	-3.3
LMQ				Trac		13 50 16.6	
	comp=Z,15nm,0.4s						
A54	Misere	12.42	239	PN	P	13 47 57.1	+1.0
A54				SN	S	13 50 13.7	-1.9
A54				Trac		13 50 19.7	
	comp=Z,10nm,0.3s						
DAQ	Lac Daran	12.50	243	PN	P	13 47 57.6	+0.4
DAQ				SN	S	13 50 22.1	+4.6
GGN	Saint George	12.60	223	PN	P	13 47 57.2	-1.3
GGN				Trac		13 50 21.6	
	comp=Z,13nm,0.4s						
DPQ	Saint Jean	14.13	241	PN	P	13 48 19.8	+1.1
DPQ				Trac		13 50 59.6	
	comp=Z,6.3nm,0.3s						
MOQ	Mont Orford	14.84	237	PN	P	13 48 27.9	0.0
VLDQ	Val d'Or	15.73	254	PN	P	13 48 41.0	+1.4
VLDQ				SN	S	13 51 31.2	-3.1
MALO	McAlpine Lake	16.05	262	PN	P	13 48 43.0	-0.6
HNH	Hanover	16.07	233	P	P	13 48 42.7	-1.2
	3.7nm,1.2s						
MDV	Middlebury	16.26	235	P	P	13 48 47.9	+1.5
MSNY	Massena	16.35	241	eP	P	13 48 46.8	-0.6
MIV	Mineville/With	16.37	236	P	P	13 48 47.2	-0.5
WES	Weston	16.69	228	P	P	13 48 52.0	+0.2
	16nm,0.7s						
VIMO	Victor Mine	17.24	275	PN	P	13 48 57.9	-0.8
SILO	Sutton Inlier	17.44	281	PN	P	13 48 59.7	-1.4
SADO	Sadowa	18.72	247	P	P	13 49 19.2	+2.1
	1.3nm,0.3s,baz=52,slow=12,SNR=6.6						
SSPA	Standing Stone	21.08	237	P	P	13 49 46.0	+3.0
	17nm,1.3s,mb4.2						
SDMD	Soldier's Deli	21.55	233	P	P	13 49 49.6	+1.7
FCC	Fort Churchill	21.67	296	eP	P	13 49 51.0	+2.1
	7.6nm,0.8s,mb4.2						
EYMN	Ely	23.80	268	P	P	13 50 12.6	+2.7
	5.7nm,1.0s,mb4.0						
YKA	Yellowknife Ar	30.95	309	P	P	13 51 14.7	-0.5
	0.2nm,0.6s,mb3.1,baz=76,slow=9.2,SNR=4.0						
YKA				PcP	PcP	13 54 06.3	-5.4
	0.3nm,0.6s,baz=73,slow=2.7,SNR=4.6						
YKA	Yellowknife Ar	30.95	309	P	P	13 51 14.7	-0.5
YKA				PcP	PcP	13 54 06.3	-5.4
INK	Inuvik	36.88	323	P	P	13 52 03.9	-2.5
	1.1nm,0.7s,mb3.8,baz=72,slow=4.5,SNR=5.6						
INK	Inuvik	36.88	323	eP	P	13 52 04.2	-2.2
	4.3nm,1.2s,mb4.2						
ARCES	ARCESS Array B	36.89	35	P	P	13 51 55.9	-11
	5.6nm,1.1s,mb4.3,baz=287,slow=9.4,SNR=3.1						
PDAR	Pinedale Array	37.18	274	P	P	13 52 11.3	+2.1
	0.7nm,0.7s,mb3.6,baz=59,slow=8.6,SNR=7.3						
ILAR	Eielson Array	43.23	321	P	P	13 52 58.2	-0.6
	1.9nm,0.9s,mb3.8,baz=44,slow=6.8,SNR=8.9						
ILAR				PcP	PcP	13 54 43.8	-4.8
	0.2nm,0.7s,baz=17,slow=2.3,SNR=4.1						
MCK	McKinley	44.56	321	P	P	13 53 08.9	-0.7
	1.7nm,0.9s,mb3.9						
IMA	Indian Mountai	44.84	325	eP	P	13 53 11.2	-0.6
	24nm,0.8s,mb5.1						
NVAR	Mina Array Bea	45.05	276	PcP	PcP	13 54 53.9	-1.3
	0.5nm,0.5s,baz=33,slow=4.9,SNR=4.4						
AKASG	Malin Array Be	47.94	58	P	P	13 53 26.0	-10
	0.2nm,0.2s,mb3.7,baz=307,slow=4.6,SNR=3.2						
CHKZ	Chkalovo	62.68	33	eP	P	13 55 13.9	-9.2
	2.2nm,0.7s,mb4.4						
CHKZ				e		13 55 24.0	
BVAR	Borovoye Array	63.16	34	P	P	13 55 17.5	-8.8
	1.2nm,0.6s,mb4.2,baz=333,slow=6.6,SNR=5.7						
SONM	Songino Array	76.31	13	P	P	13 56 40.2	-6.4
	0.3nm,0.7s,mb3.4,baz=327,slow=6.6,SNR=4.1						
WRA	Warramunga Arr	144.36	345	PKP	PKPdf	14 04 27.1	-8.5
	1.8nm,0.7s,baz=359,slow=3.6,SNR=24						
ASAR	Alice Springs	148.08	345	PKPbc	PKPdf	14 04 38.0	-3.8
	1.7nm,0.8s,baz=8.7,slow=2.3,SNR=29						

MAN 10 13:49:36.4,12.73N×123.19E,h16km,mb4.5,ML3.3, MS3.2,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.77	320	eP	Pb	13 49 51.8	+0.8
AUQP				eS	Sb	13 50 07.4	+6.4
OTRP	Odiongan	1.20	252	eP	Pb	13 49 57.3	-0.9
OTRP				eS	Sb	13 50 07.5	-5.8
PVCP	Virac	1.28	47	eP	Pb	13 49 58.5	-1.0
PVCP				eS	Sb	13 50 16.4	+0.9
BOAC	Boac	1.50	299	eP	Pn	13 50 02.2	-0.6
SJMP	San Jose	2.04	263	eP	Pn	13 50 10.3	-0.2
GUIM	Jordan	2.17	196	eP	Pn	13 50 13.1	+0.7
CUYO	Cuyo Island	2.83	229	eP	Pn	13 50 20.7	-1.2
MSLP	Maasin	3.06	147	eP	Pn	13 50 25.1	0.0

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*NEIC **10** 14:04:54.0,35.76N×90.25W,h15km,mb3.9/8, MW4.1(SLM),After CERI.*

NEIC Felt [V] at Black Oak and Trumann; [IV] at Blytheville, Brookland, Burdette, Caraway, Dell, Etowah, Frenchmans Bayou, Keiser, Lafe, Leachville, Lepanto, Luxora, Manila, Monette, Rector, Tyronza and Wilson; [III] at Bay, Biggers, Joiner, Lake City, Marked Tree, Osceola and Paragould. Also felt [III] at Steele, Missouri and Atoka, Brighton, Burlison, Covington, Drummonds, Memphis, Millington, Munford and Ripley, Tennessee. Felt in parts of Arkansas, Illinois, Kentucky, Mississippi, Missouri and Tennessee.

*IDC **10** 14:04:54.4±1.5,36.09N×90.58W,mb3.7/8,mb1 4.0/13, mb1mx3.8/27,mbtmp3.8/13,ML3.8/4,MS2.9/1,Ms1 2.9/1, ms1mx2.4/29,Error ellipse: s-maj=33.7km s-min=9.9km az=147.0*

ISC 10 14:04:51.6±0.3,35.72N±0.03×90.41W±0.03,h15km,n63, σ1^{s}35/66,mb3.6/9,Arkansas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HBAR	Harrisburg	0.26	231	eP	Sb	14 05 01.9	+0.5
GNAR	Gosnell	0.40	52	eP	Pb	14 05 00.1	+0.2
MET	Memphis--Engin	0.71	147	eP	Pb	14 05 05.8	+0.6
HALT	Halls	0.89	77	eP	Pb	14 05 08.0	-0.3
PVMO	Portageville	0.90	39	eP	Pb	14 05 08.4	0.0
GLAT	Glass	1.06	58	eP	Pb	14 05 11.3	+0.1
UTMT	University of	1.40	63	eP	Pn	14 05 16.3	-0.4
OXF	Oxford	1.46	145	eP	Pn	14 05 18.9	+1.3
UALR	University of	1.84	240	eP	Pn	14 05 26.8	+3.7
PLAL	Pickwick Lake	2.04	110	P	Pn	14 05 26.7	+0.7
WVT	Waverly	2.13	78	eP	Pn	14 05 26.6	-0.6
FVM	French Village	2.26	360	ePn	Pn	14 05 30.1	+1.0
CCM	Cathedral Cave	2.43	344	ePn	Pn	14 05 33.0	+1.5
MIAR	Mount Ida	2.84	247	ePn	Pb	14 05 41.1	-0.5
SLM	Saint Louis	2.92	3	ePn	Pn	14 05 39.5	+1.0
USIN	University of	3.14	44	ePn	Pn	14 05 40.8	-0.9
LRAL	Lakeview Retre	3.89	132	ePn	Pn	14 05 51.9	-0.4
WCI	Wyandotte Cave	4.14	52	ePn	Pn	14 05 54.4	-1.5
CPCT	Cooper Cave	4.81	91	ePn	Pn	14 06 04.1	-1.2
NATX	Nacogdoches	5.30	223	ePn	Pn	14 06 14.1	+1.8
KSU1	Kansas State U	5.98	306	ePn	Pn	14 06 22.2	+0.4
WMOK	Wichita Mounta	6.92	264	ePn	Pn	14 06 35.1	+0.1
JFWS	Jewell Farm	7.19	1	ePn	Pn	14 06 36.8	-2.0
HKT	Hockley	7.34	220	ePn	Pn	14 06 40.5	-0.5
ACSO	Alum Creek Sta	7.40	50	ePn	Pn	14 06 36.7	-5.1
CBKS	Cedar Bluff	8.05	295	ePn	P	14 06 50.9	0.0
AMTX	Amarillo	9.25	268	ePn	P	14 07 05.8	-1.7
JCT	Junction City	9.45	239	ePn	P	14 07 09.7	-0.6
ALLY	Alegheny Colle	9.97	50	ePn	P	14 07 13.8	-3.6
SSPA	Standing Stone	11.01	60	ePn	P	14 07 27.0	-4.7
CPRX	Cap Rock	11.44	260	ePn	P	14 07 36.0	-1.5
GDL2	Guadalupe Moun	12.10	257	ePn	P	14 07 44.7	-1.8
EYMN	Ely	12.25	357	ePn	P	14 07 42.5	-5.9
SDCO	Great Sand Dun	12.28	284	ePn	P	14 07 47.9	-0.9
SADO	Sadowa	12.47	40	Pn	P	14 07 45.8	-5.7
	1.4nm,0.3s,baz=243,slow=12,SNR=8.6						
SADO				Sn	S	14 10 03.2	-7.8
	2.1nm,0.3s,baz=233,slow=10.0,SNR=2.3						
SADO				Lg		14 11 12.0	
	3.1nm,0.3s,baz=329,slow=19,SNR=7.2						
ISCO	Idaho Springs	12.70	293	ePn	P	14 07 52.1	-2.4
TXAR	Lajitas Array	12.86	244	Pn	P	14 07 55.1	-1.6
	0.5nm,0.3s,baz=70,slow=13,SNR=16						
TXAR				Sn	S	14 10 16.0	-4.6
	0.7nm,0.3s,baz=63,slow=25,SNR=3.1						
TXAR				Lg		14 11 33.1	
	0.5nm,0.3s,baz=65,slow=37,SNR=2.5						
PHWY	Pilot Hill	13.03	300	ePn	P	14 07 54.6	-4.3
MNTX	Cornudas Mount	13.09	256	ePn	P	14 07 58.5	-1.2
ANMO	Albuquerque	13.13	271	Pn	P	14 08 02.4	+2.2
	baz=92,slow=15,SNR=3.3						
ANMO				Lg		14 11 48.4	
	baz=76,slow=19,SNR=4.2						
ANMO				LR	LR	14 13 01.4	
	comp=Z,57nm,20.4s,slow=38						
ANMO	Albuquerque	13.13	271	ePn	P	14 08 02.2	+2.0
ULM	Lac du Bonnet	15.06	346	Pn	P	14 08 22.4	-3.0
	0.9nm,0.3s,baz=164,slow=14,SNR=13						
ULM				Sn	S	14 10 58.0	-15
	0.6nm,0.3s,baz=138,slow=18,SNR=2.2						
ULM				Lg		14 12 33.2	
	1.0nm,0.3s,baz=271,slow=21,SNR=2.9						
ULM	Lac du Bonnet	15.06	346	eP	P	14 08 23.2	-2.2
	8.2nm,0.6s						
PV10	Paradox Valley	15.11	286	eP	P	14 08 28.3	+2.1
LAO	LASA Array	16.15	318	eP	P	14 08 41.6	+2.1
	7.9nm,0.7s						
DGMT	Dagmar	16.31	326	eP	P	14 08 41.4	-0.1
	16nm,0.4s						
BW06	Boulder Array	16.40	301	eP	P	14 08 44.6	+1.8
	2.5nm,0.6s						
PDAR	Pinedale Array	16.40	301	Pn	P	14 08 41.6	-1.2
	0.1nm,0.3s,baz=108,slow=13,SNR=4.3						
PDAR				Lg		14 13 19.4	
	0.3nm,0.3s,baz=104,slow=34,SNR=3.4						
HWUT	Hardware Ranch	17.52	296	eP	P	14 08 59.5	+2.7
	6.5nm,0.8s						
MSU	Marysvale	17.58	286	eP	P	14 08 57.3	-0.3
MCMT	McKenzie Canyo	19.34	305	eP	P	14 09 18.3	-0.7
HLID	Hailey	20.03	300	P	P	14 09 28.0	+1.3
	1.8nm,0.9s						
NVAR	Mina Array Bea	22.39	285	P	P	14 09 52.3	+1.5
	0.4nm,0.5s,mb3.1,baz=99,slow=5.9,SNR=6.2						
FCC	Fort Churchill	23.18	355	eP	P	14 09 58.1	-0.2
	6.1nm,0.6s,mb4.2						
NEW	Newport	23.35	311	P	P	14 09 59.5	-0.5
	0.6nm,0.4s,mb3.4,baz=79,slow=15,SNR=1.6						
NEW	Newport	23.35	311	P	P	14 10 02.4	+2.4
	1.9nm,0.7s,mb3.6						
SCHQ	Schefferville	25.10	33	P	P	14 10 19.2	+2.2
	1.3nm,0.7s,mb3.5,baz=239,slow=12,SNR=3.5						
SCHQ	Schefferville	25.10	33	P	P	14 10 19.2	+2.2
YBH	Yreka Blue Hor	25.81	293	P	P	14 10 22.1	-1.6
	1.4nm,0.8s,mb3.5,baz=75,slow=12,SNR=2.8						
YKA	Yellowknife Ar	30.75	338	P	P	14 11 07.0	-1.1
	0.1nm,0.4s,mb3.0,baz=129,slow=9.0,SNR=6.0						
ILAR	Eielson Array	44.13	329	P	P	14 13 02.5	+1.8
	0.3nm,0.6s,mb3.2,baz=99,slow=7.2,SNR=3.5						
ARCES	ARCESS Array B	65.23	20	P	P	14 15 37.1	+3.0
	3.7nm,0.8s,mb4.5,baz=306,slow=7.8,SNR=3.1						
FINES	FINESS Array B	70.41	27	P	P	14 16 08.4	+1.8
	1.7nm,0.7s,mb4.1,baz=333,slow=4.3,SNR=3.5						

ISC 10 14:05:27.3±0.9,46.28N±0.05×14.17E±0.07,n5,σ0^{s}60/7, 1C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CADS	Cadrg	0.31	260	i Sg	Sg	14 05 38.3	+0.7
	comp=Z,25nm,0.4s						
VOY	Vojsko	0.32	218	ePg	Pg	14 05 32.8	-0.9
VOY				e		14 05 40.2	
VOY				e		14 05 41.7	
OBKA	Obir	0.34	49	⇑iPG	Pg	14 05 34.2	0.0
OBKA				i SG	Sg	14 05 38.9	+0.2
	comp=Z,19nm,0.5s						
JAVS	Javornik	0.40	191	ePg	Pg	14 05 34.7	-0.6
CEY	Cerknica	0.57	162	i Pg	Pg	14 05 38.5	-0.3
CEY				i Sg	Sg	14 05 47.3	+0.9

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*IDC **10** 14:09:49.8±1.3,33.56S×178.38W,mb4.7/4,mb1 4.7/6, mb1mx4.3/16,mbtmp4.6/6,ML4.2/2,MS3.6/2,Ms1 3.6/2, ms1mx2.7/25,Error ellipse: s-maj=43.1km s-min=25.8km az=139.0*

*NEIC **10** 14:09:56.9±2.7,33.77S×178.50W,h50km±19km,mb4.9/6, Error ellipse: s-maj=26.2km s-min=15.3km az=68.0*

ISC 10 14:09:57.7±1.1,33.77S±0.05×179.1W±0.2,h33km,n49, σ1^{s}04/49,mb4.8/8,MS3.5/2,4C-4D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	4.79	205	PN	Pn	14 11 09.4	-0.1
PUZ				SN	Sn	14 12 10.8	+6.2
PUZ	Puketiti	4.79	205	PN	Pn	14 11 09.4	-0.1
PUZ				SN	Sn	14 12 10.8	+6.2
URZ	Urewera	5.41	213	Pn	Pn	14 11 20.7	+2.3
	9.3nm,0.3s,baz=27,slow=4.4,SNR=57						
URZ				Sn	Sn	14 12 28.3	+8.0
	19nm,0.3s,baz=159,slow=18,SNR=8.2						
URZ	Urewera	5.41	213	ePN	Pn	14 11 18.5	+0.1
URZ				SN	Sn	14 12 27.2	+6.9
URZ	Urewera	5.41	213	ePN	Pn	14 11 18.5	+0.1
URZ				SN	Sn	14 12 27.2	+6.9
KNZ	Kokohu	5.84	205	ePN	Pn	14 11 25.0	+0.6
KNZ				eSN	Sn	14 12 34.7	+3.8
KNZ				eSN	Sn	14 12 37.9	+7.0
KNZ	Kokohu	5.84	205	ePN	Pn	14 11 25.0	+0.6
KNZ				eSN	Sn	14 12 34.7	+3.8
KNZ				eSN	Sn	14 12 37.9	+7.0
TSZ	Takapari Road	7.40	211	eSN	Sn	14 13 11.5	+1.5
TSZ	Takapari Road	7.40	211	eSN	Sn	14 13 11.5	+1.5
MRZ	Mangatainoka R	8.06	210	SN	Sn	14 13 26.5	0.0
MRZ	Mangatainoka R	8.06	210	SN	Sn	14 13 26.5	0.0
NNZ	Nelson	9.51	216	eSN	Sn	14 14 02.9	+0.4
NNZ	Nelson	9.51	216	eSN	Sn	14 14 02.9	+0.4
QRZ	Quartz Range	9.67	221	eSN	Sn	14 14 06.2	-0.1
QRZ	Quartz Range	9.67	221	eSN	Sn	14 14 06.2	-0.1
THZ	Tophouse	10.16	216	eSN	S	14 14 16.5	-1.7
THZ	Tophouse	10.16	216	eSN	S	14 14 16.5	-1.7
MQZ	McQueen's Vall	11.80	210	eSN	S	14 14 50.2	-8.1
MQZ	McQueen's Vall	11.80	210	eSN	S	14 14 50.2	-8.1
RPZ	Rata Peaks	12.53	215	Pn	P	14 12 55.0	-1.4
	0.7nm,0.3s,baz=22,slow=11,SNR=4.2						
RPZ				Sn	S	14 15 10.4	-5.3
	1.8nm,0.3s,baz=300,slow=13,SNR=8.0						
DZM	Mont Dzumac	17.24	309	eP	P	14 13 59.6	+2.0
DZM	Mont Dzumac	17.24	309	eP	P	14 13 59.6	+2.0
TAU	Tasmania Unive	27.69	241	P	P	14 15 45.0	+0.2
STKA	Stephens Creek	32.91	262	P	P	14 16 32.3	+1.2
	1.7nm,0.9s,mb4.0,baz=114,slow=12,SNR=4.0						
STKA				LR	LR	14 29 40.2	
	comp=Z,154nm,19.6s,MS3.7,baz=204,slow=36						
CTA	Charters Tower	33.55	285	⇓iP	P	14 16 37.5	+0.7
	7.0nm,0.6s,mb4.8						
CTA	Charters Tower	33.55	285	P	P	14 16 37.4	+0.6
	7.3nm,0.5s,mb4.9,baz=115,slow=10,SNR=14						

CTA				LR	LR	14 26 55.0	
	comp=Z,69nm,20.3s,MS3.4,baz=42,slow=30						
CTAO	Charters Tower	33.55	285	eP	P	14 16 36.9	+0.1
	10.0nm,0.6s,mb4.9						
ASAR	Alice Springs	42.08	271	P	P	14 17 48.2	0.0
	13nm,0.7s,mb4.7,baz=111,slow=7.3,SNR=170						
ASAR				PcP	PcP	14 19 40.1	-3.1
	2.5nm,0.8s,baz=119,slow=3.6,SNR=7.2						
ASPA	Alice Springs	42.09	271	⇓ iP	P	14 17 48.4	+0.1
WB2	Warramunga Arr	43.37	276	eP	P	14 17 58.1	-0.7
WRAB	Tennant Creek	43.37	276	eP	P	14 17 57.9	-1.0
	27nm,0.8s,mb5.0						
WRA	Warramunga Arr	43.38	276	P	P	14 17 58.1	-0.8
	16nm,0.7s,mb4.8,baz=117,slow=7.4,SNR=143						
WRA				PcP	PcP	14 19 43.6	-4.1
	1.7nm,0.8s,baz=119,slow=3.1,SNR=5.0						
FITZ	Fitzroy Crossi	51.48	273	⇓ iP	P	14 19 01.1	-1.2
	9.2nm,0.7s,mb4.8						
CASY	Casey	51.72	209	P	P	14 19 00.4	-3.1
	17nm,0.8s,mb5.0						
QSPA	South Pole Qui	56.35	180	eP	P	14 19 37.3	0.0
	8.2nm,0.7s,mb4.9						
VNA3	Neumayer Olymp	75.02	176	⇑ i	P	14 21 47.2	+10
VNA3	Neumayer Olymp	75.02	176	⇑ i	P	14 21 54.0	+17
VNA2	Neumayer--Watz	75.44	177	⇑ i	P	14 21 40.8	+1.4
VNA2	Neumayer--Watz	75.44	177	⇓ i	P	14 21 49.8	+10
ARCES	ARCESS Array B	141.65	346	PKhKP		14 29 18.6	
	7.0nm,1.2s,baz=45,slow=1.3,SNR=4.2						
FINES	FINESS Array B	147.92	337	PKPbc	PKPdf	14 29 35.5	-0.1
	3.2nm,0.6s,baz=77,slow=2.3,SNR=23						
MALT	Malatya	149.43	289	eP	PKPdf	14 29 42.5	+3.7
ASF	Jabal al Asfar	149.81	277	PKPbc	PKPdf	14 29 44.4	+4.8
	5.6nm,0.8s,baz=295,slow=4.3,SNR=5.2						
NB2	NORSAR Subarra	151.90	349	PKP	PKPdf	14 29 45.2	+3.4
	1.1nm,0.6s,baz=20,slow=2.8						
NB2	NORSAR Subarra	151.90	349	⇑ PKPab	PKPdf	14 29 45.2	+3.4
NOA	NORSAR Array B	151.90	349	PKPbc	PKPdf	14 29 45.5	+3.7
	2.2nm,0.9s,baz=14,slow=4.1,SNR=3.6						
BRTR	Keskin Array B	153.16	292	PKPbc	PKPdf	14 29 50.5	+6.2
	1.4nm,0.7s,baz=90,slow=1.2,SNR=5.6						
AKASG	Malin Array Be	153.26	318	PKPbc	PKPdf	14 29 49.9	+5.8
	2.5nm,0.8s,baz=64,slow=2.4,SNR=9.0						
CLL	Collm	160.37	337	ePKP2	PKPab	14 30 34.0	-2.2

MEX 10 14:31:38.6±0.9**, 16.48N**×**100.54W, h16**$^{\text{km}}$±999$^{\text{km}}$**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.62	25	i P	Pb	14 31 48.4	-2.1
CAIG				i S	Sb	14 31 56.4	-2.3
ACX	Acapulco	0.70	57	i P	Pb	14 31 49.5	-2.5
ACX				i S	Sb	14 31 59.0	-2.3
PLIG	Platanillo	2.14	27	i P	Pn	14 32 11.8	-2.4
PLIG				i S	Sn	14 32 34.4	-6.2
PPM	Popocatepetl	3.15	35	eP	Pn	14 32 32.0	+3.4

IDC 10 14:41:31.3±19.0**, 16.32S**×**178.80W, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.7**/17**, mbtmp3.8**/5**, Error ellipse: s-maj=365.7km s-min=44.3km az=54.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	22.15	189	P	P	14 46 29.1	-1.3
	4.3nm,0.9s,baz=180,slow=6.1,SNR=4.2						
CTA	Charters Tower	33.37	258	P	P	14 48 13.0	-0.7
	7.2nm,1.0s,baz=72,slow=8.4,SNR=3.2						
STKA	Stephens Creek	39.09	239	P	P	14 49 00.6	-1.5
	0.6nm,0.5s,baz=68,slow=11,SNR=2.6						
WRA	Warramunga Arr	44.58	258	P	P	14 49 44.8	-2.4
	0.3nm,0.8s,baz=94,slow=8.1,SNR=5.7						
ASAR	Alice Springs	44.88	253	P	P	14 49 47.2	-2.5
	0.8nm,0.6s,baz=90,slow=7.9,SNR=30						

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*ATH **10** 14:47:05.4, 36.52N×27.24E, h88$^{\text{km}}$±21$^{\text{km}}$*

*CSEM **10** 14:47:06.3±0.1, 36.47N×27.19E, h15$^{\text{km}}$, MD3.2, Error ellipse: s-maj=3.7km s-min=2.9km az=156.0*

*NEIC **10** 14:47:07.3, 36.54N×27.16E, h17$^{\text{km}}$, MD3.2(ISK), After ISK.*

*ISK **10** 14:47:08.0, 36.49N×27.23E, h64$^{\text{km}}$, MD3.2*

ISC 10 14:47:06.4±0.4**, 36.48N**±0.03×**27.15E**±0.04**, h10**$^{\text{km}}$**, n32, σ1**$^{\text{s}}$**00**/47**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.63	22	i P	Pb	14 47 18.4	-0.6
BDRM				i S	Sg	14 47 26.8	-0.7
ARG	Arkhangelos	0.83	108	eP	Pb	14 47 23.5	+1.0
ARG				eS	Sb	14 47 36.4	+2.8
KARP	Karpathos	0.93	179	eP	Pb	14 47 24.7	+0.5
MLSB	Milas	0.95	32	PG	Pg	14 47 25.7	+0.2
MLSB				SG	Sg	14 47 38.8	+0.5
MLSB	Milas	0.95	32	Pg	Pg	14 47 24.6	-1.0
MLSB				Sg	Sg	14 47 38.6	+0.2
MLSB	Milas	0.95	32	Pg	Pg	14 47 24.6	-0.9
MLSB				Sg	Sg	14 47 38.6	+0.3
YER	Yerkesik	1.12	54	PG	Pg	14 47 27.9	-0.9
YER	Yerkesik	1.12	54	Pn	Pn	14 47 27.9	-0.2
SMG	Samos	1.25	349	eP	Pb	14 47 28.1	-1.5
AYDN	Tasoluk	1.31	26	i P	Pb	14 47 31.1	+0.3
AYDN				i S	Sb	14 47 47.7	+0.3
SANT	Santorini	1.37	266	ePn	Pn	14 47 31.7	+0.1
SANT				eSn	Sn	14 47 51.0	+1.1
SANT	Santorini	1.37	266	ePn	Pn	14 47 31.7	+0.1
SANT				eSn	Sn	14 47 51.0	+1.1
APE	Apeiranthos	1.42	295	PN	Pn	14 47 33.1	+0.7
APE				SN	Sn	14 47 52.4	+1.1
APE	Apeiranthos	1.42	295	P	Pn	14 47 32.5	+0.1
APE				Pn	Pn	14 47 33.2	+0.8
APE	Apeiranthos	1.42	295	eP	Pn	14 47 32.5	+0.1
APE	Apeiranthos	1.42	295	ePn	Pn	14 47 33.1	+0.7
APE				eSn	Sn	14 47 52.4	+1.1
FETY	Fethiye	1.57	84	ePN	Pn	14 47 33.6	-0.9
NPS	Neapolis	1.74	226	eP	Pn	14 47 36.1	-0.9
NPS				eS	Sn	14 47 58.0	-1.4
IZM	Izmir	1.91	3	ePN	Pn	14 47 39.4	0.0
IZM	Izmir	1.91	3	Pn	Pn	14 47 39.5	0.0
IZM	Izmir	1.91	3	Pn	Pn	14 47 39.5	+0.1
KDAG	Bornova	1.92	3	i P	Pn	14 47 42.3	+2.8
KDAG				i S	Sn	14 48 11.3	+7.4
DNZL	Cakiroluk	1.94	51	i P	Pn	14 47 41.3	+1.5
DNZL				i S	Sn	14 48 12.4	+8.0
ELL	Elmali	2.24	82	ePN	Pn	14 47 43.3	-0.8
ELL	Elmali	2.24	82	Pn	Pn	14 47 45.1	+1.0
MANT	Manisa	2.30	29	i P	Pg	14 47 50.5	-1.7
MANT				i S	Sg	14 48 23.8	+0.8
AKS	Akhisar	2.45	12	ePN	Pn	14 47 46.9	-0.2
AKS	Akhisar	2.45	12	Pn	Pn	14 47 47.0	-0.1
AKS	Akhisar	2.45	12	Pn	Pn	14 47 47.0	-0.1
PPCY	Paphos	4.52	109	P	Pn	14 48 17.0	+0.4
ALFC	Alevga	4.62	105	P	Pn	14 48 17.2	-0.8
SZAC	Souni-Zanaja	4.98	109	P	Pn	14 48 22.5	-0.6

IDC 10 14:58:41.8±1.4**, 7.56N**×**93.93E, mb4.0**/6**, mb1 4.0**/7**, mb1mx3.8**/18**, mbtmp3.9**/7**, Error ellipse: s-maj=57.3km s-min=20.1km az=60.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.88	24	Pn	P	15 01 33.2	-2.4
	baz=206,slow=14,SNR=2.6						
SONM	Songino Array	41.51	13	P	P	15 06 30.5	-1.9
	0.2nm,0.3s,baz=202,slow=8.5,SNR=13						
ZAL	Zalesovo	46.83	353	P	P	15 07 13.3	-1.9
	2.0nm,0.3s,baz=294,slow=7.1,SNR=4.1						
WRA	Warramunga Arr	48.25	125	P	P	15 07 24.8	-2.0
	0.7nm,0.7s,baz=304,slow=8.7,SNR=16						
ASAR	Alice Springs	49.87	130	P	P	15 07 37.3	-2.0
	0.5nm,0.5s,baz=302,slow=8.0,SNR=14						
FINES	FINESS Array B	72.89	332	P	P	15 10 12.2	-2.2
	5.1nm,1.0s,baz=101,slow=7.1,SNR=5.3						
ARCES	ARCESS Array B	75.49	340	P	P	15 10 28.2	-1.2
	2.9nm,0.9s,baz=90,slow=6.3,SNR=3.1						

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*NEIC **10** 15:00:53.3±0.4, 33.36S×178.70W, h10$^{\text{km}}$, mb4.8/5, Error ellipse: s-maj=13.8km s-min=12.9km az=140.0*

*IDC **10** 15:01:00.4±2.7, 33.63S×178.70W, h62$^{\text{km}}$±24$^{\text{km}}$, mb4.3/5, mb1 4.4/7, mb1mx4.0/17, mbtmp4.5/7, ML4.1/2, MS3.5/3, Ms1 3.5/3, ms1mx3.0/21, Error ellipse: s-maj=31.4km s-min=14.9km az=158.0*

ISC 10 15:00:58.5±1.6**, 33.77S**±0.09×**179.0W**±0.1**, h42**$^{\text{km}}$±14$^{\text{km}}$**, n51, σ1**$^{\text{s}}$**20**/49**, mb4.6**/10**, MS3.4**/3**, 1C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.36	209	PN	P	15 02 05.6	+1.6
MXZ				eSN	S	15 03 03.1	+8.9
MXZ	Matakaoa Point	4.36	209	PN	P	15 02 05.6	+1.6
MXZ				eSN	S	15 03 03.1	+8.9
PUZ	Puketiti	4.82	206	PN	P	15 02 11.3	+0.7
PUZ				SN	S	15 03 12.7	+6.8
PUZ	Puketiti	4.82	206	PN	P	15 02 11.3	+0.7
PUZ				SN	S	15 03 12.7	+6.8
URZ	Urewera	5.46	214	P	P	15 02 21.3	+1.8
	8.3nm,0.3s,baz=33,slow=5.1,SNR=63						
URZ				S	S	15 03 29.2	+7.4
	9.3nm,0.3s,baz=146,slow=23,SNR=8.4						
URZ	Urewera	5.46	214	PN	P	15 02 20.9	+1.4
URZ				SN	S	15 03 26.9	+5.0
URZ	Urewera	5.46	214	PN	P	15 02 20.9	+1.4
URZ				SN	S	15 03 26.9	+5.0
KNZ	Kokohu	5.87	206	ePN	P	15 02 25.6	+0.3
KNZ				eSN	S	15 03 36.0	+3.8
KNZ	Kokohu	5.87	206	ePN	P	15 02 25.6	+0.3
KNZ				eSN	S	15 03 36.0	+3.8
OUZ	Omahuta	6.25	255	PN	P	15 02 36.2	+5.6
OUZ	Omahuta	6.25	255	PN	P	15 02 36.2	+5.6
MRZ	Mangatainoka R	8.10	210	PN	P	15 02 54.4	-2.1
MRZ				SN	S	15 04 28.2	+0.4
MRZ	Mangatainoka R	8.10	210	PN	P	15 02 54.4	-2.1
MRZ				SN	S	15 04 28.2	+0.4
NNZ	Nelson	9.56	217	SN	S	15 05 03.8	0.0
NNZ	Nelson	9.56	217	SN	S	15 05 03.8	0.0
QRZ	Quartz Range	9.72	221	eSN	S	15 05 07.8	-0.1
QRZ	Quartz Range	9.72	221	eSN	S	15 05 07.8	-0.1
THZ	Tophouse	10.21	216	ePN	P	15 03 23.4	-2.0
THZ				eSN	S	15 05 17.6	-2.0
THZ	Tophouse	10.21	216	ePN	P	15 03 23.4	-2.0
THZ				eSN	S	15 05 17.6	-2.0
MQZ	McQueen's Vall	11.84	211	eSN	S	15 05 53.0	-6.4
MQZ	McQueen's Vall	11.84	211	eSN	S	15 05 53.0	-6.4
RPZ	Rata Peaks	12.57	215	P	P	15 03 56.6	-0.8
	0.5nm,0.3s,baz=28,slow=15,SNR=4.1						
RPZ				S	S	15 06 11.3	-5.7
	0.6nm,0.3s,baz=319,slow=12,SNR=6.2						
RAR	Rarotonga	21.14	59	LR	LR	15 12 04.1	
	comp=Z,31nm,18.1s,MS2.7,baz=106,slow=32						
STKA	Stephens Creek	33.00	262	LR	LR	15 20 57.8	
	comp=Z,300nm,18.2s,MS4.0,baz=157,slow=36						
CTA	Charters Tower	33.63	285	P	P	15 07 38.5	+1.1
	6.9nm,0.7s,mb4.7,baz=115,slow=11,SNR=13						
ASAR	Alice Springs	42.16	271	P	P	15 08 49.1	+0.2
	9.6nm,0.7s,mb4.5,baz=112,slow=7.5,SNR=126						
ASAR				PcP	PcP	15 10 41.1	-2.2
	1.4nm,0.6s,baz=118,slow=4.3,SNR=4.8						
ASAR				S	S	15 15 07.9	+2.3
	0.8nm,0.8s,baz=114,slow=15,SNR=5.6						
ASAR				LR	LR	15 27 23.1	
	comp=Z,61nm,18.8s,MS3.5,baz=102,slow=37						
ASPA	Alice Springs	42.17	271	⇓ iP	P	15 08 49.3	+0.4
WRAB	Tennant Creek	43.45	276	eP	P	15 08 58.5	-0.9
	18nm,0.7s,mb4.9						
WRA	Warramunga Arr	43.46	276	P	P	15 08 59.1	-0.4
	9.6nm,0.6s,mb4.7,baz=117,slow=7.5,SNR=112						
WRA				PcP	PcP	15 10 45.6	-2.1
	0.9nm,0.6s,baz=118,slow=3.0,SNR=4.3						
WRA				S	S	15 15 25.6	+1.1
	0.6nm,0.8s,baz=114,slow=14,SNR=3.7						
VNDA	Vanda	44.66	186	P	P	15 09 08.0	-0.4
	5.8nm,1.3s,mb4.2						
FITZ	Fitzroy Crossi	51.56	273	eP	P	15 10 02.1	-0.7
	7.0nm,0.7s,mb4.7						
NWAO	Narrogin (SRO)	52.45	252	P	P	15 10 08.8	-0.5
	6.6nm,0.9s,mb4.5,baz=269,slow=18,SNR=2.6						
QSPA	South Pole Qui	56.35	180	eP	P	15 10 38.9	+1.7
	7.7nm,0.7s,mb4.8						
QSPA				e	pP	15 10 48.6	-0.6
TRQA	Tornquist	87.68	135	eP	P	15 13 44.1	+0.2
	12nm,1.3s,mb5.0						
NVAR	Mina Array Bea	91.30	43	P	P	15 13 57.7	-3.3
	0.2nm,0.4s,mb3.8,baz=257,slow=7.0,SNR=3.6						
BVAR	Borovoye Array	128.15	314	PKP	PKPdf	15 19 59.1	-1.0
	0.6nm,0.5s,baz=112,slow=2.1,SNR=6.2						
MSL	Mosul	145.60	286	ePKP	PKPdf	15 20 53.0	+21
FINES	FINESS Array B	147.96	337	PKPbc	PKPdf	15 20 36.6	+1.3
	3.2nm,0.5s,baz=45,slow=4.6,SNR=25						
MALT	Malatya	149.50	289	ePKPdf	PKPdf	15 20 37.0	-1.6
MALT				ePKPbc	PKPdf	15 20 43.6	+5.0
ASF	Jabal al Asfar	149.90	277	PKPbc	PKPdf	15 20 44.7	+5.3
	5.1nm,0.8s,baz=29,slow=0.3,SNR=9.9						
EIL	Elat	150.87	271	PKPbc	PKPdf	15 20 47.1	+6.1
	7.8nm,0.8s,baz=307,slow=7.6,SNR=5.1						
NB2	NORSAR Subarra	151.92	349	PKP	PKPdf	15 20 48.4	+6.8
	1.1nm,0.7s,baz=15,slow=2.6						
NB2	NORSAR Subarra	151.92	349	⇑ PKPab	PKPdf	15 20 48.4	+6.8
NOA	NORSAR Array B	151.92	349	PKPbc	PKPdf	15 20 46.7	+5.2
	1.4nm,0.6s,baz=14,slow=4.1,SNR=4.2						
NOA	NORSAR Array B	151.92	349	PKPbc	PKPdf	15 20 46.7	+5.2
HFS	Hagfors	152.33	346	PKPbc	PKPdf	15 20 47.9	+5.7
	5.5nm,0.9s,baz=90,slow=3.0,SNR=7.4						
DBIC	Dimbokro	152.50	167	PKPab	PKPab	15 21 00.9	-2.7
	1.5nm,0.6s,baz=185,slow=9.2,SNR=3.6						
BRTR	Keskin Array B	153.24	292	PKP	PKPdf	15 20 43.5	-0.6
	0.3nm,0.4s,baz=18,slow=4.6,SNR=2.8						
BRTR				PKPbc	PKPdf	15 20 51.6	+7.5
	2.0nm,0.9s,baz=124,slow=4.5,SNR=6.1						
BRTR	Keskin Array B	153.24	292	PKP	PKPdf	15 20 43.5	-0.6
BRTR				PKPbc	PKPdf	15 20 51.6	+7.5
AKASG	Malin Array Be	153.32	318	PKPbc	PKPdf	15 20 51.2	+7.4
	0.3nm,0.3s,baz=56,slow=2.3,SNR=4.2						
GERES	GERESS Array B	162.19	332	PKPab	PKPab	15 21 42.9	-1.2
	0.7nm,0.8s,baz=301,slow=5.7,SNR=3.5						

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*IDC **10** 15:01:38.6±4.7, 38.63N×122.71W, h18$^{\text{km}}$±18$^{\text{km}}$, mb1 3.5/5, mb1mx3.2/24, mbtmp3.1/5, ML3.3/4, Error ellipse: s-maj=40.6km s-min=10.9km az=52.0*

NEIC 10 15:01:35.0, 38.79N×**122.75W, h4**$^{\text{km}}$**, ML3.2**(NCEDC)**, After NCEDC., Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NSHM	Saint Helena R	0.29	158	eP	Pg	15 01 41.5	+0.7
HOPS	Hopland	0.33	308	eP	Pg	15 01 42.6	+1.1
OHCM	Honcut	1.12	61	eP	Pb	15 01 55.1	-1.5
SAC	San Andreas	1.23	168	eP	Pb	15 01 57.8	-0.7
WDC	Whiskeytown Da	1.79	5	eP	Pn	15 02 06.4	-0.6
CMB	Columbia Colle	2.00	111	ePn	Pn	15 02 09.1	-0.9
KHMM	Horse Mountain	2.21	340	Pn	Pn	15 02 14.5	+1.5
SAO	San Andreas Ge	2.27	153	ePn	Pn	15 02 11.4	-2.4
WCN	Washoe City	2.38	77	ePn	Pn	15 02 15.0	-0.4
LRV	Little Rabbit	2.73	149	ePn	Pn	15 02 19.0	-1.5
PAHR	Pah Rah Range	2.77	70	Pn	Pn	15 02 18.1	-2.8
YBH	Yreka Blue Hor	2.94	1	Pn	Pn	15 02 28.4	+5.1
	0.6nm,0.3s,baz=180,slow=8.2,SNR=9.1						
YBH				Lg		15 03 15.7	
	0.1nm,0.3s,baz=346,slow=18,SNR=3.5						
YBH	Yreka Blue Hor	2.94	1	Pn	Pn	15 02 21.7	-1.7
OMM	Old Mammoth Mi	3.18	110	ePn	Pn	15 02 26.4	-0.4
NVAR	Mina Array Bea	3.50	95	Pn	Pn	15 02 31.3	0.0
	0.6nm,0.3s,baz=267,slow=15,SNR=16						
NVAR				Pg	Pg	15 02 38.5	-6.4
	1.8nm,0.3s,baz=264,slow=18,SNR=38						
NVAR				Lg		15 03 28.7	
	1.5nm,0.3s,baz=273,slow=32,SNR=4.0						
NVAR	Mina Array Bea	3.50	95	Pn	Pn	15 02 31.3	0.0
NVAR				Pg	Pg	15 02 38.5	-6.4
NVAR				Lg		15 03 28.7	
MNV	Mina	3.61	94	ePn	Pn	15 02 32.5	-0.4
MOD	Modoc	3.62	30	ePn	Pn	15 02 31.9	-1.2
HUMO	Hull Mountain	3.81	358	ePn	Pn	15 02 33.6	-2.2
TPH	Tonopah	4.39	98	Pn	Pn	15 02 41.4	-2.7
WVOR	Wild Horse Val	4.80	39	Pn	Pn	15 02 49.7	-0.1
NEW	Newport	10.31	21	Pn	P	15 04 12.6	+5.9
	0.3nm,0.3s,baz=76,slow=17,SNR=3.1						
PDAR	Pinedale Array	10.76	64	Pn	P	15 04 15.7	+2.8
	0.0nm,0.3s,baz=252,slow=14,SNR=5.9						
TXAR	Lajitas Array	18.38	115	P	P	15 05 52.9	+0.5
	baz=294,slow=8.9,SNR=1.8						

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*IDC **10** 15:14:37.2±0.9, 60.96S×28.44W, mb4.2/5, mb1 4.2/6, mb1mx3.9/17, mbtmp4.2/6, ML4.1/1, MS4.4/1, Ms1 4.4/1, ms1mx3.1/19, Error ellipse: s-maj=34.6km s-min=28.2km az=26.0*

ISC 10 15:14:42.2±4.7**, 60.9S**±0.2×**28.3W**±0.5**, h46**$^{\text{km}}$±45$^{\text{km}}$**, n14, σ1**$^{\text{s}}$**46**/8**, mb4.1**/5**, MS4.5**/1**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	12.76	152	P	P	15 17 44.6	+1.4
VNA2	Neumayer--Watz	13.10	149	⇑ iP	P	15 17 46.9	-0.7
SNAA	Sanae	14.72	148	Pn	P	15 18 08.0	-0.7
	0.9nm,0.3s,baz=318,slow=14,SNR=30						
SUR	Sutherland	42.62	71	P	P	15 22 37.1	+1.8
	4.1nm,0.8s,mb4.2,baz=177,slow=12,SNR=2.7						
BDFB	Brasilia	47.37	334	P	P	15 23 13.6	+0.2
	1.3nm,0.4s,mb4.3,baz=299,slow=5.1,SNR=2.9						
LBTB	Lobatse	51.07	70	P	P	15 23 41.8	-0.1
	2.2nm,0.7s,mb4.2,baz=304,slow=7.6,SNR=3.5						
TSUM	Tsumeb	52.63	59	P	P	15 23 51.9	-1.7
	1.1nm,0.6s,mb4.0,baz=228,slow=9.8,SNR=4.6						
KMBO	Kilima Mbogo	77.32	69	LR	LR	15 59 10.9	
	comp=Z,201nm,18.6s,MS4.5,baz=96,slow=34						
ASAR	Alice Springs	94.52	164	P	P	15 27 58.3	-0.1
	0.5nm,0.9s,mb4.0,baz=172,slow=6.4,SNR=7.6						
CMAR	Chiang Mai Arr	123.73	115	PKP	PKPdf	15 33 35.1	+0.3
	0.3nm,0.4s,baz=135,slow=3.8,SNR=3.3						
ZAL	Zalesovo	144.77	71	PKP	PKPdf	15 34 12.9	+0.5
	1.0nm,0.5s,baz=188,slow=3.3,SNR=4.9						
INK	Inuvik	149.04	316	PKPbc	PKPdf	15 34 24.8	+5.6
	0.9nm,0.6s,baz=89,slow=4.3,SNR=7.2						
SONM	Songino Array	151.19	96	PKP	PKPdf	15 34 28.1	+5.0
	1.4nm,0.6s,baz=226,slow=3.4,SNR=8.1						
SONM				PKPbc	PKPdf	15 34 33.0	+10
	1.6nm,0.6s,baz=222,slow=2.9,SNR=19						
ILAR	Eielson Array	152.68	305	PKPbc	PKPdf	15 34 34.2	+9.5
	1.2nm,1.1s,baz=153,slow=2.0,SNR=6.8						

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*IDC **10** 15:16:56.3±0.7, 60.44S×27.89W, mb4.3/8, mb1 4.3/9, mb1mx4.1/17, mbtmp4.3/9, ML4.0/1, Error ellipse: s-maj=27.3km s-min=22.1km az=100.0*

*NEIC **10** 15:17:00.6±0.5, 60.67S×28.23W, h35$^{\text{km}}$, mb4.6/7, Error ellipse: s-maj=13.5km s-min=11.1km az=69.0*

ISC 10 15:16:55.1±0.6**, 60.61S**±0.08×**28.2W**±0.2**, h10**$^{\text{km}}$**, n30, σ1**$^{\text{s}}$**25**/23**, mb4.4**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	12.99	153		P	15 20 01.1	-1.2
VNA2	Neumayer--Watz	13.32	150		P	15 20 05.8	-0.8
SNAA	Sanae	14.94	148	Pn	P	15 20 27.8	+0.1
	0.7nm,0.3s,baz=322,slow=15,SNR=21						
SNAA				Sn	S	15 23 00.5	-13
	baz=269,slow=23,SNR=2.3						
SNAA	Sanae	14.94	148	eP	P	15 20 26.6	-1.1
	102nm,0.6s						
SNAA				Sn	S	15 23 00.5	-13
PMSA	Palmer Station	16.80	240	P	P	15 20 50.6	-1.1
QSPA	South Pole Qui	29.63	180	eP	P	15 23 04.2	+2.1
	13nm,1.0s,mb4.6						
TRQA	Tornquist	30.95	301	P	P	15 23 12.5	-1.7
	15nm,1.3s,mb4.7						
VNDA	Vanda	41.98	183	P	P	15 24 51.0	+4.0
	2.4nm,0.9s,mb3.8,baz=174,slow=5.2,SNR=3.0						
SUR	Sutherland	42.49	71	P	P	15 24 50.9	-0.9
	5.2nm,0.9s,mb4.1,baz=359,slow=4.1,SNR=2.8						
BDFB	Brasilia	47.14	334	P	P	15 25 30.6	+1.3
	4.3nm,0.9s,mb4.4,baz=198,slow=6.0,SNR=2.7						
BOSA	Boshof	47.73	73	eP	P	15 25 34.0	+0.2
	7.3nm,1.1s,mb4.6						
LBTB	Lobatse	50.94	71	P	P	15 25 58.1	-0.4
	5.6nm,0.9s,mb4.5,baz=221,slow=8.1,SNR=6.8						
LBTB	Lobatse	50.94	71	eP	P	15 25 57.3	-1.2
	7.0nm,0.9s,mb4.6						
TSUM	Tsumeb	52.45	59	P	P	15 26 09.7	-0.3
	3.0nm,0.7s,mb4.4,baz=173,slow=8.9,SNR=6.9						
TSUM	Tsumeb	52.45	59	eP	P	15 26 09.7	-0.3
	3.2nm,0.7s,mb4.4						
LSZ	Lusaka	60.58	67	eP	P	15 27 08.1	+0.1
	9.0nm,0.8s,mb5.0						
DBIC	Dimbokro	69.55	25	P	P	15 28 05.0	-1.1
	1.8nm,0.6s,mb4.2,baz=203,slow=7.7,SNR=2.8						
MBAR	Mbarara	74.72	63	eP	P	15 28 38.8	+2.0
	5.8nm,1.3s,mb4.3						
STKA	Stephens Creek	87.47	171	P	P	15 29 45.5	+1.9
	2.3nm,1.0s,mb4.4,baz=188,slow=13,SNR=3.6						
STKA	Stephens Creek	87.47	171	P	P	15 29 45.0	+1.4
ASAR	Alice Springs	94.77	164	P	P	15 30 19.6	+1.8
	1.8nm,1.1s,mb4.4,baz=181,slow=3.7,SNR=8.5						
CMAR	Chiang Mai Arr	123.81	114	PKP	PKPdf	15 35 55.9	-0.4
	1.4nm,0.9s,baz=251,slow=4.3,SNR=8.0						
FINES	FINESS Array B	128.65	30	PKP	PKPdf	15 36 02.5	-1.9
	7.4nm,0.9s,baz=180,slow=5.7,SNR=5.6						
BVAR	Borovoye Array	137.54	62	PKP	PKPdf	15 36 20.8	-0.5
	1.4nm,0.9s,baz=180,slow=1.5,SNR=6.0						
YKA	Yellowknife Ar	139.12	315	PKP	PKPdf	15 36 21.5	-2.3
	0.4nm,0.7s,baz=127,slow=2.0,SNR=8.3						
ZAL	Zalesovo	144.64	70	PKP	PKPdf	15 36 31.1	-2.5
	1.5nm,0.6s,baz=266,slow=3.1,SNR=10						
INK	Inuvik	148.87	316	PKPbc	PKPdf	15 36 42.6	+2.4
	1.9nm,0.7s,baz=92,slow=2.1,SNR=7.6						
BJI	Beijing	149.91	117	P	PKPdf	15 36 48.3	+5.5
SONM	Songino Array	151.18	96	PKPbc	PKPdf	15 36 50.5	+6.1
	5.0nm,0.8s,baz=222,slow=2.8,SNR=30						
ILAR	Eielson Array	152.55	305	PKPbc	PKPdf	15 36 52.1	+6.3
	1.1nm,0.7s,baz=328,slow=1.7,SNR=10						

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*IDC **10** 15:24:51.6±1.1, 60.64S×27.96W, mb4.1/3, mb1 4.1/4, mb1mx3.7/15, mbtmp4.1/4, ML3.4/1, MS4.0/5, Ms1 4.0/5, ms1mx3.6/21, Error ellipse: s-maj=60.7km s-min=29.1km az=46.0*

*NEIC **10** 15:24:56.7±0.7, 60.61S×27.87W, h35$^{\text{km}}$, mb4.7/3, Error ellipse: s-maj=29.0km s-min=16.9km az=64.0*

ISC 10 15:24:52.0±0.8**, 60.5S**±0.1×**27.7W**±0.3**, h10**$^{\text{km}}$**, n19, σ0**$^{\text{s}}$**85**/8**, mb4.3**/6**, MS4.0**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	14.86	149	Pn	P	15 28 22.8	-0.7
	0.2nm,0.3s,baz=220,slow=12,SNR=3.2						
SNAA	Sanae	14.86	149	eP	P	15 28 22.4	-1.2
	90nm,0.7s						
USHA	Ushuaia	22.23	267	LR	LR	15 36 18.3	
	comp=Z,402nm,20.7s,MS3.8,baz=40,slow=31						
QSPA	South Pole Qui	29.70	180	eP	P	15 31 00.6	+1.0
	22nm,1.5s,mb4.7						
PLCA	Paso Flores	32.82	287	LR	LR	15 43 35.8	
	comp=Z,126nm,19.7s,MS3.6,baz=180,slow=34						
VNDA	Vanda	42.06	183	LR	LR	15 49 19.8	
	comp=Z,95nm,18.3s,MS3.7,baz=174,slow=35						
SUR	Sutherland	42.23	71	LR	LR	15 45 27.2	
	comp=Z,133nm,21.7s,MS3.8,baz=182,slow=29						
BDFB	Brasilia	47.20	333	P	P	15 33 26.6	0.0
	1.2nm,0.4s,mb4.2,baz=150,slow=13,SNR=2.1						
LVC	Limon Verde	47.48	304	P	P	15 33 28.2	-0.6
	1.2nm,0.7s,mb3.9,baz=186,slow=6.1,SNR=2.8						
LSZ	Lusaka	60.31	67	eP	P	15 35 02.5	-0.6
	8.6nm,1.1s,mb4.7						
DBIC	Dimbokro	69.38	24	P	P	15 36 01.6	-0.3
	3.9nm,1.1s,mb4.3,baz=198,slow=13,SNR=3.1						
MBAR	Mbarara	74.46	62	P	P	15 36 33.7	+1.5
	5.1nm,1.3s,mb4.3						
CTA	Charters Tower	99.51	174	LR	LR	16 22 04.1	
	comp=Z,612nm,18.2s,MS5.1,baz=130,slow=34						
CMAR	Chiang Mai Arr	123.61	114	PKP	PKPdf	15 43 51.4	-1.4
	1.3nm,1.0s,baz=243,slow=3.9,SNR=7.4						
BVAR	Borovoye Array	137.28	62	PKP	PKPdf	15 44 17.5	-0.1
	1.0nm,0.9s,baz=90,slow=1.4,SNR=3.0						
YKA	Yellowknife Ar	139.25	315	PKP	PKPdf	15 44 16.9	-4.1
	1.5nm,1.2s,baz=116,slow=1.7,SNR=5.4						
ZAL	Zalesovo	144.37	70	PKP	PKPdf	15 44 26.1	-4.0
	1.1nm,0.8s,baz=248,slow=2.3,SNR=5.4						
INK	Inuvik	148.99	316	PKPbc	PKPdf	15 44 37.2	-0.1
	1.8nm,1.0s,baz=275,slow=8.7,SNR=3.1						
SONM	Songino Array	150.93	95	PKPbc	PKPdf	15 44 45.4	+4.5
	2.5nm,0.7s,baz=224,slow=2.9,SNR=19						

IDC 10 15:31:27.2±26.0**, 25.25S**×**177.25W, h147**$^{\text{km}}$±217$^{\text{km}}$**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/15**, mbtmp4.0**/4**, MS3.7**/1**,**

Ms1 3.7/1,ms1mx2.7/24,Error ellipse: s-maj=189.7km s-min=81.8km az=148.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	34.00	271	P	P	15 37 58.9	-0.1
	4.9nm,0.7s,baz=94,slow=12,SNR=5.4						
CTA				LR	LR	15 50 34.3	
	comp=Z,108nm,18.0s,baz=224,slow=34						
ASAR	**Alice Springs**	44.30	261	P	P	15 39 22.1	-2.1
	1.9nm,0.9s,baz=108,slow=8.6,SNR=12						
WRA	**Warramunga Arr**	44.82	267	P	P	15 39 25.7	-2.7
	0.7nm,0.5s,baz=102,slow=8.2,SNR=14						
CMAR	**Chiang Mai Arr**	92.34	289	P	P	15 44 22.9	+0.4
	0.8nm,0.9s,baz=111,slow=2.4,SNR=5.6						
YKA	**Yellowknife Ar**	100.51	25	P	P	15 44 57.1	-1.6
	0.0nm,0.4s,baz=236,slow=5.7,SNR=3.9						
AKASG	**Malin Array Be**	147.44	328	PKPbc	PKPdf	15 50 52.1	+1.4
	0.1nm,0.3s,baz=34,slow=3.0,SNR=4.3						

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*STR **10** 15:32:23.4±0.3,49.35N×8.41E,h10^{km}±1^{km},Ml2.9,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **10** 15:32:23.4±0.1,49.36N×8.38E,h17^{km},Md3.4/2,Ml3.3/18, Error ellipse: s-maj=1.1km s-min=0.8km az=150.0*

*NEIC **10** 15:32:23.4,49.35N×8.41E,h10^{km},ML3.3(LDG), ML3.0(VIE),ML2.9(STR),ML2.6(SZGRF),After STR.*

*CSEM **10** 15:32:23.2±0.1,49.35N×8.42E,h20^{km},ML3.2/20,Error ellipse: s-maj=1.3km s-min=0.9km az=159.0*

*PRU **10** 15:32:23.2,49.34N×8.44E*

*LEDBW **10** 15:32:24.2±0.1,49.37N×8.42E,h17^{km}±2^{km},ML2.7,Error ellipse: s-maj=2.0km s-min=2.0km az=165.0*

BGR 10 15:32:23.4±0.2,49.39N×8.38E,h21^{km},ML2.5/9,8C-3D, Error ellipse: s-maj=2.2km s-min=1.1km az=130.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTD	**Kalmit**	0.20	251	⇓*e*Pg	Pb	15 32 29.4	+0.8
KTD				Sg	Sb	15 32 33.1	+0.9
KTD	**Kalmit**	0.20	251	Pg	Pb	15 32 29.3	+0.6
KTD				Sg	Sb	15 32 33.0	+0.8
HEI	**Heidelberg**	0.23	87	⇑*e*P	Pb	15 32 29.2	+0.2
HEI				*e*S	Sb	15 32 32.8	+0.1
TOD	**Tromm**	0.35	51	⇑*i*Pg	Pb	15 32 31.3	+0.4
TOD				Sg	Sb	15 32 36.3	+0.2
TOD	**Tromm**	0.35	51	Pg	Pb	15 32 31.3	+0.3
TOD				Sg	Sb	15 32 36.2	+0.1
IMS	**Imsbach**	0.38	304	⇑*i*P	Pb	15 32 32.3	+1.0
IMS				P		15 32 33.2	
IMS				*i* S	Sb	15 32 38.0	+1.2
PEB	**Petersbachel**	0.54	234	⇑*e*P	Pb	15 32 34.8	+0.7
PEB				P		15 32 35.3	
PEB				S	Sb	15 32 42.4	+1.0
LANF	**Langenberg**	0.55	223	*e*Pg	Pb	15 32 34.9	+0.6
LANF				⇑*i*P		15 32 35.0	
LANF				*e*Sg	Sb	15 32 42.4	+0.6
LANF	**Langenberg**	0.55	223	Pg	Pb	15 32 34.8	+0.5
LANF				Sg	Sb	15 32 41.9	+0.1
LANF	**Langenberg**	0.55	223	⇑*i*P	Pb	15 32 35.0	+0.7
LANF	**Langenberg**	0.55	223	P	Pb	15 32 35.0	+0.7
LANF				Sg	Sb	15 32 41.9	+0.1
ABH	**Alteburg**	0.73	313	*e*Pg	Pb	15 32 38.5	+1.1
ABH				⇑*i*P		15 32 38.7	
ABH	**Alteburg**	0.73	313	Pg	Pb	15 32 38.3	+0.9
ABH				Sg	Sb	15 32 49.0	+2.0
ABH	**Alteburg**	0.73	313	⇑*i*P	Pb	15 32 38.7	+1.3
ABH	**Alteburg**	0.73	313	P	Pb	15 32 38.7	+1.3
ABH				Sg	Sb	15 32 49.0	+2.0
LBG	**Lerchenberg**	0.77	159	P	Pb	15 32 38.3	+0.3
LBG				S	Sb	15 32 48.0	0.0
SIND	**Sindeldorf**	0.80	92	⇑*e*P	Pb	15 32 38.6	+0.1
SIND				S	Sb	15 32 49.3	+0.4
STU	**Stuttgart**	0.81	139	*e*Sg	Sb	15 32 48.9	-0.4
STU	**Stuttgart**	0.81	139	*e*Pg	Pb	15 32 39.0	+0.2
STU				*e*Sg	Sb	15 32 48.2	-1.1
STU	**Stuttgart**	0.81	139	*e*Pg	Pb	15 32 39.0	+0.3
STU				Sg	Sb	15 32 48.9	-0.4
TNS	**Taunus Mts**	0.84	3	*e*Pg	Pb	15 32 39.3	+0.2
TNS				*e*Sg	Sb	15 32 51.2	+1.2
TNS	**Taunus Mts**	0.84	3	*e*Pg	Pb	15 32 39.3	+0.1
TNS				*e*Sg	Sb	15 32 51.2	+1.2
RUP	**Ruppelstein**	0.92	291	*e*Pg	Pb	15 32 40.6	+0.1
RUP				⇑*e*Pn	Pn	15 32 41.5	+0.3
RUP	**Ruppelstein**	0.92	291	Pg	Pb	15 32 41.3	+0.8
RUP				Sg	Sb	15 32 54.0	+1.8
RUP	**Ruppelstein**	0.92	291	⇑*e*P	Pb	15 32 41.5	+1.0
RUP	**Ruppelstein**	0.92	291	Pn	Pn	15 32 41.5	+0.4
RUP				Sg	Sb	15 32 54.0	+1.8
TUBL	**Tuebingen Lnz**	0.98	152	Sg	Sb	15 32 54.5	+0.4
FACH	**Fachingen**	1.00	346	P	Pb	15 32 42.4	+0.4
FACH				S	Sb	15 32 56.5	+1.7
DUP	**Duppenweiler**	1.04	272	*e*P	Pb	15 32 44.0	+1.4
BFO	**Black Forest**	1.06	182	Pn	Pn	15 32 41.5	-1.6
BFO				Pg	Pb	15 32 44.2	+1.3
BFO				Sn	Sn	15 32 54.5	-2.8
BFO				*e*Sg	Sb	15 32 56.7	+0.4
BFO	**Black Forest**	1.06	182	*e*Pn	Pn	15 32 41.4	-1.8
BFO				*e*Sg	Sb	15 32 56.7	+0.4
RIVT	**Riveris**	1.10	288	*e*P	Pb	15 32 44.8	+1.2
BUCH	**Bad Urach**	1.14	145	Pn	Pn	15 32 44.3	0.0
BUCH				Sg	Sb	15 32 59.2	+0.7
WLS	**Welschbruch**	1.19	215	Pn	Pn	15 32 43.2	-1.8
WLS				*e*Pg	Pn	15 32 46.2	+1.2
WLS				*e*Sg	Sb	15 33 01.3	+1.3
WLS	**Welschbruch**	1.19	215	Pg	Pn	15 32 43.7	-1.3
WLS				Sg	Sb	15 33 01.0	+1.0
CDF	**Champ du Feu**	1.22	217	*e*Pn	Pn	15 32 43.4	-2.0
CDF				*e*Pg	Pn	15 32 46.0	+0.6
CDF				*e*Sn	Sn	15 32 58.7	-2.7
CDF				*e*Sg	Sb	15 33 01.6	+0.7
	91nm,0.2s						
LIBD	**Limburg**	1.34	203	Pg	Pn	15 32 50.0	+2.8
LIBD	**Limburg**	1.34	203	Pg	Pn	15 32 48.5	+1.3
BIW	**Bindweide**	1.39	346	⇑*i*P	Pn	15 32 50.4	+2.4
GUT	**Gutenstein**	1.40	159	Pn	Pn	15 32 46.6	-1.5
ECH	**Echery**	1.42	215	Pn	Pn	15 32 45.5	-2.8
ECH				*e*Pg	Pn	15 32 50.0	+1.6
ECH				*e*Sg	Sn	15 33 08.1	+1.5
ECH	**Echery**	1.42	215	Pg	Pn	15 32 50.1	+1.7
ECH				Sg	Sn	15 33 08.8	+2.2
HDH	**Heidenheim**	1.45	123	Pg	Pn	15 32 50.4	+1.7
HDH				Sg	Sn	15 33 08.2	+1.0
KIZ	**Kirchzarten**	1.46	192	Pn	Pn	15 32 46.9	-2.1
KIZ				Sn	Sn	15 33 03.9	-3.8
KIZ				Sg	Sn	15 33 09.6	+1.9
WLF	**Walferdange**	1.48	282	*e*Pn	Pn	15 32 48.3	-0.9
	SNR=0.8						
WLF				*e*Pg	Pn	15 32 50.9	+1.7
WLF				*e*Sg	Sn	15 33 09.9	+1.9
WLF	**Walferdange**	1.48	282	*e*Pn	Pn	15 32 49.0	-0.1
WLF				*e*Sn	Sn	15 33 05.8	-2.2
WLF	**Walferdange**	1.48	282	*e*Pn	Pn	15 32 49.0	-0.2
WLF	**Walferdange**	1.48	282	P	Pn	15 32 49.9	+0.7
WLF				*e*Sn	Sn	15 33 05.8	-2.2
FELD	**Feldberg**	1.53	190	Pn	Pn	15 32 49.2	-0.7
MOF	**Molkenrain**	1.74	209	Pg	Pn	15 32 56.3	+3.3
MOF				*e*Sg	Sn	15 33 18.7	+3.9
MOF	**Molkenrain**	1.74	209	Pg	Pn	15 32 56.2	+3.2
UBBA	**Unterbreizbach**	1.77	35	*e*Pn	Pn	15 32 51.7	-1.7
	SNR=0.8						
UBBA				*e*Pg	Pn	15 32 56.1	+2.7
UBBA				*e*Sg	Sn	15 33 19.2	+3.7
HINF	**Hinteralfeld**	1.87	213	*e*Pn	Pn	15 32 52.3	-2.5
HINF				*e*Pg	Pn	15 32 58.1	+3.3
HINF				*e*Sn	Sn	15 33 14.5	-3.5
HINF				*e*Sg	Sn	15 33 22.6	+4.6
	99nm,0.3s						
GRA1	**Grafenberg Arr**	1.88	80	*e*Pg	Pn	15 32 58.2	+3.3
GRA1				*e*Sg	Sn	15 33 21.7	+3.6
GRF	**Grafenberg Arr**	1.88	80	*e*Pg	Pn	15 32 58.2	+3.4
GRF				*e*Sg	Sn	15 33 21.7	+3.6
HAU	**Haudompre**	1.93	225	*e*Pn	Pn	15 32 52.8	-2.8
HAU				*e*Pg	Pn	15 32 59.4	+3.8
HAU				*e*Sn	Sn	15 33 15.8	-3.7
HAU				*e*Sg	Sn	15 33 23.4	+3.9
	83nm,0.2s						
MEM	**Membach**	1.96	310	P	Pn	15 32 55.5	-0.6
THEF	**They Montfort**	1.96	235	Pg	Pn	15 32 59.4	+3.3
THEF				*e*Sg	Sn	15 33 24.4	+4.1
THEF	**They Montfort**	1.96	235	Pg	Pn	15 32 59.2	+3.1
UBR	**Uberruh**	2.06	145	Pg	Pn	15 33 01.6	+4.1
RFYF	**Reffroy**	2.06	249	*e*Pn	Pn	15 32 55.7	-1.8
	baz=66						
RFYF				*e*Pg	Pn	15 33 01.3	+3.8
	baz=73						
RFYF				*e*Sn	Sn	15 33 19.5	-3.3
	baz=63						
RFYF				*e*Sg	Sn	15 33 28.6	+5.8
	48nm,0.3s,baz=69						
RFYF	**Reffroy**	2.06	249	*e*Pg	Pn	15 33 01.3	+3.8
RFYF				*e*Sn	Sn	15 33 19.5	-3.3
RFYF				*e*Sg	Sn	15 33 28.6	+5.8
	24nm,0.3s						
HGN	**Heimansgroeve**	2.10	312	*e*Pg	Pn	15 33 02.7	+4.6
HGN				*e*Sg	Sn	15 33 28.2	+4.5
BUG	**Bochum--Univer**	2.18	341	*e*Sg	Sn	15 33 31.2	+5.4
FUR	**Furstenfeldbru**	2.27	121	*e*Sg	Sn	15 33 35.1	+6.9
LOMF	**Lomont**	2.29	208	*e*Pg	Pn	15 33 06.8	+6.1
LOMF				*e*Sg	Sn	15 33 36.3	+7.8
LOMF	**Lomont**	2.29	208	Pg	Pn	15 33 06.9	+6.2
DAVA	**Damuels**	2.33	154	⇓*i*PN	Pn	15 33 02.4	+1.1
DAVA				*i* PG	Pn	15 33 06.7	+5.4
DAVA				*i* SG	Sn	15 33 36.0	+6.4
	11nm,0.3s						
MEZF	**Maizieres J'vi**	2.37	249	*e*Pn	Pn	15 32 59.6	-2.3
	baz=69						
MEZF				*e*Pg	Pn	15 33 07.4	+5.5
	baz=66						
MEZF				*e*Sg	Sn	15 33 37.0	+6.4
	25nm,0.3s,baz=70						
MEZF	**Maizieres J'vi**	2.37	249	*e*Pg	Pn	15 33 07.4	+5.5
MEZF				*e*Sg	Sn	15 33 37.0	+6.4
	12nm,0.3s						
GIVF	**Givet**	2.42	289	*e*Pn	Pn	15 33 00.9	-1.7
GIVF				*e*Pg	Pn	15 33 07.8	+5.2
GIVF				*e*Sn	Sn	15 33 28.8	-3.1
GIVF				*e*Sg	Sn	15 33 40.0	+8.1
	22nm,0.3s						
MOX	**Moxa**	2.44	58	*e*Pn	Pn	15 33 01.2	-1.7
	SNR=1.1						
MOX				*e*Pg	Pn	15 33 08.7	+5.8
MOX				*e*Sg	Sn	15 33 39.3	+6.9
MOX	**Moxa**	2.44	58	*i* Pg	Pn	15 33 09.6	+6.7
MOX				*i* Sg	Sn	15 33 59.0	+27
MOX	**Moxa**	2.44	58	*i* P	Pn	15 33 01.2	-1.7
MOX				Pg	Pn	15 33 10.0	+7.1
MOX				Sg	Sn	15 33 59.0	+27
SFTF	**Sexfontaines**	2.51	243	*e*Pn	Pn	15 33 01.6	-2.3
	baz=62						
SFTF				*e*Pg	Pn	15 33 09.7	+5.8
	baz=67						
SFTF				*e*Sn	Sn	15 33 30.0	-4.1
	baz=65						
SFTF				*e*Sg	Sn	15 33 41.2	+7.1
	29nm,0.2s,baz=64						
SFTF	**Sexfontaines**	2.51	243	*e*Pg	Pn	15 33 09.7	+5.8
SFTF				*e*Sn	Sn	15 33 30.0	-4.1
SFTF				*e*Sg	Sn	15 33 41.2	+7.1
	14nm,0.2s						
DOU	**Dourbes**	2.56	288	P	Pn	15 33 04.0	-0.6
GUNZ	**Gunzen**	2.74	68	*e*Pn	Pn	15 33 04.8	-2.4
	SNR=2.0						
GUNZ				*e*Pg	Pn	15 33 14.6	+7.4
GUNZ				*e*Sg	Sn	15 33 49.5	+9.5
WERD	**Werda**	2.75	66	*e*Pn	Pn	15 33 04.2	-3.2
	SNR=2.7						
WERD				*e*Pg	Pn	15 33 14.9	+7.5
WERD				*e*Sg	Sn	15 33 49.6	+9.2
CLZ	**Clausthal**	2.77	27	*e*Pn	Pn	15 33 05.7	-1.9
	SNR=0.8						
CLZ				*e*Sg	Sn	15 33 51.0	+10
NKC	**Novy Kostel**	2.77	71	*e*PG	Pn	15 33 15.0	+7.4
NKC				*e*SG	Sn	15 33 49.0	+8.2
BAIF	**Baives**	2.79	286	*e*Pg	Pn	15 33 14.7	+6.8
BAIF				*e*Sn	Sn	15 33 37.0	-4.4
BAIF				*e*Sg	Sn	15 33 51.4	+10
	19nm,0.5s						
TANN	**Tannenbergstha**	2.83	67	*e*Pg	Pn	15 33 16.6	+8.0
TANN				*e*Sg	Sn	15 33 52.9	+10
NEUB	**Neuenburg**	2.84	49	*e*Sg	Sn	15 33 52.6	+10
SQTA	**Sankt Quirin**	2.87	138	⇑*i*PN	Pn	15 33 09.3	+0.2
SQTA				*i* SN	Sn	15 33 41.6	-1.9
SQTA				*i* SG	Sn	15 33 53.6	+10
	7.1nm,0.3s						
WTTA	**Wattenberg**	3.04	133	⇓*i*PN	Pn	15 33 11.4	-0.1
WTTA				*i* SN	Sn	15 33 45.8	-1.8
WTTA				*i* SG	Sn	15 33 59.7	+12
	5.8nm,0.3s						
CABF	**La Chapelle**	3.17	210	*e*Pn	Pn	15 33 10.6	-2.8
CABF				*e*Pg	Pn	15 33 21.6	+8.2
CABF				*e*Sn	Sn	15 33 44.5	-6.6
CABF				*e*Sg	Sn	15 34 02.0	+11
	19nm,0.5s						
KHC	**Kasperske Hory**	3.42	92	*e*PG	Pn	15 33 26.6	+10
KHC				*e*x	x	15 33 38.5	
KHC				*e*x	x	15 33 51.5	
KHC				*e*SG	Sn	15 34 08.8	+12
KHC	**Kasperske Hory**	3.42	92	*e*Pg	Pn	15 33 26.6	+10
KHC				*e*Sg	Sn	15 34 08.8	+12
CLL	**Collm**	3.53	55	*e*Pg	Pn	15 33 29.5	+11
CLL				*e*Sg	Sn	15 34 14.5	+14
CLL	**Collm**	3.53	55	*e*Pg	Pn	15 33 30.0	+12
CLL				*e*Sg	Sn	15 34 15.0	+15
GEC2	**GERESS Array S**	3.54	97	*e*Pg	Pn	15 33 29.9	+11
GEC2				*e*Sg	Sn	15 34 14.1	+14
BRG	**Berggiesshubel**	3.88	65	*e*Pg	Pn	15 33 38.2	+15
BRG				*e*Sg	Sn	15 34 24.4	+16
SSF	**Saint Saulge**	4.00	236	*e*Pn	Pn	15 33 21.6	-3.6
SSF				*e*Pg	Pn	15 33 37.5	+12
SSF				*e*Sn	Sn	15 34 05.2	-6.9
SSF				*e*Sg	Sn	15 34 28.4	+16
	14nm,0.4s						
LPL	**La Plagne**	4.03	197	*e*Sg	Sn	15 34 28.6	+16
	4.9nm,0.4s						
PRU	**Pruhonice**	4.05	79	*e*SG	Sn	15 34 30.7	+18
SMF	**Signal de Mont**	4.10	230	*e*Pn	Pn	15 33 22.5	-4.0
SMF				*e*Pg	Pn	15 33 39.9	+13
SMF				*e*Sg	Sn	15 34 30.9	+16
	14nm,0.3s						
AVF	**Avril sur Loir**	4.25	234	*e*Pn	Pn	15 33 24.7	-4.0
AVF				*e*Pg	Pn	15 33 41.6	+13
AVF				*e*Sn	Sn	15 34 11.0	-7.4
AVF				*e*Sg	Sn	15 34 35.6	+17
	25nm,0.9s						
HYF	**Humbligny**	4.38	243	*e*Pg	Pn	15 33 43.5	+13
HYF				*e*Sg	Sn	15 34 39.5	+18
BGF	**Bois d'Agland**	4.67	235	*e*Pg	Pn	15 33 49.9	+15
BGF				*e*Sg	Sn	15 34 47.4	+18
	24nm,0.3s						
ORIF	**Oris-en-Rattie**	4.78	202	*e*Pn	Pn	15 33 32.2	-4.1
ORIF				*e*Sg	Sn	15 34 52.1	+20
	5.0nm,0.5s						
UPC	**Upice**	5.05	74	*e*SG	Sn	15 35 00.8	+22
TCF	**Toulx Ste Croi**	5.18	236	*e*Pn	Pn	15 33 38.5	-3.4
TCF				*e*Pg	Pn	15 33 59.6	+18
TCF				*e*Sn	Sn	15 34 34.4	-7.4
TCF				*e*Sg	Sn	15 35 04.7	+23
	5.3nm,0.3s						
VIVF	**Saint-Julien-l**	5.19	211	*e*Pn	Pn	15 33 38.5	-3.5
VIVF				*e*Sg	Sn	15 35 04.7	+23
	3.2nm,0.3s						
FLN	**La Foliniere**	5.86	267	*e*Pn	Pn	15 33 47.8	-3.6
MORC	**Moravsky Berou**	5.97	83	Pn	Pn	15 33 50.1	-2.9
MORC				*e*Sn	Sn	15 35 23.7	+22
MORC	**Moravsky Berou**	5.97	83	Pn	Pn	15 33 50.1	-2.9
RGN	**Rugen**	6.00	29	Pn	Pn	15 33 50.3	-3.1
RJF	**Les Rejaudoux**	6.20	231	*e*Pn	Pn	15 33 51.7	-4.5
LFF	**La Frestale**	6.85	232	*e*Pn	Pn	15 34 00.7	-4.6
SGMF	**Saint Gilles**	7.31	265	*e*Pn	Pn	15 34 06.0	-5.8
ROSF	**Rostrenen**	7.76	267	*e*Pn	Pn	15 34 14.1	-4.0
ROSF				*e*Pg	Pn	15 34 46.6	+28
QUIF	**Quistinic**	7.79	263	*e*Pn	Pn	15 34 13.8	-4.7
QUIF				*e*Pg	Pn	15 34 47.4	+29

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*IDC **10** 15:33:37.1±1.1,5.29N×94.11E,mb4.1/9,mb1 4.2/10, mb1mx4.0/20,mbtmp4.1/10,ML4.6/1,MS3.4/2,Ms1 3.5/2, ms1mx2.8/30,Error ellipse: s-maj=51.8km s-min=19.0km az=52.0*

*BJI **10** 15:33:38.0,5.10N×94.00E,h28^{km},mb4.8*

*NEIC **10** 15:33:41.0±0.7,5.14N×93.97E,h30^{km},mb4.4/7,Error ellipse: s-maj=21.7km s-min=12.0km az=66.0*

ISC 10 15:33:39.5±0.7,5.22N±0.09×94.1E±0.1,h30^{km},n24, σ1^{s}00/23,mb4.3/19,MS3.9/1,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	13.98	19	*e*P	P	15 37 01.2	+3.2
	6.8nm,0.6s						
CMAR	**Chiang Mai Arr**	13.98	19	Pn	P	15 36 59.5	+1.4
	0.9nm,0.3s,baz=209,slow=15,SNR=19						
CMAR				LR	LR	15 43 02.7	
	comp=Z,62nm,18.2s,baz=168,slow=41						
GYA	**Guiyang**	24.30	28	⇑*i*P	P	15 38 55.9	+0.2
GYA				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
LSA	**Lhasa**	24.51	354	*e*P	P	15 38 57.2	-0.5
	comp=Z,5.4nm,0.6s,mb4.2						
LUBP	**Lubang**	27.12	70	*e*P	P	15 39 17.1	-5.0
GTA	**Gaotai**	34.43	8	*e*P	P	15 40 25.5	-1.1
GTA				AP	pP	15 40 33.6	-1.9
GTA				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.5						
AAK	**Ala-Archa**	41.12	338	*e*P	P	15 41 22.9	+0.3
	comp=Z,1.3nm,0.7s,mb3.7						
SONM	**Songino Array**	43.75	12	P	P	15 41 43.2	-0.8
	comp=Z,2.0nm,0.7s,mb3.9,baz=194,slow=8.0,SNR=24						
SONM				PcP	PcP	15 43 30.8	-0.2
	comp=Z,0.3nm,0.5s,baz=182,slow=4.0,SNR=5.5						
ULN	**Ulaanbaatar**	43.92	13	*e*P	P	15 41 43.6	-1.7
	comp=Z,1.7nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	46.80	124	P	P	15 42 08.8	+0.1
	comp=Z,1.7nm,0.5s,mb4.3,baz=301,slow=9.7,SNR=23						
WRAB	**Tennant Creek**	46.80	124	*e*P	P	15 42 07.2	-1.5
	comp=Z,5.9nm,0.5s,mb4.8						
KURK	**Kurchatov**	47.16	347	*e*P	P	15 42 11.0	-0.1
	comp=Z,2.4nm,0.5s,mb4.4						
ASAR	**Alice Springs**	48.28	128	P	P	15 42 20.4	+0.1
	comp=Z,0.5nm,0.4s,mb3.9,baz=302,slow=7.8,SNR=13						
ZAL	**Zalesovo**	49.16	353	P	P	15 42 25.6	-1.0
	comp=Z,2.5nm,0.5s,mb4.5,baz=312,slow=5.6,SNR=14						
MDJ	**Mudanjiang**	50.03	33	P	P	15 42 33.6	+0.1
	comp=Z,25nm,1.3s,mb5.1						
BVAR	**Borovoye Array**	51.48	342	P	P	15 42 43.9	-0.4
	comp=Z,1.2nm,0.5s,mb4.0,baz=144,slow=11,SNR=13						
CHKZ	**Chkalovo**	51.97	342	*e*P	P	15 42 47.6	-0.4
	comp=Z,4.0nm,0.6s,mb4.5						
STKA	**Stephens Creek**	58.33	133	P	P	15 43 35.2	+0.8
LBTB	**Lobatse**	72.95	242	LR	LR	16 17 02.6	
	comp=Z,58nm,18.7s,MS3.9,baz=44,slow=36						
FINES	**FINESS Array B**	75.03	333	P	P	15 45 19.6	-0.3
	comp=Z,2.1nm,0.6s,mb4.2,baz=117,slow=3.1,SNR=6.8						
GERES	**GERESS Array B**	79.77	319	P	P	15 45 47.0	+0.6
	comp=Z,2.6nm,1.0s,mb4.1,baz=117,slow=4.4,SNR=2.9						
HFS	**Hagfors**	80.72	330	P	P	15 45 51.3	+0.1
	comp=Z,75nm,1.6s,mb5.4,baz=90,slow=8.9,SNR=4.0						
DAVOX	**Davos**	82.27	316	P	P	15 46 01.1	+1.5
	comp=Z,2.1nm,0.7s,mb4.2,baz=154,slow=23,SNR=2.9						
ILAR	**Eielson Array**	97.21	22	P	P	15 47 12.9	+2.7
	comp=Z,0.1nm,0.5s,mb3.5,baz=307,slow=4.5,SNR=3.4						

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*NEIC **10** 15:37:26.9,25.73S×70.01W,h80^{km},After GUC.*

GUC 10 15:37:26.9±0.8,25.73S×70.01W,h80^{km}±17^{km},ML3.8,1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	**Cerro Paranal**	1.15	342	⇓*i*P	P	15 37 49.0	+0.9
CPN1				*i* S	S	15 38 05.4	+1.5
CPN1				AMP		15 38 08.8	
	comp=E,1μm,0.3s						
CPCH	**Copiapo**	1.66	191	*e*P	P	15 37 54.8	+0.1
CPCH				*i* S	S	15 38 15.4	+0.1
CPCH				AMP		15 38 26.2	
	comp=E,5μm,0.1s						
ANCH	**Antofagasta**	2.07	350	*e*P	P	15 37 59.6	-0.7
ANCH				*i* S	S	15 38 25.3	+0.3
ANCH				AMP		15 38 33.2	
	comp=N,144nm,0.2s						
SPCH	**San Pedro de A**	3.25	31	*e*P	P	15 38 17.1	+0.2
SPCH				*i* S	S	15 38 54.7	0.0
SPCH				AMP		15 39 01.0	
	comp=N,506nm,0.7s						
LVC	**Limon Verde**	3.26	18	*e*Pn	P	15 38 15.8	-1.1
LVC				*e*Sn	S	15 38 39.9	-15

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*IDC **10** 15:58:10.5±3.2,9.46N×126.59E,h13^{km}±19^{km},mb4.6/28, mb1 4.6/29,mb1mx4.6/31,mbtmp4.7/29,MS4.4/5, Ms1 4.4/5,ms1mx3.8/31,Error ellipse: s-maj=19.7km s-min=10.2km az=70.0*

*MOS **10** 15:58:11.3±1.1,9.50N×126.76E,h33^{km},mb5.1/17, MS4.5/5,Error ellipse: s-maj=17.3km s-min=6.9km az=113.3*

*MAN **10** 15:58:12.9,9.45N×126.78E,h27^{km},mb5.6,ML4.6,MS4.9*

*BJI **10** 15:58:15.3,9.47N×126.50E,h64^{km},mB5.2,mb4.9,Ms4.8, Msz4.6*

*NEIC **10** 15:58:17.5±1.3,9.40N×126.46E,h69^{km}±12^{km},mb5.0/44, Error ellipse: s-maj=8.9km s-min=4.4km az=70.0*

*HRVD **10** 15:58:17.5±0.5,9.50N×127.02E,h66^{km}±4^{km},MW5.0/41, Centroid moment Tensor Solution. LP body waves: s1,c1; Mantle waves: s41,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.53±.44; $M_{\theta\theta}$3.95±.22; $M_{\phi\phi}$-1.42±.28; $M_{r\theta}$0.04±.16; $M_{\theta\phi}$0.66±.14; $M_{\phi r}$1.49±.15; Best double couple: $M_0$3.809×10^{16} NP1:ϕ_s113°,δ53°,λ-44°. NP2: ϕ_s233°,δ56°,λ-134°. Principal axes: T 4.036, Plg2°, Azm353°; N -.455, Plg35°, Azm261°; P -3.581, Plg55°, Azm85°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 10 15:58:14.8±0.6,9.43N±0.03×126.63E±0.05,h63^{km}±5^{km}, h42^{km}±4.1^{km}:pP-P,n198,σ1^{s}20/200,mb4.9/86,14C-8D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	1.10	246	*e*P	P	15 58 33.7	-0.8
SCPH	**Surigao**	1.18	288	⇑*i*P	P	15 58 34.6	-1.1
SCPH				*i* S	S	15 58 47.2	-4.0
SCPH	**Surigao**	1.18	288	⇑*i*P	P	15 58 34.6	-1.1
SCPH				*i* S	S	15 58 47.2	-4.0
BIPH	**Bislig**	1.26	192	⇓*i*P	P	15 58 34.6	-2.2
BIPH				*e*S	S	15 58 50.1	-3.0
BIPH	**Bislig**	1.26	192	⇓*e*P	P	15 58 34.6	-2.2
BIPH				*e*S	S	15 58 50.1	-3.0
MSLP	**Maasin**	1.88	292	*e*P	P	15 58 46.3	+0.9
PLP	**Palo**	2.37	317	*i* P	P	15 58 51.5	-0.8
PLP				*i* S	S	15 59 21.4	+1.3
MATI	**Mati**	2.49	189	*e*P	P	15 58 52.6	-1.4
DAV	**Davao City (W)**	2.56	204	*e*P	P	15 58 58.0	+3.1
OCLP	**Ormoc**	2.56	309	*e*P	P	15 58 55.4	+0.4
TBP	**Tagbilaran**	2.75	276	⇑*e*P	P	15 58 57.8	+0.3
TBP				*e*S	S	15 59 32.0	+2.4
LLP	**Lapu-Lapu**	2.77	289	⇑*e*P	P	15 58 58.7	+0.8
LLP				*e*S	S	15 59 32.5	+2.3
DCPH	**Dipolog City**	3.35	256	⇑*e*P	P	15 59 06.3	+0.3
DCPH				*e*S	S	15 59 37.3	-7.4
PAGZ	**Pagadian**	3.58	244	*e*P	P	15 59 10.8	+1.6
MMPH	**Masbate**	4.15	315	*e*P	P	15 59 27.0	+10
GUIM	**Jordan**	4.16	287	*e*P	P	15 59 17.8	+0.5
IPIL	**Ipil**	4.33	248	*e*P	P	15 59 21.9	+2.1
RCP	**Roxas**	4.37	299	⇓*e*P	P	15 59 20.6	+0.3
KALP	**Kalibo**	4.78	298	*e*P	P	15 59 26.4	+0.4
PVCP	**Virac**	4.80	330	*e*P	P	15 59 26.3	-0.1
OTRP	**Odiongan**	5.39	303	*e*P	P	15 59 34.4	0.0
CUYO	**Cuyo Island**	5.71	285	*e*P	P	15 59 40.3	+1.5
BOAC	**Boac**	6.17	311	*e*P	P	15 59 45.5	+0.1
SJMP	**San Jose**	6.20	300	*e*P	P	15 59 47.0	+1.3
BUSP	**Coron**	6.82	293	*e*P	P	15 59 54.8	+0.3
TGY	**Tagaytay City**	7.26	310	Pn	P	15 59 59.7	-0.8
	baz=342,slow=3.2						
TGY				LR	LR	16 03 05.6	
	comp=Z,3μm,19.2s,baz=291,slow=41						
ENPP	**El Nido**	7.31	285	*e*P	P	16 00 00.1	-1.1
LUBP	**Lubang**	7.58	305	*e*P	P	16 00 06.7	+1.8
BATP	**Bataraza**	8.74	267	*e*P	P	16 00 27.0	+6.1
CAUP	**Cauayan**	8.82	328	*e*P	P	16 00 19.5	-2.4
SCZP	**Santa Cruz**	9.10	315	*e*P	P	16 00 33.9	+8.1
BOLP	**Bolinao**	9.52	317	*e*P	P	16 00 31.5	-0.2
APYP	**Conner**	9.88	329	*e*P	P	16 00 36.4	-0.2
ABRA	**Dolores**	9.99	325	*e*P	P	16 00 37.4	-0.7
TATO	**Taipei**	16.22	343	P	P	16 01 57.0	-3.0
	74nm,1.1s						

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GZH   Guangzhou         18.61 318  P      P       16 02 26.6  -3.0
GZH                                LR     LR
      comp=N,1µm,22.8s
GZH                                LR     LR
      comp=E,2µm,19.1s
GZH                                LR     LR
      comp=Z,3µm,18.5s
QIZ   Qiongzhong        18.85 302  P      P       16 02 30.7  -1.7
QIZ                                S      S       16 06 02.4  +5.5
QIZ                                AMB    AMB
      comp=Z,440nm,9.4s
QIZ                                LR     LR
      comp=N,3µm,14.3s
QIZ                                LR     LR
      comp=E,1µm,14.3s
QIZ                                LR     LR
      comp=Z,1µm,15.0s
QIZ   Qiongzhong        18.85 302  eP     P       16 02 31.8  -0.6
      comp=Z,75nm,1.4s
SSE   Sheshan           22.15 348  P      P       16 03 01.0  -5.6
      comp=Z,46nm,1.3s,mb4.8
SSE                                pP             16 03 09.3
SSE                                sP             16 03 13.3
SSE                                S      S       16 07 09.6  +8.1
SSE                                sS             16 07 22.3
SSE                                LR     LR
      comp=Z,470nm,19.6s
KAKA  Kakadu            22.74 165⇓iP     P       16 03 13.3  +0.8
      comp=Z,40nm,0.6s,mb5.0
CBIJ  Chichi jima       22.91  38  P      P       16 03 15.0  +0.9
      comp=Z,85nm,0.6s,mb5.3,baz=229,slow=9.3,SNR=4.0
CBIJ                               LR     LR      16 11 11.5
      comp=Z,657nm,18.1s,baz=123,slow=34
NJ2   Nanjing           23.64 343  eP     P       16 03 22.6  +1.5
NJ2                                PP     PP      16 03 57.3  +1.7
NJ2                                AMB    AMB
      comp=Z,160nm,1.2s,mb5.3
NJ2                                AMB    AMB
      comp=Z,730nm,7.1s
NJ2                                LR     LR
      comp=N,2µm,20.7s
NJ2                                LR     LR
      comp=E,1µm,16.0s
NJ2                                LR     LR
      comp=Z,2µm,20.1s
ENH   Enshi             26.20 325  eP     P       16 03 43.5  -2.0
      comp=Z,51nm,1.4s,mb4.9
JHJ   Hachijo jima 2    26.52  25  LR     LR      16 13 32.7
      comp=Z,1µm,18.1s,baz=82,slow=35
FITZ  Fitzroy Crossi    27.37 182  eP     P       16 03 57.0  +0.6
      comp=Z,80nm,1.1s,mb5.2
PMG   Port Moresby      27.70 132  eP     P       16 03 56.7  -2.8
PMG   Port Moresby      27.70 132  P      P       16 03 57.7  -1.8
      comp=Z,16nm,1.0s,mb4.6,baz=22,slow=4.6,SNR=3.9
PMG   Port Moresby      27.70 132  eP     P       16 03 55.0  -4.5
      comp=Z,21nm,1.1s,mb4.7
KS15  Wonju Array Si    27.91   2  P      P       16 04 02.5  +1.3
CM31  Chiang Mai Arr    28.30 292  eP     P       16 04 04.5  -0.2
      comp=Z,21nm,1.0s,mb4.7
CMAR  Chiang Mai Arr    28.30 292  i P    P       16 04 04.7  -0.1
CMAR                               pmax   pmax
      comp=Z,5.0nm,0.9s
CMAR  Chiang Mai Arr    28.30 292  P      P       16 04 04.7  -0.1
      comp=Z,4.7nm,0.9s,mb4.1,baz=94,slow=7.6,SNR=8.8
CMAR                               ScP            16 10 57.4
      comp=Z,1.0nm,0.9s,baz=67,slow=2.5,SNR=5.5
CMAR                               LR     LR      16 16 43.9
      comp=Z,478nm,18.6s,baz=105,slow=39
MAJO  Matsushiro        28.97  19  eP     P       16 04 07.5  -3.0
      comp=Z,7.9nm,0.8s,mb4.5
XAN   Xi'an             29.41 329  P      P       16 04 12.7  -1.8
XAN                                AMB    AMB
      comp=Z,14nm,0.8s,mb4.7
WRAB  Tennant Creek     30.15 165  eP     P       16 04 20.8  -0.4
WRAB  Tennant Creek     30.15 165  eP     P       16 04 19.7  -1.5
      comp=Z,12nm,0.6s,mb4.8
WRA   Warramunga Arr    30.15 165  P      P       16 04 20.1  -1.2
      comp=Z,4.0nm,0.7s,mb4.3,baz=346,slow=9.1,SNR=38
MBWA  Marble Bar        31.14 193  eP     P       16 04 28.7  -1.3
      comp=Z,29nm,0.8s,mb5.2
BJT   Baijiatuau        31.86 345  eP     P       16 04 36.2  +0.1
      comp=Z,98nm,1.2s,mb5.5
BJT                                e      pP      16 04 47.7  -4.0
BJT                                eScP           16 11 09.5
BJI   Beijing           31.88 345  P      P       16 04 34.8  -1.4
BJI                                AMB    AMB
      comp=Z,42nm,1.5s,mb5.0
BJI                                AMB    AMB
      comp=Z,335nm,7.4s
BJI                                LR     LR
      comp=N,541nm,16.7s
BJI                                LR     LR
      comp=E,318nm,16.7s
BJI                                LR     LR
      comp=Z,412nm,18.1s
BJI   Beijing           31.88 345  P      P       16 04 34.8  -1.4
      comp=Z,42nm,1.5s,mb5.0
BJI                                S      S       16 10 06.9  +26
BJI                                LR     LR
      comp=Z,410nm,18.1s
SNY   Shenyang          32.38 356 ⇓P      P       16 04 41.4  +0.8
SNY                                AMB    AMB
      comp=Z,20nm,1.7s,mb4.7
SNY                                LR     LR
      comp=N,670nm,22.1s
SNY                                LR     LR
      comp=E,760nm,15.2s
SNY                                LR     LR
      comp=Z,850nm,14.2s
ASAR  Alice Springs     33.65 168  P      P       16 04 50.8  -1.0
      comp=Z,2.9nm,0.6s,mb4.4,baz=353,slow=6.7,SNR=48
ASAR                               PcP    PcP     16 07 33.2  +2.5
      comp=Z,2.0nm,0.9s,baz=351,slow=2.3,SNR=4.9
ASPA  Alice Springs     33.65 168  eP     P       16 04 52.0  +0.2
LZH   Lanzhou           33.67 326 ⇑P      P       16 04 51.0  -0.8
LZH                                AMB    AMB
      comp=Z,25nm,1.0s,mb5.1
LZH                                AMB    AMB
      comp=Z,108nm,4.5s
LZH                                LR     LR
      comp=N,2µm,15.9s
LZH                                LR     LR
      comp=Z,4µm,16.1s
LZH   Lanzhou           33.67 326  P      P       16 04 51.0  -0.8
LZH                               e       pP      16 05 01.9  -5.7
LZH   Lanzhou           33.67 326 ⇑P      P       16 04 51.0  -0.8
      comp=Z,25nm,1.0s,mb5.1
LZH                                pP     pP      16 05 01.9  -5.7
LZH                                sP     sP      16 05 06.3  -9.1
LZH                                LR     LR
      comp=Z,4µm,16.1s
HHC   Hu-ho-hao-te      34.03 339 ⇑P      P       16 04 55.1  +0.3
HHC                                AP     pP      16 05 13.0  +2.4
HHC                                PP     PP      16 06 07.7  -2.7
HHC                                PCP    PcP     16 07 32.1  +0.5
HHC                                S      S       16 10 12.6  -2.0
HHC                                XS             16 10 44.8
HHC                                SCP            16 11 09.7
HHC                                PCS            16 11 18.1
HHC                                SS     SS      16 12 25.8  +0.1
HHC                                SCS    ScS     16 15 05.2  -5.1
HHC                                AMB    AMB
      comp=Z,36nm,1.7s,mb5.0
HHC                                AMB    AMB
      comp=Z,277nm,4.1s
HHC                                LR     LR
      comp=N,614nm,15.5s
HHC                                LR     LR
      comp=E,818nm,19.0s
HHC                                LR     LR
      comp=Z,586nm,15.5s
CN2   Changchun         34.26 358  eP     P       16 04 54.8  -2.0
CN2                                AMB    AMB
      comp=Z,10.0nm,0.8s,mb4.8
CN2                                LR     LR
      comp=N,600nm,16.0s
CN2                                LR     LR
      comp=E,400nm,16.0s
CN2                                LR     LR
      comp=Z,590nm,18.0s
BTO   Baotou            34.38 337  eP     P       16 04 57.4  -0.4
BTO                                AMB    AMB
      comp=Z,19nm,1.8s,mb4.7
CTA   Charters Tower    35.12 147⇓iP     P       16 05 05.9  +1.6
      comp=Z,4.9nm,0.6s,mb4.6
CTA   Charters Tower    35.12 147  P      P       16 05 03.8  -0.5
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      comp=Z,5.8nm,0.5s,mb4.8,baz=313,slow=8.1,SNR=16
CTAO  Charters Tower    35.12 147  eP     P       16 05 05.0  +0.6
      comp=Z,61nm,1.5s,mb5.3
MDJ   Mudanjiang        35.15   4  P      P       16 05 06.8  +2.4
MDJ                                AMB    AMB
      comp=Z,16nm,1.3s,mb4.8
MDJ                                AMB    AMB
      comp=Z,152nm,4.4s
MDJ                                LR     LR
      comp=N,159nm,21.8s
MDJ                                LR     LR
      comp=E,110nm,20.5s
MDJ                                LR     LR
      comp=Z,200nm,21.8s
MDJ   Mudanjiang        35.15   4  eP     P       16 05 05.5  +1.1
      comp=Z,17nm,1.0s,mb4.9
ASAJ  Asahikawa         37.24  19  P      P       16 05 23.2  +1.2
      comp=Z,9.9nm,0.7s,mb4.7,baz=242,slow=13,SNR=10.0
GTA   Gaotai            38.27 326  eP     P       16 05 30.6  -0.1
GTA                                AMB    AMB
      comp=Z,7.0nm,0.8s,mb4.4
GTA                                AMB    AMB
      comp=Z,305nm,5.0s
GTA                                LR     LR
      comp=N,512nm,19.0s
GTA                                LR     LR
      comp=E,585nm,16.4s
GTA                                LR     LR
      comp=Z,956nm,16.3s
LSA   Lhasa             38.81 306  eP     P       16 05 35.9  +0.7
      comp=Z,7.0nm,0.6s,mb4.6
YSS   Yuzh-Sakhalins    39.84  17  eP     P       16 05 38.0  -5.6
YSS   Yuzh-Sakhalins    39.84  17  eP     P       16 05 44.6  +1.1
      comp=Z,13nm,0.8s,mb4.7
KLR   Kul'dur           39.91   5  eP     P       16 05 42.0  -2.1
KLR                                e              16 07 48.0
FORT  Forrest           40.00 178  eP     P       16 05 46.2  +1.1
      comp=Z,760nm,0.5s
HIA   Hailar            40.13 353  eP     P       16 05 45.8  -0.2
      comp=Z,6.8nm,0.8s,mb4.4
ULN   Ulaanbaatar       41.73 340  eP     P       16 05 59.6  +0.4
      comp=Z,11nm,0.8s,mb4.5
ULN                                eScP           16 11 45.4
SONM  Songino Array     41.93 340  P      P       16 06 01.2  +0.4
      comp=Z,4.8nm,0.6s,mb4.3,baz=155,slow=9.5,SNR=48
SONM                               ScP            16 11 46.8
      comp=Z,1.7nm,0.9s,baz=162,slow=3.9,SNR=8.0
JIRN  Jiri              42.17 301  eP     P       16 06 02.0  -1.0
      comp=Z,54nm,0.6s,mb5.3
MUN   Mundaring         42.36 193  eP     P       16 06 05.1  +0.5
      comp=Z,17nm,0.5s,mb4.9
GUN   Gumba             42.50 301  eP     P       16 06 05.1  -0.7
      comp=Z,67nm,0.8s,mb5.4
PKI   Pulchoki          42.80 301  eP     P       16 06 06.8  -1.5
      comp=Z,23nm,0.8s,mb4.9
VIS   Vishakhapatnam    42.81 286  i P    P       16 06 09.0  +0.6
KKN   Kakani            42.98 301  eP     P       16 06 08.9  -0.8
      comp=Z,44nm,1.0s,mb5.1
NWAO  Narrogin (SRO)    43.06 192  P      P       16 06 11.4  +1.1
      comp=Z,21nm,0.4s,mb5.2,baz=26,slow=6.8,SNR=53
NWAO  Narrogin (SRO)    43.06 192  eP     P       16 06 10.7  +0.4
      comp=Z,46nm,0.9s,mb5.2
STKA  Stephens Creek    43.49 161  eP     P       16 06 13.8   0.0
      comp=Z,9.8nm,0.9s,mb4.5
STKA  Stephens Creek    43.49 161  P      P       16 06 13.9  +0.1
      comp=Z,4.3nm,0.5s,mb4.5,baz=337,slow=8.5,SNR=23
GKN   Gorkha            43.58 301  eP     P       16 06 13.2  -1.4
      comp=Z,19nm,0.7s,mb5.0
KOLN  Koldanda          44.40 300  eP     P       16 06 20.2  -1.0
      comp=Z,72nm,0.8s,mb5.4
ZAK   Zakamensk         45.18 339  eP     P       16 06 26.2  -0.9
ZAK                                e              16 08 00.4
ZAK                                pmax   pmax
      comp=Z,4.0nm,1.0s,mb4.2
ZAK                                pmax   pmax
      comp=Z,3.0nm,1.5s,mb3.9
TLY   Talaya            46.14 340  P      P       16 06 36.3  +1.6
      comp=Z,78nm,0.8s,mb5.7,SNR=13
TLY   Talaya            46.14 340  eP     P       16 06 35.7  +1.0
TLY                                pmax   pmax
      comp=Z,23nm,0.9s,mb5.1
TLY                                MLR    MLR
      comp=Z,319nm,17.0s
TLY   Talaya            46.14 340  eP     P       16 06 35.6  +0.9
      comp=Z,24nm,1.0s,mb5.1
IRK   Irkutsk           46.42 341  eP     P       16 06 37.2  +0.3
IRK                                e              16 08 19.3
MOY   Mondy             47.05 338  eP     P       16 06 42.8  +0.9
MOY                                pmax   pmax
      comp=Z,32nm,2.0s,mb4.9
CLNS  Chul'man          47.31 359  eP     P       16 06 41.9  -2.0
CLNS                               e*PP   pP      16 06 47.8   -12
CLNS                               e              16 08 09.9
CLNS                               e              16 08 26.2
CLNS                               eS     S       16 13 30.9  -0.8
CLNS                               eSS    SS      16 16 54.3  +0.9
CLNS                               pmax   pmax
      comp=N,6.0nm,1.0s
CLNS                               pmax   pmax
      comp=E,4.0nm,1.0s
CLNS                               pmax   pmax
      comp=Z,6.0nm,1.0s,mb4.5
CLNS                               pmax   pmax
      comp=Z,6.0nm,0.9s,mb4.5
CLNS                               pmax   pmax
      comp=N,7.0nm,1.1s
CLNS                               pmax   pmax
      comp=E,3.0nm,1.0s
CLNS                               smax
      comp=E,3.0nm,1.0s
CLNS                               smax
      comp=Z,2.0nm,0.8s
CLNS                               smax
      comp=N,3.0nm,1.1s
CLNS                               MLR    MLR
      comp=N,200nm,14.0s
CLNS                               MLR    MLR
      comp=Z,300nm,14.0s
CLNS                               MLR    MLR
      comp=E,100nm,11.0s
HYB   Hyderabad         47.33 285  i P    P       16 06 45.0  +0.5
BOD   Bodaibo           49.25 351  eP     P       16 06 59.2  +0.3
BOD                                pmax   pmax
      comp=Z,51nm,2.0s,mb5.2
DDI   Dehra Dun         49.74 302  eP     P       16 07 02.6  -0.5
NDI   New Delhi         50.08 300  eP     P       16 07 03.0  -2.7
PET   Petropavlovsk     50.58  24  eP     P       16 07 16.8  +7.7
PET                                e              16 14 09.9
PET                                MLR    MLR
      comp=Z,400nm,18.0s
SDNR  Sundarnagar       50.94 303  eP     P       16 07 12.2  +0.1
POO   Poona             51.86 286  eP     P       16 07 17.0  -2.2
THN   Thein Dam         52.20 304  eP     P       16 07 19.0  -2.6
YAK   Yakutsk           52.55   2  eP     P       16 07 22.1  -1.7
YAK                                pmax   pmax
      comp=N,8.0nm,1.1s
YAK                                pmax   pmax
      comp=Z,14nm,1.1s,mb4.8
YAK                                pmax   pmax
      comp=N,189nm,20.0s
YAK                                pmax   pmax
      comp=E,131nm,14.4s
YAK   Yakutsk           52.55   2  eP     P       16 07 24.1  +0.2
      comp=E,27nm,0.9s,mb5.2
MKAR  Makanchi Array    52.91 323  i P    P       16 07 16.9   -10
MKAR                               pmax   pmax
      comp=Z,6.0nm,0.7s
MA2   Magadan           53.25  15  eP     P       16 07 29.8  +0.7
MA2                                eS     S       16 14 55.7  +1.9
MA2                                pmax   pmax
      comp=Z,8.0nm,1.4s,mb4.5
MA2   Magadan           53.25  15  eP     P       16 07 29.6  +0.5
      comp=Z,6.4nm,0.8s,mb4.6
TAU   Tasmania Unive    55.40 162  P      P       16 07 45.0   0.0
      comp=Z,33nm,1.4s,mb5.2
ZAL   Zalesovo          55.54 331  P      P       16 07 44.5  -1.3
      comp=Z,3.2nm,0.7s,mb4.5,baz=359,slow=7.4,SNR=19
ZAL                                LR     LR      16 34 05.1
      comp=Z,337nm,18.0s,baz=114,slow=39
AAK   Ala-Archa         56.17 315  i P    P       16 07 49.5  -1.0
AAK                                pmax   pmax
      comp=Z,15nm,1.3s,mb4.9
AAK   Ala-Archa         56.17 315  eP     P       16 07 47.9  -2.6
      comp=Z,6.9nm,0.8s,mb4.7
NVS   Novosibirsk       56.81 332  eP     P       16 07 52.2  -2.7
NVS                                e              16 08 44.1
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NVS                                pmax   pmax
      comp=N,3.0nm,1.1s
NVS                                pmax   pmax
      comp=E,10.0nm,1.1s
NVS                                pmax   pmax
      comp=Z,13nm,1.1s,mb4.9
KURK  Kurchatov         56.96 326  i P    P       16 07 54.8  -1.2
KURK                               pmax   pmax
      comp=Z,22nm,1.2s,mb5.1
KURK  Kurchatov         56.96 326  eP     P       16 07 53.7  -2.3
      comp=Z,40nm,1.1s,mb5.4
FX1   Attu Island--F    57.26  32  eP     P       16 07 59.7  +1.6
TIXI  Tiksi             62.19   1  eP     P       16 08 30.7  -0.9
TIXI                               eS     S       16 16 59.3  +8.7
TIXI                               eSS    SS      16 21 03.3  +7.0
TIXI                               pmax   pmax
      comp=Z,26nm,1.3s,mb5.2
TIXI                               MLR    MLR
      comp=Z,441nm,17.0s
BVA0  Borovoye Array    62.56 326  P      P       16 08 33.7  -0.7
BVA0                               pmax   pmax
      comp=Z,3.0nm,1.0s,mb4.4
BVAR  Borovoye Array    62.56 326  P      P       16 08 32.9  -1.5
      comp=Z,7.4nm,0.7s,mb4.9,baz=153,slow=9.9,SNR=36
BVAR  Borovoye Array    62.56 326  P      P       16 08 32.9  -1.5
CHKZ  Chkalovo          62.68 326  P      P       16 08 30.6  -4.6
CHKZ                               pmax   pmax
      comp=Z,8.0nm,1.3s,mb4.7
CHKZ  Chkalovo          62.68 326  eP     P       16 08 30.4  -4.9
      comp=Z,21nm,1.3s,mb5.1
BILL  Bilibino          64.11  15  eP     P       16 08 44.0  -0.4
BILL                               pmax   pmax
      comp=Z,19nm,1.7s,mb4.8
BILL  Bilibino          64.11  15  eP     P       16 08 45.1  +0.7
      comp=Z,21nm,1.2s,mb5.0
THZ   Tophouse          66.28 144  ePN    P       16 08 58.7   0.0
      comp=Z,25nm,0.6s
THZ   Tophouse          66.28 144  ePN    P       16 08 58.7   0.0
      comp=Z,25nm,0.6s
RPZ   Rata Peaks        66.49 146  P      P       16 09 00.8  +0.8
      comp=Z,38nm,0.9s,mb5.4,baz=278,slow=2.6,SNR=21
BIDO  Bidbid            66.65 292 ⇑P      P       16 09 00.9  -0.5
      SNR=7.5
URZ   Urewera           66.80 139  P      P       16 09 02.4  +0.3
      comp=Z,12nm,1.1s,mb4.9,baz=289,slow=9.0,SNR=2.9
HOQ   Hoqain            67.39 292 ⇑P      P       16 09 06.2  +0.2
BSY   Bisya             67.51 291 ⇓P      P       16 09 03.9  -2.8
ARQ   Araqi             68.12 291 ⇑P      P       16 09 09.6  -0.9
ASHO  Ashiyiah          68.53 293 ⇑P      P       16 09 12.2  -0.8
SVE   Sverdlovsk        69.11 327  eP     P       16 09 15.5  -0.6
SVE                                e              16 09 39.1
SVE                                pmax   pmax
      comp=Z,60nm,1.4s,mb5.3
SVE                                MLR    MLR
      comp=N,100nm,16.0s
SVE                                MLR    MLR
      comp=E,100nm,16.0s
SVE                                MLR    MLR
      comp=Z,1µm,16.0s
WHFO  Wadi Hawf         70.94 286 ⇓P      P       16 09 27.4  -0.4
      SNR=8.2
ABTO  Aybut             71.43 285  P      P       16 09 31.1  +0.3
      SNR=8.3
IMA   Indian Mountai    77.26  24  eP     P       16 10 06.2  +2.5
      comp=Z,39nm,0.9s,mb5.3
GNI   Garni             77.81 309  eP     P       16 10 08.6  +1.4
GNI                                pmax   pmax
      comp=Z,33nm,1.7s
GNI   Garni             77.81 309  P      P       16 10 08.4  +1.2
      comp=Z,3.1nm,0.7s,mb4.3,baz=282,slow=9.2,SNR=4.6
RAYN  Ar Rayn           78.22 292  P      P       16 10 09.3  -0.4
      comp=Z,118nm,0.6s,mb6.0,SNR=12
MCK   McKinley          79.15  27  eP     P       16 10 14.9  +0.9
      comp=Z,10.0nm,0.9s,mb4.8
KIV   Kislovodsk        79.18 313  eP     P       16 10 14.1  -0.5
KIV                                pmax   pmax
      comp=Z,25nm,1.7s,mb4.9
KIV   Kislovodsk        79.18 313  eP     P       16 10 15.7  +1.1
      comp=Z,13nm,0.8s,mb4.9
MSL   Mosul             79.31 305  eP     P       16 10 16.0  +0.5
COLA  College           79.63  26  eP     P       16 10 16.9  +0.3
COLA  College           79.63  26  P      P       16 10 16.1  -0.5
      comp=Z,6.3nm,1.0s,mb4.5
ILAR  Eielson Array     80.04  26  P      P       16 10 18.4  -0.5
      comp=Z,2.4nm,1.1s,mb4.0,baz=249,slow=4.3,SNR=23
MOS   Moscow            81.73 325  eP     P       16 10 31.4  +3.5
OBN   Obninsk           82.38 325  eP     P       16 10 30.7  -0.6
OBN                                pmax   pmax
      comp=Z,26nm,1.3s,mb5.0
OBN                                MLR    MLR
      comp=Z,300nm,19.0s
APA   Apatity           82.59 337⇑iP     P       16 10 33.0  +0.9
APA                               i               16 10 41.0
APA                                pmax   pmax
      comp=Z,31nm,1.0s,mb5.3
MALT  Malatya           82.83 308  eP     P       16 10 35.3  +1.3
      comp=Z,9.9nm,1.0s,mb4.8
ANN   Anapa             82.87 314  eP     P       16 10 29.7  -4.3
ANN                                pmax   pmax
      comp=Z,35nm,0.9s,mb5.4
DAWY  Dawson            83.34  26  eP     P       16 10 37.8  +1.8
JOF   Joensuu           84.10 333  ep     P       16 10 40.0  +0.2
KEV   Kevo              84.54 340  ep     P       16 10 42.5  +0.7
ASF   Jabal al Asfar    84.83 302  P      P       16 10 45.7  +1.5
      comp=Z,4.1nm,1.0s,mb4.5,baz=70,slow=2.1,SNR=5.8
INK   Inuvik            84.93  22  P      P       16 10 45.9  +2.0
      comp=Z,4.9nm,0.9s,mb4.6,baz=298,slow=5.6,SNR=14
INK   Inuvik            84.93  22  eP     P       16 10 45.3  +1.5
      comp=Z,32nm,1.4s,mb5.3
ARCES ARCESS Array B    85.10 340  P      P       16 10 46.0  +1.3
      comp=Z,11nm,0.6s,mb5.1,baz=85,slow=7.1,SNR=34
ARE0  ARCESS Array S    85.10 340  eP     P       16 10 45.9  +1.2
ARE0                               e              16 10 57.9
BRTR  Keskin Array B    86.34 309  P      P       16 10 51.4   0.0
      comp=Z,2.2nm,0.8s,mb4.4,baz=108,slow=3.9,SNR=4.2
KAF   Kangasniemi       86.53 332  ep     P       16 10 51.8   0.0
      comp=Z,6.5nm,0.6s,mb5.0
KAF   Kangasniemi       86.53 332  eP     P       16 10 51.8   0.0
KAF                                pmax   pmax
      comp=Z,7.0nm,0.6s,mb5.1
FINES FINESS Array B    86.80 332  P      P       16 10 53.8  +0.6
      comp=Z,7.2nm,0.9s,mb4.9,baz=82,slow=5.7,SNR=14
PPT   Papeete           86.96 108  eS     S       16 21 30.8  +4.2
PPT                                eLR    LR      16 38 02.5
      comp=Z,167nm,21.8s
AKASG Malin Array Be    87.44 321  P      P       16 10 56.6  +0.1
      comp=Z,2.7nm,0.7s,mb4.6,baz=63,slow=5.8,SNR=8.7
TBI   Tubuai            88.16 114  eS     S       16 21 42.1  +4.3
TBI                                eLR    LR      16 38 56.7
      comp=Z,279nm,27.2s
MAW   Mawson            89.03 200  P      P       16 11 05.5  +1.8
      comp=Z,3.4nm,0.8s,mb4.7,baz=337,slow=6.9,SNR=2.7
VNDA  Vanda             89.05 173  P      P       16 11 04.9  +1.3
      comp=Z,1.3nm,0.5s,mb4.5,baz=350,slow=9.8,SNR=3.6
KMBO  Kilima Mbogo      89.57 269  P      P       16 11 08.8  +1.3
      comp=Z,3.2nm,0.9s,mb4.6,baz=65,slow=3.5,SNR=5.1
KMBO  Kilima Mbogo      89.57 269  eP     P       16 11 08.8  +1.3
      comp=Z,36nm,1.7s,mb5.4
KMBO                               e      pP      16 11 22.1  -3.4
DAG   Danmarks Havn     91.63 352⇑iP     P       16 11 17.0  +1.3
      comp=Z,4.9nm,0.5s,mb5.1
RES   Resolute Bay      92.26  10  eP     P       16 11 20.1  +1.5
      comp=Z,8.1nm,0.7s,mb5.2
HFS   Hagfors           92.96 333  P      P       16 11 22.0  -0.1
      comp=Z,6.1nm,0.9s,mb5.0,baz=72,slow=4.7,SNR=6.3
OJC   Ojcow             93.37 322  eP     P       16 11 12.8   -11
NB2   NORSAR Subarra    93.67 334  P      P       16 11 24.4  -0.9
      comp=Z,16nm,1.4s,mb5.2,baz=70,slow=4.5
NB2   NORSAR Subarra    93.67 334  P      P       16 11 24.4  -0.9
      baz=70,slow=4.4
NOA   NORSAR Array B    93.67 334  P      P       16 11 24.7  -0.6
      comp=Z,2.0nm,0.8s,mb4.6,baz=63,slow=4.6,SNR=5.0
NOA   NORSAR Array B    93.67 334  P      P       16 11 24.7  -0.6
YKA   Yellowknife Ar    94.38  24  P      P       16 11 30.3  +1.8
      comp=Z,2.0nm,0.6s,mb4.7,baz=300,slow=4.6,SNR=33
TXAR  Lajitas Array    118.10  50  PKP    PKPdf   16 16 57.7  +2.6
      comp=Z,0.3nm,0.3s,baz=333,slow=2.8,SNR=4.3
TXAR  Lajitas Array    118.10  50  PKP    PKPdf   16 16 57.7  +2.6
JCT   Junction City    120.33  46  ePKPdf PKPdf   16 17 00.6  +1.1
PLCA  Paso Flores      145.30 157  PKPbc  PKPbc   16 17 47.2  +1.0
      comp=Z,1.7nm,0.7s,baz=242,slow=4.3,SNR=5.8
PLCA  Paso Flores      145.30 157  ePKPdf PKPdf   16 17 46.2  +0.5
SJG   San Juan         149.87  25  PKPbc  PKPdf   16 18 00.3  +6.5
      comp=Z,30nm,0.2s,baz=353,slow=17,SNR=7.1
SDV   Santo Domingo    154.97  44  PKP    PKPdf   16 18 05.0  +3.8
      comp=Z,1.5nm,0.5s,baz=275,slow=5.6,SNR=4.9
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SDV				PKPbc	PKPdf	16 18 13.6	+12
	comp=Z,9.6nm,1.0s,baz=317,slow=4.2,SNR=8.4						
SDV	Santo Domingo	154.97	44	*e*PKPdf	PKPdf	16 18 04.6	+3.4
SDV				*e*PKPbc	PKPdf	16 18 13.6	+12
LPAZ	La Paz	164.08	117	PKP	PKPdf	16 18 16.4	+4.9
	comp=Z,1.0nm,0.4s,baz=336,slow=2.7,SNR=4.1						

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*IDC **10** 15:59:23.2±0.6, 5.81N×94.76E, mb4.4/17, mb1 4.5/18, mb1mx4.4/24, mbtmp4.4/18, ML4.9/1, MS3.7/1, Ms1 3.9/1, ms1mx3.1/26, Error ellipse: s-maj=26.0km s-min=14.3km az=47.0*

*BJI **10** 15:59:26.1, 5.75N×94.99E, h36^{km}, mB5.2, mb4.7, Ms4.7, Msz4.4*

*NEIC **10** 15:59:27.5±0.5, 5.87N×94.79E, h30^{km}, mb4.8/10, Error ellipse: s-maj=13.5km s-min=9.2km az=65.0*

ISC 10 15:59:26.6±0.5, **5.88N**±0.06×**94.94E**±0.07, **h33**^{km}**, n63,** σ**1^{s}08**/60, **mb4.6**/33, **MS4.5**/3, **1C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	13.09	17	*e*P	P	16 02 32.7	-0.3
	7.0nm,0.3s						
CMAR	Chiang Mai Arr	13.09	17	Pn	P	16 02 32.7	-0.3
	2.1nm,0.3s,baz=208,slow=14,SNR=46						
CMAR				LR	LR	16 07 13.3	
	comp=Z,350nm,20.6s,baz=200,slow=36						
VIS	Vishakhapatnam	16.34	317	*i* P	P	16 03 14.0	-1.3
HYB	Hyderabad	19.70	307	*i* P	P	16 03 59.0	+2.9
HYB				*e*S	rx	16 06 55.0	
KMI	Kunming	20.54	21	⇓P	P	16 04 05.8	+0.8
KMI				AP		16 04 11.8	
KMI				AMB	AMB		
	comp=Z,21nm,1.3s						
KMI				AMB	AMB		
	comp=Z,77nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,13.9s,MS4.5						
KMI				LR	LR		
	comp=E,862nm,14.4s,MS4.5						
KMI				LR	LR		
	comp=Z,894nm,16.0s,MS4.2						
KMI	Kunming	20.54	21	⇓P	P	16 04 05.8	+0.8
	comp=Z,21nm,1.3s						
KMI				pP		16 04 11.8	
KMI				sP		16 04 14.2	
KMI				PP	PP	16 04 20.3	-6.1
KMI				S	rx	16 07 13.1	
KMI				sS		16 07 31.0	
KMI				LR	LR		
	comp=Z,890nm,16.0s,MS4.2						
JIRN	Jiri	23.20	340	*e*P	P	16 04 31.3	-0.3
	comp=Z,12nm,0.8s,mb4.4						
GYA	Guiyang	23.32	27	⇑*i*P	P	16 04 32.6	-0.2
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
GYA				AMB	AMB		
	comp=Z,400nm,5.1s						
GYA				LR	LR		
	comp=N,1µm,14.6s,MS4.7						
GYA				LR	LR		
	comp=E,1µm,15.0s,MS4.7						
GYA				LR	LR		
	comp=Z,2µm,16.2s,MS4.7						
PKI	Pulchoki	23.39	338	*e*P	P	16 04 33.2	-0.3
GUN	Gumba	23.54	340	*e*P	P	16 04 34.2	-0.7
	comp=Z,33nm,1.1s,mb4.7						
KKN	Kakani	23.64	338	*e*P	P	16 04 34.9	-1.0
LSA	Lhasa	23.96	352	P	P	16 04 40.0	+1.0
LSA	Lhasa	23.96	352	*e*P	P	16 04 38.2	-0.8
	comp=Z,14nm,0.8s,mb4.4						
GKN	Gorkha	24.08	337	*e*P	P	16 04 38.5	-1.7
KOLN	Koldanda	24.29	335	*e*P	P	16 04 40.2	-2.0
	comp=Z,33nm,1.2s,mb4.6						
CD2	Chengdu	26.24	17	P	P	16 05 00.2	-0.5
CD2				AMB	AMB		
	comp=Z,42nm,1.2s,mb4.8						
NDI	New Delhi	28.21	326	*e*P	P	16 05 17.0	-1.7
DDI	Dehra Dun	29.04	329	*e*P	P	16 05 28.2	+2.1
XAN	Xi’an	30.87	23	P	P	16 05 40.8	-1.5
XAN				AMB	AMB		
	comp=Z,22nm,1.2s,mb4.9						
WMQ	Urumqi	38.32	352	*e*P	P	16 06 46.5	+0.5
WMQ				XP	sP	16 07 00.0	0.0
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.5						
WMQ				LR	LR		
	comp=N,818nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=E,564nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,456nm,18.0s,MS4.3						
BJT	Baijiatuau	38.98	26	*e*P	P	16 06 52.8	+1.2
	comp=Z,58nm,1.3s,mb5.2						
BJI	Beijing	39.00	26	P	P	16 06 52.4	+0.7
BJI				AMB	AMB		
	comp=Z,24nm,1.2s,mb4.8						
BJI	Beijing	39.00	26	P	P	16 06 52.4	+0.7
	comp=Z,24nm,1.2s,mb4.8						
ULHL	Ulahol	39.84	338	P	P	16 06 59.0	+0.4
	SNR=5.4						
KZA	Kyzart	40.07	337	P	P	16 07 01.4	+0.9
	SNR=9.0						
UCH	Uchtor	40.48	336	P	P	16 07 05.0	+1.0
	SNR=9.0						
KBK	Karagaybulak	40.68	337	P	P	16 07 06.4	+0.8
	SNR=15						
AML	Almayashu	40.73	336	P	P	16 07 07.0	+0.9
	SNR=19						
AAK	Ala-Archa	40.83	337	P	P	16 07 07.6	+0.7
	SNR=12						
AAK	Ala-Archa	40.83	337	*e*P	P	16 07 06.3	-0.6
	comp=Z,26nm,1.3s,mb4.7						
CHMS	Chumysh	41.05	337	P	P	16 07 08.7	+0.1
	SNR=6.5						
EKS2	Erkin-Say	41.14	336	P	P	16 07 10.5	+1.1
	SNR=6.9						
USP	Ospenovka	41.37	337	P	P	16 07 11.4	+0.1
	SNR=16						
SONM	Songino Array	42.93	11	P	P	16 07 25.5	+1.4
	comp=Z,2.2nm,0.8s,mb3.9,baz=173,slow=12,SNR=2.9						
ULN	Ulaanbaatar	43.09	12	P	P	16 07 30.1	+4.7
	comp=Z,11nm,1.1s,mb4.5						
CN2	Changchun	46.31	31	*e*P	P	16 07 50.6	-0.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
WRA	Warramunga Arr	46.48	125	P	P	16 07 53.8	+1.0
	comp=Z,9.4nm,0.8s,mb4.8,baz=304,slow=8.9,SNR=13						
WRAB	Tennant Creek	46.48	125	*e*P	P	16 07 51.8	-1.0
	comp=Z,23nm,0.8s,mb5.2						
ASAR	Alice Springs	48.04	129	P	P	16 08 04.8	-0.3
	comp=Z,8.3nm,0.8s,mb4.8,baz=307,slow=7.7,SNR=11						
ZAL	Zalesovo	48.62	352	P	P	16 08 08.0	-1.1
	comp=Z,2.5nm,0.6s,mb4.4,baz=325,slow=8.2,SNR=5.0						
MDJ	Mudanjiang	49.03	33	P	P	16 08 12.9	+0.5
MDJ				AMB	AMB		
	comp=Z,17nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,150nm,4.6s						
MDJ	Mudanjiang	49.03	33	*e*P	P	16 08 12.7	+0.4
	comp=Z,33nm,1.3s,mb5.2						
BVAR	Borovoye Array	51.12	341	P	P	16 08 27.0	-1.2
	comp=Z,1.5nm,0.9s,mb3.9,baz=149,slow=8.6,SNR=8.2						
BVAR	Borovoye Array	51.12	341	P	P	16 08 27.0	-1.2
PMG	Port Moresby	54.21	106	P	P	16 08 52.3	+0.5
	comp=Z,7.2nm,0.8s,mb4.6,baz=294,slow=19,SNR=2.2						
KMBO	Kilima Mbogo	58.02	265	P	P	16 09 16.3	-2.8
	comp=Z,0.3nm,0.3s,mb3.8,baz=218,slow=24,SNR=2.5						
KMBO	Kilima Mbogo	58.02	265	P	P	16 09 16.3	-2.8
STKA	Stephens Creek	58.17	133	P	P	16 09 19.1	-0.8
	comp=Z,3.4nm,0.6s,mb4.5,baz=321,slow=7.8,SNR=3.0						
STKA	Stephens Creek	58.17	133	P	P	16 09 17.5	-2.5
ASF	Jabal al Asfar	59.97	304	P	P	16 09 33.5	+1.0
	comp=Z,1.7nm,0.6s,mb4.2,baz=40,slow=2.2,SNR=3.9						
BRTR	Keskin Array B	64.33	311	P	P	16 10 00.5	-0.9
	comp=Z,2.5nm,1.0s,mb4.2,baz=119,slow=7.6,SNR=7.6						
OBN	Obninsk	67.48	328	P	P	16 10 24.5	+3.3
	comp=Z,28nm,1.0s,mb5.2						
AKASG	Malin Array Be	70.20	322	P	P	16 10 37.3	-0.8
	comp=Z,2.7nm,0.8s,mb4.2,baz=90,slow=4.7,SNR=10						
IDI	Anoyia	70.35	305	P	P	16 10 40.3	+1.0
	comp=Z,12nm,1.0s,mb4.8,baz=214,slow=16,SNR=2.8						
LBTB	Lobatse	74.00	242	P	P	16 11 05.0	+3.7
	comp=Z,3.0nm,0.7s,mb4.4,baz=106,slow=6.6,SNR=8.8						
LBTB	Lobatse	74.00	242	P	P	16 11 05.0	+3.7
FINES	FINESS Array B	74.83	332	P	P	16 11 05.1	-0.2
	comp=Z,3.7nm,0.5s,mb4.6,baz=90,slow=5.6,SNR=10						
MAW	Mawson	76.76	192	P	P	16 11 16.2	0.0
	comp=Z,8.1nm,0.8s,mb4.7,baz=33,slow=7.3,SNR=5.8						
GERES	GERESS Array B	79.83	318	P	P	16 11 34.3	+0.9
	comp=Z,3.5nm,1.1s,mb4.2,baz=90,slow=5.3,SNR=10						
DAVOX	Davos	82.37	316	P	P	16 11 47.0	+0.2
	comp=Z,13nm,1.3s,mb4.7,baz=284,slow=2.5,SNR=3.1						
NVAR	Mina Array Bea	126.19	32	PKP	PKPdf	16 18 28.0	+1.6
	comp=Z,0.4nm,0.7s,baz=252,slow=2.9,SNR=2.5						
PDAR	Pinedale Array	126.71	22	PKP	PKPdf	16 18 29.0	+1.7
	comp=Z,0.3nm,0.6s,baz=333,slow=2.0,SNR=3.1						
PDAR	Pinedale Array	126.71	22	PKP	PKPdf	16 18 29.0	+1.7

GUC 10 16:13:51.4±0.6, **32.74S**×**72.40W, h33**^{km}±3^{km}**, MD3.6, ML2.6, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	Papudo	0.84	76	*i* P	Pn	16 14 06.9	-0.1
PACH				*i* S	Sn	16 14 18.8	+0.6
LNV	Longovilo	1.47	146	*e*P	Pn	16 14 16.4	+0.3
LNV				*i* S	Sn	16 14 36.0	+1.7
JACH	Jahuel	1.53	88	*e*P	Pn	16 14 16.8	-0.1
JACH				*i* S	Sn	16 14 36.7	+1.0
TACH	Talagante	1.53	127	*i* S	Sn	16 14 37.8	+2.0
FCH	Farellones	1.87	109	*e*P	Pn	16 14 23.5	+1.8
FCH				*i* S	Sn	16 14 47.2	+2.8
FCH				AMP		16 14 48.7	
	comp=N,86nm,0.2s						
CACH	El Canelo	2.04	133	*e*S	Sn	16 14 52.0	+3.2

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*CSEM **10** 16:15:00.9±0.1, 42.66N×18.87E, h20^{km}, ML2.7, Error ellipse: s-maj=1.7km s-min=1.2km az=52.0*

*PDG **10** 16:15:01.3±0.1, 42.64N×18.89E, h18^{km}*

*NEIC **10** 16:15:01.3, 42.64N×18.89E, h18^{km}, ML2.7(PDG), After PDG.*

*TIR **10** 16:15:01.4, 42.57N×18.92E, h9^{km}*

ISC 10 16:15:01.6±0.4, **42.65N**±0.02×**18.83E**±0.04, **h22**^{km}±4^{km}**, n25,** σ**1^{s}09**/44, **8C-8D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NKY	Niksic	0.20	37	⇓*i*Pg	Pb	16 15 06.0	-0.9
NKY				*e*Sg	Sb	16 15 09.7	-0.9
HCY	Herceg Novi	0.32	230	⇓*i*Pg	Pb	16 15 08.4	-0.4
HCY				*e*Sg	Sb	16 15 14.5	+0.9
BRY	Bratogost	0.33	320	⇑*i*Pg	Pb	16 15 08.7	-0.2
BRY				*e*Sg	Sb	16 15 14.8	+1.1
BUM	Brajici-Budva	0.35	172	⇓*i*Pg	Pb	16 15 08.4	-0.8
BUM				*e*Sg	Sb	16 15 14.3	-0.2
TTG	Podgorica	0.39	125	⇓*i*Pg	Pb	16 15 08.3	-1.5
TTG				*e*Sg	Sb	16 15 14.3	-1.1
UPM	Unac-Piva	0.55	6	⇓*i*Pg	Pb	16 15 11.9	-0.7
UPM				*e*Sg	Sb	16 15 21.0	+1.0
ULC	Ulcinj	0.76	156	⇑*i*Pg	Pb	16 15 14.9	-1.0
ULC				*e*Sg	Sb	16 15 26.7	+0.9
ULC	Ulcinj	0.76	156	⇑*i*Pg	Pb	16 15 14.9	-1.0
ULC				*e*Sg	Sb	16 15 26.7	+0.9
PLE	Pljevlja	0.79	31	⇑*i*Pg	Pb	16 15 15.9	-0.7
PLE				*e*Sg	Sb	16 15 28.5	+1.6
IVA	Berane	0.81	74	⇑*i*Pg	Pb	16 15 16.2	-0.8
IVA				*e*Sg	Sb	16 15 28.3	+0.8
PVY	Plav	0.84	94	⇑*i*Pg	Pb	16 15 16.5	-0.9
PVY				*e*Sg	Sb	16 15 29.2	+0.9
STON	Ston	0.86	285	*i* Pg	Pb	16 15 17.9	+0.1
STON				*i* Sg	Sb	16 15 32.1	+3.3
STON	Ston	0.86	285	*i* Pg	Pb	16 15 17.8	0.0
STON				*i* Sg	Sb	16 15 32.1	+3.2
BCI	Bajram Curri	0.96	107	*i* Pg	Pb	16 15 19.1	-0.3
BCI				*i* Sg	Sb	16 15 34.4	+2.8
PUK	Puka	0.99	127	*i* Pg	Pb	16 15 19.4	-0.6
PUK				*i* Sg	Sb	16 15 35.7	+3.0
QSH	Qafa e Shtames	1.38	144	*i* pn?	Pn	16 15 27.0	+1.1
QSH				*i* Sn	Sn	16 15 48.0	+4.4
DIVS	Divcibare	1.67	30	⇓*i*Pn	Pn	16 15 30.3	+0.3
RHK3	Tenkes	3.26	353	*e*P	Pn	16 15 52.4	-0.3
RHK1	Bakonya	3.48	351	*e*P	Pn	16 15 55.6	-0.3
PKS9	Tamasi	3.95	354	⇑*i*P	Pn	16 16 02.3	-0.2
VISS	Visnje	4.26	319	*i* Pn	Pn	16 16 09.2	+2.3
VISS	Visnje	4.26	319	*i* Pn	Pn	16 16 09.1	+2.2
OBKA	Obir	4.92	323	⇓*i*PN	Pn	16 16 16.8	+0.5
OBKA				*i* SN	Sn	16 17 10.7	-2.6
ARSA	Arzberg	5.16	334	⇑*i*PN	Pn	16 16 19.0	-0.6
ARSA				*i* SN	Sn	16 17 14.9	-4.4
MOA	Molln	6.11	330	⇓*i*PN	Pn	16 16 32.5	-0.6
MOA				*i* SN	Sn	16 17 39.0	-4.1

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*BJI **10** 16:20:12.7, 4.80N×94.80E, h30^{km}, mB4.7, mb4.2, Ms4.6, Msz4.3*

*NEIC **10** 16:20:13.8±0.4, 4.81N×94.80E, h30^{km}, mb4.4/13, Error ellipse: s-maj=11.7km s-min=7.0km az=64.0*

*IDC **10** 16:20:21.7±9.7, 4.91N×94.94E, h99^{km}±87^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.8/19, mbtmp4.0/12, ML4.3/1, Error ellipse: s-maj=47.0km s-min=14.0km az=54.0*

ISC 10 16:20:12.0±0.5, **4.80N**±0.07×**94.85E**±0.09, **h30**^{km}**, n38,** σ**0^{s}91**/38, **mb4.2**/30, **1C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	14.15	16	*e*P	P	16 23 40.1	+7.4
	14nm,0.9s						
CMAR	Chiang Mai Arr	14.15	16	P	P	16 23 37.0	+4.2
	0.5nm,0.3s,baz=210,slow=12,SNR=21						
PALK	Pallekele	14.29	281	P	P	16 23 38.3	+3.7
	24nm,1.2s						
COCO	West Island	17.00	173	P	P	16 24 09.2	-0.3
	145nm,1.2s						
QIZ	Qiongzhong	20.34	45	P	P	16 24 50.6	+1.7
	60nm,1.5s						
JIRN	Jiri	24.18	341	*e*P	P	16 25 28.5	+1.4
	9.1nm,0.6s,mb4.4						
GYA	Guiyang	24.32	26	⇑*i*P	P	16 25 30.4	+2.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
PKI	Pulchoki	24.36	339	*e*P	P	16 25 30.7	+1.8
	comp=Z,6.1nm,0.6s,mb4.2						
GUN	Gumba	24.52	341	*e*P	P	16 25 30.1	-0.2
	comp=Z,6.1nm,0.4s,mb4.4						
KKN	Kakani	24.61	339	*e*P	P	16 25 31.4	+0.2
	comp=Z,4.3nm,0.5s,mb4.2						
LSA	Lhasa	25.01	352	*e*P	P	16 25 35.5	+0.5
	comp=Z,6.8nm,0.7s,mb4.3						
GKN	Gorkha	25.04	338	*e*P	P	16 25 34.7	-0.6
	comp=Z,12nm,0.6s,mb4.6						
KOLN	Koldanda	25.23	336	*e*P	P	16 25 37.8	+0.7
	comp=Z,16nm,0.7s,mb4.7						
TGY	Tagaytay City	27.31	68	P	P	16 25 55.0	-1.4
	comp=Z,99nm,0.4s,baz=217,slow=13,SNR=3.5						
ENH	Enshi	28.85	27	*e*P	P	16 26 08.8	-1.4
	comp=Z,6.6nm,0.7s,mb4.5						
XAN	Xi’an	31.89	22	P	P	16 26 36.2	-0.9
XAN				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.9						
GTA	Gaotai	34.74	7	*e*P	P	16 27 01.4	-0.4
GTA				AP	pP	16 27 10.7	0.0
GTA				XP	sP	16 27 13.9	-0.6
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
BJT	Baijiatuau	39.98	26	*e*P	P	16 27 47.0	+1.2
	comp=Z,4.7nm,0.7s,mb4.3						
SONM	Songino Array	44.00	11	P	P	16 28 18.3	-0.3
	comp=Z,1.8nm,0.8s,mb3.9,baz=189,slow=7.9,SNR=19						
ULN	Ulaanbaatar	44.16	12	*e*P	P	16 28 18.6	-1.3
	comp=Z,1.0nm,0.6s,mb3.7						
KS15	Wonju Array Si	44.33	38	*e*P	P	16 28 21.4	0.0
WRA	Warramunga Arr	45.95	124	P	P	16 28 34.8	+0.3
	comp=Z,4.1nm,1.0s,mb4.3,baz=302,slow=9.2,SNR=24						
WRAB	Tennant Creek	45.95	124	*e*P	P	16 28 34.9	+0.4
	comp=Z,10nm,1.0s,mb4.7						
TLY	Talaya	47.29	7	P	P	16 28 44.0	-0.7
	comp=Z,2.5nm,0.8s,mb4.2						
ASAR	Alice Springs	47.44	128	P	P	16 28 46.4	+0.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=298,slow=7.7,SNR=15						
KURK	Kurchatov	47.74	346	*e*P	P	16 28 48.3	+0.1
	comp=Z,4.7nm,0.7s,mb4.6						
HIA	Hailar	49.08	21	*e*P	P	16 28 57.8	-0.8
	comp=Z,2.4nm,0.8s,mb4.3						
ZAL	Zalesovo	49.66	352	P	P	16 29 02.7	-0.3
	comp=Z,2.0nm,0.5s,mb4.4,baz=306,slow=5.6,SNR=13						
ZAL	Zalesovo	49.66	352	P	P	16 29 02.7	-0.3
BVAR	Borovoye Array	52.10	342	P	P	16 29 21.4	-0.2
	comp=Z,1.6nm,0.6s,mb4.2,baz=141,slow=9.5,SNR=21						
CHKZ	Chkalovo	52.59	342	*e*P	P	16 29 24.9	-0.4
	comp=Z,6.4nm,0.6s,mb4.7						
STKA	Stephens Creek	57.50	133	P	P	16 30 01.8	+0.6
	comp=Z,0.7nm,0.7s,mb3.8,baz=294,slow=18,SNR=2.0						
BRTR	Keskin Array B	64.97	312	P	P	16 30 50.4	-1.2
	comp=Z,0.6nm,0.6s,mb3.8,baz=124,slow=6.5,SNR=4.3						
AKASG	Malin Array Be	70.99	322	P	P	16 31 27.6	-1.4
	comp=Z,0.3nm,0.5s,mb3.5,baz=91,slow=5.3,SNR=5.3						
FINES	FINESS Array B	75.74	332	P	P	16 31 56.0	-0.5
	comp=Z,3.4nm,0.9s,mb4.3,slow=1.9,SNR=3.9						
ARCES	ARCESS Array B	78.38	340	P	P	16 32 11.3	+0.3
	comp=Z,2.0nm,0.8s,mb4.1,baz=102,slow=7.3,SNR=11						
TSUM	Tsumeb	79.61	250	P	P	16 32 19.0	+0.3
	comp=Z,1.1nm,0.7s,mb3.9						
GERES	GERESS Array B	80.58	319	P	P	16 32 23.7	+0.5
	comp=Z,1.0nm,0.7s,mb3.9,baz=121,slow=7.8,SNR=7.8						

MAN 10 16:38:38.8, 16.67N×122.12E, h19^{km}**, mb4.0, ML2.8, MS2.4, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAUP	Cauayan	0.40	313	*e*P	Pb	16 38 47.7	+0.8
PALP	Palanan	0.48	37	*e*P	Pb	16 38 49.0	+0.5
CVP	Callao Caves	1.06	344	⇑*e*P	Pb	16 38 58.0	-0.4
CVP				*e*S	Sb	16 39 13.0	+1.1
APYP	Conner	1.45	325	*e*P	Pn	16 39 03.0	-1.3
ABRA	Dolores	1.66	306	*e*P	Pn	16 39 06.2	-1.2
BOLP	Bolinao	2.14	263	*e*P	Pn	16 39 14.3	+0.2

IDC 10 16:40:04.6±3.2, **23.58S**×**174.63W, mb4.1**/6, **mb1 4.2**/6, **mb1mx4.0**/16, **mbtmp4.1**/6, **Error ellipse: s-maj=92.0km s-min=47.4km az=144.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	36.40	268	P	P	16 47 11.2	-1.6
	7.9nm,1.1s,baz=98,slow=14,SNR=3.0						
PMG	Port Moresby	39.11	285	P	P	16 47 33.3	-2.3
	7.6nm,0.8s,baz=174,slow=24,SNR=2.3						
STKA	Stephens Creek	39.41	248	P	P	16 47 35.6	-2.3
	0.9nm,0.8s,baz=151,slow=20,SNR=2.3						
ASAR	Alice Springs	46.94	259	P	P	16 48 38.0	-1.1
	2.0nm,0.8s,baz=102,slow=7.0,SNR=22						
WRA	Warramunga Arr	47.34	264	P	P	16 48 40.1	-2.2
	0.8nm,0.7s,baz=103,slow=7.9,SNR=17						
CMAR	Chiang Mai Arr	94.06	288	P	P	16 53 27.1	+0.4
	1.2nm,1.1s,baz=108,slow=2.9,SNR=5.3						
AKASG	Malin Array Be	147.20	332	PKPbc	PKPdf	16 59 47.9	-1.2
	0.9nm,0.7s,baz=44,slow=3.9,SNR=5.6						

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*IDC **10** 16:53:18.6±0.3, 23.17S×169.27E, mb5.5/28, mb1 5.5/29, mb1mx5.5/29, mbtmp5.4/29, ML4.5/1, MS5.6/22, Ms1 5.6/22, ms1mx5.5/27, Error ellipse: s-maj=12.2km s-min=11.0km az=77.0*

*GUC **10** 16:53:19.9±0.0, 23.09S×169.21E, h9^{km}, mb6.0(NEIC), MW5.7(NEIC), MW6.4(NEIC)*

*NEIC **10** 16:53:20.0±0.1, 23.10S×169.22E, h9^{km}, mb6.0/85, ME6.0, MS5.7/127, MW6.3, Error ellipse: s-maj=3.9km s-min=3.2km az=77.0 Broadband fault plane solution: P waves. NP1:φ$_s$95°,δ45°,λ-90°. NP2:φ$_s$275°,δ45°,λ-90°. Principal axes: T Plg0°, Azm5°; N Plg0°, Azm0°; P Plg90°, Azm0°; Moment Tensor Solution. s41 Moment tensor: Scale 10^{18} Nm; M$_{rr}$-3.27; M$_{\theta\theta}$2.95; M$_{\phi\phi}$0.32; M$_{r\theta}$-2.12; M$_{\theta\phi}$-1.20; M$_{\phi r}$-0.05; Best double couple: M$_0$4×10^{18} NP1: φ$_s$303°,δ31°,λ-70°. NP2:φ$_s$99°,δ61°,λ-102°. Principal axes: T 3.96, Plg15°, Azm198°; N 0, Plg10°, Azm105°; P -3.96, Plg71°, Azm343°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*LDG **10** 16:53:20.0±0.1, 22.56S×169.53E, h10^{km}, Mb5.9/4, Ms5.7/8 Error ellipse: s-maj=19.1km s-min=4.7km az=6.0*

*BJI **10** 16:53:20.4, 22.78S×169.21E, h13^{km}, mB6.4, mb5.7, Ms5.9, Msz5.7*

*HRVD **10** 16:53:20.0±0.1, 23.11S×169.21E, h12^{km}, MW6.2/82, Centroid moment Tensor Solution. LP body waves: s78,c192;Mantle waves: s82,c338; Half duration: 3^{s}1 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-2.43±.01; M$_{\theta\theta}$2.46±.01; M$_{\phi\phi}$-0.02±.01; M$_{r\theta}$-0.23±.04; M$_{\theta\phi}$0.09±.01; M$_{\phi r}$-0.23±.04; Best double couple: M$_0$2.468×10^{18} NP1: φ$_s$273°,δ42°,λ-82°. NP2:φ$_s$83°,δ48°,λ-97°. Principal axes: T 2.475, Plg3°, Azm178°; N -.013, Plg5°, Azm87°; P -2.461, Plg84°, Azm296°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BGS **10** 16:53:23.1, 23.10S×169.22E, h10^{km}*

*MOS **10** 16:53:23.1±1.1, 23.17S×169.25E, h33^{km}, mb6.2/59, MS5.7/77, Error ellipse: s-maj=8.1km s-min=7.2km az=75.8*

*CRAAG **10** 16:53:25.7, 22.48S×169.21E, Mb6.4*

ISC 10 16:53:21.7±1.4, **23.15S**±0.03×**169.18E**±0.03, **h29**^{km}±10^{km}**, h24**^{km}±2.8^{km}**:pP-P, n903,** σ**1^{s}02**/417, **mb5.9**/128, **MS5.7**/166, **46C-96D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.75	293	*e*P	Pn	16 54 04.7	-0.2
NOUC	Port Laguerre	2.86	291	⇓*e*P	Pn	16 54 06.5	0.0
NOUC	Port Laguerre	2.86	291	⇓*e*P	Pn	16 54 06.5	0.0
OUZ	Omahuta	12.63	163	*e*P	P	16 56 20.3	-2.0
OUZ	Omahuta	12.63	163	*e*PN	P	16 56 21.4	-0.9
OUZ	Omahuta	12.63	163	*e*PN	P	16 56 21.4	-0.9
WCZ	Waipu Caves	13.51	162	*e*P	P	16 56 33.5	-0.5
WCZ	Waipu Caves	13.51	162	PN	P	16 56 33.5	-0.5
WCZ				*e*SN	S	16 58 53.0	-11
WCZ	Waipu Caves	13.51	162	PN	P	16 56 33.5	-0.5
WCZ				*e*SN	S	16 58 53.0	-11
KAAZ	Kauri Point	14.44	162	P	P	16 56 49.4	+3.2
KAAZ	Kauri Point	14.44	162	PN	P	16 56 46.9	+0.8
KAAZ	Kauri Point	14.44	162	PN	P	16 56 46.9	+0.8
MTAZ	Motutapu	14.46	161	P	P	16 56 48.5	+2.0
WTAZ	Waiatarua	14.50	162	*e*P	P	16 56 47.5	+0.5
WTAZ	Waiatarua	14.50	162	PN	P	16 56 47.5	+0.5
WTAZ	Waiatarua	14.50	162	PN	P	16 56 47.5	+0.5
OTAZ	Otara	14.62	161	P	P	16 56 51.3	+2.8
KUZ	Kuaotunu	14.68	159	*e*P	P	16 56 48.0	-1.3
KUZ	Kuaotunu	14.68	159	PN	P	16 56 49.6	+0.2
KUZ	Kuaotunu	14.68	159	PN	P	16 56 49.6	+0.2
MKAZ	Moumakai	14.84	161	P	P	16 56 52.5	+1.1
MKAZ	Moumakai	14.84	161	*e*PN	P	16 56 51.1	-0.3
MKAZ	Moumakai	14.84	161	*e*PN	P	16 56 51.1	-0.3
TOZ	Tahuroa Road	15.51	161	*e*P	P	16 57 04.6	+4.4
LIRZ	Lichensteins R	16.04	159	*e*P	P	16 57 07.3	+0.3
LIRZ	Lichensteins R	16.04	159	PN	P	16 57 06.3	-0.7
LIRZ	Lichensteins R	16.04	159	PN	P	16 57 06.3	-0.7
HIZ	Hauiti	16.06	164	*e*P	P	16 57 06.4	-0.8
HIZ	Hauiti	16.06	164	*e*PN	P	16 57 06.9	-0.4
HIZ				*e*SN	S	17 00 01.8	-2.4
HIZ	Hauiti	16.06	164	*e*PN	P	16 57 06.9	-0.4
HIZ				*e*SN	S	17 00 01.8	-2.4
TAZ	Tarawera	16.29	159	*e*P	P	16 57 11.4	+1.3
TAZ	Tarawera	16.29	159	*e*PN	P	16 57 11.7	+1.6
TAZ	Tarawera	16.29	159	*e*PN	P	16 57 11.7	+1.6
WATZ	Wairara	16.48	162	*e*P	P	16 57 17.9	+5.3
URZ	Urewera	16.52	158	Pn	P	16 57 11.8	-1.2
	1.7nm,0.3s,baz=345,slow=9.7,SNR=15						
URZ				Sn	S	17 00 20.7	+6.0
	0.4nm,0.3s,baz=17,slow=19,SNR=3.1						
URZ				LR	LR	17 02 44.9	
	comp=Z,69µm,18.1s,baz=348,slow=34						
URZ	Urewera	16.52	158	*e*P	P	16 57 12.2	-0.8
URZ	Urewera	16.52	158	PN	P	16 57 13.5	+0.5
URZ	Urewera	16.52	158	PN	P	16 57 13.5	+0.5
VRZ	Vera Road	16.62	165	*e*P	P	16 57 19.0	+4.7
VRZ	Vera Road	16.62	165	*e*PN	P	16 57 15.0	+0.7
VRZ	Vera Road	16.62	165	*e*PN	P	16 57 15.0	+0.7
RATZ	Rangitukua	16.64	162	*e*P	P	16 57 17.9	+3.3
RATZ	Rangitukua	16.64	162	PN	P	16 57 15.7	+1.1
RATZ	Rangitukua	16.64	162	PN	P	16 57 15.7	+1.1
MGZ	Maungaku	16.70	163	*e*P	P	16 57 20.4	+5.0
MGZ	Maungaku	16.70	163	PN	P	16 57 15.9	+0.5

MGZ	**Maungaku**	**16.70**	**163**	PN	**P**	**16 57 15.9**	**+0.5**
PUZ	**Puketiti**	**16.78**	**154**	*e*PN	**P**	**16 57 18.0**	**+1.6**
PUZ	**Puketiti**	**16.78**	**154**	*e*PN	**P**	**16 57 18.0**	**+1.6**
NGZ	**Ngauruhoe**	**16.88**	**163**	*e*P	**P**	**16 57 18.7**	**+1.1**
NGZ	**Ngauruhoe**	**16.88**	**163**	*e*PN	**P**	**16 57 18.7**	**+1.1**
NGZ	**Ngauruhoe**	**16.88**	**163**	*e*PN	**P**	**16 57 18.7**	**+1.1**
CNZ	**Chateau**	**16.89**	**163**	*e*P	**P**	**16 57 22.4**	**+4.7**
CNZ	**Chateau**	**16.89**	**163**	*e*PN	**P**	**16 57 19.5**	**+1.7**
CNZ	**Chateau**	**16.89**	**163**	*e*PN	**P**	**16 57 19.5**	**+1.7**
TUVZ	**Tukino**	**16.98**	**163**	P	**P**	**16 57 27.3**	**+8.4**
BKZ	**Black Stump Fm**	**17.14**	**160**	*e*P	**P**	**16 57 19.5**	**-1.3**
TSZ	**Takapari Road**	**17.81**	**163**	*e*PN	**P**	**16 57 30.6**	**+1.4**
TSZ	**Takapari Road**	**17.81**	**163**	*e*PN	**P**	**16 57 30.6**	**+1.4**
QRZ	**Quartz Range**	**17.85**	**172**	*e*P	**P**	**16 57 28.8**	**-0.8**
QRZ	**Quartz Range**	**17.85**	**172**	*e*PN	**P**	**16 57 28.6**	**-1.0**
QRZ	**Quartz Range**	**17.85**	**172**	*e*PN	**P**	**16 57 28.6**	**-1.0**
MRZ	**Mangatainoka R**	**18.27**	**164**	*e*P	**P**	**16 57 34.5**	**-0.5**
MRZ	**Mangatainoka R**	**18.27**	**164**	*e*P*	**P**	**16 57 33.9**	**-1.1**
MRZ	**Mangatainoka R**	**18.27**	**164**	*e*P*	**P**	**16 57 33.9**	**-1.1**
NNZ	**Nelson**	**18.36**	**170**	*e*P	**P**	**16 57 35.8**	**-0.2**
NNZ	**Nelson**	**18.36**	**170**	*e*P*	**P**	**16 57 36.3**	**+0.3**
NNZ	**Nelson**	**18.36**	**170**	*e*P*	**P**	**16 57 36.3**	**+0.3**
BFZ	**Birch Farm**	**18.46**	**163**	*e*P	**P**	**16 57 39.8**	**+2.5**
BFZ	**Birch Farm**	**18.46**	**163**	P*	**P**	**16 57 36.7**	**-0.6**
BFZ	**Birch Farm**	**18.46**	**163**	P*	**P**	**16 57 36.7**	**-0.6**
CAW	**Cannon Point**	**18.57**	**166**	*e*P	**P**	**16 57 39.0**	**+0.3**
CAW	**Cannon Point**	**18.57**	**166**	P*	**P**	**16 57 39.0**	**+0.3**
CAW	**Cannon Point**	**18.57**	**166**	P*	**P**	**16 57 39.0**	**+0.3**
TUWZ	**Tuamarina**	**18.66**	**169**	*e*P*	**P**	**16 57 39.8**	**+0.1**
TUWZ	**Tuamarina**	**18.66**	**169**	*e*P*	**P**	**16 57 39.8**	**+0.1**
DSZ	**Denniston Nort**	**18.67**	**174**	P*	**P**	**16 57 42.0**	**+2.2**
DSZ	**Denniston Nort**	**18.67**	**174**	P*	**P**	**16 57 42.0**	**+2.2**
THZ	**Tophouse**	**18.82**	**171**	*e*P	**P**	**16 57 41.3**	**-0.3**
THZ	**Tophouse**	**18.82**	**171**	P*	**P**	**16 57 41.3**	**-0.3**
THZ	**Tophouse**	**18.82**	**171**	P*	**P**	**16 57 41.3**	**-0.3**
MSWZ	**Moikau Station**	**18.91**	**166**	*e*P	**P**	**16 57 41.5**	**-1.1**
RIV	**Riverview**	**19.05**	**232**	⇑*i*P	**P**	**16 57 47.0**	**+2.6**
LTZ	**Lake Taylor**	**19.74**	**173**	*e*P	**P**	**16 57 51.5**	**-0.7**
LTZ	**Lake Taylor**	**19.74**	**173**	P*	**P**	**16 57 51.5**	**-0.7**
LTZ	**Lake Taylor**	**19.74**	**173**	P*	**P**	**16 57 51.5**	**-0.7**
WVZ	**Waitaha Valley**	**19.91**	**177**	P*	**P**	**16 57 54.7**	**+0.7**
WVZ	**Waitaha Valley**	**19.91**	**177**	P*	**P**	**16 57 54.7**	**+0.7**
FOZ	**Fox Glacier**	**20.36**	**179**	P*	**P**	**16 57 58.0**	**-0.6**
FOZ	**Fox Glacier**	**20.36**	**179**	P*	**P**	**16 57 58.0**	**-0.6**
CRLZ	**Canterbury Las**	**20.57**	**173**	*e*P*	**P**	**16 57 58.8**	**-2.0**
CRLZ	**Canterbury Las**	**20.57**	**173**	*e*P*	**P**	**16 57 58.8**	**-2.0**
RPZ	**Rata Peaks**	**20.57**	**176**	P	**P**	**16 57 59.7**	**-1.1**
	129nm,0.8s,baz=2.6,slow=3.7,SNR=31						
RPZ				S	**S**	**17 01 52.2**	**+7.9**
	25nm,1.1s,baz=357,slow=18,SNR=2.0						
RPZ				LR	LR	17 04 55.5	
	comp=Z,38µm,21.9s,MS5.7,baz=358,slow=34						
RPZ	**Rata Peaks**	**20.57**	**176**	*e*P	**P**	**16 57 59.9**	**-0.9**
RPZ	**Rata Peaks**	**20.57**	**176**	P*	**P**	**16 57 59.9**	**-0.9**
RPZ	**Rata Peaks**	**20.57**	**176**	P*	**P**	**16 57 59.9**	**-0.9**
MQZ	**McQueen’s Vall**	**20.70**	**173**	*e*P*	**P**	**16 58 03.0**	**+0.8**
MQZ	**McQueen’s Vall**	**20.70**	**173**	*e*P*	**P**	**16 58 03.0**	**+0.8**
CNB	**Canberra Magne**	**21.07**	**230**	⇓*i*P	**P**	**16 58 07.4**	**+1.4**
	5µm,1.0s,mb6.8						
LBZ	**Lake Benmore**	**21.20**	**178**	*e*P	**P**	**16 58 06.9**	**-0.3**
LBZ	**Lake Benmore**	**21.20**	**178**	*e*P*	**P**	**16 58 07.3**	**+0.1**
LBZ	**Lake Benmore**	**21.20**	**178**	*e*P*	**P**	**16 58 07.3**	**+0.1**
CTA	**Charters Tower**	**21.52**	**274**	⇓*i*P	**P**	**16 58 12.0**	**+1.3**
	222nm,1.4s,mb5.4						
CTA				*e*S	**S**	**17 02 18.9**	**+16**
CTA	**Charters Tower**	**21.52**	**274**	⇓*i*P	**P**	**16 58 12.0**	**+1.3**
CTA				*e*S	**S**	**17 02 18.9**	**+16**
CTA				pmax	pmax		
	comp=Z,222nm,1.4s						
CTA	**Charters Tower**	**21.52**	**274**	P	**P**	**16 58 11.9**	**+1.2**
	comp=Z,74nm,0.6s,mb5.3,baz=92,slow=11,SNR=57						
CTA				LR	LR	17 05 18.6	
	comp=Z,13µm,21.3s,MS5.3,baz=92,slow=33						
CTAO	**Charters Tower**	**21.52**	**274**	*e*P	**P**	**16 58 11.6**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,838nm,1.4s,mb6.0						
CTAO				MLR	MLR		
	comp=Z,21µm,20.0s,MS5.5						
CTAO	**Charters Tower**	**21.52**	**274**	*e*P	**P**	**16 58 11.6**	**+0.8**
	comp=Z,838nm,1.4s,mb6.0						
CTAO				LR	LR		
	comp=Z,21µm,20.0s,MS5.5						
WKZ	**Wanaka**	**21.62**	**180**	*e*P*	**P**	**16 58 12.1**	**+0.6**
WKZ	**Wanaka**	**21.62**	**180**	*e*P*	**P**	**16 58 12.1**	**+0.6**
ODZ	**Otahua Downs**	**21.87**	**177**	*e*P*	**P**	**16 58 12.8**	**-1.2**
ODZ	**Otahua Downs**	**21.87**	**177**	*e*P*	**P**	**16 58 12.8**	**-1.2**
EAZ	**Earnscleugh**	**22.02**	**180**	*e*P*	**P**	**16 58 16.2**	**+0.7**
EAZ	**Earnscleugh**	**22.02**	**180**	*e*P*	**P**	**16 58 16.2**	**+0.7**
TUZ	**Tuapeka**	**22.75**	**179**	*e*P	**P**	**16 58 23.0**	**+0.3**
TUZ	**Tuapeka**	**22.75**	**179**	*e*P*	**P**	**16 58 25.1**	**+2.3**
TUZ	**Tuapeka**	**22.75**	**179**	*e*P*	**P**	**16 58 25.1**	**+2.3**
TOO	**Toolangi**	**24.89**	**229**	⇓*i*P	**P**	**16 58 44.9**	**+1.3**
	comp=Z,9.1nm,1.3s						
TOO				*e*S	**S**	**17 03 23.2**	**+21**
PMG	**Port Moresby**	**25.12**	**299**	*e*P	**P**	**16 58 43.0**	**-3.0**
PMG	**Port Moresby**	**25.12**	**299**	P	**P**	**16 58 46.1**	**+0.1**
	comp=Z,40nm,0.8s,mb5.0,baz=107,slow=9.0,SNR=19						
PMG	**Port Moresby**	**25.12**	**299**	*e*P	**P**	**16 58 45.8**	**-0.2**
	comp=Z,147nm,1.0s,mb5.5						
PMG				LR	LR		
	comp=Z,14µm,20.0s,MS5.5						
STKA	**Stephens Creek**	**25.91**	**244**	⇓*i*P	**P**	**16 58 53.8**	**+0.6**
	comp=Z,258nm,1.0s,mb5.7						
STKA				*e*S	**S**	**17 03 37.1**	**+18**
STKA	**Stephens Creek**	**25.91**	**244**	P	**P**	**16 58 53.9**	**+0.7**
	comp=Z,119nm,0.9s,mb5.4,baz=80,slow=9.1,SNR=92						
STKA				LR	LR	17 07 41.1	
	comp=Z,10µm,18.4s,MS5.4,baz=74,slow=33						
TAU	**Tasmania Unive**	**26.77**	**217**	*e*P	**P**	**16 59 01.2**	**+0.2**
TAU				pmax	pmax		
	comp=Z,283nm,1.4s,mb5.6						
TAU				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.1						
TAU	**Tasmania Unive**	**26.77**	**217**	*e*P	**P**	**16 59 01.1**	**+0.2**
	comp=Z,283nm,1.4s,mb5.6						
TAU				LR	LR		
	comp=Z,5µm,19.0s,MS5.1						
RAR	**Rarotonga**	**28.79**	**92**	*e*P	**P**	**16 59 17.2**	**-2.3**
RAR				pmax	pmax		
	comp=Z,277nm,1.4s						
RAR				MLR	MLR		
	comp=Z,9µm,20.0s						
RAR	**Rarotonga**	**28.79**	**92**	P	**P**	**16 59 17.7**	**-1.8**
	comp=Z,94nm,1.1s,mb5.4,baz=255,slow=4.4,SNR=4.7						
RAR				LR	LR	17 08 11.4	
	comp=Z,8µm,19.1s,MS5.3,baz=270,slow=31						
RAR	**Rarotonga**	**28.79**	**92**	*e*P	**P**	**16 59 17.2**	**-2.3**
	comp=Z,278nm,1.4s,mb5.8						
RAR				LR	LR		
	comp=Z,9µm,20.0s,MS5.4						
ASAR	**Alice Springs**	**32.33**	**262**	P	**P**	**16 59 49.9**	**-0.9**
	comp=Z,62nm,0.9s,mb5.5,baz=88,slow=7.8,SNR=180						
ASAR				PcP	PcP	17 02 37.8	-0.6
	comp=Z,23nm,0.8s,baz=109,slow=2.1,SNR=7.5						
ASAR				ScP		17 06 22.6	
	comp=Z,6.2nm,1.1s,baz=135,slow=2.6,SNR=3.2						
ASAR				PKiKP		17 10 04.5	
	comp=Z,1.0nm,0.7s,baz=71,slow=1.2,SNR=4.8						
ASAR				LR	LR	17 13 04.6	
	comp=Z,6µm,18.4s,MS5.3,baz=97,slow=37						
ASPA	**Alice Springs**	**32.33**	**262**	⇓*i*P	**P**	**16 59 49.9**	**-0.9**
ASPA				*i* PCP	PcP	17 02 37.5	-0.9
ASPA				*e*S		17 06 20.5	
WRAB	**Tennant Creek**	**32.51**	**269**	⇓*i*P	**P**	**16 59 50.0**	**-2.4**
WRAB	**Tennant Creek**	**32.51**	**269**	*e*P	**P**	**16 59 50.3**	**-2.0**
	comp=Z,404nm,1.5s,mb6.1						
WRAB				LR	LR		
	comp=Z,8µm,19.0s,MS5.4						
WRA	**Warramunga Arr**	**32.52**	**269**	P	**P**	**16 59 50.7**	**-1.8**
	comp=Z,48nm,0.9s,mb5.4,baz=99,slow=8.1,SNR=70						
WRA				PcP	PcP	17 02 37.9	-1.0
	comp=Z,18nm,0.7s,baz=94,slow=2.7,SNR=9.9						
WRA				PKiKP		17 10 04.1	
	comp=Z,1.7nm,0.9s,baz=57,slow=0.4,SNR=5.3						
KAKA	**Kakadu**	**36.37**	**280**	⇓*i*P	**P**	**17 00 24.6**	**-0.9**
	comp=Z,99nm,0.9s,mb5.7						
KAKA				*i* PCP	PcP	17 02 49.8	-0.2
FORT	**Forrest**	**37.27**	**249**	⇓*i*P	**P**	**17 00 32.4**	**-0.5**
	comp=Z,6µm,1.2s						
TBI	**Tubuai**	**37.91**	**99**	*e*P	**P**	**17 00 37.8**	**-0.6**
	comp=Z,340nm,1.4s,mb5.9						
TBI				*e*S	**S**	**17 06 24.5**	**-3.2**
TBI				*e*LQ		17 09 05.2	
TBI				*e*LR	LR	17 10 54.7	
	comp=Z,12µm,27.0s,baz=264						
PAE	**Paea**	**38.94**	**90**	*e*P	**P**	**17 00 45.8**	**-1.3**
	comp=Z,254nm,1.4s,mb5.8						
PPT	**Papeete**	**38.97**	**90**	*e*P	**P**	**17 00 46.3**	**-1.1**
	comp=Z,75nm,1.0s,mb5.4						
PPT	**Papeete**	**38.97**	**90**	*e*S	**S**	**17 06 36.8**	**-7.0**
PPT				*e*LQ		17 09 24.0	
PPT				*e*LR	LR	17 11 24.1	
	comp=Z,12µm,25.0s,baz=260						
PPT	**Papeete**	**38.97**	**90**	P	**P**	**17 00 46.5**	**-0.9**
	comp=Z,51nm,0.6s,mb5.4,baz=181,slow=8.5,SNR=4.5						
TIAR	**Tiarei**	**39.19**	**90**	*e*P	**P**	**17 00 48.0**	**-1.2**
	comp=Z,420nm,1.1s,mb6.1						
TVO	**Taravao**	**39.21**	**90**	*e*P	**P**	**17 00 48.4**	**-1.0**
	comp=Z,242nm,0.7s,mb6.0						
MEH	**Mehetia**	**40.28**	**91**	*e*P	**P**	**17 00 56.7**	**-1.5**
	comp=Z,117nm,1.0s,mb5.6						
FITZ	**Fitzroy Crossi**	**40.95**	**269**	⇓*i*P	**P**	**17 01 03.9**	**+0.3**
	comp=Z,258nm,0.9s,mb5.9						
FITZ				*i* PCP	PcP	17 03 05.8	+1.5
GUMO	**Guam**	**43.59**	**325**	*e*P	**P**	**17 01 25.9**	**+0.6**
GUMO				pmax	pmax		
	comp=Z,250nm,1.0s,mb5.9						
GUMO				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.4						
GUMO	**Guam**	**43.59**	**325**	*e*P	**P**	**17 01 25.9**	**+0.6**
	comp=Z,250nm,1.0s,mb5.9						
GUMO				LR	LR		
	comp=Z,5µm,21.0s,MS5.4						
MBWA	**Marble Bar**	**45.67**	**263**	*e*P	**P**	**17 01 41.7**	**-0.3**
	comp=Z,268nm,0.8s,mb6.2						
MBWA				LR	LR		
	comp=Z,17µm,19.0s,MS6.0						
NWAO	**Narrogin (SRO)**	**46.48**	**246**	*e*P	**P**	**17 01 47.6**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,368nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,13µm,20.0s						
NWAO	**Narrogin (SRO)**	**46.48**	**246**	P	**P**	**17 01 47.0**	**-1.2**
	comp=Z,176nm,0.8s,mb6.0,baz=92,slow=8.8,SNR=30						
NWAO				LR	LR	17 21 02.2	
	comp=Z,99nm,18.4s,baz=256,slow=36						
NWAO	**Narrogin (SRO)**	**46.48**	**246**	*e*P	**P**	**17 01 47.6**	**-0.6**
	comp=Z,368nm,1.2s,mb6.2						
NWAO				LR	LR		
	comp=Z,13µm,20.0s,MS5.9						
DRV	**Dumont d’Urvil**	**47.25**	**195**	P	**P**	**17 01 55.0**	**+1.1**
DRV				S	**S**	**17 08 51.0**	**+6.8**
DRV				R		17 16 00.0	
MUN	**Mundaring**	**47.38**	**247**	⇓*i*P	**P**	**17 01 54.6**	**-0.8**
	comp=Z,137nm,1.0s,mb5.8						
MUN	**Mundaring**	**47.38**	**247**	⇓*i*P	**P**	**17 01 54.6**	**-0.8**
MUN				pmax	pmax		
	comp=Z,137nm,1.0s,mb5.8						
TAOE	**Nuku Hiva Isla**	**50.49**	**82**	*e*P	**P**	**17 02 18.6**	**-1.0**
DAV	**Davao City (W)**	**52.14**	**300**	*e*P	**P**	**17 02 33.0**	**+0.9**
KEDI	**Kedomdong**	**52.81**	**277**	*e*P	**P**	**17 02 36.0**	**-1.2**
KEDI				pmax	pmax		
	comp=Z,123nm,1.0s,mb5.8						
KEDI	**Kedomdong**	**52.81**	**277**	*e*P	**P**	**17 02 36.0**	**-1.2**
	comp=Z,123nm,1.0s,mb5.8						
RATI	**Rata**	**53.26**	**276**	⇓*e*P	**P**	**17 02 40.0**	**-0.4**
	comp=Z,608nm,1.1s,mb6.4						
KELI	**Kelakatan**	**54.40**	**277**	⇓*e*P	**P**	**17 02 47.8**	**-1.0**
	comp=Z,430nm,1.0s,mb6.3						
VNDA	**Vanda**	**54.54**	**182**	P	**P**	**17 02 47.8**	**-1.2**
	comp=Z,15nm,0.7s,mb5.1,baz=6.4,slow=8.8,SNR=22						
VNDA				LR	LR	17 22 54.1	
	comp=Z,6µm,19.0s,MS5.7,baz=8.2,slow=33						
SRDI	**Scrawed**	**54.62**	**276**	⇓*e*P	**P**	**17 02 48.9**	**-1.5**
SRDI				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.6						
SRDI	**Scrawed**	**54.62**	**276**	⇓*e*P	**P**	**17 02 48.9**	**-1.5**
	comp=Z,69nm,1.2s,mb5.6						
KIP	**Kipapa**	**54.63**	**38**	*e*P	**P**	**17 02 49.6**	**-0.8**
KIP				pmax	pmax		
	comp=Z,148nm,1.0s,mb6.0						
KIP				MLR	MLR		
	comp=Z,11µm,22.0s,MS5.9						
KIP	**Kipapa**	**54.63**	**38**	*e*P	**P**	**17 02 49.6**	**-0.8**
	comp=Z,148nm,1.0s,mb6.0						
KIP				LR	LR		
	comp=Z,11µm,22.0s,MS5.9						
SBA	**Scott Base**	**54.77**	**181**	*e*P	**P**	**17 02 49.4**	**-1.3**
SBA				pmax	pmax		
	comp=Z,291nm,1.0s,mb6.3						
SBA				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.8						
SBA	**Scott Base**	**54.77**	**181**	*e*P	**P**	**17 02 49.4**	**-1.3**
	comp=Z,291nm,1.0s,mb6.3						
SBA				LR	LR		
	comp=Z,8µm,20.0s,MS5.8						
POHA	**Pohakuloa**	**54.81**	**42**	*e*P	**P**	**17 02 53.0**	**+1.2**
	comp=Z,5µm,1.4s						
POHA				LR	LR		
	comp=Z,64µm,20.0s,MS6.7						
HKL	**Haleakala**	**55.10**	**40**	P	**P**	**17 02 47.4**	**-6.5**
CBIJ	**Chichi jima**	**56.36**	**331**	P	**P**	**17 03 01.3**	**-1.5**
	comp=Z,186nm,0.8s,mb6.2,baz=237,slow=7.4,SNR=8.0						
CASY	**Casey**	**56.54**	**204**	⇓*i*P	**P**	**17 03 01.5**	**-2.1**
CASY				*e*S	**S**	**17 10 53.2**	**+1.7**
TSM	**Tawau**	**56.99**	**292**	P	**P**	**17 03 07.9**	**+0.3**
KKM	**Kota Kinabalu**	**59.31**	**293**	P	**P**	**17 03 24.1**	**+0.4**
TGY	**Tagaytay City**	**59.99**	**303**	P	**P**	**17 03 27.7**	**-0.7**
	comp=Z,92nm,0.6s,mb6.0,baz=262,slow=18,SNR=13						
TGY				LR	LR	17 25 16.4	
	comp=Z,4µm,21.6s,MS5.6,baz=289,slow=32						
JHJ	**Hachijo jima 2**	**62.59**	**332**	LR	LR	17 25 15.6	
	comp=Z,4µm,20.8s,MS5.5,baz=101,slow=31						
MIR	**Mirnyy**	**63.49**	**206**	j *e*P	**P**	**17 03 49.4**	**-1.8**
MIR				*e*S	**S**	**17 12 24.0**	**+3.2**
MIR				pmax	pmax		
	comp=Z,150nm,1.4s,mb5.9						
MIR				pmax	pmax		
	comp=Z,2µm,14.0s						
MIR				MLR	MLR		
	comp=N,2µm,14.0s,MS5.7						
MIR				MLR	MLR		
	comp=E,3µm,14.0s,MS5.7						
MIR				MLR	MLR		
	comp=Z,10µm,14.0s,MS6.2						
JOW	**Kunigami**	**63.51**	**319**	P	**P**	**17 03 52.2**	**+0.3**
	comp=Z,59nm,0.8s,mb5.7,baz=109,slow=3.9,SNR=5.7						
JOW				LR	LR	17 28 42.3	
	comp=Z,4µm,20.1s,MS5.6,baz=299,slow=33						
JOW	**Kunigami**	**63.51**	**319**	P	**P**	**17 03 52.2**	**+0.3**
JOW				LR	LR	17 28 42.3	
MAJO	**Matsushiro**	**66.19**	**333**	*e*P	**P**	**17 04 08.3**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,63nm,0.7s,mb5.8						
MAJO				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
MAJO	**Matsushiro**	**66.19**	**333**	*e*P	**P**	**17 04 08.3**	**-0.8**
	comp=Z,63nm,0.7s,mb5.8						
MAJO				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
MAT	**Matsushiro**	**66.19**	**333**	P	**P**	**17 04 08.2**	**-0.9**
MAT				S	S	17 12 55.0	+0.5
TATO	**Taipei**	**66.54**	**313**	*e*P	**P**	**17 04 10.7**	**-0.9**
	comp=Z,667nm,1.5s,mb6.5						
TATO				LR	LR		
	comp=Z,9µm,21.0s,MS6.0						
QSPA	**South Pole Qui**	**66.92**	**180**	*e*P	**P**	**17 04 12.0**	**-1.1**
	comp=Z,227nm,1.0s,mb6.2						
QZH	**Quanzhou**	**68.50**	**311**	*i* PR	**P**	**17 04 23.6**	**-0.3**
QZH				S	S	17 13 28.0	+5.6
QZH				AMB	AMB		
	comp=Z,5µm,8.8s						
QZH				LR	LR		
	comp=N,2µm,13.8s,MS5.8						
QZH				LR	LR		
	comp=E,4µm,14.1s,MS5.8						
QZH				LR	LR		
	comp=Z,21µm,31.8s						
KGM	**Kluang**	**68.74**	**282**	P	**P**	**17 04 26.2**	**+0.7**
ERM	**Erimo**	**69.17**	**340**	PFAKE		17 04 40.0	+12
ERM				LR	LR		
	comp=Z,5.0nm,20.0s						
COCO	**West Island**	**69.21**	**265**	*e*P	**P**	**17 04 27.4**	**-0.9**
	comp=Z,800nm,1.6s,mb6.4						
COCO				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
YUK	**Yuzh-Kuril’sk**	**70.19**	**342**	*e*P	**P**	**17 04 35.0**	**+1.1**
YUK				*e*		17 07 12.5	
YUK				S	S	17 13 50.0	+7.9
YUK				*e*PS	PS	17 14 23.5	+11
YUK				pmax	pmax		
	comp=Z,4µm,4.0s						
YUK				pmax	pmax		
	comp=N,4µm,3.0s						
YUK				pmax	pmax		
	comp=E,3µm,3.0s						
YUK				smax			
	comp=N,3µm,5.0s						
YUK				smax			
	comp=E,3µm,5.0s						
SSE	**Sheshan**	**70.88**	**318**	P	**P**	**17 04 37.6**	**-0.7**
SSE				XP	sP	17 04 50.7	+0.1
SSE				PP	PP	17 07 14.5	-3.1
SSE				S	S	17 13 54.0	+3.6
SSE				SCS	ScS	17 14 39.5	+3.2
SSE				SS	SS	17 18 27.0	+1.9
SSE				AMB	AMB		
	comp=Z,79nm,1.1s,mb5.6						
SSE				AMB	AMB		
	comp=Z,2µm,8.2s						
SSE				LR	LR		
	comp=N,2µm,30.1s,MS5.5						
SSE				LR	LR		
	comp=E,4µm,31.0s,MS5.5						
SSE				LR	LR		
	comp=Z,5µm,23.1s						
SSE	**Sheshan**	**70.88**	**318**	P	**P**	**17 04 37.6**	**-0.7**
	comp=Z,79nm,1.1s,mb5.6						
SSE				sP	sP	17 04 50.7	+0.1
SSE				PP	PP	17 07 14.5	-3.1
SSE				S	S	17 13 54.0	+3.6
SSE				sS		17 14 09.4	
SSE				ScS	ScS	17 14 39.5	+3.2
SSE				SS	SS	17 18 27.0	+1.9
SSE				LR	LR		
	comp=Z,5µm,23.1s,MS5.7						
GZH	**Guangzhou**	**71.12**	**306**	P	**P**	**17 04 40.8**	**+0.9**
GZH				LR	LR		
	comp=N,3µm,19.7s,MS5.6						
GZH				LR	LR		
	comp=E,2µm,18.5s,MS5.6						
GZH				LR	LR		
	comp=Z,4µm,50.0s						
ASAJ	**Asahikawa**	**71.24**	**340**	LR	LR	17 31 00.3	
	comp=Z,10µm,21.6s,MS6.1,baz=169,slow=32						
QIZ	**Qiongzhong**	**71.50**	**301**	P	**P**	**17 04 40.7**	**-1.5**
QIZ				XP	sP	17 04 48.6	-5.9
QIZ				S	S	17 14 00.4	+2.8
QIZ				SS	SS	17 18 31.3	-3.3
QIZ				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.5						
QIZ				LR	LR		
	comp=E,2µm,19.4s						
QIZ				LR	LR		
	comp=Z,3µm,26.0s						
QIZ	**Qiongzhong**	**71.50**	**301**	*e*P	**P**	**17 04 43.0**	**+0.8**
	comp=Z,274nm,1.6s,mb5.9						
KS15	**Wonju Array Si**	**71.72**	**326**	*e*P	**P**	**17 04 42.3**	**-0.9**
IPM	**Ipoh**	**71.92**	**283**	P	**P**	**17 04 44.8**	**-0.1**
INCN	**Inchon**	**72.39**	**326**	*e*P	**P**	**17 04 47.6**	**+0.4**
	comp=Z,648nm,1.6s,mb6.3						
INCN				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
NJ2	**Nanjing**	**72.99**	**317**	*e*P	**P**	**17 04 50.9**	**0.0**
NJ2				AP	pP	17 04 55.1	-4.9
NJ2				XP	sP	17 04 58.3	-4.9
NJ2				PCP	PcP	17 05 06.8	-1.0
NJ2				S	S	17 14 09.0	-5.5
NJ2				SS	SS	17 18 56.0	-1.9
NJ2				AMB	AMB		
	comp=Z,470nm,1.2s,mb6.3						
NJ2				AMB	AMB		
	comp=Z,5µm,9.4s						
NJ2				LR	LR		
	comp=N,9µm,20.8s,MS6.1						
NJ2				LR	LR		
	comp=E,5µm,21.3s,MS6.1						
NJ2				LR	LR		
	comp=Z,11µm,21.6s,MS6.1						
YSS	**Yuzh-Sakhalins**	**73.75**	**341**	κ *i*P	**P**	**17 04 55.0**	**0.0**
YSS				*e*	pP	17 05 04.0	-0.1
YSS				*e*		17 05 08.2	
YSS				*e*S	S	17 14 27.0	+4.3
YSS				*e*PS	PS	17 15 10.0	+10
YSS				pmax	pmax		
	comp=N,160nm,1.5s						
YSS				pmax	pmax		
	comp=Z,240nm,1.5s,mb5.9						
YSS				pmax	pmax		
	comp=Z,4µm,6.0s						
YSS				smax			
	comp=N,4µm,10.0s						
YSS				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.8						
YSS				MLR	MLR		
	comp=N,4µm,18.0s,MS5.7						
YSS				MLR	MLR		
	comp=E,2µm,18.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**73.75**	**341**	*e*P	**P**	**17 04 56.1**	**+1.2**
	comp=E,558nm,1.7s,mb6.2						
YSS				LR	LR		
	comp=Z,8µm,21.0s,MS6.0						
VLA	**Vladivostok**	**74.34**	**333**	*i* P	**P**	**17 05 00.0**	**+1.5**
VLA				*i*		17 05 19.0	
VLA				*i* S	S	17 14 35.0	+5.6
VLA				*i* SS	SS	17 19 20.0	+2.1
VLA				pmax	pmax		
	comp=Z,4µm,10.0s						
VLA				pmax	pmax		
	comp=N,2µm,11.0s						
VLA				pmax	pmax		
	comp=E,500nm,11.0s						
VLA				smax			
	comp=N,4µm,8.0s						
VLA				smax			
	comp=E,2µm,9.0s						
VLA				MLR	MLR		
	comp=E,1µm,16.0s,MS5.5						
VLA				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.4						
VLA				MLR	MLR		
	comp=N,1µm,15.0s,MS5.5						
SKR	**Severo-Kuril’s**	**74.41**	**351**	*e*P	**P**	**17 04 56.0**	**-2.7**
SKR				*e*		17 05 08.0	
SKR				*e*		17 07 43.0	
SKR				*e*PPP	PPP	17 09 26.0	-5.9
SKR				*e*S	S	17 14 34.0	+4.0
SKR				*e*		17 14 58.0	
SKR				*e*PS	PS	17 15 26.0	+18
SKR				pmax	pmax		
	comp=Z,5µm,10.0s						
SKR				pmax	pmax		
	comp=N,3µm,12.0s						
SKR				pmax	pmax		
	comp=E,3µm,12.0s						
SKR				pmax	pmax		
	comp=Z,1µm,2.0s,mb6.5						
SKR				pmax	pmax		
	comp=Z,3.0nm,16.0s						
SKR				smax			
	comp=N,5µm,10.0s						
SKR				smax			
	comp=E,4µm,10.0s						
SKR				MLR	MLR		
	comp=N,3µm,18.0s,MS5.8						
SKR				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.6						
SKR				MLR	MLR		
	comp=E,3µm,14.0s,MS5.8						
MAW	**Mawson**	**74.81**	**202**	*e*P	**P**	**17 05 00.3**	**-0.4**
	comp=E,25nm,0.9s,mb5.1						
MAW				*e*S	S	17 14 32.4	-1.7
MAW	**Mawson**	**74.81**	**202**	*e*P	**P**	**17 05 00.3**	**-0.4**
MAW				*e*S	S	17 14 32.4	-1.7
MAW				pmax	pmax		
	comp=Z,25nm,0.9s						
MAW	**Mawson**	**74.81**	**202**	P	**P**	**17 05 00.4**	**-0.3**
	comp=Z,28nm,0.9s,mb5.2,baz=114,slow=11,SNR=11						
MAW				LR	LR	17 33 36.0	
	comp=Z,5µm,20.0s,MS5.8,baz=99,slow=32						
WHN	**Wuhan**	**74.95**	**313**	⇑P	**P**	**17 05 02.5**	**+0.2**
WHN				S	S	17 14 29.0	-7.5
WHN				AMB	AMB		
	comp=Z,163nm,1.5s,mb5.7						
WHN				LR	LR		
	comp=Z,20µm,33.9s,MS6.2						

KIWB	**Kanaga Island**	**75.64**	**9**	*e*P	**P**	**17 05 05.5**	**-0.2**
SMY	**Shemya**	**75.68**	**3**	*e*P	**P**	**17 05 06.0**	**0.0**
FX1	**Attu Island--F**	**75.79**	**2**	P	**P**	**17 05 06.6**	**0.0**
	comp=Z,33nm,0.6s,mb5.4,baz=190,slow=3.7,SNR=15						
FX1				LR	LR	17 32 02.3	
	comp=Z,219nm,21.2s,baz=229,slow=31						
FX1	**Attu Island--F**	**75.79**	**2**	*e*P	**P**	**17 05 06.3**	**-0.3**
GSTR	**Great Sitkin T**	**76.03**	**9**	*e*P	**P**	**17 05 08.2**	**+0.2**
DL2	**Dalian**	**76.10**	**324**	PR		17 05 06.7	
DL2				S	S	17 14 50.6	+1.6
DL2				AMB	AMB		
	comp=Z,100nm,1.7s,mb5.5						
DL2				AMB	AMB		
	comp=Z,1µm,11.2s						
DL2				LR	LR		
	comp=N,1µm,27.0s,MS5.3						
DL2				LR	LR		
	comp=E,2µm,26.1s,MS5.3						
DL2				LR	LR		
	comp=Z,4µm,36.1s						
PET	**Petropavlovsk**	**76.41**	**353**	*e*P	**P**	**17 05 10.7**	**+0.6**
PET				*e*	pP	17 05 20.5	+1.3
PET				*e*		17 08 04.4	
PET				*e*PPP	PPP	17 09 45.9	-4.9
PET				*e*S	S	17 15 00.6	+8.6
PET				*e*PS	PS	17 15 43.6	+10
PET				*e*SS	SS	17 19 49.3	-0.3
PET				pmax	pmax		
	comp=Z,4µm,5.2s						
PET				pmax	pmax		
	comp=Z,3µm,10.8s						
PET				pmax	pmax		
	comp=Z,800nm,18.4s						
PET				smax			
	comp=N,3µm,10.2s						
PET				smax			
	comp=E,2µm,16.8s						
PET				smax			
	comp=N,4µm,24.5s						
PET	**Petropavlovsk**	**76.41**	**353**	*e*P	**P**	**17 05 09.7**	**-0.4**
	comp=N,148nm,1.4s,mb5.7						
PET				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
MDJ	**Mudanjiang**	**76.53**	**332**	P	**P**	**17 05 11.7**	**+0.8**
MDJ				AP	pP	17 05 15.0	-5.1
MDJ				XP	sP	17 05 16.3	-6.9
MDJ				PP	PP	17 08 05.4	+0.8
MDJ				XS		17 15 06.6	
MDJ				AMB	AMB		
	comp=Z,129nm,1.4s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,3µm,5.7s						
MDJ				LR	LR		
	comp=N,3µm,23.1s,MS5.6						
MDJ				LR	LR		
	comp=E,2µm,24.3s,MS5.6						
MDJ				LR	LR		
	comp=Z,5µm,24.3s,MS5.8						
MDJ	**Mudanjiang**	**76.53**	**332**	*e*P	**P**	**17 05 11.1**	**+0.2**
	comp=Z,311nm,1.5s,mb6.0						
TIA	**Tai’an**	**76.83**	**319**	⇓P	**P**	**17 05 12.8**	**0.0**
TIA				AMB	AMB		
	comp=Z,170nm,0.6s,mb6.2						
TIA				LR	LR		
	comp=E,1µm,11.0s						
SNY	**Shenyang**	**77.20**	**327**	⇓P	**P**	**17 05 14.7**	**0.0**
SNY				S	S	17 15 08.7	+7.8
SNY				SS	SS	17 20 02.1	+0.3
SNY				LR	LR		
	comp=N,3µm,24.0s,MS5.7						
SNY				LR	LR		
	comp=E,3µm,24.5s,MS5.7						
SNY				LR	LR		
	comp=Z,6µm,42.1s						
CN2	**Changchun**	**77.77**	**329**	⇓P	**P**	**17 05 18.0**	**+0.2**
CN2				XP	sP	17 05 24.4	-5.7
CN2				*e*S	S	17 15 09.2	+2.3
CN2				AMB	AMB		
	comp=Z,130nm,1.4s,mb5.7						
CN2				AMB	AMB		
	comp=Z,4µm,4.0s						
CN2				LR	LR		
	comp=N,2µm,19.0s,MS5.7						
CN2				LR	LR		
	comp=E,2µm,19.0s,MS5.7						
CN2				LR	LR		
	comp=Z,5µm,21.0s,MS5.8						
GYA	**Guiyang**	**78.02**	**306**	⇑*i*P	**P**	**17 05 19.4**	**-0.2**
GYA				AP	pP	17 05 29.6	+0.9
GYA				XP	sP	17 05 33.7	+1.9
GYA				PP	PP	17 08 20.2	+2.3
GYA				S	S	17 15 15.2	+5.2
GYA				SKS	SKS	17 15 25.4	-9.3
GYA				PS	PS	17 16 02.2	+7.3
GYA				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.5						
GYA				AMB	AMB		
	comp=Z,2µm,9.3s						
GYA				LR	LR		
	comp=N,2µm,17.0s,MS5.7						
GYA				LR	LR		
	comp=E,3µm,20.2s,MS5.7						
GYA				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
ENH	**Enshi**	**78.13**	**310**	*e*P	**P**	**17 05 19.7**	**-0.3**
	comp=Z,903nm,1.6s,mb6.5						
NIKO	**Nikolski**	**78.18**	**13**	*e*P	**P**	**17 05 17.8**	**-2.0**
KLR	**Kul’dur**	**79.40**	**336**	*e*P	**P**	**17 05 24.7**	**-1.9**
KLR				*e*S	S	17 15 28.5	+4.3
KLR				pmax	pmax		
	comp=N,100nm,1.8s						
KLR				pmax	pmax		
	comp=E,92nm,1.8s						
KLR				pmax	pmax		
	comp=Z,250nm,1.8s,mb5.8						
KLR				pmax	pmax		
	comp=N,2µm,11.0s						
KLR				pmax	pmax		
	comp=E,1µm,11.0s						
KLR				pmax	pmax		
	comp=Z,4µm,11.0s						
UNV	**Unalaska Valle**	**79.51**	**14**	*e*P	**P**	**17 05 24.9**	**-2.3**
	comp=Z,635nm,1.2s,mb6.4						
BJT	**Baijiatuau**	**79.93**	**321**	*e*P	**P**	**17 05 29.7**	**0.0**
BJT				pmax	pmax		
	comp=Z,219nm,1.5s						
BJT	**Baijiatuau**	**79.93**	**321**	*e*P	**P**	**17 05 29.7**	**0.0**
	comp=Z,219nm,1.5s,mb5.9						
BJI	**Beijing**	**79.94**	**321**	P	**P**	**17 05 30.2**	**+0.5**
BJI				XP	sP	17 05 34.7	-7.3
BJI				S	S	17 15 37.0	+7.0
BJI				AMB	AMB		
	comp=Z,64nm,1.6s,mb5.3						
BJI				AMB	AMB		
	comp=Z,5µm,5.4s						
BJI				LR	LR		
	comp=N,1µm,21.2s,MS5.7						
BJI				LR	LR		
	comp=E,4µm,21.2s,MS5.7						
BJI				LR	LR		
	comp=Z,5µm,24.3s,MS5.8						
BJI	**Beijing**	**79.94**	**321**	P	**P**	**17 05 30.2**	**+0.5**
	comp=Z,64nm,1.6s,mb5.3						
BJI				sP	sP	17 05 34.7	-7.3
BJI				S	S	17 15 37.0	+7.0
BJI				S	tx	17 20 57.8	
BJI				LR	LR		
	comp=Z,5µm,24.3s,MS5.8						
CM31	**Chiang Mai Arr**	**80.07**	**295**	*e*P	**P**	**17 05 32.0**	**+1.2**
	comp=Z,426nm,1.3s,mb6.2						
CM31				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
CMAR	**Chiang Mai Arr**	**80.07**	**295**	*i* P	**P**	**17 05 32.4**	**+1.6**
CMAR				pmax	pmax		
	comp=Z,58nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.07**	**295**	P	**P**	**17 05 32.4**	**+1.6**
	comp=Z,58nm,0.8s,mb5.6,baz=132,slow=3.7,SNR=249						
CMAR				PKKPbc		17 24 16.1	
	comp=Z,13nm,1.3s,baz=297,slow=4.4,SNR=13						
KMI	**Kunming**	**80.30**	**303**	⇓P	**P**	**17 05 33.8**	**+1.8**
KMI				XP	sP	17 05 37.9	-6.3
KMI				PP	PP	17 08 37.4	+0.9
KMI				S	S	17 15 40.1	+6.0
KMI				XS		17 15 44.1	
KMI				AMB	AMB		
	comp=Z,194nm,1.5s,mb5.8						
KMI				AMB	AMB		
	comp=Z,3µm,5.7s						
KMI				LR	LR		
	comp=N,2µm,20.5s,MS5.7						
KMI				LR	LR		
	comp=E,3µm,20.5s,MS5.7						
KMI				LR	LR		
	comp=Z,3µm,25.2s,MS5.6						
KMI	**Kunming**	**80.30**	**303**	⇓P	**P**	**17 05 33.8**	**+1.8**
KMI						17 08 37.4	
KMI				S	S	17 15 40.1	+6.0
KMI				*SS		17 15 44.1	
KMI				SS	SS	17 20 54.5	+5.8
KMI				pmax	pmax		
	comp=Z,194nm,1.5s,mb5.8						
KMI				MLR	MLR		
	comp=Z,3µm,25.2s,MS5.6						
KMI	**Kunming**	**80.30**	**303**	⇓P	**P**	**17 05 33.8**	**+1.8**
	comp=Z,194nm,1.5s,mb5.8						
KMI				sP	sP	17 05 37.9	-6.3
KMI				PP	PP	17 08 37.4	+0.9
KMI				S	S	17 15 40.1	+6.0
KMI				sS		17 15 44.1	
KMI				SS	SS	17 20 54.5	+5.8
KMI				LR	LR		
	comp=Z,3µm,25.2s,MS5.6						
XAN	**Xi’an**	**80.72**	**313**	P	**P**	**17 05 34.6**	**+0.6**
XAN				AP	pP	17 05 42.0	-1.2
XAN				S	S	17 15 39.8	+1.6
XAN				AMB	AMB		
	comp=Z,133nm,1.6s,mb5.6						
XAN				AMB	AMB		
	comp=Z,3µm,10.7s						
XAN				LR	LR		
	comp=E,4µm,30.3s						
XAN				LR	LR		
	comp=Z,6µm,37.7s						
SYO	**Syowa Base**	**81.18**	**196**	⇑P	**P**	**17 05 34.1**	**-1.6**
SYO	**Syowa Base**	**81.18**	**196**	⇑pP	pP	17 05 37.5	-7.4
SYO	**Syowa Base**	**81.18**	**196**	⇓sP	sP	17 05 40.0	-7.9
CD2	**Chengdu**	**82.58**	**308**	P	**P**	**17 05 44.5**	**+0.8**
CD2				PP	PP	17 08 56.0	+0.7
CD2				PPP	PPP	17 10 55.0	+7.1
CD2				S	S	17 16 05.0	+7.6
CD2				AMB	AMB		
	comp=Z,280nm,1.6s,mb6.0						
CD2				AMB	AMB		
	comp=Z,2µm,6.0s						
CD2				LR	LR		
	comp=E,3µm,18.0s						
HHC	**Hu-ho-hao-te**	**83.15**	**320**	⇓*i*P	**P**	**17 05 47.5**	**+1.0**
HHC				AP	pP	17 05 51.6	-4.1
HHC				XP	sP	17 05 54.7	-4.1
HHC				PP	PP	17 09 00.5	+0.8
HHC				SKS	SKS	17 16 03.7	-6.9
HHC				AMB	AMB		
	comp=Z,71nm,1.5s,mb5.5						
HHC				AMB	AMB		
	comp=Z,3µm,12.0s						
HHC				LR	LR		
	comp=N,4µm,21.6s,MS5.8						
HHC				LR	LR		
	comp=E,3µm,22.8s,MS5.8						
HHC				LR	LR		
	comp=Z,4µm,21.6s,MS5.7						
PMSA	**Palmer Station**	**83.27**	**160**	*e*P	**P**	**17 05 44.8**	**-1.8**
	comp=Z,240nm,1.2s,mb6.1						
PMSA				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
MA2	**Magadan**	**83.81**	**351**	*e*P	**P**	**17 05 48.7**	**-0.7**
MA2				*e*S	S	17 16 09.0	-0.1
MA2				*e*		17 17 10.1	
MA2				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.4						
MA2	**Magadan**	**83.81**	**351**	*e*P	**P**	**17 05 49.1**	**-0.3**
	comp=Z,121nm,1.6s,mb5.8						
MA2				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
BTO	**Baotou**	**83.93**	**319**	*e*P	**P**	**17 05 51.2**	**+0.7**
BTO				AMB	AMB		
	comp=Z,68nm,3.0s						
HIA	**Hailar**	**84.45**	**330**	*e*P	**P**	**17 05 53.0**	**+0.1**
HIA				pmax	pmax		
	comp=Z,248nm,1.9s						
HIA	**Hailar**	**84.45**	**330**	*e*P	**P**	**17 05 53.0**	**+0.1**
	comp=Z,248nm,1.9s,mb6.0						
HIA				*e*PP	PP	17 09 02.9	-7.0
MAIT	**Maitri**	**84.99**	**187**	⇓*i*P	**P**	**17 05 54.9**	**-0.2**
SNAA	**Sanae**	**85.27**	**183**	*e*P	**P**	**17 05 54.9**	**-1.5**
SNAA				pmax	pmax		
	comp=Z,5µm,1.3s						
SNAA	**Sanae**	**85.27**	**183**	P	**P**	**17 05 55.4**	**-1.0**
	comp=Z,63nm,1.0s,mb5.7,baz=189,slow=4.8,SNR=47						
SNAA				LR	LR	17 40 41.6	
	comp=Z,2µm,21.2s,MS5.5,baz=194,slow=33						
SNAA	**Sanae**	**85.27**	**183**	*e*P	**P**	**17 05 54.9**	**-1.6**
	comp=Z,5µm,1.3s						
LZH	**Lanzhou**	**85.31**	**312**	⇓P	**P**	**17 05 59.4**	**+1.9**
LZH				PP	PP	17 09 20.0	+3.0
LZH				S	S	17 16 24.2	-0.3
LZH				XS		17 16 41.3	
LZH				PS	PS	17 17 22.0	-3.4
LZH				SS	SS	17 22 01.1	-1.4
LZH				AMB	AMB		
	comp=Z,6µm,6.0s						
LZH				LR	LR		
	comp=N,12µm,18.9s						
LZH				LR	LR		
	comp=Z,19µm,19.7s,MS6.5						
LZH	**Lanzhou**	**85.31**	**312**	⇓P	**P**	**17 05 59.4**	**+1.9**
LZH				*PP	pP	17 06 13.0	+6.2
LZH						17 09 20.0	
LZH				S	S	17 16 24.2	-0.3
LZH				PS	PS	17 17 22.0	-3.4
LZH				SS	SS	17 22 01.1	-1.4
LZH				pmax	pmax		
	comp=Z,1µm,1.7s,mb6.7						
LZH				MLR	MLR		
	comp=Z,19µm,19.7s,MS6.5						
LZH	**Lanzhou**	**85.31**	**312**	⇓P	**P**	**17 05 59.4**	**+1.9**
	comp=Z,1µm,1.7s,mb6.7						
LZH				pP	pP	17 06 13.0	+6.2
LZH				sP	sP	17 06 20.6	+11
LZH				PP	PP	17 09 20.0	+3.0
LZH				S	S	17 16 24.2	-0.3
LZH				sS		17 16 41.3	
LZH				PS	PS	17 17 22.0	-3.4
LZH				SS	SS	17 22 01.1	-1.4
LZH				LR	LR		
	comp=Z,19µm,19.7s,MS6.5						
VNA3	**Neumayer Olymp**	**85.86**	**180**	⇓*i*P	**P**	**17 05 59.4**	**0.0**
VNA2	**Neumayer--Watz**	**86.15**	**181**	⇓*i*P	**P**	**17 06 01.1**	**+0.3**
VNA1	**Neumayer--Stat**	**86.44**	**181**	⇑*i*P	**P**	**17 06 03.2**	**+0.9**
KDAK	**Kodiak Island**	**86.72**	**19**	PFAKE		17 06 10.0	+6.1
KDAK				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
SEY	**Seymchan**	**86.82**	**352**	*i* P	**P**	**17 06 06.6**	**+2.3**
SEY						17 09 26.9	
SEY				*e*PPP	PPP	17 11 23.3	-3.0
SEY				*e*S	S	17 16 41.4	+3.0
SEY				pmax	pmax		
	comp=Z,600nm,1.4s,mb6.6						
SEY				pmax	pmax		
	comp=N,160nm,1.2s						
SEY				pmax	pmax		
	comp=E,50nm,1.2s						
SEY				smax			
	comp=N,16µm,13.8s						
SEY				smax			
	comp=E,3µm,10.4s						
SEY				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
SEY				MLR	MLR		
	comp=N,6µm,20.0s,MS6.0						
SEY				MLR	MLR		
	comp=E,3µm,23.0s,MS6.0						
CLNS	**Chul’man**	**87.97**	**337**	*e*P	**P**	**17 06 11.4**	**+1.5**
CLNS				*e**PP	pP	17 06 19.9	+0.7
CLNS				*e*		17 09 34.5	
CLNS				*e*S	S	17 16 46.6	-2.7
CLNS				*e*PS	PS	17 17 52.5	-5.0
CLNS				pmax	pmax		
	comp=Z,389nm,1.5s,mb6.4						
CLNS				pmax	pmax		
	comp=N,276nm,1.6s						
CLNS				pmax	pmax		
	comp=E,49nm,1.1s						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.2						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
CLNS				smax			
	comp=N,2µm,12.0s						
CLNS				smax			
	comp=Z,685nm,12.9s						
CLNS				smax			
	comp=E,508nm,11.9s						
USHA	**Ushuaia**	**88.07**	**151**	P	**P**	**17 06 10.4**	**-0.1**
	comp=E,30nm,1.1s,mb5.5,baz=216,slow=5.9,SNR=5.6						
USHA				LR	LR	17 36 23.1	
	comp=E,3µm,21.1s,MS5.7,baz=206,slow=29						
SAC	**San Andreas**	**88.18**	**48**	*e*P	**P**	**17 06 09.6**	**-1.9**
SAO	**San Andreas Ge**	**88.43**	**49**	*e*P	**P**	**17 06 12.9**	**+0.2**
SAO				pmax	pmax		
	comp=Z,183nm,1.3s,mb6.2						
SAO				MLR	MLR		
	comp=Z,5µm,19.0s,MS6.0						
SAO	**San Andreas Ge**	**88.43**	**49**	*e*P	**P**	**17 06 12.9**	**+0.2**
	comp=Z,183nm,1.3s,mb6.2						
SAO				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
HOPS	**Hopland**	**88.48**	**46**	*e*P	**P**	**17 06 13.5**	**+0.6**
	comp=Z,347nm,1.4s,mb6.4						
HOPS				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
LRV	**Little Rabbit**	**88.56**	**49**	*e*P	**P**	**17 06 14.6**	**+1.3**
SVW2	**Sparrevohn**	**88.65**	**16**	*e*P	**P**	**17 06 14.2**	**+1.1**
RSO	**Redoubt South**	**88.88**	**18**	P	**P**	**17 06 14.3**	**+0.1**
AGT	**Agartala**	**88.92**	**296**	⇑*i*P	**P**	**17 06 19.0**	**+3.7**
AGT				*i*		17 06 53.0	
KHMM	**Horse Mountain**	**89.03**	**44**	*e*P	**P**	**17 06 16.5**	**+1.1**
SHL	**Shillong**	**89.14**	**298**	*e*P	**P**	**17 06 18.0**	**+1.7**
SHL				*e*S	S	17 16 48.0	-13
MWC	**Mount Wilson**	**89.59**	**52**	*e*P	**P**	**17 06 18.3**	**0.0**
WDC	**Whiskeytown Da**	**89.65**	**45**	*e*P	**P**	**17 06 18.8**	**+0.4**
WDC				pmax	pmax		
	comp=Z,181nm,1.4s,mb6.2						
WDC				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.9						
WDC	**Whiskeytown Da**	**89.65**	**45**	*e*P	**P**	**17 06 18.8**	**+0.4**
	comp=Z,181nm,1.4s,mb6.2						
WDC				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
SLKM	**Skilak Lake**	**89.65**	**19**	*e*P	**P**	**17 06 15.9**	**-2.0**
OHCM	**Honcut**	**89.71**	**47**	*e*P	**P**	**17 06 18.7**	**0.0**
KEBM	**Edson Butte**	**89.72**	**42**	*e*P	**P**	**17 06 17.7**	**-0.9**
GTA	**Gaotai**	**89.77**	**314**	⇓*i*P	**P**	**17 06 19.5**	**+0.6**
GTA				AP	pP	17 06 24.7	-3.5
GTA				XP	sP	17 06 26.8	-4.4
GTA				PP	PP	17 09 54.7	+1.1
GTA				AMB	AMB		
	comp=Z,51nm,1.6s,mb5.6						
GTA				AMB	AMB		
	comp=Z,2µm,8.0s						
GTA				LR	LR		
	comp=N,2µm,18.3s						
GTA				LR	LR		
	comp=E,2µm,30.4s						
GTA				LR	LR		
	comp=Z,4µm,29.3s						
CMB	**Columbia Colle**	**89.80**	**48**	P	**P**	**17 06 19.6**	**+0.5**
CMB	**Columbia Colle**	**89.80**	**48**	*e*P	**P**	**17 06 19.6**	**+0.5**
CMB				pmax	pmax		
	comp=Z,233nm,1.3s,mb6.3						
CMB				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.9						
CMB	**Columbia Colle**	**89.80**	**48**	*e*P	**P**	**17 06 19.6**	**+0.5**
	comp=Z,233nm,1.3s,mb6.3						
CMB				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
BAR	**Barrett**	**89.89**	**54**	*e*P	**P**	**17 06 20.3**	**+0.6**
ULN	**Ulaanbaatar**	**89.96**	**323**	*e*P	**P**	**17 06 20.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,249nm,1.4s,mb6.3						
ULN				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
ULN	**Ulaanbaatar**	**89.96**	**323**	*e*P	**P**	**17 06 20.4**	**+0.8**
	comp=Z,249nm,1.4s,mb6.3						
ULN				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
YBH	**Yreka Blue Hor**	**90.14**	**44**	*e*P	**P**	**17 06 20.7**	**+0.1**
YBH				pmax	pmax		
	comp=Z,92nm,1.3s						
YBH				MLR	MLR		
	comp=Z,3µm,20.0s						
YBH	**Yreka Blue Hor**	**90.14**	**44**	P	**P**	**17 06 20.3**	**-0.4**
	comp=Z,23nm,0.8s,mb5.5,baz=169,slow=3.1,SNR=29						
YBH	**Yreka Blue Hor**	**90.14**	**44**	*e*P	**P**	**17 06 20.7**	**+0.1**
	comp=Z,92nm,1.3s,mb6.0						
YBH				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
TNA	**Tin City**	**90.16**	**9**	*e*P	**P**	**17 06 19.3**	**-0.8**
	comp=Z,28nm,1.3s,mb5.4						
FIB	**Fire Island**	**90.20**	**18**	PFAKE		17 06 30.0	+10
FIB				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
SONM	**Songino Array**	**90.30**	**323**	P	**P**	**17 06 22.1**	**+0.9**
	comp=Z,27nm,0.8s,mb5.6,baz=143,slow=0.7,SNR=108						
SONM				PP	PP	17 09 55.0	-2.7
	comp=Z,5.8nm,1.2s,baz=135,slow=5.2,SNR=3.7						
SONM				PKKPbc		17 23 51.2	
	comp=Z,2.8nm,1.0s,baz=270,slow=1.2,SNR=4.6						
SONM				PKPPKP		17 31 59.3	
	comp=Z,2.1nm,1.1s,baz=270,slow=1.4,SNR=8.0						
HUMO	**Hull Mountain**	**90.44**	**43**	*e*P	**P**	**17 06 22.6**	**+0.7**
	comp=Z,67nm,1.0s,mb5.9						
HUMO				LR	LR		
	comp=Z,4µm,21.0s,MS5.8						
PFO	**Pinyon Flat Ob**	**90.48**	**53**	*e*P	**P**	**17 06 22.5**	**+0.1**
PFO				pmax	pmax		
	comp=Z,81nm,1.3s,mb5.9						
PFO				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
PFO	**Pinyon Flat Ob**	**90.48**	**53**	*e*P	**P**	**17 06 22.5**	**+0.1**
	comp=Z,81nm,1.3s,mb5.9						
PFO				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
OMM	**Old Mammoth Mi**	**90.56**	**49**	*e*P	**P**	**17 06 23.6**	**+0.9**
YAK	**Yakutsk**	**90.57**	**343**	*d* *i*P	**P**	**17 06 22.2**	**+0.1**
YAK				*e**PP	pP	17 06 33.5	+2.1
YAK				*e*S		17 16 49.4	
YAK				*e*SSS	SS	17 23 20.3	+2.0
YAK				pmax	pmax		
	comp=N,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.8						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK	**Yakutsk**	**90.57**	**343**	*e*P	**P**	**17 06 21.1**	**-1.0**
	comp=E,334nm,1.4s,mb6.5						
YAK				LR	LR		
	comp=Z,4µm,22.0s,MS5.8						
LTIM	**Timbered Crate**	**90.64**	**45**	P	**P**	**17 06 23.9**	**+0.9**
BBOR	**Butler Butte**	**90.76**	**43**	P	**P**	**17 06 24.0**	**+0.6**
CAL	**Calcutta**	**90.78**	**294**	*e*P	**P**	**17 06 23.2**	**-0.8**
CAL				*e*S		17 16 51.2	
WCN	**Washoe City**	**90.85**	**47**	*e*P	**P**	**17 06 24.2**	**+0.2**
WCN				pmax	pmax		
	comp=Z,103nm,1.2s,mb6.0						
WCN	**Washoe City**	**90.85**	**47**	*e*P	**P**	**17 06 24.2**	**+0.2**
	comp=Z,103nm,1.2s,mb6.0						
DAC	**Darwin (Calif)**	**90.90**	**51**	*e*P	**P**	**17 06 24.6**	**+0.4**
DAC				pmax	pmax		
	comp=Z,84nm,1.3s,mb5.9						
DAC				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
DAC	**Darwin (Calif)**	**90.90**	**51**	*e*P	**P**	**17 06 24.6**	**+0.3**
	comp=Z,84nm,1.3s,mb5.9						
DAC				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
BILL	**Bilibino**	**90.94**	**359**	⇓*i*P	**P**	**17 06 23.9**	**+0.2**
BILL				*e*		17 10 04.0	
BILL				*i* S	S	17 17 19.0	+2.7
BILL				*i* PPS	tx	17 18 35.6	
BILL				*i* SS	SS	17 23 24.4	+1.0
BILL				pmax	pmax		
	comp=Z,137nm,1.4s,mb6.1						
BILL	**Bilibino**	**90.94**	**359**	*e*P	**P**	**17 06 22.9**	**-0.8**
	comp=Z,145nm,1.3s,mb6.2						

BILL				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
COR	**Corvallis**	**91.26**	**41**	*e*P	**P**	**17 06 25.9**	**+0.2**
COR				pmax	pmax		
	comp=Z,132nm,1.3s,mb6.1						
COR				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.4						
COR	**Corvallis**	**91.26**	**41**	*e*P	**P**	**17 06 25.9**	**+0.2**
	comp=Z,132nm,1.3s,mb6.1						
COR				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
PAHR	**Pah Rah Range**	**91.30**	**47**	*e*P	**P**	**17 06 24.9**	**-1.1**
	comp=Z,106nm,1.4s,mb6.0						
NVAR	**Mina Array Bea**	**91.42**	**49**	P	**P**	**17 06 27.2**	**+0.6**
	comp=Z,47nm,0.8s,mb5.9,baz=232,slow=9.1,SNR=92						
NVAR				PP	PP	17 10 03.6	-3.4
	comp=Z,1.4nm,0.8s,baz=216,slow=5.7,SNR=4.0						
NVAR				PKPPKP		17 31 57.5	
	comp=Z,0.8nm,0.8s,baz=97,slow=2.2,SNR=6.2						
NVAR				LR	LR	17 42 28.0	
	comp=Z,3µm,18.2s,MS5.8,baz=265,slow=32						
PALK	**Pallekele**	**91.43**	**277**	*e*P	**P**	**17 06 27.4**	**+0.2**
	comp=Z,238nm,1.6s,mb6.3						
PALK				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
HBO	**Huckleberry Mo**	**91.48**	**42**	P	**P**	**17 06 28.0**	**+1.2**
LSA	**Lhasa**	**91.53**	**302**	P	**P**	**17 06 25.4**	**-1.9**
LSA				AP	pP	17 06 33.3	-3.3
LSA				XP	sP	17 06 37.2	-2.3
LSA				PP	PP	17 10 00.8	-7.2
LSA				XS		17 17 39.0	
LSA				SS	SS	17 23 27.5	-5.0
LSA				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.5						
LSA				AMB	AMB		
	comp=Z,1µm,11.1s						
LSA				LR	LR		
	comp=E,2µm,48.0s						
LSA				LR	LR		
	comp=Z,3µm,42.5s						
LSA	**Lhasa**	**91.53**	**302**	*e*P	**P**	**17 06 28.2**	**+0.9**
LSA				pmax	pmax		
	comp=Z,164nm,1.5s,mb6.1						
LSA	**Lhasa**	**91.53**	**302**	*e*P	**P**	**17 06 28.2**	**+0.9**
	comp=Z,164nm,1.5s,mb6.1						
MNV	**Mina**	**91.53**	**49**	*e*P	**P**	**17 06 27.5**	**+0.4**
MNV				pmax	pmax		
	comp=Z,133nm,1.2s,mb6.1						
MNV				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.8						
MNV	**Mina**	**91.53**	**49**	*e*P	**P**	**17 06 27.5**	**+0.4**
	comp=Z,134nm,1.2s,mb6.2						
MNV				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
MOD	**Modoc**	**91.78**	**45**	*e*P	**P**	**17 06 28.5**	**+0.3**
	comp=Z,98nm,1.3s,mb6.0						
MOD				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
COYC	**Coyhaique**	**91.87**	**142**	*e*P	**P**	**17 06 26.0**	**-2.5**
TPH	**Tonopah**	**92.00**	**49**	*e*P	**P**	**17 06 30.0**	**+0.7**
TPH				*e*		17 10 08.7	
TPH				pmax	pmax		
	comp=Z,157nm,1.2s,mb6.2						
TPH				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.9						
TPH	**Tonopah**	**92.00**	**49**	*e*P	**P**	**17 06 30.0**	**+0.7**
	comp=Z,157nm,1.2s,mb6.2						
TPH				*e*PP	PP	17 10 08.7	-2.9
TPH				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
BWNR	**Bhubaneshwar**	**92.01**	**291**	*e*P	**P**	**17 06 27.8**	**-1.9**
BWNR				AMb	AMB	17 06 33.3	
	comp=Z,135nm,1.5s,mb6.1						
LDFC	**Landfair**	**92.14**	**53**	*e*P	**P**	**17 06 31.5**	**+1.5**
OOW	**Octopus West**	**92.41**	**38**	P	**P**	**17 06 32.7**	**+1.8**
OCWA	**Octopus Mounta**	**92.42**	**38**	*e*P	**P**	**17 06 30.9**	**-0.1**
	comp=Z,414nm,1.7s,mb6.5						
OCWA				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
SIT	**Sitka**	**92.44**	**27**	PFAKE		17 06 40.0	+9.2
SIT				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
MCK	**McKinley**	**92.59**	**17**	*e*P	**P**	**17 06 29.5**	**-1.8**
MCK				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.6						
MCK				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.6						
MCK	**McKinley**	**92.59**	**17**	*e*P	**P**	**17 06 29.5**	**-1.9**
	comp=Z,30nm,1.3s,mb5.6						
MCK				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
NEN	**Nelson**	**92.59**	**52**	*e*P	**P**	**17 06 32.4**	**+0.3**
NEN				*e*PP	PP	17 10 10.5	-5.8
BBB	**Bella Bella**	**92.77**	**33**	LR	LR	17 44 31.6	
	comp=Z,3µm,18.1s,MS5.8,baz=239,slow=33						
BOD	**Bodaibo**	**92.81**	**334**	*e*P	**P**	**17 06 31.3**	**-1.2**
BOD				pmax	pmax		
	comp=Z,158nm,3.0s						
BMN	**Battle Mountai**	**93.11**	**47**	*e*P	**P**	**17 06 34.2**	**-0.1**
BMN				pmax	pmax		
	comp=Z,79nm,1.4s,mb6.0						
BMN				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
BMN	**Battle Mountai**	**93.11**	**47**	*e*P	**P**	**17 06 34.2**	**-0.1**
	comp=Z,79nm,1.4s,mb6.0						
BMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
WVOR	**Wild Horse Val**	**93.12**	**45**	*e*P	**P**	**17 06 34.7**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,106nm,1.4s,mb6.1						
WVOR				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.9						
WVOR	**Wild Horse Val**	**93.12**	**45**	*e*P	**P**	**17 06 34.7**	**+0.5**
	comp=Z,106nm,1.4s,mb6.1						
WVOR				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
VIS	**Vishakhapatnam**	**93.14**	**288**	*e*P	**P**	**17 06 35.6**	**+0.6**
DGAR	**Diego Garcia**	**93.26**	**261**	PFAKE		17 06 50.0	+14
DGAR				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
TRCR	**Troy Canyon**	**93.28**	**50**	*e*P	**P**	**17 06 35.5**	**+0.4**
TRCR				*e*PP	PP	17 10 19.3	-2.5
IMA	**Indian Mountai**	**93.31**	**14**	*e*P	**P**	**17 06 34.7**	**+0.1**
IMA				pmax	pmax		
	comp=Z,573nm,1.7s,mb6.7						
IMA	**Indian Mountai**	**93.31**	**14**	*e*P	**P**	**17 06 34.6**	**+0.1**
	comp=Z,573nm,1.7s,mb6.7						
PGC	**Sidney**	**93.31**	**38**	*e*P	**P**	**17 06 35.7**	**+0.7**
	comp=Z,187nm,1.6s,mb6.3						
ZAK	**Zakamensk**	**93.42**	**324**	*e*P	**P**	**17 06 35.6**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.7						
MENT	**Mentasta**	**93.50**	**20**	*e*P	**P**	**17 06 34.1**	**-1.5**
COLA	**College**	**93.78**	**17**	⇓*i*P	**P**	**17 06 34.2**	**-2.6**
COLA	**College**	**93.78**	**17**	*e*P	**P**	**17 06 35.4**	**-1.4**
IRK	**Irkutsk**	**93.92**	**326**	*e*P	**P**	**17 06 37.5**	**-0.2**
IRK				pmax	pmax		
	comp=Z,105nm,1.9s,mb5.9						
TLY	**Talaya**	**93.94**	**325**	P	**P**	**17 06 38.2**	**+0.4**
	comp=Z,283nm,1.7s,mb6.4,SNR=20						
TLY	**Talaya**	**93.94**	**325**	*d i*P	**P**	**17 06 38.2**	**+0.4**
TLY				*e*S		17 17 09.1	
TLY				*e*		17 17 51.1	
TLY				*e*		17 19 08.0	
TLY				*e*SS	SS	17 24 21.3	+15
TLY				*e*SSS	SSS	17 27 52.7	+5.2
TLY				pmax	pmax		
	comp=Z,117nm,1.5s,mb6.1						
TLY	**Talaya**	**93.94**	**325**	*e*P	**P**	**17 06 38.1**	**+0.3**
	comp=Z,192nm,1.6s,mb6.3						
TLY				LR	LR		
	comp=Z,507nm,20.0s,MS5.0						
ILAR	**Eielson Array**	**93.97**	**17**	P	**P**	**17 06 36.1**	**-1.5**
	comp=Z,9.5nm,0.8s,mb5.3,baz=235,slow=2.7,SNR=53						
ILAR				PP	PP	17 10 24.6	-2.0
	comp=Z,3.5nm,1.0s,baz=239,slow=8.3,SNR=4.5						
ILAR				PKKPbc		17 23 41.6	
	comp=Z,2.9nm,0.8s,baz=360,slow=2.6,SNR=14						
ILAR				LR	LR	17 49 04.9	
	comp=Z,2µm,18.3s,MS5.6,baz=241,slow=36						
MDRS	**Chennai**	**94.08**	**282**	*e*P	**P**	**17 06 39.0**	**-0.3**
MDRS				*e*		17 08 07.0	
MDRS				*e*		17 11 32.0	
MDRS				*e*		17 17 17.0	
MDRS				*e*		17 22 13.0	
MDRS				*e*		17 27 53.0	
TUC	**Tucson**	**94.19**	**57**	*e*P	**P**	**17 06 40.7**	**+1.2**
TUC				*e*		17 10 25.6	
TUC				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.7						
TUC				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.8						
TUC	**Tucson**	**94.19**	**57**	*e*P	**P**	**17 06 40.7**	**+1.2**
	comp=Z,32nm,1.1s,mb5.7						
TUC				*e*PP	PP	17 10 25.6	-3.4
TUC				LR	LR		
	comp=Z,4µm,22.0s,MS5.8						
ARUT	**Antelope Range**	**94.55**	**51**	*e*P	**P**	**17 06 42.2**	**+1.2**
JIRN	**Jiri**	**94.64**	**298**	*e*P	**P**	**17 06 42.1**	**+0.4**
	comp=Z,359nm,1.8s,mb6.5						
GUN	**Gumba**	**94.99**	**298**	*e*P	**P**	**17 06 43.2**	**-0.1**
BMO	**Blue Mountains**	**95.11**	**43**	*e*P	**P**	**17 06 42.8**	**-0.6**
BMO				pmax	pmax		
	comp=Z,34nm,1.5s,mb5.6						
BMO				MLR	MLR		
	comp=Z,6µm,22.0s,MS6.0						
BMO	**Blue Mountains**	**95.11**	**43**	*e*P	**P**	**17 06 42.8**	**-0.6**
	comp=Z,34nm,1.5s,mb5.5						
BMO				LR	LR		
	comp=Z,6µm,22.0s,MS6.0						
PKI	**Pulchoki**	**95.24**	**298**	*e*P	**P**	**17 06 44.6**	**+0.2**
	comp=Z,250nm,1.3s,mb6.5						
MOY	**Mondy**	**95.33**	**324**	*e*P	**P**	**17 06 45.1**	**+0.9**
MOY				pmax	pmax		
	comp=Z,146nm,3.6s						
KKN	**Kakani**	**95.43**	**298**	*e*P	**P**	**17 06 45.4**	**+0.1**
	comp=Z,230nm,1.3s,mb6.4						
DMN	**Daman**	**95.50**	**298**	*e*P	**P**	**17 06 46.1**	**+0.5**
	comp=Z,113nm,0.9s,mb6.3						
DLBC	**Dease Lake**	**95.53**	**27**	P	**P**	**17 06 46.8**	**+1.9**
	comp=Z,4.7nm,0.8s,mb4.9,baz=217,slow=4.4,SNR=3.8						
DLBC				LR	LR	17 46 51.0	
	comp=Z,3µm,18.1s,MS5.8,baz=262,slow=34						
PLCA	**Paso Flores**	**95.65**	**139**	*e*P	**P**	**17 06 45.7**	**-0.3**
PLCA				pmax	pmax		
	comp=Z,48nm,1.7s						
PLCA				MLR	MLR		
	comp=Z,1µm,21.0s						
PLCA	**Paso Flores**	**95.65**	**139**	P	**P**	**17 06 46.2**	**+0.2**
	comp=Z,20nm,1.4s,mb5.3,baz=201,slow=7.1,SNR=6.9						
PLCA	**Paso Flores**	**95.65**	**139**	*e*P	**P**	**17 06 45.7**	**-0.3**
	comp=Z,48nm,1.7s,mb5.7						
PLCA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
DAWY	**Dawson**	**95.67**	**20**	*e*P	**P**	**17 06 44.3**	**-1.2**
MVU	**Marysvale**	**95.73**	**51**	*e*P	**P**	**17 06 47.5**	**+1.1**
	comp=Z,13nm,1.0s,mb5.3						
MVU				*e*PP	PP	17 10 37.2	-3.1
MVU				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
MSU	**Marysvale**	**95.75**	**51**	*e*P	**P**	**17 06 47.1**	**+0.6**
MSU				*e*		17 10 37.4	
GKN	**Gorkha**	**96.04**	**298**	*e*P	**P**	**17 06 47.7**	**-0.4**
	comp=Z,240nm,1.6s,mb6.4						
BGU	**Big Grassy Mou**	**96.18**	**48**	*e*P	**P**	**17 06 48.6**	**+0.2**
BGU				*e*PP	PP	17 10 37.3	-6.7
HLID	**Hailey**	**96.39**	**45**	*e*P	**P**	**17 06 50.0**	**+0.7**
	comp=Z,11nm,1.0s,mb5.2						
HLID				*e*PP	PP	17 10 37.5	-8.1
HLID				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
NLU	**North Lily Min**	**96.43**	**49**	*e*P	**P**	**17 06 49.7**	**+0.1**
NLU				*e*PP	PP	17 10 44.0	-2.0
HVU	**Hansel Valley**	**96.72**	**47**	*e*P	**P**	**17 06 50.9**	**+0.1**
HVU				*e*PP	PP	17 10 39.3	-8.9
SPUT	**South Promonto**	**96.74**	**48**	*e*P	**P**	**17 06 51.2**	**+0.3**
SPUT				*e*PP	PP	17 10 45.2	-3.2
TMUT	**Trail Mountain**	**96.77**	**50**	*e*P	**P**	**17 06 52.1**	**+1.1**
NEW	**Newport**	**96.79**	**40**	*e*P	**P**	**17 06 53.2**	**+2.2**
NEW				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NEW				MLR	MLR		
	comp=Z,3µm,20.0s						
NEW	**Newport**	**96.79**	**40**	P	**P**	**17 06 50.6**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=232,slow=12,SNR=2.1						
NEW				LR	LR	17 40 56.8	
	comp=Z,3µm,20.8s,MS5.7,baz=243,slow=30						
NEW	**Newport**	**96.79**	**40**	*e*P	**P**	**17 06 53.2**	**+2.2**
	comp=Z,10nm,1.1s,mb5.2						
NEW				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
KOLN	**Koldanda**	**96.80**	**297**	*e*P	**P**	**17 06 51.4**	**-0.1**
	comp=Z,165nm,1.4s,mb6.3						
JLU	**Jordanelle**	**97.13**	**49**	P	**P**	**17 06 52.1**	**-0.6**
SRU	**San Rafael**	**97.18**	**51**	*e*P	**P**	**17 06 53.5**	**+0.6**
DAU	**Daniels Canyon**	**97.19**	**49**	*e*P	**P**	**17 06 54.0**	**+1.0**
DAU				*e*		17 10 45.5	
HYB	**Hyderabad**	**97.23**	**286**	⇓*e*P	**P**	**17 06 53.5**	**-0.1**
HYB				pmax	pmax		
	comp=Z,114nm,1.2s,mb6.2						
HYB	**Hyderabad**	**97.23**	**286**	⇓*e*P	**P**	**17 06 53.5**	**-0.1**
	comp=Z,114nm,1.2s,mb6.2						
HYB	**Hyderabad**	**97.23**	**286**	⇓*i*P	**P**	**17 06 53.5**	**-0.1**
	comp=Z,114nm,1.2s,mb6.2						
HYB				*e*PP	PP	17 10 52.0	-0.8
HYB				*e*SKS	SKS	17 17 32.0	-3.8
HYB				*e*SS	SS	17 25 02.0	+8.4
TCUT	**Toone Canyon**	**97.37**	**48**	*e*P	**P**	**17 06 54.0**	**+0.3**
HWUT	**Hardware Ranch**	**97.47**	**48**	*e*P	**P**	**17 06 54.2**	**+0.1**
	comp=Z,10nm,1.1s,mb5.2						
HWUT				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
LAZ	**Ladron**	**97.82**	**56**	*e*P	**P**	**17 06 56.1**	**+0.1**
LAZ				*e*PP	PP	17 10 52.5	-4.7
MCMT	**McKenzie Canyo**	**97.94**	**45**	*e*P	**P**	**17 06 56.5**	**+0.2**
PV10	**Paradox Valley**	**97.95**	**52**	*e*P	**P**	**17 06 55.4**	**-1.1**
PV10				*e*PP	PP	17 10 55.3	-2.8
MSO	**Missoula**	**98.09**	**42**	PFAKE		17 07 10.0	+13
MSO				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
MNTX	**Cornudas Mount**	**98.17**	**59**	*e*P	**P**	**17 06 57.7**	**+0.2**
	comp=Z,16nm,1.2s,mb5.4						
MNTX				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
LPM	**Los Pinos Moun**	**98.18**	**56**	*e*P	**P**	**17 06 56.5**	**-1.1**
PV01	**Paradox Valley**	**98.20**	**52**	*e*P	**P**	**17 06 58.0**	**+0.4**
AHID	**Auburn Hatcher**	**98.25**	**47**	*e*Pdif	**P**	**17 07 01.6**	**+3.9**
	comp=Z,16nm,1.1s,mb5.5						
AHID				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
RRI2	**Red Ridge**	**98.34**	**46**	*e*P	**P**	**17 06 58.8**	**+0.7**
RRI2				*e*PP	PP	17 10 47.4	-13
TIXI	**Tiksi**	**98.54**	**348**	⇑*i*P	**P**	**17 06 57.6**	**-0.7**
TIXI				*e*		17 17 27.0	
TIXI				*e*S	S	17 18 19.9	-1.5
TIXI				*e*PS	PS	17 19 55.4	+0.4
TIXI				*e*SS	SS	17 25 15.0	+4.3
TIXI				*e*SSS	SSS	17 28 55.1	-3.7
TIXI				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.5						
TIXI	**Tiksi**	**98.54**	**348**	⇓*i*P	**P**	**17 06 56.8**	**-1.5**
TIXI				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
ANMO	**Albuquerque**	**98.55**	**56**	*e*P	**P**	**17 06 59.8**	**+0.6**
ANMO				*e*		17 10 58.7	
ANMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ANMO				MLR	MLR		
	comp=Z,3µm,21.0s						
ANMO	**Albuquerque**	**98.55**	**56**	P	**P**	**17 06 59.6**	**+0.4**
	comp=Z,7.6nm,1.0s,mb5.2,baz=223,slow=4.2,SNR=9.6						
ANMO				PP	PP	17 10 59.9	-2.6
	comp=Z,6.8nm,1.2s,baz=281,slow=9.0,SNR=5.8						
ANMO				LR	LR	17 48 23.2	
	comp=Z,3µm,18.2s,MS5.8,slow=34						
ANMO	**Albuquerque**	**98.55**	**56**	*e*P	**P**	**17 06 59.8**	**+0.6**
	comp=Z,7.6nm,0.9s,mb5.2						
ANMO				*e*PP	PP	17 10 58.7	-3.8
ANMO				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
CHMT	**Chamberlain Mo**	**98.56**	**43**	*e*P	**P**	**17 06 58.3**	**-0.7**
CHMT				*e*PP	PP	17 10 60.0	-2.3
TPAW	**Teton Pass**	**98.64**	**46**	*e*Pdif	**P**	**17 07 00.2**	**+0.8**
TPAW				*e*PP	PP	17 11 00.8	-2.2
LTX	**Lajitas**	**98.67**	**62**	*e*P	**P**	**17 06 59.0**	**-0.9**
LTX				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.8						
LTX				MLR	MLR		
	comp=Z,5µm,19.0s,MS6.0						
LTX	**Lajitas**	**98.67**	**62**	*e*Pdif	**P**	**17 06 59.0**	**-0.8**
	comp=Z,50nm,1.7s,mb5.8						
LTX				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
TXAR	**Lajitas Array**	**98.67**	**62**	P	**P**	**17 07 00.6**	**+0.7**
	comp=Z,3.4nm,0.9s,mb4.9,baz=236,slow=4.5,SNR=16						
TXAR				PP	PP	17 11 00.3	-3.1
	comp=Z,0.4nm,0.3s,baz=207,slow=5.6,SNR=3.9						
TXAR				PKKPbc		17 23 30.1	
	comp=Z,1.6nm,0.7s,baz=90,slow=4.5,SNR=9.3						
TXAR				LR	LR	17 45 02.7	
	comp=Z,4µm,18.1s,MS6.0,baz=120,slow=32						
IMW	**Indian Meadow**	**98.81**	**46**	*e*P	**P**	**17 07 00.7**	**+0.6**
MOOW	**Moose Ponds**	**98.89**	**46**	*e*Pdif	**P**	**17 06 59.8**	**-0.7**
BOZ	**Bozeman (W)**	**99.06**	**44**	*e*P	**P**	**17 07 00.9**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.2						
BOZ				MLR	MLR		
	comp=Z,6µm,22.0s,MS6.1						
BOZ	**Bozeman (W)**	**99.06**	**44**	*e*Pdif	**P**	**17 07 00.9**	**-0.3**
	comp=Z,7.1nm,1.0s,mb5.2						
BOZ				LR	LR		
	comp=Z,6µm,22.0s,MS6.1						
YMR	**Madison River**	**99.11**	**45**	*e*Pdif	**P**	**17 06 59.3**	**-2.2**
GDL2	**Guadalupe Moun**	**99.16**	**59**	*e*Pdif	**P**	**17 07 02.6**	**+0.5**
GDL2				*e*PP	PP	17 11 03.0	-4.0
BW06	**Boulder Array**	**99.30**	**48**	PFAKE		17 07 10.0	+7.6
BW06				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
PDAR	**Pinedale Array**	**99.30**	**48**	P	**P**	**17 07 01.6**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=198,slow=4.7,SNR=8.4						
PDAR				PP	PP	17 11 03.7	-4.1
	comp=Z,6.2nm,1.2s,baz=252,slow=4.7,SNR=8.7						
PDAR				PKKPbc		17 23 27.3	
	comp=Z,2.1nm,1.1s,baz=90,slow=1.5,SNR=5.6						
PDAR				LR	LR	17 46 00.6	
	comp=Z,2µm,19.7s,MS5.5,baz=252,slow=32						
PDAR	**Pinedale Array**	**99.30**	**48**	P	**P**	**17 07 01.6**	**-0.8**
PDAR				PP	PP	17 11 03.7	-4.1
PDAR				PKKPbc		17 23 27.3	
PDAR				LR	LR	17 46 00.6	
PAYG	**Puerto Ayora**	**99.42**	**95**	PFAKE		17 07 10.0	+6.3
PAYG				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
LKWY	**Lake**	**99.44**	**46**	*e*P	**P**	**17 07 04.9**	**+1.9**
LKWY				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.5						
LKWY				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.8						
LKWY	**Lake**	**99.44**	**46**	*e*Pdif	**P**	**17 07 04.9**	**+1.9**
	comp=Z,18nm,1.1s,mb5.5						
LKWY				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
CPRX	**Cap Rock**	**99.85**	**58**	*e*Pdif	**P**	**17 07 05.0**	**-0.2**
CPRX				*e*PP	PP	17 11 07.4	-5.1
WMQ	**Urumqi**	**99.85**	**313**	P	**P**	**17 07 05.3**	**+0.4**
WMQ				PP	PP	17 11 13.0	+0.8
WMQ				SKS	SKS	17 17 39.0	-9.5
WMQ				S	S	17 18 32.0	-1.1
WMQ				SS	SS	17 25 31.0	+1.3
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.6						
WMQ				LR	LR		
	comp=N,3µm,25.0s,MS5.9						
WMQ				LR	LR		
	comp=E,4µm,24.0s,MS5.9						
WMQ				LR	LR		
	comp=Z,4µm,25.0s,MS5.8						
INK	**Inuvik**	**100.26**	**19**	*e*P	P	17 07 05.4	-0.8
INK				pmax	pmax		
	comp=Z,29nm,1.3s						
INK	**Inuvik**	**100.26**	**19**	P	P	17 07 05.4	-0.8
	comp=Z,9.2nm,1.2s,baz=237,slow=3.3,SNR=8.1						
INK				PP	PP	17 11 07.8	-7.1
	comp=Z,10.0nm,1.1s,baz=243,slow=5.1,SNR=4.4						
INK	**Inuvik**	**100.26**	**19**	*e*Pdif	P	17 07 05.4	-0.8
	comp=Z,29nm,1.3s						
SDCO	**Great Sand Dun**	**100.30**	**53**	*e*Pdif	P	17 07 06.2	-0.9
	comp=Z,5.5nm,1.0s						
SDCO				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
BHPL	**Bhopal**	**100.33**	**291**	*e*P	P	17 07 04.9	-2.7
BHPL				AMb	AMB	17 07 09.5	
	comp=Z,23nm,1.2s						
ISCO	**Idaho Springs**	**100.95**	**51**	PFAKE		17 07 20.0	+10
ISCO				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
POO	**Poona**	**101.81**	**285**	*i* P	P	17 07 14.8	+0.5
POO				AMb	AMB	17 07 17.8	
	comp=Z,36nm,1.0s						
JCT	**Junction City**	**102.21**	**62**	PFAKE		17 07 30.0	+14
JCT				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
DDI	**Dehra Dun**	**102.24**	**298**	*e*P	Pdif	17 07 15.3	-0.6
SONA	**Sohna**	**102.34**	**296**	*e*P	Pdif	17 07 14.8	-1.7
NDI	**New Delhi**	**102.38**	**296**	*e*P	Pdif	17 07 15.5	-1.1
NDI				*e*		17 10 30.0	
NDI				*e*		17 11 20.0	
NDI				*e*		17 17 40.0	
AYAN	**Aya Nagar**	**102.39**	**296**	*e*P	Pdif	17 07 15.6	-1.0
AYAN				AMb	AMB	17 07 19.9	
	comp=Z,18nm,1.1s						
TRQA	**Tornquist**	**102.46**	**141**	PFAKE		17 07 30.0	+13
TRQA				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
KUDL	**Kundal**	**102.80**	**295**	*e*P	Pdif	17 07 14.7	-3.8
KUDL				AMb	AMB	17 07 21.8	
	comp=Z,20nm,1.2s						
LAO	**LASA Array**	**102.94**	**45**	PFAKE		17 07 30.0	+11
LAO				LR	LR		
	comp=Z,5µm,22.0s,MS6.0						
KHET	**Khetri**	**103.35**	**295**	*e*P	Pdif	17 07 20.4	-0.5
KHET				AMb	AMB	17 07 23.8	
	comp=Z,16nm,0.9s						
RSSD	**Black Hills**	**103.54**	**48**	PFAKE		17 07 30.0	+8.7
RSSD				LR	LR		
	comp=Z,1.0nm,20.0s						
YKA	**Yellowknife Ar**	**104.15**	**28**	Pdiff	Pdif	17 07 22.9	-0.6
	comp=Z,0.5nm,0.7s,baz=249,slow=4.4,SNR=11						
YKA				PKiKP		17 11 41.1	
	comp=Z,1.3nm,0.8s,baz=250,slow=1.6,SNR=8.3						
YKA				PKKPbc		17 23 11.5	
	comp=Z,1.2nm,1.0s,baz=65,slow=3.1,SNR=7.0						
WMOK	**Wichita Mounta**	**104.40**	**58**	PFAKE		17 07 40.0	+15
WMOK				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
DGMT	**Dagmar**	**104.82**	**43**	PFAKE		17 07 40.0	+13
DGMT				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
CBKS	**Cedar Bluff**	**104.93**	**54**	PFAKE		17 07 40.0	+12
CBKS				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
ZAL	**Zalesovo**	**105.19**	**322**	Pdiff	Pdif	17 07 29.2	+0.9
	comp=Z,1.3nm,0.6s,baz=46,slow=3.2,SNR=8.5						
ZAL				PP	PP	17 11 49.9	-2.6
	comp=Z,1.6nm,0.8s,baz=6.2,slow=7.9,SNR=4.0						
HKT	**Hockley**	**105.29**	**64**	*e*PKPdf		17 11 44.6	
HKT				LR	LR		
	comp=Z,685nm,20.0s,MS5.2						
NVS	**Novosibirsk**	**106.34**	**323**	*e*P	Pdif	17 07 31.2	-2.1
NNA	**Nana**	**106.58**	**111**	PFAKE		17 12 00.0	
NNA				LR	LR		
	comp=Z,526nm,19.0s,MS5.1						
NATX	**Nacogdoches**	**106.79**	**62**	PFAKE		17 12 00.0	
NATX				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
LVC	**Limon Verde**	**107.46**	**125**	PFAKE		17 12 00.0	
LVC				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
KURK	**Kurchatov**	**107.91**	**318**	PFAKE		17 12 00.0	
KURK				LR	LR		
	comp=Z,425nm,21.0s,MS5.0						
JTS	**JuntasAbangare**	**108.48**	**86**	Pdiff	Pdif	17 07 45.0	+1.3
	comp=Z,9.0nm,0.5s,baz=251,slow=18,SNR=7.5						
JTS	**JuntasAbangare**	**108.48**	**86**	Pdif	Pdif	17 07 45.0	+1.3
JTS				LR	LR		
	comp=Z,101nm,22.0s						
AAK	**Ala-Archa**	**108.62**	**309**	PFAKE		17 12 00.0	
AAK				LR	LR		
	comp=Z,574nm,21.0s,MS5.1						
TEIG	**Tepich**	**108.79**	**76**	PFAKE		17 12 00.0	
TEIG				LR	LR		
	comp=Z,600nm,20.0s,MS5.2						
ULM	**Lac du Bonnet**	**110.53**	**43**	Pdiff	Pdif	17 07 57.4	+5.5
	comp=Z,0.8nm,0.3s,baz=273,slow=3.8,SNR=3.1						
ULM				PKiKP		17 11 51.4	
	comp=Z,2.4nm,0.6s,baz=238,slow=2.9,SNR=6.0						
ULM	**Lac du Bonnet**	**110.53**	**43**	Pdif	Pdif	17 07 57.4	+5.5

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ULM                                PKPdf    PKPdf    17 11 51.4 -4.8
ULM                                LR       LR
       comp=Z,3µm,20.0s,MS5.9
OTAV   Otavalo         110.60  99  PFAKE             17 12 10.0 +13
OTAV                               LR       LR
       comp=Z,900nm,19.0s,MS5.4
CCM    Cathedral Cave  111.15  57  PFAKE             17 12 10.0 +12
CCM                                LR       LR
       comp=Z,623nm,19.0s,MS5.2
LPAZ   La Paz          111.62 120  PKIKP    PKPdf    17 11 56.0 -3.0
LPAZ                                                 17 12 36.8
LPAZ                               MLR      MLR
       comp=Z,551nm,19.0s
LPAZ   La Paz          111.62 120  PKiKP             17 11 56.0
       comp=Z,1.7nm,0.8s,baz=306,slow=2.3,SNR=4.0
LPAZ                               PP       PP       17 12 36.8 -3.5
       comp=Z,3.0nm,1.1s,baz=211,slow=8.4,SNR=4.7
OXF    Oxford          111.77  61  PFAKE             17 12 10.0 +11
OXF                                LR       LR
       comp=Z,3µm,20.0s,MS5.9
JFWS   Jewell Farm     112.91  52  PFAKE             17 12 10.0 +9.0
JFWS                               LR       LR
       comp=Z,2µm,20.0s,MS5.7
EYMN   Ely             112.94  46  PFAKE             17 12 10.0 +9.1
EYMN                               LR       LR
       comp=Z,5µm,20.0s,MS6.1
FCC    Fort Churchill  112.95  34 ePKPdf    PKPdf    17 11 55.1 -5.6
FCC                               ePP       PP       17 12 32.7  -17
CHKZ   Chkalovo        113.31 320 ePKPdf    PKPdf    17 11 56.1 -5.4
CHKZ                              ePP       PP       17 12 41.1  -11
BVAR   Borovoye Array  113.36 319  Pdiff    Pdif     17 08 07.8 +3.5
       comp=Z,0.7nm,0.6s,baz=90,slow=4.4,SNR=4.6
BVAR                               PKiKP             17 11 57.7
       comp=Z,2.5nm,0.7s,baz=90,slow=3.0,SNR=11
BVAR                               PKKPbc            17 22 42.2
       comp=Z,2.3nm,0.6s,baz=288,slow=4.6,SNR=8.0
LRAL   Lakeview Retre  113.38  63  PFAKE             17 12 10.0 +7.8
LRAL                               LR       LR
       comp=Z,2µm,19.0s,MS5.8
WVT    Waverly         113.39  59  PFAKE             17 12 10.0 +7.9
WVT                                LR       LR
       comp=Z,2µm,20.0s,MS5.8
RES    Resolute Bay    113.71  17 ePKIKP    PKPdf    17 11 57.0 -4.9
WCI    Wyandotte Cave  115.01  57  PFAKE             17 12 10.0 +4.8
WCI                                LR       LR
       comp=Z,620nm,19.0s,MS5.2
GOGA   Godfrey         116.35  63  PFAKE             17 12 20.0  +12
GOGA                               LR       LR
       comp=Z,3µm,21.0s,MS5.9
DWPF   Disney          116.95  69  PFAKE             17 12 20.0  +11
DWPF                               LR       LR
       comp=Z,358nm,19.0s,MS5.0
SUR    Sutherland      117.05 210  PKP      PKPdf    17 12 06.2 -3.1
       comp=Z,20nm,1.2s,baz=242,slow=1.2,SNR=3.4
SUR    Sutherland      117.05 210  PKP      PKPdf    17 12 06.2 -3.1
SUR                                LR       LR
       comp=Z,826nm,20.0s,MS5.3
AAM    Ann Arbor       117.62  53  PFAKE             17 12 20.0  +10
AAM                                LR       LR
       comp=Z,2µm,21.0s,MS5.7
ACSO   Alum Creek Sta  117.86  56  PFAKE             17 12 20.0 +9.3
ACSO                               LR       LR
       comp=Z,4µm,21.0s,MS6.0
BOSA   Boshof          117.89 216  PFAKE             17 12 20.0 +9.0
BOSA                               LR       LR
       comp=Z,3µm,21.0s,MS5.9
NHSC   New Hope        119.00  64  PFAKE             17 12 20.0 +6.9
NHSC                               LR       LR
       comp=Z,2µm,20.0s,MS5.8
SVE    Sverdlovsk      119.18 323 i PKIKP   PKPdf    17 12 08.0 -4.8
SVE                               e                  17 24 46.0
SVE                                pmax     pmax
       comp=Z,80nm,1.5s
BLA    Blacksburg      119.44  59 ePKIKP    PKPdf    17 12 08.3 -5.5
BLA                                MLR      MLR
       comp=Z,3µm,19.0s,MS5.9
SAML   Samuel          119.66 116  PFAKE             17 12 20.0 +5.2
SAML                               LR       LR
       comp=Z,1µm,20.0s,MS5.6
TRIS   Tristan da Cun  120.09 179  PFAKE             17 12 20.0 +4.9
TRIS                               LR       LR
       comp=Z,3µm,19.0s,MS6.0
MCWV   Mont Chateau    120.19  57  PFAKE             17 12 20.0 +4.8
MCWV                               LR       LR
       comp=Z,3µm,21.0s,MS5.9
ERPA   Erie            120.32  54  PFAKE             17 12 20.0 +4.6
ERPA                               LR       LR
       comp=Z,2µm,19.0s,MS5.8
LBTB   Lobatse         120.50 219 ePKIKP    PKPdf    17 12 12.4 -3.8
LBTB                               MLR      MLR
       comp=Z,3µm,20.0s,MS5.9
SOKR   Solikamsk       121.00 327⇑iPKIKP    PKPdf    17 12 10.5 -5.8
SOKR                              e                  17 12 20.9
SOKR                               pmax     pmax
       comp=Z,60nm,1.2s
SOKR                               MLR      MLR
       comp=Z,2µm,19.0s,MS5.8
SADO   Sadowa          121.10  51  PKP      PKPdf    17 12 12.4 -4.5
       comp=Z,6.4nm,0.7s,baz=236,slow=2.3,SNR=4.1
SDV    Santo Domingo   121.15  94  PKP      PKPdf    17 12 13.3 -4.4
       comp=Z,11nm,0.9s,baz=292,slow=4.6,SNR=9.6
SDV    Santo Domingo   121.15  94 ePKPdf    PKPdf    17 12 13.0 -4.7
SDV                                LR       LR
       comp=Z,967nm,20.0s,MS5.4
SSPA   Standing Stone  121.77  56  PFAKE             17 12 30.0  +12
SSPA                               LR       LR
       comp=Z,658nm,20.0s,MS5.3
CBN    Corbin          121.96  58  PFAKE             17 12 30.0  +11
CBN                                LR       LR
       comp=Z,3µm,20.0s,MS6.0
FRB    Frobisher Bay   124.66  27  PKP      PKPdf    17 12 18.4 -4.9
       comp=Z,46nm,1.1s,baz=295,slow=2.5,SNR=7.8
MIV    Mineville/With  125.11  52 ePKPdf    PKPdf    17 12 19.0 -5.6
MDV    Middlebury      125.36  52 ePKPdf    PKPdf    17 12 19.4 -5.7
QUA2   Belchertown     125.99  54 ePKPdf    PKPdf    17 12 21.1 -5.2
LSZ    Lusaka          126.01 229 ePKIKP    PKPdf    17 12 23.0 -4.1
LSZ                                MLR      MLR
       comp=Z,4µm,20.0s,MS6.1
DAG    Danmarks Havn   126.19   2⇑ePKIKP    PKPdf    17 12 20.2 -5.7
DAG                                pmax     pmax
       comp=Z,19nm,1.1s
DAG    Danmarks Havn   126.19   2⇑iP        PKPdf    17 12 20.2 -5.7
       comp=Z,19nm,1.1s
HRV    Harvard--Oak R  126.58  53  PFAKE             17 12 40.0  +13
HRV                                LR       LR
       comp=Z,3µm,19.0s,MS6.0
BDFB   Brasilia        126.99 133  PKP      PKPdf    17 12 24.9 -4.0
       comp=Z,25nm,0.8s,baz=294,slow=0.8,SNR=22
KMBO   Kilima Mbogo    127.39 249 ePKIKP    PKPdf    17 12 26.8 -3.1
KMBO                               MLR      MLR
       comp=Z,3µm,19.0s
KMBO   Kilima Mbogo    127.39 249  PKP      PKPdf    17 12 26.5 -3.3
       comp=Z,26nm,1.1s,baz=43,slow=2.1,SNR=34
APA    Apatity         127.89 340⇓iPKIKP    PKPdf    17 12 25.4 -4.0
APA                                pmax     pmax
       comp=Z,43nm,1.2s
APA                                MLR      MLR
       comp=Z,4µm,22.0s,MS6.0
SCHQ   Schefferville   128.07  38  PKP      PKPdf    17 12 25.5 -4.6
       comp=Z,38nm,1.3s,baz=306,slow=1.8,SNR=14
SCHQ   Schefferville   128.07  38 ePKPdf    PKPdf    17 12 23.7 -6.3
SCHQ                              ePP       PP       17 14 17.9  -15
SCHQ                               LR       LR
       comp=Z,7µm,21.0s,MS6.3
SUMG   Summit          128.21  10 ePKPdf    PKPdf    17 12 25.7 -4.2
SUMG                              ePP       PP       17 14 27.0 -6.1
SJG    San Juan        128.23  85 ePKIKP    PKPdf    17 12 26.1 -5.2
SJG                                MLR      MLR
       comp=Z,863nm,21.0s
SJG    San Juan        128.23  85  PKP      PKPdf    17 12 26.7 -4.6
       comp=Z,75nm,1.0s,baz=279,slow=3.6,SNR=13
MAK    Makhachkala     128.34 307 ePKIKP    PKPdf    17 12 22.0 -8.9
MAK                               i                  17 14 34.0
MAK                                pmax     pmax
       comp=Z,2µm,6.0s
MAK                                MLR      MLR
       comp=Z,2µm,18.0s,MS5.8
MAK                                MLR      MLR
       comp=E,2µm,15.0s
CBYP   Canovanas       128.54  85 ePKPdf    PKPdf    17 12 27.9 -4.0
ARCES  ARCESS Array B  128.81 344  PKP      PKPdf    17 12 26.5 -4.6
       comp=E,6.6nm,0.6s,baz=76,slow=5.0,SNR=22
TSUM   Tsumeb          129.59 216  PKP      PKPdf    17 12 30.6 -3.3
       comp=E,24nm,1.1s,baz=156,slow=2.6,SNR=16
TSUM   Tsumeb          129.59 216 ePKPdf    PKPdf    17 12 30.2 -3.7
TSUM                               LR       LR
       comp=Z,5µm,20.0s,MS6.2
MTA    Mtatsminda      130.42 306  P        PKPdf    17 12 31.2 -3.7
MTA                                S                 17 15 58.5
TI2    Plekhanov       130.45 306⇑iPKIKP    PKPdf    17 12 32.0 -3.0
TI2                                pmax     pmax
       comp=Z,20nm,0.6s
GNI    Garni           130.54 304⇓iPKIKP    PKPdf    17 12 29.6 -5.6
GNI    Garni           130.54 304  PKP      PKPdf    17 12 32.7 -2.4
       comp=Z,9.3nm,0.9s,baz=179,slow=5.9,SNR=13
GNI    Garni           130.54 304 ePKPdf    PKPdf    17 12 31.2 -4.0
GNI                                LR       LR
       comp=Z,1µm,20.0s,MS5.6
BHD    Baghdad         130.81 295 i PKP     PKPdf    17 12 25.0  -11
JOF    Joensuu         131.30 336 epkp               17 12 26.0
ONI    Oni             131.34 307  P        PKPdf    17 12 30.2 -6.4
ONI                                S                 17 16 01.6
GOF    Gofitskoye      131.34 310⇑iPKIKP    PKPdf    17 12 34.0 -2.6
GOF                                pmax     pmax
       comp=Z,50nm,1.4s
GOF                                pmax     pmax
       comp=Z,2µm,4.0s
KIV    Kislovodsk      131.74 309 ePKIKP    PKPdf    17 12 32.3 -5.0
KIV                                MLR      MLR
       comp=Z,496nm,22.0s,MS5.2
BBSR   BB Station      131.87  67  PFAKE             17 12 50.0  +12
BBSR                               LR       LR
       comp=Z,1µm,20.0s,MS5.6
MOS    Moscow          131.89 325 ePKIKP    PKPdf    17 12 33.2 -4.1
MOS                               e                  17 14 53.9
MOS                               ePPP      PPP      17 17 54.5 +6.3
MOS                               ePPS      PPS      17 26 38.9 -9.1
MOS                                pmax     pmax
       comp=Z,121nm,1.4s
MOS                                MLR      MLR
       comp=Z,3µm,23.2s,MS5.9
MSL    Mosul           131.94 299 ePKP      PKPdf    17 12 33.0 -5.0
MSL                               ePPP      tx       17 16 02.0
VRSR   Storozhevoye    132.53 319 ePKIKP    PKPdf    17 12 37.8 -0.8
VRSR                               pmax     pmax
       comp=E,20nm,1.1s
VRSR                               pmax     pmax
       comp=Z,20nm,1.1s
VRSR                               pmax     pmax
       comp=N,5.0nm,0.4s
OBN    Obninsk         132.69 325⇓iPKIKP    PKPdf    17 12 34.3 -4.5
OBN                               i PPS     PPS      17 26 59.7 +3.7
OBN                                pmax     pmax
       comp=Z,141nm,1.6s
OBN                                MLR      MLR
       comp=Z,4µm,21.0s,MS6.1
OBN    Obninsk         132.69 325 ePKPdf    PKPdf    17 12 34.7 -4.1
OBN                                LR       LR
       comp=Z,918nm,20.0s,MS5.5
MBAR   Mbarara         133.20 246 ePKIKP    PKPdf    17 12 37.1 -3.8
MBAR                               MLR      MLR
       comp=Z,758nm,20.0s,MS5.4
KAF    Kangasniemi     133.64 337 epkp               17 12 26.0
SOC    Sochi           133.92 309 i PKIKP   PKPdf    17 12 38.2 -3.2
SOC                               e                  17 19 36.2
SOC                                pmax     pmax
       comp=Z,104nm,1.9s
SOC                                pmax     pmax
       comp=N,99nm,1.4s
SOC                                pmax     pmax
       comp=E,53nm,1.5s
FINES  FINESS Array B  134.15 336  PKhKP             17 12 31.1
       comp=E,4.7nm,1.0s,baz=180,slow=1.9,SNR=4.7
FINES                              PKP      PKPdf    17 12 39.7 -1.7
       comp=E,31nm,1.2s,baz=90,slow=3.8,SNR=9.0
ELZG   Elazig          135.11 302 i P       PKPdf    17 12 38.1 -5.7
ANN    Anapa           135.30 311 i PKIKP   PKPdf    17 12 33.9  -10
ANN                                pmax     pmax
       comp=Z,46nm,1.2s
ANN                                MLR      MLR
       comp=E,1µm,22.0s
ANN                                MLR      MLR
       comp=Z,267nm,22.0s,MS4.9
MALT   Malatya         135.56 302 ePKIKP    PKPdf    17 12 41.6 -3.0
GZT    Gaziantep       136.33 300 i P       PKPdf    17 12 37.2 -8.8
KAHT   Ahir Dag        136.85 301 i P       PKPdf    17 12 38.5 -8.4
ASF    Jabal al Asfar  137.08 293  PKhKP             17 12 34.6
       comp=Z,2.2nm,0.9s,baz=220,slow=3.5,SNR=3.5
ASF                                PKP      PKPdf    17 12 44.8 -2.7
       comp=Z,24nm,1.2s,baz=41,slow=2.1,SNR=14
COBT   Iskenderun      137.44 299 i P       PKPdf    17 12 41.9 -6.2
MNK    Minsk           137.46 327 ePKHKP             17 12 28.0
SIM    Simferopol’     137.56 312 ePKIKP    PKPdf    17 12 46.9 -1.2
SIM                                pmax     pmax
       comp=Z,23nm,1.1s
BORG   Borgarnes       137.85   7  PFAKE             17 13 00.0  +12
BORG                               LR       LR
       comp=Z,1µm,19.0s,MS5.6
CTKT   Corum           138.04 306 i P       PKPdf    17 12 46.5 -2.6
BHL    Bhannes         138.10 295 eP        PKPdf    17 12 46.0 -3.4
AVNT   Avonos          138.29 303 i P       PKPdf    17 12 45.1 -4.5
AKASG  Malin Array Be  138.57 322  PKhKP             17 12 37.5
       comp=Z,1.5nm,0.6s,baz=54,slow=3.2,SNR=9.7
AKASG                              PKP      PKPdf    17 12 46.2 -3.5
       comp=Z,8.3nm,0.8s,baz=54,slow=2.6,SNR=14
AKASG                              PP       PP       17 15 39.0 -0.6
       comp=Z,0.5nm,0.4s,baz=57,slow=6.8,SNR=4.1
EIL    Elat            138.70 289  PKP      PKPdf    17 12 47.8 -2.9
       comp=Z,32nm,1.2s,baz=174,slow=0.6,SNR=10
EIL    Elat            138.70 289 ePKPdf    PKPdf    17 12 46.6 -4.0
BALT   Daday           138.90 307 i P       PKPdf    17 12 45.6 -5.0
BR131  Keskin Array S  139.07 304  PFAKE             17 13 00.0 +9.0
BR131                              LR       LR
       comp=Z,2µm,22.0s,MS5.7
BRTR   Keskin Array B  139.07 304  PKhKP             17 12 40.4
       comp=Z,1.9nm,0.7s,baz=141,slow=3.6,SNR=6.6
BRTR                               PKP      PKPdf    17 12 47.7 -3.3
       comp=Z,7.7nm,1.1s,baz=145,slow=2.9,SNR=19
BRTR                               PP       PP       17 15 41.6 -1.3
       comp=Z,2.4nm,0.9s,baz=108,slow=7.8,SNR=3.9
ELDT   Eldivan         139.09 306 i P       PKPdf    17 12 47.1 -3.9
MEST   Erdemli         139.13 300 i P       PKPdf    17 12 46.0 -5.2
NB2    NORSAR Subarra139.18 344    PKPdf             17 12 36.8
       comp=Z,30nm,1.4s,baz=39,slow=1.9
NB2    NORSAR Subarra139.18 344    PKPd              17 12 36.8
       baz=39,slow=1.9
NOA    NORSAR Array B 139.18 344   PKhKP             17 12 38.2
       comp=Z,6.4nm,1.0s,baz=16,slow=4.6,SNR=6.3
NOA                                PKP      PKPdf    17 12 47.0 -3.6
       comp=Z,3.4nm,0.9s,baz=21,slow=3.0,SNR=4.3
HFS    Hagfors         139.25 341  PKhKP             17 12 40.2
       comp=Z,6.7nm,0.6s,baz=117,slow=3.3,SNR=7.1
HFS                                PKP      PKPdf    17 12 46.2 -4.5
       comp=Z,6.5nm,0.6s,baz=135,slow=2.0,SNR=8.8
ANTO   Ankara          139.68 305  PKIKP    PKPdf    17 12 49.1 -3.0
CSS    Prodhromos      139.94 297 ePKPpre            17 12 44.4
SUW    Suwalki         139.99 329 ePKP      PKPdf    17 12 45.0 -7.2
SUW    Suwalki         139.99 329 ePKP      PKPdf    17 12 45.0 -7.3
KIS    Kishinev        140.37 317 ePKHKP             17 12 44.0
KIS                               e                  17 15 45.0
KIS                                MLR      MLR
       comp=N,3µm,20.0s
KIS                                MLR      MLR
       comp=Z,5µm,20.0s,MS6.3
KIS                                MLR      MLR
       comp=Z,3µm,20.0s
KONO   Kongsberg       140.79 344  PFAKE             17 13 00.0 +6.5
KONO                               LR       LR
       comp=Z,4µm,19.0s,MS6.2
ESKT   Eskisehir       141.22 305 i P       PKPdf    17 12 49.5 -5.3
CFR    Carcaliu        141.50 314 ⇑P                 17 12 41.4
HARR   Harsova         141.81 314 ⇓P        PKPdf    17 12 55.0 -0.7
VRI    Vrincioaia      142.15 316 ⇑P        PKPdf    17 12 53.8 -2.4
RCBR   Riachuelo       142.18 137 ePKPpre            17 12 47.6
RCBR                              ePKPdf    PKPdf    17 12 53.6 -3.7
RCBR                               LR       LR
       comp=Z,2µm,21.0s,MS5.9
BURAR  Bucovina Array  142.32 319 ⇑P        PKPdf    17 12 51.9 -4.6
BURAR  Bucovina Array  142.32 319 ⇑P        PKPdf    17 12 51.9 -4.6
ULDT   Uludag          142.36 306 i P       PKPdf    17 12 53.0 -3.8
KWP    Kalwaria        142.74 324 ePKP      PKPdf    17 12 50.5 -6.7
BSD    Bornholm Skovb  142.78 336 ePKHKP             17 12 40.5
BSD                                pmax     pmax
       comp=Z,64nm,1.2s
BSD                                MLR      MLR
       comp=Z,1µm,20.0s,MS5.7
BSD    Bornholm Skovb  142.78 336 i P                17 12 40.5
       comp=Z,64nm,1.2s
       comp=Z,1µm,20.0s
MLR    Muntele Rosu    142.80 316  PKhKP             17 12 50.5
       comp=Z,15nm,1.0s,baz=339,slow=2.0,SNR=17
MLR                                PKP      PKPdf    17 12 54.2 -3.1
       comp=Z,15nm,1.0s,baz=360,slow=2.7,SNR=17
MLR    Muntele Rosu    142.80 316 ⇓P        PKPdf    17 12 51.0 -6.4
MLR                                PKP      PKPdf    17 12 54.2 -3.1
MLR    Muntele Rosu    142.80 316 ⇓P        PKPdf    17 12 51.0 -6.4
DNZL   Cakiroluk       142.98 302 i P       PKPdf    17 12 51.1 -6.8
SNX    Sinaia          143.13 316  PKIKP    PKPdf    17 12 52.9 -5.0
GKP    Gorka Klasztor  143.17 332 ePKP      PKPdf    17 12 50.9 -6.8
MANT   Manisa          143.19 304 i P       PKPbc    17 12 51.7 +0.3
COP    Copenhagen      143.24 338 i PKHKP            17 12 42.6
COP                               i                  17 16 08.9
COP                               i                  17 40 09.1
COP                                pmax     pmax
       comp=Z,36nm,0.8s
COP    Copenhagen      143.24 338 i P       PKPbc    17 12 42.6 -8.4
       comp=Z,36nm,0.8s
COP                               i                  17 16 08.9
COP                               i                  17 40 09.1
KOLS   Kolonicke sedl  143.36 323 ePKP      PKPdf    17 12 53.4 -4.8
MTUR   Matau           143.48 316  PKIKP    PKPdf    17 12 53.3 -5.2
MUD    Monsted U’grnd  143.65 341⇑iPKIKP    PKPdf    17 12 54.1 -4.3
MUD                               e                  17 40 13.9
MUD                                pmax     pmax
       comp=Z,88nm,1.2s
MUD                                MLR      MLR
       comp=Z,2µm,21.0s,MS6.0
MUD    Monsted U’grnd  143.65 341⇑iP        PKPbc    17 12 54.1 +1.9
       comp=Z,88nm,1.2s
MUD                               e                  17 40 13.9
       comp=Z,2µm,21.0s
SZH    Strazhica       143.68 312 i P       PKPbc    17 12 53.0 +0.3
CRVS   Cervenica-Dubn  143.83 323 ePKP      PKPdf    17 12 54.0 -5.0
OJC    Ojcow           143.94 326 ePKP      PKPdf    17 12 55.4 -3.7
PVL    Pavlikeni       144.10 313 i P       PKPbc    17 12 55.0 +1.0
NIE    Niedzica        144.15 325 ePKP      PKPdf    17 12 54.6 -4.9
KDAG   Bornova         144.20 304 i P       PKPbc    17 12 54.8 +0.5
BDRM   Kayabasi        144.36 302 i P       PKPbc    17 12 57.2 +2.3
AYVA   Ayvalik         144.40 306 i P       PKPbc    17 12 54.9  0.0
ALN    Alexandroupoli  144.41 309 eP        PKPbc    17 12 52.8 -2.1
KECS   Kecovo          144.60 323 ePKP      PKPdf    17 12 56.5 -3.9
KECS                              e                  17 13 15.4
KECS                              e                  17 13 29.9
KDZ    Kurdzhali       144.61 310 i P       PKPbc    17 12 56.0 +0.6
RTO    Tolsta          144.65 356⇓eP        PKPbc    17 12 55.0  0.0
RAC    Raciborz        144.84 327 ePKPdf    PKPdf    17 12 57.5 -3.3
REB    Eisghbrachaidh  144.84 355⇓eP        PKPbc    17 12 55.5 -0.1
MVH1   Achvaich        144.93 354⇓eP        PKPbc    17 12 55.8  0.0
PLD    Plovdiv         144.95 311 i P       PKPbc    17 12 57.0 +0.6
OKC    Ostrava-Krasne  145.02 327 ePKP      PKPdf    17 12 57.4 -3.7
OKC                                AMS      AMS      18 12 00.0
       comp=Z,4µm,25.9s
RZN    Rozhen          145.09 310 i P       PKPbc    17 12 57.0 +0.3
RRH    Rhenigidale     145.14 356⇓eP        PKPbc    17 12 56.5 +0.1
RRR    Rubha Reidh     145.14 355⇓eP        PKPbc    17 12 56.4 +0.1
PGB    Panagyurishte   145.15 312 i P       PKPbc    17 12 58.0 +1.1
MCD    Coleburn Disti  145.17 353⇓eP        PKPbc    17 12 56.8 +0.4
RUE    Ruedersdorf     145.20 334 eP        PKPbc    17 12 57.9 +1.3
PSZ    Piszkesteto     145.24 323 ePKIKP    PKPdf    17 12 57.4 -4.1
PSZ    Piszkesteto     145.24 323⇓ePKP/p    PKPdf    17 12 58.5 -3.0
KSP    Ksiaz           145.26 330⇓ePKIKP    PKPdf    17 12 58.3 -3.2
KSP                               e                  17 16 14.0
KSP                               ePPS      PPS      17 28 53.0 -0.8
KSP                               eSS       SS       17 35 11.0 +5.4
KSP    Ksiaz           145.26 330⇓ePKP      PKPdf    17 12 58.3 -3.2
KSP                               ePP       PP       17 16 14.0 -5.7
KSP                               e                  17 26 10.0
KSP                               ePPS      PPS      17 28 53.0 -0.8
KSP                               eSS       SS       17 35 11.0 +5.4
KSP                               eSSS      SSS      17 40 48.0  +14
KSP                                LR       LR
       comp=Z,14µm,29.2s,MS6.6
KSP    Ksiaz           145.26 330 ePKP      PKPdf    17 12 58.3 -3.2
MORC   Moravsky Berou  145.36 327 ePKIKP    PKPdf    17 12 57.6 -4.1
BSEG   Bad Segeberg    145.38 338 ePKIKP    PKPdf    17 12 58.1 -3.5
MME1   Meikle Cairn    145.40 352 eP        PKPbc    17 12 57.0  0.0
MDO    Dochfour        145.43 354⇓eP        PKPbc    17 12 57.6 +0.6
BZS    Buzias          145.46 318 ⇓P        PKPbc    17 12 58.7 +1.2
VYHS   Vyhne           145.48 324 ePKP      PKPdf    17 12 59.7 -2.2
VYHS                              e                  17 13 33.3
DPC    Dobruska-Polom  145.58 329  P        PKPbc    17 12 59.5 +1.8
DPC    Dobruska-Polom  145.58 329 ePKP      PKPdf    17 12 59.1 -2.9
DPC                                AMS      AMS      18 12 40.0
       comp=Z,6µm,25.1s
UPC    Upice           145.62 329 ePKP      PKPdf    17 12 58.6 -3.5
KOLL   Kolacno         145.66 325 ePKP      PKPdf    17 13 00.0 -2.2
KOLL                              e                  17 13 25.9
EDR    Drumtochty      145.73 352 eP        PKPbc    17 12 58.5 +0.6
VTS    Vitosha         145.78 313  P        PKPbc    17 12 59.7 +1.3
VTS    Vitosha         145.78 313 i P       PKPbc    17 12 59.0 +0.5
MMB    Musomiste       145.81 311 i P       PKPbc    17 12 58.0 -0.6
APE    Apeiranthos     145.85 302  PKIKP    PKPdf    17 12 59.1 -3.8
BUD    Budapest        145.97 323 ePKP/p    PKPdf    17 13 01.1 -1.7
SANT   Santorini       146.06 301 ePKPdf    PKPdf    17 12 59.8 -3.5
OUR    Ouranopolis     146.08 309 eP        PKPbc    17 12 56.0 -3.2
BOLS   Boljevac        146.08 315⇓iP        PKPbc    17 12 59.9 +0.8
VRAC   Vranov          146.13 327  PKP2     PKPab    17 13 00.4 -1.3
VRAC   Vranov          146.13 327  PKPbc    PKPbc    17 13 01.1 +2.0
       comp=Z,174nm,1.3s,baz=48,slow=4.3,SNR=58
KKB    Krupnik         146.15 312 i P       PKPbc    17 12 59.0 -0.4
SRO2   Moca            146.16 324 ePKP      PKPdf    17 13 01.5 -1.6
SRO    Srobarova       146.17 324 ePKP      PKPdf    17 13 00.7 -2.4
SRO                               e                  17 13 22.0
SRO                               e                  17 13 53.6
SMOL   Smolenice       146.22 326 ePKP      PKPdf    17 13 01.1 -2.1
SRO1   Iza             146.25 324 ePKP      PKPdf    17 13 01.2 -2.0
SRO1                              e                  17 13 25.2
SRO1                              e                  17 13 37.4
PVCC   Panska Ves      146.27 330 ePKP      PKPdf    17 13 00.2 -3.0
PVCC                               AMS      AMS      18 15 30.0
       comp=Z,5µm,23.5s
BRG    Berggiesshubel  146.31 331 i PKIKP   PKPdf    17 12 59.8 -3.5
BRG                               i                  17 13 03.0
BRG                               i                  17 16 27.8
BRG                               eSS                17 29 08.0
BRG                                pmax     pmax
       comp=Z,450nm,1.5s
BRG                                MLR      MLR
       comp=N,3µm,23.3s,MS6.2
BRG                                MLR      MLR
       comp=E,3µm,23.3s,MS6.2
BRG                                MLR      MLR
       comp=Z,4µm,23.3s,MS6.1
SVIS   Svilajnac       146.34 317⇑iP        PKPbc    17 13 01.8 +2.1
SOH    Sokhos          146.35 310 eP        PKPbc    17 12 58.7 -1.1
CLL    Collm           146.39 333 i PKIKP   PKPdf    17 12 59.3 -4.1
CLL                               i                  17 13 04.7
CLL                                pmax     pmax
       comp=Z,455nm,1.4s
CLL                                MLR      MLR
       comp=Z,3µm,22.0s,MS6.0
CLL    Collm           146.39 333 i PKP1    PKPbc    17 12 59.3 -0.3
CLL                               i PKP     PKPdf    17 13 04.7 +1.3
CLL                               i                  17 13 07.5
CLL                               e                  17 13 28.0
CLL                               ePP       PP       17 16 30.0 +3.5
CLL                               e                  17 36 12.0
CLL                               eSSS      SSS      17 40 54.0 +3.9
KRUC   Moravsky        146.39 327  PKP2     PKPab    17 13 00.6 -2.1
AOS    Alonnisos       146.53 307 eP        PKPbc    17 13 01.4 +1.1
KNT    Kendrikon       146.55 310 eP        PKPbc    17 12 59.5 -0.8
BEO    Belgrade        146.56 318⇑iP        PKPbc    17 13 02.1 +1.9
ZST    Bratislava      146.58 325 ePKP      PKPdf    17 13 01.6 -2.2
BARS   Barje           146.62 314⇑iP        PKPbc    17 13 08.3 +7.9
PRA    Prague          146.66 330  PKP      PKPdf    17 13 02.0 -1.9
EAB    Aberfoyle       146.66 353⇓eP        PKPbc    17 13 01.6 +1.6
EAB                                AMb      AMB      17 13 05.0
       comp=Z,432nm,1.2s
PRU    Pruhonice       146.66 330 ePKP      PKPdf    17 13 00.3 -3.6
PRU                                AMS      AMS      18 14 30.0
       comp=Z,4µm,25.2s
THE    Thessaloniki    146.70 310 eP        PKPbc    17 12 58.7 -1.9
IDI    Anoyia          146.74 299  PKPbc    PKPbc    17 13 02.7 +1.7
       comp=Z,141nm,1.0s,baz=180,slow=2.0,SNR=16
EDI    Edinburgh       146.79 352  P        PKPbc    17 13 03.3 +2.9
EDI    Edinburgh       146.79 352⇓eP        PKPbc    17 13 01.8 +1.5
EDI                               eP                 17 13 03.3
PCOU   Corrie          146.83 353⇓eP        PKPbc    17 13 02.1 +1.6
GRUS   Gruza           146.85 316⇑iP        PKPbc    17 13 01.1 +0.2
EAU    Auchinoon       146.90 352⇓eP        PKPbc    17 13 02.6 +2.0
EAU                                AMb      AMB      17 13 05.6
       comp=Z,1µm,1.4s
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VKA	Vienna	146.95	326	ePKP	PKPdf	17 13 01.0	-3.4
VKA				i		17 13 06.6	
XOR	Xorichti	146.97	307	eP	PKPbc	17 13 01.9	+0.5
GRG	Griva	146.98	310	eP	PKPbc	17 13 00.5	-0.8
POB1	Observatory	147.01	353	⇓eP		17 13 02.2	
CLZ	Clausthal	147.04	336	ePKPbc	PKPdf	17 13 03.8	-0.6
PMSU	Muirshiel	147.04	354	⇓eP	PKPdf	17 13 02.0	-2.4
PCA1	Carrot	147.13	353	⇓eP	PKPdf	17 13 02.7	-1.8
SOP	Sopron	147.19	325	⇑ePKP/p	PKPdf	17 13 04.7	-0.1
DIVS	Divcibare	147.21	317	⇓iP	PKPdf	17 13 01.5	-3.5
LIT	Litokhoron	147.23	309	eP	PKPdf	17 13 01.7	-3.5
SKO	Skopje	147.23	313	i PKP	PKPdf	17 13 01.0	-4.1
	comp=Z,0.6nm,1.4s						
EKA	Eskdalemuir Ar	147.36	352	PKPbc	PKPdf	17 13 04.0	-0.9
	comp=Z,126nm,1.0s,slow=2.5,SNR=46						
ESK	Eskdalemuir	147.38	352	ePKP2	PKPab	17 13 03.4	-3.0
ESK				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
ESK	Eskdalemuir	147.38	352	⇓iP	PKPdf	17 13 03.2	-1.7
ESK				AMb	AMB	17 13 09.1	
	comp=Z,569nm,1.6s						
NKC	Novy Kostel	147.43	332	ePKP	PKPdf	17 13 01.4	-3.7
MOX	Moxa	147.47	333	ePKP2	PKPab	17 13 03.8	-3.1
MOX				pmax	pmax		
	comp=Z,372nm,1.8s						
MOX				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.7						
MOX	Moxa	147.47	333	ePKP	PKPdf	17 13 03.8	-1.4
MOX				e		17 13 28.4	
MOX				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
MOX	Moxa	147.47	333	i P	PKPdf	17 13 03.8	-1.4
	comp=Z,logA/T=2.3						
MOX				pPKP		17 13 28.0	
MOX				PP	PP	17 16 41.0	+8.0
MOX				SS	tx	17 36 27.0	
MOX				SSS	tx	17 41 45.0	
MOX				e		17 49 23.0	
MOX				L		18 29 51.0	
GVD	Gavdhos	147.48	299	ePKPdf	PKPdf	17 13 01.2	-4.5
GVD				ePKPbc	PKPdf	17 13 05.0	-0.7
WIT	Witteveen	147.52	340	ePKP	PKPdf	17 13 05.5	+0.3
GMK	Mull of Kintyr	147.62	354	⇓eP	PKPdf	17 13 04.3	-1.0
LCP	Cassop	147.69	350	eP	PKPdf	17 13 04.7	-0.7
LCP				AMb	AMB	17 13 10.4	
	comp=Z,1µm,1.4s						
KHC	Kasperske Hory	147.71	329	ePKIKP	PKPdf	17 13 01.7	-3.9
KHC				e		17 13 06.0	
KHC				MLR	MLR		
	comp=Z,3µm,22.2s,MS6.0						
KHC	Kasperske Hory	147.71	329	ePKP	PKPdf	17 13 01.7	-3.9
KHC				e		17 13 06.0	
KHC				e		17 13 29.5	
KHC				LR	LR		
	comp=Z,3µm,22.2s,MS6.0						
KHC	Kasperske Hory	147.71	329	ePKP	PKPdf	17 13 01.7	-3.9
KHC				pPKP		17 13 06.0	
KHC				x	x	17 13 29.5	
KHC				AMS	AMS	18 16 40.0	
	comp=Z,3µm,22.2s						
AGG	Agios Georgios	147.72	307	eP	PKPdf	17 13 01.7	-4.3
FNA	Florina	147.76	311	eP	PKPdf	17 13 00.5	-5.5
GERES	GERESS Array B	147.85	329	PKP	PKPdf	17 13 02.3	-3.5
	comp=Z,65nm,1.2s,SNR=30						
GERES				PKPbc	PKPdf	17 13 06.0	+0.1
	comp=Z,65nm,1.2s,slow=1.3,SNR=30						
IVA	Berane	147.86	315	⇑iPKP	PKPdf	17 13 04.2	-1.8
GCL	Cushendall	147.93	355	⇓eP	PKPdf	17 13 05.0	-0.7
PVY	Plav	147.94	315	ePKP	PKPdf	17 13 04.4	-1.8
LWH	Whinny Nab	147.94	349	⇓eP	PKPdf	17 13 05.4	-0.4
PLE	Pljevlja	147.96	316	⇑iPKP	PKPdf	17 13 04.3	-1.9
GAL1	Galloway	148.00	353	eP	PKPdf	17 13 03.8	-2.1
ARSA	Arzberg	148.01	325	⇑iP	PKPdf	17 13 02.2	-4.0
OHR	Ohrid	148.03	312	i PKP	PKPdf	17 13 04.7	-1.7
OHR				i		17 13 08.3	
WTSB	Winterswijk	148.20	339	ePKP	PKPdf	17 13 03.0	-3.3
	comp=Z,233nm,1.5s						
MOA	Molln	148.26	327	⇑iP	PKPdf	17 13 02.7	-3.8
UPM	Unac-Piva	148.33	316	⇑iPKP	PKPdf	17 13 02.8	-4.0
GRA1	Grafenberg Arr	148.36	332	ePKPdf	PKPdf	17 13 04.2	-2.4
GRA1				LR	LR		
	comp=Z,2µm,21.2s,MS5.9						
GRF	Grafenberg Arr	148.36	332	ePKIKP	PKPdf	17 13 04.2	-2.4
GRF				MLR	MLR		
	comp=Z,2µm,21.2s,MS5.9						
GRF	Grafenberg Arr	148.36	332	ePKIKP	PKPdf	17 13 04.2	-2.4
GRF				MLR	MLR		
	comp=Z,2µm,21.2s,MS5.9						
QSH	Qafa e Shtames	148.47	313	i p	PKPdf	17 13 07.6	+0.5
HPK	Haverah Park	148.47	350	⇓eP	PKPdf	17 13 06.6	0.0
HPK				AMb	AMB	17 13 13.0	
	comp=Z,2µm,1.5s						
NKY	Niksic	148.47	316	⇑iPKP	PKPdf	17 13 03.5	-3.5
TTG	Podgorica	148.48	315	⇑iPKP	PKPdf	17 13 04.7	-2.3
PERS	Pernice	148.61	325	ePKPdf	PKPdf	17 13 03.3	-3.9
PERS				e		17 13 07.3	
SISC	Sisak	148.63	322	i PKP	PKPdf	17 13 06.5	-0.7
ULC	Ulcinj	148.71	314	⇑iPKP	PKPdf	17 13 04.6	-2.9
LMK	Market Rasen	148.71	348	⇓eP	PKPdf	17 13 06.9	-0.2
BRY	Bratogost	148.72	316	⇑iPKP	PKPdf	17 13 05.0	-2.5
GMM	Mts of Mourne	148.74	354	⇓eP	PKPdf	17 13 06.8	-0.3
BUM	Brajici-Budva	148.78	315	⇑iPKP	PKPdf	17 13 04.1	-3.4
LHO	Holmfirth	148.90	350	⇓eP	PKPdf	17 13 07.6	+0.2
LHO				AMb	AMB	17 13 15.1	
	comp=Z,513nm,1.5s						
HCY	Herceg Novi	148.97	315	⇑iPKP	PKPdf	17 13 06.2	-1.6
OBKA	Obir	149.00	325	⇓iP	PKPdf	17 13 02.1	-5.7
TNS	Taunus Mts	149.06	336	ePKP2	PKPab	17 13 08.6	-4.7
KBI1	Birley Grange	149.13	349	⇓eP	PKPdf	17 13 08.2	+0.5
KBA	Koelnbreinsper	149.24	327	⇓iP	PKPdf	17 13 03.4	-4.7
BOJS	Bojanci	149.25	323	ePKPdf	PKPdf	17 13 05.0	-3.2
BOJS				e		17 13 09.2	
STON	Ston	149.27	317	i P	PKPdf	17 13 07.3	-1.0
SIND	Sindeldorf	149.30	333	eP	PKPdf	17 13 09.1	+0.9
LJU	Ljubljana	149.31	324	ePKHKP		17 13 04.9	
LJU				e		17 16 41.7	
LJU	Ljubljana	149.31	324	ePKPdf	PKPdf	17 13 04.9	-3.4
LJU				e		17 13 08.4	
LJU				ePP	PP	17 16 41.6	-1.5
WME	Myndd Eilian	149.40	352	⇓eP	PKPdf	17 13 08.5	+0.3
WME				AMb	AMB	17 13 12.9	
	comp=Z,643nm,1.6s						
KWE	Weaver Farm	149.41	349	⇓eP	PKPdf	17 13 08.9	+0.7
TOD	Tromm	149.42	335	PKHKP		17 13 05.1	
TOD	Tromm	149.42	335	eP	PKPdf	17 13 09.7	+1.4
FUR	Furstenfeldbru	149.47	330	ePKP2	PKPab	17 13 09.8	-5.2
FUR	Furstenfeldbru	149.47	330	ePKPdf	PKPdf	17 13 05.1	-3.4
FUR				ePKPbc	PKPdf	17 13 09.8	+1.3
WPM1	Penmaenmawr	149.49	352	⇓eP	PKPdf	17 13 08.9	+0.6
WPM1				AMb	AMB	17 13 12.4	
	comp=Z,559nm,1.4s						
HGN	Heimansgroeve	149.51	339	ePKP	PKPdf	17 13 08.9	+0.5
	comp=Z,339nm,2.4s						
YRC	Rhoscolyn	149.58	353	⇓eP	PKPdf	17 13 08.6	+0.2
YRC				AMb	AMB	17 13 15.6	
	comp=Z,401nm,1.6s						
HDH	Heidenheim	149.63	332	P	PKPdf	17 13 07.0	-1.7
HDH	Heidenheim	149.63	332	eP	PKPdf	17 13 10.2	+1.5
JAVS	Javornik	149.65	324	eP	PKPdf	17 13 04.9	-3.9
VOY	Vojsko	149.65	325	ePKPdf	PKPdf	17 13 04.0	-4.8
VOY				e		17 13 09.9	
ABH	Alteburg	149.68	336	PKP	PKPdf	17 13 06.0	-2.8
ABH	Alteburg	149.68	336	eP	PKPdf	17 13 10.7	+1.9
PTCC	Patocco-Chiusa	149.69	326	ePKP	PKPdf	17 13 05.2	-3.6
DLF	Lyons Farm	149.73	355	eP		17 12 57.4	
DLF	Lyons Farm	149.73	355	⇑iP	PKPdf	17 13 10.2	+1.5
DCN	Croghan	149.74	356	eP		17 12 57.7	
DCN	Croghan	149.74	356	⇑iP	PKPdf	17 13 10.3	+1.6
SBD1	Bryn Du	149.74	351	⇓eP	PKPdf	17 13 09.9	+1.2
DSB	Dublin	149.76	355	ePKPdf	PKPdf	17 13 05.4	-3.4
ZOU	Zoufplan	149.78	326	⇓eP	PKPdf	17 13 07.0	-2.0
GMNA	Gemona	149.84	326	ePKP	PKPdf	17 13 05.5	-3.6
FVI	Forni Avoltri	149.85	327	ePKIKP	PKPdf	17 13 05.2	-3.9
STU	Stuttgart	149.92	333	ePKPdf	PKPdf	17 13 05.7	-3.4
STU				ePKPbc	PKPdf	17 13 11.1	+2.0
TRI	Trieste	149.93	324	ePKHKP		17 13 07.3	
WATA	Walderalm	149.93	329	⇑iP	PKPdf	17 13 05.5	-3.7
WTTA	Wattenberg	149.95	329	⇑iP	PKPdf	17 13 05.9	-3.4
CSMI	Casera Mimoias	149.98	327	⇑eP	PKPdf	17 13 05.0	-4.3
MPRI	Monte Prat	149.99	326	⇑eP	PKPdf	17 13 07.0	-2.4
RUP	Ruppelstein	150.01	336	PKIKP	PKPdf	17 13 05.5	-3.8
RUP	Ruppelstein	150.01	336	eP	PKPdf	17 13 11.6	+2.3
HLM1	Long Mynd	150.06	350	⇓eP	PKPdf	17 13 10.7	+1.4
HLM1				AMb	AMB	17 13 14.7	
	comp=Z,362nm,1.7s						
BUCH	Bad Urach	150.10	333	P	PKPdf	17 13 07.5	-2.0
BUCH	Bad Urach	150.10	333	eP	PKPdf	17 13 11.4	+1.9
MOTA	Moosalm	150.15	329	⇑iP	PKPdf	17 13 04.9	-4.7
LBG	Lerchenberg	150.17	333	P	PKPdf	17 13 08.7	-0.8
LBG	Lerchenberg	150.17	333	eP	PKPdf	17 13 11.6	+2.1
SQTA	Sankt Quirin	150.19	329	⇑iP	PKPdf	17 13 06.4	-3.2
SSP1	Stoney Pound	150.19	350	⇓eP	PKPdf	17 13 11.1	+1.7
MLNI	Malnisio	150.24	326	⇑eP	PKPdf	17 13 07.0	-2.8
LANF	Langenberg	150.31	335	PKP	PKPdf	17 13 06.0	-3.8
UBR	Uberruh	150.36	331	P	PKPdf	17 13 08.0	-1.9
UBR	Uberruh	150.36	331	eP	PKPdf	17 13 11.7	+1.8
WLF	Walferdange	150.37	337	ePKIKP	PKPdf	17 13 11.6	+1.8
GIVF	Givet	150.44	339	ePKIKP	PKPdf	17 13 05.8	-4.1
	comp=Z,104nm,1.4s						
HAE	Alders End	150.47	350	⇓eP	PKPdf	17 13 11.3	+1.4
HAE				AMb	AMB	17 13 16.5	
	comp=Z,413nm,1.6s						
GUT	Gutenstein	150.50	332	P	PKPdf	17 13 07.7	-2.4
GUT	Gutenstein	150.50	332	eP	PKPdf	17 13 11.8	+1.7
HTR	Trewern Hill	150.54	351	⇓eP	PKPdf	17 13 11.7	+1.7
HTR				AMb	AMB	17 13 15.6	
	comp=Z,259nm,1.9s						
MCH1	Michaelchurch	150.58	350	P	PKPdf	17 13 11.5	+1.4
MCH1	Michaelchurch	150.58	350	eP	PKPdf	17 13 11.1	+1.0
MCH1				eP		17 13 11.5	
SPAK	Spaichingen	150.61	333	⇓eP	PKPdf	17 13 12.4	+2.2
BAIF	Baives	150.68	340	ePKIKP	PKPdf	17 13 06.3	-4.0
DAVA	Damuels	150.75	330	⇑iP	PKPdf	17 13 07.1	-3.4
CTI	Castel Tesino	150.80	327	ePKIKP	PKPdf	17 13 07.2	-3.4
MENF	Mencas	150.83	343	PKP		17 12 59.4	
HPE	Pembroke	150.89	352	eP	PKPdf	17 13 09.3	-1.2
HGH	Gray Hill	150.90	350	⇓eP	PKPdf	17 13 12.1	+1.6
HGH				AMb	AMB	17 13 16.3	
	comp=Z,518nm,2.0s						
WLS	Welschbruch	150.95	335	PKP	PKPdf	17 13 06.4	-4.3
WLS	Welschbruch	150.95	335	PKIKP	PKPdf	17 13 10.2	-0.5
CDF	Champ du Feu	150.98	335	ePKIKP	PKPdf	17 13 06.3	-4.5
HSA	Swansea	150.99	351	eP	PKPdf	17 13 09.6	-1.1
KIZ	Kirchzarten	151.09	333	PKIKP	PKPdf	17 13 09.2	-1.7
KIZ	Kirchzarten	151.09	333	eP	PKPdf	17 13 12.9	+2.0
FELD	Feldberg	151.12	333	PKP	PKPdf	17 13 07.0	-4.0
FELD	Feldberg	151.12	333	⇓eP	PKPdf	17 13 13.4	+2.4
BRMO	Bormio	151.12	329	ePKP	PKPdf	17 13 08.0	-3.0
DAVOX	Davos	151.13	330	PKP	PKPdf	17 13 07.2	-3.8
	comp=Z,11nm,1.1s,baz=209,slow=4.8,SNR=9.8						
DAVOX				PKPbc	PKPdf	17 13 14.0	+3.0
	comp=Z,157nm,1.2s,baz=1.3,slow=1.9,SNR=41						
DAVOX	Davos	151.13	330	PKP	PKPdf	17 13 07.2	-3.8
DAVOX				PKPbc	PKPdf	17 13 14.0	+3.0
ECH	Echery	151.19	335	PKP	PKPdf	17 13 06.8	-4.3
AOI	Ancona	151.37	321	P	PKPdf	17 13 10.4	-1.1
ORI	Oriolo Calabro	151.46	313	PKIKP	PKPdf	17 13 08.5	-3.3
MOF	Molkenrain	151.49	334	PKP	PKPdf	17 13 06.8	-4.8
HEX	Exmoor	151.61	351	eP	PKPdf	17 13 13.8	+2.2
HINF	Hinteralfeld	151.63	334	ePKIKP	PKPdf	17 13 07.2	-4.6
	comp=Z,159nm,1.7s						
BBS	Basel-Blauen	151.65	333	PKIKP	PKPdf	17 13 06.8	-5.0
BBS	Basel-Blauen	151.65	333	⇓eP	PKPdf	17 13 14.5	+2.7
TIP	Timpagrande	151.65	311	ePKPdf	PKPdf	17 13 07.5	-4.6
TIP				ePKPbc	PKPdf	17 13 15.6	+3.5
SAL	Salo	151.67	327	PKIKP	PKPdf	17 13 09.9	-2.0
HAU	Haudompre	151.67	335	ePKIKP	PKPdf	17 13 07.4	-4.4
HAU				eR			
	comp=Z,1µm,19.5s						
MEZF	Maizieres J'vi	151.74	337	ePKIKP	PKPdf	17 13 08.0	-3.9
	comp=Z,140nm,1.4s						
FSSB	Fossombrone	151.75	322	ePKP	PKPdf	17 13 09.3	-2.8
MRLC	Muro Lucano	151.77	315	ePKP	PKPdf	17 13 07.2	-5.0
ARV	Arcevia	151.78	322	PKP2	PKPdf	17 13 09.7	-2.4
RSM	Repubblica di	151.79	323	ePKIKP	PKPdf	17 13 11.2	-0.9
SNTG	Esanatoglia	151.93	321	ePKP	PKPdf	17 13 10.7	-1.7
RAVA	Ravarino	151.96	326	P	PKPdf	17 13 11.7	-0.7
CII	Carovilli	152.01	317	ePKPdf	PKPdf	17 13 06.1	-6.4
CII				ePKPbc	PKPdf	17 13 15.8	+3.3
LOMF	Lomont	152.01	334	PKP	PKPdf	17 13 08.6	-3.8
MGR	Morigerati	152.03	313	ePKP	PKPdf	17 13 09.5	-3.2
GRI	Girifalco	152.05	310	ePKIKP	PKPdf	17 13 09.8	-2.9
NRCA	Norcia	152.09	320	ePKP	PKPdf	17 13 10.6	-2.0
SFI	Santa Sofia	152.14	323	ePKIKP	PKPdf	17 13 09.9	-2.8
AQU	L'Aquila	152.20	319	ePKIKP	PKPdf	17 13 11.7	-1.1
PGD	Poggio Sodo	152.22	323	ePKIKP	PKPdf	17 13 14.1	+1.3
ZCCA	Zocca	152.31	325	ePKP	PKPdf	17 13 10.3	-2.6
VAI	Varese	152.32	330	ePKIKP	PKPdf	17 13 08.8	-4.1
SDI	San Donato	152.33	318	ePKIKP	PKPdf	17 13 10.5	-2.5
VVLD	Villa Vallelon	152.35	318	P	PKPdf	17 13 10.6	-2.4
PTQR	Pietraquaria	152.40	319	ePKP	PKPdf	17 13 09.7	-3.4
GSCL	Gusciola	152.51	325	ePKP	PKPdf	17 13 11.9	-1.3
ERBM	Eremo	152.56	326	P	PKPdf	17 13 11.6	-1.6
MCGN	Macugnaga	152.61	331	ePKP	PKPdf	17 13 10.3	-3.0
SOI	Samo	152.63	309	PKIKP	PKPdf	17 13 11.7	-1.8
BDI	Bagni Di Lucca	152.71	325	PKIKP	PKPdf	17 13 11.4	-2.0
VLC	Villacollemand	152.75	325	ePKPbc	PKPdf	17 13 16.3	+2.8
CABF	La Chapelle	152.91	334	ePKIKP	PKPdf	17 13 09.8	-3.8
	comp=Z,120nm,1.5s						
PII	Pisa	152.97	324	PKIKP	PKPdf	17 13 09.9	-3.9
GRFL	Gerfalco	153.11	323	P	PKPdf	17 13 12.7	-1.3
FLN	La Foliniere	153.16	345	ePKIKP	PKPdf	17 13 09.6	-4.3
	comp=Z,124nm,1.6s						
FLN				eR			
	comp=Z,2µm,21.5s						
LDF	La Druitiere	153.23	344	ePKIKP	PKPdf	17 13 09.8	-4.2
	comp=Z,217nm,1.8s						
RSL	Roselend	153.42	332	PKP	PKPdf	17 13 18.5	+4.1
SSF	Saint Saulge	153.51	338	ePKIKP	PKPdf	17 13 10.3	-4.2
	comp=Z,59nm,1.5s						
LPL	La Plagne	153.51	332	ePKIKP	PKPdf	17 13 10.7	-3.8
	comp=Z,30nm,1.3s						
LPG	La Plagne	153.52	332	ePKIKP	PKPdf	17 13 10.7	-3.8
	comp=Z,25nm,1.5s						
GRR	Gorron	153.60	345	ePKIKP	PKPdf	17 13 10.4	-4.1
	comp=Z,188nm,1.6s						
OG05	Jujurieux	153.63	334	PKP	PKPdf	17 13 19.1	+4.4
SMF	Signal de Mont	153.75	337	ePKIKP	PKPdf	17 13 10.5	-4.3
	comp=Z,72nm,1.6s						
AVF	Avril sur Loir	153.80	338	ePKIKP	PKPdf	17 13 10.6	-4.3
	comp=Z,57nm,1.6s						
BNI	Bardonecchia	153.90	331	ePKIKP	PKPdf	17 13 10.6	-4.5
BNI				e		17 13 20.5	
VAE	Valguarnera	154.06	309	PKPab	PKPab	17 13 34.1	-0.5
	comp=Z,10nm,0.3s,baz=12,slow=2.6,SNR=2.8						
SGMF	Saint Gilles	154.10	347	ePKIKP	PKPdf	17 13 10.9	-4.3
	comp=Z,160nm,1.4s						
MBDF	Montbardon	154.11	330	ePKIKP	PKPdf	17 13 11.2	-4.2
	comp=Z,56nm,1.4s						
ROSF	Rostrenen	154.16	348	ePKIKP	PKPdf	17 13 10.9	-4.4
	comp=Z,366nm,1.8s						
BGF	Bois d'Agland	154.17	338	ePKIKP	PKPdf	17 13 11.2	-4.2
	comp=Z,80nm,1.5s						
SURF	Saint Ours	154.28	330	PKP	PKPdf	17 13 13.6	-2.0
SAOF	Saorge	154.30	328	PKP	PKPdf	17 13 12.3	-3.3
ORIF	Oris-en-Rattie	154.35	332	ePKIKP	PKPdf	17 13 11.5	-4.2
ORIF				eR			
	comp=Z,3µm,23.0s						
AUTN	L'Aution	154.35	329	PKP	PKPdf	17 13 11.2	-4.5
PLDF	La Plantade	154.40	336	PKP	PKPdf	17 13 14.2	-1.5
TOUF	Mont Tournerai	154.43	329	PKP	PKPdf	17 13 12.8	-3.0
SBF	Sospel	154.45	328	ePKIKP	PKPdf	17 13 11.2	-4.6
AGO	Saint Agoulin	154.51	337	PKP	PKPdf	17 13 14.0	-1.9
QUIF	Quistinic	154.54	348	ePKIKP	PKPdf	17 13 11.9	-3.9
	comp=Z,139nm,1.6s						
PGF	Pioggiola	154.59	324	ePKIKP	PKPdf	17 13 11.6	-4.5
	comp=Z,72nm,1.4s						
TCF	Toulx Ste Croi	154.62	339	ePKIKP	PKPdf	17 13 11.9	-4.1
	comp=Z,94nm,1.4s						
PYM	Petit Puy Mans	154.81	337	PKP	PKPdf	17 13 14.4	-1.9
VIVF	Saint-Julien-l	154.91	333	ePKIKP	PKPdf	17 13 12.4	-4.0
	comp=Z,46nm,1.4s						
FRF	La Foret Royal	155.06	329	ePKIKP	PKPdf	17 13 12.0	-4.6
	comp=Z,90nm,1.5s						
MFF	Saint Martin d	155.07	342	ePKIKP	PKPdf	17 13 12.6	-4.0
	comp=Z,128nm,1.4s						
LBL	Lubilhac	155.16	336	PKP	PKPdf	17 13 14.0	-2.7
SMRF	Simiane la Rot	155.23	331	ePKIKP	PKPdf	17 13 13.0	-3.9
	comp=Z,49nm,1.4s						
VILF	Villemus	155.26	331	PKP	PKPdf	17 13 23.6	+6.7
LMR	La Mourre	155.29	329	ePKIKP	PKPdf	17 13 12.5	-4.5
	comp=Z,26nm,1.2s						
RJF	Les Rejaudoux	155.72	338	ePKIKP	PKPdf	17 13 13.7	-3.7
RJF				eR			
	comp=Z,3µm,22.2s						
CAF	Calviac	155.86	337	ePKIKP	PKPdf	17 13 14.1	-3.5
LASF	Ste Croix	155.89	333	ePKIKP	PKPdf	17 13 13.7	-4.0
	comp=Z,172nm,1.9s						
LFF	La Frestale	156.30	339	ePKIKP	PKPdf	17 13 14.6	-3.6
MTLF	Montolieu	157.16	335	ePKIKP	PKPdf	17 13 15.7	-3.8
	comp=Z,150nm,1.9s						
EPF	Esparros	158.12	338	ePKIKP	PKPdf	17 13 17.0	-3.7
	comp=Z,97nm,1.6s						
ETSF	Etsaut	158.54	339	ePKIKP	PKPdf	17 13 17.4	-3.8
	comp=Z,73nm,1.7s						
SJPF	Ste Jean	158.56	340	ePKIKP	PKPdf	17 13 17.8	-3.5
ADH	Angra Heroismo	159.15	38	i LR	LR	18 08 08.0	
CMAH	Djebel Manchou	159.30	315	P	PKPdf	17 13 16.0	-6.3
ABSA	Djebel Ababsia	159.47	314	P	PKPdf	17 13 17.5	-5.0
CAEH	'Ain El Ouahch	159.58	316	P	PKPdf	17 13 23.5	+0.9
CKFL	Kef-Lekhel	159.89	315	P	PKPdf	17 13 21.5	-1.5
EBR	Ebro Roquetas	159.97	334	ePDIFF		17 14 00.0	
CASM	Ain Smara	160.12	315	P	PKPdf	17 13 20.5	-2.7
CTEI	Djebel Teioual	160.29	315	P	PKPdf	17 13 32.0	+8.6
DFRA	Djebel Bou Aff	160.35	317	P	PKPdf	17 13 22.5	-1.0
PDA	Ponta Delgada	160.67	38	i PKP	PKPdf	17 13 27.0	+3.3
PDA	Ponta Delgada	160.67	38	i PP	PP	17 17 52.0	+5.4
SET	Setif	160.86	316	P	PKPdf	17 13 25.0	+1.0
CMER	Merouana	160.89	314	P	PKPdf	17 13 28.0	+4.0
PBRG	Braganca	161.09	351	ePKPab	PKPab	17 14 04.1	-0.5
PVRL	Vila Real	161.74	353	ePKPab	PKPab	17 14 07.5	0.0
PVIS	Viseu	162.32	353	ePKPbc	PKPdf	17 13 25.2	-0.1
PVIS				ePKPab	PKPab	17 14 10.4	+0.4
ESDC	Sonseca Array	162.53	342	PKP	PKPdf	17 13 22.7	-2.9
	comp=Z,0.2nm,0.3s,slow=3.8,SNR=3.7						
ESDC				PKPab	PKPab	17 14 10.8	-0.1
	comp=Z,8.7nm,0.9s,baz=15,slow=3.0,SNR=18						
ESDC				PP	PP	17 17 57.2	+1.0
	comp=Z,2.2nm,0.8s,baz=28,slow=5.4,SNR=5.0						
ESLA	Sonseca Array	162.53	342	PFAKE		17 13 30.0	+4.5
ESLA				LR	LR		
	comp=Z,13µm,19.0s						
MTE	Manteigas	162.58	352	ePKPbc	PKPdf	17 13 19.8	-5.8
MTE				ePKPab	PKPab	17 14 10.8	-0.4
MTE				ePP	PP	17 17 57.4	+0.9
MTE				i -		17 39 39.7	
MTE				e-		17 44 28.9	
MTE				eLR	LR	18 10 17.8	
	comp=Z,1µm,23.9s						
DBIC	Dimbokro	162.63	200	PKP	PKPdf	17 13 22.6	-3.8
	comp=Z,14nm,1.1s,baz=145,slow=2.5,SNR=8.5						
DBIC				PKPab	PKPab	17 14 11.3	-0.9
	comp=Z,58nm,1.0s,baz=143,slow=5.5,SNR=18						
DBIC				PP	PP	17 17 55.9	-1.6
	comp=Z,14nm,1.2s,baz=157,slow=7.2,SNR=3.4						
PCBR	Castelo Branco	163.12	351	ePKPbc	PKPdf	17 13 24.6	-1.5
PCBR				ePKPab	PKPab	17 14 12.9	-0.6
EANR	'Ain N'Sour	163.58	324	P	PKPdf	17 13 17.0	-10
ETRT	Tiaret	163.88	322	P	PKPdf	17 13 18.0	-9.0
EVO	Evora	164.48	352	ePKIKP	PKPdf	17 13 24.4	-3.1
	comp=Z,92nm,1.6s						
EVO				eR			
	comp=Z,3µm,20.5s						
PBEJ	Beja	164.96	351	ePKPbc	PKPdf	17 13 24.9	-3.1
PBEJ				ePKPab	PKPab	17 14 22.4	+0.8
PALC	Alcoutim	165.45	349	ePKPab	PKPab	17 14 22.8	-0.9

OTT 10 16:58:36.0±0.3,52.77N×67.27W,MN2.9/7,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	Schefferville	2.08	7	PN	Pn	16 59 12.3	-0.3
SCHQ				SG	Sg	16 59 40.0	-5.3
SCHQ				Trac		16 59 42.2	
	comp=Z,27nm,0.2s						
MNQ	Manicouagan	2.43	203	PN	Pn	16 59 16.8	-0.7
MNQ				SN	Sn	16 59 49.5	+1.1
MNQ				Trac		16 59 55.3	
	comp=Z,27nm,0.3s						
SMQ	Clarke City	2.57	172	PN	Pn	16 59 18.2	-1.3
SMQ				SG	Sg	16 59 51.4	-10
SMQ				Trac		16 59 58.4	
	comp=Z,14nm,0.2s						
ICQ	Pointe Anglais	3.25	180	PN	Pn	16 59 26.5	-2.7
ICQ				SN	Sn	17 00 06.6	-2.7
ICQ				SG	Sg	17 00 16.6	-7.6
ICQ				Trac		17 00 22.2	
	comp=Z,9.3nm,0.2s						
CNQ	Baie Comeau	3.51	189	PN	Pn	16 59 32.2	-0.7
CNQ				SG	Sg	17 00 22.0	-11
CNQ				Trac		17 00 24.0	
	comp=Z,9.9nm,0.2s						
GSQ	Grosses Roches	3.87	178	PN	Pn	16 59 36.0	-1.9
GSQ				SN	Sn	17 00 19.1	-5.7
GSQ				Trac		17 00 41.7	
	comp=Z,12nm,0.2s						
LG4Q	La Grande 4	4.20	285	PN	Pn	16 59 39.9	-2.8
LG4Q				PG	Pg	16 59 48.0	-12
LG4Q				SN	Sn	17 00 27.2	-6.0
LG4Q				SG	Sg	17 00 41.4	-14
LG4Q				Trac		17 00 50.0	
	comp=Z,8.2nm,0.2s						
LMQ	La Malbaie	5.58	202	PN	Pn	16 59 59.5	-2.7
LMQ				SN	Sn	17 01 02.9	-5.3
DRLN	Deer Lake	7.09	116	PN	Pn	17 00 19.5	-4.0
DRLN				SN	Sn	17 01 37.6	-8.2
LMN	Caledonia Moun	7.11	166	PN	Pn	17 00 20.1	-3.6
VIMO	Victor Mine	9.99	277	PN	P	17 00 57.1	-6.5
SILO	Sutton Inlier	10.62	286	PN	P	17 01 04.8	-7.5

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*BJI **10** 17:09:14.1,5.80N×124.10E,h520^{km},mb4.8*
*NEIC **10** 17:09:14.2±0.8,5.75N×124.11E,h526^{km}±11^{km},mb4.4/22, Error ellipse: s-maj=9.7km s-min=4.2km az=63.0*
*IDC **10** 17:09:14.7±1.1,5.72N×124.04E,h532^{km}±14^{km},mb3.6/21, mb1 3.7/22,mb1mx3.7/28,mbtmp4.6/22,Error ellipse: s-maj=19.3km s-min=7.6km az=62.0*
*MAN **10** 17:09:15.7,5.84N×124.04E,h511^{km},mb5.0,ML3.9, MS4.0*

ISC 10 17:09:13.5±0.3,5.72N±0.05×124.14E±0.07,h533^{km}±4^{km}, n87,$\sigma 0^{s}.82$/85,mb4.4/44,8C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	1.59	36	⇓eP	P	17 10 20.8	+0.4
PAGZ	Pagadian	2.25	340	eP	P	17 10 23.4	0.0
BUKP	Musuan	2.33	23	eP	P	17 10 24.0	+0.2
MATI	Mati	2.43	60	eP	P	17 10 23.4	-0.9
IPIL	Ipil	2.58	323	eP	P	17 10 24.9	-0.3
DCPH	Dipolog City	2.95	345	⇑eP	P	17 10 27.6	+0.1
TBP	Tagbilaran	3.96	356	⇑eP	P	17 10 33.7	-0.6
MSLP	Maasin	4.44	9	eP	P	17 10 39.1	+0.8
GUIM	Jordan	5.11	343	eP	P	17 10 41.2	-2.8
CUYO	Cuyo Island	5.96	329	eP	P	17 10 51.4	-0.4
OTRP	Odiongan	6.92	343	eP	P	17 11 00.9	-0.1
BATP	Bataraza	6.99	296	eP	P	17 11 01.9	+0.3
ENPP	El Nido	7.17	320	eP	P	17 11 03.2	-0.2
SJMP	San Jose	7.33	336	eP	P	17 11 05.5	+0.6
BUSP	Coron	7.36	328	eP	P	17 11 05.1	-0.1
PVCP	Virac	7.83	0	eP	P	17 11 10.4	+0.5
BOAC	Boac	8.02	344	eP	P	17 11 12.3	+0.5
LUBP	Lubang	8.84	335	eP	P	17 11 20.7	+0.5
TGY	Tagaytay City	8.91	339	P	P	17 11 20.3	-0.6
	8.9nm,0.3s,baz=275,slow=19,SNR=3.0						
TGY				S	S	17 13 04.6	+2.2
	2.9nm,0.3s,baz=163,slow=19,SNR=2.0						
QIZ	Qiongzhong	19.21	315	eP	P	17 13 04.3	+0.3
	15nm,0.8s						
KAKA	Kakadu	20.08	156	⇑iP	P	17 13 12.2	+0.1
	22nm,0.5s						
FITZ	Fitzroy Crossi	23.71	176	⇑iP	P	17 13 44.7	-0.7
	8.4nm,0.6s,mb4.5						
MBWA	Marble Bar	27.06	189	eP	P	17 14 13.1	-1.9
	7.2nm,0.6s,mb4.5						
WRAB	Tennant Creek	27.40	159	eP	P	17 14 17.3	-0.6
	40nm,0.4s,mb5.4						
WRA	Warramunga Arr	27.40	159	P	P	17 14 16.8	-1.2
	16nm,0.3s,mb5.1,baz=341,slow=9.2,SNR=376						
WRA				ScP		17 20 08.7	
	1.2nm,0.5s,baz=341,slow=3.0,SNR=9.6						
PMG	Port Moresby	27.42	123	P	P	17 14 18.4	+0.2
	13nm,0.9s,mb4.5,baz=277,slow=20,SNR=3.5						
PMG	Port Moresby	27.42	123	eP	P	17 14 17.9	-0.4
	22nm,1.1s,mb4.7						
PMG				e		17 14 22.2	
CM31	Chiang Mai Arr	27.65	299	eP	P	17 14 20.5	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	12nm,0.6s,mb4.7						
CMAR	Chiang Mai Arr	27.65	299	P	P	17 14 19.9	-0.3
	6.7nm,0.6s,mb4.5,baz=123,slow=7.6,SNR=60						
CMAR				ScP		17 20 10.4	
	1.5nm,1.0s,baz=112,slow=1.9,SNR=8.2						
ENH	Enshi	28.05	332	eP	P	17 14 23.2	-0.4
	33nm,0.7s,mb5.1						
ASAR	Alice Springs	30.72	162	P	P	17 14 46.6	+0.1
	22nm,0.4s,mb5.0,baz=342,slow=7.2,SNR=465						
ASAR				PcP	PcP	17 17 27.9	-0.3
	1.7nm,0.5s,baz=347,slow=2.6,SNR=5.7						
ASAR				ScP		17 20 20.1	
	0.7nm,0.4s,baz=338,slow=3.5,SNR=12						
ASPA	Alice Springs	30.72	162	⇑iP	P	17 14 46.9	+0.3
KS15	Wonju Array Si	31.76	6	P	P	17 14 52.4	-2.8
MAJO	Matsushiro	33.28	21	P	P	17 15 06.6	-1.4
	9.4nm,0.9s,mb4.3						
CTA	Charters Tower	33.62	140	⇑iP	P	17 15 12.3	+1.2
	4.1nm,0.6s,mb4.1						
CTA	Charters Tower	33.62	140	P	P	17 15 12.0	+0.9
	5.6nm,0.7s,mb4.2,baz=336,slow=11,SNR=14						
CTAO	Charters Tower	33.62	140	eP	P	17 15 12.1	+1.0
	8.7nm,0.8s,mb4.3						
BJT	Baijiatuau	34.89	349	eP	P	17 15 21.7	+0.2
	6.4nm,0.8s,mb4.2						
FORT	Forrest	36.48	174	⇑iP	P	17 15 35.0	+0.2
	766nm,0.6s						
NWAO	Narrogin (SRO)	38.99	189	P	P	17 15 54.8	-0.3
	17nm,0.9s,mb4.5,baz=59,slow=3.2,SNR=13						
MDJ	Mudanjiang	39.04	6	P	P	17 15 55.3	0.0
	4.2nm,0.6s,mb4.2						
LSA	Lhasa	39.20	311	eP	P	17 15 58.5	+1.7
	8.1nm,0.7s,mb4.4						
GTA	Gaotai	40.09	330	eP	P	17 16 05.0	+1.1
GTA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
STKA	Stephens Creek	40.92	157	⇑iP	P	17 16 11.7	+1.0
	comp=Z,5.6nm,0.8s,mb4.2						
STKA	Stephens Creek	40.92	157	P	P	17 16 11.5	+0.8
	comp=Z,12nm,0.5s,mb4.7,baz=332,slow=7.9,SNR=53						
STKA	Stephens Creek	40.92	157	eP	P	17 16 11.7	+1.0
ASAJ	Asahikawa	41.54	20	P	P	17 16 16.4	+0.9
	comp=Z,3.6nm,0.5s,mb4.2,baz=254,slow=19,SNR=4.7						
JIRN	Jiri	42.12	306	eP	P	17 16 20.9	+0.5
	comp=Z,48nm,0.9s,mb5.0						
GUN	Gumba	42.48	306	eP	P	17 16 23.5	+0.3
	comp=Z,20nm,0.4s,mb5.0						
PKI	Pulchoki	42.72	305	eP	P	17 16 24.7	-0.5
	comp=Z,14nm,0.7s,mb4.6						
KKN	Kakani	42.91	305	eP	P	17 16 26.4	-0.3
	comp=Z,14nm,0.5s,mb4.7						
DMN	Daman	42.98	305	eP	P	17 16 26.9	-0.3
	comp=Z,30nm,0.9s,mb4.8						
GKN	Gorkha	43.52	305	eP	P	17 16 31.1	-0.3
	comp=Z,16nm,0.6s,mb4.7						
HIA	Hailar	43.55	356	eP	P	17 16 31.6	+0.3
	comp=Z,4.2nm,0.8s,mb4.0						
KOLN	Koldanda	44.28	304	eP	P	17 16 37.6	+0.3
	comp=Z,92nm,0.8s,mb5.4						
ULN	Ulaanbaatar	44.47	344	eP	P	17 16 38.4	-0.1
	comp=Z,2.7nm,0.6s,mb4.0						
SONM	Songino Array	44.63	343	P	P	17 16 40.1	+0.3
	comp=Z,3.4nm,1.0s,mb3.8,baz=166,slow=7.6,SNR=19						
HYB	Hyderabad	46.03	289	eP	P	17 16 50.0	-1.0
HYB	Hyderabad	46.03	289	i P	P	17 16 50.0	-1.0
TOO	Toolangi	47.44	157	eP	P	17 17 03.1	+1.6
	comp=Z,0.5nm,1.5s						
TAU	Tasmania Unive	52.78	159	P	P	17 17 41.5	+0.8
YAK	Yakutsk	56.34	3	eP	P	17 18 04.6	-0.8
	comp=Z,13nm,0.6s,mb4.3						
KZA	Kyzart	56.41	318	P	P	17 18 07.3	+1.1
	SNR=6.7						
UCH	Uchtor	56.97	318	P	P	17 18 11.2	+1.1
	SNR=6.5						
AAK	Ala-Archa	57.16	318	eP	P	17 18 10.3	-1.0
	comp=Z,2.7nm,0.8s,mb3.5						
USP	Ospenovka	57.43	319	P	P	17 18 13.1	-0.1
	SNR=9.6						
MA2	Magadan	57.46	16	eP	P	17 18 13.5	+0.5
	comp=Z,6.1nm,0.7s,mb3.9						
AML	Almayashu	57.48	317	P	P	17 18 14.5	+0.9
	SNR=8.6						
EKS2	Erkin-Say	57.65	318	P	P	17 18 15.2	+0.5
	SNR=6.7						
ZAL	Zalesovo	57.67	334	P	P	17 18 12.9	-1.7
	comp=Z,1.4nm,0.5s,mb3.5,baz=339,slow=6.0,SNR=5.8						
KURK	Kurchatov	58.69	328	eP	P	17 18 20.8	-0.8
	comp=Z,39nm,0.7s,mb4.7						
BVAR	Borovoye Array	64.26	327	P	P	17 18 56.6	-1.1
	comp=Z,3.5nm,0.6s,mb4.0,baz=135,slow=8.4,SNR=12						
CHKZ	Chkalovo	64.44	328	eP	P	17 18 57.9	-1.0
	comp=Z,6.2nm,0.9s,mb4.0						
RPZ	Rata Peaks	64.87	144	P	P	17 19 02.2	+0.5
	comp=Z,11nm,0.8s,mb4.3,baz=9.5,slow=6.1,SNR=2.6						
URZ	Urewera	65.75	136	P	P	17 19 07.9	+0.5
	comp=Z,4.9nm,0.7s,mb4.2,baz=212,slow=17,SNR=3.3						
OBN	Obninsk	83.96	325	P	P	17 20 47.2	-1.0
ILAR	Eielson Array	84.43	26	P	P	17 20 50.5	+0.2
	comp=Z,0.3nm,0.5s,baz=245,slow=6.1,SNR=5.3						
ASF	Jabal al Asfar	84.66	302	P	P	17 20 53.2	+0.9
	comp=Z,1.8nm,0.8s,mb3.6,baz=322,slow=3.6,SNR=6.8						
VNDA	Vanda	85.72	172	P	P	17 20 57.0	+0.7
	comp=Z,1.2nm,0.8s,mb3.6,baz=340,slow=12,SNR=3.0						
EIL	Elat	86.50	299	P	P	17 21 01.0	-0.1
	comp=Z,2.4nm,0.7s,mb3.9,baz=209,slow=41,SNR=2.2						
KMBO	Kilima Mbogo	87.02	269	P	P	17 21 04.9	+1.0
	comp=Z,1.2nm,0.8s,mb3.6,baz=227,slow=24,SNR=3.1						
ARCES	ARCESS Array B	87.70	340	P	P	17 21 05.6	-0.2
	comp=Z,6.2nm,0.9s,mb4.3,baz=90,slow=4.9,SNR=6.0						
AKASG	Malin Array Be	88.73	321	P	P	17 21 10.2	-0.9
	comp=Z,0.5nm,0.6s,mb3.6,baz=61,slow=4.3,SNR=4.4						
FINES	FINESS Array B	88.87	332	P	P	17 21 10.3	-1.1
	comp=Z,4.1nm,1.1s,mb4.2,baz=53,slow=6.9,SNR=8.4						
MSU	Marysvale	111.81	45	ePdif	Pdif	17 23 01.0	+6.3
SDCO	Great Sand Dun	116.77	43	ePdif	Pdif	17 23 13.8	-2.8
SCHQ	Schefferville	118.98	7	ePKPdf	PKPdf	17 27 04.2	+3.0

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*IDC **10** 17:11:33.4±1.0, 23.37S×169.36E, mb4.2/9, mb1 4.4/9, mb1mx4.3/15, mbtmp4.2/9, Error ellipse: s-maj=39.4km s-min=23.0km az=157.0*

ISC 10 17:11:37.8±0.9**, 23.3S**±0.2×**169.1E**±0.1**, h33^{km}, n17, σ0^{s}73**/11**, mb4.1**/9**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.75	295	eP	P	17 12 20.1	-0.4
NOUC	Port Laguerre	2.86	293	eP	P	17 12 21.5	-0.6
CTA	Charters Tower	21.50	274	P	P	17 16 27.7	+1.9
	5.4nm,1.0s,mb3.8,baz=87,slow=11,SNR=3.8						
STKA	Stephens Creek	25.83	245	P	P	17 17 08.3	+0.4
	5.9nm,0.8s,mb4.2,baz=88,slow=12,SNR=6.0						
ASAR	Alice Springs	32.27	262	P	P	17 18 05.4	-0.4
	4.6nm,1.1s,mb4.2,baz=85,slow=8.3,SNR=16						
WRA	Warramunga Arr	32.48	269	P	P	17 18 07.0	-0.6
	0.6nm,0.6s,mb3.6,baz=101,slow=7.9,SNR=4.2						
WRA				PcP	PcP	17 20 52.9	-1.3
	0.9nm,0.6s,baz=92,slow=2.7,SNR=3.8						
CMAR	Chiang Mai Arr	80.08	295	P	P	17 23 46.5	+0.1
	2.4nm,0.7s,mb4.2,baz=136,slow=3.9,SNR=18						
SNAA	Sanae	85.16	183	P	P	17 24 10.6	-0.6
	2.7nm,1.0s,mb4.3,baz=49,slow=9.6,SNR=4.7						
SONM	Songino Array	90.36	323	P	P	17 24 37.1	+0.3
	0.8nm,0.9s,mb4.1,baz=135,slow=4.1,SNR=2.4						
NVAR	Mina Array Bea	91.52	49	P	P	17 24 41.9	-0.6
	1.9nm,0.8s,mb4.5,baz=232,slow=7.5,SNR=9.4						
ILAR	Eielson Array	94.08	17	P	P	17 24 54.2	+0.8
	0.5nm,0.8s,mb4.0,baz=248,slow=3.9,SNR=3.9						
CLL	Collm	146.47	333	P	PKPdf	17 31 17.0	+3.1
PRU	Pruhonice	146.74	330	eP	PKPdf	17 31 12.5	-1.9
EKA	Eskdalemuir Ar	147.46	352	PKPbc	PKPdf	17 31 18.8	+3.4
	1.4nm,0.7s,baz=45,slow=2.4,SNR=3.9						
KHC	Kasperske Hory	147.78	329	eP	PKPdf	17 31 19.5	+3.4
GERES	GERESS Array B	147.93	329	PKPbc	PKPdf	17 31 19.6	+3.3
	1.4nm,0.8s,baz=34,slow=3.5,SNR=6.1						
DAVOX	Davos	151.20	330	PKPbc	PKPdf	17 31 29.6	+8.0
	3.8nm,0.8s,baz=184,slow=23,SNR=3.5						

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*IDC **10** 17:12:43.5±0.5, 23.21S×169.27E, mb4.8/16, mb1 4.8/17, mb1mx4.7/22, mbtmp4.7/17, ML3.4/1, MS5.1/1, Ms1 5.1/1, ms1mx3.6/24, Error ellipse: s-maj=20.3km s-min=16.5km az=152.0*

*NEIC **10** 17:12:45.3±0.2, 23.12S×169.20E, h10^{km}, mb5.1/29, Error ellipse: s-maj=8.2km s-min=7.6km az=161.0*

*HRVD **10** 17:12:45.3±0.5, 23.12S×169.17E, h12^{km}, MW5.2/38, Centroid moment Tensor Solution. LP body waves: s4,c5; Mantle waves: s38,c68; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.79±.04; $M_{\theta\theta}$0.65±.03; $M_{\phi\phi}$0.14±.03; $M_{r\theta}$-0.46±.12; $M_{\theta\phi}$0.03±.03; $M_{\phi r}$-0.04±.20; Best double couple: M_0.857×10^{17} NP1:ϕ_s267°, δ29°, λ-89°. NP2:ϕ_s86°, δ61°, λ-91°. Principal axes: T .787, Plg16°, Azm176°; N .14, Plg1°, Azm86°; P -.927, Plg74°, Azm354°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **10** 17:12:47.1, 22.37S×168.95E, h10^{km}, mb5.0, Ms5.6, Msz5.5*

*ORF **10** 17:12:51.3, 23.78S×167.88E, h30^{km}, mb5.9*

ISC 10 17:12:46.9±0.3**, 23.25S**±0.07×**169.19E**±0.07**, h33^{km}, n119, σ1^{s}08**/62**, mb5.0**/43**, MS5.5**/1**, 8C-2D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.43	157	Pn	P	17 16 35.8	-0.7
	0.1nm,0.3s,baz=315,slow=13,SNR=2.4						
URZ				LR	LR	17 21 31.8	
	comp=Z,6μm,18.4s,baz=360,slow=32						
AFI	Afiamalu	20.27	66	eP	P	17 17 22.2	-0.2
RPZ	Rata Peaks	20.47	176	P	P	17 17 24.0	-0.4
	52nm,1.2s,baz=12,slow=20,SNR=1.5						
CTA	Charters Tower	21.54	274	⇑iP	P	17 17 37.3	+1.9
	18nm,1.4s,mb4.3						
CTA	Charters Tower	21.54	274	P	P	17 17 36.5	+1.1
	8.5nm,0.7s,mb4.3,baz=104,slow=13,SNR=8.0						
CTAO	Charters Tower	21.54	274	eP	P	17 17 36.7	+1.3
	111nm,1.6s,mb5.0						
TOO	Toolangi	24.84	229	eP	P	17 18 11.1	+3.4
	0.7nm,1.0s						
PMG	Port Moresby	25.17	300	P	P	17 18 10.0	-1.0
	10nm,0.8s,mb4.4,baz=100,slow=14,SNR=4.9						
PMG	Port Moresby	25.17	300	P	P	17 18 09.6	-1.4
	40nm,1.2s,mb4.8						
STKA	Stephens Creek	25.87	245	⇑iP	P	17 18 19.3	+1.8
	18nm,1.0s,mb4.6						
STKA	Stephens Creek	25.87	245	P	P	17 18 18.9	+1.4
	21nm,1.0s,mb4.6,baz=86,slow=12,SNR=9.3						
STKA				PcP	PcP	17 21 46.5	-0.2
	4.6nm,0.9s,baz=60,slow=5.7,SNR=3.1						
STKA	Stephens Creek	25.87	245	eP	P	17 18 18.9	+1.4
ASAR	Alice Springs	32.32	262	P	P	17 19 15.1	-0.3
	26nm,1.2s,mb4.9,baz=83,slow=8.9,SNR=18						
ASAR				PcP	PcP	17 22 02.3	-0.6
	3.8nm,0.9s,baz=103,slow=2.9,SNR=8.7						
ASPA	Alice Springs	32.33	262	eP	P	17 19 15.5	+0.1
WRAB	Tennant Creek	32.52	269	eP	P	17 19 15.6	-1.5
	19nm,1.1s,mb4.9						
WRA	Warramunga Arr	32.52	269	P	P	17 19 15.3	-1.9
	3.3nm,0.7s,mb4.4,baz=97,slow=8.0,SNR=8.1						
WRA				PcP	PcP	17 22 02.7	-0.8
	3.0nm,0.8s,baz=98,slow=2.5,SNR=9.2						
KAKA	Kakadu	36.39	280	eP	P	17 19 49.4	-0.9
	13nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	40.95	269	⇓iP	P	17 20 28.7	+0.4
	24nm,0.9s,mb4.8						
MBWA	Marble Bar	45.66	263	eP	P	17 21 06.3	-0.2
	45nm,0.8s,mb5.5						
NWAO	Narrogin (SRO)	46.45	246	P	P	17 21 12.3	-0.2
	23nm,1.1s,mb5.0,baz=111,slow=11,SNR=3.8						
NWAO	Narrogin (SRO)	46.45	246	eP	P	17 21 11.9	-0.7
	39nm,1.3s,mb5.2						
SBA	Scott Base	54.67	181	P	P	17 22 15.4	+0.9
	47nm,1.4s,mb5.3						
CASY	Casey	56.46	204	P	P	17 22 20.2	-7.3
	15nm,1.0s,mb5.0						
MAJO	Matsushiro	66.27	333	eP	P	17 23 30.3	-3.8
	14nm,0.9s,mb5.0						
QSPA	South Pole Qui	66.83	180	⇑iP	P	17 23 40.5	+3.6
	21nm,1.3s,mb5.0						
ASAJ	Asahikawa	71.33	340	P	P	17 24 05.3	+0.2
	3.5nm,0.7s,mb4.4,baz=87,slow=31,SNR=3.6						
KS15	Wonju Array Si	71.80	326	P	P	17 24 08.1	0.0
YSS	Yuzh-Sakhalins	73.84	341	P	P	17 24 18.5	-1.4
	20nm,1.0s,mb5.0						
MAW	Mawson	74.72	202	P	P	17 24 22.9	-1.8
	47nm,1.7s,mb5.1						
FX1	Attu Island--F	75.88	2	P	P	17 24 31.2	-0.4
	18nm,0.9s,mb5.0,baz=296,slow=21,SNR=3.9						
MDJ	Mudanjiang	76.62	332	P	P	17 24 36.4	+0.5
MDJ				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,3μm,14.8s						
MDJ	Mudanjiang	76.62	332	eP	P	17 24 36.2	+0.2
	comp=Z,33nm,1.3s,mb5.1						
CN2	Changchun	77.85	329	eP	P	17 24 41.0	-1.8
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
ENH	Enshi	78.19	310	eP	P	17 24 44.6	-0.4
	comp=Z,88nm,1.6s,mb5.4						
BJT	Baijiatuau	80.01	321	eP	P	17 24 54.5	-0.2
	comp=Z,19nm,1.0s,mb5.0						
BJI	Beijing	80.02	321	P	P	17 24 55.2	+0.5
BJI				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.9						
BJI	Beijing	80.02	321	P	P	17 24 55.2	+0.5
	comp=Z,17nm,1.0s,mb4.9						
CM31	Chiang Mai Arr	80.12	295	eP	P	17 24 57.2	+1.6
	comp=Z,25nm,1.0s,mb5.1						
CMAR	Chiang Mai Arr	80.12	295	P	P	17 24 56.9	+1.2
	comp=Z,9.7nm,0.8s,mb4.8,baz=134,slow=4.2,SNR=33						
KMI	Kunming	80.36	303	⇑P	P	17 24 58.2	+1.3
KMI				AMB	AMB		
	comp=Z,21nm,1.4s,mb4.9						
KMI				LR	LR		
	comp=N,1μm,18.6s,MS5.4						
KMI				LR	LR		
	comp=E,1μm,21.3s,MS5.4						
KMI				LR	LR		
	comp=Z,2μm,17.6s,MS5.5						
KMI	Kunming	80.36	303	⇑P	P	17 24 58.2	+1.3
	comp=Z,21nm,1.4s,mb4.9						
XAN	Xi’an	80.79	313	P	P	17 24 59.6	+0.7
XAN				AMB	AMB		
	comp=Z,17nm,1.1s,mb4.9						
HHC	Hu-ho-hao-te	83.23	320	⇓P	P	17 25 12.6	+1.2
HHC				AP	pP	17 25 19.2	-2.6
HHC				XP	sP	17 25 22.8	-2.6
HHC				AMB	AMB		
	comp=Z,18nm,1.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,1μm,13.1s						
MA2	Magadan	83.90	351	P	P	17 25 14.4	0.0
	comp=Z,8.7nm,1.1s,mb4.8						
SNAA	Sanae	85.17	183	P	P	17 25 21.2	+0.8
	comp=Z,4.0nm,1.0s,mb4.5,baz=218,slow=3.6,SNR=5.0						
SNAA	Sanae	85.17	183	eP	P	17 25 20.2	-0.2
	comp=Z,601nm,1.4s						
LZH	Lanzhou	85.37	312	⇑P	P	17 25 24.0	+1.7
LZH				AP	pP	17 25 34.0	+1.2
LZH				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.5						
LZH	Lanzhou	85.37	312	⇑P	P	17 25 24.0	+1.7
	comp=Z,60nm,1.5s,mb5.5						
LZH				pP	pP	17 25 34.0	+1.2
LZH				sP	sP	17 25 38.5	+2.2
OHCM	Honcut	89.77	47	eP	P	17 25 43.2	-0.2
CMB	Columbia Colle	89.85	48	eP	P	17 25 43.9	0.0
	comp=Z,29nm,1.3s,mb5.5						
ULN	Ulaanbaatar	90.04	323	eP	P	17 25 44.9	+0.4
	comp=Z,18nm,1.2s,mb5.3						
YBH	Yreka Blue Hor	90.20	44	P	P	17 25 46.2	+0.8
	comp=Z,4.7nm,0.9s,mb4.8,baz=113,slow=1.4,SNR=8.3						
SONM	Songino Array	90.38	323	P	P	17 25 47.0	+1.0
	comp=Z,4.6nm,0.9s,mb4.8,baz=139,slow=4.3,SNR=14						
YAK	Yakutsk	90.66	343	eP	P	17 25 46.5	-0.5
	comp=Z,28nm,1.0s,mb5.5						
BILL	Bilibino	91.04	359	P	P	17 25 47.0	-1.6
	comp=Z,76nm,2.1s,mb5.7						
PALK	Pallekele	91.45	277	P	P	17 25 49.2	-2.6
	comp=Z,28nm,1.2s,mb5.5						
NVAR	Mina Array Bea	91.48	49	P	P	17 25 52.0	+0.6
	comp=Z,6.0nm,0.8s,mb5.0,baz=225,slow=8.6,SNR=21						
NVAR	Mina Array Bea	91.48	49	P	P	17 25 52.0	+0.6
COLA	College	93.87	17	eP	P	17 26 00.6	-1.1
	comp=Z,7.8nm,0.9s,mb5.1						
TLY	Talaya	94.02	325	eP	P	17 26 03.2	+0.6
	comp=Z,4.7nm,0.9s,mb4.9						
ILAR	Eielson Array	94.05	17	P	P	17 26 01.7	-0.8
	comp=Z,1.9nm,0.8s,mb4.6,baz=246,slow=5.3,SNR=9.3						
PDAR	Pinedale Array	99.35	48	P	P	17 26 28.9	+1.8
	comp=Z,0.8nm,1.0s,mb4.2,baz=297,slow=2.0,SNR=3.4						
FRB	Frobisher Bay	124.74	27	PKP	PKPdf	17 31 43.0	+0.1
	comp=Z,8.2nm,1.1s,baz=312,slow=5.2,SNR=7.5						
FRB	Frobisher Bay	124.74	27	PKP	PKPdf	17 31 43.0	+0.1
BDFB	Brasilia	126.92	133	PKP	PKPdf	17 31 49.6	+1.2
	comp=Z,2.4nm,0.9s,baz=8.2,slow=3.5,SNR=2.5						
KMBO	Kilima Mbogo	127.37	249	PKP	PKPdf	17 31 51.2	+1.8
	comp=Z,0.6nm,0.3s,baz=229,slow=20,SNR=4.6						
KMBO	Kilima Mbogo	127.37	249	PKP	PKPdf	17 31 51.2	+1.8
SCHQ	Schefferville	128.13	38	PKP	PKPdf	17 31 49.7	0.0
	comp=Z,0.7nm,0.7s,baz=267,slow=14,SNR=4.1						
SCHQ	Schefferville	128.13	38	PKP	PKPdf	17 31 49.7	0.0
SJG	San Juan	128.23	85	PKP	PKPdf	17 31 51.1	+0.3
	comp=Z,7.8nm,0.3s,baz=37,slow=22,SNR=2.8						
SJG	San Juan	128.23	85	PKP	PKPdf	17 31 51.1	+0.3
ARCES	ARCESS Array B	128.91	344	PKP	PKPdf	17 31 52.4	+1.6
	comp=Z,3.0nm,0.9s,baz=53,slow=4.0,SNR=5.5						
TSUM	Tsumeb	129.52	216	PKP	PKPdf	17 31 56.0	+2.7
	comp=Z,1.8nm,0.8s,baz=288,slow=11,SNR=2.9						
AKASG	Malin Array Be	138.65	322	PKP	PKPdf	17 32 10.8	+1.4
	comp=Z,1.3nm,0.8s,baz=49,slow=2.4,SNR=6.5						
BRTR	Keskin Array B	139.13	304	PKP	PKPdf	17 32 12.0	+1.4
	comp=Z,2.0nm,1.1s,baz=18,slow=7.8,SNR=4.3						
MLR	Muntele Rosu	142.87	316	PKP	PKPdf	17 32 20.1	+3.1
	comp=Z,1.7nm,0.8s,baz=112,slow=11,SNR=3.2						
KOLS	Kolonicke sedl	143.44	323	ePKP	PKPdf	17 32 18.7	+0.9
KOLS				e		17 32 31.5	
CRVS	Cervenica-Dubn	143.91	323	ePKP	PKPdf	17 32 19.6	+1.0
KECS	Kecovo	144.68	323	ePKP	PKPdf	17 32 21.8	+1.8
OKC	Ostrava-Krasne	145.10	327	ePKP	PKPdf	17 32 22.6	+1.9
PSZ	Piszkesteto	145.32	323	ePKPpre		17 32 19.4	
PSZ				ePKPdf	PKPdf	17 32 22.9	+1.8
KSP	Ksiaz	145.35	329	eP	PKPdf	17 32 23.6	+2.5
KSP	Ksiaz	145.35	329	ePKP	PKPdf	17 32 23.7	+2.6
VYHS	Vyhne	145.56	324	ePKP	PKPdf	17 32 24.5	+2.9
VYHS				e		17 32 34.5	
VYHS				e		17 32 58.0	
DPC	Dobruska-Polom	145.66	329	ePKP	PKPdf	17 32 24.3	+2.6
UPC	Upice	145.71	329	ePKP	PKPdf	17 32 23.7	+2.0
KOLL	Kolacno	145.75	325	ePKP	PKPdf	17 32 25.0	+3.1
VRAC	Vranov	146.22	327	PKPbc	PKPbc	17 32 25.6	+1.9
	comp=Z,18nm,1.0s,baz=25,slow=2.9,SNR=12						
PVCC	Panska Ves	146.36	330	ePKP	PKPdf	17 32 25.2	+2.3
BRG	Berggiesshubel	146.39	331	i P	PKPdf	17 32 26.5	+3.6
CLL	Collm	146.48	333	i PKP1	PKPbc	17 32 26.5	+2.2
CLL				e		17 32 51.0	
ZST	Bratislava	146.66	325	ePKP	PKPdf	17 32 27.6	+4.1
ZST				e		17 32 45.3	
PRU	Pruhonice	146.75	330	ePKP	PKPdf	17 32 26.9	+3.4
DIVS	Divcibare	147.28	317	⇑iP	PKPdf	17 32 29.1	+4.5
EKA	Eskdalemuir Ar	147.45	352	PKPbc	PKPdf	17 32 28.5	+4.0
	comp=Z,23nm,0.9s,baz=353,slow=2.7,SNR=19						
NKC	Novy Kostel	147.51	332	ePKP	PKPdf	17 32 29.6	+4.8
MOX	Moxa	147.56	333	i P	PKPdf	17 32 29.9	+5.1
	comp=Z,logA/T=1.2						
KHC	Kasperske Hory	147.80	329	eP	PKPdf	17 32 27.2	+1.9
KHC				e		17 32 30.0	
KHC	Kasperske Hory	147.80	329	ePKP	PKPdf	17 32 27.2	+1.9
KHC				pPKP		17 32 30.0	
GERES	GERESS Array B	147.94	329	PKP	PKPdf	17 32 26.9	+1.4
	comp=Z,8.8nm,1.0s,baz=90,slow=6.7,SNR=5.0						
GERES				PKPbc	PKPdf	17 32 30.4	+4.9
	comp=Z,12nm,1.0s,baz=45,slow=1.9,SNR=22						
GRA1	Grafenberg Arr	148.44	332	ePKP	PKPdf	17 32 32.1	+5.8
GRF	Grafenberg Arr	148.44	332	ePKP	PKPdf	17 32 32.1	+5.8
BOJS	Bojanci	149.32	323	ePKP	PKPdf	17 32 34.5	+6.6
LJU	Ljubljana	149.39	324	ePKP	PKPdf	17 32 34.5	+6.5
STU	Stuttgart	150.00	333	ePKPbc	PKPdf	17 32 34.4	+5.6
WLF	Walferdange	150.46	337	ePKPbc	PKPdf	17 32 36.9	+7.4
GIVF	Givet	150.53	339	ePKP1	PKPdf	17 32 36.8	+7.2
	comp=Z,83nm,1.0s						
BAIF	Baives	150.77	340	ePKP1	PKPdf	17 32 37.6	+7.7
	comp=Z,56nm,1.2s						
CDF	Champ du Feu	151.07	335	ePKP1	PKPdf	17 32 37.8	+7.4
	comp=Z,42nm,1.2s						
DAVOX	Davos	151.22	330	PKPbc	PKPdf	17 32 38.4	+7.7
	comp=Z,13nm,0.9s,baz=29,slow=4.5,SNR=9.5						
HINF	Hinteralfeld	151.72	334	ePKP1	PKPdf	17 32 39.3	+7.9
	comp=Z,30nm,1.2s						
HAU	Haudompre	151.76	335	ePKP1	PKPdf	17 32 39.4	+7.9
	comp=Z,28nm,1.0s						
MEZF	Maizieres J’vi	151.83	337	ePKP1	PKPdf	17 32 40.1	+8.6
	comp=Z,71nm,1.1s						
LPL	La Plagne	153.60	332	ePKP1	PKPdf	17 32 44.0	+10
	comp=Z,13nm,1.0s						
SSF	Saint Saulge	153.60	338	ePKP1	PKPdf	17 32 43.6	+10
	comp=Z,25nm,1.2s						
LPG	La Plagne	153.60	331	ePKP1	PKPdf	17 32 44.3	+10
	comp=Z,9.6nm,0.8s						
SBF	Sospel	154.53	328	ePKP1	PKPdf	17 32 46.7	+11
DBIC	Dimbokro	162.55	200	PKP	PKPdf	17 32 49.3	+3.5
	comp=Z,3.0nm,1.0s,baz=196,slow=5.3,SNR=3.2						
DBIC				PKPab	PKPab	17 33 35.0	-1.4
	comp=Z,8.3nm,1.2s,baz=173,slow=7.4,SNR=4.0						
DBIC	Dimbokro	162.55	200	PKP	PKPdf	17 32 49.3	+3.5
DBIC				PKPab	PKPab	17 33 35.0	-1.4

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*IDC **10** 17:17:23.6±1.1, 22.52S×175.30W, mb4.2/9, mb1 4.4/10, mb1mx4.2/19, mbtmp4.2/10, ML4.0/1, Error ellipse: s-maj=37.2km s-min=22.3km az=138.0*

*NEIC **10** 17:17:26.7±0.9, 22.40S×175.28W, h25^{km}, mb4.8/4, Error ellipse: s-maj=26.6km s-min=13.4km az=126.0*

ISC 10 17:17:23.6±1.1**, 22.3S**±0.1×**175.0W**±0.2**, h33^{km}, n21, σ0^{s}99**/20**, mb4.3**/12**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.91	20	ePn	P	17 19 33.0	0.0
AFI				eSn	Sn	17 21 10.4	-3.2
URZ	Urewera	17.27	201	Pn	P	17 21 23.2	-0.6
	0.5nm,0.3s,baz=54,slow=14,SNR=3.3						
URZ				Sn	S	17 24 16.4	-17
	0.3nm,0.3s,baz=276,slow=20,SNR=3.4						
RPZ	Rata Peaks	24.26	205	P	P	17 22 39.6	+0.8
	5.3nm,0.7s,mb4.1,baz=65,slow=16,SNR=2.8						
CTA	Charters Tower	36.14	266	P	P	17 24 26.1	+1.2
	1.8nm,0.4s,mb4.3,baz=66,slow=15,SNR=9.1						
CTAO	Charters Tower	36.14	266	eP	P	17 24 23.1	-1.8
	5.4nm,0.8s,mb4.5						
PMG	Port Moresby	38.50	283	P	P	17 24 45.2	+0.6
	7.6nm,0.8s,mb4.5,baz=176,slow=14,SNR=2.9						
STKA	Stephens Creek	39.59	247	P	P	17 24 53.7	+0.1
	0.9nm,0.5s,mb3.8,baz=102,slow=14,SNR=5.6						
STKA	Stephens Creek	39.59	247	eP	P	17 24 53.5	0.0
ASAR	Alice Springs	46.87	258	P	P	17 25 53.0	+0.4
	5.8nm,0.8s,mb4.6,baz=90,slow=8.2,SNR=43						
ASPA	Alice Springs	46.87	258	eP	P	17 25 53.4	+0.7
WRAB	Tennant Creek	47.15	263	eP	P	17 25 54.8	-0.1
	7.2nm,0.9s,mb4.6						
WRAB				e		17 26 07.5	
WRA	Warramunga Arr	47.15	263	P	P	17 25 54.7	-0.4
	2.2nm,0.7s,mb4.2,baz=96,slow=8.4,SNR=30						
MBWA	Marble Bar	60.21	258	eP	P	17 27 29.2	-1.9
	8.9nm,1.0s,mb4.8						
PMSA	Palmer Station	78.49	156	eP	P	17 29 17.4	-5.3
	186nm,1.2s						
NVAR	Mina Array Bea	80.47	42	P	P	17 29 39.0	+5.1
	0.3nm,0.5s,mb3.5,baz=229,slow=8.3,SNR=2.5						
MDJ	Mudanjiang	83.64	324	P	P	17 29 54.0	+3.8
	6.4nm,0.9s,mb4.8						
ILAR	Eielson Array	89.50	12	P	P	17 30 23.0	+4.7
	1.2nm,1.1s,mb4.1,baz=210,slow=7.3,SNR=5.3						
CMAR	Chiang Mai Arr	93.37	288	P	P	17 30 41.7	+4.5
	1.7nm,0.8s,mb4.5,baz=126,slow=3.3,SNR=8.0						
AKASG	Malin Array Be	145.96	332	PKPbc	PKPbc	17 37 04.0	+4.1
	2.9nm,0.8s,baz=42,slow=4.1,SNR=13						
ASF	Jabal al Asfar	150.11	296	PKPbc	PKPdf	17 37 16.7	+10
	1.5nm,0.5s,baz=172,slow=1.1,SNR=3.0						
BRTR	Keskin Array B	150.15	312	PKPbc	PKPdf	17 37 16.6	+11
	1.6nm,0.9s,baz=117,slow=2.8,SNR=6.2						

IDC 10 17:23:47.5±4.2**, 18.48S**×**173.87W, mb3.7**/4**, mb1 4.0**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, Error ellipse: s-maj=279.6km s-min=27.6km az=153.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.62	261	P	P	17 31 04.7	-1.2
	11nm,1.3s,baz=94,slow=14,SNR=3.0						
WRA	Warramunga Arr	48.77	259	P	P	17 32 34.4	-2.1
	0.3nm,0.8s,baz=97,slow=7.5,SNR=11						
ASAR	Alice Springs	48.80	254	P	P	17 32 34.5	-2.0
	0.3nm,0.6s,baz=91,slow=7.2,SNR=8.5						
NVAR	Mina Array Bea	76.91	42	P	P	17 35 42.1	-1.4

0.4nm,0.8s,baz=207,slow=4.0,SNR=2.7

IDC 10 17:32:29.7±7.8**, 14.87N×93.69E, h51**^{km}±71^{km}**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.4**/19**, mbtmp3.5**/6**, ML3.8**/1**, Error ellipse: s-maj=49.1km s-min=21.1km az=48.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.17	54	P	P	17 33 57.8	-2.6
	0.6nm,0.3s,baz=240,slow=15,SNR=10						
CMAR				S	S	17 35 09.0	-1.6
	0.3nm,0.3s,baz=242,slow=23,SNR=3.4						
SONM	Songino Array	34.52	15	P	P	17 39 12.5	-2.5
	0.3nm,0.9s,baz=188,slow=10,SNR=2.9						
WRA	Warramunga Arr	52.87	130	P	P	17 41 39.9	-3.0
	0.8nm,0.9s,baz=314,slow=8.2,SNR=5.3						
ASAR	Alice Springs	54.88	134	P	P	17 41 55.8	-1.9
	0.5nm,0.8s,baz=311,slow=7.1,SNR=11						
BRTR	Keskin Array B	57.68	308	P	P	17 42 15.4	-2.1
	0.3nm,0.4s,baz=79,slow=7.3,SNR=2.6						
GERES	GERESS Array B	72.39	317	P	P	17 43 50.8	-1.4
	0.9nm,0.8s,baz=76,slow=5.5,SNR=5.1						

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*IDC **10** 17:33:44.8±0.5, 14.87N×93.65E, mb4.2/17, mb1 4.3/18, mb1mx4.3/24, mbtmp4.2/18, ML4.4/1, Error ellipse: s-maj=22.3km s-min=13.1km az=60.0*
*BJI **10** 17:33:47.8, 15.02N×93.59E, h21^{km}, mb4.5, Ms5.1*
*NEIC **10** 17:33:49.1±0.3, 14.90N×93.58E, h30^{km}, mb4.6/9, Error ellipse: s-maj=7.3km s-min=6.0km az=51.0*
ISC 10 17:33:43.2±2.2**, 14.84N**±0.05×**93.63E**±0.04**, h2**^{km}±14^{km}**, n57,** σ**1**^{s}**02**/61**, mb4.3**/29**, 3C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	6.24	54	*e*Pn	Pn	17 35 19.3	+0.8
	23nm,0.4s						
CMAR	Chiang Mai Arr	6.24	54	Pn	Pn	17 35 19.0	+0.5
	2.2nm,0.3s,baz=243,slow=15,SNR=18						
CMAR				Sn	Sn	17 36 30.4	-0.9
	2.2nm,0.3s,baz=239,slow=19,SNR=3.2						
BWNR	Bhubaneshwar	9.23	307	*e*	P	17 36 04.0	+3.8
BWNR				*e*S	Sn	17 37 35.0	-11
VIS	Vishakhapatnam	10.30	288	*i* P	P	17 36 13.7	-1.4
VIS				*e*S	S	17 37 58.4	-14
SHL	Shillong	10.80	352	*e*P	P	17 36 18.0	-4.0
SHL				*e*S	S	17 38 13.5	-11
BLSP	Bilaspur	13.09	305	*e*P	P	17 36 53.0	+0.1
BLSP				*e*P		17 36 53.1	
BLSP				AMb	AMB	17 36 55.8	
	comp=Z,12nm,0.3s						
BLSP				*e*S	S	17 39 08.9	-11
JIRN	Jiri	14.52	333	*e*P	P	17 37 11.1	-0.6
	comp=Z,19nm,0.3s						
HYB	Hyderabad	14.71	282	*i* P	P	17 37 14.0	-0.3
HYB				*e*		17 39 47.0	
HYB				*e*S	S	17 39 59.0	0.0
PALK	Pallekele	14.74	241	P	P	17 37 14.3	-0.4
	comp=Z,63nm,1.5s						
PKI	Pulchoki	14.80	330	*e*P	P	17 37 14.7	-0.8
	comp=Z,48nm,1.0s						
LSA	Lhasa	14.97	352	P	P	17 37 13.6	-4.1
LSA	Lhasa	14.97	352	*e*P	P	17 37 15.4	-2.2
	comp=Z,18nm,0.8s						
LSA				*e*S	S	17 39 58.3	-6.8
DMN	Daman	14.98	329	*e*P	P	17 37 17.2	-0.6
	comp=Z,11nm,0.4s						
KKN	Kakani	15.05	330	*e*P	P	17 37 17.8	-0.9
	comp=Z,15nm,0.6s						
GKN	Gorkha	15.54	329	*e*P	P	17 37 24.5	-0.6
	comp=Z,14nm,0.4s						
KOLN	Koldanda	15.89	326	*e*P	P	17 37 29.9	+0.2
	comp=Z,22nm,0.5s						
LATR	Latur	16.74	285	*e*	P	17 37 36.0	-4.5
LATR				*e*		17 40 30.5	
GYA	Guiyang	16.79	44	⇑*i*P	P	17 37 43.4	+2.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
BHPL	Bhopal	17.44	301	*e*P	P	17 37 52.0	+2.7
BHPL				AMb	AMB	17 38 01.7	
	comp=Z,9.5nm,0.6s						
CD2	Chengdu	18.50	28	*e*P	P	17 38 01.2	-1.3
POO	Poona	19.30	284	*e*P	P	17 38 13.4	+1.2
POO				AMb	AMB	17 38 14.8	
	comp=Z,16nm,0.6s						
DDI	Dehra Dun	21.04	320	*e*P	P	17 38 32.4	+1.6
ENH	Enshi	21.18	41	*e*P	P	17 38 31.1	-1.2
	comp=Z,22nm,0.7s,mb4.6						
LZH	Lanzhou	23.05	22	⇑P	P	17 38 52.0	+1.1
LZH				AP		17 38 59.0	
LZH				XP		17 39 03.5	
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb4.7						
LZH	Lanzhou	23.05	22	⇑P	P	17 38 52.0	+1.1
	comp=Z,42nm,1.5s,mb4.7						
LZH				pP		17 38 59.0	
LZH				sP		17 39 03.5	
XAN	Xi’an	23.60	33	P	P	17 38 56.5	+0.3
XAN				AP		17 39 00.9	
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GTA	Gaotai	25.08	11	*e*P	P	17 39 12.5	+2.0
GTA				AP	pP	17 39 18.1	+6.9
GTA				XP	sP	17 39 20.6	+9.1
GTA				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.4						
AAK	Ala-Archa	32.23	333	*e*P	P	17 40 16.1	+1.1
	comp=Z,2.8nm,1.1s,mb4.0						
SONM	Songino Array	34.56	15	P	P	17 40 35.8	+0.6
	comp=Z,3.2nm,1.0s,mb4.2,baz=203,slow=9.4,SNR=18						
ULN	Ulaanbaatar	34.76	16	*e*P	P	17 40 37.0	0.0
	comp=Z,8.5nm,1.3s,mb4.5						
KURK	Kurchatov	37.79	344	*e*P	P	17 41 02.9	+0.4
	comp=Z,6.7nm,1.1s,mb4.3						
CN2	Changchun	39.60	37	*e*P	P	17 41 20.9	+3.2
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
ZAL	Zalesovo	39.63	352	P	P	17 41 18.0	+0.2
	comp=Z,2.4nm,0.7s,mb4.0,baz=321,slow=8.1,SNR=14						
BVAR	Borovoye Array	42.31	339	P	P	17 41 39.0	-0.8
	comp=Z,0.3nm,0.4s,mb3.2,baz=135,slow=6.1,SNR=2.4						
CHKZ	Chkalovo	42.77	340	*e*P	P	17 41 43.5	-0.1
	comp=Z,2.3nm,0.6s,mb4.1						
NWAO	Narrogin (SRO)	52.58	155	P	P	17 43 02.3	+1.7
	comp=Z,5.9nm,0.7s,mb4.6,baz=285,slow=18,SNR=2.8						
WRA	Warramunga Arr	52.89	130	P	P	17 43 02.2	-0.9
	comp=Z,0.6nm,0.4s,mb3.8,baz=312,slow=7.9,SNR=17						
WRA				PcP	PcP	17 44 11.4	-0.9
	comp=Z,1.5nm,0.7s,baz=315,slow=3.2,SNR=7.7						
WRAB	Tennant Creek	52.89	130	*e*P	P	17 43 01.8	-1.4
	comp=Z,51nm,1.6s,mb5.2						
ASPA	Alice Springs	54.90	134	*e*P	P	17 43 17.8	-0.1
ASAR	Alice Springs	54.90	134	P	P	17 43 16.8	-1.0
	comp=Z,1.7nm,0.6s,mb4.3,baz=311,slow=6.7,SNR=25						
ASAR				PcP	PcP	17 44 20.1	+0.2
	comp=Z,1.2nm,0.7s,baz=321,slow=3.9,SNR=5.6						
BRTR	Keskin Array B	57.66	308	P	P	17 43 36.2	-1.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=133,slow=8.2,SNR=2.9						
MA2	Magadan	60.92	29	P	P	17 43 53.7	-6.0
	comp=Z,12nm,1.1s,mb4.9						
AKASG	Malin Array Be	62.48	320	P	P	17 44 10.4	+0.1
	comp=Z,0.1nm,0.3s,mb3.4,baz=87,slow=6.1,SNR=3.1						
STKA	Stephens Creek	65.34	136	P	P	17 44 28.6	-0.8
	comp=Z,3.0nm,0.8s,mb4.4,baz=312,slow=8.7,SNR=8.1						
FINES	FINESS Array B	66.39	331	P	P	17 44 34.5	-1.0
	comp=Z,7.9nm,1.1s,mb4.6,baz=117,slow=6.2,SNR=4.1						
ARCES	ARCESS Array B	68.60	339	P	P	17 44 50.1	+0.7
	comp=Z,2.9nm,1.0s,mb4.2,baz=97,slow=7.3,SNR=2.6						
HFS	Hagfors	72.25	329	P	P	17 45 11.1	-0.6
	comp=Z,3.2nm,0.8s,mb4.3,baz=141,slow=9.5,SNR=5.4						
GERES	GERESS Array B	72.38	317	P	P	17 45 12.8	+0.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=90,slow=6.7,SNR=9.5						
LBTB	Lobatse	77.22	240	P	P	17 45 41.9	+1.0
	comp=Z,4.4nm,0.9s,mb4.4,baz=68,slow=5.4,SNR=6.0						
BOSA	Boshof	78.92	236	*e*P	P	17 45 50.7	+0.5
	comp=Z,6.8nm,0.8s,mb4.6						
ILAR	Eielson Array	88.52	22	P	P	17 46 37.7	-0.5
	comp=Z,0.6nm,0.7s,mb4.0,baz=317,slow=4.6,SNR=7.5						
INK	Inuvik	90.48	16	P	P	17 46 47.5	+0.2
	comp=Z,1.1nm,0.6s,mb4.4,baz=359,slow=7.9,SNR=6.4						
YKA	Yellowknife Ar	99.80	13	P	P	17 47 30.3	+0.3
	comp=Z,0.9nm,1.1s,mb4.1,baz=330,slow=3.9,SNR=5.4						
YKA	Yellowknife Ar	99.80	13	P	P	17 47 30.3	+0.3
NVAR	Mina Array Bea	119.15	28	PKP	PKPdf	17 52 37.4	+1.2
	comp=Z,0.3nm,0.6s,baz=315,slow=3.8,SNR=3.4						
NVAR	Mina Array Bea	119.15	28	PKP	PKPdf	17 52 37.4	+1.2
PLCA	Paso Flores	150.75	205	PKPbc	PKPdf	17 53 39.8	+6.0
	comp=Z,4.9nm,0.8s,baz=68,slow=0.6,SNR=9.7						

IDC 10 17:42:45.2±29.0**, 22.22S×178.10W, h602**^{km}±292^{km}**, mb2.8**/4**, mb1 2.9**/4**, mb1mx2.9**/15**, mbtmp3.9**/4**, Error ellipse: s-maj=210.5km s-min=99.4km az=78.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.26	267	P	P	17 48 34.9	-0.9
	3.1nm,0.9s,baz=92,slow=13,SNR=5.0						
STKA	Stephens Creek	36.98	246	P	P	17 49 04.5	-1.9
	0.9nm,0.8s,baz=86,slow=15,SNR=3.6						
ASAR	Alice Springs	44.06	258	P	P	17 50 01.6	-1.3
	1.6nm,0.7s,baz=96,slow=7.8,SNR=17						
WRA	Warramunga Arr	44.29	264	P	P	17 50 03.4	-1.5
	0.4nm,0.4s,baz=95,slow=8.4,SNR=22						
AKASG	Malin Array Be	144.46	330	PKP	PKPdf	18 01 13.0	-0.4
	0.1nm,0.3s,baz=46,slow=4.5,SNR=4.3						

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*IDC **10** 17:43:33.5±0.9, 2.38S×68.44E, mb3.9/11, mb1 4.0/11, mb1mx4.0/19, mbtmp3.9/11, MS4.9/1, Ms1 4.9/1, ms1mx4.3/17, Error ellipse: s-maj=29.2km s-min=18.3km az=34.0*
*BJI **10** 17:43:34.0, 2.40S×68.50E, h10^{km}, mb4.0*
*NEIC **10** 17:43:35.0±0.5, 2.45S×68.54E, h10^{km}, mb4.4/13, Error ellipse: s-maj=11.3km s-min=11.2km az=85.0*
ISC 10 17:43:33.1±0.5**, 2.44S**±0.08×**68.53E**±0.08**, h10**^{km}**, n28,** σ**1**^{s}**24**/28**, mb4.2**/24**, MS4.8**/1**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	6.30	142	*e*Pn	Pn	17 45 06.3	-2.1
DGAR				*e*Sn	Sn	17 46 09.7	-12
PALK	Pallekele	15.51	51	*e*P	P	17 47 12.2	-1.6
	36nm,1.2s						
KMBO	Kilima Mbogo	31.28	272	P	P	17 49 56.6	+0.9
	2.2nm,0.8s,mb4.1,baz=78,slow=10,SNR=6.7						
KMBO				LR	LR	18 01 19.2	
	comp=Z,2µm,21.0s,MS4.8,baz=317,slow=34						
CM31	Chiang Mai Arr	36.43	54	P	P	17 50 42.8	+2.7
	5.8nm,1.0s,mb4.5						
CMAR	Chiang Mai Arr	36.43	54	P	P	17 50 42.1	+2.0
	0.5nm,0.4s,mb3.8,baz=241,slow=9.3,SNR=6.1						
LSA	Lhasa	38.59	32	*e*P	P	17 50 59.9	+1.6
	2.5nm,0.6s,mb4.1						
LSZ	Lusaka	41.75	250	*e*P	P	17 51 25.2	+0.7
	8.1nm,1.2s,mb4.2						
AAK	Ala-Archa	45.18	6	*e*P	P	17 51 52.0	0.0
	14nm,1.5s,mb4.6						
BOSA	Boshof	48.72	233	*e*P	P	17 52 19.6	-0.4
	4.5nm,0.9s,mb4.5						
MALT	Malatya	49.16	329	*e*P	P	17 52 24.9	+1.6
	3.4nm,0.9s,mb4.4						
GTA	Gaotai	50.60	31	*e*P	P	17 52 34.2	-0.1
GTA				AP	pP	17 52 43.5	+6.2
GTA				XP	sP	17 52 47.0	+8.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.6s,mb4.0						
ENH	Enshi	50.84	47	P	P	17 52 41.7	+5.5
	comp=Z,6.7nm,0.9s,mb4.6						
BRTR	Keskin Array B	52.76	326	P	P	17 52 51.0	+0.5
	comp=Z,1.7nm,1.0s,mb3.9,baz=129,slow=7.9,SNR=6.6						
KURK	Kurchatov	53.65	8	*e*P	P	17 52 56.1	-0.9
	comp=Z,5.7nm,0.9s,mb4.5						
BVAR	Borovoye Array	55.28	1	P	P	17 53 08.2	-0.8
	comp=Z,0.3nm,0.6s,mb3.5,baz=153,slow=3.2,SNR=3.3						
CHKZ	Chkalovo	55.94	2	*e*P	P	17 53 12.1	-1.5
	comp=Z,4.2nm,1.1s,mb4.4						
CHKZ				*e*		17 53 20.4	
ZAL	Zalesovo	57.79	11	P	P	17 53 25.4	-1.4
	comp=Z,0.9nm,0.9s,mb3.8,baz=217,slow=7.3,SNR=5.9						
ZAL	Zalesovo	57.79	11	P	P	17 53 25.4	-1.4
SONM	Songino Array	59.99	29	P	P	17 53 42.5	+0.3
	comp=Z,3.6nm,0.8s,mb4.5,baz=220,slow=7.1,SNR=36						
ULN	Ulaanbaatar	60.32	29	*e*P	P	17 53 44.3	-0.2
	comp=Z,1.8nm,0.8s,mb4.2						
ULN				*e*		17 53 51.4	
TLY	Talaya	61.59	24	*e*P	P	17 53 53.6	+0.6
	comp=Z,2.6nm,0.9s,mb4.4						
AKASG	Malin Array Be	62.67	333	P	P	17 53 58.5	-1.8
	comp=Z,0.1nm,0.3s,mb3.5,baz=139,slow=5.7,SNR=4.6						
WRA	Warramunga Arr	66.46	111	P	P	17 54 25.7	+0.3
	comp=Z,0.9nm,0.8s,mb3.9,baz=305,slow=6.1,SNR=7.9						
ASAR	Alice Springs	66.52	115	P	P	17 54 25.8	0.0
	comp=Z,0.5nm,0.7s,mb3.6,baz=276,slow=6.0,SNR=13						
VRAC	Vranov	68.20	326	P	P	17 54 33.8	-2.1
	comp=Z,1.9nm,0.3s,mb4.5,baz=83,slow=8.1,SNR=2.4						
MDJ	Mudanjiang	71.60	41	*e*P	P	17 54 57.4	+0.7
	comp=Z,28nm,1.4s,mb5.0						
STKA	Stephens Creek	74.35	122	P	P	17 55 14.9	+1.7
	comp=Z,0.7nm,0.7s,mb3.7,baz=297,slow=14,SNR=2.4						
TXAR	Lajitas Array	152.24	345	PKPbc	PKPdf	18 03 31.9	+5.9
	comp=Z,0.3nm,0.3s,baz=45,slow=1.8,SNR=4.5						

IDC 10 17:57:15.7±0.9**, 16.48S×174.24W, mb4.0**/7**, mb1 4.2**/7**, mb1mx4.0**/17**, mbtmp4.0**/7**, Error ellipse: s-maj=50.4km s-min=19.1km az=139.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	23.00	198	P	P	18 02 22.0	-1.1
	6.0nm,0.3s,baz=312,slow=2.7,SNR=11						
STKA	Stephens Creek	42.81	241	P	P	18 05 15.8	-1.2
	1.3nm,1.1s,baz=79,slow=5.2,SNR=2.4						
WRA	Warramunga Arr	48.82	258	P	P	18 06 03.0	-2.0
	0.6nm,1.1s,baz=95,slow=7.0,SNR=8.1						
ASAR	Alice Springs	49.02	253	P	P	18 06 04.5	-2.0
	2.4nm,0.6s,baz=88,slow=8.5,SNR=68						
YBH	Yreka Blue Hor	74.94	37	P	P	18 08 59.8	-0.7
	2.1nm,0.7s,baz=74,slow=1.1,SNR=5.7						
NVAR	Mina Array Bea	75.66	42	P	P	18 09 03.5	-1.2
	4.5nm,1.1s,baz=226,slow=9.7,SNR=14						
PDAR	Pinedale Array	83.60	42	P	P	18 09 44.8	-2.6
	0.9nm,0.8s,baz=243,slow=3.3,SNR=5.6						
BRTR	Keskin Array B	146.46	319	PKPbc	PKPbc	18 16 58.2	-0.7
	1.1nm,0.8s,baz=90,slow=4.9,SNR=3.9						

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*MOS **10** 17:58:01.8±2.1, 30.41N×49.88E, h33^{km}, mb4.1/7, Error ellipse: s-maj=28.4km s-min=12.1km az=108.5*
*THR **10** 17:58:04.8±0.5, 30.87N×49.74E, h36^{km}±6^{km}, ML3.6*
*TEH **10** 17:58:06.2, 30.96N×49.81E, h10^{km}, Mn3.5*
*NEIC **10** 17:58:07.9±1.9, 31.04N×49.89E, h35^{km}, mb4.1/3, Error ellipse: s-maj=43.2km s-min=12.4km az=175.0*
*CSEM **10** 17:58:07.3±0.1, 30.95N×49.84E, h60^{km}, mb4.4/2, ML3.9/1, Error ellipse: s-maj=3.9km s-min=1.5km az=127.0*
*IDC **10** 17:58:12.2±4.9, 31.15N×49.67E, h72^{km}±41^{km}, mb3.6/12, mb1 3.7/14, mb1mx3.6/24, mbtmp3.8/14, ML3.6/2, Error ellipse: s-maj=58.5km s-min=22.3km az=176.0*
ISC 10 17:58:07.2±0.4**, 31.01N**±0.03×**49.88E**±0.04**, h48**^{km}±6^{km}**, n57,** σ**1**^{s}**03**/63**, mb3.8**/15**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBRJ	Borojen	1.41	57	Pn	P	17 58 33.3	+2.4
SHGO	Shushtar	1.43	320	*e*PG	P	17 58 31.7	+0.5
SHGO				AML	AML	17 58 57.3	
	comp=E,724nm,0.1s						
SHGR	Shooshtar-Gavs	1.43	320	*e*PG	P	17 58 31.7	+0.5
SHGR				AML	AML	17 58 54.7	
	comp=N,2µm,0.3s						
KBD	Kabd	2.63	227	*e*S	S	17 59 19.7	+0.7
QRN	Al-Qurain	2.82	218	*e*P	P	17 58 50.4	-0.5
QRN				*e*S	S	17 59 24.1	+0.1
NAY	Al-Naaiem	2.88	233	*e*P	P	17 58 51.3	-0.4
NAY				*e*S	S	17 59 26.6	+1.3
RDF	Al-Radifah	2.89	225	*e*P	P	17 58 51.5	-0.4
RST	Umm Al-Ruwaisa	2.91	240	*e*P	P	17 58 51.4	-0.7
NASN	Na’in	3.07	54	*e*PN	P	17 58 55.9	+1.4
IMOK	Mook	3.14	128	Pn	P	17 58 51.0	-4.5
ISRV	Sarvestan	3.24	119	Pn	P	17 58 56.5	-0.3
ASAO	Ashtian	3.53	2	*e*PN	P	17 59 01.7	+0.7
ASAO				SN	S	17 59 43.1	+1.1
ASAO				AML	AML	18 00 15.1	
	comp=N,82nm,0.7s						
ASAO	Ashtian	3.53	2	*e*Pn	P	17 59 01.7	+0.7
	SNR=54						
ASAO				Sn	S	17 59 43.1	+1.2
	comp=N,82nm,0.7s,SNR=54						
IKOM	Komasi	3.74	328	Pn	P	17 59 04.5	+0.7
GHIR	Ghir-Karzin	3.83	134	*e*PN	P	17 59 03.5	-1.7
IVRN	Varamin	4.27	21	Pn	P	17 59 11.8	+0.4
IVRN	Varamin	4.27	21	Lg		18 00 20.8	
IGHG	Ghaleghazi	4.33	321	Pn	P	17 59 11.2	-1.0
IVIS	Veys	4.33	325	Pn	P	17 59 11.9	-0.4
SNGE	Sanandaj	4.59	333	*e*PN	P	17 59 15.2	-0.8
SNGE				AML	AML	18 00 39.7	
	comp=N,52nm,0.6s						
IDHR	Dehrash	4.71	322	Pn	P	17 59 16.5	-1.1
IMHD	Mahdasht	4.71	8	Pn	P	17 59 17.4	-0.2
IMHD				Sn	S	18 00 10.0	-1.7
IDMV	Damavand	4.90	21	Pn	P	17 59 20.7	+0.4
DAMV	Damavand	4.93	20	*e*PN	P	17 59 20.9	+0.2
DAMV				AML	AML	18 00 54.3	
	comp=N,26nm,0.6s						
IFIR	Firoozkooh	5.21	27	Pn	P	17 59 25.2	+0.6
IFIR				Sn	S	18 00 22.4	-1.8
KRBR	Kerman	6.03	98	*e*PN	P	17 59 35.1	-0.9
RAYN	Ar Rayn	8.41	209	Pn	P	18 00 03.3	-5.8
	comp=N,42nm,0.5s,SNR=12						
ASF	Jabal al Asfar	11.13	279	P	P	18 00 44.6	-1.8
	comp=N,0.8nm,0.3s,baz=324,slow=2.3,SNR=7.3						
ASF				S	S	18 02 43.0	-7.4
	comp=N,0.1nm,0.3s,baz=213,slow=21,SNR=4.1						
KIV	Kislovodsk	14.12	338	P	P	18 01 32.2	+6.1
KIV				pmax	pmax		
	comp=Z,18nm,1.2s						
KIV	Kislovodsk	14.12	338	P	P	18 01 32.2	+6.1
	comp=Z,18nm,1.2s						
BRTR	Keskin Array B	15.83	308	P	P	18 01 49.8	+1.6
	comp=Z,0.1nm,0.3s,baz=126,slow=20,SNR=3.1						
IDI	Anoyia	21.33	288	P	P	18 02 53.0	+0.9
	comp=Z,17nm,0.9s,mb4.4,baz=202,slow=5.4,SNR=4.9						
AAK	Ala-Archa	22.79	53	P	P	18 03 14.2	+7.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
AAK	Ala-Archa	22.79	53	P	P	18 03 14.2	+7.7
	comp=Z,2.8nm,1.0s,mb3.6						
MLR	Muntele Rosu	23.59	315	P	P	18 03 16.3	+2.1
MLR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MLR	Muntele Rosu	23.59	315	P	P	18 03 16.3	+2.0
	comp=Z,1.3nm,0.5s,mb3.7,baz=239,slow=6.8,SNR=4.3						
AKASG	Malin Array Be	24.97	328	P	P	18 03 26.7	-0.9
	comp=Z,0.4nm,0.3s,mb3.4,baz=136,slow=8.8,SNR=5.6						
BVAR	Borovoye Array	26.58	28	P	P	18 03 42.6	0.0
	comp=Z,0.9nm,0.6s,mb3.5,baz=220,slow=12,SNR=7.6						
ZAL	Zalesovo	33.94	37	P	P	18 04 49.5	+1.8
	comp=Z,0.4nm,0.3s,mb3.8,baz=286,slow=4.5,SNR=3.9						
FINES	FINESS Array B	34.20	340	P	P	18 04 48.2	-1.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	34.20	340	P	P	18 04 48.2	-1.7
	comp=Z,1.6nm,0.7s,mb4.1,baz=140,slow=10,SNR=14						
FINES	FINESS Array B	34.20	340	P	P	18 04 48.2	-1.7
KONO	Kongsberg	39.26	329	P	P	18 05 32.9	+0.4
KONO				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
KONO	Kongsberg	39.26	329	P	P	18 05 32.9	+0.4
	comp=Z,11nm,0.9s,mb4.6						
KONO	Kongsberg	39.26	329	P	P	18 05 32.9	+0.4
	comp=Z,11nm,0.9s,mb4.6						
NOA	NORSAR Array B	39.28	331	P	P	18 05 31.1	-1.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	39.28	331	P	P	18 05 31.1	-1.5
	comp=Z,0.5nm,0.7s,mb3.4,baz=140,slow=7.8,SNR=2.6						
ARCES	ARCESS Array B	40.98	347	P	P	18 05 46.3	-0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	40.98	347	P	P	18 05 46.2	-0.4
	comp=Z,3.1nm,0.9s,mb3.9,baz=153,slow=10,SNR=5.2						
ARCES	ARCESS Array B	40.98	347	P	P	18 05 46.2	-0.4
SONM	Songino Array	45.74	52	P	P	18 06 26.2	+0.8
	comp=Z,0.6nm,0.8s,mb3.6,baz=262,slow=8.2,SNR=6.4						
ULN	Ulaanbaatar	46.18	52	*e*P	P	18 06 29.3	+0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
ULN	Ulaanbaatar	46.18	52	*e*P	P	18 06 29.3	+0.4
	comp=Z,2.7nm,1.1s,mb4.1						
ULN	Ulaanbaatar	46.18	52	*e*P	P	18 06 29.3	+0.4
	comp=Z,2.7nm,1.1s,mb4.1						
SCHQ	Schefferville	78.77	328	P	P	18 10 05.5	-0.5
	comp=Z,0.7nm,0.5s,mb3.8,baz=4.5,slow=15,SNR=3.8						
INK	Inuvik	80.96	1	P	P	18 10 17.0	-0.5
	comp=Z,0.4nm,0.3s,mb3.8,baz=210,slow=2.7,SNR=2.9						
YKA	Yellowknife Ar	86.00	353	P	P	18 10 43.5	+0.5
	comp=Z,0.4nm,0.7s,mb3.7,baz=16,slow=5.5,SNR=5.6						

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*IDC **10** 17:59:42.6±1.4, 45.67S×75.39W, mb4.0/4, mb1 4.1/6, mb1mx4.0/16, mbtmp4.1/6, ML4.1/2, MS3.9/1, Ms1 3.9/1, ms1mx2.4/22, Error ellipse: s-maj=53.3km s-min=19.8km az=98.0*
*NEIC **10** 17:59:45.9±1.0, 45.72S×75.78W, h35^{km}, mb4.5/6, Error ellipse: s-maj=31.5km s-min=13.5km az=106.0*
ISC 10 17:59:43.7±1.1**, 45.78S**±0.09×**75.7W**±0.3**, h33**^{km}**, n18,** σ**1**^{s}**25**/15**, mb4.4**/8**, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	6.29	38	Pn	Pn	18 01 14.7	-2.0
	1.1nm,0.3s,baz=218,slow=13,SNR=17						
USHA	Ushuaia	10.18	156	Pn	P	18 02 09.9	-0.6
	1.3nm,0.3s,baz=311,slow=8.2,SNR=5.1						
USHA				LR	LR	18 06 36.8	
	comp=Z,657nm,19.6s,baz=314,slow=41						
TRQA	Tornquist	12.79	58	*e*P	P	18 02 47.1	+1.1
	16nm,1.1s						
LVC	Limon Verde	23.76	16	P	P	18 04 55.1	+1.1
	2.9nm,0.8s,mb3.8,baz=211,slow=14,SNR=4.1						
LVC	Limon Verde	23.76	16	*e*P	P	18 04 54.3	+0.4
	8.1nm,0.9s,mb4.2						
CPUP	Villa Florida	24.33	43	P	P	18 05 00.3	+0.9
	0.0nm,0.5s,baz=213,slow=10,SNR=2.1						
LPAZ	La Paz	30.08	15	P	P	18 05 51.7	-0.5
	0.5nm,0.4s,mb3.6,baz=203,slow=6.8,SNR=4.4						
LPAZ	La Paz	30.08	15	*e*P	P	18 05 51.1	-1.1
	7.3nm,1.3s,mb4.2						
BDFB	Brasilia	37.96	47	P	P	18 06 59.9	-0.2
	5.3nm,0.7s,mb4.4,baz=187,slow=9.9,SNR=4.2						
SNAA	Sanae	42.02	153	P	P	18 07 34.5	+1.5
	3.4nm,0.9s,mb4.0,baz=277,slow=8.8,SNR=9.3						
SNAA	Sanae	42.02	153	*e*P	P	18 07 29.4	-3.6
	139nm,0.8s,mb5.6						
QSPA	South Pole Qui	44.47	180	*e*P	P	18 07 51.2	-1.6
	12nm,1.4s,mb4.4						
OTAV	Otavalo	45.89	356	P	P	18 08 10.4	+5.4
	8.6nm,1.5s,mb4.5						
TEIG	Tepich	66.68	347	P	P	18 10 42.3	+9.0
	6.2nm,1.1s,mb4.5						
CASY	Casey	68.17	183	P	P	18 10 43.6	+1.7
	11nm,1.0s,mb4.8						
CMAR	Chiang Mai Arr	152.39	169	PKP	PKPdf	18 19 35.0	+5.6
	0.7nm,0.7s,baz=201,slow=3.9,SNR=6.8						
CMAR				PKPbc	PKPdf	18 19 41.2	+12
	1.0nm,0.8s,baz=222,slow=2.9,SNR=4.8						
ZAL	Zalesovo	165.04	50	PKP	PKPdf	18 19 46.9	+3.7
	0.5nm,0.3s,baz=316,slow=7.2,SNR=3.5						
SONM	Songino Array	177.49	326	PKP	PKPdf	18 19 53.6	+3.9
	0.2nm,0.7s,baz=252,slow=3.9,SNR=2.2						
SONM				PKPab	PKPab	18 21 41.2	+3.9
	0.7nm,1.0s,baz=18,slow=3.9,SNR=5.0						

OTT 10 18:15:44.3±0.1**, 53.06N×66.94W, MN2.7**/8**, Blast, Labrador City, Nl Mining explosion., Labrador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	Schefferville	1.77	2	PN	Pn	18 16 16.1	-0.5
SCHQ				SG	Sg	18 16 39.4	-4.1
SCHQ				Trac		18 16 42.7	
	comp=Z,14nm,0.1s						
MNQ	Manicouagan	2.78	205	PN	Pn	18 16 29.8	-1.1
MNQ				SN	Sn	18 17 03.9	-1.6
MNQ				Trac		18 17 14.0	
	comp=Z,6.7nm,0.1s						
SMQ	Clarke City	2.85	177	PN	Pn	18 16 30.0	-1.9
SMQ				SN	Sn	18 17 05.7	-1.7
SMQ				Trac		18 17 12.5	
	comp=Z,4.7nm,0.1s						

ICQ	**Pointe Anglais**	**3.55**	**184**	PN	Pn	18 16 39.5	-2.4
ICQ				SN	Sn	18 17 21.4	-3.8
ICQ				Trac		18 17 34.3	
	comp=Z,2.6nm,0.1s						
CNQ	**Baie Comeau**	**3.83**	**191**	PN	Pn	18 16 44.0	-1.9
CNQ				SN	Sn	18 17 27.5	-4.8
CNQ				SG	Sg	18 17 39.8	-12
CNQ				Trac		18 17 47.9	
	comp=Z,4.9nm,0.2s						
GSQ	**Grosses Roches**	**4.16**	**182**	PN	Pn	18 16 47.7	-2.8
GSQ				Trac		18 17 40.2	
	comp=Z,1.6nm,0.1s						
LG4Q	**La Grande 4**	**4.33**	**280**	PN	Pn	18 16 49.6	-3.3
LG4Q				PG	Pg	18 16 58.5	-12
LG4Q				SN	Sn	18 17 39.0	-5.9
LG4Q				SG	Sg	18 17 55.4	-13
LG4Q				Trac		18 17 59.5	
	comp=Z,4.3nm,0.2s						
LMQ	**La Malbaie**	**5.93**	**203**	PN	Pn	18 17 12.2	-3.3
LMQ				SN	Sn	18 18 17.4	-7.8
LMQ				Trac		18 18 23.2	
	comp=Z,2.7nm,0.1s						
DRLN	**Deer Lake**	**7.05**	**119**	PN	Pn	18 17 26.9	-4.5
DRLN				SN	Sn	18 18 44.2	-9.0
DRLN				SG	Sg	18 19 22.3	-17
LMN	**Caledonia Moun**	**7.35**	**168**	PN	Pn	18 17 31.0	-4.5
VIMO	**Victor Mine**	**10.15**	**275**	PN	P	18 18 07.7	-6.6
SILO	**Sutton Inlier**	**10.73**	**285**	PN	P	18 18 15.4	-6.8

*IDC **10** 18:22:22.4±1.8, 65.65N×1.46W, mb3.7/3, mb1 3.7/8, mb1mx3.5/24, mbtmp3.6/8, ML3.4/5, Error ellipse: s-maj=33.3km s-min=18.3km az=33.0*
*CSEM **10** 18:22:23.0±0.0, 65.28N×2.23W, h30^{km}, mb5.5, Error ellipse: s-maj=1.8km s-min=1.0km az=10.0*
*NEIC **10** 18:22:25.9, 65.39N×1.66W, h2^{km}, ML2.9(BER), After BER.*
*BER **10** 18:22:26.2±3.6, 65.40N×1.79W, h10^{km}, MD3.4, ML2.9, ML3.4(NAO)*
*NAO **10** 18:22:30.8±4.2, 65.35N×0.60W, ML3.4*
ISC 10 18:22:19.5±0.3**, 65.18N**±0.03×**1.95W**±0.06**, h10**^{km}**, n48, σ1**^{s}**40**/73**, mb3.5**/3**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOO	**Floro**	**4.78**	**136**	*e*P	**Pn**	**18 23 37.6**	**+4.3**
FOO				*e*S	**Sn**	**18 24 30.5**	**+1.1**
MOL	**Molde**	**4.95**	**118**	*e*P	**Pn**	**18 23 44.1**	**+8.4**
MOL				*e*S	**Sn**	**18 24 37.7**	**+4.0**
MOL				AML	AML	18 24 41.5	
	comp=Z,61nm,0.3s						
SUE	**Sulen**	**5.14**	**141**	*e*P	**Pn**	**18 23 42.2**	**+3.8**
SUE				*e*S	**Sn**	**18 24 38.5**	**0.0**
HYA	**Hoyanger**	**5.46**	**134**	*e*P	**Pn**	**18 23 48.4**	**+5.5**
HYA				*e*S	**Sn**	**18 24 48.4**	**+1.8**
HYA				AML	AML	18 24 56.0	
	comp=Z,35nm,0.4s						
RORSS	**Ber_school_1**	**5.59**	**87**	*e*P	**Pn**	**18 23 47.6**	**+2.8**
RORSS				*e*S	**Sn**	**18 24 45.3**	**-4.6**
TRON	**Trondheim**	**5.66**	**102**	*e*S	**Sn**	**18 24 49.9**	**-1.6**
ASK	**Askoy**	**5.74**	**142**	*e*P	**Pn**	**18 23 50.5**	**+3.7**
IADA	**Aoalbol**	**5.76**	**275**	P	**Pn**	**18 23 47.2**	**0.0**
DOMB	**Dombas**	**5.83**	**118**	*e*S	**Sn**	**18 24 55.2**	**-0.7**
RUND	**Rundenannen**	**5.84**	**142**	*e*P	**Pn**	**18 23 52.2**	**+3.9**
RUND				*e*S	**Sn**	**18 24 55.2**	**-1.0**
BER	**Bergen**	**5.86**	**142**	*e*S	**Sn**	**18 24 55.1**	**-1.5**
IVSH	**V-Sauoahnukur**	**5.86**	**273**	P	**Pn**	**18 23 48.5**	**0.0**
IVSH				S	**Sn**	**18 24 51.2**	**-5.4**
IHVA	**Hvannstoosfjol**	**5.89**	**274**	P	**Pn**	**18 23 48.9**	**-0.1**
IHVA				S	**Sn**	**18 24 52.7**	**-4.7**
EGD	**Espegrend**	**5.93**	**143**	*e*P	**Pn**	**18 23 53.0**	**+3.5**
EGD				*e*S	**Sn**	**18 24 58.0**	**-0.3**
IGRS	**Grimsstaoir**	**5.94**	**281**	P	**Pn**	**18 23 49.3**	**-0.4**
NSS	**Namsos**	**5.97**	**90**	*e*P	**Pn**	**18 23 51.7**	**+1.6**
NSS				*e*S	**Sn**	**18 24 53.0**	**-6.3**
NSS				AML	AML	18 25 00.2	
	comp=Z,25nm,0.3s						
IBRU	**Bruarjokull**	**6.01**	**273**	P	**Pn**	**18 23 50.3**	**-0.3**
IGIL	**Gilhagi**	**6.03**	**285**	P	**Pn**	**18 23 49.8**	**-1.2**
IKVO	**Krokottuvotn**	**6.25**	**282**	P	**Pn**	**18 23 54.1**	**+0.1**
IREN	**Reynihlio**	**6.26**	**281**	P	**Pn**	**18 23 54.5**	**+0.3**
IHED	**Heoinshofoi**	**6.42**	**285**	P	**Pn**	**18 23 55.7**	**-0.8**
ISVA	**Svartarkot**	**6.43**	**278**	P	**Pn**	**18 23 58.0**	**+1.4**
ISVA				S	**Sn**	**18 25 05.8**	**-5.0**
IGRA	**Granastaoir**	**6.53**	**284**	P	**Pn**	**18 23 56.2**	**-1.8**
ODD1	**Odda**	**6.61**	**139**	*e*P	**Pn**	**18 24 01.8**	**+2.7**
ODD1				*e*S	**Sn**	**18 25 14.3**	**-1.0**
ODD1				AML	AML	18 25 16.3	
	comp=Z,24nm,0.2s						
LOF	**Lofoten**	**6.82**	**57**	*e*P	**Pn**	**18 24 02.8**	**+0.7**
LOF				*e*S	**Sn**	**18 25 12.5**	**-8.1**
LOF				AML	AML	18 25 18.8	
	comp=Z,11nm,0.7s						
MOR8	**Moi Rana**	**6.84**	**74**	*e*P	**Pn**	**18 24 03.6**	**+1.3**
MOR8				AML	AML	18 25 24.6	
	comp=Z,57nm,0.5s						
BLS5	**Blasjo**	**6.98**	**142**	*e*P	**Pn**	**18 24 07.9**	**+3.6**
BLS5				*e*S	**Sn**	**18 25 23.4**	**-1.1**
BLS5				AML	AML	18 25 27.0	
	comp=Z,10.0nm,0.2s						
NB2	**NORSAR Subarra**	**7.27**	**119**	Pn	**Pn**	**18 24 11.4**	**+3.0**
NOA	**NORSAR Array B**	**7.27**	**119**	Pn	**Pn**	**18 24 10.8**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=308,slow=13,SNR=3.8						
NOA				Sn	**Sn**	**18 25 30.5**	**-1.3**
	comp=Z,2.8nm,0.3s,baz=276,slow=17,SNR=7.6						
NC6	**NORSAR Subarra**	**7.55**	**120**	Pn	**Pn**	**18 24 15.1**	**+2.8**
NC6				Sn	**Sn**	**18 25 37.6**	**-1.2**
HFS	**Hagfors**	**8.79**	**118**	Pn	**P**	**18 24 31.7**	**+2.2**
	baz=299,slow=8.6						
HFS				Sn	**Sn**	**18 26 04.9**	**-4.7**
	baz=318,slow=22						
HFS	**Hagfors**	**8.79**	**118**	Pn	**P**	**18 24 31.7**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=315,slow=10,SNR=8.3						
HFS				Sn	**Sn**	**18 26 06.6**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=312,slow=24,SNR=14						
EKA	**Eskdalemuir Ar**	**9.90**	**184**	Pn	**P**	**18 24 47.5**	**+2.8**
	comp=Z,0.5nm,0.3s,baz=357,slow=12,SNR=8.8						
EKA				Sn	**Sn**	**18 26 35.7**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=358,slow=23,SNR=3.7						
EKA	**Eskdalemuir Ar**	**9.90**	**184**	Pn	**P**	**18 24 47.5**	**+2.7**
KTK1	**Kautokeino**	**10.49**	**57**	*e*P	**P**	**18 24 51.5**	**-1.2**
ARA0	**ARCESS Array S**	**11.37**	**55**	Pn	**P**	**18 25 03.5**	**-1.3**
	baz=247,slow=12						
ARA0				Sn	**S**	**18 27 00.7**	**-12**
	baz=251,slow=28						
ARCES	**ARCESS Array B**	**11.37**	**55**	Pn	**P**	**18 25 03.5**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=245,slow=12,SNR=14						
ARCES				Sn	**S**	**18 27 01.1**	**-12**
	comp=Z,0.2nm,0.3s,baz=252,slow=23,SNR=2.4						
ARCES	**ARCESS Array B**	**11.37**	**55**	Pn	**P**	**18 25 03.5**	**-1.4**
ARCES				Sn	**S**	**18 27 01.1**	**-12**
ARCES	**ARCESS Array B**	**11.37**	**55**	Pn	**P**	**18 25 03.5**	**-1.3**
ARCES				Sn	**S**	**18 27 01.0**	**-12**
FIA0	**FINESS Array S**	**13.07**	**94**	Pn	**P**	**18 25 28.0**	**+0.2**
	baz=310,slow=14						
FIA0				Sn	**S**	**18 27 43.5**	**-11**
	baz=298,slow=22						
FINES	**FINESS Array B**	**13.07**	**94**	Pn	**P**	**18 25 28.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=305,slow=11,SNR=9.0						
FINES				Sn	**S**	**18 27 46.7**	**-7.6**
	comp=Z,0.3nm,0.3s,baz=307,slow=21,SNR=4.6						
APA0	**Apatity Array**	**14.08**	**64**	Pn	**P**	**18 25 40.0**	**-0.8**
	baz=272,slow=11						
SPA0	**Spitsbergen Ar**	**14.14**	**15**	Pn	**P**	**18 25 42.0**	**+0.5**
	baz=178,slow=22						
BVAR	**Borovoye Array**	**36.88**	**74**	P	**P**	**18 29 31.3**	**+1.8**
	comp=Z,0.5nm,0.4s,mb3.7,baz=302,slow=14,SNR=4.8						
BVAR	**Borovoye Array**	**36.88**	**74**	P	**P**	**18 29 31.3**	**+1.8**
ZAL	**Zalesovo**	**41.82**	**62**	P	**P**	**18 30 08.2**	**-2.0**
	comp=Z,1.0nm,0.5s,mb3.7,baz=295,slow=8.3,SNR=4.2						
YKA	**Yellowknife Ar**	**43.33**	**321**	P	**P**	**18 30 22.8**	**+0.4**
	comp=Z,0.2nm,0.5s,mb3.1,baz=36,slow=8.5,SNR=5.5						
YKA	**Yellowknife Ar**	**43.33**	**321**	P	**P**	**18 30 22.8**	**+0.4**

IDC 10 18:22:32.5±9.3**, 15.83N**×**92.31E, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.3**/18**, mbtmp3.2**/3**, ML3.3**/1**, Error ellipse: s-maj=185.1km s-min=54.9km az=122.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.86**	**67**	Pn	Pn	18 24 13.2	-3.7
	0.1nm,0.3s,baz=254,slow=15,SNR=6.0						
CMAR				Sn	Sn	18 25 22.2	-14
	0.4nm,0.3s,baz=253,slow=27,SNR=8.9						
WRA	**Warramunga Arr**	**54.50**	**129**	P	P	18 32 03.5	-1.1
	0.7nm,0.6s,baz=304,slow=9.1,SNR=8.9						
ASAR	**Alice Springs**	**56.51**	**133**	P	P	18 32 15.6	-3.6
	0.1nm,0.5s,baz=301,slow=7.9,SNR=2.7						

*CASC **10** 18:26:19.6±1.8, 11.43N×85.75W, h192^{km}, MD3.8, mb4.1(NEIC)*
*IDC **10** 18:26:19.8±0.7, 11.64N×85.49W, h180^{km}±8^{km}, mb3.5/11, mb1 3.7/13, mb1mx3.5/23, mbtmp4.0/13, Error ellipse: s-maj=25.3km s-min=12.3km az=62.0*
*NEIC **10** 18:26:20.6±0.9, 11.56N×85.56W, h192^{km}±9^{km}, mb4.1/5, Error ellipse: s-maj=18.5km s-min=8.9km az=54.0*
ISC 10 18:26:19.4±0.4**, 11.55N**±0.08×**85.64W**±0.09**, h196**^{km}±3^{km}**, n50, σ0**^{s}**95**/59**, mb3.7**/15**, 8C-5D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONN	**Concepcion**	**0.02**	**33**	⇑*e*P	**P**	**18 26 45.8**	**+0.6**
MADN	**Villa Maderas**	**0.17**	**145**	⇑*e*P	**P**	**18 26 45.8**	**+0.3**
SSNN	**San Juan del S**	**0.34**	**219**	⇑*e*P	**P**	**18 26 45.5**	**-0.4**
SSNN				*e*S	**S**	**18 27 05.4**	**-0.7**
APON	**Apoyo**	**0.56**	**311**	⇑*e*P	**P**	**18 26 46.8**	**+0.2**
MASN	**Masaya**	**0.67**	**311**	⇓*e*P	**P**	**18 26 46.8**	**-0.3**
MASN				*e*S	**S**	**18 27 07.5**	**-0.9**
TICN	**Ticuantepe**	**0.76**	**309**	*e*P	**P**	**18 26 48.0**	**+0.6**
WILN	**Americas 2**	**0.81**	**318**	⇓*i*P	**P**	**18 26 48.8**	**+1.0**
WILN				*e*S	**S**	**18 27 10.1**	**+0.4**
MGAN	**Managua**	**0.84**	**315**	*e*P	**P**	**18 26 48.9**	**+1.0**
MGAN				*e*S	**S**	**18 27 09.2**	**-0.8**
XAVN	**Gruta Xavier**	**0.90**	**311**	⇓*e*P	**P**	**18 26 49.4**	**+1.2**
APYN	**Apoyeque**	**0.98**	**314**	⇑*e*P	**P**	**18 26 49.6**	**+0.9**
APYN				*e*S	**S**	**18 27 12.3**	**+0.9**
PYTN	**Playitas**	**1.06**	**337**	⇓*e*P	**P**	**18 26 50.7**	**+1.3**
PYTN				*e*S	**S**	**18 27 11.7**	**-0.9**
COPN	**Copaltepe**	**1.13**	**304**	⇓*e*P	**P**	**18 26 49.4**	**-0.5**
COPN				*e*S	**S**	**18 27 12.4**	**-1.1**
MOMJ	**Momotombo**	**1.23**	**314**	⇑*e*P	**P**	**18 26 50.7**	**0.0**
MOMJ				*e*S	**S**	**18 27 14.7**	**-0.3**
MIRN	**Miramar**	**1.38**	**310**	*e*P	**P**	**18 26 52.0**	**0.0**
CNGN	**Cerro Negro**	**1.41**	**312**	⇑*e*P	**P**	**18 26 52.3**	**+0.1**
CNGN				*e*S	**S**	**18 27 17.6**	**0.0**
JTS	**JuntasAbangare**	**1.42**	**152**	P	**P**	**18 26 52.3**	**-0.1**
	129nm,0.3s,baz=321,slow=14,SNR=408						
JTS				S	**S**	**18 27 15.0**	**-2.8**
	111nm,0.3s,baz=318,slow=20,SNR=5.7						
JTS	**JuntasAbangare**	**1.42**	**152**	P	**P**	**18 26 52.3**	**-0.1**
JTS				*e*Sn	**S**	**18 27 12.9**	**-4.9**
LEON	**Leon**	**1.50**	**305**	*e*P	**P**	**18 26 52.7**	**-0.4**
LEON				*e*S	**S**	**18 27 18.0**	**-1.1**
TEL3	**Telica 3**	**1.56**	**311**	⇑*e*P	**P**	**18 26 53.8**	**+0.2**
TEL3				*e*S	**S**	**18 27 19.5**	**-0.6**
TELN	**Telica**	**1.57**	**312**	*e*P	**P**	**18 26 55.4**	**+1.7**
CRIN	**San Cristobal**	**1.79**	**310**	*e*P	**P**	**18 26 55.4**	**-0.5**
CRIN				*e*S	**S**	**18 27 24.6**	**+0.6**
SJS	**Escuela Geolog**	**2.23**	**136**	*e*S	**S**	**18 27 31.8**	**-0.3**
TEIG	**Tepich**	**8.99**	**344**	*e*Pn	**P**	**18 28 26.9**	**+0.5**
ROSC	**El Rosal**	**13.01**	**120**	P	**P**	**18 29 18.3**	**+0.2**
	1.3nm,0.3s,baz=106,slow=19,SNR=2.0						
SDV	**Santo Domingo**	**15.00**	**99**	P	**P**	**18 29 45.9**	**+2.9**
	0.2nm,0.3s,baz=341,slow=1.6,SNR=3.2						
SDV	**Santo Domingo**	**15.00**	**99**	P	**P**	**18 29 42.4**	**-0.7**
	4.8nm,0.9s						
JSC	**Jenkinsville**	**22.98**	**9**	*e*Pn	**P**	**18 31 10.9**	**+3.1**
LTX	**Lajitas**	**24.40**	**319**	*e*P	**P**	**18 31 23.8**	**+2.5**
	4.7nm,0.8s,mb4.2						
TXAR	**Lajitas Array**	**24.40**	**319**	P	**P**	**18 31 22.1**	**+0.7**
	3.1nm,0.8s,mb4.0,baz=139,slow=10,SNR=10.0						
ACSO	**Alum Creek Sta**	**28.66**	**4**	P	**P**	**18 32 00.5**	**+0.5**
	12nm,0.7s,mb4.6						
SDCO	**Great Sand Dun**	**31.58**	**329**	P	**P**	**18 32 26.0**	**+0.3**
	1.6nm,0.9s,mb3.5						
SADO	**Sadowa**	**33.57**	**8**	P	**P**	**18 32 42.4**	**-0.3**
	5.7nm,0.6s,mb4.3,baz=209,slow=10,SNR=6.1						
PV10	**Paradox Valley**	**33.91**	**326**	P	**P**	**18 32 43.7**	**-2.0**
PDAR	**Pinedale Array**	**37.41**	**331**	P	**P**	**18 33 15.9**	**+0.8**
	0.2nm,0.5s,mb2.9,baz=139,slow=8.3,SNR=2.5						
ULM	**Lac du Bonnet**	**39.50**	**350**	P	**P**	**18 33 31.4**	**-0.9**
	0.8nm,0.4s,mb3.6,baz=168,slow=1.5,SNR=3.3						
NVAR	**Mina Array Bea**	**39.55**	**318**	P	**P**	**18 33 35.1**	**+2.2**
	1.3nm,0.7s,mb3.5,baz=139,slow=7.1,SNR=11						
NVAR				PcP	PcP	18 35 37.6	+0.8
	0.6nm,0.6s,baz=124,slow=3.3,SNR=4.2						
SCHQ	**Schefferville**	**45.65**	**15**	P	**P**	**18 34 21.4**	**-0.6**
	4.9nm,0.6s,mb4.0,baz=211,slow=5.9,SNR=23						
BDFB	**Brasilia**	**46.01**	**125**	P	**P**	**18 34 25.4**	**+0.1**
	1.3nm,0.4s,mb3.6,baz=270,slow=15,SNR=2.1						
FCC	**Fort Churchill**	**47.55**	**354**	P	**P**	**18 34 35.7**	**-0.9**
FRB	**Frobisher Bay**	**53.50**	**9**	P	**P**	**18 35 20.1**	**-1.4**
	2.5nm,0.5s,mb4.0,baz=193,slow=7.0,SNR=4.6						
PLCA	**Paso Flores**	**53.86**	**166**	P	**P**	**18 35 24.8**	**+0.5**
	1.7nm,0.9s,mb3.5,baz=243,slow=1.2,SNR=2.3						
YKA	**Yellowknife Ar**	**54.95**	**344**	P	**P**	**18 35 30.6**	**-1.4**
	0.2nm,0.4s,mb3.0,baz=141,slow=7.2,SNR=8.3						
YKA				pP	pP	18 36 15.9	-0.4
	0.4nm,0.8s,baz=138,slow=7.5,SNR=4.0						
YKA	**Yellowknife Ar**	**54.95**	**344**	P	**P**	**18 35 30.6**	**-1.4**
YKA				pP	pP	18 36 15.9	-0.4
INK	**Inuvik**	**64.59**	**342**	P	**P**	**18 36 36.1**	**-1.4**
	3.9nm,1.2s,mb3.9						
ILAR	**Eielson Array**	**67.56**	**336**	P	**P**	**18 36 55.0**	**-1.4**
	1.0nm,1.0s,mb3.4,baz=130,slow=4.4,SNR=8.6						
TSUM	**Tsumeb**	**106.07**	**107**	*e*P		18 44 22.0	
STKA	**Stephens Creek**	**132.12**	**237**	PKP	PKPdf	18 45 12.5	+2.0
	0.7nm,0.7s,baz=59,slow=5.9,SNR=2.9						
ASAR	**Alice Springs**	**140.57**	**247**	PKhKP		18 45 20.7	
	0.2nm,0.6s,baz=110,slow=3.2,SNR=7.9						
ASAR				PKP	PKPdf	18 45 27.9	+1.7
	1.0nm,0.6s,baz=104,slow=2.0,SNR=18						
WRA	**Warramunga Arr**	**140.71**	**253**	PKhKP		18 45 21.6	
	1.4nm,0.8s,baz=92,slow=2.6,SNR=4.7						
WRA				PKP	PKPdf	18 45 28.3	+1.7
	1.3nm,0.7s,baz=90,slow=2.5,SNR=19						
CMAR	**Chiang Mai Arr**	**149.84**	**351**	PKPbc	PKPdf	18 45 48.5	+6.6
	0.6nm,1.1s,baz=18,slow=2.9,SNR=3.5						

*IDC **10** 19:04:46.5±10.0, 6.19N×127.45E, h286^{km}±114^{km}, mb3.4/9, mb1 3.5/9, mb1mx3.3/19, mbtmp4.0/9, Error ellipse: s-maj=49.7km s-min=18.3km az=67.0*
ISC 10 19:04:37.1±1.2**, 6.3N**±0.1×**127.3E**±0.3**, h206**^{km}±11^{km}**, n12, σ0**^{s}**94**/13**, mb3.7**/10**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**2.14**	**334**	⇓*i*P	**P**	**19 05 19.5**	**+1.5**
BIPH				*i* S	**S**	**19 05 48.3**	**-1.2**
FITZ	**Fitzroy Crossi**	**24.25**	**184**	*e*P	**P**	**19 09 36.4**	**-0.5**
	7.3nm,1.5s,mb4.1						
WRA	**Warramunga Arr**	**26.93**	**165**	P	**P**	**19 10 00.7**	**-0.8**
	0.5nm,0.4s,mb3.5,baz=343,slow=10.0,SNR=24						
ASPA	**Alice Springs**	**30.42**	**168**	*e*P	**P**	**19 10 32.9**	**+0.4**
ASAR	**Alice Springs**	**30.42**	**168**	P	**P**	**19 10 32.1**	**-0.4**
	0.4nm,0.3s,mb3.5,baz=342,slow=7.3,SNR=18						
NWAO	**Narrogin (SRO)**	**40.12**	**193**	P	**P**	**19 11 54.5**	**+0.1**
	8.1nm,0.9s,mb4.2,baz=32,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**40.29**	**161**	P	**P**	**19 11 56.7**	**+0.9**
	1.4nm,0.4s,mb3.7,baz=335,slow=9.8,SNR=8.1						
SONM	**Songino Array**	**45.12**	**340**	P	**P**	**19 12 36.3**	**+1.6**
	0.3nm,0.4s,mb3.0,baz=156,slow=8.9,SNR=7.6						
ZAL	**Zalesovo**	**58.64**	**332**	P	**P**	**19 14 13.1**	**-1.6**
	0.9nm,0.3s,mb3.9,baz=341,slow=6.5,SNR=2.8						
BVAR	**Borovoye Array**	**65.55**	**326**	P	**P**	**19 15 01.1**	**+0.6**
	1.5nm,0.5s,mb3.9,baz=123,slow=7.4,SNR=10.0						
ILAR	**Eielson Array**	**82.59**	**26**	P	**P**	**19 16 37.2**	**-0.8**
	0.3nm,0.6s,mb3.2,baz=254,slow=5.3,SNR=4.4						
ARCES	**ARCESS Array B**	**88.30**	**340**	P	**P**	**19 17 05.9**	**+0.1**
	1.8nm,0.8s,mb4.0,baz=90,slow=6.3,SNR=3.4						

*BJI **10** 19:07:44.6, 8.97N×126.69E, h36^{km}, mB5.0, mb4.5, Ms4.7, Msz4.2*
*IDC **10** 19:07:45.3±0.5, 9.50N×126.63E, mb4.2/17, mb1 4.3/18, mb1mx4.3/24, mbtmp4.2/18, ML4.7/1, MS3.6/1, Ms1 3.8/1, ms1mx2.6/25, Error ellipse: s-maj=30.7km s-min=10.6km az=67.0*
*NEIC **10** 19:07:46.7±0.2, 9.45N×126.62E, h10^{km}, mb4.6/19, Error ellipse: s-maj=12.3km s-min=4.8km az=69.0*
*MAN **10** 19:07:48.4, 9.46N×126.80E, h14^{km}, mb5.1, ML4.1, MS4.2*
ISC 10 19:07:48.8±0.8**, 9.51N**±0.03×**126.90E**±0.05**, h41**^{km}±7^{km}**, n72, σ1**^{s}**19**/83**, mb4.4**/36**, MS3.9**/2**, 4C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.42**	**281**	*e*P	**P**	**19 08 11.4**	**-1.2**
SCPH				*e*S	**S**	**19 08 30.4**	**+0.2**
SCPH	**Surigao**	**1.42**	**281**	*e*P	**P**	**19 08 11.4**	**-1.2**
SCPH				*e*S	**S**	**19 08 30.4**	**+0.2**
BIPH	**Bislig**	**1.42**	**202**	⇑*i*P	**P**	**19 08 11.2**	**-1.5**
BIPH				*e*S	**S**	**19 08 26.4**	**-4.0**
BIPH	**Bislig**	**1.42**	**202**	⇑*e*P	**P**	**19 08 11.2**	**-1.5**
BIPH				*e*S	**S**	**19 08 26.4**	**-4.0**
MSLP	**Maasin**	**2.10**	**287**	*e*P	**P**	**19 08 22.7**	**+0.3**
MSLP				*e*S	**S**	**19 08 39.1**	**-8.3**
CGP	**Cagayan de Oro**	**2.42**	**244**	*e*P	**P**	**19 08 25.4**	**-1.5**
CGP				*e*S	**S**	**19 08 56.5**	**+1.0**
BUKP	**Musuan**	**2.44**	**228**	*e*P	**P**	**19 08 27.0**	**0.0**
PLP	**Palo**	**2.50**	**311**	*e*P	**P**	**19 08 28.0**	**0.0**
PLP				*e*S	**S**	**19 08 56.7**	**-0.9**
MATI	**Mati**	**2.63**	**194**	*e*P	**P**	**19 08 28.3**	**-1.5**
OCLP	**Ormoc**	**2.72**	**304**	*e*P	**P**	**19 08 32.4**	**+1.2**
DAV	**Davao City (W)**	**2.76**	**208**	*e*P	**P**	**19 08 33.0**	**+1.4**
LLP	**Lapu-Lapu**	**3.00**	**286**	*e*P	**P**	**19 08 35.4**	**+0.3**
LLP				*e*S	**S**	**19 09 10.1**	**-0.1**
TBP	**Tagbilaran**	**3.00**	**274**	*e*P	**P**	**19 08 34.8**	**-0.4**
TBP				*e*S	**S**	**19 09 10.0**	**-0.2**
KCP	**Kidapawan**	**3.07**	**216**	*i* P	**P**	**19 08 36.6**	**+0.5**
KCP				*i* S	**S**	**19 09 14.7**	**+2.8**
DCPH	**Dipolog City**	**3.62**	**256**	⇑*e*P	**P**	**19 08 43.3**	**-0.6**
DCPH				*e*S	**S**	**19 09 26.1**	**+0.1**
PAGZ	**Pagadian**	**3.85**	**245**	*e*P	**P**	**19 08 47.6**	**+0.5**
GUIM	**Jordan**	**4.39**	**285**	*e*P	**P**	**19 08 55.5**	**+0.8**
RCP	**Roxas**	**4.56**	**297**	⇓*e*P	**P**	**19 08 57.5**	**+0.2**
IPIL	**Ipil**	**4.61**	**249**	*e*P	**P**	**19 09 00.1**	**+2.2**
PVCP	**Virac**	**4.87**	**327**	*e*P	**P**	**19 09 03.6**	**+2.1**
BUSP	**Coron**	**7.03**	**291**	*e*P	**P**	**19 09 32.3**	**+0.4**
TGY	**Tagaytay City**	**7.41**	**309**	Pn	**P**	**19 09 33.0**	**-4.1**
	13nm,0.3s,baz=211,slow=5.9,SNR=2.0						
CAUP	**Cauayan**	**8.89**	**327**	*e*P	**P**	**19 09 56.2**	**-1.3**
GUMO	**Guam**	**18.06**	**75**	P	**P**	**19 11 55.1**	**-3.5**
KAKA	**Kakadu**	**22.75**	**166**	*e*P	**P**	**19 12 48.5**	**-0.3**
	22nm,0.8s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.47**	**183**	*e*P	**P**	**19 13 33.3**	**-0.2**
	27nm,0.9s,mb4.8						
KS15	**Wonju Array Si**	**27.82**	**2**	*e*P	**P**	**19 13 36.3**	**-0.2**
CM31	**Chiang Mai Arr**	**28.51**	**291**	*e*P	**P**	**19 13 40.6**	**-2.3**
	8.2nm,1.1s,mb4.4						
CMAR	**Chiang Mai Arr**	**28.51**	**291**	P	**P**	**19 13 41.5**	**-1.4**
	1.8nm,0.9s,mb3.8,baz=102,slow=7.3,SNR=12						
CMAR				PcP	PcP	19 16 54.2	+0.2
	1.0nm,1.1s,baz=104,slow=1.8,SNR=2.5						
CMAR				LR	LR	19 26 21.4	
	comp=Z,117nm,19.1s,MS3.5,baz=310,slow=40						
WRAB	**Tennant Creek**	**30.17**	**166**	*e*P	**P**	**19 13 56.4**	**-1.1**
	6.9nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**30.17**	**166**	P	**P**	**19 13 55.9**	**-1.7**
	2.1nm,0.9s,mb3.9,baz=348,slow=9.3,SNR=12						
WRA				S	**S**	**19 19 01.6**	**+8.9**
	0.4nm,0.7s,baz=307,slow=26,SNR=5.3						
BJT	**Baijiatuau**	**31.85**	**344**	*e*P	**P**	**19 14 11.1**	**-1.1**
	17nm,1.2s,mb4.8						
BJI	**Beijing**	**31.87**	**344**	P	**P**	**19 14 12.9**	**+0.5**
BJI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.4						
BJI	**Beijing**	**31.87**	**344**	P	**P**	**19 14 12.9**	**+0.5**
	comp=Z,10.0nm,1.5s,mb4.4						
ASAR	**Alice Springs**	**33.68**	**168**	P	**P**	**19 14 27.6**	**-0.6**
	comp=Z,1.2nm,0.4s,mb4.1,baz=353,slow=6.7,SNR=35						
ASAR				PcP	PcP	19 17 07.9	+0.3
	comp=Z,1.2nm,0.8s,baz=341,slow=3.1,SNR=3.4						
ASPA	**Alice Springs**	**33.68**	**168**	*e*P	**P**	**19 14 28.5**	**+0.2**
HHC	**Hu-ho-hao-te**	**34.04**	**339**	⇑P	**P**	**19 14 32.0**	**+0.8**
HHC				PCP	PcP	19 17 05.5	-3.0
HHC				S	**S**	**19 20 01.6**	**+8.7**
HHC				XS		19 20 11.1	
HHC				SCP		19 20 47.9	
HHC				SCS	ScS	19 24 45.8	-3.6
HHC				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
HHC				LR	LR		
	comp=N,305nm,16.6s,MS4.3						
HHC				LR	LR		
	comp=E,351nm,14.3s,MS4.3						
HHC				LR	LR		
	comp=Z,318nm,17.8s,MS4.1						
CTA	**Charters Tower**	**35.05**	**147**	*e*P	**P**	**19 14 42.2**	**+2.2**
	comp=Z,7.2nm,1.6s,mb4.3						
CTA	**Charters Tower**	**35.05**	**147**	P	**P**	**19 14 42.3**	**+2.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=310,slow=7.9,SNR=6.5						
CTAO	**Charters Tower**	**35.05**	**147**	P	**P**	**19 14 42.3**	**+2.3**
	comp=Z,6.5nm,0.9s,mb4.6						
GTA	**Gaotai**	**38.35**	**325**	*e*P	**P**	**19 15 07.1**	**-0.6**
GTA				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.0						
LSA	**Lhasa**	**38.97**	**306**	P	**P**	**19 15 13.6**	**+0.7**
	comp=Z,4.2nm,0.9s,mb4.2						
FORT	**Forrest**	**40.08**	**178**	*e*P	**P**	**19 15 22.4**	**+0.3**
	comp=Z,517nm,0.7s						
ULN	**Ulaanbaatar**	**41.74**	**340**	*e*P	**P**	**19 15 36.6**	**+0.9**
	comp=Z,3.6nm,0.8s,mb4.0						
SONM	**Songino Array**	**41.94**	**339**	P	**P**	**19 15 38.2**	**+0.9**
	comp=Z,2.1nm,1.0s,mb3.7,baz=153,slow=9.0,SNR=13						
SONM				ScP		19 21 19.8	
	comp=Z,0.6nm,1.0s,baz=135,slow=2.0,SNR=3.2						
MUN	**Mundaring**	**42.50**	**193**	*e*P	**P**	**19 15 42.0**	**-0.1**
	comp=Z,14nm,1.0s,mb4.6						
NWAO	**Narrogin (SRO)**	**43.20**	**192**	P	**P**	**19 15 47.7**	**-0.1**
	comp=Z,5.9nm,0.3s,mb4.7,baz=24,slow=8.5,SNR=23						
NWAO	**Narrogin (SRO)**	**43.20**	**192**	*e*P	**P**	**19 15 46.7**	**-1.1**
	comp=Z,25nm,1.0s,mb4.9						
STKA	**Stephens Creek**	**43.49**	**162**	*e*P	**P**	**19 15 49.8**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**43.49**	**162**	P	**P**	**19 15 49.9**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.0,baz=338,slow=7.5,SNR=8.2						
STKA	**Stephens Creek**	**43.49**	**162**	*e*P	**P**	**19 15 49.2**	**-1.0**
TLY	**Talaya**	**46.15**	**340**	*e*P	**P**	**19 16 11.1**	**0.0**
	comp=Z,4.1nm,0.7s,mb4.5						
YAK	**Yakutsk**	**52.46**	**2**	*e*P	**P**	**19 16 59.9**	**+0.4**
	comp=Z,9.7nm,0.9s,mb4.7						
ZAL	**Zalesovo**	**55.59**	**331**	P	**P**	**19 17 20.6**	**-2.0**
	comp=Z,1.3nm,0.8s,mb4.0,baz=12,slow=7.2,SNR=8.3						
AAK	**Ala-Archa**	**56.30**	**315**	*e*P	**P**	**19 17 25.9**	**-2.0**
	comp=Z,2.2nm,0.7s,mb4.3						
KURK	**Kurchatov**	**57.04**	**326**	*e*P	**P**	**19 17 31.7**	**-1.4**
	comp=Z,9.2nm,1.0s,mb4.8						
BVAR	**Borovoye Array**	**62.64**	**325**	P	**P**	**19 18 10.1**	**-1.3**
	comp=Z,2.7nm,0.7s,mb4.5,baz=121,slow=8.6,SNR=16						
CHKZ	**Chkalovo**	**62.76**	**326**	*e*P	**P**	**19 18 10.2**	**-2.0**
	comp=Z,2.9nm,1.0s,mb4.4						
RPZ	**Rata Peaks**	**66.42**	**147**	P	**P**	**19 18 37.4**	**+1.4**
	comp=Z,18nm,1.0s,mb5.1,baz=263,slow=8.3,SNR=6.5						
RAYN	**Ar Rayn**	**78.43**	**292**	P	**P**	**19 19 46.2**	**-1.4**
	comp=Z,40nm,0.7s,mb5.5,SNR=7.9						
ILAR	**Eielson Array**	**79.85**	**26**	P	**P**	**19 19 56.6**	**+2.1**
	comp=Z,0.6nm,0.8s,mb3.6,baz=253,slow=4.8,SNR=6.6						
INK	**Inuvik**	**84.76**	**22**	P	**P**	**19 20 22.2**	**+2.5**
	comp=Z,3.0nm,1.0s,mb4.4						
ASF	**Jabal al Asfar**	**85.01**	**302**	P	**P**	**19 20 21.9**	**+0.1**
	comp=Z,1.7nm,0.8s,mb4.2,baz=34,slow=3.6,SNR=3.5						
ARCES	**ARCESS Array B**	**85.11**	**340**	P	**P**	**19 20 21.9**	**+0.5**
	comp=Z,3.9nm,0.7s,mb4.6,baz=79,slow=6.2,SNR=8.2						
BRTR	**Keskin Array B**	**86.49**	**310**	P	**P**	**19 20 30.5**	**+1.7**
	comp=Z,1.1nm,0.9s,mb4.1,baz=108,slow=9.1,SNR=3.6						
FINES	**FINESS Array B**	**86.85**	**332**	P	**P**	**19 20 30.5**	**+0.5**
	comp=Z,1.1nm,0.4s,mb4.4,baz=72,slow=5.0,SNR=7.7						
FINES	**FINESS Array B**	**86.85**	**332**	P	**P**	**19 20 30.5**	**+0.5**
AKASG	**Malin Array Be**	**87.54**	**321**	P	**P**	**19 20 34.2**	**+0.5**
	comp=Z,0.7nm,0.6s,mb4.1,baz=65,slow=4.9,SNR=5.6						
RES	**Resolute Bay**	**92.13**	**10**	*e*P	**P**	**19 20 56.8**	**+2.0**
	comp=Z,2.9nm,0.9s,mb4.6						
YKA	**Yellowknife Ar**	**94.19**	**24**	P	**P**	**19 21 07.3**	**+3.0**
	comp=Z,0.7nm,0.7s,mb4.2,baz=302,slow=4.8,SNR=9.9						
PLCA	**Paso Flores**	**145.27**	**156**	PKPbc	PKPbc	19 27 24.8	+1.8
	comp=Z,1.0nm,0.6s,baz=311,slow=6.0,SNR=3.3						
PLCA	**Paso Flores**	**145.27**	**156**	PKPbc	PKPbc	19 27 24.8	+1.8

*IDC **10** 19:17:54.9±2.5, 2.46N×99.36E, h172^{km}±22^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.6/20, mbtmp4.2/11, Error ellipse: s-maj=26.9km s-min=11.3km az=62.0*
*NEIC **10** 19:17:56.1±2.7, 2.50N×99.46E, h183^{km}±26^{km}, mb4.1/5, Error ellipse: s-maj=23.7km s-min=8.6km az=63.0*
ISC 10 19:17:54.9±2.0**, 2.5N**±0.1×**99.5E**±0.2**, h187**^{km}±16^{km}**, n18, σ0**^{s}**91**/18**, mb4.0**/14**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	2.55	36	P	P	19 18 39.7	+0.6
KGM	Kluang	3.84	97	P	P	19 18 53.9	-1.0
CM31	Chiang Mai Arr	15.85	358	*e*P	P	19 21 29.6	+0.2
	3.0nm,0.5s						
CMAR	Chiang Mai Arr	15.85	358	P	P	19 21 30.1	+0.6
	0.7nm,0.3s,baz=190,slow=11,SNR=58						
CMAR				ScP		19 29 33.9	
	0.1nm,0.3s,baz=211,slow=2.7,SNR=4.4						
LSA	Lhasa	28.18	344	*e*P	P	19 23 32.7	+0.5
	1.8nm,0.5s,mb4.1						
ENH	Enshi	29.18	18	P	P	19 23 39.7	-1.5
	5.7nm,0.8s,mb4.3						
NWAO	Narrogin (SRO)	39.04	156	P	P	19 25 05.3	+0.1
	10nm,1.1s,mb4.4,baz=208,slow=22,SNR=2.3						
WRA	Warramunga Arr	40.83	125	P	P	19 25 20.8	+0.8
	1.5nm,0.3s,mb4.1,baz=320,slow=11,SNR=52						
WRAB	Tennant Creek	40.83	125	*e*P	P	19 25 20.8	+0.7
	7.9nm,0.8s,mb4.4						
ASAR	Alice Springs	42.40	130	P	P	19 25 33.1	+0.2
	1.1nm,0.7s,mb3.6,baz=298,slow=7.3,SNR=18						
SONM	Songino Array	45.53	7	P	P	19 25 58.1	+0.5
	1.7nm,0.4s,mb4.0,baz=191,slow=9.3,SNR=55						
SONM				ScP		19 31 09.7	
	0.3nm,0.7s,baz=193,slow=3.7,SNR=4.7						
ULN	Ulaanbaatar	45.64	7	*e*P	P	19 25 58.3	-0.2
	1.6nm,0.6s,mb3.8						
STKA	Stephens Creek	52.56	134	P	P	19 26 50.9	-0.6
	0.9nm,0.4s,mb3.8,baz=328,slow=6.8,SNR=7.5						
ZAL	Zalesovo	52.66	349	P	P	19 26 50.6	-1.3
	1.8nm,0.3s,mb4.2,baz=321,slow=8.2,SNR=10.0						
BVAR	Borovoye Array	55.81	339	P	P	19 27 13.0	-1.8
	0.8nm,0.5s,mb3.9,baz=139,slow=11,SNR=11						
LBTB	Lobatse	76.53	244	P	P	19 29 25.8	-0.8
	1.6nm,0.8s,mb3.7,baz=20,slow=10,SNR=2.7						
FINES	FINESS Array B	79.91	332	P	P	19 29 45.2	+1.0
	5.4nm,1.1s,mb4.1,baz=101,slow=7.1,SNR=6.0						
ARCES	ARCESS Array B	82.09	340	P	P	19 29 57.1	+1.7
	2.2nm,0.8s,mb3.9,baz=108,slow=5.7,SNR=3.2						

IDC 10 19:32:18.6±5.9**, 9.10S×156.80E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/13**, mbtmp3.6**/3**, Error ellipse: s-maj=101.9km s-min=81.5km az=8.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.23	241	P	P	19 37 36.2	-2.2
	0.8nm,0.8s,baz=68,slow=9.6,SNR=5.5						
ASAR	Alice Springs	26.25	234	P	P	19 37 57.6	+0.2
	0.6nm,1.1s,baz=52,slow=10,SNR=3.4						
STKA	Stephens Creek	26.70	210	P	P	19 37 58.7	-2.8
	1.4nm,0.8s,baz=22,slow=9.8,SNR=4.2						

BJI ***10*** *19:35:47.4, 4.05N×95.70E, h50^{km}, mb4.3*

IDC ***10*** *19:35:47.9±4.6, 4.58N×96.32E, h19^{km}±28^{km}, mb4.2/14, mb1 4.3/15, mb1mx4.2/22, mbtmp4.3/15, MS3.1/1, Ms1 3.3/1, ms1mx3.2/21, Error ellipse: s-maj=24.9km s-min=13.2km az=49.0*

NEIC ***10*** *19:35:49.3±0.4, 4.55N×96.34E, h30^{km}, mb4.6/7, Error ellipse: s-maj=17.2km s-min=7.6km az=52.0*

ISC 10 19:35:47.3±0.5**, 4.42N**±0.09×**96.2E**±0.1**, h30**^{km}**, n28,** σ1^{s}**25**/28**, mb4.4**/22**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	14.20	11	P	P	19 39 13.3	+4.6
	23nm,1.1s						
CMAR	Chiang Mai Arr	14.20	11	Pn	P	19 39 11.6	+2.9
	baz=200,slow=13,SNR=6.6						
CMAR				LR	LR	19 44 50.9	
	comp=Z,74nm,18.4s,baz=135,slow=39						
LSA	Lhasa	25.60	350	P	P	19 41 17.0	+1.1
LSA	Lhasa	25.60	350	*e*P	P	19 41 17.0	+1.2
	8.6nm,0.9s,mb4.3						
GTA	Gaotai	34.98	5	*e*P	P	19 42 39.1	0.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.5s,mb4.1						
FITZ	Fitzroy Crossi	36.62	128	*e*P	P	19 42 52.2	-1.0
	comp=Z,9.3nm,0.5s,mb4.9						
JOW	Kunigami	37.85	51	P	P	19 43 03.7	+0.3
	comp=Z,20nm,0.7s,mb5.0,baz=168,slow=28,SNR=3.9						
BJI	Beijing	39.77	24	P	P	19 43 21.6	+2.3
BJI				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.5						
BJI	Beijing	39.77	24	P	P	19 43 21.6	+2.3
	comp=Z,7.0nm,0.7s,mb4.5						
NWAO	Narrogin (SRO)	42.14	153	P	P	19 43 41.1	+2.2
	comp=Z,7.4nm,0.9s,mb4.3,baz=307,slow=11,SNR=3.5						
SONM	Songino Array	44.12	10	P	P	19 43 54.5	-0.4
	comp=Z,1.2nm,0.9s,mb3.6,baz=189,slow=9.6,SNR=11						
SONM				PcP	PcP	19 45 39.6	-0.5
	comp=Z,0.5nm,0.4s,baz=192,slow=3.9,SNR=12						
WRA	Warramunga Arr	44.58	124	P	P	19 43 58.4	-0.5
	comp=Z,7.1nm,0.5s,mb4.8,baz=301,slow=9.2,SNR=131						
WRA				PcP	PcP	19 45 41.8	-0.3
	comp=Z,0.7nm,0.5s,baz=315,slow=2.8,SNR=5.8						
WRA				ScP		19 49 33.6	
	comp=Z,0.5nm,0.7s,baz=318,slow=3.6,SNR=6.2						
WRAB	Tennant Creek	44.59	124	*e*P	P	19 43 58.7	-0.3
	comp=Z,17nm,0.5s,mb5.1						
ASPA	Alice Springs	46.12	129	⇓*i*P	P	19 44 11.0	-0.1
ASAR	Alice Springs	46.12	129	P	P	19 44 11.1	0.0
	comp=Z,3.7nm,0.4s,mb4.7,baz=304,slow=7.6,SNR=127						
ASAR				PcP	PcP	19 45 47.1	-0.2
	comp=Z,1.0nm,0.8s,baz=310,slow=4.3,SNR=4.1						
KURK	Kurchatov	48.45	345	*e*P	P	19 44 27.4	-1.7
	comp=Z,3.7nm,1.3s,mb4.2						
ZAL	Zalesovo	50.24	351	P	P	19 44 40.7	-2.0
	comp=Z,1.2nm,0.4s,mb4.3,baz=302,slow=8.3,SNR=4.0						
BVAR	Borovoye Array	52.91	341	P	P	19 45 01.0	-1.9
	comp=Z,0.8nm,0.6s,mb3.9,baz=135,slow=8.4,SNR=8.3						
CHKZ	Chkalovo	53.39	341	*e*P	P	19 45 04.4	-2.0
	comp=Z,3.1nm,0.7s,mb4.3						
CTA	Charters Tower	54.82	118	P	P	19 45 17.1	-0.3
	comp=Z,6.0nm,1.1s,mb4.5,baz=238,slow=7.9,SNR=2.7						
STKA	Stephens Creek	56.23	133	P	P	19 45 27.3	-0.1
	comp=Z,2.3nm,0.7s,mb4.3,baz=306,slow=7.4,SNR=7.4						
STKA	Stephens Creek	56.23	133	*e*P	P	19 45 26.8	-0.6
KMBO	Kilima Mbogo	59.20	266	P	P	19 45 50.2	+1.7
	comp=Z,0.8nm,0.6s,mb3.9,baz=55,slow=23,SNR=2.1						
BRTR	Keskin Array B	66.26	312	P	P	19 46 34.2	-0.8
	comp=Z,1.1nm,0.4s,mb4.2,baz=133,slow=6.6,SNR=3.8						
IDI	Anoyia	72.25	306	P	P	19 47 12.0	0.0
	comp=Z,9.4nm,0.8s,mb4.7,baz=78,slow=8.4,SNR=2.2						
ARCES	ARCESS Array B	79.20	340	P	P	19 47 50.3	-0.4
	comp=Z,5.0nm,0.9s,mb4.5,baz=91,slow=6.8,SNR=7.8						
GERES	GERESS Array B	81.78	319	P	P	19 48 06.0	+1.2
	comp=Z,0.8nm,0.5s,mb3.9,baz=117,slow=6.0,SNR=9.1						
LPG	La Plagne	86.52	315	*e*P	P	19 48 30.0	+1.1
	comp=Z,12nm,1.0s,mb4.8						

IDC 10 19:45:11.5±2.9**, 33.53S×178.50W, mb4.5**/3**, mb1 4.6**/4**, mb1mx4.1**/15**, mbtmp4.4**/4**, ML4.0**/1**, Error ellipse: s-maj=61.8km s-min=35.5km az=118.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	5.91	216	Pn	Pn	19 46 40.5	-2.0
	4.4nm,0.3s,baz=317,slow=7.6,SNR=13						
URZ				Sn	Sn	19 47 48.8	-3.1
	2.0nm,0.3s,baz=151,slow=21,SNR=8.1						
CTA	Charters Tower	34.01	284	P	P	19 51 58.0	-1.3
	38nm,1.4s,baz=140,slow=7.9,SNR=4.2						
ASAR	Alice Springs	42.61	271	P	P	19 53 09.5	-1.8
	1.8nm,0.7s,baz=112,slow=7.3,SNR=26						
WRA	Warramunga Arr	43.88	276	P	P	19 53 19.5	-2.1
	2.4nm,0.7s,baz=116,slow=7.9,SNR=28						
FINES	FINESS Array B	147.91	338	PKPbc	PKPdf	20 04 57.1	+0.5
	4.9nm,0.9s,baz=45,slow=2.7,SNR=7.5						

LDG ***10*** *19:51:05.4±0.3, 18.22S×168.44E, h10^{km}, Mb4.9/3, Error ellipse: s-maj=31.7km s-min=17.4km az=14.0*

BJI ***10*** *19:51:17.7, 18.40S×168.80E, h116^{km}, mB5.0, mb4.7*

NEIC ***10*** *19:51:18.8±1.2, 18.41S×168.76E, h116^{km}±10^{km}, mb4.8/28, Error ellipse: s-maj=9.0km s-min=7.9km az=175.0*

IDC ***10*** *19:51:24.9±5.0, 18.46S×168.70E, h169^{km}±44^{km}, mb4.2/16, mb1 4.4/16, mb1mx4.3/20, mbtmp4.6/16, Error ellipse: s-maj=20.1km s-min=14.4km az=35.0*

ISC 10 19:51:15.9±1.5**, 18.38S**±0.07×**168.71E**±0.07**, h100**^{km}±14^{km}**, n149,** σ0^{s}**98**/70**, mb4.7**/43**, 9C-9D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.25	210	*e*P	P	19 52 20.6	+0.9
DZM				*e*S	S	19 53 07.8	-0.7
DZM	Mont Dzumac	4.25	210	*e*P	P	19 52 20.6	+0.9
DZM				*e*S	S	19 53 07.8	-0.7
NOUC	Port Laguerre	4.34	211	⇑*e*P	P	19 52 22.2	+1.1
NOUC				*e*S	S	19 53 09.6	-1.2
NOUC	Port Laguerre	4.34	211	⇑*e*P	P	19 52 22.1	+1.1
NOUC				*e*S	S	19 53 09.6	-1.2
AFI	Afiamalu	19.26	80	P	P	19 55 34.3	-0.9
	73nm,1.1s						
URZ	Urewera	21.12	161	P	P	19 55 55.6	+1.3
	15nm,0.8s,mb4.4,baz=311,slow=3.6,SNR=7.5						
CTA	Charters Tower	21.27	262	⇓*i*P	P	19 55 57.4	+1.5
	8.4nm,0.6s,mb4.2						
CTA	Charters Tower	21.27	262	P	P	19 55 58.6	+2.8
	9.3nm,0.6s,mb4.3,baz=94,slow=13,SNR=19						
CTAO	Charters Tower	21.27	262	P	P	19 55 57.2	+1.3
	30nm,1.0s,mb4.6						
PMG	Port Moresby	22.72	290	P	P	19 56 13.1	+2.9
	42nm,0.9s,mb4.8,baz=117,slow=5.8,SNR=7.9						
PMG	Port Moresby	22.72	290	P	P	19 56 11.2	+1.0
	83nm,1.1s,mb5.0						
CNB	Canberra Magne	24.06	222	*e*P	P	19 56 24.5	+1.6
	126nm,0.6s,mb5.4						
RPZ	Rata Peaks	25.34	176	P	P	19 56 35.8	+0.8
	21nm,1.2s,mb4.5,baz=290,slow=18,SNR=3.3						
STKA	Stephens Creek	27.90	236	⇑*i*P	P	19 56 59.0	+0.3
	12nm,0.6s,mb4.6						
STKA	Stephens Creek	27.90	236	P	P	19 56 59.1	+0.5
	16nm,0.7s,mb4.7,baz=63,slow=7.4,SNR=80						
WRAB	Tennant Creek	32.47	262	*e*P	P	19 57 35.8	-3.2
	15nm,1.0s,mb4.7						
WRA	Warramunga Arr	32.48	262	P	P	19 57 37.9	-1.2
	5.1nm,1.0s,mb4.2,baz=80,slow=6.7,SNR=38						
WRA				PcP	PcP	20 00 22.8	-1.3
	1.4nm,0.7s,baz=90,slow=2.8,SNR=7.6						
ASAR	Alice Springs	32.86	255	P	P	19 57 42.1	-0.4
	28nm,0.5s,mb5.3,baz=83,slow=8.6,SNR=583						
ASAR				PcP	PcP	20 00 23.2	-1.8
	1.3nm,0.8s,baz=84,slow=3.9,SNR=5.0						
ASPA	Alice Springs	32.87	255	*e*P	P	19 57 41.5	-1.0
FORT	Forrest	38.77	244	*e*P	P	19 58 32.2	-0.1
	505nm,0.6s						
FITZ	Fitzroy Crossi	40.84	263	*e*P	P	19 58 49.9	+0.4
	55nm,0.7s,mb5.5						
MBWA	Marble Bar	46.04	258	*e*P	P	19 59 31.3	-0.3
	18nm,0.8s,mb4.8						
NWAO	Narrogin (SRO)	48.17	242	*e*P	P	19 59 47.2	-0.9
	9.9nm,0.8s,mb4.7						
VNDA	Vanda	59.27	182	P	P	20 01 07.7	-1.2
	3.3nm,1.2s,mb4.2,baz=18,slow=13,SNR=2.8						
VNDA	Vanda	59.27	182	P	P	20 01 07.7	-1.2
CASY	Casey	60.71	203	P	P	20 01 15.6	-3.3
	19nm,1.0s,mb5.1						
MAJO	Matsushiro	61.76	332	*e*P	P	20 01 25.1	-1.3
	20nm,0.9s,mb5.2						
MAT	Matsushiro	61.76	332	P	P	20 01 25.3	-1.1
YSS	Yuzh-Sakhalins	69.11	341	*e*P	P	20 02 12.6	-0.7
	40nm,1.2s,mb5.1						
MDJ	Mudanjiang	72.13	332	*e*P	P	20 02 31.5	0.0
	10nm,0.8s,mb4.7						
CN2	Changchun	73.47	329	*e*P	P	20 02 39.3	0.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
ENH	Enshi	74.74	310	*e*P	P	20 02 46.5	-0.6
	comp=Z,14nm,0.9s,mb4.7						
GYA	Guiyang	74.92	305	⇓*i*P	P	20 02 48.0	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
BJT	Baijiatuau	75.95	321	*e*P	P	20 02 53.8	+0.1
	comp=Z,10nm,0.6s,mb4.7						
BJI	Beijing	75.96	321	P	P	20 02 53.8	+0.1
BJI				AMB	AMB		
	comp=Z,16nm,0.7s,mb4.9						
BJI	Beijing	75.96	321	P	P	20 02 53.8	+0.1
	comp=Z,16nm,0.7s,mb4.9						
XAN	Xi'an	77.17	313	P	P	20 03 00.8	+0.2
XAN				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
KMI	Kunming	77.40	302	⇓P	P	20 03 03.4	+1.4
KMI				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,62nm,3.1s						
KMI	Kunming	77.40	302	⇓P	P	20 03 03.4	+1.4
	comp=Z,18nm,1.2s,mb4.7						
CMAR	Chiang Mai Arr	77.70	294	P	P	20 03 04.9	+1.1
	comp=Z,8.7nm,0.8s,mb4.5,baz=131,slow=4.5,SNR=70						
CM31	Chiang Mai Arr	77.70	294	*e*P	P	20 03 04.3	+0.5
	comp=Z,12nm,0.8s,mb4.7						
MA2	Magadan	79.05	351	*e*P	P	20 03 08.6	-1.8
	comp=Z,7.5nm,0.9s,mb4.5						
HHC	Hu-ho-hao-te	79.25	320	*e*P	P	20 03 12.1	+0.2
HHC				AMB	AMB		
	comp=Z,111nm,10.7s						
HHC				LR	LR		
	comp=N,267nm,15.5s						
HHC				LR	LR		
	comp=E,252nm,17.8s						
HIA	Hailar	80.12	330	*e*P	P	20 03 15.8	-0.6
	comp=E,4.0nm,0.6s,mb4.4						
LZH	Lanzhou	81.78	312	*e*P	P	20 03 26.5	+1.1
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
LZH	Lanzhou	81.78	312	*e*P	P	20 03 26.5	+1.1
	comp=Z,20nm,1.2s,mb4.8						
LZH				pP	pP	20 03 35.5	-16
LZH				sP	sP	20 03 42.0	-21
SYO	Syowa Base	85.62	196	⇓P	P	20 03 43.0	-0.9
ULN	Ulaanbaatar	85.88	324	*e*P	P	20 03 46.2	+0.5
	comp=Z,17nm,1.0s,mb4.9						
YAK	Yakutsk	85.91	343	*e*P	P	20 03 44.8	-0.7
	comp=Z,21nm,0.8s,mb5.1						
GTA	Gaotai	86.18	314	*e*P	P	20 03 48.6	+1.3
GTA				AP	pP	20 04 18.5	+4.7
GTA				XP	sP	20 04 31.2	+6.6
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.8						
BILL	Bilibino	86.19	359	*e*P	P	20 03 46.3	-0.4
	comp=Z,15nm,1.1s,mb4.8						
SONM	Songino Array	86.24	323	P	P	20 03 48.0	+0.5
	comp=Z,6.7nm,0.6s,mb4.8,baz=148,slow=6.4,SNR=80						
CMB	Columbia Colle	86.96	48	*e*P	P	20 03 51.6	+0.4
	comp=Z,8.4nm,0.9s,mb4.7						
YBH	Yreka Blue Hor	87.03	44	P	P	20 03 51.5	+0.1
	comp=Z,4.1nm,0.8s,mb4.4,baz=135,slow=7.3,SNR=10						
NVAR	Mina Array Bea	88.61	49	P	P	20 03 59.9	+0.9
	comp=Z,2.3nm,0.7s,mb4.3,baz=215,slow=5.7,SNR=17						
NVAR	Mina Array Bea	88.61	49	P	P	20 03 59.9	+0.8
LSA	Lhasa	88.66	302	*e*P	P	20 04 00.2	+0.7
	comp=Z,2.7nm,0.8s,mb4.3						
MOD	Modoc	88.71	45	*e*P	P	20 03 59.6	+0.1
	comp=Z,11nm,1.1s,mb4.8						
ILAR	Eielson Array	89.56	17	P	P	20 04 01.1	-1.8
	comp=Z,0.6nm,0.6s,mb3.9,baz=238,slow=5.1,SNR=9.3						
SNAA	Sanae	89.99	183	P	P	20 04 04.2	-0.6
	comp=Z,1.0nm,0.8s,mb4.0,baz=226,slow=16,SNR=6.3						
SNAA	Sanae	89.99	183	P	P	20 04 02.9	-2.0
	comp=Z,113nm,1.2s						
VNA3	Neumayer Olymp	90.60	181	⇑*i*	P	20 04 08.8	+1.1
VNA2	Neumayer--Watz	90.89	181	⇑*i*	P	20 04 07.8	-1.2
VNA2	Neumayer--Watz	90.89	181	⇑*i*	P	20 04 10.3	+1.3
ANMO	Albuquerque	96.22	55	P	P	20 04 34.8	+0.6
	comp=Z,1.5nm,0.7s,mb4.5,baz=78,slow=0.7,SNR=3.0						
TXAR	Lajitas Array	96.79	61	P	P	20 04 37.6	+0.7
	comp=Z,0.9nm,0.7s,mb4.3,baz=243,slow=5.6,SNR=6.9						
YKA	Yellowknife Ar	100.14	27	P	P	20 04 51.1	-0.2
	comp=Z,0.5nm,0.5s,baz=256,slow=4.7,SNR=14						
ARCES	ARCESS Array B	124.11	345	PKP	PKPdf	20 10 02.1	-0.2
	comp=Z,2.3nm,0.7s,baz=45,slow=1.7,SNR=10						
FINES	FINESS Array B	129.61	338	PKP	PKPdf	20 10 11.5	-1.5
	comp=Z,3.4nm,0.9s,baz=180,slow=1.9,SNR=3.9						
BDFB	Brasilia	130.49	131	PKP	PKPdf	20 10 15.6	-0.3
	comp=Z,1.0nm,0.4s,baz=288,slow=3.2,SNR=3.3						
AKASG	Malin Array Be	134.51	325	PKP	PKPdf	20 10 23.3	+0.7
	comp=Z,0.3nm,0.3s,baz=33,slow=1.9,SNR=4.1						
GERES	GERESS Array B	143.50	332	PKP	PKPdf	20 10 37.2	-1.4
	comp=Z,3.9nm,1.0s,baz=63,slow=3.0,SNR=8.9						
IDI	Anoyia	143.84	305	PKP	PKPdf	20 10 38.8	-0.9
	comp=Z,9.1nm,0.7s,baz=46,slow=18,SNR=3.1						
GRA1	Grafenberg Arr	143.91	335	*e*PKPbc	PKPbc	20 10 38.6	+0.1
GRF	Grafenberg Arr	143.91	335	*e*PKP	PKPdf	20 10 38.6	-0.7
MOA	Molln	143.97	330	⇑*i*P	PKPbc	20 10 39.3	+0.5
TNS	Taunus Mts	144.52	338	*e*PKPbc	PKPbc	20 10 40.8	+0.6
LEGS	Legarje	144.78	327	*e*PKP	PKPdf	20 10 41.1	+0.1
OBKA	Obir	144.78	329	⇑*i*P	PKPdf	20 10 41.4	+0.4
DLF	Lyons Farm	144.96	355	*e*P	PKPdf	20 10 39.0	-2.1
KBA	Koelnbreinsper	144.96	330	⇑*i*P	PKPdf	20 10 41.9	+0.6
DCN	Croghan	144.97	356	*e*P	PKPdf	20 10 41.0	-0.1
FUR	Furstenfeldbru	145.07	333	*e*PKPbc	PKPbc	20 10 42.9	+1.1
BOJS	Bojanci	145.11	327	*i* PKP	PKPdf	20 10 42.8	+1.2
LJU	Ljubljana	145.12	328	*i* PKP	PKPdf	20 10 42.5	+0.9
FVI	Forni Avoltri	145.58	330	*e*PKP	PKPdf	20 10 43.8	+1.5
WATA	Walderalm	145.58	332	⇓*i*P	PKPdf	20 10 43.4	+1.1
WTTA	Wattenberg	145.61	332	⇑*i*P	PKPdf	20 10 43.0	+0.6
MOTA	Moosalm	145.78	333	⇓*i*P	PKPdf	20 10 44.4	+1.7
WLF	Walferdange	145.78	340	*e*P	PKPdf	20 10 44.8	+2.2
GIVF	Givet	145.82	341	*e*PKP1	PKPbc	20 10 44.0	+0.4
	comp=Z,21nm,0.8s						
SQTA	Sankt Quirin	145.83	332	⇓*i*P	PKPdf	20 10 44.8	+2.0
BAIF	Baives	146.04	342	*e*PKP1	PKPbc	20 10 44.7	+0.5
	comp=Z,25nm,0.9s						
BFO	Black Forest	146.13	336	*e*PKPbc	PKPbc	20 10 45.3	+0.9
DAVA	Damuels	146.35	334	⇓*i*P	PKPdf	20 10 46.3	+2.6
CDF	Champ du Feu	146.46	337	*e*PKP1	PKPbc	20 10 45.9	+0.7
	comp=Z,44nm,0.9s						
DAVOX	Davos	146.75	333	PKPbc	PKPbc	20 10 47.8	+1.9
	comp=Z,18nm,0.6s,baz=231,slow=7.1,SNR=39						
HINF	Hinteralfeld	147.11	337	*e*PKP1	PKPdf	20 10 47.4	+2.5
HAU	Haudompre	147.14	338	*e*PKP1	PKPdf	20 10 47.8	+2.8
	comp=Z,35nm,1.0s						
MEZF	Maizieres J'vi	147.15	340	*e*PKP1	PKPdf	20 10 48.2	+3.2
	comp=Z,70nm,1.0s						
VAI	Varese	147.94	333	*e*PKP	PKPdf	20 10 50.2	+3.9
SFI	Santa Sofia	147.97	328	*e*PKP	PKPdf	20 10 51.5	+5.0
NRCA	Norcia	148.04	325	*e*PKP	PKPdf	20 10 50.6	+4.0
PGD	Poggio Sodo	148.06	328	*e*PKP	PKPdf	20 10 52.1	+5.5
ZCCA	Zocca	148.08	329	*e*PKP	PKPdf	20 10 52.1	+5.5
MCGN	Macugnaga	148.20	334	*e*PKP	PKPdf	20 10 51.8	+5.1
CABF	La Chapelle	148.41	337	*e*PKP1	PKPdf	20 10 51.7	+4.7
	comp=Z,48nm,0.9s						
GRAM		148.42	330	P	PKPdf	20 10 51.3	+4.2
VALM		148.44	330	P	PKPdf	20 10 51.2	+4.0
FLN	La Foliniere	148.45	346	*e*PKP1	PKPdf	20 10 50.9	+3.9
	comp=Z,62nm,1.1s						
ORX	Oropa	148.46	334	P	PKPdf	20 10 51.0	+3.8
SARO	Sassorosso	148.49	329	P	PKPdf	20 10 51.1	+3.9
BOB	Bobbio (Coli)	148.50	331	*e*PKP	PKPdf	20 10 52.3	+5.1
LDF	La Druitiere	148.53	346	*e*PKP1	PKPdf	20 10 51.0	+3.8
GRR	Gorron	148.89	346	*e*PKP1	PKPdf	20 10 52.1	+4.3
SSF	Saint Saulge	148.92	340	*e*PKP1	PKPdf	20 10 52.6	+4.8
	comp=Z,46nm,0.9s						
LSD	Ceresole Reale	148.94	334	P	PKPdf	20 10 53.2	+5.2
HYF	Humbligny	149.00	341	*e*PKP1	PKPdf	20 10 53.1	+5.1
LPL	La Plagne	149.07	335	*e*PKP1	PKPdf	20 10 53.4	+5.3
	comp=Z,9.8nm,0.6s						
LPG	La Plagne	149.08	335	*e*PKP1	PKPdf	20 10 53.5	+5.3
	comp=Z,35nm,1.1s						
PCP	Pian Castagno	149.08	332	P	PKPdf	20 10 52.9	+4.7
RSP	Reno Superiore	149.15	334	P	PKPdf	20 10 52.1	+3.8
SMF	Signal de Mont	149.17	339	*e*PKP1	PKPdf	20 10 53.0	+4.7
	comp=Z,56nm,1.4s						
AVF	Avril sur Loir	149.21	340	*e*PKP1	PKPdf	20 10 52.9	+4.6
	comp=Z,14nm,1.0s						
FENE	Fenestrelle	149.33	334	P	PKPdf	20 10 53.7	+5.1
SGMF	Saint Gilles	149.37	349	*e*PKP1	PKPdf	20 10 53.2	+4.7
BNI	Bardonecchia	149.47	335	*e*PKPbc	PKPdf	20 10 54.3	+5.5
FIN	Finale Ligure	149.49	332	P	PKPdf	20 10 53.1	+4.3
RRL	Cesana Torines	149.53	334	P	PKPdf	20 10 54.7	+5.8
ROB	Roburent	149.57	332	P	PKPdf	20 10 53.6	+4.7
BGF	Bois d'Agland	149.57	341	*e*PKP1	PKPdf	20 10 54.1	+5.2
	comp=Z,26nm,0.9s						
MBDF	Montbardon	149.70	334	*e*PKP1	PKPdf	20 10 54.3	+5.1
	comp=Z,31nm,1.2s						
PZZ	Prazzo	149.74	333	P	PKPdf	20 10 55.1	+5.8
MONE	Monesi	149.79	332	P	PKPdf	20 10 54.4	+5.0
QUIF	Quistinic	149.80	349	*e*PKP1	PKPdf	20 10 54.1	+4.9
ORIF	Oris-en-Rattie	149.90	335	*e*PKP1	PKPdf	20 10 55.1	+5.6
	comp=Z,33nm,0.8s						
TCF	Toulx Ste Croi	150.01	341	*e*PKP1	PKPdf	20 10 55.1	+5.5
	comp=Z,30nm,1.0s						
SBF	Sospel	150.11	332	*e*PKP1	PKPdf	20 10 55.1	+5.3
	comp=Z,62nm,1.0s						
PGF	Pioggiola	150.38	329	*e*PKP1	PKPdf	20 10 56.1	+5.8
	comp=Z,110nm,1.0s						
MFF	Saint Martin d	150.39	344	*e*PKP1	PKPdf	20 10 55.8	+5.6
	comp=Z,46nm,1.0s						
VIVF	Saint-Julien-l	150.42	337	*e*PKP1	PKPdf	20 10 56.3	+6.0
	comp=Z,27nm,0.9s						
FRF	La Foret Royal	150.69	333	*e*PKP1	PKPdf	20 10 56.5	+5.8
	comp=Z,30nm,0.9s						
SMRF	Simiane la Rot	150.81	335	*e*PKP1	PKPdf	20 10 57.5	+6.6
	comp=Z,35nm,0.9s						
LMR	La Mourre	150.93	333	*e*PKP1	PKPdf	20 10 57.2	+6.1
	comp=Z,33nm,1.0s						
RJF	Les Rejaudoux	151.11	341	*e*PKP1	PKPdf	20 10 57.8	+6.5
	comp=Z,8.3nm,0.7s						
CAF	Calviac	151.28	340	*e*PKP1	PKPdf	20 10 58.2	+6.7
	comp=Z,34nm,1.2s						
LASF	Ste Croix	151.39	337	*e*PKP1	PKPdf	20 10 58.6	+6.8
	comp=Z,33nm,0.9s						
LFF	La Frestale	151.68	342	*e*PKP1	PKPdf	20 10 59.1	+7.0
	comp=Z,15nm,0.7s						
MTLF	Montolieu	152.62	338	*e*PKP1	PKPdf	20 11 01.1	+7.5
	comp=Z,5.8nm,0.7s						

IDC 10 20:03:08.7±2.7**, 14.65N×93.79E, mb3.3**/3**, mb1 3.6**/4**, mb1mx3.4**/19**, mbtmp3.3**/4**, ML3.7**/1**, Error ellipse: s-maj=60.0km s-min=28.6km az=93.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.23	52	Pn	Pn	20 04 42.4	-1.7
	0.5nm,0.3s,baz=242,slow=15,SNR=18						
CMAR				Sn	Sn	20 05 53.6	-3.5
	0.4nm,0.3s,baz=229,slow=18,SNR=3.3						
SONM	Songino Array	34.71	15	P	P	20 10 00.8	-1.5
	0.3nm,0.7s,baz=190,slow=8.8,SNR=3.0						
WRA	Warramunga Arr	52.65	130	P	P	20 12 24.4	-2.8
	0.2nm,0.4s,baz=315,slow=8.4,SNR=6.0						
ASAR	Alice Springs	54.66	134	P	P	20 12 39.9	-2.0
	0.5nm,0.7s,baz=312,slow=6.6,SNR=8.9						

KNET 10 20:08:09.2±0.6**, 40.75N×73.32E, h13**^{km}±5^{km}**, ml4.0, 8C-1D, Error ellipse: s-maj=6.8km s-min=4.0km az=94.0, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	1.40	11	⇑P	Pn	20 08 35.4	+0.8
	7.8nm,0.2s						
AML				⇑S	Sb	20 08 56.5	+4.1
	34nm,0.4s						
UCH	Uchtor	1.72	31	⇑P	Pn	20 08 41.1	+2.0
	1.8nm,0.3s						
UCH				⇑S	Sn	20 09 06.4	+5.3
	6.1nm,0.3s						
EKS2	Erkin-Say	1.94	10	⇑P	Pn	20 08 44.7	+2.5
	1.2nm,0.3s						
EKS2				⇓S	Sn	20 09 12.2	+5.7
	3.1nm,0.2s						
KZA	Kyzart	1.96	47	⇑P	Pn	20 08 45.1	+2.5
	0.9nm,0.2s						
AAK	Ala-Archa	2.07	25	⇑P	Pn	20 08 47.1	+3.0
	2.3nm,0.2s						
AAK				⇑S	Sn	20 09 15.5	+5.5
	4.6nm,0.2s						

IDC ***10*** *20:08:41.0±0.8, 40.39N×73.14E, mb3.9/13, mb1 4.0/15, mb1mx3.9/23, mbtmp3.9/15, ML3.4/2, MS3.6/2, Ms1 3.5/2, ms1mx3.0/29, Error ellipse: s-maj=18.0km s-min=15.4km az=80.0*

MOS ***10*** *20:08:44.8±1.4, 40.66N×73.11E, h33^{km}, mb4.2/12, Error ellipse: s-maj=13.9km s-min=9.2km az=94.3*

KNET ***10*** *20:08:44.8±0.5, 40.71N×73.21E, h10^{km}±3^{km}, ml4.1, Error ellipse: s-maj=5.6km s-min=3.7km az=87.0*

NEIC ***10*** *20:08:46.6±0.5, 40.64N×73.15E, h35^{km}, mb3.9/6, Error ellipse: s-maj=10.2km s-min=9.2km az=177.0*

NNC ***10*** *20:08:47.1±3.2, 40.58N×74.05E, mpv4.5, Error ellipse:*

s-maj=40.8km s-min=26.1km az=82.0
*BJI **10** 20:08:51.5, 40.69N×73.31E, h10^{km}, mb3.6, ML4.1, Ms3.9*
ISC 10 20:08:47.6±0.9, **40.61N**±0.04×**72.91E**±0.08, **h55**^{km}±9^{km}, **n68**, σ**1^{s}29**/80, **mb3.8**/17, **MS3.8**/1, **9C-16D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	1.63	21	⇓P	P	20 09 13.1	-1.5
	1µm,0.2s						
AML				⇑S	S	20 09 34.4	-0.1
	6µm,0.4s						
UCH	Uchtor	2.01	36	⇑P	P	20 09 18.8	-1.1
	387nm,0.2s						
UCH				⇓S	S	20 09 44.1	+0.3
	1µm,0.3s						
EKS2	Erkin-Say	2.15	17	⇓P	P	20 09 21.7	-0.1
	158nm,0.1s						
EKS2				⇑S	S	20 09 49.9	+2.6
	447nm,0.2s						
KZA	Kyzart	2.29	49	⇓P	P	20 09 22.2	-1.6
	313nm,0.4s						
KZA				⇑S	S	20 09 52.7	+1.9
	537nm,0.3s						
AAK	Ala-Archa	2.34	30	⇓Pn	P	20 09 24.3	-0.3
	352nm,0.3s						
AAK				⇓Lg		20 09 53.0	
	283nm,0.3s						
AAK	Ala-Archa	2.34	30	⇓P	P	20 09 24.1	-0.5
	640nm,0.3s						
AAK				⇓S	S	20 09 53.7	+1.5
	785nm,0.2s						
AAK	Ala-Archa	2.34	30	*e*Pn	P	20 09 23.2	-1.4
AAK				*e*Sn	S	20 09 52.7	+0.5
KBK	Karagaybulak	2.55	36	⇓P	P	20 09 27.0	-0.5
	441nm,0.5s,SNR=353						
KBK				⇓S	S	20 09 59.3	+1.8
	788nm,0.2s						
KSH	Kashi	2.59	114	*e*P	P	20 09 27.9	-0.2
KSH				*e*S	S	20 10 00.7	+2.2
KSH				Smax			
	comp=N,650nm,0.6s						
KSH				Smax			
	comp=E,860nm,0.8s						
CHMS	Chumysh	2.75	29	⇓P	P	20 09 29.7	-0.7
	comp=E,152nm,0.2s,SNR=273						
CHMS				⇑S	S	20 10 04.1	+1.5
	comp=E,222nm,0.3s						
USP	Ospenovka	2.91	24	⇓P	P	20 09 31.6	-1.0
	comp=E,256nm,0.3s,SNR=63						
ULHL	Ulahol	2.99	56	P	P	20 09 31.4	-2.3
	comp=E,62nm,0.2s,SNR=76						
TKM2	Tokmak 2	3.06	40	⇓P	P	20 09 33.3	-1.4
	comp=E,202nm,0.4s,SNR=71						
AAA	Alma-Ata	4.01	47*c*	*i*PN	P	20 09 52.3	+4.1
AAA				*i*		20 10 43.6	
DLH	Dalhousie	8.42	162	*e*P	P	20 10 56.0	+6.5
DLH				*e*S	S	20 12 18.0	-6.1
MK31	Makanchi Array	9.18	45	⇓Pn	P	20 10 55.4	-4.6
	comp=E,4.3nm,0.6s,baz=222,slow=14,SNR=22						
MK31				⇓Lg		20 13 18.0	
	comp=E,16nm,0.9s,baz=223,slow=27,SNR=6.2						
MKAR	Makanchi Array	9.18	45	*e*P	P	20 10 55.4	-4.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SDNR	Sundarnagar	9.66	159	*e*P	P	20 11 09.6	+3.0
SDNR				*e*S	S	20 12 47.6	-7.2
SMLA	Simla	10.07	159	⇓*i*P	P	20 11 24.4	+12
SMLA				*i* S	S	20 13 05.9	+1.2
KURK	Kurchatov	10.86	20	⇑P	P	20 11 17.7	-5.2
	comp=Z,1.0nm,0.8s,baz=266,slow=17,SNR=7.4						
KURK	Kurchatov	10.86	20	*e*P	P	20 11 17.0	-5.9
DDI	Dehra Dun	11.09	156	*e*S	S	20 13 21.4	-7.9
BVA0	Borovoye Array	12.54	353	⇑P	P	20 11 46.9	+1.5
	comp=Z,0.4nm,0.6s,baz=161,slow=12,SNR=11						
BVAR	Borovoye Array	12.54	353	Pn	P	20 11 41.7	-3.7
	comp=Z,0.3nm,0.3s,baz=156,slow=12,SNR=8.2						
BVAR				Sn	S	20 14 02.9	-1.3
	comp=Z,0.3nm,0.3s,baz=168,slow=28,SNR=2.5						
BVAR				Lg		20 15 17.4	
	comp=Z,0.8nm,0.3s,baz=147,slow=24,SNR=2.8						
CHKZ	Chkalovo	13.16	354	⇑P	P	20 11 55.8	+2.2
	comp=Z,0.9nm,0.5s						
CHKZ	Chkalovo	13.16	354	*e*P	P	20 11 48.4	-5.2
ZAL	Zalesovo	15.55	27	P	P	20 12 20.8	-3.8
ZAL				MLR	MLR		
	comp=Z,115nm,20.6s						
ZAL	Zalesovo	15.55	27	Pn	P	20 12 20.8	-3.7
	comp=Z,0.4nm,0.3s,baz=273,slow=9.5,SNR=4.6						
ZAL				Lg		20 16 48.3	
	baz=184,slow=24,SNR=1.9						
ZAL				LR	LR	20 18 12.5	
	comp=Z,115nm,20.6s,baz=168,slow=36						
LSA	Lhasa	18.43	121	P	P	20 12 56.3	-4.4
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LSA	Lhasa	18.43	121	P	P	20 12 56.3	-4.4
	comp=Z,2.2nm,0.8s						
GTA	Gaotai	20.62	85	*e*P	P	20 13 30.9	+6.3
GTA				AP		20 13 37.6	
GTA				XP		20 13 41.0	
GTA				AMB	AMB		
	comp=Z,4.0nm,1.6s						
GNI	Garni	21.43	278	*e*P	P	20 13 34.2	+1.3
GNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GNI	Garni	21.43	278	P	P	20 13 34.5	+1.7
	comp=Z,2.1nm,0.5s,mb3.7,baz=234,slow=14,SNR=3.4						
GNI	Garni	21.43	278	*e*P	P	20 13 34.2	+1.3
	comp=Z,7.8nm,0.9s,mb4.0						
KIV	Kislovodsk	22.55	289	*e*P	P	20 13 44.9	+1.1
KIV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.3						
KIV	Kislovodsk	22.55	289	*e*P	P	20 13 44.9	+1.1
	comp=Z,7.8nm,0.7s,mb4.2						
ZAK	Zakamensk	23.27	55	*e*P	P	20 13 58.1	+7.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.2						
SONM	Songino Array	24.91	62	P	P	20 14 06.7	0.0
	comp=Z,0.5nm,1.1s,mb3.0,baz=262,slow=10,SNR=2.8						
ULN	Ulaanbaatar	25.36	62	P	P	20 14 09.8	-1.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
ULN	Ulaanbaatar	25.36	62	P	P	20 14 09.8	-1.1
	comp=Z,1.1nm,0.9s,mb3.4						
BRTR	Keskin Array B	29.86	281	P	P	20 14 52.5	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	29.86	281	P	P	20 14 52.5	+0.6
	comp=Z,0.7nm,0.5s,mb3.7,baz=90,slow=7.7,SNR=4.6						
BOD	Bodaibo	31.26	43	*e*P	P	20 15 07.7	+3.6
AKASG	Malin Array Be	31.74	303	P	P	20 15 08.1	-0.2
	comp=Z,0.3nm,0.3s,mb3.6,baz=81,slow=7.5,SNR=5.8						
FINES	FINESS Array B	35.03	322	P	P	20 15 36.6	0.0
FINES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FINES	FINESS Array B	35.03	322	P	P	20 15 36.6	0.0
	comp=Z,6.8nm,1.1s,mb4.5,baz=116,slow=10,SNR=14						
ARCES	ARCESS Array B	37.98	335	P	P	20 16 01.7	+0.3
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARCES	ARCESS Array B	37.98	335	P	P	20 16 01.6	+0.2
	comp=Z,5.2nm,1.1s,mb4.2,baz=102,slow=7.9,SNR=8.6						
GERES	GERESS Array B	41.91	302	P	P	20 16 35.6	+1.6
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	41.91	302	P	P	20 16 35.6	+1.6
	comp=Z,1.9nm,0.7s,mb3.8,baz=68,slow=7.2,SNR=8.7						
NB2	NORSAR Subarra	42.09	320	P	P	20 16 35.5	+0.2
	comp=Z,1.1nm,0.5s,mb3.7,baz=91,slow=7.9						
NB2	NORSAR Subarra	42.09	320	P	P	20 16 35.5	+0.2
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NB2	NORSAR Subarra	42.09	320	P	P	20 16 35.5	+0.2
	comp=Z,1.1nm,0.5s,mb3.7						
NOA	NORSAR Array B	42.09	320	P	P	20 16 36.1	+0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	42.09	320	P	P	20 16 36.1	+0.7
	comp=Z,0.9nm,0.5s,mb3.7,baz=90,slow=7.7,SNR=3.9						
ASAJ	Asahikawa	50.20	62	LR	LR	20 41 43.3	
	comp=Z,100nm,20.0s,MS3.8,baz=26,slow=40						
CART	Cartagena	55.85	293	*e*P	P	20 18 18.6	-3.1
	comp=Z,43nm,1.0s						
INK	Inuvik	69.61	10	*e*P	P	20 19 51.5	-0.8
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	69.61	10	P	P	20 19 52.0	-0.4
	comp=Z,0.8nm,0.5s,mb3.9,baz=20,slow=2.0,SNR=4.7						
INK	Inuvik	69.61	10	*e*P	P	20 19 51.5	-0.8
	comp=Z,1.6nm,0.8s,mb4.0						
ILAR	Eielson Array	70.42	17	P	P	20 19 56.2	-1.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	70.42	17	P	P	20 19 56.1	-1.2
	comp=Z,0.8nm,0.9s,mb3.6,baz=321,slow=3.8,SNR=5.7						
YKA	Yellowknife Ar	77.07	4	P	P	20 20 36.1	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	77.07	4	P	P	20 20 36.1	+0.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=350,slow=5.8,SNR=22						
TSUM	Tsumeb	78.62	232	P	P	20 20 45.6	+0.2
	comp=Z,0.9nm,0.7s,mb3.8,baz=340,slow=6.9,SNR=2.4						
WRA	Warramunga Arr	82.95	124	P	P	20 21 06.9	-1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	82.95	124	P	P	20 21 06.9	-1.3
	comp=Z,0.8nm,1.0s,mb3.7,baz=326,slow=5.0,SNR=4.9						
ASAR	Alice Springs	85.43	126	P	P	20 21 19.6	-1.0
	comp=Z,0.5nm,0.6s,mb3.8,baz=317,slow=5.7,SNR=7.5						

MAN 10 20:12:38.1, 16.26N×120.27E, h7^{km}, mb3.9, ML2.6, MS2.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.33	68	⇑*i*P	Pg	20 12 45.9	+1.1
BCPH				*i* S	Sg	20 12 52.2	+3.1
BOLP	Bolinao	0.36	290	*e*P	Pg	20 12 45.9	+0.4
BOLP				*e*S	Sg	20 12 52.3	+2.0
SCZP	Santa Cruz	0.59	216	*e*P	Pg	20 12 49.8	-0.2
SCZP				*e*S	Sg	20 12 58.3	+0.4
BALP	Baler	1.36	112	*e*P	Pb	20 13 02.7	-0.8

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*NEIC **10** 20:17:44.0±0.5, 33.55S×178.66W, h10^{km}, mb5.0/5, Error ellipse: s-maj=16.5km s-min=10.6km az=145.0*
*IDC **10** 20:17:49.0±2.6, 33.54S×178.69W, h43^{km}±22^{km}, mb4.2/7, mb1 4.4/9, mb1mx4.1/18, mbtmp4.5/9, ML4.4/2, MS4.0/4, Ms1 4.0/4, ms1mx3.3/21, Error ellipse: s-maj=24.2km s-min=15.0km az=159.0*
ISC 10 20:17:47.8±0.9, **33.79S**±0.06×**179.0W**±0.1, **h33**^{km}, **n65**, σ**1^{s}10**/57, **mb4.6**/10, **MS4.0**/4, **4C-2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	4.81	207	PN	Pn	20 19 00.8	+0.7
PUZ				SN	Sn	20 20 03.7	+8.3
PUZ	Puketiti	4.81	207	PN	Pn	20 19 00.8	+0.7
PUZ				SN	Sn	20 20 03.7	+8.3
MWZ	Matawai	5.33	211	PN	Pn	20 19 07.7	+0.4
MWZ				SN	Sn	20 20 15.7	+7.4
MWZ	Matawai	5.33	211	PN	Pn	20 19 07.7	+0.4
MWZ				SN	Sn	20 20 15.7	+7.4
URZ	Urewera	5.46	214	P	P	20 19 11.7	+2.8
	17nm,0.3s,baz=32,slow=5.2,SNR=50						
URZ				S	S	20 20 18.2	+6.8
	12nm,0.3s,baz=156,slow=21,SNR=9.5						
URZ	Urewera	5.46	214	PN	Pn	20 19 10.4	+1.4
URZ				SN	Sn	20 20 18.6	+7.2
URZ	Urewera	5.46	214	PN	Pn	20 19 10.4	+1.4
URZ				SN	Sn	20 20 18.6	+7.2
BKZ	Black Stump Fm	6.47	213	*e*SN	Sn	20 20 42.5	+5.7
BKZ	Black Stump Fm	6.47	213	*e*SN	Sn	20 20 42.5	+5.7
BFZ	Birch Farm	7.85	207	*e*SN	Sn	20 21 12.5	+1.2
BFZ	Birch Farm	7.85	207	*e*SN	Sn	20 21 12.5	+1.2
MRZ	Mangatainoka R	8.10	211	*e*PN	P	20 19 44.5	-1.5
MRZ				*e*SN	Sn	20 21 18.0	+0.4
MRZ	Mangatainoka R	8.10	211	*e*PN	P	20 19 44.5	-1.5
MRZ				*e*SN	Sn	20 21 18.0	+0.4
TUWZ	Tuamarina	9.45	214	*e*SN	Sn	20 21 50.3	-0.7
TUWZ	Tuamarina	9.45	214	*e*SN	Sn	20 21 50.3	-0.7
THZ	Tophouse	10.21	216	SN	S	20 22 08.1	-1.3
THZ	Tophouse	10.21	216	SN	S	20 22 08.1	-1.3
DSZ	Denniston Nort	10.76	220	*e*SN	S	20 22 21.2	-1.7
DSZ	Denniston Nort	10.76	220	*e*SN	S	20 22 21.2	-1.7
LTZ	Lake Taylor	11.29	215	*e*SN	S	20 22 31.4	-4.3
LTZ	Lake Taylor	11.29	215	*e*SN	S	20 22 31.4	-4.3
MQZ	McQueen’s Vall	11.84	211	*e*SN	S	20 22 42.2	-7.1
MQZ	McQueen’s Vall	11.84	211	*e*SN	S	20 22 42.2	-7.1
RPZ	Rata Peaks	12.57	215	P	P	20 20 46.6	-0.5
	1.3nm,0.3s,baz=224,slow=1.0,SNR=4.2						
RPZ				S	S	20 23 01.1	-5.8
	1.6nm,0.3s,baz=344,slow=20,SNR=7.3						
RAR	Rarotonga	21.13	59	P	P	20 22 24.9	-7.3
	10nm,0.4s,mb4.5,baz=260,slow=18,SNR=6.0						
STKA	Stephens Creek	33.01	262	P	P	20 24 23.1	+1.0
	2.2nm,0.8s,mb4.1,baz=105,slow=11,SNR=3.8						
STKA				PcP	PcP	20 27 03.9	-1.6
	2.3nm,0.7s,baz=139,slow=5.7,SNR=4.7						
STKA				LR	LR	20 37 57.3	
	comp=Z,330nm,18.1s,MS4.1,baz=31,slow=36						
STKA	Stephens Creek	33.01	262	*e*P	P	20 24 23.3	+1.2
CTA	Charters Tower	33.66	285	*e*P	P	20 24 28.9	+1.2
	7.8nm,0.5s,mb4.9						
CTA	Charters Tower	33.66	285	P	P	20 24 28.8	+1.0
	8.4nm,0.5s,mb4.9,baz=114,slow=11,SNR=20						
CTA				LR	LR	20 37 39.3	
	comp=Z,152nm,18.3s,MS3.8,baz=217,slow=35						
CTAO	Charters Tower	33.66	285	*e*P	P	20 24 28.5	+0.7
	11nm,0.6s,mb5.0						
ASAR	Alice Springs	42.18	271	P	P	20 25 39.7	+0.5
	14nm,0.7s,mb4.7,baz=111,slow=7.3,SNR=151						
ASAR				PcP	PcP	20 27 31.6	-2.2
	1.6nm,0.5s,baz=116,slow=4.0,SNR=5.7						
ASAR				S	S	20 31 58.8	+2.0
	1.4nm,0.9s,baz=113,slow=16,SNR=4.5						
ASAR				LR	LR	20 43 28.6	
	comp=Z,97nm,19.1s,MS3.7,baz=97,slow=36						
ASPA	Alice Springs	42.19	271	*e*P	P	20 25 39.4	+0.2
WRAB	Tennant Creek	43.48	276	*e*P	P	20 25 49.6	-0.2
	26nm,0.6s,mb5.1						
WRA	Warramunga Arr	43.48	276	P	P	20 25 49.6	-0.3
	18nm,0.7s,mb4.9,baz=117,slow=7.9,SNR=182						
FORT	Forrest	44.44	259	*e*P	P	20 25 57.4	0.0
	348nm,0.7s						
FITZ	Fitzroy Crossi	51.58	273	*e*P	P	20 26 52.1	-1.0
	11nm,0.7s,mb4.9						
MBWA	Marble Bar	55.07	266	*e*P	P	20 27 17.4	-1.5
	37nm,1.5s,mb5.2						
QSPA	South Pole Qui	56.33	180	⇓*i*P	P	20 27 39.4	+12
SYO	Syowa Base	73.63	194	⇓P	P	20 29 26.3	+7.2
SNAA	Sanae	74.80	179	P	P	20 29 26.4	+0.6
	0.6nm,0.6s,mb3.7,baz=190,slow=17,SNR=4.1						
VNA3	Neumayer Olymp	74.99	176	⇑*i*	P	20 29 38.7	+12
VNA2	Neumayer--Watz	75.41	177	⇑*i*	P	20 29 41.4	+12
VNA2	Neumayer--Watz	75.41	177	⇑*i*	P	20 29 44.8	+15
KS15	Wonju Array Si	86.39	320	P	P	20 30 20.4	-7.5
NVAR	Mina Array Bea	91.30	43	P	P	20 30 49.7	-1.5
	0.4nm,0.8s,mb3.8,baz=214,slow=6.5,SNR=3.6						
NVAR	Mina Array Bea	91.30	43	P	P	20 30 49.7	-1.5
NEW	Newport	98.61	37	LR	LR	21 09 42.8	
	comp=Z,181nm,19.8s,MS4.6,baz=58,slow=32						
ZAL	Zalesovo	119.96	317	PKP	PKPdf	20 36 33.2	-1.5
	0.9nm,0.3s,baz=101,slow=5.7,SNR=2.9						
ZAL	Zalesovo	119.96	317	PKP	PKPdf	20 36 33.2	-1.5
BVAR	Borovoye Array	128.17	314	PKP	PKPdf	20 36 49.7	-0.8
	0.9nm,0.5s,baz=156,slow=2.2,SNR=15						
ARCES	ARCESS Array B	141.69	346	PKhKP		20 37 07.9	
	2.3nm,0.8s,baz=270,slow=0.9,SNR=6.6						
JOF	Joensuu	145.20	336	*e*p	PKPdf	20 37 17.7	-3.4
MSL	Mosul	145.62	286	*e*PKP	PKPdf	20 37 38.5	+16
KAF	Kangasniemi	147.40	338	*e*p	PKPdf	20 37 24.4	-0.5
FINES	FINESS Array B	147.98	337	PKPbc	PKPdf	20 37 27.1	+1.3
	9.3nm,0.8s,baz=45,slow=5.0,SNR=46						
MALT	Malatya	149.53	289	*e*PKPbc	PKPdf	20 37 33.2	+4.1
ASF	Jabal al Asfar	149.92	277	PKPbc	PKPdf	20 37 35.6	+5.8
	8.5nm,0.9s,baz=11,slow=4.0,SNR=13						
EIL	Elat	150.89	271	PKPbc	PKPdf	20 37 38.0	+6.6
	12nm,0.9s,baz=300,slow=3.3,SNR=8.6						
EIL	Elat	150.89	271	*e*PKPbc	PKPdf	20 37 37.6	+6.2
NB2	NORSAR Subarra	151.94	349	PKP	PKPdf	20 37 38.5	+6.5
	7.2nm,1.1s,baz=17,slow=4.1						
NB2	NORSAR Subarra	151.94	349	⇑PKPab	PKPdf	20 37 38.5	+6.5
NOA	NORSAR Array B	151.94	349	PKPbc	PKPdf	20 37 39.1	+7.2
	4.6nm,0.9s,baz=16,slow=4.1,SNR=4.0						
DBIC	Dimbokro	152.48	167	PKPab	PKPab	20 37 51.0	-2.8
	1.8nm,0.5s,baz=175,slow=2.0,SNR=12						
BRTR	Keskin Array B	153.26	292	PKPbc	PKPdf	20 37 41.8	+7.3
	6.2nm,1.2s,baz=166,slow=5.1,SNR=9.0						
AKASG	Malin Array Be	153.35	318	PKPbc	PKPdf	20 37 40.8	+6.5
	1.1nm,0.6s,baz=45,slow=2.1,SNR=6.5						

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*IDC **10** 20:24:18.2±2.9, 33.43S×178.68W, mb4.2/3, mb1 4.3/4, mb1mx3.9/15, mbtmp4.2/4, ML4.0/1, Error ellipse: s-maj=60.6km s-min=35.3km az=115.0*
ISC 10 20:24:17.0±4.2, **33.6S**±0.1×**17 9W**± , **h11**^{km}±64^{km}, **n7**, σ**0^{s}57**/9, **mb4.1**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	5.21	209	PN	Pn	20 25 35.9	-0.9
PUZ				*e*SN	Sn	20 26 38.1	+0.5
URZ	Urewera	5.88	216	Pn	Pn	20 25 47.5	+1.2
	3.5nm,0.3s,baz=54,slow=14,SNR=19						
URZ				Sn	Sn	20 26 54.2	-0.2
	2.0nm,0.3s,baz=158,slow=20,SNR=4.7						
URZ	Urewera	5.88	216	*e*PN	Pn	20 25 46.8	+0.5
URZ				*e*SN	Sn	20 26 53.6	-0.8
CTA	Charters Tower	33.99	284	P	P	20 31 02.9	0.0
	1.4nm,0.2s,mb4.5,baz=117,slow=9.0,SNR=7.5						
ASAR	Alice Springs	42.59	271	P	P	20 32 15.1	+0.3
	1.6nm,0.7s,mb3.9,baz=110,slow=7.2,SNR=14						
WRA	Warramunga Arr	43.86	276	P	P	20 32 25.0	-0.2
	2.5nm,0.8s,mb4.0,baz=116,slow=8.0,SNR=25						
FINES	FINESS Array B	147.92	338	PKPbc	PKPdf	20 44 03.2	+1.7
	1.0nm,0.5s,baz=45,slow=3.9,SNR=10						

SKHL 10 20:58:02.4±0.1, **55.91N**×**124.44E**, **h10**^{km}, **mb3.5**/5, **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KROS	Kirovskiy	2.07	135	*e*Pn	Pn	20 58 38.7	+1.0
KROS				*i* Pg	Pg	20 58 40.7	-3.1
KROS				AMB	AMB	20 58 41.4	
	9.0nm,0.5s						
KROS				AMB	AMB	20 58 41.4	
	6.0nm,0.5s						
KROS				AMB	AMB	20 58 41.4	
	10.0nm,0.5s						
KROS				*e*Sn	Sn	20 59 04.4	+0.6
KROS				*e*Sg	Sg	20 59 08.3	-3.2
KROS				A		20 59 10.5	
	130nm,0.5s						
KROS				A		20 59 10.5	
	110nm,0.5s						
KROS				A		20 59 10.5	
	95nm,0.5s						
ZEA	Zeya	2.72	142	*e*Pg	Pg	20 58 51.3	-5.4
ZEA				AMB	AMB	20 58 53.5	
	8.0nm,0.2s						
ZEA				*e*Sn	Sn	20 59 20.1	-0.1
ZEA				*e*Sg	Sg	20 59 26.7	-6.2
ZEA				A		20 59 29.4	
	68nm,0.5s						
ZEA				A		20 59 29.4	
	97nm,0.5s						
ZEA				A		20 59 29.4	
	29nm,0.5s						
BMKR	Bomnak	2.79	114	*e*Pn	Pn	20 58 47.9	-0.1
BMKR				*e*Pg	Pg	20 58 53.4	-4.7
BMKR				AMB	AMB	20 58 54.0	
	7.0nm,0.4s						
BMKR				*e*Sn	Sn	20 59 21.5	-0.5
BMKR				*e*Sg	Sg	20 59 30.1	-5.2
BMKR				A		20 59 32.4	
	30nm,0.6s						
TUP	Tupik	2.97	242	*e*Pn	Pn	20 58 52.9	+2.3
TUP				*e*Pg	Pg	20 58 58.4	-3.4
TUP				AMB	AMB	20 59 01.9	
	6.0nm,0.3s						
TUP				*e*Sn	Sn	20 59 28.0	+1.3
TUP				*e*Sg	Sg	20 59 36.3	-5.1
TUP				A		20 59 39.1	
	40nm,0.5s						
YASR	Yasnyy	3.34	140	*e*Pn	Pn	20 58 56.6	+0.9
YASR				*e*Pg	Pg	20 59 03.0	-6.0
YASR				AMB	AMB	20 59 07.7	
	2.0nm,0.4s						
YASR				AMB	AMB	20 59 07.7	
	3.0nm,0.4s						
YASR				AMB	AMB	20 59 07.7	
	5.0nm,0.4s						
YASR				*e*Sn	Sn	20 59 34.9	-1.0
YASR				*e*Sg	Sg	20 59 46.6	-6.9
YASR				A		20 59 49.1	
	33nm,0.6s						
YASR				A		20 59 49.1	
	10.0nm,0.6s						
YASR				A		20 59 49.1	
	11nm,0.6s						
EKMR	Ekimchan	5.72	116	*e*Sg	Sg	21 01 00.5	-12
EKMR				A		21 01 12.0	
	8.0nm,0.5s						
EKMR				A		21 01 12.0	
	4.0nm,0.5s						

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*IDC **10** 20:59:45.2±0.7, 30.41N×108.40E, mb4.0/10, mb1 4.1/12, mb1mx4.0/21, mbtmp4.0/12, ML3.5/2, Error ellipse: s-maj=42.4km s-min=15.4km az=62.0*
*BJI **10** 20:59:46.6, 30.38N×108.20E, h15^{km}, mb4.3, ML4.0, Ms3.9, Msz3.7*
*MOS **10** 20:59:47.8±1.0, 30.36N×108.27E, h33^{km}, mb4.3/12, Error ellipse: s-maj=18.1km s-min=10.1km az=110.8*
*NEIC **10** 20:59:48.6±1.2, 30.39N×108.43E, h24^{km}±10^{km}, mb4.1/8, Error ellipse: s-maj=9.1km s-min=6.6km az=77.0*
ISC 10 20:59:48.7±0.7, **30.37N**±0.04×**108.25E**±0.05, **h39**^{km}±8^{km}, **n55**, σ**0^{s}94**/70, **mb4.1**/17, **5C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	1.08	95	*e*Pg	P	21 00 05.6	-1.9
ENH				*e*Sg	S	21 00 21.4	-0.1
XAN	Xi’an	3.71	9	P	P	21 00 45.3	+0.3
XAN				PG	P	21 00 55.9	+11
XAN				S	S	21 01 23.9	-4.2
XAN				SG	S	21 01 40.6	+13
XAN				Smax			
	comp=N,577nm,1.0s						
XAN				Smax			
	comp=E,357nm,1.0s						
CD2	Chengdu	3.91	279	⇑*i*P	P	21 00 43.0	-4.8
CD2				PG	P	21 00 59.0	+11
CD2				S	S	21 01 37.6	+4.6
CD2				SG	S	21 01 52.4	+19
CD2				Smax			
	comp=N,736nm,1.2s						
CD2				Smax			
	comp=E,537nm,1.2s						
GYA	Guiyang	4.13	200	⇑*i*P	P	21 00 51.7	+0.7
GYA				S	S	21 01 40.9	+2.1
GYA				SG	S	21 01 55.8	+17
GYA				Smax			
	comp=N,250nm,0.7s						
GYA				Smax			
	comp=E,290nm,0.9s						
GYA				LR	LR		
	comp=N,670nm,6.9s						
GYA				LR	LR		
	comp=E,1µm,6.6s						
GYA				LR	LR		
	comp=Z,420nm,4.5s						
WHN	Wuhan	5.27	87	P	P	21 01 07.5	+0.4
WHN				PG	P	21 01 25.5	+18
WHN				S	S	21 02 08.0	+0.5
WHN				SG	S	21 02 39.4	+32
WHN				Smax			
	comp=N,560nm,1.5s						
WHN				Smax			
	comp=E,230nm,1.0s						
LZH	Lanzhou	6.79	328	⇑P	P	21 01 28.6	+0.2
LZH				S	S	21 02 50.3	+4.9
LZH				Smax			
	comp=N,190nm,1.0s						
LZH				Smax			
	comp=E,390nm,1.2s						
LZH				LR	LR		
	comp=N,2µm,6.2s						
LZH				LR	LR		
	comp=Z,2µm,7.2s						

LZH	**Lanzhou**	**6.79**	**328**	⇑P	**P**	**21 01 28.6**	**+0.2**
	comp=Z,40nm,1.0s						
LZH				pP		21 01 35.5	
LZH				sP		21 01 38.7	
LZH				S	**S**	**21 02 50.3**	**+4.9**
LZH				sS		21 03 01.5	
KMI	**Kunming**	**7.14**	**224**	P	**P**	**21 01 34.2**	**+0.8**
KMI				S	**S**	**21 02 51.6**	**-2.5**
KMI				Smax			
	comp=N,22nm,1.4s						
KMI				Smax			
	comp=E,39nm,0.9s						
GTA	**Gaotai**	**11.37**	**325**	*e*P	**P**	**21 02 30.7**	**-0.8**
GTA				AP		21 02 40.0	
GTA				XP		21 02 43.5	
GTA				S	**S**	**21 04 31.2**	**-7.0**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s						
GTA				LR	LR		
	comp=N,239nm,9.5s						
GTA				LR	LR		
	comp=E,253nm,9.5s						
GTA				LR	LR		
	comp=Z,495nm,12.2s						
QIZ	**Qiongzhong**	**11.38**	**172**	*e*P	**P**	**21 02 25.1**	**-6.6**
	comp=Z,21nm,1.0s						
CM31	**Chiang Mai Arr**	**14.56**	**218**	*e*P	**P**	**21 03 14.3**	**+0.3**
	comp=Z,3.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.56**	**218**	Pn	**P**	**21 03 14.4**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=27,slow=12,SNR=14						
LSA	**Lhasa**	**14.83**	**272**	*e*P	**P**	**21 03 15.3**	**-2.1**
LSA				pmax	pmax		
	comp=Z,12nm,1.2s						
LSA	**Lhasa**	**14.83**	**272**	*e*P	**P**	**21 03 15.3**	**-2.1**
	comp=Z,12nm,1.2s						
LSA				*e*		21 03 32.9	
ULN	**Ulaanbaatar**	**17.50**	**357**	*e*P	**P**	**21 03 51.0**	**-0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**17.50**	**357**	*e*P	**P**	**21 03 51.0**	**-0.2**
	comp=Z,4.3nm,1.0s						
SONM	**Songino Array**	**17.50**	**356**	P	**P**	**21 03 51.4**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=173,slow=10,SNR=13						
CN2	**Changchun**	**19.14**	**41**	*e*P	**P**	**21 04 13.6**	**+2.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
ZAK	**Zakamensk**	**20.34**	**351**	⇑*i*P	**P**	**21 04 25.2**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMQ	**Urumqi**	**21.12**	**315**	*e*P	**P**	**21 04 32.5**	**+0.3**
WMQ				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.4						
KLR	**Kul'dur**	**25.92**	**37**	*e*P	**P**	**21 05 13.2**	**-5.7**
ZAL	**Zalesovo**	**29.02**	**331**	P	**P**	**21 05 46.6**	**-0.3**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	**Zalesovo**	**29.02**	**331**	P	**P**	**21 05 46.6**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.6,baz=334,slow=11,SNR=4.2						
KURK	**Kurchatov**	**30.02**	**321**	*e*P	**P**	**21 05 55.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
KURK	**Kurchatov**	**30.02**	**321**	*e*P	**P**	**21 05 55.6**	**-0.2**
	comp=Z,3.4nm,1.1s,mb4.0						
BVAR	**Borovoye Array**	**35.60**	**320**	P	**P**	**21 06 45.8**	**+1.3**
	comp=Z,0.5nm,0.5s,mb3.7,baz=117,slow=6.4,SNR=5.6						
BVAR				PcP	PcP	21 09 12.9	0.0
	comp=Z,0.4nm,0.6s,baz=135,slow=2.0,SNR=3.6						
CHKZ	**Chkalovo**	**35.76**	**322**	*e*P	**P**	**21 06 45.7**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
CHKZ	**Chkalovo**	**35.76**	**322**	*e*P	**P**	**21 06 45.7**	**0.0**
	comp=Z,7.2nm,1.4s,mb4.4						
TIXI	**Tiksi**	**42.84**	**9**	*e*P	**P**	**21 07 44.1**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
BILL	**Bilibino**	**50.34**	**24**	*e*P	**P**	**21 08 42.5**	**-0.9**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BILL	**Bilibino**	**50.34**	**24**	*e*P	**P**	**21 08 42.5**	**-1.0**
	comp=Z,1.4nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**55.96**	**150**	*e*P	**P**	**21 09 25.2**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**55.96**	**150**	*e*P	**P**	**21 09 25.2**	**-0.4**
	comp=Z,8.4nm,0.8s,mb4.8						
WRA	**Warramunga Arr**	**55.97**	**150**	P	**P**	**21 09 25.3**	**-0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**55.97**	**150**	P	**P**	**21 09 25.3**	**-0.4**
	comp=Z,4.4nm,0.8s,mb4.5,baz=340,slow=7.9,SNR=17						
MALT	**Malatya**	**56.97**	**298**	*e*P	**P**	**21 09 35.0**	**+2.3**
MALT				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
MALT	**Malatya**	**56.97**	**298**	*e*P	**P**	**21 09 35.0**	**+2.3**
	comp=Z,1.4nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**59.10**	**152**	P	**P**	**21 09 47.6**	**-0.1**
	comp=Z,2.0nm,0.4s,mb4.5,baz=334,slow=6.8,SNR=45						
ARCES	**ARCESS Array B**	**59.39**	**336**	P	**P**	**21 09 49.3**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**59.39**	**336**	P	**P**	**21 09 49.3**	**+0.2**
	comp=Z,2.4nm,0.9s,mb4.2,baz=72,slow=7.7,SNR=3.9						
FINES	**FINESS Array B**	**60.15**	**327**	P	**P**	**21 09 54.6**	**+0.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**60.15**	**327**	P	**P**	**21 09 54.6**	**+0.1**
	comp=Z,2.9nm,0.9s,mb4.3,baz=97,slow=11,SNR=3.2						
BRTR	**Keskin Array B**	**60.19**	**301**	P	**P**	**21 09 55.4**	**+0.3**
BRTR	**Keskin Array B**	**60.19**	**301**	P	**P**	**21 09 55.3**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.8,baz=90,slow=5.8,SNR=3.2						
NB2	**NORSAR Subarra**	**67.18**	**328**	P	**P**	**21 10 39.8**	**-0.6**
	comp=Z,1.3nm,0.6s,mb4.1,baz=70,slow=6.2						
NB2	**NORSAR Subarra**	**67.18**	**328**	P	**P**	**21 10 39.8**	**-0.6**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
NOA	**NORSAR Array B**	**67.18**	**328**	P	**P**	**21 10 40.0**	**-0.4**
NOA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NOA	**NORSAR Array B**	**67.18**	**328**	P	**P**	**21 10 40.0**	**-0.4**
	comp=Z,1.6nm,0.9s,mb4.0,baz=76,slow=5.7,SNR=3.1						
KONO	**Kongsberg**	**68.45**	**327**	P	**P**	**21 10 47.2**	**-1.2**
KONO				pmax	pmax		
	comp=Z,64nm,1.4s						
KONO	**Kongsberg**	**68.45**	**327**	P	**P**	**21 10 47.2**	**-1.2**
	comp=Z,64nm,1.4s						
STKA	**Stephens Creek**	**69.52**	**150**	P	**P**	**21 10 55.2**	**-0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=315,slow=6.8,SNR=5.1						
STKA	**Stephens Creek**	**69.52**	**150**	*e*P	**P**	**21 10 54.7**	**-0.8**
YKA	**Yellowknife Ar**	**81.30**	**19**	P	**P**	**21 12 02.2**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=326,slow=5.1,SNR=4.3						
FCC	**Fort Churchill**	**89.28**	**11**	P	**P**	**21 12 40.8**	**-0.8**
FCC				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.2						
FCC	**Fort Churchill**	**89.28**	**11**	P	**P**	**21 12 40.8**	**-0.8**
	comp=Z,0.7nm,0.7s,mb4.1						

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*IDC **10** 21:21:54.8±0.7, 11.09N×140.88E, mb4.0/10, mb1 4.3/10, mb1mx4.2/19, mbtmp4.0/10, MS3.3/1, Ms1 3.3/1, ms1mx2.7/22, Error ellipse: s-maj=31.3km s-min=17.3km az=98.0*

ISC 10 21:21:57.9±0.7**, 11.0N**±0.1×**140.9E**±0.2**, h33**^{km}**, n12,** σ**1**^{s}**08**/10**, mb4.0**/10**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**16.05**	**4**	LR	LR	21 31 25.3	
	comp=Z,114nm,18.8s,baz=156,slow=36						
WRA	**Warramunga Arr**	**31.42**	**192**	P	**P**	**21 28 17.4**	**-1.2**
	1.9nm,0.7s,mb4.0,baz=10,slow=9.7,SNR=16						
ASAR	**Alice Springs**	**35.13**	**191**	P	**P**	**21 28 50.6**	**0.0**
	1.1nm,0.5s,mb4.0,baz=19,slow=12,SNR=13						
ASAR				PcP	PcP	21 31 22.7	+0.8
	0.4nm,0.7s,baz=10,slow=2.5,SNR=3.9						
CMAR	**Chiang Mai Arr**	**41.14**	**285**	P	**P**	**21 29 42.1**	**+1.2**
	1.9nm,1.1s,mb3.6,baz=86,slow=6.6,SNR=7.7						
STKA	**Stephens Creek**	**42.65**	**179**	P	**P**	**21 29 53.8**	**+0.6**
	1.0nm,0.7s,mb3.6,baz=325,slow=17,SNR=2.5						
SONM	**Songino Array**	**46.72**	**328**	P	**P**	**21 30 25.4**	**-0.3**
	0.4nm,0.7s,mb3.5,baz=127,slow=5.5,SNR=3.8						
ILAR	**Eielson Array**	**72.56**	**25**	P	**P**	**21 33 22.1**	**-1.1**
	0.7nm,0.6s,mb3.8,baz=250,slow=6.1,SNR=5.6						
INK	**Inuvik**	**78.23**	**22**	P	**P**	**21 33 55.1**	**-0.5**
	10nm,1.4s,mb4.6,baz=280,slow=6.1,SNR=2.3						
YKA	**Yellowknife Ar**	**86.92**	**27**	P	**P**	**21 34 41.2**	**+0.8**
	1.0nm,0.7s,mb4.2,baz=291,slow=5.1,SNR=16						
NVAR	**Mina Array Bea**	**91.57**	**51**	P	**P**	**21 35 05.5**	**+2.4**
	0.5nm,0.5s,mb4.1,baz=283,slow=5.0,SNR=4.2						
FINES	**FINESS Array B**	**91.80**	**334**	P	**P**	**21 35 02.2**	**-1.3**
	8.2nm,1.2s,mb5.0,baz=79,slow=7.1,SNR=3.9						
LPAZ	**La Paz**	**151.35**	**104**	PKPbc	PKPdf	21 41 53.9	+11
	0.6nm,0.5s,baz=248,slow=2.0,SNR=2.9						

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*IDC **10** 21:52:18.6±0.6, 23.17S×169.33E, mb4.8/15, mb1 4.9/16, mb1mx4.8/19, mbtmp4.8/16, ML3.5/1, MS4.6/18, Ms1 4.5/18, ms1mx4.4/24, Error ellipse: s-maj=18.8km s-min=17.5km az=165.0*

*NEIC **10** 21:52:20.7±0.2, 22.94S×169.23E, h10*^{km}*, mb5.2/30, MS5.3/1, Error ellipse: s-maj=8.9km s-min=6.0km az=166.0*

*HRVD **10** 21:52:20.7±0.2, 23.09S×169.30E, h12*^{km}*, MW5.3/68, Centroid moment Tensor Solution. LP body waves: s51,c92;Mantle waves: s68,c130; Half duration: 1*^{s}*1 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.97±.02;* $M_{\theta\theta}$*0.95±.02;* $M_{\phi\phi}$*0.01±.02;* $M_{r\theta}$*-0.36±.05;* $M_{\theta\phi}$*0.05±.02;* $M_{\phi r}$*-0.13±.06; Best double couple:* M_0*1.036×10*^{17} *NP1:* ϕ_s*273°,δ35°,λ-80°. NP2:*ϕ_s*81°,δ56°,λ-97°. Principal axes: T 1.023, Plg10°, Azm176°; N .027, Plg6°, Azm85°; P -1.049, Plg78°, Azm327°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*LDG **10** 21:52:21.4±0.5, 22.28S×169.53E, h10*^{km}*, Mb5.1/4, Ms4.8/8 Error ellipse: s-maj=51.8km s-min=6.0km az=175.0*

*BJI **10** 21:52:21.0, 22.64S×169.22E, h12*^{km}*, mB5.6, mb5.0, Ms5.0, Msz4.7*

*MOS **10** 21:52:24.0±2.1, 22.93S×169.14E, h33*^{km}*, mb5.4/5, Error ellipse: s-maj=15.0km s-min=11.4km az=42.4*

ISC 10 21:52:22.3±0.3**, 23.15S**±0.06×**169.23E**±0.06**, h33**^{km}**, (h28**^{km}±6.8^{km}**:pP-P), n208,** σ**1**^{s}**19**/98**, mb5.0**/48**, MS4.5**/23**, 17C-12D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.79**	**292**	*e*P	**P**	**21 53 04.8**	**-0.9**
DZM	**Mont Dzumac**	**2.79**	**292**	*e*P	**P**	**21 53 04.8**	**-0.9**
NOUC	**Port Laguerre**	**2.90**	**290**	*e*P	**P**	**21 53 06.4**	**-0.8**
URZ	**Urewera**	**16.51**	**158**	Pn	**P**	**21 56 11.0**	**-1.8**
	0.2nm,0.3s,baz=270,slow=0.3,SNR=6.5						
URZ				LR	LR	22 01 39.5	
	comp=Z,4µm,19.0s,baz=230,slow=34						
AFI	**Afiamalu**	**20.20**	**66**	*e*P	**P**	**21 56 50.4**	**-6.7**
RPZ	**Rata Peaks**	**20.57**	**176**	P	**P**	**21 56 58.9**	**-1.9**
	72nm,1.0s,baz=3.9,slow=4.8,SNR=12						
RPZ				LR	LR	22 04 23.1	
	comp=Z,4µm,18.9s,MS4.8,baz=7.4,slow=35						
CNB	**Canberra Magne**	**21.11**	**231**	*e*P	**P**	**21 57 08.7**	**+2.3**
	223nm,0.8s,mb5.5						
CTA	**Charters Tower**	**21.57**	**274**	*e*P	**P**	**21 57 13.1**	**+1.9**
	13nm,0.7s,mb4.5						
CTA				*e*S	**S**	**22 01 14.2**	**+11**
CTA	**Charters Tower**	**21.57**	**274**	P	**P**	**21 57 12.0**	**+0.8**
	15nm,0.7s,mb4.5,baz=100,slow=12,SNR=19						
CTA				LR	LR	22 05 07.8	
	comp=Z,1µm,18.4s,MS4.3,baz=90,slow=36						
CTAO	**Charters Tower**	**21.57**	**274**	*e*P	**P**	**21 57 12.3**	**+1.1**
	19nm,0.7s,mb4.6						
TOO	**Toolangi**	**24.93**	**229**	⇑*i*P	**P**	**21 57 50.1**	**+6.1**
	0.8nm,0.9s						
PMG	**Port Moresby**	**25.16**	**299**	P	**P**	**21 57 46.5**	**+0.2**
	28nm,0.7s,mb4.9,baz=130,slow=6.4,SNR=8.1						
PMG				LR	LR	22 05 16.2	
	comp=Z,1µm,19.7s,MS4.4,baz=127,slow=31						
PMG	**Port Moresby**	**25.16**	**299**	*e*P	**P**	**21 57 45.7**	**-0.7**
	44nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**25.95**	**244**	⇑*i*P	**P**	**21 57 54.7**	**+1.1**
	18nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**25.95**	**244**	P	**P**	**21 57 54.6**	**+0.9**
	19nm,1.0s,mb4.6,baz=84,slow=11,SNR=10.0						
STKA				LR	LR	22 06 56.0	
	comp=Z,790nm,18.7s,MS4.3,baz=73,slow=34						
STKA	**Stephens Creek**	**25.95**	**244**	*e*P	**P**	**21 57 54.5**	**+0.8**
ASAR	**Alice Springs**	**32.38**	**262**	P	**P**	**21 58 50.6**	**-0.6**
	10nm,0.9s,mb4.7,baz=84,slow=8.4,SNR=39						
ASAR				PcP	PcP	22 01 37.4	-1.1
	2.8nm,0.8s,baz=99,slow=3.4,SNR=5.0						
ASAR				LR	LR	22 12 00.1	
	comp=Z,362nm,18.1s,MS4.1,baz=96,slow=36						
ASPA	**Alice Springs**	**32.38**	**262**	⇓*i*P	**P**	**21 58 51.7**	**+0.4**
WB2	**Warramunga Arr**	**32.55**	**269**	*e*P	**P**	**21 58 51.6**	**-1.2**
WRAB	**Tennant Creek**	**32.56**	**269**	*e*P	**P**	**21 58 50.0**	**-2.9**
	12nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**32.57**	**269**	*e*P	**P**	**21 58 51.1**	**-1.8**
WRA	**Warramunga Arr**	**32.57**	**269**	P	**P**	**21 58 51.1**	**-1.8**
	3.8nm,0.7s,mb4.4,baz=99,slow=7.6,SNR=34						
WRA				PcP	PcP	22 01 38.1	-1.0
	2.7nm,0.7s,baz=98,slow=2.7,SNR=7.1						
KAKA	**Kakadu**	**36.42**	**280**	⇑*i*P	**P**	**21 59 25.0**	**-0.9**
	22nm,0.8s,mb5.2						
FORT	**Forrest**	**37.31**	**249**	*e*P	**P**	**21 59 33.0**	**-0.4**
	434nm,0.8s						
TBI	**Tubuai**	**37.86**	**99**	*e*S	**S**	**22 05 20.8**	**-5.8**
TBI				*e*LQ		22 07 57.5	
TBI				*e*LR	LR	22 09 50.3	
	256nm,31.0s						
PPT	**Papeete**	**38.92**	**90**	*e*S	**S**	**22 05 33.0**	**-10**
PPT				*e*LQ		22 08 35.2	
PPT				*e*LR	LR	22 10 14.6	
	312nm,24.2s						
FITZ	**Fitzroy Crossi**	**41.00**	**269**	*e*P	**P**	**22 00 04.0**	**-0.1**
	31nm,0.7s,mb5.0						
MBWA	**Marble Bar**	**45.72**	**263**	*e*P	**P**	**22 00 41.3**	**-1.1**
	53nm,0.7s,mb5.6						
NWAO	**Narrogin (SRO)**	**46.52**	**246**	P	**P**	**22 00 47.6**	**-1.0**
	18nm,0.8s,mb5.0,baz=112,slow=8.4,SNR=5.5						
NWAO	**Narrogin (SRO)**	**46.52**	**246**	*e*P	**P**	**22 00 44.9**	**-3.7**
	27nm,1.0s,mb5.1						
DRV	**Dumont d'Urvil**	**47.27**	**195**	S	**S**	**22 07 56.0**	**+12**
DRV				R		22 15 00.0	
TAOE	**Nuku Hiva Isla**	**50.44**	**82**	*e*LR	LR	22 15 48.7	
VNDA	**Vanda**	**54.55**	**182**	P	**P**	**22 01 48.2**	**-0.8**
	6.5nm,0.9s,mb4.7,baz=6.6,slow=7.9,SNR=9.6						
VNDA				LR	LR	22 23 23.6	
	comp=Z,579nm,18.4s,MS4.7,baz=13,slow=34						
SBA	**Scott Base**	**54.78**	**181**	*e*P	**P**	**22 01 52.6**	**+1.9**
	38nm,0.9s,mb5.4						
CBIJ	**Chichi jima**	**56.38**	**331**	LR	LR	22 26 15.9	
	comp=Z,237nm,18.1s,MS4.3,baz=3.9,slow=36						
CASY	**Casey**	**56.57**	**204**	*e*P	**P**	**22 02 01.7**	**-2.1**
	19nm,1.0s,mb5.1						
JOW	**Kunigami**	**63.53**	**319**	LR	LR	22 26 02.1	
	comp=Z,231nm,20.9s,MS4.3,baz=124,slow=32						
MAJO	**Matsushiro**	**66.20**	**333**	*e*P	**P**	**22 03 07.7**	**-1.4**
	26nm,1.0s,mb5.2						
MAT	**Matsushiro**	**66.20**	**333**	P	**P**	**22 03 08.6**	**-0.5**
JNU	**Nakatsue**	**66.85**	**326**	LR	LR	22 28 20.8	
	comp=Z,4.4nm,21.0s,baz=333,slow=32						
QSPA	**South Pole Qui**	**66.93**	**180**	⇓*i*P	**P**	**22 03 15.0**	**+2.0**
	20nm,1.0s,mb5.1						
SSE	**Sheshan**	**70.91**	**318**	P	**P**	**22 03 40.2**	**+1.8**
SSE				PCP	PcP	22 03 59.6	+0.7
SSE				S	S	22 12 55.0	+4.8
SSE				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.6						
SSE				AMB	AMB		
	comp=Z,204nm,7.7s						
SSE				LR	LR		
	comp=N,162nm,22.6s,MS4.4						
SSE				LR	LR		
	comp=E,153nm,22.6s,MS4.4						
SSE				LR	LR		
	comp=Z,275nm,22.6s,MS4.5						
SSE	**Sheshan**	**70.91**	**318**	P	**P**	**22 03 40.2**	**+1.8**
	comp=Z,12nm,1.4s,mb4.6						
SSE				PcP	PcP	22 03 59.6	+0.7
SSE				S	S	22 12 55.0	+4.8
SSE				sS		22 13 12.4	
SSE				LR	LR		
	comp=Z,280nm,22.6s,MS4.5						
ASAJ	**Asahikawa**	**71.25**	**340**	LR	LR	22 30 48.4	
	comp=Z,709nm,19.6s,MS4.9,baz=276,slow=32						
KS15	**Wonju Array Si**	**71.74**	**326**	P	**P**	**22 03 41.4**	**-1.8**
YSS	**Yuzh-Sakhalins**	**73.76**	**341**	*e*P	**P**	**22 03 52.0**	**-2.9**
MAW	**Mawson**	**74.83**	**202**	LR	LR	22 33 38.1	
	comp=Z,347nm,18.2s,MS4.7,baz=315,slow=33						
FX1	**Attu Island--F**	**75.78**	**2**	*e*P	**P**	**22 04 05.3**	**-1.1**
PET	**Petropavlovsk**	**76.40**	**353**	*e*P	**P**	**22 04 04.3**	**-5.7**
PET				*e*		22 07 02.5	
PET				pmax	pmax		
	comp=Z,200nm,11.4s						
PET				pmax	pmax		
	comp=Z,100nm,16.1s						
MDJ	**Mudanjiang**	**76.55**	**332**	P	**P**	**22 04 11.3**	**+0.3**
MDJ				AMB	AMB		
	comp=Z,23nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,242nm,7.2s						
MDJ				LR	LR		
	comp=N,170nm,24.8s,MS4.3						
MDJ				LR	LR		
	comp=E,78nm,25.6s,MS4.3						
MDJ				LR	LR		
	comp=Z,270nm,21.0s,MS4.5						
TIA	**Tai'an**	**76.86**	**319**	*e*P	**P**	**22 04 13.8**	**+0.8**
TIA				AMB	AMB		
	comp=Z,44nm,1.4s,mb5.2						
CN2	**Changchun**	**77.78**	**329**	*e*P	**P**	**22 04 18.6**	**+0.7**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=E,300nm,18.0s,MS4.8						
CN2				LR	LR		
	comp=Z,370nm,21.0s,MS4.7						
KLR	**Kul'dur**	**79.42**	**336**	*e*P	**P**	**22 04 23.5**	**-3.2**
KLR				*e*S	S	22 14 33.0	+9.1
BJT	**Baijiatuau**	**79.95**	**321**	*e*P	**P**	**22 04 30.0**	**+0.2**
	comp=Z,17nm,0.9s,mb5.0						
BJI	**Beijing**	**79.96**	**321**	P	**P**	**22 04 30.0**	**+0.1**
BJI				S	S	22 14 37.9	+8.0
BJI				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.1						
BJI				AMB	AMB		
	comp=Z,434nm,7.0s						
BJI				LR	LR		
	comp=N,182nm,19.3s,MS4.7						
BJI				LR	LR		
	comp=E,306nm,19.9s,MS4.7						
BJI				LR	LR		
	comp=Z,296nm,25.0s						
BJI	**Beijing**	**79.96**	**321**	P	**P**	**22 04 30.0**	**+0.1**
	comp=Z,16nm,0.7s,mb5.1						
BJI				S	S	22 14 37.9	+8.0
BJI				SS	SS	22 19 47.0	+4.1
BJI				LR	LR		
	comp=Z,300nm,25.0s,MS4.5						
CM31	**Chiang Mai Arr**	**80.11**	**295**	*e*P	**P**	**22 04 32.5**	**+1.4**
	comp=Z,29nm,1.0s,mb5.2						
CMAR	**Chiang Mai Arr**	**80.11**	**295**	P	**P**	**22 04 32.4**	**+1.3**
	comp=Z,10nm,0.8s,mb4.8,baz=136,slow=4.1,SNR=62						
KMI	**Kunming**	**80.34**	**303**	⇑P	**P**	**22 04 34.1**	**+1.9**
KMI				S	S	22 14 30.9	-3.2
KMI				AMB	AMB		
	comp=Z,23nm,1.6s,mb4.9						
KMI				AMB	AMB		
	comp=Z,248nm,6.4s						
KMI				LR	LR		
	comp=Z,198nm,37.3s,MS4.2						
KMI	**Kunming**	**80.34**	**303**	P	**P**	**22 04 34.1**	**+1.9**
KMI				*e*		22 04 47.3	
KMI	**Kunming**	**80.34**	**303**	⇑P	**P**	**22 04 34.1**	**+1.9**
	comp=Z,23nm,1.6s,mb4.9						
KMI				pP	pP	22 04 47.3	+4.7
KMI				S	S	22 14 30.9	-3.2
KMI				LR	LR		
	comp=Z,200nm,37.3s,MS4.2						
XAN	**Xi'an**	**80.75**	**313**	P	**P**	**22 04 34.3**	**+0.1**
XAN				AP	pP	22 04 43.1	-1.5
XAN				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.9						
SYO	**Syowa Base**	**81.20**	**196**	⇑P	**P**	**22 04 40.1**	**+4.3**
HHC	**Hu-ho-hao-te**	**83.18**	**320**	⇓P	**P**	**22 04 47.3**	**+0.7**
HHC				AP	pP	22 04 59.3	+2.3
HHC				PP	PP	22 08 01.3	+1.4
HHC				SKS	SKS	22 14 58.8	-3.2
HHC				S	S	22 15 03.5	+0.7
HHC				PS	PS	22 16 00.6	+1.0
HHC				SS	SS	22 20 34.1	+3.2
HHC				AMB	AMB		
	comp=Z,18nm,1.8s,mb4.8						
HHC				LR	LR		
	comp=N,323nm,13.1s,MS4.9						
HHC				LR	LR		
	comp=E,239nm,16.6s,MS4.9						
HHC				LR	LR		
	comp=Z,261nm,17.8s,MS4.7						
HIA	**Hailar**	**84.47**	**330**	*e*P	**P**	**22 04 53.1**	**+0.2**
	comp=Z,6.7nm,1.0s,mb4.7						
SNAA	**Sanae**	**85.28**	**183**	P	**P**	**22 04 55.8**	**-0.6**
	comp=Z,7.3nm,0.9s,mb4.8,baz=223,slow=7.2,SNR=5.2						
SNAA	**Sanae**	**85.28**	**183**	*e*P	**P**	**22 04 55.1**	**-1.3**
	comp=Z,359nm,1.0s						
LZH	**Lanzhou**	**85.34**	**312**	⇓P	**P**	**22 04 59.0**	**+1.5**
LZH				AP	pP	22 05 05.5	-2.6
LZH				XP	sP	22 05 10.0	-1.5
LZH				AMB	AMB		
	comp=Z,42nm,1.2s,mb5.4						
LZH	**Lanzhou**	**85.34**	**312**	⇓P	**P**	**22 04 59.0**	**+1.5**
	comp=Z,42nm,1.2s,mb5.4						
LZH				pP	pP	22 05 05.5	-2.6
LZH				sP	sP	22 05 10.0	-1.5
VNA3	**Neumayer Olymp**	**85.86**	**180**	⇑*i*	**P**	**22 05 02.5**	**+3.2**
VNA2	**Neumayer--Watz**	**86.16**	**181**	⇑*i*	**P**	**22 05 05.0**	**+4.3**
VNA2	**Neumayer--Watz**	**86.16**	**181**	⇑*i*	**P**	**22 05 15.8**	**+15**
VNA1	**Neumayer--Stat**	**86.45**	**181**	⇑*i*	**P**	**22 05 07.5**	**+5.3**
CLNS	**Chul'man**	**87.98**	**337**	*e*P	**P**	**22 05 10.3**	**+0.5**
CLNS				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.7						
CLNS				pmax	pmax		
	comp=N,23nm,1.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.2s						
KRMB	**Red Mountain**	**89.23**	**44**	*e*P	**P**	**22 05 16.9**	**+0.7**
WDC	**Whiskeytown Da**	**89.61**	**45**	*e*P	**P**	**22 05 18.4**	**+0.3**
	comp=E,22nm,1.3s,mb5.3						
WDC				*e*		22 05 24.5	
OHCM	**Honcut**	**89.67**	**47**	*e*P	**P**	**22 05 17.7**	**-0.6**
CMB	**Columbia Colle**	**89.76**	**48**	*e*P	**P**	**22 05 18.9**	**+0.1**
	comp=E,39nm,1.3s,mb5.6						
GTA	**Gaotai**	**89.80**	**314**	*e*P	**P**	**22 05 20.3**	**+1.3**
GTA				AP	pP	22 05 25.5	-4.1
GTA				XP	sP	22 05 28.7	-4.3
GTA				AMB	AMB		
	comp=Z,8.0nm,1.5s,mb4.8						
ULN	**Ulaanbaatar**	**89.98**	**323**	*e*P	**P**	**22 05 20.8**	**+1.2**
	comp=Z,25nm,1.2s,mb5.4						
YBH	**Yreka Blue Hor**	**90.10**	**44**	*e*P	**P**	**22 05 21.0**	**+0.7**
YBH	**Yreka Blue Hor**	**90.10**	**44**	P	**P**	**22 05 21.0**	**+0.7**
	comp=Z,4.4nm,0.8s,mb4.9,baz=189,slow=2.7,SNR=12						
SONM	**Songino Array**	**90.33**	**323**	P	**P**	**22 05 22.2**	**+1.0**
	comp=Z,7.7nm,0.9s,mb5.0,baz=141,slow=3.7,SNR=54						
HUMO	**Hull Mountain**	**90.40**	**43**	*e*P	**P**	**22 05 21.4**	**-0.3**
	comp=Z,24nm,1.3s,mb5.4						
OMM	**Old Mammoth Mi**	**90.51**	**49**	*e*P	**P**	**22 05 21.6**	**-0.7**
MTUM	**Tungsten Hills**	**90.69**	**49**	*e*P	**P**	**22 05 23.8**	**+0.7**
BILL	**Bilibino**	**90.94**	**359**	*e*P	**P**	**22 05 23.6**	**0.0**
BILL				pmax	pmax		
	comp=Z,14nm,1.5s,mb5.1						
BILL	**Bilibino**	**90.94**	**359**	*e*P	**P**	**22 05 22.9**	**-0.7**
	comp=Z,14nm,1.1s,mb5.2						
LSA	**Lhasa**	**91.56**	**302**	P	**P**	**22 05 28.4**	**+1.0**
LSA	**Lhasa**	**91.56**	**302**	*e*P	**P**	**22 05 28.6**	**+1.1**
	comp=Z,5.2nm,0.9s,mb4.9						
MOD	**Modoc**	**91.74**	**45**	*e*P	**P**	**22 05 26.9**	**-1.0**
	comp=Z,8.0nm,1.0s,mb5.0						
MOD				*e*		22 05 35.1	
TPH	**Tonopah**	**91.96**	**49**	*e*P	**P**	**22 05 28.7**	**-0.4**
BBB	**Bella Bella**	**92.73**	**33**	LR	LR	22 39 07.6	
	comp=Z,334nm,20.8s,MS4.8,baz=226,slow=30						
BOD	**Bodaibo**	**92.82**	**334**	*e*P	**P**	**22 05 31.6**	**-0.9**
WVOR	**Wild Horse Val**	**93.08**	**45**	*e*P	**P**	**22 05 33.9**	**-0.2**
	comp=Z,10.0nm,1.3s,mb5.1						
ZAK	**Zakamensk**	**93.45**	**324**	⇓*e*P	**P**	**22 05 36.0**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
COLA	**College**	**93.76**	**17**	*e*P	**P**	**22 05 34.6**	**-2.0**
	comp=Z,20nm,1.4s,mb5.3						
ILAR	**Eielson Array**	**93.94**	**17**	P	**P**	**22 05 35.9**	**-1.6**
	comp=Z,3.0nm,0.9s,mb4.7,baz=225,slow=5.6,SNR=14						
ILAR				PKKPbc		22 22 44.1	
	comp=Z,0.6nm,0.9s,baz=347,slow=4.4,SNR=5.3						
ILAR				LR	LR	22 44 10.8	

	comp=Z,246nm,20.5s,MS4.7,baz=59,slow=33						
TLY	Talaya	93.96	325	P	P	22 05 38.3	+0.5
	comp=Z,49nm,0.8s,mb6.0,SNR=11						
TLY	Talaya	93.96	325	eP	P	22 05 38.5	+0.7
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
TLY	Talaya	93.96	325	eP	P	22 05 38.4	+0.6
	comp=Z,9.3nm,1.0s,mb5.2						
DLBC	Dease Lake	95.50	27	LR	LR	22 39 15.7	
	comp=Z,403nm,20.2s,MS4.9,baz=88,slow=30						
PLCA	Paso Flores	95.62	139	LR	LR	22 39 56.8	
	comp=Z,90nm,18.4s,MS4.3,baz=206,slow=30						
NEW	Newport	96.75	40	LR	LR	22 40 47.8	
	comp=Z,242nm,19.8s,MS4.7,baz=209,slow=30						
HYB	Hyderabad	97.28	286	iP	P	22 05 54.0	+0.3
ANMO	Albuquerque	98.50	56	LR	LR	22 41 46.1	
	comp=Z,256nm,21.1s,MS4.7,slow=30						
TXAR	Lajitas Array	98.62	62	P	P	22 06 00.0	+0.5
	comp=Z,0.6nm,0.3s,mb4.6,baz=198,slow=2.9,SNR=5.6						
TXAR				PKKP	PKKP	22 22 30.6	+6.4
	comp=Z,0.4nm,0.7s,baz=90,slow=2.5,SNR=3.7						
PDAR	Pinedale Array	99.26	48	P	P	22 06 03.0	+0.9
	comp=Z,0.6nm,0.9s,mb4.1,baz=180,slow=3.0,SNR=4.1						
PDAR				LR	LR	22 41 40.0	
	comp=Z,217nm,21.8s,MS4.6,baz=268,slow=30						
YKA	Yellowknife Ar	104.12	28	PKiKP		22 10 41.9	
	comp=Z,0.2nm,0.5s,baz=247,slow=1.6,SNR=3.9						
BDFB	Brasilia	126.96	133	PKP	PKPdf	22 11 24.2	+0.3
	comp=Z,3.3nm,0.7s,baz=83,slow=3.3,SNR=4.0						
KMBO	Kilima Mbogo	127.44	249	PKP	PKPdf	22 11 26.9	+2.0
	comp=Z,2.1nm,1.0s,baz=64,slow=23,SNR=3.4						
SCHQ	Schefferville	128.03	38	PKP	PKPdf	22 11 24.8	-0.1
	comp=Z,2.1nm,1.1s,baz=315,slow=5.9,SNR=2.6						
ARCES	ARCESS Array B	128.82	345	PKP	PKPdf	22 11 26.4	+0.3
	comp=Z,1.3nm,0.6s,slow=2.4,SNR=7.3						
OBN	Obninsk	132.71	325	iPKIKP	PKPdf	22 11 33.3	-0.5
OBN				pmax	pmax		
	comp=Z,14nm,1.6s						
FINES	FINESS Array B	134.16	336	PKP	PKPdf	22 11 37.5	+1.1
	comp=Z,3.4nm,0.9s,baz=270,slow=3.8,SNR=4.0						
AKASG	Malin Array Be	138.60	322	PKP	PKPdf	22 11 44.8	+0.1
	comp=Z,0.7nm,0.6s,baz=49,slow=3.3,SNR=5.0						
BURAR	Bucovina Array	142.35	319	⇑P	PKPdf	22 11 59.6	+8.1
MLR	Muntele Rosu	142.83	316	⇓PKIKP	PKPdf	22 11 51.8	-0.6
KOLS	Kolonicke sedl	143.38	323	ePKP	PKPdf	22 11 53.2	0.0
KOLS				e		22 12 00.6	
CRVS	Cervenica-Dubn	143.85	323	ePKP	PKPdf	22 11 54.6	+0.6
CRVS				e		22 12 01.5	
NIE	Niedzica	144.18	325	ePKP	PKPdf	22 11 55.1	+0.6
KECS	Kecovo	144.62	323	ePKP	PKPdf	22 11 57.5	+2.1
OKC	Ostrava-Krasne	145.04	327	ePKP	PKPdf	22 11 57.3	+1.2
OKC				epPKP		22 12 03.2	
RUE	Ruedersdorf	145.22	334	ePKPdf	PKPdf	22 11 58.0	+1.7
PSZ	Piszkesteto	145.27	323	ePKPdf	PKPdf	22 11 58.4	+1.9
PSZ	Piszkesteto	145.27	323	⇑iPKP/p	PKPdf	22 11 58.7	+2.2
KSP	Ksiaz	145.28	330	ePKP	PKPdf	22 11 58.2	+1.8
KSP				epPKP		22 12 05.0	
KSP	Ksiaz	145.28	330	ePKP	PKPdf	22 11 58.5	+2.0
MORC	Moravsky Berou	145.38	327	ePKPdf	PKPdf	22 11 58.1	+1.4
BSEG	Bad Segeberg	145.39	338	ePKIKP	PKPdf	22 11 58.6	+2.1
BZS	Buzias	145.48	318	⇓PKIKP	PKPdf	22 11 59.4	+2.4
VYHS	Vyhne	145.51	325	eP	PKPdf	22 11 59.0	+2.1
VYHS				e		22 12 05.6	
DPC	Dobruska-Polom	145.60	329	ePKP	PKPdf	22 11 59.2	+2.2
UPC	Upice	145.64	329	ePKP	PKPdf	22 11 59.4	+2.3
UPC				epPKP		22 12 04.8	
KOLL	Kolacno	145.69	325	ePKP	PKPdf	22 12 00.7	+3.5
KOLL				e		22 12 07.3	
SMOL	Smolenice	146.24	326	ePKP	PKPdf	22 12 02.2	+4.0
PVCC	Panska Ves	146.29	331	ePKP	PKPdf	22 12 01.6	+3.4
BRG	Berggiesshubel	146.32	331	iPKP2	PKPab	22 12 01.5	-0.8
BRG				pmax	pmax		
	comp=Z,29nm,1.0s						
BRG	Berggiesshubel	146.32	331	iP	PKPdf	22 12 01.5	+3.3
BRG				i		22 12 08.1	
CLL	Collm	146.41	333	⇑iPKP2	PKPab	22 12 02.0	-0.7
CLL				pmax	pmax		
	comp=Z,46nm,1.0s						
CLL	Collm	146.41	333	⇑iPKP1	PKPbc	22 12 02.0	+2.4
CLL				iPKP1	PKPbc	22 12 08.3	+8.7
CLL				e		22 12 26.0	
ZST	Bratislava	146.60	325	ePKP	PKPdf	22 12 03.4	+4.6
ZST				e		22 12 09.1	
PRU	Pruhonice	146.68	330	ePKP	PKPdf	22 12 02.4	+3.5
DIVS	Divcibare	147.24	317	⇓iP	PKPdf	22 12 04.5	+4.5
SKO	Skopje	147.26	313	⇑iP	PKPdf	22 12 04.5	+4.4
NKC	Novy Kostel	147.44	332	ePKP	PKPdf	22 12 04.5	+4.4
MOX	Moxa	147.49	333	ePKP2	PKPab	22 12 04.8	-2.1
MOX				pmax	pmax		
	comp=Z,34nm,1.5s						
MOX	Moxa	147.49	333	P	PKPdf	22 12 04.8	+4.6
MOX				e		22 12 36.5	
MOX	Moxa	147.49	333	iP	PKPdf	22 12 04.8	+4.6
	comp=Z,logA/T=1.4						
MOX				e		22 12 36.0	
KHC	Kasperske Hory	147.73	330	ePKP	PKPdf	22 12 02.6	+2.0
GERES	GERESS Array B	147.87	329	PKP	PKPdf	22 12 02.4	+1.5
	comp=Z,11nm,1.0s,baz=243,slow=3.0,SNR=7.4						
GERES				PKPbc	PKPdf	22 12 05.7	+4.9
	comp=Z,8.7nm,0.8s,baz=45,slow=1.9,SNR=27						
ARSA	Arzberg	148.03	325	⇑iP	PKPdf	22 12 05.9	+4.8
MOA	Molln	148.28	327	⇓iP	PKPdf	22 12 06.2	+4.7
GRA1	Grafenberg Arr	148.38	332	ePKPbc	PKPdf	22 12 06.8	+5.2
GRA1				ePKPab	PKPab	22 12 11.1	+0.7
GRF	Grafenberg Arr	148.38	332	ePKP2	PKPab	22 12 06.8	-3.6
GRF	Grafenberg Arr	148.38	332	ePKP	PKPdf	22 12 06.9	+5.3
GRF				ePKP	PKPdf	22 12 11.1	+9.5
DOBS	Dobrina	148.75	324	iPKPbc	PKPdf	22 12 07.3	+5.0
DMUB	Kingscourt	149.15	356	eP	PKPdf	22 12 09.0	+6.3
BOJS	Bojanci	149.27	323	ePKPbc	PKPdf	22 12 09.6	+6.4
VISS	Visnje	149.31	324	ePKPbc	PKPdf	22 12 09.3	+6.1
LJU	Ljubljana	149.33	324	ePKPbc	PKPdf	22 12 09.0	+5.8
TOD	Tromm	149.44	335	eP	PKPdf	22 12 09.2	+5.9
FUR	Furstenfeldbru	149.49	330	ePKP2	PKPab	22 12 15.8	+0.7
VOY	Vojsko	149.67	325	ePKPbc	PKPdf	22 12 09.7	+5.9
VOY				e		22 12 14.6	
ABH	Alteburg	149.69	336	eP	PKPdf	22 12 09.9	+6.2
PTCC	Patocco-Chiusa	149.71	326	ePKP	PKPdf	22 12 09.9	+6.0
DLF	Lyons Farm	149.72	355	eP	PKPdf	22 12 09.0	+5.3
DCN	Croghan	149.73	356	eP	PKPdf	22 12 09.0	+5.3
STU	Stuttgart	149.93	333	ePKPbc	PKPdf	22 12 10.8	+6.7
WATA	Walderalm	149.95	329	⇓iP	PKPdf	22 12 11.4	+7.2
WTTA	Wattenberg	149.97	329	⇓iP	PKPdf	22 12 10.8	+6.6
RUP	Ruppelstein	150.02	337	eP	PKPdf	22 12 09.9	+5.7
WLF	Walferdange	150.38	338	ePKPbc	PKPdf	22 12 12.3	+7.5
GIVF	Givet	150.45	339	ePKP1	PKPdf	22 12 11.2	+6.3
	comp=Z,68nm,0.9s						
BAIF	Baives	150.69	340	ePKP1	PKPdf	22 12 11.9	+6.7
	comp=Z,46nm,1.2s						
DAVA	Damuels	150.77	331	⇑iP	PKPdf	22 12 12.7	+7.2
WLS	Welschbruch	150.96	335	PKP	PKPdf	22 12 13.5	+7.8
CDF	Champ du Feu	150.99	335	ePKP1	PKPdf	22 12 13.2	+7.5
	comp=Z,52nm,1.1s						
FELD	Feldberg	151.13	333	eP	PKPdf	22 12 14.2	+8.2
BRMO	Bormio	151.14	329	ePKP	PKPdf	22 12 14.1	+8.0
HINF	Hinteralfeld	151.64	335	ePKP1	PKPdf	22 12 14.5	+7.8
	comp=Z,21nm,0.8s						
HAU	Haudompre	151.69	335	ePKP1	PKPdf	22 12 14.8	+8.0
	comp=Z,56nm,1.1s						
HAU				eR			
	comp=Z,515nm,21.8s						
MEZF	Maizieres J'vi	151.75	337	ePKP1	PKPdf	22 12 14.5	+7.6
	comp=Z,78nm,1.0s						
FSSB	Fossombrone	151.78	322	ePKP	PKPdf	22 12 15.6	+8.5
ARV	Arcevia	151.81	322	ePKP	PKPdf	22 12 14.8	+7.7
SNTG	Esanatoglia	151.96	321	ePKP	PKPdf	22 12 15.8	+8.4
LOMF	Lomont	152.03	334	PKP	PKPdf	22 12 16.3	+9.0
LOMF	Lomont	152.03	334	eP	PKPdf	22 12 16.8	+9.5
NRCA	Norcia	152.12	320	ePKP	PKPdf	22 12 15.8	+8.2
SFI	Santa Sofia	152.16	323	ePKP	PKPdf	22 12 16.7	+9.0
ZCCA	Zocca	152.33	325	ePKP	PKPdf	22 12 17.6	+10
VAI	Varese	152.34	330	ePKP	PKPdf	22 12 15.6	+7.7
MCGN	Macugnaga	152.63	331	ePKP	PKPdf	22 12 17.2	+9.0
CABF	La Chapelle	152.93	334	ePKP1	PKPdf	22 12 18.0	+9.4
	comp=Z,41nm,1.2s						
SSF	Saint Saulge	153.52	338	ePKP1	PKPdf	22 12 18.9	+9.5
	comp=Z,19nm,1.1s						
LPL	La Plagne	153.53	332	ePKP1	PKPdf	22 12 19.6	+10
	comp=Z,15nm,0.9s						
LPG	La Plagne	153.53	332	ePKP1	PKPdf	22 12 19.5	+10
	comp=Z,20nm,0.9s						
SMF	Signal de Mont	153.76	337	ePKP1	PKPdf	22 12 19.2	+9.4
BNI	Bardonecchia	153.91	331	ePKPdf	PKPdf	22 12 12.3	+2.3
BNI				ePKPbc	PKPdf	22 12 20.3	+10
ORIF	Oris-en-Rattie	154.37	332	ePKP1	PKPdf	22 12 20.8	+10
	comp=Z,9.2nm,0.7s						
ORIF				eR			
	comp=Z,359nm,20.8s						
PLDF	La Plantade	154.41	336	eP	PKPab	22 12 37.0	+1.2
PGF	Pioggiola	154.61	324	ePKP1	PKPdf	22 12 22.4	+11
	comp=Z,15nm,0.9s						
VIVF	Saint-Julien-l	154.93	333	ePKP1	PKPdf	22 12 22.0	+11
LBL	Lubilhac	155.18	336	PKP	PKPdf	22 12 25.2	+14
LBL	Lubilhac	155.18	336	eP	PKPab	22 12 40.2	+1.2
ESDC	Sonseca Array	162.54	342	PKPab	PKPab	22 13 11.1	+0.1
	comp=Z,2.0nm,1.0s,baz=21,slow=3.5,SNR=6.3						
DBIC	Dimbokro	162.66	200	ePKIKP	PKPdf	22 12 24.6	+3.2
DBIC				P		22 13 11.6	
DBIC	Dimbokro	162.66	200	PKP	PKPdf	22 12 24.6	+3.2
	comp=Z,5.6nm,1.2s,baz=186,slow=5.0,SNR=3.8						
DBIC				PKPab	PKPab	22 13 11.6	-0.6
	comp=Z,6.4nm,0.8s,baz=138,slow=4.9,SNR=5.1						

NEIC ***10*** *22:08:38.4, 16.95N×94.55W, h148^{km}, MD3.9(MEX), After MEX.*

MEX 10 22:08:38.4±1.0**, 16.96N×94.55W, h148**^{km}±22^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVV	El Vigia	1.67	333	eP	P	22 09 08.0	-2.0
SCX	San Cristobal	1.85	97	iP	P	22 09 11.0	-1.0
SCX				iS	S	22 09 35.0	-2.9
HUIG	Huatulco	1.91	232	iP	P	22 09 10.1	-2.6
HUIG				iS	S	22 09 36.6	-2.3
OXX	Oaxaca	2.08	274	iP	P	22 09 13.5	-1.2
OXX				iS	S	22 09 40.5	-2.1
VHO	Vista Hermosa	2.09	273	iP	P	22 09 14.0	-0.9
VHO				iS	S	22 09 40.4	-2.4
CCIG	Comitan	2.41	106	iP	P	22 09 18.0	-0.9
CCIG				iS	S	22 09 48.1	-1.8
PPM	Popocatepetl	4.41	299	eP	P	22 09 53.0	+8.2

IDC 10 22:20:30.4±1.4**, 1.47N×126.63E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/15**, mbtmp3.6**/4**, Error ellipse: s-maj=168.4km s-min=23.4km az=72.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.58	161	P	P	22 25 33.6	-0.4
	1.5nm,0.4s,baz=339,slow=10,SNR=12						
ASAR	Alice Springs	25.97	165	P	P	22 26 05.8	-0.9
	0.5nm,0.5s,baz=352,slow=8.0,SNR=7.9						
STKA	Stephens Creek	36.07	158	P	P	22 27 34.0	-1.9
	1.3nm,0.6s,baz=322,slow=10,SNR=4.9						
SONM	Songino Array	49.40	342	P	P	22 29 22.8	-1.0
	0.3nm,0.9s,baz=153,slow=6.4,SNR=2.7						

MAN ***10*** *22:31:56.8, 13.64N×120.43E, h110^{km}, mb4.3, ML3.1, MS2.9*

BJI ***10*** *22:31:56.6, 13.49N×120.94E, h128^{km}, mb4.0*

NEIC ***10*** *22:31:58.0±0.8, 13.84N×121.16E, h116^{km}±7^{km}, mb4.2/6, Error ellipse: s-maj=18.3km s-min=9.0km az=67.0*

IDC ***10*** *22:31:57.9±0.7, 13.81N×121.08E, h110^{km}±3^{km}, mb3.5/9, mb1 3.6/9, mb1mx3.5/20, mbtmp3.8/9, Error ellipse: s-maj=26.5km s-min=15.2km az=65.0*

ISC 10 22:31:57.3±0.5**, 13.65N**±0.05×**120.62E**±0.09**, h116**^{km}±5^{km}**, n28, σ1^{s}20**/35**, mb4.0**/16**, 3D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.38	283	eP	P	22 32 13.6	-0.7
LUBP	Lubang	0.38	283	eP	P	22 32 13.2	-1.1
TGY	Tagaytay City	0.54	34	⇓iP	P	22 32 15.1	-0.2
TGY				iS	S	22 32 27.2	-1.7
TGY	Tagaytay City	0.54	34	P	P	22 32 15.2	0.0
	318nm,0.3s,baz=261,slow=12,SNR=22						
TGY				S	S	22 32 27.4	-1.5
	2μm,0.3s,baz=6.3,slow=20,SNR=80						
BOAC	Boac	1.20	99	eP	P	22 32 22.0	+0.4
BOAC				eS	S	22 32 39.4	-0.3
SJMP	San Jose	1.28	158	eP	P	22 32 23.3	+0.9
SJMP				eS	S	22 32 41.3	+0.2
POLP	Polilio Island	1.67	50	eP	P	22 32 28.2	+1.2
GQP	Guinayangan	1.79	82	⇓eP	P	22 32 30.5	+2.1
GQP				eS	S	22 32 55.6	+3.7
OTRP	Odiongan	1.87	133	eP	P	22 32 30.5	+1.1
OTRP				eS	S	22 32 53.2	-0.4
PCPH	Palayan	1.96	13	⇓iP	P	22 32 29.0	-1.5
PCPH				eS	S	22 32 55.8	+0.3
TATO	Taipei	11.29	4	P	P	22 34 31.7	-4.5
CMAR	Chiang Mai Arr	21.37	286	P	P	22 36 40.4	+3.6
	1.7nm,0.8s,mb3.4,baz=90,slow=7.4,SNR=16						
JHJ	Hachijo jima 2	26.09	39	P	P	22 37 18.5	-3.5
	155nm,0.5s,baz=97,slow=10,SNR=3.6						
HHC	Hu-ho-hao-te	28.23	345	eP	P	22 37 44.0	+2.6
HHC				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.0						
LSA	Lhasa	31.58	305	eP	P	22 38 12.8	+1.6
	comp=Z,2.7nm,0.7s,mb4.1						
ULN	Ulaanbaatar	35.94	344	eP	P	22 38 48.4	+0.2
	comp=Z,1.0nm,0.7s,mb3.9						
WRAB	Tennant Creek	36.00	158	eP	P	22 38 47.2	-1.8
	comp=Z,4.5nm,0.8s,mb4.5						
WRA	Warramunga Arr	36.01	158	P	P	22 38 48.2	-1.0
	comp=Z,1.0nm,0.5s,mb4.0,baz=333,slow=9.8,SNR=6.0						
WRA				pP	pP	22 39 12.3	-3.1
	comp=Z,1.4nm,0.9s,baz=338,slow=9.5,SNR=5.1						
SONM	Songino Array	36.08	344	P	P	22 38 49.5	0.0
	comp=Z,1.0nm,0.5s,mb4.0,baz=160,slow=11,SNR=16						
ASAR	Alice Springs	39.30	161	P	P	22 39 16.1	-0.5
	comp=Z,0.6nm,0.6s,mb3.6,baz=335,slow=6.7,SNR=8.1						
ASAR				pP	pP	22 39 41.8	-1.3
	comp=Z,0.8nm,0.6s,baz=338,slow=7.0,SNR=7.5						
AAK	Ala-Archa	49.05	315	P	P	22 40 34.4	0.0
	comp=Z,2.1nm,1.0s,mb4.0						
ZAL	Zalesovo	49.07	333	P	P	22 40 33.2	-1.2
	comp=Z,0.8nm,0.4s,mb4.0,baz=6.6,slow=9.9,SNR=4.1						
KURK	Kurchatov	50.19	326	P	P	22 40 43.5	+0.4
	comp=Z,14nm,0.8s,mb5.0						
BVAR	Borovoye Array	55.77	326	P	P	22 41 24.3	-0.1
	comp=Z,1.0nm,0.6s,mb4.1,baz=113,slow=11,SNR=11						
CHKZ	Chkalovo	55.93	327	eP	P	22 41 24.7	-0.8
	comp=Z,2.3nm,0.8s,mb4.3						
ASF	Jabal al Asfar	77.62	300	P	P	22 43 44.7	+2.0
	comp=Z,0.9nm,0.6s,mb3.7,baz=32,slow=21,SNR=3.0						
ILAR	Eielson Array	78.83	26	P	P	22 43 45.2	-3.4
	comp=Z,1.1nm,1.2s,mb3.6,baz=297,slow=4.0,SNR=3.1						
ARCES	ARCESS Array B	79.10	339	P	P	22 43 49.6	-0.4
	comp=Z,1.1nm,0.6s,mb3.9,baz=90,slow=4.9,SNR=7.0						

WEL 10 22:36:51.4±0.4**, 35.33S×177.84E, h33**^{km}**, ML4.1**/3**, Error ellipse: s-maj=5.8km s-min=2.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.26	171	P*	Pb	22 37 26.4	-5.1
MXZ				S*	Sb	22 37 52.7	-6.5
URZ	Urewera	2.98	191	P*	Pb	22 37 36.8	-7.0
URZ				S*	Sb	22 38 11.4	-8.6
MWZ	Matawai	3.01	185	P*	Pb	22 37 36.8	-7.4
MWZ				S*	Sb	22 38 11.0	-10
MWZ				eS*	Sb	22 38 11.3	-10
BFZ	Birch Farm	5.49	193	ePN	Pn	22 38 05.9	-7.2
MRZ	Mangatainoka R	5.62	198	PN	Pn	22 38 08.0	-7.0
MRZ				SN	Sn	22 39 08.6	-10
KIW	Kapiti Island	5.99	202	ePN	Pn	22 38 12.4	-7.7

IDC ***10*** *22:40:03.4±3.8, 36.02N×71.35E, mb4.0/7, mb1 4.1/8, mb1mx3.8/21, mbtmp4.0/8, ML3.8/1, Error ellipse: s-maj=78.9km s-min=31.2km az=2.0*

MOS ***10*** *22:40:07.7±0.9, 36.17N×71.15E, h33^{km}, mb4.3/9, Error ellipse: s-maj=22.4km s-min=12.9km az=96.5*

NEIC ***10*** *22:40:11.7±3.0, 36.14N×71.25E, h59^{km}±24^{km}, mb3.7/7, Error ellipse: s-maj=26.0km s-min=13.3km az=171.0*

ISC 10 22:40:19.7±0.8**, 36.56N**±0.05×**72.08E**±0.09**, h167**^{km}±10^{km}**, n36, σ1^{s}13**/44**, mb3.8**/10**, 1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.10	143	eP	P	22 41 34.2	-1.4
THN				eS	S	22 42 33.8	-0.4
DLH	Dalhousie	5.14	140	eP	P	22 41 37.0	+0.9
DLH				eS	S	22 42 36.0	+0.9
PONG	Pong	5.61	144	eP	P	22 41 43.0	+0.8
PONG				e		22 42 56.0	
AAK	Ala-Archa	6.34	16	ePN	P	22 41 51.0	-1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AAK	Ala-Archa	6.34	16	ePn	P	22 41 51.0	-1.0
	comp=Z,5.1nm,0.4s						
AAK				eSn	S	22 43 03.3	-0.4
SMLA	Simla	6.88	141	⇓iP	P	22 42 12.6	+13
SMLA				iS	S	22 43 27.4	+11
GKN	Gorkha	13.62	125	eP	P	22 43 27.7	+0.7
	comp=Z,15nm,0.5s						
GKN				eS	S	22 45 53.8	-0.8
KKN	Kakani	14.19	124	eP	P	22 43 34.9	+0.8
	comp=Z,7.6nm,0.5s						
KKN				eS	S	22 46 07.1	-0.4
DMN	Daman	14.19	125	eP	P	22 43 34.4	+0.2
	comp=Z,8.8nm,0.3s						
DMN				eS	S	22 46 06.4	-1.2
JIRN	Jiri	14.88	123	eP	P	22 43 43.5	+0.6
	comp=Z,12nm,0.4s						
JIRN				eS	S	22 46 23.8	+0.5
KURK	Kurchatov	14.91	16	eP	P	22 43 48.2	+5.2
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	Kurchatov	14.91	16	eP	P	22 43 48.2	+5.1
	comp=Z,4.8nm,1.2s						
BVAR	Borovoye Array	16.50	356	P	P	22 44 02.2	-0.6
	comp=Z,0.3nm,0.3s,baz=164,slow=11,SNR=6.4						
CHKZ	Chkalovo	17.14	357	eP	P	22 44 04.2	-6.2
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CHKZ	Chkalovo	17.14	357	eP	P	22 44 04.2	-6.2
	comp=Z,0.9nm,0.9s						
ZAL	Zalesovo	19.49	23	P	P	22 44 39.9	+4.2
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ZAL	Zalesovo	19.49	23	P	P	22 44 39.9	+4.2
	comp=Z,10nm,0.3s,baz=243,slow=6.1,SNR=17						
KIV	Kislovodsk	23.53	297	eP	P	22 45 14.4	-1.0
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.3						
KIV	Kislovodsk	23.53	297	eP	P	22 45 14.4	-1.1
	comp=Z,11nm,1.1s,mb4.3						
MALT	Malatya	26.69	284	P	P	22 45 39.9	-5.1
MALT				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.9						
MALT	Malatya	26.69	284	P	P	22 45 39.9	-5.1
	comp=Z,3.8nm,1.2s,mb3.9						
SONM	Songino Array	27.59	55	P	P	22 45 59.5	+6.5
	comp=Z,0.2nm,0.4s,mb3.2,baz=262,slow=9.1,SNR=5.9						
ULN	Ulaanbaatar	28.03	55	eP	P	22 46 05.3	+8.3
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ULN	Ulaanbaatar	28.03	55	eP	P	22 46 05.3	+8.3
	comp=Z,0.8nm,0.7s,mb3.6						
FINES	FINESS Array B	37.92	326	P	P	22 47 23.0	+1.0
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FINES	FINESS Array B	37.92	326	P	P	22 47 23.0	+1.0
	comp=Z,4.8nm,1.0s,mb4.1,baz=118,slow=11,SNR=8.6						
MORC	Moravsky Berou	41.02	306	P	P	22 47 45.7	-2.0
ARCES	ARCESS Array B	41.42	337	P	P	22 47 53.5	+2.7
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	ARCESS Array B	41.42	337	P	P	22 47 53.5	+2.7
	comp=Z,1.6nm,0.5s,mb3.9,baz=108,slow=3.8,SNR=11						
HFS	Hagfors	43.55	322	P	P	22 48 09.5	+1.5
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	Hagfors	43.55	322	P	P	22 48 09.5	+1.5
	comp=Z,1.7nm,0.4s,mb4.0,baz=98,slow=10,SNR=9.6						
NB2	NORSAR Subarra	44.85	323	P	P	22 48 19.3	+0.9
	comp=Z,0.4nm,0.3s,mb3.5,baz=99,slow=7.4						
NOA	NORSAR Array B	44.85	323	P	P	22 48 19.1	+0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	44.85	323	P	P	22 48 19.1	+0.7
	comp=Z,1.4nm,0.7s,mb3.7,baz=96,slow=7.7,SNR=3.3						
TSUM	Tsumeb	75.64	233	P	P	22 51 46.0	-2.2
	comp=Z,5.7nm,1.2s,mb4.1						
YKA	Yellowknife Ar	81.14	3	P	P	22 52 23.0	+5.8
	comp=Z,0.3nm,0.5s,mb3.2,baz=351,slow=5.3,SNR=7.1						

TRN 10 22:43:34.2, 17.92N×60.96W, h35^{km}**, M3.5**(FDF)**, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEG	Port Louis	1.60	199	eP	P	22 44 00.9	+0.5
SEG				eS	S	22 44 21.7	+1.6
DEG	La Desirade	1.60	183	eP	P	22 44 01.8	+1.2
BCG	Bois Riant Cap	1.93	199	eP	P	22 44 06.3	+1.0

CSEM ***10*** *23:07:46.3±0.1, 67.14N×20.81E, h2^{km}, ML2.6, Error ellipse: s-maj=3.1km s-min=2.5km az=1.0, Mining explosion.*

UPP ***10*** *23:07:47.2, 67.18N×20.66E, h0^{km}, ML2.6, Mining explosion.*

HEL 10 23:07:47.7±0.0**, 67.17N×20.64E, ML2.6**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.06	212	iP	Pg	23 07 48.7	-0.1
MASU	Masugnsbyn	0.60	61	iP	Pg	23 07 58.5	-1.2
MASU	Masugnsbyn	0.60	61	P	Pg	23 07 58.4	-1.3
KUA	Kurravaara	0.80	352	iP	Pg	23 08 01.9	-1.7
ERTU	Ertsjaerv	0.87	135	iP	Pg	23 08 03.2	-1.9
PAJU	Pajala	0.98	97	eP	Pb	23 08 05.2	-2.0
LANU	Lannavaara	1.02	30	eP	Pb	23 08 06.1	-1.9
SJUU	Sjulsmark	1.71	166	eP	Pn	23 08 18.3	-0.7
SJUU	Sjulsmark	1.71	166	P	Pn	23 08 18.2	-0.8
KIF	Kilpisjarvi	1.84	2	eP	Pn	23 08 20.7	-0.2
KIF				eS	Sn	23 08 44.6	-0.7
KIF	Kilpisjarvi	1.84	2	P	Pn	23 08 20.6	-0.3
KIF				S	Sn	23 08 44.5	-0.8

ISK ***10*** *23:54:39.4, 37.00N×28.31E, h14^{km}, MD3.1*

CSEM ***10*** *23:54:39.4±0.1, 37.00N×28.31E, h15^{km}, MD3.1/1, Error ellipse: s-maj=2.5km s-min=2.1km az=61.0*

ATH ***10*** *23:54:40.8, 36.98N×28.25E, h21^{km}±11^{km}, MD3.2/4*

NEIC ***10*** *23:54:40.8, 36.98N×28.25E, h21^{km}, MD3.2(ATH), After ATH.*

ISC 10 23:54:39.5±0.6**, 36.97N**±0.03×**28.28E**±0.05**, h9**^{km}±5^{km}**, n19, σ0^{s}94**/26**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	360	iPG	Pg	23 54 43.7	+0.4
YER				iSG	Sg	23 54 46.0	+0.2
MLSB	Milas	0.52	309	PG	Pg	23 54 50.0	-0.1
BDRM	Kayabasi	0.68	279	iP	Pb	23 54 54.5	+1.4
BDRM				iS	Sb	23 55 06.3	+4.0
FETY	Fethiye	0.72	117	PG	Pg	23 54 53.8	-0.3
FETY				SG	Sg	23 55 04.2	+0.4
ARG	Arkhangelos	0.76	190	ePN	Pn	23 54 55.5	-0.7
AYDN	Tasoluk	0.76	335	iP	Pb	23 54 55.1	+0.6
AYDN				iS	Sb	23 55 04.8	+0.1
DNZL	Cakiroluk	0.94	40	iP	Pb	23 54 56.8	-0.9
DNZL				iS	Sb	23 55 13.0	+3.0
DENT	Denizli	0.99	37	PG	Pg	23 54 58.1	-1.2
KSL	Kastellorizon	1.33	127	ePN	Pn	23 55 06.5	+2.2
SMG	Samos	1.37	303	ePN	Pn	23 55 06.0	+1.1
MANT	Manisa	1.54	8	iP	Pn	23 55 07.5	+0.2
MANT				iS	Sb	23 55 27.8	+0.5
IZM	Izmir	1.64	331	ePN	Pn	23 55 07.7	-1.1
KDAG	Bornova	1.65	331	iP	Pn	23 55 09.5	+0.7
KDAG				iS	Sn	23 55 29.5	-0.8
KHL	Karahalli	1.68	36	ePN	Pn	23 55 08.8	-0.5
KARP	Karpathos	1.68	213	ePB	Pb	23 55 10.3	+0.1
AKS	Akhisar	1.94	349	ePN	Pn	23 55 12.7	-0.4
ALT	Altintas	2.54	34	ePN	Pn	23 55 20.5	-1.1
DST	Dursunbey	2.65	6	ePN	Pn	23 55 22.8	-0.4

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NPS   Neapolis             2.75 233  ePB     Pb       23 55 27.0  -1.5
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MOS ***11*** *00:20:39.9±0.9, 2.87N×95.47E, h33^{km}, mb5.2/24, Error ellipse: s-maj=12.9km s-min=7.2km az=101.6*

BJI ***11*** *00:20:39.9, 2.65N×95.33E, h37^{km}, mB5.1, mb5.2, Ms4.7, Msz4.5*

NEIC ***11*** *00:20:40.8±0.2, 2.84N×95.47E, mb4.9/25, Error ellipse: s-maj=7.1km s-min=5.3km az=57.0*

IDC ***11*** *00:20:40.6±0.5, 2.89N×95.46E, h23^{km}±3^{km}, mb4.2/12, mb1 4.4/12, mb1mx4.3/17, mbtmp4.4/12, ML5.0/1, MS4.3/6, Ms1 4.3/6, ms1mx3.8/20, Error ellipse: s-maj=23.1km s-min=11.2km az=46.0*

ISC 11 00:20:38.9±0.3, **2.85N**±0.05×**95.48E**±0.04, **h26**^{km}, **h26**^{km}±.6^{km}**:pP-P, n125,** σ**0**$\overset{s}{.}$**93**/117, **mb4.9**/62, **MS4.5**/22, **8C-4D, Off west coast of northern Sumatera**

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Code  Station Name          Δ°   AZ°     Phase ID              Time     Res
                                       Op       ISC          h  m  s    ISC
IPM   Ipoh                 5.79   73   P        Pn        00 22 06.4  +0.8
SNG   Songkhla             6.68   50   P        Pn        00 22 18.5  +0.4
      276nm,0.9s
KGM   Kluang               7.87   96   P        Pn        00 22 35.2  +0.5
KKTK  Khon Kaen           15.23   28 ⇑P        P         00 24 19.5  +5.3
      2μm,0.7s
PALK  Pallekele           15.36  287  ePn      P         00 24 16.1  +0.1
      20nm,0.8s
CM31  Chiang Mai Arr      15.88   12  eP       P         00 24 23.4  +0.8
      97nm,0.9s
CMAR  Chiang Mai Arr      15.88   12   Pn      P         00 24 22.5  -0.2
      1.9nm,0.3s,baz=202,slow=11,SNR=182
CMAR                                   LR       LR        00 31 28.2
      comp=Z,890nm,18.9s,baz=195,slow=41
CMAR                                   ScP                00 32 56.0
      0.3nm,0.3s,baz=232,slow=3.2,SNR=4.2
CHG   Chiang Mai          16.23   12 ⇓P        P         00 24 26.7  -0.3
      15nm,0.8s
VIS   Vishakhapatnam      18.99  322  i        P         00 25 09.5  +8.1
KKM   Kota Kinabalu       20.91   81   P       P         00 25 23.0  +0.9
QIZ   Qiongzhong          21.36   40 ⇑P        P         00 25 25.8  -0.8
QIZ                                    LR       LR
      comp=N,857nm,17.4s,MS4.3
QIZ                                    LR       LR
      comp=E,659nm,17.2s,MS4.3
QIZ                                    LR       LR
      comp=Z,1μm,17.2s,MS4.3
HYB   Hyderabad           22.04  312  i P      P         00 25 37.0  +3.5
HYB                                   eS       S         00 29 40.0  +10
TSM   Tawau               22.39   86   P       P         00 25 34.4  -2.6
KMI   Kunming             23.23   17 ⇑P        P         00 25 46.8  +1.6
KMI                                    AP                 00 25 54.5
KMI                                    XP                 00 25 57.1
KMI                                    AMB      AMB
      comp=Z,37nm,0.9s,mb4.8
KMI                                    AMB      AMB
      comp=Z,293nm,4.6s
KMI                                    LR       LR
      comp=N,1μm,15.2s
KMI                                    LR       LR
      comp=E,639nm,23.0s
KMI                                    LR       LR
      comp=Z,2μm,13.7s,MS4.7
KAD   Karad               25.38  306  eP       P         00 26 10.0  +4.0
GYA   Guiyang             25.81   24⇑iP        P         00 26 10.2  +0.2
GYA                                    AP       pP        00 26 17.4  -0.2
GYA                                    XP       sP        00 26 21.4  +0.3
GYA                                    PP       PP        00 26 53.4  +2.7
GYA                                    AMB      AMB
      comp=Z,40nm,0.7s,mb5.1
GYA                                    AMB      AMB
      comp=Z,180nm,3.9s
GYA                                    LR       LR
      comp=N,790nm,14.9s,MS4.4
GYA                                    LR       LR
      comp=E,320nm,16.5s,MS4.4
GYA                                    LR       LR
      comp=Z,1μm,16.5s,MS4.5
JIRN  Jiri                26.23  341  eP       P         00 26 14.9  +1.1
      comp=Z,102nm,0.7s,mb5.5
POO   Poona               26.30  308  e        pP        00 26 23.0  +0.8
PKI   Pulchoki            26.41  340  eP       P         00 26 16.2  +0.7
      comp=Z,50nm,0.8s,mb5.1
GZH   Guangzhou           26.54   39   P       P         00 26 22.8  +6.1
GZH                                    LR       LR
      comp=N,1μm,14.3s,MS4.6
GZH                                    LR       LR
      comp=E,708nm,17.3s,MS4.6
GZH                                    LR       LR
      comp=Z,2μm,15.8s,MS4.7
DMN   Daman               26.55  339  eP       P         00 26 17.3  +0.5
KKN   Kakani              26.65  340  eP       P         00 26 17.9  +0.2
      comp=Z,99nm,0.7s,mb5.4
LSA   Lhasa               27.02  352   P       P         00 26 22.2  +1.1
LSA                                    AP       pP        00 26 33.2  +4.5
LSA                                   eS       S         00 30 57.1  +1.8
LSA                                    AMB      AMB
      comp=Z,50nm,0.9s,mb5.0
LSA                                    LR       LR
      comp=N,240nm,25.0s,MS4.0
LSA                                    LR       LR
      comp=E,370nm,20.0s,MS4.0
LSA                                    LR       LR
      comp=Z,460nm,22.0s,MS4.0
LSA   Lhasa               27.02  352  eP       P         00 26 22.1  +1.0
LSA                                    pmax     pmax
      comp=Z,46nm,0.6s,mb5.2
LSA   Lhasa               27.02  352  eP       P         00 26 22.1  +1.0
      comp=Z,46nm,0.6s,mb5.2
GKN   Gorkha              27.08  339  eP       P         00 26 21.8  +0.2
      comp=Z,206nm,1.0s,mb5.6
KOLN  Koldanda            27.26  337  eP       P         00 26 23.6  +0.3
      comp=Z,93nm,0.7s,mb5.4
CD2   Chengdu             28.99   15⇑iP        P         00 26 37.6  -1.3
CD2                                    AMB      AMB
      comp=Z,17nm,1.0s,mb4.7
ENH   Enshi               30.33   24  eP       P         00 26 49.1  -1.8
      comp=Z,23nm,0.8s,mb5.0
NDI   New Delhi           31.03  328  eP       P         00 26 56.0  -1.0
DDI   Dehra Dun           31.93  331  eP       P         00 27 05.8  +0.9
SDNR  Sundarnagar         33.42  330  eP       P         00 27 18.2  +0.3
XAN   Xi'an               33.47   20   P       P         00 27 17.2  -1.1
XAN                                    AMB      AMB
      comp=Z,30nm,1.2s,mb5.1
XAN                                    LR       LR
      comp=N,209nm,11.1s,MS4.4
XAN                                    LR       LR
      comp=E,404nm,13.1s,MS4.4
XAN                                    LR       LR
      comp=Z,606nm,17.3s,MS4.4
MBWA  Marble Bar          33.66  136  eP       P         00 27 20.5  +0.4
      comp=Z,16nm,0.9s,mb5.0
LZH   Lanzhou             33.97   12 ⇑P        P         00 27 21.6  -1.0
LZH                                    AMB      AMB
      comp=Z,40nm,1.3s,mb5.2
LZH                                    AMB      AMB
      comp=Z,123nm,4.0s
LZH                                    LR       LR
      comp=E,415nm,13.8s
LZH                                    LR       LR
      comp=Z,367nm,15.1s,MS4.2
THN   Thein Dam           34.80  330  eP       P         00 27 30.0  +0.2
FITZ  Fitzroy Crossi      36.28  126  eP       P         00 27 42.0  -0.4
      comp=Z,13nm,0.7s,mb5.0
NJ2   Nanjing             36.43   35  eP       P         00 27 44.4  +0.8
NJ2                                    AMB      AMB
      comp=Z,120nm,0.8s,mb5.9
NJ2                                    LR       LR
      comp=N,7μm,17.4s,MS5.5
NJ2                                    LR       LR
      comp=E,1μm,14.3s,MS5.5
GTA   Gaotai              36.61    6  eP       P         00 27 44.5  -0.5
GTA                                    PP       PP        00 29 07.5  -2.3
GTA                                    PCP      PcP       00 30 09.3  +1.1
GTA                                    S        S         00 33 25.3  -0.3
GTA                                    AMB      AMB
      comp=Z,20nm,0.9s,mb5.0
GTA                                    AMB      AMB
      comp=Z,165nm,5.0s
GTA                                    LR       LR
      comp=N,355nm,11.8s
GTA                                    LR       LR
      comp=E,247nm,21.3s
GTA                                    LR       LR
      comp=Z,443nm,16.3s,MS4.3
HHC   Hu-ho-hao-te        40.52   19⇑iP        P         00 28 19.0  +1.4
HHC                                    AP       pP        00 28 27.8  +2.3
HHC                                    XP       sP        00 28 33.7  +5.0
HHC                                    S        S         00 34 23.1  -1.8
HHC                                    AMB      AMB
      comp=Z,39nm,1.7s,mb4.8
HHC                                    LR       LR
      comp=N,829nm,16.7s,MS4.7
HHC                                    LR       LR
      comp=E,657nm,19.0s,MS4.7
HHC                                    LR       LR
      comp=Z,835nm,16.6s,MS4.7
NWAO  Narrogin (SRO)      41.10  152   pP       pP        00 28 30.0  -0.3
      comp=Z,4.4nm,0.6s,baz=342,slow=8.7,SNR=2.1
WMQ   Urumqi              41.38  351  eP       P         00 28 25.5  +0.8
WMQ                                    AMB      AMB
      comp=Z,12nm,1.0s,mb4.5
BJT   Baijiatuau          41.48   24  eP       P         00 28 26.8  +1.3
BJT                                   e*PP      pP        00 28 34.6  +1.3
BJT                                    pmax     pmax
      comp=Z,64nm,0.8s
BJT   Baijiatuau          41.48   24  eP       P         00 28 26.8  +1.2
      comp=Z,64nm,0.8s,mb5.3
BJT                                   epP       pP        00 28 34.6  +1.2
BJI   Beijing             41.50   24   P       P         00 28 27.1  +1.3
BJI                                    AP       pP        00 28 34.7  +1.1
BJI                                    XP       sP        00 28 37.4  +0.6
BJI                                    AMB      AMB
      comp=Z,87nm,0.9s,mb5.4
BJI                                    LR       LR
      comp=N,385nm,16.4s,MS4.5
BJI                                    LR       LR
      comp=E,344nm,14.6s,MS4.5
BJI                                    LR       LR
      comp=Z,236nm,16.6s,MS4.1
AAK   Ala-Archa           43.83  338  eP       P         00 28 44.8  +0.1
AAK                                    pmax     pmax
      comp=Z,14nm,1.1s,mb4.6
AAK   Ala-Archa           43.83  338  eP       P         00 28 44.8  +0.1
      comp=Z,14nm,1.1s,mb4.6
FRU   Bishkek             43.95  338  eP       P         00 28 50.0  +4.3
WRA   Warramunga Arr      44.36  122   P       P         00 28 49.6  +0.4
      comp=Z,11nm,0.9s,mb4.6,baz=301,slow=9.0,SNR=28
WRA                                    pP       pP        00 28 56.4  -0.7
      comp=Z,11nm,0.9s,baz=300,slow=9.3,SNR=13
WRAB  Tennant Creek       44.36  122  eP       P         00 28 49.2  -0.1
WRAB                                  e*PP      pP        00 28 57.2  +0.1
WRAB                                   pmax     pmax
      comp=Z,32nm,1.3s,mb4.9
WRAB  Tennant Creek       44.36  122  eP       P         00 28 49.2  -0.1
      comp=Z,32nm,1.3s,mb4.9
WRAB                                  epP       pP        00 28 57.2  +0.1
MKAR  Makanchi Array      45.26  347  i P      P         00 28 56.5  +0.4
MKAR                                   pmax     pmax
      comp=Z,28nm,0.7s
KS15  Wonju Array Si      45.49   37  eP       P         00 28 58.5  +0.4
ASPA  Alice Springs       45.75  127  eP       pP        00 29 07.9  -0.2
ASAR  Alice Springs       45.75  127   P       P         00 29 00.7  +0.4
      comp=Z,6.0nm,1.0s,mb4.5,baz=304,slow=7.4,SNR=24
ASAR                                   pP       pP        00 29 07.3  -0.8
      comp=Z,2.9nm,0.5s,baz=302,slow=7.8,SNR=14
SONM  Songino Array       45.80   10   P       P         00 29 00.6  +0.2
      comp=Z,24nm,0.8s,mb5.2,baz=189,slow=8.7,SNR=231
SONM                                   pP       pP        00 29 08.1  -0.1
      comp=Z,21nm,1.1s,baz=193,slow=9.2,SNR=10.0
SONM                                   PcP      PcP       00 30 38.2  +0.1
      comp=Z,4.8nm,0.7s,baz=191,slow=3.7,SNR=12
ULN   Ulaanbaatar         45.95   11  eP       P         00 29 01.6   0.0
ULN                                   e                   00 30 38.9
ULN                                    pmax     pmax
      comp=Z,9.0nm,0.8s,mb4.8
ULN   Ulaanbaatar         45.95   11  eP       P         00 29 01.6  +0.1
      comp=Z,8.9nm,0.8s,mb4.8
ULN                                   ePcP      PcP       00 30 38.9  +0.2
SNY   Shenyang            46.27   29 ⇓P        P         00 29 04.3  +0.1
SNY                                    S        S         00 35 54.9  +6.3
SNY                                    XS                 00 36 05.6
SNY                                    AMB      AMB
      comp=Z,30nm,0.7s,mb5.3
SNY                                    LR       LR
      comp=N,550nm,16.7s
SNY                                    LR       LR
      comp=Z,600nm,14.3s,MS4.7
ZAK   Zakamensk           47.83    7⇑iP        P         00 29 16.5  +0.1
ZAK                                   e         pP        00 29 25.1  +0.8
ZAK                                   e                   00 30 45.2
ZAK                                    pmax     pmax
      comp=Z,8.0nm,0.8s,mb4.8
ZAK                                    pmax     pmax
      comp=Z,2.0nm,1.5s,mb3.9
CN2   Changchun           48.66   29  eP       P         00 29 22.8  -0.1
CN2                                    AMB      AMB
      comp=Z,30nm,0.7s,mb5.4
CN2                                    LR       LR
      comp=N,700nm,16.0s,MS4.9
CN2                                    LR       LR
      comp=E,600nm,16.0s,MS4.9
CN2                                    LR       LR
      comp=Z,730nm,19.0s,MS4.7
MOY   Mondy               48.87    5  eP       P         00 29 24.5  +0.1
MOY                                    pmax     pmax
      comp=Z,19nm,2.8s,mb4.6
TLY   Talaya              49.15    7   P       P         00 29 27.3  +0.8
      comp=Z,138nm,0.8s,SNR=11
TLY   Talaya              49.15    7  eP       P         00 29 27.0  +0.5
TLY                                   e*PP      pP        00 29 34.9  +0.4
TLY                                    pmax     pmax
      comp=Z,16nm,0.8s,mb5.1
TLY   Talaya              49.15    7  eP       P         00 29 27.3  +0.8
TLY                                    pmax     pmax
      comp=Z,19nm,0.8s,mb5.2
TLY                                    MLR      MLR
      comp=Z,340nm,19.0s,MS4.4
TLY   Talaya              49.15    7  eP       P         00 29 27.0  +0.5
      comp=Z,16nm,0.8s,mb5.1
TLY                                   epP       pP        00 29 34.9  +0.4
KURK  Kurchatov           49.78  346  eP       P         00 29 31.5  +0.1
KURK                                  e*PP      pP        00 29 39.3  -0.1
KURK                                   pmax     pmax
      comp=Z,4.0nm,1.0s,mb4.4
KURK  Kurchatov           49.78  346  eP       P         00 29 31.5  +0.1
      comp=Z,3.7nm,1.0s,mb4.4
KURK                                  epP       pP        00 29 39.3  -0.1
HIA   Hailar              50.67   20  eP       P         00 29 38.3  +0.1
HIA                                   e*PP      pP        00 29 46.1  -0.1
HIA                                    pmax     pmax
      comp=Z,8.0nm,0.8s
HIA   Hailar              50.67   20  eP       P         00 29 38.3  +0.1
      comp=Z,8.0nm,0.8s,mb4.7
HIA                                   epP       pP        00 29 46.1  -0.1
MDJ   Mudanjiang          51.31   31   P       P         00 29 44.8  +1.7
MDJ                                    AMB      AMB
      comp=Z,14nm,1.0s,mb4.8
MDJ                                    AMB      AMB
      comp=Z,47nm,3.9s
ZAL   Zalesovo            51.68  352   P       P         00 29 45.3  -0.5
      comp=Z,39nm,0.6s,mb5.5,baz=304,slow=5.7,SNR=270
ZAL                                    pP       pP        00 29 52.8  -1.0
      comp=Z,14nm,0.5s,baz=288,slow=6.3,SNR=12
NVS   Novosibirsk         52.78  351  eP       P         00 29 52.5  -1.6
NVS                                   e*PP      pP        00 29 59.4  -2.7
NVS                                   eS       S         00 37 18.7  -0.4
NVS                                    pmax     pmax
      comp=N,19nm,0.8s
NVS                                    pmax     pmax
      comp=E,15nm,0.8s
NVS                                    pmax     pmax
      comp=Z,44nm,0.8s,mb5.4
NVS                                    smax
      comp=N,15nm,1.6s
NVS                                    smax
      comp=E,53nm,1.6s
BVA0  Borovoye Array      54.15  342   P       P         00 30 03.6  -0.5
BVA0                                   pmax     pmax
      comp=Z,2.0nm,0.8s,mb4.1
CHKZ  Chkalovo            54.64  342   P       P         00 30 07.4  -0.3
CHKZ                                   pmax     pmax
      comp=Z,17nm,0.8s,mb5.1
CTA   Charters Tower      54.77  117   P       P         00 30 09.3  +0.2
      comp=Z,6.1nm,0.7s,mb4.8,baz=286,slow=8.9
CTAO  Charters Tower      54.77  117  eP       P         00 30 09.2   0.0
CTAO                                  e*PP      pP        00 30 17.0  -0.1
CTAO                                   pmax     pmax
      comp=Z,15nm,1.0s,mb5.0
CTAO  Charters Tower      54.77  117  eP       P         00 30 09.2   0.0
      comp=Z,15nm,1.0s,mb5.0
CTAO                                  epP       pP        00 30 17.0  -0.1
KLR   Kul'dur             55.59   28  eP       P         00 30 12.0  -2.7
KLR                                    MLR      MLR
      comp=E,1μm,16.0s
STKA  Stephens Creek      55.72  132   P       P         00 30 16.0   0.0
      comp=E,2.6nm,0.8s,mb4.3,baz=294,slow=8.2,SNR=5.9
STKA                                   pP       pP        00 30 23.8  -0.2
      comp=E,3.9nm,0.9s,baz=304,slow=6.6,SNR=4.4
STKA                                   LR       LR        00 57 10.1
      comp=E,178nm,18.9s,MS4.2,baz=27,slow=39
STKA  Stephens Creek      55.72  132   P       P         00 30 16.0   0.0
STKA                                   pP       pP        00 30 23.8  -0.2
STKA                                   LR       LR        00 57 10.1
BOD   Bodaibo             56.74   12⇓iP        P         00 30 21.5  -1.4
BOD                                    pmax     pmax
      comp=Z,20nm,2.5s,mb4.7
KMBO  Kilima Mbogo        58.35  267  eP       P         00 30 35.8  +1.0
KMBO                                  e*PP      pP        00 30 42.8   0.0
KMBO                                   pmax     pmax
      comp=Z,2.0nm,0.9s
KMBO  Kilima Mbogo        58.35  267   P       P         00 30 35.8  +1.0
      comp=Z,5.7nm,1.2s,mb4.5,baz=229,slow=23,SNR=7.3
KMBO                                   pP       pP        00 30 42.6  -0.2
      comp=Z,5.1nm,1.1s,baz=48,slow=11,SNR=6.1
KMBO                                   LR       LR        00 52 54.0
      comp=Z,315nm,18.9s,MS4.5,baz=93,slow=33
KMBO  Kilima Mbogo        58.35  267  eP       P         00 30 35.8  +1.0
      comp=Z,1.8nm,0.9s,mb4.1
KMBO                                  epP       pP        00 30 42.8  -0.1
KMBO                                   LR       LR        00 52 54.0
TI2   Plekhanov           59.61  318  eP       pP        00 30 51.2  -0.1
YSS   Yuzh-Sakhalins      59.99   36  eP       P         00 30 44.0  -1.7
YSS                                   e                   00 31 02.0
YSS                                    pmax     pmax
      comp=Z,40nm,1.1s,mb5.4
YSS                                    MLR      MLR
      comp=Z,500nm,18.0s,MS4.7
YSS   Yuzh-Sakhalins      59.99   36  eP       P         00 30 44.3  -1.4
      comp=Z,20nm,0.8s,mb5.2
SVE   Sverdlovsk          60.54  339  eP       P         00 30 49.0  -0.3
SVE                                    pmax     pmax
      comp=Z,60nm,1.3s,mb5.6
MALT  Malatya             62.76  312  eP       P         00 31 03.6  -0.9
MALT                                  e*PP      pP        00 31 12.6   0.0
MALT                                   pmax     pmax
      comp=Z,26nm,1.8s,mb5.1
MALT  Malatya             62.76  312  eP       P         00 31 03.6  -0.9
      comp=Z,26nm,1.8s,mb5.1
MALT                                  epP       pP        00 31 12.6  -0.1
SOKR  Solikamsk           63.94  339⇓iP        P         00 31 11.9  -0.1
SOKR                                   pmax     pmax
      comp=Z,20nm,0.7s,mb5.3
YAK   Yakutsk             64.34   17  eP       P         00 31 13.0  -1.6
YAK                                   e*PP      pP        00 31 21.2  -1.5
YAK                                    pmax     pmax
      comp=Z,17nm,0.6s,mb5.2
YAK   Yakutsk             64.34   17  eP       P         00 31 13.0  -1.5
      comp=Z,18nm,0.6s,mb5.3
YAK                                   epP       pP        00 31 21.2  -1.5
MBAR  Mbarara             64.81  268  eP       P         00 31 16.1  -2.3
MBAR                                  e*PP      pP        00 31 25.6  -1.0
MBAR                                   pmax     pmax
      comp=Z,3.0nm,0.8s,mb4.4
MBAR  Mbarara             64.81  268  eP       P         00 31 16.1  -2.3
      comp=Z,2.5nm,0.8s,mb4.3
MBAR                                  epP       pP        00 31 25.6  -1.0
BRTR  Keskin Array B      66.74  312   P       P         00 31 28.4  -1.9
      comp=Z,2.6nm,1.2s,mb4.2,baz=100,slow=6.9,SNR=2.8
BRTR                                   pP       pP        00 31 36.7  -1.8
      comp=Z,0.8nm,0.6s,baz=137,slow=6.4,SNR=3.0
LSZ   Lusaka              68.95  253  eP       P         00 31 44.8  +0.3
LSZ                                   e*PP      pP        00 31 53.3  +0.6
LSZ                                    pmax     pmax
      comp=Z,2.0nm,0.9s,mb4.0
LSZ   Lusaka              68.95  253  eP       P         00 31 44.8  +0.3
      comp=Z,2.1nm,0.9s,mb4.1
LSZ                                   epP       pP        00 31 53.3  +0.6
OBN   Obninsk             70.33  328  eP       P         00 31 51.3  -1.0
OBN                                   e         pP        00 31 59.4  -1.0
OBN                                   e                   00 32 10.4
OBN                                    pmax     pmax
      comp=Z,13nm,0.9s,mb4.9
MA2   Magadan             70.61   26  eP       P         00 31 53.8  -0.2
MA2                                    pmax     pmax
      comp=Z,14nm,0.9s,mb4.9
MA2   Magadan             70.61   26  eP       P         00 31 53.8  -0.2
      comp=Z,14nm,0.9s,mb4.9
TIXI  Tiksi               71.89   11  eP       P         00 32 00.3  -1.1
TIXI                                   pmax     pmax
      comp=Z,9.0nm,0.9s,mb4.7
TIXI                                   MLR      MLR
      comp=Z,284nm,15.0s,MS4.7
AKASG Malin Array Be      72.92  322   P       P         00 32 06.7  -1.2
      comp=Z,2.2nm,0.6s,mb4.2,baz=86,slow=5.2,SNR=11
AKASG                                  pP       pP        00 32 14.6  -1.4
      comp=Z,1.6nm,0.7s,baz=89,slow=4.7,SNR=3.3
LBTB  Lobatse             73.09  243  eP       P         00 32 10.1  +0.7
LBTB                                  e*PP      pP        00 32 18.0  +0.4
LBTB                                   pmax     pmax
      comp=Z,13nm,0.8s,mb4.9
LBTB  Lobatse             73.09  243  eP       P         00 32 10.1  +0.7
      comp=Z,13nm,0.8s,mb4.9
LBTB                                  epP       pP        00 32 18.0  +0.4
BOSA  Boshof              74.12  239  eP       P         00 32 15.4  +0.1
BOSA                                  e*PP      pP        00 32 24.3  +0.8
BOSA                                   pmax     pmax
      comp=Z,16nm,1.5s,mb4.7
BOSA  Boshof              74.12  239  eP       P         00 32 15.3   0.0
      comp=Z,16nm,1.5s,mb4.7
BOSA                                  epP       pP        00 32 24.3  +0.7
FINES FINESS Array B      77.76  333   P       P         00 32 34.7  -0.5
      comp=Z,4.7nm,0.6s,mb4.6,baz=96,slow=6.4,SNR=26
OJC   Ojcow               78.67  321  eP       P         00 32 40.9  +0.5
BILL  Bilibino            80.25   21  eP       pP        00 32 56.9   0.0
BILL                                   pmax     pmax
      comp=Z,8.0nm,1.3s,mb4.5
BILL                                   MLR      MLR
      comp=Z,200nm,15.0s,MS4.6
ARCES ARCESS Array B      80.42  340   P       P         00 32 50.4  +0.9
      comp=Z,3.5nm,0.6s,mb4.5,baz=91,slow=4.5,SNR=17
ARCES                                  LR       LR        01 11 58.0
      comp=Z,310nm,21.0s,MS4.6,baz=23,slow=38
GERES GERESS Array B      82.45  319   P       P         00 33 01.7  +1.1
      comp=Z,1.1nm,0.6s,mb4.0,baz=104,slow=5.5,SNR=6.8
GERES                                  pP       pP        00 33 09.3  +0.5
      comp=Z,1.5nm,0.6s,baz=101,slow=6.8,SNR=5.3
KHC   Kasperske Hory      82.56  319  eP       P         00 33 01.5  +0.5
NOA   NORSAR Array B      84.74  331   P       P         00 33 12.5  +0.6
      comp=Z,2.0nm,0.8s,mb4.3,baz=95,slow=5.3,SNR=4.1
URZ   Urewera             85.18  129   LR       LR        01 12 13.8
      comp=Z,142nm,19.3s,MS4.4,baz=286,slow=36
LPG   La Plagne           87.10  315  eP       P         00 33 27.8  +3.9
      comp=Z,12nm,0.9s,mb4.8
DBIC  Dimbokro            99.93  277   LR       LR        01 14 57.9
      comp=Z,98nm,21.1s,MS4.3,baz=352,slow=33
ULM   Lac du Bonnet      126.22    9   PKP      PKPdf     00 39 41.3  -2.9
      comp=Z,1.1nm,0.5s,baz=331,slow=4.4,SNR=3.6
ULM                                    pPKP               00 39 48.7
      comp=Z,1.3nm,0.5s,baz=338,slow=3.6,SNR=3.0
ULM   Lac du Bonnet      126.22    9   PKP      PKPdf     00 39 41.3  -2.9
ULM                                    pPKP               00 39 48.7
PDAR  Pinedale Array     129.27   24   PKP      PKPdf     00 39 48.1  -2.2
      comp=Z,0.4nm,0.5s,baz=135,slow=2.1,SNR=4.8
PDAR                                   pPKP               00 39 55.7
      comp=Z,0.5nm,0.7s,baz=243,slow=3.3,SNR=4.1
TXAR  Lajitas Array      143.12   29   PKhKP              00 40 10.3
      comp=Z,0.7nm,0.6s,baz=270,slow=1.7,SNR=8.5
TXAR  Lajitas Array      143.12   29   PKP      PKPdf     00 40 10.3  -5.8
JCT   Junction City      143.79   23  ePKIKP    PKPdf     00 40 12.1  -5.1
HKT   Hockley            145.64   18  ePKP2     PKPab     00 40 18.1  -0.3
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IDC ***11*** *00:30:36.5±34.0, 22.85S×168.83E, mb3.7/3, mb1 3.9/3, mb1mx3.7/13, mbtmp3.7/3, MS3.7/2, Ms1 3.7/2, ms1mx2.9/19, Error ellipse: s-maj=1045.0km s-min=69.4km az=139.0*

ISC 11 00:30:37.2±1.5, **23.3S**±0.4×**169.1E**±0.2, **h33**^{km}**, n7,** σ**0**$\overset{s}{.}$**97**/7, **mb3.8**/3, **MS3.6**/1, **Southeast of Loyalty Islands**

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Code  Station Name          Δ°   AZ°     Phase ID              Time     Res
                                       Op       ISC          h  m  s    ISC
DZM   Mont Dzumac          2.77  297  eP       P         00 31 19.0  -1.2
DZM                                   eS       S         00 31 52.2  -0.5
NOUC  Port Laguerre        2.87  295  eP       P         00 31 20.6  -1.1
NOUC                                  eS       S         00 31 57.1  +1.7
URZ   Urewera             16.37  157   LR       LR        00 39 56.1
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	comp=Z,165nm,18.4s,baz=175,slow=33						
RPZ	Rata Peaks	20.39	176	LR	LR	00 41 57.6	
	comp=Z,233nm,18.5s,MS3.6,baz=204,slow=33						
ASAR	Alice Springs	32.24	262	P	P	00 37 04.8	-0.1
	0.5nm,0.7s,mb3.4,baz=83,slow=7.3,SNR=4.2						
CMAR	Chiang Mai Arr	80.09	295	P	P	00 42 46.9	+1.1
	1.4nm,0.8s,mb4.0,baz=136,slow=4.5,SNR=8.2						
CMAR				pP	pP	00 42 51.6	-4.7
	0.7nm,0.5s,baz=128,slow=4.3,SNR=1.7						
SONM	Songino Array	90.41	323	P	P	00 43 36.7	+0.2
	0.8nm,1.1s,mb4.0,baz=146,slow=5.2,SNR=3.9						

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*IDC **11** 00:38:10.7±2.4, 17.64S×168.49E, mb4.4/8, mb1 4.6/8, mb1mx4.4/15, mbtmp4.4/8, MS3.7/6, Ms1 3.7/6, ms1mx3.4/19, Error ellipse: s-maj=76.6km s-min=26.1km az=134.0*

*NEIC **11** 00:38:11.6±10.0, 17.49S×168.40E, h5^{km}±67^{km}, mb4.9/6, Error ellipse: s-maj=29.6km s-min=20.3km az=184.0*

*HRVD **11** 00:38:11.6±0.8, 17.50S×168.33E, h20^{km}±1^{km}, MW4.9/34, Centroid moment Tensor Solution. LP body waves: s17,c21;Mantle waves: s34,c49; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.73±.31; $M_{\theta\theta}$2.05±.20; $M_{\phi\phi}$0.68±.19; $M_{r\theta}$-0.73±.34; $M_{\theta\phi}$-0.36±.15; $M_{\phi r}$-0.18±.41; Best double couple: $M_0$2.544×10^{16} NP1:ϕ_s289°,δ38°, λ-81°. NP2:ϕ_s97°,δ53°,λ-97°. Principal axes: T 2.232, Plg8°, Azm192°; N .626, Plg6°, Azm101°; P -2.856, Plg80°, Azm337°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 11 00:38:15.9±3.2**, 17.7S**±0.2×**168.3E**±0.2**, h42**^{km}±32^{km}**, n28, σ0**^{s}**77**/26**, mb4.6**/10**, MS3.7**/6**, 2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.69	202	eP	P	00 39 26.2	+0.2
DZM				eS	S	00 40 19.5	-0.3
DZM	Mont Dzumac	4.69	202	eP	P	00 39 26.2	+0.2
DZM				eS	S	00 40 19.5	-0.3
NOUC	Port Laguerre	4.76	203	eP	P	00 39 27.4	+0.3
NOUC				eS	S	00 40 21.6	-0.2
NOUC	Port Laguerre	4.76	203	eP	P	00 39 27.4	+0.3
NOUC				eS	S	00 40 21.6	-0.2
CTA	Charters Tower	20.99	260	eP	P	00 42 57.8	-0.2
	13nm,0.9s						
CTA	Charters Tower	20.99	260	P	P	00 42 57.8	-0.2
	5.7nm,0.8s,baz=92,slow=15,SNR=5.6						
CTAO	Charters Tower	20.99	260	eP	P	00 42 57.7	-0.3
	26nm,1.1s						
URZ	Urewera	21.89	161	LR	LR	00 50 21.9	
	comp=Z,306nm,18.9s,MS3.7,baz=298,slow=33						
RPZ	Rata Peaks	26.04	175	LR	LR	00 52 12.2	
	comp=Z,234nm,20.7s,MS3.7,baz=19,slow=32						
STKA	Stephens Creek	27.95	235	eP	P	00 44 05.9	+1.2
	4.3nm,0.8s,mb4.1						
STKA	Stephens Creek	27.95	235	P	P	00 44 05.4	+0.8
	6.1nm,0.8s,mb4.3,baz=60,slow=7.3,SNR=13						
STKA	Stephens Creek	27.95	235	eP	P	00 44 05.9	+1.2
WRAB	Tennant Creek	32.18	261	eP	P	00 44 41.2	-1.0
	5.7nm,0.6s,mb4.6						
WRA	Warramunga Arr	32.19	261	P	P	00 44 41.3	-1.0
	6.4nm,0.8s,mb4.5,baz=92,slow=9.3,SNR=28						
ASAR	Alice Springs	32.66	254	P	P	00 44 45.9	-0.6
	22nm,0.8s,mb5.2,baz=79,slow=9.0,SNR=184						
ASPA	Alice Springs	32.67	254	⇓iP	P	00 44 45.8	-0.6
FORT	Forrest	38.73	243	eP	P	00 45 38.6	+0.9
	464nm,0.7s						
FITZ	Fitzroy Crossi	40.53	263	⇓iP	P	00 45 53.4	+0.6
	42nm,0.9s,mb5.1						
MBWA	Marble Bar	45.79	257	eP	P	00 46 35.8	+0.1
	35nm,1.0s,mb5.2						
NWAO	Narrogin (SRO)	48.14	241	P	P	00 46 54.4	+0.4
	20nm,0.7s,mb5.2,baz=90,slow=7.0,SNR=11						
NWAO	Narrogin (SRO)	48.14	241	eP	P	00 46 53.9	0.0
	18nm,0.8s,mb5.1						
VNDA	Vanda	59.93	182	LR	LR	01 12 56.3	
	comp=Z,132nm,18.6s,MS4.1,baz=346,slow=35						
ASAJ	Asahikawa	65.85	340	LR	LR	01 11 45.4	
	comp=Z,120nm,20.8s,MS4.1,baz=182,slow=31						
FX1	Attu Island--F	70.41	3	LR	LR	01 15 00.3	
	comp=Z,5.2nm,19.0s,MS2.8,baz=35,slow=31						
CMAR	Chiang Mai Arr	77.06	294	P	P	00 50 08.1	+1.1
	2.4nm,1.0s,mb4.1,baz=124,slow=4.5,SNR=7.3						
SONM	Songino Array	85.46	323	P	P	00 50 51.3	+0.9
	1.1nm,0.9s,mb4.0,baz=135,slow=3.5,SNR=9.2						
ILAR	Eielson Array	89.04	18	P	P	00 51 05.7	-1.6
	0.6nm,0.8s,mb4.0,baz=238,slow=4.0,SNR=6.7						
NEW	Newport	93.18	40	LR	LR	01 22 58.7	
	comp=Z,36nm,20.7s,MS3.8,baz=236,slow=29						

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*NEIC **11** 00:57:22.3, 60.28N×152.19W, h77^{km}, After AEIC.*

*IDC **11** 00:57:23.1±7.8, 60.41N×151.98W, h97^{km}±72^{km}, mb3.2/1, mb1 3.2/4, mb1mx3.1/21, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=62.1km s-min=44.4km az=22.0*

ISC 11 00:57:19.7±0.3**, 60.28N**±0.03×**152.12W**±0.06**, h95**^{km}±4^{km}**, n64, σ0**^{s}**77**/78**, mb3.6**/1**, 1C, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDT	Redoubt	0.32	334	P	P	00 57 33.9	0.0
RDT				S	S	00 57 43.8	-0.8
RSO	Redoubt South	0.36	300	⇑iP	P	00 57 34.4	+0.4
RDN	Redoubt North	0.40	306	P	P	00 57 34.4	+0.1
RDN				S	S	00 57 44.3	-1.1
DFR	Drift River	0.42	318	P	P	00 57 34.6	+0.1
DFR				S	S	00 57 45.2	-0.4
ILIM	Iliamna	0.47	244	P	P	00 57 34.7	-0.2
ILIM				S	S	00 57 44.9	-1.3
NCT	North Crescent	0.49	305	P	P	00 57 35.0	-0.1
INE	Iliamna NE	0.52	245	P	P	00 57 35.1	-0.2
ILW	Iliamna West	0.56	247	P	P	00 57 35.7	+0.1
ILW				S	S	00 57 46.6	-0.8
NKA	Nikishka	0.63	43	P	P	00 57 38.5	+2.3
HOM	Homer	0.67	159	P	P	00 57 37.4	+0.8
BRLK	Bradley Lake	0.81	130	P	P	00 57 38.2	+0.3
BRLK				S	S	00 57 51.5	+0.1
OPT	Oil Point	0.84	222	P	P	00 57 38.7	+0.4
XLV	Seldovia	0.86	166	P	P	00 57 38.8	+0.4
XLV				S	S	00 57 52.2	-0.1
CNPM	China Poot	0.88	149	P	P	00 57 39.2	+0.6
CNPM				S	S	00 57 52.9	+0.1
SPU	Mount Spurr	0.90	2	eP	P	00 57 39.6	+0.8
CKN	Chakachatna No	0.94	358	P	P	00 57 40.1	+0.8
SLKM	Skilak Lake	0.97	76	P	P	00 57 40.4	+0.8
VOGL	Vogel Lake	1.10	49	P	P	00 57 43.5	+2.3
AUE	Augustine Isla	1.12	215	P	P	00 57 41.8	+0.3
AUW	Augustine West	1.14	217	P	P	00 57 42.1	+0.4
AUI	Augustine Isla	1.16	215	P	P	00 57 41.8	-0.2
STLK	Strandline Lak	1.23	6	P	P	00 57 43.6	+0.8
FIB	Fire Island	1.30	46	P	P	00 57 45.7	+2.0
SEW	Seward	1.35	97	P	P	00 57 44.3	+0.1
SEW				S	S	00 58 01.4	-1.0
RC01	Rabbit Creek A	1.42	54	P	P	00 57 46.2	+1.0
RC01				S	S	00 58 04.3	+0.3
MCNL	McNeil River	1.57	227	P	P	00 57 47.1	+0.1
SYI	Shuyak Island	1.69	185	P	P	00 57 49.4	+0.9
PWA	Palmer West	1.75	38	P	P	00 57 50.5	+1.2
SVW2	Sparrevohn	1.89	297	P	P	00 57 50.8	-0.3
PMR	Palmer	1.96	47	eP	P	00 57 52.4	+0.3
PMR				S	S	00 58 15.7	-0.2
KAPH	Katmai Pasha	2.04	215	P	P	00 57 53.6	+0.5
KNK	Knik Glacier	2.12	56	P	P	00 57 54.6	+0.4
GHO	Glory Hole Cre	2.16	45	P	P	00 57 55.2	+0.5
KAHC	Katmai Hardscr	2.21	223	P	P	00 57 55.5	+0.1
CUT	Chulitna	2.31	22	P	P	00 57 57.6	+0.8
KAWH	Katmai	2.35	217	P	P	00 57 57.5	+0.1
SML	Sawmill	2.39	49	P	P	00 57 58.2	+0.2
SML				S	S	00 58 25.5	-1.0
KDAK	Kodiak Island	2.52	186	P	P	00 57 59.1	-0.6
KDAK				S	S	00 58 27.9	-1.8
HIN	Hinchinbrook I	2.79	85	P	P	00 58 02.2	-1.3
SCM	Sheep Creek Mo	2.80	54	P	P	00 58 03.7	+0.1
DIV	Divide	3.23	72	P	P	00 58 08.7	-0.8
TRF	Thorofare Moun	3.29	14	P	P	00 58 10.4	0.0
KTH	Kantishna Hill	3.33	9	P	P	00 58 10.9	0.0
MCK	McKinley	3.77	22	P	P	00 58 17.4	+0.4
PAX	Paxson	4.16	47	P	P	00 58 22.6	+0.2
GLB	Gilahina Butte	4.22	70	P	P	00 58 22.2	-1.0
THY	Trims Highway	4.36	41	P	P	00 58 25.9	+1.0
HDA	Harding Lake	4.78	28	P	P	00 58 29.7	-1.1
MENT	Mentasta	4.81	53	eP	P	00 58 32.0	+0.8
CCB	Clear Creek Bu	4.81	23	P	P	00 58 30.5	-0.8
BALM	Baldy	4.87	77	P	P	00 58 31.0	-1.0
COLA	College	5.01	21	P	P	00 58 33.4	-0.5
MDM	Murphy Dome	5.02	19	P	P	00 58 33.3	-0.8
DOT	Dot Lake	5.08	45	P	P	00 58 34.5	-0.4
IL1	Eielson Array	5.11	26	P	P	00 58 35.0	-0.3
ILAR	Eielson Array	5.11	26	P	P	00 58 35.0	-0.4
	1.4nm,0.3s,baz=212,slow=13,SNR=89						
ILAR				S	S	00 59 32.0	-1.6
	0.5nm,0.3s,baz=200,slow=26,SNR=3.1						
BCA3	Beaver Creek A	5.66	56	P	P	00 58 42.2	-0.5
IM3	Indian Mountai	5.77	353	P	P	00 58 44.0	-0.3
DAWY	Dawson	7.06	52	P	P	00 59 01.5	-0.6
BM3	Burnt Mountain	7.89	22	P	P	00 59 12.4	-1.0
INK	Inuvik	11.35	37	P	P	00 59 59.8	+0.1
	0.1nm,0.3s,baz=238,slow=12,SNR=3.3						
YKA	Yellowknife Ar	17.93	67	P	P	01 01 23.6	-0.2
	baz=280,slow=11,SNR=6.0						
YKA	Yellowknife Ar	17.93	67	P	P	01 01 23.6	-0.3
SONM	Songino Array	54.98	306	P	P	01 06 43.7	+0.9
	0.3nm,0.4s,mb3.6,baz=46,slow=5.5,SNR=5.5						

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*NEIC **11** 01:02:06.9, 17.75N×101.49W, h75^{km}, MD3.8(MEX), After MEX.*

MEX 11 01:02:07.8±0.9**, 17.69N**×**101.45W, h71**^{km}±10^{km}**, MD3.8, 1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.09	188	⇓iP	P	01 02 17.3	-0.9
ZIIG				i S	S	01 02 23.7	-2.0
ZIIG	Zihuatanejo	0.09	188	i P	P	01 02 17.3	-0.9
ZIIG				i S	S	01 02 23.6	-2.1
CAIG	El Cayaco	1.30	119	eP	P	01 02 27.9	-2.8
CAIG				i S	S	01 02 44.8	-2.9
CAIG	El Cayaco	1.30	119	eP	P	01 02 27.9	-2.8
CAIG				i S	S	01 02 44.6	-3.1
ACX	Acapulco	1.68	119	eP	P	01 02 34.0	-1.8
ACX				i S	S	01 02 56.5	+0.1
ACX	Acapulco	1.68	119	eP	P	01 02 34.0	-1.8
ACX				i S	S	01 02 55.0	-1.4
PLIG	Platanillo	1.98	69	i P	P	01 02 38.1	-1.7
PLIG				i S	S	01 03 01.7	-1.8
CRX	Cerrillo	2.40	44	eP	P	01 02 42.0	-3.7
CRX	Cerrillo	2.40	44	eP	P	01 02 43.0	-2.7
PPM	Popocatepetl	3.01	63	i P	P	01 02 50.9	-3.4
PPM				i S	S	01 03 26.8	-2.6
PPM	Popocatepetl	3.01	63	i P	P	01 02 53.0	-1.3
PPM				eP		01 02 54.0	
PPM				i S	S	01 03 26.8	-2.6
SFJM	Santa Fe	3.16	332	eP	P	01 02 51.5	-4.9
SFJM	Santa Fe	3.16	332	eP	P	01 02 59.5	+3.1

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*CSEM **11** 01:03:58.0, 12.10N×44.20E, h8^{km}, ML3.5, After DHMR*

DHMR 11 01:03:58.0±1.1**, 12.10N**×**44.20E, h8**^{km}±12^{km}**, ML3.5, 1C-4D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.13	356	⇑eP	Pb	01 04 19.4	+0.1
TRBA				i S	Sb	01 04 35.2	+1.2
TRBA				AML	AML	01 04 41.8	
	comp=E,789nm,0.6s						
UDYN	Al ‘Udayn	1.87	353	⇓eP	Pn	01 04 30.7	+0.1
UDYN				i S	Sn	01 04 57.2	+2.6
UDYN				AML	AML	01 05 04.4	
	comp=N,400nm,0.5s						
LBOS		2.04	30	⇓iP	Pn	01 04 34.5	+1.5
LBOS				i S	Sn	01 05 02.4	+3.6
LBOS				AML	AML	01 05 13.7	
	comp=N,451nm,0.7s						
BDHA	Al Bayda’	2.29	35	⇓iP	Pn	01 04 38.2	+1.6
BDHA				i S	Sn	01 05 09.1	+3.8
BDHA				AML	AML	01 05 20.2	
	comp=E,565nm,0.8s						
DHBB	Dhamar BB	2.46	4	⇓iP	Pn	01 04 40.9	+1.8
DHBB				i S	Sn	01 05 15.1	+5.4

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*IDC **11** 01:08:18.1±1.0, 4.17S×132.14E, mb4.1/6, mb1 4.4/8, mb1mx4.3/15, mbtmp4.3/8, ML4.6/2, Error ellipse: s-maj=67.5km s-min=17.8km az=63.0*

*BJI **11** 01:08:22.4, 4.20S×132.50E, h53^{km}, mB5.2, mb4.4*

*NEIC **11** 01:08:24.9±0.7, 4.49S×131.82E, h50^{km}, mb4.4/6, Error ellipse: s-maj=27.2km s-min=9.7km az=71.0*

ISC 11 01:08:23.9±2.0**, 4.57S**±0.05×**131.7E**±0.1**, h60**^{km}±18^{km}**, n19, σ1**^{s}**15**/25**, mb4.1**/8**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	8.12	175	eP	P	01 10 22.5	+0.9
	34nm,0.2s						
KAKA				eS	S	01 11 53.1	+0.2
FITZ	Fitzroy Crossi	14.70	203	eP	P	01 11 51.4	+1.3
	28nm,0.5s						
FITZ				eS	S	01 14 30.2	-1.7
WRAB	Tennant Creek	15.49	171	ePn	P	01 11 58.9	-1.3
	44nm,0.9s						
WRAB				eSn	S	01 14 42.7	-7.5
WRA	Warramunga Arr	15.49	171	Pn	P	01 11 58.3	-2.0
	3.6nm,0.3s,baz=354,slow=13,SNR=64						
WRA				Sn	S	01 14 44.8	-5.5
	4.2nm,0.3s,baz=353,slow=23,SNR=6.1						
ASAR	Alice Springs	19.11	174	P	P	01 12 45.7	+1.0
	2.7nm,0.3s,baz=353,slow=9.8,SNR=80						
ASAR				S	S	01 16 12.4	+0.4
	0.6nm,0.3s,baz=357,slow=27,SNR=4.6						
ASPA	Alice Springs	19.11	174	eP	P	01 12 44.7	0.0
ASPA				eS	S	01 16 12.1	+0.1
CTA	Charters Tower	20.95	139	eP	P	01 13 04.2	0.0
	12nm,0.8s						
CTA	Charters Tower	20.95	139	P	P	01 13 03.1	-1.0
	13nm,0.8s,baz=330,slow=12,SNR=9.7						
CTAO	Charters Tower	20.95	139	eP	P	01 13 03.7	-0.4
	77nm,1.4s						
FORT	Forrest	26.30	187	eP	P	01 14 00.6	+4.7
	281nm,0.5s						
STKA	Stephens Creek	28.71	162	eP	P	01 14 19.8	+2.0
	1.7nm,0.3s,mb4.2						
STKA	Stephens Creek	28.71	162	P	P	01 14 19.8	+2.0
	3.8nm,0.7s,mb4.2,baz=357,slow=8.1,SNR=11						
CMAR	Chiang Mai Arr	39.57	306	P	P	01 15 53.4	+2.2
	1.1nm,0.6s,mb3.8,baz=132,slow=7.2,SNR=8.1						
HHC	Hu-ho-hao-te	48.82	340	⇑P	P	01 17 04.8	-0.5
HHC				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.4						
SONM	Songino Array	56.72	340	P	P	01 18 02.2	-1.8
	comp=Z,1.1nm,1.1s,mb3.8,baz=169,slow=7.3,SNR=4.8						
ZAL	Zalesovo	70.19	333	P	P	01 19 31.1	-1.2
	comp=Z,2.2nm,1.1s,mb4.0,baz=358,slow=7.4,SNR=9.1						
KURK	Kurchatov	71.36	328	eP	P	01 19 40.0	+0.5
	comp=Z,5.6nm,0.8s,mb4.5						
KURK				e	pP	01 19 52.4	-3.5
BVAR	Borovoye Array	76.94	327	P	P	01 20 11.9	+0.2
	comp=Z,3.8nm,1.1s,mb4.2,baz=104,slow=6.1,SNR=7.2						
CHKZ	Chkalovo	77.11	328	eP	P	01 20 12.8	+0.2
	comp=Z,3.0nm,1.3s,mb4.1						

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*BJI **11** 01:34:36.1, 29.74N×138.53E, h445^{km}, mB5.1, mb4.4*

*JMA **11** 01:34:36.5±0.1, 29.97N×139.10E, h483^{km}, M4.2*

*IDC **11** 01:34:37.1±1.1, 29.95N×138.60E, h436^{km}±13^{km}, mb3.4/16, mb1 3.5/17, mb1mx3.4/25, mbtmp4.2/17, Error ellipse: s-maj=17.2km s-min=10.1km az=82.0*

*NEIC **11** 01:34:38.0±0.6, 29.96N×138.56E, h446^{km}±7^{km}, mb4.0/8, Error ellipse: s-maj=10.7km s-min=5.7km az=82.0*

ISC 11 01:34:36.8±0.4**, 29.91N**±0.04×**138.68E**±0.10**, h452**^{km}±6^{km}**, n41, σ0**^{s}**86**/48**, mb3.7**/22**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	Tokai 1	3.95	347	P	P	01 35 55.0	+2.7
CBIJ	Chichi jima	4.17	132	P	P	01 35 54.0	-0.2
	22nm,0.3s,baz=308,slow=20,SNR=13						
CBIJ				S	S	01 36 55.5	+0.1
	33nm,0.3s,baz=290,slow=22,SNR=11						
CBIJ	Chichi jima	4.17	132	P	P	01 35 54.0	-0.2
CBIJ				eS	S	01 36 55.1	-0.2
JHHJ	Haha-jima-NKT	4.49	136	eS	S	01 36 59.9	-0.8
JIE	Ise	4.77	340	P	P	01 36 02.2	+2.4
BSO1	Boso 1	5.11	22	P	P	01 36 02.8	-0.3
BSO1				eS	S	01 37 10.0	-1.2
JRY	Ryogami san	6.09	2	P	P	01 36 12.9	-0.1
JRY				eS	S	01 37 29.4	+0.4
MAJO	Matsushiro	6.62	357	ePn	P	01 36 17.8	-0.8
	16nm,0.8s						
MAT	Matsushiro	6.62	357	eP	P	01 36 18.0	-0.6
	16nm,1.0s						
MAT				eS	S	01 37 33.0	-6.1
MAT	Matsushiro	6.62	357	P	P	01 36 18.1	-0.5
MAT				S	S	01 37 38.3	-0.8
JHS	Saijyo	6.92	319	P	P	01 36 23.9	+2.2
JMK	Ichinoseki	9.26	12	P	P	01 36 47.4	0.0
JMK				eS	S	01 38 31.6	+0.7
BJT	Baijiatuau	20.98	305	eP	P	01 38 47.3	-0.3
	3.4nm,0.4s						
BJI	Beijing	20.98	305	P	P	01 38 47.3	-0.4
BJI				AMB	AMB		
	comp=Z,7.0nm,1.1s						
XAN	Xi’an	25.54	287	P	P	01 39 28.7	-0.6
XAN				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.2						
ULN	Ulaanbaatar	30.16	315	eP	P	01 40 09.3	-0.4
	comp=Z,1.5nm,0.5s,mb3.7						
SONM	Songino Array	30.55	315	P	P	01 40 13.0	-0.1
	comp=Z,1.0nm,0.6s,mb3.4,baz=125,slow=8.4,SNR=12						
SONM				ScP		01 45 56.8	
	comp=Z,0.4nm,0.6s,baz=132,slow=2.4,SNR=4.8						
ZAL	Zalesovo	45.35	318	P	P	01 42 12.8	-1.5
	comp=Z,1.1nm,0.3s,mb3.7,baz=15,slow=6.4,SNR=6.4						
KURK	Kurchatov	48.82	313	eP	P	01 42 39.8	-1.0
	comp=Z,2.2nm,0.3s,mb4.0						
FITZ	Fitzroy Crossi	49.36	196	eP	P	01 42 46.2	+0.8
	comp=Z,4.7nm,0.8s,mb3.9						
WRAB	Tennant Creek	49.73	185	eP	P	01 42 48.1	-0.1
	comp=Z,5.5nm,0.6s,mb4.1						
WRA	Warramunga Arr	49.74	185	P	P	01 42 48.4	+0.2
	comp=Z,3.8nm,0.5s,mb4.0,baz=1.3,slow=7.8,SNR=56						
ASAR	Alice Springs	53.47	185	P	P	01 43 15.5	+0.1
	comp=Z,2.2nm,0.5s,mb3.7,baz=16,slow=10,SNR=40						
ASPA	Alice Springs	53.47	185	eP	P	01 43 15.6	+0.2
CHKZ	Chkalovo	53.72	317	eP	P	01 43 15.8	-1.0
	comp=Z,2.2nm,0.5s,mb3.7						
BVAR	Borovoye Array	53.89	316	P	P	01 43 17.3	-0.7
	comp=Z,6.2nm,0.5s,mb4.2,baz=95,slow=7.0,SNR=42						
ILAR	Eielson Array	56.76	30	P	P	01 43 37.5	-0.5
	comp=Z,0.6nm,0.8s,mb3.0,baz=269,slow=5.1,SNR=9.9						
FORT	Forrest	61.20	190	eP	P	01 44 08.6	+0.4
	comp=Z,206nm,0.4s						
STKA	Stephens Creek	61.51	177	P	P	01 44 10.1	-0.1
	comp=Z,2.1nm,0.5s,mb3.9,baz=330,slow=5.4,SNR=4.1						
INK	Inuvik	61.77	25	P	P	01 44 10.9	-0.6
	comp=Z,0.8nm,0.8s,mb3.2,baz=231,slow=12,SNR=4.4						
INK	Inuvik	61.77	25	eP	P	01 44 11.3	-0.1
NWAO	Narrogin (SRO)	65.72	200	P	P	01 44 36.9	-0.3
	comp=Z,31nm,1.3s,mb4.8,baz=356,slow=5.1,SNR=3.7						
ARCES	ARCESS Array B	69.86	340	P	P	01 45 02.3	+0.5
	comp=Z,2.4nm,0.5s,mb4.0,baz=68,slow=8.3,SNR=14						
YKA	Yellowknife Ar	71.12	28	P	P	01 45 10.2	+0.8
	comp=Z,0.3nm,0.6s,mb3.0,baz=296,slow=5.9,SNR=7.0						
YKA	Yellowknife Ar	71.12	28	P	P	01 45 10.2	+0.8
FINES	FINESS Array B	74.05	333	P	P	01 45 26.1	-0.1
	comp=Z,1.5nm,0.4s,mb3.9,baz=67,slow=5.3,SNR=24						
NB2	NORSAR Subarra	79.84	337	P	P	01 45 57.1	-0.6
	comp=Z,0.8nm,0.4s,mb3.6,baz=47,slow=5.0						
NOA	NORSAR Array B	79.84	337	P	P	01 45 57.6	0.0
	comp=Z,1.2nm,0.5s,mb3.7,baz=46,slow=5.1,SNR=4.0						
NVAR	Mina Array Bea	81.17	51	P	P	01 46 07.3	+2.2
	comp=Z,0.2nm,0.4s,mb3.0,baz=330,slow=7.3,SNR=2.6						
BRTR	Keskin Array B	81.83	311	P	P	01 46 09.4	+1.0
	comp=Z,1.0nm,0.7s,mb3.4,baz=94,slow=5.1,SNR=4.0						
MLR	Muntele Rosu	83.30	319	P	P	01 46 16.1	+0.4
	comp=Z,0.6nm,0.5s,mb3.4,baz=338,slow=4.3,SNR=3.7						

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*CSEM **11** 01:34:50.2±0.3, 37.61N×25.22W, ML3.3, Error ellipse: s-maj=6.6km s-min=2.8km az=161.0, After PDA*

*PDA **11** 01:34:50.2±1.3, 37.61N×25.22W, MD3.1, ML3.3, Error ellipse: s-maj=4.9km s-min=2.2km az=73.0*

SVSA 11 01:34:50.2±1.3**, 37.61N**×**25.22W, MD3.1, ML3.3, Error ellipse: s-maj=4.9km s-min=2.2km az=73.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BART	Pico Bartolome	0.17	13	i P	Pg	01 34 53.3	-0.2
BART				i S	Sg	01 34 56.3	+0.5
	10µm,0.4s						
FRA1	Furnas	0.17	319	i P	Pg	01 34 54.2	+0.6
MIRA	Miradouro	0.18	344	i P	Pg	01 34 54.3	+0.5
MIRA				eS	Sg	01 34 56.5	+0.4
PCNG	Congro	0.21	317	i P	Pg	01 34 54.7	+0.3
PCNG				i S	Sg	01 34 57.7	+0.5
	3µm,0.3s						
VIF	Vila Franca	0.22	306	i P	Pg	01 34 54.4	-0.2
VIF				i S	Sg	01 34 58.0	+0.5
	2µm,0.2s						
PRCH	Ribeira Ch	0.24	299	i P	Pg	01 34 54.7	-0.3
PRCH				i S	Sg	01 34 58.5	+0.4
	8µm,0.3s						
PFAD	Fenais da Ajud	0.24	339	i P	Pg	01 34 55.3	+0.3
PFAD				eS	Sg	01 34 58.4	+0.2
MESC	Monte Escuro	0.26	315	i P	Pg	01 34 54.9	-0.4
MESC				i S	Sg	01 34 59.2	+0.5
LFA	Lagoa do Fogo	0.27	307	i P	Pg	01 34 55.2	-0.3
PMAT	Coroa da Mata	0.29	315	i P	Pg	01 34 55.3	-0.6
PMAT				i S	Sg	01 34 59.8	+0.1
	2µm,0.1s						
PVER	Pico Vermelho	0.30	308	i P	Pg	01 34 55.6	-0.6
CML	Cha da Macela	0.30	301	i P	Pg	01 34 55.8	-0.5
PDA	Ponta Delgada	0.38	291	i P	Pg	01 34 57.4	-0.4
PDA				eS	Sg	01 35 03.0	+0.2
FAC	Faja de Cima	0.38	295	i P	Pg	01 34 57.3	-0.5
PSET	Sete Cidades	0.45	298	i P	Pg	01 34 58.3	-0.9
PSET				i S	Sg	01 35 05.1	-0.1
	4µm,0.4s						
PSAN	Santo Antonio	0.47	301	i P	Pg	01 34 58.6	-1.0
PFET	Feteiras	0.50	294	i P	Pg	01 34 59.0	-1.1
SET2	Ginetes	0.52	296	i P	Pg	01 34 59.4	-1.2
SET4	Mosteiros	0.53	300	i P	Pg	01 34 59.5	-1.3
PSMN	Pico do Norte,	0.62	169	i P	Pg	01 35 01.6	-1.0
PSMN				i S	Sg	01 35 09.7	-1.2
PFAV	Pico das Favas	1.84	307	eP	Pn	01 35 18.3	-4.9
PFAV				i S	Sn	01 35 39.9	-7.6
	71nm,0.3s						
PSCM	Serra do Cume	1.85	306	eP	Pn	01 35 18.4	-5.1
PSCM				eS	Sn	01 35 39.5	-8.4
	145nm,0.4s						
RIB2	Ribeirinha	1.87	305	eP	Pn	01 35 19.1	-4.6
RIB2				eS	Sn	01 35 40.7	-7.7
	48nm,0.3s						
ADH	Angra Heroismo	1.90	304	eP	Pn	01 35 19.4	-4.8
ADH				eS	Sn	01 35 41.1	-8.1
PVNV	Vila Nova	1.91	307	eP	Pn	01 35 20.1	-4.2
PVNV				eS	Sn	01 35 41.6	-7.8
	76nm,0.3s						
PPAD	Pico dos Padre	1.96	304	eP	Pn	01 35 21.6	-3.4
PPAD				eS	Sn	01 35 43.5	-7.2
	35nm,0.4s						
PBIS	Biscoitos	1.97	306	eS	Sn	01 35 44.1	-6.9
	22nm,0.3s						
ASBA	Santa Barbara	2.00	304	eP	Pn	01 35 21.9	-3.6
ASBA				eS	Sn	01 35 45.3	-6.3
	31nm,0.2s						
PSBA	Serra de Santa	2.02	305	i P	Pn	01 35 22.0	-3.9
PSBA				eS	Sn	01 35 45.0	-7.2
	81nm,0.5s						
PIED	Piedade	2.38	291	eP	Pn	01 35 27.6	-3.5
PMAN	Manadas	2.48	295	i P	Pn	01 35 27.9	-4.6
ROSA	Rosais	2.63	296	eP	Pn	01 35 30.0	-4.6
PICO	Pico	2.68	290	eP	Pn	01 35 30.5	-4.9
PICO				eS	Sn	01 36 00.4	-8.7
HOR	Horta	2.84	290	eP	Pn	01 35 32.3	-5.4
HOR				eS	Sn	01 36 03.7	-9.4
CALA	Caldeira	2.92	290	eP	Pn	01 35 33.9	-4.8
CALA				eS	Sn	01 36 06.1	-8.8
PCED	Cedros	2.93	291	i P	Pn	01 35 33.6	-5.3

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*CSEM **11** 02:09:40.4±0.1, 59.84N×6.02E, h10^{km}, ML2.1, Error ellipse: s-maj=2.3km s-min=2.2km az=23.0*

*NAO **11** 02:09:44.0±5.9, 59.86N×6.49E, h9^{km}±27^{km}, ML2.7*

BER 11 02:09:42.6±3.4**, 59.87N**×**6.16E, h12**^{km}**, MD2.1, ML2.1, ML2.7**(NAO)**, 2C-3D, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ODD1	Odda	0.24	80	⇓iP	Pg	02 09 46.5	-1.4
ODD1				eS	Sg	02 09 49.6	-1.8
ODD1				eSg	Sg	02 09 50.4	-1.0
ODD1				AML	AML	02 09 50.6	
	comp=Z,357nm,0.3s						
ODD1	Odda	0.24	80	⇓iP	Pg	02 09 46.5	-1.4
	SNR=115						
ODD1				eSg	Sg	02 09 50.4	-1.0
	comp=Z,357nm,0.3s,SNR=115						
BLS5	Blasjo	0.48	161	eP	Pg	02 09 51.8	-0.5
BLS5				eSg	Sg	02 09 58.1	-0.7
EGD	Espegrend	0.61	311	eP	Pb	02 09 52.8	-2.0
EGD				eS	Sb	02 10 00.7	-2.4
EGD				AML	AML	02 10 02.3	
	comp=Z,79nm,0.1s						
BER	Bergen	0.66	322	eP	Pb	02 09 54.1	-1.4
BER				eS	Sb	02 10 01.9	-2.5
ASK	Askoy	0.78	322	eP	Pb	02 09 55.9	-1.7
ASK				eS	Sb	02 10 06.0	-1.8
KMY	Karmoy	0.81	215	⇑iP	Pb	02 09 56.0	-2.1
KMY				ePg	Pg	02 09 57.4	-1.4
KMY				eS	Sb	02 10 05.9	-2.8
KMY				eSg	Sg	02 10 08.9	-0.8
STAV	Stavanger	0.97	194	⇑iP	Pb	02 09 59.0	-1.9
STAV				eS	Sb	02 10 10.8	-2.6
STAV				eSg	Sg	02 10 13.8	-1.2
HYA	Hoyanger	1.30	1	⇓iP	Pb	02 10 05.9	-0.6
HYA				eSg	Sg	02 10 23.4	-2.6
HYA				AML	AML	02 10 25.3	
	comp=Z,46nm,0.0s						
SUE	Sulen	1.38	330	eP	Pn	02 10 06.9	-0.9
SUE				eS	Sb	02 10 23.1	-2.0
SUE				AML	AML	02 10 25.5	
	comp=Z,44nm,0.2s						
SUE	Sulen	1.38	330	eP	Pn	02 10 06.9	-0.8
	SNR=50						
SUE				eS	Sb	02 10 23.1	-2.1
	comp=Z,44nm,0.2s,SNR=50						
SNART	Snartemo	1.63	160	eP	Pn	02 10 10.9	-0.5
SNART				eS	Sn	02 10 30.3	-2.1
FOO	Floro	1.82	343	eP	Pn	02 10 13.8	-0.2
FOO				eS	Sn	02 10 35.8	-1.3
FOO				eSg	Sg	02 10 37.2	-5.9
DOMB	Dombas	2.60	32	ePg	Pg	02 10 28.5	-6.0
DOMB				e		02 11 02.3	
NB2	NORSAR Subarra	2.77	63	Pn	Pn	02 10 26.3	-1.3
NB2				Pg	Pg	02 10 30.6	-7.3
NB2				Lg		02 11 06.7	
NC6	NORSAR Subarra	2.78	69	Pn	Pn	02 10 26.8	-1.1
NC6				Pg	Pg	02 10 30.9	-7.2
NC6				Lg		02 11 06.6	
NC6	NORSAR Subarra	2.78	69	Pg	Pg	02 10 31.0	-7.2
	SNR=92						
MOL	Molde	2.79	13	eP	Pn	02 10 25.8	-2.1
MOL				eS	Sn	02 10 59.5	-2.3
HFS	Hagfors	3.79	83	Pn	Pn	02 10 40.1	-2.1
	baz=265,slow=14						
HFS				Pg	Pg	02 10 49.5	-8.9
	baz=260,slow=16						
HFS				Sn	Sn	02 11 22.7	-4.6
	baz=267,slow=18						
HFS				Lg		02 11 37.7	
	baz=273,slow=37						
HFS	Hagfors	3.79	83	Pg	Pg	02 10 49.5	-8.9
	SNR=92						
HFS				Sn	Sn	02 11 22.7	-4.6
	SNR=50						
FIA0	FINESS Array S	9.90	72	Lg		02 14 49.6	
	baz=269,slow=22						
FIA0	FINESS Array S	9.90	72	Lg		02 14 49.6	
	baz=269,slow=22						

IDC 11 02:57:02.8±5.0**, 8.44S**×**119.50E, mb3.8**/2**, mb1 4.0**/3**, mb1mx3.8**/15**, mbtmp3.8**/3**, ML3.7**/1**, Error ellipse: s-maj=269.0km s-min=26.5km az=59.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.36	130	P	P	03 01 19.7	-1.0
	0.3nm,0.3s,baz=302,slow=12,SNR=16						
WB2	Warramunga Arr	18.37	130	eP	P	03 01 20.3	-0.5
ASPA	Alice Springs	20.48	139	eP	P	03 01 43.2	-1.8
ASAR	Alice Springs	20.48	139	P	P	03 01 42.0	-3.1
	3.8nm,0.8s,baz=327,slow=12,SNR=30						
SONM	Songino Array	57.22	350	P	P	03 06 51.8	-2.4
	1.7nm,1.0s,baz=167,slow=8.8,SNR=12						

IDC 11 03:12:23.9±11.0**, 1.64N**×**125.41E, h230**^{km}±120^{km}**, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.2**/14**, mbtmp3.7**/4**, Error ellipse: s-maj=180.6km s-min=21.8km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.16	158	P	P	03 17 09.7	-1.8
	1.0nm,0.4s,baz=335,slow=11,SNR=37						
WB2	Warramunga Arr	23.17	158	eP	P	03 17 10.0	-1.5
ASAR	Alice Springs	26.47	162	P	P	03 17 41.5	-0.5
	0.4nm,0.5s,baz=344,slow=7.3,SNR=5.6						
STKA	Stephens Creek	36.69	157	eP	P	03 19 09.0	-1.7
	1.4nm,0.3s						
STKA	Stephens Creek	36.69	157	P	P	03 19 08.7	-2.0
	1.7nm,0.4s,baz=347,slow=8.6,SNR=14						
SONM	Songino Array	48.88	343	P	P	03 20 46.5	-1.7
	0.7nm,1.0s,baz=153,slow=7.7,SNR=4.3						
LPAZ	La Paz	160.25	138	PKPab	PKPab	03 32 38.8	-1.6
	2.1nm,0.4s,baz=250,slow=5.7,SNR=8.1						

*THE **11** 03:42:56.2, 40.22N×19.50E, h10^{km}, ML3.2*

*TIR **11** 03:42:57.2, 40.17N×19.69E, h16^{km}*

*CSEM **11** 03:42:57.7±0.1, 40.14N×19.59E, h8^{km}, MD3.3, Error ellipse: s-maj=2.5km s-min=1.6km az=40.0*

*ATH **11** 03:42:58.0, 40.03N×19.48E, h33^{km}±4^{km}, MD3.3/6*

*NEIC **11** 03:42:58.0, 40.03N×19.48E, h33^{km}, MD3.3(ATH), After ATH.*

ISC 11 03:42:56.6±0.6**, 40.14N**±0.03×**19.55E**±0.03**, h5**^{km}±4^{km}**, n45, σ1**^{s}**00**/62**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.33	353	ePg	Pg	03 43 04.3	+1.1
VLO				i Sg	Sg	03 43 12.3	+4.6
TPE	Tepelena	0.39	67	i Pg	Pg	03 43 03.4	-1.0
TPE				i Sg	Sg	03 43 09.1	-0.5
TPE	Tepelena	0.39	67	ePg	Pg	03 43 03.4	-1.0
TPE				i Sg	Sg	03 43 09.1	-0.5
SRN	Sarande	0.44	127	i Pg	Pg	03 43 05.4	0.0
SRN				i Sg	Sg	03 43 12.5	+1.3
KEK	Kerkira	0.47	156	ePB	Pb	03 43 07.0	0.0
KEK				eSB	Sb	03 43 14.5	+0.6
LSK	Leskovik	0.81	89	i Pg	Pg	03 43 11.5	-1.3
LSK				i Sg	Sg	03 43 27.6	+4.1
LSK	Leskovik	0.81	89	ePg	Pg	03 43 11.5	-1.3
IGT	Igoumenitsa	0.86	135	ePg	Pg	03 43 13.2	-0.6
IGT				eSg	Sg	03 43 27.2	+2.0
JAN	Janina	1.11	115	ePN	Pn	03 43 18.6	-0.2
JAN				eSN	Sn	03 43 33.7	-1.0
LCI	Lecce	1.11	280	ePn	Pn	03 43 19.1	+0.3
TIR	Tirane	1.23	11	ePn	Pn	03 43 21.3	+0.9
TIR				i Sn	Sn	03 43 30.5	-7.1
OHR	Ohrid	1.36	44	ePn	Sn	03 43 41.5	+0.6
QSH	Qafa e Shtames	1.41	11	i Pn	Pn	03 43 24.0	+1.0
QSH				i Sn	Sn	03 43 43.0	+0.9
QSH	Qafa e Shtames	1.41	11	ePn	Pn	03 43 24.0	+1.0
QSH				i Sn	Sn	03 43 43.0	+0.9
FNA	Florina	1.54	65	ePb	Pb	03 43 24.8	-0.4
FNA				eSb	Sb	03 43 46.6	+1.7
KZN	Kozani	1.71	84	ePN	Pn	03 43 28.3	+1.0
PUK	Puka	1.92	8	i Pn	Pn	03 43 29.9	-0.4
PUK	Puka	1.92	8	ePn	Pn	03 43 29.9	-0.4
VLS	Valsamata	2.12	157	ePN	Pn	03 43 32.3	-0.9
LTRZ	Laterza	2.13	283	ePn	Pn	03 43 38.0	+4.6
EVR	Evrytania	2.13	124	ePB	Pb	03 43 34.5	-1.0
LIT	Litokhoron	2.26	90	ePn	Pn	03 43 35.0	-0.1
SG1	Sgolgore (BA)	2.29	289	ePn	Pn	03 43 35.3	-0.4
SKO	Skopje	2.32	37	ePn	Pn	03 43 38.0	+1.9
GRG	Griva	2.32	69	ePn	Pn	03 43 35.2	-0.8
GRG				eSn	Sn	03 44 05.6	+0.2
GRG	Griva	2.32	69	ePn	Pn	03 43 35.2	-0.9
ORI	Oriolo Calabro	2.38	269	ePn	Pn	03 43 43.2	+6.4
AGG	Agios Georgios	2.42	117	ePn	Pn	03 43 38.1	+0.6
AGG				eSn	Sn	03 44 10.9	+2.9
CDT	Castel del Mon	2.66	292	ePn	Pn	03 43 41.0	+0.1
KNT	Kendrikon	2.75	67	ePn	Pn	03 43 41.0	-1.1
KNT				eSn	Sn	03 44 15.1	-1.0
XOR	Xorichti	2.92	104	ePn	Pn	03 43 44.6	+0.1
SOH	Sokhos	2.98	76	ePn	Pn	03 43 44.5	-1.0
PLG	Polygyros	2.99	84	ePN	Pn	03 43 46.0	+0.3
STON	Ston	3.06	334	i Pn	Pn	03 43 43.8	-2.8
STON				i Sn	Sn	03 44 18.2	-5.9
STON	Ston	3.06	334	i Pn	Pn	03 43 43.7	-2.9
STON				i Sn	Sn	03 44 18.2	-5.9
MGR	Morigerati	3.06	271	ePn	Pn	03 43 46.6	0.0
MGR	Morigerati	3.06	271	ePn	Pn	03 43 46.6	0.0
MRLC	Muro Lucano	3.16	283	ePn	Pn	03 43 48.9	+0.9
MRLC	Muro Lucano	3.16	283	ePn	Pn	03 43 48.9	+0.9
PAIG	Paliouri	3.18	93	ePn	Pn	03 43 46.8	-1.5
SGO	Sicignano	3.27	279	ePn	Pn	03 43 50.5	+0.9
SGO	Sicignano	3.27	279	ePn	Pn	03 43 50.5	+1.0
OUR	Ouranopolis	3.40	85	ePn	Pn	03 43 50.6	-0.9
AOS	Alonnisos	3.48	105	ePn	Pn	03 43 51.9	-0.7
NRCA	Norcia	5.53	301	ePn	Pn	03 44 20.3	-1.3

*SOF **11** 03:55:10.8, 40.28N×25.61E, h2^{km}, MD2.6*

*CSEM **11** 03:55:13.8±0.2, 40.32N×25.58E, h8^{km}, MD3.3, Error ellipse: s-maj=4.5km s-min=3.1km az=48.0*

*ATH **11** 03:55:14.1, 40.31N×25.50E, h28^{km}, MD3.1/3*

*NEIC **11** 03:55:14.1, 40.31N×25.50E, h28^{km}, MD3.1(ATH), After ATH.*

*ISK **11** 03:55:16.0, 40.14N×25.56E, h32^{km}, MD3.3*

ISC 11 03:55:13.7±0.4**, 40.33N**±0.03×**25.52E**±0.05**, h8**^{km}**, n23, σ0**^{s}**84**/31**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.50	211	ePB	Pb	03 55 24.3	+0.1
LIA				eSB	Sb	03 55 31.9	+0.5
EZN	Ezine	0.80	129	i PG	Pg	03 55 29.3	-0.4
EZN				i SG	Sg	03 55 39.0	-1.4
RDO	Rodhopi	0.82	1	ePN	Pn	03 55 30.4	-0.8
PRK	Paraskevi	1.23	151	ePN	Pn	03 55 37.0	-0.1
KDZ	Kurdzhali	1.32	357	i P	Pb	03 55 38.0	-0.3
KDZ				i S	Sb	03 55 56.0	+0.7
AYVA	Ayvalik	1.36	138	P	Pb	03 55 39.6	+0.6
AYVA				S	Sb	03 55 56.9	+0.5
MFT	Murefte	1.42	71	PN	Pn	03 55 40.7	+0.8
RZN	Rozhen	1.49	336	i P	Pn	03 55 41.0	+0.2
RZN				i Sg	Sg	03 56 04.0	+0.8
NVR	Nevrokopi	1.62	310	ePN	Pn	03 55 42.8	+0.1
EDRB	Edirne	1.78	31	ePN	Pn	03 55 46.9	+1.9
EDC	Edincik	1.79	89	PN	Pn	03 55 45.3	+0.1
BNT	Bandirma	1.84	88	PN	Pn	03 55 45.8	0.0
MMB	Musomiste	1.85	314	i P	Pn	03 55 46.0	0.0
PLD	Plovdiv	1.88	341	i Sg	Sg	03 56 16.0	-0.2
BALB	Balikesir	1.94	110	ePN	Pn	03 55 46.9	-0.4
BTOK	Tokmak	2.01	106	P	Pn	03 55 48.2	-0.2
BTOK				S	Sn	03 56 17.0	+3.1
KCT	Karacabey	2.17	91	ePN	Pn	03 55 50.5	-0.2
KKB	Krupnik	2.40	311	i P	Pn	03 55 59.0	+5.2
PGB	Panagyurishte	2.44	336	i Sg	Sg	03 56 33.0	-1.9
DST	Dursunbey	2.50	106	ePN	Pn	03 55 54.6	-0.7
ULDT	Uludag	2.78	93	P	Pn	03 56 04.5	+5.3
ULDT				S	Sn	03 56 41.3	+7.9
MANT	Manisa	2.99	127	P	Pn	03 56 09.6	+7.3
MANT				S	Sn	03 56 47.8	+9.1
ESKT	Eskisehir	4.18	99	P	Pn	03 56 18.2	-1.0

IDC 11 04:20:45.9±6.4**, 4.08N**×**92.39E, mb3.2**/2**, mb1 3.7**/3**, mb1mx3.4**/17**, mbtmp3.4**/3**, ML4.4**/1**, Error ellipse: s-maj=184.7km s-min=38.3km az=72.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.66	24	Pn	P	04 24 28.4	-1.4
	0.5nm,0.3s,baz=207,slow=12,SNR=5.8						
SONM	Songino Array	45.23	13	P	P	04 29 04.8	-1.9
	0.3nm,0.9s,baz=180,slow=5.8,SNR=2.2						
WRA	Warramunga Arr	47.62	122	P	P	04 29 24.1	-1.9
	0.4nm,0.8s,baz=297,slow=9.1,SNR=2.8						

*IDC **11** 04:26:19.0±0.8, 7.31N×93.95E, mb4.0/10, mb1 4.2/11, mb1mx4.0/20, mbtmp4.0/11, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.9/26, Error ellipse: s-maj=45.4km s-min=17.4km az=52.0*

*NEIC **11** 04:26:22.9±3.6, 7.33N×94.04E, h24^{km}±25^{km}, mb4.6/8, Error ellipse: s-maj=14.8km s-min=7.9km az=47.0*

*BJI **11** 04:26:24.8, 7.30N×94.00E, h24^{km}, mB4.4, mb4.2, Ms4.2, Msz3.9*

ISC 11 04:26:22.5±2.6**, 7.30N**±0.09×**94.04E**±0.09**, h35**^{km}±23^{km}**, n35, σ1**^{s}**02**/34**, mb4.4**/21**, MS3.8**/3**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.07	23	Pn	P	04 29 13.6	-1.6
	0.5nm,0.3s,baz=212,slow=15,SNR=7.6						
VIS	Vishakhapatnam	14.71	316	eP	P	04 29 51.9	+1.8
VIS				e		04 29 52.9	
	comp=Z,18nm,0.4s						
VIS				eS	rx	04 33 32.0	
HYB	Hyderabad	18.15	305	eP	P	04 30 34.0	+0.2
HYB	Hyderabad	18.15	305	i P	P	04 30 34.0	+0.2
HYB				eS	S	04 33 48.0	-4.0
KMI	Kunming	19.58	24	P	P	04 30 52.6	+2.1
KMI				AMB	AMB		
	comp=Z,9.0nm,1.2s						
KMI				LR	LR		
	comp=N,280nm,10.1s						
KMI				LR	LR		
	comp=E,212nm,14.5s						
KMI				LR	LR		
	comp=Z,223nm,12.5s						
JIRN	Jiri	21.57	341	eP	P	04 31 09.3	-1.9
	comp=Z,26nm,0.8s,mb4.7						
PKI	Pulchoki	21.76	339	eP	P	04 31 12.8	-0.2
DMN	Daman	21.90	338	eP	P	04 31 14.2	-0.3
	comp=Z,11nm,0.6s,mb4.5						
KKN	Kakani	22.01	339	eP	P	04 31 14.5	-1.0
GKN	Gorkha	22.43	338	eP	P	04 31 19.4	-0.3
LSA	Lhasa	22.45	353	eP	P	04 31 22.4	+2.5
LSA	Lhasa	22.45	353	eP	P	04 31 22.3	+2.4
	comp=Z,15nm,0.7s,mb4.5						
POO	Poona	22.60	302	eP	P	04 31 21.0	-0.5
POO				eS	rx	04 36 11.0	
KOLN	Koldanda	22.64	335	eP	P	04 31 22.2	+0.4
	comp=Z,16nm,0.6s,mb4.6						
GTA	Gaotai	32.39	8	eP	P	04 32 56.2	+4.9
GTA				AP	pP	04 33 01.3	0.0
GTA				XP	sP	04 33 03.6	-2.2
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.3						
HHC	Hu-ho-hao-te	36.88	22	eP	P	04 33 38.1	+8.4
HHC				AP	pP	04 33 47.3	+7.5
HHC				PP	PP	04 35 04.0	+8.0
HHC				PCP	PcP	04 35 58.0	+6.7
HHC				SCP		04 39 41.0	
HHC				SCS	ScS	04 43 47.9	+8.0
HHC				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.2						
HHC				AMB	AMB		
	comp=Z,86nm,12.0s						
HHC				LR	LR		
	comp=N,216nm,13.2s,MS4.3						
HHC				LR	LR		
	comp=E,278nm,14.4s,MS4.3						
HHC				LR	LR		
	comp=Z,202nm,15.6s,MS4.0						
AAK	Ala-Archa	39.19	337	eP	P	04 33 50.8	+1.8
	comp=Z,11nm,1.5s,mb4.4						
SONM	Songino Array	41.74	13	P	P	04 34 09.4	-0.6
	comp=Z,0.4nm,0.8s,baz=198,slow=9.1,SNR=2.9						
SONM				pPcP		04 36 11.7	
	comp=Z,0.6nm,0.6s,baz=195,slow=3.5,SNR=4.7						
KURK	Kurchatov	45.14	346	eP	P	04 34 37.6	+0.1
	comp=Z,12nm,0.9s,mb4.7						
WRA	Warramunga Arr	48.01	125	P	P	04 35 00.2	-0.4
	comp=Z,1.4nm,0.5s,mb4.2,baz=305,slow=8.6,SNR=17						
WRA				PcP	PcP	04 36 29.0	+0.5
	comp=Z,0.7nm,0.6s,baz=309,slow=3.2,SNR=6.6						
WRA				pPcP		04 36 32.3	
	comp=Z,0.9nm,0.7s,baz=309,slow=3.1,SNR=6.0						
WRAB	Tennant Creek	48.01	125	eP	P	04 35 00.3	-0.3
	comp=Z,3.6nm,0.6s,mb4.6						
BVAR	Borovoye Array	49.50	341	P	P	04 35 10.8	-0.8
	comp=Z,1.6nm,0.7s,mb4.2,baz=124,slow=10,SNR=5.8						
BVAR				pPcP		04 36 38.4	
	comp=Z,1.2nm,0.6s,baz=162,slow=4.7,SNR=5.1						
ASAR	Alice Springs	49.62	130	P	P	04 35 12.8	-0.1
	comp=Z,2.4nm,0.7s,mb4.3,baz=302,slow=7.7,SNR=16						
ASAR				PcP	PcP	04 36 35.1	+0.8
	comp=Z,1.5nm,0.7s,baz=315,slow=3.8,SNR=7.4						
ASAR				pPcP		04 36 38.5	
ASAR				LR	LR	04 56 33.1	
	comp=Z,72nm,19.8s,MS3.7,baz=142,slow=36						
FORT	Forrest	49.95	141	eP	P	04 35 15.5	+0.1
	comp=Z,535nm,0.7s						
CHKZ	Chkalovo	49.98	342	eP	P	04 35 14.6	-0.8
	comp=Z,6.1nm,0.8s,mb4.7						
KMBO	Kilima Mbogo	57.27	264	P	P	04 36 10.0	+0.5
	comp=Z,5.6nm,1.0s,mb4.5						
CTA	Charters Tower	58.11	119	LR	LR	05 02 58.7	
	comp=Z,43nm,21.3s,MS3.5,baz=60,slow=38						
BRTR	Keskin Array B	62.73	311	P	P	04 36 45.5	-1.1
	comp=Z,0.4nm,0.5s,mb3.8,baz=119,slow=5.4,SNR=2.5						
FINES	FINESS Array B	73.17	332	P	P	04 37 50.9	-0.5
	comp=Z,6.9nm,1.1s,mb4.5,baz=90,slow=5.6,SNR=8.3						
ARCES	ARCESS Array B	75.77	340	P	P	04 38 06.4	+0.2
	comp=Z,3.0nm,0.8s,mb4.3,baz=333,slow=5.4,SNR=3.0						
GERES	GERESS Array B	78.19	318	P	P	04 38 19.8	-0.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=315,slow=1.9,SNR=3.0						
HFS	Hagfors	78.90	330	P	P	04 38 24.0	+0.2
	comp=Z,11nm,1.1s,mb4.7,baz=117,slow=3.3,SNR=7.1						
EKA	Eskdalemuir Ar	88.14	325	P	P	04 39 11.7	+0.8
	comp=Z,1.0nm,0.7s,mb4.2,baz=98,slow=5.9,SNR=3.9						
IMA	Indian Mountai	92.19	22	eP	P	04 39 30.9	+1.4
	comp=Z,18nm,0.8s,mb5.4						
NVAR	Mina Array Bea	125.46	31	PKP	PKPdf	04 45 23.5	+2.9
	comp=Z,0.3nm,0.6s,baz=304,slow=2.0,SNR=2.6						

*NIED **11** 04:26:00, 32.40N×132.20E, h41^{km}, Mw4.1 Best double couple: $M_0$1.58×10^{15} NP1:ϕ_s210°, δ80°, λ-52°. NP2: ϕ_s312°, δ39°, λ-165°.*

*IDC **11** 04:26:21.1±1.0, 32.41N×131.74E, mb3.8/6, mb1 4.0/6, mb1mx3.8/22, mbtmp3.8/6, MS3.7/2, Ms1 3.7/2, ms1mx2.9/30, Error ellipse: s-maj=50.7km s-min=20.5km az=73.0*

*BJI **11** 04:26:25.6, 32.50N×132.00E, h40^{km}, mB4.9, mb3.9*

*JMA **11** 04:26:25.8, 32.44N×132.17E, h29^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s311°, δ23°, λ-158°. NP2:ϕ_s200°, δ81°, λ-68°. Principal axes: T Plg33°, Azm272°; N Plg22°, Azm17°; P Plg49°, Azm134°;*

JMA Felt II J1.

*NEIC **11** 04:26:26.6±0.6, 32.46N×131.99E Error ellipse: s-maj=16.7km s-min=12.1km az=75.0*

NEIC Recorded [2 JMA] in Miyazaki and Oita Prefectures.

ISC 11 04:26:25.4±0.6**, 32.48N**±0.06×**132.15E**±0.06**, h50**^{km}±6^{km}**, n20, σ0**^{s}**87**/23**, mb3.9**/7**, MS4.4**/1**, 6C-1D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTSN	Tsuno	0.59	247	⇑P	P	04 26 37.4	-0.4
JTSN				S	S	04 26 45.7	-1.2
JKIT	Kitakata	0.61	284	P	P	04 26 38.0	0.0
JTO	Tosashimizu	0.67	55	⇑P	P	04 26 38.8	0.0
JTO				S	S	04 26 48.0	-0.6
JUS	Usuki	0.68	330	⇓P	P	04 26 39.7	+0.8
JUS				S	S	04 26 49.4	+0.6
UWA2	Uwa jima 2	0.83	28	⇑P	P	04 26 41.4	+0.4
UWA2				S	S	04 26 52.5	-0.1
JTZ	Takazaki	1.07	238	⇑P	P	04 26 44.4	+0.1
JTZ				S	S	04 26 59.2	+0.9
JIU2	Izumi 2	1.13	274	⇑P	P	04 26 46.2	+1.1
KS15	Wonju Array Si	6.07	326	Pn	P	04 27 53.6	-1.1
MAJO	Matsushiro	6.43	49	ePn	P	04 27 59.9	0.0
CBIJ	Chichi jima	10.23	119	LR	LR	04 32 14.9	
	comp=Z,126nm,18.5s,baz=314,slow=34						
HHC	Hu-ho-hao-te	18.48	303	eP	P	04 30 36.0	-3.4
HHC				AMB	AMB		
	comp=Z,6.0nm,1.3s						
GYA	Guiyang	22.96	261	⇑iP	P	04 31 26.9	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
SONM	Songino Array	24.80	316	P	P	04 31 43.4	-0.5
	comp=Z,1.0nm,0.7s,mb3.5,baz=136,slow=11,SNR=8.0						
SONM				pP		04 31 54.4	
	comp=Z,2.9nm,0.8s,baz=126,slow=9.8,SNR=15						
BVAR	Borovoye Array	48.13	314	P	P	04 35 00.7	-1.4
	comp=Z,0.8nm,0.6s,mb3.9,baz=91,slow=9.6,SNR=3.9						
WRA	Warramunga Arr	52.16	177	P	P	04 35 32.6	-0.7
	comp=Z,1.4nm,0.9s,mb3.9,baz=354,slow=8.2,SNR=14						
ASAR	Alice Springs	55.85	178	P	P	04 36 00.3	+0.1
	comp=Z,1.1nm,0.6s,mb4.1,baz=14,slow=13,SNR=9.0						
STKA	Stephens Creek	64.63	171	P	P	04 37 00.5	+0.4
	comp=Z,2.0nm,0.5s,mb4.4,baz=335,slow=8.2,SNR=5.7						
YKA	Yellowknife Ar	71.43	27	P	P	04 37 44.1	+2.2
	comp=Z,0.3nm,0.9s,mb3.2,baz=306,slow=5.8,SNR=4.8						
YKA				pP	pP	04 37 55.7	-0.5
	comp=Z,0.8nm,0.9s,baz=301,slow=5.7,SNR=8.3						
YKA	Yellowknife Ar	71.43	27	P	P	04 37 44.1	+2.2
YKA				pP	pP	04 37 55.7	-0.5
SCHQ	Schefferville	91.52	11	LR	LR	05 23 41.9	
	comp=Z,119nm,18.6s,MS4.4,baz=15,slow=38						

IDC 11 04:40:25.1±1.9**, 4.49N**×**123.36E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.8**/16**, mbtmp3.8**/3**, Error ellipse: s-maj=307.2km s-min=27.6km az=71.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.57	156	P	P	04 46 05.2	-1.8
	1.3nm,0.3s,baz=335,slow=9.7,SNR=46						
ASAR	Alice Springs	29.81	160	P	P	04 46 34.0	-2.2
	0.5nm,0.4s,baz=338,slow=6.9,SNR=8.2						
SONM	Songino Array	45.58	344	P	P	04 48 47.0	-1.7
	0.3nm,0.7s,baz=169,slow=7.3,SNR=3.2						

*NEIC **11** 04:54:56.1±0.9, 37.54N×16.28W, h10^{km}, Error ellipse: s-maj=11.1km s-min=5.3km az=87.0*

*IGIL **11** 04:54:56.0, 37.43N×16.33W, h8^{km}, ML3.3*

*LDG **11** 04:55:01.8±0.4, 37.66N×15.98W, h10^{km}, Ml3.8/7, Error ellipse: s-maj=7.6km s-min=5.7km az=83.0*

*INMG **11** 04:55:01.6±1.8, 37.49N×16.35W, h10^{km}, ML3.1, Error ellipse: s-maj=8.0km s-min=6.8km az=109.0*

*CSEM **11** 04:55:03.3±0.3, 37.81N×15.35W, h10^{km}, mb4.5/18, Error ellipse: s-maj=5.5km s-min=3.7km az=69.0*

MDD 11 04:54:58.9±1.8**, 37.55N**×**16.27W, h25**^{km}±25^{km}**, mb4.4**/25**, Error ellipse: s-maj=24.3km s-min=11.2km az=99.0, PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIS	Lisbon	5.73	76	AML	AML	04 56 18.8	
	comp=Z,44nm,0.1s						
LIS				eP		04 56 18.9	
LIS				eS	Sn	04 57 22.0	-8.4
LIS				eS	Sn	04 57 22.1	-8.3
LIS	Lisbon	5.73	76	eP	Pn	04 56 18.9	-5.8
LIS				eS	Sn	04 57 22.0	-8.4
PLOU	Loures	5.76	74	ePn	Pn	04 56 22.4	-2.6
PLOU				eSn	Sn	04 57 22.4	-8.7
	comp=Z,40nm,0.4s						
PLOU	Loures	5.76	74	Pn	Pn	04 56 22.4	-2.6
PLOU				Sn	Sn	04 57 22.5	-8.6
PLOU	Loures	5.76	74	Pn	Pn	04 56 22.4	-2.6
PLOU				eSn	Sn	04 57 22.4	-8.7
	comp=Z,40nm,0.4s						
PTEO	Sao Teotonio	5.99	88	ePn	Pn	04 56 24.8	-3.5
PTEO				eSn	Sn	04 57 25.6	-11
	comp=Z,26nm,0.3s						
PTEO	Sao Teotonio	5.99	88	Pn	Pn	04 56 24.7	-3.6
PTEO	Sao Teotonio	5.99	88	ePn	Pn	04 56 24.8	-3.5
PTEO				eSn	Sn	04 57 25.6	-11
	comp=Z,26nm,0.3s						
ALMR	Almeirim	6.25	73	eP	Pn	04 56 28.8	-3.3
ALMR				AML	AML	04 56 30.6	
	comp=Z,22nm,0.4s						

ALMR				*e*S	Sn	04 57 33.6	-10
ALMR				*e*S	Sn	04 57 33.6	-10
ALMR	**Almeirim**	6.25	73	*e*P	Pn	04 56 28.8	-3.2
ALMR				*e*S	Sn	04 57 33.6	-10
	comp=Z,22nm,0.4s						
ALMR	**Almeirim**	6.25	73	*e*P	Pn	04 56 28.8	-3.2
	comp=Z,22nm,0.4s						
MOE	**Montemor**	6.32	79	*e*Pn	Pn	04 56 29.7	-3.3
MOE				*e*Sn	Sn	04 57 35.8	-9.4
EVO	**Evora**	6.59	79	*e*Pn	Pn	04 56 31.2	-5.5
EVO				*e*Sn	Sn	04 57 38.5	-13
	comp=Z,38nm,0.4s						
PBEJ	**Beja**	6.67	83	*e*Pn	Pn	04 56 34.3	-3.6
PBEJ				*e*Sn	Sn	04 57 44.1	-10
	comp=Z,17nm,0.3s						
PBEJ	**Beja**	6.67	83	Pn	Pn	04 56 34.6	-3.3
PBEJ				Sn	Sn	04 57 44.0	-10
PALC	**Alcoutim**	6.99	88	*e*Pn	Pn	04 56 38.4	-4.0
PALC				*e*Sn	Sn	04 57 51.5	-10
	comp=Z,24nm,0.3s						
PALC	**Alcoutim**	6.99	88	Pn	Pn	04 56 38.1	-4.3
PALC				Sn	Sn	04 57 51.5	-10
PVIS	**Viseu**	7.24	61	*e*Pn	Pn	04 56 42.5	-3.3
PVIS				*e*Sn	Sn	04 57 57.2	-11
	comp=Z,6.9nm,0.1s						
PVIS	**Viseu**	7.24	61	Pn	Pn	04 56 42.8	-3.0
PVIS				Sn	Sn	04 57 57.2	-11
	comp=Z,3.5nm,0.1s						
PCBR	**Castelo Branco**	7.24	69	*e*Pn	Pn	04 56 42.5	-3.5
PCBR				*e*Sn	Sn	04 57 57.6	-11
	comp=Z,5.8nm,0.3s						
PCBR	**Castelo Branco**	7.24	69	Pn	Pn	04 56 42.3	-3.7
PCBR				Sn	Sn	04 57 57.6	-11
	comp=Z,2.9nm,0.3s						
MTE	**Manteigas**	7.37	65	*e*Pn	Pn	04 56 43.9	-3.8
MTE				*e*Sn	Sn	04 58 01.3	-10
	comp=Z,9.7nm,0.3s						
MTE	**Manteigas**	7.37	65	*e*Pn	Pn	04 56 44.7	-3.0
MTE				*e*Sn	Sn	04 58 02.7	-8.6
MTE	**Manteigas**	7.37	65	Pn	Pn	04 56 44.6	-3.1
MTE				Sn	Sn	04 58 01.2	-10
EBAD	**Badajoz**	7.39	78	P	Pn	04 56 44.5	-3.5
EBAD				S	Sn	04 58 00.9	-11
EBAD	**Badajoz**	7.39	78	P	Pn	04 56 44.6	-3.4
	comp=Z,1.6nm,0.1s,SNR=33						
EBAD				S	Sn	04 58 00.9	-11
	comp=Z,23nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	7.39	78	P	Pn	04 56 44.6	-3.4
	comp=Z,1.6nm,0.1s,SNR=33						
EBAD				S	Sn	04 58 00.9	-11
	comp=Z,23nm,0.2s,SNR=7.9						
EZAM	**Zamans**	7.42	49	P	Pn	04 56 44.4	-4.0
EZAM				S	Sn	04 57 59.6	-13
EZAM	**Zamans**	7.42	49	P	Pn	04 56 44.4	-4.0
	comp=Z,4.3nm,0.3s,SNR=7.9						
EZAM				S	Sn	04 58 02.4	-10
	comp=Z,5.7nm,0.2s,SNR=7.9						
EZAM	**Zamans**	7.42	49	P	Pn	04 56 44.3	-4.1
	comp=Z,4.3nm,0.3s,SNR=7.9						
EZAM				S	Sn	04 58 02.4	-10
	comp=Z,5.7nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	7.59	58	*e*Pn	Pn	04 56 47.3	-3.5
PVRL				*e*Sn	Sn	04 58 06.5	-10
	comp=Z,10nm,0.1s						
PVRL	**Vila Real**	7.59	58	Pn	Pn	04 56 47.8	-3.0
PVRL				Sn	Sn	04 58 06.7	-10
EMIN	**Mina Concepcio**	7.61	85	P	Pn	04 56 47.1	-4.1
EMIN				S	Sn	04 58 05.2	-12
EMIN	**Mina Concepcio**	7.61	85	P	Pn	04 56 47.1	-4.1
	comp=Z,2.0nm,0.1s,SNR=24						
EMIN				S	Sn	04 58 06.5	-11
	comp=Z,3.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	7.61	85	P	Pn	04 56 47.1	-4.0
	comp=Z,2.0nm,0.1s,SNR=24						
EMIN				S	Sn	04 58 06.5	-11
	comp=Z,3.7nm,0.2s,SNR=7.9						
ELOB	**Lobios**	7.65	53	P	Pn	04 56 47.7	-4.0
	comp=Z,1.0nm,0.1s,SNR=12						
ELOB				S	Sn	04 58 07.7	-11
	comp=Z,11nm,0.2s,SNR=7.9						
ELOB	**Lobios**	7.65	53	P	Pn	04 56 47.7	-4.0
	comp=Z,1.0nm,0.1s,SNR=12						
ELOB				S	Sn	04 58 07.7	-11
	comp=Z,11nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	7.76	44	P	Pn	04 56 49.1	-4.0
	comp=Z,4.2nm,0.1s,SNR=17						
EMAZ				S	Sn	04 58 08.5	-13
	comp=Z,3.6nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	7.76	44	P	Pn	04 56 49.1	-4.0
	comp=Z,4.2nm,0.1s,SNR=17						
STS	**Santiago**	7.95	45	P	Pn	04 56 52.4	-3.5
	comp=Z,4.9nm,0.1s,SNR=7.9						
STS				S	Sn	04 58 12.7	-13
	comp=Z,5.2nm,0.1s,SNR=7.9						
ESPR	**Espera**	8.33	92	P	P	04 56 57.1	-4.1
ESPR				S	Sn	04 58 24.2	-11
ESPR	**Espera**	8.33	92	P	P	04 56 57.1	-4.1
	comp=Z,1.0nm,0.1s,SNR=10						
ESPR				S	Sn	04 58 24.2	-11
	comp=Z,20nm,0.3s,SNR=7.9						
ESPR	**Espera**	8.33	92	P	P	04 56 57.1	-4.0
	comp=Z,1.0nm,0.1s,SNR=10						
ESPR				S	Sn	04 58 24.2	-11
	comp=Z,20nm,0.3s,SNR=7.9						
PBRG	**Braganca**	8.48	57	*e*Pn	P	04 56 59.3	-3.9
PBRG				*e*Sn	Sn	04 58 27.8	-11
	comp=Z,4.2nm,0.2s						
PBRG	**Braganca**	8.48	57	Pn	P	04 56 59.8	-3.4
PBRG				Sn	Sn	04 58 28.4	-11
ERUA	**La Rua**	8.51	53	P	P	04 56 59.0	-4.7
ERUA				S	Sn	04 58 28.9	-11
ERUA	**La Rua**	8.51	53	P	P	04 56 59.0	-4.7
	comp=Z,1.2nm,0.2s,SNR=7.9						
ERUA				S	Sn	04 58 28.5	-11
	comp=Z,7.0nm,0.4s,SNR=7.9						
ERUA	**La Rua**	8.51	53	P	P	04 56 59.0	-4.6
	comp=Z,1.2nm,0.2s,SNR=7.9						
ERUA				S	Sn	04 58 28.9	-11
EINC	**Incio**	8.53	50	P	P	04 56 59.8	-4.0
	comp=Z,2.1nm,0.3s,SNR=8.4						
EINC				S	Sn	04 58 26.8	-13
	comp=Z,1.6nm,0.1s,SNR=7.9						
EINC	**Incio**	8.53	50	P	P	04 56 59.8	-4.0
	comp=Z,2.1nm,0.3s,SNR=8.4						
ECAL	**Calabor**	8.55	56	P	P	04 57 00.0	-4.2
ECAL				S	Sn	04 58 29.4	-11
ECAL	**Calabor**	8.55	56	P	P	04 56 60.0	-4.2
	comp=Z,2.7nm,0.3s,SNR=11						
ECAL				S	Sn	04 58 30.3	-11
	comp=Z,16nm,0.3s,SNR=7.9						
ECAL	**Calabor**	8.55	56	P	P	04 57 00.0	-4.2
	comp=Z,2.7nm,0.3s,SNR=11						
ECAL				S	Sn	04 58 29.4	-11
EPON	**Pontenova**	9.03	47	P	P	04 57 04.9	-5.9
EPON				S	Sn	04 58 40.1	-13
EPON	**Pontenova**	9.03	47	P	P	04 57 05.8	-5.0
	comp=Z,4.3nm,0.8s,SNR=7.9						
EPON				S	Sn	04 58 41.4	-11
	comp=Z,9.4nm,0.2s,SNR=7.9						
EPON	**Pontenova**	9.03	47	P	P	04 57 05.8	-5.0
	comp=Z,4.3nm,0.8s,SNR=7.9						
EPON				S	Sn	04 58 41.4	-11
	comp=Z,9.4nm,0.2s,SNR=7.9						
CFUE	**Fuerteventura**	9.09	167	P	P	04 57 07.8	-3.8
	comp=Z,10nm,0.2s,SNR=7.9						
CFUE				S	Sn	04 58 41.1	-13
	comp=Z,15nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	9.24	93	P	P	04 57 09.5	-4.2
	comp=Z,3.8nm,0.4s,SNR=7.9						
EMIJ				S	Sn	04 58 46.8	-11
	comp=Z,8.5nm,0.6s,SNR=7.9						
EADA	**Adamuz**	9.27	83	P	P	04 57 09.3	-4.7
EADA				S	Sn	04 58 47.5	-11
EADA	**Adamuz**	9.27	83	P	P	04 57 10.1	-3.9
	comp=Z,4.1nm,0.2s,SNR=26						
EADA				S	Sn	04 58 45.1	-13
	comp=Z,6.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	9.27	83	P	P	04 57 10.1	-4.0
	comp=Z,4.1nm,0.2s,SNR=26						
EADA				S	Sn	04 58 47.5	-11
CFTV	**Fuerteventura**	9.29	168	P	P	04 57 10.3	-4.1
	comp=Z,4.8nm,0.4s,SNR=7.9						
CFTV				S	Sn	04 58 46.8	-12
	comp=Z,18nm,0.8s,SNR=7.9						
ESDC	**Sonseca Array**	9.86	74	P	P	04 57 18.4	-3.8
	comp=Z,1.1nm,0.3s,baz=260,slow=13,SNR=23						
ESDC				S	Sn	04 59 00.7	-12
	comp=Z,2.0nm,0.2s,baz=263,slow=24,SNR=5.6						
ESDC	**Sonseca Array**	9.86	74	P	P	04 57 18.4	-3.8
	comp=Z,1.1nm,0.3s,SNR=23						
ESDC				S	Sn	04 59 00.7	-12
	comp=Z,2.0nm,0.2s,SNR=5.6						
ESLA	**Sonseca Array**	9.86	74	*e*Pn	P	04 57 18.1	-4.2
ESLA	**Sonseca Array**	9.86	74	*e*Pn	P	04 57 18.0	-4.2
EBAN	**Banos Encina**	9.89	83	P	P	04 57 18.8	-3.8
	comp=Z,0.4nm,0.2s,SNR=7.9						
EBAN				S	Sn	04 59 00.7	-13
	comp=Z,2.3nm,0.2s,SNR=7.9						
EARI	**Arriondas**	10.20	52	P	P	04 57 22.9	-3.9
	comp=Z,9.0nm,0.8s,SNR=7.9						
EARI				S	S	04 59 08.6	-13
	comp=Z,28nm,1.1s,SNR=7.9						
EARI	**Arriondas**	10.20	52	P	P	04 57 22.9	-3.9
	comp=Z,9.0nm,0.8s,SNR=7.9						
EARI				S	S	04 59 08.6	-13
	comp=Z,28nm,1.1s,SNR=7.9						
EQES	**Quesada**	10.46	85	P	P	04 57 26.4	-4.1
	comp=Z,3.6nm,0.7s,SNR=7.9						
EQES				S	S	04 59 14.7	-13
	comp=Z,3.6nm,0.3s,SNR=4.7						
EQES	**Quesada**	10.46	85	P	P	04 57 26.4	-4.1
	comp=Z,3.6nm,0.7s,SNR=7.9						
EQES				S	S	04 59 14.7	-13
	comp=Z,3.6nm,0.3s,SNR=4.7						
EBER	**Berja**	10.69	89	P	P	04 57 29.8	-3.7
	comp=Z,4.0nm,0.5s,SNR=7.9						
EBER				S	S	04 59 20.1	-13
	comp=Z,1.9nm,0.5s,SNR=7.9						
EBER	**Berja**	10.69	89	P	P	04 57 29.8	-3.8
	comp=Z,4.0nm,0.5s,SNR=7.9						
EBER				S	S	04 59 20.1	-13
	comp=Z,1.9nm,0.5s,SNR=7.9						
ELAN	**Lanestosa**	11.31	56	P	P	04 57 38.1	-3.9
	comp=Z,63nm,1.3s,SNR=7.9						
ELAN				S	S	04 59 36.2	-12
	comp=Z,10nm,0.6s,SNR=7.9						
ELAN	**Lanestosa**	11.31	56	P	P	04 57 38.1	-3.9
	comp=Z,63nm,1.3s,SNR=7.9						
ELAN				S	S	04 59 36.2	-12
	comp=Z,10nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	11.65	80	P	P	04 57 42.1	-4.5
	comp=Z,3.9nm,0.5s,SNR=7.9						
ETOB				S	S	04 59 43.7	-13
	comp=Z,4.7nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	11.65	80	P	P	04 57 42.1	-4.6
	comp=Z,3.9nm,0.5s						
ETOB				S	S	04 59 43.7	-13
EMOS	**Mosqueruela**	12.61	72	P	P	04 57 55.7	-3.8
	comp=Z,3.5nm,0.6s,SNR=7.9						
EMOS				S	S	05 00 08.2	-12
	comp=Z,4.4nm,0.5s,SNR=7.9						
EMOS	**Mosqueruela**	12.61	72	P	P	04 57 55.7	-3.9
	comp=Z,3.5nm,0.6s						
SJPF	**Ste Jean**	12.75	59	*e*Pn	P	04 57 58.2	-3.1
	comp=Z,0.7nm,0.2s						
SJPF				*e*Sn	S	05 00 09.0	-14
ETSF	**Etsaut**	13.13	61	*e*Pn	P	04 58 03.4	-3.1
	comp=Z,1.8nm,0.4s						
ETSF				*e*Sn	S	05 00 18.8	-14
EBIE	**Bielsa**	13.56	63	P	P	04 58 08.5	-3.6
	comp=Z,5.5nm,0.7s						
EPF	**Esparros**	13.80	61	*e*Pn	P	04 58 12.1	-3.1
	comp=Z,1.4nm,0.4s						
EPF				*e*Sn	S	05 00 33.9	-15
	comp=Z,1.3nm,0.4s						
QUIF	**Quistinic**	14.12	39	*e*Pn	P	04 58 15.9	-3.5
QUIF				*e*Sn	S	05 00 39.9	-16
	comp=Z,3.2nm,0.3s						
ROSF	**Rostrenen**	14.36	37	*e*Pn	P	04 58 19.6	-2.9
ROSF				*e*Sn	S	05 00 46.1	-16
	comp=Z,0.8nm,0.2s						
CAF	**Calviac**	15.62	56	*e*Pn	P	04 58 36.2	-2.7
LASF	**Ste Croix**	16.55	60	*e*Pn	P	04 58 48.6	-2.3
BGF	**Bois d'Agland**	16.77	52	*e*Pn	P	04 58 51.8	-1.9

IDC 11 04:57:16.2±13.0**, 8.90N**×**92.37E, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/16**, mbtmp3.4**/3**, Error ellipse: s-maj=434.3km s-min=31.6km az=73.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	40.58	15	P	P	05 04 57.5	-1.6
	0.9nm,1.1s,baz=198,slow=9.1,SNR=3.2						
WRA	**Warramunga Arr**	50.28	125	P	P	05 06 14.8	-2.0
	0.4nm,0.5s,baz=304,slow=8.6,SNR=7.9						
ASAR	**Alice Springs**	51.92	129	P	P	05 06 27.0	-2.2
	0.3nm,0.5s,baz=305,slow=7.6,SNR=4.8						

TEH **11** *05:11:49.5, 35.05N×53.70E, h1^{km}, Mn3.6*

CSEM **11** *05:11:49.3±0.1, 35.04N×53.76E, h20^{km}, ML3.6, Error ellipse: s-maj=2.3km s-min=2.0km az=20.0*

THR **11** *05:11:49.4±1.1, 34.97N×53.76E, h14^{km}±13^{km}, ML3.2*

ISC 11 05:11:49.2±0.5**, 35.09N**±0.04×**53.79E**±0.04**, h10^{km}, n19, σ0^{s}87**/23**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IANJ	**Anjiloo**	0.39	16	Pg	**Pg**	**05 11 57.7**	**+0.6**
ILAS	**Lasjerd**	0.74	294	Pg	**Pg**	**05 12 04.9**	**+0.9**
ISHM	**Shahmirzad**	0.82	331	Pg	**Pg**	**05 12 05.8**	**+0.2**
IFIR	**Firoozkooh**	1.01	303	Pg	**Pg**	**05 12 09.3**	**0.0**
ISFB	**Sefidab**	1.47	240	Pg	**Pn**	**05 12 14.5**	**-1.4**
IDMV	**Damavand**	1.51	289	Pn	**Pn**	**05 12 17.8**	**+1.3**
IDMV				Sn	**Sn**	**05 12 37.1**	**+0.8**
DAMV	**Damavand**	1.58	290	*e*PG	**Pg**	**05 12 18.4**	**-2.3**
DAMV				*e*SG	**Sg**	**05 12 40.8**	**-1.0**
DAMV				AML	AML	05 12 51.6	
	comp=N,392nm,0.5s						
IVRN	**Varamin**	1.69	267	Pn	**Pn**	**05 12 18.8**	**-0.2**
IVRN				Sn	**Sn**	**05 12 40.8**	**0.0**
NASN	**Na'in**	2.43	200	*e*PN	**Pn**	**05 12 29.4**	**-0.1**
NASN				*e*SG	**Sn**	**05 13 01.8**	**+2.3**
NASN				AML	AML	05 13 04.4	
	comp=N,126nm,0.3s						
ICHK	**Chekchek**	2.89	169	Pn	**Pn**	**05 12 35.6**	**-0.5**
ASAO	**Ashtian**	3.14	261	*e*PN	**Pn**	**05 12 40.6**	**+0.9**
ASAO				AML	AML	05 13 49.2	
	comp=N,57nm,0.6s						
IRAZ	**Razeghan**	3.17	277	Pn	**Pn**	**05 12 40.0**	**-0.1**
IMEH	**Mehriz**	3.75	169	Pn	**Pn**	**05 12 47.6**	**-0.8**
IBAF	**Bafgh**	3.80	156	Pn	**Pn**	**05 12 48.7**	**-0.3**
IPAY	**Payeh**	4.45	71	Pn	**Pn**	**05 12 57.9**	**-0.4**
IMOG	**Moghan**	4.64	76	Pn	**Pn**	**05 13 00.9**	**-0.1**
MHI	**Mashhad**	4.79	74	Pn	**Pn**	**05 13 03.8**	**+0.7**
SNGE	**Sanandaj**	5.28	272	*e*PN	**Pn**	**05 13 10.1**	**+0.1**
SNGE				AML	AML	05 14 45.4	
	comp=N,8.5nm,0.6s						
IMYA	**Miamay**	5.29	75	Pn	**Pn**	**05 13 09.9**	**-0.3**

IDC **11** *05:14:15.2±1.2, 10.60N×93.19E, mb3.8/8, mb1 4.0/9, mb1mx3.8/19, mbtmp3.8/9, ML4.1/1, MS2.8/1, Ms1 3.0/1, ms1mx2.9/13, Error ellipse: s-maj=45.9km s-min=21.3km az=55.0*

NEIC **11** *05:14:19.9±0.6, 10.65N×93.28E, h30^{km}, mb4.3/2, Error ellipse: s-maj=16.2km s-min=10.7km az=58.0*

ISC 11 05:14:18.1±0.9**, 10.7N**±0.1×**93.4E**±0.2**, h30^{km}, n12, σ0^{s}42**/12**, mb3.9**/10**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	9.43	34	Pn	**P**	**05 16 34.6**	**-0.5**
	0.4nm,0.3s,baz=228,slow=16,SNR=10						
CMAR				LR	LR	05 20 23.0	
	comp=Z,55nm,18.7s,baz=230,slow=38						
AAK	**Ala-Archa**	35.83	336	P	**P**	**05 21 17.3**	**+0.1**
	1.8nm,0.8s,mb4.0						
SONM	**Songino Array**	38.62	14	P	**P**	**05 21 41.5**	**+1.0**
	0.2nm,0.6s,mb3.0,baz=215,slow=5.6,SNR=2.9						
BVAR	**Borovoye Array**	46.09	341	P	**P**	**05 22 41.0**	**-0.3**
	0.6nm,0.3s,mb3.9,baz=138,slow=10,SNR=3.6						
CHKZ	**Chkalovo**	46.58	342	*e*P	**P**	**05 22 44.9**	**-0.2**
	3.8nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	50.54	127	P	**P**	**05 23 16.3**	**0.0**
	0.4nm,0.5s,mb3.6,baz=301,slow=9.9,SNR=5.6						
ASAR	**Alice Springs**	52.32	131	P	**P**	**05 23 29.6**	**-0.2**
	0.6nm,0.7s,mb3.7,baz=305,slow=6.8,SNR=6.1						
FINES	**FINESS Array B**	69.88	332	P	**P**	**05 25 27.5**	**-0.5**
	3.1nm,1.0s,mb4.2,baz=113,slow=7.9,SNR=7.6						
FINES	**FINESS Array B**	69.88	332	P	**P**	**05 25 27.5**	**-0.5**
ARCES	**ARCESS Array B**	72.37	340	P	**P**	**05 25 43.0**	**+0.1**
	2.1nm,0.7s,mb4.2,baz=97,slow=6.7,SNR=5.6						
GERES	**GERESS Array B**	75.23	318	P	**P**	**05 25 60.0**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=90,slow=5.9,SNR=4.1						
INK	**Inuvik**	94.52	16	P	**P**	**05 27 37.1**	**+0.5**
	0.2nm,0.5s,mb3.9,slow=7.1,SNR=3.8						

CASC 11 05:22:22.9±2.0**, 13.64N**×**90.88W, h19^{km}**±8^{km}**, MD3.6, ML3.8, 5C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	0.67	38	⇑*e*P	Pb	05 22 36.7	+0.8
IXG				*e*S	Sb	05 22 48.0	+3.3
JAT	**Jato**	0.99	313	⇓*e*P	Pb	05 22 41.1	-0.2
JAT				*e*S	Sb	05 22 53.7	-0.3
NBG	**Las Nubes**	1.07	29	⇑*e*P	Pb	05 22 43.2	+0.5
NBG				*e*S	Sb	05 22 58.1	+1.9
TP2	**Tecpan 2**	1.14	353	⇑*e*P	Pb	05 22 43.8	0.0
TP2				*e*S	Sb	05 22 58.8	+0.5
TP2				AML	AML	05 22 59.6	
	comp=E,2μm,0.3s						
RTR	**El Retiro**	1.23	78	⇓*e*P	Pn	05 22 45.3	+0.1
RTR				*e*S	Sb	05 23 01.6	+0.9
SBLS	**San Blas**	1.24	81	⇓*e*P	Pn	05 22 45.0	-0.3
SBLS				*e*S	Sb	05 23 01.8	+0.8
RBDL	**Robledal**	1.25	68	⇑*e*P	Pn	05 22 45.5	-0.1
RBDL				*e*S	Sb	05 23 02.5	+1.1
SNJE	**San Jose**	1.26	80	*e*P	Pn	05 22 45.6	-0.1
SNJE				*e*S	Sb	05 23 01.6	0.0
SNET	**Serv Nac Est T**	1.60	88	*e*P	Pn	05 22 50.3	-0.3
SNET				*e*S	Sn	05 23 11.1	+0.2
LFU	**La Fuente**	1.72	86	*e*P	Pn	05 22 52.3	0.0
LFRS	**El Faro**	1.77	90	*e*P	Pn	05 22 53.1	+0.1
LFRS				*e*S	Sn	05 23 15.6	+0.5
LBRS	**Las Brisas**	1.79	87	*e*P	Pn	05 22 53.4	+0.2
LCBS	**La Ceiba**	1.85	89	⇑*e*P	Pn	05 22 53.8	-0.3
LCBS				*e*S	Sn	05 23 17.3	+0.2
SNVI	**San Vicente**	1.99	91	*e*P	Pn	05 22 55.6	-0.5
SNVI				*e*S	Sn	05 23 20.7	+0.1

CSEM **11** *05:24:40.7±0.3, 35.00N×3.82W, h2^{km}, MD2.9, Error ellipse: s-maj=8.4km s-min=6.4km az=71.0*

CNRM **11** *05:24:41.0, 35.07N×3.70W, h10^{km}, MD2.9*

MDD **11** *05:24:42.2±0.5, 35.02N×3.87W, mbLg2.2/4, Error ellipse: s-maj=5.5km s-min=2.9km az=52.0, PRXIMO*

ISC 11 05:24:41.4±0.7**, 35.03N**±0.03×**3.91W**±0.04**, h7^{km}**±4^{km}**, n20, σ1^{s}08**/36**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOU	**Touzarine**	0.15	118	P	**Pg**	**05 24 43.5**	**-1.1**
TOU				S	**Sg**	**05 24 46.0**	**-0.7**
TOU	**Touzarine**	0.15	118	*i* P	**Pg**	**05 24 43.5**	**-1.1**
MPAL	**Palemas**	0.20	353	P	**Pg**	**05 24 45.5**	**0.0**
MPAL				S	**Sg**	**05 24 49.5**	**+1.3**
MPAL	**Palemas**	0.20	353	*i* P	**Pg**	**05 24 45.5**	**0.0**
EMEL	**Melilla**	0.83	71	P	**Pb**	**05 24 57.3**	**-0.4**
	130nm,0.2s,SNR=7.9						
EMEL				S	**Sb**	**05 25 08.7**	**-0.1**
	244nm,0.2s,SNR=7.9						
EMLI	**Melilla**	0.83	71	P	**Pb**	**05 24 57.3**	**-0.5**
	130nm,0.2s,SNR=7.9						
EMLI				S	**Sb**	**05 25 08.7**	**-0.3**
	244nm,0.2s,SNR=7.9						
TZK	**Tazeka**	0.97	193	*i* P	**Pb**	**05 25 00.5**	**+0.5**
TZK				*i* S	**Sb**	**05 25 13.5**	**+0.7**
TAF	**Taforalt**	1.25	100	P	**Pb**	**05 25 06.0**	**+1.1**
TAF				S	**Sb**	**05 25 22.0**	**+0.9**
EMIJ	**Mijas**	1.68	336	P	**Pn**	**05 25 13.6**	**+2.1**
	3.1nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**05 25 30.7**	**-2.8**
	6.7nm,0.2s,SNR=7.9						
EBER	**Berja**	2.04	24	P	**Pn**	**05 25 16.1**	**-0.5**
	21nm,1.1s,SNR=4.6						
EBER				S	**Sn**	**05 25 41.9**	**-0.7**
	4.3nm,0.4s,SNR=7.9						
EBER	**Berja**	2.04	24	P	**Pn**	**05 25 16.1**	**-0.5**
	21nm,1.1s,SNR=4.6						
EBER				S	**Sn**	**05 25 41.9**	**-0.7**
	4.3nm,0.4s,SNR=7.9						
ESPR	**Espera**	2.42	320	S	**Sn**	**05 25 52.9**	**+0.7**
	0.8nm,0.2s,SNR=4.0						
ESPR	**Espera**	2.42	320	S	**Sn**	**05 25 54.8**	**+2.6**
	0.8nm,0.2s,SNR=4.0						
EQES	**Quesada**	2.85	14	P	**Pn**	**05 25 28.8**	**+0.7**
	0.9nm,0.3s,SNR=9.9						
EQES				S	**Sn**	**05 26 03.0**	**-0.1**
	2.7nm,0.3s,SNR=7.9						
EQES	**Quesada**	2.85	14	P	**Pn**	**05 25 28.8**	**+0.7**
	0.9nm,0.3s,SNR=9.9						
EQES				S	**Sn**	**05 26 03.0**	**-0.1**
	2.7nm,0.3s,SNR=7.9						
EADA	**Adamuz**	3.18	350	P	**Pn**	**05 25 32.8**	**0.0**
	0.3nm,0.1s,SNR=6.5						
EADA				S	**Sn**	**05 26 13.3**	**+1.9**
	1.0nm,0.3s,SNR=7.9						
EADA	**Adamuz**	3.18	350	P	**Pn**	**05 25 32.8**	**0.0**
	0.3nm,0.1s,SNR=6.5						
EADA				S	**Sn**	**05 26 13.3**	**+1.9**
	1.0nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	3.52	322	P	**Pn**	**05 25 36.2**	**-1.5**
	6.2nm,1.0s,SNR=6.9						
EMIN				S	**Sn**	**05 26 20.0**	**-0.2**
	SNR=7.9						
PALC	**Alcoutim**	3.77	311	*e*Pn	**Pn**	**05 25 40.5**	**-0.7**
PALC				*e*Sn	**Sn**	**05 26 24.0**	**-2.4**
	2.5nm,0.5s						
PALC	**Alcoutim**	3.77	311	Pn	**Pn**	**05 25 40.5**	**-0.7**
PALC				Sn	**Sn**	**05 26 24.0**	**-2.4**
	1.2nm,0.5s						

IDC **11** *06:06:18.4±0.5, 19.07N×121.29E, mb4.4/18, mb1 4.5/20, mb1mx4.5/23, mbtmp4.4/20, ML4.8/1, MS4.1/12, Ms1 4.1/12, ms1mx3.7/32, Error ellipse: s-maj=25.3km s-min=12.8km az=67.0*

MOS **11** *06:06:21.5±0.9, 18.95N×121.26E, h33^{km}, mb4.9/24, Error ellipse: s-maj=13.3km s-min=7.5km az=110.3*

MAN **11** *06:06:23.2, 19.13N×121.02E, h11^{km}, mb5.3, ML4.3, MS4.5*

NEIC **11** *06:06:26.9±1.0, 19.00N×121.23E, h66^{km}±9^{km}, mb4.7/24, Error ellipse: s-maj=7.1km s-min=5.5km az=75.0*

BJI **11** *06:06:32.6, 19.73N×120.74E, h66^{km}, mB4.7, mb4.4, ML4.4, Ms4.4, Msz4.2*

ISC 11 06:06:25.7±0.4**, 19.10N**±0.03×**121.15E**±0.05**, h62^{km}**±5^{km}**, h37^{km}**±4.5^{km}**:pP-P, n142, σ1^{s}13**/137**, mb4.5**/54**, 11C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	1.20	135	*e*P	**P**	**06 06 46.0**	**-0.7**
APYP	**Conner**	1.23	176	*e*P	**P**	**06 06 46.2**	**-1.0**
APYP				*e*S	**S**	**06 07 02.7**	**-0.6**
ABRA	**Dolores**	1.50	196	*e*P	**P**	**06 06 49.2**	**-1.8**
ABRA				*e*S	**S**	**06 07 11.8**	**+2.1**
CVP	**Callao Caves**	1.53	155	⇓*i*P	**P**	**06 06 52.0**	**+0.7**
BBP	**Basco**	1.54	30	*e*P	**P**	**06 06 51.5**	**+0.1**
BBP				*e*S	**S**	**06 07 11.6**	**+1.1**
CAUP	**Cauayan**	2.24	163	*e*P	**P**	**06 07 00.9**	**-0.3**
BCPH	**Baguio City Da**	2.76	191	⇑*i*P	**P**	**06 07 07.3**	**-1.2**
BCPH				*i* S	**S**	**06 07 41.2**	**+0.4**
BOLP	**Bolinao**	2.95	204	*e*P	**P**	**06 07 10.2**	**-1.0**
BOLP				*e*S	**S**	**06 07 53.9**	**+8.2**
BALP	**Baler**	3.37	173	*e*P	**P**	**06 07 17.1**	**0.0**
BALP				*e*S	**S**	**06 08 04.8**	**+8.8**
SCZP	**Santa Cruz**	3.51	200	*e*P	**P**	**06 07 21.3**	**+2.2**
PCPH	**Palayan**	3.52	181	⇓*e*P	**P**	**06 07 19.9**	**+0.6**
PCPH				*e*S	**S**	**06 08 06.6**	**+6.7**
POLP	**Polilio Island**	4.41	170	*e*P	**P**	**06 07 32.6**	**+0.9**
POLP				*e*S	**S**	**06 08 25.4**	**+3.1**
TGY	**Tagaytay City**	4.97	182	⇑*e*P	**P**	**06 07 41.5**	**+1.9**
TGY	**Tagaytay City**	4.97	182	Pn	**P**	**06 07 40.7**	**+1.1**
	38nm,0.3s,baz=166,slow=1.6,SNR=9.3						
TGY				Lg		06 08 53.9	
	18nm,0.3s,baz=94,slow=13,SNR=1.8						
GQP	**Guinayangan**	5.31	166	⇑*e*P	**P**	**06 07 44.2**	**-0.1**
GQP				*e*S	**S**	**06 08 44.8**	**-0.1**

LUBP	**Lubang**	**5.41**	**189**	*e*P	**P**	**06 07 52.0**	**+6.4**
LUBP				*e*S	Px	06 07 56.5	
BOAC	**Boac**	**5.65**	**173**	*e*P	**P**	**06 07 48.6**	**-0.3**
AUQP	**San Andres**	**5.93**	**165**	*e*P	**P**	**06 07 54.9**	**+2.1**
PVCP	**Virac**	**6.18**	**152**	*e*P	**P**	**06 07 55.0**	**-1.4**
QZH	**Quanzhou**	**6.28**	**338**	⇓*i*P	**P**	**06 07 53.0**	**-4.7**
QZH				S	**S**	**06 08 58.8**	**-10**
QZH				Smax			
	comp=N,90nm,0.4s						
QZH				Smax			
	comp=E,280nm,1.3s						
QZH				LR	LR		
	comp=Z,3μm,16.9s						
SJMP	**San Jose**	**6.60**	**180**	*e*P	**P**	**06 08 03.6**	**+1.3**
BUSP	**Coron**	**7.12**	**188**	*e*P	**P**	**06 08 13.5**	**+4.1**
ENPP	**El Nido**	**8.02**	**192**	*e*P	**P**	**06 08 20.2**	**-1.7**
GZH	**Guangzhou**	**8.30**	**300**	P	**P**	**06 08 20.3**	**-5.4**
GZH				S	**S**	**06 09 47.3**	**-12**
GZH				LR	LR		
	comp=N,1μm,19.4s						
GZH				LR	LR		
	comp=E,2μm,15.7s						
GZH				LR	LR		
	comp=Z,3μm,16.7s						
JOW	**Kunigami**	**10.11**	**39**	Pn	**P**	**06 08 49.6**	**-1.0**
JOW				LR	LR	06 12 46.3	
	comp=Z,1μm,21.4s,baz=101,slow=38						
QIZ	**Qiongzhong**	**10.69**	**271**	*e*Pn	**P**	**06 08 52.5**	**-6.0**
	comp=Z,31nm,0.7s						
BUKP	**Musuan**	**11.78**	**161**	*e*P	**P**	**06 09 14.9**	**+1.7**
BUKP				*e*S	**S**	**06 11 24.2**	**+0.3**
GYA	**Guiyang**	**15.23**	**301**	⇑*i*P	**P**	**06 09 56.8**	**-1.6**
GYA				S	**S**	**06 12 32.0**	**-14**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s						
GYA				AMB	AMB		
	comp=Z,400nm,5.0s						
GYA				LR	LR		
	comp=N,950nm,14.0s						
GYA				LR	LR		
	comp=E,840nm,12.0s						
GYA				LR	LR		
	comp=Z,1μm,16.1s						
ENH	**Enshi**	**15.35**	**319**	*e*P	**P**	**06 09 57.6**	**-2.3**
	comp=Z,110nm,1.7s						
KMI	**Kunming**	**18.07**	**293**	P	**P**	**06 10 32.3**	**-1.8**
KMI				PP	PP	06 10 51.3	+1.7
KMI				AMB	AMB		
	comp=Z,10.0nm,1.8s						
KMI				AMB	AMB		
	comp=Z,288nm,5.8s						
KMI				LR	LR		
	comp=N,550nm,11.2s						
KMI				LR	LR		
	comp=E,1μm,17.0s						
KMI				LR	LR		
	comp=Z,1μm,15.2s						
XAN	**Xi'an**	**18.44**	**326**	P	**P**	**06 10 37.8**	**-0.7**
XAN				AP		06 10 50.2	
XAN				AMB	AMB		
	comp=Z,9.0nm,2.0s						
XAN				LR	LR		
	comp=N,657nm,15.0s						
XAN				LR	LR		
	comp=Z,673nm,14.8s						
CD2	**Chengdu**	**19.64**	**310**	P	**P**	**06 10 51.2**	**-0.7**
CD2				AMB	AMB		
	comp=Z,39nm,1.6s						
CBIJ	**Chichi jima**	**20.90**	**64**	LR	LR	06 17 29.6	
	comp=Z,346nm,19.2s,baz=302,slow=32						
CMAR	**Chiang Mai Arr**	**21.04**	**272**	P	**P**	**06 11 06.4**	**-0.1**
	comp=Z,4.6nm,0.7s,mb3.9,baz=77,slow=10,SNR=13						
CMAR				PcP	PcP	06 15 12.4	+0.7
	comp=Z,1.0nm,0.4s,baz=150,slow=0.7,SNR=5.2						
CMAR				LR	LR	06 20 02.0	
	comp=Z,552nm,18.2s,baz=90,slow=39						
BJT	**Baijiatuau**	**21.29**	**349**	*e*P	**P**	**06 11 08.2**	**-0.7**
BJT				pmax	pmax		
	comp=Z,19nm,0.8s						
BJT	**Baijiatuau**	**21.29**	**349**	*e*P	**P**	**06 11 08.2**	**-0.7**
	comp=Z,19nm,0.8s,mb4.5						
BJI	**Beijing**	**21.30**	**349**	P	**P**	**06 11 08.7**	**-0.4**
BJI				AP		06 11 22.3	
BJI				XP		06 11 30.0	
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.0						
BJI				LR	LR		
	comp=N,612nm,15.0s						
BJI				LR	LR		
	comp=E,430nm,15.5s						
BJI				LR	LR		
	comp=Z,324nm,28.9s						
JHJ	**Hachijo jima 2**	**21.74**	**46**	LR	LR	06 18 06.3	
	comp=Z,474nm,19.4s,baz=156,slow=33						
LZH	**Lanzhou**	**22.78**	**322**	⇑P	**P**	**06 11 25.9**	**+2.3**
LZH				AP		06 11 35.5	
LZH				AMB	AMB		
	comp=Z,60nm,1.6s,mb4.8						
LZH				AMB	AMB		
	comp=Z,220nm,4.0s						
LZH				LR	LR		
	comp=N,750nm,13.8s						
LZH				LR	LR		
	comp=Z,982nm,14.9s						
MAJO	**Matsushiro**	**22.95**	**37**	*e*P	**P**	**06 11 23.7**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**22.95**	**37**	*e*P	**P**	**06 11 23.7**	**-1.6**
	comp=Z,18nm,0.9s,mb4.5						
MAT	**Matsushiro**	**22.95**	**37**	*e*P	**P**	**06 11 29.0**	**+3.7**
MAT	**Matsushiro**	**22.95**	**37**	P	**P**	**06 11 29.1**	**+3.8**
HHC	**Hu-ho-hao-te**	**23.18**	**341**	⇑P	**P**	**06 11 30.0**	**+2.5**
HHC				AP		06 11 38.6	
HHC				SCP		06 18 51.5	
HHC				PCS		06 18 55.1	
HHC				AMB	AMB		
	comp=Z,15nm,1.5s,mb4.2						
HHC				AMB	AMB		
	comp=Z,256nm,9.5s						
HHC				LR	LR		
	comp=N,777nm,17.8s						
HHC				LR	LR		
	comp=E,352nm,22.6s						
HHC				LR	LR		
	comp=Z,751nm,19.0s						
BTO	**Baotou**	**23.46**	**338**	*e*P	**P**	**06 11 31.5**	**+1.2**
CN2	**Changchun**	**24.89**	**7**	*e*P	**P**	**06 11 44.7**	**+0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
CN2				LR	LR		
	comp=N,500nm,18.0s						
CN2				LR	LR		
	comp=E,700nm,18.0s						
CN2				LR	LR		
	comp=Z,550nm,19.0s						
GTA	**Gaotai**	**27.37**	**322**	*e*P	**P**	**06 12 07.4**	**+0.3**
GTA				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb3.8						
GTA				AMB	AMB		
	comp=Z,99nm,5.7s						
GTA				LR	LR		
	comp=N,265nm,16.0s						
GTA				LR	LR		
	comp=E,309nm,15.2s						
GTA				LR	LR		
	comp=Z,419nm,14.8s						
LSA	**Lhasa**	**29.21**	**297**	*e*P	**P**	**06 12 26.2**	**+2.5**
LSA	**Lhasa**	**29.21**	**297**	*e*P	**P**	**06 12 23.2**	**-0.5**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LSA	**Lhasa**	**29.21**	**297**	*e*P	**P**	**06 12 23.2**	**-0.5**
	comp=Z,3.8nm,0.8s,mb4.2						
HIA	**Hailar**	**30.12**	**358**	*e*P	**P**	**06 12 30.5**	**-1.0**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HIA	**Hailar**	**30.12**	**358**	*e*P	**P**	**06 12 30.4**	**-1.1**
	comp=Z,5.6nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**30.90**	**341**	*e*P	**P**	**06 12 38.5**	**0.0**
ULN				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.9						
ULN	**Ulaanbaatar**	**30.90**	**341**	*e*P	**P**	**06 12 38.5**	**0.0**
	comp=Z,24nm,1.3s,mb4.9						
SONM	**Songino Array**	**31.08**	**341**	P	**P**	**06 12 40.6**	**+0.5**
	comp=Z,5.1nm,1.1s,mb4.3,baz=162,slow=9.0,SNR=24						
SONM				pP	pP	06 12 51.5	-3.9
	comp=Z,7.8nm,0.8s,baz=157,slow=8.5,SNR=28						
SONM				PcP	PcP	06 15 34.1	-0.3
	comp=Z,0.8nm,0.8s,baz=153,slow=5.5,SNR=5.3						
KLR	**Kul'dur**	**31.25**	**13**	*e*P	**P**	**06 12 37.0**	**-4.5**
KLR				MLR	MLR		
	comp=E,900nm,20.0s						
YSS	**Yuzh-Sakhalins**	**32.94**	**28**	*e*P	**P**	**06 12 56.0**	**-0.3**
JIRN	**Jiri**	**33.11**	**292**	*e*P	**P**	**06 12 58.1**	**+0.1**
	comp=E,35nm,1.1s,mb5.2						
GUN	**Gumba**	**33.42**	**292**	*e*P	**P**	**06 13 00.9**	**+0.3**
	comp=E,38nm,0.9s,mb5.3						
PKI	**Pulchoki**	**33.79**	**291**	*e*P	**P**	**06 13 03.4**	**-0.4**
KKN	**Kakani**	**33.93**	**292**	*e*P	**P**	**06 13 04.9**	**-0.1**
DMN	**Daman**	**34.06**	**291**	*e*P	**P**	**06 13 06.1**	**-0.1**
	comp=E,26nm,1.0s,mb5.1						
ZAK	**Zakamensk**	**34.30**	**340**	*e*P	**P**	**06 13 08.1**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
GKN	**Gorkha**	**34.52**	**292**	*e*P	**P**	**06 13 09.9**	**-0.2**
	comp=Z,45nm,1.2s,mb5.3						
TLY	**Talaya**	**35.31**	**341**	*e*P	**P**	**06 13 17.7**	**+1.1**
TLY				*e*S	**S**	**06 18 47.4**	**+2.0**
TLY				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
TLY				MLR	MLR		
	comp=Z,324nm,18.0s						
TLY	**Talaya**	**35.31**	**341**	*e*P	**P**	**06 13 17.0**	**+0.4**
	comp=Z,9.3nm,0.8s,mb4.8						
TLY				*e*	pP	06 13 27.8	-4.4
KOLN	**Koldanda**	**35.41**	**291**	*e*P	**P**	**06 13 17.6**	**-0.1**
	comp=Z,20nm,0.9s,mb5.0						
MOY	**Mondy**	**36.16**	**339**	*e*P	**P**	**06 13 25.1**	**+1.3**
MOY				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
PMG	**Port Moresby**	**38.21**	**136**	LR	LR	06 29 42.9	
	comp=Z,139nm,19.7s,baz=230,slow=37						
MBWA	**Marble Bar**	**40.03**	**182**	P	**P**	**06 13 53.7**	**-2.7**
	comp=Z,18nm,1.3s,mb4.7						
WRAB	**Tennant Creek**	**40.89**	**161**	*e*P	**P**	**06 14 00.2**	**-3.3**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
WRAB	**Tennant Creek**	**40.89**	**161**	*e*P	**P**	**06 14 00.2**	**-3.3**
	comp=Z,10nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**40.90**	**161**	P	**P**	**06 14 00.3**	**-3.2**
	comp=Z,1.6nm,0.4s,mb4.0,baz=333,slow=11,SNR=26						
WRA				PcP	PcP	06 16 03.7	-0.1
	comp=Z,3.9nm,0.6s,baz=343,slow=3.4,SNR=15						
WB2	**Warramunga Arr**	**40.90**	**161**	⇓*i*P	**P**	**06 14 00.3**	**-3.2**
SDNR	**Sundarnagar**	**41.55**	**296**	*e*P	**P**	**06 14 10.6**	**+1.8**
ASAR	**Alice Springs**	**44.29**	**163**	P	**P**	**06 14 28.9**	**-2.4**
	comp=Z,3.0nm,0.4s,mb4.4,baz=344,slow=6.8,SNR=25						
ASAR				PcP	PcP	06 16 14.9	-0.3
	comp=Z,2.0nm,0.9s,baz=343,slow=3.3,SNR=4.0						
ASPA	**Alice Springs**	**44.29**	**163**	*e*P	**P**	**06 14 29.5**	**-1.8**
ZAL	**Zalesovo**	**44.55**	**330**	P	**P**	**06 14 33.4**	**+0.5**
	comp=Z,2.2nm,0.2s,mb4.6,baz=4.8,slow=7.3,SNR=11						
ZAL				LR	LR	06 34 50.4	
	comp=Z,553nm,18.4s,baz=335,slow=38						
ZAL	**Zalesovo**	**44.55**	**330**	P	**P**	**06 14 33.4**	**+0.5**
ZAL				LR	LR	06 34 50.4	
AAK	**Ala-Archa**	**45.70**	**311**	*e*P	**P**	**06 14 42.4**	**+0.2**
AAK				*e*		06 14 51.8	
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**45.70**	**311**	*e*P	**P**	**06 14 42.4**	**+0.2**
	comp=Z,4.9nm,1.2s,mb4.3						
AAK				*e*		06 14 51.8	
NVS	**Novosibirsk**	**45.83**	**330**	*e*P	**P**	**06 14 42.4**	**-0.7**
NVS				pmax	pmax		
	comp=N,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
KURK	**Kurchatov**	**46.05**	**323**	*e*P	**P**	**06 14 45.5**	**+0.6**
KURK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
KURK	**Kurchatov**	**46.05**	**323**	*e*P	**P**	**06 14 45.5**	**+0.6**
	comp=Z,12nm,1.1s,mb4.7						
CTA	**Charters Tower**	**46.07**	**146**	LR	LR	06 33 09.0	
	comp=Z,178nm,19.9s,baz=44,slow=35						
BVAR	**Borovoye Array**	**51.65**	**323**	P	**P**	**06 15 28.2**	**+0.2**
	comp=Z,2.4nm,0.6s,mb4.3,baz=113,slow=11,SNR=16						
BVAR				PcP	PcP	06 16 40.6	-0.5
	comp=Z,3.0nm,0.6s,baz=143,slow=7.4,SNR=7.4						
CHKZ	**Chkalovo**	**51.76**	**324**	*e*P	**P**	**06 15 28.9**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
CHKZ	**Chkalovo**	**51.76**	**324**	*e*P	**P**	**06 15 28.9**	**0.0**
	comp=Z,12nm,1.2s,mb4.7						
NWAO	**Narrogin (SRO)**	**51.87**	**184**	*e*P	**P**	**06 15 28.0**	**-2.0**
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NWAO	**Narrogin (SRO)**	**51.87**	**184**	P	**P**	**06 15 28.3**	**-1.7**
	comp=Z,8.4nm,0.7s,mb4.8,baz=0.3,slow=13,SNR=4.2						
NWAO	**Narrogin (SRO)**	**51.87**	**184**	*e*P	**P**	**06 15 28.0**	**-2.0**
	comp=Z,9.0nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**54.34**	**159**	*e*P	**P**	**06 15 46.3**	**-2.1**
	comp=Z,2.1nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**54.34**	**159**	P	**P**	**06 15 46.4**	**-2.0**
	comp=Z,3.0nm,0.8s,mb4.3,baz=349,slow=7.4,SNR=5.8						
STKA				LR	LR	06 40 47.5	
	comp=Z,102nm,19.3s,baz=21,slow=38						
BILL	**Bilibino**	**56.47**	**19**	α*i*P	**P**	**06 16 02.5**	**-0.7**
BILL				*e*		06 16 08.1	
BILL						06 17 05.0	
BILL				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
BILL	**Bilibino**	**56.47**	**19**	*e*P	**P**	**06 16 01.7**	**-1.5**
	comp=Z,6.9nm,0.7s,mb4.8						
SVE	**Sverdlovsk**	**58.16**	**326**	*e*P	**P**	**06 16 15.5**	**+0.3**
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
KIV	**Kislovodsk**	**68.81**	**311**	*e*P	**P**	**06 17 25.7**	**+0.4**
KIV				*e*		06 17 37.0	
KIV						06 17 53.0	
KIV				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
KIV				MLR	MLR		
	comp=Z,200nm,13.0s						
IMA	**Indian Mountai**	**70.77**	**26**	*e*P	**P**	**06 17 37.6**	**+0.7**
IMA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
IMA	**Indian Mountai**	**70.77**	**26**	*e*P	**P**	**06 17 37.5**	**+0.6**
	comp=Z,11nm,0.8s,mb4.8						
OBN	**Obninsk**	**71.49**	**323**	*e*P	**P**	**06 17 42.3**	**+0.9**
OBN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
OBN				MLR	MLR		
	comp=Z,300nm,17.0s						
MALT	**Malatya**	**72.84**	**305**	*e*P	**P**	**06 17 50.4**	**+0.6**
MALT				*e*	pP	06 18 03.5	-3.4
MALT				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MALT	**Malatya**	**72.84**	**305**	*e*P	**P**	**06 17 50.4**	**+0.6**
	comp=Z,3.6nm,0.9s,mb4.3						
MALT				*e*	pP	06 18 03.5	-3.4
MCK	**McKinley**	**73.03**	**28**	*e*P	**P**	**06 17 50.1**	**-0.2**
MCK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
MCK	**McKinley**	**73.03**	**28**	*e*P	**P**	**06 17 50.1**	**-0.2**
	comp=Z,11nm,1.0s,mb4.8						
COLA	**College**	**73.32**	**26**	*e*P	**P**	**06 17 52.1**	**+0.1**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
COLA	**College**	**73.32**	**26**	*e*P	**P**	**06 17 52.1**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**73.74**	**26**	P	**P**	**06 17 52.7**	**-1.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=261,slow=4.4,SNR=11						
ILAR				PP	PP	06 20 37.0	-4.4
	comp=Z,0.6nm,1.1s,baz=285,slow=10,SNR=3.5						
ILAR				LR	LR	06 53 02.6	
	comp=Z,111nm,19.4s,baz=182,slow=38						
ARCES	**ARCESS Array B**	**74.23**	**339**	P	**P**	**06 17 57.4**	**+0.1**
	comp=Z,4.2nm,0.6s,mb4.5,baz=76,slow=7.9,SNR=18						
ASF	**Jabal al Asfar**	**75.37**	**299**	P	**P**	**06 18 04.7**	**+0.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=55,slow=5.2,SNR=3.6						
FINES	**FINESS Array B**	**75.81**	**330**	P	**P**	**06 18 05.7**	**-0.8**
	comp=Z,2.2nm,0.7s,mb4.2,baz=45,slow=5.4,SNR=7.7						
BRTR	**Keskin Array B**	**76.19**	**307**	P	**P**	**06 18 08.0**	**-1.0**
	comp=Z,1.1nm,0.8s,mb3.8,baz=140,slow=9.6,SNR=5.0						
AKASG	**Malin Array Be**	**76.66**	**319**	P	**P**	**06 18 10.7**	**-0.8**
	comp=Z,2.3nm,0.7s,mb4.2,baz=61,slow=5.5,SNR=8.2						
DAWY	**Dawson**	**77.07**	**26**	*e*P	**P**	**06 18 14.0**	**+0.5**
URZ	**Urewera**	**77.52**	**138**	LR	LR	06 50 26.5	
	comp=Z,91nm,19.8s,baz=202,slow=34						
INK	**Inuvik**	**77.94**	**22**	*e*P	**P**	**06 18 17.9**	**-0.3**
INK				pmax	pmax		
	comp=Z,23nm,1.4s						
INK	**Inuvik**	**77.94**	**22**	*e*P	**P**	**06 18 17.9**	**-0.3**
	comp=Z,23nm,1.4s,mb4.9						
NOA	**NORSAR Array B**	**82.69**	**333**	P	**P**	**06 18 43.2**	**-0.4**
	comp=Z,2.3nm,0.9s,mb4.2,baz=63,slow=5.1,SNR=3.5						
NOA				LR	LR	06 58 28.9	
	comp=Z,222nm,19.7s,baz=355,slow=38						
NOA	**NORSAR Array B**	**82.69**	**333**	P	**P**	**06 18 43.2**	**-0.4**
NOA				LR	LR	06 58 28.9	
DLBC	**Dease Lake**	**83.33**	**30**	LR	LR	06 52 51.7	
	comp=Z,179nm,21.4s,baz=81,slow=34						
RES	**Resolute Bay**	**83.66**	**9**	*e*P	**P**	**06 18 48.5**	**+0.3**
RES				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.7						
RES	**Resolute Bay**	**83.66**	**9**	*e*P	**P**	**06 18 48.5**	**+0.3**
	comp=Z,7.4nm,1.2s,mb4.7						
KMBO	**Kilima Mbogo**	**84.60**	**267**	P	**P**	**06 18 56.0**	**+1.7**
	comp=Z,2.9nm,0.9s,mb4.4,baz=31,slow=5.8,SNR=7.2						
GERES	**GERESS Array B**	**86.74**	**321**	P	**P**	**06 19 04.4**	**+0.4**
	comp=Z,0.9nm,0.8s,mb4.1,baz=45,slow=7.5,SNR=5.2						
SUMG	**Summit**	**87.53**	**354**	*e*P	**P**	**06 19 08.4**	**+1.1**
	comp=Z,8.5nm,1.1s,mb4.9						
YKW3	**Yellowknife Ar**	**87.60**	**23**	*e*P	**P**	**06 19 08.6**	**+0.7**
YKW3				*e*pP	pP	06 19 17.4	-8.1
YKA	**Yellowknife Ar**	**87.65**	**23**	P	**P**	**06 19 08.7**	**+0.6**
YKA	**Yellowknife Ar**	**87.65**	**23**	P	**P**	**06 19 08.6**	**+0.6**
	comp=Z,8.5nm,0.8s,mb5.0,baz=311,slow=4.6,SNR=163						
NEW	**Newport**	**95.18**	**35**	*e*P	**P**	**06 19 44.6**	**+1.2**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEW	**Newport**	**95.18**	**35**	*e*P	**P**	**06 19 44.6**	**+1.3**
	comp=Z,3.7nm,0.8s,mb4.9						
NVAR	**Mina Array Bea**	**100.14**	**43**	P	P	06 20 07.6	+1.5
	comp=Z,0.5nm,0.8s,baz=253,slow=6.4,SNR=3.7						
TXAR	**Lajitas Array**	**115.29**	**43**	PKP	PKPdf	06 25 03.1	+2.4
	comp=Z,1.1nm,0.7s,baz=206,slow=0.7,SNR=15						
JCT	**Junction City**	**116.90**	**39**	*e*PKPdf	PKPdf	06 25 05.7	+2.0
WCI	**Wyandotte Cave**	**117.42**	**24**	*e*PKPdf	PKPdf	06 25 05.8	+1.3
WVT	**Waverly**	**118.60**	**27**	*e*PKPdf	PKPdf	06 25 07.8	+0.9
VNA2	**Neumayer--Watz**	**120.06**	**197**	⇑*i*	PKPdf	06 25 09.7	+0.8
VNA1	**Neumayer--Stat**	**120.45**	**197**	⇑*i*	PKPdf	06 25 14.9	+5.2
VNA3	**Neumayer Olymp**	**120.51**	**197**	⇑*i*	PKPdf	06 25 10.3	+0.5
SDV	**Santo Domingo**	**149.86**	**24**	*e*PKPdf	PKPdf	06 26 06.6	+1.8
SDV				*e*PKPbc	PKPdf	06 26 11.8	+7.0
ROSC	**El Rosal**	**151.73**	**34**	PKPbc	PKPdf	06 26 17.1	+9.4
	comp=Z,12nm,0.8s,baz=239,slow=3.0,SNR=15						
OTAV	**Otavalo**	**152.81**	**47**	*e*PKPbc	PKPdf	06 26 18.9	+10
PLCA	**Paso Flores**	**156.22**	**158**	PKPab	PKPab	06 26 44.4	+0.9
	comp=Z,5.4nm,0.9s,baz=206,slow=3.9,SNR=7.4						
PLCA	**Paso Flores**	**156.22**	**158**	PKPab	PKPab	06 26 44.4	+0.9

WEL 11 06:19:59.7±0.3**,38.84S**×**175.88E,h134**^{km}±2^{km}**,ML3.6**/11**,**
2C,Error ellipse: s-maj=3.0km s-min=2.8km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGZ	**Maungaku**	**0.31**	**239**	PN	P	06 20 18.2	-0.1
MGZ				SN	S	06 20 32.7	+0.1
NGZ	**Ngauruhoe**	**0.40**	**213**	PN	P	06 20 18.6	-0.1
CNZ	**Chateau**	**0.44**	**216**	PN	P	06 20 18.6	-0.3
TUVZ	**Tukino**	**0.46**	**203**	PN	P	06 20 18.9	-0.1
MOVZ	**Moawhango**	**0.57**	**190**	⇑PN	P	06 20 19.4	-0.3
MOVZ				SN	S	06 20 33.9	-1.0
BKZ	**Black Stump Fm**	**0.58**	**124**	PN	P	06 20 19.9	+0.1
BKZ				SN	S	06 20 35.2	+0.2
TSZ	**Takapari Road**	**1.22**	**177**	PN	P	06 20 25.0	-0.2
TSZ				SN	S	06 20 44.5	-0.3
MWZ	**Matawai**	**1.39**	**69**	PN	P	06 20 26.5	-0.6
MWZ				SN	S	06 20 46.4	-1.8
MRZ	**Mangatainoka R**	**1.83**	**187**	⇑PN	P	06 20 30.7	-1.5
MRZ				SN	S	06 20 53.8	-3.2
BFZ	**Birch Farm**	**1.86**	**171**	PN	P	06 20 31.4	-1.1
BFZ				SN	S	06 20 54.8	-2.8
KIW	**Kapiti Island**	**2.15**	**200**	PN	P	06 20 33.7	-2.4
KIW				SN	S	06 21 00.0	-3.9
MTW	**Mount Morrison**	**2.33**	**187**	PN	P	06 20 35.9	-2.5
CAW	**Cannon Point**	**2.35**	**195**	PN	P	06 20 36.0	-2.7
MRW	**Makara Radio**	**2.55**	**200**	PN	P	06 20 38.2	-3.1
PAWZ	**Paruwai Farm**	**2.56**	**188**	PN	P	06 20 38.6	-2.9
MSWZ	**Moikau Station**	**2.61**	**190**	PN	P	06 20 39.2	-3.0
MSWZ				SN	S	06 21 08.8	-5.6
BHW	**Baring Head**	**2.68**	**196**	PN	P	06 20 39.7	-3.3
TUWZ	**Tuamarina**	**2.98**	**209**	PN	P	06 20 43.0	-3.9
NNZ	**Nelson**	**3.05**	**218**	SN	S	06 21 19.7	-4.9
BSWZ	**Blackbirch Sta**	**3.25**	**207**	PN	P	06 20 46.5	-4.1
THZ	**Tophouse**	**3.70**	**217**	PN	P	06 20 52.1	-4.4
THZ				SN	S	06 21 34.1	-5.9
KHZ	**Kahutara**	**3.99**	**206**	PN	P	06 20 56.0	-4.4
KHZ				SN	S	06 21 41.1	-5.8
LTZ	**Lake Taylor**	**4.79**	**214**	PN	P	06 21 05.2	-5.8
MQZ	**McQueen's Vall**	**5.43**	**206**	SN	S	06 22 10.2	-11

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*IDC **11** 06:37:25.6±7.0,30.69S×179.56W,h441^{km}±73^{km},mb3.2/4,*
mb1 3.3/4,mb1mx3.2/14,mbtmp4.1/4,Error ellipse:
s-maj=72.2km s-min=40.3km az=30.0
*NEIC **11** 06:37:26.4±2.9,30.72S×179.52W,h461^{km}±30^{km},mb4.1/1,*
Error ellipse: s-maj=41.6km s-min=24.4km az=206.0
ISC 11 06:37:25.2±2.0**,30.9S**±0.1×**179.3W**±0.4**,h481**^{km}±28^{km}**,**
n59,σ**0**^{s}**86**/63**,mb3.7**/5**,1D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.96**	**196**	P	**P**	**06 39 12.7**	**+1.3**
MXZ	**Matakaoa Point**	**6.96**	**196**	*e*PN	**P**	**06 39 10.9**	**-0.5**
MXZ	**Matakaoa Point**	**6.96**	**196**	*e*PN	**P**	**06 39 10.9**	**-0.5**
PUZ	**Puketiti**	**7.46**	**195**	P	**P**	**06 39 17.6**	**+1.0**
PUZ	**Puketiti**	**7.46**	**195**	*e*PN	**P**	**06 39 17.4**	**+0.7**
PUZ	**Puketiti**	**7.46**	**195**	*e*PN	**P**	**06 39 17.4**	**+0.7**
MWZ	**Matawai**	**7.89**	**198**	*e*P	**P**	**06 39 20.9**	**-0.3**
MWZ	**Matawai**	**7.89**	**198**	*e*PN	**P**	**06 39 19.5**	**-1.7**
MWZ	**Matawai**	**7.89**	**198**	*e*PN	**P**	**06 39 19.5**	**-1.7**
URZ	**Urewera**	**7.94**	**201**	P	**P**	**06 39 22.5**	**+0.8**
	35nm,0.3s,baz=295,slow=2.9,SNR=105						
URZ				S	**S**	**06 40 53.8**	**-0.4**
	4.8nm,0.3s,baz=85,slow=17,SNR=11						
URZ	**Urewera**	**7.94**	**201**	*e*P	**P**	**06 39 21.8**	**+0.1**
URZ	**Urewera**	**7.94**	**201**	*e*PN	**P**	**06 39 20.1**	**-1.6**
URZ				SN	**S**	**06 40 53.7**	**-0.5**
URZ	**Urewera**	**7.94**	**201**	*e*PN	**P**	**06 39 20.1**	**-1.6**
URZ				SN	**S**	**06 40 53.7**	**-0.5**
BKZ	**Black Stump Fm**	**8.96**	**201**	P	**P**	**06 39 32.5**	**-0.2**
BKZ	**Black Stump Fm**	**8.96**	**201**	*e*PN	**P**	**06 39 32.4**	**-0.3**
BKZ	**Black Stump Fm**	**8.96**	**201**	*e*PN	**P**	**06 39 32.4**	**-0.3**
MGZ	**Maungaku**	**9.15**	**206**	P	**P**	**06 39 36.0**	**+1.3**
MGZ	**Maungaku**	**9.15**	**206**	*e*PN	**P**	**06 39 35.9**	**+1.2**
MGZ	**Maungaku**	**9.15**	**206**	*e*PN	**P**	**06 39 35.9**	**+1.2**
NGZ	**Ngauruhoe**	**9.28**	**205**	P	**P**	**06 39 37.3**	**+1.2**
NGZ	**Ngauruhoe**	**9.28**	**205**	*e*PN	**P**	**06 39 37.0**	**+0.9**
NGZ	**Ngauruhoe**	**9.28**	**205**	*e*PN	**P**	**06 39 37.0**	**+0.9**
CNZ	**Chateau**	**9.32**	**205**	P	**P**	**06 39 37.5**	**+1.0**
CNZ	**Chateau**	**9.32**	**205**	*e*PN	**P**	**06 39 37.2**	**+0.7**
CNZ	**Chateau**	**9.32**	**205**	*e*PN	**P**	**06 39 37.2**	**+0.7**
TUVZ	**Tukino**	**9.34**	**205**	P	**P**	**06 39 36.3**	**-0.4**
TUVZ	**Tukino**	**9.34**	**205**	*e*PN	**P**	**06 39 36.3**	**-0.4**
TUVZ	**Tukino**	**9.34**	**205**	*e*PN	**P**	**06 39 36.3**	**-0.4**
TSZ	**Takapari Road**	**9.95**	**201**	*e*P	**P**	**06 39 43.0**	**-0.2**
TSZ	**Takapari Road**	**9.95**	**201**	*e*PN	**P**	**06 39 43.0**	**-0.1**
TSZ	**Takapari Road**	**9.95**	**201**	*e*PN	**P**	**06 39 43.0**	**-0.1**
BFZ	**Birch Farm**	**10.43**	**199**	P	**P**	**06 39 49.0**	**+0.6**
BFZ	**Birch Farm**	**10.43**	**199**	PN	**P**	**06 39 49.0**	**+0.6**
BFZ				*e*SN	**S**	**06 41 42.7**	**+0.1**
BFZ	**Birch Farm**	**10.43**	**199**	PN	**P**	**06 39 49.0**	**+0.6**
BFZ				*e*SN	**S**	**06 41 42.7**	**+0.1**
MRZ	**Mangatainoka R**	**10.61**	**202**	*e*P	**P**	**06 39 50.3**	**0.0**
MRZ	**Mangatainoka R**	**10.61**	**202**	*e*PN	**P**	**06 39 48.6**	**-1.7**
MRZ	**Mangatainoka R**	**10.61**	**202**	*e*PN	**P**	**06 39 48.6**	**-1.7**
MTW	**Mount Morrison**	**11.09**	**201**	*e*PN	**P**	**06 39 55.9**	**+0.5**
MTW	**Mount Morrison**	**11.09**	**201**	*e*PN	**P**	**06 39 55.9**	**+0.5**
CAW	**Cannon Point**	**11.18**	**202**	*e*PN	**P**	**06 39 55.7**	**-0.6**
CAW	**Cannon Point**	**11.18**	**202**	*e*PN	**P**	**06 39 55.7**	**-0.6**
TUWZ	**Tuamarina**	**11.86**	**205**	*e*PN	**P**	**06 40 02.6**	**-0.9**
TUWZ	**Tuamarina**	**11.86**	**205**	*e*PN	**P**	**06 40 02.6**	**-0.9**
THZ	**Tophouse**	**12.55**	**208**	*e*PN	**P**	**06 40 09.7**	**-1.1**
THZ	**Tophouse**	**12.55**	**208**	*e*PN	**P**	**06 40 09.7**	**-1.1**
KHZ	**Kahutara**	**12.87**	**204**	*e*P	**P**	**06 40 15.0**	**+0.8**
KHZ	**Kahutara**	**12.87**	**204**	PN	**P**	**06 40 15.0**	**+0.8**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	12.87	204	PN	P	06 40 15.0	+0.8
LTZ	Lake Taylor	13.66	207	*e*P	P	06 40 23.3	+0.9
LTZ	Lake Taylor	13.66	207	*e*PN	P	06 40 22.9	+0.5
LTZ	Lake Taylor	13.66	207	*e*PN	P	06 40 22.9	+0.5
CTA	Charters Tower	32.77	281	P	P	06 43 18.4	-0.3
	1.5nm,0.4s,mb3.8,baz=111,slow=14,SNR=3.2						
STKA	Stephens Creek	33.27	258	P	P	06 43 24.9	+2.1
	0.8nm,0.4s,mb3.5,baz=97,slow=13,SNR=4.1						
STKA	Stephens Creek	33.27	258	P	P	06 43 24.9	+2.1
ASAR	Alice Springs	41.96	268	P	P	06 44 34.5	+0.2
	0.7nm,0.5s,mb3.4,baz=104,slow=7.4,SNR=12						
WB2	Warramunga Arr	42.98	273	⇓*i*P	P	06 44 42.2	-0.2
WRAB	Tennant Creek	42.99	273	*e*P	P	06 44 41.4	-1.0
	3.3nm,0.5s,mb4.0						
WRA	Warramunga Arr	42.99	273	P	P	06 44 42.2	-0.3
	2.4nm,0.5s,mb3.9,baz=111,slow=7.8,SNR=45						
FINES	FINESS Array B	145.19	339	PKP	PKPdf	06 56 09.9	+3.7
	1.9nm,0.5s,baz=53,slow=4.9,SNR=21						

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*MAN **11** 06:50:08.2,9.49N×126.97E,h5^{km},mb4.6,ML3.5,MS3.4*
*IDC **11** 06:50:08.4±0.9,9.39N×126.21E,mb3.9/7,mb1 4.0/7, mb1mx3.8/19,mbtmp3.9/7,Error ellipse: s-maj=80.7km s-min=19.1km az=79.0*
ISC 11 06:50:11.3±2.8,**9.42N**±0.05×**126.98E**±0.08,**h33**^{km}±21^{km}, **n17**,σ**1**^{s}**28**/22,**mb3.8**/7,**1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.38	207	⇓*e*P	Pn	06 50 34.5	0.0
BIPH				*e*S	Sn	06 50 50.6	-1.1
BUTP	Butuan	1.42	252	*e*P	Pn	06 50 34.3	-0.9
SCPH	Surigao	1.52	284	*e*P	Pn	06 50 34.9	-1.7
SCPH				*e*S	Sn	06 50 46.7	-8.5
MSLP	Maasin	2.21	289	*e*P	Pn	06 50 46.5	0.0
MSLP				*e*S	Sn	06 51 16.6	+3.7
BUKP	Musuan	2.44	231	*e*P	Pn	06 50 51.0	+1.2
PLP	Palo	2.62	311	*e*P	Pn	06 50 51.5	-0.9
PLP				*e*S	Sn	06 51 20.0	-3.4
TBP	Tagbilaran	3.09	275	*e*P	Pn	06 50 58.5	-0.5
TBP				*e*S	Sn	06 51 36.8	+1.6
PAGZ	Pagadian	3.89	247	*e*P	Pn	06 51 12.4	+2.1
GUIM	Jordan	4.49	286	*e*P	Pn	06 51 18.6	-0.3
PVCP	Virac	4.99	327	*e*P	Pn	06 51 27.6	+1.7
WRA	Warramunga Arr	30.07	166	P	P	06 56 20.4	+0.3
	0.4nm,0.7s,mb3.3,baz=347,slow=10,SNR=3.5						
ASAR	Alice Springs	33.58	168	P	P	06 56 52.1	+1.4
	0.3nm,0.6s,mb3.4,baz=350,slow=7.1,SNR=4.6						
ASAR				PcP	PcP	06 59 33.0	+2.2
	0.3nm,0.7s,baz=346,slow=2.4,SNR=5.6						
SONM	Songino Array	42.05	339	P	P	06 58 00.2	-1.4
	0.7nm,0.9s,mb3.3,baz=156,slow=7.7,SNR=7.2						
NWAO	Narrogin (SRO)	43.12	192	P	P	06 58 08.5	-2.1
	8.4nm,0.9s,mb4.5,baz=39,slow=6.5,SNR=3.9						
ARCES	ARCESS Array B	85.23	340	P	P	07 02 45.1	-0.3
	2.6nm,0.7s,mb4.5,baz=63,slow=5.4,SNR=6.9						
FINES	FINESS Array B	86.97	332	P	P	07 02 53.9	-0.3
	2.9nm,1.0s,mb4.5,baz=45,slow=3.9,SNR=3.9						
YKA	Yellowknife Ar	94.24	24	P	P	07 03 30.0	+1.9
	0.1nm,0.7s,mb3.3,baz=303,slow=4.6,SNR=4.7						

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*MAN **11** 06:54:47.6,7.17N×126.08E,h7^{km},mb4.5,ML3.4,MS3.2*
*IDC **11** 06:55:02.3±7.5,2.55N×126.76E,mb3.9/4,mb1 4.0/4, mb1mx3.8/17,mbtmp3.9/4,Error ellipse: s-maj=127.7km s-min=72.8km az=9.0*
ISC 11 06:54:37.6±0.9,**6.42N**±0.07×**126.77E**±0.10,**h74**^{km}±13^{km}, **n15**,σ**1**^{s}**00**/22,**mb4.0**/5,**1C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.73	316	*e*P	P	06 54 53.8	+0.6
MATI				*e*S	S	06 55 05.2	+0.3
KCP	Kidapawan	1.77	289	*e*P	P	06 55 06.8	0.0
KCP				*i* S	S	06 55 28.2	0.0
BIPH	Bislig	1.80	347	⇑*e*P	P	06 55 07.0	-0.2
BIPH				*i* S	S	06 55 26.6	-2.4
BUKP	Musuan	2.23	311	*e*P	P	06 55 13.3	+0.1
BUKP				*e*S	S	06 55 39.5	0.0
BUTP	Butuan	2.77	336	*e*P	P	06 55 20.1	-0.7
BUTP				*e*S	S	06 55 57.2	+4.0
SCPH	Surigao	3.57	339	*e*P	P	06 55 34.8	+2.8
SCPH				*e*S	S	06 56 14.9	+1.8
PAGZ	Pagadian	3.65	293	*e*P	P	06 55 32.3	-0.7
TBP	Tagbilaran	4.34	319	*e*P	P	06 55 41.7	-0.9
TBP				*i* S	S	06 56 26.9	-5.4
KAKA	Kakadu	19.82	163	*e*P	P	06 59 05.1	+0.1
	6.6nm,0.4s						
FITZ	Fitzroy Crossi	24.39	183	*e*P	P	06 59 50.8	+0.4
	9.8nm,0.8s,mb4.2						
WRA	Warramunga Arr	27.24	164	P	P	07 00 16.1	-0.8
	0.6nm,0.3s,mb3.6,baz=340,slow=11,SNR=20						
WB2	Warramunga Arr	27.24	164	*e*P	P	07 00 18.8	+1.8
ASAR	Alice Springs	30.70	167	P	P	07 00 46.7	-1.2
	0.5nm,0.3s,mb3.7,baz=348,slow=7.0,SNR=12						
NWAO	Narrogin (SRO)	40.17	192	P	P	07 02 08.2	0.0
	4.8nm,0.6s,mb4.5,baz=16,slow=10,SNR=8.5						
STKA	Stephens Creek	40.63	160	P	P	07 02 11.9	-0.1
	1.1nm,0.4s,mb4.0,baz=340,slow=7.8,SNR=5.4						

IDC 11 06:55:09.3±1.5,**66.73N**×**38.29W,mb3.4**/6,**mb1 3.8**/6, **mb1mx3.5**/22,**mbtmp3.4**/6,**MS4.2**/1,**Ms1 4.2**/1, **ms1mx3.2**/19,**Error ellipse: s-maj=59.0km s-min=25.7km az=32.0,Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	31.08	299	P	P	07 01 27.7	-3.0
	0.3nm,1.0s,baz=47,slow=9.6,SNR=5.1						
ESDC	Sonseca Array	33.20	127	P	P	07 01 47.4	-2.1
	0.2nm,0.3s,baz=342,slow=8.1,SNR=5.1						
ILAR	Eielson Array	39.21	320	P	P	07 02 38.7	-1.5
	0.4nm,0.9s,baz=49,slow=8.3,SNR=4.2						
MLR	Muntele Rosu	39.31	90	LR	LR	07 20 01.7	
	comp=Z,310nm,19.5s,baz=356,slow=38						
PDAR	Pinedale Array	44.37	274	P	P	07 03 20.8	-1.9
	0.7nm,1.0s,baz=63,slow=8.1,SNR=3.6						
NVAR	Mina Array Bea	51.53	279	P	P	07 04 17.4	-1.0
	0.7nm,0.7s,baz=36,slow=7.3,SNR=5.4						
TXAR	Lajitas Array	53.71	260	P	P	07 04 32.8	-2.1
	0.3nm,0.8s,baz=36,slow=7.8,SNR=3.3						

MAN 11 06:57:09.9,9.47N×**127.05E,h9**^{km}**,mb4.5,ML3.4,MS3.2, 1C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.45	208	⇑*i*P	Pn	06 57 35.5	-0.9
BIPH				*i* S	Sb	06 57 51.7	-3.4
SCPH	Surigao	1.57	281	*e*P	Pn	06 57 37.3	-0.9
SCPH				*e*S	Sb	06 57 52.6	-6.1
BUKP	Musuan	2.52	231	*e*P	Pn	06 57 53.4	+1.6
BUKP				*e*S	Sn	06 58 23.4	+0.4
TBP	Tagbilaran	3.15	274	*e*P	Pn	06 58 00.9	+0.1
TBP				*e*S	Sn	06 58 34.8	-4.2

WEL 11 07:27:43.4±0.3,**38.41S**×**175.97E,h146**^{km}±2^{km},**ML3.9**/13, **4C,Error ellipse: s-maj=2.8km s-min=2.5km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGZ	Maungaku	0.68	210	⇑PN	P	07 28 05.7	-0.1
CNZ	Chateau	0.86	203	PN	P	07 28 06.6	-0.3
BKZ	Black Stump Fm	0.86	152	⇑PN	P	07 28 07.0	0.0
BKZ				SN	S	07 28 24.4	-0.6
WPVZ	Whakapapa	0.86	203	PN	P	07 28 06.9	-0.1
TUVZ	Tukino	0.89	196	PN	P	07 28 07.1	-0.1
URZ	Urewera	0.91	81	PN	P	07 28 06.7	-0.6
URZ				SN	S	07 28 24.8	-0.8
MOVZ	Moawhango	1.01	190	PN	P	07 28 07.7	-0.4
VRZ	Vera Road	1.19	233	PN	P	07 28 09.4	-0.5
MWZ	Matawai	1.22	87	PN	P	07 28 10.1	0.0
MWZ				SN	S	07 28 29.8	-0.9
KNZ	Kokohu	1.46	115	PN	P	07 28 12.6	0.0
WAZ	Wanganui	1.55	209	PN	P	07 28 12.8	-0.8
TSZ	Takapari Road	1.65	180	PN	P	07 28 13.8	-0.8
PUZ	Puketiti	1.83	80	PN	P	07 28 16.2	-0.5
PUZ				SN	S	07 28 40.9	-1.3
MXZ	Matakaoa Point	2.03	66	PN	P	07 28 18.8	-0.2
MRZ	Mangatainoka R	2.27	188	⇑PN	P	07 28 19.9	-2.1
BFZ	Birch Farm	2.28	175	PN	P	07 28 20.3	-1.8
BFZ				SN	S	07 28 48.8	-3.0
KIW	Kapiti Island	2.58	198	PN	P	07 28 23.0	-3.0
MTW	Mount Morrison	2.77	187	⇑PN	P	07 28 25.2	-3.2
CAW	Cannon Point	2.78	194	PN	P	07 28 25.4	-3.2
MRW	Makara Radio	2.98	199	PN	P	07 28 27.5	-3.6
PAWZ	Paruwai Farm	3.00	188	PN	P	07 28 27.9	-3.5
MSWZ	Moikau Station	3.05	190	PN	P	07 28 28.4	-3.6
MSWZ				SN	S	07 29 02.7	-6.5
BHW	Baring Head	3.11	195	PN	P	07 28 29.0	-3.8
TUWZ	Tuamarina	3.40	207	PN	P	07 28 32.3	-4.2
NNZ	Nelson	3.44	215	SN	S	07 29 13.4	-4.9
BSWZ	Blackbirch Sta	3.67	205	PN	P	07 28 35.6	-4.5
THZ	Tophouse	4.09	214	*e*PN	P	07 28 41.1	-4.6
KHZ	Kahutara	4.41	204	PN	P	07 28 45.1	-4.8
KHZ				SN	S	07 29 34.4	-6.7
LTZ	Lake Taylor	5.20	212	*e*PN	P	07 28 54.5	-5.8
MQZ	McQueen's Vall	5.86	204	SN	S	07 30 03.4	-12

IGQ 11 07:36:23.4,0.12N×**79.92W,h9**^{km}±4^{km}**,mb4.1,9C-3D, Error ellipse: s-maj=4.0km s-min=2.7km az=54.8,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	Jama	0.48	217	⇑P	Pg	07 36 32.7	-0.4
PINO	Pino	1.34	102	⇓P	Pb	07 36 48.6	+0.4
TERV	Terraza Guagua	1.34	103	P	Pb	07 36 48.7	+0.4
JUA2	San Juan 2	1.35	104	⇑P	Pb	07 36 49.3	+0.8
YANA	Yana	1.37	100	⇑P	Pb	07 36 49.3	+0.6
YANA				S	Sb	07 37 10.1	+4.0
LORE	San Lorenzo	1.58	43	P	Pn	07 36 53.5	+1.7
COTA	Cotacachi	1.59	82	⇑P	Pn	07 36 53.2	+1.2
NAS1	Nasa	1.62	118	⇓P	Pn	07 36 54.3	+1.9
VC1	Cotopaxi 1	1.69	117	⇑P	Pn	07 36 55.4	+2.0
TAMB	Tambo	1.75	118	⇑P	Pn	07 36 56.7	+2.5
ANTI	Antisana	1.84	108	⇑P	Pn	07 36 58.1	+2.5
CAYR	Refugio Cayamb	1.91	93	⇑P	Pn	07 36 59.1	+2.6
CAYR				S	Sn	07 37 24.5	+3.6
CAYA	Cayambe	1.93	91	⇓P	Pn	07 36 59.3	+2.6
CAYA				S	Sn	07 37 25.0	+3.7
PISA	Pisayambo	1.93	127	P	Pn	07 36 58.9	+2.1
IGUA	Igualata	2.05	141	P	Pn	07 37 00.4	+1.9
ECEN	Cerro Negro	2.07	70	⇑P	Pn	07 37 00.2	+1.5
ECEN				S	Sn	07 37 27.6	+2.7
JUIV	Juive	2.11	137	P	Pn	07 37 02.5	+3.1
ULBA	Ulba	2.17	136	P	Pn	07 37 02.1	+1.8
CONE	Cono NE Rev Vo	2.28	95	P	Pn	07 37 06.7	+4.8

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*IDC **11** 07:42:44.4±3.0,23.59S×169.41E,mb4.1/6,mb1 4.3/6, mb1mx4.2/14,mbtmp4.1/6,MS3.5/5,Ms1 3.5/5, ms1mx3.1/22,Error ellipse: s-maj=138.0km s-min=29.5km az=164.0*
*NEIC **11** 07:42:49.9±0.9,22.30S×169.21E,h10^{km},mb3.9/1,Error ellipse: s-maj=38.5km s-min=11.9km az=169.0*
ISC 11 07:42:48.3±3.9,**22.5S**±0.3×**169.25E**±0.08,**h11**^{km}±25^{km}, **n21**,σ**0**^{s}**72**/15,**mb4.0**/6,**MS3.4**/4,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.63	278	*e*P	Pn	07 43 31.8	+0.3
DZM				*e*S	Sn	07 44 04.7	+1.0
NOUC	Port Laguerre	2.76	277	*e*P	Pn	07 43 33.2	0.0
NOUC				*e*S	Sn	07 44 05.9	-1.0
NOUC	Port Laguerre	2.76	277	*e*P	Pn	07 43 33.2	-0.1
NOUC				*e*S	Sn	07 44 05.8	-1.0
URZ	Urewera	17.14	159	LR	LR	07 51 45.2	
	comp=Z,224nm,19.6s,baz=69,slow=34						
RPZ	Rata Peaks	21.26	176	LR	LR	07 54 07.1	
	comp=Z,404nm,18.5s,MS3.8,baz=29,slow=34						
CTA	Charters Tower	21.56	272	P	P	07 47 38.7	-1.2
	6.0nm,1.1s,mb3.9,baz=100,slow=8.7,SNR=5.3						
CTA	Charters Tower	21.56	272	P	P	07 47 38.7	-1.2
CTAO	Charters Tower	21.56	272	P	P	07 47 39.1	-0.9
	4.0nm,0.7s,mb4.0						
STKA	Stephens Creek	26.28	243	LR	LR	07 57 31.2	
	comp=Z,89nm,19.9s,MS3.3,baz=214,slow=34						
STKA	Stephens Creek	26.28	243	*e*P	P	07 48 26.1	+0.5
ASAR	Alice Springs	32.50	261	P	P	07 49 17.1	-4.2
	3.7nm,1.1s,mb4.1,baz=81,slow=9.2,SNR=7.0						
WRA	Warramunga Arr	32.61	268	P	P	07 49 17.5	-4.8
	0.4nm,0.5s,mb3.6,baz=100,slow=8.4,SNR=5.2						
VNDA	Vanda	55.23	182	LR	LR	08 11 00.2	
	comp=Z,91nm,18.1s,MS3.9,baz=341,slow=31						
FX1	Attu Island--F	75.09	2	LR	LR	08 21 26.3	
	comp=Z,3.1nm,21.9s,MS2.6,baz=217,slow=30						
CMAR	Chiang Mai Arr	79.84	295	P	P	07 54 59.4	+0.5
	1.6nm,0.6s,mb4.1,baz=132,slow=3.7,SNR=8.2						
SONM	Songino Array	89.79	323	P	P	07 55 48.5	+0.3
	1.0nm,0.8s,mb4.2,baz=136,slow=3.6,SNR=5.4						
NVAR	Mina Array Bea	90.91	48	P	P	07 55 53.2	-0.3
	1.0nm,0.7s,mb4.2,baz=228,slow=5.9,SNR=7.4						
VYHS	Vyhne	144.96	325	*e*PKP	PKPdf	08 02 26.7	-1.9
BRG	Berggiesshubel	145.73	332	*e*P	PKPbc	08 02 28.8	+1.3
CLL	Collm	145.81	333	*i* PKP1	PKPbc	08 02 30.0	+2.3
GERES	GERESS Array B	147.29	330	PKPbc	PKPdf	08 02 32.6	+0.1
	1.0nm,0.7s,baz=27,slow=3.0,SNR=6.4						

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*MAN **11** 07:43:51.9,16.28N×119.39E,h20^{km},mb5.1,ML4.1, MS4.2*
MAN STA CRUZ ZAMBALES INTENSITY III QUEZON CITY INTENSITY I.
*MOS **11** 07:43:52.5±1.0,16.51N×119.68E,h33^{km},mb5.2/23,Error ellipse: s-maj=16.0km s-min=6.9km az=121.0*
*CSEM **11** 07:43:53.2,16.47N×119.76E,h33^{km},mb5.6*
*BJI **11** 07:43:54.1,16.35N×119.84E,h52^{km},mB5.0,mb4.8, ML4.7,Ms4.5,Msz4.4*
*NEIC **11** 07:43:55.6±0.9,16.17N×119.74E,h62^{km}±8^{km},mb5.0/40, Error ellipse: s-maj=6.5km s-min=3.6km az=64.0*
NEIC Felt [III PIVS] at Santa Cruz and [I PIVS] at Quezon City.
*IDC **11** 07:43:55.7±2.3,16.24N×119.85E,h63^{km}±20^{km},mb4.5/21, mb1 4.6/22,mb1mx4.6/25,mbtmp4.8/22,MS4.2/15, Ms1 4.2/15,ms1mx3.9/25,Error ellipse: s-maj=23.3km s-min=9.7km az=59.0*
*HRVD **11** 07:43:55.6±0.4,16.22N×119.66E,h42^{km}±2^{km},MW4.9/47, Centroid moment Tensor Solution. LP body waves: s12,c13;Mantle waves: s47,c65; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.75±.23; M$_{\theta\theta}$1.38±.16; M$_{\phi\phi}$0.36±.21; M$_{r\theta}$-1.75±.13; M$_{\theta\phi}$-0.41±.10; M$_{\phi r}$-1.50±.14; Best double couple: M$_0$2.701×10^{16} NP1:φ$_s$293°,δ23°, λ-44°. NP2:φ$_s$65°,δ74°,λ-107°. Principal axes: T 2.204, Plg27°, Azm169°; N .991, Plg17°, Azm70°; P -3.198, Plg58°, Azm312°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 11 07:43:54.5±0.3,**16.18N**±0.02×**119.67E**±0.03,**h64**^{km}±3^{km}, **h49**^{km}±1.8^{km}**:pP-P,n229**,σ**1**^{s}**20**/248,**mb5.0**/80,**29C-25D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.31	49	*e*P	P	07 44 02.5	-2.6
BOLP				*e*S	S	07 44 10.2	-2.8
SCZP	Santa Cruz	0.46	150	*e*P	P	07 44 05.6	-0.9
SCZP				*e*S	S	07 44 15.0	-0.3
BCPH	Baguio City Da	0.90	77	⇑*i*P	P	07 44 11.3	-0.3
BCPH				*i* S	S	07 44 24.3	0.0
PCPH	Palayan	1.50	114	⇑*e*P	P	07 44 20.3	+0.4
PCPH				*i* S	S	07 44 41.9	+3.3
ABRA	Dolores	1.77	34	*e*P	P	07 44 23.1	-0.4
ABRA				*e*S	S	07 44 46.0	+1.1
BALP	Baler	1.88	103	*e*P	P	07 44 27.0	+1.9
BALP				*e*S	S	07 44 52.5	+4.9
CAUP	Cauayan	2.20	69	*e*P	P	07 44 31.9	+2.3
APYP	Conner	2.25	42	*e*P	P	07 44 29.7	-0.5
APYP				*e*S	S	07 44 57.5	+0.6
TGY	Tagaytay City	2.40	149	⇑*i*P	P	07 44 34.7	+2.3
TGY				*i* S	S	07 45 06.1	+5.6
TGY	Tagaytay City	2.40	149	P	P	07 44 34.1	+1.7
	294nm,0.3s,baz=270,slow=7.9,SNR=33						
LUBP	Lubang	2.49	167	*e*P	P	07 44 33.4	-0.3
LUBP				*e*S	S	07 45 04.5	+1.5
LUBP	Lubang	2.49	167	*e*P	P	07 44 33.4	-0.3
LUBP				*e*S	S	07 45 04.5	+1.5
CVP	Callao Caves	2.56	53	⇓*i*P	P	07 44 35.0	+0.4
POLP	Polilio Island	2.62	123	*e*P	P	07 44 37.5	+2.0
POLP						07 45 13.3	
LQP	Lukban	2.73	138	⇓*e*P	P	07 44 38.9	+1.8
LQP				*e*S	S	07 45 09.6	+0.5
PALP	Palanan	2.78	71	*e*P	P	07 44 39.6	+1.8
SGCP	Mt. Cagua	3.06	48	*e*P	P	07 44 41.6	-0.1
BOAC	Boac	3.42	142	*e*P	P	07 44 48.6	+1.8
GQP	Guinayangan	3.51	130	⇓*e*P	P	07 44 49.6	+1.7
GQP				*e*S	S	07 45 34.6	+6.1
SJMP	San Jose	3.95	159	*e*P	P	07 44 56.0	+1.8
AUQP	San Andres	4.06	134	*e*P	P	07 45 00.4	+4.6
BUSP	Coron	4.18	173	*e*P	P	07 44 56.5	-0.9
BUSP				*e*S	S	07 45 41.8	-3.6
OTRP	Odiongan	4.42	149	*e*P	P	07 45 03.0	+2.2
BBP	Basco	4.77	27	*e*P	P	07 45 03.9	-1.7
ENPP	El Nido	4.95	183	*e*P	P	07 45 06.3	-1.8
ENPP				*e*S	S	07 45 59.0	-5.7
PVCP	Virac	5.04	120	*e*P	P	07 45 10.5	+1.1
CUYO	Cuyo Island	5.46	166	*e*P	P	07 45 14.2	-0.8
PPR	Puerto Princes	6.43	188	⇑*i*P	P	07 45 25.6	-3.1
PPR				*i* S	S	07 46 35.5	-5.9
TBP	Tagbilaran	7.63	147	*e*P	P	07 45 43.6	-1.7
	63μm,9.0s						
MSLP	Maasin	7.85	139	*e*P	P	07 45 51.0	+2.7
QZH	Quanzhou	8.78	354	P	P	07 45 56.5	-4.6
QZH				S	S	07 47 28.0	-12
QZH				Smax			
	comp=N,60nm,0.6s						
QZH				Smax			
	comp=E,100nm,0.7s						
QZH				LR	LR		
	comp=Z,4μm,20.8s						
GZH	Guangzhou	9.10	320	P	P	07 46 03.4	-2.0
GZH				S	S	07 47 40.1	-7.2
GZH				LR	LR		
	comp=N,1μm,21.3s						
GZH				LR	LR		
	comp=E,1μm,18.5s						
GZH				LR	LR		
	comp=Z,3μm,20.2s						
JOW	Kunigami	13.28	36	LR	LR	07 52 28.3	
	comp=Z,334nm,19.3s,baz=132,slow=39						
SSE	Sheshan	14.91	5	P	P	07 47 21.6	-1.5
SSE				S	S	07 50 00.6	-6.5
SSE				AMB	AMB		
	comp=Z,16nm,1.1s						
SSE				AMB	AMB		
	comp=Z,113nm,4.0s						
SSE				LR	LR		
	comp=N,775nm,19.7s						
SSE				LR	LR		
	comp=E,280nm,19.5s						
SSE				LR	LR		
	comp=Z,1μm,18.6s						
WHN	Wuhan	15.11	342	P	P	07 47 25.3	-0.3
WHN				AP		07 47 31.8	
WHN				S	S	07 50 08.0	-3.5
WHN				LR	LR		
	comp=Z,3μm,16.0s						
GYA	Guiyang	15.85	312	⇑*i*P	P	07 47 34.2	-0.9
GYA				AMB	AMB		
	comp=Z,20nm,1.0s						
GYA				AMB	AMB		
	comp=Z,140nm,3.8s						
GYA				LR	LR		
	comp=N,780nm,15.6s						
GYA				LR	LR		
	comp=E,920nm,16.7s						
GYA				LR	LR		
	comp=Z,2μm,16.7s						
ENH	Enshi	16.85	328	*e*P	P	07 47 47.0	-0.6
	comp=Z,56nm,1.3s						
KMI	Kunming	18.16	302	⇑P	P	07 48 06.6	+2.7
KMI				AP		07 48 13.2	
KMI				XP		07 48 16.8	
KMI				PP	PP	07 48 22.8	+3.2
KMI				S	S	07 51 24.6	+3.6
KMI				XS		07 51 40.8	
KMI				AMB	AMB		
	comp=Z,9.0nm,1.4s						
KMI				AMB	AMB		
	comp=Z,452nm,5.9s						
KMI				LR	LR		
	comp=N,519nm,14.1s						
KMI				LR	LR		
	comp=E,674nm,21.6s						
KMI				LR	LR		
	comp=Z,1μm,22.6s						
NANT	Nan	18.28	281	P	P	07 48 04.0	-1.5
NST	Nakhon Sawan	18.80	271	P	P	07 48 12.0	+0.5
CHRT	Chiangrai	19.26	284	⇓P	P	07 48 18.0	+1.3
	comp=Z,197nm,0.8s						
CMAR	Chiang Mai Arr	19.92	280	*i* P	P	07 48 24.6	+0.9
CMAR				pmax	pmax		
	comp=Z,26nm,0.8s						
CMAR	Chiang Mai Arr	19.92	280	P	P	07 48 24.6	+0.8
	comp=Z,26nm,0.8s,baz=100,slow=9.0,SNR=50						
CMAR				LR	LR	07 56 00.7	
	comp=Z,669nm,20.2s,baz=95,slow=36						
CHG	Chiang Mai	19.94	281	⇓P	P	07 48 24.3	+0.3
	comp=Z,13nm,0.8s						
TIA	Tai'an	20.08	354	*e*P	P	07 48 24.2	-1.1
TIA				AMB	AMB		
	comp=Z,41nm,1.0s						
XAN	Xi'an	20.25	333	P	P	07 48 26.3	-0.8
XAN				S	S	07 52 13.2	+7.5
XAN				AMB	AMB		
	comp=Z,24nm,1.1s						
XAN				LR	LR		
	comp=N,566nm,16.3s						
XAN				LR	LR		
	comp=E,621nm,16.9s						
XAN				LR	LR		
	comp=Z,1μm,18.3s						
CD2	Chengdu	20.65	318	⇓*i*P	P	07 48 30.6	-0.6
CD2				AMB	AMB		
	comp=Z,61nm,1.2s						
INCN	Inchon	22.10	15	*e*P	P	07 48 45.0	-0.7
	comp=Z,32nm,0.9s,mb4.8						
KS15	Wonju Array Si	22.39	17	*e*P	P	07 48 48.0	-0.6
BJT	Baijiatuau	23.95	353	*e*P	P	07 49 04.4	+0.7
	comp=Z,96nm,1.1s,mb5.1						
BJI	Beijing	23.97	353	P	P	07 49 04.7	+0.8
BJI				AP		07 49 17.4	
BJI				XP		07 49 23.7	
BJI				S	S	07 53 15.6	+2.5
BJI				AMB	AMB		
	comp=Z,46nm,0.9s,mb4.9						
BJI				LR	LR		
	comp=N,554nm,16.9s						
BJI				LR	LR		
	comp=E,341nm,19.5s						
BJI				LR	LR		
	comp=Z,631nm,25.0s						
LZH	Lanzhou	24.33	328	⇓*i*P	P	07 49 09.5	+2.0
LZH				AP		07 49 16.1	
LZH				AMB	AMB		
	comp=Z,289nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,650nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,15.6s						
LZH				LR	LR		
	comp=Z,2μm,17.0s						
HHC	Hu-ho-hao-te	25.57	346	⇓P	P	07 49 19.7	+0.5
HHC				XP	sP	07 49 36.9	-5.3
HHC				S	S	07 53 46.7	+6.7
HHC				XS		07 54 01.0	
HHC				AMB	AMB		
	comp=Z,53nm,1.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,161nm,11.9s						
HHC				LR	LR		
	comp=N,890nm,19.0s						
HHC				LR	LR		
	comp=E,391nm,17.8s						
HHC				LR	LR		
	comp=Z,623nm,20.2s						
BTO	Baotou	25.74	343	*e*P	P	07 49 19.1	-1.8
SNY	Shenyang	25.78	7	⇓P	P	07 49 19.5	-1.7
SNY				AP	pP	07 49 32.3	-4.1
SNY				XP	sP	07 49 39.7	-4.5
SNY				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.7						
SNY				LR	LR		

	comp=N,660nm,18.2s						
SNY				LR	LR		
	comp=Z,550nm,20.1s						
MAJO	Matsushiro	26.12	36	eP	P	07 49 23.9	-0.6
	comp=Z,79nm,0.5s,mb5.5						
MAT	Matsushiro	26.12	36	P	P	07 49 24.1	-0.3
MAT				S	sP	07 49 44.1	-3.3
CN2	Changchun	27.97	9	eP	P	07 49 39.3	-1.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
CN2				LR	LR		
	comp=N,700nm,17.0s						
CN2				LR	LR		
	comp=E,500nm,17.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
GTA	Gaotai	28.93	327	⇓iP	P	07 49 50.5	+0.7
GTA				AP	pP	07 50 02.4	-2.9
GTA				XP	sP	07 50 09.1	-3.8
GTA				PP	PP	07 50 46.7	+1.5
GTA				PPP	PPP	07 51 00.2	+1.9
GTA				PCP	PcP	07 52 58.1	+0.4
GTA				S	S	07 54 39.0	+4.6
GTA				XS		07 54 59.0	
GTA				SCP		07 56 36.2	
GTA				PCS		07 56 37.7	
GTA				SCS	ScS	08 00 26.8	+2.2
GTA				AMB	AMB		
	comp=Z,55nm,1.3s,mb5.1						
GTA				AMB	AMB		
	comp=Z,204nm,6.5s						
GTA				LR	LR		
	comp=N,811nm,19.4s						
GTA				LR	LR		
	comp=E,890nm,19.0s						
GTA				LR	LR		
	comp=Z,2µm,20.9s						
LSA	Lhasa	29.42	302	P	P	07 49 55.5	+1.2
LSA	Lhasa	29.42	302	eP	P	07 49 55.3	+1.0
	comp=Z,65nm,1.3s,mb5.2						
MDJ	Mudanjiang	29.56	14	P	P	07 49 54.6	-0.8
MDJ				AP	pP	07 50 07.6	-3.4
MDJ				XP	sP	07 50 14.0	-4.6
MDJ				S	S	07 54 47.9	+3.4
MDJ				PCS		07 56 41.2	
MDJ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,163nm,5.0s						
MDJ				LR	LR		
	comp=N,294nm,24.2s						
MDJ				LR	LR		
	comp=E,125nm,22.1s						
MDJ				LR	LR		
	comp=Z,389nm,22.1s						
MDJ	Mudanjiang	29.56	14	eP	P	07 49 54.0	-1.4
	comp=Z,13nm,0.9s,mb4.7						
KAKA	Kakadu	31.36	156	⇓iP	P	07 50 09.3	-2.3
	comp=Z,68nm,0.6s,mb5.7						
JIRN	Jiri	32.99	296	eP	P	07 50 25.0	-0.7
	comp=Z,148nm,1.0s,mb5.9						
HIA	Hailar	33.00	0	eP	P	07 50 23.2	-2.3
	comp=Z,4.5nm,0.9s,mb4.4						
ULN	Ulaanbaatar	33.27	344	eP	P	07 50 27.6	-0.3
	comp=Z,6.7nm,0.8s,mb4.6						
GUN	Gumba	33.32	296	eP	P	07 50 28.7	+0.2
	comp=Z,164nm,0.9s,mb6.0						
SONM	Songino Array	33.41	344	P	P	07 50 28.7	-0.5
	comp=Z,8.9nm,0.7s,mb4.8,baz=161,slow=9.7,SNR=84						
SONM				ScP		07 56 47.8	
	comp=Z,0.7nm,0.8s,baz=180,slow=2.5,SNR=4.1						
PKI	Pulchoki	33.65	296	eP	P	07 50 30.8	-0.6
	comp=Z,83nm,1.0s,mb5.6						
KKN	Kakani	33.81	296	eP	P	07 50 32.4	-0.3
	comp=Z,98nm,1.0s,mb5.7						
DMN	Daman	33.92	296	eP	P	07 50 33.3	-0.4
	comp=Z,113nm,1.0s,mb5.7						
ASAJ	Asahikawa	33.95	30	LR	LR	08 04 07.5	
	comp=Z,360nm,18.6s,baz=258,slow=36						
KLR	Kul'dur	34.40	14	eP	P	07 50 33.9	-3.7
KLR				pmax	pmax		
	comp=E,20nm,0.9s						
KLR				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
KLR				MLR	MLR		
	comp=E,900nm,20.0s						
GKN	Gorkha	34.41	296	eP	P	07 50 37.1	-0.8
	comp=E,125nm,1.0s,mb5.8						
FITZ	Fitzroy Crossi	34.57	170	⇑iP	P	07 50 37.7	-1.6
	comp=E,26nm,0.8s,mb5.2						
KOLN	Koldanda	35.26	295	eP	P	07 50 44.8	-0.4
	comp=E,69nm,1.1s,mb5.5						
ZAK	Zakamensk	36.59	342	⇓iP	P	07 50 55.9	-0.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
MBWA	Marble Bar	37.10	180	eP	P	07 50 59.5	-1.3
	comp=Z,96nm,0.7s,mb5.7						
PMG	Port Moresby	37.24	131	P	P	07 50 59.5	-2.4
	comp=Z,19nm,1.0s,mb4.9,baz=31,slow=6.5,SNR=3.2						
PMG				LR	LR	08 07 24.8	
	comp=Z,120nm,20.1s,baz=264,slow=38						
PMG	Port Moresby	37.24	131	eP	P	07 51 00.0	-1.9
	comp=Z,16nm,0.8s,mb4.9						
TLY	Talaya	37.66	344	eP	P	07 51 05.0	-0.1
TLY				e		07 52 35.8	
TLY				eS	S	07 56 39.2	-11
TLY				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
TLY				MLR	MLR		
	comp=Z,390nm,21.0s						
MOY	Mondy	38.41	341	eP	P	07 51 11.9	+0.6
MOY				pmax	pmax		
	comp=Z,32nm,2.8s,mb4.6						
WMQ	Urumqi	38.64	322	eP	P	07 51 14.0	+0.6
WMQ				XP	sP	07 51 32.0	-5.0
WMQ				PP	PP	07 52 47.0	+0.7
WMQ				S	S	07 57 07.0	+2.1
WMQ				SS	SS	07 59 50.0	+0.8
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,776nm,18.0s						
WMQ				LR	LR		
	comp=E,687nm,18.0s						
WMQ				LR	LR		
	comp=Z,828nm,18.0s						
WRAB	Tennant Creek	38.68	158	eP	P	07 51 12.2	-1.6
	comp=Z,190nm,0.8s,mb5.9						
WRA	Warramunga Arr	38.68	158	P	P	07 51 12.0	-1.9
	comp=Z,99nm,0.7s,mb5.7,baz=339,slow=9.2,SNR=228						
WRA				PcP	PcP	07 53 25.5	0.0
	comp=Z,1.5nm,0.5s,baz=342,slow=2.9,SNR=4.9						
WB2	Warramunga Arr	38.69	158	⇑iP	P	07 51 12.3	-1.6
HYB	Hyderabad	39.33	278	i P	P	07 51 20.0	+0.7
DDI	Dehra Dun	40.51	298	e	P	07 51 29.3	+0.3
SDNR	Sundarnagar	41.65	299	eP	P	07 51 39.0	+0.6
BOD	Bodaibo	41.79	355	eP	P	07 51 36.5	-2.6
BOD				e		07 53 13.2	
ASAR	Alice Springs	41.97	160	P	P	07 51 40.0	-1.1
	comp=Z,80nm,0.7s,mb5.5,baz=340,slow=7.0,SNR=606						
ASAR				PcP	PcP	07 53 36.2	+0.1
	comp=Z,3.4nm,0.5s,baz=343,slow=3.6,SNR=5.5						
ASPA	Alice Springs	41.97	160	⇑iP	P	07 51 40.0	-1.1
MKAR	Makanchi Array	43.46	323	eP	P	07 51 53.6	+0.6
MKAR				pmax	pmax		
	comp=Z,55nm,1.0s						
CTA	Charters Tower	44.51	143	eP	P	07 52 01.1	-0.7
	comp=Z,12nm,0.7s,mb4.8						
CTA	Charters Tower	44.51	143	P	P	07 52 01.0	-0.8
	comp=Z,17nm,0.8s,mb5.0,baz=325,slow=10,SNR=24						
CTA				PcP	PcP	07 53 43.3	-1.4
	comp=Z,8.0nm,0.8s,baz=340,slow=3.6,SNR=7.0						
CTA				LR	LR	08 11 23.4	
	comp=Z,238nm,18.4s,baz=142,slow=37						
CTAO	Charters Tower	44.51	143	eP	P	07 52 01.0	-0.8
	comp=Z,17nm,0.8s,mb4.9						
KSH	Kashi	44.53	310	eP	P	07 52 04.0	+2.3
KSH				eAP	pP	07 52 16.3	-1.6
KSH				eXP	sP	07 52 22.7	-2.7
KSH				ePCP	PcP	07 53 46.1	+1.6
KSH				ePP	PP	07 53 52.0	+4.4
KSH				eSCP		07 57 34.3	
KSH				eS	S	07 58 36.1	+4.2
KSH				ePS	PS	07 58 46.0	-4.2
KSH				eXS		07 58 56.6	
KSH				eSS	SS	08 01 47.4	+3.3
KSH				eSCS	ScS	08 01 55.1	+4.1
KSH				AMB	AMB		
	comp=Z,110nm,1.6s,mb5.4						
KSH				LR	LR		
	comp=N,680nm,7.6s						
KSH				LR	LR		
	comp=E,720nm,7.2s						
ULHL	Ulahol	45.28	314	P	P	07 52 09.1	+1.5
	SNR=12						
KZA	Kyzart	45.91	313	P	P	07 52 14.6	+2.0
	SNR=40						
TKM2	Tokmak 2	45.97	315	P	P	07 52 14.3	+1.1
	SNR=11						
KBK	Karagaybulak	46.32	314	P	P	07 52 17.4	+1.5
	SNR=6.6						
YAK	Yakutsk	46.34	7	eP	P	07 52 14.4	-1.4
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
YAK	Yakutsk	46.34	7	eP	P	07 52 14.6	-1.3
	comp=Z,26nm,0.8s,mb5.2						
ZAL	Zalesovo	46.41	332	P	P	07 52 16.1	-0.4
	comp=Z,2.9nm,0.6s,mb4.4,baz=348,slow=6.8,SNR=22						
ZAL				PP	PP	07 54 04.0	-2.1
	comp=Z,0.9nm,0.6s,baz=0.6,slow=9.7,SNR=4.4						
ZAL				LR	LR	08 13 08.4	
	comp=Z,560nm,18.9s,baz=351,slow=38						
ZAL	Zalesovo	46.41	332	P	P	07 52 16.1	-0.4
ZAL				PP	PP	07 54 04.0	-2.1
ZAL				LR	LR	08 13 08.4	
UCH	Uchtor	46.48	313	P	P	07 52 19.1	+2.0
	SNR=52						
CHMS	Chumysh	46.58	315	P	P	07 52 18.5	+0.6
	SNR=18						
FRU	Bishkek	46.61	314	eP	P	07 52 19.5	+1.3
AAK	Ala-Archa	46.63	314	P	P	07 52 19.5	+1.2
	SNR=11						
AAK	Ala-Archa	46.63	314	i P	P	07 52 17.9	-0.4
AAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
AAK	Ala-Archa	46.63	314	eP	P	07 52 18.0	-0.3
	comp=Z,29nm,1.4s,mb5.0						
USP	Ospenovka	46.85	315	P	P	07 52 20.6	+0.6
	SNR=24						
AML	Almayashu	47.02	313	P	P	07 52 23.0	+1.6
	SNR=40						
EKS2	Erkin-Say	47.13	314	P	P	07 52 23.5	+1.2
	SNR=24						
FORT	Forrest	47.38	170	eP	P	07 52 23.6	-0.8
	comp=Z,1µm,0.7s						
KLBR	Kellerberrin	47.53	182	eP	P	07 52 24.2	-1.4
	comp=Z,306nm,0.6s						
KURK	Kurchatov	47.59	326	i P	P	07 52 25.8	0.0
KURK				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
KURK	Kurchatov	47.59	326	⇓iP	P	07 52 25.7	-0.1
	comp=Z,71nm,0.7s,mb5.8						
NVS	Novosibirsk	47.70	332	eP	P	07 52 24.0	-2.5
NVS				e		07 54 13.6	
NVS				pmax	pmax		
	comp=N,9.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,17nm,1.3s						
NVS				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.2						
NWAO	Narrogin (SRO)	48.88	183	P	P	07 52 35.3	-0.7
	comp=Z,21nm,0.7s,mb5.3,baz=8.6,slow=8.5,SNR=12						
NWAO	Narrogin (SRO)	48.88	183	eP	P	07 52 35.4	-0.6
	comp=Z,16nm,0.7s,mb5.2						
MA2	Magadan	48.92	20	d iP	P	07 52 35.7	-0.2
MA2				e*PP	pP	07 52 50.4	-1.9
MA2				eS	S	07 59 31.1	-2.7
MA2				e		07 59 43.1	
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
MA2				pmax	pmax		
	comp=E,4.0nm,0.6s						
MA2				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY	Seymchan	51.97	18	eP	P	07 52 58.8	-0.3
SEY				e		07 54 05.6	
SEY				e		08 00 18.5	
SEY				e		08 02 38.7	
SEY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
STKA	Stephens Creek	52.20	156	⇑iP	P	07 52 59.8	-1.5
	comp=Z,59nm,0.7s,mb5.6						
STKA	Stephens Creek	52.20	156	P	P	07 52 59.9	-1.4
	comp=Z,82nm,0.8s,mb5.7,baz=334,slow=7.1,SNR=157						
STKA				LR	LR	08 15 58.8	
	comp=Z,191nm,20.7s,baz=263,slow=37						
BVA0	Borovoye Array	53.18	325	i P	P	07 53 07.7	-0.6
BVA0				pmax	pmax		
	comp=Z,11nm,1.8s,mb4.5						
BVAR	Borovoye Array	53.18	325	P	P	07 53 07.8	-0.5
	comp=Z,13nm,0.7s,mb5.0,baz=117,slow=9.9,SNR=69						
CHKZ	Chkalovo	53.33	326	P	P	07 53 08.6	-0.8
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ARMA	Armidale	55.62	146	eP	P	07 53 25.7	-0.7
CNB	Canberra Magne	58.45	152	⇑iP	P	07 53 45.3	-1.0
	comp=Z,429nm,0.8s						
TOO	Toolangi	58.72	156	⇑iP	P	07 53 47.5	-0.7
	comp=Z,2.0nm,0.9s,mb4.2						
BILL	Bilibino	59.67	18	κ iP	P	07 53 53.5	-0.9
BILL						07 54 38.0	
BILL				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
BILL	Bilibino	59.67	18	⇓iP	P	07 53 53.4	-1.0
	comp=Z,6.0nm,0.8s,mb4.7						
SVE	Sverdlovsk	59.79	327	⇓eP	P	07 53 54.5	-0.8
SVE				e	pP	07 54 07.0	-5.2
SVE				pmax	pmax		
	comp=Z,84nm,1.7s,mb5.5						
GNI	Garni	68.32	307	i P	P	07 54 51.5	+0.3
GNI				pmax	pmax		
	comp=Z,40nm,1.6s						
GNI	Garni	68.32	307	P	P	07 54 52.1	+0.9
	comp=Z,8.9nm,0.8s,mb4.8,baz=320,slow=8.3,SNR=7.2						
GNI				LR	LR	08 25 51.8	
	comp=Z,136nm,18.6s,baz=106,slow=37						
GNI	Garni	68.32	307	eP	P	07 54 52.1	+1.0
	comp=Z,23nm,1.0s,mb5.2						
GOF	Gofitskoye	69.34	313	eP	P	07 54 57.5	+0.1
KIV	Kislovodsk	69.65	311	P	P	07 55 00.5	+1.2
	comp=Z,311nm,0.8s,SNR=10						
KIV	Kislovodsk	69.65	311	κ iP	P	07 54 59.6	+0.3
KIV				e		07 55 10.7	
KIV				e		07 55 23.4	
KIV				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.5						
KIV				MLR	MLR		
	comp=Z,200nm,17.0s						
KIV	Kislovodsk	69.65	311	eP	P	07 54 59.6	+0.4
	comp=Z,53nm,0.9s,mb5.5						
SOC	Sochi	71.82	311	eP	P	07 55 10.0	-2.4
SOC				e		07 55 33.4	
SOC				e		07 57 55.4	
SOC				ePPP	PPP	07 59 34.7	-1.4
SOC				eS	S	08 04 23.6	-3.0
SOC				e		08 05 03.3	
SOC				eSSS	SSS	08 12 10.3	-4.2
SOC				pmax	pmax		
	comp=N,36nm,0.8s						
SOC				pmax	pmax		
	comp=E,15nm,0.8s						
SOC				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
MOS	Moscow	72.33	324	eP	P	07 55 12.6	-2.5
MOS				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.5						
OBN	Obninsk	72.97	323	eP	P	07 55 18.2	-0.7
OBN				e		07 55 28.7	
OBN						07 58 02.9	
OBN				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,14.0s						
MALT	Malatya	73.38	306	⇑P	P	07 55 22.8	+1.1
MALT	Malatya	73.38	306	eP	P	07 55 22.8	+1.1
	comp=Z,30nm,1.5s,mb5.0						
APA	Apatity	73.76	336	⇓eP	P	07 55 23.4	+0.1
IMA	Indian Mountai	74.00	25	eP	P	07 55 26.1	+1.4
	comp=Z,88nm,1.3s,mb5.5						
JOF	Joensuu	75.00	332	ep	P	07 55 29.1	-1.4
	comp=Z,7.2nm,0.5s,mb4.9						
JOF	Joensuu	75.00	332	eP	P	07 55 29.1	-1.4
JOF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
ASF	Jabal al Asfar	75.57	300	P	P	07 55 35.7	+1.3
	comp=Z,9.6nm,0.9s,mb4.7,baz=349,slow=0.3,SNR=9.9						
RPZ	Rata Peaks	75.87	144	P	P	07 55 35.9	0.0
	comp=Z,25nm,1.0s,mb5.1,baz=255,slow=11,SNR=6.2						
MCK	McKinley	76.26	27	eP	P	07 55 38.0	+0.4
	comp=Z,15nm,1.3s,mb4.8						
ARCES	ARCESS Array B	76.43	339	P	P	07 55 38.0	-0.5
	comp=Z,2.7nm,0.6s,mb4.4,baz=71,slow=7.7,SNR=14						
ARCES				LR	LR	08 33 49.4	
	comp=Z,289nm,20.9s,baz=286,slow=39						
COLA	College	76.55	26	i P	P	07 55 40.0	+0.7
BRTR	Keskin Array B	76.85	308	P	P	07 55 41.1	-0.4
	comp=Z,2.8nm,0.9s,mb4.2,baz=118,slow=4.3,SNR=10						
ILAR	Eielson Array	76.97	26	P	P	07 55 40.4	-1.3
	comp=Z,1.1nm,0.6s,mb4.0,baz=270,slow=5.5,SNR=26						
ILAR				LR	LR	08 27 33.2	
	comp=Z,75nm,20.7s,baz=360,slow=34						
KAF	Kangasniemi	77.42	331	ep	P	07 55 42.8	-1.4
	comp=Z,8.5nm,0.6s,mb4.8,baz=76,slow=5.2						
KAF	Kangasniemi	77.42	331	eP	P	07 55 42.8	-1.4
KAF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
FINES	FINESS Array B	77.65	331	P	P	07 55 44.3	-1.2
	comp=Z,7.8nm,0.8s,mb4.7,baz=63,slow=6.4,SNR=36						
FINES				LR	LR	08 32 57.7	
	comp=Z,341nm,21.4s,baz=20,slow=38						
EIL	Elat	77.68	297	eP	P	07 55 46.8	+0.5
	comp=Z,30nm,1.3s,mb5.1						
AKASG	Malin Array Be	77.94	319	P	P	07 55 46.3	-1.0
	comp=Z,7.4nm,0.7s,mb4.7,baz=65,slow=5.0,SNR=20						
CSS	Prodhromos	77.98	303	⇓iP	P	07 55 48.3	+0.4
	comp=Z,35nm,0.8s,mb5.3						
TIRR	Tirgusor	79.74	313	⇑P	P	07 55 57.4	+0.1
CFR	Carcaliu	79.77	314	⇓P	P	07 55 57.6	+0.2
CFR	Carcaliu	79.77	314	⇑iP	P	07 55 57.6	+0.1
CFR	Carcaliu	79.77	314	⇑iP	P	07 55 57.6	+0.2
DAWY	Dawson	80.30	26	eP	P	07 56 01.1	+1.2
VRI	Vrincioaia	80.58	315	⇓P	P	07 56 02.6	+0.8
VRI	Vrincioaia	80.58	315	⇑iP	P	07 56 02.9	+1.1
VRI	Vrincioaia	80.58	315	⇑iP	P	07 56 02.8	+1.0
SUW	Suwalki	80.83	324	eP	P	07 56 02.4	-0.5
INK	Inuvik	81.16	21	eP	P	07 56 04.7	+0.3
	comp=Z,9.4nm,0.8s,mb4.8						
BURAR	Bucovina Array	81.18	317	⇓P	P	07 56 05.6	+0.7
MLR	Muntele Rosu	81.21	315	⇑P	P	07 56 06.0	+1.0
MLR	Muntele Rosu	81.21	315	⇑iP	P	07 56 05.5	+0.5
MLR	Muntele Rosu	81.21	315	⇑iP	P	07 56 05.5	+0.5
KOLS	Kolonicke sedl	82.73	319	eP	P	07 56 13.4	+0.6
KOLS				e		07 56 23.1	
KOLS	Kolonicke sedl	82.73	319	eP	P	07 56 13.4	+0.6
KOLS				e		07 56 15.7	
KOLS				e		07 56 23.1	
KMBO	Kilima Mbogo	83.03	267	i P	P	07 56 16.6	+1.5
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KMBO	Kilima Mbogo	83.03	267	P	P	07 56 17.2	+2.2
	comp=Z,3.1nm,0.7s,mb4.5,baz=49,slow=10,SNR=10						
KMBO	Kilima Mbogo	83.03	267	eP	P	07 56 17.3	+2.2
	comp=Z,11nm,1.3s,mb4.7						
CRVS	Cervenica-Dubn	83.25	319	eP	P	07 56 18.0	+2.6
CRVS				epP	pP	07 56 33.3	+0.1
MMB	Musomiste	83.77	311	eP	P	07 56 18.0	-0.3
NIE	Niedzica	83.82	320	eP	P	07 56 18.5	+0.2
VTS	Vitosha	83.87	312	⇑P	P	07 56 19.2	+0.5
VTS	Vitosha	83.87	312	⇑P	P	07 56 19.2	+0.5
VTS	Vitosha	83.87	312	eP	P	07 56 19.0	+0.3
OJC	Ojcow	83.89	320	eP	P	07 56 19.3	+0.6
DAG	Danmarks Havn	84.02	351	⇑eP	P	07 56 18.3	-0.5
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
DAG	Danmarks Havn	84.02	351	⇑eP	P	07 56 18.3	-0.5
	comp=Z,4.7nm,0.6s,mb4.8						
DAG	Danmarks Havn	84.02	351	⇑iP	P	07 56 18.3	-0.5
	comp=Z,4.7nm,0.6s,mb4.8						
BZS	Buzias	84.10	316	⇑P	P	07 56 20.1	+0.3
KKB	Krupnik	84.16	312	eP	P	07 56 20.0	-0.2
PSZ	Piszkesteto	84.54	318	eP	P	07 56 22.2	+0.3
	comp=Z,3.1nm,0.6s,mb4.6						
NB2	NORSAR Subarra	84.62	332	P	P	07 56 21.4	-0.6
	comp=Z,1.5nm,0.5s,mb4.4,baz=65,slow=4.5						
NOA	NORSAR Array B	84.62	332	P	P	07 56 21.3	-0.7
	comp=Z,2.7nm,0.6s,mb4.5,baz=67,slow=4.8,SNR=8.6						
NOA				LR	LR	08 36 26.9	
	comp=Z,338nm,21.9s,baz=65,slow=37						
NOA	NORSAR Array B	84.62	332	P	P	07 56 21.3	-0.7
NOA				LR	LR	08 36 26.9	
OKC	Ostrava-Krasne	85.03	320	eP	P	07 56 24.8	+0.5
VYHS	Vyhne	85.03	319	eP	P	07 56 25.5	+1.1
VYHS				e		07 56 37.9	
SKO	Skopje	85.30	312	i P	P	07 56 26.0	+0.1
GVD	Gavdhos	85.38	305	eP	P	07 56 26.4	0.0
	comp=Z,39nm,0.3s,mb6.0						
KSP	Ksiaz	85.80	322	eP	P	07 56 29.0	+0.9
KSP	Ksiaz	85.80	322	eP	P	07 56 29.2	+1.1
DPC	Dobruska-Polom	85.96	321	eP	P	07 56 30.1	+1.2
UPC	Upice	86.09	322	eP	P	07 56 30.6	+1.1
PVCC	Panska Ves	86.94	322	eP	P	07 56 35.1	+1.4
PRU	Pruhonice	87.16	321	eP	P	07 56 35.4	+0.6
BRG	Berggiesshubel	87.18	322	eP	P	07 56 35.9	+1.0
CLL	Collm	87.56	323	eP	P	07 56 37.0	+0.3
CLL	Collm	87.56	323	P	P	07 56 37.0	+0.3
KHC	Kasperske Hory	88.06	321	eP	P	07 56 36.3	-2.8
GERES	GERESS Array B	88.10	321	P	P	07 56 39.8	+0.5
	comp=Z,0.8nm,0.5s,mb4.2,baz=53,slow=6.7,SNR=5.4						
MBAR	Mbarara	89.14	269	eP	P	07 56 45.5	+0.5
	comp=Z,1.8nm,0.9s,mb4.4						
YKW3	Yellowknife Ar	90.83	22	eP	P	07 56 53.1	+1.3
YKA	Yellowknife Ar	90.87	22	i P	P	07 56 53.1	+1.0
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	Yellowknife Ar	90.87	22	P	P	07 56 53.1	+1.0
	comp=Z,2.7nm,0.7s,mb4.7,baz=316,slow=4.6,SNR=75						
YKA				LR	LR	08 45 11.1	
	comp=Z,95nm,18.4s,baz=320,slow=40						
MAW	Mawson	93.10	199	LR	LR	08 32 31.6	
	comp=Z,78nm,18.5s,baz=243,slow=31						
LPG	La Plagne	93.81	320	eP	P	07 57 06.5	+0.6
	comp=Z,8.0nm,0.7s,mb5.0						
LPL	La Plagne	93.81	320	eP	P	07 57 06.5	+0.6
	comp=Z,7.4nm,0.7s,mb4.9						
PPT	Papeete	95.46	107	eLR	LR	08 27 57.7	
	comp=Z,161nm,24.5s						
VNDA	Vanda	96.62	172	LR	LR	08 37 01.8	
	comp=Z,92nm,21.1s,baz=340,slow=33						
TBI	Tubuai	97.04	112	eLR	LR	08 28 41.4	
	comp=Z,180nm,29.5s						
SBA	Scott Base	97.59	171	P	P	07 57 20.9	-1.5
	comp=Z,2µm,2.8s						
VNA2	Neumayer--Watz	116.87	197	⇑iP	PKPdf	08 02 32.1	+0.7
VNA3	Neumayer Olymp	117.33	196	⇑iP	PKPdf	08 02 26.7	-5.6
TXAR	Lajitas Array	118.38	43	PKP	PKPdf	08 02 37.9	+2.5
	comp=Z,1.2nm,0.9s,baz=287,slow=1.3,SNR=9.6						
PLCA	Paso Flores	153.98	162	PKPbc	PKPdf	08 03 49.5	+11
	comp=Z,2.7nm,0.7s,baz=229,slow=3.6,SNR=2.9						

IDC 11 07:53:10.7±49.0, 28.40S×178.37E, mb3.7/3, mb1 3.9/3, mb1mx3.8/13, mbtmp3.7/3, Error ellipse: s-maj=873.0km s-min=148.5km az=93.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	31.90	255	P	P	07 59 37.9	-2.2
	0.5nm,0.3s,baz=103,slow=14,SNR=3.9						
ASAR	Alice Springs	40.07	266	P	P	08 00 48.0	-1.5
	0.4nm,0.6s,baz=101,slow=7.7,SNR=6.0						
WRA	Warramunga Arr	40.87	272	P	P	08 00 54.5	-1.6
	0.6nm,0.5s,baz=110,slow=7.9,SNR=7.1						

IGQ 11 08:05:16.6, 1.64S×80.74W, h12km±27km, mb4.3, 2C, Error ellipse: s-maj=14.3km s-min=5.3km az=160.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	Salinas	0.60	205	P	Pb	08 05 27.0	-1.5
SALI				S	Sb	08 05 36.5	-0.1
IGUA	Igualata	2.10	86	⇑P	Pn	08 05 53.0	+0.9
CUSU	Cusua	2.27	85	P	Pn	08 05 57.1	+2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JUIV	Juive	2.28	85	P	Pn	08 05 56.2	+1.5
RETU	Refugio	2.30	85	P	Pn	08 05 57.2	+2.3
ULBA	Ulba	2.34	85	P	Pn	08 05 57.4	+1.9
PISA	Pisayambo	2.42	76	P	Pn	08 05 58.1	+1.4
PISA				S	Sn	08 06 34.8	+8.3
NAS1	Nasa	2.47	66	P	Pn	08 06 00.4	+3.0
NAS1				S	Sn	08 06 38.5	+11
VC1	Cotopaxi 1	2.54	67	P	Pn	08 06 01.8	+3.4
TAMB	Tambo	2.55	68	P	Pn	08 06 00.6	+2.1
TERV	Terraza Guagua	2.58	56	P	Pn	08 05 59.5	+0.5
PINO	Pino	2.59	55	P	Pn	08 05 58.3	-0.8
YANA	Yana	2.64	55	P	Pn	08 05 59.1	-0.8
ANTI	Antisana	2.84	65	P	Pn	08 06 03.9	+1.3
ANTI				S	Sn	08 06 45.5	+8.5
COTA	Cotacachi	3.10	51	⇑P	Pn	08 06 07.3	+0.9
COTA				S	Sn	08 06 53.3	+10
CAYR	Refugio Cayamb	3.19	59	P	Pn	08 06 09.9	+2.3
CAYA	Cayambe	3.23	58	P	Pn	08 06 11.0	+2.8
LORE	San Lorenzo	3.48	33	P	Pn	08 06 13.8	+2.0
ECEN	Cerro Negro	3.69	49	P	Pn	08 06 16.1	+1.3
ECEN				S	Sn	08 07 06.5	+7.8

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*MOS **11** 08:08:14.6±1.0,52.06N×156.14E,h221^{km},mb3.7/11, Error ellipse: s-maj=22.7km s-min=10.0km az=57.5*

*KRSC **11** 08:08:14.0±1.1,51.63N×156.54E,h220^{km}±3^{km},ML4.3*

*NEIC **11** 08:08:15.9±0.6,51.95N×156.22E,h220^{km}±5^{km},mb4.1/10, Error ellipse: s-maj=10.1km s-min=5.6km az=137.0*

*IDC **11** 08:08:17.2±3.0,51.99N×156.17E,h233^{km}±28^{km}, mb3.5/13,mb1 3.8/15,mb1mx3.6/26,mbtmp4.2/15,Error ellipse: s-maj=18.2km s-min=12.3km az=140.0*

ISC 11 08:08:14.5±0.3,51.93N±0.06×156.29E±0.09,h220^{km}±2^{km}, n72,σ0^{s}90/93,mb3.7/20,1D,Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	0.45	40	iP	P	08 08 45.1	+1.0
PAU	Pauzhetka	0.57	145	iP	P	08 08 44.4	-0.1
PAU				eS	S	08 09 06.4	-1.3
PAU				Smax			
	7µm,0.7s						
APC	Apacha	1.13	28	iP	P	08 08 48.4	+0.9
APC				iS	S	08 09 13.4	+0.4
APC				Smax			
	140nm,1.0s						
ALID	Alaid	1.16	204	eP	P	08 08 47.9	+0.2
ALID				eS	S	08 09 12.6	-0.8
SKR	Severo-Kuril's	1.25	185	⇓iPN	P	08 08 43.6	-4.8
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				pmax	pmax		
	comp=N,310nm,0.2s						
SKR	Severo-Kuril's	1.25	185	iP	P	08 08 43.6	-4.8
SKR				eS	S	08 09 08.8	-5.8
GRL	Gorelyy	1.26	60	eP	P	08 08 48.8	+0.3
GRL				eS	S	08 09 14.1	-0.7
KRMR	Karymshinskiy	1.44	51	eP	P	08 08 50.1	+0.1
KRMR				eS	S	08 09 16.6	-0.7
RUS	Russkaya	1.46	69	eP	P	08 08 49.6	-0.5
RUS				iS	S	08 09 15.3	-2.2
PET	Petropavlovsk	1.81	52	P	P	08 08 53.0	-0.2
PET				S	S	08 09 21.6	-1.3
PET	Petropavlovsk	1.81	52	ePn	P	08 08 53.9	+0.7
PET				eS	S	08 09 21.6	-1.3
PET	Petropavlovsk	1.81	52	eP	P	08 08 53.1	-0.1
PET				eS	S	08 09 21.6	-1.3
KOK	Koryaka	1.98	45	eP	P	08 08 56.2	+1.5
KOK				eS	S	08 09 26.9	+1.3
AVH	Avacha	2.00	47	eP	P	08 08 56.0	+1.1
AVH				eS	S	08 09 26.1	0.0
UGLR	Uglovaya	2.01	49	iP	P	08 08 56.3	+1.3
UGLR				eS	S	08 09 26.6	+0.4
GNL	Ganaly	2.03	29	eP	P	08 08 56.5	+1.3
GNL				eS	S	08 09 27.2	+0.6
SDLR	Sedlovina	2.08	48	eP	P	08 08 56.7	+1.0
SDLR				eS	S	08 09 27.3	-0.2
NLC	Nalytchevo	2.24	55	P	P	08 08 56.7	-0.7
NLC				S	S	08 09 27.0	-3.5
NLC	Nalytchevo	2.24	55	eP	P	08 08 56.6	-0.8
NLC				eS	S	08 09 27.0	-3.5
SPN	Mys Shipunski	2.56	61	P	P	08 08 59.9	-0.9
SPN				S	S	08 09 32.3	-4.4
SPN	Mys Shipunski	2.56	61	iP	P	08 08 59.9	-0.9
SPN				iS	S	08 09 33.2	-3.5
KBTR	Krutoberegovo	5.76	39	P	P	08 09 40.3	+0.6
KBTR				S	S	08 10 42.2	-3.8
KBTR	Krutoberegovo	5.76	39	eP	P	08 09 40.3	+0.6
KBTR				eS	S	08 10 43.3	-2.7
BKI	Bering	6.63	57	eP	P	08 09 49.6	-1.3
FX1	Attu Island--F	10.36	78	PN	P	08 10 41.3	+2.5
FX1				S	S	08 12 33.2	+1.2
FX1				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FX1				smax			
	comp=E,5.0nm,0.3s						
FX1	Attu Island--F	10.36	78	P	P	08 10 41.3	+2.5
	comp=E,2.2nm,0.3s,baz=270,slow=16,SNR=5.0						
FX1				S	S	08 12 33.2	+1.2
	comp=E,4.8nm,0.3s,baz=94,slow=23,SNR=7.6						
ASAJ	Asahikawa	12.03	235	PN	P	08 11 01.5	+1.5
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	12.03	235	P	P	08 11 01.4	+1.4
	comp=Z,1.1nm,0.3s,baz=71,slow=9.2,SNR=11						
BILL	Bilibino	16.87	13	eP	P	08 11 59.6	+0.7
BILL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
BILL	Bilibino	16.87	13	eP	P	08 11 58.4	-0.6
	comp=Z,6.3nm,0.4s						
MAJO	Matsushiro	20.03	227	eP	P	08 12 32.3	+0.5
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s						
MAJO	Matsushiro	20.03	227	eP	P	08 12 32.3	+0.5
	comp=Z,10nm,0.6s						
MAT	Matsushiro	20.03	227	eP	P	08 12 32.0	+0.2
MAT				pmax	pmax		
	comp=Z,12nm,0.8s						
MAT	Matsushiro	20.03	227	eP	P	08 12 32.0	+0.2
	comp=Z,12nm,0.8s						
MAT	Matsushiro	20.03	227	P	P	08 12 32.4	+0.6
ILAR	Eielson Array	31.28	44	P	P	08 14 14.7	-0.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	31.28	44	P	P	08 14 14.7	-0.7
	comp=Z,1.4nm,0.7s,mb3.7,baz=268,slow=7.7,SNR=12						
ZAK	Zakamensk	32.68	289	eP	P	08 14 26.8	-0.8
INK	Inuvik	36.20	36	P	P	08 14 57.2	-0.1
INK						08 17 16.7	
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	36.20	36	P	P	08 14 57.2	-0.1
	comp=Z,0.7nm,0.4s,mb3.6,baz=284,slow=6.2,SNR=13						
INK				PcP	PcP	08 17 16.7	-1.3
	comp=Z,0.3nm,0.4s,baz=295,slow=6.1,SNR=5.0						
INK	Inuvik	36.20	36	eP	P	08 14 57.2	-0.1
INK				PcP	PcP	08 17 16.7	-1.3
YKA	Yellowknife Ar	45.58	41	P	P	08 16 13.2	-0.4
YKA						08 17 47.6	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	45.58	41	P	P	08 16 13.2	-0.3
	comp=Z,1.0nm,0.7s,mb3.2,baz=300,slow=7.7,SNR=19						
YKA				PcP	PcP	08 17 47.6	-0.9
	comp=Z,0.2nm,0.5s,baz=304,slow=3.6,SNR=5.3						
YKA	Yellowknife Ar	45.58	41	P	P	08 16 13.2	-0.3
YKA				PcP	PcP	08 17 47.6	-0.9
BVAR	Borovoye Array	49.27	307	P	P	08 16 41.5	-0.6
	comp=Z,0.5nm,0.3s,mb3.3,baz=55,slow=9.2,SNR=5.1						
YBH	Yreka Blue Hor	53.61	67	P	P	08 17 15.0	+0.3
YBH				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YBH	Yreka Blue Hor	53.61	67	P	P	08 17 15.0	+0.3
	comp=Z,1.3nm,0.6s,mb3.6,baz=23,slow=5.3,SNR=6.1						
ARCES	ARCESS Array B	53.64	341	P	P	08 17 13.2	-1.3
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	53.64	341	P	P	08 17 13.2	-1.4
	comp=Z,5.4nm,0.9s,mb4.1,baz=46,slow=7.3,SNR=6.6						
SUMG	Summit	55.37	5	eP	P	08 17 27.6	+0.7
	comp=Z,2.0nm,0.4s,mb4.0						
WVOR	Wild Horse Val	55.44	64	eP	P	08 17 27.8	0.0
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
WVOR	Wild Horse Val	55.44	64	eP	P	08 17 27.8	0.0
	comp=Z,2.0nm,0.4s,mb4.0						
FCC	Fort Churchill	55.82	36	eP	P	08 17 29.4	-0.9
FCC				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
FCC	Fort Churchill	55.82	36	eP	P	08 17 29.4	-0.9
	comp=Z,1.2nm,0.5s,mb3.7						
NVAR	Mina Array Bea	58.33	67	P	P	08 17 48.4	+0.1
	comp=Z,1.3nm,0.4s,mb3.9,baz=307,slow=6.3,SNR=15						
ELK	Elko	58.46	63	P	P	08 17 49.2	+0.1
ELK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ELK	Elko	58.46	63	P	P	08 17 49.2	+0.1
	comp=Z,0.6nm,0.4s,mb3.6						
HWUT	Hardware Ranch	59.86	60	eP	P	08 17 58.9	+0.2
	comp=Z,2.0nm,0.6s,mb3.9						
BW06	Boulder Array	60.12	58	eP	P	08 18 00.4	0.0
	comp=Z,2.4nm,0.8s,mb3.9						
PDAR	Pinedale Array	60.12	58	P	P	08 18 00.3	0.0
	comp=Z,3.2nm,1.0s,mb3.9,baz=330,slow=3.0,SNR=17						
DUG	Dugway	60.17	62	eP	P	08 18 01.1	+0.3
DUG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
DUG	Dugway	60.17	62	eP	P	08 18 01.1	+0.3
	comp=Z,1.3nm,0.7s,mb3.7						
NLU	North Lily Min	60.75	62	eP	P	08 18 04.6	0.0
NOA	NORSAR Array B	63.97	342	P	P	08 18 25.0	-0.5
NOA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NOA	NORSAR Array B	63.97	342	P	P	08 18 25.0	-0.4
	comp=Z,2.4nm,1.1s,mb3.7,baz=32,slow=5.2,SNR=2.5						
SCHQ	Schefferville	67.73	25	P	P	08 18 48.5	-0.9
	comp=Z,2.5nm,1.1s,mb3.8,baz=348,slow=9.3,SNR=3.3						
TXAR	Lajitas Array	73.24	64	P	P	08 19 23.1	+0.1
	comp=Z,1.2nm,0.4s,mb3.9,baz=300,slow=5.2,SNR=42						
WRA	Warramunga Arr	74.09	201	P	P	08 19 27.2	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	74.09	201	P	P	08 19 27.2	-0.9
	comp=Z,0.7nm,0.7s,mb3.4,baz=22,slow=6.4,SNR=5.4						
ASAR	Alice Springs	77.79	201	P	P	08 19 48.9	+0.2
	comp=Z,1.7nm,0.4s,mb4.0,baz=14,slow=5.2,SNR=45						
PLCA	Paso Flores	146.33	89	PKP2	PKPbc	08 27 29.5	+1.3
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	Paso Flores	146.33	89	PKPbc	PKPbc	08 27 29.5	+1.3
	comp=Z,1.0nm,0.5s,baz=270,slow=5.6,SNR=8.2						

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*BJI **11** 08:12:59.7,26.12N×92.18E,h15^{km},mb3.5,ML3.8*

ISC 11 08:13:13.3±1.4,26.46N±0.06×92.1E±0.1,h33^{km},n9, σ1^{s}62/14,Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	0.92	194	iP	P	08 13 30.5	+0.7
SHL				eS	S	08 13 45.5	+3.5
GTK	Gangtok	3.25	286	ePN	Pn	08 14 07.0	+3.6
LSA	Lhasa	3.34	345	PG	P	08 14 03.8	-0.7
LSA				S	S	08 14 44.0	+0.5
LSA				Smax			
	comp=N,110nm,0.5s						
LSA				Smax			
	comp=E,120nm,0.5s						
BOK	Bokaro	6.25	246	eP	P	08 14 46.4	+0.9
BOK				eS	S	08 15 58.1	+1.4
BOK				e		08 16 52.8	
	comp=N,89nm,1.1s						
BOK				e		08 16 53.7	
	comp=E,66nm,0.6s						
BWNR	Bhubaneshwar	8.45	225	eP	P	08 15 14.0	-2.3
BWNR				eS	S	08 16 46.0	-5.5
BWNR				e		08 16 51.4	
	comp=N,37nm,0.3s						
BWNR				e		08 16 51.5	
	comp=E,23nm,0.3s						
BLSP	Bilaspur	10.08	247	eP	P	08 15 38.8	-0.2
BLSP				eS	S	08 17 28.6	-3.4
BLSP				e		08 18 42.3	
	comp=N,36nm,0.4s						
BLSP				e		08 18 42.4	
	comp=E,18nm,0.5s						
KALG	Kalgarh	12.20	287	e	S	08 18 26.8	+3.2
	comp=E,31nm,0.2s						
SONA	Sohna	13.49	281	eS	S	08 18 50.9	-3.7
BHPL	Bhopal	13.73	260	eS	S	08 18 56.3	-4.0

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*CSEM **11** 08:23:03.4±0.2,37.76N×25.37W,h2^{km},ML2.7,Error ellipse: s-maj=8.4km s-min=4.1km az=177.0,After PDA*

*PDA **11** 08:23:03.4±1.0,37.76N×25.37W,h2^{km}±2^{km},MD2.6, ML2.7,Error ellipse: s-maj=2.1km s-min=1.9km az=171.0*

SVSA 11 08:23:03.4±1.0,37.76N×25.37W,h2^{km}±2^{km},MD2.6, ML2.7,Error ellipse: s-maj=2.1km s-min=1.9km az=171.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRA1	Furnas	0.02	146	iP	Pg	08 23 06.0	+2.0
PCNG	Congro	0.02	289	iP	Pg	08 23 05.9	+1.9
PCNG				iS	Sg	08 23 07.0	+2.6
VIF	Vila Franca	0.06	254	iP	Pg	08 23 05.0	+0.4
VIF				iS	Sg	08 23 06.5	+1.1
	3µm,0.3s						
MESC	Monte Escuro	0.07	299	iP	Pg	08 23 05.3	+0.5
MESC				iS	Sg	08 23 06.6	+0.8
MIRA	Miradouro	0.08	71	iP	Pg	08 23 07.2	+2.2
MIRA				iS	Sg	08 23 08.9	+2.8
PFAD	Fenais da Ajud	0.09	26	iP	Pg	08 23 07.2	+2.0
PFAD				iS	Sg	08 23 09.1	+2.7
LFA	Lagoa do Fogo	0.09	278	iP	Pg	08 23 05.7	+0.5
PRCH	Ribeira Ch	0.09	250	iP	Pg	08 23 05.5	+0.2
PRCH				iS	Sg	08 23 07.2	+0.7
	3µm,0.3s						
PMAT	Coroa da Mata	0.10	305	iP	Pg	08 23 05.6	+0.2
PMAT				iS	Sg	08 23 07.5	+0.8
	1µm,0.2s						
PVER	Pico Vermelho	0.12	288	iP	Pg	08 23 05.9	+0.1
CML	Cha da Macela	0.14	275	iP	Pg	08 23 06.5	+0.3
BART	Pico Bartolome	0.16	84	iP	Pg	08 23 07.1	+0.5
BART				eS	Sg	08 23 10.2	+1.4
	459nm,0.5s						
FAC	Faja de Cima	0.22	273	iP	Pg	08 23 08.6	+0.8
PDA	Ponta Delgada	0.23	267	eP	Pg	08 23 08.1	0.0
PDA				eS	Sg	08 23 11.2	0.0
PSET	Sete Cidades	0.28	283	iP	Pg	08 23 09.3	+0.2
PSET				eS	Sg	08 23 13.7	+0.8
	578nm,0.4s						
PSAN	Santo Antonio	0.29	288	eP	Pg	08 23 09.6	+0.3
PFET	Feteiras	0.34	280	eP	Pg	08 23 10.1	0.0
SET2	Ginetes	0.35	284	eP	Pg	08 23 10.4	-0.1
SET4	Mosteiros	0.36	289	eP	Pg	08 23 10.4	-0.2
PSMN	Pico do Norte,	0.79	162	eP	Pg	08 23 17.3	-2.0
PSMN				eS	Sg	08 23 28.0	-1.8

IDC 11 08:31:06.4±25.0,18.76S×173.34W,mb4.1/4,mb1 4.2/4, mb1mx3.8/17,mbtmp4.1/4,Error ellipse: s-maj=471.0km s-min=159.6km az=74.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.07	261	P	P	08 38 28.0	-0.7
	3.5nm,0.4s,baz=88,slow=10,SNR=6.2						
STKA	Stephens Creek	42.50	243	P	P	08 39 03.0	-2.3
	1.0nm,0.5s,baz=95,slow=11,SNR=3.8						
ASAR	Alice Springs	49.21	255	P	P	08 39 56.4	-2.3
	2.0nm,1.0s,baz=92,slow=8.1,SNR=18						
WRA	Warramunga Arr	49.22	260	P	P	08 39 56.9	-1.9
	1.2nm,0.7s,baz=94,slow=7.6,SNR=26						

IDC 11 08:51:02.5±2.0,0.05S×123.62E,mb3.2/3,mb1 3.5/3, mb1mx3.4/15,mbtmp3.3/3,Error ellipse: s-maj=217.7km s-min=26.5km az=69.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.39	153	P	P	08 56 01.6	-2.4
	0.4nm,0.4s,baz=329,slow=11,SNR=6.7						
ASAR	Alice Springs	25.51	158	P	P	08 56 33.7	-0.7
	0.2nm,0.5s,baz=330,slow=8.2,SNR=5.1						
SONM	Songino Array	49.99	345	P	P	08 59 58.5	-2.0
	0.4nm,0.6s,baz=160,slow=8.4,SNR=5.0						

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*IDC **11** 08:53:06.1±0.9,9.28N×126.56E,mb3.9/6,mb1 4.1/6, mb1mx3.9/18,mbtmp3.9/6,Error ellipse: s-maj=111.3km s-min=20.8km az=75.0*

*MAN **11** 08:53:09.2,9.46N×126.77E,h7^{km},mb4.7,ML3.6,MS3.6*

ISC 11 08:53:09.7±1.2,9.40N±0.05×126.94E±0.07,h34^{km}±12^{km}, n19,σ1^{s}19/27,mb3.8/6,3C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.33	205	⇑eP	P	08 53 32.1	-0.1
BIPH				eS	S	08 53 47.4	-1.6
BUTP	Butuan	1.37	252	eP	P	08 53 32.2	-0.5
BUTP				eS	S	08 53 51.0	+1.1
SCPH	Surigao	1.48	285	eP	P	08 53 33.1	-1.1
SCPH				iS	S	08 53 51.3	-1.3
MSLP	Maasin	2.18	290	eP	P	08 53 45.2	+1.0
MSLP				eS	S	08 54 16.3	+6.0
BUKP	Musuan	2.39	231	eP	P	08 53 48.7	+1.4
BUKP				eS	S	08 54 19.2	+3.5
CGP	Cagayan de Oro	2.41	247	⇓eP	P	08 53 48.8	+1.2
CGP				eS	S	08 54 17.4	+1.3
PLP	Palo	2.61	313	eP	P	08 53 48.8	-1.6
PLP				eS	S	08 54 20.1	-1.1
TBP	Tagbilaran	3.05	276	eP	P	08 53 57.8	+1.1
TBP				eS	S	08 54 28.9	-3.5
DCPH	Dipolog City	3.63	257	⇑eP	P	08 54 04.8	-0.2
DCPH				eS	S	08 54 45.6	-1.7
GUIM	Jordan	4.45	286	eP	P	08 54 17.8	+1.2
RCP	Roxas	4.65	298	⇑eP	P	08 54 19.9	+0.4
PVCP	Virac	4.99	327	eP	P	08 54 25.0	+0.8
WRA	Warramunga Arr	30.05	166	P	P	08 59 16.3	-1.7
	0.9nm,0.8s,mb3.5,baz=343,slow=9.7,SNR=3.0						
ASAR	Alice Springs	33.56	168	P	P	08 59 47.8	-1.0
	0.3nm,0.4s,mb3.6,baz=352,slow=7.1,SNR=8.0						
SONM	Songino Array	42.06	339	P	P	09 00 59.4	-0.5
	0.3nm,0.4s,mb3.3,baz=159,slow=9.3,SNR=7.0						
ARCES	ARCESS Array B	85.24	340	P	P	09 05 44.1	+0.5
	3.9nm,0.8s,mb4.6,baz=79,slow=6.2,SNR=6.2						
FINES	FINESS Array B	86.97	332	P	P	09 05 52.6	+0.3
	1.7nm,0.8s,mb4.3,baz=72,slow=6.0,SNR=4.7						
YKA	Yellowknife Ar	94.28	24	P	P	09 06 28.1	+1.7
	0.2nm,0.6s,mb3.7,baz=298,slow=4.3,SNR=6.9						
PLCA	Paso Flores	145.15	156	PKPbc	PKPbc	09 12 46.0	+1.7
	3.9nm,1.3s,baz=214,slow=3.7,SNR=3.6						

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*NEIC **11** 09:29:00.1±1.0,8.43N×93.59E,h30^{km},mb4.3/2,Error ellipse: s-maj=24.7km s-min=19.4km az=72.0*

*IDC **11** 09:29:04.7±9.4,8.54N×93.82E,h67^{km}±78^{km},mb3.7/8, mb1 4.0/9,mb1mx3.8/18,mbtmp4.1/9,ML4.8/1,MS3.5/1, Ms1 3.5/1,ms1mx2.5/22,Error ellipse: s-maj=79.7km s-min=26.2km az=55.0*

ISC 11 09:28:58.4±1.1,8.5N±0.2×93.7E±0.2,h30^{km},n12, σ0^{s}78/11,mb4.0/10,MS3.5/1,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.17	27	P	P	09 31 40.1	+0.8
	1.8nm,0.3s,baz=214,slow=15,SNR=20						
LSA	Lhasa	21.25	354	eP	P	09 33 43.0	-1.4
	4.0nm,0.5s,mb4.0						
JOW	Kunigami	37.51	56	LR	LR	09 54 12.2	
	comp=Z,71nm,19.3s,MS3.5,baz=314,slow=40						
SONM	Songino Array	40.69	13	P	P	09 36 37.4	-0.4
	0.2nm,0.5s,mb3.0,baz=198,slow=4.6,SNR=4.3						
ZAL	Zalesovo	45.90	353	P	P	09 37 20.8	+0.8
	2.1nm,0.3s,mb4.5,baz=288,slow=7.1,SNR=7.8						
BVAR	Borovoye Array	48.28	341	P	P	09 37 37.6	-1.1
	0.6nm,0.4s,mb4.0,baz=153,slow=9.7,SNR=3.6						
CHKZ	Chkalovo	48.77	342	eP	P	09 37 42.3	-0.1
	2.3nm,0.5s,mb4.5						
WRA	Warramunga Arr	48.98	126	P	P	09 37 44.2	-0.4
	1.5nm,1.3s,mb3.9,baz=307,slow=8.5,SNR=5.1						
FINES	FINESS Array B	71.97	332	P	P	09 40 21.2	+0.3
	7.5nm,1.1s,mb4.5,baz=90,slow=5.6,SNR=3.9						
ARCES	ARCESS Array B	74.55	340	P	P	09 40 36.8	+0.9
	4.0nm,0.9s,mb4.3,baz=101,slow=6.2,SNR=4.7						
GERES	GERESS Array B	77.08	318	P	P	09 40 51.5	+1.0
	0.3nm,0.3s,mb3.7,baz=76,slow=5.5,SNR=5.7						
NOA	NORSAR Array B	78.99	331	P	P	09 41 00.4	-0.4
	1.0nm,0.7s,mb3.8,baz=95,slow=5.5,SNR=3.3						

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*IDC **11** 09:31:51.8±1.2,24.91N×123.65E,mb3.5/4,mb1 3.7/4, mb1mx3.6/20,mbtmp3.5/4,Error ellipse: s-maj=85.2km s-min=23.9km az=78.0*

*JMA **11** 09:31:53.9±0.2,24.84N×123.32E,h27^{km}±4^{km},M3.2*

ISC 11 09:31:53.9±1.4,24.8N±0.1×123.33E±0.05,h26^{km}±11^{km}, n10,σ0^{s}34/14,mb3.4/4,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.46	219	P	Pb	09 32 03.4	0.0
YOJ				S	Sb	09 32 09.9	-0.1
IRIF	Iriomote-Funau	0.61	143	P	Pb	09 32 06.0	+0.1
JKRS	Kuro-shima	0.85	133	P	Pb	09 32 09.9	-0.1
JKRS				eS	Sb	09 32 21.5	+0.5
JIJ	Ishigaki jima	0.87	121	P	Pb	09 32 09.6	-0.7
JIJ				eS	Sb	09 32 21.4	-0.2
HATJ	Hateruma jima	0.88	150	P	Pb	09 32 10.6	+0.2
HATJ				eS	Sb	09 32 21.8	0.0
JTJ	Tarama	1.27	98	P	Pn	09 32 16.5	+0.3
SONM	Songino Array	26.60	334	P	P	09 37 32.5	+0.6
	0.6nm,0.7s,mb3.2,baz=153,slow=8.3,SNR=5.7						
WRA	Warramunga Arr	45.77	165	P	P	09 40 15.2	-0.2
	0.7nm,0.7s,mb3.7,baz=348,slow=8.7,SNR=8.3						
ASAR	Alice Springs	49.28	167	P	P	09 40 42.6	-0.1
	0.2nm,0.6s,mb3.4,baz=353,slow=14,SNR=5.9						
YKA	Yellowknife Ar	81.62	23	P	P	09 44 10.2	-0.5
	0.2nm,0.8s,mb3.1,baz=314,slow=4.5,SNR=8.1						

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*IDC **11** 09:49:42.8±4.4,22.49S×168.91E,mb3.6/4,mb1 3.9/4, mb1mx3.7/13,mbtmp3.6/4,MS3.3/1,Ms1 3.3/1, ms1mx2.8/13,Error ellipse: s-maj=166.3km s-min=40.3km az=151.0*

ISC 11 09:49:43.6±1.5,23.3S±0.3×169.2E±0.2,h33^{km},n9, σ0^{s}70/8,mb3.5/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.81	296	eP	P	09 50 26.2	-1.0
DZM				eS	S	09 51 00.6	+0.3
NOUC	Port Laguerre	2.91	295	eP	P	09 50 27.7	-1.0
NOUC				eS	S	09 51 03.5	+0.6
URZ	Urewera	16.35	157	LR	LR	09 59 00.2	
	comp=Z,99nm,19.0s,baz=251,slow=32						
ASAR	Alice Springs	32.28	262	P	P	09 56 12.3	+0.6
	0.3nm,0.5s,mb3.4,baz=80,slow=9.2,SNR=9.4						
WRA	Warramunga Arr	32.50	269	P	P	09 56 13.0	-0.6
	0.4nm,0.7s,mb3.4,baz=98,slow=8.2,SNR=3.0						
CMAR	Chiang Mai Arr	80.14	295	P	P	10 01 53.3	+0.8
	0.6nm,0.5s,mb3.8,baz=121,slow=5.3,SNR=4.7						
SONM	Songino Array	90.44	323	P	P	10 02 43.3	+0.3
	0.3nm,0.8s,mb3.6,baz=150,slow=5.5,SNR=5.3						
EKA	Eskdalemuir Ar	147.54	352	PKPbc	PKPdf	10 09 24.5	+3.1
	0.7nm,0.7s,baz=297,slow=1.9,SNR=4.2						
GERES	GERESS Array B	148.00	329	PKPbc	PKPdf	10 09 26.7	+4.4
	0.2nm,0.3s,baz=342,slow=4.2,SNR=4.9						

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*CSEM **11** 09:59:46.8±0.3,50.30N×18.82E,h1^{km}±1^{km},ML2.7,Error ellipse: s-maj=8.4km s-min=3.8km az=15.0*

*NEIC **11** 09:59:47.6±0.9,50.19N×18.88E,h5^{km},ML2.7(VIE),Error ellipse: s-maj=16.3km s-min=7.9km az=177.0*

*PRU **11** 09:59:47.3,50.31N×18.77E*

WAR 11 09:59:46.1,50.26N×18.86E,h0^{km},ML2.7,1C-1D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.47	248	ePG	Pg	09 59 56.0	+0.6
RAC				eSG	Sg	10 00 04.0	+2.4
OJC	Ojcow	0.60	94	ePG	Pg	09 59 58.0	-0.1
OJC				eSG	Sg	10 00 07.0	+0.8
OKC	Ostrava-Krasne	0.63	228	ePG	Pg	09 59 58.6	0.0
OKC				eSG	Sg	10 00 09.0	+2.1
MORC	Moravsky Berou	0.98	241	ePg	Pg	10 00 05.0	-0.7

MORC				*e*Sg	Sg	10 00 17.9	-0.8
MORC	Moravsky Berou	0.98	241	*e*Pg	Pg	10 00 05.0	-0.7
MORC				*e*Sg	Sg	10 00 17.9	-0.8
NIE	Niedzica	1.26	131	*e*PG	Pg	10 00 10.0	-1.3
NIE				*e*SG	Sg	10 00 28.0	-0.1
DPC	Dobruska-Polom	1.63	274	*e*PG	Pg	10 00 15.4	-3.3
DPC				*e*SG	Sg	10 00 37.1	-3.3
	40nm,0.3s						
KSP	Ksiaz	1.74	291	*e*PG	Pg	10 00 19.0	-1.8
KSP				*e*SG	Sg	10 00 42.0	-2.0
KSP	Ksiaz	1.74	291	⇓*i*Pg	Pg	10 00 19.1	-1.7
KSP				*e*Sg	Sg	10 00 41.8	-2.2
VRAC	Vranov	1.75	238	*e*Pn	Pn	10 00 17.5	-0.4
VRAC				*e*Sg	Sg	10 00 40.9	-3.5
VYHS	Vyhne	1.77	181	*e*PN	Pn	10 00 17.6	-0.5
VYHS				*e*SN	Sn	10 00 42.4	+0.8
UPC	Upice	1.84	279	*e*SG	Sg	10 00 42.9	-4.5
CRVS	Cervenica-Dubn	2.17	128	*e*PN	Pn	10 00 24.2	+0.3
CRVS				*e*SN	Sn	10 00 54.6	+2.8
PRU	Pruhonice	2.79	266	*e*SG	Sg	10 01 12.7	-6.4
KHC	Kasperske Hory	3.61	254	*e*PG	Pg	10 00 55.0	-3.2
KHC				*e*SG	Sg	10 01 40.7	-5.6
MOA	Molln	3.87	233	⇑*i*PN	Pn	10 00 48.1	0.0
MOA				*i* SG	Sg	10 01 50.3	-4.6
	5.1nm,0.5s						

IDC 11 10:32:09.8±11.0, 7.64S×157.09E, h351^{km}±105^{km}, mb3.1/4, mb1 3.4/4, mb1mx3.2/13, mbtmp3.7/4, Error ellipse: s-maj=136.3km s-min=33.1km az=126.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.21	239	P	P	10 37 05.2	-1.5
	0.7nm,0.4s,baz=65,slow=8.7,SNR=20						
WRA				PcP	PcP	10 40 27.6	-2.7
	0.2nm,0.5s,baz=66,slow=3.0,SNR=5.9						
ASAR	Alice Springs	27.36	232	P	P	10 37 23.9	-2.1
	0.4nm,0.5s,baz=61,slow=9.2,SNR=7.6						
ASAR				PcP	PcP	10 40 33.0	-2.2
	0.2nm,0.5s,baz=88,slow=2.2,SNR=3.8						
ILAR	Eielson Array	83.21	21	P	P	10 43 56.5	-1.7
	0.3nm,0.4s,baz=260,slow=5.3,SNR=7.4						
YKA	Yellowknife Ar	95.93	28	P	P	10 44 57.8	-0.3
	0.1nm,0.6s,baz=266,slow=4.8,SNR=6.4						

IDC 11 11:12:42.9±1.1, 5.53N×93.02E, mb4.0/8, mb1 4.2/9, mb1mx4.0/19, mbtmp4.0/9, ML3.7/1, Error ellipse: s-maj=51.2km s-min=17.4km az=59.0

NEIC 11 11:12:47.5±0.6, 5.55N×93.05E, h30^{km}, mb4.4/2, Error ellipse: s-maj=19.9km s-min=8.3km az=63.0

ISC 11 11:12:46.0±0.9, 5.6N±0.1×93.1E±0.2, h33^{km}, n15, σ0^{s}40/13, mb4.1/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.04	24	Pn	P	11 16 05.0	+0.1
	0.1nm,0.3s,baz=220,slow=14,SNR=8.9						
SONM	Songino Array	43.64	13	P	P	11 20 49.1	-0.1
	1.4nm,0.6s,mb3.9,baz=196,slow=8.2,SNR=17						
WRA	Warramunga Arr	47.83	123	P	P	11 21 22.7	-0.2
	2.3nm,0.7s,mb4.3,baz=301,slow=9.0,SNR=22						
WRAB	Tennant Creek	47.83	123	*e*P	P	11 21 22.8	-0.1
	5.1nm,0.7s,mb4.7						
WB2	Warramunga Arr	47.84	123	*e*P	P	11 21 23.1	+0.1
ZAL	Zalesovo	48.70	353	P	P	11 21 29.9	+0.8
	1.8nm,0.5s,mb4.4,baz=291,slow=7.0,SNR=7.5						
ZAL	Zalesovo	48.70	353	P	P	11 21 29.9	+0.8
ASAR	Alice Springs	49.29	128	P	P	11 21 34.2	+0.1
	0.7nm,0.6s,mb3.9,baz=300,slow=8.0,SNR=14						
ASAR				PcP	PcP	11 22 57.4	+0.5
	0.5nm,0.6s,baz=302,slow=3.4,SNR=6.9						
BVAR	Borovoye Array	50.85	343	P	P	11 21 45.1	-0.5
	0.5nm,0.5s,mb3.7,baz=121,slow=8.4,SNR=4.0						
CHKZ	Chkalovo	51.35	343	*e*P	P	11 21 48.7	-0.7
	4.3nm,1.3s,mb4.2						
STKA	Stephens Creek	59.31	132	P	P	11 22 47.3	0.0
	2.5nm,0.9s,mb4.2,baz=291,slow=8.6,SNR=4.2						
ARCES	ARCESS Array B	77.08	341	P	P	11 24 37.4	-0.1
	1.2nm,0.6s,mb4.0,baz=90,slow=7.3,SNR=3.9						
GERES	GERESS Array B	78.85	319	P	P	11 24 48.1	+0.6
	0.5nm,0.3s,mb3.9,baz=135,slow=1.9,SNR=5.5						
TXAR	Lajitas Array	141.75	24	PKhKP		11 32 13.4	
	0.1nm,0.5s,baz=161,slow=34,SNR=3.1						
TXAR				PKiKP		11 32 20.3	
	0.2nm,0.5s,baz=72,slow=0.4,SNR=4.6						
TXAR	Lajitas Array	141.75	24	PKP	PKPdf	11 32 13.4	-1.7
TXAR				PKPdf	PKPdf	11 32 20.3	+5.2

NEIC 11 11:25:54.3, 60.19N×152.98W, h108^{km}, After AEIC.

IDC 11 11:25:56.1±4.1, 60.50N×152.77W, h123^{km}±28^{km}, mb3.5/2, mb1 3.4/6, mb1mx3.2/23, mbtmp3.7/6, Error ellipse: s-maj=36.3km s-min=23.6km az=26.0

ISC 11 11:25:51.8±0.3, 60.19N±0.03×152.93W±0.06, h122^{km}±3^{km}, n80, σ0^{s}79/97, mb4.0/2, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIM	Iliamna	0.11	188	P	P	11 26 08.7	0.0
ILIM				S	S	11 26 20.3	-0.9
INE	Iliamna NE	0.14	208	P	P	11 26 08.8	+0.1
INE				S	S	11 26 20.9	-0.5
ILW	Iliamna West	0.16	219	P	P	11 26 08.8	+0.1
ILW				S	S	11 26 20.9	-0.6
RSO	Redoubt South	0.29	17	*e*P	P	11 26 09.3	+0.3
RDN	Redoubt North	0.34	14	P	P	11 26 09.6	+0.3
NCT	North Crescent	0.38	0	P	P	11 26 09.7	+0.2
NCT				S	S	11 26 22.1	-0.7
DFR	Drift River	0.43	16	P	P	11 26 09.6	-0.1
OPT	Oil Point	0.56	196	P	P	11 26 10.9	+0.4
OPT				S	S	11 26 24.8	+0.1
HOM	Homer	0.84	129	P	P	11 26 13.7	+1.0
HOM				S	S	11 26 29.9	+1.4
AUE	Augustine Isla	0.86	195	P	P	11 26 13.1	+0.2
AUW	Augustine West	0.86	199	P	P	11 26 13.4	+0.4
AUI	Augustine Isla	0.89	197	P	P	11 26 13.5	+0.3
AUI				S	S	11 26 28.8	-0.5
XLV	Seldovia	0.95	140	P	P	11 26 14.3	+0.4
NKA	Nikishka	1.01	56	P	P	11 26 16.5	+2.1
CNPM	China Poot	1.08	127	P	P	11 26 16.0	+0.8
CNPM				S	S	11 26 32.6	0.0
SPU	Mount Spurr	1.09	23	*e*P	P	11 26 15.6	+0.4
CKN	Chakachatna No	1.11	19	P	P	11 26 16.1	+0.7
BRLK	Bradley Lake	1.11	111	P	P	11 26 15.9	+0.4
MCNL	McNeil River	1.23	216	P	P	11 26 16.8	0.0
SLKM	Skilak Lake	1.39	75	P	P	11 26 19.1	+0.6
STLK	Strandline Lak	1.42	22	P	P	11 26 19.6	+0.6
VOGL	Vogel Lake	1.48	56	P	P	11 26 21.5	+2.0
SVW2	Sparrevohn	1.59	306	*e*P	P	11 26 19.4	-1.5
SYI	Shuyak Island	1.60	170	P	P	11 26 21.5	+0.5
FIB	Fire Island	1.68	53	P	P	11 26 23.6	+1.8
SEW	Seward	1.74	91	P	P	11 26 23.4	+0.7
KAPH	Katmai Pasha	1.75	205	P	P	11 26 23.4	+0.6
KAPH				S	S	11 26 45.7	-0.5
RC01	Rabbit Creek A	1.82	59	P	P	11 26 24.2	+0.6
RC01				S	S	11 26 48.4	+0.8
KAHC	Katmai Hardscr	1.87	215	P	P	11 26 24.6	+0.4
KAHC				S	S	11 26 47.9	-0.9
KAIC	Katmai Ikaglui	2.02	213	P	P	11 26 26.2	+0.2
KAWH	Katmai	2.04	209	P	P	11 26 26.8	+0.4
PWA	Palmer West	2.09	44	*e*P	P	11 26 27.5	+0.5
PMR	Palmer	2.33	51	P	P	11 26 29.6	-0.5
PMR				S	S	11 26 58.1	-1.1
PWL	Port Wells	2.37	71	P	P	11 26 30.1	-0.6
KDAK	Kodiak Island	2.42	176	P	P	11 26 30.4	-0.9
KDAK				S	S	11 26 59.8	-1.4
KNK	Knik Glacier	2.52	59	P	P	11 26 32.1	-0.5
GHO	Glory Hole Cre	2.52	49	P	P	11 26 32.4	-0.3
LTI	Latouche	2.55	91	P	P	11 26 32.6	-0.4
CUT	Chulitna	2.57	29	P	P	11 26 33.9	+0.6
SML	Sawmill	2.77	52	P	P	11 26 35.5	-0.5
GLI	Glacier Island	2.97	74	P	P	11 26 37.0	-1.6
TT01	Tatalina	3.11	333	P	P	11 26 40.0	-0.5
SCM	Sheep Creek Mo	3.19	56	P	P	11 26 41.1	-0.5
HIN	Hinchinbrook I	3.21	83	P	P	11 26 40.6	-1.2
FID	Port Fidalgo	3.25	77	P	P	11 26 40.3	-2.1
VLZ	Valdez	3.38	71	P	P	11 26 43.2	-1.0
TRF	Thorofare Moun	3.51	20	P	P	11 26 46.2	+0.3
KTH	Kantishna Hill	3.51	15	P	P	11 26 46.1	+0.2
EYAK	Cordova Ski Ar	3.59	81	P	P	11 26 45.1	-1.8
DIV	Divide	3.65	72	P	P	11 26 46.7	-1.0
MCK	McKinley	4.03	26	P	P	11 26 53.1	+0.3
KAIM	Kayak Island	4.28	90	P	P	11 26 55.9	-0.3
BWN	Browne	4.32	21	P	P	11 26 57.3	+0.6
PAX	Paxson	4.53	49	P	P	11 26 59.6	0.0
GLB	Gilahina Butte	4.64	70	P	P	11 27 00.2	-0.9
THY	Trims Highway	4.70	43	*e*P	P	11 27 02.5	+0.6
HDA	Harding Lake	5.07	31	P	P	11 27 06.8	0.0
CCB	Clear Creek Bu	5.07	26	P	P	11 27 06.5	-0.4
MENT	Mentasta	5.20	54	*e*P	P	11 27 09.3	+0.8
COLA	College	5.26	24	*e*P	P	11 27 09.7	+0.3
MDM	Murphy Dome	5.26	22	P	P	11 27 09.2	-0.2
BALM	Baldy	5.29	76	P	P	11 27 08.8	-0.9
IL1	Eielson Array	5.39	29	P	P	11 27 10.8	-0.2
ILAR	Eielson Array	5.39	29	P	P	11 27 10.8	-0.3
	2.4nm,0.3s,baz=209,slow=13,SNR=50						
ILAR				S	S	11 28 06.8	-5.7
	1.7nm,0.3s,baz=217,slow=24,SNR=5.0						
YAH	Yahtse	5.57	83	P	P	11 27 14.4	+0.9
IM3	Indian Mountai	5.83	357	P	P	11 27 17.2	+0.2
IMA	Indian Mountai	5.92	357	*e*P	P	11 27 18.6	+0.4
BCA3	Beaver Creek A	6.05	57	P	P	11 27 19.8	-0.2
PCA	Pinnacle	6.33	85	P	P	11 27 24.3	+0.4
PNL	Peninsula	6.82	88	P	P	11 27 30.7	+0.1
COLD	Coldfoot	7.17	9	P	P	11 27 35.4	0.0
BM3	Burnt Mountain	8.13	23	P	P	11 27 46.8	-1.6
WHY	Whitehorse	8.94	79	P	P	11 27 58.5	-0.6
INK	Inuvik	11.67	38	P	P	11 28 35.8	+0.6
	0.1nm,0.3s,baz=260,slow=12,SNR=9.0						
INK				S	S	11 30 40.5	-2.9
	0.1nm,0.3s,baz=275,slow=18,SNR=2.6						
DLBC	Dease Lake	11.82	89	P	P	11 28 38.9	+1.8
	0.4nm,0.3s,baz=236,slow=7.3,SNR=15						
DLBC				S	S	11 30 47.1	+0.2
	0.1nm,0.3s,baz=205,slow=19,SNR=3.1						
DLBC	Dease Lake	11.82	89	P	P	11 28 38.9	+1.8
DLBC				S	S	11 30 47.1	+0.3
YKA	Yellowknife Ar	18.34	66	P	P	11 29 59.5	+0.7
	0.1nm,0.3s,baz=279,slow=10,SNR=21						
YKA				ScP		11 37 48.8	
	0.0nm,0.3s,baz=291,slow=2.1,SNR=6.1						
YKA	Yellowknife Ar	18.34	66	P	P	11 29 59.5	+0.7
YKA				ScP		11 37 48.9	
ZAL	Zalesovo	57.26	324	P	P	11 35 28.8	+0.7
	0.7nm,0.4s,mb4.0,baz=102,slow=6.5,SNR=3.3						
BVAR	Borovoye Array	61.92	332	P	P	11 35 59.8	-0.2
	1.1nm,0.7s,mb4.0,baz=53,slow=7.2,SNR=6.0						

IDC 11 11:31:28.1±2.2, 10.52N×91.68E, mb4.1/4, mb1 4.2/5, mb1mx3.9/18, mbtmp3.9/5, ML3.9/1, MS2.9/1, Ms1 3.1/1, ms1mx2.7/17, Error ellipse: s-maj=72.1km s-min=23.0km az=74.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.57	41	Pn	P	11 34 00.8	-3.2
	0.3nm,0.3s,baz=236,slow=13,SNR=6.3						
CMAR				LR	LR	11 38 12.4	
	comp=Z,70nm,20.4s,baz=14,slow=38						
VIS	Vishakhapatnam	10.81	312	*i* P	P	11 33 59.0	-8.3
VIS				*i* S	S	11 35 49.5	-21
SONM	Songino Array	39.21	16	P	P	11 38 58.1	-1.6
	1.6nm,0.8s,baz=210,slow=8.0,SNR=14						
ZAL	Zalesovo	43.65	354	P	P	11 39 34.2	-1.8
	0.9nm,0.3s,baz=170,slow=6.0,SNR=3.3						
WRA	Warramunga Arr	51.77	126	P	P	11 40 37.8	-2.2
	2.1nm,0.7s,baz=305,slow=8.5,SNR=23						
ASAR	Alice Springs	53.47	130	P	P	11 40 50.5	-2.1
	2.9nm,0.8s,baz=307,slow=6.6,SNR=27						
ASAR				PcP	PcP	11 41 57.4	-2.3
	0.5nm,0.7s,baz=295,slow=4.1,SNR=3.9						

NNC 11 11:40:52.4±28.0, 41.74N×87.35E, mpv2.4, Error ellipse: s-maj=197.7km s-min=145.8km az=145.0

BJI 11 11:40:56.4, 42.53N×88.52E, h29^{km}, ML2.7, 2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	1.43	335	*e*P	Pn	11 41 23.5	+2.8
WMQ				S	Sn	11 41 49.2	+11
WMQ				Smax			
	comp=N,87nm,0.5s						
WMQ				Smax			
	comp=E,121nm,0.5s						
MK31	Makanchi Array	6.16	316	Pn	Pn	11 42 25.6	-2.3
	comp=E,0.1nm,0.3s,baz=131,slow=13,SNR=11						
MK31				⇓Sn	Sn	11 43 38.2	+0.1
	comp=E,0.2nm,0.3s,baz=142,slow=27,SNR=7.0						
MK31				⇓Lg		11 44 11.4	
	comp=E,1.2nm,0.6s,baz=146,slow=26						

IDC 11 12:11:52.5±7.8, 26.03S×67.06E, mb3.3/2, mb1 3.6/2, mb1mx3.3/17, mbtmp3.3/2, Error ellipse: s-maj=591.5km s-min=94.5km az=25.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	60.09	103	P	P	12 22 01.8	-2.3
	0.3nm,0.8s,baz=253,slow=5.5,SNR=4.5						
WRA	Warramunga Arr	61.65	100	P	P	12 22 12.6	-2.1
	0.4nm,0.8s,baz=250,slow=6.2,SNR=4.6						
YKA	Yellowknife Ar	143.52	1	PKP	PKPdf	12 31 28.1	-2.1
	1.1nm,0.6s,baz=344,slow=3.6,SNR=44						

TRN 11 12:18:33.4, 18.46N×64.44W, h24^{km}, MD3.7

RSPR 11 12:18:35.2, 18.68N×64.35W, h31^{km}±29^{km}, MD3.7/15, MD3.7/15

NEIC 11 12:18:35.2, 18.68N×64.35W, h31^{km}, MD3.7(RSPR), After RSPR.

NEIC Felt [III] at Road Town, British Virgin Islands. Also felt at Spanish Town, British Virgin Islands.

ISC 11 12:18:32.8±1.4, 18.69N±0.08×64.41W±0.03, h21^{km}±10^{km}, n29, σ0^{s}71/43, 13C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDVI	St. Croix	0.99	200	⇑*e*P	Pb	12 18 51.4	+0.4
CDVI	St. Croix	0.99	200	*e*S	Sb	12 19 04.1	+0.4
MTP	Monte Pirata	1.24	242	⇑*e*P	Pn	12 18 55.0	-0.1
MTP				*e*S	Sb	12 19 10.6	-0.4
STMA	St. Maarten, A	1.39	117	⇑*e*P	Pn	12 18 59.0	+1.7
STMA				*e*S	Sn	12 19 16.1	+0.9
CBYP	Canovanas	1.43	253	⇑*e*P	Pn	12 18 57.9	0.0
CBYP	Canovanas	1.43	253	*e*S	Sn	12 19 16.6	+0.4
CBYP	Canovanas	1.43	253	*e*P	Pn	12 18 57.9	0.0
CBYP				*e*S	Sn	12 19 16.6	+0.4
HUMP	Col San Antoni	1.47	249	⇑*e*P	Pn	12 18 58.4	0.0
HUMP				*e*S	Sn	12 19 17.1	-0.1
SABS	Saba	1.54	134	*e*P	Pn	12 18 58.8	-0.5
SABT	Saba	1.54	134	*e*P	Pn	12 18 58.8	-0.5
CPD	Cerro la Pandu	1.57	246	⇑*e*P	Pn	12 19 00.7	+0.9
CPD				*e*S	Sn	12 19 20.0	+0.3
CPD	Cerro la Pandu	1.57	246	*e*P	Pn	12 19 00.7	+0.9
CPD				*e*S	Sn	12 19 20.0	+0.3
CSB	Colonia Sabana	1.71	257	⇑*e*P	Pn	12 19 01.8	0.0
SJG	San Juan	1.75	251	⇓*e*P	Pn	12 19 02.6	+0.2
SJG				*e*S	Sn	12 19 24.9	+0.6
SJG	San Juan	1.75	251	⇓*e*P	Pn	12 19 03.1	+0.7
SJG				*e*S	Sn	12 19 24.9	+0.6
SJG	San Juan	1.75	251	*e*P	Pn	12 19 02.6	+0.2
SJG				*e*S	Sn	12 19 24.9	+0.6
BSK	Brimstone Hill	2.00	132	*e*P	Pn	12 19 05.9	-0.1
BSK				*e*S	Sn	12 19 31.8	+1.1
CELP	Cerrillos	2.15	254	⇑*e*P	Pn	12 19 08.7	+0.6
CELP				*e*S	Sn	12 19 33.4	-1.0
OBIP	Obispado Ponce	2.18	253	⇑*e*P	Pn	12 19 08.9	+0.3
OBIP				*e*S	Sn	12 19 34.6	-0.7
PORP	Portuguez	2.21	254	⇑*e*P	Pn	12 19 09.5	+0.6
PORP				*e*S	Sn	12 19 35.8	-0.2
AOPR	Arecibo Observ	2.25	262	⇑*e*P	Pn	12 19 09.7	+0.1
AOPR				*e*S	Sn	12 19 36.9	0.0
LRS	Lares	2.34	261	⇑*e*P	Pn	12 19 11.6	+0.6
AGP	Aguadilla	2.61	264	*e*P	Pn	12 19 13.8	-0.9
MGP	Maguayo	2.63	256	⇑*e*P	Pn	12 19 15.4	+0.4
SEG	Port Louis	3.58	129	*e*P	Pn	12 19 28.0	-0.5
BCG	Bois Riant Cap	3.71	134	*e*P	Pn	12 19 29.6	-0.8
DEG	La Desirade	3.97	126	*e*P	Pn	12 19 32.3	-1.8
BBL	Barber's Block	4.22	138	*e*P	Pn	12 19 36.9	-0.7
SDV	Santo Domingo	11.46	213	P	P	12 21 17.0	-1.5

IDC 11 12:31:06.4±13.0, 4.72N×93.61E, mb3.3/2, mb1 3.6/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=331.4km s-min=51.2km az=85.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.61	20	Pn	P	12 34 35.0	-1.6
	baz=218,slow=12,SNR=5.3						
WRA	Warramunga Arr	46.94	123	P	P	12 39 38.7	-2.4
	0.5nm,1.0s,baz=304,slow=9.0,SNR=6.6						
ASAR	Alice Springs	48.37	127	P	P	12 39 50.9	-1.4
	0.1nm,0.5s,baz=292,slow=6.8,SNR=4.0						

IDC 11 12:35:00.2±4.0, 53.95N×160.08E, h37^{km}±34^{km}, mb3.7/9, mb1 4.0/10, mb1mx3.7/24, mbtmp3.9/10, ML3.5/1, Error ellipse: s-maj=60.2km s-min=22.1km az=13.0

MOS 11 12:35:03.1±0.4, 53.78N×160.77E, h73^{km}, mb4.0/6, Error ellipse: s-maj=22.5km s-min=9.9km az=74.0

KRSC 11 12:35:04.0±0.3, 53.83N×160.63E, h68^{km}±6^{km}, ML4.3

NEIC 11 12:35:05.8±0.9, 53.93N×160.06E, h94^{km}±11^{km}, mb4.3/5, Error ellipse: s-maj=15.0km s-min=9.8km az=181.0

ISC 11 12:35:03.8±0.3, 53.81N±0.02×160.68E±0.07, h81^{km}±5^{km}, n69, σ0^{s}94/105, mb4.0/13, 1C, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.81	209	P	P	12 35 20.5	-0.5
SPN				S	S	12 35 32.3	-1.5
SPN	Mys Shipunski	0.81	209	*i* P	P	12 35 20.5	-0.5
SPN				*i* S	S	12 35 32.5	-1.3
NLC	Nalytchevo	1.02	232	P	P	12 35 23.2	-0.2
NLC				S	S	12 35 36.9	-1.2
NLC	Nalytchevo	1.02	232	*i* P	P	12 35 23.2	-0.2
NLC				*i* S	S	12 35 37.3	-0.8
SDLR	Sedlovina	1.20	244	*e*P	P	12 35 25.7	+0.1
SDLR				*i* S	S	12 35 41.8	-0.1
UGLR	Uglovaya	1.26	242	*i* P	P	12 35 26.6	+0.2
UGLR				*i* S	S	12 35 43.0	-0.4
AVH	Avacha	1.28	245	*i* P	P	12 35 27.1	+0.4
AVH				*i* S	S	12 35 44.0	+0.1
KOK	Koryaka	1.32	248	*e*P	P	12 35 27.5	+0.1
KOK				*i* S	S	12 35 44.5	-0.4
PET	Petropavlovsk	1.45	238	P	P	12 35 28.8	-0.1
PET				S	S	12 35 47.2	-0.3
PET	Petropavlovsk	1.45	238	⇑*i*PN	P	12 35 28.8	-0.1
PET				*i* S	S	12 35 46.9	-0.6
PET				pmax	pmax		
	comp=Z,148nm,0.3s						
PET				smax			
	comp=N,5µm,0.6s						
PET				smax			
	comp=E,3µm,0.5s						
PET	Petropavlovsk	1.45	238	*e*Pn	P	12 35 28.4	-0.5
PET				*e*Sn	S	12 35 47.0	-0.5
PET	Petropavlovsk	1.45	238	*e*P	P	12 35 28.7	-0.2
PET				*e*S	S	12 35 46.7	-0.8
TUMR	Tumrok	1.51	348	*i* P	P	12 35 30.1	+0.4
TUMR				*i* S	S	12 35 49.1	+0.2
GNL	Ganaly	1.63	267	*i* P	P	12 35 31.2	-0.1
GNL				*i* S	S	12 35 51.0	-0.6
KRMR	Karymshinskiy	1.82	238	*e*P	P	12 35 34.3	+0.5
KRMR				*e*S	S	12 35 56.7	+0.8
RUS	Russkaya	1.90	224	P	P	12 35 34.8	-0.1
RUS				S	S	12 35 57.0	-0.8
RUS	Russkaya	1.90	224	*e*P	P	12 35 34.8	-0.1
RUS				*e*S	S	12 35 57.3	-0.5
KMNR	Kamenistaya	1.97	353	*e*P	P	12 35 36.5	+0.7
KMNR				*e*S	S	12 36 00.1	+0.7
GRL	Gorelyy	2.01	232	*i* P	P	12 35 37.3	+0.9
GRL				*e*S	S	12 36 01.8	+1.3
KPT	Kopyto	2.18	353	*e*P	P	12 35 39.8	+1.1
KPT				*e*S	S	12 36 05.9	+1.3
ZLN	Zelenaya	2.21	2	*e*P	P	12 35 40.1	+0.9
APC	Apacha	2.29	249	*e*P	P	12 35 40.9	+0.6
APC				*e*S	S	12 36 08.0	+0.6
APC				Smax			
	comp=E,150nm,1.0s						
KOZ	Kozyrevsk	2.30	349	P	P	12 35 40.8	+0.3
KOZ				S	S	12 36 08.0	+0.3
KOZ	Kozyrevsk	2.30	349	*e*P	P	12 35 40.7	+0.2
KOZ				*e*S	S	12 36 07.4	-0.3
KOZR	Kozyr	2.31	349	PN	P	12 35 40.8	+0.3
KOZR				S	S	12 36 08.0	+0.2
ESO	Esso	2.41	332	*i* P	P	12 35 41.5	-0.5
ESO				*e*S	S	12 36 09.1	-1.3
ESO				Smax			
	comp=E,210nm,0.9s						
KRSR	Krestovskiy	2.41	359	*e*P	P	12 35 42.3	+0.3
KLY	Klyuchi	2.51	360	P	P	12 35 43.9	+0.5
KLY				S	S	12 36 12.7	-0.2
KLY	Klyuchi	2.51	360	*e*P	P	12 35 43.7	+0.3
KLY				*e*S	S	12 36 12.7	-0.2
SRDR	Sredinnyy	2.57	348	*e*P	P	12 35 44.0	-0.3
SRDR				*e*S	S	12 36 13.5	-1.0
KBTR	Krutoberegovo	2.70	26	P	P	12 35 45.8	-0.3
KBTR				S	S	12 36 16.5	-1.2
KBTR	Krutoberegovo	2.70	26	*e*P	P	12 35 46.3	+0.2
KBTR				*e*S	S	12 36 17.2	-0.5
KBG	Krutoberegovo	2.71	25	*e*P	P	12 35 46.4	+0.2
KBG				*e*S	S	12 36 17.4	-0.6
KBG				Smax			
	comp=E,540nm,1.0s						
KBG	Krutoberegovo	2.71	25	*e*P	P	12 35 47.2	+1.0
KBG				*e*S	S	12 36 18.6	+0.6
SVLR	Shiveluch	2.79	6	*e*P	P	12 35 48.1	+0.8
SVLR				*e*S	S	12 36 20.4	+0.5
PAU	Pauzhetka	3.33	227	*e*P	P	12 35 58.0	+3.3
PAU				*e*S	S	12 36 33.5	+0.2
PAU				Smax			
	comp=E,300nm,0.8s						
BKI	Bering	3.39	64	*i* P	P	12 35 55.0	-0.6
BKI				*i* S	S	12 36 32.1	-2.7
SKR	Severo-Kuril's	4.20	224	*e*P	P	12 36 07.3	+0.4
FX1	Attu Island--F	7.53	92	Pn	P	12 36 51.5	-1.3
	comp=E,2.3nm,0.3s,baz=286,slow=5.5,SNR=6.0						
FX1				Sn	S	12 38 10.6	-6.8
	comp=E,22nm,0.3s,baz=249,slow=17,SNR=11						
MA2	Magadan	7.94	321	*e*PN	P	12 36 57.7	-0.7
MA2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MA2	Magadan	7.94	321	*e*Pn	P	12 36 57.6	-0.8
	comp=Z,5.8nm,0.4s						
KAMR	Kamenskoye	9.15	16	*e*P	P	12 37 14.0	-0.8
BILL	Bilibino	14.52	8	*e*P	P	12 38 30.6	+4.7
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	Bilibino	14.52	8	*e*P	P	12 38 25.6	-0.3
	comp=Z,2.0nm,0.5s						
YAK	Yakutsk	18.24	309	*e*P	P	12 39 08.8	-3.6
YAK				pmax	pmax		
	comp=Z,22nm,0.6s						
YAK	Yakutsk	18.24	309	*e*P	P	12 39 08.8	-3.7
	comp=Z,22nm,0.6s						
BOD	Bodaibo	26.11	298	*e*P	P	12 40 25.5	-5.8
ILAR	Eielson Array	28.06	46	P	P	12 40 48.5	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	28.06	46	P	P	12 40 48.5	-0.5
	comp=Z,0.8nm,0.7s,mb3.4,baz=265,slow=9.4,SNR=8.2						
INK	Inuvik	33.09	38	P	P	12 41 33.1	-0.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	Inuvik	33.09	38	P	P	12 41 33.1	-0.2
	comp=Z,0.7nm,0.9s,mb3.5,baz=309,slow=6.4,SNR=4.5						
YKA	Yellowknife Ar	42.40	43	P	P	12 42 51.5	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	42.40	43	P	P	12 42 51.5	+0.5
	comp=Z,0.5nm,0.6s,mb3.5,baz=299,slow=8.0,SNR=11						
YKA	Yellowknife Ar	42.40	43	P	P	12 42 51.5	+0.5
KURK	Kurchatov	47.65	302	*e*P	P	12 43 28.8	-4.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						

KURK	**Kurchatov**	47.65	302	*e*P	P	12 43 28.8	-4.4
	comp=Z,3.2nm,0.5s,mb4.4						
CHKZ	**Chkalovo**	49.70	309	*e*P	P	12 43 43.8	-5.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
CHKZ	**Chkalovo**	49.70	309	*e*P	P	12 43 43.8	-5.1
	comp=Z,1.8nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	50.22	308	P	P	12 43 49.0	-3.9
	comp=Z,0.9nm,0.4s,mb4.0,baz=68,slow=8.0,SNR=7.9						
NVAR	**Mina Array Bea**	55.17	71	P	P	12 44 31.4	+1.5
	comp=Z,1.2nm,0.6s,mb4.1,baz=308,slow=6.0,SNR=11						
HWUT	**Hardware Ranch**	56.63	64	*e*P	P	12 44 41.5	+1.2
	comp=Z,2.0nm,0.6s,mb4.3						
BW06	**Boulder Array**	56.87	62	*e*P	P	12 44 42.8	+0.8
	comp=Z,1.1nm,0.7s,mb4.0						
PDAR	**Pinedale Array**	56.87	62	P	P	12 44 43.0	+1.0
	comp=Z,1.1nm,0.6s,mb4.0,baz=330,slow=3.5,SNR=10						
FINES	**FINESS Array B**	59.60	337	P	P	12 44 57.9	-2.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	59.60	337	P	P	12 44 57.9	-2.8
	comp=Z,1.7nm,0.7s,mb4.2,baz=27,slow=8.5,SNR=4.1						
FINES	**FINESS Array B**	59.60	337	P	P	12 44 57.9	-2.8
NOA	**NORSAR Array B**	62.95	344	P	P	12 45 20.8	-2.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	62.95	344	P	P	12 45 20.8	-2.5
	comp=Z,0.6nm,0.4s,mb3.9,baz=24,slow=6.7,SNR=3.1						
TXAR	**Lajitas Array**	70.04	68	P	P	12 46 09.6	+1.1
	comp=Z,1.3nm,0.6s,mb3.9,baz=294,slow=5.5,SNR=21						

IDC 11 12:50:00.4±3.8**,9.29N×93.52E,mb3.5**/3**,mb1 3.7**/4**, mb1mx3.5**/18**,mbtmp3.5**/4**,ML3.7**/1**,MS2.7**/1**,Ms1 2.9**/1**, ms1mx2.4**/19**,Error ellipse: s-maj=143.2km s-min=30.9km az=74.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	10.52	29	Pn	P	12 52 42.0	+6.3
	0.2nm,0.3s,baz=229,slow=15,SNR=8.2						
CMAR				LR	LR	12 56 23.7	
	comp=Z,37nm,20.2s,baz=259,slow=36						
SONM	**Songino Array**	39.93	14	P	P	12 57 36.4	-1.6
	0.8nm,0.8s,baz=198,slow=7.8,SNR=6.7						
WRA	**Warramunga Arr**	49.59	126	P	P	12 58 54.0	-1.7
	0.4nm,0.3s,baz=307,slow=8.3,SNR=10						
WRA				PcP	PcP	13 00 15.3	-2.4
	0.3nm,0.9s,baz=319,slow=2.5,SNR=4.9						
ASAR	**Alice Springs**	51.30	130	P	P	12 59 06.3	-2.4
	0.2nm,0.4s,baz=304,slow=7.6,SNR=8.8						
ASAR				PcP	PcP	13 00 21.4	-2.5
	0.2nm,0.6s,baz=306,slow=3.9,SNR=4.0						

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*IDC **11** 12:50:06.8±0.7,6.75N×72.93W,h160^{km}±9^{km},mb3.2/4, mb1 3.5/6,mb1mx3.2/22,mbtmp3.7/6,Error ellipse: s-maj=32.4km s-min=7.4km az=131.0*

*NEIC **11** 12:50:07.2±0.8,6.73N×72.94W,h167^{km}±9^{km},Error ellipse: s-maj=27.7km s-min=12.2km az=127.0*

ISC 11 12:50:06.4±1.2**,6.8N**±0.4×**73.0W**±0.5**,h168**^{km}±32^{km}**,n10, σ0^{s}48**/10**,mb3.4**/4**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	2.36	214	P	**P**	**12 50 47.6**	**+0.3**
	20nm,0.3s,baz=100,slow=19,SNR=32						
ROSC				S	**S**	**12 51 18.4**	**-0.3**
	63nm,0.3s,baz=78,slow=21,SNR=23						
SDV	**Santo Domingo**	3.11	49	P	**P**	**12 50 57.0**	**+0.5**
	27nm,0.3s,baz=210,slow=2.7,SNR=108						
SDV				S	**S**	**12 51 34.5**	**-0.4**
	21nm,0.3s,baz=269,slow=23,SNR=30						
TXAR	**Lajitas Array**	36.56	312	P	**P**	**12 56 58.2**	**+0.4**
	0.2nm,0.5s,mb3.0,baz=129,slow=8.9,SNR=6.1						
TXAR	**Lajitas Array**	36.56	312	P	**P**	**12 56 58.2**	**+0.4**
SCHQ	**Schefferville**	48.13	5	P	**P**	**12 58 31.6**	**+0.5**
	2.2nm,1.1s,mb3.7,baz=207,slow=14,SNR=3.7						
PDAR	**Pinedale Array**	48.16	324	P	**P**	**12 58 31.3**	**-0.2**
	0.4nm,0.8s,mb3.1,baz=124,slow=9.8,SNR=2.7						
YKA	**Yellowknife Ar**	63.31	340	P	**P**	**13 00 18.6**	**-0.8**
	0.5nm,0.5s,mb3.6,baz=133,slow=6.7,SNR=19						
YKA	**Yellowknife Ar**	63.31	340	P	**P**	**13 00 18.6**	**-0.8**
ASAR	**Alice Springs**	149.22	234	PKPbc	PKPdf	13 09 36.9	+5.6
	0.4nm,0.5s,baz=121,slow=3.6,SNR=9.7						
WRA	**Warramunga Arr**	150.45	241	PKPbc	PKPdf	13 09 39.9	+6.6
	0.5nm,0.4s,baz=109,slow=2.4,SNR=24						

WEL 11 12:57:40.3±0.4**,36.49S×177.18E,h286**^{km}±4^{km}**,ML3.5**/6**, Error ellipse: s-maj=11.6km s-min=6.7km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	1.77	182	PN	P	12 58 23.9	-0.3
URZ				SN	S	12 58 58.1	-0.4
MWZ	**Matawai**	1.86	171	PN	P	12 58 25.0	0.0
MWZ				SN	S	12 58 59.6	-0.1
KNZ	**Kokohu**	2.55	171	PN	P	12 58 31.0	-0.1
KNZ				SN	S	12 59 08.6	-2.1
BKZ	**Black Stump Fm**	2.72	191	PN	P	12 58 32.7	0.0
BKZ				SN	S	12 59 13.3	-0.3
TSZ	**Takapari Road**	3.69	195	PN	P	12 58 42.2	-0.6
TSZ				SN	S	12 59 32.3	+0.7
BFZ	**Birch Farm**	4.25	190	SN	S	12 59 43.6	+0.8
MRZ	**Mangatainoka R**	4.35	196	*e*PN	P	12 58 48.4	-1.9
MRZ				SN	S	12 59 44.2	-0.7
TUWZ	**Tuamarina**	5.54	206	SN	S	13 00 09.1	-0.9
NNZ	**Nelson**	5.57	211	*e*PN	P	12 59 03.6	-1.0
NNZ				SN	S	13 00 10.2	-0.5
KHZ	**Kahutara**	6.55	204	PN	P	12 59 15.8	-0.7
MQZ	**McQueen’s Vall**	8.00	204	SN	S	13 01 01.4	-2.7

JMA 11 13:06:43.3±0.2**,28.42N×140.42E,h438**^{km}**,M3.6,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	2.05	130	P	P	13 07 43.3	-0.1
CBIJ				S	S	13 08 30.9	+0.1
JHHJ	**Haha-jima-NKT**	2.37	138	P	P	13 07 45.4	-0.1
JHHJ				S	S	13 08 35.2	+0.7
JAG	**Ashikaga**	8.02	354	P	P	13 08 39.3	-0.7
JHO	**Hitachi**	8.17	1	P	P	13 08 42.2	+0.6

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*NAO **11** 13:13:00.3±2.9,61.01N×29.13E,ML2.6*

*BER **11** 13:13:01.5±4.7,61.02N×29.08E,ML2.6(NAO), Suspected explosion*

*IDC **11** 13:13:01.6±1.8,60.91N×29.00E,mb1 3.3/3, mb1mx3.1/19,mbtmp3.3/3,ML3.1/3,Error ellipse: s-maj=19.3km s-min=11.2km az=175.0*

*CSEM **11** 13:13:01.5,61.02N×29.08E,ML2.6,After BER*

HEL 11 13:13:00.3±0.3**,60.89N×29.16E,ML2.1,ML2.6**(NAO)**, Explosion,Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	**Virojoki**	0.86	247	*e*P	Pg	13 13 15.7	-1.8
VJF				*e*S	Sg	13 13 27.1	-1.9
FIA0	**FINESS Array S**	1.59	292	Pn	Pn	13 13 27.7	-2.2
	baz=117,slow=16						
FIA0				Lg		13 13 49.7	
	baz=106,slow=28						
FIA0				Rg		13 13 57.2	
	baz=115,slow=37						
FIA0	**FINESS Array S**	1.59	292	*e*P	Pn	13 13 27.6	-2.3
FIA0				*e*S	Sb	13 13 48.9	-2.2
FIA0	**FINESS Array S**	1.59	292	Pn	Pn	13 13 27.7	-2.2
	baz=117,slow=15,SNR=50						
FIA0				Lg		13 13 49.7	
	baz=106,slow=28,SNR=115						
FIA0				Rg		13 13 57.2	
	baz=115,slow=36,SNR=70						
FINES	**FINESS Array B**	1.59	292	Pg	Pg	13 13 27.7	-4.5
	5.4nm,0.3s,baz=113,slow=16,SNR=132						
FINES				Lg		13 13 49.3	
	12nm,0.3s,baz=102,slow=30,SNR=59						
FINES				Rg		13 13 57.0	
	39nm,0.9s,baz=115,slow=32,SNR=28						
PVF	**Pernaja**	1.66	259	*e*P	Pn	13 13 28.9	-1.9
PVF				*e*S	Sb	13 13 52.1	-0.7
KAF	**Kangasniemi**	1.84	313	*e*P	Pn	13 13 32.6	-0.8
KAF				*e*S	Sn	13 13 56.1	-1.7
JOF	**Joensuu**	2.28	26	*e*P	Pn	13 13 38.6	-1.1
JOF				*e*S	Sn	13 14 07.2	-1.7
SUF	**Sumiainen**	2.33	323	*e*P	Pn	13 13 40.4	0.0
SUF				*e*S	Sn	13 14 09.5	-0.6
SUF				*e*SG	Sg	13 14 11.2	-6.6
SUF				MSG		13 14 12.0	
	comp=Z,13nm,0.2s						
KEF	**Keuruu**	2.42	304	*e*P	Pn	13 13 41.0	-0.7
KEF				*e*S	Sn	13 14 11.9	-0.7
KEF				*e*SG	Sg	13 14 14.1	-6.8
KEF				MSG		13 14 15.4	
	comp=Z,4.3nm,0.2s						
KJN	**Kajaani**	3.28	349	*e*P	Pn	13 13 53.6	-0.3
KJN				*e*S	Sn	13 14 31.6	-2.6
VAF	**Ylistaro**	3.75	308	*e*PG	Pg	13 14 07.7	-7.5
VAF				*e*S	Sn	13 14 43.0	-3.2
HFS	**Hagfors**	7.67	271	Pn	Pn	13 14 52.0	-4.0
	baz=84,slow=16						
HFS				Sn	Sn	13 16 17.0	-7.7
	baz=86,slow=37						
HFS				Lg		13 16 54.3	
	baz=94,slow=37						
HFS	**Hagfors**	7.67	271	*e*P	Pn	13 14 52.0	-4.0
HFS				*e*S	Sn	13 16 17.0	-7.7
HFS				*e*SG		13 16 54.3	
HFS	**Hagfors**	7.67	271	Pn	Pn	13 14 52.0	-4.1
	comp=Z,0.1nm,0.3s,baz=90,slow=12,SNR=7.2						
HFS				Sn	Sn	13 16 15.6	-9.1
	comp=Z,0.1nm,0.3s,baz=81,slow=28,SNR=3.2						
HFS	**Hagfors**	7.67	271	Pn	Pn	13 14 52.0	-4.0
	baz=84,slow=15,SNR=50						
HFS				Sn	Sn	13 16 17.0	-7.7
	baz=86,slow=28,SNR=50						
HFS				Lg		13 16 54.3	
	baz=94,slow=30,SNR=70						
NOA	**NORSAR Array B**	8.73	279	Pn	P	13 15 06.2	-4.5
	comp=Z,0.3nm,0.3s,baz=73,slow=17,SNR=2.9						
NOA				Sn	Sn	13 16 39.0	-12
	comp=Z,0.1nm,0.3s,baz=39,slow=21,SNR=2.4						
NOA				Lg		13 17 32.5	
	comp=Z,0.4nm,0.3s,baz=350,slow=8.8,SNR=3.0						
ARA0	**ARCESS Array S**	8.82	352	Pn	P	13 15 07.2	-4.7
	baz=163,slow=14						
ARA0				Sn	Sn	13 16 41.3	-12
	baz=172,slow=28						
ARA0				Lg		13 17 25.8	
	baz=152,slow=37						
ARA0	**ARCESS Array S**	8.82	352	*e*P	P	13 15 07.2	-4.7
ARA0				*e*S	Sn	13 16 41.3	-12
ARA0				*e*		13 17 25.8	
ARA0	**ARCESS Array S**	8.82	352	Pn	P	13 15 07.2	-4.8
	baz=163,slow=13,SNR=50						
ARA0				Sn	Sn	13 16 41.3	-12
	baz=172,slow=23,SNR=50						
ARA0				Lg		13 17 25.8	
	baz=152,slow=35,SNR=98						
ARCES	**ARCESS Array B**	8.82	352	Pn	P	13 15 07.1	-4.9
	comp=Z,0.2nm,0.3s,baz=163,slow=12,SNR=14						

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*NIED **11** 13:13:00,33.70N×140.70E,h53^{km},Mw3.8 Best double couple: $M_0$5.47×10^{14} NP1:ϕ_s245°,δ78°,λ-128°. NP2: ϕ_s140°,δ40°,λ-20°.*

*JMA **11** 13:13:02.3±0.1,33.71N×140.73E,h53^{km}±4^{km},M3.8*

*IDC **11** 13:13:02.8±4.0,33.42N×140.88E,h41^{km}±36^{km},mb3.5/4, mb1 3.7/5,mb1mx3.4/22,mbtmp3.8/5,ML3.9/1,Error ellipse: s-maj=35.4km s-min=22.3km az=99.0*

*NEIC **11** 13:13:04.9±1.9,33.56N×140.47E,h66^{km}±17^{km},mb4.0/2, Error ellipse: s-maj=31.2km s-min=14.1km az=83.0*

ISC 11 13:13:02.1±0.8**,33.67N**±0.04×**140.69E**±0.09**,h64**^{km}±8^{km}**, n21,σ0^{s}79**/30**,mb3.9**/6**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	0.92	233	P	**P**	**13 13 19.9**	**+0.5**
JHJ2				S	**S**	**13 13 32.5**	**+0.2**
JHJ	**Hachijo jima 2**	0.94	234	P	**P**	**13 13 19.8**	**+0.1**
	384nm,0.3s,baz=264,slow=21,SNR=110						
JHJ				S	**S**	**13 13 32.4**	**-0.4**
	594nm,0.3s,baz=38,slow=20,SNR=48						
BSO1	**Boso 1**	1.01	14	P	**P**	**13 13 19.8**	**-0.8**
BSO3	**Boso 3**	1.13	353	P	**P**	**13 13 22.1**	**-0.2**
NJJJ	**Nii jima 2**	1.37	302	P	**P**	**13 13 26.1**	**+0.4**
JKO	**Kozu shima**	1.39	292	P	**P**	**13 13 26.4**	**+0.5**
JKO				S	**S**	**13 13 43.5**	**0.0**
JIM2	**Oshima 3**	1.47	315	P	**P**	**13 13 26.9**	**-0.1**
JIM2				S	**S**	**13 13 44.9**	**-0.6**
JIZS	**Izushimoda**	1.82	305	P	**P**	**13 13 32.6**	**+0.8**
JIZS				S	**S**	**13 13 54.1**	**+0.3**
KTJJ	**Kamata 2**	1.83	313	P	**P**	**13 13 31.9**	**-0.1**
KTJJ				S	**S**	**13 13 52.6**	**-1.4**
JOD2	**Odawara 2**	2.06	321	P	**P**	**13 13 35.2**	**+0.1**
JOD2				S	**S**	**13 13 58.9**	**-0.7**
MAJO	**Matsushiro**	3.51	325	*e*Pn	**P**	**13 13 57.0**	**+1.4**
MAT	**Matsushiro**	3.51	325	*e*P	**P**	**13 13 57.0**	**+1.4**
MAT				*e*S	**S**	**13 14 36.0**	**-0.1**
MAT	**Matsushiro**	3.51	325	P	**P**	**13 13 56.8**	**+1.2**
MAT				S	**S**	**13 14 35.7**	**-0.4**
ASAJ	**Asahikawa**	10.53	8	P	**P**	**13 15 28.9**	**-3.6**
	1.1nm,0.3s,baz=156,slow=16,SNR=8.2						
SONM	**Songino Array**	29.31	309	P	**P**	**13 19 04.3**	**+3.8**
	0.2nm,0.6s,mb3.0,baz=101,slow=8.3,SNR=3.3						
KURK	**Kurchatov**	47.59	310	*e*P	**P**	**13 21 33.7**	**+0.6**
	1.8nm,0.8s,mb4.2						
CHKZ	**Chkalovo**	52.22	315	*e*P	**P**	**13 22 08.2**	**-0.2**
	0.8nm,0.7s,mb3.8						
WB2	**Warramunga Arr**	53.66	187	*e*P	**P**	**13 22 19.1**	**-0.5**
WRA	**Warramunga Arr**	53.66	187	P	**P**	**13 22 18.6**	**-1.0**
	2.3nm,0.6s,mb4.3,baz=4.2,slow=7.5,SNR=48						
ASAR	**Alice Springs**	57.38	187	P	**P**	**13 22 45.4**	**-1.0**
	0.4nm,0.4s,mb3.8,baz=3.0,slow=6.3,SNR=23						
INK	**Inuvik**	57.65	26	P	**P**	**13 22 49.1**	**+1.5**
	3.0nm,1.3s,mb4.2,baz=286,slow=3.7,SNR=4.7						

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*NEIC **11** 13:38:58.4,53.04N×163.13W,h34^{km},ML3.6(AEIC),After AEIC.*

*IDC **11** 13:39:03.0±1.3,53.48N×162.80W,h40^{km}±8^{km},mb3.3/7, mb1 3.6/8,mb1mx3.5/24,mbtmp3.5/8,ML3.5/1,Error ellipse: s-maj=29.6km s-min=19.3km az=26.0*

ISC 11 13:38:57.4±0.7**,53.06N**±0.05×**163.19W**±0.06**,h33**^{km}**, (h41**^{km}±3.9^{km}**:pP-P),n27,σ0^{s}80**/34**,mb3.6**/6**,Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESS	**West Dahl Sout**	1.69	328	P	**P**	**13 39 25.3**	**+0.3**
WESS				S	**S**	**13 39 46.2**	**+0.5**
SSLS	**Shishaldin Sou**	1.73	344	P	**P**	**13 39 26.1**	**+0.6**
SSLS				S	**S**	**13 39 48.0**	**+1.4**
WESN	**West Dahl Nort**	1.73	332	P	**P**	**13 39 26.0**	**+0.5**
WFAR	**Faris Peak**	1.76	328	P	**P**	**13 39 26.4**	**+0.5**
SSLW	**Shishaldin Wes**	1.80	343	P	**P**	**13 39 27.0**	**+0.4**
FALS	**False Pass**	1.81	356	P	**P**	**13 39 26.7**	**+0.1**
FALS				S	**S**	**13 39 49.2**	**+0.5**
AKA	**Akutan**	1.88	306	P	**P**	**13 39 28.2**	**+0.5**
AKA				S	**S**	**13 39 50.0**	**-0.5**
WTUG	**Tugumak**	1.93	339	P	**P**	**13 39 28.8**	**+0.4**
AKLV	**Akutan Long Va**	1.98	305	P	**P**	**13 39 29.2**	**0.0**
AKLV				S	**S**	**13 39 52.4**	**-0.7**
DT1	**Dutton Round H**	2.12	14	P	**P**	**13 39 30.4**	**-0.7**
UNV	**Unalaska Valle**	2.13	293	P	**P**	**13 39 31.1**	**-0.2**
UNV				S	**S**	**13 39 55.8**	**-1.0**
DTNA	**Dutton South F**	2.17	14	P	**P**	**13 39 31.3**	**-0.5**
MTBL	**Makushin Table**	2.27	295	P	**P**	**13 39 33.8**	**+0.4**
MSW	**Makushin Switc**	2.31	293	P	**P**	**13 39 34.0**	**+0.1**
HAG	**Hague Volcano**	2.39	18	P	**P**	**13 39 35.0**	**+0.1**
SDPT	**Sand Point**	2.79	34	P	**P**	**13 39 40.5**	**-0.3**
SDPT				S	**S**	**13 40 11.8**	**-1.9**
OKFG	**Magazine Ridge**	2.86	279	P	**P**	**13 39 41.2**	**-0.5**
NIKO	**Nikolski**	3.42	271	P	**P**	**13 39 48.7**	**-1.0**
ILAR	**Eielson Array**	14.39	29	Pn	**P**	**13 42 14.7**	**-5.6**
	0.1nm,0.3s,baz=214,slow=13,SNR=7.4						
INK	**Inuvik**	20.75	31	P	**P**	**13 43 35.0**	**-2.3**
	0.5nm,0.4s,baz=233,slow=6.0,SNR=14						
YKA	**Yellowknife Ar**	26.93	50	P	**P**	**13 44 36.6**	**-0.5**
	0.7nm,0.5s,mb3.5,baz=270,slow=9.0,SNR=27						
NVAR	**Mina Array Bea**	33.96	97	P	**P**	**13 45 40.8**	**+1.2**
	0.2nm,0.6s,mb3.3,baz=270,slow=5.4,SNR=2.9						
NVAR				pP	pP	13 45 53.3	+4.0
	0.3nm,0.6s,baz=311,slow=6.8,SNR=2.9						
PDAR	**Pinedale Array**	36.59	84	P	**P**	**13 46 02.3**	**+0.5**
	0.2nm,0.5s,mb3.2,baz=307,slow=4.5,SNR=3.3						
TXAR	**Lajitas Array**	49.01	94	P	**P**	**13 47 43.5**	**+0.8**
	1.0nm,0.7s,mb4.0,baz=297,slow=5.6,SNR=5.7						
TXAR				pP	pP	13 47 55.6	+3.0
	0.9nm,0.7s,baz=297,slow=5.6,SNR=2.0						
TXAR	**Lajitas Array**	49.01	94	P	**P**	**13 47 43.5**	**+0.8**
TXAR				pP	pP	13 47 55.6	+3.0
SONM	**Songino Array**	54.11	304	P	**P**	**13 48 24.5**	**+3.6**
	0.8nm,1.2s,mb3.5,baz=79,slow=7.3,SNR=2.6						
SONM				pP	pP	13 48 33.5	+2.6
	0.3nm,0.7s,baz=35,slow=6.4,SNR=3.8						
HFS	**Hagfors**	67.13	2	P	**P**	**13 49 49.0**	**-0.1**
	1.2nm,0.5s,mb4.2,baz=315,slow=4.1,SNR=5.8						
HFS				pP	pP	13 50 01.9	+2.5
	1.6nm,0.6s,slow=3.0,SNR=2.1						

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*JMA **11** 13:40:07.7±0.2,36.61N×142.05E,h50^{km},M3.2*

*IDC **11** 13:40:14.6±1.1,36.65N×140.41E,mb3.5/5,mb1 3.7/5, mb1mx3.5/21,mbtmp3.5/5,Error ellipse: s-maj=40.3km s-min=24.6km az=99.0*

ISC 11 13:40:12.3±1.9**,36.8N**±0.1×**141.7E**±0.1**,h26**^{km}±12^{km}**,n10, σ1^{s}17**/12**,mb3.5**/5**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	0.75	291	P	**Pb**	**13 40 26.9**	**+0.3**
ONAJ				S	**Sb**	**13 40 41.8**	**+5.4**
JFK	**Kawauchi**	0.83	310	P	**Pb**	**13 40 28.8**	**+0.9**
JHO	**Hitachi**	0.92	256	P	**Pb**	**13 40 28.4**	**-1.0**
JMM	**Marumori**	1.24	326	P	**Pn**	**13 40 34.3**	**+0.1**
MAT	**Matsushiro**	2.80	265	P	**Pn**	**13 40 55.9**	**-0.6**
MAT				S	**Sn**	**13 41 30.6**	**+0.8**
SONM	**Songino Array**	28.07	304	P	**P**	**13 46 01.5**	**-2.1**
	0.8nm,0.7s,mb3.4,baz=102,slow=8.6,SNR=7.6						
SONM				pP	pP	13 46 15.9	+4.8
	1.5nm,0.8s,baz=102,slow=8.5,SNR=11						
ILAR	**Eielson Array**	49.55	32	P	**P**	**13 49 11.6**	**+9.0**
	0.4nm,1.0s,mb3.4,baz=286,slow=7.9,SNR=4.2						
WRA	**Warramunga Arr**	56.90	188	P	**P**	**13 49 57.3**	**-0.3**
	0.4nm,0.7s,mb3.6,baz=1.3,slow=7.5,SNR=4.6						
ASAR	**Alice Springs**	60.62	188	P	**P**	**13 50 26.6**	**+3.2**
	0.4nm,0.7s,mb3.7,baz=17,slow=7.5,SNR=5.6						
YKA	**Yellowknife Ar**	63.87	30	P	**P**	**13 50 53.3**	**+8.8**
	0.5nm,1.1s,mb3.5,baz=300,slow=6.5,SNR=4.2						

IDC 11 13:50:38.8±5.8**,6.31N×92.24E,mb3.0**/2**,mb1 3.4**/3**, mb1mx3.3**/18**,mbtmp3.1**/3**,ML3.5**/1**,Error ellipse: s-maj=161.0km s-min=37.9km az=76.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	13.73	28	Pn	P	13 53 55.1	-2.3
	0.1nm,0.3s,baz=228,slow=14,SNR=6.3						
SONM	**Songino Array**	43.11	14	P	P	13 58 40.8	-1.7
	0.1nm,0.4s,baz=207,slow=9.1,SNR=3.3						
WRA	**Warramunga Arr**	48.94	123	P	P	13 59 27.2	-1.9
	0.2nm,0.7s,baz=301,slow=9.1,SNR=4.6						

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*NEIC **11** 13:58:45.3,22.43S×70.23W,h70^{km},MD3.9(GUC),After GUC.*

NEIC Felt [III] at Tocopilla.

GUC 11 13:58:45.3±0.6**,22.43S×70.23W,h70**^{km}±18^{km}**,MD3.9, ML3.4,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	1.23	99	*e*P	P	13 59 08.0	+0.9
LVC				*i* S	S	13 59 24.5	+1.2
LVC				AMP		13 59 25.8	
	comp=N,529nm,0.7s						
ANCH	**Antofagasta**	1.26	188	*e*P	P	13 59 09.0	+1.5
ANCH				*i* S	S	13 59 26.1	+2.1
ANCH				AMP		13 59 34.2	
	comp=N,2µm,0.2s						
SPCH	**San Pedro de A**	1.93	105	*e*P	P	13 59 17.4	+0.7
SPCH				*i* S	S	13 59 41.9	+2.1
CPN1	**Cerro Paranal**	2.19	184	*e*P	P	13 59 21.1	+0.8
CPN1				*i* S	S	13 59 48.3	+2.0
CPN1				AMP		14 00 04.1	
	comp=E,306nm,0.8s						
LPAZ	**La Paz**	6.42	18	*e*Pn	P	14 00 16.6	-2.6
	comp=E,1.4nm,0.6s						

IDC 11 14:47:26.1±4.1**,18.14S×175.54W,mb3.9**/3**,mb1 4.2**/3**, mb1mx3.8**/15**,mbtmp3.9**/3**,Error ellipse: s-maj=290.1km s-min=31.2km az=152.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	47.27	259	P	P	14 56 01.9	-1.4
	0.9nm,0.7s,baz=96,slow=7.6,SNR=14						
ASAR	**Alice Springs**	47.35	254	P	P	14 56 01.7	-2.2
	1.7nm,0.8s,baz=88,slow=8.4,SNR=17						
NVAR	**Mina Array Bea**	77.72	43	P	P	14 59 25.3	-1.3
	0.8nm,0.7s,baz=220,slow=5.8,SNR=4.3						
AKASG	**Malin Array Be**	141.99	334	PKP	PKPdf	15 06 58.0	-3.7
	0.4nm,0.3s,baz=35,slow=4.3,SNR=4.5						

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*BJI **11** 15:04:22.2,17.66S×177.94W,h559^{km},mB5.0,mb4.7*

*NEIC **11** 15:04:23.6±0.6,17.78S×178.67W,h541^{km}±7^{km},mb4.4/31, Error ellipse: s-maj=9.5km s-min=4.6km az=154.0*

*IDC **11** 15:04:25.5±1.6,17.92S×178.72W,h567^{km}±18^{km}, mb3.8/16,mb1 4.1/17,mb1mx4.0/21,mbtmp4.7/17,Error ellipse: s-maj=18.9km s-min=8.6km az=155.0*

ISC 11 15:04:22.8±1.0**,17.79S**±0.09×**178.70W**±0.06**, h541**^{km}±13^{km}**,n188,σ0^{s}87**/85**,mb4.4**/52**,16C-15D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	7.70	61	*e*Pn	**P**	**15 06 17.5**	**-0.6**
	166nm,0.7s						
DZM	**Mont Dzumac**	14.61	251	*e*P	**P**	**15 07 30.0**	**+1.7**
NOUC	**Port Laguerre**	14.74	251⇓	*e*P	**P**	**15 07 31.1**	**+1.5**
NOUC	**Port Laguerre**	14.74	251⇓	*e*P	**P**	**15 07 31.1**	**+1.5**
RAR	**Rarotonga**	18.16	104	P	**P**	**15 08 03.6**	**+0.7**
	1.6nm,0.3s,baz=230,slow=5.3,SNR=5.3						
URZ	**Urewera**	20.72	189	P	**P**	**15 08 24.7**	**-2.1**
	4.3nm,0.4s,baz=356,slow=12,SNR=7.7						
RPZ	**Rata Peaks**	27.26	196	P	**P**	**15 09 23.4**	**-1.8**
	16nm,1.0s,mb4.6,baz=250,slow=22,SNR=4.4						
PPT	**Papeete**	27.74	94	P	**P**	**15 09 28.5**	**-1.3**
	36nm,0.6s,mb5.2,baz=38,slow=15,SNR=4.2						
CTA	**Charters Tower**	33.20	260	*e*P	**P**	**15 10 16.7**	**+0.4**
	7.1nm,1.4s,mb4.0						
CTA	**Charters Tower**	33.20	260	P	**P**	**15 10 15.7**	**-0.6**
	5.7nm,0.8s,mb4.2,baz=75,slow=11,SNR=7.5						
CTAO	**Charters Tower**	33.20	260	*e*P	**P**	**15 10 16.5**	**+0.3**
	12nm,1.0s,mb4.4						
CNB	**Canberra Magne**	33.28	232⇓	*i*P	**P**	**15 10 18.1**	**+1.2**
	286nm,0.7s						
TOO	**Toolangi**	37.03	231	*e*P	**P**	**15 10 49.0**	**+1.1**
	1.0nm,0.7s,mb3.5						
STKA	**Stephens Creek**	38.45	241	*e*P	**P**	**15 11 00.6**	**+1.2**
	7.5nm,0.6s,mb4.4						
STKA	**Stephens Creek**	38.45	241	P	**P**	**15 10 59.7**	**+0.3**
	7.0nm,0.5s,mb4.5,baz=83,slow=9.0,SNR=26						
STKA				PcP	PcP	15 12 58.8	-0.5
	2.4nm,0.9s,baz=60,slow=4.9,SNR=3.5						
WB2	**Warramunga Arr**	44.37	259⇑	*i*P	**P**	**15 11 46.0**	**-0.8**
WB2				*e*S	**S**	**15 17 37.1**	**-5.3**
WB2				*e*SCS	ScS	15 20 43.7	+0.4
WRAB	**Tennant Creek**	44.37	259	*e*P	**P**	**15 11 45.9**	**-0.9**
	8.2nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	44.38	259	P	**P**	**15 11 46.2**	**-0.8**
	1.3nm,0.4s,mb3.8,baz=94,slow=7.6,SNR=78						
WRA				PcP	PcP	15 13 18.5	-0.9
	3.1nm,0.7s,baz=88,slow=3.6,SNR=11						
WRA				S	**S**	**15 17 37.3**	**-5.2**
	1.5nm,0.9s,baz=93,slow=14,SNR=8.0						
ASAR	**Alice Springs**	44.56	254	P	**P**	**15 11 48.2**	**0.0**
	16nm,0.5s,mb4.8,baz=90,slow=7.7,SNR=536						
ASAR				PcP	PcP	15 13 19.0	-1.0
	3.7nm,0.6s,baz=94,slow=5.3,SNR=8.6						
ASAR				S	**S**	**15 17 41.1**	**-3.8**
	3.3nm,0.8s,baz=89,slow=15,SNR=13						

ASPA	**Alice Springs**	**44.56**	**254**	⇑iP	**P**	**15 11 48.4**	**+0.1**
ASPA				eS	**S**	**15 17 41.1**	**-3.9**
ASPA				eSCS	ScS	15 20 44.7	+0.2
KAKA	**Kakadu**	**47.31**	**269**	eP	**P**	**15 12 09.0**	**-0.4**
	5.5nm,0.4s,mb4.4						
FORT	**Forrest**	**49.81**	**245**	eP	**P**	**15 12 27.4**	**-0.6**
	241nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.78**	**261**	⇓iP	**P**	**15 12 49.3**	**-0.3**
	12nm,1.6s,mb4.0						
MBWA	**Marble Bar**	**57.84**	**256**	eP	**P**	**15 13 23.7**	**-1.1**
	6.5nm,0.6s,mb4.0						
KLBR	**Kellerberrin**	**58.64**	**243**	eP	**P**	**15 13 29.2**	**-0.8**
	142nm,1.1s,mb5.1						
JHJ	**Hachijo jima 2**	**64.31**	**322**	P	**P**	**15 14 05.8**	**-1.1**
	110nm,0.7s,mb5.4,baz=215,slow=12,SNR=3.8						
MAJO	**Matsushiro**	**67.65**	**323**	eP	**P**	**15 14 26.5**	**-1.1**
	19nm,0.8s,mb4.7						
MAT	**Matsushiro**	**67.65**	**323**	eP	**P**	**15 14 27.0**	**-0.6**
	19nm,0.8s,mb4.7						
MAT	**Matsushiro**	**67.65**	**323**	P	**P**	**15 14 26.5**	**-1.1**
QSPA	**South Pole Qui**	**72.26**	**180**	⇑iP	**P**	**15 14 55.0**	**+0.9**
	11nm,0.9s,mb4.3						
NJ2	**Nanjing**	**77.65**	**310**	eP	**P**	**15 15 25.6**	**+0.8**
NJ2				PP	PP	15 18 34.0	+3.8
NJ2				XS		15 28 08.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,5µm,6.7s						
MDJ	**Mudanjiang**	**77.93**	**325**	P	**P**	**15 15 26.5**	**+0.5**
MDJ				AP	pP	15 17 28.7	+6.5
MDJ				PP	PP	15 18 33.1	+0.7
MDJ				S	S	15 24 34.0	-1.0
MDJ				AMB	AMB		
	comp=Z,37nm,0.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,116nm,6.0s						
MDJ	**Mudanjiang**	**77.93**	**325**	eP	**P**	**15 15 26.5**	**+0.5**
	comp=Z,32nm,0.9s,mb4.7						
CMB	**Columbia Colle**	**77.94**	**43**	eP	**P**	**15 15 26.4**	**+0.2**
	comp=Z,9.4nm,1.2s,mb4.0						
HUMO	**Hull Mountain**	**78.98**	**38**	eP	**P**	**15 15 32.3**	**+0.7**
	comp=Z,5.8nm,0.9s,mb3.9						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**15 15 34.8**	**+0.2**
	comp=Z,5.0nm,0.7s,mb3.9,baz=214,slow=7.0,SNR=30						
CN2	**Changchun**	**79.76**	**322**	eP	**P**	**15 15 35.8**	**+0.1**
CN2				eS	S	15 24 50.5	-3.4
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.3						
MOD	**Modoc**	**80.17**	**40**	eP	**P**	**15 15 37.6**	**-0.2**
	comp=Z,5.6nm,0.7s,mb4.0						
WVOR	**Wild Horse Val**	**81.50**	**40**	eP	**P**	**15 15 45.0**	**+0.4**
	comp=Z,14nm,1.0s,mb4.3						
TNA	**Tin City**	**83.50**	**4**	eP	**P**	**15 15 53.7**	**-0.5**
BJT	**Baijiatuau**	**83.50**	**315**	eP	**P**	**15 15 54.9**	**+0.1**
	comp=Z,14nm,0.8s,mb4.6						
BJI	**Beijing**	**83.51**	**315**	P	**P**	**15 15 55.4**	**+0.6**
BJI				AMB	AMB		
	comp=Z,17nm,0.8s,mb4.6						
BMO	**Blue Mountains**	**83.62**	**39**	eP	**P**	**15 15 54.9**	**-0.4**
	comp=Z,8.3nm,1.5s,mb4.0						
MSU	**Marysvale**	**83.71**	**46**	eP	**P**	**15 15 57.1**	**+1.2**
ENH	**Enshi**	**83.98**	**304**	eP	**P**	**15 15 57.9**	**+0.6**
	comp=Z,58nm,1.2s,mb5.0						
MCK	**McKinley**	**84.48**	**13**	eP	**P**	**15 15 58.0**	**-1.0**
	comp=Z,9.3nm,0.9s,mb4.3						
HLID	**Hailey**	**84.72**	**41**	eP	**P**	**15 16 01.2**	**+0.5**
	comp=Z,5.9nm,0.9s,mb4.1						
SRU	**San Rafael**	**85.13**	**46**	eP	**P**	**15 16 03.2**	**+0.4**
NEW	**Newport**	**85.58**	**36**	eP	**P**	**15 16 04.2**	**-0.5**
	comp=Z,4.1nm,0.8s,mb4.1						
HWUT	**Hardware Ranch**	**85.59**	**44**	eP	**P**	**15 16 04.9**	**0.0**
	comp=Z,1.8nm,0.5s,mb4.0						
IMA	**Indian Mountai**	**85.70**	**10**	eP	**P**	**15 16 04.6**	**-0.3**
COLA	**College**	**85.72**	**13**	eP	**P**	**15 16 03.0**	**-2.0**
	comp=Z,25nm,1.1s,mb4.8						
DLBC	**Dease Lake**	**85.83**	**23**	P	**P**	**15 16 05.7**	**+0.1**
	comp=Z,1.4nm,0.4s,mb4.0,baz=198,slow=10,SNR=7.1						
ILAR	**Eielson Array**	**85.83**	**13**	P	**P**	**15 16 04.0**	**-1.5**
	comp=Z,6.5nm,0.8s,mb4.3,baz=227,slow=4.8,SNR=80						
PV10	**Paradox Valley**	**85.84**	**48**	eP	**P**	**15 16 06.5**	**+0.3**
XAN	**Xi’an**	**85.97**	**307**	P	**P**	**15 16 07.9**	**+1.0**
XAN				AMB	AMB		
	comp=Z,33nm,1.0s,mb4.9						
TXAR	**Lajitas Array**	**86.16**	**58**	P	**P**	**15 16 08.6**	**+0.6**
	comp=Z,2.5nm,0.7s,mb4.0,baz=216,slow=6.0,SNR=22						
ANMO	**Albuquerque**	**86.24**	**52**	eP	**P**	**15 16 08.7**	**+0.5**
	comp=Z,4.7nm,1.1s,mb4.0						
BILL	**Bilibino**	**86.29**	**354**	eP	**P**	**15 16 07.0**	**-0.6**
	comp=Z,16nm,0.9s,mb4.6						
MCMT	**McKenzie Canyo**	**86.33**	**41**	eP	**P**	**15 16 08.9**	**+0.5**
RRI2	**Red Ridge**	**86.58**	**42**	eP	**P**	**15 16 10.4**	**+0.8**
TPAW	**Teton Pass**	**86.88**	**42**	eP	**P**	**15 16 11.9**	**+0.9**
HHC	**Hu-ho-hao-te**	**86.99**	**315**	⇑P	**P**	**15 16 12.5**	**+0.9**
HHC				S	S	15 25 56.0	-8.0
HHC				XS		15 29 41.3	
HHC				AMB	AMB		
	comp=Z,16nm,1.6s,mb4.4						
HHC				AMB	AMB		
	comp=Z,140nm,8.3s						
SNOW	**Snow King Moun**	**87.00**	**43**	eP	**P**	**15 16 12.2**	**+0.7**
DAWY	**Dawson**	**87.05**	**16**	eP	**P**	**15 16 10.8**	**-0.4**
IMW	**Indian Meadow**	**87.08**	**42**	eP	**P**	**15 16 12.6**	**+0.7**
MOOW	**Moose Ponds**	**87.14**	**42**	eP	**P**	**15 16 12.7**	**+0.5**
LOHW	**Long Hollow**	**87.16**	**42**	eP	**P**	**15 16 12.8**	**+0.5**
BW06	**Boulder Array**	**87.45**	**44**	eP	**P**	**15 16 13.7**	**0.0**
	comp=Z,9.3nm,1.1s,mb4.3						
PDAR	**Pinedale Array**	**87.45**	**44**	P	**P**	**15 16 14.0**	**+0.3**
	comp=Z,3.9nm,0.8s,mb4.1,baz=223,slow=3.3,SNR=25						
BOZ	**Bozeman (W)**	**87.48**	**40**	eP	**P**	**15 16 13.9**	**+0.2**
	comp=Z,7.2nm,1.3s,mb4.1						
KMI	**Kunming**	**87.53**	**297**	⇑P	**P**	**15 16 16.1**	**+1.6**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
SDCO	**Great Sand Dun**	**88.09**	**49**	eP	**P**	**15 16 17.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**88.59**	**290**	P	**P**	**15 16 20.5**	**+0.9**
	comp=Z,4.8nm,0.7s,mb4.4,baz=104,slow=2.8,SNR=35						
SYO	**Syowa Base**	**89.21**	**193**	⇓PcP	PcP	15 16 22.3	-0.2
YAK	**Yakutsk**	**89.36**	**338**	eP	**P**	**15 16 20.6**	**-1.6**
	comp=Z,8.4nm,0.8s,mb4.6						
LZH	**Lanzhou**	**90.60**	**308**	eP	**P**	**15 16 29.6**	**+1.1**
LZH				AMB	AMB		
	comp=Z,26nm,1.1s,mb5.1						
LZH				AMB	AMB		
	comp=Z,79nm,4.0s						
INK	**Inuvik**	**91.84**	**15**	P	**P**	**15 16 32.1**	**-1.4**
	comp=Z,6.1nm,0.7s,mb4.7,baz=222,slow=4.5,SNR=26						
ULN	**Ulaanbaatar**	**92.89**	**320**	eP	**P**	**15 16 38.3**	**-0.4**
	comp=Z,15nm,1.4s,mb4.8						
SONM	**Songino Array**	**93.28**	**319**	P	**P**	**15 16 39.9**	**-0.7**
	comp=Z,1.4nm,0.9s,mb4.0,baz=132,slow=4.3,SNR=13						
YKA	**Yellowknife Ar**	**94.34**	**25**	P	**P**	**15 16 43.9**	**-1.1**
	comp=Z,9.0nm,1.2s,mb4.8,baz=244,slow=4.4,SNR=48						
GTA	**Gaotai**	**94.75**	**310**	eP	**P**	**15 16 47.8**	**+0.4**
GTA				AP	pP	15 18 50.8	+3.1
GTA				S	S	15 27 10.0	-1.8
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.5						
BVAR	**Borovoye Array**	**116.58**	**321**	PKP	PKPdf	15 22 04.8	-0.2
	comp=Z,3.8nm,0.7s,baz=112,slow=1.5,SNR=28						
ARCES	**ARCESS Array B**	**126.15**	**350**	PKP	PKPdf	15 22 22.9	-0.1
	comp=Z,4.7nm,0.8s,baz=298,slow=1.3,SNR=8.8						
FINES	**FINESS Array B**	**133.00**	**344**	PKhKP		15 22 29.7	
	comp=Z,1.0nm,0.6s,baz=270,slow=3.8,SNR=4.6						
FINES				PKP	PKPdf	15 22 36.1	-0.1
	comp=Z,2.8nm,0.7s,baz=117,slow=3.1,SNR=7.7						
FINES				SKPbc		15 25 11.4	
	comp=Z,4.2nm,0.9s,baz=27,slow=4.3,SNR=7.2						
NB2	**NORSAR Subarra**	**136.22**	**353**	PKP	PKPdf	15 22 42.1	0.0
	comp=Z,7.9nm,1.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**136.22**	**353**	PKP	PKPdf	15 22 41.8	-0.3
	comp=Z,1.0nm,0.7s,baz=18,slow=4.2,SNR=4.2						
AKASG	**Malin Array Be**	**140.33**	**332**	PKhKP		15 22 42.4	
	comp=Z,2.5nm,0.6s,baz=42,slow=4.1,SNR=12						
AKASG				PKP	PKPdf	15 22 49.0	-0.9
	comp=Z,3.4nm,0.7s,baz=42,slow=3.2,SNR=5.2						
MALT	**Malatya**	**141.73**	**310**	ePKPdf	PKPdf	15 22 52.2	-0.5
EKA	**Eskdalemuir Ar**	**142.37**	**4**	PKhKP		15 22 49.7	
	comp=Z,2.4nm,0.7s,baz=326,slow=2.6,SNR=6.1						
KWP	**Kalwaria**	**143.85**	**336**	ePKP	PKPdf	15 22 56.3	+0.4
OJC	**Ojcow**	**144.41**	**340**	ePKP	PKPdf	15 22 57.9	+1.0
BRTR	**Keskin Array B**	**144.50**	**315**	PKP	PKPdf	15 22 57.7	+0.3
	comp=Z,16nm,0.8s,baz=135,slow=3.5,SNR=63						
KOLS	**Kolonicke sedl**	**144.59**	**336**	ePKP	PKPdf	15 22 58.8	+1.5
KOLS				e		15 23 07.7	
CFR	**Carcaliu**	**144.69**	**326**	⇓P	PKPdf	15 22 59.2	+1.6
CFR	**Carcaliu**	**144.69**	**326**	⇓P	PKPdf	15 22 59.2	+1.6
WIT	**Witteveen**	**144.80**	**354**	ePKP	PKPdf	15 22 59.9	+2.4
ASF	**Jabal al Asfar**	**144.88**	**301**	PKP	PKPdf	15 22 59.9	+1.5
	comp=Z,15nm,0.9s,baz=34,slow=1.6,SNR=12						
NIE	**Niedzica**	**144.91**	**338**	⇑ePKP	PKPdf	15 22 58.5	+0.7
KSP	**Ksiaz**	**144.92**	**343**	ePKP	PKPdf	15 22 59.8	+2.0
CRVS	**Cervenica-Dubn**	**144.92**	**337**	ePKP	PKPdf	15 23 00.2	+2.4
CRVS				e		15 23 03.8	
VRI	**Vrincioaia**	**144.94**	**329**	⇓P	PKPdf	15 22 59.7	+1.7
VRI	**Vrincioaia**	**144.94**	**329**	⇓P	PKPdf	15 22 59.7	+1.7
TIRR	**Tirgusor**	**145.01**	**325**	⇓P	PKPdf	15 22 59.9	+1.7
TIRR	**Tirgusor**	**145.01**	**325**	⇓P	PKPdf	15 22 59.8	+1.6
HARR	**Harsova**	**145.12**	**326**	⇑P	PKPdf	15 23 00.7	+2.3
HARR	**Harsova**	**145.12**	**326**	⇑P	PKPdf	15 23 00.6	+2.3
OKC	**Ostrava-Krasne**	**145.27**	**341**	ePKP	PKPdf	15 23 00.3	+1.9
CLL	**Collm**	**145.29**	**347**	⇑iPKIKP	PKPdf	15 23 00.4	+2.0
	comp=Z,logA/T=1.7						
CLL				e		15 23 10.0	
CLL				e		15 25 47.0	
UPC	**Upice**	**145.30**	**343**	ePKP	PKPdf	15 23 00.8	+2.3
DPC	**Dobruska-Polom**	**145.36**	**343**	ePKP	PKPdf	15 23 01.2	+2.6
MLR	**Muntele Rosu**	**145.59**	**329**	PKPbc	PKPbc	15 23 01.3	+1.0
	comp=Z,10.0nm,0.8s,baz=72,slow=1.5,SNR=15						
MLR	**Muntele Rosu**	**145.59**	**329**	⇓P	PKPdf	15 23 01.7	+2.6
MLR	**Muntele Rosu**	**145.59**	**329**	⇓P	PKPdf	15 23 01.7	+2.6
WTSB	**Winterswijk**	**145.62**	**354**	ePKP	PKPdf	15 23 01.5	+2.5
	comp=Z,46nm,1.1s						
KECS	**Kecovo**	**145.63**	**337**	ePKP	PKPdf	15 23 01.5	+2.4
PVCC	**Panska Ves**	**145.65**	**345**	ePKP	PKPdf	15 23 01.9	+2.8
MBAR	**Mbarara**	**145.75**	**241**	ePKPbc	PKPbc	15 23 02.8	+1.0
SNX	**Sinaia**	**145.90**	**329**	P	PKPdf	15 23 03.3	+3.7
PRU	**Pruhonice**	**146.16**	**345**	ePKP	PKPdf	15 23 03.0	+3.1
PRU				ex	x	15 23 05.3	
VYHS	**Vyhne**	**146.21**	**339**	ePKP	PKPdf	15 23 03.5	+3.5
VYHS				e		15 23 06.1	
VRAC	**Vranov**	**146.21**	**342**	PKPbc	PKPbc	15 23 02.6	+0.8
	comp=Z,12nm,0.8s,baz=42,slow=5.4,SNR=9.3						
PSZ	**Piszkesteto**	**146.32**	**337**	ePKPbc	PKPbc	15 23 03.3	+1.3
PSZ	**Piszkesteto**	**146.32**	**337**	⇑eP	PKPdf	15 23 03.7	+3.5
NKC	**Novy Kostel**	**146.42**	**347**	ePKP	PKPdf	15 23 03.7	+3.4
SMOL	**Smolenice**	**146.66**	**340**	ePKP	PKPdf	15 23 05.0	+4.2
CSS	**Prodhromos**	**146.79**	**307**	ePKPbc	PKPbc	15 23 04.7	+1.1
CSS				ePKPab	PKPab	15 23 08.0	-1.6
HGN	**Heimansgroeve**	**146.90**	**355**	ePKP	PKPdf	15 23 00.5	-0.6
	comp=Z,20nm,1.1s						
ZST	**Bratislava**	**147.04**	**340**	ePKP	PKPdf	15 23 05.2	+3.8
EIL	**Elat**	**147.12**	**297**	PKPbc	PKPdf	15 23 05.4	+3.3
	comp=Z,8.2nm,0.7s,baz=327,slow=7.0,SNR=6.1						
KHC	**Kasperske Hory**	**147.19**	**345**	ePKP	PKPdf	15 23 05.6	+4.0
KHC				ex	x	15 23 09.0	
GERES	**GERESS Array B**	**147.43**	**345**	PKPbc	PKPdf	15 23 06.2	+4.2
	comp=Z,10nm,0.5s,baz=23,slow=2.9,SNR=81						
GIVF	**Givet**	**147.64**	**356**	ePKP1	PKPdf	15 23 07.0	+4.7
	comp=Z,71nm,0.8s						
BAIF	**Baives**	**147.72**	**356**	ePKP1	PKPdf	15 23 07.3	+4.9
	comp=Z,31nm,0.7s						
RUP	**Ruppelstein**	**147.83**	**353**	eP	PKPdf	15 23 07.6	+5.0
WLF	**Walferdange**	**147.96**	**354**	ePKPbc	PKPdf	15 23 08.2	+5.4
MOA	**Molln**	**148.19**	**343**	⇑iP	PKPdf	15 23 08.5	+5.3
ARSA	**Arzberg**	**148.37**	**341**	⇑iP	PKPdf	15 23 08.6	+5.1
LANF	**Langenberg**	**148.44**	**352**	PKP	PKPdf	15 23 09.0	+5.4
LANF	**Langenberg**	**148.44**	**352**	eP	PKPdf	15 23 09.0	+5.4
FUR	**Furstenfeldbru**	**148.63**	**347**	ePKPbc	PKPdf	15 23 09.1	+5.2
FUR				ePKPab	PKPab	15 23 15.5	-1.0
PERS	**Pernice**	**149.05**	**341**	ePKPbc	PKPdf	15 23 09.9	+5.3
WLS	**Welschbruch**	**149.06**	**352**	PKP	PKPdf	15 23 09.9	+5.3
WLS	**Welschbruch**	**149.06**	**352**	eP	PKPdf	15 23 09.9	+5.3
CDF	**Champ du Feu**	**149.07**	**352**	ePKP1	PKPdf	15 23 10.5	+5.9
	comp=Z,28nm,0.8s						
FLN	**La Foliniere**	**149.07**	**2**	ePKP1	PKPdf	15 23 10.2	+5.6
	comp=Z,77nm,1.0s						
MEZF	**Maizieres J’vi**	**149.22**	**355**	ePKP1	PKPdf	15 23 11.1	+6.2
LDF	**La Druitiere**	**149.25**	**2**	ePKP1	PKPdf	15 23 10.7	+5.8
	comp=Z,9.6nm,0.4s						
ECH	**Echery**	**149.28**	**352**	PKP	PKPdf	15 23 07.8	+2.8
ECH	**Echery**	**149.28**	**352**	eP	PKPdf	15 23 07.8	+2.8
ROSF	**Rostrenen**	**149.31**	**6**	ePKP1	PKPdf	15 23 10.4	+5.4
WATA	**Walderalm**	**149.35**	**346**	⇑iP	PKPdf	15 23 11.0	+5.9
WTTA	**Wattenberg**	**149.40**	**346**	⇑iP	PKPdf	15 23 11.5	+6.3
THEF	**They Montfort**	**149.40**	**354**	PKP	PKPdf	15 23 11.1	+5.9
DIVS	**Divcibare**	**149.41**	**333**	⇓iP	PKPdf	15 23 11.3	+6.0
GRR	**Gorron**	**149.43**	**3**	ePKP1	PKPdf	15 23 11.2	+6.0
	comp=Z,21nm,0.6s						
MOTA	**Moosalm**	**149.44**	**347**	⇑iP	PKPdf	15 23 11.1	+5.8
FELD	**Feldberg**	**149.50**	**351**	eP	PKPdf	15 23 10.2	+4.9
SQTA	**Sankt Quirin**	**149.54**	**347**	⇓iP	PKPdf	15 23 11.7	+6.3
HAU	**Haudompre**	**149.58**	**353**	ePKP1	PKPdf	15 23 11.7	+6.2
	comp=Z,24nm,0.7s						
HINF	**Hinteralfeld**	**149.71**	**353**	ePKP1	PKPdf	15 23 11.9	+6.2
	comp=Z,15nm,0.8s						
DAVA	**Damuels**	**149.75**	**348**	⇑iP	PKPdf	15 23 11.9	+6.2
LJU	**Ljubljana**	**149.76**	**342**	ePKPbc	PKPdf	15 23 11.9	+6.1
VOY	**Vojsko**	**149.96**	**342**	ePKPbc	PKPdf	15 23 11.8	+5.7
BOJS	**Bojanci**	**150.02**	**340**	ePKPbc	PKPdf	15 23 12.8	+6.6
LOMF	**Lomont**	**150.17**	**352**	PKP	PKPdf	15 23 13.0	+6.6
LOMF	**Lomont**	**150.17**	**352**	eP	PKPdf	15 23 13.0	+6.6
DAVOX	**Davos**	**150.23**	**348**	PKP	PKPdf	15 23 08.1	+1.6
	comp=Z,18nm,0.7s,baz=352,slow=15,SNR=4.0						
DAVOX				PKPbc	PKPdf	15 23 13.3	+6.7
	comp=Z,32nm,0.7s,baz=255,slow=1.3,SNR=33						
SKO	**Skopje**	**150.39**	**329**	i PKP	PKPdf	15 23 13.8	+6.9
HYF	**Humbligny**	**150.58**	**358**	ePKP1	PKPdf	15 23 14.4	+7.4
SSF	**Saint Saulge**	**150.75**	**357**	ePKP1	PKPdf	15 23 14.6	+7.3
CABF	**La Chapelle**	**150.99**	**353**	ePKP1	PKPdf	15 23 15.7	+8.1
	comp=Z,60nm,1.0s						
AVF	**Avril sur Loir**	**151.03**	**357**	ePKP1	PKPdf	15 23 14.8	+7.1
	comp=Z,10nm,0.7s						
SMF	**Signal de Mont**	**151.15**	**356**	ePKP1	PKPdf	15 23 15.1	+7.2
MFF	**Saint Martin d**	**151.24**	**2**	ePKP1	PKPdf	15 23 15.4	+7.4
	comp=Z,46nm,1.0s						
TCF	**Toulx Ste Croi**	**151.57**	**359**	ePKP1	PKPdf	15 23 16.2	+7.7
	comp=Z,38nm,1.0s						
LPL	**La Plagne**	**151.99**	**352**	ePKP1	PKPdf	15 23 18.1	+9.0
	comp=Z,16nm,0.8s						
LPG	**La Plagne**	**152.00**	**352**	ePKP1	PKPdf	15 23 18.2	+9.1
	comp=Z,16nm,0.9s						
BNI	**Bardonecchia**	**152.45**	**352**	ePKPbc	PKPdf	15 23 18.2	+8.4
BNI				ePKPab	PKPab	15 23 31.7	-0.8
RJF	**Les Rejaudoux**	**152.57**	**360**	ePKP1	PKPdf	15 23 18.4	+8.5
	comp=Z,13nm,0.7s						
ORIF	**Oris-en-Rattie**	**152.68**	**353**	ePKP1	PKPdf	15 23 19.1	+9.0
IDI	**Anoyia**	**152.74**	**314**	PKPbc	PKPdf	15 23 20.3	+10
	comp=Z,12nm,0.7s,baz=4.8,slow=12,SNR=3.9						
MBDF	**Montbardon**	**152.75**	**351**	ePKP1	PKPdf	15 23 19.2	+9.0
	comp=Z,18nm,0.7s						
VIVF	**Saint-Julien-l**	**152.87**	**355**	ePKP1	PKPdf	15 23 19.4	+9.1
	comp=Z,7.8nm,0.7s						
CAF	**Calviac**	**152.94**	**359**	ePKP1	PKPdf	15 23 19.4	+9.0
	comp=Z,8.2nm,0.7s						
SMRF	**Simiane la Rot**	**153.65**	**353**	ePKP1	PKPdf	15 23 22.3	+11
SJPF	**Ste Jean**	**154.67**	**4**	ePKP1	PKPdf	15 23 24.0	+11
ESDC	**Sonseca Array**	**157.72**	**11**	PKPab	PKPab	15 23 53.7	-1.4
	comp=Z,2.3nm,0.8s,baz=342,slow=4.7,SNR=6.3						

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*IDC **11** 15:49:42.2±3.1,36.93N×143.05E,mb3.6/5,mb1 3.8/5, mb1mx3.5/21,mbtmp3.6/5,Error ellipse: s-maj=89.8km s-min=26.1km az=64.0*

*JMA **11** 15:49:47.8±0.5,36.61N×142.04E,h58^{km},M3.2*

ISC 11 15:49:50.1±1.1,36.68N±0.09×141.90E±0.09,h58^{km},n14, σ1^{s}07/17,mb3.5/5,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.98**	**296**	P	**P**	**15 50 08.1**	**+0.1**
JFK	**Kawauchi**	**1.07**	**310**	P	**P**	**15 50 08.4**	**-0.9**
JHO	**Hitachi**	**1.07**	**267**	P	**P**	**15 50 07.7**	**-1.6**
JHO				eS	**S**	**15 50 22.6**	**-0.9**
JYT	**Yasato**	**1.45**	**252**	P	**P**	**15 50 13.1**	**-1.5**
JYT				eS	**S**	**15 50 33.6**	**+1.0**
JMM	**Marumori**	**1.48**	**324**	P	**P**	**15 50 13.9**	**-1.1**
JFT	**Otama**	**1.50**	**304**	P	**P**	**15 50 15.3**	**-0.1**
JFY	**Yanaizu**	**1.90**	**293**	P	**P**	**15 50 22.8**	**+2.0**
JAG	**Ashikaga**	**1.98**	**263**	P	**P**	**15 50 21.7**	**-0.3**
MAT	**Matsushiro**	**2.97**	**268**	P	**P**	**15 50 36.9**	**+0.9**
MAT				S	**S**	**15 51 11.1**	**+0.5**
SONM	**Songino Array**	**28.31**	**304**	P	**P**	**15 55 41.6**	**+1.4**
	1.9nm,0.9s,mb3.7,baz=105,slow=8.7,SNR=16						
CMAR	**Chiang Mai Arr**	**41.78**	**256**	P	**P**	**15 57 41.8**	**+6.2**
	0.4nm,0.7s,mb3.1,baz=37,slow=9.0,SNR=3.2						
ZAL	**Zalesovo**	**42.45**	**313**	P	**P**	**15 57 44.2**	**+3.6**
	0.5nm,0.3s,mb3.5,baz=56,slow=7.4,SNR=3.9						
WRA	**Warramunga Arr**	**56.76**	**189**	P	**P**	**15 59 30.0**	**-0.6**
	0.5nm,0.8s,mb3.6,baz=8.0,slow=7.5,SNR=5.4						
ASAR	**Alice Springs**	**60.49**	**188**	P	**P**	**15 59 57.2**	**+0.7**
	0.3nm,0.7s,mb3.4,baz=18,slow=7.4,SNR=4.6						

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*IDC **11** 16:05:33.8±10.0,21.41S×167.29E,mb3.5/3,mb1 3.7/3, mb1mx3.6/13,mbtmp3.5/3,Error ellipse: s-maj=263.6km s-min=79.8km az=132.0*

ISC 11 16:05:23.9±2.4,23.3S±0.4×169.1E±0.3,h33^{km},n5, σ1^{s}06/7,mb3.4/3,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.73**	**297**	eP	**P**	**16 06 05.9**	**-0.5**
DZM				eS	**S**	**16 06 38.1**	**-0.5**
NOUC	**Port Laguerre**	**2.83**	**295**	eP	**P**	**16 06 07.2**	**-0.6**
NOUC				eS	**S**	**16 06 44.3**	**+3.1**
ASAR	**Alice Springs**	**32.19**	**262**	P	**P**	**16 11 52.1**	**+0.8**
	0.7nm,1.1s,mb3.4,baz=81,slow=9.3,SNR=6.5						
WRA	**Warramunga Arr**	**32.41**	**269**	P	**P**	**16 11 51.9**	**-1.2**
	0.3nm,0.8s,mb3.2,baz=99,slow=8.5,SNR=4.8						
CMAR	**Chiang Mai Arr**	**80.05**	**295**	P	**P**	**16 17 33.3**	**+0.9**
	0.5nm,0.7s,mb3.5,baz=135,slow=4.5,SNR=4.9						

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*NEIC **11** 16:24:33.4±3.0,51.48N×16.06E,h5^{km},ML2.7(SZGRF), ML2.6(BRG),Error ellipse: s-maj=34.2km s-min=11.0km az=201.0*

*CSEM **11** 16:24:33.1±0.3,51.51N×16.07E,h0^{km}±1^{km},ML2.7,Error ellipse: s-maj=7.1km s-min=3.3km az=9.0*

*PRU **11** 16:24:34.9,51.44N×15.99E*

WAR 11 16:24:34.7,51.47N×16.03E,h1^{km},ML2.4,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.65**	**165**	ePG	Pg	16 24 46.0	-1.7
KSP				eSG	Sg	16 24 55.0	-1.3
UPC	**Upice**	**0.96**	**181**	ePG	Pg	16 24 52.2	-1.7
DPC	**Dobruska-Polom**	**1.14**	**171**	ePG	Pg	16 24 55.0	-2.4
DPC				eSG	Sg	16 25 11.1	-1.4
PVCC	**Panska Ves**	**1.32**	**225**	ePG	Pg	16 24 59.2	-1.9
BRG	**Berggiesshubel**	**1.45**	**246**	i Pg	Pg	16 25 01.4	-2.1
BRG				i Sg	Sg	16 25 21.1	-1.7
PRU	**Pruhonice**	**1.76**	**213**	ePG	Pg	16 25 06.2	-3.6
PRU				eSG	Sg	16 25 29.5	-3.8
CLL	**Collm**	**1.91**	**266**	ePG	Pg	16 25 09.0	-3.7
CLL				eSG	Sg	16 25 35.0	-3.1
OKC	**Ostrava-Krasne**	**2.12**	**140**	ePG	Pg	16 25 13.1	-3.9
OKC				eSG	Sg	16 25 43.7	-1.5
VRAC	**Vranov**	**2.19**	**170**	ePn	Pn	16 25 11.8	-1.0
NKC	**Novy Kostel**	**2.59**	**243**	ePN	Pn	16 25 17.3	-1.1
NKC				ePG	Pg	16 25 22.0	-4.3
NKC				eSG	Sg	16 25 56.3	-4.5
NKC	**Novy Kostel**	**2.59**	**243**	Pg	Pg	16 25 22.0	-4.3
NKC				Sg	Sg	16 25 56.3	-4.5
KHC	**Kasperske Hory**	**2.82**	**215**	ePN	Pn	16 25 20.0	-1.7
KHC				ePG	Pg	16 25 25.5	-5.5
KHC				eSN	Sn	16 25 52.5	-4.4
KHC				eSG	Sg	16 26 02.9	-5.7
GEC2	**GERESS Array S**	**3.02**	**211**	ePn	Pn	16 25 23.7	-0.9
GEC2				eSg	Sg	16 26 10.4	-5.0

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*NEIC **11** 16:52:41.1±1.2,51.53N×16.08E,h5^{km},ML2.7(SZGRF), ML2.7(FUR),ML2.2(BRG),Error ellipse: s-maj=14.0km s-min=6.2km az=196.0*

*CSEM **11** 16:52:41.3±0.2,51.55N×16.08E,h2^{km},ML2.7,Error ellipse: s-maj=3.3km s-min=1.6km az=6.0*

*WAR **11** 16:52:42,51.54N×16.06E,h1^{km},ML2.7,Mining Induced*

*PRU **11** 16:52:42.1,51.48N×16.06E*

ISC 11 16:52:40.1±0.8,51.46N±0.04×16.04E±0.04,n19,σ1^{s}34/39, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**165**	ePg	**Pg**	**16 52 55.0**	**+2.1**
KSP				e		16 52 56.8	
KSP				eSg	**Sg**	**16 53 02.0**	**+0.5**
KSP				e		16 53 04.3	
UPC	**Upice**	**0.96**	**181**	ePG	**Pg**	**16 53 00.8**	**+1.6**
DPC	**Dobruska-Polom**	**1.13**	**171**	ePG	**Pg**	**16 53 03.8**	**+1.1**
DPC				eSG	**Sg**	**16 53 19.3**	**+1.6**
PVCC	**Panska Ves**	**1.32**	**225**	ePG	**Pg**	**16 53 07.4**	**+0.9**
BRG	**Berggiesshubel**	**1.45**	**247**	ePn	**Pn**	**16 53 09.2**	**+1.6**
BRG				i Pg	**Pg**	**16 53 09.7**	**+0.7**
BRG				i Sg	**Sg**	**16 53 29.8**	**+1.5**
BRG	**Berggiesshubel**	**1.45**	**247**	i Pg	**Pg**	**16 53 09.7**	**+0.7**
PRU	**Pruhonice**	**1.76**	**213**	ePG	**Pg**	**16 53 14.7**	**-0.5**
PRU				eSG	**Sg**	**16 53 39.1**	**+0.5**
CLL	**Collm**	**1.91**	**267**	i Pn	**Pn**	**16 53 14.1**	**-0.1**
CLL				i Pg	**Pg**	**16 53 16.9**	**-1.4**
CLL				i Sg	**Sg**	**16 53 43.3**	**-0.4**
CLL	**Collm**	**1.91**	**267**	i PN	**Pn**	**16 53 14.1**	**-0.1**
CLL				i PG	**Pg**	**16 53 16.9**	**-1.4**
CLL				i		16 53 21.1	
CLL				i SG	**Sg**	**16 53 43.3**	**-0.4**
OKC	**Ostrava-Krasne**	**2.11**	**140**	ePG	**Pg**	**16 53 21.8**	**-0.4**
OKC				eSG	**Sg**	**16 53 48.8**	**-1.5**
VRAC	**Vranov**	**2.19**	**170**	ePn	**Pn**	**16 53 19.5**	**+1.3**
NKC	**Novy Kostel**	**2.59**	**243**	ePN	**Pn**	**16 53 24.8**	**+0.8**
NKC				ePG	**Pg**	**16 53 31.1**	**-0.7**
OJC	**Ojcow**	**2.69**	**116**	ePG	**Pg**	**16 53 32.0**	**-1.8**
OJC				eSG	**Sg**	**16 54 08.0**	**-1.6**
OJC	**Ojcow**	**2.69**	**116**	ePg	**Pg**	**16 53 32.3**	**-1.5**
OJC				eSg	**Sg**	**16 54 07.8**	**-1.8**
KHC	**Kasperske Hory**	**2.82**	**215**	ePN	**Pn**	**16 53 28.6**	**+1.4**
KHC				ePG	**Pg**	**16 53 33.7**	**-2.7**
KHC				eSN	**Sn**	**16 54 00.0**	**-2.4**
KHC				eSG	**Sg**	**16 54 12.7**	**-1.3**
MOX	**Moxa**	**2.91**	**255**	Pg	**Pg**	**16 53 37.0**	**-1.2**
MOX				Sg	**Sg**	**16 54 16.0**	**-1.0**
MOX	**Moxa**	**2.91**	**255**	ePg	**Pg**	**16 53 36.6**	**-1.6**
MOX				eSg	**Sg**	**16 54 16.2**	**-0.8**
GEC2	**GERESS Array S**	**3.02**	**211**	ePn	**Pn**	**16 53 32.0**	**+1.9**
GEC2				eSg	**Sg**	**16 54 18.3**	**-2.4**
WET	**Wettzell**	**3.08**	**222**	ePn	**Pn**	**16 53 31.9**	**+0.9**
WET				eSg	**Sg**	**16 54 22.0**	**-0.7**

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*BJI **11** 16:53:37.2,38.14N×76.85E,h15^{km},ML3.6*

*NNC **11** 16:53:47.2±10.0,43.98N×70.04E,mpv3.2,Error ellipse: s-maj=196.6km s-min=59.2km az=47.0*

ISC 11 16:53:24.2±0.5,37.53N±0.03×76.2E±0.1,h10^{km},n18, σ1^{s}08/22,2C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.99**	**356**	⇓PG	**Pg**	**16 54 02.4**	**-1.6**
KSH				SG	**Sg**	**16 54 27.0**	**-3.6**
KSH				Smax			
	comp=N,450nm,1.0s						
KSH				Smax			
	comp=E,250nm,0.7s						
KZA	**Kyzart**	**4.60**	**352**	P	**Pn**	**16 54 36.2**	**+0.7**
	SNR=30						
ULHL	**Ulahol**	**4.71**	**1**	P	**Pn**	**16 54 38.2**	**+1.1**
	SNR=13						
UCH	**Uchtor**	**4.86**	**345**	P	**Pn**	**16 54 39.6**	**+0.4**
	SNR=8.8						
AML	**Almayashu**	**4.97**	**338**	P	**Pn**	**16 54 40.9**	**+0.1**
	SNR=5.6						
DLH	**Dalhousie**	**4.98**	**182**	eP	**Pn**	**16 54 47.0**	**+6.2**
DLH				eS	**Sn**	**16 55 40.0**	**+0.9**
THN	**Thein Dam**	**5.09**	**184**	eP	**Pn**	**16 54 45.4**	**+3.0**
THN				eS	**Sn**	**16 55 40.7**	**-1.4**
AAK	**Ala-Archa**	**5.26**	**346**	⇑Pn	**Pn**	**16 54 43.2**	**-1.6**
	comp=E,5.6nm,0.8s						
AAK				⇑Lg		16 55 39.4	
	comp=E,13nm,0.6s						
TKM2	**Tokmak 2**	**5.41**	**356**	P	**Pn**	**16 54 47.8**	**+1.0**
	SNR=12						
SDNR	**Sundarnagar**	**6.05**	**173**	eP	**Pn**	**16 55 02.8**	**+6.9**
SDNR				eS	**Sn**	**16 56 05.2**	**-0.8**
MK31	**Makanchi Array**	**10.31**	**24**	P	**P**	**16 55 58.8**	**+3.6**
	comp=E,1.2nm,1.1s,baz=201,slow=12,SNR=12						
KOLN	**Koldanda**	**11.57**	**145**	eP	**P**	**16 56 12.0**	**-0.5**
	comp=E,5.1nm,0.3s						
GKN	**Gorkha**	**11.87**	**141**	eP	**P**	**16 56 16.0**	**-0.6**
	comp=E,8.1nm,0.2s						
KKN	**Kakani**	**12.38**	**139**	eP	**P**	**16 56 23.4**	**+0.1**

	comp=E,4.8nm,0.4s						
DMN	Daman	12.43	140	eP	P	16 56 23.7	-0.4
	comp=E,4.1nm,0.3s						
GUN	Gumba	12.60	137	eP	P	16 56 26.6	+0.3
	comp=E,5.8nm,0.3s						
PKI	Pulchoki	12.62	139	eP	P	16 56 26.2	-0.4
JIRN	Jiri	12.96	136	eP	P	16 56 32.0	+0.8
	comp=E,14nm,0.3s						

MAN 11 16:55:25.1, 10.30N×122.38E, h27^{km}, mb4.4, ML3.2, MS3.0, 1C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.38	32	eP	Pb	16 55 34.3	+0.8
GUIM				eS	Sb	16 55 40.7	+1.5
AAP	Anini-y	0.45	285	eP	Pb	16 55 32.0	-2.5
RCP	Roxas	1.30	16	⇑eP	Pn	16 55 47.4	-0.3
RCP				eS	Sn	16 56 05.0	+0.6
CUYO	Cuyo Island	1.45	292	eP	Pn	16 55 49.7	-0.1
CUYO				eS	Sn	16 56 07.7	-0.4
TBP	Tagbilaran	1.58	112	eP	Pn	16 55 51.7	0.0
DCPH	Dipolog City	1.96	151	⇓iP	Pn	16 55 56.8	-0.3
DCPH				i S	Sn	16 56 20.6	-0.4
OTRP	Odiongan	2.08	350	eP	Pn	16 55 59.9	+1.1
MSLP	Maasin	2.44	94	eP	Pn	16 56 04.1	0.0
MSLP				eS	Sn	16 56 33.0	-0.4
SJMP	San Jose	2.48	330	eP	Pn	16 56 03.6	-1.0
IPIL	Ipil	2.50	176	eP	Pn	16 56 05.4	+0.5
IPIL				eS	Sn	16 56 33.2	-1.7
PAGZ	Pagadian	2.63	158	eP	Pn	16 56 07.7	+0.9
PAGZ				eS	Sn	16 56 42.5	+4.4
BUSP	Coron	2.73	308	eP	Pn	16 56 07.3	-0.9
BUSP				eS	Sn	16 56 37.7	-2.9
ENPP	El Nido	3.04	287	eP	Pn	16 56 12.6	0.0
BUKP	Musuan	3.58	132	eP	Pn	16 56 19.4	-0.8

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*IDC **11** 17:12:05.5±1.9, 4.68N×94.59E, mb3.8/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.7/6, ML3.4/1, MS2.1/1, Ms1 2.1/1, ms1mx2.0/29, Error ellipse: s-maj=86.9km s-min=29.9km az=57.0*

*NEIC **11** 17:12:08.7±0.8, 4.18N×94.02E, h30^{km}, mb4.1/2, Error ellipse: s-maj=27.6km s-min=12.4km az=63.0*

ISC 11 17:12:06.7±1.1, **4.2N**±0.2×**94.0E**±0.2, **h30^{km}, n11, σ0.^{s}50**/10, **mb3.8**/7, **MS2.1**/1, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.98	18	Pn	P	17 15 38.8	+0.3
	0.1nm,0.3s,baz=211,slow=11,SNR=12						
NWAO	Narrogin (SRO)	42.98	151	LR	LR	17 36 17.7	
	comp=Z,2.3nm,19.4s,MS2.1,baz=178,slow=34						
SONM	Songino Array	44.77	12	P	P	17 20 15.4	-4.1
	0.2nm,0.6s,mb3.1,baz=196,slow=9.4,SNR=4.7						
WB2	Warramunga Arr	46.33	123	eP	P	17 20 32.0	-0.2
ASAR	Alice Springs	47.73	127	P	P	17 20 43.4	+0.1
	0.3nm,0.8s,mb3.4,baz=301,slow=8.0,SNR=5.4						
KURK	Kurchatov	48.14	347	eP	P	17 20 45.8	-0.3
	1.3nm,0.6s,mb4.1						
ZAL	Zalesovo	50.16	353	P	P	17 21 00.8	-0.8
	0.6nm,0.4s,mb4.0,baz=182,slow=1.8,SNR=3.7						
ZAL	Zalesovo	50.16	353	P	P	17 21 00.8	-0.8
CHKZ	Chkalovo	52.92	343	eP	P	17 21 22.4	-0.1
	0.7nm,0.3s,mb4.1						
FINES	FINESS Array B	75.90	333	P	P	17 23 52.4	+0.3
	1.5nm,0.9s,mb3.9,baz=108,slow=6.0,SNR=7.7						
ARCES	ARCESS Array B	78.67	341	P	P	17 24 08.0	+0.7
	2.4nm,0.9s,mb4.1,baz=108,slow=5.7,SNR=3.4						

IDC 11 17:15:50.1±11.0, **13.37N×91.53E, mb3.5**/2, **mb1 3.6**/3, **mb1mx3.3**/18, **mbtmp3.3**/3, **ML3.2**/1, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.5**/19, **Error ellipse: s-maj=240.5km s-min=51.7km az=112.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.74	54	Pn	P	17 17 57.9	-2.7
	0.1nm,0.3s,baz=240,slow=17,SNR=3.8						
JOW	Kunigami	36.87	63	LR	LR	17 38 22.3	
	comp=Z,58nm,20.5s,baz=59,slow=37						
WRA	Warramunga Arr	53.57	127	P	P	17 25 12.8	-2.5
	0.4nm,0.6s,baz=302,slow=10,SNR=9.4						
ASAR	Alice Springs	55.42	131	P	P	17 25 26.9	-2.0
	0.3nm,0.5s,baz=309,slow=7.0,SNR=10						

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*IDC **11** 17:39:26.0±2.3, 34.29N×135.69E, h356^{km}±29^{km}, mb3.1/6, mb1 3.3/8, mb1mx3.0/25, mbtmp4.0/8, Error ellipse: s-maj=24.1km s-min=12.8km az=69.0*

*BJI **11** 17:39:26.7, 34.60N×135.75E, h391^{km}, mB4.6, mb4.3*

*NEIC **11** 17:39:28.3±0.8, 34.38N×135.54E, h385^{km}±8^{km}, mb3.8/6, Error ellipse: s-maj=15.1km s-min=12.6km az=213.0*

*JMA **11** 17:39:28.3±0.1, 34.44N×135.55E, h388^{km}±2^{km}, M3.1*

ISC 11 17:39:27.3±0.4, **34.37N**±0.06×**135.60E**±0.06, **h394^{km}**±3^{km}, **n39, σ0.^{s}82**/51, **mb3.4**/10, **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHE	Heguri	0.30	14	P	P	17 40 16.6	+0.2
JHE				S	S	17 40 54.6	-0.4
TSUJ	Tsu 2	0.76	63	P	P	17 40 17.6	+0.4
JWZ	Kozaga	0.84	173	P	P	17 40 17.9	+0.4
JIE	Ise	0.92	88	P	P	17 40 18.3	+0.6
JWT	Wachi	0.93	350	P	P	17 40 17.8	+0.1
JWT				S	S	17 40 56.5	-0.9
JEG	Eigenji	1.01	40	P	P	17 40 18.4	+0.4
JAI	Aioi	1.11	239	P	P	17 40 19.0	+0.6
JAI				S	S	17 40 58.3	-0.3
JFM	Mihama	1.20	15	P	P	17 40 19.3	+0.5
JKY	Yasaka	1.32	342	P	P	17 40 19.3	-0.1
JMN	Monobe	1.56	247	P	P	17 40 20.8	+0.2
JMN				S	S	17 41 02.8	+0.4
JGM	Miyama	1.62	34	P	P	17 40 21.0	+0.1
JGM				S	S	17 41 02.7	-0.2
JAO	Obara	1.64	56	P	P	17 40 21.3	+0.3
JKG	Kaga	2.00	17	P	P	17 40 23.1	0.0
JNY	Yasuok	2.11	61	P	P	17 40 23.9	+0.1
JHS	Saijyo	2.14	288	P	P	17 40 24.2	+0.2
JHS				S	S	17 41 08.0	-0.5
JHT	Toyohira	2.64	277	P	P	17 40 27.6	0.0
JHT				S	S	17 41 14.3	-0.7
JYN	Shimob	2.67	64	P	P	17 40 27.9	+0.1
JTO	Tosashimizu	2.77	238	P	P	17 40 29.3	+0.7
MAJO	Matsushiro	3.04	44	ePn	P	17 40 30.8	+0.1
MAT	Matsushiro	3.04	44	eP	P	17 40 31.0	+0.2
MAT				eS	S	17 41 20.0	-0.7
MAT	Matsushiro	3.04	44	P	P	17 40 30.6	-0.1
MAT				S	S	17 41 19.8	-0.9
JRY	Ryogami san	3.17	58	P	P	17 40 32.1	+0.3
JRY				S	S	17 41 24.3	+1.7
KS15	Wonju Array Si	6.97	298	ePn	P	17 41 11.0	-0.2
CBIJ	Chichi jima	9.20	140	P	P	17 41 34.4	-2.5
	12nm,0.3s,baz=275,slow=21,SNR=4.8						
CBIJ				S	S	17 43 15.8	-3.5
	10nm,0.3s,baz=307,slow=22,SNR=3.9						
ASAJ	Asahikawa	11.14	27	P	P	17 41 57.0	-2.7
	1.7nm,0.3s,baz=240,slow=18,SNR=13						
ASAJ				S	S	17 43 55.9	-4.6
	0.8nm,0.3s,baz=235,slow=33,SNR=5.6						
CN2	Changchun	12.28	323	eP	P	17 42 11.2	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
BJT	Baijiatuau	16.47	296	eP	P	17 42 55.8	-1.3
	comp=Z,4.6nm,0.6s						
HIA	Hailar	18.95	327	eP	P	17 43 20.6	-1.3
	comp=Z,8.7nm,1.1s						
HHC	Hu-ho-hao-te	20.08	296	eP	P	17 43 34.4	+1.4
HHC				AMB	AMB		
	comp=Z,9.0nm,1.1s						
ULN	Ulaanbaatar	25.22	311	eP	P	17 44 21.4	+0.9
	comp=Z,1.3nm,0.5s,mb3.6						
SONM	Songino Array	25.62	311	P	P	17 44 25.0	+0.8
	comp=Z,3.5nm,0.8s,mb3.8,baz=122,slow=9.5,SNR=26						
CMAR	Chiang Mai Arr	36.22	254	P	P	17 45 56.7	+0.8
	comp=Z,0.5nm,0.4s,mb3.2,baz=54,slow=7.4,SNR=7.0						
BILL	Bilibino	37.98	18	eP	P	17 46 10.6	+0.6
	comp=Z,2.9nm,0.3s,mb4.1						
ZAL	Zalesovo	40.34	315	P	P	17 46 30.8	+1.4
	comp=Z,0.6nm,0.6s,mb3.1,baz=23,slow=5.9,SNR=4.7						
KURK	Kurchatov	43.92	310	eP	P	17 46 58.0	0.0
	comp=Z,0.8nm,0.5s,mb3.3						
CHKZ	Chkalovo	48.72	314	eP	P	17 47 34.3	-0.9
	comp=Z,0.9nm,0.6s,mb3.3						
WRA	Warramunga Arr	54.02	181	P	P	17 48 14.1	-0.6
	comp=Z,1.3nm,0.7s,mb3.3,baz=358,slow=7.7,SNR=21						
ASAR	Alice Springs	57.73	182	P	P	17 48 40.2	-0.3
	comp=Z,0.5nm,0.6s,mb3.1,baz=8.1,slow=6.4,SNR=14						
INK	Inuvik	58.88	26	P	P	17 48 48.1	+0.4
	comp=Z,0.7nm,0.6s,mb3.1,baz=263,slow=8.3,SNR=3.3						

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*NEIC **11** 17:42:48.6±1.9, 50.25N×19.26E, h5^{km}, MG2.7(WAR), Error ellipse: s-maj=20.8km s-min=10.2km az=163.0*

*PRU **11** 17:42:49.6, 50.17N×19.21E*

WAR 11 17:42:48.1, 50.16N×19.30E, h0^{km}, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.32	80	ePG	Pg	17 42 55.0	+0.4
OJC				eSG	Sg	17 43 00.0	+1.1
OKC	Ostrava-Krasne	0.81	247	ePG	Pg	17 43 04.3	0.0
OKC				eSG	Sg	17 43 15.4	+0.2
NIE	Niedzica	0.99	138	ePG	Pg	17 43 06.0	-1.9
NIE				eSG	Sg	17 43 21.0	-0.2
LIKS	Likavka	1.12	187	ePN	Pn	17 43 11.5	+0.6
LIKS				eSN	Sn	17 43 29.0	+1.8
KOLL	Kolacno	1.69	201	ePN	Pn	17 43 21.2	+2.2
KOLL				eSN	Sn	17 43 43.8	+2.1
VYHS	Vyhne	1.70	191	i PN	Pn	17 43 18.8	-0.3
VYHS				eSN	Sn	17 43 41.4	-0.5
CRVS	Cervenica-Dubn	1.89	131	ePN	Pn	17 43 24.8	+2.9
DPC	Dobruska-Polom	1.92	277	ePG	Pg	17 43 21.7	-4.8
DPC				eSG	Sg	17 43 47.2	-4.9
	23nm,0.4s						
KSP	Ksiaz	2.04	291	ePn	Pn	17 43 26.4	+2.4
KSP				ePg	Pg	17 43 29.4	+0.6
KSP				eSg	Sg	17 43 52.9	-3.0
KSP	Ksiaz	2.04	291	ePn	Pn	17 43 26.9	+3.0
KSP				ePg	Pg	17 43 29.3	+0.5
KSP				eSn	Sn	17 43 52.8	+2.3
UPC	Upice	2.14	281	eSG	Sg	17 43 54.7	-4.5
PSZ	Piszkesteto	2.28	170	ePg	Pg	17 43 34.1	+0.5
PSZ	Piszkesteto	2.28	170	ePn	Pn	17 43 29.1	+1.6
PRU	Pruhonice	3.07	269	eSG	Sg	17 44 23.0	-7.4
KHC	Kasperske Hory	3.86	257	eP	Pn	17 43 55.5	+5.5
KHC				ePg	Pg	17 44 00.0	-5.2
KHC				e		17 44 34.5	
KHC				eSg	Sg	17 44 46.7	-10
KHC	Kasperske Hory	3.86	257	ex	x	17 43 55.5	
KHC				ePG	Pg	17 44 00.0	-5.2
KHC				ex	x	17 44 34.5	
KHC				eSG	Sg	17 44 46.7	-10
CLL	Collm	4.16	288	ePG	Pg	17 44 15.0	+3.8
CLL				eSG	Sg	17 45 01.0	-5.7

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*KNET **11** 17:51:24.3±0.6, 42.42N×78.16E, ml3.8, Error ellipse: s-maj=9.7km s-min=4.1km az=3.0*

*NNC **11** 17:51:29.7±1.2, 42.77N×77.91E, mpv4.0, Error ellipse: s-maj=14.4km s-min=5.3km az=149.0*

*MOS **11** 17:51:29.2±2.3, 42.69N×78.24E, h33^{km}, mb3.5/1, Error ellipse: s-maj=21.6km s-min=14.3km az=87.0*

ISC 11 17:51:30.3±0.9, **42.75N**±0.06×**78.11E**±0.08, **h33^{km}, n23, σ1.^{s}04**/34, **mb4.9**/1, **MS3.6**/1, **16C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAA	Alma-Ata	1.00	302	i PG	P	17 51 49.8	+1.8
AAA				i S	S	17 52 07.5	+6.4
AAA				pmax	pmax		
	comp=Z,1.0nm,0.1s						
AAA				smax			
	comp=N,2.0nm,0.1s						
ULHL	Ulahol	1.47	251	P	P	17 51 52.1	-2.6
	comp=N,210nm,0.2s,SNR=30						
ULHL				⇓S	S	17 52 12.1	-0.9
	comp=N,863nm,0.2s						
TKM2	Tokmak 2	1.86	276	⇑P	P	17 52 01.3	+1.1
	comp=N,90nm,0.2s,SNR=108						
TKM2				⇑S	S	17 52 29.1	+6.4
	comp=N,703nm,0.1s						
KZA	Kyzart	2.22	253	⇑P	P	17 52 04.9	-0.5
	comp=N,145nm,0.4s,SNR=270						
KBK	Karagaybulak	2.33	269	P	P	17 52 07.7	+0.7
	comp=N,94nm,0.2s,SNR=376						
KBK				⇓S	S	17 52 41.8	+7.0
	comp=N,510nm,0.3s						
CHMS	Chumysh	2.48	277	⇑P	P	17 52 09.3	+0.1
	comp=N,41nm,0.3s,SNR=36						
AAK	Ala-Archa	2.67	269	⇑Pn	Pn	17 52 12.1	+0.1
	comp=N,28nm,0.3s						
AAK				⇑Lg		17 52 50.0	
	comp=N,236nm,0.5s						
AAK	Ala-Archa	2.67	269	⇑P	P	17 52 12.0	+0.2
	comp=N,37nm,0.2s,SNR=77						
AAK				⇓S	S	17 52 50.1	+6.8
	comp=N,326nm,0.5s						
AAK	Ala-Archa	2.67	269	PN	Pn	17 52 12.0	0.0
AAK						17 52 49.9	
AAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AAK				smax			
	comp=E,118nm,0.5s						
USP	Ospenovka	2.70	282	⇑P	P	17 52 13.3	+1.0
	comp=E,36nm,0.2s,SNR=98						
UCH	Uchtor	2.71	260	⇑P	P	17 52 12.7	+0.2
	comp=E,28nm,0.2s,SNR=60						
UCH				⇓S	S	17 52 50.3	+5.9
	comp=E,190nm,0.3s						
EKS2	Erkin-Say	3.19	270	⇑P	P	17 52 19.0	-0.3
	comp=E,41nm,0.3s,SNR=8.5						
AML	Almayashu	3.33	261	⇑P	P	17 52 21.2	0.0
	comp=E,40nm,0.3s,SNR=21						
MK31	Makanchi Array	5.02	35	⇓Pn	Pn	17 52 46.3	+0.9
	comp=E,23nm,0.5s,baz=216,slow=16,SNR=5.1						
MK31				⇑Pg	P	17 53 03.6	+18
	comp=E,9.0nm,0.5s,baz=211,slow=16,SNR=214						
MK31				⇑Sn	Sn	17 53 48.3	+5.2
	comp=E,7.5nm,0.5s,baz=212,slow=24,SNR=3.8						
MK31				⇓Lg		17 54 10.2	
	comp=E,23nm,0.7s,baz=215,slow=26,SNR=4.6						
MKAR	Makanchi Array	5.02	35	PN	Pn	17 52 46.3	+0.9
MKAR				P		17 53 06.1	
KURK	Kurchatov	7.98	2	⇑Pn	P	17 53 26.7	0.0
	comp=E,2.5nm,0.7s,baz=268,slow=17,SNR=40						
KURK				⇑Lg		17 55 40.8	
	comp=E,16nm,0.7s,baz=260,slow=16,SNR=20						
KURK	Kurchatov	7.98	2	P	P	17 53 26.6	-0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVA0	Borovoye Array	11.51	336	⇓Pn	P	17 54 15.3	+0.2
	comp=Z,1.7nm,1.9s						
BVA0				⇓Sn	S	17 56 22.3	-1.3
	comp=Z,0.6nm,0.6s,baz=154,slow=28,SNR=10						
BVA0				⇓Lg		17 57 30.3	
	comp=Z,2.7nm,1.1s,baz=150,slow=29,SNR=5.0						
BVA0	Borovoye Array	11.51	336	P	P	17 54 14.3	-0.9
BVA0						17 56 22.1	
CHKZ	Chkalovo	12.02	338	⇓Pn	P	17 54 21.8	-0.2
	comp=Z,0.9nm,0.5s						
CHKZ				⇑Sn	S	17 56 35.3	-0.6
	comp=Z,2.3nm,0.7s						
CHKZ				⇓Lg		17 57 48.1	
	comp=Z,20nm,1.4s						
CHKZ	Chkalovo	12.02	338	P	P	17 54 20.2	-1.8
CHKZ						17 56 33.7	
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CHKZ				smax			
	comp=E,27nm,1.4s						
ZAK	Zakamensk	18.85	57	eP	P	17 55 48.6	-1.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
SOC	Sochi	27.85	285	eP	P	17 57 14.2	-4.5
SOC				ePPP	PPP	17 58 20.5	+0.3
SOC				eS	S	18 02 00.0	+1.9
SOC				eSS	SS	18 03 14.1	-5.5
SOC				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.9						
SOC				pmax	pmax		
	comp=N,43nm,0.9s						
SOC				pmax	pmax		
	comp=E,18nm,0.9s						
SOC				MLR	MLR		
	comp=Z,79nm,10.0s,MS3.6						
SOC				MLR	MLR		
	comp=N,51nm,7.0s						
SOC				MLR	MLR		
	comp=E,44nm,7.0s						

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*IDC **11** 18:01:19.0±0.8, 23.30S×169.35E, mb4.1/10, mb1 4.3/10, mb1mx4.3/15, mbtmp4.1/10, MS3.7/7, Ms1 3.7/7, ms1mx3.3/22, Error ellipse: s-maj=27.2km s-min=23.9km az=168.0*

*NEIC **11** 18:01:21.0±0.5, 23.24S×169.26E, h10^{km}, mb4.6/4, Error ellipse: s-maj=15.5km s-min=10.0km az=203.0*

ISC 11 18:01:19.8±3.7, **23.3S**±0.1×**169.21E**±0.09, **h11^{km}**±22^{km}, **n33, σ0.^{s}82**/28, **mb4.2**/13, **MS3.6**/6, **3C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.82	294	eP	Pn	18 02 05.7	+0.1
DZM				eS	Sn	18 02 39.5	-0.4
DZM	Mont Dzumac	2.82	294	eP	Pn	18 02 05.7	+0.1
DZM				eS	Sn	18 02 39.5	-0.4
NOUC	Port Laguerre	2.93	293	eP	Pn	18 02 06.9	-0.2
NOUC				eS	Sn	18 02 42.9	+0.3
URZ	Urewera	16.40	157	LR	LR	18 10 31.7	
	comp=Z,318nm,18.2s,baz=23,slow=34						
RPZ	Rata Peaks	20.45	176	LR	LR	18 12 57.2	
	comp=Z,244nm,18.2s,MS3.6,baz=213,slow=34						
CTA	Charters Tower	21.56	274	P	P	18 06 12.6	+1.2
	4.4nm,0.8s,mb3.9,baz=116,slow=6.3,SNR=5.9						
CTAO	Charters Tower	21.56	274	P	P	18 06 12.6	+1.2
	5.0nm,0.7s,mb4.0						
PMG	Port Moresby	25.20	300	LR	LR	18 14 38.2	
	comp=Z,77nm,18.7s,MS3.2,baz=118,slow=32						
STKA	Stephens Creek	25.88	245	eP	P	18 06 55.0	+1.6
	5.2nm,0.8s,mb4.1						
STKA	Stephens Creek	25.88	245	P	P	18 06 55.0	+1.6
	5.9nm,0.8s,mb4.2,baz=89,slow=12,SNR=9.3						
STKA				PcP	PcP	18 10 21.5	-1.5
	1.0nm,0.7s,baz=273,slow=6.3,SNR=2.9						
STKA				LR	LR	18 16 36.7	
	comp=Z,112nm,19.4s,MS3.4,baz=205,slow=35						
STKA	Stephens Creek	25.88	245	eP	P	18 06 54.0	+0.7
ASAR	Alice Springs	32.34	262	P	P	18 07 50.8	-0.6
	3.4nm,1.0s,mb4.1,baz=80,slow=9.2,SNR=25						
ASAR				PcP	PcP	18 10 38.1	-1.2
	3.1nm,1.1s,baz=102,slow=3.2,SNR=6.9						
ASAR				LR	LR	18 19 54.1	
	comp=Z,34nm,20.3s,MS3.0,baz=101,slow=34						
ASPA	Alice Springs	32.34	262	eP	P	18 07 51.5	+0.1
WB2	Warramunga Arr	32.53	269	eP	P	18 07 52.0	-1.1
WRA	Warramunga Arr	32.54	269	P	P	18 07 51.4	-1.7
	1.6nm,0.9s,mb3.9,baz=98,slow=8.3,SNR=11						
WRA				PcP	PcP	18 10 38.8	-1.1
	1.2nm,0.7s,baz=96,slow=2.7,SNR=10						
FITZ	Fitzroy Crossi	40.97	269	eP	P	18 09 05.3	+0.9
	8.7nm,0.9s,mb4.4						
MBWA	Marble Bar	45.68	263	eP	P	18 09 42.4	-0.2
	13nm,0.8s,mb4.9						
VNDA	Vanda	54.42	182	P	P	18 10 47.9	-0.9
	1.4nm,0.6s,mb4.1,baz=207,slow=2.5,SNR=6.2						
VNDA				LR	LR	18 32 06.2	
	comp=Z,82nm,18.4s,MS3.8,baz=189,slow=34						
JHJ	Hachijo jima 2	62.70	332	LR	LR	18 35 20.9	
	comp=Z,183nm,19.6s,MS4.2,baz=120,slow=32						
QSPA	South Pole Qui	66.80	180	eP	P	18 12 12.7	-0.3
	3.5nm,0.6s,mb4.6						
CMAR	Chiang Mai Arr	80.15	295	P	P	18 13 33.2	+1.3
	2.7nm,0.9s,mb4.2,baz=132,slow=4.3,SNR=20						
SNAA	Sanae	85.16	183	⇑i	P	18 13 56.5	-0.1
SNAA	Sanae	85.16	183	P	P	18 13 55.4	-1.2
	2.7nm,1.1s,mb4.3,baz=210,slow=9.9,SNR=9.8						
SNAA	Sanae	85.16	183	eP	P	18 13 56.1	-0.5
	176nm,1.1s						
VNA3	Neumayer Olymp	85.74	180	⇑i	P	18 14 00.1	+0.5
VNA2	Neumayer--Watz	86.03	181	⇑i	P	18 14 01.8	+0.8
SONM	Songino Array	90.41	323	P	P	18 14 22.2	-0.3
	0.8nm,0.9s,mb4.1,baz=146,slow=4.5,SNR=5.5						
NVAR	Mina Array Bea	91.48	49	P	P	18 14 28.4	+0.8
	0.6nm,0.5s,mb4.2,baz=216,slow=5.9,SNR=5.8						
ILAR	Eielson Array	94.07	17	P	P	18 14 38.0	-0.9
	0.4nm,0.7s,mb3.9,baz=250,slow=4.2,SNR=4.7						
BRG	Berggiesshubel	146.42	331	eP	PKPbc	18 21 02.5	+1.9
KHC	Kasperske Hory	147.82	329	eP	PKPdf	18 21 06.5	+1.7
GERES	GERESS Array B	147.97	329	PKPbc	PKPdf	18 21 05.9	+0.8
	1.0nm,0.9s,baz=27,slow=3.0,SNR=6.8						
DBIC	Dimbokro	162.54	200	PKPab	PKPab	18 22 11.4	-1.3
	2.8nm,1.0s,baz=221,slow=1.7,SNR=3.2						

IDC 11 18:07:22.0±36.0, **4.68N×127.04E, mb3.9**/3, **mb1 4.1**/3, **mb1mx3.7**/17, **mbtmp3.9**/3, **1C, Error ellipse: s-maj=597.1km s-min=138.2km az=161.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.50	164	P	P	18 12 52.0	-1.9
	2.1nm,0.4s,baz=344,slow=10,SNR=70						
WB2	Warramunga Arr	25.50	164	⇑iP	P	18 12 51.8	-2.1
WB2				eS	Px	18 16 02.3	
ASAR	Alice Springs	28.96	167	P	P	18 13 23.5	-1.9
	0.3nm,0.6s,baz=350,slow=7.8,SNR=13						
STKA	Stephens Creek	38.91	160	P	P	18 14 49.5	-1.7
	1.0nm,0.3s,baz=321,slow=9.0,SNR=7.4						

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*NEIC **11** 18:12:21.5, 19.32N×67.21W, h25^{km}, MD3.3(RSPR), After RSPR.*

RSPR 11 18:12:21.5, 19.32N×67.21W, h25^{km}±29^{km}, **MD3.3**/11, **MD3.3**/11, **21C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGP	Aguadilla	0.91	176	eP	Pb	18 12 34.8	-3.8
AOPR	Arecibo Observ	1.06	156	⇑eP	Pn	18 12 38.0	-2.9
AOPR	Arecibo Observ	1.06	156	eS	Sb	18 12 51.8	-2.8
AOPR	Arecibo Observ	1.06	156	eS	Sb	18 12 51.3	-3.3
AOPR	Arecibo Observ	1.06	156	⇑eP	Pn	18 12 37.7	-3.2
AOPR				eS	Sb	18 12 51.3	-3.3
MGP	Maguayo	1.31	175	⇑eP	Pn	18 12 41.8	-2.7
MGP				eS	Sn	18 12 58.1	-3.3
MGP	Maguayo	1.31	175	⇑eP	Pn	18 12 41.8	-2.7
MGP				eS	Sn	18 12 57.9	-3.4
PORP	Portuguez	1.37	157	⇑eP	Pn	18 12 42.7	-2.6
PORP				eS	Sn	18 12 59.6	-3.3
PORP	Portuguez	1.37	157	⇑eP	Pn	18 12 42.6	-2.8
PORP				eS	Sn	18 12 59.2	-3.6
CELP	Cerrillos	1.38	154	⇑eP	Pn	18 12 42.9	-2.5
CELP				eS	Sn	18 13 00.3	-2.7
CELP	Cerrillos	1.38	154	⇑eP	Pn	18 12 42.9	-2.5
CELP				eS	Sn	18 12 59.5	-3.4
OBIP	Obispado Ponce	1.39	156	⇑eP	Pn	18 12 43.2	-2.4
OBIP	Obispado Ponce	1.39	156	eS	Sn	18 13 00.7	-2.7
OBIP	Obispado Ponce	1.39	156	eS	Sn	18 13 00.4	-3.0
OBIP	Obispado Ponce	1.39	156	⇑eP	Pn	18 12 42.9	-2.7
OBIP				eS	Sn	18 13 00.4	-3.0
CSB	Colonia Sabana	1.43	136	⇑eP	Pn	18 12 43.5	-2.7
CSB				eS	Sn	18 13 00.3	-4.0
CSB	Colonia Sabana	1.43	136	⇓eP	Pn	18 12 43.5	-2.7
CSB				eS	Sn	18 13 01.1	-3.2
SJG	San Juan	1.57	140	⇑eP	Pn	18 12 46.1	-2.0
SJG	San Juan	1.57	140	⇑eP	Pn	18 12 46.3	-1.8
SJG				eS	Sn	18 13 04.4	-3.4
SJG	San Juan	1.57	140	⇓eP	Pn	18 12 46.2	-2.0
SJG				eS	Sn	18 13 04.6	-3.2
SJG	San Juan	1.57	140	⇑eP	Pn	18 12 45.7	-2.4
SJG				eS	Sn	18 13 04.6	-3.2
CBYP	Canovanas	1.65	129	⇑eP	Pn	18 12 46.7	-2.7
CBYP	Canovanas	1.65	129	eS	Sn	18 13 05.8	-4.2
CBYP	Canovanas	1.65	129	⇑eP	Pn	18 12 47.0	-2.4
HUMP	Col San Antoni	1.74	132	⇑eP	Pn	18 12 48.2	-2.5
HUMP				eS	Sn	18 13 09.3	-2.9
HUMP	Col San Antoni	1.74	132	⇑eP	Pn	18 12 48.2	-2.5
HUMP				eS	Sn	18 13 09.0	-3.2
CPD	Cerro la Pandu	1.77	136	⇑eP	Pn	18 12 48.8	-2.3
CPD	Cerro la Pandu	1.77	136	eS	Sn	18 13 09.9	-3.1
CPD	Cerro la Pandu	1.77	136	eS	Sn	18 13 09.4	-3.6
CPD	Cerro la Pandu	1.77	136	⇑eP	Pn	18 12 48.6	-2.4

CPD				eS	Sn	18 13 09.4	-3.6
MTP	Monte Pirata	1.98	128	⇑eP	Pn	18 12 51.1	-3.0
MTP	Monte Pirata	1.98	128	eS	Sn	18 13 15.0	-3.5
MTP	Monte Pirata	1.98	128	eS	Sn	18 13 14.5	-3.9
MTP	Monte Pirata	1.98	128	⇓eP	Pn	18 12 51.1	-3.0
MTP				eS	Sn	18 13 14.5	-3.9

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*IDC **11** 18:33:22.8±0.9, 13.79N×93.05E, mb3.9/8, mb1 4.1/9, mb1mx3.9/18, mbtmp3.9/9, ML4.0/1, MS3.6/3, Ms1 3.7/3, ms1mx3.2/23, Error ellipse: s-maj=34.9km s-min=18.5km az=51.0*

*BJI **11** 18:33:25.5, 13.78N×93.17E, h36^{km}, mB4.2, mb4.0, Ms3.9, Msz3.7*

*NEIC **11** 18:33:27.3±0.7, 13.93N×93.05E, h30^{km}, mb4.4/3, Error ellipse: s-maj=16.1km s-min=9.1km az=223.0*

ISC 11 18:33:25.0±0.7**, 13.83N**±0.08×**93.01E**±0.07**, h30**^{km}**, n33, σ1ˢ25**/34**, mb4.0**/12**, MS3.8**/4**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NST	Nakhon Sawan	7.13	74	P	Pn	18 35 05.3	-4.9
CM31	Chiang Mai Arr	7.33	50	ePn	Pn	18 35 10.8	-2.0
	13nm,0.6s						
CMAR	Chiang Mai Arr	7.33	50	Pn	Pn	18 35 11.6	-1.3
	0.6nm,0.3s,baz=240,slow=15,SNR=30						
CMAR				LR	LR	18 38 40.8	
	comp=Z,307nm,20.5s,baz=229,slow=43						
CHG	Chiang Mai	7.55	48	P	Pn	18 35 21.0	+5.0
NANT	Nan	8.89	55	P	P	18 35 37.0	+2.5
VIS	Vishakhapatnam	10.09	294	eP	P	18 35 49.3	-1.8
VIS				AMb	AMB	18 35 51.2	
	comp=Z,28nm,0.6s						
VIS				eS	S	18 37 32.4	-12
VIS				e		18 37 51.6	
	comp=E,74nm,0.5s						
VIS				e		18 37 52.2	
	comp=N,119nm,0.4s						
SHL	Shillong	11.72	355	eP	P	18 36 07.0	-6.5
BLSP	Bilaspur	13.23	310	eS	S	18 38 49.0	-12
BLSP				e		18 39 06.0	
HYB	Hyderabad	14.37	286	i P	P	18 36 57.0	+8.4
HYB				eS	S	18 39 20.0	-7.8
JIRN	Jiri	15.16	336	eP	P	18 36 56.7	-2.2
	comp=N,15nm,0.3s						
PKI	Pulchoki	15.40	334	eP	P	18 37 00.8	-1.3
	comp=N,20nm,0.5s						
DMN	Daman	15.56	333	eP	P	18 37 03.4	-0.8
	comp=N,5.4nm,0.3s						
KKN	Kakani	15.64	334	eP	P	18 37 03.6	-1.6
	comp=N,3.6nm,0.3s						
LSA	Lhasa	15.88	354	P	P	18 37 09.8	+1.5
LSA				AP		18 37 16.5	
LSA				AMB	AMB		
	comp=Z,20nm,3.5s						
LSA				LR	LR		
	comp=N,110nm,13.0s						
LSA				LR	LR		
	comp=E,250nm,14.0s						
LSA				LR	LR		
	comp=Z,220nm,13.0s						
GKN	Gorkha	16.11	332	eP	P	18 37 10.5	-0.7
	comp=Z,8.8nm,0.3s						
KOLN	Koldanda	16.41	329	eP	P	18 37 16.6	+1.7
	comp=Z,17nm,0.6s						
BHPL	Bhopal	17.47	305	e	P	18 37 35.6	+7.2
BHPL				AMb	AMB	18 37 46.2	
	comp=Z,10nm,0.6s						
BHPL				eS	S	18 40 47.5	+7.7
KAD	Karad	18.46	283	e	P	18 37 45.2	+4.6
KAD				e		18 38 02.0	
	comp=Z,15nm,2.6s						
KAD				e		18 40 52.5	
DDI	Dehra Dun	21.44	322	e	P	18 38 14.7	+1.7
XAN	Xi’an	24.76	33	P	P	18 38 45.4	-0.2
XAN				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.1						
XAN				LR	LR		
	comp=N,278nm,20.2s,MS3.8						
XAN				LR	LR		
	comp=E,221nm,22.4s,MS3.8						
GTA	Gaotai	26.18	12	eP	P	18 39 00.5	+1.7
GTA				AP	pP	18 39 07.5	-0.1
GTA				XP	sP	18 39 10.6	-0.9
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb3.8						
GTA				AMB	AMB		
	comp=Z,201nm,3.9s						
GTA				LR	LR		
	comp=N,139nm,13.3s,MS3.8						
GTA				LR	LR		
	comp=E,172nm,17.1s,MS3.8						
GTA				LR	LR		
	comp=Z,188nm,17.5s,MS3.7						
SONM	Songino Array	35.69	16	P	P	18 40 23.2	+0.4
	comp=Z,3.4nm,1.2s,mb4.2,baz=198,slow=8.0,SNR=12						
KURK	Kurchatov	38.60	345	eP	P	18 40 47.6	+0.5
	comp=Z,6.0nm,1.1s,mb4.2						
ZAL	Zalesovo	40.53	353	P	P	18 41 03.7	+0.6
	comp=Z,0.9nm,0.4s,mb3.7,baz=314,slow=5.7,SNR=6.7						
WRA	Warramunga Arr	52.73	129	P	P	18 42 39.2	-0.4
	comp=Z,1.0nm,0.6s,mb3.9,baz=300,slow=10.0,SNR=13						
WRAB	Tennant Creek	52.73	129	P	P	18 42 39.4	-0.3
	comp=Z,3.3nm,0.6s,mb4.4						
ASAR	Alice Springs	54.66	133	P	P	18 42 53.2	-0.6
	comp=Z,0.5nm,0.4s,mb3.9,baz=310,slow=7.2,SNR=16						
BRTR	Keskin Array B	57.80	308	P	P	18 43 16.8	+0.7
	comp=Z,0.8nm,0.7s,mb3.9,baz=122,slow=8.3,SNR=6.4						
STKA	Stephens Creek	65.05	135	LR	LR	19 15 32.4	
	comp=Z,76nm,20.4s,MS3.9,baz=206,slow=39						
FINES	FINESS Array B	66.97	331	P	P	18 44 17.6	+0.7
	comp=Z,0.7nm,0.6s,mb3.9,baz=72,slow=6.0,SNR=5.1						
ARCES	ARCESS Array B	69.32	340	P	P	18 44 31.8	+0.3
	comp=Z,4.6nm,1.0s,mb4.4,baz=80,slow=5.5,SNR=3.4						
GERES	GERESS Array B	72.70	317	P	P	18 44 53.3	+1.2
	comp=Z,1.2nm,0.8s,mb3.9,baz=90,slow=6.7,SNR=11						
DBIC	Dimbokro	96.00	278	LR	LR	19 32 55.1	
	comp=Z,32nm,21.5s,MS3.8,baz=357,slow=37						

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*NEIC **11** 18:40:36.1, 17.23N×94.93W, h124^{km}, MD4.1(MEX), After MEX.*

MEX 11 18:40:37.6±1.1**, 17.13N×94.89W, h102**^{km}±17^{km}**, MD4.1, 7C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.01	26	eP	P	18 40 57.0	-1.5
TUIG				eS	S	18 41 12.1	-2.1
EVV	El Vigia	1.39	342	eP	P	18 41 01.0	-2.1
EVV				eS	S	18 41 16.5	-5.6
EVV	El Vigia	1.39	342	eP	P	18 41 01.0	-2.1
EVV				eS	S	18 41 20.0	-2.1
OXX	Oaxaca	1.75	269	i P	P	18 41 06.5	-1.0
OXX				i S	S	18 41 28.0	-1.7
OXX	Oaxaca	1.75	269	i P	P	18 41 06.0	-1.5
OXX				i S	S	18 41 28.0	-1.7
VHO	Vista Hermosa	1.76	268	⇑iP	P	18 41 07.0	-0.7
VHO				i S	S	18 41 29.6	-0.3
VHO	Vista Hermosa	1.76	268	⇑iP	P	18 41 07.0	-0.7
VHO				i S	S	18 41 29.1	-0.8
HUIG	Huatulco	1.79	221	⇑iP	P	18 41 04.6	-3.3
HUIG				i S	S	18 41 28.7	-1.8
SCX	San Cristobal	2.20	100	eP	P	18 41 12.0	-1.4
SCX				eS	S	18 41 40.0	-0.1
SCX	San Cristobal	2.20	100	eP	P	18 41 12.0	-1.4
SCX				eS	S	18 41 39.0	-1.1
CCIG	Comitan	2.77	107	⇑iP	P	18 41 20.2	-1.1
CCIG				i S	S	18 41 50.0	-4.1
CCIG	Comitan	2.77	107	⇑iP	P	18 41 20.2	-1.1
CCIG				i S	S	18 41 53.1	-1.0
IIB	San Bernardino	3.76	300	eP	P	18 41 29.0	-5.7
IIB				eS	S	18 42 10.0	-8.2
IIB	San Bernardino	3.76	300	eP	P	18 41 33.5	-1.2
IIB				eS	S	18 42 14.0	-4.2
PPM	Popocatepetl	4.04	299	eP	P	18 41 35.9	-2.7
PPM				eS	S	18 42 18.0	-7.1
PPM	Popocatepetl	4.04	299	eP	P	18 41 37.0	-1.6
PPM				eP		18 41 37.6	
PPM				eS	S	18 42 21.6	-3.5
PLIG	Platanillo	4.57	287	⇑eP	P	18 41 44.1	-1.7
PLIG				eS	S	18 42 31.1	-6.9
PLIG	Platanillo	4.57	287	⇑eP	P	18 41 44.1	-1.7
PLIG				eS	S	18 42 33.5	-4.6
ACX	Acapulco	4.81	268	eP	P	18 41 43.0	-6.1
ACX				eS	S	18 42 36.0	-8.1
TEIG	Tepich	6.99	63	ePn	P	18 42 13.8	-5.2
	11nm,0.4s						

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*NEIC **11** 18:43:45.0±0.9, 16.29S×72.37W, h116^{km}±8^{km}, mb4.5/2, Error ellipse: s-maj=18.5km s-min=12.4km az=51.0*

*IDC **11** 18:43:48.1±3.1, 16.37S×72.22W, h139^{km}±25^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.5/20, mbtmp4.1/7, MS2.7/1, Ms1 2.7/1, ms1mx2.0/24, Error ellipse: s-maj=29.8km s-min=15.6km az=102.0*

ISC 11 18:43:43.8±0.9**, 16.38S**±0.07×**72.47W**±0.09**, h110**^{km}±9^{km}**, n14, σ0ˢ71**/15**, mb3.8**/5**, 1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	0.95	95	⇓iP	P	18 44 04.6	-0.2
ARE				i S	S	18 44 20.1	-0.4
LPAZ	La Paz	4.17	89	P	P	18 44 47.2	+0.6
	11nm,0.3s,baz=292,slow=9.1,SNR=189						
LPAZ				S	S	18 45 35.4	+0.7
	2.0nm,0.3s,baz=168,slow=19,SNR=6.2						
LPAZ	La Paz	4.17	89	ePn	P	18 44 47.4	+0.7
LPAZ				S	S	18 45 35.4	+0.7
NNA	Nana	6.09	315	ePn	P	18 45 12.5	-0.1
	44nm,0.8s						
LVC	Limon Verde	7.05	152	P	P	18 45 26.4	+0.5
	5.5nm,0.3s,baz=341,slow=9.1,SNR=66						
LVC				S	S	18 46 44.4	-0.7
	11nm,0.3s,baz=238,slow=23,SNR=18						
LVC				LR	LR	18 48 19.2	
	comp=Z,58nm,21.5s,baz=343,slow=39						
SAML	Samuel	11.69	52	ePn	P	18 46 20.5	-7.8
	4.1nm,0.7s						
BDFB	Brasilia	23.52	92	P	P	18 48 43.5	-1.4
	3.5nm,0.3s,mb4.1,baz=271,slow=10,SNR=6.7						
PLCA	Paso Flores	24.32	176	P	P	18 48 53.3	+0.9
	2.2nm,0.8s,mb3.5,baz=345,slow=12,SNR=4.6						
SDV	Santo Domingo	25.17	4	P	P	18 49 00.9	+0.2
	3.2nm,0.8s,mb3.8,baz=72,slow=23,SNR=3.4						
SNAA	Sanae	68.19	161	P	P	18 54 34.0	0.0
	0.8nm,0.6s,mb3.8,baz=234,slow=7.3,SNR=10						
DBIC	Dimbokro	70.69	77	P	P	18 54 46.1	-4.1
	1.5nm,0.7s,mb3.9,baz=127,slow=3.0,SNR=4.6						
ASAR	Alice Springs	132.58	214	PKP	PKPdf	19 02 46.6	+0.2
	0.3nm,0.8s,baz=129,slow=1.8,SNR=6.3						
WRA	Warramunga Arr	135.31	217	PKP	PKPdf	19 02 52.3	+0.8
	0.4nm,0.4s,baz=139,slow=1.7,SNR=14						
SONM	Songino Array	148.62	1	PKPbc	PKPdf	19 03 17.9	+3.9
	0.3nm,0.5s,baz=298,slow=1.8,SNR=5.4						

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*IDC **11** 18:46:52.0±1.4, 7.36N×94.02E, mb4.0/6, mb1 4.1/7, mb1mx3.8/18, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=47.7km s-min=27.5km az=57.0*

*NEIC **11** 18:46:56.6±0.9, 7.38N×94.08E, h30^{km}, mb4.5/1, Error ellipse: s-maj=22.6km s-min=16.6km az=73.0*

ISC 11 18:46:55.5±1.2**, 7.4N**±0.2×**94.2E**±0.2**, h33**^{km}**, n9, σ0ˢ34**/9**, mb4.0**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.90	23	Pn	P	18 49 45.9	+0.1
	0.2nm,0.3s,baz=214,slow=14,SNR=9.6						
SONM	Songino Array	41.58	12	P	P	18 54 41.8	0.0
	0.8nm,0.8s,mb3.4,baz=197,slow=8.3,SNR=8.8						
SONM				PcP	PcP	18 56 39.7	+0.4
	0.5nm,0.9s,baz=197,slow=4.9,SNR=3.6						
SONM	Songino Array	41.58	12	P	P	18 54 41.8	0.0
SONM				PcP	PcP	18 56 39.7	+0.4
KURK	Kurchatov	45.04	346	eP	P	18 55 09.5	-0.3
	9.0nm,1.4s,mb4.4						
ZAL	Zalesovo	46.98	352	P	P	18 55 25.3	+0.2
	2.3nm,0.4s,mb4.5,baz=308,slow=5.8,SNR=8.0						
WRA	Warramunga Arr	47.99	125	P	P	18 55 33.5	0.0
	0.5nm,0.9s,mb3.5,baz=300,slow=9.8,SNR=7.2						
FINES	FINESS Array B	73.11	332	P	P	18 58 23.5	-0.7
	1.4nm,0.5s,mb4.1,baz=90,slow=5.7,SNR=8.6						
ARCES	ARCESS Array B	75.68	340	P	P	18 58 39.0	+0.1
	3.7nm,1.0s,mb4.2,baz=98,slow=8.6,SNR=5.6						
GERES	GERESS Array B	78.17	318	P	P	18 58 53.8	+0.6
	0.3nm,0.4s,mb3.6,baz=90,slow=5.3,SNR=5.7						

IDC 11 19:01:08.0±13.0**, 1.95N×99.42E, h135**^{km}±116^{km}**, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.3**/17**, mbtmp3.8**/5**, ML4.1**/1**, Error ellipse: s-maj=150.2km s-min=18.3km az=62.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.41	358	P	P	19 04 50.5	-1.4
	0.2nm,0.3s,baz=192,slow=11,SNR=16						
WRA	Warramunga Arr	40.58	124	P	P	19 08 34.8	-1.2
	1.7nm,0.8s,baz=306,slow=9.1,SNR=25						
ASAR	Alice Springs	42.11	129	P	P	19 08 46.5	-2.1
	0.5nm,0.7s,baz=302,slow=6.9,SNR=6.1						
SONM	Songino Array	46.10	7	P	P	19 09 18.9	-1.4
	0.2nm,0.4s,baz=191,slow=9.2,SNR=7.0						
ZAL	Zalesovo	53.20	349	P	P	19 10 11.8	-2.6
	2.1nm,0.3s,baz=336,slow=4.2,SNR=5.8						

IDC 11 19:43:21.9±7.1**, 13.35N×92.95E, mb3.3**/2**, mb1 3.4**/3**, mb1mx3.2**/17**, mbtmp3.1**/3**, ML3.1**/1**, Error ellipse: s-maj=148.6km s-min=46.6km az=105.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.68	48	Pn	Pn	19 45 15.2	-2.6
	0.1nm,0.3s,baz=239,slow=16,SNR=3.0						
WRA	Warramunga Arr	52.47	128	P	P	19 52 36.4	-2.7
	0.2nm,0.6s,baz=307,slow=9.5,SNR=6.0						
ASAR	Alice Springs	54.38	132	P	P	19 52 51.4	-1.7
	0.4nm,0.9s,baz=313,slow=7.4,SNR=4.4						

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*IDC **11** 19:55:23.6±2.8, 31.14S×68.63W, h89^{km}±23^{km}, mb3.5/3, mb1 3.9/6, mb1mx3.7/14, mbtmp3.9/6, Error ellipse: s-maj=71.8km s-min=20.4km az=89.0*

*GUC **11** 19:55:24.7±0.7, 31.10S×68.61W, h150^{km}, MD3.7, ML4.1*

*NEIC **11** 19:55:24.8±0.8, 31.12S×68.34W, h103^{km}±6^{km}, mb3.5/1, MD3.7(GUC), Error ellipse: s-maj=17.1km s-min=7.5km az=103.0*

ISC 11 19:55:23.9±0.7**, 31.06S**±0.04×**68.39W**±0.08**, h106**^{km}±7^{km}**, n29, σ0ˢ90**/39**, mb3.5**/3**, 5C-5D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.54	207	⇓iP	P	19 55 41.0	+0.2
ZON				eS	S	19 55 53.0	-0.4
ILCH	Illapel	2.44	256	i P	P	19 56 03.3	+0.1
ILCH				i S	S	19 56 32.9	+0.2
ILCH				AMP		19 56 35.6	
	comp=E,358nm,0.2s						
JACH	Jahuel	2.47	229	⇓iP	P	19 56 04.1	+0.5
JACH				i S	S	19 56 34.1	+0.7
PTCH	Petorca	2.47	240	i P	P	19 56 04.0	+0.3
PTCH				i S	S	19 56 33.3	-0.1
PTCH				AMP		19 56 35.1	
	comp=E,839nm,0.3s						
FCH	Farellones	2.77	215	⇑iP	P	19 56 08.7	+1.0
FCH				i S	S	19 56 42.8	+2.1
FCH				AMP		19 56 50.8	
	comp=E,377nm,0.2s						
PEL	Peldehue	2.85	223	i P	P	19 56 08.7	0.0
PEL				i S	S	19 56 42.4	0.0
ROCH	El Roble	2.93	229	⇑iP	P	19 56 09.9	+0.1
ROCH				i S	S	19 56 44.1	-0.3
CLCH	Cerro Calan	2.95	217	⇑iP	P	19 56 10.6	+0.4
CLCH				i S	S	19 56 44.9	-0.1
CLCH				AMP		19 56 47.6	
	comp=E,810nm,0.3s						
CLCH				AMP		19 56 48.1	
	comp=E,931nm,0.3s						
PACH	Papudo	2.98	240	⇑iP	P	19 56 09.8	-0.7
SAN	Santiago	3.06	218	AMP		19 56 50.4	
	comp=E,575nm,0.6s						
ANTU	Antumapu	3.14	217	AMP		19 56 50.6	
	comp=N,430nm,0.5s						
RCDM	Rinconada Maip	3.17	220	⇓iP	P	19 56 13.0	-0.1
RCDM				i S	S	19 56 49.7	-0.5
RCDM				AMP		19 56 50.1	
	comp=E,501nm,0.3s						
LMEL	Las Melosas	3.17	208	i P	P	19 56 13.6	+0.5
LMEL				i S	S	19 56 51.1	+0.8
LMEL				AMP		19 56 57.7	
	comp=N,244nm,0.5s						
VACH	Vallenar	3.22	320	i S	S	19 56 52.1	+0.6
CHCH	Chadas Angostu	3.44	213	⇓iP	P	19 56 16.2	-0.6
CHCH				i S	S	19 56 56.2	-0.7
CACH	El Canelo	3.57	211	⇓iP	P	19 56 19.1	+0.5
CACH				i S	S	19 57 00.2	+0.1
LCCH	Las Cruces	3.61	227	i P	P	19 56 17.6	-1.5
LCCH				i S	S	19 56 58.6	-2.4
CICH	Cipreses	3.67	207	⇑iP	P	19 56 20.4	+0.5
LVC	Limon Verde	8.43	357	P	P	19 57 24.3	-0.4
	comp=N,3.6nm,0.3s,baz=203,slow=7.9,SNR=26						
LVC				S	S	19 58 56.4	-2.4
	comp=N,1.2nm,0.3s,baz=12,slow=20,SNR=2.3						
LVC	Limon Verde	8.43	357	P	P	19 57 24.3	-0.4
LVC				S	S	19 58 56.4	-2.4
PLCA	Paso Flores	9.81	190	P	P	19 57 41.0	-2.3
	comp=N,0.2nm,0.3s,baz=351,slow=16,SNR=4.6						
LPAZ	La Paz	14.71	1	P	P	19 58 50.2	+2.4
	comp=N,0.2nm,0.3s,baz=193,slow=10,SNR=9.3						
LPAZ	La Paz	14.71	1	eP	P	19 58 49.6	+1.9
	comp=N,2.0nm,0.6s						
TXAR	Lajitas Array	68.81	327	P	P	20 06 19.6	+0.7
	comp=N,0.5nm,0.4s,mb3.7,baz=144,slow=8.1,SNR=4.7						
PDAR	Pinedale Array	82.62	331	P	P	20 07 36.5	-0.2
	comp=N,0.4nm,0.7s,mb3.4,baz=108,slow=4.7,SNR=4.2						
NVAR	Mina Array Bea	83.32	323	P	P	20 07 40.5	+0.2
	comp=N,0.6nm,0.8s,mb3.5,baz=146,slow=6.5,SNR=3.3						
ASAR	Alice Springs	121.54	204	PKP	PKPdf	20 14 05.8	+0.4
	comp=N,0.3nm,0.9s,baz=121,slow=1.6,SNR=5.3						
WRA	Warramunga Arr	124.79	206	PKP	PKPdf	20 14 12.3	+0.5
	comp=N,0.3nm,0.5s,baz=171,slow=1.7,SNR=17						
ZAL	Zalesovo	150.10	32	PKPbc	PKPdf	20 15 04.5	+8.1
	comp=N,2.0nm,0.8s,baz=152,slow=4.5,SNR=12						

MAN 11 19:56:21.3, 9.73N×122.07E, h31^{km}**, mb4.3, ML3.1, MS2.8, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	1.03	30	eP	Pn	19 56 39.2	-0.5
GUIM				eS	Sn	19 56 53.1	0.0
CUYO	Cuyo Island	1.52	317	eP	Pn	19 56 47.2	+0.4
CUYO				eS	Sn	19 57 05.5	-0.2
IPIL	Ipil	1.99	166	eP	Pn	19 56 52.7	-0.8
IPIL				eS	Sn	19 57 14.1	-3.5
PAGZ	Pagadian	2.27	145	eP	Pn	19 56 58.1	+0.5
MSLP	Maasin	2.77	81	eP	Pn	19 57 04.2	-0.5
BUSP	Coron	2.91	321	eP	Pn	19 57 06.2	-0.5
ENPP	El Nido	2.99	300	eP	Pn	19 57 07.3	-0.5

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*JMA **11** 20:04:49.3±0.3, 24.02N×122.52E, h27^{km}, M2.6*

TAP 11 20:04:48.4, 23.92N×122.45E, h10^{km}±1^{km}**, ML3.4, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.74	43	P	Pb	20 05 01.5	-1.5
YOJ				S	Sb	20 05 09.9	-3.0
IRIF	Iriomote-Funau	1.24	70	P	Pb	20 05 09.9	-1.6
IRIF				S	Sb	20 05 25.4	-2.0
HATJ	Hateruma jima	1.25	83	P	Pb	20 05 09.9	-1.7
HATJ				eS	Sb	20 05 25.5	-2.0
JKRS	Kuro-shima	1.46	77	P	Pn	20 05 13.1	-1.9
JKRS				eS	Sb	20 05 31.5	-2.2
JIJ	Ishigaki jima	1.61	74	P	Pn	20 05 14.4	-2.7
JIJ				S	Sn	20 05 33.8	-4.2
JTJ	Tarama	2.18	70	P	Pn	20 05 23.1	-2.1
JTJ				eS	Sn	20 05 48.5	-4.0

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*NIED **11** 20:17:00, 28.50N×142.40E, h5^{km}, Mw4.1 Best double couple: M$_0$1.8×10^{15} NP1:φ$_s$189°, δ53°, λ118°. NP2:φ$_s$328°, δ45°, λ59°.*

*NEIC **11** 20:17:41.6±0.4, 28.45N×142.66E, mb4.4/6, Error ellipse: s-maj=12.7km s-min=6.8km az=83.0*

*IDC **11** 20:17:41.4±0.8, 28.41N×142.69E, h35^{km}±6^{km}, mb3.7/11, mb1 3.9/11, mb1mx3.8/20, mbtmp3.9/11, Error ellipse: s-maj=26.7km s-min=13.1km az=103.0*

*BJI **11** 20:17:44.7, 28.66N×141.79E, h35^{km}, mB4.8, mb4.2*

ISC 11 20:17:39.3±0.6**, 28.48N**±0.05×**142.7E**±0.1**, h33**^{km}**, (h36**^{km}±1.9^{km}**:pP-P), n24, σ0ˢ73**/26**, mb4.1**/17**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.45	197	Pn	Pn	20 18 03.1	-0.5
	30nm,0.3s,baz=350,slow=14,SNR=11						
CBIJ				Sn	Sn	20 18 22.4	+0.8
	80nm,0.3s,baz=280,slow=23,SNR=17						
MAT	Matsushiro	8.87	336	eP	P	20 19 47.0	-1.2
MAT				eS	S	20 21 22.0	-6.1
MAT	Matsushiro	8.87	336	P	P	20 19 46.9	-1.3
MAT				S	S	20 21 22.4	-5.7
MDJ	Mudanjiang	19.18	331	eP	P	20 22 02.4	-0.4
	4.0nm,0.4s						
HIA	Hailar	27.18	326	eP	P	20 23 22.7	+1.0
	4.0nm,0.8s,mb4.0						
SONM	Songino Array	34.03	315	P	P	20 24 22.7	+0.5
	0.8nm,0.5s,mb3.9,baz=124,slow=8.3,SNR=14						
KMI	Kunming	35.69	274	P	P	20 24 35.6	-1.0
KMI				AMB	AMB		
	comp=Z,5.0nm,1.6s,mb4.2						
CMAR	Chiang Mai Arr	41.14	266	P	P	20 25 22.2	0.0
	comp=Z,1.1nm,0.9s,mb3.5,baz=47,slow=9.0,SNR=5.3						
ZAL	Zalesovo	48.74	318	P	P	20 26 23.4	+0.8
	comp=Z,1.4nm,0.4s,mb4.3,baz=5.0,slow=10.0,SNR=7.3						
WB2	Warramunga Arr	48.81	190	eP	P	20 26 23.2	-0.3
WRA	Warramunga Arr	48.81	190	P	P	20 26 23.2	-0.4
	comp=Z,4.1nm,0.5s,mb4.7,baz=12,slow=8.5,SNR=43						
FITZ	Fitzroy Crossi	49.15	202	eP	P	20 26 26.0	-0.2
	comp=Z,14nm,1.5s,mb4.8						
KURK	Kurchatov	52.33	314	eP	P	20 26 49.8	-0.1
	comp=Z,17nm,1.0s,mb4.9						
ASAR	Alice Springs	52.53	190	P	P	20 26 51.0	-0.8
	comp=Z,0.5nm,0.5s,mb3.7,baz=5.7,slow=5.6,SNR=15						
AAK	Ala-Archa	55.83	304	eP	P	20 27 15.1	-0.6
	comp=Z,1.1nm,0.5s,mb4.1						
ILAR	Eielson Array	56.29	29	P	P	20 27 17.9	-0.9
	comp=Z,0.5nm,0.9s,mb3.5,baz=260,slow=5.5,SNR=4.2						
ILAR				pP	pP	20 27 28.9	+0.1
	comp=Z,0.9nm,0.8s,baz=251,slow=6.4,SNR=5.8						
CHKZ	Chkalovo	57.13	318	eP	P	20 27 24.7	-0.2
	comp=Z,3.7nm,0.7s,mb4.5						
INK	Inuvik	61.59	25	P	P	20 27 55.6	+0.2
	comp=Z,0.4nm,0.5s,mb3.9,baz=290,slow=6.0,SNR=3.8						
INK				pP	pP	20 28 06.8	+1.2
	comp=Z,1.8nm,0.7s,baz=273,slow=8.5,SNR=4.5						
YKA	Yellowknife Ar	70.72	29	P	P	20 28 54.2	+0.6
	comp=Z,0.3nm,0.7s,mb3.4,baz=289,slow=6.1,SNR=5.0						
YKA				pP	pP	20 29 04.3	+0.5
	comp=Z,1.6nm,1.0s,baz=294,slow=6.5,SNR=6.5						
YKA	Yellowknife Ar	70.72	29	P	P	20 28 54.2	+0.6
YKA				pP	pP	20 29 04.3	+0.5
FINES	FINESS Array B	76.90	334	P	P	20 29 29.9	+0.4
	comp=Z,5.4nm,1.1s,mb4.4,baz=90,slow=5.7,SNR=8.3						
NOA	NORSAR Array B	82.48	338	P	P	20 30 00.2	+0.7
	comp=Z,0.7nm,0.7s,mb3.7,baz=48,slow=4.5,SNR=3.0						
BRTR	Keskin Array B	85.38	313	P	P	20 30 16.4	+1.9
	comp=Z,0.8nm,0.8s,mb3.9,baz=45,slow=1.7,SNR=5.7						
TXAR	Lajitas Array	94.43	53	pP	pP	20 31 11.2	+3.1
	comp=Z,0.3nm,0.4s,baz=307,slow=4.5,SNR=3.2						

IDC 11 20:18:53.7±8.4**, 16.71S×174.95W, mb4.2**/1**, mb1 4.4**/1**, mb1mx3.6**/12**, mbtmp4.2**/1**, Error ellipse: s-maj=369.0km s-min=37.0km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.10	258	P	P	20 27 35.2	-2.2
	0.6nm,0.8s,baz=94,slow=7.3,SNR=3.6						
ASAR	Alice Springs	48.29	253	P	P	20 27 37.2	-1.7
	1.1nm,0.3s,baz=89,slow=7.5,SNR=32						
ILAR	Eielson Array	84.02	12	P	P	20 31 25.6	-1.3
	0.3nm,0.7s,baz=208,slow=4.8,SNR=5.7						

*ATH **11** 20:28:32.4,37.78N×22.95E,h14km±13km,MD3.3/10,ML3.0*

*NEIC **11** 20:28:32.4,37.78N×22.95E,h14km,ML3.0(ATH),After ATH.*

*CSEM **11** 20:28:32.5±0.1,37.78N×22.94E,h5km,ML3.0,Error ellipse: s-maj=2.8km s-min=2.5km az=7.0*

*THE **11** 20:28:33.9,37.72N×23.12E,h10km,ML3.1*

ISC 11 20:28:31.6±0.8**,37.81N**±0.04×**22.97E**±0.04**,h5**km±7km**, n23,**σ**0s90**/34**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGER	Gerania Oros	0.29	53	ePG	Pg	20 28 38.2	+0.7
MGER				eSB	Sb	20 28 44.0	+0.3
NAIG	Nisos Aigina	0.42	97	ePG	Pg	20 28 40.0	0.0
NAIG				eSB	Sb	20 28 47.2	-0.2
ATH	Athens Observa	0.62	75	ePB	Pb	20 28 44.7	+0.3
ATH				eSB	Sb	20 28 54.0	+0.9
MPAR	Parnis Oros	0.70	61	ePB	Pb	20 28 46.6	+0.8
MPAR				eSB	Sb	20 28 57.0	+1.6
PTL	Penteli	0.75	71	ePB	Pb	20 28 45.5	-1.2
LKR	Lokris	0.84	2	ePG	Pg	20 28 48.5	+0.1
ITM	Ithomi	1.04	233	ePB	Pb	20 28 51.7	0.0
VLI	Veliai	1.09	181	ePG	Pg	20 28 51.8	-1.6
AGG	Agios Georgios	1.31	338	ePb	Pb	20 28 57.2	+1.0
AGG				eSb	Sb	20 29 15.6	+2.4
EVR	Evrytania	1.43	321	ePB	Pb	20 28 59.9	+1.6
NEO	Neokhori	1.51	8	ePN	Pn	20 28 59.2	-0.1
KYTH	Kithira	1.53	178	ePB	Pb	20 29 01.6	+1.6
XOR	Xorichti	1.56	6	ePb	Pb	20 28 59.8	-0.8
XOR				eSb	Sb	20 29 20.1	-0.5
PAIG	Paliouri	2.19	15	ePn	Pn	20 29 08.3	-0.8
PAIG				eSn	Sn	20 29 35.5	-1.2
LIT	Litokhoron	2.32	351	ePn	Pn	20 29 10.8	-0.1
LIT				eSn	Sn	20 29 39.6	-0.4
OUR	Ouranopolis	2.64	17	ePn	Pn	20 29 14.6	-0.9
SOH	Sokhos	3.02	6	ePn	Pn	20 29 20.7	-0.2
GRG	Griva	3.17	352	ePn	Pn	20 29 23.2	0.0
FNA	Florina	3.21	338	ePn	Pn	20 29 24.2	+0.5
FNA				eSn	Sn	20 30 02.9	0.0
FNA	Florina	3.21	338	ePn	Pn	20 29 24.2	+0.5
FNA				eSn	Sn	20 30 02.9	0.0
SRS	Serrai	3.34	8	ePn	Pn	20 29 24.5	-1.0
KNT	Kendrikon	3.35	359	ePn	Pn	20 29 25.2	-0.4
KNT				eSn	Sn	20 30 06.1	-0.1
ALN	Alexandroupoli	3.90	37	ePn	Pn	20 29 32.0	-1.5

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*IDC **11** 20:46:15.0±1.7,7.63S×126.92E,mb3.7/2,mb1 4.3/4, mb1mx4.0/11,mbtmp4.1/4,ML4.2/2,Error ellipse: s-maj=235.8km s-min=29.5km az=66.0*

ISC 11 20:46:32.4±1.0**,7.86S**±0.07×**128.2E**±0.1**,h200**km**,n8,** σ**1s17**/14**,mb3.4**/2**,1D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.35	140	⇓iP	P	20 48 05.1	+0.1
	22nm,0.3s						
KAKA				i S	S	20 49 14.0	-3.1
FITZ	Fitzroy Crossi	10.49	194	eP	P	20 48 58.9	0.0
	17nm,0.5s						
FITZ				eS	S	20 50 53.2	-0.5
WRA	Warramunga Arr	13.39	154	Pn	P	20 49 36.0	+0.3
	1.2nm,0.3s,baz=326,slow=14,SNR=67						
WRA				Sn	S	20 51 58.6	-1.7
	2.9nm,0.3s,baz=326,slow=25,SNR=12						
WB2	Warramunga Arr	13.40	154	eP	P	20 49 36.1	+0.3
WB2				eS	S	20 52 00.6	+0.2
ASPA	Alice Springs	16.63	162	eP	P	20 50 19.4	+3.7
ASPA				eS	S	20 53 19.4	+6.2
ASAR	Alice Springs	16.63	162	P	P	20 50 19.2	+3.5
	1.3nm,0.3s,baz=340,slow=11,SNR=110						
ASAR				S	S	20 53 17.0	+3.8
	0.5nm,0.3s,baz=316,slow=17,SNR=6.7						
SONM	Songino Array	58.72	343	P	P	20 56 10.7	-0.5
	0.3nm,0.6s,mb3.1,baz=159,slow=7.2,SNR=4.6						
ZAL	Zalesovo	71.59	335	P	P	20 57 33.3	-0.2
	0.8nm,0.5s,mb3.6,baz=349,slow=5.5,SNR=4.7						

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*BJI **11** 21:00:21.0,60.10N×139.30W,h15km,mB5.4,mb5.4, Ms5.6,Msz5.3*

*IDC **11** 21:00:21.9±0.5,60.21N×139.48W,mb4.8/27,mb1 4.9/33, mb1mx4.9/34,mbtmp4.8/33,ML4.6/6,MS5.0/19,Ms1 5.0/19, ms1mx4.9/27,Error ellipse: s-maj=13.7km s-min=6.8km az=47.0*

*MOS **11** 21:00:22.0±1.0,60.23N×139.48W,h10km,mb5.4/51, MS4.9/20,Error ellipse: s-maj=12.4km s-min=4.7km az=105.5*

*NEIC **11** 21:00:23.1,60.10N×139.34W,h15km,mb5.3/133, MS5.1/89,MW5.5,ML5.8(PMR),ML5.5(AEIC), MW5.6(PGC),Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}0.50; $M_{\theta\theta}$-1.26; $M_{\phi\phi}$0.76; $M_{r\theta}$0.38; $M_{\theta\phi}$-0.94; $M_{\phi r}$1.27; Best double couple: $M_0 2\times10^{17}$ NP1:ϕ_s288°,δ46°,λ165°. NP2:ϕ_s29°,δ79°,λ45°. Principal axes: T 1.97, Plg39°, Azm259°; N -.03, Plg44°, Azm39°; P -1.94, Plg21°, Azm151°; After AEIC.*

NEIC Felt [IV] at Yakutat and [III] at Haines. Also felt at Whitehorse, Yukon Territory, Canada.

*PGC **11** 21:00:23.7,60.12N×139.40W,h1km,Mw5.6/6, ML5.5(AEIC),Mw5.5(NEIC)*

PGC St. Elias Mountains, Yukon Territory - Alaska border. Felt (III-IV) at Whitehorse and Destruction Bay, Yt and Haines Ak.

*HRVD **11** 21:00:23.0±0.1,60.21N×139.53W,h13km,MW5.4/73, Centroid moment Tensor Solution. LP body waves: s60,c123;Mantle waves: s73,c157; Half duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}0.26±.02; $M_{\theta\theta}$-0.91±.02; $M_{\phi\phi}$0.65±.02; $M_{r\theta}$0.52±.05; $M_{\theta\phi}$-0.78±.02; $M_{\phi r}$1.01±.05; Best double couple: $M_0 1.593\times10^{17}$ NP1: ϕ_s291°,δ43°,λ172°. NP2:ϕ_s27°,δ84°,λ47°. Principal axes: T 1.522, Plg36°, Azm261°; N .145, Plg43°, Azm33°; P -1.665, Plg26°, Azm150°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*CRAAG **11** 21:00:25.7,60.23N×139.41W,Mb5.2*

ISC 11 21:00:22.5±0.1**,60.18N**±0.02×**139.46W**±0.03**,h15**km**, h15**km±.6km**:pP-P,n640,**σ**1s03**/615**,mb5.2**/196**,MS5.1**/126**, 32C-10D,Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNL	Peninsula	0.51	177	P	Pb	21 00 31.6	-1.0
PNL				S	Sb	21 00 38.2	-1.4
YKU2	Yakutat	0.68	189	eP	Pb	21 00 35.3	-0.2
CHX	Chaix Hills	0.84	263	P	Pb	21 00 39.8	+1.5
YAH	Yahtse	1.16	280	P	Pb	21 00 44.9	+1.3
HYT	Haines Junctio	1.16	55	⇑P	Pb	21 00 44.7	+0.9
HYT				S	Sb	21 01 01.1	+2.6
HYT				Trac		21 01 02.5	
	comp=Z,8μm,0.3s						
CTGM	Chitina Glacie	1.22	311	P	Pb	21 00 45.0	+0.3
WRG	White River Gl	1.30	265	P	Pb	21 00 47.2	+1.2
CYK	Cape Yakataga	1.52	268	P	Pn	21 00 50.5	+1.2
BALM	Baldy	1.66	302	P	Pn	21 00 52.3	+0.9
BALM				S	Sn	21 01 16.4	+3.8
WHY	Whitehorse	2.32	76	P	Pn	21 01 01.6	+0.8
WHY				S	Sn	21 01 30.0	+0.8
WHY	Whitehorse	2.32	76	⇓Pn	Pn	21 01 02.1	+1.3
WHY				Pg	Pg	21 01 05.6	-3.3
WHY				Sn	Sn	21 01 32.8	+3.5
WHY				Sg	Sg	21 01 35.6	-4.3
WHY				Trac		21 01 37.9	
	comp=Z,15μm,0.6s						
GLB	Gilahina Butte	2.48	303	P	Pn	21 01 04.6	+1.5
KAIM	Kayak Island	2.50	266	P	Pn	21 01 03.7	+0.3
BESE	Bessie Mountai	2.85	122	P	Pn	21 01 07.0	-1.3
BESE				S	Sn	21 01 42.2	-0.5
WANC	Wrangell North	2.89	311	P	Pn	21 01 12.5	+3.5
BCA3	Beaver Creek A	3.10	340	P	Pn	21 01 13.1	+1.1
EYAK	Cordova Ski Ar	3.15	280	⇑iPn	Pn	21 01 12.9	+0.3
DIV	Divide	3.25	290	P	Pn	21 01 14.9	+0.8
MENT	Mentasta	3.44	325	P	Pn	21 01 18.0	+1.3
TZL	Tazlina	3.45	305	P	Pn	21 01 19.4	+2.5
HIN	Hinchinbrook I	3.52	277	P	Pn	21 01 18.2	+0.5
VLZ	Valdez	3.52	289	P	Pn	21 01 18.3	+0.5
FID	Port Fidalgo	3.52	282	P	Pn	21 01 18.5	+0.6
MID	Middleton Isla	3.56	261	P	Pn	21 01 18.1	-0.3
JPK	Jack Peak	3.63	287	P	Pn	21 01 19.8	+0.4
SIT	Sitka	3.80	144	eP	Pn	21 01 18.8	-3.1
SIT	Sitka	3.80	144	P	Pn	21 01 19.9	-2.0
GLI	Glacier Island	3.84	284	P	Pn	21 01 22.5	+0.1
DAWY	Dawson	3.90	0	P	Pn	21 01 24.9	+1.6
DAWY	Dawson	3.90	0	⇑Pn	Pn	21 01 25.0	+1.7
DAWY				Pg	Pg	21 01 35.6	-4.8
DAWY				Sn	Sn	21 02 12.0	+2.7
DAWY				Sg	Sg	21 02 25.2	-7.2
DAWY				Trac		21 02 37.0	
	comp=Z,4μm,0.5s						
PAX	Paxson	4.01	317	P	Pn	21 01 25.7	+0.8
DOT	Dot Lake	4.11	330	P	Pn	21 01 27.1	+0.9
SCM	Sheep Creek Mo	4.18	297	P	Pn	21 01 28.2	+1.1
LTI	Latouche	4.21	272	P	Pn	21 01 27.1	-0.6
THY	Trims Highway	4.41	320	P	Pn	21 01 32.6	+2.0
KNK	Knik Glacier	4.58	290	P	Pn	21 01 34.0	+1.1
SML	Sawmill	4.62	295	eP	Pn	21 01 33.5	0.0
SML	Sawmill	4.62	295	P	Pn	21 01 33.9	+0.4
GHO	Glory Hole Cre	4.88	293	P	Pn	21 01 37.6	+0.4
PMR	Palmer	4.93	291	eP	Pn	21 01 38.6	+0.7
SEW	Seward	5.00	273	P	Pn	21 01 37.7	-1.1
DLBC	Dease Lake	5.14	106	Pn	Pn	21 01 39.1	-1.7
	19nm,0.3s,baz=287,slow=13,SNR=95						
DLBC				Lg		21 03 00.9	
	318nm,0.3s,baz=181,slow=21,SNR=11						
DLBC				LR	LR	21 04 02.3	
	comp=Z,28μm,19.1s,baz=296,slow=43						
DLBC	Dease Lake	5.14	106	P	Pn	21 01 39.0	-1.8
DLBC	Dease Lake	5.14	106	⇑Pn	Pn	21 01 39.2	-1.6
DLBC				Pg	Pg	21 01 53.9	-11
DLBC				Sg	Sg	21 03 01.3	-12
DLBC				Trac		21 03 09.3	
	comp=Z,3μm,0.7s						
RC01	Rabbit Creek A	5.14	285	P	Pn	21 01 40.7	-0.2
PWA	Palmer West	5.30	291	P	Pn	21 01 44.8	+1.7
SLKM	Skilak Lake	5.36	278	eP	Pn	21 01 42.3	-1.6
SLKM	Skilak Lake	5.36	278	P	Pn	21 01 42.8	-1.1
FIB	Fire Island	5.36	285	eP	Pn	21 01 43.8	-0.2
FIB	Fire Island	5.36	285	P	Pn	21 01 45.8	+1.8
RND	Reindeer	5.51	310	P	Pn	21 01 47.0	+1.0
CUT	Chulitna	5.67	298	P	Pn	21 01 49.4	+1.1
MCK	McKinley	5.72	313	eP	Pn	21 01 49.6	+0.6
MCK	McKinley	5.72	313	P	Pn	21 01 49.7	+0.8
IL1	Eielson Array	5.75	326	P	Pn	21 01 48.2	-1.2
ILAR	Eielson Array	5.75	326	Pn	Pn	21 01 48.1	-1.4
	7.3nm,0.3s,baz=145,slow=12,SNR=215						
ILAR				Lg		21 03 24.4	
	22nm,0.3s,baz=131,slow=32,SNR=4.4						
BRLK	Bradley Lake	5.76	271	P	Pn	21 01 48.3	-1.3
CCB	Clear Creek Bu	5.93	323	P	Pn	21 01 53.0	+1.1
TRF	Thorofare Moun	6.09	307	P	Pn	21 01 54.5	+0.3
COLA	College	6.10	324	i P	Pn	21 01 56.1	+1.7
COLA	College	6.10	324	P	Pn	21 01 55.5	+1.1
BWN	Browne	6.16	315	P	Pn	21 01 54.6	-0.7
STLK	Strandline Lak	6.20	288	P	Pn	21 01 55.8	+0.1
XLV	Seldovia	6.23	269	P	Pn	21 01 56.5	+0.3
SPU	Mount Spurr	6.27	285	ePn	Pn	21 01 54.3	-2.5
KTH	Kantishna Hill	6.39	307	P	Pn	21 01 59.3	+0.8
DFR	Drift River	6.57	279	P	Pn	21 01 59.6	-1.5
RSO	Redoubt South	6.61	278	ePn	Pn	21 02 00.5	-1.1
RDN	Redoubt North	6.61	279	P	Pn	21 02 00.8	-0.8
NCT	North Crescent	6.69	279	P	Pn	21 02 01.5	-1.2
ILIM	Iliamna	6.75	275	P	Pn	21 02 03.6	+0.1
SYI	Shuyak Island	6.79	262	P	Pn	21 02 03.5	-0.6
INE	Iliamna NE	6.80	275	P	Pn	21 02 04.3	+0.1
ILW	Iliamna West	6.84	275	P	Pn	21 02 04.1	-0.7
OPT	Oil Point	6.95	272	P	Pn	21 02 06.2	-0.1
AUE	Augustine Isla	7.08	269	P	Pn	21 02 08.1	-0.1
AUI	Augustine Isla	7.11	269	P	Pn	21 02 09.0	+0.4
AUW	Augustine West	7.12	270	P	Pn	21 02 09.1	+0.3
KDAK	Kodiak Island	7.20	256	P	Pn	21 02 07.7	-2.1
MCNL	McNeil River	7.60	269	P	Pn	21 02 15.1	-0.4
BM3	Burnt Mountain	7.62	345	P	Pn	21 02 15.9	+0.3
KAPH	Katmai Pasha	7.77	265	P	Pn	21 02 17.1	-0.6
SVW2	Sparrevohn	7.98	284	P	Pn	21 02 19.6	-1.2
KAWH	Katmai	8.06	264	P	P	21 02 20.7	-1.2
KAHC	Katmai Hardscr	8.08	266	P	P	21 02 20.5	-1.6
KAIC	Katmai Ikaglui	8.15	265	P	P	21 02 21.8	-1.3
TT01	Tatalina	8.37	296	P	P	21 02 24.2	-1.9
FNBB	Fort Nelson	8.46	92	Pn	P	21 02 26.6	-0.8
FNBB				Sg	Sg	21 04 45.8	-18
FNBB				Trac		21 04 54.8	
	comp=Z,2μm,1.6s						
COLD	Coldfoot	8.52	331	P	P	21 02 27.7	-0.5
INK	Inuvik	8.56	15	P	P	21 02 27.9	-0.9
INK	Inuvik	8.56	15	Pn	P	21 02 27.8	-1.0
	4.4nm,0.3s,baz=194,slow=15,SNR=203						
INK				Sn	Sn	21 04 01.4	-4.6
	5.1nm,0.3s,baz=50,slow=7.6,SNR=4.7						
INK				Lg		21 04 40.5	
	14nm,0.3s,baz=274,slow=18,SNR=2.6						
INK				LR	LR	21 06 19.3	
	comp=Z,6μm,18.6s,baz=199,slow=42						
INK	Inuvik	8.56	15	ePn	P	21 02 27.8	-1.0
INK	Inuvik	8.56	15	⇓Pn	P	21 02 27.9	-0.8
INK				Pg	P	21 03 03.3	+35
INK				Sg	Sg	21 04 51.7	-16
INK				Trac		21 05 10.3	
	comp=Z,1μm,1.3s						
IM3	Indian Mountai	8.70	318	P	P	21 02 29.7	-1.1
IMA	Indian Mountai	8.72	319	eP	P	21 02 29.6	-1.5
IMA	Indian Mountai	8.72	319	eP	P	21 02 31.1	0.0
GCSA	Galena City Sc	9.26	307	P	P	21 02 37.8	-0.8
FSB	Fort Saint Jam	9.96	118	Pn	P	21 02 53.0	+5.0
FSB				Sg	Sg	21 05 39.0	-15
FSB				Trac		21 05 46.0	
	comp=Z,7μm,1.8s						
BMBC	Bull Mountain	10.05	107	⇑Pn	P	21 02 51.1	+1.8
BMBC				Sg	S	21 05 33.6	+51
BMBC				Trac		21 05 52.7	
	comp=Z,2μm,1.3s						
BBB	Bella Bella	10.19	137	Pn	P	21 02 50.2	-1.0
	2.7nm,0.3s,baz=319,slow=11,SNR=20						
BBB				Sn	S	21 04 45.2	-1.0
	1.4nm,0.3s,baz=270,slow=20,SNR=3.8						
BBB				Lg		21 05 39.1	
	0.7nm,0.3s,baz=36,slow=22,SNR=7.5						
BBB	Bella Bella	10.19	137	Pn	P	21 02 50.2	-1.0
BBB				Sn	S	21 04 45.2	-1.0
BBB				Lg		21 05 39.1	
YKW3	Yellowknife Ar	12.12	68	ePn	P	21 03 15.2	-2.2
YKW3	Yellowknife Ar	12.12	68	Pn	P	21 03 15.6	-1.9
YKW3				Pn	P	21 03 15.6	-1.8
YKW3				Sg	S	21 06 38.5	+65
YKW3				Sg	S	21 06 39.5	+66
YKW3				Trac		21 06 45.3	
	comp=Z,2μm,1.5s						
YKW3				Trac		21 06 45.6	
	comp=Z,274nm,1.3s						
YKA	Yellowknife Ar	12.13	68	Pn	P	21 03 14.8	-2.7
	1.8nm,0.3s,baz=265,slow=12,SNR=64						
YKA				Lg		21 06 38.9	
	0.2nm,0.3s,baz=129,slow=9.4,SNR=4.8						
YKA				LR	LR	21 08 23.8	
	comp=Z,11μm,18.2s,baz=265,slow=40						
YKA	Yellowknife Ar	12.13	68	Pn	P	21 03 14.8	-2.7
YKA				Lg		21 06 38.9	
YKA				LR	LR	21 08 23.8	
TNA	Tin City	13.97	305	ePn	P	21 03 41.2	-0.6
PGC	Sidney	14.79	134	ePn	P	21 03 50.4	-2.1
	371nm,1.2s						
OCWA	Octopus Mounta	15.30	138	ePn	P	21 03 59.5	+0.1
	1μm,1.6s						
OOW	Octopus West	15.31	138	P	P	21 04 01.7	+2.3
EDM	Edmonton	15.86	104	eP	P	21 04 05.6	-0.9
UNV	Unalaska Valle	15.95	259	eP	P	21 04 05.7	-2.0
	2μm,1.3s						
TTW	Tolt Reservoir	16.23	132	P	P	21 04 11.8	+0.6
FMW	Mount Fremont	16.88	134	P	P	21 04 21.3	+1.8
LON	Longmire	16.98	134	P	P	21 04 22.7	+1.9
TBM	Table Mountain	17.07	131	P	P	21 04 24.7	+2.7
EBG	Ellensburg	17.30	132	P	P	21 04 28.7	+3.9
NEW	Newport	17.58	123	P	P	21 04 29.7	+1.5
NEW				pmax	pmax		
	comp=Z,160nm,1.1s						
NEW	Newport	17.58	123	P	P	21 04 29.1	+0.9
	comp=Z,0.5nm,0.3s,baz=326,slow=10,SNR=27						
NEW	Newport	17.58	123	eP	P	21 04 29.0	+0.8
	comp=Z,156nm,1.1s						
NIKO	Nikolski	17.61	259	eP	P	21 04 29.4	+0.8
OD2	Odessa Site #2	17.62	127	P	P	21 04 29.7	+1.0
VFP	Flag Point	18.34	136	P	P	21 04 38.6	+0.8
WALA	Waterton Lakes	18.38	116	eP	P	21 04 37.8	-0.4
	comp=Z,296nm,1.4s						
CROR	Criterion Ridg	18.80	136	P	P	21 04 43.7	+0.3
HBO	Huckleberry Mo	19.36	140	P	P	21 04 50.3	+0.3
KEBM	Edson Butte	19.63	145	eP	P	21 04 52.2	-0.9
MSO	Missoula	20.05	120	eP	P	21 04 56.4	-1.2
	comp=Z,312nm,1.4s						
BBOR	Butler Butte	20.11	142	P	P	21 04 59.1	+0.8
BMO	Blue Mountains	20.27	129	eP	P	21 04 58.1	-1.8
	comp=Z,55nm,1.2s						
BMO				LR	LR		
	comp=Z,5μm,20.0s,MS4.9						
KBO	Bosley Butte	20.27	146	eP	P	21 04 59.0	-1.0
HUMO	Hull Mountain	20.28	143	eP	P	21 04 59.6	-0.5
	comp=Z,92nm,1.2s						
HUMO				LR	LR		
	comp=Z,5μm,21.0s,MS4.8						
CHMT	Chamberlain Mo	20.28	119	eP	P	21 04 58.9	-1.1
FFC	Flin Flon	20.68	89	Pn	P	21 05 03.2	-0.9
	comp=Z,768nm,1.1s,SNR=99						
HRY	Holter Researc	21.06	117	eP	P	21 05 06.0	-2.1
YBH	Yreka Blue Hor	21.15	143	P	P	21 05 09.6	+0.5
YBH				pmax	pmax		
	comp=Z,92nm,1.2s						
YBH	Yreka Blue Hor	21.15	143	P	P	21 05 10.0	+0.9
	comp=Z,38nm,0.9s,mb4.7,baz=9.9,slow=4.7,SNR=36						
YBH				S	S	21 09 15.2	+16
	comp=Z,4.4nm,0.8s,baz=270,slow=20,SNR=3.0						
YBH	Yreka Blue Hor	21.15	143	eP	P	21 05 08.6	-0.4
	comp=Z,92nm,1.3s,mb5.0						
RES	Resolute Bay	21.62	30	P	P	21 05 13.5	-0.1
RES	Resolute Bay	21.62	30	eP	P	21 05 13.3	-0.3
	comp=Z,0.2nm,0.5s						
RES	Resolute Bay	21.62	30	Pn	P	21 05 13.7	+0.1
KHMM	Horse Mountain	21.65	146	eP	P	21 05 13.8	-0.3
MOD	Modoc	21.76	139	eP	P	21 05 15.6	+0.4
	comp=Z,94nm,1.0s,mb5.2						
WVOR	Wild Horse Val	21.86	135	P	P	21 05 17.0	+0.9
WVOR				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.0						
WVOR	Wild Horse Val	21.86	135	eP	P	21 05 16.1	0.0
	comp=Z,65nm,1.0s,mb5.0						
WVOR				LR	LR		
	comp=Z,11μm,19.0s,MS5.3						
BOZ	Bozeman (W)	21.98	119	P	P	21 05 17.4	+0.1
BOZ				pmax	pmax		
	comp=Z,130nm,1.3s,mb5.2						
BOZ	Bozeman (W)	21.98	119	eP	P	21 05 16.9	-0.5
	comp=Z,131nm,1.4s,mb5.2						
BOZ				LR	LR		
	comp=Z,6μm,20.0s,MS5.0						
MCMT	McKenzie Canyo	22.10	122	eP	P	21 05 18.3	-0.2
WDC	Whiskeytown Da	22.26	144	P	P	21 05 21.5	+1.3
WDC				pmax	pmax		
	comp=Z,310nm,1.4s,mb5.5						
WDC	Whiskeytown Da	22.26	144	eP	P	21 05 21.1	+0.9
	comp=Z,311nm,1.4s,mb5.5						
HLID	Hailey	22.49	126	eP	P	21 05 21.9	-0.5
	comp=Z,82nm,1.4s,mb5.0						
HLID				LR	LR		
	comp=Z,4μm,19.0s,MS4.8						
QLMT	Earthquake Lak	22.70	120	eP	P	21 05 24.6	+0.2
FCC	Fort Churchill	22.75	74	P	P	21 05 26.5	+1.8
FCC				pmax	pmax		
	comp=Z,11nm,2.5s						
FCC	Fort Churchill	22.75	74	eP	P	21 05 26.0	+1.3
	comp=Z,11nm,2.6s						
YMR	Madison River	23.04	120	eP	P	21 05 28.8	+1.1
YNR	Norris Junctio	23.12	119	eP	P	21 05 29.9	+1.4
YFT	Old Faithful	23.26	120	eP	P	21 05 31.7	+1.9
DGMT	Dagmar	23.35	104	eP	P	21 05 31.5	+0.8
	comp=Z,1μm,1.9s,mb6.0						
DGMT				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
LKWY	Lake	23.36	119	P	P	21 05 34.1	+3.3
LKWY				pmax	pmax		
	comp=Z,160nm,1.5s,mb5.2						
LKWY	Lake	23.36	119	eP	P	21 05 32.2	+1.3
	comp=Z,157nm,1.5s,mb5.2						
LKWY				LR	LR		
	comp=Z,4μm,20.0s,MS4.9						
HOPS	Hopland	23.59	147	eP	P	21 05 33.2	+0.1
	comp=Z,173nm,1.4s,mb5.3						
HOPS				LR	LR		
	comp=Z,2μm,22.0s,MS4.4						
LAO	LASA Array	23.65	110	eP	P	21 05 34.7	+1.1
	comp=Z,669nm,1.3s,mb5.9						
LAO				LR	LR		
	comp=Z,2μm,21.0s,MS4.6						
IMW	Indian Meadow	23.66	121	eP	P	21 05 35.0	+1.2
OHCM	Honcut	23.72	143	eP	P	21 05 34.9	+0.5
MOOW	Moose Ponds	23.86	121	eP	P	21 05 37.4	+1.7
RRI2	Red Ridge	23.94	122	eP	P	21 05 37.4	+0.9
TPAW	Teton Pass	23.98	121	eP	P	21 05 38.1	+1.2
WUWY	Wally Ulrich	24.03	121	eP	P	21 05 37.8	+0.4
LOHW	Long Hollow	24.04	121	eP	P	21 05 38.7	+1.3
SNOW	Snow King Moun	24.09	121	eP	P	21 05 39.4	+1.5
BMN	Battle Mountai	24.12	135	P	P	21 05 41.2	+2.9
BMN				pmax	pmax		
	comp=Z,110nm,1.7s,mb5.0						
BMN	Battle Mountai	24.12	135	eP	P	21 05 38.3	0.0
	comp=Z,112nm,1.7s,mb5.0						
BMN				LR	LR		
	comp=Z,4μm,20.0s,MS4.9						
NSHM	Saint Helena R	24.16	146	P	P	21 05 39.2	+0.6
BILL	Bilibino	24.18	312α	iP	P	21 05 39.1	+0.6
BILL				i		21 05 44.3	
BILL						21 06 18.0	
BILL				i S	S	21 10 00.2	+7.3
BILL				eSS	SS	21 10 46.5	+1.0
BILL				pmax	pmax		
	comp=Z,800nm,3.0s						
BILL				pmax	pmax		
	comp=Z,183nm,1.8s,mb5.2						
BILL				MLR	MLR		
	comp=Z,7μm,13.0s,MS5.3						
BILL	Bilibino	24.18	312	eP	P	21 05 38.9	+0.4
	comp=Z,90nm,1.0s,mb5.2						
BILL				LR	LR		
	comp=Z,6μm,19.0s,MS5.1						
WCN	Washoe City	24.29	141	P	P	21 05 42.0	+2.1
WCN				pmax	pmax		
	comp=Z,130nm,1.6s,mb5.1						
WCN	Washoe City	24.29	141	eP	P	21 05 40.6	+0.7
	comp=Z,129nm,1.6s,mb5.1						
AHID	Auburn Hatcher	24.51	123	eP	P	21 05 42.1	+0.1
	comp=Z,85nm,1.4s,mb5.1						
AHID				LR	LR		
	comp=Z,6μm,19.0s,MS5.1						
ELK	Elko	24.57	131	P	P	21 05 44.0	+1.4
ELK				pmax	pmax		
	comp=Z,39nm,1.2s						
ELK	Elko	24.57	131	eP	P	21 05 43.6	+0.9
	comp=Z,39nm,1.2s,mb4.8						
ELK				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
HVU	Hansel Valley	24.64	126	P	P	21 05 45.6	+2.3
HVU	Hansel Valley	24.64	126	eP	P	21 05 44.1	+0.8
SAC	San Andreas	25.09	147	P	P	21 05 49.5	+1.9
SAC	San Andreas	25.09	147	eP	P	21 05 46.9	-0.7
BW06	Boulder Array	25.17	120	eP	P	21 05 48.8	+0.5
	comp=Z,168nm,1.6s,mb5.3						
BW06				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
PDAR	Pinedale Array	25.17	120	P	P	21 05 49.2	+0.9
	comp=Z,5.8nm,0.9s,mb4.1,baz=315,slow=8.4,SNR=24						
PDAR				LR	LR	21 16 41.0	
	comp=Z,4μm,18.1s,MS4.9,baz=157,slow=39						
SPUT	South Promonto	25.17	126	eP	P	21 05 49.1	+0.7
CMB	Columbia Colle	25.25	143	P	P	21 05 50.2	+1.0
CMB				pmax	pmax		
	comp=Z,69nm,1.3s,mb5.0						
CMB	Columbia Colle	25.25	143	eP	P	21 05 49.4	+0.2
	comp=Z,69nm,1.3s,mb5.0						
CMB				LR	LR		
	comp=Z,2μm,22.0s,MS4.7						
BGU	Big Grassy Mou	25.26	128	eP	P	21 05 49.0	-0.2
HWUT	Hardware Ranch	25.28	125	eP	P	21 05 49.5	+0.2
	comp=Z,54nm,1.2s,mb5.0						
HWUT				LR	LR		
	comp=Z,5μm,22.0s,MS5.0						
NVAR	Mina Array Bea	25.55	139	P	P	21 05 53.0	+1.1
	comp=Z,28nm,0.9s,mb4.8,baz=325,slow=6.5,SNR=45						
NVAR				LR	LR	21 15 24.1	

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      comp=Z,4µm,19.7s,MS4.9,baz=335,slow=35
MNV   Mina             25.59 139  P         P       21 05 53.4 +1.0
MNV                               pmax      pmax
      comp=Z,140nm,1.3s,mb5.3
MNV   Mina             25.59 139  eP        P       21 05 52.7 +0.3
      comp=Z,136nm,1.4s,mb5.3
MNV                               LR        LR
      comp=Z,3µm,20.0s,MS4.9
TCUT  Toone Canyon     25.75 125  eP        P       21 05 55.5 +1.7
NOQ   North Oquirrh    25.86 127  eP        P       21 05 55.4 +0.6
DUG   Dugway           25.97 128  eP        P       21 05 56.4 +0.5
      comp=Z,129nm,1.5s,mb5.2
DUG                               LR        LR
      comp=Z,5µm,20.0s,MS5.0
OMM   Old Mammoth Mi   26.06 141  eP        P       21 05 57.3 +0.6
SAO   San Andreas Ge   26.12 146  P         P       21 05 58.6 +1.3
SAO                               pmax      pmax
      comp=Z,170nm,1.7s,mb5.3
SAO   San Andreas Ge   26.12 146  eP        P       21 05 57.7 +0.4
      comp=Z,174nm,1.8s,mb5.3
JLU   Jordanelle       26.17 126  eP        P       21 05 58.1 +0.4
TPH   Tonopah          26.23 137  P         P       21 05 59.5 +1.2
TPH                               pmax      pmax
      comp=Z,86nm,1.1s,mb5.2
TPH   Tonopah          26.23 137  eP        P       21 05 58.4 +0.1
      comp=Z,86nm,1.1s,mb5.2
TPH                               LR        LR
      comp=Z,2µm,20.0s,MS4.7
SMY   Shemya           26.23 274  PFAKE             21 06 10.0  +12
SMY                               LR        LR
      comp=Z,7µm,19.0s,MS5.2
ULM   Lac du Bonnet    26.30  93  P         P       21 05 58.8  0.0
      comp=Z,44nm,1.1s,mb4.9,baz=306,slow=10.0,SNR=18
ULM                               LR        LR      21 16 49.7
      comp=Z,8µm,20.1s,MS5.2,baz=49,slow=38
ULM   Lac du Bonnet    26.30  93  eP        P       21 05 57.9 -0.9
      comp=Z,106nm,1.3s,mb5.2
ULM                               LR        LR
      comp=Z,11µm,19.0s,MS5.4
NLU   North Lily Min   26.47 128  eP        P       21 06 00.2 -0.2
TRCR  Troy Canyon      26.55 135  eP        P       21 06 00.9 -0.4
LRV   Little Rabbit    26.56 145  eP        P       21 06 02.4 +1.1
FX1   Attu Island--F   26.61 275  P         P       21 06 01.2 -0.4
      comp=Z,60nm,0.6s,mb5.3,baz=340,slow=6.9,SNR=8.5
FX1                               LR        LR      21 17 31.0
      comp=Z,248nm,18.4s,baz=80,slow=39
FX1   Attu Island--F   26.61 275  eP        P       21 06 00.9 -0.7
MVU   Marysvale        27.67 129  eP        P       21 06 10.8 -0.6
      comp=Z,36nm,1.3s,mb4.8
MVU                               LR        LR
      comp=Z,4µm,19.0s,MS5.0
MSU   Marysvale        27.67 129  P         P       21 06 12.6 +1.1
MSU   Marysvale        27.67 129  eP        P       21 06 11.7 +0.2
DAC   Darwin (Calif)   27.74 140  eP        P       21 06 11.8 -0.3
      comp=Z,63nm,1.5s,mb5.0
DAC                               LR        LR
      comp=Z,3µm,21.0s,MS4.8
SRU   San Rafael       27.81 126  P         P       21 06 13.4 +0.7
SRU   San Rafael       27.81 126  eP        P       21 06 11.3 -1.4
ARUT  Antelope Range   27.83 132  P         P       21 06 13.4 +0.5
ARUT  Antelope Range   27.83 132  eP        P       21 06 12.8 -0.1
PHWY  Pilot Hill       28.15 117  eP        P       21 06 15.2 -0.5
PV10  Paradox Valley   29.04 125  eP        P       21 06 23.3 -0.5
NEN   Nelson           29.23 136  eP        P       21 06 25.1 -0.5
ISCO  Idaho Springs    29.30 119  eP        P       21 06 25.9 -0.3
      comp=Z,15nm,1.2s,mb4.6
ISCO                              LR        LR
      comp=Z,6µm,21.0s,MS5.2
PV01  Paradox Valley   29.44 125  eP        P       21 06 27.0 -0.4
MWC   Mount Wilson     29.48 142  P         P       21 06 29.6 +1.7
MWC   Mount Wilson     29.48 142  eP        P       21 06 26.1 -1.7
LDFC  Landfair         29.66 137  eP        P       21 06 29.7 +0.3
EYMN  Ely              29.98  92  eP        P       21 06 31.6 -0.6
      comp=Z,101nm,1.2s,mb5.4
EYMN                              LR        LR
      comp=Z,9µm,19.0s,MS5.4
SDCO  Great Sand Dun   31.06 121  eP        P       21 06 41.0 -0.7
      comp=Z,17nm,1.4s,mb4.7
SDCO                              LR        LR
      comp=Z,5µm,22.0s,MS5.1
SEY   Seymchan         31.21 305  eP        P       21 06 44.4 +1.5
FRB   Frobisher Bay    31.96  53  P         P       21 06 49.5 +0.1
      comp=Z,71nm,1.4s,mb5.3,baz=299,slow=10.0,SNR=16
FRB                               LR        LR      21 20 18.3
      comp=Z,4µm,20.0s,MS5.1,baz=293,slow=37
FRB   Frobisher Bay    31.96  53  P         P       21 06 49.5 +0.1
FRB                               LR        LR      21 20 18.3
CBKS  Cedar Bluff      32.75 113  PFAKE             21 07 10.0  +13
CBKS                              LR        LR
      comp=Z,21µm,22.0s,MS5.8
ANMO  Albuquerque      33.04 125  P         P       21 07 00.0 +0.9
ANMO                              pmax      pmax
      comp=Z,30nm,1.6s
ANMO  Albuquerque      33.04 125  P         P       21 06 59.8 +0.7
      comp=Z,2.4nm,0.8s,mb4.2,baz=314,slow=8.7,SNR=11
ANMO                              PcP       PcP     21 09 42.8 -0.1
      comp=Z,4.5nm,1.0s,baz=234,slow=3.2,SNR=2.3
ANMO                              LR        LR      21 20 12.7
      comp=Z,3µm,18.5s,MS5.0,slow=36
ANMO  Albuquerque      33.04 125  eP        P       21 06 59.0 -0.2
      comp=Z,30nm,1.6s,mb5.0
ANMO                              LR        LR
      comp=Z,4µm,19.0s,MS5.1
LENM  Lemitar          33.51 126  eP        P       21 07 02.0 -1.3
LPM   Los Pinos Moun   33.52 126  eP        P       21 07 01.7 -1.6
MA2   Magadan          33.54 300  i P       P       21 07 03.1 -0.1
MA2                               e                 21 08 19.9
MA2                               pmax      pmax
      comp=Z,50nm,1.4s,mb5.2
MA2   Magadan          33.54 300  eP        P       21 07 02.6 -0.6
      comp=Z,102nm,1.4s,mb5.6
MA2                               LR        LR
      comp=Z,2µm,19.0s,MS4.9
PET   Petropavlovsk    33.64 286  eP        P       21 07 01.6 -2.6
PET                               e                 21 09 46.2
PET                               pmax      pmax
      comp=Z,400nm,9.6s
PET                               pmax      pmax
      comp=Z,75nm,1.5s,mb5.4
PET                               pmax      pmax
      comp=Z,400nm,17.9s
PET                               pmax      pmax
      comp=Z,102nm,2.1s,mb5.4
PET                               MLR       MLR
      comp=Z,4µm,20.0s,MS5.2
TUC   Tucson           33.69 133  P         P       21 07 05.9 +1.1
TUC                               pmax      pmax
      comp=Z,12nm,1.0s,mb4.8
TUC   Tucson           33.69 133  eP        P       21 07 04.5 -0.2
      comp=Z,12nm,0.9s,mb4.8
KSU1  Kansas State U   33.99 109  P         P       21 07 06.5 -0.8
JFWS  Jewell Farm      34.16  98  PFAKE             21 07 20.0  +11
JFWS                              LR        LR
      comp=Z,14µm,19.0s,MS5.7
AMTX  Amarillo         35.12 119  eP        P       21 07 17.0 -0.1
      comp=Z,41nm,1.4s,mb5.2
CPRX  Cap Rock         35.77 123  eP        P       21 07 22.2 -0.4
GDL2  Guadalupe Moun   36.29 125  eP        P       21 07 26.4 -0.6
MNTX  Cornudas Mount   36.31 126  eP        P       21 07 27.2  0.0
      comp=Z,5.0nm,0.8s,mb4.5
MNTX                              LR        LR
      comp=Z,6µm,19.0s,MS5.4
WMOK  Wichita Mounta   36.54 116  eP        P       21 07 28.0 -1.0
      comp=Z,33nm,1.2s,mb5.0
SFJ   Sondre           36.83  41  eP        P       21 07 30.5 -0.7
      comp=Z,25nm,1.0s,mb5.0
SUMG  Summit           37.14  29  eP        P       21 07 33.8  0.0
      comp=Z,156nm,1.8s,mb5.5
CCM   Cathedral Cave   37.38 104  P         P       21 07 36.9 +0.8
CCM                               pmax      pmax
      comp=Z,21nm,1.2s,mb4.8
CCM   Cathedral Cave   37.38 104  eP        P       21 07 34.8 -1.3
      comp=Z,21nm,1.3s,mb4.8
CCM                               LR        LR
      comp=Z,5µm,19.0s,MS5.3
SCHQ  Schefferville    37.55  65  P         P       21 07 37.8 +0.4
      comp=Z,12nm,0.9s,mb4.6,baz=303,slow=8.3,SNR=12
SCHQ                              LR        LR      21 23 35.6
      comp=Z,3µm,18.2s,MS5.1,baz=318,slow=37
SCHQ  Schefferville    37.55  65  eP        P       21 07 37.2 -0.1
      comp=Z,45nm,1.1s,mb5.1
SCHQ                              LR        LR
      comp=Z,6µm,19.0s,MS5.4
FVM   French Village   37.84 103  P         P       21 07 42.4 +2.5
FVM                               pmax      pmax
      comp=Z,47nm,1.1s,mb5.1
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FVM   French Village   37.84 103  eP        P       21 07 38.7 -1.2
      comp=Z,47nm,1.1s,mb5.1
AAM   Ann Arbor        37.89  92  PFAKE             21 07 50.0  +10
AAM                               LR        LR
      comp=Z,3µm,21.0s,MS5.0
SADO  Sadowa           38.35  86  P         P       21 07 45.1 +1.0
      comp=Z,13nm,1.0s,mb4.6,baz=344,slow=10,SNR=2.8
SADO                              LR        LR      21 24 11.4
      comp=Z,4µm,19.3s,MS5.3,baz=332,slow=37
LTX   Lajitas          39.09 126  P         P       21 07 51.8 +1.3
LTX                               pmax      pmax
      comp=Z,24nm,1.4s,mb4.7
LTX   Lajitas          39.09 126  eP        P       21 07 49.9 -0.6
      comp=Z,24nm,1.4s,mb4.7
LTX                               LR        LR
      comp=Z,5µm,19.0s,MS5.3
TXAR  Lajitas Array    39.09 126  P         P       21 07 51.0 +0.5
      comp=Z,1.2nm,0.6s,baz=333,slow=5.6,SNR=13
TXAR                              PcP       PcP     21 09 59.8 -1.1
      comp=Z,2.8nm,0.9s,baz=315,slow=3.8,SNR=2.3
TXAR                              LR        LR      21 25 03.6
      comp=Z,3µm,21.2s,MS5.1,baz=305,slow=38
MIAR  Mount Ida        39.09 110  eP        P       21 07 49.5 -1.0
      comp=Z,43nm,1.2s,mb5.0
USIN  University of    39.20 101  P         P       21 07 49.8 -1.6
      comp=Z,127nm,1.2s,mb5.5
JCT   Junction City    39.70 120  P         P       21 07 55.9 +0.3
JCT                               pmax      pmax
      comp=Z,27nm,1.3s,mb4.8
JCT   Junction City    39.70 120  eP        P       21 07 53.8 -1.9
      comp=Z,27nm,1.4s,mb4.8
JCT                               LR        LR
      comp=Z,6µm,19.0s,MS5.5
ACSO  Alum Creek Sta   39.78  94  P         P       21 07 56.1 -0.1
      comp=Z,82nm,1.1s,mb5.4
ACSO                              LR        LR
      comp=Z,4µm,19.0s,MS5.3
ERPA  Erie             39.86  89  PFAKE             21 08 10.0  +13
ERPA                              LR        LR
      comp=Z,6µm,19.0s,MS5.4
ALLY  Alegheny Colle   40.13  90  eP        P       21 07 59.5 +0.5
MSNY  Massena          40.31  82  eP        P       21 08 00.6 +0.1
GENY  Geneseo          40.46  87  eP        P       21 08 00.4 -1.3
YAK   Yakutsk          40.51 313  eP        P       21 08 01.9  0.0
YAK                               e                 21 09 35.7
YAK                               e                 21 17 34.1
YAK                               pmax      pmax
      comp=Z,14nm,0.8s,mb4.6
YAK                               pmax      pmax
      comp=N,4.0nm,1.1s
YAK                               pmax      pmax
      comp=E,7.0nm,1.4s
YAK                               pmax      pmax
      comp=N,5.0nm,1.1s
YAK                               pmax      pmax
      comp=Z,12nm,1.1s,mb4.4
YAK                               pmax      pmax
      comp=N,1µm,14.6s
YAK                               pmax      pmax
      comp=E,991nm,15.7s
YAK                               MLR       MLR
      comp=Z,1µm,13.0s,MS4.9
YAK                               MLR       MLR
      comp=N,825nm,12.0s,MS4.9
YAK                               MLR       MLR
      comp=E,696nm,14.0s,MS4.9
YAK   Yakutsk          40.51 313  eP        P       21 08 01.8 -0.1
      comp=E,43nm,0.9s,mb5.1
NATX  Nacogdoches      40.90 114  PFAKE             21 08 20.0  +15
NATX                              LR        LR
      comp=Z,8µm,22.0s,MS5.5
OXF   Oxford           41.10 106  P         P       21 08 06.5 -0.6
OXF                               pmax      pmax
      comp=Z,170nm,1.1s,mb5.6
OXF   Oxford           41.10 106  eP        P       21 08 05.9 -1.2
      comp=Z,169nm,1.1s,mb5.6
OXF                               LR        LR
      comp=Z,6µm,22.0s,MS5.4
NCB   Newcomb          41.37  83  eP        P       21 08 09.1 -0.1
      comp=Z,75nm,1.1s,mb5.2
MIV   Mineville/With   41.64  82  P         P       21 08 12.7 +1.4
MCWV  Mont Chateau     41.78  92  PFAKE             21 08 20.0 +7.6
MCWV                              LR        LR
      comp=Z,4µm,20.0s,MS5.3
BINY  Binghamton       41.80  86  eP        P       21 08 13.0 +0.5
      comp=Z,100nm,1.2s,mb5.3
BINY                              LR        LR
      comp=Z,4µm,20.0s,MS5.3
HKT   Hockley          41.91 116  P         P       21 08 14.3 +0.7
HKT                               pmax      pmax
      comp=Z,54nm,1.4s,mb5.0
HKT   Hockley          41.91 116  eP        P       21 08 13.3 -0.3
      comp=Z,54nm,1.4s,mb5.0
HKT                               LR        LR
      comp=Z,12µm,19.0s,MS5.8
SSPA  Standing Stone   42.02  89  eP        P       21 08 16.4 +2.1
      comp=Z,104nm,1.4s,mb5.3
BLA   Blacksburg       43.38  95  PFAKE             21 08 40.0  +14
BLA                               LR        LR
      comp=Z,5µm,19.0s,MS5.5
LRAL  Lakeview Retre   43.47 104  PFAKE             21 08 40.0  +14
LRAL                              LR        LR
      comp=Z,7µm,21.0s,MS5.5
HRV   Harvard--Oak R   43.77  82  PFAKE             21 08 40.0  +11
HRV                               LR        LR
      comp=Z,1µm,21.0s,MS4.8
GOGA  Godfrey          44.88 101  PFAKE             21 08 50.0  +12
GOGA                              LR        LR
      comp=Z,3µm,22.0s,MS5.2
JSC   Jenkinsville     45.27  98  eP        P       21 08 39.8 -1.1
YSS   Yuzh-Sakhalins   45.30 290⇑eP         P       21 08 40.6 -0.3
YSS                               e                 21 10 23.0
YSS                               pmax      pmax
      comp=Z,20nm,1.0s,mb4.9
YSS                               MLR       MLR
      comp=Z,4µm,20.0s,MS5.3
YSS                               MLR       MLR
      comp=N,2µm,21.0s,MS5.2
YSS                               MLR       MLR
      comp=E,2µm,19.0s,MS5.2
YSS   Yuzh-Sakhalins   45.30 290  i P       P       21 08 41.4 +0.5
CLNS  Chul'man         45.85 310  eP        P       21 08 45.8 +0.7
CLNS                              e*PP      pP      21 08 52.9 +3.3
CLNS                              e                 21 10 25.1
CLNS                              e                 21 10 28.0
CLNS                              eS        S       21 15 19.9 -7.9
CLNS                              eSS       SS      21 18 33.6  -11
CLNS                              pmax      pmax
      comp=Z,73nm,0.9s,mb5.6
CLNS                              pmax      pmax
      comp=N,29nm,1.1s
CLNS                              pmax      pmax
      comp=E,50nm,1.0s
CLNS                              pmax      pmax
      comp=N,14nm,1.0s
CLNS                              pmax      pmax
      comp=Z,19nm,1.0s,mb5.0
CLNS                              pmax      pmax
      comp=E,22nm,1.2s
CLNS                              smax
      comp=N,228nm,12.9s
CLNS                              smax
      comp=Z,86nm,13.1s
CLNS                              smax
      comp=E,85nm,14.3s
CLNS                              MLR       MLR
      comp=Z,4µm,15.0s,MS5.5
CLNS                              MLR       MLR
      comp=N,2µm,13.0s,MS5.2
CLNS                              MLR       MLR
      comp=E,500nm,13.0s,MS5.2
NHSC  New Hope         46.75  98  PFAKE             21 09 00.0 +7.4
NHSC                              LR        LR
      comp=Z,9µm,19.0s,MS5.7
BORG  Borgarnes        47.05  31  LR        LR      21 28 15.1
      comp=Z,1µm,18.9s,MS4.8,baz=154,slow=36
KLR   Kul'dur          48.63 299⇓iP         P       21 09 04.0 -3.0
KLR                               i                 21 09 04.0
KLR                               e                 21 11 00.0
KLR                               eS        S       21 16 29.5  +22
KLR                               pmax      pmax
      comp=N,43nm,1.4s
KLR                               pmax      pmax
      comp=E,28nm,1.4s
KLR                               pmax      pmax
      comp=Z,62nm,1.4s,mb5.5
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KLR                               MLR       MLR
      comp=N,2µm,12.5s,MS5.4
KLR                               MLR       MLR
      comp=E,2µm,12.5s,MS5.4
KLR                               MLR       MLR
      comp=Z,2µm,12.5s,MS5.4
BOD   Bodaibo          49.04 317⇓iP         P       21 09 08.9 -1.2
BOD                               pmax      pmax
      comp=Z,128nm,1.9s,mb5.6
KEV   Kevo             50.00   6  ep        P       21 09 15.6 -1.7
ARCES ARCESS Array B   50.13   7  P         P       21 09 17.6 -0.7
      comp=Z,7.5nm,0.8s,mb4.8,baz=338,slow=6.5,SNR=9.0
ARCES                             LR        LR      21 32 60.0
      comp=Z,516nm,19.6s,MS4.5,baz=93,slow=39
DWPF  Disney           50.23 103  PFAKE             21 09 30.0  +10
DWPF                              LR        LR
      comp=Z,4µm,20.0s,MS5.4
MDJ   Mudanjiang       53.11 297  P         P       21 09 40.5 -0.6
MDJ                               AP        pP      21 09 45.8 +0.1
MDJ                               XP        sP      21 09 49.6 +2.2
MDJ                               PP        PP      21 11 40.6 -2.1
MDJ                               S         S       21 17 16.9 +7.7
MDJ                               SS        SS      21 20 51.7 +3.6
MDJ                               AMB       AMB
      comp=Z,26nm,1.2s,mb5.0
MDJ                               AMB       AMB
      comp=Z,350nm,9.4s
MDJ                               LR        LR
      comp=N,767nm,31.1s,MS4.8
MDJ                               LR        LR
      comp=E,1µm,31.7s,MS4.8
MDJ                               LR        LR
      comp=Z,753nm,27.0s,MS4.6
MDJ   Mudanjiang       53.11 297  eP        P       21 09 40.5 -0.6
      comp=Z,26nm,1.1s,mb5.1
HIA   Hailar           53.63 307⇑eP         P       21 09 44.8 -0.1
      comp=Z,89nm,1.1s,mb5.6
HIA                               epP       pP      21 09 49.2 -0.2
TEIG  Tepich           53.71 115  PFAKE             21 10 00.0  +14
TEIG                              LR        LR
      comp=Z,1µm,19.0s,MS5.0
MAJO  Matsushiro       55.45 284  P         P       21 09 58.4  0.0
MAJO                              pmax      pmax
      comp=Z,37nm,1.1s,mb5.3
MAJO  Matsushiro       55.45 284  eP        P       21 09 57.5 -0.9
      comp=Z,37nm,1.1s,mb5.3
MAJO                              LR        LR
      comp=Z,1µm,20.0s,MS5.0
MAT   Matsushiro       55.45 284  eP        P       21 09 58.0 -0.4
      comp=Z,51nm,1.1s,mb5.5
MAT                               LR        LR
      comp=Z,1µm,20.0s,MS4.9
MAT   Matsushiro       55.45 284  P         P       21 09 57.7 -0.7
CN2   Changchun        55.58 299 ⇑P         P       21 09 58.6 -0.6
CN2                               PP        PP      21 12 02.0 -3.0
CN2                               PPP       PPP     21 13 17.0 -2.2
CN2                               eS        S       21 17 39.8 -2.7
CN2                               SS        SS      21 21 24.6 -3.1
CN2                               AMB       AMB
      comp=Z,100nm,1.0s,mb5.8
CN2                               AMB       AMB
      comp=Z,580nm,4.0s
CN2                               LR        LR
      comp=N,1µm,16.0s,MS5.2
CN2                               LR        LR
      comp=E,1µm,16.0s,MS5.2
CN2                               LR        LR
      comp=Z,1µm,19.0s,MS5.0
IRK   Irkutsk          56.84 319  eP        P       21 10 07.6 -0.6
IRK                               e                 21 11 03.6
IRK                               pmax      pmax
      comp=Z,85nm,1.9s,mb5.5
NB2   NORSAR Subarra   57.01  17  P         P       21 10 07.1 -2.1
      comp=Z,20nm,1.1s,mb5.1,baz=343,slow=7.0
NOA   NORSAR Array B   57.01  17  P         P       21 10 08.1 -1.2
      comp=Z,14nm,1.1s,mb4.9,baz=344,slow=7.0,SNR=9.6
NOA                               LR        LR      21 39 22.3
      comp=Z,419nm,18.4s,MS4.6,baz=335,slow=41
NOA   NORSAR Array B   57.01  17  P         P       21 10 08.1 -1.2
NOA                               LR        LR      21 39 22.2
JOF   Joensuu          57.03   5  ep        P       21 10 11.3 +1.9
TLY   Talaya           57.52 319  P         P       21 10 13.0  0.0
      comp=Z,192nm,1.5s,mb5.9,SNR=31
TLY   Talaya           57.52 319c iP        P       21 10 13.2 +0.2
TLY                               e                 21 12 15.5
TLY                               ePPP      PPP     21 13 46.2 +2.8
TLY                               eS        S       21 18 12.2 +4.1
TLY                               pmax      pmax
      comp=Z,84nm,1.7s,mb5.5
TLY                               MLR       MLR
      comp=Z,3µm,17.0s,MS5.4
TLY   Talaya           57.52 319⇑iP         P       21 10 13.4 +0.4
TLY                               LR        LR
      comp=Z,697nm,19.0s,MS4.8
KAF   Kangasniemi      57.55   8  ep        P       21 10 15.2 +2.2
      comp=Z,4.6nm,0.7s,mb4.6,baz=11,slow=5.7
KAF   Kangasniemi      57.55   8  eP        P       21 10 15.2 +2.2
KAF                               pmax      pmax
      comp=Z,5.0nm,0.7s,mb4.7
SNY   Shenyang         57.98 299 ⇑P         P       21 10 12.1 -4.3
SNY                               S         S       21 18 13.3 -1.0
SNY                               XS                21 18 25.1
SNY                               AMB       AMB
      comp=Z,40nm,0.8s,mb5.5
SNY                               AMB       AMB
      comp=Z,360nm,11.6s
SNY                               LR        LR
      comp=N,1µm,15.7s
SNY                               LR        LR
      comp=Z,1µm,18.2s,MS5.0
FINES FINESS Array B   58.20   8  P         P       21 10 16.1 -1.5
      comp=Z,3.7nm,0.9s,mb4.4,slow=9.5,SNR=9.0
FINES                             LR        LR      21 36 42.3
      comp=Z,426nm,19.2s,MS4.6,baz=353,slow=38
MOY   Mondy            58.39 320  eP        P       21 10 20.4 +1.3
MOY                               pmax      pmax
      comp=Z,155nm,1.9s,mb5.7
ZAK   Zakamensk        58.75 318  eP        P       21 10 22.0 +0.4
ZAK                               pmax      pmax
      comp=Z,11nm,1.1s,mb4.8
KS15  Wonju Array Si   59.61 293  eP        P       21 10 27.6 -0.1
ESK   Eskdalemuir      59.72  27  PFAKE             21 10 40.0  +12
ESK                               LR        LR
      comp=Z,382nm,20.0s,MS4.5
SONM  Songino Array    59.85 315  P         P       21 10 29.7 +0.5
      comp=Z,26nm,0.9s,mb5.2,baz=29,slow=6.8,SNR=164
SOKR  Solikamsk        59.92 351c iP        P       21 10 28.9 -0.6
SOKR                              pmax      pmax
      comp=Z,80nm,1.0s,mb5.7
SOKR                              MLR       MLR
      comp=Z,860nm,19.0s,MS4.9
INCN  Inchon           60.15 294  eP        P       21 10 30.9 -0.5
      comp=Z,54nm,0.9s,mb5.6
INCN                              LR        LR
      comp=Z,2µm,21.0s,MS5.2
NVS   Novosibirsk      60.40 333⇑iP         P       21 10 30.5 -2.4
NVS                               i                 21 11 11.1
NVS                               pmax      pmax
      comp=N,81nm,2.0s
NVS                               pmax      pmax
      comp=E,65nm,2.0s
DCN   Croghan          60.53  31  eP        P       21 10 29.0 -4.8
DLF   Lyons Farm       60.77  30  eP        P       21 10 32.0 -3.4
ZAL   Zalesovo         60.87 332  i P       P       21 10 35.8 -0.3
ZAL                               pmax      pmax
      comp=Z,13nm,0.9s
ZAL   Zalesovo         60.87 332  P         P       21 10 35.8 -0.3
      comp=Z,13nm,0.9s,mb5.1,baz=90,slow=7.2,SNR=79
MUD   Monsted U'grnd   61.09  19  eP        P       21 10 37.4 -0.1
MUD                               pmax      pmax
      comp=Z,18nm,1.0s,mb5.2
MUD   Monsted U'grnd   61.09  19  eP        P       21 10 37.4 -0.1
      comp=Z,18nm,1.0s,mb5.2
MUD   Monsted U'grnd   61.09  19  i P       P       21 10 37.4 -0.1
      comp=Z,18nm,1.0s,mb5.2
DL2   Dalian           61.23 298  P         P       21 10 38.8  0.0
DL2                               S         S       21 18 59.8 +3.5
DL2                               AMB       AMB
      comp=Z,30nm,1.2s,mb5.3
DL2                               AMB       AMB
      comp=Z,250nm,7.3s
DL2                               LR        LR
      comp=N,560nm,26.8s,MS4.8
DL2                               LR        LR
      comp=E,550nm,24.6s,MS4.8
DL2                               LR        LR
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       comp=Z,500nm,20.4s,MS4.7
SVE    Sverdlovsk       62.26 348⇑eP     P      21 10 45.0 -0.5
SVE                              e              21 11 25.5
SVE                              e              21 19 25.0
SVE                               pmax   pmax
       comp=Z,132nm,2.0s,mb5.7
SVE                               pmax   pmax
       comp=N,500nm,22.0s
SVE                               pmax   pmax
       comp=E,100nm,22.0s
BJI    Beijing          62.63 303 P      P      21 10 48.0 -0.1
BJI                               S      S      21 19 17.5 +3.5
BJI                               AMB    AMB
       comp=Z,36nm,1.6s,mb5.2
BJI                               AMB    AMB
       comp=Z,532nm,3.9s
BJI                               LR     LR
       comp=N,1µm,18.4s,MS5.3
BJI                               LR     LR
       comp=E,1µm,18.4s,MS5.3
BJT    Baijiatuau       62.65 303 PFAKE         21 11 00.0  +12
BJT                               LR     LR
       comp=Z,2µm,19.0s,MS5.3
HHC    Hu-ho-hao-te     63.83 307 eP     P      21 10 55.7 -0.2
HHC                               PCP    PcP    21 11 29.7 -2.0
HHC                               PP     PP     21 13 18.1 -0.1
HHC                               SCP           21 15 31.6
HHC                               S      S      21 19 31.1 +2.2
HHC                               XS            21 19 40.6
HHC                               PS     PS     21 19 52.5 +2.4
HHC                               SCS    ScS    21 20 46.2 +0.8
HHC                               SS     SS     21 23 39.0 +0.2
HHC                               AMB    AMB
       comp=Z,33nm,1.8s,mb5.1
HHC                               AMB    AMB
       comp=Z,180nm,3.5s
HHC                               LR     LR
       comp=N,2µm,21.5s,MS5.6
HHC                               LR     LR
       comp=E,3µm,21.5s,MS5.6
HHC                               LR     LR
       comp=Z,4µm,19.1s,MS5.7
JTS    JuntasAbangare   63.94 117 PFAKE         21 11 10.0  +13
JTS                               LR     LR
       comp=Z,299nm,21.0s,MS4.5
MOS    Moscow           64.41   2 eP     P      21 10 58.8 -0.6
MOS                               e             21 11 06.2
MOS                               e             21 13 26.0
MOS                             i PPP    PPP    21 14 57.9 +2.0
MOS                               pmax   pmax
       comp=Z,41nm,0.8s,mb5.5
MOS                               MLR    MLR
       comp=Z,1µm,21.6s,MS5.0
BVAR   Borovoye Array   64.64 341 P      P      21 11 00.5 -0.5
       comp=Z,25nm,1.0s,mb5.2,baz=53,slow=7.4,SNR=68
BTO    Baotou           64.65 308 eP     P      21 11 00.1 -1.2
BTO                               AMB    AMB
       comp=Z,33nm,1.8s,mb5.1
WTSB   Winterswijk      64.96  22 eP     P      21 11 02.2 -0.8
       comp=Z,19nm,1.2s,mb5.0
OBN    Obninsk          65.01   3 eP     P      21 11 02.9 -0.5
OBN                               pmax   pmax
       comp=Z,47nm,1.8s,mb5.2
OBN                               MLR    MLR
       comp=Z,400nm,19.0s,MS4.6
OBN    Obninsk          65.01   3 i P    P      21 11 02.5 -0.9
OBN                               LR     LR
       comp=Z,400nm,19.0s,MS4.6
MNK    Minsk            65.22   8⇑eP     P      21 11 07.0 +2.3
KURK   Kurchatov        65.26 334 PFAKE         21 11 20.0  +15
KURK                              LR     LR
       comp=Z,311nm,20.0s,MS4.5
SUW    Suwalki          65.32  11 eP     P      21 11 05.1 -0.2
TIA    Tai'an           65.44 300 eP     P      21 11 06.1 -0.4
CLZ    Clausthal        65.72  20 eP     P      21 11 07.9 -0.1
       comp=Z,34nm,1.4s,mb5.2
HGN    Heimansgroeve    65.94  23 eP     P      21 11 08.3 -1.0
       comp=Z,36nm,1.6s,mb5.2
HGN                               eS     S      21 20 02.8 +8.2
ROSF   Rostrenen        66.14  30 eP     P      21 11 10.1 -0.6
       comp=Z,165nm,1.4s,mb5.6
BAIF   Baives           66.25  25 eP     P      21 11 10.9 -0.5
       comp=Z,32nm,1.0s,mb5.0
GIVF   Givet            66.34  24 eP     P      21 11 11.4 -0.5
SGMF   Saint Gilles     66.40  30 eP     P      21 11 11.7 -0.7
       comp=Z,88nm,1.1s,mb5.4
FLN    La Foliniere     66.43  28 eP     P      21 11 11.5 -1.0
       comp=Z,150nm,1.4s,mb5.5
FLN                               eR
       comp=Z,1µm,18.8s
QUIF   Quistinic        66.56  30 eP     P      21 11 12.6 -0.8
CLL    Collm            66.67  18 i P    P      21 11 12.8 -1.2
CLL                               i      pP     21 11 17.6 -1.1
CLL                               pmax   pmax
       comp=Z,17nm,1.5s,mb4.8
CLL    Collm            66.67  18 i P    P      21 11 12.8 -1.2
       comp=Z,17nm,1.5s,mb4.8
CLL                               i      pP     21 11 17.6 -1.1
CLL    Collm            66.67  18 P      P      21 11 12.8 -1.2
       comp=Z,logA/T=1.1,mb4.9
CLL                               i *PP  pP     21 11 17.6 -1.1
LDF    La Druitiere     66.67  28 eP     P      21 11 12.4 -1.7
       comp=Z,70nm,1.2s,mb5.3
GRR    Gorron           66.69  29 eP     P      21 11 13.5 -0.7
       comp=Z,50nm,1.1s,mb5.2
TNS    Taunus Mts       66.93  22 eP     P      21 11 15.8 +0.1
TNS                               pmax   pmax
       comp=Z,16nm,1.3s,mb4.9
TNS    Taunus Mts       66.93  22 eP     P      21 11 15.8 +0.1
       comp=Z,16nm,1.3s,mb4.9
MOX    Moxa             67.09  20 eP     P      21 11 16.2 -0.5
MOX                               pmax   pmax
       comp=Z,33nm,1.4s,mb5.2
MOX                               MLR    MLR
       comp=Z,500nm,19.0s,MS4.8
MOX    Moxa             67.09  20 eP     P      21 11 16.2 -0.5
       comp=Z,33nm,1.4s,mb5.2
MOX                               LR     LR
       comp=Z,500nm,19.0s,MS4.8
MOX    Moxa             67.09  20 i P    P      21 11 16.2 -0.5
       comp=Z,logA/T=1.4,mb5.2
MOX                               L             21 43 00.0
ABH    Alteburg         67.09  22 eP     P      21 11 16.3 -0.4
RUP    Ruppelstein      67.17  23 eP     P      21 11 19.3 +2.1
BRG    Berggiesshubel   67.24  18 eP     P      21 11 17.1 -0.6
BRG                               e      pP     21 11 21.7 -0.6
BRG                               pmax   pmax
       comp=Z,27nm,1.3s,mb5.1
BRG                               MLR    MLR
       comp=N,530nm,24.0s,MS4.8
BRG                               MLR    MLR
       comp=E,380nm,24.0s,MS4.8
BRG                               MLR    MLR
       comp=Z,950nm,24.0s,MS4.9
BRG    Berggiesshubel   67.24  18 eP     P      21 11 17.1 -0.6
       comp=Z,27nm,1.3s,mb5.1
BRG                               e      pP     21 11 21.7 -0.6
BRG                               e             21 15 00.1
BRG                               LR     LR
       comp=Z,950nm,24.0s,MS4.9
TOD    Tromm            67.59  22 eP     P      21 11 19.6 -0.3
KSP    Ksiaz            67.61  16 eP     P      21 11 19.7 -0.3
KSP                               eS     S      21 20 21.5 +6.6
KSP                               LR     LR
       comp=Z,1µm,24.4s,MS5.0
KSP    Ksiaz            67.61  16 eP     P      21 11 19.6 -0.4
NKC    Novy Kostel      67.62  19 eP     P      21 11 19.6 -0.5
NKC                               AMS    AMS    21 42 30.0
       comp=Z,600nm,14.4s
PVCC   Panska Ves       67.67  18 eP     P      21 11 20.3 -0.1
KTD    Kalmit           67.73  22 eP     P      21 11 20.3 -0.5
UPC    Upice            67.90  17 eP     P      21 11 21.2 -0.6
UPC                               epP    pP     21 11 25.2 -1.3
MEZF   Maizieres J'vi   67.91  25 eP     P      21 11 21.3 -0.6
GRA1   Grafenberg Arr   67.94  20 eP     P      21 11 22.0 -0.1
       comp=Z,276nm,3.2s
GRA1                              epP    pP     21 11 26.5 -0.2
GRA1                              LR     LR
       comp=Z,800nm,19.5s,MS5.0
GRF    Grafenberg Arr   67.94  20 eP     P      21 11 22.0 -0.1
GRF                               e*PP   pP     21 11 26.5 -0.2
GRF                               pmax   pmax
       comp=Z,276nm,3.2s
GRF                               MLR    MLR
       comp=Z,800nm,19.5s,MS5.0
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GRF    Grafenberg Arr   67.94  20 eP     P      21 11 22.0 -0.1
       comp=Z,276nm,3.2s
GRF                               epP    pP     21 11 26.5 -0.2
GRF                               LR     LR
       comp=Z,800nm,19.5s,MS5.0
SSE    Sheshan          67.95 294 P      P      21 11 21.9 -0.6
SSE                               XP     sP     21 11 35.0 +6.2
SSE                               PCP    PcP    21 11 46.8 -2.1
SSE                               S      S      21 20 22.4 +3.1
SSE                               SCS    ScS    21 21 19.0 +1.7
SSE                               AMB    AMB
       comp=Z,22nm,1.6s,mb4.9
SSE                               AMB    AMB
       comp=Z,224nm,5.4s
SSE                               LR     LR
       comp=N,336nm,20.0s,MS5.0
SSE                               LR     LR
       comp=E,881nm,20.0s,MS5.0
SSE                               LR     LR
       comp=Z,964nm,19.3s,MS5.0
LANF   Langenberg       68.00  23 eP     P      21 11 23.4 +0.9
LANF   Langenberg       68.00  23 eP     P      21 11 21.7 -0.8
DPC    Dobruska-Polom   68.10  16 eP     P      21 11 22.8 -0.3
DPC                               epP    pP     21 11 27.3 -0.4
PRU    Pruhonice        68.19  18 eP     P      21 11 23.2 -0.4
PRU                               epP    pP     21 11 27.2 -1.1
PRU                               AMS    AMS    21 43 10.0
       comp=Z,700nm,21.0s
NJ2    Nanjing          68.20 296 eP     P      21 11 23.6 -0.4
NJ2                               AP     pP     21 11 33.9 +5.3
NJ2                               XP     sP     21 11 37.9 +7.6
NJ2                               PP     PP     21 13 55.7 -0.9
NJ2                               S      S      21 20 22.0 -0.2
NJ2                               XS            21 20 40.0
NJ2                               PS     PS     21 20 55.0 +6.1
NJ2                               AMB    AMB
       comp=Z,140nm,1.0s,mb6.0
NJ2                               AMB    AMB
       comp=Z,3µm,6.2s
NJ2                               LR     LR
       comp=N,4µm,21.8s,MS5.7
NJ2                               LR     LR
       comp=E,2µm,23.8s,MS5.7
NJ2                               LR     LR
       comp=Z,3µm,20.5s,MS5.5
THEF   They Montfort    68.36  24 eP     P      21 11 21.7 -3.0
STR    Strasbourg       68.37  23 eP     P      21 11 17.9 -6.9
CDF    Champ du Feu     68.44  23 eP     P      21 11 24.9 -0.3
       comp=Z,60nm,1.3s,mb5.2
WLS    Welschbruch      68.46  23 eP     P      21 11 25.0 -0.3
WLS    Welschbruch      68.46  23 eP     P      21 11 22.9 -2.4
MFF    Saint Martin d   68.53  29 eP     P      21 11 24.6 -1.2
       comp=Z,100nm,1.2s,mb5.3
HYF    Humbligny        68.55  27 eP     P      21 11 25.6 -0.4
ECH    Echery           68.61  23 eP     P      21 11 23.6 -2.7
HAU    Haudompre        68.65  24 eP     P      21 11 26.0 -0.5
       comp=Z,27nm,0.9s,mb4.9
HAU                               eR
       comp=Z,1µm,18.8s
OJC    Ojcow            68.69  14 eP     P      21 11 31.9 +5.2
BFO    Black Forest     68.73  22 eP     P      21 11 26.6 -0.4
BFO                               pmax   pmax
       comp=Z,25nm,1.3s,mb5.0
BFO    Black Forest     68.73  22 eP     P      21 11 26.6 -0.4
       comp=Z,25nm,1.3s,mb5.0
WET    Wettzell         68.75  19 eP     P      21 11 27.2 +0.1
WET                               pmax   pmax
       comp=Z,29nm,1.3s,mb5.0
WET    Wettzell         68.75  19 eP     P      21 11 27.2 +0.1
       comp=Z,29nm,1.3s,mb5.0
TAOE   Nuku Hiva Isla   68.81 181 eLR    LR     21 32 25.9
OKC    Ostrava-Krasne   68.85  15 eP     P      21 11 27.5 -0.2
OKC                               e      pP     21 11 31.9 -0.5
KHC    Kasperske Hory   68.87  19 i P    P      21 11 27.0 -0.9
KHC    Kasperske Hory   68.87  19 eP     P      21 11 28.0 +0.1
KHC                               epP    pP     21 11 31.8 -0.7
KHC                               AMS    AMS    21 43 20.0
       comp=Z,600nm,20.1s
HINF   Hinteralfeld     68.93  24 eP     P      21 11 27.9 -0.4
       comp=Z,25nm,1.1s,mb4.8
SSF    Saint Saulge     68.94  26 eP     P      21 11 27.9 -0.5
       comp=Z,65nm,1.2s,mb5.2
MOF    Molkenrain       68.95  23 eP     P      21 11 28.0 -0.4
MOF    Molkenrain       68.95  23 eP     P      21 11 27.1 -1.3
FELD   Feldberg         69.10  23 eP     P      21 11 25.5 -3.8
AKASG  Malin Array Be   69.10   8 P      P      21 11 28.0 -1.2
       comp=Z,11nm,0.9s,mb4.8,baz=353,slow=6.0,SNR=16
AVF    Avril sur Loir   69.17  26 eP     P      21 11 29.0 -0.7
       comp=Z,45nm,1.1s,mb5.0
GEC2   GERESS Array S   69.17  19 eP     P      21 11 29.4 -0.3
GEC2                              pmax   pmax
       comp=Z,22nm,1.3s,mb4.9
GEC2   GERESS Array S   69.17  19 eP     P      21 11 29.4 -0.3
       comp=Z,22nm,1.3s,mb4.9
GERES  GERESS Array B   69.17  19 P      P      21 11 29.2 -0.5
       comp=Z,3.2nm,1.0s,mb4.2,baz=342,slow=4.2,SNR=14
BGF    Bois d'Agland    69.27  27 eP     P      21 11 29.6 -0.8
       comp=Z,57nm,0.9s,mb5.2
LOMF   Lomont           69.37  24 eP     P      21 11 29.3 -1.7
TCF    Toulx Ste Croi   69.38  27 eP     P      21 11 30.4 -0.7
       comp=Z,70nm,1.1s,mb5.2
SMF    Signal de Mont   69.41  26 eP     P      21 11 30.6 -0.6
       comp=Z,27nm,1.1s,mb4.8
WMQ    Urumqi           69.42 325⇑iP     P      21 11 31.0 -0.3
WMQ                               PP     PP     21 14 07.0  0.0
WMQ                               S      S      21 20 36.0 -0.4
WMQ                               SS     SS     21 25 05.0 -0.5
WMQ                               AMB    AMB
       comp=Z,60nm,1.4s,mb5.3
WMQ                               AMB    AMB
       comp=Z,76nm,10.0s
WMQ                               LR     LR
       comp=N,837nm,20.0s,MS5.1
WMQ                               LR     LR
       comp=E,941nm,25.0s,MS5.1
WMQ                               LR     LR
       comp=Z,843nm,20.0s,MS5.0
FUR    Furstenfeldbru   69.42  20 eP     P      21 11 29.9 -1.4
FUR                               pmax   pmax
       comp=Z,27nm,1.0s,mb5.1
FUR    Furstenfeldbru   69.42  20 eP     P      21 11 29.9 -1.4
       comp=Z,27nm,1.0s,mb5.1
GTA    Gaotai           69.53 315 ⇑P     P      21 11 32.6 +0.5
GTA                               PCP    PcP    21 11 55.9 +0.5
GTA                               PP     PP     21 14 07.9  0.0
GTA                               PPP    PPP    21 15 47.1 +0.1
GTA                               S      S      21 20 38.4 +0.6
GTA                               SCS    ScS    21 21 29.9 +0.5
GTA                               AMB    AMB
       comp=Z,36nm,1.3s,mb5.1
GTA                               AMB    AMB
       comp=Z,409nm,8.0s
GTA                               LR     LR
       comp=N,961nm,18.3s,MS5.3
GTA                               LR     LR
       comp=E,1µm,18.3s,MS5.3
GTA                               LR     LR
       comp=Z,942nm,25.1s
EMAZ   Mazaricos        69.53  37 P      P      21 11 35.0 +3.0
       comp=Z,666nm,3.3s
NIE    Niedzica         69.53  14 eP     P      21 11 30.4 -1.5
LVV    L'vov            69.55  11 eP     P      21 11 35.9 +3.9
AGO    Saint Agoulin    69.81  27 eP     P      21 11 33.7  0.0
CABF   La Chapelle      69.92  25 eP     P      21 11 33.6 -0.8
       comp=Z,68nm,1.1s,mb5.2
PLDF   La Plantade      70.00  26 eP     P      21 11 34.2 -0.6
SMOL   Smolenice        70.05  16 i P    P      21 11 35.2 +0.1
SMOL                              epP    pP     21 11 39.7  0.0
PYM    Petit Puy Mans   70.07  27 eP     P      21 11 33.9 -1.4
RJF    Les Rejaudoux    70.15  28 eP     P      21 11 34.8 -0.9
RJF                               eR
       comp=Z,2µm,22.2s
CRVS   Cervenica-Dubn   70.18  13 eP     P      21 11 37.7 +1.8
CRVS                              esP    sP     21 11 44.2 +2.0
MOA    Molln            70.23  18⇑iP     P      21 11 35.6 -0.6
       comp=Z,10nm,1.1s,mb4.7
KOLS   Kolonicke sedl   70.24  13 eP     P      21 11 41.8 +5.6
KOLS   Kolonicke sedl   70.24  13 epP    pP     21 11 41.8 +0.9
VYHS   Vyhne            70.26  15 eP     P      21 11 36.1 -0.3
VYHS                              e      pP     21 11 40.5 -0.5
VYHS                              e             21 11 52.5
WATA   Walderalm        70.28  20⇑iP     P      21 11 36.6 +0.1
       comp=Z,31nm,1.3s,mb5.1
EARI   Arriondas        70.29  34 P      P      21 11 39.9 +3.3
       comp=Z,542nm,3.3s
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LFF    La Frestale      70.31  29 eP     P      21 11 35.5 -1.2
       comp=Z,105nm,1.3s,mb5.3
ZST    Bratislava       70.31  16 eP     P      21 11 36.4 -0.3
ZST                               epP    pP     21 11 41.4 +0.1
SQTA   Sankt Quirin     70.32  21⇓iP     P      21 11 37.5 +0.7
       comp=Z,20nm,1.1s,mb5.0
WTTA   Wattenberg       70.36  20⇑iP     P      21 11 37.4 +0.4
       comp=Z,42nm,1.1s,mb5.3
KECS   Kecovo           70.48  14 eP     pP     21 11 43.9 +1.6
KECS   Kecovo           70.48  14 epP    pP     21 11 43.9 +1.6
DAVOX  Davos            70.51  22 P      P      21 11 37.4 -0.5
       comp=Z,12nm,1.2s,mb4.7,baz=338,slow=8.6,SNR=4.9
ERUA   La Rua           70.58  36 P      P      21 11 42.4 +4.0
       comp=Z,14nm,0.9s,mb4.9
CAF    Calviac          70.63  28 eP     P      21 11 38.1 -0.6
       comp=Z,48nm,1.1s,mb5.0
XAN    Xi'an            70.75 305 P      P      21 11 39.1 -0.5
XAN                               S      S      21 20 51.4 -0.9
XAN                               AMB    AMB
       comp=Z,21nm,1.6s,mb4.8
XAN                               AMB    AMB
       comp=Z,249nm,9.8s
XAN                               LR     LR
       comp=N,1µm,18.1s,MS5.4
XAN                               LR     LR
       comp=E,2µm,18.1s,MS5.4
XAN                               LR     LR
       comp=Z,2µm,16.4s,MS5.5
ELOB   Lobios           70.79  36 P      P      21 11 43.1 +3.4
       comp=Z,291nm,3.5s
KBA    Koelnbreinsper   70.83  19⇑iP     P      21 11 40.3 +0.4
       comp=Z,64nm,1.2s,mb5.4
ELAN   Lanestosa        70.84  32 P      P      21 11 43.9 +3.9
       comp=Z,371nm,2.5s,mb5.9
SRO1   Iza              70.90  16 eP     pP     21 11 46.5 +1.6
SRO1   Iza              70.90  16 epP    pP     21 11 46.5 +1.6
PSZ    Piszkesteto      70.96  15⇓ePcP   P      21 11 41.3 +0.7
LZH    Lanzhou          70.97 310 ⇑P     P      21 11 41.5 +0.5
LZH                               AP     pP     21 11 52.0 +6.4
LZH                               XP     sP     21 11 55.4 +8.2
LZH                               PP     PP     21 14 20.0 -0.5
LZH                               eS     S      21 20 56.0 +1.2
LZH                               XS            21 21 11.0
LZH                               SS     SS     21 25 31.0 +1.0
LZH                               AMB    AMB
       comp=Z,99nm,1.5s,mb5.5
LZH                               AMB    AMB
       comp=Z,242nm,5.5s
LZH                               LR     LR
       comp=E,2µm,15.4s
LZH                               LR     LR
       comp=Z,3µm,18.6s,MS5.6
ARSA   Arzberg          71.01  18⇑iP     P      21 11 41.2 +0.3
       comp=Z,14nm,1.2s,mb4.8
LPL    La Plagne        71.10  24 eP     P      21 11 40.6 -1.0
       comp=Z,24nm,0.9s,mb4.8
ECAL   Calabor          71.11  35 P      P      21 11 44.1 +2.5
       comp=Z,299nm,3.0s
LPG    La Plagne        71.12  24 eP     P      21 11 41.5 -0.2
       comp=Z,53nm,1.2s,mb5.0
GUMO   Guam             71.19 264 PFAKE         21 11 50.0 +7.4
GUMO                              LR     LR
       comp=Z,966nm,21.0s,MS5.0
FVI    Forni Avoltri    71.20  20 eP     P      21 11 42.4 +0.2
PBRG   Braganca         71.24  35 eP     P      21 11 41.6 -0.8
       comp=Z,12nm,0.9s,mb4.8
ORO    Oropa            71.25  24 eP     P      21 11 43.6 +1.2
VIVF   Saint-Julien-l   71.29  26 eP     P      21 11 42.1 -0.6
       comp=Z,42nm,1.1s,mb5.0
EALK   Alkurruntz       71.36  31 P      P      21 11 46.8 +3.6
       comp=Z,464nm,2.8s,mb5.9
PVRL   Vila Real        71.44  36 eP     P      21 11 43.7 +0.1
       comp=Z,24nm,1.1s,mb5.0
PVRL                              i -    pP     21 11 48.5 +0.2
WHN    Wuhan            71.48 299 P      P      21 11 44.3 +0.2
WHN                               S      S      21 21 04.0 +3.3
WHN                               LR     LR
       comp=Z,2µm,13.8s,MS5.5
PTCC   Patocco-Chiusa   71.48  19 eP     P      21 11 46.6 +2.8
ORIF   Oris-en-Rattie   71.50  25 eP     P      21 11 42.8 -1.1
       comp=Z,56nm,1.3s,mb5.0
ORIF                              eR
       comp=Z,941nm,19.5s
SJPF   Ste Jean         71.53  31 eP     P      21 11 42.7 -1.5
       comp=Z,96nm,1.4s,mb5.2
PERS   Pernice          71.54  18 eP     P      21 11 44.1 -0.1
PERS                              epP    pP     21 11 49.1 +0.3
OBKA   Obir             71.58  19⇑iP     P      21 11 44.4  0.0
       comp=Z,46nm,1.2s,mb5.3
BURAR  Bucovina Array   71.84  11 ⇓P     P      21 11 45.8 -0.2
LASF   Ste Croix        71.85  27 eP     P      21 11 45.2 -0.9
MBDF   Montbardon       71.86  25 eP     P      21 11 45.8 -0.3
PVIS   Viseu            71.90  37 eP     P      21 11 46.3 -0.1
       comp=Z,25nm,2.1s,mb4.8
PVIS                              i -    pP     21 11 51.1  0.0
ETSF   Etsaut           71.90  31 eP     P      21 11 45.6 -0.8
       comp=Z,50nm,0.9s,mb5.1
VOY    Vojsko           71.94  19 eP     P      21 11 45.7 -0.8
VOY                               e      pP     21 11 49.7 -1.5
VOY                               e             21 11 55.7
EPF    Esparros         72.00  30 eP     P      21 11 45.5 -1.5
JAVS   Javornik         72.10  19 eP     P      21 11 46.8 -0.7
MTLF   Montolieu        72.17  28 eP     P      21 11 47.5 -0.5
       comp=Z,28nm,1.1s,mb4.8
EBIE   Bielsa           72.28  30 P      P      21 11 51.8 +3.2
       comp=Z,35nm,1.1s,mb5.2
MTE    Manteigas        72.29  37 eP     P      21 11 48.8  0.0
       comp=Z,22nm,1.3s,mb4.9
MTE                               i pP   pP     21 11 53.7 +0.3
SMRF   Simiane la Rot   72.33  26 eP     P      21 11 48.3 -0.6
BOJS   Bojanci          72.67  18 i P    P      21 11 50.2 -0.6
BOJS                              epP    pP     21 11 55.1 -0.3
BOJS                              ePcP   PcP    21 12 00.8 -7.6
KIS    Kishinev         72.76   8 eP     P      21 11 50.0 -1.2
KIS                               e      pP     21 11 54.0 -1.9
KIS                               e             21 12 06.0
KIS                               eS     S      21 21 11.0 -3.9
PCBR   Castelo Branco   72.83  37 eP     P      21 11 50.9 -0.9
       comp=Z,16nm,1.2s,mb4.8
SBF    Sospel           72.83  24 eP     P      21 11 51.0 -0.7
       comp=Z,64nm,1.0s,mb5.2
FRF    La Foret Royal   72.95  25 eP     P      21 11 51.8 -0.7
       comp=Z,39nm,1.0s,mb5.0
LMR    La Mourre        73.14  25 eP     P      21 11 53.1 -0.5
       comp=Z,65nm,1.2s,mb5.1
PLOU   Loures           73.19  38 eP     P      21 11 53.6 -0.4
       comp=Z,43nm,1.5s,mb5.2
PLOU                              i -           21 12 38.4
USP    Ospenovka        73.22 335 P      P      21 11 54.7 +0.6
       SNR=33
TKM2   Tokmak 2         73.31 334 P      P      21 11 55.0 +0.4
       SNR=32
CHMS   Chumysh          73.42 335 P      P      21 11 56.0 +0.8
       SNR=45
BZS    Buzias           73.44  14 ⇑P     P      21 11 55.0 -0.2
ROSC   El Rosal         73.60 110 P      P      21 11 56.9 +0.1
       comp=Z,4.3nm,0.3s,mb4.8,baz=260,slow=2.2,SNR=4.5
ROSC                              LR     LR     21 48 36.5
       comp=Z,1µm,18.5s,MS5.2,baz=199,slow=39
FRU    Bishkek          73.61 335⇑iP     P      21 11 57.0 +0.7
FRU                               pmax   pmax
       comp=Z,220nm,1.8s,mb5.8
SFI    Santa Sofia      73.64  21 eP     P      21 11 52.8 -3.7
KBK    Karagaybulak     73.71 334 P      P      21 11 57.9 +1.0
       SNR=55
EPOB   Poblet           73.77  30 P      P      21 11 59.6 +2.3
       comp=Z,84nm,1.5s,mb5.5
MOE    Montemor         73.77  38 eP     P      21 11 58.1 +0.8
ENH    Enshi            73.80 303 PFAKE         21 12 10.0  +12
ENH                               LR     LR
       comp=Z,1µm,19.0s,MS5.3
ULHL   Ulahol           73.81 333 P      P      21 11 58.8 +1.3
       SNR=5.2
AAK    Ala-Archa        73.83 335 P      P      21 11 58.5 +0.9
       SNR=40
AAK    Ala-Archa        73.83 335⇑iP     P      21 11 57.2 -0.4
AAK                               pmax   pmax
       comp=Z,93nm,1.6s,mb5.5
AAK                               MLR    MLR
       comp=Z,800nm,17.0s,MS5.1
EVO    Evora            73.87  38 eP     P      21 11 57.1 -0.8
       comp=Z,72nm,0.9s,mb5.3
EVO                               eR
       comp=Z,2µm,18.8s
EKS2   Erkin-Say        73.95 335 P      P      21 11 59.3 +1.0
       SNR=72
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EBAD	Badajoz	73.97	37	P	P	21 12 00.1	+1.6
	comp=Z,62nm,1.5s,mb5.3						
ESDC	Sonseca Array	74.00	34	P	P	21 11 59.0	+0.4
	comp=Z,20nm,1.0s,mb5.0,baz=334,slow=5.9,SNR=36						
ESDC	Sonseca Array	74.00	34	P	P	21 11 59.0	+0.4
	comp=Z,27nm,0.9s,mb5.2						
ESLA	Sonseca Array	74.00	34	PFAKE		21 12 10.0	+11
ESLA				LR	LR		
	comp=Z,6μm,19.0s,MS5.9						
FSSB	Fossombrone	74.02	21	eP	P	21 11 59.5	+0.8
MLR	Muntele Rosu	74.02	11	⇓P	P	21 12 01.6	+3.0
KZA	Kyzart	74.20	334	P	P	21 12 01.0	+1.3
	SNR=18						
UCH	Uchtor	74.21	334	P	P	21 12 01.0	+1.2
	SNR=12						
ARV	Arcevia	74.23	21	eP	P	21 12 00.2	+0.3
EMOS	Mosqueruela	74.30	31	P	P	21 12 00.6	+0.3
	comp=Z,433nm,3.3s						
PBEJ	Beja	74.38	38	eP	P	21 12 00.9	0.0
	comp=Z,12nm,1.3s,mb4.7						
PGF	Pioggiola	74.41	24	eP	P	21 12 00.6	-0.3
	comp=Z,133nm,1.2s,mb5.4						
SNTG	Esanatoglia	74.47	21	eP	P	21 12 01.9	+0.6
AML	Almayashu	74.48	335	P	P	21 12 03.1	+1.8
	SNR=53						
CFR	Carcaliu	74.51	9	⇓P	P	21 12 01.4	-0.1
PTEO	Sao Teotonio	74.56	39	eP	P	21 11 58.5	-3.4
	comp=Z,30nm,1.2s,mb5.1						
NRCA	Norcia	74.91	21	eP	P	21 12 04.0	+0.2
EMIN	Mina Concepcio	74.98	37	P	P	21 12 03.6	-0.8
	comp=Z,90nm,2.3s,mb5.3						
PALC	Alcoutim	75.02	38	eP	P	21 12 04.5	-0.1
	comp=Z,11nm,0.9s,mb4.8						
GOF	Gofitskoye	75.11	358	⇓iP	P	21 12 05.0	+0.1
GOF				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.3						
EADA	Adamuz	75.23	35	P	P	21 12 05.7	-0.1
	comp=Z,132nm,2.2s,mb5.5						
MNS	Montasola	75.27	21	eP	P	21 12 05.7	-0.2
ANN	Anapa	75.35	2	eP	P	21 12 04.7	-1.6
ANN				eS	S	21 21 40.2	-3.8
ANN				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
ANN				MLR	MLR		
	comp=Z,63nm,11.0s,MS4.2						
ANN				MLR	MLR		
	comp=N,1μm,23.0s						
ANN				MLR	MLR		
	comp=E,93nm,6.0s						
EVIA	Vianos	75.37	34	P	P	21 12 07.6	+1.0
	comp=E,90nm,1.1s,mb5.6						
EBAN	Banos Encina	75.46	35	P	P	21 12 06.9	-0.2
	comp=E,28nm,1.1s,mb5.1						
CD2	Chengdu	75.58	308	⇑iP	P	21 12 08.0	+0.1
CD2				AMB	AMB		
	comp=Z,42nm,1.2s,mb5.2						
ETOB	Tobarra	75.63	33	P	P	21 12 10.1	+2.1
	comp=Z,168nm,2.6s,mb5.5						
PTQR	Pietraquaria	75.75	21	eP	P	21 12 09.4	+0.7
ELUQ	Luque	75.88	35	P	P	21 12 10.0	+0.5
	comp=Z,10nm,0.7s,mb4.9						
EBEN	Beniarda	75.93	32	P	P	21 12 11.1	+1.4
	comp=Z,79nm,1.2s,mb5.5						
EQES	Quesada	76.00	34	P	P	21 12 10.6	+0.5
	comp=Z,334nm,3.0s						
ESPR	Espera	76.06	37	P	P	21 12 10.1	-0.4
	comp=Z,148nm,2.4s,mb5.5						
SDI	San Donato	76.12	20	eP	P	21 12 10.8	+0.1
CII	Carovilli	76.19	20	eP	P	21 12 11.2	0.0
KIV	Kislovodsk	76.21	358	c iP	P	21 12 11.5	+0.3
KIV				i	pP	21 12 15.3	-0.6
KIV						21 12 21.0	
KIV				e		21 22 03.5	
KIV				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
KIV				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.7						
KIV	Kislovodsk	76.21	358	i P	P	21 12 10.9	-0.3
KIV				LR	LR		
	comp=Z,98nm,21.0s,MS4.1						
SZH	Strazhica	76.22	11	eP	P	21 12 17.0	+5.7
ELOJ	Sierra Loja	76.30	35	P	P	21 12 09.9	-2.0
	comp=Z,4.4nm,0.1s,mb5.3						
ECOG	Cogollos-Vega	76.35	35	P	P	21 12 12.3	+0.1
	comp=Z,9.9nm,0.7s,mb4.8						
EMUR	La Murta	76.47	33	P	P	21 12 13.5	+0.7
	comp=Z,280nm,3.6s						
KSH	Kashi	76.48	333	eP	P	21 12 14.0	+1.2
KSH				eAP	pP	21 12 26.3	+8.8
KSH				ePP	PP	21 15 06.7	+0.3
KSH				eS	S	21 21 57.7	+1.3
KSH				eSKS	SKS	21 22 19.9	-4.6
KSH				eSCS	ScS	21 22 27.5	+2.8
KSH				ePS	PS	21 22 36.0	-0.8
KSH				eSS	SS	21 26 53.6	-0.8
KSH				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.6						
KSH				LR	LR		
	comp=N,940nm,17.5s,MS5.4						
KSH				LR	LR		
	comp=E,1μm,14.1s,MS5.4						
ERON	Agron	76.52	35	P	P	21 12 14.0	+0.9
	comp=E,26nm,0.9s,mb5.2						
SOC	Sochi	76.60	1	eP	P	21 12 12.8	-0.6
SOC				e		21 15 03.7	
SOC				eS	S	21 21 58.1	+0.4
SOC				e		21 22 23.0	
SOC				eSS	SS	21 26 53.9	-2.2
SOC				eSSS	SSS	21 30 14.9	+3.2
SOC				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.4						
SOC				pmax	pmax		
	comp=N,35nm,1.0s						
SOC				pmax	pmax		
	comp=E,30nm,0.8s						
SOC				MLR	MLR		
	comp=Z,524nm,21.0s,MS4.8						
SOC				MLR	MLR		
	comp=N,463nm,22.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,469nm,21.0s,MS4.9						
VTS	Vitosha	76.61	13	eP	P	21 12 19.0	+5.5
EMIJ	Mijas	76.66	36	P	P	21 12 13.2	-0.7
	comp=E,32nm,0.9s,mb5.2						
PGB	Panagyurishte	76.75	12	eP	P	21 12 21.0	+6.7
EBER	Berja	76.89	34	P	P	21 12 15.1	-0.1
	comp=E,74nm,2.2s,mb5.2						
SKO	Skopje	77.00	15	eP	P	21 12 16.0	+0.3
SKO				i	pP	21 12 22.2	+1.8
ENIJ	Nijar	77.02	34	P	P	21 12 16.2	+0.4
	comp=E,11nm,0.7s,mb4.9						
KKB	Krupnik	77.31	13	eP	P	21 12 23.0	+5.6
SGO	Sicignano	77.50	19	eP	P	21 12 18.3	-0.1
MMB	Musomiste	77.65	13	eP	P	21 12 21.0	+1.7
RZN	Rozhen	77.66	12	i P	P	21 12 21.0	+1.7
PPT	Papeete	77.90	190	eP	P	21 12 20.1	-1.0
	comp=E,120nm,1.4s,mb5.6						
PPT	Papeete	77.90	190	eSS	SS	21 27 19.3	+3.1
PPT				eLR	LR	21 36 25.9	
	comp=E,419nm,21.5s						
MGR	Morigerati	77.95	19	eP	P	21 12 20.4	-0.5
KNT	Kendrikon	77.98	14	eP	P	21 12 20.6	-0.5
PAE	Paea	78.00	190	eP	P	21 12 21.3	-0.3
	comp=E,233nm,1.3s,mb6.0						
SRS	Serrai	78.10	13	eP	P	21 12 21.3	-0.5
GRG	Griva	78.12	14	eP	P	21 12 21.4	-0.5
SOH	Sokhos	78.37	13	eP	P	21 12 23.2	0.0
TI2	Plekhanov	78.39	357	eP	P	21 12 23.0	-0.3
ABA	Alger-Bouzarea	78.56	30	P	P	21 12 30.0	+5.6
ALN	Alexandroupoli	78.58	11	eP	P	21 12 21.1	-3.3
EBNR	Beni Rached	78.66	31	P	P	21 12 30.0	+5.1
ECHA	Ech Chlef	78.75	31	P	P	21 12 36.0	+11
EANR	’Ain N’Sour	78.87	32	P	P	21 12 35.0	+8.9
LIT	Litokhoron	78.98	14	eP	P	21 12 25.1	-1.5
EMHD	Djebel Mahouad	79.11	30	P	P	21 12 28.0	+0.6
IGT	Igoumenitsa	79.26	16	eP	P	21 12 23.7	-4.5
GRI	Girifalco	79.37	19	eP	P	21 12 32.8	+4.0
ETRT	Tiaret	79.45	32	P	P	21 12 36.5	+7.2
GNI	Garni	79.97	357	i P	P	21 12 32.9	+1.0
GNI				pmax	pmax		
	comp=Z,32nm,1.6s						
GNI				MLR	MLR		
	comp=Z,300nm,23.0s						
GNI	Garni	79.97	357	P	P	21 12 32.1	+0.1
	comp=Z,5.7nm,0.8s,mb4.6,baz=272,slow=5.6,SNR=6.9						
BR131	Keskin Array S	80.29	5	PFAKE		21 12 40.0	+6.3
BR131				LR	LR		
	comp=Z,275nm,19.0s,MS4.6						
BRTR	Keskin Array B	80.29	5	P	P	21 12 33.8	+0.1
	comp=Z,7.1nm,1.2s,mb4.5,slow=3.7,SNR=11						
KMI	Kunming	81.12	306	⇑P	P	21 12 38.7	+0.4
KMI				PP	PP	21 15 45.1	-0.8
KMI				S	S	21 22 46.2	+0.1
KMI				SKS	SKS	21 22 53.9	-4.2
KMI				PS	PS	21 23 37.0	+1.2
KMI				SS	SS	21 28 05.7	+1.4
KMI				AMB	AMB		
	comp=Z,14nm,1.3s,mb4.7						
KMI				AMB	AMB		
	comp=Z,234nm,6.3s						
KMI				LR	LR		
	comp=N,1μm,24.0s,MS5.4						
KMI				LR	LR		
	comp=E,2μm,22.8s,MS5.4						
KMI				LR	LR		
	comp=Z,2μm,18.3s,MS5.4						
LSA	Lhasa	81.32	317	P	P	21 12 41.8	+2.5
LSA				S	S	21 22 51.9	+3.9
LSA				SS	SS	21 28 07.2	0.0
LSA				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.3						
LSA				AMB	AMB		
	comp=Z,300nm,9.0s						
LSA				LR	LR		
	comp=N,460nm,22.0s,MS5.0						
LSA				LR	LR		
	comp=E,660nm,20.0s,MS5.0						
LSA				LR	LR		
	comp=Z,1μm,18.0s,MS5.2						
THN	Thein Dam	83.29	331	eP	P	21 12 48.6	-0.9
QIZ	Qiongzhong	83.48	297	P	P	21 12 55.4	+4.8
QIZ				PP	PP	21 16 09.7	+4.9
QIZ				SS	SS	21 28 42.6	+3.3
QIZ				LR	LR		
	comp=N,649nm,16.0s,MS5.2						
QIZ				LR	LR		
	comp=E,715nm,17.2s,MS5.2						
QIZ				LR	LR		
	comp=Z,1μm,16.3s,MS5.3						
QIZ	Qiongzhong	83.48	297	PFAKE		21 13 00.0	+9.4
QIZ				LR	LR		
	comp=Z,947nm,20.0s,MS5.2						
TBI	Tubuai	83.62	189	eSS	SS	21 28 33.4	-7.8
TBI				eLR	LR	21 39 10.8	
	comp=Z,347nm,23.8s						
PONG	Pong	83.69	330	e	P	21 12 52.5	+1.1
MSL	Mosul	83.86	358	eP	P	21 12 52.0	-0.2
SDNR	Sundarnagar	83.87	329	e	P	21 12 53.6	+1.3
SMLA	Simla	84.17	329	⇑iP	P	21 13 08.7	+15
	comp=Z,12nm,0.3s,mb5.5						
SMLA				i		21 16 22.2	
HNR	Honiara	84.20	240	PFAKE		21 13 00.0	+5.7
HNR				LR	LR		
	comp=Z,510nm,20.0s,MS4.9						
DDI	Dehra Dun	84.71	328	e	P	21 12 58.5	+1.9
DDI				e		21 15 55.9	
JIRN	Jiri	84.84	320	eP	P	21 12 58.7	+1.4
	comp=Z,721nm,1.2s						
KKN	Kakani	85.00	321	eP	P	21 12 59.2	+1.1
	comp=Z,127nm,0.9s,mb6.1						
GKN	Gorkha	85.00	322	eP	P	21 12 59.2	+1.1
	comp=Z,308nm,1.3s						
PKI	Pulchoki	85.17	321	eP	P	21 12 59.6	+0.7
	comp=Z,161nm,1.2s,mb6.0						
DMN	Daman	85.22	321	eP	P	21 13 00.4	+1.2
	comp=Z,279nm,1.2s						
KOLN	Koldanda	85.54	323	eP	P	21 13 01.6	+0.8
	comp=Z,309nm,1.5s						
NDI	New Delhi	86.48	328	e	P	21 13 05.0	-0.4
BHGR	Bahadurgarh	86.55	329	e	P	21 13 06.3	+0.6
AYAN	Aya Nagar	86.70	328	e	P	21 13 07.3	+0.8
AYAN				e	pP	21 13 11.2	0.0
	comp=Z,58nm,1.6s						
SONA	Sohna	86.93	328	e	P	21 13 07.7	0.0
SONA				e		21 13 09.5	
	comp=Z,48nm,1.0s						
KUDL	Kundal	87.19	329	e	P	21 13 09.2	+0.3
KUDL				e	pP	21 13 12.2	-1.4
	comp=Z,96nm,1.4s						
KUDL				e		21 16 25.8	
NNA	Nana	87.35	120	PFAKE		21 13 20.0	+10
NNA				LR	LR		
	comp=Z,144nm,19.0s,MS4.4						
ASF	Jabal al Asfar	87.94	3	P	P	21 13 13.3	+0.9
	comp=Z,8.1nm,1.0s,mb4.9,baz=225,slow=2.2,SNR=6.4						
CHG	Chiang Mai	88.31	306	⇑P	P	21 13 14.8	+0.4
	comp=Z,26nm,1.3s,mb5.3						
CM31	Chiang Mai Arr	88.63	306	PFAKE		21 13 30.0	+14
CM31				LR	LR		
	comp=Z,1μm,20.0s,MS5.3						
CMAR	Chiang Mai Arr	88.63	306	P	P	21 13 17.1	+1.1
	comp=Z,37nm,0.9s,mb5.7,baz=2.4,slow=5.4,SNR=175						
CMAR				LR	LR	21 56 11.4	
	comp=Z,1μm,18.0s,MS5.3,baz=20,slow=38						
PMG	Port Moresby	89.98	251	P	P	21 13 22.5	+0.1
	comp=Z,9.4nm,1.0s,mb5.1,baz=309,slow=11,SNR=8.5						
PMG				LR	LR	21 50 52.8	
	comp=Z,405nm,19.9s,MS4.8,baz=17,slow=34						
NST	Nakhon Sawan	90.64	304	P	P	21 13 25.4	0.0
SAML	Samuel	90.95	106	PFAKE		21 13 40.0	+13
SAML				LR	LR		
	comp=Z,971nm,20.0s,MS5.2						
BHPL	Bhopal	91.60	326	e	P	21 13 28.4	-1.3
LPAZ	La Paz	95.03	114	P	P	21 13 48.6	+3.0
	comp=Z,1.3nm,0.7s,mb4.5,baz=354,slow=5.9,SNR=5.6						
LPAZ				LR	LR	22 00 15.0	
	comp=Z,863nm,19.8s,MS5.2,baz=186,slow=38						
LPAZ	La Paz	95.03	114	P	P	21 13 48.6	+3.0
LPAZ				LR	LR	22 00 14.9	
HYB	Hyderabad	96.80	324	i P	P	21 13 53.5	-0.1
HYB				ePP	PP	21 17 47.0	-4.3
CTAO	Charters Tower	99.70	247	PFAKE		21 14 20.0	+13
CTAO				LR	LR		
	comp=Z,427nm,19.0s,MS5.0						
LVC	Limon Verde	100.21	118	PFAKE		21 14 20.0	+11
LVC				LR	LR		
	comp=Z,607nm,20.0s,MS5.1						
RCBR	Riachuelo	101.77	81	PFAKE		21 14 30.0	+14
RCBR				LR	LR		
	comp=Z,996nm,20.0s,MS5.3						
WRAB	Tennant Creek	105.21	257	PFAKE		21 19 00.0	
WRAB				LR	LR		
	comp=Z,425nm,20.0s,MS5.0						
WRA	Warramunga Arr	105.22	257	PP	PP	21 18 48.5	-7.0
	comp=Z,8.6nm,1.4s,baz=35,slow=7.2,SNR=7.2						
PALK	Pallekele	105.67	318	PFAKE		21 19 00.0	
PALK				LR	LR		
	comp=Z,145nm,21.0s,MS4.5						
MBWA	Marble Bar	113.47	268	PFAKE		21 19 10.0	+6.7
MBWA				LR	LR		
	comp=Z,371nm,19.0s,MS5.0						
PLCA	Paso Flores	115.23	128	PFAKE		21 19 10.0	+3.8
PLCA				LR	LR		
	comp=Z,541nm,19.0s,MS5.2						
COCO	West Island	116.93	294	PFAKE		21 19 20.0	+10
COCO				LR	LR		
	comp=Z,127nm,19.0s,MS4.6						
MBAR	Mbarara	120.10	11	PFAKE		21 19 20.0	+3.7
MBAR				LR	LR		
	comp=Z,77nm,20.0s,MS4.3						
KMBO	Kilima Mbogo	121.05	4	PFAKE		21 19 30.0	+12
KMBO				LR	LR		
	comp=Z,348nm,19.0s,MS5.0						
LSZ	Lusaka	134.27	17	PFAKE		21 19 50.0	+6.7
LSZ				LR	LR		
	comp=Z,559nm,20.0s,MS5.3						
TSUM	Tsumeb	135.90	32	PKP	PKPdf	21 19 43.6	-2.6
	comp=Z,4.8nm,0.9s,baz=205,slow=3.4,SNR=3.6						
TSUM	Tsumeb	135.90	32	PKP	PKPdf	21 19 43.6	-2.6
TSUM				LR	LR		
	comp=Z,582nm,19.0s,MS5.3						
LBTB	Lobatse	143.36	23	PFAKE		21 20 10.0	+16
LBTB				LR	LR		
	comp=Z,483nm,19.0s,MS5.3						
SUR	Sutherland	149.28	34	PKPbc	PKPdf	21 20 11.1	+2.0
	comp=Z,24nm,1.1s,baz=288,slow=6.4,SNR=5.4						
CASY	Casey	149.46	228	PFAKE		21 20 20.0	+12
CASY				LR	LR		
	comp=Z,317nm,19.0s,MS5.1						
QSPA	South Pole Qui	149.99	180	eP	PKPdf	21 20 12.1	+3.3
MAW	Mawson	167.74	223	PFAKE		21 20 40.0	+10
MAW				LR	LR		
	comp=Z,857nm,22.0s						

IDC 11 21:10:41.9±2.7, 5.32S×104.37E, mb3.7/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.7/5, Error ellipse: s-maj=125.7km s-min=23.1km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.57	119	P	P	21 17 16.0	-1.3
	0.6nm,0.5s,baz=303,slow=9.1,SNR=11						
WRA				pP	pP	21 17 23.8	+6.5
	0.5nm,0.5s,baz=302,slow=9.2,SNR=3.5						
ASAR	Alice Springs	33.79	126	P	P	21 17 25.8	-2.1
	1.0nm,0.9s,baz=303,slow=7.9,SNR=7.3						
ASAR				sP	sP	21 17 36.0	+8.1
	0.6nm,0.4s,baz=306,slow=8.3,SNR=5.8						
STKA	Stephens Creek	43.71	132	P	P	21 18 48.1	-2.6
	2.3nm,0.9s,baz=307,slow=13,SNR=5.1						
SONM	Songino Array	52.95	2	P	P	21 20 01.5	-0.9
	0.3nm,0.6s,baz=184,slow=11,SNR=4.1						
BVAR	Borovoye Array	64.82	338	P	P	21 21 21.8	-3.0
	0.3nm,0.5s,baz=162,slow=9.1,SNR=3.4						
TXAR	Lajitas Array	144.32	45	PKP	PKPdf	21 30 19.0	-3.5
	0.7nm,0.8s,baz=297,slow=2.0,SNR=3.7						

IDC 11 21:10:51.4±3.0, 5.94S×103.17E, mb3.8/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.8/4, MS3.6/1, Ms1 3.6/1, ms1mx2.7/21, Error ellipse: s-maj=148.1km s-min=27.0km az=60.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	24.60	350	P	P	21 16 13.1	-1.6
	1.4nm,0.9s,baz=180,slow=9.5,SNR=4.2						
ASAR	Alice Springs	34.42	124	pP	pP	21 17 48.2	+5.4
	0.7nm,0.4s,baz=299,slow=7.6,SNR=5.0						
CTA	Charters Tower	44.12	113	LR	LR	21 39 30.4	
	comp=Z,66nm,19.3s,baz=220,slow=39						
STKA	Stephens Creek	44.20	131	P	P	21 19 01.8	-2.3
	2.5nm,0.7s,baz=307,slow=9.4,SNR=7.5						
SONM	Songino Array	53.62	3	P	P	21 20 14.6	-2.1
	0.5nm,0.6s,baz=183,slow=8.4,SNR=5.8						
BVAR	Borovoye Array	64.96	339	P	P	21 21 32.7	-2.5
	0.6nm,0.4s,baz=144,slow=10.0,SNR=4.5						
TXAR	Lajitas Array	145.60	44	PKPbc	PKPbc	21 30 33.1	+0.1
	1.1nm,0.8s,baz=315,slow=1.3,SNR=4.2						

IDC 11 21:14:13.7±3.0, 5.65N×94.95E, mb3.5/4, mb1 3.6/5, mb1mx3.5/18, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=123.9km s-min=25.3km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.32	17	Pn	P	21 17 31.4	+4.7
	0.1nm,0.3s,baz=208,slow=14,SNR=2.8						
SONM	Songino Array	43.16	11	P	P	21 22 16.5	-1.3
	0.2nm,0.4s,baz=194,slow=7.7,SNR=4.5						
WRA	Warramunga Arr	46.33	124	P	P	21 22 41.5	-2.1
	0.3nm,0.5s,baz=303,slow=9.4,SNR=11						
ASAR	Alice Springs	47.88	129	P	P	21 22 54.1	-1.7
	0.4nm,0.7s,baz=307,slow=7.2,SNR=4.5						
BVAR	Borovoye Array	51.34	341	P	P	21 23 19.5	-2.5
	0.3nm,0.3s,baz=135,slow=8.2,SNR=5.3						

MAN 11 21:19:04.1, 9.30N×125.47E, h1^{km}, mb4.4, ML3.2, MS3.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.36	156	eP	Pg	21 19 11.3	-0.1
BUTP				eS	Sg	21 19 18.5	+2.3
SCPH	Surigao	0.48	2	eP	Pg	21 19 13.5	-0.1
SCPH				eS	Sg	21 19 20.9	+0.9
MSLP	Maasin	1.02	324	eP	Pb	21 19 23.8	-0.4
CGP	Cagayan de Oro	1.14	222	⇑iP	Pb	21 19 25.9	-0.3
CGP				i S	Sb	21 19 43.2	+1.9
BUKP	Musuan	1.47	196	eP	Pn	21 19 31.6	-0.2
BUKP				eS	Sb	21 19 54.3	+3.3
TBP	Tagbilaran	1.63	284	eP	Pn	21 19 33.5	-0.6
TBP				i S	Sb	21 19 56.3	+0.6
LLP	Lapu-Lapu	1.79	304	⇓iP	Pn	21 19 36.1	-0.3
LLP				i S	Sn	21 20 00.3	+0.2
PLP	Palo	1.91	345	eP	Pn	21 19 37.7	-0.4
PLP				eS	Sn	21 20 03.5	+0.4
PAGZ	Pagadian	2.52	235	eP	Pn	21 19 47.5	+0.7
PAGZ				eS	Sn	21 20 20.1	+1.5

IDC 11 21:24:13.0±8.1, 6.29S×147.98E, h47^{km}±56^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.6/12, mbtmp3.8/4, ML3.5/2, 1C, Error ellipse: s-maj=69.4km s-min=55.6km az=72.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.20	195	P	P	21 25 01.0	-1.2
	10nm,0.3s,baz=24,slow=11,SNR=26						
PMG				S	S	21 25 38.6	-0.8
	6.4nm,0.3s,baz=17,slow=22,SNR=4.7						
WB2	Warramunga Arr	18.96	223	eP	P	21 28 29.7	-3.5
WRA	Warramunga Arr	18.97	223	P	P	21 28 29.8	-3.5
	0.4nm,0.3s,baz=50,slow=11,SNR=20						
ASAR	Alice Springs	21.95	217	P	P	21 29 02.3	-2.1
	2.0nm,0.4s,baz=53,slow=8.7,SNR=46						
ASPA	Alice Springs	21.95	217	⇑iP	P	21 29 02.5	-1.9
FITZ	Fitzroy Crossi	24.76	240	eP	P	21 29 30.2	-1.7
	4.4nm,0.6s						
STKA	Stephens Creek	26.15	192	P	P	21 29 43.8	-1.1
	1.1nm,0.4s,baz=27,slow=11,SNR=6.1						

MOS ***11*** *21:29:32.1±1.8, 59.88N×139.81W, h10^{km}, mb5.1/13, Error ellipse: s-maj=35.0km s-min=8.7km az=110.2*
NEIC ***11*** *21:29:33.7, 60.11N×139.35W, h12^{km}, mb4.7/35, ML5.1(PMR), ML4.9(AEIC), MW5.0(PGC), After AEIC.*
NEIC Felt [IV] at Yakutat.
IDC ***11*** *21:29:33.5±0.6, 60.20N×139.39W, mb4.3/17, mb1 4.6/23, mb1mx4.5/27, mbtmp4.4/23, ML4.2/6, MS4.2/15, Ms1 4.2/15, ms1mx4.1/27, Error ellipse: s-maj=15.0km s-min=7.2km az=49.0*
BJI ***11*** *21:29:34.6, 60.49N×140.15W, h11^{km}, mB5.7, mb4.9, Ms5.1, Msz4.8*
PGC ***11*** *21:29:35.5, 60.12N×139.28W, h1^{km}, Mw5.1, Near Yakutat Bay, Alaska.*

ISC 11 21:29:33.2±0.1, 60.14N±0.02×139.51W±0.03, h12^{km}, (h23^{km}±6.5^{km}:pP-P), n261, σ1º10/276, mb4.7/74, MS4.5/21, 8C-1D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCA	Pinnacle	0.38	264	P	Pg	21 29 42.5	+1.4
PCA				S	Sg	21 29 49.5	+3.3
PNL	Peninsula	0.47	173	P	Pg	21 29 42.6	-0.2
PNL				S	Sg	21 29 49.0	-0.3
YKU2	Yakutat	0.63	188	eP	Pb	21 29 46.5	+0.8
CHX	Chaix Hills	0.81	266	P	Pb	21 29 50.9	+2.1
CHX				S	Sb	21 30 04.7	+5.3
YAH	Yahtse	1.14	283	P	Pb	21 29 55.9	+1.5
HYT	Haines Junctio	1.21	54	⇑P	Pb	21 29 54.9	-0.7
HYT				S	Sb	21 30 11.3	+0.3
HYT				Trac		21 30 12.9	
	comp=Z,2μm,0.2s						
CTGM	Chitina Glacie	1.23	313	P	Pb	21 29 55.7	-0.2
WRG	White River Gl	1.27	267	P	Pb	21 29 58.2	+1.6
CYK	Cape Yakataga	1.49	269	P	Pn	21 30 01.6	+1.5
BALM	Baldy	1.67	304	P	Pn	21 30 02.8	+0.2
WHY	Whitehorse	2.35	75	P	Pn	21 30 12.5	+0.1
WHY				S	Sn	21 30 41.2	-0.3
WHY	Whitehorse	2.35	75	Pn	Pn	21 30 12.2	-0.2
WHY				Pg	Pg	21 30 15.6	-4.7
WHY				Sn	Sn	21 30 43.2	+1.8
WHY				Sg	Sg	21 30 46.4	-5.2
WHY				Trac		21 30 48.6	
	comp=Z,3μm,0.3s						
KAIM	Kayak Island	2.47	267	P	Pn	21 30 15.0	+1.0

GLB	Gilahina Butte	2.48	304	P	Pn	21 30 15.8	+1.5
BESE	Bessie Mountai	2.85	121	P	Pn	21 30 18.4	-1.0
BESE				S	Sn	21 30 54.9	+1.0
EYAK	Cordova Ski Ar	3.13	280	P	Pn	21 30 24.0	+0.6
BCA3	Beaver Creek A	3.14	341	P	Pn	21 30 24.2	+0.7
DIV	Divide	3.25	291	P	Pn	21 30 26.1	+1.1
MENT	Mentasta	3.46	326	P	Pn	21 30 29.3	+1.2
HIN	Hinchinbrook I	3.50	277	P	Pn	21 30 28.6	0.0
VLZ	Valdez	3.51	289	P	Pn	21 30 29.0	+0.2
FID	Port Fidalgo	3.51	283	P	Pn	21 30 30.0	+1.2
MID	Middleton Isla	3.53	261	P	Pn	21 30 28.8	-0.3
JPK	Jack Peak	3.62	288	P	Pn	21 30 30.5	+0.2
SIT	Sitka	3.78	143	P	Pn	21 30 30.9	-1.8
GLI	Glacier Island	3.83	285	P	Pn	21 30 33.4	+0.1
DAWY	Dawson	3.94	1	⇑Pn	Pn	21 30 36.0	+1.1
DAWY				Sn	Sn	21 31 23.4	+1.6
DAWY				Sg	Sg	21 31 36.2	-8.4
DAWY				Trac		21 31 43.5	
	comp=Z,2µm,0.6s						
PAX	Paxson	4.03	317	P	Pn	21 30 36.6	+0.4
DOT	Dot Lake	4.13	331	P	Pn	21 30 37.8	+0.2
SCM	Sheep Creek Mo	4.17	297	P	Pn	21 30 39.1	+0.9
LTI	Latouche	4.18	272	P	Pn	21 30 37.8	-0.6
THY	Trims Highway	4.43	321	*e*Pn	Pn	21 30 43.2	+1.3
SML	Sawmill	4.62	295	P	Pn	21 30 45.1	+0.6
GHO	Glory Hole Cre	4.88	294	P	Pn	21 30 48.5	+0.3
PMR	Palmer	4.93	291	P	Pn	21 30 49.5	+0.6
SEW	Seward	4.97	274	P	Pn	21 30 48.5	-1.1
DLBC	Dease Lake	5.15	105	Pn	Pn	21 30 50.2	-1.9
	5.6nm,0.3s,baz=293,slow=14,SNR=18						
DLBC				Pg	Pg	21 31 03.7	-12
	52nm,0.3s,baz=276,slow=14,SNR=54						
DLBC				Lg		21 32 12.8	
	99nm,0.3s,baz=165,slow=22,SNR=11						
DLBC				LR	LR	21 33 11.9	
	comp=Z,4µm,19.0s,baz=300,slow=43						
DLBC	Dease Lake	5.15	105	P	Pn	21 30 50.0	-2.1
DLBC	Dease Lake	5.15	105	Pn	Pn	21 30 49.8	-2.3
DLBC				Pg	Pg	21 31 05.8	-10
DLBC				Sg	Sg	21 32 11.3	-13
DLBC				Trac		21 32 13.7	
	comp=Z,1µm,0.8s						
SLKM	Skilak Lake	5.34	279	P	Pn	21 30 53.9	-0.8
FIB	Fire Island	5.35	286	P	Pn	21 30 56.3	+1.4
VOGL	Vogel Lake	5.46	284	P	Pn	21 30 56.4	-0.1
HDA	Harding Lake	5.52	324	P	Pn	21 30 56.8	-0.5
MCK	McKinley	5.73	313	P	Pn	21 31 00.1	-0.1
BRLK	Bradley Lake	5.73	271	P	Pn	21 30 59.0	-1.3
IL1	Eielson Array	5.78	327	P	Pn	21 30 59.5	-1.4
ILAR	Eielson Array	5.78	327	Pn	Pn	21 30 59.4	-1.5
	2.6nm,0.3s,baz=152,slow=12,SNR=66						
ILAR				Lg		21 32 35.5	
	6.5nm,0.3s,baz=135,slow=26,SNR=4.1						
ILAR				LR	LR	21 33 12.5	
	comp=Z,354nm,19.2s,baz=154,slow=38						
CCB	Clear Creek Bu	5.95	323	P	Pn	21 31 02.5	-0.8
TRF	Thorofare Moun	6.10	308	P	Pn	21 31 05.2	-0.2
COLA	College	6.12	324	*i* P	Pn	21 31 08.8	+3.0
COLA	College	6.12	324	P	Pn	21 31 05.2	-0.6
STLK	Strandline Lak	6.18	288	P	Pn	21 31 06.4	-0.3
SPU	Mount Spurr	6.26	285	*e*Pn	Pn	21 31 06.8	-0.9
MDM	Murphy Dome	6.30	324	P	Pn	21 31 07.3	-1.0
CKN	Chakachatna No	6.32	285	P	Pn	21 31 08.5	-0.1
KTH	Kantishna Hill	6.40	307	P	Pn	21 31 09.1	-0.5
DFR	Drift River	6.56	280	P	Pn	21 31 11.6	-0.3
RSO	Redoubt South	6.59	279	*e*Pn	Pn	21 31 10.9	-1.6
RDN	Redoubt North	6.60	279	P	Pn	21 31 12.2	-0.3
NCT	North Crescent	6.68	279	P	Pn	21 31 12.0	-1.6
ILIM	Iliamna	6.73	275	P	Pn	21 31 13.7	-0.7
INE	Iliamna NE	6.78	275	P	Pn	21 31 14.3	-0.8
ILW	Iliamna West	6.82	275	P	Pn	21 31 14.7	-0.9
OPT	Oil Point	6.92	272	P	Pn	21 31 17.5	+0.4
AUE	Augustine Isla	7.05	270	P	Pn	21 31 19.4	+0.6
AUI	Augustine Isla	7.08	270	P	Pn	21 31 19.8	+0.5
MLY	Manley	7.14	318	P	Pn	21 31 19.1	-0.9
NDB	Naden	7.15	147	Pn	Pn	21 31 18.1	-2.2
KDAK	Kodiak Island	7.16	256	P	Pn	21 31 18.8	-1.6
MCNL	McNeil River	7.57	269	P	Pn	21 31 25.8	-0.4
BM3	Burnt Mountain	7.65	345	P	Pn	21 31 26.8	-0.5
RUBB	Prince Rupert	7.68	135	Pn	Pn	21 31 26.8	-0.9
RUBB				Sg	Sg	21 33 32.1	-17
RUBB				Trac		21 33 48.6	
	comp=Z,790nm,1.0s						
KAPH	Katmai Pasha	7.74	265	P	Pn	21 31 28.0	-0.5
SVW2	Sparrevohn	7.97	284	P	Pn	21 31 30.2	-1.5
KAWH	Katmai	8.03	264	P	P	21 31 31.2	-1.4
KAHC	Katmai Hardscr	8.05	266	P	P	21 31 31.8	-1.1
MOBC	Moresby Island	8.12	146	Pn	P	21 31 32.0	-1.7
TT01	Tatalina	8.36	296	P	P	21 31 35.5	-1.7
FNBB	Fort Nelson	8.48	91	Pn	P	21 31 37.3	-1.6
FNBB				Pg	P	21 32 09.0	+30
FNBB				Sg	Sg	21 33 54.4	-21
FNBB				Trac		21 34 24.0	
	comp=Z,367nm,0.9s						
COLD	Coldfoot	8.54	331	P	P	21 31 39.2	-0.5
INK	Inuvik	8.60	15	Pn	P	21 31 38.9	-1.6
	1.4nm,0.3s,baz=195,slow=15,SNR=47						
INK				Sn	Sn	21 33 12.4	-6.1
	3.0nm,0.3s,baz=63,slow=30,SNR=3.6						
INK				Lg		21 34 03.6	
	1.7nm,0.3s,baz=288,slow=28,SNR=8.2						
INK				LR	LR	21 35 26.0	
	comp=Z,2µm,19.5s,baz=201,slow=41						
INK	Inuvik	8.60	15	*e*Pn	P	21 31 38.0	-2.6
INK	Inuvik	8.60	15	Pn	P	21 31 39.1	-1.4
INK				Pg	P	21 32 12.7	+32
INK				Sg	Sg	21 34 05.0	-15
INK				Trac		21 34 21.2	
	comp=Z,237nm,0.9s						
BNB	Barry Inlet	8.71	147	Pn	P	21 31 39.9	-2.1
BNB				Trac		21 34 24.1	
	comp=Z,105nm,1.0s						
IM3	Indian Mountai	8.71	318	P	P	21 31 40.8	-1.3
IMA	Indian Mountai	8.74	319	*e*P	P	21 31 42.8	+0.4
FSB	Fort Saint Jam	9.97	118	Pn	P	21 32 02.2	+3.0
FSB				Sg	Sg	21 34 50.2	-15
FSB				Trac		21 35 16.2	
	comp=Z,562nm,1.2s						
BMBC	Bull Mountain	10.06	106	Pn	P	21 32 02.2	+1.7
BMBC				Sg	S	21 34 50.8	+56
BMBC				Trac		21 35 03.3	
	comp=Z,375nm,1.0s						
BBB	Bella Bella	10.18	137	Pn	P	21 32 01.1	-0.9
	1.5nm,0.3s,baz=119,slow=4.8,SNR=7.4						
BBB				Sn	S	21 33 56.9	-0.3
	1.0nm,0.3s,baz=180,slow=8.1,SNR=4.1						
BBB				Lg		21 34 53.6	
	0.8nm,0.3s,baz=32,slow=22,SNR=5.1						
BBB				LR	LR	21 35 28.6	
	comp=Z,1µm,20.5s,baz=324,slow=35						
BBB	Bella Bella	10.18	137	Pn	P	21 32 01.6	-0.5
BBB				Sg	S	21 34 54.9	+58
BBB				Trac		21 35 10.0	
	comp=Z,76nm,1.2s						
MAYB	Maynard	12.00	139	Pn	P	21 32 19.2	-7.8
YKW3	Yellowknife Ar	12.16	68	*e*Pn	P	21 32 24.8	-4.2
YKW3	Yellowknife Ar	12.16	68	⇑Pn	P	21 32 25.9	-3.2
YKW3				Pn	P	21 32 25.9	-3.2
YKW3				Sg	S	21 35 49.5	+64
YKW3				Sg	S	21 35 51.8	+66
YKW3				Trac		21 35 55.2	
	comp=Z,422nm,1.4s						
YKW3				Trac		21 35 55.5	
	comp=Z,85nm,1.3s						
YKA	Yellowknife Ar	12.16	68	Pn	P	21 32 25.2	-3.9
	0.7nm,0.3s,baz=266,slow=13,SNR=45						
YKA				Lg		21 35 50.9	
	0.2nm,0.3s,baz=270,slow=29,SNR=7.8						
YKA				LR	LR	21 37 51.1	
	comp=Z,231nm,20.3s,baz=265,slow=41						
WOSB	Woss	12.41	138	Pn	P	21 32 33.4	+1.0
WOSB				Sn		21 36 05.8	
WOSB				Trac		21 36 42.2	
	comp=Z,349nm,1.7s						
GDR	Gold River	12.91	137	Pn	P	21 32 40.0	+0.8
TXB	Texada	13.54	134	Sn	Sx	21 36 32.7	
TXB				Trac		21 36 56.3	
	comp=Z,406nm,1.7s						
WSLR	Whistler	13.76	129	Pn	P	21 32 52.0	+1.8
WSLR				Sn		21 36 42.4	
WSLR				Trac		21 36 55.5	
	comp=Z,43nm,1.4s						
LLLB	Lillooet	13.79	126	Pn	P	21 32 52.6	+2.0
LLLB				Sn		21 36 44.8	
LLLB				Trac		21 37 15.9	
	comp=Z,44nm,1.5s						
SHB	Sechelt	13.83	133	Trac		21 36 56.4	
	comp=Z,40nm,1.1s						
TNA	Tin City	13.98	305	*e*Pn	P	21 32 52.0	-1.0
MGB	Mount Grey	14.04	136	Pn	P	21 32 58.8	+5.0
GOBB	Galiano Island	14.50	133	Pn	P	21 33 04.3	+4.4
DOWB	Downie Slide	14.55	117	Pn	P	21 33 08.6	+8.0
DOWB				Sn		21 37 19.4	
LZB	Mount Lazard	14.67	135	Trac		21 36 23.5	
	comp=Z,3.0nm,0.6s						
LZB	Mount Lazard	14.67	135	Pn	P	21 33 10.7	+8.5
LZB				Sn	S	21 36 17.6	+32
SNB	Saturna Island	14.77	133	Pn	P	21 33 08.8	+5.3
PGC	Sidney	14.77	134	*e*Pn	P	21 33 01.4	-2.1
	103nm,0.9s						
PGC	Sidney	14.77	134	Pn	P	21 33 10.7	+7.2
VDB	Vedder Mountai	14.96	130	Pn	P	21 33 10.2	+4.3
VDB				Sn		21 37 18.9	
SLEB	Sale Mountain	14.97	117	Pn	P	21 33 12.2	+6.1
SLEB				Trac		21 37 57.7	
	comp=Z,51nm,1.1s						
VGZ	Gonzales	15.02	134	Pn	P	21 33 13.3	+6.6
OCWA	Octopus Mounta	15.29	137	*e*Pn	P	21 33 10.6	+0.3
	130nm,0.9s						
OSD	Olympics--Snow	15.39	136	P	P	21 33 18.4	+6.9
PNT	Penticton	15.72	125	Pn	P	21 33 20.9	+5.1
PNT				Sn		21 37 42.4	
EDM	Edmonton	15.87	104	*e*P	P	21 33 16.7	-1.1
EDM	Edmonton	15.87	104	⇑Pn	P	21 33 17.0	-0.8
EDM				Sn		21 37 56.8	
UNV	Unalaska Valle	15.92	259	*e*P	P	21 33 16.7	-1.7
FMW	Mount Fremont	16.87	134	P	P	21 33 32.3	+1.8
LON	Longmire	16.97	134	P	P	21 33 35.6	+3.8
TBM	Table Mountain	17.06	131	P	P	21 33 35.8	+2.9
NEW	Newport	17.57	123	P	P	21 33 39.7	+0.4
	0.4nm,0.3s,baz=328,slow=10,SNR=21						
NEW				LR	LR	21 41 00.1	
	comp=Z,1µm,18.4s,baz=322,slow=39						
NEW	Newport	17.57	123	*e*P	P	21 33 38.2	-1.1
	80nm,1.2s						
GL2	New Goldendale	18.00	134	P	P	21 33 46.5	+1.8
COR	Corvallis	18.36	141	*e*P	P	21 33 47.6	-1.6
	194nm,1.8s						
WALA	Waterton Lakes	18.38	116	*e*P	P	21 33 48.2	-1.2
	61nm,1.0s						
WALA	Waterton Lakes	18.38	116	⇑Pn	P	21 33 50.1	+0.7
WALA				Trac		21 39 30.8	
	comp=Z,38nm,1.4s						
BROR	Big Rock Looko	18.92	139	P	P	21 33 56.8	+0.9
FRIS	Frissel Point	19.09	139	P	P	21 33 58.7	+0.8
MSO	Missoula	20.05	120	*e*P	P	21 34 07.8	-1.0
	50nm,1.2s						
BBOR	Butler Butte	20.09	142	P	P	21 34 10.1	+0.8
BMO	Blue Mountains	20.26	129	*e*P	P	21 34 09.4	-1.6
	40nm,1.4s						
HUMO	Hull Mountain	20.26	143	*e*P	P	21 34 09.3	-1.8
	16nm,0.8s						
CHMT	Chamberlain Mo	20.28	119	*e*P	P	21 34 10.0	-1.2
FFC	Flin Flon	20.70	88	Pn	P	21 34 14.6	-0.9
	325nm,1.2s,SNR=35						
YBH	Yreka Blue Hor	21.13	143	P	P	21 34 20.7	+0.6
	16nm,0.8s,mb4.4,baz=3.3,slow=6.4,SNR=15						
YBH	Yreka Blue Hor	21.13	143	*e*P	P	21 34 19.6	-0.5
	22nm,0.9s,mb4.5						
LHEM	Herd Peak	21.38	142	P	P	21 34 23.9	+1.4
RES	Resolute Bay	21.67	30	*e*P	P	21 34 24.2	-1.0
	33nm,1.0s,mb4.7						
RES	Resolute Bay	21.67	30	Pn	P	21 34 24.9	-0.4
MOD	Modoc	21.74	138	*e*P	P	21 34 26.2	0.0
	34nm,1.0s,mb4.7						
WVOR	Wild Horse Val	21.84	135	*e*P	P	21 34 27.3	+0.1
	29nm,1.1s,mb4.6						
BOZ	Bozeman (W)	21.98	119	*e*P	P	21 34 27.9	-0.6
	30nm,1.1s,mb4.6						
LTIM	Timbered Crate	22.02	141	P	P	21 34 30.5	+1.6
MCMT	McKenzie Canyo	22.10	122	*e*P	P	21 34 29.4	-0.3
WDC	Whiskeytown Da	22.24	144	*e*P	P	21 34 31.6	+0.4
	151nm,1.4s,mb5.2						
HLID	Hailey	22.48	126	*e*P	P	21 34 33.2	-0.3
	76nm,1.8s,mb4.8						
QLMT	Earthquake Lak	22.70	120	*e*P	P	21 34 35.1	-0.5
GCMT	Greycliff	22.74	116	*e*P	P	21 34 36.8	+0.9
FCC	Fort Churchill	22.79	73	*e*P	P	21 34 35.4	-0.9
	68nm,1.5s,mb4.9						
FCC	Fort Churchill	22.79	73	Pn	P	21 34 37.3	+1.0
FCC				Sn		21 41 20.1	
FCC				Trac		21 41 58.2	
	comp=Z,26nm,1.1s						
YNR	Norris Junctio	23.12	119	*e*P	P	21 34 39.8	+0.1
LKWY	Lake	23.36	119	*e*P	P	21 34 43.6	+1.6
	25nm,1.3s,mb4.5						
DGMT	Dagmar	23.37	104	*e*P	P	21 34 42.0	0.0
	677nm,2.2s,mb5.7						
HOPS	Hopland	23.56	147	*e*P	P	21 34 44.3	+0.3
	136nm,1.9s,mb5.0						
LAO	LASA Array	23.66	110	*e*P	P	21 34 45.3	+0.5
	159nm,1.5s,mb5.2						
IMW	Indian Meadow	23.66	121	*e*P	P	21 34 46.4	+1.5
OHCM	Honcut	23.70	143	*e*P	P	21 34 45.5	+0.2
MOOW	Moose Ponds	23.86	120	*e*P	P	21 34 48.3	+1.4
RRI2	Red Ridge	23.94	122	*e*P	P	21 34 49.0	+1.3
TPAW	Teton Pass	23.98	121	*e*P	P	21 34 49.1	+1.1
WUWY	Wally Ulrich	24.03	121	*e*P	P	21 34 48.5	-0.1
LOHW	Long Hollow	24.03	120	*e*P	P	21 34 49.4	+0.8
SNOW	Snow King Moun	24.09	121	*e*P	P	21 34 50.1	+1.0
BILL	Bilibino	24.19	312	*e*P	P	21 34 50.9	+1.1
BILL				*e*		21 34 59.1	
BILL				*e*		21 35 25.9	
BILL				pmax	pmax		
	comp=Z,36nm,1.7s,mb4.5						
BILL				MLR	MLR		
	comp=Z,2µm,12.0s,MS4.7						
BILL	Bilibino	24.19	312	*e*P	P	21 34 50.2	+0.4
	comp=Z,27nm,1.0s,mb4.6						
ELK	Elko	24.56	131	*e*P	P	21 34 55.0	+1.3
	comp=Z,5.2nm,0.9s,mb4.1						
SAC	San Andreas	25.06	147	*e*P	P	21 34 58.9	+0.3
BW06	Boulder Array	25.17	120	*e*P	P	21 34 59.2	-0.3
	comp=Z,27nm,1.4s,mb4.6						
PDAR	Pinedale Array	25.17	120	P	P	21 35 00.5	+0.9
	comp=Z,5.9nm,0.9s,mb4.1,baz=327,slow=5.6,SNR=36						
PDAR				LR	LR	21 46 14.0	
	comp=Z,512nm,18.1s,MS4.1,baz=330,slow=40						
CMB	Columbia Colle	25.23	143	*e*P	P	21 35 00.8	+0.6
	comp=Z,19nm,1.3s,mb4.5						
HWUT	Hardware Ranch	25.27	125	*e*P	P	21 35 00.1	-0.5
	comp=Z,16nm,1.2s,mb4.4						
NVAR	Mina Array Bea	25.53	139	P	P	21 35 03.9	+0.9
	comp=Z,9.2nm,0.8s,mb4.3,baz=326,slow=6.9,SNR=41						
NVAR				LR	LR	21 44 42.7	
	comp=Z,714nm,18.4s,MS4.2,baz=325,slow=36						
MNV	Mina	25.58	139	*e*P	P	21 35 03.5	+0.1
	comp=Z,46nm,1.4s,mb4.8						
DUG	Dugway	25.97	128	*e*P	P	21 35 05.1	-1.9
	comp=Z,16nm,1.0s,mb4.5						
OMM	Old Mammoth Mi	26.05	141	*e*P	P	21 35 07.2	-0.6
TPH	Tonopah	26.21	137	*e*P	P	21 35 09.0	-0.4
	comp=Z,19nm,1.0s,mb4.6						
ULM	Lac du Bonnet	26.32	92	P	P	21 35 10.5	+0.3
	comp=Z,15nm,1.1s,mb4.4,baz=302,slow=9.5,SNR=6.9						
ULM				LR	LR	21 45 59.4	
	comp=Z,1µm,19.9s,MS4.5,baz=105,slow=38						
ULM	Lac du Bonnet	26.32	92	Pn	P	21 35 10.2	0.0
ULM				Trac		21 43 33.3	
	comp=Z,6.0nm,0.8s						
TRCR	Troy Canyon	26.54	134	*e*P	P	21 35 12.2	-0.1
LRV	Little Rabbit	26.54	145	*e*P	P	21 35 11.7	-0.7
MVU	Marysvale	27.66	129	*e*P	P	21 35 21.2	-1.4
	comp=Z,4.6nm,0.9s,mb4.1						
PHWY	Pilot Hill	28.15	117	*e*P	P	21 35 26.4	-0.6
NEN	Nelson	29.22	136	*e*P	P	21 35 37.1	+0.5
SEY	Seymchan	31.22	305	*e*P	P	21 35 55.8	+1.7
SEY				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.9						
FRB	Frobisher Bay	32.00	52	P	P	21 36 01.5	+0.5
	comp=Z,14nm,0.9s,mb4.8,baz=296,slow=10,SNR=8.1						
MA2	Magadan	33.54	300	*e*P	P	21 36 10.2	-4.2
MA2				*e*PPP	PPP	21 37 44.9	+1.1
MA2				*e*S	S	21 41 27.2	-8.0
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MA2				MLR	MLR		
	comp=Z,800nm,21.0s,MS4.4						
TUC	Tucson	33.68	133	*e*P	P	21 36 14.8	-1.0
	comp=Z,5.8nm,1.0s,mb4.5						
GDL2	Guadalupe Moun	36.28	124	*e*P	P	21 36 36.2	-2.0
SCHQ	Schefferville	37.59	65	P	P	21 36 48.5	-0.4
	comp=Z,4.8nm,1.0s,mb4.2,baz=304,slow=11,SNR=3.5						
SCHQ				LR	LR	21 52 13.4	
	comp=Z,248nm,19.0s,MS4.0,baz=295,slow=36						
FVM	French Village	37.85	103	*e*P	P	21 36 48.7	-2.5
TXAR	Lajitas Array	39.08	126	P	P	21 37 02.3	+0.6
	comp=Z,1.7nm,0.8s,mb3.8,baz=326,slow=9.0,SNR=9.3						
TXAR				PcP	PcP	21 39 10.9	-1.2
	comp=Z,2.1nm,0.9s,baz=270,slow=2.5,SNR=5.0						
TXAR				LR	LR	21 54 22.0	
	comp=Z,1µm,18.4s,MS4.7,baz=25,slow=38						
YAK	Yakutsk	40.52	313	*i* P	P	21 37 13.2	0.0
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
YAK				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.5						
POHA	Pohakuloa	41.93	203	P	P	21 37 24.1	-1.1
	comp=Z,2µm,0.6s						
YSS	Yuzh-Sakhalins	45.29	290	*i* P	P	21 37 58.2	+6.1
KLR	Kul'dur	48.63	299	*e*P	P	21 38 15.0	-3.2
BOD	Bodaibo	49.06	317	⇑*i*P	P	21 38 20.5	-0.9
BOD				pmax	pmax		
	comp=Z,22nm,1.9s,mb4.9						
ARCES	ARCESS Array B	50.18	7	P	P	21 38 29.6	-0.3
	comp=Z,3.5nm,0.7s,mb4.5,slow=4.9,SNR=9.5						
ARCES				LR	LR	22 01 05.3	
	comp=Z,222nm,19.6s,MS4.2,baz=192,slow=38						
MDJ	Mudanjiang	53.10	297	P	P	21 38 51.6	-0.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
MDJ				LR	LR		
	comp=N,208nm,24.9s,MS4.2						
MDJ				LR	LR		
	comp=E,154nm,23.8s,MS4.2						
MDJ				LR	LR		
	comp=Z,193nm,20.6s,MS4.1						
CN2	Changchun	55.58	299	*e*P	P	21 39 09.4	-1.1
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
NOA	NORSAR Array B	57.06	16	P	P	21 39 20.7	-0.1
	comp=Z,0.8nm,0.8s,mb3.8,baz=233,slow=12,SNR=3.1						
NOA	NORSAR Array B	57.06	16	P	P	21 39 20.7	-0.1
TLY	Talaya	57.54	319	*e*P	P	21 39 24.9	+0.6
TLY				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.8						
TLY				MLR	MLR		
	comp=Z,506nm,16.0s,MS4.7						
TLY	Talaya	57.54	319	*e*P	P	21 39 24.0	-0.4
	comp=Z,25nm,1.7s,mb5.0						
SNY	Shenyang	57.98	299	⇑P	P	21 39 27.0	-0.6
SNY				AP	pP	21 39 31.1	-0.1
SNY				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
SNY				LR	LR		
	comp=N,340nm,13.7s						
SNY				LR	LR		
	comp=Z,350nm,17.0s,MS4.5						
FINES	FINESS Array B	58.24	8	P	P	21 39 28.6	-0.5
	comp=Z,1.1nm,0.7s,mb4.0,baz=342,slow=6.0,SNR=4.9						
MOY	Mondy	58.41	320	*e*P	P	21 39 31.6	+1.2
MOY				pmax	pmax		
	comp=Z,32nm,2.6s,mb4.9						
ZAK	Zakamensk	58.77	318	*e*P	P	21 39 32.6	-0.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb4.0						
ULN	Ulaanbaatar	59.60	314	*e*P	P	21 39 38.2	-0.6
	comp=Z,11nm,0.8s,mb5.0						
KS15	Wonju Array Si	59.60	293	*e*P	P	21 39 38.6	-0.3
EKA	Eskdalemuir Ar	59.76	27	P	P	21 39 38.2	-1.5
	comp=Z,5.5nm,1.0s,mb4.5,baz=333,slow=5.7,SNR=7.8						
SONM	Songino Array	59.86	315	P	P	21 39 41.5	+0.9
	comp=Z,4.6nm,0.7s,mb4.6,baz=27,slow=11,SNR=52						
SOKR	Solikamsk	59.96	351	⇓*i*P	P	21 39 40.7	-0.3
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
NVS	Novosibirsk	60.42	333	*i* P	P	21 39 40.9	-3.4
SVE	Sverdlovsk	62.30	348	*e*P	P	21 39 56.6	-0.3
BJI	Beijing	62.63	303	P	P	21 40 00.7	+1.3
BJI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.6						
HHC	Hu-ho-hao-te	63.84	307	*e*P	P	21 40 05.7	-1.5
HHC				XP	sP	21 40 13.1	+0.9
HHC				PCP	PcP	21 40 38.8	-4.1
HHC				SCP		21 44 40.7	
HHC				S	S	21 48 43.8	+3.2
HHC				XS		21 48 50.9	
HHC				PS	PS	21 49 07.6	+6.4
HHC				SCS	ScS	21 49 56.5	-0.5
HHC				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,3µm,8.4s						
HHC				LR	LR		
	comp=N,531nm,25.0s,MS5.0						
HHC				LR	LR		
	comp=E,891nm,21.5s,MS5.0						
HHC				LR	LR		
	comp=Z,470nm,22.6s,MS4.6						
JTS	JuntasAbangare	63.94	117	LR	LR	22 11 24.7	
	comp=Z,330nm,19.3s,MS4.5,baz=37,slow=39						
CHKZ	Chkalovo	64.00	341	*e*P	P	21 40 06.4	-1.7
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
CHKZ	Chkalovo	64.00	341	*e*P	P	21 40 06.4	-1.7
	comp=Z,5.7nm,1.4s,mb4.4						
BVAR	Borovoye Array	64.67	341	P	P	21 40 11.1	-1.3
	comp=Z,1.7nm,0.6s,mb4.3,baz=45,slow=6.3,SNR=12						
OBN	Obninsk	65.06	2	*e*P	P	21 40 19.6	+4.7
OBN				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
KURK	Kurchatov	65.29	334	*e*P	P	21 40 14.3	-2.2
KURK				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
KURK	Kurchatov	65.29	334	*e*P	P	21 40 14.3	-2.2
	comp=Z,31nm,1.4s,mb5.1						
MOX	Moxa	67.13	19	*e*P	P	21 40 31.9	+3.7
MOX	Moxa	67.13	19	*i* P	P	21 40 31.9	+3.7
SSE	Sheshan	67.95	294	P	P	21 40 29.5	-4.2
SSE				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
DPC	Dobruska-Polom	68.15	16	*e*P	P	21 40 35.6	+1.0
NJ2	Nanjing	68.19	296	*e*P	P	21 40 35.3	+0.1
NJ2				AP	pP	21 40 45.6	+6.7
NJ2				XP	sP	21 40 49.6	+9.4
NJ2				PP	PP	21 43 07.4	-0.4
NJ2				S	S	21 49 29.0	-4.8
NJ2				XS		21 49 41.0	
NJ2				PS	PS	21 49 52.0	-8.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,3µm,9.8s						
NJ2				LR	LR		
	comp=N,6µm,26.5s						
NJ2				LR	LR		
	comp=E,2µm,21.3s						
NJ2				LR	LR		
	comp=Z,730nm,19.4s						
KHC	Kasperske Hory	68.92	19	*i* P	P	21 40 45.2	+5.8
KHC	Kasperske Hory	68.92	19	*e*P	P	21 40 44.5	+5.1
AKASG	Malin Array Be	69.14	8	P	P	21 40 39.0	-1.7
	comp=Z,1.3nm,0.6s,mb4.0,baz=353,slow=6.0,SNR=9.7						
WMQ	Urumqi	69.44	325	*e*P	P	21 40 43.0	+0.3
WMQ				XP	sP	21 40 50.0	+2.3
WMQ				PP	PP	21 43 19.0	+0.7
WMQ				S	S	21 49 49.0	+0.7
WMQ				SS	SS	21 54 17.0	-0.3
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,197nm,22.0s,MS4.5						
WMQ				LR	LR		
	comp=E,184nm,20.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,263nm,20.0s,MS4.5						
GTA	Gaotai	69.54	315	*e*P	P	21 40 44.0	+0.6
GTA				AP	pP	21 40 46.4	-0.6
GTA				XP	sP	21 40 47.9	-0.4
GTA				PCP	PcP	21 41 06.9	+0.2
GTA				PP	PP	21 43 21.1	+1.9

GTA				S	S	21 49 54.3	+4.7
GTA				XS		21 50 00.4	
GTA				SCS	ScS	21 50 38.6	-2.5
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.4						
GTA				AMB	AMB		
	comp=Z,574nm,6.5s						
GTA				LR	LR		
	comp=N,288nm,18.6s,MS4.8						
GTA				LR	LR		
	comp=E,454nm,18.6s,MS4.8						
GTA				LR	LR		
	comp=Z,246nm,18.6s,MS4.5						
KWP	Kalwaria	69.64	12	P	P	21 40 44.0	+0.1
LZH	Lanzhou	70.98	310	*e*P	P	21 40 52.5	+0.3
LZH				AP	pP	21 41 02.4	+6.5
LZH				XP	sP	21 41 06.3	+9.1
LZH				PP	PP	21 43 33.0	+1.2
LZH				AMB	AMB		
	comp=Z,22nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,163nm,5.8s						
SDV	Santo Domingo	71.87	104	LR	LR	22 11 58.1	
	comp=Z,257nm,21.1s,MS4.5,baz=2.2,slow=35						
AAK	Ala-Archa	73.86	335	*i* P	P	21 41 08.8	-0.2
AAK				pmax	pmax		
	comp=Z,15nm,1.8s,mb4.6						
AAK				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.7						
AAK	Ala-Archa	73.86	335	*e*P	P	21 41 08.1	-0.9
	comp=Z,6.4nm,0.9s,mb4.5						
ESDC	Sonseca Array	74.05	34	P	P	21 41 10.1	0.0
	comp=Z,2.2nm,0.8s,mb4.1,baz=337,slow=5.8,SNR=12						
GOF	Gofitskoye	75.15	358	*e*P	P	21 41 19.0	+2.6
GOF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
KIV	Kislovodsk	76.25	358	*e*P	P	21 41 26.2	+3.5
KIV				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
KSH	Kashi	76.50	333	*e*P	P	21 41 25.0	+0.8
KSH				*e*PP	PP	21 44 11.3	-6.5
KSH				*e*S	S	21 51 09.0	+0.6
KSH				*e*SKS	SKS	21 51 32.1	-3.6
KSH				*e*SCS	ScS	21 51 38.6	+2.1
KSH				*e*PS	PS	21 51 47.5	-0.7
KSH				*e*SS	SS	21 56 05.0	-1.3
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
KSH				AMB	AMB		
	comp=Z,140nm,7.6s						
KSH				LR	LR		
	comp=N,250nm,6.9s						
KSH				LR	LR		
	comp=E,400nm,7.9s						
GYA	Guiyang	78.32	303	P	P	21 41 35.3	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GNI	Garni	80.01	357	*i* P	P	21 41 46.2	+2.8
GNI				pmax	pmax		
	comp=Z,13nm,1.5s						
GNI	Garni	80.01	357	LR	LR	22 23 25.9	
	comp=Z,130nm,19.5s,MS4.3,baz=114,slow=40						
BRTR	Keskin Array B	80.34	5	P	P	21 41 46.4	+1.3
	comp=Z,1.0nm,0.7s,mb3.8,baz=11,slow=6.3,SNR=5.9						
KMI	Kunming	81.13	306	P	P	21 41 51.5	+1.9
KMI				S	S	21 51 58.8	+1.1
KMI				AMB	AMB		
	comp=Z,2.0nm,1.3s,mb3.9						
KMI				LR	LR		
	comp=N,319nm,17.2s,MS4.9						
KMI				LR	LR		
	comp=E,405nm,19.6s,MS4.9						
KMI				LR	LR		
	comp=Z,385nm,13.1s						
LSA	Lhasa	81.33	317	*e*P	P	21 41 53.2	+2.6
LSA	Lhasa	81.33	317	*e*P	P	21 41 52.1	+1.6
	comp=Z,9.9nm,1.1s,mb4.7						
SDNR	Sundarnagar	83.89	329	*e*P	P	21 42 04.8	+1.1
SMLA	Simla	84.20	329	⇑*i*P	P	21 42 20.1	+15
JIRN	Jiri	84.85	320	*e*P	P	21 42 09.7	+1.1
	comp=Z,60nm,0.9s,mb5.7						
KKN	Kakani	85.02	321	*e*P	P	21 42 09.9	+0.5
	comp=Z,17nm,0.8s,mb5.2						
GKN	Gorkha	85.02	322	*e*P	P	21 42 10.3	+0.9
	comp=Z,29nm,1.0s,mb5.4						
PKI	Pulchoki	85.18	321	*e*P	P	21 42 10.7	+0.5
	comp=Z,21nm,0.9s,mb5.3						
DMN	Daman	85.24	321	*e*P	P	21 42 11.4	+0.9
	comp=Z,76nm,1.4s,mb5.6						
KOLN	Koldanda	85.56	323	*e*P	P	21 42 12.4	+0.3
	comp=Z,16nm,0.9s,mb5.3						
CM31	Chiang Mai Arr	88.63	306	*e*P	P	21 42 27.8	+0.5
	comp=Z,11nm,1.0s,mb5.1						
CMAR	Chiang Mai Arr	88.63	306	P	P	21 42 28.4	+1.1
	comp=Z,5.9nm,0.9s,mb4.9,baz=358,slow=5.9,SNR=35						
QSPA	South Pole Qui	149.95	180	⇑*i*P	PKPdf	21 49 23.6	+3.9

IDC ***11*** *21:33:45.4±0.6,50.03S×161.82E,mb4.7/8,mb1 4.8/9,mb1mx4.6/12,mbtmp4.6/9,ML3.8/1,MS4.2/6,Ms1 4.2/6,ms1mx3.9/14,Error ellipse: s-maj=30.9km s-min=18.0km az=59.0*

NEIC ***11*** *21:33:51.9±0.4,49.40S×161.57E,h10km,mb4.8/8,Error ellipse: s-maj=10.7km s-min=6.8km az=171.0*

ISC 11 21:33:45.6±0.5**,49.94S**±0.07×**161.92E**±0.08**,h10**km**,n64,σ1§19**/50**,mb4.7**/14**,MS4.2**/4**,2C,North of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	5.73	47	*e*P	Pn	21 35 13.9	+1.1
WHZ				S	Sn	21 36 18.1	-1.3
WHZ	Wether Hill Ro	5.73	47	PN	Pn	21 35 13.5	+0.7
WHZ				SN	Sn	21 36 17.5	-1.9
WHZ	Wether Hill Ro	5.73	47	PN	Pn	21 35 13.5	+0.7
WHZ				SN	Sn	21 36 17.5	-1.9
MLZ	Mavora Lakes	6.24	45	*e*P	Pn	21 35 21.5	+1.4
MLZ	Mavora Lakes	6.24	45	PN	Pn	21 35 21.4	+1.3
MLZ	Mavora Lakes	6.24	45	PN	Pn	21 35 21.4	+1.3
TUZ	Tuapeka	6.54	55	*e*P	Pn	21 35 25.5	+1.2
TUZ				S	Sn	21 36 37.6	-2.1
TUZ	Tuapeka	6.54	55	PN	Pn	21 35 25.0	+0.8
TUZ				SN	Sn	21 36 38.3	-1.4
TUZ	Tuapeka	6.54	55	PN	Pn	21 35 25.0	+0.8
TUZ				SN	Sn	21 36 38.3	-1.4
EAZ	Earnscleugh	6.87	49	*e*P	Pn	21 35 30.2	+1.3
EAZ	Earnscleugh	6.87	49	*e*PN	Pn	21 35 29.4	+0.5
EAZ	Earnscleugh	6.87	49	*e*PN	Pn	21 35 29.4	+0.5
JCZ	Jackson Bay	7.50	41	*e*P	Pn	21 35 40.2	+2.4
JCZ				S	Sn	21 37 05.6	+1.8
JCZ	Jackson Bay	7.50	41	PN	Pn	21 35 39.8	+2.0
JCZ				*e*SN	Sn	21 37 03.2	-0.6
JCZ	Jackson Bay	7.50	41	PN	Pn	21 35 39.8	+2.0
JCZ				*e*SN	Sn	21 37 03.2	-0.6
RPZ	Rata Peaks	8.83	49	Pn	P	21 35 55.0	-1.2
	1.0nm,0.3s,baz=201,slow=8.6,SNR=4.5						
RPZ				LR	LR	21 39 15.8	
	comp=Z,1μm,19.8s,baz=338,slow=37						
DSZ	Denniston Nort	10.70	44	*e*PN	P	21 36 22.8	+0.8
DSZ				SN	S	21 38 19.4	-3.5
TAU	Tasmania Unive	12.27	299	*e*Pn	P	21 36 38.1	-5.2
	85nm,1.3s						
URZ	Urewera	15.95	49	LR	LR	21 44 14.6	
	comp=Z,551nm,18.1s,baz=60,slow=39						
TOO	Toolangi	17.09	310	*e*P	P	21 37 47.7	+1.6
	2.0nm,1.2s						
CNB	Canberra Magne	17.26	323	*e*P	P	21 37 52.4	+4.2
	2μm,1.7s						
STKA	Stephens Creek	23.57	312	*e*P	P	21 38 59.1	+2.1
	28nm,1.0s,mb4.6						
STKA	Stephens Creek	23.57	312	P	P	21 38 59.0	+2.1
	26nm,1.0s,mb4.6,baz=140,slow=9.9,SNR=27						
STKA				LR	LR	21 46 40.6	
	comp=Z,690nm,19.7s,MS4.1,baz=148,slow=33						
STKA	Stephens Creek	23.57	312	*e*P	P	21 38 58.3	+1.3
VNDA	Vanda	27.68	180	P	P	21 39 34.9	-0.3
	5.2nm,1.2s,mb4.0,baz=358,slow=13,SNR=3.6						
VNDA				LR	LR	21 47 56.2	
	comp=Z,255nm,18.6s,MS3.8,baz=7.1,slow=31						
VNDA	Vanda	27.68	180	P	P	21 39 34.6	-0.6
	19nm,1.4s,mb4.5						
VNDA				LR	LR	21 47 56.2	
CTA	Charters Tower	32.29	332	P	P	21 40 17.3	+0.6
	3.2nm,0.9s,mb4.2,baz=159,slow=12,SNR=3.8						
ASAR	Alice Springs	34.14	310	P	P	21 40 32.1	-0.7
	15nm,0.7s,mb5.0,baz=145,slow=8.4,SNR=166						
ASAR				PcP	PcP	21 43 08.4	-1.7
	1.5nm,0.9s,baz=143,slow=3.0,SNR=4.0						
ASPA	Alice Springs	34.15	310	⇑*i*P	P	21 40 32.2	-0.6
WB2	Warramunga Arr	37.10	314	⇑*i*P	P	21 40 56.8	-1.1
WRA	Warramunga Arr	37.10	314	P	P	21 40 56.7	-1.2
	14nm,1.0s,mb4.8,baz=145,slow=8.0,SNR=60						
WRA				PcP	PcP	21 43 17.2	-1.6
	3.6nm,0.9s,baz=164,slow=3.0,SNR=7.0						
WRAB	Tennant Creek	37.11	314	*e*P	P	21 40 56.8	-1.2
	26nm,0.8s,mb5.1						
RAR	Rarotonga	41.62	61	LR	LR	21 55 18.8	
	comp=Z,532nm,18.7s,MS4.4,baz=127,slow=31						
FITZ	Fitzroy Crossi	43.02	304	*e*P	P	21 41 46.6	-0.4
	20nm,1.1s,mb4.8						
MBWA	Marble Bar	43.88	295	*e*P	P	21 41 52.6	-1.3
	12nm,0.7s,mb4.7						
MBWA				*e*		21 42 06.4	
MAW	Mawson	48.24	210	LR	LR	22 00 56.9	
	comp=Z,251nm,18.6s,MS4.2,baz=280,slow=34						
SNAA	Sanae	58.21	186	P	P	21 43 39.4	-2.2
	10nm,1.3s,mb4.7,baz=157,slow=5.9,SNR=5.9						
SNAA	Sanae	58.21	186	*e*P	P	21 43 39.9	-1.7
	286nm,1.3s						
PLCA	Paso Flores	78.64	142	P	P	21 45 49.5	+0.6
	5.1nm,1.2s,mb4.3,baz=196,slow=8.1,SNR=3.5						
PLCA	Paso Flores	78.64	142	P	PcP	21 45 57.6	-0.7
	4.2nm,1.2s						
TRQA	Tornquist	84.20	147	*e*P	P	21 46 19.3	+1.3
	7.3nm,1.0s,mb4.8						
CM31	Chiang Mai Arr	87.80	302	*e*P	P	21 46 36.8	+0.6
	7.9nm,0.9s,mb4.9						
CMAR	Chiang Mai Arr	87.80	302	P	P	21 46 36.6	+0.4
	4.8nm,0.9s,mb4.7,baz=165,slow=3.2,SNR=21						
ENH	Enshi	92.41	317	*e*P	P	21 46 57.8	+0.3
	4.4nm,0.9s,mb4.8						
ILAR	Eielson Array	121.07	23	PKP	PKPdf	21 52 39.1	-1.5
	0.7nm,0.8s,baz=279,slow=3.4,SNR=6.7						
KURK	Kurchatov	122.77	311	*e*PKPdf	PKPdf	21 52 41.5	-2.6
INK	Inuvik	127.25	25	*e*PKPdf	PKPdf	21 52 50.8	-1.4
BVAR	Borovoye Array	128.22	310	PKP	PKPdf	21 52 51.2	-3.4
	1.8nm,0.9s,baz=135,slow=2.0,SNR=10						
CHKZ	Chkalovo	128.48	311	*e*PKPdf	PKPdf	21 52 53.3	-1.8
YKA	Yellowknife Ar	129.93	37	PKP	PKPdf	21 52 54.8	-2.8
	0.4nm,0.9s,baz=220,slow=1.7,SNR=7.6						
BRTR	Keskin Array B	142.61	274	PKhKP		21 53 14.9	
	1.2nm,0.9s,baz=225,slow=1.7,SNR=5.2						
IDI	Anoyia	145.66	261	PKPbc	PKPbc	21 53 25.6	+1.1
	19nm,0.9s,baz=67,slow=2.5,SNR=3.3						
KDZ	Kurdzhali	148.94	271	*e*P	PKPdf	21 53 35.0	+3.0
RZN	Rozhen	149.41	271	*i* P	PKPdf	21 53 36.0	+3.3
MMB	Musomiste	150.00	270	*i* P	PKPdf	21 53 36.0	+2.3
FRB	Frobisher Bay	150.06	43	PKPbc	PKPdf	21 53 37.0	+4.0
	25nm,1.3s,baz=253,slow=2.5,SNR=9.0						
AKASG	Malin Array Be	150.19	290	PKPbc	PKPdf	21 53 36.5	+2.9
	3.4nm,0.7s,baz=76,slow=2.3,SNR=21						
PGB	Panagyurishte	150.19	272	*e*P	PKPdf	21 53 38.0	+4.1
KKB	Krupnik	150.55	270	*i* P	PKPdf	21 53 37.0	+2.5
VTS	Vitosha	150.83	271	*e*P	PKPdf	21 53 39.0	+4.1
ARCES	ARCESS Array B	151.53	329	PKPbc	PKPdf	21 53 40.4	+5.3
	11nm,0.8s,slow=1.2,SNR=13						
FINES	FINESS Array B	153.14	312	PKP	PKPdf	21 53 33.5	-4.1
	3.0nm,0.9s,baz=46,slow=4.3,SNR=11						
FINES				PKPbc	PKPdf	21 53 43.7	+6.1
	4.8nm,0.7s,baz=93,slow=3.3,SNR=19						
FINES	FINESS Array B	153.14	312	PKP	PKPdf	21 53 33.5	-4.2
FINES				PKPbc	PKPdf	21 53 43.7	+6.1
GERES	GERESS Array B	159.36	279	PKPab	PKPab	21 54 21.5	-1.6
	1.5nm,0.8s,baz=135,slow=3.8,SNR=11						

IDC ***11*** *21:34:19.2±7.6,34.54S×179.13E,h198km±54km,mb3.9/3,mb1 4.0/5,mb1mx3.7/15,mbtmp4.4/5,Error ellipse: s-maj=95.0km s-min=24.5km az=38.0*

NEIC ***11*** *21:34:21.4±2.0,34.65S×178.60E,h184km±13km,mb4.8/4,Error ellipse: s-maj=26.4km s-min=14.8km az=225.0*

ISC 11 21:34:08.5±1.0**,33.76S**±0.07×**179.1E**±0.1**,h114**km±10km**,n98,σ1§71**/132**,mb4.8**/6**,3C-1D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.85	189	P	P	21 35 08.6	+1.6
MXZ	Matakaoa Point	3.85	189	PN	P	21 35 07.8	+0.8
MXZ				SN	S	21 35 56.3	+4.7
MXZ	Matakaoa Point	3.85	189	PN	P	21 35 07.8	+0.8
MXZ				SN	S	21 35 56.3	+4.7
PUZ	Puketiti	4.36	188	P	P	21 35 14.7	+0.8
PUZ	Puketiti	4.36	188	PN	P	21 35 14.7	+0.8
PUZ				SN	S	21 36 09.2	+5.2
PUZ	Puketiti	4.36	188	PN	P	21 35 14.7	+0.8
PUZ				SN	S	21 36 09.2	+5.2
MWZ	Matawai	4.74	195	P	P	21 35 21.0	+2.0
MWZ				S	S	21 36 22.9	+10
MWZ	Matawai	4.74	195	PN	P	21 35 20.7	+1.7
MWZ				SN	S	21 36 21.7	+8.4
MWZ	Matawai	4.74	195	PN	P	21 35 20.7	+1.7
MWZ				SN	S	21 36 21.7	+8.4
URZ	Urewera	4.77	199	P	P	21 35 21.9	+2.5
	28nm,0.3s,baz=286,slow=1.8,SNR=22						
URZ				S	S	21 36 23.5	+10
	43nm,0.3s,baz=329,slow=22,SNR=15						
URZ	Urewera	4.77	199	P	P	21 35 21.9	+2.5
URZ	Urewera	4.77	199	PN	P	21 35 21.7	+2.2
URZ				SN	S	21 36 23.3	+9.4
URZ	Urewera	4.77	199	PN	P	21 35 21.7	+2.2
URZ				SN	S	21 36 23.3	+9.4
KNZ	Kokohu	5.37	192	*e*P	P	21 35 26.8	-0.8
KNZ	Kokohu	5.37	192	PN	P	21 35 26.7	-0.9
KNZ				SN	S	21 36 30.6	+1.8
KNZ	Kokohu	5.37	192	PN	P	21 35 26.7	-0.9
KNZ				SN	S	21 36 30.6	+1.8
BKZ	Black Stump Fm	5.79	200	P	P	21 35 34.3	+1.1
BKZ	Black Stump Fm	5.79	200	*e*PN	P	21 35 34.2	+1.0
BKZ				SN	S	21 36 46.3	+7.5
BKZ	Black Stump Fm	5.79	200	*e*PN	P	21 35 34.2	+1.0
BKZ				SN	S	21 36 46.3	+7.5
MOVZ	Moawhango	6.24	204	*e*PN	P	21 35 40.6	+1.2
MOVZ				SN	S	21 36 57.0	+7.1
MOVZ	Moawhango	6.24	204	*e*PN	P	21 35 40.6	+1.2
MOVZ				SN	S	21 36 57.0	+7.1
PWZ	Pawanui	6.51	195	*e*P	P	21 35 41.4	-1.7
PWZ	Pawanui	6.51	195	PN	P	21 35 40.8	-2.2
PWZ				SN	S	21 36 57.5	+1.1
PWZ	Pawanui	6.51	195	PN	P	21 35 40.8	-2.2
PWZ				SN	S	21 36 57.5	+1.1
TSZ	Takapari Road	6.77	201	*e*P	P	21 35 46.2	-0.4
TSZ	Takapari Road	6.77	201	*e*PN	P	21 35 45.7	-0.9
TSZ	Takapari Road	6.77	201	*e*PN	P	21 35 45.7	-0.9
BFZ	Birch Farm	7.27	197	SN	S	21 37 18.7	+3.7
BFZ	Birch Farm	7.27	197	SN	S	21 37 18.7	+3.7
MRZ	Mangatainoka R	7.43	201	*e*P	P	21 35 53.7	-2.0
MRZ	Mangatainoka R	7.43	201	*e*PN	P	21 35 53.3	-2.4
MRZ	Mangatainoka R	7.43	201	*e*PN	P	21 35 53.3	-2.4
KIW	Kapiti Island	7.83	204	P	P	21 35 59.8	-1.2
KIW	Kapiti Island	7.83	204	*e*PN	P	21 35 58.4	-2.7
KIW				SN	S	21 37 32.5	+3.9
KIW	Kapiti Island	7.83	204	*e*PN	P	21 35 58.4	-2.7
KIW				SN	S	21 37 32.5	+3.9
MTW	Mount Morrison	7.91	200	P	P	21 35 59.4	-2.8
MTW	Mount Morrison	7.91	200	*e*PN	P	21 35 59.0	-3.2
MTW				SN	S	21 37 32.3	+1.6
MTW	Mount Morrison	7.91	200	*e*PN	P	21 35 59.0	-3.2
MTW				SN	S	21 37 32.3	+1.6
CAW	Cannon Point	8.00	202	P	P	21 36 01.9	-1.4
CAW	Cannon Point	8.00	202	*e*PN	P	21 36 01.3	-2.0
CAW				SN	S	21 37 34.4	+1.7
CAW	Cannon Point	8.00	202	*e*PN	P	21 36 01.3	-2.0
CAW				SN	S	21 37 34.4	+1.7
PAWZ	Paruwai Farm	8.14	200	SN	S	21 37 37.1	+0.9
PAWZ	Paruwai Farm	8.14	200	SN	S	21 37 37.1	+0.9
MSWZ	Moikau Station	8.22	200	*e*PN	P	21 36 03.6	-2.8
MSWZ	Moikau Station	8.22	200	*e*PN	P	21 36 03.6	-2.8
MRW	Makara Radio	8.23	204	*e*PN	P	21 36 03.6	-2.8
MRW				SN	S	21 37 41.2	+2.9
MRW	Makara Radio	8.23	204	*e*PN	P	21 36 03.6	-2.8
MRW				SN	S	21 37 41.2	+2.9
BHW	Baring Head	8.33	202	P	P	21 36 05.6	-2.2
BHW	Baring Head	8.33	202	SN	S	21 37 41.4	+0.6
BHW	Baring Head	8.33	202	SN	S	21 37 41.4	+0.6
NNZ	Nelson	8.71	210	*e*P	P	21 36 12.0	-0.9
NNZ				S	S	21 37 48.7	-1.3
NNZ	Nelson	8.71	210	*e*PN	P	21 36 11.9	-1.0
NNZ				SN	S	21 37 54.2	+4.2
NNZ	Nelson	8.71	210	*e*PN	P	21 36 11.9	-1.0
NNZ				SN	S	21 37 54.2	+4.2
QRZ	Quartz Range	8.77	215	*e*P	P	21 36 13.7	0.0
QRZ				S	S	21 37 56.6	+5.2
QRZ	Quartz Range	8.77	215	*e*PN	P	21 36 13.5	-0.2
QRZ	Quartz Range	8.77	215	*e*PN	P	21 36 13.5	-0.2
BSWZ	Blackbirch Sta	8.94	206	SN	S	21 37 57.7	+2.1
BSWZ	Blackbirch Sta	8.94	206	SN	S	21 37 57.7	+2.1
THZ	Tophouse	9.36	210	*e*P	P	21 36 20.6	-1.0
THZ				S	S	21 38 03.6	-2.0
THZ	Tophouse	9.36	210	*e*PN	P	21 36 19.2	-2.4
THZ				SN	S	21 38 08.8	+3.1
THZ	Tophouse	9.36	210	*e*PN	P	21 36 19.2	-2.4
THZ				SN	S	21 38 08.8	+3.1
KHZ	Kahutara	9.68	205	*e*P	P	21 36 23.4	-2.5
KHZ	Kahutara	9.68	205	*e*PN	P	21 36 23.2	-2.7
KHZ				SN	S	21 38 12.9	-0.3
KHZ	Kahutara	9.68	205	*e*PN	P	21 36 23.2	-2.7
KHZ				SN	S	21 38 12.9	-0.3
DSZ	Denniston Nort	9.83	214	*e*P	P	21 36 24.2	-3.7
LTZ	Lake Taylor	10.47	209	SN	S	21 38 32.1	-0.1
LTZ	Lake Taylor	10.47	209	SN	S	21 38 32.1	-0.1
CRLZ	Canterbury Las	11.02	205	SN	S	21 38 43.8	-1.4
CRLZ	Canterbury Las	11.02	205	SN	S	21 38 43.8	-1.4
MQZ	McQueen’s Vall	11.12	205	P	P	21 36 41.1	-4.0
MQZ	McQueen’s Vall	11.12	205	*e*PN	P	21 36 40.7	-4.4
MQZ				SN	S	21 38 44.3	-3.3
MQZ	McQueen’s Vall	11.12	205	*e*PN	P	21 36 40.7	-4.4
MQZ				SN	S	21 38 44.3	-3.3
WVZ	Waitaha Valley	11.36	213	SN	S	21 38 53.6	+0.2
WVZ	Waitaha Valley	11.36	213	SN	S	21 38 53.6	+0.2
RPZ	Rata Peaks	11.74	210	P	P	21 36 51.3	-2.0
	1.0nm,0.3s,baz=326,slow=15,SNR=3.2						
RPZ				S	S	21 39 01.2	-1.2
	6.0nm,0.3s,baz=328,slow=22,SNR=14						
RPZ	Rata Peaks	11.74	210	SN	S	21 39 01.1	-1.3
RPZ	Rata Peaks	11.74	210	SN	S	21 39 01.1	-1.3
FOZ	Fox Glacier	12.22	214	SN	S	21 39 11.5	-2.2
FOZ	Fox Glacier	12.22	214	SN	S	21 39 11.5	-2.2
ODZ	Otahua Downs	13.01	207	SN	S	21 39 29.9	-2.4
ODZ	Otahua Downs	13.01	207	SN	S	21 39 29.9	-2.4
JCZ	Jackson Bay	13.05	215	SN	S	21 39 32.2	-1.1
JCZ	Jackson Bay	13.05	215	SN	S	21 39 32.2	-1.1
CTA	Charters Tower	32.12	287	P	P	21 40 30.3	+3.2
	7.2nm,0.8s,mb4.5,baz=110,slow=12,SNR=9.9						
CTAO	Charters Tower	32.12	287	*e*P	P	21 40 30.2	+3.2
	5.2nm,0.6s,mb4.4						
ASAR	Alice Springs	40.59	272	P	P	21 41 40.9	+2.5
	3.0nm,0.8s,mb4.2,baz=109,slow=8.0,SNR=9.1						
WRAB	Tennant Creek	41.89	278	P	P	21 41 52.1	+3.0
	6.5nm,0.5s,mb4.6						
WRA	Warramunga Arr	41.89	278	P	P	21 41 51.1	+2.0
	2.4nm,0.4s,mb4.2,baz=119,slow=7.4,SNR=25						
QSPA	South Pole Qui	56.36	180	⇓*i*P	P	21 43 40.5	+1.1
	28nm,0.6s,mb5.5						
SNAA	Sanae	74.86	179	⇑*i*	P	21 45 37.0	-0.5
SNAA	Sanae	74.86	179	*e*P	P	21 45 36.0	-1.4
	110nm,1.0s,mb5.5						
VNA3	Neumayer Olymp	75.11	177	⇑*i*	P	21 45 39.3	+0.4
VNA2	Neumayer--Watz	75.52	178		P	21 45 39.4	-1.8
VNA2	Neumayer--Watz	75.52	178	⇑*i*	P	21 45 41.3	+0.1
DBIC	Dimbokro	152.81	171	PKPbc	PKPdf	21 53 51.3	+6.3
	4.2nm,0.4s,baz=156,slow=3.2,SNR=20						
KOLS	Kolonicke sedl	157.03	318	*e*PKP	PKPdf	21 54 00.1	+10
VYHS	Vyhne	159.15	321	*e*P	PKPdf	21 54 04.8	+13
VYHS	Vyhne	159.15	321	*e*	PKPdf	21 54 04.8	+13

NEIC ***11*** *21:42:58.6,17.55N×97.59W,h65km,MD4.1(MEX),After MEX.*

MEX 11 21:42:58.7±1.1**,17.61N×97.53W,h68**km±9km**,MD4.1,1C-1D,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.93	125	⇓*i*P	P	21 43 15.2	-1.2
VHO				*i* S	S	21 43 28.3	-1.3
OXX	Oaxaca	0.93	124	*e*P	P	21 43 15.0	-1.5
OXX				*e*S	S	21 43 28.0	-1.7
PNIG	Pinotepa	1.33	205	*i* P	P	21 43 19.2	-2.8
PNIG				*i* S	S	21 43 32.5	-6.6
PNIG	Pinotepa	1.33	205	*i* P	P	21 43 19.2	-2.8
PNIG				*i* S	S	21 43 36.6	-2.5
IISM	Ciudad Serdan	1.38	6	*e*P	P	21 43 20.0	-2.6
IIB	San Bernardino	1.55	330	*e*P	P	21 43 23.0	-1.9
IIB				*e*S	S	21 43 43.0	-1.2
PPM	Popocatepetl	1.79	325	*e*P	P	21 43 27.5	-0.5
PPM				*e*S	S	21 43 48.2	-1.4
PPM	Popocatepetl	1.79	325	*e*P	P	21 43 27.5	-0.5
PPM				*i* P		21 43 27.9	
PPM				*e*S	S	21 43 48.2	-1.4
PPM				*e*S	S	21 43 49.0	-0.6
YAIG	Yautepec	1.92	311	*e*P	P	21 43 28.7	-1.1
YAIG				*e*S	S	21 43 50.8	-1.9
PLIG	Platanillo	2.03	293	*e*P	P	21 43 30.5	-0.9
PLIG				*e*S	S	21 43 53.3	-2.2
ACX	Acapulco	2.39	252	*e*P	P	21 43 31.5	-5.0
CAIG	El Cayaco	2.67	258	⇑*i*P	P	21 43 37.2	-3.2
CAIG				*e*S	S	21 44 08.5	-3.1

IDC ***11*** *21:59:42.5±1.9,59.91N×139.56W,mb3.4/1,mb1 3.5/5,mb1mx3.4/21,mbtmp3.3/5,ML3.4/4,MS3.0/1,Ms1 3.0/1,ms1mx2.4/21,Error ellipse: s-maj=33.7km s-min=12.1km az=28.0*

NEIC ***11*** *21:59:44.5,60.10N×139.39W,h13km,ML3.8(PMR),ML3.6(AEIC),After AEIC.*

PGC ***11*** *21:59:44.7,60.08N×139.32W,h1km,ML3.6/4,Near Yakutat Bay, Alaska.*

ISC 11 21:59:43.3±0.3**,60.12N**±0.03×**139.41W**±0.05**,h13**km**,n57,σ1§07**/71**,mb3.6**/1**,2C,Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNL	Peninsula	0.45	179	P	Pb	21 59 52.7	+0.1
PNL				S	Sg	21 59 59.4	+0.6
YKU2	Yakutat	0.62	193	P	Pb	21 59 56.8	+1.3
CHX	Chaix Hills	0.86	267	P	Pb	22 00 01.1	+1.5
HYT	Haines Junctio	1.18	52	⇑P	Pb	22 00 05.2	+0.1
HYT				S	Sb	22 00 21.2	+1.1
HYT				Trac		22 00 23.0	
	comp=Z,323nm,0.2s						
YAH	Yahtse	1.19	283	P	Pb	22 00 06.3	+1.0
CTGM	Chitina Glacie	1.28	313	P	Pb	22 00 05.8	-0.9
CYK	Cape Yakataga	1.54	270	P	Pn	22 00 11.8	+1.1
BALM	Baldy	1.72	304	P	Pn	22 00 13.0	-0.2
BALM				S	Sn	22 00 38.4	+3.3
TGL	Tana Glacier	1.81	292	P	Pn	22 00 15.2	+0.6
WHY	Whitehorse	2.31	74	P	Pn	22 00 22.5	+0.8
WHY				S	Sn	22 00 52.2	+2.0
WHY	Whitehorse	2.31	74	⇑Pn	Pn	22 00 22.5	+0.8
WHY				Pg	Pg	22 00 25.6	-3.9
WHY				Sn	Sn	22 00 52.2	+2.0
WHY				Sg	Sg	22 00 55.6	-4.7
WHY				Trac		22 00 57.6	
	comp=Z,280nm,0.4s						
KAIM	Kayak Island	2.52	268	P	Pn	22 00 25.2	+0.5
GLB	Gilahina Butte	2.54	304	P	Pn	22 00 26.0	+1.1
GLB				S	Sn	22 00 59.3	+3.4
BESE	Bessie Mountai	2.79	122	P	Pn	22 00 28.6	0.0
BCA3	Beaver Creek A	3.17	340	P	Pn	22 00 34.7	+0.8
EYAK	Cordova Ski Ar	3.18	281	P	Pn	22 00 34.3	+0.2
DIV	Divide	3.30	291	P	Pn	22 00 36.1	+0.4
HIN	Hinchinbrook I	3.55	278	P	Pn	22 00 38.6	-0.7
VLZ	Valdez	3.56	290	P	Pn	22 00 39.6	+0.1
SIT	Sitka	3.74	143	P	Pn	22 00 42.6	+0.6
GLI	Glacier Island	3.88	285	P	Pn	22 00 44.0	-0.1
DAWY	Dawson	3.96	0	⇑Pn	Pn	22 00 46.2	+1.0
DAWY				Sn	Sn	22 01 32.4	+0.4
DAWY				Sg	Sg	22 01 48.5	-6.8
DAWY				Trac		22 01 50.1	
	comp=Z,36nm,0.2s						
PAX	Paxson	4.08	317	P	Pn	22 00 46.9	+0.1
SCM	Sheep Creek Mo	4.23	297	P	Pn	22 00 49.3	+0.4
LTI	Latouche	4.23	273	P	Pn	22 00 48.0	-1.0
THY	Trims Highway	4.48	320	P	Pn	22 00 53.0	+0.5
SML	Sawmill	4.67	295	P	Pn	22 00 55.3	+0.1
GHO	Glory Hole Cre	4.93	294	P	Pn	22 00 59.0	+0.1

PMR	Palmer	4.98	291	eP	Pn	22 01 00.8	+1.2
DLBC	Dease Lake	5.10	105	Pn	Pn	22 01 00.6	-0.7
	1.1nm,0.3s,baz=270,slow=20,SNR=4.1						
DLBC				Lg		22 02 22.1	
	7.5nm,0.3s,baz=159,slow=22,SNR=7.7						
DLBC				LR	LR	22 02 31.8	
	comp=Z,143nm,19.9s,baz=80,slow=33						
DLBC	Dease Lake	5.10	105	P	Pn	22 01 00.1	-1.1
DLBC	Dease Lake	5.10	105	Pn	Pn	22 01 00.9	-0.4
DLBC				Pg	Pg	22 01 15.3	-10
DLBC				Sg	Sg	22 02 21.5	-12
DLBC				Trac		22 02 29.8	
	comp=Z,77nm,0.6s						
PWA	Palmer West	5.34	291	eP	Pn	22 01 05.6	+0.9
SLKM	Skilak Lake	5.39	279	eP	Pn	22 01 04.7	-0.7
FIB	Fire Island	5.40	286	eP	Pn	22 01 05.4	-0.2
MCK	McKinley	5.78	313	P	Pn	22 01 10.8	-0.1
BRLK	Bradley Lake	5.78	271	P	Pn	22 01 09.8	-1.2
IL1	Eielson Array	5.82	327	P	Pn	22 01 10.1	-1.3
ILAR	Eielson Array	5.82	327	Pn	Pn	22 01 10.7	-0.7
	0.3nm,0.3s,baz=147,slow=12,SNR=13						
ILAR				Lg		22 02 50.7	
	1.1nm,0.3s,baz=130,slow=19,SNR=4.5						
TRF	Thorofare Moun	6.15	308	P	Pn	22 01 15.9	-0.2
COLA	College	6.17	324	P	Pn	22 01 20.1	+3.7
STLK	Strandline Lak	6.24	288	P	Pn	22 01 17.0	-0.3
KTH	Kantishna Hill	6.45	307	P	Pn	22 01 20.0	-0.3
RSO	Redoubt South	6.65	279	eP	Pn	22 01 22.5	-0.7
NCT	North Crescent	6.73	280	P	Pn	22 01 22.9	-1.4
OPT	Oil Point	6.97	272	P	Pn	22 01 27.1	-0.6
KDAK	Kodiak Island	7.21	257	P	Pn	22 01 28.9	-2.0
BM3	Burnt Mountain	7.68	345	P	Pn	22 01 37.1	-0.5
TT01	Tatalina	8.41	297	P	P	22 01 46.0	-1.8
INK	Inuvik	8.61	15	Pn	P	22 01 51.9	+1.3
	0.3nm,0.3s,baz=205,slow=10.0,SNR=4.9						
INK				Sn	Sn	22 03 23.5	-5.0
	0.2nm,0.3s,baz=73,slow=19,SNR=3.6						
INK				Lg		22 04 13.6	
	0.5nm,0.3s,baz=288,slow=27,SNR=8.8						
INK	Inuvik	8.61	15	Pn	P	22 01 51.9	+1.3
INK				Sn	Sn	22 03 23.5	-5.0
INK				Lg		22 04 13.6	
INK	Inuvik	8.61	15	Pn	P	22 01 52.0	+1.4
INK				Pg	P	22 02 26.2	+36
INK				Sg	Sg	22 04 09.9	-20
INK				Trac		22 04 34.4	
	comp=Z,12nm,0.8s						
IM3	Indian Mountai	8.76	318	P	P	22 01 50.5	-2.2
BMBC	Bull Mountain	10.01	106	Trac		22 05 09.4	
	comp=Z,14nm,0.9s						
YKW3	Yellowknife Ar	12.12	68	Pn	P	22 02 36.9	-1.6
YKW3				Sg	S	22 05 59.6	+65
YKW3				Trac		22 06 13.0	
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	12.13	68	Pn	P	22 02 36.4	-2.1
	0.1nm,0.3s,baz=270,slow=13,SNR=4.2						
YKA				Lg		22 06 05.4	
	0.0nm,0.3s,baz=268,slow=30,SNR=4.4						
SONM	Songino Array	59.91	315	P	P	22 09 51.1	+0.3
	0.4nm,0.7s,mb3.6,baz=41,slow=8.3,SNR=4.1						

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*IDC **11** 22:04:48.8±2.0,20.24S×68.03E,mb3.9/5,mb1 4.1/5, mb1mx3.9/16,mbtmp3.9/5,Error ellipse: s-maj=63.0km s-min=29.7km az=44.0*

*NEIC **11** 22:04:49.7±0.7,20.38S×67.90E,h10^{km},mb4.0/3,Error ellipse: s-maj=24.9km s-min=14.0km az=185.0*

ISC 11 22:04:47.9±1.0,**20.4S**±0.2×**67.9E**±0.1,**h10^{km},n9,**σ**0^{s}60**/8, **mb4.0**/8,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	Lusaka	38.12	271	eP	P	22 12 09.3	+0.3
	2.9nm,0.9s,mb4.0						
MBAR	Mbarara	41.34	294	eP	P	22 12 35.5	-0.2
	2.5nm,1.1s,mb3.8						
CMAR	Chiang Mai Arr	49.14	40	P	P	22 13 37.0	-1.1
	4.0nm,0.9s,mb4.4,baz=241,slow=8.9,SNR=19						
LSA	Lhasa	54.59	25	eP	P	22 14 20.1	+1.2
	1.6nm,0.7s,mb4.2						
ASAR	Alice Springs	60.75	106	P	P	22 15 02.4	-0.1
	0.9nm,0.8s,mb4.0,baz=265,slow=6.2,SNR=9.6						
WRA	Warramunga Arr	61.92	102	P	P	22 15 10.5	+0.1
	0.9nm,0.9s,mb3.9,baz=257,slow=6.3,SNR=7.3						
BRTR	Keskin Array B	67.84	332	P	P	22 15 48.1	-0.4
	1.7nm,1.2s,mb4.0,baz=153,slow=5.5,SNR=3.8						
SONM	Songino Array	76.17	26	P	P	22 16 38.2	+0.2
	1.1nm,0.9s,mb3.8,baz=211,slow=7.2,SNR=8.4						
ULM	Lac du Bonnet	147.56	341	PKPbc	PKPdf	22 24 34.1	+1.5
	2.1nm,0.6s,baz=26,slow=6.4,SNR=3.1						

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*NNC **11** 22:33:37.7±16.0,36.43N×70.87E,mpv3.9,Error ellipse: s-maj=267.3km s-min=130.3km az=125.0*

ISC 11 22:33:52.9±2.0,**36.68N**±0.07×**71.5E**±0.3,**h241**^{km}±26^{km}, **n17,**σ**0^{s}74**/21,**5C,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.50	139	eP	P	22 35 14.7	-0.5
THN				eS	S	22 36 19.1	-0.2
DLH	Dalhousie	5.55	137	eS	S	22 36 21.0	+0.5
AML	Almayashu	5.71	17	P	P	22 35 17.2	-0.7
	SNR=28						
UCH	Uchtor	6.03	22	P	P	22 35 22.2	+0.4
	SNR=11						
KZA	Kyzart	6.14	27	P	P	22 35 23.1	-0.1
	SNR=9.6						
EKS2	Erkin-Say	6.24	16	P	P	22 35 24.3	-0.2
	SNR=13						
AAK	Ala-Archa	6.39	21	⇑P	P	22 35 20.5	-5.9
	7.3nm,0.8s						
AAK				⇑S	S	22 36 38.1	-1.4
	27nm,0.7s						
AAK	Ala-Archa	6.39	21	P	P	22 35 26.1	-0.3
	SNR=7.4						
KBK	Karagaybulak	6.55	23	P	P	22 35 29.2	+0.8
	SNR=7.1						
ULHL	Ulahol	6.68	32	P	P	22 35 31.8	+1.8
	SNR=9.8						
SDNR	Sundarnagar	6.89	137	eP	P	22 35 33.4	+0.6
SDNR				eS	S	22 36 50.0	-0.9
TKM2	Tokmak 2	7.00	26	P	P	22 35 34.7	+0.5
	SNR=10						
SMLA	Simla	7.28	138	⇑iP	P	22 35 52.1	+14
SMLA				i S	S	22 37 13.7	+14
DDI	Dehra Dun	8.39	137	eS	S	22 37 20.4	-4.7
MK31	Makanchi Array	12.93	35	⇑P	P	22 36 49.7	+0.5
	1.9nm,1.3s,baz=220,slow=13,SNR=12						
BVA0	Borovoye Array	16.37	358	P	P	22 37 30.1	-0.5
	0.5nm,0.8s,baz=163,slow=11,SNR=19						
CHKZ	Chkalovo	17.01	358	⇑P	P	22 37 37.3	-0.4
	15nm,3.0s						

IDC 11 22:46:52.2±2.9,**5.88S**×**155.48E,mb3.8**/4,**mb1 4.0**/4, **mb1mx3.9**/12,**mbtmp3.8**/4,**MS3.3**/2,**Ms1 3.3**/2, **ms1mx2.8**/20,**1D,Error ellipse: s-maj=81.3km s-min=31.6km az=103.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.96	247	LR	LR	22 52 07.4	
	comp=Z,62nm,18.7s,baz=335,slow=35						
WB2	Warramunga Arr	24.84	234	⇓iP	P	22 52 17.1	-0.8
WRA	Warramunga Arr	24.85	234	P	P	22 52 17.2	-0.7
	1.3nm,0.3s,baz=60,slow=9.5,SNR=50						
ASAR	Alice Springs	27.27	227	P	P	22 52 38.0	-2.4
	0.4nm,0.3s,baz=57,slow=9.4,SNR=6.9						
ASAR				PcP	PcP	22 55 58.2	-2.4
	0.5nm,0.5s,baz=60,slow=2.4,SNR=6.9						
CMAR	Chiang Mai Arr	60.75	295	P	P	22 57 06.3	-2.2
	0.6nm,0.6s,baz=123,slow=5.6,SNR=5.8						
SONM	Songino Array	68.67	327	P	P	22 57 57.7	-1.9
	0.6nm,0.6s,baz=143,slow=5.2,SNR=8.4						
INK	Inuvik	88.51	21	LR	LR	23 33 02.6	
	comp=Z,55nm,21.2s,baz=84,slow=31						

IDC 11 22:49:00.6±5.7,**5.17N**×**93.79E,mb3.4**/3,**mb1 3.7**/4, **mb1mx3.5**/17,**mbtmp3.4**/4,**ML3.9**/1,**Error ellipse: s-maj=169.0km s-min=30.3km az=74.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.13	20	Pn	P	22 52 24.0	-0.5
	0.2nm,0.3s,baz=207,slow=14,SNR=8.1						
SONM	Songino Array	43.86	12	P	P	22 57 08.2	-2.2
	0.2nm,0.5s,baz=207,slow=7.1,SNR=3.9						
WRA	Warramunga Arr	47.02	123	P	P	22 57 34.2	-1.8
	0.5nm,0.6s,baz=304,slow=9.4,SNR=5.6						
ASAR	Alice Springs	48.49	128	P	P	22 57 45.5	-1.9
	0.3nm,0.4s,baz=299,slow=7.8,SNR=6.5						

NEIC 11 22:54:01.2,63.02N×**151.45W,h12^{km},ML4.0**(PMR), **ML3.7**(AEIC)**,After AEIC.,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTH	Kantishna Hill	0.59	24	P	Pb	22 54 13.1	+0.1
KTH				S	Sb	22 54 20.9	-0.1
TRF	Thorofare Moun	0.69	50	P	Pb	22 54 14.6	-0.1
TRF				S	Sb	22 54 24.0	+0.2
CUT	Chulitna	0.82	138	P	Pb	22 54 17.0	0.0
HUR	Hurricane	0.83	92	P	Pb	22 54 17.1	0.0
RND	Reindeer	1.24	71	P	Pb	22 54 24.2	+0.1
MCK	McKinley	1.34	57	P	Pb	22 54 26.2	+0.3
MCK				S	Sb	22 54 43.5	+0.6
BWN	Browne	1.46	37	P	Pn	22 54 28.1	+0.5
STLK	Strandline Lak	1.53	187	P	Pn	22 54 27.9	-0.7
PWA	Palmer West	1.56	151	P	Pn	22 54 28.1	-0.8
GHO	Glory Hole Cre	1.72	136	P	Pn	22 54 31.0	-0.2
PMR	Palmer	1.79	142	P	Pn	22 54 31.6	-0.8
CKN	Chakachatna No	1.83	191	P	Pn	22 54 32.7	-0.2
SPU	Mount Spurr	1.86	189	eP	Pn	22 54 32.8	-0.5
NEA	Nenana	1.89	33	P	Pn	22 54 32.7	-1.1
SML	Sawmill	1.89	128	P	Pn	22 54 33.4	-0.3
FIB	Fire Island	1.95	161	P	Pn	22 54 35.3	+0.6
MLY	Manley	2.05	9	P	Pn	22 54 35.6	-0.4
VOGL	Vogel Lake	2.08	166	P	Pn	22 54 37.6	+1.1
TT01	Tatalina	2.09	269	P	Pn	22 54 35.5	-1.1
RC01	Rabbit Creek A	2.10	157	P	Pn	22 54 35.8	-0.9
SCM	Sheep Creek Mo	2.26	120	P	Pn	22 54 38.3	-0.7
CCB	Clear Creek Bu	2.30	43	P	Pn	22 54 38.6	-1.1
MDM	Murphy Dome	2.41	35	P	Pn	22 54 40.2	-1.0
HDA	Harding Lake	2.44	53	P	Pn	22 54 41.0	-0.7
COLA	College	2.45	39	P	Pn	22 54 40.8	-1.0
DFR	Drift River	2.50	194	P	Pn	22 54 43.4	+0.9
NCT	North Crescent	2.56	197	P	Pn	22 54 43.7	+0.3
SLKM	Skilak Lake	2.59	166	P	Pn	22 54 43.6	-0.1
RDN	Redoubt North	2.59	194	P	Pn	22 54 43.5	-0.2
THY	Trims Highway	2.61	79	P	Pn	22 54 44.5	+0.4
RSO	Redoubt South	2.64	194	eP	Pn	22 54 44.3	-0.2
IL1	Eielson Array	2.68	47	P	Pn	22 54 43.9	-1.1
PAX	Paxson	2.73	88	P	Pn	22 54 45.3	-0.5
SVW2	Sparrevohn	2.74	227	P	Pn	22 54 45.1	-0.8
GLI	Glacier Island	2.97	134	P	Pn	22 54 49.5	+0.3
ILIM	Iliamna	3.03	194	P	Pn	22 54 51.0	+0.9
ILW	Iliamna West	3.08	196	P	Pn	22 54 51.0	+0.3
IM3	Indian Mountai	3.14	343	P	Pn	22 54 51.1	-0.5
IMA	Indian Mountai	3.21	344	eP	Pn	22 54 52.2	-0.4
FID	Port Fidalgo	3.27	132	P	Pn	22 54 53.5	+0.1
BRLK	Bradley Lake	3.28	175	P	Pn	22 54 54.4	+0.9
DIV	Divide	3.28	123	P	Pn	22 54 53.9	+0.3
LTI	Latouche	3.45	148	P	Pn	22 54 54.5	-1.5
CNPM	China Poot	3.50	178	P	Pn	22 54 56.7	-0.1
HIN	Hinchinbrook I	3.53	136	P	Pn	22 54 57.1	0.0
MENT	Mentasta	3.53	88	P	Pn	22 54 58.0	+0.8
EYAK	Cordova Ski Ar	3.67	130	P	Pn	22 54 59.6	+0.5
GLB	Gilahina Butte	3.91	110	P	Pn	22 55 02.5	-0.1
COLD	Coldfoot	4.26	7	P	Pn	22 55 07.0	-0.5
BCA3	Beaver Creek A	4.40	85	P	Pn	22 55 09.1	-0.4
KAHC	Katmai Hardscr	4.71	203	P	Pn	22 55 12.6	-1.4
BM3	Burnt Mountain	5.27	30	P	Pn	22 55 19.5	-2.3
KDAK	Kodiak Island	5.28	187	P	Pn	22 55 21.7	-0.3
DAWY	Dawson	5.50	74	P	Pn	22 55 23.4	-1.5
TNA	Tin City	7.60	297	P	Pn	22 55 52.8	-1.8
INK	Inuvik	9.08	46	eP	P	22 56 12.0	-3.2

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*NIED **11** 22:56:00,23.90N×121.70E,h8^{km},Mw4.0 Best double couple: M$_0$1.31×10^{15} NP1:ϕ_s22°,δ74°,λ63°. NP2:ϕ_s263°, δ31°,λ147°.*

*BJI **11** 22:56:13.4,23.66N×121.88E,h13^{km},mB4.7,mb4.0, ML4.1*

*IDC **11** 22:56:15.7±0.7,23.90N×121.71E,mb3.9/10,mb1 4.1/11, mb1mx4.0/22,mbtmp4.0/11,ML3.8/1,MS3.1/1,Ms1 3.3/1, ms1mx2.4/19,Error ellipse: s-maj=23.3km s-min=16.8km az=80.0*

*NEIC **11** 22:56:17.8±1.5,23.86N×121.70E,h13^{km}±9^{km},mb4.2/3, ML4.8(TAP),Error ellipse: s-maj=10.4km s-min=8.1km az=66.0*

NEIC Recorded [3 TAP] in Hua-lien; [2 TAP] in I-lan, Nan-t'ou and T'ai-chung; [1 TAP] in Chang-hua and T'ai-tung Counties.

*TAP **11** 22:56:20.9,23.96N×121.61E,h26^{km},ML4.5*

TAP Felt III J at Hualien, II J at Chiawan, II J at Shilin, II J at Hehuanshan, II J at Nanau, II J at Tachien, I J at Hungye, II J at Nanshan, I J at Ryuetan, I J at Nioudou, I J at Suao, I J at Chenggung, I J at Taichung, I J at Tsauling, II J at Dacheng.

*JMA **11** 22:56:21.2±0.3,23.90N×121.70E,h67^{km},M4.0*

ISC 11 22:56:20.2±0.3,**23.93N**±0.01×**121.71E**±0.02,**h26**^{km}±2^{km}, **n94,**σ**1^{s}01**/149,**mb3.9**/13,**MS2.9**/1,**12C-14D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.11	297	⇓iP	Pb	22 56 25.4	+0.3
TWD	Chiawan	0.19	325	⇓iP	Pb	22 56 25.8	0.0
TWD				S	Sb	22 56 29.7	0.0
ESL	Shilin	0.28	247	⇑iP	Pb	22 56 26.8	-0.3
ESL				S	Sb	22 56 30.7	-1.0
WHF	Hehuan Shan	0.47	298	⇑iP	Pb	22 56 29.3	-0.6
ENA	Nanau	0.50	3	⇓iP	Pb	22 56 30.6	+0.1
ENA				S	Sb	22 56 38.3	+0.9
EHY	Hungye	0.55	221	⇓iP	Pb	22 56 30.5	-0.8
TWT	Tachien	0.59	304	⇑iP	Pb	22 56 31.7	-0.2
TWT				S	Sb	22 56 39.2	-0.7
NNS	Nan Shan	0.60	329	⇑iP	Pb	22 56 31.7	-0.4
NNS				S	Sb	22 56 39.4	-0.7
TWF1	Yuli	0.69	214	⇓iP	Pb	22 56 32.6	-0.9
TWC	Suao	0.69	10	⇓iP	Pb	22 56 33.9	+0.3
TWC				S	Sb	22 56 44.0	+1.2
ENTT	Nioudou	0.72	349	⇓iP	Pb	22 56 34.0	-0.1
ENTT				S	Sb	22 56 43.0	-0.7
SMLT	Sun Moon Lake	0.75	267	⇑iP	Pb	22 56 34.1	-0.4
SMLT				S	Sb	22 56 43.1	-1.2
TYC	Yuchr	0.78	269	⇑iP	Pb	22 56 34.5	-0.6
TYC				S	Sb	22 56 43.9	-1.5
TWE	Neicheng	0.79	357	⇓iP	Pb	22 56 35.1	-0.2
TWE				S	Sb	22 56 47.1	+1.4
NSK	Sanguang	0.81	337	⇑iP	Pb	22 56 35.3	-0.3
NSK				S	Sb	22 56 45.2	-1.0
YUS	Yu-Shan	0.82	238	⇓iP	Pb	22 56 35.8	0.0
YUS				S	Sb	22 56 45.9	-0.5
ILA	Ilan	0.84	2	eP	Pb	22 56 36.4	+0.4
ILA				S	Sb	22 56 48.2	+1.4
CHKT	Chengkung	0.88	201	eP	Pb	22 56 36.3	-0.5
CHKT				S	Sb	22 56 50.0	+1.7
ALS	Alishan	0.93	244	⇓iP	Pb	22 56 37.6	0.0
ALS				S	Sb	22 56 49.4	-0.2
WNT	Mingjian	0.94	267	eP	Pn	22 56 38.0	+0.2
WNT				S	Sb	22 56 49.7	-0.2
NSTT	Nanjuang	0.96	317	⇑iP	Pn	22 56 38.0	0.0
NSTT				S	Sb	22 56 49.3	-1.0
TWQ1	Liyutan	0.96	296	⇑P	Pn	22 56 38.2	+0.2
TWQ1				S	Sb	22 56 50.3	0.0
ELDTW	Lidau	0.97	221	eP	Pn	22 56 36.9	-1.3
ELDTW				S	Sb	22 56 51.0	+0.2
TCU	Taichung	0.97	283	eP	Pn	22 56 38.7	+0.5
TCU				S	Sb	22 56 51.2	+0.4
NSY	Sanyi	1.00	299	⇑iP	Pn	22 56 39.3	+0.7
NSY				S	Sb	22 56 51.8	+0.3
CHN5	Tsauling	1.00	251	⇓iP	Pn	22 56 39.0	+0.3
CHN5				S	Sb	22 56 51.9	+0.3
TWA	Mucha	1.06	354	⇑P	Pn	22 56 39.8	+0.3
TWA				S	Sb	22 56 53.0	-0.2
TATO	Taipei	1.06	349	ePg	Pn	22 56 39.5	-0.1
WGK	Gukeng	1.08	257	eP	Pn	22 56 40.4	+0.6
WGK				S	Sb	22 56 54.3	+0.4
HSN	Hsinchu	1.10	322	eP	Pn	22 56 41.1	+0.9
HSN				S	Sb	22 56 55.5	+1.0
TWB1	Santiao Chiao	1.11	13	eP	Pn	22 56 40.9	+0.8
TWB1				S	Sb	22 56 55.7	+1.1
TAP1	Taipei	1.12	351	eP	Pn	22 56 40.1	-0.3
TAP1				S	Sn	22 56 54.4	-0.6
TAP	Taipei	1.12	350	eP	Pn	22 56 39.6	-0.8
TAP				S	Sn	22 56 55.1	0.0
NWF	Wu-fen Shan	1.14	3	eP	Pn	22 56 41.1	+0.4
NWF				S	Sn	22 56 56.9	+1.3
NCU	National Centr	1.15	335	eP	Pn	22 56 41.4	+0.7
NCU				S	Sn	22 56 56.1	+0.5
STYT	Tauyuan	1.16	229	⇓iP	Pn	22 56 41.0	+0.1
STYT				S	Sn	22 56 55.4	-0.6
CHN4	Tsaushan	1.18	241	⇓iP	Pn	22 56 41.8	+0.6
CHN4				S	Sn	22 56 57.5	+1.1
TWS1	Kuangyinshan	1.20	347	eP	Pn	22 56 41.7	+0.2
TWS1				S	Sn	22 56 57.4	+0.4
CHN2	Minshiung	1.20	251	eP	Pn	22 56 42.0	+0.5
CHN2				S	Sn	22 56 57.9	+0.9
WTP	Ta-pu	1.22	236	⇓iP	Pn	22 56 42.2	+0.5
WTP				S	Sn	22 56 58.0	+0.6
TWG	Pinlang	1.25	208	eP	Pn	22 56 40.4	-1.8
TWG				S	Sn	22 56 59.0	+0.8
CHY	Chiayi	1.26	250	eP	Pn	22 56 42.6	+0.3
CHY				S	Sn	22 56 58.8	+0.4
TTN	Taitung	1.28	204	eP	Pn	22 56 42.3	-0.3
YOJ	Yonaguni jima	1.30	65	P	Pn	22 56 44.0	+1.1
YOJ				S	Sn	22 57 00.7	+1.2
TWK	Hsinying	1.30	240	eP	Pn	22 56 43.4	+0.5
TWK				S	Sn	22 57 01.1	+1.5
WTCT	Ta-ch'eng	1.31	268	eP	Pn	22 56 43.2	+0.1
CHN1	Nanshi	1.31	236	eP	Pn	22 56 43.6	+0.5
CHN1				S	Sn	22 57 02.2	+2.3
SGST	Jiashian	1.33	231	eP	Pn	22 56 44.2	+0.8
SGST				S	Sn	22 57 01.9	+1.5
TWY	Chenhua	1.35	356	eP	Pn	22 56 43.5	-0.1
WSF	Szhu	1.40	258	eP	Pn	22 56 45.0	+0.7
WSF				S	Sn	22 57 03.2	+1.2
CHN8	Yiju	1.49	248	eP	Pn	22 56 45.9	+0.2
CHN8				S	Sn	22 57 05.7	+1.2
ECL	Taimali	1.50	208	eP	Pn	22 56 43.8	-1.9
CHN3	Shinhua	1.50	236	eP	Pn	22 56 47.5	+1.7
CHN3				S	Sn	22 57 08.1	+3.5
SSD	Sandimen	1.54	220	eP	Pn	22 56 46.0	-0.3
SSD				S	Sn	22 57 07.4	+1.8
SCLT	Jiali	1.58	242	eP	Pn	22 56 47.4	+0.4
TWM1	Shoushan	1.62	227	eP	Pn	22 56 49.1	+1.7
SGLT	Jiouru	1.64	223	eP	Pn	22 56 49.1	+1.3
PCYT	Pengchaiyu	1.73	11	eP	Pn	22 56 50.0	+0.9
EAST	Anshuo	1.73	208	eP	Pn	22 56 47.4	-1.6
TAW	Tawu	1.73	206	eP	Pn	22 56 48.9	-0.2
SCZT	Fangliau	1.84	213	eP	Pn	22 56 50.8	0.0
LAY	Lan-yu	1.88	185	eP	Pn	22 56 49.4	-1.9
IRIF	Iriomote-Funau	1.89	77	P	Pn	22 56 52.0	+0.7
IRIF				S	Sn	22 57 15.8	+1.3
HATJ	Hateruma jima	1.92	86	P	Pn	22 56 52.0	+0.3
HATJ				S	Sn	22 57 16.4	+1.2
WDGT	Dungji	2.00	251	eP	Pn	22 56 52.4	-0.4
WDGT				S	Sn	22 57 15.9	-1.3
PNG	Penghu	2.01	260	eP	Pn	22 56 52.4	-0.7
PNG				S	Sn	22 57 16.7	-0.9
HEN	Hengchun	2.11	205	eP	Pn	22 56 56.2	+1.7
JKRS	Kuro-shima	2.12	81	P	Pn	22 56 55.7	+1.0
JKRS				S	Sn	22 57 20.8	+0.4
TWK1	Hengchun	2.14	203	eP	Pn	22 56 55.2	+0.2
JIJ	Ishigaki jima	2.26	78	P	Pn	22 56 57.0	+0.3
JIJ				S	Sn	22 57 23.4	-0.6
JTJ	Tarama	2.82	75	P	Pn	22 57 04.9	+0.3
JTJ				S	Sn	22 57 37.2	-0.9
QZH	Quanzhou	3.02	290	⇑iP	Pn	22 57 05.8	-1.7
QZH				S	Sn	22 57 38.1	-5.1
QZH				Smax			
	comp=N,810nm,0.4s						
QZH				Smax			
	comp=E,520nm,0.5s						
KNM	Kinmen	3.04	280	eP	Pn	22 57 07.6	-0.1
JMJ	Miyako jima 2	3.38	74	eS	Sn	22 57 52.6	+0.2
JOGS	Gusukube	3.47	75	P	Pn	22 57 14.5	+0.6
JOGS				eS	Sn	22 57 54.7	+0.1
JKE	Kume jima 2	5.18	61	P	Pn	22 57 37.4	-0.7
JOW	Kunigami	6.60	63	Pn	Pn	22 57 55.1	-3.0
	comp=E,4.5nm,0.3s,baz=244,slow=28,SNR=22						
JOW				Sn	Sn	22 59 10.1	-3.2
	comp=E,0.8nm,0.3s,baz=139,slow=19,SNR=2.1						
JOW	Kunigami	6.60	63	P	Pn	22 57 55.5	-2.7
CMAR	Chiang Mai Arr	21.91	260	P	P	23 01 10.5	-2.8
	comp=E,1.0nm,0.8s,mb3.3,baz=68,slow=8.8,SNR=6.1						
CMAR				LR	LR	23 10 09.8	
	comp=E,42nm,18.8s,MS2.9,baz=100,slow=38						
ULN	Ulaanbaatar	26.59	338	P	P	23 01 56.9	-1.1
	comp=E,0.8nm,0.6s,mb3.4						
SONM	Songino Array	26.79	337	P	P	23 01 58.6	-1.3
	comp=E,0.7nm,0.8s,mb3.3,baz=156,slow=9.7,SNR=7.8						
WRAB	Tennant Creek	45.30	163	eP	P	23 04 34.8	-3.1
	comp=E,3.9nm,0.8s,mb4.3						
WRA	Warramunga Arr	45.30	163	P	P	23 04 35.0	-3.0
	comp=E,1.9nm,0.7s,mb4.1,baz=345,slow=8.7,SNR=15						
BVAR	Borovoye Array	48.18	321	P	P	23 04 57.4	-2.7
	comp=E,0.5nm,0.5s,mb3.8,baz=116,slow=7.5,SNR=3.6						
CHKZ	Chkalovo	48.24	322	eP	P	23 04 58.3	-2.3
	comp=E,1.0nm,0.4s,mb4.2						
ASAR	Alice Springs	48.77	165	P	P	23 05 02.9	-2.2
	comp=E,0.8nm,0.4s,mb4.1,baz=341,slow=7.7,SNR=11						
STKA	Stephens Creek	58.66	160	P	P	23 06 14.2	-3.6
	comp=E,1.2nm,0.6s,mb4.1,baz=332,slow=9.1,SNR=5.7						
ILAR	Eielson Array	69.22	27	P	P	23 07 23.9	-2.5
	comp=E,0.7nm,0.8s,mb3.7,baz=298,slow=8.9,SNR=5.3						
FINES	FINESS Array B	71.91	330	P	P	23 07 40.4	-2.4
	comp=E,4.1nm,1.1s,mb4.3,baz=72,slow=6.0,SNR=3.4						
FINES	FINESS Array B	71.91	330	P	P	23 07 40.4	-2.4
INK	Inuvik	73.28	22	P	P	23 07 48.9	-1.7
	comp=E,1.7nm,0.8s,mb4.1,baz=349,slow=5.2,SNR=6.7						
INK	Inuvik	73.28	22	P	P	23 07 48.9	-1.7
YKA	Yellowknife Ar	83.02	23	P	P	23 08 42.8	-1.4
	comp=E,1.0nm,0.5s,mb4.1,baz=312,slow=5.0,SNR=26						
YKA	Yellowknife Ar	83.02	23	P	P	23 08 42.8	-1.4

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*CSEM **11** 23:18:30.2±0.4,37.85N×30.16E,h30^{km},MD2.9,Error ellipse: s-maj=11.3km s-min=5.0km az=80.0*

*ISK **11** 23:18:57.9,39.10N×27.92E,h12^{km},ML3.6*

ISC 11 23:18:57.7±0.5,**39.11N**±0.02×**27.93E**±0.03,**h5**^{km}±4^{km}, **n62,**σ**0^{s}76**/72,**3C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKS	Akhisar	0.25	202	i PG	Pg	23 19 03.1	+0.4
BALB	Balikesir	0.53	356	i PG	Pg	23 19 09.1	+0.7
BALB				i SG	Sg	23 19 17.2	+1.7
BTOK	Tokmak	0.66	7	i P	Pg	23 19 11.3	+0.4
BTOK				i S	Sg	23 19 21.1	+1.4
DST	Dursunbey	0.73	47	i PG	Pg	23 19 12.3	-0.1
MANT	Manisa	0.79	141	i P	Pg	23 19 13.2	-0.2
MANT				i S	Sg	23 19 24.2	+0.3
KDAG	Bornova	0.88	217	i P	Pb	23 19 14.5	-0.5
KDAG				i S	Sb	23 19 27.8	+1.0
IZM	Izmir	0.88	217	PG	Pg	23 19 14.5	-0.8
IZM				SG	Sg	23 19 27.4	+0.4
AYVA	Ayvalik	0.98	282	i P	Pb	23 19 16.8	-0.1
AYVA				i S	Sb	23 19 30.4	+0.4
BLCB	Balcova	1.00	224	PG	Pg	23 19 17.4	-0.3
ORLT	Orhaneli	1.20	38	PN	Pn	23 19 21.2	+0.1
KCT	Karacabey	1.20	16	PN	Pn	23 19 21.2	0.0
EDC	Edincik	1.24	358	PN	Pn	23 19 21.5	-0.2
BNT	Bandirma	1.25	360	PN	Pn	23 19 21.6	-0.2
ULDT	Uludag	1.39	42	i P	Pb	23 19 24.3	+0.5
ULDT				i S	Sb	23 19 43.1	+1.3
EZN	Ezine	1.44	300	PN	Pn	23 19 24.4	-0.1
AYDN	Tasoluk	1.45	182	i P	Pn	23 19 23.9	-0.7
AYDN				i S	Sb	23 19 44.2	+0.8
KHL	Karahalli	1.47	122	PN	Pn	23 19 25.4	+0.4
DENT	Denizli	1.60	147	PN	Pn	23 19 27.0	+0.1
ALT	Altintas	1.70	91	ePN	Pn	23 19 28.3	+0.1
MLSB	Milas	1.81	184	ePN	Pn	23 19 29.8	-0.1
YLV	Yalova	1.83	37	ePN	Pn	23 19 29.7	-0.5
YER	Yerkesik	1.99	172	ePN	Pn	23 19 32.0	-0.4
ISK	Istanbul-Kandi	2.14	24	ePN	Pn	23 19 33.9	-0.7
HRT	Hereke	2.17	37	ePN	Pn	23 19 34.1	-0.9
GPA	Golpazari	2.18	57	ePN	Pn	23 19 35.1	-0.1
ALN	Alexandroupoli	2.30	322	eP	Pn	23 19 36.7	-0.2

ESKT	**Eskisehir**	2.30	79	*e*PN	Pn	23 19 37.0	+0.1
ISP	**Isparta**	2.39	121	*e*PN	Pn	23 19 38.6	+0.5
FETY	**Fethiye**	2.63	159	*e*PN	Pn	23 19 41.7	+0.1
BCK	**Bucak**	2.66	127	*e*PN	Pn	23 19 41.8	-0.2
ELL	**Elmali**	2.83	146	*e*PN	Pn	23 19 44.5	+0.1
HENT	**Hendek**	2.85	52	*i* P	Pn	23 19 51.4	+6.6
HENT				*i* S	Sg	23 20 30.2	-2.4
MDU	**Mudurnu**	2.87	61	*e*PN	Pn	23 19 45.3	+0.3
EDRB	**Edirne**	2.88	342	*e*PN	Pn	23 19 44.7	-0.5
ANTB	**Antalya**	3.08	135	*e*PN	Pn	23 19 48.1	+0.1
KIZT	**Kizilcal**	3.09	93	*e*PN	Pn	23 19 48.5	+0.4
AOS	**Alonnisos**	3.15	272	*e*P	Pn	23 19 48.6	-0.4
KDZ	**Kurdzhali**	3.18	324	*i* P	Pn	23 19 51.0	+1.5
OUR	**Ouranopolis**	3.28	293	*e*P	Pn	23 19 50.0	-0.8
DIM	**Dimitrovgrad**	3.46	329	*i* S	Sg	23 20 53.0	+0.1
JMB	**Yambol**	3.51	343	*i* S	Sg	23 20 52.0	-2.5
RZN	**Rozhen**	3.56	317	*i* P	Pn	23 19 55.0	+0.2
KONT	**Konya--Tatoy**	3.66	107	*e*PN	Pn	23 19 55.4	-0.9
LOD	**Lodumlu**	3.82	77	*e*PN	Pn	23 19 58.6	+0.1
PLD	**Plovdiv**	3.87	322	*i* P	Pn	23 19 59.0	-0.3
SRS	**Serrai**	3.88	302	*e*P	Pn	23 19 58.4	-1.1
SOH	**Sokhos**	3.91	297	*e*P	Pn	23 19 59.3	-0.5
MMB	**Musomiste**	4.06	309	*i* P	Pn	23 20 02.0	+0.1
SAFT	**Safranbolu**	4.22	58	*e*PN	Pn	23 20 04.2	0.0
LIT	**Litokhoron**	4.32	285	*e*P	Pn	23 20 04.8	-0.8
AGG	**Agios Georgios**	4.36	271	*e*P	Pn	23 20 07.0	+0.8
KNT	**Kendrikon**	4.37	300	*e*P	Pn	23 20 06.0	-0.4
KNT	**Kendrikon**	4.37	300	*e*P	Pn	23 20 05.9	-0.4
PGB	**Panagyurishte**	4.47	321	*i* S	Sg	23 21 22.0	-4.5
KAMT	**Kaman**	4.50	85	*e*PN	Pn	23 20 08.3	+0.2
PVL	**Pavlikeni**	4.55	335	*i* P	Pn	23 20 08.0	-0.9
KKB	**Krupnik**	4.61	308	*i* P	Pn	23 20 10.0	+0.3
VTS	**Vitosha**	4.99	316	*i* P	Pn	23 20 16.0	+0.8
VTS				*i* S	Sg	23 21 37.5	-6.4
FNA	**Florina**	5.31	290	*e*P	Pn	23 20 19.8	+0.2
TIRR	**Tirgusor**	5.36	4	⇑P	Pn	23 20 18.8	-1.5
MLR	**Muntele Rosu**	6.55	348	⇑P	Pn	23 20 40.8	+3.7
VRI	**Vrincioaia**	6.81	353	⇑P	Pn	23 20 43.1	+2.3

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*NIC **11** 23:20:35.3±0.1, 36.32N×30.98E, h25^{km}, ML3.6, MW3.1*

*HLW **11** 23:20:35.8, 35.76N×30.89E, h33^{km}, Mb3.5*

*CSEM **11** 23:20:36.3±0.1, 35.62N×31.09E, h40^{km}, Mw3.1, Error ellipse: s-maj=4.3km s-min=1.5km az=89.0*

*ISK **11** 23:20:38.0, 35.72N×31.11E, h39^{km}, MD3.7*

ISC 11 23:20:36.5±0.5**, 35.56N**±0.03×**30.91E**±0.08**, h33^{km}, n22, σ1^{s}29**/28**, 4C-1D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	**Paphos**	1.35	119	P	P	23 21 03.4	+4.2
ANTB	**Antalya**	1.36	351	PN	Pn	23 20 58.8	-0.7
ANTB				SN	Sn	23 21 15.5	-1.0
ALFC	**Alevga**	1.44	106	P	P	23 21 02.6	+2.1
	9.7nm,0.2s						
ALFC				S	S	23 21 24.2	+5.8
ELL	**Elmali**	1.44	326	PN	Pn	23 21 02.0	+1.4
LEF	**Lefka**	1.68	104	PN	Pn	23 21 04.2	+0.1
SZAC	**Souni-Zanaja**	1.80	116	P	P	23 21 09.0	+3.3
SZAC				S	S	23 21 34.9	+7.3
FETY	**Fethiye**	1.83	307	*e*PN	Pn	23 21 09.2	+3.0
HDMB	**Hadim**	1.90	42	PN	Pn	23 21 06.2	-1.0
BCK	**Bucak**	1.92	352	PN	Pn	23 21 06.8	-0.7
MAMC	**Mammari**	1.93	101	P	P	23 21 08.1	+0.7
ISP	**Isparta**	2.31	352	*e*PN	Pn	23 21 12.7	-0.3
KONT	**Konya--Tatoy**	2.65	26	*e*PN	Pn	23 21 16.8	-1.2
DENT	**Denizli**	2.66	326	*e*PN	Pn	23 21 19.6	+1.5
KIZT	**Kizilcal**	3.41	13	*e*PN	Pn	23 21 27.8	-0.9
AMAG	**Maghara**	5.27	158	⇑P	P	23 21 54.5	-0.4
AMAG				S	S	23 22 53.4	-1.9
HMYD	**Mayadein**	5.75	181	⇑P	P	23 22 02.5	+0.9
HNAT	**Natroun**	5.91	182	⇑P	P	23 22 04.7	+0.8
SUZ		5.92	164	⇓P	P	23 22 04.4	+0.2
SUZ				S	S	23 23 09.2	-2.6
HSAF	**As Saff**	5.95	175	P	P	23 22 05.0	+0.5
HSAF	**As Saff**	5.95	175	P	P	23 22 04.9	+0.5
GLL	**Jalalah**	6.00	173	⇑P	P	23 22 05.3	+0.1
GLL				S	S	23 23 11.3	-2.4
SWA2		7.80	218	P	P	23 22 29.8	-0.7

IDC 11 23:22:21.2±6.8**, 2.89N**×**93.02E, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.5**/17**, mbtmp3.6**/3**, ML4.2**/1**, Error ellipse: s-maj=203.9km s-min=34.8km az=74.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	16.52	20	Pn	P	23 26 14.9	-1.2
	0.3nm,0.3s,baz=213,slow=11,SNR=12						
SONM	**Songino Array**	46.24	12	P	P	23 30 48.2	-1.8
	0.2nm,0.7s,baz=192,slow=6.5,SNR=4.1						
ASAR	**Alice Springs**	47.75	126	P	P	23 31 00.3	-2.0
	0.8nm,0.8s,baz=312,slow=8.6,SNR=6.8						

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*NEIC **11** 23:24:24.9, 19.56N×65.41W, h73^{km}, MD3.7(RSPR), After RSPR.*

RSPR 11 23:24:24.9, 19.56N×**65.41W, h73^{km}**±28^{km}**, MD3.7**/6**, MD3.7**/6**, 7C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	1.35	199	⇑*e*P	P	23 24 46.5	-1.9
CSB	**Colonia Sabana**	1.45	210	⇑*e*P	P	23 24 48.1	-1.6
CSB				*e*S	S	23 25 07.2	-0.9
MTP	**Monte Pirata**	1.46	186	⇑*e*P	P	23 24 49.0	-1.0
MTP				*e*S	S	23 25 08.0	-0.5
HUMP	**Col San Antoni**	1.47	197	⇑*e*P	P	23 24 49.0	-1.0
SJG	**San Juan**	1.60	206	⇑*e*P	P	23 24 50.4	-1.4
SJG				*e*S	S	23 25 09.8	-1.9
AOPR	**Arecibo Observ**	1.75	227	⇑*e*P	P	23 24 52.9	-0.9
AOPR				*e*S	S	23 25 14.6	-0.5
MGP	**Maguayo**	2.22	226	⇑*e*P	P	23 24 59.5	-0.7

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*BJI **11** 23:26:31.3, 8.46N×127.47E, h35^{km}, mb4.6*

*MAN **11** 23:26:40.6, 9.47N×126.83E, h13^{km}, mb4.8, ML3.7, MS3.7*

*NEIC **11** 23:26:43.1±0.6, 9.42N×126.52E, mb4.2/3, Error ellipse: s-maj=27.7km s-min=12.0km az=76.0*

*IDC **11** 23:26:43.1±0.9, 9.43N×126.52E, h35^{km}±7^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.7/17, mbtmp3.8/8, Error ellipse: s-maj=41.1km s-min=17.0km az=71.0*

ISC 11 23:26:39.8±1.9**, 9.48N**±0.05×**126.96E**±0.05**, h23^{km}**±14^{km}**, h35^{km}**±2.7^{km}**:pP-P, n31, σ1^{s}28**/40**, mb4.0**/13**, 3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	1.41	249	*e*P	Pn	23 27 02.5	-1.9
BUTP				*e*S	Sn	23 27 17.3	-5.1
SCPH	**Surigao**	1.48	282	*e*P	Pn	23 27 03.9	-1.4
SCPH				*e*S	Sn	23 27 23.0	-1.1
MSLP	**Maasin**	2.17	288	*e*P	Pn	23 27 15.0	-0.2
MSLP				*e*S	Sn	23 27 44.0	+2.4
CGP	**Cagayan de Oro**	2.46	246	⇓*e*P	Pn	23 27 20.2	+0.8
CGP				*e*S	Sn	23 27 49.2	+0.2
BUKP	**Musuan**	2.46	230	*e*P	Pn	23 27 19.5	+0.2
BUKP				*e*S	Sn	23 27 52.3	+3.3
PLP	**Palo**	2.57	311	*e*P	Pn	23 27 20.7	-0.1
MATI	**Mati**	2.61	195	*e*P	Pn	23 27 21.2	-0.3
TBP	**Tagbilaran**	3.06	274	*e*P	Pn	23 27 27.4	-0.5
TBP				*i* S	Sn	23 28 05.2	+1.0
LLP	**Lapu-Lapu**	3.06	286	*e*P	Pn	23 27 28.4	+0.5
LLP				*e*S	Sn	23 27 59.5	-4.8
KCP	**Kidapawan**	3.07	217	*e*P	Pn	23 27 31.0	+2.9
KCP				*i* S	Sn	23 28 07.7	+3.1
DCPH	**Dipolog City**	3.67	256	⇓*i*P	Pn	23 27 36.0	-0.5
DCPH				*e*S	Sn	23 28 18.6	-1.1
SNPH	**Sibulan**	3.67	268	*e*P	Pn	23 27 36.0	-0.6
PAGZ	**Pagadian**	3.89	246	*e*P	Pn	23 27 40.0	+0.3
GUIM	**Jordan**	4.45	285	*e*P	Pn	23 27 48.3	+0.7
RCP	**Roxas**	4.63	297	⇓*e*P	Pn	23 27 50.3	+0.1
PVCP	**Virac**	4.92	326	*e*P	Pn	23 27 55.2	+0.8
NJ2	**Nanjing**	23.68	343	*e*P	P	23 31 52.6	+1.8
NJ2				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.7						
CMAR	**Chiang Mai Arr**	28.58	291	P	P	23 32 33.2	-3.3
	comp=Z,1.4nm,1.0s,mb3.7,baz=90,slow=7.8,SNR=6.0						
WRA	**Warramunga Arr**	30.13	166	P	P	23 32 52.0	+1.6
	comp=Z,0.5nm,0.5s,mb3.5,baz=348,slow=9.4,SNR=4.4						
WRA				pP	pP	23 33 00.2	+3.0
	comp=Z,0.9nm,0.5s,baz=347,slow=9.7,SNR=5.9						
MBWA	**Marble Bar**	31.27	193	P	P	23 32 58.3	-2.1
	comp=Z,1.8nm,0.4s,mb4.2						
BJI	**Beijing**	31.91	344	P	P	23 33 06.3	+0.4
BJI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
ASAR	**Alice Springs**	33.64	168	P	P	23 33 19.3	-1.8
	comp=Z,0.4nm,0.4s,mb3.7,baz=348,slow=7.3,SNR=6.0						
ULN	**Ulaanbaatar**	41.79	340	*e*P	P	23 34 29.1	-0.1
	comp=Z,1.8nm,0.7s,mb3.8						
SONM	**Songino Array**	41.99	339	P	P	23 34 30.5	-0.3
	comp=Z,0.6nm,0.6s,mb3.4,baz=153,slow=9.3,SNR=10						
KURK	**Kurchatov**	57.09	326	*e*P	P	23 36 24.2	-2.6
	comp=Z,6.7nm,1.1s,mb4.6						
ILAR	**Eielson Array**	79.85	26	P	P	23 38 49.5	+1.7
	comp=Z,0.7nm,1.1s,mb3.5,baz=252,slow=6.9,SNR=5.1						
ARCES	**ARCESS Array B**	85.16	340	P	P	23 39 14.8	-0.3
	comp=Z,4.5nm,0.9s,mb4.6,baz=79,slow=6.2,SNR=6.7						
ARCES				pP	pP	23 39 26.3	+3.8
	comp=Z,2.0nm,0.6s,baz=79,slow=6.2,SNR=1.7						
ARCES	**ARCESS Array B**	85.16	340	P	P	23 39 14.8	-0.3
ARCES				pP	pP	23 39 26.3	+3.8
FINES	**FINESS Array B**	86.90	332	P	P	23 39 22.1	-1.7
	comp=Z,1.1nm,0.7s,mb4.2,baz=72,slow=6.0,SNR=7.4						
FINES				pP	pP	23 39 34.5	+3.2
	comp=Z,1.9nm,0.8s,baz=76,slow=7.9,SNR=1.9						
YKA	**Yellowknife Ar**	94.20	24	P	P	23 39 59.2	+1.4
	comp=Z,0.2nm,0.5s,mb3.8,baz=297,slow=4.6,SNR=5.8						
YKA	**Yellowknife Ar**	94.20	24	P	P	23 39 59.2	+1.4

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*CSEM **12** 00:01:24.4±0.8, 44.27N×26.81E, h26^{km}±9^{km}, MD3.2/3, Error ellipse: s-maj=16.0km s-min=3.1km az=359.0, After BUC*

*NEIC **12** 00:01:25.8, 44.41N×26.88E, ML3.6(BUC), After BUC.*

BUC 12 00:01:24.6±0.5**, 44.28N**×**26.81E, h26^{km}**±5^{km}**, MD3.2**/4**, 10C-6D, Error ellipse: s-maj=10.5km s-min=1.8km az=359.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUC	**Bucharest**	0.53	285	⇓*i*P	Pb	00 01 35.9	+0.6
BUC				*i* S	Sb	00 01 44.2	+1.7
BUC	**Bucharest**	0.53	285	*i* S	Sb	00 01 44.2	+1.7
BUC1	**Bucharest**	0.56	277	⇓*i*P	Pb	00 01 35.9	+0.1
BUC1				*i* S	Sb	00 01 44.2	+0.7
HARR	**Harsova**	0.90	63	⇑*i*P	Pb	00 01 41.5	-0.1
HARR				*i* S	Sb	00 01 53.3	+0.1
HARR	**Harsova**	0.90	63	⇑*i*P	Pb	00 01 41.5	0.0
HARR				*i* S	Sb	00 01 53.3	+0.1
TIRR	**Tirgusor**	1.17	81	⇑*i*P	Pn	00 01 45.8	+0.4
TIRR				*i* S	Sn	00 02 01.3	+0.7
TIRR	**Tirgusor**	1.17	81	⇑*i*P	Pn	00 01 45.8	+0.4
TIRR				*i* S	Sn	00 02 01.3	+0.7
CFR	**Carcaliu**	1.30	46	⇑*i*P	Pn	00 01 48.1	+0.7
CFR				*i* S	Sn	00 02 04.0	-0.1
CFR	**Carcaliu**	1.30	46	⇑*i*P	Pn	00 01 48.1	+0.7
CFR				*i* S	Sn	00 02 04.0	-0.1
MLR	**Muntele Rosu**	1.35	333	⇓*i*P	Pn	00 01 48.8	+0.7
MLR				*i* S	Sn	00 02 07.9	+2.5
MLR	**Muntele Rosu**	1.35	333	⇓*i*P	Pn	00 01 48.8	+0.7
MLR				*i* S	Sn	00 02 07.9	+2.5
SNX	**Sinaia**	1.41	320	⇑*i*P	Pn	00 01 49.6	+0.7
SNX				*i* S	Sn	00 02 09.0	+2.2
SNX	**Sinaia**	1.41	320	⇑*i*P	Pn	00 01 49.6	+0.7
SNX				*i* S	Sn	00 02 09.0	+2.2
VRI	**Vrincioaia**	1.58	358	⇑*i*P	Pn	00 01 54.9	+3.5
VRI				*i* S	Sn	00 02 14.8	+3.5
TLCR		1.69	57	⇓*i*P	Pn	00 01 52.9	-0.1
TLCR				⇑P		00 01 57.8	
TLCR				*i* S	Sn	00 02 14.0	0.0
TLCR				S	Sn	00 02 16.3	+2.3
TLCR		1.69	57	⇓*i*P	Pn	00 01 52.9	-0.1
TLCR				*i* S	Sn	00 02 14.0	0.0

IDC 12 00:22:31.0±1.2**, 55.66S**×**26.50W, mb4.2**/2**, mb1 4.0**/3**, mb1mx3.6**/15**, mbtmp3.9**/3**, ML3.0**/1**, Error ellipse: s-maj=58.7km s-min=26.9km az=58.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	18.95	157	P	P	00 26 53.1	-2.4
	0.0nm,0.3s,baz=328,slow=15,SNR=3.7						
LVC	**Limon Verde**	45.44	299	P	P	00 30 52.0	-1.3
	3.9nm,0.6s,baz=202,slow=4.0,SNR=12						
VNDA	**Vanda**	46.98	182	P	P	00 31 03.0	-1.7
	1.2nm,0.5s,baz=262,slow=2.2,SNR=8.7						
YKA	**Yellowknife Ar**	136.14	318	PKP	PKPdf	00 41 51.6	-3.2
	0.2nm,0.7s,baz=132,slow=2.0,SNR=4.3						
ILAR	**Eielson Array**	150.14	312	PKPbc	PKPdf	00 42 21.4	+2.5
	1.5nm,0.8s,baz=124,slow=3.9,SNR=13						
SONM	**Songino Array**	150.31	85	PKPbc	PKPdf	00 42 23.2	+3.6
	0.8nm,0.5s,baz=226,slow=3.4,SNR=12						

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*IDC **12** 00:26:42.4±0.9, 11.61S×72.52W, mb3.9/9, mb1 4.1/10, mb1mx3.9/19, mbtmp3.9/10, ML2.9/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/31, Error ellipse: s-maj=44.2km s-min=16.7km az=55.0*

*NEIC **12** 00:26:45.6±3.3, 11.68S×72.61W, h22^{km}±25^{km}, mb4.3/3, Error ellipse: s-maj=15.5km s-min=10.5km az=197.0*

ISC 12 00:26:45.2±0.6**, 11.68S**±0.10×**72.57W**±0.08**, h33^{km}, n22, σ1^{s}11**/18**, mb4.0**/12**, MS3.0**/2**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	4.19	265	*e*P	P	00 27 47.8	-0.5
LPAZ	**La Paz**	6.29	137	Pn	Pn	00 28 17.5	-0.7
	0.1nm,0.3s,baz=319,slow=9.3,SNR=2.2						
LPAZ				Pg	P	00 28 34.1	+16
	0.8nm,0.3s,baz=307,slow=11,SNR=6.9						
LPAZ				Lg		00 30 01.5	
	1.3nm,0.3s,baz=153,slow=18,SNR=3.4						
SAML	**Samuel**	9.63	74	*e*P	P	00 29 03.7	-1.0
LVC	**Limon Verde**	11.42	163	LR	LR	00 34 29.7	
	comp=Z,95nm,20.6s,baz=308,slow=41						
ROSC	**El Rosal**	16.52	354	LR	LR	00 37 17.9	
	comp=Z,114nm,19.5s,baz=80,slow=39						
SDV	**Santo Domingo**	20.52	5	LR	LR	00 38 36.6	
	comp=Z,39nm,21.1s,MS2.8,baz=223,slow=35						
BDFB	**Brasilia**	24.18	102	P	P	00 32 02.1	+2.3
	2.1nm,0.6s,mb3.8,baz=291,slow=8.9,SNR=4.3						
PLCA	**Paso Flores**	28.99	177	P	P	00 32 43.8	-0.2
	1.4nm,0.7s,mb3.8,baz=327,slow=12,SNR=4.0						
SJG	**San Juan**	30.27	12	LR	LR	00 45 41.1	
	comp=Z,47nm,19.1s,MS3.1,baz=72,slow=38						
TXAR	**Lajitas Array**	50.62	324	P	P	00 35 43.2	-0.2
	0.5nm,0.7s,mb3.5,baz=141,slow=8.0,SNR=5.1						
SDCO	**Great Sand Dun**	58.05	329	P	P	00 36 37.7	+0.1
	0.8nm,0.8s,mb3.8						
PDAR	**Pinedale Array**	63.89	330	P	P	00 37 18.5	+1.4
	0.3nm,0.6s,mb3.5,baz=113,slow=6.9,SNR=2.6						
ULM	**Lac du Bonnet**	64.95	344	P	P	00 37 22.2	-1.6
	2.5nm,0.9s,mb4.3,baz=145,slow=6.3,SNR=3.6						
NVAR	**Mina Array Bea**	65.64	322	P	P	00 37 28.5	+0.1
	0.4nm,0.6s,mb3.6,baz=121,slow=6.7,SNR=3.7						
SCHQ	**Schefferville**	66.43	4	P	P	00 37 31.0	-2.2
	5.5nm,1.1s,mb4.5,baz=187,slow=8.1,SNR=2.4						
HLID	**Hailey**	66.90	328	*e*P	P	00 37 36.3	0.0
FFC	**Flin Flon**	70.66	342	*e*P	P	00 37 59.1	-0.2
	1.7nm,0.7s,mb4.1						
FCC	**Fort Churchill**	72.35	348	*e*P	P	00 38 09.2	-0.1
	9.9nm,1.4s,mb4.5						
YKA	**Yellowknife Ar**	80.81	342	P	P	00 38 57.7	+0.9
	1.1nm,0.9s,mb3.8,baz=138,slow=5.8,SNR=15						
YKA	**Yellowknife Ar**	80.81	342	P	P	00 38 57.7	+0.9
INK	**Inuvik**	90.57	341	P	P	00 39 47.0	+2.2
	1.4nm,1.0s,mb4.2,baz=110,slow=7.7,SNR=3.4						
SONM	**Songino Array**	143.95	1	PKP	PKPdf	00 46 18.4	+1.2
	1.0nm,0.9s,baz=330,slow=3.0,SNR=5.3						

IDC 12 00:37:27.6±2.3**, 10.08N**×**91.46E, mb3.9**/3**, mb1 4.0**/4**, mb1mx3.7**/18**, mbtmp3.8**/4**, ML3.7**/1**, MS2.8**/1**, Ms1 3.1**/1**, ms1mx2.8**/19**, Error ellipse: s-maj=62.7km s-min=29.0km az=64.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	**Vishakhapatnam**	10.95	315	*i* P	P	00 40 06.0	-2.8
VIS				*i* S	S	00 42 01.5	-12
CMAR	**Chiang Mai Arr**	11.04	40	Pn	P	00 40 07.4	-2.6
	0.1nm,0.3s,baz=229,slow=16,SNR=6.8						
CMAR				LR	LR	00 44 06.0	
	comp=Z,50nm,18.2s,baz=215,slow=36						
SONM	**Songino Array**	39.69	16	P	P	00 45 01.4	-1.8
	2.3nm,0.9s,baz=199,slow=6.3,SNR=17						
BVAR	**Borovoye Array**	46.08	342	P	P	00 45 53.1	-2.0
	0.3nm,0.7s,baz=153,slow=3.2,SNR=2.7						
WRA	**Warramunga Arr**	51.69	125	P	P	00 46 37.0	-1.9
	0.8nm,0.3s,baz=303,slow=9.3,SNR=2.9						

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*IDC **12** 00:38:23.4±15.0, 3.83S×130.72E, mb4.0/1, mb1 4.6/3, mb1mx4.0/12, mbtmp4.4/3, ML4.5/2, Error ellipse: s-maj=284.8km s-min=173.0km az=117.0*

ISC 12 00:38:30.9±1.9**, 4.4S**±0.1×**130.2E**±0.2**, h33^{km}, n7, σ1^{s}01**/13**, mb3.8**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	8.51	165	*e*P	P	00 40 35.0	+0.3
	4.6nm,0.2s						
KAKA				*e*S	S	00 42 09.4	-1.2
FITZ	**Fitzroy Crossi**	14.31	198	*e*P	P	00 41 54.6	+1.2
	13nm,1.4s						
FITZ				*e*S	S	00 44 30.8	-1.0
WRA	**Warramunga Arr**	15.93	166	Pn	P	00 42 14.9	+0.6
	1.3nm,0.3s,baz=348,slow=11,SNR=39						
WRA				Sn	S	00 45 03.5	-6.1
	0.9nm,0.3s,baz=332,slow=22,SNR=6.5						
WB2	**Warramunga Arr**	15.93	166	*e*P	P	00 42 14.1	-0.2
WB2				*e*S	S	00 45 03.4	-6.3
ASAR	**Alice Springs**	19.45	170	P	P	00 42 57.5	-0.1
	5.0nm,0.3s,baz=350,slow=10,SNR=264						
ASAR				S	S	00 46 31.1	+1.3
	0.3nm,0.3s,baz=345,slow=17,SNR=7.7						
ASPA	**Alice Springs**	19.45	170	*e*P	P	00 42 57.5	-0.1
ASPA				*e*S	S	00 46 33.0	+3.2
STKA	**Stephens Creek**	29.31	160	P	P	00 44 31.2	-1.5
	0.8nm,0.4s,mb3.8,baz=328,slow=6.9,SNR=3.5						

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*IDC **12** 00:42:36.6±9.1, 8.10N×93.57E, mb3.8/4, mb1 4.0/5, mb1mx3.6/19, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=209.8km s-min=57.3km az=138.0*

ISC 12 00:42:40.5±3.1**, 8.3N**±0.3×**93.7E**±0.2**, h33^{km}, n11, σ0^{s}50**/11**, mb4.1**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	11.32	26	Pn	P	00 45 23.1	+0.1
	0.4nm,0.3s,baz=217,slow=14,SNR=4.9						
JIRN	**Jiri**	20.57	341	*e*P	P	00 47 18.2	-0.9
	7.9nm,0.4s						
PKI	**Pulchoki**	20.75	339	*e*P	P	00 47 21.4	+0.4
	15nm,0.7s						
DMN	**Daman**	20.90	338	*e*P	P	00 47 22.7	+0.2
	12nm,0.7s						
KKN	**Kakani**	21.00	339	*e*P	P	00 47 23.4	-0.2
	16nm,0.8s,mb4.4						
GKN	**Gorkha**	21.43	337	*e*P	P	00 47 27.7	-0.2
	16nm,0.7s,mb4.4						
KOLN	**Koldanda**	21.64	335	*e*P	P	00 47 30.8	+0.9
	14nm,0.8s,mb4.5						
ZAL	**Zalesovo**	46.11	353	P	P	00 51 03.7	+0.4
	1.4nm,0.5s,mb4.2,baz=305,slow=8.4,SNR=5.5						
BVAR	**Borovoye Array**	48.49	341	P	P	00 51 21.4	-0.5
	0.3nm,0.5s,mb3.6,baz=135,slow=6.1,SNR=2.7						
FINES	**FINESS Array B**	72.18	332	P	P	00 54 03.0	-0.6
	2.2nm,1.0s,mb4.0,baz=90,slow=6.9,SNR=5.7						
GERES	**GERESS Array B**	77.27	318	P	P	00 54 33.8	+0.5
	0.2nm,0.5s,mb3.4,baz=90,slow=1.0,SNR=4.0						

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*NEIC **12** 00:45:19.5, 38.91S×177.60E, h28^{km}, ML3.7(WEL), After WEL.*

WEL 12 00:45:19.4±0.2**, 38.92S**×**177.63E, h27^{km}**±2^{km}**, ML3.7**/4**, 4C, Error ellipse: s-maj=2.6km s-min=1.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	0.11	162	P	Pb	00 45 24.5	0.0
KNZ				S	Sb	00 45 28.9	+1.0
KNZ	**Kokohu**	0.11	162	⇑P*	Pb	00 45 24.5	0.0
KNZ				S*	Sb	00 45 28.6	+0.8
MWZ	**Matawai**	0.58	352	P	Pb	00 45 31.0	0.0
MWZ				S	Sb	00 45 40.1	+1.1
MWZ	**Matawai**	0.58	352	⇑P*	Pb	00 45 31.0	-0.1
MWZ				S*	Sb	00 45 40.1	+1.1
URZ	**Urewera**	0.77	328	P	Pb	00 45 32.9	-1.2
URZ	**Urewera**	0.77	328	⇑P*	Pb	00 45 33.5	-0.6
URZ				S*	Sb	00 45 44.3	0.0
BKZ	**Black Stump Fm**	0.92	254	P	Pn	00 45 36.0	-0.7
BKZ	**Black Stump Fm**	0.92	254	⇑PN	Pn	00 45 35.9	-0.7
BKZ				SN	Sn	00 45 48.8	-0.3
PUZ	**Puketiti**	0.97	31	PN	Pn	00 45 36.5	-0.9
PUZ				SN	Sn	00 45 50.2	-0.2
EDRZ	**Edgecumbe**	1.07	319	P	Pn	00 45 37.9	-0.8
EDRZ	**Edgecumbe**	1.07	319	*e*PN	Pn	00 45 37.9	-0.8
TAZ	**Tarawera**	1.11	307	P	Pn	00 45 38.9	-0.5
TAZ	**Tarawera**	1.11	307	PN	Pn	00 45 38.9	-0.5
PATZ	**Paeroa**	1.20	296	P	Pn	00 45 40.6	0.0
PATZ	**Paeroa**	1.20	296	PN	Pn	00 45 40.1	-0.6
LIRZ	**Lichensteins R**	1.33	313	PN	Pn	00 45 42.6	0.0
KHZ	**Kahutara**	4.68	220	*e*SN	Sn	00 47 15.0	-9.4
MQZ	**McQueen's Vall**	6.08	216	*e*SN	Sn	00 47 46.6	-13

IDC 12 00:51:23.9±8.1**, 6.25S**×**147.91E, h94^{km}**±50^{km}**, mb3.4**/2**, mb1 3.6**/4**, mb1mx3.4**/13**, mbtmp3.8**/4**, Error ellipse: s-maj=78.2km s-min=58.4km az=79.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.22	193	P	P	00 52 12.3	-1.4
	13nm,0.3s,baz=351,slow=6.5,SNR=36						
PMG				S	S	00 52 50.9	-0.2
	22nm,0.3s,baz=199,slow=19,SNR=9.9						
WRA	**Warramunga Arr**	18.95	223	P	P	00 55 36.5	-3.8
	0.3nm,0.3s,baz=52,slow=11,SNR=8.7						
ASAR	**Alice Springs**	21.94	216	P	P	00 56 09.8	-1.1
	1.0nm,0.4s,baz=49,slow=9.1,SNR=14						
STKA	**Stephens Creek**	26.17	192	P	P	00 56 50.6	-0.9
	1.7nm,0.8s,baz=25,slow=7.6,SNR=3.8						

IDC 12 01:28:00.2±1.6**, 13.61S**×**166.95E, mb4.1**/7**, mb1 4.3**/7**, mb1mx4.2**/14**, mbtmp4.1**/7**, Error ellipse: s-maj=64.1km s-min=24.0km az=137.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	29.49	228	P	P	01 34 07.2	-1.2
	2.3nm,0.5s,baz=61,slow=3.3,SNR=2.8						
WRA	**Warramunga Arr**	31.81	254	P	P	01 34 26.7	-2.4
	1.2nm,0.7s,baz=81,slow=7.1,SNR=7.0						
ASAR	**Alice Springs**	32.80	247	P	P	01 34 35.0	-2.6
	1.5nm,0.5s,baz=75,slow=9.4,SNR=38						
ASAR				PcP	PcP	01 37 19.8	-3.1
	0.6nm,0.6s,baz=78,slow=2.3,SNR=6.3						
CMAR	**Chiang Mai Arr**	74.21	294	P	P	01 39 40.4	-1.0
	1.7nm,0.6s,baz=125,slow=4.6,SNR=8.3						
SONM	**Songino Array**	81.42	324	P	P	01 40 18.9	-1.7
	0.4nm,0.4s,baz=152,slow=6.7,SNR=10						
ILAR	**Eielson Array**	85.57	18	P	P	01 40 39.9	-1.4
	1.0nm,0.6s,baz=236,slow=4.6,SNR=26						
YKA	**Yellowknife Ar**	96.70	27	P	P	01 41 32.3	-1.1
	0.1nm,0.4s,baz=257,slow=4.6,SNR=5.0						
ARCES	**ARCESS Array B**	119.10	345	PKP	PKPdf	01 46 50.8	-1.8
	4.9nm,1.1s,baz=65,slow=2.3,SNR=10						

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*THE **12** 01:47:18.3, 38.45N×23.78E, h7^{km}, ML4.1*

*ATH **12** 01:47:19.7, 38.62N×23.57E, h17^{km}±2^{km}, MD4.0/15, ML3.9*

*NEIC **12** 01:47:19.7, 38.61N×23.55E, h18^{km}, mb3.9/11, MD3.8(PDG), ML4.1(THE), ML3.9(ATH), After ATH.*

*IDC **12** 01:47:19.2±0.7, 38.58N×23.39E, mb4.1/15, mb1 4.1/23, mb1mx4.0/31, mbtmp4.0/23, ML3.3/7, MS3.7/4, Ms1 3.7/4, ms1mx3.1/29, Error ellipse: s-maj=14.6km s-min=10.9km*

az=92.0

*CSEM **12** 01:47:19.9±0.1, 38.62N×23.70E, h5^{km}, mb4.4/2, Ms3.1, Error ellipse: s-maj=1.6km s-min=1.3km az=91.0*

*MOS **12** 01:47:20.4±1.0, 38.65N×23.66E, h10^{km}, mb4.3/11, Error ellipse: s-maj=5.4km s-min=2.9km az=108.6*

*PDG **12** 01:47:21.1±0.5, 38.67N×23.59E, h12^{km}±1^{km}*

ISC 12 01:47:20.0±0.6**, 38.60N**±0.02×**23.55E**±0.02**, h13^{km}**±4^{km}**, n217, σ1^{s}40**/244**, mb4.0**/17**, MS3.6**/4**, 24C-9D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKR	Lokris	0.43	278	⇓*i*PB	Pb	01 47 28.1	-0.9
MPAR	Parnis Oros	0.47	162	*e*PB	Pb	01 47 29.5	0.0
PTL	Penteli	0.60	155	⇑*i*PN	Pn	01 47 31.6	-2.3
AOS	Alonnisos	0.63	24	*e*Pg	Pg	01 47 32.2	-0.6
ATH	Athens Observa	0.64	168	⇑*i*PN	Pn	01 47 32.4	-2.0
MGER	Gerania Oros	0.65	201	*e*PB	Pb	01 47 32.5	-0.2
NEO	Neokhori	0.76	340	⇑*i*PN	Pn	01 47 34.6	-1.5
XOR	Xorichti	0.82	340	*e*Pg	Pg	01 47 35.9	-0.7
XOR				*e*Sg	Sg	01 47 53.5	+5.9
NAIG	Nisos Aigina	0.84	183	*e*PB	Pb	01 47 35.7	-0.2
AGG	Agios Georgios	1.04	295	*e*Pb	Pb	01 47 40.1	+0.7
AGG				*e*Sb	Sb	01 47 58.5	+5.8
PAIG	Paliouri	1.33	4	*e*Pb	Pb	01 47 44.5	+0.1
EVR	Evrytania	1.40	284	⇓*i*PN	Pn	01 47 46.5	+1.2
LIT	Litokhoron	1.71	332	*e*Pb	Pb	01 47 50.0	-0.9
LIT				*e*Sb	Sb	01 48 16.9	+4.7
OUR	Ouranopolis	1.77	11	*e*Pb	Pb	01 47 50.9	-1.0
OUR				*e*Sb	Sb	01 48 15.5	+1.7
PLG	Polygyros	1.78	357	*e*PN	Pn	01 47 51.0	+0.3
ITM	Ithomi	1.91	223	*e*PN	Pn	01 47 54.7	+2.1
VLI	Veliai	1.94	195	*e*PB	Pb	01 47 53.7	-1.0
THE	Thessaloniki	2.08	348	*e*Pn	Pn	01 47 55.1	0.0
APE	Apeiranthos	2.19	134	*e*PB	Pb	01 47 57.4	-1.6
KZN	Kozani	2.19	322	*e*PN	Pn	01 47 57.6	+0.9
PRK	Paraskevi	2.22	72	*e*PN	Pn	01 47 58.5	+1.4
SOH	Sokhos	2.23	356	*e*Pn	Pn	01 47 57.9	+0.7
KYTH	Kithira	2.35	190	*e*PB	Pb	01 47 59.5	-2.2
VLS	Valsamata	2.36	261	*e*PN	Pn	01 48 01.1	+2.0
GRG	Griva	2.52	340	*e*Pn	Pn	01 48 01.0	-0.3
GRG				*e*Sn	Sn	01 48 34.3	+2.2
SRS	Serrai	2.52	1	*e*Pn	Pn	01 48 01.4	0.0
AYVA	Ayvalik	2.55	73	*i* P	Pn	01 48 10.8	+9.0
KNT	Kendrikon	2.61	349	*e*Pn	Pn	01 48 03.4	+0.7
IGT	Igoumenitsa	2.67	292	*e*Pn	Pn	01 48 06.1	+2.5
IGT				*e*Sn	Sn	01 48 41.8	+5.7
SANT	Santorini	2.69	145	P	Pn	01 47 59.3	-4.5
SANT	Santorini	2.69	145	P	Pn	01 47 59.3	-4.5
FNA	Florina	2.75	323	*e*Pn	Pn	01 48 05.5	+0.7
FNA				*e*Sn	Sn	01 48 42.9	+4.8
FNA	Florina	2.75	323	*e*Pn	Pn	01 48 05.4	+0.7
FNA				S	Sn	01 48 42.9	+4.8
NVR	Nevrokopi	2.76	5	*e*PN	Pn	01 48 04.7	-0.1
LSK	Leskovik	2.76	305	*e*Pn	Pn	01 48 07.0	+2.2
LSK				*i* Sn	Sn	01 48 45.2	+6.9
KDAG	Bornova	2.92	93	*i* P	Pn	01 48 08.1	+1.0
RDO	Rodhopi	2.97	30	*e*PN	Pn	01 48 07.3	-0.5
MMB	Musomiste	2.99	3	*i* P	Pn	01 48 07.7	-0.4
ALN	Alexandroupoli	3.00	39	*e*Pn	Pn	01 48 07.3	-0.9
ALN				*e*Sn	Sn	01 48 42.0	-2.3
KEK	Kerkira	3.12	292	*e*Pb	Pb	01 48 13.9	-1.1
KEK	Kerkira	3.12	292	*e*PN	Pn	01 48 11.5	+1.6
RZN	Rozhen	3.22	16	*i* P	Pn	01 48 11.3	0.0
OHR	Ohrid	3.29	321	*i* Pn	Pn	01 48 14.3	+2.0
OHR				*i*		01 48 26.2	
OHR				*i*		01 48 53.8	
OHR				*i*		01 49 09.2	
OHR	Ohrid	3.29	321	*i* Pn	Pn	01 48 14.3	+2.0
OHR				*i* S	Sn	01 48 53.8	+2.2
KKB	Krupnik	3.29	354	*i* P	Pn	01 48 12.3	0.0
KDZ	Kurdzhali	3.37	25	*i* P	Pn	01 48 12.8	-0.7
BDRM	Kayabasi	3.44	115	*i* P	Pn	01 48 16.9	+2.5
IDI	Anoyia	3.47	162	Pn	Pn	01 48 15.4	+0.5
	4.5nm,0.3s,baz=313,slow=15,SNR=29						
IDI				Sn	Sn	01 48 56.4	+0.2
	4.0nm,0.3s,baz=262,slow=23,SNR=4.2						
IDI				Lg		01 49 11.9	
	7.0nm,0.3s,baz=288,slow=20,SNR=2.9						
AYDN	Tasoluk	3.54	104	*i* P	Pn	01 48 18.6	+2.7
PLD	Plovdiv	3.62	14	*e*P	Pn	01 48 18.0	+1.1
BTOK	Tokmak	3.67	70	*i* P	Pg	01 48 32.8	-0.6
SKO	Skopje	3.74	335	*i* Pn	Pn	01 48 19.0	+0.3
SKO				*i*		01 48 24.0	
SKO				*i*		01 48 33.8	
DIM	Dimitrovgrad	3.77	23	*e*P	Pn	01 48 19.0	-0.1
GVD	Gavdhos	3.77	173	P	Pn	01 48 15.4	-3.8
MANT	Manisa	3.93	90	*i* P	Pn	01 48 34.6	+13
PGB	Panagyurishte	3.98	7	*e*P	Pn	01 48 23.0	+0.9
VTS	Vitosha	4.00	356	⇓P	Pn	01 48 22.9	+0.5
QSH	Qafa e Shtames	4.04	317	*e*Pn	Pn	01 48 27.6	+4.5
QSH				*i* Sn	Sn	01 49 19.6	+8.8
QSH	Qafa e Shtames	4.04	317	*i* Pn	Pn	01 48 27.6	+4.5
DNZL	Cakiroluk	4.43	100	*i* P	Pg	01 48 45.6	-2.8
ULDT	Uludag	4.60	69	*i* P	Pn	01 48 31.3	+0.5
ULC	Ulcinj	4.71	317	⇑*i*Pn	Pn	01 48 33.0	+0.6
ULC				*e*Sn	Sn	01 49 27.4	-0.1
PVL	Pavlikeni	4.81	16	*i* P	Pn	01 48 32.0	-1.9
PVY	Plav	4.83	327	⇑*i*Pn	Pn	01 48 34.8	+0.6
PVY				*e*Sn	Sn	01 49 30.1	-0.6
TTG	Podgorica	5.04	321	⇑*i*Pn	Pn	01 48 37.8	+0.7
TTG				*e*Sn	Sn	01 49 34.4	-1.3
IVA	Berane	5.09	328	⇑*i*Pn	Pn	01 48 38.7	+0.8
IVA				*e*Sn	Sn	01 49 36.6	-0.7
BUM	Brajici-Budva	5.13	318	⇑*i*Pn	Pn	01 48 38.5	+0.2
BUM				*e*Sn	Sn	01 49 37.0	-1.1
TIP	Timpagrande	5.33	278	*e*P	Pn	01 48 40.5	-0.7
HCY	Herceg Novi	5.44	317	⇑*i*Pn	Pn	01 48 43.0	+0.2
HCY				*e*Sn	Sn	01 49 44.7	-1.3
NKY	Niksic	5.45	322	⇑*i*Pn	Pn	01 48 43.4	+0.4
NKY				*e*Sn	Sn	01 49 45.0	-1.2
GRI	Girifalco	5.58	275	*e*Pn	Pn	01 48 44.8	0.0
PLE	Pljevlja	5.68	328	⇑*i*Pn	Pn	01 48 46.3	+0.2
PLE				*e*Sn	Sn	01 49 50.1	-1.8
ORI	Oriolo Calabro	5.70	287	*e*Pn	Pn	01 48 46.4	0.0
BRY	Bratogost	5.74	320	⇑*i*Pn	Pn	01 48 47.0	0.0
BRY				*e*Sn	Sn	01 49 52.1	-1.3
SG1	Sgolgore (BA)	5.75	295	*e*Pn	Pn	01 48 46.6	-0.6
ESKT	Eskisehir	5.76	78	*i* P	Pn	01 48 52.4	+5.1
UPM	Unac-Piva	5.79	324	⇑*i*Pn	Pn	01 48 48.2	+0.4
UPM				*e*Sn	Sn	01 49 53.1	-1.6
HENT	Hendek	6.09	66	*i* P	Pn	01 48 47.6	-4.3
DIVS	Divcibare	6.12	335	⇑*i*Pn	Pn	01 48 51.2	-1.1
CDT	Castel del Mon	6.13	296	*e*Pn	Pn	01 48 51.7	-0.8
STON	Ston	6.16	316	*i* Pn	Pn	01 48 52.0	-1.0
STON				*i* Sn	Sn	01 49 58.8	-5.2
MTTG	Motta San Giov	6.21	267	*e*Pn	Pn	01 48 52.6	-1.0
MTTG	Motta San Giov	6.21	267	*e*Pn	Pn	01 48 52.6	-1.0
MGR	Morigerati	6.38	286	*e*Pn	Pn	01 48 55.8	-0.3
MGR	Morigerati	6.38	286	*e*Pn	Pn	01 48 55.8	-0.3
MRLC	Muro Lucano	6.58	292	*e*Pn	Pn	01 48 58.3	-0.6
MRLC	Muro Lucano	6.58	292	*e*Pn	Pn	01 48 58.3	-0.6
FGMS	Monte Sant'Ang	6.60	301	*e*Pn	Pn	01 48 58.2	-0.9
MS1	Monte Sant'Ang	6.60	300	*e*Pn	Pn	01 48 58.1	-1.1
SGO	Sicignano	6.66	290	*e*Pn	Pn	01 48 59.7	-0.3
SNX	Sinaia	6.91	12	⇓P	Pn	01 49 04.0	+0.5
MLR	Muntele Rosu	7.12	14	Pn	Pn	01 49 06.1	-0.3
	0.4nm,0.3s,baz=194,slow=6.9,SNR=16						
MLR				Sn	Sn	01 50 29.1	+1.2
	0.3nm,0.3s,baz=194,slow=19,SNR=1.9						
MLR				Lg		01 51 07.1	
	baz=270,slow=20,SNR=1.9						
MLR	Muntele Rosu	7.12	14	⇑P	Pn	01 49 06.7	+0.3
MLR	Muntele Rosu	7.12	14	⇑P	Pn	01 49 06.7	+0.3
MLR				S	Sn	01 50 29.1	+1.2
BZS	Buzias	7.16	349	⇓P	Pn	01 49 05.4	-1.7
VAE	Valguarnera	7.30	264	Pn	Pn	01 49 07.4	-1.5
	0.3nm,0.3s,baz=146,slow=18,SNR=2.7						
VAE				Sn	Sn	01 50 30.5	-1.9
	1.0nm,0.3s,baz=204,slow=20,SNR=2.3						
CFR	Carcaliu	7.41	26	⇓P	Pn	01 49 09.4	-1.2
VRI	Vrincioaia	7.64	17	⇓P	Pn	01 49 13.6	-0.1
CII	Carovilli	7.74	297	*e*Pn	Pn	01 49 15.9	+0.8
CII	Carovilli	7.74	297	*e*Pn	Pn	01 49 15.9	+0.8
BRTR	Keskin Array B	7.92	79	Pn	Pn	01 49 18.4	+0.7
	0.2nm,0.3s,baz=254,slow=12,SNR=7.8						
SDI	San Donato	8.08	296	*e*Pn	P	01 49 20.5	+0.6
PTQR	Pietraquaria	8.48	297	*e*Pn	P	01 49 26.6	+1.2
PTQR	Pietraquaria	8.48	297	*e*Pn	P	01 49 26.6	+1.2
RHK1	Bakonya	8.52	333	*e*P	P	01 49 25.6	-0.4
AQU	L'Aquila	8.60	299	*e*P	P	01 49 24.1	-3.0
NRCA	Norcia	8.98	301	*e*Pn	P	01 49 31.4	-1.0
NRCA	Norcia	8.98	301	*e*Pn	P	01 49 31.4	-1.0
BURAR	Bucovina Array	9.10	7	⇓P	P	01 49 33.9	-0.1
MNS	Montasola	9.10	298	*e*P	P	01 49 34.8	+0.7
BOJS	Bojanci	9.26	321	*i* Pn	P	01 49 34.1	-2.1
BOJS				*e*Sn	Sn	01 51 15.9	-5.3
CRES	Cresnjev	9.39	323	*i* Pn	P	01 49 36.1	-1.9
FSSB	Fossombrone	9.59	306	*e*Pn	P	01 49 38.5	-2.2
FSSB	Fossombrone	9.59	306	*e*Pn	P	01 49 38.5	-2.2
VISS	Visnje	9.67	321	*e*Pn	P	01 49 39.0	-2.9
JAVS	Javornik	10.12	319	*e*Pn	P	01 49 46.0	-2.2
PERS	Pernice	10.15	325	*e*Pn	P	01 49 46.0	-2.5
VOY	Vojsko	10.31	319	*e*Pn	P	01 49 48.2	-2.4
VOY				*e*Sn	S	01 51 40.8	-6.2
KOLS	Kolonicke sedl	10.38	355	*e*	P	01 49 53.9	+2.4
CRVS	Cervenica-Dubn	10.41	352	*e*	P	01 49 55.0	+2.9
ARSA	Arzberg	10.46	328	⇓*i*P	P	01 49 49.2	-3.5
	3.8nm,0.7s						
VYHS	Vyhne	10.47	342	*e*	P	01 49 53.2	+0.4
SMOL	Smolenice	10.86	338	*e*PN	P	01 49 53.9	-4.3
SMOL				*e*		01 50 06.7	
KWP	Kalwaria	11.05	357	P	P	01 50 01.4	+0.6
KBA	Koelnbreinsper	11.30	322	⇑*i*P	P	01 50 01.5	-2.7
	2.5nm,0.6s						
KBA	Koelnbreinsper	11.30	322	⇑*i*P	P	01 50 01.5	-2.7
KBA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MOA	Molln	11.46	327	⇑*i*P	P	01 50 04.3	-2.0
	comp=Z,6.2nm,0.8s						
PGF	Pioggiola	11.75	294	*e*P	P	01 50 12.9	+2.6
	comp=Z,76nm,1.2s						
PGF	Pioggiola	11.75	294	*e*P	P	01 50 12.9	+2.6
PGF				pmax	pmax		
	comp=Z,38nm,1.3s						
VRAC	Vranov	11.82	337	Pn	P	01 50 08.9	-2.3
	comp=Z,0.0nm,0.3s,baz=136,slow=11,SNR=4.5						
GERES	GERESS Array B	12.47	328	Pn	P	01 50 16.9	-3.0
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=7.5						
SQTA	Sankt Quirin	12.48	318	⇑*i*P	P	01 50 18.1	-2.0
	comp=Z,4.7nm,0.6s						
SQTA	Sankt Quirin	12.48	318	⇑*i*P	P	01 50 18.1	-2.0
SQTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KHC	Kasperske Hory	12.74	329	*e*P	P	01 50 22.3	-1.3
AKASG	Malin Array Be	12.76	17	Pn	P	01 50 22.9	-0.8
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=4.0						
DPC	Dobruska-Polom	12.83	339	*e*P	P	01 50 24.9	+0.2
DAVOX	Davos	12.95	314	Pn	P	01 50 24.8	-1.6
	baz=342,slow=20						
PRU	Pruhonice	13.08	333	*e*P	P	01 50 26.8	-1.2
SBF	Sospel	13.22	299	*e*P	P	01 50 32.1	+2.2
MBDF	Montbardon	13.95	301	*e*P	P	01 50 40.0	+0.5
	comp=Z,22nm,1.1s						
LPG	La Plagne	14.25	304	*e*P	P	01 50 45.4	+2.0
	comp=Z,12nm,0.8s						
LPG	La Plagne	14.25	304	*e*P	P	01 50 45.4	+2.0
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPL	La Plagne	14.27	304	*e*P	P	01 50 45.8	+2.1
	comp=Z,13nm,0.9s						
LPL	La Plagne	14.27	304	*e*P	P	01 50 45.8	+2.1
LPL				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ORIF	Oris-en-Rattie	14.61	301	*e*P	P	01 50 50.8	+2.6
	comp=Z,9.4nm,0.8s						
ORIF				*e*R			
	comp=Z,161nm,20.2s						
CLL	Collm	14.72	333	⇑*i*P	P	01 50 56.5	+6.9
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	Collm	14.72	333	⇑*i*P	P	01 50 56.5	+6.9
	comp=Z,9.0nm,0.9s						
CLL	Collm	14.72	333	⇑*i*	P	01 50 56.5	+6.9
CABF	La Chapelle	15.13	308	*e*P	P	01 50 57.8	+2.9
HINF	Hinteralfeld	15.24	313	*e*P	P	01 50 58.9	+2.5
	comp=Z,10nm,1.0s						
HINF	Hinteralfeld	15.24	313	*e*P	P	01 50 58.9	+2.5
HINF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CDF	Champ du Feu	15.32	315	*e*P	P	01 50 59.7	+2.2
KIV	Kislovodsk	15.34	63	*e*P	P	01 51 03.1	+5.3
KIV				*e*		01 53 51.9	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VIVF	Saint-Julien-l	15.41	300	*e*P	P	01 51 01.0	+2.4
SUW	Suwalki	15.42	359	P	P	01 50 58.9	+0.2
SUW				pmax	pmax		
	comp=Z,50nm,1.0s						
SUW	Suwalki	15.42	359	P	P	01 50 58.9	+0.2
	comp=Z,50nm,1.0s						
SUW	Suwalki	15.42	359	P	P	01 50 58.9	+0.2
	comp=Z,50nm,1.0s						
HAU	Haudompre	15.63	313	*e*P	P	01 51 04.1	+2.6
	comp=Z,8.1nm,0.8s						
HAU				*e*R			
	comp=Z,161nm,17.1s						
SMF	Signal de Mont	16.56	305	*e*P	P	01 51 16.2	+2.9
	comp=Z,19nm,1.1s						
SMF	Signal de Mont	16.56	305	*e*P	P	01 51 16.2	+2.9
SMF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MEZF	Maizieres J'vi	16.63	312	*e*P	P	01 51 17.7	+3.5
MTLF	Montolieu	16.78	293	*e*P	P	01 51 18.9	+2.7
AVF	Avril sur Loir	16.92	305	*e*P	P	01 51 21.0	+3.0
	comp=Z,31nm,1.4s						
AVF	Avril sur Loir	16.92	305	*e*P	P	01 51 21.0	+3.0
AVF				pmax	pmax		
	comp=Z,16nm,1.4s						
SSF	Saint Saulge	16.93	306	*e*P	P	01 51 21.0	+3.0
SSF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSF	Saint Saulge	16.93	306	*e*P	P	01 51 21.0	+3.0
	comp=Z,5.8nm,1.0s						
BGF	Bois d'Agland	17.17	304	*e*P	P	01 51 24.2	+3.2
CAF	Calviac	17.21	298	*e*P	P	01 51 24.2	+2.6
TCF	Toulx Ste Croi	17.49	303	*e*P	P	01 51 28.0	+2.9
BAIF	Baives	17.91	316	*e*P	P	01 51 33.1	+2.9
	comp=Z,13nm,1.0s						
BAIF	Baives	17.91	316	*e*P	P	01 51 33.1	+2.9
BAIF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LFF	La Frestale	18.13	298	*e*P	P	01 51 35.9	+2.9
	comp=Z,58nm,1.4s						
LFF	La Frestale	18.13	298	*e*P	P	01 51 35.9	+2.9
LFF				pmax	pmax		
	comp=Z,29nm,1.4s						
OBN	Obninsk	18.72	24	*e*P	P	01 51 42.0	+1.8
OBN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
OBN	Obninsk	18.72	24	*e*P	P	01 51 42.0	+1.8
	comp=Z,100nm,15.0s						
ETSF	Etsaut	18.75	291	*e*P	P	01 51 43.8	+3.2
SJPF	Ste Jean	19.25	291	*e*P	P	01 51 48.9	+2.3
GRR	Gorron	20.16	307	*e*P	P	01 51 57.7	+1.1
ESDC	Sonseca Array	21.34	282	P	P	01 52 07.7	-1.2
	comp=Z,3.0nm,0.7s,mb3.8,baz=75,slow=11,SNR=10						
ESLA	Sonseca Array	21.34	282	*e*P	P	01 52 07.0	-1.9
	comp=Z,3.7nm,1.0s,mb3.7						
HFS	Hagfors	22.45	347	P	P	01 52 19.9	+0.1
HFS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HFS	Hagfors	22.45	347	P	P	01 52 19.9	+0.1
	comp=Z,7.6nm,0.9s,mb4.1,baz=158,slow=8.0,SNR=7.2						
FINES	FINESS Array B	22.93	3	P	P	01 52 24.1	-0.3
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,252nm,19.9s						
FINES	FINESS Array B	22.93	3	P	P	01 52 24.1	-0.3
	comp=Z,2.7nm,0.9s,mb3.7,baz=170,slow=16,SNR=5.2						
FINES				LR	LR	02 02 07.9	
	comp=Z,252nm,19.9s,MS3.7,baz=179,slow=39						
NB2	NORSAR Subarra	23.75	345	P	P	01 52 32.1	-0.4
	comp=Z,8.0nm,1.0s,mb4.1,baz=158,slow=10						
NB2	NORSAR Subarra	23.75	345	P	P	01 52 32.1	-0.4
NB2				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
NOA	NORSAR Array B	23.75	345	P	P	01 52 32.5	0.0
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,81nm,18.8s						
NOA	NORSAR Array B	23.75	345	P	P	01 52 32.5	0.0
	comp=Z,3.4nm,0.8s,mb3.9,baz=147,slow=9.8,SNR=7.2						
NOA				LR	LR	02 02 01.4	
	comp=Z,81nm,18.8s,MS3.2,baz=345,slow=37						
NOA	NORSAR Array B	23.75	345	P	P	01 52 32.5	0.0
NOA				LR	LR	02 02 01.4	
EKA	Eskdalemuir Ar	24.52	322	P	P	01 52 40.1	+0.1
EKA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EKA	Eskdalemuir Ar	24.52	322	P	P	01 52 40.1	+0.1
	comp=Z,6.1nm,1.0s,mb4.1,baz=112,slow=12,SNR=8.8						
ARCES	ARCESS Array B	31.02	1	LR	LR	02 07 15.6	
	comp=Z,252nm,18.3s,MS3.9,baz=197,slow=38						
CHKZ	Chkalovo	35.23	49	*e*P	P	01 54 15.3	-0.5
AAK	Ala-Archa	38.41	67	P	P	01 54 44.1	+1.4
DBIC	Dimbokro	40.86	226	P	P	01 55 02.2	-1.1
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	40.86	226	P	P	01 55 02.1	-1.1
	comp=Z,2.6nm,0.7s,mb4.0,baz=13,slow=11,SNR=7.0						
NVS	Novosibirsk	42.65	47	*i* P	P	01 55 19.4	+2.0
ZAL	Zalesovo	43.62	49	P	P	01 55 25.7	+0.3
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,60nm,18.6s						
ZAL	Zalesovo	43.62	49	P	P	01 55 25.7	+0.3
	comp=Z,0.8nm,0.5s,mb3.7,baz=183,slow=11,SNR=6.7						
ZAL				LR	LR	02 14 55.5	
	comp=Z,60nm,18.6s,MS3.5,baz=302,slow=38						
ZAL	Zalesovo	43.62	49	P	P	01 55 25.7	+0.3
ZAL				LR	LR	02 14 55.5	
LSA	Lhasa	55.52	77	*e*P	P	01 56 57.2	+0.1
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
LSA	Lhasa	55.52	77	*e*P	P	01 56 57.2	+0.1
	comp=Z,2.1nm,0.6s,mb4.3						
LSA	Lhasa	55.52	77	*e*P	P	01 56 57.2	+0.1
	comp=Z,2.1nm,0.6s,mb4.3						
FRB	Frobisher Bay	57.07	328	P	P	01 57 05.1	-2.6
FRB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FRB	Frobisher Bay	57.07	328	P	P	01 57 05.1	-2.6
	comp=Z,2.2nm,0.8s,mb4.3,baz=73,slow=8.6,SNR=5.7						
SONM	Songino Array	58.34	52	P	P	01 57 16.6	-0.2
	comp=Z,1.1nm,0.8s,mb4.0,baz=285,slow=9.3,SNR=11						
SCHQ	Schefferville	59.76	318	P	P	01 57 25.3	-1.3
	comp=Z,3.5nm,0.7s,mb4.5,baz=52,slow=7.2,SNR=9.3						
SCHQ	Schefferville	59.76	318	P	P	01 57 25.3	-1.3
INK	Inuvik	72.04	351	P	P	01 58 43.7	-1.3
INK				pmax	pmax		
	comp=Z,12nm,1.6s						
INK	Inuvik	72.04	351	P	P	01 58 43.7	-1.2
	comp=Z,12nm,1.6s,mb4.6,baz=31,slow=18,SNR=3.2						
INK	Inuvik	72.04	351	P	P	01 58 43.7	-1.2
YKA	Yellowknife Ar	73.79	341	P	P	01 58 54.8	-0.3
	comp=Z,0.3nm,0.5s,mb3.5,baz=30,slow=5.3,SNR=12						
ULM	Lac du Bonnet	76.75	325	P	P	01 59 11.2	-1.1
	comp=Z,0.4nm,0.4s,mb3.8,baz=112,slow=2.0,SNR=3.4						
BDFB	Brasilia	85.85	246	P	P	02 00 01.0	+0.1
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BDFB	Brasilia	85.85	246	P	P	02 00 01.0	+0.1
	comp=Z,1.5nm,0.7s,mb4.3,baz=132,slow=6.7,SNR=3.1						
TXAR	Lajitas Array	96.38	316	P	P	02 00 50.6	+0.8
	comp=Z,1.1nm,1.2s,mb4.2,baz=63,slow=4.0,SNR=3.4						
ASAR	Alice Springs	119.86	98	PKP	PKPdf	02 06 10.7	-3.1
	comp=Z,0.4nm,0.7s,baz=0.7,slow=2.6,SNR=5.7						

IDC 12 02:01:10.7±0.8**, 55.33S×26.56W, mb4.3**/4**, mb1 4.2**/5**, mb1mx3.8**/15**, mbtmp4.1**/5**, ML3.4**/1**, MS3.7**/6**, Ms1 3.7**/6**, ms1mx3.5**/14**, Error ellipse: s-maj=39.8km s-min=24.6km az=73.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	19.27	157	P	P	02 05 36.8	-2.2
	0.1nm,0.3s,baz=289,slow=13,SNR=7.1						
SNAA				LR	LR	02 11 19.0	
	comp=Z,50nm,21.9s,baz=219,slow=32						
USHA	Ushuaia	23.72	254	LR	LR	02 13 09.4	
	comp=Z,413nm,18.6s,baz=222,slow=30						
PLCA	Paso Flores	32.24	278	LR	LR	02 19 38.4	
	comp=Z,86nm,20.5s,baz=319,slow=34						
SUR	Sutherland	40.11	75	LR	LR	02 22 14.9	
	comp=Z,150nm,18.0s,baz=7.3,slow=32						
LVC	Limon Verde	45.25	299	P	P	02 09 30.2	-1.3
	3.4nm,0.6s,baz=220,slow=1.2,SNR=7.2						
VNDA	Vanda	47.31	182	P	P	02 09 45.0	-2.1
	2.4nm,0.6s,baz=195,slow=6.1,SNR=5.6						
LPAZ	La Paz	50.26	304	LR	LR	02 32 28.9	
	comp=Z,52nm,18.1s,baz=277,slow=37						
DBIC	Dimbokro	64.36	24	P	P	02 11 48.6	-1.9
	2.8nm,1.1s,baz=162,slow=9.3,SNR=3.3						
DBIC				LR	LR	02 33 10.1	
	comp=Z,80nm,20.7s,baz=162,slow=30						
ASAR	Alice Springs	99.57	162	P	P	02 14 57.2	+0.4
	0.3nm,0.8s,baz=180,slow=3.9,SNR=4.3						
YKA	Yellowknife Ar	135.87	318	PKP	PKPdf	02 20 30.3	-3.8
	0.2nm,0.9s,baz=124,slow=2.5,SNR=3.0						
INK	Inuvik	145.47	321	PKPbc	PKPbc	02 20 48.6	-0.9
	10nm,1.2s,baz=127,slow=3.5,SNR=13						
ILAR	Eielson Array	149.90	312	PKPbc	PKPdf	02 21 00.4	+2.3
	2.2nm,0.8s,baz=123,slow=3.7,SNR=12						
SONM	Songino Array	150.32	85	PKPbc	PKPdf	02 21 01.8	+2.5
	0.8nm,0.6s,baz=215,slow=3.7,SNR=10.0						

MAN 12 02:04:05.3, 8.67N×124.26E, h29^{km}, mb3.5, ML2.2, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	Cagayan de Oro	0.48	117	⇑*i*P	Pb	02 04 16.1	+0.7
CGP				*e*S	Sb	02 04 21.7	-0.5
BUKP	Musuan	1.12	135	*e*P	Pn	02 04 25.0	-0.3
PAGZ	Pagadian	1.19	227	*e*P	Pn	02 04 27.4	+1.1
PAGZ				*e*S	Sn	02 04 41.2	-0.4
IPIL	Ipil	1.89	242	*e*P	Pn	02 04 36.0	-0.2

IDC 12 02:05:47.0±0.8**, 55.39S×26.66W, mb4.3**/4**, mb1 4.3**/5**, mb1mx3.9**/15**, mbtmp4.2**/5**, ML3.4**/1**, Error ellipse: s-maj=37.0km s-min=23.3km az=62.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	19.23	157	P	P	02 10 14.1	-0.7
	0.1nm,0.3s,baz=288,slow=12,SNR=7.7						
LVC	Limon Verde	45.23	299	P	P	02 14 06.2	-1.3
	5.4nm,0.7s,baz=171,slow=4.5,SNR=8.9						
VNDA	Vanda	47.25	183	P	P	02 14 20.0	-2.8
	3.0nm,0.8s,baz=162,slow=3.2,SNR=4.7						
LPAZ	La Paz	50.24	304	P	P	02 14 45.5	-1.2
	2.3nm,0.7s,baz=143,slow=5.8,SNR=8.0						
DBIC	Dimbokro	64.44	24	P	P	02 16 24.7	-2.6
	3.4nm,0.8s,baz=165,slow=9.5,SNR=4.9						
BVAR	Borovoye Array	134.17	57	PKP	PKPdf	02 25 06.3	-1.0
	1.4nm,1.0s,baz=270,slow=4.3,SNR=4.0						
YKA	Yellowknife Ar	135.88	318	PKP	PKPdf	02 25 07.0	-3.4
	0.3nm,0.8s,baz=131,slow=1.7,SNR=4.9						
INK	Inuvik	145.48	321	PKPbc	PKPbc	02 25 24.9	-0.8
	2.7nm,0.8s,baz=80,slow=2.8,SNR=13						
ILAR	Eielson Array	149.89	312	PKPbc	PKPdf	02 25 36.8	+2.4
	1.7nm,0.8s,baz=128,slow=2.7,SNR=19						
SONM	Songino Array	150.38	85	PKPbc	PKPdf	02 25 38.7	+3.0
	1.0nm,0.7s,baz=217,slow=2.7,SNR=11						

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*IDC **12** 02:09:01.1±1.5, 47.40N×154.03E, mb4.2/15, mb1 4.4/17, mb1mx4.2/26, mbtmp4.3/17, ML4.3/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=41.6km s-min=14.3km az=172.0*

*BJI **12** 02:09:07.5, 47.98N×153.73E, h32^{km}, mB4.8, mb4.2, Ms4.4, Msz4.1*

*MOS **12** 02:09:09.3±1.1, 48.04N×153.68E, h43^{km}, mb4.7/18, Error ellipse: s-maj=17.0km s-min=9.5km az=94.9*

*NEIC **12** 02:09:09.9±2.6, 47.67N×153.96E, h53^{km}±25^{km}, mb4.5/15, Error ellipse: s-maj=20.8km s-min=9.9km az=161.0*

ISC 12 02:09:06.2±0.7**, 47.7N**±0.1×**153.9E**±0.1**, h33^{km}, n84, σ1^{s}15**/84**, mb4.5**/35**, 1C-3D, Kuril Islands**

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

SKR	**Severo-Kuril's**	**3.31**	**25**	*e*PN	**Pn**	**02 09 55.6**	**-1.5**
SKR				*e*S	**S**	**02 10 36.0**	**+0.3**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax			
	comp=N,310nm,0.5s						
SKR				smax			
	comp=E,230nm,0.5s						
KUR	**Kuril'sk**	**4.84**	**241**	⇑*i*PN	**Pn**	**02 10 15.2**	**-3.5**
KUR				pmax	pmax		
	comp=E,110nm,0.5s						
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.60**	**268**	*e*PN	**Pn**	**02 11 03.0**	**+5.4**
ASAJ	**Asahikawa**	**8.65**	**250**	PN	**P**	**02 11 09.5**	**-2.4**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,143nm,18.6s						
ASAJ	**Asahikawa**	**8.65**	**250**	Pn	**P**	**02 11 09.4**	**-2.5**
	comp=Z,2.0nm,0.3s,baz=86,slow=15,SNR=8.2						
ASAJ				LR	LR	02 14 21.1	
	comp=Z,143nm,18.6s,baz=13,slow=37						
FX1	**Attu Island--F**	**13.35**	**60**	Pn	**P**	**02 12 10.8**	**-4.9**
	comp=Z,9.7nm,0.3s,baz=225,slow=11,SNR=12						
FX1				Sn	**S**	**02 14 28.8**	**-15**
	comp=Z,2.7nm,0.3s,baz=19,slow=18,SNR=4.1						
MAT	**Matsushiro**	**16.09**	**232**	*e*P	**P**	**02 12 55.0**	**+3.7**
MAT				pmax	pmax		
	comp=Z,19nm,1.1s						
MAT	**Matsushiro**	**16.09**	**232**	*e*P	**P**	**02 12 55.0**	**+3.7**
	comp=Z,19nm,1.1s						
MAT	**Matsushiro**	**16.09**	**232**	P	**P**	**02 12 55.1**	**+3.8**
MDJ	**Mudanjiang**	**17.09**	**269**	P	**P**	**02 13 03.0**	**-0.9**
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,71nm,5.5s						
MDJ	**Mudanjiang**	**17.09**	**269**	P	**P**	**02 13 03.9**	**+0.1**
CN2	**Changchun**	**20.17**	**269**	*e*P	**P**	**02 13 41.3**	**+1.0**
SONM	**Songino Array**	**31.52**	**288**	P	**P**	**02 15 26.4**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.7,baz=57,slow=9.0,SNR=8.9						
ILAR	**Eielson Array**	**35.47**	**39**	P	**P**	**02 16 00.3**	**-0.8**
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ILAR	**Eielson Array**	**35.47**	**39**	P	**P**	**02 16 00.3**	**-0.8**
	comp=Z,1.7nm,1.1s,mb3.9,baz=261,slow=8.0,SNR=9.4						
INK	**Inuvik**	**40.56**	**33**	*e*P	**P**	**02 16 44.1**	**+0.5**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**40.56**	**33**	P	**P**	**02 16 44.4**	**+0.8**
	comp=Z,2.4nm,0.5s,mb4.1,baz=296,slow=5.5,SNR=26						
INK	**Inuvik**	**40.56**	**33**	*e*P	**P**	**02 16 44.1**	**+0.5**
	comp=Z,1.6nm,0.6s,mb3.8						
ZAL	**Zalesovo**	**42.49**	**305**	P	**P**	**02 16 59.7**	**+0.2**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**42.49**	**305**	P	**P**	**02 16 59.7**	**+0.2**
	comp=Z,2.1nm,0.6s,mb3.9,baz=36,slow=8.4,SNR=12						
DLBC	**Dease Lake**	**44.55**	**47**	P	**P**	**02 17 17.2**	**+1.1**
	comp=Z,2.3nm,0.6s,mb4.2,baz=18,slow=10,SNR=7.4						
WMQ	**Urumqi**	**45.07**	**291**	*e*P	**P**	**02 17 21.6**	**+1.1**
WMQ				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.9						
KMI	**Kunming**	**45.94**	**259**	P	**P**	**02 17 30.3**	**+2.7**
KMI				AMB	AMB		
	comp=Z,5.0nm,1.5s,mb4.2						
KURK	**Kurchatov**	**47.27**	**303**	*e*P	**P**	**02 17 36.4**	**-1.4**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
KURK	**Kurchatov**	**47.27**	**303**	*e*P	**P**	**02 17 36.4**	**-1.3**
	comp=Z,8.4nm,0.6s,mb4.8						
YKA	**Yellowknife Ar**	**49.84**	**37**	P	**P**	**02 17 57.1**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**49.84**	**37**	P	**P**	**02 17 57.1**	**-0.4**
	comp=Z,1.1nm,0.8s,mb4.0,baz=296,slow=7.2,SNR=18						
CHKZ	**Chkalovo**	**50.21**	**310**	*e*P	**P**	**02 17 59.2**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
CHKZ	**Chkalovo**	**50.21**	**310**	*e*P	**P**	**02 17 59.2**	**-1.3**
	comp=Z,16nm,0.6s,mb5.2						
BVAR	**Borovoye Array**	**50.65**	**309**	P	**P**	**02 18 03.5**	**-0.3**
	comp=Z,4.2nm,0.4s,mb4.7,baz=59,slow=8.0,SNR=30						
LSA	**Lhasa**	**50.75**	**273**	*e*P	**P**	**02 18 06.0**	**+1.1**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**50.75**	**273**	*e*P	**P**	**02 18 06.0**	**+1.1**
	comp=Z,5.3nm,0.6s,mb4.7						
AAK	**Ala-Archa**	**53.88**	**296**	*e*P	**P**	**02 18 26.1**	**-2.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AAK	**Ala-Archa**	**53.88**	**296**	*e*P	**P**	**02 18 26.1**	**-2.0**
	comp=Z,2.0nm,0.6s,mb4.2						
JIRN	**Jiri**	**55.39**	**274**	*e*P	**P**	**02 18 39.2**	**-0.2**
	comp=Z,16nm,0.6s,mb5.2						
KKN	**Kakani**	**55.92**	**275**	*e*P	**P**	**02 18 42.9**	**-0.3**
	comp=Z,12nm,0.7s,mb5.1						
PKI	**Pulchoki**	**55.98**	**275**	*e*P	**P**	**02 18 43.2**	**-0.4**
	comp=Z,8.8nm,0.6s,mb4.9						
DMN	**Daman**	**56.16**	**275**	*e*P	**P**	**02 18 44.7**	**-0.1**
	comp=Z,21nm,0.8s,mb5.2						
NEW	**Newport**	**56.18**	**54**	P	**P**	**02 18 47.2**	**+2.5**
NEW				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NEW	**Newport**	**56.18**	**54**	P	**P**	**02 18 47.2**	**+2.5**
	comp=Z,0.7nm,0.5s,mb4.0						
GKN	**Gorkha**	**56.22**	**276**	*e*P	**P**	**02 18 45.0**	**-0.3**
	comp=Z,18nm,0.6s,mb5.3						
KOLN	**Koldanda**	**57.06**	**276**	*e*P	**P**	**02 18 50.9**	**-0.5**
	comp=Z,15nm,0.8s,mb5.1						
ARCES	**ARCESS Array B**	**57.11**	**341**	P	**P**	**02 18 51.0**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**57.11**	**341**	P	**P**	**02 18 51.0**	**-0.2**
	comp=Z,2.0nm,0.7s,mb4.2,baz=39,slow=7.8,SNR=5.2						
ARCES	**ARCESS Array B**	**57.11**	**341**	P	**P**	**02 18 51.0**	**-0.2**
FFC	**Flin Flon**	**59.66**	**41**	*e*P	**P**	**02 19 08.1**	**-1.0**
FCC	**Fort Churchill**	**60.17**	**34**	*e*P	**P**	**02 19 11.3**	**-1.2**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
FCC	**Fort Churchill**	**60.17**	**34**	*e*P	**P**	**02 19 11.3**	**-1.2**
	comp=Z,2.5nm,0.4s,mb4.6						
JOF	**Joensuu**	**60.70**	**334**	*e*p	**P**	**02 19 13.7**	**-2.4**
	comp=Z,1.1nm,0.5s,mb4.2						
KAF	**Kangasniemi**	**62.79**	**335**	*e*p	**P**	**02 19 27.0**	**-3.1**
	comp=Z,4.3nm,0.9s,mb4.6						
KAF	**Kangasniemi**	**62.79**	**335**	*e*P	**P**	**02 19 27.0**	**-3.1**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
FINES	**FINESS Array B**	**63.39**	**335**	P	**P**	**02 19 33.6**	**-0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FINES	**FINESS Array B**	**63.39**	**335**	P	**P**	**02 19 33.6**	**-0.5**
	comp=Z,2.6nm,0.4s,mb4.8,baz=40,slow=7.9,SNR=56						
NB2	**NORSAR Subarra**	**67.48**	**341**	P	**P**	**02 20 00.4**	**+0.2**
	comp=Z,5.7nm,0.6s,mb4.8,baz=26,slow=6.2						
NOA	**NORSAR Array B**	**67.48**	**341**	P	**P**	**02 20 00.7**	**+0.5**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NOA	**NORSAR Array B**	**67.48**	**341**	P	**P**	**02 20 00.7**	**+0.5**
	comp=Z,6.1nm,0.6s,mb4.8,baz=24,slow=6.3,SNR=25						
AKASG	**Malin Array Be**	**71.03**	**326**	P	**P**	**02 20 21.8**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	**Malin Array Be**	**71.03**	**326**	P	**P**	**02 20 21.8**	**-0.4**
	comp=Z,3.7nm,0.5s,mb4.6,baz=33,slow=6.2,SNR=18						
SCHQ	**Schefferville**	**72.22**	**23**	P	**P**	**02 20 28.6**	**-0.5**
	comp=Z,1.6nm,0.6s,mb4.1,baz=260,slow=2.7,SNR=7.5						
KOLS	**Kolonicke sedl**	**75.01**	**329**	*e*P	**P**	**02 20 46.1**	**+0.6**
OKC	**Ostrava-Krasne**	**75.59**	**332**	*e*P	**P**	**02 20 49.7**	**+0.9**
UPC	**Upice**	**75.65**	**334**	*e*P	**P**	**02 20 50.5**	**+1.4**
DPC	**Dobruska-Polom**	**75.70**	**334**	*e*P	**P**	**02 20 50.4**	**+1.0**
CLL	**Collm**	**75.80**	**336**	⇓*i*P	**P**	**02 20 50.7**	**+0.7**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
CLL	**Collm**	**75.80**	**336**	⇓*i*P	**P**	**02 20 50.7**	**+0.7**
	comp=Z,8.0nm,0.6s,mb4.8						
CLL	**Collm**	**75.80**	**336**	⇓P	**P**	**02 20 50.7**	**+0.7**
	comp=Z,logA/T=1.1,mb4.8						
MORC	**Moravsky Berou**	**75.83**	**333**	*e*P	**P**	**02 20 50.7**	**+0.6**
MORC				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.7						
MORC	**Moravsky Berou**	**75.83**	**333**	*e*P	**P**	**02 20 50.7**	**+0.6**
	comp=Z,20nm,1.9s,mb4.7						
BRG	**Berggiesshubel**	**75.93**	**335**	*e*P	**P**	**02 20 51.5**	**+0.8**
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BRG	**Berggiesshubel**	**75.93**	**335**	*e*P	**P**	**02 20 51.5**	**+0.8**
	comp=Z,4.4nm,0.7s,mb4.5						
PVCC	**Panska Ves**	**76.06**	**335**	*e*P	**P**	**02 20 51.7**	**+0.3**
PRU	**Pruhonice**	**76.55**	**334**	*e*P	**P**	**02 20 55.6**	**+1.4**
TXAR	**Lajitas Array**	**76.57**	**61**	P	**P**	**02 20 52.5**	**-2.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=295,slow=4.1,SNR=13						
KHC	**Kasperske Hory**	**77.60**	**335**	*e*P	**P**	**02 21 00.1**	**0.0**
GRA1	**Grafenberg Arr**	**77.75**	**336**	*e*P	**P**	**02 21 03.0**	**+2.0**
	comp=Z,2.0nm,0.8s,mb4.1						
GRF	**Grafenberg Arr**	**77.75**	**336**	*e*P	**P**	**02 21 03.0**	**+2.0**
GRF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
GRF	**Grafenberg Arr**	**77.75**	**336**	*e*P	**P**	**02 21 03.0**	**+2.0**
GRF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
GRF	**Grafenberg Arr**	**77.75**	**336**	*e*P	**P**	**02 21 03.0**	**+2.0**
	comp=Z,2.0nm,0.8s,mb4.1						
GERES	**GERESS Array B**	**77.82**	**334**	P	**P**	**02 21 01.9**	**+0.6**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	**GERESS Array B**	**77.82**	**334**	P	**P**	**02 21 01.9**	**+0.6**
	comp=Z,1.7nm,0.8s,mb4.0,baz=36,slow=6.0,SNR=12						
BRTR	**Keskin Array B**	**78.04**	**317**	P	**P**	**02 21 04.1**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRTR	**Keskin Array B**	**78.04**	**317**	P	**P**	**02 21 04.1**	**+1.4**
	comp=Z,6.6nm,1.2s,mb4.4,baz=64,slow=3.7,SNR=13						
PLCA	**Paso Flores**	**147.76**	**94**	PKIKP	PKPdf	02 28 46.6	+2.6
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PLCA	**Paso Flores**	**147.76**	**94**	PKPbc	PKPdf	02 28 46.6	+2.6
	comp=Z,1.4nm,0.7s,baz=212,slow=7.9,SNR=3.5						

IDC 12 02:14:35.5±6.3**, 5.98S**×**149.31E, h83**^{km}±43^{km}**, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.7**/13**, mbtmp4.2**/4**, 1C, Error ellipse: s-maj=74.0km s-min=44.1km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.02**	**212**	P	P	02 15 35.7	-0.4
	31nm,0.3s,baz=16,slow=4.4,SNR=72						
PMG				S	S	02 16 21.0	-1.2
	20nm,0.3s,baz=50,slow=21,SNR=10						
WB2	**Warramunga Arr**	**20.10**	**225**	⇑*i*P	P	02 19 02.5	-2.5
WRA	**Warramunga Arr**	**20.11**	**225**	P	P	02 19 02.6	-2.5
	4.3nm,0.3s,baz=52,slow=11,SNR=16						
ASAR	**Alice Springs**	**23.00**	**219**	P	P	02 19 32.8	-1.2
	2.9nm,0.5s,baz=54,slow=9.0,SNR=23						
ASPA	**Alice Springs**	**23.00**	**219**	*e*P	P	02 19 32.8	-1.1
FITZ	**Fitzroy Crossi**	**26.06**	**240**	*e*P	P	02 20 00.6	-2.5
	2.6nm,0.3s						
STKA	**Stephens Creek**	**26.76**	**195**	P	P	02 20 08.3	-1.2
	0.8nm,0.3s,baz=34,slow=7.3,SNR=2.6						

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*CSEM **12** 02:22:00.2±0.1, 43.55N×45.09E, h5^{km}, mb4.0, Error ellipse: s-maj=4.2km s-min=1.6km az=32.0*

*TIF **12** 02:22:01.7, 43.57N×44.92E, h10^{km}±3^{km}*

*MOS **12** 02:22:04.5±2.4, 43.42N×44.92E, h35^{km}, mb4.0/1, Error ellipse: s-maj=18.4km s-min=9.3km az=41.8*

ISC 12 02:22:01.7±0.5**, 43.58N**±0.04×**45.08E**±0.04**, h10**^{km}**, n23,** σ1^{s}**21**/39**, mb3.7**/1**, 2C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBR	**Kubataba**	**1.23**	**281**	*e*P	**Pb**	**02 22 24.6**	**0.0**
KUBR				*i* S	**Sb**	**02 22 42.0**	**+1.6**
BTLR	**Botlikh**	**1.23**	**137**	⇑*i*P	**Pb**	**02 22 23.0**	**-1.6**
BTLR				*i* S	**Sb**	**02 22 40.4**	**-0.1**
BTLR				pmax	pmax		
	comp=Z,319nm,0.5s						
BTLR	**Botlikh**	**1.23**	**137**	*i* P	**Pb**	**02 22 23.0**	**-1.6**
	comp=Z,319nm,0.5s						
BTLR				*i* S	**Sb**	**02 22 40.4**	**-0.1**
DLMR	**Dylym**	**1.24**	**114**	*e*P	**Pb**	**02 22 24.1**	**-0.6**
DLMR				*e*S	**Sb**	**02 22 43.1**	**+2.6**
DLMR				pmax	pmax		
	comp=Z,587nm,0.8s						
DLMR	**Dylym**	**1.24**	**114**	*e*P	**Pb**	**02 22 24.1**	**-0.6**
	comp=Z,587nm,0.8s						
DLMR				*e*S	**Sb**	**02 22 43.1**	**+2.6**
DBC	**Dubki**	**1.39**	**113**	⇓*i*P	**Pn**	**02 22 30.0**	**+2.8**
DBC				*i* S	**Sb**	**02 22 51.5**	**+6.5**
DBC				pmax	pmax		
	comp=Z,238nm,0.3s						
DUS	**Dusheti**	**1.51**	**191**	P	**Pn**	**02 22 28.7**	**-0.3**
PYA	**Pyatigorsk**	**1.54**	**288**	*e*P	**Pn**	**02 22 28.8**	**-0.5**
PYA				*e*S	**Sb**	**02 22 49.1**	**-0.1**
ONI	**Oni**	**1.56**	**231**	P	**Pn**	**02 22 28.5**	**-1.1**
ONI				S	**Sb**	**02 22 50.9**	**+1.1**
ARKR	**Arakani**	**1.71**	**124**	*e*P	**Pn**	**02 22 29.3**	**-2.4**
ARKR				*i* S	**Sn**	**02 22 52.8**	**-0.9**
ARKR				pmax	pmax		
	comp=Z,45nm,0.2s						
ARKR	**Arakani**	**1.71**	**124**	*e*P	**Pn**	**02 22 29.3**	**-2.4**
	comp=Z,45nm,0.2s						
ARKR				*i* S	**Sn**	**02 22 52.8**	**-0.9**
SHAR	**Shatzhatmas**	**1.76**	**276**	*e*P	**Pn**	**02 22 31.3**	**-1.2**
SHAR				*e*S	**Sn**	**02 22 54.4**	**-0.7**
KIV	**Kislovodsk**	**1.78**	**283**	⇑*e*P	**Pn**	**02 22 31.5**	**-1.2**
KIV				*i*		02 22 55.7	
KIV				pmax	pmax		
	comp=Z,20nm,0.5s						
KIV	**Kislovodsk**	**1.78**	**283**	*e*P	**Pn**	**02 22 31.5**	**-1.2**
	comp=Z,20nm,0.5s						
KIV				*i* S	**Sn**	**02 22 55.7**	**+0.1**
TI2	**Plekhanov**	**1.86**	**188**	⇓*i*P	**Pn**	**02 22 34.0**	**+0.1**
TI2				*i* S	**Sn**	**02 22 57.0**	**-0.6**
TI2				smax			
	comp=N,500nm,2.0s						
TI2				smax			
	comp=N,110nm,1.0s						
TI2				pmax	pmax		
	comp=E,1µm,5.0s						
TI2	**Plekhanov**	**1.86**	**188**	⇓*i*P	**Pn**	**02 22 34.0**	**+0.1**
	comp=E,40nm,1.0s						
TI2				*i* S	**Sn**	**02 22 57.0**	**-0.6**
	comp=E,110nm,1.0s						
MAK	**Makhachkala**	**1.87**	**108**	*e*P	**Pn**	**02 22 41.0**	**+6.9**
MAK				*i*		02 23 04.7	
MAK				pmax	pmax		
	comp=Z,105nm,0.5s						
MAK				smax			
	comp=N,2µm,0.8s						
MAK				smax			
	comp=E,4µm,0.8s						
NAGR	**Nagutskaya**	**1.89**	**298**	*e*P	**Pn**	**02 22 34.0**	**-0.3**
NAGR				*e*S	**Sn**	**02 22 58.7**	**+0.3**
MTA	**Mtatsminda**	**1.89**	**187**	P	**Pn**	**02 22 34.7**	**+0.3**
MTA				S	**Sn**	**02 23 00.6**	**+2.2**
GOF	**Gofitskoye**	**2.09**	**316**	*e*P	**Pn**	**02 22 40.0**	**+2.8**
GOF				*i*		02 23 07.0	
GOF				pmax	pmax		
	comp=Z,50nm,1.3s						
GOF				smax			
	comp=E,2µm,3.0s						
AKH	**Akhalkalaki**	**2.46**	**209**	P	**Pn**	**02 22 42.8**	**+0.2**
STE	**Stepanavan**	**2.62**	**191**	*e*P	**Pn**	**02 22 44.0**	**-0.8**
KAF	**Kangasniemi**	**21.61**	**336**	*e*p	**P**	**02 26 46.8**	**-6.7**
	comp=E,3.1nm,0.9s,mb3.7						

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*NIED **12** 02:30:00, 42.30N×143.00E, h56^{km}, Mw4.5 Best double couple: M$_0$7.12×10^{15} NP1:ϕ_s38°, δ66°, λ96°. NP2:ϕ_s204°, δ25°, λ77°.*

*MOS **12** 02:30:13.5±0.8, 42.48N×142.87E, h55^{km}, mb4.9/40, Error ellipse: s-maj=9.6km s-min=5.7km az=107.7*

*BJI **12** 02:30:14.2, 42.14N×142.76E, h68^{km}, mB5.0, mb4.8, Ms4.0, Msz3.7*

*NEIC **12** 02:30:15.8±0.8, 42.43N×142.81E, h65^{km}±7^{km}, mb4.7/34, MW4.5(NIED), Error ellipse: s-maj=7.0km s-min=4.9km az=165.0*

NEIC Recorded [2 JMA] in south-central Hokkaido and [1 JMA] in the Chitose-Ebetsu-Noboribetsu and Obihiro areas. Also recorded [1 JMA] in Aomori Prefecture, Honshu.

*JMA **12** 02:30:15.4±0.1, 42.34N×143.00E, h55^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1:ϕ_s237°, δ41°, λ117°. NP2:ϕ_s23°, δ54°, λ68°. Principal axes: T Plg71°, Azm239°; N Plg18°, Azm36°; P Plg7°, Azm128°;*

JMA Felt II J1.

*IDC **12** 02:30:15.8±2.2, 42.40N×142.86E, h65^{km}±16^{km}, mb4.0/21, mb1 4.2/22, mb1mx4.2/24, mbtmp4.3/22, MS3.6/7, Ms1 3.6/7, ms1mx3.3/27 Error ellipse: s-maj=16.5km s-min=13.1km az=137.0*

*SKHL **12** 02:30:15.4±0.9, 42.33N×142.97E, h68^{km}±17^{km}, mb4.7/9*

ISC 12 02:30:14.2±0.3**, 42.37N**±0.03×**142.90E**±0.03**, h66**^{km}±2^{km}**, h82**^{km}±4.0^{km}**:pP-P, n221,** σ0^{s}**98**/231**, mb4.5**/74**, 14C-11D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.14**	**231**	⇑P	**P**	**02 30 24.0**	**-0.1**
JNBK				*e*S	**S**	**02 30 30.7**	**-0.7**
JEM	**Erimo**	**0.40**	**152**	⇑P	**P**	**02 30 25.7**	**-0.1**
JCH	**Churui**	**0.42**	**54**	⇑P	**P**	**02 30 25.9**	**-0.1**
JCH				*e*S	**S**	**02 30 34.0**	**-0.7**
JBT2	**Biratori 2**	**0.57**	**316**	⇓P	**P**	**02 30 28.7**	**+1.2**
JBT2				*e*S	**S**	**02 30 39.8**	**+2.5**
JFR	**Furan**	**0.83**	**344**	⇓P	**P**	**02 30 31.0**	**+0.5**
JFR				*e*S	**S**	**02 30 43.3**	**+0.7**
JOB	**Onbets**	**0.87**	**52**	⇑P	**P**	**02 30 32.0**	**+1.0**
JOB				*e*S	**S**	**02 30 44.9**	**+1.3**
JAR	**Ashorobuto**	**1.13**	**34**	⇑P	**P**	**02 30 34.7**	**+0.3**
JAR				*e*S	**S**	**02 30 48.9**	**-0.5**
JEW	**Eniwo**	**1.17**	**294**	⇓P	**P**	**02 30 37.0**	**+2.0**
JEW				*e*S	**S**	**02 30 53.6**	**+3.1**
JAB	**Ashibetsu**	**1.24**	**337**	⇓P	**P**	**02 30 37.8**	**+1.8**
JAK	**Akkeshi**	**1.46**	**64**	P	**P**	**02 30 38.8**	**-0.3**
JAK				*e*S	**S**	**02 30 56.9**	**-0.6**
ASAJ	**Asahikawa**	**1.76**	**353**	PN	**P**	**02 30 44.9**	**+1.8**
ASAJ				S	**S**	**02 31 04.4**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,275nm,0.3s						
ASAJ				smax			
	comp=N,189nm,0.3s						
ASAJ	**Asahikawa**	**1.76**	**353**	P	**P**	**02 30 44.9**	**+1.7**
	comp=N,275nm,0.3s,baz=209,slow=8.7,SNR=418						
ASAJ				S	**S**	**02 31 04.4**	**-0.1**
	comp=N,189nm,0.3s,baz=51,slow=19,SNR=9.3						
ASAJ				LR	LR	02 31 25.4	
	comp=N,513nm,20.5s,baz=186,slow=40						
YUK	**Yuzh-Kuril'sk**	**2.73**	**51**	⇓*i*PN	**P**	**02 30 56.5**	**-0.2**
YUK				*i* S	**S**	**02 31 26.5**	**-2.1**
YUK				pmax	pmax		
	comp=N,220nm,0.3s						
YUK				pmax	pmax		
	comp=Z,360nm,0.3s						
YUK				smax			
	comp=N,1µm,0.5s						
YUK				smax			
	comp=E,2µm,0.5s						
YUK				smax			
	comp=N,3µm,1.0s						
YUK				smax			
	comp=E,5µm,1.0s						
YUK	**Yuzh-Kuril'sk**	**2.73**	**51**	⇓*i*P	**P**	**02 30 56.5**	**-0.2**
YUK				AMB	AMB	02 30 58.0	
	comp=E,220nm,0.3s						
YUK				AMB	AMB	02 30 58.0	
	comp=E,360nm,0.3s						
YUK				*i* S	**S**	**02 31 26.5**	**-2.1**
YUK				A		02 31 35.9	
	comp=E,3µm,1.0s						
YUK				A		02 31 35.9	
	comp=E,5µm,1.0s						
YUK				A		02 31 35.9	
	comp=E,1µm,0.5s						
YUK				A		02 31 35.9	
	comp=E,2µm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.59**	**359**	⇑*i*PN	**P**	**02 31 14.2**	**-8.5**
YSS				*e*S	**S**	**02 32 17.9**	**+2.7**
YSS				pmax	pmax		
	comp=N,110nm,0.6s						
YSS				pmax	pmax		
	comp=Z,110nm,0.6s						
YSS				pmax	pmax		
	comp=E,120nm,0.8s						
YSS				smax			
	comp=N,160nm,1.0s						
YSS				smax			
	comp=E,90nm,1.0s						
KUR	**Kuril'sk**	**4.59**	**50**	⇓*i*PN	**P**	**02 31 22.0**	**-0.8**
KUR				*e*S	**S**	**02 32 14.0**	**-1.4**
KUR				pmax	pmax		
	comp=N,190nm,1.0s						
KUR				pmax	pmax		
	comp=Z,450nm,1.0s						
KUR				smax			
	comp=N,750nm,1.0s						
KUR				smax			
	comp=E,570nm,1.0s						
KUR	**Kuril'sk**	**4.59**	**50**	*i* P	**P**	**02 31 22.0**	**-0.8**
KUR				AMB	AMB	02 31 23.2	
	comp=E,190nm,1.0s						
KUR				AMB	AMB	02 31 23.2	
	comp=E,450nm,1.0s						
KUR				*e*S	**S**	**02 32 14.0**	**-1.4**
KUR				A		02 32 36.0	
	comp=E,750nm,1.0s						
KUR				A		02 32 36.0	
	comp=E,570nm,1.0s						
TEY	**Ternei**	**5.29**	**302**	*e*P	**P**	**02 31 31.0**	**-1.4**
TEY				AMB	AMB	02 31 34.0	
	comp=E,50nm,0.8s						
TEY				AMB	AMB	02 31 34.0	
	comp=E,70nm,0.8s						
TEY				AMB	AMB	02 31 34.0	
	comp=E,60nm,0.8s						
UGL	**Uglegorsk**	**6.74**	**355**	*e*P	**P**	**02 31 51.5**	**-1.1**
UGL				AMB	AMB	02 31 53.5	
	comp=E,96nm,0.8s						
UGL				AMB	AMB	02 31 53.5	
	comp=E,120nm,0.8s						
MAT	**Matsushiro**	**6.86**	**214**	*e*PN	**P**	**02 31 54.0**	**-0.3**
MAT				S	**S**	**02 33 13.0**	**+1.4**
MAT				pmax	pmax		
	comp=Z,23nm,0.6s						
MAT	**Matsushiro**	**6.86**	**214**	*e*P	**P**	**02 31 54.0**	**-0.3**
	comp=Z,23nm,0.6s						
MAT				S	**S**	**02 33 13.0**	**+1.4**
MAT	**Matsushiro**	**6.86**	**214**	P	**P**	**02 31 53.8**	**-0.5**
MAT				*e*S	**S**	**02 33 13.4**	**+1.8**
GRNR	**Gornyy**	**9.51**	**334**	*e*P	**P**	**02 32 34.0**	**+3.4**
JHJ	**Hachijo jima 2**	**9.56**	**196**	P	**P**	**02 32 27.1**	**-4.2**
	comp=Z,29nm,0.3s,baz=263,slow=22,SNR=6.0						
JHJ				S	**S**	**02 34 05.8**	**-12**
	comp=Z,19nm,0.3s,baz=270,slow=20,SNR=4.6						
JHJ				LR	LR	02 36 12.5	
	comp=Z,133nm,19.1s,baz=106,slow=37						
MDJ	**Mudanjiang**	**9.93**	**288**	P	**P**	**02 32 33.6**	**-2.8**
MDJ				S	**S**	**02 34 22.3**	**-4.9**
MDJ				PCP	PcP	02 38 42.2	-1.3
MDJ				SCS	ScS	02 45 39.8	-2.2
MDJ				AMB	AMB		
	comp=Z,17nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,94nm,5.0s						
MDJ				LR	LR		
	comp=N,188nm,5.2s						
MDJ				LR	LR		
	comp=E,223nm,7.9s						
MDJ				LR	LR		
	comp=Z,215nm,8.9s						
MDJ	**Mudanjiang**	**9.93**	**288**	P	**P**	**02 32 34.9**	**-1.5**
	comp=Z,14nm,0.8s						
KLR	**Kul'dur**	**10.37**	**315**	*e*P	**P**	**02 32 42.0**	**-0.3**
KS15	**Wonju Array Si**	**12.53**	**252**	*e*P	**P**	**02 33 11.2**	**-0.2**
EKMR	**Ekimchan**	**12.62**	**331**	*e*P	**P**	**02 33 11.8**	**-0.7**
EKMR				AMB	AMB	02 33 20.4	
	comp=Z,10.0nm,1.0s						
CN2	**Changchun**	**12.84**	**282**	*e*P	**P**	**02 33 15.1**	**-0.4**
CN2				*e*XP		02 33 37.2	
CN2				*e*S	**S**	**02 35 35.1**	**-2.2**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
YASR	**Yasnyy**	**14.79**	**323**	*e*P	**P**	**02 33 37.5**	**-3.3**
YASR				AMB	AMB	02 33 39.9	
	comp=Z,2.0nm,0.7s						

YASR				AMB	AMB	02 33 39.9	
	comp=Z,4.0nm,0.7s						
ZEA	**Zeya**	**15.41**	**323**	*e*P	**P**	**02 33 47.3**	**-1.5**
ZEA				AMB	AMB	02 33 53.1	
	comp=Z,23nm,1.0s						
BMKR	**Bomnak**	**15.43**	**328**	*e*P	**P**	**02 33 47.8**	**-1.1**
BMKR				AMB	AMB	02 33 51.4	
	comp=Z,12nm,0.6s						
KROS	**Kirovskiy**	**16.00**	**324**	*e*P	**P**	**02 33 54.6**	**-1.6**
KROS				AMB	AMB	02 33 58.4	
	comp=Z,3.0nm,0.7s						
HIA	**Hailar**	**17.52**	**301**	*e*P	**P**	**02 34 14.7**	**-0.5**
HIA				pmax	pmax		
	comp=Z,16nm,0.9s						
HIA	**Hailar**	**17.52**	**301**	*e*P	**P**	**02 34 14.7**	**-0.5**
	comp=Z,16nm,0.9s						
MA2	**Magadan**	**17.90**	**13**	*e*P	**P**	**02 34 18.3**	**-1.6**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLNS	**Chul'man**	**18.51**	**328**	*e*P	**P**	**02 34 26.7**	**-0.5**
CLNS				pmax	pmax		
	comp=Z,15nm,0.8s						
CLNS				pmax	pmax		
	comp=N,11nm,1.0s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
JOW	**Kunigami**	**19.58**	**222**	LR	LR	02 42 17.1	
	comp=E,94nm,20.2s,baz=181,slow=37						
BJI	**Beijing**	**20.22**	**272**	P	**P**	**02 34 43.5**	**-2.5**
BJI				AMB	AMB		
	comp=Z,18nm,0.9s						
BJI				LR	LR		
	comp=N,251nm,15.4s						
BJI				LR	LR		
	comp=E,238nm,15.9s						
BJI				LR	LR		
	comp=Z,218nm,30.7s						
BJT	**Baijiatuau**	**20.23**	**272**	*e*P	**P**	**02 34 42.6**	**-3.6**
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
BJT	**Baijiatuau**	**20.23**	**272**	*e*P	**P**	**02 34 42.6**	**-3.6**
	comp=Z,18nm,0.8s						
TIA	**Tai'an**	**20.84**	**261**	⇓P	**P**	**02 34 49.5**	**-2.9**
YAK	**Yakutsk**	**21.21**	**343**	*e*P	**P**	**02 34 53.1**	**-2.9**
YAK				*e*		02 35 13.0	
YAK				*e*S	**S**	**02 38 44.7**	**+1.8**
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.4						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				smax			
	comp=N,7.0nm,1.0s						
YAK				smax			
	comp=E,3.0nm,0.8s						
YAK				smax			
	comp=Z,4.0nm,0.8s						
FX1	**Attu Island--F**	**22.78**	**52**	LR	LR	02 44 48.4	
	comp=Z,10nm,18.9s,baz=92,slow=38						
HHC	**Hu-ho-hao-te**	**23.42**	**277**	*e*P	**P**	**02 35 18.7**	**+1.0**
HHC				AP		02 35 33.4	
HHC				PP	PP	02 35 54.8	+3.5
HHC				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb3.8						
HHC				LR	LR		
	comp=N,172nm,11.9s						
HHC				LR	LR		
	comp=E,282nm,13.1s						
HHC				LR	LR		
	comp=Z,172nm,16.7s						
BOD	**Bodaibo**	**23.88**	**320**	*e*P	**P**	**02 35 19.9**	**-2.1**
BOD				pmax	pmax		
	comp=Z,33nm,4.0s						
SONM	**Songino Array**	**26.17**	**295**	P	**P**	**02 35 44.1**	**+0.1**
	comp=Z,13nm,0.7s,mb4.5,baz=78,slow=8.3,SNR=112						
SONM				PcP	PcP	02 39 09.9	-0.2
	comp=Z,0.8nm,0.6s,baz=116,slow=1.3,SNR=3.7						
XAN	**Xi'an**	**27.82**	**264**	P	**P**	**02 35 58.4**	**-0.8**
XAN				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.2						
TLY	**Talaya**	**28.03**	**303**	P	**P**	**02 36 01.5**	**+0.6**
	comp=Z,82nm,0.6s,mb5.4,SNR=12						
TLY	**Talaya**	**28.03**	**303**	*e*P	**P**	**02 36 00.7**	**-0.2**
TLY				*e*	pP	02 36 19.0	+2.2
TLY				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,140nm,21.0s						
ZAK	**Zakamensk**	**28.21**	**300**	⇑*i*P	**P**	**02 36 01.9**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
BILL	**Bilibino**	**28.60**	**18**	*i* P	**P**	**02 36 03.2**	**-2.6**
BILL				*i*		02 36 55.7	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s						
ENH	**Enshi**	**29.32**	**257**	*e*P	**P**	**02 36 10.2**	**-2.4**
	comp=Z,9.2nm,0.6s,mb4.6						
MOY	**Mondy**	**29.68**	**303**	*e*P	**P**	**02 36 16.1**	**+0.5**
MOY				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.5						
LZH	**Lanzhou**	**30.70**	**271**	*e*P	**P**	**02 36 24.8**	**0.0**
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,120nm,5.2s						
GTA	**Gaotai**	**32.45**	**280**	*e*P	**P**	**02 36 40.5**	**+0.4**
GTA				AP	pP	02 36 58.4	+2.1
GTA				XP	sP	02 37 05.7	+1.3
GTA				PP	PP	02 37 53.4	+3.5
GTA				PCP	PcP	02 39 26.2	+0.2
GTA				S	**S**	**02 41 51.6**	**+2.7**
GTA				XS		02 42 22.2	
GTA				SCP		02 43 01.1	
GTA				SCS	ScS	02 46 58.8	-1.9
GTA				AMB	AMB		
	comp=Z,29nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,138nm,4.8s						
GTA				LR	LR		
	comp=N,163nm,16.4s						
GTA				LR	LR		
	comp=E,104nm,17.5s						
GTA				LR	LR		
	comp=Z,107nm,13.7s						
GYA	**Guiyang**	**33.55**	**253**	P	**P**	**02 36 49.7**	**-0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
KMI	**Kunming**	**37.17**	**255**	P	**P**	**02 37 19.0**	**-1.4**
KMI				AMB	AMB		
	comp=Z,14nm,0.7s,mb5.0						
KMI				LR	LR		
	comp=Z,47nm,29.9s						
ZAL	**Zalesovo**	**39.38**	**308**	P	**P**	**02 37 39.1**	**+0.6**
ZAL						02 39 46.1	
ZAL				pmax	pmax		
	comp=Z,12nm,0.5s						
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAL				MLR	MLR		
	comp=Z,110nm,18.2s						
ZAL	**Zalesovo**	**39.38**	**308**	P	**P**	**02 37 39.0**	**+0.5**
	comp=Z,12nm,0.5s,mb5.0,baz=23,slow=8.9,SNR=87						
ZAL				PcP	PcP	02 39 46.1	-0.3
	comp=Z,3.0nm,0.9s,baz=22,slow=4.4,SNR=4.8						
ZAL				LR	LR	02 55 41.3	
	comp=Z,110nm,18.2s,baz=354,slow=39						
WMQ	**Urumqi**	**39.70**	**291**	⇓*i*P	**P**	**02 37 41.6**	**+0.2**
WMQ				XP	sP	02 38 09.0	+3.2
WMQ				PP	PP	02 39 18.0	+0.8
WMQ				S	**S**	**02 43 39.0**	**-0.9**
WMQ				SS	SS	02 46 30.0	-1.4
WMQ				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
WMQ				LR	LR		
	comp=N,49nm,17.0s						
WMQ				LR	LR		
	comp=E,125nm,19.0s						
WMQ				LR	LR		
	comp=Z,102nm,19.0s						
NVS	**Novosibirsk**	**40.17**	**309**	*i* P	**P**	**02 37 44.9**	**-0.2**
NVS				*i*	pP	02 38 06.3	+4.7
NVS				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
NVS				pmax	pmax		
	comp=E,1.0nm,0.3s						
IMA	**Indian Mountai**	**41.56**	**33**	*e*P	**P**	**02 37 56.2**	**-0.1**
IMA				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
IMA	**Indian Mountai**	**41.56**	**33**	*e*P	**P**	**02 37 56.1**	**-0.1**
	comp=Z,20nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**42.46**	**298**	*i* P	**P**	**02 38 04.0**	**0.0**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NANT	**Nan**	**42.68**	**250**	P	**P**	**02 38 06.0**	**-0.1**
LSA	**Lhasa**	**43.10**	**270**	*e*P	**P**	**02 38 11.1**	**+1.7**
LSA	**Lhasa**	**43.10**	**270**	*e*P	**P**	**02 38 10.8**	**+1.4**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
LSA	**Lhasa**	**43.10**	**270**	*e*P	**P**	**02 38 10.8**	**+1.4**
	comp=Z,6.2nm,0.7s,mb4.5						
KURK	**Kurchatov**	**43.72**	**304**	*i* P	**P**	**02 38 14.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
KURK	**Kurchatov**	**43.72**	**304**	*e*P	**P**	**02 38 13.5**	**-0.6**
	comp=Z,39nm,0.8s,mb5.2						
CHG	**Chiang Mai**	**43.90**	**251**	P	**P**	**02 38 16.3**	**+0.3**
COLA	**College**	**44.01**	**35**	*i* P	**P**	**02 38 16.3**	**0.0**
SML	**Sawmill**	**44.08**	**40**	P	**P**	**02 38 17.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.14**	**251**	P	**P**	**02 38 18.5**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,35nm,19.2s						
CMAR	**Chiang Mai Arr**	**44.14**	**251**	P	**P**	**02 38 18.5**	**+0.5**
	comp=Z,3.5nm,0.7s,mb4.2,baz=42,slow=7.4,SNR=15						
CMAR				LR	LR	02 55 44.2	
	comp=Z,35nm,19.2s,baz=90,slow=35						
ILAR	**Eielson Array**	**44.43**	**35**	P	**P**	**02 38 19.2**	**-0.4**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**44.43**	**35**	P	**P**	**02 38 19.2**	**-0.5**
	comp=Z,2.4nm,0.9s,mb3.9,baz=267,slow=6.4,SNR=20						
CHKZ	**Chkalovo**	**47.64**	**310**	*e*P	**P**	**02 38 44.2**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.1						
CHKZ	**Chkalovo**	**47.64**	**310**	*e*P	**P**	**02 38 44.2**	**-1.0**
	comp=Z,27nm,0.8s,mb5.1						
JIRN	**Jiri**	**47.87**	**271**	*e*P	**P**	**02 38 47.8**	**+0.4**
	comp=Z,26nm,0.6s,mb5.2						
BVA0	**Borovoye Array**	**47.96**	**309**	*i* P	**P**	**02 38 47.9**	**+0.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
KKN	**Kakani**	**48.47**	**272**	*e*P	**P**	**02 38 51.9**	**-0.1**
	comp=Z,17nm,0.5s,mb5.1						
PKI	**Pulchoki**	**48.50**	**272**	*e*P	**P**	**02 38 51.8**	**-0.4**
	comp=Z,68nm,1.0s,mb5.4						
DMN	**Daman**	**48.70**	**272**	*e*P	**P**	**02 38 53.7**	**-0.1**
	comp=Z,26nm,0.8s,mb5.2						
GKN	**Gorkha**	**48.83**	**273**	*e*P	**P**	**02 38 54.6**	**-0.2**
	comp=Z,31nm,0.5s,mb5.5						
AAK	**Ala-Archa**	**49.13**	**295**	*e*P	**P**	**02 38 55.2**	**-1.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**49.13**	**295**	*e*P	**P**	**02 38 55.2**	**-1.6**
	comp=Z,5.3nm,0.8s,mb4.5						
INK	**Inuvik**	**49.15**	**29**	*e*P	**P**	**02 38 55.7**	**-1.0**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	**Inuvik**	**49.15**	**29**	P	**P**	**02 38 56.1**	**-0.5**
	comp=Z,1.2nm,0.3s,mb4.3,baz=290,slow=5.9,SNR=24						
INK	**Inuvik**	**49.15**	**29**	*e*P	**P**	**02 38 55.7**	**-1.0**
	comp=Z,3.7nm,0.9s,mb4.3						
KSH	**Kashi**	**49.45**	**291**	*e*P	**P**	**02 39 00.0**	**+0.6**
KSH				AMB	AMB		
	comp=Z,120nm,3.9s						
KOLN	**Koldanda**	**49.73**	**273**	*e*P	**P**	**02 39 01.8**	**+0.1**
	comp=Z,17nm,0.4s,mb5.4						
SVE	**Sverdlovsk**	**52.00**	**316**	⇑*e*P	**P**	**02 39 18.3**	**-0.2**
SVE				pmax	pmax		
	comp=Z,56nm,0.8s						
SOKR	**Solikamsk**	**52.88**	**320**	⇑*i*P	**P**	**02 39 24.9**	**-0.1**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
DLBC	**Dease Lake**	**53.78**	**41**	P	**P**	**02 39 32.5**	**+0.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=249,slow=8.6,SNR=3.1						
YKA	**Yellowknife Ar**	**58.65**	**32**	P	**P**	**02 40 05.5**	**-0.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=304,slow=6.8,SNR=14						
KEV	**Kevo**	**58.88**	**339**	*e*p	**P**	**02 40 04.4**	**-3.5**
	comp=Z,12nm,0.8s,mb5.0						
KEV	**Kevo**	**58.88**	**339**	*e*P	**P**	**02 40 04.4**	**-3.5**
KEV				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
ARCES	**ARCESS Array B**	**59.43**	**339**	P	**P**	**02 40 10.8**	**-0.9**
	comp=Z,2.0nm,0.5s,mb4.4,baz=46,slow=8.4,SNR=17						
ARCES				LR	LR	03 13 11.2	
	comp=Z,98nm,19.3s,baz=16,slow=43						
HYB	**Hyderabad**	**59.60**	**266**	*i* P	**P**	**02 40 13.0**	**-0.6**
JOF	**Joensuu**	**61.83**	**331**	*e*p	**P**	**02 40 23.4**	**-4.7**
	comp=Z,6.8nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**62.50**	**189**	P	**P**	**02 40 31.7**	**-1.5**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**62.50**	**189**	P	**P**	**02 40 31.7**	**-1.5**
	comp=Z,1.7nm,0.8s,mb4.2,baz=6.9,slow=6.9,SNR=12						
KAF	**Kangasniemi**	**64.11**	**332**	*e*p	**P**	**02 40 40.3**	**-2.8**
	comp=Z,4.3nm,0.7s,mb4.4,baz=46,slow=6.3						
KAF	**Kangasniemi**	**64.11**	**332**	*e*P	**P**	**02 40 40.3**	**-2.8**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
OBN	**Obninsk**	**64.55**	**322**	*i* P	**P**	**02 40 44.8**	**-1.2**
OBN				*e**PP	pP	02 41 25.1	+21
OBN				*e*		02 43 08.2	
OBN				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
FINES	**FINESS Array B**	**64.65**	**332**	P	**P**	**02 40 45.4**	**-1.2**
FINES				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,108nm,21.6s						
FINES	**FINESS Array B**	**64.65**	**332**	P	**P**	**02 40 45.4**	**-1.2**
	comp=Z,8.8nm,0.7s,mb4.7,baz=60,slow=7.4,SNR=117						
FINES				LR	LR	03 08 55.4	
	comp=Z,108nm,21.6s,baz=350,slow=36						
SUMG	**Summit**	**65.35**	**0**	*e*P	**P**	**02 40 50.7**	**-0.3**
	comp=Z,16nm,0.8s,mb4.9						
NEW	**Newport**	**65.56**	**46**	*e*P	**P**	**02 40 52.9**	**+0.2**
ASAR	**Alice Springs**	**66.23**	**189**	P	**P**	**02 40 56.5**	**-0.9**
	comp=Z,0.8nm,0.8s,mb3.6,baz=23,slow=5.8,SNR=7.0						
GOF	**Gofitskoye**	**67.44**	**311**	*e*P	**P**	**02 41 04.0**	**-0.6**
KIV	**Kislovodsk**	**68.32**	**310**	P	**P**	**02 41 10.7**	**+0.6**
	comp=Z,147nm,0.6s,SNR=7.4						
KIV	**Kislovodsk**	**68.32**	**310**	*i* P	**P**	**02 41 10.7**	**+0.6**
KIV				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.0						
KIV	**Kislovodsk**	**68.32**	**310**	*e*P	**P**	**02 41 09.7**	**-0.3**
	comp=Z,17nm,0.8s,mb4.9						
FCC	**Fort Churchill**	**68.74**	**28**	*e*P	**P**	**02 41 11.2**	**-1.2**
NB2	**NORSAR Subarra**	**69.72**	**337**	P	**P**	**02 41 17.6**	**-0.8**
	comp=Z,2.8nm,0.6s,mb4.3,baz=35,slow=6.2						
NB2	**NORSAR Subarra**	**69.72**	**337**	P	**P**	**02 41 17.6**	**-0.8**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
NOA	**NORSAR Array B**	**69.72**	**337**	P	**P**	**02 41 17.6**	**-0.8**
NOA				pmax	pmax		
	comp=Z,41nm,1.3s						
NOA				MLR	MLR		
	comp=Z,46nm,20.5s						
NOA	**NORSAR Array B**	**69.72**	**337**	P	**P**	**02 41 17.6**	**-0.8**
	comp=Z,41nm,1.3s,mb5.1,baz=36,slow=6.1,SNR=18						
NOA				LR	LR	03 13 18.9	
	comp=Z,46nm,20.5s,baz=110,slow=37						
BOZ	**Bozeman (W)**	**70.13**	**46**	*e*P	**P**	**02 41 21.0**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
BOZ	**Bozeman (W)**	**70.13**	**46**	*e*P	**P**	**02 41 21.0**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.2						
SOC	**Sochi**	**70.22**	**311**	*e*P	**P**	**02 41 23.1**	**+1.4**
SOC				*e*		02 43 54.2	
SOC				*e*		02 51 05.6	
SOC				*e*SSS	SSS	02 58 05.1	-0.3
SOC				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
SOC				pmax	pmax		
	comp=N,16nm,0.8s						
SOC				pmax	pmax		
	comp=E,29nm,0.9s						
BANOM	**Banah**	**70.64**	**288**	⇓P	**P**	**02 41 24.9**	**+0.3**
	SNR=30						
WBK	**Wadi Bani Khal**	**70.79**	**283**	⇑P	**P**	**02 41 26.6**	**+1.0**
AKASG	**Malin Array Be**	**70.80**	**322**	P	**P**	**02 41 24.2**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	**Malin Array Be**	**70.80**	**322**	P	**P**	**02 41 24.2**	**-0.9**
	comp=Z,2.9nm,0.4s,mb4.5,baz=42,slow=5.9,SNR=25						
NVAR	**Mina Array Bea**	**70.94**	**55**	P	**P**	**02 41 27.1**	**+0.9**
	comp=Z,1.1nm,0.7s,mb3.8,baz=311,slow=4.6,SNR=9.0						
MNV	**Mina**	**71.03**	**55**	P	**P**	**02 41 27.2**	**+0.5**
SMDO	**Samad**	**71.17**	**284**	⇓P	**P**	**02 41 29.2**	**+1.4**
HOQ	**Hoqain**	**71.38**	**285**	⇑P	**P**	**02 41 29.2**	**+0.2**
JMDO	**Jabal Madar**	**71.56**	**284**	P	**P**	**02 41 30.6**	**+0.4**
	SNR=10						
BSY	**Bisya**	**71.98**	**285**	P	**P**	**02 41 33.1**	**+0.5**
	SNR=9.5						
ARQ	**Araqi**	**72.09**	**285**	P	**P**	**02 41 33.8**	**+0.4**
	SNR=7.6						
DUG	**Dugway**	**73.05**	**51**	*e*P	**P**	**02 41 39.3**	**+0.7**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
DUG	**Dugway**	**73.05**	**51**	*e*P	**P**	**02 41 39.3**	**+0.7**
	comp=Z,1.3nm,0.7s,mb3.9						
BW06	**Boulder Array**	**73.16**	**47**	*e*P	**P**	**02 41 40.0**	**+0.9**
PDAR	**Pinedale Array**	**73.16**	**47**	P	**P**	**02 41 39.5**	**+0.3**
	comp=Z,0.8nm,0.8s,mb3.6,baz=32,slow=1.2,SNR=4.9						
ULM	**Lac du Bonnet**	**74.44**	**35**	P	**P**	**02 41 46.5**	**0.0**
	comp=Z,2.0nm,0.8s,mb3.9,baz=308,slow=7.2,SNR=3.3						
KWP	**Kalwaria**	**74.47**	**324**	*e*P	**P**	**02 41 46.9**	**+0.2**
TMUT	**Trail Mountain**	**74.57**	**51**	P	**P**	**02 41 49.1**	**+1.6**
KOLS	**Kolonicke sedl**	**75.18**	**324**	*e*P	**P**	**02 41 50.9**	**+0.1**
BRTR	**Keskin Array B**	**76.18**	**311**	P	**P**	**02 41 57.0**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRTR	**Keskin Array B**	**76.18**	**311**	P	**P**	**02 41 57.0**	**+0.3**
	comp=Z,5.4nm,1.1s,mb4.2,baz=81,slow=3.6,SNR=20						
PV10	**Paradox Valley**	**76.44**	**50**	*e*P	**P**	**02 41 58.9**	**+0.8**
UPC	**Upice**	**76.55**	**328**	*e*P	**P**	**02 41 59.0**	**+0.5**
DPC	**Dobruska-Polom**	**76.55**	**328**	*e*P	**P**	**02 41 59.1**	**+0.6**
CLL	**Collm**	**77.04**	**330**	*i* P	**P**	**02 42 01.1**	**-0.1**
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
CLL	**Collm**	**77.04**	**330**	*i* P	**P**	**02 42 01.1**	**-0.1**
	comp=Z,9.0nm,0.9s,mb4.5						
CLL	**Collm**	**77.04**	**330**	P	**P**	**02 42 01.1**	**-0.1**
	comp=Z,logA/T=1.0,mb4.5						
BRG	**Berggiesshubel**	**77.04**	**330**	*e*P	**P**	**02 42 01.3**	**0.0**
BRG				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
BRG	**Berggiesshubel**	**77.04**	**330**	P	**P**	**02 42 01.3**	**0.0**
	comp=Z,1.2nm,0.5s,mb3.9						
PRU	**Pruhonice**	**77.53**	**329**	*e*P	**P**	**02 42 03.9**	**-0.1**
MOX	**Moxa**	**78.09**	**331**	*e*P	**P**	**02 42 07.0**	**0.0**
KHC	**Kasperske Hory**	**78.59**	**329**	*e*P	**P**	**02 42 10.3**	**+0.5**
GERES	**GERESS Array B**	**78.78**	**329**	P	**P**	**02 42 11.2**	**+0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**78.78**	**329**	P	**P**	**02 42 11.2**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.8,baz=32,slow=5.2,SNR=16						
SDCO	**Great Sand Dun**	**78.87**	**49**	P	**P**	**02 42 12.6**	**+1.0**
GRA1	**Grafenberg Arr**	**79.02**	**330**	*e*P	**P**	**02 42 12.6**	**+0.4**
	comp=Z,6.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**79.02**	**330**	*e*P	**P**	**02 42 12.6**	**+0.4**
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**79.02**	**330**	*e*P	**P**	**02 42 12.6**	**+0.4**
GRF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
GRF	**Grafenberg Arr**	**79.02**	**330**	*e*P	**P**	**02 42 12.6**	**+0.4**
	comp=Z,6.0nm,0.9s,mb4.4						
RZN	**Rozhen**	**79.47**	**318**	*i* P	**P**	**02 42 16.0**	**+1.2**
VTS	**Vitosha**	**79.53**	**319**	*i* P	**P**	**02 42 16.0**	**+0.9**
SCHQ	**Schefferville**	**79.90**	**17**	P	**P**	**02 42 16.7**	**-0.2**
	comp=Z,1.8nm,0.8s,mb4.0,baz=239,slow=12,SNR=4.6						
SCHQ	**Schefferville**	**79.90**	**17**	P	**P**	**02 42 16.7**	**-0.2**
PERS	**Pernice**	**80.00**	**326**	*e*P	**P**	**02 42 17.8**	**+0.3**
MMB	**Musomiste**	**80.04**	**318**	*i* P	**P**	**02 42 18.0**	**+0.2**
BOJS	**Bojanci**	**80.85**	**326**	*i* P	**P**	**02 42 22.1**	**0.0**
CDF	**Champ du Feu**	**81.50**	**332**	*e*P	**P**	**02 42 25.3**	**-0.1**
	comp=Z,4.6nm,0.7s,mb4.1						
CDF	**Champ du Feu**	**81.50**	**332**	*e*P	**P**	**02 42 25.3**	**-0.1**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
HINF	**Hinteralfeld**	**82.16**	**332**	*e*P	**P**	**02 42 28.9**	**+0.1**
	comp=Z,3.4nm,0.6s,mb4.1						
HINF	**Hinteralfeld**	**82.16**	**332**	*e*P	**P**	**02 42 28.9**	**+0.1**
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
HAU	**Haudompre**	**82.17**	**332**	*e*P	**P**	**02 42 28.6**	**-0.3**
CABF	**La Chapelle**	**83.46**	**332**	*e*P	**P**	**02 42 36.0**	**+0.5**
	comp=Z,13nm,0.9s,mb4.5						
CABF	**La Chapelle**	**83.46**	**332**	*e*P	**P**	**02 42 36.0**	**+0.5**
CABF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**83.95**	**333**	*e*P	**P**	**02 42 37.8**	**-0.1**
SSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
SSF	**Saint Saulge**	**83.95**	**333**	*e*P	**P**	**02 42 37.8**	**-0.1**
	comp=Z,6.2nm,0.9s,mb4.4						
GRR	**Gorron**	**84.14**	**337**	*e*P	**P**	**02 42 39.7**	**+0.9**
LPL	**La Plagne**	**84.17**	**331**	*e*P	**P**	**02 42 39.6**	**+0.6**
	comp=Z,8.1nm,0.7s,mb4.4						
LPL	**La Plagne**	**84.17**	**331**	*e*P	**P**	**02 42 39.6**	**+0.6**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
LPG	**La Plagne**	**84.18**	**331**	*e*P	**P**	**02 42 39.8**	**+0.8**
	comp=Z,8.6nm,0.6s,mb4.5						
LPG	**La Plagne**	**84.18**	**331**	*e*P	**P**	**02 42 39.8**	**+0.8**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
SMF	**Signal de Mont**	**84.21**	**333**	*e*P	**P**	**02 42 39.3**	**+0.2**
AVF	**Avril sur Loir**	**84.24**	**333**	*e*P	**P**	**02 42 39.6**	**+0.3**
	comp=Z,16nm,0.7s,mb4.7						
AVF	**Avril sur Loir**	**84.24**	**333**	*e*P	**P**	**02 42 39.6**	**+0.3**
AVF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
SGMF	**Saint Gilles**	**84.75**	**338**	*e*P	**P**	**02 42 42.6**	**+0.8**
MBDF	**Montbardon**	**84.83**	**330**	*e*P	**P**	**02 42 43.1**	**+0.8**
	comp=Z,7.6nm,0.7s,mb4.5						
MBDF	**Montbardon**	**84.83**	**330**	*e*P	**P**	**02 42 43.1**	**+0.8**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
ROSF	**Rostrenen**	**84.88**	**338**	*e*P	**P**	**02 42 43.0**	**+0.6**
ORIF	**Oris-en-Rattie**	**84.99**	**331**	*e*P	**P**	**02 42 43.7**	**+0.6**
TCF	**Toulx Ste Croi**	**85.06**	**334**	*e*P	**P**	**02 42 43.8**	**+0.4**
	comp=Z,16nm,1.1s,mb4.6						
TCF	**Toulx Ste Croi**	**85.06**	**334**	*e*P	**P**	**02 42 43.8**	**+0.4**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
SBF	**Sospel**	**85.33**	**329**	*e*P	**P**	**02 42 44.6**	**-0.2**
	comp=Z,14nm,0.7s,mb4.7						
SBF	**Sospel**	**85.33**	**329**	*e*P	**P**	**02 42 44.6**	**-0.2**
SBF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
VIVF	**Saint-Julien-l**	**85.48**	**332**	*e*P	**P**	**02 42 46.0**	**+0.5**
	comp=Z,21nm,0.9s,mb4.7						
VIVF	**Saint-Julien-l**	**85.48**	**332**	*e*P	**P**	**02 42 46.0**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MFF	**Saint Martin d**	**85.53**	**335**	*e*P	**P**	**02 42 46.4**	**+0.7**
TXAR	**Lajitas Array**	**85.99**	**53**	P	**P**	**02 42 49.6**	**+1.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=294,slow=3.5,SNR=26						
LMR	**La Mourre**	**86.13**	**330**	*e*P	**P**	**02 42 48.7**	**0.0**
CAF	**Calviac**	**86.31**	**333**	*e*P	**P**	**02 42 50.8**	**+1.2**
	comp=Z,31nm,1.1s,mb4.9						
CAF	**Calviac**	**86.31**	**333**	*e*P	**P**	**02 42 50.8**	**+1.2**
CAF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
LASF	**Ste Croix**	**86.44**	**332**	*e*P	**P**	**02 42 51.0**	**+0.8**
	comp=Z,73nm,1.4s,mb5.1						
EPF	**Esparros**	**88.56**	**334**	*e*P	**P**	**02 43 01.2**	**+0.7**
ETSF	**Etsaut**	**88.98**	**334**	*e*P	**P**	**02 43 03.7**	**+1.3**
	comp=Z,21nm,0.8s,mb4.9						
ETSF	**Etsaut**	**88.98**	**334**	*e*P	**P**	**02 43 03.7**	**+1.3**
ETSF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
ESDC	**Sonseca Array**	**92.98**	**335**	P	**P**	**02 43 20.9**	**-0.2**
	comp=Z,0.6nm,0.7s,mb4.0,baz=67,slow=1.7,SNR=5.6						
DBIC	**Dimbokro**	**123.03**	**321**	PKIKP	PKPdf	02 49 04.0	+0.5
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.6s						

DBIC	**Dimbokro**	**123.03**	**321**	PKP	PKPdf	02 49 04.0	+0.5
	comp=Z,1.5nm,0.6s,baz=356,slow=10,SNR=4.0						
SNAA	**Sanae**	**146.17**	**199**	*e*	PKPdf	02 49 53.7	+9.2
SNAA	**Sanae**	**146.17**	**199**	⇑*i*PKPdf	PKPdf	02 49 49.3	+4.8
SNAA				*e*		02 49 53.7	
VNA2	**Neumayer--Watz**	**147.75**	**198**	*e*	PKPdf	02 49 55.1	+8.0
VNA2	**Neumayer--Watz**	**147.75**	**198**	*e*	PKPdf	02 49 56.3	+9.2
VNA2	**Neumayer--Watz**	**147.75**	**198**	⇑*i*PKPdf	PKPdf	02 49 50.9	+3.8
VNA2				*e*		02 49 55.1	
VNA2				*e*		02 49 56.3	
VNA3	**Neumayer Olymp**	**148.01**	**196**	*e*	PKPdf	02 49 56.3	+8.8
VNA3	**Neumayer Olymp**	**148.01**	**196**	*e*	PKPdf	02 49 57.7	+10
VNA3	**Neumayer Olymp**	**148.01**	**196**	⇑*i*PKPdf	PKPdf	02 49 52.1	+4.6
VNA3				*e*		02 49 56.3	
VNA3				*e*		02 49 57.7	
BDFB	**Brasilia**	**151.76**	**23**	PKIKP	PKPdf	02 50 03.3	+8.4
BDFB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BDFB	**Brasilia**	**151.76**	**23**	PKPbc	PKPdf	02 50 03.3	+8.3
	comp=Z,3.9nm,0.7s,baz=76,slow=1.7,SNR=6.1						
BDFB				PKPab	PKPab	02 50 12.5	-0.3
	comp=Z,2.4nm,0.6s,baz=19,slow=4.5,SNR=3.9						

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*BJI **12** 02:38:38.6,23.62S×168.88E,h10^{km},mB5.5,mb4.7,Ms5.1,Msz4.8*

*NEIC **12** 02:38:41.7±0.3,23.43S×169.21E,h10^{km},mb5.0/11,MS4.9/1,Error ellipse: s-maj=12.5km s-min=8.4km az=185.0*

*IDC **12** 02:38:41.3±0.9,23.12S×169.20E,mb4.6/11,mb1 4.7/12,mb1mx4.7/17,mbtmp4.6/12,ML3.9/1,MS4.5/16,Ms1 4.4/16,ms1mx4.2/23,Error ellipse: s-maj=29.7km s-min=20.8km az=159.0*

*HRVD **12** 02:38:41.7±0.3,23.07S×169.40E,h12^{km},MW5.2/67,Centroid moment Tensor Solution. LP body waves: s51,c89;Mantle waves: s67,c120; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-6.46±.19; $M_{\theta\theta}$5.94±.18; $M_{\phi\phi}$0.52±.18; $M_{r\theta}$1.37±.50; $M_{\theta\phi}$3.24±.17; $M_{\phi r}$-2.49±.51; Best double couple: $M_0$7.562×10^{16} NP1: ϕ_s44°,δ49°,λ-121°. NP2:ϕ_s266°,δ50°,λ-59°. Principal axes: T 7.457, Plg1°, Azm335°; N .214, Plg23°, Azm66°; P -7.667, Plg67°, Azm243°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ORF **12** 02:38:49.2,23.78S×167.88E,h30^{km},mb5.6*

*MOS **12** 02:38:49.1±1.8,22.58S×168.67E,h33^{km},mb4.9/4,Error ellipse: s-maj=29.0km s-min=16.7km az=22.8*

ISC 12 02:38:42.6±3.8**,23.15S**±0.08×**169.17E**±0.07**,h17**^{km}±25^{km}**, h19**^{km}±2.7^{km}**:pP-P,n112,**σ**1**^{s}**18**/59**,mb4.8**/32**,MS4.5**/21**, 9C-1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.74**	**293**	*e*P	**Pn**	**02 39 26.6**	**0.0**
DZM				*e*S	**Sn**	**02 40 00.7**	**+1.0**
DZM	**Mont Dzumac**	**2.74**	**293**	*e*P	**Pn**	**02 39 26.6**	**-0.1**
DZM				*e*S	**Sn**	**02 40 00.7**	**+1.0**
NOUC	**Port Laguerre**	**2.85**	**291**	*e*P	**Pn**	**02 39 28.0**	**-0.3**
NOUC				*e*S	**Sn**	**02 40 02.4**	**-0.1**
URZ	**Urewera**	**16.52**	**158**	Pn	**P**	**02 42 38.4**	**+3.2**
	0.5nm,0.3s,baz=323,slow=13,SNR=4.2						
URZ				LR	LR	02 47 57.4	
	comp=Z,5µm,18.1s,baz=154,slow=34						
RPZ	**Rata Peaks**	**20.57**	**176**	P	**P**	**02 43 23.2**	**0.0**
	19nm,0.8s,baz=19,slow=18,SNR=3.1						
RPZ				LR	LR	02 50 31.9	
	comp=Z,4µm,18.8s,MS4.8,baz=9.7,slow=34						
CNB	**Canberra Magne**	**21.07**	**230**	*e*P	**P**	**02 43 29.7**	**+1.4**
	537nm,1.0s,mb5.8						
CTA	**Charters Tower**	**21.52**	**274**	*e*P	**P**	**02 43 34.5**	**+1.5**
	14nm,0.8s,mb4.4						
CTA	**Charters Tower**	**21.52**	**274**	*e*P	**P**	**02 43 34.5**	**+1.5**
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTA	**Charters Tower**	**21.52**	**274**	P	**P**	**02 43 34.0**	**+1.0**
	comp=Z,14nm,0.7s,mb4.5,baz=101,slow=10.0,SNR=18						
PMG	**Port Moresby**	**25.11**	**299**	P	**P**	**02 44 08.9**	**+0.7**
	comp=Z,12nm,0.9s,mb4.4,baz=218,slow=10,SNR=4.3						
PMG				LR	LR	02 52 29.4	
	comp=Z,2µm,20.7s,MS4.6,baz=326,slow=33						
STKA	**Stephens Creek**	**25.90**	**244**	*e*P	**P**	**02 44 16.5**	**+1.0**
	comp=Z,26nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**25.90**	**244**	P	**P**	**02 44 15.2**	**-0.3**
	comp=Z,19nm,0.9s,mb4.6,baz=82,slow=11,SNR=19						
STKA				LR	LR	02 53 39.6	
	comp=Z,399nm,20.2s,MS3.9,baz=319,slow=35						
RAR	**Rarotonga**	**28.80**	**92**	LR	LR	02 52 58.0	
	comp=Z,453nm,18.9s,MS4.1,baz=283,slow=30						
ASAR	**Alice Springs**	**32.32**	**262**	P	**P**	**02 45 12.4**	**-0.7**
	comp=Z,7.0nm,0.9s,mb4.5,baz=99,slow=9.7,SNR=37						
ASAR				PcP	PcP	02 47 59.0	-2.1
	comp=Z,3.7nm,0.9s,baz=101,slow=3.1,SNR=6.6						
ASPA	**Alice Springs**	**32.32**	**262**	*e*P	**P**	**02 45 12.3**	**-0.9**
WB2	**Warramunga Arr**	**32.50**	**269**	*e*P	**P**	**02 45 13.2**	**-1.5**
WRAB	**Tennant Creek**	**32.50**	**269**	*e*P	**P**	**02 45 13.4**	**-1.4**
WRA	**Warramunga Arr**	**32.51**	**269**	P	**P**	**02 45 12.5**	**-2.3**
	comp=Z,2.2nm,0.7s,mb4.2,baz=99,slow=7.8,SNR=24						
WRA				PcP	PcP	02 47 59.9	-1.7
	comp=Z,1.7nm,0.7s,baz=98,slow=2.7,SNR=5.6						
KAKA	**Kakadu**	**36.36**	**280**	*e*P	**P**	**02 45 46.6**	**-1.3**
	comp=Z,9.0nm,0.6s,mb4.9						
TBI	**Tubuai**	**37.92**	**99**	*e*S	**S**	**02 51 45.5**	**-5.9**
TBI				*e*LQ		02 54 25.6	
TBI				*e*LR	LR	02 55 43.1	
	comp=Z,800nm,30.0s,baz=262						
PPT	**Papeete**	**38.98**	**90**	*e*S	**S**	**02 51 56.6**	**-11**
PPT				*e*LQ		02 54 49.2	
PPT				*e*LR	LR	02 56 09.5	
	comp=Z,491nm,30.0s,baz=258						
FITZ	**Fitzroy Crossi**	**40.94**	**269**	*e*P	**P**	**02 46 26.2**	**+0.1**
	comp=Z,21nm,0.9s,mb4.8						
MBWA	**Marble Bar**	**45.66**	**263**	*e*P	**P**	**02 47 03.0**	**-1.4**
	comp=Z,42nm,0.9s,mb5.4						
VNDA	**Vanda**	**54.54**	**182**	LR	LR	03 08 39.6	
	comp=Z,369nm,18.0s,MS4.5,baz=104,slow=33						
VNDA	**Vanda**	**54.54**	**182**	P	**P**	**02 48 06.8**	**-4.8**
SBA	**Scott Base**	**54.77**	**181**	P	**P**	**02 48 07.7**	**-5.6**
JOW	**Kunigami**	**63.50**	**319**	LR	LR	03 13 35.4	
	comp=Z,362nm,20.6s,MS4.5,baz=85,slow=33						
MAT	**Matsushiro**	**66.18**	**333**	*e*P	**P**	**02 49 31.0**	**-0.6**
	comp=Z,13nm,0.9s,mb5.0						
MAT	**Matsushiro**	**66.18**	**333**	P	**P**	**02 49 31.2**	**-0.4**
MAT				S	S	02 58 23.6	+5.6
QSPA	**South Pole Qui**	**66.92**	**180**	⇑*i*P	**P**	**02 49 37.6**	**+1.9**
	comp=Z,22nm,1.1s,mb5.1						
YSS	**Yuzh-Sakhalins**	**73.74**	**341**	P	**P**	**02 50 24.4**	**+6.9**
MAW	**Mawson**	**74.81**	**202**	LR	LR	03 18 55.2	
	comp=Z,317nm,21.0s,MS4.6,baz=91,slow=32						
MDJ	**Mudanjiang**	**76.52**	**332**	P	**P**	**02 50 31.1**	**-2.4**
MDJ				PP	PP	02 53 29.1	+1.9
MDJ				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,167nm,5.1s						
MDJ				LR	LR		
	comp=N,260nm,22.4s,MS4.6						
MDJ				LR	LR		
	comp=E,183nm,22.4s,MS4.6						
MDJ				LR	LR		
	comp=Z,407nm,24.0s,MS4.7						
CN2	**Changchun**	**77.76**	**329**	*e*P	**P**	**02 50 43.0**	**+2.7**
CN2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
GYA	**Guiyang**	**78.01**	**306**	P	**P**	**02 50 43.1**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
ENH	**Enshi**	**78.12**	**310**	*e*P	**P**	**02 50 42.4**	**-0.3**
	comp=Z,24nm,1.2s,mb5.0						
NANT	**Nan**	**78.77**	**296**	P	**P**	**02 50 46.5**	**+0.1**
KLR	**Kul'dur**	**79.39**	**336**	*e*P	**P**	**02 50 46.8**	**-2.4**
BJI	**Beijing**	**79.93**	**321**	P	**P**	**02 50 52.9**	**+0.6**
BJI				S	S	03 00 57.4	+3.7
BJI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
BJI				AMB	AMB		
	comp=Z,268nm,5.9s						
BJI				LR	LR		
	comp=N,238nm,11.8s,MS4.9						
BJI				LR	LR		
	comp=E,224nm,10.6s,MS4.9						
BJI				LR	LR		
	comp=Z,394nm,40.7s						
CMAR	**Chiang Mai Arr**	**80.06**	**295**	P	**P**	**02 50 54.5**	**+1.1**
	comp=Z,6.6nm,0.7s,mb4.7,baz=133,slow=4.1,SNR=32						
CMAR				LR	LR	03 23 51.4	
	comp=Z,129nm,19.5s,MS4.3,baz=100,slow=34						
CHG	**Chiang Mai**	**80.23**	**295**	⇑P	**P**	**02 50 55.9**	**+1.6**
	comp=Z,15nm,0.9s,mb4.9						
KMI	**Kunming**	**80.29**	**303**	P	**P**	**02 50 55.9**	**+1.4**
KMI				AP	pP	02 50 58.7	-1.2
KMI				AMB	AMB		
	comp=Z,11nm,1.4s,mb4.6						
KMI				AMB	AMB		
	comp=Z,261nm,5.0s						
KMI				LR	LR		
	comp=N,132nm,11.1s						
KMI				LR	LR		
	comp=E,148nm,18.9s						
KMI				LR	LR		
	comp=Z,107nm,25.1s						
XAN	**Xi'an**	**80.71**	**313**	P	**P**	**02 50 55.9**	**-0.6**
XAN				AP	pP	02 51 03.6	+1.6
XAN				AMB	AMB		
	comp=Z,11nm,1.9s,mb4.5						
HHC	**Hu-ho-hao-te**	**83.14**	**320**	*e*P	**P**	**02 51 10.4**	**+1.3**
HHC				AP	pP	02 51 15.1	+0.6
HHC				XP	sP	02 51 17.5	+1.2
HHC				SKS	SKS	03 01 26.5	-6.0
HHC				S	S	03 01 31.3	+4.6
HHC				XS		03 01 38.5	
HHC				AMB	AMB		
	comp=Z,11nm,1.4s,mb4.7						
HHC				AMB	AMB		
	comp=Z,181nm,4.2s						
HHC				LR	LR		
	comp=N,205nm,21.6s,MS4.7						
HHC				LR	LR		
	comp=E,241nm,19.2s,MS4.7						
HHC				LR	LR		
	comp=Z,425nm,26.4s						
SNAA	**Sanae**	**85.27**	**183**	⇑*i*P	**P**	**02 51 21.6**	**+2.5**
SNAA	**Sanae**	**85.27**	**183**	LR	LR	03 25 59.9	
	comp=Z,204nm,19.0s,MS4.5,baz=220,slow=33						
SNAA	**Sanae**	**85.27**	**183**	*e*P	**P**	**02 51 16.0**	**-3.0**
	comp=Z,310nm,1.2s						
LZH	**Lanzhou**	**85.30**	**312**	*e*P	**P**	**02 51 20.5**	**+0.5**
LZH				AP	pP	02 51 28.0	+2.5
LZH				XP	sP	02 51 31.7	+4.4
LZH				AMB	AMB		
	comp=Z,46nm,1.8s,mb5.3						
LZH				AMB	AMB		
	comp=Z,130nm,4.0s						
LZH				LR	LR		
	comp=N,386nm,17.2s						
LZH				LR	LR		
	comp=Z,561nm,18.5s,MS5.0						
VNA3	**Neumayer Olymp**	**85.86**	**180**	⇑*i*P	**P**	**02 51 20.7**	**-1.3**
VNA2	**Neumayer--Watz**	**86.15**	**181**	⇑*i*P	**P**	**02 51 22.5**	**-1.0**
CLNS	**Chul'man**	**87.96**	**337**	*e*P	**P**	**02 51 33.3**	**+0.8**
CLNS				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=N,11nm,1.0s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.8s						
USHA	**Ushuaia**	**88.08**	**151**	LR	LR	03 20 23.9	
	comp=E,400nm,20.0s,MS4.8,baz=225,slow=28						
GTA	**Gaotai**	**89.76**	**314**	*e*P	**P**	**02 51 42.7**	**+1.2**
GTA				AP	pP	02 51 49.3	+2.3
GTA				XP	sP	02 51 52.2	+3.4
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.6						
GTA				AMB	AMB		
	comp=Z,167nm,6.9s						
GTA				LR	LR		
	comp=N,207nm,19.8s,MS4.7						
GTA				LR	LR		
	comp=E,230nm,22.1s,MS4.7						
GTA				LR	LR		
	comp=Z,204nm,18.6s,MS4.6						
CMB	**Columbia Colle**	**89.80**	**48**	*e*P	**P**	**02 51 41.0**	**-0.8**
	comp=Z,12nm,1.3s,mb5.1						
SONM	**Songino Array**	**90.29**	**323**	P	**P**	**02 51 43.8**	**0.0**
	comp=Z,3.6nm,1.0s,mb4.7,baz=141,slow=4.1,SNR=20						
BILL	**Bilibino**	**90.94**	**359**	*e*P	**P**	**02 51 45.3**	**-1.0**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
NVAR	**Mina Array Bea**	**91.42**	**49**	P	**P**	**02 51 49.5**	**+0.3**
	comp=Z,3.8nm,1.0s,mb4.7,baz=216,slow=6.0,SNR=17						
NVAR				LR	LR	03 23 25.2	
	comp=Z,150nm,20.6s,MS4.4,baz=270,slow=29						
MNV	**Mina**	**91.53**	**49**	*e*P	**P**	**02 51 49.8**	**+0.1**
	comp=Z,5.8nm,1.0s,mb4.9						
MNV				LR	LR		
	comp=Z,393nm,20.0s,MS4.8						
ZAK	**Zakamensk**	**93.41**	**324**	⇑*i*P	**P**	**02 51 53.8**	**-4.3**
ZAK				*e*		02 55 44.7	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.8s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.9s,mb3.9						
ILAR	**Eielson Array**	**93.96**	**17**	P	**P**	**02 51 58.9**	**-1.4**
	comp=Z,1.5nm,0.8s,mb4.5,baz=232,slow=6.6,SNR=10						
ILAR				LR	LR	03 27 09.6	
	comp=Z,130nm,19.6s,MS4.4,baz=178,slow=31						
ELK	**Elko**	**94.59**	**48**	P	**P**	**02 52 03.8**	**+0.1**
PLCA	**Paso Flores**	**95.66**	**139**	LR	LR	03 25 16.8	
	comp=Z,192nm,21.0s,MS4.5,baz=224,slow=29						
TXAR	**Lajitas Array**	**98.67**	**62**	LR	LR	03 30 55.8	
	comp=Z,115nm,18.0s,MS4.4,baz=320,slow=32						
PDAR	**Pinedale Array**	**99.30**	**48**	P	**P**	**02 52 25.9**	**+0.8**
	comp=Z,0.8nm,1.0s,mb4.2,baz=180,slow=4.4,SNR=4.0						
PDAR				LR	LR	03 27 41.6	
	comp=Z,76nm,21.3s,MS4.2,baz=146,slow=30						
KMBO	**Kilima Mbogo**	**127.39**	**249**	PKP	PKPdf	02 57 49.0	-2.4
	comp=Z,1.0nm,0.8s,baz=29,slow=16,SNR=3.5						
AKASG	**Malin Array Be**	**138.56**	**322**	PKP	PKPdf	02 58 10.1	-1.2
	comp=Z,1.4nm,0.7s,baz=50,slow=2.6,SNR=5.5						
BRTR	**Keskin Array B**	**139.06**	**304**	PKP	PKPdf	02 58 09.9	-2.6
	comp=Z,1.2nm,1.0s,baz=180,slow=4.9,SNR=4.6						
KOLS	**Kolonicke sedl**	**143.35**	**323**	*e*PKP	PKPdf	02 58 15.4	-4.3
KOLS				*e*		02 58 23.1	
CRVS	**Cervenica-Dubn**	**143.82**	**323**	*e*PKP	PKPdf	02 58 21.4	+0.9
DIM	**Dimitrovgrad**	**144.38**	**311**	*e*P	PKPbc	02 58 22.0	+4.5
KECS	**Kecovo**	**144.59**	**323**	*e*PKP	PKPdf	02 58 17.6	-4.3
KECS				*e*		02 58 28.8	
KDZ	**Kurdzhali**	**144.60**	**310**	*e*P	PKPbc	02 58 19.0	+0.8
OKC	**Ostrava-Krasne**	**145.01**	**327**	*e*PKP	PKPdf	02 58 20.1	-2.5
RZN	**Rozhen**	**145.08**	**310**	*i* P	PKPbc	02 58 21.0	+1.5
PGB	**Panagyurishte**	**145.14**	**312**	*e*P	PKPbc	02 58 23.0	+3.4
RUE	**Ruedersdorf**	**145.19**	**334**	*e*PKP	PKPdf	02 58 20.2	-2.6
PSZ	**Piszkesteto**	**145.23**	**323**	*e*PKP	PKPdf	02 58 20.6	-2.5
PSZ	**Piszkesteto**	**145.23**	**323**	⇑*i*PKP/p	PKPdf	02 58 21.2	-1.9
KSP	**Ksiaz**	**145.25**	**330**	*e*P	PKPbc	02 58 21.1	+1.5
MORC	**Moravsky Berou**	**145.35**	**327**	*e*PKP	PKPdf	02 58 19.7	-3.5
BSEG	**Bad Segeberg**	**145.37**	**338**	*e*PKIKP	PKPdf	02 58 21.1	-2.0
VYHS	**Vyhne**	**145.48**	**324**	*i* PKP	PKPdf	02 58 22.0	-1.5
DPC	**Dobruska-Polom**	**145.57**	**329**	*e*PKP	PKPdf	02 58 21.7	-1.9
UPC	**Upice**	**145.61**	**329**	*e*PKP	PKPdf	02 58 22.1	-1.5
VTS	**Vitosha**	**145.77**	**313**	*e*P	PKPbc	02 58 23.0	+1.8
MMB	**Musomiste**	**145.80**	**311**	*i* P	PKPbc	02 58 23.0	+1.7
KKB	**Krupnik**	**146.15**	**312**	*i* P	PKPbc	02 58 24.0	+1.9
SRO	**Srobarova**	**146.16**	**324**	*e*PKP	PKPdf	02 58 23.6	-1.1
SMOL	**Smolenice**	**146.21**	**326**	*e*PKP	PKPdf	02 58 26.2	+1.5
SMOL				*e*		02 58 31.0	
SRO1	**Iza**	**146.24**	**324**	*e*PKP	PKPdf	02 58 24.8	0.0
PVCC	**Panska Ves**	**146.26**	**330**	*e*PKP	PKPdf	02 58 23.9	-0.8
BRG	**Berggiesshubel**	**146.30**	**331**	*e*PKP2	PKPab	02 58 24.3	-0.7
BRG				pmax	pmax		
	comp=Z,45nm,1.3s						
BRG	**Berggiesshubel**	**146.30**	**331**	*e*P	PKPbc	02 58 24.3	+2.1
BRG				*i*		02 58 29.9	
CLL	**Collm**	**146.39**	**333**	⇑*i*PKP2	PKPab	02 58 24.3	-1.1
CLL				pmax	pmax		
	comp=Z,27nm,1.1s						
CLL	**Collm**	**146.39**	**333**	⇑*i*PKP1	PKPbc	02 58 24.3	+1.9
CLL				*i*		02 58 29.1	
PRU	**Pruhonice**	**146.66**	**330**	*e*PKP	PKPdf	02 58 23.8	-1.6
SKO	**Skopje**	**147.22**	**313**	⇓*i*PKP	PKPdf	02 58 26.0	-0.6
NKC	**Novy Kostel**	**147.42**	**332**	*e*PKP	PKPdf	02 58 27.4	+0.7
MOX	**Moxa**	**147.46**	**333**	*e*PKP2	PKPab	02 58 27.7	-1.9
MOX				pmax	pmax		
	comp=Z,15nm,1.2s						
KHC	**Kasperske Hory**	**147.70**	**329**	*e*PKP	PKPdf	02 58 26.2	-1.0
GEC2	**GERESS Array S**	**147.84**	**329**	*e*PKP2	PKPab	02 58 28.4	-2.7
GERES	**GERESS Array B**	**147.84**	**329**	PKPbc	PKPdf	02 58 28.5	+1.1
	comp=Z,4.3nm,0.8s,baz=45,slow=1.9,SNR=14						
WET	**Wettzell**	**148.02**	**330**	*e*PKP2	PKPab	02 58 28.8	-3.0
GRA1	**Grafenberg Arr**	**148.35**	**332**	*e*PKPbc	PKPdf	02 58 29.3	+1.1
GRF	**Grafenberg Arr**	**148.35**	**332**	*e*PKIKP	PKPdf	02 58 29.3	+1.1
TNS	**Taunus Mts**	**149.06**	**336**	*e*PKIKP	PKPdf	02 58 31.0	+1.7
FUR	**Furstenfeldbru**	**149.46**	**330**	*e*PKIKP	PKPdf	02 58 32.3	+2.3
WLF	**Walferdange**	**150.36**	**337**	*e*PKPbc	PKPdf	02 58 33.7	+2.4
GIVF	**Givet**	**150.44**	**339**	*e*PKP1	PKPdf	02 58 34.3	+2.8
	comp=Z,38nm,0.9s						
BAIF	**Baives**	**150.67**	**340**	*e*PKP1	PKPdf	02 58 34.8	+3.0
MEZF	**Maizieres J'vi**	**151.73**	**337**	*e*PKP1	PKPdf	02 58 37.5	+4.1
	comp=Z,69nm,1.2s						
AQU	**L'Aquila**	**152.19**	**319**	PKP	PKPdf	02 58 33.4	-1.0

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*IDC **12** 02:57:48.8±0.9,4.90S×102.69E,mb4.3/12,mb1 4.4/12,mb1mx4.3/17,mbtmp4.3/12,MS4.4/3,Ms1 4.4/3,ms1mx3.6/19,Error ellipse: s-maj=48.0km s-min=14.2km az=51.0*

*NEIC **12** 02:57:53.4±0.5,4.81S×102.81E,h30^{km},mb4.5/5,Error ellipse: s-maj=21.5km s-min=6.1km az=52.0*

ISC 12 02:57:52.1±0.8**,4.8S**±0.2×**102.9E**±0.2**,h33**^{km}**,n29,** σ**0**^{s}**64**/24**,mb4.3**/17**,MS4.5**/3**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**23.42**	**351**	P	**P**	**03 02 59.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**23.42**	**351**	P	**P**	**03 03 00.9**	**+1.5**
	2.7nm,0.5s,mb4.0,baz=182,slow=8.8,SNR=9.4						
FITZ	**Fitzroy Crossi**	**25.90**	**123**	*e*P	**P**	**03 03 23.2**	**0.0**
	3.4nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**34.14**	**119**	P	**P**	**03 04 36.2**	**-0.2**
	1.1nm,0.3s,mb4.3,baz=300,slow=11,SNR=48						
WRA				PcP	PcP	03 07 13.3	0.0
	0.8nm,0.5s,baz=300,slow=2.0,SNR=7.3						
WRAB	**Tennant Creek**	**34.14**	**119**	*e*P	**P**	**03 04 35.6**	**-0.8**
	4.0nm,0.4s,mb4.7						
WB2	**Warramunga Arr**	**34.15**	**119**	*e*P	**P**	**03 04 36.2**	**-0.3**
ASPA	**Alice Springs**	**35.31**	**125**	*e*P	**P**	**03 04 46.8**	**+0.4**
ASAR	**Alice Springs**	**35.31**	**125**	P	**P**	**03 04 46.8**	**+0.4**
	0.9nm,0.4s,mb4.0,baz=298,slow=8.0,SNR=15						
ASAR				PcP	PcP	03 07 17.1	+0.4
	1.2nm,0.6s,baz=304,slow=2.3,SNR=11						
ENH	**Enshi**	**35.44**	**10**	P	**P**	**03 04 46.8**	**-0.6**
CTA	**Charters Tower**	**44.85**	**114**	P	**P**	**03 06 05.5**	**+0.1**
	4.7nm,0.7s,mb4.5,baz=298,slow=7.8,SNR=6.5						
STKA	**Stephens Creek**	**45.17**	**131**	P	**P**	**03 06 08.5**	**+0.6**
	3.5nm,0.6s,mb4.4,baz=308,slow=8.7,SNR=9.7						
STKA	**Stephens Creek**	**45.17**	**131**	*e*P	**P**	**03 06 08.1**	**+0.3**
SONM	**Songino Array**	**52.49**	**3**	P	**P**	**03 07 05.1**	**+0.9**
	2.7nm,0.7s,mb4.3,baz=185,slow=8.1,SNR=21						
SONM				PcP	PcP	03 08 13.9	-0.6
	0.5nm,0.4s,baz=178,slow=2.6,SNR=3.7						
ULN	**Ulaanbaatar**	**52.56**	**4**	*e*P	**P**	**03 07 04.9**	**+0.2**
KURK	**Kurchatov**	**59.09**	**342**	*e*P	**P**	**03 07 50.5**	**-1.2**
	2.9nm,0.5s,mb4.6						
ZAL	**Zalesovo**	**60.44**	**348**	P	**P**	**03 08 00.8**	**-0.1**
	3.1nm,0.5s,mb4.6,baz=302,slow=3.6,SNR=12						
ZAL				LR	LR	03 39 14.2	
	comp=Z,264nm,19.3s,MS4.4,baz=5.2,slow=41						
BVAR	**Borovoye Array**	**63.79**	**339**	P	**P**	**03 08 22.4**	**-0.8**
	3.7nm,0.8s,mb4.4,baz=135,slow=8.4,SNR=11						
CHKZ	**Chkalovo**	**64.23**	**339**	*e*P	**P**	**03 08 25.4**	**-0.7**
	2.6nm,0.6s,mb4.4						
BRTR	**Keskin Array B**	**77.30**	**312**	P	**P**	**03 09 45.8**	**+0.5**
	1.2nm,0.6s,mb4.0,baz=142,slow=6.4,SNR=7.9						
AKASG	**Malin Array Be**	**83.43**	**322**	P	**P**	**03 10 17.9**	**+0.3**
	1.0nm,0.8s,mb3.9,baz=91,slow=4.5,SNR=4.8						
FINES	**FINESS Array B**	**87.90**	**332**	P	**P**	**03 10 40.4**	**+1.0**
	0.8nm,0.5s,mb4.2,baz=108,slow=6.0,SNR=8.6						
FINES				LR	LR	03 51 50.4	
	comp=Z,360nm,20.4s,MS4.8,baz=210,slow=37						
FINES	**FINESS Array B**	**87.90**	**332**	P	**P**	**03 10 40.4**	**+1.0**
FINES				LR	LR	03 51 50.4	
KAF	**Kangasniemi**	**87.95**	**333**	*e*p	**P**	**03 10 39.3**	**-0.3**
	1.5nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**90.06**	**340**	P	**P**	**03 10 48.9**	**-0.6**
	5.8nm,1.0s,mb4.8,baz=112,slow=4.9,SNR=3.4						
NOA	**NORSAR Array B**	**94.96**	**331**	LR	LR	03 59 02.8	
	comp=Z,141nm,21.9s,MS4.4,baz=35,slow=39						
WMOK	**Wichita Mounta**	**144.09**	**31**	*e*PKP	PKPdf	03 17 23.1	-1.8
BDFB	**Brasilia**	**144.74**	**234**	PKP	PKPdf	03 17 28.5	+1.9
	1.9nm,0.4s,baz=133,slow=4.6,SNR=6.5						
TXAR	**Lajitas Array**	**144.98**	**43**	PKPbc	PKPbc	03 17 28.5	+1.6
	0.9nm,0.5s,baz=280,slow=1.0,SNR=18						
JCT	**Junction City**	**146.69**	**37**	*e*PKPdf	PKPdf	03 17 31.8	+2.2

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*NEIC **12** 03:13:59.8±0.5,0.31N×122.62E,mb4.0/2,Error ellipse: s-maj=41.4km s-min=8.1km az=62.0*

*IDC **12** 03:14:00.1±1.1,0.35N×122.73E,h132^{km}±9^{km},mb3.5/5,mb1 3.7/5,mb1mx3.5/15,mbtmp3.9/5,Error ellipse: s-maj=66.2km s-min=13.9km az=64.0*

ISC 12 03:13:58.3±0.7**,0.4N**±0.2×**122.7E**±0.3**,h130**^{km}**,n15,** σ**0**^{s}**68**/15**,mb4.1**/10**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.57**	**171**	*e*P	**P**	**03 18 06.7**	**-1.1**
	9.9nm,0.6s						
WRAB	**Tennant Creek**	**23.18**	**151**	*e*P	**P**	**03 18 54.7**	**+0.4**
WRA	**Warramunga Arr**	**23.18**	**151**	P	**P**	**03 18 54.6**	**+0.3**
	2.4nm,0.8s,mb3.7,baz=328,slow=10,SNR=12						
WRA				pP		03 19 20.5	
	1.3nm,0.5s,baz=333,slow=10,SNR=3.5						
WB2	**Warramunga Arr**	**23.19**	**151**	*e*P	**P**	**03 18 55.1**	**+0.7**
ASAR	**Alice Springs**	**26.25**	**156**	P	**P**	**03 19 22.9**	**-0.4**
	1.2nm,0.5s,mb3.8,baz=342,slow=14,SNR=16						
ASAR				pP	pP	03 19 51.0	+0.3
	0.7nm,0.7s,baz=330,slow=9.4,SNR=3.4						
ASAR				PcP	PcP	03 22 46.0	-0.9
	0.6nm,0.3s,baz=348,slow=2.2,SNR=17						
ASAR				ScP		03 26 14.2	
	0.2nm,0.5s,baz=340,slow=2.9,SNR=3.7						
CMAR	**Chiang Mai Arr**	**29.45**	**309**	P	**P**	**03 19 51.4**	**-0.8**
	0.4nm,0.4s,mb3.5,baz=138,slow=8.3,SNR=4.4						
STKA	**Stephens Creek**	**36.72**	**153**	P	**P**	**03 20 54.8**	**+0.2**
	0.8nm,0.3s,mb3.8,baz=334,slow=12,SNR=3.5						
JIRN	**Jiri**	**44.28**	**311**	*e*P	**P**	**03 21 57.5**	**+0.6**
	8.5nm,0.4s,mb4.7						
KKN	**Kakani**	**45.04**	**310**	*e*P	**P**	**03 22 03.5**	**+0.6**
DMN	**Daman**	**45.08**	**310**	*e*P	**P**	**03 22 03.9**	**+0.6**
	8.2nm,0.6s,mb4.5						
GKN	**Gorkha**	**45.64**	**310**	*e*P	**P**	**03 22 08.2**	**+0.5**
	6.1nm,0.4s,mb4.6						
KOLN	**Koldanda**	**46.32**	**309**	*e*P	**P**	**03 22 13.4**	**+0.4**
	19nm,0.7s,mb4.9						
SONM	**Songino Array**	**49.36**	**346**	P	**P**	**03 22 36.5**	**+0.1**
	1.1nm,0.6s,mb3.7,baz=164,slow=8.6,SNR=13						
SONM				pP	pP	03 23 06.9	+0.3
	0.4nm,0.7s,baz=154,slow=7.4,SNR=2.1						
KURK	**Kurchatov**	**62.51**	**330**	*e*P	**P**	**03 24 09.3**	**-1.0**
	0.5nm,0.5s,mb3.6						
CHKZ	**Chkalovo**	**68.24**	**330**	P	**P**	**03 24 45.7**	**-1.2**

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*NEIC **12** 04:02:28.1,14.99N×94.77W,h16^{km},MD4.2(MEX),After MEX.*

MEX 12 04:02:28.2±1.1**,14.98N×94.79W,h16**^{km}±29^{km}**,MD4.2,2D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.50**	**302**	⇓*e*P	Pn	04 02 50.9	-3.7
HUIG				*e*S	Sb	04 03 07.2	-6.5
VHO	**Vista Hermosa**	**2.80**	**318**	⇓*i*P	Pn	04 03 09.4	-3.8
VHO				*i* S	Sn	04 03 40.9	-6.0
OXX	**Oaxaca**	**2.80**	**319**	*e*P	Pn	04 03 09.5	-3.7
OXX				*e*S	Sn	04 03 43.0	-3.9
CCIG	**Comitan**	**2.86**	**63**	*e*P	Pn	04 03 09.7	-4.4
CCIG				*i* S	Sn	04 03 40.0	-8.5
CCIG	**Comitan**	**2.86**	**63**	*e*P	Pn	04 03 09.7	-4.4
CCIG				*i* S	Sn	04 03 42.0	-6.6
PPM	**Popocatepetl**	**5.48**	**318**	*e*P	Pn	04 03 48.5	-2.7
PPM				*e*P		04 03 48.7	
PPM				*i* S	Sn	04 04 50.1	-4.5

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*IDC **12** 04:28:09.3±3.0,30.49N×135.84E,mb4.1/4,mb1 4.2/4,mb1mx3.6/21,mbtmp4.1/4,Error ellipse: s-maj=255.0km s-min=24.3km az=80.0*

*JMA **12** 04:28:55.3±0.3,30.86N×138.87E,h510^{km},M3.5*

ISC 12 04:28:54.2±1.0**,30.7N**±0.1×**139.1E**±0.5**,h496**^{km}±15^{km}**,**

n10,σ0ˢ93/14,mb3.5/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.51	15	P	P	04 30 04.2	+1.9
JNY	Yasuok	4.78	348	P	P	04 30 20.2	+0.5
JHU	Hanno	5.17	2	P	P	04 30 23.0	-0.2
JHU				S	S	04 31 33.2	-0.5
JRY	Ryogami san	5.33	359	P	P	04 30 24.9	+0.1
JRY				S	S	04 31 36.3	-0.2
JAG	Ashikaga	5.74	3	P	P	04 30 28.1	-0.6
JAG				eS	S	04 31 41.7	-1.9
JHO	Hitachi	6.05	12	P	P	04 30 32.7	+1.0
JHO				eS	S	04 31 49.2	+0.2
WRA	Warramunga Arr	50.53	186	P	P	04 37 06.4	-1.6
	1.4nm,0.7s,mb3.4,baz=0.5,slow=7.8,SNR=23						
ASAR	Alice Springs	54.26	186	P	P	04 37 34.6	-0.2
	0.6nm,0.4s,mb3.3,baz=14,slow=12,SNR=9.6						
ARCES	ARCESS Array B	69.26	340	P	P	04 39 12.8	+1.0
	3.8nm,0.8s,mb4.0,baz=61,slow=9.3,SNR=4.0						
FINES	FINESS Array B	73.53	333	P	P	04 39 37.1	+0.4
	0.8nm,0.8s,mb3.3,baz=72,slow=4.4,SNR=5.2						

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*CASC **12** 04:30:54.3±2.6,12.93N×89.82W,h19^{km}±8^{km},MD4.1,ML4.0,mb3.8(NEIC)*

*IDC **12** 04:30:54.2±1.7,13.86N×89.06W,mb3.9/5,mb1 4.2/7,mb1mx3.8/21,mbtmp4.0/7,ML3.8/2,Error ellipse: s-maj=54.5km s-min=17.5km az=43.0*

*NEIC **12** 04:30:55.2±0.5,13.82N×89.08W,h10^{km},mb3.8/3,Error ellipse: s-maj=20.0km s-min=6.9km az=50.0*

ISC 12 04:30:51.8±1.3,**12.85N**±0.04×**89.87W**±0.03,**h9**^{km}±9^{km},**n33,σ0ˢ91**/48,**mb3.9**/7,**3C-11D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	1.01	14	⇓iP	Pb	04 31 11.5	+0.5
SNET	Serv Nac Est T	1.03	37	eP	Pb	04 31 11.5	+0.1
SNET				eS	Sb	04 31 25.0	+0.1
SNET				i		04 31 29.3	
	comp=Z,5μm,0.3s						
SNJE	San Jose	1.04	14	eP	Pb	04 31 11.9	+0.4
BOQS	Boqueron	1.04	33	⇓eP	Pb	04 31 11.9	+0.2
BOQS				eS	Sb	04 31 25.8	+0.5
RTR	El Retiro	1.06	12	⇓iP	Pb	04 31 12.3	+0.4
LFRS	El Faro	1.09	46	⇓iP	Pb	04 31 12.5	0.0
LFRS				eS	Sb	04 31 25.5	-1.2
LFU	La Fuente	1.15	39	⇑eP	Pb	04 31 13.6	+0.1
LFU				eS	Sb	04 31 31.0	+2.7
LCBS	La Ceiba	1.18	47	⇓iP	Pb	04 31 13.7	-0.2
LCBS				eS	Sb	04 31 28.1	-1.0
LBRS	Las Brisas	1.19	42	⇓eP	Pb	04 31 14.1	0.0
LBRS				eS	Sb	04 31 28.3	-1.1
SNVI	San Vicente	1.25	53	⇓eP	Pb	04 31 14.9	-0.3
SNVI				eP		04 31 15.1	
SNVI				eS	Sb	04 31 29.6	-1.6
SNVI				eS	Sb	04 31 33.0	+1.7
RBDL	Robledal	1.26	8	⇑eP	Pb	04 31 15.6	+0.2
RBDL				eS	Sb	04 31 32.7	+1.1
IXG	Ixpaco	1.43	336	⇑eP	Pn	04 31 17.6	-0.5
IXG				eS	Sb	04 31 35.2	-1.3
MTO2	Montecristo 2	1.61	18	⇓eP	Pn	04 31 21.0	+0.3
MTO2				eS	Sn	04 31 41.1	-0.7
BLLM	Bellamira	1.69	70	⇓eP	Pn	04 31 21.8	-0.1
BLLM				eS	Sn	04 31 44.7	+1.0
NBG	Las Nubes	1.79	345	⇓eP	Pn	04 31 24.2	+1.0
NBG				eS	Sn	04 31 46.6	+0.5
CAHU	Cacacuatique	1.85	60	eP	Pn	04 31 24.2	+0.1
CNCH	Conchagua	2.02	78	⇓eP	Pn	04 31 26.3	-0.3
CNCH				eS	Sn	04 31 51.7	-0.6
JAT	Jato	2.25	310	eP	Pn	04 31 29.4	-0.5
JAT				eS	Sn	04 31 59.9	+1.8
JTS	JuntasAbangare	5.45	117	Pn	Pn	04 32 15.5	+0.3
	comp=Z,1.3nm,0.3s,baz=293,slow=23,SNR=4.2						
JTS				Pg	Pg	04 32 27.8	-13
	comp=Z,3.9nm,0.3s,baz=347,slow=21,SNR=4.4						
JTS				Lg		04 33 45.0	
	comp=Z,0.9nm,0.3s,baz=166,slow=21,SNR=8.6						
SDV	Santo Domingo	19.29	100	P	P	04 35 14.4	-5.5
	comp=Z,0.6nm,0.3s,baz=346,slow=13,SNR=6.8						
TXAR	Lajitas Array	20.81	324	P	P	04 35 35.2	-1.0
	comp=Z,1.7nm,0.7s,baz=149,slow=10,SNR=25						
WMOK	Wichita Mounta	23.24	341	eP	P	04 35 55.6	-4.9
MNTX	Cornudas Mount	23.57	325	eP	P	04 36 02.1	-1.5
	comp=Z,1.2nm,0.6s,mb3.5						
SDCO	Great Sand Dun	28.45	333	eP	P	04 36 45.9	-3.2
SAML	Samuel	34.23	128	P	P	04 37 41.9	+1.6
	comp=Z,1.3nm,0.9s,mb3.9						
NVAR	Mina Array Bea	35.87	320	P	P	04 37 53.9	-0.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=130,slow=8.6,SNR=14						
NVAR	Mina Array Bea	35.87	320	P	P	04 37 53.9	-0.2
ULM	Lac du Bonnet	37.61	354	P	P	04 38 02.0	-6.6
	comp=Z,1.3nm,0.6s,mb3.9,baz=176,slow=8.2,SNR=4.7						
SCHQ	Schefferville	45.61	18	P	P	04 39 07.2	-6.9
	comp=Z,2.8nm,0.8s,mb4.3,baz=202,slow=5.1,SNR=9.4						
FCC	Fort Churchill	45.93	357	eP	P	04 39 10.8	-5.9
	comp=Z,1.0nm,0.5s,mb4.0						
YKA	Yellowknife Ar	52.62	346	P	P	04 40 03.3	-4.9
	comp=Z,0.6nm,0.4s,mb3.9,baz=145,slow=7.8,SNR=21						
PLCA	Paso Flores	56.24	162	eP	P	04 40 40.3	+5.4
WRA	Warramunga Arr	137.11	255	PKP	PKPdf	04 50 21.5	+2.2
	comp=Z,0.4nm,0.9s,baz=93,slow=2.5,SNR=4.6						

IGQ 12 04:36:38.0,1.39S×81.30W,h5^{km}±23^{km},mb4.4,1C,Error ellipse: s-maj=23.4km s-min=12.8km az=158.0,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	2.66	92	P	Pn	04 37 23.1	+0.8
IGUA				S	Sn	04 37 57.2	+1.8
ARRY	Arrayan	2.85	92	P	Pn	04 37 25.3	+0.3
ARRY				S	Sn	04 38 00.1	0.0
NAS1	Nasa	2.92	75	P	Pn	04 37 28.6	+2.6
PISA	Pisayambo	2.93	84	P	Pn	04 37 28.4	+2.2
TERV	Terraza Guagua	2.96	66	P	Pn	04 37 28.1	+1.6
PINO	Pino	2.96	66	P	Pn	04 37 27.5	+1.0
VC1	Cotopaxi 1	2.99	76	P	Pn	04 37 29.8	+2.7
YANA	Yana	3.01	65	P	Pn	04 37 28.3	+1.0
TAMB	Tambo	3.01	77	P	Pn	04 37 30.4	+3.1
ANTI	Antisana	3.28	73	P	Pn	04 37 33.6	+2.6
CAYR	Refugio Cayamb	3.58	67	⇑P	Pn	04 37 38.7	+3.3
CAYR				S	Sn	04 38 29.8	+11
CAYA	Cayambe	3.62	66	P	Pn	04 37 39.0	+3.1

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*ATH **12** 04:41:28.5,38.59N×23.47E,h23^{km}±3^{km},MD3.1/7,ML3.0*

*NEIC **12** 04:41:29.0,38.57N×23.48E,h3^{km},MD3.1(ATH),After ATH.*

*CSEM **12** 04:41:29.2±0.1,38.58N×23.53E,h8^{km},ML2.9,Error ellipse: s-maj=3.0km s-min=1.4km az=80.0*

*THE **12** 04:41:31.3,38.70N×23.52E,h9^{km},ML2.7*

ISC 12 04:41:28.2±0.7,**38.59N**±0.03×**23.51E**±0.06,**h12**^{km}±6^{km},**n18,σ0ˢ91**/25,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.41	279	ePB	Pb	04 41 36.4	-0.5
MPAR	Parnis Oros	0.47	158	ePB	Pb	04 41 38.0	+0.1
MPAR				eSB	Sb	04 41 45.7	+1.2
PTL	Penteli	0.60	153	ePB	Pb	04 41 40.1	-0.1
MGER	Gerania Oros	0.63	199	ePN	Pn	04 41 41.0	-1.7
ATH	Athens Observa	0.63	165	ePN	Pn	04 41 41.0	-1.8
AOS	Alonnisos	0.65	26	ePg	Pg	04 41 41.4	0.0
AOS				eSg	Sg	04 41 50.7	+0.6
NEO	Neokhori	0.75	343	ePN	Pn	04 41 43.5	-1.0
XOR	Xorichti	0.82	342	ePg	Pg	04 41 44.5	-0.2
XOR				eSg	Sg	04 41 54.5	-1.2
NAIG	Nisos Aigina	0.83	181	ePN	Pn	04 41 45.0	-0.5
NAIG	Nisos Aigina	0.83	181	ePb	Pb	04 41 46.0	+1.9
AGG	Agios Georgios	1.02	296	ePg	Pg	04 41 48.7	0.0
AGG				eSg	Sg	04 42 04.7	+2.3
PAIG	Paliouri	1.34	5	ePb	Pb	04 41 53.2	+0.3
PAIG				eSb	Sb	04 42 10.1	+0.1
LIT	Litokhoron	1.71	333	ePb	Pb	04 41 58.7	-0.4
LIT				eSb	Sb	04 42 20.7	+0.2
OUR	Ouranopolis	1.78	12	ePb	Pb	04 41 59.5	-0.9
PLG	Polygyros	1.79	358	ePN	Pn	04 41 59.5	+0.3
SOH	Sokhos	2.24	357	ePn	Pn	04 42 06.4	+0.7
GRG	Griva	2.52	340	ePn	Pn	04 42 10.3	+0.6
GRG				eSn	Sn	04 42 40.7	+0.1
KNT	Kendrikon	2.62	350	ePn	Pn	04 42 12.1	+1.0

MAN 12 04:43:24.4,10.94N×125.80E,h86^{km},mb2.4,ML1.9,MS3.7,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.83	286	eP	P	04 43 43.0	+0.9
PLP				eS	S	04 43 51.6	-3.8
SCPH	Surigao	1.19	195	eP	P	04 43 46.7	+0.2
MSLP	Maasin	1.22	229	eP	P	04 43 47.7	+0.9

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*PRU **12** 04:46:04.1,50.07N×18.30E*

WAR 12 04:46:02.0,50.07N×18.46E,h1^{km},MW2.5,Location given by Central Institute of Mining, origin time based upon RAC,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.17	276	ePg	Pg	04 46 06.2	+0.8
RAC				eSg	Sg	04 46 09.6	+1.9
OKC	Ostrava-Krasne	0.31	221	ePG	Pg	04 46 08.4	+0.3
OKC				eSG	Sg	04 46 13.3	+1.2
LIKS	Likavka	1.10	157	eSN	Sn	04 46 42.1	+1.6
NIE	Niedzica	1.37	118	ePg	Pg	04 46 26.8	-2.5
NIE				eSg	Sg	04 46 45.7	-1.8
DPC	Dobruska-Polom	1.40	282	ePG	Pg	04 46 27.8	-2.2
DPC				eSG	Sg	04 46 46.3	-2.3
VYHS	Vyhne	1.59	171	ePN	Pn	04 46 31.1	-0.3
VYHS				eSN	Sn	04 46 52.8	-0.2
UPC	Upice	1.63	287	ePG	Pg	04 46 31.3	-3.2
UPC				eSG	Sg	04 46 53.6	-2.6
SMOL	Smolenice	1.69	204	eSN	Sn	04 46 53.7	-1.8
CRVS	Cervenica-Dubn	2.28	120	ePN	Pn	04 46 44.0	+2.7
CRVS				eSN	Sn	04 47 14.4	+4.0
PRU	Pruhonice	2.53	270	eSG	Sg	04 47 19.6	-6.5
KHC	Kasperske Hory	3.31	255	ePG	Pg	04 47 01.5	-6.6
KHC				eSG	Sg	04 47 46.2	-6.0

MAN 12 04:48:58.1,8.05N×124.72E,h33^{km},mb3.7,ML2.4,MS2.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.38	116	eP	P	04 49 08.3	+1.3
PAGZ	Pagadian	1.34	262	eP	P	04 49 21.7	+1.0
PAGZ				eS	S	04 49 36.9	-0.6

CASC 12 05:02:19.8±1.8,**12.62N×88.13W,h41**^{km}±141^{km},**MD3.6,7C-8D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.71	24	⇓eP	P	05 02 33.4	-0.1
CNCH				eS	S	05 02 44.5	+1.1
BLLM	Bellamira	0.82	353	⇓eP	P	05 02 34.9	-0.2
BLLM				eS	S	05 02 46.3	0.0
CRIN	San Cristobal	1.06	86	⇑eP	P	05 02 38.9	+0.6
CRIN				eS	S	05 02 53.5	+1.4
CAHU	Cacacuatique	1.15	356	eP	P	05 02 39.2	-0.4
SNVI	San Vicente	1.21	325	⇓eP	P	05 02 40.2	-0.2
SNVI				eS	S	05 02 56.5	+0.6
LEON	Leon	1.22	99	⇓eP	P	05 02 40.1	-0.6
LEON				eS	S	05 02 56.9	+0.6
TEL3	Telica 3	1.25	92	⇑eP	P	05 02 41.0	-0.1
TELN	Telica	1.27	91	eP	P	05 02 41.2	-0.1
TELN				eS	S	05 02 56.5	-0.9
LCBS	La Ceiba	1.32	321	⇑eP	P	05 02 42.0	-0.1
LCBS				eS	S	05 02 58.4	-0.4
LFRS	El Faro	1.35	318	⇓eP	P	05 02 42.3	-0.3
LFRS				eS	S	05 02 59.1	-0.4
MIRN	Miramar	1.40	97	⇑eP	P	05 02 42.7	-0.5
MIRN				eS	S	05 03 00.8	+0.1
CNGN	Cerro Negro	1.40	95	⇓eP	P	05 02 42.9	-0.4
CNGN				eS	S	05 03 02.0	+1.1
LBRS	Las Brisas	1.43	321	eP	P	05 02 43.1	-0.6
LBRS				eS	S	05 03 01.9	+0.5
LFU	La Fuente	1.48	320	⇓eP	P	05 02 44.6	+0.2
LFU				eS	S	05 03 03.7	+1.0
COPN	Copaltepe	1.56	106	⇓eP	P	05 02 45.0	-0.6
COPN				eS	S	05 03 03.7	-1.1
MOMJ	Momotombo	1.57	98	⇑eP	P	05 02 45.0	-0.6
MOMJ				eS	S	05 03 05.1	+0.2
BOQS	Boqueron	1.58	315	eP	P	05 02 46.1	+0.3
BOQS				eS	S	05 03 05.5	+0.4
APYN	Apoyeque	1.78	102	⇑eP	P	05 02 48.4	-0.3
APYN				eS	S	05 03 11.8	+1.6
XAVN	Gruta Xavier	1.82	105	eP	P	05 02 48.9	-0.4
SBLS	San Blas	1.89	310	eP	P	05 02 50.7	+0.4
SBLS				eS	S	05 03 14.1	+1.0
MGAN	Managua	1.90	104	eP	P	05 02 48.1	-2.3
MGAN				eS	S	05 03 13.3	+0.2
TICN	Ticuantepe	1.94	107	eP	P	05 02 50.9	-0.1
TICN				eS	S	05 03 12.8	-1.6
RTR	El Retiro	1.95	311	⇑eP	P	05 02 51.2	+0.1
RTR				eS	S	05 03 14.9	+0.4
WILN	Americas 2	1.95	103	eS	S	05 03 13.5	-1.0

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*NEIC **12** 05:24:18.2±1.0,4.17N×94.36E,h30^{km},mb4.3/1,Error ellipse: s-maj=32.9km s-min=12.5km az=64.0*

IDC 12 05:24:13.8±1.8,**4.20N×94.37E,mb3.9**/5,**mb1 4.0**/6,**mb1mx3.7**/19,**mbtmp3.9**/6,**ML4.3**/1,**Error ellipse: s-maj=83.1km s-min=21.7km az=55.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.86	17	Pn	P	05 27 47.0	-0.2
	0.4nm,0.3s,baz=212,slow=11,SNR=6.8						
WRA	Warramunga Arr	46.01	123	P	P	05 32 39.1	-2.1
	1.8nm,0.6s,baz=302,slow=9.2,SNR=20						
WRAB	Tennant Creek	46.02	123	eP	P	05 32 39.0	-2.2
	2.5nm,0.6s						
ASAR	Alice Springs	47.45	128	P	P	05 32 50.9	-1.6
	0.3nm,0.5s,baz=299,slow=8.0,SNR=4.9						
ZAL	Zalesovo	50.20	353	P	P	05 33 10.5	-2.9
	0.9nm,0.8s,baz=216,slow=3.2,SNR=4.2						
BVAR	Borovoye Array	52.53	342	P	P	05 33 28.5	-2.5
	1.2nm,0.8s,baz=143,slow=7.4,SNR=6.4						
FINES	FINESS Array B	76.06	333	P	P	05 36 03.5	-1.2
	2.0nm,1.0s,baz=108,slow=6.0,SNR=7.1						

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*BUG **12** 05:30:08.6,51.65N×7.70E,h1^{km},ML2.3*

*LDG **12** 05:30:09.5±0.4,51.64N×7.84E,h1^{km},Ml2.9/6,Error ellipse: s-maj=6.2km s-min=5.7km az=130.0,Suspected Mining induced.*

*BNS **12** 05:30:09.4±1.0,51.68N×7.81E,h1^{km},ML2.5*

*NEIC **12** 05:30:10.2±0.5,51.61N×7.66E,h10^{km},ML2.9(LDG),ML2.5(SZGRF),Error ellipse: s-maj=7.9km s-min=5.3km az=147.0*

*CSEM **12** 05:30:10.7±0.2,51.61N×7.68E,h2^{km},ML2.8/5,Error ellipse: s-maj=4.3km s-min=2.6km az=138.0*

BGR 12 05:30:11.3±0.3,**51.58N×7.67E,h1**^{km},**ML2.4**/6,**1D,Error ellipse: s-maj=4.4km s-min=3.3km az=158.0,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHL	Ahlen	0.18	31	Pg	Pg	05 30 13.7	-1.3
BAHL				Sg	Sg	05 30 16.3	-1.1
BUG	Bochum--Univer	0.29	241	⇓iPg	Pg	05 30 16.0	-1.1
BUG				Sg	Sg	05 30 21.4	+0.5
BUG	Bochum--Univer	0.29	241	ePg	Pg	05 30 15.9	-1.2
BUG				eSg	Sg	05 30 22.2	+1.2
WTSB	Winterswijk	0.67	306	ePg	Pg	05 30 22.6	-2.0
BNS	Bensberg	0.69	207	eSg	Sg	05 30 36.1	+1.6
IBBN	Ibbenburen	0.73	4	ePg	Pg	05 30 24.3	-1.6
	SNR=4.2						
IBBN				eSg	Sg	05 30 33.8	-1.8
	SNR=18						
IBBN	Ibbenburen	0.73	4	ePg	Pg	05 30 24.2	-1.7
IBBN				eSg	Sg	05 30 34.2	-1.4
JUE	Julich	1.04	230	eSg	Sg	05 30 47.7	+1.7
STB	Steinbach	1.12	208	ePg	Pg	05 30 32.2	-1.5
STB				eSg	Sg	05 30 48.6	0.0
	101nm,1.3s						
KLL	Kalltalsperre	1.27	223	ePg	Pg	05 30 34.8	-1.9
KLL				eSg	Sg	05 30 52.3	-1.3
HGN	Heimansgroeve	1.37	234	ePg	Pg	05 30 35.1	-3.5
HGN				eSg	Sg	05 30 54.1	-2.8
BGG	Burgeitz	1.39	189	ePg	Pg	05 30 36.3	-2.9
BGG				eSg	Sg	05 30 55.5	-2.3
	46nm,1.2s						
MEM	Membach	1.43	228	P	Pn	05 30 36.2	-2.3
MEM				S	Sb	05 30 56.4	-0.8
TNS	Taunus Mts	1.45	160	ePn	Pn	05 30 37.2	-1.5
	SNR=9.4						
TNS				eSg	Sg	05 30 56.3	-3.2
	SNR=1.9						
UBBA	Unterbreizbach	1.65	117	ePn	Pn	05 30 41.0	-0.6
	SNR=6.8						
UBBA				eSg	Sg	05 31 02.9	-3.5
	SNR=11						
CLZ	Clausthal	1.70	80	ePn	Pn	05 30 40.1	-2.3
	SNR=3.2						
CLZ				ePg	Pg	05 30 41.9	-3.4
	SNR=17						
CLZ				eSg	Sg	05 31 05.8	-2.1
	SNR=27						
CLZ	Clausthal	1.70	80	ePn	Pn	05 30 39.9	-2.5
NRDL	Niedersach Rie	1.76	58	ePg	Pg	05 30 45.4	-1.1
	SNR=2.7						
WLF	Walferdange	2.15	207	ePn	Pn	05 30 47.8	-1.0
	SNR=0.9						
WLF				ePg	Pg	05 30 51.3	-2.9
	SNR=3.4						
WLF				eSg	Sg	05 31 18.2	-4.8
	SNR=12						
WLF	Walferdange	2.15	207	P	Pn	05 30 47.2	-1.6
WLF	Walferdange	2.15	207	P	Pn	05 30 47.2	-1.6
GIVF	Givet	2.33	232	ePn	Pn	05 30 48.3	-3.1
GIVF				eSg	Sg	05 31 26.2	-2.9
	17nm,0.2s						
DOU	Dourbes	2.45	234	P	Pn	05 30 51.8	-1.3
NEUB	Neuenburg	2.60	97	eSg	Sg	05 31 34.4	-3.4
	SNR=6.9						
MOX	Moxa	2.66	109	ePn	Pn	05 30 54.7	-1.3
	SNR=5.2						
MOX				ePg	Pg	05 31 01.4	-3.0
MOX				eSg	Sg	05 31 33.6	-6.2
	SNR=12						
MOX	Moxa	2.66	109	ePn	Pn	05 30 53.5	-2.5
MOX				ePg	Pg	05 31 01.4	-3.0
MOX				eSg	Sg	05 31 36.9	-2.9
MOX	Moxa	2.66	109	i P	Pn	05 30 53.5	-2.5
MOX				Pg	Pg	05 31 01.0	-3.4
MOX				Sg	Sg	05 31 37.0	-2.8
BAIF	Baives	2.67	237	ePn	Pn	05 30 53.2	-3.1
BAIF				eSg	Sg	05 31 36.7	-3.7
	12nm,0.4s						
WERD	Werda	3.14	109	ePn	Pn	05 31 00.8	-2.2
	SNR=1.3						
CDF	Champ du Feu	3.18	185	ePn	Pn	05 31 00.3	-3.2
CDF				eSg	Sg	05 31 50.0	-7.3
	15nm,0.5s						
TANN	Tannenbergstha	3.24	109	ePn	Pn	05 31 03.6	-0.8
	SNR=2.7						
RFYF	Reffroy	3.28	206	eSg	Sg	05 31 54.8	-5.7
	14nm,0.5s						
BFO	Black Forest	3.28	172	ePn	Pn	05 31 03.2	-1.8
	SNR=3.0						
BFO				eSn	Sn	05 31 40.3	-4.9
BFO	Black Forest	3.28	172	ePn	Pn	05 31 03.3	-1.7
NOTT	Nottersdorf	3.34	120	ePn	Pn	05 31 04.2	-1.5
CLL	Collm	3.35	93	eSg	Sg	05 31 58.5	-4.3
	SNR=4.9						
SFTF	Sexfontaines	3.79	208	ePn	Pn	05 31 08.3	-3.8
SFTF				ePg	Pg	05 31 22.5	-4.4
SFTF				eSg	Sg	05 32 11.3	-6.1
	2.2nm,0.3s						
BRG	Berggiesshubel	4.01	98	ePg	Pg	05 31 26.2	-5.1
BRG				eSg	Sg	05 32 17.8	-6.9
	SNR=1.8						
BRG	Berggiesshubel	4.01	98	ePg	Pg	05 31 26.2	-5.1
BRG				eSg	Sg	05 32 19.7	-5.0
WET	Wettzell	4.13	124	ePn	Pn	05 31 16.0	-1.0
	SNR=1.9						
WET				eSg	Sg	05 32 22.6	-6.3
	SNR=2.9						
GEC2	GERESS Array S	4.74	123	ePn	Pn	05 31 24.3	-1.4
	SNR=1.9						
GEC2				eSg	Sg	05 32 42.4	-6.9
	SNR=1.6						
SSF	Saint Saulge	5.28	213	ePn	Pn	05 31 28.8	-4.5

IDC 12 05:47:54.7±2.0,**7.31S×128.61E,mb3.6**/1,**mb1 4.0**/3,**mb1mx3.8**/12,**mbtmp3.8**/3,**ML3.4**/2,**MS3.0**/1,**Ms1 3.0**/1,**ms1mx2.7**/10,**1C,Error ellipse: s-maj=106.5km s-min=31.4km az=71.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.55	145	⇑iP	Pn	05 49 29.5	-5.3
	8.6nm,0.6s						
WRA	Warramunga Arr	13.73	157	Pn	P	05 51 09.2	-4.1
	0.3nm,0.3s,baz=335,slow=13,SNR=29						
WRA				Sn	Sx	05 53 31.8	
	0.3nm,0.3s,baz=322,slow=24,SNR=5.4						
WB2	Warramunga Arr	13.73	157	eP	P	05 51 09.5	-3.8
WB2				eS	Sx	05 53 28.5	
ASAR	Alice Springs	17.04	163	P	P	05 51 56.0	-0.1
	0.2nm,0.3s,baz=343,slow=11,SNR=9.1						
CTA	Charters Tower	21.30	128	LR	LR	06 01 01.8	
	comp=Z,39nm,19.5s,baz=228,slow=37						
SONM	Songino Array	58.31	343	P	P	05 57 51.5	-2.3
	0.8nm,1.0s,baz=169,slow=6.3,SNR=5.1						

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*IDC **12** 05:50:47.5±0.9,16.42S×73.28W,mb3.8/5,mb1 4.1/7,mb1mx3.8/18,mbtmp3.9/7,ML4.5/2,MS3.2/2,Ms1 3.3/2,ms1mx2.5/30,Error ellipse: s-maj=43.1km s-min=17.8km az=64.0*

*NEIC **12** 05:50:56.8±1.3,16.69S×73.21W,h68^{km}±13^{km},mb3.5/1,Error ellipse: s-maj=21.7km s-min=13.5km az=50.0*

ISC 12 05:50:55.5±1.4,**16.7S**±0.1×**73.2W**±0.1,**h76**^{km}±15^{km},**n14,σ1ˢ40**/14,**mb3.6**/5,**Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	1.69	84	eP	P	05 51 23.0	-0.6
LPAZ	La Paz	4.91	87	Pn	P	05 52 10.2	+1.7
	4.8nm,0.3s,baz=268,slow=12,SNR=36						
LPAZ				Lg		05 53 15.9	
	baz=186,slow=21,SNR=1.6						
LPAZ				LR	LR	05 54 24.1	
	comp=Z,371nm,18.1s,baz=269,slow=44						
NNA	Nana	5.80	323	eP	P	05 52 21.7	+1.0
LVC	Limon Verde	7.20	146	Pn	P	05 52 37.8	-2.3
	2.1nm,0.3s,baz=315,slow=10,SNR=20						
LVC				Pg	P	05 53 02.9	+23
	1.7nm,0.3s,baz=290,slow=11,SNR=4.1						
LVC				Sn	S	05 53 56.1	-4.9
	4.2nm,0.3s,baz=92,slow=20,SNR=13						
LVC				Lg		05 54 43.0	
	baz=141,slow=19,SNR=3.8						
LVC				LR	LR	05 55 09.6	
	comp=Z,100nm,18.5s,baz=318,slow=35						
LVC	Limon Verde	7.20	146	Pn	P	05 52 37.8	-2.3
LVC				Pg	P	05 53 02.9	+23
LVC				Sn	S	05 53 56.1	-4.9
LVC				Lg		05 54 43.0	
LVC				LR	LR	05 55 09.6	
PLCA	Paso Flores	24.11	175	P	P	05 56 06.8	+1.7
	1.3nm,0.8s,mb3.3,baz=342,slow=12,SNR=3.4						
PLCA	Paso Flores	24.11	175	eP	P	05 56 06.0	+0.9
	1.7nm,0.9s,mb3.4						
TXAR	Lajitas Array	54.34	327	P	P	06 00 14.5	-2.3
	0.2nm,0.9s,mb3.1,baz=126,slow=12,SNR=3.2						
SNAA	Sanae	68.17	161	P	P	06 01 50.7	+1.4
	1.3nm,0.9s,mb3.7,baz=307,slow=11,SNR=6.8						
DBIC	Dimbokro	71.46	77	P	P	06 02 10.2	-0.1
	3.1nm,0.5s,mb4.4,baz=236,slow=7.9,SNR=14						
YKA	Yellowknife Ar	85.31	342	P	P	06 03 24.3	-0.6
	0.3nm,0.6s,mb3.4,baz=136,slow=5.2,SNR=10						
YKA	Yellowknife Ar	85.31	342	P	P	06 03 24.3	-0.6
WRA	Warramunga Arr	134.65	218	PKP	PKPdf	06 10 08.9	+2.7
	0.2nm,0.5s,baz=148,slow=2.0,SNR=4.4						
SONM	Songino Array	148.90	0	PKPbc	PKPdf	06 10 37.4	+7.0
	1.0nm,0.7s,baz=316,slow=2.4,SNR=8.9						

*NEIC **12** 06:09:16.1±6.7, 24.51S×179.98E, h501^{km}±73^{km}, mb4.4/6, Error ellipse: s-maj=72.8km s-min=34.6km az=164.0*

*IDC **12** 06:09:16.6±3.1, 24.25S×179.90E, h499^{km}±25^{km}, mb3.4/5, mb1 3.7/5, mb1mx3.4/14, mbtmp4.3/5, Error ellipse: s-maj=86.5km s-min=26.1km az=161.0*

ISC 12 06:09:23.1±1.5**, 24.4S**±0.6×**179.7E**±0.3**, h600^{km}, n15, σ0^{s}47**/14**, mb4.1**/9**, 3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.20**	**271**	⇓*i*P	**P**	**06 14 57.0**	**+0.6**
	6.7nm,0.4s,mb4.6						
CTA	**Charters Tower**	**31.20**	**271**	P	**P**	**06 14 57.0**	**+0.6**
	11nm,0.5s,mb4.7,baz=98,slow=11,SNR=31						
CTAO	**Charters Tower**	**31.20**	**271**	*e*P	**P**	**06 14 56.9**	**+0.5**
	8.5nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**34.29**	**249**	P	**P**	**06 15 22.4**	**+0.2**
	2.3nm,0.6s,mb4.0,baz=82,slow=8.1,SNR=6.9						
STKA	**Stephens Creek**	**34.29**	**249**	*e*P	**P**	**06 15 22.1**	**-0.1**
ASAR	**Alice Springs**	**41.68**	**261**	P	**P**	**06 16 22.4**	**+0.1**
	1.7nm,0.5s,mb3.8,baz=94,slow=7.2,SNR=26						
ASAR				ScP		06 21 08.2	
	0.7nm,0.9s,baz=117,slow=4.0,SNR=4.5						
ASPA	**Alice Springs**	**41.68**	**261**	*e*P	**P**	**06 16 22.7**	**+0.3**
WB2	**Warramunga Arr**	**42.08**	**267**	⇓*i*P	**P**	**06 16 25.2**	**-0.3**
WRAB	**Tennant Creek**	**42.09**	**267**	*e*P	**P**	**06 16 24.9**	**-0.6**
	6.8nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**42.09**	**267**	P	**P**	**06 16 25.3**	**-0.4**
	4.8nm,0.5s,mb4.3,baz=101,slow=8.2,SNR=48						
WRA				ScP		06 21 11.5	
	1.2nm,0.7s,baz=101,slow=3.6,SNR=11						
KAKA	**Kakadu**	**46.07**	**276**	*e*P	**P**	**06 16 56.2**	**-0.2**
	7.4nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**50.51**	**266**	⇓*i*P	**P**	**06 17 30.5**	**+1.0**
	7.9nm,0.6s,mb4.3						
MBWA	**Marble Bar**	**55.01**	**260**	P	**P**	**06 18 00.8**	**-0.6**
	2.9nm,0.6s,mb3.8						
TXAR	**Lajitas Array**	**90.92**	**58**	P	**P**	**06 21 25.3**	**0.0**
	0.3nm,0.6s,mb3.4,baz=205,slow=5.8,SNR=5.2						
BRTR	**Keskin Array B**	**147.62**	**306**	PKPbc	PKPdf	06 28 05.8	+8.7
	0.6nm,0.5s,baz=146,slow=2.9,SNR=4.9						

MAN 12 06:11:05.5, 6.57N×126.00E, h24^{km}, mb3.6, ML2.4, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.45**	**34**	*e*P	Pb	06 11 16.6	+1.7
MATI				*e*S	Sb	06 11 25.3	+4.1
KCP	**Kidapawan**	**1.01**	**296**	⇑*i*P	Pb	06 11 23.5	-0.7
KCP				*i* S	Sb	06 11 38.1	+1.1
BUKP	**Musuan**	**1.61**	**324**	*e*P	Pn	06 11 31.8	-1.0
BUKP				*e*S	Sn	06 11 53.2	+0.3

IDC 12 06:17:19.5±6.6**, 12.02S×170.26E, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=388.1km s-min=35.4km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.38**	**246**	P	P	06 24 25.8	-1.8
	0.6nm,0.7s,baz=71,slow=9.4,SNR=5.4						
ILAR	**Eielson Array**	**83.08**	**17**	P	P	06 29 47.4	-0.7
	1.0nm,0.9s,baz=239,slow=5.3,SNR=6.5						
YKA	**Yellowknife Ar**	**93.83**	**27**	P	P	06 30 37.2	-2.4
	0.2nm,0.9s,baz=256,slow=5.1,SNR=3.6						

IDC 12 06:28:01.6±6.0**, 12.45S×170.77E, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/14**, mbtmp3.6**/3**, Error ellipse: s-maj=348.2km s-min=33.9km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.68**	**247**	P	P	06 35 10.4	-1.8
	0.4nm,0.6s,baz=73,slow=9.3,SNR=9.3						
ILAR	**Eielson Array**	**83.34**	**17**	P	P	06 40 31.1	-0.5
	0.6nm,0.8s,baz=239,slow=5.2,SNR=5.0						
YKA	**Yellowknife Ar**	**93.98**	**27**	P	P	06 41 19.9	-2.5
	0.1nm,0.5s,baz=265,slow=4.1,SNR=4.0						

IDC 12 06:32:49.8±1.1**, 16.30N×92.83E, mb3.8**/6**, mb1 3.9**/7**, mb1mx3.7**/19**, mbtmp3.7**/7**, ML3.6**/1**, Error ellipse: s-maj=34.6km s-min=21.6km az=43.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.21**	**69**	Pn	Pn	06 34 22.1	-3.0
	0.4nm,0.3s,baz=255,slow=17,SNR=6.3						
CMAR				Sn	Sn	06 35 34.8	-2.9
	0.9nm,0.3s,baz=252,slow=29,SNR=9.4						
SONM	**Songino Array**	**33.37**	**17**	P	P	06 39 30.5	-1.3
	0.4nm,0.9s,baz=191,slow=7.3,SNR=2.8						
WRA	**Warramunga Arr**	**54.41**	**130**	P	P	06 42 18.0	-3.2
	0.7nm,1.1s,baz=313,slow=7.8,SNR=3.1						
ASAR	**Alice Springs**	**56.47**	**134**	P	P	06 42 35.1	-1.0
	0.3nm,0.6s,baz=317,slow=6.3,SNR=4.9						
FINES	**FINESS Array B**	**64.74**	**331**	P	P	06 43 29.8	-2.1
	4.0nm,1.2s,baz=207,slow=4.3,SNR=3.6						
HFS	**Hagfors**	**70.60**	**329**	P	P	06 44 07.0	-1.7
	7.2nm,1.2s,baz=117,slow=6.4,SNR=4.6						
GERES	**GERESS Array B**	**70.79**	**317**	P	P	06 44 07.5	-2.5
	0.5nm,0.6s,baz=101,slow=6.8,SNR=4.6						

IGQ 12 06:37:46.7, 1.66S×81.39W, h12^{km}±17^{km}**, mb4.3, Error ellipse: s-maj=17.0km s-min=7.7km az=158.7, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARRY	**Arrayan**	**2.94**	**87**	P	Pn	06 38 34.5	+0.3
ARRY				S	Sn	06 39 10.2	+0.5
RETU	**Refugio**	**2.95**	**86**	P	Pn	06 38 36.4	+2.0
ULBA	**Ulba**	**2.99**	**86**	P	Pn	06 38 36.7	+1.7
PISA	**Pisayambo**	**3.06**	**79**	P	Pn	06 38 37.9	+2.0
NAS1	**Nasa**	**3.09**	**71**	P	Pn	06 38 38.3	+2.0
MOV1	**Cotopaxi Vol s**	**3.10**	**72**	P	Pn	06 38 38.5	+2.0
TERV	**Terraza Guagua**	**3.15**	**62**	P	Pn	06 38 38.6	+1.4
PITA	**Cotopaxi Volc**	**3.15**	**70**	P	Pn	06 38 38.5	+1.2
VC1	**Cotopaxi 1**	**3.15**	**71**	P	Pn	06 38 39.8	+2.6
PINO	**Pino**	**3.16**	**62**	P	Pn	06 38 37.3	0.0
TAMB	**Tambo**	**3.17**	**72**	P	Pn	06 38 39.8	+2.3
COV1	**Cotopaxi Volc**	**3.21**	**72**	P	Pn	06 38 38.4	+0.4
YANA	**Yana**	**3.21**	**62**	P	Pn	06 38 37.8	-0.2
COTA	**Cotacachi**	**3.64**	**57**	P	Pn	06 38 44.7	+0.6
CAYR	**Refugio Cayamb**	**3.77**	**64**	P	Pn	06 38 48.3	+2.3
CAYA	**Cayambe**	**3.81**	**63**	P	Pn	06 38 48.5	+1.9

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*IDC **12** 06:45:00.3±2.0, 7.41S×128.35E, mb3.8/2, mb1 4.0/4, mb1mx3.9/13, mbtmp3.8/4, ML3.3/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/15, Error ellipse: s-maj=92.0km s-min=22.2km az=67.0*

ISC 12 06:44:58.2±3.9**, 7.7S**±0.2×**128.0E**±0.4**, h8^{km}**±24^{km}**, n8, σ0^{s}40**/10**, mb3.8**/2**, MS3.5**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.67**	**139**	*e*P	**Pn**	**06 46 39.1**	**+0.2**
	8.6nm,0.7s						
WRA	**Warramunga Arr**	**13.68**	**154**	Pn	**P**	**06 48 15.2**	**+0.1**
	0.2nm,0.3s,baz=334,slow=13,SNR=18						
WRA				Sn	**S**	**06 50 47.6**	**-0.7**
	0.2nm,0.3s,baz=345,slow=20,SNR=5.1						
WB2	**Warramunga Arr**	**13.68**	**154**	*e*P	**P**	**06 48 15.0**	**-0.2**
WB2				*e*S	**S**	**06 50 49.1**	**+0.7**
ASPA	**Alice Springs**	**16.90**	**161**	*e*P	**P**	**06 49 06.2**	**+9.4**
ASAR	**Alice Springs**	**16.90**	**161**	P	**P**	**06 49 01.7**	**+4.9**
	0.2nm,0.3s,baz=344,slow=12,SNR=9.6						
ASAR				S	**S**	**06 52 10.6**	**+6.7**
	0.1nm,0.3s,baz=196,slow=31,SNR=2.8						
CTA	**Charters Tower**	**21.59**	**127**	P	**P**	**06 49 50.5**	**-0.1**
	5.3nm,0.8s,mb4.0,baz=321,slow=14,SNR=6.2						
CTA				LR	LR	06 58 53.0	
	comp=Z,69nm,19.7s,MS3.1,baz=225,slow=39						
ASAJ	**Asahikawa**	**53.21**	**13**	LR	LR	07 15 23.6	
	comp=Z,95nm,18.5s,MS3.9,baz=159,slow=34						
SONM	**Songino Array**	**58.46**	**343**	P	**P**	**06 54 57.0**	**0.0**
	0.8nm,1.0s,mb3.7,baz=117,slow=6.4,SNR=4.4						

IGQ 12 06:56:30.0, 1.21S×81.94W, h5^{km}±10^{km}**, mb4.5, 1D, Error ellipse: s-maj=9.5km s-min=5.1km az=169.3, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TERV	**Terraza Guagua**	**3.49**	**73**	P	Pn	06 57 27.8	+1.7
PINO	**Pino**	**3.49**	**73**	P	Pn	06 57 27.4	+1.3
ARRY	**Arrayan**	**3.49**	**95**	⇓P	Pn	06 57 27.0	+0.8
ARRY				S	Sn	06 58 03.5	-4.9
RETU	**Refugio**	**3.50**	**94**	P	Pn	06 57 28.0	+1.8
NAS1	**Nasa**	**3.51**	**81**	P	Pn	06 57 28.0	+1.7
MOV1	**Cotopaxi Vol s**	**3.53**	**82**	P	Pn	06 57 28.0	+1.3
ULBA	**Ulba**	**3.54**	**94**	P	Pn	06 57 28.2	+1.4
YANA	**Yana**	**3.54**	**72**	P	Pn	06 57 28.2	+1.5
PISA	**Pisayambo**	**3.55**	**88**	P	Pn	06 57 28.7	+1.7
PISA				S	Sn	06 58 09.9	0.0
VC1	**Cotopaxi 1**	**3.58**	**81**	P	Pn	06 57 29.0	+1.7
TAMB	**Tambo**	**3.60**	**82**	P	Pn	06 57 29.3	+1.6
COV1	**Cotopaxi Volc**	**3.63**	**81**	P	Pn	06 57 28.3	+0.1
COTA	**Cotacachi**	**3.91**	**67**	P	Pn	06 57 33.8	+1.7
CAYR	**Refugio Cayamb**	**4.11**	**73**	P	Pn	06 57 38.3	+3.4
CAYA	**Cayambe**	**4.15**	**72**	P	Pn	06 57 38.5	+3.0

IDC 12 07:01:14.9±4.8**, 7.60N×91.79E, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.5**/18**, mbtmp3.6**/3**, ML4.1**/1**, Error ellipse: s-maj=137.6km s-min=34.4km az=79.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.84**	**32**	Pn	P	07 04 19.3	-2.3
	0.3nm,0.3s,baz=219,slow=13,SNR=12						
SONM	**Songino Array**	**41.98**	**15**	P	P	07 09 07.6	-1.7
	0.5nm,0.8s,baz=190,slow=9.2,SNR=3.3						
ASAR	**Alice Springs**	**51.55**	**128**	P	P	07 10 23.1	-2.1
	1.2nm,1.0s,baz=310,slow=7.0,SNR=5.4						

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*IDC **12** 07:08:21.9±5.0, 7.37S×123.95E, h244^{km}±91^{km}, mb3.5/1, mb1 3.4/3, mb1mx3.1/14, mbtmp3.9/3, Error ellipse: s-maj=168.6km s-min=62.4km az=60.0*

ISC 12 07:08:13.2±3.4**, 7.9S**±0.5×**122.3E**±0.3**, h210^{km}**±52^{km}**, n7, σ0^{s}54**/10**, mb3.8**/1**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.73**	**137**	P	**P**	**07 11 52.0**	**-5.2**
	0.2nm,0.3s,baz=315,slow=12,SNR=6.8						
WRA				S	**S**	**07 14 50.3**	**-5.1**
	baz=320,slow=20,SNR=2.7						
WB2	**Warramunga Arr**	**16.74**	**137**	*e*P	**P**	**07 11 56.7**	**-0.6**
WB2				*e*S	**S**	**07 14 55.6**	**0.0**
ASPA	**Alice Springs**	**19.24**	**146**	*e*P	**P**	**07 12 24.3**	**+0.7**
ASAR	**Alice Springs**	**19.25**	**146**	P	**P**	**07 12 24.5**	**+0.8**
	0.4nm,0.3s,baz=329,slow=13,SNR=13						
ASAR				S	**S**	**07 15 45.5**	**-0.1**
	0.1nm,0.3s,baz=324,slow=22,SNR=5.3						
FORT	**Forrest**	**23.41**	**167**	*e*P	**P**	**07 13 04.9**	**+0.3**
	296nm,0.7s						
KLBR	**Kellerberrin**	**23.96**	**190**	*e*P	**P**	**07 13 09.4**	**-0.4**
	275nm,1.5s						
STKA	**Stephens Creek**	**29.88**	**146**	P	**P**	**07 14 02.9**	**-0.7**
	1.1nm,0.4s,mb3.8,baz=323,slow=9.4,SNR=5.8						

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*IDC **12** 07:11:46.1±1.1, 13.89S×171.96E, mb4.1/10, mb1 4.4/10, mb1mx4.4/14, mbtmp4.1/10, MS3.6/9, Ms1 3.6/9, ms1mx3.4/23, Error ellipse: s-maj=57.1km s-min=19.0km az=148.0*

*BJI **12** 07:11:49.4, 13.80S×171.90E, h20^{km}, mb4.2*

*NEIC **12** 07:11:49.5±0.6, 13.80S×171.87E, h20^{km}, mb4.6/2, Error ellipse: s-maj=25.4km s-min=14.0km az=144.0*

ISC 12 07:11:49.8±0.7**, 13.9S**±0.2×**171.8E**±0.1**, h33^{km}, n23, σ1^{s}17**/17**, mb4.1**/13**, MS3.5**/9**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**24.56**	**278**	LR	LR	07 25 31.5	
	comp=Z,34nm,20.4s,MS2.8,baz=50,slow=33						
URZ	**Urewera**	**24.74**	**170**	LR	LR	07 24 34.8	
	comp=Z,307nm,21.9s,MS3.8,baz=34,slow=31						
CTA	**Charters Tower**	**25.21**	**252**	LR	LR	07 24 52.7	
	comp=Z,76nm,18.4s,MS3.2,baz=53,slow=31						
RPZ	**Rata Peaks**	**29.75**	**181**	LR	LR	07 27 38.0	
	comp=Z,246nm,20.6s,MS3.8,baz=170,slow=32						
STKA	**Stephens Creek**	**32.96**	**232**	P	**P**	**07 18 24.4**	**+0.6**
	4.3nm,1.0s,mb4.3,baz=70,slow=9.0,SNR=5.0						
STKA				LR	LR	07 30 21.1	
	comp=Z,55nm,21.6s,MS3.2,baz=28,slow=34						
STKA	**Stephens Creek**	**32.96**	**232**	*e*P	**P**	**07 18 24.2**	**+0.4**
STKA				LR	LR	07 30 21.1	
WRA	**Warramunga Arr**	**36.32**	**255**	P	**P**	**07 18 52.1**	**-0.5**
	0.6nm,0.8s,mb3.5,baz=94,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**37.11**	**249**	P	**P**	**07 18 58.9**	**-0.4**
	2.1nm,0.7s,mb4.1,baz=75,slow=9.2,SNR=16						
ASAR				PcP	PcP	07 21 18.9	-0.7
	0.9nm,0.9s,baz=60,slow=3.2,SNR=4.9						
ASAR				LR	LR	07 32 39.5	
	comp=Z,61nm,18.8s,MS3.4,baz=50,slow=34						
VNDA	**Vanda**	**63.86**	**182**	LR	LR	07 44 09.4	
	comp=Z,72nm,18.9s,MS3.9,baz=359,slow=30						
SBA	**Scott Base**	**64.04**	**181**	*e*P	**P**	**07 22 21.6**	**-0.5**
	11nm,1.0s,mb4.8						
CN2	**Changchun**	**71.29**	**326**	*e*P	**P**	**07 23 05.4**	**-2.6**
ENH	**Enshi**	**74.30**	**307**	P	**P**	**07 23 24.2**	**-1.8**
	1.6nm,0.5s,mb4.2						
CMAR	**Chiang Mai Arr**	**78.68**	**292**	P	**P**	**07 23 52.5**	**+1.6**
	0.7nm,0.3s,mb4.0,baz=117,slow=4.0,SNR=3.1						
NVAR	**Mina Array Bea**	**83.39**	**48**	P	**P**	**07 24 15.8**	**+0.5**
	0.6nm,0.8s,mb3.6,baz=232,slow=5.6,SNR=4.5						
MAW	**Mawson**	**84.31**	**201**	LR	LR	07 56 22.2	
	comp=Z,108nm,18.9s,MS4.2,baz=207,slow=32						
ILAR	**Eielson Array**	**84.40**	**17**	P	**P**	**07 24 19.4**	**-0.4**
	4.3nm,0.9s,mb4.6,baz=239,slow=5.5,SNR=26						
SONM	**Songino Array**	**84.49**	**322**	P	**P**	**07 24 22.0**	**+1.3**
	0.6nm,0.8s,mb3.8,baz=135,slow=3.5,SNR=5.1						
GTA	**Gaotai**	**85.31**	**312**	*e*P	**P**	**07 24 27.4**	**+2.4**
GTA				AP	pP	07 24 33.3	-2.2
GTA				XP	sP	07 24 36.3	-2.7
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb4.2						
PDAR	**Pinedale Array**	**91.14**	**46**	P	**P**	**07 24 52.5**	**-0.3**
	comp=Z,0.6nm,1.0s,mb3.9,baz=90,slow=8.9,SNR=2.9						
PDAR				LR	LR	08 00 25.9	
	comp=Z,18nm,21.5s,MS3.5,baz=252,slow=32						
TXAR	**Lajitas Array**	**92.00**	**60**	P	**P**	**07 24 57.7**	**+0.6**
	comp=Z,1.0nm,0.8s,mb4.2,baz=225,slow=5.4,SNR=12						
TXAR	**Lajitas Array**	**92.00**	**60**	P	**P**	**07 24 57.7**	**+0.6**
YKA	**Yellowknife Ar**	**94.78**	**27**	P	**P**	**07 25 08.2**	**-0.7**
	comp=Z,0.8nm,0.8s,mb4.2,baz=253,slow=4.6,SNR=14						
YKA	**Yellowknife Ar**	**94.78**	**27**	P	**P**	**07 25 08.2**	**-0.7**

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*NIED **12** 07:13:00, 43.60N×139.00E, h8^{km}, Mw3.6 Best double couple: $M_0 3.28\times10^{14}$ NP1:ϕ_s16°, δ65°, λ100°. NP2:ϕ_s174°, δ27°, λ70°.*

JMA 12 07:13:27.4±0.2**, 43.64N×139.00E, h29^{km}**±4^{km}**, M3.8, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**1.11**	**104**	P	Pn	07 13 47.0	-0.2
JSK				*e*S	Sn	07 14 01.1	-0.5
JSH	**Shimam**	**1.26**	**142**	P	Pn	07 13 49.2	-0.1
JSH				*e*S	Sn	07 14 04.6	-0.7
JOSM	**Okushiri--Mats**	**1.59**	**167**	P	Pn	07 13 53.9	-0.2
JOSM				*e*S	Sn	07 14 12.9	-1.0
JYM2	**Yakumo 2**	**1.82**	**146**	P	Pn	07 13 58.0	+0.6
JYM2				*e*S	Sn	07 14 20.6	+0.8
JNB	**Noboribetsu**	**1.90**	**127**	P	Pn	07 13 59.4	+0.9
JNB				*e*S	Sn	07 14 22.2	+0.6
JHR	**Hokuryu**	**1.98**	**86**	P	Pn	07 13 59.7	+0.1
JSS	**Shosan**	**2.19**	**69**	P	Pn	07 14 02.6	-0.1
JSS				*e*S	Sn	07 14 28.7	-0.5
JKB	**Kayabe**	**2.30**	**139**	P	Pn	07 14 04.7	+0.4
JKB				*e*S	Sn	07 14 32.4	+0.5
JAB	**Ashibetsu**	**2.35**	**92**	P	Pn	07 14 05.0	+0.1
JSR	**Shiriuchi**	**2.35**	**153**	P	Pn	07 14 05.7	+0.7
JSR				*e*S	Sn	07 14 33.6	+0.4
JWK2	**Keihoku**	**2.67**	**50**	P	Pn	07 14 10.2	+0.7
JWK2				*e*S	Sn	07 14 41.0	-0.1
JOT	**Ohata**	**2.72**	**145**	P	Pn	07 14 11.1	+0.9
JOT				*e*S	Sn	07 14 42.7	+0.3
JKK2	**Kamakawa 2**	**2.73**	**84**	P	Pn	07 14 10.4	+0.1

IGQ 12 07:17:45.0, 1.30S×81.48W, h12^{km}±20^{km}**, mb4.0, Error ellipse: s-maj=20.2km s-min=9.6km az=162.6, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARRY	**Arrayan**	**3.03**	**94**	P	Pn	07 18 34.5	+0.6
ARRY				S	Sn	07 19 10.7	+0.3
NAS1	**Nasa**	**3.08**	**78**	P	Pn	07 18 37.1	+2.7
ULBA	**Ulba**	**3.08**	**93**	P	Pn	07 18 36.0	+1.5
TERV	**Terraza Guagua**	**3.09**	**69**	P	Pn	07 18 35.6	+1.0
PINO	**Pino**	**3.09**	**68**	P	Pn	07 18 36.0	+1.4
MOV1	**Cotopaxi Vol s**	**3.10**	**79**	P	Pn	07 18 36.6	+1.9
PISA	**Pisayambo**	**3.10**	**86**	P	Pn	07 18 36.2	+1.3
PITA	**Cotopaxi Volc**	**3.14**	**76**	P	Pn	07 18 36.9	+1.6
YANA	**Yana**	**3.14**	**68**	P	Pn	07 18 36.0	+0.6
VC1	**Cotopaxi 1**	**3.15**	**78**	P	Pn	07 18 37.9	+2.5
TAMB	**Tambo**	**3.17**	**79**	P	Pn	07 18 38.3	+2.5
COTA	**Cotacachi**	**3.54**	**63**	P	Pn	07 18 42.1	+1.0
CAYR	**Refugio Cayamb**	**3.71**	**69**	P	Pn	07 18 46.1	+2.6
CAYA	**Cayambe**	**3.75**	**69**	P	Pn	07 18 46.4	+2.4

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*IDC **12** 07:20:05.8±1.3, 33.95N×142.51E, mb3.7/4, mb1 4.0/6, mb1mx3.7/22, mbtmp3.8/6, ML3.8/2, Error ellipse: s-maj=52.9km s-min=25.4km az=134.0*

*JMA **12** 07:20:06.1±0.4, 33.99N×142.68E, h69^{km}, M3.0*

ISC 12 07:20:05.8±1.8**, 34.02N**±0.05×**142.54E**±0.06**, h15^{km}**±13^{km}**, n21, σ1^{s}24**/27**, mb3.7**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.44**	**297**	P	**Pn**	**07 20 32.2**	**+0.7**
BSO1				S	**Sb**	**07 20 51.2**	**+1.5**
BSO2	**Boso 2**	**1.64**	**297**	*e*S	**Sn**	**07 20 58.0**	**+2.6**
BSO3	**Boso 3**	**1.85**	**296**	P	**Pn**	**07 20 38.5**	**+1.2**
BSO3				S	**Sn**	**07 21 02.4**	**+1.8**
BSO4	**Boso 4**	**2.06**	**299**	*e*S	**Sn**	**07 21 07.7**	**+1.8**
JHJ2	**Mitsune**	**2.44**	**249**	P	**Pn**	**07 20 46.3**	**+0.4**
JHJ2				*e*S	**Sn**	**07 21 14.9**	**-0.9**
JHJ	**Hachijo jima 2**	**2.47**	**249**	Pn	**Pn**	**07 20 46.3**	**+0.1**
	168nm,0.3s,baz=73,slow=20,SNR=35						
JHJ				Sn	**Sn**	**07 21 13.4**	**-2.9**
	67nm,0.3s,baz=76,slow=23,SNR=12						
JHO	**Hitachi**	**3.04**	**329**	P	**Pn**	**07 20 54.4**	**0.0**
JOD2	**Odawara 2**	**3.10**	**295**	*e*S	**Sn**	**07 21 31.4**	**-1.0**
JHU	**Hanno**	**3.24**	**305**	*e*S	**Sn**	**07 21 35.8**	**-0.1**
JFK	**Kawauchi**	**3.60**	**338**	P	**Pn**	**07 21 01.3**	**-1.1**
JYN	**Shimob**	**3.60**	**295**	*e*S	**Sn**	**07 21 44.8**	**-0.2**
JFT	**Otama**	**3.92**	**333**	P	**Pn**	**07 21 06.9**	**0.0**
JFT				*e*S	**Sn**	**07 21 49.7**	**-3.4**
JNT	**Takato**	**4.06**	**298**	*e*S	**Sn**	**07 21 55.4**	**-1.2**
JMM	**Marumori**	**4.09**	**340**	P	**Pn**	**07 21 08.0**	**-1.3**
JNG	**Nsakai**	**4.34**	**304**	*e*S	**Sn**	**07 22 03.3**	**-0.5**
MAT	**Matsushiro**	**4.34**	**307**	P	**Pn**	**07 21 12.0**	**-0.9**
MAT				*e*S	**Sn**	**07 22 02.7**	**-1.2**
ASAJ	**Asahikawa**	**10.08**	**0**	Pn	**P**	**07 22 29.6**	**-3.5**
	0.7nm,0.3s,baz=165,slow=31,SNR=3.3						
WRA	**Warramunga Arr**	**54.23**	**190**	P	**P**	**07 29 32.3**	**-1.0**
	0.8nm,0.5s,mb4.0,baz=7.4,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**57.95**	**189**	P	**P**	**07 30 00.2**	**+0.1**
	0.5nm,0.7s,mb3.6,baz=8.7,slow=9.8,SNR=6.1						
NVAR	**Mina Array Bea**	**76.06**	**53**	P	**P**	**07 31 56.2**	**+1.9**
	0.4nm,0.6s,mb3.5,baz=284,slow=4.2,SNR=4.8						
TXAR	**Lajitas Array**	**91.22**	**53**	P	**P**	**07 33 13.1**	**+1.3**
	0.2nm,0.5s,mb3.7,baz=308,slow=1.7,SNR=4.7						

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*IDC **12** 07:31:22.6±0.6, 10.97N×141.14E, mb4.1/12, mb1 4.3/13, mb1mx4.2/21, mbtmp4.2/13, ML4.3/1, MS3.3/5, Ms1 3.4/5, ms1mx3.1/23, Error ellipse: s-maj=32.3km s-min=14.9km az=89.0*

*BJI **12** 07:31:26.9, 10.99N×141.75E, h72^{km}, mB5.2, mb4.2*

*NEIC **12** 07:31:30.1±4.2, 10.88N×141.14E, h55^{km}±39^{km}, mb4.4/3, Error ellipse: s-maj=23.3km s-min=9.0km az=75.0*

ISC 12 07:31:26.4±6.8**, 10.86N**±0.09×**141.2E**±0.2**, h38^{km}**±61^{km}**, n30, σ0^{s}94**/25**, mb4.2**/15**, MS3.3**/5**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**20.00**	**324**	P	**P**	**07 35 59.0**	**+0.4**
	1.3nm,0.3s,baz=128,slow=14,SNR=3.6						
PMG	**Port Moresby**	**21.00**	**163**	P	**P**	**07 36 09.1**	**0.0**
	16nm,0.7s,mb4.5,baz=347,slow=7.4,SNR=5.8						
PMG				LR	LR	07 44 02.4	
	comp=Z,64nm,18.4s,MS3.0,baz=353,slow=36						
CTA	**Charters Tower**	**31.16**	**171**	LR	LR	07 48 12.2	
	comp=Z,59nm,19.0s,MS3.3,baz=317,slow=32						
WRAB	**Tennant Creek**	**31.32**	**192**	*e*P	**P**	**07 37 44.9**	**-0.8**
	2.7nm,0.6s,mb4.2						
WB2	**Warramunga Arr**	**31.33**	**192**	*e*P	**P**	**07 37 45.5**	**-0.3**
WRA	**Warramunga Arr**	**31.34**	**192**	P	**P**	**07 37 45.2**	**-0.6**
	1.4nm,0.6s,mb4.0,baz=10,slow=9.6,SNR=20						
WRA				PcP	PcP	07 40 39.6	+0.4
	0.4nm,0.7s,baz=0.9,slow=2.9,SNR=4.9						
ASAR	**Alice Springs**	**35.04**	**192**	P	**P**	**07 38 18.2**	**+0.4**
	1.2nm,0.6s,mb4.0,baz=18,slow=12,SNR=20						
ASAR				PcP	PcP	07 40 50.5	+1.0
	0.5nm,0.6s,baz=24,slow=2.5,SNR=8.4						
ASAR				LR	LR	07 52 56.0	
	comp=Z,52nm,18.2s,MS3.3,baz=90,slow=37						
ASPA	**Alice Springs**	**35.04**	**192**	*e*P	**P**	**07 38 18.9**	**+1.1**
ENH	**Enshi**	**35.20**	**308**	*e*P	**P**	**07 38 19.7**	**+0.6**
	2.6nm,0.5s,mb4.4						
CD2	**Chengdu**	**39.97**	**306**	P	**P**	**07 39 00.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**41.45**	**286**	LR	LR	07 54 03.1	
	comp=Z,43nm,20.7s,MS3.3,baz=90,slow=33						
STKA	**Stephens Creek**	**42.50**	**179**	P	**P**	**07 39 19.7**	**-0.3**
	1.6nm,0.8s,mb3.7,baz=44,slow=6.2,SNR=4.3						
STKA	**Stephens Creek**	**42.50**	**179**	*e*P	**P**	**07 39 20.0**	**0.0**
SONM	**Songino Array**	**46.99**	**328**	P	**P**	**07 39 55.7**	**0.0**
	0.6nm,0.5s,mb3.8,baz=135,slow=5.4,SNR=6.3						
FX1	**Attu Island--F**	**49.18**	**25**	LR	LR	07 56 04.6	
	comp=Z,41nm,21.8s,MS3.4,baz=112,slow=30						
ZAL	**Zalesovo**	**61.79**	**326**	P	**P**	**07 41 42.6**	**-1.0**
	0.7nm,0.4s,mb4.1,baz=43,slow=9.0,SNR=3.9						
KURK	**Kurchatov**	**64.37**	**321**	*e*P	**P**	**07 41 59.6**	**-1.1**
	5.6nm,0.7s,mb4.7						
BVAR	**Borovoye Array**	**69.84**	**323**	P	**P**	**07 42 34.7**	**-0.4**
	2.0nm,0.4s,mb4.4,baz=109,slow=7.7,SNR=15						
ILAR	**Eielson Array**	**72.57**	**25**	P	**P**	**07 42 49.6**	**-1.5**
	1.2nm,0.7s,mb3.9,baz=260,slow=4.8,SNR=13						
INK	**Inuvik**	**78.25**	**22**	P	**P**	**07 43 22.8**	**-0.8**
INK	**Inuvik**	**78.25**	**22**	P	**P**	**07 43 22.8**	**-0.8**
YKA	**Yellowknife Ar**	**86.93**	**27**	P	**P**	**07 44 09.3**	**+1.0**
	0.7nm,0.4s,mb4.2,baz=289,slow=5.0,SNR=26						
ARCES	**ARCESS Array B**	**88.53**	**342**	P	**P**	**07 44 17.4**	**+1.6**
	3.9nm,0.8s,mb4.8,baz=22,slow=6.5,SNR=4.3						
ARCES	**ARCESS Array B**	**88.53**	**342**	P	**P**	**07 44 17.4**	**+1.6**
NVAR	**Mina Array Bea**	**91.45**	**51**	P	**P**	**07 44 32.4**	**+2.1**
	0.5nm,0.7s,mb4.0,baz=260,slow=4.5,SNR=6.4						
NVAR	**Mina Array Bea**	**91.45**	**51**	P	**P**	**07 44 32.4**	**+2.1**
FINES	**FINESS Array B**	**92.06**	**334**	P	**P**	**07 44 31.3**	**-1.3**
	1.1nm,0.5s,mb4.4,baz=72,slow=6.0,SNR=7.9						
FINES	**FINESS Array B**	**92.06**	**334**	P	**P**	**07 44 31.3**	**-1.3**
LPAZ	**La Paz**	**151.04**	**104**	PKPbc	PKPdf	07 51 20.4	+10
	6.4nm,1.0s,baz=289,slow=2.2,SNR=13						
LPAZ	**La Paz**	**151.04**	**104**	*e*PKPbc	PKPdf	07 51 20.5	+10

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*IDC **12** 07:43:05.3±1.9, 23.53S×169.37E, mb3.8/6, mb1 4.1/6, mb1mx4.0/14, mbtmp3.8/6, MS3.5/4, Ms1 3.5/4, ms1mx3.1/21, Error ellipse: s-maj=97.3km s-min=29.7km az=165.0*

*NEIC **12** 07:43:08.0±1.1, 23.16S×169.20E, h10^{km}, mb3.9/2, Error ellipse: s-maj=42.2km s-min=16.6km az=179.0*

ISC 12 07:43:09.9±4.6**, 23.3S**±0.2×**169.1E**±0.1**, h32^{km}**±32^{km}**, n18, σ0^{s}95**/16**, mb3.8**/7**, MS3.4**/3**, 4D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.70**	**296**	⇓*e*P	**Pn**	**07 43 52.2**	**+0.1**
DZM				*e*S	**Sn**	**07 44 24.4**	**+0.4**
DZM	**Mont Dzumac**	**2.70**	**296**	⇓*e*P	**Pn**	**07 43 52.2**	**+0.1**
DZM				*e*S	**Sn**	**07 44 24.4**	**+0.4**
NOUC	**Port Laguerre**	**2.80**	**294**	⇓*e*P	**Pn**	**07 43 53.5**	**-0.1**

NOUC				eS	Sn	07 44 26.1	-0.6
NOUC	Port Laguerre	2.80	294⇓	eP	Pn	07 43 53.5	-0.1
NOUC				eS	Sn	07 44 26.1	-0.6
URZ	Urewera	16.44	157	LR	LR	07 52 05.9	
	comp=Z,189nm,18.9s,baz=302,slow=34						
RPZ	Rata Peaks	20.44	176	LR	LR	07 54 39.3	
	comp=Z,250nm,20.4s,MS3.6,baz=162,slow=34						
CTA	Charters Tower	21.42	274	P	P	07 47 59.8	+2.4
	1.9nm,0.7s,mb3.5,baz=84,slow=9.5,SNR=6.0						
CTAO	Charters Tower	21.42	274	eP	P	07 47 58.4	+1.0
	2.2nm,0.6s,mb3.7						
STKA	Stephens Creek	25.74	245	LR	LR	07 57 54.5	
	comp=Z,62nm,19.9s,MS3.1,baz=30,slow=34						
ASAR	Alice Springs	32.19	262	P	P	07 49 38.0	+0.7
	1.4nm,1.0s,mb3.8,baz=75,slow=9.1,SNR=7.0						
ASAR				PcP	PcP	07 52 24.5	-1.2
	0.4nm,0.6s,baz=115,slow=3.1,SNR=4.4						
WRAB	Tennant Creek	32.39	269	P	P	07 49 37.2	-1.8
	2.1nm,0.8s,mb4.0						
WRA	Warramunga Arr	32.40	269	P	P	07 49 38.1	-1.1
	0.3nm,0.7s,mb3.2,baz=98,slow=8.0,SNR=3.7						
WRA				PcP	PcP	07 52 25.4	-0.9
	0.2nm,0.6s,baz=101,slow=3.1,SNR=5.3						
VNDA	Vanda	54.40	182	LR	LR	08 10 58.3	
	comp=Z,48nm,18.3s,MS3.6,baz=194,slow=31						
CMAR	Chiang Mai Arr	80.03	295	P	P	07 55 19.6	+1.3
	1.1nm,0.4s,mb4.1,baz=137,slow=4.1,SNR=6.8						
SONM	Songino Array	90.34	323	P	P	07 56 09.3	+0.2
	0.3nm,0.7s,mb3.7,baz=135,slow=5.2,SNR=4.7						
NVAR	Mina Array Bea	91.60	49	P	P	07 56 14.4	-0.6
	0.7nm,0.7s,mb4.1,baz=226,slow=6.5,SNR=5.7						
VYHS	Vyhne	145.53	324	eP	PKPbc	08 02 47.1	+1.8
GERES	GERESS Array B	147.91	329	PKPbc	PKPdf	08 02 52.9	-1.0
	0.8nm,0.5s,baz=34,slow=4.8,SNR=3.8						

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*NEIC **12** 07:48:42.6, 16.56N×94.85W, h83^{km}, MD4.0(MEX), After MEX.*

MEX 12 07:48:42.6±1.2**, 16.56N×94.86W, h84**^{km}±25^{km}**, MD4.0, 1C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.44	237	eP	P	07 49 05.1	-2.7
HUIG				eS	S	07 49 24.6	-1.7
TUIG	Tuzandepetl	1.52	16	iP	P	07 49 06.9	-1.9
TUIG				eS	S	07 49 26.1	-2.1
OXX	Oaxaca	1.86	286	eP	P	07 49 12.2	-1.1
OXX				eS	S	07 49 34.8	-1.0
VHO	Vista Hermosa	1.86	286⇑	iP	P	07 49 12.2	-1.1
VHO				iS	S	07 49 34.0	-2.0
CCIG	Comitan	2.63	96	iP	P	07 49 23.8	-0.1
CCIG				iS	S	07 49 49.2	-5.6
CCIG	Comitan	2.63	96	iP	P	07 49 23.6	-0.4
CCIG				iS	S	07 49 52.9	-1.9
ACX	Acapulco	4.86	274	eP	P	07 49 50.0	-4.8

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*NIED **12** 07:55:00, 33.90N×142.60E, h8^{km}, Mw4.4 Best double couple: M$_0$4.72×10^{15} NP1:φ$_s$158°, δ75°, λ-111°. NP2: φ$_s$35°, δ26°, λ-36°.*

*IDC **12** 07:55:45.8±0.5, 34.01N×142.55E, mb4.4/20, mb1 4.6/23, mb1mx4.6/25, mbtmp4.4/23, ML4.5/3, MS3.4/4, Ms1 3.4/4, ms1mx3.1/27, Error ellipse: s-maj=16.4km s-min=13.9km az=107.0*

*JMA **12** 07:55:47.5±0.3, 33.92N×142.56E, h56^{km}, M4.1*

*MOS **12** 07:55:49.1±1.0, 33.99N×142.48E, h33^{km}, mb4.7/37, Error ellipse: s-maj=11.8km s-min=6.7km az=109.8*

*BJI **12** 07:55:49.0, 34.01N×142.22E, h21^{km}, mB4.8, mb4.4, Ms4.1, Msz4.0*

*NEIC **12** 07:55:50.6±2.8, 33.99N×142.44E, h31^{km}±19^{km}, mb4.7/34, MW4.4(NIED), Error ellipse: s-maj=6.5km s-min=5.1km az=105.0*

ISC 12 07:55:47.2±1.3**, 33.93N**±0.03×**142.46E**±0.03**, h20**^{km}±9^{km}**, h28**^{km}±1.1^{km}**:pP-P, n164,** $\sigma 0\overset{s}{.}95$/174**, mb4.5**/72**, MS3.7**/8**, 4C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.43	301	P	Pn	07 56 12.4	+0.1
BSO1				S	Sb	07 56 31.5	+0.7
BSO2	Boso 2	1.64	301	S	Sn	07 56 38.5	+2.6
BSO3	Boso 3	1.84	299	P	Pn	07 56 18.7	+0.5
BSO3				S	Sn	07 56 42.4	+1.4
BSO4	Boso 4	2.05	302	P	Pn	07 56 22.4	+1.1
BSO4				S	Sn	07 56 47.8	+1.3
CHOJ	Chosi	2.21	324	P	Pn	07 56 23.9	+0.4
CHOJ				S	Sn	07 56 49.9	-0.6
JHJ2	Mitsune	2.36	251	P	Pn	07 56 26.3	+0.7
JHJ2				S	Sn	07 56 54.3	+0.1
JHJ	Hachijo jima 2	2.38	251	Pn	Pn	07 56 26.4	+0.4
	681nm,0.3s,baz=44,slow=1.5,SNR=141						
JHJ				Sn	Sn	07 56 54.2	-0.6
	473nm,0.3s,baz=51,slow=21,SNR=24						
JHJ				LR	LR	07 57 20.8	
	comp=Z,856nm,20.8s,baz=297,slow=39						
JIM2	Oshima 3	2.63	288	P	Pn	07 56 28.9	-0.6
JIM2				eS	Sn	07 57 01.4	+0.2
JYT	Yasato	2.96	322	P	Pn	07 56 34.3	+0.1
JOD2	Odawara 2	3.09	297	P	Pn	07 56 35.2	-0.8
JOD2				S	Sn	07 57 12.0	-0.8
JHO	Hitachi	3.09	330	P	Pn	07 56 34.0	-2.1
JHO				eS	Sn	07 57 08.2	-4.7
MAJO	Matsushiro	4.35	308	eP	Pn	07 56 53.9	-0.1
MAT	Matsushiro	4.35	308	P	Pn	07 56 54.0	0.0
MAT				eS	Sn	07 57 43.0	-1.8
MAT	Matsushiro	4.35	308	P	Pn	07 56 52.5	-1.5
MAT				S	Sn	07 57 42.6	-2.2
CBIJ	Chichi jima	6.81	182	Pn	Pn	07 57 25.1	-3.7
	17nm,0.3s,baz=334,slow=18,SNR=5.8						
CBIJ				Sn	Sn	07 58 37.5	-9.0
	55nm,0.3s,baz=280,slow=21,SNR=9.6						
ASAJ	Asahikawa	10.18	1	Pn	P	07 58 09.3	-6.1
	3.9nm,0.3s,baz=243,slow=10,SNR=21						
ASAJ				Sn	S	07 59 56.0	-14
	0.4nm,0.3s,baz=264,slow=24,SNR=2.1						
ASAJ				LR	LR	08 02 20.9	
	comp=Z,153nm,20.3s,baz=290,slow=39						
YSS	Yuzh-Sakhalins	13.02	1α	iP	P	07 58 48.0	-5.7
YSS				pmax	pmax		
	comp=N,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				pmax	pmax		
	comp=N,100nm,0.9s						
YSS				pmax	pmax		
	comp=N,110nm,1.0s						
YSS	Yuzh-Sakhalins	13.02	1	eP	P	07 58 48.1	-5.7
	comp=N,101nm,0.9s						
CN2	Changchun	16.49	312	eP	P	07 59 43.3	+4.3
SSE	Sheshan	18.16	267	P	P	07 59 59.4	-0.7
SSE				S	S	08 03 24.1	+4.9
SSE				AMB	AMB		
	comp=Z,8.0nm,0.9s						
SSE				AMB	AMB		
	comp=Z,68nm,7.0s						
SSE				LR	LR		
	comp=N,59nm,16.8s						
SSE				LR	LR		
	comp=E,70nm,16.9s						
SSE				LR	LR		
	comp=Z,89nm,16.0s						
NJ2	Nanjing	19.89	271	eP	P	08 00 21.1	+0.8
NJ2				AP		08 00 29.8	
NJ2				XP		08 00 34.2	
NJ2				PP	PP	08 00 40.6	+1.4
NJ2				S	S	08 03 56.0	-1.6
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s						
NJ2				AMB	AMB		
	comp=Z,2µm,7.6s						
NJ2				LR	LR		
	comp=E,660nm,19.8s						
NJ2				LR	LR		
	comp=Z,520nm,14.4s						
BJI	Beijing	21.83	294	P	P	08 00 42.6	+2.5
BJI				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.4						
BJI				LR	LR		
	comp=N,206nm,17.1s,MS3.9						
BJI				LR	LR		
	comp=E,299nm,17.1s,MS3.9						
BJI				LR	LR		
	comp=Z,158nm,34.3s						
HIA	Hailar	22.76	319	eP	P	08 00 47.7	-1.6
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HIA	Hailar	22.76	319	eP	P	08 00 47.7	-1.6
	comp=Z,10nm,0.9s,mb4.2						
WHN	Wuhan	23.99	270	eP	P	08 01 01.0	-0.4
WHN				AP		08 01 10.0	
HHC	Hu-ho-hao-te	25.42	295⇓	iP	P	08 01 16.6	+1.6
HHC				AP	pP	08 01 26.3	+5.4
HHC				XP	sP	08 01 31.1	+7.6
HHC				S	S	08 05 44.0	+5.9
HHC				SCP		08 08 21.1	
HHC				AMB	AMB		
	comp=Z,24nm,1.6s,mb4.5						
HHC				AMB	AMB		
	comp=Z,165nm,8.4s						
HHC				LR	LR		
	comp=N,163nm,12.0s,MS3.9						
HHC				LR	LR		
	comp=E,210nm,14.4s,MS3.9						
HHC				LR	LR		
	comp=Z,215nm,18.0s,MS3.7						
CLNS	Chul'man	25.87	338	eP	P	08 01 19.1	0.0
CLNS				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.6						
CLNS				pmax	pmax		
	comp=N,14nm,1.2s						
CLNS				pmax	pmax		
	comp=E,15nm,1.1s						
MA2	Magadan	26.24	10	eP	P	08 01 21.8	-0.7
MA2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
BTO	Baotou	26.56	294	eP	P	08 01 25.5	-0.2
XAN	Xi'an	27.75	280	P	P	08 01 35.8	-0.7
XAN				XP	sP	08 01 45.3	+0.3
XAN				AMB	AMB		
	comp=Z,11nm,1.7s,mb4.2						
ENH	Enshi	28.11	272	eP	P	08 01 37.9	-1.9
	comp=Z,11nm,0.8s,mb4.5						
YAK	Yakutsk	29.28	348	iP	P	08 01 48.9	-1.2
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
YAK				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.5						
ULN	Ulaanbaatar	29.88	308	eP	P	08 01 56.8	+1.2
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
ULN	Ulaanbaatar	29.88	308	eP	P	08 01 56.8	+1.2
	comp=Z,7.9nm,0.9s,mb4.4						
SONM	Songino Array	30.30	308	P	P	08 02 00.1	+0.8
	comp=Z,4.2nm,1.0s,mb4.1,baz=106,slow=9.0,SNR=22						
BOD	Bodaibo	30.63	330	eP	P	08 02 00.7	-1.4
BOD				pmax	pmax		
	comp=Z,30nm,2.1s,mb4.8						
LZH	Lanzhou	31.57	285	eP	P	08 02 10.1	-0.5
LZH				AP	pP	08 02 16.5	0.0
LZH				XP	sP	08 02 19.8	+0.7
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,70nm,4.0s						
GYA	Guiyang	31.71	266	P	P	08 02 11.8	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
ZAK	Zakamensk	32.92	312	eP	P	08 02 23.0	+0.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
TLY	Talaya	33.06	314⇑	eP	P	08 02 24.4	+0.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
TLY				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.6						
TLY	Talaya	33.06	314	eP	P	08 02 23.6	+0.1
	comp=Z,1.9nm,0.6s,mb4.2						
GTA	Gaotai	34.41	292	eP	P	08 02 35.9	+0.7
GTA				AP	pP	08 02 44.1	+3.0
GTA				XP	sP	08 02 47.9	+4.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.6s,mb4.2						
BILL	Bilibino	36.78	15⇓	eP	P	08 02 53.4	-1.7
BILL				eS	S	08 08 37.4	-0.1
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
BILL				MLR	MLR		
	comp=Z,700nm,26.0s,MS4.3						
TIXI	Tiksi	38.47	353⇑	eP	P	08 03 08.4	-0.9
TIXI				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.6						
CMAR	Chiang Mai Arr	41.66	260	P	P	08 03 36.6	+0.5
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR				MLR	MLR		
	comp=Z,42nm,19.2s						
CMAR	Chiang Mai Arr	41.66	260	P	P	08 03 36.5	+0.4
	comp=Z,1.9nm,0.5s,mb4.0,baz=50,slow=7.3,SNR=9.5						
CMAR				LR	LR	08 20 37.5	
	comp=Z,42nm,19.2s,MS3.3,baz=75,slow=36						
ZAL	Zalesovo	44.69	315	P	P	08 04 01.0	+0.7
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZAL	Zalesovo	44.69	315	P	P	08 04 01.0	+0.7
	comp=Z,4.8nm,0.2s,mb4.9,baz=55,slow=12,SNR=22						
ZAL	Zalesovo	44.69	315	P	P	08 04 01.0	+0.7
NVS	Novosibirsk	45.63	316	iP	P	08 04 07.0	-0.8
MKAR	Makanchi Array	46.54	305	iP	P	08 04 15.2	+0.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KAKA	Kakadu	47.35	193	eP	P	08 04 21.7	-0.2
	comp=Z,11nm,0.7s,mb4.9						
JIRN	Jiri	48.24	279	eP	P	08 04 29.4	+0.7
	comp=Z,29nm,0.7s,mb5.4						
GUN	Gumba	48.40	279	eP	P	08 04 30.4	+0.4
	comp=Z,21nm,0.7s,mb5.3						
KURK	Kurchatov	48.56	310	eP	P	08 04 30.1	-0.8
KURK				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
KURK	Kurchatov	48.56	310	eP	P	08 04 30.1	-0.8
	comp=Z,14nm,0.8s,mb5.0						
PKI	Pulchoki	48.91	279	eP	P	08 04 34.0	+0.1
	comp=Z,7.8nm,0.6s,mb4.9						
KKN	Kakani	48.94	279	eP	P	08 04 34.5	+0.4
	comp=Z,21nm,0.8s,mb5.2						
DMN	Daman	49.15	279	eP	P	08 04 35.6	-0.2
	comp=Z,16nm,0.9s,mb5.0						
GKN	Gorkha	49.39	280	eP	P	08 04 38.1	+0.5
	comp=Z,21nm,0.7s,mb5.3						
KOLN	Koldanda	50.32	280	eP	P	08 04 44.7	-0.1
	comp=Z,14nm,0.8s,mb5.0						
SML	Sawmill	51.02	35	eP	P	08 04 48.6	-0.9
COLA	College	51.27	31	P	P	08 04 52.6	+1.2
ILAR	Eielson Array	51.68	31	P	P	08 04 53.0	-1.6
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	51.68	31	P	P	08 04 53.0	-1.6
	comp=Z,3.1nm,0.8s,mb4.3,baz=265,slow=5.2,SNR=21						
CHKZ	Chkalovo	53.09	315	P	P	08 05 03.9	-1.3
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BVAR	Borovoye Array	53.32	314	P	P	08 05 06.1	-0.9
	comp=Z,0.9nm,0.5s,mb3.9,baz=100,slow=9.0,SNR=6.2						
BVAR				PcP	PcP	08 06 13.9	-0.5
	comp=Z,1.0nm,0.5s,baz=63,slow=6.6,SNR=2.5						
CTA	Charters Tower	53.83	176	P	P	08 05 12.0	+0.9
CTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CTA	Charters Tower	53.83	176	P	P	08 05 12.0	+0.9
	comp=Z,2.5nm,0.7s,mb4.3,baz=352,slow=7.9,SNR=3.9						
CTAO	Charters Tower	53.83	176	eP	P	08 05 12.0	+0.9
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
CTAO	Charters Tower	53.83	176	eP	P	08 05 12.0	+0.8
	comp=Z,4.3nm,0.9s,mb4.4						
WRAB	Tennant Creek	54.11	189	eP	P	08 05 12.4	-0.8
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
WRAB	Tennant Creek	54.11	189	eP	P	08 05 12.4	-0.8
	comp=Z,17nm,0.8s,mb5.0						
WB2	Warramunga Arr	54.12	189	eP	P	08 05 12.5	-0.8
WRA	Warramunga Arr	54.12	189	P	P	08 05 12.5	-0.8
WRA				pmax	pmax		
	comp=Z,11nm,0.6s						
WRA	Warramunga Arr	54.12	189	P	P	08 05 12.5	-0.8
	comp=Z,11nm,0.6s,mb5.0,baz=7.4,slow=7.6,SNR=145						
FITZ	Fitzroy Crossi	54.17	200	eP	P	08 05 14.4	+0.8
	comp=Z,7.7nm,0.6s,mb4.8						
NDI	New Delhi	55.17	284	e	P	08 05 19.0	-1.9
INK	Inuvik	56.77	26	eP	P	08 05 30.7	-1.2
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
INK	Inuvik	56.77	26	LR	LR	08 27 19.5	
	comp=Z,51nm,21.9s,MS3.6,baz=205,slow=33						
INK	Inuvik	56.77	26	eP	P	08 05 30.7	-1.2
	comp=Z,3.7nm,1.0s,mb4.4						
ASAR	Alice Springs	57.85	189	P	P	08 05 39.7	-0.3
	comp=Z,4.4nm,0.7s,mb4.6,baz=18,slow=10,SNR=43						
ASPA	Alice Springs	57.85	189	eP	P	08 05 40.4	+0.4
SVE	Sverdlovsk	58.06	320	eP	P	08 05 50.0	+9.0
MBWA	Marble Bar	58.90	205	eP	P	08 05 46.5	-0.9
	comp=Z,7.3nm,0.7s,mb4.8						
RES	Resolute Bay	65.39	14	eP	P	08 06 28.9	-1.1
RES				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
RES	Resolute Bay	65.39	14	eP	P	08 06 28.9	-1.1
	comp=Z,25nm,1.3s,mb5.1						
STKA	Stephens Creek	65.46	181	P	P	08 06 31.2	+0.1
	comp=Z,2.1nm,0.6s,mb4.3,baz=341,slow=11,SNR=6.4						
STKA	Stephens Creek	65.46	181	P	P	08 06 30.8	-0.3
YKA	Yellowknife Ar	66.07	30	P	P	08 06 32.9	-1.6
YKA						08 07 04.4	
YKA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	66.07	30	P	P	08 06 32.9	-1.6
	comp=Z,6.4nm,1.1s,mb4.5,baz=296,slow=6.4,SNR=38						
YKA				PcP	PcP	08 07 04.4	-0.4
	comp=Z,0.7nm,0.7s,baz=301,slow=4.2,SNR=5.7						
YKA	Yellowknife Ar	66.07	30	P	P	08 06 32.9	-1.6
YKA				PcP	PcP	08 07 04.4	-0.4
JOF	Joensuu	69.11	333	ep	P	08 06 51.4	-2.2
	comp=Z,2.3nm,0.6s,mb4.3						
NWAO	Narrogin (SRO)	70.61	202	eP	P	08 07 02.9	-0.3
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NWAO	Narrogin (SRO)	70.61	202	eP	P	08 07 02.9	-0.3
	comp=Z,7.7nm,0.7s,mb4.7						
OBN	Obninsk	71.10	324	eP	P	08 07 06.2	+0.4
OBN				e		08 07 25.3	
OBN				e		08 09 41.7	
OBN				eS	S	08 16 23.3	+3.3
OBN				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
KAF	Kangasniemi	71.46	334	ep	P	08 07 04.6	-3.3
	comp=Z,3.9nm,0.7s,mb4.5,baz=50,slow=5.8						
KAF	Kangasniemi	71.46	334	eP	P	08 07 04.6	-3.3
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
NEW	Newport	71.77	44	eP	P	08 07 09.8	-0.1
NEW				e		08 07 19.1	
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NEW	Newport	71.77	44	eP	P	08 07 09.8	-0.1
	comp=Z,3.6nm,0.8s,mb4.3						
NEW				e		08 07 19.1	
FINES	FINESS Array B	71.96	333	P	P	08 07 10.3	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	71.96	333	P	P	08 07 10.3	-0.6
	comp=Z,1.8nm,0.7s,mb4.1,baz=79,slow=9.7,SNR=7.6						
BMO	Blue Mountains	73.42	47	eP	P	08 07 19.5	-0.2
	comp=Z,3.4nm,0.8s,mb4.3						
BMO				e		08 07 28.9	
KIV	Kislovodsk	73.60	312	eP	P	08 07 21.6	+0.8
KIV				e		08 07 36.7	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
SUMG	Summit	73.78	0	eP	P	08 07 21.8	+0.5
	comp=Z,6.3nm,0.7s,mb4.7						
SUMG				e		08 07 31.9	
CMB	Columbia Colle	74.98	54	eP	P	08 07 28.7	-0.2
CMB				e		08 07 38.4	
CMB				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
CMB	Columbia Colle	74.98	54	eP	P	08 07 28.7	-0.2
	comp=Z,11nm,1.0s,mb4.8						
CMB				e		08 07 38.4	
NVAR	Mina Array Bea	76.17	53	P	P	08 07 36.5	+0.8
	comp=Z,4.8nm,0.8s,mb4.5,baz=290,slow=4.5,SNR=44						
MNV	Mina	76.27	53	eP	P	08 07 36.7	+0.5
MNV				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MNV	Mina	76.27	53	eP	P	08 07 36.7	+0.5
	comp=Z,2.4nm,0.8s,mb4.2						
ELK	Elko	76.90	50	eP	P	08 07 40.3	+0.6
ELK				e		08 07 49.8	
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ELK	Elko	76.90	50	eP	P	08 07 40.3	+0.6
	comp=Z,3.9nm,1.0s,mb4.3						
ELK				e		08 07 49.8	
QLMT	Earthquake Lak	76.93	45	eP	P	08 07 40.8	+1.0
QLMT				e		08 07 50.1	
AKASG	Malin Array Be	77.28	323	P	P	08 07 41.2	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	77.28	323	P	P	08 07 41.2	-0.4
	comp=Z,2.2nm,0.7s,mb4.2,baz=45,slow=6.2,SNR=11						
NB2	NORSAR Subarra	77.38	338	P	P	08 07 41.6	-0.3
	comp=Z,1.9nm,0.6s,mb4.2,baz=40,slow=5.6						
NB2	NORSAR Subarra	77.38	338	P	P	08 07 41.6	-0.3
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NOA	NORSAR Array B	77.38	338	P	P	08 07 40.9	-1.0
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA	NORSAR Array B	77.38	338	P	P	08 07 40.9	-1.1
	comp=Z,4.1nm,0.8s,mb4.4,baz=39,slow=5.6,SNR=9.6						
IMW	Indian Meadow	77.75	45	eP	P	08 07 46.0	+1.7
HWUT	Hardware Ranch	78.70	47	eP	P	08 07 50.8	+1.2
	comp=Z,25nm,1.6s,mb4.9						
HWUT				e	pP	08 07 58.9	+3.0
DUG	Dugway	78.74	49	eP	P	08 07 50.2	+0.4
DUG				e		08 07 59.3	
DUG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
DUG	Dugway	78.74	49	eP	P	08 07 50.2	+0.4
	comp=Z,4.7nm,0.7s,mb4.5						
DUG				e		08 07 59.3	
LAO	LASA Array	78.76	41	P	P	08 07 50.4	+0.6
	comp=Z,4.2nm,0.9s,mb4.4						
PDAR	Pinedale Array	79.23	45	P	P	08 07 52.5	+0.1
	comp=Z,1.5nm,0.7s,mb4.0,baz=279,slow=2.3,SNR=13						
JLU	Jordanelle	79.36	48	eP	P	08 07 54.3	+1.1
SRU	San Rafael	80.81	49	eP	P	08 08 01.5	+0.6
BRTR	Keskin Array B	81.56	312	P	P	08 08 06.0	+1.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	81.56	312	P	P	08 08 06.0	+1.1
	comp=Z,2.0nm,0.8s,mb4.1,baz=90,slow=4.9,SNR=7.3						
ULM	Lac du Bonnet	81.62	34	P	P	08 08 04.0	-1.0
	comp=Z,0.7nm,0.4s,mb3.9,baz=307,slow=6.4,SNR=4.3						
ULM	Lac du Bonnet	81.62	34	P	P	08 08 04.0	-1.0
PV10	Paradox Valley	82.18	49	eP	P	08 08 09.0	+0.9
PV01	Paradox Valley	82.62	49	eP	P	08 08 11.6	+1.2
PV01				e		08 08 20.6	
VYHS	Vyhne	83.77	326	eP	P	08 08 16.9	+0.9
BRG	Berggiesshubel	84.16	330	iP	P	08 08 18.6	+0.6
BRG				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.6						
BRG	Berggiesshubel	84.16	330	iP	P	08 08 18.6	+0.6
	comp=Z,7.1nm,1.4s,mb4.6						
CLL	Collm	84.22	331	iP	P	08 08 18.5	+0.3
CLL				i		08 08 28.2	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
CLL	Collm	84.22	331	iP	P	08 08 18.5	+0.3
	comp=Z,10.0nm,1.4s,mb4.8						
CLL				i		08 08 28.2	
CLL	Collm	84.22	331	P	P	08 08 18.5	+0.3
	comp=Z,logA/T=0.9,mb4.8						
CLL				i *PP	pP	08 08 28.2	+3.6
MOX	Moxa	85.29	331	eP	P	08 08 24.1	+0.5
MOX	Moxa	85.29	331	iP	P	08 08 24.1	+0.5
GEC2	GERESS Array S	85.81	329	eP	P	08 08 26.8	+0.6
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.1						
GEC2	GERESS Array S	85.81	329	eP	P	08 08 26.8	+0.6
	comp=Z,1.0nm,0.8s,mb4.1						
GERES	GERESS Array B	85.81	329	P	P	08 08 26.6	+0.4
GERES				pmax	pmax		

	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**85.81**	**329**	P	**P**	**08 08 26.6**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.2,baz=56,slow=4.8,SNR=5.2						
WET	**Wettzell**	**85.93**	**330**	*e*P	**P**	**08 08 28.1**	**+1.3**
WET				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb4.0						
WET	**Wettzell**	**85.93**	**330**	*e*P	**P**	**08 08 28.1**	**+1.3**
	comp=Z,1.0nm,1.0s,mb4.0						
GRA1	**Grafenberg Arr**	**86.19**	**331**	*e*P	**P**	**08 08 29.2**	**+1.1**
	comp=Z,5.0nm,0.8s,mb4.8						
GRA1				*e*pP	pP	08 08 38.5	+4.0
GRF	**Grafenberg Arr**	**86.19**	**331**	*e*P	**P**	**08 08 29.2**	**+1.1**
GRF				e*PP	pP	08 08 38.5	+4.0
GRF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
GRF	**Grafenberg Arr**	**86.19**	**331**	*e*P	**P**	**08 08 29.2**	**+1.1**
GRF				e*PP	pP	08 08 38.5	+4.0
GRF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
GRF	**Grafenberg Arr**	**86.19**	**331**	*e*P	**P**	**08 08 29.2**	**+1.1**
	comp=Z,5.0nm,0.8s,mb4.8						
GRF				*e*pP	pP	08 08 38.5	+4.0
GRFO	**Grafenberg**	**86.19**	**331**	*e*P	**P**	**08 08 29.2**	**+1.1**
	comp=Z,29nm,0.8s,mb5.6						
TNS	**Taunus Mts**	**86.87**	**332**	*e*P	**P**	**08 08 31.6**	**+0.2**
TNS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
TNS	**Taunus Mts**	**86.87**	**332**	*e*P	**P**	**08 08 31.6**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.6						
CBKS	**Cedar Bluff**	**87.49**	**44**	*e*P	**P**	**08 08 34.5**	**-0.2**
CBKS				*e*		08 08 43.5	
CBKS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
CBKS	**Cedar Bluff**	**87.49**	**44**	*e*P	**P**	**08 08 34.5**	**-0.2**
	comp=Z,8.3nm,0.9s,mb5.0						
CBKS				*e*		08 08 43.5	
SCHQ	**Schefferville**	**88.08**	**16**	P	**P**	**08 08 37.3**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.6,baz=303,slow=7.1,SNR=3.8						
TXAR	**Lajitas Array**	**91.32**	**53**	P	**P**	**08 08 53.5**	**+0.5**
	comp=Z,2.5nm,0.6s,mb4.8,baz=302,slow=3.1,SNR=53						
SDV	**Santo Domingo**	**127.09**	**43**	PKP	PKPdf	08 14 52.5	-2.5
	comp=Z,6.0nm,0.9s,baz=325,slow=6.4,SNR=5.1						
SAML	**Samuel**	**145.73**	**49**	*e*PKPdf	PKPdf	08 15 25.9	-3.2
LPAZ	**La Paz**	**147.38**	**65**	PKP2	PKPab	08 15 32.6	-1.5
LPAZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LPAZ	**La Paz**	**147.38**	**65**	PKPbc	PKPdf	08 15 32.6	+0.9
	comp=Z,6.4nm,0.7s,baz=356,slow=5.9,SNR=2.8						
PLCA	**Paso Flores**	**152.99**	**114**	PKIKP	PKPdf	08 15 44.7	+5.0
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	**Paso Flores**	**152.99**	**114**	PKPbc	PKPdf	08 15 44.6	+5.0
	comp=Z,1.5nm,0.9s,baz=264,slow=4.6,SNR=4.1						

JMA 12 08:00:24.8±0.4**,34.04N**×**142.63E,h85**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.50**	**295**	*e*S	S	08 01 10.5	+0.5
JHJ2	**Mitsune**	**2.52**	**249**	P	P	08 01 04.6	-0.1
JHJ2				*e*S	S	08 01 33.7	-0.8
JOD2	**Odawara 2**	**3.16**	**294**	*e*S	S	08 01 51.2	+0.8
JRY	**Ryogami san**	**3.64**	**304**	*e*S	S	08 02 03.9	+1.7
JMM	**Marumori**	**4.10**	**339**	P	P	08 01 26.9	+0.4
JMM				*e*S	S	08 02 12.7	-0.8
JMK	**Ichinoseki**	**5.03**	**347**	P	P	08 01 39.5	+0.1
JMK				*e*S	S	08 02 35.0	-1.7

*INMG **12** 08:00:42.1±1.1,36.56N×9.57W,h8^{km}±23^{km},ML2.4,Error ellipse: s-maj=24.3km s-min=3.8km az=50.0*

MDD 12 08:00:40.6±1.7**,36.58N**×**9.57W,mbLg3.0**/9**,1C,Error ellipse: s-maj=14.3km s-min=10.6km az=58.0,PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	**Sao Teotonio**	**1.18**	**35**	*e*P	Pb	08 01 03.5	-0.1
PTEO				*e*S	Sb	08 01 19.4	+0.1
	27nm,0.2s						
PTEO	**Sao Teotonio**	**1.18**	**35**	P	Pb	08 01 03.5	-0.1
PTEO				S	Sb	08 01 19.3	0.0
PALC	**Alcoutim**	**1.90**	**62**	*e*Sn	Sn	08 01 36.4	-3.1
	17nm,0.1s						
PALC	**Alcoutim**	**1.90**	**62**	Sn	Sn	08 01 36.4	-3.1
	8.7nm,0.1s						
PBEJ	**Beja**	**1.98**	**43**	*e*Pn	Pn	08 01 14.2	-1.6
PBEJ				*e*Sn	Sn	08 01 38.7	-3.0
	15nm,0.1s						
PBEJ	**Beja**	**1.98**	**43**	Pn	Pn	08 01 14.4	-1.4
PBEJ				Sn	Sn	08 01 38.7	-3.0
ERIP	**Rio Piedras**	**2.02**	**66**	⇑P	Pn	08 01 14.9	-1.4
	5.0nm,0.1s,SNR=18						
ERIP				S	Sn	08 01 39.1	-3.5
	30nm,0.1s,SNR=7.9						
MOE	**Montemor**	**2.17**	**26**	*e*Sn	Sn	08 01 43.0	-3.5
MOE	**Montemor**	**2.17**	**26**	Sn	Sn	08 01 43.1	-3.4
PLOU	**Loures**	**2.33**	**8**	*e*Pn	Pn	08 01 18.6	-2.1
PLOU				*e*Sn	Sn	08 01 46.9	-3.5
	25nm,0.2s						
PLOU	**Loures**	**2.33**	**8**	Pn	Pn	08 01 18.6	-2.1
PLOU				Sn	Sn	08 01 46.8	-3.6
EMIN	**Mina Concepcio**	**2.60**	**62**	P	Pn	08 01 22.4	-2.2
	0.8nm,0.1s,SNR=15						
EMIN				S	Sn	08 01 53.4	-4.0
	4.2nm,0.1s,SNR=6.9						
EBAD	**Badajoz**	**2.97**	**42**	P	Pn	08 01 27.7	-2.2
	1.9nm,0.1s,SNR=5.6						
EBAD				S	Sn	08 02 03.1	-3.8
	6.8nm,0.1s,SNR=9.2						
ESPR	**Espera**	**3.00**	**83**	P	Pn	08 01 28.2	-2.1
	1.1nm,0.1s,SNR=7.9						
ESPR				S	Sn	08 02 02.3	-5.2
	45nm,0.3s,SNR=8.4						
PCBR	**Castelo Branco**	**3.65**	**26**	*e*Pn	Pn	08 01 37.1	-2.5
PCBR				*e*Sn	Sn	08 02 18.5	-5.5
	3.6nm,0.2s						
PCBR	**Castelo Branco**	**3.65**	**26**	Pn	Pn	08 01 37.1	-2.5
PCBR				Sn	Sn	08 02 18.5	-5.5
	1.8nm,0.2s						
MTE	**Manteigas**	**4.13**	**22**	*e*Sn	Sn	08 02 30.4	-5.8
	7.1nm,0.3s						
MTE	**Manteigas**	**4.13**	**22**	Sn	Sn	08 02 30.6	-5.6
EADA	**Adamuz**	**4.28**	**67**	P	Pn	08 01 45.9	-2.6
	3.4nm,0.2s,SNR=5.8						
EADA				S	Sn	08 02 32.4	-7.6
	4.2nm,0.1s						
PVIS	**Viseu**	**4.33**	**17**	*e*Sn	Sn	08 02 34.7	-6.6
	5.8nm,0.1s						
PVRL	**Vila Real**	**4.91**	**17**	*e*Sn	Sn	08 02 48.4	-7.4
	8.4nm,0.1s						
PVRL	**Vila Real**	**4.91**	**17**	Sn	Sn	08 02 48.5	-7.3
EQES	**Quesada**	**5.33**	**75**	S	Sn	08 02 59.4	-7.1
	2.4nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**5.39**	**53**	P	Pn	08 02 01.0	-3.3
	1.8nm,0.1s,baz=239,slow=13,SNR=8.7						
ESDC				S	Sn	08 03 01.1	-6.9
	2.2nm,0.1s,baz=240,slow=24,SNR=9.5						
ELOB	**Lobios**	**5.41**	**12**	P	Pn	08 02 00.9	-3.6
	0.8nm,0.1s,SNR=7.9						
ELOB				S	Sn	08 02 58.9	-9.5
	1.9nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.66**	**22**	*e*Sn	Sn	08 03 06.4	-8.4
	1.9nm,0.1s						
PBRG	**Braganca**	**5.66**	**22**	Sn	Sn	08 03 06.5	-8.3
ECAL	**Calabor**	**5.79**	**21**	P	Pn	08 02 06.0	-3.8
	18nm,0.6s,SNR=7.9						
ECAL				S	Sn	08 03 10.3	-7.7
	2.9nm,0.2s,SNR=6.9						

*CSEM **12** 08:03:44.8±0.2,28.78N×35.20E,h2^{km},Mw3.6,Error ellipse: s-maj=5.1km s-min=1.8km az=120.0*

*HLW **12** 08:03:45.4,28.76N×35.26E,h3^{km},Mb3.8*

*GII **12** 08:03:46.3±0.5,28.90N×35.18E,h5^{km}±30^{km},mb4.2/5, ML4.0/5,Mw3.6/4*

ISC 12 08:03:44.1±0.8**,28.84N**±0.03×**35.28E**±0.07**,h2**^{km}**,n30,** σ**0ˢ.60**/36**,2C-3D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NUB		**0.58**	**289**	⇑P	**Pg**	**08 03 56.8**	**+1.0**
EIL	**Elat**	**0.88**	**341**	Pg	**Pg**	**08 04 01.8**	**+0.2**
EIL				Sg	**Sg**	**08 04 13.2**	**-0.1**
AQBJ	**Aqaba**	**0.91**	**347**	Pg	**Pg**	**08 04 02.2**	**-0.1**
MBH	**Mount Berech**	**1.00**	**342**	Pg	**Pg**	**08 04 04.0**	**-0.1**
HKAT	**Jabal Katrina**	**1.17**	**255**	⇓P	**Pb**	**08 04 07.0**	**+0.3**
HRFI	**Mount Harif**	**1.21**	**350**	Pg	**Pg**	**08 04 07.9**	**-0.4**
HRFI				Sg	**Sg**	**08 04 24.4**	**-0.1**
KMTI	**Karmit**	**1.35**	**339**	Pg	**Pg**	**08 04 09.8**	**-1.2**
KMTI				Sg	**Sg**	**08 04 27.8**	**-1.3**
TR1		**1.43**	**235**	P	**Pn**	**08 04 10.9**	**-0.2**
TR2		**1.44**	**252**	P	**Pn**	**08 04 11.1**	**-0.2**
PRNI	**Paran**	**1.53**	**351**	Pn	**Pn**	**08 04 12.7**	**+0.2**
HNKL	**Nakhl**	**1.57**	**314**	⇓P	**Pn**	**08 04 13.7**	**+0.5**
HNKL				S	**Sb**	**08 04 34.4**	**+0.6**
ZFRI	**Zfri**	**1.71**	**357**	Pn	**Pn**	**08 04 15.5**	**+0.3**
HRDS	**Abu Rudays**	**1.74**	**266**	P	**Pn**	**08 04 15.4**	**-0.2**
RMNI	**Mount Ramon**	**1.81**	**346**	Pn	**Pn**	**08 04 17.3**	**+0.8**
RMNI	**Mount Ramon**	**1.81**	**346**	Pn	**Pn**	**08 04 17.8**	**+1.2**
ZEIT		**1.81**	**238**	P	**Pn**	**08 04 15.9**	**-0.7**
MASH	**Mash‘abbe Sade**	**2.19**	**349**	Pn	**Pn**	**08 04 22.3**	**+0.3**
KZIT	**Kziot**	**2.20**	**340**	Pn	**Pn**	**08 04 22.6**	**+0.5**
KZIT				Sn	**Sn**	**08 04 50.1**	**-0.2**
HHRG	**Al Ghardaqah**	**2.21**	**224**	⇓P	**Pn**	**08 04 21.2**	**-1.0**
GRB	**Gharib**	**2.26**	**256**	P	**Pn**	**08 04 22.3**	**-0.8**
SUZ		**2.36**	**296**	P	**Pn**	**08 04 24.9**	**+0.5**
ZAF		**2.43**	**281**	⇑P	**Pn**	**08 04 25.4**	**-0.1**
MZDA	**Masada**	**2.46**	**2**	Pn	**Pn**	**08 04 26.4**	**+0.4**
MZDA				Sn	**Sn**	**08 04 55.9**	**-1.1**
YTIR	**Yattir**	**2.52**	**357**	Pn	**Pn**	**08 04 27.3**	**+0.6**
AMAG	**Maghara**	**2.54**	**315**	P	**Pn**	**08 04 27.7**	**+0.6**
MKRJ	**Makawir**	**2.72**	**7**	Pn	**Pn**	**08 04 29.9**	**+0.2**
DRGI	**Dragot**	**2.75**	**2**	Pn	**Pn**	**08 04 29.6**	**-0.4**
GLL	**Jalalah**	**3.21**	**284**	P	**Pn**	**08 04 36.7**	**+0.2**
OFRI	**‘Ofer**	**3.78**	**356**	Pn	**Pn**	**08 04 45.0**	**+0.4**
OFRI	**‘Ofer**	**3.78**	**356**	Pn	**Pn**	**08 04 45.5**	**+0.9**

*BJI **12** 08:10:31.1,48.23N×155.28E,h40^{km},mB4.8,mb4.8, Ms4.2,Msz4.0*

*SKHL **12** 08:10:35.6±1.1,48.08N×154.99E,h70^{km}±38^{km},mb5.4/8, Ms4.2/1*

*MOS **12** 08:10:37.9±0.9,48.35N×154.50E,h52^{km},mb5.2/67,Error ellipse: s-maj=7.9km s-min=4.4km az=97.9*

*NEIC **12** 08:10:38.1±0.7,48.30N×154.41E,h41^{km}±5^{km},mb5.0/88, MS4.4/3,Error ellipse: s-maj=4.2km s-min=2.9km az=154.0*

*IDC **12** 08:10:38.3±4.0,48.32N×154.41E,h42^{km}±36^{km},mb4.5/23, mb1 4.7/25,mb1mx4.7/26,mbtmp4.8/25,ML4.7/2,MS4.0/11, Ms1 4.0/11,ms1mx3.7/25,Error ellipse: s-maj=14.1km s-min=11.7km az=137.0*

*HRVD **12** 08:10:38.1±0.9,48.24N×154.69E,h42^{km}±1^{km},MW4.9/30, Centroid moment Tensor Solution. LP body waves: s14,c20;Mantle waves: s30,c42; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.38±.22; $M_{\theta\theta}$0.94±.14; $M_{\phi\phi}$1.45±.13; $M_{r\theta}$-0.73±.12; $M_{\theta\phi}$0.91±.06; $M_{\phi r}$-0.23±.08; Best double couple: $M_0$2.377×10^{16} NP1:ϕ_s209°,δ38°, λ-104°. NP2:ϕ_s47°,δ53°,λ-79°. Principal axes: T 2.222, Plg8°, Azm129°; N .317, Plg9°, Azm220°; P -2.533, Plg78°, Azm357°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 12 08:10:36.1±0.2**,48.31N**±0.03×**154.47E**±0.04**,h37**^{km}**, h37**^{km}±2.7^{km}**:pP-P,n400,**σ**0ˢ.88**/409**,mb5.0**/129**,MS4.0**/25**, 9C-17D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.60**	**24**	*e*PN	**P**	**08 11 14.2**	**-2.6**
SKR				*e*S	**S**	**08 11 42.4**	**-5.1**
SKR				pmax	pmax		
	comp=N,310nm,0.5s						
SKR				pmax	pmax		
	comp=E,310nm,0.5s						
SKR				pmax	pmax		
	comp=Z,860nm,0.5s						
SKR				smax			
	comp=E,8µm,2.0s						
SKR				smax			
	comp=N,900nm,0.3s						
SKR				smax			
	comp=E,3µm,0.3s						
SKR	**Severo-Kuril's**	**2.60**	**24**	*e*P	**P**	**08 11 14.2**	**-2.6**
SKR				AMB	AMB	08 11 18.5	
	comp=E,310nm,0.5s						
SKR				AMB	AMB	08 11 18.5	
	comp=E,860nm,0.5s						
SKR				*e*S	**S**	**08 11 42.4**	**-5.1**
SKR				A		08 11 50.0	
	comp=E,8µm,2.0s						
SKR				A		08 11 50.0	
	comp=E,2µm,2.0s						
SKR				A		08 11 50.0	
	comp=E,8µm,2.0s						
SKR				A		08 11 50.0	
	comp=E,1µm,2.0s						
SKR				A		08 11 53.5	
	comp=E,900nm,0.4s						
SKR				A		08 11 53.5	
	comp=E,3µm,0.4s						
SKR				A		08 11 53.5	
	comp=E,600nm,0.4s						
PAU	**Pauzhetka**	**3.50**	**25**	*e*P	**P**	**08 11 31.7**	**+2.2**
PAU				*i* S	**S**	**08 12 09.2**	**-1.1**
PET	**Petropavlovsk**	**5.42**	**28**	*e*PN	**P**	**08 11 56.9**	**+0.4**
PET				*e*S	**S**	**08 12 57.0**	**-1.5**
PET				pmax	pmax		
	comp=Z,184nm,1.3s						
PET	**Petropavlovsk**	**5.42**	**28**	*e*P	**P**	**08 11 55.9**	**-0.6**
	comp=Z,218nm,1.0s						
PET	**Petropavlovsk**	**5.42**	**28**	*e*P	**P**	**08 11 56.9**	**+0.4**
PET				AMB	AMB	08 12 04.6	
	comp=Z,180nm,1.3s						
PET				*e*S	**S**	**08 12 57.0**	**-1.5**
PET				A		08 13 13.8	
	comp=Z,830nm,0.6s						
PET				A		08 13 16.1	
	comp=Z,930nm,0.8s						
PET				AMS	AMS	08 14 27.4	
	comp=Z,700nm,21.0s						
KUR	**Kuril'sk**	**5.48**	**238**	⇓*i*PN	**P**	**08 11 58.4**	**+0.9**
KUR	**Kuril'sk**	**5.48**	**238**	*i* P	**P**	**08 11 58.4**	**+0.9**
KUR				AMB	AMB	08 12 15.0	
	comp=Z,380nm,0.8s						
KUR				AMB	AMB	08 12 15.0	
	comp=Z,430nm,0.8s						
KUR				AMB	AMB	08 12 15.0	
	comp=Z,860nm,0.8s						
KUR				*e*S	**S**	**08 13 00.5**	**+0.3**
KUR				A		08 13 09.2	
	comp=Z,910nm,0.8s						
KUR				A		08 13 09.2	
	comp=Z,1µm,0.8s						
KUR				A		08 13 09.6	
	comp=Z,10µm,2.0s						
YUK	**Yuzh-Kuril'sk**	**7.35**	**238**	⇓*i*P	**P**	**08 12 24.5**	**+0.8**
YUK				AMB	AMB	08 12 26.4	
	comp=Z,160nm,0.4s						
YUK				AMB	AMB	08 12 26.4	
	comp=Z,350nm,0.4s						
YUK				AMB	AMB	08 12 26.4	
	comp=Z,640nm,0.4s						
YUK				*i* S	**S**	**08 13 47.5**	**+0.8**
YUK				A		08 14 07.5	
	comp=Z,420nm,0.5s						
YUK				A		08 14 07.5	
	comp=Z,580nm,0.5s						
YUK				A		08 14 07.5	
	comp=Z,2µm,1.0s						
YUK				A		08 14 07.5	
	comp=Z,3µm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.03**	**265**	⇑*i*PN	**P**	**08 12 36.0**	**+2.9**
YSS				pmax	pmax		
	comp=Z,150nm,0.7s						
YSS				pmax	pmax		
	comp=N,90nm,0.5s						
YSS				pmax	pmax		
	comp=E,150nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**8.03**	**265**	*e*P	**P**	**08 12 36.3**	**+3.1**
	comp=Z,94nm,0.6s						
YSS	**Yuzh-Sakhalins**	**8.03**	**265**	*i* P	**P**	**08 12 36.0**	**+2.9**
YSS				AMB	AMB	08 12 37.0	
	comp=Z,90nm,0.7s						
YSS				AMB	AMB	08 12 37.0	
	comp=Z,150nm,0.7s						
YSS				*i* S	**S**	**08 14 01.4**	**-2.3**
YSS				A		08 14 08.2	
	comp=Z,190nm,0.8s						
YSS				AMS	AMS	08 15 33.0	
	comp=Z,500nm,16.0s						
UGL	**Uglegorsk**	**8.24**	**280**	*e*PN	**P**	**08 12 36.8**	**+0.7**
UGL				pmax	pmax		
	comp=E,240nm,0.6s						
UGL				pmax	pmax		
	comp=Z,450nm,1.0s						
UGL				MLR	MLR		
	comp=N,700nm,16.0s						
UGL				MLR	MLR		
	comp=E,600nm,16.0s						
UGL				MLR	MLR		
	comp=Z,1µm,16.0s						
UGL	**Uglegorsk**	**8.24**	**280**	*e*P	**P**	**08 12 36.8**	**+0.7**
UGL				AMB	AMB	08 12 38.0	
	comp=Z,54nm,0.5s						
UGL				AMB	AMB	08 12 38.0	
	comp=Z,450nm,1.0s						
UGL				AMB	AMB	08 12 38.0	
	comp=Z,240nm,0.6s						
UGL				AMB	AMB	08 12 38.0	
	comp=Z,98nm,0.4s						
UGL				*e*S	**S**	**08 14 07.4**	**-1.6**
UGL				A		08 14 13.0	
	comp=Z,77nm,0.5s						
UGL				A		08 14 13.0	
	comp=Z,150nm,0.5s						
UGL				AMS	AMS	08 16 00.0	
	comp=Z,700nm,16.0s						
UGL				AMS	AMS	08 16 00.0	
	comp=Z,600nm,16.0s						
UGL				AMS	AMS	08 16 00.0	
	comp=Z,1µm,16.0s						
OKH	**Okha**	**8.97**	**310**	*e*PN	**P**	**08 12 46.9**	**+0.7**
ASAJ	**Asahikawa**	**9.24**	**247**	PN	**P**	**08 12 53.6**	**+3.7**
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,699nm,21.9s						
ASAJ	**Asahikawa**	**9.24**	**247**	P	**P**	**08 12 53.5**	**+3.7**
	comp=Z,11nm,0.3s,baz=86,slow=12,SNR=46						
ASAJ				LR	LR	08 16 01.2	
	comp=Z,699nm,21.9s,baz=173,slow=35						
MA2	**Magadan**	**11.49**	**351**	*i* PN	**P**	**08 13 21.5**	**+0.9**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s						
MA2				MLR	MLR		
	comp=Z,500nm,17.5s						
MA2	**Magadan**	**11.49**	**351**	*e*P	**P**	**08 13 20.8**	**+0.2**
	comp=Z,36nm,0.8s						
GRNR	**Gornyy**	**11.98**	**289**	*e*P	**P**	**08 13 31.2**	**+4.1**
GRNR				AMB	AMB	08 13 32.6	
	comp=Z,84nm,1.0s						
TEY	**Ternei**	**12.70**	**262**	*e*P	**P**	**08 13 41.0**	**+4.2**
TEY				*e*rx	rx	08 13 45.0	
FX1	**Attu Island--F**	**12.72**	**62**	P	**P**	**08 13 35.5**	**-1.6**
	comp=Z,11nm,0.3s,baz=296,slow=6.9,SNR=10						
FX1				S	**S**	**08 15 44.2**	**-14**
	comp=Z,3.7nm,0.3s,baz=44,slow=20,SNR=3.8						
EKMR	**Ekimchan**	**14.43**	**297**	*e*P	**P**	**08 14 00.5**	**+1.1**
EKMR				AMB	AMB	08 14 08.3	
	comp=Z,22nm,0.6s						
EKMR				AMB	AMB	08 14 08.3	
	comp=Z,15nm,0.6s						
EKMR				AMB	AMB	08 14 08.3	
	comp=Z,96nm,0.6s						
SEY	**Seymchan**	**14.70**	**356**	*e*P	**P**	**08 14 08.5**	**+5.6**
SEY				pmax	pmax		
	comp=N,40nm,1.0s						
SEY				pmax	pmax		
	comp=Z,90nm,1.0s						
KLR	**Kul'dur**	**15.00**	**282**	*e*P	**P**	**08 14 09.5**	**+2.6**
KLR				AMB	AMB	08 14 10.9	
	comp=Z,34nm,1.6s						
KLR				AMS	AMS	08 20 33.0	
	comp=Z,700nm,15.0s						
MAJO	**Matsushiro**	**16.77**	**231**	*e*P	**P**	**08 14 28.0**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,29nm,0.8s						
MAJO	**Matsushiro**	**16.77**	**231**	*e*P	**P**	**08 14 28.0**	**-1.5**
	comp=Z,29nm,0.8s						
MAT	**Matsushiro**	**16.77**	**231**	*e*P	**P**	**08 14 28.0**	**-1.5**
MAT				pmax	pmax		
	comp=Z,19nm,0.8s						
MAT	**Matsushiro**	**16.77**	**231**	*e*P	**P**	**08 14 28.0**	**-1.5**
	comp=Z,19nm,0.8s						
MAT	**Matsushiro**	**16.77**	**231**	P	**P**	**08 14 26.9**	**-2.6**
MAT				*e*S	**S**	**08 17 35.6**	**+2.0**
BMKR	**Bomnak**	**17.13**	**302**	*e*P	**P**	**08 14 34.2**	**+0.2**
BMKR				*e*rx	rx	08 14 36.5	
BMKR				AMB	AMB	08 14 37.3	
	comp=Z,53nm,0.8s						
YASR	**Yasnyy**	**17.42**	**297**	*e*P	**P**	**08 14 36.4**	**-1.2**
YASR				AMB	AMB	08 14 40.6	
	comp=Z,2.0nm,0.7s						
YASR				AMB	AMB	08 14 40.6	
	comp=Z,15nm,0.7s						
YASR				AMB	AMB	08 14 40.6	
	comp=Z,30nm,0.7s						
MDJ	**Mudanjiang**	**17.51**	**267**	P	**P**	**08 14 40.1**	**+1.3**
MDJ				AMB	AMB		
	comp=Z,32nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,187nm,5.8s						
MDJ	**Mudanjiang**	**17.51**	**267**	*e*P	**P**	**08 14 39.1**	**+0.3**
	comp=Z,22nm,0.7s						
ZEA	**Zeya**	**17.90**	**298**	*e*P	**P**	**08 14 43.2**	**-0.4**
ZEA				AMB	AMB	08 14 47.2	
	comp=Z,36nm,1.2s						
KROS	**Kirovskiy**	**18.15**	**300**	*e*P	**P**	**08 14 46.3**	**-0.5**
KROS				AMB	AMB	08 14 48.7	
	comp=Z,20nm,0.8s						
YAK	**Yakutsk**	**19.55**	**324**	*e*P	**P**	**08 15 02.8**	**-0.3**
YAK				*e*S	**S**	**08 18 41.1**	**+4.8**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,25nm,1.0s						
YAK				smax			
	comp=N,8.0nm,1.2s						
YAK				smax			
	comp=E,4.0nm,0.8s						
YAK				smax			
	comp=Z,3.0nm,0.8s						
YAK				MLR	MLR		
	comp=N,84nm,7.0s						
YAK				MLR	MLR		
	comp=Z,81nm,7.0s						
YAK				MLR	MLR		
	comp=E,91nm,8.0s						
YAK	**Yakutsk**	**19.55**	**324**	*e*P	**P**	**08 15 02.7**	**-0.4**
	comp=E,94nm,0.7s						
CLNS	**Chul'man**	**19.76**	**307**	*e*P	**P**	**08 15 08.7**	**+3.2**
CLNS				*e*S	**S**	**08 18 47.3**	**+6.4**
CLNS				pmax	pmax		
	comp=Z,169nm,0.9s						
CLNS				pmax	pmax		
	comp=N,103nm,0.8s						
CLNS				pmax	pmax		
	comp=E,74nm,0.8s						
CLNS				smax			
	comp=N,8.0nm,0.7s						
CLNS				smax			
	comp=E,6.0nm,0.8s						
CLNS				smax			
	comp=Z,4.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,400nm,17.0s						
CLNS				MLR	MLR		
	comp=N,200nm,16.0s						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s						
CN2	**Changchun**	**20.57**	**268**	⇓P	**P**	**08 15 11.9**	**-2.3**
CN2				AMB	AMB		
	comp=Z,90nm,0.8s						
CN2				AMB	AMB		
	comp=Z,220nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS3.9						

CN2				LR	LR		
	comp=E,300nm,15.0s,MS3.9						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS3.7						
BILL	**Bilibino**	**20.66**	**13**⇑	*e*P	**P**	**08 15 12.2**	**-2.7**
BILL				*i* *PP		08 15 28.2	
BILL				*e*S	**S**	**08 19 00.3**	**+1.5**
BILL				*i*		08 19 22.3	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BILL				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.4						
BILL	**Bilibino**	**20.66**	**13**	*e*P	**P**	**08 15 11.8**	**-3.1**
	comp=Z,17nm,0.9s						
KS15	**Wonju Array Si**	**22.20**	**251**	*e*P	**P**	**08 15 31.1**	**+0.6**
HIA	**Hailar**	**22.78**	**286**	*e*P	**P**	**08 15 35.8**	**-0.3**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	**22.78**	**286**	*e*P	**P**	**08 15 35.8**	**-0.4**
	comp=Z,10nm,0.8s,mb4.3						
DL2	**Dalian**	**25.40**	**261**	P	**P**	**08 16 06.1**	**+4.5**
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
BOD	**Bodaibo**	**25.74**	**307**	*e*P	**P**	**08 16 01.6**	**-3.0**
BOD				*e*		08 16 15.8	
BOD				pmax	pmax		
	comp=Z,14nm,3.2s						
BOD				pmax	pmax		
	comp=Z,25nm,2.6s,mb4.3						
TNA	**Tin City**	**26.22**	**35**	*e*P	**P**	**08 16 09.9**	**+1.0**
	comp=Z,24nm,1.0s,mb4.7						
TIXI	**Tiksi**	**26.25**	**342**⇓	*e*P	**P**	**08 16 08.4**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,100nm,13.0s,MS3.5						
BJI	**Beijing**	**28.44**	**267**	P	**P**	**08 16 30.3**	**+0.9**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.4						
BJI				LR	LR		
	comp=N,204nm,14.3s,MS4.0						
BJI				LR	LR		
	comp=E,198nm,12.4s,MS4.0						
BJI				LR	LR		
	comp=Z,146nm,25.5s						
JOW	**Kunigami**	**29.60**	**233**	LR	LR	08 28 02.0	
	comp=Z,151nm,20.5s,MS3.6,baz=86,slow=35						
SSE	**Sheshan**	**30.53**	**248**	P	**P**	**08 16 44.4**	**-3.7**
SSE				S	**S**	**08 21 41.9**	**-4.0**
SSE				XS		08 22 02.3	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
SSE				AMB	AMB		
	comp=Z,80nm,4.9s						
SSE				LR	LR		
	comp=N,43nm,23.7s,MS3.3						
SSE				LR	LR		
	comp=E,60nm,23.5s,MS3.3						
SSE				LR	LR		
	comp=Z,107nm,27.2s,MS3.4						
HHC	**Hu-ho-hao-te**	**31.12**	**272**	*e*P	**P**	**08 16 53.3**	**+0.1**
HHC				AP	pP	08 17 02.7	-0.9
HHC				XP	sP	08 17 07.7	-0.7
HHC				PP	PP	08 17 58.1	+1.8
HHC				PCP	PcP	08 19 47.1	-0.9
HHC				S	**S**	**08 21 57.8**	**+2.7**
HHC				XS		08 22 13.4	
HHC				SCP		08 23 27.7	
HHC				SS	SS	08 23 45.7	+4.2
HHC				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,164nm,9.6s						
HHC				LR	LR		
	comp=N,256nm,14.4s,MS4.1						
HHC				LR	LR		
	comp=E,217nm,16.8s,MS4.1						
HHC				LR	LR		
	comp=Z,215nm,20.4s,MS3.8						
ULN	**Ulaanbaatar**	**31.28**	**287**	*e*P	**P**	**08 16 52.8**	**-1.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**31.28**	**287**	*e*P	**P**	**08 16 52.8**	**-1.7**
	comp=Z,5.6nm,0.8s,mb4.5						
NJ2	**Nanjing**	**31.34**	**252**	*e*P	**P**	**08 16 54.4**	**-0.9**
NJ2				AP	pP	08 17 03.9	-1.7
NJ2				XP	sP	08 17 07.9	-2.5
NJ2				PP	PP	08 17 57.6	-1.7
NJ2				S	**S**	**08 21 59.0**	**+0.3**
NJ2				XS		08 22 21.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
NJ2				LR	LR		
	comp=N,410nm,20.3s,MS4.2						
NJ2				LR	LR		
	comp=E,310nm,22.1s,MS4.2						
NJ2				LR	LR		
	comp=Z,550nm,20.6s,MS4.2						
SONM	**Songino Array**	**31.71**	**288**	P	**P**	**08 16 57.1**	**-1.2**
	comp=Z,4.8nm,0.9s,mb4.3,baz=56,slow=6.3,SNR=35						
SONM				PcP	PcP	08 19 48.2	-1.3
	comp=Z,3.9nm,0.6s,baz=99,slow=1.7,SNR=15						
IMA	**Indian Mountai**	**32.01**	**37**	*e*P	**P**	**08 17 00.5**	**-0.2**
TLY	**Talaya**	**32.31**	**295**	*e*P	**P**	**08 17 02.7**	**-0.8**
TLY				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
TLY				MLR	MLR		
	comp=Z,337nm,18.3s,MS4.1						
TLY	**Talaya**	**32.31**	**295**	*e*P	**P**	**08 17 03.3**	**-0.2**
	comp=Z,12nm,0.9s,mb4.7						
ZAK	**Zakamensk**	**32.88**	**293**	*e*P	**P**	**08 17 08.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
MCK	**McKinley**	**33.87**	**42**	*e*P	**P**	**08 17 16.5**	**-0.4**
MCK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
MCK	**McKinley**	**33.87**	**42**	*e*P	**P**	**08 17 16.5**	**-0.4**
	comp=Z,9.9nm,1.0s,mb4.7						
SML	**Sawmill**	**34.21**	**45**	*e*P	**P**	**08 17 15.9**	**-3.9**
COLA	**College**	**34.34**	**40**	*e*P	**P**	**08 17 20.9**	**-0.1**
ILAR	**Eielson Array**	**34.76**	**40**	P	**P**	**08 17 23.7**	**-0.8**
ILAR				*PP	pP	08 17 37.2	+2.2
ILAR						08 19 54.9	
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ILAR	**Eielson Array**	**34.76**	**40**	P	**P**	**08 17 23.6**	**-0.8**
	comp=Z,3.8nm,0.6s,mb4.5,baz=270,slow=7.1,SNR=15						
ILAR				pP	pP	08 17 37.1	+2.2
	comp=Z,2.0nm,0.6s,baz=270,slow=7.1,SNR=5.2						
ILAR				PcP	PcP	08 19 54.9	-2.9
	comp=Z,0.8nm,0.6s,baz=289,slow=3.5,SNR=4.9						
WHN	**Wuhan**	**35.22**	**255**	*e*P	**P**	**08 17 28.0**	**-0.9**
DIV	**Divide**	**35.50**	**46**	*e*P	**P**	**08 17 30.8**	**0.0**
	comp=Z,23nm,0.7s,mb5.2						
MENT	**Mentasta**	**36.26**	**43**	*e*P	**P**	**08 17 37.6**	**+0.3**
XAN	**Xi'an**	**36.58**	**264**	P	**P**	**08 17 39.2**	**-1.1**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
DAWY	**Dawson**	**38.05**	**41**	*e*P	**P**	**08 17 52.8**	**+0.4**
ENH	**Enshi**	**38.56**	**259**	*e*P	**P**	**08 17 56.3**	**-0.6**
	comp=Z,7.6nm,0.6s,mb4.6						
LZH	**Lanzhou**	**38.77**	**271**	*e*P	**P**	**08 17 59.0**	**+0.4**
LZH				AP	pP	08 18 06.5	-2.6
LZH				XP	sP	08 18 09.5	-4.2
LZH				AMB	AMB		
	comp=Z,42nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,220nm,4.3s						
GTA	**Gaotai**	**39.65**	**278**	*e*P	**P**	**08 18 05.2**	**-0.6**
GTA				AP	pP	08 18 12.6	-3.8
GTA				PCP	PcP	08 20 12.2	-0.7
GTA				AMB	AMB		
	comp=Z,6.0nm,1.9s,mb4.0						
INK	**Inuvik**	**39.84**	**34**	*e*P	**P**	**08 18 07.3**	**+0.2**
INK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
INK	**Inuvik**	**39.84**	**34**	P	**P**	**08 18 07.8**	**+0.7**
	comp=Z,6.6nm,0.6s,mb4.5,baz=286,slow=6.9,SNR=52						
INK	**Inuvik**	**39.84**	**34**	*e*P	**P**	**08 18 07.2**	**+0.1**
	comp=Z,9.5nm,0.8s,mb4.6						
CD2	**Chengdu**	**41.94**	**265**	P	**P**	**08 18 24.8**	**0.0**
CD2				AMB	AMB		
	comp=Z,36nm,1.0s,mb5.0						
ZAL	**Zalesovo**	**42.47**	**305**	P	**P**	**08 18 28.3**	**-0.5**
ZAL						08 20 21.1	
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,211nm,18.3s						
ZAL	**Zalesovo**	**42.47**	**305**	P	**P**	**08 18 28.3**	**-0.6**
	comp=Z,10nm,0.4s,mb4.8,baz=46,slow=6.6,SNR=51						
ZAL				PcP	PcP	08 20 21.1	-0.8
	comp=Z,16nm,1.1s,baz=21,slow=3.1,SNR=18						
ZAL				LR	LR	08 37 57.1	
	comp=Z,211nm,18.3s,MS4.1,baz=45,slow=39						
ZAL	**Zalesovo**	**42.47**	**305**	P	**P**	**08 18 28.3**	**-0.6**
ZAL				PcP	PcP	08 20 21.1	-0.8
ZAL				LR	LR	08 37 57.1	
GYA	**Guiyang**	**42.95**	**257**⇓	*i*P	**P**	**08 18 32.9**	**-0.3**
GYA				S	**S**	**08 24 51.6**	**-3.8**
GYA				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
GYA				AMB	AMB		
	comp=Z,230nm,5.1s						
GYA				LR	LR		
	comp=N,260nm,4.5s						
GYA				LR	LR		
	comp=E,270nm,5.9s						
GYA				LR	LR		
	comp=Z,180nm,5.4s						
NVS	**Novosibirsk**	**42.98**	**307**	*i* P	**P**	**08 18 31.3**	**-1.7**
KMI	**Kunming**	**46.43**	**259**	P	**P**	**08 19 00.8**	**-0.2**
KMI				AP	pP	08 19 10.4	-1.3
KMI				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
KMI				LR	LR		
	comp=Z,56nm,36.1s,MS3.3						
MKAR	**Makanchi Array**	**47.05**	**297**	*i* P	**P**	**08 19 04.1**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	**Kurchatov**	**47.27**	**303**	*i* P	**P**	**08 19 06.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
KURK	**Kurchatov**	**47.27**	**303**	*e*P	**P**	**08 19 06.3**	**-1.0**
	comp=Z,50nm,0.6s,mb5.6						
RES	**Resolute Bay**	**49.06**	**19**	*e*P	**P**	**08 19 20.6**	**-0.3**
RES				pmax	pmax		
	comp=Z,17nm,0.4s,mb5.4						
RES	**Resolute Bay**	**49.06**	**19**	*e*P	**P**	**08 19 20.6**	**-0.3**
	comp=Z,17nm,0.4s,mb5.4						
YKW3	**Yellowknife Ar**	**49.09**	**38**	*e*P	**P**	**08 19 21.2**	**0.0**
YKA	**Yellowknife Ar**	**49.12**	**38**	P	**P**	**08 19 21.6**	**+0.1**
YKA	**Yellowknife Ar**	**49.12**	**38**	P	**P**	**08 19 21.5**	**0.0**
	comp=Z,8.5nm,0.8s,mb4.8,baz=297,slow=7.4,SNR=101						
CHKZ	**Chkalovo**	**50.13**	**310**	P	**P**	**08 19 26.9**	**-2.5**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
BVA0	**Borovoye Array**	**50.58**	**309**	*i* P	**P**	**08 19 31.0**	**-1.8**
LSA	**Lhasa**	**51.11**	**273**	P	**P**	**08 19 39.2**	**+2.1**
LSA	**Lhasa**	**51.11**	**273**	*e*P	**P**	**08 19 38.3**	**+1.2**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
LSA	**Lhasa**	**51.11**	**273**	*e*P	**P**	**08 19 38.3**	**+1.2**
	comp=Z,6.3nm,0.6s,mb4.7						
SHL	**Shillong**	**53.33**	**268**	*e*P	**P**	**08 19 53.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**53.63**	**256**	P	**P**	**08 19 56.3**	**+0.2**
CMAR						08 21 02.0	
CMAR				pmax	pmax		
	comp=Z,11nm,0.7s						
CMAR				MLR	MLR		
	comp=Z,87nm,18.2s						
CMAR	**Chiang Mai Arr**	**53.63**	**256**	P	**P**	**08 19 56.3**	**+0.2**
	comp=Z,11nm,0.7s,mb4.9,baz=33,slow=7.2,SNR=42						
CMAR				PcP	PcP	08 21 01.9	-0.2
	comp=Z,3.4nm,0.7s,baz=3.2,slow=2.5,SNR=5.7						
CMAR				LR	LR	08 44 35.0	
	comp=Z,87nm,18.2s,MS3.9,baz=50,slow=38						
AAK	**Ala-Archa**	**53.97**	**296**	*e*P	**P**	**08 19 56.5**	**-1.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
AAK	**Ala-Archa**	**53.97**	**296**	*e*P	**P**	**08 19 56.5**	**-1.8**
	comp=Z,4.6nm,0.7s,mb4.5						
EDM	**Edmonton**	**54.58**	**48**	*e*P	**P**	**08 20 02.4**	**-0.2**
JIRN	**Jiri**	**55.74**	**274**	*e*P	**P**	**08 20 11.6**	**+0.2**
	comp=Z,30nm,0.5s,mb5.6						
GUN	**Gumba**	**55.78**	**275**	*e*P	**P**	**08 20 11.3**	**-0.4**
	comp=Z,19nm,0.4s,mb5.5						
KKN	**Kakani**	**56.26**	**275**	*e*P	**P**	**08 20 15.7**	**+0.6**
	comp=Z,19nm,0.4s,mb5.5						
PKI	**Pulchoki**	**56.32**	**275**	*e*P	**P**	**08 20 15.5**	**0.0**
	comp=Z,20nm,0.5s,mb5.4						
DMN	**Daman**	**56.49**	**275**	*e*P	**P**	**08 20 17.4**	**+0.6**
	comp=Z,38nm,0.4s,mb5.8						
GKN	**Gorkha**	**56.55**	**276**	*e*P	**P**	**08 20 17.1**	**-0.1**
	comp=Z,38nm,0.5s,mb5.7						
ARCES	**ARCESS Array B**	**56.68**	**341**	P	**P**	**08 20 16.1**	**-1.4**
ARCES						08 21 13.0	
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARCES				MLR	MLR		
	comp=Z,221nm,18.3s						
ARCES	**ARCESS Array B**	**56.68**	**341**	P	**P**	**08 20 16.1**	**-1.4**
	comp=Z,7.8nm,1.1s,mb4.7,slow=2.4,SNR=6.5						
ARCES				PcP	PcP	08 21 13.0	-0.2
	comp=Z,4.8nm,0.9s,baz=63,slow=5.4,SNR=60						
ARCES				LR	LR	08 48 21.3	
	comp=Z,221nm,18.3s,MS4.3,baz=25,slow=40						
ARCES	**ARCESS Array B**	**56.68**	**341**	P	**P**	**08 20 16.1**	**-1.4**
ARCES				PcP	PcP	08 21 13.0	-0.2
ARCES				LR	LR	08 48 21.3	
KOLN	**Koldanda**	**57.39**	**276**	*e*P	**P**	**08 20 23.2**	**0.0**
	comp=Z,32nm,0.6s,mb5.5						
BMO	**Blue Mountains**	**57.45**	**58**	*e*P	**P**	**08 20 22.8**	**-0.5**
	comp=Z,4.8nm,0.8s,mb4.6						
MOD	**Modoc**	**57.53**	**62**	*e*P	**P**	**08 20 23.9**	**-0.1**
	comp=Z,4.5nm,0.7s,mb4.6						
FFC	**Flin Flon**	**58.95**	**41**	P	**P**	**08 20 33.9**	**+0.2**
	comp=Z,109nm,0.9s,mb5.9,SNR=15						
FFC	**Flin Flon**	**58.95**	**41**	*e*P	**P**	**08 20 33.3**	**-0.4**
FFC				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
FFC	**Flin Flon**	**58.95**	**41**	*e*P	**P**	**08 20 33.3**	**-0.4**
	comp=Z,22nm,1.1s,mb5.1						
SUMG	**Summit**	**59.07**	**5**	*e*P	**P**	**08 20 34.3**	**-0.1**
	comp=Z,18nm,0.6s,mb5.3						
FCC	**Fort Churchill**	**59.45**	**34**	*e*P	**P**	**08 20 36.2**	**-0.9**
FCC				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
FCC	**Fort Churchill**	**59.45**	**34**	*e*P	**P**	**08 20 36.2**	**-0.9**
	comp=Z,17nm,0.7s,mb5.2						
MCMT	**McKenzie Canyo**	**59.94**	**55**	*e*P	**P**	**08 20 40.0**	**-0.6**
BOZ	**Bozeman (W)**	**60.08**	**54**	*e*P	**P**	**08 20 41.7**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BOZ	**Bozeman (W)**	**60.08**	**54**	*e*P	**P**	**08 20 41.7**	**+0.1**
	comp=Z,9.5nm,0.9s,mb4.8						
JOF	**Joensuu**	**60.34**	**334**	*e*p	**P**	**08 20 40.1**	**-3.0**
	comp=Z,1.9nm,0.3s,mb4.6						
QLMT	**Earthquake Lak**	**60.72**	**54**	*e*P	**P**	**08 20 46.4**	**+0.5**
NVAR	**Mina Array Bea**	**60.91**	**64**	P	**P**	**08 20 47.3**	**0.0**
	comp=Z,5.9nm,0.8s,mb4.8,baz=308,slow=6.1,SNR=43						
NVAR				PcP	PcP	08 21 30.2	-0.1
	comp=Z,2.2nm,0.7s,baz=302,slow=3.4,SNR=4.7						
MNV	**Mina**	**61.00**	**64**	*e*P	**P**	**08 20 47.8**	**-0.1**
MNV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
MNV	**Mina**	**61.00**	**64**	*e*P	**P**	**08 20 47.8**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.4						
ELK	**Elko**	**61.22**	**60**	*e*P	**P**	**08 20 49.7**	**+0.3**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ELK	**Elko**	**61.22**	**60**	*e*P	**P**	**08 20 49.7**	**+0.3**
	comp=Z,2.3nm,0.7s,mb4.4						
LKWY	**Lake**	**61.45**	**54**	*e*P	**P**	**08 20 52.8**	**+1.9**
LKWY				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
LKWY	**Lake**	**61.45**	**54**	*e*P	**P**	**08 20 52.8**	**+1.9**
	comp=Z,10nm,1.0s,mb4.9						
RRI2	**Red Ridge**	**61.74**	**56**	*e*P	**P**	**08 20 53.9**	**+1.0**
TPH	**Tonopah**	**61.78**	**64**	*e*P	**P**	**08 20 52.8**	**-0.4**
TPH				*e*	pP	08 21 05.3	+1.1
TPH				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
TPH	**Tonopah**	**61.78**	**64**	*e*P	**P**	**08 20 52.8**	**-0.5**
	comp=Z,4.1nm,0.7s,mb4.7						
TPH				*e*	pP	08 21 05.3	+1.1
TPAW	**Teton Pass**	**61.85**	**55**	*e*P	**P**	**08 20 54.5**	**+0.9**
SNOW	**Snow King Moun**	**61.97**	**55**	*e*P	**P**	**08 20 55.9**	**+1.4**
SNOW				*e*	pP	08 21 07.2	+1.8
BLSP	**Bilaspur**	**62.18**	**273**	*e*P	**P**	**08 20 54.3**	**-1.8**
BLSP				*e*		08 20 55.9	
	comp=Z,26nm,1.3s						
KAF	**Kangasniemi**	**62.41**	**335**	*e*p	**P**	**08 20 51.7**	**-5.4**
DUG	**Dugway**	**62.98**	**59**	*e*P	**P**	**08 21 00.9**	**-0.3**
DUG				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.1						
DUG	**Dugway**	**62.98**	**59**	*e*P	**P**	**08 21 00.9**	**-0.3**
	comp=Z,18nm,1.2s,mb5.1						
FINES	**FINESS Array B**	**63.02**	**335**	P	**P**	**08 21 00.2**	**-0.9**
FINES						08 21 36.3	
FINES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
FINES	**FINESS Array B**	**63.02**	**335**	P	**P**	**08 21 00.2**	**-1.0**
	comp=Z,3.8nm,0.4s,mb4.9,baz=39,slow=7.5,SNR=48						
FINES				PcP	PcP	08 21 36.2	-2.3
	comp=Z,2.3nm,0.5s,baz=61,slow=5.5,SNR=5.0						
PDAR	**Pinedale Array**	**63.09**	**55**	P	**P**	**08 21 01.9**	**-0.1**
	comp=Z,6.6nm,0.8s,mb4.8,baz=304,slow=2.0,SNR=47						
PDAR				pP	pP	08 21 13.7	+0.7
	comp=Z,7.0nm,0.9s,slow=3.0,SNR=11						
FRB	**Frobisher Bay**	**63.27**	**20**	LR	LR	08 54 39.3	
	comp=Z,238nm,18.2s,MS4.4,baz=122,slow=42						
NLU	**North Lily Min**	**63.56**	**59**	*e*P	**P**	**08 21 04.9**	**0.0**
NLU				*e*	pP	08 21 16.9	+0.9
KAKA	**Kakadu**	**63.83**	**204**	*e*P	**P**	**08 21 05.4**	**-1.7**
	comp=Z,6.9nm,0.6s,mb4.9						
ARUT	**Antelope Range**	**64.22**	**62**	*e*P	**P**	**08 21 09.4**	**+0.2**
MSU	**Marysvale**	**64.47**	**60**	*e*P	**P**	**08 21 11.1**	**+0.3**
TMUT	**Trail Mountain**	**64.50**	**59**	*e*P	**P**	**08 21 11.3**	**+0.3**
OBN	**Obninsk**	**64.54**	**326**⇓	*e*P	**P**	**08 21 10.3**	**-0.7**
OBN				*e*		08 21 43.6	
OBN				*e*S	**S**	**08 29 40.6**	**-5.5**
OBN				*e*SS	SS	08 33 52.9	-5.6
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
BHPL	**Bhopal**	**64.55**	**277**	*e*P	**P**	**08 21 09.2**	**-2.4**
BHPL				*e*		08 25 22.5	
ULM	**Lac du Bonnet**	**64.74**	**42**	P	**P**	**08 21 11.6**	**-0.8**
	comp=Z,13nm,1.1s,mb4.9,baz=307,slow=6.2,SNR=19						
SRU	**San Rafael**	**65.01**	**59**	*e*P	**P**	**08 21 14.5**	**+0.1**
PV10	**Paradox Valley**	**66.36**	**58**	*e*P	**P**	**08 21 23.0**	**0.0**
PV01	**Paradox Valley**	**66.79**	**58**	*e*P	**P**	**08 21 24.9**	**-0.8**
NB2	**NORSAR Subarra**	**67.04**	**342**	P	**P**	**08 21 26.1**	**-0.8**
	comp=Z,6.2nm,0.6s,mb4.8,baz=25,slow=6.2						
NB2	**NORSAR Subarra**	**67.04**	**342**	P	**P**	**08 21 26.1**	**-0.8**
NB2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
NOA	**NORSAR Array B**	**67.04**	**342**	P	**P**	**08 21 26.4**	**-0.5**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NOA				MLR	MLR		
	comp=Z,87nm,18.5s						
NOA	**NORSAR Array B**	**67.04**	**342**	P	**P**	**08 21 26.4**	**-0.5**
	comp=Z,6.0nm,0.5s,mb4.8,baz=25,slow=6.3,SNR=29						
NOA				LR	LR	08 55 30.2	
	comp=Z,87nm,18.5s,MS4.0,baz=20,slow=40						
ISCO	**Idaho Springs**	**67.29**	**55**	*e*P	**P**	**08 21 29.3**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ISCO	**Idaho Springs**	**67.29**	**55**	*e*P	**P**	**08 21 29.3**	**+0.5**
	comp=Z,6.3nm,1.0s,mb4.6						
HYB	**Hyderabad**	**67.88**	**272**	*i* P	**P**	**08 21 32.0**	**-0.8**
CTA	**Charters Tower**	**68.48**	**188**	P	**P**	**08 21 35.5**	**-1.1**
	comp=Z,4.4nm,0.7s,mb4.6,baz=8.1,slow=10.0,SNR=14						
CTA				LR	LR	08 50 25.8	
	comp=Z,59nm,18.2s,MS3.9,baz=229,slow=35						
POO	**Poona**	**70.22**	**276**⇓	*i*P	**P**	**08 21 47.0**	**-0.2**
	comp=Z,100nm,1.0s,mb5.7						
POO				*e*		08 26 37.0	
ANMO	**Albuquerque**	**70.24**	**60**	LR	LR	08 49 15.1	
	comp=Z,236nm,18.3s,MS4.5,slow=33						
WRAB	**Tennant Creek**	**70.28**	**200**	*e*P	**P**	**08 21 46.6**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
WRAB	**Tennant Creek**	**70.28**	**200**	*e*P	**P**	**08 21 46.6**	**-1.0**
	comp=Z,43nm,0.9s,mb5.4						
WB2	**Warramunga Arr**	**70.29**	**200**⇓	*i*P	**P**	**08 21 46.6**	**-1.1**
WRA	**Warramunga Arr**	**70.29**	**200**	P	**P**	**08 21 46.7**	**-1.0**
WRA				pmax	pmax		
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**70.29**	**200**	P	**P**	**08 21 46.7**	**-1.0**
	comp=Z,15nm,0.7s,mb5.0,baz=16,slow=6.3,SNR=98						
KIV	**Kislovodsk**	**70.36**	**315**	*e*P	**P**	**08 21 47.4**	**-0.3**
KIV				*e*		08 24 23.2	
KIV				*i* SS	SS	08 35 25.2	-3.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
AKASG	**Malin Array Be**	**70.75**	**327**	P	**P**	**08 21 47.9**	**-2.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**70.75**	**327**	P	**P**	**08 21 47.9**	**-2.0**
	comp=Z,1.5nm,0.4s,mb4.3,baz=32,slow=6.1,SNR=16						
KAD	**Karad**	**70.87**	**275**	*e*P	**P**	**08 21 51.9**	**+0.7**
	comp=Z,52nm,0.6s,mb5.6						
FITZ	**Fitzroy Crossi**	**70.96**	**209**⇓	*i*P	**P**	**08 21 51.4**	**-0.3**
	comp=Z,19nm,0.9s,mb5.0						
SCHQ	**Schefferville**	**71.51**	**24**	P	**P**	**08 21 54.4**	**0.0**
	comp=Z,19nm,0.5s,mb5.2,baz=346,slow=5.8,SNR=155						
SCHQ	**Schefferville**	**71.51**	**24**	*e*P	**P**	**08 21 54.0**	**-0.4**
	comp=Z,21nm,0.6s,mb5.2						
SOC	**Sochi**	**72.04**	**316**	*e*P	**P**	**08 21 55.4**	**-2.3**
SOC				*e*		08 22 23.5	
SOC				*e*		08 24 39.2	
SOC				*e*PPP	PPP	08 26 19.7	-2.1
SOC				*e*S	S	08 31 10.8	-4.8
SOC				*e*		08 32 02.3	
SOC				*e*SS	SS	08 35 51.4	-3.3
SOC				*e*SSS	SSS	08 39 09.6	+5.8
SOC				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.3						
SOC				pmax	pmax		
	comp=N,54nm,1.0s						
SOC				pmax	pmax		
	comp=E,34nm,1.1s						
SOC				MLR	MLR		
	comp=N,132nm,19.0s,MS4.5						
SOC				MLR	MLR		
	comp=E,193nm,19.0s,MS4.5						
SOC				MLR	MLR		
	comp=Z,211nm,19.0s,MS4.4						
GNI	**Garni**	**72.21**	**311**	*i* P	**P**	**08 21 58.1**	**-0.7**
GNI				MLR	MLR		
	comp=Z,100nm,16.0s						
BSEG	**Bad Segeberg**	**73.71**	**339**	*e*P	**P**	**08 22 07.8**	**+0.5**
KIS	**Kishinev**	**73.95**	**325**	*e*P	**P**	**08 22 11.0**	**+2.1**
KIS				*e*	pP	08 22 24.0	+4.0
KIS				*e*		08 22 35.0	
ASAR	**Alice Springs**	**73.98**	**200**	P	**P**	**08 22 09.6**	**0.0**
	comp=Z,7.0nm,0.7s,mb4.7,baz=14,slow=5.4,SNR=104						
ASAR				LR	LR	08 51 09.2	
	comp=Z,44nm,20.2s,MS3.7,baz=151,slow=33						
ASPA	**Alice Springs**	**73.99**	**200**⇓	*i*P	**P**	**08 22 09.5**	**-0.1**
OJC	**Ojcow**	**74.39**	**332**	*e*P	**P**	**08 22 11.2**	**-0.1**
KOLS	**Kolonicke sedl**	**74.69**	**330**	*e*P	**P**	**08 22 11.9**	**-1.2**
KOLS				*e*	pP	08 22 21.0	-3.3
KSP	**Ksiaz**	**74.91**	**334**	*e*P	**P**	**08 22 13.9**	**-0.4**
KSP				*e**PP	pP	08 22 26.8	+1.3
KSP	**Ksiaz**	**74.91**	**334**	*e*P	**P**	**08 22 14.3**	**0.0**
NIE	**Niedzica**	**74.92**	**331**	*e*P	**P**	**08 22 14.0**	**-0.4**
CRVS	**Cervenica-Dubn**	**74.99**	**330**	*e*P	**P**	**08 22 16.7**	**+1.9**
CRVS				*e*	pP	08 22 25.7	-0.3
ESK	**Eskdalemuir**	**75.05**	**347**	*e*P	**P**	**08 22 14.2**	**-0.9**
ESK				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
ESK	**Eskdalemuir**	**75.05**	**347**	*e*P	**P**	**08 22 14.2**	**-0.9**
	comp=Z,22nm,0.8s,mb5.1						
OKC	**Ostrava-Krasne**	**75.24**	**332**	*e*P	**P**	**08 22 16.8**	**+0.6**
UPC	**Upice**	**75.29**	**334**	*e*P	**P**	**08 22 16.3**	**-0.2**
DPC	**Dobruska-Polom**	**75.34**	**334**	*e*P	**P**	**08 22 17.2**	**+0.4**
CLL	**Collm**	**75.42**	**336**	*i* P	**P**	**08 22 16.8**	**-0.4**
CLL				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
CLL	**Collm**	**75.42**	**336**	*i* P	**P**	**08 22 16.8**	**-0.4**
	comp=Z,22nm,0.8s,mb5.1						
CLL				*e*		08 22 47.0	
CLL	**Collm**	**75.42**	**336**	P	**P**	**08 22 16.8**	**-0.4**
	comp=Z,logA/T=1.4,mb5.1						
CLL				*e*		08 22 47.0	
MORC	**Moravsky Berou**	**75.48**	**333**	*e*P	**P**	**08 22 17.4**	**-0.2**
MORC				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
MORC	**Moravsky Berou**	**75.48**	**333**	*e*P	**P**	**08 22 17.4**	**-0.2**

	comp=Z,19nm,1.0s,mb5.0						
BRG	Berggiesshubel	75.55	335	*i* P	P	08 22 17.9	-0.1
BRG				*e*	pP	08 22 31.2	+2.0
BRG				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
BRG	Berggiesshubel	75.55	335	*i* P	P	08 22 17.9	-0.1
	comp=Z,11nm,1.1s,mb4.7						
BRG				*e*	pP	08 22 31.2	+2.0
CLZ	Clausthal	75.61	338	*e*P	P	08 22 19.1	+0.8
	comp=Z,17nm,1.1s,mb4.9						
PVCC	Panska Ves	75.68	335	*e*P	P	08 22 18.9	+0.1
TXAR	Lajitas Array	75.93	62	P	P	08 22 20.8	+0.1
	comp=Z,5.7nm,0.7s,mb4.6,baz=299,slow=4.9,SNR=66						
BOYT	Boyabat	75.94	318	*i* P	P	08 22 21.6	+1.2
PRU	Pruhonice	76.18	335	*e*P	P	08 22 21.4	-0.2
VYHS	Vyhne	76.20	331	*i* P	P	08 22 22.0	+0.2
BANOM	Banah	76.21	293	P	P	08 22 22.3	0.0
	SNR=6.7						
ELZG	Elazig	76.34	313	*i* P	P	08 22 20.3	-2.4
MOX	Moxa	76.39	337	*e*P	P	08 22 22.8	0.0
MOX				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
MOX	Moxa	76.39	337	*e*P	P	08 22 22.8	0.0
	comp=Z,16nm,1.1s,mb4.9						
MOX	Moxa	76.39	337	*i* P	P	08 22 22.8	0.0
	comp=Z,logA/T=1.2,mb4.9						
BALT	Daday	76.52	319	*i* P	P	08 22 24.4	+0.7
NKC	Novy Kostel	76.54	336	*e*P	P	08 22 23.7	+0.1
CTKT	Corum	76.63	317	*i* P	P	08 22 25.4	+1.0
SMOL	Smolenice	76.63	332	*e*P	P	08 22 25.1	+0.9
SMOL				*e*		08 22 30.1	
MALT	Malatya	76.75	313	*e*P	P	08 22 26.2	+1.1
MALT				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
MALT	Malatya	76.75	313	*e*P	P	08 22 26.2	+1.1
	comp=Z,12nm,0.8s,mb4.9						
WBK	Wadi Bani Khal	76.97	289	P	P	08 22 27.7	+1.0
	SNR=7.6						
SRO	Srobarova	76.97	331	*e*P	P	08 22 26.8	+0.7
SRO				*e*		08 22 31.9	
ZST	Bratislava	77.01	332	*e*P	P	08 22 26.5	+0.1
SMDO	Samad	77.22	290	P	P	08 22 28.5	+0.4
	SNR=7.6						
KHC	Kasperske Hory	77.22	335	*e*P	P	08 22 28.0	+0.5
ASHO	Ashiyiah	77.27	293	P	P	08 22 28.2	-0.1
	SNR=5.8						
HOQ	Hoqain	77.30	291	P	P	08 22 28.5	+0.1
	SNR=9.2						
JCT	Junction City	77.32	58	*e*P	P	08 22 27.8	-0.7
JCT				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
JCT	Junction City	77.32	58	*e*P	P	08 22 27.8	-0.7
	comp=Z,12nm,1.2s,mb4.7						
ELDT	Eldivan	77.35	318	*i* P	P	08 22 29.4	+1.0
GRA1	Grafenberg Arr	77.36	337	*e*P	P	08 22 29.1	+0.8
	comp=Z,14nm,0.8s,mb4.9						
GRF	Grafenberg Arr	77.36	337	*e*P	P	08 22 29.1	+0.8
GRF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
GRF	Grafenberg Arr	77.36	337	*e*P	P	08 22 29.1	+0.8
GRF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
GRF	Grafenberg Arr	77.36	337	*e*P	P	08 22 29.1	+0.8
	comp=Z,14nm,0.8s,mb4.9						
WET	Wettzell	77.41	335	*e*P	P	08 22 29.3	+0.7
WET				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
WET	Wettzell	77.41	335	*e*P	P	08 22 29.3	+0.7
	comp=Z,10.0nm,0.8s,mb4.8						
GEC2	GERESS Array S	77.44	335	*e*P	P	08 22 29.0	+0.2
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
GEC2	GERESS Array S	77.44	335	*e*P	P	08 22 29.0	+0.2
	comp=Z,7.0nm,0.7s,mb4.7						
GERES	GERESS Array B	77.44	335	P	P	08 22 29.0	+0.2
GERES				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GERES	GERESS Array B	77.44	335	P	P	08 22 29.0	+0.2
	comp=Z,6.8nm,0.6s,mb4.8,baz=34,slow=5.2,SNR=35						
TNS	Taunus Mts	77.58	338	*e*P	P	08 22 29.9	+0.4
TNS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
TNS	Taunus Mts	77.58	338	*e*P	P	08 22 29.9	+0.4
	comp=Z,8.0nm,0.8s,mb4.7						
MIAR	Mount Ida	77.63	52	*e*P	P	08 22 29.7	-0.4
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
MIAR	Mount Ida	77.63	52	*e*P	P	08 22 29.7	-0.4
	comp=Z,4.7nm,0.7s,mb4.5						
HGN	Heimansgroeve	77.67	340	*e*P	P	08 22 27.9	-2.1
	comp=Z,39nm,2.4s,mb4.9						
JMDO	Jabal Madar	77.69	290	P	P	08 22 30.9	+0.3
	SNR=21						
BRTR	Keskin Array B	77.87	317	P	P	08 22 31.7	+0.4
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BRTR	Keskin Array B	77.87	317	P	P	08 22 31.6	+0.3
	comp=Z,8.5nm,0.7s,mb4.8,baz=63,slow=2.8,SNR=39						
SGKT	Sivrigoynuk	77.89	319	*i* P	P	08 22 32.2	+0.8
GZT	Gaziantep	77.93	313	*i* P	P	08 22 32.1	+0.5
ARQ	Araqi	77.97	291	P	P	08 22 32.5	+0.4
	SNR=15						
BSY	Bisya	77.98	291	P	P	08 22 32.3	+0.1
	SNR=29						
KAHT	Ahir Dag	78.04	314	*i* P	P	08 22 33.4	+1.1
TOD	Tromm	78.06	338	*e*P	P	08 22 32.2	+0.1
AVNT	Avonos	78.08	316	*i* P	P	08 22 32.6	+0.1
ABH	Alteburg	78.12	339	*e*P	P	08 22 32.7	+0.3
MOA	Molln	78.18	334	⇑*i*P	P	08 22 33.2	+0.4
	comp=Z,10nm,0.8s,mb4.8						
ARSA	Arzberg	78.34	333	⇑*i*P	P	08 22 34.3	+0.6
	comp=Z,18nm,1.3s,mb4.8						
GIVF	Givet	78.54	341	*e*P	P	08 22 34.5	-0.2
BAIF	Baives	78.72	341	*e*P	P	08 22 35.6	-0.1
KBA	Koelnbreinsper	79.14	334	⇑*i*P	P	08 22 39.2	+1.1
	comp=Z,49nm,0.7s,mb5.5						
KBA	Koelnbreinsper	79.14	334	⇑*i*P	P	08 22 39.2	+1.1
KBA				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.5						
BFO	Black Forest	79.36	338	*e*P	P	08 22 39.6	+0.3
BFO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BFO	Black Forest	79.36	338	*e*P	P	08 22 39.6	+0.3
	comp=Z,10.0nm,0.9s,mb4.8						
WATA	Walderalm	79.42	335	⇓*i*P	P	08 22 40.1	+0.5
	comp=Z,26nm,1.1s,mb5.1						
WATA	Walderalm	79.42	335	⇓*i*P	P	08 22 40.1	+0.5
WATA				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
WTTA	Wattenberg	79.46	335	⇑*i*P	P	08 22 40.8	+0.9
	comp=Z,40nm,0.7s,mb5.5						
WTTA	Wattenberg	79.46	335	⇑*i*P	P	08 22 40.8	+0.9
WTTA				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.5						
WLS	Welschbruch	79.53	338	*e*P	P	08 22 40.3	+0.1
MOTA	Moosalm	79.54	336	⇓*i*P	P	08 22 40.7	+0.5
	comp=Z,16nm,1.0s,mb4.9						
MOTA	Moosalm	79.54	336	⇓*i*P	P	08 22 40.7	+0.5
MOTA				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
CDF	Champ du Feu	79.55	338	*e*P	P	08 22 40.2	-0.1
	comp=Z,58nm,1.1s,mb5.1						
CDF	Champ du Feu	79.55	338	*e*P	P	08 22 40.2	-0.1
CDF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
SQTA	Sankt Quirin	79.62	336	⇓*i*P	P	08 22 41.3	+0.6
	comp=Z,29nm,1.1s,mb5.1						
SQTA	Sankt Quirin	79.62	336	⇓*i*P	P	08 22 41.3	+0.6
SQTA				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
DIVS	Divcibare	79.67	328	⇑*i*P	P	08 22 40.2	-0.8
LIBD	Limburg	79.71	338	*e*P	P	08 22 41.0	-0.2
PTCC	Patocco-Chiusa	79.75	334	*e*P	P	08 22 40.6	-0.8
ECH	Echery	79.76	338	*e*P	P	08 22 40.5	-0.9
VISS	Visnje	79.85	333	*e*P	P	08 22 41.2	-0.7
FELD	Feldberg	79.87	338	*e*P	P	08 22 41.1	-0.9
DAVA	Damuels	79.92	336	⇓*i*P	P	08 22 42.7	+0.4
	comp=Z,19nm,0.8s,mb5.1						
BOJS	Bojanci	79.99	332	*e*P	P	08 22 42.3	-0.4
MEZF	Maizieres J'vi	79.99	340	*e*P	P	08 22 42.8	+0.1
	comp=Z,89nm,1.0s,mb5.3						
JAVS	Javornik	80.00	333	*e*P	P	08 22 41.9	-0.9
THEF	They Montfort	80.03	339	*e*P	P	08 22 42.7	-0.2
MOF	Molkenrain	80.11	338	*e*P	P	08 22 43.4	+0.1
HAU	Haudompre	80.15	339	*e*P	P	08 22 43.3	-0.2
	comp=Z,47nm,1.0s,mb5.1						
HAU				*e*R			
	comp=Z,155nm,21.5s						
HAU	Haudompre	80.15	339	*e*P	P	08 22 43.3	-0.2
HAU				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
HAU				MLR	MLR		
	comp=Z,160nm,21.5s,MS4.3						
HINF	Hinteralfeld	80.21	339	*e*P	P	08 22 43.4	-0.4
	comp=Z,26nm,1.0s,mb4.8						
HINF	Hinteralfeld	80.21	339	*e*P	P	08 22 43.4	-0.4
HINF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
BRMO	Bormio	80.53	336	*e*P	P	08 22 46.4	+0.8
STKA	Stephens Creek	80.66	191	*e*P	P	08 22 46.0	-0.6
	comp=Z,3.6nm,0.9s,mb4.3						
STKA	Stephens Creek	80.66	191	P	P	08 22 46.1	-0.5
	comp=Z,3.9nm,0.7s,mb4.5,baz=355,slow=5.0,SNR=8.9						
STKA				LR	LR	08 56 10.4	
	comp=Z,60nm,20.5s,MS3.9,baz=26,slow=34						
FLN	La Foliniere	80.91	344	*e*P	P	08 22 47.2	-0.3
	comp=Z,48nm,0.9s,mb5.1						
FLN				*e*R			
	comp=Z,147nm,19.8s						
FLN	La Foliniere	80.91	344	*e*P	P	08 22 47.2	-0.3
FLN				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
FLN				MLR	MLR		
	comp=Z,150nm,19.8s,MS4.3						
LDF	La Druitiere	81.00	343	*e*P	P	08 22 47.7	-0.3
	comp=Z,40nm,0.9s,mb5.0						
LDF	La Druitiere	81.00	343	*e*P	P	08 22 47.7	-0.3
LDF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
GRR	Gorron	81.33	344	*e*P	P	08 22 49.9	+0.1
	comp=Z,106nm,1.1s,mb5.4						
GRR	Gorron	81.33	344	*e*P	P	08 22 49.9	+0.1
GRR				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
CABF	La Chapelle	81.52	339	*e*P	P	08 22 51.1	+0.3
MCGN	Macugnaga	81.65	337	*e*P	P	08 22 52.4	+1.0
HYF	Humbligny	81.69	341	*e*P	P	08 22 52.1	+0.4
SSF	Saint Saulge	81.70	340	*e*P	P	08 22 51.7	0.0
SSF				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
SSF	Saint Saulge	81.70	340	*e*P	P	08 22 51.7	0.0
	comp=Z,20nm,0.8s,mb5.1						
SGMF	Saint Gilles	81.77	345	*e*P	P	08 22 52.2	+0.2
	comp=Z,71nm,0.9s,mb5.3						
SGMF	Saint Gilles	81.77	345	*e*P	P	08 22 52.2	+0.2
SGMF				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
ROSF	Rostrenen	81.82	345	*e*P	P	08 22 52.6	+0.3
	comp=Z,242nm,1.3s,mb5.7						
ROSF	Rostrenen	81.82	345	*e*P	P	08 22 52.6	+0.3
ROSF				pmax	pmax		
	comp=Z,121nm,1.3s,mb5.7						
CSS	Prodhromos	81.88	315	*e*P	P	08 22 53.0	+0.1
	comp=Z,45nm,0.7s,mb5.5						
ORX	Oropa	81.95	337	P	P	08 22 52.8	-0.2
AVF	Avril sur Loir	81.99	340	*e*P	P	08 22 53.3	+0.1
	comp=Z,61nm,0.8s,mb5.3						
AVF	Avril sur Loir	81.99	340	*e*P	P	08 22 53.3	+0.1
AVF				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
SMF	Signal de Mont	82.02	340	*e*P	P	08 22 53.5	+0.2
TRAV		82.13	337	P	P	08 22 53.9	-0.1
FORT	Forrest	82.21	203	*e*P	P	08 22 54.9	+0.2
	comp=Z,834nm,0.6s						
BGF	Bois d'Agland	82.32	341	*e*P	P	08 22 55.1	+0.2
	comp=Z,33nm,0.6s,mb5.1						
BGF	Bois d'Agland	82.32	341	*e*P	P	08 22 55.1	+0.2
BGF				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
LSD	Ceresole Reale	82.33	337	P	P	08 22 56.1	+1.1
LPL	La Plagne	82.38	338	*e*P	P	08 22 56.4	+1.2
	comp=Z,75nm,0.8s,mb5.3						
LPL	La Plagne	82.38	338	*e*P	P	08 22 56.4	+1.2
LPL				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.4						
ASF	Jabal al Asfar	82.39	311	P	P	08 22 56.4	+0.8
	comp=Z,26nm,1.0s,mb5.1,baz=350,slow=1.0,SNR=16						
LPG	La Plagne	82.40	338	*e*P	P	08 22 56.6	+1.3
	comp=Z,85nm,0.9s,mb5.4						
LPG	La Plagne	82.40	338	*e*P	P	08 22 56.6	+1.3
LPG				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.4						
GRAM		82.44	335	P	P	08 22 55.8	+0.2
SFI	Santa Sofia	82.47	334	*e*P	P	08 22 57.0	+1.3
ARV	Arcevia	82.51	333	*e*P	P	08 22 56.3	+0.4
VALM		82.52	335	P	P	08 22 56.7	+0.7
PGD	Poggio Sodo	82.53	334	*e*P	P	08 22 57.7	+1.7
RSP	Reno Superiore	82.59	337	P	P	08 22 55.9	-0.4
CODM		82.60	335	P	P	08 22 56.8	+0.4
SARO	Sassorosso	82.63	335	P	P	08 22 57.1	+0.5
BDI	Bagni Di Lucca	82.69	335	*e*P	P	08 22 58.0	+1.2
PLDF	La Plantade	82.71	340	*e*P	P	08 22 57.9	+1.0
TCF	Toulx Ste Croi	82.72	341	*e*P	P	08 22 57.4	+0.5
	comp=Z,61nm,0.9s,mb5.3						
TCF	Toulx Ste Croi	82.72	341	*e*P	P	08 22 57.4	+0.5
TCF				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
SNTG	Esanatoglia	82.73	333	*e*P	P	08 22 57.5	+0.5
AGO	Saint Agoulin	82.74	340	*e*P	P	08 22 58.4	+1.4
VINC	Vinca	82.74	335	P	P	08 22 57.8	+0.7
FENE	Fenestrelle	82.75	337	P	P	08 22 57.9	+0.7
PCP	Pian Castagno	82.82	336	P	P	08 22 57.3	-0.2
BHB	Bricherasio	82.88	337	P	P	08 22 57.0	-0.8
MFF	Saint Martin d	82.91	343	*e*P	P	08 22 58.3	+0.4
	comp=Z,41nm,0.8s,mb5.2						
MFF	Saint Martin d	82.91	343	*e*P	P	08 22 58.3	+0.4
MFF				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
RRL	Cesana Torines	82.93	337	P	P	08 22 58.9	+0.9
PYM	Petit Puy Mans	83.05	340	*e*P	P	08 22 59.0	+0.4
NRCA	Norcia	83.06	332	*e*P	P	08 22 59.5	+0.7
MBDF	Montbardon	83.11	337	*e*P	P	08 22 59.5	+0.5
	comp=Z,32nm,0.8s,mb5.1						
MBDF	Montbardon	83.11	337	*e*P	P	08 22 59.5	+0.5
MBDF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
ORIF	Oris-en-Rattie	83.16	338	*e*P	P	08 23 00.3	+1.1
	comp=Z,68nm,0.9s,mb5.4						
ORIF				*e*R			
	comp=Z,125nm,20.7s						
FIN	Finale Ligure	83.21	336	P	P	08 22 59.2	-0.3
ROB	Roburent	83.22	337	P	P	08 22 59.0	-0.5
PZZ	Prazzo	83.23	337	P	P	08 22 58.8	-0.8
ENR	Entracque	83.41	337	P	P	08 22 59.9	-0.6
STV2	Anna di Valdie	83.42	337	P	P	08 22 60.0	-0.6
STV	Sta Anna Valdi	83.42	337	P	P	08 23 00.0	-0.5
MONE	Monesi	83.46	337	P	P	08 23 00.6	-0.1
VIVF	Saint-Julien-l	83.51	339	*e*P	P	08 23 01.7	+0.8
	comp=Z,80nm,1.1s,mb5.5						
VIVF	Saint-Julien-l	83.51	339	*e*P	P	08 23 01.7	+0.8
VIVF				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.5						
IMI	Imperia	83.58	336	P	P	08 23 01.2	-0.1
SAOF	Saorge	83.60	337	*e*P	P	08 23 00.1	-1.3
NEGI	Negi	83.69	336	P	P	08 23 01.3	-0.5
WHFO	Wadi Hawf	83.70	290	P	P	08 23 02.3	-0.2
	SNR=65						
PTQR	Pietraquaria	83.71	332	*e*P	P	08 23 02.6	+0.6
RBK	Rabkut	83.74	289	P	P	08 23 02.5	-0.2
	SNR=15						
SBF	Sospel	83.74	337	*e*P	P	08 23 02.1	0.0
	comp=Z,36nm,0.6s,mb5.4						
SBF	Sospel	83.74	337	*e*P	P	08 23 02.1	0.0
SBF				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.4						
RJF	Les Rejaudoux	83.81	341	*e*P	P	08 23 03.1	+0.7
	comp=Z,47nm,1.1s,mb5.2						
RJF				*e*R			
	comp=Z,165nm,20.2s						
RJF	Les Rejaudoux	83.81	341	*e*P	P	08 23 03.1	+0.7
RJF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.2						
RJF				MLR	MLR		
	comp=Z,170nm,20.3s,MS4.4						
REVF	Revere	83.87	337	*e*P	P	08 23 02.2	-0.6
CAF	Calviac	84.05	341	*e*P	P	08 23 04.6	+1.0
	comp=Z,40nm,0.9s,mb5.2						
CAF	Calviac	84.05	341	*e*P	P	08 23 04.6	+1.0
CAF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SMRF	Simiane la Rot	84.11	338	*e*P	P	08 23 05.2	+1.2
	comp=Z,119nm,1.4s,mb5.5						
FRF	La Foret Royal	84.23	337	*e*P	P	08 23 04.8	+0.2
	comp=Z,177nm,1.5s,mb5.7						
FRF	La Foret Royal	84.23	337	*e*P	P	08 23 04.8	+0.2
FRF				pmax	pmax		
	comp=Z,89nm,1.5s,mb5.7						
LFF	La Frestale	84.32	342	*e*P	P	08 23 05.0	0.0
	comp=Z,38nm,0.8s,mb5.3						
LFF	La Frestale	84.32	342	*e*P	P	08 23 05.0	0.0
LFF				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.3						
ABTO	Aybut	84.42	290	P	P	08 23 06.2	+0.1
	SNR=15						
LASF	Ste Croix	84.44	339	*e*P	P	08 23 06.0	+0.4
ORI	Oriolo Calabro	84.46	329	*e*P	P	08 23 06.9	+1.0
LMR	La Mourre	84.48	337	*e*P	P	08 23 06.3	+0.5
	comp=Z,170nm,1.2s,mb5.7						
LMR	La Mourre	84.48	337	*e*P	P	08 23 06.3	+0.5
LMR				pmax	pmax		
	comp=Z,85nm,1.2s,mb5.8						
PGF	Pioggiola	84.53	335	*e*P	P	08 23 06.1	0.0
TIP	Timpagrande	85.14	328	*e*P	P	08 23 09.4	+0.1
EIL	Elat	85.39	311	*e*P	P	08 23 11.0	+0.3
	comp=Z,9.0nm,0.7s,mb5.0						
MTLF	Montolieu	85.52	340	*e*P	P	08 23 11.1	+0.1
EPF	Esparros	86.23	341	*e*P	P	08 23 14.6	+0.1
	comp=Z,8.4nm,0.6s,mb4.8						
EPF	Esparros	86.23	341	*e*P	P	08 23 14.6	+0.1
EPF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
SJPF	Ste Jean	86.47	342	*e*P	P	08 23 15.8	+0.1
ETSF	Etsaut	86.54	342	*e*P	P	08 23 17.0	+1.0
	comp=Z,11nm,0.7s,mb4.9						
ETSF	Etsaut	86.54	342	*e*P	P	08 23 17.0	+1.0
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
ESDC	Sonseca Array	90.33	344	P	P	08 23 33.5	-0.6
	comp=Z,1.1nm,0.6s,mb4.4,baz=20,slow=4.5,SNR=5.9						
DBIC	Dimbokro	122.31	335	PKIKP	PKPdf	08 29 27.7	+0.1
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
DBIC	Dimbokro	122.31	335	PKP	PKPdf	08 29 27.7	+0.1
	comp=Z,3.5nm,0.5s,baz=14,slow=2.3,SNR=9.3						
QSPA	South Pole Qui	138.05	180	*e*PKPdf	PKPdf	08 29 55.7	0.0
PLCA	Paso Flores	147.41	94	*e*PKP2	PKPab	08 30 16.9	-2.6
PLCA	Paso Flores	147.41	94	PKPbc	PKPdf	08 30 17.0	+4.1
	comp=Z,8.0nm,0.9s,baz=298,slow=2.6,SNR=17						
SNAA	Sanae	154.31	196	PKIKP	PKPdf	08 30 30.9	+8.6
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SNAA	Sanae	154.31	196	PKPbc	PKPdf	08 30 30.9	+8.6
	comp=Z,1.2nm,0.6s,baz=302,slow=6.4,SNR=5.6						

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*IDC **12** 08:12:08.5±1.0, 22.62S×66.12W, h240^{km}±9^{km}, mb3.5/8, mb1 3.8/12, mb1mx3.7/17, mbtmp4.2/12, Error ellipse: s-maj=14.8km s-min=13.4km az=89.0*

*NEIC **12** 08:12:09.4±0.8, 22.63S×66.11W, h247^{km}±8^{km}, mb4.1/3, Error ellipse: s-maj=13.9km s-min=9.4km az=82.0*

ISC 12 08:12:08.1±0.9**, 22.68S**±0.07×**66.1W**±0.1**, h248**^{km}±10^{km}**, n20,** σ**1**^{s}**02**/20**, mb3.8**/9**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.59	271	P	P	08 12 57.4	+0.9
	73nm,0.3s,baz=91,slow=6.0,SNR=1049						
LVC				S	S	08 13 33.3	-0.8
	28nm,0.3s,baz=243,slow=19,SNR=6.2						
LPAZ	La Paz	6.64	343	P	P	08 13 46.0	+1.2
	1.0nm,0.3s,baz=137,slow=9.2,SNR=18						
LPAZ				S	S	08 15 00.2	-0.2
	0.5nm,0.3s,baz=283,slow=17,SNR=8.0						
LPAZ	La Paz	6.64	343	P	P	08 13 46.0	+1.2
LPAZ				S	S	08 15 00.2	-0.2
TRQA	Tornquist	15.73	168	*e*P	P	08 15 37.4	-0.9
	1.4nm,0.6s						
PLCA	Paso Flores	18.39	191	P	P	08 16 05.9	-0.9
	0.4nm,0.3s,baz=354,slow=8.5,SNR=13						
PLCA	Paso Flores	18.39	191	*e*P	P	08 16 06.4	-0.4
	8.0nm,1.0s						
BDFB	Brasilia	18.46	71	P	P	08 16 08.1	+0.4
	1.7nm,0.3s,baz=253,slow=12,SNR=37						
TXAR	Lajitas Array	63.10	323	P	P	08 22 10.3	-1.0
	0.4nm,0.7s,mb3.2,baz=144,slow=5.4,SNR=5.5						
TXAR	Lajitas Array	63.10	323	P	P	08 22 10.3	-1.0
DBIC	Dimbokro	66.61	72	P	P	08 22 32.5	-1.6
	2.8nm,0.4s,mb4.2,baz=218,slow=6.6,SNR=9.7						
QSPA	South Pole Qui	67.52	180	*e*P	P	08 22 40.4	+1.7
	6.9nm,0.8s,mb4.3						
VNDA	Vanda	76.14	190	P	P	08 23 30.9	+1.2
	2.1nm,1.1s,mb3.7,baz=63,slow=14,SNR=5.8						
PDAR	Pinedale Array	76.44	329	P	P	08 23 31.9	0.0
	0.7nm,0.7s,mb3.4,baz=122,slow=6.7,SNR=5.4						
TSUM	Tsumeb	77.22	106	P	P	08 23 36.9	+0.2
	1.6nm,0.5s,mb4.0,baz=256,slow=8.3,SNR=5.3						
ULM	Lac du Bonnet	77.24	341	P	P	08 23 34.4	-1.8
	1.5nm,0.6s,mb3.8,baz=132,slow=6.3,SNR=3.7						
NVAR	Mina Array Bea	78.03	321	P	P	08 23 42.0	+1.2
	1.0nm,1.0s,mb3.4,baz=140,slow=4.6,SNR=3.8						
YKA	Yellowknife Ar	93.17	340	P	P	08 24 54.8	+0.1
	0.7nm,0.5s,mb3.9,baz=130,slow=4.4,SNR=18						
ASAR	Alice Springs	130.00	204	PKP	PKPdf	08 30 50.1	+1.2
	1.0nm,0.8s,baz=125,slow=1.8,SNR=11						
ASAR				SKPbc		08 33 48.9	
	0.7nm,0.9s,baz=141,slow=3.2,SNR=5.2						
WRA	Warramunga Arr	133.17	207	PKP	PKPdf	08 30 56.6	+1.6
	0.5nm,0.3s,baz=162,slow=1.6,SNR=10						
SONM	Songino Array	154.19	12	PKPbc	PKPdf	08 31 39.8	+10
	0.6nm,0.9s,baz=337,slow=1.9,SNR=4.6						

IDC 12 08:18:32.0±1.2**, 11.93N**×**141.41E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.7**/4**, Error ellipse: s-maj=105.2km s-min=28.9km az=105.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	36.12	192	P	P	08 25 35.9	-2.0
	0.2nm,0.5s,baz=17,slow=12,SNR=2.7						
ILAR	Eielson Array	71.51	25	P	P	08 29 54.2	-2.1
	0.3nm,0.6s,baz=254,slow=5.7,SNR=6.4						
ILAR				pP	pP	08 30 06.8	+11
	0.3nm,0.7s,baz=246,slow=6.2,SNR=2.7						
YKA	Yellowknife Ar	85.87	27	P	P	08 31 13.8	-0.7
	0.2nm,0.4s,baz=289,slow=5.3,SNR=6.3						
YKA				pP	pP	08 31 26.7	+12
	0.2nm,0.4s,baz=289,slow=5.0,SNR=3.9						
FINES	FINESS Array B	91.21	334	P	P	08 31 38.7	-1.3
	1.9nm,1.0s,baz=101,slow=7.1,SNR=4.0						

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*NEIC **12** 08:31:53.6±3.8, 15.35N×90.41W, h28^{km}±29^{km}, mb4.3/1, Error ellipse: s-maj=40.8km s-min=12.5km az=222.0*

*IDC **12** 08:31:53.5±4.7, 14.41N×91.23W, h55^{km}±48^{km}, mb3.2/4, mb1 3.6/6, mb1mx3.4/21, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=126.3km s-min=34.3km az=43.0*

ISC 12 08:31:53.5±2.2**, 14.7N**±0.7×**90.9W**±0.5**, h72**^{km}±53^{km}**, n11,** σ**0**^{s}**94**/10**, mb3.6**/5**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	7.24	127	P	P	08 33 38.6	-0.1
	1.1nm,0.3s,baz=275,slow=23,SNR=4.3						
IIB	San Bernardino	8.33	302	*e*P	P	08 33 55.0	+1.2
PPM	Popocatepetl	8.62	301	*e*P	P	08 33 57.0	-0.6
TXAR	Lajitas Array	18.77	323	P	P	08 36 08.4	-1.0
	0.0nm,0.3s,baz=153,slow=14,SNR=9.4						
MNTX	Cornudas Mount	21.51	324	*e*P	P	08 36 36.6	-1.6
	12nm,0.8s,mb4.3						
ANMO	Albuquerque	24.58	328	P	P	08 37 09.4	+1.4
	0.9nm,0.9s,mb3.2,baz=150,slow=14,SNR=4.8						
NVAR	Mina Array Bea	33.85	319	P	P	08 38 30.9	-0.2
	0.6nm,0.8s,mb3.5,baz=129,slow=8.9,SNR=4.3						
YKA	Yellowknife Ar	50.61	346	P	P	08 40 47.8	+0.9
	0.3nm,0.4s,mb3.6,baz=149,slow=7.6,SNR=9.9						
YKA	Yellowknife Ar	50.61	346	P	P	08 40 47.8	+0.8
ILAR	Eielson Array	62.64	336	P	P	08 42 12.5	0.0
	0.2nm,0.6s,mb3.2,baz=139,slow=8.3,SNR=4.4						
CMAR	Chiang Mai Arr	145.67	343	PKPbc	PKPbc	08 51 26.9	+1.7
	1.4nm,0.6s,baz=324,slow=1.8,SNR=5.1						

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*NEIC **12** 08:32:03.8±1.1, 14.25N×91.63W, h77^{km}±10^{km}, mb4.3/18,*

Error ellipse: s-maj=14.5km s-min=6.1km az=46.0

IDC ***12*** *08:32:04.6±3.5, 14.26N×91.43W, h87^{km}±31^{km}, mb4.0/9, mb1 4.1/12, mb1mx3.8/23, mbtmp4.3/12, Error ellipse: s-maj=36.6km s-min=18.5km az=44.0*

ISC 12 08:32:00.2±0.8**, 14.10N**±0.08×**91.78W**±0.06**, h65**^{km}±7^{km}**, n91, σ1^{s}06**/88**, mb4.3**/21**, 3C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RBDL	Robledal	2.03	89⇑	eP	P	08 32 33.7	+0.9
RBDL				eS	S	08 32 58.9	+1.9
RTR	El Retiro	2.08	95	eP	P	08 32 34.7	+1.1
SBLS	San Blas	2.11	97	eP	P	08 32 34.4	+0.4
SNJE	San Jose	2.12	96⇓	eP	P	08 32 34.8	+0.7
SNJE				eS	S	08 33 01.1	+1.8
MTO2	Montecristo 2	2.37	82	eP	P	08 32 38.0	+0.4
BOQS	Boqueron	2.46	98	eP	P	08 32 38.9	0.0
BOQS				eS	S	08 33 05.8	-1.9
SNET	Serv Nac Est T	2.51	99⇑	eP	P	08 32 39.3	-0.3
LFU	La Fuente	2.61	97	eP	P	08 32 41.2	+0.1
LBRS	Las Brisas	2.68	97	eP	P	08 32 41.7	-0.3
LBRS				eS	S	08 33 13.3	-0.2
LFRS	El Faro	2.68	100	eP	P	08 32 41.9	-0.2
SCX	San Cristobal	2.75	343	eP	P	08 32 44.0	+1.0
SNVI	San Vicente	2.90	99⇓	eP	P	08 32 45.1	0.0
SNVI				eS	S	08 33 18.6	-0.3
CAHU	Cacacuatique	3.48	95	eP	P	08 32 53.3	+0.1
BLLM	Bellamira	3.50	100⇑	eP	P	08 32 54.5	+0.9
CNCH	Conchagua	3.92	102	eP	P	08 32 58.9	-0.5
MIRN	Miramar	5.20	108	eP	P	08 33 15.1	-2.2
MOMJ	Momotombo	5.37	108	eP	P	08 33 17.5	-2.1
APYN	Apoyeque	5.61	109	eP	P	08 33 22.6	-0.2
OXX	Oaxaca	5.61	303	eP	P	08 33 20.5	-2.4
VHO	Vista Hermosa	5.61	302	eP	P	08 33 20.6	-2.2
XAVN	Gruta Xavier	5.66	109	eP	P	08 33 24.4	+0.9
MGAN	Managua	5.73	109	eP	P	08 33 22.0	-2.6
JTS	JuntasAbangare	7.67	119	P	P	08 33 51.0	-0.6
	2.9nm,0.3s,baz=280,slow=23,SNR=6.8						
LTX	Lajitas	18.73	326	eP	P	08 36 16.5	+0.2
	6.5nm,0.8s						
TXAR	Lajitas Array	18.73	326	P	P	08 36 17.0	+0.7
	0.3nm,0.3s,baz=156,slow=13,SNR=42						
TXAR	Lajitas Array	18.73	326	P	P	08 36 17.0	+0.7
OTAV	Otavalo	19.07	135	eP	P	08 36 22.6	+2.4
	1.4nm,0.6s						
LRAL	Lakeview Retre	19.35	12	eP	P	08 36 22.2	-0.9
	5.2nm,0.3s						
ROSC	El Rosal	19.49	116	P	P	08 36 26.6	+1.8
	0.4nm,0.3s,baz=95,slow=20,SNR=13						
MIAR	Mount Ida	20.42	356	eP	P	08 36 32.5	-1.9
	7.0nm,0.8s						
OXF	Oxford	20.44	6	eP	P	08 36 33.8	-0.8
	9.2nm,0.4s						
UALR	University of	20.59	359	eP	P	08 36 36.3	0.0
	7.1nm,0.7s						
SDV	Santo Domingo	21.36	102	P	P	08 36 42.3	-1.7
	5.7nm,0.8s,mb4.0,baz=269,slow=10,SNR=3.8						
GDL2	Guadalupe Moun	21.38	330	eP	P	08 36 44.7	+0.6
MNTX	Cornudas Mount	21.50	327	eP	P	08 36 44.9	-0.5
WMOK	Wichita Mounta	21.50	344	eP	P	08 36 44.5	-0.9
	4.5nm,0.7s,mb3.9						
CPRX	Cap Rock	21.82	332	eP	P	08 36 49.3	+0.7
WVT	Waverly	22.22	8	eP	P	08 36 52.1	-0.4
	9.5nm,0.7s,mb4.2						
AMTX	Amarillo	22.54	338	eP	P	08 36 55.5	-0.2
	25nm,0.5s,mb4.8						
WCI	Wyandotte Cave	24.52	10	eP	P	08 37 14.9	0.0
ANMO	Albuquerque	24.62	330	P	P	08 37 17.7	+1.8
	6.0nm,0.6s,mb4.2,baz=152,slow=12,SNR=33						
ANMO	Albuquerque	24.62	330	P	P	08 37 17.7	+1.8
TUC	Tucson	25.10	319	eP	P	08 37 19.0	-1.5
BLO	Bloomington	25.40	10	P	P	08 37 23.7	+0.5
	9.7nm,0.6s,mb4.4						
SDCO	Great Sand Dun	26.52	335	eP	P	08 37 34.2	+0.5
	4.1nm,1.1s,mb3.9						
PV01	Paradox Valley	28.19	331	eP	P	08 37 47.0	-1.8
PV10	Paradox Valley	28.61	331	eP	P	08 37 52.8	+0.2
SRU	San Rafael	29.90	330	eP	P	08 38 04.7	+0.7
MSU	Marysvale	30.28	327	eP	P	08 38 08.5	+1.1
MVU	Marysvale	30.29	327	eP	P	08 38 07.8	+0.3
	3.6nm,0.9s,mb4.0						
ARUT	Antelope Range	30.44	325	eP	P	08 38 09.6	+0.7
MPU	Maple Canyon	31.14	330	eP	P	08 38 15.7	+0.7
DUG	Dugway	31.86	329	eP	P	08 38 22.1	+0.8
	2.7nm,1.0s,mb3.9						
PDAR	Pinedale Array	32.42	335	P	P	08 38 26.4	+0.3
	0.6nm,0.5s,mb3.6,baz=132,slow=12,SNR=6.5						
BGU	Big Grassy Mou	32.52	329	eP	P	08 38 27.4	+0.4
SPUT	South Promonto	32.53	330	eP	P	08 38 27.8	+0.7
SNOW	Snow King Moun	33.49	335	eP	P	08 38 36.2	+0.9
SNOW				epP	pP	08 38 51.4	-0.1
ELK	Elko	33.52	327	eP	P	08 38 36.8	+1.1
	3.8nm,0.7s,mb4.3						
LOHW	Long Hollow	33.55	335	eP	P	08 38 35.1	-0.8
TPAW	Teton Pass	33.59	334	eP	P	08 38 36.9	+0.6
RRI2	Red Ridge	33.63	334	eP	P	08 38 36.9	+0.2
MNV	Mina	33.64	321	eP	P	08 38 37.3	+0.5
	6.7nm,1.0s,mb4.4						
NVAR	Mina Array Bea	33.73	321	P	P	08 38 39.1	+1.6
	5.8nm,0.7s,mb4.5,baz=129,slow=9.0,SNR=36						
NVAR	Mina Array Bea	33.73	321	P	P	08 38 39.1	+1.6
IMW	Indian Meadow	33.92	335	eP	P	08 38 39.2	+0.1
MCMT	McKenzie Canyo	35.48	334	eP	P	08 38 54.2	+1.9
ULM	Lac du Bonnet	36.21	356	PcP	PcP	08 41 21.4	-1.6
	0.9nm,0.4s,baz=164,slow=4.3,SNR=3.7						
WVOR	Wild Horse Val	36.53	326	eP	P	08 39 02.2	+0.9
	5.0nm,0.8s,mb4.5						
MOD	Modoc	37.11	324	eP	P	08 39 06.2	0.0
BMO	Blue Mountains	37.54	330	eP	P	08 39 10.2	+0.5
EDM	Edmonton	42.61	341	eP	P	08 39 50.7	-0.8
SCHQ	Schefferville	45.06	20	P	P	08 40 09.7	-1.6
	4.2nm,0.9s,mb4.2,baz=175,slow=6.8,SNR=5.6						
YKA	Yellowknife Ar	50.98	347	P	P	08 40 56.2	-1.0
	2.9nm,0.5s,mb4.6,baz=148,slow=7.5,SNR=55						
YKA	Yellowknife Ar	50.98	347	P	P	08 40 56.2	-1.0
FRB	Frobisher Bay	52.17	13	P	P	08 41 03.1	-3.0
	2.4nm,0.8s,mb4.3,baz=216,slow=10.0,SNR=5.7						
INK	Inuvik	60.40	343	eP	P	08 42 03.0	-1.9
	4.3nm,0.8s,mb4.5						
SML	Sawmill	62.16	333	eP	P	08 42 15.7	-1.1
ILAR	Eielson Array	62.83	337	P	P	08 42 21.0	-0.3
	5.3nm,1.0s,mb4.4,baz=122,slow=4.3,SNR=35						
ILAR	Eielson Array	62.83	337	P	P	08 42 21.0	-0.3
COLA	College	63.25	337	eP	P	08 42 23.5	-0.5
RSO	Redoubt South	63.67	331	eP	P	08 42 26.3	-0.5
BILL	Bilibino	81.45	338	eP	P	08 44 11.7	+0.3
	13nm,0.9s,mb4.8						
ARCES	ARCESS Array B	85.98	18	P	P	08 44 33.9	-0.2
	2.6nm,0.9s,mb4.2,baz=270,slow=3.6,SNR=4.0						
ARCES	ARCESS Array B	85.98	18	P	P	08 44 33.9	-0.2
SONM	Songino Array	116.25	346	PKP	PKPdf	08 50 39.0	+2.7
	0.3nm,0.6s,baz=263,slow=0.7,SNR=3.6						
STKA	Stephens Creek	128.29	240	PKP	PKPdf	08 51 00.2	+0.1
	2.0nm,0.8s,baz=341,slow=19,SNR=3.8						
STKA	Stephens Creek	128.29	240	PKPdf	PKPdf	08 51 00.2	+0.1
WRA	Warramunga Arr	135.62	256	PKP	PKPdf	08 51 15.9	+1.8
	0.3nm,0.5s,baz=87,slow=2.3,SNR=6.8						
ASAR	Alice Springs	135.90	251	PKP	PKPdf	08 51 16.4	+1.8
	0.2nm,0.5s,baz=113,slow=3.0,SNR=3.5						
CMAR	Chiang Mai Arr	145.97	342	PKPbc	PKPbc	08 51 35.1	+1.5
	9.6nm,0.7s,baz=332,slow=3.7,SNR=27						
CMAR	Chiang Mai Arr	145.97	342	PKPbc	PKPbc	08 51 35.1	+1.5

IDC ***12*** *08:33:12.7±3.6, 14.16N×91.48W, h48^{km}±33^{km}, mb4.2/21, mb1 4.4/24, mb1mx4.3/26, mbtmp4.5/24, ML4.0/3, MS4.0/3, Ms1 4.0/3, ms1mx3.5/12, Error ellipse: s-maj=22.6km s-min=11.5km az=58.0*

BJI ***12*** *08:33:13.9, 14.10N×91.60W, h61^{km}, mB5.5*

NEIC ***12*** *08:33:13.9±0.3, 14.08N×91.63W, mb4.8/39, Error ellipse: s-maj=9.1km s-min=4.5km az=47.0*

ISC 12 08:33:14.7±0.7**, 14.08N**±0.05×**91.66W**±0.06**, h86**^{km}±6^{km}**, n172, σ1^{s}00**/164**, mb4.6**/51**, 2C-2D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.17	85⇑	eP	P	08 33 35.4	-1.0
NBG	Las Nubes	1.36	68⇓	eP	P	08 33 40.1	+1.2
RBDL	Robledal	1.91	89⇓	eP	P	08 33 46.1	+0.1
RTR	El Retiro	1.96	95	eP	P	08 33 46.9	+0.2
SBLS	San Blas	1.99	97	eP	P	08 33 48.9	+1.8
MTO2	Montecristo 2	2.25	82	eP	P	08 33 51.0	+0.3
BOQS	Boqueron	2.33	98	eP	P	08 33 52.9	+1.0
SNET	Serv Nac Est T	2.39	99	eP	P	08 33 52.7	0.0
SNET				eS	S	08 34 23.0	+2.1
SNET				i		08 34 26.1	
	comp=Z,6μm,0.5s						
LFU	La Fuente	2.49	97	eP	P	08 33 54.2	+0.1
LFRS	El Faro	2.56	100	eP	P	08 33 54.4	-0.7
LCBS	La Ceiba	2.63	99	eP	P	08 33 55.3	-0.8
LCBS				eS	S	08 34 29.2	+2.1
CAHU	Cacacuatique	3.36	95	eP	P	08 34 06.9	+0.8
CRIN	San Cristobal	4.69	106	eP	P	08 34 24.2	-0.3
TEL3	Telica 3	4.92	107	eP	P	08 34 26.2	-1.4
TELN	Telica	4.92	107	eP	P	08 34 30.2	+2.5
CNGN	Cerro Negro	5.08	107	eP	P	08 34 28.3	-1.5
MIRN	Miramar	5.08	108	eP	P	08 34 29.1	-0.8
QUIN	Quiabu	5.18	100	eP	P	08 34 29.9	-1.4
COPN	Copaltepe	5.28	110	eP	P	08 34 31.6	-1.0
APYN	Apoyeque	5.48	109	eP	P	08 34 35.0	-0.4
APYN				eS	S	08 35 38.8	+1.0
XAVN	Gruta Xavier	5.54	110	eP	P	08 34 36.7	+0.6
MGAN	Managua	5.61	109	eP	P	08 34 35.7	-1.4
MGAN				eS	S	08 35 40.1	-0.7
PYTN	Playitas	5.66	105	eP	P	08 34 36.0	-1.9
TICN	Ticuantepe	5.66	110	eP	P	08 34 37.8	0.0
APON	Apoyo	5.86	111⇑	eP	P	08 34 40.6	+0.1
VCR	Vista de Mar	7.08	123	eP	P	08 34 55.4	-2.1
JTS	JuntasAbangare	7.56	119	P	P	08 35 03.2	-0.8
	comp=Z,8.8nm,0.3s,baz=315,slow=20,SNR=6.6						
JTS				S	S	08 36 28.3	-0.5
	baz=336,slow=20,SNR=1.3						
JTS	JuntasAbangare	7.56	119	eP	P	08 35 02.6	-1.4
	comp=Z,124nm,0.6s						
JCR	Jicaral	7.66	123	eP	P	08 35 06.0	+0.6
ACX	Acapulco	8.43	290	eP	P	08 35 07.5	-8.5
LAJ	Bijagual	8.48	119	eP	P	08 35 14.8	-1.7
TRTC	Tortuguero	8.51	113	eP	P	08 35 16.5	-0.4
LCR2	La Lucha 2	8.64	119	eP	P	08 35 19.3	+0.6
ICR	Volcan Irazu	8.67	117	eP	P	08 35 21.2	+2.1
CAIG	El Cayaco	8.81	291	eP	P	08 35 14.0	-7.0
BUS	Buena Vista	8.94	119	eP	P	08 35 24.8	+1.9
ACR	Cerro Adams	9.91	122	eP	P	08 35 37.3	+1.1
SFJM	Santa Fe	12.60	302	eP	P	08 36 08.5	-3.6
HKT	Hockley	16.26	347	P	P	08 36 51.4	-7.8
	comp=Z,46nm,1.5s						
NATX	Nacogdoches	17.81	352	eP	P	08 37 18.5	0.0
	comp=Z,83nm,1.2s						
JCT	Junction City	17.96	337	eP	P	08 37 19.3	-1.0
	comp=Z,25nm,1.2s						
LTX	Lajitas	18.82	326	eP	P	08 37 29.6	-0.5
	comp=Z,39nm,1.0s						
TXAR	Lajitas Array	18.82	326	P	P	08 37 29.6	-0.5
	comp=Z,0.4nm,0.3s,baz=153,slow=11,SNR=36						
TXAR				PcP	PcP	08 41 56.1	+2.5
	comp=Z,0.1nm,0.3s,baz=135,slow=5.3,SNR=4.7						
TXAR				LR	LR	08 45 54.9	
	comp=Z,252nm,19.3s,baz=160,slow=40						
OTAV	Otavalo	18.97	135	P	P	08 37 32.6	+0.6
	comp=Z,5.5nm,1.0s						
LRAL	Lakeview Retre	19.34	12	eP	P	08 37 36.2	+0.4
	comp=Z,51nm,1.1s						
ROSC	El Rosal	19.38	117	P	P	08 37 39.7	+3.3
	comp=Z,1.0nm,0.3s,baz=70,slow=0.5,SNR=14						
OXF	Oxford	20.44	5	eP	P	08 37 48.5	+1.1
	comp=Z,142nm,1.2s						
MIAR	Mount Ida	20.45	355	eP	P	08 37 45.0	-2.5
	comp=Z,26nm,0.8s						
UALR	University of	20.61	358	eP	P	08 37 47.9	-1.2
SDV	Santo Domingo	21.23	102	P	P	08 37 54.8	-0.7
	comp=Z,11nm,0.7s,mb4.3,baz=315,slow=5.5,SNR=5.2						
GDL2	Guadalupe Moun	21.45	329	eP	P	08 37 57.6	0.0
WMOK	Wichita Mounta	21.55	344	eP	P	08 37 56.5	-2.1
MNTX	Cornudas Mount	21.58	327	eP	P	08 37 57.6	-1.3
NHSC	New Hope	21.63	27	P	P	08 38 02.0	+2.6
CPRX	Cap Rock	21.90	332	eP	P	08 38 01.8	-0.2
WVT	Waverly	22.22	8	eP	P	08 38 04.6	-0.6
	comp=Z,14nm,0.6s,mb4.5						
UTMT	University of	22.31	6	eP	P	08 38 04.7	-1.3
AMTX	Amarillo	22.60	338	eP	P	08 38 08.5	-0.4
	comp=Z,42nm,0.6s,mb4.9						
USIN	University of	24.05	8	eP	P	08 38 22.4	-0.4
SLM	Saint Louis	24.49	3	eP	P	08 38 27.1	0.0
SLM				epP		08 38 40.1	
WCI	Wyandotte Cave	24.52	10	eP	P	08 38 27.0	-0.4
	comp=Z,62nm,1.3s,mb4.9						
ANMO	Albuquerque	24.70	330	P	P	08 38 30.4	+1.1
	comp=Z,19nm,0.8s,mb4.6,baz=152,slow=12,SNR=32						
SJG	San Juan	24.82	77	LR	LR	08 47 46.4	
	comp=Z,468nm,21.2s,baz=265,slow=36						
BLA	Blacksburg	25.12	21	eP	P	08 38 33.3	+0.2
	comp=Z,34nm,1.0s,mb4.7						
TUC	Tucson	25.19	319	eP	P	08 38 33.7	-0.2
	comp=Z,5.1nm,0.9s,mb4.0						
TUC				epP	pP	08 38 49.9	-3.2
KSU1	Kansas State U	25.30	351	eP	P	08 38 34.5	-0.4
BLO	Bloomington	25.40	9	eP	P	08 38 35.1	-0.6
	comp=Z,15nm,0.6s,mb4.6						
CBKS	Cedar Bluff	25.65	345	eP	P	08 38 37.1	-1.0
	comp=Z,14nm,1.0s,mb4.3						
PV01	Paradox Valley	28.27	331	eP	P	08 39 02.5	+0.5
ISCO	Idaho Springs	28.41	337	eP	P	08 39 04.2	+0.9
	comp=Z,5.0nm,1.1s,mb4.0						
PV10	Paradox Valley	28.68	331	eP	P	08 39 05.5	-0.2
SRU	San Rafael	29.98	330	eP	P	08 39 17.6	+0.4
MSU	Marysvale	30.36	327	eP	P	08 39 21.2	+0.6
MVU	Marysvale	30.38	327	eP	P	08 39 21.4	+0.6
	comp=Z,10nm,1.0s,mb4.4						
TMUT	Trail Mountain	30.46	329	eP	P	08 39 21.9	+0.4
ARUT	Antelope Range	30.53	325	eP	P	08 39 23.2	+1.1
MPU	Maple Canyon	31.22	330	eP	P	08 39 28.7	+0.5
NLU	North Lily Min	31.39	329	eP	P	08 39 29.6	-0.1
JLU	Jordanelle	31.58	331	eP	P	08 39 31.3	0.0
DUG	Dugway	31.94	328	eP	P	08 39 34.1	-0.4
	comp=Z,11nm,1.1s,mb4.5						
NOQ	North Oquirrh	31.95	330	eP	P	08 39 35.2	+0.8
TCUT	Toone Canyon	31.97	331	eP	P	08 39 35.7	+1.0
TRCR	Troy Canyon	32.14	323	P	P	08 39 35.2	-1.0
HWUT	Hardware Ranch	32.42	332	eP	P	08 39 38.4	-0.2
	comp=Z,25nm,1.1s,mb4.9						
PDAR	Pinedale Array	32.49	335	P	P	08 39 38.9	-0.3
	comp=Z,3.2nm,0.9s,mb4.0,baz=141,slow=9.5,SNR=11						
PDAR				PcP	PcP	08 42 25.2	+0.8
	comp=Z,1.5nm,0.6s,baz=138,slow=4.5,SNR=8.6						
SPUT	South Promonto	32.61	330	eP	P	08 39 40.8	+0.5
TPH	Tonopah	32.94	321	eP	P	08 39 43.0	-0.1
	comp=Z,21nm,1.4s,mb4.8						
HVU	Hansel Valley	33.13	330	eP	P	08 39 45.1	+0.4
AHID	Auburn Hatcher	33.14	333	eP	P	08 39 44.6	-0.2
	comp=Z,23nm,1.4s,mb4.8						
SNOW	Snow King Moun	33.56	334	eP	P	08 39 49.0	+0.6
ELK	Elko	33.61	327	eP	P	08 39 49.7	+0.8
	comp=Z,10nm,0.8s,mb4.7						
WUWY	Wally Ulrich	33.61	335	eP	P	08 39 49.4	+0.4
LOHW	Long Hollow	33.62	335	eP	P	08 39 49.1	+0.2
TPAW	Teton Pass	33.66	334	eP	P	08 39 49.9	+0.6
RRI2	Red Ridge	33.70	334	eP	P	08 39 49.7	0.0
MNV	Mina	33.73	321	eP	P	08 39 50.6	+0.7
	comp=Z,33nm,1.1s,mb5.1						
NVAR	Mina Array Bea	33.82	321	P	P	08 39 52.1	+1.3
	comp=Z,20nm,0.8s,mb5.0,baz=129,slow=9.0,SNR=38						
NVAR				PcP	PcP	08 42 29.4	+1.3
	comp=Z,4.4nm,0.9s,baz=128,slow=4.0,SNR=6.3						
IMW	Indian Meadow	33.99	335	eP	P	08 39 52.3	+0.2
LKWY	Lake	34.32	336	eP	P	08 39 57.1	+2.2
	comp=Z,9.8nm,1.1s,mb4.5						
BMN	Battle Mountai	34.48	324	eP	P	08 39 57.1	+0.7
	comp=Z,22nm,1.1s,mb4.9						
CMB	Columbia Colle	34.89	318	eP	P	08 39 59.7	-0.1
	comp=Z,7.5nm,1.0s,mb4.5						
QLMT	Earthquake Lak	34.95	335	eP	P	08 40 01.2	+0.8
WCN	Washoe City	35.25	321	eP	P	08 40 03.9	+1.0
HLID	Hailey	35.27	331	eP	P	08 40 03.3	+0.3
	comp=Z,25nm,1.1s,mb5.0						
MCMT	McKenzie Canyo	35.55	334	eP	P	08 40 07.4	+2.0
BOZ	Bozeman (W)	35.71	336	eP	P	08 40 06.9	+0.1
	comp=Z,13nm,1.1s,mb4.8						
ULM	Lac du Bonnet	36.23	355	P	P	08 40 08.7	-2.4
	comp=Z,1.4nm,0.4s,mb4.2,baz=183,slow=7.0,SNR=5.1						
ULM				PcP	PcP	08 42 35.5	+0.4
	comp=Z,4.6nm,0.5s,baz=191,slow=1.7,SNR=7.8						
OHCM	Honcut	36.35	319	eP	P	08 40 13.0	+0.8
SAML	Samuel	36.35	127	eP	P	08 40 10.9	-1.6
	comp=Z,7.1nm,0.9s,mb4.6						
WVOR	Wild Horse Val	36.61	326	eP	P	08 40 14.7	+0.3
	comp=Z,15nm,0.8s,mb5.0						
MOD	Modoc	37.20	324	eP	P	08 40 19.5	+0.2
	comp=Z,12nm,1.1s,mb4.7						
BMO	Blue Mountains	37.62	330	eP	P	08 40 22.3	-0.5
	comp=Z,22nm,1.3s,mb4.8						
WDC	Whiskeytown Da	37.73	320	eP	P	08 40 21.5	-2.3
LPAZ	La Paz	38.09	142	P	P	08 40 27.2	+0.3
	comp=Z,2.0nm,0.5s,mb4.2,baz=349,slow=7.8,SNR=7.1						
LPAZ	La Paz	38.09	142	eP	P	08 40 27.0	0.0
BBOR	Butler Butte	39.19	323	P	P	08 40 35.6	-0.2
HBO	Huckleberry Mo	39.58	325	P	P	08 40 39.5	+0.4
NEW	Newport	40.07	333	P	P	08 40 42.6	-0.4
	comp=Z,2.2nm,0.4s,mb4.3,baz=137,slow=8.9,SNR=6.8						
NEW				PcP	PcP	08 42 48.2	+1.2
	comp=Z,2.9nm,0.5s,baz=103,slow=11,SNR=4.5						
NEW	Newport	40.07	333	eP	P	08 40 43.0	-0.1
	comp=Z,5.4nm,0.8s,mb4.4						
KEBM	Edson Butte	40.15	322	eP	P	08 40 45.0	+1.2
EBG	Ellensburg	40.68	329	P	P	08 40 49.6	+1.5
WTV	Waterville	40.94	331	P	P	08 40 51.6	+1.4
LON	Longmire	41.20	328	P	P	08 40 53.3	+1.0
EDM	Edmonton	42.67	341	eP	P	08 41 03.5	-0.8
LVC	Limon Verde	42.74	148	P	P	08 41 05.8	+0.5
	comp=Z,1.8nm,0.7s,mb3.9,baz=323,slow=6.3,SNR=3.0						
VDB	Vedder Mountai	42.89	331	P	P	08 41 06.6	+0.3
SCHQ	Schefferville	45.03	20	P	P	08 41 22.4	-1.0
	comp=Z,16nm,0.9s,mb4.7,baz=214,slow=6.6,SNR=14						
SCHQ				PcP	PcP	08 43 03.3	-0.1
	comp=Z,4.9nm,0.8s,baz=102,slow=0.3,SNR=4.0						
SCHQ	Schefferville	45.03	20	eP	P	08 41 21.8	-1.5
	comp=Z,22nm,0.9s,mb4.9						
YKA	Yellowknife Ar	51.02	347	P	P	08 42 08.8	-1.0
	comp=Z,8.5nm,0.7s,mb4.9,baz=148,slow=7.5,SNR=30						
YKA				PcP	PcP	08 43 25.4	+0.5
	comp=Z,5.9nm,0.8s,baz=146,slow=3.9,SNR=19						
YKW3	Yellowknife Ar	51.09	347	eP	P	08 42 09.2	-1.1
FRB	Frobisher Bay	52.16	13	P	P	08 42 16.3	-2.1
	comp=Z,7.1nm,0.8s,mb4.7,baz=207,slow=8.4,SNR=12						
BDFB	Brasilia	52.28	123	P	P	08 42 19.4	-0.5
	comp=Z,2.3nm,0.7s,mb4.3,baz=299,slow=10.0,SNR=4.0						
PLCA	Paso Flores	57.94	161	P	P	08 42 59.4	-1.1
	comp=Z,1.0nm,0.8s,mb3.9,baz=9.9,slow=14,SNR=2.8						
RCBR	Riachuelo	58.74	106	eP	P	08 43 07.5	+1.1
	comp=Z,32nm,1.0s,mb5.3						
DAWY	Dawson	59.73	338	eP	P	08 43 12.1	-0.4
INK	Inuvik	60.46	343	eP	P	08 43 17.3	-0.1
	comp=Z,12nm,0.8s,mb5.0						
RES	Resolute Bay	60.62	359	eP	P	08 43 16.8	-1.8
	comp=Z,6.5nm,0.8s,mb4.7						
MENT	Mentasta	60.80	336	eP	P	08 43 20.4	+0.5
SML	Sawmill	62.23	333	eP	P	08 43 27.9	-1.6
PMR	Palmer	62.50	333	eP	P	08 43 31.1	-0.1
FIB	Fire Island	62.80	332	P	P	08 43 34.3	+1.0
ILAR	Eielson Array	62.90	337	P	P	08 43 33.4	-0.6
	comp=Z,26nm,1.1s,mb5.1,baz=125,slow=4.5,SNR=59						
MCK	McKinley	63.26	335	eP	P	08 43 36.0	-0.3
	comp=Z,22nm,1.3s,mb4.9						
COLA	College	63.31	337	eP	P	08 43 35.8	-0.8
RSO	Redoubt South	63.74	331	eP	P	08 43 39.4	0.0
SVW2	Sparrevohn	65.26	331	eP	P	08 43 48.0	-1.3
IMA	Indian Mountai	66.02	337	eP	P	08 43 53.3	-0.8
ESDC	Sonseca Array	79.40	52	P	P	08 45 12.4	-0.8
	comp=Z,1.9nm,0.8s,mb4.0,baz=282,slow=5.2,SNR=6.2						
BILL	Bilibino	81.51	338	eP	P	08 45 25.2	+1.4
	comp=Z,73nm,1.2s,mb5.4						
NB2	NORSAR Subarra	83.92	29	P	P	08 45 37.1	+1.0
	comp=Z,1.5nm,0.7s,mb3.9,baz=288,slow=5.3						
NOA	NORSAR Array B	83.92	29	P	P	08 45 37.5	+1.4
	comp=Z,3.3nm,0.9s,mb4.2,baz=288,slow=5.2,SNR=6.8						
NOA	NORSAR Array B	83.92	29	P	P	08 45 37.5	+1.4
DBIC	Dimbokro	85.31	84	P	P	08 45 45.1	+0.9
	comp=Z,4.4nm,1.1s,mb4.3,baz=246,slow=4.6,SNR=5.3						
DBIC				LR	LR	09 21 28.7	
	comp=Z,142nm,20.5s,baz=309,slow=34						
HFS	Hagfors	85.37	29	P	P	08 45 43.9	+0.6
	comp=Z,3.8nm,0.7s,mb4.5,baz=191,slow=7.6,SNR=6.9						
ARCES	ARCESS Array B	85.96	18	P	P	08 45 46.2	+0.2
	comp=Z,3.9nm,0.9s,mb4.3,baz=281,slow=6.2,SNR=6.1						
GERES	GERESS Array B	89.33	40	P	P	08 46 03.1	+0.5
	comp=Z,0.9nm,0.4s,mb4.2,baz=309,slow=8.5,SNR=3.1						
GERES	GERESS Array B	89.33	40	P	P	08 46 03.1	+0.5
FINES	FINESS Array B	90.28	25	P	P	08 46 07.3	+0.5
	comp=Z,2.0nm,0.9s,mb4.3,baz=349,slow=9.7,SNR=4.2						
FINES	FINESS Array B	90.28	25	P	P	08 46 07.3	+0.5
AKASG	Malin Array Be	97.48	33	P	P	08 46 39.3	-0.7
	comp=Z,1.5nm,0.7s,mb4.6,baz=297,slow=4.3,SNR=11						
SONM	Songino Array	116.29	347	PKhKP		08 51 46.3	
	comp=Z,0.4nm,0.8s,baz=315,slow=2.0,SNR=3.2						
SONM				PKP	PKPdf	08 51 52.0	+3.7
	comp=Z,0.7nm,0.7s,baz=306,slow=1.7,SNR=8.4						
STKA	Stephens Creek	128.39	240	PKP	PKPdf	08 52 13.5	+1.4
	comp=Z,1.8nm,0.6s,baz=93,slow=2.0,SNR=4.5						
STKA	Stephens Creek	128.39	240	PKP	PKPdf	08 52 13.5	+1.4
ENH	Enshi	131.43	335	ePKPdf	PKPdf	08 52 20.9	+3.0
ASAR	Alice Springs	136.01	250	PKP	PKPdf	08 52 27.9	+1.3
	comp=Z,0.7nm,0.8s,baz=104,slow=2.7,SNR=5.2						
ASPA	Alice Springs	136.01	250	eP	PKPdf	08 52 39.9	+13
LSA	Lhasa	136.39	356	ePKP	PKPdf	08 52 31.2	+4.0
CMAR	Chiang Mai Arr	146.02	342	PKPbc	PKPbc	08 52 48.1	+2.5
	comp=Z,27nm,0.9s,baz=337,slow=3.6,SNR=38						
HYB	Hyderabad	147.25	17	eP	PKPdf	08 52 51.0	+4.4
HYB	Hyderabad	147.25	17	i PKP	PKPdf	08 52 51.0	+4.4
NWAO	Narrogin (SRO)	147.71	230	PKPbc	PKPdf	08 52 50.2	+3.3
	comp=Z,12nm,1.0s,baz=199,slow=6.6,SNR=3.4						
NWAO	Narrogin (SRO)	147.71	230	PKPbc	PKPdf	08 52 50.2	+3.3

ISC 12 08:40:23.9±1.9**, 37.43N**±0.06×**72.8E**±0.4**, h153**^{km}±23^{km}**, n17, σ0^{s}61**/20**, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.74	8	P	P	08 41 34.3	-0.4
	SNR=51						
UCH	Uchtor	4.96	15	P	P	08 41 37.9	+0.1
	SNR=22						
KZA	Kyzart	5.00	21	P	P	08 41 38.5	+0.3
	SNR=24						
EKS2	Erkin-Say	5.27	8	P	P	08 41 41.7	-0.1
	SNR=8.0						
AAK	Ala-Archa	5.35	13	P	P	08 41 43.0	+0.1
	SNR=11						
ULHL	Ulahol	5.48	28	P	P	08 41 45.3	+0.7
	SNR=5.9						
DLH	Dalhousie	5.52	151	eP	P	08 41 46.0	+0.9
DLH				eS	S	08 42 49.0	+0.9
THN	Thein Dam	5.53	154	eP	P	08 41 44.9	-0.2
THN				eS	S	08 42 47.9	-0.3
CHMS	Chumysh	5.75	14	P	S	08 42 53.0	-0.6
	SNR=7.2						
SDNR	Sundarnagar	6.84	149	eP	P	08 42 02.2	-0.5
SDNR				eS	S	08 43 18.6	-1.0
KOLN	Koldanda	13.24	134	eP	P	08 43 25.8	-0.9
	5.5nm,0.3s						
GKN	Gorkha	13.68	130	eP	P	08 43 32.4	0.0
	37nm,0.4s						
KKN	Kakani	14.23	129	eP	P	08 43 38.9	-0.5
	12nm,0.5s						
DMN	Daman	14.25	130	eP	P	08 43 39.1	-0.6
	12nm,0.4s						
PKI	Pulchoki	14.46	129	eP	P	08 43 42.9	+0.5
	12nm,0.5s						
GUN	Gumba	14.52	127	eP	P	08 43 44.1	+1.0
	7.0nm,0.3s						
JIRN	Jiri	14.89	127	eP	P	08 43 48.3	+0.6
	17nm,0.4s						

IDC ***12*** *08:47:20.1±10.0, 0.41N×123.66E, h196^{km}±99^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.5/15, mbtmp4.0/6, Error ellipse: s-maj=251.0km s-min=18.0km az=69.0*

ISC 12 08:47:01.2±0.9**, 0.1N**±0.4×**122.4E**±0.7**, h33**^{km}**, n8, σ1^{s}13**/8**, mb4.1**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	16.13	142	eP	P	08 50 46.9	-0.3
	4.7nm,0.6s						
WRA	Warramunga Arr	23.07	150	P	P	08 52 05.3	+0.3
	13nm,0.7s,mb4.5,baz=344,slow=10,SNR=76						
WB2	Warramunga Arr	23.08	150	eP	P	08 52 05.3	+0.2
WB2				eS	Sx	08 56 59.7	
ASAR	Alice Springs	26.11	156	P	P	08 52 36.1	+1.9
	1.0nm,0.8s,mb3.4,baz=351,slow=7.6,SNR=8.5						
ASAR				PcP	PcP	08 55 58.4	-3.3
	0.4nm,0.6s,baz=356,slow=2.2,SNR=5.2						
STKA	Stephens Creek	36.60	152	P	P	08 54 04.0	-2.3
	2.0nm,0.5s,mb4.2,baz=349,slow=8.8,SNR=7.1						

SONM	**Songino Array**	**49.55**	**346**	P	**P**	**08 55 52.1**	**+1.1**
	0.5nm,0.6s,mb3.7,baz=152,slow=9.1,SNR=4.1						
SONM				pP	pP	08 56 36.2	+35
	0.7nm,0.7s,baz=217,slow=6.2,SNR=4.9						
ZAL	**Zalesovo**	**62.00**	**336**	P	**P**	**08 57 19.4**	**-1.0**
	1.0nm,0.7s,mb4.1,baz=309,slow=6.6,SNR=3.5						
FINES	**FINESS Array B**	**92.97**	**331**	P	**P**	**09 00 12.1**	**-0.1**
	1.8nm,0.8s,mb4.5,baz=108,slow=6.0,SNR=5.9						

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*IDC **12** 08:55:15.8±1.0, 17.38S×174.36W, mb4.4/7, mb1 4.6/7, mb1mx4.2/18, mbtmp4.4/7, Error ellipse: s-maj=38.5km s-min=19.9km az=129.0*

*NEIC **12** 08:55:16.7±0.6, 17.36S×174.33W, h10^{km}, mb4.7/5, Error ellipse: s-maj=18.8km s-min=12.3km az=140.0*

ISC 12 08:55:18.8±0.7**, 17.4S**±0.1×**174.4W**±0.1**, h33^{km}, n24, σ0^{s}92**/21**, mb4.6**/11**, 3C-1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**22.11**	**198**	P	**P**	**09 00 11.7**	**-1.1**
	8.1nm,0.4s,mb4.5,baz=187,slow=5.6,SNR=15						
THZ	**Tophouse**	**26.64**	**201**	*e*P*	**P**	**09 00 56.1**	**-0.3**
THZ	**Tophouse**	**26.64**	**201**	*e*P*	**P**	**09 00 56.1**	**-0.3**
LTZ	**Lake Taylor**	**27.76**	**201**	*e*P*	**P**	**09 01 07.7**	**+1.1**
LTZ	**Lake Taylor**	**27.76**	**201**	*e*P*	**P**	**09 01 07.7**	**+1.1**
RPZ	**Rata Peaks**	**29.01**	**202**	P	**P**	**09 01 18.3**	**+0.6**
	16nm,0.8s,mb4.8,baz=170,slow=13,SNR=3.4						
CTA	**Charters Tower**	**37.29**	**259**	P	**P**	**09 02 30.7**	**+1.0**
	5.5nm,0.7s,mb4.5,baz=90,slow=11,SNR=9.0						
CTAO	**Charters Tower**	**37.29**	**259**	*e*P	**P**	**09 02 30.3**	**+0.6**
	5.4nm,0.7s,mb4.5						
STKA	**Stephens Creek**	**42.23**	**242**	⇑*i*P	**P**	**09 03 11.2**	**+0.6**
	6.6nm,1.1s,mb4.2						
STKA	**Stephens Creek**	**42.23**	**242**	P	**P**	**09 03 11.0**	**+0.4**
	4.9nm,0.7s,mb4.3,baz=97,slow=9.3,SNR=13						
WB2	**Warramunga Arr**	**48.46**	**259**	⇑*i*P	**P**	**09 04 00.3**	**-0.1**
WRAB	**Tennant Creek**	**48.46**	**259**	*e*P	**P**	**09 03 59.6**	**-0.8**
	8.0nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	**48.47**	**259**	P	**P**	**09 04 00.5**	**0.0**
	4.5nm,0.4s,mb4.9,baz=98,slow=6.6,SNR=128						
ASAR	**Alice Springs**	**48.60**	**254**	P	**P**	**09 04 01.6**	**+0.2**
	50nm,0.7s,mb5.7,baz=89,slow=8.4,SNR=748						
ASPA	**Alice Springs**	**48.60**	**254**	⇓*i*P	**P**	**09 04 01.5**	**0.0**
KAKA	**Kakadu**	**51.41**	**267**	*e*P	**P**	**09 04 23.4**	**+0.4**
	9.3nm,0.6s,mb4.9						
MBWA	**Marble Bar**	**61.90**	**255**	*e*P	**P**	**09 05 35.2**	**-2.5**
QSPA	**South Pole Qui**	**72.69**	**180**	⇑*i*P	**P**	**09 06 44.8**	**+0.2**
	6.3nm,0.8s,mb4.6						
LAZ	**Ladron**	**82.06**	**50**	P	**P**	**09 07 35.5**	**-1.9**
PDAR	**Pinedale Array**	**84.37**	**42**	P	**P**	**09 07 50.2**	**+1.2**
	0.6nm,0.7s,mb3.8,baz=212,slow=3.2,SNR=5.0						
ILAR	**Eielson Array**	**84.55**	**11**	P	**P**	**09 07 50.1**	**+0.7**
	0.4nm,0.5s,mb3.8,baz=223,slow=5.5,SNR=16						
CLL	**Collm**	**145.62**	**352**	*e*PKP1	PKPbc	09 14 56.0	+1.7
BRTR	**Keskin Array B**	**147.01**	**318**	PKPbc	PKPdf	09 15 00.9	+4.6
	1.5nm,0.9s,baz=90,slow=3.7,SNR=5.2						
DAVOX	**Davos**	**150.45**	**354**	PKPbc	PKPdf	09 15 09.2	+7.7
	2.1nm,0.4s,baz=189,slow=5.4,SNR=4.7						

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*NIED **12** 09:24:00, 33.90N×142.50E, h5^{km}, Mw4.0 Best double couple: $M_0$1.18×10^{15} NP1:ϕ_s142°, δ63°, λ-93°. NP2: ϕ_s329°, δ27°, λ-84°.*

*IDC **12** 09:24:48.3±0.6, 33.93N×142.44E, mb3.9/14, mb1 4.1/17, mb1mx4.1/24, mbtmp4.0/17, ML4.0/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/23, Error ellipse: s-maj=19.3km s-min=15.3km az=95.0*

*JMA **12** 09:24:50.1±0.3, 33.94N×142.53E, h58^{km}, M3.6*

*MOS **12** 09:24:51.9±1.3, 34.34N×142.62E, h33^{km}, mb4.3/5, Error ellipse: s-maj=24.4km s-min=13.1km az=115.5*

*BJI **12** 09:24:51.1, 33.87N×142.39E, h36^{km}, mB4.8, mb4.3, Ms4.2, Msz3.7*

*NEIC **12** 09:24:53.0±4.8, 33.92N×142.35E, h31^{km}±33^{km}, mb4.6/3, MW4.0(NIED), Error ellipse: s-maj=15.6km s-min=9.7km az=87.0*

ISC 12 09:24:47.3±1.6**, 33.87N**±0.04×**142.48E**±0.05**, h7^{km}**±10^{km}**, n54, σ0^{s}91**/61**, mb4.0**/19**, MS4.1**/1**, 2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.47**	**303**	P	**Pn**	**09 25 14.6**	**+0.2**
BSO1				S	**Sb**	**09 25 33.6**	**+0.2**
BSO2	**Boso 2**	**1.68**	**302**	*e*S	**Sn**	**09 25 38.4**	**-0.9**
BSO3	**Boso 3**	**1.88**	**300**	P	**Pn**	**09 25 20.9**	**+0.7**
BSO3				*e*S	**Sn**	**09 25 45.0**	**+0.6**
BSO4	**Boso 4**	**2.09**	**303**	P	**Pn**	**09 25 24.3**	**+1.0**
BSO4				S	**Sn**	**09 25 50.4**	**+0.5**
CHOJ	**Chosi**	**2.27**	**324**	P	**Pn**	**09 25 25.9**	**+0.1**
JHJ2	**Mitsune**	**2.35**	**252**	P	**Pn**	**09 25 28.6**	**+1.7**
JHJ2				*e*S	**Sn**	**09 25 56.4**	**+0.1**
JHJ	**Hachijo jima 2**	**2.37**	**252**	Pn	**Pn**	**09 25 28.6**	**+1.3**
	334nm,0.3s,baz=106,slow=4.0,SNR=160						
JHJ				Sn	**Sn**	**09 25 55.9**	**-1.1**
	214nm,0.3s,baz=58,slow=23,SNR=28						
JIM2	**Oshima 3**	**2.66**	**289**	P	**Pn**	**09 25 31.1**	**-0.3**
JOD2	**Odawara 2**	**3.12**	**297**	P	**Pn**	**09 25 37.4**	**-0.6**
JAG	**Ashikaga**	**3.56**	**317**	P	**Pn**	**09 25 43.1**	**-1.1**
JYN	**Shimob**	**3.63**	**298**	P	**Pn**	**09 25 45.0**	**-0.1**
JRY	**Ryogami san**	**3.64**	**307**	P	**Pn**	**09 25 44.7**	**-0.6**
MAJO	**Matsushiro**	**4.40**	**309**	*e*P	**Pn**	**09 25 57.5**	**+1.4**
MAT	**Matsushiro**	**4.40**	**309**	*e*P	**Pn**	**09 25 55.0**	**-1.1**
MAT				*e*S	**Sn**	**09 26 44.0**	**-4.3**
MAT	**Matsushiro**	**4.40**	**309**	P	**Pn**	**09 25 54.1**	**-2.0**
MAT				S	**Sn**	**09 26 44.3**	**-4.0**
CBIJ	**Chichi jima**	**6.75**	**182**	Pn	**Pn**	**09 26 28.6**	**-0.8**
	6.2nm,0.3s,baz=304,slow=22,SNR=4.5						
CBIJ				Sn	**Sn**	**09 27 40.4**	**-7.0**
	3.0nm,0.3s,baz=277,slow=21,SNR=2.2						
ASAJ	**Asahikawa**	**10.24**	**0**	P	**P**	**09 27 12.1**	**-5.6**
ASAJ						09 28 57.1	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**10.24**	**0**	Pn	**P**	**09 27 12.1**	**-5.6**
	comp=Z,1.2nm,0.3s,baz=241,slow=31,SNR=9.2						
ASAJ				Sn	**S**	**09 28 57.0**	**-17**
	comp=Z,0.4nm,0.3s,baz=24,slow=28,SNR=2.6						
YSS	**Yuzh-Sakhalins**	**13.07**	**1**	⇓*e*P	**P**	**09 27 50.0**	**-6.1**
JOW	**Kunigami**	**14.12**	**244**	LR	LR	09 32 55.2	
	comp=Z,95nm,21.1s,baz=330,slow=34						
HHC	**Hu-ho-hao-te**	**25.45**	**295**	*e*P	**P**	**09 30 18.6**	**+1.3**
HHC				AP	pP	09 30 30.1	+11
HHC				XP	sP	09 30 36.1	+16
HHC				PP	PP	09 30 56.5	+0.2
HHC				PCP	PcP	09 33 45.5	-4.7
HHC				S	**S**	**09 34 44.2**	**+2.2**
HHC				SCP		09 37 22.5	
HHC				SCS	ScS	09 41 09.1	-7.1
HHC				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.3						
HHC				AMB	AMB		
	comp=Z,60nm,5.4s						
HHC				LR	LR		
	comp=N,266nm,13.2s,MS4.1						
HHC				LR	LR		
	comp=E,216nm,12.0s,MS4.1						
HHC				LR	LR		
	comp=Z,152nm,18.0s						
XAN	**Xi'an**	**27.77**	**280**	P	**P**	**09 30 38.3**	**-0.4**
XAN				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.2						
ENH	**Enshi**	**28.12**	**272**	*e*P	**P**	**09 30 39.9**	**-2.0**
	comp=Z,6.6nm,0.9s,mb4.3						
SONM	**Songino Array**	**30.35**	**308**	P	**P**	**09 31 02.7**	**+0.9**
	comp=Z,1.0nm,0.5s,mb3.8,baz=105,slow=9.0,SNR=9.3						
CMAR	**Chiang Mai Arr**	**41.66**	**260**	P	**P**	**09 32 38.6**	**+0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.66**	**260**	P	**P**	**09 32 38.5**	**+0.4**
	comp=Z,1.2nm,0.4s,mb3.9,baz=50,slow=7.1,SNR=4.8						
WMQ	**Urumqi**	**43.11**	**300**	*e*P	**P**	**09 32 50.2**	**+0.4**
ZAL	**Zalesovo**	**44.73**	**315**	P	**P**	**09 33 02.7**	**-0.1**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL	**Zalesovo**	**44.73**	**315**	P	**P**	**09 33 02.7**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=146,slow=2.5,SNR=5.0						
ZAL	**Zalesovo**	**44.73**	**315**	P	**P**	**09 33 02.7**	**-0.1**
KURK	**Kurchatov**	**48.61**	**310**	*e*P	**P**	**09 33 31.5**	**-1.8**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KURK	**Kurchatov**	**48.61**	**310**	*e*P	**P**	**09 33 31.5**	**-1.8**
	comp=Z,4.7nm,0.6s,mb4.7						
ILAR	**Eielson Array**	**51.73**	**31**	P	**P**	**09 33 55.9**	**-1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR	**Eielson Array**	**51.73**	**31**	P	**P**	**09 33 55.9**	**-1.1**
	comp=Z,1.1nm,1.1s,mb3.7,baz=251,slow=6.2,SNR=5.2						
CHKZ	**Chkalovo**	**53.13**	**315**	P	**P**	**09 34 06.9**	**-0.8**
BVAR	**Borovoye Array**	**53.37**	**314**	P	**P**	**09 34 08.7**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=286,slow=42,SNR=3.2						
WRAB	**Tennant Creek**	**54.06**	**189**	*e*P	**P**	**09 34 14.7**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**54.06**	**189**	*e*P	**P**	**09 34 14.7**	**-0.2**
	comp=Z,7.2nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	**54.06**	**189**	⇓*i*P	**P**	**09 34 14.5**	**-0.4**
WRA	**Warramunga Arr**	**54.07**	**189**	P	**P**	**09 34 14.6**	**-0.3**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WRA	**Warramunga Arr**	**54.07**	**189**	P	**P**	**09 34 14.6**	**-0.4**
	comp=Z,4.3nm,0.5s,mb4.6,baz=7.7,slow=7.7,SNR=39						
ASAR	**Alice Springs**	**57.79**	**189**	P	**P**	**09 34 41.4**	**-0.4**
	comp=Z,2.7nm,0.9s,mb4.3,baz=11,slow=7.6,SNR=21						
ASPA	**Alice Springs**	**57.79**	**189**	*e*P	**P**	**09 34 42.4**	**+0.6**
STKA	**Stephens Creek**	**65.40**	**181**	P	**P**	**09 35 33.6**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.1,baz=147,slow=21,SNR=2.5						
FINES	**FINESS Array B**	**72.02**	**333**	P	**P**	**09 36 12.6**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**72.02**	**333**	P	**P**	**09 36 12.6**	**-0.8**
	comp=Z,1.3nm,0.8s,mb3.9,baz=54,slow=16,SNR=3.1						
NVAR	**Mina Array Bea**	**76.19**	**53**	P	**P**	**09 36 39.3**	**+1.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=288,slow=3.6,SNR=6.5						
NOA	**NORSAR Array B**	**77.44**	**338**	P	**P**	**09 36 44.1**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**77.44**	**338**	P	**P**	**09 36 44.1**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.9,baz=216,slow=20,SNR=2.8						
PDAR	**Pinedale Array**	**79.27**	**45**	P	**P**	**09 36 55.6**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=304,slow=6.5,SNR=3.3						
BRTR	**Keskin Array B**	**81.61**	**312**	P	**P**	**09 37 07.5**	**+0.2**
	comp=Z,0.8nm,0.8s,mb3.7,baz=104,slow=5.9,SNR=3.4						
TXAR	**Lajitas Array**	**91.35**	**53**	P	**P**	**09 37 56.3**	**+1.1**
	comp=Z,1.4nm,1.1s,mb4.2,baz=302,slow=3.2,SNR=6.9						
LPAZ	**La Paz**	**147.39**	**65**	PKP2	PKPab	09 44 37.0	+0.6
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LPAZ	**La Paz**	**147.39**	**65**	PKPbc	PKPdf	09 44 37.0	+4.4
	comp=Z,0.5nm,0.5s,baz=358,slow=7.2,SNR=3.9						

IDC 12 09:27:56.1±1.7**, 8.81N×94.08E, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/18**, mbtmp3.5**/5**, ML3.9**/1**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.7**/17**, Error ellipse: s-maj=67.4km s-min=24.7km az=69.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.69**	**26**	Pn	P	09 30 34.4	+0.7
	0.3nm,0.3s,baz=212,slow=14,SNR=5.8						
SONM	**Songino Array**	**40.27**	**13**	P	P	09 35 35.0	-1.5
	0.1nm,0.4s,baz=321,slow=43,SNR=2.2						
ZAL	**Zalesovo**	**45.62**	**352**	P	P	09 36 17.9	-2.0
	1.8nm,0.3s,baz=170,slow=2.8,SNR=4.2						
WRA	**Warramunga Arr**	**48.85**	**126**	P	P	09 36 43.2	-2.6
	0.4nm,0.5s,baz=306,slow=8.4,SNR=6.6						
CBIJ	**Chichi jima**	**48.90**	**62**	LR	LR	09 55 59.8	
	comp=Z,133nm,18.6s,baz=98,slow=34						
ASAR	**Alice Springs**	**50.56**	**131**	P	P	09 36 57.3	-1.5
	0.3nm,0.8s,baz=314,slow=7.5,SNR=3.0						
PLCA	**Paso Flores**	**145.40**	**201**	PKPbc	PKPbc	09 47 35.5	-1.3
	1.6nm,0.9s,baz=198,slow=3.2,SNR=4.4						

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*ISK **12** 09:39:11.7, 38.64N×26.57E, h25^{km}, MD3.4, ML3.4*

*CSEM **12** 09:39:11.8±0.1, 38.65N×26.60E, h25^{km}, MD3.4, Error ellipse: s-maj=3.3km s-min=2.0km az=60.0*

*ATH **12** 09:39:13.0, 38.73N×26.42E, h32^{km}, MD3.4/3*

ISC 12 09:39:11.0±0.9**, 38.73N**±0.04×**26.52E**±0.06**, h8^{km}**±7^{km}**, n28, σ0^{s}82**/38**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.53**	**130**	PG	**Pg**	**09 39 21.2**	**-0.6**
BLCB				SG	**Sg**	**09 39 28.9**	**-0.1**
PRK	**Paraskevi**	**0.55**	**340**	*e*PN	**Pn**	**09 39 24.1**	**-0.7**
PRK				*e*SN	**Sn**	**09 39 32.7**	**-1.4**
AYVA	**Ayvalik**	**0.59**	**13**	*i* P	**Pg**	**09 39 23.9**	**+0.9**
AYVA				*i* S	**Sg**	**09 39 34.4**	**+3.5**
IZM	**Izmir**	**0.67**	**119**	PG	**Pg**	**09 39 24.5**	**0.0**
IZM				SG	**Sg**	**09 39 33.5**	**0.0**
KDAG	**Bornova**	**0.67**	**119**	*i* P	**Pg**	**09 39 24.5**	**0.0**
KDAG				*i* S	**Sg**	**09 39 32.9**	**-0.6**
AKS	**Akhisar**	**1.02**	**81**	PG	**Pg**	**09 39 30.8**	**-0.7**
EZN	**Ezine**	**1.11**	**352**	PN	**Pn**	**09 39 33.5**	**+0.8**
BALB	**Balikesir**	**1.39**	**49**	PN	**Pn**	**09 39 36.7**	**-0.1**
BTOK	**Tokmak**	**1.56**	**48**	*i* P	**Pn**	**09 39 39.8**	**+0.5**
BTOK				*i* S	**Sb**	**09 39 59.2**	**-0.3**
MANT	**Manisa**	**1.61**	**98**	*i* P	**Pn**	**09 39 41.5**	**+1.5**
MANT				*i* S	**Sb**	**09 40 02.0**	**+1.0**
LPK	**Lapseki**	**1.65**	**6**	PN	**Pn**	**09 39 41.2**	**+0.7**
BDRM	**Kayabasi**	**1.81**	**156**	*i* P	**Pn**	**09 39 44.7**	**+1.8**
BDRM				*i* S	**Sn**	**09 40 14.3**	**+8.1**
APE	**Apeiranthos**	**1.83**	**206**	*e*PN	**Pn**	**09 39 41.8**	**-1.3**
APE	**Apeiranthos**	**1.83**	**206**	*e*PN	**Pn**	**09 39 44.0**	**+0.9**
DST	**Dursunbey**	**1.86**	**61**	*e*PN	**Pn**	**09 39 42.8**	**-0.6**
EDC	**Edincik**	**1.92**	**32**	*e*PN	**Pn**	**09 39 44.1**	**-0.2**
BNT	**Bandirma**	**1.95**	**33**	*e*PN	**Pn**	**09 39 44.2**	**-0.6**
MRMT	**Marmara Adasi**	**2.05**	**24**	*e*PN	**Pn**	**09 39 45.5**	**-0.7**
KCT	**Karacabey**	**2.09**	**42**	*e*PN	**Pn**	**09 39 47.0**	**+0.2**
MFT	**Murefte**	**2.14**	**16**	*e*PN	**Pn**	**09 39 47.1**	**-0.4**
DNZL	**Cakiroluk**	**2.24**	**117**	*i* P	**Pn**	**09 39 48.8**	**-0.1**
DNZL				*i* S	**Sn**	**09 40 23.1**	**+6.0**
ORLT	**Orhaneli**	**2.26**	**54**	*e*PN	**Pn**	**09 39 49.1**	**-0.1**
ULDT	**Uludag**	**2.47**	**54**	*i* P	**Pn**	**09 39 57.3**	**+5.1**
ULDT				*i* S	**Sn**	**09 40 27.9**	**+5.1**
RDO	**Rodhopi**	**2.53**	**343**	*e*PN	**Pn**	**09 39 54.1**	**+1.0**
YLV	**Yalova**	**2.87**	**49**	*e*PN	**Pn**	**09 39 57.6**	**-0.3**
FETY	**Fethiye**	**2.92**	**135**	*e*PN	**Pn**	**09 39 56.2**	**-2.4**
ISK	**Istanbul-Kandi**	**3.04**	**39**	*e*PN	**Pn**	**09 40 01.0**	**+0.6**
EDRB	**Edirne**	**3.12**	**3**	*e*PN	**Pn**	**09 40 01.5**	**0.0**

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*NIED **12** 09:59:00, 33.90N×142.50E, h5^{km}, Mw3.6 Best double couple: $M_0$2.77×10^{14} NP1:ϕ_s162°, δ52°, λ-99°. NP2: ϕ_s355°, δ39°, λ-79°.*

*JMA **12** 09:59:46.8±0.5, 33.91N×142.52E, h22^{km}, M3.6*

*IDC **12** 10:00:00.5±1.2, 32.29N×138.57E, mb3.8/3, mb1 4.1/3, mb1mx3.6/20, mbtmp3.8/3, Error ellipse: s-maj=33.7km s-min=23.0km az=113.0*

ISC 12 09:59:48.2±2.0**, 33.94N**±0.05×**142.48E**±0.08**, h31^{km}**±18^{km}**, n16, σ1^{s}03**/26**, mb3.8**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.44**	**300**	P	**Pn**	**10 00 12.6**	**+0.1**
BSO1				*e*S	**Sn**	**10 00 31.4**	**+0.9**
BSO3	**Boso 3**	**1.85**	**298**	P	**Pn**	**10 00 19.2**	**+0.8**
BSO3				*e*S	**Sn**	**10 00 43.6**	**+2.7**
BSO4	**Boso 4**	**2.06**	**301**	P	**Pn**	**10 00 23.1**	**+1.7**
BSO4				*e*S	**Sn**	**10 00 48.4**	**+2.1**
JHJ2	**Mitsune**	**2.38**	**250**	P	**Pn**	**10 00 26.4**	**+0.5**
JHJ2				*e*S	**Sn**	**10 00 54.3**	**0.0**
JHJ	**Hachijo jima 2**	**2.40**	**251**	Pn	**Pn**	**10 00 26.6**	**+0.3**
	133nm,0.3s,baz=231,slow=13,SNR=74						
JHJ				Sn	**Sn**	**10 00 54.2**	**-0.7**
	135nm,0.3s,baz=58,slow=22,SNR=26						
JIM2	**Oshima 3**	**2.64**	**288**	P	**Pn**	**10 00 28.6**	**-1.2**
JHO	**Hitachi**	**3.09**	**330**	P	**Pn**	**10 00 34.9**	**-1.3**
JOD2	**Odawara 2**	**3.10**	**296**	P	**Pn**	**10 00 35.8**	**-0.4**
JOD2				*e*S	**Sn**	**10 01 11.1**	**-1.5**
JHU	**Hanno**	**3.25**	**307**	P	**Pn**	**10 00 38.0**	**-0.4**
JHU				*e*S	**Sn**	**10 01 15.4**	**-1.1**
JAG	**Ashikaga**	**3.51**	**316**	P	**Pn**	**10 00 41.6**	**-0.5**
JAG				*e*S	**Sn**	**10 01 23.2**	**+0.1**
JRY	**Ryogami san**	**3.60**	**306**	P	**Pn**	**10 00 43.1**	**-0.2**
JYN	**Shimob**	**3.60**	**297**	P	**Pn**	**10 00 44.6**	**+1.3**
JYN				*e*S	**Sn**	**10 01 24.2**	**-1.1**
MAT	**Matsushiro**	**4.36**	**308**	P	**Pn**	**10 00 53.3**	**-0.8**
MAT				S	**Sn**	**10 01 43.8**	**-0.8**
SONM	**Songino Array**	**30.31**	**308**	P	**P**	**10 06 00.7**	**+1.7**
	0.6nm,0.6s,mb3.5,baz=106,slow=8.8,SNR=6.2						
WRA	**Warramunga Arr**	**54.14**	**189**	P	**P**	**10 09 12.4**	**-0.4**
	1.4nm,0.4s,mb4.2,baz=6.1,slow=7.5,SNR=28						
ASAR	**Alice Springs**	**57.86**	**189**	P	**P**	**10 09 39.4**	**-0.2**
	0.5nm,0.6s,mb3.7,baz=360,slow=6.2,SNR=8.3						

JMA 12 10:04:36.7±0.5**, 34.20N×142.43E, h29^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.28**	**291**	P	Pn	10 04 59.2	+0.2
BSO1				*e*S	Sn	10 05 15.1	-0.2
BSO2	**Boso 2**	**1.49**	**292**	*e*S	Sn	10 05 21.6	+1.1
BSO3	**Boso 3**	**1.69**	**291**	*e*S	Sn	10 05 27.6	+1.8
BSO4	**Boso 4**	**1.90**	**295**	P	Pn	10 05 09.0	+1.3
CHOJ	**Chosi**	**1.98**	**320**	P	Pn	10 05 10.2	+1.3
JHJ2	**Mitsune**	**2.44**	**244**	P	Pn	10 05 16.6	+1.1
JHJ2				*e*S	Sn	10 05 43.9	-0.7
JIM2	**Oshima 3**	**2.53**	**283**	P	Pn	10 05 17.0	+0.2
JOD2	**Odawara 2**	**2.95**	**292**	P	Pn	10 05 22.5	-0.3
JAG	**Ashikaga**	**3.29**	**313**	P	Pn	10 05 27.5	-0.2
JFK	**Kawauchi**	**3.40**	**339**	P	Pn	10 05 27.9	-1.3
JRY	**Ryogami san**	**3.41**	**303**	P	Pn	10 05 29.3	-0.1

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*SNSN **12** 10:41:24.0, 27.04N×34.81E, Ml2.2*

*CSEM **12** 10:41:24.1±0.1, 26.87N×34.74E, h30^{km}, ML3.1, Error ellipse: s-maj=3.6km s-min=2.7km az=102.0*

*HLW **12** 10:41:25.7, 26.83N×34.63E, h24^{km}, Mb3.1*

ISC 12 10:41:23.6±1.5**, 26.84N**±0.04×**34.74E**±0.08**, h29^{km}**±16^{km}**, n16, σ0^{s}57**/18**, 5C-2D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSFG		**0.78**	**249**	⇑P	**Pn**	**10 41 39.0**	**+0.2**
HSFG				S	**Sb**	**10 41 48.5**	**-0.3**
HHRG	**Al Ghardaqah**	**1.11**	**290**	⇑P	**Pn**	**10 41 43.6**	**+0.1**
HQSR		**1.13**	**197**	⇑P	**Pn**	**10 41 44.5**	**+0.7**
DBAS	**Duba**	**1.16**	**71**	P	**Pn**	**10 41 44.0**	**-0.2**
AYUS	**'Aynunah**	**1.42**	**19**	P	**Pn**	**10 41 47.1**	**-0.8**
ZEIT		**1.48**	**314**	⇓P	**Pn**	**10 41 48.8**	**0.0**
TAYS	**Tayyib Ism**	**1.71**	**4**	P	**Pn**	**10 41 50.9**	**-1.0**
TR2		**1.78**	**330**	⇓P	**Pn**	**10 41 53.2**	**+0.2**
TR2		**1.78**	**330**	P	**Pn**	**10 41 53.2**	**+0.1**
HKAT	**Jabal Katrina**	**1.80**	**338**	⇑P	**Pn**	**10 41 53.6**	**+0.3**
EMRS	**Mersa Alam**	**1.82**	**177**	⇑P	**Pn**	**10 41 54.4**	**+0.7**
EMRS				S	**Sn**	**10 42 15.0**	**-1.0**
TBKS	**Tabuk**	**2.11**	**49**	P	**Pn**	**10 41 58.6**	**+0.8**
HAQS	**Haql**	**2.21**	**4**	P	**Pn**	**10 41 58.7**	**-0.5**
JMQS	**Jabal Moqyreh**	**2.27**	**26**	P	**Pn**	**10 42 00.4**	**+0.3**
JMOS	**Jabal al Moall**	**2.34**	**8**	P	**Pn**	**10 42 00.9**	**-0.1**
ALWS	**Ilw as Safayha**	**2.47**	**7**	P	**Pn**	**10 42 03.7**	**+0.7**

JMA 12 11:06:20.0±0.6**, 33.91N×142.72E, h31^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.62**	**298**	P	Pn	11 06 47.3	+0.4
BSO1				S	Sn	11 07 08.1	+1.1
BSO3	**Boso 3**	**2.03**	**297**	P	Pn	11 06 53.7	+0.9
BSO3				S	Sn	11 07 17.8	+0.4
JHJ2	**Mitsune**	**2.55**	**253**	P	Pn	11 07 01.0	+0.7
JHJ2				S	Sn	11 07 29.5	-1.1
JIM2	**Oshima 3**	**2.84**	**287**	P	Pn	11 07 05.4	+1.1
JIM2				S	Sn	11 07 38.3	+0.4
JOD2	**Odawara 2**	**3.29**	**295**	P	Pn	11 07 10.4	-0.3
JOD2				S	Sn	11 07 48.4	-0.8
JAG	**Ashikaga**	**3.67**	**314**	P	Pn	11 07 17.2	+1.1
JAG				S	Sn	11 07 57.1	-1.7
JYN	**Shimob**	**3.79**	**296**	P	Pn	11 07 19.3	+1.5
JYN				S	Sn	11 08 01.3	-0.5
JMM	**Marumori**	**4.25**	**339**	P	Pn	11 07 23.4	-0.9
JMM				S	Sn	11 08 09.2	-4.3

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*MDD **12** 11:24:46.2±2.5, 35.42N×11.62W, mb4.4/5, Error ellipse: s-maj=24.3km s-min=19.8km az=98.0, PRXIMO*

*CSEM **12** 11:24:48.2±0.5, 35.31N×11.37W, h2^{km}, ML3.5/8, Error ellipse: s-maj=10.3km s-min=8.4km az=106.0*

INMG 12 11:24:47.9±0.7**, 35.35N×11.64W, h10^{km}**±55^{km}**, ML2.5, Error ellipse: s-maj=55.5km s-min=6.3km az=49.0, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**3.21**	**46**	*e*Pn	Pn	11 25 36.3	-3.2
PTEO				*e*Sn	Sn	11 26 13.0	-5.2
	7.7nm,0.2s						
PTEO	**Sao Teotonio**	**3.21**	**46**	*e*Pn	Pn	11 25 36.3	-3.2
PTEO				*e*Sn	Sn	11 26 13.0	-5.2
	7.7nm,0.2s						
PALC	**Alcoutim**	**3.97**	**57**	Pn	Pn	11 25 46.0	-4.1
PBEJ	**Beja**	**4.04**	**48**	*e*Pn	Pn	11 25 47.4	-3.8
PBEJ				*e*Sn	Sn	11 26 32.2	-6.9
	3.6nm,0.2s						
PBEJ	**Beja**	**4.04**	**48**	Pn	Pn	11 25 47.2	-4.0
PBEJ				Sn	Sn	11 26 32.1	-7.0
PLOU	**Loures**	**4.05**	**29**	*e*Pn	Pn	11 25 47.7	-3.6
PLOU				*e*Sn	Sn	11 26 32.5	-6.9
	15nm,0.2s						
PLOU	**Loures**	**4.05**	**29**	*e*Pn	Pn	11 25 47.7	-3.6
PLOU				*e*Sn	Sn	11 26 32.5	-6.9
	15nm,0.2s						
MOE	**Montemor**	**4.12**	**39**	*e*Pn	Pn	11 25 48.9	-3.4
MOE				*e*Sn	Sn	11 26 34.3	-6.8
EMIN	**Mina Concepcio**	**4.67**	**57**	Pn	Pn	11 25 56.0	-4.2
	2.5nm,0.1s,SNR=35						
EMIN				Sn	Sn	11 26 47.0	-8.0
	1.3nm,0.1s,SNR=5.0						
EMIN	**Mina Concepcio**	**4.67**	**57**	Pn	Pn	11 25 56.0	-4.1
	2.5nm,0.1s,SNR=35						
EMIN				Sn	Sn	11 26 47.0	-8.0
	1.3nm,0.1s,SNR=5.0						
ESPR	**Espera**	**4.92**	**70**	Pn	Pn	11 25 59.8	-3.9
	7.3nm,0.4s,SNR=18						
ESPR				Sn	Sn	11 26 54.6	-6.8
	14nm,0.3s,SNR=5.0						
ESPR	**Espera**	**4.92**	**70**	Pn	Pn	11 25 59.8	-3.9
	7.3nm,0.4s,SNR=18						
ESPR				Sn	Sn	11 26 54.6	-6.8
	14nm,0.3s,SNR=5.0						
EBAD	**Badajoz**	**5.02**	**46**	Pn	Pn	11 26 00.8	-4.4
	3.5nm,0.1s,SNR=10						
EBAD				Sn	Sn	11 26 56.1	-7.9
	9.2nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	**5.02**	**46**	Pn	Pn	11 26 00.8	-4.4
	3.5nm,0.1s,SNR=10						
EBAD				Sn	Sn	11 26 56.1	-7.9
	9.2nm,0.2s,SNR=5.0						
PCBR	**Castelo Branco**	**5.57**	**35**	*e*Pn	Pn	11 26 08.2	-4.6
PCBR				*e*Sn	Sn	11 27 08.7	-8.9
	2.7nm,0.1s						
PCBR	**Castelo Branco**	**5.57**	**35**	Pn	Pn	11 26 08.6	-4.2
PCBR				Sn	Sn	11 27 08.9	-8.7
PCBR	**Castelo Branco**	**5.57**	**35**	*e*Pn	Pn	11 26 08.2	-4.6
PCBR				*e*Sn	Sn	11 27 08.7	-8.9
	2.7nm,0.1s						
MTE	**Manteigas**	**5.99**	**31**	*e*Sn	Sn	11 27 18.9	-9.3
	4.0nm,0.2s						
PVIS	**Viseu**	**6.12**	**28**	*e*Sn	Sn	11 27 22.0	-9.4
	4.7nm,0.1s						
PVIS	**Viseu**	**6.12**	**28**	Sn	Sn	11 27 21.9	-9.5
EADA	**Adamuz**	**6.33**	**62**	Pn	Pn	11 26 18.6	-4.9
	2.0nm,0.1s,SNR=36						
EADA				Sn	Sn	11 27 26.7	-10
	0.9nm,0.1s,SNR=5.0						
EADA	**Adamuz**	**6.33**	**62**	Pn	Pn	11 26 18.6	-5.0
	2.0nm,0.1s,SNR=36						
EADA				Sn	Sn	11 27 26.7	-10
	0.9nm,0.1s,SNR=5.0						
ELOB	**Lobios**	**7.08**	**22**	Pn	Pn	11 26 28.8	-5.3
	0.8nm,0.3s,SNR=6.3						
ELOB				Sn	Sn	11 27 44.4	-11
	1.1nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**7.47**	**52**	Pn	Pn	11 26 34.2	-5.4
	0.6nm,0.2s,baz=235,slow=13,SNR=6.8						
ESDC				Sn	Sn	11 27 55.1	-10
	0.5nm,0.2s,baz=243,slow=24,SNR=5.2						
ESDC	**Sonseca Array**	**7.47**	**52**	Pn	Pn	11 26 34.2	-5.4
	0.6nm,0.2s,SNR=6.8						
ESDC				Sn	Sn	11 27 55.1	-10
	0.5nm,0.2s,SNR=5.2						
PBRG	**Braganca**	**7.50**	**29**	*e*Sn	Sn	11 27 54.6	-11

PBRG	**Braganca**	7.50	29	Sn	Sn	11 27 54.5	-11
ECAL	**Calabor**	7.62	29	Pn	Pn	11 26 36.8	-4.9
	2.8nm,0.5s,SNR=7.9						
ECAL				Sn	Sn	11 27 55.5	-13
	4.5nm,0.5s,SNR=7.9						
ECAL	**Calabor**	7.62	29	Pn	Pn	11 26 36.8	-4.8
	SNR=7.9						
EMAZ	**Mazaricos**	7.87	14	Sn	Sn	11 28 01.7	-13
	1.7nm,0.2s,SNR=7.9						

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*NEIC **12** 11:34:27.0,37.15S×176.94E,h222^{km},After WEL.*

WEL 12 11:34:26.4±0.3**,37.11S×176.92E,h222**^{km}±3^{km}**,ML3.7**/13**,1D,Error ellipse: s-maj=4.6km s-min=3.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	1.16	173	P	P	11 34 59.6	-0.2
URZ	**Urewera**	1.16	173	PN	P	11 34 59.5	-0.2
URZ				SN	S	11 35 25.0	-0.6
MXZ	**Matakaoa Point**	1.20	113	*e*P	P	11 34 59.7	-0.3
MXZ				S	S	11 35 25.0	-1.0
MXZ	**Matakaoa Point**	1.20	113	PN	P	11 34 59.6	-0.4
MXZ				SN	S	11 35 25.0	-1.0
MWZ	**Matawai**	1.32	159	P	P	11 35 01.3	+0.3
MWZ				S	S	11 35 27.6	-0.1
MWZ	**Matawai**	1.32	159	PN	P	11 35 01.0	0.0
MWZ				SN	S	11 35 27.6	-0.1
PUZ	**Puketiti**	1.44	133	P	P	11 35 01.9	0.0
PUZ				S	S	11 35 28.2	-1.1
PUZ	**Puketiti**	1.44	133	⇓PN	P	11 35 01.8	-0.1
PUZ				SN	S	11 35 28.1	-1.2
KNZ	**Kokohu**	2.00	163	*e*P	P	11 35 06.8	-0.1
KNZ	**Kokohu**	2.00	163	PN	P	11 35 06.8	-0.1
KNZ				SN	S	11 35 37.4	-0.8
BKZ	**Black Stump Fm**	2.09	189	*e*P	P	11 35 07.5	-0.3
BKZ	**Black Stump Fm**	2.09	189	PN	P	11 35 07.4	-0.4
NGZ	**Ngauruhoe**	2.31	206	PN	P	11 35 11.2	+1.0
TUVZ	**Tukino**	2.38	204	P	P	11 35 11.4	+0.6
TUVZ	**Tukino**	2.38	204	PN	P	11 35 11.2	+0.3
PWZ	**Pawanui**	2.92	181	*e*P	P	11 35 16.3	-0.4
PWZ	**Pawanui**	2.92	181	PN	P	11 35 15.8	-1.0
PWZ				SN	S	11 35 54.8	-0.9
TSZ	**Takapari Road**	3.04	194	P	P	11 35 17.3	-0.9
TSZ	**Takapari Road**	3.04	194	PN	P	11 35 17.1	-1.0
TSZ				SN	S	11 35 57.0	-1.3
WAZ	**Wanganui**	3.05	209	*e*P	P	11 35 17.9	-0.3
WAZ	**Wanganui**	3.05	209	PN	P	11 35 17.9	-0.3
WAZ				SN	S	11 35 59.6	+1.1
BFZ	**Birch Farm**	3.61	188	*e*P	P	11 35 24.0	-0.8
BFZ	**Birch Farm**	3.61	188	PN	P	11 35 23.8	-1.1
BFZ				SN	S	11 36 07.5	-2.6
MRZ	**Mangatainoka R**	3.70	196	*e*P	P	11 35 24.3	-1.7
MRZ	**Mangatainoka R**	3.70	196	PN	P	11 35 24.3	-1.7
KIW	**Kapiti Island**	4.07	202	PN	P	11 35 28.2	-2.2
MTW	**Mount Morrison**	4.20	195	PN	P	11 35 29.7	-2.3
CAW	**Cannon Point**	4.25	199	P	P	11 35 30.3	-2.3
CAW	**Cannon Point**	4.25	199	PN	P	11 35 30.1	-2.5
MRW	**Makara Radio**	4.46	202	PN	P	11 35 32.7	-2.6
MSWZ	**Moikau Station**	4.50	196	PN	P	11 35 32.9	-2.8
BHW	**Baring Head**	4.58	200	PN	P	11 35 33.9	-2.8
QRZ	**Quartz Range**	5.05	221	*e*P	P	11 35 40.0	-2.6
THZ	**Tophouse**	5.59	213	*e*P	P	11 35 46.6	-2.9
THZ	**Tophouse**	5.59	213	PN	P	11 35 46.5	-3.0
KHZ	**Kahutara**	5.91	205	*e*P	P	11 35 50.3	-3.2
KHZ	**Kahutara**	5.91	205	PN	P	11 35 50.3	-3.2
LTZ	**Lake Taylor**	6.70	211	*e*P	P	11 36 00.6	-3.1
LTZ	**Lake Taylor**	6.70	211	PN	P	11 36 00.8	-2.9
MQZ	**McQueen's Vall**	7.35	205	*e*P	P	11 36 07.6	-4.5
MQZ	**McQueen's Vall**	7.35	205	PN	P	11 36 07.6	-4.5
ODZ	**Otahua Downs**	9.24	209	*e*P	P	11 36 33.1	-3.2
ODZ	**Otahua Downs**	9.24	209	PN	P	11 36 33.1	-3.3
JCZ	**Jackson Bay**	9.32	219	PN	P	11 36 33.0	-4.5

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*ATH **12** 11:36:10.1,39.14N×21.85E,h15^{km}±3^{km},MD3.2/5*

*NEIC **12** 11:36:10.0,39.15N×21.90E,h10^{km},MD3.2(ATH),After ATH.*

*CSEM **12** 11:36:11.4±0.2,39.11N×21.75E,h5^{km},MD3.2,Error ellipse: s-maj=4.5km s-min=4.3km az=45.0*

*THE **12** 11:36:12.3,39.13N×21.78E,h10^{km},ML3.1*

ISC 12 11:36:11.5±0.5**,39.11N**±0.04×**21.80E**±0.05**,h17**^{km}±7^{km}**,n17,**σ**1**^{s}**12**/27**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	0.19	177	*e*PB	**Pb**	**11 36 15.1**	**-1.1**
EVR				*e*SB	**Sb**	**11 36 18.8**	**-0.6**
AGG	**Agios Georgios**	0.42	101	*e*Pg	**Pb**	**11 36 20.2**	**+0.1**
AGG				*e*Sg	**Sb**	**11 36 28.1**	**+2.2**
JAN	**Janina**	0.92	307	*e*PN	**Pn**	**11 36 27.8**	**-1.8**
XOR	**Xorichti**	1.11	76	*e*Pg	**Pb**	**11 36 32.5**	**+0.6**
XOR				*e*Sg	**Sb**	**11 36 50.1**	**+4.1**
LIT	**Litokhoron**	1.13	28	*e*Pg	**Pb**	**11 36 32.1**	**-0.1**
LIT				*e*Sg	**Sb**	**11 36 49.9**	**+3.5**
KZN	**Kozani**	1.20	359	*e*PN	**Pn**	**11 36 32.2**	**-1.4**
IGT	**Igoumenitsa**	1.21	291	*e*Pb	**Pb**	**11 36 34.5**	**+0.9**
IGT				*e*Sb	**Sb**	**11 36 51.2**	**+2.3**
VLS	**Valsamata**	1.32	226	*e*PN	**Pn**	**11 36 35.7**	**+0.3**
KEK	**Kerkira**	1.66	292	*e*Pn	**Pn**	**11 36 44.5**	**+4.3**
KEK	**Kerkira**	1.66	292	*e*PN	**Pn**	**11 36 42.0**	**+1.8**
FNA	**Florina**	1.71	349	*e*Pb	**Pb**	**11 36 41.3**	**-0.8**
FNA				*e*Sb	**Sb**	**11 37 03.9**	**+0.8**
PLG	**Polygyros**	1.79	45	*e*PN	**Pn**	**11 36 41.4**	**-0.7**
GRG	**Griva**	1.91	14	*e*Pb	**Pb**	**11 36 43.8**	**-1.7**
GRG				*e*Sb	**Sb**	**11 37 07.9**	**-1.1**
OUR	**Ouranopolis**	2.08	53	*e*Pn	**Pn**	**11 36 45.8**	**-0.5**
SOH	**Sokhos**	2.09	34	*e*Pn	**Pn**	**11 36 46.7**	**+0.3**
SOH				*e*Sn	**Sn**	**11 37 13.0**	**+0.8**
KNT	**Kendrikon**	2.22	22	*e*Pn	**Pn**	**11 36 48.4**	**+0.2**
KNT				*e*Sn	**Sn**	**11 37 15.7**	**+0.1**
KNT	**Kendrikon**	2.22	22	*e*Pn	**Pn**	**11 36 48.4**	**+0.2**
KNT				*e*Sn	**Sn**	**11 37 15.6**	**+0.1**

IDC 12 11:37:59.4±2.8**,58.36S×31.23W,mb4.4**/1**,mb1 4.6**/1**, mb1mx3.6**/12**,mbtmp4.4**/1**,MS3.6**/1**,Ms1 3.6**/1**, ms1mx2.6**/13**,Error ellipse: s-maj=463.3km s-min=50.8km az=34.0,Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	**Ushuaia**	20.61	264	LR	LR	11 48 20.3	
	comp=Z,166nm,21.1s,baz=156,slow=30						
LPAZ	**La Paz**	50.08	311	P	P	11 46 57.0	-0.9
	1.2nm,0.3s,baz=121,slow=5.9,SNR=8.1						
YKA	**Yellowknife Ar**	136.41	318	PKP	PKPdf	11 57 21.2	-2.4
	0.2nm,0.5s,baz=127,slow=2.1,SNR=7.8						
INK	**Inuvik**	146.16	319	PKPbc	PKPbc	11 57 37.4	-2.4
	0.6nm,0.6s,baz=96,slow=4.3,SNR=7.8						
ILAR	**Eielson Array**	149.95	310	PKPbc	PKPdf	11 57 49.9	+3.1
	1.4nm,0.7s,baz=124,slow=1.9,SNR=16						
SONM	**Songino Array**	152.91	94	PKPbc	PKPdf	11 57 58.0	+6.3
	0.1nm,0.6s,baz=230,slow=3.3,SNR=4.9						

IDC 12 11:45:52.7±5.1**,12.51S×170.82E,mb3.8**/3**,mb1 4.0**/3**, mb1mx3.7**/14**,mbtmp3.7**/3**,Error ellipse: s-maj=298.2km s-min=32.1km az=141.0,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	36.69	247	P	P	11 53 01.6	-1.8
	0.9nm,0.6s,baz=74,slow=9.3,SNR=15						
ILAR	**Eielson Array**	83.39	17	P	P	11 58 22.4	-0.5
	0.7nm,0.8s,baz=231,slow=4.2,SNR=6.4						
YKA	**Yellowknife Ar**	94.02	27	P	P	11 59 11.2	-2.4
	0.2nm,0.8s,baz=258,slow=4.4,SNR=3.6						

IDC 12 11:50:16.5±2.6**,18.87S×177.22W,mb3.8**/4**,mb1 4.2**/4**, mb1mx3.8**/15**,mbtmp3.8**/4**,Error ellipse: s-maj=220.1km s-min=26.0km az=156.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	45.58	260	P	P	11 58 37.9	-2.4
	0.4nm,0.5s,baz=98,slow=6.7,SNR=13						
ASAR	**Alice Springs**	45.63	255	P	P	11 58 39.5	-1.2
	3.0nm,0.5s,baz=90,slow=8.4,SNR=63						
NVAR	**Mina Array Bea**	79.33	43	P	P	12 02 24.2	-1.6
	0.2nm,0.7s,baz=216,slow=7.0,SNR=4.3						
TXAR	**Lajitas Array**	85.56	57	P	P	12 02 57.6	-0.7
	0.5nm,0.9s,baz=225,slow=3.5,SNR=4.4						

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*IDC **12** 12:11:48.3±5.2,5.32S×151.15E,h147^{km}±38^{km},mb3.3/3, mb1 3.4/4,mb1mx3.3/13,mbtmp3.7/4,Error ellipse: s-maj=74.5km s-min=28.4km az=111.0*

*NEIC **12** 12:11:49.6±8.1,5.26S×150.89E,h148^{km}±28^{km},mb4.2/1, Error ellipse: s-maj=193.1km s-min=24.7km az=105.0*

ISC 12 12:11:45.0±5.8**,5.3S**±0.3×**151.3E**±0.6**,h137**^{km}±37^{km}**,n6,** σ**0**^{s}**35**/7**,mb3.8**/4**,1D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	5.82	225	P	**P**	**12 13 10.1**	**0.0**
	0.6nm,0.3s,baz=50,slow=16,SNR=3.3						
PMG				S	**S**	**12 14 16.2**	**0.0**
	2.7nm,0.3s,baz=164,slow=23,SNR=9.5						
WRAB	**Tennant Creek**	22.02	227	*e*P	**P**	**12 16 28.7**	**-0.4**
	7.5nm,0.7s,mb4.2						
WB2	**Warramunga Arr**	22.03	227	⇓*i*P	**P**	**12 16 29.4**	**+0.3**
WRA	**Warramunga Arr**	22.04	227	P	**P**	**12 16 29.6**	**+0.4**
	3.0nm,0.7s,mb3.9,baz=52,slow=10.0,SNR=32						
ASAR	**Alice Springs**	24.82	221	P	**P**	**12 16 55.8**	**-0.2**
	2.5nm,0.8s,mb3.8,baz=59,slow=8.7,SNR=16						
SONM	**Songino Array**	65.93	329	P	**P**	**12 22 18.5**	**0.0**
	0.2nm,0.4s,mb3.3,baz=142,slow=5.2,SNR=5.0						

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*ORF **12** 12:12:38.9,34.95N×21.36E,h30^{km},mb4.2,ML5.5*

*LDG **12** 12:13:43.1±0.2,40.10N×19.86E,h10^{km},Mb4.9/12, Ms3.1/5,Error ellipse: s-maj=9.4km s-min=5.1km az=37.0*

*BJI **12** 12:13:43.0,39.90N×19.70E,h10^{km},mB5.3,mb4.8*

*IDC **12** 12:13:43.7±0.9,39.99N×19.77E,mb4.3/14,mb1 4.4/24, mb1mx4.3/33,mbtmp4.3/24,ML4.1/10,MS3.5/8,Ms1 3.5/8, ms1mx3.2/34,Error ellipse: s-maj=17.1km s-min=11.3km az=37.0*

*ATH **12** 12:13:44.0,39.96N×19.66E,h18^{km}±1^{km},MD4.4/20, ML4.6*

*MOS **12** 12:13:44.2±1.0,40.01N×19.71E,h10^{km},mb4.6/30,Error ellipse: s-maj=3.4km s-min=2.7km az=89.5*

*THE **12** 12:13:45.1,39.92N×19.70E,h10^{km},ML4.5*

*ZUR_RM **12** 12:13:45,39.92N×19.70E,h39^{km},Mw4.3/25,Moment Tensor Solution. s25 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.13; M$_{\theta\theta}$-0.74; M$_{\phi\phi}$-1.39; M$_{r\theta}$1.02; M$_{\theta\phi}$2.65; M$_{\phi r}$-1.38; Best double couple: M$_0$3.4×10^{15} NP1:φ$_s$145°,δ61°,λ99°. NP2:φ$_s$308°,δ31°,λ75°. Principal axes: T 2.61, Plg73°, Azm77°; N 1.579, Plg8°, Azm321°; P -4.189, Plg15°, Azm229°;*

*NEIC **12** 12:13:45.1,39.92N×19.70E,mb4.4/35,ML4.6(ATH), ML4.5(THE),ML4.2(PDG),After THE.*

NEIC Felt on Kerkira.

*TIR **12** 12:13:45.6,39.92N×19.89E,h16^{km},Ml4.4*

*PDG **12** 12:13:46.3±0.3,39.94N×19.68E,h22^{km}±2^{km}*

*CSEM **12** 12:13:47.4,39.91N×19.72E,h60^{km},ML4.5*

*HLW **12** 12:13:49.7,39.68N×20.09E,h33^{km},Mb4.7*

ISC 12 12:13:44.3±0.1**,39.96N**±0.01×**19.70E**±0.01**,h10**^{km}**,n444,** σ**1**^{s}**38**/498**,mb4.5**/43**,MS3.8**/9**,30C-23D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	**Sarande**	0.24	108	*i* Pg	**Pg**	**12 13 49.0**	**-0.5**
SRN				*i* Sg	**Sg**	**12 13 51.7**	**-1.2**
KEK	**Kerkira**	0.25	163	*e*PB	**Pb**	**12 13 49.8**	**-0.7**
KEK				*e*SB	**Sb**	**12 13 54.8**	**+0.2**
TPE	**Tepelena**	0.41	35	*i* Pg	**Pg**	**12 13 52.8**	**0.0**
TPE				*i* Sg	**Sg**	**12 13 59.5**	**+1.1**
VLO	**Vlora**	0.54	343	*e*Pg	**Pg**	**12 13 59.1**	**+3.9**
IGT	**Igoumenitsa**	0.64	131	*e*Pg	**Pg**	**12 13 56.8**	**-0.5**
IGT				*e*Sg	**Sg**	**12 14 06.4**	**+0.5**
LSK	**Leskovik**	0.72	74	*i* Pg	**Pg**	**12 13 57.9**	**-0.8**
LSK				*i* Sg	**Sg**	**12 14 08.3**	**-0.1**
JAN	**Janina**	0.93	108	*e*PB	**Pb**	**12 14 01.8**	**-0.3**
JAN				*e*SN	**Sn**	**12 14 15.6**	**-1.2**
KBN	**Korca**	1.07	51	*i* Pg	**Pg**	**12 14 06.4**	**+0.7**
KBN				*i* Sg	**Sg**	**12 14 21.5**	**+1.6**
KBN	**Korca**	1.07	51	*e*Pg	**Pg**	**12 14 06.4**	**+0.7**
KBN				*i* Sg	**Sg**	**12 14 21.5**	**+1.6**
LCI	**Lecce**	1.28	288	*e*Pn	**Pn**	**12 14 10.2**	**+2.0**
TIR	**Tirane**	1.40	5	P	**Pn**	**12 14 12.5**	**+2.5**
TIR	**Tirane**	1.40	5	⇑*i*Pn	**Pn**	**12 14 13.5**	**+3.5**
TIR				*i* Sn	**Sn**	**12 14 33.5**	**+5.0**
OHR	**Ohrid**	1.43	36	*e*Pn	**Pn**	**12 14 12.4**	**+2.0**
OHR				*e*Sn	**Sn**	**12 14 34.4**	**+5.1**
FNA	**Florina**	1.52	57	*e*Pb	**Pb**	**12 14 13.5**	**+1.3**
FNA				*e*Sb	**Sb**	**12 14 36.3**	**+4.8**
QSH	**Qafa e Shtames**	1.57	6	*i* pn?	**Pn**	**12 14 14.6**	**+2.1**
KZN	**Kozani**	1.62	77	*e*PN	**Pn**	**12 14 14.6**	**+1.4**
VLS	**Valsamata**	1.91	158	*e*PN	**Pn**	**12 14 17.9**	**+0.7**
EVR	**Evrytania**	1.93	122	*e*PN	**Pn**	**12 14 20.1**	**+2.5**
EVR	**Evrytania**	1.93	122	*e*Pn	**Pn**	**12 14 20.3**	**+2.7**
PE1	**Pezze di Greco**	1.94	297	*e*Pn	**Pn**	**12 14 19.2**	**+1.5**
ULC	**Ulcinj**	2.04	350	⇑*i*Pn	**Pn**	**12 14 20.3**	**+1.2**
ULC				*e*Sn	**Sn**	**12 14 47.5**	**+2.7**
SDA	**Shkodra**	2.10	356	*i* Pn	**Pn**	**12 14 21.9**	**+1.9**
SDA	**Shkodra**	2.10	356	*e*Pn	**Pn**	**12 14 21.9**	**+1.9**
LIT	**Litokhoron**	2.15	85	*e*Pn	**Pn**	**12 14 22.2**	**+1.5**
AGG	**Agios Georgios**	2.24	114	*e*Pn	**Pn**	**12 14 24.0**	**+2.1**
GRG	**Griva**	2.29	63	*e*Pn	**Pn**	**12 14 24.1**	**+1.3**
LTRZ	**Laterza**	2.30	287	*e*Pn	**Pn**	**12 14 24.4**	**+1.6**
LTRZ	**Laterza**	2.30	287	*e*Pn	**Pn**	**12 14 24.4**	**+1.5**
TIP	**Timpagrande**	2.40	252	*e*P	**Pn**	**12 14 25.0**	**+0.6**
TIP	**Timpagrande**	2.40	252	*e*P	**Pn**	**12 14 25.0**	**+0.6**
SKO	**Skopje**	2.41	33	⇑*i*Pn	**Pn**	**12 14 26.5**	**+2.1**
	comp=Z,0.2nm,0.7s						
SKO				*i* Pb	**Pb**	**12 14 29.4**	**+2.1**
SKO				*i* Pg	**Pg**	**12 14 33.0**	**+0.6**
SKO				*i* Sn	**Sn**	**12 14 57.5**	**+3.3**
SKO				*i* Sb	**Sb**	**12 15 03.3**	**+6.2**
SKO				*i* Sg	**Sg**	**12 15 04.5**	**0.0**
SKO				Lg		12 15 10.0	
	comp=Z,0.9nm,0.7s						
SKO				Lg		12 15 10.0	
	comp=E,5.4nm,1.0s						
SKO	**Skopje**	2.41	33	⇑*i*Pn	**Pn**	**12 14 26.5**	**+2.1**
SKO				*i* S	**Sn**	**12 14 57.5**	**+3.3**
BUM	**Brajici-Budva**	2.42	346	⇑*i*Pn	**Pn**	**12 14 25.4**	**+0.8**
BUM				*e*Sn	**Sn**	**12 14 56.3**	**+1.7**
BCI	**Bajram Curri**	2.42	6	*e*Pn	**Pn**	**12 14 27.3**	**+2.6**
BAI	**Bari**	2.44	299	*e*Pn	**Pn**	**12 14 24.0**	**-0.9**
SG1	**Sgolgore (BA)**	2.47	292	*e*Pn	**Pn**	**12 14 26.1**	**+0.8**
TTG	**Podgorica**	2.50	352	⇑*i*Pn	**Pn**	**12 14 26.6**	**+0.9**
TTG				*e*Sn	**Sn**	**12 14 58.3**	**+1.8**
ORI	**Oriolo Calabro**	2.50	274	*e*P	**Pn**	**12 14 27.0**	**+1.2**
THE	**Thessaloniki**	2.59	74	*e*Pn	**Pn**	**12 14 27.9**	**+1.0**
PVY	**Plav**	2.65	4	⇑*i*Pn	**Pn**	**12 14 29.7**	**+1.9**
PVY				*e*Sn	**Sn**	**12 15 01.8**	**+1.5**
HCY	**Herceg Novi**	2.65	340	⇑*i*Pn	**Pn**	**12 14 28.6**	**+0.7**
HCY				*e*Sn	**Sn**	**12 15 02.2**	**+1.8**
KNT	**Kendrikon**	2.72	63	*e*Pn	**Pn**	**12 14 29.5**	**+0.7**
XOR	**Xorichti**	2.76	101	*e*Pn	**Pn**	**12 14 30.4**	**+1.0**
XOR				*e*Sn	**Sn**	**12 15 04.1**	**+0.9**
GRI	**Girifalco**	2.78	247	*e*Pn	**Pn**	**12 14 30.3**	**+0.5**
NEO	**Neokhori**	2.80	102	*e*PN	**Pn**	**12 14 30.9**	**+0.9**
CDT	**Castel del Mon**	2.84	294	*e*Pn	**Pn**	**12 14 31.6**	**+0.9**
LKR	**Lokris**	2.87	116	*e*PN	**Pn**	**12 14 31.9**	**+0.9**
PLG	**Polygyros**	2.90	81	*e*PN	**Pn**	**12 14 32.3**	**+0.9**
NKY	**Niksic**	2.90	350	⇑*i*Pn	**Pn**	**12 14 32.7**	**+1.2**
NKY				*e*Sn	**Sn**	**12 15 08.2**	**+1.4**
IVA	**Berane**	2.92	3	⇑*i*Pn	**Pn**	**12 14 33.7**	**+2.0**
IVA				*e*Sn	**Sn**	**12 15 08.4**	**+1.2**
SOH	**Sokhos**	2.92	72	*e*Pn	**Pn**	**12 14 32.6**	**+0.8**
SOH				*e*Sn	**Sn**	**12 15 10.2**	**+2.9**
CUC	**Castrocucco**	2.99	272	P	**Pn**	**12 14 35.5**	**+2.8**
BRY	**Bratogost**	3.07	344	⇑*i*Pn	**Pn**	**12 14 34.8**	**+1.0**
BRY				*e*Sn	**Sn**	**12 15 12.3**	**+1.3**
SRS	**Serrai**	3.18	67	*e*Pn	**Pn**	**12 14 35.7**	**+0.2**
MGR	**Morigerati**	3.19	275	*e*Pn	**Pn**	**12 14 37.2**	**+1.6**
MGR	**Morigerati**	3.19	275	*e*Pn	**Pn**	**12 14 37.2**	**+1.6**
KKB	**Krupnik**	3.20	52	P	**Pn**	**12 14 37.0**	**+1.3**
ITM	**Ithomi**	3.27	147	*e*PN	**Pn**	**12 14 37.6**	**+0.8**
STON	**Ston**	3.28	333	*i* Pn	**Pn**	**12 14 37.3**	**+0.5**
STON				*i* Sn	**Sn**	**12 15 15.1**	**-1.2**
UPM	**Unac-Piva**	3.30	350	⇑*i*Pn	**Pn**	**12 14 38.4**	**+1.3**
UPM				*e*Sn	**Sn**	**12 15 17.5**	**+0.7**
OUR	**Ouranopolis**	3.30	82	*e*Pn	**Pn**	**12 14 37.5**	**+0.4**
OUR				*e*Sn	**Sn**	**12 15 20.5**	**+3.6**
MRLC	**Muro Lucano**	3.32	285	*e*Pn	**Pn**	**12 14 39.2**	**+1.9**
MRLC	**Muro Lucano**	3.32	285	*e*Pn	**Pn**	**12 14 39.2**	**+1.8**
AOS	**Alonnisos**	3.32	102	*e*Pn	**Pn**	**12 14 37.8**	**+0.3**
FGMS	**Monte Sant'Ang**	3.34	303	*e*Pn	**Pn**	**12 14 38.8**	**+1.1**
FGMS	**Monte Sant'Ang**	3.34	303	*e*Pn	**Pn**	**12 14 38.8**	**+1.1**
MS1	**Monte Sant'Ang**	3.35	303	*e*Pn	**Pn**	**12 14 38.3**	**+0.5**
PLE	**Pljevlja**	3.38	356	⇑*i*Pn	**Pn**	**12 14 39.9**	**+1.6**
PLE				*e*Sn	**Sn**	**12 15 19.9**	**+1.0**
MGER	**Gerania Oros**	3.40	124	*e*PN	**Pn**	**12 14 38.8**	**+0.2**
SOI	**Samo**	3.41	238	*e*Pn	**Pn**	**12 14 38.8**	**+0.2**
CEL	**Celeste**	3.41	241	P	**Pn**	**12 14 38.5**	**-0.2**
SGO	**Sicignano**	3.42	282	*e*P	**Pn**	**12 14 40.4**	**+1.6**
NVR	**Nevrokopi**	3.46	65	*e*PN	**Pn**	**12 14 40.3**	**+0.9**
MMB	**Musomiste**	3.47	61	P	**Pn**	**12 14 40.0**	**+0.5**
GMB	**Gambarie**	3.50	241	P	**Pn**	**12 14 40.2**	**+0.2**
SCLL	**Scilla**	3.54	243	*e*Pn	**Pn**	**12 14 40.6**	**+0.2**
SCLL	**Scilla**	3.54	243	*e*Pn	**Pn**	**12 14 40.7**	**+0.2**
NVSS	**Nova Varos 2**	3.55	360	⇓*i*Pn	**Pn**	**12 14 41.1**	**+0.4**
NVSS				Sn	**Sn**	**12 15 22.5**	**-0.6**
RGNG	**Rignano Grg**	3.56	300	*e*Pn	**Pn**	**12 14 42.4**	**+1.5**
RGNG	**Rignano Grg**	3.56	300	*e*Pn	**Pn**	**12 14 42.4**	**+1.5**
MPAR	**Parnis Oros**	3.62	119	*e*PN	**Pn**	**12 14 42.2**	**+0.5**
FG5	**Orsara di Pugl**	3.63	293	*e*P	**Pn**	**12 14 44.9**	**+3.1**
NAIG	**Nisos Aigina**	3.68	125	*e*PN	**Pn**	**12 14 42.5**	**0.0**
MTTG	**Motta San Giov**	3.68	239	*e*Pn	**Pn**	**12 14 42.6**	**0.0**
MTTG	**Motta San Giov**	3.68	239	*e*Pn	**Pn**	**12 14 42.6**	**0.0**
ATH	**Athens Observa**	3.70	121	*e*PN	**Pn**	**12 14 43.2**	**+0.3**
VTS	**Vitosha**	3.73	44	⇑P	**Pn**	**12 14 44.8**	**+1.5**
VTS	**Vitosha**	3.73	44	P	**Pn**	**12 14 44.7**	**+1.4**
PTL	**Penteli**	3.76	119	*e*PN	**Pn**	**12 14 44.2**	**+0.5**
MRB1	**Monte Rocchett**	3.79	290	P	**Pn**	**12 14 46.8**	**+2.7**
PSB1	**Pescosannita**	3.93	290	P	**Pn**	**12 14 48.0**	**+1.9**
GRUS	**Gruza**	4.00	11	⇓*i*Pn	**Pn**	**12 14 47.5**	**+0.4**
GRUS				Sn	**Sn**	**12 15 35.2**	**+0.6**
CIGN	**Sant'Elia a Pi**	4.02	297	P	**Pn**	**12 14 50.0**	**+2.7**
SLNA	**Salina**	4.03	251	P	**Pn**	**12 14 49.3**	**+1.8**
VLI	**Veliai**	4.11	141	*e*PN	**Pn**	**12 14 49.1**	**+0.4**
DIVS	**Divcibare**	4.15	3	⇓*i*Pn	**Pn**	**12 14 48.9**	**-0.3**
RZN	**Rozhen**	4.18	64	P	**Pn**	**12 14 50.2**	**+0.6**
PGB	**Panagyurishte**	4.25	51	P	**Pn**	**12 14 51.5**	**+0.9**
PLD	**Plovdiv**	4.35	59	P	**Pn**	**12 14 53.7**	**+1.6**
AGST	**Augusta-Monte**	4.42	234	*e*Pn	**Pn**	**12 14 50.0**	**-3.0**
AGST	**Augusta-Monte**	4.42	234	*e*Pn	**Pn**	**12 14 50.0**	**-3.1**
CII	**Carovilli**	4.46	295	*e*P	**Pn**	**12 14 52.8**	**-0.8**
CII	**Carovilli**	4.46	295	*e*P	**Pn**	**12 14 52.8**	**-0.8**
MIDA	**Miranda**	4.46	294	P	**Pn**	**12 14 55.8**	**+2.1**
SVIS	**Svilajnac**	4.48	14	*e*Pn	**Pn**	**12 14 53.0**	**-0.9**
SVIS				Sn	**Sn**	**12 15 41.1**	**-5.7**
SVIS	**Svilajnac**	4.48	14	Pn	**Pn**	**12 14 53.0**	**-0.9**
SVIS				Sn	**Sn**	**12 15 41.2**	**-5.6**
KYTH	**Kithira**	4.51	143	*e*PN	**Pn**	**12 14 55.5**	**+1.1**
RDO	**Rodhopi**	4.60	73	*e*PN	**Pn**	**12 14 55.3**	**-0.3**
KDZ	**Kurdzhali**	4.66	67	P	**Pn**	**12 14 55.5**	**-0.9**
KDZ				*e*S	**Sn**	**12 15 50.0**	**-1.2**
SDI	**San Donato**	4.80	293	*e*P	**Pn**	**12 15 00.0**	**+1.6**
VAE	**Valguarnera**	4.82	241	Pn	**Pn**	**12 15 05.3**	**+6.6**
	comp=E,3.5nm,0.3s,baz=51,slow=6.5,SNR=3.7						
VAE				LR	LR	12 16 58.7	
	comp=E,165nm,21.1s,baz=308,slow=40						
INTR	**Introdacqua**	4.84	297	P	**Pn**	**12 15 00.6**	**+1.5**
DIM	**Dimitrovgrad**	4.88	63	*e*P	**Pn**	**12 15 00.0**	**+0.4**
BEO	**Belgrade**	4.89	6	⇓*i*Pn	**Pn**	**12 14 53.6**	**-6.1**
ALN	**Alexandroupoli**	4.93	77	*e*Pn	**Pn**	**12 14 59.4**	**-1.0**
ALN				*e*Sn	**Sn**	**12 15 58.1**	**0.0**
VVLD	**Villa Vallelon**	4.99	295	P	**Pn**	**12 15 02.0**	**+0.9**
PRK	**Paraskevi**	5.12	96	*e*PN	**Pn**	**12 15 03.5**	**+0.5**
PTQR	**Pietraquaria**	5.20	295	*e*Pn	**Pn**	**12 15 05.9**	**+1.9**
PTQR	**Pietraquaria**	5.20	295	*e*Pn	**Pn**	**12 15 05.9**	**+1.9**
TERO	**Teramo**	5.31	302	P	**Pn**	**12 15 06.6**	**+1.0**
AQU	**L'Aquila**	5.33	299	*e*P	**Pn**	**12 15 07.2**	**+1.4**
AQU				pmax	pmax		
	comp=Z,122nm,0.8s						
AQU	**L'Aquila**	5.33	299	*e*P	**Pn**	**12 15 07.2**	**+1.4**
	comp=Z,122nm,0.8s						
PVL	**Pavlikeni**	5.33	51	P	**Pn**	**12 15 04.0**	**-2.0**
APE	**Apeiranthos**	5.40	120	⇓*e*P	**Pn**	**12 15 06.3**	**-0.7**
APE	**Apeiranthos**	5.40	120	*e*PN	**Pn**	**12 15 06.3**	**-0.7**
APE	**Apeiranthos**	5.40	120	*e*Pn	**Pn**	**12 15 06.1**	**-0.9**
LPK	**Lapseki**	5.42	83	*e*P	**Pn**	**12 15 06.3**	**-0.9**
AYVA	**Ayvalik**	5.43	95	*i* P	**Pn**	**12 15 08.3**	**+0.9**
FIAM	**Fiamignano**	5.48	297	P	**Pn**	**12 15 10.6**	**+2.5**
EDRB	**Edirne**	5.66	68	*e*P	**Pn**	**12 15 10.8**	**+0.2**
SZH	**Strazhica**	5.72	53	*e*P	**Pn**	**12 15 12.3**	**+0.8**
NRCA	**Norcia**	5.73	302	*e*Pn	**Pn**	**12 15 12.4**	**+0.9**
NRCA	**Norcia**	5.73	302	*e*Pn	**Pn**	**12 15 12.4**	**+0.9**
SART	**Tekirdag**	5.76	80	*i* P	**Pn**	**12 15 12.0**	**0.0**
VAM	**Vamos**	5.77	140	*e*PN	**Pn**	**12 15 11.6**	**-0.6**
AOI	**Ancona**	5.80	310	P	**Pn**	**12 15 14.7**	**+2.1**
BZS	**Buzias**	5.83	13	⇓P	**Pn**	**12 15 11.7**	**-1.3**
BZS	**Buzias**	5.83	13	P	**Pn**	**12 15 12.5**	**-0.5**
BZS	**Buzias**	5.83	13	P	**Pn**	**12 15 12.5**	**-0.5**
MFT	**Murefte**	5.85	79	*e*P	**Pn**	**12 15 10.8**	**-2.5**
ERC	**Erice**	5.86	253	P	**Pn**	**12 15 13.7**	**+0.3**
CING	**Cingoli**	5.95	307	P	**Pn**	**12 15 14.7**	**0.0**
SNTG	**Esanatoglia**	6.04	305	*e*Pn	**Pn**	**12 15 16.4**	**+0.3**
SNTG	**Esanatoglia**	6.04	305	*e*Pn	**Pn**	**12 15 16.4**	**+0.4**
IZM	**Izmir**	6.08	102	*e*P	**Pn**	**12 15 17.4**	**+1.0**
KDAG	**Bornova**	6.08	102	*i* P	**Pn**	**12 15 17.3**	**+0.8**
ARV	**Arcevia**	6.17	307	*e*Pn	**Pn**	**12 15 17.3**	**-0.5**
ARV	**Arcevia**	6.17	307	*e*Pn	**Pn**	**12 15 17.3**	**-0.5**
GVD	**Gavdhos**	6.18	144	*e*P	**Pn**	**12 15 15.5**	**-2.5**
	comp=Z,61nm,0.8s						
IDI	**Anoyia**	6.22	137	Pn	**Pn**	**12 15 15.3**	**-3.2**
	comp=Z,2.1nm,0.3s,baz=345,slow=13,SNR=17						
IDI				Sn	**Sn**	**12 16 21.5**	**-8.8**
	comp=Z,63nm,0.3s,baz=305,slow=21,SNR=24						
RHK1	**Bakonya**	6.25	350	*e*P	**Pn**	**12 15 17.3**	**-1.6**
PKSM	**Moragy**	6.30	353	⇓*e*P	**Pn**	**12 15 18.0**	**-1.6**
BALB	**Balikesir**	6.31	90	*e*P	**Pn**	**12 15 18.6**	**-1.1**
BNT	**Bandirma**	6.31	84	*e*P	**Pn**	**12 15 19.7**	**-0.1**
MURB	**Monte Urbino**	6.31	304	P	**Pn**	**12 15 22.0**	**+2.2**
AKS	**Akhisar**	6.37	97	P	**Pn**	**12 15 20.8**	**+0.1**
FSSB	**Fossombrone**	6.38	308	*e*Pn	**Pn**	**12 15 20.6**	**-0.1**
FSSB	**Fossombrone**	6.38	308	*e*Pn	**Pn**	**12 15 20.6**	**-0.1**
BTOK	**Tokmak**	6.41	89	*i* P	**Pn**	**12 15 21.2**	**0.0**
BOJS	**Bojanci**	6.44	331	*e*Pn	**Pn**	**12 15 21.0**	**-0.6**
BOJS				*e*Sn	**Sn**	**12 16 32.5**	**-3.4**
BOJS	**Bojanci**	6.44	331	Pn	**Pn**	**12 15 21.0**	**-0.6**
BOJS				*e*Sn	**Sn**	**12 16 32.5**	**-3.4**
CRES	**Cresnjev**	6.64	333	*i* Pn	**Pn**	**12 15 23.1**	**-1.3**
RSM	**Repubblica di**	6.71	309	P	**Pn**	**12 15 27.1**	**+1.7**
PKS9	**Tamasi**	6.71	352	⇑*e*P	**Pn**	**12 15 24.1**	**-1.3**
BDRM	**Kayabasi**	6.72	113	*i* P	**Pn**	**12 15 27.7**	**+2.2**
AYDN	**Tasoluk**	6.78	107	*i* P	**Pn**	**12 15 26.9**	**+0.5**
CRE	**Caprese Michel**	6.85	305	*e*P	**Pn**	**12 15 28.3**	**+0.9**
SNX	**Sinaia**	6.89	37	⇓P	**Pn**	**12 15 29.0**	**+1.1**
SNX	**Sinaia**	6.89	37	P	**Pn**	**12 15 29.2**	**+1.3**
SNX	**Sinaia**	6.89	37	P	**Pn**	**12 15 29.0**	**+1.1**
CEY	**Cerknica**	6.96	328	*i* Pn	**Pn**	**12 15 27.9**	**-1.0**
MANT	**Manisa**	7.03	99	*i* P	**Pn**	**12 15 30.1**	**+0.2**
SFI	**Santa Sofia**	7.06	307	*e*P	**Pn**	**12 15 31.7**	**+1.4**
LJU	**Ljubljana**	7.17	330	*e*Pn	**Pn**	**12 15 30.7**	**-1.2**
LJU				*i* Sn	**Sn**	**12 16 50.1**	**-4.0**
MLR	**Muntele Rosu**	7.19	38	Pn	**Pn**	**12 15 32.2**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=191,slow=6.3,SNR=42						
MLR	**Muntele Rosu**	7.19	38	⇓*i*P	**Pn**	**12 15 33.1**	**+0.9**
MLR	**Muntele Rosu**	7.19	38	⇓*i*P	**Pn**	**12 15 33.1**	**+1.0**
TRI	**Trieste**	7.22	325	*e*P	**Pn**	**12 15 30.9**	**-1.6**
ISR	**Istrita**	7.22	42	⇓*i*P	**Pn**	**12 15 33.6**	**+1.1**
JAVS	**Javornik**	7.23	327	*e*Pn	**Pn**	**12 15 31.2**	**-1.5**
ULDT	**Uludag**	7.24	85	*i* P	**Pn**	**12 15 32.9**	**0.0**
KARP	**Karpathos**	7.37	124	*e*PN	**Pn**	**12 15 35.5**	**+0.9**
VOY	**Vojsko**	7.42	327	*e*Pn	**Pn**	**12 15 33.7**	**-1.6**
VOY				*e*Sn	**Sn**	**12 16 54.1**	**-6.2**
YLV	**Yalova**	7.42	82	*e*P	**Pn**	**12 15 39.2**	**+3.8**
PERS	**Pernice**	7.47	335	*e*Pn	**Pn**	**12 15 34.2**	**-1.8**
PERS	**Pernice**	7.47	335	*e*Pn	**Pn**	**12 15 34.2**	**-1.8**
OBKA	**Obir**	7.55	332	⇑*i*PN	**Pn**	**12 15 35.6**	**-1.6**
OBKA				*i* SN	**Sn**	**12 16 58.9**	**-4.9**
DENT	**Denizli**	7.61	104	*e*P	**Pn**	**12 15 38.1**	**+0.1**
DNZL	**Cakiroluk**	7.64	104	*i* P	**Pn**	**12 15 39.1**	**+0.7**
HARR	**Harsova**	7.72	50	⇑*i*P	**Pn**	**12 15 39.5**	**0.0**
VRI	**Vrincioaia**	7.84	39	⇓*i*P	**Pn**	**12 15 42.1**	**+0.9**
TIRR	**Tirgusor**	7.88	52	P	**Pn**	**12 15 41.2**	**-0.5**
ARSA	**Arzberg**	7.90	339	⇓*i*PN	**Pn**	**12 15 40.5**	**-1.5**
ARSA				*i* SN	**Sn**	**12 17 07.5**	**-4.8**
SRO	**Srobarova**	7.92	353	*e*PN	**Pn**	**12 15 42.9**	**+0.6**

PTCC	Patocco-Chiusa	7.94	326	ePn	Pn	12 15 40.7	-1.9
PTCC	Patocco-Chiusa	7.94	326	ePn	Pn	12 15 40.7	-1.9
FETY	Fethiye	8.09	111	eP	P	12 15 47.0	+2.3
ALT	Altintas	8.10	93	P	P	12 15 46.3	+1.5
CFR	Carcaliu	8.12	47	⇓iP	P	12 15 44.5	-0.6
CFR	Carcaliu	8.12	47	⇓iP	P	12 15 44.5	-0.6
CFR	Carcaliu	8.12	47	P	P	12 15 44.7	-0.4
FVI	Forni Avoltri	8.34	325	eP	P	12 15 47.2	-0.9
PGF	Pioggiola	8.47	291	eP	P	12 15 50.0	0.0
	comp=Z,57nm,1.1s						
CTI	Castel Tesino	8.48	319	eP	P	12 15 48.3	-1.8
KBA	Koelnbreinsper	8.48	329	⇑iPN	P	12 15 48.3	-1.9
KBA				iSN	Sn	12 17 21.1	-5.9
VYHS	Vyhne	8.56	356	ePN	P	12 15 50.7	-0.5
HENT	Hendek	8.59	81	iP	P	12 15 50.7	-1.0
ESKT	Eskisehir	8.60	89	eP	P	12 15 52.0	+0.2
BURAR	Bucovina Array	8.63	26	P	P	12 15 53.5	+1.3
BURAR	Bucovina Array	8.63	26	P	P	12 15 53.5	+1.3
SEST	Monte Rota	8.71	324	P	P	12 15 53.6	+0.3
MOA	Molln	8.81	335	⇓iPN	P	12 15 53.4	-1.3
MOA				iSN	Sn	12 17 29.7	-5.4
BRES	Bressanone	8.89	322	P	P	12 15 56.1	+0.2
APPI	Appiano	8.98	319	P	P	12 15 57.9	+0.8
JAVC	Velka Javorina	9.02	351	P	P	12 15 57.8	+0.2
CRVS	Cervenica-Dubn	9.03	7	ePN	P	12 15 56.6	-1.2
KOLS	Kolonicke sedl	9.16	11	ePN	P	12 15 59.0	-0.6
KOLS				e		12 16 14.6	
WTTA	Wattenberg	9.35	324	⇑iPN	P	12 16 00.2	-2.0
WTTA				iSN	Sn	12 17 42.7	-5.9
WATA	Walderalm	9.44	324	⇑iPN	P	12 16 01.9	-1.5
WATA				iSN	Sn	12 17 41.4	-9.2
SGKT	Sivrigoynuk	9.47	82	iP	P	12 16 04.0	+0.2
NIE	Niedzica	9.47	2	eP	P	12 16 03.0	-0.9
KIZT	Kizilcal	9.49	93	eP	P	12 16 05.2	+1.2
SQTA	Sankt Quirin	9.52	323	⇑iPN	P	12 16 02.6	-1.9
SQTA				iSN	Sn	12 17 47.1	-5.5
SLUM		9.56	150	⇑P	P	12 16 00.9	-4.2
MOTA	Moosalm	9.66	323	⇓iPN	P	12 16 04.3	-2.1
MOTA				iSN	Sn	12 17 49.6	-6.4
KIS	Kishinev	9.66	40	eP	P	12 16 04.0	-2.4
KIS				MLR	MLR		
	comp=Z,900nm,8.0s						
GERES	GERESS Array B	9.87	336	P	P	12 16 06.8	-2.4
GERES						12 17 56.1	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				smax			
	comp=N,1.0nm,0.3s						
GERES	GERESS Array B	9.87	336	Pn	P	12 16 06.8	-2.4
	comp=N,0.9nm,0.3s,baz=161,slow=14,SNR=14						
GERES				Sn	Sn	12 17 56.1	-5.0
	comp=N,0.9nm,0.3s,baz=158,slow=24,SNR=5.4						
DAVOX	Davos	9.88	317	Pn	P	12 16 08.8	-0.6
	comp=N,0.7nm,0.3s,baz=126,slow=22,SNR=6.5						
DAVOX				Sn	Sn	12 17 59.2	-2.3
	comp=N,2.4nm,0.3s,baz=227,slow=21,SNR=6.1						
MORC	Moravsky Berou	9.94	352	eP	P	12 16 09.3	-0.9
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC	Moravsky Berou	9.94	352	eP	P	12 16 09.3	-0.9
	comp=Z,4.9nm,1.0s						
MORC	Moravsky Berou	9.94	352	eP	P	12 16 09.3	-0.9
	comp=Z,4.9nm,1.0s						
SBF	Sospel	9.94	297	eP	P	12 16 09.0	-1.3
OKC	Ostrava-Krasne	9.94	354	eP	P	12 16 09.1	-1.2
KHC	Kasperske Hory	10.16	337	eP	P	12 16 10.5	-2.7
KHC				e		12 18 03.5	
KHC	Kasperske Hory	10.16	337	eP	P	12 16 10.5	-2.7
KHC				e		12 16 26.0	
KHC				e		12 18 03.5	
KHC	Kasperske Hory	10.16	337	eP	P	12 16 10.5	-2.7
KHC				x	x	12 16 26.0	
KHC				S	S	12 18 03.5	-4.8
OJC	Ojcow	10.27	0	eP	P	12 16 13.9	-0.8
LVV	L'vov	10.33	16	eP	P	12 16 17.1	+1.5
LVV				MLR	MLR		
	comp=Z,770nm,10.0s						
LVV				MLR	MLR		
	comp=N,860nm,9.3s						
LVV				MLR	MLR		
	comp=E,250nm,8.7s						
LVV	L'vov	10.33	16	eP	P	12 16 17.1	+1.5
	comp=E,860nm,9.3s						
BALT	Daday	10.51	77	iP	P	12 16 18.5	+0.4
ELDT	Eldivan	10.51	83	iP	P	12 16 18.4	+0.3
DPC	Dobruska-Polom	10.66	348	eP	P	12 16 23.7	+3.5
PRU	Pruhonice	10.67	342	eP	P	12 16 18.3	-2.0
MBDF	Montbardon	10.69	301	eP	P	12 16 20.7	+0.2
BRTR	Keskin Array B	10.72	87	Pn	P	12 16 19.8	-1.3
	comp=E,0.2nm,0.3s,baz=270,slow=11,SNR=16						
LPG	La Plagne	11.02	304	eP	P	12 16 24.9	-0.1
	comp=E,17nm,0.7s						
LPG	La Plagne	11.02	304	eP	P	12 16 24.9	-0.1
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPL	La Plagne	11.04	304	eP	P	12 16 25.1	-0.1
	comp=Z,4.0nm,0.4s						
LPL	La Plagne	11.04	304	eP	P	12 16 25.1	-0.1
LPL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ORIF	Oris-en-Rattie	11.35	300	eP	P	12 16 29.0	-0.6
ORIF				eR			
	comp=Z,287nm,19.8s						
NKC	Novy Kostel	11.48	336	eP	P	12 16 34.2	+2.9
BOYT	Boyabat	11.64	78	iP	P	12 16 24.4	-9.0
BRG	Berggiesshubel	11.64	342	eP	P	12 16 31.3	-2.2
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRG	Berggiesshubel	11.64	342	P	P	12 16 31.3	-2.2
	comp=Z,7.5nm,1.3s						
SWA2		11.69	154	⇑P	P	12 16 29.9	-4.2
NIG	Nigde	11.74	94	eP	P	12 16 37.7	+2.8
SWA1		11.75	153	⇓P	P	12 16 31.3	-3.8
SWA1				S	S	12 18 29.4	-18
SIM	Simferopol'	11.76	60	P	P	12 16 40.1	+5.0
SIM				eS	S	12 18 52.0	+4.6
SIM				pmax	pmax		
	comp=Z,11nm,0.9s						
SIM				MLR	MLR		
	comp=Z,50nm,7.0s						
MEST	Erdemli	11.84	102	iP	P	12 16 40.7	+4.5
CABF	La Chapelle	11.94	308	eP	P	12 16 36.2	-1.3
	comp=Z,11nm,0.7s						
CABF	La Chapelle	11.94	308	eP	P	12 16 36.2	-1.3
CABF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MOX	Moxa	12.10	335	eP	P	12 16 36.2	-3.5
MOX	Moxa	12.10	335	iP	P	12 16 36.2	-3.5
VIVF	Saint-Julien-l	12.14	299	eP	P	12 16 39.6	-0.6
HINF	Hinteralfeld	12.14	315	eP	P	12 16 38.5	-1.7
	comp=Z,5.8nm,0.5s						
HINF	Hinteralfeld	12.14	315	eP	P	12 16 38.5	-1.7
HINF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CDF	Champ du Feu	12.28	318	eP	P	12 16 41.7	-0.4
CLL	Collm	12.28	340	P	P	12 16 40.0	-2.0
CLL				eL		12 21 01.0	
HAU	Haudompre	12.53	314	eP	P	12 16 44.1	-1.3
	comp=Z,4.5nm,0.3s						
HAU				eR			
	comp=Z,136nm,19.2s						
AKASG	Malin Array Be	12.65	29	iP	P	12 16 46.3	-0.8
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	12.65	29	Pn	P	12 16 44.0	-3.0
	comp=Z,1.1nm,0.3s,baz=216,slow=12,SNR=11						
AKASG	Malin Array Be	12.65	29	iP	P	12 16 46.3	-0.8
	comp=Z,4.0nm,0.8s						
SMF	Signal de Mont	13.34	305	eP	P	12 16 55.8	-0.4
	comp=Z,6.7nm,0.3s						
SMF	Signal de Mont	13.34	305	eP	P	12 16 55.8	-0.4
SMF				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KAHT	Ahir Dag	13.60	94	iP	P	12 17 08.6	+9.0
ANN	Anapa	13.97	64	eP	P	12 17 07.3	+2.9
ANN				pmax	pmax		
	comp=Z,12nm,0.8s						
GZT	Gaziantep	14.20	95	iP	P	12 17 10.5	+3.0
SUW	Suwalki	14.26	8	eP	P	12 17 03.5	-4.7
MALT	Malatya	14.63	90	eP	P	12 17 18.3	+5.1
MALT				pmax	pmax		
	comp=Z,14nm,0.7s						
MALT	Malatya	14.63	90	eP	P	12 17 18.3	+5.1
	comp=Z,14nm,0.7s						
SUZ		14.74	129	P	P	12 17 12.4	-2.3
ERTA	Horta de San J	14.78	280	P	P	12 17 22.9	+7.7
	comp=Z,16nm,0.9s						
EPF	Esparros	14.83	288	eP	P	12 17 15.2	-0.6
EBIE	Bielsa	14.95	287	P	P	12 17 23.8	+6.5
	comp=Z,7.8nm,0.9s						
ELZG	Elazig	15.02	89	iP	P	12 17 23.2	+4.9
EMOS	Mosqueruela	15.43	278	P	P	12 17 29.8	+6.2
	comp=Z,21nm,0.9s						
EBEN	Beniarda	15.47	272	P	P	12 17 29.1	+4.9
	comp=Z,28nm,1.0s						
ETSF	Etsaut	15.48	288	eP	P	12 17 23.7	-0.5
ASF	Jabal al Asfar	15.91	114	Pn	P	12 17 29.5	-0.4
	comp=Z,0.5nm,0.3s,baz=204,slow=10.0,SNR=4.4						
EIL	Elat	16.17	125	Pn	P	12 17 34.1	+0.9
	comp=Z,0.7nm,0.3s,baz=337,slow=14,SNR=8.9						
EIL	Elat	16.17	125	eP	P	12 17 31.7	-1.5
	comp=Z,18nm,0.8s						
EIL	Elat	16.17	125	eP	P	12 17 31.7	-1.5
	comp=Z,18nm,0.8s						
LDF	La Druitiere	16.58	308	eP	P	12 17 37.3	-1.0
HAQS	Haql	16.58	126	P	P	12 17 34.1	-4.4
JMOS	Jabal al Moall	16.61	126	P	P	12 17 35.7	-3.1
EVIA	Vianos	17.24	273	P	P	12 17 51.8	+5.2
EVIA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
EVIA	Vianos	17.24	273	P	P	12 17 51.8	+5.2
	comp=Z,4.8nm,0.4s						
JMQS	Jabal Moqyreh	17.29	125	P	P	12 17 48.9	+1.5
KIV	Kislovodsk	17.54	69	d iP	P	12 17 52.0	+1.6
KIV				eS	S	12 21 08.1	+4.2
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	Kislovodsk	17.54	69	eP	P	12 17 51.7	+1.3
	comp=Z,21nm,1.2s						
KIV	Kislovodsk	17.54	69	eP	P	12 17 51.7	+1.3
	comp=Z,21nm,1.2s						
EQES	Quesada	17.86	270	P	P	12 17 59.3	+5.0
	comp=Z,4.2nm,0.6s						
GOF	Gofitskoye	17.92	66	⇑iP	P	12 17 55.0	-0.1
GOF				pmax	pmax		
	comp=Z,45nm,0.9s						
GOF	Gofitskoye	17.92	66	iP	P	12 17 55.0	-0.1
	comp=Z,45nm,0.9s						
EBER	Berja	17.95	267	P	P	12 18 00.5	+4.9
	comp=Z,3.0nm,0.5s						
ESDC	Sonseca Array	18.18	277	P	P	12 17 59.6	+1.2
	comp=Z,0.5nm,0.3s,baz=70,slow=11,SNR=9.0						
ESDC	Sonseca Array	18.18	277	P	P	12 18 00.3	+1.9
	comp=Z,2.3nm,0.3s						
ESLA	Sonseca Array	18.18	277	eP	P	12 17 58.1	-0.3
	comp=Z,1.9nm,0.8s						
ESLA	Sonseca Array	18.18	277	eP	P	12 17 58.1	-0.3
	comp=Z,1.9nm,0.8s						
ELUQ	Luque	18.84	270	P	P	12 18 07.1	+0.6
ELUQ				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ELUQ	Luque	18.84	270	P	P	12 18 07.1	+0.6
	comp=Z,8.2nm,0.5s						
ELUQ	Luque	18.84	270	P	P	12 18 07.1	+0.6
	comp=Z,8.2nm,0.5s,SNR=14						
ELOJ	Sierra Loja	18.86	269	P	P	12 18 08.2	+1.5
ELOJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ELOJ	Sierra Loja	18.86	269	P	P	12 18 08.2	+1.4
	comp=Z,1.2nm,0.3s						
OBN	Obninsk	18.89	31	⇓eP	P	12 18 04.3	-2.6
OBN				S	S	12 21 38.1	+3.8
OBN				pmax	pmax		
	comp=Z,40nm,1.2s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s						
OBN	Obninsk	18.89	31	eP	P	12 18 04.0	-2.9
	comp=Z,35nm,1.0s						
OBN	Obninsk	18.89	31	eP	P	12 18 04.3	-2.6
	comp=Z,200nm,20.0s						
EADA	Adamuz	18.93	272	P	P	12 18 09.2	+1.7
	comp=Z,3.7nm,0.7s						
GNI	Garni	19.16	81	c iP	P	12 18 09.7	-0.6
GNI				pmax	pmax		
	comp=Z,37nm,1.7s						
GNI				MLR	MLR		
	comp=Z,200nm,11.0s						
GNI	Garni	19.16	81	LR	LR	12 25 35.9	
	comp=Z,35nm,19.7s,baz=275,slow=37						
GNI	Garni	19.16	81	eP	P	12 18 06.4	-3.9
	comp=Z,34nm,0.9s						
GNI	Garni	19.16	81	iP	P	12 18 09.7	-0.6
	comp=Z,200nm,11.0s						
EMIJ	Mijas	19.50	268	P	P	12 18 16.3	+2.0
	comp=Z,6.0nm,0.7s						
MOS	Moscow	19.75	31	eP	P	12 18 15.1	-1.9
MOS				eS	S	12 21 55.7	+2.0
MOS				pmax	pmax		
	comp=Z,79nm,0.7s						
MOS	Moscow	19.75	31	eP	P	12 18 15.1	-1.9
	comp=Z,79nm,0.7s						
ESPR	Espera	20.24	269	P	P	12 18 23.0	+0.6
	comp=Z,2.8nm,0.3s						
EINC	Incio	20.47	286	P	P	12 18 22.1	-2.7
	comp=Z,12nm,0.5s						
EINC	Incio	20.47	286	P	P	12 18 22.1	-2.6
	comp=Z,12nm,0.5s,SNR=10						
HFS	Hagfors	20.55	351	P	P	12 18 23.0	-2.4
HFS				pmax	pmax		
	comp=Z,6.0nm,0.4s						
HFS	Hagfors	20.55	351	P	P	12 18 23.0	-2.4
	comp=Z,5.6nm,0.4s,baz=157,slow=11,SNR=31						
EMIN	Mina Concepcio	20.63	272	P	P	12 18 24.9	-1.6
	comp=Z,24nm,1.1s						
EMIN	Mina Concepcio	20.63	272	P	P	12 18 24.9	-1.5
	comp=Z,24nm,1.1s						
EBAD	Badajoz	20.67	275	P	P	12 18 26.5	-0.3
	comp=Z,43nm,1.5s						
EBAD	Badajoz	20.67	275	P	P	12 18 26.5	-0.3
	comp=Z,43nm,1.5s,SNR=7.9						
PUL	Pulkovo	20.93	15	iP	P	12 18 27.3	-2.0
NAO01	NORSAR Array S	21.62	348	eP	P	12 18 33.5	-2.8
	comp=Z,34nm,1.2s,mb4.7						
EKA	Eskdalemuir Ar	21.62	323	P	P	12 18 36.1	-0.3
EKA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
EKA	Eskdalemuir Ar	21.62	323	P	P	12 18 36.0	-0.3
	comp=Z,8.0nm,0.7s,mb4.2,baz=117,slow=8.4,SNR=12						
EKA	Eskdalemuir Ar	21.62	323	P	P	12 18 36.0	-0.4
NB2	NORSAR Subarra	21.75	349	P	P	12 18 36.0	-1.7
	comp=Z,34nm,0.9s,mb4.8,baz=164,slow=10						
NB2	NORSAR Subarra	21.75	349	P	P	12 18 36.0	-1.7
NB2				pmax	pmax		
	comp=Z,34nm,0.9s,mb4.8						
NOA	NORSAR Array B	21.75	349	P	P	12 18 36.5	-1.2
NOA				pmax	pmax		
	comp=Z,21nm,0.9s						
NOA				MLR	MLR		
	comp=Z,96nm,18.5s						
NOA	NORSAR Array B	21.75	349	P	P	12 18 36.5	-1.1
	comp=Z,21nm,0.9s,mb4.6,baz=165,slow=10,SNR=27						
NOA				LR	LR	12 28 19.3	
	comp=Z,96nm,18.5s,MS3.2,baz=185,slow=40						
FINES	FINESS Array B	21.87	8	P	P	12 18 36.6	-2.2
FINES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,187nm,18.9s						
FINES	FINESS Array B	21.87	8	P	P	12 18 36.6	-2.2
	comp=Z,6.4nm,0.5s,mb4.3,baz=179,slow=11,SNR=51						
FINES				LR	LR	12 28 09.7	
	comp=Z,187nm,18.9s,MS3.5,baz=157,slow=40						
KAF	Kangasniemi	22.55	8	ep	P	12 18 43.6	-1.9
	comp=Z,12nm,0.9s,mb4.3						
KAF	Kangasniemi	22.55	8	eP	P	12 18 43.6	-1.9
KAF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.3						
JOF	Joensuu	24.03	13	ep	P	12 18 58.1	-1.8
	comp=Z,8.7nm,0.7s,mb4.3						
ARCES	ARCESS Array B	29.80	4	P	P	12 19 50.7	-2.4
ARCES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,93nm,20.2s						
ARCES	ARCESS Array B	29.80	4	P	P	12 19 50.7	-2.5
	comp=Z,9.1nm,0.9s,mb4.5,baz=188,slow=11,SNR=12						
ARCES				LR	LR	12 32 08.5	
	comp=Z,92nm,20.2s,MS3.4,baz=191,slow=37						
ARCES	ARCESS Array B	29.80	4	P	P	12 19 50.7	-2.5
ARCES				LR	LR	12 32 08.5	
KEV	Kevo	30.11	5	ep	P	12 19 52.8	-3.1
SVE	Sverdlovsk	31.40	44	⇑eP	P	12 20 05.3	-2.0
SVE				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.8						
SVE				MLR	MLR		
	comp=E,500nm,16.0s						
SVE				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.4						
SVE	Sverdlovsk	31.40	44	eP	P	12 20 05.3	-2.0
	comp=Z,20nm,1.2s,mb4.8						
BRVK	Borovoye	36.43	52	eP	P	12 20 48.7	-2.0
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
BRVK	Borovoye	36.43	52	eP	P	12 20 48.7	-2.1
	comp=Z,12nm,0.8s,mb4.9						
BRVK	Borovoye	36.43	52	eP	P	12 20 48.7	-2.0
	comp=Z,12nm,0.8s,mb4.9						
BVA0	Borovoye Array	36.49	52	iP	P	12 20 49.6	-1.7
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0						
BVA0	Borovoye Array	36.49	52	iP	P	12 20 49.6	-1.7
	comp=Z,3.0nm,1.5s,mb4.0						
BVAR	Borovoye Array	36.49	52	P	P	12 20 49.8	-1.5
	comp=Z,5.9nm,0.9s,mb4.5,baz=252,slow=4.7,SNR=25						
BVAR				PP	PP	12 22 11.8	-3.4
	comp=Z,3.2nm,0.9s,baz=278,slow=10,SNR=4.4						
BVAR	Borovoye Array	36.49	52	PP	PP	12 22 11.8	-3.5
CHKZ	Chkalovo	36.63	51	eP	P	12 20 50.3	-2.2
CHKZ				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
CHKZ	Chkalovo	36.63	51	eP	P	12 20 50.3	-2.2
	comp=Z,14nm,0.9s,mb4.8						
CHKZ	Chkalovo	36.63	51	eP	P	12 20 50.3	-2.2
	comp=Z,14nm,0.9s,mb4.8						
DBIC	Dimbokro	39.80	220	LR	LR	12 37 12.2	
	comp=Z,50nm,19.7s,MS3.4,baz=335,slow=35						
AAK	Ala-Archa	40.65	68	⇓eP	P	12 21 25.9	-0.2
AAK				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.3						
AAK	Ala-Archa	40.65	68	eP	P	12 21 24.1	-2.0
	comp=Z,14nm,1.4s,mb4.4						
AAK	Ala-Archa	40.65	68	eP	P	12 21 24.1	-2.0
	comp=Z,14nm,1.4s,mb4.4						
KURK	Kurchatov	41.75	55	iP	P	12 21 32.9	-2.0
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.2						
KURK	Kurchatov	41.75	55	eP	P	12 21 32.6	-2.4
	comp=Z,14nm,1.4s,mb4.4						
KURK	Kurchatov	41.75	55	iP	P	12 21 32.9	-2.0
	comp=Z,8.0nm,1.3s,mb4.2						
NVS	Novosibirsk	43.95	48	iP	P	12 21 50.8	-2.0
NVS				eS	S	12 28 14.0	-10
NVS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
NVS				smax			
	comp=E,10.0nm,2.3s						
NVS	Novosibirsk	43.95	48	iP	P	12 21 50.8	-2.0
	comp=E,16nm,1.0s,mb4.7						
MKAR	Makanchi Array	44.94	60	iP	P	12 21 59.0	-1.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAL	Zalesovo	44.99	49	P	P	12 22 00.2	-1.0
ZAL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ZAL				MLR	MLR		
	comp=Z,131nm,18.2s						
ZAL	Zalesovo	44.99	49	P	P	12 22 00.2	-1.1
	comp=Z,9.1nm,0.6s,mb4.8,baz=196,slow=8.0,SNR=62						
ZAL				LR	LR	12 43 45.2	
	comp=Z,131nm,18.2s,MS3.9,baz=182,slow=40						
ZAL	Zalesovo	44.99	49	P	P	12 22 00.2	-1.1
ZAL				LR	LR	12 43 45.2	
WMQ	Urumqi	49.47	62	eP	P	12 22 34.5	-2.0
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s,mb5.0						
KOLN	Koldanda	53.41	82	eP	P	12 23 03.0	-3.5
	comp=Z,11nm,0.5s,mb5.0						
GKN	Gorkha	54.08	82	eP	P	12 23 07.6	-3.7
	comp=Z,13nm,0.5s,mb5.1						
DMN	Daman	54.64	82	eP	P	12 23 12.2	-3.3
	comp=Z,30nm,0.9s,mb5.3						
KKN	Kakani	54.67	81	eP	P	12 23 12.1	-3.7
PKI	Pulchoki	54.89	82	eP	P	12 23 14.5	-2.8
GUN	Gumba	55.07	81	eP	P	12 23 15.1	-3.6
	comp=Z,25nm,0.9s,mb5.2						
JIRN	Jiri	55.43	81	eP	P	12 23 17.4	-3.9
	comp=Z,26nm,0.5s,mb5.5						
TLY	Talaya	56.56	48	⇑iP	P	12 23 27.9	-1.2
TLY	Talaya	56.56	48	iP	P	12 23 27.9	-1.2
ZAK	Zakamensk	56.88	49	eP	P	12 23 30.1	-1.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAK	Zakamensk	56.88	49	eP	P	12 23 30.1	-1.3
	comp=Z,2.0nm,1.1s,mb4.1						
RES	Resolute Bay	57.89	343	eP	P	12 23 36.9	-1.3
RES				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
RES	Resolute Bay	57.89	343	eP	P	12 23 36.9	-1.3
	comp=Z,2.0nm,1.0s,mb4.1						
LSA	Lhasa	58.12	76	eP	P	12 23 37.7	-2.7
LSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
LSA	Lhasa	58.12	76	eP	P	12 23 37.7	-2.7
	comp=Z,4.5nm,0.8s,mb4.5						
LSA	Lhasa	58.12	76	eP	P	12 23 37.7	-2.7
	comp=Z,5.0nm,0.8s,mb4.6						
TIXI	Tiksi	58.21	21	⇓eP	P	12 23 39.3	-1.2
TIXI	Tiksi	58.21	21	eP	P	12 23 39.3	-1.2
BOD	Bodaibo	59.37	38	⇓iP	P	12 23 45.9	-2.8
BOD				pmax	pmax		
	comp=Z,19nm,3.2s						
BOD	Bodaibo	59.37	38	iP	P	12 23 45.9	-2.8
	comp=Z,19nm,3.2s						
GTA	Gaotai	59.55	62	eP	P	12 23 48.1	-2.1
GTA				AP	pP	12 23 57.9	+4.5
GTA				XP	sP	12 24 01.8	+7.3
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.3						
SONM	Songino Array	59.83	51	P	P	12 23 50.2	-1.9
	comp=Z,2.6nm,0.8s,mb4.3,baz=289,slow=9.1,SNR=30						
ULN	Ulaanbaatar	60.21	51	eP	P	12 23 51.9	-2.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
ULN	Ulaanbaatar	60.21	51	eP	P	12 23 51.9	-2.7
	comp=Z,3.1nm,0.9s,mb4.3						
ULN	Ulaanbaatar	60.21	51	eP	P	12 23 51.9	-2.7
	comp=Z,3.0nm,0.9s,mb4.3						
YAK	Yakutsk	63.88	30	⇑eP	P	12 24 16.7	-2.1
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
YAK				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.2						
YAK	Yakutsk	63.88	30	⇑eP	P	12 24 16.8	-2.0
YAK	Yakutsk	63.88	30	eP	P	12 24 16.7	-2.1
	comp=Z,100nm,13.0s						
HIA	Hailar	66.70	45	eP	P	12 24 29.7	-7.6
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HIA	Hailar	66.70	45	eP	P	12 24 29.7	-7.5
	comp=Z,4.6nm,0.8s,mb4.6						
BOSA	Boshof	68.41	175	eP	P	12 24 50.2	+1.8
BILL	Bilibino	69.43	13	eP	P	12 24 51.1	-2.9
BILL				e		12 25 13.6	
BILL				eS	S	12 33 53.0	-6.7
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BILL	Bilibino	69.43	13	eP	P	12 24 51.1	-2.9
	comp=Z,2.0nm,0.8s,mb4.1						
BILL	Bilibino	69.43	13	ePcP	PcP	12 25 13.6	-3.9
BILL				eS	S	12 33 53.0	-6.7
INK	Inuvik	70.20	350	eP	P	12 24 57.4	-1.3
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	Inuvik	70.20	350	P	P	12 24 56.9	-1.8
	comp=Z,2.3nm,1.1s,mb4.0,baz=32,slow=5.0,SNR=3.8						
INK	Inuvik	70.20	350	eP	P	12 24 57.4	-1.3
	comp=Z,3.2nm,1.1s,mb4.2						
INK	Inuvik	70.20	350	eP	P	12 24 57.4	-1.3
	comp=Z,3.0nm,1.1s,mb4.1						
CMAR	Chiang Mai Arr	70.28	82	P	P	12 24 56.9	-3.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	Chiang Mai Arr	70.28	82	P	P	12 24 56.9	-3.1
	comp=Z,1.8nm,0.7s,mb4.1,baz=306,slow=7.3,SNR=13						
ENH	Enshi	71.14	66	eP	P	12 25 03.3	-1.7
YKA	Yellowknife Ar	71.50	339	P	P	12 25 06.2	-0.5

YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	**Yellowknife Ar**	**71.50**	**339**	P	**P**	**12 25 06.2**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=35,slow=5.1,SNR=27						
MA2	**Magadan**	**72.93**	**24**	eP	**P**	**12 25 14.7**	**-0.3**
MA2				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
MA2				MLR	MLR		
	comp=Z,140nm,18.0s,MS4.3						
MA2	**Magadan**	**72.93**	**24**	eP	**P**	**12 25 14.7**	**-0.3**
	comp=Z,140nm,18.0s						
CN2	**Changchun**	**73.13**	**47**	⇑P	**P**	**12 25 15.1**	**-1.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
ULM	**Lac du Bonnet**	**73.90**	**323**	P	**P**	**12 25 21.0**	**+0.1**
	comp=Z,2.5nm,0.6s,mb4.3,baz=46,slow=8.3,SNR=5.7						
IMA	**Indian Mountai**	**74.19**	**357**	eP	**P**	**12 25 22.7**	**+0.5**
IMA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
IMA	**Indian Mountai**	**74.19**	**357**	eP	**P**	**12 25 22.7**	**+0.5**
	comp=Z,18nm,0.9s,mb5.0						
DAWY	**Dawson**	**75.01**	**351**	eP	**P**	**12 25 27.3**	**+0.3**
COLA	**College**	**75.05**	**355**	eP	**P**	**12 25 27.1**	**-0.2**
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
COLA	**College**	**75.05**	**355**	eP	**P**	**12 25 27.1**	**-0.1**
	comp=Z,2.7nm,1.0s,mb4.1						
COLA	**College**	**75.05**	**355**	eP	**P**	**12 25 27.1**	**-0.2**
	comp=Z,3.0nm,1.0s,mb4.2						
ILAR	**Eielson Array**	**75.08**	**354**	P	**P**	**12 25 27.9**	**+0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,76nm,18.8s						
ILAR	**Eielson Array**	**75.08**	**354**	P	**P**	**12 25 27.9**	**+0.4**
	comp=Z,1.4nm,0.9s,mb3.9,baz=354,slow=3.7,SNR=13						
ILAR				LR	LR	12 59 52.0	
	comp=Z,76nm,18.8s,MS4.0,baz=179,slow=37						
MCK	**McKinley**	**76.26**	**355**	eP	**P**	**12 25 33.8**	**-0.3**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MCK	**McKinley**	**76.26**	**355**	eP	**P**	**12 25 33.8**	**-0.3**
	comp=Z,2.3nm,0.9s,mb4.1						
MCK	**McKinley**	**76.26**	**355**	eP	**P**	**12 25 33.8**	**-0.3**
	comp=Z,2.0nm,0.9s,mb4.0						
KS15	**Wonju Array Si**	**78.68**	**50**	eP	**P**	**12 25 46.7**	**-1.3**
EDM	**Edmonton**	**78.72**	**333**	eP	**P**	**12 25 51.7**	**+3.7**
WMOK	**Wichita Mounta**	**86.51**	**314**	eP	**P**	**12 26 27.7**	**-0.9**
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.6						
WMOK	**Wichita Mounta**	**86.51**	**314**	eP	**P**	**12 26 27.7**	**-0.8**
	comp=Z,4.2nm,1.1s,mb4.6						
WMOK	**Wichita Mounta**	**86.51**	**314**	eP	**P**	**12 26 27.7**	**-0.9**
	comp=Z,4.0nm,1.1s,mb4.6						
TXAR	**Lajitas Array**	**93.29**	**313**	P	**P**	**12 27 02.2**	**+1.7**
	comp=Z,0.5nm,0.8s,mb4.0,baz=72,slow=4.0,SNR=4.7						
ASAR	**Alice Springs**	**122.97**	**95**	PKP	PKPdf	12 32 41.2	-2.9
	comp=Z,0.6nm,0.8s,baz=310,slow=2.3,SNR=4.5						

IDC 12 12:19:07.4±5.5, 7.16N×92.25E, mb3.4/2, mb1 3.7/3, mb1mx3.4/18, mbtmp3.4/3, ML3.8/1, Error ellipse: s-maj=133.6km s-min=47.1km az=87.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.98**	**29**	Pn	P	12 22 13.0	-3.0
	0.1nm,0.3s,baz=225,slow=15,SNR=6.5						
WRA	**Warramunga Arr**	**49.40**	**124**	P	P	12 27 58.9	-2.3
	0.2nm,0.4s,baz=303,slow=9.1,SNR=5.9						
ASAR	**Alice Springs**	**50.92**	**128**	P	P	12 28 10.8	-2.0
	0.7nm,0.8s,baz=300,slow=6.6,SNR=5.6						
TXAR	**Lajitas Array**	**140.61**	**22**	PKP	PKPdf	12 38 41.5	-0.2
	0.1nm,0.4s,baz=187,slow=0.1,SNR=4.0						

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*NIED **12** 12:23:00, 40.40N×142.30E, h53^{km}, Mw4.0 Best double couple: $M_0$1.01×10^{15} NP1:ϕ_s22°, δ69°, λ84°. NP2:ϕ_s219°, δ22°, λ106°.*
*IDC **12** 12:23:13.1±1.2, 40.18N×141.79E, mb3.9/8, mb1 4.0/9, mb1mx3.8/24, mbtmp3.9/9, ML3.8/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/31, Error ellipse: s-maj=30.5km s-min=23.3km az=107.0*
*JMA **12** 12:23:18.9±0.1, 40.37N×142.27E, h39^{km}±1^{km}, M4.0*
JMA Felt II J1.
*MOS **12** 12:23:22.2±1.5, 40.52N×141.62E, h76^{km}, mb4.4/7, Error ellipse: s-maj=22.8km s-min=10.3km az=80.9*
*NEIC **12** 12:23:26.7±1.8, 40.19N×141.72E, h114^{km}±20^{km}, mb4.2/2, Error ellipse: s-maj=19.7km s-min=19.2km az=49.0*
NEIC Recorded [2 JMA] in Aomori and Iwate Prefectures.
ISC 12 12:23:18.2±0.8, 40.41N±0.04×142.25E±0.10, h56^{km}±6^{km}, n33, σ0^{s}90/41, mb3.8/9, 6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.55**	**212**	P	**P**	**12 23 30.0**	**-0.5**
JTH				S	**S**	**12 23 37.8**	**-1.7**
JANG	**Nango**	**0.56**	**267**	⇓P	**P**	**12 23 30.6**	**0.0**
JANG				S	**S**	**12 23 38.9**	**-0.7**
JKZ	**Kuzumaki**	**0.82**	**239**	⇓P	**P**	**12 23 34.2**	**+0.4**
JKZ				S	**S**	**12 23 45.1**	**-0.4**
JTM	**Tenmabayashi**	**0.97**	**293**	⇓P	**P**	**12 23 36.2**	**+0.3**
JTM				S	**S**	**12 23 49.2**	**+0.1**
JOM	**Ohasama**	**1.19**	**218**	⇓P	**P**	**12 23 39.2**	**+0.3**
JOM				S	**S**	**12 23 54.4**	**+0.1**
JAH	**Hinai**	**1.25**	**260**	⇓P	**P**	**12 23 40.3**	**+0.5**
JAH				S	**S**	**12 23 56.1**	**+0.2**
JOT	**Ohata**	**1.33**	**317**	P	**P**	**12 23 41.2**	**+0.1**
ASAJ	**Asahikawa**	**3.72**	**4**	Pn	**P**	**12 24 15.7**	**+1.1**
	4.9nm,0.3s,baz=201,slow=12,SNR=15						
ASAJ				Sn	**S**	**12 25 04.7**	**+7.2**
	2.6nm,0.3s,baz=126,slow=33,SNR=6.4						
ASAJ				LR	LR	12 26 06.4	
	comp=Z,108nm,20.1s,baz=136,slow=44						
YUK	**Yuzh-Kuril'sk**	**4.51**	**35**	eP	**P**	**12 24 34.0**	**+8.3**
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
MAJO	**Matsushiro**	**4.99**	**221**	eP	**P**	**12 24 33.3**	**+0.8**
MAT	**Matsushiro**	**4.99**	**221**	eP	**P**	**12 24 34.0**	**+1.5**
MAT	**Matsushiro**	**4.99**	**221**	P	**P**	**12 24 34.1**	**+1.6**
MAT				eS	**S**	**12 25 30.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.55**	**3**	eP	**P**	**12 24 54.0**	**-0.3**
BOD	**Bodaibo**	**25.12**	**323**	⇓iP	**P**	**12 28 37.3**	**-1.7**
BOD				pmax	pmax		
	comp=Z,50nm,3.6s						
SONM	**Songino Array**	**26.60**	**298**	P	**P**	**12 28 53.1**	**+0.2**
	comp=Z,0.5nm,0.5s,mb3.3,baz=85,slow=7.9,SNR=8.4						
ZAL	**Zalesovo**	**40.21**	**309**	P	**P**	**12 30 51.2**	**+0.7**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	**Zalesovo**	**40.21**	**309**	P	**P**	**12 30 51.2**	**+0.7**
	comp=Z,1.7nm,0.5s,mb4.0,baz=16,slow=7.8,SNR=10						
KURK	**Kurchatov**	**44.43**	**306**	eP	**P**	**12 31 24.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
KURK	**Kurchatov**	**44.43**	**306**	eP	**P**	**12 31 24.3**	**-0.7**
	comp=Z,6.0nm,0.8s,mb4.4						
ILAR	**Eielson Array**	**46.32**	**34**	P	**P**	**12 31 45.1**	**+5.4**
	comp=Z,0.4nm,1.1s,mb3.3,baz=283,slow=7.0,SNR=2.8						
CHKZ	**Chkalovo**	**48.54**	**311**	eP	**P**	**12 31 56.3**	**-1.0**
INK	**Inuvik**	**51.10**	**28**	P	**P**	**12 32 19.3**	**+2.6**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**51.10**	**28**	P	**P**	**12 32 19.3**	**+2.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=257,slow=5.7,SNR=4.9						
WRA	**Warramunga Arr**	**60.49**	**189**	P	**P**	**12 33 23.0**	**-1.8**
	comp=Z,0.3nm,0.6s,mb3.5,baz=6.9,slow=6.6,SNR=5.6						
FINES	**FINESS Array B**	**66.14**	**332**	P	**P**	**12 34 00.5**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**66.14**	**332**	P	**P**	**12 34 00.5**	**-0.9**
	comp=Z,1.0nm,0.6s,mb4.0,baz=45,slow=8.1,SNR=6.1						
FINES	**FINESS Array B**	**66.14**	**332**	P	**P**	**12 34 00.5**	**-0.9**
HFS	**Hagfors**	**71.29**	**336**	P	**P**	**12 34 33.2**	**+0.1**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	**Hagfors**	**71.29**	**336**	P	**P**	**12 34 33.2**	**+0.1**
	comp=Z,2.4nm,0.8s,mb4.2,baz=27,slow=3.3,SNR=5.6						
NB2	**NORSAR Subarra**	**71.33**	**337**	P	**P**	**12 34 33.0**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=38,slow=6.2						
NB2	**NORSAR Subarra**	**71.33**	**337**	P	**P**	**12 34 33.0**	**-0.3**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NOA	**NORSAR Array B**	**71.33**	**337**	P	**P**	**12 34 33.5**	**+0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**71.33**	**337**	P	**P**	**12 34 33.5**	**+0.2**
	comp=Z,1.3nm,0.6s,mb4.0,baz=39,slow=6.2,SNR=5.9						

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*BER **12** 12:26:46.6±3.3, 71.00N×16.78E, h10^{km}, MD2.5, ML2.0(NAO)*
*NAO **12** 12:26:47.9±5.2, 70.00N×16.89E, ML2.0*
HEL 12 12:26:46.1±0.5, 70.95N×16.91E, h15^{km}±4^{km}, ML2.0, MD2.5(BER), ML2.0(NAO), Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRO	**Tromso**	**1.49**	**152**	eS	Sb	12 27 29.9	-1.8
KIF	**Kilpisjarvi**	**2.37**	**144**	eP	Pn	12 27 24.3	-0.9
KIF				eS	Sn	12 27 53.0	-1.3
KTK1	**Kautokeino**	**2.92**	**129**	eP	Pn	12 27 32.9	-0.1
KTK1				eS	Sn	12 28 07.8	-0.4
LOF	**Lofoten**	**3.07**	**204**	eP	Pn	12 27 34.3	-0.8
LOF				eS	Sn	12 28 08.6	-3.3
ARA0	**ARCESS Array S**	**3.25**	**112**	Pn	Pn	12 27 36.5	-1.2
	baz=307,slow=12						
ARA0				Sn	Sn	12 28 14.0	-2.4
	baz=283,slow=22						
ARA0	**ARCESS Array S**	**3.25**	**112**	eP	Pn	12 27 36.5	-1.2
ARA0				eS	Sn	12 28 14.0	-2.4
KEV	**Kevo**	**3.62**	**105**	eP	Pn	12 27 41.3	-1.6
KEV				eS	Sn	12 28 21.8	-4.0
KEV				MSN		12 28 25.3	
	comp=Z,1.2nm,0.2s						
SGF	**Sodankyl**	**4.91**	**131**	eP	Pn	12 28 00.2	-1.1
SGF				eS	Sn	12 28 54.6	-3.9
SGF				MSN		12 28 59.1	
	comp=Z,0.5nm,0.1s						
KU4	**Oulanka**	**6.51**	**129**	eP	Pn	12 28 21.9	-1.9
KU4				eS	Sn	12 29 31.6	-7.0
APA0	**Apatity Array**	**6.61**	**113**	Pn	Pn	12 28 21.2	-4.0
	baz=316,slow=11						
APA0				Sn	Sn	12 29 33.7	-7.4
	baz=313,slow=37						
APA0	**Apatity Array**	**6.61**	**113**	eP	Pn	12 28 21.2	-4.0
APA0				eS	Sn	12 29 33.7	-7.4
MSF	**Maaselka**	**6.74**	**133**	eP	Pn	12 28 24.6	-2.5
MSF				eS	Sn	12 29 37.7	-6.6
MSF				MSN		12 29 41.5	
	comp=Z,0.3nm,0.2s						
OUL	**Oulu**	**6.78**	**146**	eS	Sn	12 29 38.1	-7.2
KJN	**Kajaani**	**8.03**	**144**	eS	Sn	12 30 08.1	-8.4

IGQ 12 12:40:12.8, 1.28S×81.76W, h5^{km}±9^{km}, mb4.5, 7D, Error ellipse: s-maj=9.5km s-min=5.7km az=164.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	**3.13**	**94**	P	Pn	12 41 05.0	+1.2
IGUA				S	Sn	12 41 43.1	+1.1
JUIV	**Juive**	**3.30**	**93**	P	Pn	12 41 08.9	+2.6
ARRY	**Arrayan**	**3.31**	**94**	P	Pn	12 41 07.5	+1.1
ARRY				S	Sn	12 41 44.4	-2.3
RETU	**Refugio**	**3.32**	**93**	P	Pn	12 41 09.1	+2.6
TERV	**Terraza Guagua**	**3.34**	**71**	⇓P	Pn	12 41 07.3	+0.4
PINO	**Pino**	**3.35**	**71**	P	Pn	12 41 05.9	-1.0
NAS1	**Nasa**	**3.35**	**79**	⇓P	Pn	12 41 08.3	+1.4
ULBA	**Ulba**	**3.36**	**93**	P	Pn	12 41 08.6	+1.6
PISA	**Pisayambo**	**3.38**	**86**	P	Pn	12 41 08.4	+1.0
YANA	**Yana**	**3.39**	**70**	⇓P	Pn	12 41 06.7	-0.8
VC1	**Cotopaxi 1**	**3.42**	**79**	⇓P	Pn	12 41 09.6	+1.7
TAMB	**Tambo**	**3.44**	**80**	P	Pn	12 41 09.9	+1.7
ANTI	**Antisana**	**3.69**	**77**	⇓P	Pn	12 41 13.5	+1.6
ANTI				S	Sn	12 41 57.0	+0.7
CAYR	**Refugio Cayamb**	**3.97**	**71**	⇓P	Pn	12 41 17.4	+1.6
CAYA	**Cayambe**	**4.00**	**70**	⇓P	Pn	12 41 17.6	+1.4

IDC 12 12:48:11.9±2.7, 2.44N×95.71E, mb3.7/4, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=94.4km s-min=27.2km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.23**	**11**	Pn	P	12 52 03.1	0.0
	0.1nm,0.3s,baz=197,slow=11,SNR=12						
WRA	**Warramunga Arr**	**43.95**	**122**	P	P	12 56 21.1	-1.7
	0.3nm,0.7s,baz=301,slow=9.1,SNR=3.2						
SONM	**Songino Array**	**46.15**	**10**	P	P	12 56 37.8	-2.3
	0.6nm,0.5s,baz=193,slow=8.7,SNR=9.9						
ZAL	**Zalesovo**	**52.11**	**352**	P	P	12 57 24.1	-1.9
	1.0nm,0.6s,baz=321,slow=9.5,SNR=8.8						
BVAR	**Borovoye Array**	**54.61**	**342**	P	P	12 57 41.8	-2.6
	0.6nm,0.6s,baz=149,slow=8.6,SNR=6.5						

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*BJI **12** 12:54:11.8, 4.14N×94.23E, h30^{km}, mb4.6*
*IDC **12** 12:54:18.1±1.3, 4.99N×94.72E, mb4.2/8, mb1 4.4/9, mb1mx4.1/19, mbtmp4.2/9, ML4.1/1, Error ellipse: s-maj=62.5km s-min=18.9km az=54.0*
*NEIC **12** 12:54:22.0±0.7, 4.81N×94.53E, h30^{km}, mb4.5/5, Error ellipse: s-maj=25.1km s-min=10.8km az=60.0*
ISC 12 12:54:20.8±0.8, 5.0N±0.1×94.8E±0.2, h30^{km}, n20, σ0^{s}71/20, mb4.3/16, 1D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.98**	**17**	Pn	**P**	**12 57 44.0**	**+4.7**
	0.3nm,0.3s,baz=210,slow=11,SNR=28						
GYA	**Guiyang**	**24.18**	**27**	P	**P**	**12 59 37.6**	**+1.7**
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
LSA	**Lhasa**	**24.80**	**352**	eP	**P**	**12 59 42.7**	**+0.9**
	comp=Z,4.2nm,0.4s,mb4.3						
ENH	**Enshi**	**28.71**	**27**	eP	**P**	**13 00 17.2**	**-0.6**
	comp=Z,2.2nm,0.4s,mb4.2						
XAN	**Xi'an**	**31.74**	**23**	P	**P**	**13 00 43.4**	**-1.2**
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.6						
GTA	**Gaotai**	**34.55**	**7**	eP	**P**	**13 01 08.5**	**-0.5**
GTA				AP	pP	13 01 20.8	+2.9
GTA				XP	sP	13 01 26.1	+4.4
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
SONM	**Songino Array**	**43.82**	**11**	P	**P**	**13 02 25.7**	**-0.2**
	comp=Z,1.2nm,0.6s,mb3.8,baz=193,slow=8.1,SNR=20						
SONM				PcP	PcP	13 04 11.8	-0.8
	comp=Z,0.7nm,0.6s,baz=193,slow=4.2,SNR=7.9						
WRA	**Warramunga Arr**	**46.13**	**124**	P	**P**	**13 02 44.8**	**0.0**
	comp=Z,3.4nm,0.7s,mb4.4,baz=303,slow=9.1,SNR=30						
WRAB	**Tennant Creek**	**46.13**	**124**	eP	**P**	**13 02 44.7**	**-0.1**
	comp=Z,7.3nm,0.8s,mb4.7						
WB2	**Warramunga Arr**	**46.14**	**124**	⇓iP	**P**	**13 02 44.9**	**+0.1**
KURK	**Kurchatov**	**47.52**	**346**	P	**P**	**13 02 55.7**	**+0.3**
	comp=Z,3.0nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**47.63**	**128**	P	**P**	**13 02 56.5**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=298,slow=7.8,SNR=21						
ZAL	**Zalesovo**	**49.45**	**352**	P	**P**	**13 03 10.8**	**+0.5**
	comp=Z,2.4nm,0.4s,mb4.6,baz=303,slow=5.6,SNR=12						
ZAL	**Zalesovo**	**49.45**	**352**	P	**P**	**13 03 10.8**	**+0.5**
BVAR	**Borovoye Array**	**51.89**	**342**	P	**P**	**13 03 28.1**	**-0.6**
	comp=Z,4.7nm,1.1s,mb4.3,baz=135,slow=8.4,SNR=14						
BRVK	**Borovoye**	**51.95**	**341**	eP	**P**	**13 03 28.5**	**-0.7**
CHKZ	**Chkalovo**	**52.38**	**342**	eP	**P**	**13 03 31.8**	**-0.7**
	comp=Z,6.9nm,0.8s,mb4.6						
FINES	**FINESS Array B**	**75.52**	**332**	P	**P**	**13 06 03.6**	**-0.4**
	comp=Z,2.9nm,1.0s,mb4.2,baz=108,slow=6.0,SNR=7.6						
ARCES	**ARCESS Array B**	**78.16**	**340**	P	**P**	**13 06 19.1**	**+0.5**
	comp=Z,3.6nm,0.8s,mb4.3,baz=90,slow=5.4,SNR=4.8						
GERES	**GERESS Array B**	**80.37**	**319**	P	**P**	**13 06 31.8**	**+0.9**
	comp=Z,1.3nm,0.6s,mb4.0,baz=100,slow=8.1,SNR=4.9						

IDC 12 13:03:23.2±5.0, 13.06N×92.51E, mb3.2/2, mb1 3.4/3, mb1mx3.2/18, mbtmp3.1/3, ML3.1/1, Error ellipse: s-maj=115.1km s-min=48.6km az=107.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.20**	**48**	Pn	P	13 05 22.6	-3.7
	0.1nm,0.3s,baz=240,slow=15,SNR=4.3						
WRA	**Warramunga Arr**	**52.63**	**128**	P	P	13 12 39.2	-2.5
	0.2nm,0.4s,baz=300,slow=9.5,SNR=6.8						
WRA				PcP	PcP	13 13 49.6	-2.1
	0.2nm,0.6s,baz=320,slow=3.0,SNR=4.6						
ASAR	**Alice Springs**	**54.51**	**132**	P	P	13 12 53.5	-1.9
	0.1nm,0.4s,baz=310,slow=7.0,SNR=5.9						

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*THE **12** 13:12:54.5, 38.87N×20.56E, h1^{km}, ML3.3*
*ATH **12** 13:12:54.8, 38.96N×20.57E, h19^{km}±4^{km}, MD3.4/6*
*NEIC **12** 13:12:54.8, 38.96N×20.57E, h19^{km}, MD3.4(ATH), After ATH.*
*CSEM **12** 13:12:55.4±0.1, 38.98N×20.53E, h2^{km}, ML3.3, Error ellipse: s-maj=3.6km s-min=2.6km az=57.0*
ISC 12 13:12:53.2±0.8, 38.86N±0.04×20.53E±0.05, h2^{km}, n19, σ1^{s}03/30, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.68**	**176**	ePN	**Pn**	**13 13 10.4**	**+0.8**
IGT	**Igoumenitsa**	**0.69**	**347**	ePg	**Pg**	**13 13 05.7**	**-1.2**
IGT				eSg	**Sg**	**13 13 16.8**	**+0.6**
JAN	**Janina**	**0.83**	**17**	ePN	**Pn**	**13 13 08.8**	**-2.9**
EVR	**Evrytania**	**1.00**	**86**	ePN	**Pn**	**13 13 12.0**	**-2.1**
KEK	**Kerkira**	**1.02**	**327**	ePN	**Pn**	**13 13 13.0**	**-1.4**
AGG	**Agios Georgios**	**1.41**	**83**	ePb	**Pb**	**13 13 19.3**	**-0.7**
AGG				eSb	**Sb**	**13 13 38.9**	**+0.5**
KZN	**Kozani**	**1.73**	**33**	ePN	**Pn**	**13 13 24.5**	**-0.1**
LKR	**Lokris**	**1.94**	**95**	ePN	**Pn**	**13 13 29.5**	**+1.9**
LIT	**Litokhoron**	**1.96**	**50**	ePb	**Pb**	**13 13 28.3**	**-1.0**
LIT				eSb	**Sb**	**13 13 53.6**	**-0.6**
FNA	**Florina**	**2.03**	**19**	ePn	**Pn**	**13 13 29.4**	**+0.6**
FNA				eSn	**Sn**	**13 13 55.6**	**+0.6**
XOR	**Xorichti**	**2.13**	**75**	ePn	**Pn**	**13 13 31.4**	**+1.1**
XOR				eSn	**Sn**	**13 13 58.0**	**+0.3**
NEO	**Neokhori**	**2.14**	**77**	ePN	**Pn**	**13 13 31.0**	**+0.5**
GRG	**Griva**	**2.54**	**34**	ePn	**Pn**	**13 13 35.6**	**-0.5**
GRG				eSn	**Sn**	**13 14 10.0**	**+1.9**
AOS	**Alonnisos**	**2.63**	**82**	ePn	**Pn**	**13 13 37.8**	**+0.4**
AOS				eSn	**Sn**	**13 14 09.0**	**-1.3**
SOH	**Sokhos**	**2.93**	**47**	ePn	**Pn**	**13 13 42.0**	**+0.3**
SOH				eSn	**Sn**	**13 14 18.3**	**+0.4**
KNT	**Kendrikon**	**2.93**	**38**	ePn	**Pn**	**13 13 42.3**	**+0.6**
KNT				eSn	**Sn**	**13 14 18.0**	**0.0**
OUR	**Ouranopolis**	**3.05**	**60**	ePn	**Pn**	**13 13 43.4**	**+0.1**
OUR				eSn	**Sn**	**13 14 20.2**	**-0.7**
SKO	**Skopje**	**3.19**	**12**	ePn	**Pn**	**13 13 48.3**	**+3.0**
SKO				i		13 14 36.5	
ALN	**Alexandroupoli**	**4.71**	**63**	ePn	**Pn**	**13 14 06.3**	**-0.6**
ALN				eSn	**Sn**	**13 15 02.5**	**-0.4**

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*SNSN **12** 13:27:58.6, 30.36N×34.91E, h10^{km}, Ml2.5*
*CSEM **12** 13:28:02.5±0.1, 30.15N×35.16E, h15^{km}, Mw2.5, Error ellipse: s-maj=2.4km s-min=1.3km az=91.0*
*GII **12** 13:28:03.2±0.4, 30.17N×35.15E, h9^{km}±5^{km}, ML2.8/6, Mw2.5/3*
ISC 12 13:28:02.1±0.6, 30.19N±0.03×35.17E±0.07, h13^{km}±6^{km}, n19, σ0^{s}72/24, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**0.19**	**217**	Pg	**Pg**	**13 28 07.1**	**+0.4**
HRFI				Sg	**Sg**	**13 28 10.1**	**+0.4**
PRNI	**Paran**	**0.21**	**319**	Pg	**Pg**	**13 28 08.3**	**+1.2**
ZFRI	**Zfri**	**0.36**	**1**	Pg	**Pg**	**13 28 10.9**	**+1.1**
KMTI	**Karmit**	**0.39**	**258**	Pg	**Pg**	**13 28 10.5**	**+0.2**
KMTI				Sg	**Sg**	**13 28 15.7**	**-0.1**
MBH	**Mount Berech**	**0.45**	**209**	Pg	**Pg**	**13 28 11.3**	**-0.2**
AQBJ	**Aqaba**	**0.47**	**193**	Pg	**Pg**	**13 28 12.0**	**+0.1**
EIL	**Elat**	**0.55**	**200**	Pg	**Pg**	**13 28 12.8**	**-0.7**
MASH	**Mash'abbe Sade**	**0.87**	**338**	Pg	**Pg**	**13 28 18.8**	**-0.8**
ALWS	**Ilw as Safayha**	**0.88**	**186**	P	**Pb**	**13 28 18.9**	**+0.2**
KZIT	**Kziot**	**0.98**	**317**	Pg	**Pg**	**13 28 21.5**	**-0.3**
KZIT				Sg	**Sg**	**13 28 34.8**	**0.0**
JMOS	**Jabal al Moall**	**1.02**	**183**	P	**Pb**	**13 28 21.5**	**+0.3**
MZDA	**Masada**	**1.13**	**8**	Pg	**Pg**	**13 28 24.0**	**-0.8**
MZDA				Sg	**Sg**	**13 28 39.3**	**-0.6**
MZDA	**Masada**	**1.13**	**8**	Pg	**Pg**	**13 28 24.0**	**-0.8**
MZDA				Sg	**Sg**	**13 28 38.6**	**-1.3**
HAQS	**Haql**	**1.15**	**190**	P	**Pb**	**13 28 22.9**	**-0.5**
YTIR	**Yattir**	**1.17**	**358**	Pg	**Pg**	**13 28 24.9**	**-0.8**
DRGI	**Dragot**	**1.41**	**8**	Pn	**Pn**	**13 28 28.9**	**+1.3**
MKRJ	**Makawir**	**1.42**	**17**	Pn	**Pn**	**13 28 28.8**	**+1.1**
JMQS	**Jabal Moqyreh**	**1.44**	**154**	P	**Pn**	**13 28 28.2**	**+0.2**
TAYS	**Tayyib Ism**	**1.65**	**189**	P	**Pn**	**13 28 29.8**	**-1.3**

IDC 12 13:43:26.7±5.4, 4.92N×93.12E, mb3.2/3, mb1 3.5/4, mb1mx3.4/18, mbtmp3.2/4, ML3.5/1, Error ellipse: s-maj=159.8km s-min=28.9km az=73.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.61**	**22**	Pn	P	13 46 56.5	-0.3
	0.1nm,0.3s,baz=212,slow=12,SNR=5.7						
SONM	**Songino Array**	**44.25**	**13**	P	P	13 51 37.6	-2.1
	0.1nm,0.4s,baz=196,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**47.45**	**123**	P	P	13 52 03.4	-2.1
	0.2nm,0.3s,baz=303,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**48.87**	**127**	P	P	13 52 14.8	-1.7
	0.2nm,0.5s,baz=296,slow=8.2,SNR=5.3						

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*IDC **12** 13:49:17.5±1.0, 11.98N×116.22E, mb3.8/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=74.2km s-min=20.3km az=62.0*
ISC 12 13:49:21.3±1.6, 11.8N±0.1×116.1E±0.1, h39^{km}±18^{km}, n11, σ0^{s}51/11, mb3.7/5, 1C, South China Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPR	**Puerto Princes**	**3.31**	**128**	⇑iP	**P**	**13 50 12.2**	**+0.2**
ENPP	**El Nido**	**3.34**	**100**	eP	**P**	**13 50 12.8**	**+0.4**
BATP	**Bataraza**	**3.46**	**151**	eP	**P**	**13 50 13.2**	**-1.0**
BUSP	**Coron**	**4.04**	**87**	eP	**P**	**13 50 22.2**	**0.0**
CUYO	**Cuyo Island**	**4.94**	**101**	eP	**P**	**13 50 35.1**	**0.0**
CMAR	**Chiang Mai Arr**	**17.80**	**294**	P	**P**	**13 53 28.4**	**+0.6**
	0.0nm,0.3s,baz=112,slow=15,SNR=4.1						
WRA	**Warramunga Arr**	**36.34**	**150**	P	**P**	**13 56 23.6**	**-0.1**
	1.3nm,0.7s,mb4.0,baz=332,slow=9.4,SNR=13						
SONM	**Songino Array**	**36.79**	**349**	P	**P**	**13 56 27.0**	**-0.2**
	0.5nm,0.9s,mb3.4,baz=165,slow=7.8,SNR=3.9						
ASAR	**Alice Springs**	**39.36**	**154**	P	**P**	**13 56 49.8**	**+0.9**
	0.3nm,0.8s,mb3.1,baz=333,slow=7.1,SNR=4.7						
ASAR				PcP	PcP	13 58 58.0	+0.5
	0.4nm,0.7s,baz=347,slow=3.1,SNR=4.9						
ARCES	**ARCESS Array B**	**79.20**	**339**	P	**P**	**14 01 23.5**	**-0.1**
	3.2nm,0.9s,mb4.2,baz=90,slow=5.4,SNR=3.6						
FINES	**FINESS Array B**	**79.70**	**331**	P	**P**	**14 01 25.7**	**-0.7**
	1.9nm,0.9s,mb4.0,baz=98,slow=9.8,SNR=3.2						

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*IDC **12** 13:58:14.9±1.1, 3.33N×127.38E, mb4.1/8, mb1 4.3/8, mb1mx4.1/18, mbtmp4.1/8, MS3.4/2, Ms1 3.6/2, ms1mx2.8/26, Error ellipse: s-maj=78.8km s-min=15.7km az=66.0*
*BJI **12** 13:58:15.4, 2.26N×127.55E, h57^{km}, mB5.3, mb4.1, Ms4.6*
*NEIC **12** 13:58:19.2±0.7, 3.23N×127.18E, h30^{km}, mb4.5/9, Error ellipse: s-maj=40.5km s-min=9.4km az=71.0*
ISC 12 13:58:18.5±0.6, 3.17N±0.10×127.0E±0.2, h33^{km}, n21, σ1^{s}20/20, mb4.3/16, MS3.8/3, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**16.68**	**161**	eP	**P**	**14 02 14.3**	**+3.0**
	21nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.17**	**184**	eP	**P**	**14 03 03.4**	**+0.1**
	15nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**24.06**	**163**	eP	**P**	**14 03 31.8**	**-0.2**
	16nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**24.07**	**163**	P	**P**	**14 03 31.9**	**-0.1**
	10nm,0.5s,mb4.5,baz=337,slow=11,SNR=110						
WB2	**Warramunga Arr**	**24.07**	**163**	⇓iP	**P**	**14 03 31.8**	**-0.2**
MBWA	**Marble Bar**	**25.20**	**196**	eP	**P**	**14 03 42.9**	**0.0**
	10nm,1.0s,mb4.3						
ASAR	**Alice Springs**	**27.50**	**166**	P	**P**	**14 04 03.4**	**-0.8**
	2.2nm,0.6s,mb3.9,baz=350,slow=6.8,SNR=44						
ASPA	**Alice Springs**	**27.50**	**166**	eP	**P**	**14 04 03.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**31.38**	**301**	P	**P**	**14 04 40.6**	**+1.8**
	1.4nm,0.9s,mb3.8,baz=117,slow=6.9,SNR=7.8						

CMAR				LR	LR	14 18 28.0	
	comp=Z,51nm,20.4s,MS3.2,baz=110,slow=38						
STKA	Stephens Creek	37.51	159	⇑iP	P	14 05 31.3	+0.1
	13nm,0.6s,mb4.8						
STKA	Stephens Creek	37.51	159	P	P	14 05 31.4	+0.2
	17nm,0.7s,mb4.9,baz=328,slow=8.5,SNR=30						
BJT	Baijiatuau	37.97	346	P	P	14 05 36.0	+1.0
	5.2nm,0.8s,mb4.3						
BJI	Beijing	37.99	346	P	P	14 05 37.3	+2.1
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.4						
BJI				LR	LR		
	comp=N,306nm,14.7s,MS4.5						
BJI				LR	LR		
	comp=E,298nm,10.9s,MS4.5						
SONM	Songino Array	47.91	341	P	P	14 06 55.6	0.0
	comp=E,0.9nm,0.8s,mb3.8,baz=155,slow=8.1,SNR=7.1						
ZAL	Zalesovo	61.21	333	P	P	14 08 32.1	-0.2
	comp=E,0.7nm,0.8s,mb3.9,baz=155,slow=0.3,SNR=4.6						
KURK	Kurchatov	62.35	328	eP	P	14 08 36.6	-3.4
	comp=E,5.8nm,0.8s,mb4.8						
BVAR	Borovoye Array	67.93	327	P	P	14 09 14.4	-1.6
	comp=E,1.1nm,0.8s,mb4.0,baz=108,slow=4.6,SNR=6.7						
BRVK	Borovoye	68.00	327	eP	P	14 09 13.7	-2.7
	comp=E,3.9nm,0.9s,mb4.4						
CHKZ	Chkalovo	68.10	328	eP	P	14 09 16.0	-1.0
	comp=E,2.5nm,1.0s,mb4.2						
VNDA	Vanda	82.84	173	P	P	14 10 41.8	+1.3
	comp=E,1.3nm,0.9s,mb4.0,baz=344,slow=7.4,SNR=4.7						
NOA	NORSAR Array B	99.41	334	LR	LR	14 58 10.0	
	comp=E,21nm,19.5s,MS3.6,baz=40,slow=36						

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*CSEM **12** 14:04:30.6±0.8, 38.60N×28.56W, h5^{km}±8^{km}, ML1.6, Error ellipse: s-maj=2.9km s-min=1.8km az=35.0, After PDA*

*PDA **12** 14:04:30.6±0.8, 38.60N×28.56W, h5^{km}±8^{km}, MD2.9, ML1.6, Error ellipse: s-maj=2.9km s-min=1.8km az=35.0*

SVSA 12 14:04:30.6±0.8**, 38.60N×28.56W, h5^{km}±8^{km}, MD2.9, ML1.6, Error ellipse: s-maj=2.9km s-min=1.8km az=35.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOR	Horta	0.09	221	eP	Pg	14 04 32.5	-0.1
HOR				eS	Sg	14 04 33.9	-0.1
CALA	Caldeira	0.12	263	eP	Pg	14 04 33.3	+0.2
CALA				eS	Sg	14 04 35.0	+0.3
PCED	Cedros	0.12	286	i P	Pg	14 04 33.0	-0.2
PCED				eS	Sg	14 04 34.4	-0.5
	46nm,0.3s						
PCED	Cedros	0.12	286	eS	Sg	14 04 34.4	-0.5
	46nm,0.3s						
PICO	Pico	0.14	133	eP	Pg	14 04 33.4	-0.1
PICO				eS	Sg	14 04 35.3	-0.1
ROSA	Rosais	0.28	63	eP	Pg	14 04 35.8	-0.4
ROSA				eS	Sg	14 04 39.4	-0.5
PMAN	Manadas	0.37	84	erx		14 04 43.1	

IDC 12 14:04:35.7±3.2**, 11.00N×141.20E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/19**, mbtmp3.6**/4**, Error ellipse: s-maj=97.3km s-min=28.0km az=72.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.48	192	P	P	14 10 58.8	-2.8
	0.6nm,0.7s,baz=12,slow=9.7,SNR=5.3						
ASAR	Alice Springs	35.19	192	P	P	14 11 32.0	-1.7
	0.5nm,0.6s,baz=20,slow=12,SNR=8.1						
CMAR	Chiang Mai Arr	41.46	285	P	P	14 12 24.9	-1.1
	1.1nm,0.8s,baz=86,slow=6.7,SNR=5.9						
BVAR	Borovoye Array	69.75	323	P	P	14 15 47.4	-2.2
	0.2nm,0.5s,baz=104,slow=6.1,SNR=3.5						

IDC 12 14:08:23.7±2.5**, 13.24S×171.32E, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.8**/14**, mbtmp3.8**/5**, Error ellipse: s-maj=129.2km s-min=25.6km az=139.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	32.96	231	P	P	14 14 58.6	-3.9
	6.3nm,1.3s,baz=101,slow=5.7,SNR=3.8						
WRA	Warramunga Arr	36.01	254	P	P	14 15 27.3	-1.5
	0.3nm,0.8s,baz=85,slow=9.4,SNR=3.9						
ASAR	Alice Springs	36.88	248	P	P	14 15 35.0	-1.0
	1.2nm,0.6s,baz=71,slow=9.7,SNR=24						
ILAR	Eielson Array	83.94	17	P	P	14 20 55.6	-1.0
	0.7nm,0.8s,baz=235,slow=4.8,SNR=8.3						
YKA	Yellowknife Ar	94.44	27	P	P	14 21 44.7	-1.9
	0.3nm,0.9s,baz=253,slow=4.5,SNR=4.2						

IGQ 12 14:23:05.9, 0.75S×81.46W, h12^{km}±17^{km}, mb4.0, 1C, Error ellipse: s-maj=17.1km s-min=8.4km az=0.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINO	Pino	2.91	78	⇑P	Pn	14 23 54.4	+1.4
IGUA	Igualata	2.92	105	P	Pn	14 23 55.2	+2.2
IGUA				S	Sn	14 24 29.3	+1.0
YANA	Yana	2.96	78	P	Pn	14 23 54.4	+0.8
NAS1	Nasa	2.99	88	P	Pn	14 23 55.0	+1.0
VC1	Cotopaxi 1	3.06	88	P	Pn	14 23 57.3	+2.2
TAMB	Tambo	3.09	89	P	Pn	14 23 58.2	+2.7
ARRY	Arrayan	3.10	104	P	Pn	14 23 57.2	+1.6
ANTI	Antisana	3.31	85	P	Pn	14 24 00.4	+1.7
ANTI				S	Sn	14 24 41.4	+3.0
CAYR	Refugio Cayamb	3.54	78	P	Pn	14 24 04.6	+2.7
CAYR				S	Sn	14 24 45.1	+1.0

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*BJI **12** 14:25:08.9, 20.30S×177.80W, h529^{km}, mB5.2, mb4.4*

*NEIC **12** 14:25:10.0±1.7, 20.27S×177.84W, h529^{km}±18^{km}, mb4.6/11, Error ellipse: s-maj=11.2km s-min=10.7km az=88.0*

*IDC **12** 14:25:11.6±2.3, 20.29S×177.86W, h544^{km}±26^{km}, mb3.6/13, mb1 3.8/14, mb1mx3.7/18, mbtmp4.5/14, Error ellipse: s-maj=19.8km s-min=11.7km az=157.0*

ISC 12 14:25:09.8±1.9**, 20.3S**±0.1×**177.91W**±0.09**, h535^{km}**±22^{km}**, n55, σ$0\overset{s}{.}$69**/39**, mb4.4**/21**, 4C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.70	260	eP	P	14 28 17.1	+0.8
URZ	Urewera	18.39	193	P	P	14 28 51.8	-0.5
	1.7nm,0.3s,baz=346,slow=21,SNR=11						
CTA	Charters Tower	33.59	264	⇓iP	P	14 31 07.8	+0.8
	40nm,0.6s,mb5.1						
CTA	Charters Tower	33.59	264	P	P	14 31 07.8	+0.8
	50nm,0.6s,mb5.2,baz=96,slow=10,SNR=98						
PMG	Port Moresby	35.38	283	P	P	14 31 22.5	+0.6
	27nm,0.8s,mb4.8,baz=103,slow=4.5,SNR=13						
STKA	Stephens Creek	37.94	244	⇓iP	P	14 31 43.6	+0.9
	13nm,0.6s,mb4.6						
STKA	Stephens Creek	37.94	244	P	P	14 31 43.7	+1.0
	17nm,0.6s,mb4.7,baz=90,slow=9.2,SNR=39						
ASAR	Alice Springs	44.64	257	P	P	14 32 36.5	+0.2
	78nm,0.8s,mb5.3,baz=99,slow=7.5,SNR=758						
ASAR				PcP	PcP	14 34 07.3	-0.6
	9.2nm,1.1s,baz=97,slow=4.1,SNR=5.2						
ASAR				S	S	14 38 33.5	-0.3
	2.8nm,0.7s,baz=94,slow=17,SNR=15						
ASPA	Alice Springs	44.65	257	⇓iP	P	14 32 36.5	+0.2
ASPA				i S	S	14 38 34.4	+0.5
WB2	Warramunga Arr	44.70	262	⇓iP	P	14 32 36.3	-0.5
WRAB	Tennant Creek	44.70	262	eP	P	14 32 36.2	-0.6
	52nm,0.8s,mb5.1						
WRA	Warramunga Arr	44.71	262	P	P	14 32 36.3	-0.5
	29nm,0.7s,mb4.9,baz=98,slow=7.6,SNR=227						
KAKA	Kakadu	48.05	271	⇓iP	P	14 33 01.9	-0.6
	42nm,0.6s,mb5.2						
FORT	Forrest	49.44	246	⇑iP	P	14 33 12.0	-0.7
	1μm,0.6s						
FITZ	Fitzroy Crossi	53.13	262	⇓iP	P	14 33 39.4	-0.2
	23nm,0.6s,mb4.7						
MBWA	Marble Bar	57.98	257	eP	P	14 34 12.1	-1.1
	44nm,0.7s,mb4.8						
VNDA	Vanda	58.09	185	P	P	14 34 13.6	+0.3
	1.1nm,0.6s,baz=354,slow=6.5,SNR=5.1						
VNDA	Vanda	58.09	185	P	P	14 34 13.6	+0.3
KLBR	Kellerberrin	58.21	245	⇓iP	P	14 34 13.7	-0.9
	427nm,0.9s						
NWAO	Narrogin (SRO)	58.52	243	P	P	14 34 16.4	-0.3
	23nm,1.1s,mb4.3,baz=114,slow=6.1,SNR=7.1						
NWAO	Narrogin (SRO)	58.52	243	eP	P	14 34 16.6	-0.2
	13nm,0.9s,mb4.2						
MUN	Mundaring	59.48	244	⇑iP	P	14 34 23.0	-0.1
	12nm,0.7s,mb4.2						
QSPA	South Pole Qui	69.75	180	eP	P	14 35 27.0	0.0
	13nm,0.8s,mb4.5						
MAT	Matsushiro	70.12	324	eP	P	14 35 29.0	-0.8
	6.0nm,0.6s,mb4.3						
MAT	Matsushiro	70.12	324	P	P	14 35 28.9	-0.9
YBH	Yreka Blue Hor	80.10	39	P	P	14 36 24.9	-0.1
	2.2nm,0.8s,mb3.5,baz=267,slow=1.2,SNR=6.0						
MDJ	Mudanjiang	80.42	325	eP	P	14 36 26.9	+0.2
	7.2nm,0.9s,mb4.0						
NVAR	Mina Array Bea	80.84	43	P	P	14 36 28.6	-0.3
	1.3nm,0.9s,mb3.4,baz=218,slow=6.7,SNR=8.9						
CN2	Changchun	82.21	322	eP	P	14 36 36.4	+0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
TXAR	Lajitas Array	86.89	57	P	P	14 36 59.7	+0.8
	comp=Z,0.4nm,0.6s,baz=216,slow=7.8,SNR=3.4						
XAN	Xi'an	88.09	307	P	P	14 37 05.0	+0.6
XAN				AMB	AMB		
	comp=Z,1.0nm,0.9s,mb3.5						
ILAR	Eielson Array	88.12	13	P	P	14 37 02.1	-1.7
	comp=Z,0.2nm,0.5s,baz=218,slow=5.9,SNR=5.6						
VNA3	Neumayer Olymp	88.31	176	⇑i	P	14 37 05.0	+0.4
VNA2	Neumayer--Watz	88.76	177	⇑i	P	14 37 07.3	+0.6
PDAR	Pinedale Array	88.77	43	P	P	14 37 07.3	-0.1
	comp=Z,0.6nm,0.9s,mb3.4,baz=252,slow=4.7,SNR=3.7						
CMAR	Chiang Mai Arr	90.13	290	P	P	14 37 16.1	+1.9
	comp=Z,5.1nm,0.9s,mb4.4,baz=123,slow=2.6,SNR=22						
SONM	Songino Array	95.67	319	P	P	14 37 39.2	+0.3
	comp=Z,0.2nm,0.6s,mb3.5,baz=135,slow=4.1,SNR=2.9						
CHKZ	Chkalovo	118.81	321	ePKPdf	PKPdf	14 42 56.2	-0.7
BVAR	Borovoye Array	119.00	320	PKP	PKPdf	14 42 57.1	-0.1
	comp=Z,3.4nm,0.9s,baz=117,slow=3.3,SNR=7.4						
AKASG	Malin Array Be	142.90	331	PKhKP		14 43 39.4	
	comp=Z,5.6nm,0.6s,baz=42,slow=4.4,SNR=33						
MBAR	Mbarara	145.08	237	ePKPdf	PKPdf	14 43 48.6	+1.8
ASF	Jabal al Asfar	146.77	298	PKPbc	PKPbc	14 43 53.6	+2.4
	comp=Z,4.6nm,0.8s,baz=311,slow=1.9,SNR=6.2						
BRTR	Keskin Array B	146.78	313	PKPbc	PKPbc	14 43 52.5	+1.6
	comp=Z,3.2nm,0.7s,baz=138,slow=4.6,SNR=16						
KOLS	Kolonicke sedl	147.19	335	ePKP	PKPdf	14 43 57.0	+7.8
CRVS	Cervenica-Dubn	147.53	336	ePKP	PKPdf	14 43 59.8	+10
CLL	Collm	147.91	347	i PKP1	PKPdf	14 43 54.7	+4.4
UPC	Upice	147.92	343	ePKPbc	PKPdf	14 43 55.5	+5.2
DPC	Dobruska-Polom	147.98	343	ePKPbc	PKPdf	14 43 55.4	+5.0
BRG	Berggiesshubel	148.11	346	i P	PKPdf	14 43 56.0	+5.4
PVCC	Panska Ves	148.28	345	ePKPbc	PKPdf	14 43 56.5	+5.6
PRU	Pruhonice	148.78	344	ePKPbc	PKPdf	14 43 57.2	+5.5
VYHS	Vyhne	148.82	338	ePKP	PKPdf	14 43 57.6	+5.8
NKC	Novy Kostel	149.04	347	ePKPbc	PKPdf	14 43 58.1	+6.0
KHC	Kasperske Hory	149.82	345	ePKPbc	PKPdf	14 43 59.8	+6.4
GERES	GERESS Array B	150.05	345	PKPbc	PKPdf	14 44 00.2	+6.4
	comp=Z,3.3nm,0.9s,slow=1.3,SNR=7.8						

IDC 12 14:26:40.2±3.5**, 10.61N×91.49E, mb3.7**/3**, mb1 3.8**/4**, mb1mx3.6**/18**, mbtmp3.6**/4**, ML3.6**/1**, Error ellipse: s-maj=94.6km s-min=28.5km az=79.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.62	42	Pn	P	14 29 12.6	-4.3
	0.1nm,0.3s,baz=237,slow=15,SNR=5.2						
SONM	Songino Array	39.17	16	P	P	14 34 10.4	-1.1
	0.4nm,0.5s,baz=206,slow=7.6,SNR=7.7						
WRA	Warramunga Arr	51.97	126	P	P	14 35 50.0	-3.6
	0.8nm,0.5s,baz=303,slow=9.2,SNR=6.1						
ASAR	Alice Springs	53.66	130	P	P	14 36 05.1	-1.0
	0.7nm,0.5s,baz=308,slow=7.3,SNR=4.8						

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*MAN **12** 14:31:38.8, 14.23N×123.35E, h87^{km}, mb4.5, ML3.4, MS3.3*

*IDC **12** 14:31:39.4±0.9, 14.10N×123.44E, h80^{km}±7^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.8/18, mbtmp4.1/8, Error ellipse: s-maj=28.2km s-min=14.4km az=63.0*

*NEIC **12** 14:31:41.5±2.9, 13.97N×123.33E, h97^{km}±24^{km}, mb4.4/8, Error ellipse: s-maj=38.8km s-min=10.0km az=66.0*

ISC 12 14:31:38.6±0.4**, 14.22N**±0.03×**123.37E**±0.04**, h91^{km}**±4^{km}**, n49, σ$1\overset{s}{.}$08**/57**, mb4.2**/14**, 2C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	0.95	251	⇓eP	P	14 31 57.9	-0.1
GQP				i S	S	14 32 11.1	-1.5
PVCP	Virac	0.98	129	eP	P	14 31 58.9	+0.5
PVCP				eS	S	14 32 12.7	-0.4
AUQP	San Andres	1.12	217	eP	P	14 32 01.4	+1.4
AUQP				eS	S	14 32 18.1	+2.0
POLP	Polilio Island	1.48	290	eP	P	14 32 05.3	+0.7
POLP				eS	S	14 32 24.3	+0.5
BOAC	Boac	1.67	243	eP	P	14 32 07.2	+0.3
BOAC				eS	S	14 32 26.4	-1.5
LQP	Lukban	1.78	267	⇓iP	P	14 32 08.2	-0.3
LQP				i S	S	14 32 30.2	-0.2
MMPH	Masbate	1.86	172	eP	P	14 32 11.5	+1.9
OTRP	Odiongan	2.27	216	eP	P	14 32 15.0	-0.1
BALP	Baler	2.30	311	eP	P	14 32 14.2	-1.3
TGY	Tagaytay City	2.37	268	⇓iP	P	14 32 17.6	+1.2
TGY				i S	S	14 32 36.9	-7.6
TGY	Tagaytay City	2.37	268	P	P	14 32 17.7	+1.2
	344nm,0.3s,baz=268,slow=12,SNR=33						
PCPH	Palayan	2.58	302	⇓eP	P	14 32 18.0	-1.3
PCPH				i S	S	14 32 48.0	-1.7
RCP	Roxas	2.71	193	⇑iP	P	14 32 21.1	-0.1
SJMP	San Jose	2.80	232	eP	P	14 32 23.5	+1.0
PALP	Palanan	2.97	342	eP	P	14 32 24.5	-0.3
LUBP	Lubang	3.07	261	eP	P	14 32 26.2	0.0
CAUP	Cauayan	3.10	331	eP	P	14 32 26.7	+0.2
OCLP	Ormoc	3.37	159	eP	P	14 32 30.2	-0.1
PLP	Palo	3.42	153	eP	P	14 32 30.6	-0.3
PLP				eS	S	14 33 07.4	-3.1
BCPH	Baguio City Da	3.45	309	⇑iP	P	14 32 31.1	-0.3
BCPH				i S	S	14 33 10.5	-0.8
GUIM	Jordan	3.65	192	eP	P	14 32 35.8	+1.6
SCZP	Santa Cruz	3.69	295	eP	P	14 32 34.4	-0.3
CVP	Callao Caves	3.77	337	i P	P	14 32 36.5	+0.7
BUSP	Coron	3.80	235	eP	P	14 32 36.0	-0.1
APYP	Conner	4.16	331	eP	P	14 32 40.7	-0.5
SGCP	Mt. Cagua	4.20	343	eP	P	14 32 42.0	+0.3
ABRA	Dolores	4.26	323	eP	P	14 32 43.4	+0.7
MSLP	Maasin	4.31	160	eP	P	14 32 43.6	+0.3
ENPP	El Nido	4.88	233	eP	P	14 32 51.1	0.0
BBP	Basco	6.33	348	eP	P	14 33 10.4	-0.6
ENH	Enshi	20.47	324	eP	P	14 36 16.0	+4.9
	3.5nm,0.5s						
CMAR	Chiang Mai Arr	23.81	284	P	P	14 36 45.5	+1.4
	2.1nm,0.6s,mb3.6,baz=98,slow=8.2,SNR=20						
CMAR				pP		14 37 04.8	
	5.1nm,1.1s,baz=92,slow=7.7,SNR=7.9						
LSA	Lhasa	33.48	303	eP	P	14 38 13.6	+2.3
	6.6nm,0.9s,mb4.5						
MBWA	Marble Bar	35.34	186	eP	P	14 38 26.5	-0.8
	9.8nm,0.8s,mb4.7						
WRAB	Tennant Creek	35.61	162	eP	P	14 38 27.0	-2.6
	3.5nm,0.5s,mb4.5						
WRA	Warramunga Arr	35.62	162	P	P	14 38 28.0	-1.6
	2.2nm,0.4s,mb4.4,baz=342,slow=9.0,SNR=50						
SONM	Songino Array	36.37	341	P	P	14 38 38.3	+2.6
	0.8nm,0.9s,mb3.6,baz=163,slow=11,SNR=6.3						
SONM				pP	pP	14 38 55.3	-1.7
	0.8nm,0.8s,baz=154,slow=10.0,SNR=6.2						
SONM				sP	sP	14 39 05.3	-2.7
	1.3nm,0.8s,baz=155,slow=8.0,SNR=6.5						
ASAR	Alice Springs	39.03	165	P	P	14 38 57.6	-0.5
	2.4nm,0.4s,mb4.4,baz=337,slow=7.3,SNR=28						
ASAR				PcP	PcP	14 41 07.2	+0.1
	0.6nm,0.4s,baz=338,slow=3.0,SNR=4.5						
NWAO	Narrogin (SRO)	47.24	187	P	P	14 40 03.1	-1.5
	3.0nm,0.5s,mb4.3,baz=32,slow=9.3,SNR=5.5						
NWAO	Narrogin (SRO)	47.24	187	eP	P	14 40 03.3	-1.3
	3.4nm,0.7s,mb4.2						
STKA	Stephens Creek	49.05	159	P	P	14 40 17.9	-0.6
	1.1nm,0.3s,mb4.2,baz=344,slow=9.2,SNR=3.9						
STKA	Stephens Creek	49.05	159	P	P	14 40 17.9	-0.6
KURK	Kurchatov	51.23	325	eP	P	14 40 36.5	+1.5
	3.4nm,0.8s,mb4.4						
BVAR	Borovoye Array	56.83	325	P	P	14 41 15.4	-0.5
	0.6nm,0.4s,mb3.9,baz=150,slow=12,SNR=5.1						
BRVK	Borovoye	56.90	325	P	P	14 41 12.5	-3.9
	2.9nm,0.8s,mb4.4						
CHKZ	Chkalovo	56.95	326	eP	P	14 41 16.5	-0.2
	0.9nm,0.5s,mb4.1						
FINES	FINESS Array B	81.09	331	P	P	14 43 46.4	+1.4
	3.1nm,1.0s,mb4.1,baz=76,slow=5.7,SNR=4.3						
FINES				pP	pP	14 44 07.3	-1.7
	3.7nm,1.1s,baz=63,slow=4.3,SNR=1.7						
AKASG	Malin Array Be	81.74	320	pP	pP	14 44 10.4	-2.3
	0.7nm,0.3s,baz=62,slow=4.8,SNR=3.3						
YKA	Yellowknife Ar	91.30	23	pP	pP	14 44 58.9	-0.5
	0.3nm,0.6s,baz=303,slow=4.6,SNR=4.0						

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*TAP **12** 14:38:20.9, 23.85N×121.56E, h24^{km}, ML4.1*

TAP Felt II J at Shilin, I J at Hualien, I J at Chiawan, I J at Hehuanshan, I J at Hungye.

*NEIC **12** 14:38:24.6±1.0, 24.07N×121.83E, h48^{km}±14^{km}, mb3.7/1, Error ellipse: s-maj=16.5km s-min=12.6km az=105.0*

*IDC **12** 14:38:25.7±3.0, 23.89N×121.98E, h69^{km}±32^{km}, mb3.0/4, mb1 3.3/5, mb1mx3.2/21, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=28.5km s-min=22.3km az=99.0*

ISC 12 14:38:20.8±0.4**, 23.82N**±0.02×**121.64E**±0.03**, h24^{km}**±2^{km}**, n68, σ$0\overset{s}{.}$88**/111**, mb3.2**/5**, 10C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.16	348	⇓iP	Pb	14 38 26.2	+0.3
HWA				S	Sb	14 38 30.3	+0.9
ESL	Shilin	0.19	269	⇑iP	Pb	14 38 25.9	-0.4
ESL				S	Sb	14 38 29.3	-0.6
TWD	Chiawan	0.27	351	⇓iP	Pb	14 38 27.3	0.0
TWD				S	Sb	14 38 32.2	+0.6
EHY	Hungye	0.43	224	⇓iP	Pb	14 38 29.1	-0.6
WHF	Hehuan Shan	0.47	313	⇑iP	Pb	14 38 29.9	-0.6
WHF				S	Sb	14 38 36.4	-0.8
TWF1	Yuli	0.56	214	eP	Pb	14 38 31.2	-0.8
TWT	Tachien	0.61	316	⇑iP	Pb	14 38 32.5	-0.2
TWT				S	Sb	14 38 40.2	-0.8
ENA	Nanau	0.61	8	⇑iP	Pb	14 38 32.8	-0.1
ENA				S	Sb	14 38 41.3	+0.2
NNS	Nan Shan	0.67	338	⇑iP	Pb	14 38 33.3	-0.5
NNS				S	Sb	14 38 41.6	-1.0
SMLT	Sun Moon Lake	0.68	276	⇑iP	Pb	14 38 33.5	-0.5
SMLT				S	Sb	14 38 42.3	-0.7
YUS	Yu-Shan	0.71	243	P	Pb	14 38 34.5	0.0
YUS				S	Sb	14 38 43.5	-0.4
TYC	Yuchr	0.72	277	⇑iP	Pb	14 38 34.0	-0.7
TYC				S	Sb	14 38 42.9	-1.3
CHKT	Chengkung	0.76	200	eP	Pb	14 38 35.2	-0.1
CHKT				S	Sb	14 38 46.9	+1.7
TWC	Suao	0.81	13	eP	Pb	14 38 36.2	0.0
TWC				S	Sb	14 38 47.0	+0.3
ENTT	Nioudou	0.82	355	⇑P	Pb	14 38 35.9	-0.5
ENTT				S	Sb	14 38 47.0	0.0
ALS	Alishan	0.83	248	eP	Pb	14 38 36.5	0.0
ALS				S	Sb	14 38 46.8	-0.4
ELDTW	Lidau	0.85	223	eP	Pb	14 38 35.5	-1.3
WNT	Mingjian	0.88	274	eP	Pb	14 38 37.7	+0.4
WNT				S	Sb	14 38 49.2	+0.5
NSK	Sanguang	0.89	343	⇑P	Pb	14 38 37.1	-0.5
NSK				S	Sb	14 38 48.5	-0.6
TWE	Neicheng	0.90	1	eP	Pb	14 38 37.2	-0.5
TWE				S	Sb	14 38 49.9	+0.7
CHN5	Tsauling	0.91	256	⇓iP	Pb	14 38 38.1	+0.3
CHN5				S	Sb	14 38 49.4	-0.1
TCU	Taichung	0.94	291	eP	Pb	14 38 39.0	+0.6
TCU				S	Sb	14 38 50.6	+0.1
TWQ1	Liyutan	0.95	304	eP	Pb	14 38 39.0	+0.4
TWQ1				S	Sb	14 38 50.9	+0.1
WGK	Gukeng	1.00	263	eP	Pb	14 38 39.7	+0.3
WGK				S	Sb	14 38 52.0	-0.1
NSTT	Nanjuang	1.00	324	eP	Pb	14 38 39.2	-0.2
NSTT				S	Sb	14 38 52.1	-0.1
NSY	Sanyi	1.00	307	⇑iP	Pb	14 38 40.0	+0.6
NSY				S	Sb	14 38 52.9	+0.7
STYT	Tauyuan	1.04	231	⇓P	Pb	14 38 39.7	-0.3
STYT				S	Sb	14 38 53.4	+0.1
CHN4	Tsaushan	1.07	244	eP	Pn	14 38 40.7	+0.2
CHN4				S	Sb	14 38 54.8	+0.7
WTP	Ta-pu	1.10	239	eP	Pn	14 38 41.1	+0.2
WTP				S	Sb	14 38 55.1	0.0
CHN2	Minshiung	1.11	255	eP	Pn	14 38 41.5	+0.4
CHN2				S	Sb	14 38 55.0	-0.2
TWG	Pinlang	1.12	208	eP	Pn	14 38 39.1	-2.2
TTN	Taitung	1.15	203	eP	Pn	14 38 40.5	-1.2
HSN	Hsinchu	1.16	328	eP	Pn	14 38 42.5	+0.8
HSN				S	Sb	14 38 57.8	+1.2
TWA	Mucha	1.16	357	eP	Pn	14 38 41.8	0.0
TWA				S	Sb	14 38 56.2	-0.5
CHY	Chiayi	1.16	254	eP	Pn	14 38 42.0	+0.2
CHY				S	Sb	14 38 56.3	-0.5
TATO	Taipei	1.16	353	eP	Pn	14 38 41.5	-0.3
TWK	Hsinying	1.19	243	eP	Pn	14 38 42.4	+0.1
TWK				S	Sb	14 38 58.2	+0.6
CHN1	Nanshi	1.20	239	eP	Pn	14 38 42.6	+0.2
CHN1				S	Sb	14 38 58.6	+0.7
SGST	Jiashian	1.22	233	eP	Pn	14 38 42.9	+0.3
SGST				S	Sb	14 38 59.3	+0.9
NCU	National Centr	1.22	340	eP	Pn	14 38 43.4	+0.8
NCU				S	Sb	14 38 59.2	+0.7
TAP1	Taipei	1.22	355	eP	Pn	14 38 42.7	+0.1
TWB1	Santiao Chiao	1.23	15	eP	Pn	14 38 43.7	+1.0
TWB1				S	Sb	14 39 00.8	+2.2
WTCT	Ta-ch'eng	1.25	272	eP	Pn	14 38 43.2	+0.2
WTCT				S	Sn	14 38 59.0	-0.2
NWF	Wu-fen Shan	1.25	6	eP	Pn	14 38 43.6	+0.5
NWF				S	Sn	14 38 59.8	+0.4
TWS1	Kuangyinshan	1.29	351	eP	Pn	14 38 44.2	+0.5
TWS1				S	Sn	14 39 00.7	+0.3
WSF	Szhu	1.31	262	eP	Pn	14 38 44.3	+0.3
WSF				S	Sn	14 39 01.8	+0.9
ECL	Taimali	1.37	208	eP	Pn	14 38 43.8	-1.0
CHN3	Shinhua	1.39	238	eP	Pn	14 38 45.3	+0.3
CHN3				S	Sn	14 39 04.7	+2.0
CHN8	Yiju	1.40	251	eP	Pn	14 38 44.8	-0.4
CHN8				S	Sn	14 39 03.5	+0.6
SSD	Sandimen	1.41	221	eP	Pn	14 38 45.0	-0.4
SSD				S	Sn	14 39 04.3	+0.9
SCLT	Jiali	1.48	245	S	Sn	14 39 05.0	0.0
TWM1	Shoushan	1.50	229	eP	Pn	14 38 48.1	+1.5
SGLT	Jiouru	1.52	224	eP	Pn	14 38 48.2	+1.2
EAST	Anshuo	1.60	207	eP	Pn	14 38 46.1	-2.0
SCZT	Fangliau	1.72	213	eP	Pn	14 38 49.9	+0.1
WDGT	Dungji	1.90	253	eP	Pn	14 38 51.2	-1.2
PNG	Penghu	1.93	263	⇓P	Pn	14 38 52.2	-0.6
PNG				S	Sn	14 39 15.4	-1.2
HEN	Hengchun	1.99	205	eP	Pn	14 38 56.4	+2.7
TWK1	Hengchun	2.02	203	eP	Pn	14 38 54.4	+0.3
KNM	Kinmen	2.99	282	eP	Pn	14 39 06.9	-1.1
JOW	Kunigami	6.71	62	P	Pn	14 39 57.4	-3.2
	1.3nm,0.3s,baz=332,slow=18,SNR=7.0						
TGY	Tagaytay City	9.69	184	P	P	14 40 44.7	+2.6
	14nm,0.3s,baz=92,slow=14,SNR=4.0						
CMAR	Chiang Mai Arr	21.82	260	P	P	14 43 16.4	+3.0
	0.3nm,0.7s,mb2.8,baz=63,slow=8.1,SNR=4.1						
SONM	Songino Array	26.87	337	P	P	14 43 59.4	-2.2
	0.2nm,0.8s,mb2.7,baz=158,slow=10,SNR=2.7						
SONM	Songino Array	26.87	337	P	P	14 43 59.4	-2.2
WRA	Warramunga Arr	45.22	163	P	P	14 46 35.2	-3.1
	0.4nm,0.6s,mb3.4,baz=344,slow=8.6,SNR=6.6						
CHKZ	Chkalovo	48.28	322	P	P	14 46 58.9	-3.1
	0.5nm,0.6s,mb3.7						
YKA	Yellowknife Ar	83.14	23	P	P	14 50 43.9	-2.0
	0.4nm,0.8s,mb3.5,baz=310,slow=4.8,SNR=7.4						

IDC 12 14:54:55.4±4.0**, 29.00N×142.51E, h43^{km}**±40^{km}**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.2**/20**, mbtmp3.5**/3**, Error ellipse: s-maj=52.2km s-min=25.1km az=88.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.92	189	P	P	14 55 25.4	-0.9
	3.4nm,0.3s,baz=112,slow=19,SNR=2.3						
CBIJ				S	S	14 55 48.7	-0.6
	12nm,0.3s,baz=269,slow=22,SNR=7.3						
SONM	Songino Array	33.57	314	P	P	15 01 31.1	-2.2
	0.4nm,0.6s,baz=116,slow=7.8,SNR=4.9						

WRA	Warramunga Arr	49.29	190	P	P	15 03 40.3	-2.0
	0.7nm,0.7s,baz=11,slow=8.4,SNR=11						
YKA	Yellowknife Ar	70.34	29	P	P	15 06 04.2	-1.9
	0.1nm,0.5s,baz=293,slow=6.4,SNR=5.5						

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*IDC **12** 15:37:55.1±11.0, 14.24N×91.16W, mb3.4/2, mb1 3.9/3, mb1mx3.4/19, mbtmp3.4/3, Error ellipse: s-maj=231.9km s-min=108.0km az=7.0*

*MEX **12** 15:38:36.0±0.3, 16.33N×92.44W, h95^{km}, MD4.0*

ISC 12 15:38:37.0±3.3, **16.1N**±0.3×**92.9W**±0.3, **h216**^{km}±37^{km}, **n6, σ0^{s}67**/9, **mb2.6**/2, **1C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	3.09	265	⇑*i*P	P	15 39 28.3	-0.6
HUIG				*i* S	S	15 40 09.3	+0.2
OXX	Oaxaca	3.79	286	*e*P	P	15 39 37.5	+0.1
OXX				*i* S	S	15 40 24.0	-0.1
VHO	Vista Hermosa	3.80	286	*i* P	P	15 39 38.3	+0.9
VHO				*i* S	S	15 40 24.0	-0.3
TXAR	Lajitas Array	16.50	325	P	P	15 42 17.8	-0.1
	baz=156,slow=12,SNR=5.7						
NVAR	Mina Array Bea	31.52	320	P	P	15 44 41.5	+0.5
	0.1nm,0.5s,mb2.6,baz=127,slow=9.0,SNR=5.5						
YKA	Yellowknife Ar	48.82	347	P	P	15 46 58.0	-4.0
	0.2nm,0.5s,mb2.7,baz=150,slow=7.3,SNR=5.3						

IDC 12 15:52:21.9±1.4, **12.88S×75.63W, mb3.7**/3, **mb1 3.8**/4, **mb1mx3.4**/19, **mbtmp3.6**/4, **ML3.3**/1, **Error ellipse: s-maj=55.9km s-min=27.1km az=76.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	8.01	116	Pn	P	15 54 20.1	-2.3
	0.2nm,0.3s,baz=305,slow=12,SNR=2.5						
SDV	Santo Domingo	22.19	13	P	P	15 57 20.1	-1.5
	1.4nm,0.3s,baz=281,slow=10,SNR=2.4						
PLCA	Paso Flores	28.10	172	P	P	15 58 15.5	-2.0
	0.8nm,0.9s,baz=9.5,slow=6.1,SNR=2.9						
YKA	Yellowknife Ar	81.03	343	P	P	16 04 38.0	-1.9
	0.1nm,0.4s,baz=141,slow=5.5,SNR=5.4						
SONM	Songino Array	145.11	358	PKPbc	PKPbc	16 12 00.9	-0.8
	0.9nm,0.5s,slow=1.4,SNR=15						

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*JMA **12** 15:59:54.3±0.6, 34.16N×141.56E, h39^{km}, M2.9*

*IDC **12** 15:59:56.1±7.0, 34.07N×141.64E, h42^{km}±59^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.1/20, mbtmp3.4/3, Error ellipse: s-maj=48.1km s-min=28.7km az=78.0*

ISC 12 15:59:52.8±1.9, **34.18N**±0.06×**141.7E**±0.2, **h39**^{km}±17^{km}, **n13, σ0^{s}56**/16, **mb3.4**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.78	308	P	P	16 00 07.5	+0.1
BSO3	Boso 3	1.18	302	P	P	16 00 13.4	+0.3
JHJ2	Mitsune	1.91	237	P	P	16 00 24.1	+0.6
JHJ2				*e*S	S	16 00 47.3	+0.8
JHJ	Hachijo jima 2	1.93	237	P	P	16 00 23.9	+0.1
	baz=41,slow=18						
JHJ				S	S	16 00 46.3	-0.7
	27nm,0.3s,baz=57,slow=20,SNR=6.5						
JIM2	Oshima 3	1.97	287	P	P	16 00 23.8	-0.6
JOD2	Odawara 2	2.42	297	P	P	16 00 30.6	-0.3
JAG	Ashikaga	2.91	321	P	P	16 00 38.2	+0.3
JYN	Shimob	2.93	298	P	P	16 00 37.8	-0.3
JRY	Ryogami san	2.95	309	P	P	16 00 38.9	+0.5
MAT	Matsushiro	3.72	310	P	P	16 00 48.6	-0.7
MAT				S	S	16 01 32.1	-0.4
SONM	Songino Array	29.67	308	P	P	16 05 58.1	+1.2
	0.4nm,0.7s,mb3.3,baz=108,slow=7.9,SNR=4.3						
WRA	Warramunga Arr	54.27	189	P	P	16 09 16.7	-0.8
	0.4nm,0.6s,mb3.5,baz=5.9,slow=7.8,SNR=7.9						
ASAR	Alice Springs	58.00	188	P	P	16 09 44.0	-0.1
	0.2nm,0.7s,mb3.3,baz=360,slow=5.9,SNR=5.1						

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*IDC **12** 16:13:02.3±1.2, 7.75N×93.91E, mb3.6/7, mb1 3.8/8, mb1mx3.7/19, mbtmp3.6/8, ML3.9/1, MS2.9/1, Ms1 3.1/1, ms1mx2.3/21, Error ellipse: s-maj=44.3km s-min=20.0km az=55.0*

*BJI **12** 16:13:07.2, 7.80N×94.00E, h30^{km}, mb4.0*

*NEIC **12** 16:13:07.2±0.9, 7.83N×94.04E, h30^{km}, mb4.3/7, Error ellipse: s-maj=20.8km s-min=13.7km az=60.0*

ISC 12 16:13:06.3±0.9, **7.9N**±0.1×**94.3E**±0.1, **h30**^{km}, **n24, σ1^{s}32**/23, **mb4.2**/18, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	11.40	23	*e*P	P	16 15 50.1	-0.4
	2.3nm,0.6s						
CMAR	Chiang Mai Arr	11.40	23	Pn	P	16 15 50.0	-0.5
	0.2nm,0.3s,baz=213,slow=14,SNR=14						
CMAR				LR	LR	16 20 22.6	
	comp=Z,53nm,18.3s,baz=215,slow=38						
KMI	Kunming	18.91	24	P		16 17 35.4	
KMI				AMB	AMB		
	comp=Z,6.0nm,1.5s						
JIRN	Jiri	21.06	340	*e*P	P	16 17 49.9	-0.6
	comp=Z,25nm,1.0s,mb4.5						
PKI	Pulchoki	21.26	338	*e*P	P	16 17 53.9	+1.4
	comp=Z,25nm,0.8s,mb4.6						
DMN	Daman	21.41	337	*e*P	P	16 17 56.2	+2.2
	comp=Z,30nm,0.9s,mb4.6						
KKN	Kakani	21.50	338	*e*P	P	16 17 52.7	-2.3
	comp=Z,21nm,1.1s,mb4.5						
LSA	Lhasa	21.85	353	P	P	16 17 59.8	+1.3
LSA	Lhasa	21.85	353	*e*P	P	16 17 59.7	+1.2
	comp=Z,7.5nm,0.7s,mb4.2						
GKN	Gorkha	21.94	337	*e*P	P	16 17 57.5	-1.9
	comp=Z,21nm,0.7s,mb4.6						
ENH	Enshi	26.40	31	P	P	16 18 47.0	+4.7
	comp=Z,3.8nm,0.7s,mb4.0						
BJT	Baijiatuau	37.47	28	P	P	16 20 21.1	+2.0
	comp=Z,2.6nm,0.7s,mb4.2						
SONM	Songino Array	41.07	12	P	P	16 20 48.8	-0.2
	comp=Z,1.3nm,1.0s,mb3.5,baz=189,slow=10,SNR=4.9						
KURK	Kurchatov	44.58	346	*e*P	P	16 21 17.5	-0.1
	comp=Z,7.2nm,1.1s,mb4.4						
ZAL	Zalesovo	46.51	352	P	P	16 21 33.7	+1.0
	comp=Z,1.5nm,0.7s,mb4.0,baz=277,slow=7.8,SNR=7.9						
ZAL	Zalesovo	46.51	352	P	P	16 21 33.7	+1.0
WRA	Warramunga Arr	48.19	126	P	P	16 21 46.2	-0.2
	comp=Z,0.3nm,0.7s,mb3.4,baz=304,slow=8.5,SNR=4.1						
BVAR	Borovoye Array	48.98	341	P	P	16 21 50.3	-1.8
	comp=Z,0.4nm,0.7s,mb3.6,baz=349,slow=7.3,SNR=2.7						
CHKZ	Chkalovo	49.46	342	*e*P	P	16 21 54.0	-1.8
	comp=Z,5.3nm,0.9s,mb4.6						
ASAR	Alice Springs	49.85	130	P	P	16 21 59.0	-0.2
	comp=Z,1.7nm,1.3s,mb3.9,baz=308,slow=8.1,SNR=3.9						
GNI	Garni	54.49	314	P	P	16 22 37.0	+3.3
KIV	Kislovodsk	57.36	318	P	P	16 22 55.2	+0.9
	comp=Z,7.5nm,0.8s,mb4.8						
BRTR	Keskin Array B	62.49	311	P	P	16 23 25.7	-3.9
	comp=Z,0.2nm,0.4s,mb3.6,baz=111,slow=28,SNR=3.4						
FINES	FINESS Array B	72.72	332	P	P	16 24 33.5	+0.1
	comp=Z,1.9nm,0.7s,mb4.1,baz=117,slow=6.2,SNR=6.7						

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*AUST **12** 16:25:01.8, 19.72S×133.94E, h6^{km}, ML2.6*

*NEIC **12** 16:25:01.0, 19.72S×133.94E, h6^{km}, ML2.6(AUST), After AUST.*

ISC 12 16:25:00.6±1.4, **19.71S**±0.07×**134.0E**±0.1, **h10**^{km}±12^{km}, **n8, σ1^{s}06**/11, **2C-1D, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	0.44	121	*e*Pg	Pg	16 25 10.2	+0.6
WRAB				*e*Sg	Sg	16 25 15.2	-0.3
WB2	Warramunga Arr	0.45	122	⇑*i*P	Pg	16 25 10.3	+0.6
WB2				*e*S	Sg	16 25 14.9	-0.9
ASPA	Alice Springs	3.94	181	*e*P	Pn	16 26 04.5	+2.0
ASPA				*e*S	Sn	16 26 49.1	-0.3
QIS	Mount Isa	5.38	100	*e*P	Pn	16 26 24.1	+1.2
KNA	Kununurra	6.31	308	*e*P	Pn	16 26 34.4	-1.7
KAKA	Kakadu	7.10	348	⇓*i*P	Pn	16 26 47.4	+0.2
FITZ	Fitzroy Crossi	8.03	280	⇑*i*P	P	16 27 00.5	+0.4
STKA	Stephens Creek	13.93	152	*e*P	P	16 28 18.7	-1.8

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*NEIC **12** 16:25:27.0, 19.74S×133.90E, ML3.1(AUST), After AUST.*

AUST 12 16:25:27.2, 19.74S×133.90E, ML3.1, 1C-1D, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	0.47	114	*e*Pg	Pg	16 25 37.4	+0.9
WRAB				*e*Sg	Sg	16 25 41.5	-1.3
WB2	Warramunga Arr	0.47	115	*e*P	Pg	16 25 36.7	0.0
WB2				*e*S	Sg	16 25 41.2	-1.7
ASPA	Alice Springs	3.91	180	*e*P	Pn	16 26 31.3	+1.5
ASPA				*e*S	Sn	16 27 15.3	-1.8
QIS	Mount Isa	5.42	100	*e*P	Pn	16 26 50.7	-0.6
KNA	Kununurra	6.30	308	*e*P	Pn	16 27 00.9	-2.8
KAKA	Kakadu	7.13	348	⇓*i*P	Pn	16 27 13.9	-1.5
FITZ	Fitzroy Crossi	7.99	280	⇑*i*P	Pn	16 27 26.9	-0.4
CTAO	Charters Tower	11.63	94	P	P	16 28 13.0	-4.6
STKA	Stephens Creek	13.92	152	*e*P	P	16 28 41.2	-7.1
STKA				*e*S	S	16 31 10.1	-15

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*NEIC **12** 16:38:53.6±2.8, 17.77S×178.53W, h500^{km}±34^{km}, mb4.1/8, Error ellipse: s-maj=19.1km s-min=10.0km az=171.0*

*IDC **12** 16:38:54.2±4.5, 17.84S×178.50W, h505^{km}±55^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.6/20, mbtmp4.4/13, Error ellipse: s-maj=30.9km s-min=13.4km az=167.0*

ISC 12 16:38:52.7±3.4, **17.8S**±0.2×**178.59W**±0.09, **h497**^{km}±42^{km}, **n31, σ0^{s}84**/29, **mb3.9**/18, **1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	18.07	104	P	P	16 42 33.1	-0.6
	2.3nm,0.3s,baz=164,slow=18,SNR=3.8						
URZ	Urewera	20.77	190	P	P	16 42 58.3	-0.9
	4.2nm,0.4s,baz=344,slow=6.0,SNR=7.6						
ARMA	Armidale	29.86	239	*e*P	P	16 44 21.7	+1.2
CTA	Charters Tower	33.30	260	*e*P	P	16 44 50.2	+0.5
	2.8nm,0.8s,mb3.7						
CTAO	Charters Tower	33.30	260	*e*P	P	16 44 49.7	0.0
	4.6nm,0.7s,mb4.0						
PMG	Port Moresby	34.26	279	P	P	16 44 58.9	+1.0
	11nm,0.9s,mb4.3,baz=344,slow=7.4,SNR=4.8						
TOO	Toolangi	37.13	231	⇑*i*P	P	16 45 22.8	+1.4
	0.5nm,0.6s,mb3.1						
STKA	Stephens Creek	38.55	241	⇓*i*P	P	16 45 34.3	+1.3
	6.1nm,0.6s,mb4.2						
STKA	Stephens Creek	38.55	241	P	P	16 45 34.4	+1.4
	7.1nm,0.5s,mb4.3,baz=95,slow=9.3,SNR=34						
STKA	Stephens Creek	38.55	241	*e*P	P	16 45 34.2	+1.2
WB2	Warramunga Arr	44.48	259	*e*P	P	16 46 19.9	-0.7
WRAB	Tennant Creek	44.48	259	*e*P	P	16 46 19.7	-0.9
	5.9nm,0.6s,mb4.2						
WRA	Warramunga Arr	44.49	259	P	P	16 46 20.3	-0.4
	2.5nm,0.4s,mb4.0,baz=96,slow=6.9,SNR=101						
ASAR	Alice Springs	44.66	254	P	P	16 46 22.1	0.0
	34nm,0.5s,mb5.0,baz=90,slow=7.9,SNR=982						
ASPA	Alice Springs	44.67	254	*e*P	P	16 46 21.8	-0.2
KAKA	Kakadu	47.41	269	*e*P	P	16 46 42.9	-0.4
	5.0nm,0.4s,mb4.3						
MBWA	Marble Bar	57.94	256	*e*P	P	16 47 57.7	-1.2
	23nm,1.1s,mb4.4						
NWAO	Narrogin (SRO)	59.13	242	P	P	16 48 05.9	-0.7
	8.0nm,1.1s,mb4.0,baz=55,slow=12,SNR=3.4						
QSPA	South Pole Qui	72.29	180	*e*P	P	16 49 28.1	+0.1
	4.4nm,0.8s,mb4.0						
CMB	Columbia Colle	77.85	43	*e*P	P	16 49 59.7	+0.1
	2.6nm,0.9s,mb3.7						
YBH	Yreka Blue Hor	78.52	39	P	P	16 50 03.5	+0.4
	1.4nm,0.7s,mb3.6,baz=202,slow=3.3,SNR=4.2						
NVAR	Mina Array Bea	79.44	44	P	P	16 50 08.7	+0.7
	1.2nm,0.7s,mb3.6,baz=213,slow=6.7,SNR=12						
MCK	McKinley	84.44	13	P	P	16 50 32.2	-0.5
ILAR	Eielson Array	85.78	13	P	P	16 50 38.1	-1.0
	0.5nm,0.4s,mb3.5,baz=221,slow=5.2,SNR=16						
TXAR	Lajitas Array	86.06	58	P	P	16 50 43.2	+1.8
	1.3nm,0.8s,mb3.6,baz=217,slow=6.3,SNR=8.3						
TXAR	Lajitas Array	86.06	58	P	P	16 50 43.2	+1.8
PDAR	Pinedale Array	87.37	44	P	P	16 50 47.6	+0.4
	0.7nm,0.5s,mb3.6,baz=216,slow=3.5,SNR=7.9						
YKA	Yellowknife Ar	94.27	25	P	P	16 51 17.7	-1.0
	0.2nm,0.9s,mb3.1,baz=246,slow=4.4,SNR=5.3						
YKA	Yellowknife Ar	94.27	25	P	P	16 51 17.7	-1.0
GERES	GERESS Array B	147.43	345	PKPbc	PKPdf	16 57 39.7	+3.3
	1.0nm,0.6s,baz=45,slow=2.8,SNR=3.7						
GERES	GERESS Array B	147.43	345	PKPbc	PKPdf	16 57 39.7	+3.3

IDC 12 17:03:09.7±6.1, **11.00N×95.47E, mb3.6**/2, **mb1 3.7**/3, **mb1mx3.4**/18, **mbtmp3.4**/3, **ML3.3**/1, **Error ellipse: s-maj=149.3km s-min=40.2km az=88.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.15	24	Pn	P	17 05 08.9	-3.1
	0.1nm,0.3s,baz=213,slow=15,SNR=5.3						
WRA	Warramunga Arr	49.09	129	P	P	17 11 59.2	-1.9
	0.7nm,0.7s,baz=305,slow=8.6,SNR=8.8						
ASAR	Alice Springs	50.98	133	P	P	17 12 13.5	-2.1
	0.7nm,0.8s,baz=313,slow=7.6,SNR=7.4						

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*MOS **12** 17:19:01.2±2.4, 55.15N×123.10E, h20^{km}, mb4.2/12, Error ellipse: s-maj=8.7km s-min=7.1km az=74.1*

*BJI **12** 17:19:01.0, 55.21N×123.04E, h10^{km}, mB4.7, mb4.3, ML4.9, Ms4.2, Msz4.0*

*SKHL **12** 17:19:02.0±0.6, 55.13N×123.01E, h21^{km}±2^{km}, mb5.1/6, Ms4.3/1*

SKHL Felt (III-IV) at Tinda.

*NEIC **12** 17:19:04.7±0.3, 55.17N×122.90E, mb4.1/11, MS3.9/2, Error ellipse: s-maj=6.1km s-min=5.9km az=186.0*

NEIC Felt [IV] at Tynda.

*IDC **12** 17:19:04.6±0.8, 55.20N×122.91E, h29^{km}±5^{km}, mb3.5/10, mb1 3.7/11, mb1mx3.6/23, mbtmp3.7/11, ML4.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.7/32, Error ellipse: s-maj=19.6km s-min=16.6km az=135.0*

ISC 12 17:19:01.4±0.9, **55.18N**±0.04×**122.97E**±0.04, **h25**^{km}±8^{km}, **h30**^{km}±1.0^{km}**:pP-P, n93, σ1^{s}44**/112, **mb3.8**/18, **MS3.8**/4, **2C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUP	Tupik	1.91	248	*e*P	Pb	17 19 35.8	+0.4
TUP				*e*S	Sb	17 20 00.2	+1.3
TUP				pmax	pmax		
	comp=Z,245nm,0.4s						
TUP				smax			
	comp=N,5μm,0.4s						
TUP	Tupik	1.91	248	*e*Pn	Pn	17 19 34.7	+1.8
TUP				*e*Pg	Pn	17 19 37.1	+4.2
TUP				AMB	AMB	17 19 42.2	
	comp=N,2μm,0.4s						
TUP				*e*Sg	Sn	17 20 01.6	+5.3
TUP				A		17 20 02.9	
	comp=N,5μm,0.4s						
CLNS	Chul'man	1.98	32	*e*P	Pn	17 19 36.0	+2.1
CLNS				*e*S	Sn	17 19 57.0	-1.1
CLNS				pmax	pmax		
	comp=Z,19nm,0.6s						
CLNS				pmax	pmax		
	comp=N,13nm,0.8s						
CLNS				pmax	pmax		
	comp=E,11nm,0.7s						
CLNS				smax			
	comp=N,852nm,0.9s						
CLNS				smax			
	comp=Z,298nm,0.5s						
CLNS				smax			
	comp=E,886nm,0.8s						
CLNS				smax			
	comp=N,6μm,0.5s						
CLNS				smax			
	comp=Z,4μm,0.6s						
CLNS				smax			
	comp=E,5μm,0.5s						
KROS	Kirovskiy	2.43	106	*i* Pn	Pn	17 19 40.9	+0.4
KROS				*e*Pg	Pn	17 19 46.4	+5.9
KROS				*e*Sn	Sn	17 20 08.5	-1.2
ZEA	Zeya	2.88	118	*e*Pn	Pn	17 19 47.0	+0.1
ZEA				pPn		17 19 53.5	
ZEA				*i* Pg	Pn	17 19 54.6	+7.7
ZEA				AMB	AMB	17 19 57.2	
	comp=E,810nm,0.7s						
ZEA				*e*rx	rx	17 20 02.7	
ZEA				*i* Sg	Sn	17 20 32.5	+11
ZEA				A		17 20 33.5	
	comp=E,2μm,0.6s						
ZEA				A		17 20 33.5	
	comp=E,1μm,0.6s						
ZEA				A		17 20 34.0	
	comp=E,2μm,1.5s						
ZEA				A		17 20 34.0	
	comp=E,2μm,1.5s						
CRS	Chara	3.15	305	*e*P	Pn	17 19 52.5	+1.8
CRS				pmax	pmax		
	comp=Z,486nm,1.0s						
BMKR	Bomnak	3.42	96	*e*Pn	Pn	17 19 53.0	-1.5
BMKR				pPn		17 20 00.5	
BMKR				*e*Pg	Px	17 20 04.0	
BMKR				AMB	AMB	17 20 04.5	
	comp=Z,251nm,0.5s						
BMKR				AMB	AMB	17 20 04.5	
	comp=Z,610nm,0.5s						
BMKR				*e*Sn	Sn	17 20 32.5	-2.1
BMKR				*e*Sg	Sx	17 20 47.2	
BMKR				A		17 20 50.9	
	comp=Z,1μm,0.5s						
NLYR	Nelyaty	4.30	291	*e*P	Pn	17 20 07.4	+0.3
NLYR				pmax	pmax		
	comp=Z,331nm,0.4s						
UKT	Uakit	5.34	277	*e*P	Pn	17 20 37.9	+16
UKT				pmax	pmax		
	comp=Z,170nm,0.5s						
BOD	Bodaibo	5.63	302	*e*P	Pn	17 20 45.5	+20
BOD				pmax	pmax		
	comp=Z,62nm,0.8s						
EKMR	Ekimchan	6.24	106	*i* Pn	Pn	17 20 33.0	-1.3
EKMR				AMB	AMB	17 20 33.6	
	comp=Z,19nm,0.4s						
EKMR				AMB	AMB	17 20 33.6	
	comp=Z,33nm,0.4s						
EKMR				AMB	AMB	17 20 33.6	
	comp=Z,54nm,0.4s						
EKMR				pPn		17 20 39.5	
EKMR				sPn		17 20 44.0	
EKMR				*e*Sg	Sn	17 22 19.5	+34
EKMR				A		17 22 29.0	
	comp=Z,370nm,0.6s						
EKMR				A		17 22 29.0	
	comp=Z,220nm,0.6s						
HIA	Hailar	6.25	200	*e*P	Pn	17 20 32.6	-1.9
HIA				pmax	pmax		
	comp=Z,25nm,0.6s						
HIA	Hailar	6.25	200	*e*Pn	Pn	17 20 32.6	-1.9
	comp=Z,25nm,0.6s						
HIA				*e*Sn	Sn	17 21 34.8	-11
CIT	Chita	6.44	244	*e*P	Px	17 20 57.9	
CIT				pmax	pmax		
	comp=Z,31nm,1.5s						
KMO	Kumora	6.72	281	*e*P	Pn	17 20 40.6	-0.6
YLYR	Ulyunkhan	6.80	272	*e*P	Px	17 21 02.9	
YLYR				pmax	pmax		
	comp=Z,80nm,1.2s						
NIZ	Nizh Angarsk	7.66	280	*e*P	Pn	17 20 53.5	-0.8
YAK	Yakutsk	7.71	24	*e*P	Pn	17 20 54.2	-0.8
YAK				*e*S	Sn	17 22 16.0	-6.3
YAK				pmax	pmax		
	comp=Z,11nm,0.7s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,41nm,0.8s						
YAK				pmax	pmax		
	comp=N,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.9s						
YAK				smax			
	comp=N,48nm,0.9s						
YAK				smax			
	comp=E,87nm,0.9s						
YAK				smax			
	comp=Z,28nm,0.9s						
YAK				smax			
	comp=N,283nm,0.8s						
YAK				smax			
	comp=Z,349nm,1.0s						
YAK				smax			
	comp=E,314nm,0.8s						
YAK				MLR	MLR		
	comp=Z,89nm,7.0s						
YAK	Yakutsk	7.71	24	*e*P	Pn	17 20 54.2	-0.8
	comp=Z,11nm,0.7s						
YAK				*e*S	Sn	17 22 16.0	-6.3
SYVR	Suvo	7.72	264	*e*P	Pn	17 20 54.4	-0.8
KLR	Kul'dur	8.03	134	*e*P	P	17 20 57.2	-2.3
KLR				*i* S	Sn	17 22 20.0	-11
KLR				pmax	pmax		
	comp=N,32nm,0.6s						
KLR				pmax	pmax		
	comp=E,36nm,0.6s						
KLR				pmax	pmax		
	comp=Z,36nm,0.6s						
KLR				smax			
	comp=N,96nm,0.7s						
KLR				smax			
	comp=E,160nm,0.7s						
KLR				MLR	MLR		
	comp=Z,700nm,8.0s						
KLR	Kul'dur	8.03	134	*e*Pn	P	17 20 57.2	-2.3
KLR				AMB	AMB	17 20 58.2	
	comp=Z,32nm,0.6s						
KLR				AMB	AMB	17 20 58.2	
	comp=Z,36nm,0.6s						
KLR				AMS	AMS	17 24 07.0	
	comp=Z,700nm,8.0s						
KPC	Khapcheranga	8.48	234	*e*P	P	17 21 04.0	-1.7
KPC				pmax	pmax		
	comp=Z,43nm,1.7s						
KPC	Khapcheranga	8.48	234	*e*P	P	17 21 04.0	-1.7
	comp=Z,43nm,1.7s						
OGRR	Ongureny	9.10	267	*e*P	P	17 21 13.0	-1.3
OGRR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
OGRR	Ongureny	9.10	267	*e*P	P	17 21 13.0	-1.3
	comp=Z,10.0nm,0.8s						
GRNR	Gornyy	9.23	113	*e*P	P	17 21 18.0	+1.8
GRNR				pP		17 21 24.0	
GRNR				sP		17 21 28.1	
GRNR				*e*Sg	Sn	17 23 47.2	+47
GRNR				A		17 24 04.1	
	comp=Z,170nm,1.0s						
GRNR				A		17 24 04.1	
	comp=Z,210nm,1.0s						
GRNR				A		17 24 04.1	
	comp=Z,240nm,1.0s						
TRG	Tyrgan	10.09	263	*e*P	P	17 21 26.3	-1.5
TRG				*e*S	S	17 23 17.5	-3.8
TRG				pmax	pmax		
	comp=Z,11nm,0.9s						
TRG				smax			
	comp=N,228nm,1.4s						
NKL	Nikolayevsk	10.58	94	*e*P	P	17 21 37.0	+2.5
NKL				AMB	AMB	17 21 42.7	
	comp=N,34nm,1.3s						
NKL				*e*Sg	S	17 24 32.8	+60
MDJ	Mudanjiang	11.40	155	*e*P	P	17 21 46.4	+0.7
CN2	Changchun	11.51	171	*e*P	P	17 21 46.2	-1.0
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2	Changchun	11.51	171	*e*P	P	17 21 46.2	-1.0
	comp=Z,10.0nm,1.0s						
OKH	Okha	11.75	90	*e*Sg	Sx	17 25 12.1	
TLY	Talaya	12.04	261	*e*P	P	17 21 49.8	-4.6
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	Talaya	12.04	261	*e*P	P	17 21 44.0	-10
TLY				*e*S	S	17 24 10.5	+1.6
TLY				*e*Lg		17 25 23.7	
ULN	Ulaanbaatar	12.31	240	*e*P	P	17 21 54.8	-3.2
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULN	Ulaanbaatar	12.31	240	*e*P	P	17 21 54.8	-3.2
	comp=Z,6.1nm,1.0s						
ULN				*e*S	S	17 24 11.6	-3.8
SONM	Songino Array	12.66	241	Pn	P	17 22 02.0	-0.6
	comp=Z,0.3nm,0.3s,baz=39,slow=13,SNR=26						
SONM				Lg		17 25 39.7	

	comp=Z,6.6nm,0.3s,baz=56,slow=22,SNR=9.2						
ZAK	**Zakamensk**	**12.84**	**256**	*e*P	**P**	**17 22 04.3**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ZAK	**Zakamensk**	**12.84**	**256**	*e*P	**P**	**17 22 04.3**	**-0.7**
	comp=Z,1.0nm,0.9s						
TEY	**Ternei**	**13.38**	**134**	*e*rx	rx	17 26 00.5	
MOY	**Mondy**	**13.55**	**264**	*e*P	**P**	**17 22 15.8**	**+1.5**
MOY				*e*S	**S**	**17 24 37.8**	**-7.3**
MOY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MOY				pmax	pmax		
	comp=E,248nm,1.5s						
MOY	**Mondy**	**13.55**	**264**	*e*P	**P**	**17 22 15.8**	**+1.5**
	comp=E,5.0nm,0.9s						
MOY				*e*S	**S**	**17 24 37.8**	**-7.3**
MA2	**Magadan**	**15.56**	**62**	*i* P	**P**	**17 22 47.2**	**+6.7**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJT	**Baijiatuau**	**15.84**	**199**	P	**P**	**17 22 41.6**	**-2.6**
BJT				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BJT	**Baijiatuau**	**15.84**	**199**	P	**P**	**17 22 41.6**	**-2.6**
	comp=Z,3.3nm,0.6s						
HHC	**Hu-ho-hao-te**	**16.21**	**213**	*e*P	**P**	**17 22 54.3**	**+5.3**
HHC				AMB	AMB		
	comp=Z,6.0nm,1.7s						
HHC				AMB	AMB		
	comp=Z,139nm,4.3s						
HHC	**Hu-ho-hao-te**	**16.21**	**213**	*e*P	**P**	**17 22 54.3**	**+5.3**
	comp=Z,6.0nm,1.7s						
TIXI	**Tiksi**	**16.72**	**6**	⇑*i*P	**P**	**17 22 50.5**	**-4.8**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,41nm,10.0s						
TIXI	**Tiksi**	**16.72**	**6**	⇑*i*P	**P**	**17 22 50.5**	**-4.8**
	comp=Z,7.0nm,0.7s						
ASAJ	**Asahikawa**	**16.79**	**123**	LR	LR	17 29 44.7	
	comp=Z,98nm,18.2s,baz=150,slow=38						
MAJO	**Matsushiro**	**21.36**	**144**	P	**P**	**17 23 51.3**	**+2.4**
MAJO				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.1						
MAJO	**Matsushiro**	**21.36**	**144**	P	**P**	**17 23 51.3**	**+2.4**
	comp=Z,12nm,1.3s,mb4.1						
ZAL	**Zalesovo**	**21.99**	**283**	LR	LR	17 33 38.2	
	comp=Z,150nm,20.2s,MS3.4,baz=130,slow=40						
NJ2	**Nanjing**	**23.31**	**189**	*e*P	**P**	**17 24 11.2**	**+3.1**
NJ2				AP		17 24 21.5	
NJ2				S	**S**	**17 28 16.0**	**+0.9**
NJ2				XS		17 28 27.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,1µm,5.3s						
NJ2				LR	LR		
	comp=N,1µm,24.8s,MS4.5						
NJ2				LR	LR		
	comp=E,1µm,21.9s,MS4.5						
NJ2				LR	LR		
	comp=Z,630nm,22.1s,MS4.0						
NJ2	**Nanjing**	**23.31**	**189**	*e*P	**P**	**17 24 11.2**	**+3.1**
	comp=Z,20nm,1.0s,mb4.5						
NJ2				pP		17 24 21.5	
NJ2				S	**S**	**17 28 16.0**	**+0.9**
NJ2				sS		17 28 27.0	
NJ2				LR	LR		
	comp=Z,630nm,22.1s,MS4.0						
BILL	**Bilibino**	**23.65**	**40**	*e*P	**P**	**17 24 15.4**	**+4.4**
BILL				*e*		17 24 41.0	
BILL				*e*S	**S**	**17 28 25.3**	**+4.6**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.4						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s,MS3.6						
BILL	**Bilibino**	**23.65**	**40**	*e*P	**P**	**17 24 15.4**	**+4.4**
	comp=Z,2.0nm,1.3s,mb3.4						
BILL				*e*		17 24 41.0	
BILL				*e*S	**S**	**17 28 25.3**	**+4.6**
BILL				LR	LR		
	comp=Z,200nm,20.0s,MS3.6						
SSE	**Sheshan**	**24.11**	**184**	P	**P**	**17 24 17.6**	**+1.7**
SSE				S	**S**	**17 28 34.8**	**+5.8**
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
SSE				AMB	AMB		
	comp=Z,110nm,4.8s						
SSE	**Sheshan**	**24.11**	**184**	P	**P**	**17 24 17.6**	**+1.7**
	comp=Z,10.0nm,1.0s,mb4.2						
SSE				S	**S**	**17 28 34.8**	**+5.8**
WMQ	**Urumqi**	**25.30**	**258**	*e*P	**P**	**17 24 30.9**	**+3.7**
ENH	**Enshi**	**26.70**	**207**	*e*P	**P**	**17 24 41.3**	**+1.0**
	comp=Z,3.1nm,0.7s,mb4.0						
KURK	**Kurchatov**	**26.74**	**279**	P	**P**	**17 24 40.5**	**0.0**
KURK				*e*		17 24 53.4	
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
CHKZ	**Chkalovo**	**29.91**	**289**	*e*P	**P**	**17 25 08.0**	**-1.1**
CHKZ				*e*		17 25 17.5	
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
BVAR	**Borovoye Array**	**30.31**	**288**	P	**P**	**17 25 13.2**	**+0.6**
	comp=Z,0.7nm,0.7s,mb3.5,baz=243,slow=40,SNR=2.8						
BVAR				pP	pP	17 25 21.3	+1.3
	comp=Z,1.2nm,0.9s,baz=63,slow=9.7,SNR=3.6						
BVAR				PcP	PcP	17 28 12.8	+0.1
	comp=Z,0.7nm,0.5s,slow=1.5,SNR=3.7						
CMAR	**Chiang Mai Arr**	**40.97**	**216**	P	**P**	**17 26 45.0**	**+1.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**40.97**	**216**	P	**P**	**17 26 45.0**	**+1.3**
	comp=Z,0.8nm,0.9s,mb3.4,baz=357,slow=6.7,SNR=6.0						
ILAR	**Eielson Array**	**42.31**	**40**	P	**P**	**17 26 56.0**	**+1.9**
ILAR				*PP	pP	17 27 04.5	+2.9
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**42.31**	**40**	P	**P**	**17 26 56.0**	**+2.0**
	comp=Z,1.2nm,1.1s,mb3.4,baz=302,slow=6.9,SNR=6.3						
ILAR				pP	pP	17 27 04.5	+2.9
	comp=Z,1.5nm,1.0s,baz=306,slow=6.7,SNR=5.0						
INK	**Inuvik**	**44.71**	**31**	P	**P**	**17 27 15.1**	**+1.6**
INK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
INK	**Inuvik**	**44.71**	**31**	P	**P**	**17 27 15.1**	**+1.6**
	comp=Z,1.4nm,1.1s,mb3.7,baz=240,slow=6.0,SNR=3.2						
FINES	**FINESS Array B**	**46.74**	**319**	P	**P**	**17 27 30.2**	**+0.5**
FINES				*PP	pP	17 27 39.2	+1.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**46.74**	**319**	P	**P**	**17 27 30.1**	**+0.5**
	comp=Z,1.8nm,0.9s,mb4.0,baz=63,slow=8.5,SNR=10						
FINES				pP	pP	17 27 39.2	+1.9
	comp=Z,1.8nm,0.5s,baz=45,slow=9.8,SNR=3.5						
FINES	**FINESS Array B**	**46.74**	**319**	P	**P**	**17 27 30.1**	**+0.5**
FINES				pP	pP	17 27 39.2	+1.9
NB2	**NORSAR Subarra**	**52.26**	**325**	P	**P**	**17 28 11.9**	**-0.2**
	comp=Z,2.8nm,0.6s,mb4.4,baz=40,slow=7.0						
NB2	**NORSAR Subarra**	**52.26**	**325**	P	**P**	**17 28 11.9**	**-0.2**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
NOA	**NORSAR Array B**	**52.26**	**325**	P	**P**	**17 28 11.9**	**-0.2**
NOA				*PP	pP	17 28 21.1	+1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	**NORSAR Array B**	**52.26**	**325**	P	**P**	**17 28 11.9**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=39,slow=7.1,SNR=4.6						
NOA				pP	pP	17 28 21.1	+1.3
	comp=Z,2.6nm,0.7s,baz=40,slow=7.0,SNR=8.9						
SOC	**Sochi**	**52.29**	**294**	*e*P	**P**	**17 28 10.9**	**-1.7**
SOC				*e*		17 29 20.9	
SOC				*e*S	**S**	**17 35 31.3**	**-3.4**
SOC				*e*		17 38 03.7	
SOC				*e*SS	SS	17 39 20.5	+10
SOC				*e*SSS	SSS	17 40 53.1	-1.0
SOC				pmax	pmax		
	comp=Z,32nm,0.9s						
SOC				pmax	pmax		
	comp=N,23nm,1.1s						
SOC				pmax	pmax		
	comp=E,24nm,1.0s						
SOC				MLR	MLR		
	comp=N,274nm,22.0s						
SOC				MLR	MLR		
	comp=Z,252nm,22.0s,MS4.2						
SOC	**Sochi**	**52.29**	**294**	*e*P	**P**	**17 28 10.9**	**-1.7**
	comp=Z,32nm,0.9s						
SOC				*e*		17 29 20.9	
SOC				*e*S	**S**	**17 35 31.3**	**-3.4**
SOC				*e*		17 38 03.7	
SOC				*e*SS	SS	17 39 20.5	+10
SOC				*e*SSS	SSS	17 40 53.1	-1.0
SOC				LR	LR		
	comp=Z,250nm,22.0s,MS4.2						
AKASG	**Malin Array Be**	**52.53**	**307**	P	**P**	**17 28 13.7**	**-0.6**
AKASG				*PP	pP	17 28 23.1	+1.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**52.53**	**307**	P	**P**	**17 28 13.7**	**-0.6**
	comp=Z,0.1nm,0.3s,mb3.2,baz=45,slow=12,SNR=2.6						
AKASG				pP	pP	17 28 23.1	+1.0
	comp=Z,2.0nm,0.7s,baz=42,slow=8.3,SNR=8.1						
AKASG	**Malin Array Be**	**52.53**	**307**	P	**P**	**17 28 13.7**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.2						
AKASG				pP	pP	17 28 23.1	+1.1
YKA	**Yellowknife Ar**	**54.36**	**29**	P	**P**	**17 28 26.4**	**-1.2**
YKA				*PP	pP	17 28 36.4	+1.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**54.36**	**29**	P	**P**	**17 28 26.4**	**-1.1**
	comp=Z,0.5nm,0.8s,mb3.5,baz=328,slow=6.9,SNR=8.4						
YKA				pP	pP	17 28 36.4	+1.1
	comp=Z,0.8nm,0.9s,baz=327,slow=7.1,SNR=6.8						
YKA	**Yellowknife Ar**	**54.36**	**29**	P	**P**	**17 28 26.4**	**-1.1**
YKA				pP	pP	17 28 36.4	+1.1
KHC	**Kasperske Hory**	**60.49**	**315**	*e*P	**P**	**17 29 20.5**	**+9.4**
WRAB	**Tennant Creek**	**75.44**	**169**	P	**P**	**17 30 45.0**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
WRAB	**Tennant Creek**	**75.44**	**169**	P	**P**	**17 30 45.0**	**+0.1**
	comp=Z,2.5nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**75.45**	**169**	P	**P**	**17 30 45.2**	**+0.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**75.45**	**169**	P	**P**	**17 30 45.2**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=350,slow=6.5,SNR=13						
ASAR	**Alice Springs**	**79.08**	**170**	P	**P**	**17 31 06.0**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.7,baz=351,slow=5.2,SNR=5.7						
QSPA	**South Pole Qui**	**144.93**	**180**	*e*PKPdf	PKPdf	17 38 35.2	-3.8

SOF ***12*** *17:33:32.2, 42.22N×25.08E, h11*^{km}*, MD3.3*
CSEM ***12*** *17:33:33.2±0.1, 42.23N×25.05E, h2*^{km}*, MD3.3, Error ellipse: s-maj=2.7km s-min=1.9km az=141.0*
THE ***12*** *17:33:34.3, 42.18N×25.12E, h10*^{km}*, ML3.6*
MOS ***12*** *17:33:34.1±1.3, 42.13N×25.10E, h19*^{km}*, mb4.0/1, Error ellipse: s-maj=7.5km s-min=4.4km az=65.5*
ATH ***12*** *17:33:37.5, 41.86N×25.00E, h17*^{km}*, MD3.5/3*
NEIC ***12*** *17:33:37.5, 41.86N×25.00E, h17*^{km}*, MD3.5(ATH), After ATH.*

ISC 12 17:33:32.5±0.3**, 42.19N**±0.02×**25.04E**±0.02**, h2**^{km}**, n57,** σ**1**^{s}**10**/94**, 7C-3D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLD	**Plovdiv**	**0.27**	**251**	Pg	**Pg**	**17 33 38.0**	**+0.2**
PLD				Sg	**Sg**	**17 33 42.0**	**+0.6**
DIM	**Dimitrovgrad**	**0.39**	**111**	Pg	**Pg**	**17 33 41.0**	**+0.7**
DIM				Sg	**Sg**	**17 33 47.0**	**+1.5**
RZN	**Rozhen**	**0.56**	**206**	Pg	**Pg**	**17 33 44.0**	**+0.3**
KDZ	**Kurdzhali**	**0.61**	**153**	Pg	**Pg**	**17 33 45.0**	**+0.4**
KDZ				Sg	**Sg**	**17 33 52.0**	**-0.7**
PGB	**Panagyurishte**	**0.74**	**299**	Pg	**Pg**	**17 33 47.2**	**-0.1**
PGB				Sg	**Sg**	**17 33 57.0**	**-0.2**
PVL	**Pavlikeni**	**1.05**	**12**	Pg	**Pg**	**17 33 51.0**	**-2.4**
RDO	**Rodhopi**	**1.11**	**160**	*e*PN	**Pn**	**17 33 53.7**	**-1.2**
MMB	**Musomiste**	**1.15**	**239**	Pg	**Pg**	**17 33 55.0**	**-0.5**
MMB				Sg	**Sg**	**17 34 12.5**	**+1.7**
JMB	**Yambol**	**1.17**	**76**	Pg	**Pg**	**17 33 54.0**	**-1.9**
JMB				Sg	**Sg**	**17 34 10.0**	**-1.6**
NVR	**Nevrokopi**	**1.22**	**227**	*e*PN	**Pn**	**17 33 56.5**	**0.0**
SZH	**Strazhica**	**1.26**	**31**	Pg	**Pg**	**17 33 57.0**	**-0.6**
SZH				Sg	**Sg**	**17 34 15.5**	**+1.1**
VTS	**Vitosha**	**1.42**	**287**	P	**Pb**	**17 33 59.0**	**-0.3**
VTS	**Vitosha**	**1.42**	**287**	⇑P	**Pb**	**17 33 59.8**	**+0.5**
VTS				Sg	**Sg**	**17 34 17.5**	**-2.2**
ALN	**Alexandroupoli**	**1.50**	**149**	*e*Pb	**Pn**	**17 34 00.5**	**+0.1**
ALN				*e*Sb	**Sb**	**17 34 20.8**	**+0.8**
ALN	**Alexandroupoli**	**1.50**	**149**	P	**Pn**	**17 34 00.5**	**+0.1**
ALN				S	**Sb**	**17 34 21.0**	**+1.0**
KKB	**Krupnik**	**1.50**	**258**	P	**Pn**	**17 34 01.0**	**+0.5**
KKB				Sg	**Sg**	**17 34 22.0**	**-0.3**
SRS	**Serrai**	**1.53**	**226**	*e*Pb	**Pb**	**17 34 01.2**	**0.0**
SRS	**Serrai**	**1.53**	**226**	P	**Pb**	**17 34 01.2**	**0.0**
SRS				S	**Sb**	**17 34 24.4**	**+3.4**
SRS	**Serrai**	**1.53**	**226**	*e*Pb	**Pb**	**17 34 01.2**	**0.0**
SRS				S	**Sb**	**17 34 24.4**	**+3.5**
SOH	**Sokhos**	**1.87**	**223**	*e*Pb	**Pb**	**17 34 06.5**	**-0.5**
SOH				*e*Sb	**Sb**	**17 34 30.1**	**-0.6**
SOH	**Sokhos**	**1.87**	**223**	P	**Pb**	**17 34 06.5**	**-0.5**
SOH				S	**Sn**	**17 34 32.9**	**+2.7**
KNT	**Kendrikon**	**1.91**	**238**	*e*Pb	**Pb**	**17 34 07.6**	**-0.1**
KNT				*e*Sb	**Sb**	**17 34 31.4**	**-0.6**
KNT	**Kendrikon**	**1.91**	**238**	P	**Pb**	**17 34 07.6**	**-0.1**
KNT				S	**Sn**	**17 34 35.6**	**+4.4**
KNT	**Kendrikon**	**1.91**	**238**	*e*Pb	**Pb**	**17 34 07.6**	**-0.1**
KNT				*e*Sb	**Sb**	**17 34 31.4**	**-0.6**
KNT				S	**Sn**	**17 34 35.6**	**+4.3**
PRD	**Provadia**	**2.01**	**59**	Pg	**Pg**	**17 34 10.0**	**-2.6**
OUR	**Ouranopolis**	**2.02**	**204**	*e*Pn	**Pn**	**17 34 07.7**	**-0.3**
OUR				*e*Sn	**Sn**	**17 34 34.0**	**-0.1**
OUR	**Ouranopolis**	**2.02**	**204**	P	**Pn**	**17 34 07.7**	**-0.3**
OUR				S	**Sn**	**17 34 38.0**	**+3.8**
OUR	**Ouranopolis**	**2.02**	**204**	*e*Pn	**Pn**	**17 34 07.7**	**-0.3**
OUR				*e*Sn	**Sn**	**17 34 34.0**	**-0.1**
OUR				S	**Sn**	**17 34 38.0**	**+3.9**
PLG	**Polygyros**	**2.18**	**214**	*e*PB	**Pb**	**17 34 10.4**	**-1.9**
THE	**Thessaloniki**	**2.21**	**226**	*e*Pn	**Pn**	**17 34 10.5**	**-0.1**
THE				*e*Sn	**Sn**	**17 34 38.2**	**-0.6**
THE	**Thessaloniki**	**2.21**	**226**	P	**Pn**	**17 34 10.5**	**-0.1**
THE				S	**Sn**	**17 34 41.5**	**+2.6**
THE	**Thessaloniki**	**2.21**	**226**	*e*Pn	**Pn**	**17 34 10.5**	**-0.1**
THE				*e*Sn	**Sn**	**17 34 38.2**	**-0.7**
THE				S	**Sn**	**17 34 41.5**	**+2.6**
BUC1	**Bucharest**	**2.27**	**18**	P	**Pn**	**17 34 13.6**	**+2.0**
GRG	**Griva**	**2.33**	**239**	*e*Pn	**Pn**	**17 34 13.2**	**+0.7**
GRG				*e*Sn	**Sn**	**17 34 42.2**	**+0.1**
GRG	**Griva**	**2.33**	**239**	P	**Pn**	**17 34 14.1**	**+1.7**
GRG				S	**Sn**	**17 34 47.1**	**+5.0**
GRG	**Griva**	**2.33**	**239**	P	**Pn**	**17 34 14.1**	**+1.6**
GRG				*e*Sn	**Sn**	**17 34 42.2**	**+0.1**
GRG				S	**Sn**	**17 34 47.1**	**+5.0**
BARS	**Barje**	**2.46**	**286**	⇓*i*Pn	**Pn**	**17 34 14.7**	**+0.4**
BARS				Sn	**Sn**	**17 34 43.3**	**-2.0**
PAIG	**Paliouri**	**2.49**	**205**	*e*Pn	**Pn**	**17 34 14.1**	**-0.5**
PAIG				*e*Sn	**Sn**	**17 34 44.5**	**-1.5**
PAIG	**Paliouri**	**2.49**	**205**	P	**Pn**	**17 34 14.1**	**-0.5**
PAIG				S	**Sn**	**17 34 49.8**	**+3.8**
PAIG	**Paliouri**	**2.49**	**205**	*e*Pn	**Pn**	**17 34 14.1**	**-0.5**
PAIG				*e*Sn	**Sn**	**17 34 44.5**	**-1.4**
PAIG				S	**Sn**	**17 34 49.8**	**+3.9**
SKO	**Skopje**	**2.69**	**267**	*e*Pn	**Pn**	**17 34 21.0**	**+3.4**
LIT	**Litokhoron**	**2.84**	**224**	*e*Pn	**Pn**	**17 34 20.2**	**+0.5**
PRK	**Paraskevi**	**3.09**	**162**	*e*PN	**Pn**	**17 34 23.1**	**-0.1**
FNA	**Florina**	**3.09**	**244**	*e*Pn	**Pn**	**17 34 23.4**	**+0.1**
AOS	**Alonnisos**	**3.15**	**197**	*e*Pn	**Pn**	**17 34 22.7**	**-1.3**
XOR	**Xorichti**	**3.15**	**207**	*e*Pn	**Pn**	**17 34 23.4**	**-0.7**
SNX	**Sinaia**	**3.18**	**6**	⇑P	**Pn**	**17 34 25.6**	**+1.1**
HARR	**Harsova**	**3.27**	**39**	⇑*i*P	**Pn**	**17 34 26.3**	**+0.6**
TIRR	**Tirgusor**	**3.34**	**46**	⇓P	**Pn**	**17 34 27.1**	**+0.3**
MLR	**Muntele Rosu**	**3.36**	**11**	⇑*i*P	**Pn**	**17 34 28.3**	**+1.2**
SVIS	**Svilajnac**	**3.50**	**308**	*e*Pn	**Pn**	**17 34 32.5**	**+3.5**
SVIS				Sn	**Sn**	**17 35 11.6**	**0.0**
CFR	**Carcaliu**	**3.73**	**36**	P	**Pn**	**17 34 32.5**	**+0.1**
AGG	**Agios Georgios**	**3.78**	**214**	*e*Pn	**Pn**	**17 34 32.7**	**-0.3**
VRI	**Vrincioaia**	**3.87**	**18**	⇑*i*P	**Pn**	**17 34 35.9**	**+1.6**
VRI	**Vrincioaia**	**3.87**	**18**	⇑*i*P	**Pn**	**17 34 35.8**	**+1.5**
TLCR		**4.05**	**41**	⇑P	**Pn**	**17 34 36.9**	**0.0**
BURAR	**Bucovina Array**	**5.42**	**1**	⇓P	**Pn**	**17 34 56.2**	**-0.2**

NIED ***12*** *17:40:00, 26.60N×144.30E, h8*^{km}*, Mw4.6 Best double couple: M*$_0$*1.03×10*^{16} *NP1:* ϕ_s*319°, δ71°, λ-75°. NP2:* ϕ_s*100°, δ24°, λ-126°.*
IDC ***12*** *17:40:54.2±0.4, 25.99N×144.17E, mb4.6/24, mb1 4.7/27, mb1mx4.7/30, mbtmp4.6/27, ML4.6/3, MS3.9/14, Ms1 4.0/14, ms1mx3.7/29, Error ellipse: s-maj=15.1km s-min=12.0km az=85.0*
BJI ***12*** *17:40:55.1, 25.90N×144.10E, h19*^{km}*, mB5.0, mb4.5, Ms4.4, Msz4.0*
JMA ***12*** *17:40:56.6±0.1, 26.57N×144.27E, M5.5*
CSEM ***12*** *17:40:57.1, 25.97N×144.08E, h33*^{km}*, mb5.6*
NEIC ***12*** *17:40:57.4±2.0, 25.99N×144.15E, h20*^{km}*±14*^{km}*, mb4.8/54, MW4.6(NIED), Error ellipse: s-maj=5.0km s-min=4.0km az=110.0*
MOS ***12*** *17:40:57.5±0.8, 25.99N×144.15E, h33*^{km}*, mb5.1/42, Error ellipse: s-maj=10.9km s-min=6.2km az=104.6*

ISC 12 17:40:56.9±0.2**, 26.07N**±0.04×**144.14E**±0.03**, h26**^{km}**, h26**^{km}±1.1^{km}**:pP-P, n228,** σ**1**^{s}**09**/233**, mb4.8**/95**, MS4.0**/22**, 5C-9D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.85**	**288**	P	**Pn**	**17 41 30.5**	**+3.0**
JHHJ				*e*S	**Sn**	**17 41 55.2**	**+5.0**
CBIJ	**Chichi jima**	**2.03**	**301**	Pn	**Pn**	**17 41 31.3**	**+1.2**
	242nm,0.3s,baz=263,slow=22,SNR=154						
CBIJ				Sn	**Sn**	**17 41 55.7**	**+0.9**
	763nm,0.3s,baz=278,slow=22,SNR=20						
CBIJ				LR	LR	17 42 01.2	
	comp=Z,505nm,20.2s,baz=134,slow=32						
CBIJ	**Chichi jima**	**2.03**	**301**	⇓P	**Pn**	**17 41 31.4**	**+1.3**
CBIJ				*e*S	**Sn**	**17 41 56.6**	**+1.8**
JHJ2	**Mitsune**	**7.96**	**333**	P	**Pn**	**17 42 51.8**	**-2.1**
JHJ2				*e*S	**Sn**	**17 44 16.2**	**-7.9**
JHJ	**Hachijo jima 2**	**7.98**	**333**	Pn	**Pn**	**17 42 52.0**	**-2.2**
	16nm,0.3s,baz=74,slow=16,SNR=17						
JHJ				Sn	**Sn**	**17 44 18.1**	**-6.5**
	46nm,0.3s,baz=77,slow=22,SNR=6.2						
JHJ				LR	LR	17 45 35.7	
	comp=Z,453nm,22.0s,baz=144,slow=35						
BSO1	**Boso 1**	**8.98**	**343**	P	**P**	**17 43 05.9**	**-2.1**
BSO1				*e*S	**Sn**	**17 44 40.9**	**-8.4**
BSO3	**Boso 3**	**9.25**	**341**	P	**P**	**17 43 09.5**	**-2.2**
BSO4	**Boso 4**	**9.47**	**341**	*e*S	**Sn**	**17 44 54.4**	**-7.2**
JOD2	**Odawara 2**	**10.14**	**336**	P	**P**	**17 43 21.3**	**-2.7**
JHU	**Hanno**	**10.60**	**338**	P	**P**	**17 43 27.5**	**-2.9**
JHU				*e*S	**S**	**17 45 18.0**	**-11**
JNY	**Yasuok**	**10.71**	**331**	P	**P**	**17 43 33.0**	**+1.1**
JRY	**Ryogami san**	**10.88**	**337**	P	**P**	**17 43 32.2**	**-2.0**
JHO	**Hitachi**	**10.94**	**345**	P	**P**	**17 43 31.0**	**-4.0**
MAJO	**Matsushiro**	**11.60**	**336**	*e*P	**P**	**17 43 42.4**	**-1.6**
MAT	**Matsushiro**	**11.60**	**336**	*e*P	**P**	**17 43 42.0**	**-2.0**
MAT				pmax	pmax		
	comp=Z,58nm,1.2s						
MAT	**Matsushiro**	**11.60**	**336**	*e*P	**P**	**17 43 42.0**	**-2.0**
	comp=Z,58nm,1.2s						
MAT				*e*S	**S**	**17 45 44.0**	**-10**
MAT	**Matsushiro**	**11.60**	**336**	P	**P**	**17 43 41.3**	**-2.7**
MAT				S	**S**	**17 45 44.1**	**-10**
JJN	**Nakama**	**12.12**	**337**	P	**P**	**17 43 49.6**	**-1.3**
JOW	**Kunigami**	**14.24**	**277**	LR	LR	17 49 06.6	
	comp=Z,460nm,19.5s,baz=299,slow=34						
KS15	**Wonju Array Si**	**17.85**	**313**	*e*P	**P**	**17 45 05.1**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**17.98**	**4**	P	**P**	**17 45 02.0**	**-4.7**
ASAJ	**Asahikawa**	**18.05**	**356**	P	**P**	**17 45 07.4**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=208,slow=14,SNR=18						
ASAJ				LR	LR	17 51 29.9	
	comp=Z,410nm,20.4s,baz=15,slow=35						
INCN	**Inchon**	**18.70**	**312**	*e*P	**P**	**17 45 15.7**	**0.0**
	comp=Z,36nm,0.9s						
SSE	**Sheshan**	**20.76**	**289**	P	**P**	**17 45 38.3**	**-0.1**
SSE				S	**S**	**17 49 26.1**	**+2.2**
SSE				AMB	AMB		
	comp=Z,10.0nm,1.2s						
SSE				AMB	AMB		
	comp=Z,106nm,4.9s						
SSE				LR	LR		
	comp=N,64nm,24.5s,MS3.3						
SSE				LR	LR		
	comp=E,139nm,24.5s,MS3.3						
SSE				LR	LR		
	comp=Z,161nm,20.0s,MS3.4						
YSS	**Yuzh-Sakhalins**	**20.87**	**357**	*e*P	**P**	**17 45 41.0**	**+1.6**
YSS				*e*		17 45 49.8	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**20.87**	**357**	*e*P	**P**	**17 45 39.5**	**+0.1**
	comp=Z,45nm,1.2s						
MDJ	**Mudanjiang**	**21.92**	**331**	P	**P**	**17 45 50.6**	**+0.6**
MDJ				AP		17 45 53.4	
MDJ				S	**S**	**17 49 54.7**	**+9.0**
MDJ				XS		17 49 59.6	
MDJ				SCP		17 53 24.5	
MDJ				SCS	ScS	17 57 06.7	0.0
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,227nm,7.8s						
MDJ				LR	LR		
	comp=N,146nm,24.7s,MS3.5						
MDJ				LR	LR		
	comp=E,168nm,23.3s,MS3.5						
MDJ				LR	LR		
	comp=Z,196nm,23.8s,MS3.4						
MDJ	**Mudanjiang**	**21.92**	**331**	*e*P	**P**	**17 45 50.4**	**+0.3**
	comp=Z,28nm,1.0s,mb4.6						
NJ2	**Nanjing**	**22.87**	**291**	*e*P	**P**	**17 45 58.2**	**-1.3**
NJ2				AP		17 46 07.4	
NJ2				XP		17 46 11.5	
NJ2				PP	PP	17 46 27.6	-1.4
NJ2				S	**S**	**17 50 00.0**	**-3.0**
NJ2				XS		17 50 16.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
NJ2				LR	LR		
	comp=N,890nm,19.6s,MS4.3						
NJ2				LR	LR		
	comp=E,520nm,20.0s,MS4.3						
NJ2				LR	LR		
	comp=Z,610nm,20.6s,MS4.0						
SNY	**Shenyang**	**23.11**	**318**	⇓P	**P**	**17 46 02.5**	**+0.8**
SNY				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
SNY				LR	LR		
	comp=N,360nm,7.1s						
SNY				LR	LR		
	comp=Z,220nm,13.0s,MS3.8						
CN2	**Changchun**	**23.31**	**324**	*e*P	**P**	**17 46 05.4**	**+1.7**
CN2				*e*XP		17 46 12.4	
CN2				*e*S	**S**	**17 50 14.2**	**+3.5**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
CN2				LR	LR		
	comp=N,300nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=E,200nm,12.0s,MS4.0						
CN2				LR	LR		
	comp=Z,200nm,13.0s,MS3.8						
KLR	**Kul'dur**	**25.05**	**341**	*e*P	**P**	**17 46 18.0**	**-2.4**
WHN	**Wuhan**	**26.57**	**287**	*e*P	**P**	**17 46 37.5**	**+2.7**
BJT	**Baijiatuau**	**27.13**	**308**	*e*P	**P**	**17 46 38.3**	**-1.5**
BJT				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BJT	**Baijiatuau**	**27.13**	**308**	*e*P	**P**	**17 46 38.3**	**-1.5**
	comp=Z,2.2nm,0.5s,mb3.9						
HIA	**Hailar**	**29.91**	**327**	*e*P	**P**	**17 47 05.0**	**+0.2**
HIA				*e*	pP	17 47 12.4	0.0
HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HIA	**Hailar**	**29.91**	**327**	*e*P	**P**	**17 47 05.0**	**+0.2**
	comp=Z,9.3nm,1.0s,mb4.5						
HIA				*e*	pP	17 47 12.4	+0.1
ENH	**Enshi**	**30.76**	**286**	*e*P	**P**	**17 47 10.7**	**-1.8**
	comp=Z,23nm,1.0s,mb5.0						
XAN	**Xi'an**	**31.39**	**293**	P	**P**	**17 47 16.7**	**-1.3**
XAN				AP	pP	17 47 27.1	+1.6
XAN				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.5						
GYA	**Guiyang**	**33.53**	**279**	P	**P**	**17 47 36.0**	**-0.8**

GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MA2	**Magadan**	**33.80**	**6**	P	**P**	**17 47 39.0**	**+0.2**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
MA2	**Magadan**	**33.80**	**6**	P	**P**	**17 47 39.0**	**+0.2**
	comp=Z,5.8nm,0.8s,mb4.6						
PMG	**Port Moresby**	**35.39**	**175**	P	**P**	**17 47 50.1**	**-2.7**
	comp=Z,4.8nm,0.7s,mb4.5,baz=117,slow=16,SNR=4.4						
CD2	**Chengdu**	**35.68**	**287**	P	**P**	**17 47 54.4**	**-0.8**
LZH	**Lanzhou**	**35.71**	**296**	*e*P	**P**	**17 47 54.5**	**-0.9**
LZH				AP	pP	17 48 05.3	+2.3
LZH				XP	sP	17 48 08.9	+2.6
LZH				AMB	AMB		
	comp=Z,22nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,100nm,4.0s						
LZH				LR	LR		
	comp=E,270nm,15.9s						
LZH				LR	LR		
	comp=Z,342nm,17.6s,MS4.2						
ULN	**Ulaanbaatar**	**36.27**	**317**	*e*P	**P**	**17 48 01.2**	**+1.3**
ULN				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.3						
ULN	**Ulaanbaatar**	**36.27**	**317**	*e*P	**P**	**17 48 01.2**	**+1.3**
	comp=Z,44nm,1.2s,mb5.3						
SONM	**Songino Array**	**36.66**	**316**	P	**P**	**17 48 04.5**	**+1.2**
	comp=Z,12nm,0.9s,mb4.7,baz=116,slow=7.6,SNR=76						
SONM				PcP	PcP	17 50 25.4	-0.8
	comp=Z,1.5nm,0.8s,baz=154,slow=2.7,SNR=5.0						
KMI	**Kunming**	**37.24**	**278**	⇓P	**P**	**17 48 08.4**	**+0.1**
KMI				AP	pP	17 48 14.6	-1.4
KMI				XP	sP	17 48 17.8	-1.4
KMI				PP	PP	17 49 34.6	-1.2
KMI				S	**S**	**17 53 53.1**	**-0.3**
KMI				XS		17 54 06.1	
KMI				SS	SS	17 56 19.1	-5.8
KMI				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
KMI				AMB	AMB		
	comp=Z,76nm,4.6s						
KMI				LR	LR		
	comp=N,231nm,18.7s						
KMI				LR	LR		
	comp=E,168nm,24.3s						
KMI				LR	LR		
	comp=Z,217nm,22.5s,MS3.9						
YAK	**Yakutsk**	**37.24**	**349**	*e*P	**P**	**17 48 07.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
YAK	**Yakutsk**	**37.24**	**349**	*e*P	**P**	**17 48 07.3**	**-0.7**
	comp=Z,20nm,0.9s,mb4.9						
BOD	**Bodaibo**	**38.23**	**334**	⇓*i*P	**P**	**17 48 15.8**	**-0.5**
GTA	**Gaotai**	**39.21**	**301**	*e*P	**P**	**17 48 24.0**	**-0.7**
GTA				AP	pP	17 48 29.0	-3.4
GTA				XP	sP	17 48 31.9	-3.7
GTA				PP	PP	17 49 58.5	-0.1
GTA				PCP	PcP	17 50 31.9	-2.2
GTA				S	**S**	**17 54 24.3**	**+1.2**
GTA				SS	SS	17 57 11.6	+2.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.2						
GTA				AMB	AMB		
	comp=Z,78nm,7.2s						
GTA				LR	LR		
	comp=N,152nm,11.4s,MS4.3						
GTA				LR	LR		
	comp=E,232nm,14.4s,MS4.3						
GTA				LR	LR		
	comp=Z,325nm,17.5s,MS4.2						
ZAK	**Zakamensk**	**39.53**	**319**	⇓*i*P	**P**	**17 48 28.5**	**+1.3**
ZAK				*e*	pP	17 48 37.7	+2.7
ZAK				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
KKTK	**Khon Kaen**	**39.58**	**264**	P	**P**	**17 48 29.0**	**+1.0**
TLY	**Talaya**	**39.84**	**321**	*e*P	**P**	**17 48 30.8**	**+1.1**
TLY				pmax	pmax		
	comp=Z,35nm,1.3s,mb4.9						
TLY	**Talaya**	**39.84**	**321**	*e*P	**P**	**17 48 30.8**	**+1.0**
	comp=Z,36nm,1.3s,mb4.9						
KAKA	**Kakadu**	**40.20**	**198**	*e*P	**P**	**17 48 31.7**	**-1.4**
	comp=Z,10nm,0.8s,mb4.6						
KAKA				*e*	pP	17 48 40.4	-0.4
NANT	**Nan**	**40.66**	**269**	P	**P**	**17 48 36.5**	**-0.3**
NST	**Nakhon Sawan**	**42.23**	**265**	P	**P**	**17 48 56.0**	**+6.2**
CHG	**Chiang Mai**	**42.23**	**270**	⇓P	**P**	**17 48 49.8**	**0.0**
	comp=Z,19nm,1.2s,mb4.6						
CM31	**Chiang Mai Arr**	**42.34**	**269**	*e*P	**P**	**17 48 51.0**	**+0.3**
	comp=Z,11nm,0.7s,mb4.6						
CMAR	**Chiang Mai Arr**	**42.34**	**269**	P	**P**	**17 48 51.1**	**+0.4**
	comp=Z,8.1nm,0.9s,mb4.3,baz=59,slow=8.3,SNR=56						
CMAR				PcP	PcP	17 50 45.0	+0.4
	comp=Z,1.8nm,0.8s,baz=78,slow=2.3,SNR=4.4						
CMAR				LR	LR	18 06 46.7	
	comp=Z,137nm,19.6s,MS3.9,baz=80,slow=37						
BILL	**Bilibino**	**44.08**	**12**	⇑*e*P	**P**	**17 49 04.7**	**+0.5**
BILL				*i*	pP	17 49 12.3	+0.4
BILL				*e**PP	pP	17 49 22.3	+10
BILL				*e*		17 50 49.2	
BILL				*e*S	**S**	**17 55 36.2**	**+1.6**
BILL				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,13.0s,MS3.9						
BILL	**Bilibino**	**44.08**	**12**	*e*P	**P**	**17 49 04.6**	**+0.4**
	comp=Z,20nm,1.1s,mb4.8						
BILL				*e*	pP	17 49 13.4	+1.5
CTA	**Charters Tower**	**45.93**	**177**	*e*P	**P**	**17 49 18.0**	**-1.6**
	comp=Z,5.5nm,0.9s,mb4.5						
CTA	**Charters Tower**	**45.93**	**177**	*e*P	**P**	**17 49 18.0**	**-1.6**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTA	**Charters Tower**	**45.93**	**177**	P	**P**	**17 49 18.2**	**-1.4**
	comp=Z,5.9nm,0.8s,mb4.6,baz=4.0,slow=7.7,SNR=8.8						
CTAO	**Charters Tower**	**45.93**	**177**	*e*P	**P**	**17 49 18.3**	**-1.3**
CTAO				*e*	pP	17 49 26.7	-0.6
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**45.93**	**177**	*e*P	**P**	**17 49 18.3**	**-1.3**
	comp=Z,7.8nm,0.8s,mb4.7						
CTAO				*e*	pP	17 49 26.7	-0.7
TIXI	**Tiksi**	**46.41**	**353**	⇓*i*P	**P**	**17 49 22.6**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
LSA	**Lhasa**	**46.65**	**287**	P	**P**	**17 49 27.4**	**+2.2**
LSA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
LSA	**Lhasa**	**46.65**	**287**	*e*P	**P**	**17 49 26.4**	**+1.2**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
LSA	**Lhasa**	**46.65**	**287**	*e*P	**P**	**17 49 26.4**	**+1.2**
	comp=Z,10nm,1.1s,mb4.7						
WRAB	**Tennant Creek**	**46.71**	**193**	*e*P	**P**	**17 49 24.5**	**-1.3**
WRAB				*e*	pP	17 49 31.6	-1.9
WRAB				pmax	pmax		
	comp=Z,73nm,0.6s,mb5.8						
WRAB	**Tennant Creek**	**46.71**	**193**	*e*P	**P**	**17 49 24.5**	**-1.2**
	comp=Z,73nm,0.6s,mb5.8						
WRAB				*e*	pP	17 49 31.6	-1.9
WB2	**Warramunga Arr**	**46.72**	**193**	*e*P	**P**	**17 49 24.2**	**-1.6**
WB2				*e*	pP	17 49 33.0	-0.6
WRA	**Warramunga Arr**	**46.72**	**193**	P	**P**	**17 49 24.6**	**-1.3**
	comp=Z,11nm,0.6s,mb4.9,baz=11,slow=8.6,SNR=66						
FITZ	**Fitzroy Crossi**	**47.45**	**204**	⇓*i*P	**P**	**17 49 31.1**	**-0.6**
	comp=Z,23nm,0.8s,mb5.2						
FITZ				*i*	pP	17 49 38.6	-0.9
WMQ	**Urumqi**	**48.59**	**306**	⇑*i*P	**P**	**17 49 41.4**	**+1.2**
WMQ				XP	sP	17 49 48.5	-2.6
WMQ				PP	PP	17 51 34.0	+1.1
WMQ				S	**S**	**17 56 42.0**	**+2.7**
WMQ				AMB	AMB		
	comp=Z,85nm,1.2s,mb5.7						
WMQ				LR	LR		
	comp=N,81nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=E,94nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,79nm,20.0s,MS3.7						
ASAR	**Alice Springs**	**50.43**	**192**	P	**P**	**17 49 52.6**	**-1.9**
	comp=Z,2.0nm,0.8s,mb4.2,baz=10,slow=10,SNR=16						
ASAR				LR	LR	18 10 42.0	
	comp=Z,82nm,18.4s,MS3.8,baz=7.9,slow=36						
ASPA	**Alice Springs**	**50.43**	**192**	*e*P	**P**	**17 49 53.8**	**-0.8**
ASPA				*e*	pP	17 50 02.5	+0.1
JIRN	**Jiri**	**51.31**	**286**	*e*P	**P**	**17 50 02.0**	**+0.8**
	comp=Z,48nm,0.7s,mb5.5						
ZAL	**Zalesovo**	**51.42**	**319**	P	**P**	**17 50 01.8**	**+0.2**
	comp=Z,3.0nm,0.6s,mb4.4,baz=14,slow=7.6,SNR=23						
ZAL				PcP	PcP	17 51 15.4	-0.7
	comp=Z,4.7nm,1.0s,baz=356,slow=4.2,SNR=5.3						
GUN	**Gumba**	**51.52**	**286**	*e*P	**P**	**17 50 03.4**	**+0.6**
	comp=Z,44nm,0.9s,mb5.4						
PKI	**Pulchoki**	**52.00**	**286**	*e*P	**P**	**17 50 06.8**	**+0.3**
	comp=Z,8.9nm,0.6s,mb4.9						
KKN	**Kakani**	**52.07**	**286**	*e*P	**P**	**17 50 06.8**	**-0.1**
	comp=Z,33nm,1.2s,mb5.1						
DMN	**Daman**	**52.26**	**286**	*e*P	**P**	**17 50 08.3**	**-0.1**
	comp=Z,16nm,0.8s,mb5.0						
NVS	**Novosibirsk**	**52.45**	**320**	*i* P	**P**	**17 50 06.2**	**-3.2**
NVS				*e*		17 50 17.9	
NVS				*e*		17 51 26.7	
NVS				pmax	pmax		
	comp=N,6.0nm,1.6s						
NVS				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.8						
NVS				pmax	pmax		
	comp=E,16nm,1.4s						
MKAR	**Makanchi Array**	**52.47**	**310**	*i* P	**P**	**17 50 09.9**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,15nm,0.8s						
GKN	**Gorkha**	**52.58**	**286**	*e*P	**P**	**17 50 10.6**	**-0.1**
	comp=Z,46nm,1.2s,mb5.3						
MBWA	**Marble Bar**	**52.58**	**209**	*e*P	**P**	**17 50 08.9**	**-1.9**
	comp=Z,11nm,0.8s,mb4.8						
SVW2	**Sparrevohn**	**53.22**	**32**	*e*P	**P**	**17 50 15.7**	**+0.6**
KOLN	**Koldanda**	**53.52**	**286**	*e*P	**P**	**17 50 18.2**	**+0.5**
	comp=Z,35nm,1.0s,mb5.3						
KURK	**Kurchatov**	**54.95**	**315**	*e*P	**P**	**17 50 27.4**	**-0.5**
KURK				*e*	pP	17 50 35.9	+0.1
KURK				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
KURK	**Kurchatov**	**54.95**	**315**	*e*P	**P**	**17 50 27.4**	**-0.5**
	comp=Z,31nm,1.1s,mb5.2						
KURK				*e*	pP	17 50 35.9	+0.1
IMA	**Indian Mountai**	**55.23**	**26**	*e*P	**P**	**17 50 30.2**	**+0.5**
IMA				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
IMA	**Indian Mountai**	**55.23**	**26**	*e*P	**P**	**17 50 30.2**	**+0.5**
	comp=Z,28nm,0.8s,mb5.3						
PMR	**Palmer**	**56.37**	**32**	*e*P	**P**	**17 50 37.0**	**-1.0**
MCK	**McKinley**	**56.75**	**29**	*e*P	**P**	**17 50 40.0**	**-0.7**
	comp=Z,8.9nm,0.9s,mb4.8						
SML	**Sawmill**	**56.77**	**32**	*e*P	**P**	**17 50 40.4**	**-0.5**
COLA	**College**	**57.38**	**28**	*e*P	**P**	**17 50 45.7**	**+0.6**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
COLA	**College**	**57.38**	**28**	*e*P	**P**	**17 50 45.7**	**+0.6**
	comp=Z,4.6nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**57.44**	**306**	P	**P**	**17 50 46.7**	**+0.9**
	SNR=11						
KSH	**Kashi**	**57.61**	**302**	*e*P	**P**	**17 50 49.0**	**+1.9**
KSH				*e*AP	pP	17 50 54.0	-1.0
KSH				*e*PCP	PcP	17 51 41.0	+1.0
KSH				*e*PP	PP	17 52 59.0	+2.5
KSH				*e*SCP		17 55 39.4	
KSH				*e*S	**S**	**17 58 46.0**	**+4.3**
KSH				*e*XS		17 58 56.5	
KSH				*e*SCS	ScS	18 00 34.0	+2.9
KSH				*e*SS	SS	18 02 37.4	+4.0
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.6						
KSH				LR	LR		
	comp=N,330nm,7.2s						
KSH				LR	LR		
	comp=E,330nm,6.1s						
STKA	**Stephens Creek**	**57.67**	**183**	*e*P	**P**	**17 50 45.7**	**-2.0**
	comp=E,1.9nm,0.8s,mb4.2						
STKA				*e*		17 50 55.7	
STKA	**Stephens Creek**	**57.67**	**183**	P	**P**	**17 50 44.6**	**-3.1**
	comp=E,2.8nm,0.8s,mb4.3,baz=333,slow=9.9,SNR=4.3						
ILAR	**Eielson Array**	**57.77**	**28**	P	**P**	**17 50 46.5**	**-1.4**
	comp=E,10nm,0.8s,mb4.9,baz=256,slow=6.0,SNR=97						
ILAR				LR	LR	18 17 53.9	
	comp=E,126nm,18.6s,MS4.0,baz=186,slow=38						
KZA	**Kyzart**	**57.79**	**305**	P	**P**	**17 50 50.2**	**+1.8**
	SNR=8.7						
KBK	**Karagaybulak**	**57.94**	**306**	P	**P**	**17 50 50.1**	**+0.8**
	SNR=16						
CHMS	**Chumysh**	**58.04**	**306**	P	**P**	**17 50 50.4**	**+0.3**
	SNR=7.1						
USP	**Ospenovka**	**58.19**	**306**	P	**P**	**17 50 51.4**	**+0.3**
	SNR=7.8						
AAK	**Ala-Archa**	**58.28**	**306**	P	**P**	**17 50 52.1**	**+0.4**
	SNR=7.2						
AAK	**Ala-Archa**	**58.28**	**306**	*e*P	**P**	**17 50 50.8**	**-0.9**
AAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**58.28**	**306**	*e*P	**P**	**17 50 50.8**	**-0.9**
	comp=Z,11nm,0.8s,mb4.9						
UCH	**Uchtor**	**58.32**	**305**	P	**P**	**17 50 53.6**	**+1.6**
	SNR=14						
NDI	**New Delhi**	**58.77**	**289**	*e*	**P**	**17 50 58.0**	**+2.6**
EKS2	**Erkin-Say**	**58.80**	**306**	P	**P**	**17 50 55.9**	**+0.5**
	SNR=6.5						
AML	**Almayashu**	**58.93**	**305**	P	**P**	**17 50 57.5**	**+1.2**
	SNR=13						
CHKZ	**Chkalovo**	**59.80**	**319**	*e*P	**P**	**17 51 01.2**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
CHKZ	**Chkalovo**	**59.80**	**319**	*e*P	**P**	**17 51 01.2**	**-0.9**
	comp=Z,27nm,1.1s,mb5.2						
BVA0	**Borovoye Array**	**59.98**	**318**	P	**P**	**17 51 03.2**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BVAR	**Borovoye Array**	**59.98**	**318**	P	**P**	**17 51 03.3**	**-0.1**
	comp=Z,18nm,0.7s,mb5.2,baz=88,slow=6.1,SNR=107						
BRVK	**Borovoye**	**60.04**	**318**	*e*P	**P**	**17 51 03.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
BRVK	**Borovoye**	**60.04**	**318**	*e*P	**P**	**17 51 03.5**	**-0.2**
	comp=Z,20nm,0.8s,mb5.2						
DAWY	**Dawson**	**60.98**	**29**	*e*P	**P**	**17 51 10.0**	**0.0**
DAWY				*e*	pP	17 51 17.3	-0.8
HYB	**Hyderabad**	**60.99**	**276**	*i* P	**P**	**17 51 10.5**	**-0.2**
INK	**Inuvik**	**63.23**	**24**	*e*P	**P**	**17 51 24.5**	**-0.5**
INK				pmax	pmax		
	comp=Z,17nm,1.2s						
INK	**Inuvik**	**63.23**	**24**	P	**P**	**17 51 24.1**	**-0.9**
	comp=Z,3.5nm,0.7s,mb4.6,baz=277,slow=7.1,SNR=11						
INK	**Inuvik**	**63.23**	**24**	*e*P	**P**	**17 51 24.5**	**-0.5**
	comp=Z,17nm,1.2s,mb5.0						
POO	**Poona**	**64.80**	**279**	⇑*i*P	**P**	**17 51 35.0**	**-1.0**
SVE	**Sverdlovsk**	**65.10**	**323**	*e*P	**P**	**17 51 32.0**	**-5.3**
SVE				*e*		17 52 12.5	
SVE				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
YKA	**Yellowknife Ar**	**72.20**	**29**	*i* P	**P**	**17 52 20.6**	**-0.6**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**72.20**	**29**	P	**P**	**17 52 20.6**	**-0.6**
	comp=Z,3.4nm,0.8s,mb4.3,baz=294,slow=5.7,SNR=53						
RES	**Resolute Bay**	**72.64**	**14**	*e*P	**P**	**17 52 22.6**	**-0.9**
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
RES	**Resolute Bay**	**72.64**	**14**	*e*P	**P**	**17 52 22.6**	**-1.0**
	comp=Z,5.2nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**75.07**	**341**	P	**P**	**17 52 37.3**	**-0.5**
	comp=Z,5.5nm,0.9s,mb4.5,baz=27,slow=2.7,SNR=4.0						
ARCES				LR	LR	18 31 07.2	
	comp=Z,160nm,18.7s,MS4.3,baz=196,slow=40						
YBH	**Yreka Blue Hor**	**75.35**	**51**	P	**P**	**17 52 40.5**	**+0.7**
	comp=Z,4.2nm,0.8s,mb4.4,baz=241,slow=2.8,SNR=9.4						
NEW	**Newport**	**76.47**	**43**	*e*P	**P**	**17 52 46.3**	**+0.2**
NEW				*e*	pP	17 52 56.1	+1.9
NEW				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEW	**Newport**	**76.47**	**43**	P	**P**	**17 52 46.5**	**+0.4**
	comp=Z,4.1nm,0.7s,mb4.5,baz=297,slow=5.0,SNR=11						
NEW	**Newport**	**76.47**	**43**	*e*P	**P**	**17 52 46.3**	**+0.3**
	comp=Z,9.4nm,0.9s,mb4.7						
NEW				*e*	pP	17 52 56.1	+1.9
EDM	**Edmonton**	**76.58**	**37**	*e*P	**P**	**17 52 46.7**	**+0.1**
JOF	**Joensuu**	**76.77**	**334**	*e*p	**P**	**17 52 44.2**	**-3.2**
	comp=Z,9.5nm,0.8s,mb4.8						
HOQ	**Hoqain**	**77.32**	**290**	P	**P**	**17 52 52.1**	**+0.8**
	SNR=6.9						
HOQ				P		17 52 52.1	
	SNR=6.9						
MOS	**Moscow**	**77.53**	**326**	*e*P	**P**	**17 52 51.7**	**-0.1**
MOS				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.5						
BMO	**Blue Mountains**	**77.75**	**46**	*e*P	**P**	**17 52 53.8**	**+0.5**
	comp=Z,9.0nm,1.1s,mb4.6						
BMO				*e*	pP	17 53 02.1	+0.7
WVOR	**Wild Horse Val**	**77.87**	**49**	*e*P	**P**	**17 52 54.1**	**+0.2**
WVOR				*e*		17 53 04.5	
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
WVOR	**Wild Horse Val**	**77.87**	**49**	*e*P	**P**	**17 52 54.1**	**+0.1**
	comp=Z,9.8nm,1.1s,mb4.7						
WVOR				*e*		17 53 04.5	
ASHO	**Ashiyiah**	**77.94**	**292**	P	**P**	**17 52 55.7**	**+1.0**
	SNR=5.1						
WALA	**Waterton Lakes**	**78.07**	**41**	*e*P	**P**	**17 52 55.1**	**+0.2**
	comp=Z,11nm,1.0s,mb4.7						
WALA				*e*		17 53 05.7	
ARQ	**Araqi**	**78.08**	**290**	P	**P**	**17 52 56.6**	**+1.1**
	SNR=14						
OBN	**Obninsk**	**78.36**	**326**	⇓*e*P	**P**	**17 52 56.7**	**+0.3**
OBN				*e*	pP	17 53 05.7	+1.2
OBN				S	S	18 02 48.7	-0.2
OBN				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
OBN	**Obninsk**	**78.36**	**326**	*e*P	**P**	**17 52 56.6**	**+0.2**
	comp=Z,18nm,0.8s,mb5.0						
CMB	**Columbia Colle**	**78.44**	**53**	*e*P	**P**	**17 52 57.3**	**+0.2**
CMB				*e*		17 53 08.4	
CMB				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
CMB	**Columbia Colle**	**78.44**	**53**	*e*P	**P**	**17 52 57.3**	**+0.2**
	comp=Z,11nm,0.7s,mb4.9						
CMB				*e*		17 53 08.4	
KAF	**Kangasniemi**	**79.15**	**335**	*e*p	**P**	**17 52 59.2**	**-1.3**
	comp=Z,9.4nm,0.9s,mb4.7,baz=52,slow=5.2						
KAF	**Kangasniemi**	**79.15**	**335**	*e*P	**P**	**17 52 59.2**	**-1.3**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
GOF	**Gofitskoye**	**79.31**	**315**	⇑*i*P	**P**	**17 53 02.0**	**+0.2**
GOF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
FINES	**FINESS Array B**	**79.63**	**334**	P	**P**	**17 53 03.4**	**+0.3**
	comp=Z,9.7nm,0.8s,mb4.8,baz=73,slow=5.9,SNR=36						
NVAR	**Mina Array Bea**	**79.76**	**52**	P	**P**	**17 53 05.3**	**+0.9**
	comp=Z,6.1nm,0.8s,mb4.6,baz=298,slow=3.8,SNR=48						
NVAR				LR	LR	18 25 21.7	
	comp=Z,126nm,19.8s,MS4.3,baz=335,slow=33						
KIV	**Kislovodsk**	**80.02**	**314**	*c* *i*P	**P**	**17 53 07.8**	**+2.2**
KIV				*i*	pP	17 53 15.3	+1.5
KIV				*e**PP	pP	17 53 24.8	+11
KIV				*e*S	S	18 03 06.3	-0.3
KIV				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,25.0s,MS4.1						
KIV	**Kislovodsk**	**80.02**	**314**	*e*P	**P**	**17 53 06.2**	**+0.6**
	comp=Z,18nm,1.0s,mb5.0						
HLID	**Hailey**	**80.19**	**46**	*e*P	**P**	**17 53 07.0**	**+0.5**
	comp=Z,4.6nm,1.1s,mb4.3						
HLID				*e*		17 53 17.2	
GNI	**Garni**	**80.32**	**310**	*e*P	**P**	**17 53 06.5**	**-0.8**
GNI				pmax	pmax		
	comp=Z,21nm,1.1s						
GNI	**Garni**	**80.32**	**310**	P	**P**	**17 53 07.1**	**-0.2**
	comp=Z,2.2nm,0.4s,mb4.4,baz=48,slow=12,SNR=4.8						
GNI	**Garni**	**80.32**	**310**	*e*P	**P**	**17 53 06.5**	**-0.8**
	comp=Z,21nm,1.1s,mb5.0						
MCMT	**McKenzie Canyo**	**80.62**	**45**	*e*P	**P**	**17 53 09.2**	**+0.4**
BOZ	**Bozeman (W)**	**81.00**	**44**	*e*P	**P**	**17 53 03.8**	**-7.0**
BOZ				*e*	pP	17 53 11.5	-7.5
BOZ				*e*		17 53 19.2	
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BOZ	**Bozeman (W)**	**81.00**	**44**	*e*P	**P**	**17 53 03.8**	**-7.0**
	comp=Z,3.9nm,0.8s,mb4.4						
BOZ				*e*	pP	17 53 11.5	-7.5
BOZ				*e*		17 53 19.2	
QLMT	**Earthquake Lak**	**81.51**	**44**	*e*P	**P**	**17 53 14.6**	**+1.2**
QLMT				*e*		17 53 25.4	
SUMG	**Summit**	**81.60**	**1**	*e*P	**P**	**17 53 15.1**	**+1.7**
	comp=Z,7.5nm,0.8s,mb4.7						
FFC	**Flin Flon**	**81.67**	**32**	*e*P	**P**	**17 53 14.6**	**+0.5**
FFC				*e*	pP	17 53 24.7	+2.4
FFC				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
FFC	**Flin Flon**	**81.67**	**32**	*e*P	**P**	**17 53 14.6**	**+0.5**
	comp=Z,18nm,1.1s,mb4.9						
FFC				*e*	pP	17 53 24.7	+2.4
IMW	**Indian Meadow**	**82.26**	**45**	*e*P	**P**	**17 53 19.0**	**+1.7**
IMW				*e*	pP	17 53 26.1	+0.5
LKWY	**Lake**	**82.28**	**44**	*e*P	**P**	**17 53 20.4**	**+3.0**
LKWY				*e*	pP	17 53 29.0	+3.3
LKWY				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
LKWY	**Lake**	**82.28**	**44**	*e*P	**P**	**17 53 20.4**	**+2.9**
	comp=Z,11nm,0.9s,mb4.8						
LKWY				*e*	pP	17 53 29.0	+3.3
FCC	**Fort Churchill**	**82.75**	**27**	*e*P	**P**	**17 53 19.1**	**-0.5**
FCC				*e*		17 53 30.2	
FCC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
FCC	**Fort Churchill**	**82.75**	**27**	*e*P	**P**	**17 53 19.1**	**-0.5**
	comp=Z,6.7nm,1.0s,mb4.6						
FCC				*e*		17 53 30.2	
DUG	**Dugway**	**82.79**	**49**	*e*P	**P**	**17 53 20.4**	**+0.2**
DUG				*e*		17 53 31.7	
DUG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
DUG	**Dugway**	**82.79**	**49**	*e*P	**P**	**17 53 20.4**	**+0.2**
	comp=Z,7.2nm,0.8s,mb4.8						
DUG				*e*		17 53 31.7	
HWUT	**Hardware Ranch**	**82.95**	**47**	*e*P	**P**	**17 53 21.9**	**+0.9**
	comp=Z,6.9nm,0.8s,mb4.7						
MSL	**Mosul**	**83.21**	**307**	*e*P	**P**	**17 53 21.0**	**-1.4**
ABTO	**Aybut**	**83.29**	**286**	P	**P**	**17 53 23.9**	**+0.7**
	SNR=6.0						
ABTO				P		17 53 23.9	
	SNR=6.0						
NEN	**Nelson**	**83.47**	**54**	*e*P	**P**	**17 53 24.3**	**+0.5**
NEN				*e*		17 53 35.3	
BW06	**Boulder Array**	**83.69**	**45**	*e*P	**P**	**17 53 24.1**	**-0.6**
	comp=Z,3.9nm,1.1s,mb4.5						
BW06				*e*		17 53 36.1	
PDAR	**Pinedale Array**	**83.69**	**45**	P	**P**	**17 53 25.2**	**+0.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=270,slow=1.5,SNR=9.1						
PDAR				LR	LR	18 28 58.8	
	comp=Z,168nm,18.8s,MS4.4,baz=270,slow=34						
AKASG	**Malin Array Be**	**84.47**	**325**	P	**P**	**17 53 28.3**	**-0.2**
	comp=Z,5.4nm,0.6s,mb4.8,baz=48,slow=5.2,SNR=30						
SRU	**San Rafael**	**84.86**	**49**	*e*P	**P**	**17 53 31.4**	**+0.7**
NB2	**NORSAR Subarra**	**85.20**	**339**	P	**P**	**17 53 31.9**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=50,slow=5.0						
NB2	**NORSAR Subarra**	**85.20**	**339**	P	**P**	**17 53 31.9**	**+0.1**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
NOA	**NORSAR Array B**	**85.20**	**339**	P	**P**	**17 53 32.0**	**+0.2**
	comp=Z,11nm,0.9s,mb5.0,baz=43,slow=4.7,SNR=21						
NOA				LR	LR	18 34 59.7	
	comp=Z,65nm,19.0s,MS4.0,baz=115,slow=38						
SUW	**Suwalki**	**85.42**	**329**	*e*P	**P**	**17 53 33.1**	**-0.1**
MALT	**Malatya**	**85.51**	**311**	*e*P	**P**	**17 53 34.5**	**+0.5**
MALT				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.9						
MALT	**Malatya**	**85.51**	**311**	*e*P	**P**	**17 53 34.5**	**+0.5**
	comp=Z,9.5nm,1.2s,mb4.9						
PV10	**Paradox Valley**	**86.23**	**49**	*e*P	**P**	**17 53 38.3**	**+0.8**
PV10				*e*		17 53 50.3	
PV10				*e*		17 54 00.8	
PV10				*e*		17 54 07.1	
PV01	**Paradox Valley**	**86.67**	**49**	*e*P	**P**	**17 53 40.1**	**+0.4**
ULM	**Lac du Bonnet**	**87.33**	**34**	P	**P**	**17 53 42.4**	**-0.2**
	comp=Z,1.2nm,0.6s,mb4.3,baz=316,slow=8.2,SNR=4.1						
ULM				LR	LR	18 28 43.2	
	comp=Z,80nm,20.0s,MS4.1,baz=349,slow=33						
ISCO	**Idaho Springs**	**87.77**	**46**	*e*P	**P**	**17 53 45.8**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.6						
ISCO	**Idaho Springs**	**87.77**	**46**	*e*P	**P**	**17 53 45.8**	**+0.8**
	comp=Z,5.5nm,1.3s,mb4.6						
BRTR	**Keskin Array B**	**87.98**	**314**	P	**P**	**17 53 46.2**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.5,baz=110,slow=3.2,SNR=14						
KWP	**Kalwaria**	**88.45**	**326**	*e*P	**P**	**17 53 48.6**	**+0.6**
SDCO	**Great Sand Dun**	**88.94**	**48**	*e*P	**P**	**17 53 50.1**	**-0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,7.0nm,1.4s,mb4.8						
KOLS	Kolonicke sedl	89.11	326	*e*P	P	17 53 51.1	-0.1
CRVS	Cervenica-Dubn	89.54	326	*e*P	P	17 53 57.2	+4.0
CRVS	Cervenica-Dubn	89.54	326	*e*	P	17 53 57.2	+4.0
ASF	Jabal al Asfar	89.69	306	LR	LR	18 40 53.3	
	comp=Z,41nm,20.9s,MS3.8,baz=74,slow=40						
PSZ	Piszkesteto	90.98	326	*e*P	P	17 54 00.2	+0.4
PSZ				*e*	pP	17 54 07.3	-0.8
PSZ				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.3						
PSZ	Piszkesteto	90.98	326	*e*P	P	17 54 00.2	+0.4
	comp=Z,21nm,1.3s,mb5.3						
PSZ				*e*	pP	17 54 07.3	-0.8
DPC	Dobruska-Polom	91.01	330	*e*P	P	17 54 00.2	+0.2
DPC				*e*pP	pP	17 54 08.6	+0.4
VYHS	Vyhne	91.11	327	*e*P	P	17 54 00.8	+0.3
VYHS				*e*sP	sP	17 54 09.4	-2.0
CLL	Collm	91.78	332	*e**SP	sP	17 54 12.0	-2.4
PRU	Pruhonice	92.08	330	*e*P	P	17 54 04.9	+0.1
PRU				*e*pP	pP	17 54 09.7	-3.4
KHC	Kasperske Hory	93.13	330	*e*P	P	17 54 09.9	+0.2
KHC				*e*pP	pP	17 54 16.6	-1.4
LTX	Lajitas	94.79	54	*e*P	P	17 54 18.5	+0.6
LTX				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
LTX	Lajitas	94.79	54	*e*P	P	17 54 18.5	+0.6
	comp=Z,4.1nm,0.9s,mb4.9						
TXAR	Lajitas Array	94.79	54	P	P	17 54 18.8	+1.0
	comp=Z,2.1nm,0.9s,mb4.6,baz=315,slow=3.5,SNR=10						
TXAR				LR	LR	18 32 57.4	
	comp=Z,80nm,18.4s,MS4.2,baz=205,slow=33						
WMOK	Wichita Mounta	95.12	47	*e*P	P	17 54 19.0	-0.2
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
WMOK	Wichita Mounta	95.12	47	*e*P	P	17 54 19.0	-0.3
	comp=Z,3.5nm,0.9s,mb4.8						
LBTB	Lobatse	125.01	257	PKP	PKPdf	17 59 54.8	-5.4
	comp=Z,2.8nm,0.7s,baz=128,slow=14,SNR=4.3						
DBIC	Dimbokro	135.67	313	PKP	PKPdf	18 00 18.8	-1.9
	comp=Z,2.9nm,0.6s,baz=130,slow=3.7,SNR=5.8						
DBIC	Dimbokro	135.67	313	PKP	PKPdf	18 00 18.8	-1.9
ARE	Arequipa	145.54	81	*e*P	PKPbc	18 00 37.0	+2.9
PLCA	Paso Flores	147.79	126	PKPbc	PKPdf	18 00 41.8	+0.6
	comp=Z,7.0nm,0.7s,baz=234,slow=3.7,SNR=30						
PLCA	Paso Flores	147.79	126	*e*PKPbc	PKPdf	18 00 41.5	+0.2
LPAZ	La Paz	148.45	79	PKPbc	PKPdf	18 00 44.9	+1.9
	comp=Z,10nm,0.8s,baz=295,slow=3.0,SNR=32						
LPAZ	La Paz	148.45	79	*e*PKPdf	PKPdf	18 00 40.1	-2.8
LPAZ				*e*PKPbc	PKPdf	18 00 44.6	+1.6
LPAZ				PKPbc	PKPdf	18 00 44.9	+1.9
SAML	Samuel	148.98	62	*e*PKPbc	PKPdf	18 00 44.5	+0.5
LVC	Limon Verde	149.73	91	PKPbc	PKPdf	18 00 47.9	+2.9
	comp=Z,3.3nm,0.7s,baz=269,slow=5.3,SNR=5.5						

IGQ 12 17:45:56.0, 1.98S×81.46W, h5^{km}±21^{km}, mb4.0, Error ellipse: s-maj=20.2km s-min=12.4km az=159.2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	2.87	80	P	Pn	17 46 44.4	+1.2
ARRY	Arrayan	3.04	81	P	Pn	17 46 46.5	+0.8
ULBA	Ulba	3.10	80	P	Pn	17 46 47.9	+1.4
PISA	Pisayambo	3.21	73	P	Pn	17 46 50.7	+2.6
VC1	Cotopaxi 1	3.34	67	P	Pn	17 46 51.8	+1.9
TAMB	Tambo	3.35	68	P	Pn	17 46 52.6	+2.5
TERV	Terraza Guagua	3.38	58	P	Pn	17 46 52.7	+2.3
YANA	Yana	3.43	57	P	Pn	17 46 50.9	-0.3
ANTI	Antisana	3.63	65	P	Pn	17 46 56.3	+2.2
ANTI				S	Sn	17 47 38.0	+0.1
CAYR	Refugio Cayamb	3.98	60	P	Pn	17 47 01.5	+2.4
ECEN	Cerro Negro	4.47	51	P	Pn	17 47 06.8	+0.9

IGQ 12 17:55:48.5, 1.67S×81.24W, h12^{km}±33^{km}, mb4.0, Error ellipse: s-maj=32.3km s-min=8.3km az=162.1, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	2.60	86	P	Pn	17 56 32.8	+1.6
IGUA				S	Sn	17 57 04.5	+1.5
ARRY	Arrayan	2.79	87	P	Pn	17 56 35.0	+1.2
ARRY				S	Sn	17 57 07.1	-0.6
ULBA	Ulba	2.84	86	P	Pn	17 56 36.6	+2.1
ULBA				S	Sn	17 57 10.7	+1.7
PISA	Pisayambo	2.92	78	P	Pn	17 56 37.4	+1.8
NAS1	Nasa	2.95	70	P	Pn	17 56 37.9	+1.8
VC1	Cotopaxi 1	3.01	70	P	Pn	17 56 40.5	+3.5
TERV	Terraza Guagua	3.02	61	P	Pn	17 56 39.0	+1.9
PINO	Pino	3.03	60	P	Pn	17 56 36.9	-0.3
TAMB	Tambo	3.03	71	P	Pn	17 56 39.4	+2.2
YANA	Yana	3.08	60	P	Pn	17 56 37.0	-0.9
ANTI	Antisana	3.31	69	P	Pn	17 56 42.9	+1.8
ANTI				S	Sn	17 57 23.0	+2.2
COTA	Cotacachi	3.52	56	P	Pn	17 56 44.4	+0.3
CAYR	Refugio Cayamb	3.64	63	P	Pn	17 56 48.5	+2.6
CAYR				S	Sn	17 57 29.1	-0.1
ECEN	Cerro Negro	4.10	53	P	Pn	17 56 53.1	+0.6

IDC 12 18:29:47.1±4.5**, 4.95N×94.55E, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.8**/18**, mbtmp3.9**/5**, ML3.9**/1**, Error ellipse: s-maj=167.8km s-min=24.2km az=64.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.09	17	Pn	P	18 33 17.6	+7.2
	0.2nm,0.3s,baz=213,slow=12,SNR=20						
SONM	Songino Array	43.92	11	P	P	18 37 55.9	-1.4
	0.9nm,0.6s,baz=188,slow=8.2,SNR=12						
WRA	Warramunga Arr	46.28	124	P	P	18 38 14.5	-2.0
	1.8nm,0.6s,baz=302,slow=9.1,SNR=22						
WB2	Warramunga Arr	46.29	124	*e*P	P	18 38 14.6	-2.0
ASAR	Alice Springs	47.77	128	P	P	18 38 26.6	-1.7
	0.6nm,0.6s,baz=299,slow=8.0,SNR=12						
ZAL	Zalesovo	49.48	352	P	P	18 38 38.5	-2.5
	0.7nm,0.4s,baz=269,slow=1.8,SNR=4.4						

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*IDC **12** 18:34:33.4±1.5, 5.94S×146.83E, mb3.5/3, mb1 3.7/6, mb1mx3.7/14, mbtmp3.5/6, ML3.2/3, Error ellipse: s-maj=41.1km s-min=16.9km az=84.0*

ISC 12 18:34:36.9±1.2**, 6.01S**±0.09×**146.7E**±0.1**, h33^{km}, n8, σ0^{s}61**/10**, mb3.7**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.40	172	Pn	Pn	18 35 29.5	+0.4
	2.5nm,0.3s,baz=4.2,slow=6.8,SNR=18						
PMG				Pg	P	18 35 36.9	+8.0
	8.8nm,0.3s,baz=23,slow=7.7,SNR=19						
PMG				Sn	Sn	18 36 08.5	-0.2
	10nm,0.3s,baz=36,slow=19,SNR=7.2						
PMG				Lg		18 36 22.5	
	8.7nm,0.3s,baz=359,slow=19,SNR=5.6						
CTA	Charters Tower	14.00	182	Pn	P	18 37 56.0	+0.7
	0.1nm,0.3s,baz=45,slow=16,SNR=2.6						
KAKA	Kakadu	15.57	244	*e*P	P	18 38 16.4	+0.7
	6.4nm,0.5s						
WRA	Warramunga Arr	18.34	220	P	P	18 38 49.4	-1.3
	0.2nm,0.3s,baz=41,slow=11,SNR=13						
ASAR	Alice Springs	21.45	214	P	P	18 39 24.0	-0.5
	0.4nm,0.4s,mb3.1,baz=50,slow=9.2,SNR=8.1						
FITZ	Fitzroy Crossi	23.82	238	*e*P	P	18 39 48.2	+0.2
	3.8nm,0.4s,mb4.2						
CMAR	Chiang Mai Arr	53.00	298	P	P	18 43 53.4	+0.3
	0.8nm,0.6s,mb3.8,baz=117,slow=5.9,SNR=9.1						
ILAR	Eielson Array	85.61	23	P	P	18 47 12.6	-0.4
	0.3nm,0.6s,mb3.7,baz=262,slow=5.0,SNR=5.8						

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*IDC **12** 18:35:27.0±2.5, 20.78S×69.89W, h90^{km}±19^{km}, mb3.7/4, mb1 3.9/7, mb1mx3.7/17, mbtmp4.1/7, MS3.2/2, Ms1 3.2/2, ms1mx2.5/20, Error ellipse: s-maj=36.1km s-min=16.4km az=91.0*

*NEIC **12** 18:35:28.1±1.5, 20.85S×69.64W, h90^{km}±14^{km}, mb4.3/4, Error ellipse: s-maj=25.1km s-min=12.5km az=90.0*

ISC 12 18:35:26.3±1.6**, 20.79S**±0.08×**69.9W**±0.2**, h103^{km}**±12^{km}**, n17, σ0^{s}76**/18**, mb4.3**/7**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.03	153	P	P	18 35 59.3	-0.5
	116nm,0.3s,baz=329,slow=9.8,SNR=150						
LVC				S	S	18 36 25.6	+0.7
	539nm,0.3s,baz=136,slow=20,SNR=38						
LVC	Limon Verde	2.03	153	P	P	18 35 59.3	-0.5
LVC				S	S	18 36 25.6	+0.7
LPAZ	La Paz	4.78	21	P	P	18 36 38.2	+0.7
	1.0nm,0.3s,baz=211,slow=6.1,SNR=15						
LPAZ	La Paz	4.78	21	*e*Pn	P	18 36 36.7	-0.7
SAML	Samuel	13.44	30	*e*P	P	18 38 29.5	-4.5
	3.9nm,0.8s						
TRQA	Tornquist	18.52	160	*e*P	P	18 39 35.6	-1.5
	7.0nm,0.6s						
PLCA	Paso Flores	19.89	181	P	P	18 39 51.3	-0.5
	0.4nm,0.3s,baz=3.7,slow=12,SNR=20						
BDFB	Brasilia	21.40	80	P	P	18 40 07.6	+0.4
	6.7nm,0.6s,mb4.1,baz=276,slow=8.7,SNR=9.0						
BDFB				LR	LR	18 49 25.0	
	comp=Z,77nm,20.8s,baz=311,slow=39						
OTAV	Otavalo	22.51	337	*e*P	P	18 40 25.3	+7.0
	3.0nm,0.8s,mb3.7						
SDV	Santo Domingo	29.50	359	LR	LR	18 52 42.2	
	comp=Z,41nm,20.8s,baz=216,slow=35						
RCBR	Riachuelo	36.16	71	*e*P	P	18 42 20.6	-0.2
	21nm,0.9s,mb5.1						
SNAA	Sanae	63.25	161	P	P	18 45 46.4	+0.5
	1.2nm,0.7s,mb3.9,baz=256,slow=20,SNR=5.5						
SNAA	Sanae	63.25	161	P	P	18 45 46.3	+0.4
	81nm,0.9s,mb5.7						
QSPA	South Pole Qui	69.40	180	*e*P	P	18 46 25.9	+1.3
	3.2nm,0.5s,mb4.4						
DBIC	Dimbokro	69.42	74	P	P	18 46 25.5	-0.3
	7.5nm,1.2s,mb4.4,baz=198,slow=9.4,SNR=5.1						
YKA	Yellowknife Ar	90.22	341	P	P	18 48 16.2	+0.1
	0.3nm,0.7s,mb3.5,baz=139,slow=4.2,SNR=7.0						
YKA	Yellowknife Ar	90.22	341	P	P	18 48 16.2	+0.1

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*IDC **12** 18:42:58.1±0.6, 5.58N×93.05E, mb4.6/15, mb1 4.7/16, mb1mx4.7/21, mbtmp4.6/16, ML4.6/1, MS4.1/8, Ms1 4.1/8, ms1mx3.8/21, Error ellipse: s-maj=29.5km s-min=12.8km az=49.0*

*MOS **12** 18:43:00.1±1.1, 5.40N×92.94E, h33^{km}, mb5.1/10, Error ellipse: s-maj=20.7km s-min=9.3km az=103.7*

*BJI **12** 18:43:00.8, 5.22N×93.07E, h45^{km}, mB4.8, mb4.8, Ms4.4, Msz4.0*

*NEIC **12** 18:43:02.6±0.2, 5.51N×93.03E, h30^{km}, mb4.9/28, Error ellipse: s-maj=6.6km s-min=4.1km az=59.0*

*HRVD **12** 18:43:02.6±0.3, 5.50N×93.00E, h36^{km}±1^{km}, MW5.0/51, Centroid moment Tensor Solution. LP body waves: s30,c41;Mantle waves: s51,c75; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.45±.16; $M_{\theta\theta}$-1.55±.12; $M_{\phi\phi}$2.00±.12; $M_{r\theta}$-0.55±.15; $M_{\theta\phi}$-3.38±.10; $M_{\phi r}$-0.14±.17; Best double couple: $M_0$3.866×10^{16} NP1:ϕ_s13°,δ82°,λ-5°. NP2:ϕ_s104°,δ85°,λ-172°. Principal axes: T 4.049, Plg2°, Azm239°; N -.36, Plg80°, Azm136°; P -3.684, Plg10°, Azm329°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 12 18:43:01.1±1.1**, 5.46N**±0.04×**93.05E**±0.03**, h32^{km}**±7^{km}**, h34^{km}**±1.6^{km}**:pP-P, n147, σ1^{s}07**/168**, mb4.8**/62**, MS4.1**/20**, 4C-14D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	7.72	77	P	Pn	18 44 54.0	-0.1
	582nm,0.8s						
IPM	Ipoh	8.00	96	P	P	18 44 58.6	+0.6
NNT	Nongplab	9.69	43	P	P	18 45 21.8	+0.3
KGM	Kluang	10.81	108	P	P	18 45 37.0	+0.2
NST	Nakhon Sawan	12.31	34	P	P	18 45 57.0	-0.2
PALK	Pallekele	12.40	279	Pn	P	18 45 57.7	-0.7
	150nm,0.4s,SNR=36						
PALK	Pallekele	12.40	279	*e*P	P	18 45 57.4	-1.0
	26nm,0.4s						
PALK				*e*S	S	18 47 47.8	-29
CM31	Chiang Mai Arr	14.14	24	*e*P	P	18 46 21.7	+0.2
	72nm,0.9s						
CMAR	Chiang Mai Arr	14.14	24	*i* P	P	18 46 21.9	+0.4
CMAR				pmax	pmax		
	comp=Z,30nm,0.8s						
CMAR	Chiang Mai Arr	14.14	24	Pn	P	18 46 21.9	+0.4
	comp=Z,1.0nm,0.3s,baz=216,slow=14,SNR=241						
CMAR				LR	LR	18 51 55.6	
	comp=Z,364nm,19.9s,baz=200,slow=38						
KKTK	Khon Kaen	14.45	41	PG	P	18 46 26.5	+1.0
KKTK				SG	Px	18 46 31.0	
CHG	Chiang Mai	14.47	23	⇑P	P	18 46 25.8	0.0
	comp=Z,22nm,1.0s						
MDRS	Chennai	14.71	302	*e*P	P	18 46 27.0	-2.0
MDRS				*e*S	S	18 48 55.0	-17
NANT	Nan	15.22	29	P	P	18 46 35.0	-0.6
	comp=Z,56nm,0.5s						
VIS	Vishakhapatnam	15.45	323	*i* P	P	18 46 34.0	-4.6
VIS				*i* S	S	18 49 10.0	-19
CHRT	Chiangrai	15.76	24	⇓P	P	18 46 42.0	-0.5
	comp=Z,129nm,1.0s						
KOD	Kodaikanal	16.14	288	*e*S	S	18 49 33.0	-12
BWNR	Bhubaneshwar	16.34	335	*e*P	P	18 46 43.0	-7.0
BWNR				*e*S	S	18 49 30.0	-20
COCO	West Island	17.93	168	*e*P	P	18 47 11.4	+1.5
	comp=Z,81nm,1.0s						
AGT	Agartala	18.40	355	*e*	P	18 47 18.0	+2.3
HYB	Hyderabad	18.50	311	⇓*e*P	P	18 47 16.5	-0.5
	comp=Z,50nm,1.0s						
HYB				*e*		18 50 25.0	
HYB				*e*S	S	18 50 42.0	+3.2
HYB	Hyderabad	18.50	311	⇓*i*P	P	18 47 16.5	-0.5
	comp=Z,50nm,1.0s						
HYB				*e*		18 50 25.0	
HYB				*e*S	S	18 50 42.0	+3.2
IMP	Imphal	19.23	2	*e*P	P	18 47 24.0	-1.6
MNGI	Mangalore	19.45	294	*i* P	P	18 47 29.5	+1.4
MNGI				*i*		18 50 50.7	
BOK	Bokaro	19.49	340	⇓*i*P	P	18 47 28.0	-0.5
BOK				*i*		18 50 52.0	
BLSP	Bilaspur	19.65	329	*i* P	P	18 47 32.0	+1.7
BLSP				*e*		18 48 12.0	
LATR	Latur	20.61	310	*e*	P	18 47 39.5	-0.9
LATR				*e*S	S	18 51 14.5	-10
NGP	Nagpur	20.68	320	*e*P	P	18 47 41.3	+0.3
	comp=Z,161nm,0.8s						
NGP				*e*		18 51 21.3	
QIZ	Qiongzhong	21.21	49	P	P	18 47 46.8	+0.2
QIZ				S	S	18 51 36.7	+1.0
QIZ				SS	SS	18 52 05.8	-4.0
QIZ				AMB	AMB		
	comp=Z,82nm,1.0s,mb5.0						
QIZ				LR	LR		
	comp=N,371nm,14.6s,MS4.0						
QIZ				LR	LR		
	comp=E,363nm,15.0s,MS4.0						
QIZ	Qiongzhong	21.21	49	*e*P	P	18 47 47.1	+0.5
	comp=E,70nm,0.9s,mb5.0						
GOA	Goa	21.35	299	*e*	S	18 51 40.6	+2.5
KMI	Kunming	21.65	24	P	P	18 47 51.7	+0.8
KMI				AP		18 48 01.5	
KMI				XP		18 48 07.2	
KMI				S	S	18 51 39.1	-4.7
KMI				AMB	AMB		
	comp=Z,33nm,0.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,98nm,4.0s						
KMI				LR	LR		
	comp=N,300nm,15.4s,MS4.0						
KMI				LR	LR		
	comp=E,397nm,17.9s,MS4.0						
KMI				LR	LR		
	comp=Z,384nm,28.2s						
KAD	Karad	21.89	304	⇓*i*	P	18 47 54.1	+0.7
KAD				*i*		18 51 48.8	
GTK	Gangtok	22.16	350	*e*P	P	18 48 06.0	+10
ALBI	Allahabad	22.49	333	*e*	P	18 48 00.0	+0.8
POO	Poona	22.80	306	*e*	P	18 48 02.0	-0.4
	comp=Z,100nm,1.0s,mb5.2						
POO				*i* S	S	18 52 07.0	+2.2
JIRN	Jiri	23.02	344	*e*P	P	18 48 05.4	+0.8
	comp=Z,126nm,0.7s,mb5.5						
PKI	Pulchoki	23.16	343	*e*P	P	18 48 06.7	+0.8
BHPL	Bhopal	23.23	321	⇓*i*	P	18 48 08.2	+1.6
BHPL				*e*		18 52 42.0	
DMN	Daman	23.29	342	*e*P	P	18 48 08.2	+1.1
	comp=Z,114nm,0.9s,mb5.3						
GUN	Gumba	23.35	344	*e*P	P	18 48 08.5	+0.8
KKN	Kakani	23.41	342	*e*P	P	18 48 09.0	+0.7
	comp=Z,75nm,0.7s,mb5.2						
GKN	Gorkha	23.80	341	*e*P	P	18 48 13.5	+1.4
	comp=Z,332nm,0.9s,mb5.8						
BOM	Bombay	23.82	306	*e*	P	18 48 15.8	+3.4
BOM				*e*		18 52 32.0	
KOLN	Koldanda	23.94	339	*e*P	P	18 48 14.8	+1.4
	comp=Z,184nm,0.9s,mb5.5						
LSA	Lhasa	24.18	356	P	P	18 48 17.2	+1.4
LSA				AP		18 48 27.0	
LSA				XP		18 48 32.1	
LSA				S	S	18 52 29.3	+0.5
LSA				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
LSA				AMB	AMB		
	comp=Z,60nm,7.6s						
LSA				LR	LR		
	comp=N,140nm,26.0s,MS3.8						
LSA				LR	LR		
	comp=E,360nm,25.0s,MS3.8						
LSA				LR	LR		
	comp=Z,300nm,22.0s,MS3.7						
LSA	Lhasa	24.18	356	*e*P	P	18 48 17.0	+1.2
	comp=Z,127nm,0.7s,mb5.5						
LSA				*e*		18 48 40.4	
GYA	Guiyang	24.60	30	⇓*i*P	P	18 48 20.6	+0.7
GYA				AP		18 48 29.3	
GYA				XP		18 48 33.6	
GYA				S	S	18 52 44.6	+8.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GYA				AMB	AMB		
	comp=Z,80nm,3.7s						
GYA				LR	LR		
	comp=N,470nm,19.2s,MS4.1						
GYA				LR	LR		
	comp=E,260nm,16.5s,MS4.1						
GYA				LR	LR		
	comp=Z,630nm,18.9s,MS4.1						
LGTI	Lohaghat	26.75	335	⇑*i*	P	18 48 40.5	+0.5
CD2	Chengdu	27.25	20	P	P	18 48 43.8	-0.7
NDI	New Delhi	27.54	329	*e*	P	18 48 46.0	-1.2
NDI				*e*		18 52 57.0	
DDI	Dehra Dun	28.48	332	*e*	P	18 48 56.8	+1.2
DDI				*e*		18 54 31.1	
ENH	Enshi	29.14	30	*e*P	P	18 48 59.5	-2.1
	comp=Z,24nm,0.9s,mb4.9						
SMLA	Simla	29.57	332	⇑*i*	P	18 49 19.3	+14
SMLA				*i*		18 50 15.1	
SDNR	Sundarnagar	29.97	332	*e*	P	18 49 09.4	+0.4
THN	Thein Dam	31.34	331	*e*	P	18 49 18.8	-2.3
WHN	Wuhan	32.01	36	*e*P	P	18 49 27.4	+0.5
XAN	Xi'an	32.03	25	P	P	18 49 25.3	-1.7
XAN				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.0						
LZH	Lanzhou	32.06	17	*e*P	P	18 49 26.7	-0.6
LZH				AP	pP	18 49 34.9	-1.9
LZH				XP	sP	18 49 40.2	-0.8
LZH				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.7						
LZH				LR	LR		
	comp=E,310nm,16.3s						
LZH				LR	LR		
	comp=Z,420nm,18.0s,MS4.2						
GTA	Gaotai	34.35	9	*e*P	P	18 49 47.2	+0.1
GTA				AP	pP	18 49 56.8	+0.1
GTA				PP	PP	18 51 03.7	+0.8
GTA				PCP	PcP	18 52 21.4	-1.4
GTA				S	S	18 55 13.9	+2.4
GTA				XS		18 55 28.7	
GTA				SCP		18 56 02.1	
GTA				SS	SS	18 57 26.2	+3.8
GTA				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.9						
GTA				AMB	AMB		
	comp=Z,52nm,4.2s						
GTA				LR	LR		
	comp=N,200nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=E,161nm,17.1s,MS4.1						
GTA				LR	LR		
	comp=Z,240nm,14.1s,MS4.1						
NJ2	Nanjing	35.81	39	*e*P	P	18 50 00.1	+0.4
NJ2				AP	pP	18 50 09.8	+0.5
NJ2				XP	sP	18 50 13.7	+0.3
NJ2				PP	PP	18 51 23.2	+2.1
NJ2				S	S	18 55 38.0	+3.7
NJ2				XS		18 55 54.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				LR	LR		
	comp=N,290nm,10.0s						
NJ2				LR	LR		
	comp=E,300nm,19.3s						
NJ2				LR	LR		
	comp=Z,240nm,10.2s,MS4.2						
SSE	Sheshan	36.72	43	P	P	18 50 06.9	-0.4
SSE				S	S	18 55 51.0	+2.9
SSE				XS		18 56 03.7	
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
SSE				AMB	AMB		
	comp=Z,91nm,4.5s						
SSE				LR	LR		
	comp=N,207nm,23.5s,MS4.0						
SSE				LR	LR		
	comp=E,185nm,23.5s,MS4.0						
SSE				LR	LR		
	comp=Z,114nm,17.0s						
MBWA	Marble Bar	37.22	136	*e*P	P	18 50 10.9	-0.7
	comp=Z,18nm,1.1s,mb4.8						
KSH	Kashi	37.25	338	*e*P	P	18 50 12.0	+0.3
KSH				*e*AP	pP	18 50 22.3	+1.0
KSH				*e*XP	sP	18 50 26.1	+0.7
KSH				*e*PP	PP	18 51 39.3	0.0
KSH				*e*PCP	PcP	18 52 32.6	+1.3
KSH				*e*S	S	18 55 55.2	-1.0
KSH				*e*SCP		18 56 15.0	
KSH				*e*PCS		18 56 21.4	
KSH				*e*SS	SS	18 58 28.7	+0.6
KSH				*e*SCS	ScS	19 00 22.4	+1.3
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.6						
KSH				AMB	AMB		
	comp=Z,60nm,2.4s,mb5.0						
KSH				LR	LR		
	comp=N,410nm,4.8s						
KSH				LR	LR		
	comp=E,400nm,5.6s						
WMQ	Urumqi	38.50	354	⇓*i*P	P	18 50 22.8	+0.7
WMQ				AP	pP	18 50 32.4	+0.6
WMQ				XP	sP	18 50 36.4	+0.6
WMQ				PP	PP	18 51 55.0	+1.0
WMQ				S	S	18 56 15.0	-0.1
WMQ				SS	SS	18 58 55.0	-1.2
WMQ				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,221nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=E,423nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,189nm,20.0s,MS3.9						
HHC	Hu-ho-hao-te	38.95	23	*e*P	P	18 50 26.5	+0.5
HHC				AP	pP	18 50 35.7	+0.1
HHC				XP	sP	18 50 39.3	-0.4
HHC				PP	PP	18 51 57.2	-2.1
HHC				S	S	18 56 18.6	-3.4
HHC				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.6						
HHC				LR	LR		
	comp=N,226nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=E,355nm,16.8s,MS4.3						
HHC				LR	LR		
	comp=Z,206nm,21.6s,MS3.9						
FITZ	Fitzroy Crossi	39.77	127	⇓*i*P	P	18 50 32.6	-0.4
	comp=Z,21nm,0.7s,mb5.0						
UCH	Uchtor	40.15	339	P	P	18 50 36.9	+1.1
	SNR=16						
BJT	Baijiatuau	40.22	28	*e*P	P	18 50 35.4	-1.0
	comp=Z,18nm,1.1s,mb4.7						

BJI	**Beijing**	**40.24**	**28**	P	**P**	**18 50 34.1**	**-2.5**
BJI				AMB	AMB		
	comp=Z,4.0nm,1.5s,mb3.9						
BJI				LR	LR		
	comp=N,302nm,15.9s,MS4.4						
BJI				LR	LR		
	comp=E,326nm,13.5s,MS4.4						
BJI				LR	LR		
	comp=Z,211nm,23.2s						
KBK	**Karagaybulak**	**40.37**	**339**	P	**P**	**18 50 38.8**	**+1.1**
	SNR=26						
AML	**Almayashu**	**40.37**	**338**	P	**P**	**18 50 38.8**	**+1.1**
	SNR=26						
TKM2	**Tokmak 2**	**40.38**	**340**	P	**P**	**18 50 38.1**	**+0.4**
	SNR=10.0						
AAK	**Ala-Archa**	**40.51**	**339**	P	**P**	**18 50 39.7**	**+0.9**
	SNR=7.9						
AAK	**Ala-Archa**	**40.51**	**339**	P	**P**	**18 50 39.5**	**+0.7**
AAK				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.7						
AAK	**Ala-Archa**	**40.51**	**339**	*e*P	**P**	**18 50 38.2**	**-0.6**
	comp=Z,11nm,0.8s,mb4.5						
CHMS	**Chumysh**	**40.74**	**339**	P	**P**	**18 50 41.2**	**+0.5**
	SNR=7.1						
EKS2	**Erkin-Say**	**40.80**	**338**	P	**P**	**18 50 42.2**	**+1.0**
	SNR=12						
USP	**Ospenovka**	**41.06**	**339**	P	**P**	**18 50 43.8**	**+0.4**
	SNR=6.8						
MKAR	**Makanchi Array**	**42.21**	**349**	*i* P	**P**	**18 50 52.5**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MUN	**Mundaring**	**43.28**	**151**	*e*P	**P**	**18 51 03.2**	**+1.5**
	comp=Z,6.4nm,0.6s,mb4.5						
SONM	**Songino Array**	**43.74**	**13**	P	**P**	**18 51 05.3**	**+0.1**
	comp=Z,2.5nm,0.5s,mb4.2,baz=191,slow=8.7,SNR=32						
SONM				PcP	PcP	18 52 50.0	-2.2
	comp=Z,1.8nm,0.6s,baz=180,slow=4.3,SNR=3.5						
ULN	**Ulaanbaatar**	**43.92**	**14**	*e*P	**P**	**18 51 06.0**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.1						
NWAO	**Narrogin (SRO)**	**44.55**	**151**	P	**P**	**18 51 12.8**	**+0.8**
	comp=Z,6.8nm,0.6s,mb4.6,baz=251,slow=9.0,SNR=9.5						
NWAO	**Narrogin (SRO)**	**44.55**	**151**	*e*P	**P**	**18 51 12.5**	**+0.5**
	comp=Z,18nm,1.2s,mb4.8						
ZAK	**Zakamensk**	**45.59**	**9**	*e*P	**P**	**18 51 20.2**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
KURK	**Kurchatov**	**46.70**	**347**	*i* P	**P**	**18 51 28.4**	**-0.3**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
KURK	**Kurchatov**	**46.70**	**347**	*e*P	**P**	**18 51 28.3**	**-0.4**
	comp=Z,29nm,1.0s,mb5.2						
KURK				*e*	pP	18 51 39.9	+1.4
TLY	**Talaya**	**46.91**	**9**	*i* P	**P**	**18 51 30.5**	**+0.1**
CN2	**Changchun**	**47.64**	**32**	*e*P	**P**	**18 51 37.3**	**+1.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
WRA	**Warramunga Arr**	**47.81**	**123**	P	**P**	**18 51 38.0**	**+0.1**
	comp=Z,26nm,0.7s,mb5.4,baz=302,slow=9.0,SNR=225						
WRAB	**Tennant Creek**	**47.81**	**123**	*de*P	**P**	**18 51 37.1**	**-0.8**
WRAB	**Tennant Creek**	**47.81**	**123**	*e*P	**P**	**18 51 37.6**	**-0.4**
	comp=Z,60nm,0.8s,mb5.7						
WRAB				*e*		18 51 51.3	
WB2	**Warramunga Arr**	**47.82**	**123**	⇓*i*P	**P**	**18 51 38.1**	**+0.1**
ZAL	**Zalesovo**	**48.80**	**354**	P	**P**	**18 51 45.6**	**+0.6**
	comp=Z,13nm,0.5s,mb5.2,baz=307,slow=5.9,SNR=63						
HIA	**Hailar**	**49.16**	**23**	*e*P	**P**	**18 51 47.5**	**-0.4**
	comp=Z,11nm,0.9s,mb4.9						
FORT	**Forrest**	**49.18**	**139**	*e*P	**P**	**18 51 49.6**	**+1.2**
	comp=Z,743nm,0.7s						
ASPA	**Alice Springs**	**49.26**	**128**	⇓*i*P	**P**	**18 51 49.2**	**+0.2**
ASAR	**Alice Springs**	**49.26**	**128**	P	**P**	**18 51 49.2**	**+0.1**
	comp=Z,9.5nm,0.8s,mb4.9,baz=299,slow=7.8,SNR=107						
ASAR				PcP	PcP	18 53 12.2	+0.2
	comp=Z,2.3nm,0.8s,baz=306,slow=3.5,SNR=4.5						
NVS	**Novosibirsk**	**49.87**	**353**	*i* P	**P**	**18 51 52.0**	**-1.3**
NVS				*e**PP	pP	18 52 05.6	+2.4
NVS				*e*S	**S**	**18 58 54.4**	**-5.4**
NVS				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.2						
NVS				pmax	pmax		
	comp=N,22nm,1.4s						
NVS				pmax	pmax		
	comp=E,14nm,1.3s						
NVS				smax			
	comp=E,14nm,1.3s						
MDJ	**Mudanjiang**	**50.41**	**33**	P	**P**	**18 51 56.8**	**-0.8**
MDJ				AP	pP	18 52 05.9	-1.5
MDJ				XP	sP	18 52 09.7	-1.5
MDJ				PCP	PcP	18 53 14.3	-1.5
MDJ				PP	PP	18 53 52.8	-1.2
MDJ				S	**S**	**18 59 09.0**	**+1.6**
MDJ				XS		18 59 24.2	
MDJ				SCS	ScS	19 01 44.6	+1.7
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,79nm,7.2s						
MDJ				LR	LR		
	comp=N,63nm,22.3s						
MDJ				LR	LR		
	comp=E,78nm,27.8s						
MDJ				LR	LR		
	comp=Z,106nm,30.4s						
MDJ	**Mudanjiang**	**50.41**	**33**	P	**P**	**18 51 57.2**	**-0.3**
	comp=Z,24nm,1.3s,mb5.1						
MDJ				*e*pP	pP	18 52 16.8	+9.3
MDJ				*e*sP	sP	18 52 25.0	+14
BRVK	**Borovoye**	**50.99**	**343**	*e*P	**P**	**18 52 00.4**	**-1.4**
	comp=Z,12nm,0.7s,mb4.9						
BRVK				*e*		18 52 16.5	
CHKZ	**Chkalovo**	**51.43**	**343**	P	**P**	**18 52 04.5**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
CHKZ	**Chkalovo**	**51.43**	**343**	*e*P	**P**	**18 52 04.3**	**-1.0**
	comp=Z,23nm,0.7s,mb5.2						
CHKZ				*e*		18 52 19.5	
KLR	**Kul'dur**	**54.51**	**30**	*e*P	**P**	**18 52 25.0**	**-3.1**
BOD	**Bodaibo**	**54.74**	**14**	*e*P	**P**	**18 52 28.5**	**-1.2**
GNI	**Garni**	**55.37**	**316**	*i* P	**P**	**18 52 30.7**	**-3.9**
KMBO	**Kilima Mbogo**	**56.10**	**265**	P	**P**	**18 52 41.6**	**+1.5**
	comp=Z,6.9nm,1.1s,mb4.6,baz=57,slow=11,SNR=11						
KMBO				LR	LR	19 12 23.7	
	comp=Z,139nm,21.7s,MS4.0,baz=88,slow=32						
SVE	**Sverdlovsk**	**57.25**	**339**	⇑*e*P	**P**	**18 52 46.0**	**-1.8**
SVE				*e*		18 53 04.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SVE				MLR	MLR		
	comp=Z,100nm,22.0s,MS3.9						
CTA	**Charters Tower**	**58.12**	**118**	*e*P	**P**	**18 52 54.3**	**0.0**
	comp=Z,4.6nm,0.9s,mb4.5						
CTA	**Charters Tower**	**58.12**	**118**	P	**P**	**18 52 54.2**	**-0.1**
	comp=Z,5.5nm,0.8s,mb4.6,baz=289,slow=8.7,SNR=8.6						
CTA				LR	LR	19 18 01.6	
	comp=Z,130nm,22.0s,MS4.0,baz=103,slow=36						
CTAO	**Charters Tower**	**58.12**	**118**	*e*P	**P**	**18 52 52.9**	**-1.4**
	comp=Z,11nm,1.1s,mb4.8						
CTAO				*e*		18 53 07.6	
KIV	**Kislovodsk**	**58.40**	**319**	*i* P	**P**	**18 52 54.0**	**-2.0**
KIV				*e*		18 53 09.2	
KIV				*e*		18 55 00.9	
KIV				*e*S	**S**	**19 00 54.4**	**-0.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**58.40**	**319**	*e*P	**P**	**18 52 54.5**	**-1.5**
	comp=Z,14nm,1.1s,mb4.9						
MALT	**Malatya**	**59.22**	**312**	*e*P	**P**	**18 53 00.7**	**-1.1**
	comp=Z,5.1nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**59.27**	**132**	*e*P	**P**	**18 53 02.4**	**+0.2**
	comp=Z,7.5nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**59.27**	**132**	P	**P**	**18 53 02.4**	**+0.2**
	comp=Z,18nm,1.1s,mb5.0,baz=299,slow=6.4,SNR=15						
STKA				LR	LR	19 18 44.7	
	comp=Z,161nm,20.9s,MS4.1,baz=21,slow=36						
YSS	**Yuzh-Sakhalins**	**59.35**	**37**	P	**P**	**18 53 10.3**	**+7.8**
SOC	**Sochi**	**60.20**	**318**	*e*P	**P**	**18 53 03.4**	**-5.0**
SOC				*e*		18 53 45.8	
SOC				*e*		18 55 18.8	
SOC				*e*S	**S**	**19 01 16.8**	**-1.4**
SOC				*e*		19 02 46.0	
SOC				*e*SS	SS	19 05 12.2	-4.4
SOC				pmax	pmax		
	comp=N,27nm,0.9s						
SOC				pmax	pmax		
	comp=E,29nm,0.9s						
SOC				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.3						
ANN	**Anapa**	**62.18**	**318**	*e*P	**P**	**18 53 22.4**	**+0.5**
ANN				*i* *PP	pP	18 53 34.0	+2.1
ANN				*e*S	**S**	**19 02 03.0**	**+20**
ANN				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
YAK	**Yakutsk**	**62.62**	**18**	⇓*e*P	**P**	**18 53 22.9**	**-1.6**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
YAK	**Yakutsk**	**62.62**	**18**	*e*P	**P**	**18 53 22.6**	**-1.8**
	comp=Z,8.9nm,0.6s,mb5.1						
BRTR	**Keskin Array B**	**63.20**	**312**	P	**P**	**18 53 27.6**	**-1.0**
	comp=Z,2.0nm,0.8s,mb4.3,baz=121,slow=7.2,SNR=13						
OBN	**Obninsk**	**66.84**	**329**	*i* P	**P**	**18 53 49.9**	**-2.1**
OBN				pmax	pmax		
	comp=Z,38nm,1.8s,mb5.1						
AKASG	**Malin Array Be**	**69.38**	**322**	P	**P**	**18 54 05.6**	**-2.2**
	comp=Z,3.0nm,0.8s,mb4.2,baz=94,slow=4.5,SNR=7.0						
TIXI	**Tiksi**	**69.80**	**11**	⇓*i*P	**P**	**18 54 08.9**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,93nm,18.0s,MS4.1						
LBTB	**Lobatse**	**72.14**	**242**	*e*P	**P**	**18 54 25.2**	**+0.2**
	comp=Z,32nm,1.6s,mb5.0						
JOF	**Joensuu**	**72.56**	**335**	*e*p	**P**	**18 54 24.4**	**-2.3**
	comp=Z,5.9nm,0.7s,mb4.6						
JOF	**Joensuu**	**72.56**	**335**	*e*P	**P**	**18 54 24.4**	**-2.3**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
KOLS	**Kolonicke sedl**	**73.31**	**319**	*e*P	**P**	**18 54 31.2**	**-0.2**
FINES	**FINESS Array B**	**74.33**	**333**	P	**P**	**18 54 36.2**	**-0.9**
	comp=Z,4.9nm,0.7s,mb4.5,baz=115,slow=7.0,SNR=17						
FINES				LR	LR	19 30 50.8	
	comp=Z,153nm,19.0s,MS4.3,baz=317,slow=39						
FINES	**FINESS Array B**	**74.33**	**333**	P	**P**	**18 54 36.2**	**-0.9**
FINES				LR	LR	19 30 50.8	
KAF	**Kangasniemi**	**74.44**	**333**	*e*p	**P**	**18 54 34.5**	**-3.2**
	comp=Z,4.0nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**74.44**	**333**	*e*P	**P**	**18 54 34.5**	**-3.2**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OJC	**Ojcow**	**75.12**	**320**	*e*P	**P**	**18 54 41.4**	**-0.5**
OKC	**Ostrava-Krasne**	**76.12**	**320**	*e*P	**P**	**18 54 47.6**	**+0.1**
ARCES	**ARCESS Array B**	**77.16**	**341**	P	**P**	**18 54 52.8**	**-0.2**
	comp=Z,11nm,1.1s,mb4.7,baz=88,slow=6.5,SNR=12						
ARCES				LR	LR	19 32 56.1	
	comp=Z,197nm,18.5s,MS4.5,baz=17,slow=39						
DPC	**Dobruska-Polom**	**77.35**	**320**	*e*P	**P**	**18 54 54.2**	**-0.2**
BILL	**Bilibino**	**78.72**	**22**	*e*P	**P**	**18 55 02.2**	**+0.6**
BILL				*e*		18 57 59.9	
BILL				*e*S	S	19 04 57.5	+2.2
BILL				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.8						
GERES	**GERESS Array B**	**78.90**	**319**	P	**P**	**18 55 03.5**	**+0.5**
	comp=Z,3.9nm,0.8s,mb4.4,baz=90,slow=5.3,SNR=9.4						
KHC	**Kasperske Hory**	**79.00**	**319**	*e*P	**P**	**18 55 03.6**	**+0.1**
KHC				*e*		18 55 21.0	
KHC	**Kasperske Hory**	**79.00**	**319**	*e*P	**P**	**18 55 03.6**	**+0.1**
KHC				x	x	18 55 21.0	
NB2	**NORSAR Subarra**	**81.29**	**331**	P	**P**	**18 55 14.1**	**-1.3**
	comp=Z,4.1nm,0.9s,mb4.4,baz=93,slow=5.6						
NOA	**NORSAR Array B**	**81.29**	**331**	P	**P**	**18 55 14.6**	**-0.8**
	comp=Z,1.9nm,0.8s,mb4.1,baz=95,slow=5.5,SNR=5.6						
NOA				LR	LR	19 35 08.8	
	comp=Z,84nm,18.4s,MS4.1,baz=115,slow=39						
DAVOX	**Davos**	**81.37**	**316**	P	**P**	**18 55 16.8**	**+0.6**
	comp=Z,3.3nm,0.6s,mb4.4,baz=124,slow=7.2,SNR=5.2						
URZ	**Urewera**	**88.69**	**128**	LR	LR	19 33 03.0	
	comp=Z,83nm,21.0s,MS4.1,baz=157,slow=34						

ATH ***12*** *18:47:59.3, 38.59N×23.52E, h10^{km}, MD2.8/6, ML2.6*
NEIC ***12*** *18:47:59.3, 38.59N×23.52E, h10^{km}, ML2.6(ATH), After ATH.*
CSEM ***12*** *18:47:59.2±0.1, 38.58N×23.56E, h8^{km}, ML2.6, Error ellipse: s-maj=3.2km s-min=1.7km az=68.0*
THE ***12*** *18:48:00.3, 38.64N×23.53E, h11^{km}, ML2.4*
ISC 12 18:47:58.7±0.7**, 38.60N**±0.03×**23.55E**±0.07**, h12**^{km}±6^{km}**, n15, σ0^{s}.65**/21**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.43**	**277**	*e*PG	**Pg**	**18 48 07.1**	**-0.5**
MPAR	**Parnis Oros**	**0.47**	**162**	*e*PB	**Pb**	**18 48 08.5**	**0.0**
PTL	**Penteli**	**0.61**	**156**	*e*PB	**Pb**	**18 48 10.5**	**-0.2**
AOS	**Alonnisos**	**0.62**	**24**	*e*Pg	**Pg**	**18 48 11.4**	**+0.1**
ATH	**Athens Observa**	**0.64**	**168**	*e*PB	**Pb**	**18 48 10.4**	**-1.0**
MGER	**Gerania Oros**	**0.66**	**200**	*e*PB	**Pb**	**18 48 12.5**	**+0.9**
NEO	**Neokhori**	**0.75**	**340**	*e*PG	**Pg**	**18 48 13.4**	**-0.4**
NEO				*e*SG	**Sg**	**18 48 24.4**	**+0.6**
XOR	**Xorichti**	**0.81**	**340**	*e*Pg	**Pg**	**18 48 15.0**	**0.0**
XOR				*e*Sg	**Sg**	**18 48 26.2**	**+0.3**
NAIG	**Nisos Aigina**	**0.84**	**183**	*e*PB	**Pb**	**18 48 16.0**	**+1.2**
NAIG	**Nisos Aigina**	**0.84**	**183**	*e*Pb	**Pb**	**18 48 16.5**	**+1.7**
AGG	**Agios Georgios**	**1.04**	**294**	*e*Pg	**Pg**	**18 48 18.9**	**-0.6**
AGG				*e*Sg	**Sg**	**18 48 33.9**	**+0.4**
PAIG	**Paliouri**	**1.33**	**4**	*e*Pb	**Pb**	**18 48 23.4**	**+0.3**
PAIG				*e*Sb	**Sb**	**18 48 41.0**	**+1.1**
LIT	**Litokhoron**	**1.71**	**332**	*e*Pb	**Pb**	**18 48 28.6**	**-1.0**
LIT				*e*Sb	**Sb**	**18 48 51.0**	**0.0**
OUR	**Ouranopolis**	**1.76**	**11**	*e*Pb	**Pb**	**18 48 29.7**	**-0.8**
GRG	**Griva**	**2.51**	**340**	*e*Pn	**Pn**	**18 48 39.9**	**-0.2**
GRG				*e*Sn	**Sn**	**18 49 10.5**	**-0.5**

IDC ***12*** *19:22:02.7±2.4, 17.65S×178.79W, h559^{km}±27^{km}, mb3.4/7, mb1 3.6/7, mb1mx3.4/16, mbtmp4.4/7, Error ellipse: s-maj=25.3km s-min=13.3km az=157.0*
NEIC ***12*** *19:22:03.2±4.1, 17.68S×178.77W, h569^{km}±44^{km}, mb4.2/9, Error ellipse: s-maj=23.9km s-min=16.4km az=67.0*
ISC 12 19:22:01.5±2.5**, 17.7S**±0.2×**178.8W**±0.1**, h560**^{km}±30^{km}**, n29, σ0^{s}.83**/26**, mb4.2**/13**, 3C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.13**	**260**	⇑*i*P	**P**	**19 27 53.6**	**+0.3**
	4.1nm,0.7s,mb4.1						
CTAO	**Charters Tower**	**33.13**	**260**	*e*P	**P**	**19 27 53.4**	**+0.1**
	5.7nm,0.7s,mb4.2						
CNB	**Canberra Magne**	**33.27**	**232**	⇓*i*P	**P**	**19 27 55.6**	**+1.3**
	63nm,0.5s						
PMG	**Port Moresby**	**34.08**	**279**	P	**P**	**19 28 01.7**	**+0.4**
	6.9nm,0.6s,mb4.4,baz=104,slow=8.7,SNR=6.8						
STKA	**Stephens Creek**	**38.42**	**241**	*e*P	**P**	**19 28 37.9**	**+1.1**
	5.0nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.42**	**241**	P	**P**	**19 28 37.5**	**+0.7**
	6.4nm,0.5s,mb4.4,baz=88,slow=9.0,SNR=31						
STKA	**Stephens Creek**	**38.42**	**241**	*e*P	**P**	**19 28 37.8**	**+1.1**
WB2	**Warramunga Arr**	**44.31**	**259**	*e*P	**P**	**19 29 23.1**	**-0.7**
WRAB	**Tennant Creek**	**44.31**	**259**	*e*P	**P**	**19 29 23.1**	**-0.8**
	4.3nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**44.32**	**259**	P	**P**	**19 29 22.7**	**-1.3**
	2.9nm,0.5s,mb4.0,baz=96,slow=7.3,SNR=111						
WRA				S	**S**	**19 35 19.1**	**+0.9**
	0.4nm,0.7s,baz=98,slow=12,SNR=3.1						
ASAR	**Alice Springs**	**44.51**	**254**	P	**P**	**19 29 25.4**	**+0.1**
	30nm,0.5s,mb5.1,baz=88,slow=8.1,SNR=774						
ASAR				PcP	PcP	19 30 56.5	-0.2
	0.9nm,0.5s,baz=102,slow=4.0,SNR=4.7						
ASAR				S	**S**	**19 35 19.9**	**-0.8**
	0.4nm,0.7s,baz=87,slow=15,SNR=5.2						
ASPA	**Alice Springs**	**44.51**	**254**	⇑*i*P	**P**	**19 29 25.4**	**+0.1**
KAKA	**Kakadu**	**47.24**	**269**	⇑*i*P	**P**	**19 29 46.2**	**-0.1**
	9.7nm,0.6s,mb4.5						
FORT	**Forrest**	**49.77**	**244**	*e*P	**P**	**19 30 04.3**	**-0.8**
	282nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.72**	**260**	*e*P	**P**	**19 30 27.0**	**+0.5**
	6.3nm,1.4s,mb3.8						
MBWA	**Marble Bar**	**57.78**	**256**	*e*P	**P**	**19 31 01.0**	**-0.7**
	18nm,1.2s,mb4.2						
VNDA	**Vanda**	**60.60**	**185**	P	**P**	**19 31 19.4**	**-0.3**
	0.5nm,0.5s,baz=347,slow=10.0,SNR=4.3						
VNDA	**Vanda**	**60.60**	**185**	P	**P**	**19 31 19.4**	**-0.3**
QSPA	**South Pole Qui**	**72.34**	**180**	*e*P	**P**	**19 32 32.4**	**+0.7**
	5.5nm,0.5s,mb4.2						
QIZ	**Qiongzhong**	**79.06**	**294**	P	**P**	**19 33 10.0**	**+0.4**
ENH	**Enshi**	**83.88**	**304**	P	**P**	**19 33 35.9**	**+1.9**
	2.8nm,0.7s,mb3.9						
MAW	**Mawson**	**83.92**	**200**	P	**P**	**19 33 32.3**	**-0.9**
	49nm,1.0s,mb5.0						
ILAR	**Eielson Array**	**85.78**	**13**	P	**P**	**19 33 41.1**	**-1.3**
	0.4nm,0.8s,baz=229,slow=5.1,SNR=4.1						
TXAR	**Lajitas Array**	**86.19**	**58**	P	**P**	**19 33 45.6**	**+0.5**
	0.4nm,0.5s,mb3.3,baz=214,slow=5.9,SNR=7.4						
BRTR	**Keskin Array B**	**144.40**	**315**	PKP	PKPdf	19 40 36.1	+2.0
	1.2nm,0.6s,baz=144,slow=5.7,SNR=7.9						
CLL	**Collm**	**145.20**	**347**	*i* PKP1	PKPbc	19 40 38.2	+2.1
MLR	**Muntele Rosu**	**145.49**	**329**	PKPbc	PKPbc	19 40 37.5	+0.5
	1.3nm,0.5s,baz=352,slow=7.1,SNR=4.5						
GERES	**GERESS Array B**	**147.34**	**345**	PKPbc	PKPdf	19 40 43.7	+5.0
	2.0nm,0.5s,baz=37,slow=2.8,SNR=15						
DAVOX	**Davos**	**150.15**	**348**	PKPbc	PKPdf	19 40 50.7	+7.5
	baz=180,slow=6.1						

IDC ***12*** *19:38:02.5±0.6, 4.56S×144.91E, mb4.7/14, mb1 4.8/17, mb1mx4.8/21, mbtmp4.8/17, ML4.3/3, MS4.3/11, Ms1 4.3/11, ms1mx4.2/13, Error ellipse: s-maj=24.5km s-min=11.9km az=78.0*
BJI ***12*** *19:38:04.5, 4.60S×144.90E, h42^{km}, mB4.9, mb4.9, Ms4.5, Msz4.2*
MOS ***12*** *19:38:05.8±1.0, 4.58S×144.86E, h31^{km}, mb5.1/23, Error ellipse: s-maj=15.3km s-min=7.5km az=92.2*
NEIC ***12*** *19:38:08.8±1.3, 4.61S×144.86E, h43^{km}±11^{km}, mb4.9/30, Error ellipse: s-maj=8.3km s-min=6.3km az=82.0*
HRVD ***12*** *19:38:08.8±0.2, 4.61S×144.84E, h45^{km}±1^{km}, MW5.0/57, Centroid moment Tensor Solution. LP body waves: s32,c49;Mantle waves: s57,c100; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.17±.18; M$_{θθ}$-3.45±.12; M$_{φφ}$0.27±.16; M$_{rθ}$-2.46±.14; M$_{θφ}$2.19±.10; M$_{φr}$1.01±.16; Best double couple: M$_0$4.652×10^{16} NP1: φ$_s$118°, δ28°, λ95°. NP2: φ$_s$293°, δ62°, λ88°. Principal axes: T 4.008, Plg72°, Azm197°; N 1.282, Plg2°, Azm294°; P -5.296, Plg17°, Azm24°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 12 19:38:06.8±1.7**, 4.63S**±0.05×**144.84E**±0.06**, h39**^{km}±16^{km}**, h45**^{km}±2.9^{km}**:pP-P, n101, σ0^{s}.83**/94**, mb4.8**/49**, MS4.3**/15**, 4C-2D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.28**	**154**	Pn	**P**	**19 39 25.0**	**-0.2**
	58nm,0.3s,baz=357,slow=5.7,SNR=240						
PMG				Sn	**S**	**19 40 25.7**	**+0.1**
	20nm,0.3s,baz=329,slow=20,SNR=3.2						
KAKA	**Kakadu**	**14.65**	**236**	*e*P	**P**	**19 41 32.8**	**-0.6**
	48nm,0.4s						
KAKA				*e*S	**S**	**19 44 11.8**	**-3.5**
CTA	**Charters Tower**	**15.43**	**175**	*e*P	**P**	**19 41 44.7**	**+1.2**
	32nm,0.9s						
CTA	**Charters Tower**	**15.43**	**175**	*e*P	**P**	**19 41 44.7**	**+1.2**
CTA				pmax	pmax		
	comp=Z,32nm,0.9s						
CTA	**Charters Tower**	**15.43**	**175**	Pn	**P**	**19 41 44.4**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=345,slow=14,SNR=12						
CTAO	**Charters Tower**	**15.43**	**175**	*e*P	**P**	**19 41 44.0**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,90nm,1.1s						
CTAO	**Charters Tower**	**15.43**	**175**	*e*P	**P**	**19 41 44.0**	**+0.5**
	comp=Z,90nm,1.1s						
WRAB	**Tennant Creek**	**18.33**	**213**	*e*P	**P**	**19 42 20.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,123nm,0.8s						
WRAB	**Tennant Creek**	**18.33**	**213**	*e*P	**P**	**19 42 20.1**	**+0.1**
	comp=Z,123nm,0.8s						
WB2	**Warramunga Arr**	**18.34**	**213**	⇑*i*P	**P**	**19 42 20.4**	**+0.3**
WRA	**Warramunga Arr**	**18.34**	**213**	P	**P**	**19 42 19.6**	**-0.6**
	comp=Z,5.0nm,0.3s,baz=37,slow=12,SNR=192						
ASAR	**Alice Springs**	**21.67**	**208**	P	**P**	**19 42 55.8**	**-0.3**
	comp=Z,17nm,0.8s,mb4.5,baz=37,slow=9.1,SNR=69						
ASAR				LR	LR	19 51 47.9	
	comp=Z,686nm,19.8s,MS4.1,baz=30,slow=38						
ASPA	**Alice Springs**	**21.67**	**208**	⇓*i*P	**P**	**19 42 56.3**	**+0.2**
ASPA				*e*S	**S**	**19 46 57.2**	**+8.5**
FITZ	**Fitzroy Crossi**	**23.07**	**233**	*e*P	**P**	**19 43 10.2**	**+0.2**
	comp=Z,147nm,0.8s,mb5.5						
STKA	**Stephens Creek**	**27.28**	**186**	⇑*i*P	**P**	**19 43 49.2**	**-0.6**
	comp=Z,13nm,1.0s,mb4.4						
STKA	**Stephens Creek**	**27.28**	**186**	P	**P**	**19 43 48.7**	**-1.1**
	comp=Z,8.2nm,0.5s,mb4.5,baz=350,slow=8.8,SNR=27						
STKA				LR	LR	19 55 57.9	
	comp=Z,1µm,18.2s,MS4.5,baz=259,slow=39						
MBWA	**Marble Bar**	**29.40**	**234**	*e*P	**P**	**19 44 08.2**	**-0.7**
	comp=Z,27nm,0.8s,mb5.0						
MBWA				*e*PP	PP	19 45 07.2	+2.1
FORT	**Forrest**	**30.44**	**209**	*e*P	**P**	**19 44 18.6**	**+0.5**
	comp=Z,572nm,0.5s						
CNB	**Canberra Magne**	**30.82**	**173**	*e*P	**P**	**19 44 21.4**	**0.0**
	comp=Z,211nm,0.8s						
CBIJ	**Chichi jima**	**31.64**	**355**	P	**P**	**19 44 27.2**	**-1.5**
	comp=Z,46nm,0.7s,mb5.4,baz=292,slow=18,SNR=3.9						
CBIJ				LR	LR	19 56 12.4	
	comp=Z,304nm,21.1s,MS4.0,baz=57,slow=34						
TOO	**Toolangi**	**32.80**	**179**	*e*P	**P**	**19 44 39.3**	**+0.6**
	comp=Z,0.9nm,0.9s						
TOO	**Toolangi**	**32.80**	**179**	*e*P	**P**	**19 44 39.3**	**+0.6**
TOO				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
JOW	**Kunigami**	**35.14**	**334**	P	**P**	**19 44 59.5**	**+0.6**
	comp=Z,3.5nm,0.4s,mb4.7,baz=130,slow=18,SNR=4.7						
KLBR	**Kellerberrin**	**36.96**	**220**	*e*P	**P**	**19 45 14.3**	**+0.1**
	comp=Z,503nm,1.2s						
JHJ	**Hachijo jima 2**	**37.84**	**353**	LR	LR	19 59 34.0	
	comp=Z,354nm,18.0s,MS4.2,baz=170,slow=34						
NWAO	**Narrogin (SRO)**	**38.17**	**219**	P	**P**	**19 45 24.4**	**0.0**
	comp=Z,5.7nm,0.5s,mb4.6,baz=184,slow=24,SNR=11						
TAU	**Tasmania Unive**	**38.19**	**177**	P	**P**	**19 45 24.6**	**+0.2**
TAU				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.0						
TAU	**Tasmania Unive**	**38.19**	**177**	P	**P**	**19 45 24.6**	**+0.2**
	comp=Z,38nm,1.2s,mb5.0						
MUN	**Mundaring**	**38.21**	**221**	*e*P	**P**	**19 45 25.2**	**+0.5**
	comp=Z,21nm,1.0s,mb4.8						
MUN	**Mundaring**	**38.21**	**221**	*e*P	**P**	**19 45 25.2**	**+0.5**
MUN				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
NJ2	**Nanjing**	**44.07**	**328**	*e*P	**P**	**19 46 15.0**	**+2.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
URZ	**Urewera**	**44.53**	**143**	P	**P**	**19 46 16.9**	**+0.3**
	comp=Z,14nm,0.9s,mb4.8,baz=57,slow=3.5,SNR=10.0						
RPZ	**Rata Peaks**	**45.28**	**153**	P	**P**	**19 46 22.1**	**-0.4**
	comp=Z,58nm,1.0s,mb5.4,baz=5.9,slow=4.4,SNR=16						
WHN	**Wuhan**	**45.53**	**322**	*e*P	**P**	**19 46 27.0**	**+2.2**
COCO	**West Island**	**48.02**	**258**	*e*P	**P**	**19 46 45.3**	**+0.8**
	comp=Z,71nm,0.9s,mb5.7						
ENH	**Enshi**	**48.46**	**318**	*e*P	**P**	**19 46 47.0**	**-0.7**
	comp=Z,7.4nm,0.9s,mb4.7						
SNY	**Shenyang**	**50.13**	**339**	⇑P	**P**	**19 47 00.6**	**+0.2**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
SNY				LR	LR		
	comp=E,210nm,11.4s						
SNY				LR	LR		
	comp=Z,210nm,16.5s						
CM31	**Chiang Mai Arr**	**50.71**	**298**	*e*P	**P**	**19 47 04.8**	**-0.3**
	comp=Z,7.1nm,0.7s,mb4.7						
CMAR	**Chiang Mai Arr**	**50.71**	**298**	P	**P**	**19 47 05.3**	**+0.2**
	comp=Z,4.3nm,0.7s,mb4.5,baz=120,slow=6.3,SNR=36						
CMAR				LR	LR	20 10 36.8	
	comp=Z,63nm,19.4s,MS3.6,baz=100,slow=38						
XAN	**Xi'an**	**51.27**	**321**	P	**P**	**19 47 09.6**	**+0.4**
XAN				AP	pP	19 47 20.5	+0.1
XAN				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.5						
YSS	**Yuzh-Sakhalins**	**51.39**	**358**	P	**P**	**19 47 07.3**	**-2.6**
YSS				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
YSS	**Yuzh-Sakhalins**	**51.39**	**358**	P	**P**	**19 47 07.3**	**-2.6**
	comp=Z,14nm,0.9s,mb4.9						
BJI	**Beijing**	**51.68**	**332**	P	**P**	**19 47 11.9**	**-0.2**
BJI				AMB	AMB		
	comp=Z,16nm,0.9s,mb5.0						
BJI				LR	LR		
	comp=N,254nm,23.4s						
BJI				LR	LR		
	comp=E,177nm,17.7s						
BJI				LR	LR		
	comp=Z,305nm,26.7s,MS4.2						
HHC	**Hu-ho-hao-te**	**54.55**	**329**	⇑P	**P**	**19 47 34.0**	**+0.5**
HHC				AP	pP	19 47 48.1	+3.2
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.8						

HHC				AMB	AMB		
	comp=Z,111nm,6.4s						
HHC				LR	LR		
	comp=N,209nm,25.2s,MS4.3						
HHC				LR	LR		
	comp=E,260nm,21.6s,MS4.3						
HHC				LR	LR		
	comp=Z,352nm,22.8s,MS4.4						
KLR	**Kul'dur**	**54.83**	**350**	*e*P	**P**	**19 47 31.0**	**-4.4**
BTO	**Baotou**	**55.17**	**328**	*e*P	**P**	**19 47 37.6**	**-0.4**
LZH	**Lanzhou**	**55.78**	**320**	*e*P	**P**	**19 47 43.6**	**+1.2**
LZH				XP	sP	19 47 56.0	-2.5
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb5.1						
HIA	**Hailar**	**57.94**	**341**	*e*P	**P**	**19 47 53.3**	**-4.3**
GTA	**Gaotai**	**60.32**	**321**	*e*P	**P**	**19 48 14.8**	**+0.6**
GTA				AMB	AMB		
	comp=Z,5.0nm,1.7s,mb4.3						
GTA				AMB	AMB		
	comp=Z,52nm,4.2s						
GTA				LR	LR		
	comp=N,166nm,17.5s,MS4.4						
GTA				LR	LR		
	comp=E,173nm,16.7s,MS4.4						
GTA				LR	LR		
	comp=Z,152nm,11.0s						
LSA	**Lhasa**	**61.70**	**307**	*e*P	**P**	**19 48 19.6**	**-4.1**
LSA	**Lhasa**	**61.70**	**307**	*e*P	**P**	**19 48 23.7**	**0.0**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
LSA	**Lhasa**	**61.70**	**307**	*e*P	**P**	**19 48 23.7**	**0.0**
	comp=Z,6.1nm,0.9s,mb4.7						
ULN	**Ulaanbaatar**	**61.89**	**332**	*e*P	**P**	**19 48 24.8**	**+0.2**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**61.89**	**332**	*e*P	**P**	**19 48 24.8**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.8						
SONM	**Songino Array**	**62.17**	**332**	P	**P**	**19 48 26.1**	**-0.4**
	comp=Z,2.5nm,0.7s,mb4.5,baz=160,slow=6.3,SNR=14						
MA2	**Magadan**	**64.17**	**3**	*e*P	**P**	**19 48 39.3**	**-0.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
MA2	**Magadan**	**64.17**	**3**	*e*P	**P**	**19 48 39.3**	**-0.2**
	comp=Z,8.0nm,0.9s,mb4.8						
PALK	**Pallekele**	**65.09**	**280**	*e*P	**P**	**19 48 46.7**	**+0.4**
	comp=Z,6.5nm,0.7s,mb4.8						
ZAK	**Zakamensk**	**65.42**	**332**	*e*P	**P**	**19 48 46.9**	**-0.9**
ZAK				*e*	pP	19 49 01.0	+1.5
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
CASY	**Casey**	**66.02**	**194**	*e*P	**P**	**19 48 51.0**	**-0.3**
	comp=Z,19nm,0.7s,mb5.2						
TLY	**Talaya**	**66.15**	**333**	*e*P	**P**	**19 48 53.6**	**+1.2**
TLY				pmax	pmax		
	comp=Z,17nm,2.3s,mb4.7						
TLY				MLR	MLR		
	comp=Z,231nm,21.0s,MS4.4						
TLY	**Talaya**	**66.15**	**333**	*e*P	**P**	**19 48 53.0**	**+0.5**
	comp=Z,5.0nm,1.0s,mb4.5						
BOD	**Bodaibo**	**67.02**	**343**	*e*P	**P**	**19 48 57.3**	**-0.5**
MOY	**Mondy**	**67.36**	**332**	*e*P	**P**	**19 49 00.3**	**+0.3**
MOY				pmax	pmax		
	comp=Z,21nm,2.2s,mb4.8						
YAK	**Yakutsk**	**67.48**	**352**	P	**P**	**19 49 01.7**	**+1.1**
YAK				pmax	pmax		
	comp=Z,56nm,1.5s,mb5.4						
YAK	**Yakutsk**	**67.48**	**352**	P	**P**	**19 49 01.7**	**+1.1**
	comp=Z,56nm,1.5s,mb5.4						
VNDA	**Vanda**	**73.41**	**176**	*e*P	**P**	**19 49 35.9**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,19nm,1.1s						
VNDA	**Vanda**	**73.41**	**176**	P	**P**	**19 49 36.4**	**+0.1**
	comp=Z,7.8nm,0.7s,mb4.8,baz=322,slow=5.8,SNR=29						
VNDA				LR	LR	20 23 08.7	
	comp=Z,183nm,18.7s,MS4.4,baz=352,slow=37						
VNDA	**Vanda**	**73.41**	**176**	*e*P	**P**	**19 49 35.9**	**-0.4**
	comp=Z,19nm,1.1s,mb4.9						
BILL	**Bilibino**	**74.05**	**8**	*e*P	**P**	**19 49 41.0**	**+0.9**
BILL				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
BILL	**Bilibino**	**74.05**	**8**	*e*P	**P**	**19 49 41.0**	**+0.8**
	comp=Z,22nm,1.5s,mb4.9						
SBA	**Scott Base**	**74.09**	**175**	P	**P**	**19 49 40.0**	**-0.2**
SBA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
SBA	**Scott Base**	**74.09**	**175**	P	**P**	**19 49 40.0**	**-0.2**
	comp=Z,4.9nm,0.7s,mb4.5						
ZAL	**Zalesovo**	**76.72**	**328**	P	**P**	**19 49 55.4**	**-0.3**
	comp=Z,3.2nm,0.7s,mb4.3,baz=345,slow=6.2,SNR=13						
ZAL				LR	LR	20 23 07.5	
	comp=Z,283nm,21.7s,MS4.5,baz=350,slow=35						
NVS	**Novosibirsk**	**77.95**	**329**	*i* P	**P**	**19 50 00.5**	**-2.0**
NVS				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.8						
NVS				pmax	pmax		
	comp=N,15nm,2.1s						
NVS				pmax	pmax		
	comp=E,15nm,1.8s						
KURK	**Kurchatov**	**78.83**	**324**	*e*P	**P**	**19 50 06.0**	**-1.4**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KURK	**Kurchatov**	**78.83**	**324**	*e*P	**P**	**19 50 06.0**	**-1.4**
	comp=Z,8.1nm,1.1s,mb4.6						
MAW	**Mawson**	**82.68**	**202**	LR	LR	20 24 35.9	
	comp=Z,209nm,18.0s,MS4.5,baz=272,slow=34						
IMA	**Indian Mountai**	**83.05**	**21**	*e*P	**P**	**19 50 30.6**	**+1.3**
IMA				*e*	pP	19 50 42.5	+1.2
IMA				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.6						
IMA	**Indian Mountai**	**83.05**	**21**	*e*P	**P**	**19 50 30.6**	**+1.3**
	comp=Z,98nm,1.6s,mb5.6						
IMA				*e*	pP	19 50 42.5	+1.2
MCK	**McKinley**	**83.85**	**24**	*e*P	**P**	**19 50 33.0**	**-0.4**
MCK				pmax	pmax		
	comp=Z,43nm,1.7s,mb5.3						
MCK	**McKinley**	**83.85**	**24**	*e*P	**P**	**19 50 33.0**	**-0.4**
	comp=Z,43nm,1.7s,mb5.3						
BVAR	**Borovoye Array**	**84.40**	**324**	P	**P**	**19 50 36.4**	**0.0**
	comp=Z,11nm,1.0s,mb5.0,baz=104,slow=6.1,SNR=16						
CHKZ	**Chkalovo**	**84.44**	**325**	*e*P	**P**	**19 50 35.8**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
CHKZ	**Chkalovo**	**84.44**	**325**	*e*P	**P**	**19 50 35.8**	**-0.9**
	comp=Z,8.4nm,1.0s,mb4.8						
BRVK	**Borovoye**	**84.47**	**324**	*e*P	**P**	**19 50 37.6**	**+0.8**
BRVK				*e*	pP	19 50 51.1	+2.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
BRVK	**Borovoye**	**84.47**	**324**	*e*P	**P**	**19 50 37.6**	**+0.8**
	comp=Z,8.3nm,0.9s,mb4.9						
BRVK				*e*	pP	19 50 51.0	+2.3
COLA	**College**	**84.74**	**23**	P	**P**	**19 50 36.6**	**-1.2**
COLA				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
COLA	**College**	**84.74**	**23**	P	**P**	**19 50 36.6**	**-1.2**
	comp=Z,13nm,1.1s,mb5.0						
ILAR	**Eielson Array**	**85.08**	**24**	P	**P**	**19 50 38.0**	**-1.5**
	comp=Z,3.6nm,0.7s,mb4.6,baz=263,slow=4.4,SNR=37						
ILAR				LR	LR	20 22 15.5	
	comp=Z,163nm,21.0s,MS4.4,baz=344,slow=31						
QSPA	**South Pole Qui**	**85.33**	**180⇓**	*i*P	**P**	**19 50 41.2**	**+0.7**
	comp=Z,37nm,0.7s,mb5.6						
DAWY	**Dawson**	**87.95**	**25**	*e*P	**P**	**19 50 54.4**	**+0.9**
INK	**Inuvik**	**91.17**	**22**	P	**P**	**19 51 08.8**	**+0.1**
	comp=Z,1.2nm,0.8s,mb4.3,baz=272,slow=6.8,SNR=3.6						
NVAR	**Mina Array Bea**	**98.22**	**52**	LR	LR	20 28 24.3	
	comp=Z,345nm,20.9s,MS4.8,baz=275,slow=31						
YKA	**Yellowknife Ar**	**98.96**	**28**	LR	LR	20 31 34.1	
	comp=Z,157nm,21.0s,MS4.5,baz=280,slow=32						
MSL	**Mosul**	**102.20**	**306**	*e*P	Pdif	19 52 07.0	+7.5
MALT	**Malatya**	**105.73**	**308**	P	Pdif	19 52 19.3	+4.3
MALT				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PLCA	**Paso Flores**	**124.43**	**148**	PKP	PKPdf	19 57 05.4	+3.1
	comp=Z,1.5nm,0.8s,baz=250,slow=6.3,SNR=5.0						
SDV	**Santo Domingo**	**144.53**	**81**	PKP	PKPdf	19 57 41.0	+0.8
	comp=Z,1.6nm,0.5s,baz=318,slow=2.6,SNR=3.6						
SAML	**Samuel**	**148.97**	**116**	*e*PKPbc	PKPdf	19 57 51.3	+3.8
DBIC	**Dimbokro**	**149.78**	**275**	PKPbc	PKPdf	19 57 53.7	+4.8
	comp=Z,3.2nm,0.6s,baz=63,slow=3.4,SNR=6.8						

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*IDC **12** 19:40:35.8±0.4, 53.91N×160.64E, mb4.5/31, mb1 4.6/32, mb1mx4.6/34, mbtmp4.5/32, ML4.5/2, MS3.8/7, Ms1 3.8/7, ms1mx3.4/25, Error ellipse: s-maj=12.7km s-min=9.8km az=174.0*

*MOS **12** 19:40:37.3±1.1, 53.95N×160.81E, h17^{km}, mb4.9/71, Error ellipse: s-maj=9.5km s-min=4.8km az=90.0*

*BJI **12** 19:40:38.0, 53.80N×160.70E, h43^{km}, mB4.9, mb4.6, Ms4.2, Msz4.0*

*KRSC **12** 19:40:40.5±0.6, 53.75N×160.91E, h16^{km}±2^{km}, ML5.1*

*NEIC **12** 19:40:42.2±1.0, 53.85N×160.68E, h44^{km}±9^{km}, mb4.8/69, Error ellipse: s-maj=6.4km s-min=4.5km az=149.0*

ISC 12 19:40:42.4±0.3**, 53.74N**±0.02×**160.88E**±0.05**, h64**^{km}±2^{km}**,**
h38^{km}±9.7^{km}**:pP-P, n315, σ1§14**/354**, mb4.7**/105**, 16C-6D,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.82**	**219**	P	**P**	**19 40 56.8**	**-1.7**
SPN				S	**S**	**19 41 08.1**	**-2.4**
SPN	**Mys Shipunski**	**0.82**	**219**	*i* P	**P**	**19 40 56.8**	**-1.7**
SPN				*i* S	**S**	**19 41 08.3**	**-2.2**
NLC	**Nalytchevo**	**1.08**	**239**	P	**P**	**19 41 01.0**	**-0.9**
NLC				S	**S**	**19 41 15.2**	**-1.2**
NLC	**Nalytchevo**	**1.08**	**239**	*i* P	**P**	**19 41 01.0**	**-0.9**
NLC				*i* S	**S**	**19 41 15.5**	**-0.9**
SDLR	**Sedlovina**	**1.28**	**250**	*i* P	**P**	**19 41 04.3**	**-0.4**
UGLR	**Uglovaya**	**1.34**	**247**	*i* P	**P**	**19 41 05.2**	**-0.4**
AVH	**Avacha**	**1.37**	**250**	*i* P	**P**	**19 41 05.8**	**-0.1**
AVH				*i* S	**S**	**19 41 24.0**	**+0.7**
KOK	**Koryaka**	**1.41**	**252**	*i* P	**P**	**19 41 06.2**	**-0.4**
PET	**Petropavlovsk**	**1.52**	**243**	P	**P**	**19 41 07.5**	**-0.4**
PET				S	**S**	**19 41 26.7**	**-0.1**
PET	**Petropavlovsk**	**1.52**	**243**	*e*PN	**P**	**19 41 07.0**	**-0.9**
PET				*e*		19 41 26.8	
PET	**Petropavlovsk**	**1.52**	**243**	*e*Pn	**P**	**19 41 07.0**	**-0.9**
PET				*e*		19 41 18.9	
PET				*e*		19 41 26.8	
PET	**Petropavlovsk**	**1.52**	**243**	*i* P	**P**	**19 41 07.4**	**-0.5**
PET				*i* S	**S**	**19 41 27.3**	**+0.5**
TUMR	**Tumrok**	**1.60**	**345**	*e*P	**P**	**19 41 08.4**	**-0.7**
TUMR				*e*S	**S**	**19 41 28.8**	**-0.1**
GNL	**Ganaly**	**1.75**	**270**	*i* P	**P**	**19 41 11.2**	**+0.1**
GNL				*e*S	**S**	**19 41 33.8**	**+1.5**
KRMR	**Karymshinskiy**	**1.89**	**242**	*e*P	**P**	**19 41 13.2**	**+0.2**
KRMR				*e*S	**S**	**19 41 37.1**	**+1.5**
RUS	**Russkaya**	**1.94**	**228**	P	**P**	**19 41 13.7**	**0.0**
RUS				S	**S**	**19 41 38.1**	**+1.3**
RUS	**Russkaya**	**1.94**	**228**	*i* P	**P**	**19 41 14.5**	**+0.8**
RUS				*i* S	**S**	**19 41 39.1**	**+2.3**
KMNR	**Kamenistaya**	**2.06**	**350**	*e*P	**P**	**19 41 15.5**	**+0.2**
KMNR				*e*S	**S**	**19 41 41.3**	**+1.6**
GRL	**Gorelyy**	**2.07**	**236**	*i* P	**P**	**19 41 16.0**	**+0.5**
GRL				*e*S	**S**	**19 41 42.3**	**+2.2**
KPT	**Kopyto**	**2.26**	**351**	*e*P	**P**	**19 41 18.7**	**+0.4**
KPT				*e*S	**S**	**19 41 46.9**	**+1.9**
ZLN	**Zelenaya**	**2.28**	**359**	*e*P	**P**	**19 41 19.5**	**+1.0**
ZLN				*e*S	**S**	**19 41 48.0**	**+2.5**
LGNR	**Loginova**	**2.35**	**357**	*e*P	**P**	**19 41 19.3**	**-0.2**
LGNR				*e*S	**S**	**19 41 48.0**	**+0.8**
APC	**Apacha**	**2.38**	**251**	*e*P	**P**	**19 41 21.1**	**+1.2**
APC				*e*S	**S**	**19 41 49.9**	**+2.0**
APC				Smax			
	1μm,1.1s						
CIRR	**Tsirk**	**2.38**	**358**	*e*P	**P**	**19 41 18.5**	**-1.5**
KOZ	**Kozyrevsk**	**2.40**	**346**	P	**P**	**19 41 19.7**	**-0.4**
KOZ				S	**S**	**19 41 48.7**	**+0.4**
KOZ	**Kozyrevsk**	**2.40**	**346**	*e*P	**P**	**19 41 19.7**	**-0.4**
KOZ				*e*S	**S**	**19 41 48.4**	**+0.1**
KOZR	**Kozyr**	**2.40**	**347**	PN	**P**	**19 41 19.7**	**-0.5**
KOZR				S	**S**	**19 41 48.7**	**+0.3**
KRSR	**Krestovskiy**	**2.49**	**356**	*e*P	**P**	**19 41 21.8**	**+0.3**
KRSR				*e*S	**S**	**19 41 52.2**	**+1.5**
ESO	**Esso**	**2.53**	**331**	*e*P	**P**	**19 41 21.0**	**-1.0**
ESO				*e*S	**S**	**19 41 50.8**	**-0.9**
ESO				Smax			
	1μm,0.7s						
KLY	**Klyuchi**	**2.58**	**357**	P	**P**	**19 41 22.7**	**-0.1**
KLY				S	**S**	**19 41 53.6**	**+0.6**
KLY	**Klyuchi**	**2.58**	**357**	*e*P	**P**	**19 41 22.5**	**-0.3**
KLY				*e*S	**S**	**19 41 53.6**	**+0.6**
SRDR	**Sredinnyy**	**2.67**	**346**	*e*P	**P**	**19 41 22.9**	**-1.1**
SRDR				*e*S	**S**	**19 41 53.9**	**-1.3**
KBTR	**Krutoberegovo**	**2.71**	**24**	P	**P**	**19 41 23.7**	**-1.0**
KBTR				S	**S**	**19 41 55.8**	**-0.6**
KBTR	**Krutoberegovo**	**2.71**	**24**	*e*P	**P**	**19 41 24.6**	**-0.1**
KBTR				*e*S	**S**	**19 41 57.2**	**+0.8**
KBG	**Krutoberegovo**	**2.73**	**22**	*e*P	**P**	**19 41 24.6**	**-0.3**
KBG				*e*S	**S**	**19 41 56.6**	**-0.2**
KBG				Smax			
	6μm,0.7s						
KBG	**Krutoberegovo**	**2.73**	**22**	*e*P	**P**	**19 41 25.7**	**+0.8**
KBG				*e*S	**S**	**19 41 58.8**	**+2.0**
KBG				Smax			
	5μm,0.7s						
SVLR	**Shiveluch**	**2.85**	**4**	*e*P	**P**	**19 41 26.5**	**-0.1**
SVLR				*e*S	**S**	**19 42 00.3**	**+0.5**
BKI	**Bering**	**3.31**	**62**	*i* P	**P**	**19 41 30.4**	**-2.7**
BKI				*i* S	**S**	**19 42 04.8**	**-6.6**
PAU	**Pauzhetka**	**3.37**	**229**	*e*P	**P**	**19 41 35.8**	**+2.0**
PAU				*e*S	**S**	**19 42 15.5**	**+2.7**
PAU				Smax			
	1μm,0.9s						
SKR	**Severo-Kuril's**	**4.24**	**226**	*e*PN	**P**	**19 41 44.4**	**-1.6**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.4s						
SKR	**Severo-Kuril's**	**4.24**	**226**	*e*P	**P**	**19 41 44.4**	**-1.6**
SKR				*e*S	**S**	**19 42 33.0**	**-1.7**
ALID	**Alaid**	**4.36**	**231**	P	**P**	**19 41 49.1**	**+1.4**
OSSR	**Ossora**	**5.65**	**11**	*e*P	**P**	**19 42 02.0**	**-3.7**
OSSR				*e*S	**S**	**19 43 07.0**	**-3.0**
OSSR				Smax			
	comp=E,100nm,0.5s						
FX1	**Attu Island--F**	**7.41**	**92**	Pn	**P**	**19 42 26.7**	**-3.4**
	comp=E,56nm,0.3s,baz=326,slow=3.2,SNR=78						
FX1				Sn	**S**	**19 43 45.2**	**-8.3**
	comp=E,18nm,0.3s,baz=167,slow=21,SNR=3.9						
FX1	**Attu Island--F**	**7.41**	**92**	*e*Pn	**P**	**19 42 26.1**	**-4.0**
FX1				*e*Sn	**S**	**19 43 44.3**	**-9.3**
MA2	**Magadan**	**8.07**	**320*c***	*i*PN	**P**	**19 42 39.0**	**-0.2**
MA2				pmax	pmax		
	comp=N,6.0nm,0.7s						
MA2				pmax	pmax		
	comp=E,7.0nm,0.7s						
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2	**Magadan**	**8.07**	**320**	*e*P	**P**	**19 42 37.9**	**-1.3**
	comp=Z,42nm,0.9s						
KAMR	**Kamenskoye**	**9.18**	**16**	*e*P	**P**	**19 42 55.6**	**+1.2**
YSS	**Yuzh-Sakhalins**	**13.40**	**247**	PN	**P**	**19 43 54.6**	**+3.6**
YSS	**Yuzh-Sakhalins**	**13.40**	**247**	*e*P	**P**	**19 43 54.5**	**+3.6**
	comp=Z,14nm,0.9s						
BILL	**Bilibino**	**14.58**	**8⇑**	*e*P	**P**	**19 44 06.6**	**+0.6**
BILL				*e*S	**S**	**19 46 43.6**	**-2.8**
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BILL	**Bilibino**	**14.58**	**8**	*e*P	**P**	**19 44 06.1**	**+0.1**
	comp=Z,7.7nm,0.6s						
ASAJ	**Asahikawa**	**15.36**	**239**	P	**P**	**19 44 14.9**	**-1.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**15.36**	**239**	Pn	**P**	**19 44 14.9**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=94,slow=11,SNR=7.4						
YAK	**Yakutsk**	**18.38**	**309**	*e*P	**P**	**19 44 50.8**	**-3.1**
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK	**Yakutsk**	**18.38**	**309**	*e*P	**P**	**19 44 50.5**	**-3.4**
	comp=E,67nm,0.7s						
KLR	**Kul'dur**	**18.62**	**268**	*e*P	**P**	**19 44 55.2**	**-1.6**
CLNS	**Chul'man**	**20.57**	**293**	*e*P	**P**	**19 45 19.8**	**+2.0**
CLNS				pmax	pmax		
	comp=Z,22nm,0.8s						
CLNS				pmax	pmax		
	comp=N,11nm,0.7s						
CLNS				pmax	pmax		
	comp=E,11nm,0.7s						
MDJ	**Mudanjiang**	**22.24**	**259**	P	**P**	**19 45 32.3**	**-2.3**
MDJ				AP		19 45 45.6	
MDJ				PCP	PcP	19 49 28.0	-2.1
MDJ				S	**S**	**19 49 32.8**	**+2.6**
MDJ				SCS	ScS	19 56 44.2	+0.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb3.8						
MDJ				AMB	AMB		
	comp=Z,123nm,7.0s						
MDJ				LR	LR		
	comp=N,115nm,26.4s						
MDJ				LR	LR		
	comp=E,83nm,20.9s						
MDJ				LR	LR		
	comp=Z,105nm,20.2s						
TIXI	**Tiksi**	**22.70**	**334⇑**	*e*P	**P**	**19 45 38.0**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,100nm,13.0s						
MAJO	**Matsushiro**	**23.32**	**232**	*e*P	**P**	**19 45 46.4**	**+1.4**
MAJO				pmax	pmax		
	comp=Z,44nm,0.8s,mb4.9						
MAJO	**Matsushiro**	**23.32**	**232**	*e*P	**P**	**19 45 46.4**	**+1.4**
	comp=Z,44nm,0.8s,mb4.9						
MAT	**Matsushiro**	**23.32**	**232**	*e*P	**P**	**19 45 47.0**	**+2.0**
MAT				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.7						
MAT	**Matsushiro**	**23.32**	**232**	*e*P	**P**	**19 45 47.0**	**+2.0**
	comp=Z,25nm,0.8s,mb4.7						
MAT	**Matsushiro**	**23.32**	**232**	P	**P**	**19 45 46.5**	**+1.5**
MAT				*e*S	**S**	**19 49 57.2**	**+7.9**
CN2	**Changchun**	**25.14**	**261**	*e*P	**P**	**19 46 01.6**	**-1.0**
CN2				*e*XP	sP	19 46 16.0	-10
CN2				*e*S	**S**	**19 50 17.8**	**-2.3**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
IMA	**Indian Mountai**	**25.25**	**43**	*e*P	**P**	**19 46 04.1**	**+0.8**
IMA				pmax	pmax		
	comp=Z,43nm,1.1s,mb4.9						
IMA	**Indian Mountai**	**25.25**	**43**	*e*P	**P**	**19 46 04.0**	**+0.7**
	comp=Z,43nm,1.1s,mb4.9						
RSO	**Redoubt South**	**25.60**	**56**	*e*P	**P**	**19 46 06.2**	**-0.5**
HIA	**Hailar**	**25.73**	**277**	*e*P	**P**	**19 46 05.4**	**-2.6**
HIA				pmax	pmax		
	comp=Z,22nm,0.6s						
HIA	**Hailar**	**25.73**	**277**	*e*P	**P**	**19 46 05.3**	**-2.7**
	comp=Z,22nm,0.6s,mb4.9						
BOD	**Bodaibo**	**26.25**	**298**	*e*P	**P**	**19 46 09.9**	**-2.9**
BOD				pmax	pmax		
	comp=Z,23nm,4.2s						
MCK	**McKinley**	**27.17**	**48**	P	**P**	**19 46 20.7**	**-0.5**
MCK				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.2						
MCK	**McKinley**	**27.17**	**48**	P	**P**	**19 46 20.7**	**-0.5**
	comp=Z,11nm,1.5s,mb4.2						
COLA	**College**	**27.61**	**46**	*e*P	**P**	**19 46 24.0**	**-1.2**
COLA				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.4						
COLA	**College**	**27.61**	**46**	*e*P	**P**	**19 46 24.0**	**-1.2**
	comp=Z,16nm,1.5s,mb4.4						
KS15	**Wonju Array Si**	**27.93**	**248**	P	**P**	**19 46 28.8**	**+0.4**
ILAR	**Eielson Array**	**28.02**	**46**	P	**P**	**19 46 28.0**	**-0.9**
ILAR						19 49 40.7	
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				MLR	MLR		
	comp=Z,72nm,20.1s						
ILAR	**Eielson Array**	**28.02**	**46**	P	**P**	**19 46 28.0**	**-0.9**
	comp=Z,2.4nm,0.8s,mb3.9,baz=267,slow=8.0,SNR=25						
ILAR				PcP	PcP	19 49 40.6	-1.9
	comp=Z,0.5nm,0.7s,baz=270,slow=3.6,SNR=7.9						
ILAR				LR	LR	19 58 16.9	
	comp=Z,72nm,20.1s,baz=181,slow=38						
BJT	**Baijiatuau**	**32.92**	**264**	*e*P	**P**	**19 47 12.1**	**-0.3**
BJT				pmax	pmax		
	comp=Z,14nm,0.9s						
BJT	**Baijiatuau**	**32.92**	**264**	*e*P	**P**	**19 47 12.1**	**-0.3**
	comp=Z,14nm,0.9s,mb4.9						
INK	**Inuvik**	**33.07**	**38**	P	**P**	**19 47 12.0**	**-1.4**
INK						19 49 54.6	
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**33.07**	**38**	P	**P**	**19 47 11.9**	**-1.4**
	comp=Z,3.2nm,0.6s,mb4.4,baz=299,slow=6.4,SNR=28						
INK				PcP	PcP	19 49 54.5	-1.1
	comp=Z,1.2nm,0.4s,baz=294,slow=2.8,SNR=9.1						
INK	**Inuvik**	**33.07**	**38**	*e*P	**P**	**19 47 12.7**	**-0.6**
	comp=Z,4.1nm,0.7s,mb4.5						
INK				*e*PcP	PcP	19 49 54.9	-0.8
ULN	**Ulaanbaatar**	**33.82**	**282**	*e*P	**P**	**19 47 17.4**	**-2.6**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
ULN	**Ulaanbaatar**	**33.82**	**282**	*e*P	**P**	**19 47 17.4**	**-2.6**
	comp=Z,1.1nm,0.7s,mb3.9						
TLY	**Talaya**	**33.94**	**290⇓**	*e*P	**P**	**19 47 19.9**	**-1.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
TLY				MLR	MLR		
	comp=Z,200nm,8.0s						
TLY	**Talaya**	**33.94**	**290**	*e*P	**P**	**19 47 18.5**	**-2.5**
	comp=Z,3.4nm,1.1s,mb4.2						
SONM	**Songino Array**	**34.22**	**283**	P	**P**	**19 47 21.7**	**-1.8**
	comp=Z,1.7nm,0.8s,mb4.0,baz=57,slow=7.8,SNR=15						
SONM				PcP	PcP	19 49 58.9	-0.2
	comp=Z,1.5nm,0.7s,baz=63,slow=1.8,SNR=5.2						
JOW	**Kunigami**	**36.07**	**235**	P	**P**	**19 47 40.2**	**+0.8**
	comp=Z,42nm,0.5s,mb5.7,baz=7.9,slow=8.7,SNR=31						
SSE	**Sheshan**	**36.34**	**248**	P	**P**	**19 47 35.5**	**-6.2**
SSE				S	**S**	**19 53 13.9**	**-3.5**
SSE				XS		19 53 36.0	
SSE				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
SSE				AMB	AMB		
	comp=Z,88nm,5.2s						
SSE				LR	LR		
	comp=N,168nm,20.0s						
SSE				LR	LR		
	comp=E,118nm,20.0s						
SSE				LR	LR		
	comp=Z,281nm,25.5s						
NJ2	**Nanjing**	**36.91**	**251**	*e*P	**P**	**19 47 46.5**	**0.0**
NJ2				AP	pP	19 47 56.2	-6.4
NJ2				XP	sP	19 48 00.2	-10
NJ2				PP	PP	19 49 12.4	-1.2
NJ2				S	**S**	**19 53 25.0**	**-1.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
NJ2				LR	LR		
	comp=N,880nm,26.9s						
NJ2				LR	LR		
	comp=E,1μm,20.0s						
NJ2				LR	LR		
	comp=Z,490nm,25.8s						
BBB	**Bella Bella**	**41.16**	**62**	LR	LR	20 02 31.7	
	comp=Z,240nm,20.2s,baz=300,slow=32						
YKA	**Yellowknife Ar**	**42.37**	**43**	P	**P**	**19 48 31.2**	**+0.1**
YKA						19 50 23.9	
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA				MLR	MLR		
	comp=Z,85nm,20.4s						
YKA	**Yellowknife Ar**	**42.37**	**43**	P	**P**	**19 48 31.2**	**+0.1**
	comp=Z,2.2nm,0.5s,mb4.1,baz=298,slow=7.7,SNR=38						
YKA				PcP	PcP	19 50 23.9	-0.2
	comp=Z,1.3nm,0.9s,baz=307,slow=3.7,SNR=6.8						
YKA				LR	LR	20 08 13.3	
	comp=Z,85nm,20.4s,baz=260,slow=39						
YKA	**Yellowknife Ar**	**42.37**	**43**	P	**P**	**19 48 31.2**	**+0.1**
YKA				PcP	PcP	19 50 23.9	-0.2
YKA				LR	LR	20 08 13.3	
RES	**Resolute Bay**	**42.55**	**22**	*e*P	**P**	**19 48 32.2**	**-0.3**
RES				pmax	pmax		

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       comp=Z,12nm,0.9s,mb4.6
RES    Resolute Bay       42.55  22 eP     P       19 48 32.2 -0.3
       comp=Z,12nm,0.9s,mb4.6
ZAL    Zalesovo           42.84 302 i P    P       19 48 33.7 -1.4
ZAL                                 pmax   pmax
       comp=Z,1.0nm,0.6s
ZAL    Zalesovo           42.84 302 P      P       19 48 31.6 -3.5
       comp=Z,0.9nm,0.6s,mb3.7,baz=52,slow=7.7,SNR=4.7
ZAL                                 LR     LR      20 08 30.6
       comp=Z,219nm,18.1s,baz=1.8,slow=39
NVS    Novosibirsk        43.14 304 i P    P       19 48 34.5 -3.0
NVS                                 e              19 48 45.4
NVS                                 pmax   pmax
       comp=Z,13nm,1.2s,mb4.5
NVS                                 pmax   pmax
       comp=N,9.0nm,1.4s
NVS                                 pmax   pmax
       comp=E,12nm,1.4s
ENH    Enshi              43.60 259 eP     P       19 48 39.7 -1.9
       comp=E,13nm,0.6s,mb4.8
WMQ    Urumqi             47.20 289 P      P       19 49 08.8 -1.3
WMQ                                 PP     PP      19 50 59.0 -2.1
WMQ                                 S      S       19 55 54.0 -3.1
WMQ                                 AMB    AMB
       comp=Z,12nm,0.8s,mb4.9
WMQ                                 LR     LR
       comp=N,124nm,20.0s
WMQ                                 LR     LR
       comp=E,87nm,19.0s
WMQ                                 LR     LR
       comp=Z,148nm,20.0s
KURK   Kurchatov          47.79 302 eP     P       19 49 11.3 -3.3
KURK                                pmax   pmax
       comp=Z,8.0nm,0.6s,mb4.9
KURK   Kurchatov          47.79 302 eP     P       19 49 11.3 -3.3
       comp=Z,7.9nm,0.6s,mb4.9
CHKZ   Chkalovo           49.84 309 eP     P       19 49 26.8 -3.6
CHKZ                                pmax   pmax
       comp=Z,6.0nm,0.7s,mb4.7
CHKZ   Chkalovo           49.84 309 eP     P       19 49 26.8 -3.5
       comp=Z,5.5nm,0.7s,mb4.7
BVAR   Borovoye Array     50.36 308 P      P       19 49 31.3 -3.0
       comp=Z,2.9nm,0.4s,mb4.7,baz=66,slow=7.5,SNR=33
BRVK   Borovoye           50.39 308 eP     P       19 49 31.4 -3.1
BRVK                                pmax   pmax
       comp=Z,6.0nm,0.9s,mb4.6
BRVK   Borovoye           50.39 308 eP     P       19 49 31.4 -3.1
       comp=Z,6.0nm,0.9s,mb4.6
KMI    Kunming            51.40 260 P      P       19 49 43.4 +0.8
KMI                                 S      S       19 56 53.4 -2.4
KMI                                 AMB    AMB
       comp=Z,4.0nm,2.0s,mb4.0
KMI                                 AMB    AMB
       comp=Z,50nm,5.9s
KMI                                 LR     LR
       comp=N,128nm,18.2s
KMI                                 LR     LR
       comp=E,134nm,26.4s
KMI                                 LR     LR
       comp=Z,161nm,21.5s
FCC    Fort Churchill     52.68  39 eP     P       19 49 50.9 -0.8
FCC                                 pmax   pmax
       comp=Z,12nm,0.7s,mb4.9
FCC    Fort Churchill     52.68  39 eP     P       19 49 50.9 -0.9
       comp=Z,12nm,0.7s,mb5.0
ARCES  ARCESS Array B     52.82 342 P      P       19 49 50.6 -2.0
ARCES                               pmax   pmax
       comp=Z,6.0nm,0.9s
ARCES                               MLR    MLR
       comp=Z,73nm,20.4s
ARCES  ARCESS Array B     52.82 342 P      P       19 49 50.6 -2.1
       comp=Z,5.7nm,0.9s,mb4.5,baz=34,slow=7.4,SNR=13
ARCES                               LR     LR      20 16 12.7
       comp=Z,73nm,20.4s,baz=206,slow=41
SUMG   Summit             53.26   7 eP     P       19 49 55.5 -0.5
       comp=Z,31nm,0.9s,mb5.2
LSA    Lhasa              54.86 274 P      P       19 50 07.8 -0.4
LSA                                 AMB    AMB
       comp=Z,20nm,0.6s,mb5.3
LSA    Lhasa              54.86 274 eP     P       19 50 07.4 -0.8
       comp=Z,4.1nm,0.5s,mb4.7
NVAR   Mina Array Bea     55.08  71 P      P       19 50 10.6 +0.9
       comp=Z,1.5nm,0.8s,mb4.1,baz=310,slow=6.3,SNR=9.8
NVAR   Mina Array Bea     55.08  71 P      P       19 50 10.6 +0.9
ELK    Elko               55.17  67 eP     P       19 50 11.7 +1.4
ELK                                 pmax   pmax
       comp=Z,7.0nm,1.2s
ELK    Elko               55.17  67 eP     P       19 50 11.7 +1.5
       comp=Z,7.3nm,1.2s,mb4.6
AAK    Ala-Archa          55.22 296 i P    P       19 50 08.6 -2.0
AAK                                 pmax   pmax
       comp=Z,6.0nm,1.3s,mb4.5
AAK                                 MLR    MLR
       comp=Z,100nm,19.0s
AAK    Ala-Archa          55.22 296 eP     P       19 50 06.5 -4.1
       comp=Z,3.6nm,0.7s,mb4.5
HWUT   Hardware Ranch     56.55  64 eP     P       19 50 21.8 +1.6
       comp=Z,3.7nm,0.6s,mb4.6
FRB    Frobisher Bay      56.73  24 LR     LR      20 18 17.5
       comp=Z,91nm,19.1s,baz=147,slow=40
BW06   Boulder Array      56.80  62 eP     P       19 50 22.4 +0.4
       comp=Z,6.0nm,1.3s,mb4.5
PDAR   Pinedale Array     56.80  62 P      P       19 50 22.4 +0.5
       comp=Z,3.8nm,1.1s,mb4.3,baz=322,slow=3.0,SNR=14
DUG    Dugway             56.88  66 eP     P       19 50 22.5  0.0
DUG                                 pmax   pmax
       comp=Z,4.0nm,1.0s,mb4.4
DUG    Dugway             56.88  66 eP     P       19 50 22.5  0.0
       comp=Z,3.6nm,1.0s,mb4.4
JOF    Joensuu            57.18 335 ep     P       19 50 21.2 -3.1
       comp=Z,7.0nm,0.8s,mb4.7
RSSD   Black Hills        58.66  57 P      P       19 50 28.3 -6.6
CM31   Chiang Mai Arr     58.78 258 eP     P       19 50 36.3 +0.2
       comp=Z,5.6nm,0.7s,mb4.7
CMAR   Chiang Mai Arr     58.78 258 P      P       19 50 35.9 -0.1
CMAR                                               19 51 25.5
CMAR                                pmax   pmax
       comp=Z,3.0nm,0.6s
CMAR                                pmax   pmax
       comp=Z,1.0nm,0.7s
CMAR   Chiang Mai Arr     58.78 258 P      P       19 50 35.9 -0.1
       comp=Z,3.1nm,0.6s,mb4.5,baz=27,slow=6.6,SNR=26
CMAR                                PcP    PcP     19 51 25.4 +0.6
       comp=Z,0.8nm,0.7s,baz=19,slow=4.6,SNR=2.7
KAF    Kangasniemi        59.08 337 ep     P       19 50 35.2 -2.3
       comp=Z,4.3nm,0.5s,mb4.7,baz=29,slow=6.4
KAF    Kangasniemi        59.08 337 eP     P       19 50 35.2 -2.3
KAF                                 pmax   pmax
       comp=Z,4.0nm,0.5s,mb4.7
FINES  FINESS Array B     59.71 337 P      P       19 50 40.6 -1.3
FINES                               pmax   pmax
       comp=Z,6.0nm,0.5s
FINES  FINESS Array B     59.71 337 P      P       19 50 40.5 -1.4
       comp=Z,5.6nm,0.5s,mb4.9,baz=38,slow=9.4,SNR=57
PV10   Paradox Valley     60.22  65 eP     P       19 50 46.5 +0.8
ISCO   Idaho Springs      60.99  62 eP     P       19 50 51.5 +0.5
ISCO                                pmax   pmax
       comp=Z,3.0nm,0.9s,mb4.4
ISCO   Idaho Springs      60.99  62 eP     P       19 50 51.5 +0.5
       comp=Z,3.0nm,0.9s,mb4.4
OBN    Obninsk            62.23 328⇑eP     P       19 50 57.9 -1.1
OBN                                 e              19 53 13.8
OBN                                 eS     S       19 59 20.1 +2.0
OBN                                 pmax   pmax
       comp=Z,13nm,0.8s,mb5.1
OBN    Obninsk            62.23 328 P      P       19 50 57.7 -1.4
       comp=Z,19nm,0.8s,mb5.3
NB2    NORSAR Subarra     63.05 344 P      P       19 51 02.7 -1.8
       comp=Z,5.2nm,0.5s,mb4.9,baz=23,slow=6.5
NB2    NORSAR Subarra     63.05 344 P      P       19 51 02.7 -1.8
NB2                                 pmax   pmax
       comp=Z,5.0nm,0.5s,mb4.9
NOA    NORSAR Array B     63.05 344 P      P       19 51 03.0 -1.5
NOA                                 pmax   pmax
       comp=Z,7.0nm,0.6s
NOA    NORSAR Array B     63.05 344 P      P       19 51 03.0 -1.5
       comp=Z,6.8nm,0.6s,mb4.9,baz=21,slow=6.6,SNR=29
HFS    Hagfors            63.48 342 P      P       19 51 05.0 -2.3
HFS                                 pmax   pmax
       comp=Z,4.0nm,0.5s
HFS    Hagfors            63.48 342 P      P       19 51 05.0 -2.3
       comp=Z,4.2nm,0.5s,mb4.9,baz=45,slow=4.2,SNR=40
ANMO   Albuquerque        64.14  66 P      P       19 51 12.0 +0.1
ANMO                                pmax   pmax
       comp=Z,1.0nm,0.7s
ANMO   Albuquerque        64.14  66 P      P       19 51 12.0 +0.1
       comp=Z,0.7nm,0.7s,mb3.8,baz=306,slow=8.7,SNR=3.1
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SCHQ   Schefferville      64.86  28 P      P       19 51 15.2 -1.0
       comp=Z,3.8nm,0.6s,mb4.6,baz=16,slow=7.3,SNR=9.5
SCHQ   Schefferville      64.86  28 eP     P       19 51 15.4 -0.8
       comp=Z,8.0nm,0.8s,mb4.8
GOF    Gofitskoye         68.23 318 eP     P       19 51 36.0 -1.7
AKASG  Malin Array Be     68.30 329 P      P       19 51 36.7 -1.3
AKASG                               pmax   pmax
       comp=Z,7.0nm,0.4s
AKASG  Malin Array Be     68.30 329 P      P       19 51 36.7 -1.3
       comp=Z,6.5nm,0.4s,mb5.0,baz=28,slow=6.6,SNR=31
WMOK   Wichita Mounta     68.38  61 eP     P       19 51 38.3 -0.4
WMOK                                e              19 51 47.2
WMOK                                pmax   pmax
       comp=Z,7.0nm,1.0s,mb4.7
WMOK   Wichita Mounta     68.38  61 eP     P       19 51 38.2 -0.5
       comp=Z,6.9nm,1.0s,mb4.6
WMOK                                e              19 51 47.2
KIV    Kislovodsk         69.29 317 eP     P       19 51 44.9 +0.7
KIV                                 pmax   pmax
       comp=Z,4.0nm,0.8s,mb4.4
KIV    Kislovodsk         69.29 317 eP     P       19 51 44.9 +0.7
KIV                                 pmax   pmax
       comp=Z,4.0nm,0.8s,mb4.4
KIV                                 MLR    MLR
       comp=Z,100nm,17.0s
KIV    Kislovodsk         69.29 317 eP     P       19 51 45.0 +0.8
       comp=Z,6.1nm,0.7s,mb4.6
CCM    Cathedral Cave     69.52  53 eP     P       19 51 44.9 -0.8
CCM                                 pmax   pmax
       comp=Z,16nm,1.4s,mb4.8
CCM    Cathedral Cave     69.52  53 eP     P       19 51 44.9 -0.9
       comp=Z,16nm,1.4s,mb4.8
LTX    Lajitas            69.95  68 P      P       19 51 49.5 +1.0
LTX                                 pmax   pmax
       comp=Z,3.0nm,0.6s,mb4.4
LTX    Lajitas            69.95  68 P      P       19 51 49.5 +1.0
       comp=Z,3.0nm,0.6s,mb4.4
TXAR   Lajitas Array      69.95  68 P      P       19 51 49.0 +0.5
       comp=Z,1.8nm,0.5s,mb4.2,baz=300,slow=4.4,SNR=9.6
TXAR   Lajitas Array      69.95  68 P      P       19 51 49.0 +0.5
EKA    Eskdalemuir Ar     70.50 350 P      P       19 51 50.4 -1.0
EKA                                 pmax   pmax
       comp=Z,5.0nm,0.6s
EKA    Eskdalemuir Ar     70.50 350 P      P       19 51 50.4 -1.0
       comp=Z,5.4nm,0.6s,mb4.7,baz=21,slow=4.7,SNR=15
GNI    Garni              71.58 314⇑eP     P       19 51 58.8 +0.7
GNI                                 pmax   pmax
       comp=Z,15nm,1.3s
GNI    Garni              71.58 314 P      P       19 51 58.0 -0.1
       comp=Z,1.9nm,0.5s,mb4.3,baz=221,slow=7.4,SNR=3.6
KSP    Ksiaz              71.63 337 eP     P       19 51 58.0 -0.2
KOLS   Kolonicke sedl     71.89 333 eP     P       19 51 59.4 -0.4
KOLS                                e              19 52 09.3
CLL    Collm              71.92 339⇓iP     P       19 51 59.9  0.0
CLL                                 pmax   pmax
       comp=Z,25nm,1.1s,mb5.1
CLL    Collm              71.92 339⇓iP     P       19 51 59.9  0.0
       comp=Z,25nm,1.1s,mb5.1
CLL    Collm              71.92 339 ⇓P     P       19 51 59.9  0.0
       comp=Z,logA/T=1.4,mb5.1
UPC    Upice              72.01 337 eP     P       19 52 00.6 +0.1
DPC    Dobruska-Polom     72.08 337 eP     P       19 52 01.3 +0.4
OKC    Ostrava-Krasne     72.13 336 eP     P       19 52 00.6 -0.6
CRVS   Cervenica-Dubn     72.14 333 eP     P       19 51 58.5 -2.8
PVCC   Panska Ves         72.31 338 eP     P       19 52 02.5 +0.2
MORC   Moravsky Berou     72.33 336 eP     P       19 52 02.1 -0.3
MORC                                pmax   pmax
       comp=Z,10.0nm,0.9s,mb4.8
MORC   Moravsky Berou     72.33 336 eP     P       19 52 02.1 -0.3
       comp=Z,9.9nm,0.9s,mb4.7
PRU    Pruhonice          72.83 338 eP     P       19 52 04.2 -1.0
MOX    Moxa               72.83 340 eP     P       19 52 05.6 +0.4
MOX                                 pmax   pmax
       comp=Z,19nm,1.1s,mb4.9
MOX    Moxa               72.83 340 eP     P       19 52 05.6 +0.4
       comp=Z,19nm,1.1s,mb4.9
MOX    Moxa               72.83 340 i P    P       19 52 05.6 +0.4
       comp=Z,logA/T=1.2,mb4.9
VRAC   Vranov             72.99 336 P      P       19 52 06.8 +0.6
VRAC                                pmax   pmax
       comp=Z,9.0nm,0.9s
VRAC   Vranov             72.99 336 P      P       19 52 06.8 +0.7
       comp=Z,9.1nm,0.9s,mb4.7,baz=29,slow=6.4,SNR=10
VYHS   Vyhne              73.20 335 eP     P       19 52 07.8 +0.4
VYHS                                e              19 52 14.3
PSZ    Piszkesteto        73.46 334 eP     P       19 52 08.8 -0.1
PSZ                                 pmax   pmax
       comp=Z,4.0nm,0.7s,mb4.5
PSZ    Piszkesteto        73.46 334 eP     P       19 52 08.8 -0.1
       comp=Z,4.4nm,0.7s,mb4.5
SMOL   Smolenice          73.53 336 eP     P       19 52 10.8 +1.5
GRA1   Grafenberg Arr     73.81 340 eP     P       19 52 12.2 +1.2
       comp=Z,13nm,0.8s,mb4.9
GRF    Grafenberg Arr     73.81 340 eP     P       19 52 12.2 +1.2
GRF                                 pmax   pmax
       comp=Z,13nm,0.8s,mb4.9
GRF    Grafenberg Arr     73.81 340 eP     P       19 52 12.2 +1.2
GRF                                 pmax   pmax
       comp=Z,13nm,0.8s,mb4.9
GRF    Grafenberg Arr     73.81 340 eP     P       19 52 12.2 +1.2
       comp=Z,13nm,0.8s,mb4.9
KHC    Kasperske Hory     73.85 338 eP     P       19 52 12.1 +0.9
KHC                                 e              19 52 20.5
KHC    Kasperske Hory     73.85 338 eP     P       19 52 12.1 +0.9
KHC                                 pP     pP      19 52 20.5 -8.4
ZST    Bratislava         73.91 336 eP     P       19 52 12.8 +1.2
MLR    Muntele Rosu       73.94 329 P      P       19 52 12.5 +0.7
MLR                                 pmax   pmax
       comp=Z,13nm,0.5s
MLR    Muntele Rosu       73.94 329 P      P       19 52 12.5 +0.7
       comp=Z,13nm,0.5s,mb5.1,baz=304,slow=2.0,SNR=66
SRO    Srobarova          73.96 335 eP     P       19 52 12.4 +0.5
SRO                                 e              19 52 21.6
WET    Wettzell           73.99 339 eP     P       19 52 12.8 +0.8
WET                                 pmax   pmax
       comp=Z,7.0nm,0.8s,mb4.6
WET    Wettzell           73.99 339 eP     P       19 52 12.8 +0.8
       comp=Z,7.0nm,0.8s,mb4.6
GEC2   GERESS Array S     74.09 338 eP     P       19 52 13.1 +0.5
GEC2                                pmax   pmax
       comp=Z,5.0nm,0.8s,mb4.5
GEC2   GERESS Array S     74.09 338 eP     P       19 52 13.1 +0.5
       comp=Z,5.0nm,0.8s,mb4.5
GERES  GERESS Array B     74.09 338 P      P       19 52 12.4 -0.2
GERES                               pmax   pmax
       comp=Z,4.0nm,0.5s
GERES  GERESS Array B     74.09 338 P      P       19 52 12.4 -0.2
       comp=Z,4.4nm,0.5s,mb4.6,baz=30,slow=5.7,SNR=25
BOYT   Boyabat            74.47 321 i P    P       19 52 11.6 -3.4
GIVF   Givet              74.58 344 eP     P       19 52 15.7 +0.3
CTA    Charters Tower     74.60 194 P      P       19 52 16.5 +0.4
CTA                                 pmax   pmax
       comp=Z,5.0nm,0.6s
CTA    Charters Tower     74.60 194 P      P       19 52 16.5 +0.4
       comp=Z,4.7nm,0.6s,mb4.6,baz=2.4,slow=3.5,SNR=9.1
CTAO   Charters Tower     74.60 194 eP     P       19 52 16.5 +0.4
CTAO                                pmax   pmax
       comp=Z,7.0nm,0.8s,mb4.6
CTAO   Charters Tower     74.60 194 eP     P       19 52 16.5 +0.4
       comp=Z,7.3nm,0.8s,mb4.7
BAIF   Baives             74.72 345 eP     P       19 52 16.4 +0.2
       comp=Z,9.2nm,0.7s,mb4.5
BAIF   Baives             74.72 345 eP     P       19 52 16.4 +0.2
BAIF                                pmax   pmax
       comp=Z,5.0nm,0.7s,mb4.5
BALT   Daday              74.94 322 i P    P       19 52 18.0 +0.4
ARSA   Arzberg            75.17 336⇑iP     P       19 52 19.9 +1.1
       comp=Z,6.2nm,0.6s,mb4.7
ELZG   Elazig             75.38 316 i P    P       19 52 21.2 +0.9
BFO    Black Forest       75.68 341 eP     P       19 52 22.0 +0.3
BFO                                 pmax   pmax
       comp=Z,4.0nm,0.8s,mb4.4
BFO    Black Forest       75.68 341 eP     P       19 52 22.0 +0.3
       comp=Z,4.0nm,0.8s,mb4.4
MALT   Malatya            75.77 317 P      P       19 52 19.3 -3.1
MALT                                e      pP      19 52 34.1 -6.1
MALT                                pmax   pmax
       comp=Z,7.0nm,1.2s,mb4.5
MALT   Malatya            75.77 317 P      P       19 52 19.3 -3.2
       comp=Z,6.8nm,1.2s,mb4.5
MALT                                e      pP      19 52 34.1 -6.0
CDF    Champ du Feu       75.80 342 eP     P       19 52 22.6 +0.2
       comp=Z,37nm,1.1s,mb4.9
CDF    Champ du Feu       75.80 342 eP     P       19 52 22.6 +0.2
CDF                                 pmax   pmax
```

```
       comp=Z,19nm,1.1s,mb4.9
ELDT   Eldivan            75.83 321 i P    P       19 52 23.1 +0.4
KBA    Koelnbreinsper     75.84 338⇓iP     P       19 52 23.8 +1.2
       comp=Z,43nm,1.1s,mb5.3
KBA    Koelnbreinsper     75.84 338⇓iP     P       19 52 23.8 +1.2
KBA                                 pmax   pmax
       comp=Z,43nm,1.1s,mb5.3
WATA   Walderalm          75.98 339⇑iP     P       19 52 24.3 +0.8
       comp=Z,13nm,1.2s,mb4.7
WATA   Walderalm          75.98 339⇑iP     P       19 52 24.3 +0.8
WATA                                pmax   pmax
       comp=Z,13nm,1.2s,mb4.7
WTTA   Wattenberg         76.04 339⇑iP     P       19 52 24.9 +1.1
       comp=Z,11nm,0.7s,mb4.9
WTTA   Wattenberg         76.04 339⇑iP     P       19 52 24.9 +1.1
WTTA                                pmax   pmax
       comp=Z,11nm,0.7s,mb4.9
MOTA   Moosalm            76.07 339⇑iP     P       19 52 24.6 +0.6
       comp=Z,6.0nm,1.0s,mb4.5
MOTA   Moosalm            76.07 339⇑iP     P       19 52 24.6 +0.6
MOTA                                pmax   pmax
       comp=Z,6.0nm,1.0s,mb4.5
OBKA   Obir               76.10 337⇑iP     P       19 52 25.2 +1.1
MEZF   Maizieres J’vi     76.10 344 eP     P       19 52 24.4 +0.3
       comp=Z,12nm,0.7s,mb4.6
SQTA   Sankt Quirin       76.17 339⇑iP     P       19 52 25.6 +1.1
       comp=Z,6.8nm,0.9s,mb4.6
SQTA   Sankt Quirin       76.17 339⇑iP     P       19 52 25.6 +1.1
SQTA                                pmax   pmax
       comp=Z,7.0nm,0.9s,mb4.6
HAU    Haudompre          76.36 343 eP     P       19 52 25.6  0.0
FVI    Forni Avoltri      76.42 338 eP     P       19 52 26.3 +0.3
BRTR   Keskin Array B     76.42 321 P      P       19 52 25.2 -0.9
BRTR                                pmax   pmax
       comp=Z,2.0nm,0.5s
BRTR   Keskin Array B     76.42 321 P      P       19 52 25.2 -0.9
       comp=Z,1.8nm,0.5s,mb4.2,baz=54,slow=3.3,SNR=11
PTCC   Patocco-Chiusa     76.47 338 eP     P       19 52 26.3  0.0
FLN    La Foliniere       76.66 347 eP     P       19 52 26.9 -0.4
       comp=Z,35nm,0.9s,mb5.0
FLN    La Foliniere       76.66 347 eP     P       19 52 26.9 -0.4
FLN                                 pmax   pmax
       comp=Z,18nm,0.9s,mb5.0
WRAB   Tennant Creek      76.86 206 P      P       19 52 26.7 -2.2
WRAB                                pmax   pmax
       comp=Z,23nm,1.4s,mb4.9
WRAB   Tennant Creek      76.86 206 P      P       19 52 26.7 -2.3
       comp=Z,23nm,1.4s,mb4.9
DAVOX  Davos              76.86 340 P      P       19 52 29.0 +0.6
       comp=Z,7.6nm,0.6s,mb4.8,baz=345,slow=4.8,SNR=11
WRA    Warramunga Arr     76.87 206 P      P       19 52 29.4 +0.4
WRA                                 pmax   pmax
       comp=Z,4.0nm,0.8s
WRA    Warramunga Arr     76.87 206 P      P       19 52 29.4 +0.4
       comp=Z,4.3nm,0.8s,mb4.4,baz=17,slow=6.0,SNR=14
BRMO   Bormio             77.05 340 eP     P       19 52 30.8 +1.2
GRR    Gorron             77.08 348 eP     P       19 52 28.8 -0.8
ESKT   Eskisehir          77.63 323 i P    P       19 52 32.1 -0.7
ULDT   Uludag             77.68 324 i P    P       19 52 33.5 +0.3
CABF   La Chapelle        77.75 343 eP     P       19 52 34.0 +0.6
SSF    Saint Saulge       77.75 344 eP     P       19 52 33.4 +0.1
SSF                                 pmax   pmax
       comp=Z,9.0nm,0.9s,mb4.7
SSF    Saint Saulge       77.75 344 eP     P       19 52 33.4 +0.1
       comp=Z,8.6nm,0.9s,mb4.7
VAI    Varese             77.96 340 eP     P       19 52 35.1 +0.6
AVF    Avril sur Loir     78.04 344 eP     P       19 52 34.9  0.0
       comp=Z,16nm,0.8s,mb4.7
AVF    Avril sur Loir     78.04 344 eP     P       19 52 34.9  0.0
AVF                                 pmax   pmax
       comp=Z,8.0nm,0.8s,mb4.7
PALK   Pallekele          78.36 266 eP     P       19 52 36.3 -1.1
       comp=Z,21nm,1.0s,mb5.0
BTOK   Tokmak             78.40 325 i P    P       19 52 35.7 -1.4
LPL    La Plagne          78.69 342 eP     P       19 52 40.1 +1.6
       comp=Z,29nm,0.9s,mb4.9
LPL    La Plagne          78.69 342 eP     P       19 52 40.1 +1.6
LPL                                 pmax   pmax
       comp=Z,15nm,0.9s,mb4.9
LPG    La Plagne          78.70 342 eP     P       19 52 40.3 +1.7
       comp=Z,28nm,0.8s,mb5.0
LPG    La Plagne          78.70 342 eP     P       19 52 40.3 +1.7
LPG                                 pmax   pmax
       comp=Z,14nm,0.8s,mb4.9
TCF    Toulx Ste Croi     78.71 345 eP     P       19 52 39.1 +0.5
MFF    Saint Martin d     78.74 347 eP     P       19 52 39.1 +0.3
FSSB   Fossombrone        79.17 337 eP     P       19 52 42.1 +0.9
BDI    Bagni Di Lucca     79.31 339 eP     P       19 52 43.3 +1.3
ORIF   Oris-en-Rattie     79.42 342 eP     P       19 52 43.2 +0.6
       comp=Z,19nm,0.8s,mb4.7
ORIF   Oris-en-Rattie     79.42 342 eP     P       19 52 43.2 +0.6
ORIF                                pmax   pmax
       comp=Z,9.0nm,0.8s,mb4.8
MBDF   Montbardon         79.44 342 eP     P       19 52 43.8 +1.1
       comp=Z,14nm,0.8s,mb4.7
MBDF   Montbardon         79.44 342 eP     P       19 52 43.8 +1.1
MBDF                                pmax   pmax
       comp=Z,7.0nm,0.8s,mb4.6
SNTG   Esanatoglia        79.55 337 eP     P       19 52 44.1 +0.9
VIVF   Saint-Julien-l     79.70 343 eP     P       19 52 45.1 +1.1
       comp=Z,16nm,0.9s,mb4.6
VIVF   Saint-Julien-l     79.70 343 eP     P       19 52 45.1 +1.1
VIVF                                pmax   pmax
       comp=Z,8.0nm,0.9s,mb4.7
DNZL   Cakiroluk          79.90 323 i P    P       19 52 45.2 -0.1
NRCA   Norcia             79.91 337 eP     P       19 52 46.1 +0.9
CAF    Calviac            80.06 345 eP     P       19 52 45.8 -0.2
SBF    Sospel             80.15 341 eP     P       19 52 46.1 -0.4
       comp=Z,16nm,0.7s,mb4.8
SBF    Sospel             80.15 341 eP     P       19 52 46.1 -0.4
SBF                                 pmax   pmax
       comp=Z,8.0nm,0.6s,mb4.8
LFF    La Frestale        80.24 346 eP     P       19 52 46.9 -0.1
AYDN   Tasoluk            80.34 324 i P    P       19 52 47.9 +0.3
ASAR   Alice Springs      80.54 205 P      P       19 52 49.8 +0.8
       comp=Z,3.5nm,0.6s,mb4.5,baz=19,slow=6.0,SNR=17
ASAR                                LR     LR      20 30 07.0
       comp=Z,52nm,19.6s,baz=36,slow=37
ASPA   Alice Springs      80.54 205 eP     P       19 52 50.3 +1.3
FRF    La Foret Royal     80.59 341 eP     P       19 52 48.5 -0.3
LMR    La Mourre          80.84 341 eP     P       19 52 50.8 +0.7
       comp=Z,39nm,1.0s,mb5.0
LMR    La Mourre          80.84 341 eP     P       19 52 50.8 +0.7
LMR                                 pmax   pmax
       comp=Z,19nm,1.0s,mb5.0
PGF    Pioggiola          81.09 339 eP     P       19 52 51.4 -0.1
       comp=Z,242nm,1.6s,mb5.6
PGF    Pioggiola          81.09 339 eP     P       19 52 51.4 -0.1
PGF                                 pmax   pmax
       comp=Z,121nm,1.6s,mb5.6
MTLF   Montolieu          81.58 344 eP     P       19 52 55.4 +1.4
ASF    Jabal al Asfar     81.68 315 P      P       19 52 54.2 -0.6
       comp=Z,6.8nm,1.0s,mb4.5,baz=257,slow=4.6,SNR=5.2
EPF    Esparros           82.17 346 eP     P       19 52 57.7 +0.6
       comp=Z,24nm,1.0s,mb4.8
EPF    Esparros           82.17 346 eP     P       19 52 57.7 +0.6
EPF                                 pmax   pmax
       comp=Z,12nm,1.0s,mb4.8
ETSF   Etsaut             82.43 346 eP     P       19 52 59.7 +1.3
MBWA   Marble Bar         82.60 218 P      P       19 52 59.5 -0.2
       comp=Z,11nm,1.0s,mb4.8
IDI    Anoyia             83.51 325 P      P       19 53 02.5 -1.4
       comp=Z,6.8nm,0.6s,mb5.0,baz=1.0,slow=7.9,SNR=12
HILS   Ha’il              83.61 309 P      P       19 53 05.2 +0.5
RYDS   Riyadh             83.97 303 P      P       19 53 15.5 +8.9
EIL    Elat               84.68 315 P      P       19 53 10.3 +0.3
       comp=Z,11nm,0.7s,mb5.1,baz=341,slow=12,SNR=16
EIL    Elat               84.68 315 P      P       19 53 10.3 +0.3
MZLS   Mizel              84.81 304 P      P       19 53 11.1 +0.3
AFFS   ‘Afif              85.97 306 P      P       19 53 16.9 +0.4
ESDC   Sonseca Array      86.05 348 P      P       19 53 17.3 +0.9
       comp=Z,0.9nm,0.6s,mb4.2,baz=2.8,slow=5.2,SNR=7.5
STKA   Stephens Creek     86.89 196 P      P       19 53 21.8 +1.0
       comp=Z,3.9nm,0.9s,mb4.6,baz=27,slow=5.1,SNR=4.6
STKA   Stephens Creek     86.89 196 eP     P       19 53 21.9 +1.1
EVO    Evora              87.60 351 eP     P       19 53 24.3 +0.2
       comp=Z,25nm,1.1s,mb5.1
LBTB   Lobatse           136.16 293 PKIKP  PKPdf   19 59 59.3 +3.1
LBTB                                pmax   pmax
       comp=Z,3.0nm,0.9s
LBTB   Lobatse           136.16 293 PKP    PKPdf   19 59 59.3 +3.1
       comp=Z,3.0nm,0.9s,baz=359,slow=8.8,SNR=5.0
QSPA   South Pole Qui    143.49 180⇑iP     PKPbc   20 00 07.4 +1.2
PLCA   Paso Flores       143.54  90 PKIKP  PKPdf   20 00 08.7 -0.1
PLCA                                pmax   pmax
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.0nm,1.0s						
PLCA	**Paso Flores**	**143.54**	**90**	PKhKP		20 00 08.7	
	comp=Z,1.6nm,0.9s,baz=296,slow=5.8,SNR=4.0						

TRN 12 19:45:48.8,17.92N×61.31W,h35^{km},M3.5(FDF), **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEG	**Port Louis**	**1.52**	**187**	*e*P	P	19 46 14.8	+0.9
DEG	**La Desirade**	**1.62**	**171**	*e*P	P	19 46 16.3	+1.0
BCG	**Bois Riant Cap**	**1.85**	**189**	*e*P	P	19 46 19.9	+1.3
SCG	**Saint Claude**	**1.92**	**191**	*e*P	P	19 46 20.9	+1.4

OTT 12 19:52:15.3±0.9**,64.50N×88.28W,h18^{km},MN2.9**/4**, 176km northeast from Chesterfield Inlet, Nu Boothia Ungava Seismic Zone.,Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QILN	**Qililugaq Expl**	**2.30**	**19**	PN	Pn	19 52 53.3	+0.2
QILN				SN	Sn	19 53 21.2	+0.1
QILN				Trac		19 53 28.6	
	comp=Z,46nm,0.1s						
YRTN	**Rankin Inlet**	**2.41**	**227**	PN	Pn	19 52 54.0	-0.6
YRTN				SN	Sn	19 53 23.4	-0.5
YRTN				Trac		19 53 31.0	
	comp=Z,47nm,0.1s						
FCC	**Fort Churchill**	**6.39**	**208**	PN	Pn	19 53 47.0	-3.9
FCC				SN	Sn	19 54 55.5	-8.7
FCC				Trac		19 55 36.0	
	comp=Z,8.0nm,0.4s						
FRB	**Frobisher Bay**	**8.66**	**86**	PN	P	19 54 15.6	-7.1
FRB				SN	Sn	19 55 52.1	-8.8
FRB				LG		19 56 42.8	
FRB				Trac		19 56 53.9	
	comp=Z,2.5nm,0.2s						
PINU	**Pond Inlet**	**9.03**	**20**	PN	P	19 54 20.7	-7.2
PINU				SN	Sn	19 55 56.5	-14
PINU				LG		19 56 48.5	
SILO	**Sutton Inlier**	**10.20**	**169**	PN	P	19 54 36.9	-6.9
SILO				SN	S	19 56 32.4	-6.3
SILO				LG		19 57 34.9	
SILO				Trac		19 57 42.7	
	comp=Z,1.8nm,0.4s						
RES	**Resolute Bay**	**10.48**	**350**	PN	P	19 54 39.4	-8.2
KUQ	**Kuujjuuaa**	**11.46**	**115**	PN	P	19 54 54.7	-6.3
YKW3	**Yellowknife Ar**	**11.87**	**273**	PN	P	19 54 57.9	-8.7
YKW3				SN	S	19 56 59.0	-21
YKW3				LG		19 58 15.5	
YKW3				Trac		19 58 29.4	
	comp=Z,4.5nm,0.6s						
VIMO	**Victor Mine**	**11.95**	**167**	PN	P	19 55 00.6	-7.0
VIMO				SN	S	19 57 03.8	-18
VIMO				Trac		19 57 57.8	
	comp=Z,0.4nm,0.2s						
PKLO	**Pickle Lake**	**13.09**	**186**	PN	P	19 55 17.7	-5.1
SCHQ	**Schefferville**	**14.45**	**122**	PN	P	19 55 33.8	-6.8
SCHQ				SN	S	19 58 01.3	-20
SCHQ				Trac		19 58 47.6	
	comp=Z,0.2nm,0.1s						

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*ATH **12** 20:17:00.1,36.66N×21.06E,h5^{km},MD3.5/5*

*NEIC **12** 20:17:00.1,36.66N×21.06E,h5^{km},MD3.5(ATH),After ATH.*

*CSEM **12** 20:17:01.1±0.3,36.72N×21.13E,h1^{km}±3^{km},MD3.5,Error ellipse: s-maj=8.2km s-min=2.4km az=45.0*

ISC 12 20:17:00.7±1.0**,36.8N**±0.1×**21.18E**±0.07**,h5^{km},n13, σ0^{s}94**/13**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.70**	**58**	*e*PB	**Pb**	**20 17 15.8**	**+0.7**
VLI	**Veliai**	**1.42**	**93**	*e*PG	**Pg**	**20 17 27.8**	**-1.2**
VLS	**Valsamata**	**1.44**	**341**	*e*PG	**Pg**	**20 17 29.2**	**-0.4**
KYTH	**Kithira**	**1.59**	**109**	*e*PB	**Pb**	**20 17 31.0**	**+0.8**
EVR	**Evrytania**	**2.16**	**13**	*e*PG	**Pg**	**20 17 43.2**	**-0.7**
SOI	**Samo**	**4.27**	**289**	*e*Pn	**Pn**	**20 18 07.1**	**-0.8**
SOI	**Samo**	**4.27**	**289**	*e*Pn	**Pn**	**20 18 07.1**	**-0.8**
MTTG	**Motta San Giov**	**4.53**	**287**	*e*Pn	**Pn**	**20 18 10.7**	**-0.9**
MTTG	**Motta San Giov**	**4.53**	**287**	*e*Pn	**Pn**	**20 18 10.6**	**-0.9**
SGO	**Sicignano**	**5.92**	**311**	*e*Pn	**Pn**	**20 18 32.1**	**+0.8**
SGO	**Sicignano**	**5.92**	**311**	*e*Pn	**Pn**	**20 18 32.2**	**+0.9**
MRLC	**Muro Lucano**	**5.94**	**313**	*e*Pn	**Pn**	**20 18 33.1**	**+1.6**
MRLC	**Muro Lucano**	**5.94**	**313**	*e*Pn	**Pn**	**20 18 33.1**	**+1.6**

IDC 12 20:44:10.2±1.4**,2.87N×126.61E,mb3.8**/4**,mb1 4.0**/4**, mb1mx3.7**/16**,mbtmp3.8**/4**,Error ellipse: s-maj=156.8km s-min=23.0km az=72.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.91**	**162**	P	P	20 49 25.4	-1.4
	3.1nm,0.6s,baz=340,slow=10,SNR=20						
ASAR	**Alice Springs**	**27.32**	**165**	P	P	20 49 57.3	-1.6
	0.5nm,0.5s,baz=348,slow=7.6,SNR=11						
STKA	**Stephens Creek**	**37.38**	**159**	P	P	20 51 25.1	-1.5
	3.4nm,0.8s,baz=337,slow=6.4,SNR=6.0						
SONM	**Songino Array**	**48.07**	**342**	P	P	20 52 51.4	-2.0
	0.2nm,0.5s,baz=164,slow=10.0,SNR=3.5						

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*MDD **12** 20:49:53.7±2.0,37.06N×11.03W,mb3.6/10,Error ellipse: s-maj=17.8km s-min=12.4km az=50.0,PRXIMO*

*NEIC **12** 20:49:53.1,36.97N×11.20W,h15^{km},MG3.7(MDD),After MDD.*

*CSEM **12** 20:49:53.8±0.5,37.10N×11.09W,h8^{km},ML2.9/11,Error ellipse: s-maj=9.2km s-min=5.5km az=49.0*

INMG 12 20:49:54.9±1.2**,36.98N×11.16W,h18^{km}**±33^{km}**,ML2.0, Error ellipse: s-maj=31.4km s-min=5.0km az=60.0, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	**2.02**	**73**	*e*Pn	Pn	20 50 26.5	-2.2
PTEO				*e*Sn	Sn	20 50 49.8	-4.0
	15nm,0.4s						
PTEO	**Sao Teotonio**	**2.02**	**73**	*e*Pn	Pn	20 50 26.5	-2.2
PTEO				*e*Sn	Sn	20 50 49.8	-4.0
	15nm,0.4s						
PLOU	**Loures**	**2.48**	**39**	*e*Pn	Pn	20 50 32.6	-2.6
PLOU				*e*Sn	Sn	20 51 01.6	-3.7
	8.5nm,0.5s						
PLOU	**Loures**	**2.48**	**39**	Pn	Pn	20 50 32.6	-2.6
PLOU				Sn	Sn	20 51 01.6	-3.7
	4.2nm,0.5s						
MOE	**Montemor**	**2.71**	**54**	*e*Sn	Sn	20 51 06.2	-4.9
PBEJ	**Beja**	**2.82**	**67**	*e*Pn	Pn	20 50 37.3	-2.8
PBEJ				*e*Sn	Sn	20 51 08.7	-5.3
	2.3nm,0.2s						
PBEJ	**Beja**	**2.82**	**67**	*e*Pn	Pn	20 50 37.3	-2.8
PBEJ				*e*Sn	Sn	20 51 08.7	-5.3
	2.3nm,0.2s						
PALC	**Alcoutim**	**2.98**	**80**	*e*Pn	Pn	20 50 39.3	-3.1
PALC				*e*Sn	Sn	20 51 12.6	-5.4
	4.5nm,0.3s						
PALC	**Alcoutim**	**2.98**	**80**	*e*Pn	Pn	20 50 39.3	-3.1
PALC				*e*Sn	Sn	20 51 12.6	-5.4
	4.5nm,0.3s						
EMIN	**Mina Concepcio**	**3.66**	**76**	Pn	Pn	20 50 48.4	-3.6
	0.2nm,0.1s,SNR=6.8						
EMIN				Sn	Sn	20 51 28.2	-7.1
	1.4nm,0.2s,SNR=15						
EMIN	**Mina Concepcio**	**3.66**	**76**	Pn	Pn	20 50 48.4	-3.6
	0.2nm,0.1s,SNR=6.8						
EMIN				Sn	Sn	20 51 28.2	-7.0
	1.4nm,0.2s,SNR=15						
EBAD	**Badajoz**	**3.73**	**60**	Pn	Pn	20 50 49.6	-3.4
	0.2nm,0.0s,SNR=7.9						
EBAD				Sn	Sn	20 51 30.9	-6.0
	1.5nm,0.1s,SNR=10						
EBAD	**Badajoz**	**3.73**	**60**	Pn	Pn	20 50 49.6	-3.4
	0.2nm,0.0s,SNR=7.9						
EBAD				Sn	Sn	20 51 31.0	-6.0
PCBR	**Castelo Branco**	**4.06**	**44**	*e*Pn	Pn	20 50 54.3	-3.5
PCBR				*e*Sn	Sn	20 51 38.9	-6.6
ESPR	**Espera**	**4.25**	**90**	Pn	Pn	20 50 56.7	-3.8
	2.5nm,0.1s,SNR=22						
ESPR				Sn	Sn	20 51 43.4	-6.8
	5.8nm,0.4s,SNR=5.0						
ESPR	**Espera**	**4.25**	**90**	Pn	Pn	20 50 56.7	-3.7
	2.5nm,0.1s,SNR=22						
ESPR				Sn	Sn	20 51 43.4	-6.8
	5.8nm,0.4s,SNR=5.0						
PVIS	**Viseu**	**4.52**	**33**	*e*Pn	Pn	20 51 00.2	-4.0
EMIJ	**Mijas**	**5.14**	**93**	Pn	Pn	20 51 09.6	-3.5
	0.4nm,0.2s,SNR=4.0						
EADA	**Adamuz**	**5.36**	**75**	Pn	Pn	20 51 12.1	-4.1
	0.7nm,0.1s,SNR=8.1						
EADA				Sn	Sn	20 52 10.3	-7.9
	1.9nm,0.2s,SNR=7.1						
EADA	**Adamuz**	**5.36**	**75**	Pn	Pn	20 51 12.1	-4.0
	0.7nm,0.1s,SNR=8.1						
EADA				Sn	Sn	20 52 10.3	-7.9
	1.9nm,0.2s,SNR=7.1						
ELOB	**Lobios**	**5.44**	**25**	Pn	Pn	20 51 12.8	-4.4
	0.2nm,0.1s,SNR=4.0						
ELOB				Sn	Sn	20 52 12.1	-8.0
	0.3nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.44**	**25**	Pn	Pn	20 51 12.8	-4.4
	0.2nm,0.1s,SNR=4.0						
ELOB				Sn	Sn	20 52 12.1	-8.0
	0.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.02**	**33**	Pn	Pn	20 51 21.0	-4.4
	0.4nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	20 52 26.6	-8.0
	1.2nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**6.02**	**33**	Pn	Pn	20 51 21.0	-4.4
	0.4nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	20 52 26.6	-8.1
	1.2nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.19**	**15**	Sn	Sn	20 52 28.5	-10
	0.7nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.19**	**15**	Sn	Sn	20 52 28.5	-10
	0.7nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**6.26**	**62**	Pn	Pn	20 51 24.5	-4.4
	0.5nm,0.1s,baz=246,slow=13,SNR=5.9						
ESDC				Sn	Sn	20 52 31.5	-9.3
	0.8nm,0.2s,baz=247,slow=23,SNR=4.6						
ESDC	**Sonseca Array**	**6.26**	**62**	Pn	Pn	20 51 24.5	-4.4
	0.5nm,0.1s,SNR=5.9						
ESDC				Sn	Sn	20 52 31.5	-9.3
	0.8nm,0.2s,SNR=4.6						
EINC	**Incio**	**6.38**	**26**	Pn	Pn	20 51 25.9	-4.7
	0.3nm,0.1s,SNR=7.9						
EINC	**Incio**	**6.38**	**26**	Pn	Pn	20 51 25.9	-4.7
	0.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.49**	**80**	Sn	Sn	20 52 37.9	-8.6
	SNR=4.0						
EQES	**Quesada**	**6.49**	**80**	Sn	Sn	20 52 37.9	-8.6
	0.3nm,0.2s,SNR=4.0						
EPON	**Pontenova**	**7.04**	**25**	Pn	Pn	20 51 34.5	-5.4
	0.6nm,0.2s,SNR=4.0						
EPON	**Pontenova**	**7.04**	**25**	Pn	Pn	20 51 34.5	-5.3
	0.6nm,0.2s,SNR=4.0						

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*NIED **12** 21:19:00,36.40N×141.00E,h32^{km},Mw3.4 Best double couple: M$_0$1.49×10^{14} NP1:φ$_s$258°,δ79°,λ-112°. NP2: φ$_s$142°,δ24°,λ-28°.*

*IDC **12** 21:19:06.7±1.9,36.44N×142.06E,mb3.5/3,mb1 3.7/5, mb1mx3.5/23,mbtmp3.7/5,ML3.3/2,Error ellipse: s-maj=61.9km s-min=24.5km az=83.0*

*JMA **12** 21:19:14.3±0.1,36.42N×141.04E,h46^{km}±1^{km},M3.6*

JMA Felt I J1.

ISC 12 21:19:13.2±0.9**,36.38N**±0.04×**141.12E**±0.09**,h46^{km}**±10^{km}**, n14,**σ**0^{s}88**/22**,mb3.5**/3**,6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.50**	**298**	⇓P	**P**	**21 19 24.3**	**+0.1**
JHO				S	**S**	**21 19 31.2**	**-0.7**
JYT	**Yasato**	**0.76**	**259**	⇓P	**P**	**21 19 28.2**	**+0.6**
JYT				S	**S**	**21 19 37.7**	**-0.5**
ONAJ	**Iwakimizuishiy**	**0.77**	**341**	⇓P	**P**	**21 19 27.8**	**+0.1**
ONAJ				*e*S	**S**	**21 19 37.1**	**-1.3**
JFK	**Kawauchi**	**1.01**	**349**	⇓P	**P**	**21 19 31.0**	**-0.1**
JFT	**Otama**	**1.30**	**332**	⇓P	**P**	**21 19 36.4**	**+1.1**
JFT				*e*S	**S**	**21 19 51.9**	**+0.2**
JAG	**Ashikaga**	**1.34**	**273**	⇓P	**P**	**21 19 36.3**	**+0.3**
JAG				*e*S	**S**	**21 19 52.3**	**-0.5**
JMM	**Marumori**	**1.51**	**350**	P	**P**	**21 19 38.6**	**+0.3**
JMM				*e*S	**S**	**21 19 56.2**	**-0.7**
JFY	**Yanaizu**	**1.53**	**313**	P	**P**	**21 19 39.4**	**+0.8**
MAT	**Matsushiro**	**2.35**	**275**	P	**P**	**21 19 51.1**	**+0.9**
MAT				S	**S**	**21 20 17.8**	**-0.2**
JHJ	**Hachijo jima 2**	**3.43**	**199**	Pn	**P**	**21 20 06.7**	**+1.1**
	7.7nm,0.3s,baz=78,slow=19,SNR=5.7						
JHJ				Sn	**S**	**21 20 45.0**	**-0.4**
	20nm,0.3s,baz=244,slow=23,SNR=8.0						
ASAJ	**Asahikawa**	**7.81**	**8**	Pn	**P**	**21 20 60.0**	**-7.0**
	0.4nm,0.3s,baz=190,slow=19,SNR=2.5						
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**21 25 04.2**	**+2.9**
	0.5nm,0.7s,mb3.2,baz=104,slow=9.1,SNR=6.1						
WRA	**Warramunga Arr**	**56.38**	**188**	P	**P**	**21 28 51.6**	**-0.7**
	0.5nm,0.5s,mb3.8,baz=4.7,slow=7.2,SNR=9.5						
ASAR	**Alice Springs**	**60.10**	**188**	P	**P**	**21 29 16.2**	**-2.1**
	0.2nm,0.6s,mb3.3,baz=8.1,slow=6.4,SNR=3.6						

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*IDC **12** 21:26:39.5±1.2,27.78N×53.87E,mb3.9/11,mb1 4.0/12, mb1mx3.8/25,mbtmp3.9/12,ML1.5/1,Error ellipse: s-maj=27.1km s-min=19.9km az=137.0*

*THR **12** 21:26:39.2±0.3,27.30N×53.77E,h41^{km}±7^{km},ML3.6*

*TEH **12** 21:26:41.1,27.57N×54.10E,h10^{km},Mn3.6*

*NEIC **12** 21:26:41.1,27.57N×54.10E,h10^{km},mb3.6/1, MN3.6(TEH),After TEH.*

*CSEM **12** 21:26:43.9±0.1,27.77N×53.91E,h50^{km},ML4.5/1,Error ellipse: s-maj=3.4km s-min=3.1km az=10.0*

ISC 12 21:26:44.6±1.1**,27.87N**±0.07×**53.87E**±0.07**,h55^{km}**±9^{km}**, n39,**σ**1^{s}11**/42**,mb3.8**/10**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	**Ghir-Karzin**	**0.89**	**298**	*e*PG	**P**	**21 27 01.6**	**+0.5**
GHIR				*e*SG	**S**	**21 27 18.1**	**+4.6**
GHIR				AML	AML	21 27 21.8	
	comp=N,1μm,0.5s						
GHIR	**Ghir-Karzin**	**0.89**	**298**	*e*Pg	**P**	**21 27 01.6**	**+0.5**
	SNR=103						
GHIR				*e*Sg	**S**	**21 27 18.0**	**+4.6**
	comp=N,1μm,0.5s,SNR=103						
IMOK	**Mook**	**1.55**	**319**	Pn	**P**	**21 27 14.1**	**+3.6**
SHI	**Shiraz**	**2.13**	**326**	Pn	**P**	**21 27 24.2**	**+5.6**
KRBR	**Kerman**	**3.29**	**50**	*e*PN	**P**	**21 27 36.4**	**+1.3**
KRBR				AML	AML	21 28 30.8	
	comp=N,84nm,0.6s						
KRBR	**Kerman**	**3.29**	**50**	*e*Pn	**P**	**21 27 36.3**	**+1.2**
	SNR=54						
IMEH	**Mehriz**	**3.57**	**10**	Pn	**P**	**21 27 40.4**	**+1.5**
IBAF	**Bafgh**	**3.99**	**21**	Pn	**P**	**21 27 44.5**	**-0.4**
IBRJ	**Borojen**	**4.50**	**330**	Pn	**P**	**21 27 53.4**	**+1.4**
ZHSF	**Zahedan**	**6.31**	**72**	*e*PN	**P**	**21 28 15.5**	**-1.7**
ISFB	**Sefidab**	**6.62**	**348**	Pn	**P**	**21 28 21.2**	**-0.4**
ISFB				Sn	**S**	**21 29 36.9**	**+0.5**
ISFB				Lg		21 30 17.6	
IVRN	**Varamin**	**7.34**	**346**	Pn	**P**	**21 28 30.9**	**-0.7**
IVRN				Sn	**S**	**21 29 54.0**	**-0.3**
IVRN				Lg		21 30 40.2	
IQOM	**Qom**	**7.35**	**342**	Pn	**P**	**21 28 30.6**	**-1.2**
IFIR	**Firoozkooh**	**7.81**	**353**	Pn	**P**	**21 28 37.8**	**-0.3**
IFIR				Lg		21 30 54.4	
IDMV	**Damavand**	**7.84**	**349**	Pn	**P**	**21 28 38.8**	**+0.2**
IRAZ	**Razeghan**	**8.23**	**337**	Pn	**P**	**21 28 41.1**	**-2.8**
IRAZ	**Razeghan**	**8.23**	**337**	Lg		21 31 08.4	
IKOM	**Komasi**	**8.32**	**321**	Pn	**P**	**21 28 43.6**	**-1.6**
IVIS	**Veys**	**8.95**	**320**	Pn	**P**	**21 28 54.2**	**+0.4**
SNGE	**Sanandaj**	**9.10**	**324**	*e*PN	**P**	**21 28 56.0**	**+0.1**
SNGE	**Sanandaj**	**9.10**	**324**	*e*Pn	**P**	**21 28 56.0**	**+0.1**
	SNR=54						
IDHR	**Dehrash**	**9.35**	**319**	Pn	**P**	**21 28 58.3**	**-1.0**
GNI	**Garni**	**14.39**	**331**	Pn	**P**	**21 30 16.5**	**+10**
	comp=N,0.6nm,0.3s,baz=70,slow=3.2,SNR=5.3						
GNI	**Garni**	**14.39**	**331**	P	**P**	**21 30 03.8**	**-2.9**
	comp=N,9.6nm,1.0s						
MALT	**Malatya**	**16.59**	**313**	*e*P	**P**	**21 30 33.7**	**-1.2**
	comp=N,5.7nm,1.0s						
MALT	**Malatya**	**16.59**	**313**	*e*P	**P**	**21 30 33.7**	**-1.2**
	comp=N,5.7nm,1.0s						
EIL	**Elat**	**16.69**	**281**	P	**P**	**21 30 31.2**	**-4.9**
BRTR	**Keskin Array B**	**20.50**	**310**	P	**P**	**21 31 21.3**	**+0.8**
	comp=N,0.9nm,0.5s,baz=128,slow=14,SNR=3.4						
BRTR	**Keskin Array B**	**20.50**	**310**	P	**P**	**21 31 21.4**	**+0.9**
IDI	**Anoyia**	**25.71**	**294**	P	**P**	**21 32 12.9**	**+1.4**
	comp=N,9.8nm,1.0s,mb4.3,baz=54,slow=14,SNR=2.9						
BVAR	**Borovoye Array**	**27.96**	**21**	P	**P**	**21 32 32.5**	**+0.6**
	comp=N,0.6nm,0.5s,mb3.5,baz=225,slow=6.3,SNR=6.8						
MLR	**Muntele Rosu**	**28.27**	**316**	P	**P**	**21 32 35.9**	**+1.1**
	comp=N,1.1nm,0.7s,mb3.6,baz=224,slow=12,SNR=4.1						
ZAL	**Zalesovo**	**34.51**	**32**	P	**P**	**21 33 28.8**	**-0.6**
	comp=N,0.7nm,0.3s,mb4.0,baz=215,slow=9.4,SNR=5.4						
FINES	**FINESS Array B**	**38.36**	**339**	P	**P**	**21 34 02.1**	**+0.4**
	comp=N,1.0nm,0.7s,mb3.6,baz=146,slow=6.9,SNR=5.4						
HFS	**Hagfors**	**42.17**	**331**	P	**P**	**21 34 33.1**	**-0.1**
	comp=N,4.6nm,1.0s,mb4.1,baz=141,slow=9.5,SNR=4.2						
NOA	**NORSAR Array B**	**43.69**	**331**	P	**P**	**21 34 45.0**	**-0.5**
	comp=N,1.3nm,1.1s,mb3.6,baz=153,slow=7.6,SNR=2.7						
SONM	**Songino Array**	**45.05**	**49**	P	**P**	**21 34 58.9**	**+2.2**
	comp=N,0.4nm,0.8s,mb3.3,baz=260,slow=8.8,SNR=3.8						
LBTB	**Lobatse**	**59.21**	**210**	P	**P**	**21 36 41.9**	**-0.8**
	comp=N,1.7nm,0.7s,mb4.2,baz=14,slow=4.2,SNR=2.2						
DBIC	**Dimbokro**	**59.33**	**261**	P	**P**	**21 36 43.3**	**-0.3**
	comp=N,2.1nm,1.0s,mb4.1,baz=67,slow=13,SNR=3.1						

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*IDC **12** 21:30:17.9±9.1,3.62N×91.39E,mb4.1/4,mb1 4.1/5, mb1mx3.8/19,mbtmp4.0/5,ML4.4/1,MS3.4/2,Ms1 3.5/2, ms1mx2.8/21,Error ellipse: s-maj=200.3km s-min=64.0km az=152.0*

*BJI **12** 21:30:24.7,3.65N×91.33E,h54^{km},mb4.4*

*NEIC **12** 21:30:25.8±4.0,4.16N×91.22E,h30^{km},mb4.9/3,Error ellipse: s-maj=78.4km s-min=15.4km az=160.0*

ISC 12 21:30:24.9±3.7**,4.3N**±0.5×**91.1E**±0.2**,h30^{km},n13,** σ**1^{s}04**/14**,mb4.4**/10**,MS3.7**/1**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**10.74**	**286**	*e*P	**P**	**21 32 59.2**	**-0.9**
PALK				*e*S	**S**	**21 34 51.3**	**-9.0**
CM31	**Chiang Mai Arr**	**16.03**	**28**	P	**P**	**21 34 08.6**	**-1.4**
CMAR	**Chiang Mai Arr**	**16.03**	**28**	Pn	**P**	**21 34 09.8**	**-0.2**
	0.5nm,0.3s,baz=215,slow=14,SNR=7.8						
CMAR				LR	LR	21 40 09.1	
	comp=Z,68nm,20.9s,baz=210,slow=36						
LSA	**Lhasa**	**25.26**	**0**	*e*P	**P**	**21 35 53.3**	**+3.1**
	18nm,0.8s,mb4.7						
GYA	**Guiyang**	**26.60**	**33**	P	**P**	**21 36 02.8**	**+0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
ENH	**Enshi**	**31.13**	**32**	*e*P	**P**	**21 36 41.9**	**-1.5**
	comp=Z,9.7nm,1.1s,mb4.5						
XAN	**Xi’an**	**33.92**	**27**	P	**P**	**21 37 07.7**	**+0.1**
XAN				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb4.3						
GTA	**Gaotai**	**35.83**	**12**	*e*P	**P**	**21 37 26.2**	**+2.3**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
SONM	**Songino Array**	**45.32**	**14**	P	**P**	**21 38 42.6**	**+0.6**
	comp=Z,5.5nm,1.0s,mb4.3,baz=195,slow=8.1,SNR=33						
ZAL	**Zalesovo**	**49.74**	**355**	P	**P**	**21 39 17.5**	**+1.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=301,slow=4.8,SNR=5.6						
ZAL				LR	LR	22 02 56.9	
	comp=Z,72nm,18.1s,MS3.7,baz=115,slow=39						
BVAR	**Borovoye Array**	**51.47**	**344**	P	**P**	**21 39 29.9**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=149,slow=8.6,SNR=6.7						
CHKZ	**Chkalovo**	**51.99**	**345**	*e*P	**P**	**21 39 33.0**	**-0.6**
	comp=Z,138nm,1.3s,mb5.7						
FINES	**FINESS Array B**	**74.46**	**333**	P	**P**	**21 42 02.1**	**+0.1**
	comp=Z,3.1nm,1.1s,mb4.1,baz=101,slow=7.1,SNR=4.5						

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*NEIC **12** 21:30:59.8±1.9,7.74S×127.16E,h126^{km}±21^{km},mb4.2/9, Error ellipse: s-maj=21.6km s-min=11.9km az=61.0*

*IDC **12** 21:31:13.6±5.3,7.91S×127.16E,h270^{km}±59^{km},mb3.6/7, mb1 3.7/10,mb1mx3.6/16,mbtmp4.3/10,Error ellipse: s-maj=23.5km s-min=15.6km az=65.0*

ISC 12 21:31:00.7±1.7**,7.86S**±0.07×**127.1E**±0.1**,h157^{km}**±19^{km}**, n24,**σ**1^{s}30**/31**,mb4.0**/13**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.11**	**133**	*e*P	**P**	**21 32 43.3**	**+0.2**
	21nm,0.2s						
KAKA				*e*S	**S**	**21 33 56.4**	**-6.4**
FITZ	**Fitzroy Crossi**	**10.29**	**188**	*e*P	**P**	**21 33 25.1**	**-0.1**
	14nm,0.7s						
FITZ				*e*S	**S**	**21 35 15.8**	**-2.7**
WRAB	**Tennant Creek**	**13.89**	**151**	*e*P	**P**	**21 34 11.5**	**-0.4**
	12nm,0.6s						
WRAB				*e*S	**S**	**21 36 35.4**	**-7.2**
WRA	**Warramunga Arr**	**13.90**	**151**	P	**P**	**21 34 10.5**	**-1.5**
	2.0nm,0.3s,baz=326,slow=14,SNR=50						
WRA				S	**S**	**21 36 37.5**	**-5.2**
	5.0nm,0.3s,baz=326,slow=22,SNR=13						
WB2	**Warramunga Arr**	**13.90**	**151**	*e*P	**P**	**21 34 11.6**	**-0.5**
WB2				*e*S	**S**	**21 36 36.3**	**-6.5**
ASPA	**Alice Springs**	**17.01**	**158**	*e*P	**P**	**21 34 52.8**	**+2.2**
ASPA				*e*S	**S**	**21 37 51.6**	**-1.4**
ASAR	**Alice Springs**	**17.01**	**158**	P	**P**	**21 34 52.5**	**+1.9**
	1.3nm,0.3s,baz=340,slow=13,SNR=62						
ASAR				S	**S**	**21 37 54.9**	**+1.8**
	1.4nm,0.3s,baz=316,slow=18,SNR=11						
PMG	**Port Moresby**	**19.86**	**96**	P	**P**	**21 35 25.0**	**+3.4**
	5.4nm,0.3s,baz=276,slow=0.5,SNR=19						
CTA	**Charters Tower**	**22.15**	**125**	*e*P	**P**	**21 35 46.6**	**+2.3**
	4.4nm,0.9s,mb3.9						
CTA	**Charters Tower**	**22.15**	**125**	P	**P**	**21 35 46.9**	**+2.6**
	5.4nm,0.7s,mb4.1,baz=310,slow=10.0,SNR=8.8						
NWAO	**Narrogin (SRO)**	**26.58**	**199**	P	**P**	**21 36 27.7**	**+1.5**
	3.8nm,0.6s,mb4.2,baz=42,slow=6.3,SNR=5.0						
NWAO	**Narrogin (SRO)**	**26.58**	**199**	P	**P**	**21 36 27.7**	**+1.5**
STKA	**Stephens Creek**	**27.43**	**153**	P	**P**	**21 36 34.9**	**+0.9**
	1.8nm,0.4s,mb4.0,baz=348,slow=7.5,SNR=3.4						
CM31	**Chiang Mai Arr**	**38.18**	**313**	*e*P	**P**	**21 38 08.1**	**+1.3**
	3.5nm,0.5s,mb4.2						
CMAR	**Chiang Mai Arr**	**38.18**	**313**	P	**P**	**21 38 07.8**	**+1.0**
	4.5nm,0.7s,mb4.2,baz=143,slow=6.8,SNR=30						
ENH	**Enshi**	**41.52**	**337**	P	**P**	**21 38 33.5**	**-0.8**
	2.8nm,0.7s,mb4.0						
LSA	**Lhasa**	**50.91**	**319**	*e*P	**P**	**21 39 48.7**	**+0.7**
	3.2nm,0.7s,mb4.1						
ULN	**Ulaanbaatar**	**58.25**	**344**	*e*P	**P**	**21 40 40.5**	**-0.4**
	2.9nm,1.0s,mb4.1						
SONM	**Songino Array**	**58.40**	**344**	P	**P**	**21 40 41.7**	**-0.3**
	1.4nm,0.9s,mb3.8,baz=173,slow=6.8,SNR=6.0						
AAK	**Ala-Archa**	**69.39**	**321**	*e*P	**P**	**21 41 53.6**	**0.0**
	1.7nm,0.7s,mb3.9						
ZAL	**Zalesovo**	**71.12**	**335**	P	**P**	**21 42 03.0**	**-0.8**
	1.3nm,0.6s,mb3.8,baz=344,slow=5.8,SNR=5.5						
KURK	**Kurchatov**	**71.80**	**330**	*e*P	**P**	**21 42 06.9**	**-1.0**
	2.5nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**77.29**	**329**	P	**P**	**21 42 39.0**	**-0.2**
	0.5nm,0.4s,mb3.5,baz=124,slow=11,SNR=9.1						
RSO	**Redoubt South**	**91.93**	**29**	*e*P	**P**	**21 43 49.5**	**-2.7**

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*IDC **12** 22:04:17.9±0.9,8.57N×94.15E,mb3.8/9,mb1 3.9/10, mb1mx3.8/20,mbtmp3.7/10,ML3.5/1,MS3.1/2,Ms1 3.2/2, ms1mx2.8/25,Error ellipse: s-maj=37.9km s-min=19.3km az=59.0*

*BJI **12** 22:04:21.1,8.75N×94.05E,h23^{km},mb3.8*

*NEIC **12** 22:04:22.5±0.6,8.58N×94.15E,h30^{km},mb4.2/1,Error ellipse: s-maj=20.4km s-min=12.3km az=72.0*

ISC 12 22:04:20.8±0.9**,8.6N**±0.1×**94.2E**±0.2**,h33^{km},n14,** σ**0^{s}55**/12**,mb3.8**/10**,MS3.3**/1**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.86**	**25**	Pn	**P**	**22 06 57.0**	**-0.1**
	0.1nm,0.3s,baz=217,slow=15,SNR=11						
CMAR				LR	LR	22 11 39.1	
	comp=Z,74nm,18.3s,baz=200,slow=41						
LSA	**Lhasa**	**21.22**	**353**	P	**P**	**22 09 06.0**	**0.0**
LSA	**Lhasa**	**21.22**	**353**	*e*P	**P**	**22 09 05.5**	**-0.5**
	10nm,0.9s,mb4.2						
SONM	**Songino Array**	**40.48**	**13**	P	**P**	**22 11 58.3**	**+0.3**
	0.2nm,0.8s,mb2.9,baz=126,slow=23,SNR=3.4						
ZAL	**Zalesovo**	**45.87**	**352**	P	**P**	**22 12 42.0**	**+0.3**
	1.5nm,0.3s,mb4.3,baz=308,slow=5.2,SNR=7.3						
BVAR	**Borovoye Array**	**48.35**	**341**	P	**P**	**22 13 01.6**	**+0.4**
	0.1nm,0.3s,mb3.3,baz=162,slow=9.1,SNR=2.6						
WRA	**Warramunga Arr**	**48.62**	**126**	P	**P**	**22 13 04.0**	**+0.3**
	0.6nm,0.6s,mb3.8,baz=307,slow=8.6,SNR=2.5						
ASAR	**Alice Springs**	**50.32**	**130**	P	**P**	**22 13 16.4**	**-0.3**
	0.6nm,0.8s,mb3.7,baz=304,slow=7.2,SNR=6.6						

GNI	**Garni**	**53.99**	**314**	LR	LR	22 42 27.2	
	comp=Z,24nm,18.6s,MS3.3,baz=153,slow=42						
BRTR	**Keskin Array B**	**62.02**	**310**	P	**P**	**22 14 40.3**	**0.0**
	0.4nm,0.5s,mb3.8,baz=127,slow=7.2,SNR=2.5						
FINES	**FINESS Array B**	**72.13**	**332**	P	**P**	**22 15 42.8**	**-0.8**
	1.3nm,0.8s,mb3.9,baz=124,slow=5.0,SNR=3.5						
GERES	**GERESS Array B**	**77.35**	**318**	P	**P**	**22 16 17.6**	**+3.6**
	1.5nm,0.9s,mb3.9,baz=104,slow=4.0,SNR=2.5						
HFS	**Hagfors**	**77.89**	**330**	P	**P**	**22 16 16.5**	**-0.2**
	4.8nm,1.0s,mb4.4,baz=135,slow=6.3,SNR=6.2						
PLCA	**Paso Flores**	**145.21**	**201**	PKPbc	PKPbc	22 23 58.9	+3.1
	1.7nm,0.8s,baz=318,slow=2.7,SNR=4.5						

IDC ***12*** *22:12:08.0±1.7, 35.43N×141.03E, mb3.5/4, mb1 3.8/7, mb1mx3.5/25, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=56.8km s-min=19.4km az=79.0*

JMA ***12*** *22:12:14.7±0.2, 35.34N×140.81E, h66^{km}±2^{km}, M3.1*

ISC 12 22:12:14.7±0.7**, 35.31N**±0.04×**140.80E**±0.07**, h68**^{km}±5^{km}**, n20, σ0^{s}69**/27**, mb3.5**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.40**	**7**	P	**P**	**22 12 25.8**	**-0.6**
CHOJ				S	**S**	**22 12 34.3**	**-0.8**
KTR	**Katsuura**	**0.43**	**248**	P	**P**	**22 12 26.6**	**-0.1**
BSO4	**Boso 4**	**0.49**	**230**	P	**P**	**22 12 27.7**	**+0.4**
JCN	**Nagara**	**0.50**	**283**	P	**P**	**22 12 27.6**	**+0.2**
BSO3	**Boso 3**	**0.56**	**205**	P	**P**	**22 12 28.3**	**+0.3**
BSO3				*e*S	**S**	**22 12 39.3**	**+1.6**
BSO1	**Boso 1**	**0.67**	**167**	P	**P**	**22 12 29.8**	**+0.6**
JYT	**Yasato**	**1.04**	**332**	P	**P**	**22 12 33.4**	**-0.5**
JIM2	**Oshima 3**	**1.27**	**243**	P	**P**	**22 12 36.6**	**-0.3**
JIM2				*e*S	**S**	**22 12 52.8**	**-0.6**
JOD2	**Odawara 2**	**1.40**	**269**	P	**P**	**22 12 38.6**	**-0.2**
JOD2				*e*S	**S**	**22 12 55.9**	**-0.7**
JAG	**Ashikaga**	**1.56**	**316**	P	**P**	**22 12 41.2**	**+0.3**
JIZS	**Izushimoda**	**1.68**	**250**	P	**P**	**22 12 42.9**	**+0.3**
JIZS				*e*S	**S**	**22 13 03.2**	**+0.1**
JRY	**Ryogami san**	**1.70**	**295**	P	**P**	**22 12 43.3**	**+0.5**
JHJ	**Hachijo jima 2**	**2.34**	**201**	Pn	**P**	**22 12 51.6**	**-0.1**
	43nm,0.3s,baz=125,slow=11,SNR=25						
JHJ				Sn	**S**	**22 13 17.9**	**-1.3**
	41nm,0.3s,baz=265,slow=23,SNR=6.3						
MAT	**Matsushiro**	**2.44**	**301**	P	**P**	**22 12 54.0**	**+0.9**
MAT				S	**S**	**22 13 27.7**	**+5.9**
CBIJ	**Chichi jima**	**8.27**	**171**	Pn	**P**	**22 14 10.8**	**-3.3**
	7.6nm,0.3s,baz=289,slow=16,SNR=5.4						
ASAJ	**Asahikawa**	**8.91**	**8**	Pn	**P**	**22 14 16.7**	**-6.2**
	0.3nm,0.3s,baz=234,slow=8.7,SNR=1.9						
SONM	**Songino Array**	**28.38**	**307**	P	**P**	**22 18 04.2**	**-0.2**
	0.2nm,0.5s,mb2.9,baz=104,slow=7.8,SNR=3.6						
BVAR	**Borovoye Array**	**51.38**	**313**	P	**P**	**22 21 14.7**	**+0.4**
	0.3nm,0.3s,mb3.8,baz=97,slow=7.9,SNR=5.5						
WRA	**Warramunga Arr**	**55.28**	**187**	P	**P**	**22 21 43.6**	**-0.1**
	0.4nm,0.4s,mb3.8,baz=4.0,slow=7.4,SNR=4.6						
ASAR	**Alice Springs**	**59.01**	**187**	P	**P**	**22 22 10.4**	**+0.5**
	0.3nm,0.7s,mb3.4,slow=5.4,SNR=2.7						

IDC ***12*** *22:28:18.8±0.7, 7.76N×93.94E, mb4.2/17, mb1 4.4/18, mb1mx4.3/22, mbtmp4.3/18, ML4.6/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/21, Error ellipse: s-maj=34.0km s-min=14.7km az=49.0*

MOS ***12*** *22:28:23.1±1.3, 7.96N×94.21E, h33^{km}, mb4.8/17, Error ellipse: s-maj=13.5km s-min=7.3km az=108.9*

NEIC ***12*** *22:28:24.4±0.4, 7.91N×94.08E, h30^{km}, mb4.6/21, Error ellipse: s-maj=9.9km s-min=7.9km az=65.0*

BJI ***12*** *22:28:25.1, 7.95N×94.26E, h25^{km}, mB4.8, mb4.3, Ms4.3, Msz3.8*

ISC 12 22:28:23.2±1.1**, 7.87N**±0.05×**94.07E**±0.05**, h36**^{km}±10^{km}**, n103, σ1^{s}18**/102**, mb4.5**/48**, MS3.8**/8**, 3C-4D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.52**	**96**	P	**P**	**22 29 59.0**	**-0.2**
	142nm,0.9s						
CM31	**Chiang Mai Arr**	**11.54**	**24**	*e*P	**P**	**22 31 08.2**	**-0.4**
	16nm,0.6s						
CMAR	**Chiang Mai Arr**	**11.54**	**24**	Pn	**P**	**22 31 07.8**	**-0.8**
	1.1nm,0.3s,baz=211,slow=14,SNR=87						
CMAR				LR	LR	22 35 44.1	
	comp=Z,249nm,18.9s,baz=210,slow=38						
CHG	**Chiang Mai**	**11.86**	**23**	⇑P	**P**	**22 31 13.0**	**+0.1**
	16nm,1.1s						
NANT	**Nan**	**12.63**	**30**	P	**P**	**22 31 24.0**	**+0.8**
PALK	**Pallekele**	**13.27**	**268**	P	**P**	**22 31 29.7**	**-2.0**
	16nm,1.1s						
HYB	**Hyderabad**	**17.86**	**304**	*e*P	**P**	**22 32 33.0**	**+2.4**
HYB	**Hyderabad**	**17.86**	**304**	*i* P	**P**	**22 32 33.0**	**+2.4**
QIZ	**Qiongzhong**	**18.91**	**53**	*e*P	**P**	**22 32 42.6**	**-1.0**
QIZ				S	**S**	**22 36 11.5**	**+2.0**
QIZ				LR	LR		
	comp=N,120nm,11.2s						
KMI	**Kunming**	**19.05**	**25**	⇓P	**P**	**22 32 47.3**	**+2.1**
KMI				AP		22 32 54.8	
KMI				XP		22 32 59.9	
KMI				S	**S**	**22 36 19.4**	**+6.8**
KMI				XS		22 36 30.8	
KMI				AMB	AMB		
	comp=Z,12nm,0.6s						
KMI				AMB	AMB		
	comp=Z,126nm,4.6s						
KMI				LR	LR		
	comp=N,231nm,13.5s						
KMI				LR	LR		
	comp=E,220nm,17.5s						
KMI				LR	LR		
	comp=Z,222nm,14.8s						
PKI	**Pulchoki**	**21.24**	**338**	*e*P	**P**	**22 33 10.3**	**+1.9**
	comp=Z,31nm,0.6s,mb4.8						
PKI	**Pulchoki**	**21.24**	**338**	*e*P	**P**	**22 33 10.3**	**+1.9**
PKI				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.5						
DMN	**Daman**	**21.39**	**338**	*e*P	**P**	**22 33 10.3**	**+0.4**
	comp=Z,40nm,0.7s,mb4.9						
KKN	**Kakani**	**21.49**	**338**	*e*P	**P**	**22 33 12.7**	**+1.8**
	comp=Z,37nm,0.8s,mb4.8						
LSA	**Lhasa**	**21.89**	**353**	P	**P**	**22 33 14.4**	**-0.5**
LSA	**Lhasa**	**21.89**	**353**	*e*P	**P**	**22 33 13.8**	**-1.1**
LSA				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.5						
LSA	**Lhasa**	**21.89**	**353**	*e*P	**P**	**22 33 13.8**	**-1.0**
	comp=Z,17nm,0.8s,mb4.5						
GKN	**Gorkha**	**21.92**	**337**	*e*P	**P**	**22 33 15.2**	**0.0**
	comp=Z,65nm,0.8s,mb5.1						
GYA	**Guiyang**	**22.02**	**31**	P	**P**	**22 33 17.1**	**+0.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
KOLN	**Koldanda**	**22.13**	**335**	*e*P	**P**	**22 33 17.1**	**-0.2**
LGTI	**Lohaghat**	**25.09**	**331**	⇓*i*P	**P**	**22 33 47.5**	**+1.2**
NDI	**New Delhi**	**26.10**	**325**	*e*P	**P**	**22 33 55.0**	**-0.7**
ENH	**Enshi**	**26.56**	**31**	*e*P	**P**	**22 33 59.4**	**-0.5**
	comp=Z,14nm,0.9s,mb4.5						
GTA	**Gaotai**	**31.82**	**8**	P	**P**	**22 34 46.8**	**-0.1**
GTA				PP	PP	22 35 52.1	-0.7
GTA				PCP	PcP	22 37 37.6	+0.2
GTA				S	**S**	**22 39 54.7**	**+1.1**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.0						
GTA				AMB	AMB		
	comp=Z,76nm,5.7s						
GTA				LR	LR		
	comp=N,182nm,12.5s						
GTA				LR	LR		
	comp=E,193nm,9.9s						
GTA				LR	LR		
	comp=Z,166nm,12.9s,MS3.9						
WMQ	**Urumqi**	**36.24**	**352**	*e*P	**P**	**22 35 24.0**	**-0.8**
WMQ				PP	PP	22 36 46.0	-2.2
WMQ				S	**S**	**22 41 00.0**	**-2.1**
WMQ				LR	LR		
	comp=N,68nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=E,102nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,760nm,20.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**36.34**	**23**	*e*P	**P**	**22 35 33.0**	**+7.3**
HHC				PP	PP	22 36 53.1	+3.5
HHC				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
HHC				AMB	AMB		
	comp=Z,171nm,9.5s						
HHC				LR	LR		
	comp=N,235nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=E,242nm,15.5s,MS4.2						
HHC				LR	LR		
	comp=Z,203nm,15.5s,MS4.0						
BJT	**Baijiatuau**	**37.62**	**28**	P	**P**	**22 35 39.4**	**+3.0**
BJT				pmax	pmax		
	comp=Z,14nm,1.6s						
BJT	**Baijiatuau**	**37.62**	**28**	P	**P**	**22 35 39.4**	**+3.0**
	comp=Z,14nm,1.6s,mb4.4						
BJI	**Beijing**	**37.64**	**28**	P	**P**	**22 35 42.5**	**+5.9**
BJI				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.2						
BJI				LR	LR		
	comp=N,237nm,12.3s						
BJI				LR	LR		
	comp=E,235nm,17.4s						
BJI				LR	LR		
	comp=Z,85nm,27.1s						
AAK	**Ala-Archa**	**38.68**	**337**	*e*P	**P**	**22 35 45.5**	**+0.3**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**38.68**	**337**	*e*P	**P**	**22 35 45.5**	**+0.3**
	comp=Z,7.7nm,1.2s,mb4.3						
MKAR	**Makanchi Array**	**40.07**	**347**	*i* P	**P**	**22 35 56.0**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**41.18**	**13**	P	**P**	**22 36 05.8**	**-0.1**
	comp=Z,1.7nm,0.7s,mb3.8,baz=195,slow=8.3,SNR=20						
SONM				PcP	PcP	22 38 02.5	-2.7
	comp=Z,0.4nm,0.5s,baz=197,slow=4.0,SNR=4.2						
ULN	**Ulaanbaatar**	**41.35**	**13**	*e*P	**P**	**22 36 06.9**	**-0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**41.35**	**13**	*e*P	**P**	**22 36 06.9**	**-0.4**
	comp=Z,1.7nm,0.8s,mb3.7						
TLY	**Talaya**	**44.38**	**9**	P	**P**	**22 36 31.3**	**-0.6**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
TLY	**Talaya**	**44.38**	**9**	P	**P**	**22 36 31.3**	**-0.6**
	comp=Z,1.6nm,0.7s,mb3.9						
KURK	**Kurchatov**	**44.60**	**346**	*e*P	**P**	**22 36 33.0**	**-0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
KURK	**Kurchatov**	**44.60**	**346**	*e*P	**P**	**22 36 33.0**	**-0.7**
	comp=Z,5.6nm,0.8s,mb4.5						
CN2	**Changchun**	**45.06**	**32**	*e*P	**P**	**22 36 38.8**	**+1.3**
NWAO	**Narrogin (SRO)**	**46.18**	**153**	*e*P	**P**	**22 36 49.0**	**+2.5**
NWAO				pmax	pmax		
	comp=Z,15nm,1.0s						
NWAO	**Narrogin (SRO)**	**46.18**	**153**	P	**P**	**22 36 47.5**	**+1.0**
	comp=Z,11nm,0.9s,mb4.8,baz=345,slow=11,SNR=5.7						
NWAO	**Narrogin (SRO)**	**46.18**	**153**	*e*P	**P**	**22 36 49.0**	**+2.4**
	comp=Z,15nm,1.0s,mb4.9						
ZAL	**Zalesovo**	**46.54**	**352**	P	**P**	**22 36 49.1**	**+0.1**
	comp=Z,3.1nm,0.5s,mb4.5,baz=296,slow=7.3,SNR=23						
HIA	**Hailar**	**46.55**	**23**	*e*P	**P**	**22 36 48.0**	**-1.2**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HIA	**Hailar**	**46.55**	**23**	*e*P	**P**	**22 36 48.0**	**-1.2**
	comp=Z,7.9nm,1.1s,mb4.6						
NVS	**Novosibirsk**	**47.64**	**352**	*e*P	**P**	**22 36 56.6**	**-1.1**
NVS				*e*		22 38 20.5	
NVS				pmax	pmax		
	comp=Z,23nm,2.4s,mb4.8						
NVS				pmax	pmax		
	comp=N,29nm,2.3s						
NVS				pmax	pmax		
	comp=E,19nm,2.3s						
MDJ	**Mudanjiang**	**47.84**	**34**	P	**P**	**22 36 58.9**	**-0.6**
MDJ				AP	pP	22 37 07.9	-2.1
MDJ				PP	PP	22 38 50.9	+0.2
MDJ				S	**S**	**22 43 54.1**	**+1.1**
MDJ				SCS	ScS	22 46 47.6	+0.5
MDJ				SS	SS	22 47 21.4	+5.4
MDJ				AMB	AMB		
	comp=Z,4.0nm,2.1s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,96nm,6.7s						
MDJ				LR	LR		
	comp=N,22nm,16.4s,MS3.5						
MDJ				LR	LR		
	comp=E,46nm,18.5s,MS3.5						
MDJ				LR	LR		
	comp=Z,39nm,18.1s,MS3.4						
WRA	**Warramunga Arr**	**48.31**	**125**	P	**P**	**22 37 01.5**	**-1.9**
WRA	**Warramunga Arr**	**48.31**	**125**	P	**P**	**22 37 01.4**	**-2.0**
	comp=Z,2.0nm,0.8s,mb4.2,baz=306,slow=9.0,SNR=8.8						
WRAB	**Tennant Creek**	**48.32**	**125**	*e*P	**P**	**22 37 02.6**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**48.32**	**125**	*e*P	**P**	**22 37 02.6**	**-0.9**
	comp=Z,4.2nm,0.6s,mb4.7						
CHKZ	**Chkalovo**	**49.45**	**342**	*e*P	**P**	**22 37 10.8**	**-1.0**
CHKZ				*e*		22 38 39.7	
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	**49.45**	**342**	*e*P	**P**	**22 37 10.8**	**-1.0**
	comp=Z,8.2nm,0.8s,mb4.8						
CHKZ				*e*PcP	PcP	22 38 39.7	+5.9
ASAR	**Alice Springs**	**49.96**	**130**	P	**P**	**22 37 14.2**	**-1.9**
	comp=Z,1.6nm,0.8s,mb4.1,baz=305,slow=6.4,SNR=9.5						
ASAR				LR	LR	23 00 49.7	
	comp=Z,39nm,18.8s,MS3.4,baz=130,slow=39						
BOD	**Bodaibo**	**52.16**	**13**	*e*P	**P**	**22 37 29.7**	**-2.5**
PMG	**Port Moresby**	**55.59**	**107**	P	**P**	**22 37 59.3**	**+1.2**
	comp=Z,6.3nm,0.6s,mb4.8,baz=81,slow=6.2,SNR=4.4						
KIV	**Kislovodsk**	**57.27**	**318**	*e*P	**P**	**22 38 12.5**	**+2.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
KIV	**Kislovodsk**	**57.27**	**318**	P	**P**	**22 38 08.4**	**-1.4**
	comp=Z,13nm,1.2s,mb4.8						
KMBO	**Kilima Mbogo**	**57.36**	**264**	P	**P**	**22 38 12.6**	**+1.8**
	comp=Z,2.1nm,0.7s,mb4.3,baz=48,slow=9.1,SNR=7.4						
KMBO				LR	LR	23 00 06.3	
	comp=Z,58nm,18.3s,MS3.7,baz=87,slow=33						
CTA	**Charters Tower**	**58.36**	**119**	P	**P**	**22 38 22.2**	**+4.6**
	comp=Z,3.5nm,0.9s,mb4.4,baz=21,slow=5.3,SNR=3.7						
EIL	**Elat**	**59.37**	**300**	P	**P**	**22 38 25.1**	**+0.6**
	comp=Z,15nm,1.4s,mb4.8						
YAK	**Yakutsk**	**60.02**	**18**	*e*P	**P**	**22 38 23.3**	**-5.2**
YAK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
YAK	**Yakutsk**	**60.02**	**18**	*e*P	**P**	**22 38 23.3**	**-5.2**
	comp=Z,21nm,0.7s,mb5.3						
STKA	**Stephens Creek**	**60.15**	**134**	P	**P**	**22 38 28.9**	**-1.0**
	comp=Z,3.4nm,1.1s,mb4.3,baz=328,slow=13,SNR=2.4						
STKA				LR	LR	23 03 42.5	
	comp=Z,57nm,19.2s,MS3.7,baz=100,slow=35						
STKA	**Stephens Creek**	**60.15**	**134**	*e*P	**P**	**22 38 31.9**	**+2.0**
BRTR	**Keskin Array B**	**62.38**	**311**	P	**P**	**22 38 43.4**	**-1.5**
	comp=Z,2.5nm,1.0s,mb4.3,baz=115,slow=6.9,SNR=10						
OBN	**Obninsk**	**65.34**	**328**	*e*P	**P**	**22 39 03.3**	**-0.6**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
MA2	**Magadan**	**66.80**	**28**	*e*P	**P**	**22 39 13.1**	**0.0**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
MA2	**Magadan**	**66.80**	**28**	*e*P	**P**	**22 39 13.1**	**0.0**
	comp=Z,4.5nm,0.8s,mb4.5						
TIXI	**Tiksi**	**67.25**	**11**	*e*P	**P**	**22 39 14.3**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**68.11**	**322**	P	**P**	**22 39 19.8**	**-1.7**
	comp=Z,1.1nm,0.7s,mb4.0,baz=84,slow=4.9,SNR=5.9						
VRI	**Vrincioaia**	**68.66**	**316**	⇓P	**P**	**22 39 24.0**	**-1.0**
MLR	**Muntele Rosu**	**69.13**	**316**	⇓P	**P**	**22 39 28.1**	**+0.2**
TAU	**Tasmania Unive**	**69.92**	**141**	P	**P**	**22 39 33.7**	**+0.9**
TAU				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
TAU	**Tasmania Unive**	**69.92**	**141**	P	**P**	**22 39 33.7**	**+0.9**
	comp=Z,27nm,1.1s,mb5.1						
BURAR	**Bucovina Array**	**70.00**	**318**	⇑P	**P**	**22 39 34.6**	**+1.4**
BURAR	**Bucovina Array**	**70.00**	**318**	⇑P	**P**	**22 39 34.6**	**+1.4**
FINES	**FINESS Array B**	**72.68**	**332**	P	**P**	**22 39 48.7**	**-0.3**
	comp=Z,2.4nm,0.7s,mb4.3,baz=106,slow=6.1,SNR=22						
KAF	**Kangasniemi**	**72.76**	**333**	*e*p	**P**	**22 39 48.8**	**-0.6**
LBTB	**Lobatse**	**74.19**	**241**	*e*P	**P**	**22 39 59.4**	**+0.9**
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
LBTB	**Lobatse**	**74.19**	**241**	LR	LR	23 08 48.3	
	comp=Z,51nm,19.3s,MS3.8,baz=102,slow=33						
LBTB	**Lobatse**	**74.19**	**241**	*e*P	**P**	**22 39 59.4**	**+0.8**
	comp=Z,5.5nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**75.25**	**340**	P	**P**	**22 40 03.2**	**-0.6**
	comp=Z,12nm,1.2s,mb4.7,baz=326,slow=4.4,SNR=8.3						
BOSA	**Boshof**	**75.53**	**238**	*e*P	**P**	**22 40 07.5**	**+1.3**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BOSA	**Boshof**	**75.53**	**238**	*e*P	**P**	**22 40 07.5**	**+1.3**
	comp=Z,5.4nm,0.9s,mb4.5						
BRG	**Berggiesshubel**	**77.71**	**320**	*e*P	**P**	**22 40 24.7**	**+6.7**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
GERES	**GERESS Array B**	**77.78**	**318**	P	**P**	**22 40 18.8**	**+0.3**
GERES	**GERESS Array B**	**77.78**	**318**	P	**P**	**22 40 18.7**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=76,slow=5.5,SNR=6.0						
CLL	**Collm**	**78.32**	**321**	*e*P	**P**	**22 40 24.0**	**+2.7**
CLL	**Collm**	**78.32**	**321**	P	**P**	**22 40 24.0**	**+2.7**
HFS	**Hagfors**	**78.42**	**330**	P	**P**	**22 40 21.8**	**+0.1**
	comp=Z,2.9nm,0.5s,mb4.4,baz=104,slow=6.1,SNR=26						
NB2	**NORSAR Subarra**	**79.70**	**331**	P	**P**	**22 40 28.4**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.3,baz=92,slow=5.6						
NB2	**NORSAR Subarra**	**79.70**	**331**	P	**P**	**22 40 28.4**	**-0.3**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NOA	**NORSAR Array B**	**79.70**	**331**	P	**P**	**22 40 28.1**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.9,baz=97,slow=5.2,SNR=5.5						
ESDC	**Sonseca Array**	**91.17**	**310**	P	**P**	**22 41 26.9**	**+0.8**
	comp=Z,1.5nm,0.9s,mb4.3,baz=61,slow=5.2,SNR=2.9						
IMA	**Indian Mountai**	**91.65**	**22**	*e*P	**P**	**22 41 26.7**	**-0.9**
IMA				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.5						
IMA	**Indian Mountai**	**91.65**	**22**	*e*P	**P**	**22 41 26.7**	**-0.9**
	comp=Z,15nm,0.6s,mb5.5						
NVAR	**Mina Array Bea**	**124.95**	**31**	PKP	PKPdf	22 47 23.2	+3.0
	comp=Z,1.0nm,1.1s,baz=45,slow=2.6,SNR=3.4						
PDAR	**Pinedale Array**	**125.19**	**21**	PKP	PKPdf	22 47 22.3	+1.8
	comp=Z,0.2nm,0.6s,baz=137,slow=28,SNR=3.4						
TXAR	**Lajitas Array**	**139.25**	**24**	PKP	PKPdf	22 47 49.6	+2.4
	comp=Z,0.1nm,0.6s,baz=180,slow=3.8,SNR=2.6						
BDFB	**Brasilia**	**142.14**	**255**	PKP	PKPdf	22 47 55.6	+2.8
	comp=Z,2.0nm,0.7s,baz=127,slow=5.1,SNR=2.9						
PLCA	**Paso Flores**	**144.53**	**200**	PKP	PKPdf	22 47 57.3	+1.1
	comp=Z,1.9nm,0.9s,baz=91,slow=7.6,SNR=3.7						

IDC ***12*** *23:15:55.4±1.2, 7.88N×93.92E, h19^{km}±4^{km}, mb3.8/11, mb1 3.9/12, mb1mx3.8/18, mbtmp3.8/12, ML4.0/1, Error ellipse: s-maj=31.7km s-min=26.7km az=52.0*

NEIC ***12*** *23:15:56.9±0.6, 7.85N×93.89E, h30^{km}, mb4.5/8, Error ellipse: s-maj=16.7km s-min=14.0km az=51.0*

ISC 12 23:15:56.7±0.9**, 8.3N**±0.1×**93.6E**±0.1**, h20**^{km}**, h20**^{km}±.6^{km}**:pP-P, n25, σ0^{s}98**/23**, mb4.1**/18**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.37**	**27**	Pn	**P**	**23 18 42.0**	**+0.7**
	0.3nm,0.3s,baz=215,slow=14,SNR=3.4						
SONM	**Songino Array**	**40.89**	**13**	P	**P**	**23 23 38.0**	**-1.2**
	0.7nm,0.9s,mb3.3,baz=202,slow=9.2,SNR=6.0						
SONM				pP	pP	23 23 44.6	-0.5
	0.6nm,0.8s,baz=207,slow=7.6,SNR=5.2						
SONM				PcP	PcP	23 25 38.3	-2.0
	0.3nm,0.5s,baz=204,slow=4.6,SNR=6.7						
SONM				pPcP		23 25 44.6	
	0.3nm,0.5s,baz=197,slow=4.0,SNR=5.2						
KURK	**Kurchatov**	**44.10**	**346**	*e*P	**P**	**23 24 05.7**	**+0.3**
	3.0nm,0.9s,mb4.0						
ZAL	**Zalesovo**	**46.09**	**353**	P	**P**	**23 24 22.3**	**+1.1**
	1.1nm,0.6s,mb4.0,baz=301,slow=9.8,SNR=5.7						
ZAL	**Zalesovo**	**46.09**	**353**	P	**P**	**23 24 22.3**	**+1.1**
CHKZ	**Chkalovo**	**48.93**	**342**	*e*P	**P**	**23 24 43.2**	**-0.3**
	3.6nm,1.0s,mb4.4						
MAJO	**Matsushiro**	**49.28**	**48**	P	**P**	**23 24 47.7**	**+1.3**
	41nm,1.7s,mb5.2						
GUMO	**Guam**	**50.52**	**79**	*e*P	**P**	**23 24 51.6**	**-4.6**
	222nm,1.2s						
ASAR	**Alice Springs**	**50.57**	**130**	P	**P**	**23 24 48.7**	**-7.7**
	0.3nm,0.5s,mb3.5,baz=319,slow=8.3,SNR=3.8						
GNI	**Garni**	**53.79**	**314**	P	**P**	**23 25 20.8**	**+0.5**
	9.5nm,1.2s,mb4.6						
PMG	**Port Moresby**	**56.14**	**107**	*e*P	**P**	**23 25 37.1**	**-0.7**
	16nm,1.1s,mb5.0						
KMBO	**Kilima Mbogo**	**56.96**	**263**	P	**P**	**23 25 47.6**	**+3.9**
	2.4nm,0.7s,mb4.3,baz=52,slow=12,SNR=9.9						
KMBO	**Kilima Mbogo**	**56.96**	**263**	*e*P	**P**	**23 25 47.8**	**+4.1**
	2.6nm,0.6s,mb4.4						
BRTR	**Keskin Array B**	**61.78**	**311**	P	**P**	**23 26 15.4**	**-1.2**
	0.8nm,0.7s,mb4.0,baz=137,slow=7.9,SNR=6.9						
AKASG	**Malin Array Be**	**67.52**	**322**	P	**P**	**23 26 52.8**	**-0.9**
	1.3nm,0.8s,mb4.0,baz=90,slow=4.6,SNR=4.6						
AKASG				pP	pP	23 26 58.8	-1.1
	1.3nm,0.7s,baz=92,slow=4.7,SNR=3.3						
LSZ	**Lusaka**	**68.92**	**250**	P	**P**	**23 27 04.0**	**+0.9**
	3.5nm,1.2s,mb4.2						
FINES	**FINESS Array B**	**72.12**	**332**	P	**P**	**23 27 21.4**	**-0.2**
	0.7nm,0.5s,mb3.9,baz=96,slow=4.4,SNR=15						
FINES				pP	pP	23 27 27.3	-0.5
	1.4nm,0.6s,baz=90,slow=5.7,SNR=2.7						
FINES	**FINESS Array B**	**72.12**	**332**	P	**P**	**23 27 21.4**	**-0.2**
FINES				pP	pP	23 27 27.3	-0.5
KAF	**Kangasniemi**	**72.20**	**333**	*e*p	**P**	**23 27 21.1**	**-1.0**
	1.7nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**74.72**	**340**	P	**P**	**23 27 36.8**	**+0.1**
	3.4nm,1.0s,mb4.2,baz=90,slow=3.6,SNR=5.8						
GERES	**GERESS Array B**	**77.19**	**318**	P	**P**	**23 27 51.8**	**+0.8**
	1.3nm,0.6s,mb4.1,baz=72,slow=4.2,SNR=5.8						
GERES				pP	pP	23 27 58.1	+0.9
	1.3nm,0.7s,baz=135,slow=7.5,SNR=4.0						
NOA	**NORSAR Array B**	**79.13**	**331**	P	**P**	**23 28 00.2**	**-1.2**
	0.3nm,0.4s,mb3.6,baz=110,slow=5.2,SNR=2.5						
ESDC	**Sonseca Array**	**90.57**	**310**	P	**P**	**23 29 00.3**	**+1.1**
	0.4nm,0.5s,mb4.0,baz=66,slow=4.3,SNR=4.6						
ESDC				pP	pP	23 29 06.4	+0.8
	0.2nm,0.4s,baz=84,slow=3.3,SNR=3.4						
TXAR	**Lajitas Array**	**139.07**	**23**	PKP	PKPdf	23 35 22.8	-4.2
	0.1nm,0.4s,baz=327,slow=0.6,SNR=4.2						
PLCA	**Paso Flores**	**144.74**	**201**	PKP	PKPdf	23 35 31.4	-5.3
	2.1nm,0.8s,baz=71,slow=2.4,SNR=4.4						

IDC 12 23:18:32.2±1.2**, 3.30N**×**126.66E, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.8**/18**, mbtmp3.9**/5**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.4**/17**, Error ellipse: s-maj=145.2km s-min=19.4km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**24.02**	**122**	LR	LR	23 32 38.4	
	comp=Z,66nm,18.1s,baz=295,slow=35						
WRA	**Warramunga Arr**	**24.30**	**162**	P	P	23 23 51.3	-1.2
	4.9nm,0.6s,baz=342,slow=10,SNR=18						
WB2	**Warramunga Arr**	**24.30**	**162**	*e*P	P	23 23 51.6	-1.0
ASAR	**Alice Springs**	**27.72**	**166**	P	P	23 24 22.9	-1.6
	0.7nm,0.6s,baz=352,slow=7.6,SNR=19						
STKA	**Stephens Creek**	**37.76**	**159**	P	P	23 25 50.0	-1.8
	3.3nm,0.7s,baz=336,slow=8.4,SNR=6.1						
SONM	**Songino Array**	**47.68**	**342**	P	P	23 27 10.8	-1.5
	0.2nm,0.5s,baz=165,slow=8.9,SNR=3.1						
BVAR	**Borovoye Array**	**67.64**	**327**	P	P	23 29 30.4	-2.7
	0.8nm,0.8s,baz=108,slow=4.6,SNR=4.8						

ISK ***12*** *23:19:53.7, 38.23N×26.70E, h16^{km}, MD2.9*

ATH ***12*** *23:19:54.3, 38.06N×26.93E, h44^{km}, MD3.0/3*

CSEM ***12*** *23:19:54.0±0.2, 38.15N×26.78E, h15^{km}, MD2.9, Error ellipse: s-maj=10.0km s-min=2.6km az=129.0*

ISC 12 23:19:54.4±0.9**, 38.18N**±0.04×**26.73E**±0.06**, h10**^{km}±6^{km}**, n11, σ0^{s}71**/17**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.32**	**50**	PG	**Pg**	**23 20 00.9**	**-0.1**
BLCB				SG	**Sg**	**23 20 05.2**	**-0.3**
IZM	**Izmir**	**0.47**	**63**	PG	**Pg**	**23 20 04.0**	**0.0**
IZM				SG	**Sg**	**23 20 10.7**	**+0.3**
SMG	**Samos**	**0.48**	**169**	*e*P	**Pg**	**23 20 04.0**	**-0.1**
SMG				*e*S	**Sg**	**23 20 11.1**	**+0.5**
KDAG	**Bornova**	**0.48**	**62**	*i* P	**Pg**	**23 20 04.0**	**-0.1**
KDAG				*i* S	**Sg**	**23 20 10.3**	**-0.3**
AYDN	**Tasoluk**	**1.05**	**119**	*i* P	**Pb**	**23 20 14.4**	**+0.2**
AYDN				*i* S	**Sb**	**23 20 27.2**	**-0.5**
AKS	**Akhisar**	**1.10**	**50**	PN	**Pn**	**23 20 15.6**	**-0.2**
PRK	**Paraskevi**	**1.12**	**342**	*e*P	**Pb**	**23 20 17.0**	**+1.5**
MLSB	**Milas**	**1.21**	**136**	*e*PN	**Pn**	**23 20 17.6**	**+0.2**
APE	**Apeiranthos**	**1.46**	**221**	PN	**Pn**	**23 20 20.0**	**-1.0**

MANT	**Manisa**	1.47	77	*i* P	Pn	23 20 22.3	+1.1
MANT				*i* S	Sb	23 20 40.7	+0.6
BALB	**Balikesir**	1.71	31	*e*PN	Pn	23 20 22.8	-1.8

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*IDC **13** 00:07:45.0±2.9,6.89S×121.87E,h573^{km}±36^{km},mb2.9/4, mb1 3.1/5,mb1mx2.9/15,mbtmp3.9/5,Error ellipse: s-maj=96.1km s-min=12.0km az=61.0*

ISC 13 00:07:43.0±2.9,7.0S±0.3×121.5E±0.5,h571^{km}±37^{km},n7, σ0^{s}.47/9,mb3.5/3,1C,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	12.18	119	⇑*i*P	P	00 10 23.3	-0.4
	5.9nm,0.6s						
WRA	**Warramunga Arr**	17.92	137	P	P	00 11 19.9	+0.2
	0.4nm,0.3s,baz=313,slow=10,SNR=13						
WRA				S	S	00 14 14.5	+0.3
	0.1nm,0.3s,baz=314,slow=18,SNR=3.6						
WB2	**Warramunga Arr**	17.93	137	*e*P	P	00 11 20.6	+0.8
ASAR	**Alice Springs**	20.42	146	P	P	00 11 42.4	-0.7
	0.7nm,0.4s,baz=322,slow=8.5,SNR=18						
ASAR				S	S	00 14 55.0	-0.9
	0.4nm,0.7s,baz=322,slow=15,SNR=3.2						
ASAR				PcP	PcP	00 15 30.7	+0.4
	0.4nm,0.4s,baz=328,slow=1.4,SNR=8.4						
STKA	**Stephens Creek**	31.06	146	P	P	00 13 16.9	+0.2
	3.7nm,0.5s,mb4.2,baz=318,slow=10,SNR=7.0						
SONM	**Songino Array**	56.19	348	P	P	00 16 30.9	-0.3
	0.3nm,0.5s,mb2.8,baz=163,slow=7.6,SNR=6.8						
ZAL	**Zalesovo**	68.09	338	P	P	00 17 48.0	+0.3
	0.8nm,0.4s,mb3.6,baz=124,slow=23,SNR=3.9						

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*MDD **13** 00:23:30.2±1.6,37.00N×11.12W,mb4.3/8,Error ellipse: s-maj=14.9km s-min=9.6km az=53.0,PRXIMO*

*NEIC **13** 00:23:30.0,36.85N×11.38W,h40^{km},MG4.4(MDD),After MDD.*

*INMG **13** 00:23:31.3±1.9,36.90N×11.23W,h16^{km}±43^{km},ML2.4, Error ellipse: s-maj=42.1km s-min=5.0km az=58.0*

*CSEM **13** 00:23:31.6±0.5,37.09N×11.10W,h10^{km},ML3.4/11,Error ellipse: s-maj=10.0km s-min=5.5km az=51.0*

ISC 13 00:23:31.0±1.0,37.20N±0.04×10.96W±0.06,h10^{km},n68, σ1^{s}.39/133,2D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	**Sao Teotonio**	1.81	78	*e*Pn	Pn	00 24 04.1	+1.5
PTEO				*e*Sn	Sn	00 24 28.4	+2.6
	15nm,0.1s						
PTEO	**Sao Teotonio**	1.81	78	P	Pn	00 24 04.0	+1.4
PTEO				S	Sn	00 24 27.9	+2.1
PTEO	**Sao Teotonio**	1.81	78	*e*Pn	Pn	00 24 04.1	+1.5
PTEO				*e*Sn	Sn	00 24 28.4	+2.6
	15nm,0.1s						
PLOU	**Loures**	2.20	40	*e*Pn	Pn	00 24 10.6	+2.4
PLOU				*e*Sn	Sn	00 24 39.9	+4.1
	18nm,0.1s						
PLOU	**Loures**	2.20	40	Pn	Pn	00 24 10.6	+2.4
PLOU				Sn	Sn	00 24 39.9	+4.1
	9.1nm,0.1s						
MOE	**Montemor**	2.45	57	*e*Pn	Pn	00 24 13.7	+2.0
MOE				*e*Sn	Sn	00 24 45.1	+3.1
MOE	**Montemor**	2.45	57	*e*Pn	Pn	00 24 13.7	+2.0
MOE				S	Sn	00 24 44.6	+2.6
PBEJ	**Beja**	2.59	70	*e*Pn	Pn	00 24 14.9	+1.2
PBEJ				*e*Sn	Sn	00 24 47.5	+2.0
	8.1nm,0.3s						
PBEJ	**Beja**	2.59	70	P	Pn	00 24 14.8	+1.1
PBEJ				S	Sn	00 24 47.0	+1.5
PBEJ	**Beja**	2.59	70	*e*Pn	Pn	00 24 14.9	+1.2
PBEJ				*e*Sn	Sn	00 24 47.5	+2.0
	8.1nm,0.3s						
PALC	**Alcoutim**	2.79	84	*e*Pn	Pn	00 24 17.1	+0.5
PALC				*e*Sn	Sn	00 24 51.3	+0.7
	14nm,0.4s						
PALC	**Alcoutim**	2.79	84	P	Pn	00 24 17.0	+0.4
PALC				S	Sn	00 24 50.2	-0.4
PALC	**Alcoutim**	2.79	84	*e*Pn	Pn	00 24 17.1	+0.5
PALC				*e*Sn	Sn	00 24 51.3	+0.7
	14nm,0.4s						
EMIN	**Mina Concepcio**	3.45	79	P	Pn	00 24 26.2	+0.2
EMIN				S	Sn	00 25 08.1	+0.6
EMIN	**Mina Concepcio**	3.45	79	Pn	Pn	00 24 26.2	+0.2
	SNR=7.9						
EMIN				Sn	Sn	00 25 07.3	-0.1
	3.1nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	3.45	79	Pn	Pn	00 24 26.2	+0.2
	SNR=7.9						
EMIN				Sn	Sn	00 25 07.3	-0.2
	3.1nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	3.48	62	P	Pn	00 24 27.7	+1.3
EBAD				S	Sn	00 25 10.3	+2.1
EBAD	**Badajoz**	3.48	62	Pn	Pn	00 24 27.7	+1.3
	1.1nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	00 25 10.3	+2.1
	11nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	3.48	62	Pn	Pn	00 24 27.7	+1.3
	1.1nm,0.1s,SNR=7.9						
EBAD				Sn	Sn	00 25 10.3	+2.2
	11nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	3.79	45	*e*Pn	Pn	00 24 32.2	+1.3
PCBR				*e*Sn	Sn	00 25 17.8	+1.8
	5.0nm,0.4s						
PCBR	**Castelo Branco**	3.79	45	*e*Pn	Pn	00 24 32.2	+1.3
PCBR				S	Sn	00 25 18.1	+2.1
ESPR	**Espera**	4.09	93	⇓P	Pn	00 24 34.3	-0.8
ESPR				S	Sn	00 25 21.8	-1.9
ESPR	**Espera**	4.09	93	⇓Pn	Pn	00 24 34.3	-0.8
	5.6nm,0.1s,SNR=18						
ESPR				Sn	Sn	00 25 19.9	-3.8
	15nm,0.3s,SNR=7.9						
ESPR	**Espera**	4.09	93	Pn	Pn	00 24 34.3	-0.8
	5.6nm,0.1s,SNR=18						
ESPR				Sn	Sn	00 25 19.9	-3.8
	15nm,0.3s,SNR=7.9						
MTE	**Manteigas**	4.16	39	*e*Pn	Pn	00 24 36.5	+0.4
MTE				*e*Sn	Sn	00 25 27.0	+1.7
	5.1nm,0.2s						
MTE	**Manteigas**	4.16	39	Pn	Pn	00 24 36.5	+0.4
MTE				Sn	Sn	00 25 27.0	+1.7
	2.5nm,0.2s						
PVIS	**Viseu**	4.24	33	*e*Pn	Pn	00 24 38.5	+1.2
PVIS				*e*Sn	Sn	00 25 29.1	+1.6
	7.2nm,0.1s						
PVIS	**Viseu**	4.24	33	P	Pn	00 24 38.5	+1.2
PVIS				S	Sn	00 25 28.9	+1.4
PVRL	**Vila Real**	4.78	31	*e*Pn	Pn	00 24 45.6	+0.7
PVRL				*e*Sn	Sn	00 25 41.5	+0.4
	7.0nm,0.2s						
PVRL	**Vila Real**	4.78	31	Pn	Pn	00 24 45.6	+0.7
PVRL				Sn	Sn	00 25 41.5	+0.4
	3.5nm,0.2s						
EMIJ	**Mijas**	5.00	95	Pn	Pn	00 24 47.4	-0.6
	0.4nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	00 25 43.4	-3.1
	1.6nm,0.3s,SNR=7.9						
EADA	**Adamuz**	5.15	77	P	Pn	00 24 49.5	-0.6
EADA				S	Sn	00 25 49.4	-1.0
EADA	**Adamuz**	5.15	77	Pn	Pn	00 24 49.5	-0.6
	1.5nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 25 48.2	-2.2
	6.8nm,0.2s,SNR=7.9						
EADA	**Adamuz**	5.15	77	Pn	Pn	00 24 49.5	-0.6
	1.5nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 25 48.2	-2.2
	6.8nm,0.2s,SNR=7.9						
ELOB	**Lobios**	5.17	25	P	Pn	00 24 50.7	+0.3
ELOB				S	Sn	00 25 51.4	+0.6
ELOB	**Lobios**	5.17	25	Pn	Pn	00 24 50.0	-0.3
	2.5nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	00 25 50.5	-0.3
	2.8nm,0.1s,SNR=7.9						
ELOB	**Lobios**	5.17	25	Pn	Pn	00 24 50.0	-0.4
	2.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	5.17	25	P	Pn	00 24 50.7	+0.3
ELOB				Sn	Sn	00 25 50.5	-0.3
	2.8nm,0.1s,SNR=7.9						
ELOB				S	Sn	00 25 51.4	+0.6
EZAM	**Zamans**	5.24	19	P	Pn	00 24 51.4	0.0
EZAM				S	Sn	00 25 50.2	-2.4
EZAM	**Zamans**	5.24	19	Pn	Pn	00 24 51.3	0.0
	1.2nm,0.1s,SNR=7.9						
EZAM				Sn	Sn	00 25 49.9	-2.7
	SNR=7.9						
PBRG	**Braganca**	5.64	34	*e*Pn	Pn	00 24 57.5	+0.6
PBRG				*e*Sn	Sn	00 26 01.7	-0.8
	3.0nm,0.2s						
PBRG	**Braganca**	5.64	34	Pn	Pn	00 24 57.5	+0.6
PBRG				Sn	Sn	00 26 01.7	-0.8
	1.5nm,0.2s						
ECAL	**Calabor**	5.75	33	Pn	Pn	00 24 59.2	+0.7
	0.9nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	00 26 04.2	-1.1
	SNR=7.9						
ECAL	**Calabor**	5.75	33	Pn	Pn	00 24 59.2	+0.7
	0.9nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	00 26 04.2	-1.1
	SNR=7.9						
EBAN	**Banos Encina**	5.77	78	Pn	Pn	00 24 57.5	-1.3
	0.4nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	00 26 03.6	-2.3
	0.7nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	5.94	14	P	Pn	00 24 59.4	-1.8
EMAZ				S	Sn	00 26 07.6	-2.5
EMAZ	**Mazaricos**	5.94	14	Pn	Pn	00 24 60.0	-1.2
	1.1nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	00 26 06.0	-4.1
	4.0nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	5.94	14	P	Pn	00 24 59.4	-1.8
EMAZ	**Mazaricos**	5.94	14	Pn	Pn	00 25 00.0	-1.2
	1.1nm,0.1s,SNR=7.9						
EMAZ				Sn	Sn	00 26 06.0	-4.1
	4.0nm,0.2s,SNR=7.9						
STS	**Santiago**	5.97	17	Sn	Sn	00 26 09.3	-1.6
	SNR=7.9						
ESDC	**Sonseca Array**	6.02	64	P	Pn	00 25 02.4	0.0
ESDC				S	Sn	00 26 11.6	-0.5
ESDC	**Sonseca Array**	6.02	64	Pn	Pn	00 25 02.4	0.0
	SNR=7.9						
ESDC				Sn	Sn	00 26 10.8	-1.4
	SNR=7.9						
ESDC	**Sonseca Array**	6.02	64	Pn	Pn	00 25 02.4	0.0
	SNR=7.9						
ESDC				Sn	Sn	00 26 10.8	-1.3
	SNR=7.9						
ESDC				S	Sn	00 26 11.6	-0.5
EINC	**Incio**	6.12	26	Pn	Pn	00 25 03.8	+0.1
	2.4nm,0.1s,SNR=7.9						
EINC				Sn	Sn	00 26 12.5	-2.0
	SNR=7.9						
EINC	**Incio**	6.12	26	Pn	Pn	00 25 03.8	+0.1
	2.4nm,0.1s,SNR=7.9						
EINC				Sn	Sn	00 26 12.5	-2.0
	SNR=7.9						
EQES	**Quesada**	6.30	82	P	Pn	00 25 05.2	-1.1
EQES				S	Sn	00 26 16.2	-2.9
EQES	**Quesada**	6.30	82	Pn	Pn	00 25 05.2	-1.1
	0.6nm,0.1s,SNR=7.9						
EQES				Sn	Sn	00 26 15.5	-3.6
	SNR=7.9						
EQES	**Quesada**	6.30	82	Pn	Pn	00 25 05.2	-1.1
	0.6nm,0.1s,SNR=7.9						
EQES				Sn	Sn	00 26 15.5	-3.6
	SNR=7.9						
EPON	**Pontenova**	6.78	24	P	Pn	00 25 12.4	-0.6
EPON				S	Sn	00 26 29.7	-1.4
EPON	**Pontenova**	6.78	24	Pn	Pn	00 25 12.5	-0.6
	3.5nm,0.2s,SNR=7.9						
EPON				Sn	Sn	00 26 28.7	-2.4
	SNR=7.9						
EPON	**Pontenova**	6.78	24	Pn	Pn	00 25 12.5	-0.5
	3.5nm,0.2s,SNR=7.9						
EPON				Sn	Sn	00 26 28.7	-2.3
	SNR=7.9						
EPON				S	Sn	00 26 29.7	-1.3
EARI	**Arriondas**	7.51	34	Pn	Pn	00 25 22.7	-0.7
EARI				Sn	Sn	00 26 46.3	-3.1
EARI	**Arriondas**	7.51	34	Pn	Pn	00 25 22.7	-0.6
	SNR=7.9						
EARI				Sn	Sn	00 26 46.3	-3.1
	SNR=7.9						
ETOB	**Tobarra**	7.58	76	Pn	Pn	00 25 23.0	-1.2
	0.1nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	00 26 46.8	-4.3
	SNR=7.9						
ETOB	**Tobarra**	7.58	76	Pn	Pn	00 25 23.0	-1.2
	0.1nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	00 26 46.8	-4.2
	SNR=7.9						
EMUR	**La Murta**	7.75	82	Sn	Sn	00 26 50.1	-5.2
	SNR=7.9						
EMUR	**La Murta**	7.75	82	Sn	Sn	00 26 50.1	-5.3
	SNR=7.9						
EBIE	**Bielsa**	10.13	54	Pn	P	00 26 00.0	+0.5

IDC 13 00:25:13.7±1.0,27.27N×140.20E,h360^{km}±11^{km},mb2.9/7, mb1 3.2/7,mb1mx3.0/20,mbtmp3.7/7,Error ellipse: s-maj=32.2km s-min=15.1km az=92.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	1.77	95	P	P	00 26 05.0	+0.1
	6.2nm,0.3s,baz=237,slow=11,SNR=4.6						
CBIJ				S	S	00 26 45.5	+0.6
	16nm,0.3s,baz=273,slow=21,SNR=10						
SONM	**Songino Array**	33.38	317	P	P	00 31 19.7	-1.2
	0.1nm,0.6s,baz=127,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	47.27	188	P	P	00 33 12.0	-2.0
	0.5nm,0.4s,baz=4.0,slow=7.6,SNR=4.5						
ASAR	**Alice Springs**	51.00	187	P	P	00 33 40.5	-1.6
	0.3nm,0.7s,baz=0.5,slow=6.0,SNR=3.0						
ILAR	**Eielson Array**	58.41	29	P	P	00 34 32.2	-1.9
	0.6nm,0.9s,baz=243,slow=6.0,SNR=4.1						
STKA	**Stephens Creek**	58.83	179	P	P	00 34 34.9	-2.6
	1.4nm,0.8s,baz=326,slow=11,SNR=2.8						
YKA	**Yellowknife Ar**	72.82	28	P	P	00 36 03.7	-1.1
	0.4nm,0.4s,baz=296,slow=5.8,SNR=7.5						
FINES	**FINESS Array B**	77.01	333	P	P	00 36 26.9	-1.6
	0.5nm,0.4s,baz=62,slow=4.9,SNR=9.3						

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*NEIC **13** 00:38:25.7,17.98N×97.05W,h66^{km},MD3.9(MEX),After MEX.*

MEX 13 00:38:25.7±0.9,17.98N×97.05W,h66^{km}±9^{km},MD3.9,1C, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OXX	**Oaxaca**	0.95	161	*e*P	P	00 38 41.5	-2.0
OXX				*e*S	S	00 38 55.0	-1.8
VHO	**Vista Hermosa**	0.95	162	*i* P	P	00 38 42.1	-1.6
VHO				*i* S	S	00 38 55.7	-1.3
IISM	**Ciudad Serdan**	1.05	343	*e*P	P	00 38 43.5	-1.4
IISM				*e*S	S	00 38 57.5	-1.6
IIB	**San Bernardino**	1.57	309	*e*P	P	00 38 50.5	-1.6
IIB				*e*S	S	00 39 10.0	-1.5
PPM	**Popocatepetl**	1.85	306	*i* P	P	00 38 55.4	-0.4
PPM				*i* S	S	00 39 16.4	-1.6
PPM	**Popocatepetl**	1.85	306	*e*P	P	00 38 54.5	-1.3
PPM				*i* P		00 38 55.4	
PPM				*e*S	S	00 39 15.5	-2.5
PPM				*i* S	S	00 39 16.4	-1.6
YAIG	**Yautepec**	2.11	295	⇑*e*P	P	00 38 57.7	-1.7
YAIG				*e*S	S	00 39 20.9	-3.5

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*NEIC **13** 00:52:37.3±0.7,5.04N×94.06E,h30^{km},mb4.1/6,Error ellipse: s-maj=22.6km s-min=11.4km az=60.0*

*IDC **13** 00:52:39.5±7.2,5.09N×94.11E,h46^{km}±65^{km},mb3.6/9, mb1 3.8/10,mb1mx3.6/19,mbtmp3.9/10,ML4.3/1,Error ellipse: s-maj=54.1km s-min=17.9km az=52.0*

ISC 13 00:52:35.4±0.8,5.0N±0.1×94.1E±0.2,h30^{km},n16, σ0^{s}.76/16,mb4.0/15,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	14.17	19	P	P	00 55 56.9	+0.5
	0.5nm,0.3s,baz=215,slow=14,SNR=3.5						
LSA	**Lhasa**	24.68	354	*e*P	P	00 57 56.8	+1.5
	2.2nm,0.4s,mb4.0						
SONM	**Songino Array**	43.93	12	P	P	01 00 40.7	-0.7
	1.1nm,0.6s,mb3.7,baz=194,slow=7.7,SNR=17						
SONM				PcP	PcP	01 02 27.8	+0.3
	0.4nm,0.7s,baz=199,slow=3.1,SNR=3.5						
ULN	**Ulaanbaatar**	44.10	13	*e*P	P	01 00 40.7	-2.1
	1.1nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	46.73	123	P	P	01 01 04.3	+0.2
	1.8nm,0.7s,mb4.1,baz=303,slow=9.1,SNR=9.6						
WRAB	**Tennant Creek**	46.73	123	*e*P	P	01 01 04.3	+0.2
	4.3nm,0.6s,mb4.6						
KURK	**Kurchatov**	47.33	347	*e*P	P	01 01 08.7	+0.3
	1.3nm,0.5s,mb4.1						
ASAR	**Alice Springs**	48.20	128	P	P	01 01 15.7	+0.1
	0.4nm,0.5s,mb3.7,baz=299,slow=7.7,SNR=8.9						
ZAL	**Zalesovo**	49.33	353	P	P	01 01 24.6	+0.7
	1.2nm,0.8s,mb4.0,baz=295,slow=6.7,SNR=7.6						
BVAR	**Borovoye Array**	51.64	342	P	P	01 01 40.9	-0.5
	0.6nm,0.5s,mb3.8,baz=134,slow=10,SNR=5.2						
BRVK	**Borovoye**	51.70	342	*e*P	P	01 01 41.8	-0.1
	0.8nm,0.4s,mb4.0						
BRTR	**Keskin Array B**	64.23	312	P	P	01 03 10.4	+0.3
	0.6nm,0.5s,mb3.9,baz=133,slow=8.1,SNR=6.6						
AKASG	**Malin Array Be**	70.33	322	P	P	01 03 48.3	0.0
	1.4nm,0.7s,mb4.0,baz=110,slow=6.8,SNR=4.9						
FINES	**FINESS Array B**	75.17	333	P	P	01 04 17.1	+0.5
	0.8nm,0.4s,mb4.0,baz=95,slow=5.4,SNR=16						
KAF	**Kangasniemi**	75.27	333	*e*p	P	01 04 17.2	0.0
	1.1nm,0.6s,mb4.0,baz=111,slow=5.5						
HFS	**Hagfors**	80.86	330	P	P	01 04 46.7	-1.1
	1.8nm,0.5s,mb4.2,baz=108,slow=9.4,SNR=6.2						

NEIC 13 01:03:21.6,63.07N×151.52W,h10^{km},ML3.6(PMR), ML3.3(AEIC),After AEIC.,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	0.56	29	P	Pg	01 03 32.7	-0.1
KTH				S	Sg	01 03 40.1	-0.2
TRF	**Thorofare Moun**	0.68	55	P	Pb	01 03 35.0	0.0
TRF				S	Sb	01 03 44.4	+0.3
HUR	**Hurricane**	0.86	95	P	Pb	01 03 38.0	-0.2
HUR				S	Sb	01 03 49.5	-0.1
CUT	**Chulitna**	0.88	139	P	Pb	01 03 38.4	-0.1
RND	**Reindeer**	1.25	73	P	Pb	01 03 44.9	0.0
RND				S	Sb	01 04 01.6	+0.7
MCK	**McKinley**	1.34	59	P	Pb	01 03 46.2	-0.1
MCK				S	Sb	01 04 04.3	+0.9
BWN	**Browne**	1.44	39	P	Pn	01 03 47.5	-0.2
STLK	**Strandline Lak**	1.58	185	P	Pn	01 03 49.0	-0.8
STLK				S	Sb	01 04 10.0	-0.5
PWA	**Palmer West**	1.62	151	P	Pn	01 03 50.3	-0.1
GHO	**Glory Hole Cre**	1.78	136	P	Pn	01 03 52.7	+0.1
PMR	**Palmer**	1.86	142	P	Pn	01 03 53.6	-0.2
CKN	**Chakachatna No**	1.88	190	P	Pn	01 03 54.2	+0.1
SPU	**Mount Spurr**	1.91	188	*e*P	Pn	01 03 53.7	-0.8
SML	**Sawmill**	1.95	129	P	Pn	01 03 55.0	-0.1
MLY	**Manley**	2.00	10	P	Pn	01 03 54.7	-1.1
FIB	**Fire Island**	2.01	161	P	Pn	01 03 56.7	+0.7
RC01	**Rabbit Creek A**	2.16	156	P	Pn	01 03 58.9	+0.8
KNK	**Knik Glacier**	2.20	138	P	Pn	01 04 00.1	+1.4
CCB	**Clear Creek Bu**	2.28	44	P	Pn	01 03 58.0	-1.8
SCM	**Sheep Creek Mo**	2.31	121	P	Pn	01 04 00.8	+0.5
NKA	**Nikishka**	2.34	177	P	Pn	01 04 02.6	+1.9
MDM	**Murphy Dome**	2.39	36	P	Pn	01 03 59.5	-1.8
COLA	**College**	2.43	40	P	Pn	01 04 00.1	-1.9
HDA	**Harding Lake**	2.43	55	P	Pn	01 04 00.6	-1.4
DFR	**Drift River**	2.55	193	P	Pn	01 04 03.7	0.0
NCT	**North Crescent**	2.60	196	P	Pn	01 04 04.8	+0.3
RDN	**Redoubt North**	2.63	194	P	Pn	01 04 05.2	+0.4
THY	**Trims Highway**	2.63	80	P	Pn	01 04 05.2	+0.4
DDM	**Donnelly Dome**	2.64	72	P	Pn	01 04 05.3	+0.3
SLKM	**Skilak Lake**	2.65	166	*e*P	Pn	01 04 04.8	-0.2
GLM	**Gilmore Dome**	2.65	42	P	Pn	01 04 03.5	-1.6
IL1	**Eielson Array**	2.67	48	P	Pn	01 04 03.5	-1.9
PWL	**Port Wells**	2.68	144	P	Pn	01 04 06.4	+0.9
RSO	**Redoubt South**	2.68	193	*e*P	Pn	01 04 04.9	-0.7
SVW2	**Sparrevohn**	2.75	226	P	Pn	01 04 04.6	-2.0
PAX	**Paxson**	2.76	89	P	Pn	01 04 06.7	0.0
GLI	**Glacier Island**	3.03	134	P	Pn	01 04 09.6	-1.0
JPK	**Jack Peak**	3.08	129	P	Pn	01 04 10.2	-0.9
ILIM	**Iliamna**	3.08	194	P	Pn	01 04 11.9	+0.7
IM3	**Indian Mountai**	3.08	343	P	Pn	01 04 10.1	-1.1
INE	**Iliamna NE**	3.11	194	P	Pn	01 04 10.9	-0.8
VLZ	**Valdez**	3.12	126	P	Pn	01 04 11.5	-0.3
IMA	**Indian Mountai**	3.15	344	*e*P	Pn	01 04 11.2	-1.1
DIV	**Divide**	3.33	123	P	Pn	01 04 14.9	+0.1
FID	**Port Fidalgo**	3.33	132	P	Pn	01 04 13.3	-1.6
MENT	**Mentasta**	3.56	89	*e*P	Pn	01 04 19.2	+1.1
COLD	**Coldfoot**	4.21	7	P	Pn	01 04 25.9	-1.4
BCA3	**Beaver Creek A**	4.43	86	P	Pn	01 04 29.9	-0.5
DAWY	**Dawson**	5.51	74	P	Pn	01 04 43.4	-2.3

IDC 13 01:10:29.6±12.0,9.92N×91.78E,mb3.5/2,mb1 3.9/3, mb1mx3.4/17,mbtmp3.6/3,ML4.2/1,Error ellipse: s-maj=284.4km s-min=47.2km az=99.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	10.97	38	Pn	P	01 13 08.0	-3.0
	0.5nm,0.3s,baz=232,slow=15,SNR=6.3						
WRA	**Warramunga Arr**	51.34	125	P	P	01 19 36.5	-1.7
	0.3nm,0.3s,baz=306,slow=8.4,SNR=5.1						
ASAR	**Alice Springs**	53.01	130	P	P	01 19 48.2	-2.5
	0.5nm,0.5s,baz=306,slow=7.4,SNR=8.9						

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*MOS **13** 01:11:27.1±2.7,42.53N×46.08E,h15^{km},mb3.5/1,Error ellipse: s-maj=16.4km s-min=13.1km az=165.1*

TIF 13 01:11:28.7,43.11N×46.00E,h10^{km}±3^{km},Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTLR	**Botlikh**	0.48	160	*e*PG	Pg	01 11 37.4	-1.0
BTLR				pmax	pmax		
	comp=Z,62nm,0.2s						
DBC	**Dubki**	0.62	98	*i* PG	Pg	01 11 42.0	+0.9
DBC				*i* S	Sg	01 11 52.0	+2.6
KRNR	**Karanay**	0.72	113	*e*PG	Pg	01 11 50.0	+6.7
KRNR				pmax	pmax		
	comp=Z,16nm,0.2s						
MNSR	**Manas**	1.33	107	*e*PG	Pg	01 11 53.8	-1.5
MNSR				*e*S	Sb	01 12 13.8	+3.6
DUS	**Dusheti**	1.40	224	P	Pn	01 11 56.4	+2.0
DUS				S	Sb	01 12 17.9	+5.6
ZEI	**Tsey**	1.58	258	*i* PN	Pn	01 11 56.9	0.0
ZEI				*i* S	Sb	01 12 18.7	+1.2
TI2	**Plekhanov**	1.66	214	*i* PG	Pg	01 12 05.4	+3.5
MTA	**Mtatsminda**	1.68	213	P	Pn	01 12 01.5	+3.2
MTA				S	Sn	01 12 25.3	+5.3
ONI	**Oni**	1.95	255	P	Pn	01 12 03.3	+1.0
ONI				S	Sn	01 12 31.4	+4.5
GOF	**Gofitskoye**	2.89	313	*e*PN	Pn	01 12 25.0	+9.4

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*NEIC **13** 01:21:35.6±2.6,4.53S×144.89E,h53^{km}±21^{km},mb4.3/3, Error ellipse: s-maj=23.9km s-min=15.5km az=166.0*

*IDC **13** 01:21:35.1±5.2,4.47S×144.86E,h44^{km}±47^{km},mb3.8/4, mb1 4.1/7,mb1mx4.0/14,mbtmp4.1/7,ML4.1/3,MS3.0/1, Ms1 3.0/1,ms1mx2.6/16,Error ellipse: s-maj=40.5km s-min=29.7km az=120.0*

*BJI **13** 01:21:37.6,4.50S×144.90E,h53^{km},mB5.7,Ms5.5, Msz5.3*

ISC 13 01:21:33.4±2.6,4.50S±0.10×144.82E±0.10,h43^{km}±25^{km}, n22,σ0^{s}.93/25,mb4.2/6,MS5.2/3,1C-1D,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	5.40	155	P	P	01 22 54.0	+0.6
	9.5nm,0.3s,baz=11,slow=7.9,SNR=22						
PMG				S	S	01 23 54.3	-0.8
	6.1nm,0.3s,baz=115,slow=23,SNR=3.5						
PMG	**Port Moresby**	5.40	155	*e*P	P	01 22 53.0	-0.4
PMG				S	S	01 23 54.3	-0.8
PMG				*e*S	S	01 23 56.2	+1.0
KAKA	**Kakadu**	14.70	236	*e*P	P	01 25 00.7	+0.3
	17nm,0.6s						
CTA	**Charters Tower**	15.55	175	P	P	01 25 15.4	+4.0
	0.4nm,0.3s,baz=360,slow=14,SNR=6.4						
CTA				LR	LR	01 30 43.4	
	comp=Z,58nm,20.9s,baz=44,slow=35						
CTAO	**Charters Tower**	15.55	175	*e*P	P	01 25 15.6	+4.2
	2.4nm,0.6s						
WRAB	**Tennant Creek**	18.42	213	*e*P	P	01 25 47.3	-0.1
	26nm,0.9s						
WB2	**Warramunga Arr**	18.43	213	⇓*i*P	P	01 25 47.3	-0.2

WRA	Warramunga Arr	18.43	213	P	P	01 25 47.5	-0.1
	1.5nm,0.3s,baz=33,slow=13,SNR=37						
ASAR	Alice Springs	21.77	208	P	P	01 26 23.0	-0.3
	1.8nm,0.5s,mb3.8,baz=38,slow=9.9,SNR=23						
ASPA	Alice Springs	21.77	208	*e*P	P	01 26 23.9	+0.6
FITZ	Fitzroy Crossi	23.12	233	*e*P	P	01 26 38.1	+1.3
	24nm,0.6s,mb4.8						
STKA	Stephens Creek	27.40	186	P	P	01 27 18.3	+1.2
	1.4nm,0.5s,mb3.7,baz=17,slow=11,SNR=4.5						
STKA	Stephens Creek	27.40	186	P	P	01 27 13.9	-3.3
MBWA	Marble Bar	29.46	234	*e*P	P	01 27 34.7	-0.9
	8.5nm,0.8s,mb4.5						
LUBP	Lubang	30.38	307	*e*P	P	01 27 43.5	-0.4
ABRA	Dolores	32.41	313	*e*P	P	01 28 00.0	-1.8
QZH	Quanzhou	38.82	320	P	P	01 29 04.0	+8.0
QZH				LR	LR		
	comp=Z,5µm,23.2s,MS5.3						
TIA	Tai'an	48.09	330	⇑P	P	01 30 16.4	+5.5
TIA				LR	LR		
	comp=N,2µm,17.0s,MS5.3						
TIA				LR	LR		
	comp=E,2µm,15.0s,MS5.3						
BJI	Beijing	51.56	332	P	P	01 30 39.4	+2.0
BJI				LR	LR		
	comp=N,2µm,19.1s,MS5.2						
BJI				LR	LR		
	comp=E,1µm,17.7s,MS5.2						
BJI				LR	LR		
	comp=Z,2µm,25.1s						
VNDA	Vanda	73.53	176	P	P	01 33 02.9	-0.2
	comp=Z,1.4nm,0.6s,mb4.0,baz=337,slow=7.3,SNR=8.0						
VNDA	Vanda	73.53	176	P	P	01 33 02.9	-0.2
ILAR	Eielson Array	84.97	24	P	P	01 34 05.0	-0.2
	comp=Z,1.0nm,0.7s,mb4.1,baz=253,slow=5.3,SNR=15						

*MOS **13** 01:22:06.1±0.9, 5.15N×94.83E, h33^{km}, mb6.0/96, Error ellipse: s-maj=7.7km s-min=3.3km az=127.4*

*BGS **13** 01:22:07.6, 5.08N×94.79E, h33^{km}, mb6.0*

*NEIC **13** 01:22:09.3±0.1, 5.08N×94.79E, mb5.7/114, MS4.5/10, MW5.3, Error ellipse: s-maj=4.0km s-min=2.6km az=32.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.01; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$-0.76; M$_{r\theta}$0.66; M$_{\theta\phi}$0.32; M$_{\phi r}$-0.57; Best double couple: M$_0$1.3×10^{17} NP1:φ$_s$344°, δ26°, λ112°. NP2:φ$_s$140°, δ66°, λ80°. Principal axes: T 1.37, Plg67°, Azm30°; N -.15, Plg9°, Azm144°; P -1.22, Plg21°, Azm237°;*

NEIC Felt at Banda Aceh.

*HRVD **13** 01:22:09.3±0.2, 4.82N×94.61E, h51^{km}, MW5.4/64, Centroid moment Tensor Solution. LP body waves: s62,c111;Mantle waves: s64,c128; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.04±.03; M$_{\theta\theta}$-0.49±.02; M$_{\phi\phi}$-0.54±.03; M$_{r\theta}$0.56±.02; M$_{\theta\phi}$0.70±.02; M$_{\phi r}$-0.41±.02; Best double couple: M$_0$1.326×10^{17} NP1: φ$_s$323°, δ30°, λ101°. NP2:φ$_s$130°, δ61°, λ84°. Principal axes: T 1.242, Plg73°, Azm25°; N .17, Plg5°, Azm133°; P -1.411, Plg16°, Azm225°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **13** 01:22:09.9±0.4, 5.16N×94.94E, h52^{km}±2^{km}, mb5.2/29, mb1 5.3/30, mb1mx5.2/31, mbtmp5.5/30, MS4.6/17, Ms1 4.6/17, ms1mx4.5/26 Error ellipse: s-maj=13.9km s-min=7.5km az=45.0*

*BJI **13** 01:22:10.0, 5.31N×94.52E, h41^{km}, mB5.6, mb5.7, Ms5.2, Msz5.0*

ISC 13 01:22:07.9±0.6**, 5.05N**±0.03×**94.79E**±0.02**, h50**^{km}±5^{km}**, h48**^{km}±1.0^{km}**:pP-P, n874,** σ0^s**95**/758**, mb5.7**/188**, MS4.8**/56**, 218C-14D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	6.17	70	P	P	01 23 39.0	+0.4
	2µm,1.0s						
IPM	Ipoh	6.23	94	P	P	01 23 40.3	+0.8
NNT	Nongplab	8.94	33	P	P	01 24 19.0	+1.9
KGM	Kluang	9.03	109	P	P	01 24 18.6	+0.2
NST	Nakhon Sawan	11.79	26	⇓P	P	01 24 59.0	+3.0
	104nm,0.5s						
KKTK	Khon Kaen	13.71	34	PN	P	01 25 26.0	+4.4
KKTK				PG	P	01 25 31.0	+9.4
KKTK				SG	rx	01 25 44.0	
CM31	Chiang Mai Arr	13.93	17	*e*P	P	01 25 24.7	+0.3
	317nm,0.8s						
CMAR	Chiang Mai Arr	13.93	17	P	P	01 25 26.4	+2.0
	1.6nm,0.3s,baz=205,slow=12,SNR=134						
CMAR				LR	LR	01 30 36.5	
	comp=Z,2µm,21.4s,baz=195,slow=37						
CMAR				ScP		01 34 13.3	
	0.4nm,0.3s,baz=229,slow=3.1,SNR=25						
PALK	Pallekele	14.18	280	Pn	P	01 25 27.1	-0.6
	344nm,0.7s,SNR=26						
PALK	Pallekele	14.18	280	*e*P	P	01 25 25.4	-2.3
	57nm,0.6s						
CHG	Chiang Mai	14.27	16	⇑P	P	01 25 30.4	+1.5
	150nm,0.8s						
CHRT	Chiangrai	15.51	18	⇑P	P	01 25 47.0	+2.0
	1µm,0.7s						
MDRS	Chennai	16.41	300	*e*		01 26 08.0	
MDRS				*e*		01 28 42.0	
MDRS				*e*	S	01 29 12.0	+16
VIS	Vishakhapatnam	16.86	319	*i* S	S	01 28 57.0	-10
COCO	West Island	17.25	173	Pn	P	01 26 05.2	-1.8
	2µm,1.2s,SNR=9.3						
COCO	West Island	17.25	173	*e*P	P	01 26 06.1	-0.9
	456nm,1.3s						
BWNR	Bhubaneshwar	17.49	331	*e*P	P	01 26 04.0	-5.9
BWNR				*e*		01 28 05.0	
TRD	Trivandrum	18.03	282	*e*P	P	01 26 17.3	+0.6
TRD				*e*		01 26 19.6	
	comp=Z,106nm,1.0s						
AGT	Agartala	19.03	350	*e*P	P	01 26 27.0	-1.6
IMP	Imphal	19.63	358	*e*P	P	01 26 32.0	-3.2
HYB	Hyderabad	20.09	309	⇑*e*P	P	01 26 39.0	-1.1
HYB				*e*S	S	01 30 20.0	+2.0
HYB				pmax	pmax		
	comp=Z,190nm,1.0s						
HYB	Hyderabad	20.09	309	⇑*e*P	P	01 26 39.0	-1.1
	comp=Z,190nm,1.0s						
HYB				*e*S	S	01 30 20.0	+2.0
HYB	Hyderabad	20.09	309	⇑*i*P	P	01 26 39.0	-1.1
	comp=Z,190nm,1.0s						
HYB				*e*S	S	01 30 20.0	+2.0
QIZ	Qiongzhong	20.21	45	P	P	01 26 41.2	-0.2
QIZ				XP		01 26 57.0	
QIZ				S	S	01 30 21.3	+0.8
QIZ				XS		01 30 36.9	
QIZ				AMB	AMB		
	comp=Z,97nm,1.3s						
QIZ				LR	LR		
	comp=N,3µm,16.9s,MS4.8						
QIZ				LR	LR		
	comp=E,2µm,17.6s,MS4.8						
QIZ				LR	LR		
	comp=Z,4µm,18.9s,MS4.8						
QIZ	Qiongzhong	20.21	45	⇑*e*P	P	01 26 41.9	+0.4
	comp=Z,176nm,1.1s						
BOK	Bokaro	20.51	336	⇓*i*P	P	01 26 42.0	-2.5
BOK				*i* S	S	01 30 28.0	+1.8
SHL	Shillong	20.59	353	*e*P	P	01 26 42.0	-3.2
SHL				*e*		01 30 22.0	
BLSP	Bilaspur	20.93	325	*i* P	P	01 26 47.0	-1.8
BLSP				*e*		01 27 08.0	
MNGI	Mangalore	21.20	293	*e*P	P	01 26 53.9	+2.3
MNGI				*e*S	S	01 30 39.3	-0.1
KKM	Kota Kinabalu	21.35	86	P	P	01 26 54.2	+1.2
KMI	Kunming	21.37	20	⇑P	P	01 26 55.0	+1.9
KMI				PP	PP	01 27 19.7	+1.6
KMI				S	S	01 30 42.3	-0.1
KMI				SS	SS	01 31 14.8	-4.6
KMI				AMB	AMB		
	comp=Z,148nm,0.8s,mb5.4						
KMI				LR	LR		
	comp=N,2µm,19.3s						
KMI				LR	LR		
	comp=E,2µm,13.8s						
KMI				LR	LR		
	comp=Z,3µm,21.4s,MS4.7						
NGP	Nagpur	22.12	318	*e*S	S	01 31 01.8	+5.5
LATR	Latur	22.21	308	*e*P	P	01 27 02.6	+1.0
LATR				*e*S	S	01 31 01.8	+3.9
GTK	Gangtok	22.92	346	*e*P	P	01 27 05.0	-3.6
TSM	Tawau	23.02	91	P	P	01 27 10.6	+0.9
GOA	Goa	23.06	298	*e*S	S	01 31 29.0	+16
BATP	Bataraza	23.14	79	*e*P	P	01 27 12.5	+1.6
KAD	Karad	23.56	303	*e*P	P	01 27 16.7	+1.9
KAD				*e*S	S	01 31 26.3	+4.3
ALBI	Allahabad	23.68	330	*e*P	P	01 27 15.5	-0.4
JIRN	Jiri	23.93	341	*e*P	P	01 27 16.8	-1.5
	comp=Z,574nm,0.6s,mb6.2						
PKI	Pulchoki	24.11	339	*e*P	P	01 27 19.8	-0.3
	comp=Z,255nm,0.7s,mb5.8						
GYA	Guiyang	24.12	27	⇑*i*P	P	01 27 21.5	+1.3
GYA				AP		01 27 31.1	
GYA				XP		01 27 35.0	
GYA				AMB	AMB		
	comp=Z,160nm,0.7s,mb5.6						
GYA				AMB	AMB		
	comp=Z,670nm,4.0s						
GYA				LR	LR		
	comp=N,4µm,17.3s,MS5.0						
GYA				LR	LR		
	comp=E,1µm,13.1s,MS5.0						
GYA				LR	LR		
	comp=Z,5µm,18.6s						
PPR	Puerto Princes	24.20	77	*e*P	P	01 27 22.8	+1.7
DMN	Daman	24.25	339	*e*P	P	01 27 21.0	-0.5
	comp=Z,616nm,0.9s,mb6.0						
KKN	Kakani	24.35	339	*e*P	P	01 27 21.7	-0.8
	comp=Z,1µm,1.2s,mb6.2						
POO	Poona	24.44	305	⇑*i*P	P	01 27 25.0	+1.6
	comp=Z,140nm,1.0s,mb5.3						
POO				*i*		01 31 54.0	
BHPL	Bhopal	24.65	319	⇑*i*P	P	01 27 27.1	+1.7
BHPL				*e*		01 32 04.0	
LSA	Lhasa	24.75	352	P	P	01 27 26.6	+0.2
LSA				AP		01 27 36.9	
LSA				S	S	01 31 38.2	-4.1
LSA				AMB	AMB		
	comp=Z,350nm,0.5s,mb6.2						
LSA				AMB	AMB		
	comp=Z,450nm,8.0s						
LSA				LR	LR		
	comp=N,1µm,23.0s,MS4.4						
LSA				LR	LR		
	comp=E,1µm,28.0s,MS4.4						
LSA				LR	LR		
	comp=Z,2µm,24.0s,MS4.5						
LSA	Lhasa	24.75	352	*e*P	P	01 27 26.4	0.0
LSA				pmax	pmax		
	comp=Z,279nm,0.6s,mb6.0						
LSA	Lhasa	24.75	352	*e*P	P	01 27 26.4	+0.1
	comp=Z,279nm,0.6s,mb6.0						
GKN	Gorkha	24.78	338	*e*P	P	01 27 26.2	-0.4
	comp=Z,774nm,0.8s,mb6.3						
KOLN	Koldanda	24.98	336	*e*P	P	01 27 28.7	+0.2
	comp=Z,1µm,0.8s,mb6.5						
ENPP	El Nido	25.13	74	*e*P	P	01 27 31.5	+1.4
GZH	Guangzhou	25.34	43	P	P	01 27 38.6	+6.6
GZH				AMB	AMB		
	comp=Z,135nm,0.8s,mb5.5						
GZH				LR	LR		
	comp=N,3µm,19.4s,MS4.8						
GZH				LR	LR		
	comp=E,2µm,19.7s,MS4.8						
GZH				LR	LR		
	comp=Z,4µm,18.8s,MS4.9						
BOM	Bombay	25.47	305	*e*P	P	01 27 35.3	+2.0
BOM				*e*S	S	01 32 02.9	+8.5
DGAR	Diego Garcia	25.50	241	*e*P	P	01 27 34.2	+0.7
DGAR				pmax	pmax		
	comp=Z,435nm,1.4s,mb5.8						
DGAR				MLR	MLR		
	comp=Z,661nm,21.0s,MS4.1						
DGAR	Diego Garcia	25.50	241	*e*P	P	01 27 34.2	+0.6
	comp=Z,435nm,1.4s,mb5.8						
DGAR				LR	LR		
	comp=Z,661nm,21.0s,MS4.1						
JHNI	Jhansi	25.59	324	⇓*i*P	P	01 27 33.0	-1.3
JHNI				*e*		01 27 58.0	
BUSP	Coron	26.05	73	*e*P	P	01 27 37.5	-1.2
SJMP	San Jose	27.03	72	*e*P	P	01 27 48.3	+0.6
CD2	Chengdu	27.07	17	⇑*i*P	P	01 27 47.0	-0.9
CD2				PPP	PPP	01 28 42.0	-5.4
CD2				S	S	01 32 20.0	-0.5
CD2				SS	SS	01 33 35.0	-2.6
CD2				AMB	AMB		
	comp=Z,325nm,1.2s,mb5.7						
CD2				LR	LR		
	comp=E,3µm,16.0s						
TGY	Tagaytay City	27.28	69	⇓*e*P	P	01 27 51.5	+1.5
TGY	Tagaytay City	27.28	69	P	P	01 27 51.1	+1.1
	comp=E,790nm,0.8s,mb6.3,baz=263,slow=2.1,SNR=23						
OTRP	Odiongan	27.86	73	*e*P	P	01 27 55.0	-0.2
LGTI	Lohaghat	27.89	332	*e*P	P	01 27 55.3	-0.1
BOAC	Boac	27.95	71	*e*P	P	01 27 56.3	+0.2
PTH	Pithoragarh	27.99	332	*e*P	P	01 27 58.0	+1.7
PTH				*e*		01 33 28.0	
GUIM	Jordan	28.08	77	*e*P	P	01 27 58.6	+1.3
BALP	Baler	28.37	66	*e*P	P	01 28 00.7	+0.9
POLP	Polilio Island	28.39	68	*e*P	P	01 27 59.8	-0.2
PAGZ	Pagadian	28.55	83	*e*P	P	01 28 01.0	-0.4
ENH	Enshi	28.66	27	*e*P	P	01 28 01.0	-1.3
	comp=E,143nm,0.7s,mb5.8						
AJM	Ajmer	28.71	320	⇑*i*P	P	01 28 03.2	+0.4
NDI	New Delhi	28.81	327	*e*P	P	01 28 01.5	-2.1
NDI				*e*		01 33 44.0	
APYP	Conner	28.83	62	*e*P	P	01 28 04.3	+0.4
CAUP	Cauayan	29.00	64	*e*P	P	01 28 06.1	+0.7
DDI	Dehra Dun	29.68	330	*e*P	P	01 28 09.9	-1.4
DDI				*e*S	S	01 33 06.6	+4.4
PVCP	Virac	30.16	72	*e*P	P	01 28 15.1	-0.7
BUKP	Musuan	30.21	83	*e*P	P	01 28 16.3	+0.1
SMLA	Simla	30.77	330	*i*		01 33 39.4	
SDNR	Sundarnagar	31.17	330	*e*P	P	01 28 24.8	+0.2
WHN	Wuhan	31.34	34	⇑P	P	01 28 26.0	-0.1
WHN				LR	LR		
	comp=Z,11µm,14.6s,MS5.7						
BHK	Bhakra	31.39	329	*e*	P	01 28 25.0	-1.5
XAN	Xi'an	31.69	23	P	P	01 28 27.9	-1.2
XAN				AP	pP	01 28 40.4	-1.7
XAN				PP	PP	01 29 37.9	+2.9
XAN				S	S	01 33 30.0	-3.8
XAN				AMB	AMB		
	comp=Z,461nm,0.9s,mb6.3						
XAN				LR	LR		
	comp=N,2µm,16.9s,MS5.0						
XAN				LR	LR		
	comp=E,2µm,16.3s,MS5.0						
XAN				LR	LR		
	comp=Z,4µm,17.5s,MS5.1						
LZH	Lanzhou	31.99	14	⇑*i*P	P	01 28 30.6	-1.1
LZH				AP	pP	01 28 43.5	-1.2
LZH				XP	sP	01 28 50.1	-0.9
LZH				PP	PP	01 29 39.0	+0.1
LZH				PCP	PcP	01 31 19.9	-0.9
LZH				S	S	01 33 39.6	+1.1
LZH				XS		01 34 00.0	
LZH				SCP		01 35 01.0	
LZH				PCS		01 35 06.0	
LZH				SS	SS	01 35 32.0	-1.2
LZH				SCS	ScS	01 38 57.0	+1.1
LZH				AMB	AMB		
	comp=Z,167nm,1.4s,mb5.7						
LZH				AMB	AMB		
	comp=Z,420nm,4.0s						
LZH				LR	LR		
	comp=N,1µm,14.3s						
LZH				LR	LR		
	comp=Z,2µm,16.0s,MS5.0						
TATO	Taipei	32.39	50	PFAKE		01 28 50.0	+15
TATO				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
DLH	Dalhousie	32.52	330	*e*P	P	01 28 36.0	-0.3
THN	Thein Dam	32.55	329	*e*P	P	01 28 34.3	-2.4
THN				*e*		01 31 21.3	
GTA	Gaotai	34.50	7	⇑*i*P	P	01 28 52.9	-0.5
GTA				AP	pP	01 29 04.8	-1.7
GTA				XP	sP	01 29 09.2	-3.7
GTA				PP	PP	01 30 09.6	-0.9
GTA				PPP	PPP	01 30 27.1	-1.6
GTA				PCP	PcP	01 31 28.1	+0.3
GTA				S	S	01 34 19.8	+2.3
GTA				SCP		01 35 08.9	
GTA				PCS		01 35 13.1	
GTA				SCS	ScS	01 39 10.1	+1.2
GTA				AMB	AMB		
	comp=Z,225nm,1.0s,mb6.0						
GTA				AMB	AMB		
	comp=Z,610nm,5.0s						
GTA				LR	LR		
	comp=N,960nm,22.4s,MS4.6						
GTA				LR	LR		
	comp=E,877nm,24.0s,MS4.6						
GTA				LR	LR		
	comp=Z,997nm,24.3s,MS4.5						
NJ2	Nanjing	35.06	37	*e*P	P	01 28 58.8	+0.6
NJ2				AP	pP	01 29 08.8	-2.6
NJ2				XP	sP	01 29 15.2	-2.5
NJ2				PP	PP	01 30 19.8	+2.1
NJ2				PPP	PPP	01 30 36.2	+0.2
NJ2				S	S	01 34 28.0	+1.9
NJ2				XS		01 34 47.0	
NJ2				AMB	AMB		
	comp=Z,500nm,0.8s,mb6.5						
NJ2				AMB	AMB		
	comp=Z,410nm,7.0s						
NJ2				LR	LR		
	comp=N,4µm,13.4s,MS5.5						
NJ2				LR	LR		
	comp=E,5µm,14.6s,MS5.5						
NJ2				LR	LR		
	comp=Z,8µm,13.3s,MS5.6						
MBWA	Marble Bar	35.74	138	*e*P	P	01 29 02.8	-1.2
	comp=Z,49nm,1.3s,mb5.3						
MBWA				LR	LR		
	comp=Z,665nm,20.0s,MS4.4						
SSE	Sheshan	35.87	41	P	P	01 29 05.2	+0.1
SSE				S	S	01 34 43.3	+4.7
SSE				XS		01 34 58.2	
SSE				PCS		01 35 18.3	
SSE				AMB	AMB		
	comp=Z,53nm,0.9s,mb5.5						
SSE				AMB	AMB		
	comp=Z,149nm,7.3s						
SSE				LR	LR		
	comp=N,749nm,20.6s,MS4.6						
SSE				LR	LR		
	comp=E,697nm,20.6s,MS4.6						
SSE				LR	LR		
	comp=Z,1µm,20.8s,MS4.6						
TIA	Tai'an	37.19	31	⇑P	P	01 29 16.4	+0.3
TIA				AMB	AMB		
	comp=Z,125nm,1.0s,mb5.7						
TIA				LR	LR		
	comp=N,2µm,17.0s,MS5.1						
TIA				LR	LR		
	comp=E,2µm,15.0s,MS5.1						
BTO	Baotou	37.95	19	*e*P	P	01 29 21.8	-0.7
BTO				PP	PP	01 30 55.7	+2.8
BTO				AMB	AMB		
	comp=Z,66nm,0.7s,mb5.5						
BTO				LR	LR		
	comp=N,377nm,6.9s						
BTO				LR	LR		
	comp=E,1µm,13.9s						
FITZ	Fitzroy Crossi	38.15	128	*e*P	P	01 29 23.3	-1.0
	comp=E,63nm,0.9s,mb5.3						
FITZ				*e*sP	sP	01 29 39.9	-3.9
FITZ				*e*PCP	PcP	01 31 39.2	+0.3
FITZ				*e*SCP		01 35 21.3	
KSH	Kashi	38.29	336	⇑P	P	01 29 26.0	+0.7
KSH				*e*AP	pP	01 29 34.0	-4.6
KSH				*e*PP	PP	01 30 57.1	+0.2
KSH				*e*PCP	PcP	01 31 40.7	+1.6
KSH				*e*S	S	01 35 17.0	+1.4
KSH				*e*PCS		01 35 26.7	
KSH				*e*XS		01 35 35.0	
KSH				*e*PS		01 35 45.4	
KSH				*e*SS	SS	01 37 56.1	-0.5
KSH				*e*SCS	ScS	01 39 32.2	+2.3
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.5						
KSH				LR	LR		
	comp=N,410nm,5.9s						
KSH				LR	LR		
	comp=E,580nm,4.2s						
JOW	Kunigami	38.59	52	P	P	01 29 29.1	+1.2
	comp=E,126nm,0.7s,mb5.7,baz=247,slow=7.5,SNR=22						
JOW				LR	LR	01 45 13.3	
	comp=E,2µm,21.8s,MS4.8,baz=275,slow=36						
HHC	Hu-ho-hao-te	38.69	21	⇑*i*P	P	01 29 29.3	+0.7
HHC				AP	pP	01 29 40.7	-1.2
HHC				XP	sP	01 29 46.7	-1.3
HHC				PP	PP	01 31 02.2	+0.7
HHC				PCP	PcP	01 31 40.6	+0.2
HHC				S	S	01 35 20.6	-1.0
HHC				SCP		01 35 26.6	
HHC				SS	SS	01 38 05.7	+0.5
HHC				SCS	ScS	01 39 32.1	-0.1
HHC				AMB	AMB		
	comp=Z,158nm,1.2s,mb5.6						
HHC				AMB	AMB		
	comp=Z,443nm,4.2s						
HHC				LR	LR		
	comp=N,2µm,18.6s,MS5.1						
HHC				LR	LR		
	comp=E,2µm,16.8s,MS5.1						
HHC				LR	LR		
	comp=Z,2µm,21.6s,MS5.0						
WBK	Wadi Bani Khal	38.75	300	P	P	01 29 32.1	+2.8
	SNR=7.2						
WMQ	Urumqi	39.11	352	⇑*i*P	P	01 29 32.5	+0.4
WMQ				AP	pP	01 29 39.9	-5.5
WMQ				PP	PP	01 31 06.5	+0.3
WMQ				S	S	01 35 30.0	+2.1
WMQ				SS	SS	01 38 13.9	-0.5
WMQ				SCS	ScS	01 39 38.0	+3.4
WMQ				AMB	AMB		
	comp=Z,154nm,1.0s,mb5.7						
WMQ				AMB	AMB		
	comp=Z,138nm,10.0s						
WMQ				LR	LR		
	comp=N,792nm,18.0s,MS4.9						
WMQ				LR	LR		
	comp=E,1µm,20.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,857nm,18.0s,MS4.6						
SMDO	Samad	39.70	300	P	P	01 29 39.9	+2.7
	SNR=7.5						
BJT	Baijiatuau	39.79	26	*e*P	P	01 29 39.1	+1.4
BJT				pmax	pmax		
	comp=Z,291nm,0.8s						
BJT	Baijiatuau	39.79	26	*e*P	P	01 29 39.1	+1.3
	comp=Z,291nm,0.8s,mb6.1						
BIDO	Bidbid	39.81	301	P	P	01 29 40.9	+2.9
	SNR=10						
BJI	Beijing	39.81	26	P	P	01 29 39.4	+1.5
BJI				AP	pP	01 29 48.1	-3.1
BJI				XP	sP	01 29 52.2	-5.1
BJI				AMB	AMB		
	comp=Z,428nm,0.9s,mb6.2						
BJI				AMB	AMB		
	comp=Z,880nm,3.5s						
BJI				LR	LR		
	comp=N,2µm,19.1s,MS5.0						
BJI				LR	LR		
	comp=E,1µm,17.7s,MS5.0						
BJI				LR	LR		
	comp=Z,2µm,25.1s						
BSY	Bisya	40.33	300	P	P	01 29 45.2	+2.8
	SNR=14						
HOQ	Hoqain	40.52	301	P	P	01 29 46.7	+2.7
	SNR=7.0						
HOQ				P		01 29 46.7	
	SNR=7.0						
ULHL	Ulahol	40.55	339	P	P	01 29 45.0	+1.1
	SNR=9.7						
KZA	Kyzart	40.77	338	P	P	01 29 47.2	+1.4
	SNR=28						
ARQ	Araqi	41.12	300	P	P	01 29 51.5	+2.7
	SNR=6.8						
ARQ				P		01 29 51.5	
	SNR=6.8						
UCH	Uchtor	41.18	337	P	P	01 29 50.6	+1.4
	SNR=186						
KAKA	Kakadu	41.37	116	*e*P	P	01 29 50.0	-1.0
	comp=Z,33nm,0.8s,mb5.0						
TKM2	Tokmak 2	41.37	339	P	P	01 29 51.9	+1.1
	SNR=24						
KBK	Karagaybulak	41.38	338	P	P	01 29 52.5	+1.6
	SNR=41						
AML	Almayashu	41.42	336	P	P	01 29 52.7	+1.5

	SNR=28						
AAK	Ala-Archa	41.53	337	P	P	01 29 53.4	+1.3
	SNR=89						
AAK	Ala-Archa	41.53	337	P	P	01 29 53.2	+1.1
AAK				pmax	pmax		
	comp=Z,115nm,1.0s,mb5.5						
AAK	Ala-Archa	41.53	337	eP	P	01 29 51.7	-0.4
	comp=Z,129nm,0.9s,mb5.6						
AAK				LR	LR		
	comp=Z,174nm,20.0s,MS3.9						
DL2	Dalian	41.56	32	P	P	01 29 53.2	+0.8
DL2				eS	S	01 36 09.1	+4.5
DL2				AMB	AMB		
	comp=Z,190nm,0.8s,mb5.8						
DL2				LR	LR		
	comp=N,800nm,17.7s,MS4.7						
DL2				LR	LR		
	comp=E,420nm,19.8s,MS4.7						
DL2				LR	LR		
	comp=Z,930nm,16.2s,MS4.8						
FRU	Bishkek	41.66	338	i P	P	01 29 55.0	+1.9
FRU				i	pP	01 30 10.0	+3.5
FRU				pmax	pmax		
	comp=Z,210nm,2.0s,mb5.4						
CHMS	Chumysh	41.75	338	P	P	01 29 54.4	+0.5
	SNR=45						
EKS2	Erkin-Say	41.84	337	P	P	01 29 55.9	+1.2
	SNR=17						
ASHO	Ashiyiah	41.99	302	P	P	01 29 58.5	+2.4
	SNR=6.7						
ASHO				P		01 29 58.5	
	SNR=6.7						
USP	Ospenovka	42.07	338	P	P	01 29 57.3	+0.7
	SNR=159						
MUN	Mundaring	42.10	152	eP	P	01 29 57.0	+0.1
	comp=Z,28nm,1.3s,mb4.7						
MUN	Mundaring	42.10	152	eP	P	01 29 57.0	+0.1
MUN				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
MKAR	Makanchi Array	42.96	347	i P	P	01 30 03.7	-0.1
NWAO	Narrogin (SRO)	43.37	152	eP	P	01 30 06.2	-1.1
NWAO				pmax	pmax		
	comp=Z,37nm,1.1s						
NWAO	Narrogin (SRO)	43.37	152	P	P	01 30 09.4	+2.1
	comp=Z,21nm,0.9s,mb4.8,baz=308,slow=7.7,SNR=8.9						
NWAO				LR	LR	01 46 21.5	
	comp=Z,3.1nm,19.3s,baz=162,slow=34						
NWAO	Narrogin (SRO)	43.37	152	eP	P	01 30 06.2	-1.1
	comp=Z,37nm,1.1s,mb5.0						
NWAO				LR	LR	01 46 21.5	
INCN	Inchon	43.43	38	eP	P	01 30 05.9	-1.8
	comp=Z,125nm,0.8s,mb5.7						
SONM	Songino Array	43.77	11	P	P	01 30 09.9	-0.5
	comp=Z,99nm,0.8s,mb5.6,baz=191,slow=8.4,SNR=783						
SONM				pP	pP	01 30 22.9	-0.9
	comp=Z,59nm,1.0s,baz=197,slow=8.5,SNR=9.3						
SONM				PcP	PcP	01 31 56.7	-0.2
	comp=Z,35nm,0.7s,baz=192,slow=3.7,SNR=15						
SONM				pPcP		01 32 10.9	
	comp=Z,25nm,0.7s,baz=193,slow=4.0,SNR=5.6						
SONM				ScP		01 35 43.0	
	comp=Z,6.8nm,0.9s,baz=207,slow=2.8,SNR=7.1						
KS15	Wonju Array Si	44.17	39	eP	P	01 30 13.1	-0.7
SNY	Shenyang	44.72	31	⇑P	P	01 30 17.8	-0.2
SNY				PP	PP	01 32 07.0	+3.1
SNY				AMB	AMB		
	comp=Z,90nm,1.3s,mb5.4						
SNY				AMB	AMB		
	comp=Z,210nm,9.6s						
SNY				LR	LR		
	comp=N,2µm,18.1s,MS5.1						
SNY				LR	LR		
	comp=E,1µm,19.8s,MS5.1						
SNY				LR	LR		
	comp=Z,2µm,17.4s,MS5.1						
ZAK	Zakamensk	45.73	8	⇓iP	P	01 30 25.2	-0.8
ZAK				e	pP	01 30 35.4	-4.1
ZAK				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
ZAK				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
WRA	Warramunga Arr	46.14	124	P	P	01 30 29.4	-0.2
WRA				S	S	01 37 08.7	-2.4
WRA	Warramunga Arr	46.14	124	P	P	01 30 29.4	-0.2
	comp=Z,180nm,0.8s,mb6.1,baz=302,slow=9.1,SNR=330						
WRA				ScP		01 35 52.6	
	comp=Z,3.8nm,0.8s,baz=309,slow=3.5,SNR=5.1						
WRA				S	S	01 37 08.7	-2.4
	comp=Z,5.7nm,1.1s,baz=296,slow=16,SNR=5.8						
WRAB	Tennant Creek	46.14	124	eP	P	01 30 29.0	-0.6
WRAB				MLR	MLR		
	comp=Z,375nm,22.0s,MS4.3						
WB2	Warramunga Arr	46.15	124	⇑iP	P	01 30 29.5	-0.2
WB2				eS	S	01 36 59.9	-11
MOY	Mondy	46.74	5	eP	P	01 30 33.5	-0.5
MOY				e		01 32 07.2	
MOY				pmax	pmax		
	comp=Z,48nm,2.7s,mb5.0						
TLY	Talaya	47.05	8	P	P	01 30 36.9	+0.5
	comp=Z,575nm,0.8s,mb6.6,SNR=44						
TLY	Talaya	47.05	8	⇑iP	P	01 30 36.6	+0.2
TLY				eS	S	01 37 23.3	-0.4
TLY				e		01 40 25.7	
TLY				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.7						
TLY				MLR	MLR		
	comp=Z,947nm,17.0s,MS4.8						
TLY	Talaya	47.05	8	eP	P	01 30 35.9	-0.5
	comp=Z,67nm,0.8s,mb5.6						
TLY				LR	LR		
	comp=Z,280nm,19.0s,MS4.2						
CN2	Changchun	47.09	30	⇑P	P	01 30 36.6	-0.2
CN2				eXP	sP	01 30 53.6	-2.6
CN2				LR	LR		
	comp=N,1µm,16.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,16.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,16.0s,MS5.0						
KURK	Kurchatov	47.48	346	i P	P	01 30 40.0	+0.2
KURK				pmax	pmax		
	comp=Z,501nm,1.6s,mb6.2						
KURK	Kurchatov	47.48	346	eP	P	01 30 39.8	0.0
	comp=Z,436nm,1.1s,mb6.3						
ASPA	Alice Springs	47.64	128	⇑iP	P	01 30 41.0	-0.4
ASPA				eS	S	01 37 31.7	-0.7
ASPA				eSCS	ScS	01 40 28.9	+1.3
ASAR	Alice Springs	47.65	128	P	P	01 30 41.0	-0.4
	comp=Z,48nm,0.8s,mb5.6,baz=304,slow=7.5,SNR=206						
ASAR				pP	pP	01 30 54.5	-0.5
	comp=Z,28nm,0.7s,baz=304,slow=7.7,SNR=6.4						
ASAR				PcP	PcP	01 32 10.7	0.0
	comp=Z,19nm,0.8s,baz=304,slow=4.4,SNR=5.8						
ASAR				ScP		01 35 59.3	
	comp=Z,5.4nm,0.9s,baz=297,slow=4.1,SNR=6.9						
ASAR				S	S	01 37 31.6	-0.9
	comp=Z,4.6nm,0.9s,baz=293,slow=13,SNR=7.3						
ASAR				PKiKP		01 39 00.9	
	comp=Z,0.7nm,0.7s,baz=296,slow=1.0,SNR=3.7						
ASAR				LR	LR	01 51 16.6	
	comp=Z,324nm,21.3s,MS4.3,baz=298,slow=37						
IRK	Irkutsk	47.69	8	⇑iP	P	01 30 40.9	-0.5
IRK				pmax	pmax		
	comp=Z,104nm,1.7s,mb5.6						
FORT	Forrest	47.76	140	eP	P	01 30 42.6	+0.4
	comp=Z,1µm,0.7s						
HIA	Hailar	48.87	22	eP	P	01 30 50.0	-0.6
HIA				e	pP	01 31 02.6	-1.5
HIA				pmax	pmax		
	comp=Z,94nm,0.7s						
HIA	Hailar	48.87	22	eP	P	01 30 50.0	-0.6
	comp=Z,94nm,0.7s,mb5.9						
HIA				e	pP	01 31 02.6	-1.5
ZAL	Zalesovo	49.41	352	P	P	01 30 55.0	+0.3
	comp=Z,113nm,0.6s,mb6.1,baz=303,slow=5.7,SNR=431						
ZAL				pP	pP	01 31 08.6	+0.4
	comp=Z,58nm,0.8s,baz=253,slow=5.9,SNR=10						
ZAL				LR	LR	01 56 31.0	
	comp=Z,382nm,21.4s,MS4.4,baz=293,slow=42						
ZAL	Zalesovo	49.41	352	P	P	01 30 55.0	+0.3
ZAL				pP	pP	01 31 08.6	+0.4
ZAL				LR	LR	01 56 31.0	
MDJ	Mudanjiang	49.80	32	P	P	01 30 57.8	0.0
MDJ				AP	pP	01 31 09.0	-2.4
MDJ				XP	sP	01 31 13.6	-3.6
MDJ				PCP	PcP	01 32 16.0	-2.2
MDJ				PP	PP	01 32 52.4	-1.1
MDJ				SCP		01 36 08.9	
MDJ				PCS		01 36 14.3	
MDJ				S	S	01 38 05.8	+3.5
MDJ				XS		01 38 27.3	
MDJ				SCS	ScS	01 40 45.2	+3.5
MDJ				AMB	AMB		
	comp=Z,115nm,1.4s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,307nm,5.3s						
MDJ				LR	LR		
	comp=N,622nm,22.1s,MS4.8						
MDJ				LR	LR		
	comp=E,916nm,21.4s,MS4.8						
MDJ				LR	LR		
	comp=Z,1µm,24.7s,MS4.8						
MDJ	Mudanjiang	49.80	32	eP	P	01 30 57.6	-0.2
	comp=Z,187nm,1.2s,mb6.0						
MDJ				e	pP	01 31 08.8	-2.5
CBIJ	Chichi jima	50.15	59	P	P	01 30 59.7	-1.0
	comp=Z,240nm,1.0s,mb6.2,baz=264,slow=5.5,SNR=10						
NVS	Novosibirsk	50.51	351	⇑iP	P	01 31 01.5	-1.6
NVS				i *PP	pP	01 31 14.7	-2.0
NVS				e		01 32 18.3	
NVS				i S	S	01 38 11.0	-1.0
NVS				pmax	pmax		
	comp=Z,178nm,1.3s,mb5.8						
NVS				pmax	pmax		
	comp=N,174nm,1.4s						
NVS				pmax	pmax		
	comp=E,97nm,1.3s						
NVS				smax			
	comp=N,84nm,1.8s						
NVS				smax			
	comp=E,63nm,2.1s						
MAJO	Matsushiro	50.61	46	eP	P	01 31 02.8	-1.3
MAJO				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.5						
MAJO	Matsushiro	50.61	46	eP	P	01 31 02.8	-1.3
	comp=Z,48nm,0.8s,mb5.5						
MAT	Matsushiro	50.61	46	eP	P	01 31 03.0	-1.1
MAT				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.5						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.8						
MAT	Matsushiro	50.61	46	P	P	01 31 03.1	-1.0
MAT				S	S	01 38 04.8	-8.8
BVA0	Borovoye Array	51.85	342	P	P	01 31 12.4	-0.8
BVA0				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
BVAR	Borovoye Array	51.85	342	P	P	01 31 12.5	-0.6
	comp=Z,149nm,0.8s,mb6.0,baz=143,slow=7.4,SNR=770						
BVAR				pP	pP	01 31 26.2	-0.7
	comp=Z,72nm,0.8s,baz=135,slow=8.4,SNR=10						
BVAR				S	S	01 38 31.4	+1.0
	comp=Z,10.0nm,1.1s,baz=132,slow=18,SNR=7.6						
BRVK	Borovoye	51.91	341	eP	P	01 31 12.8	-0.8
BRVK				e	pP	01 31 26.2	-1.1
BRVK				pmax	pmax		
	comp=Z,162nm,0.8s,mb6.0						
BRVK	Borovoye	51.91	341	eP	P	01 31 12.8	-0.9
	comp=Z,162nm,0.8s,mb6.0						
BRVK				e	pP	01 31 26.2	-1.1
KLR	Kul'dur	53.99	29	eP	P	01 31 25.5	-3.7
KLR				e		01 33 26.0	
KLR				pmax	pmax		
	comp=N,70nm,1.8s						
KLR				pmax	pmax		
	comp=E,110nm,1.8s						
KLR				pmax	pmax		
	comp=Z,140nm,1.8s,mb5.6						
KLR				MLR	MLR		
	comp=E,2µm,18.0s						
PMG	Port Moresby	54.13	105	P	P	01 31 30.1	-0.6
	comp=E,61nm,0.9s,mb5.5,baz=262,slow=4.5,SNR=11						
BHD	Baghdad	54.57	308	i P	P	01 31 25.0	-8.7
BHD				e	pP	01 31 37.0	-10
BOD	Bodaibo	54.74	12	⇓iP	P	01 31 32.9	-1.6
BOD				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.5						
CTA	Charters Tower	56.40	118	eP	P	01 31 45.8	-1.2
	comp=Z,44nm,1.0s,mb5.4						
CTA	Charters Tower	56.40	118	eP	P	01 31 45.8	-1.2
CTA				pmax	pmax		
	comp=Z,44nm,1.0s						
CTA	Charters Tower	56.40	118	P	P	01 31 46.1	-0.9
	comp=Z,48nm,0.9s,mb5.5,baz=294,slow=8.3,SNR=50						
CTA				LR	LR	01 57 39.9	
	comp=Z,724nm,20.7s,MS4.8,baz=284,slow=38						
CTAO	Charters Tower	56.40	118	eP	P	01 31 45.1	-1.9
CTAO				pmax	pmax		
	comp=Z,99nm,1.2s,mb5.7						
CTAO	Charters Tower	56.40	118	eP	P	01 31 45.1	-1.9
	comp=Z,99nm,1.2s,mb5.7						
HKR	Hakkari	56.58	312	P	P	01 31 46.6	-1.5
MSL	Mosul	56.60	311	eP	P	01 31 44.5	-3.8
CLNS	Chul'man	56.86	19	eP	P	01 31 47.9	-1.9
CLNS				e*PP	pP	01 31 54.5	-9.2
CLNS				e		01 32 40.9	
CLNS				e		01 33 52.8	
CLNS				eS	S	01 39 35.0	-2.7
CLNS				e		01 41 38.2	
CLNS				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.6						
CLNS				pmax	pmax		
	comp=N,23nm,0.7s						
CLNS				pmax	pmax		
	comp=E,23nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
CLNS				pmax	pmax		
	comp=E,14nm,0.9s						
CLNS				smax			
	comp=N,105nm,15.6s						
CLNS				smax			
	comp=E,18nm,11.3s						
CLNS				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.3						
CLNS				MLR	MLR		
	comp=N,1µm,16.0s						
GNI	Garni	56.87	315	eP	P	01 31 48.9	-1.2
GNI				pmax	pmax		
	comp=Z,83nm,0.9s						
GNI	Garni	56.87	315	eP	P	01 31 48.9	-1.2
	comp=Z,83nm,0.9s,mb5.8						
ASAJ	Asahikawa	57.14	39	P	P	01 31 51.6	-0.3
	comp=Z,38nm,0.7s,mb5.6,baz=258,slow=7.2,SNR=32						
MTA	Mtatsminda	57.48	317	P	P	01 31 53.4	-1.0
TI2	Plekhanov	57.53	317	αiP	P	01 31 53.8	-0.9
TI2				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.1						
STKA	Stephens Creek	57.72	133	⇑iP	P	01 31 55.4	-0.8
	comp=Z,26nm,1.0s,mb5.2						
STKA	Stephens Creek	57.72	133	P	P	01 31 55.4	-0.8
	comp=Z,30nm,0.9s,mb5.3,baz=305,slow=7.5,SNR=33						
STKA				LR	LR	02 01 26.5	
	comp=Z,345nm,18.3s,MS4.5,baz=291,slow=41						
KMBO	Kilima Mbogo	57.80	265	i P	P	01 31 58.5	+1.5
KMBO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMBO	Kilima Mbogo	57.80	265	P	P	01 31 58.5	+1.5
	comp=Z,9.0nm,0.9s,mb4.8,baz=48,slow=7.5,SNR=18						
KMBO				LR	LR	01 52 40.1	
	comp=Z,867nm,21.2s,MS4.8,baz=97,slow=32						
KMBO	Kilima Mbogo	57.80	265	eP	P	01 31 57.5	+0.5
	comp=Z,37nm,1.2s,mb5.3						
SVE	Sverdlovsk	58.24	339	⇑iP	P	01 31 59.0	-0.5
SVE				e	pP	01 32 12.0	-1.4
SVE				eS	S	01 39 56.0	+0.1
SVE				pmax	pmax		
	comp=Z,300nm,2.3s,mb5.9						
SVE				MLR	MLR		
	comp=N,300nm,18.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,200nm,18.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.7						
BTMT	Batman	58.47	312	P	Px	01 31 00.3	
BEST	Besiri	58.52	312	i P	P	01 32 00.6	-1.2
YSS	Yuzh-Sakhalins	58.62	37	⇑iP	P	01 32 01.2	-1.1
YSS				e	pP	01 32 15.0	-1.2
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,160nm,1.0s,mb6.0						
YSS				pmax	pmax		
	comp=E,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.8						
YSS				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
YSS				MLR	MLR		
	comp=E,1µm,22.0s						
YSS	Yuzh-Sakhalins	58.62	37	eP	P	01 32 01.4	-0.9
	comp=E,272nm,1.4s,mb6.1						
ONI	Oni	58.76	318	P	P	01 32 01.3	-2.0
VRT	Varto	58.77	313	P	Px	01 31 03.4	
VRT	Varto	58.77	313	P	P	01 32 03.4	0.0
EZM	Erzurum	59.17	314	P	Px	01 31 06.0	
DIY	Diyarbakir	59.30	311	P	Px	01 31 06.2	
DIY	Diyarbakir	59.30	311	P	P	01 32 06.2	-0.9
BINT	Bingol	59.44	313	P	Px	01 31 07.2	
BINT	Bingol	59.44	313	P	P	01 32 07.2	-0.8
KIV	Kislovodsk	59.84	319	P	P	01 32 09.4	-1.3
	comp=E,708nm,0.9s,mb6.7,SNR=32						
KIV	Kislovodsk	59.84	319	c iP	P	01 32 09.5	-1.2
KIV				e		01 32 55.7	
KIV				e		01 34 22.3	
KIV				i S	S	01 40 16.3	-0.5
KIV				eSS	SS	01 44 17.0	+2.4
KIV				pmax	pmax		
	comp=Z,183nm,1.0s,mb6.1						
KIV				smax			
	comp=N,146nm,2.7s						
KIV				smax			
	comp=E,19nm,1.8s						
KIV	Kislovodsk	59.84	319	eP	P	01 32 09.2	-1.5
	comp=E,122nm,1.0s,mb5.9						
KIV				e	pP	01 32 22.6	-2.1
GOF	Gofitskoye	60.08	320	⇓iP	P	01 32 10.5	-1.9
GOF				pmax	pmax		
	comp=Z,85nm,1.2s,mb5.7						
EZC	Erzincan	60.23	313	P	Px	01 31 15.5	
EZC	Erzincan	60.23	313	P	P	01 32 15.5	+2.0
PTK	Pertek	60.25	312	P	Px	01 31 12.8	
ASF	Jabal al Asfar	60.30	304	P	P	01 32 14.9	+0.8
	comp=Z,15nm,0.8s,mb5.1,baz=350,slow=3.3,SNR=15						
ASF				pP	pP	01 32 28.9	+0.8
	comp=Z,42nm,0.9s,baz=354,slow=1.2,SNR=15						
ELZG	Elazig	60.42	312	i P	P	01 32 14.5	-0.3
GUMT	Gumushane	60.71	314	P	Px	01 31 16.5	
GUMT	Gumushane	60.71	314	P	P	01 32 16.5	-0.3
MALT	Malatya	60.78	311	P	Px	01 31 16.2	
MALT	Malatya	60.78	311	P	P	01 32 16.2	-1.1
MYA	Malataya	60.79	311	P	Px	01 31 17.1	
MYA	Malataya	60.79	311	P	P	01 32 17.1	-0.2
GZT	Gaziantep	61.15	310	i P	P	01 32 19.7	0.0
GAZ	Gaziantep	61.36	310	P	Px	01 31 21.2	
GAZ	Gaziantep	61.36	310	P	P	01 32 21.2	0.0
HWQ	Hawqa	61.58	306	eP	P	01 32 24.0	+1.3
SOKR	Solikamsk	61.65	339	c iP	P	01 32 21.9	-0.9
SOKR				pmax	pmax		
	comp=Z,100nm,0.9s,mb6.0						
SOKR				MLR	MLR		
	comp=Z,350nm,19.0s,MS4.5						
SOC	Sochi	61.67	317	eP	P	01 32 19.7	-3.4
SOC				e		01 32 59.5	
SOC				e		01 34 44.0	
SOC				ePPP	PPP	01 36 07.0	-3.3
SOC				eS	S	01 40 40.7	+0.6
SOC				eSS	SS	01 44 40.6	-3.2
SOC				eSSS	SSS	01 47 28.2	+3.4
SOC				pmax	pmax		
	comp=Z,112nm,0.9s,mb6.0						
SOC				pmax	pmax		
	comp=N,40nm,0.8s						
SOC				pmax	pmax		
	comp=E,33nm,0.8s						
BHL	Bhannes	61.73	306	eP	P	01 32 24.0	+0.3
KAHT	Ahir Dag	61.75	310	i P	P	01 32 23.8	0.0
HTY	Hatay	61.90	308	P	Px	01 31 24.8	
HTY	Hatay	61.90	308	P	P	01 32 24.8	0.0
COBT	Iskenderun	61.92	309	i P	P	01 32 24.9	0.0
CEYT	Ceyhan	62.44	309	P	Px	01 31 28.3	
CEYT	Ceyhan	62.44	309	P	P	01 32 28.3	-0.1
YAK	Yakutsk	62.46	18	c iP	P	01 32 26.2	-2.0
YAK				e*PP	pP	01 32 36.8	-5.4
YAK				e		01 34 42.5	
YAK				ePPP	PPP	01 36 22.7	+4.7
YAK				eS	S	01 40 48.9	-1.0
YAK				e*SS		01 41 13.2	
YAK				e		01 42 08.2	
YAK				e		02 33 05.4	
YAK				pmax	pmax		
	comp=Z,100nm,0.9s,mb6.0						
YAK				pmax	pmax		
	comp=N,34nm,1.1s						
YAK				pmax	pmax		
	comp=E,29nm,1.2s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				smax			
	comp=N,11nm,1.1s						
YAK				smax			
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,288nm,13.5s						
YAK				pmax	pmax		
	comp=E,558nm,16.7s						
YAK				MLR	MLR		
	comp=Z,877nm,16.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,667nm,20.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,446nm,20.0s,MS4.9						
YAK	Yakutsk	62.46	18	eP	P	01 32 25.6	-2.6
	comp=E,196nm,0.8s,mb6.3						
TOO	Toolangi	63.37	137	eP	P	01 32 35.3	+0.7
	comp=E,1.9nm,1.1s						
TOO	Toolangi	63.37	137	eP	P	01 32 35.3	+0.7
TOO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KVT	Kavak	63.38	314	P	Px	01 31 33.9	
KVT	Kavak	63.38	314	P	P	01 32 33.9	-0.7
MEST	Erdemli	63.58	308	i P	P	01 32 35.0	-1.0
AVNT	Avonos	63.60	311	i P	P	01 32 35.2	-0.9
NIG	Nigde	63.60	310	P	Px	01 31 35.9	
NIG	Nigde	63.60	310	P	P	01 32 35.9	-0.3
ANN	Anapa	63.64	318	eP	P	01 32 29.6	-6.7
ANN				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.6						
CSS	Prodhromos	63.84	307	P	P	01 32 36.1	-1.7
MAMC	Mammari	63.98	307	⇑P	P	01 32 39.0	+0.4
MAMC	Mammari	63.98	307	⇑eP	P	01 32 39.0	+0.4
CORM	Corum	64.15	312	P	Px	01 31 37.6	
SZAC	Souni-Zanaja	64.16	306	⇑P	P	01 32 39.7	-0.1
SZAC	Souni-Zanaja	64.16	306	⇑eP	P	01 32 39.7	-0.1
CTKT	Corum	64.16	313	i P	P	01 32 39.1	-0.6
MBAR	Mbarara	64.22	267	eP	P	01 32 39.3	-1.2
	comp=Z,39nm,1.1s,mb5.3						
LEF	Lefka	64.23	307	P	Px	01 31 40.2	
LEF	Lefka	64.23	307	P	P	01 32 40.2	0.0
BOYT	Boyabat	64.31	314	i P	P	01 32 39.6	-1.0
BYBT	Boyabat	64.42	314	P	Px	01 31 40.4	
BYBT	Boyabat	64.42	314	P	P	01 32 40.4	-1.0
ALFC	Alevga	64.47	307	⇑P	P	01 32 41.2	-0.6
	comp=Z,2.7nm,0.8s						
ALFC	Alevga	64.47	307	⇑eP	P	01 32 41.2	-0.6
KAMT	Kaman	64.61	311	P	Px	01 31 41.6	
KAMT	Kaman	64.61	311	P	P	01 32 41.6	-1.0
BRTR	Keskin Array B	64.76	312	P	P	01 32 42.4	-1.3
	comp=Z,46nm,0.8s,mb5.6,baz=131,slow=7.1,SNR=270						
BRTR				pP	pP	01 32 57.7	-0.1
	comp=Z,28nm,0.9s,baz=132,slow=7.9,SNR=7.1						
TOS	Tosya	64.83	313	P	Px	01 31 43.0	
TOS	Tosya	64.83	313	P	P	01 32 43.0	-1.1
HDMB	Hadim	64.96	308	P	Px	01 31 44.1	
HDMB	Hadim	64.96	308	P	P	01 32 44.1	-0.8
CANT	Cankiri	65.01	313	P	Px	01 31 44.9	
CANT	Cankiri	65.01	313	P	P	01 32 44.9	-0.3
CNB	Canberra Magne	65.05	133	eP	P	01 32 45.4	-0.2
	comp=Z,625nm,1.2s,mb6.5						
BZK	Bozkurt	65.11	314	P	Px	01 31 44.8	
BZK	Bozkurt	65.11	314	P	P	01 32 44.8	-1.0
ELDT	Eldivan	65.12	312	i P	P	01 32 45.1	-0.8
VOR	Voronezh	65.25	326	⇑iP	P	01 32 45.5	-1.1
VOR				pmax	pmax		
	comp=Z,300nm,2.0s,mb6.0						

KONT	Konya--Tatoy	65.28	310	P	Px	01 31 46.6	
KONT	Konya--Tatoy	65.28	310	P	P	01 32 46.6	-0.4
ANTO	Ankara	65.42	312	P	Px	01 31 46.4	
ANTO	Ankara	65.42	312	⇑P	P	01 32 47.1	-0.8
ANTO	Ankara	65.42	312	P	P	01 32 46.4	-1.5
BALT	Daday	65.43	314	i P	P	01 32 47.3	-0.6
LOD	Lodumlu	65.45	312	P	Px	01 31 45.9	
LOD	Lodumlu	65.45	312	P	P	01 32 45.9	-2.2
SAFT	Safranbolu	65.86	313	P	Px	01 31 49.8	
SAFT	Safranbolu	65.86	313	P	P	01 32 49.8	-0.9
KIZT	Kizilcal	65.87	310	P	Px	01 31 49.3	
KIZT	Kizilcal	65.87	310	P	P	01 32 49.3	-1.5
SIM	Simferopol’	65.91	317	c iP	P	01 32 51.0	+0.1
SIM				pmax	pmax		
	comp=Z,77nm,0.9s,mb5.7						
SIM				MLR	MLR		
	comp=Z,170nm,19.6s,MS4.3						
BCK	Bucak	66.55	309	P	Px	01 31 53.1	
BCK	Bucak	66.55	309	P	P	01 32 53.1	-2.0
ISP	Isparta	66.69	309	P	Px	01 31 54.7	
ISP	Isparta	66.69	309	P	P	01 32 55.2	-0.8
ISP	Isparta	66.69	309	P	P	01 32 54.7	-1.3
MDU	Mudurnu	66.75	312	P	Px	01 31 55.3	
MDU	Mudurnu	66.75	312	P	P	01 32 55.3	-1.0
ESKT	Eskisehir	66.80	311	P	Px	01 31 55.6	
ESKT	Eskisehir	66.80	311	P	P	01 32 55.6	-1.0
ESKT	Eskisehir	66.80	311	i P	P	01 32 55.7	-0.9
ELL	Elmali	66.93	308	P	Px	01 31 56.7	
ELL	Elmali	66.93	308	P	P	01 32 56.7	-0.8
HENT	Hendek	67.06	312	i P	P	01 32 57.0	-1.3
ALT	Altintas	67.25	310	P	Px	01 31 59.0	
ALT	Altintas	67.25	310	P	P	01 32 59.0	-0.5
GPA	Golpazari	67.38	312	P	Px	01 31 59.2	
GPA	Golpazari	67.38	312	P	P	01 32 59.2	-1.0
KHL	Karahalli	67.55	309	eP	Px	01 32 00.4	
KHL	Karahalli	67.55	309	P	P	01 33 00.4	-1.0
FETY	Fethiye	67.56	308	P	Px	01 32 00.4	
MOS	Moscow	67.81	329	α iP	P	01 33 01.9	-0.8
MOS				e	pP	01 33 15.5	-1.4
MOS				e		01 33 28.6	
MOS				e		01 35 29.9	
MOS				eS	S	01 41 54.0	-1.5
MOS				pmax	pmax		
	comp=Z,334nm,1.4s,mb6.2						
MOS				pmax	pmax		
	comp=Z,700nm,2.0s,mb6.3						
MOS				smax			
	comp=E,800nm,4.5s						
DENT	Denizli	67.81	309	eP	Px	01 32 02.0	
DENT	Denizli	67.81	309	P	P	01 33 02.0	-1.1
HRT	Hereke	67.97	312	eP	Px	01 32 02.1	
HRT	Hereke	67.97	312	P	P	01 33 03.0	-0.9
OBN	Obninsk	68.10	328	P	P	01 33 03.6	-0.8
	comp=E,694nm,1.6s,mb6.4,SNR=18						
OBN	Obninsk	68.10	328	c iP	P	01 33 03.3	-1.1
OBN				i		01 33 23.4	
OBN				e		01 35 34.6	
OBN				i S	S	01 42 01.8	+2.9
OBN				pmax	pmax		
	comp=Z,266nm,1.8s,mb6.0						
OBN				MLR	MLR		
	comp=Z,300nm,22.0s,MS4.5						
OBN	Obninsk	68.10	328	eP	P	01 33 02.5	-2.0
	comp=Z,84nm,0.8s,mb5.8						
GBZT	Gebze	68.13	312	P	P	01 33 02.8	-2.1
YLV	Yalova	68.14	312	eP	Px	01 32 03.8	
YLV	Yalova	68.14	312	P	P	01 33 03.8	-1.2
SKR	Severo-Kuril’s	68.19	37	eP	P	01 33 01.9	-3.2
SKR				pmax	pmax		
	comp=N,100nm,0.8s						
SKR				pmax	pmax		
	comp=E,100nm,0.8s						
SKR				pmax	pmax		
	comp=Z,190nm,0.8s,mb6.2						
ULDT	Uludag	68.22	311	i P	P	01 33 05.0	-0.6
MANT	Manisa	68.33	309	i P	P	01 33 05.8	-0.4
ORLT	Orhaneli	68.38	311	eP	Px	01 32 06.1	
ORLT	Orhaneli	68.38	311	P	P	01 33 06.1	-0.4
ISK	Istanbul-Kandi	68.48	312	eP	Px	01 32 06.3	
ISK	Istanbul-Kandi	68.48	312	P	P	01 33 06.3	-0.8
DST	Dursunbey	68.49	311	eP	Px	01 32 06.3	
DST	Dursunbey	68.49	311	P	P	01 33 06.3	-0.9
MLSB	Milas	68.71	308	eP	Px	01 32 01.1	
MLSB	Milas	68.71	308	P	P	01 33 01.1	-7.5
MA2	Magadan	68.96	27	c iP	P	01 33 08.9	-0.9
MA2				S	S	01 42 09.8	+0.6
MA2				e		01 42 53.8	
MA2				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
MA2				pmax	pmax		
	comp=E,30nm,1.2s						
MA2				pmax	pmax		
	comp=N,20nm,1.0s						
MA2				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2						
MA2	Magadan	68.96	27	eP	P	01 33 08.4	-1.3
	comp=Z,82nm,0.8s,mb5.7						
LSZ	Lusaka	68.97	252	eP	P	01 33 10.8	+0.3
LSZ				pmax	pmax		
	comp=Z,66nm,1.3s,mb5.4						
LSZ	Lusaka	68.97	252	eP	P	01 33 10.8	+0.3
	comp=Z,66nm,1.3s,mb5.4						
AKS	Akhisar	68.97	310	eP	Px	01 32 09.7	
AKS	Akhisar	68.97	310	P	P	01 33 09.7	-0.5
BTOK	Tokmak	68.97	311	i P	P	01 33 09.6	-0.6
BALB	Balikesir	69.07	310	eP	Px	01 32 10.3	
BALB	Balikesir	69.07	310	P	P	01 33 10.3	-0.5
BNT	Bandirma	69.18	311	eP	Px	01 32 10.7	
BNT	Bandirma	69.18	311	P	P	01 33 10.7	-0.7
KDAG	Bornova	69.31	309	i P	P	01 33 12.2	0.0
IZM	Izmir	69.31	309	eP	Px	01 32 12.3	
IZM	Izmir	69.31	309	P	P	01 33 12.3	0.0
TLCR		69.59	316	⇓P	P	01 33 12.9	-1.0
PSN	Preselentsi	69.68	315	P	P	01 33 14.0	-0.5
TIRR	Tirgusor	69.70	316	P	P	01 33 14.1	-0.4
MFT	Murefte	69.74	312	P	P	01 33 12.0	-2.8
TIXI	Tiksi	69.86	11	⇑iP	P	01 33 13.3	-1.8
TIXI				pmax	pmax		
	comp=Z,135nm,0.7s,mb6.0						
TIXI				pmax	pmax		
	comp=N,19nm,0.6s						
TIXI				pmax	pmax		
	comp=E,13nm,0.6s						
TIXI				pmax	pmax		
	comp=Z,185nm,0.8s,mb6.1						
TIXI				MLR	MLR		
	comp=Z,1μm,16.0s,MS5.2						
KIS	Kishinev	70.03	318	α iP	P	01 33 14.0	-2.5
KIS				e	pP	01 33 30.0	-0.8
KIS				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0						
CFR	Carcaliu	70.06	316	P	P	01 33 16.3	-0.4
CFR	Carcaliu	70.06	316	⇑iP	P	01 33 16.0	-0.7
HARR	Harsova	70.09	316	⇑iP	P	01 33 16.5	-0.4
PRD	Provadia	70.14	314	P	P	01 33 17.0	-0.2
EDRB	Edirne	70.34	313	eP	Px	01 32 16.8	
EDRB	Edirne	70.34	313	P	P	01 33 16.8	-1.7
PET	Petropavlovsk	70.44	35	eP	P	01 33 18.1	-0.8
PET				e	pP	01 33 31.1	-2.1
PET				eS	S	01 42 19.3	-7.3
PET				pmax	pmax		
	comp=Z,71nm,0.6s,mb5.8						
PET				MLR	MLR		
	comp=Z,700nm,21.0s,MS4.9						
PET	Petropavlovsk	70.44	35	eP	P	01 33 17.5	-1.4
	comp=Z,96nm,1.0s,mb5.7						
APE	Apeiranthos	70.44	307	⇑P	P	01 33 18.3	-0.9
APE	Apeiranthos	70.44	307	P	P	01 33 17.3	-1.9
JMB	Yambol	70.58	313	P	P	01 33 20.0	+0.1
ALN	Alexandroupoli	70.68	312	eP	P	01 33 19.4	-1.2
IDI	Anoyia	70.71	306	P	P	01 33 21.1	+0.3
	comp=Z,67nm,0.8s,mb5.6,baz=109,slow=5.8,SNR=31						
IDI				pP	pP	01 33 35.1	0.0
	comp=Z,75nm,0.7s,baz=84,slow=6.0,SNR=11						
AKASG	Malin Array Be	70.76	322	P	P	01 33 19.2	-1.6
	comp=Z,37nm,0.6s,mb5.5,baz=85,slow=5.1,SNR=147						
IAS	Iasi	70.91	318	P	P	01 33 21.4	-0.5
ISR	Istrita	71.14	316	P	P	01 33 24.6	+1.3
ISR	Istrita	71.14	316	⇑iP	P	01 33 24.0	+0.7
ISR	Istrita	71.14	316	⇑iP	P	01 33 24.0	+0.7
VRI	Vrincioaia	71.17	317	⇑iP	P	01 33 23.8	+0.4
SZH	Strazhica	71.20	314	P	P	01 33 23.0	-0.6
DIM	Dimitrovgrad	71.26	313	P	P	01 33 24.0	0.0
KDZ	Kurdzhali	71.28	312	P	P	01 33 24.0	-0.1
BUC	Bucharest	71.31	315	⇑P	P	01 33 24.6	+0.3
BUC1	Bucharest	71.34	315	P	P	01 33 24.7	+0.2
BUC1	Bucharest	71.34	315	⇑P	P	01 33 24.6	+0.1
PVL	Pavlikeni	71.62	314	P	P	01 33 26.0	-0.2
MLR	Muntele Rosu	71.63	316	P	P	01 33 26.5	+0.3
MLR	Muntele Rosu	71.63	316	P	P	01 33 26.3	+0.2
	comp=Z,102nm,0.8s,mb5.8,baz=95,slow=1.8,SNR=172						
MLR				LR	LR	02 07 42.4	
	comp=Z,184nm,19.8s,MS4.3,baz=329,slow=38						
MLR	Muntele Rosu	71.63	316	⇑iP	P	01 33 26.4	+0.2
MLR	Muntele Rosu	71.63	316	⇑iP	P	01 33 26.4	+0.2
RZN	Rozhen	71.80	312	P	P	01 33 27.0	-0.3
PLD	Plovdiv	71.88	313	eP	P	01 33 27.0	-0.7
OUR	Ouranopolis	72.14	311	eP	P	01 33 28.8	-0.4
PAIG	Paliouri	72.30	310	eP	P	01 33 29.7	-0.6
PGB	Panagyurishte	72.35	313	P	P	01 33 29.0	-1.5
MMB	Musomiste	72.52	312	P	P	01 33 30.5	-1.0
SRS	Serrai	72.55	311	eP	P	01 33 30.6	-1.1
BURAR	Bucovina Array	72.56	318	⇑P	P	01 33 32.1	+0.4
BURAR	Bucovina Array	72.56	318	⇑P	P	01 33 32.1	+0.4
MNK	Minsk	72.63	326	eP	P	01 33 27.0	-4.9
SOH	Sokhos	72.68	311	eP	P	01 33 30.7	-1.8
THE	Thessaloniki	72.95	311	eP	P	01 33 32.6	-1.5
PUL	Pulkovo	72.98	331	i P	P	01 33 33.7	-0.2
KKB	Krupnik	73.04	312	P	P	01 33 33.0	-1.6
VTS	Vitosha	73.06	313	⇑P	P	01 33 34.4	-0.3
VTS	Vitosha	73.06	313	P	P	01 33 34.1	-0.5
VTS	Vitosha	73.06	313	P	P	01 33 33.0	-1.7
KNT	Kendrikon	73.07	311	eP	P	01 33 33.6	-1.2
AGG	Agios Georgios	73.22	309	eP	P	01 33 33.7	-2.0
LIT	Litokhoron	73.23	310	eP	P	01 33 34.2	-1.6
VAY	Valandovo	73.34	312	i P	P	01 33 35.3	-1.1
GRG	Griva	73.42	311	eP	P	01 33 35.5	-1.3
LBTB	Lobatse	73.48	242	eP	P	01 33 38.4	+0.8
LBTB				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
LBTB	Lobatse	73.48	242	eP	P	01 33 38.4	+0.8
	comp=Z,39nm,0.8s,mb5.4						
JOF	Joensuu	73.66	335	ep	P	01 33 36.4	-1.4
	comp=Z,45nm,0.8s,mb5.5						
LVV	L’vov	73.78	320	eP	P	01 33 37.0	-1.8
FNA	Florina	74.16	311	eP	P	01 33 39.5	-1.6
SKO	Skopje	74.27	312	⇑iP	P	01 33 40.0	-1.8
SKO				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.3						
SKO	Skopje	74.27	312	⇑iP	P	01 33 40.0	-1.8
	comp=Z,0.0nm,0.9s						
LVZ	Lovozero	74.41	340	P	P	01 33 41.7	-0.4
	comp=Z,423nm,0.9s,mb6.4,SNR=19						
LVZ	Lovozero	74.41	340	⇑iP	P	01 33 41.3	-0.8
KWP	Kalwaria	74.59	320	eP	P	01 33 43.7	+0.2
KWP				e	pP	01 34 00.4	+2.6
BZS	Buzias	74.65	316	P	P	01 33 43.9	0.0
BZS	Buzias	74.65	316	⇑P	P	01 33 43.2	-0.7
BZS	Buzias	74.65	316	⇑P	P	01 33 43.2	-0.7
BOSA	Boshof	74.66	239	eP	P	01 33 45.0	+0.7
BOSA				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6						
BOSA	Boshof	74.66	239	eP	P	01 33 45.0	+0.7
	comp=Z,80nm,1.1s,mb5.6						
APA	Apatity	74.70	340	⇑iP	P	01 33 43.1	-0.6
APA				i	pP	01 33 56.7	-1.4
APA				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.7						
SVIS	Svilajnac	74.74	314	⇑iP	P	01 33 43.6	-0.8
KOLS	Kolonicke sedl	74.74	319	i P	P	01 33 44.9	+0.5
IGT	Igoumenitsa	74.81	309	eP	P	01 33 43.1	-1.9
NOUC	Port Laguerre	74.92	114	eP	P	01 33 46.5	+0.6
NOUC	Port Laguerre	74.92	114	eP	P	01 33 46.5	+0.6
DZM	Mont Dzumac	75.04	114	⇑eP	P	01 33 47.8	+1.1
GRUS	Gruza	75.04	314	⇓iP	P	01 33 45.6	-0.6
SUW	Suwalki	75.16	325	eP	P	01 33 45.9	-0.8
SUW				e	pP	01 34 03.0	+2.0
CRVS	Cervenica-Dubn	75.27	319	eP	P	01 33 47.9	+0.6
CRVS				e		01 33 51.1	
FINES	FINESS Array B	75.49	332	P	P	01 33 47.6	-0.8
	comp=Z,20nm,0.7s,mb5.2,baz=97,slow=7.0,SNR=147						
FINES				pP	pP	01 34 02.1	-0.7
	comp=Z,31nm,0.7s,baz=100,slow=6.6,SNR=14						
FINES				LR	LR	02 11 16.4	
	comp=Z,320nm,19.2s,MS4.6,baz=147,slow=39						
KAF	Kangasniemi	75.58	333	ep	P	01 33 47.8	-1.1
	comp=Z,27nm,0.8s,mb5.2,baz=104,slow=5.4						
KAF	Kangasniemi	75.58	333	eP	P	01 33 47.8	-1.1
KAF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.2						
DIVS	Divcibare	75.59	314	⇓iP	P	01 33 48.7	-0.6
KECS	Kecovo	75.84	319	i P	P	01 33 50.6	0.0
KECS				e	pP	01 34 00.6	-4.4
MAW	Mawson	75.92	192	LR	LR	02 01 28.7	
	comp=Z,417nm,19.1s,MS4.8,baz=60,slow=31						
NIE	Niedzica	76.09	320	⇑iP	P	01 33 51.2	-0.8
WAR	Warsaw	76.10	323	eP	P	01 33 52.2	+0.2
PSZ	Piszkesteto	76.15	318	P	P	01 33 52.7	+0.3
PSZ	Piszkesteto	76.15	318	⇑eP	P	01 33 52.6	+0.2
OJC	Ojcow	76.54	320	⇑iP	P	01 33 54.8	+0.2
LIKS	Likavka	76.82	319	eP	P	01 33 56.1	-0.1
LIKS				e		01 33 59.8	
VYHS	Vyhne	76.93	319	i P	P	01 33 56.9	+0.1
SRO2	Moca	77.13	318	eP	P	01 33 58.2	+0.2
SRO2				epP	pP	01 34 13.0	+0.6
SRO	Srobarova	77.19	318	eP	P	01 33 58.7	+0.4
SRO				epP	pP	01 34 12.0	-0.7
KOLL	Kolacno	77.22	319	i P	P	01 33 58.5	0.0
KOLL				e	pP	01 34 15.5	+2.6
OKC	Ostrava-Krasne	77.54	320	⇑iP	P	01 34 00.6	+0.4
RAC	Raciborz	77.54	320	eP	P	01 34 01.0	+0.8
KEV	Kevo	77.69	341	ep	P	01 34 00.1	-0.5
	comp=Z,34nm,0.7s,mb5.4						
KEV	Kevo	77.69	341	eP	P	01 34 00.1	-0.5
KEV				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.4						
GRI	Girifalco	77.79	308	eP	P	01 34 02.6	+0.8
ORI	Oriolo Calabro	77.84	310	eP	P	01 34 03.0	+1.0
MORC	Moravsky Berou	77.92	320	⇑P	P	01 34 02.7	+0.4
SOI	Samo	78.03	308	eP	P	01 34 03.0	-0.1
ZST	Bratislava	78.04	318	eP	P	01 34 03.5	+0.5
ZST				e	pP	01 34 16.3	-1.1
ARCES	ARCESS Array B	78.12	340	P	P	01 34 03.0	0.0
	comp=Z,45nm,0.7s,mb5.5,baz=89,slow=6.2,SNR=104						
ARCES				pP	pP	01 34 17.5	+0.1
	comp=Z,47nm,0.7s,baz=90,slow=3.6,SNR=11						
ARCES				PP	PP	01 37 00.7	-1.1
	comp=Z,32nm,1.1s,baz=98,slow=8.6,SNR=6.1						
ARCES				LR	LR	02 14 33.1	
	comp=Z,465nm,18.4s,MS4.8,baz=279,slow=40						
ARE0	ARCESS Array S	78.12	340	eP	P	01 34 02.8	-0.1
SISC	Sisak	78.29	315	i P	P	01 34 04.7	+0.3
MTTG	Motta San Giov	78.31	308	eP	P	01 34 05.6	+0.9
BILL	Bilibino	78.46	21	c iP	P	01 34 04.2	-0.7
BILL				i	pP	01 34 17.9	-1.4
BILL				pmax	pmax		
	comp=Z,43nm,0.7s,mb5.5						
BILL				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.5						
BILL	Bilibino	78.46	21	eP	P	01 34 03.6	-1.2
	comp=Z,66nm,1.1s,mb5.5						
VRAC	Vranov	78.49	319	P	P	01 34 05.8	+0.4
VRAC	Vranov	78.49	319	P	P	01 34 05.6	+0.2
	comp=Z,32nm,0.8s,mb5.3,baz=97,slow=6.3,SNR=42						
VRAC				pP	pP	01 34 20.9	+1.1
	comp=Z,22nm,1.0s,baz=122,slow=11,SNR=5.6						
GKP	Gorka Klasztor	78.53	323	eP	P	01 34 05.3	-0.2
GKP				e	pP	01 34 19.3	-0.7
MGR	Morigerati	78.53	310	eP	P	01 34 05.0	-0.8
VKA	Vienna	78.57	318	⇑iP	P	01 34 06.3	+0.4
	comp=Z,493nm,1.5s,mb6.2						
VKA	Vienna	78.57	318	⇑iP	P	01 34 06.3	+0.4
VKA				pmax	pmax		
	comp=Z,493nm,1.5s,mb6.2						
SGO	Sicignano	78.74	310	eP	P	01 34 07.2	+0.2
KTK1	Kautokeino	78.74	340	⇑iP	P	01 34 06.1	-0.3
	comp=Z,138nm,1.2s,mb5.8						
KTK1	Kautokeino	78.74	340	⇑iP	P	01 34 06.1	-0.3
KTK1				AMb	AMB	01 34 08.1	
	comp=Z,138nm,1.2s,mb5.8						
KTK1				epP	pP	01 34 20.6	-0.2
DPC	Dobruska-Polom	78.77	320	⇑iP	P	01 34 07.7	+0.8
KSP	Ksiaz	78.83	321	⇑eP	P	01 34 07.8	+0.5
KSP	Ksiaz	78.83	321	eP	P	01 34 07.8	+0.6
DOBS	Dobrina	78.97	316	⇑iP	P	01 34 08.4	+0.2
FX1	Attu Island--F	78.97	37	eP	P	01 34 07.8	-0.1
UPC	Upice	78.98	320	⇑iP	P	01 34 08.6	+0.5
ARSA	Arzberg	79.02	317	⇑iP	P	01 34 08.9	+0.5
	comp=Z,267nm,1.4s,mb6.0						
BOJS	Bojanci	79.08	315	⇑iP	P	01 34 08.9	+0.1
BOJS				e	pP	01 34 23.4	+0.2
PERS	Pernice	79.25	316	⇑eP	P	01 34 10.1	+0.5
PERS				e	pP	01 34 24.5	+0.4
SUR	Sutherland	79.28	236	P	P	01 34 12.7	+2.6
	comp=Z,21nm,0.8s,mb5.2,baz=82,slow=5.9,SNR=14						
SUR				LR	LR	02 03 16.8	
	comp=Z,380nm,20.0s,MS4.7,baz=158,slow=31						
LJU	Ljubljana	79.62	316	⇑iP	P	01 34 12.2	+0.5
LJU				e	pP	01 34 24.7	-1.5
OBKA	Obir	79.63	316	⇑iP	P	01 34 12.1	+0.4
	comp=Z,246nm,1.5s,mb5.9						
PRU	Pruhonice	79.88	320	⇑iP	P	01 34 13.3	+0.4
PVCC	Panska Ves	79.90	320	⇑iP	P	01 34 13.6	+0.6
MOA	Molln	79.91	318	⇑iP	P	01 34 13.1	-0.1
	comp=Z,78nm,1.2s,mb5.5						
SDI	San Donato	79.92	311	eP	P	01 34 12.7	-0.7
VOY	Vojsko	80.06	316	⇑eP	P	01 34 14.0	0.0
VOY				e	pP	01 34 28.5	0.0
BSD	Bornholm Skovb	80.08	325	⇑iP	P	01 34 13.2	-0.7
BSD				pmax	pmax		
	comp=Z,82nm,0.8s,mb5.7						
BSD	Bornholm Skovb	80.08	325	⇑iP	P	01 34 13.2	-0.7
	comp=Z,82nm,0.8s,mb5.7						
TRI	Trieste	80.13	315	eP	P	01 34 14.0	-0.4
PTQR	Pietraquaria	80.24	312	eP	P	01 34 15.1	+0.1
AQU	L’Aquila	80.25	312	eP	P	01 34 15.5	+0.4
BRG	Berggiesshubel	80.32	321	⇑iP	P	01 34 15.7	+0.4
BRG				pmax	pmax		
	comp=Z,130nm,1.3s,mb5.7						
BRG	Berggiesshubel	80.32	321	⇑iP	P	01 34 15.7	+0.4
	comp=Z,130nm,1.3s,mb5.7						
ROBS	Robic	80.34	316	⇑eP	P	01 34 15.4	-0.1
ROBS				e	pP	01 34 29.6	-0.4
GEC2	GERESS Array S	80.35	319	eP	P	01 34 16.0	+0.5
GEC2				pmax	pmax		
	comp=Z,227nm,0.9s,mb6.1						
GEC2	GERESS Array S	80.35	319	eP	P	01 34 16.0	+0.5
	comp=Z,227nm,0.9s,mb6.1						
GERES	GERESS Array B	80.35	319	P	P	01 34 16.0	+0.5
	comp=Z,100nm,0.7s,mb5.8,baz=90,slow=5.3,SNR=403						
GERES				pP	pP	01 34 30.2	+0.2
	comp=Z,39nm,0.9s,baz=112,slow=4.8,SNR=6.7						
TRO	Tromso	80.38	340	eP	P	01 34 13.5	-1.7
TRO				pmax	pmax		
	comp=Z,189nm,1.4s,mb5.8						
TRO	Tromso	80.38	340	eP	P	01 34 13.5	-1.7
	comp=Z,189nm,1.4s,mb5.8						
TRO	Tromso	80.38	340	eP	P	01 34 13.5	-1.7
TRO				epP	pP	01 34 28.3	-1.5
TRO				AMb	AMB	01 34 30.2	
	comp=Z,189nm,1.4s,mb5.8						
KHC	Kasperske Hory	80.45	319	⇑iP	P	01 34 16.2	+0.2
KHC				epP	pP	01 34 30.0	-0.5
PTCC	Patocco-Chiusa	80.45	316	eP	P	01 34 16.4	+0.3
NRCA	Norcia	80.48	312	eP	P	01 34 16.4	0.0
KBA	Koelnbreinsper	80.49	317	⇑iP	P	01 34 16.2	-0.1
	comp=Z,108nm,1.3s,mb5.6						
KBA	Koelnbreinsper	80.49	317	⇑iP	P	01 34 16.2	-0.1
KBA				pmax	pmax		
	comp=Z,108nm,1.3s,mb5.6						
GMNA	Gemona	80.53	316	eP	P	01 34 16.9	+0.4
RUE	Ruedersdorf	80.53	322	eP	P	01 34 16.4	+0.1
	comp=Z,232nm,1.1s,mb6.0						
SNTG	Esanatoglia	80.62	313	eP	P	01 34 17.4	+0.4
ARV	Arcevia	80.63	313	eP	P	01 34 17.8	+0.7
FSSB	Fossombrone	80.75	313	eP	P	01 34 18.5	+0.8
MA9	Marino	80.79	311	eP	P	01 34 18.1	+0.1
MNS	Montasola	80.79	312	eP	P	01 34 17.3	-0.6
FVI	Forni Avoltri	80.86	316	eP	P	01 34 18.3	+0.1
WET	Wettzell	80.91	319	eP	P	01 34 18.8	+0.4
WET				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.7						
WET	Wettzell	80.91	319	eP	P	01 34 18.8	+0.4
	comp=Z,120nm,1.1s,mb5.7						
CLL	Collm	80.94	321	⇑iP	P	01 34 18.5	0.0
CLL				pmax	pmax		
	comp=Z,77nm,1.1s,mb5.5						
CLL	Collm	80.94	321	⇑iP	P	01 34 18.5	0.0
	comp=Z,77nm,1.1s,mb5.5						
CLL	Collm	80.94	321	⇑P	P	01 34 18.5	0.0
	comp=Z,logA/T=1.8,mb5.5						
CLL				e*SP	sP	01 34 35.0	-3.6
RSM	Repubblica di	81.00	314	eP	P	01 34 20.2	+1.2
NKC	Novy Kostel	81.24	320	⇑iP	P	01 34 20.6	+0.5
CRE	Caprese Michel	81.35	313	eP	P	01 34 21.2	+0.3
SFI	Santa Sofia	81.43	313	eP	P	01 34 22.7	+1.4
MOR8	Moi Rana	81.50	336	eP	P	01 34 20.4	-0.8
	comp=Z,88nm,1.5s,mb5.5						
MOR8	Moi Rana	81.50	336	eP	P	01 34 20.4	-0.8
MOR8				AMb	AMB	01 34 22.4	
	comp=Z,88nm,1.5s,mb5.5						
MOR8				epP	pP	01 34 34.6	-1.1
PGD	Poggio Sodo	81.52	313	eP	P	01 34 23.7	+1.9
COP	Copenhagen	81.54	325	⇑eP	pP	01 34 35.9	-0.2
COP	Copenhagen	81.54	325	⇑iP	pP	01 34 35.9	-0.2
	comp=Z,67nm,0.8s						
CTI	Castel Tesino	81.62	316	eP	P	01 34 23.0	+0.8
WTTA	Wattenberg	81.66	317	⇑iP	P	01 34 22.2	-0.2
	comp=Z,203nm,1.2s,mb5.9						
WTTA	Wattenberg	81.66	317	⇑iP	P	01 34 22.2	-0.2
WTTA				pmax	pmax		
	comp=Z,203nm,1.2s,mb5.9						
WATA	Walderalm	81.71	317	⇑iP	P	01 34 22.3	-0.3
	comp=Z,100nm,1.1s,mb5.7						
WATA	Walderalm	81.71	317	⇑iP	P	01 34 22.3	-0.3
WATA				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
MOX	Moxa	81.78	320	i P	P	01 34 23.2	+0.2
FUR	Furstenfeldbru	81.93	318	eP	P	01 34 23.7	-0.1
FUR				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.8						
FUR	Furstenfeldbru	81.93	318	eP	P	01 34 23.7	-0.1
	comp=Z,100nm,0.9s,mb5.8						
SQTA	Sankt Quirin	81.95	317	⇑iP	P	01 34 23.9	0.0
	comp=Z,91nm,1.0s,mb5.7						
SQTA	Sankt Quirin	81.95	317	⇑iP	P	01 34 23.9	0.0
SQTA				pmax	pmax		
	comp=Z,91nm,1.0s,mb5.7						
GRA1	Grafenberg Arr	82.01	319	eP	P	01 34 24.9	+0.8
	comp=Z,185nm,1.1s,mb5.9						
GRF	Grafenberg Arr	82.01	319	eP	P	01 34 24.9	+0.8
GRF				pmax	pmax		
	comp=Z,185nm,1.1s,mb5.9						
GRF	Grafenberg Arr	82.01	319	eP	P	01 34 24.9	+0.8
GRF				pmax	pmax		
	comp=Z,185nm,1.1s,mb5.9						
GRF	Grafenberg Arr	82.01	319	eP	P	01 34 24.9	+0.8
	comp=Z,185nm,1.1s,mb5.9						
MOTA	Moosalm	82.03	317	⇑iP	P	01 34 24.0	-0.3
	comp=Z,71nm,1.1s,mb5.5						
MOTA	Moosalm	82.03	317	⇑iP	P	01 34 24.0	-0.3
MOTA				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.5						
ZCCA	Zocca	82.07	314	eP	P	01 34 26.5	+1.9
LOF	Lofoten	82.07	338	eP	P	01 34 25.9	+1.8
	comp=Z,113nm,1.6s,mb5.5						
LOF	Lofoten	82.07	338	eP	P	01 34 25.9	+1.8
LOF				AMb	AMB	01 34 30.1	
	comp=Z,113nm,1.6s,mb5.5						
BDI	Bagni Di Lucca	82.34	314	eP	P	01 34 25.6	-0.4
GSCL	Gusciola	82.35	314	eP	P	01 34 27.5	+1.5
NSS	Namsos	82.37	334	eP	P	01 34 24.6	-1.1
	comp=Z,120nm,1.3s,mb5.7						
NSS	Namsos	82.37	334	eP	P	01 34 24.6	-1.1
NSS				AMb	AMB	01 34 25.3	
	comp=Z,120nm,1.3s,mb5.7						
NSS				epP	pP	01 34 39.5	-0.8
PII	Pisa	82.39	313	eP	P	01 34 25.3	-0.9
SAL	Salo	82.40	315	eP	P	01 34 27.2	+1.0
ERBM	Eremo	82.47	314	eP	P	01 34 28.4	+1.8
SARO	Sassorosso	82.48	314	P	P	01 34 27.0	+0.3
NB2	NORSAR Subarra	82.49	331	P	P	01 34 25.6	-0.8
	comp=Z,33nm,0.9s,mb5.3,baz=96,slow=5.3						
NB2	NORSAR Subarra	82.49	331	P	P	01 34 25.6	-0.8
NB2				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
NB2	NORSAR Subarra	82.49	331	P	P	01 34 25.6	-0.8
	baz=96,slow=5.3						
NOA	NORSAR Array B	82.49	331	P	P	01 34 25.7	-0.6
	comp=Z,16nm,0.8s,mb5.0,baz=94,slow=5.4,SNR=41						
NOA				pP	pP	01 34 41.8	+0.9

	comp=Z,12nm,0.8s,baz=95,slow=5.0,SNR=7.3						
NOA				LR	LR	02 16 58.7	
	comp=Z,256nm,18.2s,MS4.6,baz=95,slow=40						
NOA	**NORSAR Array B**	**82.49**	**331**	P	**P**	**01 34 25.7**	**-0.6**
NOA				pP	pP	01 34 41.8	+0.9
NOA				LR	LR	02 16 58.7	
BRMO	**Bormio**	**82.52**	**316**	*e*P	**P**	**01 34 27.7**	**+0.9**
FUORN	**Ofenpass**	**82.59**	**316**	⇑*i*P	**P**	**01 34 28.2**	**+1.0**
CLZ	**Clausthal**	**82.60**	**321**	*e*P	**P**	**01 34 27.5**	**+0.4**
	comp=Z,140nm,1.2s,mb5.9						
NAO01	**NORSAR Array S**	**82.64**	**331**	*e*P	**P**	**01 34 26.5**	**-0.7**
	comp=Z,26nm,1.0s,mb5.2						
HDH	**Heidenheim**	**82.65**	**318**	⇑*e*P	**P**	**01 34 27.3**	**-0.2**
VINC	**Vinca**	**82.66**	**314**	P	**P**	**01 34 27.2**	**-0.4**
BSEG	**Bad Segeberg**	**82.69**	**324**	*e*P	**P**	**01 34 28.1**	**+0.6**
UBR	**Uberruh**	**82.71**	**317**	⇑*e*P	**P**	**01 34 27.8**	**0.0**
GRAM		**82.72**	**314**	P	**P**	**01 34 28.6**	**+0.7**
BERNI	**Berninapass**	**82.76**	**316**	⇑*i*P	**P**	**01 34 29.2**	**+1.2**
DAVOX	**Davos**	**82.86**	**316**	P	**P**	**01 34 29.5**	**+1.0**
	comp=Z,147nm,0.7s,mb6.1,baz=119,slow=5.6,SNR=95						
DAVOX	**Davos**	**82.86**	**316**	⇑*i*P	**P**	**01 34 29.5**	**+1.0**
DAVA	**Damuels**	**82.86**	**317**	⇑*i*P	**P**	**01 34 29.0**	**+0.5**
	comp=Z,186nm,1.2s,mb6.0						
CODM		**82.88**	**314**	P	**P**	**01 34 29.1**	**+0.4**
SIND	**Sindeldorf**	**83.06**	**319**	⇑*e*P	**P**	**01 34 29.9**	**+0.4**
LIENZ	**Alp Oberkamor**	**83.12**	**317**	⇑*i*P	**P**	**01 34 30.6**	**+0.7**
VDL	**Val di Lei**	**83.14**	**316**	⇑*i*P	**P**	**01 34 30.6**	**+0.6**
BOB	**Bobbio (Coli)**	**83.16**	**314**	*e*P	**P**	**01 34 31.1**	**+1.0**
PLONS	**Plons**	**83.20**	**317**	⇑*i*P	**P**	**01 34 30.9**	**+0.6**
BUCH	**Bad Urach**	**83.22**	**318**	⇑*e*P	**P**	**01 34 30.7**	**+0.4**
GUT	**Gutenstein**	**83.38**	**318**	⇑*e*P	**P**	**01 34 31.4**	**+0.3**
MUD	**Monsted U'grnd**	**83.39**	**326**	*i* P	**P**	**01 34 31.5**	**+0.5**
MUD				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
MUD	**Monsted U'grnd**	**83.39**	**326**	*i* P	**P**	**01 34 31.5**	**+0.5**
	comp=Z,60nm,1.0s,mb5.6						
MUGIO	**Muggio**	**83.44**	**316**	⇑*i*P	**P**	**01 34 31.1**	**-0.4**
LLS	**Linth-Limmern**	**83.46**	**316**	⇑*i*P	**P**	**01 34 32.2**	**+0.6**
WEIN	**Weingarten**	**83.47**	**317**	⇑*i*P	**P**	**01 34 31.9**	**+0.3**
GENL	**Genova Univers**	**83.51**	**314**	P	**P**	**01 34 31.5**	**-0.4**
PGF	**Pioggiola**	**83.51**	**312**	*e*P	**P**	**01 34 32.3**	**+0.3**
	comp=Z,279nm,1.4s,mb5.9						
PGF	**Pioggiola**	**83.51**	**312**	*e*P	**P**	**01 34 32.3**	**+0.3**
PGF				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.9						
WILA	**Wila**	**83.52**	**317**	⇑*i*P	**P**	**01 34 32.3**	**+0.4**
STEIN	**Stein am Rhein**	**83.55**	**317**	⇑*i*P	**P**	**01 34 32.3**	**+0.3**
DOMB	**Dombas**	**83.56**	**332**	⇑*i*P	**P**	**01 34 31.9**	**+0.1**
	comp=Z,66nm,1.3s,mb5.6						
DOMB	**Dombas**	**83.56**	**332**	⇑*i*P	**P**	**01 34 31.9**	**+0.1**
DOMB				AMb	AMB	01 34 33.9	
	comp=Z,66nm,1.3s,mb5.6						
DOMB				*e*pP	pP	01 34 46.6	+0.3
TOD	**Tromm**	**83.58**	**319**	*e*P	**P**	**01 34 32.3**	**+0.2**
TOD	**Tromm**	**83.58**	**319**	*e*P	**P**	**01 34 32.6**	**+0.5**
LBG	**Lerchenberg**	**83.59**	**318**	⇑*e*P	**P**	**01 34 32.5**	**+0.3**
SPAK	**Spaichingen**	**83.60**	**318**	*e*P	**P**	**01 34 32.5**	**+0.2**
SPAK	**Spaichingen**	**83.60**	**318**	⇓*e*P	**P**	**01 34 32.8**	**+0.5**
VAI	**Varese**	**83.63**	**315**	*e*P	**P**	**01 34 32.2**	**-0.3**
TRULL	**Truellikon**	**83.67**	**317**	⇑*i*P	**P**	**01 34 32.4**	**-0.3**
MUO	**Muotathal**	**83.71**	**317**	⇑*i*P	**P**	**01 34 33.7**	**+0.8**
ZUR	**Zurich**	**83.74**	**317**	⇑*i*P	**P**	**01 34 33.4**	**+0.4**
SLE	**Schleitheim**	**83.80**	**317**	⇑*i*P	**P**	**01 34 33.3**	**0.0**
TNS	**Taunus Mts**	**83.81**	**320**	*e*P	**P**	**01 34 33.8**	**+0.5**
TNS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.8						
TNS	**Taunus Mts**	**83.81**	**320**	*e*P	**P**	**01 34 33.8**	**+0.5**
	comp=Z,90nm,1.0s,mb5.8						
PCP	**Pian Castagno**	**83.81**	**314**	P	**P**	**01 34 33.3**	**-0.1**
BFO	**Black Forest**	**83.90**	**318**	*e*P	**P**	**01 34 33.7**	**-0.1**
BFO				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.8						
BFO	**Black Forest**	**83.90**	**318**	*e*P	**P**	**01 34 33.7**	**-0.1**
	comp=Z,73nm,1.0s,mb5.8						
HASLI	**Hasliberg**	**84.05**	**316**	⇑*i*P	**P**	**01 34 35.0**	**+0.4**
FIN	**Finale Ligure**	**84.06**	**314**	*e*P	**P**	**01 34 35.2**	**+0.5**
SULZ	**Sulz-Cheisache**	**84.06**	**317**	⇑*i*P	**P**	**01 34 34.7**	**+0.1**
FELD	**Feldberg**	**84.13**	**317**	*e*P	**P**	**01 34 35.1**	**+0.1**
MCGN	**Macugnaga**	**84.17**	**316**	*e*P	**P**	**01 34 35.0**	**-0.2**
KIZ	**Kirchzarten**	**84.18**	**318**	⇑*e*P	**P**	**01 34 35.3**	**+0.1**
ORX	**Oropa**	**84.19**	**315**	P	**P**	**01 34 34.4**	**-0.9**
LANF	**Langenberg**	**84.24**	**319**	*e*P	**P**	**01 34 36.0**	**+0.5**
STR	**Strasbourg**	**84.27**	**318**	*e*P	**P**	**01 34 36.0**	**+0.3**
IMI	**Imperia**	**84.29**	**314**	*e*P	**P**	**01 34 36.1**	**+0.2**
ROB	**Roburent**	**84.30**	**314**	P	**P**	**01 34 36.0**	**+0.1**
BALST	**Balsthal**	**84.35**	**317**	⇑*i*P	**P**	**01 34 36.3**	**+0.2**
TRAV		**84.35**	**315**	P	**P**	**01 34 35.7**	**-0.5**
MONE	**Monesi**	**84.39**	**314**	P	**P**	**01 34 36.9**	**+0.6**
ABH	**Alteburg**	**84.39**	**320**	*e*P	**P**	**01 34 36.7**	**+0.5**
ABH	**Alteburg**	**84.39**	**320**	⇑*e*P	**P**	**01 34 36.9**	**+0.7**
LIBD	**Limburg**	**84.39**	**318**	*e*P	**P**	**01 34 36.7**	**+0.4**
LIBD	**Limburg**	**84.39**	**318**	*e*P	**P**	**01 34 36.8**	**+0.5**
WIMIS	**Wimmis**	**84.41**	**316**	⇑*i*P	**P**	**01 34 36.9**	**+0.5**
LKBD	**Leukerbad**	**84.42**	**316**	⇑*i*P	**P**	**01 34 37.2**	**+0.8**
NEGI	**Negi**	**84.43**	**313**	P	**P**	**01 34 36.6**	**0.0**
BBS	**Basel-Blauen**	**84.47**	**317**	*e*P	**P**	**01 34 36.7**	**0.0**
BBS	**Basel-Blauen**	**84.47**	**317**	*e*P	**P**	**01 34 36.8**	**+0.1**
SAOF	**Saorge**	**84.53**	**314**	*e*P	**P**	**01 34 37.6**	**+0.5**
DIX	**Grande Dixence**	**84.57**	**316**	⇑*i*P	**P**	**01 34 38.5**	**+1.3**
CDF	**Champ du Feu**	**84.60**	**318**	⇑*i*P	**P**	**01 34 37.3**	**0.0**
	comp=Z,65nm,0.8s,mb5.5						
CDF	**Champ du Feu**	**84.60**	**318**	⇑*i*P	**P**	**01 34 37.3**	**0.0**
CDF				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.5						
ENR	**Entracque**	**84.62**	**314**	P	**P**	**01 34 36.4**	**-1.1**
SBF	**Sospel**	**84.62**	**313**	⇑*i*P	**P**	**01 34 37.9**	**+0.3**
	comp=Z,315nm,1.0s,mb6.1						
SBF	**Sospel**	**84.62**	**313**	⇑*i*P	**P**	**01 34 37.9**	**+0.3**
SBF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.1						
AUTN	**L'Aution**	**84.62**	**314**	*e*P	**P**	**01 34 36.9**	**-0.7**
REVF	**Revere**	**84.68**	**313**	*e*P	**P**	**01 34 38.3**	**+0.5**
ECH	**Echery**	**84.69**	**318**	*e*P	**P**	**01 34 37.7**	**-0.1**
STV2	**Anna di Valdie**	**84.69**	**314**	P	**P**	**01 34 37.2**	**-0.7**
STV	**Sta Anna Valdi**	**84.69**	**314**	P	**P**	**01 34 37.1**	**-0.8**
RSP	**Reno Superiore**	**84.71**	**315**	P	**P**	**01 34 37.2**	**-0.7**
RUP	**Ruppelstein**	**84.71**	**319**	*e*P	**P**	**01 34 38.4**	**+0.6**
RUP	**Ruppelstein**	**84.71**	**319**	⇑*e*P	**P**	**01 34 38.5**	**+0.7**
MOF	**Molkenrain**	**84.71**	**317**	*e*P	**P**	**01 34 37.9**	**0.0**
BHB	**Bricherasio**	**84.72**	**314**	P	**P**	**01 34 36.2**	**-1.8**
TOUF	**Mont Tournerai**	**84.75**	**314**	*e*P	**P**	**01 34 39.0**	**+0.8**
LSD	**Ceresole Reale**	**84.77**	**315**	P	**P**	**01 34 38.9**	**+0.7**
GRYON	**Gryon**	**84.78**	**316**	⇑*i*P	**P**	**01 34 39.0**	**+0.7**
WTSB	**Winterswijk**	**84.81**	**322**	*e*P	**P**	**01 34 37.8**	**-0.5**
	comp=Z,112nm,0.9s,mb6.0						
MVIF	**Mont Vial**	**84.83**	**314**	*e*P	**P**	**01 34 39.2**	**+0.6**
BLS5	**Blasjo**	**84.83**	**329**	⇑*i*P	**P**	**01 34 39.5**	**+1.3**
	comp=Z,62nm,0.8s,mb5.8						
BLS5	**Blasjo**	**84.83**	**329**	⇑*i*P	**P**	**01 34 39.5**	**+1.3**
BLS5				AMb	AMB	01 34 40.4	
	comp=Z,62nm,0.8s,mb5.8						
BLS5				*e*pP	pP	01 34 54.7	+1.9
PZZ	**Prazzo**	**84.84**	**314**	P	**P**	**01 34 37.6**	**-1.0**
FENE	**Fenestrelle**	**84.85**	**315**	P	**P**	**01 34 38.6**	**0.0**
KIWB	**Kanaga Island**	**84.86**	**38**	*e*P	**P**	**01 34 37.5**	**-1.1**
TORNY	**Torny**	**84.86**	**316**	⇑*i*P	**P**	**01 34 39.4**	**+0.7**
ABSA	**Djebel Ababsia**	**84.88**	**306**	P	**P**	**01 34 40.5**	**+1.5**
SALAN	**Lac Salanfe**	**84.88**	**316**	⇑*i*P	**P**	**01 34 39.5**	**+0.7**
AIGLE	**Aigle**	**84.88**	**316**	⇑*i*P	**P**	**01 34 39.3**	**+0.5**
HINF	**Hinteralfeld**	**84.90**	**317**	⇑*i*P	**P**	**01 34 38.5**	**-0.3**
CMAH	**Djebel Manchou**	**84.91**	**306**	P	**P**	**01 34 40.0**	**+0.8**
CGMA	**Guelma**	**84.92**	**306**	P	**P**	**01 34 40.0**	**+0.8**
EMV	**Vieux Emosson**	**84.93**	**316**	⇑*i*P	**P**	**01 34 39.9**	**+0.9**
LOMF	**Lomont**	**84.94**	**317**	*e*P	**P**	**01 34 39.1**	**+0.1**
SURF	**Saint Ours**	**85.05**	**314**	*e*P	**P**	**01 34 40.6**	**+0.9**
RRL	**Cesana Torines**	**85.05**	**315**	P	**P**	**01 34 39.5**	**-0.2**
LPG	**La Plagne**	**85.05**	**315**	⇑*i*P	**P**	**01 34 40.4**	**+0.7**
	comp=Z,194nm,1.0s,mb5.9						
LPG	**La Plagne**	**85.05**	**315**	⇑*i*P	**P**	**01 34 40.4**	**+0.7**
LPG				pmax	pmax		
	comp=Z,97nm,1.0s,mb5.9						
LPL	**La Plagne**	**85.07**	**315**	⇑*i*P	**P**	**01 34 40.4**	**+0.7**
	comp=Z,292nm,1.1s,mb6.0						
LPL	**La Plagne**	**85.07**	**315**	⇑*i*P	**P**	**01 34 40.4**	**+0.7**
LPL				pmax	pmax		
	comp=Z,146nm,1.1s,mb6.0						
MBDF	**Montbardon**	**85.07**	**314**	⇑*i*P	**P**	**01 34 39.5**	**-0.2**
	comp=Z,89nm,1.1s,mb5.5						
MBDF	**Montbardon**	**85.07**	**314**	⇑*i*P	**P**	**01 34 39.5**	**-0.2**
MBDF				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.5						
BRANT	**Les Verrieres**	**85.19**	**317**	⇑*i*P	**P**	**01 34 40.9**	**+0.6**
FRF	**La Foret Royal**	**85.21**	**313**	⇑*i*P	**P**	**01 34 41.0**	**+0.5**
	comp=Z,369nm,1.2s,mb6.1						
FRF	**La Foret Royal**	**85.21**	**313**	⇑*i*P	**P**	**01 34 41.0**	**+0.5**
FRF				pmax	pmax		
	comp=Z,184nm,1.2s,mb6.1						
HAU	**Haudompre**	**85.24**	**318**	⇑*i*P	**P**	**01 34 40.5**	**0.0**
	comp=Z,259nm,1.0s,mb6.0						
HAU				*e*R			
	comp=Z,224nm,21.2s						
HAU	**Haudompre**	**85.24**	**318**	⇑*i*P	**P**	**01 34 40.5**	**0.0**
HAU				pmax	pmax		
	comp=Z,129nm,1.0s,mb6.0						
HAU				MLR	MLR		
	comp=Z,220nm,21.3s,MS4.5						
LMR	**La Mourre**	**85.31**	**313**	⇑*i*P	**P**	**01 34 41.4**	**+0.4**
	comp=Z,188nm,1.2s,mb5.8						
LMR	**La Mourre**	**85.31**	**313**	⇑*i*P	**P**	**01 34 41.4**	**+0.4**
LMR				pmax	pmax		
	comp=Z,94nm,1.2s,mb5.8						
HGN	**Heimansgroeve**	**85.40**	**320**	*e*P	**P**	**01 34 40.9**	**-0.3**
	comp=Z,49nm,1.6s,mb5.4						
THEF	**They Montfort**	**85.47**	**318**	*e*P	**P**	**01 34 41.7**	**+0.1**
CABF	**La Chapelle**	**85.47**	**316**	⇑*i*P	**P**	**01 34 42.3**	**+0.6**
	comp=Z,218nm,1.1s,mb5.9						
CABF	**La Chapelle**	**85.47**	**316**	⇑*i*P	**P**	**01 34 42.3**	**+0.6**
CABF				pmax	pmax		
	comp=Z,109nm,1.1s,mb5.9						
CKFL	**Kef-Lekhel**	**85.48**	**306**	P	**P**	**01 34 41.5**	**-0.5**
GDM	**Grand'Maison**	**85.51**	**315**	*e*P	**P**	**01 34 42.5**	**+0.6**
TAVF	**Tavernes**	**85.63**	**313**	*e*P	**P**	**01 34 43.6**	**+1.1**
CASM	**Ain Smara**	**85.67**	**306**	P	**P**	**01 34 43.0**	**+0.1**
ORIF	**Oris-en-Rattie**	**85.69**	**315**	⇑*i*P	**P**	**01 34 43.0**	**+0.2**
	comp=Z,84nm,1.0s,mb5.6						
ORIF				*e*R			
	comp=Z,329nm,20.0s						
CTEI	**Djebel Teioual**	**85.75**	**306**	P	**P**	**01 34 45.0**	**+1.7**
GRN	**Grenoble**	**85.77**	**315**	*e*P	**P**	**01 34 44.0**	**+0.8**
VILF	**Villemus**	**85.87**	**314**	*e*P	**P**	**01 34 44.7**	**+1.0**
SMRF	**Simiane la Rot**	**85.96**	**314**	⇑*i*P	**P**	**01 34 45.2**	**+1.1**
	comp=Z,170nm,1.3s,mb5.8						
MEZF	**Maizieres J'vi**	**86.08**	**318**	⇑*i*P	**P**	**01 34 44.9**	**+0.3**
	comp=Z,110nm,1.0s,mb5.7						
GIVF	**Givet**	**86.14**	**320**	*e*P	**P**	**01 34 45.3**	**+0.5**
	comp=Z,100nm,1.1s,mb5.6						
GIVF	**Givet**	**86.14**	**320**	*e*P	**P**	**01 34 45.3**	**+0.5**
GIVF				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.7						
DFRA	**Djebel Bou Aff**	**86.15**	**306**	P	**P**	**01 34 46.0**	**+0.7**
CMER	**Merouana**	**86.19**	**305**	P	**P**	**01 34 47.0**	**+1.5**
PRAF	**Pradon**	**86.26**	**313**	*e*P	**P**	**01 34 45.7**	**+0.1**
CKHR	**Kef el Ahmar**	**86.48**	**306**	P	**P**	**01 34 48.0**	**+1.1**
BAIF	**Baives**	**86.54**	**320**	⇑*i*P	**P**	**01 34 47.5**	**+0.7**
	comp=Z,213nm,1.1s,mb6.0						
BAIF	**Baives**	**86.54**	**320**	⇑*i*P	**P**	**01 34 47.5**	**+0.7**
BAIF				pmax	pmax		
	comp=Z,106nm,1.1s,mb6.0						
VIVF	**Saint-Julien-l**	**86.56**	**315**	⇑*i*P	**P**	**01 34 47.5**	**+0.5**
	comp=Z,129nm,1.1s,mb5.8						
VIVF	**Saint-Julien-l**	**86.56**	**315**	⇑*i*P	**P**	**01 34 47.5**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.8						
SET	**Setif**	**86.56**	**306**	P	**P**	**01 34 50.0**	**+2.7**
SMF	**Signal de Mont**	**87.01**	**316**	⇑*i*P	**P**	**01 34 49.4**	**+0.2**
	comp=Z,196nm,1.0s,mb6.0						
SMF	**Signal de Mont**	**87.01**	**316**	⇑*i*P	**P**	**01 34 49.4**	**+0.2**
SMF				pmax	pmax		
	comp=Z,98nm,1.0s,mb6.0						
URZ	**Urewera**	**87.09**	**129**	P	**P**	**01 34 49.3**	**-0.5**
	comp=Z,49nm,1.1s,mb5.6,baz=61,slow=5.4,SNR=8.7						
URZ				LR	LR	02 13 31.1	
	comp=Z,345nm,21.8s,MS4.7,baz=288,slow=35						
LASF	**Ste Croix**	**87.19**	**314**	⇑*i*P	**P**	**01 34 51.0**	**+0.8**
	comp=Z,150nm,1.3s,mb5.8						
SSF	**Saint Saulge**	**87.21**	**317**	⇑*i*P	**P**	**01 34 50.5**	**+0.3**
SSF				pmax	pmax		
	comp=Z,86nm,1.3s,mb5.8						
SSF	**Saint Saulge**	**87.21**	**317**	⇑*i*P	**P**	**01 34 50.5**	**+0.3**
	comp=Z,86nm,1.3s,mb5.8						
PLDF	**La Plantade**	**87.22**	**316**	*e*P	**P**	**01 34 50.9**	**+0.7**
AVF	**Avril sur Loir**	**87.34**	**317**	⇑*i*P	**P**	**01 34 51.0**	**+0.2**
	comp=Z,137nm,1.0s,mb5.8						
AVF	**Avril sur Loir**	**87.34**	**317**	⇑*i*P	**P**	**01 34 51.0**	**+0.2**
AVF				pmax	pmax		
	comp=Z,69nm,1.0s,mb5.8						
LBL	**Lubilhac**	**87.54**	**315**	*e*P	**P**	**01 34 52.6**	**+0.8**
AGO	**Saint Agoulin**	**87.55**	**316**	*e*P	**P**	**01 34 52.6**	**+0.8**
PYM	**Petit Puy Mans**	**87.66**	**316**	*e*P	**P**	**01 34 53.1**	**+0.7**
BGF	**Bois d'Agland**	**87.70**	**316**	⇑*i*P	**P**	**01 34 53.2**	**+0.6**
	comp=Z,210nm,1.2s,mb5.9						
BGF	**Bois d'Agland**	**87.70**	**316**	⇑*i*P	**P**	**01 34 53.2**	**+0.6**
BGF				pmax	pmax		
	comp=Z,105nm,1.2s,mb5.9						
HYF	**Humbligny**	**87.78**	**317**	⇑*i*P	**P**	**01 34 53.8**	**+0.9**
TCF	**Toulx Ste Croi**	**88.17**	**316**	⇑*i*P	**P**	**01 34 55.4**	**+0.6**
	comp=Z,88nm,1.3s,mb5.5						
TCF	**Toulx Ste Croi**	**88.17**	**316**	⇑*i*P	**P**	**01 34 55.4**	**+0.6**
TCF				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.5						
CAF	**Calviac**	**88.40**	**315**	⇑*i*P	**P**	**01 34 56.9**	**+1.0**
	comp=Z,88nm,1.2s,mb5.6						
CAF	**Calviac**	**88.40**	**315**	⇑*i*P	**P**	**01 34 56.9**	**+1.0**
CAF				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.6						
ABA	**Alger-Bouzarea**	**88.41**	**307**	P	**P**	**01 34 57.0**	**+0.8**
MTLF	**Montolieu**	**88.44**	**313**	⇑*i*P	**P**	**01 34 56.9**	**+0.8**
	comp=Z,122nm,1.2s,mb5.7						
MTLF	**Montolieu**	**88.44**	**313**	⇑*i*P	**P**	**01 34 56.9**	**+0.8**
MTLF				pmax	pmax		
	comp=Z,61nm,1.2s,mb5.7						
TNA	**Tin City**	**88.45**	**24**	*e*P	**P**	**01 34 55.2**	**-0.5**
	comp=Z,32nm,1.0s,mb5.5						
RJF	**Les Rejaudoux**	**88.75**	**315**	⇑*i*P	**P**	**01 34 58.5**	**+0.9**
	comp=Z,114nm,1.1s,mb5.8						
RJF				*e*R			
	comp=Z,258nm,20.0s						
RJF	**Les Rejaudoux**	**88.75**	**315**	⇑*i*P	**P**	**01 34 58.5**	**+0.9**
RJF				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.8						
RJF				MLR	MLR		
	comp=Z,260nm,20.0s,MS4.7						
KTG1	**Tilbrook Grang**	**89.21**	**322**	*e*P	**P**	**01 35 00.4**	**+0.8**
LFF	**La Frestale**	**89.33**	**315**	⇑*i*P	**P**	**01 35 01.3**	**+1.0**
	comp=Z,119nm,1.2s,mb5.8						
LFF	**La Frestale**	**89.33**	**315**	⇑*i*P	**P**	**01 35 01.3**	**+1.0**
LFF				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.8						
LDF	**La Druitiere**	**89.49**	**319**	⇑*i*P	**P**	**01 35 01.6**	**+0.6**
	comp=Z,245nm,1.0s,mb6.2						
LDF	**La Druitiere**	**89.49**	**319**	⇑*i*P	**P**	**01 35 01.6**	**+0.6**
LDF				pmax	pmax		
	comp=Z,122nm,1.0s,mb6.2						
LCP	**Cassop**	**89.53**	**325**	⇑*e*P	**P**	**01 35 02.0**	**+1.0**
LCP				AMb	AMB	01 35 02.8	
	comp=Z,382nm,0.8s,mb6.8						
FLN	**La Foliniere**	**89.71**	**319**	⇑*i*P	**P**	**01 35 02.5**	**+0.5**
	comp=Z,261nm,1.1s,mb6.2						
FLN				*e*R			
	comp=Z,348nm,20.0s						
FLN	**La Foliniere**	**89.71**	**319**	⇑*i*P	**P**	**01 35 02.5**	**+0.5**
FLN				pmax	pmax		
	comp=Z,131nm,1.1s,mb6.2						
FLN				MLR	MLR		
	comp=Z,350nm,20.0s,MS4.8						
HPK	**Haverah Park**	**89.72**	**324**	⇑*e*P	**P**	**01 35 02.7**	**+0.7**
HPK				AMb	AMB	01 35 05.1	
	comp=Z,514nm,1.6s,mb6.6						
MFF	**Saint Martin d**	**89.75**	**317**	⇑*i*P	**P**	**01 35 02.8**	**+0.5**
	comp=Z,200nm,1.3s,mb6.0						
MFF	**Saint Martin d**	**89.75**	**317**	⇑*i*P	**P**	**01 35 02.8**	**+0.5**
MFF				pmax	pmax		
	comp=Z,100nm,1.3s,mb6.0						
KBI1	**Birley Grange**	**89.77**	**323**	⇑*e*P	**P**	**01 35 02.6**	**+0.5**
KBI1				AMb	AMB	01 35 04.0	
	comp=Z,195nm,1.1s,mb6.4						
EPF	**Esparros**	**89.84**	**313**	*e*P	**P**	**01 35 03.5**	**+0.7**
LHO	**Holmfirth**	**89.92**	**324**	⇑*e*P	**P**	**01 35 03.5**	**+0.7**
LHO				AMb	AMB	01 35 11.3	
	comp=Z,129nm,1.8s,mb6.0						
KWE	**Weaver Farm**	**89.99**	**323**	*e*P	**P**	**01 35 02.9**	**-0.3**
KWE				AMb	AMB	01 35 06.6	
	comp=Z,188nm,1.6s,mb6.2						
GRR	**Gorron**	**90.01**	**318**	*e*P	**P**	**01 35 04.2**	**+0.8**
	comp=Z,264nm,1.3s,mb6.1						
GRR	**Gorron**	**90.01**	**318**	*e*P	**P**	**01 35 04.2**	**+0.8**
GRR				pmax	pmax		
	comp=Z,132nm,1.3s,mb6.1						
VNDA	**Vanda**	**90.06**	**168**	*e*P	**P**	**01 35 03.8**	**+0.8**
VNDA				pmax	pmax		
	comp=Z,25nm,1.4s						
VNDA	**Vanda**	**90.06**	**168**	P	**P**	**01 35 04.2**	**+1.2**
	comp=Z,15nm,1.2s,mb5.2,baz=272,slow=8.1,SNR=6.0						
VNDA				LR	LR	02 11 28.9	
	comp=Z,450nm,18.7s,MS4.9,baz=299,slow=33						
VNDA	**Vanda**	**90.06**	**168**	*e*P	**P**	**01 35 03.8**	**+0.8**
	comp=Z,25nm,1.4s,mb5.3						
DAG	**Danmarks Havn**	**90.35**	**348**	⇓*e*P	**P**	**01 35 03.8**	**-0.6**
DAG				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.4						
DAG	**Danmarks Havn**	**90.35**	**348**	⇓*e*P	**P**	**01 35 03.8**	**-0.6**
	comp=Z,22nm,1.0s,mb5.4						
DAG	**Danmarks Havn**	**90.35**	**348**	⇓*i*P	**P**	**01 35 03.8**	**-0.6**
	comp=Z,22nm,1.0s,mb5.4						
ESK	**Eskdalemuir**	**90.42**	**326**	⇑*e*P	**P**	**01 35 05.8**	**+0.6**
ESK				AMb	AMB	01 35 07.2	
	comp=Z,100nm,1.3s,mb6.0						
EAU	**Auchinoon**	**90.47**	**326**	*e*P	**P**	**01 35 06.5**	**+1.1**
EAU				AMb	AMB	01 35 17.4	
	comp=Z,209nm,2.0s,mb6.1						
ETSF	**Etsaut**	**90.51**	**313**	*e*P	**P**	**01 35 07.2**	**+1.3**
SJPF	**Ste Jean**	**90.96**	**313**	*e*P	**P**	**01 35 09.4**	**+1.3**
	comp=Z,59nm,1.0s,mb5.6						
SJPF	**Ste Jean**	**90.96**	**313**	*e*P	**P**	**01 35 09.4**	**+1.3**
SJPF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.6						
SGMF	**Saint Gilles**	**91.15**	**318**	⇑*i*P	**P**	**01 35 09.3**	**+0.5**
	comp=Z,164nm,1.2s,mb5.9						
SGMF	**Saint Gilles**	**91.15**	**318**	⇑*i*P	**P**	**01 35 09.3**	**+0.5**
SGMF				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.9						
QUIF	**Quistinic**	**91.60**	**318**	⇑*i*P	**P**	**01 35 11.1**	**+0.2**
	comp=Z,148nm,1.2s,mb5.9						
QUIF	**Quistinic**	**91.60**	**318**	⇑*i*P	**P**	**01 35 11.1**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,74nm,1.2s,mb5.9						
ROSF	**Rostrenen**	**91.61**	**319**	⇑*i*P	**P**	**01 35 11.5**	**+0.6**
	comp=Z,109nm,1.0s,mb5.8						
ROSF	**Rostrenen**	**91.61**	**319**	⇑*i*P	**P**	**01 35 11.5**	**+0.6**
ROSF				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.8						
DLF	**Lyons Farm**	**92.72**	**324**	*e*P	**P**	**01 35 16.8**	**+1.0**
DMUB	**Kingscourt**	**92.81**	**325**	*e*P	**P**	**01 35 17.6**	**+1.3**
DCN	**Croghan**	**93.14**	**324**	*e*P	**P**	**01 35 19.0**	**+1.2**
ESDC	**Sonseca Array**	**93.52**	**310**	P	**P**	**01 35 20.8**	**+0.9**
	comp=Z,3.6nm,0.6s,mb5.0,baz=62,slow=4.1,SNR=36						
ESDC				pP	pP	01 35 35.9	+1.2
	comp=Z,7.0nm,0.6s,baz=61,slow=4.3,SNR=10						
ESDC				PKKPbc		01 52 26.2	
	comp=Z,4.5nm,1.1s,baz=295,slow=1.8,SNR=8.3						
ESLA	**Sonseca Array**	**93.52**	**310**	*e*P	**P**	**01 35 20.2**	**+0.3**
	comp=Z,16nm,1.6s,mb5.2						
ESLA				*e*	pP	01 35 30.8	-3.9
IMA	**Indian Mountai**	**93.97**	**22**	*e*P	**P**	**01 35 22.0**	**+0.8**
SVW2	**Sparrevohn**	**94.94**	**27**	*e*P	**P**	**01 35 26.1**	**+0.3**
BORG	**Borgarnes**	**96.26**	**337**	LR	LR	02 24 10.4	
	comp=Z,398nm,18.7s,MS4.9,baz=306,slow=39						
SPU	**Mount Spurr**	**96.50**	**27**	*e*P	**P**	**01 35 31.8**	**-1.1**
MCK	**McKinley**	**96.77**	**24**	*e*P	**P**	**01 35 34.1**	**+0.1**
MCK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.2						
MCK	**McKinley**	**96.77**	**24**	*e*P	**P**	**01 35 34.1**	**0.0**
	comp=Z,7.8nm,0.9s,mb5.1						
ILAR	**Eielson Array**	**97.10**	**22**	P	**P**	**01 35 34.4**	**-1.1**
	comp=Z,3.7nm,0.7s,mb4.9,baz=290,slow=4.2,SNR=28						
ILAR				PKKPbc		01 52 15.2	
	comp=Z,0.8nm,0.9s,baz=172,slow=2.2,SNR=4.3						
ILAR				LR	LR	02 26 18.4	
	comp=Z,320nm,18.1s,MS4.8,baz=92,slow=40						
PWA	**Palmer West**	**97.27**	**26**	*e*P	**P**	**01 35 36.5**	**+0.1**
PMR	**Palmer**	**97.62**	**26**	*e*P	**P**	**01 35 37.7**	**-0.3**
SML	**Sawmill**	**97.87**	**25**	*e*P	**P**	**01 35 37.7**	**-1.4**
MENT	**Mentasta**	**99.22**	**23**	*e*P	**P**	**01 35 46.0**	**+0.8**
INK	**Inuvik**	**99.50**	**16**	*e*P	**P**	**01 35 45.2**	**-1.2**
INK				pmax	pmax		
	comp=Z,17nm,1.1s						
INK	**Inuvik**	**99.50**	**16**	*e*P	**P**	**01 35 45.2**	**-1.2**
	comp=Z,17nm,1.1s,mb5.4						
RES	**Resolute Bay**	**100.17**	**3**	*e*P	P	01 35 49.3	0.0
RES				pmax	pmax		
	comp=Z,23nm,0.9s						
RES	**Resolute Bay**	**100.17**	**3**	*e*P	P	01 35 49.3	0.0
	comp=Z,23nm,0.9s						
RES				*e*		01 36 03.1	
DAWY	**Dawson**	**100.24**	**21**	*e*P	P	01 35 49.7	-0.1
YKA	**Yellowknife Ar**	**109.00**	**14**	P	Pdif	01 36 29.9	+1.4
YKA						01 41 02.3	
YKA	**Yellowknife Ar**	**109.00**	**14**	Pdiff	Pdif	01 36 29.9	+1.4
	comp=Z,1.4nm,0.9s,baz=330,slow=4.6,SNR=17						
YKA				PKiKP		01 40 32.3	
	comp=Z,0.5nm,0.6s,baz=354,slow=2.3,SNR=6.7						
YKA				PP	PP	01 41 02.3	-2.5
	comp=Z,2.3nm,0.8s,baz=339,slow=7.1,SNR=6.1						
YKA				PKKPbc		01 51 40.0	
	comp=Z,0.7nm,0.8s,baz=151,slow=3.0,SNR=11						
YKA	**Yellowknife Ar**	**109.00**	**14**	Pdif	Pdif	01 36 29.9	+1.4
YKA				PKPdf		01 40 32.3	
YKA				PP	PP	01 41 02.3	-2.5
YKA				PKKPbc		01 51 40.0	
TBI	**Tubuai**	**115.61**	**113**	*e*LR	LR	02 15 36.1	
	comp=Z,387nm,25.2s						
PPT	**Papeete**	**115.94**	**107**	*e*LR	LR	02 15 45.2	
	comp=Z,212nm,24.8s						
FCC	**Fort Churchill**	**115.99**	**5**	*e*PKIKP	PKPdf	01 40 45.5	+0.3
EDM	**Edmonton**	**117.28**	**19**	*e*PKIKP	PKPdf	01 40 48.7	+0.9
SCHQ	**Schefferville**	**118.40**	**348**	PKP	PKPdf	01 40 50.9	+0.9
	comp=Z,5.9nm,0.6s,baz=24,slow=2.4,SNR=23						
MSO	**Missoula**	**122.42**	**23**	*e*PKPdf	PKPdf	01 40 58.3	+0.4
BMO	**Blue Mountains**	**122.60**	**27**	*e*PKPdf	PKPdf	01 40 58.3	0.0
CHMT	**Chamberlain Mo**	**122.62**	**22**	*e*PKPdf	PKPdf	01 40 59.1	+0.8
WVOR	**Wild Horse Val**	**123.83**	**29**	*e*PKIKP	PKPdf	01 41 02.5	+1.7
ULM	**Lac du Bonnet**	**124.15**	**8**	PKP	PKPdf	01 41 02.1	+0.9
	comp=Z,14nm,0.7s,baz=348,slow=3.0,SNR=31						
ULM	**Lac du Bonnet**	**124.15**	**8**	*e*PKPdf	PKPdf	01 41 01.6	+0.3
DGMT	**Dagmar**	**124.17**	**15**	*e*PKPdf	PKPdf	01 41 02.6	+1.3
BOZ	**Bozeman (W)**	**124.30**	**22**	*e*PKIKP	PKPdf	01 41 03.0	+1.4
OHCM	**Honcut**	**124.58**	**34**	*e*PKPdf	PKPdf	01 41 03.4	+1.0
GCMT	**Greycliff**	**124.89**	**21**	*e*PKPdf	PKPdf	01 41 04.7	+1.9
HLID	**Hailey**	**124.89**	**26**	*e*PKPdf	PKPdf	01 41 04.7	+1.9
QLMT	**Earthquake Lak**	**125.06**	**23**	*e*PKPdf	PKPdf	01 41 05.4	+2.3
LAO	**LASA Array**	**125.22**	**18**	*e*PKPdf	PKPdf	01 41 05.3	+2.0
YMR	**Madison River**	**125.37**	**22**	*e*PKPdf	PKPdf	01 41 06.0	+2.3
WCN	**Washoe City**	**125.55**	**33**	*e*PKIKP	PKPdf	01 41 05.2	+1.0
YFT	**Old Faithful**	**125.61**	**22**	*e*PKPdf	PKPdf	01 41 07.5	+3.3
LKWY	**Lake**	**125.67**	**22**	*e*PKIKP	PKPdf	01 41 08.1	+3.8
RRI2	**Red Ridge**	**126.35**	**23**	*e*PKPdf	PKPdf	01 41 06.8	+1.2
TPAW	**Teton Pass**	**126.38**	**23**	*e*PKPdf	PKPdf	01 41 07.6	+1.9
LOHW	**Long Hollow**	**126.41**	**23**	*e*PKPdf	PKPdf	01 41 07.7	+1.9
SNOW	**Snow King Moun**	**126.48**	**23**	*e*PKPdf	PKPdf	01 41 08.1	+2.2
ELK	**Elko**	**126.76**	**28**	*e*PKIKP	PKPdf	01 41 08.6	+2.1
LRV	**Little Rabbit**	**126.86**	**36**	*e*PKPdf	PKPdf	01 41 08.8	+1.9
NVAR	**Mina Array Bea**	**126.97**	**32**	PKP	PKPdf	01 41 09.7	+2.7
	comp=Z,10nm,0.8s,baz=310,slow=0.7,SNR=65						
NVAR				pPKP		01 41 24.4	
	comp=Z,7.8nm,0.9s,baz=270,slow=0.9,SNR=8.1						
MNV	**Mina**	**127.04**	**32**	*e*PKIKP	PKPdf	01 41 09.6	+2.5
PDAR	**Pinedale Array**	**127.53**	**23**	PKP	PKPdf	01 41 09.3	+1.3
	comp=Z,22nm,1.1s,slow=1.5,SNR=68						
BGU	**Big Grassy Mou**	**127.63**	**27**	*e*PKPdf	PKPdf	01 41 09.8	+1.6
HWUT	**Hardware Ranch**	**127.70**	**25**	*e*PKPdf	PKPdf	01 41 09.2	+0.9
NOQ	**North Oquirrh**	**128.25**	**26**	*e*PKPdf	PKPdf	01 41 11.4	+2.0
DUG	**Dugway**	**128.31**	**27**	*e*PKIKP	PKPdf	01 41 11.3	+1.8
TRCR	**Troy Canyon**	**128.44**	**31**	*e*PKPdf	PKPdf	01 41 12.5	+2.6
DAU	**Daniels Canyon**	**128.82**	**25**	*e*PKIKP	PKPdf	01 41 12.8	+2.3
NLU	**North Lily Min**	**128.84**	**26**	*e*PKPdf	PKPdf	01 41 12.8	+2.3
TMUT	**Trail Mountain**	**129.76**	**26**	*e*PKPdf	PKPdf	01 41 13.5	+1.2
ARUT	**Antelope Range**	**129.94**	**29**	PKIKP	PKPdf	01 41 11.0	-1.7
MVU	**Marysvale**	**129.95**	**28**	*e*PKPdf	PKPdf	01 41 15.4	+2.7
MSU	**Marysvale**	**129.96**	**28**	*e*PKIKP	PKPdf	01 41 15.3	+2.6
SADO	**Sadowa**	**130.10**	**354**	PKP	PKPdf	01 41 13.6	+0.8
	comp=Z,7.2nm,0.6s,baz=325,slow=2.7,SNR=8.6						
NCB	**Newcomb**	**130.21**	**350**	*e*PKPdf	PKPdf	01 41 14.0	+1.0
SRU	**San Rafael**	**130.21**	**26**	*e*PKIKP	PKPdf	01 41 15.3	+2.1
NEN	**Nelson**	**130.88**	**32**	*e*PKPdf	PKPdf	01 41 17.1	+2.5
LDFC	**Landfair**	**131.17**	**33**	*e*PKPdf	PKPdf	01 41 18.4	+3.3
PV10	**Paradox Valley**	**131.46**	**25**	*e*PKPdf	PKPdf	01 41 17.7	+2.2
ISCO	**Idaho Springs**	**131.57**	**21**	*e*PKIKP	PKPdf	01 41 18.0	+2.3
PV01	**Paradox Valley**	**131.87**	**25**	*e*PKPdf	PKPdf	01 41 17.1	+0.7
BINY	**Binghamton**	**132.23**	**351**	*e*PKPdf	PKPdf	01 41 18.2	+1.2
ERPA	**Erie**	**132.81**	**355**	*e*PKPdf	PKPdf	01 41 19.0	+1.0
SSPA	**Standing Stone**	**134.04**	**352**	*e*PKPdf	PKPdf	01 41 20.7	+0.3
MVL	**Millersville**	**134.43**	**350**	*e*PKPdf	PKPdf	01 41 22.4	+1.2

KSU1	**Kansas State U**	134.82	13	*e*PKPdf	PKPdf	01 41 23.0	+1.2
ACSO	**Alum Creek Sta**	134.89	358	*e*PKPdf	PKPdf	01 41 22.8	+0.8
ANMO	**Albuquerque**	135.46	25	*e*PKIKP	PKPdf	01 41 25.3	+2.2
TUC	**Tucson**	135.59	31	*e*PKIKP	PKPdf	01 41 24.9	+1.5
BLO	**Bloomington**	135.98	1	*e*PKIKP	PKPdf	01 41 24.8	+0.9
CCM	**Cathedral Cave**	136.75	7	*e*PKIKP	PKPdf	01 41 26.1	+0.7
WCI	**Wyandotte Cave**	136.93	1	*e*PKIKP	PKPdf	01 41 26.6	+0.9
WMOK	**Wichita Mounta**	138.41	17	*e*PKHKP		01 41 17.8	
MNTX	**Cornudas Mount**	138.70	26	*e*PKPpre		01 41 18.3	
MNTX				*e*PKPdf	PKPdf	01 41 30.6	+1.4
WVT	**Waverly**	138.96	3	*e*PKHKP		01 41 21.1	
WVT				*e*		01 41 30.6	
CPCT	**Cooper Cave**	139.71	359	PKPdf	PKPdf	01 41 31.9	+1.1
UALR	**University of**	139.82	9	PKPpre		01 41 25.1	
MIAR	**Mount Ida**	139.83	11	*e*PKHKP		01 41 23.0	
LTX	**Lajitas**	141.49	26	*e*PKIKP	PKPdf	01 41 32.1	-2.2
TXAR	**Lajitas Array**	141.49	26	PKhKP		01 41 29.8	
	comp=Z,3.8nm,0.6s,baz=270,slow=1.3,SNR=16						
TXAR				PKP	PKPdf	01 41 34.8	+0.6
	comp=Z,7.5nm,0.7s,baz=275,slow=0.1,SNR=28						
TXAR				PP	PP	01 44 38.1	-3.3
	comp=Z,3.0nm,1.0s,baz=326,slow=4.5,SNR=3.9						
TXAR				SKPbc		01 45 06.4	
	comp=Z,4.4nm,0.7s,baz=259,slow=1.2,SNR=7.4						
BDFB	**Brasilia**	141.99	251	PKhKP		01 41 32.3	
	comp=Z,2.8nm,0.8s,baz=146,slow=3.6,SNR=3.0						
BDFB				PKP	PKPdf	01 41 38.2	+2.8
	comp=Z,9.6nm,1.0s,baz=212,slow=1.2,SNR=6.9						
JCT	**Junction City**	142.01	21	*e*PKHKP		01 41 30.2	
LRAL	**Lakeview Retre**	142.08	2	*e*PKPpre		01 41 29.6	
PLCA	**Paso Flores**	142.12	198	PKhKP		01 41 32.5	
	comp=Z,6.1nm,1.0s,baz=62,slow=2.8,SNR=10						
PLCA				PKP	PKPdf	01 41 36.8	+1.8
	comp=Z,4.6nm,0.9s,baz=155,slow=3.7,SNR=7.5						
NATX	**Nacogdoches**	142.30	13	*e*PKPpre		01 41 32.4	
HKT	**Hockley**	143.74	16	*e*PKIKP	PKPdf	01 41 36.1	-2.0
CPUP	**Villa Florida**	145.98	229	PKPab	PKPab	01 41 44.2	-1.3
DWPF	**Disney**	146.83	354	*e*PKPbc	PKPbc	01 41 47.1	+2.1
FCH	**Farellones**	148.62	204	*e*P	PKPdf	01 41 52.3	+6.1
BBL	**Barber's Block**	148.84	311	*e*P	PKPdf	01 41 51.8	+4.8
CBYP	**Canovanas**	149.97	321	*e*PKPbc	PKPdf	01 41 54.8	+6.0
SJG	**San Juan**	150.28	321	*e*PKIKP	PKPdf	01 41 55.6	+6.4
GRW	**Mount Saint Ca**	151.00	306	*e*P	PKPdf	01 41 58.3	+7.9
TRN	**Trinidad (W)**	151.62	303	*e*P	PKPdf	01 42 00.9	+10
TPP	**Pointe-a-Pierr**	151.84	303	*e*P	PKPdf	01 42 02.1	+10
TEIG	**Tepich**	154.70	7	*e*PKPdf	PKPdf	01 41 57.6	+2.1
TEIG				*e*PKPbc	PKPdf	01 42 06.0	+11
LVC	**Limon Verde**	156.48	221	PKP	PKPdf	01 42 00.2	+2.4
	comp=Z,3.9nm,0.9s,baz=210,slow=1.7,SNR=5.4						
LVC				PKPab	PKPab	01 42 29.8	+0.7
	comp=Z,4.7nm,0.7s,baz=55,slow=0.9,SNR=6.7						
SAML	**Samuel**	157.80	259	*e*PKPdf	PKPdf	01 42 01.4	+1.6
SAML				*e*PKPab	PKPab	01 42 34.1	-0.9
LPAZ	**La Paz**	159.86	235	*e*PKIKP	PKPdf	01 42 05.0	+2.9
LPAZ	**La Paz**	159.86	235	PKP	PKPdf	01 42 04.7	+2.7
	comp=Z,8.1nm,1.1s,baz=98,slow=3.0,SNR=14						
LPAZ				pPKP		01 42 21.4	
	comp=Z,4.6nm,0.8s,baz=209,slow=4.4,SNR=5.3						
LPAZ				PKPab	PKPab	01 42 44.8	+1.0
	comp=Z,4.7nm,1.0s,baz=355,slow=3.2,SNR=2.7						
SDV	**Santo Domingo**	159.92	314	PKP	PKPdf	01 42 03.9	+1.7
	comp=Z,15nm,1.1s,baz=34,slow=2.4,SNR=5.7						
SDV				PKPab	PKPab	01 42 43.6	-0.6
	comp=Z,9.0nm,0.8s,baz=38,slow=4.6,SNR=6.5						
SDV	**Santo Domingo**	159.92	314	*e*PKPdf	PKPdf	01 42 03.5	+1.3
ROSC	**El Rosal**	165.34	312	PKP	PKPdf	01 42 10.5	+2.9
	comp=Z,14nm,0.8s,baz=114,slow=3.4,SNR=14						
ROSC				PKPab	PKPab	01 43 08.5	+0.9
	comp=Z,6.0nm,0.5s,baz=90,slow=4.0,SNR=3.0						
OTAV	**Otavalo**	171.44	308	*e*PKPdf	PKPdf	01 42 13.8	+2.1

IDC 13 02:00:18.8±13.0**,4.62N**×**95.67E,mb3.5**/2**,mb1 3.9**/3**, mb1mx3.5**/17**,mbtmp3.6**/3**,ML4.3**/1**,Error ellipse: s-maj=356.2km s-min=47.3km az=80.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	14.12	13	Pn	P	02 03 40.5	-2.0
	0.4nm,0.3s,baz=209,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	45.16	124	P	P	02 08 37.7	-1.7
	0.8nm,0.7s,baz=304,slow=8.9,SNR=4.1						
ASAR	**Alice Springs**	46.69	129	P	P	02 08 49.4	-2.0
	0.3nm,0.6s,baz=303,slow=7.6,SNR=5.7						

MOS ***13*** *02:02:04.2±0.8,5.16N×94.83E,h34^{km},mb5.7/95,Error ellipse: s-maj=8.4km s-min=3.5km az=127.7*

BGS ***13*** *02:02:05.2,5.07N×94.80E,h33^{km},mb5.9*

ORF ***13*** *02:02:06.5,4.83N×94.31E,h30^{km},mb5.7*

NEIC ***13*** *02:02:07.6±0.1,5.07N×94.80E,mb5.5/112,MW5.3,Error ellipse: s-maj=4.7km s-min=3.1km az=216.0,Moment Tensor Solution. s8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1×10^{17} NP1:ϕ_s119°,δ46°,λ50°. NP2:ϕ_s350°,δ57°,λ123°. Principal axes: T .87, Plg62°, Azm315°; N .3, Plg27°, Azm150°; P -1.17, Plg6°, Azm57°;*

NEIC Felt at Banda Aceh.

HRVD ***13*** *02:02:07.6±0.2,4.85N×94.70E,h42^{km},MW5.2/60, Centroid moment Tensor Solution. LP body waves: s51,c84;Mantle waves: s60,c109; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.23±.22; $M_{\theta\theta}$-2.87±.15; $M_{\phi\phi}$-3.36±.18; $M_{r\theta}$3.74±.11; $M_{\theta\phi}$3.43±.11; $M_{\phi r}$-2.94±.15; Best double couple: $M_0$7.97×10^{16} NP1: ϕ_s323°,δ27°,λ100°. NP2:ϕ_s132°,δ63°,λ85°. Principal axes: T 7.837, Plg71°, Azm30°; N .265, Plg5°, Azm134°; P -8.102, Plg18°, Azm225°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***13*** *02:02:07.8±0.5,5.16N×95.00E,h52^{km}±3^{km},mb5.0/27, mb1 5.1/28,mb1mx5.1/29,mbtmp5.2/28,MS4.5/14, Ms1 4.5/14,ms1mx4.3/20 Error ellipse: s-maj=15.4km s-min=7.7km az=46.0*

BJI ***13*** *02:02:08.1,5.34N×94.70E,h36^{km},mB5.3,mb5.4,Ms4.9, Msz4.7*

ISC 13 02:02:05.8±0.6**,5.02N**±0.03×**94.78E**±0.02**,h50**^{km}±5^{km}**, h50**^{km}±1.2^{km}**:pP-P,n620,**σ**0^{s}95**/585**,mb5.5**/179**,MS4.7**/65**, 163C-18D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	6.24	94	P	P	02 03 38.1	+0.6
NNT	**Nongplab**	8.97	33	P	P	02 04 17.2	+1.8
KGM	**Kluang**	9.03	109	P	P	02 04 15.6	-0.6
CM31	**Chiang Mai Arr**	13.96	17	*e*P	P	02 05 25.4	+2.7
	202nm,0.8s						
CMAR	**Chiang Mai Arr**	13.96	17	P	P	02 05 24.4	+1.6
	1.7nm,0.3s,baz=207,slow=12,SNR=72						
CMAR				LR	LR	02 10 34.6	
	comp=Z,1µm,21.4s,baz=195,slow=37						
CMAR				ScP		02 14 11.8	
	0.1nm,0.3s,baz=242,slow=3.4,SNR=16						
PALK	**Pallekele**	14.17	280	*e*P	P	02 05 24.0	-1.5
	83nm,1.0s						
PALK				*e*S	S	02 07 46.0	-16
CHG	**Chiang Mai**	14.30	16	⇓P	P	02 05 29.1	+1.9
	150nm,0.9s						
UBT	**Ubonrachathani**	14.30	44	P	P	02 05 30.5	+3.2
NANT	**Nan**	14.87	22	⇑P	P	02 05 35.0	+0.4
	112nm,1.0s						
CHRT	**Chiangrai**	15.54	18	⇑P	P	02 05 44.0	+0.7
	568nm,0.8s						
MDRS	**Chennai**	16.42	300	*e*P	P	02 05 54.9	+0.5
MDRS				*e*		02 06 07.0	
MDRS				*e*		02 08 41.0	
MDRS				*e*		02 10 01.0	
VIS	**Vishakhapatnam**	16.88	319	*i* P	P	02 05 57.0	-3.2
VIS				*i*		02 08 57.0	
COCO	**West Island**	17.22	173	*e*P	P	02 06 02.3	-2.2
	411nm,1.3s						
COCO				*e*		02 06 21.0	
TRD	**Trivandrum**	18.03	282	*e*P	P	02 06 14.5	-0.1
TRD				*e*		02 09 28.7	
IMP	**Imphal**	19.67	358	*e*P	P	02 06 30.0	-3.5
HYB	**Hyderabad**	20.10	309	*e*P	P	02 06 38.0	-0.2
HYB				*e*S	S	02 10 24.0	+7.8
HYB				pmax	pmax		
	comp=Z,90nm,1.0s						
HYB	**Hyderabad**	20.10	309	*e*P	P	02 06 38.0	-0.2
	comp=Z,90nm,1.0s						
HYB				*e*S	S	02 10 24.0	+7.8
HYB	**Hyderabad**	20.10	309	*i* P	P	02 06 38.0	-0.2
	comp=Z,90nm,1.0s						
HYB				*e*S	S	02 10 21.0	+4.8
QIZ	**Qiongzhong**	20.24	45	P	P	02 06 40.2	+0.6
QIZ				AP		02 06 51.0	
QIZ				XP		02 06 55.7	
QIZ				S	S	02 10 20.3	+1.3
QIZ				SS	SS	02 10 46.6	-3.5
QIZ				AMB	AMB		
	comp=Z,51nm,1.5s						
QIZ				LR	LR		
	comp=N,2µm,18.2s,MS4.5						
QIZ				LR	LR		
	comp=E,1µm,17.3s,MS4.5						
QIZ				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
QIZ	**Qiongzhong**	20.24	45	*e*P	P	02 06 40.1	+0.5
	comp=Z,139nm,1.3s						
QIZ				*e*		02 06 52.0	
BOK	**Bokaro**	20.54	336	*e*P	P	02 06 41.6	-1.1
BOK				*e*		02 06 44.8	
	comp=Z,249nm,1.1s						
BOK				*e*S	S	02 10 25.3	+0.6
BLSP	**Bilaspur**	20.96	325	*i* P	P	02 06 45.0	-2.0
BLSP				*i*		02 07 05.0	
	comp=Z,165nm,1.1s						
MNGI	**Mangalore**	21.21	293	*i*	P	02 07 06.0	+16
	comp=Z,72nm,0.2s,mb5.7						
MNGI				*i*		02 10 36.8	
KKM	**Kota Kinabalu**	21.36	86	P	P	02 06 53.3	+2.2
KMI	**Kunming**	21.40	20	⇑P	P	02 06 53.0	+1.6
KMI				PP	PP	02 07 18.0	+1.6
KMI				S	S	02 10 43.1	+2.1
KMI				SS	SS	02 11 17.8	-0.3
KMI				AMB	AMB		
	comp=Z,76nm,1.3s,mb4.9						
KMI				LR	LR		
	comp=N,1µm,17.7s,MS4.6						
KMI				LR	LR		
	comp=E,2µm,16.1s,MS4.6						
KMI				LR	LR		
	comp=Z,2µm,21.1s,MS4.5						
NGP	**Nagpur**	22.14	318	*e*P	P	02 07 00.5	+1.7
NGP				*e*		02 11 07.2	
LATR	**Latur**	22.23	308	*e*P	P	02 07 00.0	+0.4
LATR				*e*S	S	02 11 04.5	+8.3
TSM	**Tawau**	23.03	91	P	P	02 07 10.4	+2.8
GOA	**Goa**	23.07	298	⇑*e*	P	02 07 18.1	+10
	comp=Z,91nm,2.2s,mb4.8						
GOA				*e*S	S	02 11 22.5	+11
BATP	**Bataraza**	23.16	79	*e*P	P	02 07 09.6	+0.7
KAD	**Karad**	23.57	303	*e*P	P	02 07 14.9	+2.0
JIRN	**Jiri**	23.95	341	*e*P	P	02 07 16.1	-0.4
	comp=Z,209nm,0.6s,mb5.8						
PKI	**Pulchoki**	24.14	339	*e*P	P	02 07 17.6	-0.7
	comp=Z,699nm,1.6s,mb5.8						
GYA	**Guiyang**	24.16	27	⇑*i*P	P	02 07 19.7	+1.2
GYA				AP		02 07 31.2	
GYA				XP		02 07 37.4	
GYA				S	S	02 11 34.0	+3.8
GYA				AMB	AMB		
	comp=Z,100nm,0.6s,mb5.4						
GYA				AMB	AMB		
	comp=Z,480nm,3.7s						
GYA				LR	LR		
	comp=N,2µm,18.7s,MS4.7						
GYA				LR	LR		
	comp=E,1µm,15.9s,MS4.7						
GYA				LR	LR		
	comp=Z,3µm,19.5s,MS4.7						
PPR	**Puerto Princes**	24.21	77	*e*P	P	02 07 20.8	+1.7
DMN	**Daman**	24.28	339	*e*P	P	02 07 19.4	-0.3
	comp=Z,169nm,0.7s,mb5.6						
KKN	**Kakani**	24.38	339	*e*P	P	02 07 19.0	-1.7
	comp=Z,550nm,1.2s,mb5.9						
POO	**Poona**	24.45	305	⇓*i*P	P	02 07 23.0	+1.5
	comp=Z,143nm,1.5s,mb5.2						
POO				*e*		02 11 56.0	
BHPL	**Bhopal**	24.67	319	⇑*i*P	P	02 07 24.9	+1.4
BHPL				*e*		02 12 22.0	
	comp=Z,124nm,1.3s						
LSA	**Lhasa**	24.79	352	P	P	02 07 24.4	-0.2
LSA				AP		02 07 40.6	
LSA				XP		02 07 45.6	
LSA				S	S	02 11 39.4	-1.4
LSA				AMB	AMB		
	comp=Z,110nm,0.7s,mb5.5						
LSA				AMB	AMB		
	comp=Z,230nm,7.9s						
LSA				LR	LR		
	comp=N,590nm,23.0s,MS4.2						
LSA				LR	LR		
	comp=E,660nm,23.0s,MS4.2						
LSA				LR	LR		
	comp=Z,1µm,21.0s,MS4.3						
LSA	**Lhasa**	24.79	352	*e*P	P	02 07 24.5	-0.1
LSA				pmax	pmax		
	comp=Z,130nm,0.6s,mb5.6						
LSA				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.3						
LSA	**Lhasa**	24.79	352	*e*P	P	02 07 24.5	-0.1
	comp=Z,130nm,0.6s,mb5.6						
LSA				LR	LR		
	comp=Z,1µm,21.0s,MS4.3						
GKN	**Gorkha**	24.81	338	*e*P	P	02 07 24.4	-0.4
	comp=Z,703nm,1.2s,mb6.1						
KOLN	**Koldanda**	25.00	336	*e*P	P	02 07 27.0	+0.3
	comp=Z,486nm,0.8s,mb6.1						
ENPP	**El Nido**	25.15	74	*e*P	P	02 07 30.4	+2.2
GZH	**Guangzhou**	25.37	43	P	P	02 07 36.5	+6.3
GZH				LR	LR		
	comp=N,2µm,17.3s,MS4.7						
GZH				LR	LR		
	comp=E,1µm,20.4s,MS4.7						
GZH				LR	LR		
	comp=Z,2µm,18.0s,MS4.7						
DGAR	**Diego Garcia**	25.47	241	PFAKE		02 07 40.0	+8.8
DGAR				LR	LR		
	comp=Z,419nm,20.0s,MS4.0						
BOM	**Bombay**	25.48	305	*e*P	P	02 07 34.0	+2.7
BOM				*e*S	S	02 11 57.8	+5.2
BUSP	**Coron**	26.06	73	*e*P	P	02 07 37.4	+0.7
LUBP	**Lubang**	26.55	69	*e*P	P	02 07 41.6	+0.3
CD2	**Chengdu**	27.10	17	⇑*i*P	P	02 07 44.8	-1.4
CD2				S	S	02 12 20.0	+1.0
CD2				AMB	AMB		
	comp=Z,153nm,1.2s,mb5.4						
CD2				LR	LR		
	comp=E,2µm,16.0s						
TGY	**Tagaytay City**	27.30	69	P	P	02 07 48.3	+0.2
	comp=E,1µm,1.1s,mb6.3,baz=160,slow=4.5,SNR=13						
OTRP	**Odiongan**	27.88	73	*e*P	P	02 07 53.5	+0.1
LGTI	**Lohaghat**	27.92	332	*e*P	P	02 07 53.3	-0.3
ABRA	**Dolores**	28.30	62	*e*P	P	02 07 57.3	+0.1
BALP	**Baler**	28.39	66	*e*P	P	02 07 58.6	+0.8
POLP	**Polilio Island**	28.41	68	*e*P	P	02 07 57.8	-0.3
PAGZ	**Pagadian**	28.56	83	*e*P	P	02 07 58.9	-0.5
ENH	**Enshi**	28.69	27	*e*P	P	02 07 58.9	-1.6
	comp=E,70nm,0.7s,mb5.5						
ENH				LR	LR		
	comp=Z,3µm,20.0s,MS4.9						
NDI	**New Delhi**	28.83	327	*e*P	P	02 08 00.5	-1.3
APYP	**Conner**	28.85	62	*e*P	P	02 08 01.7	-0.3
CAUP	**Cauayan**	29.02	64	*e*P	P	02 08 03.9	+0.4
DDI	**Dehra Dun**	29.70	330	*e*P	P	02 08 07.9	-1.6
DDI				*e*S	S	02 13 04.4	+3.8
OCLP	**Ormoc**	30.12	77	*e*P	P	02 08 13.4	+0.1
BUKP	**Musuan**	30.22	83	*e*P	P	02 08 14.5	+0.3
SMLA	**Simla**	30.80	330	⇓*i*	P	02 08 32.5	+13
SDNR	**Sundarnagar**	31.20	330	*e*P	P	02 08 22.8	+0.1
WHN	**Wuhan**	31.38	34	P	P	02 08 24.2	-0.1
WHN				S	S	02 13 33.0	+6.1
WHN				LR	LR		
	comp=Z,6µm,15.3s,MS5.4						
XAN	**Xi'an**	31.72	23	P	P	02 08 25.7	-1.6
XAN				AP	pP	02 08 39.3	-0.9
XAN				S	S	02 13 28.0	-4.3
XAN				AMB	AMB		
	comp=Z,223nm,0.9s,mb6.0						
XAN				LR	LR		
	comp=N,1µm,16.8s,MS4.7						
XAN				LR	LR		
	comp=E,879nm,16.5s,MS4.7						
XAN				LR	LR		
	comp=Z,2µm,17.2s,MS4.9						
LZH	**Lanzhou**	32.02	14	⇑*i*P	P	02 08 28.5	-1.4
LZH				AP	pP	02 08 41.5	-1.3
LZH				XP	sP	02 08 47.2	-1.9
LZH				PP	PP	02 09 36.6	-0.6
LZH				PCP	PcP	02 11 19.0	+0.1
LZH				S	S	02 13 36.4	-0.6
LZH				PCS		02 15 03.4	
LZH				SS	SS	02 15 31.0	-0.9
LZH				SCS	ScS	02 18 55.5	+1.4
LZH				AMB	AMB		
	comp=Z,91nm,1.2s,mb5.5						
LZH				AMB	AMB		
	comp=Z,157nm,4.0s						
LZH				LR	LR		
	comp=N,956nm,15.4s						
LZH				LR	LR		
	comp=Z,1µm,17.0s,MS4.7						
DLH	**Dalhousie**	32.54	330	*e*P	P	02 08 35.0	+0.6
GTA	**Gaotai**	34.54	7	⇑*i*P	P	02 08 50.9	-0.7
GTA				AP	pP	02 09 03.0	-1.6
GTA				PP	PP	02 10 07.2	-1.7
GTA				PPP	PPP	02 10 25.1	-1.9
GTA				PCP	PcP	02 11 26.1	+0.3
GTA				S	S	02 14 16.3	+0.3
GTA				SCP		02 15 06.6	
GTA				PCS		02 15 11.6	
GTA				SS	SS	02 16 27.4	-2.2
GTA				SCS	ScS	02 19 06.9	-0.2
GTA				AMB	AMB		
	comp=Z,99nm,0.9s,mb5.7						
GTA				AMB	AMB		
	comp=Z,359nm,5.7s						
GTA				LR	LR		
	comp=N,633nm,20.1s,MS4.4						
GTA				LR	LR		
	comp=E,510nm,23.9s,MS4.4						
GTA				LR	LR		
	comp=Z,571nm,27.0s,MS4.2						
NJ2	**Nanjing**	35.09	37	*e*P	P	02 08 56.5	+0.1
NJ2				AP	pP	02 09 09.8	+0.4
NJ2				XP	sP	02 09 13.2	-2.5
NJ2				PP	PP	02 10 16.1	+0.1
NJ2				PPP	PPP	02 10 34.8	+0.5
NJ2				S	S	02 14 26.0	+1.4
NJ2				XS		02 14 46.0	
NJ2				AMB	AMB		
	comp=Z,300nm,1.0s,mb6.2						
NJ2				AMB	AMB		
	comp=Z,640nm,5.1s						
NJ2				LR	LR		
	comp=N,3µm,14.6s,MS5.3						
NJ2				LR	LR		
	comp=E,3µm,15.2s,MS5.3						
NJ2				LR	LR		
	comp=Z,4µm,12.6s,MS5.4						
SSE	**Sheshan**	35.90	41	P	P	02 09 03.7	+0.5
SSE				S	S	02 14 40.3	+3.3
SSE				PCS		02 15 17.4	
SSE				AMB	AMB		
	comp=Z,24nm,1.0s,mb5.1						
SSE				AMB	AMB		
	comp=Z,104nm,5.4s						
SSE				LR	LR		
	comp=N,403nm,21.7s,MS4.3						
SSE				LR	LR		
	comp=E,375nm,21.7s,MS4.3						
SSE				LR	LR		
	comp=Z,715nm,21.0s,MS4.4						
TIA	**Tai'an**	37.22	31	⇑P	P	02 09 13.9	-0.4
TIA				AMB	AMB		
	comp=Z,69nm,1.1s,mb5.4						
BTO	**Baotou**	37.99	19	*e*P	P	02 09 19.2	-1.5
BTO				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
BTO				LR	LR		
	comp=N,310nm,5.7s						
BTO				LR	LR		
	comp=E,760nm,15.1s						
FITZ	**Fitzroy Crossi**	38.14	128	*e*P	P	02 09 20.8	-1.3
	comp=E,40nm,0.8s,mb5.2						
FITZ				*e*PCP	PcP	02 11 37.0	+0.2
KSH	**Kashi**	38.32	336	⇑P	P	02 09 24.0	+0.5
KSH				*e*AP	pP	02 09 34.0	-2.6
KSH				*e*PP	PP	02 10 50.3	-4.8
KSH				*e*PCP	PcP	02 11 37.8	+0.6
KSH				*e*S	S	02 15 13.2	-0.8
KSH				*e*PCS		02 15 24.3	
KSH				*e*XS		02 15 34.2	
KSH				*e*PS		02 15 42.5	
KSH				*e*SS	SS	02 17 56.1	+1.0
KSH				*e*SCS	ScS	02 19 29.8	+1.8
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.3						
KSH				LR	LR		
	comp=N,340nm,6.6s						
KSH				LR	LR		
	comp=E,310nm,5.6s						
HHC	**Hu-ho-hao-te**	38.72	20	⇑*i*P	P	02 09 27.2	+0.4
HHC				AP	pP	02 09 41.9	+1.9
HHC				XP	sP	02 09 49.1	+3.1
HHC				PP	PP	02 11 03.4	+3.6
HHC				S	S	02 15 22.4	+2.3
HHC				SS	SS	02 18 06.6	+2.7
HHC				SCS	ScS	02 19 28.1	-2.3
HHC				AMB	AMB		
	comp=Z,79nm,1.1s,mb5.4						
HHC				LR	LR		
	comp=N,1µm,19.2s,MS4.9						
HHC				LR	LR		
	comp=E,919nm,18.0s,MS4.9						
HHC				LR	LR		
	comp=Z,1µm,21.6s,MS4.7						
WBK	**Wadi Bani Khal**	38.76	300	⇑P	P	02 09 30.1	+2.9
	SNR=6.2						
WMQ	**Urumqi**	39.14	352	⇑*i*P	P	02 09 30.5	+0.2
WMQ				AP	pP	02 09 40.0	-3.5
WMQ				PP	PP	02 11 05.0	+0.5
WMQ				S	S	02 15 28.0	+1.6
WMQ				SS	SS	02 18 13.0	-0.1
WMQ				AMB	AMB		
	comp=Z,87nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,89nm,9.0s						
WMQ				LR	LR		
	comp=N,428nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=E,804nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,475nm,20.0s,MS4.3						
JMDO	**Jabal Madar**	39.42	299	⇑P	P	02 09 35.2	+2.4
BJT	**Baijiatuau**	39.82	26	*e*P	P	02 09 37.0	+1.1
BJT				*e*	pP	02 09 48.9	-0.2
BJT				pmax	pmax		
	comp=Z,141nm,0.8s						
BJT	**Baijiatuau**	39.82	26	*e*P	P	02 09 37.0	+1.1
	comp=Z,141nm,0.8s,mb5.8						
BJT				*e*	pP	02 09 48.9	-0.3
BJI	**Beijing**	39.84	26	P	P	02 09 37.2	+1.1
BJI				AP	pP	02 09 49.9	+0.6
BJI				XP	sP	02 09 56.8	+1.5
BJI				AMB	AMB		
	comp=Z,204nm,0.9s,mb5.9						
BJI				LR	LR		
	comp=N,930nm,20.5s,MS4.8						
BJI				LR	LR		
	comp=E,720nm,17.3s,MS4.8						
BJI				LR	LR		
	comp=Z,1µm,26.2s						
BSY	**Bisya**	40.34	300	P	P	02 09 43.3	+3.0
	SNR=13						
KZA	**Kyzart**	40.80	338	P	P	02 09 45.0	+1.1
	SNR=11						
ARQ	**Araqi**	41.13	300	⇓P	P	02 09 49.7	+2.9
	SNR=6.3						
UCH	**Uchtor**	41.21	337	P	P	02 09 48.5	+1.2
	SNR=74						
KAKA	**Kakadu**	41.36	116	⇑*i*P	P	02 09 47.5	-1.4
	comp=Z,16nm,0.4s,mb5.0						
TKM2	**Tokmak 2**	41.40	339	P	P	02 09 49.8	+0.9
	SNR=11						
AML	**Almayashu**	41.45	336	P	P	02 09 50.7	+1.3
	SNR=91						
AAK	**Ala-Archa**	41.56	337	P	P	02 09 51.5	+1.3
	SNR=43						

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AAK   Ala-Archa          41.56 337  eP     P       02 09 50.2 -0.1
AAK                                  pmax  pmax
      comp=Z,57nm,0.8s,mb5.2
AAK                                  MLR   MLR
      comp=Z,93nm,20.0s,MS3.6
AAK   Ala-Archa          41.56 337  eP     P       02 09 50.2 -0.1
      comp=Z,57nm,0.8s,mb5.2
AAK                                  LR    LR
      comp=Z,93nm,20.0s,MS3.6
DL2   Dalian             41.59  32   P     P       02 09 49.8 -0.8
DL2                                 eS     S       02 16 02.4 -0.6
DL2                                  AMB   AMB
      comp=Z,100nm,0.8s,mb5.5
DL2                                  LR    LR
      comp=N,450nm,16.8s,MS4.5
DL2                                  LR    LR
      comp=E,290nm,19.5s,MS4.5
DL2                                  LR    LR
      comp=Z,670nm,16.1s,MS4.6
CHMS  Chumysh            41.78 338   P     P       02 09 52.4 +0.3
      SNR=20
WHFO  Wadi Hawf          42.07 291   P     P       02 09 56.6 +1.9
      SNR=9.5
MUN   Mundaring          42.07 152  eP     P       02 09 56.2 +1.6
      comp=Z,7.1nm,0.5s,mb4.5
MUN   Mundaring          42.07 152  eP     P       02 09 56.2 +1.6
MUN                                  pmax  pmax
      comp=Z,7.0nm,0.5s,mb4.5
USP   Ospenovka          42.10 338   P     P       02 09 55.2 +0.5
      SNR=74
NWAO  Narrogin (SRO)     43.34 152  eP     P       02 10 04.8 -0.2
INCN  Inchon             43.46  38  eP     P       02 10 05.2 -0.8
      comp=Z,92nm,0.9s,mb5.5
SONM  Songino Array      43.81  11   P     P       02 10 07.8 -0.7
      comp=Z,41nm,0.8s,mb5.2,baz=190,slow=8.5,SNR=316
SONM                                 pP    pP      02 10 20.1 -1.8
      comp=Z,16nm,0.7s,baz=198,slow=7.8,SNR=7.4
SONM                                 sP    sP      02 10 26.3 -1.5
      comp=Z,14nm,0.7s,baz=196,slow=7.2,SNR=4.3
SONM                                 PcP   PcP     02 11 54.6 -0.3
      comp=Z,22nm,0.7s,baz=195,slow=3.1,SNR=11
SONM                                 pPcP          02 12 08.6
      comp=Z,15nm,0.8s,baz=208,slow=3.6,SNR=6.5
SONM                                 ScP           02 15 40.4
      comp=Z,3.4nm,0.8s,baz=198,slow=3.9,SNR=7.2
SONM  Songino Array      43.81  11   P     P       02 10 07.8 -0.7
SONM                                 pP    pP      02 10 20.1 -1.8
SONM                                 sP    sP      02 10 26.3 -1.5
SONM                                 PcP   PcP     02 11 54.6 -0.3
SONM                                 pPcP          02 12 08.6
SONM                                 ScP           02 15 40.4
ULN   Ulaanbaatar        43.97  12  eP     P       02 10 08.7 -1.2
ULN                                  MLR   MLR
      comp=Z,488nm,20.0s,MS4.4
KS15  Wonju Array Si     44.21  39  eP     P       02 10 10.3 -1.6
SNY   Shenyang           44.75  31 ⇑P     P       02 10 15.9 -0.3
SNY                                  PP    PP      02 11 59.4 -2.7
SNY                                  AMB   AMB
      comp=Z,60nm,1.3s,mb5.3
SNY                                  LR    LR
      comp=N,990nm,17.7s,MS4.8
SNY                                  LR    LR
      comp=E,650nm,20.2s,MS4.8
SNY                                  LR    LR
      comp=Z,1µm,18.0s,MS4.8
ZAK   Zakamensk          45.77   8⇓iP     P       02 10 23.0 -1.2
ZAK                                 e      pP      02 10 35.8 -1.8
ZAK                                  pmax  pmax
      comp=Z,17nm,1.0s,mb4.9
ZAK                                  pmax  pmax
      comp=Z,20nm,1.2s,mb4.9
WRA   Warramunga Arr     46.13 124   P     P       02 10 27.4 -0.1
      comp=Z,132nm,0.8s,mb5.9,baz=302,slow=9.1,SNR=295
WRA                                  pP    pP      02 10 40.3 -0.5
      comp=Z,44nm,0.7s,baz=302,slow=9.1,SNR=7.8
WRA                                  S     S       02 17 05.9 -3.0
      comp=Z,3.1nm,1.1s,baz=294,slow=15,SNR=4.0
WRAB  Tennant Creek      46.13 124⇓eP     P       02 10 26.9 -0.6
WRAB  Tennant Creek      46.13 124  eP     P       02 10 27.1 -0.4
      comp=Z,225nm,0.8s,mb6.2
WRAB                                 LR    LR
      comp=Z,223nm,22.0s,MS4.1
WB2   Warramunga Arr     46.14 124⇑iP     P       02 10 27.4 -0.1
WB2                                 eS     S       02 17 00.8 -8.3
MOY   Mondy              46.78   5  eP     P       02 10 31.4 -0.7
MOY                                 e              02 12 05.3
MOY                                  pmax  pmax
      comp=Z,29nm,2.5s,mb4.8
TLY   Talaya             47.09   8   P     P       02 10 34.5 -0.1
      comp=Z,267nm,0.8s,mb6.2,SNR=16
TLY   Talaya             47.09   8  eP     P       02 10 34.5 -0.1
TLY                                 e              02 12 16.7
TLY                                 eS     S       02 17 29.1 +6.9
TLY                                  pmax  pmax
      comp=Z,39nm,0.9s,mb5.3
TLY                                  MLR   MLR
      comp=Z,549nm,17.0s,MS4.6
TLY   Talaya             47.09   8⇑iP     P       02 10 34.5 -0.1
CN2   Changchun          47.13  30 ⇑P     P       02 10 34.3 -0.7
CN2                                 eAP    pP      02 10 48.3 -0.1
CN2                                  PCP   PcP     02 12 05.6 -0.9
CN2                                 eS     S       02 17 23.0 +0.2
CN2                                  AMB   AMB
      comp=Z,30nm,0.7s,mb5.3
CN2                                  LR    LR
      comp=N,700nm,16.0s,MS4.9
CN2                                  LR    LR
      comp=E,800nm,16.0s,MS4.9
CN2                                  LR    LR
      comp=Z,800nm,19.0s,MS4.7
KURK  Kurchatov          47.52 346  eP     P       02 10 37.7 -0.3
KURK                                 pmax  pmax
      comp=Z,204nm,1.1s,mb6.1
KURK                                 MLR   MLR
      comp=Z,82nm,21.0s,MS3.7
KURK  Kurchatov          47.52 346  eP     P       02 10 37.7 -0.3
      comp=Z,204nm,1.1s,mb6.1
KURK                                 LR    LR
      comp=Z,82nm,21.0s,MS3.7
ASPA  Alice Springs      47.63 128⇑iP     P       02 10 38.9 -0.3
ASPA                                eS     S       02 17 29.2 -1.0
ASAR  Alice Springs      47.63 128   P     P       02 10 38.9 -0.3
      comp=Z,38nm,0.8s,mb5.5,baz=299,slow=7.7,SNR=283
ASAR                                 PcP   PcP     02 12 08.6 -0.1
      comp=Z,8.8nm,0.8s,baz=306,slow=3.1,SNR=4.8
ASAR                                 ScP           02 15 57.2
      comp=Z,2.8nm,0.9s,baz=310,slow=4.4,SNR=5.9
ASAR                                 pScP          02 16 15.1
      comp=Z,3.0nm,1.1s,baz=309,slow=4.9,SNR=3.9
ASAR                                 S     S       02 17 29.1 -1.1
      comp=Z,2.1nm,0.7s,baz=291,slow=14,SNR=5.9
IRK   Irkutsk            47.72   8  eP     P       02 10 38.7 -0.9
IRK                                  pmax  pmax
      comp=Z,71nm,1.8s,mb5.4
FORT  Forrest            47.74 140⇓iP     P       02 10 40.4 +0.4
      comp=Z,1µm,0.9s
HIA   Hailar             48.91  22  eP     P       02 10 47.8 -1.0
HIA                                  pmax  pmax
      comp=Z,42nm,0.7s
HIA   Hailar             48.91  22  eP     P       02 10 47.8 -1.0
      comp=Z,42nm,0.7s,mb5.6
ZAL   Zalesovo           49.44 352   P     P       02 10 52.9 +0.1
ZAL                                  *PP   pP      02 11 06.5 +0.2
ZAL                                  S     S       02 17 55.3 +0.1
ZAL   Zalesovo           49.44 352   P     P       02 10 52.9  0.0
      comp=Z,53nm,0.7s,mb5.7,baz=301,slow=6.0,SNR=225
ZAL                                  pP    pP      02 11 06.5 +0.3
      comp=Z,35nm,0.9s,baz=298,slow=8.2,SNR=11
ZAL                                  ScP           02 16 05.1
      comp=Z,2.3nm,0.3s,baz=197,slow=1.5,SNR=4.2
ZAL                                  pScP          02 16 21.4
      comp=Z,1.2nm,0.3s,baz=214,slow=2.1,SNR=4.7
ZAL                                  S     S       02 17 55.3 +0.1
      comp=Z,2.4nm,1.1s,baz=151,slow=19,SNR=4.6
ZAL                                  LR    LR      02 37 00.7
      comp=Z,252nm,18.1s,MS4.3,baz=296,slow=42
ZAL   Zalesovo           49.44 352   P     P       02 10 52.9  0.0
ZAL                                  pP    pP      02 11 06.5 +0.3
ZAL                                  ScP           02 16 05.1
ZAL                                  pScP          02 16 21.4
ZAL                                  S     S       02 17 55.3 +0.1
ZAL                                  LR    LR      02 37 00.7
MDJ   Mudanjiang         49.84  32   P     P       02 10 55.9 -0.1
MDJ                                  AP    pP      02 11 08.3 -1.1
MDJ                                  PCP   PcP     02 12 15.7 -0.6
MDJ                                  PP    PP      02 12 51.1 -0.6
MDJ                                  SCP           02 16 07.4
MDJ                                  PCS           02 16 11.8
MDJ                                  S     S       02 18 03.4 +2.6
MDJ                                  XS            02 18 23.1
MDJ                                  AMB   AMB
      comp=Z,63nm,1.4s,mb5.5
MDJ                                  LR    LR
      comp=N,382nm,22.3s,MS4.6
MDJ                                  LR    LR
      comp=E,514nm,22.3s,MS4.6
MDJ                                  LR    LR
      comp=Z,682nm,24.1s,MS4.6
MDJ   Mudanjiang         49.84  32  eP     P       02 10 55.5 -0.5
      comp=Z,97nm,1.2s,mb5.7
MDJ                                  LR    LR
      comp=Z,673nm,20.0s,MS4.6
NVS   Novosibirsk        50.54 351  i P    P       02 10 59.1 -2.1
NVS                                 i *PP  pP      02 11 12.7 -2.0
NVS                                 i S    S       02 18 06.6 -3.8
NVS                                  pmax  pmax
      comp=Z,92nm,1.3s,mb5.5
NVS                                  pmax  pmax
      comp=N,88nm,1.5s
NVS                                  pmax  pmax
      comp=E,41nm,1.3s
NVS                                  smax
      comp=N,35nm,1.7s
NVS                                  smax
      comp=E,24nm,2.2s
MAJO  Matsushiro         50.64  46  eP     P       02 11 01.2 -1.1
MAJO                                 pmax  pmax
      comp=Z,20nm,0.7s,mb5.2
MAJO                                 MLR   MLR
      comp=Z,965nm,20.0s,MS4.8
MAJO  Matsushiro         50.64  46  eP     P       02 11 01.2 -1.1
      comp=Z,20nm,0.7s,mb5.2
MAJO                                 LR    LR
      comp=Z,965nm,20.0s,MS4.8
MAT   Matsushiro         50.64  46  eP     P       02 11 01.0 -1.3
MAT                                  pmax  pmax
      comp=Z,19nm,0.7s,mb5.1
MAT                                  MLR   MLR
      comp=Z,710nm,20.0s,MS4.7
MAT   Matsushiro         50.64  46   P     P       02 11 01.2 -1.1
BVAR  Borovoye Array     51.88 342   P     P       02 11 10.5 -0.8
      comp=Z,73nm,0.8s,mb5.7,baz=143,slow=7.4,SNR=417
BVAR                                 S     S       02 18 28.5 -0.4
      comp=Z,1.9nm,0.9s,baz=131,slow=15,SNR=4.9
BRVK  Borovoye           51.94 341  eP     P       02 11 10.8 -1.0
BRVK                                 pmax  pmax
      comp=Z,112nm,0.9s,mb5.8
BRVK                                 MLR   MLR
      comp=Z,92nm,20.0s,MS3.8
BRVK  Borovoye           51.94 341  eP     P       02 11 10.8 -1.0
      comp=Z,112nm,0.9s,mb5.8
BRVK                                 LR    LR
      comp=Z,92nm,20.0s,MS3.8
KLR   Kul'dur            54.03  29  eP     P       02 11 23.8 -3.6
KLR                                  pmax  pmax
      comp=N,28µm,1.6s
KLR                                  pmax  pmax
      comp=E,50µm,1.6s
KLR                                  pmax  pmax
      comp=Z,57µm,1.6s
PMG   Port Moresby       54.13 105  eP     P       02 11 27.6 -1.0
PMG                                  pmax  pmax
      comp=Z,47nm,0.9s
PMG                                  MLR   MLR
      comp=Z,209nm,20.0s
PMG   Port Moresby       54.13 105   P     P       02 11 27.8 -0.8
      comp=Z,41nm,0.9s,mb5.4,baz=291,slow=2.4
PMG   Port Moresby       54.13 105  eP     P       02 11 27.6 -1.0
      comp=Z,47nm,0.9s,mb5.4
PMG                                  LR    LR
      comp=Z,209nm,20.0s,MS4.2
BHD   Baghdad            54.59 308  eP     P       02 11 23.0 -8.7
BOD   Bodaibo            54.77  12  eP     P       02 11 30.6 -2.1
BOD                                  pmax  pmax
      comp=Z,38nm,1.4s,mb5.2
CTA   Charters Tower     56.39 118⇑iP     P       02 11 44.0 -0.9
      comp=Z,28nm,1.0s,mb5.2
CTA   Charters Tower     56.39 118⇑iP     P       02 11 44.0 -0.9
CTA                                  pmax  pmax
      comp=Z,28nm,1.0s
CTA   Charters Tower     56.39 118   P     P       02 11 43.7 -1.2
      comp=Z,32nm,0.9s,mb5.3,baz=292,slow=9.8,SNR=6.4
CTAO  Charters Tower     56.39 118  eP     P       02 11 43.5 -1.4
CTAO                                 pmax  pmax
      comp=Z,43nm,1.0s,mb5.4
CTAO                                 MLR   MLR
      comp=Z,639nm,22.0s,MS4.7
CTAO  Charters Tower     56.39 118  eP     P       02 11 43.5 -1.4
      comp=Z,43nm,1.0s,mb5.4
CTAO                                 LR    LR
      comp=Z,639nm,22.0s,MS4.7
GNI   Garni              56.89 315  eP     P       02 11 47.2 -1.0
GNI                                  pmax  pmax
      comp=Z,55nm,1.0s
GNI   Garni              56.89 315   P     P       02 11 47.5 -0.6
      comp=Z,40nm,1.1s,mb5.4,baz=12,slow=2.5,SNR=18
GNI   Garni              56.89 315  eP     P       02 11 47.1 -1.0
      comp=Z,55nm,1.0s,mb5.5
MTA   Mtatsminda         57.50 317   P     P       02 11 51.5 -1.0
STKA  Stephens Creek     57.70 133⇑iP     P       02 11 53.1 -0.9
      comp=Z,20nm,1.0s,mb5.1
STKA  Stephens Creek     57.70 133   P     P       02 11 53.3 -0.7
      comp=Z,21nm,0.9s,mb5.2,baz=306,slow=7.4,SNR=30
STKA                                 LR    LR      02 37 08.9
      comp=Z,315nm,20.2s,MS4.4,baz=246,slow=36
DUS   Dusheti            57.73 318   P     P       02 11 53.0 -1.1
KMBO  Kilima Mbogo       57.79 266  eP     P       02 11 55.6 +0.7
KMBO                                 pmax  pmax
      comp=Z,30nm,1.2s
KMBO                                 MLR   MLR
      comp=Z,532nm,21.0s
KMBO  Kilima Mbogo       57.79 266   P     P       02 11 56.6 +1.8
      comp=Z,7.5nm,1.1s,mb4.6,baz=66,slow=10,SNR=13
KMBO                                 pP    pP      02 12 09.9 +1.2
      comp=Z,17nm,1.1s,baz=60,slow=10,SNR=13
KMBO                                 LR    LR      02 32 28.0
      comp=Z,562nm,21.6s,MS4.6,baz=95,slow=31
KMBO  Kilima Mbogo       57.79 266  eP     P       02 11 55.6 +0.8
      comp=Z,30nm,1.2s,mb5.2
KMBO                                 LR    LR
      comp=Z,532nm,21.0s,MS4.6
SVE   Sverdlovsk         58.27 339  i P    P       02 11 56.5 -1.1
SVE                                 e      pP      02 12 10.3 -1.1
SVE                                  pmax  pmax
      comp=Z,180nm,1.6s,mb5.8
SVE                                  MLR   MLR
      comp=N,100nm,19.0s,MS4.1
SVE                                  MLR   MLR
      comp=E,100nm,19.0s,MS4.1
SVE                                  MLR   MLR
      comp=Z,400nm,19.0s,MS4.5
BEST  Besiri             58.54 312  i P    P       02 11 59.0 -0.8
YSS   Yuzh-Sakhalins     58.66  37c iP     P       02 11 59.9 -0.5
YSS                                 i *PP  pP      02 12 10.0 -4.2
YSS                                 i *SP  sP      02 12 14.1 -5.9
YSS                                 i              02 12 49.8
YSS                                 i              02 14 09.7
YSS                                  pmax  pmax
      comp=Z,39nm,0.5s,mb5.7
YSS   Yuzh-Sakhalins     58.66  37  eP     P       02 11 59.5 -1.0
      comp=Z,159nm,1.4s,mb5.9
YSS                                  LR    LR
      comp=Z,601nm,19.0s,MS4.7
ONI   Oni                58.78 318   P     P       02 12 00.9 -0.4
KIV   Kislovodsk         59.86 319   P     P       02 12 07.7 -1.1
      comp=Z,400nm,0.9s,mb6.5,SNR=22
KIV   Kislovodsk         59.86 319c iP     P       02 12 07.8 -1.0
KIV                                 e              02 12 54.5
KIV                                 e              02 14 22.6
KIV                                 eS     S       02 20 23.4 +8.4
KIV                                 eSS    SS      02 24 14.3 +1.4
KIV                                  pmax  pmax
      comp=N,43nm,1.1s
KIV                                  pmax  pmax
      comp=E,35nm,1.1s
KIV                                  pmax  pmax
      comp=Z,77nm,1.1s,mb5.7
KIV   Kislovodsk         59.86 319  eP     P       02 12 07.3 -1.4
      comp=Z,87nm,1.1s,mb5.7
GOF   Gofitskoye         60.10 320⇓iP     P       02 12 09.0 -1.4
GOF                                  pmax  pmax
      comp=Z,64nm,1.0s,mb5.6
ASF   Jabal al Asfar     60.31 304   P     P       02 12 12.5 +0.4
      comp=Z,14nm,0.9s,mb5.0,baz=319,slow=2.1,SNR=11
ASF                                  pP    pP      02 12 27.9 +2.0
      comp=Z,29nm,1.1s,baz=193,slow=1.2,SNR=8.4
ASF                                  LR    LR      02 40 46.9
      comp=Z,446nm,18.4s,MS4.6,baz=147,slow=38
ELZG  Elazig             60.44 312  i P    P       02 12 12.1 -0.8
MALT  Malatya            60.80 311  eP     P       02 12 14.3 -1.0
MALT                                 pmax  pmax
      comp=Z,33nm,1.2s,mb5.3
MALT  Malatya            60.80 311  eP     P       02 12 14.3 -1.0
      comp=Z,33nm,1.2s,mb5.3
GZT   Gaziantep          61.16 310  i P    P       02 12 17.8  0.0
EIL   Elat               61.41 301   P     P       02 12 19.9 +0.4
      comp=Z,21nm,1.0s,mb5.2,baz=122,slow=5.9,SNR=12
EIL                                  LR    LR      02 39 55.0
      comp=Z,608nm,18.2s,MS4.8,baz=300,slow=37
EIL   Elat               61.41 301  eP     P       02 12 19.4 -0.2
SOKR  Solikamsk          61.67 339⇓iP     P       02 12 20.3 -0.6
SOKR                                 pmax  pmax
      comp=Z,40nm,0.8s,mb5.6
SOC   Sochi              61.69 317  eP     P       02 12 17.7 -3.5
SOC                                 e              02 13 02.1
SOC                                 eS     S       02 20 35.7 -2.7
SOC                                 eSS    SS      02 24 42.3 +0.3
SOC                                 eSSS   SSS     02 27 22.5 -0.6
SOC                                  pmax  pmax
      comp=Z,62nm,1.1s,mb5.7
SOC                                  pmax  pmax
      comp=N,11nm,0.6s
SOC                                  pmax  pmax
      comp=E,39nm,1.1s
KAHT  Ahir Dag           61.77 310  i P    P       02 12 21.9 +0.1
YAK   Yakutsk            62.49  18   P     P       02 12 24.3 -2.0
YAK                                 e      pP      02 12 36.9 -3.3
YAK                                  pmax  pmax
      comp=Z,160nm,1.0s,mb6.1
YAK   Yakutsk            62.49  18  eP     P       02 12 23.8 -2.5
      comp=Z,156nm,1.0s,mb6.1
YAK                                  LR    LR
      comp=Z,909nm,22.0s,MS4.9
TOO   Toolangi           63.35 137  eP     P       02 12 33.6 +1.2
      comp=Z,1.4nm,1.0s
TOO   Toolangi           63.35 137  eP     P       02 12 33.6 +1.2
TOO                                  pmax  pmax
      comp=Z,1.0nm,1.0s
MEST  Erdemli            63.59 308  i P    P       02 12 33.0 -1.0
AVNT  Avonos             63.61 311  i P    P       02 12 33.4 -0.7
CSS   Prodhromos         63.85 307  eP     P       02 12 35.4 -0.4
      comp=Z,108nm,1.2s,mb5.8
MBAR  Mbarara            64.21 267  eP     P       02 12 38.8 +0.4
MBAR                                 pmax  pmax
      comp=Z,63nm,1.3s,mb5.5
MBAR  Mbarara            64.21 267  eP     P       02 12 38.8 +0.4
      comp=Z,63nm,1.3s,mb5.5
BOYT  Boyabat            64.32 314  i P    P       02 12 37.9 -0.8
BRTR  Keskin Array B     64.78 312   P     P       02 12 40.4 -1.2
      comp=Z,28nm,0.8s,mb5.3,baz=127,slow=6.8,SNR=129
CNB   Canberra Magne     65.03 133  eP     P       02 12 43.5 +0.1
      comp=Z,347nm,1.1s,mb6.3
ELDT  Eldivan            65.14 312  i P    P       02 12 43.2 -0.8
VOR   Voronezh           65.27 326  eP     P       02 12 43.5 -1.1
VOR                                  pmax  pmax
      comp=Z,200nm,2.0s,mb5.8
ANTO  Ankara             65.44 312 ⇑P     P       02 12 45.1 -0.8
BALT  Daday              65.45 314  i P    P       02 12 44.6 -1.4
SIM   Simferopol'        65.93 317c iP     P       02 12 49.0  0.0
SIM                                  pmax  pmax
      comp=Z,40nm,0.8s,mb5.5
ISP   Isparta            66.70 309  eP     P       02 12 53.3 -0.7
ISP                                  pmax  pmax
      comp=Z,30nm,0.8s,mb5.4
ISP   Isparta            66.70 309  eP     P       02 12 53.3 -0.7
      comp=Z,30nm,0.8s,mb5.4
ESKT  Eskisehir          66.81 311  i P    P       02 12 53.6 -1.0
HENT  Hendek             67.08 312  i P    P       02 12 53.8 -2.5
MOS   Moscow             67.83 329α iP     P       02 12 59.7 -1.0
MOS                                 e      pP      02 13 13.5 -1.4
MOS                                 e              02 13 24.5
MOS                                 e              02 15 25.7
MOS                                 eS     S       02 21 49.7 -4.1
MOS                                  pmax  pmax
      comp=Z,300nm,1.4s,mb6.1
MOS                                  pmax  pmax
      comp=Z,195nm,1.5s,mb5.9
OBN   Obninsk            68.12 328   P     P       02 13 01.9 -0.6
      comp=Z,353nm,1.4s,mb6.2,SNR=12
OBN   Obninsk            68.12 328c iP     P       02 13 01.3 -1.2
OBN                                 eS     S       02 22 23.5 +26
OBN                                  pmax  pmax
      comp=Z,89nm,1.2s,mb5.7
OBN                                  MLR   MLR
      comp=Z,200nm,17.0s,MS4.4
OBN   Obninsk            68.12 328  eP     P       02 13 00.9 -1.7
      comp=Z,44nm,0.8s,mb5.5
ULDT  Uludag             68.24 311  i P    P       02 13 02.3 -1.3
LSZ   Lusaka             68.95 252  eP     P       02 13 09.0 +0.7
LSZ                                  pmax  pmax
      comp=Z,56nm,1.4s,mb5.3
LSZ   Lusaka             68.95 252  eP     P       02 13 09.0 +0.7
      comp=Z,56nm,1.4s,mb5.3
BTOK  Tokmak             68.99 311  i P    P       02 13 07.9 -0.3
MA2   Magadan            69.00  27  eP     P       02 13 06.9 -1.0
MA2                                  pmax  pmax
      comp=Z,64nm,1.1s,mb5.5
MA2   Magadan            69.00  27  eP     P       02 13 06.9 -1.0
      comp=Z,64nm,1.1s,mb5.5
KDAG  Bornova            69.32 309  i P    P       02 13 10.2  0.0
TLCR                     69.61 316 ⇑P     P       02 13 10.9 -1.0
PSN   Preselentsi        69.70 315  eP     P       02 13 12.2 -0.3
TIRR  Tirgusor           69.72 316   P     P       02 13 11.9 -0.7
TIXI  Tiksi              69.89  11⇑iP     P       02 13 11.0 -2.2
TIXI                                 pmax  pmax
      comp=Z,59nm,0.7s,mb5.6
TIXI  Tiksi              69.89  11⇑iP     P       02 13 11.5 -1.7
KIS   Kishinev           70.05 318α iP     P       02 13 12.0 -2.6
KIS                                 e      pP      02 13 29.0 +0.3
KIS                                  pmax  pmax
      comp=Z,200nm,1.0s,mb6.0
CFR   Carcaliu           70.08 316⇑iP     P       02 13 14.0 -0.7
HARR  Harsova            70.11 316⇑iP     P       02 13 14.7 -0.2
PRD   Provadia           70.15 314  eP     P       02 13 15.0 -0.3
SANT  Santorini          70.41 307  eP     P       02 13 15.5 -1.4
      comp=Z,94nm,1.0s,mb5.7
APE   Apeiranthos        70.46 307 ⇓P     P       02 13 16.5 -0.7
PET   Petropavlovsk      70.47  35  eP     P       02 13 16.0 -1.0
PET                                 eS     S       02 22 26.2 +1.2
PET                                  pmax  pmax
      comp=Z,35nm,0.7s,mb5.4
PET                                  MLR   MLR
      comp=Z,400nm,19.0s,MS4.7
JMB   Yambol             70.59 313   P     P       02 13 18.0 +0.1
IDI   Anoyia             70.72 306   P     P       02 13 19.3 +0.4
      comp=Z,46nm,0.8s,mb5.5,baz=101,slow=7.9,SNR=26
AKASG Malin Array Be     70.78 322   P     P       02 13 17.2 -1.6
      comp=Z,23nm,0.7s,mb5.2,baz=92,slow=4.5,SNR=60
IAS   Iasi               70.93 318   P     P       02 13 19.6 -0.3
VRI   Vrincioaia         71.19 317⇑iP     P       02 13 21.7 +0.2
SZH   Strazhica          71.22 314  eP     P       02 13 21.0 -0.7
DIM   Dimitrovgrad       71.28 313   P     P       02 13 22.0 -0.1
KDZ   Kurdzhali          71.30 312  eP     P       02 13 21.0 -1.2
GVD   Gavdhos            71.31 305  eP     P       02 13 22.4 -0.1
      comp=Z,50nm,0.9s,mb5.5
GVD                                 e      pP      02 13 36.9 +0.3
BUC1  Bucharest          71.36 315 ⇑P     P       02 13 22.5  0.0
BUC1  Bucharest          71.36 315   P     P       02 13 23.1 +0.5
PVL   Pavlikeni          71.64 314   P     P       02 13 25.0 +0.8
MLR   Muntele Rosu       71.65 316   P     P       02 13 24.5 +0.3
MLR   Muntele Rosu       71.65 316   P     P       02 13 24.4 +0.1
      comp=Z,62nm,0.8s,mb5.6,baz=81,slow=2.0,SNR=97
MLR   Muntele Rosu       71.65 316⇑iP     P       02 13 24.4 +0.2
MLR   Muntele Rosu       71.65 316⇑iP     P       02 13 24.4 +0.2
RZN   Rozhen             71.82 312   P     P       02 13 15.0  -10
PLD   Plovdiv            71.90 313  eP     P       02 13 25.0 -0.8
PGB   Panagyurishte      72.37 313   P     P       02 13 28.0 -0.5
MMB   Musomiste          72.53 312   P     P       02 13 28.5 -1.1
SRS   Serrai             72.56 311  eP     P       02 13 28.8 -0.9
BURAR Bucovina Array     72.58 318 ⇑P     P       02 13 30.0 +0.3
MNK   Minsk              72.65 326  eP     P       02 13 25.0 -5.0
THE   Thessaloniki       72.96 311  eP     P       02 13 31.1 -1.1
PUL   Pulkovo            73.00 331  i P    P       02 13 32.4 +0.4
KKB   Krupnik            73.05 312   P     P       02 13 31.5 -1.1
VTS   Vitosha            73.07 313   P     P       02 13 32.4 -0.3
VTS   Vitosha            73.07 313   P     P       02 13 32.0 -0.7
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KNT	Kendrikon	73.09	311	eP	P	02 13 31.4	-1.5
AGG	Agios Georgios	73.23	309	eP	P	02 13 31.8	-1.9
LIT	Litokhoron	73.25	310	eP	P	02 13 32.5	-1.3
VAY	Valandovo	73.36	312	i P	P	02 13 33.3	-1.1
GRG	Griva	73.43	311	eP	P	02 13 33.6	-1.2
LBTB	Lobatse	73.46	242	eP	P	02 13 36.4	+1.0
LBTB				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
LBTB				MLR	MLR		
	comp=Z,860nm,20.0s,MS5.0						
LBTB	Lobatse	73.46	242	eP	P	02 13 36.4	+1.0
	comp=Z,33nm,0.9s,mb5.3						
LBTB				LR	LR		
	comp=Z,860nm,20.0s,MS5.0						
JOF	Joensuu	73.68	335	ep	P	02 13 34.1	-1.8
	comp=Z,21nm,0.7s,mb5.2						
LVV	L'vov	73.80	320	eP	P	02 13 36.1	-0.7
FNA	Florina	74.18	311	eP	P	02 13 37.7	-1.5
SKO	Skopje	74.28	312	⇑iP	P	02 13 38.0	-1.8
SKO				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
SKO	Skopje	74.28	312	⇑iP	P	02 13 38.0	-1.8
	comp=Z,0.0nm,0.9s						
LVZ	Lovozero	74.44	340	⇑eP	P	02 13 39.4	-0.8
KWP	Kalwaria	74.61	320	eP	P	02 13 41.4	-0.1
BOSA	Boshof	74.63	239	eP	P	02 13 42.9	+0.8
BOSA				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
BOSA	Boshof	74.63	239	eP	P	02 13 42.9	+0.8
	comp=Z,44nm,1.0s,mb5.3						
BZS	Buzias	74.67	316	P	P	02 13 42.0	+0.1
APA	Apatity	74.73	340	⇑iP	P	02 13 41.0	-0.8
APA				i	pP	02 13 56.0	-0.1
APA				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4						
KOLS	Kolonicke sedl	74.76	319	i P	P	02 13 42.9	+0.5
IGT	Igoumenitsa	74.83	309	eP	P	02 13 41.9	-1.1
NOUC	Port Laguerre	74.91	114	eP	P	02 13 43.8	0.0
DZM	Mont Dzumac	75.03	114	eP	P	02 13 45.7	+1.2
DZM	Mont Dzumac	75.03	114	eP	P	02 13 45.7	+1.2
GRUS	Gruza	75.06	314	⇓iP	P	02 13 43.6	-0.7
SUW	Suwalki	75.18	325	P	P	02 13 44.2	-0.5
SUW				e	pP	02 13 54.1	-4.8
SUW				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.9						
SUW	Suwalki	75.18	325	eP	P	02 13 43.6	-1.1
CRVS	Cervenica-Dubn	75.28	319	eP	P	02 13 46.5	+1.1
FINES	FINESS Array B	75.52	332	P	P	02 13 45.9	-0.5
	comp=Z,12nm,0.8s,mb4.9,baz=97,slow=6.9,SNR=79						
FINES				pP	pP	02 14 01.0	+0.2
	comp=Z,5.6nm,0.4s,baz=91,slow=6.4,SNR=7.3						
KAF	Kangasniemi	75.61	333	ep	P	02 13 45.6	-1.4
	comp=Z,18nm,0.9s,mb5.0,baz=104,slow=5.3						
KAF	Kangasniemi	75.61	333	eP	P	02 13 45.6	-1.4
KAF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
KECS	Kecovo	75.86	319	eP	P	02 13 48.4	-0.3
MAW	Mawson	75.89	192	LR	LR	02 38 23.4	
	comp=Z,339nm,21.7s,MS4.6,baz=184,slow=29						
NIE	Niedzica	76.11	320	⇑iP	P	02 13 49.2	-0.9
PSZ	Piszkesteto	76.17	318	P	P	02 13 50.6	+0.1
OJC	Ojcow	76.56	320	⇑iP	P	02 13 52.7	+0.1
LIKS	Likavka	76.84	319	eP	P	02 13 54.5	+0.3
VYHS	Vyhne	76.95	319	i P	P	02 13 55.1	+0.2
VYHS				e		02 14 01.3	
SRO2	Moca	77.15	318	eP	P	02 13 56.4	+0.4
SRO	Srobarova	77.21	318	i P	P	02 13 56.7	+0.4
SRO				e		02 14 02.6	
SRO				epP	pP	02 14 10.2	-0.4
KOLL	Kolacno	77.24	319	eP	P	02 13 56.8	+0.3
KOLL				e	pP	02 14 13.4	+2.6
OKC	Ostrava-Krasne	77.56	320	⇑iP	P	02 13 58.6	+0.4
RAC	Raciborz	77.56	320	eP	P	02 13 58.7	+0.5
KEV	Kevo	77.72	341	ep	P	02 13 57.6	-1.1
	comp=Z,32nm,0.8s,mb5.3						
KEV	Kevo	77.72	341	eP	P	02 13 57.6	-1.1
KEV				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
GRI	Girifalco	77.80	308	eP	P	02 14 00.8	+1.0
ORI	Oriolo Calabro	77.86	310	eP	P	02 14 01.1	+1.0
MORC	Moravsky Berou	77.94	320	eP	P	02 14 00.2	-0.1
MORC				e	pP	02 14 10.7	-3.9
MORC				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.5						
MORC	Moravsky Berou	77.94	320	eP	P	02 14 00.2	-0.1
	comp=Z,68nm,1.0s,mb5.5						
MORC				e	pP	02 14 10.7	-4.0
ZST	Bratislava	78.06	318	eP	P	02 14 01.4	+0.4
ARCES	ARCESS Array B	78.15	340	P	P	02 14 00.9	-0.1
	comp=Z,21nm,0.7s,mb5.2,baz=92,slow=6.4,SNR=70						
ARCES				pP	pP	02 14 15.3	0.0
	comp=Z,26nm,0.8s,baz=104,slow=5.0,SNR=7.8						
ARCES				PP	PP	02 16 56.3	-3.6
	comp=Z,9.7nm,0.8s,baz=117,slow=2.7,SNR=5.4						
ARCES				LR	LR	02 54 51.5	
	comp=Z,272nm,18.9s,MS4.6,baz=284,slow=40						
ARE0	ARCESS Array S	78.15	340	eP	P	02 14 00.8	-0.2
ARE0				e	pP	02 14 15.6	+0.2
SISC	Sisak	78.31	315	i P	P	02 14 04.2	+1.8
MTTG	Motta San Giov	78.33	308	eP	P	02 14 03.4	+0.7
SOP	Sopron	78.38	318	⇑eP	P	02 14 03.1	+0.4
BILL	Bilibino	78.49	21	⇑eP	P	02 14 01.6	-1.4
BILL				e		02 16 56.4	
BILL				eS	S	02 24 11.8	+18
BILL				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.2						
BILL				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
BILL	Bilibino	78.49	21	eP	P	02 14 01.1	-1.8
	comp=Z,43nm,1.3s,mb5.2						
BILL				e	pP	02 14 15.5	-1.8
VRAC	Vranov	78.51	319	⇓P	P	02 14 04.1	+0.7
VRAC	Vranov	78.51	319	P	P	02 14 03.8	+0.3
VKA	Vienna	78.59	318	⇑iP	P	02 14 04.5	+0.6
	comp=Z,269nm,1.5s,mb6.0						
VKA	Vienna	78.59	318	⇑iP	P	02 14 04.5	+0.6
VKA				pmax	pmax		
	comp=Z,269nm,1.5s,mb6.0						
KTK1	Kautokeino	78.77	340	eP	P	02 14 04.4	-0.1
KTK1				epP	pP	02 14 19.1	+0.2
DPC	Dobruska-Polom	78.79	320	⇑iP	P	02 14 05.9	+1.0
KSP	Ksiaz	78.86	321	⇑eP	P	02 14 05.8	+0.5
KSP				e		02 14 13.9	
KSP	Ksiaz	78.86	321	eP	P	02 14 05.8	+0.5
GROS	Grobnik	78.99	316	i P	P	02 14 05.4	-0.7
UPC	Upice	79.00	320	⇑iP	P	02 14 06.7	+0.6
FX1	Attu Island--F	79.01	37	eP	P	02 14 05.8	-0.3
ARSA	Arzberg	79.04	317	⇑iP	P	02 14 06.9	+0.5
	comp=Z,177nm,1.5s,mb5.8						
BOJS	Bojanci	79.10	315	⇑eP	P	02 14 06.9	+0.1
BOJS				e	pP	02 14 21.8	+0.7
BOJS				e		02 14 26.4	
PERS	Pernice	79.27	316	⇑eP	P	02 14 08.1	+0.4
VAE	Valguarnera	79.32	307	P	P	02 14 10.5	+2.4
	comp=Z,23nm,0.8s,mb5.2,baz=192,slow=5.6,SNR=4.1						
LJU	Ljubljana	79.64	316	⇑eP	P	02 14 10.2	+0.6
LJU				e	pP	02 14 27.0	+3.0
OBKA	Obir	79.65	316	⇑iP	P	02 14 10.3	+0.6
	comp=Z,172nm,1.6s,mb5.7						
PRU	Pruhonice	79.90	320	⇑iP	P	02 14 11.3	+0.3
PVCC	Panska Ves	79.92	320	⇑iP	P	02 14 11.6	+0.5
MOA	Molln	79.93	318	⇑iP	P	02 14 11.1	-0.1
	comp=Z,80nm,1.5s,mb5.4						
SDI	San Donato	79.94	311	eP	P	02 14 10.9	-0.5
JAVS	Javornik	79.95	316	⇑eP	P	02 14 11.4	0.0
VOY	Vojsko	80.08	316	⇑eP	P	02 14 11.9	-0.1
VOY				e	pP	02 14 26.2	-0.2
PTQR	Pietraquaria	80.26	312	eP	P	02 14 13.1	0.0
AQU	L'Aquila	80.27	312	P	P	02 14 13.7	+0.6
AQU				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.7						
AQU	L'Aquila	80.27	312	eP	P	02 14 13.5	+0.4
BRG	Berggiesshubel	80.34	321	⇑iP	P	02 14 13.8	+0.5
BRG				pmax	pmax		
	comp=Z,59nm,1.2s,mb5.4						
BRG	Berggiesshubel	80.34	321	⇑iP	P	02 14 13.8	+0.5
	comp=Z,58nm,1.1s,mb5.4						
GEC2	GERESS Array S	80.37	319	eP	P	02 14 14.1	+0.6
GEC2				pmax	pmax		
	comp=Z,129nm,0.9s,mb5.9						
GEC2	GERESS Array S	80.37	319	eP	P	02 14 14.1	+0.6
	comp=Z,129nm,0.9s,mb5.9						
GERES	GERESS Array B	80.37	319	P	P	02 14 14.0	+0.5
	comp=Z,63nm,0.7s,mb5.6,baz=90,slow=5.3,SNR=302						
TRO	Tromso	80.41	340	eP	P	02 14 11.9	-1.4
	comp=Z,119nm,1.8s,mb5.5						
TRO	Tromso	80.41	340	eP	P	02 14 11.9	-1.4
TRO				AMb	AMB	02 14 17.2	
	comp=Z,119nm,1.8s,mb5.5						
KHC	Kasperske Hory	80.47	319	⇑iP	P	02 14 14.3	+0.3
KHC				e	pP	02 14 28.0	-0.4
KHC				e		02 15 14.0	
KHC	Kasperske Hory	80.47	319	⇑iP	P	02 14 14.3	+0.3
KHC				epP	pP	02 14 28.0	-0.4
KHC				x	x	02 15 14.0	
PTCC	Patocco-Chiusa	80.47	316	eP	P	02 14 14.4	+0.2
NRCA	Norcia	80.50	312	eP	P	02 14 14.5	+0.2
KBA	Koelnbreinsper	80.51	317	⇓iP	P	02 14 14.1	-0.2
	comp=Z,93nm,1.4s,mb5.5						
KBA	Koelnbreinsper	80.51	317	⇓iP	P	02 14 14.1	-0.2
KBA				pmax	pmax		
	comp=Z,93nm,1.4s,mb5.5						
GMNA	Gemona	80.55	316	eP	P	02 14 14.9	+0.4
RUE	Ruedersdorf	80.56	322	eP	P	02 14 14.4	0.0
	comp=Z,128nm,1.0s,mb5.8						
SNTG	Esanatoglia	80.64	313	eP	P	02 14 15.4	+0.3
ARV	Arcevia	80.65	313	eP	P	02 14 15.7	+0.6
FSSB	Fossombrone	80.77	313	eP	P	02 14 16.6	+0.8
MNS	Montasola	80.80	312	eP	P	02 14 15.4	-0.6
FVI	Forni Avoltri	80.88	316	eP	P	02 14 16.3	0.0
WET	Wettzell	80.93	319	eP	P	02 14 16.9	+0.4
WET				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.5						
WET	Wettzell	80.93	319	eP	P	02 14 16.9	+0.4
	comp=Z,63nm,1.0s,mb5.5						
CLL	Collm	80.96	321	⇑iP	P	02 14 16.5	-0.1
CLL				e	pP	02 14 33.0	+2.0
CLL				pmax	pmax		
	comp=Z,54nm,1.2s,mb5.3						
CLL	Collm	80.96	321	⇑iP	P	02 14 16.5	-0.1
	comp=Z,54nm,1.2s,mb5.3						
CLL				e	pP	02 14 33.0	+2.0
CLL	Collm	80.96	321	⇑P	P	02 14 16.5	-0.1
	comp=Z,logA/T=1.7,mb5.4						
CLL				e*SP	sP	02 14 34.0	-2.4
RSM	Repubblica di	81.02	314	eP	P	02 14 18.3	+1.3
NKC	Novy Kostel	81.26	320	⇑iP	P	02 14 18.7	+0.5
CRE	Caprese Michel	81.37	313	eP	P	02 14 19.3	+0.4
SFI	Santa Sofia	81.45	313	eP	P	02 14 20.7	+1.4
MOR8	Moi Rana	81.53	336	eP	P	02 14 18.6	-0.7
	comp=Z,46nm,1.7s,mb5.1						
MOR8	Moi Rana	81.53	336	eP	P	02 14 18.6	-0.7
MOR8				AMb	AMB	02 14 23.1	
	comp=Z,46nm,1.7s,mb5.1						
MOR8				epP	pP	02 14 33.3	-0.3
PGD	Poggio Sodo	81.54	313	eP	P	02 14 21.6	+1.8
CTI	Castel Tesino	81.64	316	eP	P	02 14 21.0	+0.7
WTTA	Wattenberg	81.68	317	⇑iP	P	02 14 20.3	-0.1
	comp=Z,88nm,1.1s,mb5.6						
WTTA	Wattenberg	81.68	317	⇑iP	P	02 14 20.3	-0.1
WTTA				pmax	pmax		
	comp=Z,88nm,1.1s,mb5.6						
WATA	Walderalm	81.73	317	⇑iP	P	02 14 20.2	-0.5
	comp=Z,51nm,1.1s,mb5.4						
WATA	Walderalm	81.73	317	⇑iP	P	02 14 20.2	-0.5
WATA				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.4						
MOX	Moxa	81.81	320	eP	P	02 14 21.2	+0.2
MOX				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3						
MOX	Moxa	81.81	320	eP	P	02 14 21.2	+0.2
	comp=Z,48nm,1.3s,mb5.3						
MOX	Moxa	81.81	320	i P	P	02 14 21.2	+0.2
	comp=Z,logA/T=1.6,mb5.3						
FUR	Furstenfeldbru	81.95	318	eP	P	02 14 21.8	0.0
FUR				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.5						
FUR	Furstenfeldbru	81.95	318	eP	P	02 14 21.8	0.0
	comp=Z,52nm,0.9s,mb5.5						
SQTA	Sankt Quirin	81.97	317	⇑iP	P	02 14 21.9	-0.1
	comp=Z,44nm,0.9s,mb5.4						
SQTA	Sankt Quirin	81.97	317	⇑iP	P	02 14 21.9	-0.1
SQTA				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.4						
GRA1	Grafenberg Arr	82.03	319	eP	P	02 14 23.0	+0.8
	comp=Z,101nm,1.1s,mb5.7						
GRF	Grafenberg Arr	82.03	319	eP	P	02 14 23.0	+0.8
GRF				pmax	pmax		
	comp=Z,101nm,1.1s,mb5.7						
GRF	Grafenberg Arr	82.03	319	eP	P	02 14 23.0	+0.8
GRF				pmax	pmax		
	comp=Z,101nm,1.1s,mb5.7						
GRF	Grafenberg Arr	82.03	319	eP	P	02 14 23.0	+0.8
	comp=Z,101nm,1.1s,mb5.7						
MOTA	Moosalm	82.05	317	⇑iP	P	02 14 21.9	-0.4
	comp=Z,34nm,1.0s,mb5.2						
MOTA	Moosalm	82.05	317	⇑iP	P	02 14 21.9	-0.4
MOTA				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
ZCCA	Zocca	82.08	314	eP	P	02 14 24.9	+2.3
LOF	Lofoten	82.10	338	eP	P	02 14 24.5	+2.3
LOF	Lofoten	82.10	338	eP	P	02 14 23.6	+1.4
GSCL	Gusciola	82.36	314	eP	P	02 14 25.4	+1.3
NSS	Namsos	82.40	334	eP	P	02 14 22.6	-1.2
	comp=Z,92nm,1.3s,mb5.5						
NSS	Namsos	82.40	334	eP	P	02 14 22.6	-1.2
NSS				AMb	AMB	02 14 24.5	
	comp=Z,92nm,1.2s,mb5.6						
NSS				epP	pP	02 14 38.7	+0.5
SAL	Salo	82.42	315	eP	P	02 14 25.5	+1.2
SARO	Sassorosso	82.50	314	P	P	02 14 24.3	-0.4
NB2	NORSAR Subarra	82.51	331	P	P	02 14 23.6	-0.8
	comp=Z,19nm,0.9s,mb5.1,baz=97,slow=5.0						
NB2	NORSAR Subarra	82.51	331	P	P	02 14 23.6	-0.8
NB2				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
NB2	NORSAR Subarra	82.51	331	P	P	02 14 23.6	-0.8
	baz=97,slow=5.3						
NOA	NORSAR Array B	82.51	331	P	P	02 14 23.8	-0.6
	comp=Z,10.0nm,0.9s,mb4.9,baz=95,slow=4.9,SNR=23						
NOA				pP	pP	02 14 39.1	+0.2
	comp=Z,10.0nm,0.9s,baz=93,slow=5.5,SNR=7.6						
NOA				PP	PP	02 17 36.2	+0.3
	comp=Z,1.4nm,0.8s,baz=90,slow=7.6,SNR=3.4						
BRMO	Bormio	82.53	316	eP	P	02 14 25.6	+0.8
CLZ	Clausthal	82.62	321	eP	P	02 14 25.6	+0.4
	comp=Z,67nm,1.1s,mb5.6						
VINC	Vinca	82.68	314	P	P	02 14 25.8	+0.2
BSEG	Bad Segeberg	82.71	324	eP	P	02 14 26.1	+0.5
GRAM		82.74	314	P	P	02 14 26.5	+0.6
DAVOX	Davos	82.88	316	P	P	02 14 27.5	+0.9
	comp=Z,94nm,0.7s,mb5.9,baz=121,slow=5.1,SNR=108						
DAVA	Damuels	82.88	317	⇑iP	P	02 14 27.1	+0.5
	comp=Z,85nm,1.4s,mb5.6						
SYO	Syowa Base	82.89	197	⇓PcP	PcP	02 14 32.4	+1.1
CODM		82.89	314	P	P	02 14 26.5	-0.2
BOB	Bobbio (Coli)	83.18	314	eP	P	02 14 29.1	+0.9
STU	Stuttgart	83.34	318	eP	P	02 14 28.7	-0.2
STU				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
STU	Stuttgart	83.34	318	eP	P	02 14 28.7	-0.2
	comp=Z,16nm,0.7s,mb5.2						
GENL	Genova Univers	83.52	314	P	P	02 14 29.0	-0.9
PGF	Pioggiola	83.53	312	eP	P	02 14 30.4	+0.4
RPZ	Rata Peaks	83.60	135	LR	LR	02 49 03.3	
	comp=Z,292nm,21.3s,MS4.6,baz=229,slow=34						
TOD	Tromm	83.60	319	⇑eP	P	02 14 30.4	+0.2
SPAK	Spaichingen	83.62	318	⇑eP	P	02 14 30.7	+0.4
VAI	Varese	83.65	315	eP	P	02 14 30.2	-0.3
PCP	Pian Castagno	83.83	314	P	P	02 14 31.6	+0.1
TNS	Taunus Mts	83.83	320	eP	P	02 14 31.9	+0.6
TNS				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.7						
TNS	Taunus Mts	83.83	320	eP	P	02 14 31.9	+0.6
	comp=Z,56nm,1.0s,mb5.7						
BFO	Black Forest	83.92	318	eP	P	02 14 31.8	-0.1
FIN	Finale Ligure	84.07	314	eP	P	02 14 33.1	+0.4
FELD	Feldberg	84.15	317	⇑eP	P	02 14 33.0	0.0
MCGN	Macugnaga	84.19	316	eP	P	02 14 34.5	+1.2
ORX	Oropa	84.20	315	P	P	02 14 32.4	-0.9
LANF	Langenberg	84.26	319	⇑eP	P	02 14 33.7	+0.2
IMI	Imperia	84.31	314	eP	P	02 14 34.7	+0.8
ROB	Roburent	84.31	314	P	P	02 14 33.7	-0.2
TRAV		84.37	315	P	P	02 14 33.4	-0.8
MONE	Monesi	84.40	314	P	P	02 14 34.8	+0.4
ABH	Alteburg	84.41	320	⇑eP	P	02 14 34.7	+0.4
LIBD	Limburg	84.41	318	⇑eP	P	02 14 34.5	+0.2
NEGI	Negi	84.45	313	P	P	02 14 34.4	-0.2
BBS	Basel-Blauen	84.49	317	⇑eP	P	02 14 34.3	-0.4
SAOF	Saorge	84.55	314	⇑eP	P	02 14 35.5	+0.4
WLS	Welschbruch	84.57	318	⇑eP	P	02 14 35.2	+0.1
CDF	Champ du Feu	84.62	318	⇑iP	P	02 14 35.3	-0.1
	comp=Z,69nm,1.0s,mb5.4						
CDF	Champ du Feu	84.62	318	⇑iP	P	02 14 35.3	-0.1
CDF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.4						
ENR	Entracque	84.64	314	P	P	02 14 35.9	+0.3
SBF	Sospel	84.64	313	⇑iP	P	02 14 35.9	+0.3
	comp=Z,199nm,1.0s,mb5.9						
SBF	Sospel	84.64	313	⇑iP	P	02 14 35.9	+0.3
SBF				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.9						
ECH	Echery	84.70	318	⇑eP	P	02 14 35.8	0.0
STV2	Anna di Valdie	84.71	314	P	P	02 14 36.1	+0.2
STV	Sta Anna Valdi	84.71	314	P	P	02 14 35.5	-0.4
RSP	Reno Superiore	84.73	315	P	P	02 14 34.8	-1.2
RUP	Ruppelstein	84.73	319	⇑eP	P	02 14 36.5	+0.6
MOF	Molkenrain	84.73	317	⇑eP	P	02 14 35.4	-0.5
BHB	Bricherasio	84.73	314	P	P	02 14 34.7	-1.3
TOUF	Mont Tournerai	84.77	314	eP	P	02 14 37.0	+0.8
LSD	Ceresole Reale	84.79	315	P	P	02 14 37.0	+0.7
MVIF	Mont Vial	84.84	314	⇑eP	P	02 14 37.2	+0.6
BLS5	Blasjo	84.86	329	eP	P	02 14 38.4	+2.1
	comp=Z,32nm,1.1s,mb5.4						
BLS5	Blasjo	84.86	329	eP	P	02 14 38.4	+2.1
BLS5				epP	pP	02 14 53.7	+2.9
BLS5				AMb	AMB	02 14 54.8	
	comp=Z,32nm,1.1s,mb5.3						
PZZ	Prazzo	84.86	314	P	P	02 14 37.2	+0.5
FENE	Fenestrelle	84.87	315	P	P	02 14 36.6	-0.1
HINF	Hinteralfeld	84.92	317	⇑iP	P	02 14 36.4	-0.5
	comp=Z,29nm,1.1s,mb5.0						
HINF	Hinteralfeld	84.92	317	⇑iP	P	02 14 36.4	-0.5
HINF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
LOMF	Lomont	84.95	317	⇑eP	P	02 14 36.5	-0.6
RRL	Cesana Torines	85.07	315	P	P	02 14 37.2	-0.5
LPG	La Plagne	85.07	315	⇑iP	P	02 14 38.4	+0.7
	comp=Z,107nm,0.9s,mb5.7						
LPG	La Plagne	85.07	315	⇑iP	P	02 14 38.4	+0.7
LPG				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.7						
LPL	La Plagne	85.08	315	⇑iP	P	02 14 38.4	+0.7
	comp=Z,147nm,0.9s,mb5.8						
LPL	La Plagne	85.08	315	⇑iP	P	02 14 38.4	+0.7
LPL				pmax	pmax		
	comp=Z,74nm,0.9s,mb5.8						
MBDF	Montbardon	85.09	314	⇑iP	P	02 14 37.6	-0.2
	comp=Z,49nm,1.1s,mb5.3						
MBDF	Montbardon	85.09	314	⇑iP	P	02 14 37.6	-0.2
MBDF				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.3						
OG01	Vacheresse	85.09	316	⇑eP	P	02 14 34.7	-3.0
BNI	Bardonecchia	85.14	315	eP	P	02 14 38.0	0.0
BNI				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
BNI	Bardonecchia	85.14	315	eP	P	02 14 38.0	0.0
	comp=Z,40nm,1.0s,mb5.5						
RSL	Roselend	85.15	315	⇑eP	P	02 14 38.5	+0.4
FRF	La Foret Royal	85.22	313	⇑iP	P	02 14 38.9	+0.4
	comp=Z,151nm,1.1s,mb5.7						
FRF	La Foret Royal	85.22	313	⇑iP	P	02 14 38.9	+0.4
FRF				pmax	pmax		
	comp=Z,76nm,1.1s,mb5.7						
HAU	Haudompre	85.25	318	⇑iP	P	02 14 38.5	0.0
	comp=Z,129nm,0.9s,mb5.8						
HAU				eR			
	comp=Z,233nm,20.2s						
HAU	Haudompre	85.25	318	⇑iP	P	02 14 38.5	0.0
HAU				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.8						
HAU				MLR	MLR		
	comp=Z,230nm,20.3s,MS4.6						
LMR	La Mourre	85.33	313	⇑iP	P	02 14 39.4	+0.4
	comp=Z,121nm,1.2s,mb5.6						
LMR	La Mourre	85.33	313	⇑iP	P	02 14 39.4	+0.4
LMR				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.6						
THEF	They Montfort	85.49	318	⇑eP	P	02 14 39.5	-0.2
CABF	La Chapelle	85.49	316	⇑iP	P	02 14 40.4	+0.7
	comp=Z,91nm,1.0s,mb5.6						
CABF	La Chapelle	85.49	316	⇑iP	P	02 14 40.4	+0.7
CABF				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.5						
OG25	Le Caire	85.60	314	⇑eP	P	02 14 39.9	-0.4
ORIF	Oris-en-Rattie	85.71	315	⇑iP	P	02 14 41.6	+0.8
	comp=Z,59nm,1.0s,mb5.5						
ORIF				eR			
	comp=Z,320nm,23.0s						
SMRF	Simiane la Rot	85.98	314	⇑iP	P	02 14 43.3	+1.1
	comp=Z,51nm,1.1s,mb5.4						
MEZF	Maizieres J'vi	86.10	318	⇑iP	P	02 14 42.9	+0.3
	comp=Z,93nm,1.2s,mb5.6						
GIVF	Givet	86.16	320	eP	P	02 14 43.3	+0.4
	comp=Z,45nm,1.1s,mb5.3						
GIVF	Givet	86.16	320	eP	P	02 14 43.3	+0.4
GIVF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.3						
BAIF	Baives	86.56	320	⇑iP	P	02 14 45.5	+0.7
	comp=Z,80nm,0.9s,mb5.6						
BAIF	Baives	86.56	320	⇑iP	P	02 14 45.5	+0.7
BAIF				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.7						
VIVF	Saint-Julien-l	86.57	315	⇑iP	P	02 14 45.5	+0.4
	comp=Z,126nm,1.3s,mb5.7						
VIVF	Saint-Julien-l	86.57	315	⇑iP	P	02 14 45.5	+0.4
VIVF				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.7						
SMF	Signal de Mont	87.03	316	⇑iP	P	02 14 47.4	+0.1
	comp=Z,103nm,0.9s,mb5.8						
SMF	Signal de Mont	87.03	316	⇑iP	P	02 14 47.4	+0.1
SMF				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.8						
URZ	Urewera	87.07	129	P	P	02 14 46.1	-1.6
	comp=Z,13nm,0.7s,mb5.2,baz=25,slow=8.5,SNR=6.6						
LASF	Ste Croix	87.21	314	eP	P	02 14 48.9	+0.7
	comp=Z,167nm,1.6s,mb5.7						
SSF	Saint Saulge	87.23	317	⇑iP	P	02 14 48.5	+0.3
SSF				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.5						
SSF	Saint Saulge	87.23	317	⇑iP	P	02 14 48.5	+0.3
	comp=Z,40nm,1.2s,mb5.5						
PLDF	La Plantade	87.23	316	⇑eP	P	02 14 49.0	+0.7
AVF	Avril sur Loir	87.36	317	⇑iP	P	02 14 49.0	+0.2
	comp=Z,95nm,1.1s,mb5.7						
AVF	Avril sur Loir	87.36	317	⇑iP	P	02 14 49.0	+0.2
AVF				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.6						
LBL	Lubilhac	87.55	315	⇑eP	P	02 14 50.9	+1.1
AGO	Saint Agoulin	87.57	316	⇑eP	P	02 14 50.7	+0.8
PYM	Petit Puy Mans	87.68	316	⇑eP	P	02 14 51.2	+0.8
BGF	Bois d'Agland	87.72	316	⇑iP	P	02 14 51.3	+0.7
	comp=Z,106nm,1.1s,mb5.7						
BGF	Bois d'Agland	87.72	316	⇑iP	P	02 14 51.3	+0.7
BGF				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.7						
HYF	Humbligny	87.80	317	⇑iP	P	02 14 51.8	+0.8
TCF	Toulx Ste Croi	88.19	316	⇑iP	P	02 14 53.4	+0.6
	comp=Z,68nm,1.3s,mb5.4						
TCF	Toulx Ste Croi	88.19	316	⇑iP	P	02 14 53.4	+0.6
TCF				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.4						
CAF	Calviac	88.42	315	⇑iP	P	02 14 54.8	+0.9
	comp=Z,59nm,1.2s,mb5.4						
CAF	Calviac	88.42	315	⇑iP	P	02 14 54.8	+0.9
CAF				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.4						
MTLF	Montolieu	88.45	313	⇑iP	P	02 14 55.0	+0.8
	comp=Z,55nm,1.1s,mb5.4						
MTLF	Montolieu	88.45	313	⇑iP	P	02 14 55.0	+0.8
MTLF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.4						
TNA	Tin City	88.49	24	eP	P	02 14 53.6	-0.1
	comp=Z,20nm,1.0s,mb5.3						
RJF	Les Rejaudoux	88.76	315	⇑iP	P	02 14 56.5	+0.9
	comp=Z,65nm,1.1s,mb5.6						
RJF				eR			
	comp=Z,227nm,20.8s						
RJF	Les Rejaudoux	88.76	315	⇑iP	P	02 14 56.5	+0.9
RJF				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.6						
RJF				MLR	MLR		

	comp=Z,230nm,20.8s,MS4.6						
LFF	La Frestale	89.35	315	⇑iP	P	02 14 59.4	+1.0
	comp=Z,59nm,1.1s,mb5.5						
LFF	La Frestale	89.35	315	⇑iP	P	02 14 59.4	+1.0
LFF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.5						
LDF	La Druitiere	89.51	319	eP	P	02 14 59.6	+0.6
	comp=Z,92nm,0.9s,mb5.8						
LDF	La Druitiere	89.51	319	eP	P	02 14 59.6	+0.6
LDF				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.8						
LCP	Cassop	89.55	325	eP	P	02 14 60.0	+0.9
LCP				AMb	AMB	02 15 01.2	
	comp=Z,229nm,1.2s,mb6.4						
FLN	La Foliniere	89.73	319	⇑iP	P	02 15 00.6	+0.6
	comp=Z,103nm,0.9s,mb5.8						
FLN				eR			
	comp=Z,245nm,18.5s						
FLN	La Foliniere	89.73	319	⇑iP	P	02 15 00.6	+0.6
FLN				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.8						
FLN				MLR	MLR		
	comp=Z,250nm,18.5s,MS4.7						
HPK	Haverah Park	89.75	324	eP	P	02 15 00.8	+0.8
HPK				AMb	AMB	02 15 01.0	
	comp=Z,435nm,2.1s,mb6.4						
MFF	Saint Martin d	89.77	317	⇑iP	P	02 15 00.9	+0.6
	comp=Z,126nm,1.3s,mb5.8						
MFF	Saint Martin d	89.77	317	⇑iP	P	02 15 00.9	+0.6
MFF				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.8						
KBI1	Birley Grange	89.79	323	eP	P	02 15 00.8	+0.6
KBI1				AMb	AMB	02 15 02.0	
	comp=Z,178nm,1.2s,mb6.3						
LHO	Holmfirth	89.94	324	eP	P	02 14 58.0	-2.9
KWE	Weaver Farm	90.01	323	eP	P	02 15 01.9	+0.6
KWE				AMb	AMB	02 15 07.8	
	comp=Z,110nm,1.6s,mb5.9						
VNDA	Vanda	90.02	168	P	P	02 15 02.2	+1.3
	comp=Z,5.0nm,1.1s,mb4.8,baz=337,slow=13,SNR=3.7						
VNDA				LR	LR	02 49 58.6	
	comp=Z,236nm,18.1s,MS4.7,baz=300,slow=32						
VNDA	Vanda	90.02	168	P	P	02 15 02.2	+1.3
VNDA				LR	LR	02 49 58.6	
GRR	Gorron	90.03	318	⇑iP	P	02 15 02.2	+0.8
	comp=Z,50nm,0.9s,mb5.5						
GRR	Gorron	90.03	318	⇑iP	P	02 15 02.2	+0.8
GRR				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.5						
DAG	Danmarks Havn	90.38	348	⇓eP	P	02 15 02.0	-0.5
DAG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.2						
DAG	Danmarks Havn	90.38	348	⇓eP	P	02 15 02.0	-0.5
	comp=Z,8.2nm,0.7s,mb5.2						
DAG	Danmarks Havn	90.38	348	⇓iP	P	02 15 02.0	-0.5
	comp=Z,8.2nm,0.7s,mb5.2						
EKA	Eskdalemuir Ar	90.42	326	P	P	02 15 04.1	+1.0
	comp=Z,21nm,0.8s,mb5.5,baz=97,slow=5.0,SNR=31						
ESK	Eskdalemuir	90.45	326	eP	P	02 15 03.8	+0.5
ESK				AMb	AMB	02 15 14.0	
	comp=Z,87nm,1.8s,mb5.8						
EAU	Auchinoon	90.49	326	eP	P	02 15 05.1	+1.6
EAU				AMb	AMB	02 15 07.0	
	comp=Z,128nm,2.1s,mb5.9						
ETSF	Etsaut	90.53	313	eP	P	02 15 05.1	+1.2
	comp=Z,31nm,0.9s,mb5.3						
ETSF	Etsaut	90.53	313	eP	P	02 15 05.1	+1.2
ETSF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
SGMF	Saint Gilles	91.17	318	⇑iP	P	02 15 07.4	+0.6
	comp=Z,68nm,1.0s,mb5.6						
SGMF	Saint Gilles	91.17	318	⇑iP	P	02 15 07.4	+0.6
SGMF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.6						
QUIF	Quistinic	91.62	318	⇑iP	P	02 15 09.3	+0.4
	comp=Z,30nm,0.8s,mb5.3						
QUIF	Quistinic	91.62	318	⇑iP	P	02 15 09.3	+0.4
QUIF				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.4						
ROSF	Rostrenen	91.63	319	⇑iP	P	02 15 09.4	+0.5
	comp=Z,80nm,1.0s,mb5.7						
ROSF	Rostrenen	91.63	319	⇑iP	P	02 15 09.4	+0.5
ROSF				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.7						
ESDC	Sonseca Array	93.53	310	P	P	02 15 19.0	+1.2
	comp=Z,3.0nm,0.7s,mb4.8,baz=60,slow=4.0,SNR=12						
ESDC				PKKPbc		02 32 25.1	
	comp=Z,1.1nm,0.7s,baz=315,slow=2.1,SNR=6.3						
IMA	Indian Mountai	94.01	22	eP	P	02 15 20.3	+1.0
QSPA	South Pole Qui	94.94	180	PFAKE		02 15 40.0	+17
QSPA				LR	LR		
	comp=Z,603nm,20.0s,MS5.1						
SVW2	Sparrevohn	94.97	27	eP	P	02 15 24.8	+0.9
MCK	McKinley	96.80	24	P	P	02 15 31.1	-1.0
MCK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb5.0						
MCK				MLR	MLR		
	comp=Z,260nm,21.0s,MS4.7						
MCK	McKinley	96.80	24	P	P	02 15 31.1	-1.1
	comp=Z,7.0nm,1.1s,mb5.0						
MCK				LR	LR		
	comp=Z,260nm,21.0s,MS4.7						
SUMG	Summit	97.05	347	eP	P	02 15 33.9	+0.8
	comp=Z,20nm,1.1s,mb5.5						
ILAR	Eielson Array	97.13	22	P	P	02 15 32.4	-1.2
	comp=Z,1.7nm,0.8s,mb4.5,baz=295,slow=5.0,SNR=19						
ILAR				PP	PP	02 19 21.3	-11
	comp=Z,1.2nm,0.9s,baz=282,slow=5.6,SNR=5.2						
ILAR				LR	LR	03 06 08.4	
	comp=Z,176nm,20.1s,MS4.5,baz=348,slow=40						
ILAR	Eielson Array	97.13	22	P	P	02 15 32.4	-1.2
ILAR				PP	PP	02 19 21.3	-11
ILAR				LR	LR	03 06 08.4	
SNAA	Sanae	97.14	198	LR	LR	02 54 47.9	
	comp=Z,83nm,18.3s,MS4.3,baz=42,slow=32						
PMR	Palmer	97.65	26	eP	P	02 15 35.7	-0.4
SML	Sawmill	97.90	25	eP	P	02 15 37.3	+0.1
DBIC	Dimbokro	98.95	278	LR	LR	02 57 15.6	
	comp=Z,169nm,21.0s,MS4.5,baz=59,slow=33						
INK	Inuvik	99.54	16	eP	P	02 15 43.6	-0.9
INK				pmax	pmax		
	comp=Z,11nm,1.1s						
INK	Inuvik	99.54	16	LR	LR	03 06 36.5	
	comp=Z,349nm,20.1s,MS4.9,baz=230,slow=39						
INK	Inuvik	99.54	16	eP	P	02 15 43.6	-0.8
	comp=Z,11nm,1.1s,mb5.2						
RES	Resolute Bay	100.21	3	eP	P	02 15 47.5	+0.1
RES				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RES	Resolute Bay	100.21	3	ePdif	P	02 15 47.5	+0.1
	comp=Z,9.5nm,1.0s						
YKA	Yellowknife Ar	109.03	14	P	Pdif	02 16 27.7	+1.1
YKA						02 20 55.0	
YKA	Yellowknife Ar	109.03	14	Pdiff	Pdif	02 16 27.6	+1.0
	comp=Z,0.8nm,1.0s,baz=329,slow=4.6,SNR=8.7						
YKA				PP	PP	02 20 55.0	-8.0
	comp=Z,0.6nm,0.8s,baz=332,slow=7.1,SNR=4.2						
YKA				PKKPbc		02 31 37.9	
	comp=Z,0.6nm,0.8s,baz=150,slow=3.0,SNR=11						
YKA	Yellowknife Ar	109.03	14	Pdif	Pdif	02 16 27.6	+1.0
YKA				P		02 20 24.8	
YKA				PP	PP	02 20 55.0	-8.0
YKA				PKKPbc		02 31 37.9	
EDM	Edmonton	117.31	19	ePKIKP	PKPdf	02 20 46.1	+0.3
SCHQ	Schefferville	118.43	348	PKP	PKPdf	02 20 48.5	+0.5
	comp=Z,2.3nm,0.5s,baz=5.3,slow=7.2,SNR=6.3						
NEW	Newport	120.03	24	PKP	PKPdf	02 20 52.9	+1.7
	comp=Z,4.3nm,0.9s,baz=303,slow=2.2,SNR=10						
MSO	Missoula	122.46	23	ePKPdf	PKPdf	02 20 56.7	+0.7
WVOR	Wild Horse Val	123.86	29	PFAKE		02 21 10.0	+11
WVOR				LR	LR		
	comp=Z,566nm,22.0s,MS5.2						
ULM	Lac du Bonnet	124.19	8	PKP	PKPdf	02 20 59.8	+0.6
	comp=Z,9.3nm,0.9s,baz=322,slow=2.2,SNR=15						
ULM	Lac du Bonnet	124.19	8	PKP	PKPdf	02 20 59.8	+0.6
ULM				LR	LR		
	comp=Z,902nm,22.0s,MS5.4						
DGMT	Dagmar	124.20	15	PFAKE		02 21 10.0	+11
DGMT				LR	LR		
	comp=Z,835nm,19.0s,MS5.4						
BOZ	Bozeman (W)	124.33	22	PFAKE		02 21 10.0	+10
BOZ				LR	LR		
	comp=Z,668nm,21.0s,MS5.3						
MCMT	McKenzie Canyo	124.54	24	ePKPdf	PKPdf	02 21 01.7	+1.6
HLID	Hailey	124.93	26	PFAKE		02 21 10.0	+9.2
HLID				LR	LR		
	comp=Z,712nm,22.0s,MS5.3						
QLMT	Earthquake Lak	125.09	23	ePKPdf	PKPdf	02 21 03.5	+2.4
LAO	LASA Array	125.25	18	ePKPdf	PKPdf	02 21 03.2	+1.8
YFT	Old Faithful	125.64	22	ePKPdf	PKPdf	02 21 05.9	+3.7
LKWY	Lake	125.71	22	ePKIKP	PKPdf	02 21 05.9	+3.6
RRI2	Red Ridge	126.38	23	ePKPdf	PKPdf	02 21 05.9	+2.2
SNOW	Snow King Moun	126.51	23	ePKPdf	PKPdf	02 21 06.0	+2.1
EYMN	Ely	126.97	5	ePKPdf	PKPdf	02 21 06.0	+1.3
NVAR	Mina Array Bea	127.00	32	PKP	PKPdf	02 21 07.6	+2.6
	comp=Z,6.7nm,0.8s,baz=350,slow=1.0,SNR=39						
PDAR	Pinedale Array	127.56	23	PKP	PKPdf	02 21 07.6	+1.6
	comp=Z,6.4nm,0.8s,baz=45,slow=2.1,SNR=37						
HWUT	Hardware Ranch	127.73	25	ePKPdf	PKPdf	02 21 07.4	+1.1
DUG	Dugway	128.35	27	ePKIKP	PKPdf	02 21 09.5	+2.0
TRCR	Troy Canyon	128.47	31	ePKPdf	PKPdf	02 21 10.5	+2.7
NLU	North Lily Min	128.87	26	ePKPdf	PKPdf	02 21 10.8	+2.2
TMUT	Trail Mountain	129.79	26	ePKPdf	PKPdf	02 21 12.9	+2.5
MSU	Marysvale	130.00	28	ePKIKP	PKPdf	02 21 13.6	+2.9
NEN	Nelson	130.91	32	ePKPdf	PKPdf	02 21 15.1	+2.5
PV10	Paradox Valley	131.50	25	ePKPdf	PKPdf	02 21 15.4	+1.8
SDCO	Great Sand Dun	133.46	22	PFAKE		02 21 30.0	+13
SDCO				LR	LR		
	comp=Z,471nm,19.0s,MS5.2						
KSU1	Kansas State U	134.85	13	ePKPdf	PKPdf	02 21 22.3	+2.4
ACSO	Alum Creek Sta	134.93	358	PFAKE		02 21 30.0	+10
ACSO				LR	LR		
	comp=Z,769nm,21.0s,MS5.4						
ANMO	Albuquerque	135.50	25	ePKIKP	PKPdf	02 21 23.1	+2.0
ANMO				MLR	MLR		
	comp=Z,265nm,20.0s						
ANMO	Albuquerque	135.50	25	PKP	PKPdf	02 21 23.9	+2.8
	comp=Z,8.1nm,0.8s,baz=174,slow=1.7,SNR=20						
ANMO				SKPbc		02 24 48.6	
	comp=Z,1.6nm,0.6s,baz=8.8,slow=4.5,SNR=5.9						
BLA	Blacksburg	137.75	354	ePKIKP	PKPdf	02 21 27.9	+2.7
WMOK	Wichita Mounta	138.44	17	ePKHKP		02 21 16.7	
WMOK				MLR	MLR		
	comp=Z,516nm,20.0s,MS5.3						
MNTX	Cornudas Mount	138.74	26	ePKPdf	PKPdf	02 21 27.9	+0.8
WVT	Waverly	138.99	3	ePKIKP	PKPdf	02 21 28.2	+0.7
CPCT	Cooper Cave	139.74	359	PKPdf	PKPdf	02 21 30.4	+1.5
MIAR	Mount Ida	139.87	11	ePKHKP		02 21 21.2	
MIAR				e		02 21 31.2	
LTX	Lajitas	141.52	26	ePKHKP		02 21 28.0	
LTX				MLR	MLR		
	comp=Z,342nm,19.0s,MS5.1						
TXAR	Lajitas Array	141.52	26	PKhKP		02 21 28.2	
	comp=Z,2.1nm,0.6s,baz=257,slow=0.8,SNR=16						
TXAR				PKP	PKPdf	02 21 33.7	+1.4
	comp=Z,5.3nm,0.7s,baz=136,slow=0.2,SNR=22						
TXAR				PP	PP	02 24 36.2	-3.5
	comp=Z,1.9nm,1.1s,baz=27,slow=2.0,SNR=4.9						
TXAR				SKPbc		02 25 05.3	
	comp=Z,1.2nm,0.7s,baz=14,slow=1.6,SNR=4.8						
TXAR	Lajitas Array	141.52	26	PKP	PKPdf	02 21 28.2	-4.1
TXAR				PKP	PKPdf	02 21 33.7	+1.4
TXAR				PP	PP	02 24 36.1	-3.5
TXAR				SKPbc		02 25 05.3	
BDFB	Brasilia	141.97	251	PKP	PKPdf	02 21 36.4	+3.1
	comp=Z,4.6nm,0.8s,baz=28,slow=5.6,SNR=5.8						
JCT	Junction City	142.04	21	ePKHKP		02 21 29.1	
PLCA	Paso Flores	142.08	198	PKhKP		02 21 31.3	
	comp=Z,2.6nm,0.7s,baz=198,slow=6.7,SNR=8.1						
LRAL	Lakeview Retre	142.12	2	ePKPpre		02 21 27.9	
NATX	Nacogdoches	142.34	13	ePKPpre		02 21 22.8	
DWPF	Disney	146.86	354	ePKPdf	PKPdf	02 21 42.0	+0.5
DWPF				ePKPbc	PKPbc	02 21 45.0	+2.0
BBL	Barber's Block	148.86	311	eP	PKPdf	02 21 50.3	+5.3
CBYP	Canovanas	149.99	321	ePKPdf	PKPdf	02 21 47.4	+0.6
CBYP				ePKPbc	PKPdf	02 21 52.8	+6.1
SJG	San Juan	150.30	321	ePKIKP	PKPdf	02 21 53.8	+6.6
TEIG	Tepich	154.73	7	ePKPab	PKPab	02 22 18.6	-1.1
TEIG				LR	LR		
	comp=Z,121nm,21.0s,MS4.7						
LVC	Limon Verde	156.45	221	PKP	PKPdf	02 21 59.6	+3.9
	comp=Z,3.2nm,1.0s,baz=354,slow=1.0,SNR=4.1						
LVC				PKPab	PKPab	02 22 27.4	+0.5
	comp=Z,4.0nm,0.8s,baz=121,slow=3.9,SNR=3.6						
LVC	Limon Verde	156.45	221	PKP	PKPdf	02 21 59.6	+3.9
LVC				PKPab	PKPab	02 22 27.4	+0.5
SAML	Samuel	157.78	259	ePKPdf	PKPdf	02 21 59.2	+1.5
LPAZ	La Paz	159.84	235	ePKIKP	PKPdf	02 22 02.9	+2.9
LPAZ				MLR	MLR		
	comp=Z,292nm,20.0s						
LPAZ	La Paz	159.84	235	PKP	PKPdf	02 22 02.9	+2.9
	comp=Z,4.6nm,0.9s,baz=57,slow=4.9,SNR=8.6						
LPAZ				PKPab	PKPab	02 22 42.4	+0.8
	comp=Z,4.4nm,1.1s,baz=189,slow=7.4,SNR=4.1						
SDV	Santo Domingo	159.94	313	ePKPdf	PKPdf	02 22 02.2	+2.0
SDV				ePKPab	PKPab	02 22 41.0	-1.2
ROSC	El Rosal	165.35	312	PKP	PKPdf	02 22 08.6	+3.0
	comp=Z,15nm,1.0s,baz=1.6,slow=1.6,SNR=10						
ROSC				PKPab	PKPab	02 23 05.5	-0.2
	comp=Z,7.7nm,0.9s,baz=37,slow=2.7,SNR=3.7						
OTAV	Otavalo	171.46	307	ePKPdf	PKPdf	02 22 11.3	+1.7

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*BJI **13** 02:07:38.5,22.60S×66.10W,h241^{km},mB4.9*
*NEIC **13** 02:07:38.5±0.7,22.58S×66.10W,h242^{km}±7^{km},mb4.5/12, Error ellipse: s-maj=13.3km s-min=7.2km az=83.0*
*IDC **13** 02:07:38.8±1.0,22.52S×66.16W,h241^{km}±7^{km},mb3.8/12, mb1 4.0/16,mb1mx3.9/19,mbtmp4.5/16,Error ellipse: s-maj=15.6km s-min=9.4km az=93.0*
*GUC **13** 02:07:40.3±0.8,22.73S×66.67W,h277^{km}±24^{km},ML4.2*
ISC 13 02:07:37.8±0.7,**22.62S**±0.04×**66.15W**±0.09,**h252**^{km}±7^{km}, **n50,**σ**1^{s}24**/50,**mb4.2**/21,**7C-1D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.92	261	⇑iP	P	02 08 22.1	+2.2
SPCH				AMP		02 08 52.2	
	comp=N,556nm,0.6s						
LVC	Limon Verde	2.55	270	⇑iP	P	02 08 27.2	+1.1
LVC				i S	S	02 09 03.3	-0.3
LVC				AMP		02 09 05.5	
	comp=E,541nm,0.5s						
LVC	Limon Verde	2.55	270	P	P	02 08 27.2	+1.1
	comp=E,84nm,0.3s,baz=89,slow=5.9,SNR=698						
LVC				S	S	02 09 03.7	0.0
	comp=E,50nm,0.3s,baz=258,slow=20,SNR=15						
LVC	Limon Verde	2.55	270	⇑iPn	P	02 08 27.1	+1.0
LVC				eSn	S	02 09 03.4	-0.2
ANCH	Antofagasta	4.06	254	eP	P	02 08 47.3	+4.3
ANCH				i S	S	02 09 33.9	+0.3
CPN1	Cerro Paranal	4.39	242	⇑iP	P	02 08 46.9	+0.1
CPN1				i S	S	02 09 38.1	-2.4
LPAZ	La Paz	6.57	343	P	P	02 09 15.0	+1.4
	comp=E,3.1nm,0.3s,baz=153,slow=8.4,SNR=68						
LPAZ				S	S	02 10 29.5	+0.8
	comp=E,1.5nm,0.3s,baz=298,slow=22,SNR=10						
LPAZ	La Paz	6.57	343	⇑ePn	P	02 09 14.8	+1.1
	comp=E,20nm,0.7s						
LPAZ				eSn	S	02 10 29.4	+0.7
ARE	Arequipa	7.93	320	eP	P	02 09 30.0	-0.9
ARE				eS	S	02 10 54.0	-5.5
ZON	Zonda	9.18	194	eP	P	02 09 45.0	-1.7
ZON				eS	S	02 11 15.0	-13
SAML	Samuel	13.88	12	⇑ePn	P	02 10 44.7	-1.0
NNA	Nana	14.69	314	eP	P	02 10 56.2	+0.6
	comp=E,9.2nm,0.8s						
TRQA	Tornquist	15.80	168	eP	P	02 11 05.7	-2.9
PLCA	Paso Flores	18.44	191	P	P	02 11 36.7	-0.2
	comp=E,1.2nm,0.3s,baz=14,slow=13,SNR=29						
PLCA				PcP	PcP	02 15 55.8	-0.1
	comp=E,0.1nm,0.3s,baz=98,slow=8.8,SNR=3.1						
PLCA	Paso Flores	18.44	191	eP	P	02 11 36.2	-0.6
	comp=E,13nm,0.9s						
BDFB	Brasilia	18.48	71	P	P	02 11 37.5	+0.2
	comp=E,3.1nm,0.3s,baz=256,slow=11,SNR=77						
OTAV	Otavalo	25.68	331	P	P	02 12 48.0	+1.1
	comp=E,2.5nm,0.8s,mb3.9						
ROSC	El Rosal	28.45	343	P	P	02 13 11.1	-0.7
	comp=E,1.9nm,0.5s,mb4.0,baz=97,slow=18,SNR=2.7						
SDV	Santo Domingo	31.61	352	P	P	02 13 37.8	-1.7
	comp=E,10nm,0.4s,mb4.8,baz=170,slow=5.1,SNR=22						
SDV	Santo Domingo	31.61	352	eP	P	02 13 37.6	-1.9
	comp=E,9.6nm,0.4s,mb4.7						
USHA	Ushuaia	32.22	182	P	P	02 13 44.8	+0.4
	comp=E,6.2nm,0.8s,mb4.2,baz=120,slow=7.0,SNR=2.5						
RCBR	Riachuelo	33.62	65	eP	P	02 13 56.0	-0.8
	comp=E,22nm,0.5s,mb5.0						
FDF	Fort de France	37.44	8	⇑eP	P	02 14 27.8	-1.1
SJG	San Juan	40.48	360	P	P	02 14 51.7	-2.1
	comp=E,20nm,0.8s,mb4.6,baz=146,slow=6.2,SNR=5.7						
PMSA	Palmer Station	42.17	179	eP	P	02 14 58.9	-8.2
	comp=E,26nm,0.4s,mb5.0						
SNAA	Sanae	60.40	161	P	P	02 17 22.1	-0.1
	comp=E,2.2nm,0.9s,mb3.8,baz=346,slow=12,SNR=5.1						
SNAA	Sanae	60.40	161	eP	P	02 17 22.8	+0.5
	comp=E,195nm,1.2s,mb5.6						
WVT	Waverly	61.92	340	eP	P	02 17 31.1	-1.8
	comp=E,18nm,0.8s,mb4.7						
TXAR	Lajitas Array	63.02	323	P	P	02 17 39.1	-1.1
	comp=E,0.3nm,0.7s,mb3.0,baz=150,slow=7.3,SNR=2.2						
CCM	Cathedral Cave	64.79	338	eP	P	02 17 50.5	-1.1
	comp=E,8.7nm,0.7s,mb4.5						
QSPA	South Pole Qui	67.58	180	⇓iP	P	02 18 10.4	+1.9
	comp=E,8.9nm,0.5s,mb4.7						
ANMO	Albuquerque	68.85	325	P	P	02 18 18.1	+1.1
	comp=E,0.5nm,0.5s,mb3.4,baz=143,slow=6.6,SNR=2.6						
VNDA	Vanda	76.19	190	P	P	02 19 01.6	+2.3
	comp=E,1.4nm,0.8s,mb3.6,baz=31,slow=5.9,SNR=3.8						
PDAR	Pinedale Array	76.37	329	P	P	02 19 02.6	+1.7
	comp=E,0.5nm,0.7s,mb3.3,baz=101,slow=4.6,SNR=3.1						
SCHQ	Schefferville	77.13	360	P	P	02 19 04.9	+0.1
	comp=E,3.2nm,0.7s,mb4.1,baz=122,slow=4.0,SNR=10						
ULM	Lac du Bonnet	77.17	341	P	P	02 19 05.0	-0.2
	comp=E,2.3nm,0.6s,mb4.0,baz=159,slow=4.8,SNR=6.4						
ULM	Lac du Bonnet	77.17	341	P	P	02 19 05.0	-0.2
LBTB	Lobatse	82.23	114	eP	P	02 19 32.7	+0.2
	comp=E,0.8nm,0.4s,mb3.7						
ESDC	Sonseca Array	84.86	43	P	P	02 19 46.1	+0.7
	comp=E,15nm,1.1s,mb4.6,baz=246,slow=4.5,SNR=19						
LSZ	Lusaka	88.13	106	eP	P	02 20 03.5	+1.9
	comp=E,1.3nm,0.8s,mb3.8						
YKA	Yellowknife Ar	93.10	340	P	P	02 20 24.7	+1.0
	comp=E,1.2nm,0.6s,mb4.1,baz=129,slow=4.5,SNR=33						
ASAR	Alice Springs	130.04	204	PKP	PKPdf	02 26 20.2	+1.9
	comp=E,1.4nm,0.7s,baz=137,slow=2.0,SNR=15						
ASAR				SKPbc		02 29 19.4	
	comp=E,1.0nm,0.6s,baz=147,slow=3.3,SNR=11						
WRA	Warramunga Arr	133.21	207	PKP	PKPdf	02 26 26.6	+2.2
	comp=E,0.8nm,0.5s,baz=163,slow=1.8,SNR=10.0						
WRA				SKPbc		02 29 30.7	
	comp=E,0.8nm,0.6s,baz=160,slow=3.0,SNR=8.1						
PMG	Port Moresby	134.42	229	PKP	PKPdf	02 26 28.3	+1.6
	comp=E,20nm,1.1s,baz=334,slow=3.9,SNR=3.3						
BVAR	Borovoye Array	135.22	36	PKP	PKPdf	02 26 30.1	+3.0
	comp=E,0.7nm,0.9s,baz=225,slow=2.0,SNR=3.0						
BVAR				SKPbc		02 29 35.8	
	comp=E,0.2nm,0.5s,baz=342,slow=4.6,SNR=3.2						
ZAL	Zalesovo	141.81	28	PKP	PKPdf	02 26 42.3	+3.3
	comp=E,0.9nm,0.3s,baz=112,slow=5.4,SNR=2.6						
ZAL				SKPbc		02 29 55.1	
	comp=E,1.6nm,0.7s,baz=141,slow=2.0,SNR=7.7						
SONM	Songino Array	154.14	12	PKP	PKPdf	02 27 01.6	+2.8
	comp=E,0.6nm,1.0s,baz=78,slow=2.4,SNR=2.7						
SONM				PKPbc	PKPdf	02 27 09.9	+11
	comp=E,0.5nm,0.6s,baz=45,slow=1.7,SNR=3.6						
SONM				PKPab	PKPab	02 27 24.7	+0.3
	comp=E,0.7nm,0.6s,baz=318,slow=3.9,SNR=4.8						
CN2	Changchun	156.80	338	ePKP	PKPdf	02 27 05.9	+3.5
LZH	Lanzhou	164.00	31	ePKP	PKPdf	02 27 11.5	+1.0
LZH				APKP		02 28 12.0	
LZH				XPKP		02 28 37.5	
NJ2	Nanjing	169.60	336	ePKP	PKPdf	02 27 18.0	+3.2

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*IDC **13** 02:41:05.4±5.6,6.54S×130.14E,h212^{km}±61^{km},mb2.9/1, mb1 3.6/3,mb1mx3.4/12,mbtmp4.0/3,Error ellipse: s-maj=130.3km s-min=20.8km az=76.0*
ISC 13 02:41:02.2±2.1,**6.89S**±0.10×**129.4E**±0.1,**h190**^{km}±24^{km}, **n7,**σ**1^{s}15**/13,**mb3.2**/1,**1C,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	6.54	152	⇑iP	P	02 42 37.2	+0.1
	54nm,0.3s						
KAKA				eS	S	02 43 49.8	-1.2
FITZ	Fitzroy Crossi	11.72	198	eP	P	02 43 44.6	0.0
	11nm,0.4s						
FITZ				eS	S	02 45 51.6	-0.6
WRA	Warramunga Arr	13.85	160	P	P	02 44 12.2	+0.5
	1.8nm,0.3s,baz=346,slow=13,SNR=21						
WRA				S	S	02 46 39.9	-1.3
	2.8nm,0.3s,baz=334,slow=21,SNR=12						
WB2	Warramunga Arr	13.86	160	eP	P	02 44 12.2	+0.5
WB2				eS	S	02 46 41.4	+0.1
ASAR	Alice Springs	17.25	166	P	P	02 44 55.1	+2.0
	1.6nm,0.3s,baz=344,slow=10,SNR=83						
ASAR				S	S	02 48 04.1	+7.0
	0.9nm,0.3s,baz=346,slow=22,SNR=8.0						
ASPA	Alice Springs	17.25	166	eP	P	02 44 55.1	+2.0
ASPA				eS	S	02 48 02.7	+5.6
SONM	Songino Array	58.13	342	P	P	02 50 36.2	-1.9
	0.4nm,0.9s,mb3.2,baz=165,slow=5.8,SNR=4.7						

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*IDC **13** 02:44:01.5±0.7,13.13N×145.43E,mb4.4/14,mb1 4.5/14, mb1mx4.4/22,mbtmp4.4/14,MS3.4/2,Ms1 3.5/2, ms1mx3.1/22,Error ellipse: s-maj=24.3km s-min=20.1km az=106.0*
*NEIC **13** 02:44:02.8±0.4,13.15N×145.39E,h10^{km},mb4.5/12,Error ellipse: s-maj=11.8km s-min=8.9km az=95.0*
ISC 13 02:44:04.8±0.5,**13.12N**±0.08×**145.3E**±0.1,**h33**^{km}**,n36,** σ**0^{s}78**/30,**mb4.4**/26,**MS3.4**/2,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAJO	Matsushiro	24.17	346	P	P	02 49 17.4	-1.8
	4.7nm,0.6s,mb4.1						
MAT	Matsushiro	24.17	346	eP	P	02 49 19.0	-0.2
	7.0nm,1.0s,mb4.0						
MAT				eS	tx	02 55 01.0	
MAT	Matsushiro	24.17	346	P	P	02 49 18.7	-0.5
MAT				S	tx	02 55 01.0	
CTA	Charters Tower	33.02	178	LR	LR	03 02 13.1	
	comp=Z,79nm,18.9s,MS3.4,baz=42,slow=33						
QIZ	Qiongzhong	34.52	284	P	P	02 50 51.3	-1.1
	1.6nm,0.5s,mb4.2						
WRAB	Tennant Creek	34.57	198	eP	P	02 50 52.2	-0.6
	6.6nm,0.7s,mb4.7						
WRA	Warramunga Arr	34.58	198	P	P	02 50 52.1	-0.7
	2.3nm,0.6s,mb4.3,baz=21,slow=9.7,SNR=7.2						
BJT	Baijiatuau	37.05	322	eP	P	02 51 14.2	+0.6
	4.8nm,0.6s,mb4.5						
ENH	Enshi	37.18	303	P	P	02 51 15.3	+0.5
	3.1nm,0.5s,mb4.4						
ASAR	Alice Springs	38.22	197	P	P	02 51 23.6	+0.1
	1.0nm,0.6s,mb3.7,baz=8.1,slow=10,SNR=4.7						
MBWA	Marble Bar	42.32	217	eP	P	02 51 58.1	+0.5
	48nm,1.6s,mb4.9						
CMAR	Chiang Mai Arr	44.82	283	P	P	02 52 19.5	+1.7
	3.7nm,0.6s,mb4.4,baz=82,slow=6.9,SNR=22						
CMAR				PcP	PcP	02 54 00.8	+0.9
	1.4nm,0.6s,baz=82,slow=2.1,SNR=7.1						
CMAR				LR	LR	03 11 35.6	
	comp=Z,38nm,18.4s,MS3.4,baz=277,slow=37						
MA2	Magadan	46.55	4	eP	P	02 52 29.5	-1.5
	6.0nm,0.7s,mb4.6						
ULN	Ulaanbaatar	46.99	325	P	P	02 52 35.3	+0.6
	1.6nm,0.7s,mb4.1						
SONM	Songino Array	47.34	325	P	P	02 52 38.6	+1.2
	0.9nm,0.5s,mb3.9,baz=134,slow=7.2,SNR=13						
SONM				PcP	PcP	02 54 09.1	+0.8
	1.5nm,0.6s,baz=154,slow=3.1,SNR=11						
ZAL	Zalesovo	62.25	324	PcP	PcP	02 55 05.4	+0.3
	1.1nm,0.5s,baz=34,slow=5.3,SNR=5.6						
HYB	Hyderabad	64.25	283	i P	P	02 54 39.0	-0.4
KURK	Kurchatov	65.20	320	eP	P	02 54 44.8	-0.3
	8.0nm,0.8s,mb4.8						
CHKZ	Chkalovo	70.46	322	eP	P	02 55 17.2	-0.5
	4.1nm,0.7s,mb4.5						
BVAR	Borovoye Array	70.54	322	P	P	02 55 18.8	+0.5
	7.3nm,0.5s,mb4.9,baz=103,slow=8.3,SNR=58						
BRVK	Borovoye	70.61	322	eP	P	02 55 19.3	+0.6
INK	Inuvik	74.64	22	P	P	02 55 42.9	+0.7
	4.0nm,0.7s,mb4.5,baz=244,slow=3.5,SNR=4.1						
DLBC	Dease Lake	76.15	33	P	P	02 55 51.9	+0.8
	2.5nm,0.7s,mb4.3,baz=242,slow=9.1,SNR=5.2						
YBH	Yreka Blue Hor	82.87	49	P	P	02 56 28.0	+0.4
	2.1nm,0.7s,mb4.3,baz=288,slow=23,SNR=2.3						
YKW3	Yellowknife Ar	83.06	27	eP	P	02 56 27.6	-0.5
YKA	Yellowknife Ar	83.08	27	P	P	02 56 28.0	-0.2
	1.3nm,0.5s,mb4.2,baz=286,slow=5.1,SNR=21						
BMO	Blue Mountains	86.03	45	eP	P	02 56 44.6	+1.3
	7.7nm,1.4s,mb4.7						
NVAR	Mina Array Bea	86.89	51	P	P	02 56 47.8	+0.1
	0.3nm,0.6s,mb3.7,baz=58,slow=22,SNR=2.8						
ARCES	ARCESS Array B	87.65	342	P	P	02 56 50.6	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	8.0nm,1.1s,mb4.8,baz=74,slow=8.8,SNR=6.9						
FINES	**FINESS Array B**	**91.75**	**335**	P	**P**	**02 57 09.3**	**-0.9**
	1.4nm,0.5s,mb4.5,baz=72,slow=5.9,SNR=19						
NOA	**NORSAR Array B**	**97.63**	**339**	P	**P**	**02 57 36.8**	**-0.2**
	1.1nm,0.8s,mb4.4,baz=131,slow=12,SNR=2.8						
BRTR	**Keskin Array B**	**97.68**	**314**	P	**P**	**02 57 37.4**	**-0.4**
	0.6nm,0.9s,mb4.1,baz=56,slow=4.5,SNR=3.6						
DBIC	**Dimbokro**	**144.41**	**302**	PKP	PKPdf	03 03 39.5	+0.8
	16nm,0.7s,baz=30,slow=2.4,SNR=20						
LVC	**Limon Verde**	**146.18**	**111**	PKPbc	PKPbc	03 03 45.0	+2.4
	2.1nm,0.8s,baz=227,slow=8.4,SNR=5.3						
LVC	**Limon Verde**	**146.18**	**111**	*e*PKPbc	PKPbc	03 03 44.7	+2.1
LPAZ	**La Paz**	**147.54**	**100**	PKPbc	PKPdf	03 03 48.5	+4.6
	1.0nm,0.7s,baz=270,slow=5.1,SNR=3.1						

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*NEIC **13** 02:51:54.8,63.36N×147.36W,h5^{km},ML3.7(PMR), ML3.3(AEIC),After AEIC.*

*IDC **13** 02:51:54.9±1.8,63.41N×147.30W,mb3.1/1,mb1 3.6/3, mb1mx3.4/20,mbtmp3.2/3,ML3.3/2,Error ellipse: s-maj=18.9km s-min=14.4km az=37.0*

ISC 13 02:51:53.9±0.6**,63.38N**±0.02×**147.33W**±0.04**,h3**^{km}±5^{km}**, n71,**σ**0**^{s}**67**/82**,mb3.0**/1**,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RND	**Reindeer**	**0.68**	**273**	P	**Pg**	**02 52 07.9**	**+0.3**
RND				S	**Sg**	**02 52 17.2**	**+0.4**
THY	**Trims Highway**	**0.71**	**86**	P	**Pg**	**02 52 08.4**	**+0.2**
THY				S	**Sg**	**02 52 18.5**	**+0.8**
DDM	**Donnelly Dome**	**0.77**	**58**	P	**Pg**	**02 52 10.0**	**+0.6**
MCK	**McKinley**	**0.80**	**297**	P	**Pg**	**02 52 10.1**	**+0.2**
MCK				S	**Sg**	**02 52 20.7**	**+0.1**
PAX	**Paxson**	**0.94**	**115**	P	**Pb**	**02 52 11.8**	**-0.7**
HDA	**Harding Lake**	**1.04**	**9**	P	**Pb**	**02 52 15.0**	**+0.7**
HUR	**Hurricane**	**1.12**	**250**	P	**Pb**	**02 52 15.8**	**+0.3**
HUR				S	**Sb**	**02 52 31.4**	**+1.1**
BWN	**Browne**	**1.23**	**311**	P	**Pb**	**02 52 17.4**	**-0.1**
CCB	**Clear Creek Bu**	**1.29**	**351**	P	**Pb**	**02 52 18.9**	**+0.5**
TRF	**Thorofare Moun**	**1.33**	**274**	P	**Pb**	**02 52 19.4**	**+0.2**
TRF				S	**Sb**	**02 52 36.9**	**+0.4**
IL1	**Eielson Array**	**1.41**	**8**	P	**Pn**	**02 52 20.6**	**+0.1**
ILAR	**Eielson Array**	**1.41**	**8**	Pg	**Pg**	**02 52 20.6**	**-1.5**
	18nm,0.3s,baz=189,slow=14,SNR=758						
ILAR				Lg		02 52 39.4	
	103nm,0.3s,baz=187,slow=29,SNR=55						
NEA	**Nenana**	**1.43**	**328**	P	**Pn**	**02 52 20.6**	**-0.1**
COLA	**College**	**1.52**	**352**	P	**Pn**	**02 52 22.3**	**+0.2**
COLA				S	**Sb**	**02 52 42.7**	**+0.8**
SCM	**Sheep Creek Mo**	**1.55**	**180**	P	**Pn**	**02 52 22.6**	**0.0**
TZL	**Tazlina**	**1.60**	**146**	P	**Pn**	**02 52 24.1**	**+0.8**
GLM	**Gilmore Dome**	**1.61**	**359**	P	**Pn**	**02 52 23.7**	**+0.2**
KTH	**Kantishna Hill**	**1.62**	**278**	P	**Pn**	**02 52 24.1**	**+0.6**
KTH				S	**Sb**	**02 52 46.4**	**+1.6**
MDM	**Murphy Dome**	**1.63**	**346**	P	**Pn**	**02 52 23.9**	**+0.3**
SML	**Sawmill**	**1.65**	**197**	P	**Pn**	**02 52 23.6**	**-0.3**
CUT	**Chulitna**	**1.66**	**235**	P	**Pn**	**02 52 23.7**	**-0.4**
MENT	**Mentasta**	**1.70**	**104**	P	**Pn**	**02 52 25.3**	**+0.7**
MENT				S	**Sn**	**02 52 48.3**	**+1.2**
GHO	**Glory Hole Cre**	**1.77**	**205**	P	**Pn**	**02 52 25.4**	**-0.3**
PMR	**Palmer**	**1.98**	**206**	P	**Pn**	**02 52 28.5**	**-0.2**
PMR				S	**Sn**	**02 52 54.5**	**+0.2**
KNK	**Knik Glacier**	**2.04**	**195**	P	**Pn**	**02 52 30.2**	**+0.6**
PWA	**Palmer West**	**2.10**	**215**	P	**Pn**	**02 52 30.5**	**+0.1**
MLY	**Manley**	**2.23**	**320**	P	**Pn**	**02 52 31.9**	**-0.3**
VLZ	**Valdez**	**2.31**	**168**	P	**Pn**	**02 52 34.2**	**+0.9**
JPK	**Jack Peak**	**2.36**	**171**	P	**Pn**	**02 52 34.1**	**0.0**
DIV	**Divide**	**2.38**	**161**	P	**Pn**	**02 52 34.6**	**+0.2**
GLI	**Glacier Island**	**2.51**	**177**	P	**Pn**	**02 52 36.7**	**+0.4**
BCA3	**Beaver Creek A**	**2.53**	**95**	P	**Pn**	**02 52 36.6**	**0.0**
GLB	**Gilahina Butte**	**2.54**	**138**	P	**Pn**	**02 52 37.1**	**+0.3**
RC01	**Rabbit Creek A**	**2.56**	**207**	P	**Pn**	**02 52 37.1**	**+0.1**
PWL	**Port Wells**	**2.58**	**191**	P	**Pn**	**02 52 37.5**	**+0.4**
FIB	**Fire Island**	**2.59**	**212**	P	**Pn**	**02 52 36.5**	**-0.8**
FID	**Port Fidalgo**	**2.67**	**171**	P	**Pn**	**02 52 39.1**	**+0.6**
VOGL	**Vogel Lake**	**2.80**	**213**	P	**Pn**	**02 52 40.5**	**+0.1**
STLK	**Strandline Lak**	**2.82**	**230**	P	**Pn**	**02 52 40.6**	**-0.1**
EYAK	**Cordova Ski Ar**	**2.94**	**165**	P	**Pn**	**02 52 42.9**	**+0.5**
HIN	**Hinchinbrook I**	**3.02**	**172**	P	**Pn**	**02 52 43.6**	**0.0**
CKN	**Chakachatna No**	**3.13**	**228**	P	**Pn**	**02 52 45.8**	**+0.7**
BALM	**Baldy**	**3.32**	**133**	P	**Pn**	**02 52 48.8**	**+1.1**
LTI	**Latouche**	**3.36**	**184**	P	**Pn**	**02 52 48.4**	**0.0**
TGL	**Tana Glacier**	**3.38**	**139**	P	**Pn**	**02 52 47.8**	**-0.8**
SEW	**Seward**	**3.44**	**198**	P	**Pn**	**02 52 49.6**	**+0.1**
DAWY	**Dawson**	**3.60**	**75**	P	**Pn**	**02 52 51.5**	**-0.3**
RDT	**Redoubt**	**3.70**	**223**	P	**Pn**	**02 52 53.2**	**0.0**
CTGM	**Chitina Glacie**	**3.71**	**128**	P	**Pn**	**02 52 53.8**	**+0.4**
DFR	**Drift River**	**3.77**	**224**	P	**Pn**	**02 52 54.7**	**+0.5**
IM3	**Indian Mountai**	**3.80**	**316**	P	**Pn**	**02 52 53.6**	**-0.9**
IMA	**Indian Mountai**	**3.83**	**318**	*e*P	**Pn**	**02 52 54.2**	**-0.8**
RDN	**Redoubt North**	**3.85**	**224**	P	**Pn**	**02 52 54.3**	**-1.0**
NCT	**North Crescent**	**3.87**	**226**	P	**Pn**	**02 52 55.0**	**-0.6**
TT01	**Tatalina**	**3.97**	**267**	P	**Pn**	**02 52 56.7**	**-0.4**
COLD	**Coldfoot**	**4.04**	**344**	P	**Pn**	**02 52 58.0**	**-0.1**
BM3	**Burnt Mountain**	**4.21**	**14**	P	**Pn**	**02 53 00.1**	**-0.3**
ILIM	**Iliamna**	**4.26**	**221**	P	**Pn**	**02 52 59.9**	**-1.2**
CNPM	**China Poot**	**4.30**	**208**	P	**Pn**	**02 53 01.8**	**+0.1**
ILW	**Iliamna West**	**4.33**	**222**	P	**Pn**	**02 53 01.9**	**-0.2**
SVW2	**Sparrevohn**	**4.49**	**243**	P	**Pn**	**02 53 02.4**	**-2.0**
OPT	**Oil Point**	**4.69**	**220**	P	**Pn**	**02 53 07.7**	**+0.5**
PCA	**Pinnacle**	**4.71**	**131**	P	**Pn**	**02 53 06.6**	**-0.9**
AUP	**Augustine Pinn**	**4.98**	**219**	P	**Pn**	**02 53 11.0**	**-0.3**
AUI	**Augustine Isla**	**5.01**	**219**	P	**Pn**	**02 53 11.5**	**-0.2**
KAHC	**Katmai Hardscr**	**6.04**	**222**	P	**Pn**	**02 53 25.5**	**-0.7**
KDAK	**Kodiak Island**	**6.18**	**207**	P	**Pn**	**02 53 26.6**	**-1.7**
INK	**Inuvik**	**7.51**	**43**	Pn	**Pn**	**02 53 45.7**	**-1.3**
	0.5nm,0.3s,baz=229,slow=15,SNR=27						
INK				Sn	**Sn**	**02 55 08.1**	**-5.5**
	0.7nm,0.3s,baz=321,slow=18,SNR=6.6						
INK				Lg		02 55 51.6	
	0.2nm,0.3s,baz=274,slow=14,SNR=3.6						
INK	**Inuvik**	**7.51**	**43**	Pn	**Pn**	**02 53 45.7**	**-1.3**
INK				Sn	**Sn**	**02 55 08.1**	**-5.5**
INK				Lg		02 55 51.6	
YKA	**Yellowknife Ar**	**14.83**	**79**	Pn	**P**	**02 55 24.1**	**-1.8**
	0.0nm,0.3s,baz=286,slow=14,SNR=3.5						
TXAR	**Lajitas Array**	**43.97**	**120**	P	**P**	**03 00 03.3**	**-0.4**
	0.2nm,0.6s,mb3.0,baz=330,slow=7.3,SNR=3.3						

IDC 13 02:52:02.7±4.6**,5.21N**×**95.25E,mb3.7**/4**,mb1 3.9**/5**, mb1mx3.7**/18**,mbtmp3.7**/5**,ML3.7**/1**,Error ellipse: s-maj=179.5km s-min=25.2km az=64.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.65**	**15**	Pn	P	02 55 27.6	+7.3
	0.1nm,0.3s,baz=210,slow=12,SNR=5.7						
SONM	**Songino Array**	**43.53**	**11**	P	P	03 00 08.0	-1.8
	0.2nm,0.4s,baz=196,slow=8.7,SNR=5.4						
WRA	**Warramunga Arr**	**45.84**	**124**	P	P	03 00 26.8	-1.9
	1.1nm,0.6s,baz=301,slow=9.2,SNR=6.5						
ASAR	**Alice Springs**	**47.38**	**129**	P	P	03 00 39.1	-1.8
	0.4nm,0.6s,baz=299,slow=7.8,SNR=4.1						
ZAL	**Zalesovo**	**49.32**	**352**	P	P	03 00 53.5	-2.0
	1.1nm,0.6s,baz=241,slow=2.1,SNR=6.0						

IDC 13 02:52:51.0±4.7**,7.19N**×**91.37E,mb3.6**/3**,mb1 3.9**/4**, mb1mx3.6**/18**,mbtmp3.6**/4**,ML4.1**/1**,MS3.5**/1**,Ms1 3.5**/1**, ms1mx2.8**/21**,Error ellipse: s-maj=127.9km s-min=31.8km az=78.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.41**	**33**	Pn	P	02 56 00.8	-4.4
	0.3nm,0.3s,baz=229,slow=15,SNR=7.8						
SONM	**Songino Array**	**42.48**	**15**	P	P	03 00 48.6	-0.9
	0.3nm,0.7s,baz=202,slow=11,SNR=2.3						
ZAL	**Zalesovo**	**46.91**	**355**	LR	LR	03 21 23.9	
	comp=Z,61nm,21.2s,baz=6.8,slow=36						
WRA	**Warramunga Arr**	**50.14**	**123**	P	P	03 01 48.1	-2.4
	0.6nm,0.4s,baz=299,slow=9.1,SNR=8.2						
ASAR	**Alice Springs**	**51.62**	**128**	P	P	03 01 59.9	-1.9
	0.7nm,0.6s,baz=296,slow=6.9,SNR=6.6						

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*NEIC **13** 02:57:34.0,38.60S×175.83E,h150^{km},After WEL.*

WEL 13 02:57:34.1±0.3**,38.59S**×**175.83E,h149**^{km}±2^{km}**,ML3.8**/11**, 6C,Error ellipse: s-maj=2.1km s-min=2.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGZ	**Maungaku**	**0.47**	**208**	P	P	02 57 55.3	-0.3
MGZ	**Maungaku**	**0.47**	**208**	PN	P	02 57 55.3	-0.3
KRVZ	**Karewarewa**	**0.53**	**196**	PN	P	02 57 55.6	-0.3
WTVZ	**West Tongariro**	**0.56**	**199**	⇑PN	P	02 57 55.7	-0.3
TWVZ	**Taurewa**	**0.57**	**212**	⇑PN	P	02 57 55.6	-0.5
NGZ	**Ngauruhoe**	**0.61**	**197**	P	P	02 57 56.0	-0.3
NGZ	**Ngauruhoe**	**0.61**	**197**	PN	P	02 57 56.0	-0.3
CNZ	**Chateau**	**0.65**	**200**	P	P	02 57 56.3	-0.2
CNZ	**Chateau**	**0.65**	**200**	PN	P	02 57 56.3	-0.3
WPVZ	**Whakapapa**	**0.66**	**199**	P	P	02 57 56.3	-0.3
WPVZ	**Whakapapa**	**0.66**	**199**	PN	P	02 57 56.3	-0.2
TUVZ	**Tukino**	**0.69**	**191**	P	P	02 57 56.6	-0.2
TUVZ	**Tukino**	**0.69**	**191**	⇑PN	P	02 57 56.7	-0.1
TUVZ				SN	S	02 58 14.0	-0.2
FWVZ	**Far West T-bar**	**0.70**	**198**	P	P	02 57 56.5	-0.3
FWVZ	**Far West T-bar**	**0.70**	**198**	⇑PN	P	02 57 56.5	-0.3
BKZ	**Black Stump Fm**	**0.78**	**138**	P	P	02 57 57.3	0.0
BKZ				S	S	02 58 14.4	-0.7
BKZ	**Black Stump Fm**	**0.78**	**138**	⇑PN	P	02 57 57.3	0.0
BKZ				SN	S	02 58 14.4	-0.7
MOVZ	**Moawhango**	**0.82**	**184**	P	P	02 57 57.1	-0.5
MOVZ	**Moawhango**	**0.82**	**184**	⇑PN	P	02 57 57.1	-0.5
MOVZ				SN	S	02 58 14.2	-1.5
URZ	**Urewera**	**1.06**	**72**	*e*P	P	02 57 59.1	-0.3
URZ	**Urewera**	**1.06**	**72**	PN	P	02 57 59.1	-0.4
URZ				SN	S	02 58 18.0	-0.9
WAZ	**Wanganui**	**1.34**	**209**	*e*P	P	02 58 01.3	-0.9
WAZ	**Wanganui**	**1.34**	**209**	PN	P	02 58 01.3	-0.9
MWZ	**Matawai**	**1.36**	**80**	*e*P	P	02 58 02.2	-0.2
MWZ	**Matawai**	**1.36**	**80**	PN	P	02 58 02.2	-0.2
MWZ				SN	S	02 58 23.0	-1.2
TSZ	**Takapari Road**	**1.47**	**176**	P	P	02 58 02.8	-0.8
TSZ	**Takapari Road**	**1.47**	**176**	PN	P	02 58 02.8	-0.8
TSZ				SN	S	02 58 26.0	-0.3
KNZ	**Kokohu**	**1.51**	**107**	*e*P	P	02 58 03.9	0.0
KNZ	**Kokohu**	**1.51**	**107**	PN	P	02 58 03.9	0.0
KNZ				SN	S	02 58 25.7	-1.2
PKE	**Pukeiti**	**1.56**	**247**	P	P	02 58 03.3	-1.2
PKE	**Pukeiti**	**1.56**	**247**	PN	P	02 58 03.3	-1.2
PUZ	**Puketiti**	**1.98**	**76**	*e*P	P	02 58 08.5	-0.7
PUZ	**Puketiti**	**1.98**	**76**	PN	P	02 58 08.5	-0.7
PUZ				SN	S	02 58 34.2	-1.9
MRZ	**Mangatainoka R**	**2.08**	**185**	PN	P	02 58 08.4	-2.0
MRZ				SN	S	02 58 34.3	-4.0
BFZ	**Birch Farm**	**2.12**	**171**	*e*P	P	02 58 09.2	-1.7
BFZ	**Birch Farm**	**2.12**	**171**	PN	P	02 58 09.2	-1.7
BFZ				SN	S	02 58 35.7	-3.4
KIW	**Kapiti Island**	**2.38**	**197**	P	P	02 58 11.3	-2.9
KIW	**Kapiti Island**	**2.38**	**197**	PN	P	02 58 11.3	-2.8
KIW				SN	S	02 58 39.8	-5.1
MTW	**Mount Morrison**	**2.58**	**185**	P	P	02 58 13.5	-3.2
MTW	**Mount Morrison**	**2.58**	**185**	PN	P	02 58 13.5	-3.2
MTW				SN	S	02 58 43.5	-5.8
CAW	**Cannon Point**	**2.58**	**193**	PN	P	02 58 13.6	-3.2
MRW	**Makara Radio**	**2.78**	**198**	P	P	02 58 15.8	-3.4
MRW	**Makara Radio**	**2.78**	**198**	PN	P	02 58 15.8	-3.4
MRW				SN	S	02 58 47.8	-5.9
MSWZ	**Moikau Station**	**2.86**	**189**	P	P	02 58 16.7	-3.6
MSWZ	**Moikau Station**	**2.86**	**189**	PN	P	02 58 16.7	-3.6
MSWZ				SN	S	02 58 48.9	-6.7
TUWZ	**Tuamarina**	**3.19**	**206**	PN	P	02 58 20.1	-4.4
TUWZ				SN	S	02 58 56.9	-6.2
NNZ	**Nelson**	**3.23**	**215**	*e*P	P	02 58 20.6	-4.5
NNZ				S	S	02 58 58.9	-5.3
QRZ	**Quartz Range**	**3.39**	**228**	*e*P	P	02 58 18.7	-8.4
THZ	**Tophouse**	**3.88**	**214**	*e*P	P	02 58 28.6	-5.0
KHZ	**Kahutara**	**4.20**	**204**	P	P	02 58 33.1	-4.7
MQZ	**McQueen's Vall**	**5.65**	**204**	*e*P	P	02 58 50.0	-6.9

IDC 13 03:19:08.3±7.9**,2.48N**×**126.63E,mb3.7**/3**,mb1 3.9**/3**, mb1mx3.6**/16**,mbtmp3.8**/3**,Error ellipse: s-maj=165.4km s-min=123.0km az=74.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.53**	**162**	P	P	03 24 20.3	-0.9
	1.8nm,0.6s,baz=340,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**26.93**	**165**	P	P	03 24 51.9	-1.6
	0.3nm,0.6s,baz=353,slow=7.9,SNR=7.3						
STKA	**Stephens Creek**	**37.00**	**159**	P	P	03 26 19.4	-2.1
	2.5nm,0.8s,baz=323,slow=11,SNR=4.5						

CASC 13 03:27:35.8±1.9**,15.10N**×**89.41W,h10**^{km}**,MD4.0,5C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO2	**Montecristo 2**	**0.70**	**176**	⇓*e*P	Pb	03 27 47.5	-2.1
RBDL	**Robledal**	**1.02**	**195**	⇓*e*P	Pb	03 27 53.6	-1.4
RBDL				*e*S	Sb	03 28 10.2	+1.9
NBG	**Las Nubes**	**1.04**	**241**	*e*P	Pb	03 27 54.5	-0.9
NBG				*e*S	Sb	03 28 09.2	+0.4
RTR	**El Retiro**	**1.22**	**191**	⇓*e*P	Pb	03 27 57.4	-1.0
RTR				*e*S	Sb	03 28 15.7	+1.6
SNJE	**San Jose**	**1.24**	**189**	⇑*e*P	Pb	03 27 57.8	-1.1
SBLS	**San Blas**	**1.27**	**189**	⇑*i*P	Pb	03 27 58.3	-1.0
SBLS				*e*S	Sb	03 28 15.8	+0.3
BOQS	**Boqueron**	**1.36**	**175**	⇑*e*P	Pn	03 28 00.1	-0.9
BOQS				*e*S	Sb	03 28 18.7	+0.4
IXG	**Ixpaco**	**1.36**	**228**	⇑*e*P	Pn	03 28 00.1	-0.9
IXG				*e*S	Sb	03 28 20.8	+2.4
LFU	**La Fuente**	**1.37**	**168**	*e*P	Pn	03 28 00.1	-1.0
LBRS	**Las Brisas**	**1.40**	**165**	*e*P	Pn	03 28 00.6	-0.9
LBRS				*e*S	Sb	03 28 20.5	+1.1
LCBS	**La Ceiba**	**1.50**	**164**	⇑*e*P	Pn	03 28 01.9	-1.0
LCBS				*e*S	Sb	03 28 22.4	+0.2
LFRS	**El Faro**	**1.51**	**167**	*e*P	Pn	03 28 02.6	-0.4
LFRS				*e*S	Sb	03 28 22.9	+0.4
SNVI	**San Vicente**	**1.58**	**159**	*e*P	Pn	03 28 04.2	+0.2
SNVI				*e*S	Sb	03 28 25.7	+1.1
TP2	**Tecpan 2**	**1.58**	**259**	*e*P	Pn	03 28 03.9	-0.2
TP2				*e*S	Sb	03 28 27.5	+2.8
CAHU	**Cacacuatique**	**1.76**	**138**	*e*P	Pn	03 28 07.5	+0.9
CAHU				*e*S	Sn	03 28 31.4	+2.0

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*NIED **13** 03:29:00,27.10N×141.10E,h420^{km},Mw5.0 Best double couple: $M_0 4.16\times10^{16}$ NP1:ϕ_s266°,δ86°,λ-171°. NP2: ϕ_s176°,δ81°,λ-4°.*

*MOS **13** 03:29:20.5±0.9,26.78N×140.40E,h441^{km},mb4.7/40, Error ellipse: s-maj=11.6km s-min=6.0km az=107.2*

*NEIC **13** 03:29:23.7±0.2,26.79N×140.31E,mb4.5/48, MW5.0(NIED),Error ellipse: s-maj=4.9km s-min=4.7km az=154.0*

*IDC **13** 03:29:23.1±0.6,26.80N×140.44E,h456^{km}±6^{km},mb4.0/26, mb1 4.2/29,mb1mx4.1/31,mbtmp4.8/29,Error ellipse: s-maj=11.2km s-min=8.3km az=89.0*

*JMA **13** 03:29:24.5±0.1,27.14N×141.06E,h454^{km},M4.6*

*BJI **13** 03:29:25.9,27.03N×139.93E,h462^{km},mB4.9,mb4.6*

ISC 13 03:29:21.4±0.3**,26.74N**±0.03×**140.37E**±0.04**,h448**^{km}±3^{km}**, h447**^{km}±4.1^{km}**:pP-P,n242,**σ**1**^{s}**00**/250**,mb4.4**/85**,4C-9D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.62**	**93**	P	**P**	**03 30 22.0**	**+1.8**
JHHJ				S	**S**	**03 31 07.4**	**+0.7**
CBIJ	**Chichi jima**	**1.66**	**77**	P	**P**	**03 30 21.4**	**+1.0**
	688nm,0.3s,baz=248,slow=19,SNR=339						
CBIJ				S	**S**	**03 31 05.7**	**-1.4**
	1µm,0.3s,baz=291,slow=22,SNR=26						
JHJ2	**Mitsune**	**6.37**	**356**	P	**P**	**03 31 00.4**	**0.0**
JHJ	**Hachijo jima 2**	**6.38**	**356**	P	**P**	**03 31 00.2**	**-0.3**
	206nm,0.3s,baz=221,slow=22,SNR=40						
JHJ				S	**S**	**03 32 18.6**	**-0.1**
	73nm,0.3s,baz=58,slow=22,SNR=6.3						
TK01	**Tokai 1**	**7.40**	**342**	P	**P**	**03 31 14.1**	**+2.6**
BSO1	**Boso 1**	**7.91**	**4**	P	**P**	**03 31 16.6**	**-0.4**
JIM2	**Oshima 3**	**7.99**	**354**	P	**P**	**03 31 17.4**	**-0.5**
BSO3	**Boso 3**	**8.04**	**1**	P	**P**	**03 31 18.1**	**-0.3**
BSO3				*e*S	**S**	**03 32 50.3**	**-0.8**
BSO4	**Boso 4**	**8.22**	**360**	P	**P**	**03 31 20.1**	**-0.4**
JIE	**Ise**	**8.25**	**338**	P	**P**	**03 31 23.7**	**+2.9**
HMMJ	**Hamamatsu 2**	**8.40**	**345**	P	**P**	**03 31 22.9**	**+0.4**
JOD2	**Odawara 2**	**8.57**	**353**	P	**P**	**03 31 25.3**	**+1.0**
JOD2				*e*S	**S**	**03 33 03.3**	**+1.7**
JEG	**Eigenji**	**9.04**	**339**	P	**P**	**03 31 32.4**	**+2.9**
JRY	**Ryogami san**	**9.33**	**353**	P	**P**	**03 31 31.9**	**-0.9**
JHO	**Hitachi**	**9.84**	**1**	P	**P**	**03 31 37.8**	**-0.6**
JHO				S	**S**	**03 33 24.9**	**-2.3**
MAJO	**Matsushiro**	**9.95**	**350**	*e*P	**P**	**03 31 38.0**	**-1.5**
MAJO				*e*S	**S**	**03 33 27.3**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,34nm,0.3s						
MAJO	**Matsushiro**	**9.95**	**350**	*e*P	**P**	**03 31 38.0**	**-1.5**
	comp=Z,34nm,0.3s						
MAJO				*e*S	**S**	**03 33 27.3**	**-2.0**
MAT	**Matsushiro**	**9.95**	**350**	*e*P	**P**	**03 31 38.0**	**-1.5**
MAT				*e*S	**S**	**03 33 32.0**	**+2.7**
MAT				pmax	pmax		
	comp=Z,14nm,0.5s						
MAT	**Matsushiro**	**9.95**	**350**	*e*P	**P**	**03 31 38.0**	**-1.5**
	comp=Z,14nm,0.5s						
MAT				*e*S	**S**	**03 33 32.0**	**+2.7**
MAT	**Matsushiro**	**9.95**	**350**	P	**P**	**03 31 38.0**	**-1.5**
MAT				S	**S**	**03 33 31.6**	**+2.3**
JHK	**Hiroka**	**10.54**	**354**	P	**P**	**03 31 45.0**	**-1.1**
JOW	**Kunigami**	**10.81**	**273**	P	**P**	**03 31 51.2**	**+2.1**
	comp=Z,11nm,0.3s,baz=111,slow=10,SNR=19						
KS15	**Wonju Array Si**	**15.01**	**318**	*e*P	**P**	**03 32 31.5**	**-2.3**
KS15				*e*		03 32 38.8	
SSE	**Sheshan**	**17.34**	**289**	*e*P	**P**	**03 32 53.6**	**-3.8**
SSE				AMB	AMB		
	comp=Z,6.0nm,0.9s						
SSE				AMB	AMB		
	comp=Z,80nm,5.4s						
ASAJ	**Asahikawa**	**17.43**	**5**	P	**P**	**03 32 59.4**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=258,slow=19,SNR=8.3						
NJ2	**Nanjing**	**19.47**	**291**	*e*P	**P**	**03 33 18.8**	**+0.6**
NJ2				XP		03 35 17.8	
NJ2				S	**S**	**03 36 31.0**	**+1.7**
NJ2				SCP		03 40 13.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,280nm,5.0s						
MDJ	**Mudanjiang**	**19.84**	**337**	P	**P**	**03 33 23.1**	**+1.5**
MDJ				S	**S**	**03 36 37.8**	**+2.2**
MDJ				PCP	PcP	03 37 18.9	-0.8
MDJ				SCP		03 40 13.3	
MDJ				PCS		03 40 55.6	
MDJ				SCS	ScS	03 43 56.6	+2.5
MDJ				AMB	AMB		
	comp=Z,24nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,133nm,4.7s						
MDJ	**Mudanjiang**	**19.84**	**337**	*e*P	**P**	**03 33 23.1**	**+1.5**
	comp=Z,14nm,0.6s						
YSS	**Yuzh-Sakhalins**	**20.27**	**5**	*e*P	**P**	**03 33 26.0**	**+0.3**
CN2	**Changchun**	**20.88**	**328**	*e*P	**P**	**03 33 31.8**	**+0.3**
CN2				*e*S	**S**	**03 36 53.8**	**+0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
WHN	**Wuhan**	**23.13**	**286**	*e*P	**P**	**03 33 51.0**	**-1.5**
BJT	**Baijiatuau**	**24.07**	**309**	*e*P	**P**	**03 33 59.5**	**-1.4**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT	**Baijiatuau**	**24.07**	**309**	*e*P	**P**	**03 33 59.5**	**-1.4**
	comp=Z,6.6nm,0.8s,mb4.1						
BJI	**Beijing**	**24.07**	**310**	P	**P**	**03 33 59.9**	**-1.0**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.4						
ENH	**Enshi**	**27.32**	**285**	*e*P	**P**	**03 34 29.8**	**-0.2**
	comp=Z,44nm,1.4s,mb4.7						
HIA	**Hailar**	**27.58**	**330**	*e*P	**P**	**03 34 31.4**	**-0.6**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**27.58**	**330**	*e*P	**P**	**03 34 31.4**	**-0.7**
	comp=Z,7.9nm,0.6s,mb4.3						
HHC	**Hu-ho-hao-te**	**27.62**	**308**	⇓P	**P**	**03 34 32.5**	**0.0**
HHC				PCS		03 41 14.5	
HHC				SCS	ScS	03 44 20.3	-5.0
HHC				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.4						
HHC				AMB	AMB		
	comp=Z,92nm,7.3s						
XAN	**Xi'an**	**28.01**	**293**	P	**P**	**03 34 36.0**	**0.0**
XAN				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.2						
BTO	**Baotou**	**28.63**	**307**	*e*P	**P**	**03 34 36.6**	**-4.8**
CLNS	**Chul'man**	**32.05**	**344**	*e*P	**P**	**03 35 04.9**	**-5.8**
CLNS				pmax	pmax		
	comp=N,8.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
CD2	**Chengdu**	**32.25**	**286**	P	**P**	**03 35 12.8**	**+0.2**
CD2				AMB	AMB		
	comp=Z,28nm,0.8s,mb4.7						
LZH	**Lanzhou**	**32.38**	**296**	*e*P	**P**	**03 35 12.9**	**-0.7**
LZH				AP	pP	03 36 33.0	-2.0
LZH				*e*S	**S**	**03 39 55.0**	**-0.7**
LZH				SS	SS	03 42 35.0	-1.7
LZH				AMB	AMB		
	comp=Z,28nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,67nm,4.5s						
ULN	**Ulaanbaatar**	**33.48**	**318**	*e*P	**P**	**03 35 23.5**	**+0.7**
ULN				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.3						
ULN	**Ulaanbaatar**	**33.48**	**318**	*e*P	**P**	**03 35 23.5**	**+0.7**
	comp=Z,16nm,1.2s,mb4.3						
MA2	**Magadan**	**33.60**	**10**	*e*P	**P**	**03 35 23.6**	**-0.1**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
MA2	**Magadan**	**33.60**	**10**	*e*P	**P**	**03 35 22.6**	**-1.2**
	comp=Z,6.0nm,0.6s,mb4.2						
KMI	**Kunming**	**33.80**	**276**	P	**P**	**03 35 27.8**	**+2.1**
KMI				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.2						
SONM	**Songino Array**	**33.86**	**317**	P	**P**	**03 35 26.1**	**+0.1**
	comp=Z,3.9nm,0.6s,mb4.0,baz=127,slow=7.8,SNR=40						
SONM				PcP	PcP	03 37 51.7	-1.5
	comp=Z,2.5nm,0.8s,baz=126,slow=1.7,SNR=7.7						
SONM				ScP		03 40 53.1	
	comp=Z,1.1nm,0.9s,baz=146,slow=4.0,SNR=5.4						
GTA	**Gaotai**	**35.97**	**301**	*e*P	**P**	**03 35 44.4**	**+0.7**
GTA				AP	pP	03 37 08.3	+1.5
GTA				XP	sP	03 37 59.4	+2.4
GTA				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.2						
YAK	**Yakutsk**	**36.01**	**351**	*e*P	**P**	**03 35 43.1**	**-0.7**
YAK				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.6						
YAK	**Yakutsk**	**36.01**	**351**	*e*P	**P**	**03 35 43.1**	**-0.7**
	comp=Z,13nm,0.5s,mb4.6						
BOD	**Bodaibo**	**36.21**	**336**	⇓*i*P	**P**	**03 35 45.8**	**+0.2**
BOD				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.5						
ZAK	**Zakamensk**	**36.82**	**320**	⇓*i*P	**P**	**03 35 51.3**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.1						
TLY	**Talaya**	**37.20**	**322**	*d i*P	**P**	**03 35 54.8**	**+0.9**
TLY				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
MOY	**Mondy**	**38.68**	**321**	*e*P	**P**	**03 36 06.9**	**+0.9**
MOY				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**38.98**	**267**	*i* P	**P**	**03 36 14.7**	**+5.9**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**38.98**	**267**	P	**P**	**03 36 10.3**	**+1.5**
	comp=Z,2.2nm,0.6s,mb3.8,baz=56,slow=8.4,SNR=15						
CMAR				PcP	PcP	03 38 08.1	-1.0
	comp=Z,0.8nm,0.7s,baz=117,slow=3.2,SNR=4.2						
KAKA	**Kakadu**	**39.96**	**192**	*e*P	**P**	**03 36 16.9**	**+0.1**
	comp=Z,15nm,0.7s,mb4.5						
LSA	**Lhasa**	**43.21**	**286**	*e*P	**P**	**03 36 45.1**	**+2.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.2						
LSA	**Lhasa**	**43.21**	**286**	*e*P	**P**	**03 36 45.1**	**+2.3**
	comp=Z,5.4nm,0.5s,mb4.2						
BILL	**Bilibino**	**44.17**	**14**	⇓*e*P	**P**	**03 36 49.4**	**-0.4**
BILL				*e**PP	pP	03 38 13.3	-2.7
BILL				*e*		03 38 25.4	
BILL				*i* S	**S**	**03 42 52.0**	**+2.5**
BILL				pmax	pmax		
	comp=Z,74nm,1.6s,mb4.9						
BILL				MLR	MLR		
	comp=Z,100nm,21.0s						
BILL	**Bilibino**	**44.17**	**14**	*e*P	**P**	**03 36 49.3**	**-0.5**

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      comp=Z,41nm,0.9s,mb4.9
WMQ   Urumqi            45.47 306   P      P      03 37 01.0 +0.7
WMQ                                 AP     pP     03 38 27.0 +0.1
WMQ                                 PCP    PcP    03 38 30.0 -0.7
WMQ                                 PP     PP     03 38 56.0 +3.3
WMQ                                 S      S      03 43 09.0 +0.9
WMQ                                 AMB    AMB
      comp=Z,31nm,1.0s,mb4.7
WRAB  Tennant Creek     46.76 188  eP      P      03 37 09.8 -0.7
WRAB                                pmax   pmax
      comp=Z,32nm,0.8s,mb4.8
WRAB  Tennant Creek     46.76 188  eP      P      03 37 09.8 -0.8
      comp=Z,32nm,0.8s,mb4.8
WB2   Warramunga Arr    46.77 188⇑iP      P      03 37 09.9 -0.7
WRA   Warramunga Arr    46.77 188   P      P      03 37 10.1 -0.6
      comp=Z,16nm,0.6s,mb4.7,baz=6.0,slow=7.7,SNR=100
WRA                                 pP     pP     03 38 39.3 +1.4
      comp=Z,5.3nm,0.7s,baz=9.5,slow=8.6,SNR=7.8
WRA                                 ScP           03 41 43.1
      comp=Z,2.3nm,0.9s,baz=2.1,slow=4.4,SNR=7.4
WRA   Warramunga Arr    46.77 188   P      P      03 37 10.1 -0.6
WRA                                 pP     pP     03 38 39.3 +1.4
WRA                                 ScP           03 41 43.1
FITZ  Fitzroy Crossi    46.81 199  eP      P      03 37 11.0 +0.1
      comp=Z,15nm,0.9s,mb4.4
CTA   Charters Tower    46.90 172  eP      P      03 37 11.5 -0.1
      comp=Z,3.6nm,0.9s,mb3.8
CTA   Charters Tower    46.90 172  eP      P      03 37 11.5 -0.1
CTA                                 pmax   pmax
      comp=Z,4.0nm,0.9s
CTA   Charters Tower    46.90 172   P      P      03 37 11.7 +0.1
      comp=Z,1.7nm,0.5s,mb3.7,baz=309,slow=6.4,SNR=6.4
ZAL   Zalesovo          48.71 320   P      P      03 37 24.7 -0.2
      comp=Z,4.5nm,0.4s,mb4.1,baz=8.8,slow=7.7,SNR=32
ZAL                                 PcP    PcP    03 38 41.4 -0.9
      comp=Z,4.7nm,0.5s,baz=340,slow=3.5,SNR=12
ZAL                                 ScP           03 41 50.7
      comp=Z,0.9nm,0.5s,baz=314,slow=3.5,SNR=3.8
ZAL   Zalesovo          48.71 320   P      P      03 37 24.7 -0.2
ZAL                                 PcP    PcP    03 38 41.4 -0.9
ZAL                                 ScP           03 41 50.7
NVS   Novosibirsk       49.78 320  iP      P      03 37 30.2 -2.7
NVS                                i              03 38 44.0
NVS                                 pmax   pmax
      comp=Z,15nm,1.5s,mb4.1
NVS                                 pmax   pmax
      comp=N,16nm,2.5s
NVS                                 pmax   pmax
      comp=E,22nm,1.7s
ASAR  Alice Springs     50.50 188   P      P      03 37 37.9 -0.8
      comp=E,2.6nm,0.7s,mb3.7,baz=1.2,slow=5.3,SNR=53
ASAR                                pP     pP     03 39 09.2 +1.7
      comp=E,0.9nm,0.7s,baz=15,slow=11,SNR=4.1
ASAR                                ScP           03 41 59.2
      comp=E,0.9nm,0.7s,baz=5.8,slow=4.8,SNR=6.1
ASPA  Alice Springs     50.50 188  eP      P      03 37 37.8 -0.9
MBWA  Marble Bar        51.64 205  eP      P      03 37 46.1 -1.0
      comp=E,7.5nm,0.6s,mb4.2
KURK  Kurchatov         52.08 315  eP      P      03 37 48.2 -1.8
KURK                               e              03 38 53.1
KURK                                pmax   pmax
      comp=Z,25nm,1.0s,mb4.5
KURK  Kurchatov         52.08 315  eP      P      03 37 48.2 -1.8
      comp=Z,25nm,1.0s,mb4.5
KURK                               ePcP    PcP    03 38 53.1 -1.7
SVW2  Sparrevohn        54.46  32  eP      P      03 38 06.9  0.0
KBK   Karagaybulak      54.79 305   P      P      03 38 10.2 +0.7
      SNR=12
CHMS  Chumysh           54.90 305   P      P      03 38 10.7 +0.4
      SNR=5.8
USP   Ospenovka         55.06 306   P      P      03 38 11.5 +0.1
      SNR=6.6
AAK   Ala-Archa         55.13 305   P      P      03 38 12.5 +0.7
      SNR=6.4
AAK   Ala-Archa         55.13 305d iP     P      03 38 11.0 -0.9
AAK                                 pmax   pmax
      comp=Z,8.0nm,0.7s,mb4.2
AAK   Ala-Archa         55.13 305  eP      P      03 38 10.5 -1.3
      comp=Z,5.3nm,0.7s,mb4.0
UCH   Uchtor            55.16 304   P      P      03 38 13.6 +1.5
      SNR=12
EKS2  Erkin-Say         55.65 305   P      P      03 38 15.9 +0.4
      SNR=5.4
RSO   Redoubt South     55.76  33  eP      P      03 38 14.9 -1.2
AML   Almayashu         55.77 304   P      P      03 38 17.5 +1.1
      SNR=10.0
IMA   Indian Mountai    56.14  27  eP      P      03 38 18.2 -0.4
CHKZ  Chkalovo          57.06 318  eP      P      03 38 23.0 -2.0
CHKZ                               e              03 39 11.9
CHKZ                                pmax   pmax
      comp=Z,27nm,0.9s,mb4.6
CHKZ  Chkalovo          57.06 318  eP      P      03 38 23.0 -2.1
      comp=Z,27nm,0.9s,mb4.6
CHKZ                               ePcP    PcP    03 39 11.8 -2.1
BVAR  Borovoye Array    57.21 318   P      P      03 38 25.7 -0.4
      comp=Z,21nm,0.4s,mb4.8,baz=90,slow=8.9,SNR=123
BVAR                                PcP    PcP    03 39 13.1 -1.5
      comp=Z,6.2nm,0.6s,baz=108,slow=4.7,SNR=7.3
PWA   Palmer West       57.25  32  eP      P      03 38 24.8 -1.4
BRVK  Borovoye          57.27 318  eP      P      03 38 25.7 -0.8
BRVK                               e              03 39 13.9
BRVK                                pmax   pmax
      comp=Z,24nm,0.8s,mb4.6
BRVK  Borovoye          57.27 318  eP      P      03 38 25.7 -0.8
      comp=Z,24nm,0.8s,mb4.6
BRVK                               ePcP    PcP    03 39 13.9 -0.9
PMR   Palmer            57.60  32  eP      P      03 38 26.8 -1.9
MCK   McKinley          57.84  30  eP      P      03 38 29.0 -1.2
MCK                                 pmax   pmax
      comp=Z,16nm,0.8s,mb4.4
MCK   McKinley          57.84  30  eP      P      03 38 29.0 -1.2
      comp=Z,16nm,0.8s,mb4.4
SML   Sawmill           57.99  32  eP      P      03 38 30.0 -1.3
STKA  Stephens Creek    58.30 179  eP      P      03 38 32.1 -1.7
      comp=Z,1.9nm,0.7s,mb3.5
STKA  Stephens Creek    58.30 179   P      P      03 38 32.5 -1.2
      comp=Z,1.9nm,0.7s,mb3.5,baz=301,slow=6.8,SNR=3.9
STKA                                pP     pP     03 40 05.5 -1.0
      comp=Z,1.4nm,0.6s,baz=344,slow=9.6,SNR=2.1
ILAR  Eielson Array     58.80  29   P      P      03 38 34.8 -1.9
      comp=Z,3.6nm,0.5s,mb4.0,baz=255,slow=6.2,SNR=56
THY   Trims Highway     59.24  30  eP      P      03 38 38.7 -1.0
MENT  Mentasta          60.16  31  eP      P      03 38 45.6 -0.2
DAWY  Dawson            62.06  29  eP      P      03 38 57.7 -0.6
DAWY                               ePcP    PcP    03 39 33.1 -0.8
SVE   Sverdlovsk        62.52 322⇑eP      P      03 39 01.5 +0.1
INK   Inuvik            64.03  24  eP      P      03 39 09.6 -1.3
INK                                e              03 39 40.9
INK                                 pmax   pmax
      comp=Z,9.0nm,1.0s
INK   Inuvik            64.03  24   P      P      03 39 09.8 -1.1
      comp=Z,6.9nm,0.6s,mb4.4,baz=292,slow=5.9,SNR=62
INK                                 PcP    PcP    03 39 41.1 -0.8
      comp=Z,1.9nm,0.6s,baz=289,slow=2.8,SNR=4.5
INK   Inuvik            64.03  24  eP      P      03 39 09.6 -1.3
      comp=Z,9.1nm,1.0s,mb4.3
INK                                ePcP    PcP    03 39 40.9 -1.0
DLBC  Dease Lake        67.43  35   P      P      03 39 32.6 +0.4
      comp=Z,2.8nm,0.7s,mb4.0,baz=294,slow=6.8,SNR=9.7
KEV   Kevo              72.78 340  ep      P      03 40 03.1 -0.7
RES   Resolute Bay      72.78  13  eP      P      03 40 03.2 -0.5
RES                                 pmax   pmax
      comp=Z,14nm,0.8s,mb4.5
RES   Resolute Bay      72.78  13  eP      P      03 40 03.1 -0.6
      comp=Z,14nm,0.8s,mb4.5
YKA   Yellowknife Ar    73.22  28   P      P      03 40 05.7 -0.8
      comp=Z,12nm,0.9s,mb4.4,baz=294,slow=5.8,SNR=149
ARCES ARCESS Array B    73.34 341   P      P      03 40 06.7 -0.3
      comp=Z,20nm,0.8s,mb4.7,baz=71,slow=8.5,SNR=56
JOF   Joensuu           74.68 333  ep      P      03 40 13.2 -1.5
      comp=Z,22nm,0.6s,mb4.9
OBN   Obninsk           75.89 325⇓eP      P      03 40 21.4 -0.2
OBN                                e*PP    pP     03 42 00.3 -0.2
OBN                                eS      S      03 49 22.0 -4.6
OBN                                 pmax   pmax
      comp=Z,34nm,1.2s,mb4.8
NLW   Nelson Butte      76.40  43   P      P      03 40 25.2 +0.7
ETW   Entiat            76.61  43   P      P      03 40 26.3 +0.6
NAC   Naches            76.66  44   P      P      03 40 27.0 +1.0
EBG   Ellensburg        76.75  44   P      P      03 40 27.3 +0.8
MXC   Moxie City        77.06  44   P      P      03 40 28.9 +0.7
KAF   Kangasniemi       77.08 334  ep      P      03 40 26.6 -1.4
      comp=Z,33nm,0.6s,mb5.0,baz=55,slow=5.1
KAF   Kangasniemi       77.08 334  eP      P      03 40 26.6 -1.4
KAF                                 pmax   pmax
      comp=Z,33nm,0.6s,mb5.0
KIV   Kislovodsk        77.10 313  eP      P      03 40 29.0 +0.5
KIV                                e              03 40 37.8
KIV                                e*PP    pP     03 42 05.3 -2.4
KIV                                eS      S      03 49 38.3 -1.4
KIV                                 pmax   pmax
      comp=Z,10.0nm,0.8s,mb4.4
KIV   Kislovodsk        77.10 313  eP      P      03 40 28.8 +0.3
      comp=Z,8.3nm,0.6s,mb4.4
GNI   Garni             77.28 309⇑eP      P      03 40 31.1 +1.6
GNI                                 pmax   pmax
      comp=Z,13nm,1.3s
GNI   Garni             77.28 309   P      P      03 40 31.1 +1.5
      comp=Z,1.9nm,0.5s,mb3.9,baz=256,slow=17,SNR=3.7
GNI   Garni             77.28 309  eP      P      03 40 30.5 +0.9
      comp=Z,24nm,1.3s,mb4.6
CROR  Criterion Ridg    77.30  46   P      P      03 40 30.3 +0.8
FINES FINESS Array B    77.54 333   P      P      03 40 30.1 -0.5
      comp=Z,20nm,0.4s,mb4.9,baz=73,slow=5.6,SNR=385
BUOR  Burton Butte      77.61  49   P      P      03 40 32.3 +1.0
OD2   Odessa Site #2    77.69  43   P      P      03 40 31.8 +0.2
EDM   Edmonton          78.06  36  eP      P      03 40 32.9 -0.5
NEW   Newport           78.26  42  eP      P      03 40 34.7 +0.1
NEW                                 pmax   pmax
      comp=Z,16nm,0.8s
NEW   Newport           78.26  42  eP      P      03 40 34.7 +0.1
      comp=Z,16nm,0.8s,mb4.5
LTIM  Timbered Crate    78.59  50   P      P      03 40 37.3 +0.8
SOC   Sochi             79.20 313  eP      P      03 40 38.3 -1.4
SOC                                e              03 43 46.9
SOC                                ePPP    PPP    03 45 34.5 -6.6
SOC                                eS      S      03 49 59.0 -2.6
SOC                                eSS     SS     03 55 21.4 -1.8
SOC                                eSSS    SSS    03 58 49.9 +2.1
SOC                                 pmax   pmax
      comp=N,12nm,0.6s
SOC                                 pmax   pmax
      comp=Z,21nm,0.6s,mb4.8
SOC                                 pmax   pmax
      comp=E,17nm,0.7s
BMO   Blue Mountains    79.70  45  eP      P      03 40 42.2 -0.1
BMO                                 pmax   pmax
      comp=Z,9.0nm,0.8s,mb4.3
BMO   Blue Mountains    79.70  45  eP      P      03 40 42.2 -0.1
      comp=Z,9.4nm,0.8s,mb4.4
ANN   Anapa             80.11 315  eP      P      03 40 54.6 +10
ANN                                 pmax   pmax
      comp=Z,85nm,1.1s,mb5.2
CMB   Columbia Colle    80.73  52  eP      P      03 40 47.8  0.0
CMB                                 pmax   pmax
      comp=Z,12nm,1.0s,mb4.4
CMB   Columbia Colle    80.73  52  eP      P      03 40 47.8  0.0
      comp=Z,12nm,1.0s,mb4.4
SUMG  Summit            80.95 360  eP      P      03 40 48.7 +0.5
      comp=Z,5.0nm,0.6s,mb4.2
AKASG Malin Array Be    81.94 323   P      P      03 40 52.3 -1.4
      comp=Z,14nm,0.5s,mb4.8,baz=51,slow=5.1,SNR=92
NVAR  Mina Array Bea    82.01  51   P      P      03 40 54.6 +0.3
      comp=Z,6.5nm,0.6s,mb4.3,baz=302,slow=5.3,SNR=76
SIM   Simferopol'       82.11 317  eP      P      03 40 56.0 +1.3
SIM                                 pmax   pmax
      comp=Z,23nm,0.7s,mb4.8
HLID  Hailey            82.15  45  eP      P      03 40 55.5 +0.6
      comp=Z,8.2nm,1.1s,mb4.2
MALT  Malatya           82.49 309  eP      P      03 40 57.9 +1.1
MALT                                pmax   pmax
      comp=Z,13nm,0.8s,mb4.5
MALT  Malatya           82.49 309  eP      P      03 40 57.9 +1.2
      comp=Z,13nm,0.8s,mb4.5
MCMT  McKenzie Canyo    82.49  43  eP      P      03 40 56.8 +0.2
BOZ   Bozeman (W)       82.82  42  eP      P      03 40 58.0 -0.2
BOZ                                 pmax   pmax
      comp=Z,8.0nm,0.9s,mb4.2
BOZ   Bozeman (W)       82.82  42  eP      P      03 40 58.0 -0.2
      comp=Z,7.5nm,0.9s,mb4.2
ELK   Elko              82.99  48  eP      P      03 40 59.7 +0.5
ELK                                 pmax   pmax
      comp=Z,15nm,1.1s
ELK   Elko              82.99  48  eP      P      03 40 59.7 +0.5
      comp=Z,15nm,1.1s,mb4.4
HFS   Hagfors           83.10 336   P      P      03 40 57.9 -1.4
      comp=Z,13nm,0.5s,mb4.7,baz=90,slow=3.0,SNR=67
SUW   Suwalki           83.10 328  eP      P      03 40 59.0 -0.5
SUW                                 pmax   pmax
      comp=Z,78nm,1.0s,mb5.2
SUW   Suwalki           83.10 328  eP      P      03 40 59.0 -0.5
      comp=Z,78nm,1.0s,mb5.2
NB2   NORSAR Subarra    83.33 338   P      P      03 40 59.6 -0.9
      comp=Z,13nm,0.5s,mb4.7,baz=56,slow=5.0
NB2   NORSAR Subarra    83.33 338   P      P      03 40 59.6 -0.9
NB2                                 pmax   pmax
      comp=Z,13nm,0.5s,mb4.7
NB2   NORSAR Subarra    83.33 338   P      P      03 40 59.6 -0.9
      baz=56,slow=5.1
NOA   NORSAR Array B    83.33 338   P      P      03 40 59.6 -0.9
      comp=Z,13nm,0.5s,mb4.7,baz=47,slow=4.9,SNR=49
QLMT  Earthquake Lak    83.36  43  eP      P      03 41 02.2 +1.2
YMR   Madison River     83.73  43  eP      P      03 41 04.4 +1.6
YFT   Old Faithful      83.92  43  eP      P      03 41 06.8 +3.0
TRCR  Troy Canyon       83.92  50  eP      P      03 41 04.0  0.0
HVU   Hansel Valley     84.08  46  eP      P      03 41 05.8 +1.1
LKWY  Lake              84.12  43  eP      P      03 41 07.7 +2.9
LKWY                                pmax   pmax
      comp=Z,18nm,0.8s,mb4.7
LKWY  Lake              84.12  43  eP      P      03 41 07.7 +2.9
      comp=Z,18nm,0.8s,mb4.7
IMW   Indian Meadow     84.15  44  eP      P      03 41 06.2 +1.2
RRI2  Red Ridge         84.20  44  eP      P      03 41 06.5 +1.3
MOOW  Moose Ponds       84.34  44  eP      P      03 41 07.0 +1.1
TPAW  Teton Pass        84.35  44  eP      P      03 41 07.3 +1.3
DUG   Dugway            84.87  47  eP      P      03 41 09.2 +0.6
DUG                                 pmax   pmax
      comp=Z,11nm,0.9s,mb4.5
DUG   Dugway            84.87  47  eP      P      03 41 09.2 +0.7
      comp=Z,12nm,0.9s,mb4.5
HWUT  Hardware Ranch    84.95  46  eP      P      03 41 08.8 -0.1
      comp=Z,13nm,1.0s,mb4.5
BRTR  Keskin Array B    85.05 312   P      P      03 41 09.1 -0.3
      comp=Z,4.1nm,0.7s,mb4.2,baz=94,slow=3.2,SNR=24
CFR   Carcaliu          85.58 319   P      P      03 41 11.7 -0.2
BW06  Boulder Array     85.60  44  eP      P      03 41 12.2 +0.2
      comp=Z,2.4nm,0.8s,mb3.9
PDAR  Pinedale Array    85.60  44   P      P      03 41 12.2 +0.1
      comp=Z,2.6nm,0.7s,mb4.0,baz=245,slow=1.9,SNR=18
PFO   Pinyon Flat Ob    85.62  55  eP      P      03 41 12.3 -0.1
PFO                                 pmax   pmax
      comp=Z,12nm,0.9s,mb4.5
PFO   Pinyon Flat Ob    85.62  55  eP      P      03 41 12.2 -0.1
      comp=Z,12nm,0.9s,mb4.5
DAU   Daniels Canyon    85.77  47  eP      P      03 41 13.2 +0.3
BURAR Bucovina Array    85.85 322   P      P      03 41 13.6 +0.5
HARR  Harsova           85.97 319   P      P      03 41 14.0 +0.2
MVU   Marysvale         86.14  49  eP      P      03 41 15.2 +0.5
      comp=Z,3.5nm,0.9s,mb4.0
MSU   Marysvale         86.16  49  eP      P      03 41 15.4 +0.6
KOLS  Kolonicke sedl    86.64 324  eP      P      03 41 16.3 -0.5
MLR   Muntele Rosu      86.68 320   P      P      03 41 17.5 +0.4
      comp=Z,2.5nm,0.6s,mb4.2,baz=320,slow=2.0,SNR=7.1
SRU   San Rafael        86.94  47  eP      P      03 41 18.6  0.0
SNX   Sinaia            87.00 320   P      P      03 41 18.3 -0.4
CRVS  Cervenica-Dubn    87.08 325  eP      P      03 41 21.0 +2.0
OJC   Ojcow             87.09 326  eP      P      03 41 18.4 -0.6
NIE   Niedzica          87.34 326  eP      P      03 41 19.1 -1.1
OKC   Ostrava-Krasne    88.15 327  eP      P      03 41 23.5 -0.5
PV10  Paradox Valley    88.31  47  eP      P      03 41 25.9 +0.8
KSP   Ksiaz             88.37 328  eP      P      03 41 24.8 -0.2
PSZ   Piszkesteto       88.51 325  eP      P      03 41 24.6 -1.1
PSZ                                 pmax   pmax
      comp=Z,13nm,0.9s,mb4.8
PSZ   Piszkesteto       88.51 325   P      P      03 41 25.7  0.0
PSZ   Piszkesteto       88.51 325  eP      P      03 41 24.6 -1.1
      comp=Z,13nm,0.9s,mb4.8
ULM   Lac du Bonnet     88.62  32   P      P      03 41 25.9 -0.2
      comp=Z,3.4nm,0.9s,mb4.2,baz=294,slow=3.6,SNR=6.8
ULM   Lac du Bonnet     88.62  32   P      P      03 41 25.9 -0.3
VYHS  Vyhne             88.68 325  iP      P      03 41 26.7 +0.2
DPC   Dobruska-Polom    88.69 328  eP      P      03 41 26.5  0.0
UPC   Upice             88.73 328  eP      P      03 41 26.6 -0.1
PV01  Paradox Valley    88.75  47  eP      P      03 41 27.6 +0.5
VRAC  Vranov            89.26 327   P      P      03 41 29.1 -0.1
      comp=Z,10nm,0.8s,mb4.7,baz=53,slow=3.8,SNR=15
SRO   Srobarova         89.39 325  eP      P      03 41 30.2 +0.4
PVCC  Panska Ves        89.39 329  eP      P      03 41 29.5 -0.3
BRG   Berggiesshubel    89.44 329  eP      P      03 41 29.7 -0.3
BRG                                 pmax   pmax
      comp=Z,7.0nm,0.9s,mb4.5
BRG   Berggiesshubel    89.44 329  eP      P      03 41 29.7 -0.3
      comp=Z,7.0nm,0.9s,mb4.5
CLL   Collm             89.56 330  iP      P      03 41 29.3 -1.2
CLL                                 pmax   pmax
      comp=Z,9.0nm,0.9s,mb4.6
CLL   Collm             89.56 330  iP      P      03 41 29.3 -1.2
      comp=Z,9.0nm,0.9s,mb4.6
CLL                                e              03 41 54.0
CLL   Collm             89.56 330   P      P      03 41 29.3 -1.2
      comp=Z,logA/T=1.0,mb4.6
ZST   Bratislava        89.75 326  eP      P      03 41 31.7 +0.2
PRU   Pruhonice         89.78 328  eP      P      03 41 30.2 -1.3
NKC   Novy Kostel       90.57 330  eP      P      03 41 35.1 -0.1
KHC   Kasperske Hory    90.82 328⇓eP      P      03 41 35.9 -0.5
KHC   Kasperske Hory    90.82 328  eP      P      03 41 36.0 -0.4
KHC   Kasperske Hory    90.82 328  eP      P      03 41 36.0 -0.4
GERES GERESS Array B    90.96 328   P      P      03 41 36.2 -0.8
      comp=Z,13nm,1.1s,mb4.8,baz=34,slow=4.8,SNR=21
SDCO  Great Sand Dun    90.98  46  eP      P      03 41 38.0 +0.6
      comp=Z,8.4nm,1.0s,mb4.6
PERS  Pernice           91.80 326  iP      P      03 41 40.5 -0.4
ANMO  Albuquerque       91.94  49  eP      P      03 41 42.7 +0.8
ANMO                                pmax   pmax
      comp=Z,8.0nm,0.8s
ANMO  Albuquerque       91.94  49  eP      P      03 41 42.7 +0.8
      comp=Z,7.9nm,0.8s,mb4.7
GOLS  Golise            91.96 325⇑iP      P      03 41 41.4 -0.3
BOJS  Bojanci           92.50 325  iP      P      03 41 39.0 -5.3
ROBS  Robic             92.87 326  eP      P      03 41 38.4 -7.6
TXAR  Lajitas Array     97.11  52   P      P      03 42 06.0 +0.4
      comp=Z,1.8nm,0.6s,mb4.5,baz=312,slow=2.7,SNR=29
SYO   Syowa Base       118.53 204 ⇓Pdiff  Pdif   03 43 44.3 +5.0
DBIC  Dimbokro         132.69 310   PKP    PKPdf  03 47 45.3 +0.4
      comp=Z,3.6nm,0.8s,baz=287,slow=23,SNR=4.3
DBIC                                SKPbc         03 50 31.6
      comp=Z,4.9nm,0.7s,baz=68,slow=4.8,SNR=5.1
SDV   Santo Domingo    133.53  45  ePKPdf  PKPdf  03 47 46.6 +0.1
ROSC  El Rosal         134.03  52   PKP    PKPdf  03 47 49.7 +2.2
      comp=Z,1.5nm,0.5s,baz=254,slow=23,SNR=4.1
PLCA  Paso Flores      150.92 127   PKPbc  PKPdf  03 48 23.7 +8.0
      comp=Z,5.7nm,0.7s,baz=231,slow=4.5,SNR=21
SAML  Samuel           151.53  56  ePKPbc  PKPdf  03 48 24.9 +7.5
LPAZ  La Paz           151.58  74   PKPbc  PKPdf  03 48 26.6 +9.2
      comp=Z,8.6nm,0.7s,baz=327,slow=3.1,SNR=34
LPAZ  La Paz           151.58  74  ePKPbc  PKPdf  03 48 26.0 +8.6
BDFB  Brasilia         166.48  37   PKPab  PKPab  03 49 42.1 +1.0
      comp=Z,1.3nm,0.7s,baz=324,slow=6.5,SNR=3.2
```

MEX 13 03:33:13.3±0.5**, 16.91N×101.25W, h13**$^{km}\pm 31^{km}$**, MD3.8, Near coast of Guerrero**

```
Code  Station Name       Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC      h  m  s     ISC
ZIIG  Zihuatanejo        0.73 343  eP     Pb     03 33 25.3 -2.0
ZIIG                               eS     Sb     03 33 34.5 -2.3
CAIG  El Cayaco          0.95  81  eP     Pb     03 33 28.1 -3.0
CAIG                               iS     Sb     03 33 39.9 -3.3
ACX   Acapulco           1.27  92  eP     Pb     03 33 33.5 -3.1
ACX                                eS     Sb     03 33 48.5 -4.2
```

NEIC ***13*** *04:02:33.8, 37.90S×176.16E, h276*^{km}*, After WEL.*

WEL 13 04:02:33.8±0.6**, 37.64S×175.98E, h260**$^{km}\pm 6^{km}$**, ML4.0**/11**, Error ellipse: s-maj=9.3km s-min=8.8km az=90.0, North Island**

```
Code  Station Name       Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC      h  m  s     ISC
URZ   Urewera            1.08 125  eP     P      04 03 10.2 -0.4
URZ   Urewera            1.08 125   PN    P      04 03 10.2 -0.4
URZ                                 SN    S      04 03 39.1 -0.2
MGZ   Maungaku           1.40 194   P     P      04 03 13.1 +0.4
MGZ   Maungaku           1.40 194  ePN    P      04 03 13.1 +0.3
MWZ   Matawai            1.40 120  eP     P      04 03 12.8 +0.1
MWZ                                 S     S      04 03 42.9 -0.1
MWZ   Matawai            1.40 120   PN    P      04 03 12.8  0.0
MWZ                                 SN    S      04 03 42.9 -0.1
NGZ   Ngauruhoe          1.56 191   P     P      04 03 14.1 +0.2
NGZ   Ngauruhoe          1.56 191   PN    P      04 03 14.1 +0.3
BKZ   Black Stump Fm     1.57 165   P     P      04 03 13.8 -0.2
BKZ   Black Stump Fm     1.57 165   PN    P      04 03 13.7 -0.2
BKZ                                 SN    S      04 03 43.9 -1.3
CNZ   Chateau            1.59 192   PN    P      04 03 14.7 +0.6
TUVZ  Tukino             1.64 189   PN    P      04 03 14.9 +0.4
FWVZ  Far West T-bar     1.64 192   PN    P      04 03 14.9 +0.4
MOVZ  Moawhango          1.77 186   PN    P      04 03 14.8 -0.6
PUZ   Puketiti           1.85 104   P     P      04 03 15.8 -0.4
PUZ   Puketiti           1.85 104   PN    P      04 03 15.8 -0.4
PUZ                                 SN    S      04 03 49.0  0.0
KNZ   Kokohu             1.91 136  eP     P      04 03 16.0 -0.7
KNZ   Kokohu             1.91 136   PN    P      04 03 16.0 -0.7
WAZ   Wanganui           2.25 200   P     P      04 03 19.2 -0.5
WAZ   Wanganui           2.25 200   PN    P      04 03 19.2 -0.6
TSZ   Takapari Road      2.41 180   P     P      04 03 19.4 -1.9
TSZ   Takapari Road      2.41 180   PN    P      04 03 19.4 -1.9
MRZ   Mangatainoka R     3.03 186   P     P      04 03 25.3 -2.4
MRZ   Mangatainoka R     3.03 186   PN    P      04 03 25.3 -2.4
BFZ   Birch Farm         3.04 176  eP     P      04 03 25.6 -2.2
BFZ   Birch Farm         3.04 176   PN    P      04 03 25.6 -2.1
KIW   Kapiti Island      3.32 194   P     P      04 03 28.2 -2.7
CAW   Cannon Point       3.53 191   P     P      04 03 30.3 -2.9
NNZ   Nelson             4.10 209   P     P      04 03 36.2 -3.5
QRZ   Quartz Range       4.16 219  eP     P      04 03 36.6 -3.8
THZ   Tophouse           4.75 209  eP     P      04 03 43.2 -4.2
KHZ   Kahutara           5.12 201   P     P      04 03 48.1 -3.8
DSZ   Denniston Nort     5.21 217  eP     P      04 03 48.5 -4.5
LTZ   Lake Taylor        5.87 208  eP     P      04 03 56.6 -4.5
```

IDC 13 04:04:13.2±23.0**, 15.54S×172.89W, mb4.3**/4**, mb1 4.4**/4**, mb1mx3.9**/18**, mbtmp4.3**/4**, MS3.3**/1**, Ms1 3.2**/1**, ms1mx2.8**/26**, 1D, Error ellipse: s-maj=439.9km s-min=152.2km az=71.0, Samoa Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC      h  m  s     ISC
CTA   Charters Tower    39.09 257   P     P      04 11 42.4 -1.7
      1.3nm,0.5s,baz=107,slow=9.5,SNR=5.1
STKA  Stephens Creek    44.40 240  eP     P      04 12 26.2 -1.3
      2.7nm,1.1s
STKA  Stephens Creek    44.40 240   P     P      04 12 25.6 -1.8
      3.3nm,0.8s,baz=105,slow=9.1,SNR=10
STKA                                LR    LR     04 29 47.4
      comp=Z,38nm,21.0s,baz=1.2,slow=35
WRA   Warramunga Arr    50.29 257   P     P      04 13 11.8 -2.0
      1.3nm,0.7s,baz=92,slow=7.0,SNR=17
ASAR  Alice Springs     50.54 252   P     P      04 13 13.8 -1.9
      9.2nm,0.5s,baz=88,slow=8.3,SNR=228
ASPA  Alice Springs     50.54 252⇓iP     P      04 13 13.6 -2.1
```

IDC 13 04:29:53.3±1.9**, 18.88N×145.16E, mb3.6**/4**, mb1 4.0**/4**, mb1mx3.6**/20**, mbtmp3.6**/4**, Error ellipse: s-maj=180.6km s-min=24.6km az=113.0, Mariana Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC      h  m  s     ISC
WRA   Warramunga Arr    40.01 196   P     P      04 37 30.5 -1.3
      0.6nm,0.5s,baz=15,slow=8.6,SNR=5.1
ASAR  Alice Springs     43.69 195   P     P      04 37 59.8 -2.2
      0.3nm,0.3s,baz=11,slow=6.5,SNR=4.9
ILAR  Eielson Array     63.71  26   P     P      04 40 27.2 -1.4
      0.3nm,0.8s,baz=248,slow=5.7,SNR=6.9
NVAR  Mina Array Bea    83.43  52   P     P      04 42 22.3 -1.9
      0.6nm,0.6s,baz=254,slow=4.3,SNR=6.4
```

NEIC ***13*** *05:03:57.3±1.0, 17.35S×178.83W, h531*$^{km}\pm 18^{km}$*, mb4.4/5, Error ellipse: s-maj=32.9km s-min=13.5km az=142.0*

IDC ***13*** *05:04:01.3±3.3, 17.46S×179.03W, h563*$^{km}\pm 34^{km}$*, mb3.8/6, mb1 3.9/6, mb1mx3.3/17, mbtmp4.7/6, Error ellipse: s-maj=51.8km s-min=23.3km az=149.0*

ISC 13 05:03:57.9±1.3**, 17.2S**±0.3**×178.5W**±0.4**, h606**$^{km}\pm 53^{km}$**, n20,** $\sigma 0\overset{s}{.}52$/19**, mb4.5**/10**, 2D, Fiji Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID        Time       Res
                                   Op     ISC      h  m  s     ISC
AFI   Afiamalu           7.24  64  eP     P      05 05 50.6 -0.2
      24nm,0.4s
ARMA  Armidale          30.25 239  eP     P      05 09 22.7 -0.2
CNB   Canberra Magne    33.81 231  eP     P      05 09 53.1 +0.3
```

```
      154nm,0.6s
PMG   Port Moresby       34.27 279   P      P       05 09 57.7 +0.8
      15nm,0.8s,mb4.7,baz=63,slow=9.0,SNR=4.0
TOO   Toolangi           37.57 230  eP      P       05 10 24.2 +0.5
      0.3nm,0.4s
STKA  Stephens Creek     38.92 240  eP      P       05 10 35.0 +0.3
      5.9nm,0.6s,mb4.3
STKA  Stephens Creek     38.92 240   P      P       05 10 35.3 +0.6
      7.9nm,0.6s,mb4.4,baz=83,slow=8.8,SNR=20
WB2   Warramunga Arr     44.68 259⇓ iP      P       05 11 19.7 -0.7
WRAB  Tennant Creek      44.69 259  eP      P       05 11 19.7 -0.7
      6.8nm,0.6s,mb4.3
WRA   Warramunga Arr     44.69 259   P      P       05 11 19.8 -0.7
      3.4nm,0.4s,mb4.2,baz=96,slow=7.2,SNR=68
WRA                                  PcP    PcP     05 12 53.5 +3.8
      0.6nm,0.8s,baz=85,slow=3.9,SNR=4.6
ASAR  Alice Springs      44.92 254   P      P       05 11 22.1  0.0
      35nm,0.4s,mb5.2,baz=89,slow=8.0,SNR=762
ASAR                                 PcP    PcP     05 12 54.0 +3.5
      1.1nm,0.5s,baz=111,slow=3.8,SNR=5.0
ASAR                                 S      S       05 17 16.8 -0.9
      0.7nm,0.8s,baz=85,slow=15,SNR=4.7
ASPA  Alice Springs      44.92 254⇓ iP      P       05 11 22.1 -0.1
KAKA  Kakadu             47.53 268  eP      P       05 11 42.4 +0.4
      7.6nm,0.2s,mb4.9
FORT  Forrest            50.25 244  eP      P       05 12 01.3 -0.7
      392nm,0.5s
FITZ  Fitzroy Crossi     53.08 260  eP      P       05 12 23.1 +0.8
      6.8nm,0.4s,mb4.3
KLBR  Kellerberrin       59.09 243  eP      P       05 13 03.6 +0.2
      104nm,0.7s,mb5.1
NWAO  Narrogin (SRO)     59.48 242   P      P       05 13 06.4 +0.4
      4.8nm,0.7s,mb3.7,baz=103,slow=7.8,SNR=5.6
CMAR  Chiang Mai Arr     88.57 290   P      P       05 15 54.8 +5.6
      0.6nm,0.4s,mb3.8,baz=116,slow=3.0,SNR=4.3
BRTR  Keskin Array B    144.22 315   PKP    PKPdf   05 22 31.6 +5.8
      0.7nm,0.5s,baz=112,slow=1.0,SNR=4.5
GERES GERESS Array B    146.90 345   PKPbc  PKPbc   05 22 40.8 +8.4
      0.8nm,0.6s,slow=2.9,SNR=4.1
```

IDC 13 05:05:50.4±3.5**, 4.83N**×**93.61E, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.6**/17**, mbtmp3.6**/4**, ML4.0**/1**, Error ellipse: s-maj=112.1km s-min=31.2km az=65.0, Off west coast of northern Sumatera**

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                     Op     ISC      h  m  s    ISC
CMAR  Chiang Mai Arr     14.51  21   Pn     P       05 09 18.2 -1.1
      0.2nm,0.3s,baz=217,slow=13,SNR=5.7
SONM  Songino Array      44.23  12   P      P       05 14 00.7 -2.6
      0.2nm,0.6s,baz=194,slow=8.2,SNR=4.1
WRA   Warramunga Arr     46.99 123   P      P       05 14 23.7 -1.8
      0.7nm,0.5s,baz=300,slow=9.1,SNR=5.5
WRA                                  pP     pP      05 14 34.4 +8.9
      1.2nm,0.6s,baz=301,slow=9.1,SNR=7.4
ASAR  Alice Springs      48.43 128   pP     pP      05 14 46.9  +10
      0.5nm,0.9s,baz=324,slow=7.8,SNR=3.5
ZAL   Zalesovo           49.48 353   P      P       05 14 42.8 -1.7
      0.4nm,0.4s,baz=312,slow=23,SNR=2.4
```

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*DJA **13** 05:16:49.5±1.0, 9.91S×116.01E, h33^{km}, ML5.1/4, Error ellipse: s-maj=23.3km s-min=12.8km az=161.0*

ISC 13 05:16:49.0±2.3**, 9.8S**±0.2×**115.98E**±0.09**, h67**^{km}±44^{km}**, n5, σ0^{s}79**/8**, 3C-4D, South of Bali**

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                     Op     ISC      h  m  s    ISC
RATI  Rata                1.16 337⇑ ePn     P       05 17 09.2 -0.5
      3μm,0.2s
KEDI  Kedomdong           1.31   6⇓ ePn     P       05 17 12.3 +0.4
      2μm,0.3s
KEDI                              ⇓ eSn     S       05 17 28.5 -0.3
KELI  Kelakatan           2.15 317⇓ ePn     P       05 17 24.4 +1.0
      911nm,0.2s
KELI                              ⇓ eSn     S       05 17 49.4 +0.5
SRDI  Scrawed             2.24 306⇑ ePn     P       05 17 24.6  0.0
      869nm,0.2s
SRDI                              ⇑ eSn     S       05 17 50.2 -0.9
WB2   Warramunga Arr     20.40 122  eP      P       05 21 22.8 -0.2
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*NEIC **13** 05:19:42.8, 47.70N×26.68E, h5^{km}, ML4.1(BUC), After BUC.*

CSEM 13 05:19:41.0±0.8**, 47.96N**×**26.91E, h30**^{km}**, ML4.1, 6C-8D, Error ellipse: s-maj=18.9km s-min=9.2km az=28.0, Romania**

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                     Op     ISC      h  m  s    ISC
IAS   Iasi                0.88 150⇑ iP      Pn      05 19 58.0 +0.5
IAS                                 i S     Sb      05 20 08.0 -1.2
IAS   Iasi                0.88 150⇑ iP      Pn      05 19 58.0 +0.6
IAS                                 i S     Sb      05 20 08.0 -1.1
BURAR Bucovina Array      1.19 254⇓ iP      Pn      05 20 01.9 +0.1
BURAR                               i S     Sn      05 20 15.2 -1.9
BURAR Bucovina Array      1.19 254⇓ iP      Pn      05 20 01.9 +0.1
BURAR                               i S     Sn      05 20 15.2 -1.9
KIS   Kishinev            1.61 126  eS      Sn      05 20 32.0 +4.2
VRI   Vrincioaia          2.09 183⇓ iP      Pn      05 20 16.9 +2.2
VRI                                 i S     Sn      05 20 40.6 +0.5
VRI   Vrincioaia          2.09 183⇓ iP      Pn      05 20 16.9 +2.1
VRI                                 i S     Sn      05 20 40.6 +0.5
MLR   Muntele Rosu        2.55 195⇑ iP      Pn      05 20 21.8 +0.5
MLR                                 i S     Sn      05 20 54.0 +2.3
MLR   Muntele Rosu        2.55 195⇑ iP      Pn      05 20 21.8 +0.5
MLR                                 i S     Sn      05 20 54.0 +2.3
CFR   Carcaliu            2.90 163⇓ iP      Pn      05 20 26.5 +0.1
CFR                                 i S     Sn      05 20 59.3 -1.3
CFR   Carcaliu            2.90 163⇓ iP      Pn      05 20 26.5 +0.1
CFR                                 i S     Sn      05 20 59.3 -1.3
HARR  Harsova             3.34 167⇑ iP      Pn      05 20 32.0 -0.5
HARR  Harsova             3.34 167⇑ iP      Pn      05 20 32.0 -0.5
TIRR  Tirgusor            3.65 163⇓ iP      Pn      05 20 36.9  0.0
TIRR                                i S     Sn      05 21 17.9 -1.5
TIRR  Tirgusor            3.65 163⇓ iP      Pn      05 20 36.9  0.0
TIRR                                i S     Sn      05 21 18.0 -1.5
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*DHMR **13** 05:25:49.0±2.8, 14.69N×63.30E, h10^{km}, mb5.1*

*BJI **13** 05:26:46.1, 11.37N×57.32E, h10^{km}, mB5.3, mb4.8, Ms4.7, Msz4.5*

*MOS **13** 05:26:52.5±1.2, 11.99N×57.81E, h10^{km}, mb5.2/61, Error ellipse: s-maj=7.8km s-min=4.3km az=115.8*

*IDC **13** 05:26:52.9±0.6, 11.92N×57.99E, mb4.6/21, mb1 4.7/21, mb1mx4.7/24, mbtmp4.6/21, MS4.2/12, Ms1 4.2/12, ms1mx4.0/18, Error ellipse: s-maj=15.0km s-min=14.8km az=175.0*

*CSEM **13** 05:26:52.4±0.1, 11.98N×57.80E, h8^{km}, mb5.0/64, Ms4.1, Mw5.1, Error ellipse: s-maj=4.0km s-min=2.3km az=4.0*

*NEIC **13** 05:26:54.5±0.3, 11.96N×57.84E, h10^{km}, mb5.0/71, MS4.2/7, Error ellipse: s-maj=8.3km s-min=5.2km az=196.0*

*HRVD **13** 05:26:54.5±0.2, 11.98N×57.81E, h14^{km}±1^{km}, MW5.1/63, Centroid moment Tensor Solution. LP body waves: s43,c63;Mantle waves: s63,c117; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.42±.14; $M_{\theta\theta}$-3.86±.15; $M_{\phi\phi}$4.28±.17; $M_{r\theta}$2.28±.39; $M_{\theta\phi}$-3.75±.13; $M_{\phi r}$-0.53±.29; Best double couple: $M_0$6.02×10^{16} NP1: ϕ_s203°, δ67°, λ-5°. NP2: ϕ_s295°, δ85°, λ-157°. Principal axes: T 6.03, Plg12°, Azm67°; N -.019, Plg67°, Azm306°; P -6.009, Plg20°, Azm161°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*OMAN **13** 05:26:57.2, 11.90N×58.38E, h60^{km} Error ellipse: s-maj=55.9km s-min=6.6km az=332.0*

ISC 13 05:26:52.5±0.2**, 11.92N**±0.04×**57.87E**±0.02**, h10**^{km}**, (h16**^{km}±2.1^{km}**:pP-P), n337, σ1^{s}20**/344**, mb4.9**/117**, MS4.3**/37**, 27C-26D, Owen Fracture Zone region**

```
Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                     Op     ISC      h  m  s    ISC
SHAO  Shalim              6.44 341   P      Pn      05 28 32.6 +2.9
      SNR=30
RBK   Rabkut              6.58 328   P      Pn      05 28 36.4 +4.6
      SNR=17
ABTO  Aybut               6.98 321   P      Pn      05 28 41.7 +4.4
      SNR=50
WHFO  Wadi Hawf           7.15 327 ⇓ P      Pn      05 28 43.6 +3.8
      SNR=141
MUKL  Al Mukalla          8.96 287⇓ eP      P       05 29 04.4 -0.6
MUKL                                 AML    AML     05 29 07.2
JMDO  Jabal Madar        10.39   1 ⇓ P      P       05 29 24.4 -0.3
      SNR=61
WBK   Wadi Bani Khal     10.68   6 ⇓ P      P       05 29 27.7 -1.0
      SNR=34
BSYO  Bisya              10.76 357   P      P       05 29 30.6 +0.8
      SNR=50
BSY   Bisya              10.78 357 ⇓ P      P       05 29 30.6 +0.5
      SNR=50
SMDO  Samad              11.07   1   P      P       05 29 33.6 -0.5
      SNR=16
ARQ   Araqi              11.42 354 ⇑ P      P       05 29 40.0 +1.1
      SNR=31
HOQ   Hoqain             11.61 357   P      P       05 29 42.1 +0.8
      SNR=23
BDHA  Al Bayda'          12.16 281⇓ eP      P       05 29 49.9 +1.1
BDHA                                 AMb    AMB     05 29 52.1
      comp=Z,36nm,1.1s
BDHA  Al Bayda'          12.16 281⇓ eP      P       05 29 49.9 +1.1
      comp=Z,18nm,1.1s
BDHA  Al Bayda'          12.16 281  eP      P       05 29 49.3 +0.5
      comp=Z,24nm,1.3s
LBOS                     12.45 280⇓ eP      P       05 29 53.7 +0.9
LBOS                                 AMb    AMB     05 29 54.8
      comp=Z,269nm,1.8s
TRBA  At Turbah          13.48 277⇓ eP      P       05 30 07.4 +0.9
BHJ   Bhuj               15.90  43  eP      P       05 30 38.9 +0.8
BHJ                                 e               05 33 16.6
GOA   Goa                15.90  75  e       P       05 30 46.1 +7.8
MNGI  Mangalore          16.59  85  i P     P       05 30 44.9 -2.1
MNGI                                i               05 34 10.8
KAD   Karad              16.67  69  eP      P       05 30 47.8 -0.1
KAD                                 e               05 30 54.4
      comp=Z,119nm,1.3s
POO   Poona              16.76  65⇓ iP      P       05 30 49.0  0.0
      comp=Z,70nm,1.0s
POO                                 e               05 33 44.0
HYB   Hyderabad          20.74  72⇑ eP      P       05 31 35.0 -1.0
HYB                                  pmax   pmax
      comp=Z,70nm,1.0s
HYB   Hyderabad          20.74  72⇑ iP      P       05 31 35.0 -1.0
      comp=Z,233nm,1.6s
HYB                                 eS      S       05 35 30.0 +7.5
AJM   Ajmer              21.43  45  i P     P       05 31 43.0 +0.1
BHPL  Bhopal             21.75  56  eP      P       05 31 47.6 +1.4
BHPL                                e               05 31 49.2
      comp=Z,154nm,1.1s
NGP   Nagpur             22.26  63  eP      P       05 31 52.5 +1.2
NGP                                 e               05 36 04.8
PALK  Pallekele          22.98 100  eP      P       05 32 01.5 +2.9
      comp=Z,42nm,1.3s,mb4.7
PALK  Pallekele          22.98 100  eP      P       05 32 01.5 +2.9
      comp=Z,42nm,1.3s,mb4.7
DGAR  Diego Garcia       24.07 142   P      P       05 32 11.1 +1.9
DGAR                                 pmax   pmax
      comp=Z,205nm,1.3s,mb5.4
DGAR  Diego Garcia       24.07 142   P      P       05 32 11.1 +1.9
      comp=Z,205nm,1.3s,mb5.4
KMBO  Kilima Mbogo       24.24 239  i P     P       05 32 12.7 +1.9
KMBO                                 pmax   pmax
      comp=Z,23nm,0.9s
KMBO  Kilima Mbogo       24.24 239   P      P       05 32 12.7 +1.9
      comp=Z,23nm,0.9s,mb4.6,baz=45,slow=12,SNR=50
KMBO                                 LR     LR      05 42 28.0
      comp=Z,870nm,18.4s,MS4.3,baz=275,slow=38
KMBO  Kilima Mbogo       24.24 239  eP      P       05 32 12.4 +1.6
      comp=Z,86nm,1.4s,mb5.0
KMBO                                 LR     LR
      comp=Z,810nm,19.0s,MS4.2
KMBO  Kilima Mbogo       24.24 239  eP      P       05 32 12.4 +1.6
      comp=Z,86nm,1.4s,mb5.0
BHD   Baghdad            24.57 332  eP      P       05 32 06.0 -7.9
BHD                                 eS      S       05 36 28.0 -3.8
BHD                                 eLR     LR      05 41 59.0
NDI   New Delhi          24.58  44  eP      P       05 32 16.0 +2.0
VIS   Vishakhapatnam     25.27  74  eP      P       05 32 22.2 +1.5
VIS                                 e               05 32 34.7
      comp=Z,112nm,1.3s
BLSP  Bilaspur           25.29  63  eP      P       05 32 20.9 +0.1
DDI   Dehra Dun          26.18  43  e       P       05 32 31.6 +2.5
THN   Thein Dam          26.19  36  eP      P       05 32 27.4 -1.7
EIL   Elat               27.66 313   P      P       05 32 44.1 +1.4
      comp=Z,8.3nm,1.1s,mb4.3,baz=85,slow=28,SNR=3.3
EIL                                  LR     LR      05 43 10.6
      comp=Z,752nm,18.9s,MS4.3,baz=130,slow=35
EIL   Elat               27.66 313  eP      P       05 32 42.8 +0.1
      comp=Z,12nm,0.9s,mb4.5
EIL   Elat               27.66 313  eP      P       05 32 42.8 +0.1
      comp=Z,12nm,0.9s,mb4.5
ASF   Jabal al Asfar     27.89 320   P      P       05 32 47.0 +2.3
      comp=Z,13nm,1.1s,mb4.5,baz=53,slow=4.9,SNR=6.2
GKN   Gorkha             29.71  53  eP      P       05 33 01.5 +0.3
      comp=Z,51nm,1.2s,mb5.1
BEST  Besiri             29.82 333  i P     P       05 33 04.4 +2.4
DMN   Daman              29.91  55  eP      P       05 33 03.6 +0.7
      comp=Z,26nm,0.8s,mb5.0
KKN   Kakani             30.13  54  eP      P       05 33 05.6 +0.8
      comp=Z,66nm,1.2s,mb5.2
PKI   Pulchoki           30.14  55  eP      P       05 33 05.5 +0.6
      comp=Z,113nm,1.5s,mb5.4
GNI   Garni              30.41 340  eP      P       05 33 08.3 +1.1
GNI                                  pmax   pmax
      comp=Z,20nm,0.8s
GNI                                  MLR    MLR
      comp=Z,530nm,19.0s
GNI   Garni              30.41 340   P      P       05 33 09.2 +2.0
      comp=Z,19nm,0.8s,mb4.9,baz=218,slow=2.2,SNR=11
GNI   Garni              30.41 340  eP      P       05 33 08.3 +1.1
      comp=Z,20nm,0.8s,mb4.9
GNI                                  LR     LR
      comp=Z,530nm,19.0s,MS4.2
GNI   Garni              30.41 340  eP      P       05 33 08.3 +1.1
      comp=Z,20nm,0.8s,mb4.9
GUN   Gumba              30.66  55  eP      P       05 33 10.4 +0.9
      comp=Z,185nm,1.4s,mb5.7
JIRN  Jiri               30.80  55  eP      P       05 33 11.2 +0.5
      comp=Z,72nm,1.4s,mb5.3
GZT   Gaziantep          31.19 328  i P     P       05 33 16.8 +2.7
ELZG  Elazig             31.36 331  i P     P       05 33 18.1 +2.5
MALT  Malatya            31.49 330  eP      P       05 33 18.9 +2.2
MALT                                 pmax   pmax
      comp=Z,27nm,1.1s,mb5.0
MALT  Malatya            31.49 330  eP      P       05 33 18.9 +2.2
      comp=Z,27nm,1.1s,mb5.0
KAHT  Ahir Dag           31.76 327  i P     P       05 33 21.5 +2.4
KSH   Kashi              31.82  27  eP      P       05 33 20.0 +0.4
KSH                                 eAP     pP      05 33 25.3 +2.7
KSH                                 eXP     sP      05 33 27.8 +3.9
KSH                                 ePP     PP      05 34 26.3 +1.2
KSH                                 ePCP    PcP     05 36 10.1 -0.6
KSH                                 eS      S       05 38 28.3 -0.5
KSH                                 eSCS    ScS     05 43 48.5 -1.3
KSH                                  AMB    AMB
      comp=Z,30nm,1.0s,mb5.1
KSH                                  AMB    AMB
      comp=Z,190nm,3.7s
KSH                                  LR     LR
      comp=N,420nm,6.3s
KSH                                  LR     LR
      comp=E,400nm,6.2s
AVNT  Avonos             33.68 327  i P     P       05 33 37.7 +1.9
AAK   Ala-Archa          33.84  22c iP      P       05 33 38.4 +1.2
AAK                                  pmax   pmax
      comp=Z,14nm,1.1s,mb4.8
AAK                                  MLR    MLR
      comp=Z,400nm,16.0s,MS4.2
AAK   Ala-Archa          33.84  22  eP      P       05 33 37.9 +0.8
      comp=Z,18nm,1.0s,mb5.0
AAK   Ala-Archa          33.84  22  eP      P       05 33 37.9 +0.7
      comp=Z,18nm,1.0s,mb5.0
KIV   Kislovodsk         34.50 340   P      P       05 33 44.7 +1.9
      comp=Z,232nm,1.0s,SNR=8.1
KIV   Kislovodsk         34.50 340  eP      P       05 33 43.4 +0.6
KIV                                 e               05 34 58.7
KIV                                 ePPP    PPP     05 35 08.5 -8.3
KIV                                 e               05 36 20.4
KIV                                 eS      S       05 39 05.0 -5.3
KIV                                  pmax   pmax
      comp=E,11nm,1.2s
KIV                                  pmax   pmax
      comp=Z,47nm,1.2s,mb5.3
KIV                                  MLR    MLR
      comp=N,191nm,16.0s,MS4.0
KIV                                  MLR    MLR
      comp=E,118nm,16.0s,MS4.0
KIV                                  MLR    MLR
      comp=Z,292nm,16.0s,MS4.1
KIV   Kislovodsk         34.50 340  eP      P       05 33 44.0 +1.2
      comp=Z,50nm,1.1s,mb5.3
KIV                                  LR     LR
      comp=Z,77nm,20.0s,MS3.4
KIV   Kislovodsk         34.50 340  eP      P       05 33 44.0 +1.2
      comp=Z,50nm,1.1s,mb5.3
SHL   Shillong           34.84  62  eP      P       05 33 46.0 +0.1
BRTR  Keskin Array B     35.01 327   P      P       05 33 48.7 +1.4
      comp=Z,12nm,1.0s,mb4.8,baz=144,slow=11,SNR=35
CTKT  Corum              35.06 329  i P     P       05 33 48.4 +0.6
SOC   Sochi              35.23 337  eP      P       05 33 47.6 -1.5
SOC                                 e               05 35 02.2
SOC                                 ePPP    PPP     05 35 19.7 -6.8
SOC                                 e               05 36 15.7
SOC                                 eS      S       05 39 17.1 -4.6
SOC                                 eSS     SS      05 41 33.8 -4.2
SOC                                 e               05 44 01.9
SOC                                  pmax   pmax
      comp=Z,30nm,0.7s,mb5.3
SOC                                  pmax   pmax
      comp=N,26nm,0.8s
SOC                                  pmax   pmax
      comp=E,14nm,0.8s
SOC                                  MLR    MLR
      comp=Z,393nm,21.0s,MS4.1
SOC                                  MLR    MLR
      comp=N,297nm,20.0s,MS4.3
SOC                                  MLR    MLR
      comp=E,406nm,20.0s,MS4.3
GOF   Gofitskoye         35.37 342  eP      P       05 33 54.0 +3.7
GOF                                  pmax   pmax
      comp=Z,20nm,1.0s,mb5.0
ISP   Isparta            35.55 321  eP      P       05 33 52.5 +0.6
ISP                                  pmax   pmax
      comp=Z,16nm,1.0s,mb4.9
ISP   Isparta            35.55 321  eP      P       05 33 52.5 +0.6
      comp=Z,16nm,1.0s,mb4.9
BOYT  Boyabat            35.61 330  i P     P       05 33 53.8 +1.5
LSA   Lhasa              35.61  55  eP      P       05 33 51.3 -1.1
LSA   Lhasa              35.61  55   P      P       05 33 51.1 -1.3
LSA                                  pmax   pmax
      comp=Z,5.0nm,0.6s,mb4.6
LSA   Lhasa              35.61  55   P      P       05 33 51.0 -1.4
      comp=Z,4.9nm,0.6s,mb4.6
LSA   Lhasa              35.61  55   P      P       05 33 51.0 -1.4
      comp=Z,4.9nm,0.6s,mb4.6
ELDT  Eldivan            35.67 327  i P     P       05 33 54.4 +1.4
ESKT  Eskisehir          36.43 324  i P     P       05 34 00.8 +1.4
BALT  Daday              36.45 328  i P     P       05 34 01.0 +1.5
HENT  Hendek             37.28 325  i P     P       05 34 07.5 +1.1
IDI   Anoyia             37.84 313   P      P       05 34 13.5 +2.4
      comp=Z,28nm,0.8s,mb5.0,baz=115,slow=8.6,SNR=9.4
KDAG  Bornova            37.92 319  i P     P       05 34 13.1 +1.3
SIM   Simferopol'        38.68 333  eP      P       05 34 21.0 +2.9
SIM                                  S      S       05 40 22.0 +7.6
SIM                                  pmax   pmax
      comp=Z,27nm,0.8s,mb5.0
LSZ   Lusaka             39.92 228  eP      P       05 34 29.7 +1.0
LSZ                                  pmax   pmax
      comp=Z,5.0nm,0.9s,mb4.2
LSZ   Lusaka             39.92 228  eP      P       05 34 29.7 +1.0
      comp=Z,5.4nm,0.9s,mb4.3
LSZ   Lusaka             39.92 228  eP      P       05 34 29.7 +1.0
      comp=Z,5.4nm,0.9s,mb4.3
CM31  Chiang Mai Arr     40.10  76  eP      P       05 34 31.8 +1.6
      comp=Z,3.4nm,0.3s,mb4.5
CM31  Chiang Mai Arr     40.10  76  eP      P       05 34 31.8 +1.6
      comp=Z,3.4nm,0.3s,mb4.5
CMAR  Chiang Mai Arr     40.10  76  i P     P       05 34 31.7 +1.5
CMAR                                 pmax   pmax
      comp=Z,11nm,0.9s
CMAR  Chiang Mai Arr     40.10  76   P      P       05 34 30.9 +0.6
      comp=Z,11nm,0.9s,mb4.6,baz=274,slow=8.6,SNR=60
CMAR                                 LR     LR      05 49 36.1
      comp=Z,310nm,21.1s,MS4.1,baz=255,slow=34
CHG   Chiang Mai         40.13  75 ⇓ P      P       05 34 31.4 +1.0
      comp=Z,15nm,1.0s,mb4.7
MKAR  Makanchi Array     40.41  26  i P     P       05 34 33.1 +0.7
MKAR                                 pmax   pmax
      comp=Z,4.0nm,0.6s
WMQ   Urumqi             40.87  33   P      P       05 34 37.0 +0.8
WMQ                                  XP     sP      05 34 44.0 +3.5
WMQ                                  PP     PP      05 36 15.0 +1.3
WMQ                                  S      S       05 40 47.0 -0.3
WMQ                                  AMB    AMB
      comp=Z,13nm,0.1s,mb5.5
WMQ                                  LR     LR
      comp=N,483nm,20.0s,MS4.5
WMQ                                  LR     LR
      comp=E,457nm,20.0s,MS4.5
WMQ                                  LR     LR
      comp=Z,225nm,19.0s,MS4.0
NST   Nakhon Sawan       41.17  80   P      P       05 34 41.1 +2.1
HARR  Harsova            41.51 328   P      P       05 34 42.7 +1.2
HARR  Harsova            41.51 328⇑ iP      P       05 34 42.5 +1.0
HARR  Harsova            41.51 328⇑ iP      P       05 34 42.5 +1.0
CFR   Carcaliu           41.73 328⇓ iP      P       05 34 43.9 +0.6
NANT  Nan                41.79  75   P      P       05 34 43.5 -0.6
BVAR  Borovoye Array     42.21  11   P      P       05 34 47.8 +0.7
      comp=Z,3.0nm,0.8s,mb4.0,baz=194,slow=6.1,SNR=13
BRVK  Borovoye           42.22  11  eP      P       05 34 47.3 +0.1
BRVK                                 pmax   pmax
      comp=Z,6.0nm,0.8s,mb4.3
BRVK  Borovoye           42.22  11  eP      P       05 34 47.3 +0.1
      comp=Z,5.7nm,0.8s,mb4.2
BRVK  Borovoye           42.22  11  eP      P       05 34 47.3 +0.1
      comp=Z,5.7nm,0.8s,mb4.2
KURK  Kurchatov          42.24  20  eP      P       05 34 47.7 +0.2
KURK                                 pmax   pmax
      comp=Z,24nm,0.9s,mb4.8
KURK  Kurchatov          42.24  20  eP      P       05 34 47.7 +0.2
      comp=Z,24nm,0.9s,mb4.8
KURK                                e               05 34 57.2
KURK                                 LR     LR
      comp=Z,127nm,21.0s,MS3.8
VTS   Vitosha            42.87 322   P      P       05 34 54.3 +1.6
CHKZ  Chkalovo           42.87  11  eP      P       05 34 52.9 +0.4
CHKZ                                 pmax   pmax
      comp=Z,28nm,1.0s,mb5.0
CHKZ  Chkalovo           42.87  11  eP      P       05 34 52.9 +0.3
      comp=Z,28nm,1.0s,mb5.0
CHKZ  Chkalovo           42.87  11  eP      P       05 34 52.9 +0.4
      comp=Z,28nm,1.0s,mb5.0
VRI   Vrincioaia         42.93 328⇑ iP      P       05 34 54.9 +1.8
VRI   Vrincioaia         42.93 328⇑ iP      P       05 34 54.8 +1.7
MLR   Muntele Rosu       43.09 327   P      P       05 34 57.0 +2.5
MLR   Muntele Rosu       43.09 327⇑ iP      P       05 34 56.4 +1.9
MLR   Muntele Rosu       43.09 327⇑ iP      P       05 34 56.4 +1.9
IAS   Iasi               43.41 330   P      P       05 34 57.9 +0.9
SKO   Skopje             43.61 320  i P     P       05 34 59.0 +0.3
KMI   Kunming            44.33  66   P      P       05 35 09.0 +4.2
KMI                                  AP     pP      05 35 15.8 +8.0
KMI                                  XP     sP      05 35 18.9  +10
KMI                                  S      S       05 41 35.4 -2.9
KMI                                  AMB    AMB
      comp=Z,18nm,1.0s,mb4.8
KMI                                  LR     LR
      comp=N,267nm,26.2s,MS4.3
KMI                                  LR     LR
      comp=E,448nm,26.2s,MS4.3
KMI                                  LR     LR
      comp=Z,534nm,22.5s,MS4.4
SVE   Sverdlovsk         44.85   2  i P     P       05 35 08.9 +0.3
SVE                                 eS      S       05 41 42.0 -3.5
SVE                                  pmax   pmax
      comp=Z,60nm,1.5s,mb5.2
SVE                                  MLR    MLR
      comp=N,300nm,16.0s,MS4.5
SVE                                  MLR    MLR
      comp=E,300nm,16.0s,MS4.5
SVE                                  MLR    MLR
      comp=Z,400nm,16.0s,MS4.4
BURAR Bucovina Array     44.87 329 ⇓ P      P       05 35 09.9 +1.0
BURAR Bucovina Array     44.87 329 ⇓ P      P       05 35 09.9 +1.1
AKASG Malin Array Be     45.20 335   P      P       05 35 11.0 -0.4
      comp=Z,8.2nm,0.9s,mb4.5,baz=140,slow=7.4,SNR=18
AKASG                                PP     PP      05 36 54.7 -3.3
      comp=Z,0.5nm,0.4s,baz=140,slow=10,SNR=7.3
BZS   Buzias             45.56 324   P      P       05 35 14.8 +0.5
GTA   Gaotai             46.08  46  eP      P       05 35 18.9 +0.4
GTA                                  AP     pP      05 35 27.1 +5.6
GTA                                  XP     sP      05 35 31.1 +8.4
GTA                                  PP     PP      05 37 11.3 +4.4
GTA                                  PPP    PPP     05 37 56.1 +5.7
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GTA                            SCP                05 40 39.5
GTA                            S        S         05 42 09.8 +6.6
GTA                            XS                 05 42 19.6
GTA                            SS       SS        05 45 27.8 +7.3
GTA                            LR       LR
      comp=N,200nm,16.7s,MS4.3
GTA                            LR       LR
      comp=E,256nm,20.1s,MS4.3
GTA                            LR       LR
      comp=Z,532nm,22.8s,MS4.4
OBN   Obninsk          46.22 343⇓eP     P         05 35 19.1  -0.3
OBN                             e                 05 37 08.8
OBN                             i S     S         05 42 01.8  -3.2
OBN                             eSS     SS        05 45 06.1   -17
OBN                             pmax    pmax
      comp=Z,25nm,1.2s,mb5.0
OBN                             MLR     MLR
      comp=Z,300nm,21.0s,MS4.2
CD2   Chengdu          46.34  59 eP     P         05 35 19.0  -1.7
MOS   Moscow           46.48 344 eP     P         05 35 21.0  -0.4
MOS                             pmax    pmax
      comp=Z,44nm,1.1s,mb5.3
LVV   L'vov            46.92 330 eP     P         05 35 27.3 +2.3
ZAL   Zalesovo         47.04  21  P     P         05 35 26.2 +0.3
      comp=Z,12nm,0.6s,mb5.0,baz=252,slow=8.9,SNR=56
KOLS  Kolonicke sedl   47.22 328 i P    P         05 35 28.5 +1.1
NVS   Novosibirsk      47.23  20 i P    P         05 35 26.9  -0.5
NVS                             pmax    pmax
      comp=N,30nm,1.0s
NVS                             pmax    pmax
      comp=Z,36nm,1.0s,mb5.3
KWP   Kalwaria         47.45 329 eP     P         05 35 29.5 +0.3
KWP                             pmax    pmax
      comp=Z,42nm,1.1s,mb5.3
KWP   Kalwaria         47.45 329 eP     P         05 35 29.4 +0.2
      comp=Z,42nm,1.1s,mb5.3
KWP   Kalwaria         47.45 329 eP     P         05 35 29.5 +0.3
      comp=Z,42nm,1.1s,mb5.3
SOKR  Solikamsk        47.56 359⇓iP     P         05 35 31.0 +1.0
SOKR                            pmax    pmax
      comp=Z,20nm,1.0s,mb5.1
SOKR                            MLR     MLR
      comp=Z,170nm,16.0s,MS4.1
PKSM  Moragy           47.61 324⇓eP     P         05 35 30.4  -0.1
CRVS  Cervenica-Dubn   47.62 328 eP     P         05 35 37.1 +6.5
CRVS  Cervenica-Dubn   47.62 328 e      P         05 35 37.1 +6.5
LZH   Lanzhou          47.83  52 eP     P         05 35 32.6 +0.2
LZH                             AP      pP        05 35 35.8 +0.3
LZH                             XP      sP        05 35 37.4 +0.7
LZH                             PP      PP        05 37 24.0 +0.3
LZH                             eS      S         05 42 28.0  -0.2
LZH                             AMB     AMB
      comp=Z,28nm,1.5s,mb5.1
LZH                             AMB     AMB
      comp=Z,130nm,6.4s
LZH                             LR      LR
      comp=E,652nm,16.5s
LZH                             LR      LR
      comp=Z,1μm,18.0s,MS5.0
GYA   Guiyang          48.02  65⇑iP     P         05 35 32.9  -1.1
GYA                             S       S         05 42 39.3 +8.3
GYA                             AMB     AMB
      comp=Z,20nm,1.3s,mb5.0
GYA                             AMB     AMB
      comp=Z,230nm,5.1s
GYA                             LR      LR
      comp=N,370nm,22.4s,MS4.4
GYA                             LR      LR
      comp=E,230nm,23.0s,MS4.4
GYA                             LR      LR
      comp=Z,530nm,24.5s,MS4.4
LBTB  Lobatse          48.36 220 eP     P         05 35 37.9 +1.3
LBTB                            pmax    pmax
      comp=Z,34nm,1.3s,mb5.2
LBTB  Lobatse          48.36 220  P     P         05 35 37.9 +1.3
      comp=Z,30nm,1.1s,mb5.2,baz=59,slow=8.6,SNR=16
LBTB  Lobatse          48.36 220 eP     P         05 35 37.9 +1.3
      comp=Z,34nm,1.3s,mb5.2
NIE   Niedzica         48.53 328 eP     P         05 35 36.9  -0.8
SRO   Srobarova        48.68 325 eP     P         05 35 39.0 +0.2
VYHS  Vyhne            48.77 326 eP     P         05 35 39.4  -0.1
BOJS  Bojanci          49.27 321 eP     P         05 35 43.5 +0.1
OJC   Ojcow            49.28 328 eP     P         05 35 42.9  -0.5
ZST   Bratislava       49.57 325 eP     P         05 35 45.0  -0.6
GROS  Grobnik          49.59 322 i P    P         05 35 45.4  -0.4
SOP   Sopron           49.60 324 eP     P         05 35 45.8  -0.1
VISS  Visnje           49.67 321 eP     P         05 35 49.1 +2.6
PERS  Pernice          49.91 322 eP     P         05 35 47.9  -0.4
PERS                            ePcP    pP        05 35 51.1  -0.2
OKC   Ostrava-Krasne   49.92 327 eP     P         05 35 48.0  -0.3
LJU   Ljubljana        49.98 321 eP     P         05 35 49.1 +0.3
LJU                             ePcP    pP        05 35 53.3 +1.4
ARSA  Arzberg          49.98 323⇑iP     P         05 35 49.1 +0.3
      comp=Z,15nm,1.1s,mb4.9
SUW   Suwalki          50.16 334 eP     P         05 35 49.6  -0.5
SUW                             pmax    pmax
      comp=Z,50nm,1.0s,mb5.5
SUW   Suwalki          50.16 334 eP     P         05 35 49.6  -0.4
      comp=Z,50nm,1.0s,mb5.5
SUW   Suwalki          50.16 334 eP     P         05 35 49.6  -0.5
      comp=Z,50nm,1.0s,mb5.5
MORC  Moravsky Berou   50.20 327 eP     P         05 35 49.8  -0.7
MORC                            pmax    pmax
      comp=Z,18nm,1.0s,mb5.1
MORC  Moravsky Berou   50.20 327 eP     P         05 35 49.8  -0.7
      comp=Z,18nm,1.0s,mb5.0
MORC  Moravsky Berou   50.20 327 eP     P         05 35 49.8  -0.7
      comp=Z,18nm,1.0s,mb5.0
TSUM  Tsumeb           50.32 233  P     P         05 35 52.4 +0.6
      comp=Z,11nm,0.9s,mb4.9,baz=34,slow=8.0,SNR=14
TSUM  Tsumeb           50.32 233 eP     P         05 35 53.3 +1.5
      comp=Z,14nm,1.0s,mb5.0
QIZ   Qiongzhong       50.44  75  P     P         05 35 52.4  -0.3
QIZ                             S       S         05 43 03.8  -1.1
QIZ                             LR      LR
      comp=Z,292nm,19.8s,MS4.3
VRAC  Vranov           50.46 326 eP     P         05 35 52.2  -0.2
MOA   Molln            51.01 323⇑iP     P         05 35 56.4  -0.3
      comp=Z,16nm,0.9s,mb5.0
ENH   Enshi            51.05  61 eP     P         05 35 56.1  -1.1
      comp=Z,40nm,1.3s,mb5.2
ENH   Enshi            51.05  61 eP     P         05 35 56.2  -1.0
      comp=Z,40nm,1.3s,mb5.2
DPC   Dobruska-Polom   51.18 327 eP     P         05 35 57.4  -0.5
KBA   Koelnbreinsper   51.19 322⇑iP     P         05 35 57.5  -0.5
      comp=Z,22nm,1.4s,mb4.9
KBA   Koelnbreinsper   51.19 322⇑iP     P         05 35 57.5  -0.5
KBA                             pmax    pmax
      comp=Z,22nm,1.4s,mb4.9
XAN   Xi'an            51.30  56  P     P         05 35 58.1  -1.0
XAN                             AP      pP        05 36 06.6 +4.5
XAN                             AMB     AMB
      comp=Z,17nm,1.3s,mb4.8
UPC   Upice            51.43 327 eP     P         05 35 59.2  -0.6
KSP   Ksiaz            51.47 327 eP     P         05 35 59.2  -0.9
KSP                             epP     pP        05 36 01.6  -1.5
GERES GERESS Array B   51.84 324  P     P         05 36 01.9  -1.0
      comp=Z,1.7nm,0.7s,mb4.1,baz=141,slow=8.5,SNR=5.1
PRU   Pruhonice        51.95 326 eP     P         05 36 02.2  -1.5
KHC   Kasperske Hory   52.05 324⇓eP     P         05 36 03.6  -0.9
KHC   Kasperske Hory   52.05 324 eP     P         05 36 02.9  -1.6
KHC                             e                 05 36 15.0
KHC   Kasperske Hory   52.05 324 eP     P         05 36 02.9  -1.6
KHC                             x       x         05 36 15.0
PVCC  Panska Ves       52.22 326 eP     P         05 36 04.8  -1.0
WTTA  Wattenberg       52.31 322⇑iP     P         05 36 05.4  -1.1
      comp=Z,29nm,1.2s,mb5.1
WTTA  Wattenberg       52.31 322⇑iP     P         05 36 05.4  -1.1
WTTA                            pmax    pmax
      comp=Z,29nm,1.2s,mb5.1
WATA  Walderalm        52.38 322⇑iP     P         05 36 05.6  -1.4
      comp=Z,29nm,1.2s,mb5.1
WATA  Walderalm        52.38 322⇑iP     P         05 36 05.6  -1.4
WATA                            pmax    pmax
      comp=Z,29nm,1.2s,mb5.1
SQTA  Sankt Quirin     52.55 321⇓iP     P         05 36 07.2  -1.1
      comp=Z,11nm,0.9s,mb4.8
SQTA  Sankt Quirin     52.55 321⇓iP     P         05 36 07.2  -1.1
SQTA                            pmax    pmax
      comp=Z,11nm,0.9s,mb4.8
MOTA  Moosalm          52.67 321⇑iP     P         05 36 07.9  -1.3
      comp=Z,12nm,1.1s,mb4.7
MOTA  Moosalm          52.67 321⇑iP     P         05 36 07.9  -1.3
MOTA                            pmax    pmax
      comp=Z,12nm,1.1s,mb4.7
BRG   Berggiesshubel   52.74 326 eP     P         05 36 09.6  -0.1
BRG                             pmax    pmax
      comp=Z,13nm,1.0s,mb4.8
BRG   Berggiesshubel   52.74 326 eP     P         05 36 09.6  -0.1
      comp=Z,13nm,1.0s,mb4.8
MOY   Mondy            52.74  32 eP     P         05 36 10.3 +0.7
MOY                             pmax    pmax
      comp=Z,25nm,1.5s,mb4.9
NKC   Novy Kostel      53.23 325 eP     P         05 36 12.7  -0.6
ZAK   Zakamensk        53.31  35 eP     P         05 36 13.7  -0.2
ZAK                             pmax    pmax
      comp=Z,3.0nm,1.6s,mb4.0
DAVA  Damuels          53.39 321⇑iP     P         05 36 13.5  -1.0
      comp=Z,43nm,1.4s,mb5.2
CLL   Collm            53.47 327 eP     P         05 36 15.0  -0.1
CLL                             pmax    pmax
      comp=Z,20nm,1.0s,mb5.0
CLL   Collm            53.47 327  P     P         05 36 15.0  -0.1
      comp=Z,logA/T=1.1,mb4.8
CLL                             i       pP        05 36 17.9  -0.2
CLL   Collm            53.47 327 eP     P         05 36 15.0  -0.1
      comp=Z,20nm,1.0s,mb5.0
GRA1  Grafenberg Arr   53.67 324 eP     P         05 36 14.6  -1.9
GRF   Grafenberg Arr   53.67 324 eP     P         05 36 14.6  -1.9
MOX   Moxa             53.90 325 i P    P         05 36 20.3 +2.1
MOX   Moxa             53.90 325 eP     P         05 36 20.3 +2.1
SONM  Songino Array    53.96  39  P     P         05 36 18.0  -0.7
      comp=Z,4.1nm,0.9s,mb4.4,baz=235,slow=7.0,SNR=33
TLY   Talaya           54.15  33⇑eP     P         05 36 21.4 +1.4
TLY                             pmax    pmax
      comp=Z,4.0nm,0.8s,mb4.4
TLY                             MLR     MLR
      comp=Z,200nm,14.0s,MS4.3
JOF   Joensuu          54.32 345 ep     P         05 36 19.1  -2.0
ULN   Ulaanbaatar      54.37  39 eP     P         05 36 21.2  -0.5
ULN                             pmax    pmax
      comp=Z,8.0nm,1.1s,mb4.6
ULN                             MLR     MLR
      comp=Z,326nm,20.0s,MS4.4
ULN   Ulaanbaatar      54.37  39 eP     P         05 36 21.2  -0.5
      comp=Z,7.6nm,1.1s,mb4.5
ULN                             LR      LR
      comp=Z,326nm,20.0s,MS4.4
ULN   Ulaanbaatar      54.37  39 eP     P         05 36 21.2  -0.5
      comp=Z,7.6nm,1.1s,mb4.5
FINES FINESS Array B   54.56 342  P     P         05 36 21.6  -1.3
      comp=Z,7.1nm,0.9s,mb4.7,baz=112,slow=10,SNR=9.3
FINES                           LR      LR        06 03 41.8
      comp=Z,196nm,18.7s,MS4.2,baz=177,slow=40
FINES FINESS Array B   54.56 342  P     P         05 36 21.6  -1.3
LPG   La Plagne        54.69 318 eP     P         05 36 22.3  -1.8
      comp=Z,63nm,1.1s,mb5.2
LPG   La Plagne        54.69 318 eP     P         05 36 22.3  -1.8
LPG                             pmax    pmax
      comp=Z,32nm,1.1s,mb5.3
LPL   La Plagne        54.70 318 eP     P         05 36 22.4  -1.8
      comp=Z,74nm,1.3s,mb5.3
LPL   La Plagne        54.70 318 eP     P         05 36 22.4  -1.8
LPL                             pmax    pmax
      comp=Z,37nm,1.3s,mb5.2
HHC   Hu-ho-hao-te     55.02  48 ⇑P     P         05 36 26.3  -0.3
HHC                             AP      pP        05 36 30.6 +0.9
HHC                             XP      sP        05 36 33.9 +3.1
HHC                             PCP     PcP       05 37 27.8  -0.3
HHC                             PP      PP        05 38 31.4 +0.1
HHC                             SCP               05 41 22.8
HHC                             PCS               05 41 25.3
HHC                             S       S         05 44 09.4 +2.5
HHC                             SCS     ScS       05 46 10.5  -2.0
HHC                             SS      SS        05 47 50.0  -0.5
HHC                             AMB     AMB
      comp=Z,13nm,1.6s,mb4.7
HHC                             LR      LR
      comp=N,163nm,13.2s,MS4.4
HHC                             LR      LR
      comp=E,164nm,14.4s,MS4.4
HHC                             LR      LR
      comp=Z,149nm,15.6s,MS4.2
KAF   Kangasniemi      55.02 343 ep     P         05 36 24.2  -2.1
      comp=Z,15nm,1.2s,mb4.9,baz=141,slow=7.1
KAF   Kangasniemi      55.02 343 eP     P         05 36 24.2  -2.1
KAF                             pmax    pmax
      comp=Z,15nm,1.2s,mb4.9
WHN   Wuhan            55.25  61 eP     P         05 36 27.5  -0.9
CDF   Champ du Feu     55.45 321 eP     P         05 36 27.8  -1.8
      comp=Z,91nm,1.5s,mb5.3
CDF   Champ du Feu     55.45 321 eP     P         05 36 27.8  -1.8
CDF                             pmax    pmax
      comp=Z,45nm,1.5s,mb5.3
HINF  Hinteralfeld     55.48 321 eP     P         05 36 27.6  -2.2
CABF  La Chapelle      55.52 319 eP     P         05 36 29.0  -1.1
      comp=Z,132nm,1.1s,mb5.6
CABF  La Chapelle      55.52 319 eP     P         05 36 29.0  -1.1
CABF                            pmax    pmax
      comp=Z,66nm,1.1s,mb5.6
HAU   Haudompre        55.87 321 eP     P         05 36 30.2  -2.4
HAU                             eR
      comp=Z,355nm,19.9s
WLF   Walferdange      56.63 322  P     P         05 36 37.5  -0.5
MEZF  Maizieres J'vi   56.86 321 eP     P         05 36 38.2  -1.5
      comp=Z,64nm,1.0s,mb5.3
SMF   Signal de Mont   56.98 318 eP     P         05 36 38.5  -2.1
SSF   Saint Saulge     57.34 319 eP     P         05 36 41.1  -2.0
SSF                             pmax    pmax
      comp=Z,37nm,1.4s,mb5.2
SSF   Saint Saulge     57.34 319 eP     P         05 36 41.1  -2.0
      comp=Z,37nm,1.4s,mb5.2
AVF   Avril sur Loir   57.35 318 eP     P         05 36 41.0  -2.2
      comp=Z,20nm,0.9s,mb4.8
AVF   Avril sur Loir   57.35 318 eP     P         05 36 41.0  -2.2
AVF                             pmax    pmax
      comp=Z,10.0nm,0.9s,mb4.8
GIVF  Givet            57.59 322 eP     P         05 36 43.4  -1.5
      comp=Z,43nm,1.0s,mb5.1
GIVF  Givet            57.59 322 eP     P         05 36 43.4  -1.5
GIVF                            pmax    pmax
      comp=Z,21nm,1.0s,mb5.1
BGF   Bois d'Agland    57.60 318 eP     P         05 36 43.4  -1.6
      comp=Z,52nm,1.0s,mb5.2
BGF   Bois d'Agland    57.60 318 eP     P         05 36 43.4  -1.6
BGF                             pmax    pmax
      comp=Z,26nm,1.0s,mb5.2
DOU   Dourbes          57.72 322  P     P         05 36 45.3  -0.5
TCF   Toulx Ste Croi   57.94 317 eP     P         05 36 45.6  -1.7
BAIF  Baives           57.94 322 eP     P         05 36 45.9  -1.4
      comp=Z,160nm,1.5s,mb5.5
BAIF  Baives           57.94 322 eP     P         05 36 45.9  -1.4
BAIF                            pmax    pmax
      comp=Z,80nm,1.5s,mb5.5
SNF   Seneffe          58.06 323  P     P         05 36 48.0  -0.1
UCC   Uccle            58.13 323  P     P         05 36 48.5  -0.1
BJT   Baijiatuau       58.24  50 eP     P         05 36 49.1  -0.4
BJT                             pmax    pmax
      comp=Z,20nm,1.1s
BJT   Baijiatuau       58.24  50 eP     P         05 36 49.1  -0.5
      comp=Z,20nm,1.1s,mb5.1
BJT   Baijiatuau       58.24  50 eP     P         05 36 49.1  -0.4
      comp=Z,20nm,1.1s,mb5.1
BJI   Beijing          58.25  50  P     P         05 36 49.3  -0.3
BJI                             AP      pP        05 36 53.8 +1.1
BJI                             XP      sP        05 36 55.8 +2.0
BJI                             S       S         05 45 00.0   +10
BJI                             AMB     AMB
      comp=Z,16nm,1.2s,mb4.9
BJI                             AMB     AMB
      comp=Z,99nm,3.5s
BJI                             LR      LR
      comp=N,287nm,20.6s,MS4.4
BJI                             LR      LR
      comp=E,235nm,25.2s,MS4.4
BJI                             LR      LR
      comp=Z,358nm,38.9s
EBIE  Bielsa           58.40 313  P     P         05 36 51.6 +1.0
      comp=Z,59nm,1.3s,mb5.5
EBIE  Bielsa           58.40 313  P     P         05 36 51.6 +1.0
      comp=Z,59nm,1.3s,mb5.5
EMUR  La Murta         58.45 307  P     P         05 36 52.0 +1.0
      comp=Z,28nm,1.8s,mb5.0
EMUR  La Murta         58.45 307  P     P         05 36 52.0 +1.0
      comp=Z,28nm,1.8s,mb5.0
LFF   La Frestale      58.55 316 eP     P         05 36 50.0  -1.6
      comp=Z,55nm,1.0s,mb5.2
LFF   La Frestale      58.55 316 eP     P         05 36 50.0  -1.6
LFF                             pmax    pmax
      comp=Z,27nm,1.0s,mb5.2
ETOB  Tobarra          58.83 308  P     P         05 36 54.0 +0.3
      comp=Z,7.0nm,1.5s,mb4.5
ETOB  Tobarra          58.83 308  P     P         05 36 54.0 +0.3
      comp=Z,7.0nm,1.5s,mb4.5
ENIJ  Nijar            59.07 306  P     P         05 36 56.2 +0.8
ENIJ                            pmax    pmax
      comp=Z,15nm,0.9s,mb5.0
ENIJ  Nijar            59.07 306  P     P         05 36 56.2 +0.8
      comp=Z,15nm,0.9s,mb5.0
ENIJ  Nijar            59.07 306  P     P         05 36 56.2 +0.8
      comp=Z,15nm,0.9s,mb5.0
NJ2   Nanjing          59.24  60 eP     P         05 36 55.9  -0.7
NJ2                             AP      pP        05 37 00.8 +1.1
NJ2                             XP      sP        05 37 02.9 +2.0
NJ2                             PCP     PcP       05 37 39.9  -4.8
NJ2                             S       S         05 45 03.0 +0.2
NJ2                             AMB     AMB
      comp=Z,60nm,1.2s,mb5.5
NJ2                             AMB     AMB
      comp=Z,390nm,5.1s
NJ2                             LR      LR
      comp=N,560nm,27.6s
NJ2                             LR      LR
      comp=E,430nm,22.3s
NJ2                             LR      LR
      comp=Z,280nm,10.3s
EVIA  Vianos           59.56 308  P     P         05 36 58.9 +0.1
EVIA                            pmax    pmax
      comp=Z,31nm,1.0s,mb5.3
EVIA  Vianos           59.56 308  P     P         05 36 58.9 +0.1
      comp=Z,31nm,1.0s,mb5.3
NB2   NORSAR Subarra   59.58 336  P     P         05 36 56.3  -2.3
      comp=Z,10.0nm,1.1s,mb4.8,baz=120,slow=7.4
NB2   NORSAR Subarra   59.58 336  P     P         05 36 56.3  -2.3
NB2                             pmax    pmax
      comp=Z,10.0nm,1.1s,mb4.8
NOA   NORSAR Array B   59.58 336  P     P         05 36 57.1  -1.4
      comp=Z,3.9nm,1.0s,mb4.4,baz=118,slow=7.5,SNR=5.3
NOA                             LR      LR        06 07 35.5
      comp=Z,116nm,18.6s,MS4.0,baz=95,slow=41
EBER  Berja            59.60 306  P     P         05 36 59.0   0.0
      comp=Z,21nm,1.1s,mb5.1
EBER  Berja            59.60 306  P     P         05 36 59.0  -0.1
      comp=Z,21nm,1.1s,mb5.1
EQES  Quesada          59.87 307  P     P         05 37 01.1 +0.1
      comp=Z,14nm,1.2s,mb4.9
EQES  Quesada          59.87 307  P     P         05 37 01.1 +0.2
      comp=Z,14nm,1.2s,mb4.9
LDF   La Druitiere     60.13 320 eP     P         05 37 00.5  -2.0
EBAN  Banos Encina     60.48 307  P     P         05 37 04.3  -0.8
EBAN                            pmax    pmax
      comp=Z,3.0nm,0.5s,mb4.6
EBAN  Banos Encina     60.48 307  P     P         05 37 04.3  -0.8
      comp=Z,3.2nm,0.5s,mb4.6
EBAN  Banos Encina     60.48 307  P     P         05 37 04.3  -0.8
      comp=Z,3.2nm,0.5s,mb4.6
ELOJ  Sierra Loja      60.64 306  P     P         05 37 05.0  -1.1
ELOJ                            pmax    pmax
      comp=Z,5.0nm,0.7s,mb4.8
ELOJ  Sierra Loja      60.64 306  P     P         05 37 05.0  -1.1
      comp=Z,4.7nm,0.7s,mb4.7
ELOJ  Sierra Loja      60.64 306  P     P         05 37 05.0  -1.1
      comp=Z,4.7nm,0.7s,mb4.7
ESDC  Sonseca Array    60.85 309  P     P         05 37 07.1  -0.5
      comp=Z,30nm,1.3s,mb5.3,baz=84,slow=6.1,SNR=13
ESDC  Sonseca Array    60.85 309  P     P         05 37 05.3  -2.2
      comp=Z,3.5nm,0.9s,mb4.5
ESDC  Sonseca Array    60.85 309  P     P         05 37 05.3  -2.2
      comp=Z,3.5nm,0.9s,mb4.5
ESLA  Sonseca Array    60.85 309 eP     P         05 37 06.8  -0.8
      comp=Z,5.9nm,1.2s,mb4.6
ESLA  Sonseca Array    60.85 309 eP     P         05 37 06.8  -0.7
      comp=Z,5.9nm,1.2s,mb4.6
EMIJ  Mijas            61.06 305  P     P         05 37 07.4  -1.6
      comp=Z,26nm,1.0s,mb5.3
EMIJ  Mijas            61.06 305  P     P         05 37 07.4  -1.6
      comp=Z,26nm,1.0s,mb5.3
EADA  Adamuz           61.10 307  P     P         05 37 07.1  -2.1
      comp=Z,19nm,1.4s,mb5.0
EADA  Adamuz           61.10 307  P     P         05 37 07.1  -2.2
      comp=Z,19nm,1.4s,mb5.0
ARCES ARCESS Array B   61.12 348  P     P         05 37 07.2  -1.8
      comp=Z,2.2nm,0.8s,mb4.3,baz=12,slow=22,SNR=6.0
ARCES                           LR      LR        06 05 18.8
      comp=Z,118nm,19.4s,MS4.0,baz=167,slow=38
ARCES ARCESS Array B   61.12 348  P     P         05 37 07.2  -1.8
ARCES                           LR      LR        06 05 18.8
SSE   Sheshan          61.15  61  P     P         05 37 09.3  -0.4
SSE                             AP      pP        05 37 18.5 +5.7
SSE                             S       S         05 45 25.4  -2.0
SSE                             XS                05 45 41.0
SSE                             AMB     AMB
      comp=Z,9.0nm,0.8s,mb5.0
SSE                             AMB     AMB
      comp=Z,61nm,4.1s
SSE                             LR      LR
      comp=N,130nm,23.3s,MS4.1
SSE                             LR      LR
      comp=E,89nm,23.3s,MS4.1
SSE                             LR      LR
      comp=Z,225nm,20.3s,MS4.3
ESPR  Espera           61.96 305  P     P         05 37 10.9  -4.2
      comp=Z,18nm,1.0s,mb5.1
DBIC  Dimbokro         62.02 271  P     P         05 37 16.9 +1.1
      comp=Z,12nm,1.2s,mb4.9,baz=78,slow=8.1,SNR=3.3
DBIC                            LR      LR        06 02 05.3
      comp=Z,163nm,21.0s,MS4.2,baz=63,slow=34
DBIC  Dimbokro         62.02 271  P     P         05 37 16.9 +1.1
DBIC                            LR      LR        06 02 05.3
BOD   Bodaibo          62.27  30 eP     P         05 37 15.9  -1.0
BOD                             pmax    pmax
      comp=Z,9.0nm,1.2s,mb4.8
EMIN  Mina Concepcio   62.70 306  P     P         05 37 15.0  -5.1
      comp=Z,12nm,1.0s,mb5.0
HIA   Hailar           62.79  41 eP     P         05 37 20.2  -0.2
HIA                             pmax    pmax
      comp=Z,13nm,0.7s
HIA   Hailar           62.79  41 eP     P         05 37 20.2  -0.2
      comp=Z,13nm,0.7s,mb5.2
HIA   Hailar           62.79  41 eP     P         05 37 20.2  -0.2
      comp=Z,13nm,0.7s,mb5.2
SNY   Shenyang         64.07  49 ⇓P     P         05 37 27.9  -1.1
CN2   Changchun        65.68  47 eP     P         05 37 38.5  -0.9
CN2                             eS      S         05 46 23.5  -0.2
CN2                             AMB     AMB
      comp=Z,20nm,1.0s,mb5.1
CN2                             AMB     AMB
      comp=Z,200nm,5.0s
CN2                             LR      LR
      comp=Z,600nm,13.0s,MS5.0
CLNS  Chul'man         67.58  33 eP     P         05 37 50.4  -0.8
CLNS                            eS      S         05 46 45.4  -1.0
CLNS                            ePS     PS        05 47 07.2  -4.1
CLNS                            e                 05 47 45.8
CLNS                            eSS     SS        05 51 07.5  -1.1
CLNS                            pmax    pmax
      comp=Z,10.0nm,0.9s,mb4.8
CLNS                            pmax    pmax
      comp=N,7.0nm,1.0s
CLNS                            pmax    pmax
      comp=E,3.0nm,0.8s
CLNS                            pmax    pmax
      comp=Z,3.0nm,0.5s,mb4.6
CLNS                            smax
      comp=N,102nm,13.2s
CLNS                            smax
      comp=E,46nm,12.7s
MDJ   Mudanjiang       68.72  47  P     P         05 37 56.9  -1.7
MDJ                             XP      sP        05 38 01.5  -1.3
MDJ                             PCP     PcP       05 38 21.4  -2.0
MDJ                             PP      PP        05 40 28.9  -3.7
MDJ                             S       S         05 46 57.6  -2.7
MDJ                             SCS     ScS       05 47 56.8 +1.7
MDJ                             AMB     AMB
      comp=Z,2.0nm,0.9s,mb4.0
MDJ                             AMB     AMB
      comp=Z,70nm,4.6s
MDJ                             LR      LR
      comp=N,130nm,27.5s,MS4.3
MDJ                             LR      LR
      comp=E,194nm,29.4s,MS4.3
MDJ                             LR      LR
      comp=Z,277nm,24.4s,MS4.4
MDJ   Mudanjiang       68.72  47  P     P         05 38 00.9 +2.3
      comp=Z,12nm,1.0s,mb4.8
KLR   Kul'dur          70.54  42 eP     P         05 38 05.8  -3.8
KLR                             MLR     MLR
```

	comp=E,900nm,19.0s						
YAK	**Yakutsk**	**71.03**	**28**	⇑eP	**P**	**05 38 16.7**	**+4.3**
YAK				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.3						
YAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
YAK	**Yakutsk**	**71.03**	**28**	eP	**P**	**05 38 11.6**	**-0.8**
	comp=Z,65nm,0.9s,mb5.6						
YAK				LR	LR		
	comp=Z,223nm,22.0s,MS4.4						
YAK	**Yakutsk**	**71.03**	**28**	eP	**P**	**05 38 11.6**	**-0.8**
	comp=Z,65nm,0.9s,mb5.6						
JMIC	**Jan Mayen**	**71.19**	**342**	LR	LR	06 11 50.2	
	comp=Z,310nm,21.7s,MS4.5,baz=78,slow=38						
TIXI	**Tiksi**	**72.80**	**18**	⇓eP	**P**	**05 38 22.2**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
FITZ	**Fitzroy Crossi**	**73.22**	**113**	eP	**P**	**05 38 26.2**	**0.0**
	comp=Z,13nm,0.9s,mb4.9						
MAT	**Matsushiro**	**75.29**	**55**	eP	pP	05 38 48.0	+7.0
MAT				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
MAT	**Matsushiro**	**75.29**	**55**	eP	pP	05 38 48.0	+7.0
	comp=Z,13nm,1.1s						
MAT	**Matsushiro**	**75.29**	**55**	P	**P**	**05 38 37.7**	**-0.1**
DAG	**Danmarks Havn**	**75.39**	**347**	⇓eP	**P**	**05 38 37.8**	**+0.2**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
DAG	**Danmarks Havn**	**75.39**	**347**	⇓eP	**P**	**05 38 37.8**	**+0.2**
	comp=Z,5.0nm,0.9s,mb4.4						
DAG	**Danmarks Havn**	**75.39**	**347**	⇓iP	**P**	**05 38 37.8**	**+0.2**
	comp=Z,5.0nm,0.9s,mb4.4						
YSS	**Yuzh-Sakhalins**	**77.92**	**44**	c iP	**P**	**05 38 57.4**	**+5.1**
YSS				pmax	pmax		
	comp=Z,68nm,2.2s,mb5.2						
YSS				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.2						
MAW	**Mawson**	**79.40**	**178**	LR	LR	06 05 24.4	
	comp=Z,123nm,19.8s,MS4.2,baz=61,slow=29						
MA2	**Magadan**	**81.29**	**31**	eP	**P**	**05 39 13.8**	**+3.6**
MA2				e		05 49 27.2	
MA2				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
MA2	**Magadan**	**81.29**	**31**	eP	**P**	**05 39 13.2**	**+3.0**
	comp=Z,10nm,1.0s,mb4.7						
MA2	**Magadan**	**81.29**	**31**	eP	**P**	**05 39 13.1**	**+2.9**
	comp=Z,10nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**81.62**	**112**	P	**P**	**05 39 12.1**	**-0.7**
	comp=Z,4.0nm,1.0s,mb4.3,baz=295,slow=4.4,SNR=12						
WRAB	**Tennant Creek**	**81.63**	**112**	eP	**P**	**05 39 12.7**	**0.0**
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**81.63**	**112**	eP	**P**	**05 39 12.7**	**-0.1**
	comp=Z,12nm,0.8s,mb4.9						
WRAB	**Tennant Creek**	**81.63**	**112**	eP	**P**	**05 39 12.7**	**0.0**
	comp=Z,12nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**81.63**	**112**	eP	**P**	**05 39 11.9**	**-0.9**
SYO	**Syowa Base**	**81.76**	**187**	⇓P	**P**	**05 39 11.8**	**-0.6**
SYO	**Syowa Base**	**81.76**	**187**	⇑pP	pP	05 39 18.0	+2.4
ASPA	**Alice Springs**	**82.26**	**116**	eP	**P**	**05 39 16.7**	**+0.7**
ASAR	**Alice Springs**	**82.27**	**116**	P	**P**	**05 39 15.9**	**-0.1**
	comp=Z,2.4nm,0.9s,mb4.1,baz=288,slow=5.1,SNR=19						
ASAR				LR	LR	06 10 28.1	
	comp=Z,119nm,18.6s,MS4.3,baz=289,slow=32						
BILL	**Bilibino**	**85.76**	**21**	eP	**P**	**05 39 36.8**	**+4.0**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.3						
STKA	**Stephens Creek**	**90.97**	**122**	LR	LR	06 14 05.2	
	comp=Z,156nm,20.0s,MS4.4,baz=205,slow=31						
SNAA	**Sanae**	**92.48**	**196**	LR	LR	06 11 56.0	
	comp=Z,46nm,20.3s,MS3.9,baz=222,slow=29						
YKA	**Yellowknife Ar**	**105.59**	**356**	PP		05 45 18.1	
	comp=Z,0.7nm,1.1s,baz=1.0,slow=6.1,SNR=3.7						
PDAR	**Pinedale Array**	**124.37**	**349**	PKP	PKPdf	05 45 54.8	-0.5
	comp=Z,0.9nm,0.7s,baz=63,slow=3.3,SNR=8.6						
NVAR	**Mina Array Bea**	**129.78**	**356**	PKP	PKPdf	05 46 05.7	-0.1
	comp=Z,0.5nm,0.8s,baz=74,slow=6.4,SNR=4.6						
TXAR	**Lajitas Array**	**135.28**	**337**	PKP	PKPdf	05 46 17.1	+0.8
	comp=Z,1.0nm,1.1s,baz=135,slow=1.8,SNR=3.4						

IDC 13 05:29:05.3±5.3**, 17.80N×142.76E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/20**, mbtmp3.7**/4**, Error ellipse: s-maj=247.5km s-min=28.5km az=78.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.40**	**193**	P	P	05 36 29.1	-1.3
	1.2nm,0.8s,baz=7.3,slow=9.0,SNR=6.3						
ASAR	**Alice Springs**	**42.11**	**192**	P	P	05 36 59.1	-1.9
	0.3nm,0.5s,baz=25,slow=6.5,SNR=9.3						
STKA	**Stephens Creek**	**49.40**	**181**	P	P	05 37 56.3	-2.7
	1.2nm,0.7s,baz=16,slow=7.4,SNR=3.3						
BVAR	**Borovoye Array**	**65.39**	**321**	P	P	05 39 49.7	-2.1
	0.6nm,0.4s,baz=88,slow=9.7,SNR=5.4						

*NEIC **13** 05:31:49.2, 16.29N×98.53W, h11^{km}, MD4.0(MEX), After MEX.*

MEX 13 05:31:49.6±1.2**, 16.38N×98.52W, h10**^{km}±9^{km}**, MD4.0, 1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.38**	**88**	⇓iP	Pg	05 31 56.7	-0.7
PNIG				i S	Sg	05 32 02.6	0.0
ACX	**Acapulco**	**1.42**	**290**	i P	Pn	05 32 11.0	-4.6
ACX				eS	Sb	05 32 29.5	-4.3
CAIG	**El Cayaco**	**1.80**	**292**	eP	Pn	05 32 17.7	-3.3
CAIG				eS	Sn	05 32 39.1	-4.9
VHO	**Vista Hermosa**	**1.85**	**68**	i P	Pn	05 32 18.6	-3.0
VHO				i S	Sn	05 32 40.2	-5.0
OXX	**Oaxaca**	**1.86**	**68**	eP	Pn	05 32 19.0	-2.8
OXX				eS	Sn	05 32 41.5	-4.0
PLIG	**Platanillo**	**2.21**	**335**	i P	Pn	05 32 24.3	-2.6
PLIG				i S	Sn	05 32 49.8	-4.6
HUIG	**Huatulco**	**2.40**	**104**	eP	Pn	05 32 24.4	-5.1
HUIG				eS	Sn	05 32 53.0	-6.2
YAIG	**Yautepec**	**2.52**	**348**	eP	Pn	05 32 29.3	-2.0
YAIG				eS	Sn	05 33 00.4	-2.0
YAIG	**Yautepec**	**2.52**	**348**	eP	Pn	05 32 29.3	-2.0
YAIG				eS	Sn	05 32 58.2	-4.2
IIB	**San Bernardino**	**2.58**	**4**	eP	Pn	05 32 29.0	-3.1
IIB				eS	Sn	05 33 02.5	-1.2
PPM	**Popocatepetl**	**2.68**	**358**	eP	Pn	05 32 32.0	-1.5
PPM				eS	Sn	05 33 05.5	-0.7
PPM	**Popocatepetl**	**2.68**	**358**	eP	Pn	05 32 30.8	-2.7
PPM				eP		05 32 32.0	
PPM				eS	Sn	05 33 01.3	-5.0
PPM				eS	Sn	05 33 05.5	-0.7
IISM	**Ciudad Serdan**	**2.82**	**23**	eP	Pn	05 32 34.0	-1.5
IISM				eS	Sn	05 33 11.0	+1.2
IISM	**Ciudad Serdan**	**2.82**	**23**	eP	Pn	05 32 34.0	-1.5
IISM				eS	Sn	05 33 07.0	-2.8

*CSEM **13** 05:46:53.7, 12.04N×44.17E, h5^{km}, ML3.8, After DHMR*

DHMR 13 05:46:53.7±1.9**, 12.04N×44.17E, h6**^{km}±14^{km}**, MD3.8, ML3.8, 2C-5D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.19**	**358**	⇓eP	Pb	05 47 16.3	0.0
TRBA				i S	Sb	05 47 32.3	+0.5
TRBA				AML	AML	05 47 40.6	
	comp=N,1μm,0.7s						
UDYN	**Al ‘Udayn**	**1.93**	**354**	⇑iP	Pn	05 47 27.4	-0.1
UDYN				i S	Sn	05 47 55.7	+3.4
	comp=N,869nm,0.6s						
UDYN	**Al ‘Udayn**	**1.93**	**354**	⇑iP	Pn	05 47 27.4	0.0
UDYN				i S	Sn	05 47 55.7	+3.4
UDYN				AML	AML	05 48 03.5	
	comp=N,2μm,0.6s						
LBOS		**2.11**	**30**	⇓eP	Pn	05 47 31.3	+1.3
LBOS				i S	Sn	05 48 00.8	+3.9
BDHA	**Al Bayda’**	**2.36**	**35**	⇓eP	Pn	05 47 34.2	+0.5
BDHA				i S	Sn	05 48 07.4	+4.1
BDHA				AML	AML	05 48 13.7	
	comp=N,605nm,0.6s						
DHBB	**Dhamar BB**	**2.53**	**5**	⇓iP	Pn	05 47 38.9	+2.9
DHBB				i S	Sn	05 48 12.9	+5.3
HAJJ	**Hajjah**	**3.68**	**351**	⇓iP	Pn	05 47 54.2	+1.7
HAJJ				i S	Sn	05 48 40.0	+3.2

IGQ 13 06:01:36.7, 1.09S×81.21W, h5^{km}±31^{km}**, mb4.4, 1C-1D, Error ellipse: s-maj=31.3km s-min=8.1km az=171.1, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	**2.60**	**99**	P	Pn	06 02 20.8	+0.7
CUSU	**Cusua**	**2.75**	**97**	P	Pn	06 02 24.7	+2.5
TERV	**Terraza Guagua**	**2.76**	**71**	P	Pn	06 02 23.4	+1.0
PINO	**Pino**	**2.76**	**70**	⇓P	Pn	06 02 23.4	+0.9
JUIV	**Juive**	**2.76**	**97**	P	Pn	06 02 23.6	+1.2
NAS1	**Nasa**	**2.77**	**81**	P	Pn	06 02 24.4	+1.9
ARRY	**Arrayan**	**2.78**	**99**	P	Pn	06 02 23.1	+0.4
ARRY				S	Sn	06 02 57.9	+0.8
RETU	**Refugio**	**2.78**	**97**	P	Pn	06 02 25.1	+2.3
YANA	**Yana**	**2.81**	**70**	P	Pn	06 02 23.7	+0.6
ULBA	**Ulba**	**2.82**	**97**	P	Pn	06 02 25.9	+2.6
PISA	**Pisayambo**	**2.82**	**89**	P	Pn	06 02 25.6	+2.3
VC1	**Cotopaxi 1**	**2.84**	**81**	P	Pn	06 02 26.2	+2.6
TAMB	**Tambo**	**2.87**	**82**	P	Pn	06 02 26.4	+2.5
ANTI	**Antisana**	**3.11**	**78**	P	Pn	06 02 30.1	+2.6
CAYR	**Refugio Cayamb**	**3.38**	**71**	⇑P	Pn	06 02 34.3	+3.0
CAYA	**Cayambe**	**3.42**	**70**	P	Pn	06 02 34.3	+2.5
ECEN	**Cerro Negro**	**3.75**	**60**	P	Pn	06 02 38.3	+1.7

*NIED **13** 06:28:00, 42.40N×145.10E, h29^{km}, Mw4.2 Best double couple: $M_0$2.34×10^{15} NP1:ϕ_s12°, δ72°, λ61°. NP2:ϕ_s253°, δ34°, λ146°.*
*SKHL **13** 06:28:56.9±0.3, 42.40N×145.40E, h49^{km}±12^{km}, mb4.6/5, Ms4.1/1*
*MOS **13** 06:28:57.4±1.1, 42.39N×144.97E, h56^{km}, mb4.5/18, Error ellipse: s-maj=13.8km s-min=8.8km az=97.1*
*JMA **13** 06:28:57.0, 42.44N×145.13E, h42^{km}±1^{km}, M4.2*
*BJI **13** 06:28:58.7, 42.37N×144.78E, h40^{km}, mB5.0, mb4.5, Ms3.9, Msz3.8*
*NEIC **13** 06:28:59.6±1.1, 42.43N×144.89E, h51^{km}±10^{km}, mb4.4/9, Error ellipse: s-maj=10.1km s-min=8.3km az=121.0*
*IDC **13** 06:29:00.8±2.7, 42.43N×144.90E, h63^{km}±22^{km}, mb3.7/17, mb1 4.0/18, mb1mx3.9/24, mbtmp4.1/18, MS3.5/2, Ms1 3.5/2, ms1mx2.6/23, Error ellipse: s-maj=18.2km s-min=16.3km az=166.0*

ISC 13 06:28:56.7±0.8**, 42.44N**±0.05×**145.15E**±0.06**, h46**^{km}±5^{km}**, n77, σ1§13**/87**, mb4.2**/28**, MS3.6**/2**, 1C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.65**	**329**	P	**P**	**06 29 09.7**	**0.0**
JAK				S	**S**	**06 29 19.6**	**+0.5**
NEM2	**Nemuro 2**	**1.02**	**25**	P	**P**	**06 29 15.2**	**+0.3**
NEM2				eS	**S**	**06 29 28.2**	**-0.2**
JOB	**Onbets**	**1.07**	**296**	P	**P**	**06 29 15.9**	**+0.3**
JNK	**Nakash**	**1.19**	**345**	P	**P**	**06 29 17.0**	**-0.2**
JNK				eS	**S**	**06 29 32.0**	**-0.5**
JAR	**Ashorobuto**	**1.33**	**311**	P	**P**	**06 29 19.0**	**-0.3**
JCH	**Churui**	**1.33**	**278**	P	**P**	**06 29 20.0**	**+0.6**
JCH				eS	**S**	**06 29 38.3**	**+2.2**
JRA	**Rausu**	**1.50**	**359**	P	**P**	**06 29 21.9**	**+0.2**
JRA				eS	**S**	**06 29 40.3**	**0.0**
JEM	**Erimo**	**1.54**	**255**	P	**P**	**06 29 23.7**	**+1.5**
YUK	**Yuzh-Kuril’sk**	**1.68**	**18**	ePN	**P**	**06 29 23.9**	**-0.3**
YUK				i S	**S**	**06 29 44.0**	**-0.7**
YUK				pmax	pmax		
	comp=Z,380nm,0.3s						
YUK				smax			
	comp=N,3μm,0.5s						
YUK				smax			
	comp=E,5μm,0.5s						
YUK				smax			
	comp=N,3μm,0.5s						
YUK				smax			
	comp=E,10μm,0.5s						
YUK	**Yuzh-Kuril’sk**	**1.68**	**18**	eP	**P**	**06 29 23.9**	**-0.3**
YUK				AMB	AMB	06 29 24.6	
	comp=E,380nm,0.2s						
YUK				i S	**S**	**06 29 44.0**	**-0.7**
YUK				A		06 29 45.0	
	comp=E,3μm,1.0s						
YUK				A		06 29 45.0	
	comp=E,10μm,1.0s						
YUK				A		06 29 45.0	
	comp=E,3μm,0.5s						
YUK				A		06 29 45.0	
	comp=E,5μm,0.5s						
ASAJ	**Asahikawa**	**2.51**	**313**	PN	**P**	**06 29 36.6**	**+0.6**
ASAJ				S	**S**	**06 30 06.5**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,56nm,0.3s						
ASAJ				smax			
	comp=N,30nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,633nm,20.3s						
ASAJ	**Asahikawa**	**2.51**	**313**	P	**P**	**06 29 36.6**	**+0.6**
	comp=Z,56nm,0.3s,baz=161,slow=11,SNR=146						
ASAJ				S	**S**	**06 30 06.5**	**+0.9**
	comp=Z,30nm,0.3s,baz=69,slow=26,SNR=6.1						
ASAJ				LR	LR	06 30 52.2	
	comp=Z,633nm,20.2s,baz=172,slow=47						
KUR	**Kuril’sk**	**3.42**	**34**	eP	**P**	**06 29 44.5**	**-4.4**
KUR				AMB	AMB	06 30 08.0	
	comp=Z,90nm,0.8s						
KUR				AMB	AMB	06 30 08.0	
	comp=Z,130nm,0.8s						
KUR				AMB	AMB	06 30 08.0	
	comp=Z,230nm,0.8s						
KUR				eS	**S**	**06 30 26.5**	**-2.1**
KUR				A		06 30 33.6	
	comp=Z,290nm,0.6s						
KUR				A		06 30 33.6	
	comp=Z,190nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.83**	**340**	PN	**P**	**06 30 09.0**	**+0.2**
YSS				MLR	MLR		
	comp=Z,600nm,17.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS	**Yuzh-Sakhalins**	**4.83**	**340**	eP	**P**	**06 30 09.2**	**+0.4**
YSS	**Yuzh-Sakhalins**	**4.83**	**340**	eP	**P**	**06 30 09.0**	**+0.2**
MAJO	**Matsushiro**	**7.96**	**225**	ePN	**P**	**06 30 50.6**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,31nm,0.7s						
MAJO	**Matsushiro**	**7.96**	**225**	eP	**P**	**06 30 50.6**	**-2.0**
	comp=Z,31nm,0.7s						
MAT	**Matsushiro**	**7.96**	**225**	ePN	**P**	**06 30 51.0**	**-1.6**
MAT				pmax	pmax		
	comp=Z,18nm,0.7s						
MAT	**Matsushiro**	**7.96**	**225**	P	**P**	**06 30 50.5**	**-2.1**
EKMR	**Ekimchan**	**13.41**	**327**	eP	**P**	**06 32 06.8**	**+0.4**
EKMR				AMB	AMB	06 32 09.1	
	comp=Z,6.0nm,0.9s						
CN2	**Changchun**	**14.45**	**282**	eP	**P**	**06 32 19.6**	**-0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
YASR	**Yasnyy**	**15.78**	**319**	eP	**P**	**06 32 36.6**	**-0.6**
YASR				AMB	AMB	06 32 38.1	
	comp=Z,3.0nm,0.6s						
ZEA	**Zeya**	**16.40**	**320**	eP	**P**	**06 32 43.8**	**-1.2**
ZEA				AMB	AMB	06 32 44.7	
	comp=Z,16nm,0.9s						
ZEA				AMS	AMS	06 39 26.0	
	comp=Z,300nm,16.0s						
ZEA				AMS	AMS	06 39 26.0	
	comp=Z,16nm,16.0s						
HIA	**Hailar**	**18.91**	**300**	eP	**P**	**06 33 13.4**	**-2.7**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	**Hailar**	**18.91**	**300**	eP	**P**	**06 33 13.4**	**-2.7**
	comp=Z,4.6nm,0.6s						
BJI	**Beijing**	**21.87**	**274**	P	**P**	**06 33 46.3**	**-0.8**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb3.9						
BJI				LR	LR		
	comp=N,146nm,15.6s,MS3.6						
BJI				LR	LR		
	comp=E,127nm,17.9s,MS3.6						
BJT	**Baijiatuau**	**21.89**	**273**	P	**P**	**06 33 45.0**	**-2.3**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJT	**Baijiatuau**	**21.89**	**273**	P	**P**	**06 33 45.0**	**-2.3**
	comp=Z,8.0nm,0.9s,mb4.2						
HHC	**Hu-ho-hao-te**	**25.06**	**278**	eP	**P**	**06 34 19.5**	**+1.4**
HHC				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.4						
ULN	**Ulaanbaatar**	**27.21**	**295**	eP	**P**	**06 34 37.6**	**-0.4**
ULN				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.3						
ULN	**Ulaanbaatar**	**27.21**	**295**	eP	**P**	**06 34 37.5**	**-0.5**
	comp=Z,14nm,1.3s,mb4.3						
SONM	**Songino Array**	**27.65**	**295**	P	**P**	**06 34 42.1**	**+0.1**
	comp=Z,5.9nm,0.7s,mb4.3,baz=83,slow=7.9,SNR=47						
ZAK	**Zakamensk**	**29.61**	**300**	⇑iP	**P**	**06 34 59.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
LZH	**Lanzhou**	**32.36**	**273**	eP	**P**	**06 35 24.5**	**+0.6**
LZH				AP	pP	06 35 35.0	-1.1
LZH				XP	sP	06 35 38.1	-3.8
LZH				AMB	AMB		
	comp=Z,24nm,1.5s,mb4.8						
GTA	**Gaotai**	**34.08**	**280**	eP	**P**	**06 35 42.0**	**+3.3**
GTA				AP	pP	06 35 50.5	-0.5
GTA				XP	sP	06 35 53.4	-3.4
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.5						
IMA	**Indian Mountai**	**40.59**	**33**	eP	**P**	**06 36 34.7**	**+1.6**
IMA				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.8						
IMA	**Indian Mountai**	**40.59**	**33**	eP	**P**	**06 36 34.7**	**+1.6**
	comp=Z,15nm,0.6s,mb4.8						
ZAL	**Zalesovo**	**40.65**	**308**	P	**P**	**06 36 32.2**	**-1.5**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,93nm,19.1s						
ZAL	**Zalesovo**	**40.65**	**308**	P	**P**	**06 36 32.2**	**-1.5**
	comp=Z,2.4nm,0.5s,mb4.1,baz=20,slow=8.6,SNR=16						
ZAL				LR	LR	06 55 32.8	
	comp=Z,93nm,19.1s,MS3.7,baz=246,slow=39						
ILAR	**Eielson Array**	**43.41**	**35**	P	**P**	**06 36 56.7**	**+0.6**
ILAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**43.41**	**35**	P	**P**	**06 36 56.6**	**+0.5**
	comp=Z,3.5nm,1.0s,mb4.0,baz=259,slow=4.5,SNR=22						
KURK	**Kurchatov**	**45.06**	**305**	eP	**P**	**06 37 09.7**	**+0.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
KURK	**Kurchatov**	**45.06**	**305**	eP	**P**	**06 37 09.7**	**+0.2**
	comp=Z,8.2nm,0.8s,mb4.6						
INK	**Inuvik**	**48.27**	**30**	eP	**P**	**06 37 35.2**	**+0.6**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	**Inuvik**	**48.27**	**30**	P	**P**	**06 37 35.3**	**+0.7**
	comp=Z,2.3nm,0.6s,mb4.4,baz=304,slow=4.8,SNR=35						
INK	**Inuvik**	**48.27**	**30**	eP	**P**	**06 37 35.2**	**+0.6**
	comp=Z,1.9nm,0.5s,mb4.4						
BVAR	**Borovoye Array**	**49.21**	**310**	P	**P**	**06 37 41.6**	**-0.4**
	comp=Z,3.0nm,0.5s,mb4.6,baz=78,slow=8.0,SNR=23						
BRVK	**Borovoye**	**49.26**	**310**	eP	**P**	**06 37 41.9**	**-0.5**
RES	**Resolute Bay**	**56.64**	**16**	eP	**P**	**06 38 36.4**	**-0.6**
RES				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
RES	**Resolute Bay**	**56.64**	**16**	eP	**P**	**06 38 36.4**	**-0.5**
	comp=Z,2.9nm,0.6s,mb4.5						
YKA	**Yellowknife Ar**	**57.70**	**33**	P	**P**	**06 38 46.7**	**+2.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**57.70**	**33**	P	**P**	**06 38 46.7**	**+2.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=304,slow=6.8,SNR=32						
YKA	**Yellowknife Ar**	**57.70**	**33**	P	**P**	**06 38 46.7**	**+2.1**
ARCES	**ARCESS Array B**	**59.96**	**339**	P	**P**	**06 39 00.1**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ARCES	**ARCESS Array B**	**59.96**	**339**	P	**P**	**06 39 00.1**	**-0.1**
	comp=Z,6.7nm,1.2s,mb4.5,baz=56,slow=8.7,SNR=4.7						
WRA	**Warramunga Arr**	**62.86**	**191**	P	**P**	**06 39 18.9**	**-1.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**62.86**	**191**	P	**P**	**06 39 18.9**	**-1.5**
	comp=Z,0.7nm,0.7s,mb3.9,baz=13,slow=7.0,SNR=7.8						
KAF	**Kangasniemi**	**64.82**	**333**	ep	**P**	**06 39 31.2**	**-1.3**
	comp=Z,4.3nm,0.8s,mb4.5,baz=45,slow=6.2						
KAF	**Kangasniemi**	**64.82**	**333**	eP	**P**	**06 39 31.2**	**-1.3**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**65.37**	**332**	P	**P**	**06 39 34.9**	**-1.1**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FINES	**FINESS Array B**	**65.37**	**332**	P	**P**	**06 39 34.9**	**-1.1**
	comp=Z,5.3nm,0.7s,mb4.7,baz=50,slow=7.5,SNR=36						
ASAR	**Alice Springs**	**66.58**	**191**	P	**P**	**06 39 45.1**	**+0.7**
	comp=Z,0.5nm,0.8s,mb3.6,baz=8.7,slow=5.7,SNR=4.7						
NVAR	**Mina Array Bea**	**69.52**	**56**	P	**P**	**06 40 04.7**	**+2.3**
	comp=Z,0.9nm,1.1s,mb3.6,baz=312,slow=2.7,SNR=2.8						
NB2	**NORSAR Subarra**	**70.29**	**338**	P	**P**	**06 40 06.5**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=34,slow=6.2						
NB2	**NORSAR Subarra**	**70.29**	**338**	P	**P**	**06 40 06.5**	**-0.2**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
NOA	**NORSAR Array B**	**70.29**	**338**	P	**P**	**06 40 05.4**	**-1.3**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**70.29**	**338**	P	**P**	**06 40 05.4**	**-1.3**
	comp=Z,2.8nm,0.9s,mb4.2,baz=36,slow=6.1,SNR=6.2						
AKASG	**Malin Array Be**	**71.76**	**323**	P	**P**	**06 40 14.2**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
AKASG	**Malin Array Be**	**71.76**	**323**	P	**P**	**06 40 14.2**	**-1.5**
	comp=Z,3.1nm,1.0s,mb4.2,baz=31,slow=5.6,SNR=6.5						
PDAR	**Pinedale Array**	**71.88**	**48**	P	**P**	**06 40 17.5**	**+1.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=297,slow=3.3,SNR=3.7						
PV10	**Paradox Valley**	**75.10**	**51**	eP	**P**	**06 40 38.4**	**+3.0**
BRTR	**Keskin Array B**	**77.37**	**313**	P	**P**	**06 40 49.0**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**77.37**	**313**	P	**P**	**06 40 49.0**	**+0.7**
	comp=Z,0.8nm,0.8s,mb3.7,baz=63,slow=6.4,SNR=4.0						
GERES	**GERESS Array B**	**79.57**	**330**	P	**P**	**06 41 01.5**	**+1.4**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**79.57**	**330**	P	**P**	**06 41 01.5**	**+1.4**
	comp=Z,1.1nm,0.7s,mb3.9,baz=180,slow=2.7,SNR=17						
TXAR	**Lajitas Array**	**84.60**	**55**	P	**P**	**06 41 28.0**	**+1.5**
	comp=Z,0.1nm,0.5s,mb3.2,baz=323,slow=4.5,SNR=2.7						

*BJI **13** 06:30:10.0, 6.00N×77.50W, h45^{km}, mB5.2, Ms5.5, Msz4.8*
*NEIC **13** 06:30:10.0±0.9, 5.96N×77.49W, h46^{km}±9^{km}, mb4.5/9, Error ellipse: s-maj=10.1km s-min=7.2km az=54.0*
*IDC **13** 06:30:10.3±2.1, 6.04N×77.51W, h46^{km}±20^{km}, mb3.8/13, mb1 4.1/17, mb1mx3.9/25, mbtmp4.1/17, ML4.0/2, MS3.9/3, Ms1 3.8/3, ms1mx3.2/25, Error ellipse: s-maj=22.7km s-min=14.0km az=51.0*

ISC 13 06:30:07.7±0.8**, 6.04N**±0.07×**77.54W**±0.05**, h36**^{km}±8^{km}**, n51, σ1§01**/45**, mb4.2**/18**, MS3.8**/1**, 1C-2D, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZU	**Azuero**	**3.22**	**303**	⇓eP	**P**	**06 30 55.9**	**-1.2**
AZU				eS	**S**	**06 31 34.4**	**-0.3**
ROSC	**El Rosal**	**3.41**	**110**	P	**P**	**06 31 01.6**	**+1.9**
	5.5nm,0.3s,baz=296,slow=0.4,SNR=28						
UPA	**Univ. de Panam**	**3.52**	**326**	⇓eP	**P**	**06 30 59.4**	**-2.0**
PTP1	**Petroterminal**	**5.30**	**294**	eP	**P**	**06 31 28.8**	**+2.3**
DVD	**David**	**5.42**	**296**	⇑eP	**P**	**06 31 27.7**	**-0.5**
OTAV	**Otavalo**	**5.84**	**189**	ePn	**P**	**06 31 33.0**	**-1.0**
	18nm,0.8s						
OTAV				eSn	**S**	**06 32 31.1**	**-10**
ACR	**Cerro Adams**	**6.15**	**295**	eP	**P**	**06 31 37.6**	**-0.9**
BUS	**Buena Vista**	**7.08**	**300**	eP	**P**	**06 31 52.0**	**+0.5**
ICR	**Volcan Irazu**	**7.36**	**303**	eP	**P**	**06 31 56.9**	**+1.6**
LCR2	**La Lucha 2**	**7.38**	**300**	eP	**P**	**06 31 56.0**	**+0.4**
SDV	**Santo Domingo**	**7.41**	**67**	P	**P**	**06 31 55.7**	**-0.4**
	4.0nm,0.3s,baz=263,slow=9.1,SNR=47						
SDV				LR	LR	06 35 00.4	
	comp=Z,1μm,18.5s,baz=236,slow=39						
SDV	**Santo Domingo**	**7.41**	**67**	ePn	**P**	**06 31 56.1**	**+0.1**
	81nm,0.8s						
SDV				eSn	**S**	**06 33 26.1**	**+6.3**
PRS1	**Puriscal**	**7.76**	**301**	eP	**P**	**06 32 01.2**	**+0.2**
JCR	**Jicaral**	**8.40**	**297**	eP	**P**	**06 32 09.0**	**-0.9**
JTS	**JuntasAbangare**	**8.46**	**300**	P	**P**	**06 32 10.6**	**-0.1**
	1.2nm,0.3s,baz=119,slow=10,SNR=10						
JTS				LR	LR	06 35 28.8	
	comp=Z,565nm,20.4s,baz=78,slow=38						

JTS	JuntasAbangare	8.46	300	*e*Pn	P	06 32 10.5	-0.3
	17nm,0.7s						
SJG	San Juan	16.36	42	P	P	06 33 55.7	-0.6
	1.0nm,0.3s,baz=198,slow=20,SNR=2.7						
TEIG	Tepich	17.54	325	*e*P	P	06 34 13.3	+2.2
	14nm,1.3s						
SAML	Samuel	20.66	136	*e*P	P	06 34 42.6	-4.5
	11nm,0.8s						
LPAZ	La Paz	24.06	157	P	P	06 35 20.9	+0.1
	2.9nm,1.1s,mb3.6,baz=318,slow=6.7,SNR=4.8						
USIN	University of	33.08	345	*e*P	P	06 36 43.1	+0.8
	25nm,0.8s,mb5.2						
TXAR	Lajitas Array	33.84	316	P	P	06 36 48.1	-0.8
	0.7nm,0.8s,mb3.6,baz=140,slow=9.8,SNR=8.4						
TXAR				PcP	PcP	06 39 27.9	+0.4
	0.5nm,0.8s,baz=139,slow=6.4,SNR=5.5						
FVM	French Village	33.88	342	*e*P	P	06 36 49.8	+0.5
	8.3nm,0.8s,mb4.7						
CCM	Cathedral Cave	34.21	341	*e*P	P	06 36 51.8	-0.3
	6.4nm,0.7s,mb4.7						
BDFB	Brasilia	36.32	127	LR	LR	06 53 12.2	
	comp=Z,175nm,20.4s,MS3.8,baz=299,slow=38						
MNTX	Cornudas Mount	36.46	318	*e*P	P	06 37 11.8	+0.5
ANMO	Albuquerque	39.22	321	P	P	06 37 35.4	+1.0
	1.7nm,0.9s,mb3.8,baz=148,slow=8.0,SNR=11						
ANMO	Albuquerque	39.22	321	*e*P	P	06 37 36.2	+1.8
	1.8nm,0.8s,mb3.9						
PV01	Paradox Valley	42.58	323	*e*P	P	06 38 04.5	+2.4
PDAR	Pinedale Array	46.23	327	P	P	06 38 31.8	+0.5
	0.7nm,0.9s,mb3.6,baz=117,slow=4.0,SNR=4.8						
ULM	Lac du Bonnet	46.67	344	P	P	06 38 33.5	-1.1
	3.8nm,1.0s,mb4.3,baz=136,slow=13,SNR=5.2						
PLCA	Paso Flores	46.99	173	P	P	06 38 37.0	-0.3
	3.4nm,0.8s,mb4.3,baz=350,slow=11,SNR=8.7						
PLCA	Paso Flores	46.99	173	*e*P	P	06 38 37.1	-0.1
	4.7nm,0.9s,mb4.4						
NVAR	Mina Array Bea	48.98	317	P	P	06 38 53.0	+0.2
	1.3nm,0.8s,mb4.0,baz=124,slow=7.7,SNR=13						
SCHQ	Schefferville	49.41	8	P	P	06 38 54.7	-1.2
	9.6nm,1.3s,mb4.7,baz=204,slow=11,SNR=4.2						
SCHQ	Schefferville	49.41	8	P	P	06 38 54.7	-1.2
WVOR	Wild Horse Val	51.31	321	*e*P	P	06 39 10.7	+0.2
	5.2nm,0.9s,mb4.5						
YKA	Yellowknife Ar	62.54	342	P	P	06 40 28.4	-1.7
	1.5nm,0.9s,mb4.1,baz=132,slow=7.1,SNR=19						
SUMG	Summit	70.59	12	P	P	06 41 20.6	-0.3
	8.4nm,1.0s,mb4.6						
DBIC	Dimbokro	72.18	85	P	P	06 41 30.9	-0.4
	7.1nm,0.9s,mb4.6,baz=277,slow=6.7,SNR=4.9						
INK	Inuvik	72.31	341	P	P	06 41 31.2	+0.1
	2.3nm,1.2s,mb4.0,baz=5.0,slow=23,SNR=3.1						
ESDC	Sonseca Array	73.53	51	P	P	06 41 39.1	+0.2
	0.4nm,0.8s,mb3.4,baz=273,slow=5.6,SNR=4.8						
ILAR	Eielson Array	75.83	336	P	P	06 41 51.0	-0.7
	1.9nm,1.1s,mb3.9,baz=117,slow=2.6,SNR=6.2						
MDJ	Mudanjiang	123.98	337	PKP	PKPdf	06 49 01.6	-1.0
MDJ				PP	PP		
	comp=Z,69nm,5.3s						
CN2	Changchun	126.21	339	*e*PKP	PKPdf	06 49 08.3	+1.4
SONM	Songino Array	126.24	357	PKP	PKPdf	06 49 08.2	+1.3
	comp=Z,0.3nm,0.8s,baz=324,slow=0.6,SNR=3.7						
LZH	Lanzhou	138.07	358	*e*PKP	PKPdf	06 49 30.9	+1.4
LZH				XPKP		06 49 46.3	
NJ2	Nanjing	139.02	339	*e*PKP	PKPdf	06 49 32.4	+1.1
ASAR	Alice Springs	145.05	237	PKP	PKPdf	06 49 42.5	+0.3
	comp=Z,1.3nm,0.6s,baz=117,slow=3.5,SNR=16						
WB2	Warramunga Arr	146.08	243	*e*P	PKPdf	06 49 47.1	+3.1
WRA	Warramunga Arr	146.09	243	PKPbc	PKPbc	06 49 45.0	0.0
	comp=Z,2.1nm,0.9s,baz=105,slow=3.3,SNR=12						

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*NEIC **13** 06:34:08.1±0.8,12.02N×93.45E,h30^{km},mb3.9/1,Error ellipse: s-maj=19.9km s-min=12.5km az=71.0*

IDC 13 06:34:03.5±1.4**,11.97N×93.39E,mb3.6**/5**,mb1 3.7**/6**, mb1mx3.6**/18**,mbtmp3.5**/6**,ML3.8**/1**,MS2.8**/1**,Ms1 3.0**/1**, ms1mx2.4**/18**,Error ellipse: s-maj=43.2km s-min=22.8km az=62.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.38	39	Pn	P	06 36 06.4	-2.7
	0.3nm,0.3s,baz=60,slow=25,SNR=2.4						
CMAR				LR	LR	06 39 40.0	
	comp=Z,60nm,18.6s,baz=336,slow=40						
SONM	Songino Array	37.37	14	P	P	06 41 17.8	-1.9
	0.3nm,0.7s,baz=214,slow=10,SNR=4.3						
ZAL	Zalesovo	42.41	352	P	P	06 41 59.8	-1.6
	0.9nm,0.4s,baz=300,slow=9.5,SNR=4.4						
WRA	Warramunga Arr	51.29	128	P	P	06 43 09.5	-2.2
	0.3nm,0.6s,baz=302,slow=9.8,SNR=6.0						
WRAB	Tennant Creek	51.29	128	*e*P	P	06 43 09.7	-2.0
	0.7nm,0.5s						
ASAR	Alice Springs	53.14	132	P	P	06 43 23.5	-2.1
	0.2nm,0.4s,baz=307,slow=7.1,SNR=5.3						
BRTR	Keskin Array B	59.24	309	P	P	06 44 07.0	-2.2
	0.7nm,0.9s,baz=125,slow=7.5,SNR=4.0						

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*IDC **13** 06:55:27.4±0.7,45.26S×166.99E,mb4.1/6,mb1 4.4/8, mb1mx4.2/12,mbtmp4.2/8,ML4.5/2,MS3.6/6,Ms1 3.6/6, ms1mx3.2/15,Error ellipse: s-maj=28.5km s-min=19.5km az=8.0*

*NEIC **13** 06:55:31.6,45.30S×166.95E,h20^{km},mb4.8/4, ML5.2(WEL),After WEL.*

NEIC Felt at Te Anau and in other parts of Southland.

*WEL **13** 06:55:31.8±0.3,45.33S×166.92E,h21^{km}±1^{km},ML5.1/23, Error ellipse: s-maj=3.0km s-min=2.0km az=90.0*

WEL Felt from Otago to Southland, maximum reported intensity MM 5.

ISC 13 06:55:28.8±1.2**,45.21S**±0.03×**166.85E**±0.04**,h14**^{km}±8^{km}**, n88,**σ**1**^{s}**05**/98**,mb4.2**/8**,MS3.6**/6**,1C-4D,Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.34	142	⇓P*	Pb	06 55 37.3	+1.2
DCZ				S*	Sb	06 55 41.1	0.0
MSZ	Milford Sound	0.93	55	P*	Pb	06 55 46.9	+0.7
MSZ				S*	Sb	06 56 02.9	+4.6
MLZ	Mavora Lakes	0.94	99	P	Pb	06 55 47.0	+0.6
MLZ				S	Sb	06 55 58.7	+0.2
MLZ	Mavora Lakes	0.94	99	P*	Pb	06 55 47.0	+0.7
MLZ				P*	Pb	06 55 47.1	+0.7
MLZ				S*	Sb	06 55 58.6	+0.1
MLZ				S*	Sb	06 55 58.7	+0.2
WHZ	Wether Hill Ro	1.03	132	P	Pb	06 55 48.3	+0.4
WHZ				S	Sb	06 56 00.6	-0.5
WHZ	Wether Hill Ro	1.03	132	⇓P*	Pb	06 55 48.3	+0.4
WHZ				S*	Sb	06 56 00.6	-0.5
WKZ	Wanaka	1.58	77	*e*P	Pn	06 55 58.1	+1.5
WKZ	Wanaka	1.58	77	PN	Pn	06 55 58.1	+1.5
WKZ				SN	Sn	06 56 18.2	+1.2
EAZ	Earnscleugh	1.74	92	P	Pn	06 56 00.1	+1.3
EAZ	Earnscleugh	1.74	92	⇓PN	Pn	06 56 00.1	+1.3
EAZ				SN	Sn	06 56 20.7	-0.2
JCZ	Jackson Bay	1.77	51	P	Pn	06 56 01.6	+2.3
JCZ				S	Sn	06 56 26.0	+4.3
JCZ	Jackson Bay	1.77	51	PN	Pn	06 56 01.6	+2.2
JCZ				SN	Sn	06 56 24.3	+2.6
TUZ	Tuapeka	2.09	112	P	Pn	06 56 04.1	+0.2
TUZ	Tuapeka	2.09	112	PN	Pn	06 56 04.1	+0.2
TUZ				SN	Sn	06 56 28.3	-1.6
LBZ	Lake Benmore	2.51	72	P	Pn	06 56 10.5	+0.6
LBZ	Lake Benmore	2.51	72	PN	Pn	06 56 10.5	+0.6
LBZ				SN	Sn	06 56 40.6	0.0
FOZ	Fox Glacier	2.62	52	PN	Pn	06 56 13.5	+2.1
FOZ				SN	Sn	06 56 51.0	+7.9
ODZ	Otahua Downs	2.69	88	P	Pn	06 56 12.4	-0.1
ODZ	Otahua Downs	2.69	88	PN	Pn	06 56 12.4	0.0
ODZ				SN	Sn	06 56 46.3	+1.3
RPZ	Rata Peaks	3.36	65	Pn	Pn	06 56 21.3	-0.7
	170nm,0.3s,baz=208,slow=6.1,SNR=354						
RPZ				Sn	Sn	06 57 02.0	0.0
	160nm,0.3s,baz=129,slow=12,SNR=4.5						
RPZ	Rata Peaks	3.36	65	P	Pn	06 56 21.6	-0.4
RPZ	Rata Peaks	3.36	65	PN	Pn	06 56 21.6	-0.3
RPZ				SN	Sn	06 57 02.3	+0.3
WVZ	Waitaha Valley	3.52	54	*e*P	Pn	06 56 24.5	+0.3
WVZ	Waitaha Valley	3.52	54	PN	Pn	06 56 24.5	+0.3
WVZ				SN	Sn	06 57 06.0	0.0
MQZ	McQueen’s Vall	4.42	72	*e*P	Pn	06 56 35.3	-1.7
MQZ	McQueen’s Vall	4.42	72	PN	Pn	06 56 35.3	-1.7
MQZ				SN	Sn	06 57 25.4	-3.3
CRLZ	Canterbury Las	4.45	71	*e*P	Pn	06 56 36.5	-0.9
CRLZ	Canterbury Las	4.45	71	PN	Pn	06 56 36.0	-1.4
LTZ	Lake Taylor	4.60	60	*e*P	Pn	06 56 38.6	-1.0
LTZ	Lake Taylor	4.60	60	PN	Pn	06 56 38.6	-1.0
DSZ	Denniston Nort	5.00	48	P	Pn	06 56 44.6	-0.6
KHZ	Kahutara	5.59	62	*e*P	Pn	06 56 52.5	-1.0
THZ	Tophouse	5.59	54	*e*P	Pn	06 56 52.9	-0.7
QRZ	Quartz Range	6.04	46	*e*P	Pn	06 56 59.2	-0.7
NNZ	Nelson	6.22	52	*e*P	Pn	06 57 02.2	-0.2
MRW	Makara Radio	6.98	58	P	Pn	06 57 14.3	+1.2
CAW	Cannon Point	7.27	59	P	Pn	06 57 15.6	-1.6
KIW	Kapiti Island	7.33	56	P	Pn	06 57 17.2	-0.8
MTW	Mount Morrison	7.51	60	P	Pn	06 57 19.5	-1.0
MRZ	Mangatainoka R	7.85	58	*e*P	Pn	06 57 24.4	-0.9
NRZ	Ngariki Road	7.87	44	P	Pn	06 57 24.7	-0.9
NEZ	North Egmont	8.00	45	P	P	06 57 27.0	-0.5
PKE	Pukeiti	8.01	44	P	P	06 57 26.3	-1.2
WAZ	Wanganui	8.11	51	*e*P	P	06 57 30.0	+1.0
RAEZ	Rainy Point	8.14	46	P	P	06 57 29.4	0.0
FWVZ	Far West T-bar	8.77	50	*e*P	P	06 57 39.0	+0.8
WPVZ	Whakapapa	8.81	50	P	P	06 57 39.0	+0.4
CNZ	Chateau	8.81	50	P	P	06 57 40.2	+1.5
TUVZ	Tukino	8.82	51	P	P	06 57 40.2	+1.4
TWVZ	Taurewa	8.84	49	P	P	06 57 38.8	-0.4
NGZ	Ngauruhoe	8.86	50	P	P	06 57 40.2	+0.9
WTVZ	West Tongariro	8.89	50	P	P	06 57 40.5	+0.7
MGZ	Maungaku	8.95	49	P	P	06 57 40.9	+0.3
HIZ	Hauiti	8.96	45	P	P	06 57 39.8	-1.0
WTAZ	Waiatarua	10.11	38	P	P	06 57 56.1	-0.5
MKAZ	Moumakai	10.23	41	P	P	06 57 58.2	0.0
KAAZ	Kauri Point	10.26	38	P	P	06 57 58.7	+0.1
URZ	Urewera	10.34	51	Pn	P	06 57 56.2	-3.5
	1.4nm,0.3s,baz=215,slow=9.9,SNR=7.1						
URZ				Sn	S	06 59 47.4	-8.9
	2.8nm,0.3s,baz=319,slow=18,SNR=4.6						
MTAZ	Motutapu	10.38	39	P	P	06 57 59.6	-0.7
KUZ	Kuaotunu	10.78	41	*e*P	P	06 58 04.5	-1.3
WCZ	Waipu Caves	10.87	34	P	P	06 58 05.7	-1.2
TAU	Tasmania Unive	14.23	272	*e*P	P	06 58 49.2	-2.6
	24nm,0.7s						
CNB	Canberra Magne	16.57	301	*e*P	P	06 59 23.0	+0.8
	204nm,0.8s						
CNB				*e*T		07 15 11.6	
TOO	Toolangi	17.72	288	*e*P	P	06 59 39.2	+2.7
	1.0nm,0.6s						
TOO				*e*T		07 15 52.2	
STKA	Stephens Creek	23.70	295	⇑*i*P	P	07 00 44.3	+3.5
	6.1nm,0.9s,mb4.0						
STKA	Stephens Creek	23.70	295	P	P	07 00 42.6	+1.8
	7.4nm,1.0s,mb4.1,baz=132,slow=11,SNR=6.8						
STKA				LR	LR	07 09 15.0	
	comp=Z,297nm,18.7s,MS3.8,baz=299,slow=35						
CTA	Charters Tower	30.29	319	LR	LR	07 11 40.5	
	comp=Z,168nm,21.1s,MS3.7,baz=139,slow=32						
VNDA	Vanda	32.48	182	LR	LR	07 13 10.8	
	comp=Z,185nm,18.0s,MS3.8,baz=5.3,slow=33						
SBA	Scott Base	32.76	180	P	P	07 01 59.5	-3.3
ASAR	Alice Springs	34.28	298	P	P	07 02 16.9	+0.4
	0.6nm,0.6s,mb3.7,baz=139,slow=7.6,SNR=10						
ASAR				PcP	PcP	07 04 51.3	-1.7
	1.0nm,0.8s,baz=139,slow=3.2,SNR=4.6						
ASAR				LR	LR	07 16 40.9	
	comp=Z,175nm,18.9s,MS3.8,baz=148,slow=37						
ASAR	Alice Springs	34.28	298	P	P	07 02 16.9	+0.4
ASAR				PcP	PcP	07 04 51.3	-1.7
ASAR				LR	LR	07 16 40.9	
WB2	Warramunga Arr	36.80	302	*e*P	P	07 02 37.9	-0.1
WRA	Warramunga Arr	36.81	302	P	P	07 02 37.7	-0.3
	1.4nm,0.6s,mb4.0,baz=138,slow=8.3,SNR=12						
WRAB	Tennant Creek	36.81	302	*e*P	P	07 02 38.0	0.0
	29nm,1.5s,mb4.9						
PMG	Port Moresby	39.50	328	LR	LR	07 15 14.5	
	comp=Z,83nm,20.4s,MS3.6,baz=298,slow=30						
QSPA	South Pole Qui	44.92	180	*e*P	P	07 03 45.1	+1.0
	11nm,1.0s,mb4.6						
MAW	Mawson	53.99	207	LR	LR	07 23 58.3	
	comp=Z,8.8nm,21.1s,MS2.8,baz=250,slow=32						
SYO	Syowa Base	59.63	199	⇓P	P	07 05 29.5	-4.6
SNAA	Sanae	63.20	184	P	P	07 05 56.7	-1.4
	1.7nm,1.0s,mb4.2,baz=72,slow=4.2,SNR=3.8						
PLCA	Paso Flores	80.19	139	P	P	07 07 39.5	-0.3
	1.9nm,0.8s,mb4.0,baz=184,slow=8.4,SNR=4.3						
CMAR	Chiang Mai Arr	88.29	298	P	P	07 08 21.6	+0.5
	1.7nm,0.8s,mb4.3,baz=155,slow=3.7,SNR=6.4						
YKA	Yellowknife Ar	124.14	33	PKP	PKPdf	07 14 25.7	-4.0
	0.2nm,0.9s,baz=252,slow=1.6,SNR=4.1						
BRTR	Keskin Array B	145.44	278	PKPbc	PKPbc	07 15 07.2	+0.8
	3.6nm,0.6s,baz=135,slow=5.6,SNR=14						
ARCES	ARCESS Array B	148.90	335	PKPbc	PKPdf	07 15 15.4	+1.3
	12nm,1.1s,baz=86,slow=2.7,SNR=36						
JOF	Joensuu	149.29	321	*e*pkp	PKPdf	07 15 15.9	+1.0
AKASG	Malin Array Be	151.40	296	PKPbc	PKPdf	07 15 21.8	+3.3
	2.4nm,0.5s,baz=72,slow=2.6,SNR=18						
KAF	Kangasniemi	151.75	321	*e*pkp	PKPdf	07 15 21.7	+3.0
	baz=60,slow=2.1						
FINES	FINESS Array B	152.06	320	PKPbc	PKPdf	07 15 23.0	+3.8
	3.4nm,0.7s,baz=82,slow=2.7,SNR=14						

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*NIED **13** 06:55:00,35.90N×138.10E,h11^{km},Mw3.3 Best double couple: $M_0$1.12×10^{14} NP1:ϕ_s7°,δ79°,λ41°. NP2:ϕ_s267°, δ49°,λ166°.*

JMA 13 06:55:51.1,35.92N×138.06E,h12^{km}±1^{km}**,M3.4,3C-1D Broadband fault plane solution: P waves. NP1:**ϕ_s268°, δ59°,λ176°. **NP2:**ϕ_s0°,δ87°,λ31°. **Principal axes:** T Plg24°**,** Azm229°**;** N Plg59°**,** Azm6°**;** P Plg19°**,** Azm130°**; Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNT	Takato	0.08	125	⇑P	Pg	06 55 53.5	-0.3
JNT				S	Sg	06 55 55.3	-0.2
JNG	Nsakai	0.49	4	⇑P	Pg	06 56 00.3	-0.8
JNG				S	Sg	06 56 07.0	-0.7
JYN	Shimob	0.58	137	⇓P	Pb	06 56 02.3	-0.3
JYN				S	Sb	06 56 10.5	0.0
JNY	Yasuok	0.58	196	⇑P	Pb	06 56 01.9	-0.8
JNY				S	Sb	06 56 09.8	-0.9
MAT	Matsushiro	0.63	11	P	Pb	06 56 03.0	-0.6
MAT				S	Sb	06 56 11.3	-0.8
MAT	Matsushiro	0.63	11	P	Pb	06 56 02.9	-0.7
MAT				S	Sb	06 56 11.2	-0.9

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*IDC **13** 06:57:46.5±0.6,6.22N×72.99W,h195^{km}±5^{km},mb3.5/2, mb1 3.6/3,mb1mx3.0/20,mbtmp4.0/3 Error ellipse: s-maj=26.8km s-min=7.8km az=132.0*

*NEIC **13** 06:57:47.1±0.8,6.16N×72.96W,h201^{km}±8^{km},mb3.7/2, Error ellipse: s-maj=19.0km s-min=12.3km az=122.0*

ISC 13 06:57:45.9±0.7**,6.2N**±0.1×**72.9W**±0.1**,h207**^{km}±8^{km}**,n13,** σ**0**^{s}**62**/13**,mb3.6**/3**,1C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	1.92	226	P	P	06 58 25.8	+1.3
	6.3nm,0.3s,baz=323,slow=2.3,SNR=34						
ROSC				S	S	06 58 53.4	-0.8
	23nm,0.3s,baz=90,slow=18,SNR=25						
SDV	Santo Domingo	3.52	40	P	P	06 58 43.2	+0.7
	7.2nm,0.3s,baz=221,slow=9.7,SNR=86						
SDV				S	S	06 59 26.1	-0.2
	14nm,0.3s,baz=99,slow=20,SNR=17						
SDV	Santo Domingo	3.52	40	⇑*i*Pn	P	06 58 43.0	+0.5
SDV				*e*Sn	S	06 59 25.3	-1.1
SDV				S	S	06 59 26.1	-0.3
OTAV	Otavalo	8.08	223	*e*Pn	P	06 59 40.9	-0.1
	36nm,4.4s						
SAML	Samuel	17.92	147	*e*P	P	07 01 42.6	-0.4
	1.3nm,0.4s						
LPAZ	La Paz	22.84	168	P	P	07 02 32.3	0.0
	2.0nm,1.2s,mb3.5						
TXAR	Lajitas Array	37.01	312	PcP	PcP	07 06 54.7	+0.5
	0.4nm,0.8s,baz=140,slow=4.9,SNR=4.1						
YKA	Yellowknife Ar	63.90	340	P	P	07 07 58.1	-0.4
	0.4nm,0.6s,mb3.2,baz=133,slow=6.4,SNR=19						
YKA				pP	pP	07 08 43.0	-3.5
	0.3nm,0.7s,baz=128,slow=7.1,SNR=4.4						
YKA	Yellowknife Ar	63.90	340	P	P	07 07 58.1	-0.4
YKA				pP	pP	07 08 43.0	-3.6
DBIC	Dimbokro	67.61	85	P	P	07 08 23.2	+0.4
	2.7nm,0.7s,mb4.0,baz=239,slow=5.9,SNR=3.3						
SONM	Songino Array	126.19	1	PKP	PKPdf	07 16 27.5	+3.6
	0.2nm,0.4s,baz=310,slow=1.5,SNR=4.1						
ASAR	Alice Springs	148.89	233	PKPbc	PKPdf	07 17 11.2	+5.6
	1.2nm,0.6s,baz=120,slow=3.5,SNR=16						
ASAR				pPKPbc		07 18 01.9	
	0.5nm,0.8s,baz=118,slow=3.1,SNR=3.0						
WRA	Warramunga Arr	150.19	240	PKP	PKPdf	07 17 09.5	+1.8
	0.4nm,0.7s,baz=107,slow=2.6,SNR=6.1						
WRA				PKPbc	PKPdf	07 17 13.7	+5.9
	0.7nm,0.5s,baz=109,slow=2.0,SNR=5.3						
WRA				pPKPbc		07 18 05.1	
	0.7nm,0.8s,baz=106,slow=3.0,SNR=3.0						

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*THE **13** 07:00:35.5,37.98N×20.48E,h10^{km},ML3.3*

*ATH **13** 07:00:36.0,38.05N×20.46E,h18^{km}±2^{km},MD3.4/8*

*NEIC **13** 07:00:36.0,38.05N×20.46E,h18^{km},MD3.4(ATH),After ATH.*

NEIC Felt at Argostolian.

*CSEM **13** 07:00:36.0±0.3,37.95N×20.50E,h10^{km},MD3.4,Error ellipse: s-maj=7.9km s-min=2.6km az=36.0*

ISC 13 07:00:34.8±1.5**,37.93N**±0.09×**20.5E**±0.1**,h9**^{km}±19^{km}**,n21,** σ**1**^{s}**00**/26**,1C-1D,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.27	20	*e*PB	Pb	07 00 41.1	-0.1
VLS				*e*SB	Sb	07 00 43.9	-1.6
RLS	Riolos of Patr	0.80	80	⇑*i*PN	Pn	07 00 50.2	-1.7
ITM	Ithomi	1.38	122	*e*PN	Pg	07 01 03.9	+1.6
EVR	Evrytania	1.44	46	*e*PN	Pn	07 01 02.6	+1.5
EVR				*e*SN	Sn	07 01 21.0	+0.7
IGT	Igoumenitsa	1.61	356	*e*Pb	Pb	07 01 03.7	-0.5
IGT				*e*Sb	Sb	07 01 26.3	+1.8
AGG	Agios Georgios	1.82	53	*e*Pb	Pb	07 01 07.9	0.0
AGG				*e*Sb	Sb	07 01 31.9	+1.2
KEK	Kerkira	1.86	344	*e*PN	Pn	07 01 07.5	+0.4
LKR	Lokris	2.11	69	*e*PB	Pb	07 01 11.6	-1.3
NAIG	Nisos Aigina	2.39	93	*e*PB	Pb	07 01 17.0	-0.6
NEO	Neokhori	2.56	57	⇓*i*PN	Pn	07 01 17.2	+0.1
XOR	Xorichti	2.57	55	*e*Pn	Pn	07 01 17.4	+0.1
MPAR	Parnis Oros	2.58	84	*e*PB	Pb	07 01 20.0	-0.9
LIT	Litokhoron	2.68	35	*e*Pn	Pn	07 01 18.5	-0.4
LIT				*e*Sn	Sn	07 01 51.8	+0.1
PTL	Penteli	2.68	86	*e*PN	Pn	07 01 20.6	+1.7
AOS	Alonnisos	2.94	64	*e*Pn	Pn	07 01 23.6	+1.0
AOS	Alonnisos	2.94	64	*e*Pn	Pn	07 01 23.6	+1.0
PAIG	Paliouri	3.20	50	*e*Pn	Pn	07 01 25.4	-0.8
GRG	Griva	3.37	26	*e*Pn	Pn	07 01 28.1	-0.6
OUR	Ouranopolis	3.64	48	*e*Pn	Pn	07 01 31.5	-1.0
SOH	Sokhos	3.65	37	*e*Pn	Pn	07 01 33.0	+0.4
KNT	Kendrikon	3.73	29	*e*Pn	Pn	07 01 33.1	-0.8

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*CSEM **13** 07:24:50.3,12.02N×44.13E,h7^{km},ML4.2,After DHMR*

DHMR 13 07:24:50.3±1.6**,12.02N×44.13E,h7**^{km}±11^{km}**,ML4.2, 5C-3D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	At Turbah	1.21	359	⇓*e*P	Pb	07 25 13.7	+0.7
TRBA				*i* S	Sb	07 25 29.4	+0.7
TRBA				AML	AML	07 25 38.0	
	comp=E,7µm,0.5s						
UDYN	Al ‘Udayn	1.94	355	⇓*e*P	Pn	07 25 25.1	+1.0
UDYN				*e*S	Sn	07 25 52.0	+3.0
UDYN				AML	AML	07 25 57.2	
	comp=N,3µm,0.6s						
UDYN	Al ‘Udayn	1.94	355	⇓*e*P	Pn	07 25 25.1	+1.0
UDYN				*e*S	Sn	07 25 52.0	+3.0
	comp=N,2µm,0.6s						
LBOS		2.14	31	⇑*i*P	Pn	07 25 27.4	+0.5
LBOS				*i* S	Sn	07 25 57.8	+3.8
BDHA	Al Bayda’	2.40	36	⇑*i*P	Pn	07 25 31.9	+1.3
BDHA				*i* S	Sn	07 26 05.4	+4.9
BDHA				AML	AML	07 26 12.4	
	comp=N,2µm,0.7s						
BDHA	Al Bayda’	2.40	36	⇑*i*P	Pn	07 25 31.9	+1.3
BDHA				*i* S	Sn	07 26 05.4	+4.9
	comp=N,882nm,0.7s						
DHBB	Dhamar BB	2.55	6	⇑*i*P	Pn	07 25 35.1	+2.3
DHBB				*i* S	Sn	07 26 09.8	+5.4
HAJJ	Hajjah	3.69	352	⇑*i*P	Pn	07 25 50.2	+1.2
HAJJ				*i* S	Sn	07 26 37.3	+3.9

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*IDC **13** 07:32:07.5±1.2,49.96N×159.34E,mb3.6/8,mb1 3.8/8, mb1mx3.7/22,mbtmp3.6/8,ML4.4/1,MS3.8/1,Ms1 3.7/1, ms1mx2.7/23,Error ellipse: s-maj=33.8km s-min=15.6km az=169.0*

*MOS **13** 07:32:08.8±1.1,49.77N×159.60E,h39^{km},mb4.5/6,Error ellipse: s-maj=21.6km s-min=7.9km az=92.2*

*KRSC **13** 07:32:11.5±0.9,49.93N×159.64E,h48^{km}±16^{km},ML4.9*

*NEIC **13** 07:32:14.0±1.8,50.04N×159.58E,h49^{km}±15^{km},mb4.6/3, Error ellipse: s-maj=19.8km s-min=10.5km az=189.0*

ISC 13 07:32:12.5±0.6**,50.04N**±0.04×**159.67E**±0.06**,h48**^{km}**,n59,** σ**0**^{s}**96**/85**,mb3.8**/11**,MS3.7**/1**,2D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	2.31	309	*i* P	P	07 32 49.8	+0.9
PAU				*e*S	S	07 33 16.2	0.0
PAU				Smax			
	2µm,0.6s						
SKR	Severo-Kuril’s	2.36	287	⇓*i*PN	P	07 32 46.7	-3.0
SKR				pmax	pmax		
	comp=N,590nm,0.2s						
SKR				pmax	pmax		
	comp=E,730nm,0.2s						
SKR				pmax	pmax		
	comp=Z,1µm,0.2s						
SKR	Severo-Kuril’s	2.36	287	*i* P	P	07 32 46.7	-3.0
SKR				*i* S	S	07 33 13.4	-4.2
RUS	Russkaya	2.50	344	P	P	07 32 52.0	+0.3
RUS				S	S	07 33 21.0	-0.1
RUS	Russkaya	2.50	344	*i* P	P	07 32 52.1	+0.4
RUS				*i* S	S	07 33 21.0	-0.1
GRL	Gorelyy	2.71	339	*i* P	P	07 32 55.8	+1.2
GRL				*e*S	S	07 33 27.0	+0.7
ALID	Alaid	2.76	289	*e*P	P	07 32 55.2	-0.1
ALID				*e*S	S	07 33 26.7	-0.9
MIPR	Malaya Ipel’ka	2.89	322	*e*P	P	07 32 58.6	+1.4
KRMR	Karymshinskiy	2.95	342	*e*P	P	07 32 59.0	+0.9
KRMR				*e*S	S	07 33 32.7	+0.1
KRMR				Smax			
	comp=Z,2µm,0.5s						
PET	Petropavlovsk	3.05	348	P	P	07 32 59.9	+0.4
PET				S	S	07 33 34.2	-0.9
PET	Petropavlovsk	3.05	348	⇓*i*PN	P	07 32 59.8	+0.3
PET				MLR	MLR		
	comp=N,100nm,19.0s						
PET				MLR	MLR		
	comp=E,300nm,20.0s						
PET	Petropavlovsk	3.05	348	*e*Pn	P	07 32 59.6	+0.1
PET				*e*S	S	07 33 34.3	-0.7
PET	Petropavlovsk	3.05	348	*i* P	P	07 32 59.7	+0.2
PET				*e*S	S	07 33 34.2	-0.9
SPN	Mys Shipunski	3.07	4	*i* P	P	07 32 59.9	+0.2
SPN				*i* S	S	07 33 34.5	-1.0
NLC	Nalytchevo	3.14	356	P	P	07 33 01.3	+0.6
NLC				S	S	07 33 36.5	-0.8
NLC	Nalytchevo	3.14	356	*e*P	P	07 33 01.5	+0.8
NLC				*e*S	S	07 33 37.0	-0.3
UGLR	Uglovaya	3.21	351	*e*P	P	07 33 02.3	+0.5
SMAR	Somma	3.27	351	*e*P	P	07 33 03.5	+0.9
SDLR	Sedlovina	3.28	352	*e*P	P	07 33 02.7	0.0
SDLR				*e*S	S	07 33 39.2	-1.6
AVH	Avacha	3.28	350	*i* P	P	07 33 03.3	+0.6
AVH				*e*S	S	07 33 40.3	-0.5
APC	Apacha	3.29	332	*i* P	P	07 33 04.0	+1.2
APC				*i* S	S	07 33 41.2	+0.2
APC				Smax			
	comp=E,280nm,0.5s						
KOK	Koryaka	3.32	349	*i* P	P	07 33 04.1	+0.9
KOK				*e*S	S	07 33 41.2	-0.6
GNL	Ganaly	3.81	344	*i* P	P	07 33 11.3	+1.1
GNL				*e*S	S	07 33 54.3	0.0
TUMR	Tumrok	5.26	3	*i* P	P	07 33 31.8	+1.3
TUMR				*i* S	S	07 34 29.5	-1.2
KMNR	Kamenistaya	5.74	3	*e*P	P	07 33 38.6	+1.4
ESO	Esso	5.92	355	*e*P	P	07 33 40.4	+0.6
ESO				*e*S	S	07 34 44.8	-2.5
ESO				Smax			

	comp=E,40nm,1.4s						
KOZ	**Kozyrevsk**	**6.03**	**1**	P	**P**	**07 33 42.7**	**+1.4**
KOZ	**Kozyrevsk**	**6.03**	**1**	*e*P	**P**	**07 33 42.6**	**+1.3**
KOZR	**Kozyr**	**6.04**	**1**	PN	**P**	**07 33 42.7**	**+1.3**
SRDR	**Sredinnyy**	**6.29**	**0**	*e*P	**P**	**07 33 45.2**	**+0.3**
KLY	**Klyuchi**	**6.31**	**5**	P	**P**	**07 33 45.6**	**+0.3**
KLY	**Klyuchi**	**6.31**	**5**	*e*P	**P**	**07 33 45.5**	**+0.2**
BKI	**Bering**	**6.44**	**34**	*i* P	**P**	**07 33 45.5**	**-1.5**
BKI				*i* S	**S**	**07 34 52.5**	**-7.5**
KBTR	**Krutoberegovo**	**6.46**	**16**	P	**P**	**07 33 46.5**	**-0.9**
KBTR				S	**S**	**07 34 55.2**	**-5.4**
KBTR	**Krutoberegovo**	**6.46**	**16**	*i* P	**P**	**07 33 46.6**	**-0.8**
KBTR				*e*S	**S**	**07 34 56.1**	**-4.5**
KBG	**Krutoberegovo**	**6.49**	**15**	*e*P	**P**	**07 33 47.0**	**-0.7**
KBG				*e*S	**S**	**07 34 55.0**	**-6.3**
KBG				Smax			
	comp=E,300nm,1.0s						
KBG	**Krutoberegovo**	**6.49**	**15**	*e*P	**P**	**07 33 47.2**	**-0.5**
KBG				*e*S	**S**	**07 34 56.6**	**-4.7**
SVLR	**Shiveluch**	**6.61**	**7**	*e*P	**P**	**07 33 50.5**	**+1.0**
FX1	**Attu Island--F**	**8.89**	**66**	Pn	**P**	**07 34 19.8**	**-1.2**
	comp=E,13nm,0.3s,baz=90,slow=17,SNR=53						
FX1				Sn	**S**	**07 35 48.6**	**-12**
	comp=E,42nm,0.3s,baz=183,slow=24,SNR=19						
FX1	**Attu Island--F**	**8.89**	**66**	*e*Pn	**P**	**07 34 20.7**	**-0.4**
KAMR	**Kamenskoye**	**12.96**	**14**	*e*P	**P**	**07 35 16.6**	**+0.6**
YAK	**Yakutsk**	**20.38**	**317**	*e*P	**P**	**07 36 43.9**	**-3.5**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK	**Yakutsk**	**20.38**	**317**	*e*P	**P**	**07 36 45.0**	**-2.4**
	comp=Z,44nm,0.6s						
TIXI	**Tiksi**	**25.78**	**338**	*e*P	**P**	**07 37 40.6**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
ILAR	**Eielson Array**	**31.22**	**42**	P	**P**	**07 38 27.9**	**-1.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**31.22**	**42**	P	**P**	**07 38 27.9**	**-1.1**
	comp=Z,0.5nm,0.6s,mb3.5,baz=251,slow=7.7,SNR=11						
SONM	**Songino Array**	**34.45**	**287**	P	**P**	**07 38 56.6**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=68,slow=7.7,SNR=5.5						
YKA	**Yellowknife Ar**	**45.63**	**40**	P	**P**	**07 40 29.0**	**-0.3**
	comp=Z,0.1nm,0.6s,mb2.9,baz=287,slow=7.1,SNR=3.7						
YKA				LR	LR	08 00 00.4	
	comp=Z,98nm,20.0s,MS3.7,baz=270,slow=36						
KURK	**Kurchatov**	**49.17**	**304**	*e*P	**P**	**07 40 56.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KURK	**Kurchatov**	**49.17**	**304**	*e*P	**P**	**07 40 56.8**	**-0.4**
	comp=Z,2.7nm,0.4s,mb4.6						
BVAR	**Borovoye Array**	**52.12**	**310**	P	**P**	**07 41 18.9**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.1,baz=63,slow=7.4,SNR=11						
BRVK	**Borovoye**	**52.15**	**310**	*e*P	**P**	**07 41 19.0**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**52.15**	**310**	*e*P	**P**	**07 41 19.0**	**-0.7**
	comp=Z,1.7nm,0.6s,mb4.2						
FINES	**FINESS Array B**	**62.82**	**337**	P	**P**	**07 42 34.6**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**62.82**	**337**	P	**P**	**07 42 34.6**	**-0.3**
	comp=Z,2.4nm,0.9s,mb4.3,baz=45,slow=7.9,SNR=6.1						
NOA	**NORSAR Array B**	**66.40**	**344**	P	**P**	**07 42 56.7**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	**NORSAR Array B**	**66.40**	**344**	P	**P**	**07 42 56.6**	**-1.3**
	comp=Z,1.3nm,0.9s,mb4.0,baz=21,slow=6.0,SNR=3.5						
TXAR	**Lajitas Array**	**72.11**	**66**	P	**P**	**07 43 34.6**	**+1.2**
	comp=Z,0.2nm,0.7s,mb3.2,baz=309,slow=5.9,SNR=3.5						
ASAR	**Alice Springs**	**76.86**	**204**	P	**P**	**07 43 59.8**	**-1.3**
	comp=Z,0.2nm,0.6s,mb3.2,baz=11,slow=5.0,SNR=4.2						

IDC 13 07:33:16.8±9.8, 32.62S×179.33W, h206^{km}±100^{km}, mb3.0/2, mb1 3.3/3, mb1mx3.2/14, mbtmp3.6/3, Error ellipse: s-maj=101.4km s-min=45.8km az=1.0

ISC 13 07:33:09.2±2.0, **33.3S**±0.2×**177.4W**±0.4, **h282**^{km}±15^{km}, **n16,** σ**1^{s}04**/22, **mb3.0**/2, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.51**	**218**	PN	**P**	**07 34 31.6**	**-1.0**
MXZ				SN	**S**	**07 35 37.6**	**-0.4**
PUZ	**Puketiti**	**5.93**	**215**	PN	**P**	**07 34 38.2**	**+0.5**
PUZ				SN	**S**	**07 35 48.2**	**+1.1**
MWZ	**Matawai**	**6.49**	**218**	PN	**P**	**07 34 44.3**	**-0.4**
MWZ				SN	**S**	**07 36 01.9**	**+2.4**
URZ	**Urewera**	**6.66**	**220**	P	**P**	**07 34 49.5**	**+2.8**
	1.1nm,0.3s,baz=21,slow=23,SNR=9.8						
URZ				S	**S**	**07 36 00.0**	**-3.1**
	3.8nm,0.3s,baz=285,slow=23,SNR=14						
URZ	**Urewera**	**6.66**	**220**	PN	**P**	**07 34 45.8**	**-0.9**
URZ				SN	**S**	**07 36 02.8**	**-0.4**
KNZ	**Kokohu**	**6.96**	**213**	SN	**S**	**07 36 09.1**	**-0.7**
KIW	**Kapiti Island**	**9.72**	**217**	SN	**S**	**07 37 10.7**	**-0.9**
PAWZ	**Paruwai Farm**	**9.88**	**213**	SN	**S**	**07 37 17.3**	**+2.3**
THZ	**Tophouse**	**11.42**	**219**	PN	**P**	**07 35 45.2**	**-0.6**
THZ				SN	**S**	**07 37 49.2**	**-0.4**
KHZ	**Kahutara**	**11.57**	**215**	PN	**P**	**07 35 48.0**	**+0.2**
KHZ				SN	**S**	**07 37 53.2**	**+0.2**
DSZ	**Denniston Nort**	**12.01**	**222**	SN	**S**	**07 37 58.3**	**-4.5**
LTZ	**Lake Taylor**	**12.47**	**218**	SN	**S**	**07 38 12.7**	**-0.4**
MQZ	**McQueen’s Vall**	**12.97**	**214**	SN	**S**	**07 38 23.6**	**-0.6**
ASAR	**Alice Springs**	**43.52**	**270**	P	**P**	**07 40 48.1**	**+1.1**
	0.3nm,0.4s,mb2.9,baz=109,slow=8.3,SNR=4.2						
WRA	**Warramunga Arr**	**44.76**	**275**	P	**P**	**07 40 56.5**	**-0.4**
	0.5nm,0.3s,mb3.1,baz=113,slow=8.0,SNR=5.4						
FINES	**FINESS Array B**	**148.02**	**339**	PKPbc	PKPdf	07 52 32.7	+16
	0.4nm,0.3s,baz=65,slow=3.3,SNR=10						

IDC 13 07:50:28.0±3.3, **33.37S**×**178.78W**, **mb3.5**/2, **mb1 3.8**/3, **mb1mx3.6**/14, **mbtmp3.6**/3, **ML3.5**/1, **Error ellipse: s-maj=75.2km s-min=47.5km az=119.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.92**	**213**	Pn	Pn	07 51 56.3	-2.7
	1.2nm,0.3s,baz=72,slow=2.0,SNR=7.4						
URZ				Sn	Sn	07 53 01.1	-7.3
	1.5nm,0.3s,baz=97,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**42.38**	**271**	P	P	07 58 23.9	-1.9
	0.4nm,0.6s,baz=111,slow=7.8,SNR=5.8						
WRA	**Warramunga Arr**	**43.64**	**276**	P	P	07 58 34.8	-1.3
	0.3nm,0.4s,baz=116,slow=7.8,SNR=2.7						
FINES	**FINESS Array B**	**147.67**	**338**	PKPbc	PKPdf	08 10 12.9	+0.2
	3.0nm,1.0s,baz=252,slow=6.0,SNR=3.7						

CSEM 13 08:20:10.9, 12.16N×44.15E, h3^{km}, ML3.6, After DHMR

DHMR 13 08:20:10.9±1.4, **12.16N**×**44.15E**, **h3**^{km}±6^{km}, **ML3.6, 1D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.06**	**358**	*i* P	Pb	08 20 30.8	-0.8
TRBA				*i* S	Sb	08 20 46.2	+0.5
TRBA				AML	AML	08 20 54.6	
	comp=N,704nm,0.4s						
UDYN	**Al ‘Udayn**	**1.80**	**354**	*i* P	Pn	08 20 44.1	+1.0
UDYN				*i* S	Sn	08 21 09.3	+2.6
UDYN				AML	AML	08 21 14.6	
	comp=N,1µm,0.5s						
UDYN	**Al ‘Udayn**	**1.80**	**354**	*i* P	Pn	08 20 44.1	+1.0
UDYN				*i* S	Sn	08 21 09.3	+2.6
	comp=N,570nm,0.5s						
LBOS		**2.01**	**32**	*i* P	Pn	08 20 46.4	+0.4
LBOS				*i* S	Sn	08 21 14.7	+2.8
BDHA	**Al Bayda’**	**2.27**	**37**	*i* P	Pn	08 20 51.5	+1.7
BDHA				*i* S	Sn	08 21 23.1	+4.5
BDHA				AML	AML	08 21 27.4	
	comp=N,386nm,0.4s						
DHBB	**Dhamar BB**	**2.41**	**6**	⇓*i*P	Pn	08 20 53.3	+1.5
DHBB				*i* S	Sn	08 21 25.8	+3.8
HAJJ	**Hajjah**	**3.56**	**351**	*i* P	Pn	08 21 09.1	+1.0
HAJJ				*i* S	Sn	08 21 55.6	+4.4
HAJJ				AML	AML	08 22 11.9	
	comp=N,297nm,0.6s						
HAJJ	**Hajjah**	**3.56**	**351**	*i* P	Pn	08 21 09.1	+1.0
HAJJ				*i* S	Sn	08 21 55.6	+4.4
	comp=N,149nm,0.6s						

NEIC 13 08:29:45.2±0.5, 23.12N×142.95E, h50^{km}, mb3.8/2, Error ellipse: s-maj=39.5km s-min=10.6km az=105.0

IDC 13 08:29:46.8±3.9, 23.12N×142.95E, h64^{km}±38^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.6/22, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=56.5km s-min=14.8km az=101.0

ISC 13 08:29:44.6±3.2, **23.1N**±0.1×**143.0E**±0.4, **h61**^{km}±31^{km}, **n16,** σ**0^{s}75**/15, **mb3.8**/9, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.07**	**350**	P	**P**	**08 30 46.1**	**+0.2**
	7.5nm,0.3s,baz=294,slow=18,SNR=7.5						
CBIJ				S	**S**	**08 31 32.5**	**-0.1**
	23nm,0.3s,baz=298,slow=22,SNR=8.3						
WRAB	**Tennant Creek**	**43.58**	**192**	*e*P	**P**	**08 37 45.2**	**+0.6**
	2.1nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**43.59**	**192**	P	**P**	**08 37 45.3**	**+0.5**
	0.6nm,0.3s,mb3.8,baz=17,slow=9.1,SNR=19						
ASAR	**Alice Springs**	**47.30**	**191**	P	**P**	**08 38 13.9**	**-0.3**
	0.2nm,0.4s,mb3.4,baz=11,slow=5.9,SNR=5.0						
STKA	**Stephens Creek**	**54.66**	**181**	P	**P**	**08 39 08.5**	**-1.3**
	0.6nm,0.5s,mb3.9,baz=324,slow=8.2,SNR=3.4						
STKA	**Stephens Creek**	**54.66**	**181**	P	**P**	**08 39 08.5**	**-1.3**
ILAR	**Eielson Array**	**60.89**	**27**	P	**P**	**08 39 52.0**	**-1.0**
	0.9nm,0.8s,mb4.0,baz=268,slow=5.1,SNR=8.7						
INK	**Inuvik**	**66.37**	**24**	P	**P**	**08 40 28.0**	**-0.8**
	1.0nm,0.8s,mb3.9,baz=262,slow=9.3,SNR=3.7						
INK	**Inuvik**	**66.37**	**24**	*e*P	**P**	**08 40 28.2**	**-0.7**
	0.2nm,0.5s,mb3.4						
YKA	**Yellowknife Ar**	**75.31**	**28**	P	**P**	**08 41 23.2**	**+0.5**
	0.6nm,0.6s,mb3.7,baz=292,slow=5.8,SNR=16						
YKA	**Yellowknife Ar**	**75.31**	**28**	P	**P**	**08 41 23.2**	**+0.5**
FINES	**FINESS Array B**	**81.87**	**334**	P	**P**	**08 41 58.7**	**+0.2**
	4.6nm,1.2s,mb4.3,baz=233,slow=9.5,SNR=5.8						
NVAR	**Mina Array Bea**	**82.41**	**52**	P	**P**	**08 42 03.2**	**+1.4**
	0.3nm,0.6s,mb3.4,baz=275,slow=6.5,SNR=3.6						
NVAR	**Mina Array Bea**	**82.41**	**52**	P	**P**	**08 42 03.2**	**+1.4**
PLCA	**Paso Flores**	**146.78**	**130**	PKPbc	PKPbc	08 49 22.1	+2.5
	0.7nm,0.5s,baz=217,slow=11,SNR=5.4						
PLCA	**Paso Flores**	**146.78**	**130**	*e*PKPbc	PKPbc	08 49 22.3	+2.7

IDC 13 08:30:56.8±11.0, **9.91N**×**92.32E**, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.7**/17, **mbtmp3.8**/3, **Error ellipse: s-maj=393.1km s-min=31.9km az=74.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.62**	**15**	P	P	08 38 30.2	-1.6
	0.2nm,0.3s,baz=206,slow=8.7,SNR=5.3						
WRA	**Warramunga Arr**	**50.90**	**126**	P	P	08 40 00.1	-2.0
	0.8nm,0.4s,baz=305,slow=8.5,SNR=12						
ASAR	**Alice Springs**	**52.60**	**130**	P	P	08 40 12.6	-2.3
	1.1nm,0.5s,baz=307,slow=7.2,SNR=12						

IDC 13 08:32:43.9±4.1, **5.48S**×**103.73E**, **mb3.8**/5, **mb1 4.0**/5, **mb1mx3.8**/15, **mbtmp3.8**/5, **Error ellipse: s-maj=175.7km s-min=22.4km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**24.25**	**349**	P	P	08 38 01.8	-2.0
	2.0nm,0.4s,baz=181,slow=8.4,SNR=5.8						
WRA	**Warramunga Arr**	**33.05**	**119**	P	P	08 39 21.3	-2.2
	0.5nm,0.6s,baz=289,slow=9.8,SNR=3.4						
ASAR	**Alice Springs**	**34.22**	**125**	P	P	08 39 31.6	-2.0
	0.6nm,1.0s,baz=301,slow=8.1,SNR=4.3						
SONM	**Songino Array**	**53.14**	**2**	P	P	08 42 04.1	-1.6
	0.4nm,1.0s,baz=51,slow=7.9,SNR=4.0						
ZAL	**Zalesovo**	**61.30**	**347**	P	P	08 43 01.4	-2.0
	1.0nm,0.3s,baz=37,slow=5.1,SNR=3.0						
TXAR	**Lajitas Array**	**144.89**	**44**	PKP	PKPdf	08 52 23.0	-2.5
	0.5nm,0.6s,baz=270,slow=1.4,SNR=8.9						

IDC 13 09:24:13.3±1.7, 7.46S×155.18E, mb3.8/6, mb1 4.0/6, mb1mx3.9/13, mbtmp3.7/6, MS2.9/2, Ms1 2.9/2, ms1mx2.5/16, Error ellipse: s-maj=61.4km s-min=25.0km az=130.0

NEIC 13 09:24:15.3±1.2, 7.40S×155.08E, h10^{km}, mb4.2/1, Error ellipse: s-maj=40.1km s-min=15.5km az=137.0

ISC 13 09:24:18.1±1.3, **7.2S**±0.2×**154.8E**±0.2, **h33**^{km}, **n11,** σ**1^{s}12**/9, **mb3.8**/7, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.91**	**254**	LR	LR	09 28 32.2	
	comp=Z,43nm,21.4s,baz=272,slow=32						
PMG	**Port Moresby**	**7.91**	**254**	P	**P**	**09 26 12.1**	**-1.4**
CTA	**Charters Tower**	**15.25**	**212**	LR	LR	09 32 16.7	
	comp=Z,88nm,19.9s,baz=227,slow=32						
WRAB	**Tennant Creek**	**23.55**	**236**	*e*P	**P**	**09 29 28.5**	**+2.0**
	6.9nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	**23.56**	**236**	P	**P**	**09 29 26.5**	**-0.2**
	1.9nm,0.8s,mb3.6,baz=58,slow=9.6,SNR=11						
ASAR	**Alice Springs**	**25.90**	**229**	P	**P**	**09 29 48.5**	**-0.7**
	0.4nm,0.6s,mb3.1,baz=63,slow=8.1,SNR=5.0						
CMAR	**Chiang Mai Arr**	**60.75**	**296**	P	**P**	**09 34 31.4**	**+2.0**
	0.8nm,0.4s,mb4.2,baz=82,slow=5.0,SNR=5.7						
SONM	**Songino Array**	**69.45**	**327**	P	**P**	**09 35 24.5**	**-0.5**
	0.6nm,0.8s,mb3.6,baz=127,slow=4.3,SNR=5.3						
ILAR	**Eielson Array**	**83.65**	**22**	P	**P**	**09 36 44.0**	**-0.4**
	0.4nm,0.7s,mb3.7,baz=250,slow=4.7,SNR=5.4						
YKA	**Yellowknife Ar**	**96.61**	**28**	P	**P**	**09 37 45.3**	**-0.3**
	0.5nm,0.8s,mb4.0,baz=269,slow=4.8,SNR=10						
YKA	**Yellowknife Ar**	**96.61**	**28**	P	**P**	**09 37 45.3**	**-0.3**

IDC 13 09:37:10.8±1.2, 10.24S×161.47E, h89^{km}±6^{km}, mb3.7/7, mb1 4.0/8, mb1mx3.9/15, mbtmp4.1/8, MS3.1/1, Ms1 3.1/1, ms1mx2.7/16, Error ellipse: s-maj=45.9km s-min=16.1km az=132.0

NEIC 13 09:37:12.2±1.5, 10.21S×161.52E, h98^{km}±13^{km}, mb4.0/6, Error ellipse: s-maj=16.4km s-min=13.5km az=109.0

ISC 13 09:37:10.0±0.6, **10.37S**±0.09×**161.51E**±0.08, **h94**^{km}, **h94**^{km}±5.9^{km}**:pP-P, n18,** σ**1^{s}20**/19, **mb3.8**/10, **1C, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.80**	**301**	⇑*i*Pn	**P**	**09 37 40.9**	**+0.8**
HNR				*e*S	**S**	**09 38 03.6**	**+1.2**
NOUC	**Port Laguerre**	**12.54**	**159**	*e*P	**P**	**09 40 08.7**	**+2.4**
CTA	**Charters Tower**	**17.59**	**235**	*e*P	**P**	**09 41 13.8**	**+3.1**
	5.7nm,0.7s						
CTA	**Charters Tower**	**17.59**	**235**	P	**P**	**09 41 12.3**	**+1.7**
	0.4nm,0.3s,baz=64,slow=11,SNR=12						
CTAO	**Charters Tower**	**17.59**	**235**	*e*P	**P**	**09 41 13.6**	**+2.9**
	7.8nm,0.8s						
WRAB	**Tennant Creek**	**27.84**	**247**	*e*P	**P**	**09 42 52.6**	**-0.4**
	3.2nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**27.85**	**247**	*e*P	**P**	**09 42 52.1**	**-0.9**
WB2				*e*	pP	09 43 16.8	+2.8
WRA	**Warramunga Arr**	**27.86**	**247**	P	**P**	**09 42 52.4**	**-0.7**
	2.0nm,0.8s,mb3.7,baz=76,slow=9.0,SNR=21						
WRA				pP	pP	09 43 13.2	-0.9
	1.8nm,0.6s,baz=76,slow=9.2,SNR=2.9						
STKA	**Stephens Creek**	**28.24**	**218**	*e*P	**P**	**09 42 55.7**	**-0.7**
	1.6nm,0.7s,mb3.7						
STKA	**Stephens Creek**	**28.24**	**218**	P	**P**	**09 42 55.9**	**-0.5**
	1.9nm,0.7s,mb3.8,baz=18,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**29.45**	**240**	P	**P**	**09 43 05.1**	**-2.2**
	0.7nm,0.9s,mb3.3,baz=64,slow=8.6,SNR=6.1						
ASAR				pP	pP	09 43 28.5	0.0
	0.4nm,0.5s,baz=62,slow=10.0,SNR=3.0						
ASAR				LR	LR	09 53 06.1	
	comp=Z,42nm,20.7s,baz=44,slow=32						
ULN	**Ulaanbaatar**	**75.35**	**326**	*e*P	**P**	**09 48 44.9**	**0.0**
	2.0nm,0.8s,mb3.9						
SONM	**Songino Array**	**75.70**	**325**	P	**P**	**09 48 46.5**	**-0.4**
	1.6nm,0.6s,mb3.9,baz=143,slow=5.8,SNR=19						
SONM				pP	pP	09 49 09.4	-2.0
	0.8nm,0.7s,baz=142,slow=4.1,SNR=3.6						
SONM				sP	sP	09 49 18.4	-3.2
	1.3nm,0.9s,baz=145,slow=4.4,SNR=4.6						
COLA	**College**	**83.99**	**19**	*e*P	**P**	**09 49 30.2**	**-0.6**
	2.6nm,0.8s,mb4.1						
ILAR	**Eielson Array**	**84.24**	**20**	P	**P**	**09 49 30.8**	**-1.2**
	1.4nm,1.0s,mb3.7,baz=247,slow=4.8,SNR=11						
NVAR	**Mina Array Bea**	**88.80**	**51**	P	**P**	**09 49 56.5**	**+1.7**
	0.6nm,0.8s,mb3.7,baz=236,slow=12,SNR=4.0						
YKA	**Yellowknife Ar**	**96.30**	**28**	P	**P**	**09 50 28.6**	**-0.2**
	0.3nm,0.5s,mb4.0,baz=261,slow=4.7,SNR=14						
YKA				pP	pP	09 50 51.5	-2.6
	0.2nm,0.9s,baz=261,slow=4.8,SNR=4.3						
YKA	**Yellowknife Ar**	**96.30**	**28**	P	**P**	**09 50 28.6**	**-0.2**
YKA				pP	pP	09 50 51.5	-2.6

IDC 13 09:48:41.3±12.0, **11.74N**×**92.61E**, **mb3.6**/3, **mb1 3.8**/3, **mb1mx3.5**/17, **mbtmp3.6**/3, **Error ellipse: s-maj=429.1km s-min=32.6km az=75.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**37.80**	**15**	P	P	09 55 59.4	-1.7
	0.3nm,0.5s,baz=203,slow=9.4,SNR=4.7						
WRA	**Warramunga Arr**	**51.75**	**127**	P	P	09 57 50.1	-3.0
	0.6nm,0.6s,baz=307,slow=8.3,SNR=6.7						
ASAR	**Alice Springs**	**53.56**	**131**	P	P	09 58 05.0	-1.5
	0.4nm,0.7s,baz=306,slow=6.9,SNR=9.5						

SKHL 13 10:03:31.7±0.3, **48.96N**×**141.85E**, **h10**^{km}, **mb4.3**/3, **Sakhalin Island**

BJI 13 10:13:22.7, 5.80N×92.60E, h33^{km}, mb4.3

NEIC 13 10:13:23.4±0.4, 5.82N×92.64E, mb4.5/8, Error ellipse: s-maj=9.0km s-min=6.1km az=50.0

IDC 13 10:13:23.4±0.9, 5.73N×92.61E, h33^{km}±4^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.8/17, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=40.8km s-min=14.4km az=55.0

ISC 13 10:13:21.4±0.6, **5.77N**±0.07×**92.67E**±0.07, **h33**^{km}, **h33**^{km}±.9^{km}**:pP-P, n42,** σ**0^{s}86**/39, **mb4.4**/22, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.99**	**278**	*e*P	**P**	**10 16 11.6**	**-1.3**
PALK				*e*S	**S**	**10 18 09.9**	**-17**
CM31	**Chiang Mai Arr**	**14.02**	**25**	*e*P	**P**	**10 16 39.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**14.02**	**25**	Pn	**P**	**10 16 39.1**	**-0.9**
	0.2nm,0.3s,baz=221,slow=14,SNR=16						
CHG	**Chiang Mai**	**14.34**	**25**	P	**P**	**10 17 00.8**	**+17**
VIS	**Vishakhapatnam**	**14.99**	**323**	*i* P	**P**	**10 16 48.5**	**-4.2**
NANT	**Nan**	**15.14**	**30**	P	**P**	**10 16 54.0**	**-0.6**
HYB	**Hyderabad**	**18.02**	**311**	*e*P	**P**	**10 17 30.0**	**-1.1**
HYB				*e*S	**S**	**10 20 50.0**	**+1.9**
HYB	**Hyderabad**	**18.02**	**311**	*i* P	**P**	**10 17 30.0**	**-1.1**
HYB				*e*S	**S**	**10 20 44.0**	**-4.1**
KAD	**Karad**	**21.41**	**304**	*e*P	**P**	**10 18 09.0**	**+0.3**
JIRN	**Jiri**	**22.63**	**345**	*e*P	**P**	**10 18 22.3**	**+1.4**
	85nm,1.2s,mb5.1						
PKI	**Pulchoki**	**22.76**	**343**	*e*P	**P**	**10 18 22.9**	**+0.8**
	45nm,0.9s,mb4.9						
DMN	**Daman**	**22.88**	**343**	*e*P	**P**	**10 18 24.8**	**+1.4**
	49nm,0.7s,mb5.0						
GUN	**Gumba**	**22.95**	**344**	*e*P	**P**	**10 18 24.1**	**+0.1**
	105nm,1.2s,mb5.2						
KKN	**Kakani**	**23.00**	**343**	*e*P	**P**	**10 18 25.0**	**+0.5**
	58nm,1.0s,mb4.9						
GKN	**Gorkha**	**23.39**	**342**	*e*P	**P**	**10 18 28.0**	**-0.3**
KOLN	**Koldanda**	**23.52**	**340**	*e*P	**P**	**10 18 29.7**	**+0.1**
LSA	**Lhasa**	**23.85**	**357**	*e*P		10 18 39.0	
LSA	**Lhasa**	**23.85**	**357**	*e*P	**P**	**10 18 32.2**	**-0.5**
	7.1nm,0.8s,mb4.2						
GYA	**Guiyang**	**24.53**	**31**	P	**P**	**10 18 40.5**	**+1.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
DDI	**Dehra Dun**	**28.04**	**332**	*e*	**P**	**10 19 13.7**	**+1.8**
XAN	**Xi’an**	**31.91**	**26**	P	**P**	**10 19 44.5**	**-1.8**
XAN				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.2						
GTA	**Gaotai**	**34.11**	**10**	*e*P	**P**	**10 20 05.3**	**+0.1**
GTA				AP	pP	10 20 15.8	+0.9
GTA				XP	sP	10 20 20.8	+1.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb4.0						
AAK	**Ala-Archa**	**40.09**	**339**	P	**P**	**10 20 55.7**	**+0.1**
	comp=Z,6.1nm,1.3s,mb4.2						
SONM	**Songino Array**	**43.53**	**13**	P	**P**	**10 21 24.2**	**+0.5**
	comp=Z,1.4nm,0.8s,mb3.7,baz=196,slow=8.4,SNR=14						
SONM				PcP	PcP	10 23 12.4	+0.7
	comp=Z,0.9nm,0.7s,baz=204,slow=5.0,SNR=4.1						
KURK	**Kurchatov**	**46.32**	**348**	*e*P	**P**	**10 21 45.7**	**-0.3**
	comp=Z,5.6nm,1.1s,mb4.4						
WRA	**Warramunga Arr**	**48.28**	**123**	P	**P**	**10 22 01.6**	**-0.2**
	comp=Z,2.3nm,0.8s,mb4.2,baz=301,slow=9.1,SNR=11						
WRA				pP	pP	10 22 11.5	-0.2
	comp=Z,9.3nm,0.8s,baz=301,slow=8.9,SNR=31						
WRAB	**Tennant Creek**	**48.29**	**123**	*e*P	**P**	**10 22 02.2**	**+0.3**
	comp=Z,17nm,0.8s,mb5.1						
WRAB				*e*	pP	10 22 11.4	-0.3
WB2	**Warramunga Arr**	**48.30**	**123**	*e*P	**P**	**10 22 02.4**	**+0.5**
WB2				*e*	pP	10 22 11.5	-0.2
ZAL	**Zalesovo**	**48.45**	**354**	P	**P**	**10 22 03.2**	**+0.6**
	comp=Z,1.5nm,0.4s,mb4.3,baz=294,slow=4.6,SNR=10						
ZAL				pP	pP	10 22 13.5	+1.0
	comp=Z,3.9nm,0.7s,baz=307,slow=6.3,SNR=8.8						
ZAL	**Zalesovo**	**48.45**	**354**	P	**P**	**10 22 03.2**	**+0.6**
ZAL				pP	pP	10 22 13.5	+1.0
ASAR	**Alice Springs**	**49.74**	**128**	P	**P**	**10 22 13.1**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=295,slow=8.1,SNR=7.7						
ASAR				pP	pP	10 22 22.9	+0.1
	comp=Z,3.1nm,0.8s,baz=305,slow=7.6,SNR=20						
BVAR	**Borovoye Array**	**50.53**	**343**	P	**P**	**10 22 17.8**	**-0.8**
	comp=Z,1.2nm,0.8s,mb3.9,baz=146,slow=5.3,SNR=6.8						
BVAR				pP	pP	10 22 27.8	-0.7
	comp=Z,2.4nm,0.8s,baz=149,slow=8.6,SNR=9.1						
CHKZ	**Chkalovo**	**51.03**	**343**	*e*P	**P**	**10 22 21.6**	**-0.8**
	comp=Z,5.2nm,0.9s,mb4.5						
CHKZ				*e*	pP	10 22 31.6	-0.7
STKA	**Stephens Creek**	**59.75**	**132**	*e*P	pP	10 23 35.6	-0.2
	comp=Z,1.9nm,0.6s						
STKA	**Stephens Creek**	**59.75**	**132**	pP	pP	10 23 35.6	-0.3
	comp=Z,2.6nm,0.6s,baz=304,slow=6.7,SNR=5.2						
BRTR	**Keskin Array B**	**62.72**	**312**	P	**P**	**10 23 44.9**	**-0.7**
	comp=Z,1.1nm,1.0s,mb3.9,baz=106,slow=9.0,SNR=3.8						
FINES	**FINESS Array B**	**73.89**	**333**	P	**P**	**10 24 54.1**	**-0.6**
	comp=Z,1.8nm,0.8s,mb4.0,baz=83,slow=11,SNR=5.6						
GERES	**GERESS Array B**	**78.42**	**319**	P	**P**	**10 25 21.2**	**+0.7**
	comp=Z,0.5nm,0.3s,mb3.9,baz=90,slow=2.9,SNR=2.9						
INK	**Inuvik**	**99.41**	**16**	*e*P	**P**	**10 27 01.4**	**0.0**
	comp=Z,2.6nm,1.2s,mb4.6						
NVAR	**Mina Array Bea**	**127.46**	**31**	PKP	PKPdf	10 32 26.2	+2.5
	comp=Z,0.1nm,0.3s,baz=352,slow=22,SNR=3.0						
NVAR				pPKP		10 32 37.6	
	comp=Z,0.9nm,0.9s,baz=314,slow=0.8,SNR=4.0						
PDAR	**Pinedale Array**	**127.64**	**21**	PKP	PKPdf	10 32 25.9	+2.1
	comp=Z,0.5nm,0.9s,baz=70,slow=17,SNR=3.7						
PDAR				pPKP		10 32 37.1	
	comp=Z,0.6nm,0.8s,slow=4.4,SNR=3.7						
ANMO	**Albuquerque**	**135.67**	**23**	pPKP		10 32 54.4	
	comp=Z,0.9nm,0.8s,baz=64,slow=3.0,SNR=3.0						

WAR 13 10:20:03.4, 51.51N×16.06E, h1^{km}, ML2.7, Mining Induced

PRU 13 10:20:03.8, 51.47N×16.06E

NEIC 13 10:20:04.6±1.3, 51.35N×16.07E, h5^{km}, MG3.0(WAR), Error ellipse: s-maj=14.8km s-min=7.3km az=192.0

ISC 13 10:20:00.8±1.0, **51.51N**±0.05×**16.05E**±0.04, **n12,** σ**1^{s}13**/24, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**167**	*e*PG	**Pg**	**10 20 16.0**	**+1.6**
KSP				*e*SG	**Sg**	**10 20 25.0**	**+1.5**
UPC	**Upice**	**1.00**	**181**	*e*PG	**Pg**	**10 20 21.9**	**+1.1**
DPC	**Dobruska-Polom**	**1.17**	**171**	*e*PG	**Pg**	**10 20 24.7**	**+0.6**
DPC				*e*SG	**Sg**	**10 20 40.5**	**+0.8**
PVCC	**Panska Ves**	**1.35**	**224**	*e*PG	**Pg**	**10 20 28.8**	**+1.0**
BRG	**Berggiesshubel**	**1.47**	**245**	*e*Pn	**Pn**	**10 20 30.4**	**+1.8**
BRG				*i* Pg	**Pg**	**10 20 30.9**	**+0.8**
BRG				*i* Sg	**Sg**	**10 20 50.7**	**+1.0**
PRU	**Pruhonice**	**1.80**	**213**	*e*PG	**Pg**	**10 20 35.8**	**-0.9**
PRU				*e*SG	**Sg**	**10 21 00.0**	**-0.6**
CLL	**Collm**	**1.92**	**265**	*e*PG	**Pg**	**10 20 39.0**	**-0.1**
CLL				*e*SG	**Sg**	**10 21 04.0**	**-0.7**
OKC	**Ostrava-Krasne**	**2.14**	**141**	*e*PG	**Pg**	**10 20 42.0**	**-1.5**
OKC				*e*SG	**Sg**	**10 21 10.1**	**-1.9**
NKC	**Novy Kostel**	**2.61**	**242**	*e*SG	**Sg**	**10 21 27.4**	**-0.4**
OJC	**Ojcow**	**2.70**	**117**	*e*PG	**Pg**	**10 20 55.0**	**+0.3**

OJC				*e*SG	**Sg**	**10 21 30.0**	**-0.7**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**10 20 49.0**	**+0.5**
KHC				*e*PG	**Pg**	**10 20 55.5**	**-2.3**
KHC				*e*SN	**Sn**	**10 21 24.5**	**+0.4**
KHC				*e*SG	**Sg**	**10 21 33.2**	**-2.7**
MOX	**Moxa**	**2.93**	**255**	*e*Pg	**Pg**	**10 20 58.6**	**-0.6**
MOX				*e*Sg	**Sg**	**10 21 37.7**	**-0.5**

MOS ***13*** *10:23:47.3±0.9, 12.94N×93.23E, h33*^{km}*, mb4.9/30, Error ellipse: s-maj=12.1km s-min=5.9km az=121.2*

BJI ***13*** *10:23:49.3, 12.90N×93.38E, h56*^{km}*, mB4.9, mb4.4, Ms4.1, Msz3.9*

IDC ***13*** *10:23:49.5±3.3, 12.95N×93.20E, h36*^{km}*±26*^{km}*, mb4.2/21, mb1 4.3/22, mb1mx4.3/24, mbtmp4.4/22, ML4.8/1, Error ellipse: s-maj=19.4km s-min=12.9km az=50.0*

NEIC ***13*** *10:23:51.2±0.2, 13.01N×93.22E, mb4.6/32, Error ellipse: s-maj=6.4km s-min=5.6km az=50.0*

ISC 13 10:23:49.0±0.3**, 12.98N**±0.04×**93.26E**±0.03**, h47**^{km}**, h47**^{km}±1.4^{km}**:pP-P, n188,** σ1§02/176**, mb4.5**/63**, MS3.9**/10**, 4C-2D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.33**	**93**	P	**P**	**10 25 24.0**	**+1.9**
NST	**Nakhon Sawan**	**7.18**	**67**	⇑P	**P**	**10 25 34.5**	**+0.5**
	129nm,0.6s						
CM31	**Chiang Mai Arr**	**7.72**	**44**	*e*P	**P**	**10 25 41.5**	**0.0**
	35nm,0.6s						
CMAR	**Chiang Mai Arr**	**7.72**	**44**	Pn	**P**	**10 25 41.6**	**+0.1**
	3.4nm,0.3s,baz=238,slow=15,SNR=57						
CMAR				Sn	**S**	**10 27 07.0**	**-1.6**
	1.0nm,0.3s,baz=239,slow=27,SNR=6.4						
CHG	**Chiang Mai**	**7.97**	**43**	⇑P	**P**	**10 25 44.8**	**-0.2**
	47nm,1.0s						
CHRT	**Chiangrai**	**9.28**	**42**	⇑P	**P**	**10 26 03.0**	**0.0**
	568nm,0.8s						
VIS	**Vishakhapatnam**	**10.68**	**297**	*e*P	**P**	**10 26 19.1**	**-3.1**
VIS				*e*S	**S**	**10 28 07.0**	**-14**
VIS				*e*		10 28 11.4	
	comp=N,162nm,0.4s						
VIS				*e*		10 28 11.9	
	comp=E,99nm,0.3s						
SHL	**Shillong**	**12.59**	**354**	*e*P	**P**	**10 26 45.0**	**-3.0**
SHL				*e*S	**S**	**10 28 57.0**	**-11**
PALK	**Pallekele**	**13.59**	**247**	P	**P**	**10 27 01.2**	**-0.1**
PALK				*e*S	**S**	**10 29 18.4**	**-13**
BLSP	**Bilaspur**	**13.97**	**312**	*e*P	**P**	**10 27 05.0**	**-1.2**
BLSP				*e*		10 27 05.7	
	comp=Z,11nm,0.4s						
BLSP				*e*		10 29 24.8	
HYB	**Hyderabad**	**14.86**	**289**	*e*P	**P**	**10 27 15.0**	**-2.9**
HYB	**Hyderabad**	**14.86**	**289**	*i* P	**P**	**10 27 15.0**	**-2.9**
HYB				*e*S	**S**	**10 30 01.0**	**-0.7**
KMI	**Kunming**	**15.04**	**35**	P	**P**	**10 27 19.1**	**-1.0**
KMI				AMB	AMB		
	comp=Z,12nm,1.2s						
KMI				LR	LR		
	comp=Z,145nm,22.5s						
JIRN	**Jiri**	**16.04**	**337**	*e*P	**P**	**10 27 32.7**	**-0.2**
	comp=Z,20nm,0.4s						
PKI	**Pulchoki**	**16.27**	**334**	*e*P	**P**	**10 27 34.5**	**-1.3**
	comp=Z,90nm,1.0s						
GUN	**Gumba**	**16.38**	**336**	*e*P	**P**	**10 27 36.5**	**-0.7**
	comp=Z,17nm,0.4s						
DMN	**Daman**	**16.43**	**334**	*e*P	**P**	**10 27 37.1**	**-0.8**
	comp=Z,55nm,0.9s						
KKN	**Kakani**	**16.52**	**334**	*e*P	**P**	**10 27 38.3**	**-0.6**
	comp=Z,11nm,0.4s						
TRD	**Trivandrum**	**16.61**	**256**	*e*	**P**	**10 27 31.4**	**-8.8**
LSA	**Lhasa**	**16.76**	**354**	*e*P	**P**	**10 27 42.6**	**+0.7**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LSA	**Lhasa**	**16.76**	**354**	*e*P	**P**	**10 27 42.6**	**+0.6**
	comp=Z,8.7nm,0.6s						
GKN	**Gorkha**	**16.98**	**333**	*e*P	**P**	**10 27 44.6**	**-0.1**
	comp=Z,24nm,0.4s						
BHPL	**Bhopal**	**18.17**	**306**	*e*P	**P**	**10 27 58.9**	**-0.7**
BHPL				*e*		10 28 02.3	
	comp=Z,34nm,2.0s						
BHPL				*e*		10 31 11.6	
KAD	**Karad**	**18.91**	**286**	*e*P	**P**	**10 28 10.0**	**+1.5**
KAD				*e*		10 31 22.0	
POO	**Poona**	**19.47**	**289**	*e*P	**P**	**10 28 14.0**	**-0.8**
POO				*i*		10 31 40.0	
CD2	**Chengdu**	**20.31**	**27**	P	**P**	**10 28 23.3**	**-0.4**
SONA	**Sohna**	**21.41**	**318**	*e*P	**P**	**10 28 34.9**	**0.0**
SONA				*e*		10 28 37.0	
	comp=Z,17nm,1.0s						
AYAN	**Aya Nagar**	**21.54**	**318**	*e*P	**P**	**10 28 34.7**	**-1.5**
AYAN				*e*		10 28 37.7	
	comp=Z,5.8nm,0.5s						
JOSI	**Joshimath**	**21.59**	**326**	*e*	**P**	**10 28 31.2**	**-5.5**
KUDL	**Kundal**	**21.74**	**317**	*e*P	**P**	**10 28 37.8**	**-0.3**
KUDL				*e*		10 28 40.1	
	comp=Z,22nm,0.8s						
KHET	**Khetri**	**22.15**	**315**	*e*P	**P**	**10 28 43.8**	**+1.5**
KHET				*e*		10 28 46.7	
	comp=Z,35nm,1.3s						
DDI	**Dehra Dun**	**22.26**	**323**	*e*	**P**	**10 28 45.1**	**+1.7**
ENH	**Enshi**	**22.84**	**39**	*e*P	**P**	**10 28 48.3**	**-0.8**
	comp=Z,52nm,0.8s,mb5.0						
KLP	**Kalpa**	**23.06**	**326**	*e*P	**P**	**10 28 53.0**	**+1.8**
KLP				*e*		10 28 56.7	
	comp=Z,42nm,1.4s						
SDNR	**Sundarnagar**	**23.76**	**324**	*e*P	**P**	**10 29 00.6**	**+2.6**
LZH	**Lanzhou**	**24.91**	**21**	*e*P	**P**	**10 29 10.6**	**+1.5**
LZH				AP		10 29 21.6	
LZH				XP		10 29 25.9	
LZH				PP	PP	10 29 49.0	+1.7
LZH				*e*S	**S**	**10 33 29.0**	**+2.6**
LZH				XS		10 33 45.6	
LZH				SS	SS	10 34 29.0	+2.0
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,100nm,4.0s						
LZH				LR	LR		
	comp=E,601nm,12.0s						
LZH				LR	LR		
	comp=Z,900nm,13.1s,MS4.5						
XAN	**Xi'an**	**25.35**	**32**	P	**P**	**10 29 12.3**	**-1.0**
XAN				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.4						
GTA	**Gaotai**	**26.96**	**11**	*e*P	**P**	**10 29 28.9**	**+0.7**
GTA				AP	pP	10 29 40.5	+0.1
GTA				XP	sP	10 29 46.0	-0.2
GTA				PP	PP	10 30 16.9	+2.0
GTA				PCP	PcP	10 32 44.6	-4.8
GTA				S	**S**	**10 34 04.8**	**+4.6**
GTA				XS		10 34 23.8	
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb3.9						
GTA				AMB	AMB		
	comp=Z,113nm,5.7s						
GTA				LR	LR		
	comp=N,101nm,13.3s,MS3.7						
GTA				LR	LR		
	comp=E,94nm,14.1s,MS3.7						
GTA				LR	LR		
	comp=Z,79nm,10.3s,MS3.6						
NJ2	**Nanjing**	**30.19**	**47**	*e*P	**P**	**10 29 57.9**	**+0.7**
NJ2				AP	pP	10 30 07.3	-2.3
NJ2				XP	sP	10 30 15.1	-0.4
NJ2				PP	PP	10 30 56.6	-0.4
NJ2				PPP	PPP	10 31 12.5	+1.3
NJ2				S	**S**	**10 34 54.0**	**+2.1**
NJ2				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,320nm,5.8s						
NJ2				LR	LR		
	comp=N,300nm,21.3s,MS4.3						
NJ2				LR	LR		
	comp=E,590nm,19.6s,MS4.3						
NJ2				LR	LR		
	comp=Z,390nm,18.9s,MS4.1						
KSH	**Kashi**	**30.53**	**333**	*e*P	**P**	**10 30 01.0**	**+0.9**
KSH				*e*AP	pP	10 30 13.3	+0.7
KSH				*e*XP	sP	10 30 18.4	-0.1
KSH				*e*PP	PP	10 31 00.1	-1.2
KSH				*e*S	**S**	**10 34 58.1**	**+1.0**
KSH				*e*XS		10 35 20.0	
KSH				*e*PCS		10 36 43.0	
KSH				*e*SCS	ScS	10 40 32.1	+1.7
KSH				AMB	AMB		
	comp=Z,210nm,5.3s						
KSH				LR	LR		
	comp=N,280nm,4.9s						
KSH				LR	LR		
	comp=E,320nm,6.8s						
WMQ	**Urumqi**	**31.11**	**352**	*e*P	**P**	**10 30 06.5**	**+1.3**
WMQ				PP	PP	10 31 10.0	+1.3
WMQ				S	**S**	**10 35 08.0**	**+1.9**
WMQ				LR	LR		
	comp=N,98nm,18.0s,MS3.8						
WMQ				LR	LR		
	comp=E,132nm,17.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,78nm,18.0s,MS3.4						
SSE	**Sheshan**	**31.41**	**50**	*e*P	**P**	**10 30 05.8**	**-2.2**
SSE				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.4						
SSE				AMB	AMB		
	comp=Z,115nm,8.5s						
SSE				LR	LR		
	comp=N,71nm,22.3s,MS3.4						
SSE				LR	LR		
	comp=E,69nm,22.5s,MS3.4						
SSE				LR	LR		
	comp=Z,74nm,24.0s,MS3.3						
HHC	**Hu-ho-hao-te**	**32.07**	**27**	*e*P	**P**	**10 30 13.0**	**-0.7**
HHC				AMB	AMB		
	comp=Z,7.0nm,1.7s,mb4.2						
AAK	**Ala-Archa**	**33.73**	**335**	*i* P	**P**	**10 30 28.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
AAK	**Ala-Archa**	**33.73**	**335**	*e*P	**P**	**10 30 28.1**	**+0.1**
	comp=Z,3.2nm,0.9s,mb4.2						
SONM	**Songino Array**	**36.44**	**15**	P	**P**	**10 30 51.8**	**+0.6**
	comp=Z,2.3nm,1.0s,mb4.1,baz=194,slow=5.1,SNR=14						
SONM				PcP	PcP	10 33 15.8	+1.1
	comp=Z,0.5nm,0.5s,baz=196,slow=3.4,SNR=4.3						
SONM				ScP		10 36 57.6	
	comp=Z,1.5nm,0.9s,baz=223,slow=1.4,SNR=8.8						
SONM	**Songino Array**	**36.44**	**15**	P	pP	10 31 04.1	+0.3
	comp=Z,1.9nm,1.0s,baz=197,slow=7.9,SNR=6.2						
SONM	**Songino Array**	**36.44**	**15**	P	**P**	**10 30 51.8**	**+0.6**
SONM				P	pP	10 31 04.1	+0.3
SONM				PcP	PcP	10 33 15.8	+1.1
SONM				ScP		10 36 57.6	
ZAK	**Zakamensk**	**38.19**	**10**	⇓*i*P	**P**	**10 31 06.7**	**+1.0**
ZAK				*e*	pP	10 31 22.9	+4.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
KURK	**Kurchatov**	**39.48**	**345**	*e*P	**P**	**10 31 16.2**	**-0.2**
KURK				*e*	pP	10 31 30.2	+1.0
KURK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
KURK	**Kurchatov**	**39.48**	**345**	*e*P	**P**	**10 31 16.2**	**-0.2**
	comp=Z,12nm,1.2s,mb4.5						
KURK				*e*	pP	10 31 30.2	+1.0
TLY	**Talaya**	**39.51**	**10**	*e*P	**P**	**10 31 18.7**	**+2.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TLY				MLR	MLR		
	comp=Z,76nm,16.0s,MS3.6						
CN2	**Changchun**	**41.31**	**36**	*e*P	**P**	**10 31 32.3**	**+0.7**
CN2				*e*AP	pP	10 31 44.3	-0.1
CN2				*e*S	**S**	**10 37 43.0**	**+0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=Z,400nm,12.0s,MS4.5						
ZAL	**Zalesovo**	**41.41**	**352**	P	**P**	**10 31 33.2**	**+0.9**
ZAL					pP	10 31 46.6	+1.5
ZAL	**Zalesovo**	**41.41**	**352**	P	**P**	**10 31 33.2**	**+0.9**
	comp=Z,4.9nm,1.0s,mb4.1,baz=298,slow=8.0,SNR=19						
ZAL	**Zalesovo**	**41.41**	**352**	P	pP	10 31 46.6	+1.5
	comp=Z,2.0nm,0.6s,baz=325,slow=9.8,SNR=4.7						
NVS	**Novosibirsk**	**42.50**	**351**	*e*P	**P**	**10 31 35.7**	**-5.6**
BVAR	**Borovoye Array**	**43.92**	**340**	P	**P**	**10 31 52.6**	**-0.2**
	comp=Z,4.2nm,0.7s,mb4.3,baz=135,slow=6.3,SNR=17						
BRVK	**Borovoye**	**43.98**	**340**	*e*P	**P**	**10 31 53.1**	**-0.2**
BRVK				*e*	pP	10 32 05.9	-0.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
BRVK	**Borovoye**	**43.98**	**340**	*e*P	**P**	**10 31 53.1**	**-0.2**
	comp=Z,5.6nm,0.7s,mb4.4						
BRVK				*e*	pP	10 32 05.9	-0.2
MDJ	**Mudanjiang**	**44.19**	**37**	P	**P**	**10 31 53.1**	**-2.1**
MDJ				AP	pP	10 32 04.4	-3.6
MDJ				PP	PP	10 33 35.9	-4.0
MDJ				PCP	PcP	10 33 39.3	-0.5
MDJ				SCP		10 37 26.4	
MDJ				PCS		10 37 31.3	
MDJ				SCS	ScS	10 41 48.5	+1.6
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,33nm,3.9s						
MDJ				LR	LR		
	comp=N,46nm,37.4s						
MDJ				LR	LR		
	comp=E,42nm,26.8s						
MDJ				LR	LR		
	comp=Z,37nm,28.6s						
CHKZ	**Chkalovo**	**44.39**	**341**	*e*P	**P**	**10 31 56.7**	**+0.1**
CHKZ				*e**PP	pP	10 32 10.5	+1.0
CHKZ				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
CHKZ	**Chkalovo**	**44.39**	**341**	*e*P	**P**	**10 31 56.6**	**0.0**
	comp=Z,40nm,0.9s,mb5.2						
CHKZ				*e*pP	pP	10 32 10.5	+1.1
CHKZ				*e*sP	sP	10 32 17.7	+2.6
BOD	**Bodaibo**	**47.44**	**15**	*e*P	**P**	**10 32 12.9**	**-7.8**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0						
GNI	**Garni**	**50.34**	**312**	*e*P	**P**	**10 32 44.3**	**+1.0**
GNI				pmax	pmax		
	comp=Z,15nm,0.9s						
GNI	**Garni**	**50.34**	**312**	*e*P	**P**	**10 32 44.3**	**+0.9**
	comp=Z,16nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**52.00**	**128**	P	**P**	**10 32 54.8**	**-1.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=306,slow=9.4,SNR=27						
WRA				PcP	PcP	10 34 07.8	-0.3
	comp=Z,0.7nm,0.7s,baz=319,slow=3.0,SNR=6.1						
WRAB	**Tennant Creek**	**52.01**	**128**	*e*P	**P**	**10 32 55.0**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**52.01**	**128**	*e*P	**P**	**10 32 55.0**	**-1.2**
	comp=Z,3.8nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**52.01**	**128**	*e*P	**P**	**10 32 55.0**	**-1.2**
KIV	**Kislovodsk**	**53.03**	**316**	*e*P	**P**	**10 33 04.6**	**+1.1**
KIV				*e*	pP	10 33 17.8	+1.2
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
KIV	**Kislovodsk**	**53.03**	**316**	*e*P	**P**	**10 33 04.6**	**+1.1**
	comp=Z,15nm,1.1s,mb4.8						
KIV				*e*	pP	10 33 17.8	+1.1
ASAR	**Alice Springs**	**53.91**	**132**	P	**P**	**10 33 09.1**	**-1.2**
	comp=Z,0.8nm,0.5s,mb4.0,baz=310,slow=7.0,SNR=35						
ASAR	**Alice Springs**	**53.91**	**132**	LR	LR	10 58 58.7	
	comp=Z,56nm,18.9s,MS3.6,baz=343,slow=39						
MALT	**Malatya**	**54.59**	**308**	*e*P	**P**	**10 33 15.3**	**+0.2**
MALT				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
MALT	**Malatya**	**54.59**	**308**	*e*P	**P**	**10 33 15.3**	**+0.2**
	comp=Z,8.5nm,1.1s,mb4.7						
ASF	**Jabal al Asfar**	**54.82**	**300**	P	**P**	**10 33 16.4**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=322,slow=10,SNR=4.1						
SOC	**Sochi**	**54.96**	**314**	*e*P	**P**	**10 33 14.0**	**-3.7**
SOC				*e*		10 34 17.6	
SOC				*e*		10 35 23.1	
SOC				*e*PPP	PPP	10 36 37.9	+2.3
SOC				*e*S	**S**	**10 40 57.5**	**+3.3**
SOC				*e*SS	SS	10 44 36.1	-1.8
SOC				*e*SSS	SSS	10 46 44.7	+4.1
SOC				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
SOC				pmax	pmax		
	comp=N,12nm,0.7s						
SOC				pmax	pmax		
	comp=E,44nm,0.8s						
KMBO	**Kilima Mbogo**	**57.28**	**260**	*i* P	**P**	**10 33 36.9**	**+2.2**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	**Kilima Mbogo**	**57.28**	**260**	P	**P**	**10 33 33.3**	**-1.4**
	comp=Z,1.0nm,0.6s,mb4.0,baz=59,slow=13,SNR=4.4						
BRTR	**Keskin Array B**	**58.52**	**309**	P	**P**	**10 33 41.9**	**-1.1**
BRTR					pP	10 33 54.6	-1.7
BRTR	**Keskin Array B**	**58.52**	**309**	P	**P**	**10 33 41.9**	**-1.2**
	comp=Z,5.3nm,0.8s,mb4.6,baz=123,slow=7.9,SNR=25						
BRTR	**Keskin Array B**	**58.52**	**309**	P	pP	10 33 54.6	-1.7
	comp=Z,2.8nm,0.7s,baz=117,slow=8.3,SNR=8.9						
OBN	**Obninsk**	**60.65**	**327**	*e*P	**P**	**10 33 56.8**	**-0.7**
OBN				*e*		10 36 20.5	
OBN				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
TIXI	**Tiksi**	**62.44**	**12**	*e*P	**P**	**10 34 07.8**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
AKASG	**Malin Array Be**	**63.67**	**320**	P	**P**	**10 34 16.1**	**-1.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=85,slow=4.8,SNR=10.0						
AKASG	**Malin Array Be**	**63.67**	**320**	P	pP	10 34 29.5	-1.7
	comp=Z,1.3nm,0.8s,baz=84,slow=5.5,SNR=4.1						
STKA	**Stephens Creek**	**64.28**	**135**	P	**P**	**10 34 21.5**	**-0.5**
	comp=Z,0.9nm,0.8s,mb3.9,baz=142,slow=22,SNR=3.4						
MLR	**Muntele Rosu**	**64.97**	**314**	P	**P**	**10 34 26.0**	**-0.3**
MLR					pP	10 34 38.2	-1.6
MLR	**Muntele Rosu**	**64.97**	**314**	P	**P**	**10 34 26.0**	**-0.3**
	comp=Z,12nm,1.0s,mb4.9,baz=114,slow=4.2,SNR=10						
MLR	**Muntele Rosu**	**64.97**	**314**	P	pP	10 34 38.2	-1.6
	comp=Z,4.7nm,0.8s,baz=135,slow=7.1,SNR=4.2						
JOF	**Joensuu**	**65.91**	**334**	*e*p	**P**	**10 34 30.9**	**-1.0**
	comp=Z,9.5nm,0.6s,mb5.0						
FINES	**FINESS Array B**	**67.83**	**331**	P	**P**	**10 34 43.6**	**-0.5**
FINES					pP	10 34 57.8	+0.1
FINES	**FINESS Array B**	**67.83**	**331**	P	**P**	**10 34 43.6**	**-0.5**
	comp=Z,5.1nm,0.6s,mb4.7,baz=100,slow=6.1,SNR=32						
FINES	**FINESS Array B**	**67.83**	**331**	P	pP	10 34 57.8	+0.1
	comp=Z,4.3nm,0.8s,baz=90,slow=7.6,SNR=5.6						
KOLS	**Kolonicke sedl**	**67.84**	**318**	*e*P	**P**	**10 34 44.7**	**+0.4**
KAF	**Kangasniemi**	**67.89**	**332**	*e*p	**P**	**10 34 43.6**	**-0.8**
	comp=Z,8.5nm,1.0s,mb4.7,baz=102,slow=5.9						
KAF	**Kangasniemi**	**67.89**	**332**	*e*P	**P**	**10 34 43.6**	**-0.8**
KAF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
CRVS	**Cervenica-Dubn**	**68.37**	**318**	*e*P	**P**	**10 34 50.7**	**+3.0**
VYHS	**Vyhne**	**70.08**	**317**	*e*P	**P**	**10 34 58.0**	**-0.1**
ARCES	**ARCESS Array B**	**70.20**	**340**	P	**P**	**10 34 58.5**	**-0.1**
ARCES					pP	10 35 10.7	-1.5
ARCES	**ARCESS Array B**	**70.20**	**340**	P	**P**	**10 34 58.5**	**0.0**
	comp=Z,3.0nm,0.4s,mb4.5,baz=93,slow=6.5,SNR=46						
ARCES	**ARCESS Array B**	**70.20**	**340**	P	pP	10 35 10.7	-1.5
	comp=Z,2.2nm,0.6s,baz=112,slow=6.5,SNR=3.6						
LSZ	**Lusaka**	**70.24**	**248**	*e*P	**P**	**10 35 00.9**	**+1.3**
LSZ				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
LSZ	**Lusaka**	**70.24**	**248**	*e*P	**P**	**10 35 00.9**	**+1.3**
	comp=Z,12nm,1.2s,mb4.7						
BILL	**Bilibino**	**71.71**	**22**	⇓*i*P	**P**	**10 35 07.2**	**-0.4**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
KSP	**Ksiaz**	**71.83**	**319**	*e*P	**P**	**10 35 09.1**	**+0.5**
BOJS	**Bojanci**	**72.48**	**314**	*e*P	**P**	**10 35 12.9**	**+0.4**
PERS	**Pernice**	**72.56**	**315**	*e*P	**P**	**10 35 13.4**	**+0.3**
BRG	**Berggiesshubel**	**73.31**	**319**	*e*P	**P**	**10 35 18.1**	**+0.7**
BRG				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
BRG	**Berggiesshubel**	**73.31**	**319**	*e*P	**P**	**10 35 18.1**	**+0.7**
	comp=Z,12nm,1.0s,mb4.8						
GEC2	**GERESS Array S**	**73.49**	**317**	*e*P	**P**	**10 35 18.9**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
GEC2	**GERESS Array S**	**73.49**	**317**	*e*P	**P**	**10 35 18.9**	**+0.4**
	comp=Z,8.0nm,0.8s,mb4.7						
GERES	**GERESS Array B**	**73.49**	**317**	P	**P**	**10 35 19.0**	**+0.5**
GERES					pP	10 35 31.9	-0.2
GERES	**GERESS Array B**	**73.49**	**317**	P	**P**	**10 35 19.0**	**+0.5**
	comp=Z,6.1nm,0.7s,mb4.7,baz=90,slow=5.3,SNR=17						
GERES	**GERESS Array B**	**73.49**	**317**	P	pP	10 35 31.9	-0.3
	comp=Z,2.1nm,0.6s,baz=117,slow=6.0,SNR=4.1						
KHC	**Kasperske Hory**	**73.56**	**318**	*e*P	**P**	**10 35 18.5**	**-0.4**
HFS	**Hagfors**	**73.65**	**329**	P	**P**	**10 35 18.6**	**-0.6**
HFS					pP	10 35 33.7	+0.9
HFS	**Hagfors**	**73.65**	**329**	P	**P**	**10 35 18.6**	**-0.5**
	comp=Z,7.7nm,0.7s,mb4.8,baz=117,slow=6.6,SNR=29						
HFS	**Hagfors**	**73.65**	**329**	P	pP	10 35 33.7	+0.8
	comp=Z,8.6nm,0.9s,baz=104,slow=6.1,SNR=5.6						
CLL	**Collm**	**73.91**	**320**	*e*P	**P**	**10 35 20.0**	**-0.8**
CLL	**Collm**	**73.91**	**320**	P	**P**	**10 35 20.0**	**-0.8**
WET	**Wettzell**	**74.02**	**318**	*e*P	**P**	**10 35 21.9**	**+0.3**
WET				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
WET	**Wettzell**	**74.02**	**318**	*e*P	**P**	**10 35 21.9**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.4						
MOX	**Moxa**	**74.80**	**319**	*e*P	**P**	**10 35 26.4**	**+0.4**
MOX	**Moxa**	**74.80**	**319**	*i* P	**P**	**10 35 26.4**	**+0.4**
NB2	**NORSAR Subarra**	**74.90**	**330**	P	**P**	**10 35 25.7**	**-0.7**
	comp=Z,2.0nm,0.5s,mb4.3,baz=90,slow=5.6						
NB2	**NORSAR Subarra**	**74.90**	**330**	P	**P**	**10 35 25.7**	**-0.7**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
NOA	**NORSAR Array B**	**74.90**	**330**	P	**P**	**10 35 26.0**	**-0.4**
NOA					pP	10 35 40.4	+0.3
NOA	**NORSAR Array B**	**74.90**	**330**	P	**P**	**10 35 25.9**	**-0.4**
	comp=Z,2.8nm,0.6s,mb4.4,baz=91,slow=5.7,SNR=8.7						
NOA	**NORSAR Array B**	**74.90**	**330**	P	pP	10 35 40.4	+0.3
	comp=Z,2.4nm,0.6s,baz=90,slow=5.7,SNR=6.1						
GRA1	**Grafenberg Arr**	**75.09**	**318**	*e*P	**P**	**10 35 28.5**	**+0.8**
	comp=Z,4.0nm,1.0s,mb4.3						
GRF	**Grafenberg Arr**	**75.09**	**318**	*e*P	**P**	**10 35 28.5**	**+0.8**
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
GRF	**Grafenberg Arr**	**75.09**	**318**	*e*P	**P**	**10 35 28.5**	**+0.8**
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
GRF	**Grafenberg Arr**	**75.09**	**318**	*e*P	**P**	**10 35 28.5**	**+0.8**
	comp=Z,4.0nm,1.0s,mb4.3						
BSEG	**Bad Segeberg**	**75.48**	**323**	*e*P	**P**	**10 35 30.6**	**+0.8**
CLZ	**Clausthal**	**75.53**	**321**	*e*P	**P**	**10 35 30.7**	**+0.5**
	comp=Z,8.0nm,0.8s,mb4.7						
LBTB	**Lobatse**	**75.97**	**240**	*e*P	**P**	**10 35 34.2**	**+0.9**
LBTB				*e**PP	pP	10 35 48.4	+1.4
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
LBTB	**Lobatse**	**75.97**	**240**	P	**P**	**10 35 34.5**	**+1.2**
	comp=Z,3.4nm,0.6s,mb4.5,baz=89,slow=3.9,SNR=6.7						
LBTB	**Lobatse**	**75.97**	**240**	P	pP	10 35 49.1	+2.2
	comp=Z,2.3nm,0.5s,baz=128,slow=6.5,SNR=3.5						
LBTB	**Lobatse**	**75.97**	**240**	*e*P	**P**	**10 35 34.2**	**+1.0**
	comp=Z,2.6nm,0.5s,mb4.4						
LBTB				*e*pP	pP	10 35 48.4	+1.4
DAVOX	**Davos**	**76.15**	**315**	P	**P**	**10 35 34.0**	**+0.2**
	comp=Z,5.1nm,0.7s,mb4.5,baz=127,slow=7.9,SNR=6.2						
TNS	**Taunus Mts**	**76.84**	**319**	*e*P	**P**	**10 35 38.5**	**+0.8**
TNS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TNS	**Taunus Mts**	**76.84**	**319**	*e*P	**P**	**10 35 38.5**	**+0.8**
	comp=Z,4.0nm,0.8s,mb4.4						
BFO	**Black Forest**	**77.08**	**317**	*e*P	**P**	**10 35 38.8**	**-0.2**
BFO				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BFO	**Black Forest**	**77.08**	**317**	*e*P	**P**	**10 35 38.8**	**-0.2**
	comp=Z,2.0nm,0.9s,mb4.0						
HAU	**Haudompre**	**78.43**	**317**	*e*P	**P**	**10 35 45.8**	**-0.7**
	comp=Z,12nm,0.9s,mb4.5						
HAU	**Haudompre**	**78.43**	**317**	*e*P	**P**	**10 35 45.8**	**-0.7**
HAU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LPG	**La Plagne**	**78.44**	**314**	*e*P	**P**	**10 35 46.8**	**+0.2**
	comp=Z,31nm,0.9s,mb4.9						
LPG	**La Plagne**	**78.44**	**314**	*e*P	**P**	**10 35 46.8**	**+0.2**
LPG				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
LPL	**La Plagne**	**78.45**	**314**	*e*P	**P**	**10 35 46.9**	**+0.3**
	comp=Z,22nm,0.7s,mb4.9						
LPL	**La Plagne**	**78.45**	**314**	*e*P	**P**	**10 35 46.9**	**+0.3**
LPL				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
MBDF	**Montbardon**	**78.52**	**313**	*e*P	**P**	**10 35 47.3**	**+0.3**

	comp=Z,27nm,1.0s,mb4.8						
MBDF	Montbardon	78.52	313	eP	P	10 35 47.3	+0.3
MBDF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CABF	La Chapelle	78.77	315	eP	P	10 35 48.3	-0.1
ORIF	Oris-en-Rattie	79.12	314	eP	P	10 35 49.7	-0.7
MEZF	Maizieres J'vi	79.23	317	eP	P	10 35 50.4	-0.4
BAIF	Baives	79.57	319	eP	P	10 35 52.0	-0.7
SMF	Signal de Mont	80.30	316	eP	P	10 35 56.1	-0.5
	comp=Z,13nm,0.8s,mb4.6						
SMF	Signal de Mont	80.30	316	eP	P	10 35 56.1	-0.5
SMF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SSF	Saint Saulge	80.46	316	eP	P	10 35 56.5	-1.0
SSF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
SSF	Saint Saulge	80.46	316	eP	P	10 35 56.5	-1.0
	comp=Z,6.9nm,1.0s,mb4.5						
AVF	Avril sur Loir	80.61	316	eP	P	10 35 57.7	-0.6
TCF	Toulx Ste Croi	81.47	315	eP	P	10 36 02.6	-0.2
	comp=Z,36nm,1.1s,mb4.9						
TCF	Toulx Ste Croi	81.47	315	eP	P	10 36 02.6	-0.2
TCF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
CAF	Calviac	81.80	314	eP	P	10 36 04.8	+0.2
MTLF	Montolieu	81.97	313	eP	P	10 36 05.6	+0.1
	comp=Z,9.8nm,0.8s,mb4.5						
MTLF	Montolieu	81.97	313	eP	P	10 36 05.6	+0.1
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
RJF	Les Rejaudoux	82.12	315	eP	P	10 36 06.4	+0.2
EKA	Eskdalemuir Ar	83.06	325	P	P	10 36 11.5	+0.8
EKA					pP	10 36 26.5	+1.8
EKA	Eskdalemuir Ar	83.06	325	P	P	10 36 11.4	+0.7
	comp=Z,4.5nm,0.7s,mb4.6,baz=89,slow=5.7,SNR=10						
EKA	Eskdalemuir Ar	83.06	325	P	pP	10 36 26.5	+1.8
	comp=Z,3.2nm,0.7s,baz=90,slow=5.0,SNR=3.5						
IMA	Indian Mountai	87.25	22	eP	P	10 36 33.2	+1.9
IMA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.1						
IMA	Indian Mountai	87.25	22	eP	P	10 36 33.2	+1.9
	comp=Z,8.4nm,0.6s,mb5.2						
ESDC	Sonseca Array	87.29	310	P	P	10 36 32.9	+0.8
	comp=Z,1.3nm,0.6s,mb4.4,baz=54,slow=5.3,SNR=6.5						
SYO	Syowa Base	90.00	197	⇑P	P	10 36 46.8	+2.5
ILAR	Eielson Array	90.37	22	P	P	10 36 46.5	+0.5
	comp=Z,0.9nm,0.7s,mb4.2,baz=296,slow=4.5,SNR=18						
NVAR	Mina Array Bea	120.95	29	PKP	PKPdf	10 42 40.0	+3.3
	comp=Z,0.5nm,0.7s,baz=347,slow=1.6,SNR=4.8						
NVAR	Mina Array Bea	120.95	29	PKP	PKPdf	10 42 54.5	+18
	comp=Z,1.1nm,0.7s,baz=250,slow=0.6,SNR=7.5						
NVAR	Mina Array Bea	120.95	29	PKP	PKPdf	10 42 40.0	+3.3
NVAR				PKP	PKPdf	10 42 54.5	+18
MSU	Marysvale	123.52	24	ePKIKP	PKPdf	10 42 45.2	+3.5
TXAR	Lajitas Array	134.88	21	PKP	PKPdf	10 43 07.3	+3.7
	comp=Z,0.6nm,0.7s,baz=174,slow=0.3,SNR=6.4						
TXAR	Lajitas Array	134.88	21	PKP	PKPdf	10 43 19.8	+16
	comp=Z,0.4nm,0.5s,baz=45,slow=0.6,SNR=4.7						
TXAR	Lajitas Array	134.88	21	PKP	PKPdf	10 43 07.3	+3.7
TXAR				PKP	PKPdf	10 43 19.8	+16
PLCA	Paso Flores	148.92	204	PKPbc	PKPdf	10 43 34.5	+6.7
	comp=Z,3.2nm,0.7s,baz=187,slow=2.2,SNR=12						
PLCA	Paso Flores	148.92	204	PKPbc	PKPdf	10 43 47.3	+19
	comp=Z,2.4nm,0.7s,baz=284,slow=0.9,SNR=5.1						
PLCA	Paso Flores	148.92	204	PKPbc	PKPdf	10 43 34.5	+6.7
PLCA				PKPbc	PKPdf	10 43 47.3	+19
LPAZ	La Paz	161.69	257	ePKIKP	PKPdf	10 43 48.6	+3.3

IDC 13 10:41:35.6±44.0**,15.60S**×**172.69W,mb4.0**/3**,mb1 4.2**/3**, mb1mx3.7**/16**,mbtmp4.0**/3**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.8**/18**,Error ellipse: s-maj=851.9km s-min=185.1km az=78.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	39.63	274	LR	LR	11 02 45.3	
	comp=Z,43nm,19.0s,baz=70,slow=32						
STKA	Stephens Creek	44.53	240	P	P	10 49 49.5	-1.5
	0.9nm,0.6s,baz=89,slow=9.6,SNR=2.9						
WRA	Warramunga Arr	50.47	257	P	P	10 50 35.6	-2.0
	0.4nm,0.4s,baz=94,slow=7.0,SNR=24						
ASAR	Alice Springs	50.70	252	P	P	10 50 37.1	-2.2
	3.6nm,0.5s,baz=88,slow=8.3,SNR=106						

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*HLW **13** 10:52:55.9,36.73N×26.74E,h33^{km},Mb3.6*
*ATH **13** 10:53:00.8,36.73N×26.78E,h60^{km}*
*CSEM **13** 10:53:00.3±0.4,36.37N×27.01E,h124^{km}±2^{km},ML3.7, Error ellipse: s-maj=8.3km s-min=4.1km az=166.0*
ISC 13 10:53:01.0±1.7**,36.3N**±0.1×**26.9E**±0.1**,h134**^{km}±11^{km}**,n12, σ0^{s}82**/16**,3D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.77	165	⇓iP	P	10 53 23.2	+0.8
KARP				eS	S	10 53 38.7	0.0
KARP	Karpathos	0.77	165	⇓iP	P	10 53 22.2	-0.2
ARG	Arkhangelos	0.98	94	eP	P	10 53 22.6	-1.6
NPS	Neapolis	1.48	226	⇓iP	P	10 53 29.9	+0.4
XRY	Khrisi	1.73	216	eP	P	10 53 34.0	+1.6
SLUM		5.00	197	P	P	10 54 14.3	-0.8
SLUM				S	S	10 55 11.1	-1.2
HMAT	Matruh	5.19	178	P	P	10 54 17.9	+0.2
DABA	Dabaa	5.39	167	P	P	10 54 21.3	+0.9
DABA	Dabaa	5.39	167	P	P	10 54 21.3	+0.9
HBRG	Burj al 'Arab	6.20	156	P	P	10 54 31.7	+0.4
HBRG				S	S	10 55 42.3	+0.9
SWA1		7.09	189	P	P	10 54 43.2	-0.2
SWA1				S	S	10 56 02.4	-0.4
SWA2		7.14	190	P	P	10 54 43.7	-0.3

TRN 13 11:03:03.3,14.29N×**58.75W,h35**^{km}**,M4.1**(FDF)**,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	Montagne Vaucl	2.10	277	eP	P	11 03 37.5	+0.8
CRM	Caravelle	2.15	283	eP	P	11 03 37.8	+0.4
BIM	Bigot	2.26	276	eP	P	11 03 40.0	+0.9
BIM				eS	S	11 04 06.4	+0.4
FDF	Fort de France	2.37	281	eP	P	11 03 41.2	+0.7
FDF				eS	S	11 04 09.0	+0.3

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*IDC **13** 11:17:31.3±3.3,43.40N×80.18E,mb3.2/1,mb1 3.8/3, mb1mx3.4/21,mbtmp3.6/3,ML3.7/2,Error ellipse: s-maj=61.9km s-min=41.2km az=92.0*
*NNC **13** 11:17:44.7±28.0,44.17N×80.49E,h15^{km}±181^{km},mpv3.4, Error ellipse: s-maj=194.4km s-min=67.4km az=146.0*
ISC 13 11:17:41.5±1.5**,43.8N**±0.2×**80.9E**±0.2**,h33**^{km}**,n8,σ0^{s}88**/8**, mb3.2**/1**,5C-2D,Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	3.13	18	⇓P	P	11 18 30.9	+1.3
	1.5nm,0.3s,baz=208,slow=15,SNR=266						
MK31				⇑Lg		11 19 24.6	
	7.5nm,0.2s,baz=210,slow=28,SNR=11						
AAK	Ala-Archa	4.84	258	⇑P	P	11 18 53.9	0.0
	8.5nm,0.5s						
AAK				⇑S	S	11 19 49.6	+0.1
	33nm,0.5s						
KURK	Kurchatov	7.08	348	⇑P	P	11 19 39.4	+14
	1.5nm,0.5s,baz=167,slow=11,SNR=10						
KURK				⇓Lg		11 21 22.9	
	15nm,0.8s,baz=121,slow=16,SNR=5.4						
ZAL	Zalesovo	10.44	13	Pn	P	11 20 10.7	-1.2
	0.6nm,0.3s,baz=284,slow=6.7,SNR=5.0						
ZAL				Lg		11 23 18.9	
	0.5nm,0.3s,baz=4.3,slow=21,SNR=4.5						
BVAR	Borovoye Array	11.55	327	Lg		11 23 40.8	
	0.5nm,0.3s,baz=146,slow=31,SNR=3.8						
CHKZ	Chkalovo	11.97	329	⇑P	P	11 20 24.5	-8.0
	5.1nm,2.0s						
SONM	Songino Array	18.17	68	P	P	11 21 52.8	0.0
	0.4nm,0.3s,baz=270,slow=10,SNR=24						
YKA	Yellowknife Ar	73.31	7	P	P	11 29 06.8	-3.9
	0.2nm,0.6s,mb3.2,baz=340,slow=6.0,SNR=4.7						

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*IDC **13** 11:36:22.0±6.7,7.00S×148.62E,h86^{km}±46^{km},mb3.7/3, mb1 4.1/4,mb1mx3.7/11,mbtmp4.2/4,ML4.6/1,MS3.2/2, Ms1 3.1/2,ms1mx2.5/22,Error ellipse: s-maj=72.0km s-min=44.4km az=76.0*
ISC 13 11:36:09.6±4.7**,6.9S**±0.2×**149.9E**±0.3**,h64**^{km}±32^{km}**,n9, σ0^{s}57**/9**,mb4.1**/4**,1D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.64	227	P	P	11 37 04.9	0.0
	19nm,0.3s,baz=47,slow=6.1,SNR=81						
PMG				S	S	11 37 47.2	+0.2
	17nm,0.3s,baz=360,slow=4.0,SNR=3.6						
CTA	Charters Tower	13.56	195	LR	LR	11 43 24.7	
	comp=Z,97nm,19.6s,baz=48,slow=32						
WB2	Warramunga Arr	19.85	228	eP	P	11 40 37.5	-0.6
WRA	Warramunga Arr	19.86	228	P	P	11 40 36.9	-1.3
	2.1nm,0.3s,baz=53,slow=11,SNR=180						
WRA				PcP	PcP	11 44 58.7	+5.5
	baz=30,slow=2.0,SNR=5.4						
ASAR	Alice Springs	22.64	221	P	P	11 41 06.4	+0.1
	3.6nm,0.6s,mb4.0,baz=52,slow=9.2,SNR=65						
ASAR				PcP	PcP	11 45 04.3	+5.6
	0.6nm,0.9s,baz=45,slow=1.3,SNR=4.1						
ASPA	Alice Springs	22.64	221	⇓iP	P	11 41 06.9	+0.6
STKA	Stephens Creek	26.01	196	P	P	11 41 38.8	+0.2
	1.8nm,0.3s,mb4.1,baz=10,slow=11,SNR=9.3						
STKA				LR	LR	11 51 53.5	
	comp=Z,48nm,18.1s,baz=25,slow=36						
FITZ	Fitzroy Crossi	26.09	243	eP	P	11 41 39.8	+0.5
	14nm,0.6s,mb4.7						
CMAR	Chiang Mai Arr	56.17	298	P	P	11 45 45.8	+0.2
	0.9nm,0.9s,mb3.8,baz=117,slow=4.0,SNR=5.0						

IDC 13 11:42:08.4±1.8**,7.64S**×**155.19E,h57**^{km}±9^{km}**,mb3.2**/6**, mb1 3.5**/6**,mb1mx3.5**/12**,mbtmp3.5**/6**,MS4.0**/1**,Ms1 4.0**/1**, ms1mx2.7**/13**,Error ellipse: s-maj=62.8km s-min=27.4km az=132.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.62	237	P	P	11 47 14.8	-0.5
	0.6nm,0.7s,baz=59,slow=9.2,SNR=4.9						
WRA				pP		11 47 27.4	
	0.9nm,0.8s,baz=59,slow=10.0,SNR=4.7						
WRA				sP		11 47 35.7	
	1.8nm,0.7s,baz=58,slow=9.4,SNR=7.8						
ASAR	Alice Springs	25.90	230	P	P	11 47 34.9	-2.2
	0.8nm,1.2s,baz=61,slow=9.3,SNR=3.1						
ASAR				sP	sP	11 47 56.6	-1.3
	1.0nm,1.1s,baz=60,slow=8.1,SNR=3.6						
JOW	Kunigami	43.07	324	LR	LR	12 05 23.1	
	comp=Z,190nm,21.0s,baz=282,slow=32						
CMAR	Chiang Mai Arr	61.23	296	P	P	11 52 19.4	-0.9
	0.6nm,0.8s,baz=106,slow=6.6,SNR=4.2						
SONM	Songino Array	69.97	327	P	P	11 53 12.5	-3.3
	0.3nm,0.8s,baz=132,slow=7.1,SNR=3.2						
ILAR	Eielson Array	83.90	21	P	P	11 54 31.5	-1.6
	0.2nm,0.6s,baz=235,slow=4.4,SNR=4.5						
YKA	Yellowknife Ar	96.81	28	P	P	11 55 33.4	-0.5
	0.2nm,0.7s,baz=267,slow=4.7,SNR=6.6						

MAN 13 11:57:32.4,10.14N×**125.77E,h123**^{km}**,mb4.2,ML3.0, MS2.7,1D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.45	218	⇓eP	P	11 57 52.4	+1.9
MSLP	Maasin	0.90	269	eP	P	11 57 55.8	+1.9
MSLP				eS	S	11 58 10.8	+0.7
PLP	Palo	1.28	323	i P	P	11 57 54.6	-3.2
PLP				i S	S	11 58 08.0	-9.0
MATI	Mati	3.21	171	eP	P	11 58 22.3	-0.2
PVCP	Virac	3.78	335	eP	P	11 58 30.0	0.0
PVCP				eS	S	11 59 21.0	+6.9

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*IDC **13** 12:01:07.0±1.6,48.44N×128.46W,mb3.4/4,mb1 3.8/12, mb1mx3.7/27,mbtmp3.6/12,ML3.1/7,MS3.4/8,Ms1 3.4/8, ms1mx3.2/22,Error ellipse: s-maj=31.7km s-min=10.6km az=66.0*
*NEIC **13** 12:01:08.2±0.8,48.48N×128.42W,h10^{km},mb4.1/5,Error ellipse: s-maj=15.6km s-min=6.3km az=59.0*
ISC 13 12:01:06.5±3.4**,48.52N**±0.06×**128.4W**±0.1**,h11**^{km}±24^{km}**, n29,σ0^{s}85**/28**,mb3.7**/6**,MS3.3**/5**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGC	Sidney	3.29	86	eP	Pn	12 01 58.6	-0.6
BBB	Bella Bella	3.68	3	Pn	Pn	12 02 04.3	-0.3
	45nm,0.3s,baz=197,slow=12,SNR=427						
BBB				Sn	Sn	12 02 48.0	-0.4
	7.8nm,0.3s,baz=288,slow=23,SNR=6.4						
BBB				LR	LR	12 03 36.1	
	comp=Z,431nm,20.2s,baz=284,slow=40						
NEW	Newport	7.52	88	Pn	Pn	12 02 57.9	-1.0
	0.2nm,0.3s,baz=240,slow=16,SNR=3.1						
YBH	Yreka Blue Hor	7.89	147	Pn	Pn	12 03 05.0	+1.0
	0.1nm,0.3s,baz=31,slow=7.5,SNR=10.0						
DLBC	Dease Lake	9.99	355	Pn	P	12 03 34.5	+1.5
	0.0nm,0.3s,baz=308,slow=12,SNR=2.2						
MCMT	McKenzie Canyo	11.31	103	eP	P	12 03 50.1	-0.9
NVAR	Mina Array Bea	12.46	140	Pn	P	12 04 06.9	+0.3
	0.0nm,0.3s,baz=324,slow=12,SNR=12						
PDAR	Pinedale Array	14.37	107	Pn	P	12 04 35.3	+3.5
	0.0nm,0.3s,baz=302,slow=12,SNR=2.8						
MSU	Marysvale	15.42	124	eP	P	12 04 44.3	-1.2
YKA	Yellowknife Ar	15.98	24	Pn	P	12 04 52.4	-0.2
	0.1nm,0.3s,baz=214,slow=11,SNR=26						
YKA				LR	LR	12 11 15.6	
	comp=Z,226nm,19.4s,baz=225,slow=38						
YKA	Yellowknife Ar	15.98	24	Pn	P	12 04 52.4	-0.2
YKA				LR	LR	12 11 15.6	
YKW3	Yellowknife Ar	16.04	24	eP	P	12 04 53.0	-0.3
PV10	Paradox Valley	17.29	119	eP	P	12 05 09.5	+0.1
FFC	Flin Flon	17.48	59	Pn	P	12 05 14.6	+2.9
	102nm,1.0s,SNR=14						
FFC	Flin Flon	17.48	59	eP	P	12 05 13.4	+1.7
	20nm,1.0s						
PV01	Paradox Valley	17.73	118	eP	P	12 05 14.5	-0.3
ILAR	Eielson Array	19.07	335	P	P	12 05 30.3	-0.8
	0.0nm,0.3s,baz=162,slow=9.0,SNR=10						
ILAR				LR	LR	12 12 07.0	
	comp=Z,86nm,19.5s,baz=174,slow=34						
SDCO	Great Sand Dun	19.81	114	P	P	12 05 38.9	-0.9
	1.2nm,0.8s						
INK	Inuvik	20.01	354	P	P	12 05 41.9	+0.1
	2.3nm,0.9s,baz=180,slow=11,SNR=7.6						
INK	Inuvik	20.01	354	P	P	12 05 41.9	+0.1
ANMO	Albuquerque	21.16	122	P	P	12 05 54.1	+0.2
	1.5nm,1.0s,mb3.3,baz=324,slow=12,SNR=5.0						
ANMO				LR	LR	12 14 49.6	
	comp=Z,45nm,19.4s,MS2.9,slow=39						
ULM	Lac du Bonnet	21.16	73	P	P	12 05 54.9	+1.1
	3.0nm,0.9s,mb3.6,baz=308,slow=7.0,SNR=4.4						
ULM				LR	LR	12 14 10.2	
	comp=Z,88nm,18.9s,MS3.2,baz=54,slow=37						
IMA	Indian Mountai	21.99	332	eP	P	12 06 01.3	-0.8
	49nm,1.7s,mb4.7						
FCC	Fort Churchill	22.53	50	eP	P	12 06 08.2	+0.9
	13nm,1.1s,mb4.3						
MNTX	Cornudas Mount	24.19	126	eP	P	12 06 24.2	+0.4
WMOK	Wichita Mounta	25.89	111	eP	P	12 06 40.2	+0.3
	1.2nm,0.8s,mb3.5						
TXAR	Lajitas Array	26.96	126	P	P	12 06 49.5	-0.3
	0.4nm,0.8s,mb3.0,baz=307,slow=6.3,SNR=5.0						
TXAR				LR	LR	12 18 26.3	
	comp=Z,80nm,20.1s,MS3.3,baz=325,slow=39						
SADO	Sadowa	33.56	78	LR	LR	12 22 20.3	
	comp=Z,76nm,18.0s,MS3.5,baz=12,slow=38						
SCHQ	Schefferville	37.60	57	LR	LR	12 24 14.3	
	comp=Z,111nm,21.8s,MS3.6,baz=350,slow=37						

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*IDC **13** 12:13:26.1±1.7,17.55N×60.99W,mb3.6/5,mb1 4.1/6, mb1mx3.6/23,mbtmp3.7/6,ML5.7/1,MS3.0/1,Ms1 3.0/1, ms1mx2.2/27,Error ellipse: s-maj=43.5km s-min=18.4km az=73.0*
*NEIC **13** 12:13:27.0±1.0,17.56N×60.89W,h10^{km},mb4.0/2, MD3.5(TRN),Error ellipse: s-maj=13.1km s-min=12.0km az=93.0*
*TRN **13** 12:13:27.7,17.38N×61.11W,h5^{km},MD3.5*
ISC 13 12:13:25.3±1.7**,17.67N**±0.05×**60.84W**±0.05**,h10**^{km}±11^{km}**, n26,σ1^{s}09**/36**,mb3.7**/7**,1C-1D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPB	Codrington	0.95	268	eP	Pb	12 13 44.2	+0.8
CPB				eS	Sb	12 13 56.0	+0.3
BPA	Boggy Peak	1.16	238	eP	Pb	12 13 45.9	-1.0
BPA				eS	Sb	12 14 00.3	-1.5
DEG	La Desirade	1.36	189	⇓eP	Pn	12 13 50.0	-0.5
SEG	Port Louis	1.41	207	⇑eP	Pn	12 13 50.8	-0.4
BCG	Bois Riant Cap	1.75	206	eP	Pn	12 13 55.5	-0.4
NVRH	Round Hill, Ne	1.75	254	eP	Pn	12 13 57.7	+1.6
NVRH				eS	Sn	12 14 17.8	-0.8
SKTB	Turtle Beach	1.76	255	eS	Sn	12 14 17.7	-1.1
DOG	Dongo Capester	1.79	205	eP	Pn	12 13 56.3	-0.3
SCG	Saint Claude	1.82	207	eP	Pn	12 13 56.4	-0.7
SCG				eS	Sn	12 14 20.7	+0.4
SKI	Saint Kitts	1.85	260	eP	Pn	12 13 59.2	+1.8
SKI				eS	Sn	12 14 22.2	+1.2
SKDB	Saint Kitts 2	1.90	262	eP	Pn	12 13 59.8	+1.6
SKDB				eS	Sn	12 14 22.7	+0.3
BBL	Barber's Block	2.22	196	eP	Pn	12 14 03.8	+1.1
BBL				eS	Sn	12 14 33.0	+2.6
BBL	Barber's Block	2.22	196	eP	Pn	12 14 04.0	+1.3
BBL				eS	Sn	12 14 33.0	+2.6
CBYP	Canovanas	4.82	278	eP	Pn	12 14 38.5	-1.2
CBYP				S	Sn	12 15 31.2	-5.0
SJG	San Juan	5.08	276	Pn	Pn	12 14 42.9	-0.5
	6.1nm,0.3s,baz=119,slow=9.0,SNR=10						
SJG				Sn	Sn	12 15 39.0	-3.8
	6.1nm,0.3s,baz=318,slow=14,SNR=2.6						
SJG	San Juan	5.08	276	eP	Pn	12 14 42.9	-0.5
SJG				Sn	Sn	12 15 39.0	-3.8
SDV	Santo Domingo	12.92	229	LR	LR	12 21 07.9	
	comp=Z,65nm,19.7s,baz=202,slow=36						
SAML	Samuel	26.55	185	eP	P	12 19 02.9	-2.6
	0.9nm,0.5s,mb3.6						
JCT	Junction City	37.61	297	eP	P	12 20 40.7	-1.4
	4.5nm,0.8s,mb4.2						
TXAR	Lajitas Array	40.75	295	P	P	12 21 08.1	-0.2
	0.5nm,0.5s,mb3.4,baz=128,slow=6.2,SNR=14						
PDAR	Pinedale Array	48.14	312	P	P	12 22 08.2	+0.6
	0.4nm,0.6s,mb3.6,baz=108,slow=9.4,SNR=5.0						
NVAR	Mina Array Bea	53.88	305	P	P	12 22 51.6	+0.6
	0.3nm,0.6s,mb3.4,baz=121,slow=5.3,SNR=3.5						
NEW	Newport	54.69	317	P	P	12 22 57.0	+0.1
	0.8nm,0.5s,mb4.0,baz=124,slow=7.3,SNR=4.6						
NEW	Newport	54.69	317	P	P	12 22 57.0	+0.1
YKA	Yellowknife Ar	58.08	334	P	P	12 23 20.8	0.0
	0.4nm,0.7s,mb3.6,baz=107,slow=7.4,SNR=8.5						
YKA	Yellowknife Ar	58.08	334	P	P	12 23 20.8	0.0

IDC 13 12:22:23.7±4.0**,16.72S**×**178.21W,mb4.1**/4**,mb1 4.3**/4**, mb1mx3.9**/15**,mbtmp4.1**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.8**/19**,1D,Error ellipse: s-maj=177.7km s-min=32.3km az=138.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	34.47	278	LR	LR	12 38 59.6	
	comp=Z,50nm,20.1s,baz=356,slow=29						
STKA	Stephens Creek	39.37	240	P	P	12 29 55.4	-1.4
	3.1nm,0.7s,baz=84,slow=8.7,SNR=4.7						
WB2	Warramunga Arr	45.03	258	eP	P	12 30 41.4	-1.8
WRA	Warramunga Arr	45.04	258	P	P	12 30 41.4	-2.0
	0.6nm,0.5s,baz=93,slow=7.0,SNR=38						
ASAR	Alice Springs	45.30	253	P	P	12 30 43.4	-1.9
	12nm,0.7s,baz=90,slow=7.9,SNR=362						
ASPA	Alice Springs	45.31	253	⇓iP	P	12 30 43.3	-2.1
ILAR	Eielson Array	84.69	13	P	P	12 34 59.1	-1.2
	0.5nm,0.9s,baz=222,slow=5.3,SNR=7.9						

IDC 13 12:37:27.9±8.6**,12.66N**×**92.19E,h112**^{km}±73^{km}**,mb3.2**/4**, mb1 3.4**/5**,mb1mx3.2**/18**,mbtmp3.5**/5**,Error ellipse: s-maj=69.2km s-min=21.1km az=58.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.69	48	P	P	12 39 30.8	-1.3
	baz=236,slow=14,SNR=4.3						
SONM	Songino Array	37.02	16	P	P	12 44 26.6	-1.7
	0.3nm,0.9s,baz=194,slow=7.5,SNR=2.7						
WRA	Warramunga Arr	52.63	127	P	P	12 46 30.6	-2.3
	0.6nm,0.7s,baz=306,slow=8.3,SNR=7.3						
ASAR	Alice Springs	54.47	131	P	P	12 46 44.2	-2.1
	0.3nm,0.5s,baz=308,slow=6.9,SNR=15						
GERES	GERESS Array B	73.01	317	P	P	12 48 45.7	-1.5
	0.9nm,0.7s,baz=49,slow=12,SNR=5.6						

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*MOS **13** 12:38:08.7±0.9,49.38N×6.82E,h10^{km},mb4.0/2,Error ellipse: s-maj=5.2km s-min=3.7km az=89.4*
*STR **13** 12:38:10.1±0.1,49.37N×6.89E,h1^{km}±1^{km},Ml3.4,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **13** 12:38:10.1,49.37N×6.89E,h1^{km},ML3.9(CSEM), ML3.8(LDG),ML3.4(STR),ML3.3(SZGRF),ML3.2(LEDBW), After STR.*
*BGR **13** 12:38:10.2±0.2,49.39N×6.89E,h1^{km},ML3.3/8,Error ellipse: s-maj=1.1km s-min=1.1km az=100.0*
*LEDBW **13** 12:38:10.3±0.5,49.37N×6.89E,h1^{km},ML3.2,Error ellipse: s-maj=16.0km s-min=4.0km az=77.0*
*CSEM **13** 12:38:10.5±0.0,49.37N×6.93E,h2^{km},ML3.9/29,Error ellipse: s-maj=0.7km s-min=0.6km az=140.0*
*LDG **13** 12:38:10.6±0.0,49.38N×6.92E,h1^{km},Md3.8/2,Ml3.8/33, Error ellipse: s-maj=0.9km s-min=0.8km az=102.0, Suspected Mining induced.*
*BNS **13** 12:38:11.6±0.8,49.42N×6.95E,h1^{km},ML3.4*
ISC 13 12:38:07.9±0.1**,49.373N**±0.009×**6.82E**±0.02**,n174, σ1^{s}30**/348**,mb4.4**/1**,13C-13D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.36	25	⇓ePg	Pg	12 38 17.3	+2.1
RUP				i P*	Pb	12 38 18.6	+1.7
RUP	Ruppelstein	0.36	25	i P	Pg	12 38 18.6	+3.4
WLF	Walferdange	0.53	304	ePg	Pg	12 38 21.5	+3.1
	SNR=88						
WLF				eSg	Sg	12 38 27.8	+2.4
	SNR=4.4						
WLF	Walferdange	0.53	304	⇑ePg	Pg	12 38 21.5	+3.1
ABH	Alteburg	0.69	42	⇓iPg	Pg	12 38 22.7	+1.0
ABH				Sg	Sg	12 38 31.5	+0.5
LANF	Langenberg	0.75	121	⇓iPg	Pg	12 38 23.8	+0.9
KTD	Kalmit	0.83	93	Pg	Pg	12 38 24.9	+0.5
KTD				eSg	Sg	12 38 36.7	+1.3
	SNR=2.2						
KTD	Kalmit	0.83	93	Pg	Pg	12 38 24.8	+0.4
BGG	Burgeitz	0.90	22	ePg	Pg	12 38 27.3	+1.4
BGG				eSg	Sg	12 38 38.6	+0.8
	888nm,0.7s						
STR	Strasbourg	1.00	141	ePg	Pg	12 38 29.8	+1.8
	SNR=5.4						
STR	Strasbourg	1.00	141	Pg	Pg	12 38 28.7	+0.7
CDF	Champ du Feu	1.01	163	ePg	Pg	12 38 28.8	+0.8
CDF				ePn	Pn	12 38 29.8	+0.7
CDF				eSg	Sg	12 38 42.0	+0.6
	166nm,0.2s						
CDF				eSn	Sn	12 38 44.1	-0.1
	186nm,0.2s						
CDF	Champ du Feu	1.01	163	eP	Pg	12 38 28.8	+0.8
CDF				e		12 38 44.1	
WLS	Welschbruch	1.02	160	⇓iPg	Pg	12 38 29.2	+0.9
WLS				ePn	Pn	12 38 30.1	+0.8
	SNR=5.4						
WLS				PmP		12 38 30.2	
WLS	Welschbruch	1.02	160	Pg	Pg	12 38 29.4	+1.1
WLS				Sg	Sg	12 38 43.3	+1.3
WLS	Welschbruch	1.02	160	⇓iP	Pg	12 38 29.2	+0.9
WLS				P		12 38 30.2	
RFYF	Reffroy	1.16	231	ePg	Pg	12 38 33.4	+2.3
	baz=57						
RFYF				eSg	Sg	12 38 49.1	+2.6
	692nm,0.3s,baz=52						
ECH	Echery	1.18	169	⇓ePn	Pn	12 38 32.2	+0.6
ECH				Pg	Pg	12 38 33.1	+1.7
ECH				eSg	Sg	12 38 47.6	+0.4
	SNR=5.6						
ECH	Echery	1.18	169	Pg	Pg	12 38 32.7	+1.2
ECH				Sg	Sg	12 38 47.8	+0.6

STB	**Steinbach**	**1.22**	**0**	*e*Pg	**Pg**	**12 38 33.1**	**+0.8**
STB				*e*Sg	**Sg**	**12 38 49.1**	**+0.5**
	405nm,0.9s						
THEF	**They Montfort**	**1.27**	**206**	Pn	**Pn**	**12 38 34.5**	**+1.6**
THEF				*e*Pg	**Pg**	**12 38 34.5**	**+1.2**
	SNR=47						
THEF				*e*Sg	**Sg**	**12 38 50.9**	**+0.6**
	SNR=7.1						
THEF	**They Montfort**	**1.27**	**206**	Pg	**Pg**	**12 38 34.5**	**+1.1**
THEF				Sg	**Sg**	**12 38 51.3**	**+1.0**
TOD	**Tromm**	**1.31**	**79**	⇓*e*Pn	**Pn**	**12 38 33.2**	**-0.3**
TOD				Pg	**Pg**	**12 38 34.2**	**+0.1**
TOD				Sg	**Sg**	**12 38 53.4**	**+1.8**
TOD	**Tromm**	**1.31**	**79**	Pg	**Pg**	**12 38 33.6**	**-0.5**
TOD				Sg	**Sg**	**12 38 51.0**	**-0.6**
KLL	**Kalltalsperre**	**1.32**	**346**	*e*Pg	**Pg**	**12 38 34.5**	**+0.2**
KLL				*e*Sg	**Sg**	**12 38 52.5**	**+0.8**
	248nm,0.4s						
LIBD	**Limburg**	**1.33**	**157**	*e*Pn	**Pn**	**12 38 35.0**	**+1.2**
	SNR=1.1						
LIBD				Pg	**Pg**	**12 38 35.9**	**+1.5**
LIBD				*e*Sg	**Sg**	**12 38 52.4**	**+0.2**
	SNR=3.5						
LIBD	**Limburg**	**1.33**	**157**	PG	**Pg**	**12 38 35.9**	**+1.5**
LIBD	**Limburg**	**1.33**	**157**	Pg	**Pg**	**12 38 34.9**	**+0.5**
LIBD				Sg	**Sg**	**12 38 53.7**	**+1.6**
TNS	**Taunus Mts**	**1.35**	**50**	*e*Pn	**Pn**	**12 38 34.0**	**-0.1**
	SNR=4.5						
TNS				*e*Pg	**Pg**	**12 38 35.4**	**+0.5**
	SNR=24						
TNS				*e*Sg	**Sg**	**12 38 52.6**	**-0.3**
	SNR=4.4						
TNS	**Taunus Mts**	**1.35**	**50**	*e*P	**Pn**	**12 38 34.0**	**-0.1**
TNS				*e*		12 38 52.6	
TNS	**Taunus Mts**	**1.35**	**50**	*e*Pn	**Pn**	**12 38 34.0**	**-0.1**
TNS				*e*Pg	**Pg**	**12 38 35.4**	**+0.5**
TNS				*e*Sg	**Sg**	**12 38 52.6**	**-0.3**
HAU	**Haudompre**	**1.41**	**193**	*e*Pn	**Pn**	**12 38 35.6**	**+0.8**
HAU				*e*Pg	**Pg**	**12 38 37.1**	**+1.1**
HAU				*e*Sn	**Sn**	**12 38 54.2**	**-0.1**
HAU				*e*Sg	**Sg**	**12 38 55.7**	**+1.0**
	393nm,0.2s						
HAU	**Haudompre**	**1.41**	**193**	*e*P	**Pn**	**12 38 35.6**	**+0.8**
HAU				*e*		12 38 54.2	
BFO	**Black Forest**	**1.44**	**136**	*e*Pn	**Pn**	**12 38 35.4**	**+0.1**
BFO				*e*Sg	**Sg**	**12 38 55.3**	**-0.6**
MEZF	**Maizieres J’vi**	**1.46**	**234**	*e*Pn	**Pn**	**12 38 37.4**	**+1.8**
	baz=54						
MEZF				*e*Pg	**Pg**	**12 38 38.1**	**+1.1**
MEZF				*e*Sn	**Sn**	**12 38 56.0**	**+0.3**
MEZF				*e*Sg	**Sg**	**12 38 58.6**	**+2.1**
	438nm,0.5s,baz=48						
MEZF	**Maizieres J’vi**	**1.46**	**234**	*e*Pg	**Pg**	**12 38 38.1**	**+1.1**
MEZF				*e*Sn	**Sn**	**12 38 56.0**	**+0.3**
MEZF				*e*Sg	**Sg**	**12 38 58.6**	**+2.1**
	219nm,0.5s						
LBG	**Lerchenberg**	**1.48**	**118**	Pn	**Pn**	**12 38 35.9**	**+0.1**
GIVF	**Givet**	**1.49**	**300**	*e*Pn	**Pn**	**12 38 38.0**	**+2.0**
GIVF				*e*Pg	**Pg**	**12 38 39.8**	**+2.2**
GIVF				*e*Sn	**Sn**	**12 38 56.9**	**+0.5**
GIVF				*e*Sg	**Sg**	**12 38 58.9**	**+1.4**
	392nm,0.4s						
GIVF	**Givet**	**1.49**	**300**	*e*P	**Pn**	**12 38 38.0**	**+2.0**
GIVF				*e*		12 38 56.9	
HGN	**Heimansgroeve**	**1.51**	**338**	*e*Pn	**Pn**	**12 38 37.5**	**+1.3**
	SNR=18						
HGN				*e*Pg	**Pg**	**12 38 38.8**	**+0.8**
	SNR=6.7						
HGN				*e*Sg	**Sg**	**12 38 58.4**	**+0.3**
	SNR=4.2						
HGN	**Heimansgroeve**	**1.51**	**338**	*e*Pn	**Pn**	**12 38 37.6**	**+1.3**
HGN				*e*Pg	**Pg**	**12 38 39.0**	**+1.0**
HGN				*e*Sg	**Sg**	**12 38 59.7**	**+1.6**
HGN				*e*Rg		12 39 18.8	
HGN	**Heimansgroeve**	**1.51**	**338**	*e*Pg	**Pg**	**12 38 39.0**	**+1.0**
HGN				*e*Sg	**Sg**	**12 38 59.7**	**+1.6**
FBB	**Freiburg**	**1.53**	**153**	Pg	**Pg**	**12 38 39.1**	**+0.6**
MOF	**Molkenrain**	**1.54**	**172**	*e*Pg	**Pg**	**12 38 38.9**	**+0.3**
	SNR=40						
MOF				Pn	**Pn**	**12 38 39.2**	**+2.5**
MOF				Sg	**Sg**	**12 38 59.6**	**+0.5**
MOF	**Molkenrain**	**1.54**	**172**	Pg	**Pg**	**12 38 39.1**	**+0.5**
MOF				Sg	**Sg**	**12 38 59.6**	**+0.5**
MOF	**Molkenrain**	**1.54**	**172**	P	**Pn**	**12 38 39.2**	**+2.5**
MOF				S	**Sg**	**12 38 59.6**	**+0.5**
HINF	**Hinteralfeld**	**1.56**	**179**	*e*Pn	**Pn**	**12 38 37.7**	**+0.7**
HINF				*e*Pg	**Pg**	**12 38 39.5**	**+0.5**
HINF				*e*Sn	**Sn**	**12 38 57.3**	**-0.9**
HINF				*e*Sg	**Sg**	**12 39 00.0**	**+0.2**
	385nm,0.2s						
HINF	**Hinteralfeld**	**1.56**	**179**	*e*P	**Pn**	**12 38 37.7**	**+0.7**
HINF				*e*		12 38 57.3	
KIZ	**Kirchzarten**	**1.59**	**152**	Pn	**Pn**	**12 38 37.6**	**+0.1**
KIZ				Sg	**Sg**	**12 39 00.1**	**-0.9**
BNS	**Bensberg**	**1.61**	**8**	*e*Pg	**Pg**	**12 38 39.1**	**-0.9**
BNS				*e*Sg	**Sg**	**12 38 59.6**	**-1.9**
	767nm,0.8s						
DOU	**Dourbes**	**1.62**	**297**	P	**Pn**	**12 38 39.7**	**+1.9**
DOU				S	**Sb**	**12 38 59.4**	**+0.1**
SFTF	**Sexfontaines**	**1.66**	**226**	*e*Pn	**Pn**	**12 38 39.9**	**+1.4**
	baz=42						
SFTF				*e*Pg	**Pg**	**12 38 41.3**	**+0.2**
	baz=46						
SFTF				*e*Sn	**Sn**	**12 39 00.6**	**-0.2**
SFTF				*e*Sg	**Sg**	**12 39 04.4**	**+1.2**
	168nm,0.2s,baz=50						
SFTF	**Sexfontaines**	**1.66**	**226**	*e*Pg	**Pg**	**12 38 41.3**	**+0.2**
SFTF				*e*Sn	**Sn**	**12 39 00.6**	**-0.2**
SFTF				*e*Sg	**Sg**	**12 39 04.4**	**+1.2**
	84nm,0.2s						
STU	**Stuttgart**	**1.67**	**110**	*e*Pn	**Pn**	**12 38 38.7**	**0.0**
	SNR=2.5						
STU				*e*Pg	**Pg**	**12 38 40.9**	**-0.3**
	SNR=3.5						
STU	**Stuttgart**	**1.67**	**110**	*e*Pn	**Pn**	**12 38 38.7**	**+0.1**
STU				*e*Pg	**Pg**	**12 38 40.9**	**-0.4**
FELD	**Feldberg**	**1.69**	**152**	Pg	**Pg**	**12 38 41.6**	**0.0**
FELD				*e*Sg	**Sg**	**12 39 03.3**	**-0.9**
	SNR=6.0						
FELD	**Feldberg**	**1.69**	**152**	Pg	**Pg**	**12 38 41.6**	**-0.1**
FELD				Sg	**Sg**	**12 39 04.6**	**+0.4**
TUBL	**Tuebingen Lnz**	**1.71**	**119**	Pg	**Pg**	**12 38 42.0**	**-0.2**
SPAK	**Spaichingen**	**1.82**	**134**	Pg	**Pg**	**12 38 44.1**	**-0.2**
SPAK	**Spaichingen**	**1.82**	**134**	Pg	**Pg**	**12 38 43.8**	**-0.4**
SIND	**Sindeldorf**	**1.82**	**90**	⇓*i*Pn	**Pn**	**12 38 40.2**	**-0.5**
BAIF	**Baives**	**1.83**	**293**	*e*Pn	**Pn**	**12 38 42.8**	**+1.9**
BAIF				*e*Pg	**Pg**	**12 38 46.1**	**+1.6**
BAIF				*e*Sn	**Sn**	**12 39 05.4**	**+0.3**
BAIF				*e*Sg	**Sg**	**12 39 09.9**	**+1.0**
	230nm,0.5s						
BAIF	**Baives**	**1.83**	**293**	*e*P	**Pn**	**12 38 42.8**	**+1.9**
BAIF				*e*		12 39 05.4	
BUCH	**Bad Urach**	**1.91**	**118**	Pn	**Pn**	**12 38 42.4**	**+0.4**
BBS	**Basel-Blauen**	**1.96**	**166**	Pg	**Pg**	**12 38 47.1**	**0.0**
BBS	**Basel-Blauen**	**1.96**	**166**	Pg	**Pg**	**12 38 46.7**	**-0.4**
SNF	**Seneffe**	**2.00**	**306**	P	**Pn**	**12 38 45.5**	**+2.2**
GUT	**Gutenstein**	**2.00**	**130**	Pn	**Pn**	**12 38 43.8**	**+0.5**
LOMF	**Lomont**	**2.02**	**180**	Pn	**Pn**	**12 38 44.1**	**+0.4**
LOMF				*e*Pg	**Pg**	**12 38 48.6**	**+0.3**
	SNR=9.0						
LOMF				*e*Sg	**Sg**	**12 39 15.0**	**-0.3**
	SNR=3.2						
LOMF	**Lomont**	**2.02**	**180**	Pn	**Pn**	**12 38 43.9**	**+0.2**
LOMF				Pg	**Pg**	**12 38 48.5**	**+0.2**
LOMF				Sg	**Sg**	**12 39 15.7**	**+0.4**
LOMF	**Lomont**	**2.02**	**180**	P	**Pn**	**12 38 43.9**	**+0.2**
LOMF						12 39 15.7	
LOMF	**Lomont**	**2.02**	**180**	Pg	**Pg**	**12 38 48.5**	**+0.2**
LOMF				Sg	**Sg**	**12 39 15.7**	**+0.4**
BUG	**Bochum--Univer**	**2.09**	**8**	*e*Pn	**Pn**	**12 38 45.7**	**+1.1**
	SNR=2.8						
BUG				*e*Pg	**Pg**	**12 38 49.4**	**-0.2**
	SNR=3.7						
BUG				*e*Sg	**Sg**	**12 39 15.4**	**-2.1**
	SNR=4.0						
BUG	**Bochum--Univer**	**2.09**	**8**	*e*P	**Pn**	**12 38 45.7**	**+1.1**
BUG				*e*		12 39 15.4	
BUG	**Bochum--Univer**	**2.09**	**8**	*e*Pn	**Pn**	**12 38 45.7**	**+1.1**
BUG				*e*Pg	**Pg**	**12 38 49.4**	**-0.2**
BUG				*e*Sg	**Sg**	**12 39 15.4**	**-2.1**
SISB	**Singen-Sch Ber**	**2.21**	**139**	⇓*e*Pg	**Pg**	**12 38 51.8**	**-0.2**
HDH	**Heidenheim**	**2.36**	**108**	Pn	**Pn**	**12 38 48.3**	**-0.3**
HDH				⇑*i*Pg	**Pg**	**12 38 53.5**	**-1.6**
HDH	**Heidenheim**	**2.36**	**108**	Pn	**Pn**	**12 38 48.3**	**-0.2**
HDH				⇑*i*Pg	**Pg**	**12 38 53.6**	**-1.5**
HDH	**Heidenheim**	**2.36**	**108**	⇑*i*PG	**Pg**	**12 38 53.6**	**-1.5**
HDH	**Heidenheim**	**2.36**	**108**	⇑*i*Pg	**Pg**	**12 38 53.6**	**-1.5**
HROE	**Hohe Rhon--Fla**	**2.45**	**60**	⇑*i*Pn	**Pn**	**12 38 49.6**	**-0.1**
UBBA	**Unterbreizbach**	**2.51**	**54**	*e*Pg	**Pg**	**12 38 56.1**	**-1.8**
	SNR=4.0						
UBBA				*e*Sg	**Sg**	**12 39 28.3**	**-3.0**
	SNR=3.2						
NORI	**Noerdlinger Ri**	**2.58**	**103**	⇓*i*Pn	**Pn**	**12 38 51.5**	**-0.2**
WTSB	**Winterswijk**	**2.60**	**360**	*e*Pn	**Pn**	**12 38 52.6**	**+0.8**
	SNR=3.0						
WTSB				*e*Pg	**Pg**	**12 38 58.4**	**-1.3**
	SNR=6.7						
WTSB				*e*Sg	**Sg**	**12 39 32.1**	**-2.2**
	SNR=3.0						
WTSB	**Winterswijk**	**2.60**	**360**	*e*Pn	**Pn**	**12 38 52.6**	**+0.8**
WTSB				*e*Pg	**Pg**	**12 38 58.8**	**-0.9**
WTSB				*e*Sg	**Sg**	**12 39 31.9**	**-2.4**
WTSB	**Winterswijk**	**2.60**	**360**	*e*Pg	**Pg**	**12 38 58.8**	**-1.0**
WTSB				*e*Sg	**Sg**	**12 39 31.9**	**-2.5**
UBR	**Uberruh**	**2.76**	**127**	Pn	**Pn**	**12 38 54.9**	**+0.7**
CABF	**La Chapelle**	**2.81**	**190**	*e*Pn	**Pn**	**12 38 55.3**	**+0.4**
CABF				*e*Pg	**Pg**	**12 39 03.7**	**-0.3**
CABF				*e*Sn	**Sn**	**12 39 27.7**	**-2.2**
CABF				*e*Sg	**Sg**	**12 39 39.4**	**-2.0**
	183nm,0.6s						
CABF	**La Chapelle**	**2.81**	**190**	*e*P	**Pn**	**12 38 55.3**	**+0.4**
CABF				*e*		12 39 27.7	
GRF	**Grafenberg Arr**	**2.88**	**82**	*e*Sg	**Sg**	**12 39 41.4**	**-2.5**
DAVA	**Damuels**	**2.92**	**135**	⇓*i*PN	**Pn**	**12 38 57.4**	**+0.9**
DAVA				*i* SN	**Sn**	**12 39 40.2**	**+7.4**
IBBN	**Ibbenburen**	**3.00**	**11**	*e*Sg	**Sg**	**12 39 44.2**	**-3.5**
	SNR=4.0						
SSF	**Saint Saulge**	**3.21**	**225**	*e*Pn	**Pn**	**12 39 00.3**	**-0.2**
SSF				*e*Pg	**Pg**	**12 39 10.4**	**-1.5**
SSF				*e*Sn	**Sn**	**12 39 37.7**	**-2.3**
SSF				*e*Sg	**Sg**	**12 39 52.6**	**-2.0**
	96nm,0.5s						
SSF	**Saint Saulge**	**3.21**	**225**	*e*P	**Pn**	**12 39 00.3**	**-0.2**
SSF				*e*		12 39 37.7	
MOX	**Moxa**	**3.34**	**66**	*e*Pn	**Pn**	**12 39 02.0**	**-0.4**
	SNR=4.6						
MOX				*e*Pg	**Pg**	**12 39 11.0**	**-3.6**
	SNR=5.8						
MOX				*e*(Sn)	**Sn**	**12 39 40.7**	**-2.8**
	SNR=1.9						
MOX				*e*Sg	**Sg**	**12 39 54.2**	**-5.0**
	SNR=2.6						
MOX	**Moxa**	**3.34**	**66**	*e*P	**Pn**	**12 39 02.3**	**-0.2**
MOX				*e*		12 39 40.8	
MOX	**Moxa**	**3.34**	**66**	*e*Pn	**Pn**	**12 39 02.3**	**-0.2**
MOX				*e*Pg	**Pg**	**12 39 11.0**	**-3.6**
MOX				*e*Sn	**Sn**	**12 39 40.8**	**-2.7**
MOX				*e*Sg	**Sg**	**12 39 55.2**	**-4.0**
MOX	**Moxa**	**3.34**	**66**	*i* P	**Pn**	**12 39 02.3**	**-0.2**
MOX				Pg	**Pg**	**12 39 11.0**	**-3.6**
MOX				S	**Sn**	**12 39 40.0**	**-3.5**
MOX				Sg	**Sg**	**12 39 55.0**	**-4.2**
CLZ	**Clausthal**	**3.35**	**41**	*e*Pn	**Pn**	**12 39 01.8**	**-0.7**
	SNR=4.9						
CLZ				*e*Pg	**Pg**	**12 39 11.8**	**-2.9**
	SNR=4.0						
CLZ				*e*Sg	**Sg**	**12 39 55.3**	**-4.1**
	SNR=3.0						
CLZ	**Clausthal**	**3.35**	**41**	*e*Pn	**Pn**	**12 39 01.8**	**-0.8**
CLZ				*e*Pg	**Pg**	**12 39 11.8**	**-3.0**
CLZ				*e*Sg	**Sg**	**12 39 55.3**	**-4.1**
MZEK	**Zeckenberg-Ebn**	**3.38**	**78**	⇑*i*Pn	**Pn**	**12 39 03.5**	**+0.5**
SMF	**Signal de Mont**	**3.38**	**217**	*e*Pn	**Pn**	**12 39 02.4**	**-0.7**
SMF				*e*Sn	**Sn**	**12 39 42.1**	**-2.5**
	45nm,0.2s						
SMF				*e*Sg	**Sg**	**12 39 58.4**	**-2.2**
	49nm,0.3s						
NOTT	**Nottersdorf**	**3.48**	**81**	*e*Pn	**Pn**	**12 39 04.3**	**0.0**
AVF	**Avril sur Loir**	**3.48**	**223**	*e*Pn	**Pn**	**12 39 03.7**	**-0.7**
AVF				*e*Pg	**Pg**	**12 39 16.4**	**-0.9**
AVF				*e*Sn	**Sn**	**12 39 43.0**	**-3.9**
AVF				*e*Sg	**Sg**	**12 40 01.0**	**-2.7**
	82nm,0.7s						
AVF	**Avril sur Loir**	**3.48**	**223**	*e*P	**Pn**	**12 39 03.7**	**-0.7**
AVF				*e*		12 39 43.0	
HYF	**Humbligny**	**3.50**	**235**	*e*Pn	**Pn**	**12 39 05.2**	**+0.5**
HYF				*e*Sg	**Sg**	**12 40 02.1**	**-2.3**
MOTA	**Moosalm**	**3.50**	**124**	⇑*i*PN	**Pn**	**12 39 05.8**	**+1.1**
MOTA				*i* SN	**Sn**	**12 39 54.9**	**+7.4**
MCGN	**Macugnaga**	**3.51**	**167**	*e*Pn	**Pn**	**12 39 06.9**	**+2.1**
MCGN	**Macugnaga**	**3.51**	**167**	*e*Pn	**Pn**	**12 39 06.9**	**+2.1**
SQTA	**Sankt Quirin**	**3.63**	**125**	⇑*i*PN	**Pn**	**12 39 08.1**	**+1.5**
SQTA				*i* SN	**Sn**	**12 39 58.6**	**+7.7**
WERD	**Werda**	**3.70**	**71**	*e*Pn	**Pn**	**12 39 07.0**	**-0.6**
	SNR=4.1						
WERD				*e*Pg	**Pg**	**12 39 18.6**	**-3.2**
	SNR=6.7						
WERD				*e*Sg	**Sg**	**12 40 06.0**	**-5.2**
	SNR=4.2						
NKC	**Novy Kostel**	**3.74**	**75**	*e*Pn	**Pn**	**12 39 07.3**	**-0.9**
NKC				*e*Pg	**Pg**	**12 39 18.8**	**-3.8**
VAI	**Varese**	**3.75**	**159**	*e*Pn	**Pn**	**12 39 09.3**	**+1.1**
NRDL	**Niedersach Rie**	**3.75**	**32**	*e*Pg	**Pg**	**12 39 19.5**	**-3.3**
	SNR=2.6						
BRMO	**Bormio**	**3.75**	**139**	*e*Pn	**Pn**	**12 39 10.3**	**+2.0**
BRMO	**Bormio**	**3.75**	**139**	*e*Pn	**Pn**	**12 39 10.4**	**+2.1**
WATA	**Walderalm**	**3.77**	**121**	⇑*i*PN	**Pn**	**12 39 09.2**	**+0.7**
WATA				*i* SN	**Sn**	**12 40 01.8**	**+7.6**
TANN	**Tannenbergstha**	**3.79**	**72**	*e*Pn	**Pn**	**12 39 08.9**	**+0.1**
	SNR=4.2						
TANN				*e*Pg	**Pg**	**12 39 21.0**	**-2.6**
	SNR=3.6						
TANN				*e*Sg	**Sg**	**12 40 08.2**	**-5.9**
	SNR=3.3						
WTTA	**Wattenberg**	**3.84**	**122**	⇑*i*PN	**Pn**	**12 39 10.3**	**+0.7**
WTTA				*i* SN	**Sn**	**12 40 03.2**	**+7.1**
LPL	**La Plagne**	**3.86**	**181**	*e*Pn	**Pn**	**12 39 09.5**	**-0.3**
LPL				*e*Pg	**Pg**	**12 39 21.9**	**-3.1**
LPL				*e*Sg	**Sg**	**12 40 11.2**	**-5.2**
	27nm,0.5s						
LPG	**La Plagne**	**3.88**	**181**	*e*Pn	**Pn**	**12 39 10.2**	**+0.1**
LPG				*e*Sg	**Sg**	**12 40 12.3**	**-4.7**
	39nm,0.7s						
BGF	**Bois d’Agland**	**3.88**	**225**	*e*Pn	**Pn**	**12 39 09.2**	**-1.0**
BGF				*e*Sn	**Sn**	**12 39 52.0**	**-5.2**
BGF				*e*Sg	**Sg**	**12 40 14.1**	**-3.1**
	233nm,0.4s						
WET	**Wettzell**	**3.97**	**91**	*e*Pn	**Pn**	**12 39 11.2**	**-0.2**
	SNR=13						
SCE	**Schlegeis**	**4.02**	**124**	⇓*i*Pn	**Pn**	**12 39 13.2**	**+1.1**
AGO	**Saint Agoulin**	**4.15**	**218**	Pn	**Pn**	**12 39 12.5**	**-1.5**
RJOB	**Jochberg**	**4.29**	**110**	⇓*i*Pn	**Pn**	**12 39 16.7**	**+0.7**
BNI	**Bardonecchia**	**4.32**	**181**	*e*Pn	**Pn**	**12 39 16.8**	**+0.4**
TCF	**Toulx Ste Croi**	**4.38**	**227**	*e*Pn	**Pn**	**12 39 16.7**	**-0.5**
TCF				*e*Pg	**Pg**	**12 39 33.0**	**-2.4**
TCF				*e*Sg	**Sg**	**12 40 29.6**	**-4.1**
	30nm,0.3s						
CLL	**Collm**	**4.41**	**62**	*e*PN	**Pg**	**12 39 29.0**	**-6.9**
CLL				*e*		12 39 29.0	
CLL				*e*SG	**Sg**	**12 40 30.0**	**-4.6**
CLL	**Collm**	**4.41**	**62**	*e*Pg	**Pg**	**12 39 29.0**	**-6.9**
CLL				*e*Sg	**Sg**	**12 40 30.0**	**-4.6**
KHC	**Kasperske Hory**	**4.43**	**91**	*e*Pn	**Pn**	**12 39 17.4**	**-0.5**
KHC				*e*		12 39 38.5	
KHC				*e*Sn	**Sn**	**12 40 06.8**	**-4.2**
KHC				*e*		12 40 39.5	
KHC	**Kasperske Hory**	**4.43**	**91**	*e*PN	**Pn**	**12 39 17.4**	**-0.5**
KHC				PG	**Pg**	**12 39 38.5**	**+2.1**
KHC				*e*SN	**Sn**	**12 40 06.8**	**-4.2**
KHC				*e*SG	**Sg**	**12 40 39.5**	**+4.1**
KHC	**Kasperske Hory**	**4.43**	**91**	*e*Pn	**Pn**	**12 39 17.4**	**-0.5**
KHC				*e*Sn	**Sn**	**12 40 06.8**	**-4.2**
PYM	**Petit Puy Mans**	**4.45**	**217**	Pn	**Pn**	**12 39 17.3**	**-0.9**
ORIF	**Oris-en-Rattie**	**4.50**	**189**	*e*Pn	**Pn**	**12 39 18.2**	**-0.8**
ORIF				*e*Sg	**Sg**	**12 40 32.2**	**-5.6**
	41nm,0.6s						
GEC2	**GERESS Array S**	**4.55**	**94**	*e*Pn	**Pn**	**12 39 19.3**	**-0.3**
	SNR=75						
GEC2				*e*(Sn)	**Sn**	**12 40 08.1**	**-5.9**
	SNR=2.9						
GEC2				*e*Sg	**Sg**	**12 40 33.4**	**-6.0**
	SNR=1.9						
GEC2	**GERESS Array S**	**4.55**	**94**	*e*Pn	**Pn**	**12 39 19.3**	**-0.3**
GEC2				Sn	**Sn**	**12 40 08.1**	**-5.9**
GEC2				*e*Sg	**Sg**	**12 40 33.4**	**-6.0**
GEC2	**GERESS Array S**	**4.55**	**94**	*e*Pn	**Pn**	**12 39 19.3**	**-0.3**
GEC2				Sn	**Sn**	**12 40 08.1**	**-5.9**
LDF	**La Druitiere**	**4.64**	**263**	*e*Pn	**Pn**	**12 39 21.0**	**+0.1**
LDF				*e*Pg	**Pg**	**12 39 37.0**	**-3.6**
LDF				*e*Sn	**Sn**	**12 40 12.2**	**-4.1**
LDF				*e*Sg	**Sg**	**12 40 37.3**	**-5.1**
	33nm,0.4s						
LDF	**La Druitiere**	**4.64**	**263**	*e*P	**Pn**	**12 39 21.0**	**+0.1**
LDF				*e*		12 40 12.2	
VIVF	**Saint-Julien-l**	**4.75**	**199**	*e*Pn	**Pn**	**12 39 21.5**	**-1.0**
VIVF				*e*Sn	**Sn**	**12 40 13.6**	**-5.6**
VIVF				*e*Sg	**Sg**	**12 40 40.0**	**-6.1**
	21nm,0.4s						
LBL	**Lubilhac**	**4.80**	**212**	Pn	**Pn**	**12 39 22.4**	**-0.8**
BRG	**Berggiesshubel**	**4.82**	**69**	*e*Pn	**Pn**	**12 39 21.4**	**-2.0**
	SNR=2.0						
BRG				*e*(Pg)	**Pg**	**12 39 38.2**	**-6.0**
	SNR=3.5						
BRG				*e*Sg	**Sg**	**12 40 41.3**	**-7.0**
	SNR=2.1						
BRG	**Berggiesshubel**	**4.82**	**69**	*e*Pn	**Pn**	**12 39 22.4**	**-1.1**
BRG				*i* Pg	**Pg**	**12 39 38.2**	**-5.9**
BRG				*i* Sg	**Sg**	**12 40 39.7**	**-8.7**
BRG	**Berggiesshubel**	**4.82**	**69**	*i* Pg	**Pg**	**12 39 38.2**	**-5.9**
FLN	**La Foliniere**	**4.84**	**266**	*e*Pn	**Pn**	**12 39 23.9**	**+0.1**
	baz=86						
FLN				*e*Sn	**Sn**	**12 40 17.6**	**-3.8**
FLN				*e*Sg	**Sg**	**12 40 44.9**	**-4.2**
	35nm,0.4s						
FVI	**Forni Avoltri**	**4.87**	**123**	*e*P	**Pn**	**12 39 26.3**	**+2.1**
KBA	**Koelnbreinsper**	**4.93**	**115**	⇑*i*PN	**Pn**	**12 39 25.7**	**+0.7**
KBA				*i* SN	**Sn**	**12 40 30.0**	**+6.5**
PRU	**Pruhonice**	**5.05**	**80**	*e*PN	**Pn**	**12 39 26.5**	**-0.2**
PRU				*e*PG	**Pg**	**12 39 44.0**	**-4.7**
PRU				*e*SG	**Sg**	**12 40 48.9**	**-7.1**
PRU	**Pruhonice**	**5.05**	**80**	*e*Pn	**Pn**	**12 39 26.5**	**-0.2**
PRU				*e*Sg	**Sg**	**12 40 48.9**	**-7.1**
GRR	**Gorron**	**5.16**	**262**	*e*Pn	**Pn**	**12 39 27.8**	**-0.5**
GRR				*e*Pg	**Pg**	**12 39 48.5**	**-2.5**
GRR				*e*Sn	**Sn**	**12 40 25.2**	**-4.3**
	19nm,0.2s						
GRR	**Gorron**	**5.16**	**262**	*e*P	**Pn**	**12 39 27.8**	**-0.5**
GRR				*e*		12 40 25.2	
MOA	**Molln**	**5.17**	**104**	⇑*i*PN	**Pn**	**12 39 28.1**	**-0.3**
MOA				*i* SN	**Sn**	**12 40 35.3**	**+5.7**
PTCC	**Patocco-Chiusa**	**5.30**	**122**	*e*Pn	**Pn**	**12 39 32.2**	**+2.0**
MFF	**Saint Martin d**	**5.44**	**242**	*e*Pn	**Pn**	**12 39 31.6**	**-0.6**
MFF				*e*Sn	**Sn**	**12 40 31.2**	**-5.2**
MFF				*e*Sg	**Sg**	**12 41 02.7**	**-6.3**
	43nm,0.6s						
RJF	**Les Rejaudoux**	**5.44**	**224**	*e*Sn	**Sn**	**12 40 31.2**	**-5.2**
RJF				*e*Sg	**Sg**	**12 41 02.9**	**-6.1**
	34nm,0.5s						
CAF	**Calviac**	**5.51**	**218**	*e*Pn	**Pn**	**12 39 31.0**	**-2.2**
LASF	**Ste Croix**	**5.68**	**202**	*e*Pn	**Pn**	**12 39 34.6**	**-1.0**
LASF				*e*Sg	**Sg**	**12 41 09.3**	**-7.6**
	24nm,0.5s						
LFF	**La Frestale**	**6.07**	**225**	*e*Sg	**Sg**	**12 41 22.5**	**-7.6**
	26nm,0.4s						
PERS	**Pernice**	**6.20**	**113**	*i* Pn	**Pn**	**12 39 43.3**	**+0.4**
PERS				*e*Sn	**Sn**	**12 40 49.9**	**-5.7**
DPC	**Dobruska-Polom**	**6.22**	**77**	*e*PN	**Pn**	**12 39 42.9**	**-0.3**
DPC				*e*PG	**Pg**	**12 40 08.4**	**-3.7**
DPC				*e*SG	**Sg**	**12 41 27.0**	**-8.0**
KSP	**Ksiaz**	**6.27**	**73**	*e*Pn	**Pn**	**12 39 43.8**	**-0.1**
KSP				*e*Pg	**Pg**	**12 40 06.3**	**-6.7**
KSP				*e*Sg	**Sg**	**12 41 27.7**	**-8.9**
SGMF	**Saint Gilles**	**6.30**	**263**	*e*Pn	**Pn**	**12 39 43.0**	**-1.3**
SGMF				*e*Sn	**Sn**	**12 40 52.0**	**-5.9**
SGMF				*e*Sg	**Sg**	**12 41 29.9**	**-7.7**
	37nm,0.5s						
ROSF	**Rostrenen**	**6.74**	**265**	*e*Pn	**Pn**	**12 39 48.9**	**-1.7**
ROSF				*e*Sn	**Sn**	**12 41 01.8**	**-7.3**
ROSF				*e*Sg	**Sg**	**12 41 44.0**	**-8.4**
	16nm,0.5s						
QUIF	**Quistinic**	**6.78**	**261**	*e*Pn	**Pn**	**12 39 49.4**	**-1.7**
QUIF				*e*Sn	**Sn**	**12 41 03.3**	**-6.7**
	7.7nm,0.3s						
MTLF	**Montolieu**	**6.82**	**210**	*e*Pn	**Pn**	**12 39 49.6**	**-2.1**
MTLF				*e*Sg	**Sg**	**12 41 44.4**	**-11**
	18nm,0.6s						
ZST	**Bratislava**	**6.89**	**96**	*e*PN	**Pn**	**12 39 50.9**	**-1.8**
MORC	**Moravsky Berou**	**6.98**	**83**	*e*P	**Pn**	**12 39 51.5**	**-2.5**
VYHS	**Vyhne**	**7.96**	**92**	*e*PN	**Pn**	**12 40 06.2**	**-1.5**
PSZ	**Piszkesteto**	**8.78**	**95**	*e*P	**P**	**12 40 16.2**	**-2.8**
LVZ	**Lovozero**	**23.18**	**27**	*i* P	**P**	**12 43 10.5**	**-6.1**
GNI	**Garni**	**28.20**	**95**	*i* P	**P**	**12 44 02.0**	**-2.0**
YKA	**Yellowknife Ar**	**59.20**	**333**	*i* P	**P**	**12 48 14.0**	**+1.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BILL	**Bilibino**	**61.90**	**9**	*e*P	**P**	**12 48 33.7**	**+2.8**
BILL				*e*S	**S**	**12 56 42.1**	**-12**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						

IDC 13 12:43:34.4±4.5**, 12.74N**×**92.44E, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.3**/18**, mbtmp3.3**/3**, ML3.7**/1**, Error ellipse: s-maj=103.9km s-min=47.2km az=104.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.46**	**47**	Pn	P	12 45 38.5	-2.5
	0.2nm,0.3s,baz=236,slow=15,SNR=5.5						
WRA	**Warramunga Arr**	**52.49**	**128**	P	P	12 52 49.3	-2.4
	0.2nm,0.4s,baz=312,slow=8.0,SNR=10						
WRA				PcP	PcP	12 53 59.4	-3.0
	0.2nm,0.5s,baz=323,slow=3.1,SNR=5.2						
ASAR	**Alice Springs**	**54.35**	**132**	P	P	12 53 03.5	-1.8
	0.4nm,0.8s,baz=311,slow=7.2,SNR=21						

DJA 13 12:46:55.8±1.0**, 9.73S**×**115.23E, h15**^{km}**, ML3.9**/4**, 3C-4D, Error ellipse: s-maj=24.6km s-min=9.3km az=0.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RATI	**Rata**	**1.04**	**17**	⇓*e*Pn	Pn	12 47 12.7	-3.1
	193nm,0.2s						
KEDI	**Kedomdong**	**1.51**	**35**	⇑*e*Pn	Pn	12 47 20.1	-2.4
	62nm,0.2s						
KEDI				⇓*e*Sn	Sn	12 47 37.4	-4.5
SRDI	**Scrawed**	**1.64**	**319**	⇑*e*Pn	Pn	12 47 21.6	-2.8
	163nm,0.2s						
SRDI				⇓*e*Sn	Sn	12 47 40.5	-4.8
KELI	**Kelakatan**	**1.67**	**334**	⇓*e*Pn	Pn	12 47 22.6	-2.2
	54nm,0.2s						
KELI				⇑*e*Sn	Sn	12 47 41.8	-4.2

ISK ***13*** *12:50:51.4, 34.89N×27.72E, h90*^{km}*, MD3.7*

HLW ***13*** *12:50:53.2, 35.57N×27.85E, h33*^{km}*, Mb3.6*

CSEM ***13*** *12:50:54.7±0.1, 35.29N×27.85E, h10*^{km}*, Mw3.3, Error ellipse: s-maj=3.0km s-min=1.9km az=20.0*

NEIC ***13*** *12:50:55.8, 35.30N×27.72E, h23*^{km}*, MD3.6(ATH), ML3.5(NIC), After ATH.*

ATH ***13*** *12:50:56.9, 35.34N×27.77E, h25*^{km}*±5*^{km}*, MD3.7/7*

NIC ***13*** *12:50:56.8±0.3, 35.40N×27.66E, h25*^{km}*, ML3.5, MW3.3*

ISC 13 12:50:53.7±0.9**, 35.19N**±0.03×**27.79E**±0.03**, h7**^{km}±6^{km}**, n32, σ1§14**/46**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.63**	**305**	*e*PN	**Pb**	**12 51 07.3**	**+0.8**
KARP				*e*SN	**Sb**	**12 51 16.0**	**+0.7**
KARP	**Karpathos**	**0.63**	**305**	*e*Pn	**Pg**	**12 51 06.4**	**+0.1**
KARP				*e*Sn	**Sg**	**12 51 13.8**	**-0.9**
ARG	**Arkhangelos**	**1.06**	**15**	*e*PN	**Pn**	**12 51 14.9**	**0.0**
ARG				*e*SN	**Sn**	**12 51 28.2**	**-1.8**
KSL	**Kastellorizon**	**1.75**	**56**	*e*Pn	**Pn**	**12 51 26.5**	**+1.8**
KSL	**Kastellorizon**	**1.75**	**56**	*e*PB	**Pb**	**12 51 26.3**	**+0.6**
NPS	**Neapolis**	**1.78**	**273**	*e*PN	**Pg**	**12 51 29.0**	**-0.3**
FETY	**Fethiye**	**1.79**	**36**	*e*PN	**Pn**	**12 51 26.4**	**+1.1**
FETY				*e*SN	**Sn**	**12 51 51.3**	**+2.9**
BDRM	**Kayabasi**	**1.90**	**352**	*i* P	**Pn**	**12 51 27.1**	**+0.3**
BDRM				*i* S	**Sn**	**12 51 51.4**	**+0.2**
MLSB	**Milas**	**2.11**	**360**	*e*PN	**Pn**	**12 51 30.0**	**+0.2**
SANT	**Santorini**	**2.23**	**303**	*e*Pn	**Pn**	**12 51 32.2**	**+0.5**
SANT				*e*Sn	**Sn**	**12 51 59.2**	**-0.6**
SANT	**Santorini**	**2.23**	**303**	*e*Pn	**Pn**	**12 51 32.2**	**+0.6**
SANT				*e*Sn	**Sn**	**12 51 59.2**	**-0.6**

AYDN	Tasoluk	2.47	2	*i* P	Pn	12 51 35.2	+0.2
AYDN				*i* S	Sn	12 52 08.0	+2.2
APE	Apeiranthos	2.62	316	*e*PN	Pn	12 51 36.4	-0.8
APE	Apeiranthos	2.62	316	*e*PN	Pn	12 51 37.5	+0.3
DNZL	Cakiroluk	2.70	22	*i* P	Pn	12 51 38.6	+0.3
DNZL				*i* S	Sn	12 52 22.2	+11
DENT	Denizli	2.75	21	*e*PN	Pn	12 51 38.5	-0.6
ANTB	Antalya	2.88	53	*e*PN	Pn	12 51 39.9	-1.0
VAM	Vamos	2.94	275	*e*PB	Pb	12 51 45.5	-0.7
IZM	Izmir	3.23	353	*e*PN	Pn	12 51 44.7	-1.2
ISP	Isparta	3.44	39	*e*PN	Pn	12 51 47.2	-1.6
AKS	Akhisar	3.69	0	*e*PN	Pn	12 51 50.5	-1.8
PPCY	Paphos	3.75	93	P	Pn	12 51 54.1	+0.9
ALFC	Alevga	3.94	89	⇑*e*P	Pn	12 51 56.0	+0.1
	2.1nm,0.3s						
ALFC				S	Sn	12 52 42.8	-0.2
HMAT	Matruh	4.12	188	P	Pn	12 52 00.8	+2.3
HMAT				S	Sn	12 52 47.8	+0.2
SZAC	Souni-Zanaja	4.21	94	P	Pn	12 51 59.9	+0.2
	1.6nm,0.2s						
SZAC				S	Sn	12 52 49.7	0.0
VLI	Veliai	4.22	293	*e*PN	Pn	12 52 01.0	+1.1
VLI	Veliai	4.22	293	*e*Pn	Pn	12 52 01.5	+1.6
SLUM		4.27	211	P	Pn	12 52 00.8	+0.3
SLUM				S	Sn	12 52 49.4	-1.9
KIZT	Kizilcal	4.93	40	*e*PN	Pn	12 52 07.3	-2.7
MEST	Erdemli	5.35	73	*i* P	Pn	12 52 16.9	+1.1
MEST				*i* S	Sn	12 53 16.8	-1.6
SWA2		6.25	199	P	Pn	12 52 29.3	+0.8
AMAG	Maghara	6.42	133	P	Pn	12 52 28.2	-2.8

IDC 13 12:52:46.2±5.3**, 6.48N**×**92.32E, mb3.5**/3**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.6**/4**, ML3.9**/1**, MS2.6**/1**, Ms1 2.8**/1**, ms1mx2.6**/17**, Error ellipse: s-maj=152.1km s-min=30.1km az=77.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.54	28	Pn	P	12 56 01.2	-1.2
	0.2nm,0.3s,baz=230,slow=14,SNR=45						
CMAR				LR	LR	13 02 11.9	
	comp=Z,26nm,19.6s,baz=285,slow=42						
SONM	Songino Array	42.93	14	P	P	13 00 46.4	-2.0
	0.7nm,1.0s,baz=210,slow=4.4,SNR=4.9						
WRA	Warramunga Arr	48.97	123	P	P	13 01 34.5	-2.2
	0.6nm,0.8s,baz=304,slow=9.4,SNR=4.4						
ASAR	Alice Springs	50.45	128	P	P	13 01 46.3	-1.8
	0.9nm,0.8s,baz=303,slow=7.4,SNR=9.9						

IDC 13 12:56:42.7±3.0**, 31.61S**×**177.86W, mb4.2**/3**, mb1 4.3**/4**, mb1mx4.0**/15**, mbtmp4.1**/4**, ML3.0**/1**, 1C, Error ellipse: s-maj=67.8km s-min=35.8km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.81	210	Pn	Pn	12 58 37.6	-2.8
	0.2nm,0.3s,baz=189,slow=19,SNR=4.2						
URZ				Sn	Sn	13 00 05.4	-5.3
	1.1nm,0.3s,baz=92,slow=17,SNR=6.8						
STKA	Stephens Creek	34.34	259	P	P	13 03 32.4	-0.8
	1.1nm,0.8s,baz=110,slow=12,SNR=2.7						
ASAR	Alice Springs	43.17	268	P	P	13 04 45.0	-2.0
	1.7nm,0.5s,baz=106,slow=7.5,SNR=62						
WB2	Warramunga Arr	44.26	273	⇑*i*P	P	13 04 53.6	-2.3
WRA	Warramunga Arr	44.27	273	P	P	13 04 53.7	-2.3
	3.4nm,0.3s,baz=111,slow=8.1,SNR=128						
FINES	FINESS Array B	146.31	339	PKPbc	PKPbc	13 16 23.7	-0.8
	1.7nm,0.9s,baz=72,slow=6.0,SNR=6.2						

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*INMG **13** 13:16:00.9±1.3, 38.16N×8.41W, h22^{km}±3^{km}, ML2.6, Error ellipse: s-maj=3.7km s-min=1.8km az=81.0*
*MDD **13** 13:16:01.4±0.4, 38.14N×8.40W, h2^{km}±4^{km}, mbLg2.6/17, Error ellipse: s-maj=3.5km s-min=2.4km az=66.0, PRXIMO*
*NEIC **13** 13:16:01.1, 38.16N×8.41W, MN2.7(MDD), After MDD.*
*SFS **13** 13:16:01.0, 38.20N×8.41W*
*CSEM **13** 13:16:01.7±0.1, 38.17N×8.50W, h12^{km}, ML3.2/7, Error ellipse: s-maj=2.7km s-min=1.9km az=86.0*
*IGIL **13** 13:16:02.6, 38.16N×8.39W, h2^{km}, ML3.0*
ISC 13 13:16:01.2±0.5**, 38.18N**±0.03×**8.40W**±0.05**, h24**^{km}±5^{km}**, n50, σ1^{s}10**/87**, 2C-1D, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOE	Montemor	0.34	6	*i* Pg	Pb	13 16 08.8	+0.1
MOE				*e*Sg	Sb	13 16 14.4	+0.5
MOE	Montemor	0.34	6	⇑Pg	Pb	13 16 08.8	+0.1
MOE				Lg		13 16 14.4	
MOE	Montemor	0.34	6	*e*Sg	Sb	13 16 14.4	+0.5
PBEJ	Beja	0.45	110	*i* Pg	Pb	13 16 09.5	-0.9
PBEJ				*e*Sg	Sb	13 16 15.7	-1.1
	114nm,0.2s						
PBEJ	Beja	0.45	110	⇓Pg	Pb	13 16 09.5	-0.9
PBEJ				Lg		13 16 15.7	
	57nm,0.2s						
PTEO	Sao Teotonio	0.69	202	*e*Pg	Pb	13 16 13.3	-1.1
PTEO				*e*Sg	Sb	13 16 22.2	-1.3
	182nm,0.3s						
PTEO	Sao Teotonio	0.69	202	*e*Pg	Pb	13 16 13.3	-1.1
PTEO				*e*Sg	Sb	13 16 22.2	-1.3
	182nm,0.3s						
LIS	Lisbon	0.79	312	*e*P	Pb	13 16 16.9	+0.7
LIS				*e*S	Sb	13 16 27.7	+1.2
LIS				*e*S	Sb	13 16 27.8	+1.3
LIS				AML	AML	13 16 30.4	
	comp=N,126nm,0.3s						
ALMR	Almeirim	0.98	352	*e*P	Pb	13 16 20.8	+1.4
ALMR				*e*S	Sb	13 16 34.0	+2.1
ALMR				*e*S	Sb	13 16 34.0	+2.2
ALMR				AML	AML	13 16 38.8	
	comp=N,840nm,0.6s						
PALC	Alcoutim	1.02	134	*e*P	Pb	13 16 18.9	-1.2
PALC				*e*S	Sb	13 16 32.1	-1.1
	comp=N,98nm,0.2s						
PALC	Alcoutim	1.02	134	P	Pb	13 16 18.9	-1.2
PALC				S	Sb	13 16 32.1	-1.1
	comp=N,49nm,0.2s						
ERIP	Rio Piedras	1.22	131	⇑Pg	Pn	13 16 22.4	-0.4
	comp=N,13nm,0.1s,SNR=18						
ERIP				Lg		13 16 40.2	
	comp=N,118nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	1.43	106	Pg	Pn	13 16 26.3	+0.4
	comp=N,14nm,0.1s,SNR=7.9						
EMIN				Lg		13 16 46.1	
	comp=N,70nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	1.43	106	Pg	Pn	13 16 26.3	+0.4
	SNR=7.9						
PCBR	Castelo Branco	1.80	23	*e*Pn	Pn	13 16 30.6	-0.7
PCBR				*e*Sn	Sn	13 16 51.6	-2.0
PCBR				*e*Sg	Sn	13 16 58.5	+4.9
	comp=N,58nm,0.6s						
PCBR	Castelo Branco	1.80	23	*e*Pn	Pn	13 16 30.6	-0.7
PCBR				*e*Sn	Sn	13 16 51.6	-2.0
PCBR				*e*Sg	Sn	13 16 58.5	+4.9
	comp=N,58nm,0.6s						
MTE	Manteigas	2.31	16	*e*Pn	Pn	13 16 39.2	+0.7
MTE				*e*Sn	Sn	13 17 03.9	-2.6
MTE				*e*Sg	Sn	13 17 13.3	+6.8
	comp=N,33nm,0.3s						
MTE	Manteigas	2.31	16	*e*Pn	Pn	13 16 39.2	+0.7
MTE				*e*Sn	Sn	13 17 03.9	-2.6
MTE				*e*Sg	Sn	13 17 13.3	+6.8
	comp=N,33nm,0.3s						
ESPR	Espera	2.41	122	Pn	Pn	13 16 40.8	+0.8
	comp=N,1.7nm,0.1s,SNR=7.9						
ESPR				Lg		13 17 19.4	
	comp=N,26nm,0.3s,SNR=7.9						
ESPR	Espera	2.41	122	Pn	Pn	13 16 40.8	+0.8
	comp=N,1.7nm,0.1s,SNR=7.9						
PVIS	Viseu	2.56	9	*e*Sn	Sn	13 17 09.7	-3.1
	comp=N,24nm,0.4s						
PVIS	Viseu	2.56	9	Sn	Sn	13 17 09.7	-3.1
	comp=N,12nm,0.4s						
LIJA	Lijar	2.70	117	*i* P	Pn	13 16 45.0	+0.9
EADA	Adamuz	3.01	89	Pn	Pn	13 16 49.1	+0.6
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA				Sn	Sn	13 17 24.7	+0.4
	comp=N,2.2nm,0.2s,SNR=7.9						
EADA				Lg		13 17 35.5	
	comp=N,22nm,0.3s,SNR=7.9						
EADA	Adamuz	3.01	89	Pn	Pn	13 16 49.1	+0.6
	comp=N,0.3nm,0.2s,SNR=7.9						
EADA				Sn	Sn	13 17 24.7	+0.5
	SNR=7.9						
PVRL	Vila Real	3.13	9	*e*Sn	Sn	13 17 24.1	-3.2
	comp=N,18nm,0.5s						
EMIJ	Mijas	3.31	118	Pn	Pn	13 16 53.2	+0.4
EMIJ				Sn	Sn	13 17 34.3	+2.6
EMIJ				Lg		13 17 46.6	
EMIJ	Mijas	3.31	118	Pn	Pn	13 16 53.2	+0.5
	comp=N,1.0nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	13 17 32.2	+0.5
	comp=N,3.1nm,0.3s,SNR=4.0						
EMIJ				Lg		13 17 46.6	
	comp=N,30nm,0.8s,SNR=4.0						
EMIJ	Mijas	3.31	118	Pn	Pn	13 16 53.2	+0.5
	comp=N,1.0nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	13 17 34.3	+2.5
	comp=N,3.1nm,0.3s,SNR=4.0						
ELUQ	Luque	3.33	100	Pn	Pn	13 16 54.5	+1.5
	comp=N,2.3nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	13 17 32.7	+0.4
	comp=N,4.9nm,0.2s,SNR=7.9						
ELUQ				Lg		13 17 47.0	
	comp=N,1.7nm,0.4s,SNR=7.9						
EBAN	Banos Encina	3.63	89	Pn	Pn	13 16 57.9	+0.5
	comp=N,2.1nm,0.2s,SNR=7.9						
EBAN				Sn	Sn	13 17 39.4	-0.6
	comp=N,7.1nm,0.3s,SNR=7.9						
EBAN				Lg		13 17 57.3	
	comp=N,31nm,0.6s,SNR=7.9						
ELOB	Lobios	3.69	4	Pn	Pn	13 16 58.3	+0.2
	comp=N,0.1nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	13 17 39.8	-1.5
	comp=N,0.7nm,0.1s,SNR=7.9						
ELOB				Lg		13 18 00.3	
	comp=N,6.5nm,0.2s,SNR=7.9						
ELOB	Lobios	3.69	4	Pn	Pn	13 16 58.3	+0.2
	comp=N,0.1nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	13 17 39.8	-1.6
	comp=N,0.7nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	3.77	65	Pn	Pn	13 17 00.2	+1.0
	baz=250,slow=13,SNR=7.9						
ESDC				Sn	Sn	13 17 42.3	-1.0
	comp=N,3.2nm,0.2s,baz=252,slow=23,SNR=7.9						
ESDC				Lg		13 18 01.1	
	comp=N,2.1nm,0.1s,baz=254,slow=28,SNR=7.9						
ESDC	Sonseca Array	3.77	65	Pn	Pn	13 17 00.2	+1.0
	SNR=7.9						
ESDC				Sn	Sn	13 17 42.3	-1.0
	comp=N,3.2nm,0.2s,SNR=7.9						
PBRG	Braganca	3.83	19	*e*Pn	Pn	13 16 59.5	-0.7
PBRG				*e*Sn	Sn	13 17 41.1	-3.9
	comp=N,9.6nm,0.7s						
PBRG	Braganca	3.83	19	Pn	Pn	13 16 59.5	-0.7
PBRG				Sn	Sn	13 17 41.1	-3.9
	comp=N,4.8nm,0.7s						
ECAL	Calabor	3.96	18	Pn	Pn	13 17 02.9	+0.9
	comp=N,7.4nm,0.3s,SNR=7.9						
ECAL				Sn	Sn	13 17 48.1	-0.2
	comp=N,6.0nm,0.5s,SNR=7.9						
ECAL				Lg		13 18 08.1	
	comp=N,11nm,0.3s,SNR=7.9						
ECAL	Calabor	3.96	18	Pn	Pn	13 17 02.9	+0.9
	comp=N,7.4nm,0.3s,SNR=7.9						
ECAL				Sn	Sn	13 17 48.1	-0.2
	comp=N,6.0nm,0.5s,SNR=7.9						
ERUA	La Rua	4.31	12	Pn	Pn	13 17 07.1	+0.1
	comp=N,2.0nm,0.2s,SNR=7.9						
ERUA				Sn	Sn	13 17 51.7	-5.4
	comp=N,1.2nm,0.2s,SNR=4.0						
ERUA				Lg		13 18 19.4	
	comp=N,8.3nm,0.6s,SNR=7.9						
EINC	Incio	4.54	10	Pn	Pn	13 17 10.7	+0.5
EINC				Sn	Sn	13 18 02.4	-0.6
EINC				Lg		13 18 26.3	
EINC	Incio	4.54	10	Pn	Pn	13 17 10.7	+0.5
	comp=N,0.9nm,0.2s,SNR=7.9						
EINC				Sn	Sn	13 18 02.4	-0.6
	SNR=7.9						
EINC				Lg		13 18 26.3	
	comp=N,4.8nm,0.3s,SNR=7.9						
EINC	Incio	4.54	10	Pn	Pn	13 17 10.7	+0.4
EINC				Sn	Sn	13 18 02.4	-0.6
EBER	Berja	4.56	105	Pn	Pn	13 17 11.0	+0.4
	comp=N,1.8nm,0.2s,SNR=7.9						
EBER				Sn	Sn	13 18 05.8	+2.3
	comp=N,7.2nm,0.4s,SNR=4.0						
EBER				Lg		13 18 29.4	
	comp=N,12nm,0.5s,SNR=4.0						
EBER	Berja	4.56	105	Pn	Pn	13 17 11.0	+0.5
	comp=N,1.8nm,0.2s,SNR=7.9						
EVIA	Vianos	4.65	83	Lg		13 18 33.8	
	comp=N,34nm,0.6s,SNR=7.9						
EPON	Pontenova	5.22	10	Pn	Pn	13 17 19.0	-0.9
	comp=N,0.0nm,0.2s,SNR=4.0						
EPON	Pontenova	5.22	10	Pn	Pn	13 17 19.0	-0.9
EARI	Arriondas	5.66	24	Pn	Pn	13 17 24.5	-1.5
	comp=N,0.1nm,0.2s,SNR=4.0						
EARI	Arriondas	5.66	24	Pn	Pn	13 17 24.5	-1.5

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*IDC **13** 13:22:50.2±0.6, 2.28N×95.07E, mb4.4/19, mb1 4.5/20, mb1mx4.5/25, mbtmp4.4/20, ML4.3/1, Error ellipse: s-maj=28.1km s-min=12.8km az=45.0*
*BJI **13** 13:22:52.7, 2.05N×95.03E, h40^{km}, mB5.1, mb4.7, Ms4.3, Msz4.2*
*MOS **13** 13:22:53.4±0.9, 2.28N×95.12E, h33^{km}, mb4.9/20, Error ellipse: s-maj=14.2km s-min=7.4km az=103.9*
*NEIC **13** 13:22:54.4±0.3, 2.31N×95.21E, mb4.7/19, Error ellipse: s-maj=10.3km s-min=5.2km az=55.0*
ISC 13 13:22:52.2±0.3**, 2.25N**±0.05×**95.14E**±0.05**, h25**^{km}**, h25**^{km}±.4^{km}**:pP-P, n118, σ1^{s}08**/123**, mb4.7**/64**, MS4.2**/12**, 8C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	6.32	68	P	Pn	13 24 25.9	-0.4
SNG	Songkhla	7.33	48	P	Pn	13 24 37.5	-3.0
	180nm,1.0s						
KGM	Kluang	8.18	92	P	P	13 24 51.7	-0.7
KKTK	Khon Kaen	15.91	28	P	P	13 26 40.0	+3.6
	370nm,1.0s						
CM31	Chiang Mai Arr	16.53	13	*e*P	P	13 26 45.4	+1.1
	37nm,0.9s						
CM31				*e*		13 26 53.1	
CMAR	Chiang Mai Arr	16.53	13	Pn	P	13 26 43.5	-0.7
	0.4nm,0.3s,baz=204,slow=12,SNR=66						
CMAR	Chiang Mai Arr	16.53	13	Pn	P	13 26 43.5	-0.7
CHG	Chiang Mai	16.88	13	⇑P	P	13 26 47.2	-1.4
	25nm,0.9s						
CHRT	Chiangrai	18.09	14	⇑P	P	13 27 03.0	-0.8
KKM	Kota Kinabalu	21.36	79	P	P	13 27 42.9	+2.9
QIZ	Qiongzhong	22.03	40	*e*P	P	13 27 50.5	+3.7
QIZ				*e*S	S	13 31 42.3	-1.1
QIZ				LR	LR		
	comp=E,420nm,15.9s						
QIZ				LR	LR		
	comp=Z,303nm,20.2s,MS3.7						
HYB	Hyderabad	22.19	314	*e*P	P	13 27 50.0	+1.6
HYB	Hyderabad	22.19	314	*i* P	P	13 27 50.0	+1.6
KMI	Kunming	23.89	17	P	P	13 28 06.9	+1.8
KMI				AP		13 28 14.5	
KMI				XP		13 28 17.5	
KMI				PP	PP	13 28 40.8	+1.9
KMI				S	S	13 32 19.4	+2.8
KMI				SS	SS	13 33 11.4	+4.1
KMI				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
KMI				LR	LR		
	comp=N,366nm,11.5s,MS4.2						
KMI				LR	LR		
	comp=E,344nm,14.4s,MS4.2						
KMI				LR	LR		
	comp=Z,333nm,15.4s,MS3.9						
GYA	Guiyang	26.49	24	P	P	13 28 30.5	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
JIRN	Jiri	26.67	342	*e*P	P	13 28 31.9	+0.6
	comp=Z,59nm,0.8s,mb5.2						
PKI	Pulchoki	26.84	341	*e*P	P	13 28 33.7	+0.8
DMN	Daman	26.98	340	*e*P	P	13 28 34.9	+0.8
	comp=Z,31nm,0.9s,mb4.8						
GUN	Gumba	27.00	342	*e*P	P	13 28 35.0	+0.6
	comp=Z,53nm,0.8s,mb5.1						
KKN	Kakani	27.09	341	*e*P	P	13 28 35.1	0.0
	comp=Z,145nm,1.5s,mb5.3						
GKN	Gorkha	27.50	340	*e*P	P	13 28 39.1	+0.2
	comp=Z,48nm,0.8s,mb5.2						
LSA	Lhasa	27.56	352	P	P	13 28 40.8	+1.4
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
LSA	Lhasa	27.56	352	*e*P	P	13 28 40.3	+0.9
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
LSA	Lhasa	27.56	352	*e*P	P	13 28 40.3	+0.9
	comp=Z,9.9nm,0.6s,mb4.6						
KOLN	Koldanda	27.67	338	*e*P	P	13 28 40.3	-0.1
	comp=Z,48nm,0.8s,mb5.2						
CD2	Chengdu	29.65	15	P	P	13 28 57.0	-1.2
CD2				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.8						
ENH	Enshi	31.01	25	P	P	13 29 07.1	-3.2
	comp=Z,7.2nm,0.8s,mb4.5						
XAN	Xi’an	34.14	21	P	P	13 29 36.3	-1.2
XAN				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0						
LZH	Lanzhou	34.62	12	*e*P	P	13 29 40.8	-0.8
LZH				PP	PP	13 30 57.3	-1.1
LZH				AMB	AMB		
	comp=Z,27nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,125nm,4.0s						
LZH				LR	LR		
	comp=N,200nm,14.6s						
LZH				LR	LR		
	comp=Z,301nm,15.3s,MS4.2						
FITZ	Fitzroy Crossi	36.22	125	*e*P	P	13 29 54.6	-0.7
	comp=Z,7.6nm,0.8s,mb4.7						
FITZ				*i*	pP	13 30 02.9	+0.1
NJ2	Nanjing	37.11	34	*e*P	P	13 30 04.1	+1.4
NJ2				AP	pP	13 30 10.6	+0.4
NJ2				AMB	AMB		
	comp=Z,140nm,1.2s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,370nm,5.4s						
NJ2				LR	LR		
	comp=N,2µm,24.0s,MS4.8						
NJ2				LR	LR		
	comp=E,820nm,25.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,460nm,19.2s						
GTA	Gaotai	37.23	6	*e*P	P	13 30 03.3	-0.3
GTA				AP	pP	13 30 10.8	-0.3
GTA				PP	PP	13 31 29.9	-1.2
GTA				PCP	PcP	13 32 24.3	+0.7
GTA				S	S	13 35 47.3	-1.3
GTA				AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.3						
GTA				AMB	AMB		
	comp=Z,150nm,4.9s						
GTA				LR	LR		
	comp=N,119nm,17.9s,MS3.9						
GTA				LR	LR		
	comp=E,98nm,17.1s,MS3.9						
GTA				LR	LR		
	comp=Z,126nm,18.6s,MS3.7						
SSE	Sheshan	37.80	38	P	P	13 30 07.4	-1.1
SSE				S	S	13 35 58.6	+1.1
SSE				XS		13 36 13.8	
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
SSE				AMB	AMB		
	comp=Z,67nm,3.8s						
SSE				LR	LR		
	comp=N,96nm,15.8s,MS3.9						
SSE				LR	LR		
	comp=E,108nm,15.7s,MS3.9						
SSE				LR	LR		
	comp=Z,72nm,20.1s,MS3.5						
KAKA	Kakadu	39.91	113	*e*P	P	13 30 25.2	-1.1
	comp=Z,12nm,0.7s,mb4.7						
HHC	Hu-ho-hao-te	41.19	19	⇑P	P	13 30 37.9	+1.4
HHC				AP	pP	13 30 45.5	+1.5
HHC				XP	sP	13 30 48.8	+1.7
HHC				PP	PP	13 32 14.3	-0.3
HHC				PCP	PcP	13 32 37.0	+0.9
HHC				SCP		13 36 23.6	
HHC				S	S	13 36 51.3	+3.0
HHC				SCS	ScS	13 40 37.8	+0.7
HHC				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.2						
HHC				AMB	AMB		
	comp=Z,113nm,8.4s						
HHC				LR	LR		
	comp=N,285nm,16.8s,MS4.3						
HHC				LR	LR		
	comp=E,177nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=Z,285nm,16.8s,MS4.2						
WMQ	Urumqi	41.91	352	*e*P	P	13 30 44.0	+1.5
WMQ				XP	sP	13 30 55.0	+1.9
WMQ				PP	PP	13 32 24.0	+1.4
WMQ				S	S	13 37 00.0	+1.0
WMQ				SS	SS	13 40 01.0	+0.4
WMQ				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.5						
WMQ				LR	LR		
	comp=N,68nm,16.0s,MS3.8						
WMQ				LR	LR		
	comp=E,67nm,16.0s,MS3.8						
BJT	Baijiatuau	42.16	24	*e*P	P	13 30 45.4	+0.8
BJT				*e*	pP	13 30 52.8	+0.8
BJT				pmax	pmax		
	comp=Z,22nm,1.4s						
BJT	Baijiatuau	42.16	24	*e*P	P	13 30 45.4	+0.8
	comp=Z,22nm,1.4s,mb4.6						
BJT				*e*	pP	13 30 52.8	+0.8
BJI	Beijing	42.18	24	P	P	13 30 45.5	+0.8
BJI				AP	pP	13 30 53.3	+1.1
BJI				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.7						
BJI				LR	LR		
	comp=N,1µm,16.5s,MS5.1						
BJI				LR	LR		
	comp=E,2µm,16.9s,MS5.1						
BJI				LR	LR		
	comp=Z,110nm,17.9s,MS3.8						
AAK	Ala-Archa	44.24	338	P	P	13 31 01.3	-0.1
AAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
AAK	Ala-Archa	44.24	338	P	P	13 31 01.3	-0.1
	comp=Z,12nm,1.1s,mb4.5						
WRA	Warramunga Arr	44.34	122	P	P	13 31 02.7	+0.1
WRA	Warramunga Arr	44.34	122	P	P	13 31 02.7	+0.1
	comp=Z,9.9nm,0.8s,mb4.6,baz=300,slow=9.0,SNR=62						
WRAB	Tennant Creek	44.34	122	*e*P	P	13 31 02.5	-0.1
WRAB				*e*	pP	13 31 10.1	0.0
WRAB				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.9						
WRAB	Tennant Creek	44.34	122	*e*P	P	13 31 02.5	-0.1
	comp=Z,29nm,1.1s,mb4.9						
WRAB				*e*	pP	13 31 10.1	0.0
WB2	Warramunga Arr	44.35	122	*e*P	P	13 31 02.6	0.0
WB2				*i*	pP	13 31 10.7	+0.6
ASPA	Alice Springs	45.67	127	*e*P	P	13 31 13.4	+0.3
ASAR	Alice Springs	45.67	127	P	P	13 31 13.4	+0.3
	comp=Z,2.5nm,0.8s,mb4.2,baz=298,slow=7.8,SNR=29						
ASAR	Alice Springs	45.67	127	P	P	13 31 13.4	+0.3
MKAR	Makanchi Array	45.75	348	*i* P	P	13 31 13.8	+0.3
MKAR				pmax	pmax		
	comp=Z,19nm,0.9s						
SONM	Songino Array	46.44	10	P	P	13 31 19.2	+0.3
	comp=Z,3.2nm,0.8s,mb4.3,baz=190,slow=8.6,SNR=27						
SONM	Songino Array	46.44	10	P	P	13 31 19.2	+0.3
ULN	Ulaanbaatar	46.59	11	*e*P	P	13 31 19.2	-0.8
ULN				*e*	pP	13 31 27.2	-0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
ULN	Ulaanbaatar	46.59	11	*e*P	P	13 31 19.2	-0.8
	comp=Z,3.6nm,0.9s,mb4.3						
ULN				*e*	pP	13 31 27.2	-0.4
SNY	Shenyang	46.95	29	⇑P	P	13 31 22.4	-0.6
SNY				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
ZAK	Zakamensk	48.45	7	⇑*i*P	P	13 31 34.5	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.2						
CN2	Changchun	49.34	29	*e*P	P	13 31 43.8	+2.2
CN2				*e*AP	pP	13 31 51.3	+2.1
CN2				*e*S	S	13 38 48.0	+2.6

CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,12.0s,MS4.6						
CN2				LR	LR		
	comp=Z,300nm,13.0s,MS4.5						
MOY	Mondy	49.48	5	eP	P	13 31 42.8	+0.2
MOY				pmax	pmax		
	comp=Z,15nm,2.9s,mb4.5						
TLY	Talaya	49.77	7	eP	P	13 31 45.4	+0.7
TLY				e	pP	13 31 53.0	+0.6
TLY				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
TLY	Talaya	49.77	7	eP	P	13 31 45.1	+0.4
	comp=Z,8.6nm,0.8s,mb4.8						
TLY				e	pP	13 31 52.9	+0.5
KURK	Kurchatov	50.27	346	eP	P	13 31 48.4	-0.2
KURK				e	pP	13 31 55.8	-0.4
KURK				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
KURK	Kurchatov	50.27	346	eP	P	13 31 48.4	-0.1
	comp=Z,17nm,1.1s,mb5.0						
KURK				e	pP	13 31 55.8	-0.4
HIA	Hailar	51.34	20	eP	P	13 31 56.9	+0.1
HIA				e	pP	13 32 04.0	-0.4
HIA				pmax	pmax		
	comp=Z,14nm,0.9s						
HIA	Hailar	51.34	20	eP	P	13 31 56.9	+0.1
	comp=Z,14nm,0.9s,mb4.9						
HIA				e	pP	13 32 04.0	-0.4
MDJ	Mudanjiang	51.99	31	P	P	13 32 01.8	+0.1
MDJ				PCP	PcP	13 33 13.8	-0.2
MDJ				PP	PP	13 33 59.9	-0.6
MDJ				SCP		13 37 09.4	
MDJ				PCS		13 37 12.0	
MDJ				S	S	13 39 23.9	+1.9
MDJ				SCS	ScS	13 41 50.1	+3.2
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,55nm,4.4s						
MDJ				LR	LR		
	comp=Z,282nm,11.0s,MS4.6						
ZAL	Zalesovo	52.21	352	P	P	13 32 03.7	+0.4
ZAL	Zalesovo	52.21	352	P	P	13 32 03.7	+0.4
	comp=Z,5.9nm,0.6s,mb4.7,baz=306,slow=7.0,SNR=33						
PMG	Port Moresby	53.10	103	P	P	13 32 10.5	+0.1
PMG	Port Moresby	53.10	103	P	P	13 32 10.4	0.0
	comp=Z,5.8nm,0.9s,mb4.5,baz=308,slow=11,SNR=2.2						
NVS	Novosibirsk	53.31	351	⇑iP	P	13 32 09.8	-1.6
NVS				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
NVS				pmax	pmax		
	comp=N,14nm,1.4s						
NVS				pmax	pmax		
	comp=E,11nm,1.3s						
BVA0	Borovoye Array	54.60	342	P	P	13 32 19.2	-1.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
BVAR	Borovoye Array	54.60	342	P	P	13 32 19.9	-1.0
	comp=Z,4.1nm,0.7s,mb4.6,baz=143,slow=7.4,SNR=31						
BVAR	Borovoye Array	54.60	342	P	P	13 32 19.9	-1.0
BRVK	Borovoye	54.66	342	eP	P	13 32 20.1	-1.2
BRVK				e	pP	13 32 27.5	-1.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BRVK	Borovoye	54.66	342	eP	P	13 32 20.1	-1.2
	comp=Z,5.0nm,0.8s,mb4.6						
BRVK				e	pP	13 32 27.5	-1.5
CTA	Charters Tower	54.82	116	P	P	13 32 22.9	0.0
CTA	Charters Tower	54.82	116	P	P	13 32 22.9	-0.1
	comp=Z,7.2nm,0.9s,mb4.7,baz=286,slow=9.2,SNR=4.9						
CTAO	Charters Tower	54.82	116	eP	P	13 32 22.7	-0.2
CTAO				e	pP	13 32 30.3	-0.3
CTAO				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
CTAO	Charters Tower	54.82	116	eP	P	13 32 22.7	-0.2
	comp=Z,17nm,1.2s,mb4.9						
CTAO				e	pP	13 32 30.3	-0.3
CHKZ	Chkalovo	55.09	342	eP	P	13 32 23.8	-0.7
CHKZ				e	pP	13 32 31.3	-0.8
CHKZ				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.4						
CHKZ	Chkalovo	55.09	342	eP	P	13 32 23.8	-0.8
	comp=Z,38nm,0.9s,mb5.4						
CHKZ				e	pP	13 32 31.3	-0.8
STKA	Stephens Creek	55.59	132	P	P	13 32 28.8	+0.4
	comp=Z,6.1nm,0.8s,mb4.7,baz=294,slow=6.8,SNR=15						
STKA	Stephens Creek	55.59	132	eP	P	13 32 28.4	0.0
	comp=Z,6.1nm,1.2s,mb4.5						
STKA				i	pP	13 32 36.5	+0.4
BOD	Bodaibo	57.38	12	⇑iP	P	13 32 40.2	-0.7
BOD				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
KMBO	Kilima Mbogo	57.97	267	eP	P	13 32 46.3	+0.8
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMBO	Kilima Mbogo	57.97	267	P	P	13 32 45.9	+0.3
	comp=Z,0.9nm,0.5s,mb4.1,baz=222,slow=21,SNR=4.1						
KMBO	Kilima Mbogo	57.97	267	eP	P	13 32 46.3	+0.7
	comp=Z,4.9nm,1.0s,mb4.5						
GNI	Garni	59.11	317	i P	P	13 32 51.2	-2.0
GNI				pmax	pmax		
	comp=Z,16nm,1.7s						
ASF	Jabal al Asfar	62.17	305	P	P	13 33 14.4	+0.2
	comp=Z,3.7nm,0.8s,mb4.6,baz=116,slow=5.6,SNR=3.7						
SOC	Sochi	63.96	318	eP	P	13 33 22.3	-3.5
SOC				e		13 34 06.2	
SOC				e		13 35 52.4	
SOC				ePPP	PPP	13 37 21.9	+1.7
SOC				eS	S	13 41 57.8	-0.8
SOC				e		13 43 08.6	
SOC				eSS	SS	13 46 05.5	-3.3
SOC				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.4						
SOC				pmax	pmax		
	comp=N,16nm,0.7s						
SOC				pmax	pmax		
	comp=E,35nm,0.8s						
YAK	Yakutsk	65.01	17	i P	P	13 33 30.8	-1.5
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
BRTR	Keskin Array B	66.88	313	P	P	13 33 43.4	-1.3
BRTR	Keskin Array B	66.88	313	P	P	13 33 43.4	-1.3
	comp=Z,5.4nm,1.1s,mb4.5,baz=141,slow=7.9,SNR=7.5						
OBN	Obninsk	70.65	329	⇑eP	P	13 34 06.5	-1.2
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MA2	Magadan	71.29	26	eP	P	13 34 11.4	-0.1
MA2				e	pP	13 34 18.5	-0.8
MA2				e		13 47 54.6	
MA2				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
TIXI	Tiksi	72.53	11	eP	P	13 34 17.6	-1.0
TIXI				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,78nm,17.0s,MS4.0						
IDI	Anoyia	72.62	306	P	P	13 34 20.1	+0.2
	comp=Z,9.5nm,0.7s,mb4.9,baz=35,slow=20,SNR=6.2						
AKASG	Malin Array Be	73.17	323	P	P	13 34 20.7	-2.1
	comp=Z,0.8nm,0.6s,mb3.9,baz=90,slow=4.8,SNR=6.8						
MAW	Mawson	73.28	192	eP	P	13 34 26.3	+3.2
MAW				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAW	Mawson	73.28	192	eP	P	13 34 26.3	+3.2
	comp=Z,10nm,0.7s,mb4.9						
MLR	Muntele Rosu	73.89	317	P	P	13 34 26.6	-0.5
MLR	Muntele Rosu	73.89	317	P	P	13 34 26.6	-0.5
	comp=Z,3.6nm,0.8s,mb4.3,baz=29,slow=5.0,SNR=4.6						
FINES	FINESS Array B	78.12	333	P	P	13 34 50.3	-0.3
FINES	FINESS Array B	78.12	333	P	P	13 34 50.2	-0.3
	comp=Z,14nm,1.4s,mb4.7,baz=180,slow=1.9,SNR=4.6						
ARCES	ARCESS Array B	80.86	340	P	P	13 35 05.4	+0.2
ARCES	ARCESS Array B	80.86	340	P	P	13 35 05.3	+0.1
	comp=Z,2.1nm,0.8s,mb4.1,baz=337,slow=9.2,SNR=6.4						
BILL	Bilibino	80.92	21	i P	P	13 35 06.0	+0.4
BILL				eS	S	13 45 05.3	-6.0
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
GERES	GERESS Array B	82.67	319	P	P	13 35 15.9	+0.9
GERES	GERESS Array B	82.67	319	P	P	13 35 15.9	+0.9
	comp=Z,2.9nm,0.9s,mb4.3,baz=90,slow=6.7,SNR=12						
CLL	Collm	83.32	321	eP	P	13 35 20.0	+1.6
CLL	Collm	83.32	321	P	P	13 35 20.0	+1.6
DAVOX	Davos	85.11	317	P	P	13 35 28.3	+0.8
	comp=Z,2.7nm,0.6s,mb4.6,baz=1.3,slow=23,SNR=4.3						
DAVOX	Davos	85.11	317	P	P	13 35 28.3	+0.8
VNDA	Vanda	87.26	168	P	P	13 35 38.8	+1.3
	comp=Z,1.5nm,1.0s,mb4.2,baz=44,slow=11,SNR=3.3						
YKA	Yellowknife Ar	111.61	14	PP	PP	13 42 13.2	+2.8
	comp=Z,0.3nm,0.8s,baz=326,slow=7.4,SNR=5.0						
ULM	Lac du Bonnet	126.85	9	PKP	PKPdf	13 41 56.0	-2.8
	comp=Z,2.7nm,0.8s,baz=92,slow=1.6,SNR=5.1						
TXAR	Lajitas Array	143.80	28	PKP	PKPdf	13 42 26.1	-4.5
	comp=Z,0.7nm,0.7s,baz=270,slow=2.5,SNR=5.8						
JCT	Junction City	144.47	23	ePKPdf	PKPdf	13 42 27.8	-4.0

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*IDC **13** 13:23:06.5±8.8, 2.40N×95.21E, h61^{km}±80^{km}, mb4.1/16, mb1 4.3/17, mb1mx4.2/23, mbtmp4.5/17, ML4.4/1, Error ellipse: s-maj=33.6km s-min=13.3km az=50.0*

ISC 13 13:23:01.4±0.6**, 2.3N**±0.1×**95.1E**±0.1**, h33^{km}, n35,** σ**0^{s}94**/35**, mb4.4**/16**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.45	13	P	P	13 26 52.7	+1.2
	0.5nm,0.3s,baz=203,slow=10,SNR=36						
CMAR	Chiang Mai Arr	16.45	13	P	P	13 26 52.7	+1.2
VIS	Vishakhapatnam	19.19	324	i P	P	13 27 23.3	-2.0
WRA	Warramunga Arr	44.37	122	P	P	13 31 10.6	-0.3
	14nm,1.0s,mb4.7,baz=299,slow=9.2,SNR=22						
WRA	Warramunga Arr	44.37	122		P	13 31 10.6	-0.3
ASAR	Alice Springs	45.71	127	P	P	13 31 21.8	+0.2
	3.7nm,0.9s,mb4.3,baz=299,slow=7.8,SNR=14						
ASAR	Alice Springs	45.71	127	P	P	13 31 21.8	+0.2
SONM	Songino Array	46.36	10	P	P	13 31 26.4	+0.1
	5.1nm,0.8s,mb4.5,baz=190,slow=8.1,SNR=17						
SONM	Songino Array	46.36	10	P	P	13 31 26.4	+0.1
ZAL	Zalesovo	52.14	352	P	P	13 32 11.1	+0.4
	6.6nm,0.7s,mb4.7,baz=301,slow=6.6,SNR=8.5						
ZAL	Zalesovo	52.14	352		P	13 32 11.1	+0.5
PMG	Port Moresby	53.11	104	P	P	13 32 18.2	-0.3
	7.9nm,0.8s,mb4.7,baz=322,slow=8.2,SNR=3.3						
PMG	Port Moresby	53.11	104		P	13 32 18.2	-0.3
BVAR	Borovoye Array	54.53	342	P	P	13 32 26.6	-1.8
	3.2nm,0.7s,mb4.5,baz=127,slow=7.4,SNR=11						
BVAR	Borovoye Array	54.53	342	P	P	13 32 26.6	-1.8
CTA	Charters Tower	54.84	117	P	P	13 32 30.4	-0.8
	7.9nm,0.9s,mb4.7,baz=291,slow=6.6,SNR=3.9						
CTA	Charters Tower	54.84	117		P	13 32 30.4	-0.7
STKA	Stephens Creek	55.64	132	P	P	13 32 36.8	0.0
	9.5nm,0.9s,mb4.8,baz=319,slow=6.4,SNR=12						
STKA	Stephens Creek	55.64	132	P	P	13 32 36.8	0.0
KMBO	Kilima Mbogo	57.98	267	P	P	13 32 54.6	+1.0
	2.5nm,0.8s,mb4.3,baz=61,slow=8.6,SNR=5.2						
KMBO	Kilima Mbogo	57.98	267	P	P	13 32 54.6	+1.0
KMBO	Kilima Mbogo	57.98	267		P	13 32 54.6	+1.0
BRTR	Keskin Array B	66.84	313	P	P	13 33 51.4	-0.9
	0.9nm,0.5s,mb4.1,baz=153,slow=5.5,SNR=3.3						
BRTR	Keskin Array B	66.84	313		P	13 33 51.4	-0.8
AKASG	Malin Array Be	73.12	323	P	P	13 34 29.2	-1.1
	0.2nm,0.2s,mb3.6,baz=98,slow=3.7,SNR=1.6						
MLR	Muntele Rosu	73.84	317	P	P	13 34 36.0	+1.3
	3.7nm,0.8s,mb4.3,baz=256,slow=5.6,SNR=3.3						
MLR	Muntele Rosu	73.84	317		P	13 34 36.0	+1.3
FINES	FINESS Array B	78.06	333	P	P	13 34 58.2	0.0
	2.2nm,0.8s,mb4.2,baz=146,slow=6.9,SNR=1.7						
FINES	FINESS Array B	78.06	333		P	13 34 58.2	-0.1
ARCES	ARCESS Array B	80.79	340	P	P	13 35 13.2	+0.3
	5.2nm,1.0s,mb4.4,baz=79,slow=6.2,SNR=3.2						
ARCES	ARCESS Array B	80.79	340		P	13 35 13.3	+0.4
GERES	GERESS Array B	82.61	319	P	P	13 35 23.6	+0.8
	2.8nm,1.0s,mb4.2,baz=101,slow=6.8,SNR=4.8						
GERES	GERESS Array B	82.61	319		P	13 35 23.6	+0.8
DAVOX	Davos	85.06	317	P	P	13 35 36.4	+1.2
	3.8nm,0.7s,mb4.6,baz=126,slow=4.4,SNR=4.0						
DAVOX	Davos	85.06	317	P	P	13 35 36.4	+1.2

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*NEIC **13** 13:36:38.1±1.0, 24.82S×179.84E, h442^{km}±14^{km}, mb4.3/6, Error ellipse: s-maj=10.9km s-min=9.0km az=96.0*

*IDC **13** 13:36:42.5±2.0, 24.86S×179.71E, h488^{km}±24^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.7/17, mbtmp4.5/11, Error ellipse: s-maj=17.9km s-min=14.3km az=12.0*

ISC 13 13:36:37.4±1.3**, 24.74S**±0.06×**179.82E**±0.09**, h450^{km}**±16^{km}**, n63,** σ**1^{s}02**/67**, mb4.3**/12**, 8D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	13.36	185	eP	P	13 39 34.5	+1.9
PUZ	Puketiti	13.36	185	PN	P	13 39 34.5	+1.8
PUZ	Puketiti	13.36	185	PN	P	13 39 34.5	+1.8
AFI	Afiamalu	13.38	38	eP	P	13 39 32.6	-0.3
	17nm,0.6s						
URZ	Urewera	13.67	189	P	P	13 39 35.6	-0.4
	6.4nm,0.3s,baz=341,slow=1.8,SNR=35						
URZ				S	S	13 42 03.8	+4.4
	1.0nm,0.3s,baz=35,slow=23,SNR=7.2						
URZ	Urewera	13.67	189	eP	P	13 39 35.5	-0.5
URZ	Urewera	13.67	189	PN	P	13 39 34.5	-1.5
URZ	Urewera	13.67	189	PN	P	13 39 34.5	-1.5
MWZ	Matawai	13.69	188	eP	P	13 39 35.1	-1.1
MWZ	Matawai	13.69	188	PN	P	13 39 35.1	-1.1
MWZ	Matawai	13.69	188	PN	P	13 39 35.1	-1.1
VRZ	Vera Road	14.96	195	PN	P	13 39 52.3	+3.0
VRZ	Vera Road	14.96	195	PN	P	13 39 52.3	+3.0
TSZ	Takapari Road	15.61	191	eP	P	13 39 55.1	-0.8
TSZ	Takapari Road	15.61	191	PN	P	13 39 55.1	-0.8
TSZ	Takapari Road	15.61	191	PN	P	13 39 55.1	-0.8
MRZ	Mangatainoka R	16.27	192	eP	P	13 40 00.0	-2.5
MRZ	Mangatainoka R	16.27	192	PN	P	13 39 60.0	-2.5
MRZ	Mangatainoka R	16.27	192	PN	P	13 39 60.0	-2.5
QRZ	Quartz Range	17.16	199	P	P	13 40 12.8	+1.3
QRZ	Quartz Range	17.16	199	PN	P	13 40 12.8	+1.3
QRZ	Quartz Range	17.16	199	PN	P	13 40 12.8	+1.3
NNZ	Nelson	17.29	197	eP	P	13 40 11.9	-0.8
NNZ	Nelson	17.29	197	PN	P	13 40 11.9	-0.9
NNZ	Nelson	17.29	197	PN	P	13 40 11.9	-0.9
THZ	Tophouse	17.92	197	P	P	13 40 19.1	0.0
THZ	Tophouse	17.92	197	PN	P	13 40 19.1	+0.1
THZ				eSN	S	13 43 20.5	+2.3
THZ	Tophouse	17.92	197	PN	P	13 40 19.1	+0.1
THZ				eSN	S	13 43 20.5	+2.3
DSZ	Denniston Nort	18.22	199	P	P	13 40 22.8	+0.8
DSZ	Denniston Nort	18.22	199	PN	P	13 40 22.8	+0.8
DSZ	Denniston Nort	18.22	199	PN	P	13 40 22.8	+0.8
KHZ	Kahutara	18.38	195	eP	P	13 40 22.8	-0.7
KHZ	Kahutara	18.38	195	PN	P	13 40 22.8	-0.8
KHZ	Kahutara	18.38	195	PN	P	13 40 22.8	-0.8
LTZ	Lake Taylor	19.04	197	eP	P	13 40 29.7	-0.3
LTZ	Lake Taylor	19.04	197	PN	P	13 40 29.5	-0.5
LTZ	Lake Taylor	19.04	197	PN	P	13 40 29.5	-0.5
RPZ	Rata Peaks	20.24	199	P	P	13 40 41.9	+0.4
	13nm,0.5s,baz=340,slow=1.4,SNR=16						
HNR	Honiara	24.29	305	eP	P	13 41 19.2	+0.1
	40nm,0.6s,mb5.0						
CTA	Charters Tower	31.32	272	⇓iP	P	13 42 22.1	+1.3
	23nm,0.6s,mb4.8						
CTA	Charters Tower	31.32	272	P	P	13 42 22.1	+1.4
	33nm,0.6s,mb5.0,baz=96,slow=10,SNR=72						
CTAO	Charters Tower	31.32	272	eP	P	13 42 22.0	+1.2
	15nm,0.5s,mb4.7						
STKA	Stephens Creek	34.26	249	⇓iP	P	13 42 46.4	+0.9
	1.8nm,0.4s,mb3.9						
STKA	Stephens Creek	34.26	249	P	P	13 42 46.4	+0.9
	2.0nm,0.4s,mb3.9,baz=96,slow=11,SNR=18						
PMG	Port Moresby	34.62	290	P	P	13 42 49.7	+1.0
	22nm,0.7s,mb4.7,baz=95,slow=6.6,SNR=12						
ASAR	Alice Springs	41.74	262	P	P	13 43 47.1	0.0
	4.7nm,0.4s,mb4.3,baz=90,slow=8.0,SNR=132						
ASAR				S	S	13 49 29.3	-1.9
	0.8nm,0.7s,baz=95,slow=16,SNR=9.2						
ASPA	Alice Springs	41.74	262	⇓iP	P	13 43 47.0	-0.1
WB2	Warramunga Arr	42.18	267	⇓iP	P	13 43 50.2	-0.4
WB2				eS	S	13 49 32.0	-5.6
WRAB	Tennant Creek	42.18	267	eP	P	13 43 49.8	-0.8
	11nm,0.5s,mb4.5						
WRA	Warramunga Arr	42.19	267	P	P	13 43 50.1	-0.6
	4.7nm,0.3s,mb4.4,baz=99,slow=6.8,SNR=388						
WRA				S	S	13 49 33.2	-4.6
	1.4nm,1.1s,baz=100,slow=15,SNR=4.3						
KAKA	Kakadu	46.22	276	⇓iP	P	13 44 21.4	-1.0
	4.7nm,0.3s,mb4.4						
FITZ	Fitzroy Crossi	50.60	266	eP	P	13 44 55.2	-0.2
	8.3nm,0.6s,mb4.2						
VNDA	Vanda	53.53	185	P	P	13 45 15.8	-0.3
	2.5nm,0.8s,mb3.6,baz=10,slow=9.6,SNR=11						
VNDA	Vanda	53.53	185	eP	P	13 45 15.2	-0.8
	1.7nm,0.5s,mb3.6						
QSPA	South Pole Qui	65.34	180	eP	P	13 46 35.0	0.0
	4.4nm,0.6s,mb4.3						
SNAA	Sanae	83.83	179	⇓i	P	13 48 17.7	-0.9
VNA3	Neumayer Olymp	84.05	177	⇓i	P	13 48 19.2	-0.5
VNA2	Neumayer--Watz	84.46	178	⇓i	P	13 48 21.1	-0.7
NVAR	Mina Array Bea	85.47	44	P	P	13 48 27.9	+0.5
	0.1nm,0.5s,baz=232,slow=6.2,SNR=3.8						
CMAR	Chiang Mai Arr	89.66	290	P	P	13 48 48.7	+1.1
	1.1nm,0.9s,mb3.7,baz=149,slow=1.6,SNR=5.9						
TXAR	Lajitas Array	91.02	58	P	P	13 48 54.9	+1.2
	0.1nm,0.6s,baz=211,slow=7.3,SNR=4.8						
HFS	Hagfors	143.33	348	PKhKP		13 55 16.8	
	3.8nm,0.9s,baz=27,slow=3.2,SNR=4.2						
AKASG	Malin Array Be	145.58	326	PKPbc	PKPbc	13 55 25.6	+1.6
	0.3nm,0.3s,baz=44,slow=4.8,SNR=4.3						

IDC 13 13:39:09.6±5.3**, 9.74N**×**92.31E, mb3.6**/2**, mb1 4.0**/3**, mb1mx3.6**/18**, mbtmp3.7**/3**, ML4.1**/1**, Error ellipse: s-maj=114.7km s-min=44.1km az=93.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.79	36	Pn	P	13 41 45.6	-2.9
	0.4nm,0.3s,baz=228,slow=15,SNR=24						
WRA	Warramunga Arr	50.81	126	P	P	13 48 12.1	-2.1
	0.4nm,0.4s,baz=306,slow=8.4,SNR=9.4						
ASAR	Alice Springs	52.49	130	P	P	13 48 24.7	-2.2
	0.4nm,0.9s,baz=311,slow=6.9,SNR=5.1						

MOS 13 13:42:20.5±2.9**, 57.19N**×**128.65E, h10^{km}, mb4.2**/1**, 2D, Error ellipse: s-maj=38.2km s-min=19.2km az=82.5, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLNS	Chul'man	2.08	262	deP	Pn	13 42 53.6	-2.4
CLNS				e		13 43 18.1	
CLNS				pmax	pmax		
	comp=Z,860nm,0.8s						
CLNS				pmax	pmax		
	comp=N,858nm,0.9s						
CLNS				pmax	pmax		
	comp=E,2μm,0.9s						
CLNS				smax			
	comp=N,9μm,0.7s						
CLNS				smax			
	comp=Z,4μm,0.6s						
CLNS				smax			
	comp=E,6μm,0.7s						
CLNS				MLR	MLR		
	comp=Z,400nm,11.0s						
YAK	Yakutsk	4.88	6	eP	Pn	13 43 30.3	-5.5
YAK				e		13 44 38.2	
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,43nm,0.6s						
YAK				pmax	pmax		
	comp=E,13nm,1.0s						
YAK				smax			
	comp=N,548nm,0.8s						
YAK				smax			
	comp=Z,487nm,0.9s						
YAK				smax			
	comp=E,865nm,0.8s						
YAK				MLR	MLR		
	comp=Z,148nm,6.0s						
KLR	Kul'dur	8.19	166	eP	P	13 44 23.3	+1.0
KLR				MLR	MLR		
	comp=N,2μm,8.0s						
TIXI	Tiksi	14.52	0	eP	P	13 45 38.8	-8.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,170nm,7.0s						
ZAK	Zakamensk	16.40	256	eP	P	13 46 12.9	+0.8
ZAK				e		13 49 16.1	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MOY	Mondy	16.94	263	eP	P	13 46 21.5	+2.6
MOY				pmax	pmax		
	comp=Z,19nm,2.2s						
BILL	Bilibino	20.05	42	⇓iP	P	13 46 55.4	-0.8
BILL				S	S	13 50 40.6	+4.7
BILL				pmax	pmax		
	comp=Z,15nm,1.7s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						

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*NEIC **13** 13:44:16.4±0.9, 23.72S×179.83W, h506^{km}±12^{km}, mb4.4/6, Error ellipse: s-maj=14.5km s-min=11.3km az=152.0*

*IDC **13** 13:44:19.8±2.1, 23.98S×179.97E, h536^{km}±22^{km}, mb3.5/7, mb1 3.6/8, mb1mx3.5/16, mbtmp4.4/8, Error ellipse: s-maj=23.7km s-min=15.1km az=168.0*

ISC 13 13:44:17.8±1.4**, 23.9S**±0.1×**180.0E**±0.1**, h522^{km}**±18^{km}**, n30,** σ**0^{s}76**/25**, mb4.1**/12**, 5C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.67	161	eP	P	13 45 52.4	-0.4
AFI	Afiamalu	12.63	40	eP	P	13 46 57.4	-6.1
	46nm,0.6s						
URZ	Urewera	14.53	189	P	P	13 47 22.2	-0.6
	1.8nm,0.3s,baz=325,slow=1.9,SNR=13						
URZ				S	S	13 49 52.9	+0.8
	0.9nm,0.3s,baz=265,slow=19,SNR=12						
RPZ	Rata Peaks	21.09	198	P	P	13 48 25.5	-0.5
	12nm,0.5s,mb4.7,baz=55,slow=4.2,SNR=12						
CNB	Canberra Magne	28.83	240	eP	P	13 49 36.7	+1.6
	91nm,0.6s						
CTA	Charters Tower	31.44	270	⇑iP	P	13 49 58.6	+1.0
	7.7nm,0.6s,mb4.4						
CTAO	Charters Tower	31.44	270	eP	P	13 49 58.7	+1.1
	8.0nm,0.5s,mb4.5						
TOO	Toolangi	32.43	237	eP	P	13 50 06.3	+0.6
	0.4nm,0.5s,mb3.2						
PMG	Port Moresby	34.46	289	P	P	13 50 23.1	+0.1
	4.3nm,0.6s,mb4.2,baz=117,slow=6.8,SNR=3.3						
STKA	Stephens Creek	34.70	248	⇑iP	P	13 50 25.4	+0.6
	3.0nm,0.7s,mb3.9						
STKA	Stephens Creek	34.70	248	P	P	13 50 25.5	+0.7
	2.9nm,0.5s,mb4.1,baz=98,slow=8.6,SNR=12						
ASAR	Alice Springs	42.01	261	P	P	13 51 24.6	+0.2
	5.4nm,0.7s,mb4.2,baz=95,slow=7.3,SNR=73						
ASAR				ScP		13 56 08.9	
	0.7nm,0.8s,baz=90,slow=3.6,SNR=4.7						
ASAR				S	S	13 57 05.1	-1.1
	0.4nm,0.8s,baz=96,slow=14,SNR=3.7						
ASPA	Alice Springs	42.01	261	⇑iP	P	13 51 24.5	0.0
WB2	Warramunga Arr	42.36	266	⇑iP	P	13 51 26.9	-0.4
WRAB	Tennant Creek	42.37	266	eP	P	13 51 26.7	-0.7
	9.9nm,0.8s,mb4.4						
WRA	Warramunga Arr	42.38	266	P	P	13 51 27.1	-0.3
	5.4nm,0.4s,mb4.5,baz=96,slow=8.3,SNR=162						
WRA				S	S	13 57 08.4	-3.1
	0.7nm,0.8s,baz=100,slow=14,SNR=4.2						
KAKA	Kakadu	46.28	275	⇓iP	P	13 51 57.2	-0.6
	7.5nm,1.2s,mb4.1						
FORT	Forrest	46.28	250	⇑iP	P	13 51 56.6	-1.1
	906nm,0.6s						
FITZ	Fitzroy Crossi	50.80	266	eP	P	13 52 32.0	+0.3
	6.2nm,0.8s,mb4.0						
VNDA	Vanda	54.39	185	eP	P	13 52 56.0	-0.8
	0.5nm,0.6s						
CMAR	Chiang Mai Arr	89.49	290	P	P	13 56 21.4	+1.0
	0.6nm,0.8s,mb3.5,baz=133,slow=3.0,SNR=5.3						
TXAR	Lajitas Array	90.45	58	P	P	13 56 24.9	+0.2
	0.6nm,0.7s,mb3.5,baz=215,slow=6.6,SNR=8.8						

BDFB	Brasilia	118.84	125	PKP	PKPdf	14 02 07.0	0.0
	0.9nm,0.4s,baz=168,slow=6.4,SNR=3.3						
BVAR	Borovoye Array	120.41	319	PKP	PKPdf	14 02 09.6	+0.4
	0.8nm,0.5s,baz=126,slow=1.9,SNR=4.9						
ARCES	ARCESS Array B	131.87	348	PKP	PKPdf	14 02 31.2	+0.4
	1.8nm,0.7s,baz=45,slow=1.7,SNR=5.9						
HFS	Hagfors	142.53	349	PKP	PKPdf	14 02 46.7	-3.5
	2.3nm,0.5s,baz=63,slow=3.3,SNR=12						
AKASG	Malin Array Be	144.95	327	PKPbc	PKPbc	14 02 55.3	-0.1
	1.7nm,0.6s,baz=40,slow=4.2,SNR=12						
BRTR	Keskin Array B	147.55	307	PKPbc	PKPdf	14 03 03.5	+4.2
	0.4nm,0.3s,baz=308,slow=20,SNR=3.1						
CLL	Collm	150.84	343	*i* PKP1	PKPdf	14 03 11.3	+7.2
BRG	Berggiesshubel	150.97	342	*e*P	PKPdf	14 03 11.7	+7.4

ATH ***13*** *13:45:27.2, 37.24N×28.05E, h6^{km}, MD3.1/3*
ISK ***13*** *13:45:28.4, 37.06N×28.38E, h9^{km}, MD3.1*
NEIC ***13*** *13:45:28.4, 37.06N×28.38E, h9^{km}, MD3.1(ISK), MD3.1(ATH), After ISK.*
CSEM ***13*** *13:45:28.9±0.1, 37.12N×28.40E, h8^{km}, MD3.1, Error ellipse: s-maj=2.4km s-min=1.8km az=29.0*
ISC 13 13:45:29.2±0.6**, 37.05N**±0.03×**28.34E**±0.04**, h5**^{km}±5^{km}**, n22, σ1^{s}01**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.10	334	*i* PG	Pg	13 45 31.5	+0.1
YER				*i* SG	Sg	13 45 33.2	+0.4
YER	Yerkesik	0.10	334	Pg	Pg	13 45 31.6	+0.2
YER				Sg	Sg	13 45 33.6	+0.8
YER	Yerkesik	0.10	334	Pg	Pg	13 45 31.6	+0.2
YER				Sg	Sg	13 45 33.6	+0.8
MLSB	Milas	0.51	299	PG	Pg	13 45 39.6	+0.1
MLSB				SG	Sg	13 45 47.2	+0.9
MLSB	Milas	0.51	299	Pg	Pg	13 45 39.7	+0.2
MLSB				Sg	Sg	13 45 47.7	+1.3
MLSB	Milas	0.51	299	Pg	Pg	13 45 39.7	+0.2
MLSB				Sg	Sg	13 45 47.7	+1.4
AYDN	Tasoluk	0.71	329	*i* P	Pg	13 45 43.4	-0.1
AYDN				*i* S	Sg	13 45 52.7	-0.4
BDRM	Kayabasi	0.71	272	*i* P	Pg	13 45 43.0	-0.5
BDRM				*i* S	Sg	13 45 53.0	-0.1
FETY	Fethiye	0.73	124	*e*PG	Pg	13 45 42.2	-1.5
ARG	Arkhangelos	0.84	192	*e*PG	Pg	13 45 46.0	-0.1
ARG				*e*SB	Sb	13 46 01.2	+3.8
DNZL	Cakiroluk	0.86	41	*i* P	Pb	13 45 46.5	+0.3
DNZL				*i* S	Sb	13 45 59.8	+1.9
DENT	Denizli	0.90	38	*e*PG	Pg	13 45 46.3	-0.9
DENT	Denizli	0.90	38	Pg	Pg	13 45 46.4	-0.8
KSL	Kastellorizon	1.34	131	*e*PB	Pb	13 45 58.0	+3.5
MANT	Manisa	1.45	7	*i* P	Pn	13 45 56.6	+0.3
MANT				*i* S	Sb	13 46 15.7	+0.5
IZM	Izmir	1.60	328	*e*PN	Pn	13 45 57.8	-0.5
IZM	Izmir	1.60	328	Pn	Pn	13 45 57.9	-0.4
KDAG	Bornova	1.60	328	*i* P	Pn	13 45 58.2	-0.2
KDAG				*i* S	Sb	13 46 17.4	-2.0
KARP	Karpathos	1.77	213	*e*PN	Pn	13 46 01.5	+0.7
ISP	Isparta	1.90	65	*e*PN	Pn	13 46 01.3	-1.4
ISP	Isparta	1.90	65	Pn	Pn	13 46 01.4	-1.4
ISP	Isparta	1.90	65	Pn	Pn	13 46 01.4	-1.3

IDC ***13*** *13:54:49.7±2.4, 2.20N×95.06E, mb3.8/6, mb1 4.0/7, mb1mx3.8/19, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=94.6km s-min=19.4km az=62.0*
NEIC ***13*** *13:54:54.0±0.8, 2.16N×95.01E, mb4.2/2, Error ellipse: s-maj=28.0km s-min=8.4km az=67.0*
ISC 13 13:54:51.3±1.2**, 2.1N**±0.1×**94.9E**±0.2**, h28**^{km}**, h28**^{km}±1.0^{km}**:pP-P, n24, σ0^{s}35**/17**, mb4.0**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	16.71	13	P	P	13 58 46.0	+0.7
	7.0nm,0.8s						
CMAR	Chiang Mai Arr	16.71	13	Pn	P	13 58 44.8	-0.5
	0.2nm,0.3s,baz=203,slow=11,SNR=13						
CMAR	Chiang Mai Arr	16.71	13	Pn		13 58 52.0	
	0.0nm,0.3s,baz=204,slow=11,SNR=27						
CMAR	Chiang Mai Arr	16.71	13	Pn	P	13 58 44.8	-0.5
CMAR	Chiang Mai Arr	16.71	13	Pn		13 58 52.0	
LSA	Lhasa	27.66	353	*e*P	P	14 00 39.3	+0.2
LSA				*e*	pP	14 00 48.6	+1.4
WRA	Warramunga Arr	44.46	121	P	P	14 03 02.2	0.0
	2.9nm,0.8s,mb4.1,baz=298,slow=9.4,SNR=24						
WRA	Warramunga Arr	44.46	121	P	pP	14 03 10.5	-0.1
	1.9nm,0.7s,baz=299,slow=9.0,SNR=9.0						
WRA	Warramunga Arr	44.46	121	P	P	14 03 02.2	0.0
WRA				P	pP	14 03 10.5	-0.1
WRAB	Tennant Creek	44.46	121	*e*P	P	14 03 02.1	-0.1
	7.6nm,0.9s,mb4.4						
WRAB				*e*	pP	14 03 10.7	+0.2
ASAR	Alice Springs	45.77	126	P	P	14 03 12.7	+0.1
	0.8nm,0.8s,mb3.7,baz=298,slow=8.2,SNR=16						
ASAR	Alice Springs	45.77	126	P	pP	14 03 21.4	+0.5
	0.5nm,0.7s,baz=300,slow=7.8,SNR=4.7						
ASAR	Alice Springs	45.77	126	P	P	14 03 12.7	+0.1
ASAR				P	pP	14 03 21.4	+0.5
SONM	Songino Array	46.61	11	P	P	14 03 18.4	-0.5
	0.5nm,0.8s,mb3.5,baz=196,slow=8.9,SNR=4.2						
SONM	Songino Array	46.61	11	P	pP	14 03 25.7	-1.6
	1.7nm,0.8s,baz=193,slow=6.9,SNR=12						
SONM	Songino Array	46.61	11	P	P	14 03 18.4	-0.5
SONM				P	pP	14 03 25.7	-1.6
KURK	Kurchatov	50.35	347	*e*P	P	14 03 47.8	-0.1
ZAL	Zalesovo	52.32	352	P	P	14 04 03.1	+0.4
	0.9nm,0.6s,mb3.9,baz=300,slow=6.0,SNR=5.3						
ZAL	Zalesovo	52.32	352	P	pP	14 04 10.6	-0.6
	1.5nm,0.5s,baz=306,slow=6.3,SNR=6.3						
ZAL	Zalesovo	52.32	352	P	P	14 04 03.1	+0.4
ZAL				P	pP	14 04 10.6	-0.6
BVAR	Borovoye Array	54.66	342	P	P	14 04 19.7	-0.3
	0.7nm,0.6s,mb3.9,baz=141,slow=9.5,SNR=4.4						
STKA	Stephens Creek	55.67	131	P	P	14 04 27.8	+0.2
	1.6nm,0.5s,mb4.3,baz=312,slow=5.2,SNR=7.6						
STKA	Stephens Creek	55.67	131	P	pP	14 04 36.6	+0.5
	1.2nm,0.7s,baz=302,slow=9.0,SNR=2.3						
STKA	Stephens Creek	55.67	131	P	P	14 04 27.8	+0.2
STKA				P	pP	14 04 36.6	+0.5

IDC 13 13:59:15.9±12.0**, 4.32N**×**94.39E, h94**^{km}±114^{km}**, mb3.4**/5**, mb1 3.7**/6**, mb1mx3.5**/18**, mbtmp3.8**/6**, ML4.3**/1**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx3.1**/19**, Error ellipse: s-maj=70.9km s-min=20.1km az=56.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.74	17	P	P	14 02 39.8	-1.1
	0.5nm,0.3s,baz=214,slow=12,SNR=14						
SONM	Songino Array	44.57	12	P	P	14 07 19.5	-0.7
	0.7nm,0.7s,baz=195,slow=9.7,SNR=6.6						
WRA	Warramunga Arr	46.07	123	P	P	14 07 31.0	-1.5
	1.2nm,0.8s,baz=298,slow=9.1,SNR=8.4						
ASAR	Alice Springs	47.51	128	P	P	14 07 41.4	-2.4
	0.5nm,0.8s,baz=291,slow=8.1,SNR=5.5						
ZAL	Zalesovo	50.09	353	P	P	14 07 59.6	-3.6
	1.2nm,0.4s,baz=329,slow=4.4,SNR=6.9						
ZAL				LR	LR	14 31 12.9	
	comp=Z,61nm,19.3s,baz=200,slow=38						
BRTR	Keskin Array B	64.95	312	P	P	14 09 46.6	-1.4
	1.0nm,0.7s,baz=129,slow=7.9,SNR=3.7						

IDC 13 14:12:33.3±4.2**, 29.72S**×**177.04W, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=189.3km s-min=63.9km az=160.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.45	256	P	P	14 19 32.1	-1.2
	0.5nm,0.4s,baz=156,slow=9.6,SNR=4.2						
ASAR	Alice Springs	43.98	266	P	P	14 20 41.8	-2.4
	0.4nm,0.5s,baz=105,slow=6.8,SNR=9.0						
WRA	Warramunga Arr	44.91	271	P	P	14 20 50.0	-1.8
	0.6nm,0.3s,baz=111,slow=8.0,SNR=28						
FINES	FINESS Array B	144.79	341	PKP	PKPdf	14 32 11.1	-2.2
	2.0nm,0.7s,baz=49,slow=4.7,SNR=10						

IDC 13 14:33:19.0±1.5**, 11.85N**×**144.15E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/19**, mbtmp3.6**/4**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/17**, Error ellipse: s-maj=143.7km s-min=24.3km az=108.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	21.09	317	LR	LR	14 43 47.1	
	comp=Z,100nm,21.2s,baz=196,slow=30						
WRA	Warramunga Arr	33.03	197	P	P	14 39 56.1	-2.3
	1.1nm,0.6s,baz=19,slow=9.7,SNR=18						
ASAR	Alice Springs	36.69	196	P	P	14 40 27.9	-1.8
	0.2nm,0.4s,baz=26,slow=12,SNR=9.5						
STKA	Stephens Creek	43.54	183	P	P	14 41 24.6	-1.8
	0.5nm,0.5s,baz=5.2,slow=11,SNR=2.5						
ILAR	Eielson Array	70.44	25	P	P	14 44 35.0	-1.9
	0.4nm,0.6s,baz=247,slow=5.4,SNR=7.9						

IDC 13 14:40:51.4±1.9**, 19.79S**×**68.87E, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.8**/17**, mbtmp3.7**/6**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx2.6**/27**, Error ellipse: s-maj=60.7km s-min=30.2km az=44.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	48.12	40	P	P	14 49 34.8	-0.6
	2.0nm,0.9s,baz=238,slow=8.3,SNR=11						
CMAR				LR	LR	15 08 12.4	
	comp=Z,19nm,20.0s,baz=220,slow=34						
ASAR	Alice Springs	60.09	106	P	P	14 51 01.1	-1.9
	0.5nm,0.8s,baz=268,slow=5.8,SNR=8.8						
WRA	Warramunga Arr	61.19	102	P	P	14 51 07.8	-2.8
	0.7nm,1.0s,baz=257,slow=6.2,SNR=4.6						
ZAL	Zalesovo	74.69	10	P	P	14 52 30.8	-3.7
	0.9nm,0.9s,baz=212,slow=5.0,SNR=4.1						
SONM	Songino Array	75.26	25	P	P	14 52 35.5	-2.4
	0.7nm,0.8s,baz=219,slow=4.0,SNR=7.4						
AKASG	Malin Array Be	78.38	336	P	P	14 52 54.2	-1.0
	0.6nm,0.7s,baz=135,slow=4.1,SNR=4.1						
YKA	Yellowknife Ar	137.26	2	PKP	PKPdf	15 00 17.6	-0.6
	0.2nm,0.7s,baz=358,slow=2.3,SNR=5.3						
ULM	Lac du Bonnet	147.27	342	PKPbc	PKPdf	15 00 36.3	+0.1
	1.1nm,0.4s,baz=9.0,slow=7.8,SNR=4.3						

MOS ***13*** *15:12:14.9±1.1, 33.57S×178.73W, h33^{km}, mb5.2/6, Error ellipse: s-maj=21.4km s-min=14.8km az=20.6*
BJI ***13*** *15:12:14.9, 33.81S×178.23W, h52^{km}, mB5.2, mb5.0, Ms4.8, Msz4.4*
NEIC ***13*** *15:12:16.1±0.4, 33.52S×178.46W, mb4.9/10, MS4.0/3, Error ellipse: s-maj=11.6km s-min=9.5km az=180.0*
IDC ***13*** *15:12:16.0±0.5, 33.46S×178.56W, h40^{km}±3^{km}, mb4.4/13, mb1 4.5/15, mb1mx4.4/20, mbtmp4.6/15, ML4.5/2, MS4.2/13, Ms1 4.2/13, ms1mx4.0/25, Error ellipse: s-maj=14.3km s-min=11.7km az=170.0*
ISC 13 15:12:15.8±1.0**, 33.87S**±0.05×**178.72W**±0.07**, h46**^{km}±8^{km}**, h40**^{km}±1.5^{km}**:pP-P, n122, σ1^{s}39**/96**, mb4.8**/21**, MS4.2**/17**, 7C-6D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.41	212	PN	P	15 13 23.8	+1.8
MXZ				SN	S	15 14 22.8	+10
PUZ	Puketiti	4.86	209	PN	P	15 13 29.1	+0.8
PUZ				SN	S	15 14 31.4	+7.5
KUZ	Kuaotunu	5.38	236	PN	P	15 13 38.9	+3.4
MWZ	Matawai	5.39	213	PN	P	15 13 36.7	+0.9
MWZ				SN	S	15 14 44.4	+7.0
URZ	Urewera	5.53	216	P	P	15 13 39.8	+2.1
	11nm,0.3s,baz=35,slow=6.9,SNR=60						
URZ				S	S	15 14 47.9	+7.1
	21nm,0.3s,baz=175,slow=21,SNR=12						
URZ	Urewera	5.53	216	PN	P	15 13 38.8	+1.1
URZ				SN	S	15 14 47.3	+6.4
KNZ	Kokohu	5.90	208	PN	P	15 13 43.7	+0.8
KNZ				SN	S	15 14 55.4	+5.2
BKZ	Black Stump Fm	6.54	215	PN	P	15 13 52.1	+0.2
BKZ				SN	S	15 15 11.0	+5.0
NGZ	Ngauruhoe	6.99	219	PN	P	15 14 00.6	+2.4
TSZ	Takapari Road	7.50	213	PN	P	15 14 03.8	-1.5
TSZ				SN	S	15 15 33.0	+3.1
BFZ	Birch Farm	7.89	209	PN	P	15 14 08.8	-1.8
BFZ				SN	S	15 15 40.4	+0.9
MRZ	Mangatainoka R	8.16	212	PN	P	15 14 12.2	-2.2
MRZ				SN	S	15 15 45.3	-0.9
KIW	Kapiti Island	8.62	214	SN	S	15 15 57.1	-0.6
MSWZ	Moikau Station	8.92	211	SN	S	15 16 03.5	-1.6
TUWZ	Tuamarina	9.52	215	SN	S	15 16 18.8	-1.1
NNZ	Nelson	9.65	218	SN	S	15 16 21.8	-1.1
THZ	Tophouse	10.29	218	PN	P	15 14 42.8	-0.8
THZ				SN	S	15 16 36.3	-2.4
KHZ	Kahutara	10.48	213	PN	P	15 14 46.2	0.0
KHZ				SN	S	15 16 37.9	-5.4
LTZ	Lake Taylor	11.36	216	SN	S	15 16 58.3	-6.4
MQZ	McQueen's Vall	11.90	212	SN	S	15 17 10.0	-7.7
WVZ	Waitaha Valley	12.35	219	SN	S	15 17 22.6	-6.0
RPZ	Rata Peaks	12.65	216	P	P	15 15 13.2	-2.3
	3.2nm,0.3s,baz=50,slow=6.2,SNR=18						
RPZ				S	S	15 17 30.0	-5.7
	2.2nm,0.3s,baz=296,slow=15,SNR=8.6						
DZM	Mont Dzumac	17.58	308	⇑*e*P	P	15 16 20.0	+0.9
NOUC	Port Laguerre	17.65	308	*e*P	P	15 16 20.4	+0.4
NOUC	Port Laguerre	17.65	308	*e*P	P	15 16 20.4	+0.4
AFI	Afiamalu	20.85	19	*e*P	P	15 16 44.7	-11
	91nm,1.2s						
RAR	Rarotonga	20.96	58	*e*P	P	15 16 49.0	-8.3
RAR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
RAR	Rarotonga	20.96	58	P	P	15 16 47.2	-10
	comp=Z,15nm,0.5s,baz=135,slow=2.9,SNR=4.2						
RAR				S	S	15 20 22.5	-21
	comp=Z,12nm,0.4s,baz=90,slow=18,SNR=5.4						
RAR				LR	LR	15 23 21.4	
	comp=Z,427nm,20.0s,MS3.8,baz=145,slow=32						
RAR	Rarotonga	20.96	58	*e*P	P	15 16 49.0	-8.3
	comp=Z,8.0nm,0.4s						
TAU	Tasmania Unive	27.95	241	*e*P	P	15 18 06.1	+2.2
TAU				*e*	pP	15 18 14.3	-1.7
TAU				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
TAU	Tasmania Unive	27.95	241	*e*P	P	15 18 06.1	+2.1
	comp=Z,20nm,0.9s,mb4.8						
TAU				*e*	pP	15 18 14.3	-1.7
STKA	Stephens Creek	33.25	262	*e*P	P	15 18 52.3	+1.5
	comp=Z,5.3nm,0.9s,mb4.5						
STKA	Stephens Creek	33.25	262	P	P	15 18 51.9	+1.1
	comp=Z,6.2nm,0.9s,mb4.5,baz=93,slow=8.7,SNR=16						
STKA				pP	pP	15 19 03.2	+0.1
	comp=Z,5.1nm,1.1s,baz=105,slow=11,SNR=3.9						
STKA				PcP	PcP	15 21 31.7	-0.8
	comp=Z,4.6nm,1.0s,baz=29,slow=1.1,SNR=3.6						
STKA				pPcP		15 21 42.9	
	comp=Z,4.8nm,0.8s,baz=86,slow=5.1,SNR=5.9						
STKA				LR	LR	15 32 19.6	
	comp=Z,631nm,18.2s,MS4.4,baz=31,slow=36						
CTA	Charters Tower	33.92	285	⇓*i*P	P	15 18 57.3	+0.6
	comp=Z,11nm,0.6s,mb5.0						
CTA	Charters Tower	33.92	285	⇓*i*P	P	15 18 57.3	+0.6
CTA				pmax	pmax		
	comp=Z,11nm,0.6s						
CTA	Charters Tower	33.92	285	P	P	15 18 56.7	0.0
	comp=Z,23nm,1.0s,mb5.1,baz=106,slow=9.3,SNR=13						
CTA				pP	pP	15 19 07.2	-1.9
	comp=Z,16nm,0.7s,baz=100,slow=12,SNR=6.1						
CTA				LR	LR	15 29 17.3	
	comp=Z,258nm,21.6s,MS3.9,baz=56,slow=30						
CTAO	Charters Tower	33.92	285	*e*P	P	15 18 56.9	+0.2
CTAO				*e*	pP	15 19 08.5	-0.6
CTAO				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
CTAO				MLR	MLR		
	comp=Z,409nm,19.0s,MS4.2						
CTAO	Charters Tower	33.92	285	*e*P	P	15 18 56.9	+0.2
	comp=Z,17nm,0.8s,mb5.0						
CTAO				*e*	pP	15 19 08.5	-0.6
CTAO				LR	LR		
	comp=Z,409nm,19.0s,MS4.2						
PMG	Port Moresby	39.67	300	*i* P	P	15 19 43.6	-1.5
PMG	Port Moresby	39.67	300	*e*P	P	15 19 43.9	-1.2
PMG				pmax	pmax		
	comp=Z,20nm,1.1s						
PMG				MLR	MLR		
	comp=Z,229nm,19.0s						
PMG	Port Moresby	39.67	300	P	P	15 19 44.6	-0.6
	comp=Z,14nm,1.0s,mb4.7,baz=58,slow=1.5,SNR=5.0						
PMG				pP	pP	15 19 54.4	-3.3
	comp=Z,34nm,1.3s,baz=120,slow=11,SNR=2.9						
PMG				LR	LR	15 32 54.5	
	comp=Z,153nm,18.6s,MS3.9,baz=311,slow=31						
PMG	Port Moresby	39.67	300	*e*P	P	15 19 43.9	-1.3
	comp=Z,20nm,1.1s,mb4.8						
PMG				LR	LR		
	comp=Z,229nm,19.0s,MS4.0						
ASAR	Alice Springs	42.44	271	P	P	15 20 08.0	+0.1
	comp=Z,27nm,0.8s,mb4.9,baz=111,slow=7.2,SNR=191						
ASAR				pP	pP	15 20 20.9	+0.4
	comp=Z,26nm,0.8s,baz=111,slow=7.3,SNR=15						
ASAR				PcP	PcP	15 21 59.5	-1.4
	comp=Z,8.4nm,0.9s,baz=118,slow=4.3,SNR=6.9						
ASAR				pPcP		15 22 11.8	
	comp=Z,9.6nm,0.8s,baz=123,slow=3.3,SNR=8.1						
ASAR				S	S	15 26 27.1	+1.2
	comp=Z,2.6nm,0.9s,baz=113,slow=16,SNR=7.1						
ASAR				LR	LR	15 37 26.9	
	comp=Z,145nm,18.1s,MS3.9,baz=128,slow=36						
ASPA	Alice Springs	42.44	271	⇑*i*P	P	15 20 07.9	0.0
ASPA				*i*	pP	15 20 20.0	-0.5
ASPA				*i* S	S	15 26 27.4	+1.4
ASPA				*i* SCS	ScS	15 30 07.1	+4.0
WB2	Warramunga Arr	43.73	276	⇑*i*P	P	15 20 17.8	-0.7
WB2				*i*	pP	15 20 29.5	-1.6
WB2				*e*S	S	15 26 45.3	+0.4
WRAB	Tennant Creek	43.73	276	*e*P	P	15 20 17.6	-0.9
WRAB				*e*	pP	15 20 28.9	-2.2
WRAB				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.2						
WRAB				MLR	MLR		
	comp=Z,80nm,19.0s,MS3.6						
WRAB	Tennant Creek	43.73	276	*e*P	P	15 20 17.6	-0.9
	comp=Z,45nm,0.8s,mb5.2						
WRAB				*e*	pP	15 20 28.9	-2.2
WRAB				LR	LR		
	comp=Z,80nm,19.0s,MS3.6						
WRA	Warramunga Arr	43.74	276	P	P	15 20 17.9	-0.6
WRA				*PP	pP	15 20 30.0	-1.2
WRA						15 22 03.6	
WRA				S	S	15 26 45.8	+0.8
WRA	Warramunga Arr	43.74	276	P	P	15 20 17.9	-0.6
	comp=Z,30nm,0.8s,mb5.0,baz=117,slow=7.6,SNR=98						
WRA				pP	pP	15 20 30.0	-1.1
	comp=Z,32nm,0.8s,baz=116,slow=7.4,SNR=20						
WRA				PcP	PcP	15 22 03.6	-1.7
	comp=Z,4.2nm,0.9s,baz=120,slow=3.4,SNR=3.7						
WRA				pPcP		15 22 15.9	
	comp=Z,6.0nm,0.8s,baz=119,slow=3.3,SNR=7.6						
WRA				S	S	15 26 45.8	+0.7
	comp=Z,2.3nm,1.2s,baz=112,slow=15,SNR=3.5						
VNDA	Vanda	44.59	186	P	P	15 20 28.1	+3.5
	comp=Z,0.6nm,0.7s,baz=123,slow=0.3,SNR=3.7						
VNDA				pP	pP	15 20 38.2	+0.9
	comp=Z,4.5nm,1.1s,baz=358,slow=9.1,SNR=3.4						
KAKA	Kakadu	49.03	283	⇓*i*P	P	15 20 58.6	-1.7
	comp=Z,15nm,1.0s,mb5.0						
KAKA				*i*	pP	15 21 10.5	-2.5
CASY	Casey	51.81	209	P	P	15 21 22.3	+1.5
	comp=Z,33nm,0.8s,mb5.3						
CASY				*e*	pP	15 21 33.8	+0.3
FITZ	Fitzroy Crossi	51.83	273	*e*P	P	15 21 20.0	-1.6
FITZ				*i*	pP	15 21 32.5	-1.9
NWAO	Narrogin (SRO)	52.67	252	P	P	15 21 28.6	+0.9
NWAO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NWAO	Narrogin (SRO)	52.67	252	P	P	15 21 28.6	+0.9
	comp=Z,3.2nm,0.7s,mb4.4						
QSPA	South Pole Qui	56.25	180	*e*P	P	15 21 56.1	+2.9
	comp=Z,38nm,0.9s,mb5.4						
QSPA				*e*	pP	15 22 07.1	+0.9
USHA	Ushuaia	73.41	146	LR	LR	15 51 49.8	
	comp=Z,373nm,18.8s,MS4.7,baz=199,slow=32						
SYO	Syowa Base	73.61	193	⇓P	P	15 23 51.8	+6.4
SNAA	Sanae	74.71	179	⇑*i*	P	15 23 54.3	+2.6
SNAA	Sanae	74.71	179	⇓*i*	P	15 24 03.3	+12
SNAA	Sanae	74.71	179	*e*P	P	15 23 53.3	+1.6
SNAA				pmax	pmax		
	comp=Z,365nm,1.3s						
SNAA	Sanae	74.71	179	P	P	15 23 53.7	+1.9
	comp=Z,3.0nm,1.0s,mb4.2,baz=159,slow=5.3,SNR=6.5						
SNAA				pP	pP	15 24 05.3	+0.1
	comp=Z,3.4nm,0.9s,baz=198,slow=5.1,SNR=6.2						
SNAA	Sanae	74.71	179	*e*P	P	15 23 53.3	+1.6
	comp=Z,365nm,1.3s						
VNA3	Neumayer Olymp	74.89	176	⇑*i*	P	15 23 54.7	+1.9
VNA3	Neumayer Olymp	74.89	176	⇑*i*	P	15 24 06.8	+14
VNA2	Neumayer--Watz	75.32	177	⇑*i*	P	15 23 57.5	+2.3
VNA2	Neumayer--Watz	75.32	177	⇓*i*	P	15 24 09.1	+14
PLCA	Paso Flores	80.59	133	P	P	15 24 24.5	-0.5
	comp=Z,2.8nm,1.1s,mb4.1,baz=212,slow=8.5,SNR=3.9						
PLCA				LR	LR	15 55 32.4	
	comp=Z,152nm,18.8s,MS4.4,baz=91,slow=32						
ASAJ	Asahikawa	85.24	333	P	P	15 24 46.7	-1.8
	comp=Z,17nm,1.0s,mb5.1,baz=144,slow=14,SNR=3.6						
YSS	Yuzh-Sakhalins	87.61	335	*e*P	P	15 25 05.0	+5.0
YSS				*e*		15 25 10.8	
NJ2	Nanjing	88.05	311	*e*P	P	15 25 03.1	+0.6
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.4						
PET	Petropavlovsk	88.75	347	*i* P	P	15 25 03.6	-1.7
PET				pmax	pmax		
	comp=Z,82nm,1.8s,mb5.8						
PET				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.3						
LDFC	Landfair	90.81	47	*e*P	P	15 25 14.2	-1.3
MDJ	Mudanjiang	91.14	326	P	P	15 25 17.4	+0.6
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,53nm,4.1s						
NVAR	Mina Array Bea	91.19	43	P	P	15 25 14.9	-2.3
	comp=Z,1.6nm,0.8s,mb4.4,baz=204,slow=5.7,SNR=12						
LVC	Limon Verde	92.78	119	P	P	15 25 25.6	+0.8
	comp=Z,2.0nm,0.8s,mb4.6,baz=206,slow=8.5,SNR=3.2						
LVC				LR	LR	15 58 36.4	
	comp=Z,126nm,20.3s,MS4.4,baz=295,slow=30						
LVC	Limon Verde	92.78	119	P	P	15 25 25.6	+0.8
LVC				LR	LR	15 58 36.4	
CMAR	Chiang Mai Arr	93.97	289	PP	PP	15 29 18.0	-1.5
	comp=Z,2.9nm,1.2s,baz=134,slow=6.0,SNR=6.5						
TXAR	Lajitas Array	94.76	58	P	P	15 25 32.5	-1.2
	comp=Z,1.0nm,1.0s,mb4.2,baz=217,slow=6.3,SNR=6.1						
TXAR				LR	LR	16 03 16.5	
	comp=Z,196nm,18.3s,MS4.6,baz=155,slow=32						
KMI	Kunming	94.84	297	P	P	15 25 35.4	+1.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb5.0						
KMI				LR	LR		
	comp=Z,37nm,36.0s,MS3.6						
BBB	Bella Bella	96.43	29	LR	LR	15 59 21.7	
	comp=Z,146nm,20.8s,MS4.4,baz=292,slow=29						
LPAZ	La Paz	97.26	115	LR	LR	15 59 19.7	
	comp=Z,74nm,18.6s,MS4.2,baz=46,slow=29						
JTS	JuntasAbangare	98.76	84	LR	LR	16 02 46.9	
	comp=Z,135nm,18.2s,MS4.5,baz=355,slow=31						
PDAR	Pinedale Array	99.05	44	LR	LR	16 07 46.4	
	comp=Z,160nm,18.0s,MS4.6,baz=339,slow=34						
LZH	Lanzhou	100.29	307	*e*P	P	15 26 00.3	+1.6
LZH				AP		15 26 11.6	
LZH				XP		15 26 16.1	
LZH				PP	PP	15 30 09.0	+1.3
LZH				AMB	AMB		
	comp=Z,22nm,1.5s						
BILL	Bilibino	102.22	354	*i* P	Pdif	15 26 04.8	-1.7
BILL				*e*S		15 36 41.9	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.8s						
BILL				MLR	MLR		
	comp=Z,100nm,22.0s,MS4.3						
YKA	Yellowknife Ar	108.83	26	PKKPbc		15 41 50.4	
	comp=Z,0.5nm,0.8s,baz=40,slow=3.5,SNR=11						
YKA				PKKPab		15 41 59.3	
	comp=Z,0.7nm,0.8s,baz=44,slow=3.3,SNR=5.1						
ZAL	Zalesovo	120.19	317	pPKP		15 31 14.9	
	comp=Z,0.7nm,0.8s,baz=292,slow=4.6,SNR=2.1						
KURK	Kurchatov	122.97	312	*e*PKIKP	PKPdf	15 31 06.4	-0.5
CHKZ	Chkalovo	128.36	315	*e*PKIKP	PKPdf	15 31 16.8	-0.3
BVAR	Borovoye Array	128.41	314	PKP	PKPdf	15 31 17.8	+0.5
	comp=Z,3.2nm,1.0s,baz=63,slow=3.3,SNR=8.0						
BVAR				pPKP		15 31 29.5	
	comp=Z,5.3nm,0.9s,baz=315,slow=4.2,SNR=9.8						
BRVK	Borovoye	128.48	314	*e*PKIKP	PKPdf	15 31 17.7	+0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	131.48	232	PKP	PKPdf	15 31 26.9	+2.8
	comp=Z,1.2nm,0.8s,baz=251,slow=21,SNR=3.9						
KMBO				pPKP		15 31 38.7	
	comp=Z,1.6nm,0.8s,baz=210,slow=24,SNR=3.7						
ARCES	ARCESS Array B	141.83	346	PKP	PKPdf	15 31 45.3	+3.8
	comp=Z,2.1nm,0.9s,baz=45,slow=1.7,SNR=4.3						
ARCES				pPKP		15 31 57.1	
	comp=Z,3.8nm,0.9s,slow=2.4,SNR=3.9						
BHD	Baghdad	144.28	281	*e*PKP	PKPdf	15 31 50.5	+3.7
GNI	Garni	145.00	293	*e*PKIKP	PKPdf	15 31 48.5	+0.7
TI2	Plekhanov	145.07	296	*e*PKIKP	PKPdf	15 31 48.6	+0.7
JOF	Joensuu	145.38	336	*e*pkp	PKPdf	15 31 47.8	+0.1
MSL	Mosul	145.89	286	*e*PKP	PKPdf	15 31 45.5	-4.0
TVAN	Van	145.91	290	P	PKPdf	15 31 52.7	+3.3
GOF	Gofitskoye	146.23	302	⇑*i*PKP2	PKPab	15 31 51.0	-2.8
GOF				pmax	pmax		
	comp=Z,60nm,1.3s						
KIV	Kislovodsk	146.55	300	*e*PKIKP	PKPdf	15 31 50.1	-0.3
KIV				pmax	pmax		
	comp=Z,13nm,1.0s						
KIV	Kislovodsk	146.55	300	*e*PKPbc	PKPbc	15 31 53.0	+1.3
BEST	Besiri	147.52	289	P	PKPdf	15 31 56.4	+4.3
KAF	Kangasniemi	147.57	338	*e*pkp	PKPdf	15 31 54.4	+3.0
	baz=43,slow=2.7						
OBN	Obninsk	147.59	322	*i* PKIKP	PKPdf	15 31 52.5	+0.8
OBN				*e*		15 35 23.5	
OBN						15 39 00.8	
OBN				pmax	pmax		
	comp=Z,42nm,1.4s						
FINES	FINESS Array B	148.15	338	PKPbc	PKPdf	15 31 55.2	+2.8
	comp=Z,10nm,0.9s,baz=74,slow=6.1,SNR=21						
FINES				pPKPbc		15 32 07.4	
	comp=Z,7.7nm,0.6s,baz=48,slow=4.5,SNR=5.7						
ELZG	Elazig	149.36	290	P	PKPdf	15 32 01.6	+6.5
MALT	Malatya	149.79	289	*e*PKPbc	PKPdf	15 32 02.0	+6.2
MALT	Malatya	149.79	289	P	PKPdf	15 32 01.5	+5.7
ASF	Jabal al Asfar	150.18	277	PKPbc	PKPdf	15 32 03.4	+6.8
	comp=Z,9.8nm,0.9s,baz=316,slow=0.6,SNR=5.7						
ASF				pPKPbc		15 32 15.8	
	comp=Z,23nm,0.9s,baz=130,slow=1.4,SNR=10						
GZT	Gaziantep	150.41	287	P	PKPdf	15 32 03.2	+6.5
KAHT	Ahir Dag	150.98	288	P	PKPdf	15 32 06.6	+9.0
EIL	Elat	151.15	271	*e*PKPbc	PKPdf	15 32 06.0	+7.9
COBT	Iskenderun	151.39	285	P	PKPdf	15 32 06.3	+8.1
NB2	NORSAR Subarra	152.06	350	PKP	PKPdf	15 32 04.6	+6.1
	comp=Z,11nm,1.1s,baz=16,slow=4.0						
NOA	NORSAR Array B	152.06	350	PKPbc	PKPdf	15 32 03.6	+5.2
	comp=Z,2.1nm,0.8s,baz=15,slow=4.2,SNR=4.8						
NOA				PKPab	PKPab	15 32 13.2	-3.8
	comp=Z,3.8nm,0.8s,baz=14,slow=4.1,SNR=6.6						
HFS	Hagfors	152.49	347	PKPbc	PKPdf	15 32 05.8	+6.7
	comp=Z,7.6nm,1.0s,baz=135,slow=2.1,SNR=6.7						
HFS				pPKPbc		15 32 17.8	
	comp=Z,5.6nm,0.8s,baz=90,slow=1.5,SNR=2.6						
BRTR	Keskin Array B	153.53	292	PKPbc	PKPdf	15 32 09.9	+8.7
	comp=Z,2.2nm,0.6s,baz=119,slow=3.1,SNR=9.0						
BRTR				pPKPbc		15 32 22.1	
	comp=Z,4.6nm,0.9s,baz=135,slow=3.5,SNR=7.1						
AKASG	Malin Array Be	153.58	318	PKPbc	PKPdf	15 32 09.4	+8.5
	comp=Z,3.2nm,0.7s,baz=56,slow=2.1,SNR=18						
AKASG				pPKPbc		15 32 21.5	
	comp=Z,3.4nm,0.6s,baz=44,slow=2.6,SNR=9.9						
CLL	Collm	160.60	337	*e*PKP2	PKPab	15 32 51.0	-2.7
BRG	Berggiesshubel	160.65	335	*e*PKP2	PKPab	15 32 50.7	-3.3
BRG				pmax	pmax		
	comp=Z,29nm,1.7s						

JMA 13 15:22:01.6, 34.69N×135.14E, h14^{km}±1^{km}, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIK	Miki	0.14	329	S	Sg	15 22 07.8	0.0
JAJ2	Tsuna	0.34	218	P	Pg	15 22 08.7	-0.2
JKS	Kasai	0.38	320	P	Pb	15 22 09.3	-0.3

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*BJI **13** 15:21:57.3, 33.91N×136.18E, h35^{km}, mB4.9, mb3.9, Ms4.0, Msz3.7*

*NIED **13** 15:22:00, 34.70N×135.10E, h11^{km}, Mw3.9 Best double couple: $M_0$7.04×10^{14} NP1:ϕ_s261°, δ87°, λ43°. NP2:ϕ_s168°, δ47°, λ176°.*

*IDC **13** 15:22:03.0±1.1, 34.63N×135.54E, mb3.8/5, mb1 4.1/6, mb1mx3.7/24, mbtmp4.0/6, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/29, Error ellipse: s-maj=37.8km s-min=21.4km az=80.0*

*JMA **13** 15:22:05.1, 34.68N×135.14E, h13^{km}±1^{km}, M4.1*

JMA Felt III J1.

*NEIC **13** 15:22:08.5±1.0, 34.60N×135.33E, h36^{km}±12^{km}, mb3.9/2, Error ellipse: s-maj=12.8km s-min=10.4km az=153.0*

NEIC Felt at Gojo, Hirakata, Izumisano, Kobe, Moriguchi, Osaka and Toyonaka. Recorded [3 JMA] in Hyogo and [1 JMA] in Kyoto, Nara, Okayama, Tottori and Wakayama Prefectures. Recorded [2 JMA] on Awaji-shima.

ISC 13 15:22:04.8±0.5**, 34.68N**±0.02×**135.15E**±0.03**, h14^{km}**±4^{km}**, n27, σ0^{s}97**/39**, mb3.8**/7**, 6C-5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIK	Miki	0.15	328	⇑P	Pg	15 22 08.8	+0.2
JMIK				S	Sg	15 22 11.4	+0.2
JAJ2	Tsuna	0.34	220	⇓P	Pg	15 22 12.0	0.0
JKS	Kasai	0.39	320	⇑P	Pg	15 22 12.8	-0.2
JKS				S	Sg	15 22 18.0	-0.5
JHE	Heguri	0.44	93	⇑P	Pb	15 22 14.0	+0.2
JWY	Kouya	0.59	141	P	Pb	15 22 16.4	+0.1
JWY				*e*S	Sb	15 22 24.4	+0.2
JWT	Wachi	0.64	19	⇓P	Pb	15 22 17.4	+0.3
JWT				S	Sb	15 22 25.5	-0.1
JWM	Minabe	0.84	168	⇑P	Pb	15 22 21.5	+0.8
JWM				S	Sb	15 22 33.0	+1.3
JAD	Aida	0.85	288	⇑P	Pb	15 22 20.6	-0.2
JAD				S	Sb	15 22 31.7	-0.1
JKY	Yasaka	0.95	358	P	Pb	15 22 22.5	0.0
JKY				S	Sb	15 22 35.0	+0.4
JKSM	Kasumi	0.99	336	⇓P	Pb	15 22 23.3	+0.1
JKSM				S	Sb	15 22 36.2	+0.4
TSUJ	Tsu 2	1.05	88	⇑P	Pb	15 22 24.2	0.0
TSUJ				S	Sb	15 22 38.3	+0.8
JJS	Sakaide	1.05	253	⇓P	Pb	15 22 23.9	-0.3
JJS				S	Sb	15 22 37.6	-0.1
JAI	Aioi	1.06	213	⇓P	Pb	15 22 24.8	+0.5
MAJO	Matsushiro	3.11	52	*e*Pn	Pn	15 22 53.8	-0.7
MAJO				*e*Pg	Pg	15 23 03.3	-3.5
MAJO				*e*Sg	Sg	15 23 40.4	-7.9
MAT	Matsushiro	3.11	52	P	Pn	15 22 54.7	+0.3
MAT				S	Sn	15 23 31.4	-0.3
KS15	Wonju Array Si	6.50	297	P	Pn	15 23 41.6	-0.8
INCN	Inchon	7.44	295	P	Pn	15 23 58.2	+2.6
JOW	Kunigami	9.80	219	Pn	P	15 24 27.6	-0.8
	3.0nm,0.3s,baz=97,slow=29,SNR=5.2						
ASAJ	Asahikawa	11.04	29	LR	LR	15 29 04.0	
	comp=Z,97nm,19.4s,baz=222,slow=38						
CN2	Changchun	11.80	323	*e*P	P	15 25 01.8	+6.1
ULN	Ulaanbaatar	24.73	311	*e*P	P	15 27 28.3	+1.5
	0.9nm,0.8s,mb3.4						
SONM	Songino Array	25.13	310	P	P	15 27 32.1	+1.5
	3.8nm,0.9s,mb3.9,baz=116,slow=7.8,SNR=15						
BVAR	Borovoye Array	48.42	313	P	P	15 30 48.9	+0.7
	0.4nm,0.6s,mb3.7,baz=101,slow=7.6,SNR=3.8						
ILAR	Eielson Array	54.17	31	P	P	15 31 28.6	-2.8
	0.5nm,0.8s,mb3.5,baz=262,slow=5.2,SNR=4.3						
WRAB	Tennant Creek	54.31	181	*e*P	P	15 31 30.5	-2.6
	2.6nm,0.6s,mb4.3						
WRA	Warramunga Arr	54.32	181	P	P	15 31 30.5	-2.7
	2.4nm,0.7s,mb4.2,baz=355,slow=7.9,SNR=30						
ASAR	Alice Springs	58.04	181	P	P	15 31 57.9	-1.9
	0.9nm,0.8s,mb3.8,baz=16,slow=6.6,SNR=12						

WEL 13 15:50:00.2±0.3**, 37.14S×177.42E, h152^{km}**±2^{km}**, ML3.5**/10**, 4C, Error ellipse: s-maj=1.8km s-min=1.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.82	121	⇑PN	P	15 50 23.5	-0.5
MXZ				SN	S	15 50 42.0	-0.3
URZ	Urewera	1.14	192	⇑PN	P	15 50 26.4	-0.2
URZ				SN	S	15 50 46.0	-0.9
PUZ	Puketiti	1.15	145	⇑PN	P	15 50 26.4	-0.2
PUZ				SN	S	15 50 45.8	-1.2
MWZ	Matawai	1.20	176	⇑PN	P	15 50 26.9	-0.1
MWZ				SN	S	15 50 47.4	-0.4
KUZ	Kuaotunu	1.42	286	PN	P	15 50 28.9	-0.3
KNZ	Kokohu	1.89	174	PN	P	15 50 33.9	-0.5
KNZ				SN	S	15 50 59.9	-0.9
BKZ	Black Stump Fm	2.15	200	PN	P	15 50 36.7	-0.8
BKZ				SN	S	15 51 05.2	-1.0
MOVZ	Moawhango	2.61	210	PN	P	15 50 42.5	-0.9
PWZ	Pawanui	2.92	188	PN	P	15 50 45.4	-1.8
PWZ				SN	S	15 51 20.4	-2.8
TSZ	Takapari Road	3.13	201	PN	P	15 50 47.7	-2.2
TSZ				SN	S	15 51 25.2	-2.8
BFZ	Birch Farm	3.65	194	PN	P	15 50 53.8	-2.9
BFZ				SN	S	15 51 35.9	-4.2
MRZ	Mangatainoka R	3.80	202	PN	P	15 50 55.4	-3.3
MRZ				SN	S	15 51 38.5	-5.0
MTW	Mount Morrison	4.28	200	*e*PN	P	15 51 01.3	-3.6
MTW				*e*SN	S	15 51 49.3	-5.5
CAW	Cannon Point	4.36	204	*e*PN	P	15 51 02.2	-3.9
KHZ	Kahutara	6.05	208	*e*PN	P	15 51 25.8	-2.7
LTZ	Lake Taylor	6.88	213	*e*PN	P	15 51 36.7	-2.9
MQZ	McQueen's Vall	7.50	207	SN	S	15 53 01.1	-11

IDC 13 15:52:16.4±18.0**, 4.91N×94.36E, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/18**, mbtmp3.3**/3**, ML3.6**/1**, Error ellipse: s-maj=462.0km s-min=49.2km az=84.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.19	18	Pn	P	15 55 38.8	-2.3
	0.1nm,0.3s,baz=225,slow=14,SNR=5.0						
WRA	Warramunga Arr	46.41	123	P	P	16 00 45.2	-1.7
	0.8nm,0.7s,baz=302,slow=8.8,SNR=9.6						
ASAR	Alice Springs	47.89	128	P	P	16 00 56.4	-2.1
	0.1nm,0.5s,baz=300,slow=7.9,SNR=3.8						

MAN 13 15:59:05.5, 11.48N×124.52E, h21^{km}, mb4.2, ML3.0, MS2.7, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.55	125	*i* P	Pb	15 59 17.3	+1.0
PLP				*i* S	Sb	15 59 27.7	+4.0
MSLP	Maasin	1.38	166	*e*P	Pn	15 59 29.1	-0.7
MSLP						15 59 49.1	
SCPH	Surigao	1.94	150	⇑*e*P	Pn	15 59 28.8	-9.0
SCPH				*e*S	Sn	15 59 49.9	-12
PVCP	Virac	2.13	350	*e*P	Pn	15 59 50.5	+10
PVCP				*e*S	Sn	16 00 21.3	+15

CASC 13 16:04:32.1±2.1**, 10.75N×87.17W, h36^{km}**±999^{km}**, MD3.7, ML3.2, 3C-5D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	San Juan del S	1.40	67	*e*P	P	16 04 54.9	-0.6
SSNN				*e*S	S	16 05 12.9	-0.1
COPN	Copaltepe	1.53	22	⇓*e*P	P	16 04 56.7	-0.7
COPN				*e*S	S	16 05 17.4	+1.1
TICN	Ticuantepe	1.57	36	⇓*e*P	P	16 04 58.4	+0.4
APON	Apoyo	1.58	43	⇓*e*P	P	16 04 58.3	+0.1
MGAN	Managua	1.66	33	*e*P	P	16 04 58.5	-0.7
MGAN				*e*S	S	16 05 19.9	+0.4
MGAN				*i*		16 05 20.7	
	comp=E,258nm,0.4s						
LEON	Leon	1.68	9	⇑*e*P	P	16 04 58.9	-0.6
LEON				*e*S	S	16 05 19.4	-0.6
APYN	Apoyeque	1.68	28	*e*P	P	16 04 58.8	-0.7
APYN				*e*S	S	16 05 20.5	+0.4
MIRN	Miramar	1.74	15	⇑*e*P	P	16 04 59.8	-0.5
MIRN				*e*S	S	16 05 20.9	-0.7
MOMJ	Momotombo	1.76	20	⇓*e*P	P	16 04 59.8	-0.8
MOMJ				*e*S	S	16 05 22.5	+0.4
CNGN	Cerro Negro	1.80	15	*e*P	P	16 05 00.5	-0.7
TEL3	Telica 3	1.84	10	⇓*e*P	P	16 05 01.1	-0.7
TELN	Telica	1.87	10	⇑*e*P	P	16 05 00.8	-1.5
JCR	Jicaral	2.21	114	*e*P	P	16 05 05.3	-1.9
JCR				*e*S	S	16 05 30.7	-2.8
CGA2	Cerro Gallo 2	2.76	105	*e*P	P	16 05 15.9	+1.0
CGA2				*e*S	S	16 05 46.8	-0.6
PRS1	Puriscal	2.91	105	*e*P	P	16 05 17.2	+0.1
PRS1				*e*S	S	16 05 51.1	-0.3
LAJ	Bijagual	3.13	106	*e*P	P	16 05 14.3	-5.9
LCR2	La Lucha 2	3.27	108	*e*P	P	16 05 22.1	-0.2
LCR2				*e*S	S	16 06 00.1	-0.3
ICR	Volcan Irazu	3.37	103	*e*P	P	16 05 24.8	+1.1
BUS	Buena Vista	3.56	109	*e*P	P	16 05 26.0	-0.4
BUS				*e*S	S	16 06 06.1	-1.8

IDC 13 16:45:24.0±8.0**, 23.06N×143.18E, h43^{km}**±85^{km}**, mb3.2**/4**, mb1 3.6**/5**, mb1mx3.3**/20**, mbtmp3.6**/5**, ML3.8**/1**, Error ellipse: s-maj=124.8km s-min=18.6km az=103.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	4.12	348	P	P	16 46 25.4	-0.7
	10.0nm,0.3s,baz=288,slow=19,SNR=4.6						
CBIJ				S	S	16 47 11.5	-2.1
	13nm,0.3s,baz=289,slow=22,SNR=5.7						
WRA	Warramunga Arr	43.60	192	P	P	16 53 24.2	-1.8
	0.3nm,0.3s,baz=15,slow=9.0,SNR=18						
ASAR	Alice Springs	47.31	192	P	P	16 53 53.0	-2.5
	0.5nm,1.1s,baz=11,slow=6.5,SNR=6.5						
ILAR	Eielson Array	60.84	27	P	P	16 55 31.4	-2.6
	0.4nm,0.6s,baz=253,slow=5.1,SNR=7.4						
YKA	Yellowknife Ar	75.26	28	P	P	16 57 02.4	-1.3
	0.3nm,0.4s,baz=289,slow=6.0,SNR=5.6						
FINES	FINESS Array B	81.95	334	pP	pP	16 57 56.0	+2.7
	3.4nm,0.9s,baz=72,slow=4.4,SNR=3.9						

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*IDC **13** 16:54:14.6±4.9, 7.19S×128.23E, mb3.6/2, mb1 4.0/4, mb1mx3.8/12, mbtmp3.8/4, ML4.0/2, Error ellipse: s-maj=327.4km s-min=28.6km az=56.0*

ISC 13 16:54:23.1±2.4**, 6.9S**±0.1×**129.7E**±0.1**, h114^{km}**±27^{km}**, n8, σ1^{s}28**/14**, mb3.3**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.36	155	*e*P	P	16 55 56.7	+1.1
	33nm,0.4s						
KAKA				*e*S	S	16 57 07.3	0.0
FITZ	Fitzroy Crossi	11.78	199	*e*P	P	16 57 09.8	+1.2
	2.9nm,0.2s						
FITZ				*e*S	S	16 59 17.3	-0.9
WRA	Warramunga Arr	13.71	161	Pn	P	16 57 31.5	-2.3
	1.5nm,0.3s,baz=323,slow=15,SNR=45						
WRA				Sn	S	16 59 59.1	-4.4
	1.1nm,0.3s,baz=331,slow=22,SNR=5.4						
WB2	Warramunga Arr	13.71	161	*e*P	P	16 57 32.1	-1.7
WB2				*e*S	S	17 00 00.0	-3.6
ASAR	Alice Springs	17.13	167	P	P	16 58 16.9	0.0
	0.4nm,0.3s,baz=344,slow=10,SNR=30						
ASAR				S	S	17 01 23.0	+1.0
	0.2nm,0.3s,baz=348,slow=27,SNR=4.3						
ASPA	Alice Springs	17.13	167	*e*P	P	16 58 18.4	+1.5
ASPA				*e*S	S	17 01 22.2	+0.3
STKA	Stephens Creek	27.20	157	P	P	17 00 03.5	+5.2
	1.0nm,0.6s,mb3.5,baz=348,slow=9.3,SNR=3.1						
CMAR	Chiang Mai Arr	39.44	310	P	P	17 01 39.0	-4.8
	0.2nm,0.6s,mb3.1,baz=138,slow=7.0,SNR=4.5						

OTT 13 16:59:07.2±0.2**, 52.74N×67.38W, MN2.8**/7**, Blast, Mount Wright, Qc Mining explosion., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	2.12	9	PN	Pn	16 59 42.5	-1.8
SCHQ				SN	Sn	17 00 11.2	-0.5
SCHQ				Trac		17 00 13.9	
	comp=Z,24nm,0.2s						
MNQ	Manicouagan	2.38	202	PN	Pn	16 59 47.8	-0.3
MNQ				Trac		17 00 23.2	
	comp=Z,15nm,0.1s						
SMQ	Clarke City	2.56	170	PN	Pn	16 59 49.4	-1.2
SMQ				SN	Sn	17 00 19.8	-3.1
SMQ				Trac		17 00 27.1	
	comp=Z,29nm,0.3s						
ICQ	Pointe Anglais	3.23	179	PN	Pn	16 59 58.5	-1.6
ICQ				SN	Sn	17 00 36.0	-3.8
ICQ				Trac		17 00 45.9	
	comp=Z,6.9nm,0.2s						
CNQ	Baie Comeau	3.47	188	PN	Pn	17 00 02.6	-1.0
CNQ				Trac		17 00 59.8	
	comp=Z,5.2nm,0.2s						
GSQ	Grosses Roches	3.84	177	PN	Pn	17 00 06.7	-2.1
GSQ				SN	Sn	17 00 54.6	-0.7
GSQ				Trac		17 01 09.3	
	comp=Z,4.5nm,0.2s						
LG4Q	La Grande 4	4.14	285	PN	Pn	17 00 10.8	-2.3
LG4Q				PG	Pg	17 00 19.2	-11
LG4Q				SN	Sn	17 00 59.3	-3.6
LG4Q				LG		17 01 12.4	
LG4Q				Trac		17 01 18.2	
	comp=Z,5.6nm,0.2s						
LMQ	La Malbaie	5.54	201	PN	Pn	17 00 29.7	-3.2
DRLN	Deer Lake	7.14	115	PN	Pn	17 00 50.1	-5.4
VLDQ	Val d'Or	7.93	238	PN	Pn	17 01 03.0	-3.5
VLDQ				SN	Sn	17 02 33.5	-4.5
MALO	McAlpine Lake	8.21	256	PN	P	17 01 05.3	-5.2
MALO				SN	Sn	17 02 32.7	-12
VIMO	Victor Mine	9.92	277	PN	P	17 01 28.2	-5.8
VIMO				SN	Sn	17 03 13.4	-14
SILO	Sutton Inlier	10.56	286	PN	P	17 01 36.5	-6.3
SILO				SN	S	17 03 28.4	-15

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*IDC **13** 17:03:26.5±2.1, 22.69S×168.40E, mb4.0/6, mb1 4.2/6, mb1mx4.1/14, mbtmp4.0/6, MS3.6/6, Ms1 3.5/6, ms1mx3.3/22, Error ellipse: s-maj=79.9km s-min=31.8km az=155.0*

ISC 13 17:03:24.2±1.2**, 23.7S**±0.2×**168.6E**±0.2**, h10^{km}, n12, σ0^{s}70**/11**, mb3.9**/6**, MS3.4**/5**, New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.58	309	*e*P	Pn	17 04 06.2	-0.6
DZM				*e*S	Sn	17 04 39.5	+1.0
NOUC	Port Laguerre	2.66	307	*e*P	Pn	17 04 07.9	-0.1
NOUC				*e*S	Sn	17 04 40.1	-0.5
URZ	Urewera	16.21	155	LR	LR	17 12 22.2	
	comp=Z,191nm,19.4s,baz=176,slow=31						
RPZ	Rata Peaks	20.04	175	LR	LR	17 14 05.9	
	comp=Z,172nm,19.3s,MS3.4,baz=42,slow=30						
CTA	Charters Tower	21.04	276	P	P	17 08 09.8	-0.9
	5.8nm,0.9s,mb3.9,baz=98,slow=4.7,SNR=3.7						
CTA				LR	LR	17 15 31.5	
	comp=Z,83nm,19.7s,MS3.1,baz=63,slow=35						
STKA	Stephens Creek	25.17	245	*e*P	P	17 08 56.4	+5.1
	5.1nm,0.8s,mb4.1						
STKA	Stephens Creek	25.17	245	P	P	17 08 56.2	+4.9
	6.7nm,0.8s,mb4.2,baz=89,slow=12,SNR=16						
STKA				LR	LR	17 19 07.7	
	comp=Z,54nm,19.5s,MS3.1,baz=31,slow=37						
ASAR	Alice Springs	31.72	263	P	P	17 09 51.9	+1.3
	2.9nm,1.1s,mb4.0,baz=81,slow=8.6,SNR=12						
ASAR				LR	LR	17 22 35.7	
	comp=Z,77nm,19.9s,MS3.4,baz=70,slow=36						
WRA	Warramunga Arr	31.97	270	P	P	17 09 52.7	-0.1
	0.9nm,0.8s,mb3.7,baz=97,slow=8.1,SNR=7.3						
MAW	Mawson	74.07	203	LR	LR	17 43 52.1	
	comp=Z,107nm,18.1s,MS4.2,baz=61,slow=32						
CMAR	Chiang Mai Arr	79.83	295	P	P	17 15 34.5	-0.3
	1.8nm,1.0s,mb3.9,baz=134,slow=3.5,SNR=8.4						
NVAR	Mina Array Bea	92.21	49	P	P	17 16 35.9	+0.3
	0.5nm,0.8s,mb3.9,baz=213,slow=6.3,SNR=3.6						

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*KNET **13** 17:16:03.5±3.4, 37.97N×70.15E, ml4.7, Error ellipse: s-maj=36.6km s-min=28.1km az=47.0*

*NNC **13** 17:16:08.5±7.0, 38.44N×69.92E, mpv4.8, Error ellipse: s-maj=96.4km s-min=48.0km az=148.0*

*MOS **13** 17:16:13.7±1.4, 38.65N×70.55E, h33^{km}, mb4.3/15, Error ellipse: s-maj=12.7km s-min=7.4km az=93.7*

*BJI **13** 17:16:16.7, 39.04N×70.44E, h44^{km}, mB5.1, mb4.5, ML4.5*

*NEIC **13** 17:16:16.7±0.6, 38.67N×70.69E, h45^{km}, mb4.1/7, Error ellipse: s-maj=14.4km s-min=8.7km az=51.0*

*IDC **13** 17:16:18.6±5.0, 38.85N×70.47E, h46^{km}±45^{km}, mb3.6/11, mb1 3.8/14, mb1mx3.7/23, mbtmp3.9/14, ML3.9/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/22, Error ellipse: s-maj=31.4km s-min=17.6km az=10.0*

ISC 13 17:16:18.2±1.0**, 38.70N**±0.06×**70.48E**±0.08**, h67^{km}**±9^{km}**, n83, σ1^{s}30**/88**, mb3.9**/21**, 6C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.22	35	P	P	17 17 21.6	0.0
	SNR=26						
KSH	Kashi	4.35	78	⇑P	P	17 17 23.8	+0.3
KSH				Smax			
	comp=N,340nm,0.8s						
KSH				Smax			
	comp=E,440nm,1.1s						
UCH	Uchtor	4.68	40	P	P	17 17 27.8	-0.3
	SNR=172						
EKS2	Erkin-Say	4.69	31	P	P	17 17 28.8	+0.7
	SNR=45						
KZA	Kyzart	4.97	46	P	P	17 17 31.9	-0.1
	SNR=26						
AAK	Ala-Archa	4.98	37	⇑P	P	17 17 32.0	-0.2
	comp=E,64nm,0.5s						
AAK				⇑S	S	17 18 35.7	+6.7
	comp=E,70nm,0.7s						
AAK	Ala-Archa	4.98	37	P	P	17 17 33.6	+1.4
	SNR=87						
AAK	Ala-Archa	4.98	37	*i* PN	P	17 17 30.9	-1.2
AAK				pmax	pmax		
	comp=Z,49nm,0.5s						
AAK	Ala-Archa	4.98	37	*e*P	P	17 17 29.7	-2.4
FRU	Bishkek	5.19	36	*e*PN	P	17 17 37.0	+1.9
FRU				*e*S	S	17 18 40.0	+5.8
FRU				pmax	pmax		
	comp=Z,110nm,1.1s						
FRU				pmax	pmax		
	comp=E,510nm,1.8s						
KBK	Karagaybulak	5.21	39	P	P	17 17 35.3	-0.1
	SNR=262						
CHMS	Chumysh	5.38	36	P	P	17 17 38.4	+0.7
	SNR=103						
USP	Ospenovka	5.48	32	P	P	17 17 39.6	+0.5
	SNR=69						
ULHL	Ulahol	5.64	49	P	P	17 17 40.6	-0.7
	SNR=8.8						
TKM2	Tokmak 2	5.73	41	P	P	17 17 44.5	+1.9
	SNR=100						
THN	Thein Dam	7.57	144	*e*P	P	17 18 07.0	-1.1
THN				*e*		17 19 30.6	
SMLA	Simla	9.34	142	⇑*i*P	P	17 18 44.2	+12
SMLA				*i* S	S	17 20 24.6	+7.9
DDI	Dehra Dun	10.43	141	*e*P	P	17 18 48.7	+1.5
DDI				*e*		17 20 46.7	
NDI	New Delhi	11.46	149	*e*	S	17 21 03.0	-5.1
MK31	Makanchi Array	11.86	43	⇓P	P	17 19 04.9	-1.4
	comp=E,1.7nm,0.5s,baz=229,slow=15,SNR=48						
KURK	Kurchatov	13.32	23	P	Px	17 19 38.6	
	comp=E,15nm,0.9s,baz=214,slow=6.5,SNR=4.8						
KURK	Kurchatov	13.32	23	*e*P	P	17 19 20.4	-5.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	Kurchatov	13.32	23	*e*P	P	17 19 20.4	-5.3
	comp=Z,3.9nm,0.8s						
WMQ	Urumqi	13.92	63	*e*P	P	17 19 35.5	+2.0
BVA0	Borovoye Array	14.33	360	⇑P	P	17 19 35.1	-3.6
	comp=Z,0.7nm,0.6s						
BVAR	Borovoye Array	14.33	360	P	P	17 19 36.5	-2.2
	comp=Z,1.3nm,0.3s,baz=167,slow=14,SNR=26						
BRVK	Borovoye	14.36	360	*e*P	P	17 19 35.1	-4.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	Borovoye	14.36	360	*e*P	P	17 19 35.1	-4.0
	comp=Z,5.5nm,0.6s						
CHKZ	Chkalovo	14.98	0	⇑P	P	17 19 44.7	-2.5
	comp=Z,4.4nm,0.9s						
CHKZ	Chkalovo	14.98	0	*e*P	P	17 19 44.7	-2.5
CHKZ				pmax	pmax		
	comp=Z,47nm,0.9s						
CHKZ	Chkalovo	14.98	0	*e*P	P	17 19 44.7	-2.5

	comp=Z,47nm,0.9s						
KOLN	Koldanda	15.46	131	*e*P	P	17 19 55.4	+2.0
	comp=Z,50nm,0.6s						
GKN	Gorkha	15.91	128	*e*P	P	17 19 55.1	-4.1
	comp=Z,26nm,0.7s						
GKN				*e*S	S	17 22 45.7	-7.6
KKN	Kakani	16.46	127	*e*P	P	17 20 00.2	-5.9
	comp=Z,11nm,0.6s						
DMN	Daman	16.48	128	*e*P	P	17 20 02.4	-4.0
	comp=Z,17nm,0.8s						
PKI	Pulchoki	16.70	127	*e*P	P	17 20 04.2	-4.9
	comp=Z,22nm,1.0s						
JIRN	Jiri	17.13	125	*e*P	P	17 20 06.2	-8.3
	comp=Z,13nm,0.4s						
ZAL	Zalesovo	18.11	28	P	P	17 20 24.7	-1.8
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	18.11	28	P	P	17 20 24.7	-1.8
	comp=Z,0.7nm,0.3s,baz=250,slow=12,SNR=12						
NVS	Novosibirsk	18.31	24	*e*P	P	17 20 25.5	-3.3
NVS				pmax	pmax		
	comp=Z,11nm,1.4s						
NVS				pmax	pmax		
	comp=N,12nm,1.5s						
LSA	Lhasa	19.28	112	P	P	17 20 38.0	-2.1
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LSA	Lhasa	19.28	112	P	P	17 20 38.0	-2.1
	comp=Z,2.9nm,0.6s						
GNI	Garni	19.91	282	*i* P	P	17 20 50.5	+3.7
GNI				pmax	pmax		
	comp=Z,11nm,1.0s						
GNI	Garni	19.91	282	P	P	17 20 46.3	-0.5
	comp=Z,0.4nm,0.3s,baz=105,slow=19,SNR=2.5						
GNI	Garni	19.91	282	P	P	17 20 47.4	+0.6
	comp=Z,6.2nm,0.7s						
GOF	Gofitskoye	21.34	296	*e*P	P	17 21 02.5	+1.2
GOF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.3						
KIV	Kislovodsk	21.47	293	*e*P	P	17 21 07.2	+4.6
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb3.9						
KIV				pmax	pmax		
	comp=N,8.0nm,0.8s						
GTA	Gaotai	22.75	79	*e*P	P	17 21 16.0	+0.7
GTA				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb3.8						
SOC	Sochi	23.60	292	*e*P	P	17 21 26.7	+3.3
SOC				*e*S	S	17 25 33.7	+4.2
SOC				*e*SS	SS	17 26 34.2	+12
SOC				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.7						
SOC				pmax	pmax		
	comp=N,30nm,0.9s						
SOC				pmax	pmax		
	comp=E,29nm,1.0s						
ZAK	Zakamensk	25.92	53	*e*P	P	17 21 46.4	+0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
TLY	Talaya	26.48	50	*i* P	P	17 21 51.0	+0.3
SONM	Songino Array	27.49	59	P	P	17 22 00.3	+0.3
	comp=Z,1.0nm,0.9s,mb3.3,baz=271,slow=9.8,SNR=9.3						
MOS	Moscow	27.71	319	*e*P	P	17 22 02.1	+0.2
MOS				*e*		17 22 51.7	
OBN	Obninsk	28.02	317	*e*P	P	17 22 04.5	-0.2
OBN				*e*		17 22 49.0	
OBN				S	S	17 26 38.4	-4.3
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
OBN				MLR	MLR		
	comp=Z,100nm,13.0s						
AKASG	Malin Array Be	31.28	306	P	P	17 22 32.5	-1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	31.28	306	P	P	17 22 32.5	-1.1
	comp=Z,2.9nm,0.8s,mb4.0,baz=77,slow=7.1,SNR=12						
BOD	Bodaibo	33.94	41	*e*P	P	17 22 55.2	-1.5
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
FINES	FINESS Array B	35.44	325	P	P	17 23 08.9	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	35.44	325	P	P	17 23 08.9	-0.5
	comp=Z,2.2nm,0.9s,mb4.0,baz=135,slow=8.1,SNR=5.9						
WHN	Wuhan	36.73	89	*e*P	P	17 23 23.5	+2.9
ARCES	ARCESS Array B	38.96	337	P	P	17 23 38.5	-0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,56nm,18.1s						
ARCES	ARCESS Array B	38.96	337	P	P	17 23 38.5	-0.3
	comp=Z,1.4nm,0.7s,mb3.9,baz=101,slow=6.2,SNR=3.7						
ARCES				LR	LR	17 41 08.6	
	comp=Z,56nm,18.1s,baz=220,slow=38						
ARCES	ARCESS Array B	38.96	337	P	P	17 23 38.5	-0.3
ARCES				LR	LR	17 41 08.6	
NB2	NORSAR Subarra	42.39	322	P	P	17 24 06.5	-0.5
	comp=Z,1.4nm,0.7s,mb3.8,baz=94,slow=7.9						
NB2	NORSAR Subarra	42.39	322	P	P	17 24 06.5	-0.5
NB2				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
NOA	NORSAR Array B	42.39	322	P	P	17 24 06.8	-0.2
NOA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
NOA	NORSAR Array B	42.39	322	P	P	17 24 06.8	-0.2
	comp=Z,7.4nm,1.2s,mb4.3,baz=94,slow=8.0,SNR=5.8						
NOA	NORSAR Array B	42.39	322	P	P	17 24 06.8	-0.2
YAK	Yakutsk	42.44	37	*i* P	P	17 24 07.4	-0.1
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
YAK	Yakutsk	42.44	37	*e*P	P	17 24 06.7	-0.8
	comp=Z,4.7nm,0.6s,mb4.4						
TIXI	Tiksi	43.90	23	*e*P	P	17 24 19.0	-0.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
DAVOX	Davos	44.24	301	P	P	17 24 23.6	+1.2
	comp=Z,2.2nm,0.7s,mb4.0,baz=98,slow=7.1,SNR=2.8						
ESDC	Sonseca Array	56.09	296	P	P	17 25 52.3	-0.3
	comp=Z,0.4nm,0.3s,mb3.9,baz=62,slow=7.5,SNR=7.3						
INK	Inuvik	71.80	9	*e*P	P	17 27 35.3	+0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	71.80	9	*e*P	P	17 27 35.3	+0.6
	comp=Z,1.6nm,0.8s,mb3.9						
ILAR	Eielson Array	72.78	16	P	P	17 27 40.5	+0.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	72.78	16	P	P	17 27 40.5	0.0
	comp=Z,0.6nm,0.9s,mb3.4,baz=332,slow=2.6,SNR=8.2						
YKA	Yellowknife Ar	79.07	2	*i* P	P	17 28 17.8	+1.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	79.07	2	P	P	17 28 17.2	+1.1
	comp=Z,1.3nm,0.9s,mb3.8,baz=348,slow=5.7,SNR=21						
YKA	Yellowknife Ar	79.07	2	P	P	17 28 17.2	+1.1
WRA	Warramunga Arr	83.50	122	P	P	17 28 40.9	+0.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	83.50	122	P	P	17 28 40.9	+0.7
	comp=Z,0.7nm,0.9s,mb3.5,baz=327,slow=4.9,SNR=5.3						
ASAR	Alice Springs	85.85	125	P	P	17 28 55.1	+3.3
	comp=Z,0.3nm,0.7s,mb3.3,baz=315,slow=5.4,SNR=5.5						

IDC 13 17:25:58.5±8.0**, 18.56S×175.33E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.7**/14**, mbtmp3.7**/4**, Error ellipse: s-maj=193.4km s-min=69.6km az=118.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.13	240	P	P	17 32 36.9	-1.8
	2.2nm,0.7s,baz=81,slow=8.7,SNR=7.1						
WRA	Warramunga Arr	38.66	261	P	P	17 33 23.5	-2.3
	0.3nm,0.6s,baz=96,slow=8.6,SNR=5.1						
ASAR	Alice Springs	38.88	255	P	P	17 33 26.1	-1.5
	0.8nm,0.8s,baz=84,slow=8.5,SNR=12						
CMAR	Chiang Mai Arr	83.55	292	P	P	17 38 29.1	-1.3
	0.6nm,0.9s,baz=90,slow=2.9,SNR=4.1						

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*IDC **13** 17:29:44.9±1.7, 32.44S×178.11W, mb4.3/3, mb1 4.4/4, mb1mx4.0/16, mbtmp4.2/4, ML3.7/1, MS3.4/2, Ms1 3.3/2, ms1mx2.8/22, Error ellipse: s-maj=49.0km s-min=30.1km az=137.0*

*NEIC **13** 17:29:46.2±0.9, 32.43S×178.10W, h10^{km}, mb4.4/2, Error ellipse: s-maj=23.2km s-min=16.9km az=127.0*

ISC 13 17:29:46.7±5.1**, 32.6S**±0.2×**178.0W**±0.7**, h33^{km}, n12, σ0^{s}43**/8**, mb4.2**/4**, MS3.3**/2**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.95	214	Pn	Pn	17 31 29.1	+0.1
	1.4nm,0.3s,baz=50,slow=9.4,SNR=6.8						
URZ				Sn	Sn	17 32 47.6	0.0
	3.5nm,0.3s,baz=111,slow=23,SNR=10						
STKA	Stephens Creek	34.05	260	LR	LR	17 50 05.3	
	comp=Z,66nm,18.3s,MS3.4,baz=202,slow=36						
CTA	Charters Tower	34.20	282	P	P	17 36 32.8	+1.4
	3.1nm,0.5s,mb4.5,baz=107,slow=7.6,SNR=6.1						
CTA				LR	LR	17 47 04.9	
	comp=Z,46nm,18.4s,MS3.2,baz=225,slow=30						
CTAO	Charters Tower	34.20	282	*e*P	P	17 36 31.2	-0.1
	1.7nm,0.5s,mb4.2						
ASAR	Alice Springs	43.04	269	P	P	17 37 45.3	+0.2
	1.4nm,0.6s,mb3.9,baz=112,slow=7.8,SNR=27						
WB2	Warramunga Arr	44.21	274	*e*P	P	17 37 54.3	-0.3
WRAB	Tennant Creek	44.22	274	*e*P	P	17 37 54.3	-0.4
	4.3nm,0.6s,mb4.4						
WRA	Warramunga Arr	44.22	274	P	P	17 37 54.5	-0.2
	2.0nm,0.4s,mb4.2,baz=113,slow=7.9,SNR=75						
BVAR	Borovoye Array	127.93	315	PKP	PKPdf	17 48 50.7	+1.7
	0.4nm,0.5s,baz=134,slow=1.9,SNR=6.1						
KAF	Kangasniemi	146.57	339	*e*pkp	PKPdf	17 49 25.6	+3.2
	baz=50,slow=3.6						
FINES	FINESS Array B	147.16	339	PKPbc	PKPdf	17 49 28.1	+4.7
	2.5nm,0.6s,baz=52,slow=4.3,SNR=28						
HFS	Hagfors	151.35	348	PKPbc	PKPdf	17 49 39.6	+10
	2.3nm,0.8s,baz=135,slow=4.2,SNR=6.2						

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*JMA **13** 17:33:29.8±0.4, 34.00N×142.56E, h66^{km}, M3.3*

*IDC **13** 17:33:33.9±7.7, 34.16N×142.22E, h56^{km}±53^{km}, mb3.1/3, mb1 3.4/4, mb1mx3.1/21, mbtmp3.5/4, ML3.7/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/8, Error ellipse: s-maj=60.3km s-min=41.3km az=22.0*

ISC 13 17:33:31.6±1.8**, 34.08N**±0.07×**142.4E**±0.1**, h59^{km}**±17^{km}**, n10, σ0^{s}88**/15**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.31	296	P	P	17 33 54.5	+0.3
BSO1				*e*S	S	17 34 13.0	+2.0
BSO3	Boso 3	1.72	295	P	P	17 34 00.7	+0.8
BSO3				*e*S	S	17 34 24.4	+3.6
JHJ2	Mitsune	2.37	247	P	P	17 34 08.8	-0.2
JHJ2				*e*S	S	17 34 36.9	+0.1
JHJ	Hachijo jima 2	2.39	247	P	P	17 34 08.7	-0.6
	52nm,0.3s,baz=73,slow=20,SNR=10						
JHJ				S	S	17 34 36.1	-1.3
	37nm,0.3s,baz=74,slow=22,SNR=9.6						
JHJ				LR	LR	17 34 39.3	
	comp=Z,999nm,21.1s,baz=100,slow=29						
JIM2	Oshima 3	2.54	285	P	P	17 34 11.1	-0.3
JHO	Hitachi	2.94	330	P	P	17 34 16.2	-0.8
JHO				*e*S	S	17 34 49.8	-1.4
JOD2	Odawara 2	2.98	294	*e*S	S	17 34 52.3	+0.1
CMAR	Chiang Mai Arr	41.64	259	P	P	17 41 15.8	-0.1
	0.1nm,0.4s,mb2.8,baz=78,slow=8.3,SNR=3.5						
WRA	Warramunga Arr	54.27	189	P	P	17 42 54.8	+0.7
	0.5nm,0.4s,mb3.8,baz=6.3,slow=7.5,SNR=14						
WRA				pP	pP	17 43 05.0	-4.7
	0.3nm,0.4s,baz=6.3,slow=7.6,SNR=2.6						
ASAR	Alice Springs	58.00	189	P	P	17 43 21.0	+0.3
	0.2nm,0.6s,mb3.3,baz=3.2,slow=6.3,SNR=5.4						

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*NEIC **13** 17:38:51.6, 17.24N×96.60W, h70^{km}, MD3.7(MEX), After MEX.*

MEX 13 17:38:51.6±0.5**, 17.26N×96.57W, h69^{km}**±5^{km}**, MD3.7, 1C, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXX	Oaxaca	0.23	220	*i* P	P	17 39 00.7	-1.6
OXX				*i* S	S	17 39 08.3	-1.9
VHO	Vista Hermosa	0.24	220	⇑*i*P	P	17 39 01.2	-1.2
VHO				*i* S	S	17 39 09.0	-1.3
HUIG	Huatulco	1.54	163	*e*P	P	17 39 16.0	-1.7
HUIG				*e*S	S	17 39 34.0	-2.9
IISM	Ciudad Serdan	1.89	336	*e*P	P	17 39 27.0	+4.7
IISM				*i* S	S	17 39 42.0	-2.9
IIB	San Bernardino	2.39	316	*i* P	P	17 39 41.5	+12
IIB	San Bernardino	2.39	316	*i* P	P	17 39 30.0	+0.6
PPM	Popocatepetl	2.66	313	*i* P	P	17 39 33.0	-0.1
PPM				*i* S	S	17 40 02.0	-2.3
PPM	Popocatepetl	2.66	313	*i* P	P	17 39 33.0	-0.1
PPM				*e*P		17 39 35.0	
PPM				*i* S	S	17 40 02.0	-2.3

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*NEIC **13** 17:40:18.7±3.6, 17.95S×179.64W, h629^{km}±43^{km}, mb4.1/3, Error ellipse: s-maj=53.2km s-min=18.9km az=154.0*

*IDC **13** 17:40:18.1±6.2, 18.00S×179.58W, h623^{km}±80^{km}, mb3.1/8, mb1 3.4/8, mb1mx3.2/16, mbtmp4.1/8, Error ellipse: s-maj=72.3km s-min=30.0km az=153.0*

ISC 13 17:40:15.4±1.2**, 17.9S**±0.5×**179.7W**±0.3**, h600^{km}, n16, σ0^{s}34**/14**, mb3.7**/9**, 3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	32.28	261	⇓*i*P	P	17 45 59.0	+1.0
	4.6nm,0.8s,mb4.2						
CTA	Charters Tower	32.28	261	P	P	17 45 59.1	+1.1
	6.4nm,0.8s,mb4.3,baz=117,slow=12,SNR=10						
CTAO	Charters Tower	32.28	261	*e*P	P	17 45 58.6	+0.6
	5.0nm,0.7s,mb4.2						
STKA	Stephens Creek	37.62	241	⇓*i*P	P	17 46 41.8	-0.2
	2.0nm,0.6s,mb3.8						
STKA	Stephens Creek	37.62	241	P	P	17 46 41.9	-0.1
	1.9nm,0.4s,mb4.0,baz=105,slow=10,SNR=24						
WB2	Warramunga Arr	43.46	260	*e*P	P	17 47 28.5	-0.3
WRAB	Tennant Creek	43.47	260	*e*P	P	17 47 28.3	-0.5
	2.0nm,0.6s,mb3.8						
WRA	Warramunga Arr	43.47	260	P	P	17 47 28.7	-0.1
	1.1nm,0.5s,mb3.6,baz=97,slow=6.6,SNR=46						
ASAR	Alice Springs	43.66	254	P	P	17 47 30.4	+0.1
	13nm,0.7s,mb4.6,baz=90,slow=8.5,SNR=426						
ASPA	Alice Springs	43.66	254	⇓*i*P	P	17 47 30.3	0.0
NVAR	Mina Array Bea	80.22	44	P	P	17 51 26.0	+0.1
	0.4nm,0.6s,mb2.9,baz=234,slow=7.8,SNR=3.4						
ILAR	Eielson Array	86.11	13	P	P	17 51 54.4	-0.2
	0.3nm,0.5s,mb3.2,baz=231,slow=5.1,SNR=11						
TXAR	Lajitas Array	86.97	58	P	P	17 51 59.6	+0.2
	0.9nm,0.8s,mb3.5,baz=211,slow=7.3,SNR=4.6						
PDAR	Pinedale Array	88.14	44	P	P	17 52 04.4	-0.1
	0.2nm,0.5s,mb3.1,baz=297,slow=4.0,SNR=2.6						
BVAR	Borovoye Array	116.06	321	PKP	PKPdf	17 57 51.5	+0.6
	0.2nm,0.6s,baz=90,slow=2.9,SNR=4.3						
ARCES	ARCESS Array B	126.06	349	PKP	PKPdf	17 58 10.7	+1.0
	2.6nm,0.9s,baz=31,slow=5.3,SNR=3.8						

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*NEIC **13** 17:41:06.9±0.6, 4.77N×92.15E, mb4.3/2, Error ellipse: s-maj=15.9km s-min=10.6km az=225.0*

*IDC **13** 17:41:07.5±1.2, 4.91N×92.35E, h27^{km}±5^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.6/19, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=48.7km s-min=19.1km az=58.0*

ISC 13 17:41:04.7±0.7**, 4.8N**±0.1×**92.1E**±0.1**, h28^{km}, h28^{km}**±1.4^{km}**:pP-P, n13, σ0^{s}86**/13**, mb3.9**/9**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	11.61	283	*e*P	P	17 43 51.7	-0.1
	18nm,0.4s						
PALK				*e*		17 44 02.0	
PALK				*e*S	S	17 45 52.5	-9.0
CMAR	Chiang Mai Arr	15.17	26	Pn	P	17 44 40.0	+0.9
	0.1nm,0.3s,baz=219,slow=14,SNR=11						
SONM	Songino Array	44.64	14	P	P	17 49 15.5	-1.2
	0.4nm,0.6s,mb3.4,baz=202,slow=6.7,SNR=3.9						
SONM				pP	pP	17 49 24.5	-0.7
	1.3nm,0.6s,baz=195,slow=9.1,SNR=11						
WRA	Warramunga Arr	48.23	122	P	P	17 49 45.0	-0.3
	1.4nm,0.7s,mb4.1,baz=298,slow=8.9,SNR=12						
WRAB	Tennant Creek	48.23	122	*e*P	P	17 49 45.4	0.0
	1.7nm,0.4s,mb4.4						
ZAL	Zalesovo	49.39	354	P	P	17 49 53.3	-0.6
	0.9nm,0.4s,mb4.2,baz=193,slow=1.4,SNR=5.1						
ZAL				pP	pP	17 50 02.5	0.0
	1.6nm,0.4s,baz=313,slow=7.5,SNR=7.5						
ZAL	Zalesovo	49.39	354	P	P	17 49 53.3	-0.6
ZAL				pP	pP	17 50 02.5	0.0
ASAR	Alice Springs	49.59	127	P	P	17 49 56.0	+0.2
	0.7nm,0.7s,mb3.8,baz=308,slow=8.1,SNR=6.6						
ASAR				PcP	PcP	17 51 17.4	0.0
	0.3nm,0.6s,baz=307,slow=3.2,SNR=5.0						
BVAR	Borovoye Array	51.32	343	P	P	17 50 09.5	+0.9
	0.7nm,0.8s,mb3.6,baz=143,slow=7.4,SNR=3.8						
BVAR				pP	pP	17 50 16.5	-0.7
	1.0nm,0.7s,baz=149,slow=8.6,SNR=6.3						
CHKZ	Chkalovo	51.84	344	*e*P	P	17 50 11.0	-1.5
	1.6nm,0.4s,mb4.3						
CHKZ				*e*	pP	17 50 20.3	-0.8
STKA	Stephens Creek	59.51	131	P	P	17 51 08.1	0.0
	0.9nm,0.5s,mb4.0,baz=333,slow=4.5,SNR=5.4						
GERES	GERESS Array B	78.80	319	P	P	17 53 08.2	+1.6
	0.5nm,0.7s,mb3.6,baz=63,slow=3.0,SNR=3.6						
GERES				pP	pP	17 53 17.1	+1.5
	1.4nm,0.9s,baz=104,slow=5.5,SNR=5.9						
DAVOX	Davos	81.23	316	pP	pP	17 53 30.1	+1.4
	1.6nm,0.4s,baz=162,slow=6.1,SNR=3.1						

IDC 13 17:44:23.6±2.1**, 32.34S×178.27W, mb4.1**/2**, mb1 4.3**/3**, mb1mx3.9**/15**, mbtmp4.1**/3**, ML3.6**/1**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx3.0**/21**, Error ellipse: s-maj=58.4km s-min=33.3km az=125.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.01	211	Pn	Pn	17 46 08.0	-2.0
	1.0nm,0.3s,baz=128,slow=12,SNR=5.8						
URZ				Sn	Sn	17 47 26.4	-5.0
	2.3nm,0.3s,baz=338,slow=20,SNR=8.8						
MRZ	Mangatainoka R	9.67	209	SN	Sn	17 48 25.7	-12
THZ	Tophouse	11.75	214	SN	S	17 49 16.1	-12
MQZ	McQueen's Vall	13.40	210	SN	S	17 49 50.6	-18
CTA	Charters Tower	33.93	282	LR	LR	18 01 22.0	
	comp=Z,57nm,22.0s,baz=48,slow=30						
ASAR	Alice Springs	42.81	269	P	P	17 52 23.6	-1.4
	2.2nm,0.9s,baz=107,slow=7.6,SNR=19						
ASAR				LR	LR	18 09 18.1	
	comp=Z,56nm,18.2s,baz=275,slow=35						
WRA	Warramunga Arr	43.98	274	P	P	17 52 32.6	-1.9
	1.6nm,0.4s,baz=112,slow=8.1,SNR=37						
VNDA	Vanda	46.15	186	LR	LR	18 08 07.0	
	comp=Z,68nm,18.3s,baz=48,slow=31						
BVAR	Borovoye Array	127.62	315	PKP	PKPdf	18 03 29.8	-2.6
	0.4nm,0.6s,baz=135,slow=1.6,SNR=5.6						
KAF	Kangasniemi	146.29	339	*e*p	PKPbc	18 04 03.6	-1.7
FINES	FINESS Array B	146.87	339	PKPbc	PKPbc	18 04 06.3	-0.3
	1.9nm,0.6s,baz=55,slow=4.3,SNR=22						

IDC 13 17:57:46.4±2.7**, 31.62S×58.26E, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.3**/19**, mbtmp3.6**/2**, Error ellipse: s-maj=88.9km s-min=57.7km az=40.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	63.26	44	P	P	18 08 17.1	-2.3
	0.6nm,0.5s,baz=226,slow=7.0,SNR=5.7						
ASAR	Alice Springs	66.28	104	P	P	18 08 37.0	-1.9
	0.2nm,0.7s,baz=235,slow=5.8,SNR=4.7						
YKA	Yellowknife Ar	148.78	354	PKPbc	PKPdf	18 17 34.4	+1.5
	1.2nm,1.0s,baz=0.1,slow=2.8,SNR=14						

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*NEIC **13** 18:06:09.2±0.6, 10.90N×141.03E, mb4.2/1, Error ellipse: s-maj=25.9km s-min=15.2km az=83.0*

*IDC **13** 18:06:09.5±0.9, 10.88N×141.11E, h44^{km}±8^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.6/18, mbtmp3.8/6, Error ellipse: s-maj=46.4km s-min=16.3km az=97.0*

ISC 13 18:06:07.3±0.7**, 10.9N**±0.1×**141.0E**±0.2**, h44^{km}, h44^{km}**±1.5^{km}**:pP-P, n11, σ1^{s}01**/11**, mb3.9**/7**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.31	192	P	P	18 12 25.6	-0.3
	0.7nm,0.7s,mb3.6,baz=11,slow=10.0,SNR=7.1						
WRA				pP	pP	18 12 36.6	-1.1
	0.4nm,0.6s,baz=9.4,slow=9.6,SNR=2.7						
ASAR	Alice Springs	35.02	191	P	P	18 12 59.0	+1.1
	0.5nm,0.5s,mb3.7,baz=21,slow=12,SNR=14						
ASAR				pP	pP	18 13 10.6	+0.6
	0.3nm,0.6s,baz=21,slow=12,SNR=2.7						
SONM	Songino Array	46.91	328	P	P	18 14 36.4	+1.1
	0.2nm,0.5s,mb3.4,baz=121,slow=5.1,SNR=4.1						
SONM				pP	pP	18 14 49.1	+1.6
	0.3nm,0.9s,baz=133,slow=6.3,SNR=2.0						
AFI	Afiamalu	52.91	117	P	P	18 15 20.6	-1.1
KURK	Kurchatov	64.27	321	*e*P	P	18 16 39.2	-1.1
	2.0nm,0.8s,mb4.2						
CHKZ	Chkalovo	69.71	323	*e*P	P	18 17 13.7	-0.8
ILAR	Eielson Array	72.63	25	P	P	18 17 31.2	-0.5
	0.4nm,0.5s,mb3.6,baz=245,slow=6.1,SNR=11						
ILAR				pP	pP	18 17 44.8	0.0
	0.3nm,0.6s,baz=244,slow=6.0,SNR=2.5						
INK	Inuvik	78.31	22	P	P	18 18 04.8	+0.7
YKA	Yellowknife Ar	86.99	27	P	P	18 18 50.8	+2.0
	0.3nm,0.4s,mb3.9,baz=289,slow=5.3,SNR=10						
YKA	Yellowknife Ar	86.99	27	P	P	18 18 50.8	+2.0
FINES	FINESS Array B	91.98	334	P	P	18 19 11.6	-0.8
	5.5nm,1.1s,mb4.8,baz=108,slow=4.4,SNR=4.9						

IDC 13 18:14:21.1±2.8**, 32.41S×178.16W, mb4.1**/3**, mb1 4.2**/4**, mb1mx3.9**/16**, mbtmp4.0**/4**, ML3.4**/1**, Error ellipse: s-maj=59.7km s-min=35.3km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.00	212	Pn	Pn	18 16 04.8	-2.6
	0.7nm,0.3s,baz=80,slow=12,SNR=2.4						
URZ				Sn	Sn	18 17 24.8	-3.8
	1.2nm,0.3s,baz=264,slow=19,SNR=5.6						
CTA	Charters Tower	34.04	282	P	P	18 21 08.6	-0.5
	8.9nm,1.2s,baz=115,slow=13,SNR=3.1						
ASAR	Alice Springs	42.91	269	P	P	18 22 21.2	-2.0
	2.0nm,1.1s,baz=107,slow=7.5,SNR=19						
ASPA	Alice Springs	42.91	269	*e*P	P	18 22 21.3	-1.9
WB2	Warramunga Arr	44.07	274	*e*P	P	18 22 30.0	-2.6
WRA	Warramunga Arr	44.08	274	P	P	18 22 30.3	-2.4
	1.0nm,0.5s,baz=113,slow=7.9,SNR=37						
FINES	FINESS Array B	146.97	339	PKPbc	PKPbc	18 34 04.0	-0.3
	1.6nm,0.6s,baz=27,slow=4.3,SNR=12						

IDC 13 18:26:13.8±7.0**, 30.81S×178.98W, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.7**/13**, mbtmp3.6**/2**, Error ellipse: s-maj=284.8km s-min=59.9km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.25	268	P	P	18 34 08.6	-2.0
	0.5nm,0.8s,baz=103,slow=7.7,SNR=10						
WRA	Warramunga Arr	43.27	273	P	P	18 34 17.6	-1.4
	0.5nm,0.3s,baz=112,slow=8.0,SNR=20						
FINES	FINESS Array B	145.24	339	PKPbc	PKPbc	18 45 51.6	-1.4
	3.1nm,1.0s,baz=27,slow=3.1,SNR=4.1						

IDC 13 18:30:00.1±3.0**, 33.17S×178.46W, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.5**/14**, mbtmp3.5**/3**, ML3.4**/1**, Error ellipse: s-maj=69.9km s-min=35.8km az=119.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.23	214	Pn	Pn	18 31 33.6	-1.9
	0.8nm,0.3s,baz=152,slow=16,SNR=4.7						
URZ				Sn	Sn	18 32 44.2	-4.2
	2.5nm,0.3s,baz=342,slow=5.4,SNR=6.1						
ASAR	Alice Springs	42.65	270	P	P	18 37 58.8	-1.3
	1.6nm,1.1s,baz=108,slow=7.9,SNR=11						
WRA	Warramunga Arr	43.89	275	P	P	18 38 08.4	-1.8
	0.2nm,0.3s,baz=117,slow=8.2,SNR=9.2						
FINES	FINESS Array B	147.59	338	PKPbc	PKPdf	18 49 44.5	-0.1
	2.6nm,1.0s,slow=1.4,SNR=3.5						

IDC 13 18:33:26.1±3.4**,33.49S**×**178.53W,mb3.9**/2**,mb1 4.1**/3**, mb1mx3.9**/14**,mbtmp3.9**/3**,ML3.7**/1**,Error ellipse: s-maj=74.7km s-min=37.6km az=116.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.93	215	Pn	Pn	18 34 55.8	-1.5
	2.0nm,0.3s,baz=21,slow=7.2,SNR=4.6						
URZ				Sn	Sn	18 36 02.3	-4.6
	5.4nm,0.3s,baz=158,slow=19,SNR=6.5						
ASAR	Alice Springs	42.59	271	P	P	18 41 23.9	-1.6
	1.2nm,0.7s,baz=111,slow=7.2,SNR=21						
WB2	Warramunga Arr	43.84	276	eP	P	18 41 34.1	-1.7
WRA	Warramunga Arr	43.85	276	P	P	18 41 34.2	-1.7
	1.1nm,0.5s,baz=116,slow=7.4,SNR=23						
FINES	FINESS Array B	147.86	338	PKPbc	PKPdf	18 53 11.5	+0.4
	3.7nm,1.0s,baz=108,slow=4.4,SNR=3.4						

*IDC **13** 18:41:28.7±7.0,22.27S×167.80E,mb3.7/4,mb1 3.9/4, mb1mx3.7/13,mbtmp3.7/4,Error ellipse: s-maj=156.4km s-min=62.2km az=120.0*

ISC 13 18:41:19.3±6.4**,23.3S**±0.4×**169.2E**±0.3**,h8**^{km}±43^{km}**,n5, σ2**^{s}**14**/6**,mb3.6**/4**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NOUC	Port Laguerre	2.92	293	eP	Pn	18 42 07.2	+0.3
NOUC				eS	Sn	18 42 42.8	+0.1
STKA	Stephens Creek	25.87	245	P	P	18 46 54.9	+1.7
	0.8nm,0.7s,mb3.4,baz=88,slow=13,SNR=3.5						
ASAR	Alice Springs	32.33	262	P	P	18 47 50.2	-1.0
	0.4nm,0.5s,mb3.5,baz=83,slow=9.0,SNR=5.8						
WRA	Warramunga Arr	32.54	269	P	P	18 47 50.6	-2.4
	0.3nm,0.4s,mb3.5,baz=99,slow=8.2,SNR=9.9						
CMAR	Chiang Mai Arr	80.15	295	P	P	18 53 32.7	+0.8
	0.9nm,0.6s,mb3.9,baz=135,slow=5.2,SNR=7.0						

*IDC **13** 19:04:46.3±1.4,2.75N×96.18E,mb3.8/4,mb1 3.9/5, mb1mx3.6/18,mbtmp3.8/5,ML3.7/1,MS2.6/1,Ms1 2.8/1, ms1mx2.3/17,Error ellipse: s-maj=38.8km s-min=28.3km az=58.0*

*NEIC **13** 19:04:50.9±0.9,2.72N×96.14E,h30^{km},mb4.2/4,Error ellipse: s-maj=20.6km s-min=16.3km az=86.0*

ISC 13 19:04:48.9±1.1**,2.7N**±0.1×**96.1E**±0.2**,h30**^{km}**,n9,σ0**^{s}**82**/9**, mb3.9**/8**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.88	10	Pn	P	19 08 31.8	-0.3
	0.1nm,0.3s,baz=195,slow=11,SNR=7.9						
CMAR				LR	LR	19 15 11.9	
	comp=Z,23nm,21.5s,baz=210,slow=40						
LSA	Lhasa	27.24	351	eP	P	19 10 33.5	+0.9
	4.5nm,0.8s,mb4.0						
ENH	Enshi	30.18	23	eP	P	19 10 58.4	-0.5
	1.6nm,0.6s,mb3.9						
BJT	Baijiatuau	41.33	23	eP	P	19 12 35.5	+1.8
	4.2nm,0.6s,mb4.2						
WRA	Warramunga Arr	43.76	123	P	P	19 12 53.6	-0.3
	0.5nm,0.7s,mb3.4,baz=299,slow=9.3,SNR=4.0						
SONM	Songino Array	45.80	10	P	P	19 13 09.7	-0.2
	1.7nm,0.8s,mb4.0,baz=190,slow=9.3,SNR=16						
BVAR	Borovoye Array	54.46	341	P	P	19 14 15.1	-0.7
	0.9nm,0.8s,mb3.8,baz=135,slow=6.1,SNR=4.5						
CHKZ	Chkalovo	54.95	342	eP	P	19 14 18.5	-1.0
	1.9nm,0.8s,mb4.2						
KMBO	Kilima Mbogo	58.98	267	P	P	19 14 49.0	+0.5
	0.5nm,0.7s,mb3.7,baz=50,slow=23,SNR=3.1						

*IDC **13** 19:08:35.1±2.1,5.60N×93.19E,mb3.8/6,mb1 3.9/7, mb1mx3.7/20,mbtmp3.8/7,ML3.0/1,Error ellipse: s-maj=73.3km s-min=19.9km az=60.0*

*BJI **13** 19:08:42.1,5.80N×93.50E,h42^{km},mB4.5,mb4.3*

*NEIC **13** 19:08:42.1±4.6,5.79N×93.46E,h42^{km}±34^{km},mb4.6/3, Error ellipse: s-maj=50.7km s-min=12.4km az=58.0*

ISC 13 19:08:39.0±1.1**,5.8N**±0.1×**93.4E**±0.2**,h33**^{km}**,n16, σ1**^{s}**01**/16**,mb4.1**/10**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	13.73	23	P	P	19 11 52.3	-1.5
	2.5nm,0.8s						
CMAR	Chiang Mai Arr	13.73	23	Pn	P	19 11 55.1	+1.3
	0.0nm,0.3s,baz=218,slow=13,SNR=11						
LSA	Lhasa	23.92	355	P	P	19 13 56.0	+4.9
LSA	Lhasa	23.92	355	eP	P	19 13 52.8	+1.7
ENH	Enshi	28.70	30	P	P	19 14 34.2	-1.2
XAN	Xi'an	31.60	25	P	P	19 15 00.4	-0.8
XAN				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.4						
HHC	Hu-ho-hao-te	38.54	22	eP	P	19 16 02.3	+2.0
HHC				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.1						
HHC				AMB	AMB		
	comp=Z,79nm,10.7s						
SONM	Songino Array	43.38	13	P	P	19 16 40.4	+0.3
	comp=Z,1.0nm,0.8s,mb3.6,baz=194,slow=7.1,SNR=9.6						
WRA	Warramunga Arr	47.64	124	P	P	19 17 14.3	0.0
	comp=Z,1.2nm,0.6s,mb4.1,baz=302,slow=9.1,SNR=16						
WRAB	Tennant Creek	47.64	124	eP	P	19 17 14.5	+0.1
	comp=Z,4.1nm,0.7s,mb4.6						
ZAL	Zalesovo	48.56	353	P	P	19 17 21.9	+0.8
	comp=Z,0.5nm,0.4s,mb3.9,baz=323,slow=10.0,SNR=2.7						
ASAR	Alice Springs	49.13	128	P	P	19 17 25.9	+0.1
	comp=Z,0.3nm,0.4s,mb3.6,baz=302,slow=8.2,SNR=10						
BVAR	Borovoye Array	50.78	342	P	P	19 17 36.7	-1.4
	comp=Z,0.7nm,1.0s,mb3.5,baz=124,slow=10,SNR=2.5						
CHKZ	Chkalovo	51.27	343	eP	P	19 17 41.5	-0.3
	comp=Z,14nm,1.8s,mb4.6						
CHKZ				e	pP	19 17 49.5	-2.2
PMG	Port Moresby	55.61	105	P	P	19 18 14.1	-0.3
	comp=Z,5.4nm,0.8s,mb4.6,baz=286,slow=5.8,SNR=4.1						
PMG	Port Moresby	55.61	105	eP	P	19 18 14.8	+0.4
	comp=Z,6.2nm,0.7s,mb4.8						

*IDC **13** 19:22:27.2±4.0,45.26N×143.33E,mb3.5/5,mb1 3.8/5, mb1mx3.5/21,mbtmp3.5/5,Error ellipse: s-maj=130.4km s-min=29.8km az=171.0*

*JMA **13** 19:23:04.3±0.1,45.72N×142.74E,h333^{km},M2.8*

*SKHL **13** 19:23:04.0±0.5,46.18N×142.73E,h340^{km}±12^{km},mb4.7/4, msh3.9/1*

ISC 13 19:23:03.3±0.5**,45.65N**±0.09×**142.8E**±0.1**,h343**^{km}±7^{km}**, n21,σ1**^{s}**13**/27**,mb3.0**/5**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	Soyaes	0.71	194	P	P	19 23 47.1	-0.3
JWK2	Keihoku	0.73	244	P	P	19 23 47.4	-0.1
JWK2				eS	S	19 24 20.8	-1.4
JRR	Rishiri	1.19	245	P	P	19 23 49.0	-0.3
JSS	Shosan	1.43	209	P	P	19 23 50.9	+0.3
JMP	Maruseppu	1.68	167	P	P	19 23 52.8	+0.7
JKK2	Kamakawa 2	1.77	182	P	P	19 23 53.6	+0.9
JTKR	Abashiri--Toko	1.84	155	P	P	19 23 54.1	+1.0
JTKR				eS	S	19 24 33.6	+1.4
JRA	Rausu	2.36	136	P	P	19 23 58.3	+1.3
JAR	Ashorobuto	2.44	164	P	P	19 23 58.9	+1.2
JFR	Furan	2.49	184	P	P	19 23 59.5	+1.5
JAK	Akkeshi	2.97	153	P	P	19 24 02.2	0.0
JAK				eS	S	19 24 47.2	-1.1
JEW	Eniwo	2.98	200	P	P	19 24 03.4	+1.2
JCH	Churui	3.06	173	P	P	19 24 02.6	-0.4
JCH				eS	S	19 24 47.3	-2.4
NEM2	Nemuro 2	3.09	137	P	P	19 24 02.3	-1.0
NEM2				eS	S	19 24 48.3	-2.0
JNBK	Urakawa-nobuka	3.37	181	P	P	19 24 06.8	+0.9
JKB	Kayabe	3.98	200	P	P	19 24 12.3	+0.3
JKB				eS	S	19 25 05.1	-0.9
SONM	Songino Array	24.92	288	P	P	19 27 56.2	-1.4
	0.8nm,0.6s,mb3.1,baz=76,slow=8.8,SNR=7.8						
ILAR	Eielson Array	41.81	37	P	P	19 30 19.8	-1.4
	0.3nm,0.7s,mb2.5,baz=273,slow=7.2,SNR=4.2						
YKA	Yellowknife Ar	55.92	33	P	P	19 32 06.4	-1.4
	0.3nm,0.6s,mb2.8,baz=303,slow=6.7,SNR=8.6						
NVAR	Mina Array Bea	69.13	56	P	P	19 33 36.0	+1.7
	0.5nm,0.7s,mb3.4,baz=282,slow=8.7,SNR=3.9						
PDAR	Pinedale Array	70.98	48	P	P	19 33 46.1	+0.7
	0.4nm,0.8s,mb3.2,baz=333,slow=3.3,SNR=3.7						

IDC 13 19:26:59.7±34.0**,6.17N**×**121.95E,mb3.7**/3**,mb1 3.9**/3**, mb1mx3.5**/18**,mbtmp3.7**/3**,Error ellipse: s-maj=588.3km s-min=291.0km az=151.0,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	28.67	155	P	P	19 32 59.1	-1.5
	0.4nm,0.4s,baz=336,slow=9.5,SNR=11						
ASAR	Alice Springs	31.87	159	P	P	19 33 26.2	-2.8
	0.8nm,1.0s,baz=335,slow=10,SNR=7.6						
STKA	Stephens Creek	42.22	155	P	P	19 34 54.6	-1.8
	2.0nm,1.1s,baz=323,slow=10,SNR=2.6						

*IDC **13** 19:40:27.0±11.0,17.13N×95.19W,mb3.6/2,mb1 4.1/3, mb1mx3.5/20,mbtmp3.6/3,Error ellipse: s-maj=191.3km s-min=169.4km az=65.0*

*NEIC **13** 19:40:34.5,16.81N×95.74W,h84^{km},mb3.7/3, MD4.1(MEX),After MEX.*

*MEX **13** 19:40:34.9±0.9,16.80N×95.70W,h76^{km}±13^{km},MD4.1*

ISC 13 19:40:33.0±0.5**,16.80N**±0.04×**95.69W**±0.03**,h75**^{km}±7^{km}**, n28,σ1**^{s}**12**/45**,mb3.3**/3**,1C,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXX	Oaxaca	1.03	286	iP	P	19 40 53.3	+1.0
OXX				iS	S	19 41 06.7	0.0
OXX	Oaxaca	1.03	286	iP	P	19 40 52.5	+0.2
OXX				iS	S	19 41 06.7	0.0
VHO	Vista Hermosa	1.03	286	⇑iP	P	19 40 53.1	+0.8
VHO				iS	S	19 41 07.0	+0.2
HUIG	Huatulco	1.10	201	iP	P	19 40 53.1	-0.1
HUIG				iS	S	19 41 08.1	-0.2
EVV	El Vigia	1.68	11	iP	P	19 41 01.6	+0.5
EVV				iS	S	19 41 20.5	-1.2
TUIG	Tuzandepetl	1.73	44	iP	P	19 41 02.3	+0.6
TUIG				iS	S	19 41 22.2	-0.6
PNIG	Pinotepa	2.37	261	iP	P	19 41 08.9	-1.6
PNIG				iS	S	19 41 36.3	-2.2
IISM	Ciudad Serdan	2.71	324	iP	P	19 41 14.7	-0.6
SCX	San Cristobal	2.93	91	eP	P	19 41 19.0	+0.6
SCX				iS	S	19 41 53.0	+0.4
IIB	San Bernardino	3.32	311	iP	P	19 41 24.8	+0.9
CCIG	Comitan	3.45	98	eP	P	19 41 28.1	+2.5
CCIG				iS	S	19 42 04.3	-1.2
CCIG	Comitan	3.45	98	eP	P	19 41 27.5	+1.8
CCIG				iS	S	19 42 04.3	-1.2
PPM	Popocatepetl	3.59	309	iP	P	19 41 28.5	+0.9
PPM				iS	S	19 42 08.8	-0.3
PPM	Popocatepetl	3.59	309	iP	P	19 41 28.0	+0.4
PPM				eP		19 41 28.6	
PPM				iS	S	19 42 08.8	-0.3
YAIG	Yautepec	3.81	303	iP	P	19 41 31.5	+0.7
YAIG				iS	S	19 42 10.1	-4.5
YAIG	Yautepec	3.81	303	iP	P	19 41 31.1	+0.3
YAIG				iS	S	19 42 10.4	-4.2
PLIG	Platanillo	3.96	294	eP	P	19 41 33.3	+0.4
PLIG				iS	S	19 42 12.9	-5.4
PLIG	Platanillo	3.96	294	eP	P	19 41 33.3	+0.4
PLIG				iS	S	19 42 13.8	-4.6
ACX	Acapulco	4.05	272	eP	P	19 41 26.0	-8.0
ACX	Acapulco	4.05	272	eP	P	19 41 30.0	-4.0
CAIG	El Cayaco	4.39	274	iS	S	19 42 29.5	+0.6
TEIG	Tepich	7.82	63	ePn	P	19 42 22.3	-3.9
	25nm,0.3s						
TEIG				eSn	S	19 43 38.2	-16
TXAR	Lajitas Array	14.47	331	Pn	P	19 43 56.0	+0.8
	baz=150,slow=15,SNR=8.5						
GOGA	Godfrey	19.88	31	eP	P	19 44 58.1	-2.6
	13nm,0.8s						
GOGA				e		19 45 09.3	
ANMO	Albuquerque	20.48	334	eP	P	19 45 04.8	-2.2
	3.2nm,1.0s						
SDCO	Great Sand Dun	22.59	339	eP	P	19 45 29.8	+1.8
	3.4nm,1.2s,mb3.5						
SDCO				e		19 45 35.3	
PDAR	Pinedale Array	28.46	338	P	P	19 46 22.9	-0.2
	0.1nm,0.4s,mb2.7,baz=145,slow=11,SNR=4.1						
NVAR	Mina Array Bea	29.28	322	P	P	19 46 31.7	+1.3
	1.2nm,0.7s,mb3.6,baz=135,slow=8.9,SNR=7.8						

*BJI **13** 21:18:33.9,4.40N×93.30E,h28^{km},mB4.4,mb4.0,Ms4.2, Msz3.7*

*NEIC **13** 21:18:33.9±0.5,4.43N×93.29E,mb4.3/5,Error ellipse: s-maj=16.2km s-min=8.4km az=64.0*

*IDC **13** 21:18:33.8±0.9,4.35N×93.16E,h29^{km}±5^{km},mb3.9/8, mb1 4.0/9,mb1mx3.8/19,mbtmp4.0/9,ML3.3/1,MS2.9/1, Ms1 3.1/1,ms1mx2.9/17,Error ellipse: s-maj=44.1km s-min=16.2km az=50.0*

ISC 13 21:18:31.9±0.7**,4.42N**±0.09×**93.3E**±0.1**,h27**^{km}**, h27**^{km}±.8^{km}**:pP-P,n21,σ0**^{s}**94**/20**,mb4.1**/13**,MS3.9**/1**,1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	15.00	21	P	P	21 22 03.7	-0.4
	4.2nm,0.6s						
CMAR	Chiang Mai Arr	15.00	21	Pn	P	21 22 03.6	-0.5
	0.0nm,0.3s,baz=216,slow=14,SNR=9.3						
CMAR				LR	LR	21 29 02.2	
	comp=Z,41nm,18.6s,baz=190,slow=42						
KKTK	Khon Kaen	15.09	38	P	P	21 22 11.0	+5.8
	309nm,0.7s						
NANT	Nan	16.02	26	P	P	21 22 14.0	-3.2
LSA	Lhasa	25.22	356	eP	pP	21 24 04.0	-1.3
LSA	Lhasa	25.22	356	eP	P	21 23 58.8	+1.5
	5.6nm,0.6s,mb4.3						
ENH	Enshi	29.91	29	eP	P	21 24 39.5	-0.5
	2.3nm,0.6s,mb4.1						
HHC	Hu-ho-hao-te	39.81	22	eP	P	21 26 06.8	+2.2
HHC				PP	PP	21 27 42.1	+2.2
HHC				S	S	21 32 13.3	+6.4
HHC				SS	SS	21 35 03.3	+6.4
HHC				SCS	ScS	21 36 09.9	+1.9
HHC				AMB	AMB		
	comp=Z,5.0nm,1.9s,mb3.9						
HHC				AMB	AMB		
	comp=Z,56nm,9.5s						
HHC				LR	LR		
	comp=N,144nm,15.5s,MS4.1						
HHC				LR	LR		
	comp=E,151nm,16.6s,MS4.1						
HHC				LR	LR		
	comp=Z,77nm,14.3s,MS3.7						
WRA	Warramunga Arr	47.04	122	P	P	21 27 03.7	+0.4
	comp=Z,3.6nm,0.7s,mb4.4,baz=300,slow=9.0,SNR=22						
WRAB	Tennant Creek	47.04	122	eP	P	21 27 03.6	+0.2
	comp=Z,5.8nm,0.7s,mb4.6						
WB2	Warramunga Arr	47.05	122	⇓iP	P	21 27 03.6	+0.1
KURK	Kurchatov	47.76	347	eP	P	21 27 09.1	+0.5
KURK				e	pP	21 27 16.8	-0.2
ASAR	Alice Springs	48.43	127	P	P	21 27 14.6	+0.3
	comp=Z,0.7nm,0.6s,mb3.9,baz=308,slow=8.0,SNR=8.5						
ASAR				PcP	PcP	21 28 40.5	-0.1
	comp=Z,0.8nm,0.6s,baz=295,slow=3.3,SNR=5.8						
ZAL	Zalesovo	49.85	353	P	P	21 27 25.1	+0.4
	comp=Z,1.3nm,0.6s,mb4.2,baz=308,slow=6.4,SNR=8.4						
ZAL				pP	pP	21 27 34.1	+1.0
	comp=Z,1.9nm,0.5s,baz=304,slow=5.1,SNR=6.5						
BVAR	Borovoye Array	51.99	343	P	P	21 27 41.0	+0.1
	comp=Z,0.7nm,0.6s,mb3.8,baz=141,slow=9.5,SNR=6.6						
BVAR				pP	pP	21 27 49.2	-0.2
	comp=Z,0.9nm,0.6s,baz=153,slow=9.9,SNR=6.7						
CHKZ	Chkalovo	52.49	343	eP	P	21 27 44.9	+0.1
	comp=Z,3.3nm,0.8s,mb4.3						
CHKZ				e	pP	21 27 53.0	-0.1
STKA	Stephens Creek	58.39	132	P	P	21 28 26.7	-1.0
	comp=Z,1.0nm,0.5s,mb4.1,baz=337,slow=8.4,SNR=6.2						
BRTR	Keskin Array B	64.08	312	P	P	21 29 05.8	-0.1
	comp=Z,2.0nm,0.7s,mb4.2,baz=135,slow=7.3,SNR=12						
BRTR				pP	pP	21 29 14.1	-0.5
	comp=Z,1.9nm,0.8s,baz=127,slow=6.2,SNR=6.2						
FINES	FINESS Array B	75.36	333	P	P	21 30 12.5	-2.1
	comp=Z,2.2nm,0.9s,mb4.1,baz=90,slow=6.9,SNR=3.6						
GERES	GERESS Array B	79.84	319	P	P	21 30 39.3	-0.3
	comp=Z,1.8nm,0.9s,mb4.0,baz=108,slow=4.2,SNR=6.4						
GERES				pP	pP	21 30 49.0	+0.7
	comp=Z,1.4nm,0.7s,baz=90,slow=5.3,SNR=5.8						
PDAR	Pinedale Array	128.66	21	PKP	PKPdf	21 37 38.8	-3.3
	comp=Z,1.5nm,1.2s,baz=90,slow=3.0,SNR=3.8						

MAN 13 21:20:33.6,9.46N×122.39E,h30^{km},mb3.7,ML2.5,MS2.0, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	Jordan	1.18	10	eP	Pn	21 20 54.1	-0.2
GUIM				eS	Sn	21 21 09.4	+0.1
DCPH	Dipolog City	1.29	132	⇓iP	Pn	21 20 54.9	-1.1
DCPH				iS	Sn	21 21 12.2	-0.1
PAGZ	Pagadian	1.88	148	eP	Pn	21 21 05.7	+1.4
CUYO	Cuyo Island	1.93	316	eP	Pn	21 21 04.7	-0.4

*MOS **13** 21:24:19.4±2.2,55.40N×109.57E,h16^{km},mb4.1/2,Error ellipse: s-maj=11.6km s-min=6.1km az=66.6*

BYKL 13 21:24:19.6±0.2**,55.40N**×**109.53E,h13**^{km}±3^{km}**,7C-4D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIZ	Nizh Angarsk	0.38	1	ePG	Pg	21 24 27.3	-0.2
NIZ				e		21 24 32.7	
NIZ				pmax	pmax		
	comp=Z,1μm,0.2s						
NIZ				smax			
	comp=N,12μm,0.5s						
NIZ	Nizh Angarsk	0.38	1	⇓iPg	Pg	21 24 27.3	-0.2
	comp=N,239nm,0.2s						
NIZ				⇓iPg	Pg	21 24 27.3	-0.2
	comp=N,96nm,0.2s						
NIZ				⇓iPg	Pg	21 24 27.3	-0.2
	comp=N,750nm,0.2s						
NIZ				iSg	Sg	21 24 32.7	0.0
NIZ				Pmax			
	comp=N,1μm,0.2s						
NIZ				Smax			
	comp=N,12μm,0.4s						
KMO	Kumora	1.06	62	ePG	Pg	21 24 38.4	-2.6
KMO				e		21 24 52.2	
KMO				pmax	pmax		
	comp=Z,151nm,0.3s						
KMO				smax			
	comp=N,2μm,0.7s						
KMO	Kumora	1.06	62	⇑iPg	Pg	21 24 38.6	-2.4
	comp=N,6.0nm,0.3s						
KMO				⇑iPg	Pg	21 24 38.6	-2.4
	comp=N,13nm,0.3s						
KMO				⇑iPg	Pg	21 24 38.6	-2.4
	comp=N,159nm,0.3s						
KMO				eSg	Sg	21 24 52.3	-3.0
KMO				Pmax			
	comp=N,140nm,0.3s						
KMO				Smax			
	comp=N,2μm,0.6s						
YLYR	Ulyunkhan	1.07	119	ePG	Pg	21 24 38.9	-2.3
YLYR				e		21 24 53.0	
YLYR				pmax	pmax		
	comp=Z,825nm,0.1s						
YLYR				smax			
	comp=N,1μm,0.5s						
YLYR	Ulyunkhan	1.07	119	⇓iPg	Pg	21 24 38.8	-2.4
	comp=N,320nm,0.4s						
YLYR				⇑iPg	Pg	21 24 38.8	-2.4
	comp=N,514nm,0.4s						
YLYR				⇑iPg	Pg	21 24 38.8	-2.4
	comp=N,628nm,0.4s						
YLYR				iSg	Sg	21 24 53.3	-2.3
YLYR				Pmax			
	comp=N,788nm,0.2s						
YLYR				Smax			
	comp=N,1μm,0.4s						
YOA	Uoyan	1.44	58	⇑iPN	Pn	21 24 45.1	-0.4
YOA	Uoyan	1.44	58	⇑iPg	Pg	21 24 45.5	-3.0
YOA				eSg	Sg	21 25 05.7	-2.0
YOA				Pmax			
	comp=N,252nm,0.1s						
YOA				Smax			
	comp=N,3μm,0.5s						
SYVR	Suvo	1.77	171	ePN	Pn	21 24 51.1	+0.9
SYVR				e		21 25 14.9	
SYVR				pmax	pmax		
	comp=Z,86nm,0.2s						
SYVR				smax			
	comp=N,2μm,0.3s						
SYVR	Suvo	1.77	171	ePn	Pn	21 24 50.8	+0.6
SYVR				ePg	Pg	21 24 51.8	-3.2
SYVR				eSg	Sg	21 25 15.6	-3.0
SYVR				Pmax			
	comp=N,110nm,0.3s						
SYVR				Smax			
	comp=N,2μm,0.5s						
OGRR	Ongureny	2.09	213	ePN	Pn	21 24 55.3	+0.5
OGRR				e		21 24 57.6	
OGRR				e		21 25 24.2	
OGRR				pmax	pmax		
	comp=Z,150nm,0.3s						
OGRR				smax			
	comp=E,566nm,0.4s						
OGRR	Ongureny	2.09	213	ePn	Pn	21 24 55.4	+0.6
OGRR				ePg	Pg	21 24 57.6	-3.8
OGRR				eSn	Sn	21 25 21.9	+1.0
OGRR				eSg	Sg	21 25 24.4	-4.9
OGRR				Pmax			
	comp=E,150nm,0.2s						
OGRR				Smax			
	comp=E,460nm,0.2s						
MXMB	Maximikha	2.19	192	ePn	Pn	21 24 56.9	+0.6
MXMB				ePg	Pg	21 24 59.8	-3.6
MXMB				e		21 25 26.2	
MXMB				eSg	Sg	21 25 28.9	-3.7
MXMB				Pmax			
	comp=E,147nm,0.7s						
MXMB				Smax			
	comp=E,1μm,0.9s						
UKT	Uakit	2.34	86	ePN	Pn	21 25 00.4	+2.0
UKT				e		21 25 31.3	
UKT				pmax	pmax		
	comp=Z,120nm,0.3s						
UKT				smax			
	comp=N,454nm,0.3s						
UKT	Uakit	2.34	86	ePn	Pn	21 24 58.5	+0.1
UKT				ePg	Pg	21 25 00.4	-5.9
UKT				eSn	Sn	21 25 27.4	+0.3
UKT				eSg	Sg	21 25 31.3	-6.2
UKT				Pmax			
	comp=N,170nm,0.4s						
UKT				Smax			
	comp=N,524nm,0.4s						
SVKR	Severomuysk	2.39	71	ePN	Pn	21 25 03.8	+4.7
SVKR				e		21 25 33.4	
SVKR				pmax	pmax		
	comp=Z,164nm,0.8s						
SVKR				smax			
	comp=N,1μm,0.5s						
SVKR	Severomuysk	2.39	71	ePn	Pn	21 25 00.1	+1.0
SVKR				ePg	Pg	21 25 03.6	-3.7
SVKR				eSn	Sn	21 25 29.7	+1.3
SVKR				iSg	Sg	21 25 34.3	-4.9
SVKR				Pmax			
	comp=N,147nm,0.3s						
SVKR				Smax			
	comp=N,1μm,0.4s						
ZRHB	Zarechye	3.18	207	ePn	Pn	21 25 10.5	+0.1
ZRHB				ePg	Pg	21 25 17.4	-5.7
ZRHB				eSg	Sg	21 25 59.2	-6.3
ZRHB				Pmax			
	comp=N,125nm,0.8s						
ZRHB				Smax			
	comp=N,925nm,1.0s						
TRG	Tyrgan	3.24	217	ePN	Pn	21 25 11.5	+0.2
TRG				e		21 25 18.4	
TRG				e		21 25 59.9	
TRG				pmax	pmax		
	comp=Z,43nm,0.3s						
TRG				smax			
	comp=E,283nm,0.2s						
TRG	Tyrgan	3.24	217	ePn	Pn	21 25 11.5	+0.2
TRG				ePg	Pg	21 25 18.5	-5.9
TRG				eSn	Sn	21 25 50.3	+0.2
TRG				eSg	Sg	21 26 00.1	-7.5
TRG				Pmax			

	comp=E,42nm,0.3s						
TRG				Smax			
	comp=E,278nm,0.3s						
TRTB	**Turuntaevo**	**3.37**	**200**	*e*Pn	Pn	21 25 13.2	+0.1
TRTB				*e*Pg	Pg	21 25 18.8	-8.1
TRTB				*e*Sn	Sn	21 25 52.6	-0.7
TRTB				*e*Sg	Sg	21 26 03.2	-8.7
TRTB				Pmax			
	comp=E,23nm,0.3s						
TRTB				Smax			
	comp=E,183nm,0.4s						
BOD	**Bodaibo**	**3.46**	**44**	*e*PN	Pn	21 25 12.9	-1.5
BOD				*e*		21 25 20.3	
BOD				*e*S	Sn	21 25 53.8	-1.9
BOD				*e*		21 26 04.4	
BOD				pmax	pmax		
	comp=Z,42nm,0.2s						
BOD				smax			
	comp=N,364nm,0.7s						
BOD	**Bodaibo**	**3.46**	**44**	*e*Pn	Pn	21 25 13.5	-0.9
BOD				*e*Pg	Pg	21 25 21.3	-7.5
BOD				*e*Sg	Sg	21 26 05.8	-9.2
BOD				Pmax			
	comp=N,39nm,0.3s						
BOD				Smax			
	comp=N,236nm,0.6s						
NLYR	**Nelyaty**	**3.64**	**70**	*e*PN	Pn	21 25 15.6	-1.3
NLYR				*e*		21 25 23.4	
NLYR				*e*		21 26 11.0	
NLYR				pmax	pmax		
	comp=Z,21nm,1.0s						
NLYR				smax			
	comp=N,251nm,1.2s						
NLYR	**Nelyaty**	**3.64**	**70**	*e*Pn	Pn	21 25 15.9	-1.0
NLYR				*e*Pg	Pg	21 25 24.2	-8.1
NLYR				*e*Sg	Sg	21 26 12.1	-8.7
NLYR				Pmax			
	comp=N,38nm,0.8s						
NLYR				Smax			
	comp=N,246nm,0.9s						
FFNB	**Fofonovo**	**3.74**	**207**	*e*Pn	Pn	21 25 18.0	-0.3
FFNB				*e*Sg	Sg	21 26 14.6	-10
FFNB				max			
	comp=N,36nm,0.1s						
FFNB				Smax			
	comp=N,314nm,0.6s						
STDB	**Stepnoy Dvoret**	**3.74**	**211**	*e*Pn	Pn	21 25 16.8	-1.6
STDB				*e*Pg	Pg	21 25 28.4	-5.9
STDB				*e*		21 26 05.7	
STDB				*e*Sg	Sg	21 26 17.7	-6.5
STDB				Pmax			
	comp=N,47nm,0.7s						
STDB				Smax			
	comp=N,745nm,0.6s						
KAB	**Kabansk**	**3.77**	**208**	*e*PN	Pn	21 25 29.2	+11
KAB				*e*		21 26 17.6	
KAB				pmax	pmax		
	comp=Z,72nm,0.3s						
KAB				smax			
	comp=E,373nm,1.0s						
KAB	**Kabansk**	**3.77**	**208**	*e*Sg	Sg	21 26 16.4	-8.6
KAB				Smax			
	comp=E,330nm,0.7s						
HRMR	**Khuramsha**	**4.08**	**203**	*e*Pn	Pn	21 25 23.1	-0.1
HRMR				*e*Pg	Pg	21 25 32.7	-8.4
HRMR				*e*Sn	Sn	21 26 10.2	-1.1
HRMR				*e*Sg	Sg	21 26 24.7	-11
HRMR				Pmax			
	comp=E,54nm,0.4s						
HRMR				Smax			
	comp=E,526nm,0.5s						
CIT	**Chita**	**4.14**	**143**	*e*PN	Pn	21 25 33.6	+10
CIT				*e*		21 26 26.0	
CIT				pmax	pmax		
	comp=Z,24nm,0.5s						
CIT				smax			
	comp=E,297nm,0.7s						
CIT	**Chita**	**4.14**	**143**	*e*Pn	Pn	21 25 23.4	-0.7
CIT				*e*Pg	Pg	21 25 33.6	-8.7
CIT				*e*Sg	Sg	21 26 27.6	-10
CIT				Pmax			
	comp=E,23nm,0.9s						
CIT				Smax			
	comp=E,286nm,0.6s						
IRK	**Irkutsk**	**4.44**	**227**	*e*PN	Pn	21 25 40.5	+12
IRK				*e*		21 26 37.5	
IRK				pmax	pmax		
	comp=Z,32nm,0.2s						
IRK				smax			
	comp=N,440nm,0.6s						
IRK	**Irkutsk**	**4.44**	**227**	*e*Pg	Pg	21 25 39.5	-8.8
IRK				*e*Sn	Sn	21 26 18.1	-2.3
IRK				*e*Sg	Sg	21 26 37.2	-10
IRK				Pmax			
	comp=N,42nm,0.3s						
IRK				Smax			
	comp=N,424nm,0.4s						
LSTR	**Listvyanka**	**4.51**	**220**	*e*PN	Pn	21 25 27.4	-1.9
LSTR				*e*		21 25 40.9	
LSTR				*e*		21 26 37.9	
LSTR				pmax	pmax		
	comp=Z,11nm,0.2s						
LSTR				smax			
	comp=N,173nm,1.2s						
LSTR	**Listvyanka**	**4.51**	**220**	*e*Pn	Pn	21 25 28.8	-0.5
LSTR				*e*Pg	Pg	21 25 41.1	-8.5
LSTR				*e*Sn	Sn	21 26 20.6	-1.6
LSTR				*e*Sg	Sg	21 26 38.0	-12
LSTR				Pmax			
	comp=N,14nm,0.7s						
LSTR				Smax			
	comp=N,170nm,0.9s						
CRS	**Chara**	**5.11**	**69**	*e*PN	Pn	21 25 51.5	+14
CRS				*e*		21 26 57.3	
CRS				pmax	pmax		
	comp=Z,20nm,1.0s						
CRS				smax			
	comp=E,117nm,0.8s						
CRS	**Chara**	**5.11**	**69**	*e*Pn	Pn	21 25 36.8	-1.0
CRS				*e*Pg	Pg	21 25 51.6	-10
CRS				*e*Sg	Sg	21 26 57.5	-12
CRS				Pmax			
	comp=E,22nm,1.1s						
CRS				Smax			
	comp=E,114nm,1.5s						
TLY	**Talaya**	**5.12**	**226**	*e*PN	Pn	21 25 35.5	-2.4
TLY				*e*		21 25 51.3	
TLY				*e*S	Sn	21 26 34.2	-3.3
TLY	**Talaya**	**5.12**	**226**	*e*Pn	Pn	21 25 36.0	-1.9
TLY				*e*Pg	Pg	21 25 51.4	-10
TLY				*e*Sn	Sn	21 26 34.5	-3.0
TLY				*e*Sg	Sg	21 26 56.6	-13
TLY				Pmax			
	comp=E,19nm,0.6s						
TLY				Smax			
	comp=E,140nm,1.4s						
ARS	**Arshan**	**5.48**	**233**	*e*PN	Pn	21 25 41.0	-1.9
ARS				*e*		21 25 58.4	
ARS				*e*S	Sn	21 26 42.5	-4.0
ARS				*e*		21 27 10.6	
ARS				pmax	pmax		
	comp=Z,38nm,0.4s						
ARS				smax			
	comp=E,354nm,0.5s						
ARS	**Arshan**	**5.48**	**233**	*e*Pn	Pn	21 25 40.9	-2.0
ARS				*e*Pg	Pg	21 25 58.3	-11
ARS				*e*Sn	Sn	21 26 42.8	-3.7
ARS				*e*Sg	Sg	21 27 10.6	-11
ARS				Pmax			
	comp=E,38nm,0.4s						
ARS				Smax			
	comp=E,354nm,0.7s						
KPC	**Khapcheranga**	**5.96**	**162**	*e*PN	Pn	21 25 47.3	-2.5
KPC	**Khapcheranga**	**5.96**	**162**	*e*Pn	Pn	21 25 48.4	-1.4
KPC				*e*Pg	Pg	21 26 07.6	-11
KPC				*e*Sg	Sg	21 27 24.2	-14
KPC				Pmax			
	comp=E,5.0nm,0.6s						
KPC				Smax			
	comp=E,107nm,1.0s						
TUP	**Tupik**	**6.09**	**95**	*e*PN	Pn	21 25 48.5	-3.1
TUP				*e*		21 26 07.6	
TUP				*e*		21 27 27.7	
TUP				pmax	pmax		
	comp=Z,19nm,0.6s						
TUP				smax			
	comp=N,56nm,0.9s						
TUP	**Tupik**	**6.09**	**95**	*e*Pn	Pn	21 25 49.0	-2.6
TUP				*e*Pg	Pg	21 26 08.1	-13
TUP				*e*Sg	Sg	21 27 27.6	-15
TUP				Pmax			
	comp=N,19nm,0.6s						
TUP				Smax			
	comp=N,69nm,1.2s						
ZAK	**Zakamensk**	**6.29**	**220**	*e*PN	Pn	21 25 54.1	-0.3
ZAK				*e*		21 26 13.4	
ZAK				*e*		21 27 33.3	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZAK				smax			
	comp=E,118nm,1.1s						
ZAK	**Zakamensk**	**6.29**	**220**	*e*Pn	Pn	21 25 52.1	-2.3
ZAK				*e*Pg	Pg	21 26 12.6	-13
ZAK				*e*Sg	Sg	21 27 34.1	-15
ZAK				Pmax			
	comp=E,5.0nm,0.4s						
ZAK				Smax			
	comp=E,115nm,1.1s						
MOY	**Mondy**	**6.31**	**237**	*e*PN	Pn	21 25 54.4	-0.4
MOY				*e*		21 26 12.8	
MOY	**Mondy**	**6.31**	**237**	*e*Pn	Pn	21 25 54.6	-0.2
MOY				*e*Sn	Sn	21 27 04.8	-2.7
MOY				*e*Sg	Sg	21 27 34.7	-15
MOY				max			
	comp=E,8.0nm,0.4s						
MOY				Smax			
	comp=E,188nm,1.5s						
ORL	**Orlik**	**6.41**	**247**	*e*PN	Pn	21 25 55.0	-1.1
ORL				*e*		21 26 15.1	
ORL				*e*		21 27 38.1	
ORL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ORL				smax			
	comp=N,296nm,1.4s						
ORL	**Orlik**	**6.41**	**247**	*e*Pn	Pn	21 25 55.3	-0.8
ORL				*e*Sn	Sn	21 27 07.3	-2.6
ORL				*e*Sg	Sg	21 27 37.7	-15
ORL				Smax			
	comp=N,287nm,1.4s						
YAK	**Yakutsk**	**12.36**	**49**	*i* P	P	21 27 14.4	-3.7
NVS	**Novosibirsk**	**15.03**	**279**	*e*P	P	21 27 39.8	-13
TIXI	**Tiksi**	**18.28**	**20**	*e*P	P	21 28 30.8	-3.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	**Ala-Archa**	**25.98**	**255**	*i* P	P	21 29 52.5	-0.9
AAK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
FINES	**FINESS Array B**	**41.27**	**314**	*i* P	P	21 32 11.9	+6.3
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SOC	**Sochi**	**44.99**	**285**	*e*P	P	21 32 31.9	-4.1
SOC				*e*S	S	21 39 04.2	-9.2
SOC				*e*SS	SS	21 42 31.2	+4.4
SOC				*e*SSS	SSS	21 43 20.3	-5.2

MOS ***13*** *21:39:28.1±2.5, 42.22N×47.39E, h8^{km}, mb4.2/1, Error ellipse: s-maj=15.2km s-min=9.7km az=111.6*
TIF ***13*** *21:39:30.6, 42.40N×47.52E, h5^{km}±2^{km}*
ISC 13 21:39:32.4±0.6**, 42.44N**±0.04×**47.59E**±0.04**, h5**^{km}**, n14,** σ1$\overset{s}{.}$**62**/23**, 2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGKR	**Sergokala**	**0.05**	**70**	*i* PG	**Pg**	**21 39 32.0**	**-1.8**
SGKR				pmax	pmax		
	comp=Z,3μm,0.1s						
MNSR	**Manas**	**0.28**	**20**	⇓*i*PG	**Pg**	**21 39 40.2**	**+2.2**
MNSR				*e*S	**Sg**	**21 39 46.8**	**+5.0**
MAK	**Makhachkala**	**0.52**	**353**	*e*PG	**Pg**	**21 39 44.0**	**+1.1**
MAK				*i*		21 39 50.0	
MAK				pmax	pmax		
	comp=Z,204nm,0.7s						
MAK				smax			
	comp=N,2μm,1.0s						
MAK				smax			
	comp=E,3μm,1.0s						
UNCR	**Uncukul**	**0.65**	**295**	*i* PG	**Pg**	**21 39 44.2**	**-1.3**
UNCR				*e*S	**Sg**	**21 39 56.5**	**+2.4**
UNCR				pmax	pmax		
	comp=Z,115nm,0.2s						
DRN	**Derbent**	**0.69**	**127**	*e*PG	**Pg**	**21 39 44.3**	**-1.8**
DRN				*e*S	**Sg**	**21 39 56.6**	**+1.3**
DRN				pmax	pmax		
	comp=Z,229nm,0.3s						
DBC	**Dubki**	**0.81**	**316**	*i* PG	**Pg**	**21 39 46.5**	**-2.1**
DBC				*i* S	**Sg**	**21 39 58.5**	**-0.8**
KSMR	**Kasumkent**	**0.93**	**154**	*i* PG	**Pg**	**21 39 50.0**	**-1.0**
KSMR				pmax	pmax		
	comp=Z,345nm,0.2s						
BTLR	**Botlikh**	**1.04**	**283**	⇓*i*PG	**Pg**	**21 39 47.8**	**-5.4**
BTLR				*e*S	**Sb**	**21 40 03.8**	**-2.4**
BTLR				pmax	pmax		
	comp=Z,119nm,0.3s						
DUS	**Dusheti**	**2.17**	**262**	P	**Pn**	**21 40 10.2**	**+0.4**
DUS				S	**Sn**	**21 40 36.8**	**-0.6**
MTA	**Mtatsminda**	**2.22**	**251**	P	**Pn**	**21 40 10.6**	**+0.3**
MTA				S	**Sn**	**21 40 38.5**	**0.0**
TI2	**Plekhanov**	**2.23**	**252**	*e*PN	**Pn**	**21 40 11.8**	**+1.2**
TI2				*i* S	**Sn**	**21 40 41.4**	**+2.5**
TI2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TI2				smax			
	comp=E,50nm,0.8s						
ONI	**Oni**	**3.07**	**274**	P	**Pn**	**21 40 25.8**	**+3.3**
ONI				S	**Sn**	**21 41 08.8**	**+8.7**
KIV	**Kislovodsk**	**3.89**	**295**	*e*PN	**Pn**	**21 40 31.5**	**-2.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GOF	**Gofitskoye**	**4.21**	**310**	*e*PG	**Pg**	**21 41 03.5**	**+6.9**
GOF				pmax	pmax		
	comp=Z,20nm,1.2s						

IDC ***13*** *21:44:28.3±0.5, 29.16S×72.61W, mb4.6/14, mb1 4.6/16, mb1mx4.5/22, mbtmp4.6/16, ML4.7/2, MS3.6/5, Ms1 3.5/5, ms1mx3.3/20, Error ellipse: s-maj=22.7km s-min=15.9km az=80.0*
BJI ***13*** *21:44:30.0, 29.10S×72.60W, h10^{km}, mB5.3, Ms4.9, Msz4.7*
NEIC ***13*** *21:44:30.1±0.3, 29.11S×72.58W, h10^{km}, mb4.7/15, Error ellipse: s-maj=10.7km s-min=6.6km az=63.0*
ISC 13 21:44:28.5±0.3**, 29.11S**±0.04×**72.52W**±0.05**, h10**^{km}**, n77,** σ1$\overset{s}{.}$**04**/64**, mb4.6**/26**, MS3.8**/3**, 5C-1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	**Vallenar**	**1.64**	**71**	*i* P	**Pn**	**21 44 59.2**	**+1.6**
VACH				⇓*i*P		21 44 59.2	
VACH				*i* S	**Sn**	**21 45 19.3**	**+0.5**
CPCH	**Copiapo**	**2.59**	**48**	*i* P	**Pn**	**21 45 10.5**	**-0.7**
CPCH				*i* S	**Sn**	**21 45 39.2**	**-3.8**
ILCH	**Illapel**	**2.78**	**155**	⇑*i*P	**Pn**	**21 45 13.7**	**-0.2**
ILCH				*i* S	**Sn**	**21 45 44.8**	**-3.0**
ZON	**Zonda**	**4.12**	**127**	*e*P	**Pn**	**21 45 36.0**	**+3.1**
ZON				*e*S	**Sn**	**21 46 26.0**	**+4.3**
LVC	**Limon Verde**	**7.24**	**28**	Pn	**Pn**	**21 46 14.8**	**-2.2**
	2.3nm,0.3s,baz=201,slow=8.3,SNR=34						
LVC				Sn	**Sn**	**21 47 34.5**	**-5.6**
	8.4nm,0.3s,baz=43,slow=23,SNR=11						
LVC				LR	LR	21 48 38.9	
	comp=Z,236nm,18.2s,baz=220,slow=34						
LVC	**Limon Verde**	**7.24**	**28**	*e*Pn	**Pn**	**21 46 14.2**	**-2.8**
	12nm,0.6s						
LVC				*e*Sn	**Sn**	**21 47 37.0**	**-3.1**
PLCA	**Paso Flores**	**11.71**	**173**	Pn	**P**	**21 47 16.6**	**-2.0**
	0.8nm,0.3s,baz=334,slow=11,SNR=20						
PLCA				LR	LR	21 52 17.5	
	comp=Z,89nm,18.2s,baz=93,slow=40						
PLCA	**Paso Flores**	**11.71**	**173**	*e*Pn	**P**	**21 47 16.9**	**-1.8**
	4.4nm,0.6s						
TRQA	**Tornquist**	**12.52**	**138**	*e*Pn	**P**	**21 47 27.9**	**-1.6**
	18nm,1.1s						
LPAZ	**La Paz**	**13.39**	**19**	*e*Pn	**P**	**21 47 36.8**	**-4.3**
	4.6nm,0.8s						
SAML	**Samuel**	**21.89**	**25**	*e*P	**P**	**21 49 23.6**	**-0.1**
	11nm,0.8s,mb4.3						
BDFB	**Brasilia**	**26.26**	**65**	P	**P**	**21 50 07.0**	**+1.2**
	10nm,0.7s,mb4.5,baz=252,slow=7.7,SNR=13						
BDFB				LR	LR	22 00 50.7	
	comp=Z,194nm,21.5s,MS3.6,baz=250,slow=37						
ROSC	**El Rosal**	**33.81**	**357**	P	**P**	**21 51 14.3**	**+1.1**
	5.2nm,0.9s,mb4.5,baz=106,slow=20,SNR=2.0						
SDV	**Santo Domingo**	**37.82**	**3**	P	**P**	**21 51 46.3**	**-0.8**
	5.6nm,0.8s,mb4.3,baz=221,slow=2.5,SNR=5.4						
SDV	**Santo Domingo**	**37.82**	**3**	*e*P	**P**	**21 51 46.4**	**-0.6**
	6.2nm,0.9s,mb4.3						
RCBR	**Riachuelo**	**41.62**	**63**	P	**P**	**21 52 20.1**	**+1.4**
VNA3	**Neumayer Olymp**	**54.05**	**159**	⇑*i*	**P**	**21 53 55.2**	**+0.3**
VNA1	**Neumayer--Stat**	**54.34**	**158**	⇑*i*	**P**	**21 53 55.8**	**-1.2**
VNA2	**Neumayer--Watz**	**54.69**	**159**	⇑*i*	**P**	**21 53 59.8**	**+0.2**
VNA2	**Neumayer--Watz**	**54.69**	**159**		**P**	**21 54 06.5**	**+6.9**
SNAA	**Sanae**	**56.27**	**159**	⇑*i*	**P**	**21 54 10.5**	**-0.6**
SNAA	**Sanae**	**56.27**	**159**	P	**P**	**21 54 09.8**	**-1.2**
	3.7nm,0.7s,mb4.5,baz=272,slow=4.1,SNR=17						
SNAA	**Sanae**	**56.27**	**159**	*e*P	**P**	**21 54 10.4**	**-0.7**
	143nm,0.8s						
JCT	**Junction City**	**64.71**	**334**	*e*P	**P**	**21 55 08.9**	**-0.3**
	6.5nm,0.7s,mb4.8						
TXAR	**Lajitas Array**	**65.29**	**330**	P	**P**	**21 55 12.2**	**-0.8**
	1.9nm,0.9s,mb4.1,baz=157,slow=8.1,SNR=15						
WCI	**Wyandotte Cave**	**68.21**	**348**	*e*P	**P**	**21 55 29.7**	**-1.6**
	9.7nm,0.9s,mb4.8						
CCM	**Cathedral Cave**	**69.07**	**344**	*e*P	**P**	**21 55 35.9**	**-0.8**
ACSO	**Alum Creek Sta**	**69.67**	**351**	*e*P	**P**	**21 55 39.1**	**-1.2**
	16nm,0.9s,mb5.0						
ANMO	**Albuquerque**	**71.31**	**331**	P	**P**	**21 55 50.4**	**0.0**
	4.9nm,1.1s,mb4.3,baz=157,slow=8.7,SNR=7.9						
ANMO	**Albuquerque**	**71.31**	**331**	*e*P	**P**	**21 55 50.9**	**+0.5**
	5.9nm,1.2s,mb4.4						
GENY	**Geneseo**	**71.69**	**356**	P	**P**	**21 55 52.3**	**-0.1**
SDCO	**Great Sand Dun**	**73.33**	**333**	*e*P	**P**	**21 56 02.6**	**+0.4**
	9.1nm,1.2s,mb4.6						
SADO	**Sadowa**	**73.77**	**355**	P	**P**	**21 56 04.0**	**-0.6**
	7.5nm,0.7s,mb4.8,baz=178,slow=7.2,SNR=9.3						
DBIC	**Dimbokro**	**74.07**	**73**	P	**P**	**21 56 07.0**	**+0.1**
	5.5nm,0.8s,mb4.5,baz=224,slow=5.8,SNR=6.2						
DBIC				LR	LR	22 28 55.7	
	comp=Z,48nm,19.0s,MS3.8,baz=315,slow=36						
PV01	**Paradox Valley**	**74.91**	**331**	*e*P	**P**	**21 56 12.4**	**+1.0**
ISCO	**Idaho Springs**	**75.15**	**334**	*e*P	**P**	**21 56 13.5**	**+0.7**
	5.1nm,1.2s,mb4.3						
PV10	**Paradox Valley**	**75.31**	**331**	*e*P	**P**	**21 56 13.8**	**+0.1**
NEN	**Nelson**	**75.75**	**326**	*e*P	**P**	**21 56 16.7**	**+0.4**
MSU	**Marysvale**	**76.80**	**329**	*e*P	**P**	**21 56 23.2**	**+1.2**
RAR	**Rarotonga**	**77.69**	**253**	P	**P**	**21 56 27.6**	**+0.3**
	29nm,0.9s,mb5.2,baz=351,slow=4.2,SNR=3.7						
JLU	**Jordanelle**	**78.19**	**331**	*e*P	**P**	**21 56 30.6**	**+0.8**
HWUT	**Hardware Ranch**	**79.07**	**331**	*e*P	**P**	**21 56 34.8**	**+0.2**
	11nm,0.8s,mb4.8						
SPUT	**South Promonto**	**79.20**	**331**	*e*P	**P**	**21 56 35.7**	**+0.5**
NVAR	**Mina Array Bea**	**79.64**	**325**	P	**P**	**21 56 38.2**	**+0.6**
	3.3nm,0.8s,mb4.3,baz=147,slow=6.6,SNR=16						
HVU	**Hansel Valley**	**79.73**	**331**	*e*P	**P**	**21 56 38.4**	**+0.3**
AHID	**Auburn Hatcher**	**79.84**	**332**	*e*P	**P**	**21 56 39.3**	**+0.7**
	3.6nm,0.8s,mb4.3						
LOHW	**Long Hollow**	**80.35**	**333**	*e*P	**P**	**21 56 41.3**	**-0.1**
TPAW	**Teton Pass**	**80.39**	**333**	*e*P	**P**	**21 56 42.0**	**+0.4**
TSUM	**Tsumeb**	**80.98**	**107**	LR	LR	22 30 10.5	
	comp=Z,63nm,18.4s,MS4.0,baz=138,slow=34						
ULM	**Lac du Bonnet**	**81.68**	**345**	P	**P**	**21 56 47.5**	**-0.7**
	8.0nm,1.0s,mb4.6,baz=166,slow=2.2,SNR=11						
ULM	**Lac du Bonnet**	**81.68**	**345**	*e*P	**P**	**21 56 47.0**	**-1.1**
	14nm,1.1s,mb4.8						
HLID	**Hailey**	**81.88**	**331**	*e*P	**P**	**21 56 50.2**	**+0.8**
	7.8nm,0.9s,mb4.6						
WVOR	**Wild Horse Val**	**82.89**	**327**	*e*P	**P**	**21 56 54.9**	**+0.2**
	4.9nm,1.1s,mb4.5						
YBH	**Yreka Blue Hor**	**84.35**	**325**	P	**P**	**21 57 01.8**	**-0.3**
	2.2nm,0.8s,mb4.3,baz=113,slow=14,SNR=3.9						
LBTB	**Lobatse**	**84.76**	**116**	P	**P**	**21 57 05.5**	**+1.0**
	0.6nm,0.5s,mb4.0						
RPZ	**Rata Peaks**	**87.08**	**221**	P	**P**	**21 57 15.7**	**+0.2**
	12nm,0.8s,mb5.2,baz=237,slow=9.0,SNR=3.9						
EDM	**Edmonton**	**89.34**	**337**	*e*P	**P**	**21 57 24.7**	**-1.4**
LSZ	**Lusaka**	**91.73**	**108**	*e*P	**P**	**21 57 40.1**	**+2.0**
	5.4nm,1.3s,mb4.7						
YKA	**Yellowknife Ar**	**97.30**	**342**	P	**P**	**21 58 01.7**	**-0.7**
	2.0nm,1.2s,mb4.4,baz=141,slow=4.3,SNR=15						
AKASG	**Malin Array Be**	**119.13**	**45**	PKP	PKPdf	22 03 18.1	-2.4
	0.5nm,0.5s,baz=256,slow=2.9,SNR=7.3						
BRTR	**Keskin Array B**	**119.73**	**59**	PKP	PKPdf	22 03 20.8	-1.2
	1.0nm,0.7s,baz=180,slow=2.5,SNR=5.5						
ASAR	**Alice Springs**	**121.69**	**209**	PKP	PKPdf	22 03 23.4	-2.9
	1.1nm,0.9s,baz=124,slow=2.4,SNR=7.2						
MALT	**Malatya**	**123.02**	**61**	*e*PKPdf	PKPdf	22 03 27.3	-1.0
WRA	**Warramunga Arr**	**124.77**	**211**	PKP	PKPdf	22 03 29.6	-2.7
	2.3nm,0.8s,baz=157,slow=1.7,SNR=15						
CHKZ	**Chkalovo**	**143.66**	**37**	*e*PKPdf	PKPdf	22 04 03.0	-3.2
BVAR	**Borovoye Array**	**143.84**	**38**	PKP	PKPdf	22 04 03.8	-2.7
	1.2nm,0.6s,baz=18,slow=4.6,SNR=9.1						
KURK	**Kurchatov**	**149.41**	**37**	*e*PKPdf	PKPdf	22 04 15.3	-0.7
KURK				*e*PKPbc	PKPdf	22 04 19.4	+3.5
ZAL	**Zalesovo**	**150.19**	**27**	PKP	PKPdf	22 04 16.1	-1.0
	5.4nm,1.1s,baz=219,slow=3.0,SNR=16						
ZAL				PKPbc	PKPdf	22 04 21.9	+4.8
	12nm,0.7s,baz=180,slow=3.3,SNR=52						
AAK	**Ala-Archa**	**150.26**	**54**	*e*PKPbc	PKPdf	22 04 21.6	+4.1
HYB	**Hyderabad**	**151.07**	**107**	*e*P	PKPdf	22 04 24.0	+4.5
HYB	**Hyderabad**	**151.07**	**107**	*i* PKP	PKPdf	22 04 17.5	-2.0
HYB				*e*		22 04 24.0	
HYB				*e*PKPAB	PKPab	22 04 32.0	-0.2
MDJ	**Mudanjiang**	**156.60**	**317**	PKP	PKPdf	22 04 23.4	-2.9
CN2	**Changchun**	**159.47**	**320**	*e*PKP	PKPdf	22 04 24.8	-5.1
SONM	**Songino Array**	**161.28**	**2**	PKP	PKPdf	22 04 28.0	-3.6
	0.5nm,1.0s,baz=72,slow=4.6,SNR=2.2						
SONM				PKPab	PKPab	22 05 15.9	+1.0
	1.6nm,0.8s,baz=332,slow=4.3,SNR=13						
CMAR	**Chiang Mai Arr**	**166.84**	**142**	PKPab	PKPab	22 05 39.0	-0.9
	0.8nm,0.9s,baz=222,slow=5.9,SNR=5.0						
NJ2	**Nanjing**	**169.77**	**289**	*e*PKP	PKPdf	22 04 39.5	+0.4
LZH	**Lanzhou**	**172.40**	**23**	*e*PKP	PKPdf	22 04 35.3	-5.3
LZH				XPKP		22 04 40.0	

CSEM ***13*** *21:57:26.2±0.2, 43.93N×11.99E, h2^{km}, ML2.6/8, Error ellipse: s-maj=4.3km s-min=3.3km az=23.0*
NEIC ***13*** *21:57:27.5, 43.90N×11.93E, h7^{km}, MD2.9(ROM), ML2.6(LDG), After ROM.*
ROM ***13*** *21:57:27.5±0.1, 43.90N×11.93E, h7^{km}±2^{km}, MD2.9/2, ML1.9/3, Error ellipse: s-maj=2.2km s-min=2.1km az=0.0*
LDG ***13*** *21:57:28.4±0.2, 43.82N×11.98E, h10^{km}, Ml2.6/9, Error ellipse: s-maj=5.1km s-min=3.1km az=103.0*
ISC 13 21:57:26.3±0.3**, 44.01N**±0.02×**11.82E**±0.03**, h10**^{km}**, n45,** σ1$\overset{s}{.}$**17**/66**, 8C-1D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFI	**Santa Sofia**	**0.11**	**169**	⇑*i*PG	**Pg**	**21 57 29.3**	**+0.2**
SFI				SG	**Sg**	**21 57 31.0**	**+0.1**
SFI	**Santa Sofia**	**0.11**	**169**	⇑*i*Pg	**Pg**	**21 57 29.3**	**+0.3**
SFI				*e*Sg	**Sg**	**21 57 31.0**	**+0.1**
PGD	**Poggio Sodo**	**0.15**	**208**	⇑*i*PG	**Pg**	**21 57 31.2**	**+1.4**
PGD	**Poggio Sodo**	**0.15**	**208**	⇑*i*Pg	**Pg**	**21 57 31.2**	**+1.4**
CRE	**Caprese Michel**	**0.40**	**166**	*e*PG	**Pg**	**21 57 33.7**	**-0.8**
CRE				SG	**Sg**	**21 57 39.4**	**-0.6**
	294nm,0.3s						
CRE	**Caprese Michel**	**0.40**	**166**	*e*Pg	**Pg**	**21 57 33.7**	**-0.8**
CRE				*e*Sg	**Sg**	**21 57 39.4**	**-0.6**
CRE	**Caprese Michel**	**0.40**	**166**	*e*Pg	**Pg**	**21 57 33.7**	**-0.8**
	294nm,0.3s						
CRE				Sg	**Sg**	**21 57 39.4**	**-0.6**
RSM	**Repubblica di**	**0.46**	**100**	*e*PG	**Pg**	**21 57 35.5**	**-0.2**
	109nm,0.3s						
RSM	**Repubblica di**	**0.46**	**100**	*e*Pg	**Pg**	**21 57 35.5**	**-0.2**
RSM	**Repubblica di**	**0.46**	**100**	*e*Pg	**Pg**	**21 57 35.5**	**-0.2**
	109nm,0.3s						
ZCCA	**Zocca**	**0.69**	**300**	*e*PG	**Pg**	**21 57 45.1**	**+4.8**
ZCCA	**Zocca**	**0.69**	**300**	*e*Pg	**Pg**	**21 57 45.1**	**+4.8**
FSSB	**Fossombrone**	**0.76**	**114**	*e*PG	**Pg**	**21 57 41.0**	**-0.6**
	46nm,0.3s						
FSSB	**Fossombrone**	**0.76**	**114**	*e*Pg	**Pg**	**21 57 41.0**	**-0.6**
FSSB	**Fossombrone**	**0.76**	**114**	*e*Pg	**Pg**	**21 57 41.0**	**-0.6**
	46nm,0.3s						
ARV	**Arcevia**	**0.96**	**122**	*e*PG	**Pg**	**21 57 44.3**	**-1.3**
	35nm,0.5s						
ARV	**Arcevia**	**0.96**	**122**	*e*Pg	**Pg**	**21 57 44.3**	**-1.2**
ARV	**Arcevia**	**0.96**	**122**	*e*Pg	**Pg**	**21 57 44.3**	**-1.3**
	35nm,0.5s						
PII	**Pisa**	**0.98**	**253**	*e*PG	**Pg**	**21 57 47.3**	**+1.4**
	72nm,0.2s						

SNTG	Esanatoglia	1.11	132	ePG	Pg	21 57 47.1	-1.4
SNTG	Esanatoglia	1.11	132	ePg	Pg	21 57 47.1	-1.5
JAVS	Javornik	2.47	39	i Pn	Pn	21 58 07.3	0.0
JAVS				i Sn	Sn	21 58 38.6	+0.8
VOY	Vojsko	2.50	35	ePn	Pn	21 58 07.8	0.0
VOY				eSn	Sn	21 58 39.7	+1.1
PGF	Pioggiola	2.52	236	ePn	Pn	21 58 07.7	-0.4
OBKA	Obir	3.16	37	⇓iPN	Pn	21 58 20.7	+3.6
OBKA				i SN	Sn	21 58 54.1	-1.1
SBF	Sospel	3.17	269	ePn	Pn	21 58 18.4	+1.1
SBF				eSn	Sn	21 58 55.3	-0.2
	2.9nm,0.2s						
SQTA	Sankt Quirin	3.24	353	⇑iPN	Pn	21 58 21.3	+3.0
SQTA				i SN	Sn	21 58 56.1	-1.2
KBA	Koelnbreinsper	3.25	19	⇑iPN	Pn	21 58 20.8	+2.4
KBA				i SN	Sn	21 58 55.5	-2.1
DAVA	Damuels	3.55	338	⇑iPN	Pn	21 58 26.0	+3.3
DAVA				i SN	Sn	21 59 04.7	-0.4
MBDF	Montbardon	3.69	283	ePn	Pn	21 58 25.0	+0.3
MBDF				eSn	Sn	21 59 08.0	-0.7
	1.6nm,0.4s						
FRF	La Foret Royal	3.77	265	ePn	Pn	21 58 26.2	+0.4
FRF				eSn	Sn	21 59 09.2	-1.6
	1.4nm,0.2s						
LPG	La Plagne	3.90	294	ePn	Pn	21 58 29.7	+2.0
LMR	La Mourre	3.91	262	ePn	Pn	21 58 27.8	0.0
LMR				eSn	Sn	21 59 11.9	-2.4
	1.3nm,0.2s						
LPL	La Plagne	3.92	294	ePn	Pn	21 58 29.5	+1.5
LPL				eSn	Sn	21 59 14.9	+0.3
	1.7nm,0.3s						
MOA	Molln	4.20	23	⇑iPN	Pn	21 58 33.6	+1.6
MOA				i SN	Sn	21 59 18.7	-3.0
ORIF	Oris-en-Rattie	4.35	284	ePn	Pn	21 58 34.6	+0.6
SMRF	Simiane la Rot	4.50	272	ePn	Pn	21 58 36.2	0.0
CABF	La Chapelle	4.81	305	ePn	Pn	21 58 41.6	+1.1
CABF				eSn	Sn	21 59 35.9	-1.1
	0.7nm,0.2s						
HINF	Hinteralfeld	5.15	319	ePn	Pn	21 58 45.6	+0.3
HINF				eSn	Sn	21 59 42.4	-3.2
	2.7nm,0.3s						
VIVF	Saint-Julien-l	5.19	282	ePn	Pn	21 58 45.5	-0.4
CDF	Champ du Feu	5.42	326	ePn	Pn	21 58 49.8	+0.7
CDF				eSn	Sn	21 59 51.0	-1.3
	3.8nm,0.4s						
HAU	Haudompre	5.52	318	ePn	Pn	21 58 51.7	+1.1
HAU				eSn	Sn	21 59 53.3	-1.6
	4.5nm,0.3s						
SMF	Signal de Mont	6.21	298	ePn	Pn	21 59 00.8	+0.5
AVF	Avril sur Loir	6.58	298	ePn	Pn	21 59 05.4	-0.1
BGF	Bois d'Agland	6.82	295	ePn	Pn	21 59 08.7	-0.3

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*NIED **13** 22:13:00, 34.00N×142.50E, h8*

*NIED **13** 22:13:00,34.00N×142.50E,h8km,Mw4.4 Best double couple: $M_0 5.3\times10^{15}$ NP1:ϕ_s169°,δ68°,λ-113°. NP2:ϕ_s37°, δ32°,λ-46°.*

*JMA **13** 22:13:44.3±0.3,33.96N×142.49E,h64km,M4.0*

*MOS **13** 22:13:45.1±0.9,34.00N×142.53E,h33km,mb4.7/29,Error ellipse: s-maj=12.6km s-min=6.8km az=117.3*

*BJI **13** 22:13:46.0,34.06N×142.49E,h41km,mB4.8,mb4.2, Ms4.1,Msz4.0*

*NEIC **13** 22:13:46.9±0.2,33.98N×142.51E,mb4.6/24, MW4.4(NIED),Error ellipse: s-maj=5.6km s-min=4.8km az=183.0*

*IDC **13** 22:13:46.8±0.5,33.97N×142.47E,h33km±3km,mb4.2/21, mb1 4.4/24,mb1mx4.4/25,mbtmp4.4/24,ML4.3/3,MS3.5/7, Ms1 3.6/7,ms1mx3.3/30,Error ellipse: s-maj=13.8km s-min=11.4km az=113.0*

ISC 13 22:13:45.2±0.3**,33.98N**±0.04×**142.45E**±0.03**,h32**km**,** **h32**km±.6km**:pP-P,n155,**σ**0ˢ98**/163**,mb4.5**/64**,MS3.8**/14**,** **5C-2D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.39	299	P	Pn	22 14 08.3	-0.4
BSO1				eS	Sn	22 14 27.2	+1.2
BSO3	Boso 3	1.80	298	P	Pn	22 14 14.7	+0.2
BSO3				eS	Sn	22 14 37.5	+1.1
BSO4	Boso 4	2.01	301	P	Pn	22 14 18.1	+0.5
CHOJ	Chosi	2.16	323	P	Pn	22 14 19.3	-0.4
CHOJ				eS	Sn	22 14 45.3	-0.3
JHJ2	Mitsune	2.37	249	P	Pn	22 14 22.4	-0.2
JHJ2				eS	Sn	22 14 50.0	-0.8
JHJ	Hachijo jima 2	2.39	250	Pn	Pn	22 14 22.6	-0.4
	248nm,0.3s,baz=118,slow=4.7,SNR=34						
JHJ				Sn	Sn	22 14 50.1	-1.3
	271nm,0.3s,baz=49,slow=19,SNR=8.8						
JHJ				LR	LR	22 14 56.6	
	comp=Z,1μm,18.1s,baz=52,slow=30						
JIM2	Oshima 3	2.60	287	P	Pn	22 14 24.8	-1.2
JOD2	Odawara 2	3.05	296	P	Pn	22 14 31.3	-1.1
JAG	Ashikaga	3.46	316	P	Pn	22 14 37.2	-0.9
JAG				eS	Sn	22 15 16.1	-2.4
JRY	Ryogami san	3.55	306	P	Pn	22 14 38.5	-0.9
JYN	Shimob	3.55	296	P	Pn	22 14 39.0	-0.5
MAJO	Matsushiro	4.31	308	eP	Pn	22 14 50.8	+0.5
MAT	Matsushiro	4.31	308	eP	Pn	22 14 51.0	+0.7
MAT				eS	Sn	22 15 39.0	-1.1
MAT	Matsushiro	4.31	308	P	Pn	22 14 50.6	+0.3
MAT				S	Sn	22 15 38.9	-1.2
CBIJ	Chichi jima	6.87	182	Pn	Pn	22 15 22.4	-4.0
	11nm,0.3s,baz=294,slow=19,SNR=3.8						
CBIJ				Sn	Sn	22 16 34.0	-10
	2.7nm,0.3s,baz=308,slow=19,SNR=1.8						
ASAJ	Asahikawa	10.12	1	Pn	P	22 16 06.0	-5.3
	5.2nm,0.3s,baz=225,slow=14,SNR=13						
ASAJ				Sn	S	22 17 53.4	-11
	1.3nm,0.3s,baz=300,slow=20,SNR=3.3						
ASAJ				LR	LR	22 20 26.2	
	comp=Z,155nm,20.1s,baz=237,slow=39						
YUK	Yuzh-Kuril'sk	10.38	14	P	P	22 16 03.5	-11
YSS	Yuzh-Sakhalins	12.96	1	⇑iP	P	22 16 44.0	-5.7
YSS				pmax	pmax		
	comp=N,80nm,0.9s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS	Yuzh-Sakhalins	12.96	1	eP	P	22 16 44.4	-5.3
	comp=Z,68nm,0.8s						
MDJ	Mudanjiang	14.54	321	P	P	22 17 09.4	-1.0
MDJ				AP		22 17 16.9	
MDJ				XP		22 17 23.3	
MDJ				S	S	22 19 51.3	+0.1
MDJ				PCP	PcP	22 22 21.4	-2.6
MDJ				SCP		22 25 53.8	
MDJ				PCS		22 25 57.4	
MDJ				SCS	ScS	22 29 31.0	+0.6
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.7s						
MDJ				AMB	AMB		
	comp=Z,48nm,4.4s						
MDJ				LR	LR		
	comp=N,339nm,15.4s						
MDJ				LR	LR		
	comp=E,305nm,14.1s						
MDJ				LR	LR		
	comp=Z,578nm,13.9s						
CN2	Changchun	16.44	312	eP	P	22 17 34.9	-0.1
SNY	Shenyang	16.81	303	⇑P	P	22 17 40.8	+1.2
SNY				LR	LR		
	comp=N,280nm,14.9s						
SNY				LR	LR		
	comp=Z,180nm,11.0s						
NJ2	Nanjing	19.88	271	eP	P	22 18 18.3	+1.6
NJ2				AP		22 18 27.8	
NJ2				XP		22 18 30.8	
NJ2				PP	PP	22 18 36.0	+0.5
NJ2				PPP	PPP	22 18 45.8	+1.3
NJ2				S	S	22 21 55.0	+1.9
NJ2				XS		22 22 08.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s						
NJ2				AMB	AMB		
	comp=Z,300nm,6.7s						
NJ2				LR	LR		
	comp=N,490nm,13.4s						
NJ2				LR	LR		
	comp=E,730nm,16.1s						
NJ2				LR	LR		
	comp=Z,560nm,16.1s						
BJI	Beijing	21.79	294	P	P	22 18 41.5	+5.3
BJI				S	S	22 22 36.5	+6.2
BJI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb3.9						
BJI				LR	LR		
	comp=N,223nm,11.7s,MS4.0						
BJI				LR	LR		
	comp=E,228nm,12.2s,MS4.0						
BJI				LR	LR		
	comp=Z,54nm,12.7s,MS3.1						
BJT	Baijiatuau	21.80	294	eP	P	22 18 36.9	+0.7
BJT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJT	Baijiatuau	21.80	294	eP	P	22 18 36.9	+0.7
	comp=Z,6.3nm,0.7s,mb4.2						
HIA	Hailar	22.71	319	eP	P	22 18 46.7	+1.6
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HIA	Hailar	22.71	319	eP	P	22 18 46.7	+1.6
	comp=Z,4.9nm,0.8s,mb4.0						
WHN	Wuhan	23.98	270	eP	P	22 18 57.3	-0.4
HHC	Hu-ho-hao-te	25.38	295	⇓P	P	22 19 12.8	+1.8
HHC				AP	pP	22 19 21.9	+1.4
HHC				XP	sP	22 19 25.6	+0.8
HHC				PP	PP	22 19 51.8	+1.6
HHC				PCP	PcP	22 22 44.3	+0.6
HHC				S	S	22 23 37.8	+5.0
HHC				XS		22 23 48.5	
HHC				SS	SS	22 24 34.9	-0.5
HHC				SCP		22 26 21.9	
HHC				SCS	ScS	22 30 10.3	+3.7
HHC				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
HHC				LR	LR		
	comp=N,177nm,13.1s,MS3.9						
HHC				LR	LR		
	comp=E,161nm,14.3s,MS3.9						
HHC				LR	LR		
	comp=Z,171nm,14.3s,MS3.7						
MA2	Magadan	26.19	10	eP	P	22 19 18.0	-0.3
MA2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
MA2	Magadan	26.19	10	eP	P	22 19 17.9	-0.4
	comp=Z,17nm,1.0s,mb4.5						
BTO	Baotou	26.53	294	eP	P	22 19 17.3	-4.4
XAN	Xi'an	27.73	280	P	P	22 19 31.9	-0.7
XAN				AP	pP	22 19 40.8	-1.4
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
ENH	Enshi	28.09	272	eP	P	22 19 34.5	-1.5
	comp=Z,9.6nm,0.8s,mb4.5						
FX1	Attu Island--F	28.90	40	LR	LR	22 30 21.1	
	comp=Z,10nm,18.8s,baz=64,slow=34						
YAK	Yakutsk	29.23	348	d iP	P	22 19 44.5	-1.4
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
YAK				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.5						
ULN	Ulaanbaatar	29.84	308	eP	P	22 19 51.8	+0.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	29.84	308	eP	P	22 19 51.8	+0.3
	comp=Z,4.2nm,0.8s,mb4.2						
SONM	Songino Array	30.26	308	P	P	22 19 56.2	+0.9
	comp=Z,3.7nm,0.9s,mb4.1,baz=104,slow=8.4,SNR=15						
BOD	Bodaibo	30.57	330	eP	P	22 19 56.4	-1.5
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
LZH	Lanzhou	31.55	285	⇑P	P	22 20 07.0	+0.3
LZH				AP	pP	22 20 16.3	0.0
LZH				XP	sP	22 20 20.1	-0.4
LZH				PP	PP	22 21 11.5	+0.2
LZH				eS	S	22 25 12.0	+0.2
LZH				XS		22 25 28.0	
LZH				SS	SS	22 27 01.0	-0.3
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,80nm,6.0s						
LZH				LR	LR		
	comp=E,330nm,12.0s						
LZH				LR	LR		
	comp=Z,436nm,13.5s,MS4.3						
CD2	Chengdu	32.67	275	P	P	22 20 16.0	-0.5
ZAK	Zakamensk	32.88	312	eP	P	22 20 18.2	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5						
TLY	Talaya	33.02	314	i P	P	22 20 20.1	+0.8
TLY				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
TLY				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.5						
GTA	Gaotai	34.37	292	eP	P	22 20 31.9	+0.7
GTA				AP	pP	22 20 42.6	+1.7
GTA				XP	sP	22 20 47.0	+2.0
GTA				PP	PP	22 21 47.5	+0.5
GTA				PCP	PcP	22 23 10.0	+3.3
GTA				S	S	22 25 55.0	-0.7
GTA				XS		22 26 11.0	
GTA				SS	SS	22 28 05.1	-1.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.6s,mb4.2						
GTA				AMB	AMB		
	comp=Z,197nm,5.3s						
GTA				LR	LR		
	comp=N,109nm,15.2s,MS3.8						
GTA				LR	LR		
	comp=E,84nm,16.7s,MS3.8						
GTA				LR	LR		
	comp=Z,119nm,14.4s,MS3.8						
KMI	Kunming	35.48	266	P	P	22 20 44.3	+3.5
KMI				AMB	AMB		
	comp=Z,4.0nm,1.8s,mb4.0						
KMI				LR	LR		
	comp=N,176nm,15.6s,MS4.1						
KMI				LR	LR		
	comp=E,199nm,13.6s,MS4.1						
KMI				LR	LR		
	comp=Z,252nm,15.6s,MS4.1						
BILL	Bilibino	36.73	15	⇑iP	P	22 20 49.8	-1.1
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
BILL	Bilibino	36.73	15	eP	P	22 20 49.5	-1.4
	comp=Z,4.4nm,0.9s,mb4.3						
TIXI	Tiksi	38.41	353	eP	P	22 21 04.0	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,90nm,15.0s,MS3.7						
CMAR	Chiang Mai Arr	41.66	259	P	P	22 21 32.7	+0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,58nm,20.9s						
CMAR	Chiang Mai Arr	41.66	259	P	P	22 21 32.6	+0.3
	comp=Z,0.9nm,0.6s,mb3.6,baz=52,slow=7.6,SNR=7.6						
CMAR				LR	LR	22 37 06.2	
	comp=Z,58nm,20.9s,MS3.4,baz=65,slow=34						
WMQ	Urumqi	43.03	300	P	P	22 21 44.4	+1.1
WMQ				XP	sP	22 21 58.0	+0.9
WMQ				PP	PP	22 23 27.0	+1.5
WMQ				S	S	22 28 07.0	+0.6
WMQ				SS	SS	22 31 13.0	+0.5
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,93nm,16.0s,MS3.9						
WMQ				LR	LR		
	comp=E,67nm,16.0s,MS3.9						
ZAL	Zalesovo	44.64	315	P	P	22 21 56.4	+0.2
ZAL						22 23 38.8	
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAL	Zalesovo	44.64	315	P	P	22 21 56.4	+0.2
	comp=Z,1.6nm,0.7s,mb4.0,baz=18,slow=8.8,SNR=11						
ZAL				PcP	PcP	22 23 38.8	-0.2
	comp=Z,2.0nm,1.0s,baz=336,slow=4.0,SNR=3.3						
NVS	Novosibirsk	45.59	316	⇑iP	P	22 22 03.4	-0.3
NVS				pmax	pmax		
	comp=E,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
JIRN	Jiri	48.22	278	eP	P	22 22 26.8	+2.0
	comp=Z,17nm,0.5s,mb5.3						
KURK	Kurchatov	48.51	310	i P	P	22 22 26.3	-0.4
KURK	Kurchatov	48.51	310	eP	P	22 22 26.4	-0.3
	comp=Z,9.5nm,0.7s,mb4.9						
PKI	Pulchoki	48.90	279	eP	P	22 22 31.0	+1.0
	comp=Z,10nm,0.7s,mb4.9						
KKN	Kakani	48.92	279	eP	P	22 22 31.2	+1.0
	comp=Z,13nm,0.9s,mb5.0						
DMN	Daman	49.13	279	eP	P	22 22 32.9	+1.1
	comp=Z,11nm,0.9s,mb4.9						
GKN	Gorkha	49.37	280	eP	P	22 22 34.0	+0.4
	comp=Z,15nm,0.7s,mb5.1						
ILAR	Eielson Array	51.64	31	P	P	22 22 49.1	-1.4
ILAR				*PP	pP	22 23 00.8	+0.4
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	51.64	31	P	P	22 22 49.1	-1.4
	comp=Z,3.5nm,0.8s,mb4.3,baz=266,slow=5.7,SNR=23						
ILAR				pP	pP	22 23 00.8	+0.4
	comp=Z,2.1nm,0.8s,baz=267,slow=5.4,SNR=6.3						
CHKZ	Chkalovo	53.04	315	eP	P	22 22 59.7	-1.4
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
CHKZ	Chkalovo	53.04	315	eP	P	22 22 59.7	-1.4
	comp=Z,7.1nm,1.3s,mb4.4						
BVAR	Borovoye Array	53.27	314	P	P	22 23 01.0	-1.9
	comp=Z,0.8nm,0.5s,mb3.9,baz=101,slow=7.6,SNR=8.6						
BVAR				PcP	PcP	22 24 09.9	-0.2
	comp=Z,1.6nm,0.7s,baz=90,slow=4.4,SNR=4.5						
BRVK	Borovoye	53.33	314	eP	P	22 23 02.8	-0.4
WRAB	Tennant Creek	54.17	189	eP	P	22 23 08.9	-0.9
WRAB				e*PP	pP	22 23 18.6	-1.1
WRAB				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
WRAB	Tennant Creek	54.17	189	eP	P	22 23 08.8	-0.9
	comp=Z,18nm,0.8s,mb5.0						
WRAB				epP	pP	22 23 18.6	-1.2
WB2	Warramunga Arr	54.18	189	eP	P	22 23 08.9	-0.9
WB2				i pP	pP	22 23 18.8	-1.0
WRA	Warramunga Arr	54.18	189	P	P	22 23 08.7	-1.2
WRA				*PP	pP	22 23 18.6	-1.2
WRA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,9.0nm,0.4s						
WRA	Warramunga Arr	54.18	189	P	P	22 23 08.7	-1.1
	comp=Z,9.3nm,0.6s,mb4.9,baz=7.6,slow=7.7,SNR=55						
WRA				pP	pP	22 23 18.6	-1.2
	comp=Z,9.3nm,0.4s,baz=6.3,slow=7.4,SNR=16						
NDI	New Delhi	55.15	284	e	P	22 23 18.0	+1.1
INK	Inuvik	56.73	26	eP	P	22 23 26.5	-1.2
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	Inuvik	56.73	26	eP	P	22 23 26.5	-1.2
	comp=Z,6.0nm,1.2s,mb4.5						
ASAR	Alice Springs	57.90	189	P	P	22 23 35.8	-0.8
	comp=Z,3.2nm,0.7s,mb4.5,baz=9.5,slow=5.9,SNR=23						
ASAR				pP	pP	22 23 45.4	-1.2
	comp=Z,4.2nm,0.6s,baz=0.3,slow=6.6,SNR=12						
ASPA	Alice Springs	57.90	189	eP	P	22 23 36.3	-0.3
ASPA				epP	pP	22 23 46.5	-0.1
SVE	Sverdlovsk	58.01	320	eP	P	22 23 37.0	+0.1
MBWA	Marble Bar	58.95	205	P	P	22 23 43.2	-0.7
	comp=Z,2.9nm,0.5s,mb4.6						
HYB	Hyderabad	59.03	271	i P	P	22 23 48.5	+4.0
HYB				e		22 23 52.0	
POO	Poona	62.39	275	e	P	22 24 09.0	+1.6
RES	Resolute Bay	65.34	14	eP	P	22 24 24.7	-1.1
RES				e*PP	pP	22 24 34.6	-1.3
RES				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
RES	Resolute Bay	65.34	14	eP	P	22 24 24.7	-1.1
	comp=Z,14nm,1.0s,mb5.0						
RES				epP	pP	22 24 34.6	-1.4
STKA	Stephens Creek	65.51	181	P	P	22 24 26.3	-1.3
	comp=Z,3.6nm,0.8s,mb4.5,baz=330,slow=8.9,SNR=6.5						
YKA	Yellowknife Ar	66.03	30	P	P	22 24 28.9	-1.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	Yellowknife Ar	66.03	30	P	P	22 24 28.9	-1.4
	comp=Z,2.1nm,0.8s,mb4.2,baz=296,slow=6.3,SNR=28						
YKA	Yellowknife Ar	66.03	30	P	P	22 24 28.9	-1.4
ARCES	ARCESS Array B	67.15	340	P	P	22 24 36.3	-1.1
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	67.15	340	P	P	22 24 36.3	-1.1
	comp=Z,4.1nm,0.9s,mb4.5,baz=49,slow=11,SNR=4.8						
JOF	Joensuu	69.05	333	ep	P	22 24 50.4	+1.0
OBN	Obninsk	71.05	324	eP	P	22 25 00.6	-1.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
KAF	Kangasniemi	71.41	334	ep	P	22 25 04.5	+0.8
	comp=Z,2.1nm,0.5s,mb4.3,baz=50,slow=5.7						
KAF	Kangasniemi	71.41	334	eP	P	22 25 04.5	+0.8
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
FINES	FINESS Array B	71.91	333	P	P	22 25 06.2	-0.5
FINES				*PP	pP	22 25 16.9	0.0
FINES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	71.91	333	P	P	22 25 06.2	-0.5
	comp=Z,8.3nm,1.1s,mb4.6,baz=90,slow=11,SNR=6.5						
FINES				pP	pP	22 25 16.9	+0.1
	comp=Z,1.8nm,0.7s,baz=38,slow=7.9,SNR=1.9						
FINES	FINESS Array B	71.91	333	P	P	22 25 06.2	-0.5
FINES				pP	pP	22 25 16.9	+0.1
BMO	Blue Mountains	73.39	47	eP	P	22 25 16.0	+0.4
	comp=Z,4.5nm,1.1s,mb4.3						
BMO				epP	pP	22 25 25.1	-0.7
KIV	Kislovodsk	73.56	312	eP	P	22 25 18.1	+1.4
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KIV				pmax	pmax		
	comp=E,4.0nm,1.1s						
WVOR	Wild Horse Val	73.82	50	eP	P	22 25 18.0	-0.2
WVOR				e*PP	pP	22 25 29.6	+1.2
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
WVOR	Wild Horse Val	73.82	50	eP	P	22 25 18.0	-0.1
	comp=Z,10nm,1.5s,mb4.5						
WVOR				epP	pP	22 25 29.6	+1.2
GNI	Garni	74.22	308	i P	P	22 25 20.7	+0.1
GNI				pmax	pmax		
	comp=Z,9.0nm,2.2s						
GNI	Garni	74.22	308	LR	LR	23 00 37.8	
	comp=Z,46nm,18.3s,MS3.8,baz=143,slow=38						
SOC	Sochi	75.58	313	eP	P	22 25 26.4	-1.9
SOC				e		22 28 17.5	
SOC				eS	S	22 35 03.0	-2.5
SOC				e		22 35 37.4	
SOC				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.4						
SOC				pmax	pmax		
	comp=N,43nm,1.0s						
SOC				pmax	pmax		
	comp=E,18nm,1.0s						
FFC	Flin Flon	75.81	33	P	P	22 25 27.4	-2.0
	comp=E,61nm,0.8s,SNR=8.5						
HLID	Hailey	75.83	47	eP	P	22 25 30.3	+0.6
	comp=E,2.8nm,1.0s,mb4.2						
NVAR	Mina Array Bea	76.14	53	P	P	22 25 32.4	+0.8
	comp=E,4.7nm,0.8s,mb4.5,baz=291,slow=4.1,SNR=25						
NVAR				pP	pP	22 25 42.6	+0.7
	comp=E,1.7nm,0.6s,baz=286,slow=7.1,SNR=6.3						
NVAR				LR	LR	22 54 07.3	
	comp=E,110nm,18.9s,MS4.2,baz=90,slow=32						
ANN	Anapa	76.27	315	eP	P	22 25 25.4	-6.8
ANN				pmax	pmax		
	comp=Z,96nm,1.0s						
BOZ	Bozeman (W)	76.31	44	eP	P	22 25 32.5	+0.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BOZ	Bozeman (W)	76.31	44	eP	P	22 25 32.5	+0.1
	comp=Z,3.4nm,0.9s,mb4.3						
AKASG	Malin Array Be	77.23	323	P	P	22 25 37.4	0.0
AKASG				*PP	pP	22 25 48.0	+0.3
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG				pmax	pmax		

	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	77.23	323	P	P	22 25 37.4	0.0
	comp=Z,4.8nm,0.9s,mb4.4,baz=45,slow=6.1,SNR=16						
AKASG				pP	pP	22 25 48.0	+0.2
	comp=Z,1.4nm,0.5s,baz=45,slow=5.8,SNR=7.1						
NB2	NORSAR Subarra	77.32	338	P	P	22 25 37.4	-0.3
	comp=Z,5.4nm,0.8s,mb4.5,baz=39,slow=5.6						
NB2	NORSAR Subarra	77.32	338	P	P	22 25 37.4	-0.3
NB2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
NB2	NORSAR Subarra	77.32	338	P	P	22 25 37.4	-0.3
	comp=Z,5.4nm,0.8s,mb4.5						
NOA	NORSAR Array B	77.32	338	P	P	22 25 37.9	+0.2
NOA				*PP	pP	22 25 47.3	-0.7
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	77.32	338	P	P	22 25 37.9	+0.2
	comp=Z,3.7nm,0.8s,mb4.4,baz=39,slow=5.5,SNR=7.8						
NOA				pP	pP	22 25 47.3	-0.7
	comp=Z,2.0nm,0.6s,baz=39,slow=5.6,SNR=3.7						
NOA	NORSAR Array B	77.32	338	P	P	22 25 37.9	+0.1
NOA				pP	pP	22 25 47.3	-0.7
IMW	Indian Meadow	77.72	45	eP	P	22 25 41.9	+1.7
DUG	Dugway	78.71	49	eP	P	22 25 46.4	+0.6
DUG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
DUG	Dugway	78.71	49	eP	P	22 25 46.4	+0.6
	comp=Z,5.2nm,0.8s,mb4.5						
PDAR	Pinedale Array	79.20	45	P	P	22 25 48.9	+0.5
	comp=Z,1.5nm,0.7s,mb4.0,baz=288,slow=2.9,SNR=10						
PDAR				pP	pP	22 25 58.6	-0.1
	comp=Z,0.9nm,0.6s,baz=280,slow=2.7,SNR=3.9						
NEN	Nelson	79.98	54	eP	P	22 25 53.3	+0.5
MSU	Marysvale	80.08	50	eP	P	22 25 54.2	+1.0
SRU	San Rafael	80.78	49	eP	P	22 25 57.6	+0.7
KWP	Kalwaria	81.11	325	eP	P	22 25 59.9	+1.5
KWP				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.1						
KWP	Kalwaria	81.11	325	eP	P	22 25 59.9	+1.5
	comp=Z,36nm,1.3s,mb5.2						
BRTR	Keskin Array B	81.52	312	P	P	22 26 01.7	+1.0
BRTR				*PP	pP	22 26 12.7	+1.6
BRTR	Keskin Array B	81.52	312	P	P	22 26 01.6	+0.9
	comp=Z,3.2nm,0.9s,mb4.3,baz=100,slow=3.9,SNR=14						
BRTR				pP	pP	22 26 12.7	+1.5
	comp=Z,1.1nm,0.6s,baz=110,slow=4.6,SNR=3.8						
ULM	Lac du Bonnet	81.58	34	P	P	22 26 00.2	-0.6
	comp=Z,1.9nm,0.7s,mb4.1,baz=296,slow=3.7,SNR=4.5						
KOLS	Kolonicke sedl	81.79	325	eP	P	22 26 01.3	-0.7
KOLS				e		22 51 46.6	
PV10	Paradox Valley	82.15	49	eP	P	22 26 05.5	+1.4
PV10				epP	pP	22 26 14.8	+0.3
PV01	Paradox Valley	82.59	49	eP	P	22 26 06.0	-0.3
ASF	Jabal al Asfar	83.92	305	P	P	22 26 13.3	0.0
	comp=Z,1.7nm,0.8s,mb4.2,baz=124,slow=4.5,SNR=4.4						
BRG	Berggiesshubel	84.11	330	i P	P	22 26 14.5	+0.7
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.7						
BRG	Berggiesshubel	84.11	330	i P	P	22 26 14.5	+0.7
	comp=Z,7.0nm,1.1s,mb4.7						
CLL	Collm	84.16	331	eP	P	22 26 15.0	+1.0
CLL	Collm	84.16	331	P	P	22 26 15.0	+1.0
PRU	Pruhonice	84.53	329	eP	P	22 26 16.5	+0.6
SDCO	Great Sand Dun	84.73	48	eP	P	22 26 18.5	+1.2
	comp=Z,8.0nm,1.1s,mb4.8						
SDCO				epP	pP	22 26 28.8	+1.2
KHC	Kasperske Hory	85.59	329	eP	P	22 26 20.5	-0.7
KHC				ePCP	PcP	22 26 22.0	-2.5
GERES	GERESS Array B	85.75	329	P	P	22 26 22.5	+0.5
GERES				*PP	pP	22 26 33.2	+0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	85.75	329	P	P	22 26 22.5	+0.5
	comp=Z,1.2nm,0.8s,mb4.2,baz=34,slow=4.8,SNR=7.1						
GERES				pP	pP	22 26 33.2	+0.7
	comp=Z,0.5nm,0.5s,baz=27,slow=6.0,SNR=2.8						
ANMO	Albuquerque	85.89	50	eP	P	22 26 24.1	+1.0
ANMO				e*PP	pP	22 26 34.7	+1.2
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANMO	Albuquerque	85.89	50	LR	LR	22 58 25.9	
	comp=Z,56nm,21.6s,MS3.9,slow=31						
ANMO	Albuquerque	85.89	50	eP	P	22 26 24.1	+1.0
	comp=Z,6.3nm,1.0s,mb4.8						
ANMO				epP	pP	22 26 34.6	+1.1
SCHQ	Schefferville	88.03	16	P	P	22 26 32.8	-0.1
	comp=Z,3.1nm,0.9s,mb4.5,baz=20,slow=7.0,SNR=4.7						
TXAR	Lajitas Array	91.30	53	P	P	22 26 49.4	+0.6
	comp=Z,2.6nm,0.7s,mb4.7,baz=293,slow=3.2,SNR=30						
TXAR				pP	pP	22 26 59.9	+0.6
	comp=Z,1.6nm,0.5s,baz=305,slow=3.3,SNR=8.6						
LBTB	Lobatse	125.06	261	PKIKP	PKPdf	22 32 43.6	-4.4
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LBTB	Lobatse	125.06	261	PKP	PKPdf	22 32 43.6	-4.4
	comp=Z,2.6nm,0.9s,baz=100,slow=19,SNR=2.8						
SDV	Santo Domingo	127.06	43	PKP	PKPdf	22 32 48.7	-3.3
	comp=Z,3.2nm,0.5s,baz=337,slow=3.8,SNR=6.0						
SAML	Samuel	145.70	49	ePKPdf	PKPdf	22 33 22.0	-4.2
SAML				epPKPdf		22 33 32.5	
LPAZ	La Paz	147.36	65	ePKPdf	PKPdf	22 33 26.4	-2.5
LPAZ				ePKPbc	PKPdf	22 33 28.7	-0.2
LVC	Limon Verde	150.27	76	PKPbc	PKPdf	22 33 35.4	+2.0
	comp=Z,4.9nm,0.8s,baz=302,slow=1.5,SNR=6.6						

*BJI **13** 22:29:03.7, 21.70S×170.80E, h135^{km}, mB4.9, mb4.3*
*NEIC **13** 22:29:03.7±0.3, 21.68S×170.80E, mb4.7/8, Error ellipse: s-maj=8.9km s-min=7.4km az=177.0*
*IDC **13** 22:29:04.8±0.6, 21.76S×170.67E, h142^{km}±4^{km}, mb4.3/14, mb1 4.5/15, mb1mx4.4/17, mbtmp4.7/15, MS3.4/4, Ms1 3.4/4, ms1mx3.1/24, Error ellipse: s-maj=13.5km s-min=11.3km az=6.0*
ISC 13 22:29:04.8±0.9**, 21.80S**±0.06×**170.67E**±0.06**, h154**^{km}±7^{km}**, h139**^{km}±3.0^{km}**:pP-P, n84,** $\sigma 1^{s}09$/64**, mb4.5**/23**, 3C-3D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.94	265	eP	P	22 30 05.5	+0.4
DZM				eS	S	22 30 51.4	-0.1
DZM	Mont Dzumac	3.94	265	eP	P	22 30 05.5	+0.3
DZM				eS	S	22 30 51.4	-0.1
NOUC	Port Laguerre	4.07	265	eP	P	22 30 06.9	0.0
NOUC				eS	S	22 30 54.4	-0.2
NOUC	Port Laguerre	4.07	265	eP	P	22 30 06.9	0.0
NOUC				eS	S	22 30 54.4	-0.2
HNR	Honiara	16.05	318	eP	P	22 32 42.1	-1.1
	214nm,0.8s						
URZ	Urewera	17.32	163	P	P	22 32 58.5	-0.1
	1.5nm,0.3s,baz=322,slow=6.2,SNR=17						
URZ				LR	LR	22 38 22.9	
	comp=Z,200nm,19.1s,baz=107,slow=32						
AFI	Afiamalu	18.45	68	eP	P	22 33 08.4	-2.8
	76nm,1.2s						
TSZ	Takapari Road	18.75	167	PN	P	22 33 14.2	-0.1
TSZ	Takapari Road	18.75	167	PN	P	22 33 14.2	-0.1
BFZ	Birch Farm	19.41	167	PN	P	22 33 19.8	-1.4
BFZ	Birch Farm	19.41	167	PN	P	22 33 19.8	-1.4
THZ	Tophouse	19.99	175	PN	P	22 33 27.3	+0.1
THZ	Tophouse	19.99	175	PN	P	22 33 27.3	+0.1
RIV	Riverview	20.97	231	eP	P	22 33 39.8	+2.8
RPZ	Rata Peaks	21.86	179	P	P	22 33 47.1	+1.4
	47nm,1.0s,mb4.9,baz=321,slow=0.3,SNR=16						
RPZ				pP		22 34 12.8	
	46nm,0.8s,baz=358,slow=5.1,SNR=5.4						
RPZ	Rata Peaks	21.86	179	PN	P	22 33 47.0	+1.3
RPZ				pP		22 34 14.6	
RPZ	Rata Peaks	21.86	179	PN	P	22 33 47.0	+1.3
RPZ				pP		22 34 14.6	
CTA	Charters Tower	22.86	270	P	P	22 33 58.0	+2.3
	7.3nm,0.5s,mb4.4,baz=108,slow=11,SNR=8.9						
CTAO	Charters Tower	22.86	270	eP	P	22 33 58.0	+2.3
	6.3nm,0.5s,mb4.3						
CNB	Canberra Magne	22.99	230	eP	P	22 33 58.9	+2.1
	1µm,0.7s						
ODZ	Otahua Downs	23.18	180	PN	P	22 33 58.9	+0.3
ODZ	Otahua Downs	23.18	180	PN	P	22 33 58.9	+0.3
PMG	Port Moresby	25.73	295	P	P	22 34 22.9	-0.1
	9.5nm,0.7s,mb4.5,baz=129,slow=3.5,SNR=7.6						
PMG				LR	LR	22 43 17.3	
	comp=Z,72nm,19.2s,baz=290,slow=33						
PMG	Port Moresby	25.73	295	eP	P	22 34 22.7	-0.3
	12nm,0.8s,mb4.6						
TOO	Toolangi	26.82	229	eP	P	22 34 33.2	+0.6
	0.8nm,0.8s						
STKA	Stephens Creek	27.74	243	eP	P	22 34 41.3	+0.2
	22nm,0.9s,mb4.9						
STKA	Stephens Creek	27.74	243	P	P	22 34 41.4	+0.3
	25nm,0.8s,mb5.0,baz=87,slow=9.6,SNR=50						
STKA				PcP	PcP	22 37 53.8	-0.2
	3.7nm,0.7s,baz=136,slow=2.0,SNR=3.9						
STKA				ScP		22 41 21.6	
	3.6nm,0.8s,baz=33,slow=5.8,SNR=6.8						
STKA				LR	LR	22 44 05.4	
	comp=Z,59nm,18.4s,baz=43,slow=32						
ASAR	Alice Springs	33.91	260	P	P	22 35 34.4	-0.7
	25nm,0.7s,mb5.0,baz=84,slow=8.9,SNR=199						
ASAR				pP	pP	22 36 04.8	-3.5
	5.3nm,0.8s,baz=82,slow=8.8,SNR=3.1						
ASAR				PcP	PcP	22 38 08.8	-1.5
	1.4nm,0.8s,baz=95,slow=3.8,SNR=4.3						
ASAR				S	S	22 40 47.6	+0.3
	2.6nm,0.8s,baz=91,slow=16,SNR=9.3						
ASAR				ScP		22 41 42.7	
	3.6nm,0.7s,baz=103,slow=3.6,SNR=18						
ASAR				LR	LR	22 47 35.9	
	comp=Z,60nm,18.1s,baz=246,slow=33						
ASPA	Alice Springs	33.91	260	⇓iP	P	22 35 34.5	-0.6
ASPA				eS	S	22 40 46.8	-0.6
WB2	Warramunga Arr	33.94	266	eP	P	22 35 34.4	-1.1
WB2				eS	S	22 40 46.0	-1.9
WRAB	Tennant Creek	33.94	266	eP	P	22 35 34.0	-1.5
	7.7nm,0.8s,mb4.5						
WRA	Warramunga Arr	33.95	266	P	P	22 35 34.1	-1.4
	6.6nm,0.8s,mb4.4,baz=99,slow=8.4,SNR=25						
WRA				pP	pP	22 36 06.5	-2.2
	8.4nm,1.3s,baz=97,slow=8.7,SNR=3.9						
WRA				S	S	22 40 46.9	-1.2
	3.0nm,0.9s,baz=100,slow=14,SNR=11						
WRA				ScP		22 41 42.4	
	3.3nm,0.9s,baz=92,slow=3.8,SNR=8.2						
KAKA	Kakadu	37.53	278	eP	P	22 36 05.3	-0.4
	5.8nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	42.38	267	⇓iP	P	22 36 46.0	+0.2
	28nm,0.8s,mb4.9						
KLBR	Kellerberrin	47.88	247	eP	P	22 37 28.3	-0.9
	350nm,0.5s						
MUN	Mundaring	49.18	246	eP	P	22 37 38.2	-1.0
	11nm,0.8s,mb4.5						
VNDA	Vanda	55.93	182	P	P	22 38 27.6	-1.1
	8.8nm,0.7s,mb4.7,baz=360,slow=5.1,SNR=18						
SBA	Scott Base	56.13	181	eP	P	22 38 30.4	+0.3
	81nm,0.9s,mb5.5						
NJ2	Nanjing	72.97	316	eP	P	22 40 21.8	+2.3
NJ2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
MDJ	Mudanjiang	76.00	331	P	P	22 40 37.5	+0.9
MDJ				AP	pP	22 41 09.8	-4.7
MDJ				XP	sP	22 41 24.0	-7.2
MDJ				PP	PP	22 43 29.8	-0.7
MDJ				S	S	22 50 11.3	+5.9
MDJ				SCS	ScS	22 50 38.8	+5.5
MDJ				XS		22 51 06.6	
MDJ				SS	SS	22 55 07.3	+2.9
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,95nm,5.6s						
MDJ				LR	LR		
	comp=N,20nm,31.5s						
MDJ				LR	LR		
	comp=E,24nm,46.8s						
MDJ				LR	LR		
	comp=Z,35nm,41.5s						
MAW	Mawson	76.58	202	P	P	22 40 39.8	+0.5
	comp=Z,25nm,0.9s,mb4.8,baz=53,slow=19,SNR=7.0						
CN2	Changchun	77.33	328	eP	P	22 40 47.3	+3.3
KMI	Kunming	80.76	302	P	P	22 41 07.6	+4.7
KMI				AMB	AMB		
	comp=Z,5.0nm,2.0s,mb3.8						
KMI				LR	LR		
	comp=Z,50nm,39.0s						
CMAR	Chiang Mai Arr	80.77	294	P	P	22 41 04.7	+1.7
	comp=Z,1.5nm,0.6s,mb3.8,baz=134,slow=4.5,SNR=15						
CMAR				pP	pP	22 41 38.5	-2.8
	comp=Z,3.3nm,1.1s,baz=130,slow=3.7,SNR=5.4						
LZH	Lanzhou	85.43	312	eP	P	22 41 27.5	+1.1
LZH				AP	pP	22 42 04.5	-0.6
LZH				XP	sP	22 42 17.5	-4.4
LZH				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.6						
SNAA	Sanae	86.67	182	⇑i	P	22 41 31.1	-0.5
SNAA	Sanae	86.67	182	P	P	22 41 30.8	-0.7
	comp=Z,11nm,0.7s,mb4.8,baz=206,slow=6.1,SNR=50						
SNAA	Sanae	86.67	182	eP	P	22 41 30.7	-0.9
	comp=Z,944nm,1.4s						
VNA3	Neumayer Olymp	87.21	180	⇑i	P	22 41 33.9	-0.3
VNA2	Neumayer--Watz	87.52	181	⇓i	P	22 41 35.4	-0.2
VNA2	Neumayer--Watz	87.52	181	⇑i	P	22 41 45.6	+10
YBH	Yreka Blue Hor	88.21	43	pP	pP	22 42 14.5	-4.1
	comp=Z,5.8nm,1.2s,baz=89,slow=8.2,SNR=3.9						
NVAR	Mina Array Bea	89.50	48	P	P	22 41 45.1	-0.7
	comp=Z,1.6nm,0.8s,mb4.0,baz=209,slow=6.5,SNR=9.7						
NVAR				pP	pP	22 42 21.0	-3.8
	comp=Z,1.6nm,0.9s,baz=213,slow=5.3,SNR=3.9						
ULN	Ulaanbaatar	89.71	323	eP	P	22 41 47.6	+1.1
SONM	Songino Array	90.06	323	P	P	22 41 49.0	+0.8
	comp=Z,2.4nm,1.2s,mb4.0,baz=139,slow=4.8,SNR=8.1						
ILAR	Eielson Array	92.27	17	P	P	22 41 57.0	-1.0
	comp=Z,0.4nm,0.7s,mb3.6,baz=248,slow=3.9,SNR=6.6						
PLCA	Paso Flores	95.74	138	P	P	22 42 14.7	+0.3
	comp=Z,2.0nm,0.7s,mb4.5,baz=219,slow=11,SNR=3.5						
TXAR	Lajitas Array	96.81	61	pP	pP	22 42 55.2	-3.6
	comp=Z,0.3nm,0.8s,baz=243,slow=8.4,SNR=3.2						
BVAR	Borovoye Array	113.23	320	PKKPbc		22 58 09.5	
	comp=Z,0.5nm,0.6s,baz=278,slow=4.0,SNR=5.7						
LBTB	Lobatse	122.42	218	PKP	PKPdf	22 47 43.2	+1.0
	comp=Z,1.9nm,0.6s,baz=32,slow=22,SNR=5.2						
BDFB	Brasilia	126.87	131	PKP	PKPdf	22 47 51.3	+0.2
	comp=Z,1.5nm,0.4s,baz=236,slow=2.0,SNR=5.5						
ARCES	ARCESS Array B	127.87	345	PKP	PKPdf	22 47 51.6	-0.1
	comp=Z,2.9nm,0.8s,baz=90,slow=3.6,SNR=4.7						
KMBO	Kilima Mbogo	129.16	249	PKP	PKPdf	22 47 59.1	+3.4
	comp=Z,1.8nm,0.9s,baz=25,slow=3.1,SNR=5.2						
TSUM	Tsumeb	131.49	215	PKP	PKPdf	22 48 00.3	+0.4
	comp=Z,3.0nm,0.9s,baz=293,slow=3.7,SNR=4.0						
FINES	FINESS Array B	133.46	337	SKPbc		22 51 16.9	
	comp=Z,16nm,1.0s,baz=69,slow=5.2,SNR=14						
NOA	NORSAR Array B	138.25	345	SKPbc		22 51 31.9	
	comp=Z,4.1nm,0.9s,baz=17,slow=4.2,SNR=6.7						
AKASG	Malin Array Be	138.34	323	SKPbc		22 51 33.4	
	comp=Z,2.0nm,0.9s,baz=60,slow=2.2,SNR=9.7						
VYHS	Vyhne	145.15	327	ePKP	PKPdf	22 48 25.0	+1.2
BRG	Berggiesshubel	145.75	334	eP	PKPdf	22 48 27.0	+2.3
BRG				e		22 49 02.5	
CLL	Collm	145.79	335	i PKP1	PKPbc	22 48 26.6	+0.9
PRU	Pruhonice	146.16	332	ePKP	PKPdf	22 48 28.5	+3.1
EKA	Eskdalemuir Ar	146.20	354	PKPbc	PKPbc	22 48 27.2	+0.7
	comp=Z,2.3nm,0.7s,baz=360,slow=2.6,SNR=7.8						
KHC	Kasperske Hory	147.22	332	ePKP	PKPdf	22 48 30.5	+3.3
KHC				pPKP		22 49 08.5	
IDI	Anoyia	147.25	302	PKPbc	PKPdf	22 48 31.6	+3.9
	comp=Z,6.6nm,0.8s,slow=14,SNR=2.8						
GERES	GERESS Array B	147.37	331	PKPbc	PKPdf	22 48 31.2	+3.7
	comp=Z,3.0nm,0.8s,baz=45,slow=1.9,SNR=12						
GERES				pPKPbc		22 49 07.3	
	comp=Z,4.3nm,0.9s,baz=45,slow=1.9,SNR=5.4						
GERES				SKPbc		22 51 55.5	
	comp=Z,1.2nm,0.8s,baz=90,slow=1.3,SNR=3.5						
GIVF	Givet	149.63	342	ePKP1	PKPdf	22 48 36.5	+5.5
	comp=Z,85nm,1.3s						
BAIF	Baives	149.84	343	ePKP1	PKPdf	22 48 37.3	+6.0
	comp=Z,40nm,1.4s						
CDF	Champ du Feu	150.31	337	ePKP1	PKPdf	22 48 38.3	+6.2
	comp=Z,44nm,1.2s						
DAVOX	Davos	150.62	333	PKPbc	PKPdf	22 48 39.8	+7.2
	comp=Z,10nm,0.8s,baz=58,slow=3.2,SNR=13						
HINF	Hinteralfeld	150.96	337	ePKP1	PKPdf	22 48 39.7	+6.6
HAU	Haudompre	150.98	338	ePKP1	PKPdf	22 48 39.6	+6.5
	comp=Z,17nm,0.9s						
MEZF	Maizieres J'vi	150.98	340	ePKP1	PKPdf	22 48 40.2	+7.1
	comp=Z,31nm,0.9s						
CABF	La Chapelle	152.26	337	ePKP1	PKPdf	22 48 43.1	+8.1
DBIC	Dimbokro	164.35	197	PKP	PKPdf	22 48 51.1	+0.7
	comp=Z,1.6nm,0.6s,baz=183,slow=3.5,SNR=4.1						
DBIC				PKPab	PKPab	22 49 46.8	-0.9
	comp=Z,8.5nm,0.9s,baz=135,slow=4.1,SNR=7.1						

IDC 13 22:35:05.1±1.5**, 16.00S**×**173.77W, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.8**/15**, mbtmp3.8**/4**, MS3.8**/4**, Ms1 3.8**/4**, ms1mx3.0**/30**, Error ellipse: s-maj=47.6km s-min=35.8km az=123.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	38.16	258	LR	LR	22 54 55.0	
	comp=Z,61nm,18.2s,baz=227,slow=31						
WRA	Warramunga Arr	49.36	257	P	P	22 43 56.6	-2.1
	0.4nm,0.6s,baz=90,slow=6.7,SNR=6.6						
ASAR	Alice Springs	49.59	252	P	P	22 43 58.5	-1.8
	1.0nm,0.6s,baz=87,slow=7.6,SNR=8.8						
VNDA	Vanda	62.75	186	P	P	22 45 31.6	-2.4
	0.6nm,0.5s,baz=28,slow=9.7,SNR=6.7						
NVAR	Mina Array Bea	75.01	42	LR	LR	23 16 39.8	
	comp=Z,71nm,18.9s,baz=155,slow=33						
TXAR	Lajitas Array	81.24	56	LR	LR	23 16 11.9	
	comp=Z,49nm,18.6s,baz=165,slow=30						
ILAR	Eielson Array	83.10	11	P	P	22 47 32.4	-1.3
	0.2nm,0.6s,baz=225,slow=7.7,SNR=6.1						
ULM	Lac du Bonnet	94.62	39	LR	LR	23 27 09.3	
	comp=Z,45nm,18.3s,baz=4.9,slow=33						

*NEIC **13** 22:56:27.0±1.0, 23.06S×66.39W, h224^{km}±17^{km}, mb4.0/3, Error ellipse: s-maj=24.3km s-min=12.3km az=99.0*
*IDC **13** 22:56:27.3±1.5, 23.00S×66.48W, h222^{km}±21^{km}, mb3.1/1, mb1 3.7/4, mb1mx3.3/15, mbtmp4.1/4, Error ellipse: s-maj=31.7km s-min=25.0km az=132.0*
*BJI **13** 22:56:28.9, 23.10S×66.40W, h223^{km}, mB5.3*
ISC 13 22:56:26.0±0.9**, 23.05S**±0.07×**66.5W**±0.1**, h232**^{km}±15^{km}**, n11,** $\sigma 1^{s}00$/14**, mb3.3**/1**, 1C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.31	280	P	P	22 57 11.5	+1.1
	56nm,0.3s,baz=90,slow=6.3,SNR=936						
LVC				S	S	22 57 44.7	-0.2
	17nm,0.3s,baz=254,slow=21,SNR=15						
LVC	Limon Verde	2.31	280	⇑iPn	P	22 57 11.5	+1.1
LVC				S	S	22 57 44.7	-0.2
LPAZ	La Paz	6.91	346	ePn	P	22 58 07.5	+1.4
	12nm,0.6s						
ARE	Arequipa	8.09	323	P	P	22 58 29.0	+7.8
ARE				eS	S	22 59 50.0	-1.4
FCH	Farellones	10.78	197	eP	P	22 58 55.9	+0.3
SAML	Samuel	14.37	13	eP	P	22 59 39.5	-1.1
TRQA	Tornquist	15.44	167	eP	P	22 59 51.8	-1.6
	1.1nm,0.5s						
PLCA	Paso Flores	17.96	190	P	P	23 00 21.7	+0.1
	0.4nm,0.3s,baz=11,slow=9.8,SNR=9.2						
PLCA	Paso Flores	17.96	190	eP	P	23 00 21.6	0.0
	4.3nm,0.7s						
BDFB	Brasilia	18.88	70	P	P	23 00 31.4	+0.4
	2.1nm,0.3s,baz=254,slow=9.9,SNR=18						
YKA	Yellowknife Ar	93.41	340	P	P	23 09 16.5	+0.9
	0.3nm,1.0s,mb3.3,baz=118,slow=4.7,SNR=3.7						

CASC 13 22:56:28.1±2.9**, 11.25N**×**87.04W, h20**^{km}±19^{km}**, MD4.0, ML3.1, 3C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	1.03	25	⇓eP	Pb	22 56 46.9	-0.1
TICN	Ticuantepe	1.11	45	eP	Pb	22 56 49.2	+0.6
XAVN	Gruta Xavier	1.14	38	eP	Pb	22 56 48.3	-0.6
APON	Apoyo	1.16	55	eP	Pb	22 56 48.2	-1.2
SSNN	San Juan del S	1.17	88	⇑eP	Pb	22 56 48.0	-1.5
SSNN				eS	Sb	22 57 04.8	+0.5
LEON	Leon	1.17	7	⇑eP	Pb	22 56 48.9	-0.6
MGAN	Managua	1.19	41	eP	Pn	22 56 48.9	-0.9
MGAN				eS	Sb	22 57 05.9	+1.2
MGAN				i		22 57 10.8	
	comp=E,354nm,0.3s						
APYN	Apoyeque	1.19	35	eP	Pn	22 56 49.1	-0.7
MIRN	Miramar	1.23	15	eP	Pn	22 56 49.5	-0.9
WILN	Americas 2	1.23	43	eP	Pn	22 56 49.5	-0.9
WILN				eS	Sb	22 57 07.7	+1.6
CNGN	Cerro Negro	1.29	15	⇑eP	Pn	22 56 52.8	+1.6
TEL3	Telica 3	1.33	8	eP	Pn	22 56 51.1	-0.8
TELN	Telica	1.36	9	eP	Pn	22 56 51.5	-0.8
CONN	Concepcion	1.42	77	eP	Pn	22 56 51.4	-1.8
MADN	Villa Maderas	1.49	84	⇓eP	Pn	22 56 53.3	-0.8
PYTN	Playitas	1.60	37	eP	Pn	22 56 53.1	-2.7
VCR	Vista de Mar	1.78	129	eP	Pn	22 56 59.7	+1.5
JCR	Jicaral	2.35	126	eP	Pn	22 57 04.5	-1.9
FORC	Fortuna	2.45	108	eP	Pn	22 57 05.2	-2.7
LAJ	Bijagual	3.18	115	eP	Pn	22 57 13.9	-4.3
LCR2	La Lucha 2	3.34	116	eP	Pn	22 57 21.1	+0.6
BUS	Buena Vista	3.64	117	eP	Pn	22 57 25.6	+0.8

*IDC **13** 23:06:52.9±7.0, 61.96N×151.69W, h89^{km}±70^{km}, mb3.2/1, mb1 3.4/4, mb1mx3.2/20, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=57.2km s-min=37.7km az=35.0*
*NEIC **13** 23:06:55.2, 62.03N×151.72W, h104^{km}, After AEIC.*
ISC 13 23:06:53.2±0.4**, 62.04N**±0.02×**151.65W**±0.07**, h115**^{km}±4^{km}**, n69,** $\sigma 0^{s}61$/78**, mb3.4**/1**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STLK	Strandline Lak	0.55	189	P	P	23 07 10.8	-0.3
STLK				S	S	23 07 23.5	-1.0
CUT	Chulitna	0.75	60	P	P	23 07 13.2	+0.6
CRP	Crater Peak	0.81	198	P	P	23 07 13.2	+0.1
CRP				S	S	23 07 27.1	-1.1
CKN	Chakachatna No	0.85	197	P	P	23 07 13.7	0.0
SPU	Mount Spurr	0.88	193	eP	P	23 07 13.3	-0.6
PWA	Palmer West	0.93	114	P	P	23 07 15.3	+0.9
FIB	Fire Island	1.12	140	P	P	23 07 17.5	+1.1
VOGL	Vogel Lake	1.20	150	P	P	23 07 17.0	-0.2
PMR	Palmer	1.28	109	P	P	23 07 18.1	-0.1
PMR				S	S	23 07 36.7	-0.2
NKA	Nikishka	1.31	171	P	P	23 07 20.5	+1.9
GHO	Glory Hole Cre	1.32	100	P	P	23 07 19.2	+0.6
GHO				S	S	23 07 38.5	+0.6
RC01	Rabbit Creek A	1.32	135	P	P	23 07 19.1	+0.5
RC01				S	S	23 07 37.6	-0.3
HUR	Hurricane	1.33	44	P	P	23 07 19.5	+0.7
HUR				S	S	23 07 38.0	-0.2
DFR	Drift River	1.53	199	P	P	23 07 21.4	+0.3
TRF	Thorofare Moun	1.55	23	P	P	23 07 22.3	+0.9
TRF				S	S	23 07 43.2	+0.5
KTH	Kantishna Hill	1.56	12	P	P	23 07 21.8	+0.4
KTH				S	S	23 07 41.9	-0.9
SML	Sawmill	1.59	97	P	P	23 07 22.3	+0.5
NCT	North Crescent	1.60	203	P	P	23 07 22.2	+0.2
RDN	Redoubt North	1.62	200	P	P	23 07 22.5	+0.3
KNK	Knik Glacier	1.65	111	P	P	23 07 22.8	+0.3
RSO	Redoubt South	1.67	199	P	P	23 07 23.4	+0.7
SLKM	Skilak Lake	1.68	155	P	P	23 07 23.8	+0.9
RND	Reindeer	1.89	42	P	P	23 07 26.2	+0.8
SCM	Sheep Creek Mo	2.06	94	P	P	23 07 28.1	+0.5
ILIM	Iliamna	2.06	199	P	P	23 07 27.9	+0.2
INE	Iliamna NE	2.10	200	P	P	23 07 28.4	+0.2
MCK	McKinley	2.11	35	P	P	23 07 29.0	+0.7
ILW	Iliamna West	2.11	201	P	P	23 07 29.1	+0.7
TT01	Tatalina	2.21	295	P	P	23 07 29.0	-0.6
SEW	Seward	2.21	150	P	P	23 07 30.1	+0.4
BWN	Browne	2.36	24	P	P	23 07 32.3	+0.6
GLI	Glacier Island	2.48	116	P	P	23 07 32.4	-0.8
VLZ	Valdez	2.70	107	P	P	23 07 35.6	-0.6
LTI	Latouche	2.72	136	P	P	23 07 35.4	-1.2
FID	Port Fidalgo	2.80	115	P	P	23 07 36.5	-1.1
TZL	Tazlina	2.93	87	P	P	23 07 39.9	+0.5
DIV	Divide	2.96	105	P	P	23 07 39.0	-0.6
HIN	Hinchinbrook I	2.98	121	P	P	23 07 39.3	-0.7
PAX	Paxson	3.02	69	P	P	23 07 40.5	0.0
MLY	Manley	3.04	7	P	P	23 07 40.5	-0.2
THY	Trims Highway	3.05	60	P	P	23 07 41.1	+0.2
CCB	Clear Creek Bu	3.14	32	P	P	23 07 42.0	-0.2
HDA	Harding Lake	3.19	40	P	P	23 07 42.6	-0.2
EYAK	Cordova Ski Ar	3.22	115	P	P	23 07 42.4	-0.8
MDM	Murphy Dome	3.31	26	P	P	23 07 44.2	-0.2
COLA	College	3.32	29	P	P	23 07 44.5	-0.1
IL1	Eielson Array	3.48	36	P	P	23 07 46.3	-0.5
ILAR	Eielson Array	3.48	36	P	P	23 07 46.3	-0.5

	3.0nm,0.3s,baz=223,slow=14,SNR=141						
ILAR				S	S	23 08 26.7	-0.8
	3.1nm,0.3s,baz=218,slow=28,SNR=7.5						
GLM	Gilmore Dome	3.52	31	P	P	23 07 47.5	+0.2
GLB	Gilahina Butte	3.78	96	P	P	23 07 50.5	-0.2
KAHC	Katmai Hardscr	3.79	208	P	P	23 07 50.5	-0.3
MENT	Mentasta	3.79	73	eP	P	23 07 57.8	+6.9
IM3	Indian Mountai	4.07	348	P	P	23 07 54.3	-0.4
IMA	Indian Mountai	4.15	348	eP	P	23 07 55.3	-0.4
KDAK	Kodiak Island	4.29	187	P	P	23 07 56.7	-1.0
TGL	Tana Glacier	4.43	103	P	P	23 07 59.1	-0.4
BALM	Baldy	4.57	99	P	P	23 08 01.0	-0.4
BCA3	Beaver Creek A	4.68	73	P	P	23 08 03.0	+0.1
CTGM	Chitina Glacie	5.06	98	P	P	23 08 08.3	+0.3
YAH	Yahtse	5.08	105	P	P	23 08 08.5	+0.2
COLD	Coldfoot	5.25	6	P	P	23 08 10.2	-0.4
PCA	Pinnacle	5.86	104	P	P	23 08 18.6	-0.3
DAWY	Dawson	5.94	65	P	P	23 08 19.2	-0.6
BM3	Burnt Mountain	6.19	26	P	P	23 08 23.0	-0.3
WHY	Whitehorse	8.18	92	P	P	23 08 49.6	-0.8
INK	Inuvik	9.85	43	P	P	23 09 12.8	+0.2
	0.2nm,0.3s,baz=249,slow=15,SNR=20						
YKA	Yellowknife Ar	17.10	72	P	P	23 10 47.3	+1.3
	0.1nm,0.3s,baz=283,slow=11,SNR=5.9						
YKA	Yellowknife Ar	17.10	72	P	P	23 10 47.3	+1.3
SONM	Songino Array	54.13	306	P	P	23 16 08.3	+0.4
	0.3nm,0.7s,mb3.4,baz=39,slow=8.7,SNR=4.8						

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*NIED **13** 23:11:00, 33.90N×142.60E, h8^{km}, Mw4.3 Best double couple: M$_0$3.41×10^{15} NP1: φ$_s$164°, δ61°, λ-111°. NP2: φ$_s$22°, δ35°, λ-57°.*
*BJI **13** 23:11:03.1, 33.90N×142.67E, h25^{km}, mB4.7, mb4.4, Ms3.9, Msz3.9*
*NEIC **13** 23:11:03.5±4.1, 33.95N×142.50E, h3^{km}±25^{km}, mb4.6/18, MW4.3(NIED), Error ellipse: s-maj=8.6km s-min=6.7km az=116.0*
*IDC **13** 23:11:03.1±0.5, 33.96N×142.47E, mb4.2/18, mb1 4.5/21, mb1mx4.4/25, mbtmp4.3/21, ML4.5/3, MS3.6/4, Ms1 3.6/4, ms1mx3.2/27, Error ellipse: s-maj=17.4km s-min=13.1km az=103.0*
*JMA **13** 23:11:04.9±0.4, 33.91N×142.57E, h58^{km}, M4.0*
*MOS **13** 23:11:07.6±1.2, 34.23N×142.49E, h33^{km}, mb4.5/21, Error ellipse: s-maj=13.4km s-min=7.4km az=119.8*
ISC 13 23:11:04.1±1.1**, 33.90N**±0.04×**142.47E**±0.04**, h18**^{km}±7^{km}**, h31**^{km}±2.3^{km}**: pP-P, n125, σ1^{s}04**/139**, mb4.5**/50**, MS3.8**/9**, 3C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.45	302	P	Pn	23 11 30.0	+0.3
BSO1				S	Sb	23 11 48.6	+0.3
BSO2	Boso 2	1.66	301	S	Sn	23 11 55.7	+2.1
BSO3	Boso 3	1.86	300	P	Pn	23 11 36.1	+0.6
BSO3				S	Sn	23 12 01.2	+2.5
BSO4	Boso 4	2.07	302	P	Pn	23 11 39.6	+1.0
BSO4				S	Sn	23 12 03.9	-0.3
CHOJ	Chosi	2.24	324	P	Pn	23 11 41.3	+0.3
JHJ2	Mitsune	2.35	251	P	Pn	23 11 43.7	+1.1
JHJ2				S	Sn	23 12 11.8	+0.5
JHJ	Hachijo jima 2	2.38	252	Pn	Pn	23 11 44.0	+1.0
	738nm,0.3s,baz=96,slow=6.4,SNR=110						
JHJ				Sn	Sn	23 12 11.4	-0.5
	675nm,0.3s,baz=53,slow=20,SNR=32						
JIM2	Oshima 3	2.65	289	P	Pn	23 11 46.4	-0.4
JOD2	Odawara 2	3.11	297	P	Pn	23 11 52.8	-0.5
JOD2				S	Sn	23 12 30.3	-0.1
JAG	Ashikaga	3.53	316	P	Pn	23 11 58.5	-0.9
JYN	Shimob	3.61	297	P	Pn	23 12 00.2	-0.3
JYN				S	Sn	23 12 41.7	-1.4
JRY	Ryogami san	3.62	307	P	Pn	23 12 00.1	-0.5
JMM	Marumori	4.19	341	P	Pn	23 12 05.9	-2.8
JMM				S	Sn	23 12 51.3	-6.4
MAJO	Matsushiro	4.38	308	eP	Pn	23 12 11.7	+0.3
MAT	Matsushiro	4.38	308	eP	Pn	23 12 12.0	+0.6
MAT				eS	Sn	23 13 00.0	-2.5
MAT	Matsushiro	4.38	308	P	Pn	23 12 11.6	+0.2
MAT				S	Sn	23 12 59.7	-2.8
MAT	Matsushiro	4.38	308	P	Pn	23 12 11.7	+0.3
MAT				S	Sn	23 13 00.5	-2.0
JMK	Ichinoseki	5.14	349	P	Pn	23 12 18.9	-3.3
JMK				S	Sn	23 13 13.5	-8.3
JYK	Kaneyama	5.29	342	P	Pn	23 12 22.4	-1.9
CBIJ	Chichi jima	6.79	182	Pn	Pn	23 12 43.6	-1.8
	15nm,0.3s,baz=294,slow=20,SNR=3.7						
CBIJ				Sn	Sn	23 13 55.5	-7.5
	8.1nm,0.3s,baz=270,slow=20,SNR=2.7						
ASAJ	Asahikawa	10.20	1	P	P	23 13 28.2	-4.6
ASAJ						23 15 13.3	
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,152nm,18.3s						
ASAJ	Asahikawa	10.20	1	Pn	P	23 13 28.1	-4.7
	comp=Z,4.8nm,0.3s,baz=233,slow=14,SNR=7.7						
ASAJ				Sn	S	23 15 13.3	-14
	comp=Z,1.5nm,0.3s,baz=42,slow=26,SNR=3.6						
ASAJ				LR	LR	23 18 16.5	
	comp=Z,152nm,18.3s,baz=173,slow=43						
YUK	Yuzh-Kuril'sk	10.46	14	P	P	23 13 27.5	-8.8
YSS	Yuzh-Sakhalins	13.04	1	eP	P	23 14 06.0	-5.2
YSS				pmax	pmax		
	comp=Z,15nm,0.8s						
YSS	Yuzh-Sakhalins	13.04	1	eP	P	23 14 06.0	-5.2
	comp=Z,15nm,0.8s						
MDJ	Mudanjiang	14.61	321	P	P	23 14 32.4	+0.6
MDJ				AP		23 14 40.1	
MDJ				XP		23 14 45.1	
MDJ				S	S	23 17 14.1	-0.1
MDJ				PCP	PcP	23 19 43.3	-2.2
MDJ				SCP		23 23 15.9	
MDJ				PCS		23 23 19.8	
MDJ				SCS	ScS	23 26 53.4	-0.2
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,57nm,5.0s						
MDJ				LR	LR		
	comp=N,251nm,14.1s						
MDJ				LR	LR		
	comp=E,172nm,13.8s						
MDJ				LR	LR		
	comp=Z,451nm,15.0s						
CN2	Changchun	16.51	312	eP	P	23 14 58.3	+1.9
BJI	Beijing	21.84	294	P	P	23 15 59.8	+2.3
BJI				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.2						
BJI				LR	LR		
	comp=N,180nm,11.9s						
BJI				LR	LR		
	comp=E,159nm,19.9s						
BJI				LR	LR		
	comp=Z,125nm,28.2s						
BJT	Baijiatuau	21.85	294	eP	P	23 15 59.5	+2.0
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT	Baijiatuau	21.85	294	eP	P	23 15 59.5	+2.0
	comp=Z,6.7nm,0.8s,mb4.1						
HIA	Hailar	22.78	319	eP	P	23 16 05.6	-1.0
HIA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HIA	Hailar	22.78	319	eP	P	23 16 05.6	-1.0
	comp=Z,9.9nm,1.0s,mb4.2						
WHN	Wuhan	24.00	270	P	P	23 16 18.6	0.0
HHC	Hu-ho-hao-te	25.44	295	eP	P	23 16 33.3	+0.9
HHC				AP	pP	23 16 42.6	+5.0
HHC				XP	sP	23 16 46.9	+6.9
HHC				PP	PP	23 17 11.9	+0.4
HHC				PCP	PcP	23 20 05.5	+0.4
HHC				S	S	23 20 54.3	-1.4
HHC				XS		23 21 10.9	
HHC				SS	SS	23 21 57.3	-0.9
HHC				SCP		23 23 40.8	
HHC				SCS	ScS	23 27 27.9	-1.9
HHC				AMB	AMB		
	comp=Z,38nm,1.5s,mb4.7						
HHC				AMB	AMB		
	comp=Z,182nm,2.5s,mb5.2						
HHC				LR	LR		
	comp=N,86nm,13.1s,MS3.7						
HHC				LR	LR		
	comp=E,128nm,13.1s,MS3.7						
HHC				LR	LR		
	comp=Z,121nm,13.1s,MS3.6						
CLNS	Chul'man	25.90	338	eP	P	23 16 30.0	-6.5
CLNS				pmax	pmax		
	comp=N,11nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.4						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.7s						
MA2	Magadan	26.27	10	eP	P	23 16 40.0	+0.1
MA2				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.1						
MA2	Magadan	26.27	10	eP	P	23 16 40.0	+0.2
	comp=Z,2.3nm,0.3s,mb4.2						
BTO	Baotou	26.58	294	eP	P	23 16 42.0	-1.0
BTO				AMB	AMB		
	comp=Z,22nm,0.7s,mb4.8						
XAN	Xi'an	27.76	280	P	P	23 16 52.8	-1.0
XAN				AP	pP	23 17 02.8	+3.7
XAN				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.3						
ENH	Enshi	28.11	272	eP	P	23 16 55.1	-1.9
	comp=Z,9.3nm,0.7s,mb4.5						
ULN	Ulaanbaatar	29.91	308	eP	P	23 17 13.9	+0.9
ULN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
ULN	Ulaanbaatar	29.91	308	eP	P	23 17 13.9	+0.9
	comp=Z,12nm,1.0s,mb4.6						
SONM	Songino Array	30.33	308	P	P	23 17 17.7	+1.0
	comp=Z,4.8nm,0.7s,mb4.3,baz=105,slow=8.4,SNR=30						
BOD	Bodaibo	30.66	330	eP	P	23 17 18.0	-1.5
LZH	Lanzhou	31.59	285	⇑P	P	23 17 28.0	+0.1
LZH				AP	pP	23 17 37.3	+4.1
LZH				XP	sP	23 17 41.1	+5.6
LZH				PP	PP	23 18 31.6	-0.9
LZH				AMB	AMB		
	comp=Z,23nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,83nm,4.0s						
LZH				LR	LR		
	comp=E,256nm,13.8s						
LZH				LR	LR		
	comp=Z,399nm,15.0s,MS4.2						
CD2	Chengdu	32.70	276	P	P	23 17 36.0	-1.6
ZAK	Zakamensk	32.95	312	⇓iP	P	23 17 40.0	+0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.1						
TLY	Talaya	33.09	314	eP	P	23 17 41.9	+1.1
TLY				e		23 27 58.3	
TLY				pmax	pmax		
	comp=Z,10.0nm,1.9s,mb4.4						
TLY				MLR	MLR		
	comp=Z,118nm,15.0s,MS3.7						
GTA	Gaotai	34.42	292	eP	P	23 17 53.3	+0.8
GTA				AP	pP	23 18 03.0	+5.1
GTA				XP	sP	23 18 07.1	+6.9
GTA				PP	PP	23 19 09.3	+0.9
GTA				PCP	PcP	23 20 30.3	+2.2
GTA				S	S	23 23 18.8	+0.1
GTA				XS		23 23 34.0	
GTA				SS	SS	23 25 28.8	-0.7
GTA				AMB	AMB		
	comp=Z,3.0nm,1.3s,mb4.1						
GTA				AMB	AMB		
	comp=Z,71nm,5.7s						
GTA				LR	LR		
	comp=N,93nm,14.5s,MS3.8						
GTA				LR	LR		
	comp=E,66nm,13.3s,MS3.8						
GTA				LR	LR		
	comp=Z,80nm,15.6s,MS3.6						
KMI	Kunming	35.49	266	P	P	23 18 06.4	+4.6
KMI				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
KMI				LR	LR		
	comp=N,119nm,14.7s,MS4.1						
KMI				LR	LR		
	comp=E,196nm,13.3s,MS4.1						
KMI				LR	LR		
	comp=Z,149nm,11.7s,MS4.0						
CMAR	Chiang Mai Arr	41.66	260	P	P	23 18 52.9	-0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR				MLR	MLR		
	comp=Z,43nm,19.6s						
CMAR	Chiang Mai Arr	41.66	260	P	P	23 18 52.9	-0.5
	comp=Z,1.5nm,0.6s,mb3.8,baz=47,slow=7.6,SNR=12						
CMAR				LR	LR	23 35 27.0	
	comp=Z,43nm,19.6s,MS3.3,baz=35,slow=35						
WMQ	Urumqi	43.09	300	eP	P	23 19 06.8	+2.1
WMQ				XP	sP	23 19 21.0	+8.7
WMQ				PP	PP	23 20 49.0	+1.8
WMQ				S	S	23 25 29.0	-0.5
WMQ				SS	SS	23 28 35.0	-0.7
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
WMQ				LR	LR		
	comp=N,68nm,20.0s,MS3.7						
WMQ				LR	LR		
	comp=E,59nm,20.0s,MS3.7						
LSA	Lhasa	43.46	279	eP	P	23 19 10.1	+2.2
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
LSA	Lhasa	43.46	279	eP	P	23 19 10.1	+2.2
	comp=Z,1.9nm,0.6s,mb4.0						
ZAL	Zalesovo	44.71	315	P	P	23 19 18.2	+0.5
ZAL						23 20 59.5	
ZAL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAL	Zalesovo	44.71	315	P	P	23 19 18.2	+0.5
	comp=Z,2.1nm,1.0s,mb3.9,baz=17,slow=8.9,SNR=12						
ZAL				PcP	PcP	23 20 59.5	-0.9
	comp=Z,1.0nm,0.7s,baz=338,slow=2.5,SNR=3.9						
ZAL	Zalesovo	44.71	315	P	P	23 19 18.2	+0.5
ZAL				PcP	PcP	23 20 59.5	-0.9
NVS	Novosibirsk	45.66	316	⇓iP	P	23 19 24.7	-0.5
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KAKA	Kakadu	47.32	193	⇑iP	P	23 19 38.8	-0.1
	comp=Z,9.9nm,0.7s,mb4.8						
JIRN	Jiri	48.25	279	eP	P	23 19 46.5	+0.5
	comp=Z,19nm,0.6s,mb5.3						
KURK	Kurchatov	48.58	310	eP	P	23 19 47.7	-0.5
KURK				e	pP	23 19 54.9	+1.2
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
KURK	Kurchatov	48.58	310	eP	P	23 19 47.7	-0.5
	comp=Z,9.4nm,0.7s,mb4.9						
KURK				e	pP	23 19 54.9	+1.2
PKI	Pulchoki	48.93	279	eP	P	23 19 51.0	-0.2
KKN	Kakani	48.95	279	eP	P	23 19 51.5	+0.1
	comp=Z,14nm,0.8s,mb5.0						
DMN	Daman	49.16	279	eP	P	23 19 53.1	+0.1
	comp=Z,6.8nm,0.7s,mb4.8						
GKN	Gorkha	49.40	280	eP	P	23 19 54.9	+0.1
	comp=Z,19nm,0.8s,mb5.2						
ILAR	Eielson Array	51.70	31	P	P	23 20 11.5	-0.4
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	51.70	31	P	P	23 20 11.5	-0.4
	comp=Z,1.5nm,0.9s,mb3.9,baz=262,slow=7.9,SNR=7.9						
CHKZ	Chkalovo	53.11	315	eP	P	23 20 20.7	-1.9
CHKZ				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.6						
CHKZ	Chkalovo	53.11	315	eP	P	23 20 20.7	-1.9
	comp=Z,90nm,1.1s,mb5.6						
BRVK	Borovoye	53.40	314	eP	P	23 20 24.3	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BRVK	Borovoye	53.40	314	eP	P	23 20 24.3	-0.5
	comp=Z,3.3nm,0.7s,mb4.4						
WRAB	Tennant Creek	54.09	189	eP	P	23 20 29.7	-0.5
WRAB				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
WRAB	Tennant Creek	54.09	189	eP	P	23 20 29.7	-0.4
	comp=Z,34nm,1.1s,mb5.2						
WB2	Warramunga Arr	54.10	189	⇓iP	P	23 20 29.6	-0.6
WRA	Warramunga Arr	54.10	189	P	P	23 20 29.9	-0.3
WRA				pmax	pmax		
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	54.10	189	P	P	23 20 29.9	-0.4
	comp=Z,13nm,0.6s,mb5.0,baz=7.8,slow=7.8,SNR=49						
FITZ	Fitzroy Crossi	54.14	200	⇑iP	P	23 20 31.2	+0.6
	comp=Z,9.5nm,1.2s,mb4.6						
NDI	New Delhi	55.18	284	eP	P	23 20 36.5	-1.6
INK	Inuvik	56.80	26	P	P	23 20 49.1	-0.1
	comp=Z,0.6nm,0.9s,mb3.6,baz=236,slow=11,SNR=4.1						
INK	Inuvik	56.80	26	eP	P	23 20 49.0	-0.2
	comp=Z,0.4nm,0.6s,mb3.6						
ASAR	Alice Springs	57.82	189	P	P	23 20 56.8	-0.3
	comp=Z,8.4nm,0.9s,mb4.8,baz=14,slow=8.6,SNR=68						
ASAR				PcP	PcP	23 21 50.0	+0.6
	comp=Z,2.3nm,1.0s,baz=358,slow=3.8,SNR=3.8						
ASPA	Alice Springs	57.82	189	⇓iP	P	23 20 56.5	-0.5
HYB	Hyderabad	59.05	271	eP	P	23 21 05.0	-0.7
HYB	Hyderabad	59.05	271	i P	P	23 21 05.0	-0.7
HYB				e		23 21 16.0	
POO	Poona	62.42	275	e	P	23 21 27.5	-1.1
STKA	Stephens Creek	65.43	181	eP	P	23 21 48.1	0.0
	comp=Z,3.5nm,0.8s,mb4.4						
STKA	Stephens Creek	65.43	181	P	P	23 21 48.0	-0.1
	comp=Z,4.1nm,0.7s,mb4.6,baz=352,slow=7.0,SNR=12						
YKA	Yellowknife Ar	66.09	30	P	P	23 21 50.8	-1.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	66.09	30	P	P	23 21 50.8	-0.9
	comp=Z,0.6nm,0.8s,mb3.7,baz=294,slow=6.3,SNR=12						
JOF	Joensuu	69.14	333	ep	P	23 22 10.0	-0.9
KAF	Kangasniemi	71.49	334	ep	P	23 22 24.1	-1.1
	baz=51,slow=5.8						
FINES	FINESS Array B	71.99	333	P	P	23 22 27.3	-0.9
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	71.99	333	P	P	23 22 27.3	-0.9
	comp=Z,2.9nm,0.9s,mb4.2,baz=53,slow=9.5,SNR=6.9						
NVAR	Mina Array Bea	76.18	53	P	P	23 22 53.8	+0.9
	comp=Z,1.6nm,0.8s,mb4.0,baz=275,slow=7.3,SNR=8.4						
BOZ	Bozeman (W)	76.36	44	eP	P	23 22 55.2	+1.5
BOZ				e		23 23 03.7	
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
BOZ	Bozeman (W)	76.36	44	eP	P	23 22 55.2	+1.5
	comp=Z,4.7nm,1.3s,mb4.3						
BOZ				e		23 23 03.7	
HFS	Hagfors	77.30	336	P	P	23 22 57.6	-1.1
HFS				pmax	pmax		
	comp=Z,63nm,1.5s						
HFS	Hagfors	77.30	336	P	P	23 22 57.6	-1.0
	comp=Z,63nm,1.5s,mb5.3,baz=124,slow=5.3,SNR=6.3						
AKASG	Malin Array Be	77.31	323	P	P	23 22 58.8	-0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	Malin Array Be	77.31	323	P	P	23 22 58.8	-0.1
	comp=Z,3.4nm,0.8s,mb4.4,baz=45,slow=5.9,SNR=15						
NB2	NORSAR Subarra	77.41	338	P	P	23 22 58.8	-0.4
	comp=Z,3.0nm,0.7s,mb4.3,baz=39,slow=5.8						
NOA	NORSAR Array B	77.41	338	P	P	23 22 59.6	+0.4
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	77.41	338	P	P	23 22 59.6	+0.3
	comp=Z,2.6nm,0.7s,mb4.2,baz=39,slow=5.7,SNR=8.5						
PDAR	Pinedale Array	79.24	45	P	P	23 23 10.6	+0.9
	comp=Z,0.6nm,0.6s,mb3.7,baz=307,slow=2.5,SNR=5.3						
FRB	Frobisher Bay	79.62	13	P	P	23 23 10.9	-0.4
FRB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FRB	Frobisher Bay	79.62	13	P	P	23 23 10.8	-0.4
	comp=Z,1.5nm,0.6s,mb4.1,baz=218,slow=1.7,SNR=3.8						
SRU	San Rafael	80.82	49	eP	P	23 23 19.2	+1.0
SRU				e		23 23 28.7	
BRTR	Keskin Array B	81.59	312	P	P	23 23 23.1	+0.9
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	81.59	312	P	P	23 23 23.1	+0.9
	comp=Z,2.6nm,0.8s,mb4.2,baz=104,slow=3.8,SNR=14						
PV10	Paradox Valley	82.19	49	eP	P	23 23 27.2	+1.9
PV01	Paradox Valley	82.63	49	eP	P	23 23 28.7	+1.1
BRG	Berggiesshubel	84.19	330	eP	P	23 23 35.8	+0.5
BRG				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.8						
BRG	Berggiesshubel	84.19	330	P	P	23 23 35.8	+0.5
	comp=Z,11nm,1.4s,mb4.8						
CLL	Collm	84.25	331	eP	P	23 23 36.0	+0.5
CLL	Collm	84.25	331	P	P	23 23 36.0	+0.5
SDCO	Great Sand Dun	84.77	48	eP	P	23 23 38.9	+0.4
	comp=Z,2.8nm,0.9s,mb4.4						
GERES	GERESS Array B	85.83	329	P	P	23 23 44.1	+0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	85.83	329	P	P	23 23 44.1	+0.6
	comp=Z,1.2nm,0.7s,mb4.2,baz=67,slow=10,SNR=7.2						
ANMO	Albuquerque	85.93	50	LR	LR	23 58 41.4	
	comp=Z,53nm,19.2s,MS4.0,slow=33						
TXAR	Lajitas Array	91.33	53	P	P	23 24 11.4	+1.2
	comp=Z,1.5nm,0.7s,mb4.5,baz=302,slow=4.4,SNR=18						
TXAR				LR	LR	00 03 00.3	
	comp=Z,48nm,19.8s,MS3.9,baz=240,slow=34						
SDV	Santo Domingo	127.11	43	PKP	PKPdf	23 30 10.3	-1.7
	comp=Z,1.8nm,0.4s,baz=331,slow=5.8,SNR=5.2						
LPAZ	La Paz	147.38	65	ePKPbc	PKPdf	23 30 49.7	+0.9
LPAZ				e		23 30 60.0	
LVC	Limon Verde	150.27	76	PKPbc	PKPdf	23 30 56.8	+3.6
	comp=Z,2.6nm,0.8s,baz=208,slow=2.3,SNR=5.3						

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*IDC **13** 23:28:15.2±2.1, 33.78N×142.45E, mb4.0/3, mb1 4.1/4, mb1mx3.7/21, mbtmp4.0/4, ML4.2/1, Error ellipse: s-maj=42.6km s-min=28.4km az=45.0*
*JMA **13** 23:28:16.0±0.5, 33.94N×142.58E, h65^{km}, M3.4*
ISC 13 23:28:15.3±2.2**, 33.93N**±0.05×**142.54E**±0.08**, h24**^{km}±19^{km}**, n15, σ0^{s}98**/24**, mb3.9**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.48	300	P	Pn	23 28 41.2	+0.4
BSO1				S	Sn	23 29 00.0	+0.4
BSO3	Boso 3	1.89	298	P	Pn	23 28 47.5	+0.8
BSO3				S	Sn	23 29 11.3	+1.3
BSO4	Boso 4	2.10	301	P	Pn	23 28 51.0	+1.2
BSO4				S	Sn	23 29 17.3	+1.9
CHOJ	Chosi	2.25	323	S	Sn	23 29 19.3	+0.2
JHJ2	Mitsune	2.41	251	P	Pn	23 28 55.1	+0.9
JHJ2				S	Sn	23 29 22.6	-0.7
JHJ	Hachijo jima 2	2.44	251	Pn	Pn	23 28 55.1	+0.6
	130nm,0.3s,baz=56,slow=19,SNR=20						
JHJ				Sn	Sn	23 29 22.8	-1.2
	112nm,0.3s,baz=52,slow=19,SNR=16						
JIM2	Oshima 3	2.69	288	P	Pn	23 28 57.6	-0.5
JOD2	Odawara 2	3.14	296	P	Pn	23 29 04.1	-0.5
JOD2				S	Sn	23 29 40.1	-1.6
JRY	Ryogami san	3.64	306	P	Pn	23 29 11.3	-0.4
JRY				S	Sn	23 29 53.8	-0.6
JMM	Marumori	4.18	341	P	Pn	23 29 17.3	-2.0
JMM				S	Sn	23 30 02.1	-5.9
MAT	Matsushiro	4.40	308	S	Sn	23 30 12.8	-0.8
JMK	Ichinoseki	5.13	348	P	Pn	23 29 31.9	-0.8
JMK				S	Sn	23 30 24.9	-7.0
SONM	Songino Array	30.35	308	P	P	23 34 28.9	+1.5
	0.9nm,0.6s,mb3.7,baz=111,slow=9.2,SNR=7.7						
WRA	Warramunga Arr	54.13	190	P	P	23 37 40.9	0.0
	2.0nm,0.6s,mb4.2,baz=8.5,slow=7.7,SNR=9.8						
ASAR	Alice Springs	57.86	189	P	P	23 38 07.6	-0.1
	1.1nm,0.9s,mb3.9,baz=7.8,slow=7.2,SNR=7.7						

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*NEIC **13** 23:39:45.3, 32.89S×71.83W, h35^{km}, ML4.1(GUC), After GUC.*
NEIC Felt [III] at Concon.
GUC 13 23:39:45.3±0.8**, 32.89S×71.83W, h35**^{km}±1^{km}**, ML4.1, 8C-8D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.21	131	⇓iP	P	23 39 52.1	-0.1
IHA				i S	S	23 39 57.2	+0.2
PACH	Papudo	0.48	44	⇓iP	P	23 39 55.6	+0.1
PACH				i S	S	23 40 03.3	+0.5
LCCH	Las Cruces	0.63	160	⇑iP	P	23 39 57.8	+0.1
LCCH				i S	S	23 40 06.9	+0.3
ROCH	El Roble	0.69	97	⇑iP	P	23 39 58.6	0.0
ROCH				i S	S	23 40 09.4	+1.1
PEL	Peldehue	1.00	105	⇑iP	P	23 40 03.8	+0.8
PEL				i S	S	23 40 16.7	+0.7
RCDM	Rinconada Maip	1.05	125	i P	P	23 40 04.1	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCDM				i S	S	23 40 17.7	+0.4
RCDM				AMP		23 40 18.6	
	comp=N,7µm,0.1s						
JACH	Jahuel	1.06	79	⇑iP	P	23 40 04.2	+0.4
JACH				⇓iS	S	23 40 18.8	+1.2
TACH	Talagante	1.07	136	⇑iP	P	23 40 04.5	+0.5
TACH				i S	S	23 40 18.9	+1.0
LNV	Longovilo	1.12	162	⇑iP	P	23 40 04.5	-0.2
LNV				i S	S	23 40 19.9	+0.7
SAN	Santiago	1.13	120	⇑iP	P	23 40 05.4	+0.6
SAN				i S	S	23 40 20.7	+1.3
SAN				AMP		23 40 22.4	
	comp=E,7µm,0.7s						
CLCH	Cerro Calan	1.20	115	⇓iP	P	23 40 06.9	+1.1
CLCH				i S	S	23 40 23.1	+1.9
CLCH				AMP		23 40 25.1	
	comp=N,6µm,0.5s						
CLCH				AMP		23 40 26.9	
	comp=E,8µm,0.5s						
ANTU	Antumapu	1.21	125	i P	P	23 40 07.1	+1.1
ANTU				i S	S	23 40 23.0	+1.5
ANTU				AMP		23 40 25.1	
	comp=E,5µm,0.7s						
PCH	Pirque	1.32	124	⇓iP	P	23 40 08.9	+1.2
PCH				i S	S	23 40 26.4	+2.1
FCH	Farellones	1.37	109	⇓iP	P	23 40 09.4	+1.1
FCH				i S	S	23 40 27.9	+2.5
FCH				AMP		23 40 28.9	
	comp=N,8µm,0.2s						
CHCH	Chadas Angostu	1.44	137	⇓iP	P	23 40 10.4	+1.2
CHCH				i S	S	23 40 29.2	+2.0
CACH	El Canelo	1.60	140	⇑iP	P	23 40 13.2	+1.6
CACH				i S	S	23 40 35.2	+3.9
LMEL	Las Melosas	1.67	126	i P	P	23 40 13.8	+1.3
LMEL				i S	S	23 40 35.4	+2.5
LMEL				AMP		23 40 39.4	
	comp=N,5µm,0.4s						
CICH	Cipreses	1.85	141	i P	P	23 40 16.3	+1.1
CICH				i S	S	23 40 40.0	+2.4
SFDO	San Fernando	1.85	159	⇓iP	P	23 40 15.8	+0.6
SFDO				i S	S	23 40 39.5	+1.8
ZON	Zonda	2.99	64	eP	P	23 40 34.0	+2.6
ZON				eS	S	23 41 14.0	+7.6

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*IDC **13** 23:42:55.0±4.0, 8.05S×113.41E, mb3.6/4, mb1 3.8/4, mb1mx3.7/14, mbtmp3.7/4, Error ellipse: s-maj=178.9km s-min=25.1km az=59.0*

*DJA **13** 23:42:57.1±1.1, 9.45S×112.25E, h33^{km}, MD4.9/2, ML4.9/3, Error ellipse: s-maj=38.4km s-min=24.9km az=159.0*

ISC 13 23:43:02.0±3.1**, 8.6S**±0.2×**112.6E**±0.2**, h102**^{km}±23^{km}**, n8, σ0^s.88**/11**, mb3.6**/4**, 7D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.54	87	⇓ePg	P	23 43 29.0	-0.3
	754nm,0.2s						
SRDI				⇓eSg	S	23 43 49.1	-0.5
KELI	Kelakatan	1.92	80	⇓ePn	P	23 43 35.9	+1.9
	316nm,0.3s						
KELI				⇓eSn	S	23 44 04.0	+6.2
RATI	Rata	2.92	93	⇓ePn	P	23 43 47.7	0.0
	578nm,0.2s						
RATI				⇓eSn	S	23 44 22.6	+0.6
KEDI	Kedomdong	3.49	89	⇓ePn	P	23 43 54.2	-1.3
WRA	Warramunga Arr	23.89	121	P	P	23 48 06.2	-1.2
	1.6nm,0.6s,mb3.5,baz=301,slow=11,SNR=8.6						
ASAR	Alice Springs	25.34	129	P	P	23 48 21.6	+0.3
	1.2nm,0.9s,mb3.3,baz=303,slow=9.5,SNR=7.8						
STKA	Stephens Creek	35.55	135	P	P	23 49 52.2	+0.8
	2.2nm,0.6s,mb4.3,baz=307,slow=8.3,SNR=12						
SONM	Songino Array	56.42	355	P	P	23 52 35.2	-0.1
	0.1nm,0.4s,mb3.2,baz=174,slow=6.8,SNR=3.1						

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*IDC **13** 23:47:01.1±8.2, 17.17N×93.46W, mb3.6/3, mb1 3.8/4, mb1mx3.5/19, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=152.6km s-min=110.3km az=4.0*

*NEIC **13** 23:47:24.4, 17.37N×94.60W, h142^{km}, MD4.2(MEX), After MEX.*

*MEX **13** 23:47:24.9±1.1, 17.37N×94.62W, h136^{km}±13^{km}, MD4.2*

ISC 13 23:47:22.2±0.6**, 17.46N**±0.06×**94.61W**±0.04**, h148**^{km}±6^{km}**, n18, σ1^s.36**/32**, mb3.5**/3**, 2C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	0.60	17	i P	P	23 47 45.1	+0.8
TUIG				i S	S	23 47 59.6	-1.7
EVV	El Vigia	1.22	325	eP	P	23 47 49.2	+0.2
EVV				eS	S	23 48 06.7	-3.0
EVV	El Vigia	1.22	325	eP	P	23 47 49.2	+0.2
EVV				eS	S	23 48 09.0	-0.7
SCX	San Cristobal	2.02	111	eP	P	23 47 58.2	+0.4
SCX				i S	S	23 48 27.0	+1.8
OXX	Oaxaca	2.05	260	i P	P	23 47 58.5	+0.3
OXX				i S	S	23 48 27.2	+1.4
OXX	Oaxaca	2.05	260	i P	P	23 47 58.5	+0.3
OXX				i S	S	23 48 27.0	+1.2
VHO	Vista Hermosa	2.06	260	⇑iP	P	23 47 58.9	+0.6
VHO				i S	S	23 48 26.8	+0.8
HUIG	Huatulco	2.21	221	⇑iP	P	23 47 57.9	-2.3
HUIG				i S	S	23 48 26.8	-2.5
CCIG	Comitan	2.64	116	i P	P	23 48 06.2	+0.5
CCIG				i S	S	23 48 37.4	-1.4
IISM	Ciudad Serdan	3.04	300	i P	P	23 48 12.5	+1.8
IISM				i S	S	23 48 45.8	-1.9
IIB	San Bernardino	3.85	293	i P	P	23 48 22.7	+1.4
IIB				i S	S	23 49 06.0	-0.7
PPM	Popocatepetl	4.14	293	i P	P	23 48 27.0	+1.9
PPM				i S	S	23 49 14.1	+0.6
PPM	Popocatepetl	4.14	293	i P	P	23 48 27.0	+1.9
PPM				eP		23 48 27.8	
PPM				i S	S	23 49 14.1	+0.6
YAIG	Yautepec	4.46	289	i P	P	23 48 30.3	+1.0
YAIG				i S	S	23 49 19.8	-1.2
TXAR	Lajitas Array	14.44	327	Pn	P	23 50 42.0	+1.3
	0.1nm,0.3s,baz=144,slow=13,SNR=7.4						
ULM	Lac du Bonnet	32.73	358	P	P	23 53 38.1	-4.7
	1.1nm,0.4s,mb3.9,baz=180,slow=7.1,SNR=3.0						
YKA	Yellowknife Ar	47.11	347	P	P	23 55 38.7	-2.0
	0.4nm,0.5s,mb3.3,baz=153,slow=7.3,SNR=8.0						
ILAR	Eielson Array	58.69	337	P	P	23 57 04.8	-1.3
	0.2nm,0.5s,mb3.2,baz=127,slow=5.3,SNR=7.8						

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*IDC **14** 00:03:01.3±7.7, 0.51N×123.23E, h209^{km}±76^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.6/16, mbtmp4.2/7, MS3.3/1, Ms1 3.3/1, ms1mx2.7/19, Error ellipse: s-maj=53.8km s-min=14.5km az=71.0*

ISC 14 00:02:53.5±0.9**, 0.5N**±0.1×**123.0E**±0.3**, h150**^{km}**, n10, σ0^s.69**/10**, mb4.0**/7**, 1C-1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.63	172	eP	P	00 07 00.9	-1.3
	9.3nm,0.4s						
WRA	Warramunga Arr	23.12	152	P	P	00 07 47.7	+0.4
	11nm,0.7s,mb4.4,baz=328,slow=10,SNR=50						
WB2	Warramunga Arr	23.13	152	⇓iP	P	00 07 48.2	+0.9
PMG	Port Moresby	25.96	113	P	P	00 08 13.3	-0.8
	7.4nm,0.9s,mb4.3,baz=300,slow=20,SNR=5.2						
ASAR	Alice Springs	26.22	157	P	P	00 08 16.6	+0.2
	1.2nm,0.9s,mb3.5,baz=336,slow=8.0,SNR=15						
ASAR				PcP	PcP	00 11 37.4	-2.2
	0.6nm,0.7s,baz=343,slow=2.3,SNR=5.1						
ASAR				LR	LR	00 19 29.1	
	comp=Z,59nm,18.0s,baz=320,slow=38						
STKA	Stephens Creek	36.67	153	⇑iP	P	00 09 48.1	+0.6
	6.1nm,0.8s,mb4.3						
STKA	Stephens Creek	36.67	153	P	P	00 09 48.4	+0.9
	6.0nm,0.6s,mb4.4,baz=327,slow=7.5,SNR=19						
SONM	Songino Array	49.34	345	P	P	00 11 29.2	-0.1
	1.3nm,0.8s,mb3.6,baz=158,slow=7.9,SNR=11						
ZAL	Zalesovo	61.90	335	P	P	00 12 59.5	+0.3
	0.4nm,0.3s,mb3.7,baz=152,slow=22,SNR=2.1						
VNDA	Vanda	80.71	172	P	P	00 14 50.6	-0.3
	1.9nm,0.6s,mb3.9,baz=315,slow=6.0,SNR=10						

DJA 14 00:30:39.1±0.9**, 9.34S**×**112.51E, h33**^{km}**, MD4.9**/3**, ML4.3**/3**, 3C-4D, Error ellipse: s-maj=31.2km s-min=19.9km az=153.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.83	62	⇑ePn	Pn	00 31 06.5	-2.3
	226nm,0.2s						
SRDI	Scrawed	1.83	62	ePg	P	00 31 07.8	-0.8
SRDI				⇓eSn	Sn	00 31 26.2	-4.8
KELI	Kelakatan	2.25	60	⇑ePn	Pn	00 31 13.9	-1.0
	89nm,0.2s						
KELI				⇓eSn	Sn	00 31 41.0	-0.9
RATI	Rata	3.05	79	⇑ePn	Pn	00 31 26.1	-0.1
	163nm,0.2s						
RATI				⇓eSn	Sn	00 31 57.7	-4.3
KEDI	Kedomdong	3.66	77	⇓ePn	Pn	00 31 31.8	-3.1

IDC 14 00:30:42.2±12.0**, 22.95S**×**178.36W, h275**^{km}±114^{km}**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.3**/15**, mbtmp4.1**/4**, Error ellipse: s-maj=69.6km s-min=44.3km az=42.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.74	193	P	P	00 34 08.3	-3.1
	2.2nm,0.3s,baz=358,slow=2.2,SNR=5.8						
URZ				S	S	00 36 57.1	-1.3
	0.9nm,0.3s,baz=19,slow=21,SNR=3.8						
STKA	Stephens Creek	36.48	247	P	P	00 37 22.7	-0.4
	0.8nm,0.5s,baz=94,slow=14,SNR=4.3						
ASAR	Alice Springs	43.68	259	P	P	00 38 20.7	-1.4
	2.4nm,1.0s,baz=91,slow=7.7,SNR=15						
WRA	Warramunga Arr	43.98	265	P	P	00 38 22.1	-2.5
	0.6nm,0.3s,baz=97,slow=8.4,SNR=6.8						
BVAR	Borovoye Array	120.72	319	PKP	PKPdf	00 49 01.2	-0.2
	0.2nm,0.3s,baz=112,slow=2.2,SNR=6.3						

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*SOF **14** 00:35:36.5, 41.94N×23.06E, h18^{km}, MD3.1*

*NEIC **14** 00:35:37.6±2.0, 41.92N×23.01E, h10^{km}, MD3.2(ATH), ML2.3(SKO), Error ellipse: s-maj=25.0km s-min=9.7km az=201.0*

NEIC Felt [III] in the Delcevo area, Macedonia. Felt by people in tall buildings at Blagoevgrad, Kyustendil and Simitli, Bulgaria.

*CSEM **14** 00:35:37.1±0.1, 41.97N×23.03E, h10^{km}, MD3.1, Error ellipse: s-maj=2.6km s-min=2.3km az=67.0*

*THE **14** 00:35:39.1, 41.84N×22.99E, h4^{km}, ML3.2*

*ATH **14** 00:35:44.3, 41.13N×24.47E, h10^{km}, MD3.1/3*

ISC 14 00:35:36.7±0.4**, 41.93N**±0.02×**23.00E**±0.03**, h7**^{km}±4^{km}**, n30, σ0^s.90**/47**, 5C-1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.09	136	i Pg	Pg	00 35 40.5	+1.6
MMB	Musomiste	0.64	122	i Pg	Pg	00 35 50.2	+0.6
MMB				Sg	Sg	00 35 59.0	+0.8
VTS	Vitosha	0.68	13	i Pg	Pg	00 35 50.7	+0.4
VTS				Sg	Sg	00 36 00.5	+1.1
VAY	Valandovo	0.69	208	⇑iPg	Pg	00 35 50.7	+0.1
VAY				i		00 35 51.6	
VAY				i Sg	Sg	00 36 00.1	+0.3
VAY	Valandovo	0.69	208	⇑iPg	Pg	00 35 50.7	+0.1
VAY				i Sg	Sg	00 36 00.1	+0.3
KNT	Kendrikon	0.77	186	ePg	Pg	00 35 52.2	0.0
KNT				eSg	Sg	00 36 01.8	-0.7
NVR	Nevrokopi	0.87	132	ePG	Pg	00 35 54.0	-0.1
SRS	Serrai	0.93	151	ePg	Pg	00 35 55.0	-0.3
SRS				eSg	Sg	00 36 07.8	+0.2
SRS	Serrai	0.93	151	ePg	Pg	00 35 55.0	-0.3
SRS				eSg	Sg	00 36 07.8	+0.2
PGB	Panagyurishte	1.06	54	i Pg	Pg	00 35 57.5	-0.5
PGB				Sg	Sg	00 36 11.0	-1.2
GRG	Griva	1.07	205	ePg	Pg	00 35 57.4	-0.8
GRG				eSg	Sg	00 36 11.7	-0.8
SKO	Skopje	1.17	273	i Pg	Pg	00 36 00.1	0.0
SKO				i		00 36 04.2	
SKO				i Sg	Sg	00 36 17.5	+1.9
SKO				Lg		00 36 23.0	
	comp=Z,0.0nm,0.6s						
SKO	Skopje	1.17	273	i Pg	Pg	00 36 00.1	0.0
SKO				i Sg	Sg	00 36 17.5	+1.9
BARS	Barje	1.25	316	⇑iPg	Pg	00 36 01.1	-0.6
BARS				Sg	Sg	00 36 17.1	-1.2
PLD	Plovdiv	1.28	82	i Pg	Pg	00 36 02.0	-0.3
PLD				Sg	Sg	00 36 20.0	+0.6
THE	Thessaloniki	1.30	181	ePb	Pb	00 36 01.7	+0.6
RZN	Rozhen	1.30	100	i Pg	Pg	00 36 02.0	-0.8
RZN				Sg	Sg	00 36 19.5	-0.7
PLG	Polygyros	1.59	168	⇓iPN	Pn	00 36 05.8	+0.3
FNA	Florina	1.68	227	ePb	Pb	00 36 07.5	0.0
OUR	Ouranopolis	1.76	155	ePb	Pb	00 36 08.0	-0.9
KDZ	Kurdzhali	1.83	98	i P	Pn	00 36 08.0	-0.9
KDZ				Sg	Sg	00 36 33.5	-4.1
LIT	Litokhoron	1.87	192	ePb	Pb	00 36 10.3	-0.5
DIM	Dimitrovgrad	1.89	86	i P	Pg	00 36 13.5	-1.0
BOLS	Boljevac	2.05	338	⇑iPn	Pn	00 36 12.3	+0.2
BOLS				Sn	Sn	00 36 36.7	-1.5
PVL	Pavlikeni	2.15	52	i P	Pn	00 36 15.5	+2.0
PVL	Pavlikeni	2.15	52	Sg	Sn	00 36 42.5	+1.8
XOR	Xorichti	2.56	177	ePn	Pn	00 36 19.3	-0.2
NEO	Neokhori	2.63	176	ePB	Pn	00 36 19.8	-0.5
SVIS	Svilajnac	2.70	332	⇑iPn	Pn	00 36 21.8	+0.4
SVIS				Sn	Sn	00 36 54.1	-0.6
IGT	Igoumenitsa	3.14	221	ePn	Pn	00 36 30.0	+2.4

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*SOF **14** 00:38:40.8, 41.95N×23.08E, h5^{km}, MD2.7*

*CSEM **14** 00:38:40.5±0.1, 41.95N×23.02E, h5^{km}, MD2.7, Error ellipse: s-maj=1.6km s-min=1.3km az=29.0*

*THE **14** 00:38:42.1, 41.84N×22.98E, h6^{km}, ML2.9*

ISC 14 00:38:40.0±0.4**, 41.92N**±0.02×**22.99E**±0.03**, h8**^{km}±4^{km}**, n21, σ0^s.96**/39**, 1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.09	126	i Pg	Pg	00 38 43.5	+1.2
MMB	Musomiste	0.65	121	i Pg	Pg	00 38 53.5	+0.5
MMB				Sg	Sg	00 39 02.3	+0.6
VAY	Valandovo	0.68	208	i Pg	Pg	00 38 54.1	+0.5
VAY				eSg	Sg	00 39 03.4	+0.8
VTS	Vitosha	0.69	14	i Pg	Pg	00 38 54.0	+0.1
VTS				Sg	Sg	00 39 04.0	+0.8
KNT	Kendrikon	0.76	185	ePg	Pg	00 38 55.1	-0.1
KNT				eSg	Sg	00 39 05.2	-0.2
SRS	Serrai	0.92	150	ePg	Pg	00 38 57.9	-0.6
SRS				eSg	Sg	00 39 10.2	-0.6
GRG	Griva	1.06	205	ePg	Pg	00 39 00.5	-0.7
GRG				eSg	Sg	00 39 14.8	-0.5
PGB	Panagyurishte	1.08	54	i Pg	Pg	00 39 00.7	-0.9
PGB				Sg	Sg	00 39 14.0	-2.0
SKO	Skopje	1.16	273	ePg	Pg	00 39 02.6	-0.5
SKO				i		00 39 07.1	
SKO				i Sg	Sg	00 39 20.5	+2.0
SKO				Lg		00 39 26.0	
	comp=Z,0.0nm,0.5s						
SKO	Skopje	1.16	273	ePg	Pg	00 39 02.6	-0.5
SKO				i Sg	Sg	00 39 20.5	+2.0
BARS	Barje	1.25	317	⇓iPg	Pg	00 39 04.1	-0.8
BARS				Sg	Sg	00 39 20.8	-0.7
THE	Thessaloniki	1.29	181	ePb	Pb	00 39 04.6	+0.5
THE				eSb	Sb	00 39 22.3	+1.7
PLD	Plovdiv	1.29	81	Pg	Pg	00 39 05.5	-0.4
PLD				i Sg	Sg	00 39 23.5	+0.4
RZN	Rozhen	1.31	100	i P	Pb	00 39 05.5	+0.9
RZN				Sg	Sg	00 39 23.5	-0.3
FNA	Florina	1.66	227	ePb	Pb	00 39 10.5	0.0
FNA				eSb	Sb	00 39 31.8	+0.3
OUR	Ouranopolis	1.75	154	ePb	Pb	00 39 10.9	-1.2
OUR				eSb	Sb	00 39 35.5	+1.3
OUR	Ouranopolis	1.75	154	ePb	Pb	00 39 10.9	-1.2
OUR				eSb	Sb	00 39 35.5	+1.3
KDZ	Kurdzhali	1.84	98	P	Pn	00 39 13.7	+1.4
LIT	Litokhoron	1.86	192	ePb	Pb	00 39 12.8	-1.1
LIT				eSb	Sb	00 39 36.3	-0.9
PVL	Pavlikeni	2.17	52	P	Pn	00 39 18.5	+1.6
XOR	Xorichti	2.56	176	ePn	Pn	00 39 21.4	-1.2
XOR				eSn	Sn	00 39 52.4	-1.8

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*CSEM **14** 00:44:01.9±0.1, 41.99N×23.00E, h10^{km}, MD3.6, Error ellipse: s-maj=1.3km s-min=1.0km az=79.0*

*ATH **14** 00:44:02.8, 41.91N×23.03E, h21^{km}±4^{km}, MD3.6/6*

*SOF **14** 00:44:02.5, 41.95N×23.08E, h17^{km}, MD3.6*

*NEIC **14** 00:44:03.2±0.6, 41.90N×23.00E, h10^{km}, MD3.6(ATH), ML3.0(SKO), Error ellipse: s-maj=10.3km s-min=5.1km az=60.0*

NEIC Felt [IV] in the Delcevo area, Macedonia.

*THE **14** 00:44:05.4, 41.80N×23.04E, h13^{km}, ML3.6*

ISC 14 00:44:03.2±0.2**, 41.93N**±0.02×**22.97E**±0.02**, h17**^{km}**, n56, σ1^s.19**/93**, 19C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.10	126	i Pg	Pb	00 44 06.0	-0.8
MMB	Musomiste	0.66	121	i Pg	Pb	00 44 16.0	+0.2
MMB				Sg	Sb	00 44 25.0	+0.5
VAY	Valandovo	0.68	207	⇑iPg	Pb	00 44 16.2	+0.1
VAY				i		00 44 16.9	
VAY				⇑iSg	Sb	00 44 25.7	+0.7
VAY	Valandovo	0.68	207	⇑iPg	Pb	00 44 16.2	+0.1
VAY				⇑iSg	Sb	00 44 25.7	+0.7
VTS	Vitosha	0.69	15	i Pg	Pb	00 44 16.2	-0.1
VTS				Sg	Sb	00 44 25.5	+0.2
KNT	Kendrikon	0.77	184	ePg	Pb	00 44 17.6	0.0
KNT				eSg	Sb	00 44 27.4	-0.2
KNT	Kendrikon	0.77	184	ePg	Pb	00 44 17.6	-0.1
KNT				eSg	Sb	00 44 27.4	-0.2
NVR	Nevrokopi	0.88	131	ePN	Pn	00 44 19.4	-1.4
NVR				eSN	Sn	00 44 30.9	-2.2
SRS	Serrai	0.93	150	ePg	Pb	00 44 20.3	-0.2
SRS				eSg	Sb	00 44 32.6	+0.2
GRG	Griva	1.06	204	ePg	Pb	00 44 23.1	+0.4
GRG				eSg	Sb	00 44 37.5	+1.3
PGB	Panagyurishte	1.08	55	i Pg	Pb	00 44 22.7	-0.4
PGB				Sg	Sb	00 44 36.5	-0.3
SKO	Skopje	1.14	273	⇓iPg	Pb	00 44 24.8	+0.7
SKO				i Pn	Pn	00 44 26.8	+2.3
SKO				i Sg	Sb	00 44 41.0	+2.5
SKO				⇑iSn	Sn	00 44 43.0	+3.2
SKO				Lg		00 44 51.0	
	comp=Z,0.2nm,0.5s						
BARS	Barje	1.23	317	⇑iPg	Pb	00 44 26.5	+0.9
BARS				Sg	Sb	00 44 42.7	+1.6
THE	Thessaloniki	1.29	180	ePg	Pn	00 44 26.9	+0.3
THE				eSg	Sb	00 44 42.7	-0.2
PLD	Plovdiv	1.30	82	i Pg	Pn	00 44 27.7	+0.9
PLD				Sg	Sb	00 44 45.5	+2.4
RZN	Rozhen	1.33	100	i Pg	Pn	00 44 27.5	+0.4
RZN				Sg	Sb	00 44 45.5	+1.7
PLG	Polygyros	1.59	167	ePN	Pn	00 44 31.2	+0.3
PLG				eSN	Sn	00 44 51.9	+0.7
FNA	Florina	1.66	227	ePb	Pb	00 44 32.7	-0.2
FNA				eSb	Sb	00 44 54.5	+1.1
OUR	Ouranopolis	1.77	154	ePb	Pb	00 44 33.5	-1.3
KDZ	Kurdzhali	1.85	98	i P	Pn	00 44 33.7	-0.9
KDZ				Sg	Sn	00 44 58.5	+0.8
KZN	Kozani	1.86	210	ePB	Pb	00 44 35.3	-1.0
LIT	Litokhoron	1.86	191	ePb	Pb	00 44 34.4	-2.0
LIT	Litokhoron	1.86	191	ePb	Pb	00 44 34.3	-2.1
DIM	Dimitrovgrad	1.91	85	i P	Pn	00 44 38.0	+2.5
BOLS	Boljevac	2.04	339	⇓iPn	Pn	00 44 37.8	+0.4
BOLS				Sn	Sn	00 45 03.2	+0.5
PVL	Pavlikeni	2.17	53	i Pg	Pn	00 44 40.3	+1.1
PVL				Sg	Sn	00 45 09.0	+3.2
QSH	Qafa e Shtames	2.33	261	i Pn	Pn	00 44 51.2	+10
QSH				i Sn	Sn	00 45 18.0	+8.0
LOS	Limnos	2.55	141	ePn	Pn	00 44 44.2	-0.5
LOS				eSn	Sn	00 45 14.2	-1.4
SZH	Strazhica	2.56	58	P	Pn	00 44 48.5	+3.7
XOR	Xorichti	2.56	176	ePn	Pn	00 44 44.3	-0.5
XOR				eSn	Sn	00 45 14.5	-1.3
GRUS	Gruza	2.57	321	⇓iPn	Pn	00 44 44.7	-0.2
GRUS				Sn	Sn	00 45 17.6	+1.6
NEO	Neokhori	2.62	176	ePN	Pn	00 44 45.2	-0.5
NEO	Neokhori	2.62	176	ePn	Pn	00 44 45.1	-0.6
SVIS	Svilajnac	2.69	332	⇑iPn	Pn	00 44 45.7	-1.0
SVIS				Sn	Sn	00 45 18.3	-0.8
JMB	Yambol	2.74	77	i P	Pn	00 44 46.5	-0.8
JAN	Janina	2.78	216	ePN	Pn	00 44 49.0	+1.1
NVSS	Nova Varos 2	2.88	304	⇓iP	Pn	00 44 48.7	-0.6
SRN	Sarande	3.04	229	ePn	Pn	00 44 54.1	+2.5
SRN				i Sn	Sn	00 45 31.0	+3.0
DIVS	Divcibare	3.08	316	⇓iPn	Pn	00 44 51.8	-0.3
DIVS				Sn	Sn	00 45 29.2	+0.3
EVR	Evrytania	3.13	197	ePN	Pn	00 44 54.0	+1.1
PRK	Paraskevi	3.67	136	ePN	Pn	00 45 00.5	-0.1
BZS	Buzias	3.82	346	⇓P	Pn	00 45 01.8	-0.8
MLR	Muntele Rosu	4.16	30	⇑P	Pn	00 45 09.4	+1.8
VRI	Vrincioaia	4.78	33	⇑P	Pn	00 45 17.2	+0.9
CFR	Carcaliu	4.96	47	⇑P	Pn	00 45 22.0	+3.1
TLCR		5.35	51	⇑P	Pn	00 45 23.6	-0.8
RHK1	Bakonya	5.46	321	eP	Pn	00 45 24.7	-1.2
BURAR	Bucovina Array	5.91	15	⇑P	Pn	00 45 31.1	-1.1
ARSA	Arzberg	7.52	318	⇑iPN	Pn	00 45 53.9	-1.0
ARSA				i SN	Sn	00 47 11.8	-8.8
OBKA	Obir	7.59	310	⇑iPN	Pn	00 45 54.6	-1.2
OBKA				i SN	Sn	00 47 13.1	-9.1
MOA	Molln	8.55	317	⇑iPN	P	00 46 08.1	-1.2
MOA				i SN	Sn	00 47 37.1	-9.3
KBA	Koelnbreinsper	8.59	310	⇓iPN	P	00 46 07.8	-2.0
KBA				i SN	Sn	00 47 37.3	-10
WTTA	Wattenberg	9.68	307	⇑iPN	P	00 46 23.3	-1.5
WTTA				i SN	Sn	00 48 04.3	-10
WATA	Walderalm	9.75	308	⇑iPN	P	00 46 24.0	-1.8
WATA				i SN	Sn	00 48 05.8	-10
SQTA	Sankt Quirin	9.92	306	⇑iPN	P	00 46 26.5	-1.6
SQTA				i SN	Sn	00 48 09.8	-10
MOTA	Moosalm	10.04	307	⇑iPN	P	00 46 27.9	-1.8
MOTA				i SN	S	00 48 11.9	-11

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*IDC **14** 00:50:10.2±2.1, 22.92S×169.15E, mb4.0/6, mb1 4.3/6, mb1mx4.1/13, mbtmp4.0/6, MS3.3/3, Ms1 3.3/3, ms1mx3.1/18, Error ellipse: s-maj=98.1km s-min=26.9km az=153.0*

*NEIC **14** 00:50:11.0±1.0, 23.12S×169.20E, h10^{km}, mb4.5/3, Error ellipse: s-maj=30.2km s-min=16.6km az=173.0*

ISC 14 00:50:13.1±1.1**, 23.2S**±0.2×**169.1E**±0.1**, h33**^{km}**, n14, σ1^s.08**/12**, mb4.1**/8**, MS3.2**/3**, 1C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.71	293	⇑eP	P	00 50 55.6	+0.4
DZM	Mont Dzumac	2.71	293	⇑eP	P	00 50 55.6	+0.4
NOUC	Port Laguerre	2.82	292	eP	P	00 50 57.0	+0.3
CTA	Charters Tower	21.48	274	LR	LR	01 02 53.0	
	comp=Z,85nm,18.7s,MS3.2,baz=228,slow=36						
PMG	Port Moresby	25.09	299	LR	LR	01 03 03.5	
	comp=Z,78nm,18.4s,MS3.2,baz=144,slow=31						
STKA	Stephens Creek	25.85	244	eP	P	00 55 44.8	+1.4
	7.8nm,1.8s,mb3.9						
STKA	Stephens Creek	25.85	244	P	P	00 55 45.5	+2.1
	3.6nm,0.9s,mb3.9,baz=74,slow=11,SNR=7.6						
ASAR	Alice Springs	32.28	262	P	P	00 56 40.4	-0.7
	2.3nm,1.1s,mb3.9,baz=95,slow=9.3,SNR=8.4						
ASAR				LR	LR	01 08 45.7	
	comp=Z,37nm,19.3s,MS3.1,baz=48,slow=34						
WRAB	Tennant Creek	32.46	269	eP	P	00 56 41.0	-1.7
	7.4nm,1.2s,mb4.4						
WRA	Warramunga Arr	32.47	269	P	P	00 56 41.8	-1.0
	0.6nm,0.4s,mb3.7,baz=97,slow=8.2,SNR=3.4						
MBWA	Marble Bar	45.62	263	eP	P	00 58 32.2	-0.2
	6.7nm,0.7s,mb4.7						
CMAR	Chiang Mai Arr	80.04	295	P	P	01 02 23.4	+2.0
	1.3nm,0.4s,mb4.2,baz=128,slow=4.1,SNR=5.6						
NVAR	Mina Array Bea	91.47	49	P	P	01 03 17.9	+0.3
	0.9nm,0.7s,mb4.2,baz=204,slow=8.0,SNR=6.5						
ILAR	Eielson Array	94.00	17	P	P	01 03 27.6	-0.8
	0.3nm,0.7s,mb3.9,baz=233,slow=4.5,SNR=4.4						

IDC 14 00:54:21.7±2.3**, 5.49N**×**94.51E, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.6**/18**, mbtmp3.7**/5**, ML4.1**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/20**, Error ellipse: s-maj=94.7km s-min=27.0km az=58.0, Northern Sumatera**

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

CMAR	**Chiang Mai Arr**	**13.59**	**18**	Pn	P	00 57 43.0	+4.6
	0.3nm,0.3s,baz=205,slow=15,SNR=3.4						
SONM	**Songino Array**	**43.40**	**12**	P	P	01 02 26.1	-1.6
	0.4nm,0.6s,baz=200,slow=6.8,SNR=5.0						
NWAO	**Narrogin (SRO)**	**43.88**	**152**	LR	LR	01 17 29.7	
	comp=Z,31nm,20.9s,baz=28,slow=32						
WRA	**Warramunga Arr**	**46.61**	**124**	P	P	01 02 51.8	-2.0
	0.8nm,0.7s,baz=304,slow=9.0,SNR=7.1						
ASAR	**Alice Springs**	**48.14**	**129**	P	P	01 03 03.9	-1.8
	0.6nm,0.7s,baz=300,slow=7.9,SNR=5.5						
FINES	**FINESS Array B**	**74.97**	**332**	P	P	01 06 04.5	-1.8
	2.0nm,0.8s,baz=127,slow=6.9,SNR=3.7						

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*CSEM **14** 00:55:07.5±0.1,41.98N×22.99E,h12^{km},MD2.7,Error ellipse: s-maj=2.2km s-min=1.8km az=84.0*
*SOF **14** 00:55:08.3,41.94N×23.11E,h12^{km},MD2.7*
*THE **14** 00:55:09.6,41.84N×23.02E,h7^{km},ML3.3*
ISC 14 00:55:07.5±0.3,**41.93N**±0.02×**23.03E**±0.02,**h12^{km},n34,**σ**1^{s}.07**/58,**8C-4D,Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.08**	**148**	*i* Pg	**Pg**	**00 55 11.5**	**+1.4**
MMB	**Musomiste**	**0.63**	**123**	*i* Pg	**Pg**	**00 55 20.7**	**+0.6**
MMB				Sg	**Sg**	**00 55 28.5**	**-0.1**
VTS	**Vitosha**	**0.67**	**11**	*i* Pg	**Pg**	**00 55 21.3**	**+0.2**
VTS				Sg	**Sg**	**00 55 30.7**	**+0.6**
VAY	**Valandovo**	**0.70**	**210**	⇑*i*Pg	**Pg**	**00 55 21.4**	**-0.2**
VAY				*i*		00 55 22.0	
VAY				*i* Sg	**Sg**	**00 55 31.0**	**-0.1**
VAY	**Valandovo**	**0.70**	**210**	⇑*i*Pg	**Pg**	**00 55 21.4**	**-0.2**
VAY				*i* Sg	**Sg**	**00 55 31.0**	**-0.1**
KNT	**Kendrikon**	**0.78**	**187**	*e*Pg	**Pg**	**00 55 22.7**	**-0.4**
KNT				*e*Sg	**Sg**	**00 55 33.3**	**-0.2**
SRS	**Serrai**	**0.92**	**152**	*e*Pg	**Pg**	**00 55 25.4**	**-0.5**
SRS				*e*Sg	**Sg**	**00 55 37.7**	**-0.5**
PGB	**Panagyurishte**	**1.05**	**53**	*i* Pg	**Pg**	**00 55 27.8**	**-0.7**
PGB				Sg	**Sg**	**00 55 41.0**	**-1.5**
GRG	**Griva**	**1.08**	**206**	*e*Pg	**Pg**	**00 55 28.1**	**-1.1**
GRG				*e*Sg	**Sg**	**00 55 42.2**	**-1.5**
SKO	**Skopje**	**1.19**	**272**	*e*Pg	**Pg**	**00 55 29.9**	**-1.3**
SKO				*i* Pn	**Pn**	**00 55 31.5**	**+1.6**
SKO				*i* Sg	**Sg**	**00 55 46.3**	**-0.8**
SKO				*i* Sn	**Sn**	**00 55 48.2**	**+2.2**
SKO				Lg		00 55 54.0	
	comp=Z,0.0nm,0.6s						
BARS	**Barje**	**1.26**	**315**	⇑*i*Pg	**Pg**	**00 55 31.6**	**-1.0**
BARS				Sg	**Sg**	**00 55 48.0**	**-1.5**
PLD	**Plovdiv**	**1.26**	**82**	*i* P	**Pb**	**00 55 32.7**	**+2.0**
PLD				Sg	**Sg**	**00 55 50.0**	**+0.4**
RZN	**Rozhen**	**1.28**	**100**	*i* P	**Pb**	**00 55 32.7**	**+1.6**
RZN				Sg	**Sg**	**00 55 51.0**	**+0.6**
THE	**Thessaloniki**	**1.30**	**182**	*e*Pb	**Pb**	**00 55 31.9**	**+0.5**
THE				*e*Sb	**Sb**	**00 55 49.4**	**+1.5**
FNA	**Florina**	**1.69**	**228**	*e*Pb	**Pb**	**00 55 38.1**	**0.0**
FNA				*e*Sb	**Sb**	**00 55 59.8**	**+0.6**
OUR	**Ouranopolis**	**1.75**	**155**	*e*Pb	**Pb**	**00 55 38.5**	**-0.6**
KDZ	**Kurdzhali**	**1.81**	**98**	*i* P	**Pn**	**00 55 39.0**	**+0.2**
KDZ				Sg	**Sg**	**00 56 04.0**	**-3.8**
DIM	**Dimitrovgrad**	**1.87**	**86**	*i* P	**Pg**	**00 55 43.7**	**-1.2**
DIM	**Dimitrovgrad**	**1.87**	**86**	Sg	**Sg**	**00 56 08.3**	**-1.6**
LIT	**Litokhoron**	**1.88**	**193**	*e*Pb	**Pb**	**00 55 39.5**	**-1.6**
LIT	**Litokhoron**	**1.88**	**193**	*e*Pb	**Pb**	**00 55 39.5**	**-1.7**
BOLS	**Boljevac**	**2.05**	**338**	⇑*i*Pn	**Pn**	**00 55 42.7**	**+0.4**
BOLS				Sn	**Sn**	**00 56 08.7**	**+0.7**
XOR	**Xorichti**	**2.57**	**177**	*e*Pn	**Pn**	**00 55 49.6**	**0.0**
GRUS	**Gruza**	**2.59**	**320**	*e*Pn	**Pb**	**00 55 56.0**	**+2.5**
GRUS				Sn	**Sn**	**00 56 23.8**	**+2.2**
JMB	**Yambol**	**2.69**	**77**	*i* P	**Pn**	**00 55 51.3**	**-0.2**
SVIS	**Svilajnac**	**2.71**	**331**	⇑*i*Pn	**Pn**	**00 55 51.3**	**-0.4**
SVIS				Sn	**Sn**	**00 56 23.4**	**-1.2**
DIVS	**Divcibare**	**3.11**	**315**	⇓*i*Pn	**Pn**	**00 55 57.0**	**-0.3**
DIVS				Sn	**Sn**	**00 56 33.9**	**-0.8**
IGT	**Igoumenitsa**	**3.15**	**221**	*e*Pn	**Pn**	**00 55 58.9**	**+1.0**
IGT				*e*Sn	**Sn**	**00 56 36.6**	**+0.7**
BZS	**Buzias**	**3.82**	**345**	⇓P	**Pn**	**00 56 06.8**	**-0.7**
MLR	**Muntele Rosu**	**4.14**	**30**	⇓P	**Pn**	**00 56 16.1**	**+4.1**
VRI	**Vrincioaia**	**4.75**	**33**	⇑P	**Pn**	**00 56 22.4**	**+1.7**
CFR	**Carcaliu**	**4.93**	**47**	⇑P	**Pg**	**00 56 41.1**	**-4.8**
ARSA	**Arzberg**	**7.54**	**317**	⇑*i*PN	**Pn**	**00 56 59.0**	**-1.0**
ARSA				*i* SN	**Sn**	**00 58 18.5**	**-7.8**
MOTA	**Moosalm**	**10.07**	**307**	⇓*i*PN	**P**	**00 57 34.9**	**-0.1**
MOTA				*i* SN	**S**	**00 59 21.8**	**-7.1**

IDC 14 01:10:26.3±3.0,**33.51S**×**178.51W,mb3.9**/2,**mb1 4.1**/3,**mb1mx3.8**/13,**mbtmp3.9**/3,**ML3.8**/1,**Error ellipse: s-maj=73.3km s-min=36.1km az=119.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.92**	**216**	Pn	Pn	01 11 55.7	-1.7
	2.3nm,0.3s,baz=319,slow=4.4,SNR=11						
URZ				Sn	Sn	01 13 03.1	-3.8
	7.0nm,0.3s,baz=90,slow=23,SNR=11						
ASAR	**Alice Springs**	**42.61**	**271**	P	P	01 18 24.6	-1.3
	0.9nm,0.6s,baz=116,slow=7.4,SNR=8.6						
WRA	**Warramunga Arr**	**43.88**	**276**	P	P	01 18 34.2	-2.1
	1.6nm,0.6s,baz=116,slow=7.5,SNR=6.3						
FINES	**FINESS Array B**	**147.88**	**338**	PKPbc	PKPdf	01 30 11.8	+0.5
	11nm,1.3s,baz=63,slow=4.3,SNR=6.5						

IDC 14 01:13:37.9±11.0,**32.94N**×**138.17E,h608^{km}**±102^{km},**mb2.9**/4,**mb1 3.1**/4,**mb1mx2.7**/22,**mbtmp3.9**/4,**Error ellipse: s-maj=161.5km s-min=57.4km az=5.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**28.17**	**311**	P	P	01 18 43.3	-1.4
	0.3nm,0.9s,baz=121,slow=7.7,SNR=5.1						
KAF	**Kangasniemi**	**70.71**	**332**	*e*p	P	01 23 52.4	-2.4
	15nm,1.3s						
FINES	**FINESS Array B**	**71.18**	**332**	P	P	01 23 56.3	-1.3
	0.7nm,0.4s,baz=80,slow=4.2,SNR=12						
BRTR	**Keskin Array B**	**79.53**	**311**	P	P	01 24 43.2	-0.7
	1.4nm,0.7s,baz=87,slow=3.8,SNR=8.8						
TXAR	**Lajitas Array**	**94.75**	**51**	P	P	01 25 55.8	-0.8
	0.3nm,0.7s,baz=288,slow=4.0,SNR=3.7						

IDC 14 01:27:33.9±12.0,**1.36S**×**133.76E,mb3.7**/2,**mb1 3.8**/3,**mb1mx3.6**/14,**mbtmp3.6**/3,**ML3.6**/1,**MS4.0**/1,**Ms1 4.0**/1,**ms1mx2.7**/20,**Error ellipse: s-maj=209.4km s-min=137.2km az=135.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.48**	**178**	P	P	01 31 50.8	-2.5
	0.2nm,0.3s,baz=356,slow=12,SNR=11						
ASAR	**Alice Springs**	**22.17**	**180**	P	P	01 32 33.0	-0.3
	1.4nm,0.7s,baz=0.5,slow=11,SNR=14						
CBIJ	**Chichi jima**	**29.43**	**15**	LR	LR	01 43 23.6	
	comp=Z,292nm,19.4s,baz=102,slow=32						
STKA	**Stephens Creek**	**31.24**	**167**	P	P	01 33 54.3	-3.2
	0.8nm,0.6s,baz=347,slow=10,SNR=2.8						

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*MOS **14** 01:28:25.9±1.4,53.62N×108.82E,h17^{km},mb4.3/1,Error ellipse: s-maj=15.1km s-min=7.7km az=53.9*
BYKL 14 01:28:26.5±0.2,**53.62N**×**108.80E,h22^{km}**±4^{km},**7C-2D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.36**	**185**	⇑*i*Pg	Pb	01 28 34.7	+0.5
MXMB				*e*Sg	Sb	01 28 40.7	+1.2
SYVR	**Suvo**	**0.71**	**86**	*e*PG	Pb	01 28 39.1	-1.1
SYVR				*e*		01 28 48.3	
SYVR				pmax	pmax		
	comp=Z,101nm,0.1s						
SYVR				smax			
	comp=E,1µm,0.3s						
SYVR	**Suvo**	**0.71**	**86**	⇑*i*Pg	Pb	01 28 39.1	-1.1
	comp=E,118nm,0.5s						
SYVR				⇑*i*Pg	Pb	01 28 39.1	-1.1
	comp=E,735nm,0.5s						
SYVR				⇑*i*Pg	Pb	01 28 39.1	-1.1
	comp=E,911nm,0.5s						
SYVR				*i* Sg	Sb	01 28 48.7	-0.8
SYVR				Pmax			
	comp=E,941nm,0.5s						
SYVR				Smax			
	comp=E,2µm,0.7s						
OGRR	**Ongureny**	**0.72**	**272**	*e*PG	Pb	01 28 39.9	-0.3
OGRR				*e*		01 28 49.7	
OGRR				pmax	pmax		
	comp=Z,278nm,0.3s						
OGRR				smax			
	comp=E,3µm,0.1s						
OGRR	**Ongureny**	**0.72**	**272**	⇑*i*Pg	Pb	01 28 39.9	-0.3
	comp=E,41nm,0.6s						
OGRR				⇓*i*Pg	Pb	01 28 39.9	-0.3
	comp=E,152nm,0.6s						
OGRR				⇑*i*Pg	Pb	01 28 39.9	-0.3
	comp=E,193nm,0.6s						
OGRR				*i* Sg	Sb	01 28 49.8	+0.2
OGRR				Pmax			
	comp=E,260nm,0.3s						
OGRR				Smax			
	comp=E,3µm,0.1s						
ZRHB	**Zarechye**	**1.46**	**224**	*e*Pg	Pn	01 28 52.5	+0.6
ZRHB				*e*Sg	Sn	01 29 11.8	+1.3
ZRHB				Pmax			
	comp=E,264nm,0.3s						
ZRHB				Smax			
	comp=E,1µm,0.8s						
TRTB	**Turuntaevo**	**1.56**	**207**	*e*Pn	Pn	01 28 53.5	+0.1
TRTB				*e*Pg	Pn	01 28 55.0	+1.6
TRTB				*e*Sg	Sn	01 29 16.3	+3.2
TRTB				Pmax			
	comp=E,224nm,0.5s						
TRTB				Smax			
	comp=E,1µm,0.5s						
TRG	**Tyrgan**	**1.71**	**241**	*e*PN	Pn	01 28 55.5	+0.1
TRG				*e*		01 29 17.6	
TRG				pmax	pmax		
	comp=Z,172nm,0.2s						
TRG				smax			
	comp=N,2µm,0.2s						
TRG	**Tyrgan**	**1.71**	**241**	*e*Pn	Pn	01 28 55.9	+0.5
TRG				*e*Pg	Pn	01 28 56.7	+1.3
TRG				*e*Pb	Pb	01 28 57.5	+0.4
TRG				*e*Sg	Sn	01 29 18.6	+1.8
TRG				*e*		01 29 20.9	
TRG				max			
	comp=N,136nm,0.2s						
TRG				max			
	comp=N,2µm,0.2s						
YLYR	**Ulyunkhan**	**1.87**	**47**	*e*PN	Pn	01 28 57.1	-0.7
YLYR				*e*		01 28 58.5	
YLYR	**Ulyunkhan**	**1.87**	**47**	*e*Pn	Pn	01 28 57.1	-0.7
YLYR				*e*Pg	Pn	01 28 58.7	+0.9
YLYR				*e*Sg	Sn	01 29 23.5	+2.5
YLYR				Pmax			
	comp=N,120nm,0.6s						
YLYR				Smax			
	comp=N,237nm,0.7s						
FFNB	**Fofonovo**	**2.00**	**219**	*e*Pn	Pn	01 28 59.4	-0.3
FFNB				*e*Pg	Pn	01 29 03.8	+4.1
FFNB				*e*Sg	Sn	01 29 30.6	+6.3
FFNB				Pmax			
	comp=N,527nm,0.1s						
FFNB				Smax			
	comp=N,2µm,0.2s						
KAB	**Kabansk**	**2.04**	**220**	*e*PN	Pn	01 29 03.8	+3.6
KAB				*e*		01 29 30.9	
KAB				pmax	pmax		
	comp=Z,342nm,0.3s						
KAB				smax			
	comp=N,1µm,0.5s						
KAB	**Kabansk**	**2.04**	**220**	*e*Sn	Sn	01 29 26.4	+1.1
KAB				*e*Sg	Sn	01 29 31.1	+5.8
KAB				Smax			
	comp=N,1µm,0.6s						
STDB	**Stepnoy Dvoret**	**2.07**	**226**	*e*Pg	Pn	01 29 01.0	+0.4
STDB				*e*		01 29 04.8	
STDB				*e*Sg	Sn	01 29 28.8	+2.8
STDB				*e*		01 29 35.1	
STDB				max			
	comp=N,189nm,0.6s						
STDB				max			
	comp=N,1µm,0.3s						
NIZ	**Nizh Angarsk**	**2.20**	**11**	*e*PN	Pn	01 29 02.4	-0.1
NIZ				*e*		01 29 05.1	
NIZ				*e*S	Sn	01 29 29.6	+0.2
NIZ				*e*		01 29 33.2	
NIZ				pmax	pmax		
	comp=Z,78nm,0.3s						
NIZ				smax			
	comp=N,373nm,0.5s						
NIZ	**Nizh Angarsk**	**2.20**	**11**	*i* Pn	Pn	01 29 02.2	-0.3
NIZ				*e*Pg	Pn	01 29 05.2	+2.7
NIZ				*e*Sn	Sn	01 29 29.4	0.0
NIZ				*e*Sg	Sn	01 29 33.3	+3.9
NIZ				Pmax			
	comp=N,97nm,0.8s						
NIZ				Smax			
	comp=N,301nm,0.6s						
HRMR	**Khuramsha**	**2.29**	**210**	*e*Pn	Pn	01 29 04.1	+0.3
HRMR				*e*Pg	Pn	01 29 08.1	+4.3
HRMR				*e*Sn	Sn	01 29 33.4	+1.8
HRMR				*e*Sg	Sn	01 29 38.6	+7.0
HRMR				Pmax			
	comp=N,312nm,0.4s						
HRMR				Smax			
	comp=N,1µm,0.4s						
BTMB	**Babushkin**	**2.64**	**224**	*e*Pn	Pn	01 29 07.8	-1.0
BTMB				*e*Pg	Pn	01 29 14.0	+5.2
BTMB				*e*Sg	Sn	01 29 48.8	+8.4
BTMB				Pmax			
	comp=N,57nm,0.4s						
BTMB				Smax			
	comp=N,276nm,0.6s						
KMO	**Kumora**	**2.66**	**31**	*e*PN	Pn	01 29 08.3	-0.8
KMO				*e*		01 29 12.5	
KMO				*e*S	Sn	01 29 41.4	+0.3
KMO				*e*		01 29 47.0	
KMO				pmax	pmax		
	comp=Z,136nm,0.4s						
KMO				smax			
	comp=N,448nm,0.9s						
KMO	**Kumora**	**2.66**	**31**	*e*Pn	Pn	01 29 09.1	0.0
KMO				*e*Pg	Pn	01 29 13.4	+4.3
KMO				*e*Sg	Sn	01 29 48.9	+7.8
KMO				Pmax			
	comp=N,132nm,0.4s						
KMO				Smax			
	comp=N,390nm,0.6s						
LSTR	**Listvyanka**	**2.98**	**236**	⇑*i*PN	Pn	01 29 12.8	-0.9
LSTR				*e*		01 29 20.8	
LSTR				*e*		01 29 58.2	
LSTR				pmax	pmax		
	comp=Z,30nm,0.5s						
LSTR				smax			
	comp=N,250nm,1.2s						
LSTR	**Listvyanka**	**2.98**	**236**	⇓*i*Pn	Pn	01 29 12.9	-0.8
LSTR				*e*Pg	Pn	01 29 20.7	+7.0
LSTR				*e*Sn	Sn	01 29 47.9	-1.2
LSTR				*e*Sg	Sn	01 29 59.5	+10
LSTR				Pmax			
	comp=N,40nm,0.4s						
LSTR				Smax			
	comp=N,168nm,0.5s						
YOA	**Uoyan**	**3.03**	**33**	*e*Sg	Sn	01 30 00.5	+10
YOA				Smax			
	comp=N,1µm,0.9s						
IRK	**Irkutsk**	**3.07**	**245**	*e*PN	Pn	01 29 23.0	+8.1
IRK				*e*		01 29 58.8	
IRK				pmax	pmax		
	comp=Z,268nm,0.1s						
IRK				smax			
	comp=N,1µm,0.4s						
IRK	**Irkutsk**	**3.07**	**245**	*e*Sg	Sn	01 29 59.5	+8.2
IRK				Smax			
	comp=N,809nm,0.5s						
CIT	**Chita**	**3.30**	**117**	*e*PN	Pn	01 29 16.6	-1.5
CIT				*e*		01 29 25.6	
CIT				*e*		01 30 07.0	
CIT				pmax	pmax		
	comp=Z,150nm,0.4s						
CIT				smax			
	comp=E,677nm,0.5s						
CIT	**Chita**	**3.30**	**117**	*e*Pn	Pn	01 29 16.3	-1.8
CIT				*e*Pg	Pn	01 29 25.4	+7.3
CIT				*e*Sg	Sn	01 30 07.1	+10
CIT				Pmax			
	comp=E,144nm,0.5s						
CIT				Smax			
	comp=E,663nm,0.5s						
UKT	**Uakit**	**3.38**	**54**	*e*Pn	Pn	01 29 19.1	-0.1
UKT				*e*Pg	Pn	01 29 26.5	+7.3
UKT				*e*Sg	Sn	01 30 10.2	+11
UKT				Pmax			
	comp=E,62nm,0.7s						
UKT				Smax			
	comp=E,146nm,1.0s						
TLY	**Talaya**	**3.69**	**240**	*e*PN	Pn	01 29 22.3	-1.4
TLY				*e*		01 29 30.8	
TLY	**Talaya**	**3.69**	**240**	*e*Pn	Pn	01 29 22.5	-1.2
TLY				*e*Pg	Pn	01 29 32.0	+8.3
TLY				*e*Sn	Sn	01 30 06.1	-1.0
TLY				*e*Sg	Sn	01 30 19.2	+12
TLY				Pmax			
	comp=E,31nm,0.5s						
TLY				Smax			
	comp=E,281nm,0.7s						
SVKR	**Severomuysk**	**3.72**	**46**	*e*Sg	Sn	01 30 24.9	+17
SVKR				Smax			
	comp=E,471nm,0.5s						
ARS	**Arshan**	**4.23**	**249**	*e*PN	Pn	01 29 31.7	+0.3
ARS	**Arshan**	**4.23**	**249**	*e*Pn	Pn	01 29 31.1	-0.3
ARS				*e*Pg	Pn	01 29 41.7	+10
ARS				*e*Sg	Sn	01 30 37.4	+17
ARS				Pmax			
	comp=E,58nm,0.5s						
ARS				Smax			
	comp=E,811nm,0.7s						
KPC	**Khapcheranga**	**4.51**	**149**	*e*PN	Pn	01 29 47.5	+12
KPC				*e*		01 30 45.0	
KPC				pmax	pmax		
	comp=Z,31nm,0.6s						
KPC				smax			
	comp=E,166nm,0.7s						
KPC	**Khapcheranga**	**4.51**	**149**	*e*Pn	Pn	01 29 32.5	-2.8
KPC				*e*Pg	Pn	01 29 46.8	+11
KPC				*e*Sg	Sn	01 30 44.6	+17
KPC				Pmax			
	comp=E,61nm,1.2s						
KPC				Smax			
	comp=E,493nm,1.7s						
ZAK	**Zakamensk**	**4.71**	**229**	*e*PN	Pn	01 29 50.9	+13
ZAK				*e*		01 30 52.7	
ZAK				pmax	pmax		
	comp=Z,12nm,0.6s						
ZAK				smax			
	comp=N,77nm,0.5s						
ZAK	**Zakamensk**	**4.71**	**229**	*e*Pg	Pn	01 29 52.4	+14
ZAK				*e*Sg	Sn	01 30 54.1	+21
ZAK				Pmax			
	comp=N,8.0nm,0.6s						
ZAK				Smax			
	comp=N,59nm,0.7s						
NLYR	**Nelyaty**	**4.90**	**51**	*e*PN	Pn	01 29 40.0	-0.9
NLYR	**Nelyaty**	**4.90**	**51**	*e*Pn	Pn	01 29 41.9	+1.0
NLYR				*e*Pg	Pn	01 29 56.5	+16
NLYR				*e*Sg	Sn	01 31 00.4	+23
NLYR				Pmax			
	comp=N,18nm,0.8s						
NLYR				Smax			
	comp=N,135nm,1.4s						
BOD	**Bodaibo**	**5.13**	**33**	*e*PN	Pn	01 29 42.7	-1.4
BOD				*e*		01 29 57.7	
BOD				*e*		01 31 03.6	
BOD				pmax	pmax		
	comp=Z,7.0nm,0.3s						
BOD				smax			
	comp=N,82nm,1.1s						
BOD	**Bodaibo**	**5.13**	**33**	*e*Pn	Pn	01 29 42.8	-1.4
BOD				*e*Sg	Sn	01 31 05.7	+22
BOD				max			
	comp=N,9.0nm,0.9s						
BOD				Smax			
	comp=N,66nm,1.1s						
MOY	**Mondy**	**5.14**	**251**	*e*PN	Pn	01 29 45.4	+1.2
MOY	**Mondy**	**5.14**	**251**	*e*Pn	Pn	01 29 44.0	-0.2
MOY				*e*		01 30 44.4	
MOY				*e*Sg	Sn	01 31 04.2	+21
MOY				max			
	comp=N,26nm,0.6s						
MOY				Smax			
	comp=N,407nm,1.3s						
ORL	**Orlik**	**5.53**	**262**	*e*PN	Pn	01 29 49.2	-0.5
ORL				*e*		01 30 05.9	
ORL				*e*S	Sn	01 30 51.7	-1.7
ORL				*e*		01 31 18.5	
ORL				pmax	pmax		
	comp=Z,27nm,0.8s						
ORL				smax			
	comp=N,140nm,1.1s						
ORL	**Orlik**	**5.53**	**262**	*e*Pn	Pn	01 29 49.4	-0.3
ORL				*e*Pg	Pn	01 30 07.0	+17
ORL				*e*		01 30 51.9	
ORL				*e*Sg	Sn	01 31 19.1	+26
ORL				Pmax			
	comp=N,19nm,0.6s						
ORL				Smax			
	comp=N,140nm,0.6s						
CRS	**Chara**	**6.33**	**55**	*e*Pg	Pn	01 30 21.7	+21
CRS				*e*Sg	Sn	01 31 44.1	+31
CRS				Pmax			
	comp=N,15nm,0.8s						
CRS				Smax			
	comp=N,63nm,1.5s						
TUP	**Tupik**	**6.62**	**79**	*e*PN	Pn	01 30 01.7	-3.5
TUP				*e*		01 30 23.0	
TUP				*e*S	Sn	01 31 16.3	-4.5
TUP				*e*		01 31 49.3	
TUP				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TUP				smax			
	comp=N,171nm,0.9s						
TUP	**Tupik**	**6.62**	**79**	*e*Pn	Pn	01 30 02.3	-2.9
TUP				*e*Pg	Pn	01 30 25.6	+20
TUP				*e*Sg	Sn	01 31 51.3	+31
TUP				Pmax			
	comp=N,5.0nm,0.8s						
TUP				Smax			
	comp=N,92nm,1.1s						

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*NIED **14** 01:37:00,34.10N×142.00E,h8^{km},Mw3.6 Best double couple: $M_0$3.33×10^{14} NP1:ϕ_s166°,δ60°,λ-132°. NP2: ϕ_s47°,δ49°,λ-41°.*
*JMA **14** 01:37:34.1±0.3,34.12N×142.05E,h59^{km}±4^{km},M3.9*
*NEIC **14** 01:37:39.9±0.8,34.00N×141.52E,mb4.0/1,Error ellipse: s-maj=24.7km s-min=11.0km az=62.0*
*IDC **14** 01:37:39.4±1.1,34.04N×141.78E,h55^{km}±9^{km},mb3.4/5,mb1 3.7/5,mb1mx3.4/20,mbtmp3.7/5,Error ellipse: s-maj=19.8km s-min=10.8km az=154.0*
ISC 14 01:37:34.5±1.4,**34.10N**±0.05×**142.0E**±0.1,**h38^{km}**±12^{km},**h53^{km}**±.7^{km}**:pP-P,n22,**σ**0^{s}.56**/29,**mb3.6**/6,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.01**	**303**	P	**P**	**01 37 52.5**	**+0.1**
BSO1				*e*S	**S**	**01 38 06.7**	**+1.0**
BSO3	**Boso 3**	**1.42**	**300**	P	**P**	**01 37 58.8**	**+0.5**
BSO4	**Boso 4**	**1.64**	**303**	P	**P**	**01 38 02.2**	**+0.9**
CHOJ	**Chosi**	**1.85**	**330**	P	**P**	**01 38 04.1**	**-0.3**
CHOJ				*e*S	**S**	**01 38 26.9**	**+0.1**
JHJ2	**Mitsune**	**2.08**	**242**	P	**P**	**01 38 08.4**	**+0.8**
JHJ2				*e*S	**S**	**01 38 32.9**	**+0.4**
JHJ	**Hachijo jima 2**	**2.10**	**243**	P	**P**	**01 38 08.4**	**+0.5**
	200nm,0.3s,baz=148,slow=2.3,SNR=34						
JHJ				S	**S**	**01 38 32.1**	**-0.9**
	232nm,0.3s,baz=67,slow=22,SNR=15						
JIM2	**Oshima 3**	**2.22**	**287**	P	**P**	**01 38 09.0**	**-0.6**
JIZS	**Izushimoda**	**2.66**	**284**	P	**P**	**01 38 15.9**	**0.0**
JOD2	**Odawara 2**	**2.67**	**296**	P	**P**	**01 38 15.1**	**-1.0**
JAG	**Ashikaga**	**3.12**	**319**	P	**P**	**01 38 21.9**	**-0.6**
JYN	**Shimob**	**3.17**	**297**	P	**P**	**01 38 23.3**	**+0.1**
JYN				*e*S	**S**	**01 39 00.1**	**-0.2**
JRY	**Ryogami san**	**3.19**	**308**	P	**P**	**01 38 22.7**	**-0.7**
MAJO	**Matsushiro**	**3.95**	**309**	*e*P	**P**	**01 38 34.0**	**-0.3**
MAT	**Matsushiro**	**3.95**	**309**	P	**P**	**01 38 34.0**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT				*e*S	**S**	**01 39 20.0**	**+0.1**
MAT	**Matsushiro**	**3.95**	**309**	P	**P**	**01 38 33.9**	**-0.3**
MAT				S	**S**	**01 39 19.6**	**-0.3**
SONM	**Songino Array**	**29.90**	**308**	P	**P**	**01 43 41.6**	**+0.9**
	0.3nm,0.6s,mb3.2,baz=94,slow=8.3,SNR=4.9						
SONM				pP	pP	01 43 54.9	+3.6
	0.4nm,0.8s,baz=270,slow=4.9,SNR=3.2						
CMAR	**Chiang Mai Arr**	**41.32**	**259**	P	**P**	**01 45 17.4**	**-0.8**
	1.0nm,0.4s,mb3.8,baz=52,slow=6.9,SNR=4.9						
ZAL	**Zalesovo**	**44.29**	**315**	P	**P**	**01 45 42.4**	**+0.4**
	0.3nm,0.4s,mb3.4,baz=337,slow=19,SNR=3.2						
WRAB	**Tennant Creek**	**54.23**	**189**	*e*P	**P**	**01 46 58.7**	**-0.2**
	0.9nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**54.24**	**189**	P	**P**	**01 46 58.9**	**-0.1**
	1.2nm,0.9s,mb3.8,baz=6.5,slow=7.6,SNR=14						
WRA				pP	pP	01 47 13.3	+3.1
	0.7nm,0.5s,baz=5.6,slow=7.6,SNR=4.4						
ASAR	**Alice Springs**	**57.96**	**189**	P	**P**	**01 47 25.9**	**+0.3**
	0.6nm,0.7s,mb3.7,baz=19,slow=10,SNR=5.5						
ASAR				pP	pP	01 47 40.9	+3.9
	0.5nm,0.8s,baz=17,slow=10,SNR=3.5						
PV10	**Paradox Valley**	**82.34**	**49**	*e*P	**P**	**01 49 58.3**	**+4.6**

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*CSEM **14** 02:05:08.2±0.2, 30.06N×51.74E, h12km, ML3.8, Error ellipse: s-maj=7.4km s-min=2.5km az=39.0*

*TEH **14** 02:05:10.0, 30.03N×51.73E, h6km, Mn3.8*

*NEIC **14** 02:05:10.0, 30.03N×51.73E, h6km, mb4.3/1, MN3.8(TEH), After TEH.*

*THR **14** 02:05:11.8±0.8, 30.24N×51.96E, h30km±21km, ML4.2*

*OMAN **14** 02:05:13.0±0.2, 30.07N×51.98E, h143km, Error ellipse: s-maj=41.9km s-min=20.2km az=245.0*

*IDC **14** 02:05:14.7±3.8, 30.82N×51.63E, mb3.8/7, mb1 4.0/10, mb1mx3.8/24, mbtmp3.9/10, ML3.6/3, MS3.0/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=81.4km s-min=25.8km az=173.0*

ISC 14 02:05:10.1±0.4**, 30.00N**±0.04×**51.83E**±0.05**, h30km, n50, σ1s57**/54**, mb3.8**/7**, MS3.2**/1**, 7C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHI	**Shiraz**	**0.69**	**120**	Pg	**Pb**	**02 05 24.0**	**+0.4**
IMOK	**Mook**	**1.22**	**140**	Pn	**Pn**	**02 05 34.6**	**+3.1**
ISRV	**Sarvestan**	**1.28**	**118**	Pn	**Pn**	**02 05 33.2**	**+1.0**
GHIR	**Ghir-Karzin**	**1.98**	**149**	*e*PG	**Pn**	**02 05 50.0**	**+7.7**
GHIR				AML	AML	02 06 24.0	
	comp=E,2μm,0.5s						
GHIR				AML	AML	02 06 24.3	
	comp=N,2μm,0.4s						
ISAD	**Sadrabad**	**2.49**	**39**	Pn	**Pn**	**02 05 51.9**	**+2.3**
IMEH	**Mehriz**	**2.77**	**59**	Pn	**Pn**	**02 05 55.3**	**+1.7**
NASN	**Na'in**	**2.92**	**16**	*e*PN	**Pn**	**02 05 55.1**	**-0.6**
ICHK	**Chekchek**	**3.15**	**44**	Pn	**Pn**	**02 06 00.7**	**+1.7**
SHGO	**Shushtar**	**3.34**	**310**	*e*PN	**Pn**	**02 06 03.2**	**+1.5**
SHGR	**Shooshtar-Gavs**	**3.34**	**310**	*e*PN	**Pn**	**02 06 03.2**	**+1.5**
SHGR				AML	AML	02 07 10.9	
	comp=N,418nm,0.8s						
SHGR				AML	AML	02 07 28.2	
	comp=E,355nm,0.6s						
IBAF	**Bafgh**	**3.59**	**63**	Pn	**Pn**	**02 06 06.5**	**+1.3**
KRBR	**Kerman**	**4.28**	**89**	*e*PN	**Pn**	**02 06 15.9**	**+0.9**
ASAO	**Ashtian**	**4.79**	**342**	*e*PN	**Pn**	**02 06 22.2**	**-0.1**
IQOM	**Qom**	**4.88**	**353**	Pn	**Pn**	**02 06 22.4**	**-1.1**
IKOM	**Komasi**	**5.55**	**320**	Pn	**Pn**	**02 06 34.9**	**+2.0**
IDMV	**Damavand**	**5.57**	**2**	Pn	**Pn**	**02 06 31.5**	**-1.7**
DAMV	**Damavand**	**5.62**	**1**	*e*PN	**Pn**	**02 06 31.8**	**-2.1**
IRAZ	**Razeghan**	**5.63**	**344**	Pn	**Pn**	**02 06 32.5**	**-1.5**
IRAZ				Lg		02 08 03.6	
BANOM	**Banah**	**5.67**	**135**	P	**Pn**	**02 06 34.6**	**0.0**
	SNR=19						
BANOM				⇑S	**Sn**	**02 07 38.4**	**-1.1**
IFIR	**Firoozkooh**	**5.68**	**8**	Pn	**Pn**	**02 06 33.7**	**-1.2**
IFIR				Sn	**Sn**	**02 07 35.9**	**-4.0**
IMHD	**Mahdasht**	**5.76**	**351**	Pn	**Pn**	**02 06 34.4**	**-1.5**
ASHO	**Ashiyiah**	**6.49**	**144**	P	**Pn**	**02 06 46.9**	**+0.6**
	SNR=41						
ASHO				S	**Sn**	**02 07 59.6**	**-0.5**
ASHO	**Ashiyiah**	**6.49**	**144**	⇓P	**Pn**	**02 06 46.9**	**+0.6**
	SNR=41						
ASHO				⇑S	**Sn**	**02 07 59.6**	**-0.5**
IDHR	**Dehrash**	**6.57**	**317**	Pn	**Pn**	**02 06 45.6**	**-1.8**
ARQ	**Araqi**	**7.85**	**147**	P	**Pn**	**02 07 04.5**	**-0.8**
	SNR=8.2						
BSY	**Bisya**	**8.68**	**145**	⇓P	**P**	**02 07 16.0**	**-0.8**
BSYO	**Bisya**	**8.71**	**145**	P	**P**	**02 07 16.0**	**-1.2**
SMDO	**Samad**	**8.87**	**140**	P	**P**	**02 07 19.2**	**-0.3**
	SNR=14						
WBK	**Wadi Bani Khal**	**9.75**	**137**	⇑P	**P**	**02 07 29.4**	**-2.3**
WHFO	**Wadi Hawf**	**12.15**	**171**	⇑P	**P**	**02 08 02.1**	**-2.2**
	SNR=9.6						
ASF	**Jabal al Asfar**	**12.98**	**283**	Pn	**P**	**02 08 11.2**	**-4.1**
	comp=E,1.0nm,0.3s,baz=220,slow=4.3,SNR=12						
ASF				Sn	**S**	**02 10 36.7**	**-3.0**
	comp=E,0.2nm,0.3s,baz=354,slow=16,SNR=2.9						
ASF				LR	LR	02 13 43.0	
	comp=E,44nm,18.3s,baz=95,slow=40						
MALT	**Malatya**	**13.84**	**310**	*e*P	**P**	**02 08 23.7**	**-3.0**
	comp=E,3.5nm,0.7s						
EIL	**Elat**	**14.65**	**273**	Pn	**P**	**02 08 38.9**	**+1.6**
	comp=E,0.2nm,0.3s,baz=55,slow=18,SNR=2.2						
EIL				Sn	**S**	**02 11 24.6**	**+5.0**
	comp=E,0.2nm,0.3s,baz=94,slow=30,SNR=2.8						
EIL	**Elat**	**14.65**	**273**	P	**P**	**02 08 39.1**	**+1.8**
EIL				Sn	**S**	**02 11 24.6**	**+5.0**
KIV	**Kislovodsk**	**15.71**	**335**	*e*P	**P**	**02 08 44.6**	**-6.5**
	comp=E,17nm,0.9s						
BRTR	**Keskin Array B**	**17.78**	**308**	P	**P**	**02 09 15.5**	**-1.5**
	comp=E,0.1nm,0.3s,baz=127,slow=10,SNR=4.9						
CFR	**Carcaliu**	**24.00**	**316**	⇓P		02 10 33.9	
VRI	**Vrincioaia**	**25.21**	**316**	⇑P	pP	02 10 46.2	+2.9
MLR	**Muntele Rosu**	**25.50**	**315**	P	**P**	**02 10 40.0**	**+2.6**
	comp=E,11nm,0.9s,mb4.4,baz=244,slow=2.4,SNR=8.7						
MLR	**Muntele Rosu**	**25.50**	**315**	⇑P	**P**	**02 10 40.7**	**+3.2**
AKASG	**Malin Array Be**	**26.73**	**327**	P	**P**	**02 10 49.2**	**+0.5**
	comp=E,0.6nm,0.5s,mb3.4,baz=138,slow=8.3,SNR=4.1						
BVAR	**Borovoye Array**	**26.73**	**25**	P	**P**	**02 10 48.9**	**+0.2**
	comp=E,0.9nm,0.5s,mb3.5,baz=236,slow=10,SNR=7.7						
BURAR	**Bucovina Array**	**26.99**	**318**	⇑P	**P**	**02 10 52.5**	**+1.3**
ZAL	**Zalesovo**	**33.75**	**35**	P	**P**	**02 11 54.1**	**+3.1**
	comp=E,0.9nm,0.5s,mb4.0,baz=191,slow=8.9,SNR=3.2						
KHC	**Kasperske Hory**	**34.66**	**314**	*e*P	**P**	**02 12 01.5**	**+2.6**
FINES	**FINESS Array B**	**35.74**	**339**	P	**P**	**02 12 06.0**	**-2.0**
	comp=E,1.9nm,0.8s,mb4.1,baz=127,slow=9.5,SNR=7.5						
CMAR	**Chiang Mai Arr**	**44.20**	**94**	LR	LR	02 34 38.2	
	comp=E,29nm,19.4s,MS3.2,baz=300,slow=40						
INK	**Inuvik**	**81.92**	**2**	P	**P**	**02 17 31.2**	**+3.5**
	comp=E,0.8nm,0.8s,mb3.7,baz=13,slow=6.6,SNR=3.2						
YKA	**Yellowknife Ar**	**87.19**	**354**	P	**P**	**02 17 57.9**	**+3.7**
	comp=E,0.3nm,0.6s,mb3.7,baz=12,slow=5.3,SNR=11						
YKA	**Yellowknife Ar**	**87.19**	**354**	P	**P**	**02 17 57.9**	**+3.7**

IDC 14 02:34:57.2±6.5**, 7.42S×130.91E, mb3.7**/1**, mb1 3.8**/3**, mb1mx3.6**/11**, mbtmp3.6**/3**, ML3.5**/2**, Error ellipse: s-maj=118.2km s-min=71.0km az=88.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.88**	**165**	Pn	P	02 38 03.5	-0.9
	0.4nm,0.3s,baz=348,slow=14,SNR=11						
WRA				Sn	S	02 40 26.5	-3.3
	0.7nm,0.3s,baz=326,slow=24,SNR=14						
ASAR	**Alice Springs**	**16.41**	**170**	Pn	P	02 38 49.1	-1.4
	0.3nm,0.3s,baz=333,slow=10.0,SNR=11						
ASAR				Sn	S	02 41 51.7	-1.5
	0.2nm,0.3s,baz=354,slow=27,SNR=5.7						
STKA	**Stephens Creek**	**26.29**	**159**	P	P	02 40 34.1	-2.2
	0.7nm,0.5s,slow=10,SNR=3.2						

IDC 14 02:45:27.3±1.5**, 13.33N×145.14E, mb3.3**/4**, mb1 3.6**/4**, mb1mx3.5**/19**, mbtmp3.3**/4**, Error ellipse: s-maj=258.5km s-min=23.7km az=111.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.73**	**198**	P	P	02 52 18.6	-2.7
	0.4nm,0.5s,baz=20,slow=9.6,SNR=5.1						
ASAR	**Alice Springs**	**38.37**	**197**	P	P	02 52 50.9	-1.2
	0.3nm,0.8s,baz=27,slow=8.1,SNR=2.8						
ILAR	**Eielson Array**	**68.69**	**25**	P	P	02 56 32.4	-2.1
	0.3nm,0.7s,baz=259,slow=5.7,SNR=4.9						
YKA	**Yellowknife Ar**	**82.97**	**27**	P	P	02 57 54.1	-1.2
	0.1nm,0.4s,baz=286,slow=5.2,SNR=5.4						

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*IDC **14** 02:50:19.4±0.7, 13.66N×92.96E, mb4.2/15, mb1 4.3/16, mb1mx4.3/20, mbtmp4.1/16, ML4.1/1, MS3.8/1, Ms1 3.8/1, ms1mx3.5/13, Error ellipse: s-maj=31.3km s-min=14.5km az=52.0*

*BJI **14** 02:50:23.4, 13.67N×92.91E, h40km, mB5.1, mb4.5, Ms4.1, Msz3.8*

*NEIC **14** 02:50:23.9±0.5, 13.82N×92.97E, h30km, mb4.6/14, Error ellipse: s-maj=12.1km s-min=7.7km az=47.0*

ISC 14 02:50:22.6±0.4**, 13.75N**±0.05×**93.01E**±0.03**, h33km, (h44km**±1.8km**:pP-P), n85, σ1s43**/91**, mb4.4**/32**, MS3.9**/7**, 4C-3D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NST	**Nakhon Sawan**	**7.16**	**74**	P	**P**	**02 52 08.0**	**+0.4**
	54nm,0.6s						
CM31	**Chiang Mai Arr**	**7.38**	**50**	*e*Pn	**Pn**	**02 52 08.9**	**-1.9**
	21nm,0.6s						
CMAR	**Chiang Mai Arr**	**7.38**	**50**	Pn	**Pn**	**02 52 09.7**	**-1.2**
	0.8nm,0.3s,baz=239,slow=15,SNR=23						
CMAR				Sn	**Sn**	**02 53 32.4**	**-1.9**
	3.3nm,0.3s,baz=246,slow=39,SNR=5.8						
CHG	**Chiang Mai**	**7.60**	**48**	⇑P	**P**	**02 52 15.8**	**+2.0**
	57nm,0.7s						
CHRT	**Chiangrai**	**8.89**	**46**	⇑P	**P**	**02 52 31.0**	**-0.7**
	210nm,0.7s						
BWNR	**Bhubaneshwar**	**9.47**	**314**	*e*P	**P**	**02 52 35.3**	**-4.3**
BWNR				AMb	AMB	02 52 49.9	
	comp=Z,126nm,0.6s						
BWNR				*e*S	**S**	**02 54 11.3**	**-15**
CAL	**Calcutta**	**9.80**	**334**	*e*	**S**	**02 54 29.5**	**-4.9**
CAL				*e*		02 56 53.2	
VIS	**Vishakhapatnam**	**10.12**	**294**	*i* P	**P**	**02 52 46.2**	**-2.5**
VIS				*i* S	**S**	**02 54 25.0**	**-17**
SHL	**Shillong**	**11.80**	**355**	*e*	**P**	**02 53 05.0**	**-6.6**
SHL				*e*S	**S**	**02 55 11.0**	**-12**
PALK	**Pallekele**	**13.70**	**243**	Pn	**P**	**02 53 42.4**	**+5.4**
HYB	**Hyderabad**	**14.39**	**287**	*e*P	**P**	**02 53 44.0**	**-2.0**
HYB				*e*		02 56 05.0	
HYB				*e*S	**S**	**02 56 23.0**	**-2.4**
HYB	**Hyderabad**	**14.39**	**287**	*i* P	**P**	**02 53 44.0**	**-2.0**
HYB				*e*		02 56 05.0	
HYB				*e*S	**S**	**02 56 23.0**	**-2.4**
KMI	**Kunming**	**14.56**	**38**	P	**P**	**02 53 50.0**	**+1.8**
KMI				AP		02 53 56.4	
KMI				PP	PP	02 54 02.8	+3.2
KMI				S	**S**	**02 56 30.8**	**+1.5**
KMI				XS		02 56 43.6	
KMI				SS	SS	02 56 47.6	+1.3
KMI				AMB	AMB		
	comp=Z,8.0nm,0.7s						
KMI				AMB	AMB		
	comp=Z,108nm,3.5s						
KMI				LR	LR		
	comp=N,468nm,14.4s						
KMI				LR	LR		
	comp=E,810nm,17.0s						
KMI				LR	LR		
	comp=Z,344nm,18.2s						
JIRN	**Jiri**	**15.23**	**336**	*e*P	**P**	**02 53 54.6**	**-2.3**
	comp=Z,71nm,0.8s						
PKI	**Pulchoki**	**15.47**	**334**	*e*P	**P**	**02 53 57.7**	**-2.3**
	comp=Z,41nm,0.5s						
ALBI	**Allahabad**	**15.59**	**319**	*e*		02 57 17.0	
ALBI				*e*		02 58 43.5	
DMN	**Daman**	**15.63**	**333**	*e*P	**P**	**02 53 59.2**	**-2.9**
	comp=Z,60nm,0.6s						
KKN	**Kakani**	**15.71**	**334**	*e*P	**P**	**02 54 00.4**	**-2.8**
LSA	**Lhasa**	**15.96**	**354**	P	**P**	**02 54 10.0**	**+3.6**
LSA				AP		02 54 19.5	
LSA				XS		02 57 13.9	
LSA				AMB	AMB		
	comp=Z,20nm,0.7s						
LSA				LR	LR		
	comp=N,210nm,15.0s						
LSA				LR	LR		
	comp=E,390nm,13.0s						
LSA				LR	LR		
	comp=Z,300nm,17.0s						
LSA	**Lhasa**	**15.96**	**354**	*e*P	**P**	**02 54 09.5**	**+3.1**
	comp=Z,14nm,0.6s						
GKN	**Gorkha**	**16.18**	**332**	*e*P	**P**	**02 54 07.0**	**-2.1**
	comp=Z,39nm,0.5s						
KOLN	**Koldanda**	**16.47**	**329**	*e*P	**P**	**02 54 11.4**	**-1.4**
QIZ	**Qiongzhong**	**16.98**	**70**	*e*P	**P**	**02 54 20.5**	**+1.2**
QIZ				S	**S**	**02 57 23.8**	**-1.9**
QIZ				LR	LR		
	comp=N,465nm,16.2s						
QIZ				LR	LR		
	comp=Z,623nm,15.1s						
GYA	**Guiyang**	**17.99**	**43**	P	**P**	**02 54 35.3**	**+3.5**
GYA				AP		02 54 46.3	
GYA				XP		02 54 50.4	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,270nm,13.5s						
GYA				LR	LR		
	comp=E,340nm,13.6s						
GYA				LR	LR		
	comp=Z,370nm,15.0s						
KAD	**Karad**	**18.48**	**283**	*e*P	**P**	**02 54 40.0**	**+2.0**
KAD				*e*		02 57 49.0	
POO	**Poona**	**19.00**	**287**	*e*	**P**	**02 54 49.0**	**+4.7**
POO				*i*		02 58 16.0	
AGRA	**Agra**	**19.43**	**316**	*e*P	**P**	**02 54 52.5**	**+3.4**
AGRA				*e*		02 58 06.2	
AGRA				*e*		02 58 13.8	
CD2	**Chengdu**	**19.74**	**28**	P	**P**	**02 54 51.8**	**-0.6**
SONA	**Sohna**	**20.68**	**317**	*e*P	**P**	**02 55 03.3**	**+0.9**
SONA				*e*		02 58 38.2	
AYAN	**Aya Nagar**	**20.80**	**317**	*e*P	**P**	**02 55 05.2**	**+1.6**
AYAN				*e*		02 55 08.9	
	comp=Z,4.4nm,0.3s						
JOSI	**Joshimath**	**20.82**	**326**	*e*	**P**	**02 54 57.4**	**-6.3**
JOSI				*e*		02 55 05.4	
	comp=Z,240nm,0.6s						
NDI	**New Delhi**	**20.88**	**318**	*e*	**P**	**02 55 10.5**	**+6.1**
NDI				*e*		02 58 46.0	
KUDL	**Kundal**	**21.01**	**316**	*e*P	**P**	**02 55 05.3**	**-0.4**
KUDL				*e*		02 55 06.4	
	comp=Z,2.8nm,0.5s						
KUDL				*e*		02 58 47.7	
KHET	**Khetri**	**21.43**	**314**	*e*P	**P**	**02 55 10.5**	**+0.5**
KHET				*e*		02 55 11.5	
	comp=Z,2.2nm,0.4s						
KHET				*e*		02 58 59.1	
DDI	**Dehra Dun**	**21.50**	**323**	*e*P	**P**	**02 55 11.4**	**+0.8**
DDI				*e*		02 59 05.4	
KLP	**Kalpa**	**22.28**	**325**	*e*P	**P**	**02 55 20.0**	**+1.5**
KLP				*e*		02 59 04.4	
ENH	**Enshi**	**22.40**	**40**	*e*P	**P**	**02 55 19.9**	**+0.3**
	comp=Z,39nm,1.1s,mb4.8						
SDNR	**Sundarnagar**	**22.99**	**323**	*e*P	**P**	**02 55 28.2**	**+2.7**
XAN	**Xi'an**	**24.83**	**33**	P	**P**	**02 55 43.5**	**+0.2**
XAN				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.4						
GTA	**Gaotai**	**26.25**	**12**	*e*P	**P**	**02 55 57.8**	**+1.1**
GTA				AP	pP	02 56 09.3	+3.2
GTA				XP	sP	02 56 14.9	+4.9
GTA				PP	PP	02 56 41.0	+1.7
GTA				PPP	PPP	02 56 52.0	+0.7
GTA				PCP	PcP	02 59 25.3	+2.1
GTA				S	**S**	**03 00 23.8**	**-0.9**
GTA				XS		03 00 43.6	
GTA				SS	SS	03 01 31.1	-2.7
GTA				SCS	ScS	03 06 50.3	+2.6
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.1						
GTA				AMB	AMB		
	comp=Z,89nm,6.1s						
GTA				LR	LR		
	comp=N,225nm,17.9s,MS4.0						
GTA				LR	LR		
	comp=E,342nm,17.9s,MS4.0						
GTA				LR	LR		
	comp=Z,224nm,17.5s,MS3.8						
NJ2	**Nanjing**	**29.85**	**48**	*e*P	**P**	**02 56 30.4**	**+1.2**
NJ2				AP	pP	02 56 41.0	+2.2
NJ2				XP	sP	02 56 46.9	+3.8
NJ2				PP	PP	02 57 29.8	+3.0
NJ2				PPP	PPP	02 57 42.3	+1.6
NJ2				S	**S**	**03 01 22.0**	**-0.6**
NJ2				XS		03 01 44.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,490nm,4.8s						
NJ2				LR	LR		
	comp=N,670nm,17.2s,MS4.5						
NJ2				LR	LR		
	comp=E,620nm,15.2s,MS4.5						
NJ2				LR	LR		
	comp=Z,600nm,14.3s,MS4.4						
WMQ	**Urumqi**	**30.31**	**352**	P	**P**	**02 56 36.5**	**+3.4**
WMQ				XP	sP	02 56 54.0	+6.9
WMQ				PP	PP	02 57 38.0	+5.3
WMQ				S	**S**	**03 01 32.0**	**+2.3**
WMQ				SS	SS	03 03 14.0	+4.2
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
WMQ				LR	LR		
	comp=N,125nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=E,238nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,187nm,16.0s,MS3.8						
SSE	**Sheshan**	**31.11**	**52**	P	**P**	**02 56 39.5**	**-0.9**
SSE				AP	pP	02 56 52.5	+2.5
SSE				XP	sP	02 56 58.8	+4.4
SSE				PP	PP	02 57 47.8	+4.5
SSE				S	**S**	**03 01 40.4**	**-2.1**
SSE				XS		03 02 03.6	
SSE				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.6						
SSE				LR	LR		
	comp=N,269nm,23.9s,MS3.9						
SSE				LR	LR		
	comp=E,151nm,24.0s,MS3.9						
SSE				LR	LR		
	comp=Z,141nm,16.1s						
HHC	**Hu-ho-hao-te**	**31.49**	**28**	*e*P	**P**	**02 56 43.8**	**+0.2**
HHC				AP	pP	02 56 55.4	+2.1
HHC				XP	sP	02 57 01.6	+4.0
HHC				PP	PP	02 57 47.1	-1.0
HHC				PCP	PcP	02 59 35.3	-0.9
HHC				S	**S**	**03 01 46.1**	**-2.2**
HHC				XS		03 02 06.3	
HHC				SCP		03 03 12.9	
HHC				SS	SS	03 03 35.5	-2.0
HHC				SCS	ScS	03 07 10.8	-1.1
HHC				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.2						
HHC				AMB	AMB		
	comp=Z,68nm,8.3s						
HHC				LR	LR		
	comp=N,160nm,14.3s,MS4.1						
HHC				LR	LR		
	comp=E,246nm,16.7s,MS4.1						
HHC				LR	LR		
	comp=Z,209nm,14.3s,MS4.0						
SONM	**Songino Array**	**35.76**	**15**	P	**P**	**02 57 20.9**	**+0.5**
	comp=Z,3.9nm,1.0s,mb4.3,baz=202,slow=5.8,SNR=22						
ULN	**Ulaanbaatar**	**35.96**	**16**	*e*P	**P**	**02 57 22.1**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**38.67**	**345**	*e*P	**P**	**02 57 44.9**	**+0.1**
	comp=Z,9.6nm,1.0s,mb4.5						
ZAL	**Zalesovo**	**40.61**	**353**	P	**P**	**02 58 01.5**	**+0.7**
	comp=Z,1.8nm,0.5s,mb3.9,baz=299,slow=6.8,SNR=12						
CN2	**Changchun**	**40.83**	**36**	*e*P	**P**	**02 58 04.8**	**+2.1**
BVAR	**Borovoye Array**	**43.11**	**340**	P	**P**	**02 58 21.8**	**+0.5**
	comp=Z,2.2nm,0.8s,mb3.9,baz=258,slow=35,SNR=4.1						
MBWA	**Marble Bar**	**43.51**	**142**	*e*P	**P**	**02 58 24.1**	**-0.9**
	comp=Z,30nm,1.4s,mb4.8						
CHKZ	**Chkalovo**	**43.58**	**341**	*e*P	**P**	**02 58 25.2**	**0.0**
	comp=Z,5.4nm,0.8s,mb4.3						
MDJ	**Mudanjiang**	**43.73**	**38**	P	**P**	**02 58 28.0**	**+1.5**
MDJ				AP	pP	02 58 39.9	+3.5
MDJ				XP	sP	02 58 46.8	+6.3
MDJ				PP	PP	03 00 09.9	-0.1
MDJ				S	**S**	**03 04 56.8**	**+2.7**
MDJ				SS	SS	03 08 02.8	+0.4
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
MDJ				LR	LR		
	comp=N,97nm,26.0s,MS3.6						
MDJ				LR	LR		
	comp=E,47nm,24.7s,MS3.6						
MDJ				LR	LR		
	comp=Z,71nm,22.1s,MS3.5						
GNI	**Garni**	**49.64**	**311**	P	pP	02 59 20.6	-2.4
	comp=Z,5.7nm,0.8s,baz=118,slow=3.9,SNR=6.0						
GNI	**Garni**	**49.64**	**311**	P	**P**	**02 59 17.2**	**+4.1**
	comp=Z,10nm,0.9s,mb4.9						
KIV	**Kislovodsk**	**52.30**	**315**	*e*P	**P**	**02 59 34.1**	**+1.0**
	comp=Z,5.9nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**52.68**	**129**	P	**P**	**02 59 35.5**	**-0.8**
	comp=Z,4.7nm,0.7s,mb4.5,baz=307,slow=8.1,SNR=36						
WRA				PcP	PcP	03 00 45.5	-0.5
	comp=Z,1.2nm,0.5s,baz=315,slow=3.0,SNR=7.8						
WRAB	**Tennant Creek**	**52.68**	**129**	*e*P	**P**	**02 59 35.3**	**-1.0**
	comp=Z,12nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**52.69**	**129**	⇓*i*P	**P**	**02 59 35.3**	**-1.1**
ASPA	**Alice Springs**	**54.61**	**133**	*e*P	**P**	**02 59 49.6**	**-0.9**
ASAR	**Alice Springs**	**54.61**	**133**	P	**P**	**02 59 49.6**	**-0.9**
	comp=Z,3.5nm,0.5s,mb4.7,baz=310,slow=7.0,SNR=56						
ASAR				LR	LR	03 29 06.9	
	comp=Z,74nm,18.4s,MS3.8,baz=110,slow=43						
BRTR	**Keskin Array B**	**57.84**	**308**	P	**P**	**03 00 13.0**	**-0.5**
	comp=Z,2.8nm,0.9s,mb4.3,baz=118,slow=7.6,SNR=7.6						
CFR	**Carcaliu**	**62.69**	**314**	⇓P	pP	03 00 55.3	-1.4
AKASG	**Malin Array Be**	**62.91**	**320**	P	**P**	**03 00 47.5**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.6,baz=82,slow=6.2,SNR=3.3						
VRI	**Vrincioaia**	**63.76**	**315**	⇑P	**P**	**03 00 53.9**	**+0.4**
MLR	**Muntele Rosu**	**64.26**	**314**	⇓P	**P**	**03 01 03.0**	**+6.2**
STKA	**Stephens Creek**	**65.00**	**135**	P	**P**	**03 01 01.2**	**-0.6**
	comp=Z,1.4nm,0.7s,mb4.1,baz=344,slow=4.4,SNR=5.1						
BURAR	**Bucovina Array**	**65.01**	**316**	⇑P	pP	03 01 10.1	-1.8
FINES	**FINESS Array B**	**67.04**	**331**	P	**P**	**03 01 13.7**	**-0.6**
	comp=Z,5.7nm,1.1s,mb4.5,baz=101,slow=9.7,SNR=9.5						
ARCES	**ARCESS Array B**	**69.39**	**340**	P	**P**	**03 01 29.3**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=90,slow=8.5,SNR=7.8						
ARCES	**ARCESS Array B**	**69.39**	**340**	P	**P**	**03 01 29.3**	**+0.5**
LSZ	**Lusaka**	**70.29**	**248**	P	**P**	**03 01 36.5**	**+1.3**
	comp=Z,22nm,1.8s,mb4.8						
GERES	**GERESS Array B**	**72.75**	**317**	P	**P**	**03 01 50.1**	**+0.8**
	comp=Z,0.8nm,0.7s,mb3.7,baz=59,slow=5.7,SNR=3.4						
CLL	**Collm**	**73.16**	**320**	*e*P	**P**	**03 01 52.0**	**+0.3**
CLL	**Collm**	**73.16**	**320**	P	**P**	**03 01 52.0**	**+0.3**
NB2	**NORSAR Subarra**	**74.10**	**330**	P	**P**	**03 01 56.5**	**-0.5**
	comp=Z,3.3nm,0.9s,mb4.3,baz=91,slow=5.8						
NOA	**NORSAR Array B**	**74.10**	**330**	P	**P**	**03 01 57.0**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=96,slow=5.5,SNR=2.9						
LBTB	**Lobatse**	**76.15**	**240**	P	**P**	**03 02 13.6**	**+4.1**
	comp=Z,0.6nm,0.5s,mb3.8						
ESDC	**Sonseca Array**	**86.60**	**310**	P	**P**	**03 03 06.9**	**+2.8**
	comp=Z,0.8nm,0.7s,mb4.1,baz=55,slow=5.0,SNR=4.1						
IMA	**Indian Mountai**	**86.63**	**22**	*e*P	**P**	**03 03 06.0**	**+2.4**
	comp=Z,8.4nm,0.6s,mb5.2						
ILAR	**Eielson Array**	**89.74**	**22**	P	**P**	**03 03 20.4**	**+1.9**
	comp=Z,0.5nm,0.8s,mb3.9,baz=305,slow=4.5,SNR=5.4						
PDAR	**Pinedale Array**	**120.06**	**19**	PKP	PKPdf	03 09 17.1	+6.8
	comp=Z,0.5nm,0.7s,slow=1.5,SNR=4.9						
NVAR	**Mina Array Bea**	**120.39**	**28**	PKP	PKPdf	03 09 14.8	+3.8
	comp=Z,0.3nm,0.6s,baz=270,slow=2.7,SNR=3.4						
TXAR	**Lajitas Array**	**134.24**	**20**	PKP	PKPdf	03 09 45.2	+7.4
	comp=Z,0.2nm,0.7s,baz=45,slow=1.8,SNR=3.7						
TXAR	**Lajitas Array**	**134.24**	**20**	PKP	PKPdf	03 09 45.2	+7.4

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*IDC **14** 03:31:53.6±0.6, 9.17N×83.98W, mb4.6/16, mb1 4.8/19, mb1mx4.6/23, mbtmp4.6/19, ML4.0/3, MS4.2/10, Ms1 4.2/10, ms1mx3.9/25, Error ellipse: s-maj=23.1km s-min=12.2km az=51.0*

*CASC **14** 03:31:55.8±6.0, 8.91N×84.01W, MD5.0, ML4.2, MW5.0, mb5.0(NEIC), Fault plane solution: NP1:ϕ_s305°, δ33°, λ100°.*

*BJI **14** 03:31:58.1, 9.00N×84.10W, h36km, mB5.3, Msz4.4*

*HRVD **14** 03:31:58.2±0.3, 8.92N×83.93W, h19km±1km, MW5.0/50, Centroid moment Tensor Solution. LP body waves: s29,c42;Mantle waves: s50,c86; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.09±.20; $M_{\theta\theta}$-2.53±.12;*

$M_{\phi\phi}$-0.55±.15; $M_{r\theta}$1.51±.22; $M_{\theta\phi}$1.60±.08; $M_{\phi r}$-0.47±.32; Best double couple: $M_0$3.622×10^{16} NP1:ϕ_s305°,δ33°, λ100°. NP2:ϕ_s113°,δ58°,λ84°. Principal axes: T 3.471, Plg76°, Azm4°; N .304, Plg5°, Azm117°; P -3.773, Plg13°, Azm208°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*NEIC **14** 03:31:58.2±0.6,8.99N×84.08W,h37^{km}±4^{km},mb5.0/61, MS4.0/5,MD4.6(CASC) Error ellipse: s-maj=7.3km s-min=4.2km az=47.0*

NEIC Felt at Parrita and in the Valle Central.

ISC 14 03:31:56.2±0.3**,8.92N**±0.03×**84.01W**±0.03**,h33^{km}, (h34^{km}**±3.1^{km}**:pP-P),n225,**σ1^{s}**38**/210**,mb4.8**/71**,MS4.2**/16**, 27C-29D,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QCR	Quepos	0.53	343	eP	P	03 32 06.6	-0.4
BUS	Buena Vista	0.68	21	⇓iP	P	03 32 09.8	+0.5
BUS	Buena Vista	0.68	21	⇓iP	P	03 32 09.8	+0.5
LCR2	La Lucha 2	0.82	1	⇓iP	P	03 32 12.0	+0.8
LCR2	La Lucha 2	0.82	1	⇓iP	P	03 32 12.0	+0.8
ACR	Cerro Adams	0.87	107	⇓eP	P	03 32 12.9	+1.0
ACR	Cerro Adams	0.87	107	⇓eP	P	03 32 13.0	+1.0
ACR				eS	S	03 32 24.3	+0.7
LAJ	Bijagual	0.95	353	⇓iP	P	03 32 13.5	+0.4
LAJ	Bijagual	0.95	353	⇓eP	P	03 32 13.5	+0.4
LAJ				eS	S	03 32 26.5	+0.9
SJS	Escuela Geolog	1.02	358	⇑iP	P	03 32 14.4	+0.3
SJS				eS	S	03 32 29.3	+1.9
SJS	Escuela Geolog	1.02	358	⇑eP	P	03 32 14.2	+0.1
SJS				⇓eP		03 32 15.4	
SJS				eS	S	03 32 30.1	+2.7
ICR	Volcan Irazu	1.07	10	⇓iP	P	03 32 16.8	+1.9
ICR	Volcan Irazu	1.07	10	⇓eP	P	03 32 16.8	+1.9
PRS1	Puriscal	1.10	344	⇓eP	P	03 32 14.9	-0.3
CGA2	Cerro Gallo 2	1.18	338	⇑iP	P	03 32 17.3	+1.0
CGA2	Cerro Gallo 2	1.18	338	⇑eP	P	03 32 17.4	+1.0
VPS2	Volcan Poas 2	1.28	350	⇓iP	P	03 32 19.8	+1.9
VPS2	Volcan Poas 2	1.28	350	⇓iP	P	03 32 19.7	+1.9
BRU2	Volcan	1.31	95	⇓iP	P	03 32 20.7	+2.4
BRU2				eS	S	03 32 40.0	+5.2
JCR	Jicaral	1.43	311	⇓iP	P	03 32 19.3	-0.6
JCR	Jicaral	1.43	311	⇓eP	P	03 32 19.4	-0.6
LIO	Limon	1.45	42	⇑iP	P	03 32 23.4	+3.1
LIO	Limon	1.45	42	⇓iP	P	03 32 23.6	+3.3
CNI	Changuinola	1.56	71	⇑eP	P	03 32 24.4	+2.5
DVD	David	1.61	107	⇑eP	P	03 32 24.3	+1.6
JTS	JuntasAbangare	1.65	326	Pn	Pn	03 32 22.3	-1.0
	469nm,0.3s,baz=161,slow=5.6,SNR=777						
JTS				Sn	Sn	03 32 43.9	+0.3
	1µm,0.3s,baz=307,slow=19,SNR=14						
JTS	JuntasAbangare	1.65	326	⇑ePn	Pn	03 32 22.2	-1.2
JTS				eSn	Sn	03 32 43.9	+0.3
TRTC	Tortuguero	1.67	10	⇓iP	P	03 32 26.5	+3.0
TRTC	Tortuguero	1.67	10	⇓iP	P	03 32 26.4	+3.0
FORC	Fortuna	1.68	337	⇑iP	P	03 32 25.0	+1.5
FORC	Fortuna	1.68	337	⇑eP	P	03 32 25.1	+1.6
VCR	Vista de Mar	2.00	307	⇑eP	P	03 32 27.4	-0.8
VCR	Vista de Mar	2.00	307	⇑eP	P	03 32 27.4	-0.8
MADN	Villa Maderas	2.89	329	eP	P	03 32 44.5	+3.6
SSNN	San Juan del S	2.97	323	eP	P	03 32 46.2	+4.2
CONN	Concepcion	3.07	329	eP	P	03 32 47.1	+3.6
TICN	Ticuantepe	3.79	325	eP	P	03 32 56.5	+2.9
AZU	Azuero	3.86	107	eP	P	03 32 56.8	+2.1
WILN	Americas 2	3.87	327	⇑eP	P	03 32 58.0	+3.2
MGAN	Managua	3.89	326	eP	P	03 32 57.2	+2.1
MGAN				⇓i		03 34 35.7	
	comp=N,878nm,0.8s						
XAVN	Gruta Xavier	3.94	325	eP	P	03 32 58.6	+2.9
APYN	Apoyeque	4.02	325	eP	P	03 32 59.8	+2.9
COPN	Copaltepe	4.12	322	⇓eP	P	03 33 01.0	+2.6
PYTN	Playitas	4.12	331	eP	P	03 33 01.1	+2.7
AZU2	Pedas	4.18	109	eP	P	03 33 00.6	+1.4
AZU2				eS	S	03 34 00.0	+13
MIRN	Miramar	4.39	323	eP	P	03 33 05.1	+2.8
UPA	Univ. de Panam	4.42	89	⇑eP	P	03 33 03.9	+1.2
LEON	Leon	4.48	321	⇑eP	P	03 33 06.5	+2.9
TEL3	Telica 3	4.58	323	eP	P	03 33 07.6	+2.7
CRIN	San Cristobal	4.80	322	eP	P	03 33 11.4	+3.4
CNCH	Conchagua	5.73	319	eP	P	03 33 23.3	+2.2
BLLM	Bellamira	6.12	318	⇑eP	P	03 33 27.8	+1.3
VSM	San Miguel	6.13	317	⇓eP	P	03 33 28.4	+1.7
CAHU	Cacacuatique	6.34	320	eP	P	03 33 31.1	+1.4
SNVI	San Vicente	6.65	315	⇓iP	P	03 33 35.4	+1.3
SNVI				⇑eP		03 33 35.4	
SNVI				eS	S	03 34 50.5	+1.1
LCBS	La Ceiba	6.78	314	⇓eP	P	03 33 37.0	+1.2
LFRS	El Faro	6.81	314	eP	P	03 33 37.1	+0.8
LBRS	Las Brisas	6.88	315	eP	P	03 33 38.0	+0.8
BOQS	Boqueron	7.04	313	⇑eP	P	03 33 40.7	+1.2
SBLS	San Blas	7.36	312	⇑eP	P	03 33 44.8	+0.8
SNJE	San Jose	7.37	312	⇑eP	P	03 33 44.7	+0.6
RTR	El Retiro	7.42	312	eP	P	03 33 45.4	+0.7
MTO2	Montecristo 2	7.56	317	⇑eP	P	03 33 47.3	+0.6
RBDL	Robledal	7.59	313	⇓eP	P	03 33 47.5	+0.4
IXG	Ixpaco	8.19	310	⇓eP	P	03 33 56.1	+0.6
NBG	Las Nubes	8.38	313	⇑eP	P	03 33 59.4	+1.3
TP2	Tecpan 2	9.00	311	⇑eP	P	03 34 07.9	+1.1
OTAV	Otavalo	10.25	147	ePn	P	03 34 23.4	-0.7
	comp=N,74nm,1.6s						
OTAV				eSn	S	03 36 28.6	+10
ROSC	El Rosal	10.42	112	Pn	P	03 34 29.1	+2.6
	comp=N,1.0nm,0.3s,baz=273,slow=23,SNR=5.6						
ROSC				LR	LR	03 37 42.4	
	comp=N,864nm,18.8s,baz=91,slow=33						
TEIG	Tepich	11.97	340	ePn	P	03 34 47.4	-0.1
	comp=N,40nm,1.2s						
SDV	Santo Domingo	13.22	89	Pn	P	03 35 04.4	+0.2
	comp=N,0.4nm,0.3s,baz=278,slow=9.2,SNR=10.0						
SDV	Santo Domingo	13.22	89	ePn	P	03 35 04.8	+0.7
	comp=N,31nm,0.7s						
DWPF	Disney	19.25	7	eP	P	03 36 19.6	-1.0
	comp=N,86nm,1.4s						
SJG	San Juan	19.61	60	P	P	03 36 24.1	-0.6
	comp=N,1.3nm,0.3s,baz=253,slow=5.2,SNR=6.1						
SJG				LR	LR	03 43 34.9	
	comp=N,777nm,18.6s,baz=27,slow=36						
SJG	San Juan	19.61	60	eP	P	03 36 24.9	+0.2
	comp=N,147nm,1.2s						
CBYP	Canovanas	19.93	60	eP	P	03 36 27.6	-0.5
NNA	Nana	21.96	161	P	P	03 36 50.0	+1.1
	comp=N,57nm,1.4s,mb4.8						
HKT	Hockley	23.67	334	eP	P	03 37 03.8	-2.0
	comp=N,21nm,1.2s,mb4.5						
LRAL	Lakeview Retre	24.16	354	eP	P	03 37 10.6	+0.2
	comp=N,80nm,0.9s,mb5.2						
CSU	Charleston Sou	24.23	8	P	P	03 37 12.1	+0.9
NHSC	New Hope	24.33	8	eP	P	03 37 12.6	+0.5
	comp=N,153nm,1.4s,mb5.2						
GOGA	Godfrey	24.38	1	eP	P	03 37 12.7	+0.1
	comp=N,58nm,1.2s,mb4.9						
COW	Cow Castle Cre	24.54	7	eP	P	03 37 14.6	+0.5
NATX	Nacogdoches	24.79	338	eP	P	03 37 15.4	-1.2
	comp=N,100nm,0.6s,mb5.5						
JSC	Jenkinsville	25.37	5	eP	P	03 37 22.1	0.0
OXF	Oxford	25.95	350	eP	P	03 37 25.6	-1.9
	comp=N,81nm,0.9s,mb5.2						
JCT	Junction City	26.04	328	eP	P	03 37 26.3	-2.1
	comp=N,22nm,0.8s,mb4.7						
JCT				LR	LR		
	comp=Z,404nm,19.0s,MS4.0						
CPCT	Cooper Cave	26.41	359	eP	P	03 37 31.5	-0.3
UALR	University of	26.85	345	eP	P	03 37 32.3	-3.5
	comp=Z,28nm,0.9s,mb4.8						
MIAR	Mount Ida	26.98	342	eP	P	03 37 34.8	-2.1
	comp=Z,24nm,0.7s,mb4.8						
MIAR				LR	LR		
	comp=Z,485nm,19.0s,MS4.1						
HBAR	Harrisburg	27.20	348	eP	P	03 37 37.5	-1.5
SAML	Samuel	27.30	130	eP	P	03 37 38.7	-1.4
	comp=Z,7.0nm,1.1s,mb4.1						
SAML				LR	LR		
	comp=Z,387nm,19.0s,MS4.0						
WVT	Waverly	27.31	353	eP	P	03 37 37.8	-2.2
	comp=Z,12nm,0.8s,mb4.5						
LTX	Lajitas	27.43	320	P	P	03 37 41.7	+0.5
	comp=Z,8.2nm,0.8s,mb4.3						
LTX				LR	LR		
	comp=Z,388nm,20.0s,MS4.0						
TXAR	Lajitas Array	27.43	320	P	P	03 37 39.8	-1.4
	comp=Z,2.4nm,0.7s,mb3.9,baz=140,slow=8.9,SNR=16						
TXAR				PcP	PcP	03 41 01.1	+1.4
	comp=Z,1.1nm,0.7s,baz=153,slow=5.6,SNR=4.0						
ELN	Prospectdale	28.34	5	eP	P	03 37 48.9	-0.4
BLA	Blacksburg	28.36	6	eP	P	03 37 49.0	-0.3
	comp=Z,23nm,1.2s,mb4.7						
FWV	Forest Hill	28.68	5	eP	P	03 37 50.8	-1.5
WMOK	Wichita Mounta	29.05	334	eP	P	03 37 53.6	-2.0
	comp=Z,10nm,1.1s,mb4.5						
WCI	Wyandotte Cave	29.26	356	eP	P	03 37 55.4	-2.0
	comp=Z,39nm,0.9s,mb5.1						
FVM	French Village	29.51	350	eP	P	03 37 57.0	-2.7
	comp=Z,7.6nm,0.4s,mb4.8						
LPAZ	La Paz	29.57	148	eP	P	03 38 00.8	+0.4
	comp=Z,6.4nm,1.3s,mb4.2						
LPAZ				LR	LR		
	comp=Z,659nm,22.0s,MS4.2						
CCM	Cathedral Cave	29.74	348	⇑eP	P	03 37 58.9	-2.8
	comp=Z,38nm,0.6s,mb5.3						
CBN	Corbin	29.77	11	eP	P	03 38 01.9	0.0
	comp=Z,55nm,1.0s,mb5.2						
MNTX	Cornudas Mount	30.14	322	eP	P	03 38 02.8	-2.5
	comp=Z,9.0nm,1.2s,mb4.4						
BLO	Bloomington	30.21	356	eP	P	03 38 03.8	-2.1
	comp=Z,26nm,0.7s,mb5.1						
SDMD	Soldier's Deli	31.04	11	eP	P	03 38 12.4	-0.9
ACSO	Alum Creek Sta	31.20	2	eP	P	03 38 13.2	-1.5
	comp=Z,119nm,1.2s,mb5.6						
MVL	Millersville	31.70	11	eP	P	03 38 18.8	-0.3
SSPA	Standing Stone	32.05	9	eP	P	03 38 21.4	-0.8
	comp=Z,32nm,1.3s,mb5.0						
ANMO	Albuquerque	33.07	325	eP	P	03 38 29.9	-1.2
	comp=Z,5.5nm,1.1s,mb4.4						
PAL	Palisades	33.19	14	eP	P	03 38 31.5	-0.5
	comp=Z,67nm,1.3s,mb5.4						
AAM	Ann Arbor	33.25	0	eP	P	03 38 31.0	-1.5
	comp=Z,21nm,0.7s,mb5.2						
BINY	Binghamton	33.90	11	eP	P	03 38 37.8	-0.3
	comp=Z,36nm,1.1s,mb5.2						
TUC	Tucson	34.01	317	eP	P	03 38 39.0	-0.2
	comp=Z,7.8nm,0.9s,mb4.6						
GENY	Geneseo	34.15	8	eP	P	03 38 39.5	-0.8
JFWS	Jewell Farm	34.30	352	eP	P	03 38 38.8	-2.8
	comp=Z,54nm,0.6s,mb5.7						
LVC	Limon Verde	34.65	155	P	P	03 38 48.1	+3.3
	comp=Z,14nm,1.1s,mb4.8,baz=325,slow=6.9,SNR=8.2						
LVC				PcP	PcP	03 41 20.6	+1.8
	comp=Z,3.3nm,0.8s,baz=281,slow=2.1,SNR=3.5						
LVC	Limon Verde	34.65	155	eP	P	03 38 46.4	+1.6
	comp=Z,18nm,1.1s,mb4.9						
PV01	Paradox Valley	36.55	327	eP	P	03 39 00.4	-0.4
MSNY	Massena	36.81	11	eP	P	03 39 02.5	-0.3
PV10	Paradox Valley	36.98	326	eP	P	03 39 02.7	-1.6
BAR	Barrett	38.35	313	eP	P	03 39 17.2	+1.4
LDFC	Landfair	38.55	317	eP	P	03 39 19.2	+1.6
PFO	Pinyon Flat Ob	38.67	314	eP	P	03 39 20.0	+1.5
	comp=Z,17nm,0.9s,mb4.8						
NEN	Nelson	38.71	318	eP	P	03 39 19.7	+0.9
ARUT	Antelope Range	39.12	322	eP	P	03 39 22.7	+0.5
MPU	Maple Canyon	39.56	326	eP	P	03 39 25.1	-0.8
PDAR	Pinedale Array	40.48	331	P	P	03 39 31.9	-1.5
	comp=Z,1.2nm,0.6s,mb3.8,baz=131,slow=10,SNR=11						
PDAR				PcP	PcP	03 41 37.1	+0.7
	comp=Z,3.0nm,1.0s,baz=146,slow=5.3,SNR=7.0						
HWUT	Hardware Ranch	40.64	328	eP	P	03 39 33.8	-1.1
	comp=Z,7.6nm,0.7s,mb4.4						
BGU	Big Grassy Mou	40.96	326	eP	P	03 39 36.4	-1.1
SNOW	Snow King Moun	41.58	330	eP	P	03 39 41.3	-1.2
TPH	Tonopah	41.67	319	eP	P	03 39 44.5	+1.1
	comp=Z,5.4nm,0.6s,mb4.3						
TPAW	Teton Pass	41.70	330	eP	P	03 39 42.1	-1.4
IMW	Indian Meadow	41.99	331	eP	P	03 39 44.1	-1.8
ELK	Elko	42.09	324	eP	P	03 39 46.1	-0.6
	comp=Z,6.5nm,1.2s,mb4.1						
LAO	LASA Array	42.15	337	eP	P	03 39 45.0	-2.1
	comp=Z,8.3nm,0.9s,mb4.4						
ULM	Lac du Bonnet	42.37	349	P	P	03 39 45.9	-3.0
	comp=Z,25nm,0.8s,mb4.9,baz=159,slow=8.5,SNR=49						
ULM				PcP	PcP	03 41 41.5	-1.0
	comp=Z,4.6nm,0.9s,baz=196,slow=6.9,SNR=2.9						
ULM				LR	LR	04 00 00.6	
	comp=Z,185nm,18.2s,MS4.0,baz=128,slow=40						
ULM	Lac du Bonnet	42.37	349	eP	P	03 39 45.5	-3.5
	comp=Z,31nm,0.8s,mb5.0						
MNV	Mina	42.47	319	eP	P	03 39 50.5	+0.6
	comp=Z,14nm,0.9s,mb4.6						
NVAR	Mina Array Bea	42.57	319	P	P	03 39 51.5	+0.7
	comp=Z,7.1nm,0.6s,mb4.6,baz=123,slow=8.1,SNR=41						
NVAR				PcP	PcP	03 41 44.6	+1.2
	comp=Z,4.5nm,1.0s,baz=118,slow=4.8,SNR=3.6						
NVAR	Mina Array Bea	42.57	319	P	P	03 39 51.5	+0.7
NVAR				PcP	PcP	03 41 44.6	+1.2
DGMT	Dagmar	42.94	340	eP	P	03 39 51.3	-2.3
	comp=Z,15nm,0.7s,mb4.8						
BMN	Battle Mountai	43.07	322	eP	P	03 39 55.1	+0.2
	comp=Z,39nm,1.4s,mb5.0						
BDFB	Brasilia	43.20	124	P	P	03 39 57.1	+0.9
	comp=Z,4.0nm,0.9s,mb4.2,baz=301,slow=9.6,SNR=5.0						
BDFB				LR	LR	04 00 49.7	
	comp=Z,457nm,18.4s,MS4.4,baz=307,slow=40						
LRV	Little Rabbit	43.33	315	eP	P	03 39 58.5	+1.5
HLID	Hailey	43.51	328	eP	P	03 39 57.1	-1.2
	comp=Z,3.5nm,0.8s,mb4.1						
CPUP	Villa Florida	43.58	144	P	P	03 40 00.5	+1.3
BOZ	Bozeman (W)	43.62	332	eP	P	03 39 57.7	-1.5
	comp=Z,4.6nm,0.9s,mb4.2						
WVOR	Wild Horse Val	45.13	324	eP	P	03 40 09.4	-2.0
	comp=Z,30nm,1.1s,mb5.0						
OHCM	Honcut	45.14	318	eP	P	03 40 11.9	+0.4
MSO	Missoula	45.58	331	eP	P	03 40 12.0	-2.9
	comp=Z,2.0nm,0.7s,mb4.2						
KHMM	Horse Mountain	47.41	319	P	P	03 40 28.6	-0.8
SCHQ	Schefferville	47.80	13	P	P	03 40 30.9	-1.4
	comp=Z,29nm,0.7s,mb5.4,baz=209,slow=6.5,SNR=62						
SCHQ				PcP	PcP	03 41 59.7	-1.5
	comp=Z,3.7nm,0.8s,baz=230,slow=5.9,SNR=2.4						
SCHQ	Schefferville	47.80	13	eP	P	03 40 30.5	-1.8
	comp=Z,53nm,1.0s,mb5.5						
EDM	Edmonton	50.14	337	eP	P	03 40 47.6	-2.7
EDM				ePcP	PcP	03 42 08.9	-0.8
RCBR	Riachuelo	50.15	105	eP	P	03 40 51.0	+0.1
	comp=Z,1.3nm,0.6s,mb4.1						
FCC	Fort Churchill	50.33	353	eP	P	03 40 49.4	-2.3
	comp=Z,18nm,0.8s,mb5.1						
PLCA	Paso Flores	50.94	167	P	P	03 40 57.5	+0.9
	comp=Z,13nm,1.1s,mb4.8,baz=359,slow=8.4,SNR=10.0						
PLCA				LR	LR	04 00 11.9	
	comp=Z,103nm,19.6s,MS3.9,baz=26,slow=33						
BBB	Bella Bella	56.07	329	LR	LR	04 12 19.1	
	comp=Z,149nm,18.0s,MS4.1,baz=350,slow=43						
YKA	Yellowknife Ar	57.91	344	P	P	03 41 44.5	-2.7
	comp=Z,4.6nm,0.7s,mb4.6,baz=138,slow=7.3,SNR=108						
YKA				PcP	PcP	03 42 39.5	+0.5
	comp=Z,2.4nm,0.7s,baz=144,slow=4.1,SNR=12						
YKA	Yellowknife Ar	57.91	344	P	P	03 41 44.5	-2.7
YKA				PcP	PcP	03 42 39.5	+0.5
YKW3	Yellowknife Ar	57.97	344	eP	P	03 41 44.9	-2.7
DLBC	Dease Lake	60.53	334	LR	LR	04 11 32.8	
	comp=Z,178nm,18.0s,MS4.2,baz=90,slow=39						
DLBC	Dease Lake	60.53	334	eP	P	03 42 04.8	-0.6
RES	Resolute Bay	66.03	357	eP	P	03 42 39.0	-2.4
	comp=Z,28nm,1.2s,mb5.2						
DAWY	Dawson	67.35	337	eP	P	03 42 48.5	-1.2
INK	Inuvik	67.58	342	P	P	03 42 50.1	-1.0
	comp=Z,8.2nm,0.9s,mb4.8,baz=141,slow=4.3,SNR=26						
INK	Inuvik	67.58	342	eP	P	03 42 50.1	-1.1
	comp=Z,21nm,1.1s,mb5.1						
SUMG	Summit	69.19	13	eP	P	03 43 00.5	-0.7
	comp=Z,96nm,1.4s,mb5.5						
PPT	Papeete	69.90	248	eS	S	03 52 13.1	+0.6
PPT				eLR	LR	04 04 15.2	
	comp=Z,110nm,24.5s						
ILAR	Eielson Array	70.60	336	P	P	03 43 09.3	-0.5
	comp=Z,4.8nm,0.8s,mb4.5,baz=114,slow=4.2,SNR=36						
ILAR				LR	LR	04 17 46.5	
	comp=Z,112nm,18.1s,MS4.2,baz=6.8,slow=39						
TBI	Tubuai	71.54	242	eS	S	03 52 32.1	+0.6
TBI				eLR	LR	04 05 13.5	
	comp=Z,102nm,27.0s						
RSO	Redoubt South	71.86	331	eP	P	03 43 16.9	-0.6
EVO	Evora	73.56	53	eP	P	03 43 21.3	-6.7
	comp=Z,43nm,1.2s,mb5.0						
IMA	Indian Mountai	73.70	337	P	P	03 43 27.1	-1.1
	comp=Z,70nm,1.5s,mb5.4						
DAG	Danmarks Havn	75.83	12	⇓eP	P	03 43 38.8	-1.5
	comp=Z,11nm,1.0s,mb4.7						
DAG	Danmarks Havn	75.83	12	⇓iP	P	03 43 38.8	-1.5
	comp=Z,11nm,1.0s,mb4.7						
ESDC	Sonseca Array	76.72	51	P	P	03 43 46.6	+0.5
	comp=Z,4.4nm,0.7s,mb4.5,baz=280,slow=5.5,SNR=35						
QUIF	Quistinic	77.31	43	eP	P	03 43 43.4	-5.8
	comp=Z,349nm,1.8s,mb5.7						
DBIC	Dimbokro	78.32	85	P	P	03 43 56.0	+0.5
	comp=Z,7.7nm,1.0s,mb4.6,baz=223,slow=8.4,SNR=5.4						
DBIC	Dimbokro	78.32	85	P	P	03 43 56.0	+0.5
ETSF	Etsaut	79.21	48	eP	P	03 43 53.6	-6.1
	comp=Z,86nm,1.4s,mb5.2						
LDF	La Druitiere	79.34	42	eP	P	03 43 51.1	-9.2
EPF	Esparros	79.86	48	eP	P	03 43 59.0	-4.2
TCF	Toulx Ste Croi	81.02	44	eP	P	03 44 07.2	-2.1
	comp=Z,86nm,1.4s,mb5.2						
MEZF	Maizieres J'vi	82.78	42	eP	P	03 44 17.1	-1.2
HAU	Haudompre	83.69	43	eP	P	03 44 18.1	-4.9
NB2	NORSAR Subarra	84.80	29	P	P	03 44 28.4	+0.1
	comp=Z,3.1nm,0.7s,mb4.5,baz=279,slow=4.8						
NOA	NORSAR Array B	84.80	29	P	P	03 44 28.4	+0.2
	comp=Z,3.5nm,0.7s,mb4.6,baz=277,slow=4.9,SNR=12						
GRA1	Grafenberg Arr	86.64	40	eP	P	03 44 38.1	+0.5
	comp=Z,17nm,1.1s,mb5.2						
GRA1				e	pP	03 44 49.6	+1.5
GRF	Grafenberg Arr	86.64	40	eP	P	03 44 38.1	+0.5
	comp=Z,17nm,1.1s,mb5.2						
GRF				e	pP	03 44 49.6	+1.5
NKC	Novy Kostel	87.33	40	eP	P	03 44 41.6	+0.7
CLL	Collm	87.47	39	⇑iP	P	03 44 42.0	+0.4
CLL				i		03 44 50.3	
CLL	Collm	87.47	39	⇑P	P	03 44 42.0	+0.4
	comp=Z,logA/T=1.4,mb5.4						
CLL				i *PP	pP	03 44 50.3	-1.8
KHC	Kasperske Hory	88.26	41	eP	P	03 44 45.4	0.0
KHC				e	pP	03 44 57.0	+1.0
KHC	Kasperske Hory	88.26	41	eP	P	03 44 45.4	0.0
KHC				pP	pP	03 44 57.0	+1.0
ARCES	ARCESS Array B	88.39	19	LR	LR	04 25 57.8	
	comp=Z,165nm,18.7s,MS4.5,baz=198,slow=37						
GERES	GERESS Array B	88.40	41	P	P	03 44 46.6	+0.5
	comp=Z,0.9nm,0.6s,mb4.2,baz=304,slow=4.8,SNR=6.5						
PRU	Pruhonice	88.70	40	eP	P	03 44 48.8	+1.3
BILL	Bilibino	89.01	339	eP	P	03 44 49.8	+1.3
	comp=Z,59nm,1.5s,mb5.7						
UPC	Upice	89.50	39	eP	P	03 44 51.5	+0.2
DPC	Dobruska-Polom	89.73	39	eP	P	03 44 49.1	-3.3
OKC	Ostrava-Krasne	91.00	39	eP	P	03 45 04.1	+5.8
FINES	FINESS Array B	91.61	27	P	P	03 45 00.9	+0.1
	comp=Z,4.4nm,0.8s,mb4.8,baz=293,slow=2.7,SNR=14						
FINES				LR	LR	04 25 48.5	
	comp=Z,118nm,18.7s,MS4.4,baz=334,slow=35						
ZAL	Zalesovo	116.67	7	PP	PP	03 51 41.5	-8.4
	comp=Z,1.9nm,0.7s,baz=148,slow=6.6,SNR=5.5						
MDJ	Mudanjiang	118.68	333	PKP	PKPdf	03 50 40.3	-0.8
MDJ				XPKP		03 50 55.9	
MDJ				SS	SS	04 08 17.8	+1.5
MDJ				PP	PP		
	comp=Z,75nm,5.2s						
MDJ				LR	LR		
	comp=Z,80nm,19.3s,MS4.4						
CN2	Changchun	121.11	335	ePKP	PKPdf	03 50 46.9	+1.0
ULN	Ulaanbaatar	122.62	351	PKPdf	PKPdf	03 50 50.4	+1.6
SONM	Songino Array	122.75	352	PKP	PKPdf	03 50 50.7	+1.6
	comp=Z,1.2nm,0.6s,baz=306,slow=0.7,SNR=6.6						
GTA	Gaotai	131.79	356	ePKP	PKPdf	03 51 08.9	+2.3
STKA	Stephens Creek	131.99	235	PKP	PKPdf	03 51 09.5	+2.4
	comp=Z,2.2nm,1.0s,baz=332,slow=19,SNR=3.1						
STKA	Stephens Creek	131.99	235	PKP	PKPdf	03 51 09.5	+2.4
SSE	Sheshan	133.46	330	PKP	PKPdf	03 51 10.6	+0.6
SSE				PP	PP	03 53 41.6	-0.4
SSE				SS	SS	04 11 19.3	-2.7
SSE				LR	LR		
	comp=Z,45nm,20.0s,MS4.2						
NJ2	Nanjing	133.77	333	ePKP	PKPdf	03 51 11.1	+0.5
LZH	Lanzhou	134.63	351	ePKP	PKPdf	03 51 09.4	-2.6
LZH				XPKP		03 51 25.8	
ASAR	Alice Springs	140.91	243	PKhKP		03 51 18.9	
	comp=Z,1.0nm,0.7s,baz=118,slow=3.5,SNR=9.7						
ASAR				PKP	PKPdf	03 51 25.8	+2.0
	comp=Z,1.8nm,0.7s,baz=91,slow=2.2,SNR=14						
WB2	Warramunga Arr	141.36	249	eP	PKPdf	03 51 21.1	-3.6
WRAB	Tennant Creek	141.36	249	ePKPpre		03 51 21.3	
WRA	Warramunga Arr	141.37	249	PKhKP		03 51 20.5	
	comp=Z,0.9nm,0.6s,baz=104,slow=2.6,SNR=14						
WRA				PKP	PKPdf	03 51 27.4	+2.7
	comp=Z,1.7nm,0.7s,baz=102,slow=2.6,SNR=9.3						
GYA	Guiyang	143.34	344	PKP	PKPdf	03 51 28.1	+0.2
GYA				XPKP		03 51 42.6	
GYA				PP	PP	03 54 42.3	-0.8
GYA				PP	PP		
	comp=Z,120nm,8.4s						
KAKA	Kakadu	144.02	261	eP	PKPbc	03 51 29.3	+0.7
	comp=Z,3.2nm,0.6s						
KMI	Kunming	145.53	349	⇑PKP	PKPdf	03 51 34.3	+2.5
KMI				LR	LR		
	comp=Z,53nm,25.6s,MS4.2						
FITZ	Fitzroy Crossi	149.80	249	eP	PKPdf	03 51 44.8	+5.9
	comp=Z,18nm,0.8s						
CMAR	Chiang Mai Arr	152.65	354	PKPbc	PKPdf	03 51 52.3	+9.2
	comp=Z,6.4nm,1.0s,baz=329,slow=2.7,SNR=9.9						
CMAR				PKPab	PKPab	03 52 02.5	-0.7
	comp=Z,2.8nm,0.8s,baz=342,slow=4.6,SNR=5.3						

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*BJI **14** 03:43:13.1,34.48N×70.37E,h18^{km},mB4.8,mb4.5,ML4.8, Ms4.0,Msz3.9*

*NDI **14** 03:43:14.3±4.5,34.74N×70.11E,h84^{km}±31^{km},ML4.3, mb4.6(NEIC)*

*NEIC **14** 03:43:14.8±3.2,34.44N×70.64E,h8^{km}±21^{km},mb4.6/22, Error ellipse: s-maj=9.7km s-min=5.5km az=219.0*

NEIC Felt [III] at Jalalabad.

*MOS **14** 03:43:16.9±1.2,34.54N×70.67E,h33^{km},mb4.7/32,Error ellipse: s-maj=8.4km s-min=6.1km az=112.6*

*NNC **14** 03:43:18.0±5.9,34.11N×71.03E,h72^{km}±63^{km},mpv4.9, Error ellipse: s-maj=184.4km s-min=53.1km az=104.0*

*IDC **14** 03:43:22.2±4.6,34.64N×70.70E,h57^{km}±41^{km},mb4.0/18, mb1 4.2/19,mb1mx4.2/22,mbtmp4.3/19,ML4.7/1,MS3.7/3, Ms1 3.8/3,ms1mx3.1/22,Error ellipse: s-maj=14.7km s-min=13.5km az=38.0*

ISC 14 03:43:17.8±0.6**,34.40N**±0.02×**70.70E**±0.04**,h46^{km}**±6^{km}**, n160,**σ1^{s}**32**/173**,mb4.4**/43**,MS3.6**/7**,11C-5D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	1.16	119	⇓P	P	03 43 39.9	+2.1
THW	Thamme Wali	1.83	151	⇑P	P	03 43 52.0	+4.7
SBDP	Sheikh Budin	2.10	177	P	P	03 43 55.8	+4.6
CHCP	Chirah Chowk	2.26	108	P	P	03 43 58.1	+4.6
DRP	Derazinda	2.68	189	P	P	03 44 03.6	+4.1
SARP	Sargodha	2.98	146	⇑P	P	03 44 07.0	+3.3
SARP				S	S	03 44 46.0	+7.5
THN	Thein Dam	4.64	114	eP	P	03 44 29.4	+2.2
THN				e		03 45 28.9	
DLH	Dalhousie	4.78	111	eP	P	03 44 32.0	+2.8
DLH				e		03 45 32.0	
SDNR	Sundarnagar	6.02	117	eP	P	03 44 48.8	+2.4
SDNR				e		03 46 08.6	
SMLA	Simla	6.35	119	i S	S	03 46 20.0	+17
SMLA				i		03 46 59.9	
KLP	Kalpa	6.96	112	eP	P	03 45 01.8	+2.0
KLP				e		03 46 23.1	
RTK	Rohtak	7.24	136	eP	P	03 45 04.0	+0.4
KHET	Khetri	7.68	144	eP	P	03 45 09.4	-0.2
KHET				eS	S	03 46 34.2	-2.0
KHET				e		03 47 44.0	
	comp=E,72nm,0.6s						
KHET				e		03 47 44.8	
	comp=N,149nm,0.8s						
BHGR	Bahadurgarh	7.80	135	eP	P	03 45 12.0	+0.7
NDI	New Delhi	7.96	134	eP	P	03 45 13.0	-0.6
NDI				eS	S	03 46 40.5	-2.8
NDI				e		03 47 34.0	
KUDL	Kundal	7.97	140	eP	P	03 45 13.9	+0.3
KUDL				eS	S	03 46 43.1	-0.2
AYAN	Aya Nagar	8.06	135	eP	P	03 45 15.6	+0.6
AYAN				eS	S	03 46 44.8	-1.0
AML	Almayashu	8.07	16	P	P	03 45 15.1	+0.1
	SNR=29						
SONA	Sohna	8.21	137	eP	P	03 45 17.7	+0.7
SONA				eS	S	03 46 47.2	-2.3
SONA				e		03 46 53.6	
	comp=E,248nm,0.7s						
SONA				e		03 46 53.8	
	comp=N,119nm,1.1s						

UCH	Uchtor	8.37	20	P	P	03 45 19.5	+0.3
	SNR=46						
JOSI	Joshimath	8.41	115	*e*	P	03 45 15.7	-4.1
KZA	Kyzart	8.46	24	P	P	03 45 20.8	+0.4
	SNR=18						
EKS2	Erkin-Say	8.59	15	P	P	03 45 22.3	0.0
	SNR=20						
AJM	Ajmer	8.60	156	⇑*i*P	P	03 45 22.0	-0.4
AJM				*i* S	S	03 46 58.0	-1.1
AAK	Ala-Archa	8.74	19	⇑P	P	03 45 24.4	+0.1
	comp=N,26nm,0.6s						
AAK				⇓S	S	03 47 04.0	+1.4
	comp=N,46nm,0.9s						
AAK	Ala-Archa	8.74	19	P	P	03 45 24.8	+0.4
	SNR=31						
AAK	Ala-Archa	8.74	19	*e*P	P	03 45 23.1	-1.2
AAK				S	S	03 46 53.7	-8.9
AAK				pmax	pmax		
	comp=Z,35nm,0.6s						
AAK	Ala-Archa	8.74	19	*e*P	P	03 45 23.1	-1.2
	comp=Z,35nm,0.6s						
AAK				S	S	03 46 53.7	-8.9
KBK	Karagaybulak	8.89	21	P	P	03 45 26.8	+0.4
	SNR=7.5						
CHMS	Chumysh	9.15	19	P	P	03 45 30.0	0.0
	SNR=28						
TKM2	Tokmak 2	9.33	23	P	P	03 45 32.6	+0.2
	SNR=5.8						
USP	Ospenovka	9.34	17	P	P	03 45 32.1	-0.4
	SNR=30						
PTH	Pithoragarh	9.42	118	*e*P	P	03 45 35.0	+1.3
PTH				*e*		03 47 18.7	
AGRA	Agra	9.48	137	*e*	S	03 47 20.4	-0.5
LGTI	Lohaghat	9.50	119	*e*P	P	03 45 35.7	+0.9
LGTI				*e*		03 47 23.3	
BHPL	Bhopal	12.58	150	*e*P	P	03 46 15.5	-1.1
BHPL				*e*		03 48 32.4	
BHPL				*e*		03 50 16.2	
	comp=N,38nm,1.0s						
BHPL				*e*		03 50 16.5	
	comp=E,76nm,0.6s						
KOLN	Koldanda	12.88	117	*e*P	P	03 46 19.7	-0.9
	comp=E,48nm,0.3s						
GKN	Gorkha	13.53	114	*e*P	P	03 46 27.8	-1.2
	comp=E,125nm,0.5s						
DMN	Daman	14.09	115	*e*P	P	03 46 35.1	-1.3
	comp=E,302nm,0.9s						
KKN	Kakani	14.12	114	*e*P	P	03 46 34.8	-2.0
	comp=E,124nm,0.6s						
PKI	Pulchoki	14.33	114	*e*P	P	03 46 37.7	-1.9
	comp=E,95nm,0.5s						
JIRN	Jiri	14.88	113	*e*P	P	03 46 45.0	-1.7
	comp=E,160nm,0.4s						
MK31	Makanchi Array	15.17	32	⇑P	P	03 46 48.2	-2.2
	comp=E,6.4nm,0.6s,baz=208,slow=14,SNR=281						
MKAR	Makanchi Array	15.17	32	*e*P	P	03 46 48.2	-2.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BLSP	Bilaspur	15.83	138	*e*P	P	03 46 56.4	-2.5
POO	Poona	16.06	169	*e*P	P	03 47 02.0	+0.1
POO				*i*		03 50 33.0	
WMQ	Urumqi	16.18	49	*e*P	P	03 47 03.0	-0.3
WMQ				S	S	03 49 59.0	-1.8
WMQ				SS	SS	03 50 19.0	-2.1
WMQ				AMB	AMB		
	comp=Z,15nm,0.8s						
WMQ				LR	LR		
	comp=N,214nm,10.0s						
WMQ				LR	LR		
	comp=E,115nm,10.0s						
KURK	Kurchatov	17.30	17	⇓P	P	03 47 18.1	+0.8
	comp=E,6.3nm,1.3s,baz=180,slow=7.1,SNR=8.2						
KURK	Kurchatov	17.30	17	*i* P	P	03 47 18.0	+0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	Kurchatov	17.30	17	*e*P	P	03 47 18.1	+0.7
	comp=Z,14nm,1.2s						
LSA	Lhasa	17.96	99	P	P	03 47 26.4	+0.8
LSA	Lhasa	17.96	99	*e*P	P	03 47 26.8	+1.2
LSA				pmax	pmax		
	comp=Z,21nm,0.7s						
LSA	Lhasa	17.96	99	*e*P	P	03 47 26.8	+1.1
	comp=Z,21nm,0.7s						
HYB	Hyderabad	18.32	155	*i* P	P	03 47 34.0	+3.8
HYB				*e*		03 50 34.0	
HYB				*e*S	S	03 50 46.5	-3.2
BVAR	Borovoye Array	18.62	359	P	P	03 47 32.0	-1.6
	comp=Z,2.2nm,0.3s,baz=158,slow=8.1,SNR=37						
BVAR				S	S	03 50 58.4	+2.2
	comp=Z,0.2nm,0.3s,baz=170,slow=26,SNR=2.6						
BRVK	Borovoye	18.65	359	*e*P	P	03 47 32.6	-1.4
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
BRVK	Borovoye	18.65	359	*e*P	P	03 47 32.6	-1.4
	comp=Z,14nm,0.8s						
CHKZ	Chkalovo	19.27	360	⇑P	P	03 47 39.4	-1.6
	comp=Z,4.0nm,0.6s						
CHKZ				⇑S	S	03 51 17.4	+6.6
	comp=Z,4.8nm,0.8s						
CHKZ	Chkalovo	19.27	360	*e*P	P	03 47 38.9	-2.2
CHKZ				pmax	pmax		
	comp=Z,71nm,1.1s						
CHKZ	Chkalovo	19.27	360	*e*P	P	03 47 38.9	-2.2
	comp=Z,71nm,1.1s						
SHL	Shillong	20.33	110	*e*P	P	03 47 51.0	-1.6
SHL				*e*S	S	03 51 39.0	+6.1
GNI	Garni	21.40	293	*e*P	P	03 48 04.9	+1.5
GNI				pmax	pmax		
	comp=Z,20nm,0.8s						
GNI	Garni	21.40	293	P	P	03 48 05.3	+1.9
	comp=Z,13nm,0.6s,mb4.5,baz=18,slow=2.9,SNR=14						
GNI	Garni	21.40	293	*e*P	P	03 48 04.9	+1.5
	comp=Z,20nm,0.8s,mb4.5						
ZAL	Zalesovo	21.92	23	P	P	03 48 08.0	-0.5
ZAL				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZAL	Zalesovo	21.92	23	P	P	03 48 08.0	-0.5
	comp=Z,9.5nm,0.5s,mb4.5,baz=251,slow=7.4,SNR=28						
NVS	Novosibirsk	22.23	19	*e*P	P	03 48 10.8	-0.8
NVS				*e*S	S	03 52 09.3	+0.9
NVS				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.3						
NVS				pmax	pmax		
	comp=E,7.0nm,0.9s						
NVS				smax			
	comp=E,9.0nm,1.2s						
KIV	Kislovodsk	23.62	302	*e*P	P	03 48 25.0	-0.2
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
KIV				MLR	MLR		
	comp=Z,61nm,17.0s,MS3.1						
KIV				MLR	MLR		
	comp=N,28nm,13.0s,MS3.2						
KIV				MLR	MLR		
	comp=E,51nm,17.0s,MS3.2						
KIV	Kislovodsk	23.62	302	*e*P	P	03 48 25.1	-0.1
	comp=E,9.5nm,0.8s,mb4.3						
GTA	Gaotai	23.76	69	*e*P	P	03 48 30.8	+4.2
GTA				AMB	AMB		
	comp=Z,33nm,0.8s,mb4.8						
GTA				AMB	AMB		
	comp=Z,161nm,6.1s						
GTA				LR	LR		
	comp=N,199nm,14.1s,MS3.8						
GTA				LR	LR		
	comp=E,118nm,16.0s,MS3.8						
GTA				LR	LR		
	comp=Z,88nm,16.0s,MS3.3						
SOC	Sochi	25.64	300	*e*P	P	03 48 43.2	-1.4
SOC				*e*		03 49 22.6	
SOC				*e*S	S	03 53 07.0	-0.2
SOC				*e*SS	SS	03 54 08.3	-4.9
SOC				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.1						
SOC				pmax	pmax		
	comp=N,44nm,0.7s						
SOC				pmax	pmax		
	comp=E,43nm,1.0s						
MALT	Malatya	26.20	288	*e*P	P	03 48 51.2	+1.3
MALT				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
MALT	Malatya	26.20	288	*e*P	P	03 48 51.2	+1.2
	comp=Z,6.5nm,0.9s,mb4.2						
LZH	Lanzhou	27.06	77	*e*P	P	03 49 00.5	+2.7
LZH				PP	PP	03 49 47.3	+2.4
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
LZH				AMB	AMB		
	comp=Z,60nm,4.0s						
LZH				LR	LR		
	comp=E,186nm,12.8s						
LZH				LR	LR		
	comp=Z,242nm,14.0s,MS3.9						
MOY	Mondy	27.79	42	*e*P	P	03 49 06.4	+2.1
ZAK	Zakamensk	28.59	46	⇑*e*P	P	03 49 13.0	+1.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TLY	Talaya	29.30	44	*i* P	P	03 49 16.3	-1.4
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TLY	Talaya	29.30	44	P	P	03 49 19.1	+1.3
	comp=Z,3.1nm,0.6s,mb4.2						
CMAR	Chiang Mai Arr	29.73	115	P	P	03 49 24.1	+2.2
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,44nm,19.5s						
CMAR	Chiang Mai Arr	29.73	115	P	P	03 49 24.1	+2.2
	comp=Z,3.0nm,0.8s,mb4.1,baz=308,slow=8.7,SNR=11						
CMAR				LR	LR	04 04 19.2	
	comp=Z,44nm,19.5s,MS3.1,slow=42						
SONM	Songino Array	29.77	52	P	P	03 49 23.3	+1.3
	comp=Z,2.1nm,0.7s,mb4.0,baz=252,slow=9.2,SNR=12						
SONM				PcP	PcP	03 52 26.0	+1.0
	comp=Z,1.0nm,0.7s,baz=257,slow=2.2,SNR=4.3						
BRTR	Keskin Array B	29.90	291	P	P	03 49 23.9	+0.7
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRTR	Keskin Array B	29.90	291	P	P	03 49 23.9	+0.6
	comp=Z,4.9nm,0.9s,mb4.2,baz=108,slow=7.8,SNR=20						
ULN	Ulaanbaatar	30.21	52	*i* P	P	03 49 23.9	-2.0
OBN	Obninsk	31.40	322	⇑*i*P	P	03 49 37.0	+0.7
OBN				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.6						
GYA	Guiyang	31.88	95	P	P	03 49 42.6	+1.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
CFR	Carcaliu	34.07	301	⇓P	P	03 50 01.9	+2.3
AKASG	Malin Array Be	34.10	311	P	P	03 49 59.3	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	Malin Array Be	34.10	311	P	P	03 49 59.2	-0.6
	comp=Z,3.5nm,0.7s,mb4.4,baz=90,slow=7.1,SNR=18						
MLR	Muntele Rosu	35.63	302	⇓P	P	03 50 15.1	+2.1
BURAR	Bucovina Array	36.25	305	⇑P	P	03 50 13.0	-5.2
BOD	Bodaibo	37.15	37	*e*P	P	03 50 24.0	-1.6
FINES	FINESS Array B	39.10	328	P	P	03 50 41.6	-0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	39.10	328	P	P	03 50 41.6	-0.2
	comp=Z,2.3nm,0.8s,mb4.0,baz=111,slow=7.5,SNR=13						
SSE	Sheshan	42.24	80	P	P	03 51 08.3	+0.2
SSE				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.5						
SSE				AMB	AMB		
	comp=Z,144nm,3.8s						
CN2	Changchun	42.83	60	*e*P	P	03 51 13.6	+0.9
ARCES	ARCESS Array B	42.99	339	P	P	03 51 13.5	-0.2
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	42.99	339	P	P	03 51 13.5	-0.3
	comp=Z,4.9nm,0.9s,mb4.3,baz=90,slow=8.5,SNR=8.9						
GERES	GERESS Array B	43.97	307	P	P	03 51 24.2	+2.3
GERES						03 53 08.8	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	43.97	307	P	P	03 51 24.2	+2.3
	comp=Z,0.5nm,0.6s,mb3.4,baz=180,slow=1.3,SNR=3.6						
GERES				PcP	PcP	03 53 08.8	+1.2
	comp=Z,1.1nm,0.7s,baz=135,slow=3.8,SNR=4.3						
NB2	NORSAR Subarra	45.92	324	P	P	03 51 36.2	-1.1
	comp=Z,3.2nm,0.5s,mb4.5,baz=99,slow=7.9						
NB2	NORSAR Subarra	45.92	324	P	P	03 51 36.2	-1.1
NB2				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
NOA	NORSAR Array B	45.92	324	P	P	03 51 36.5	-0.8
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	45.92	324	P	P	03 51 36.5	-0.8
	comp=Z,3.4nm,0.6s,mb4.5,baz=98,slow=7.8,SNR=12						
KMBO	Kilima Mbogo	47.25	229	P	P	03 51 51.0	+2.6
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	Kilima Mbogo	47.25	229	P	P	03 51 51.0	+2.6
	comp=Z,1.3nm,0.6s,mb4.1,baz=40,slow=15,SNR=5.8						
KMBO	Kilima Mbogo	47.25	229	P	P	03 51 51.0	+2.6
TIXI	Tiksi	47.81	21	*e*P	P	03 51 52.1	0.0
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
PGF	Pioggiola	48.04	299	*e*P	P	03 51 53.2	-1.0
	comp=Z,174nm,1.3s						
PGF	Pioggiola	48.04	299	*e*P	P	03 51 53.2	-1.0
PGF				pmax	pmax		
	comp=Z,87nm,1.3s						
CDF	Champ du Feu	48.25	307	*e*P	P	03 51 55.2	-0.6
HINF	Hinteralfeld	48.61	306	*e*P	P	03 51 57.6	-1.0
LPG	La Plagne	49.06	303	*e*P	P	03 52 01.8	-0.3
	comp=Z,6.3nm,0.7s,mb4.4						
LPG	La Plagne	49.06	303	*e*P	P	03 52 01.8	-0.3
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
LPL	La Plagne	49.07	303	*e*P	P	03 52 01.6	-0.6
	comp=Z,7.2nm,0.7s,mb4.5						
LPL	La Plagne	49.07	303	*e*P	P	03 52 01.6	-0.6
LPL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MBDF	Montbardon	49.19	302	*e*P	P	03 52 01.4	-1.7
	comp=Z,26nm,0.9s,mb5.0						
MBDF	Montbardon	49.19	302	*e*P	P	03 52 01.4	-1.7
MBDF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
MEZF	Maizieres J’vi	49.70	307	*e*P	P	03 52 05.8	-1.2
	comp=Z,5.7nm,0.5s,mb4.6						
ORIF	Oris-en-Rattie	49.78	303	*e*P	P	03 52 06.5	-1.1
VIVF	Saint-Julien-l	50.63	303	*e*P	P	03 52 12.8	-1.3
	comp=Z,8.5nm,0.7s,mb4.5						
VIVF	Saint-Julien-l	50.63	303	*e*P	P	03 52 12.8	-1.3
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
SMF	Signal de Mont	50.84	305	*e*P	P	03 52 14.8	-0.8
	comp=Z,16nm,0.9s,mb4.6						
SMF	Signal de Mont	50.84	305	*e*P	P	03 52 14.8	-0.8
SMF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
AVF	Avril sur Loir	51.14	305	*e*P	P	03 52 17.1	-0.8
	comp=Z,24nm,1.2s,mb4.7						
AVF	Avril sur Loir	51.14	305	*e*P	P	03 52 17.1	-0.8
AVF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
BGF	Bois d’Agland	51.52	305	*e*P	P	03 52 20.1	-0.7
CAF	Calviac	52.42	303	*e*P	P	03 52 27.1	-0.5
LFF	La Frestale	53.33	304	*e*P	P	03 52 35.0	+0.6
EPF	Esparros	54.11	302	*e*P	P	03 52 39.6	-0.5
	comp=Z,24nm,1.1s,mb4.8						
EPF	Esparros	54.11	302	*e*P	P	03 52 39.6	-0.5
EPF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
ETSF	Etsaut	54.78	302	*e*P	P	03 52 44.1	-0.9
	comp=Z,18nm,0.8s,mb4.8						
ETSF	Etsaut	54.78	302	*e*P	P	03 52 44.1	-0.9
ETSF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ESDC	Sonseca Array	58.23	299	P	P	03 53 09.6	-0.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=72,slow=6.9,SNR=3.6						
BILL	Bilibino	60.60	25	*e*P	P	03 53 24.0	-1.6
BILL				pmax	pmax		
	comp=Z,6.0nm,1.9s,mb4.4						
TSUM	Tsumeb	73.43	232	LR	LR	04 29 28.5	
	comp=Z,85nm,18.3s,MS4.1,baz=331,slow=38						
KAKA	Kakadu	74.99	117	*e*P	P	03 54 57.8	+1.5
	comp=Z,4.5nm,0.6s,mb4.6						
INK	Inuvik	76.01	9	*e*P	P	03 55 01.1	0.0
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
INK	Inuvik	76.01	9	P	P	03 55 01.5	+0.3
	comp=Z,4.1nm,0.6s,mb4.6,baz=4.6,slow=6.2,SNR=47						
INK	Inuvik	76.01	9	*e*P	P	03 55 01.1	0.0
	comp=Z,5.9nm,0.7s,mb4.6						
COLA	College	76.56	16	*e*P	P	03 55 04.5	+0.2
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
COLA	College	76.56	16	*e*P	P	03 55 04.5	+0.2
	comp=Z,6.4nm,1.0s,mb4.5						
ILAR	Eielson Array	76.86	16	P	P	03 55 06.0	0.0
ILAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ILAR	Eielson Array	76.86	16	P	P	03 55 06.0	0.0
	comp=Z,2.7nm,1.1s,mb4.1,baz=270,slow=3.3,SNR=8.1						
DAWY	Dawson	79.02	13	*e*P	P	03 55 17.7	-0.2
WRA	Warramunga Arr	81.10	121	P	P	03 55 31.9	+2.0
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	81.10	121	P	P	03 55 31.9	+2.0
	comp=Z,3.8nm,0.7s,mb4.5,baz=324,slow=5.0,SNR=36						
WRAB	Tennant Creek	81.11	121	*e*P	P	03 55 31.6	+1.6
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
WRAB	Tennant Creek	81.11	121	*e*P	P	03 55 31.6	+1.6
	comp=Z,5.7nm,0.6s,mb4.7						
WB2	Warramunga Arr	81.11	121	*e*P	P	03 55 31.3	+1.3
ASPA	Alice Springs	83.27	124	⇑*i*P	P	03 55 42.9	+1.9
ASAR	Alice Springs	83.27	124	P	P	03 55 43.0	+2.0
	comp=Z,4.0nm,0.5s,mb4.7,baz=313,slow=5.1,SNR=52						
YKA	Yellowknife Ar	83.35	2	P	P	03 55 41.3	+0.7
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	Yellowknife Ar	83.35	2	P	P	03 55 41.3	+0.7
	comp=Z,2.2nm,0.5s,mb4.4,baz=351,slow=5.3,SNR=73						
YKA	Yellowknife Ar	83.35	2	P	P	03 55 41.3	+0.7
SCHQ	Schefferville	83.92	337	P	P	03 55 44.7	+1.1
	comp=Z,2.1nm,0.7s,mb4.4,baz=108,slow=6.1,SNR=7.0						
SCHQ	Schefferville	83.92	337	P	P	03 55 44.7	+1.1
STKA	Stephens Creek	93.75	126	LR	LR	04 44 25.5	
	comp=Z,75nm,20.0s,MS4.2,baz=204,slow=39						
PLCA	Paso Flores	148.82	247	PKP2	PKPab	04 03 04.5	-1.6
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	Paso Flores	148.82	247	PKPbc	PKPdf	04 03 04.5	+8.4
	comp=Z,2.2nm,0.9s,baz=59,slow=0.3,SNR=5.1						

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*MAN **14** 04:12:38.0, 6.32N×125.90E, h55^{km}, mb4.8, ML3.7, MS3.6*

ISC 14 04:12:36.3±1.2**, 6.2N**±0.1×**125.89E**±0.08**, h80**^{km}±17^{km}**, n6, σ0^{s}54**/10**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.80	27	*e*P	P	04 12 53.5	+0.2
MATI				*e*S	S	04 13 05.3	-0.6
KCP	Kidapawan	1.11	314	⇓*e*P	P	04 12 57.8	+0.8
KCP				*i* S	S	04 13 12.4	0.0
BUKP	Musuan	1.83	333	*e*P	P	04 13 06.3	-0.2
BUKP				*e*S	S	04 13 28.3	-0.5
BIPH	Bislig	2.00	14	⇓*e*P	P	04 13 09.8	+1.1
BIPH				*e*S	S	04 13 32.5	-0.1
PAGZ	Pagadian	2.96	303	*e*P	P	04 13 21.9	-0.3
KAKA	Kakadu	19.91	161	*e*P	P	04 17 03.7	-0.4
	5.6nm,0.6s						

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*MAN **14** 04:23:12.9, 6.41N×125.96E, h22^{km}, mb4.5, ML3.4, MS3.3*

ISC 14 04:23:10.3±1.4**, 6.2N**±0.1×**125.99E**±0.08**, h55**^{km}±23^{km}**, n5, σ0^{s}35**/9**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.79	20	*e*P	P	04 23 25.7	+0.1
MATI				*e*S	S	04 23 36.5	-0.4
KCP	Kidapawan	1.21	312	⇓*e*P	P	04 23 31.9	+0.7
KCP				*i* S	S	04 23 46.7	-0.1
BUKP	Musuan	1.91	331	*e*P	P	04 23 41.1	-0.1
BUKP				*e*S	S	04 24 03.5	-0.5
BIPH	Bislig	2.01	11	⇓*e*P	P	04 23 42.8	+0.2
BIPH				*e*S	S	04 24 06.9	+0.4
KAKA	Kakadu	19.84	161	*e*P	P	04 27 39.3	-0.2
	3.9nm,0.6s						

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*IDC **14** 04:47:07.1±1.8, 40.53N×146.24E, mb3.9/7, mb1 4.0/8, mb1mx3.7/23, mbtmp3.9/8, ML3.3/1, Error ellipse: s-maj=69.1km s-min=21.1km az=74.0*

*JMA **14** 04:47:11.6±0.2, 40.65N×145.65E, h58^{km}±5^{km}, M3.7*

ISC 14 04:47:10.6±1.9**, 40.56N**±0.04×**145.50E**±0.08**, h30**^{km}±15^{km}**, n21, σ1^{s}13**/32**, mb3.9**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	2.28	310	P	Pn	04 47 48.1	+1.0
JEM				*e*S	Sn	04 48 15.9	+1.4
JAK	Akkeshi	2.50	346	P	Pn	04 47 50.3	0.0
JAK				*e*S	Sn	04 48 19.2	-0.9
JCH	Churui	2.60	323	P	Pn	04 47 52.3	+0.7
JCH				*e*S	Sn	04 48 22.4	-0.2
JOB	Onbets	2.65	333	*e*S	Sn	04 48 24.1	+0.3
JNBK	Urakawa-nobuka	2.68	311	P	Pn	04 47 54.3	+1.5
JNBK				*e*S	Sn	04 48 26.0	+1.3
NEM2	Nemuro 2	2.81	4	P	Pn	04 47 53.9	-0.7
NEM2				*e*S	Sn	04 48 25.3	-2.4
JAR	Ashorobuto	3.02	335	P	Pn	04 47 57.4	-0.2
JAR				*e*S	Sn	04 48 32.1	-1.1
JFR	Furan	3.38	321	P	Pn	04 48 03.3	+0.5
JFR				*e*S	Sn	04 48 41.2	-1.2
JOM	Ohasama	3.41	253	P	Pn	04 48 02.2	-0.9
JOM				*e*S	Sn	04 48 39.4	-3.6
JOT	Ohata	3.47	285	P	Pn	04 48 04.2	+0.3
JTKR	Abashiri--Toko	3.60	341	P	Pn	04 48 06.3	+0.4
JTKR				*e*S	Sn	04 48 47.2	-0.7
JKB	Kayabe	3.62	293	P	Pn	04 48 06.7	+0.6
JKB				*e*S	Sn	04 48 47.4	-0.9
JMK	Ichinoseki	3.67	245	P	Pn	04 48 05.1	-1.7
JMK				*e*S	Sn	04 48 45.1	-4.5
ASAJ	Asahikawa	4.15	330	Pn	Pn	04 48 12.9	-0.7
	1.3nm,0.3s,baz=250,slow=31,SNR=3.6						
SONM	Songino Array	28.72	298	P	P	04 53 11.7	+4.5
	2.4nm,1.2s,mb3.8,baz=82,slow=8.7,SNR=8.0						
ZAL	Zalesovo	42.02	310	P	P	04 55 02.9	+2.3
	1.0nm,0.2s,mb4.0,baz=269,slow=9.5,SNR=2.6						
BVAR	Borovoye Array	50.62	311	P	P	04 56 09.9	+1.4
	0.5nm,0.5s,mb3.7,baz=68,slow=8.0,SNR=4.3						
WRA	Warramunga Arr	61.08	192	P	P	04 57 22.4	-1.8
	0.6nm,0.5s,mb4.0,baz=8.8,slow=6.8,SNR=9.3						
ASAR	Alice Springs	64.80	192	P	P	04 57 49.0	+0.2
	0.8nm,1.1s,mb3.7,baz=12,slow=8.3,SNR=2.9						
FINES	FINESS Array B	67.15	333	P	P	04 58 04.3	+1.1
	2.7nm,1.1s,mb4.2,baz=45,slow=8.1,SNR=12						
NOA	NORSAR Array B	72.12	339	P	P	04 58 34.7	+1.0
	1.9nm,1.0s,mb4.0,baz=47,slow=5.2,SNR=2.9						

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*IDC **14** 05:02:51.5±1.3, 12.55N×91.96E, mb3.8/4, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, ML4.1/1, Error ellipse: s-maj=59.3km s-min=24.8km az=52.0*

*NEIC **14** 05:02:56.0±0.9, 13.12N×92.49E, h30^{km}, mb4.4/1, Error ellipse: s-maj=20.1km s-min=17.1km az=74.0*

ISC 14 05:02:53.8±1.2**, 13.2N**±0.2×**92.5E**±0.2**, h30**^{km}**, n7, σ0^{s}28**/7**, mb4.0**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.11	49	Pn	P	05 04 52.6	0.0
	0.5nm,0.3s,baz=239,slow=16,SNR=4.9						
SONM	Songino Array	36.45	16	P	P	05 10 03.8	+5.9
	0.4nm,0.8s,mb3.4,baz=198,slow=4.6,SNR=3.5						
WRA	Warramunga Arr	52.67	128	P	P	05 12 08.1	+0.1
	1.4nm,0.6s,mb4.1,baz=299,slow=9.8,SNR=32						
WRA				PcP	PcP	05 13 18.4	+0.8
	0.2nm,0.5s,baz=322,slow=3.3,SNR=5.1						
WRAB	Tennant Creek	52.68	128	*e*P	P	05 12 07.8	-0.3
	2.7nm,0.5s,mb4.4						
WB2	Warramunga Arr	52.69	128	*e*P	P	05 12 07.8	-0.3
ASAR	Alice Springs	54.56	132	P	P	05 12 22.4	+0.5
	0.9nm,0.5s,mb4.0,baz=310,slow=6.9,SNR=14						
BRTR	Keskin Array B	57.85	309	P	P	05 12 45.2	0.0
	1.4nm,0.9s,mb4.0,baz=112,slow=6.7,SNR=5.3						

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*IDC **14** 05:04:17.5±6.3, 15.82N×99.75W, mb3.8/4, mb1 4.0/6, mb1mx3.7/20, mbtmp3.6/6, ML3.0/1, MS3.5/3, Ms1 3.4/3, ms1mx3.0/24, Error ellipse: s-maj=122.8km s-min=103.5km az=56.0*

*NEIC **14** 05:04:27.4, 16.53N×100.56W, h16^{km}, mb3.8/4,* *MD4.3(MEX),After MEX.*

MEX ***14*** *05:04:27.2±0.7,16.54N×100.56W,h20^{km}±18^{km},MD4.3*

ISC 14 05:04:25.1±1.2,**16.50N**±0.06×**100.49W**±0.05,**h22**^{km}±7^{km},**n33,**σ**1**^{s}**48**/48,**mb3.8**/7,**MS4.1**/1,**1C,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.59	22	⇑ iP	Pb	05 04 36.4	-0.2
CAIG				i S	Sb	05 04 44.2	-0.3
ACX	**Acapulco**	0.67	56	i P	Pb	05 04 38.6	+0.7
ACX				i S	Sb	05 04 47.5	+0.8
ZIIG	**Zihuatanejo**	1.44	320	eP	Pn	05 04 48.1	-2.1
ZIIG				i S	Sn	05 05 04.8	-3.9
PLIG	**Platanillo**	2.11	26	eP	Pn	05 04 59.2	-0.6
PLIG				i S	Sn	05 05 24.6	-1.1
PLIG	**Platanillo**	2.11	26	eP	Pn	05 04 59.2	-0.6
PLIG				i S	Sn	05 05 24.1	-1.6
PNIG	**Pinotepa**	2.27	92	i P	Pn	05 05 03.9	+1.8
PNIG				i S	Sn	05 05 27.1	-2.7
PNIG	**Pinotepa**	2.27	92	i P	Pn	05 05 02.1	-0.1
PNIG				i S	Sn	05 05 27.4	-2.4
YAIG	**Yautepec**	2.72	30	eP	Pn	05 05 08.6	+0.1
YAIG				i S	Sn	05 05 38.1	-3.0
CHVM	**Chichinautzin**	2.88	26	eS	Sn	05 05 49.4	+4.2
UNM	**Universidad Na**	3.08	24	eP	Pn	05 05 15.8	+2.1
UNM				i S	Sn	05 05 49.4	-1.0
UNM	**Universidad Na**	3.08	24	eP	Pn	05 05 12.4	-1.3
UNM				eP		05 05 15.8	
UNM				i S	Sn	05 05 47.6	-2.8
UNM				i S	Sn	05 05 49.4	-1.0
PPM	**Popocatepetl**	3.12	35	eP	Pn	05 05 13.8	-0.3
PPM				i S	Sn	05 05 48.1	-3.0
PPM				eS	Sn	05 05 49.6	-1.5
PPM	**Popocatepetl**	3.12	35	eP	Pn	05 05 13.0	-1.1
PPM				eP		05 05 13.8	
PPM				i S	Sn	05 05 48.1	-3.0
PPM				eS	Sn	05 05 49.6	-1.5
IIB	**San Bernardino**	3.20	40	eP	Pn	05 05 13.0	-2.3
IIB				i S	Sn	05 05 55.0	+1.8
PTVM	**Pico Tres Padr**	3.35	23	eS	Sn	05 05 59.0	+1.9
IIO	**Organos**	3.51	28	i S	Sn	05 06 03.3	+2.1
OXX	**Oaxaca**	3.66	80	eP	Pn	05 05 22.0	+0.2
IISM	**Ciudad Serdan**	3.87	50	eP	Pn	05 05 38.0	+13
HUIG	**Huatulco**	4.28	99	i S	Sn	05 06 16.8	-3.7
TXAR	**Lajitas Array**	13.11	348	Pn	P	05 07 40.4	+7.6
	0.0nm,0.3s,baz=180,slow=11,SNR=3.3						
TXAR				LR	LR	05 12 27.8	
	comp=Z,74nm,19.7s,baz=205,slow=35						
ANMO	**Albuquerque**	19.14	345	P	P	05 08 50.0	+0.4
	baz=162,slow=9.6,SNR=5.5						
ANMO				LR	LR	05 17 26.2	
	comp=Z,90nm,19.4s,slow=40						
ANMO	**Albuquerque**	19.14	345	eP	P	05 08 49.6	0.0
	2.8nm,1.2s						
ANMO				LR	LR	05 17 26.2	
SDCO	**Great Sand Dun**	21.62	349	eP	P	05 09 15.8	-0.1
	21nm,2.0s,mb4.2						
NVAR	**Mina Array Bea**	26.87	328	P	P	05 10 08.8	+2.5
	1.5nm,0.8s,mb3.6,baz=153,slow=10,SNR=10						
NVAR	**Mina Array Bea**	26.87	328	P	P	05 10 08.8	+2.5
BW06	**Boulder Array**	27.31	345	eP	P	05 10 11.9	+1.7
	2.9nm,1.0s,mb3.8						
PDAR	**Pinedale Array**	27.31	345	P	P	05 10 11.6	+1.4
	1.5nm,0.8s,mb3.6,baz=146,slow=11,SNR=13						
HLID	**Hailey**	29.46	339	P	P	05 10 31.5	+1.8
	1.0nm,0.8s,mb3.6						
EDM	**Edmonton**	38.01	347	eP	P	05 11 41.1	-2.2
YKA	**Yellowknife Ar**	47.01	351	P	P	05 12 56.7	+0.3
	1.2nm,0.9s,mb3.8,baz=161,slow=7.5,SNR=18						
YKA	**Yellowknife Ar**	47.01	351	P	P	05 12 56.7	+0.3
INK	**Inuvik**	55.88	346	P	P	05 14 02.2	-1.0
	0.8nm,0.9s,mb3.8,baz=125,slow=8.2,SNR=3.6						
USHA	**Ushuaia**	76.10	162	LR	LR	05 42 25.7	
	comp=Z,93nm,21.2s,MS4.1,baz=338,slow=30						

IDC ***14*** *05:12:17.9±1.2,14.10S×170.21E,mb4.2/10,mb1 4.4/10, mb1mx4.4/15,mbtmp4.2/10,MS3.6/9,Ms1 3.6/9, ms1mx3.5/17,Error ellipse: s-maj=59.4km s-min=18.9km az=146.0*

NEIC ***14*** *05:12:22.6±0.6,14.05S×170.08E,h30^{km},mb4.4/7,Error ellipse: s-maj=18.9km s-min=11.3km az=130.0*

ISC 14 05:12:21.4±0.7,**14.2S**±0.1×**170.1E**±0.1,**h33**^{km},**n32,** σ**1**^{s}**17**/23,**mb4.2**/14,**MS3.6**/9,**Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	8.60	203	eP	P	05 14 26.3	-0.2
NOUC	**Port Laguerre**	8.68	204	eP	P	05 14 27.9	+0.3
NOUC	**Port Laguerre**	8.68	204	eP	P	05 14 27.9	+0.3
PMG	**Port Moresby**	22.92	279	LR	LR	05 25 27.0	
	comp=Z,125nm,18.2s,MS3.4,baz=191,slow=34						
CTA	**Charters Tower**	23.50	252	eP	P	05 17 31.0	+1.6
	4.9nm,0.8s,mb4.0						
CTA	**Charters Tower**	23.50	252	P	P	05 17 31.9	+2.5
	11nm,1.1s,mb4.2,baz=101,slow=12,SNR=4.1						
CTA				LR	LR	05 25 14.6	
	comp=Z,89nm,19.5s,MS3.2,baz=230,slow=33						
CTAO	**Charters Tower**	23.50	252	eP	P	05 17 31.1	+1.7
	10nm,1.0s,mb4.2						
URZ	**Urewera**	24.81	167	LR	LR	05 25 43.5	
	comp=Z,78nm,19.3s,MS3.2,baz=21,slow=32						
RPZ	**Rata Peaks**	29.47	179	LR	LR	05 27 54.7	
	comp=Z,232nm,20.9s,MS3.8,baz=18,slow=32						
STKA	**Stephens Creek**	31.45	231	eP	P	05 18 43.8	+1.6
	9.9nm,0.8s,mb4.7						
STKA	**Stephens Creek**	31.45	231	P	P	05 18 43.9	+1.7
	11nm,0.7s,mb4.8,baz=43,slow=6.3,SNR=30						
STKA				LR	LR	05 29 37.9	
	comp=Z,76nm,21.6s,MS3.3,baz=34,slow=33						
WB2	**Warramunga Arr**	34.59	255	eP	P	05 19 08.0	-1.5
WRAB	**Tennant Creek**	34.59	255	eP	P	05 19 08.4	-1.1
	4.0nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	34.60	255	P	P	05 19 08.6	-1.0
	2.3nm,0.7s,mb4.2,baz=87,slow=8.6,SNR=16						
ASAR	**Alice Springs**	35.42	249	P	P	05 19 16.1	-0.5
	10.0nm,0.7s,mb4.8,baz=76,slow=9.1,SNR=95						
ASAR				LR	LR	05 32 30.0	
	comp=Z,87nm,20.1s,MS3.5,baz=80,slow=34						
ASPA	**Alice Springs**	35.42	249	eP	P	05 19 16.3	-0.3
KAKA	**Kakadu**	36.61	268	eP	P	05 19 25.7	-1.0
	5.1nm,0.7s,mb4.5						
PPT	**Papeete**	38.91	100	eLR	LR	05 30 23.1	
	85nm,27.5s						
TBI	**Tubuai**	39.28	110	eLR	LR	05 30 33.6	
	88nm,36.2s						
FITZ	**Fitzroy Crossi**	42.79	259	eP	P	05 20 18.5	+0.4
	9.5nm,0.6s,mb4.7						
VNDA	**Vanda**	63.51	182	LR	LR	05 44 07.5	
	comp=Z,102nm,19.9s,MS4.0,baz=330,slow=30						
VNDA	**Vanda**	63.51	182	P	P	05 22 50.1	-0.2
	0.3nm,0.6s,mb3.5						
CMAR	**Chiang Mai Arr**	77.21	293	P	P	05 24 16.6	+2.2
	0.5nm,0.4s,mb3.8,baz=111,slow=2.5,SNR=5.2						
MAW	**Mawson**	83.43	202	LR	LR	05 58 02.2	
	comp=Z,32nm,20.4s,MS3.7,baz=254,slow=33						
SONM	**Songino Array**	83.67	323	P	P	05 24 49.3	+1.2
	0.6nm,0.8s,mb3.8,baz=166,slow=5.1,SNR=4.5						
NVAR	**Mina Array Bea**	84.85	48	P	P	05 24 56.1	+1.8
	0.7nm,0.6s,mb4.0,baz=231,slow=10,SNR=4.8						
ILAR	**Eielson Array**	85.16	17	P	P	05 24 55.1	-0.1
	1.2nm,0.7s,mb4.1,baz=233,slow=5.8,SNR=7.1						
ILAR				LR	LR	05 56 32.7	
	comp=Z,82nm,19.8s,MS4.1,baz=180,slow=31						
TXAR	**Lajitas Array**	93.62	61	P	P	05 25 35.0	-1.1
	0.4nm,0.8s,mb3.9,baz=230,slow=6.3,SNR=4.2						
TXAR	**Lajitas Array**	93.62	61	P	P	05 25 35.0	-1.1
YKA	**Yellowknife Ar**	95.80	27	P	P	05 25 43.3	-1.8
	0.4nm,0.7s,mb3.9,baz=253,slow=4.5,SNR=7.6						
ARCES	**ARCESS Array B**	120.36	346	PKP	PKPdf	05 31 10.0	+0.9
	11nm,1.3s,baz=90,slow=3.6,SNR=3.6						
ARCES	**ARCESS Array B**	120.36	346	PKP	PKPdf	05 31 10.0	+0.9

NEIC ***14*** *05:12:26.3±1.3,51.53N×16.11E,h5^{km},ML2.9(VIE), ML2.9(SZGRF),Error ellipse: s-maj=14.9km s-min=5.8km az=209.0*

IPEC ***14*** *05:12:26.9±0.4,51.52N×16.13E,h8^{km}±1^{km},ML2.0/2, Error ellipse: s-maj=2.7km s-min=0.9km az=31.0*

PRU ***14*** *05:12:27.3,51.48N×16.05E*

CSEM ***14*** *05:12:27.8±0.2,51.45N×16.04E,ML3.1/5,Error ellipse: s-maj=3.4km s-min=1.9km az=14.0*

WAR 14 05:12:27.5,51.51N×16.03E,h1^{km},ML2.9,2C-2D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.68	166	⇓ iPg	Pg	05 12 40.0	-1.2
KSP				eSg	Sg	05 12 48.8	-1.5
KSP	**Ksiaz**	0.68	166	ePg	Pg	05 12 40.0	-1.2
KSP				e		05 12 41.0	
KSP				eSg	Sg	05 12 48.8	-1.5
KSP	**Ksiaz**	0.68	166	ePg	Pg	05 12 40.0	-1.2
KSP				eSg	Sg	05 12 48.8	-1.5
UPC	**Upice**	1.00	181	ePG	Pg	05 12 45.7	-1.8
DPC	**Dobruska-Polom**	1.17	171	ePG	Pg	05 12 48.7	-2.2
DPC				eSG	Sg	05 13 03.8	-2.7
	26nm,0.4s						
DPC	**Dobruska-Polom**	1.17	171	ePg	Pg	05 12 48.7	-2.2
DPC				eSg	Sg	05 13 03.6	-2.9
PVCC	**Panska Ves**	1.35	224	ePG	Pg	05 12 52.3	-2.1
PVCC	**Panska Ves**	1.35	224	ePn	Pn	05 12 52.8	-0.6
PRU	**Pruhonice**	1.79	213	ePN	Pn	05 12 58.0	-1.8
PRU				ePG	Pg	05 12 59.5	-3.8
PRU				eSG	Sg	05 13 23.4	-3.7
PRU	**Pruhonice**	1.79	213	ePg	Pg	05 12 59.5	-3.8
PRU				eSg	Sg	05 13 23.4	-3.7
CLL	**Collm**	1.91	265	i PN	Pn	05 12 59.4	-2.1
CLL				i PG	Pg	05 13 02.4	-3.2
CLL				eSG	Sg	05 13 27.0	-4.0
MORC	**Moravsky Berou**	1.98	150	ePn	Pn	05 13 00.6	-1.9
MORC				eSn	Sn	05 13 26.6	-1.7
MORC	**Moravsky Berou**	1.98	150	ePn	Pn	05 13 00.6	-1.9
MORC				eSn	Sn	05 13 26.6	-1.7
MORC				eSg	Sg	05 13 27.2	-6.2
	11nm,0.2s						
OKC	**Ostrava-Krasne**	2.15	140	ePG	Pg	05 13 06.6	-3.7
OKC				eSG	Sg	05 13 34.0	-4.9
VRAC	**Vranov**	2.23	171	ePn	Pn	05 13 04.4	-1.7
VRAC				eSg	Sg	05 13 37.1	-4.6
	7.4nm,0.2s						
KRUC	**Moravsky**	2.46	174	ePn	Pn	05 13 08.3	-1.1
NKC	**Novy Kostel**	2.60	242	ePN	Pn	05 13 10.2	-1.2
NKC				ePG	Pg	05 13 16.4	-3.1
NKC				eSG	Sg	05 13 50.1	-4.1
NKC	**Novy Kostel**	2.60	242	ePn	Pn	05 13 10.1	-1.3
NKC	**Novy Kostel**	2.60	242	ePg	Pg	05 13 16.4	-3.1
NKC				eSg	Sg	05 13 50.1	-4.1
OJC	**Ojcow**	2.71	117	ePg	Pg	05 13 17.7	-3.9
OJC				eSg	Sg	05 13 53.9	-3.9
KHC	**Kasperske Hory**	2.85	214	ePN	Pn	05 13 12.7	-2.3
KHC				ePG	Pg	05 13 18.5	-5.9
KHC				eSN	Sn	05 13 47.5	-2.9
KHC				eSG	Sg	05 13 57.4	-5.0
MOX	**Moxa**	2.92	255	ePn	Pn	05 13 14.5	-1.4
MOX				ePg	Pg	05 13 21.8	-3.9
MOX				eSg	Sg	05 14 00.9	-3.7
MOX	**Moxa**	2.92	255	i P	Pn	05 13 14.5	-1.4
MOX				Pg	Pg	05 13 22.0	-3.7
MOX				Sg	Sg	05 14 01.0	-3.6
MOX	**Moxa**	2.92	255	ePg	Pg	05 13 21.8	-3.9
MOX				eSg	Sg	05 14 00.5	-4.1
GEC2	**GERESS Array S**	3.06	210	ePn	Pn	05 13 16.7	-1.2
GEC2				eSg	Sg	05 14 03.2	-6.1
WET	**Wettzell**	3.11	222	ePn	Pn	05 13 16.9	-1.8
WET				eSg	Sg	05 14 05.4	-5.7
WET	**Wettzell**	3.11	222	ePn	Pn	05 13 16.8	-1.9
WET				eSg	Sg	05 14 05.4	-5.7
NIE	**Niedzica**	3.44	126	eP	Pn	05 13 30.5	+7.1
NIE				eS	Sn	05 14 15.5	+10
VYHS	**Vyhne**	3.52	148	ePG	Pg	05 13 34.7	-3.0
MOA	**Molln**	3.84	198	⇑ iPN	Pn	05 13 27.1	-1.9
MOA				i SG	Sg	05 14 30.9	-4.3
	5.1nm,0.4s						
ARSA	**Arzberg**	4.27	185	⇑ iPN	Pn	05 13 32.3	-2.9
ARSA				i SG	Sg	05 14 42.1	-7.6
	7.9nm,0.6s						
KBA	**Koelnbreinsper**	4.77	203	⇓ iPN	Pn	05 13 40.2	-2.0
KBA				i SG	Sg	05 14 58.6	-7.6
	4.1nm,0.5s						

GUC 14 05:20:39.9±0.9,**25.21S×70.76W,h21**^{km}±7^{km},**MD4.3, ML4.1,1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	0.67	30	⇓ iP	Pb	05 20 53.5	+0.7
CPN1				i S	Sb	05 21 02.7	+1.2
CPN1				AMP		05 21 05.5	
	comp=N,15μm,0.2s						
ANCH	**Antofagasta**	1.55	12	eP	Pn	05 21 06.0	-0.7
ANCH				i S	Sn	05 21 26.4	+0.1
ANCH				AMP		05 21 31.1	
	comp=E,4μm,0.3s						
CPCH	**Copiapo**	2.17	170	eP	Pn	05 21 16.4	+0.8
CPCH				i S	Sn	05 21 43.1	+1.0
LVC	**Limon Verde**	3.09	34	eP	Pn	05 21 29.2	+0.6
LVC				i S	Sn	05 22 06.7	+1.4
LVC				AMP		05 22 22.8	
	comp=N,815nm,0.5s						

IDC ***14*** *05:30:32.3±0.7,41.56N×29.17W,mb4.1/22,mb1 4.3/23, mb1mx4.2/29,mbtmp4.1/23,ML4.7/1,MS4.0/18,Ms1 4.0/18, ms1mx3.9/23,Error ellipse: s-maj=19.9km s-min=12.3km az=178.0*

NEIC ***14*** *05:30:35.0±0.2,41.58N×29.21W,mb4.8/31,MS4.2/4, Error ellipse: s-maj=7.7km s-min=4.4km az=177.0*

ZUR_RM ***14*** *05:30:34,41.58N×29.21W,h12^{km},Mw4.8/6,Moment Tensor Solution. s6 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.91; M$_{\theta\theta}$0.60; M$_{\phi\phi}$1.31; M$_{r\theta}$-0.25; M$_{\theta\phi}$0.08; M$_{\phi r}$1.33; Best double couple: M$_0$2.1×10^{16} NP1:φ$_s$176°,δ65°,λ-95°. NP2:φ$_s$8°,δ25°,λ-79°. Principal axes: T 1.791, Plg20°, Azm270°; N .619, Plg5°, Azm178°; P -2.41, Plg70°, Azm76°;*

BJI ***14*** *05:30:35.2,42.23N×29.59W,h16^{km},mB5.4,mb5.4,Ms4.7, Msz4.4*

SVSA ***14*** *05:30:35.5±1.2,41.54N×29.12W,h5^{km},ML3.7,Error ellipse: s-maj=18.0km s-min=5.7km az=104.0*

CSEM ***14*** *05:30:35.5±0.3,41.54N×29.12W,h5^{km},ML3.7,Error ellipse: s-maj=7.3km s-min=4.0km az=120.0,After PDA*

PDA ***14*** *05:30:35.5±1.2,41.54N×29.12W,h5^{km},ML3.7,Error ellipse: s-maj=18.0km s-min=5.7km az=104.0*

ISC 14 05:30:32.2±1.6,**41.39N**±0.03×**29.18W**±0.05,**h15**^{km}±12^{km}, **h16**^{km}±.4^{km}**:pP-P,n135,**σ**0**^{s}**87**/124,**mb4.5**/58,**MS4.1**/26, **1C-2D,Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STGR	**Santa Cruz**	2.47	158	eP	Pn	05 31 12.7	0.0
ROSA	**Rosais**	2.76	165	eP	Pn	05 31 18.0	+1.2
ROSA				eS	Sn	05 31 49.2	-0.9
PCED	**Cedros**	2.78	172	eP	Pn	05 31 18.5	+1.4
PCED				eS	Sn	05 31 50.3	-0.3
	93nm,0.5s						
CALA	**Caldeira**	2.83	172	eP	Pn	05 31 19.1	+1.4
CALA				eS	Sn	05 31 50.9	-0.9
PMAN	**Manadas**	2.88	163	eP	Pn	05 31 19.3	+0.9
PMAN				eS	Sn	05 31 52.1	-0.9
	57nm,0.4s						
HOR	**Horta**	2.89	171	eP	Pn	05 31 20.0	+1.4
HOR				eS	Sn	05 31 52.4	-0.9
PICO	**Pico**	2.94	168	eP	Pn	05 31 19.8	+0.4
PICO				eS	Sn	05 31 53.5	-1.2
PBIS	**Biscoitos**	3.01	150	eP	Pn	05 31 20.2	-0.2
ASBA	**Santa Barbara**	3.02	151	i P	Pn	05 31 20.3	-0.2
PVNV	**Vila Nova**	3.05	149	eP	Pn	05 31 20.8	-0.1
PPAD	**Pico dos Padre**	3.05	151	eP	Pn	05 31 20.8	-0.1
ADH	**Angra Heroismo**	3.11	151	i P	Pn	05 31 21.4	-0.4
PSCM	**Serra do Cume**	3.12	149	i P	Pn	05 31 21.4	-0.4
PFAV	**Pico das Favas**	3.12	148	i P	Pn	05 31 21.6	-0.3
RIB2	**Ribeirinha**	3.12	150	eP	Pn	05 31 21.6	-0.3
SET4	**Mosteiros**	4.37	142	eP	Pn	05 31 39.6	-0.1
SET2	**Ginetes**	4.39	143	eP	Pn	05 31 39.7	-0.3
PFET	**Feteiras**	4.42	143	eP	Pn	05 31 40.0	-0.4
PSAN	**Santo Antonio**	4.42	142	eP	Pn	05 31 40.2	-0.3
PSET	**Sete Cidades**	4.45	142	eP	Pn	05 31 40.7	-0.1
FAC	**Faja de Cima**	4.52	142	eP	Pn	05 31 41.5	-0.3
PDA	**Ponta Delgada**	4.54	142	erx		05 32 54.8	
PVER	**Pico Vermelho**	4.57	141	eP	Pn	05 31 42.3	-0.2
CML	**Cha da Macela**	4.57	141	eP	Pn	05 31 42.4	-0.2
PMAT	**Coroa da Mata**	4.57	140	eP	Pn	05 31 42.8	+0.2
LFA	**Lagoa do Fogo**	4.60	140	eP	Pn	05 31 42.5	-0.5
MESC	**Monte Escuro**	4.60	140	eP	Pn	05 31 42.8	-0.2
PFAD	**Fenais da Ajud**	4.63	139	eP	Pn	05 31 43.6	+0.3
PRCH	**Ribeira Ch**	4.64	141	eP	Pn	05 31 43.9	+0.4
VIF	**Vila Franca**	4.65	140	eP	Pn	05 31 43.4	-0.2
PCNG	**Congro**	4.65	140	eP	Pn	05 31 43.4	-0.2
FRA1	**Furnas**	4.69	140	eP	Pn	05 31 43.8	-0.4
MIRA	**Miradouro**	4.69	139	eP	Pn	05 31 44.1	-0.1
PSMN	**Pico do Norte,**	5.42	143	eP	Pn	05 31 54.4	-0.1
ESDC	**Sonseca Array**	19.23	87	P	P	05 34 59.1	+0.7
	0.5nm,0.3s,baz=287,slow=9.6,SNR=10						
ESLA	**Sonseca Array**	19.23	87	eP	P	05 35 01.3	+2.9
	0.2nm,0.6s						
EKA	**Eskdalemuir Ar**	22.04	42	P	P	05 35 27.8	0.0
	1.9nm,0.7s,mb3.6,baz=243,slow=9.5,SNR=3.6						
BNI	**Bardonecchia**	26.25	70	eP	P	05 36 12.5	+4.2
	0.9nm,0.5s,mb3.6						
SCHQ	**Schefferville**	28.13	311	LR	LR	05 44 52.9	
	comp=Z,206nm,19.4s,MS3.7,baz=54,slow=31						
CLL	**Collm**	30.38	56	P	P	05 36 50.0	+4.5
CLL				i		05 37 00.6	
GERES	**GERESS Array B**	30.83	61	P	P	05 36 49.6	+0.1
	1.5nm,0.8s,mb3.9,baz=278,slow=9.4,SNR=3.6						
BRG	**Berggiesshubel**	30.96	57	P	P	05 36 49.6	-1.0
	2.1nm,0.7s,mb4.1						
NOA	**NORSAR Array B**	31.32	37	P	P	05 36 51.9	-1.9
	1.3nm,1.0s,mb3.7,baz=79,slow=16,SNR=2.5						
NOA				LR	LR	05 46 52.5	
	comp=Z,194nm,21.2s,MS3.8,baz=190,slow=31						
JMIC	**Jan Mayen**	31.46	13	LR	LR	05 46 30.1	
	comp=Z,291nm,18.8s,MS4.0,baz=89,slow=31						
SUMG	**Summit**	31.60	355	eP	P	05 36 50.8	-5.3
	3.7nm,1.0s,mb4.2						
FRB	**Frobisher Bay**	31.94	328	P	P	05 36 59.2	+0.1
	5.7nm,1.1s,mb4.3,baz=135,slow=16,SNR=2.0						
FRB				LR	LR	05 46 22.5	
	comp=Z,105nm,21.1s,MS3.5,baz=60,slow=30						
VAE	**Valguarnera**	33.63	82	LR	LR	05 48 38.9	
	comp=Z,476nm,20.6s,MS4.2,baz=140,slow=32						
FINES	**FINESS Array B**	38.40	39	P	P	05 37 54.3	-0.1
	1.9nm,0.7s,mb3.9,baz=270,slow=11,SNR=3.8						
FINES				LR	LR	05 52 05.8	
	comp=Z,218nm,19.6s,MS4.0,baz=153,slow=34						
FINES	**FINESS Array B**	38.40	39	P	P	05 37 54.3	-0.1
FINES				LR	LR	05 52 05.8	
BURAR	**Bucovina Array**	38.61	62	⇓ P	P	05 38 02.3	+6.0
MLR	**Muntele Rosu**	39.58	65	P	P	05 38 04.1	-0.2
	3.3nm,0.9s,mb4.0,baz=296,slow=22,SNR=3.2						
MLR	**Muntele Rosu**	39.58	65	⇓ P	P	05 38 05.1	+0.8
ARCES	**ARCESS Array B**	39.69	27	P	P	05 38 02.9	-2.1
	3.6nm,0.9s,mb4.1,baz=260,slow=7.4,SNR=4.9						
ARCES				LR	LR	05 51 26.0	
	comp=Z,173nm,18.4s,MS3.9,baz=214,slow=32						
AKASG	**Malin Array Be**	40.62	56	P	P	05 38 12.1	-0.8
	2.8nm,0.8s,mb3.9,baz=275,slow=8.7,SNR=5.3						
DBIC	**Dimbokro**	40.79	141	P	P	05 38 16.7	+2.1
	7.2nm,1.0s,mb4.3,baz=295,slow=10,SNR=7.3						
DBIC	**Dimbokro**	40.79	141	P	P	05 38 16.7	+2.0
CFR	**Carcaliu**	41.15	65	⇑ P	P	05 38 18.4	+1.2
RES	**Resolute Bay**	44.18	340	eP	P	05 38 41.2	-0.3
	15nm,1.1s,mb4.6						
ULM	**Lac du Bonnet**	45.88	305	LR	LR	05 56 36.8	
	comp=Z,196nm,20.1s,MS4.0,baz=91,slow=34						
BRTR	**Keskin Array B**	46.82	70	P	P	05 39 03.4	+0.4
	1.4nm,0.8s,mb4.0,baz=281,slow=6.3,SNR=5.4						
CCM	**Cathedral Cave**	46.95	287	eP	P	05 39 03.0	-1.1
CCM				LR	LR		
	comp=Z,220nm,19.0s,MS4.1						
SDV	**Santo Domingo**	48.83	240	eP	P	05 39 20.2	+1.2
	comp=Z,19nm,1.5s,mb4.9						
MIAR	**Mount Ida**	50.19	284	eP	P	05 39 27.9	-1.4
	comp=Z,30nm,1.4s,mb5.1						
MIAR				LR	LR		
	comp=Z,206nm,22.0s,MS4.1						
KSU1	**Kansas State U**	50.33	291	eP	P	05 39 30.7	+0.5
MALT	**Malatya**	50.79	70	eP	P	05 39 37.7	+3.9
	comp=Z,6.9nm,1.1s,mb4.5						
YKA	**Yellowknife Ar**	52.32	324	P	P	05 39 44.2	-0.8
	comp=Z,1.2nm,0.8s,mb3.9,baz=69,slow=7.4,SNR=17						
YKA				PcP	PcP	05 40 54.7	-1.5
	comp=Z,0.7nm,0.7s,baz=76,slow=4.5,SNR=9.4						
YKA	**Yellowknife Ar**	52.32	324	P	P	05 39 44.2	-0.8
YKA				PcP	PcP	05 40 54.7	-1.5
ASF	**Jabal al Asfar**	52.57	77	P	P	05 39 46.0	-1.3
	comp=Z,1.9nm,0.6s,mb4.2,baz=144,slow=8.7,SNR=2.4						
LAO	**LASA Array**	53.57	304	eP	P	05 39 54.7	+0.3
	comp=Z,109nm,1.8s,mb5.5						
WMOK	**Wichita Mounta**	53.87	287	eP	P	05 39 55.0	-1.8
	comp=Z,9.3nm,1.2s,mb4.6						
ROSC	**El Rosal**	54.25	241	LR	LR	05 59 42.0	
	comp=Z,82nm,18.8s,MS3.8,baz=202,slow=32						
GNI	**Garni**	54.36	65	P	P	05 40 00.3	0.0
	comp=Z,2.0nm,0.3s,mb4.5,baz=252,slow=3.2,SNR=2.8						
GNI				LR	LR	06 03 16.1	
	comp=Z,73nm,20.2s,MS3.7,baz=338,slow=36						
EDM	**Edmonton**	55.09	313	eP	P	05 40 05.0	-0.6
PHWY	**Pilot Hill**	55.42	297	eP	P	05 40 07.4	-0.7
AMTX	**Amarillo**	55.88	289	eP	P	05 40 11.6	+0.2
	comp=Z,15nm,1.0s,mb5.0						
SDCO	**Great Sand Dun**	57.14	294	P	P	05 40 20.1	-0.4
	comp=Z,5.5nm,1.3s,mb4.4						
SDCO				LR	LR		
	comp=Z,552nm,21.0s,MS4.6						
INK	**Inuvik**	57.17	335	LR	LR	06 01 49.5	
	comp=Z,83nm,19.5s,MS3.9,baz=191,slow=33						
INK	**Inuvik**	57.17	335	eP	P	05 40 18.4	-1.9
	comp=Z,6.0nm,0.9s,mb4.6						
WALA	**Waterton Lakes**	57.21	309	eP	P	05 40 20.3	-0.6
	comp=Z,25nm,1.1s,mb5.2						
PDAR	**Pinedale Array**	57.44	301	P	P	05 40 22.4	-0.1
	comp=Z,3.3nm,0.9s,mb4.4,baz=69,slow=6.0,SNR=24						
PDAR				LR	LR	06 04 54.0	
	comp=Z,184nm,18.5s,MS4.2,baz=203,slow=36						
IMW	**Indian Meadow**	57.79	302	eP	P	05 40 25.2	+0.3
CHMT	**Chamberlain Mo**	57.81	306	eP	P	05 40 25.5	+0.5
SAML	**Samuel**	59.03	220	eP	P	05 40 34.4	+0.4
	comp=Z,8.5nm,1.4s,mb4.6						
ANMO	**Albuquerque**	59.22	291	P	P	05 40 35.8	+0.7
	comp=Z,3.1nm,1.1s,mb4.2,baz=72,slow=6.1,SNR=5.9						
PV10	**Paradox Valley**	59.25	296	eP	P	05 40 36.1	+0.9
HWUT	**Hardware Ranch**	59.30	300	eP	P	05 40 35.7	+0.1
	comp=Z,16nm,1.1s,mb5.0						
HWUT				e	pP	05 40 40.1	-0.2
BDFB	**Brasilia**	59.36	201	P	P	05 40 37.6	+1.3
	comp=Z,10nm,1.3s,mb4.7,baz=85,slow=8.2,SNR=3.8						
BDFB				LR	LR	06 04 52.0	
	comp=Z,110nm,18.1s,MS4.0,baz=142,slow=35						
NEW	**Newport**	59.47	309	eP	P	05 40 35.5	-1.1
	comp=Z,20nm,1.1s,mb5.1						
NEW				LR	LR		
	comp=Z,233nm,21.7s,MS4.3						
DAU	**Daniels Canyon**	59.70	299	eP	P	05 40 38.5	+0.2
DAU				e	pP	05 40 43.2	+0.2
TXAR	**Lajitas Array**	60.22	284	P	P	05 40 41.2	-0.8
	comp=Z,4.0nm,1.0s,mb4.4,baz=75,slow=4.5,SNR=28						
TXAR				LR	LR	06 03 38.7	
	comp=Z,154nm,20.7s,MS4.1,baz=50,slow=33						
TXAR	**Lajitas Array**	60.22	284	P	P	05 40 41.2	-0.8
TXAR				LR	LR	06 03 38.7	
TMUT	**Trail Mountain**	60.24	298	eP	P	05 40 41.5	-0.5
TMUT				e	pP	05 40 46.5	-0.2
OTAV	**Otavalo**	60.42	241	eP	P	05 40 45.5	+1.9
	comp=Z,5.8nm,1.3s,mb4.5						
DUG	**Dugway**	60.84	299	eP	P	05 40 44.9	-1.1
	comp=Z,32nm,1.5s,mb5.2						
DUG				e	pP	05 40 50.5	-0.2
BMO	**Blue Mountains**	61.28	306	eP	P	05 40 47.6	-1.4
	comp=Z,11nm,1.5s,mb4.8						
MSU	**Marysvale**	61.29	297	eP	P	05 40 49.3	+0.2
MSU				e	pP	05 40 54.0	+0.1
DAWY	**Dawson**	61.50	332	eP	P	05 40 48.8	-1.4
DAWY				e	pP	05 40 54.7	-0.2
ELK	**Elko**	62.13	301	eP	P	05 40 54.4	-0.4
	comp=Z,7.5nm,0.9s,mb4.8						
ELK				e	pP	05 40 59.3	-0.3
ARUT	**Antelope Range**	62.52	297	eP	P	05 40 57.5	+0.1
ARUT				e	pP	05 41 02.7	+0.6
BRVK	**Borovoye**	63.23	42	eP	P	05 41 01.8	0.0
	comp=Z,13nm,0.9s,mb5.1						
BRVK				e	pP	05 41 06.5	-0.1
BVAR	**Borovoye Array**	63.30	42	P	P	05 41 02.5	+0.2
	comp=Z,3.0nm,0.7s,mb4.5,baz=297,slow=6.6,SNR=14						
WVOR	**Wild Horse Val**	63.38	304	eP	P	05 41 03.6	+0.6
	comp=Z,16nm,1.1s,mb5.1						
ILAR	**Eielson Array**	63.57	335	P	P	05 41 03.0	-0.9

	comp=Z,1.5nm,0.7s,mb4.1,baz=28,slow=6.1,SNR=12						
TUC	**Tucson**	63.68	291	eP	P	05 41 06.3	+1.1
	comp=Z,8.4nm,1.1s,mb4.7						
NEN	**Nelson**	64.63	296	eP	P	05 41 12.0	+0.7
IMA	**Indian Mountai**	64.69	338	eP	P	05 41 10.2	-1.0
	comp=Z,1.8nm,0.8s,mb4.2						
MOD	**Modoc**	64.71	304	eP	P	05 41 11.4	-0.2
	comp=Z,12nm,1.0s,mb4.9						
TPH	**Tonopah**	64.86	299	eP	P	05 41 12.6	-0.1
	comp=Z,16nm,1.2s,mb4.9						
TPH				e	pP	05 41 17.7	+0.2
LDFC	**Landfair**	65.13	296	eP	P	05 41 15.1	+0.6
NVAR	**Mina Array Bea**	65.37	300	P	P	05 41 16.7	+0.7
	comp=Z,1.2nm,0.8s,mb4.0,baz=61,slow=7.4,SNR=8.6						
NVAR				LR	LR	06 10 10.0	
	comp=Z,183nm,18.3s,MS4.3,baz=90,slow=36						
NVAR	**Mina Array Bea**	65.37	300	P	P	05 41 16.7	+0.7
NVAR				LR	LR	06 10 10.0	
OMM	**Old Mammoth Mi**	66.28	300	eP	P	05 41 22.5	+0.7
CMB	**Columbia Colle**	66.95	301	eP	P	05 41 26.2	+0.1
	comp=Z,19nm,1.5s,mb4.9						
CMB				e	pP	05 41 30.6	-0.2
LPAZ	**La Paz**	67.76	221	eP	P	05 41 33.1	+1.5
	comp=Z,7.0nm,1.1s,mb4.6						
TNA	**Tin City**	68.68	343	eP	P	05 41 35.9	-0.6
	comp=Z,2.3nm,0.7s,mb4.2						
KURK	**Kurchatov**	68.77	40	eP	P	05 41 36.7	-0.5
	comp=Z,15nm,1.0s,mb4.9						
KURK				e	pP	05 41 42.3	+0.3
ZAL	**Zalesovo**	69.49	35	P	P	05 41 42.0	+0.4
	comp=Z,1.4nm,0.8s,mb3.9,baz=149,slow=8.1,SNR=7.7						
KMBO	**Kilima Mbogo**	73.27	107	LR	LR	06 15 11.7	
	comp=Z,123nm,18.8s,MS4.2,baz=286,slow=37						
LSZ	**Lusaka**	77.34	124	eP	P	05 42 29.5	+1.4
	comp=Z,4.3nm,1.1s,mb4.3						
WMQ	**Urumqi**	77.98	41	eP	P	05 42 34.5	+3.4
WMQ				XP	sP	05 42 44.0	+6.4
WMQ				PP	PP	05 45 33.0	+3.5
WMQ				S	S	05 52 26.0	+3.3
WMQ				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,42nm,8.0s						
WMQ				LR	LR		
	comp=N,123nm,21.0s,MS4.4						
WMQ				LR	LR		
	comp=E,128nm,22.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,106nm,20.0s,MS4.2						
SONM	**Songino Array**	82.84	28	P	P	05 42 57.8	+0.9
	comp=Z,3.3nm,1.0s,mb4.3,baz=311,slow=5.3,SNR=16						
ULN	**Ulaanbaatar**	83.05	28	eP	P	05 42 59.0	+1.1
	comp=Z,7.9nm,1.1s,mb4.7						
LBTB	**Lobatse**	83.29	132	LR	LR	06 17 19.0	
	comp=Z,144nm,19.8s,MS4.3,baz=163,slow=34						
GTA	**Gaotai**	87.16	37	eP	P	05 43 19.3	+0.7
GTA				AP	pP	05 43 24.6	+1.1
GTA				XP	sP	05 43 27.8	+2.7
GTA				S	S	05 53 56.4	+0.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.5						
GTA				AMB	AMB		
	comp=Z,146nm,4.6s						
GTA				LR	LR		
	comp=N,114nm,16.3s						
GTA				LR	LR		
	comp=E,188nm,25.1s						
GTA				LR	LR		
	comp=Z,89nm,13.3s,MS4.3						
PLCA	**Paso Flores**	89.94	210	LR	LR	06 24 05.8	
	comp=Z,119nm,20.9s,MS4.3,baz=31,slow=36						
HHC	**Hu-ho-hao-te**	90.74	29	eP	P	05 43 37.8	+2.3
HHC				AP	pP	05 43 42.1	+1.7
HHC				XP	sP	05 43 44.5	+2.5
HHC				S	S	05 54 27.8	-0.9
HHC				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.6						
HHC				LR	LR		
	comp=N,100nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=E,155nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=Z,155nm,15.5s,MS4.5						
LZH	**Lanzhou**	91.70	36	eP	P	05 43 47.0	+6.9
LZH				AP	pP	05 43 52.5	+7.6
LZH				eS	S	05 54 41.0	+3.7
LZH				XS		05 54 50.0	
LZH				AMB	AMB		
	comp=Z,31nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,132nm,6.2s						
LZH				LR	LR		
	comp=E,156nm,16.8s						
LZH				LR	LR		
	comp=Z,209nm,18.0s,MS4.6						
CN2	**Changchun**	92.18	18	eP	P	05 43 43.3	+1.2
KMI	**Kunming**	100.23	43	P	P	05 44 20.8	+1.6
KMI				AMB	AMB		
	comp=Z,13nm,1.6s						
NJ2	**Nanjing**	101.20	27	eP	P	05 44 25.5	+2.1
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s						
SSE	**Sheshan**	102.86	26	P	Pdif	05 44 31.0	+0.1
SSE				AMB	AMB		
	comp=Z,11nm,0.8s						
QSPA	**South Pole Qui**	131.27	180	eP	PKPdf	05 49 45.4	-1.0
KAKA	**Kakadu**	147.22	35	eP	PKPdf	05 50 16.8	+0.2
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	154.44	38	PKPbc	PKPdf	05 50 35.9	+8.7
	comp=Z,1.0nm,0.9s,baz=344,slow=2.9,SNR=5.0						
WRA				PKPab	PKPab	05 50 47.7	-1.2
	comp=Z,0.8nm,0.7s,baz=338,slow=4.5,SNR=6.5						
ASAR	**Alice Springs**	157.36	44	PKPab	PKPab	05 50 59.6	-1.7
	comp=Z,2.3nm,0.7s,baz=329,slow=3.8,SNR=16						

MEX 14 05:37:45.8±0.3**,16.34N**×**96.14W,h87**^{km}±8^{km}**,MD3.6,1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.57	177	⇓iP	P	05 37 59.6	-1.5
HUIG				i S	S	05 38 10.3	-2.0
VHO	**Vista Hermosa**	0.93	322	eP	P	05 38 03.3	-1.3
VHO				i S	S	05 38 17.1	-1.8
OXX	**Oaxaca**	0.93	323	eP	P	05 38 03.0	-1.7
OXX				i S	S	05 38 17.0	-1.9

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*NEIC **14** 05:57:05.6,39.14S×174.89E,h215^{km},After WEL.*

WEL 14 05:57:05.6±0.3**,39.16S**×**174.85E,h214**^{km}±2^{km}**,ML3.9**/6**, 2C-3D,Error ellipse: s-maj=4.9km s-min=2.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	**Vera Road**	0.08	297	P	P	05 57 33.0	-0.7
VRZ				S	S	05 57 54.6	-0.8
VRZ	**Vera Road**	0.08	297	PN	P	05 57 33.0	-0.7
VRZ				SN	S	05 57 54.6	-0.8
TWVZ	**Taurewa**	0.47	79	P	P	05 57 34.0	-0.6
TWVZ	**Taurewa**	0.47	79	PN	P	05 57 34.0	-0.6
TWVZ				SN	S	05 57 55.9	-1.1
WPVZ	**Whakapapa**	0.55	95	P	P	05 57 34.5	-0.3
WPVZ				S	S	05 57 56.7	-0.8
WPVZ	**Whakapapa**	0.55	95	PN	P	05 57 34.5	-0.3
WPVZ				SN	S	05 57 56.7	-0.8
CNZ	**Chateau**	0.55	94	P	P	05 57 34.5	-0.3
CNZ	**Chateau**	0.55	94	⇑PN	P	05 57 34.5	-0.3
MGZ	**Maungaku**	0.56	74	P	P	05 57 34.5	-0.4
MGZ	**Maungaku**	0.56	74	PN	P	05 57 34.5	-0.4
WTVZ	**West Tongariro**	0.58	86	P	P	05 57 34.5	-0.5
WTVZ	**West Tongariro**	0.58	86	PN	P	05 57 34.5	-0.5
WTVZ				SN	S	05 57 56.6	-1.1
NGZ	**Ngauruhoe**	0.59	92	P	P	05 57 34.6	-0.4
NGZ	**Ngauruhoe**	0.59	92	PN	P	05 57 34.5	-0.4
WAZ	**Wanganui**	0.60	170	P	P	05 57 35.3	+0.3
WAZ				S	S	05 57 57.6	-0.3
WAZ	**Wanganui**	0.60	170	PN	P	05 57 35.3	+0.2
WAZ				SN	S	05 57 57.6	-0.3
KRVZ	**Karewarewa**	0.62	84	PN	P	05 57 34.7	-0.4
KRVZ				SN	S	05 57 57.0	-1.0
OTVZ	**Oturere**	0.64	91	PN	P	05 57 35.1	0.0
TUVZ	**Tukino**	0.64	100	P	P	05 57 35.0	-0.2
TUVZ	**Tukino**	0.64	100	PN	P	05 57 35.0	-0.2
HIZ	**Hauiti**	0.65	1	P	P	05 57 34.3	-0.9
HIZ				S	S	05 57 56.9	-1.3
HIZ	**Hauiti**	0.65	1	⇓PN	P	05 57 34.3	-0.9
HIZ				SN	S	05 57 57.1	-1.0
MOVZ	**Moawhango**	0.75	110	P	P	05 57 35.0	-0.6
MOVZ				S	S	05 57 56.7	-2.3
MOVZ	**Moawhango**	0.75	110	PN	P	05 57 35.0	-0.6
MOVZ				SN	S	05 57 56.7	-2.2
TSZ	**Takapari Road**	1.25	137	P	P	05 57 38.6	-0.3
TSZ	**Takapari Road**	1.25	137	⇓PN	P	05 57 38.7	-0.2
BKZ	**Black Stump Fm**	1.28	91	⇑P	P	05 57 38.0	-1.1
BKZ	**Black Stump Fm**	1.28	91	⇓PN	P	05 57 38.0	-1.2
MRZ	**Mangatainoka R**	1.60	160	eP	P	05 57 41.1	-0.8
MRZ	**Mangatainoka R**	1.60	160	PN	P	05 57 41.1	-0.7
KIW	**Kapiti Island**	1.70	178	P	P	05 57 42.2	-0.5
KIW	**Kapiti Island**	1.70	178	PN	P	05 57 42.2	-0.5
KIW				SN	S	05 58 09.6	-1.7
BFZ	**Birch Farm**	1.86	145	eP	P	05 57 43.3	-0.9
BFZ	**Birch Farm**	1.86	145	PN	P	05 57 43.3	-0.9
CAW	**Cannon Point**	1.95	175	P	P	05 57 44.4	-0.7
CAW	**Cannon Point**	1.95	175	PN	P	05 57 44.4	-0.7
URZ	**Urewera**	1.99	64	P	P	05 57 42.6	-2.8
URZ	**Urewera**	1.99	64	PN	P	05 57 42.6	-2.8
MTW	**Mount Morrison**	2.06	166	P	P	05 57 44.9	-1.2
MTW	**Mount Morrison**	2.06	166	PN	P	05 57 45.0	-1.2
MRW	**Makara Radio**	2.07	183	P	P	05 57 45.4	-0.9
MRW	**Makara Radio**	2.07	183	PN	P	05 57 45.4	-0.8
KNZ	**Kokohu**	2.21	87	P	P	05 57 45.9	-1.8
KNZ	**Kokohu**	2.21	87	PN	P	05 57 45.9	-1.8
BHW	**Baring Head**	2.25	180	ePN	P	05 57 46.7	-1.4
MWZ	**Matawai**	2.25	69	P	P	05 57 45.6	-2.6
MWZ	**Matawai**	2.25	69	PN	P	05 57 45.6	-2.6
MWZ				SN	S	05 58 15.4	-5.6
PAWZ	**Paruwai Farm**	2.26	169	PN	P	05 57 47.1	-1.2
MSWZ	**Moikau Station**	2.27	172	P	P	05 57 47.2	-1.2
MSWZ	**Moikau Station**	2.27	172	PN	P	05 57 47.2	-1.2
MSWZ				SN	S	05 58 19.4	-2.1
NNZ	**Nelson**	2.34	208	P	P	05 57 47.9	-1.2
NNZ	**Nelson**	2.34	208	PN	P	05 57 48.1	-1.0
QRZ	**Quartz Range**	2.44	226	P	P	05 57 48.4	-1.8
QRZ	**Quartz Range**	2.44	226	PN	P	05 57 48.4	-1.8
THZ	**Tophouse**	2.99	209	P	P	05 57 54.9	-1.5
THZ	**Tophouse**	2.99	209	PN	P	05 57 54.9	-1.5
MXZ	**Matakaoa Point**	3.15	61	P	P	05 57 54.8	-3.4
MXZ	**Matakaoa Point**	3.15	61	PN	P	05 57 54.8	-3.4
KHZ	**Kahutara**	3.40	197	P	P	05 57 59.7	-1.5
KHZ	**Kahutara**	3.40	197	PN	P	05 57 59.7	-1.5
DSZ	**Denniston Nort**	3.47	221	eP	P	05 57 59.6	-2.5
DSZ	**Denniston Nort**	3.47	221	PN	P	05 57 59.6	-2.5
LTZ	**Lake Taylor**	4.11	207	P	P	05 58 07.4	-2.5
LTZ	**Lake Taylor**	4.11	207	PN	P	05 58 07.4	-2.4
MQZ	**McQueen's Vall**	4.83	199	eP	P	05 58 15.3	-3.6
MQZ	**McQueen's Vall**	4.83	199	PN	P	05 58 15.3	-3.6
WVZ	**Waitaha Valley**	4.99	217	eP	P	05 58 17.0	-3.9
WVZ	**Waitaha Valley**	4.99	217	PN	P	05 58 17.0	-3.9
RPZ	**Rata Peaks**	5.37	211	P	P	05 58 22.1	-3.6
RPZ	**Rata Peaks**	5.37	211	PN	P	05 58 22.1	-3.7
FOZ	**Fox Glacier**	5.87	220	PN	P	05 58 26.9	-5.1
LBZ	**Lake Benmore**	6.28	212	eP	P	05 58 33.4	-3.9
LBZ	**Lake Benmore**	6.28	212	PN	P	05 58 33.4	-3.9
ODZ	**Otahua Downs**	6.66	207	P	P	05 58 39.4	-2.8
ODZ	**Otahua Downs**	6.66	207	PN	P	05 58 39.4	-2.9
ODZ				SN	S	05 59 52.3	-5.4
JCZ	**Jackson Bay**	6.70	221	eP	P	05 58 38.3	-4.5
JCZ	**Jackson Bay**	6.70	221	PN	P	05 58 38.3	-4.5

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*GCG **14** 06:23:28.4,13.60N×92.30W,h101^{km},MD4.4*

*CASC **14** 06:23:33.2±2.4,13.65N×92.13W,h20^{km}±28^{km},MD4.5, ML4.1,mb3.8(NEIC)*

*SSS **14** 06:23:33.6,14.02N×92.16W,h37^{km},MD4.9,ML4.4*

*MEX **14** 06:23:34.5±0.5,13.50N×91.92W,h30^{km}±999^{km},MD4.4*

*NEIC **14** 06:23:39.1±1.5,13.93N×91.73W,h63^{km}±14^{km},mb3.8/6, Error ellipse: s-maj=24.6km s-min=10.7km az=223.0*

*IDC **14** 06:23:43.0±4.0,14.63N×91.16W,h69^{km}±35^{km},mb3.7/5, mb1 4.1/7,mb1mx3.7/20,mbtmp4.0/7,ML3.7/2,MS3.0/1, Ms1 3.0/1,ms1mx2.4/20,Error ellipse: s-maj=86.7km s-min=24.3km az=50.0*

ISC 14 06:23:34.1±0.8**,13.58N**±0.06×**92.13W**±0.04**,h44**^{km}±8^{km}**, n45,**σ1§**23**/56**,mb4.0**/9**,5C-4D,Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	**Jato**	0.88	33	⇓iP	P	06 23 48.5	-1.7
TP2	**Tecpan 2**	1.61	42	⇓eP	P	06 23 58.5	-2.2
TP2				eS	S	06 24 23.2	+2.8
IXG	**Ixpaco**	1.73	70	eP	P	06 24 00.4	-1.9
NBG	**Las Nubes**	2.00	60	⇑eP	P	06 24 05.7	-0.5
NBG				eS	S	06 24 31.6	+1.5
RBDL	**Robledal**	2.43	77	⇓eP	P	06 24 11.4	-0.9
RBDL				eS	S	06 24 40.7	-0.3
RTR	**El Retiro**	2.44	82	⇓eP	P	06 24 12.0	-0.4
RTR				eS	S	06 24 43.1	+2.0
SBLS	**San Blas**	2.45	84	⇑eP	P	06 24 12.2	-0.4
SBLS				eS	S	06 24 42.2	+0.7
SNJE	**San Jose**	2.47	83	⇑eP	P	06 24 12.8	0.0
SNJE				eS	S	06 24 43.1	+1.1
CCIG	**Comitan**	2.69	360	i P	P	06 24 15.2	-0.8
CCIG				i S	S	06 24 47.4	-0.2
BOQS	**Boqueron**	2.78	86	eP	P	06 24 17.1	-0.1
BOQS				eS	S	06 24 48.7	-1.1
MTO2	**Montecristo 2**	2.81	73	eP	P	06 24 16.6	-1.1
SNET	**Serv Nac Est T**	2.82	87	eP	P	06 24 17.5	-0.4
SNET				eS	S	06 24 51.1	+0.2
SNET				i		06 25 01.2	
	comp=Z,1μm,0.4s						
LFRS	**El Faro**	2.98	89	⇑eP	P	06 24 19.8	-0.4
LFRS				eS	S	06 24 55.8	+0.8
LBRS	**Las Brisas**	3.01	87	eP	P	06 24 21.5	+1.0
LCBS	**La Ceiba**	3.07	88	⇑eP	P	06 24 21.1	-0.2
SCX	**San Cristobal**	3.18	351	i P	P	06 24 23.0	+0.1
SCX				i S	S	06 25 00.0	0.0
SNVI	**San Vicente**	3.20	89	eP	P	06 24 23.2	0.0
SNVI				eS	S	06 25 02.7	+2.2
VSM	**San Miguel**	3.75	92	eP	P	06 24 32.8	+1.7
CAHU	**Cacacuatique**	3.82	87	eP	P	06 24 31.1	-0.8
CNCH	**Conchagua**	4.19	94	eP	P	06 24 36.0	-1.2
OXX	**Oaxaca**	5.64	309	eP	P	06 24 59.0	+1.5
VHO	**Vista Hermosa**	5.64	309	eP	P	06 25 04.5	+6.9
VHO				i S	S	06 26 03.4	+1.5
TEIG	**Tepich**	7.57	29	ePn	P	06 25 21.2	-3.5
	comp=Z,25nm,0.6s						
JTS	**JuntasAbangare**	7.75	114	P	P	06 25 29.0	+1.9
	comp=Z,0.7nm,0.3s,baz=315,slow=21,SNR=6.6						
JTS				LR	LR	06 28 43.6	
	comp=Z,124nm,21.3s,baz=337,slow=40						
JTS	**JuntasAbangare**	7.75	114	ePn	P	06 25 26.7	-0.4
	comp=Z,20nm,0.6s						
JTS				LR	LR	06 28 43.6	
IIB	**San Bernardino**	8.02	313	eP	P	06 25 32.0	+1.2
PPM	**Popocatepetl**	8.29	312	eP	P	06 25 37.9	+3.3
PPM	**Popocatepetl**	8.29	312	eP	P	06 25 35.0	+0.5
PPM				eP		06 25 37.9	
TXAR	**Lajitas Array**	18.98	328	P	P	06 27 55.3	+0.6
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=28						
MIAR	**Mount Ida**	20.92	357	P	P	06 28 12.9	-2.5
	comp=Z,3.0nm,0.8s						
MNTX	**Cornudas Mount**	21.75	328	eP	P	06 28 23.2	-0.5
	comp=Z,6.7nm,0.9s,mb4.1						
WMOK	**Wichita Mounta**	21.91	345	eP	P	06 28 23.0	-2.3
	comp=Z,3.8nm,1.0s,mb3.8						
AMTX	**Amarillo**	22.91	339	eP	P	06 28 33.7	-1.4
	comp=Z,11nm,0.6s,mb4.5						
ANMO	**Albuquerque**	24.91	331	P	P	06 28 55.5	+0.9
	comp=Z,2.2nm,0.7s,mb3.8,baz=140,slow=10,SNR=15						
ANMO	**Albuquerque**	24.91	331	eP	P	06 28 55.1	+0.5
	comp=Z,2.3nm,0.7s,mb3.8						
PV10	**Paradox Valley**	28.90	332	eP	P	06 29 30.9	-0.2
ARUT	**Antelope Range**	30.68	326	eP	P	06 29 49.0	+2.0
PDAR	**Pinedale Array**	32.75	336	P	P	06 30 06.0	+0.9
	comp=Z,0.4nm,0.7s,mb3.5,baz=143,slow=7.4,SNR=3.9						
PDAR				PcP	PcP	06 32 51.8	+2.0
	comp=Z,0.3nm,0.5s,baz=117,slow=3.3,SNR=3.7						
NVAR	**Mina Array Bea**	33.92	322	P	P	06 30 17.7	+2.4
	comp=Z,2.2nm,0.8s,mb4.2,baz=131,slow=8.7,SNR=21						
NVAR				PcP	PcP	06 32 55.0	+1.9
	comp=Z,0.6nm,0.8s,baz=90,slow=3.6,SNR=4.1						
NVAR	**Mina Array Bea**	33.92	322	P	P	06 30 17.7	+2.4
NVAR				PcP	PcP	06 32 55.0	+1.9
SAML	**Samuel**	36.42	126	eP	P	06 30 36.1	-0.6
	comp=Z,0.5nm,0.6s,mb3.6						
YKA	**Yellowknife Ar**	51.41	347	P	P	06 32 34.6	-2.0
	comp=Z,1.5nm,0.6s,mb4.1,baz=148,slow=7.6,SNR=42						
YKA				PcP	PcP	06 33 50.6	-0.2
	comp=Z,1.4nm,1.0s,baz=150,slow=3.8,SNR=14						
ILAR	**Eielson Array**	63.18	337	P	P	06 33 59.4	-0.4
	comp=Z,1.6nm,0.9s,mb4.2,baz=118,slow=4.9,SNR=13						
WRA	**Warramunga Arr**	135.16	255	PKP	PKPdf	06 42 59.3	+9.4
	comp=Z,0.5nm,0.8s,baz=87,slow=1.6,SNR=5.4						
CMAR	**Chiang Mai Arr**	146.35	341	PKPbc	PKPbc	06 43 14.3	+3.2
	comp=Z,3.8nm,0.6s,baz=335,slow=3.4,SNR=20						

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*NEIC **14** 06:46:36.2±1.9,51.54N×16.04E,h1^{km}±9^{km},ML3.1(VIE), ML2.9(SZGRF),Error ellipse: s-maj=18.0km s-min=7.5km az=190.0*

*IPEC **14** 06:46:36.3±0.3,51.55N×16.15E,h8^{km}±1^{km},ML2.3/2, Error ellipse: s-maj=1.7km s-min=0.6km az=27.0*

*PRU **14** 06:46:37.1,51.50N×16.10E*

*CSEM **14** 06:46:37.2±0.2,51.49N×16.08E,h0^{km},ML3.2/4,Error ellipse: s-maj=3.3km s-min=1.9km az=12.0*

WAR 14 06:46:36.5,51.56N×16.10E,h1^{km},ML2.9,1C,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.72	170	ePg	Pg	06 46 49.7	-1.2
KSP				i Sg	Sg	06 46 59.3	-1.3
KSP	**Ksiaz**	0.72	170	ePg	Pg	06 46 49.7	-1.2
KSP				eSg	Sg	06 46 59.4	-1.2
KSP	**Ksiaz**	0.72	170	ePg	Pg	06 46 49.7	-1.2
KSP				eSg	Sg	06 46 59.2	-1.4
UPC	**Upice**	1.05	183	ePG	Pg	06 46 55.8	-1.7
DPC	**Dobruska-Polom**	1.22	173	ePG	Pg	06 46 58.4	-2.4
DPC				eSG	Sg	06 47 14.2	-2.7
	20nm,0.2s						
DPC	**Dobruska-Polom**	1.22	173	ePg	Pg	06 46 58.5	-2.3
DPC				Sg	Sg	06 47 14.2	-2.7
	20nm,0.2s						
PVCC	**Panska Ves**	1.41	224	ePg	Pg	06 47 02.3	-2.4
PVCC				eSg	Sg	06 47 21.6	-1.9
BRG	**Berggiesshubel**	1.52	244	ePn	Pn	06 47 04.3	-0.6
BRG				eSg	Sg	06 47 24.8	-2.2
PRU	**Pruhonice**	1.85	213	ePN	Pn	06 47 09.2	-0.5
PRU				ePG	Pg	06 47 11.0	-2.5
PRU				eSG	Sg	06 47 34.4	-3.8
PRU	**Pruhonice**	1.85	213	ePn	Pn	06 47 08.9	-0.8
PRU	**Pruhonice**	1.85	213	Pg	Pg	06 47 11.0	-2.5
PRU				eSg	Sg	06 47 34.2	-4.0
CLL	**Collm**	1.95	264	ePn	Pn	06 47 09.0	-2.1
CLL				ePg	Pg	06 47 12.0	-3.5
CLL				eSg	Sg	06 47 38.0	-3.5
CLL	**Collm**	1.95	264	ePN	Pn	06 47 09.0	-2.1
CLL				ePG	Pg	06 47 12.0	-3.5
CLL				i		06 47 16.6	
CLL				eSG	Sg	06 47 38.0	-3.5
CLL	**Collm**	1.95	264	ePg	Pg	06 47 12.0	-3.5
CLL				eSg	Sg	06 47 37.1	-4.4
MORC	**Moravsky Berou**	2.00	152	ePn	Pn	06 47 09.5	-2.4
MORC				eSn	Sn	06 47 35.0	-2.9
MORC	**Moravsky Berou**	2.00	152	ePn	Pn	06 47 10.0	-1.8
MORC				eSn	Sn	06 47 35.0	-2.9
MORC				eSg	Sg	06 47 38.1	-5.1
	17nm,0.3s						
OKC	**Ostrava-Krasne**	2.16	142	eSG	Sg	06 47 44.0	-4.3
VRAC	**Vranov**	2.27	172	ePn	Pn	06 47 14.5	-1.2
KRUC	**Moravsky**	2.50	176	ePn	Pn	06 47 17.6	-1.4
KRUC				eSg	Sg	06 47 54.4	-5.4
	11nm,0.4s						
NKC	**Novy Kostel**	2.66	242	ePN	Pn	06 47 21.7	+0.4
NKC				ePG	Pg	06 47 26.3	-3.4
NKC				eSG	Sg	06 48 01.4	-3.8
NKC	**Novy Kostel**	2.66	242	ePn	Pn	06 47 20.1	-1.2
NKC	**Novy Kostel**	2.66	242	ePg	Pg	06 47 26.3	-3.4
NKC				eSg	Sg	06 48 00.7	-4.5
OJC	**Ojcow**	2.70	118	ePG	Pg	06 47 28.0	-2.4
OJC				eSG	Sg	06 48 03.0	-3.3
OJC	**Ojcow**	2.70	118	ePg	Pg	06 47 28.0	-2.4
OJC				eSg	Sg	06 48 02.6	-3.7
KHC	**Kasperske Hory**	2.92	215	ePG	Pg	06 47 31.3	-3.4
KHC				eSN	Sn	06 47 59.0	-2.0
KHC				eSG	Sg	06 48 07.9	-5.6
KHC	**Kasperske Hory**	2.92	215	ePg	Pg	06 47 31.3	-3.4
KHC				eSn	Sn	06 47 59.0	-2.0
KHC				eSg	Sg	06 48 07.2	-6.3
MOX	**Moxa**	2.97	254	ePg	Pg	06 47 31.6	-4.2
MOX				eSg	Sg	06 48 11.5	-3.8
MOX	**Moxa**	2.97	254	ePg	Pg	06 47 31.6	-4.2
MOX				eSg	Sg	06 48 11.1	-4.2
GEC2	**GERESS Array S**	3.12	211	ePn	Pn	06 47 26.2	-1.6
GEC2				eSg	Sg	06 48 13.8	-6.5
LIKS	**Likavka**	3.16	141	ePG	Pg	06 47 39.2	-0.5
WET	**Wettzell**	3.17	222	ePn	Pn	06 47 27.0	-1.6
WET				eSg	Sg	06 48 15.7	-6.5
NIE	**Niedzica**	3.44	127	eP	Pg	06 47 41.6	-3.5
NIE				eS	Sg	06 48 26.2	-4.8
CLZ	**Clausthal**	3.57	277	ePn	Pn	06 47 32.4	-1.8
MOA	**Molln**	3.90	198	⇑iPN	Pn	06 47 36.7	-2.1
MOA				i SG	Sg	06 48 40.5	-5.7
	6.8nm,0.4s						

IDC 14 06:52:51.2±2.6**,13.30S**×**168.06E,mb3.7**/4**,mb1 3.9**/4**, mb1mx3.7**/14**,mbtmp3.7**/4**,Error ellipse: s-maj=126.2km s-min=28.5km az=136.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	30.50	228	P	P	06 59 06.6	-1.7
	1.0nm,0.7s,baz=39,slow=6.5,SNR=4.6						
WRA	**Warramunga Arr**	32.93	254	P	P	06 59 29.5	-0.3
	0.3nm,0.8s,baz=84,slow=8.5,SNR=3.4						
ASAR	**Alice Springs**	33.91	247	P	P	06 59 34.2	-4.0
	0.4nm,0.5s,baz=76,slow=9.2,SNR=11						
ILAR	**Eielson Array**	84.94	18	P	P	07 05 27.9	-1.2
	1.0nm,0.6s,baz=239,slow=5.0,SNR=20						

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*IDC **14** 07:06:29.0±1.8,2.42N×96.01E,mb3.9/4,mb1 4.2/5, mb1mx3.9/17,mbtmp3.9/5,ML4.0/1,MS3.6/2,Ms1 3.8/2, ms1mx3.0/22,Error ellipse: s-maj=65.9km s-min=30.3km az=62.0*

*BJI **14** 07:06:32.3,2.12N×96.06E,h46^{km}*

*NEIC **14** 07:06:32.8±1.2,2.46N×96.16E,h30^{km},mb4.5/5,Error ellipse: s-maj=41.8km s-min=16.3km az=62.0*

ISC 14 07:06:30.7±1.1**,2.4N**±0.1×**96.1E**±0.2**,h30**^{km}**,n13,** σ1§**23**/12**,mb4.2**/8**,MS3.8**/1**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	16.23	10	eP	P	07 10 18.1	-0.4
	17nm,1.0s						
CMAR	**Chiang Mai Arr**	16.23	10	Pn	P	07 10 19.9	+1.5
	0.2nm,0.3s,baz=204,slow=11,SNR=13						
CMAR				LR	LR	07 17 55.8	
	comp=Z,195nm,18.7s,baz=195,slow=42						
CMAR	**Chiang Mai Arr**	16.23	10	Pn	P	07 10 19.9	+1.5
CMAR				LR	LR	07 17 55.8	
LSA	**Lhasa**	27.57	351	P	P	07 12 20.8	+3.4
LSA	**Lhasa**	27.57	351	eP	P	07 12 15.4	-2.0
	7.8nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	43.63	122	eP	P	07 14 33.1	-1.5
	4.5nm,0.5s,mb4.5						
ASAR	**Alice Springs**	45.01	127	P	P	07 14 47.1	+1.4
	0.5nm,0.8s,mb3.4,baz=293,slow=6.6,SNR=4.0						
SONM	**Songino Array**	46.16	10	P	P	07 14 54.1	-0.4
	1.2nm,0.8s,mb3.9,baz=189,slow=8.1,SNR=9.5						
ZAL	**Zalesovo**	52.22	352	P	P	07 15 41.5	+0.4
	3.5nm,0.5s,mb4.5,baz=314,slow=5.8,SNR=13						
BRVK	**Borovoye**	54.84	341	P	P	07 15 60.0	-0.5
	2.9nm,0.7s,mb4.4						
CHKZ	**Chkalovo**	55.26	342	eP	P	07 16 02.1	-1.4
	6.4nm,0.8s,mb4.7						
TSUM	**Tsumeb**	79.90	250	LR	LR	07 52 51.3	
	comp=Z,40nm,18.3s,MS3.8,baz=321,slow=35						
GERES	**GERESS Array B**	83.18	319	P	P	07 18 57.1	+1.6
	1.0nm,0.7s,mb4.0,baz=90,slow=6.9,SNR=5.9						

BJI 14 07:12:37.2,30.31N×115.70E,h13^{km},mB4.7,mb4.4,

ML4.0,Ms3.6,Msz3.5,1C,Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHN	**Wuhan**	**1.19**	**282**	⇑PG	Pg	07 12 57.3	-3.8
WHN				SG	Sg	07 13 13.3	-3.7
WHN				Smax			
	comp=N,1µm,0.8s						
WHN				Smax			
	comp=E,943nm,0.8s						
NJ2	**Nanjing**	**3.21**	**56**	*e*PG	Pg	07 13 33.3	-8.1
NJ2				SG	Sg	07 14 13.4	-11
NJ2				Smax			
	comp=N,2µm,0.8s						
NJ2				Smax			
	comp=E,1µm,0.7s						
TIA	**Tai’an**	**6.00**	**11**	*e*P	Pn	07 14 09.5	+1.5
TIA				PG	Pg	07 14 24.8	-12
TIA				SG	Sg	07 15 41.3	-16
TIA				Smax			
	comp=N,38nm,0.5s						
TIA				Smax			
	comp=E,63nm,0.6s						
XAN	**Xi’an**	**6.84**	**305**	P	Pn	07 14 17.4	-2.4
XAN				PG	Pg	07 14 37.0	-17
XAN				SG	Sg	07 16 01.8	-23
XAN				Smax			
	comp=N,71nm,0.9s						
XAN				Smax			
	comp=E,116nm,0.9s						
GYA	**Guiyang**	**8.83**	**246**	P	P	07 14 51.3	+3.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
LZH	**Lanzhou**	**11.48**	**303**	*e*P	P	07 15 25.0	+1.1
LZH				AP		07 15 29.0	
LZH				XP		07 15 32.5	
LZH				PP	PP	07 15 34.0	+1.2
LZH				*e*S	S	07 17 32.0	-0.9
LZH				XS		07 17 38.0	
LZH				SS	SS	07 17 46.0	-1.1
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,100nm,5.0s						
LZH				LR	LR		
	comp=N,205nm,10.0s						
LZH				LR	LR		
	comp=Z,233nm,10.6s						

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*NEIC **14** 07:19:53.1±1.0, 14.53N×92.07E, mb4.3/4, Error ellipse: s-maj=26.3km s-min=10.4km az=52.0*

*IDC **14** 07:19:54.5±1.3, 14.60N×93.21E, mb4.0/5, mb1 4.1/6, mb1mx3.8/17, mbtmp3.8/6, Error ellipse: s-maj=61.1km s-min=22.0km az=56.0*

ISC 14 07:19:50.6±0.8, 14.4N±0.1×91.89E±0.10, h28^{km}, n17, σ1^{s}00/15, mb4.1/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.89**	**58**	Pn	**Pn**	**07 21 41.4**	**-5.1**
	baz=169,slow=15,SNR=2.7						
VIS	**Vishakhapatnam**	**8.87**	**293**	*e*	**Sn**	**07 23 40.7**	**+0.6**
JIRN	**Jiri**	**14.24**	**339**	*e*P	**P**	**07 23 11.0**	**-1.7**
PKI	**Pulchoki**	**14.45**	**336**	*e*P	**P**	**07 23 14.1**	**-1.3**
GUN	**Gumba**	**14.58**	**338**	*e*P	**P**	**07 23 16.4**	**-0.7**
DMN	**Daman**	**14.60**	**335**	*e*P	**P**	**07 23 16.5**	**-0.9**
	28nm,0.7s						
GKN	**Gorkha**	**15.14**	**335**	*e*P	**P**	**07 23 23.9**	**-0.5**
	18nm,0.2s						
LSA	**Lhasa**	**15.26**	**358**	P	**P**	**07 23 27.1**	**+1.1**
	4.0nm,0.6s						
KOLN	**Koldanda**	**15.40**	**331**	*e*P	**P**	**07 23 28.0**	**+0.2**
	9.3nm,0.3s						
SONM	**Songino Array**	**35.47**	**17**	P	**P**	**07 26 47.7**	**+1.1**
	0.6nm,1.0s,mb3.5,baz=205,slow=9.0,SNR=3.5						
KURK	**Kurchatov**	**37.80**	**346**	*e*P	**P**	**07 27 07.8**	**+1.5**
	8.8nm,1.3s,mb4.3						
KURK				*e*	pP	07 27 16.1	+1.4
CHKZ	**Chkalovo**	**42.64**	**341**	*e*P	**P**	**07 27 47.9**	**+1.7**
	2.4nm,0.6s,mb4.1						
CHKZ				*e*	pP	07 27 56.2	+1.6
WRA	**Warramunga Arr**	**53.91**	**128**	P	**P**	**07 29 13.7**	**-0.5**
	2.5nm,0.7s,mb4.2,baz=309,slow=7.5,SNR=25						
WRAB	**Tennant Creek**	**53.92**	**128**	*e*P	**P**	**07 29 13.6**	**-0.6**
	4.4nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**55.83**	**132**	P	**P**	**07 29 28.2**	**0.0**
	1.0nm,0.4s,mb4.2,baz=311,slow=6.9,SNR=21						
FINES	**FINESS Array B**	**65.97**	**331**	P	pP	07 30 45.3	+0.2
	2.2nm,0.9s,baz=149,slow=8.1,SNR=4.7						
GERES	**GERESS Array B**	**71.56**	**317**	P	pP	07 31 21.8	+1.8
	1.1nm,0.9s,baz=90,slow=4.0,SNR=4.0						

CASC 14 07:48:23.2±2.5, 11.09N×87.21W, h18^{km}±9^{km}, MD4.1, ML3.2, 6C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**1.24**	**29**	⇓*i*P	Pb	07 48 45.0	-0.7
COPN				*e*S	Sb	07 49 01.8	+0.5
TICN	**Ticuantepe**	**1.34**	**45**	*e*P	Pn	07 48 46.5	-0.7
SSNN	**San Juan del S**	**1.34**	**82**	⇑*e*P	Pn	07 48 46.1	-1.2
LEON	**Leon**	**1.35**	**13**	⇑*e*P	Pn	07 48 47.1	-0.3
LEON				*e*S	Sb	07 49 07.4	+2.8
XAVN	**Gruta Xavier**	**1.36**	**39**	⇑*e*P	Pn	07 48 46.2	-1.3
MASN	**Masaya**	**1.36**	**49**	*e*P	Pn	07 48 49.9	+2.3
APON	**Apoyo**	**1.38**	**54**	*e*P	Pn	07 48 46.2	-1.7
MGAN	**Managua**	**1.41**	**42**	⇓*e*P	Pn	07 48 47.0	-1.2
MGAN				*e*S	Sb	07 49 07.8	+1.7
MGAN				*i*		07 49 08.0	
	comp=E,783nm,0.3s						
APYN	**Apoyeque**	**1.41**	**36**	⇓*e*P	Pn	07 48 47.3	-1.0
APYN				*e*S	Sb	07 49 08.9	+2.7
MIRN	**Miramar**	**1.42**	**20**	*e*P	Pn	07 48 47.7	-0.8
WILN	**Americas 2**	**1.46**	**43**	⇑*e*P	Pn	07 48 47.5	-1.4
WILN				*e*S	Sb	07 49 05.8	-1.8
MOMJ	**Momotombo**	**1.46**	**26**	⇑*e*P	Pn	07 48 48.0	-1.0
MOMJ				*e*S	Sb	07 49 08.1	+0.3
CNGN	**Cerro Negro**	**1.48**	**19**	*e*P	Pn	07 48 50.1	+0.8
TEL3	**Telica 3**	**1.51**	**13**	⇑*e*P	Pn	07 48 49.2	-0.5
TELN	**Telica**	**1.55**	**14**	*e*P	Pn	07 48 49.4	-0.8
TELN				*e*S	Sn	07 49 12.8	+2.8
CONN	**Concepcion**	**1.62**	**73**	*e*P	Pn	07 48 50.8	-0.4
MADN	**Villa Maderas**	**1.67**	**79**	*e*P	Pn	07 48 51.9	-0.1
PYTN	**Playitas**	**1.82**	**38**	*e*P	Pn	07 48 52.7	-1.4
PYTN				*e*S	Sn	07 49 17.0	0.0
QUIN	**Quiabu**	**2.16**	**21**	*e*P	Pn	07 48 57.3	-1.7
CNCH	**Conchagua**	**2.26**	**344**	*e*P	Pn	07 48 59.9	-0.5
JCR	**Jicaral**	**2.40**	**121**	*e*P	Pn	07 49 01.4	-1.0
LCBS	**La Ceiba**	**3.08**	**326**	*e*P	Pn	07 49 12.2	+0.1
LCBS				*e*S	Sn	07 49 46.7	-2.2
LFRS	**El Faro**	**3.10**	**324**	*e*P	Pn	07 49 13.4	+1.0
LFRS				*e*S	Sn	07 49 47.4	-2.0
BOQS	**Boqueron**	**3.32**	**323**	*e*P	Pn	07 49 16.2	+0.7
LCR2	**La Lucha 2**	**3.42**	**113**	*e*P	Pn	07 49 18.4	+1.4
SBLS	**San Blas**	**3.61**	**319**	*e*P	Pn	07 49 21.1	+1.4
SBLS				*e*S	Sn	07 50 01.5	-0.7
BUS	**Buena Vista**	**3.72**	**114**	*e*P	Pn	07 49 20.9	-0.3

MAN 14 07:51:26.1, 9.20N×121.84E, h7^{km}, mb3.7, ML2.5, MS2.0, 2D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**1.38**	**84**	⇓*e*P	Pb	07 51 51.5	-0.3
IPIL	**Ipil**	**1.58**	**153**	*e*P	Pn	07 51 54.5	-0.2
IPIL				*e*S	Sb	07 52 12.0	-3.2
GUIM	**Jordan**	**1.60**	**27**	*e*P	Pn	07 51 55.0	+0.1
DCPH	**Dipolog City**	**1.61**	**112**	⇓*e*P	Pn	07 51 54.3	-0.8
DCPH				*i* S	Sb	07 52 15.2	-1.0
CUYO	**Cuyo Island**	**1.83**	**334**	*e*P	Pn	07 51 59.2	+1.0
PAGZ	**Pagadian**	**2.03**	**131**	*e*P	Pn	07 52 02.3	+1.2
PAGZ				*e*S	Sn	07 52 25.0	-2.0
ENPP	**El Nido**	**3.10**	**310**	*e*P	Pn	07 52 16.7	+0.2

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*LDG **14** 08:04:36.8±0.1, 37.46N×3.37W, h10^{km}, Ml3.6/4, Error ellipse: s-maj=2.9km s-min=2.3km az=147.0*

*NEIC **14** 08:04:37.4, 37.49N×3.38W, h11^{km}, MN3.5(MDD), After MDD.*

*IGIL **14** 08:04:37.0, 37.50N×3.40W, h2^{km}, ML3.4*

*CSEM **14** 08:04:37.9±0.1, 37.47N×3.38W, h20^{km}, ML3.6/22, Error ellipse: s-maj=2.2km s-min=1.6km az=153.0*

*SFS **14** 08:04:37.0, 37.49N×3.36W*

*INMG **14** 08:04:37.8±1.0, 37.49N×3.44W, h22^{km}±2^{km}, ML3.3, Error ellipse: s-maj=1.7km s-min=1.4km az=129.0*

MDD 14 08:04:37.4±0.2, 37.49N×3.38W, h11^{km}, mbLg3.4/29, 5C-4D, Error ellipse: s-maj=2.4km s-min=1.3km az=128.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECOG	**Cogollos-Vega**	**0.26**	**216**	P	Pg	08 04 42.7	-0.2
ECOG	**Cogollos-Vega**	**0.26**	**216**	⇑Pg	Pg	08 04 42.5	-0.5
	SNR=18						
EQES	**Quesada**	**0.40**	**38**	P	Pg	08 04 45.3	-0.3
EQES				Lg		08 04 51.2	
EQES	**Quesada**	**0.40**	**38**	⇑Pg	Pg	08 04 45.3	-0.4
	159nm,0.1s,SNR=18						
EQES				Lg		08 04 51.2	
	1µm,0.1s,SNR=7.9						
EQES	**Quesada**	**0.40**	**38**	Pg	Pg	08 04 45.2	-0.5
	159nm,0.1s,SNR=18						
ERON	**Agron**	**0.58**	**216**	P	Pb	08 04 48.6	-0.5
ERON				Lg		08 04 56.4	
ERON	**Agron**	**0.58**	**216**	⇓Pg	Pg	08 04 48.1	-1.0
	70nm,0.2s,SNR=18						
ERON				Lg		08 04 57.0	
	132nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**0.70**	**242**	P	Pb	08 04 50.7	-0.5
ELOJ				Lg		08 05 02.2	
ELOJ	**Sierra Loja**	**0.70**	**242**	⇑Pg	Pg	08 04 50.5	-1.1
	26nm,0.1s,SNR=18						
ELOJ				Lg		08 05 00.7	
	110nm,0.2s,SNR=7.9						
EBER	**Berja**	**0.70**	**146**	⇓Pg	Pg	08 04 50.1	-1.5
	57nm,0.1s,SNR=18						
EBER				Lg		08 04 59.9	
	938nm,0.6s,SNR=7.9						
EBER	**Berja**	**0.70**	**146**	Pg	Pg	08 04 50.1	-1.6
	57nm,0.1s,SNR=18						
ELUQ	**Luque**	**0.71**	**276**	P	Pb	08 04 51.4	+0.1
ELUQ				Lg		08 05 01.7	
ELUQ	**Luque**	**0.71**	**276**	Pg	Pg	08 04 51.1	-0.7
	117nm,0.2s,SNR=7.9						
ELUQ				Lg		08 05 01.0	
	238nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**0.75**	**335**	P	Pb	08 04 51.4	-0.6
EBAN				Lg		08 05 00.1	
EBAN	**Banos Encina**	**0.75**	**335**	⇓Pg	Pg	08 04 51.3	-1.3
	184nm,0.2s,SNR=18						
EBAN				Lg		08 05 00.9	
	184nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**1.07**	**118**	P	Pb	08 04 57.7	+0.3
ENIJ				Lg		08 05 11.4	
ENIJ	**Nijar**	**1.07**	**118**	Pg	Pg	08 04 57.6	-1.2
	119nm,0.3s,SNR=7.9						
ENIJ				Lg		08 05 11.4	
	95nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.11**	**230**	⇓Pg	Pn	08 04 57.8	-1.0
EMAL				Lg		08 05 12.0	
EMAL	**Malaga-Limoner**	**1.11**	**230**	Pg	Pn	08 04 57.8	-1.0
	20nm,0.1s,SNR=18						
EMAL				Lg		08 05 12.0	
	80nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**1.17**	**306**	P	Pb	08 04 58.5	-0.7
EADA				Lg		08 05 12.2	
EADA	**Adamuz**	**1.17**	**306**	Pn	Pn	08 04 57.8	-1.9
	0.3nm,0.0s,SNR=7.9						
EADA				Pg	Pg	08 04 58.5	-2.3
	53nm,0.2s,SNR=7.9						
EADA				Lg		08 05 13.8	
	2µm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.17**	**306**	Pn	Pn	08 04 57.8	-1.9
	0.3nm,0.0s,SNR=7.9						
EADA	**Adamuz**	**1.17**	**306**	Pg	Pg	08 04 58.5	-2.3
	53nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**1.34**	**31**	P	Pb	08 05 00.2	-1.9
EVIA				Lg		08 05 18.3	
EVIA	**Vianos**	**1.34**	**31**	Pn	Pn	08 05 00.3	-1.9
	16nm,0.3s,SNR=7.9						
EVIA				Pg	Pg	08 05 01.3	-3.0
	116nm,0.2s						
EVIA				Lg		08 05 18.1	
	235nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.45**	**231**	P	Pn	08 05 03.3	-0.4
EMIJ				Lg		08 05 23.9	
EMIJ	**Mijas**	**1.45**	**231**	Pn	Pn	08 05 01.9	-1.8
	4.5nm,0.3s,SNR=7.9						
EMIJ				Pg	Pg	08 05 03.3	-3.1
	45nm,0.2s,SNR=7.9						
EMIJ				Lg		08 05 23.9	
	261nm,0.4s,SNR=7.9						
EALB	**Alboran**	**1.57**	**170**	P	Pn	08 05 02.1	-3.3
EALB				Lg		08 05 24.0	
EALB	**Alboran**	**1.57**	**170**	Pn	Pn	08 05 02.1	-3.3
	7.6nm,0.1s,SNR=4.0						
EALB				Lg		08 05 23.8	
	174nm,0.3s,SNR=4.0						
EALB	**Alboran**	**1.57**	**170**	Pn	Pn	08 05 02.1	-3.3
	7.6nm,0.1s,SNR=4.0						
LIJA	**Lijar**	**1.72**	**251**	⇑P	Pn	08 05 07.6	+0.1
LIJA				S	Sn	08 05 32.5	+2.9
LIJA	**Lijar**	**1.72**	**251**	*i* P	Pn	08 05 07.6	+0.1
LIJA				*e*S	Sn	08 05 32.5	+2.9
EMUR	**La Murta**	**1.73**	**78**	P	Pn	08 05 08.0	+0.2
EMUR				Lg		08 05 29.5	
EMUR	**La Murta**	**1.73**	**78**	Pg	Pn	08 05 07.7	-0.1
	23nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	08 05 27.6	-2.4
	24nm,0.2s,SNR=4.0						
EMUR				Lg		08 05 31.1	
	154nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**1.73**	**78**	Pg	Pn	08 05 07.7	-0.1
	23nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	08 05 27.6	-2.4
	24nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	**1.85**	**51**	P	Pn	08 05 10.3	+0.8
ETOB				Lg		08 05 34.1	
ETOB	**Tobarra**	**1.85**	**51**	Pn	Pn	08 05 07.6	-1.8
	4.6nm,0.2s,SNR=7.9						
ETOB				Pg	Pg	08 05 11.2	-3.2
	20nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	08 05 30.1	-2.9
	96nm,0.2s,SNR=7.9						
ETOB				Lg		08 05 34.1	
	187nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**1.85**	**51**	Pn	Pn	08 05 07.6	-1.8
	4.6nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.85**	**51**	P	Pn	08 05 10.3	+0.9
ETOB	**Tobarra**	**1.85**	**51**	Pg	Pg	08 05 11.2	-3.2
	20nm,0.1s,SNR=7.9						
ETOB				Sn	Sn	08 05 30.1	-2.9
	96nm,0.2s,SNR=7.9						
CART	**Cartagena**	**1.89**	**86**	*e*Pn	Pn	08 05 08.1	-2.0
CART				*e*Sn	Sn	08 05 30.0	-4.0
CART	**Cartagena**	**1.89**	**86**	*e*Pn	Pn	08 05 08.1	-1.9
CART				*e*Sn	Sn	08 05 30.0	-4.0
EJIF	**Jimena Fronter**	**1.97**	**239**	P	Pn	08 05 10.5	-0.6
EJIF	**Jimena Fronter**	**1.97**	**239**	Pn	Pn	08 05 10.2	-0.9
	1.9nm,0.1s,SNR=4.0						
ESPR	**Espera**	**2.07**	**253**	P	Pn	08 05 12.1	-0.5
ESPR				Lg		08 05 43.0	
ESPR	**Espera**	**2.07**	**253**	Pn	Pn	08 05 11.2	-1.4
	2.3nm,0.2s,SNR=7.9						
ESPR				Pg	Pg	08 05 16.4	-2.5
	15nm,0.1s,SNR=7.9						
ESPR				Lg		08 05 46.0	
	88nm,0.2s,SNR=7.9						
ESPR	**Espera**	**2.07**	**253**	Pn	Pn	08 05 11.2	-1.4
	2.3nm,0.2s,SNR=7.9						
ESPR	**Espera**	**2.07**	**253**	P	Pn	08 05 12.1	-0.5
ESPR	**Espera**	**2.07**	**253**	Pg	Pg	08 05 16.4	-2.5
	15nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**2.23**	**348**	P	Pn	08 05 13.3	-1.6
ESDC				Lg		08 05 48.4	
ESDC	**Sonseca Array**	**2.23**	**348**	Pn	Pn	08 05 13.2	-1.8
	4.8nm,0.4s,baz=172,slow=12,SNR=7.9						
ESDC				Pg	Pg	08 05 17.7	-4.4
	54nm,0.2s,baz=171,slow=16,SNR=7.9						
ESDC				Sn	Sn	08 05 40.6	-2.1
	6.6nm,0.1s,baz=158,slow=27,SNR=7.9						
ESDC				Lg		08 05 48.4	
	128nm,0.1s,baz=168,slow=27,SNR=7.9						
ESDC	**Sonseca Array**	**2.23**	**348**	Pn	Pn	08 05 13.2	-1.7
	4.8nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**2.23**	**348**	Pg	Pg	08 05 17.7	-4.4
	54nm,0.2s,SNR=7.9						
ESDC				Sn	Sn	08 05 40.6	-2.1
	6.6nm,0.1s,SNR=7.9						
ESLA	**Sonseca Array**	**2.23**	**348**	*e*Pn	Pn	08 05 13.1	-1.9
ESLA				*e*Pb	Pb	08 05 17.8	+0.4
ESLA				*e*Pg	Pg	08 05 20.1	-2.0
ESLA				*e*S	Sn	08 05 45.9	+3.2
ESLA	**Sonseca Array**	**2.23**	**348**	*e*Pn	Pn	08 05 13.1	-1.8
ESLA	**Sonseca Array**	**2.23**	**348**	*e*Pb	Pb	08 05 17.8	+0.4
EMIN	**Mina Concepcio**	**2.63**	**277**	P	Pn	08 05 16.8	-3.8
EMIN				Lg		08 05 57.6	
EMIN	**Mina Concepcio**	**2.63**	**277**	⇑Pn	Pn	08 05 17.3	-3.3
	5.6nm,0.1s,SNR=18						
EMIN				Pg	Pg	08 05 23.9	-6.1
	4.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	08 05 48.9	-3.9
	21nm,0.2s,SNR=7.9						
EMIN				Lg		08 05 57.9	
	46nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.63**	**277**	P	Pn	08 05 16.8	-3.8
EMIN	**Mina Concepcio**	**2.63**	**277**	Pn	Pn	08 05 17.3	-3.3
	5.6nm,0.1s,SNR=18						
EMIN	**Mina Concepcio**	**2.63**	**277**	Pg	Pg	08 05 23.9	-6.1
	4.3nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	08 05 48.9	-3.9
	21nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**2.77**	**63**	P	Pn	08 05 20.6	-2.0
EBEN				Lg		08 06 04.1	
EBEN	**Beniarda**	**2.77**	**63**	Pn	Pn	08 05 20.7	-1.9
	2.3nm,0.1s,SNR=7.9						
EBEN				Pg	Pg	08 05 27.2	-5.5
	4.3nm,0.1s,SNR=4.0						
EBEN				Sn	Sn	08 05 53.3	-3.0
	25nm,0.4s,SNR=4.0						
EBEN				Lg		08 06 04.1	
	56nm,0.4s,SNR=7.9						
EBEN	**Beniarda**	**2.77**	**63**	Pn	Pn	08 05 20.7	-1.9
	2.3nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**2.77**	**63**	Pg	Pg	08 05 27.2	-5.6
	4.3nm,0.1s,SNR=4.0						
EBEN				Sn	Sn	08 05 53.3	-3.0
	25nm,0.4s,SNR=4.0						
PALC	**Alcoutim**	**3.26**	**271**	*e*Pn	Pn	08 05 25.9	-3.7
PALC				*e*Sn	Sn	08 06 02.1	-6.6
PALC				*e*Sg	Sg	08 06 16.0	-10
	109nm,0.5s						
PALC	**Alcoutim**	**3.26**	**271**	Pn	Pn	08 05 25.9	-3.7
PALC				Sn	Sn	08 06 02.1	-6.6
PALC				*e*Sg	Sg	08 06 16.0	-10
	109nm,0.5s						
PBEJ	**Beja**	**3.60**	**280**	*e*Pn	Pn	08 05 30.6	-3.8
PBEJ				*e*Sn	Sn	08 06 10.5	-6.8
PBEJ				*e*Sg	Sg	08 06 26.7	-11
	30nm,0.3s						
PBEJ	**Beja**	**3.60**	**280**	Pn	Pn	08 05 30.5	-3.9
PBEJ				Sn	Sn	08 06 10.5	-6.8
PBEJ	**Beja**	**3.60**	**280**	*e*Pn	Pn	08 05 30.6	-3.8
PBEJ				Sn	Sn	08 06 10.5	-6.8
PBEJ				*e*Sg	Sg	08 06 26.7	-11
	30nm,0.3s						
EMOS	**Mosqueruela**	**3.66**	**37**	P	Pn	08 05 33.4	-1.8
EMOS				Lg		08 06 14.4	
EMOS	**Mosqueruela**	**3.66**	**37**	Pn	Pn	08 05 33.3	-2.0
	0.5nm,0.2s,SNR=7.9						
EMOS				Pg	Pg	08 05 42.6	-7.9
	3.6nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	08 06 14.2	-4.7
	7.6nm,0.2s,SNR=7.9						
EMOS				Lg		08 06 30.3	
	64nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**3.66**	**37**	Pn	Pn	08 05 33.3	-1.9
	0.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**3.66**	**37**	Pg	Pg	08 05 42.6	-7.9
	3.6nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	08 06 14.2	-4.6
	7.6nm,0.2s,SNR=7.9						
EVO	**Evora**	**3.81**	**287**	*e*Pn	Pn	08 05 35.2	-2.1
EVO				*e*Pg	Pg	08 05 46.8	-6.7
EVO				*e*Sn	Sn	08 06 18.4	-4.2
EVO				*e*Sg	Sg	08 06 37.5	-6.7
	116nm,0.3s						
PCBR	**Castelo Branco**	**3.98**	**307**	*e*Pn	Pn	08 05 36.4	-3.3
PCBR				*e*Sn	Sn	08 06 19.9	-7.0
PCBR				*e*Sg	Sg	08 06 37.8	-12
	77nm,0.4s						
PCBR	**Castelo Branco**	**3.98**	**307**	Pn	Pn	08 05 36.6	-3.1
PCBR				Sn	Sn	08 06 19.8	-7.1
PCBR	**Castelo Branco**	**3.98**	**307**	*e*Pn	Pn	08 05 36.4	-3.3
PCBR				*e*Sn	Sn	08 06 19.9	-7.0
PCBR				*e*Sg	Sg	08 06 37.8	-12
	77nm,0.4s						
MOE	**Montemor**	**4.06**	**286**	*e*Sn	Sn	08 06 22.2	-6.8
MOE				*e*Sg	Sg	08 06 40.8	-12
MOE	**Montemor**	**4.06**	**286**	Sn	Sn	08 06 22.1	-6.9
MOE				Lg		08 06 40.7	
MOE	**Montemor**	**4.06**	**286**	Sn	Sn	08 06 22.1	-6.9
MOE				*e*Sg	Sg	08 06 40.8	-12
PTEO	**Sao Teotonio**	**4.25**	**272**	*e*Pn	Pn	08 05 39.8	-3.8
PTEO				*e*Sn	Sn	08 06 27.1	-6.7
	53nm,0.5s						
PTEO	**Sao Teotonio**	**4.25**	**272**	Pn	Pn	08 05 39.8	-3.8
PTEO				*e*Sn	Sn	08 06 27.1	-6.7
	53nm,0.5s						
MTE	**Manteigas**	**4.36**	**313**	*e*Sn	Sn	08 06 30.3	-6.3
MTE				*e*Sg	Sg	08 06 50.4	-12
	66nm,0.5s						
MTE	**Manteigas**	**4.36**	**313**	Sn	Sn	08 06 30.0	-6.6
MTE				*e*Sg	Sg	08 06 50.4	-12
	66nm,0.5s						
ALMR	**Almeirim**	**4.42**	**294**	*e*P	Pn	08 05 42.9	-3.1
ALMR				*e*S	Sn	08 06 30.7	-7.3
ALMR				*e*S	Sn	08 06 30.7	-7.3
ALMR				AML	AML	08 06 32.4	
	comp=N,68nm,0.6s						
EBR	**Ebro Roquetas**	**4.49**	**41**	*e*S*S*		08 06 57.0	
ERTA	**Horta de San J**	**4.51**	**39**	Pn	Pn	08 05 44.1	-3.2
ERTA				Lg		08 06 54.6	
ERTA	**Horta de San J**	**4.51**	**39**	Pn	Pn	08 05 44.5	-2.7
	comp=N,4.1nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	08 05 58.0	-9.4
	comp=N,1.0nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	08 06 34.4	-5.9
	comp=N,7.3nm,0.2s,SNR=7.9						
ERTA				Lg		08 06 56.5	
	comp=N,66nm,0.6s,SNR=7.9						
ERTA	**Horta de San J**	**4.51**	**39**	Pn	Pn	08 05 44.5	-2.8
	comp=N,4.1nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**4.51**	**39**	Pg	Pg	08 05 58.0	-9.4
	comp=N,1.0nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	08 06 34.4	-5.9
	comp=N,7.3nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**4.77**	**314**	*e*Pn	Pn	08 05 47.1	-3.9
PVIS				*e*Sn	Sn	08 06 39.5	-7.4
	comp=N,27nm,0.3s						
PVIS	**Viseu**	**4.77**	**314**	Pn	Pn	08 05 47.0	-4.0
PVIS				Sn	Sn	08 06 39.4	-7.5
ESAC	**San Caprasio**	**4.79**	**27**	Lg		08 07 07.5	
	comp=N,250nm,0.5s,SNR=4.0						
PBRG	**Braganca**	**5.03**	**330**	*e*Pn	Pn	08 05 51.4	-3.3
PBRG				*e*Sn	Sn	08 06 46.1	-7.5
PBRG				*e*Sg	Sg	08 07 11.6	-13
	comp=N,20nm,0.3s						
PVRL	**Vila Real**	**5.06**	**320**	*e*Pn	Pn	08 05 52.3	-2.8
PVRL				*e*Sn	Sn	08 06 46.4	-7.9
	comp=N,40nm,0.3s						
ECAL	**Calabor**	**5.15**	**331**	Pn	Pn	08 05 53.6	-2.8
ECAL				Sn	Sn	08 06 48.3	-8.1
ECAL				Lg		08 07 18.6	
ECAL	**Calabor**	**5.15**	**331**	Pn	Pn	08 05 53.1	-3.2
	comp=N,1.7nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	08 06 48.7	-7.8
	comp=N,17nm,0.5s,SNR=7.9						
ECAL				Lg		08 07 19.0	
	comp=N,89nm,0.6s,SNR=7.9						
ECAL	**Calabor**	**5.15**	**331**	Pn	Pn	08 05 53.6	-2.7
ECAL				Sn	Sn	08 06 48.7	-7.8
	comp=N,17nm,0.5s,SNR=7.9						
EPOB	**Poblet**	**5.18**	**40**	Pn	Pn	08 05 53.2	-3.6
EPOB				Sn	Sn	08 06 49.4	-7.8
EPOB				Lg		08 07 19.7	
EPOB	**Poblet**	**5.18**	**40**	Pn	Pn	08 05 53.4	-3.4
	comp=N,3.7nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	08 06 49.4	-7.8
	comp=N,12nm,0.9s,SNR=7.9						

EPOB				Lg		08 07 17.4	
	comp=N,27nm,0.6s,SNR=7.9						
EPOB	**Poblet**	**5.18**	**40**	Pn	Pn	08 05 53.4	-3.4
	comp=N,3.7nm,0.1s,SNR=7.9						
EPOB				Sn	Sn	08 06 49.4	-7.8
	comp=N,12nm,0.9s,SNR=7.9						
ELOB	**Lobios**	**5.67**	**322**	Pn	Pn	08 06 01.1	-2.6
ELOB				Sn	Sn	08 07 01.5	-8.1
ELOB				Lg		08 07 33.9	
ELOB	**Lobios**	**5.67**	**322**	Pn	Pn	08 06 01.0	-2.8
	comp=N,4.4nm,0.1s,SNR=7.9						
ELOB				Pg	Pg	08 06 18.0	-13
	comp=N,3.4nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	08 07 00.2	-9.5
	comp=N,5.3nm,0.1s,SNR=7.9						
ELOB				Lg		08 07 34.3	
	comp=N,34nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**5.67**	**322**	Pn	Pn	08 06 01.0	-2.8
	comp=N,4.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**5.67**	**322**	Pg	Pg	08 06 18.0	-13
	comp=N,3.4nm,0.2s,SNR=7.9						
ELOB				Sn	Sn	08 07 01.5	-8.1
ELAN	**Lanestosa**	**5.74**	**360**	Pn	Pn	08 06 01.1	-3.6
ELAN				Lg		08 07 39.5	
ELAN	**Lanestosa**	**5.74**	**360**	Pn	Pn	08 06 01.1	-3.6
	comp=N,1.2nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	08 07 03.7	-7.6
	comp=N,2.9nm,0.2s,SNR=7.9						
ELAN				Lg		08 07 36.3	
	comp=N,114nm,0.9s,SNR=7.9						
ELAN	**Lanestosa**	**5.74**	**360**	Pn	Pn	08 06 01.1	-3.6
	comp=N,1.2nm,0.2s,SNR=7.9						
ELAN				Sn	Sn	08 07 03.7	-7.6
	comp=N,2.9nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.82**	**39**	Pn	Pn	08 06 02.3	-3.5
	comp=N,8.1nm,0.1s,SNR=7.9						
EMIR				Sn	Sn	08 07 05.5	-7.8
	comp=N,4.5nm,0.3s,SNR=7.9						
EMIR				Lg		08 07 38.4	
	comp=N,20nm,0.4s,SNR=4.0						
EMIR	**Miracle**	**5.82**	**39**	Pn	Pn	08 06 02.3	-3.5
	comp=N,8.1nm,0.1s,SNR=7.9						
EMIR				Sn	Sn	08 07 05.5	-7.8
	comp=N,4.5nm,0.3s,SNR=7.9						
ETSF	**Etsaut**	**5.82**	**21**	*e*Pn	Pn	08 06 03.0	-2.8
ETSF				*e*Sn	Sn	08 07 05.0	-8.3
ETSF				*e*Sg	Sg	08 07 38.5	-13
	comp=N,7.5nm,0.3s						
EBIE	**Bielsa**	**5.85**	**26**	Pn	Pn	08 06 03.8	-2.5
	comp=N,0.7nm,0.1s,SNR=7.9						
EBIE				Sn	Sn	08 07 06.6	-7.5
	comp=N,1.7nm,0.5s,SNR=7.9						
EBIE				Lg		08 07 40.5	
	comp=N,18nm,0.6s,SNR=7.9						
EBIE	**Bielsa**	**5.85**	**26**	Pn	Pn	08 06 03.8	-2.5
	comp=N,0.7nm,0.1s,SNR=7.9						
EBIE				Sn	Sn	08 07 06.6	-7.6
	comp=N,1.7nm,0.5s,SNR=7.9						
SJPF	**Ste Jean**	**5.86**	**16**	*e*Pn	Pn	08 06 02.2	-4.1
SJPF				*e*Sn	Sn	08 07 05.7	-8.5
SJPF				*e*Sg	Sg	08 07 39.4	-13
	comp=N,7.3nm,0.3s						
SJPF	**Ste Jean**	**5.86**	**16**	*e*Pn	Pn	08 06 02.2	-4.1
SJPF				*e*Sg	Sg	08 07 39.4	-13
	comp=N,3.7nm,0.3s						
EALK	**Alkurruntz**	**5.90**	**13**	Pn	Pn	08 06 04.4	-2.6
	comp=N,4.7nm,0.1s,SNR=7.9						
EALK				Sn	Sn	08 07 07.4	-8.0
	comp=N,27nm,0.5s,SNR=7.9						
EALK				Lg		08 07 41.5	
	comp=N,40nm,0.6s,SNR=7.9						
EARI	**Arriondas**	**5.97**	**347**	Pn	Pn	08 06 04.3	-3.7
	comp=N,1.1nm,0.3s,SNR=7.9						
EARI				Sn	Sn	08 07 08.8	-8.3
	comp=N,7.1nm,1.0s,SNR=7.9						
EARI				Lg		08 07 44.7	
	comp=N,200nm,1.4s,SNR=7.9						
EARI	**Arriondas**	**5.97**	**347**	Pn	Pn	08 06 04.3	-3.7
	comp=N,1.1nm,0.3s,SNR=7.9						
EARI				Sn	Sn	08 07 08.9	-8.3
EINC	**Incio**	**6.00**	**331**	Pn	Pn	08 06 05.2	-3.1
	comp=N,0.1nm,0.2s,SNR=7.9						
EINC				Sn	Sn	08 07 09.5	-8.3
	comp=N,1.9nm,0.2s,SNR=7.9						
EINC				Lg		08 07 44.3	
	comp=N,20nm,0.6s,SNR=7.9						
EINC	**Incio**	**6.00**	**331**	Pn	Pn	08 06 05.2	-3.1
	comp=N,0.1nm,0.2s,SNR=7.9						
EINC				Sn	Sn	08 07 09.5	-8.3
	comp=N,1.9nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**6.20**	**320**	Sn	Sn	08 07 13.8	-9.0
	comp=N,2.8nm,0.3s,SNR=7.9						
EZAM				Lg		08 07 51.5	
	comp=N,12nm,0.5s,SNR=7.9						
EPF	**Esparros**	**6.22**	**26**	*e*Pn	Pn	08 06 08.5	-3.0
EPF				*e*Sn	Sn	08 07 14.3	-9.2
EPF				*e*Sg	Sg	08 07 50.9	-14
	comp=N,7.8nm,0.3s						
EPF	**Esparros**	**6.22**	**26**	*e*Pn	Pn	08 06 08.5	-3.0
EPF				*e*Sg	Sg	08 07 50.9	-14
	comp=N,3.9nm,0.3s						
EPON	**Pontenova**	**6.50**	**335**	Lg		08 08 00.6	
	comp=N,40nm,0.8s,SNR=4.0						
EMAZ	**Mazaricos**	**6.94**	**324**	Pn	Pn	08 06 18.6	-2.9
	comp=N,2.9nm,0.2s,SNR=4.0						
EMAZ				Lg		08 08 13.3	
	comp=N,23nm,0.6s,SNR=4.0						
EMAZ	**Mazaricos**	**6.94**	**324**	Pn	Pn	08 06 18.6	-2.9
LFF	**La Frestale**	**8.07**	**21**	*e*Pn	P	08 06 31.9	-5.5
CAF	**Calviac**	**8.49**	**27**	*e*Pn	P	08 06 37.6	-5.6
RJF	**Les Rejaudoux**	**8.63**	**24**	*e*Pn	P	08 06 39.8	-5.4
MFF	**Saint Martin d**	**9.42**	**14**	*e*Pn	P	08 06 50.3	-5.8
QUIF	**Quistinic**	**10.43**	**1**	*e*Pn	P	08 07 04.0	-5.9
ROSF	**Rostrenen**	**10.85**	**0**	*e*Pn	P	08 07 10.1	-5.5

CASC 14 09:05:15.1±1.4**, 13.46N**×**90.97W, h8**^{km}±8^{km}**, MD4.0, 1C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.87**	**35**	⇓*e*P	Pb	09 05 31.7	-0.3
IXG				*e*S	Sb	09 05 44.6	+1.1
JAT	**Jato**	**1.07**	**323**	*e*P	Pb	09 05 34.0	-1.5
JAT				*e*S	Sb	09 05 50.1	+0.7
NBG	**Las Nubes**	**1.27**	**28**	*e*P	Pb	09 05 38.4	-0.5
NBG				*e*S	Sb	09 05 56.2	+0.9
RTR	**El Retiro**	**1.36**	**71**	*e*P	Pb	09 05 39.4	-1.0
RTR				*e*S	Sb	09 05 58.5	+0.8
SBLS	**San Blas**	**1.36**	**74**	*e*P	Pb	09 05 39.2	-1.2
SBLS				*e*S	Sb	09 05 59.6	+1.8
SNJE	**San Jose**	**1.39**	**73**	*e*P	Pn	09 05 39.9	-0.9
SNJE				*e*S	Sb	09 06 00.3	+1.8
RBDL	**Robledal**	**1.40**	**62**	*e*P	Pn	09 05 40.5	-0.6
RBDL				*e*S	Sb	09 05 59.2	+0.1
BOQS	**Boqueron**	**1.67**	**80**	⇓*e*P	Pn	09 05 44.0	-0.8
BOQS				*e*S	Sn	09 06 07.8	+1.2
MTO2	**Montecristo 2**	**1.82**	**59**	*e*P	Pn	09 05 46.7	-0.3
MTO2				*e*S	Sn	09 06 10.6	+0.2
LFRS	**El Faro**	**1.86**	**85**	⇑*e*P	Pn	09 05 46.8	-0.8
LFRS				*e*S	Sn	09 06 11.6	0.0
LCBS	**La Ceiba**	**1.94**	**84**	*e*P	Pn	09 05 48.0	-0.9
SNVI	**San Vicente**	**2.08**	**86**	*e*P	Pn	09 05 51.7	+0.9
SNVI				*e*S	Sn	09 06 17.2	+0.2

MEX 14 09:10:11.8±1.0**, 15.61N**×**95.97W, h13**^{km}±38^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.21**	**321**	*i* P	Pg	09 10 16.5	-0.1
HUIG				*i* S	Sg	09 10 18.5	-1.3
VHO	**Vista Hermosa**	**1.63**	**333**	*i* P	Pn	09 10 36.1	-4.4
VHO				*i* S	Sn	09 10 57.1	-4.3
OXX	**Oaxaca**	**1.64**	**334**	*e*P	Pn	09 10 37.0	-3.5
OXX				*i* S	Sn	09 10 58.0	-3.5
IIB	**San Bernardino**	**4.04**	**326**	*e*P	Pn	09 11 20.0	+5.2
PPM	**Popocatepetl**	**4.28**	**324**	*e*P	Pn	09 11 15.0	-3.2

IDC 14 09:25:42.3±8.1**, 17.05S**×**172.55W, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=355.4km s-min=37.5km az=140.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**50.29**	**258**	P	P	09 34 40.6	-2.3
	0.2nm,0.6s,baz=96,slow=6.5,SNR=7.6						
ASAR	**Alice Springs**	**50.40**	**253**	P	P	09 34 42.0	-1.7
	1.2nm,0.6s,baz=88,slow=8.3,SNR=36						
ILAR	**Eielson Array**	**83.90**	**11**	P	P	09 38 13.7	-1.3
	0.8nm,1.1s,baz=229,slow=6.5,SNR=5.7						

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*KRSC **14** 09:33:54.1±0.0, 49.56N×151.04E, h513^{km}±96^{km}, ML3.9*
*IDC **14** 09:34:12.4±4.5, 46.81N×150.39E, h227^{km}±42^{km}, mb3.2/4, mb1 3.3/5, mb1mx3.0/23, mbtmp3.8/5, Error ellipse: s-maj=42.2km s-min=24.5km az=86.0*
ISC 14 09:33:46.0±2.1**, 47.0N**±0.2×**153.1E**±0.3**, h38**^{km}±19^{km}**, n11, σ0**^{s}**96**/11**, mb3.9**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRL	**Gorelyy**	**6.44**	**28**	P	**P**	**09 35 26.4**	**+5.6**
RUS	**Russkaya**	**6.49**	**31**	P	**P**	**09 35 27.1**	**+5.6**
RUS				*e*S	**S**	**09 36 35.0**	**-0.1**
KOK	**Koryaka**	**7.25**	**27**	P	**P**	**09 35 31.6**	**-0.5**
SDLR	**Sedlovina**	**7.32**	**28**	P	**P**	**09 35 33.4**	**+0.4**
GNL	**Ganaly**	**7.40**	**23**	P	**P**	**09 35 31.6**	**-2.6**
SPN	**Mys Shipunski**	**7.57**	**34**	P	**P**	**09 35 38.4**	**+1.8**
ASAJ	**Asahikawa**	**7.90**	**253**	P	**P**	**09 35 41.3**	**+0.1**
	0.6nm,0.3s,baz=86,slow=13,SNR=4.2						
FINES	**FINESS Array B**	**63.82**	**335**	P	**P**	**09 44 16.1**	**+0.1**
	0.6nm,0.4s,mb4.0,baz=31,slow=8.1,SNR=7.9						
HFS	**Hagfors**	**68.23**	**339**	P	**P**	**09 44 44.4**	**+0.4**
	2.4nm,0.8s,mb4.3,baz=45,slow=2.0,SNR=6.3						
ASAR	**Alice Springs**	**72.42**	**198**	P	**P**	**09 45 09.6**	**-0.5**
	0.3nm,0.7s,mb3.3,baz=16,slow=5.6,SNR=6.6						
TXAR	**Lajitas Array**	**77.39**	**61**	P	pP	09 45 51.8	+1.5
	0.2nm,0.6s,baz=315,slow=2.6,SNR=3.0						

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*MOS **14** 09:38:33.0±1.6, 36.54N×70.14E, h237^{km}, mb4.2/8, Error ellipse: s-maj=14.1km s-min=10.8km az=85.8*
*BJI **14** 09:38:33.0, 36.67N×70.08E, h222^{km}, mB4.5, mb4.1*
*NEIC **14** 09:38:34.0±1.5, 36.50N×70.10E, h233^{km}±17^{km}, mb4.2/12, Error ellipse: s-maj=13.6km s-min=8.5km az=52.0*
*IDC **14** 09:38:36.0±3.9, 36.41N×70.27E, h253^{km}±38^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.4/22, mbtmp4.1/10, Error ellipse: s-maj=21.6km s-min=15.7km az=139.0*
*NNC **14** 09:38:56.4±41.0, 39.56N×69.52E, mpv4.3, Error ellipse: s-maj=608.3km s-min=347.1km az=165.0*
ISC 14 09:38:32.4±0.6**, 36.49N**±0.04×**70.13E**±0.08**, h229**^{km}±6^{km}**, n71, σ1**^{s}**09**/78**, mb3.9**/14**, 7C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.03**	**151**	⇑P	**P**	**09 39 25.0**	**+0.6**
CHCP	**Chirah Chowk**	**3.82**	**137**	⇑P	**P**	**09 39 34.5**	**+0.8**
THW	**Thamme Wali**	**3.92**	**160**	⇑P	**P**	**09 39 34.5**	**-0.3**
KSH	**Kashi**	**5.52**	**55**	⇑P	**P**	**09 39 55.8**	**+1.1**
KSH				S	**S**	**09 40 58.4**	**-0.4**
THN	**Thein Dam**	**6.14**	**130**	*e*P	**P**	**09 40 02.0**	**-0.5**
THN				*e*S	**S**	**09 41 09.1**	**-3.7**
DLH	**Dalhousie**	**6.22**	**128**	*e*P	**P**	**09 40 03.0**	**-0.6**
DLH				*e*S	**S**	**09 41 12.0**	**-2.8**
AML	**Almayashu**	**6.28**	**25**	P	**P**	**09 40 04.3**	**0.0**
	SNR=93						
PONG	**Pong**	**6.61**	**131**	*e*P	**P**	**09 40 09.0**	**+0.4**
PONG				*e*S	**S**	**09 41 21.0**	**-2.7**
UCH	**Uchtor**	**6.66**	**29**	P	**P**	**09 40 09.5**	**+0.3**
	SNR=46						
EKS2	**Erkin-Say**	**6.78**	**23**	P	**P**	**09 40 10.8**	**+0.1**
	SNR=50						
KZA	**Kyzart**	**6.85**	**34**	P	**P**	**09 40 11.9**	**+0.3**
	SNR=57						
AAK	**Ala-Archa**	**7.00**	**27**	⇓Pn	**P**	**09 40 13.7**	**+0.1**
	20nm,0.4s						
AAK				⇓Lg		09 41 31.1	
	35nm,0.8s						
AAK	**Ala-Archa**	**7.00**	**27**	P	**P**	**09 40 13.7**	**+0.2**
	SNR=49						
AAK	**Ala-Archa**	**7.00**	**27**	*e*PN	**P**	**09 40 12.1**	**-1.5**
AAK				pmax	pmax		
	comp=Z,36nm,0.5s						
AAK	**Ala-Archa**	**7.00**	**27**	*e*Pn	**P**	**09 40 12.1**	**-1.4**
	comp=Z,36nm,0.5s						
AAK				*e*Sn	**S**	**09 41 20.4**	**-12**
CHMS	**Chumysh**	**7.41**	**27**	P	**P**	**09 40 18.6**	**-0.2**
	SNR=14						
ULHL	**Ulahol**	**7.45**	**38**	P	**P**	**09 40 19.4**	**+0.1**
	SNR=33						
SDNR	**Sundarnagar**	**7.55**	**129**	*e*P	**P**	**09 40 20.6**	**0.0**
SDNR				*e*S	**S**	**09 41 41.4**	**-3.9**
USP	**Ospenovka**	**7.56**	**25**	P	**P**	**09 40 20.2**	**-0.5**
	SNR=39						
TKM2	**Tokmak 2**	**7.68**	**32**	P	**P**	**09 40 22.3**	**0.0**
	SNR=29						
SMLA	**Simla**	**7.93**	**130**	⇑*i*P	**P**	**09 40 39.5**	**+14**
SMLA				*i* S	**S**	**09 42 05.1**	**+11**
NDI	**New Delhi**	**9.81**	**140**	*e*	**P**	**09 41 07.0**	**+17**
MK31	**Makanchi Array**	**13.72**	**38**	⇑P	**P**	**09 41 38.9**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=215,slow=13,SNR=150						
KOLN	**Koldanda**	**14.34**	**124**	*e*P	**P**	**09 41 46.5**	**+0.1**
	comp=Z,7.8nm,0.2s						
GKN	**Gorkha**	**14.90**	**120**	*e*P	**P**	**09 41 53.2**	**-0.1**
	comp=Z,30nm,0.4s						
DMN	**Daman**	**15.47**	**121**	*e*P	**P**	**09 42 00.9**	**+0.7**
KKN	**Kakani**	**15.48**	**120**	*e*P	**P**	**09 42 01.6**	**+1.3**
	comp=Z,28nm,0.5s						
KURK	**Kurchatov**	**15.48**	**21**	⇑P	**P**	**09 41 58.9**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=228,slow=12,SNR=5.8						
KURK	**Kurchatov**	**15.48**	**21**	*e*P	**P**	**09 41 58.5**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**15.48**	**21**	*e*P	**P**	**09 41 58.5**	**-1.7**
	comp=Z,2.0nm,0.6s						
PKI	**Pulchoki**	**15.70**	**120**	*e*P	**P**	**09 42 03.9**	**+0.9**
	comp=Z,25nm,0.3s						
GUN	**Gumba**	**15.82**	**118**	*e*P	**P**	**09 42 06.0**	**+1.5**
	comp=Z,21nm,0.4s						
JIRN	**Jiri**	**16.20**	**118**	*e*P	**P**	**09 42 09.4**	**+0.5**
	comp=Z,22nm,0.3s						
BVAR	**Borovoye Array**	**16.54**	**1**	P	**P**	**09 42 12.1**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=171,slow=8.9,SNR=30						
BRVK	**Borovoye**	**16.57**	**0**	*e*P	**P**	**09 42 12.0**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**16.57**	**0**	*e*P	**P**	**09 42 12.0**	**-1.0**
	comp=Z,5.6nm,0.6s						
CHKZ	**Chkalovo**	**17.19**	**1**	P	**P**	**09 42 19.1**	**-0.7**
CHKZ	**Chkalovo**	**17.19**	**1**	*e*P	**P**	**09 42 18.4**	**-1.5**
CHKZ				pmax	pmax		
	comp=Z,50nm,0.9s						
CHKZ	**Chkalovo**	**17.19**	**1**	*e*P	**P**	**09 42 18.4**	**-1.5**
	comp=Z,50nm,0.9s						
LSA	**Lhasa**	**18.85**	**105**	*e*P	**P**	**09 42 38.9**	**+1.7**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LSA	**Lhasa**	**18.85**	**105**	*e*P	**P**	**09 42 38.9**	**+1.7**
	comp=Z,6.8nm,0.5s						
ZAL	**Zalesovo**	**20.21**	**26**	P	**P**	**09 42 51.4**	**+0.7**
ZAL				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ZAL	**Zalesovo**	**20.21**	**26**	P	**P**	**09 42 51.4**	**+0.6**
	comp=Z,6.8nm,0.3s,baz=254,slow=5.9,SNR=22						
GNI	**Garni**	**20.23**	**288**	P	**P**	**09 42 53.8**	**+2.8**
GNI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GNI	**Garni**	**20.23**	**288**	P	**P**	**09 42 53.8**	**+2.8**
	comp=Z,6.0nm,0.5s,baz=356,slow=15,SNR=5.6						
KIV	**Kislovodsk**	**22.17**	**298**	P	**P**	**09 43 12.2**	**+2.2**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.5						
KIV	**Kislovodsk**	**22.17**	**298**	P	**P**	**09 43 12.2**	**+2.1**
	comp=Z,6.8nm,0.4s,mb4.5						
GTA	**Gaotai**	**23.54**	**74**	*e*P	**P**	**09 43 25.3**	**+2.2**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.0						
MALT	**Malatya**	**25.19**	**284**	*e*P	**P**	**09 43 36.5**	**-1.9**
MALT				pmax	pmax		
	comp=Z,59nm,0.6s,mb5.4						
MALT	**Malatya**	**25.19**	**284**	*e*P	**P**	**09 43 36.5**	**-2.0**
	comp=Z,59nm,0.6s,mb5.4						
MALT				*e*		09 43 41.8	
ZAK	**Zakamensk**	**27.53**	**49**	*e*P	**P**	**09 43 59.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.2						
SONM	**Songino Array**	**28.92**	**56**	P	**P**	**09 44 13.3**	**+1.2**
	comp=Z,1.8nm,0.6s,mb3.9,baz=266,slow=9.2,SNR=8.0						
ULN	**Ulaanbaatar**	**29.36**	**56**	*e*P	**P**	**09 44 15.4**	**-0.6**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ULN	**Ulaanbaatar**	**29.36**	**56**	*e*P	**P**	**09 44 15.4**	**-0.6**
	comp=Z,1.1nm,0.5s,mb3.7						
KMBO	**Kilima Mbogo**	**48.31**	**227**	*e*P	**P**	**09 46 53.0**	**+0.4**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	**Kilima Mbogo**	**48.31**	**227**	P	**P**	**09 46 53.3**	**+0.7**
	comp=Z,1.5nm,0.6s,mb3.5,baz=42,slow=15,SNR=5.9						
KMBO	**Kilima Mbogo**	**48.31**	**227**	*e*P	**P**	**09 46 53.0**	**+0.4**
	comp=Z,1.4nm,0.6s,mb3.5						
LSZ	**Lusaka**	**64.94**	**225**	*e*P	**P**	**09 48 46.6**	**-3.0**
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.2						
LSZ	**Lusaka**	**64.94**	**225**	*e*P	**P**	**09 48 46.6**	**-3.0**
	comp=Z,7.9nm,1.3s,mb4.2						
INK	**Inuvik**	**74.03**	**9**	*e*P	**P**	**09 49 44.2**	**+0.2**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**74.03**	**9**	P	**P**	**09 49 44.6**	**+0.7**
	comp=Z,1.5nm,0.6s,mb3.8,baz=2.6,slow=4.5,SNR=9.9						
INK	**Inuvik**	**74.03**	**9**	*e*P	**P**	**09 49 44.2**	**+0.3**
	comp=Z,1.4nm,0.6s,mb3.8						
ILAR	**Eielson Array**	**74.98**	**15**	P	**P**	**09 49 49.0**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**74.98**	**15**	P	**P**	**09 49 49.0**	**-0.5**
	comp=Z,0.7nm,0.9s,mb3.3,baz=324,slow=4.9,SNR=7.1						
YKA	**Yellowknife Ar**	**81.29**	**2**	P	**P**	**09 50 24.1**	**+0.4**
YKA	**Yellowknife Ar**	**81.29**	**2**	P	**P**	**09 50 24.0**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.5,baz=350,slow=5.4,SNR=24						
WRA	**Warramunga Arr**	**82.58**	**121**	P	**P**	**09 50 29.7**	**-1.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**82.58**	**121**	P	**P**	**09 50 29.7**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.6,baz=325,slow=4.9,SNR=22						
WRAB	**Tennant Creek**	**82.58**	**121**	*e*P	**P**	**09 50 29.7**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						
WRAB	**Tennant Creek**	**82.58**	**121**	*e*P	**P**	**09 50 29.7**	**-1.5**
	comp=Z,8.1nm,1.3s,mb4.3						
ASAR	**Alice Springs**	**84.83**	**124**	P	**P**	**09 50 41.1**	**-1.3**
	comp=Z,0.8nm,0.5s,mb3.7,baz=314,slow=4.9,SNR=21						

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*NEIC **14** 09:42:42.8, 38.13N×20.16E, h2^{km}, MD3.5(ATH), After ATH.*
*CSEM **14** 09:42:42.8, 38.13N×20.16E, h2^{km}, MD3.5/5, After ATH*
ATH 14 09:42:42.7, 38.13N×**20.15E, h2**^{km}**, MD3.5**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.35**	**82**	*e*PG	Pg	09 42 48.5	-1.2
EVR	**Evrytania**	**1.52**	**58**	*e*PB	Pb	09 43 12.2	+0.9
KEK	**Kerkira**	**1.60**	**350**	*e*PN	Pn	09 43 12.0	-0.2
JAN	**Janina**	**1.62**	**20**	*e*PB	Pb	09 43 14.0	+1.0
JAN	**Janina**	**1.62**	**20**	*e*Pb	Pb	09 43 14.5	+1.5
ITM	**Ithomi**	**1.70**	**123**	*e*PB	Pb	09 43 15.5	+1.1

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*NEIC **14** 09:59:33.9, 16.75N×93.94W, h135^{km}, MD3.9(MEX), After MEX.*
MEX 14 09:59:33.9±1.3**, 16.75N**×**93.94W, h134**^{km}±21^{km}**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCX	**San Cristobal**	**1.25**	**90**	*e*P	P	09 59 58.5	-1.4
SCX				*i* S	S	10 00 17.0	-2.7
TUIG	**Tuzandepetl**	**1.36**	**340**	*i* P	P	09 59 58.5	-2.7
TUIG				*i* S	S	10 00 20.1	-2.0
CCIG	**Comitan**	**1.79**	**105**	*i* P	P	10 00 04.8	-1.1
CCIG				*i* S	S	10 00 28.8	-1.7
HUIG	**Huatulco**	**2.30**	**245**	*i* P	P	10 00 09.7	-2.7
HUIG				*i* S	S	10 00 39.1	-2.5
OXX	**Oaxaca**	**2.69**	**278**	*e*P	P	10 00 17.0	-0.4
OXX				*i* S	S	10 00 49.0	-1.5
VHO	**Vista Hermosa**	**2.70**	**277**	*i* P	P	10 00 16.5	-1.0
VHO				*i* S	S	10 00 49.6	-1.1

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*IDC **14** 10:04:11.2±1.1, 3.55S×144.97E, mb4.1/6, mb1 4.3/8, mb1mx4.2/14, mbtmp4.2/8, ML3.8/2, MS3.6/5, Ms1 3.6/5, ms1mx3.4/18, Error ellipse: s-maj=48.4km s-min=19.6km az=90.0*
*NEIC **14** 10:04:12.8±0.7, 3.58S×144.84E, h10^{km}, mb4.5/5, Error ellipse: s-maj=16.7km s-min=11.0km az=100.0*
ISC 14 10:04:14.4±0.8**, 3.72S**±0.07×**144.9E**±0.1**, h33**^{km}**, n19, σ0**^{s}**87**/20**, mb4.2**/8**, MS3.7**/3**, 2C-1D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.07**	**159**	Pn	**Pn**	**10 05 44.7**	**+0.4**
	1.1nm,0.3s,baz=329,slow=12,SNR=4.2						
PMG				Sn	**Sn**	**10 06 52.2**	**-1.1**
	0.9nm,0.3s,baz=322,slow=19,SNR=2.6						
PMG				LR	LR	10 08 23.7	
	comp=Z,753nm,19.2s,baz=331,slow=41						
PMG	**Port Moresby**	**6.07**	**159**	*e*Pn	**Pn**	**10 05 44.6**	**+0.3**
	35nm,1.1s						
PMG				Sn	**Sn**	**10 06 52.2**	**-1.1**
PMG				LR	LR	10 08 23.7	
KAKA	**Kakadu**	**15.24**	**233**	*e*P	**P**	**10 07 48.5**	**-0.5**
	9.5nm,0.5s						
CTA	**Charters Tower**	**16.32**	**176**	LR	LR	10 13 32.5	
	comp=Z,67nm,21.1s,baz=8.0,slow=34						
WRAB	**Tennant Creek**	**19.14**	**212**	*e*P	**P**	**10 08 37.5**	**-0.2**
	72nm,1.1s						
WB2	**Warramunga Arr**	**19.14**	**212**	⇓*i*P	**P**	**10 08 37.3**	**-0.4**
WB2				*e*S		10 12 24.4	
WRA	**Warramunga Arr**	**19.15**	**212**	P	**P**	**10 08 37.3**	**-0.5**
	1.6nm,0.3s,baz=26,slow=8.3,SNR=83						
ASAR	**Alice Springs**	**22.51**	**207**	P	**P**	**10 09 13.9**	**+1.2**
	14nm,0.9s,mb4.4,baz=37,slow=8.9,SNR=102						
ASAR				LR	LR	10 19 21.3	
	comp=Z,103nm,18.7s,MS3.3,baz=30,slow=40						
ASPA	**Alice Springs**	**22.51**	**207**	⇑*i*P	**P**	**10 09 13.8**	**+1.1**
ASPA				*e*S	**S**	**10 13 20.7**	**+7.9**
FITZ	**Fitzroy Crossi**	**23.69**	**231**	⇑*i*P	**P**	**10 09 23.8**	**-0.4**
	38nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**28.18**	**186**	*e*P	**P**	**10 10 07.1**	**+0.9**
	4.2nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**28.18**	**186**	P	**P**	**10 10 07.2**	**+1.1**
	3.2nm,0.6s,mb4.2,baz=360,slow=8.4,SNR=11						
STKA				LR	LR	10 22 49.9	
	comp=Z,144nm,19.1s,MS3.6,baz=23,slow=40						
MBWA	**Marble Bar**	**30.01**	**233**	P	**P**	**10 10 21.6**	**-0.9**
	3.1nm,0.5s,mb4.3						
FORT	**Forrest**	**31.27**	**209**	*e*P	**P**	**10 10 33.7**	**0.0**
	285nm,0.6s						
SONM	**Songino Array**	**61.42**	**331**	P	**P**	**10 14 30.5**	**+0.7**
	0.4nm,0.8s,mb3.6,baz=104,slow=5.1,SNR=3.7						
VNDA	**Vanda**	**74.30**	**176**	P	**P**	**10 15 51.6**	**+1.8**
	1.7nm,0.8s,mb4.0,baz=343,slow=6.2,SNR=4.9						
ZAL	**Zalesovo**	**76.00**	**328**	LR	LR	10 47 44.1	
	comp=Z,112nm,19.4s,MS4.2,baz=167,slow=34						
BVAR	**Borovoye Array**	**83.72**	**324**	P	**P**	**10 16 40.6**	**-0.7**
	5.2nm,1.2s,mb4.5,baz=90,slow=4.4,SNR=6.4						
ILAR	**Eielson Array**	**84.22**	**24**	P	**P**	**10 16 42.4**	**-1.2**
	0.5nm,0.7s,mb3.8,baz=263,slow=4.4,SNR=4.6						

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*NEIC **14** 10:24:41.5, 37.58S×176.48E, h222^{km}, After WEL.*
WEL 14 10:24:41.8±0.4**, 37.59S**×**176.47E, h220**^{km}±2^{km}**, ML4.8**/15**, 4C-16D, Error ellipse: s-maj=2.9km s-min=2.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGRZ	**Tauranga**	**0.22**	**229**	P	P	10 25 10.1	-0.7
TGRZ				S	S	10 25 33.0	-0.1
TGRZ	**Tauranga**	**0.22**	**229**	PN	P	10 25 10.1	-0.7
TGRZ				SN	S	10 25 33.0	-0.1
MYRZ	**Mayor Island**	**0.35**	**329**	PN	P	10 25 10.5	-0.6
LIRZ	**Lichensteins R**	**0.42**	**189**	P	P	10 25 10.9	-0.3
LIRZ	**Lichensteins R**	**0.42**	**189**	PN	P	10 25 10.9	-0.4
MARZ	**Manawahe**	**0.43**	**158**	P	P	10 25 10.9	-0.4
MARZ	**Manawahe**	**0.43**	**158**	PN	P	10 25 10.9	-0.3
EDRZ	**Edgecumbe**	**0.56**	**158**	P	P	10 25 11.4	-0.3
EDRZ	**Edgecumbe**	**0.56**	**158**	PN	P	10 25 11.4	-0.3

WIZ	**White Island**	**0.58**	**84**	P	P	10 25 11.9	+0.2
WIZ	**White Island**	**0.58**	**84**	PN	P	10 25 11.8	0.0
UTU	**Utuhina**	**0.63**	**200**	P	P	10 25 12.6	+0.7
UTU	**Utuhina**	**0.63**	**200**	PN	P	10 25 12.6	+0.6
TAZ	**Tarawera**	**0.65**	**177**	P	P	10 25 12.3	+0.3
TAZ	**Tarawera**	**0.65**	**177**	⇑PN	P	10 25 12.3	+0.3
TOZ	**Tahuroa Road**	**0.78**	**259**	P	P	10 25 12.3	-0.3
TOZ	**Tahuroa Road**	**0.78**	**259**	PN	P	10 25 12.3	-0.3
PATZ	**Paeroa**	**0.81**	**192**	P	P	10 25 12.7	0.0
PATZ	**Paeroa**	**0.81**	**192**	PN	P	10 25 12.9	+0.2
URZ	**Urewera**	**0.84**	**143**	P	P	10 25 12.2	-0.7
URZ	**Urewera**	**0.84**	**143**	PN	P	10 25 12.2	-0.7
KUZ	**Kuaotunu**	**1.03**	**324**	⇓P	P	10 25 13.0	-1.0
KUZ	**Kuaotunu**	**1.03**	**324**	⇓PN	P	10 25 13.0	-0.9
MWZ	**Matawai**	**1.12**	**132**	P	P	10 25 14.0	-0.7
MWZ	**Matawai**	**1.12**	**132**	PN	P	10 25 14.0	-0.6
MWZ				SN	S	10 25 38.0	-2.2
MKAZ	**Moumakai**	**1.14**	**294**	P	P	10 25 14.3	-0.5
MKAZ	**Moumakai**	**1.14**	**294**	⇓PN	P	10 25 14.3	-0.5
WATZ	**Wairara**	**1.26**	**207**	P	P	10 25 15.8	+0.1
WATZ	**Wairara**	**1.26**	**207**	PN	P	10 25 15.8	+0.1
HATZ	**Hinemaiaia**	**1.34**	**193**	P	P	10 25 15.9	-0.4
HATZ				S	S	10 25 41.4	-1.6
HATZ	**Hinemaiaia**	**1.34**	**193**	PN	P	10 25 15.9	-0.4
HATZ				SN	S	10 25 41.4	-1.6
RATZ	**Rangitukua**	**1.39**	**203**	⇓P	P	10 25 16.7	-0.1
RATZ	**Rangitukua**	**1.39**	**203**	⇓PN	P	10 25 16.7	-0.1
MXZ	**Matakaoa Point**	**1.46**	**90**	P	P	10 25 16.8	-0.5
MXZ	**Matakaoa Point**	**1.46**	**90**	PN	P	10 25 16.8	-0.5
RITZ	**Rihia Road**	**1.47**	**199**	PN	P	10 25 17.3	-0.1
MTAZ	**Motutapu**	**1.48**	**302**	P	P	10 25 16.8	-0.7
MTAZ	**Motutapu**	**1.48**	**302**	PN	P	10 25 16.8	-0.7
PUZ	**Puketiti**	**1.50**	**109**	P	P	10 25 17.3	-0.3
PUZ	**Puketiti**	**1.50**	**109**	PN	P	10 25 17.3	-0.3
KATZ	**Kakaramea**	**1.52**	**203**	P	P	10 25 17.6	-0.2
KATZ	**Kakaramea**	**1.52**	**203**	PN	P	10 25 17.6	-0.2
HIZ	**Hauiti**	**1.57**	**233**	P	P	10 25 18.1	-0.2
HIZ	**Hauiti**	**1.57**	**233**	PN	P	10 25 18.1	-0.2
BKZ	**Black Stump Fm**	**1.58**	**179**	⇑P	P	10 25 17.7	-0.6
BKZ	**Black Stump Fm**	**1.58**	**179**	⇓PN	P	10 25 17.7	-0.6
MGZ	**Maungaku**	**1.59**	**207**	P	P	10 25 18.4	0.0
MGZ	**Maungaku**	**1.59**	**207**	PN	P	10 25 18.4	0.0
KAAZ	**Kauri Point**	**1.60**	**298**	P	P	10 25 17.6	-0.9
KAAZ	**Kauri Point**	**1.60**	**298**	PN	P	10 25 17.6	-0.9
KRVZ	**Karewarewa**	**1.64**	**203**	PN	P	10 25 18.5	-0.4
WTAZ	**Waiatarua**	**1.65**	**293**	P	P	10 25 18.1	-0.8
WTAZ	**Waiatarua**	**1.65**	**293**	PN	P	10 25 18.1	-0.8
WTVZ	**West Tongariro**	**1.68**	**204**	P	P	10 25 18.9	-0.3
WTVZ	**West Tongariro**	**1.68**	**204**	PN	P	10 25 18.9	-0.3
TWVZ	**Taurewa**	**1.69**	**208**	P	P	10 25 19.1	-0.2
TWVZ	**Taurewa**	**1.69**	**208**	PN	P	10 25 19.1	-0.2
OTVZ	**Oturere**	**1.70**	**202**	PN	P	10 25 19.4	+0.1
OTVZ				SN	S	10 25 47.8	-0.5
KNZ	**Kokohu**	**1.72**	**147**	⇓P	P	10 25 19.6	+0.1
KNZ	**Kokohu**	**1.72**	**147**	⇓PN	P	10 25 19.6	+0.1
NGZ	**Ngauruhoe**	**1.73**	**203**	P	P	10 25 19.2	-0.4
NGZ	**Ngauruhoe**	**1.73**	**203**	PN	P	10 25 19.3	-0.3
CNZ	**Chateau**	**1.77**	**204**	P	P	10 25 19.4	-0.6
CNZ	**Chateau**	**1.77**	**204**	PN	P	10 25 19.4	-0.6
WPVZ	**Whakapapa**	**1.77**	**204**	P	P	10 25 19.7	-0.3
WPVZ	**Whakapapa**	**1.77**	**204**	PN	P	10 25 19.7	-0.3
TUVZ	**Tukino**	**1.80**	**201**	P	P	10 25 20.0	-0.3
TUVZ	**Tukino**	**1.80**	**201**	PN	P	10 25 20.0	-0.3
FWVZ	**Far West T-bar**	**1.82**	**203**	P	P	10 25 19.9	-0.5
FWVZ	**Far West T-bar**	**1.82**	**203**	PN	P	10 25 19.9	-0.5
DRZ	**Dome Shelter**	**1.83**	**203**	P	P	10 25 20.4	-0.2
DRZ	**Dome Shelter**	**1.83**	**203**	PN	P	10 25 20.0	-0.5
MOVZ	**Moawhango**	**1.90**	**197**	P	P	10 25 20.3	-0.9
MOVZ	**Moawhango**	**1.90**	**197**	PN	P	10 25 20.3	-0.9
VRZ	**Vera Road**	**2.04**	**221**	P	P	10 25 22.8	+0.2
VRZ	**Vera Road**	**2.04**	**221**	PN	P	10 25 22.8	+0.2
RAEZ	**Rainy Point**	**2.35**	**223**	P	P	10 25 26.6	+0.8
RAEZ	**Rainy Point**	**2.35**	**223**	PN	P	10 25 26.6	+0.8
WCZ	**Waipu Caves**	**2.37**	**313**	⇓P	P	10 25 25.0	-1.0
WCZ	**Waipu Caves**	**2.37**	**313**	⇓PN	P	10 25 25.0	-0.9
WAZ	**Wanganui**	**2.46**	**208**	P	P	10 25 26.1	-0.8
WAZ	**Wanganui**	**2.46**	**208**	PN	P	10 25 26.1	-0.9
PWZ	**Pawanui**	**2.46**	**173**	P	P	10 25 26.1	-0.8
PWZ	**Pawanui**	**2.46**	**173**	PN	P	10 25 26.1	-0.9
TSZ	**Takapari Road**	**2.50**	**189**	⇓P	P	10 25 26.3	-1.1
TSZ	**Takapari Road**	**2.50**	**189**	⇓PN	P	10 25 26.3	-1.1
NEZ	**North Egmont**	**2.51**	**227**	PN	P	10 25 27.9	+0.4
PKE	**Pukeiti**	**2.53**	**230**	P	P	10 25 27.9	+0.2
PKE	**Pukeiti**	**2.53**	**230**	PN	P	10 25 27.9	+0.2
NWEZ	**Newall Road**	**2.65**	**230**	PN	P	10 25 29.5	+0.5
BFZ	**Birch Farm**	**3.10**	**183**	P	P	10 25 32.3	-1.7
BFZ	**Birch Farm**	**3.10**	**183**	PN	P	10 25 32.4	-1.7
MRZ	**Mangatainoka R**	**3.15**	**192**	⇓P	P	10 25 32.6	-2.1
MRZ	**Mangatainoka R**	**3.15**	**192**	⇓PN	P	10 25 32.7	-2.0
OUZ	**Omahuta**	**3.31**	**315**	⇑P	P	10 25 35.2	-1.3
OUZ	**Omahuta**	**3.31**	**315**	⇓PN	P	10 25 35.2	-1.3
KIW	**Kapiti Island**	**3.49**	**200**	P	P	10 25 36.1	-2.6
KIW	**Kapiti Island**	**3.49**	**200**	PN	P	10 25 36.1	-2.6
MTW	**Mount Morrison**	**3.65**	**192**	P	P	10 25 37.7	-2.9
MTW	**Mount Morrison**	**3.65**	**192**	PN	P	10 25 37.6	-3.0
CAW	**Cannon Point**	**3.68**	**197**	P	P	10 25 38.3	-2.7
CAW	**Cannon Point**	**3.68**	**197**	PN	P	10 25 38.3	-2.7
PAWZ	**Paruwai Farm**	**3.88**	**192**	PN	P	10 25 40.2	-3.1
MRW	**Makara Radio**	**3.89**	**200**	P	P	10 25 40.5	-3.0
MRW	**Makara Radio**	**3.89**	**200**	PN	P	10 25 40.5	-3.0
WEL	**Wellington**	**3.92**	**199**	P	P	10 25 41.1	-2.8
WEL	**Wellington**	**3.92**	**199**	PN	P	10 25 41.1	-2.8
MSWZ	**Moikau Station**	**3.94**	**193**	P	P	10 25 40.9	-3.2
MSWZ	**Moikau Station**	**3.94**	**193**	PN	P	10 25 41.0	-3.1
BHW	**Baring Head**	**4.01**	**197**	P	P	10 25 41.9	-3.1
BHW	**Baring Head**	**4.01**	**197**	PN	P	10 25 41.9	-3.1
QRZ	**Quartz Range**	**4.45**	**222**	P	P	10 25 46.8	-3.7
QRZ	**Quartz Range**	**4.45**	**222**	PN	P	10 25 46.8	-3.7
THZ	**Tophouse**	**5.00**	**212**	P	P	10 25 53.3	-4.0
THZ	**Tophouse**	**5.00**	**212**	PN	P	10 25 53.3	-4.0
KHZ	**Kahutara**	**5.32**	**204**	⇓P	P	10 25 58.0	-3.4
KHZ	**Kahutara**	**5.32**	**204**	⇑PN	P	10 25 58.0	-3.4
DSZ	**Denniston Nort**	**5.50**	**219**	P	P	10 25 59.2	-4.4
DSZ	**Denniston Nort**	**5.50**	**219**	PN	P	10 25 59.2	-4.4
LTZ	**Lake Taylor**	**6.10**	**210**	P	P	10 26 06.7	-4.7
LTZ	**Lake Taylor**	**6.10**	**210**	PN	P	10 26 06.7	-4.7
CRLZ	**Canterbury Las**	**6.66**	**205**	*e*P	P	10 26 14.0	-4.5
CRLZ	**Canterbury Las**	**6.66**	**205**	PN	P	10 26 14.0	-4.5
MQZ	**McQueen’s Vall**	**6.77**	**204**	P	P	10 26 15.0	-4.9
MQZ	**McQueen’s Vall**	**6.77**	**204**	PN	P	10 26 15.0	-4.9
WVZ	**Waitaha Valley**	**7.02**	**217**	*e*P	P	10 26 19.0	-4.1
WVZ	**Waitaha Valley**	**7.02**	**217**	*e*PN	P	10 26 18.5	-4.6
RPZ	**Rata Peaks**	**7.38**	**212**	*e*P	P	10 26 23.1	-4.6
RPZ	**Rata Peaks**	**7.38**	**212**	PN	P	10 26 22.9	-4.8
FOZ	**Fox Glacier**	**7.89**	**219**	*e*PN	P	10 26 28.0	-6.3
LBZ	**Lake Benmore**	**8.29**	**213**	*e*PN	P	10 26 34.2	-5.3
ODZ	**Otahua Downs**	**8.64**	**209**	*e*PN	P	10 26 39.9	-4.2
JCZ	**Jackson Bay**	**8.72**	**220**	PN	P	10 26 38.6	-6.5
WKZ	**Wanaka**	**9.15**	**215**	*e*PN	P	10 26 44.7	-6.0
EAZ	**Earnscleugh**	**9.34**	**213**	*e*PN	P	10 26 47.2	-5.8
MSZ	**Milford Sound**	**9.57**	**220**	*e*PN	P	10 26 51.6	-4.3
TUZ	**Tuapeka**	**9.79**	**209**	*e*PN	P	10 26 54.4	-4.4
MLZ	**Mavora Lakes**	**9.94**	**216**	PN	P	10 26 56.2	-4.5
WHZ	**Wether Hill Ro**	**10.46**	**215**	PN	P	10 27 02.7	-4.6

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*NEIC **14** 10:32:25.3±0.4,8.05S×125.06E,mb4.6/9,Error ellipse: s-maj=18.2km s-min=7.6km az=62.0*

*IDC **14** 10:32:26.2±0.7,7.81S×125.12E,h26^{km}±4^{km},mb3.8/8, mb1 4.0/10,mb1mx4.0/16,mbtmp4.1/10,ML4.2/2,MS3.8/11, Ms1 3.9/11,ms1mx3.7/18,Error ellipse: s-maj=31.8km s-min=12.9km az=53.0*

*MOS **14** 10:32:28.5±1.5,8.36S×124.91E,h33^{km},mb4.6/5,Error ellipse: s-maj=37.9km s-min=11.9km az=118.2*

ISC 14 10:32:22.3±0.5**,8.16S**±0.06×**125.22E**±0.09**,h27**^{km}**, h27**^{km}±1.0^{km}**:pP-P,n45,**σ**1^{s}36**/33**,mb4.2**/19**,MS3.8**/10**,2C, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**8.42**	**123**	*e*P	**P**	**10 34 28.0**	**+2.4**
	46nm,0.6s						
KAKA				*e*S	**Sn**	**10 36 00.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.89**	**178**	*e*P	**P**	**10 34 47.8**	**+1.7**
	27nm,0.3s						
FITZ				*e*S	**Sn**	**10 36 36.6**	**-0.8**
WRAB	**Tennant Creek**	**14.67**	**144**	*e*Pn	**P**	**10 35 49.7**	**-0.5**
	25nm,0.4s						
WRA	**Warramunga Arr**	**14.67**	**144**	Pn	**P**	**10 35 48.9**	**-1.4**
	2.2nm,0.3s,baz=326,slow=14,SNR=36						
WRA				Sn	**S**	**10 38 26.1**	**-6.6**
	1.8nm,0.3s,baz=330,slow=22,SNR=6.9						
WB2	**Warramunga Arr**	**14.68**	**144**	*e*P	**P**	**10 35 49.7**	**-0.6**
WB2				*e*S	**S**	**10 38 28.4**	**-4.5**
ASPA	**Alice Springs**	**17.52**	**153**	*e*P	**P**	**10 36 28.7**	**+2.1**
ASPA				*e*S	**S**	**10 39 29.6**	**-9.2**
ASAR	**Alice Springs**	**17.53**	**153**	Pn	**P**	**10 36 28.0**	**+1.4**
	0.6nm,0.3s,baz=321,slow=10,SNR=65						
ASAR				Sn	**S**	**10 39 36.2**	**-2.6**
	0.7nm,0.3s,baz=318,slow=22,SNR=9.8						
ASAR				LR	LR	10 44 00.1	
	comp=Z,362nm,19.1s,baz=323,slow=39						
PMG	**Port Moresby**	**21.72**	**95**	P	**P**	**10 37 17.1**	**+3.5**
	7.8nm,0.7s,mb4.2,baz=256,slow=8.3,SNR=3.7						
PMG				pP		10 37 24.4	
	5.8nm,0.6s,baz=225,slow=4.3,SNR=3.9						
PMG				LR	LR	10 46 01.2	
	comp=Z,220nm,21.6s,MS3.5,baz=75,slow=37						
PMG	**Port Moresby**	**21.72**	**95**	*e*P	**P**	**10 37 16.7**	**+3.1**
	8.7nm,0.6s,mb4.4						
PMG				pP		10 37 24.4	
PMG				LR	LR	10 46 01.2	
CTA	**Charters Tower**	**23.56**	**122**	P	**P**	**10 37 38.9**	**+7.1**
	3.6nm,0.8s,mb3.8,baz=333,slow=11,SNR=2.4						
CTA				LR	LR	10 47 46.0	
	comp=Z,400nm,18.7s,MS3.9,baz=86,slow=39						
STKA	**Stephens Creek**	**28.09**	**149**	*e*P	sP	10 38 30.3	+4.9
	5.1nm,0.6s						
STKA	**Stephens Creek**	**28.09**	**149**	P	**P**	**10 38 17.2**	**+3.1**
	0.9nm,0.4s,mb3.7,baz=288,slow=7.3,SNR=3.0						
STKA				pP	pP	10 38 26.6	+4.7
	5.4nm,0.5s,baz=315,slow=12,SNR=8.9						
STKA				sP	sP	10 38 30.6	+5.1
	7.1nm,0.7s,baz=321,slow=12,SNR=8.8						
STKA				LR	LR	10 50 44.5	
	comp=Z,379nm,19.2s,MS4.0,baz=108,slow=39						
STKA	**Stephens Creek**	**28.09**	**149**	*e*P	**P**	**10 38 17.0**	**+2.9**
STKA				pP	pP	10 38 26.6	+4.7
STKA				sP	sP	10 38 30.6	+5.1
STKA				LR	LR	10 50 44.5	
CMAR	**Chiang Mai Arr**	**37.04**	**316**	P	**P**	**10 39 32.1**	**0.0**
	0.9nm,0.4s,mb3.9,baz=126,slow=7.6,SNR=6.2						
CMAR				pP	pP	10 39 40.9	+0.8
	2.6nm,0.7s,baz=141,slow=7.0,SNR=3.4						
CMAR				LR	LR	10 56 43.9	
	comp=Z,113nm,18.2s,MS3.7,baz=140,slow=40						
CBIJ	**Chichi jima**	**38.71**	**25**	LR	LR	10 52 33.3	
	comp=Z,84nm,20.0s,MS3.6,baz=297,slow=31						
MDJ	**Mudanjiang**	**52.67**	**4**	*e*P	**P**	**10 41 37.6**	**+0.9**
	20nm,1.0s,mb5.0						
MDJ				*e*pP	pP	10 41 44.2	-0.7
RPZ	**Rata Peaks**	**53.33**	**140**	P	pP	10 41 50.2	+0.4
	5.5nm,0.6s,baz=333,slow=6.8,SNR=4.0						
URZ	**Urewera**	**55.40**	**131**	pP	pP	10 42 07.3	+2.3
	6.1nm,0.6s,baz=270,slow=6.1,SNR=2.6						
ULN	**Ulaanbaatar**	**58.05**	**346**	*e*P	**P**	**10 42 14.2**	**-1.3**
	2.7nm,0.8s,mb4.3						
ULN				*e*pP	pP	10 42 22.8	-1.0
SONM	**Songino Array**	**58.18**	**345**	P	**P**	**10 42 15.4**	**-1.0**
	0.3nm,0.8s,mb3.4,baz=164,slow=11,SNR=2.8						
SONM				pP	pP	10 42 22.3	-2.4
	3.6nm,1.1s,baz=164,slow=8.9,SNR=9.3						
ZAK	**Zakamensk**	**61.34**	**344**	*e*P	pP	10 42 44.4	-2.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.7						
TLY	**Talaya**	**62.42**	**345**	*e*P	pP	10 42 50.6	-3.1
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.0						
BOD	**Bodaibo**	**66.38**	**353**	*e*P	pP	10 43 14.8	-4.5
AAK	**Ala-Archa**	**68.44**	**322**	⇑*i*P	pP	10 43 30.3	-2.3
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
AAK	**Ala-Archa**	**68.44**	**322**	*e*P	**P**	**10 43 23.0**	**-1.2**
	comp=Z,3.3nm,0.6s,mb4.5						
AAK				*e*pP	pP	10 43 32.5	-0.1
YAK	**Yakutsk**	**70.06**	**2**	⇑*i*P	pP	10 43 39.1	-3.1
YAK				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
MA2	**Magadan**	**70.53**	**13**	*e*P	pP	10 43 43.4	-1.7
MA2				S	S	10 52 55.5	+8.5
MA2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
MA2	**Magadan**	**70.53**	**13**	*e*P	**P**	**10 43 37.0**	**+0.3**
	comp=Z,26nm,1.4s,mb5.0						
MA2				*e*pP	pP	10 43 45.1	+0.1
ZAL	**Zalesovo**	**70.61**	**336**	pP	pP	10 43 44.1	-1.5
	comp=Z,1.7nm,0.3s,baz=321,slow=12,SNR=2.8						
KURK	**Kurchatov**	**71.12**	**331**	*e*P	pP	10 43 46.6	-2.2
KURK	**Kurchatov**	**71.12**	**331**	P	**P**	**10 43 40.3**	**-0.1**
	comp=Z,5.0nm,0.8s,mb4.5						
KURK				*e*pP	pP	10 43 48.1	-0.7
NVS	**Novosibirsk**	**71.90**	**336**	*e*P	pP	10 43 52.1	-1.3
VNDA	**Vanda**	**71.92**	**172**	P	**P**	**10 43 48.8**	**+4.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=356,slow=6.8,SNR=6.2						
VNDA				pP	pP	10 43 56.9	+3.6
	comp=Z,1.3nm,0.7s,baz=359,slow=6.5,SNR=2.3						
VNDA				LR	LR	11 15 27.4	
	comp=Z,166nm,20.5s,MS4.3,baz=326,slow=36						
MAW	**Mawson**	**72.17**	**201**	LR	LR	11 11 03.0	
	comp=Z,176nm,19.0s,MS4.3,baz=249,slow=32						
FX1	**Attu Island--F**	**73.15**	**28**	LR	LR	11 15 38.6	
	comp=Z,7.9nm,18.6s,MS3.0,baz=81,slow=36						
BVAR	**Borovoye Array**	**76.58**	**329**	P	**P**	**10 44 12.0**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=117,slow=9.7,SNR=2.8						
BVAR				pP	pP	10 44 20.9	+0.3
	comp=Z,1.6nm,0.7s,baz=129,slow=9.5,SNR=8.6						
BRVK	**Borovoye**	**76.65**	**329**	*e*P	**P**	**10 44 12.4**	**-0.1**
BRVK				*e*PP	pP	10 44 20.4	-0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
BRVK	**Borovoye**	**76.65**	**329**	*e*P	**P**	**10 44 12.4**	**-0.1**
	comp=Z,10nm,1.4s,mb4.6						
BRVK				*e*pP	pP	10 44 20.4	-0.6
CHKZ	**Chkalovo**	**76.83**	**330**	P	**P**	**10 44 12.8**	**-0.7**
CHKZ				*e*PP	pP	10 44 21.8	-0.1
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**76.83**	**330**	P	**P**	**10 44 12.8**	**-0.7**
	comp=Z,3.7nm,0.8s,mb4.4						
CHKZ				*e*pP	pP	10 44 21.8	-0.2
TIXI	**Tiksi**	**79.67**	**1**	*e*P	pP	10 44 34.7	-2.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
QSPA	**South Pole Qui**	**81.83**	**180**	*e*P	**P**	**10 44 42.9**	**+2.9**
	comp=Z,4.0nm,0.6s,mb4.5						
QSPA				*e*pP	pP	10 44 51.8	+3.2
SOC	**Sochi**	**92.32**	**314**	*e*P	**P**	**10 45 36.2**	**+4.5**
SOC				*e*		10 49 17.4	
SOC				*e*S		10 56 05.4	
SOC				*e*SS	SS	11 02 58.1	+13
SOC				pmax	pmax		
	comp=Z,21nm,0.6s						
SOC				pmax	pmax		
	comp=N,49nm,0.9s						
SOC				pmax	pmax		
	comp=E,26nm,0.8s						
LBTB	**Lobatse**	**95.22**	**244**	LR	LR	11 27 57.8	
	comp=E,65nm,18.0s,MS4.1,baz=289,slow=35						
ILAR	**Eielson Array**	**96.41**	**26**	LR	LR	11 30 33.4	
	comp=E,35nm,18.6s,MS3.9,slow=36						

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*IDC **14** 10:33:27.5±10.0,19.75S×177.27W,h435^{km}±104^{km}, mb3.9/7,mb1 4.0/8,mb1mx3.7/18,mbtmp4.7/8,Error ellipse: s-maj=70.0km s-min=19.6km az=46.0*

*NEIC **14** 10:33:34.3±7.3,20.00S×177.58W,h503^{km}±72^{km},mb4.6/8, Error ellipse: s-maj=53.2km s-min=19.6km az=47.0*

ISC 14 10:33:35.4±2.3**,20.2S**±0.2×**177.9W**±0.3**,h500**^{km}**,n26,** σ**0^{s}82**/21**,mb4.5**/11**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.54**	**192**	P	**P**	**10 37 20.5**	**-0.2**
	1.5nm,0.3s,baz=18,slow=16,SNR=11						
CNB	**Canberra Magne**	**32.48**	**235**	*e*P	**P**	**10 39 26.2**	**+1.0**
	76nm,0.8s,mb5.2						
CTA	**Charters Tower**	**33.61**	**264**	*e*P	**P**	**10 39 35.9**	**+1.1**
	16nm,0.4s,mb4.8						
CTA	**Charters Tower**	**33.61**	**264**	P	**P**	**10 39 36.0**	**+1.2**
	21nm,0.5s,mb4.8,baz=93,slow=10,SNR=27						
CTAO	**Charters Tower**	**33.61**	**264**	*e*P	**P**	**10 39 35.7**	**+0.9**
	19nm,0.5s,mb4.8						
PMG	**Port Moresby**	**35.35**	**282**	P	**P**	**10 39 50.2**	**+0.8**
	3.0nm,0.5s,mb4.0,baz=69,slow=7.1,SNR=3.9						
PMG	**Port Moresby**	**35.35**	**282**	*e*P	**P**	**10 39 50.2**	**+0.8**
	10nm,0.8s,mb4.3						
TOO	**Toolangi**	**36.16**	**233**	*e*P	**P**	**10 39 56.7**	**+0.8**
STKA	**Stephens Creek**	**38.01**	**244**	*e*P	**P**	**10 40 12.0**	**+0.9**
	5.1nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**38.01**	**244**	P	**P**	**10 40 12.2**	**+1.2**
	6.4nm,0.5s,mb4.3,baz=94,slow=10,SNR=6.8						
ASAR	**Alice Springs**	**44.68**	**256**	P	**P**	**10 41 04.5**	**-0.1**
	17nm,0.8s,mb4.5,baz=88,slow=8.8,SNR=20						
ASPA	**Alice Springs**	**44.68**	**256**	*e*P	**P**	**10 41 04.4**	**-0.2**
WB2	**Warramunga Arr**	**44.72**	**262**	*e*P	**P**	**10 41 04.5**	**-0.4**
WRAB	**Tennant Creek**	**44.72**	**262**	*e*P	**P**	**10 41 03.9**	**-1.1**
	16nm,0.3s,mb4.9						
WRA	**Warramunga Arr**	**44.73**	**262**	P	**P**	**10 41 04.8**	**-0.2**
	8.1nm,0.3s,mb4.7,baz=97,slow=7.2,SNR=41						
KAKA	**Kakadu**	**48.05**	**271**	*e*P	**P**	**10 41 30.2**	**-0.3**
	5.5nm,0.2s,mb4.5						
FORT	**Forrest**	**49.50**	**246**	*e*P	**P**	**10 41 40.2**	**-1.0**
	307nm,0.5s						
FITZ	**Fitzroy Crossi**	**53.16**	**262**	*e*P	**P**	**10 42 07.5**	**-0.5**
	7.0nm,0.4s,mb4.3						
MBWA	**Marble Bar**	**58.01**	**257**	*e*P	**P**	**10 42 40.0**	**-1.7**
	8.0nm,0.6s,mb4.2						
VNDA	**Vanda**	**58.24**	**185**	P	**P**	**10 42 42.5**	**0.0**
	1.2nm,0.9s,baz=18,slow=3.2,SNR=2.6						
CMAR	**Chiang Mai Arr**	**90.08**	**290**	P	**P**	**10 45 43.9**	**+1.1**
	1.0nm,0.4s,mb4.0,baz=104,slow=3.2,SNR=4.8						
BVAR	**Borovoye Array**	**118.88**	**320**	PKP	PKPdf	10 51 25.4	-0.7
	0.5nm,0.3s,baz=156,slow=1.3,SNR=6.7						
ARCES	**ARCESS Array B**	**128.61**	**350**	PKP	PKPdf	10 51 40.9	-3.6
	2.7nm,0.8s,baz=63,slow=4.0,SNR=3.1						
AKASG	**Malin Array Be**	**142.77**	**331**	PKP	PKPdf	10 52 07.5	-3.2
	0.6nm,0.3s,baz=42,slow=4.3,SNR=11						
BRTR	**Keskin Array B**	**146.68**	**313**	PKPbc	PKPbc	10 52 20.2	+0.4
	0.5nm,0.4s,baz=108,slow=5.4,SNR=4.9						
CLL	**Collm**	**147.76**	**347**	*e*PKP1	PKPdf	10 52 24.0	+4.9

IDC 14 10:40:03.1±44.0**,14.94S**×**163.44E,mb4.1**/3**,mb1 4.3**/3**, mb1mx3.9**/14**,mbtmp4.1**/3**,Error ellipse: s-maj=739.7km s-min=91.5km az=64.0,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**26.11**	**226**	P	P	10 45 38.6	-1.9
	2.3nm,0.4s,baz=44,slow=10,SNR=12						
WRA	**Warramunga Arr**	**28.18**	**256**	P	P	10 45 57.8	-1.8
	0.8nm,0.6s,baz=86,slow=9.2,SNR=6.4						
ASAR	**Alice Springs**	**29.14**	**248**	P	P	10 46 06.2	-2.0
	1.2nm,0.4s,baz=75,slow=9.5,SNR=21						

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*NEIC **14** 10:40:54.8±0.8,3.31N×93.69E,mb4.4/4,Error ellipse: s-maj=26.1km s-min=10.4km az=61.0*

*IDC **14** 10:40:54.8±1.1,3.29N×93.66E,h26^{km}±4^{km},mb3.6/6, mb1 3.9/7,mb1mx3.7/19,mbtmp3.8/7,ML4.7/1,Error ellipse: s-maj=44.2km s-min=15.0km az=56.0*

ISC 14 10:40:52.8±1.0**,3.3N**±0.1×**93.7E**±0.2**,h27**^{km}**, h27**^{km}±.4^{km}**:pP-P,n11,**σ**0^{s}79**/11**,mb4.0**/10**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.91**	**19**	Pn	**P**	**10 44 36.4**	**-0.4**
	1.0nm,0.3s,baz=221,slow=13,SNR=5.7						
LSA	**Lhasa**	**26.35**	**355**	*e*P	**P**	**10 46 30.5**	**+1.8**
	12nm,0.8s,mb4.5						
LSA				*e*pP	pP	10 46 39.0	+2.3
SONM	**Songino Array**	**45.69**	**12**	P	**P**	**10 49 13.8**	**+0.5**
	0.9nm,0.7s,mb3.8,baz=193,slow=8.8,SNR=9.5						
SONM				pP	pP	10 49 21.8	+0.3
	1.3nm,0.8s,baz=189,slow=8.8,SNR=9.9						
WRA	**Warramunga Arr**	**46.13**	**122**	P	**P**	**10 49 17.3**	**+0.1**
	2.2nm,0.7s,mb4.2,baz=298,slow=8.9,SNR=24						
WRA				pP	pP	10 49 25.6	+0.3
	1.3nm,0.5s,baz=300,slow=8.8,SNR=8.2						
WRAB	**Tennant Creek**	**46.14**	**122**	*e*P	**P**	**10 49 17.1**	**-0.1**
	2.9nm,0.6s,mb4.4						
WRAB				*e*pP	pP	10 49 25.6	+0.2
ASAR	**Alice Springs**	**47.47**	**127**	P	**P**	**10 49 27.6**	**-0.1**
	0.7nm,0.7s,mb3.7,baz=301,slow=7.1,SNR=7.2						
ASAR				pP	pP	10 49 35.1	-0.9
	0.7nm,0.7s,baz=294,slow=7.9,SNR=5.9						
ASAR				PcP	PcP	10 50 58.5	+0.4
	0.5nm,0.7s,baz=298,slow=3.7,SNR=4.2						
ASAR				pPcP		10 51 06.5	
	0.5nm,0.7s,baz=287,slow=3.0,SNR=4.2						
KURK	**Kurchatov**	**48.91**	**347**	*e*P	**P**	**10 49 37.8**	**-0.7**
	1.9nm,0.9s,mb4.1						
KURK				*e*pP	pP	10 49 46.3	-0.5
ZAL	**Zalesovo**	**50.99**	**353**	P	**P**	**10 49 54.6**	**+0.3**
	0.8nm,0.7s,mb3.8,baz=292,slow=8.8,SNR=4.1						
ZAL				pP	pP	10 50 02.8	+0.2
	0.9nm,0.4s,baz=313,slow=9.4,SNR=2.7						
BVAR	**Borovoye Array**	**53.16**	**343**	P	**P**	**10 50 09.9**	**-0.7**
	0.9nm,0.8s,mb3.8,baz=158,slow=8.0,SNR=4.7						
BVAR				pP	pP	10 50 18.3	-0.7
	0.7nm,0.7s,baz=135,slow=4.2,SNR=3.4						
CHKZ	**Chkalovo**	**53.66**	**343**	*e*P	**P**	**10 50 12.9**	**-1.3**
	3.6nm,1.0s,mb4.3						
CHKZ				*e*pP	pP	10 50 21.6	-1.0
GERES	**GERESS Array B**	**80.91**	**319**	P	**P**	**10 53 07.0**	**+0.8**
	0.2nm,0.4s,mb3.4,baz=45,slow=8.3,SNR=2.8						
GERES				pP	pP	10 53 15.4	+0.5
	0.8nm,0.6s,baz=117,slow=6.0,SNR=3.9						

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*NEIC **14** 10:51:45.7,32.00S×71.24W,h55^{km},MD4.0(GUC),After GUC.*

GUC 14 10:51:45.7±0.6**,32.00S**×**71.24W,h55**^{km}±7^{km}**,MD4.0, ML3.0,2C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.57**	**197**	⇑*i*P	P	10 51 58.4	+0.4
PACH				*i* S	S	10 52 08.0	+0.8
JACH	**Jahuel**	**0.88**	**142**	⇑*i*P	P	10 52 02.5	+0.5
JACH				*i* S	S	10 52 15.3	+1.1
ROCH	**El Roble**	**0.99**	**169**	*e*P	P	10 52 04.3	+0.7
IHA	**Instituto Hidr**	**1.08**	**198**	*e*P	P	10 52 04.7	-0.3
IHA				*i* S	S	10 52 19.9	+0.7
LCCH	**Las Cruces**	**1.50**	**191**	*e*P	P	10 52 10.6	-0.3
CLCH	**Cerro Calan**	**1.52**	**157**	*e*P	P	10 52 11.1	0.0
CLCH				*i* S	S	10 52 30.0	+0.2
CLCH				AMP		10 52 37.9	
	comp=E,288nm,0.5s						
RCDM	**Rinconada Maip**	**1.53**	**166**	*e*P	P	10 52 11.6	+0.3
RCDM				*i* S	S	10 52 31.0	+0.8
RCDM				AMP		10 52 35.8	
	comp=E,462nm,0.1s						
FCH	**Farellones**	**1.55**	**149**	⇓*i*P	P	10 52 12.1	+0.6
FCH				*i* S	S	10 52 32.4	+1.8
FCH				AMP		10 52 38.6	
	comp=E,252nm,0.3s						
PCH	**Pirque**	**1.73**	**160**	*e*P	P	10 52 14.4	+0.4
CHCH	**Chadas Angostu**	**1.99**	**166**	*e*P	P	10 52 17.7	0.0
CACH	**El Canelo**	**2.18**	**166**	*e*P	P	10 52 21.0	+0.7
ZON	**Zonda**	**2.22**	**79**	*e*P	P	10 52 22.0	+1.0

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*IDC **14** 10:58:25.8±13.0,7.91S×130.05E,h101^{km}±97^{km},mb3.6/1, mb1 3.8/3,mb1mx3.6/12,mbtmp4.0/3,ML3.8/2,Error ellipse: s-maj=91.8km s-min=84.5km az=150.0*

ISC 14 10:58:22.7±2.2**,7.5S**±0.1×**130.8E**±0.1**,h95**^{km}±33^{km}**,n8,** σ**1^{s}33**/14**,mb3.5**/1**,1D,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**5.40**	**163**	⇓*i*P	**P**	**10 59 44.3**	**+2.1**
	8.5nm,0.2s						
KAKA				*e*S	**S**	**11 00 49.3**	**+5.6**
FITZ	**Fitzroy Crossi**	**11.65**	**205**	*e*P	**P**	**11 01 05.8**	**-1.4**
	9.1nm,0.3s						
FITZ				*e*S	**S**	**11 03 16.2**	**+0.4**
WRA	**Warramunga Arr**	**12.81**	**165**	P	**P**	**11 01 21.3**	**-1.3**
	0.6nm,0.3s,baz=340,slow=13,SNR=40						
WRA				S	**S**	**11 03 42.3**	**-1.0**
	1.9nm,0.3s,baz=338,slow=22,SNR=12						
WB2	**Warramunga Arr**	**12.82**	**165**	*e*P	**P**	**11 01 21.2**	**-1.4**
WB2				*e*S	**S**	**11 03 42.3**	**-1.1**
ASAR	**Alice Springs**	**16.33**	**170**	P	**P**	**11 02 08.3**	**+0.7**
	0.8nm,0.3s,baz=348,slow=11,SNR=60						
ASAR				S	**S**	**11 05 05.9**	**+0.8**
	0.3nm,0.3s,baz=351,slow=26,SNR=8.0						
ASPA	**Alice Springs**	**16.33**	**170**	*e*P	**P**	**11 02 09.1**	**+1.5**

ASPA				eS	S	11 05 08.7	+3.6
STKA	Stephens Creek	26.24	159	eP	P	11 03 55.7	+4.9
	1.7nm,0.9s,mb3.5						
STKA	Stephens Creek	26.24	159	P	P	11 03 50.6	-0.2
	0.6nm,0.3s,mb3.5,baz=335,slow=16,SNR=3.6						

*IDC **14** 11:14:53.9±1.6,5.61N×93.17E,mb3.9/6,mb1 4.1/7,mb1mx3.8/19,mbtmp3.9/7,ML4.2/1,Error ellipse: s-maj=67.7km s-min=20.3km az=62.0*

*NEIC **14** 11:14:58.6±0.7,5.66N×93.27E,h30^{km},mb4.3/2,Error ellipse: s-maj=24.7km s-min=10.7km az=66.0*

ISC 14 11:14:56.5±1.1,5.7N±0.1×93.3E±0.2,h30^{km},n9,σ0^{s}48/9,mb4.0/8,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.87	23	Pn	P	11 18 13.3	-0.3
	0.4nm,0.3s,baz=217,slow=14,SNR=2.9						
SONM	Songino Array	43.49	13	P	P	11 22 59.6	+0.6
	0.7nm,0.6s,mb3.6,baz=192,slow=8.0,SNR=7.6						
SONM				PcP	PcP	11 24 47.7	+0.5
	0.2nm,0.5s,baz=216,slow=4.6,SNR=4.6						
WRA	Warramunga Arr	47.74	123	P	P	11 23 33.2	+0.1
	1.8nm,0.7s,mb4.2,baz=302,slow=9.1,SNR=22						
WRAB	Tennant Creek	47.74	123	eP	P	11 23 32.9	-0.3
	3.0nm,0.6s,mb4.5						
ZAL	Zalesovo	48.62	353	P	P	11 23 40.1	+0.6
	0.8nm,0.3s,mb4.2,baz=311,slow=13,SNR=3.6						
ASAR	Alice Springs	49.21	128	P	P	11 23 44.5	0.0
	0.7nm,0.7s,mb3.8,baz=298,slow=7.7,SNR=11						
ASAR				PcP	PcP	11 25 08.2	+0.6
	0.3nm,0.6s,baz=304,slow=2.8,SNR=4.2						
BVAR	Borovoye Array	50.80	342	P	P	11 23 55.4	-0.8
	0.5nm,0.8s,mb3.5,baz=149,slow=8.6,SNR=3.9						
CHKZ	Chkalovo	51.30	343	eP	P	11 23 59.4	-0.5
	0.8nm,0.4s,mb4.0						
ARCES	ARCESS Array B	77.04	340	P	P	11 26 48.6	+0.5
	1.4nm,0.8s,mb3.9,baz=100,slow=7.4,SNR=4.2						

IDC 14 11:21:44.9±1.1,23.09S×175.09W,mb3.7/5,mb1 4.0/5,mb1mx3.8/14,mbtmp3.7/5,Error ellipse: s-maj=59.3km s-min=26.7km az=165.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.62	259	P	P	11 30 16.6	-0.3
	0.7nm,0.5s,baz=91,slow=8.1,SNR=35						
ASPA	Alice Springs	46.62	259	eP	P	11 30 16.4	-0.5
WB2	Warramunga Arr	46.96	264	eP	P	11 30 16.7	-2.9
WRA	Warramunga Arr	46.97	264	P	P	11 30 16.3	-3.4
	0.5nm,0.3s,baz=96,slow=7.6,SNR=31						
PLCA	Paso Flores	85.54	132	P	P	11 34 24.2	-2.0
	0.6nm,0.6s,baz=259,slow=5.2,SNR=3.4						
TXAR	Lajitas Array	86.21	56	P	P	11 34 28.8	-1.0
	0.1nm,0.5s,baz=270,slow=3.6,SNR=3.1						
ILAR	Eielson Array	90.25	12	P	P	11 34 47.8	-0.6
	0.3nm,0.7s,baz=213,slow=5.0,SNR=6.0						

*NIED **14** 11:29:00,24.50N×122.90E,h65^{km},Mw4.5 Best double couple: M$_0$6.19×10^{15} NP1:ϕ$_s$270°,δ83°,λ-104°. NP2: ϕ$_s$154°,δ16°,λ-27°.*

*JMA **14** 11:29:14.3±0.1,24.54N×122.91E,h62^{km}±1^{km},M3.6*

*IDC **14** 11:29:14.3±12.0,23.62N×123.91E,mb4.1/3,mb1 4.3/4,mb1mx3.7/20,mbtmp4.3/4,ML3.7/1,MS3.3/2,Ms1 3.3/2,ms1mx2.7/28,Error ellipse: s-maj=348.8km s-min=35.5km az=119.0*

*TAP **14** 11:29:15.2,24.38N×122.83E,h28^{km},ML4.2*

ISC 14 11:29:12.6±0.9,24.53N±0.07×122.83E±0.07,h69^{km}±5^{km},n20,σ0^{s}78/28,mb4.3/3,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.18	112	P	P	11 29 23.6	+0.5
YOJ				S	S	11 29 30.3	-0.5
IRIF	Iriomote-Funau	0.85	103	P	P	11 29 29.5	+0.1
IRIF				S	S	11 29 41.1	-0.7
HATJ	Hateruma jima	1.01	118	P	P	11 29 32.0	+0.5
HATJ				S	S	11 29 45.2	-0.3
JKRS	Kuro-shima	1.12	105	P	P	11 29 33.3	+0.4
JKRS				S	S	11 29 48.0	0.0
JIJ	Ishigaki jima	1.21	98	P	P	11 29 34.1	-0.1
JIJ				S	S	11 29 48.8	-1.4
JTJ	Tarama	1.71	86	P	P	11 29 41.9	+0.9
JTJ				S	S	11 30 02.3	+0.4
JMJ	Miyako jima 2	2.26	82	P	P	11 29 49.5	+0.9
JMJ				S	S	11 30 16.1	+0.7
JOGS	Gusukube	2.36	84	P	P	11 29 51.2	+1.2
JKE	Kume jima 2	4.00	63	P	P	11 30 14.3	+1.3
JKE				S	S	11 30 59.6	+0.6
JAGN	Aguni-jima	4.49	62	P	P	11 30 20.4	+0.7
JAGN				eS	S	11 31 10.1	-1.0
JOW	Kunigami	5.42	64	Pn	P	11 30 31.9	-0.8
	5.7nm,0.3s,baz=118,slow=25,SNR=13						
JOW				LR	LR	11 32 33.6	
	comp=Z,93nm,19.6s,baz=246,slow=39						
JOW	Kunigami	5.42	64	P	P	11 30 32.1	-0.6
JTK	Tokunoshima	6.39	58	P	P	11 30 44.8	-1.3
JAM	Amami Oshima	7.20	56	P	P	11 30 55.6	-1.8
WRA	Warramunga Arr	45.60	165	P	P	11 37 27.7	-0.3
	3.4nm,0.6s,mb4.3,baz=347,slow=8.8,SNR=31						
WB2	Warramunga Arr	45.61	165	eP	P	11 37 27.8	-0.2
ASAR	Alice Springs	49.10	167	P	P	11 37 55.5	+0.2
	1.4nm,0.6s,mb4.1,baz=349,slow=7.4,SNR=50						
ASPA	Alice Springs	49.10	167	eP	P	11 37 55.5	+0.3
STKA	Stephens Creek	58.89	161	P	P	11 39 06.2	-0.6
	6.3nm,1.4s,mb4.5,baz=6.3,slow=9.2,SNR=4.6						
NEW	Newport	89.86	35	LR	LR	12 21 17.0	
	comp=Z,47nm,18.8s,baz=196,slow=35						

IDC 14 11:40:25.6±4.0,8.46S×147.86E,h105^{km}±16^{km},mb2.7/2,mb1 2.9/3,mb1mx2.8/11,mbtmp3.1/3,Error ellipse: s-maj=48.8km s-min=43.5km az=137.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.17	216	P	P	11 40 48.6	0.0
	5.1nm,0.3s,baz=36,slow=8.7,SNR=19						
PMG				S	S	11 41 05.5	-0.5
	10nm,0.3s,baz=20,slow=20,SNR=12						
WRA	Warramunga Arr	17.37	227	P	P	11 44 22.1	-0.8
	0.1nm,0.3s,baz=56,slow=11,SNR=17						
ASAR	Alice Springs	20.18	220	P	P	11 44 52.0	-2.1
	0.1nm,0.3s,baz=54,slow=9.0,SNR=6.8						
STKA	Stephens Creek	24.02	193	P	P	11 45 30.4	-1.3
	0.9nm,0.9s,baz=332,slow=15,SNR=2.8						

WEL 14 11:59:40.1±0.2,38.16S×176.48E,h146^{km}±1^{km},ML3.9/15,10C-2D,Error ellipse: s-maj=1.1km s-min=0.9km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAZ	Tarawera	0.07	164	PN	P	12 00 00.2	+0.2
LIRZ	Lichensteins R	0.18	334	PN	P	12 00 00.0	-0.3
EDRZ	Edgecumbe	0.21	75	PN	P	11 59 60.0	-0.4
PATZ	Paeroa	0.28	219	PN	P	12 00 00.6	0.0
TGRZ	Tauranga	0.47	338	PN	P	12 00 00.8	-0.5
TGRZ				SN	S	12 00 16.9	-0.7
URZ	Urewera	0.50	101	PN	P	12 00 00.9	-0.7
URZ				SN	S	12 00 16.4	-1.5
MWZ	Matawai	0.84	102	⇑PN	P	12 00 03.4	-0.1
MWZ				SN	S	12 00 21.0	-0.5
RATZ	Rangitukua	0.90	218	PN	P	12 00 03.9	0.0
BKZ	Black Stump Fm	1.00	180	⇑PN	P	12 00 04.7	0.0
BKZ				SN	S	12 00 22.5	-1.1
MGZ	Maungaku	1.12	221	PN	P	12 00 05.8	0.0
WTVZ	West Tongariro	1.18	216	PN	P	12 00 06.2	-0.2
TWVZ	Taurewa	1.22	222	⇑PN	P	12 00 06.6	-0.3
NGZ	Ngauruhoe	1.23	214	PN	P	12 00 06.9	0.0
CNZ	Chateau	1.27	215	PN	P	12 00 06.8	-0.5
KNZ	Kokohu	1.27	133	⇑PN	P	12 00 07.4	+0.1
KNZ				SN	S	12 00 26.8	-1.4
WPVZ	Whakapapa	1.27	215	PN	P	12 00 07.0	-0.3
TUVZ	Tukino	1.28	210	⇑PN	P	12 00 07.5	0.0
FWVZ	Far West T-bar	1.31	213	PN	P	12 00 07.6	-0.2
MOVZ	Moawhango	1.37	204	⇑PN	P	12 00 07.7	-0.7
PUZ	Puketiti	1.40	87	PN	P	12 00 07.9	-0.8
PUZ				SN	S	12 00 29.5	-1.2
MKAZ	Moumakai	1.48	315	⇓PN	P	12 00 09.3	-0.3
KUZ	Kuaotunu	1.54	337	⇓PN	P	12 00 09.4	-0.7
MXZ	Matakaoa Point	1.56	68	PN	P	12 00 10.3	-0.1
MXZ				SN	S	12 00 32.4	-1.3
VRZ	Vera Road	1.66	234	PN	P	12 00 11.2	-0.3
MTAZ	Motutapu	1.86	317	PN	P	12 00 13.4	-0.3
PWZ	Pawanui	1.89	171	⇑PN	P	12 00 13.6	-0.4
TSZ	Takapari Road	1.94	192	⇑PN	P	12 00 13.7	-0.9
WTAZ	Waiatarua	1.95	308	PN	P	12 00 14.3	-0.5
WAZ	Wanganui	1.97	216	PN	P	12 00 14.4	-0.6
BFZ	Birch Farm	2.52	184	PN	P	12 00 20.0	-1.9
MRZ	Mangatainoka R	2.59	195	⇑PN	P	12 00 20.6	-2.2
KIW	Kapiti Island	2.96	204	⇑PN	P	12 00 24.6	-2.9
MTW	Mount Morrison	3.09	194	PN	P	12 00 26.0	-3.2
CAW	Cannon Point	3.14	200	PN	P	12 00 26.8	-3.1
PAWZ	Paruwai Farm	3.32	194	PN	P	12 00 28.7	-3.5
MRW	Makara Radio	3.36	204	PN	P	12 00 29.1	-3.6
MSWZ	Moikau Station	3.38	196	PN	P	12 00 29.5	-3.6
WEL	Wellington	3.39	202	PN	P	12 00 29.5	-3.6
BHW	Baring Head	3.47	200	PN	P	12 00 30.5	-3.7
TUWZ	Tuamarina	3.81	210	PN	P	12 00 34.5	-4.1
NNZ	Nelson	3.88	217	PN	P	12 00 35.5	-4.0
QRZ	Quartz Range	4.05	228	PN	P	12 00 37.4	-4.4
BSWZ	Blackbirch Sta	4.07	209	PN	P	12 00 38.0	-4.1
KHZ	Kahutara	4.81	207	PN	P	12 00 47.3	-4.5
DSZ	Denniston Nort	5.07	224	SN	S	12 01 45.8	-7.7
LTZ	Lake Taylor	5.62	214	PN	P	12 00 57.2	-5.4
MQZ	McQueen's Vall	6.25	206	PN	P	12 01 04.6	-6.5

*IDC **14** 12:13:21.4±0.7,6.77N×73.03W,h161^{km}±10^{km},mb3.1/5,mb1 3.4/7,mb1mx3.2/22,mbtmp3.6/7,Error ellipse: s-maj=32.3km s-min=8.0km az=131.0*

*NEIC **14** 12:13:22.1±0.7,6.75N×73.00W,h170^{km}±9^{km},Error ellipse: s-maj=26.2km s-min=11.6km az=126.0*

ISC 14 12:13:21.0±0.9,6.8N±0.4×73.1W±0.4,h168^{km}±30^{km},n10,σ0^{s}57/10,mb3.3/5,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.33	212	P	P	12 14 02.5	+1.0
	48nm,0.3s,baz=4.0,slow=2.8,SNR=86						
ROSC				S	S	12 14 31.9	-0.8
	18nm,0.3s,baz=87,slow=14,SNR=5.8						
SDV	Santo Domingo	3.17	50	P	P	12 14 12.4	+0.6
	9.3nm,0.3s,baz=256,slow=4.7,SNR=31						
SDV				S	S	12 14 50.4	-0.5
	7.8nm,0.3s,baz=254,slow=22,SNR=19						
TXAR	Lajitas Array	36.47	312	P	P	12 20 12.1	+0.4
	0.2nm,0.5s,mb3.0,baz=129,slow=9.6,SNR=4.8						
PDAR	Pinedale Array	48.08	324	P	P	12 21 45.3	-0.2
	0.2nm,0.4s,mb3.1,baz=129,slow=12,SNR=3.1						
SCHQ	Schefferville	48.12	5	P	P	12 21 45.7	+0.1
	1.1nm,0.8s,mb3.6,baz=220,slow=16,SNR=2.7						
YKA	Yellowknife Ar	63.25	340	P	P	12 23 33.0	-0.7
	0.7nm,0.6s,mb3.7,baz=132,slow=6.7,SNR=21						
YKA	Yellowknife Ar	63.25	340	P	P	12 23 33.0	-0.7
INK	Inuvik	73.02	340	P	P	12 24 34.1	+0.2
	0.4nm,0.8s,mb3.2,baz=301,slow=6.1,SNR=4.1						
ASAR	Alice Springs	149.15	234	PKPbc	PKPdf	12 32 51.2	+5.3
	0.2nm,0.5s,baz=113,slow=4.0,SNR=7.1						
WRA	Warramunga Arr	150.38	241	PKPbc	PKPdf	12 32 54.3	+6.5
	0.2nm,0.4s,baz=107,slow=2.7,SNR=13						

*IDC **14** 12:19:27.2±1.8,17.62N×60.90W,mb3.6/4,mb1 4.2/6,mb1mx3.7/22,mbtmp3.9/6,ML4.9/2,MS3.2/2,Ms1 3.3/2,ms1mx2.6/20,Error ellipse: s-maj=42.8km s-min=16.8km az=78.0*

*TRN **14** 12:19:29.5,17.38N×61.14W,h2^{km}*

*NEIC **14** 12:19:30.9,17.39N×61.17W,h4^{km},mb4.1/3,MD3.8(TRN),After TRN.*

ISC 14 12:19:26.1±0.8,17.68N±0.06×60.82W±0.05,h2^{km},n25,σ1^{s}15/30,mb3.8/7,MS3.8/1,1C-1D,Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPB	Codrington	0.96	268	⇑iP	Pb	12 19 47.0	+1.9
CPB				eS	Sg	12 19 59.8	+1.7
BPA	Boggy Peak	1.18	238	⇓iP	Pb	12 19 48.8	0.0
BPA				eS	Sb	12 20 01.4	-2.9
SEG	Port Louis	1.43	207	eP	Pn	12 19 52.3	-0.8
BCG	Bois Riant Cap	1.76	206	eP	Pn	12 19 57.6	-0.2
NVRH	Round Hill, Ne	1.77	254	eP	Pn	12 19 58.8	+0.8
NVRH				eS	Sn	12 20 20.2	-1.2
SKTB	Turtle Beach	1.78	255	eS	Sn	12 20 20.0	-1.6
NVBH	Bath Hotel, Ne	1.81	252	eP	Pn	12 19 59.2	+0.7
SCG	Saint Claude	1.84	207	eP	Pn	12 19 59.2	+0.3
SKI	Saint Kitts	1.86	260	eP	Pn	12 20 00.5	+1.2
BSK	Brimstone Hill	1.96	261	i P	Pn	12 20 02.2	+1.6
BSK				eS	Sn	12 20 27.5	+1.4
BBL	Barber's Block	2.23	196	eP	Pn	12 20 05.4	+0.9
BBL	Barber's Block	2.23	196	eP	Pn	12 20 06.5	+2.0
CBYP	Canovanas	4.83	278	ePn	Pn	12 20 40.5	-1.0
SJG	San Juan	5.09	276	Pn	Pn	12 20 43.9	-1.3
	5.9nm,0.3s,baz=340,slow=13,SNR=8.4						
SJG				Sn	Sn	12 21 44.5	-1.1
	5.6nm,0.3s,baz=135,slow=15,SNR=2.1						
SJG				LR	LR	12 21 57.4	
	comp=Z,90nm,21.9s,baz=48,slow=30						
SJG	San Juan	5.09	276	ePn	Pn	12 20 44.9	-0.4
SJG				Sn	Sn	12 21 44.5	-1.1
SJG				LR	LR	12 21 57.5	
SDV	Santo Domingo	12.94	229	Pn	P	12 22 41.5	+7.6
	1.1nm,0.3s,baz=36,slow=8.7,SNR=7.1						
JCT	Junction City	37.62	297	eP	P	12 26 43.6	-0.6
	5.1nm,0.8s,mb4.3						
AMTX	Amarillo	40.13	303	eP	P	12 27 05.9	+0.8
	2.0nm,0.6s,mb4.0						
TXAR	Lajitas Array	40.76	295	P	P	12 27 08.9	-1.5
	0.6nm,0.5s,mb3.5,baz=116,slow=8.5,SNR=14						
MNTX	Cornudas Mount	42.54	298	eP	P	12 27 24.7	-0.2
	2.5nm,0.6s,mb4.1						
PDAR	Pinedale Array	48.15	312	P	P	12 28 09.7	+0.1
	0.7nm,0.7s,mb3.8,baz=111,slow=7.7,SNR=6.1						
NVAR	Mina Array Bea	53.89	305	P	P	12 28 53.6	+0.5
	0.2nm,0.4s,mb3.4,baz=90,slow=5.4,SNR=3.3						
YKA	Yellowknife Ar	58.07	334	P	P	12 29 21.7	-1.2
	0.9nm,1.0s,mb3.8,baz=107,slow=7.4,SNR=8.4						
YKA	Yellowknife Ar	58.07	334	P	P	12 29 21.7	-1.2
NOA	NORSAR Array B	66.00	30	LR	LR	12 53 26.3	
	comp=Z,50nm,18.7s,MS3.8,baz=255,slow=31						

*CASC **14** 12:46:17.5±1.9,13.83N×92.03W,h39^{km}±148^{km},MD4.5,mb4.0(NEIC)*

*MEX **14** 12:46:18.9±1.0,13.75N×92.17W,h8^{km}±565^{km},MD4.6*

*NEIC **14** 12:46:21.7±1.5,14.10N×92.03W,h49^{km}±9^{km},mb4.0/10,MD4.6(MEX),Error ellipse: s-maj=19.3km s-min=10.3km az=189.0*

*IDC **14** 12:46:28.8±3.8,14.69N×91.33W,h105^{km}±36^{km},mb3.5/6,mb1 3.9/8,mb1mx3.6/21,mbtmp3.9/8,MS3.5/2,Ms1 3.5/2,ms1mx2.7/18,Error ellipse: s-maj=91.3km s-min=20.1km az=39.0*

ISC 14 12:46:15.9±0.7,13.72N±0.06×92.10W±0.03,h35^{km}±7^{km},n51,σ1^{s}15/69,mb4.0/13,MS3.4/2,4C-2D,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.74	37	⇓eP	P	12 46 29.8	-0.1
IXG	Ixpaco	1.66	74	⇑eP	P	12 46 41.8	-1.3
IXG				eS	S	12 47 03.1	-0.3
NBG	Las Nubes	1.91	63	⇑eP	P	12 46 47.1	+0.5
NBG				eS	S	12 47 09.9	+0.3
RBDL	Robledal	2.38	80	⇑eP	P	12 46 53.5	+0.2
RBDL				eS	S	12 47 20.6	-0.9
RTR	El Retiro	2.39	86	⇑eP	P	12 46 54.0	+0.4
RTR				eS	S	12 47 21.1	-0.8
SBLS	San Blas	2.41	87	eP	P	12 46 53.9	+0.1
SBLS				eS	S	12 47 23.0	+0.6
SNJE	San Jose	2.43	86	eP	P	12 46 54.4	+0.3
SNJE				eS	S	12 47 22.7	-0.2
CCIG	Comitan	2.54	359	i P	P	12 46 56.6	+1.0
CCIG				i S	S	12 47 27.6	+1.8
BOQS	Boqueron	2.74	89	eP	P	12 46 58.0	-0.6
BOQS				eS	S	12 47 29.8	-1.0
SNET	Serv Nac Est T	2.79	90	eS	S	12 47 32.7	+0.7
LFRS	El Faro	2.96	92	⇓eP	P	12 47 01.6	0.0
LFRS				eS	S	12 47 35.0	-1.3
LBRS	Las Brisas	2.97	89	eP	P	12 47 00.7	-1.1
SCX	San Cristobal	3.04	350	i P	P	12 47 05.2	+2.5
SCX				i S	S	12 47 39.5	+1.2
LCBS	La Ceiba	3.04	91	eP	P	12 47 02.6	-0.2
LCBS				eS	S	12 47 38.1	-0.2
SNVI	San Vicente	3.18	92	eP	P	12 47 05.3	+0.7
SNVI				eS	S	12 47 42.8	+1.0
CNCH	Conchagua	4.18	96	eP	P	12 47 20.1	+1.2
TUIG	Tuzandepetl	4.83	333	eP	P	12 47 26.9	-1.2
TUIG				i S	S	12 48 22.2	-1.5
TUIG	Tuzandepetl	4.83	333	eP	P	12 47 28.5	+0.4
TUIG				i S	S	12 48 22.2	-1.5
OXX	Oaxaca	5.57	307	i P	P	12 47 39.3	+0.9
OXX				i S	S	12 48 40.0	-2.1
VHO	Vista Hermosa	5.57	307	i P	P	12 47 40.3	+1.9
VHO				i S	S	12 48 39.9	-2.3
VHO	Vista Hermosa	5.57	307	i P	P	12 47 39.0	+0.6
VHO				i S	S	12 48 41.7	-0.5
IISM	Ciudad Serdan	7.28	317	eP	P	12 48 05.0	+2.5
TEIG	Tepich	7.43	29	ePn	P	12 48 02.6	-2.0
	29nm,0.5s						
JTS	JuntasAbangare	7.78	115	P	P	12 48 17.4	+7.9
	1.5nm,0.3s,baz=310,slow=15,SNR=5.1						
JTS				S	S	12 49 56.7	+19
	baz=136,slow=20,SNR=3.7						
IIB	San Bernardino	7.94	312	eP	P	12 48 13.0	+1.4
ACX	Acapulco	8.16	294	eP	P	12 48 12.0	-2.7
PPM	Popocatepetl	8.21	311	eP	P	12 48 15.9	+0.5
PPM				eS	S	12 49 46.7	-1.2
PPM	Popocatepetl	8.21	311	eP	P	12 48 15.9	+0.5
PPM				eP		12 48 18.0	
PPM				eS	S	12 49 46.7	-1.2
PLIG	Platanillo	8.49	304	i S	S	12 49 52.6	-2.4
LTX	Lajitas	18.87	327	eP	P	12 50 35.5	-0.3
	6.4nm,1.0s						
TXAR	Lajitas Array	18.87	327	P	P	12 50 36.5	+0.6
	0.1nm,0.3s,baz=153,slow=13,SNR=28						
SDV	Santo Domingo	21.59	101	P	P	12 51 04.5	-0.2
	2.5nm,0.5s,mb3.9,baz=279,slow=13,SNR=2.5						
SDV				LR	LR	12 59 15.8	
	comp=Z,45nm,18.1s,MS2.9,baz=254,slow=36						
SDV	Santo Domingo	21.59	101	P	P	12 51 08.3	+3.6
	4.9nm,0.7s,mb4.0						
SDV				LR	LR	12 59 15.8	
MNTX	Cornudas Mount	21.64	328	eP	P	12 51 04.6	-0.6
	6.6nm,0.9s,mb4.1						
WMOK	Wichita Mounta	21.78	345	eP	P	12 51 05.3	-1.2
	2.0nm,0.7s,mb3.7						
WVT	Waverly	22.64	9	eP	P	12 51 14.3	-0.7
	3.7nm,0.8s,mb3.9						
AMTX	Amarillo	22.78	339	eP	P	12 51 15.7	-0.7
	8.1nm,0.6s,mb4.3						
ANMO	Albuquerque	24.80	331	P	P	12 51 37.0	+0.9
	2.4nm,0.7s,mb3.9,baz=155,slow=12,SNR=14						
ANMO	Albuquerque	24.80	331	eP	P	12 51 37.0	+0.9
	2.5nm,0.7s,mb3.9						
ARUT	Antelope Range	30.57	325	eP	P	12 52 29.6	+1.0
PDAR	Pinedale Array	32.63	336	P	P	12 52 45.7	-0.9
	0.4nm,0.9s,mb3.4,baz=111,slow=7.7,SNR=2.7						
MNV	Mina	33.73	322	eP	P	12 52 57.8	+1.6
	5.6nm,1.1s,mb4.4						
NVAR	Mina Array Bea	33.82	321	P	P	12 52 59.1	+2.1
	2.6nm,0.7s,mb4.3,baz=128,slow=9.5,SNR=21						
HLID	Hailey	35.37	332	eP	P	12 53 10.9	+0.7
	1.9nm,0.8s,mb4.1						
MCMT	McKenzie Canyo	35.67	334	eP	P	12 53 13.9	+1.2
WVOR	Wild Horse Val	36.66	326	eP	P	12 53 22.0	+0.9
	1.4nm,0.7s,mb3.9						
SCHQ	Schefferville	45.51	20	LR	LR	13 15 21.0	
	comp=Z,114nm,18.0s,MS3.9,baz=313,slow=39						
YKA	Yellowknife Ar	51.27	347	P	P	12 55 16.3	-1.9
	0.9nm,0.5s,mb4.0,baz=150,slow=7.3,SNR=26						
YKA				PcP	PcP	12 56 31.8	-1.3
	0.2nm,0.5s,baz=152,slow=3.7,SNR=7.0						
YKA	Yellowknife Ar	51.27	347	P	P	12 55 16.3	-1.9
YKA				PcP	PcP	12 56 31.8	-1.3
ILAR	Eielson Array	63.05	337	P	P	12 56 40.7	-1.0
	1.2nm,1.0s,mb4.0,baz=120,slow=3.8,SNR=7.6						
CMAR	Chiang Mai Arr	146.22	341	PKPbc	PKPbc	13 05 55.1	+1.6
	2.2nm,0.7s,baz=337,slow=3.5,SNR=13						

IDC 14 13:13:15.9±1.6,5.13S×145.94E,mb3.3/2,mb1 3.5/4,mb1mx3.4/12,mbtmp3.3/4,ML3.0/2,Error ellipse: s-maj=54.2km s-min=25.7km az=104.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.42	164	Pn	Pn	13 14 24.8	-0.9
	1.9nm,0.3s,baz=7.7,slow=5.5,SNR=9.7						
PMG				Sn	Sn	13 15 17.3	-1.5
	2.9nm,0.3s,baz=139,slow=19,SNR=3.7						
WRA	Warramunga Arr	18.56	216	P	P	13 17 33.9	-2.3
	0.1nm,0.3s,baz=40,slow=12,SNR=8.0						
ASAR	Alice Springs	21.78	211	P	P	13 18 09.4	-2.0
	0.9nm,1.0s,baz=48,slow=7.5,SNR=6.8						
ILAR	Eielson Array	85.10	23	P	P	13 25 53.5	-1.1
	0.6nm,0.7s,baz=246,slow=5.1,SNR=8.8						

*NEIC **14** 13:13:34.6±0.8,3.85N×95.39E,h30^{km},mb4.3/2,Error ellipse: s-maj=30.0km s-min=11.7km az=58.0*

*IDC **14** 13:13:37.8±1.3,4.37N×95.91E,h47^{km}±9^{km},mb3.7/6,mb1 3.9/7,mb1mx3.7/16,mbtmp3.9/7,ML3.8/1,Error ellipse: s-maj=70.1km s-min=17.2km az=50.0*

ISC 14 13:13:35.3±1.0,4.0N±0.1×95.5E±0.2,h49^{km},h49^{km}±1.4^{km}:pP-P,n11,σ1^{s}09/11,mb4.1/8,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.78	13	P	P	13 17 04.2	+1.2
	0.2nm,0.3s,baz=203,slow=11,SNR=14						
SONM	Songino Array	44.69	10	P	P	13 21 42.4	-2.8
	0.3nm,0.4s,mb3.5,baz=194,slow=9.5,SNR=5.2						
WRA	Warramunga Arr	44.93	123	P	P	13 21 47.6	0.0
	4.7nm,0.6s,mb4.5,baz=302,slow=9.2,SNR=60						
WRA				pP	pP	13 22 01.3	+0.7
	1.1nm,0.5s,baz=303,slow=9.2,SNR=5.1						
WRAB	Tennant Creek	44.93	123	eP	P	13 21 47.6	0.0
	3.2nm,0.4s,mb4.5						
WB2	Warramunga Arr	44.94	123	eP	P	13 21 47.4	-0.2
ASAR	Alice Springs	46.40	128	P	P	13 21 59.4	+0.2
	0.8nm,0.5s,mb3.9,baz=299,slow=7.8,SNR=23						
ASAR				pP	pP	13 22 11.9	-0.4
	0.3nm,0.4s,baz=301,slow=7.8,SNR=2.9						
CHKZ	Chkalovo	53.59	342	eP	P	13 22 52.2	-1.4
	0.7nm,0.3s,mb4.1						
FINES	FINESS Array B	76.78	332	P	P	13 25 22.7	-0.6
	0.6nm,0.3s,mb3.9,baz=106,slow=7.1,SNR=10						
FINES				pP	pP	13 25 36.6	-0.6
	2.8nm,1.1s,baz=143,slow=9.5,SNR=1.2						
FINES	FINESS Array B	76.78	332	P	P	13 25 22.7	-0.6
FINES				pP	pP	13 25 36.6	-0.6
ARCES	ARCESS Array B	79.38	340	P	P	13 25 37.9	+0.5
	4.0nm,0.9s,mb4.3,baz=82,slow=6.4,SNR=5.5						
GERES	GERESS Array B	81.64	319	P	P	13 25 51.6	+1.8
	0.8nm,0.7s,mb3.8,baz=143,slow=6.7,SNR=3.6						

*IDC **14** 13:21:51.5±0.5,14.90N×93.57E,mb4.6/21,mb1 4.8/22,mb1mx4.7/25,mbtmp4.6/22,ML4.6/1,MS4.1/11,Ms1 4.2/11,ms1mx4.0/25,Error ellipse: s-maj=19.9km s-min=11.1km az=46.0*

*BJI **14** 13:21:53.6,14.98N×93.50E,h18^{km},mB5.0,mb4.8,Ms4.7,Msz4.4*

*MOS **14** 13:21:54.2±0.7,14.87N×93.72E,h33^{km},mb5.2/41,Error ellipse: s-maj=9.2km s-min=5.5km az=118.6*

*NEIC **14** 13:21:56.4±0.2,14.85N×93.63E,h35^{km},mb5.0/49,MS4.4/11,Error ellipse: s-maj=4.9km s-min=3.9km az=205.0*

*HRVD **14** 13:21:56.4±0.5,14.78N×93.73E,h12^{km},MW4.9/51,Centroid moment Tensor Solution. LP body waves: s17,c20;Mantle waves: s51,c82; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.10±.10; $M_{\theta\theta}$1.95±.08; $M_{\phi\phi}$-2.05±.08; $M_{r\theta}$1.82±.27; $M_{\theta\phi}$0.78±.08; $M_{\phi r}$-0.04±.23; Best double couple: $M_0$2.715×10^{16} NP1:ϕ_s29°,δ59°,λ166°. NP2:ϕ_s126°,δ78°,λ32°. Principal axes: T 3.148, Plg31°, Azm352°; N -.865, Plg56°, Azm144°; P -2.282, Plg13°, Azm254°; nsta1 refers to body waves, cutoff=40s. nsta2* *refers to surface waves, cutoff=50s.*

ISC 14 13:21:54.0±0.2**, 14.82N**±0.03×**93.62E**±0.02**, h31**^{km}**, h31**^{km}±1.0^{km}**:pP-P, n261,** σ**1**^{s}**06**/270**, mb4.8**/88**, MS4.5**/38**, 16C-17D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**6.25**	**54**	*e*P	**Pn**	**13 23 25.1**	**-1.5**
	273nm,0.8s						
CMAR	**Chiang Mai Arr**	**6.25**	**54**	Pn	**Pn**	**13 23 25.6**	**-1.1**
	3.4nm,0.3s,baz=244,slow=16,SNR=54						
CMAR				Sn	**Sn**	**13 24 36.5**	**-1.3**
	5.0nm,0.3s,baz=238,slow=22,SNR=4.2						
CMAR				LR	LR	13 26 21.7	
	comp=Z,2µm,18.6s,baz=240,slow=43						
NNT	**Nongplab**	**6.34**	**110**	P	**Pn**	**13 23 30.0**	**+2.1**
NST	**Nakhon Sawan**	**6.34**	**81**	P	**Pn**	**13 23 27.0**	**-0.9**
	255nm,0.6s						
CHG	**Chiang Mai**	**6.46**	**51**	PG	**Pn**	**13 23 28.3**	**-1.3**
CHG				SG	Px	13 23 34.2	
CHRT	**Chiangrai**	**7.74**	**49**	⇑P	**Pn**	**13 23 46.0**	**-1.4**
	858nm,0.9s						
NANT	**Nan**	**7.85**	**59**	P	**Pn**	**13 23 49.0**	**0.0**
KKTK	**Khon Kaen**	**8.99**	**79**	⇑P	**P**	**13 24 06.9**	**+2.0**
	2µm,0.9s						
CAL	**Calcutta**	**9.17**	**328**	*e*	**P**	**13 24 14.6**	**+7.3**
	1µm,0.3s						
CAL				*e*		13 26 18.6	
BWNR	**Bhubaneshwar**	**9.23**	**307**	*e*P	**P**	**13 24 03.7**	**-4.5**
BWNR				*e*S	**Sn**	**13 25 39.6**	**-12**
BWNR				*e*		13 25 46.0	
	comp=E,401nm,0.6s						
BWNR				*e*		13 25 46.0	
	comp=N,455nm,0.4s						
AGT	**Agartala**	**9.29**	**346**	*e*	**P**	**13 24 17.0**	**+8.0**
IMP	**Imphal**	**9.92**	**2**	*e*P	**P**	**13 24 15.0**	**-2.7**
VIS	**Vishakhapatnam**	**10.30**	**288**	*e*P	**P**	**13 24 20.1**	**-2.8**
VIS				*e*S	**S**	**13 26 05.7**	**-13**
VIS				*e*		13 26 13.2	
	comp=E,221nm,0.6s						
VIS				*e*		13 26 13.2	
	comp=N,361nm,0.6s						
SHL	**Shillong**	**10.82**	**352**	*e*P	**P**	**13 24 25.5**	**-4.5**
SHL				*e*S	Sx	13 26 15.0	
UBT	**Ubonrachathani**	**11.02**	**86**	P	**P**	**13 24 34.0**	**+1.2**
BLSP	**Bilaspur**	**13.10**	**305**	*e*P	**P**	**13 24 59.1**	**-1.6**
BLSP				*e*		13 27 59.6	
	comp=E,106nm,1.0s						
BLSP				*e*		13 28 01.3	
	comp=N,123nm,1.2s						
MDRS	**Chennai**	**13.10**	**264**	*e*	**P**	**13 25 02.0**	**+1.3**
MDRS				*e*		13 27 50.0	
MDRS				*e*		13 32 47.0	
KMI	**Kunming**	**13.36**	**38**	P	**P**	**13 25 06.0**	**+1.9**
KMI				AP		13 25 14.1	
KMI				XP		13 25 17.9	
KMI				S	**S**	**13 27 35.0**	**+2.6**
KMI				XS		13 27 47.4	
KMI				SS	SS	13 27 52.4	+4.5
KMI				AMB	AMB		
	comp=Z,4.0nm,1.0s						
KMI				AMB	AMB		
	comp=Z,140nm,5.2s						
KMI				LR	LR		
	comp=N,1µm,17.8s						
KMI				LR	LR		
	comp=E,2µm,19.3s						
KMI				LR	LR		
	comp=Z,1µm,13.7s						
JIRN	**Jiri**	**14.53**	**333**	*e*P	**P**	**13 25 15.5**	**-4.0**
	comp=Z,182nm,1.0s						
HYB	**Hyderabad**	**14.71**	**282**	*e*P	**P**	**13 25 20.0**	**-1.9**
HYB				*e*S	**S**	**13 27 57.0**	**-7.6**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**14.71**	**282**	*e*P	**P**	**13 25 20.0**	**-1.9**
	comp=Z,50nm,1.0s						
HYB				*e*S	**S**	**13 27 57.0**	**-7.6**
HYB	**Hyderabad**	**14.71**	**282**	*i* P	**P**	**13 25 20.0**	**-1.9**
	comp=Z,50nm,1.0s						
HYB				*e*S	**S**	**13 27 57.0**	**-7.6**
PALK	**Pallekele**	**14.72**	**241**	*e*P	**P**	**13 25 20.4**	**-1.7**
	comp=Z,32nm,0.8s						
PKI	**Pulchoki**	**14.81**	**330**	*e*P	**P**	**13 25 18.2**	**-5.1**
	comp=Z,160nm,1.0s						
GUN	**Gumba**	**14.88**	**332**	*e*P	**P**	**13 25 20.0**	**-4.2**
	comp=Z,103nm,0.8s						
LSA	**Lhasa**	**14.99**	**352**	P	**P**	**13 25 20.8**	**-4.7**
LSA				AP		13 25 28.5	
LSA				*e*S	**S**	**13 28 11.8**	**+0.7**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
LSA				LR	LR		
	comp=N,670nm,13.0s						
LSA				LR	LR		
	comp=E,1µm,18.0s						
LSA				LR	LR		
	comp=Z,630nm,14.0s						
LSA	**Lhasa**	**14.99**	**352**	*e*P	**P**	**13 25 20.6**	**-4.9**
LSA				pmax	pmax		
	comp=Z,44nm,0.8s						
LSA	**Lhasa**	**14.99**	**352**	*e*P	**P**	**13 25 20.6**	**-4.9**
	comp=Z,44nm,0.8s						
DMN	**Daman**	**14.99**	**329**	*e*P	**P**	**13 25 20.0**	**-5.6**
	comp=Z,91nm,0.8s						
KKN	**Kakani**	**15.06**	**330**	*e*P	**P**	**13 25 23.3**	**-3.2**
	comp=Z,110nm,0.9s						
ALBI	**Allahabad**	**15.22**	**315**	*e*P	**P**	**13 25 25.5**	**-3.1**
GKN	**Gorkha**	**15.55**	**329**	*e*P	**P**	**13 25 27.1**	**-5.7**
	comp=Z,40nm,0.5s						
KOLN	**Koldanda**	**15.90**	**326**	*e*P	**P**	**13 25 30.6**	**-6.8**
	comp=Z,141nm,0.8s						
QIZ	**Qiongzhong**	**16.07**	**73**	P	**P**	**13 25 40.4**	**+0.8**
QIZ				S	**S**	**13 28 36.6**	**0.0**
QIZ				AMB	AMB		
	comp=Z,259nm,5.0s						
QIZ				LR	LR		
	comp=N,693nm,16.1s						
QIZ				LR	LR		
	comp=E,3µm,17.5s						
QIZ				LR	LR		
	comp=Z,1µm,16.9s						
LATR	**Latur**	**16.74**	**285**	*e*P	**P**	**13 25 46.0**	**-2.0**
LATR				*e*S	**S**	**13 28 42.5**	**-9.4**
GYA	**Guiyang**	**16.81**	**44**	⇑*i*P	**P**	**13 25 49.5**	**+0.6**
GYA				AMB	AMB		
	comp=Z,250nm,2.5s						
GYA				LR	LR		
	comp=N,1µm,13.2s						
GYA				LR	LR		
	comp=E,830nm,13.8s						
GYA				LR	LR		
	comp=Z,840nm,13.2s						
BHPL	**Bhopal**	**17.44**	**301**	⇓*i*P	**P**	**13 25 59.2**	**+2.3**
BHPL				*i*		13 29 04.0	
MNGI	**Mangalore**	**18.35**	**266**	*i* P	**P**	**13 26 10.9**	**+2.8**
MNGI				*i*		13 29 15.4	
CD2	**Chengdu**	**18.52**	**28**	P	**P**	**13 26 07.8**	**-2.4**
CD2				AMB	AMB		
	comp=Z,60nm,1.0s						
KAD	**Karad**	**18.84**	**280**	*e*P	**P**	**13 26 15.0**	**+0.9**
LGTI	**Lohaghat**	**19.09**	**322**	*e*P	**P**	**13 26 19.3**	**+2.3**
POO	**Poona**	**19.30**	**284**	*e*P	**P**	**13 26 19.6**	**+0.2**
POO				*e*		13 26 29.1	
	comp=Z,43nm,1.2s						
BOM	**Bombay**	**20.32**	**284**	*e*P	**P**	**13 26 24.8**	**-5.7**
BOM				*e*		13 30 08.3	
GZH	**Guangzhou**	**20.37**	**63**	P	**P**	**13 26 37.5**	**+6.6**
GZH				LR	LR		
	comp=N,821nm,13.3s,MS4.3						
GZH				LR	LR		
	comp=E,813nm,17.3s,MS4.3						
GZH				LR	LR		
	comp=Z,1µm,11.7s						
NDI	**New Delhi**	**20.52**	**315**	*e*P	**P**	**13 26 31.5**	**-1.0**
NDI				*e*		13 30 11.0	
DDI	**Dehra Dun**	**21.05**	**320**	*e*P	**P**	**13 26 38.8**	**+0.9**
DDI				*e*		13 30 37.8	
AJM	**Ajmer**	**21.18**	**306**	⇑*i*P	**P**	**13 26 40.0**	**+0.8**
ENH	**Enshi**	**21.20**	**41**	*e*P	**P**	**13 26 37.7**	**-1.7**
	comp=Z,47nm,0.7s,mb4.9						
SMLA	**Simla**	**22.16**	**320**	⇑*i*P	**P**	**13 27 03.8**	**+15**
	comp=Z,163nm,2.2s,mb5.1						
SMLA				*i* S	S	13 31 08.0	+22
SDNR	**Sundarnagar**	**22.54**	**320**	*e*P	**P**	**13 26 55.8**	**+3.0**
BHK	**Bhakra**	**22.82**	**319**	*e*	**P**	**13 26 54.5**	**-1.1**
XAN	**Xi'an**	**23.61**	**33**	P	**P**	**13 27 02.8**	**-0.5**
XAN				XP		13 27 11.6	
XAN				S	**S**	**13 31 13.8**	**+1.6**
XAN				AMB	AMB		
	comp=Z,24nm,1.0s,mb4.6						
XAN				LR	LR		
	comp=N,751nm,16.8s,MS4.3						
XAN				LR	LR		
	comp=E,582nm,15.8s,MS4.3						
XAN				LR	LR		
	comp=Z,675nm,16.8s,MS4.2						
THN	**Thein Dam**	**23.95**	**320**	*e*P	**P**	**13 27 05.6**	**-0.9**
WHN	**Wuhan**	**24.64**	**47**	*e*P	**P**	**13 27 15.0**	**+1.7**
WHN				S	**S**	**13 31 38.0**	**+8.2**
WHN				LR	LR		
	comp=Z,1µm,14.3s,MS4.5						
GTA	**Gaotai**	**25.10**	**11**	P	**P**	**13 27 18.4**	**+0.9**
GTA				AP	pP	13 27 26.8	+0.2
GTA				XP	sP	13 27 30.3	-0.5
GTA				PP	PP	13 27 58.9	+3.3
GTA				PPP	PPP	13 28 10.6	+3.9
GTA				PCP	PcP	13 30 47.9	-4.4
GTA				S	**S**	**13 31 41.8**	**+4.5**
GTA				PCS		13 34 32.8	
GTA				SCS	ScS	13 38 11.9	-2.9
GTA				AMB	AMB		
	comp=Z,45nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,288nm,6.1s						
GTA				LR	LR		
	comp=N,545nm,23.2s						
GTA				LR	LR		
	comp=E,611nm,16.0s						
GTA				LR	LR		
	comp=Z,628nm,19.8s,MS4.1						
QZH	**Quanzhou**	**25.51**	**63**	P	**P**	**13 27 22.1**	**+0.5**
QZH				S	**S**	**13 31 49.0**	**+4.7**
QZH				LR	LR		
	comp=Z,1µm,14.7s,MS4.5						
NJ2	**Nanjing**	**28.70**	**49**	*e*P	**P**	**13 27 53.1**	**+2.5**
NJ2				AP	pP	13 28 03.1	+3.3
NJ2				XP	sP	13 28 07.1	+3.3
NJ2				PP	PP	13 28 43.1	-0.4
NJ2				PPP	PPP	13 28 54.5	-1.7
NJ2				S	**S**	**13 32 36.0**	**-0.2**
NJ2				XS		13 32 54.0	
NJ2				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,390nm,4.1s						
NJ2				LR	LR		
	comp=N,3µm,12.2s,MS5.1						
NJ2				LR	LR		
	comp=E,2µm,14.6s,MS5.1						
NJ2				LR	LR		
	comp=Z,2µm,12.0s,MS4.9						
KSH	**Kashi**	**29.07**	**331**	*e*P	**P**	**13 27 55.0**	**+1.1**
KSH				*e*AP	pP	13 28 05.0	+1.9
KSH				*e*XP	sP	13 28 09.1	+1.9
KSH				*e*PCP	PcP	13 31 03.0	+1.3
KSH				*e*S	**S**	**13 32 43.0**	**+0.9**
KSH				*e*SCS	ScS	13 38 33.3	+1.1
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
KSH				AMB	AMB		
	comp=Z,130nm,4.0s						
KSH				LR	LR		
	comp=N,1µm,17.0s,MS4.8						
KSH				LR	LR		
	comp=E,2µm,18.6s,MS4.8						
WMQ	**Urumqi**	**29.35**	**351**	P	**P**	**13 27 56.8**	**+0.5**
WMQ				XP	sP	13 28 10.0	+0.4
WMQ				PP	PP	13 28 52.0	+0.2
WMQ				S	**S**	**13 32 47.0**	**+0.6**
WMQ				SS	SS	13 34 19.0	+0.3
WMQ				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,18nm,6.0s						
WMQ				LR	LR		
	comp=N,425nm,16.0s,MS4.4						
WMQ				LR	LR		
	comp=E,571nm,17.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,445nm,16.0s,MS4.2						
BTO	**Baotou**	**29.40**	**26**	*e*P	**P**	**13 27 56.3**	**-0.6**
BTO				AMB	AMB		
	comp=Z,19nm,0.5s,mb5.1						
BTO				LR	LR		
	comp=N,261nm,8.6s						
BTO				LR	LR		
	comp=E,731nm,13.9s						
SSE	**Sheshan**	**29.99**	**53**	P	**P**	**13 28 00.6**	**-1.6**
SSE				AP	pP	13 28 09.3	-2.1
SSE				XP	sP	13 28 11.3	-4.2
SSE				S	**S**	**13 32 55.8**	**-1.0**
SSE				XS		13 33 12.1	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
SSE				LR	LR		
	comp=N,497nm,21.2s,MS4.2						
SSE				LR	LR		
	comp=E,322nm,21.1s,MS4.2						
SSE				LR	LR		
	comp=Z,394nm,16.9s,MS4.1						
HHC	**Hu-ho-hao-te**	**30.28**	**28**	⇑P	**P**	**13 28 04.8**	**+0.2**
HHC				AP	pP	13 28 13.9	+0.1
HHC				XP	sP	13 28 18.8	+0.9
HHC				PP	PP	13 29 06.8	+2.9
HHC				PCP	PcP	13 31 02.9	-1.8
HHC				S	**S**	**13 33 02.8**	**+1.6**
HHC				XS		13 33 19.6	
HHC				SCP		13 34 41.1	
HHC				PCS		13 34 45.9	
HHC				SCS	ScS	13 38 34.9	-3.0
HHC				AMB	AMB		
	comp=Z,29nm,1.1s,mb4.9						
HHC				LR	LR		
	comp=N,751nm,15.6s,MS4.6						
HHC				LR	LR		
	comp=E,776nm,18.0s,MS4.6						
HHC				LR	LR		
	comp=Z,828nm,15.6s,MS4.5						
KZA	**Kyzart**	**31.46**	**333**	P	**P**	**13 28 15.8**	**+0.8**
	SNR=5.9						
UCH	**Uchtor**	**31.90**	**333**	P	**P**	**13 28 19.8**	**+0.8**
	SNR=5.7						
BJT	**Baijiatuau**	**31.92**	**34**	*e*P	**P**	**13 28 19.1**	**0.0**
BJT				pmax	pmax		
	comp=Z,19nm,1.1s						
BJT	**Baijiatuau**	**31.92**	**34**	*e*P	**P**	**13 28 19.1**	**0.0**
	comp=Z,19nm,1.1s,mb4.8						
BJI	**Beijing**	**31.94**	**34**	*e*P	**P**	**13 28 19.6**	**+0.3**
BJI				S	**S**	**13 33 29.1**	**+1.8**
BJI				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.8						
BJI				LR	LR		
	comp=N,637nm,24.1s,MS4.5						
BJI				LR	LR		
	comp=E,1µm,23.3s,MS4.5						
BJI				LR	LR		
	comp=Z,368nm,24.4s,MS4.0						
KBK	**Karagaybulak**	**32.06**	**334**	P	**P**	**13 28 21.9**	**+1.6**
	SNR=7.3						
AML	**Almayashu**	**32.20**	**332**	P	**P**	**13 28 22.9**	**+1.4**
	SNR=10.0						
AAK	**Ala-Archa**	**32.24**	**333**	P	**P**	**13 28 22.9**	**+1.1**
	SNR=7.5						
AAK	**Ala-Archa**	**32.24**	**333**	⇑*i*P	**P**	**13 28 20.4**	**-1.4**
AAK				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.7						
AAK				MLR	MLR		
	comp=Z,700nm,20.0s,MS4.3						
AAK	**Ala-Archa**	**32.24**	**333**	*e*P	**P**	**13 28 21.3**	**-0.6**
	comp=Z,14nm,1.2s,mb4.7						
FRU	**Bishkek**	**32.35**	**333**	⇓*e*P	**P**	**13 28 24.0**	**+1.2**
FRU				*e*		13 29 36.0	
FRU				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.5						
CHMS	**Chumysh**	**32.42**	**334**	P	**P**	**13 28 23.8**	**+0.3**
	SNR=8.3						
EKS2	**Erkin-Say**	**32.58**	**332**	P	**P**	**13 28 25.8**	**+1.0**
	SNR=9.6						
USP	**Ospenovka**	**32.75**	**334**	P	**P**	**13 28 26.3**	**0.0**
	SNR=24						
MKAR	**Makanchi Array**	**33.26**	**346**	*i* P	**P**	**13 28 30.4**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,26nm,1.0s						
DL2	**Dalian**	**34.39**	**40**	P	**P**	**13 28 44.0**	**+3.5**
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
DL2				LR	LR		
	comp=N,290nm,13.7s,MS4.3						
DL2				LR	LR		
	comp=E,290nm,13.5s,MS4.3						
DL2				LR	LR		
	comp=Z,470nm,15.5s,MS4.3						
SONM	**Songino Array**	**34.58**	**15**	P	**P**	**13 28 42.4**	**+0.3**
	comp=Z,10nm,1.0s,mb4.7,baz=201,slow=6.5,SNR=61						
SONM				PcP	PcP	13 31 17.4	+0.9
	comp=Z,4.1nm,0.8s,baz=202,slow=3.6,SNR=7.1						
SONM				ScP		13 35 03.2	
	comp=Z,0.7nm,0.9s,baz=223,slow=3.1,SNR=3.7						
ULN	**Ulaanbaatar**	**34.78**	**16**	*e*P	**P**	**13 28 43.6**	**-0.2**
ULN				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
ULN	**Ulaanbaatar**	**34.78**	**16**	*e*P	**P**	**13 28 43.6**	**-0.2**
	comp=Z,19nm,1.1s,mb5.0						
ZAK	**Zakamensk**	**36.33**	**10**	*e*P	**P**	**13 28 57.4**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
SNY	**Shenyang**	**37.33**	**38**	⇓P	**P**	**13 29 05.5**	**+0.1**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SNY				LR	LR		
	comp=N,840nm,17.1s						
SNY				LR	LR		
	comp=Z,710nm,16.0s,MS4.6						
TLY	**Talaya**	**37.64**	**10**	*e*P	**P**	**13 29 06.9**	**-1.0**
TLY				*e*S	**S**	**13 34 55.0**	**-0.2**
TLY				*e*SSS	SSS	13 37 54.9	-6.8
TLY				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.4						
TLY				MLR	MLR		
	comp=Z,583nm,18.0s,MS4.4						
TLY	**Talaya**	**37.64**	**10**	*e*P	**P**	**13 29 08.4**	**+0.6**
	comp=Z,4.6nm,0.9s,mb4.2						
KS15	**Wonju Array Si**	**37.81**	**47**	*e*P	**P**	**13 29 10.9**	**+1.4**
KURK	**Kurchatov**	**37.81**	**344**	*i* P	**P**	**13 29 09.4**	**+0.1**
KURK				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
KURK	**Kurchatov**	**37.81**	**344**	*e*P	**P**	**13 29 09.1**	**-0.2**
	comp=Z,34nm,1.1s,mb5.0						
CN2	**Changchun**	**39.62**	**37**	*e*P	**P**	**13 29 24.8**	**+0.3**
CN2				*e*AP	pP	13 29 35.4	+1.5
CN2				*e*S	**S**	**13 35 25.3**	**+0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,400nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=E,600nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=Z,700nm,19.0s,MS4.5						
HIA	**Hailar**	**40.46**	**26**	*e*P	**P**	**13 29 28.9**	**-2.5**
HIA				pmax	pmax		
	comp=Z,27nm,1.5s						
HIA				MLR	MLR		
	comp=Z,418nm,19.0s						
HIA	**Hailar**	**40.46**	**26**	*e*P	**P**	**13 29 28.9**	**-2.5**
	comp=Z,27nm,1.5s,mb4.8						
HIA				LR	LR		
	comp=Z,418nm,19.0s,MS4.3						
NVS	**Novosibirsk**	**40.75**	**351**	*e*P	**P**	**13 29 32.0**	**-1.7**
NVS				*e*		13 29 48.3	
NVS				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.7						
NVS				pmax	pmax		
	comp=N,21nm,1.5s						
BVAR	**Borovoye Array**	**42.32**	**339**	P	**P**	**13 29 45.6**	**-1.0**
	comp=N,1.7nm,0.7s,mb3.8,baz=140,slow=12,SNR=8.3						
BRVK	**Borovoye**	**42.38**	**339**	*e*P	**P**	**13 29 46.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
BRVK	**Borovoye**	**42.38**	**339**	*e*P	**P**	**13 29 46.7**	**-0.4**
	comp=Z,6.8nm,0.8s,mb4.3						
MDJ	**Mudanjiang**	**42.53**	**38**	P	**P**	**13 29 49.1**	**+0.7**
MDJ				AP	pP	13 29 57.8	0.0
MDJ				XP	sP	13 30 02.0	+0.3
MDJ				PP	PP	13 31 27.3	-2.4
MDJ				S	**S**	**13 36 12.1**	**+3.7**
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,130nm,4.6s						
MDJ				LR	LR		
	comp=N,237nm,18.7s,MS4.2						
MDJ				LR	LR		
	comp=E,122nm,16.2s,MS4.2						
MDJ				LR	LR		
	comp=Z,232nm,17.0s,MS4.1						
CHKZ	**Chkalovo**	**42.78**	**340**	*e*P	**P**	**13 29 50.3**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
CHKZ	**Chkalovo**	**42.78**	**340**	*e*P	**P**	**13 29 50.2**	**-0.1**
	comp=Z,20nm,1.1s,mb4.8						
MBWA	**Marble Bar**	**43.99**	**144**	*e*P	**P**	**13 30 00.1**	**-0.6**
	comp=Z,19nm,1.0s,mb4.8						
MBWA				LR	LR		
	comp=Z,382nm,21.0s,MS4.3						
MAJO	**Matsushiro**	**45.14**	**53**	*e*P	**P**	**13 30 08.1**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,346nm,19.0s,MS4.3						
MAJO	**Matsushiro**	**45.14**	**53**	*e*P	**P**	**13 30 08.1**	**-1.5**
	comp=Z,33nm,0.8s,mb5.2						
MAJO				LR	LR		
	comp=Z,346nm,19.0s,MS4.3						
MAT	**Matsushiro**	**45.14**	**53**	*e*P	**P**	**13 30 12.0**	**+2.3**
MAT	**Matsushiro**	**45.14**	**53**	P	**P**	**13 30 12.4**	**+2.7**
FITZ	**Fitzroy Crossi**	**45.45**	**135**	*e*P	**P**	**13 30 12.3**	**-0.1**
	comp=Z,20nm,0.9s,mb5.0						
FITZ				*e*		13 31 53.6	
BOD	**Bodaibo**	**45.58**	**15**	*e*P	**P**	**13 30 12.6**	**-0.3**
BOD				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
KLR	**Kul'dur**	**46.32**	**34**	*e*P	**P**	**13 30 11.2**	**-7.6**
KLR				MLR	MLR		
	comp=N,700nm,15.0s						
KLR				MLR	MLR		
	comp=Z,900nm,15.0s,MS4.8						
CLNS	**Chul'man**	**48.19**	**23**	*e*P	**P**	**13 30 33.3**	**-0.1**
CLNS				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.6						
CLNS				pmax	pmax		
	comp=N,25nm,0.9s						
CLNS				pmax	pmax		
	comp=E,24nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.6						
CLNS				MLR	MLR		
	comp=N,300nm,13.0s,MS4.5						
CLNS				MLR	MLR		
	comp=E,50nm,14.0s,MS4.5						
GNI	**Garni**	**49.40**	**310**	*e*P	**P**	**13 30 43.8**	**+0.8**
GNI				pmax	pmax		
	comp=Z,28nm,1.0s						
GNI	**Garni**	**49.40**	**310**	P	**P**	**13 30 43.2**	**+0.2**
	comp=Z,37nm,1.1s,mb5.3,baz=108,slow=5.2,SNR=9.1						
GNI	**Garni**	**49.40**	**310**	*e*P	**P**	**13 30 43.8**	**+0.8**
	comp=Z,28nm,1.0s,mb5.2						
TI2	**Plekhanov**	**49.86**	**312**	*e*P	**P**	**13 30 47.8**	**+1.3**
MUN	**Mundaring**	**51.32**	**155**	*e*P	**P**	**13 30 56.6**	**-1.1**
	comp=Z,22nm,0.8s,mb5.2						
MUN	**Mundaring**	**51.32**	**155**	*e*P	**P**	**13 30 56.6**	**-1.1**
MUN				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
YSS	**Yuzh-Sakhalins**	**51.78**	**41**	*e*P	**P**	**13 31 00.5**	**-0.5**
YSS				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
YSS	**Yuzh-Sakhalins**	**51.78**	**41**	*e*P	**P**	**13 31 00.5**	**-0.6**
	comp=Z,16nm,0.9s,mb5.0						
KIV	**Kislovodsk**	**51.98**	**315**	*e*P	**P**	**13 31 02.1**	**-0.4**
KIV				pmax	pmax		
	comp=N,19nm,1.1s						
KIV				pmax	pmax		
	comp=E,15nm,1.1s						

KIV				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.3						
KIV				MLR	MLR		
	comp=N,118nm,19.0s,MS4.2						
KIV				MLR	MLR		
	comp=E,157nm,19.0s,MS4.2						
KIV				MLR	MLR		
	comp=Z,233nm,19.0s,MS4.2						
KIV	Kislovodsk	51.98	315	eP	P	13 31 01.9	-0.6
	comp=Z,62nm,1.1s,mb5.5						
KIV				LR	LR		
	comp=Z,66nm,20.0s,MS3.7						
SOKR	Solikamsk	52.21	337	⇓iP	P	13 31 04.2	+0.2
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,460nm,18.0s,MS4.6						
NWAO	Narrogin (SRO)	52.57	155	P	P	13 31 07.6	+0.5
	comp=Z,26nm,0.9s,mb5.2,baz=335,slow=8.7,SNR=6.4						
NWAO				LR	LR	13 55 05.4	
	comp=Z,3.6nm,19.7s,baz=292,slow=38						
NWAO	Narrogin (SRO)	52.57	155	P	P	13 31 07.6	+0.4
NWAO				LR	LR	13 55 05.4	
WRA	Warramunga Arr	52.88	130	P	P	13 31 09.5	-0.1
	comp=Z,10.0nm,0.9s,mb4.7,baz=312,slow=7.7,SNR=45						
WRA				PcP	PcP	13 32 20.6	+2.2
	comp=Z,5.8nm,0.7s,baz=322,slow=3.5,SNR=11						
WRAB	Tennant Creek	52.88	130	eP	P	13 31 07.9	-1.7
WRAB				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
WRAB	Tennant Creek	52.88	130	eP	P	13 31 07.9	-1.8
	comp=Z,21nm,0.8s,mb5.1						
WB2	Warramunga Arr	52.89	130	eP	P	13 31 08.6	-1.1
WB2				e		13 32 18.4	
YAK	Yakutsk	53.65	20	eP	P	13 31 13.3	-1.4
YAK				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.4						
YAK				MLR	MLR		
	comp=Z,343nm,21.0s,MS4.4						
YAK	Yakutsk	53.65	20	eP	P	13 31 13.3	-1.4
	comp=Z,37nm,0.8s,mb5.4						
YAK				LR	LR		
	comp=Z,343nm,21.0s,MS4.4						
MALT	Malatya	53.76	307	eP	P	13 31 16.1	+0.3
MALT				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
MALT	Malatya	53.76	307	eP	P	13 31 16.1	+0.3
	comp=Z,5.5nm,1.0s,mb4.4						
ASF	Jabal al Asfar	54.22	299	P	P	13 31 18.7	-0.6
	comp=Z,3.9nm,0.7s,mb4.4,baz=332,slow=3.6,SNR=5.4						
ASF				LR	LR	13 59 11.9	
	comp=Z,156nm,18.5s,MS4.1,baz=131,slow=41						
ASPA	Alice Springs	54.89	134	eP	P	13 31 23.4	-1.0
ASPA				e		13 32 28.1	
ASAR	Alice Springs	54.90	134	P	P	13 31 23.3	-1.1
	comp=Z,8.3nm,0.7s,mb4.9,baz=315,slow=7.1,SNR=52						
ASAR				PcP	PcP	13 32 27.9	+1.9
	comp=Z,5.9nm,0.8s,baz=316,slow=4.1,SNR=10.0						
EIL	Elat	55.75	296	eP	P	13 31 30.1	-0.4
	comp=Z,5.7nm,0.8s,mb4.7						
ANN	Anapa	55.83	314	eP	P	13 31 27.6	-3.2
ANN				pmax	pmax		
	comp=Z,91nm,0.9s,mb5.8						
FORT	Forrest	56.14	144	eP	P	13 31 33.4	+0.1
	comp=Z,740nm,0.9s						
BRTR	Keskin Array B	57.66	308	P	P	13 31 43.5	-0.5
	comp=Z,4.7nm,0.9s,mb4.5,baz=124,slow=7.9,SNR=16						
KMBO	Kilima Mbogo	57.96	259	eP	P	13 31 46.7	+0.4
KMBO				MLR	MLR		
	comp=Z,296nm,22.0s						
KMBO	Kilima Mbogo	57.96	259	P	P	13 31 46.6	+0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=236,slow=23,SNR=4.0						
KMBO				LR	LR	13 57 02.0	
	comp=Z,227nm,18.5s,MS4.3,baz=93,slow=36						
PMG	Port Moresby	58.27	111	eP	P	13 31 48.8	+0.3
PMG				pmax	pmax		
	comp=Z,21nm,0.8s						
PMG	Port Moresby	58.27	111	P	P	13 31 49.0	+0.5
	comp=Z,20nm,0.8s,mb5.2,baz=328,slow=3.0,SNR=17						
PMG	Port Moresby	58.27	111	eP	P	13 31 48.8	+0.3
	comp=Z,21nm,0.8s,mb5.2						
MOS	Moscow	58.97	327	eP	P	13 31 50.9	-2.0
MOS				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.7						
OBN	Obninsk	59.32	326	⇓iP	P	13 31 54.7	-0.6
OBN				e		13 34 06.2	
OBN				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.2						
TIXI	Tiksi	60.58	12	⇑iP	P	13 32 02.3	-1.4
TIXI				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.4						
MA2	Magadan	60.94	29	eP	P	13 32 04.2	-2.0
MA2				eS	S	13 40 17.6	-2.9
MA2				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
MA2				MLR	MLR		
	comp=Z,700nm,26.0s,MS4.7						
MA2	Magadan	60.94	29	eP	P	13 32 04.7	-1.5
	comp=Z,14nm,0.9s,mb5.1						
TIRR	Tirgusor	62.11	313	⇓P	P	13 32 14.3	-0.1
CTA	Charters Tower	62.29	122	P	P	13 32 18.1	+2.1
	comp=Z,14nm,0.9s,mb5.1,baz=319,slow=5.8,SNR=5.9						
CTAO	Charters Tower	62.29	122	P	P	13 32 15.6	-0.4
CTAO				MLR	MLR		
	comp=Z,333nm,21.0s,MS4.5						
CFR	Carcaliu	62.39	313	⇓P	P	13 32 15.7	-0.6
AKASG	Malin Array Be	62.49	320	P	P	13 32 15.3	-1.6
	comp=Z,1.5nm,0.5s,mb4.3,baz=85,slow=5.1,SNR=13						
VRI	Vrincioaia	63.45	314	⇑P	P	13 32 24.1	+0.9
MLR	Muntele Rosu	63.96	314	⇓P	P	13 32 27.3	+0.7
MBAR	Mbarara	64.01	262	eP	P	13 32 27.7	+0.2
MBAR				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
MBAR				MLR	MLR		
	comp=Z,69nm,19.0s,MS3.9						
MBAR	Mbarara	64.01	262	eP	P	13 32 27.7	+0.2
	comp=Z,16nm,1.3s,mb4.9						
MBAR				LR	LR		
	comp=Z,69nm,19.0s,MS3.9						
BURAR	Bucovina Array	64.66	316	⇓P	P	13 32 31.6	+0.5
STKA	Stephens Creek	65.33	136	eP	P	13 32 34.9	-0.9
	comp=Z,8.4nm,0.7s,mb4.9						
STKA	Stephens Creek	65.33	136	P	P	13 32 35.2	-0.5
	comp=Z,10nm,0.7s,mb5.0,baz=323,slow=7.3,SNR=19						
FINES	FINESS Array B	66.40	331	P	P	13 32 41.0	-1.0
	comp=Z,3.9nm,0.7s,mb4.5,baz=90,slow=7.6,SNR=10						
FINES				LR	LR	14 03 37.4	
	comp=Z,273nm,19.5s,MS4.5,baz=133,slow=38						
KWP	Kalwaria	66.50	318	eP	P	13 32 42.6	-0.3
SUW	Suwalki	66.66	323	eP	P	13 32 43.1	-0.7
KOLS	Kolonicke sedl	66.73	317	eP	P	13 32 44.4	0.0
CRVS	Cervenica-Dubn	67.27	317	i P	P	13 32 48.2	+0.4
CRVS				ePP	PP	13 35 13.3	-4.4
NIE	Niedzica	68.05	318	eP	P	13 32 52.0	-0.7
PSZ	Piszkesteto	68.26	316	eP	P	13 32 53.1	-0.9
PSZ				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
PSZ	Piszkesteto	68.26	316	eP	P	13 32 53.1	-0.9
	comp=Z,14nm,1.1s,mb4.9						
OJC	Ojcow	68.42	318	eP	P	13 32 54.7	-0.3
ARCES	ARCESS Array B	68.61	339	P	P	13 32 55.0	-0.8
	comp=Z,2.8nm,0.7s,mb4.3,baz=112,slow=6.5,SNR=5.5						
ARCES				LR	LR	14 08 16.5	
	comp=Z,435nm,18.9s,MS4.7,baz=277,slow=41						
VYHS	Vyhne	68.99	317	i P	P	13 32 58.5	0.0
OKC	Ostrava-Krasne	69.47	318	eP	P	13 33 01.7	+0.3
MORC	Moravsky Berou	69.86	318	eP	P	13 33 03.5	-0.3
MORC				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
MORC	Moravsky Berou	69.86	318	eP	P	13 33 03.5	-0.3
	comp=Z,16nm,1.1s,mb4.9						
BILL	Bilibino	69.88	22	eP	P	13 33 01.9	-1.7
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BILL	Bilibino	69.88	22	eP	P	13 33 01.9	-1.7
	comp=Z,3.5nm,0.8s,mb4.3						
DPC	Dobruska-Polom	70.65	319	eP	P	13 33 09.1	+0.5
KSP	Ksiaz	70.67	319	eP	P	13 33 09.1	+0.4
KSP				e*PP	pP	13 33 17.8	-0.7
UPC	Upice	70.85	319	eP	P	13 33 05.9	-3.9
ARSA	Arzberg	71.22	315	⇓iP	P	13 33 12.3	+0.2
	comp=Z,10.0nm,0.9s,mb4.8						
LSZ	Lusaka	71.25	248	eP	P	13 33 13.7	+0.9
LSZ				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.2						
LSZ				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.1						
LSZ	Lusaka	71.25	248	eP	P	13 33 13.7	+0.9
	comp=Z,48nm,1.5s,mb5.2						
LSZ				LR	LR		
	comp=Z,1μm,21.0s,MS5.1						
ARMA	Armidale	71.66	129	eP	P	13 33 18.8	+3.7
PRU	Pruhonice	71.80	318	eP	P	13 33 15.7	+0.2
OBKA	Obir	71.92	314	⇑iP	P	13 33 16.7	+0.4
	comp=Z,15nm,0.8s,mb5.0						
LJU	Ljubljana	71.95	314	eP	P	13 33 17.1	+0.5
FX1	Attu Island--F	72.03	39	P	P	13 33 17.2	+0.3
	comp=Z,20nm,0.7s,mb5.2,baz=109,slow=20,SNR=2.6						
FX1				LR	LR	14 07 00.4	
	comp=Z,12nm,19.1s,baz=287,slow=38						
CEY	Cerknica	72.04	314	eP	P	13 33 17.0	0.0
MOA	Molln	72.05	316	⇑iP	P	13 33 16.8	-0.3
	comp=Z,11nm,0.8s,mb4.8						
JAVS	Javornik	72.28	314	eP	P	13 33 18.7	+0.2
GERES	GERESS Array B	72.39	317	P	P	13 33 19.5	+0.5
	comp=Z,10nm,0.7s,mb4.9,baz=87,slow=5.8,SNR=45						
KHC	Kasperske Hory	72.45	317	eP	P	13 33 19.7	+0.3
KBA	Koelnbreinsper	72.71	315	⇓iP	P	13 33 21.3	+0.3
	comp=Z,12nm,1.1s,mb4.7						
KBA	Koelnbreinsper	72.71	315	⇓iP	P	13 33 21.3	+0.3
KBA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
CLL	Collm	72.74	320	eP	P	13 33 21.0	-0.1
CLL				e		13 33 43.0	
CLL	Collm	72.74	320	P	P	13 33 21.0	-0.1
CLL				e		13 33 43.0	
NKC	Novy Kostel	73.14	318	eP	P	13 33 23.0	-0.4
NB2	NORSAR Subarra	73.49	330	P	P	13 33 24.5	-0.7
	comp=Z,2.6nm,0.7s,mb4.3,baz=88,slow=5.8						
NB2	NORSAR Subarra	73.49	330	P	P	13 33 24.5	-0.7
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NOA	NORSAR Array B	73.49	330	P	P	13 33 24.8	-0.4
	comp=Z,4.2nm,0.8s,mb4.4,baz=89,slow=5.9,SNR=10						
NOA				LR	LR	14 12 12.5	
	comp=Z,185nm,18.7s,MS4.4,baz=75,slow=41						
WTTA	Wattenberg	73.86	315	⇑iP	P	13 33 27.2	-0.5
	comp=Z,9.9nm,0.6s,mb4.9						
WTTA	Wattenberg	73.86	315	⇑iP	P	13 33 27.2	-0.5
WTTA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
WATA	Walderalm	73.90	315	⇑iP	P	13 33 27.4	-0.5
	comp=Z,7.1nm,1.0s,mb4.5						
WATA	Walderalm	73.90	315	⇑iP	P	13 33 27.4	-0.5
WATA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GRA1	Grafenberg Arr	73.96	318	eP	P	13 33 29.0	+0.8
	comp=Z,12nm,1.0s,mb4.8						
GRF	Grafenberg Arr	73.96	318	eP	P	13 33 29.0	+0.8
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GRF	Grafenberg Arr	73.96	318	eP	P	13 33 29.0	+0.8
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GRF	Grafenberg Arr	73.96	318	eP	P	13 33 29.0	+0.8
	comp=Z,12nm,1.0s,mb4.8						
SQTA	Sankt Quirin	74.16	315	⇓iP	P	13 33 29.1	-0.3
	comp=Z,7.7nm,0.9s,mb4.6						
SQTA	Sankt Quirin	74.16	315	⇓iP	P	13 33 29.1	-0.3
SQTA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MOTA	Moosalm	74.22	316	⇓iP	P	13 33 29.3	-0.5
	comp=Z,5.2nm,0.9s,mb4.5						
MOTA	Moosalm	74.22	316	⇓iP	P	13 33 29.3	-0.5
MOTA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
DAVA	Damuels	75.05	316	⇓iP	P	13 33 34.3	-0.3
	comp=Z,17nm,1.0s,mb4.9						
LBTB	Lobatse	77.20	240	eP	P	13 33 47.9	+0.7
LBTB				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
LBTB				MLR	MLR		
	comp=Z,873nm,19.0s,MS5.1						
LBTB	Lobatse	77.20	240	LR	LR	14 04 29.3	
	comp=Z,351nm,18.9s,MS4.7,baz=95,slow=33						
LBTB	Lobatse	77.20	240	eP	P	13 33 47.9	+0.7
	comp=Z,20nm,1.1s,mb5.0						
LBTB				LR	LR		
	comp=Z,873nm,19.0s,MS5.1						
HAU	Haudompre	77.34	317	eP	P	13 33 47.3	-0.1
HAU				eR			
	comp=Z,197nm,19.8s						
LPG	La Plagne	77.42	314	eP	P	13 33 48.7	+0.8
	comp=Z,39nm,0.8s,mb5.1						
LPG	La Plagne	77.42	314	eP	P	13 33 48.7	+0.8
LPG				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
LPL	La Plagne	77.43	314	eP	P	13 33 48.7	+0.7
	comp=Z,44nm,0.8s,mb5.1						
LPL	La Plagne	77.43	314	eP	P	13 33 48.7	+0.7
LPL				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
MBDF	Montbardon	77.52	313	eP	P	13 33 50.0	+1.5
	comp=Z,27nm,1.0s,mb4.8						
MBDF	Montbardon	77.52	313	eP	P	13 33 50.0	+1.5
MBDF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
BNI	Bardonecchia	77.54	314	P	P	13 33 48.8	+0.2
BNI				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
BNI	Bardonecchia	77.54	314	P	P	13 33 48.8	+0.3
	comp=Z,29nm,1.3s,mb5.0						
CABF	La Chapelle	77.72	315	eP	P	13 33 50.0	+0.5
ORIF	Oris-en-Rattie	78.12	313	eP	P	13 33 52.9	+1.1
	comp=Z,29nm,1.0s,mb4.8						
ORIF				eR			
	comp=Z,230nm,21.5s						
BOSA	Boshof	78.91	236	eP	P	13 33 57.0	+0.6
BOSA				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
BOSA	Boshof	78.91	236	eP	P	13 33 57.0	+0.6
	comp=Z,21nm,1.1s,mb5.0						
SMF	Signal de Mont	79.24	315	eP	P	13 33 57.7	-0.2
SSF	Saint Saulge	79.39	316	eP	P	13 33 58.8	+0.1
AVF	Avril sur Loir	79.54	316	eP	P	13 33 59.5	0.0
CAF	Calviac	80.78	314	eP	P	13 34 06.8	+0.7
RJF	Les Rejaudoux	81.08	314	eP	P	13 34 08.4	+0.7
RJF				eR			
	comp=Z,222nm,22.8s						
LDF	La Druitiere	81.48	318	eP	P	13 34 09.3	-0.4
MFF	Saint Martin d	81.94	316	eP	P	13 34 12.6	+0.5
GRR	Gorron	82.01	318	eP	P	13 34 12.1	-0.3
TSUM	Tsumeb	82.10	248	LR	LR	14 06 23.4	
	comp=Z,520nm,21.9s,MS4.8,baz=136,slow=32						
ETSF	Etsaut	83.08	312	eP	P	13 34 19.1	+1.0
IMA	Indian Mountai	85.42	22	eP	P	13 34 30.1	+0.7
IMA				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.4						
IMA	Indian Mountai	85.42	22	eP	P	13 34 30.1	+0.7
	comp=Z,20nm,0.7s,mb5.3						
ESDC	Sonseca Array	86.39	310	P	P	13 34 35.3	+0.5
	comp=Z,1.4nm,0.7s,mb4.3,baz=61,slow=4.5,SNR=5.3						
COLA	College	88.13	22	P	P	13 34 42.8	+0.2
ILAR	Eielson Array	88.54	22	P	P	13 34 44.6	0.0
	comp=Z,1.7nm,0.7s,mb4.5,baz=303,slow=4.6,SNR=20						
ILAR				PP	PP	13 38 07.7	-7.5
	comp=Z,1.3nm,0.9s,baz=292,slow=5.9,SNR=5.9						
ILAR				LR	LR	14 22 02.0	
	comp=Z,209nm,18.7s,MS4.6,baz=157,slow=41						
SML	Sawmill	89.56	25	eP	P	13 34 49.8	+0.3
INK	Inuvik	90.50	16	eP	P	13 34 53.4	-0.3
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	Inuvik	90.50	16	eP	P	13 34 53.4	-0.3
	comp=Z,11nm,1.0s,mb5.1						
DAWY	Dawson	91.58	21	eP	P	13 34 59.1	+0.4
SYO	Syowa Base	91.86	197	⇑P	P	13 35 01.8	+1.9
YKA	Yellowknife Ar	99.82	13	P	P	13 35 36.9	+0.5
	comp=Z,1.1nm,0.8s,mb4.3,baz=329,slow=4.2,SNR=26						
YKA				PP	PP	13 39 37.4	-6.1
	comp=Z,0.4nm,0.8s,baz=331,slow=7.7,SNR=5.6						
YKA				PKKPbc		13 51 58.8	
	comp=Z,0.5nm,0.9s,baz=149,slow=2.1,SNR=7.7						
YKA	Yellowknife Ar	99.82	13	P	P	13 35 36.9	+0.5
YKA				PP	PP	13 39 37.4	-6.1
YKA				PKKPbc		13 51 58.8	
PDAR	Pinedale Array	118.87	19	PKP	PKPdf	13 40 41.6	-3.2
	comp=Z,1.4nm,0.8s,baz=32,slow=1.8,SNR=9.1						
NVAR	Mina Array Bea	119.17	28	PKP	PKPdf	13 40 43.9	-1.6
	comp=Z,2.9nm,0.9s,baz=337,slow=0.9,SNR=11						
NVAR	Mina Array Bea	119.17	28	PKP	PKPdf	13 40 43.9	-1.6
MSU	Marysvale	121.70	24	ePKPdf	PKPdf	13 40 48.0	-2.5
TXAR	Lajitas Array	133.04	21	PKP	PKPdf	13 41 09.1	-3.5
	comp=Z,1.4nm,0.8s,baz=252,slow=0.7,SNR=7.3						
JCT	Junction City	133.15	16	ePKPdf	PKPdf	13 41 08.6	-4.1
TEIG	Tepich	145.13	3	ePKPdf	PKPdf	13 41 29.9	-4.6
TRQA	Tornquist	148.35	218	ePKPdf	PKPdf	13 41 36.1	-3.2
TRQA				ePKPbc	PKPdf	13 41 39.4	+0.1
PLCA	Paso Flores	150.73	205	PKPbc	PKPdf	13 41 46.4	+3.4
	comp=Z,19nm,0.9s,baz=157,slow=5.4,SNR=21						
PLCA	Paso Flores	150.73	205	ePKPdf	PKPdf	13 41 40.8	-2.2
PLCA				PKPbc	PKPdf	13 41 46.4	+3.4
SDV	Santo Domingo	151.75	325	ePKPdf	PKPdf	13 41 42.7	-2.5
SAML	Samuel	156.58	282	ePKPab	PKPab	13 42 17.2	-0.9
LPAZ	La Paz	162.36	263	ePKPdf	PKPdf	13 41 56.0	-2.3

IDC **14** *13:38:58.9±8.7, 32.65S×179.77W, h123^{km}±84^{km}, mb3.2/2, mb1 3.4/3, mb1mx3.3/13, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=73.8km s-min=49.3km az=178.0*

NEIC **14** *13:39:12.2±2.4, 34.02S×179.77W, h271^{km}±25^{km}, Error ellipse: s-maj=43.3km s-min=32.6km az=139.0*

ISC 14 13:39:00.5±1.4**, 32.87S**±0.07×**179.9E**±0.2**, h150^{km}, n41, σ1§41**/57**, mb3.3**/2**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.85	195	eP	P	13 40 15.7	+2.9
MXZ				eS	S	13 41 11.7	+3.1
MXZ	Matakaoa Point	4.85	195	ePN	P	13 40 14.6	+1.8
MXZ				eSN	S	13 41 09.1	+0.4
MXZ	Matakaoa Point	4.85	195	ePN	P	13 40 14.6	+1.8
MXZ				eSN	S	13 41 09.1	+0.4
PUZ	Puketiti	5.35	194	eP	P	13 40 19.8	+0.3
PUZ				S	S	13 41 21.6	+1.0
PUZ	Puketiti	5.35	194	ePN	P	13 40 19.6	+0.2
PUZ				SN	S	13 41 21.6	+1.0
PUZ	Puketiti	5.35	194	ePN	P	13 40 19.6	+0.2
PUZ				SN	S	13 41 21.6	+1.0
MWZ	Matawai	5.77	199	eP	P	13 40 25.1	0.0
MWZ	Matawai	5.77	199	ePN	P	13 40 24.0	-1.1
MWZ	Matawai	5.77	199	ePN	P	13 40 24.0	-1.1
URZ	Urewera	5.82	202	P	P	13 40 28.4	+2.7
	1.6nm,0.3s,baz=310,slow=20,SNR=19						
URZ				S	S	13 41 35.5	+3.6
	1.4nm,0.3s,baz=316,slow=23,SNR=7.4						
URZ	Urewera	5.82	202	ePN	P	13 40 28.2	+2.5
URZ				SN	S	13 41 35.1	+3.2
URZ	Urewera	5.82	202	ePN	P	13 40 28.2	+2.5
URZ				SN	S	13 41 35.1	+3.2
KNZ	Kokohu	6.39	195	eP	P	13 40 34.9	+1.6
KNZ				S	S	13 41 46.2	+0.8
KNZ	Kokohu	6.39	195	ePN	P	13 40 34.9	+1.5
KNZ				SN	S	13 41 46.2	+0.8
KNZ	Kokohu	6.39	195	ePN	P	13 40 34.9	+1.5
KNZ				SN	S	13 41 46.2	+0.8
BKZ	Black Stump Fm	6.85	203	eP	P	13 40 40.8	+1.3
BKZ	Black Stump Fm	6.85	203	ePN	P	13 40 40.0	+0.5
MRZ	Mangatainoka R	8.50	203	ePN	P	13 41 00.2	-1.3
MRZ				SN	S	13 42 35.8	-0.2
MRZ	Mangatainoka R	8.50	203	ePN	P	13 41 00.2	-1.3
MRZ				SN	S	13 42 35.8	-0.2
KIW	Kapiti Island	8.90	205	eP	P	13 41 05.8	-1.1
KIW	Kapiti Island	8.90	205	ePN	P	13 41 05.7	-1.2
KIW	Kapiti Island	8.90	205	ePN	P	13 41 05.7	-1.2
MTW	Mount Morrison	8.97	202	eP	P	13 41 06.1	-1.7
MTW	Mount Morrison	8.97	202	ePN	P	13 41 06.0	-1.8
MTW	Mount Morrison	8.97	202	ePN	P	13 41 06.0	-1.8
CAW	Cannon Point	9.07	204	eP	P	13 41 07.0	-2.1
CAW	Cannon Point	9.07	204	ePN	P	13 41 07.0	-2.1
CAW	Cannon Point	9.07	204	ePN	P	13 41 07.0	-2.1
TUWZ	Tuamarina	9.76	207	ePN	P	13 41 16.5	-1.6
TUWZ	Tuamarina	9.76	207	ePN	P	13 41 16.5	-1.6
NNZ	Nelson	9.80	210	eP	P	13 41 18.0	-0.8
NNZ				eS	S	13 43 06.6	-0.4
NNZ	Nelson	9.80	210	ePN	P	13 41 18.1	-0.7
NNZ				SN	S	13 43 06.4	-0.7
QRZ	Quartz Range	9.87	214	ePN	P	13 41 19.9	+0.3
THZ	Tophouse	10.46	210	eP	P	13 41 25.9	-1.4
THZ	Tophouse	10.46	210	ePN	P	13 41 25.8	-1.5
THZ				SN	S	13 43 22.7	+0.3
KHZ	Kahutara	10.76	206	ePN	P	13 41 29.7	-1.6
KHZ	Kahutara	10.76	206	ePN	P	13 41 29.7	-1.6
MQZ	McQueen's Vall	12.20	205	SN	S	13 43 59.8	-3.6
ASAR	Alice Springs	41.23	271	P	P	13 46 34.7	+2.5
	0.2nm,0.3s,mb3.2,baz=113,slow=7.7,SNR=13						
WRA	Warramunga Arr	42.45	276	P	P	13 46 43.8	+1.6
	0.4nm,0.3s,mb3.5,baz=114,slow=8.0,SNR=26						
FINES	FINESS Array B	146.77	337	PKPbc	PKPbc	13 58 24.6	+1.1
	0.6nm,0.3s,baz=45,slow=3.9,SNR=10						

IDC **14** *13:44:57.9±0.6, 1.82N×92.22E, mb4.2/14, mb1 4.3/15, mb1mx4.3/20, mbtmp4.2/15, ML4.1/1, MS4.4/15, Ms1 4.4/15, ms1mx4.3/20, Error ellipse: s-maj=21.0km s-min=15.3km az=47.0*

BJI **14** *13:45:02.0, 1.90N×92.30E, h30^{km}, mB5.1, mb4.5, Ms4.7, Msz4.3*

NEIC **14** *13:45:02.5±0.4, 1.86N×92.28E, h30^{km}, mb4.5/16, Error ellipse: s-maj=10.5km s-min=7.6km az=66.0*

MOS **14** *13:45:03.9±1.8, 2.16N×92.20E, h33^{km}, mb4.9/12, Error ellipse: s-maj=21.4km s-min=9.0km az=94.3*

ISC 14 13:45:01.2±0.4**, 1.84N**±0.06×**92.29E**±0.06**, h36^{km}, h36^{km}**±4.2^{km}**:pP-P, n91, σ1§27**/84**, mb4.5**/42**, MS4.5**/24**, 5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	9.85	57	P	P	13 47 23.0	-0.6
	608nm,0.9s						
NST	Nakhon Sawan	15.78	29	P	P	13 48 39.7	-2.8
KKTK	Khon Kaen	17.76	35	P	P	13 49 09.0	+1.5
CM31	Chiang Mai Arr	17.76	21	eP	P	13 49 05.0	-2.5
	7.0nm,0.5s						
CMAR	Chiang Mai Arr	17.76	21	P	P	13 49 06.5	-1.1
	0.3nm,0.3s,baz=216,slow=13,SNR=45						
CMAR				LR	LR	13 57 00.1	
	comp=Z,580nm,19.0s,baz=205,slow=41						
VIS	Vishakhapatnam	18.07	331	i P	P	13 49 12.0	+0.6
CHG	Chiang Mai	18.09	21	⇓P	P	13 49 11.9	+0.3
	14nm,1.0s						
NANT	Nan	18.77	26	P	P	13 49 20.0	0.0
MNGI	Mangalore	20.51	303	i P	P	13 49 40.1	+1.0
MNGI				i S	S	13 53 19.1	-2.6
HYB	Hyderabad	20.54	320	eP	P	13 49 39.0	-0.4
HYB				eS	Sx	13 53 40.0	
HYB	Hyderabad	20.54	320	i P	P	13 49 39.0	-0.4
HYB				eS	S	13 53 15.0	-7.2
KMI	Kunming	25.25	23	P	P	13 50 28.9	+3.0
KMI				AMB	AMB		
	comp=Z,12nm,1.7s,mb4.2						
KMI				AMB	AMB		
	comp=Z,195nm,5.6s						
KMI				LR	LR		
	comp=N,1μm,14.3s,MS4.7						
KMI				LR	LR		
	comp=E,1μm,17.6s,MS4.7						
KMI				LR	LR		
	comp=Z,1μm,13.1s,MS4.5						
JIRN	Jiri	26.33	348	eP	P	13 50 36.6	+0.7
	comp=Z,16nm,0.8s,mb4.6						
DMN	Daman	26.53	346	eP	P	13 50 39.1	+1.3
GUN	Gumba	26.64	347	eP	P	13 50 39.1	+0.3
	comp=Z,22nm,0.7s,mb4.8						
KKN	Kakani	26.66	346	eP	P	13 50 38.7	-0.3
GKN	Gorkha	27.03	345	eP	P	13 50 42.2	-0.1
	comp=Z,61nm,1.1s,mb5.0						
KOLN	Koldanda	27.09	343	eP	P	13 50 43.1	+0.2
	comp=Z,37nm,1.1s,mb4.8						
LSA	Lhasa	27.73	358	P	P	13 50 50.1	+1.4
LSA				AP	pP	13 51 02.0	+3.3
LSA				XP	sP	13 51 05.5	+2.3
LSA				AMB	AMB		
	comp=Z,160nm,9.9s						
LSA				LR	LR		
	comp=N,370nm,18.0s,MS4.3						
LSA				LR	LR		
	comp=E,580nm,18.0s,MS4.3						
LSA				LR	LR		
	comp=Z,630nm,17.0s,MS4.3						
LSA	Lhasa	27.73	358	eP	P	13 50 50.0	+1.3
LSA				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.8						

LSA	**Lhasa**	**27.73**	**358**	*e*P	**P**	**13 50 50.0**	**+1.3**
	comp=Z,18nm,0.7s,mb4.8						
GYA	**Guiyang**	**28.11**	**28**	⇓*i*P	**P**	**13 50 53.3**	**+1.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
TGY	**Tagaytay City**	**30.83**	**65**	LR	LR	14 04 00.0	
	comp=Z,374nm,20.5s,MS4.0,baz=257,slow=37						
CD2	**Chengdu**	**30.89**	**19**	P	**P**	**13 51 21.8**	**+5.0**
ENH	**Enshi**	**32.65**	**28**	*e*P	**P**	**13 51 31.9**	**-0.3**
	comp=Z,12nm,0.8s,mb4.9						
GTA	**Gaotai**	**38.02**	**9**	P	**P**	**13 52 18.8**	**+0.9**
GTA				AP	pP	13 52 28.6	+0.4
GTA				XP	sP	13 52 32.3	-0.4
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.0						
GTA				AMB	AMB		
	comp=Z,244nm,6.1s						
GTA				LR	LR		
	comp=N,358nm,14.8s,MS4.5						
GTA				LR	LR		
	comp=E,432nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=Z,337nm,16.4s,MS4.2						
NJ2	**Nanjing**	**39.11**	**37**	*e*P	**P**	**13 52 24.6**	**-2.4**
NJ2				AP	pP	13 52 34.1	-3.2
NJ2				XP	sP	13 52 37.5	-4.3
NJ2				S	**S**	**13 58 16.0**	**-8.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,690nm,5.0s						
NJ2				LR	LR		
	comp=N,2µm,14.4s,MS5.2						
NJ2				LR	LR		
	comp=E,3µm,14.5s,MS5.2						
NJ2				LR	LR		
	comp=Z,2µm,15.7s,MS5.0						
JOW	**Kunigami**	**42.53**	**51**	LR	LR	14 09 26.4	
	comp=Z,494nm,21.8s,MS4.4,baz=224,slow=34						
AAK	**Ala-Archa**	**43.63**	**341**	P	**P**	**13 53 03.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						
AAK	**Ala-Archa**	**43.63**	**341**	P	**P**	**13 53 03.9**	**-0.3**
	comp=Z,8.4nm,1.3s,mb4.3						
BJT	**Baijiatuau**	**43.76**	**27**	*e*P	**P**	**13 53 06.8**	**+1.6**
BJT				pmax	pmax		
	comp=Z,14nm,1.1s						
BJT	**Baijiatuau**	**43.76**	**27**	*e*P	**P**	**13 53 06.8**	**+1.6**
	comp=Z,14nm,1.1s,mb4.6						
BJI	**Beijing**	**43.78**	**27**	*e*P	**P**	**13 53 07.5**	**+2.1**
BJI				S	**S**	**13 59 25.8**	**-7.3**
BJI				SS	SS	14 02 39.4	-2.2
BJI				AMB	AMB		
	comp=Z,64nm,2.2s,mb5.0						
BJI				LR	LR		
	comp=N,484nm,21.6s						
BJI				LR	LR		
	comp=E,564nm,16.3s						
BJI				LR	LR		
	comp=Z,494nm,21.1s,MS4.4						
WRA	**Warramunga Arr**	**46.58**	**120**	P	**P**	**13 53 27.6**	**-0.3**
	comp=Z,3.3nm,0.9s,mb4.3,baz=298,slow=8.6,SNR=23						
WRAB	**Tennant Creek**	**46.58**	**120**	⇓*i*P	**P**	**13 53 26.9**	**-1.0**
WRAB	**Tennant Creek**	**46.58**	**120**	*e*P	**P**	**13 53 27.9**	**0.0**
	comp=Z,19nm,1.0s,mb5.0						
WB2	**Warramunga Arr**	**46.59**	**120**	*e*P	**P**	**13 53 28.4**	**+0.4**
SONM	**Songino Array**	**47.42**	**13**	P	**P**	**13 53 35.0**	**+0.9**
	comp=Z,2.8nm,0.7s,mb4.3,baz=195,slow=8.3,SNR=27						
ULN	**Ulaanbaatar**	**47.60**	**13**	*e*P	**P**	**13 53 35.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**47.60**	**13**	*e*P	**P**	**13 53 35.2**	**-0.4**
	comp=Z,1.9nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**47.75**	**125**	P	**P**	**13 53 37.2**	**+0.2**
	comp=Z,0.8nm,0.8s,mb3.8,baz=300,slow=7.8,SNR=14						
ASAR				PcP	PcP	13 55 06.5	+0.2
	comp=Z,1.0nm,0.9s,baz=297,slow=1.8,SNR=4.6						
ASAR				LR	LR	14 16 23.6	
	comp=Z,320nm,18.3s,MS4.3,baz=290,slow=40						
ASAR	**Alice Springs**	**47.75**	**125**	P	**P**	**13 53 37.2**	**+0.2**
ASAR				PcP	PcP	13 55 06.5	+0.2
ASAR				LR	LR	14 16 23.6	
ZAK	**Zakamensk**	**49.26**	**9**	*e*P	**P**	**13 53 50.3**	**+1.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s,mb3.6						
KURK	**Kurchatov**	**50.06**	**349**	⇓*i*P	**P**	**13 53 57.5**	**+2.9**
KURK	**Kurchatov**	**50.06**	**349**	*e*P	**P**	**13 53 53.4**	**-1.1**
	comp=Z,10.0nm,1.2s,mb4.7						
TLY	**Talaya**	**50.58**	**9**	*e*P	**P**	**13 53 59.8**	**+1.3**
TLY				*e*		14 01 02.9	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TLY				MLR	MLR		
	comp=Z,267nm,17.0s,MS4.3						
TLY	**Talaya**	**50.58**	**9**	*e*P	**P**	**13 53 59.3**	**+0.8**
	comp=Z,2.3nm,0.6s,mb4.3						
HIA	**Hailar**	**52.77**	**22**	P	**P**	**13 54 15.5**	**+0.5**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HIA	**Hailar**	**52.77**	**22**	P	**P**	**13 54 15.5**	**+0.5**
	comp=Z,3.8nm,0.6s,mb4.5						
NVS	**Novosibirsk**	**53.35**	**353**	*e*P	**P**	**13 54 17.9**	**-1.3**
NVS				pmax	pmax		
	comp=Z,22nm,2.2s,mb4.7						
NVS				pmax	pmax		
	comp=N,5.0nm,1.3s						
MDJ	**Mudanjiang**	**53.84**	**32**	P	**P**	**13 54 19.8**	**-3.2**
MDJ				AP	pP	13 54 32.6	-1.0
MDJ				XP	sP	13 54 37.0	-0.8
MDJ				SS	SS	14 05 31.9	-2.4
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,83nm,4.4s						
MDJ				LR	LR		
	comp=N,73nm,17.4s,MS4.5						
MDJ				LR	LR		
	comp=E,344nm,17.4s,MS4.5						
MDJ				LR	LR		
	comp=Z,221nm,22.9s						
BVAR	**Borovoye Array**	**54.16**	**344**	P	**P**	**13 54 23.4**	**-1.8**
	comp=Z,1.0nm,0.6s,mb3.9,baz=149,slow=8.6,SNR=8.0						
BRVK	**Borovoye**	**54.22**	**344**	*e*P	**P**	**13 54 24.6**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BRVK	**Borovoye**	**54.22**	**344**	*e*P	**P**	**13 54 24.6**	**-1.0**
	comp=Z,6.4nm,1.1s,mb4.5						
CHKZ	**Chkalovo**	**54.68**	**344**	*e*P	**P**	**13 54 27.5**	**-1.5**
CHKZ				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.5						
CHKZ	**Chkalovo**	**54.68**	**344**	*e*P	**P**	**13 54 27.5**	**-1.5**
	comp=Z,30nm,0.6s,mb5.5						
KMBO	**Kilima Mbogo**	**55.10**	**267**	P	**P**	**13 54 30.8**	**-1.9**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	**Kilima Mbogo**	**55.10**	**267**	P	**P**	**13 54 32.1**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.9,baz=207,slow=24,SNR=2.9						
KMBO				LR	LR	14 15 25.1	
	comp=Z,401nm,18.8s,MS4.5,baz=91,slow=33						
KMBO	**Kilima Mbogo**	**55.10**	**267**	P	**P**	**13 54 30.8**	**-1.9**
	comp=Z,1.2nm,0.6s,mb4.1						
KMBO				LR	LR	14 15 25.1	
CTA	**Charters Tower**	**57.20**	**115**	LR	LR	14 22 49.7	
	comp=Z,269nm,18.7s,MS4.4,baz=274,slow=40						
STKA	**Stephens Creek**	**57.47**	**130**	*e*P	**P**	**13 54 49.6**	**+0.2**
	comp=Z,2.5nm,0.7s,mb4.3						
STKA				*i*	pP	13 54 57.5	-2.6
STKA	**Stephens Creek**	**57.47**	**130**	P	**P**	**13 54 49.7**	**+0.3**
	comp=Z,3.0nm,0.7s,mb4.4,baz=312,slow=7.4,SNR=8.1						
STKA				LR	LR	14 20 23.5	
	comp=Z,345nm,18.7s,MS4.5,baz=116,slow=37						
GNI	**Garni**	**57.48**	**318**	*e*P	**P**	**13 54 45.7**	**-3.6**
GNI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GNI	**Garni**	**57.48**	**318**	P	**P**	**13 54 50.5**	**+1.1**
	comp=Z,2.6nm,0.5s,mb4.5,baz=351,slow=18,SNR=2.2						
GNI	**Garni**	**57.48**	**318**	*e*P	**P**	**13 54 45.7**	**-3.7**
	comp=Z,7.3nm,0.9s,mb4.7						
KLR	**Kul'dur**	**58.00**	**29**	*e*P	**P**	**13 54 50.0**	**-2.8**
KLR				MLR	MLR		
	comp=N,900nm,14.5s						
KLR				MLR	MLR		
	comp=Z,1µm,14.5s,MS5.1						
BOD	**Bodaibo**	**58.41**	**13**	*e*P	**P**	**13 54 53.2**	**-2.4**
KIV	**Kislovodsk**	**60.67**	**321**	*e*P	**P**	**13 55 17.2**	**+5.9**
KIV				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.1						
SOC	**Sochi**	**62.40**	**319**	*e*P	**P**	**13 55 26.2**	**+3.2**
SOC				*e*		13 56 04.7	
SOC				*e*		13 57 43.4	
SOC				*e*PPP	PPP	13 59 11.0	-1.1
SOC				*e*S	**S**	**14 03 50.3**	**+4.7**
SOC				*e*		14 05 13.8	
SOC				pmax	pmax		
	comp=Z,46nm,0.9s						
SOC				pmax	pmax		
	comp=N,17nm,0.7s						
SOC				pmax	pmax		
	comp=E,33nm,1.0s						
ANN	**Anapa**	**64.41**	**320**	*e*P	**P**	**13 55 33.4**	**-2.7**
BRTR	**Keskin Array B**	**65.08**	**313**	P	**P**	**13 55 40.5**	**-0.1**
	comp=E,0.9nm,0.5s,mb4.0,baz=130,slow=6.9,SNR=4.6						
YAK	**Yakutsk**	**66.27**	**18**	*e*P	**P**	**13 55 52.5**	**+4.7**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=E,194nm,19.5s						
YAK				pmax	pmax		
	comp=Z,67nm,16.9s						
YAK				pmax	pmax		
	comp=N,128nm,19.0s						
YAK				MLR	MLR		
	comp=N,81nm,16.0s,MS4.3						
YAK				MLR	MLR		
	comp=E,130nm,16.0s,MS4.3						
YAK				MLR	MLR		
	comp=Z,196nm,16.0s,MS4.4						
OBN	**Obninsk**	**69.54**	**330**	*e*P	**P**	**13 56 12.5**	**+4.2**
OBN				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
LBTB	**Lobatse**	**69.79**	**243**	P	**P**	**13 56 10.1**	**-0.3**
	comp=Z,11nm,0.9s,mb4.8,baz=113,slow=4.8,SNR=17						
AKASG	**Malin Array Be**	**71.79**	**323**	P	**P**	**13 56 21.6**	**-0.3**
	comp=Z,0.2nm,0.2s,mb3.6,baz=242,slow=45,SNR=3.0						
MAW	**Mawson**	**72.29**	**191**	LR	LR	14 21 29.3	
	comp=Z,149nm,19.0s,MS4.3,baz=116,slow=30						
MA2	**Magadan**	**72.94**	**27**	*e*P	**P**	**13 56 29.6**	**+0.9**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
TIXI	**Tiksi**	**73.48**	**11**	⇓*i*P	**P**	**13 56 31.3**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,304nm,18.0s,MS4.6						
TSUM	**Tsumeb**	**76.18**	**250**	P	**P**	**13 56 48.6**	**+0.5**
	comp=Z,2.2nm,0.6s,mb4.2,baz=93,slow=5.9,SNR=4.0						
FINES	**FINESS Array B**	**77.19**	**333**	P	**P**	**13 56 52.5**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.1,baz=104,slow=7.9,SNR=6.8						
FINES				LR	LR	14 32 38.3	
	comp=Z,337nm,18.8s,MS4.7,baz=151,slow=37						
ARCES	**ARCESS Array B**	**80.31**	**341**	P	**P**	**13 57 10.2**	**+0.4**
	comp=Z,4.7nm,1.0s,mb4.4,baz=96,slow=12,SNR=4.4						
ARCES				LR	LR	14 34 41.0	
	comp=Z,402nm,18.1s,MS4.8,baz=296,slow=37						
GERES	**GERESS Array B**	**81.11**	**319**	P	**P**	**13 57 15.8**	**+1.3**
	comp=Z,2.8nm,0.9s,mb4.2,SNR=7.1						
KHC	**Kasperske Hory**	**81.22**	**319**	*e*P	**P**	**13 57 17.0**	**+1.9**
NOA	**NORSAR Array B**	**84.07**	**331**	LR	LR	14 36 27.7	
	comp=Z,129nm,20.1s,MS4.3,baz=85,slow=37						
URZ	**Urewera**	**87.06**	**128**	LR	LR	14 33 53.7	
	comp=Z,334nm,20.9s,MS4.7,baz=216,slow=34						
VNDA	**Vanda**	**87.43**	**168**	LR	LR	14 29 41.1	
	comp=Z,276nm,21.5s,MS4.6,baz=280,slow=31						
DBIC	**Dimbokro**	**96.88**	**277**	LR	LR	14 39 36.5	
	comp=Z,90nm,19.2s,MS4.3,baz=66,slow=34						
BORG	**Borgarnes**	**98.22**	**337**	LR	LR	14 43 27.4	
	comp=Z,387nm,18.5s,MS4.9,baz=265,slow=36						
TXAR	**Lajitas Array**	**145.45**	**25**	PKPbc	PKPbc	14 04 39.3	+2.5
	comp=Z,2.5nm,0.6s,baz=275,slow=2.1,SNR=13						
JCT	**Junction City**	**145.86**	**19**	*e*PKPdf	PKPdf	14 04 39.1	+2.2
LVC	**Limon Verde**	**152.43**	**220**	PKPbc	PKPdf	14 04 58.1	+11
	comp=Z,2.6nm,0.6s,baz=222,slow=1.6,SNR=4.5						
LVC				PKPab	PKPab	14 05 05.6	-1.4
	comp=Z,2.6nm,0.8s,baz=72,slow=3.3,SNR=4.0						

IDC 14 13:57:26.8±2.4**, 43.11N**×**135.42E, h377**^{km}±30^{km}**, mb2.6**/4**, mb1 2.8**/5**, mb1mx2.6**/23**, mbtmp3.4**/5**, Error ellipse: s-maj=28.9km s-min=22.8km az=23.0, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**5.31**	**77**	P	P	13 58 51.0	-0.6
	1.3nm,0.3s,baz=232,slow=11,SNR=9.6						
SONM	**Songino Array**	**20.83**	**293**	P	P	14 01 40.1	-0.7
	0.5nm,0.5s,baz=84,slow=8.5,SNR=7.9						
BVAR	**Borovoye Array**	**43.16**	**307**	P	P	14 04 51.9	-1.0
	0.3nm,0.4s,baz=71,slow=9.1,SNR=4.8						
ILAR	**Eielson Array**	**46.99**	**35**	P	P	14 05 20.9	-1.8
	0.9nm,1.2s,baz=291,slow=7.4,SNR=5.2						
ASAR	**Alice Springs**	**66.46**	**182**	P	P	14 07 37.0	-1.6
	0.2nm,0.8s,baz=10,slow=5.8,SNR=4.2						

NEIC ***14*** *14:42:37.8±1.4, 10.61S×166.07E, h174*^{km}*±13*^{km}*, mb4.3/6, Error ellipse: s-maj=13.1km s-min=10.0km az=59.0*

IDC ***14*** *14:42:38.7±6.4, 10.68S×166.09E, h183*^{km}*±58*^{km}*, mb3.6/9, mb1 3.8/10, mb1mx3.8/16, mbtmp4.1/10, MS4.2/1, Ms1 4.2/1, ms1mx2.8/23, Error ellipse: s-maj=22.6km s-min=21.4km az=20.0*

ISC 14 14:42:37.7±2.0**, 10.7S**±0.1×**166.0E**±0.1**, h187**^{km}±18^{km}**, n20, σ0**^{s}**69**/18**, mb3.9**/12**, 1D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.07**	**281**	*e*Pn	**P**	**14 44 06.1**	**-0.4**
	122nm,0.9s						
DZM	**Mont Dzumac**	**11.36**	**178**	*e*P	**P**	**14 45 16.4**	**+0.8**
DZM	**Mont Dzumac**	**11.36**	**178**	*e*P	**P**	**14 45 16.4**	**+0.8**
PMG	**Port Moresby**	**18.58**	**272**	P	**P**	**14 46 43.6**	**+0.5**
	0.9nm,0.3s,baz=49,slow=6.6,SNR=6.0						
PMG	**Port Moresby**	**18.58**	**272**	*e*P	**P**	**14 46 43.5**	**+0.4**
	7.2nm,0.6s						
URZ	**Urewera**	**29.24**	**162**	P	**P**	**14 48 22.9**	**-1.5**
	4.2nm,0.4s,mb4.5,baz=338,slow=8.2,SNR=7.2						
STKA	**Stephens Creek**	**30.88**	**223**	*e*P	**P**	**14 48 39.2**	**+0.3**
	2.1nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**30.88**	**223**	P	**P**	**14 48 39.2**	**+0.3**
	3.4nm,0.8s,mb4.2,baz=52,slow=9.0,SNR=10						
WRAB	**Tennant Creek**	**31.82**	**249**	*e*P	**P**	**14 48 46.7**	**-0.5**
	2.6nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**31.84**	**249**	P	**P**	**14 48 46.9**	**-0.4**
	0.8nm,0.5s,mb3.7,baz=83,slow=8.8,SNR=22						
WRA				PcP	PcP	14 51 33.3	-0.4
	0.9nm,0.8s,baz=75,slow=3.2,SNR=10						
ASAR	**Alice Springs**	**33.17**	**243**	P	**P**	**14 48 58.3**	**-0.5**
	0.7nm,0.6s,mb3.6,baz=68,slow=10.0,SNR=8.6						
ASAR				PcP	PcP	14 51 36.6	-0.6
	0.7nm,0.5s,baz=77,slow=2.6,SNR=13						
RPZ	**Rata Peaks**	**33.23**	**173**	LR	LR	14 59 25.0	
	comp=Z,381nm,19.2s,baz=46,slow=30						
CMAR	**Chiang Mai Arr**	**72.17**	**293**	P	**P**	**14 53 45.5**	**+1.1**
	0.9nm,0.7s,mb3.6,baz=107,slow=4.9,SNR=6.2						
YAK	**Yakutsk**	**77.79**	**343**	*e*P	**P**	**14 54 15.2**	**-0.3**
	8.1nm,0.6s,mb4.5						
SONM	**Songino Array**	**78.50**	**324**	P	**P**	**14 54 20.0**	**+0.3**
	0.5nm,0.6s,mb3.4,baz=144,slow=5.5,SNR=8.1						
QSPA	**South Pole Qui**	**79.34**	**180**	⇓*i*P	**P**	**14 54 24.4**	**+0.8**
	4.9nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**83.07**	**18**	P	**P**	**14 54 43.5**	**+0.1**
	1.7nm,0.5s,mb4.0,baz=233,slow=5.2,SNR=28						
NVAR	**Mina Array Bea**	**85.60**	**50**	P	**P**	**14 54 57.1**	**+0.6**
	1.3nm,0.9s,mb3.6,baz=238,slow=8.6,SNR=6.6						
YKA	**Yellowknife Ar**	**94.52**	**27**	P	**P**	**14 55 36.6**	**-1.0**
	0.4nm,0.6s,mb3.8,baz=258,slow=4.8,SNR=9.2						
ARCES	**ARCESS Array B**	**116.02**	**346**	PKP	PKPdf	15 00 59.0	+1.0
	3.5nm,0.9s,baz=74,slow=2.0,SNR=14						

JMA ***14*** *14:45:31.0±0.5, 24.13N×122.18E, h24*^{km}*, M2.1*

TAP 14 14:45:31.6, 24.07N×**122.30E, h20**^{km}±1^{km}**, ML2.9, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.76**	**59**	P	Pb	14 45 46.5	+0.5
YOJ				S	Sb	14 45 57.3	+1.5
IRIF	**Iriomote-Funau**	**1.33**	**78**	P	Pn	14 45 55.8	+0.5
IRIF				S	Sb	14 46 14.4	+2.0
JKRS	**Kuro-shima**	**1.57**	**84**	P	Pn	14 46 00.0	+1.3
JKRS				*e*S	Sn	14 46 20.6	+2.0
JIJ	**Ishigaki jima**	**1.71**	**80**	P	Pn	14 46 00.7	0.0
JIJ				S	Sn	14 46 22.0	-0.1

NEIC ***14*** *15:00:35.6±0.5, 13.02N×88.80W, mb4.1/11, MD4.6(SNET), Error ellipse: s-maj=17.5km s-min=6.9km az=47.0*

NEIC Felt [III] at San Salvador.

CASC ***14*** *15:00:36.6±2.3, 12.99N×88.92W, h50*^{km}*±14*^{km}*, MD4.4, ML4.5, mb4.1(NEIC)*

IDC ***14*** *15:00:36.5±0.9, 13.20N×88.68W, h68*^{km}*±6*^{km}*, mb4.0/11, mb1 4.2/13, mb1mx3.9/23, mbtmp4.3/13, MS3.2/2, Ms1 3.2/2, ms1mx2.6/22, Error ellipse: s-maj=31.4km s-min=10.6km az=46.0*

ISC 14 15:00:35.6±0.3**, 13.03N**±0.04×**88.91W**±0.03**, h78**^{km}±3^{km}**, h65**^{km}±1.4^{km}**:pP-P, n91, σ1**^{s}**00**/108**, mb4.2**/20**, 9C-28D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.58**	**7**	⇓*e*P	**P**	**15 00 49.4**	**-0.7**
LFRS	**El Faro**	**0.60**	**346**	⇓*i*P	**P**	**15 00 49.2**	**-1.2**
LCBS	**La Ceiba**	**0.62**	**354**	⇓*i*P	**P**	**15 00 49.5**	**-1.0**
LCBS				*e*S	**S**	**15 01 00.9**	**-0.6**
LBRS	**Las Brisas**	**0.71**	**349**	⇓*i*P	**P**	**15 00 51.0**	**-0.5**
LBRS				*e*S	**S**	**15 01 02.9**	**-0.4**
SNET	**Serv Nac Est T**	**0.72**	**334**	⇓*e*P	**P**	**15 00 50.5**	**-1.1**
SNET				*e*S	**S**	**15 01 01.9**	**-1.5**
SNET				*e*		15 01 03.6	
	comp=Z,20µm,0.1s						
VSM	**San Miguel**	**0.73**	**57**	⇓*i*P	**P**	**15 00 51.5**	**-0.2**
VSM				*e*S	**S**	**15 01 03.0**	**-0.6**
LFU	**La Fuente**	**0.74**	**344**	⇓*e*P	**P**	**15 00 51.0**	**-0.7**
LFU				*e*S	**S**	**15 01 03.1**	**-0.7**
BLLM	**Bellamira**	**0.77**	**58**	⇓*e*P	**P**	**15 00 51.6**	**-0.5**
BLLM				*e*S	**S**	**15 01 03.5**	**-0.8**
PICS	**Picacho**	**0.78**	**334**	⇓*e*P	**P**	**15 00 52.1**	**-0.1**
BOQS	**Boqueron**	**0.79**	**332**	⇓*i*P	**P**	**15 00 51.7**	**-0.6**
CAHU	**Cacacuatique**	**1.00**	**43**	⇓*i*P	**P**	**15 00 55.0**	**+0.3**
CAHU				*e*S	**S**	**15 01 10.7**	**+1.5**
SBLS	**San Blas**	**1.06**	**319**	⇓*e*P	**P**	**15 00 55.3**	**-0.2**
CNCH	**Conchagua**	**1.07**	**77**	⇓*i*P	**P**	**15 00 55.5**	**-0.2**
CNCH				*e*S	**S**	**15 01 12.2**	**+1.5**
SNJE	**San Jose**	**1.07**	**321**	⇓*i*P	**P**	**15 00 55.5**	**-0.2**
RTR	**El Retiro**	**1.12**	**320**	⇓*i*P	**P**	**15 00 56.3**	**+0.1**
RTR				*e*S	**S**	**15 01 14.2**	**+2.5**
RBDL	**Robledal**	**1.31**	**325**	⇑*i*P	**P**	**15 00 58.9**	**0.0**
RBDL				*e*S	**S**	**15 01 16.2**	**-0.1**
MTO2	**Montecristo 2**	**1.43**	**342**	⇓*i*P	**P**	**15 01 00.6**	**+0.2**
MTO2				*e*S	**S**	**15 01 20.4**	**+1.6**
CRIN	**San Cristobal**	**1.84**	**100**	⇑*e*P	**P**	**15 01 06.9**	**+1.0**
CHIN	**Chinandega**	**1.87**	**102**	⇓*e*P	**P**	**15 00 51.2**	**-15**
CHIN				*e*S	S	15 01 03.4	-26
CHIN				*i*		15 01 07.7	
	comp=Z,48µm,0.4s						
IXG	**Ixpaco**	**1.88**	**307**	⇑*e*P	**P**	**15 01 06.2**	**-0.3**
IXG				*e*S	**S**	**15 01 29.9**	**+0.7**
LEON	**Leon**	**2.06**	**107**	⇓*e*P	**P**	**15 01 08.9**	**0.0**
TEL3	**Telica 3**	**2.06**	**103**	⇑*e*P	**P**	**15 01 09.3**	**+0.4**
TELN	**Telica**	**2.07**	**102**	⇑*e*P	**P**	**15 01 09.3**	**+0.3**
NBG	**Las Nubes**	**2.08**	**318**	⇓*e*P	**P**	**15 01 09.9**	**+0.7**
CNGN	**Cerro Negro**	**2.22**	**104**	⇓*e*P	**P**	**15 01 11.4**	**+0.3**
MIRN	**Miramar**	**2.22**	**105**	⇓*e*P	**P**	**15 01 11.9**	**+0.7**
SOMN	**Somoto**	**2.27**	**80**	⇓*e*P	**P**	**15 01 13.8**	**+2.1**
MOMJ	**Momotombo**	**2.39**	**105**	⇓*e*P	**P**	**15 01 13.4**	**-0.1**
COPN	**Copaltepe**	**2.41**	**110**	*e*P	**P**	**15 01 13.7**	**-0.2**
QUIN	**Quiabu**	**2.43**	**88**	⇓*e*P	**P**	**15 01 14.6**	**+0.5**
APYN	**Apoyeque**	**2.62**	**107**	⇓*e*P	**P**	**15 01 16.8**	**+0.1**
XAVN	**Gruta Xavier**	**2.67**	**109**	*e*P	**P**	**15 01 17.9**	**+0.4**
TP2	**Tecpan 2**	**2.69**	**310**	⇑*e*P	**P**	**15 01 19.9**	**+2.1**
TP2				*e*S	**S**	**15 01 53.2**	**+3.9**
MGAN	**Managua**	**2.74**	**108**	⇑*e*P	**P**	**15 01 18.4**	**-0.1**
MGAN				*e*S	**S**	**15 01 49.5**	**-1.0**
MGAN				*i*		15 01 57.2	
	comp=N,1µm,0.4s						
WILN	**Americas 2**	**2.79**	**108**	*e*S	**S**	**15 01 51.3**	**-0.5**
TICN	**Ticuantepe**	**2.79**	**111**	⇓*e*P	**P**	**15 01 20.8**	**+1.6**
PYTN	**Playitas**	**2.82**	**100**	*e*P	**P**	**15 01 19.6**	**0.0**
JAT	**Jato**	**2.94**	**296**	⇑*e*P	**P**	**15 01 21.1**	**-0.2**
JAT				*e*S	**S**	**15 01 54.6**	**-1.0**
APON	**Apoyo**	**2.99**	**112**	⇓*e*P	**P**	**15 01 22.6**	**+0.7**
APON				*e*S	**S**	**15 01 57.8**	**+1.1**
SSNN	**San Juan del S**	**3.46**	**120**	*e*P	**P**	**15 01 28.7**	**+0.3**
CONN	**Concepcion**	**3.52**	**114**	⇑*e*P	**P**	**15 01 29.9**	**+0.6**
VCR	**Vista de Mar**	**4.32**	**132**	*e*P	**P**	**15 01 40.0**	**-0.4**
JTS	**JuntasAbangare**	**4.74**	**125**	P	**P**	**15 01 45.9**	**-0.2**
	comp=N,6.6nm,0.3s,baz=316,slow=17,SNR=22						
JTS				S	**S**	**15 02 38.6**	**-1.7**
	comp=N,19nm,0.3s,baz=315,slow=18,SNR=2.6						
JTS				LR	LR	15 04 02.3	
	comp=N,159nm,21.1s,baz=157,slow=44						
JTS	**JuntasAbangare**	**4.74**	**125**	*e*Pn	**P**	**15 01 44.1**	**-2.0**
JTS				S	**S**	**15 02 38.6**	**-1.7**
JTS				LR	LR	15 04 02.3	
JCR	**Jicaral**	**4.88**	**130**	*e*P	**P**	**15 01 48.6**	**+0.4**
CGA2	**Cerro Gallo 2**	**5.29**	**124**	*e*P	**P**	**15 01 55.9**	**+2.2**
PRS1	**Puriscal**	**5.43**	**123**	*e*P	**P**	**15 01 57.1**	**+1.4**
PRS1				*e*S	**S**	**15 02 57.5**	**0.0**
LAJ	**Bijagual**	**5.65**	**123**	*e*P	**P**	**15 01 56.8**	**-1.8**
LCR2	**La Lucha 2**	**5.81**	**124**	*e*P	**P**	**15 02 02.4**	**+1.4**
LCR2				*e*S	**S**	**15 03 05.5**	**-1.5**
ICR	**Volcan Irazu**	**5.83**	**121**	*e*P	**P**	**15 02 00.9**	**-0.2**
BUS	**Buena Vista**	**6.12**	**124**	⇓*e*P	**P**	**15 02 06.8**	**+1.6**
ACR	**Cerro Adams**	**7.12**	**127**	*e*P	**P**	**15 02 18.6**	**-0.6**
TEIG	**Tepich**	**7.18**	**5**	*e*Pn	**P**	**15 02 20.0**	**0.0**
	comp=N,20nm,0.3s						
SDV	**Santo Domingo**	**18.41**	**101**	P	**P**	**15 04 45.4**	**-1.6**
	comp=N,1.2nm,0.3s,baz=304,slow=8.0,SNR=10						
SDV	**Santo Domingo**	**18.41**	**101**	*e*P	**P**	**15 04 45.6**	**-1.4**
JCT	**Junction City**	**20.07**	**332**	*e*P	**P**	**15 05 05.6**	**+0.5**
	comp=N,6.6nm,0.6s						
LTX	**Lajitas**	**21.23**	**322**	*e*P	**P**	**15 05 16.6**	**-0.3**
	comp=N,4.0nm,0.6s,mb3.9						
TXAR	**Lajitas Array**	**21.23**	**322**	P	**P**	**15 05 18.2**	**+1.2**
	comp=N,3.3nm,0.6s,mb3.9,baz=145,slow=11,SNR=24						
TXAR				PcP	PcP	15 09 20.9	+0.9
	comp=N,0.3nm,0.6s,baz=153,slow=2.8,SNR=3.5						
WMOK	**Wichita Mounta**	**23.39**	**339**	*e*P	**P**	**15 05 39.6**	**+1.6**
	comp=N,5.0nm,0.9s,mb3.8						
MNTX	**Cornudas Mount**	**23.96**	**323**	*e*P	**P**	**15 05 44.0**	**+0.4**
	comp=N,2.0nm,0.9s,mb3.5						
CCM	**Cathedral Cave**	**25.01**	**356**	*e*P	**P**	**15 05 53.5**	**-0.2**
	comp=N,9.7nm,0.6s,mb4.4						
CCM				*e*pP	pP	15 06 09.7	-1.9
SDCO	**Great Sand Dun**	**28.72**	**332**	*e*P	**P**	**15 06 28.4**	**+0.7**
	comp=N,1.2nm,0.6s,mb3.7						
PV10	**Paradox Valley**	**30.94**	**328**	*e*P	**P**	**15 06 47.9**	**+0.6**
SADO	**Sadowa**	**32.71**	**13**	P	**P**	**15 07 01.4**	**-1.3**
	comp=N,8.0nm,0.6s,mb4.7,baz=180,slow=2.7,SNR=7.4						
SADO	**Sadowa**	**32.71**	**13**	P	**P**	**15 07 01.4**	**-1.3**
SAML	**Samuel**	**33.61**	**129**	*e*P	**P**	**15 07 09.4**	**-1.4**
	comp=N,5.1nm,0.7s,mb4.5						
SAML				*e*pP	pP	15 07 24.8	-4.8
PDAR	**Pinedale Array**	**34.60**	**333**	P	**P**	**15 07 19.4**	**+0.4**
	comp=N,1.1nm,0.6s,mb3.8,baz=136,slow=12,SNR=11						
PDAR				PcP	PcP	15 09 51.8	-0.4
	comp=N,1.0nm,0.6s,baz=133,slow=4.0,SNR=8.4						
SNOW	**Snow King Moun**	**35.68**	**332**	*e*P	**P**	**15 07 28.6**	**+0.4**
LOHW	**Long Hollow**	**35.73**	**333**	*e*P	**P**	**15 07 28.8**	**+0.2**
MOOW	**Moose Ponds**	**35.90**	**333**	*e*P	**P**	**15 07 30.5**	**+0.4**
NVAR	**Mina Array Bea**	**36.33**	**319**	P	**P**	**15 07 35.6**	**+1.9**
	comp=N,1.0nm,0.6s,mb3.9,baz=131,slow=7.6,SNR=11						
NVAR				pP	pP	15 07 51.8	-0.9
	comp=N,1.3nm,0.8s,baz=131,slow=8.3,SNR=4.4						
NVAR				PcP	PcP	15 09 58.5	+1.3
	comp=N,1.4nm,0.6s,baz=126,slow=4.0,SNR=12						
HLID	**Hailey**	**37.51**	**329**	*e*P	**P**	**15 07 44.0**	**+0.5**
ULM	**Lac du Bonnet**	**37.55**	**353**	P	**P**	**15 07 42.4**	**-1.3**
	comp=N,1.5nm,0.3s,mb4.2,baz=158,slow=7.8,SNR=5.1						
ULM				pP	pP	15 07 59.6	-3.1
	comp=N,0.5nm,0.3s,baz=160,slow=5.2,SNR=2.7						
ULM				LR	LR	15 25 28.3	
	comp=N,63nm,18.3s,baz=21,slow=40						
ULM	**Lac du Bonnet**	**37.55**	**353**	P	**P**	**15 07 42.4**	**-1.3**
ULM				pP	pP	15 07 59.6	-3.1
ULM				LR	LR	15 25 28.3	
MCMT	**McKenzie Canyo**	**37.70**	**332**	*e*P	**P**	**15 07 47.1**	**+2.0**
BOZ	**Bozeman (W)**	**37.79**	**334**	*e*P	**P**	**15 07 46.4**	**+0.5**
	comp=N,1.6nm,0.6s,mb4.0						
WVOR	**Wild Horse Val**	**39.00**	**324**	*e*P	**P**	**15 07 56.8**	**+0.9**
	comp=N,1.8nm,0.7s,mb4.0						

EDM	Edmonton	44.56	339	eP	P	15 08 40.8	-0.5
EDM				epP	pP	15 08 57.0	-3.6
SCHQ	Schefferville	45.15	18	P	P	15 08 44.2	-1.7
	comp=N,2.6nm,0.5s,mb4.2,baz=218,slow=5.6,SNR=9.6						
BDFB	Brasilia	49.48	124	P	P	15 09 19.1	-1.2
	comp=N,1.8nm,0.4s,mb4.3,baz=282,slow=11,SNR=4.4						
YKA	Yellowknife Ar	52.68	345	P	P	15 09 42.8	-1.2
	comp=N,3.2nm,0.5s,mb4.6,baz=142,slow=7.5,SNR=131						
YKA				pP	pP	15 09 59.2	-4.5
	comp=N,4.1nm,1.0s,baz=142,slow=7.7,SNR=5.5						
YKA				PcP	PcP	15 10 50.0	-2.8
	comp=N,0.5nm,0.7s,baz=144,slow=5.2,SNR=4.3						
YKA	Yellowknife Ar	52.68	345	P	P	15 09 42.8	-1.2
YKA				pP	pP	15 09 59.2	-4.5
YKA				PcP	PcP	15 10 50.0	-2.8
YKW3	Yellowknife Ar	52.74	345	eP	P	15 09 42.9	-1.6
YKW3				epP	pP	15 09 59.7	-4.5
DLBC	Dease Lake	54.78	335	P	P	15 10 00.0	+0.6
	comp=N,2.6nm,0.7s,mb4.4,baz=140,slow=6.9,SNR=9.1						
RES	Resolute Bay	61.73	358	eP	P	15 10 45.6	-2.1
	comp=N,2.0nm,0.3s,mb4.6						
INK	Inuvik	62.23	343	P	P	15 10 49.9	-1.2
	comp=N,5.7nm,0.7s,mb4.7,baz=135,slow=7.4,SNR=41						
INK	Inuvik	62.23	343	eP	P	15 10 49.8	-1.3
	comp=N,4.9nm,0.6s,mb4.7						
ILAR	Eielson Array	64.92	336	P	P	15 11 06.9	-1.8
	comp=N,1.0nm,0.6s,mb3.9,baz=142,slow=4.6,SNR=10						
WRA	Warramunga Arr	138.06	255	PKP	PKPdf	15 19 54.6	+2.3
	comp=N,1.3nm,0.6s,baz=89,slow=1.9,SNR=14						
WRA				pPKP		15 20 12.6	
	comp=N,1.7nm,0.6s,baz=88,slow=1.7,SNR=7.7						
ASAR	Alice Springs	138.16	249	PKP	PKPdf	15 19 54.5	+2.1
	comp=N,0.5nm,0.6s,baz=98,slow=2.3,SNR=4.4						
CMAR	Chiang Mai Arr	147.76	346	PKPbc	PKPdf	15 20 11.6	+2.3
	comp=N,1.7nm,0.8s,baz=344,slow=4.0,SNR=10						

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*NEIC **14** 15:01:39.2, 59.67N×152.29W, h68^{km}, ML3.2(AEIC), After AEIC.*

*IDC **14** 15:01:39.9±5.5, 59.82N×152.17W, h80^{km}±51^{km}, mb3.2/3, mb1 3.5/7, mb1mx3.3/22, mbtmp3.4/7, ML3.5/4, Error ellipse: s-maj=44.2km s-min=20.4km az=39.0*

ISC 14 15:01:37.2±0.3, **59.67N**±0.03×**152.27W**±0.05, **h82**^{km}±3^{km}, **n76**, σ**0^{s}72**/91, **mb3.4**/3, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOM	Homer	0.32	91	P	P	15 01 50.1	+0.3
XLV	Seldovia	0.35	127	P	P	15 01 50.1	+0.1
XLV				S	S	15 01 59.3	-0.4
OPT	Oil Point	0.49	269	P	P	15 01 51.2	+0.1
ILIM	Iliamna	0.54	320	P	P	15 01 51.3	-0.3
ILIM				S	S	15 02 01.4	-0.8
INE	Iliamna NE	0.56	315	P	P	15 01 51.5	-0.3
INE				S	S	15 02 01.6	-1.0
ILW	Iliamna West	0.59	312	P	P	15 01 52.0	-0.1
ILW				S	S	15 02 02.5	-0.5
NNL	Ninilchik	0.62	52	P	P	15 01 53.8	+1.5
AUE	Augustine Isla	0.64	242	P	P	15 01 52.8	+0.2
AUP	Augustine Pinn	0.66	243	P	P	15 01 53.1	+0.3
AUI	Augustine Isla	0.68	241	P	P	15 01 53.0	+0.1
AUI				S	S	15 02 04.2	-0.4
AUW	Augustine West	0.68	245	P	P	15 01 53.2	+0.2
BRLK	Bradley Lake	0.71	81	P	P	15 01 53.7	+0.4
BRLK				S	S	15 02 05.1	-0.1
RSO	Redoubt South	0.83	343	eP	P	15 01 54.7	0.0
RDN	Redoubt North	0.89	344	P	P	15 01 55.4	+0.2
RDN				S	S	15 02 08.3	-0.4
DFR	Drift River	0.95	347	P	P	15 01 56.1	+0.1
DFR				S	S	15 02 09.8	-0.2
NCT	North Crescent	0.96	340	P	P	15 01 56.1	+0.1
NCT				S	S	15 02 10.2	0.0
SYI	Shuyak Island	1.06	184	P	P	15 01 58.3	+1.0
MCNL	McNeil River	1.16	246	P	P	15 01 58.3	-0.3
MCNL				S	S	15 02 13.2	-1.4
NKA	Nikishka	1.20	25	P	P	15 02 01.2	+2.2
SLKM	Skilak Lake	1.33	50	P	P	15 02 01.2	+0.4
SLKM				S	S	15 02 19.2	+0.9
SEW	Seward	1.49	72	P	P	15 02 03.1	+0.2
SEW				S	S	15 02 22.0	+0.2
KAPH	Katmai Pasha	1.52	226	P	P	15 02 03.6	+0.3
KAPH				S	S	15 02 22.7	+0.2
SPU	Mount Spurr	1.52	4	P	P	15 02 03.9	+0.5
SPU				S	S	15 02 23.9	+1.3
CKN	Chakachatna No	1.56	2	P	P	15 02 04.8	+1.0
BGL	Barrier Glacie	1.60	358	P	P	15 02 05.4	+1.0
KAHG	Katmai Hook Gl	1.66	226	P	P	15 02 05.6	+0.4
KAHC	Katmai Hardscr	1.74	235	P	P	15 02 06.1	-0.1
FIB	Fire Island	1.83	34	eP	P	15 02 08.5	+1.1
KAWH	Katmai	1.84	227	P	P	15 02 07.7	+0.2
STLK	Strandline Lak	1.85	6	P	P	15 02 09.0	+1.4
KAIC	Katmai Ikaglui	1.86	232	P	P	15 02 08.2	+0.4
KDAK	Kodiak Island	1.90	185	P	P	15 02 08.2	0.0
RC01	Rabbit Creek A	1.90	40	P	P	15 02 09.1	+0.8
LTI	Latouche	2.26	79	P	P	15 02 13.4	+0.1
PWL	Port Wells	2.30	57	P	P	15 02 13.7	-0.1
PWA	Palmer West	2.31	30	P	P	15 02 14.8	+0.7
PMR	Palmer	2.47	37	P	P	15 02 16.1	-0.2
KNK	Knik Glacier	2.57	45	P	P	15 02 17.5	-0.1
GHO	Glory Hole Cre	2.68	36	P	P	15 02 19.4	+0.2
SML	Sawmill	2.89	40	eP	P	15 02 22.4	+0.3
HIN	Hinchinbrook I	2.98	73	P	P	15 02 22.7	-0.7
SCM	Sheep Creek Mo	3.25	46	P	P	15 02 27.3	+0.1
VLZ	Valdez	3.29	61	P	P	15 02 26.9	-0.8
EYAK	Cordova Ski Ar	3.38	72	P	P	15 02 28.4	-0.5
DIV	Divide	3.54	63	P	P	15 02 30.5	-0.6
TT01	Tatalina	3.72	332	P	P	15 02 33.2	-0.4
KTH	Kantishna Hill	3.95	9	P	P	15 02 38.2	+1.3
KAIM	Kayak Island	3.98	83	P	P	15 02 37.8	+0.6
MCK	McKinley	4.38	20	P	P	15 02 43.2	+0.4
GLB	Gilahina Butte	4.54	63	P	P	15 02 43.8	-1.2
PAX	Paxson	4.66	42	P	P	15 02 46.2	-0.5
THY	Trims Highway	4.88	37	eP	P	15 02 49.2	-0.5
BALM	Baldy	5.12	70	P	P	15 02 52.5	-0.3
YAH	Yahtse	5.33	78	P	P	15 02 55.6	-0.2
CCB	Clear Creek Bu	5.42	21	P	P	15 02 56.4	-0.6
COLA	College	5.62	20	P	P	15 02 59.4	-0.3
MDM	Murphy Dome	5.63	18	P	P	15 02 59.7	-0.2
IL1	Eielson Array	5.71	24	P	P	15 03 00.2	-0.7
ILAR	Eielson Array	5.71	24	P	P	15 03 00.1	-0.9
	0.6nm,0.3s,baz=208,slow=14,SNR=32						
ILAR				S	S	15 04 02.0	-3.8
	1.5nm,0.3s,baz=206,slow=23,SNR=12						
PCA	Pinnacle	6.06	81	P	P	15 03 05.8	-0.1
BCA3	Beaver Creek A	6.08	51	P	P	15 03 05.3	-0.9
IM3	Indian Mountai	6.38	355	P	P	15 03 10.1	-0.2
PNL	Peninsula	6.52	84	P	P	15 03 11.4	-0.9
DAWY	Dawson	7.51	49	P	P	15 03 25.2	-0.8
COLD	Coldfoot	7.65	6	P	P	15 03 27.5	-0.4
BM3	Burnt Mountain	8.49	20	P	P	15 03 37.4	-1.9
WHY	Whitehorse	8.72	76	P	P	15 03 41.6	-0.9
SIT	Sitka	9.28	99	P	P	15 03 47.2	-2.8
DLBC	Dease Lake	11.51	86	P	P	15 04 19.6	-0.3
	0.3nm,0.3s,baz=270,slow=11,SNR=9.7						
INK	Inuvik	11.89	35	P	P	15 04 25.0	0.0
	0.0nm,0.3s,baz=234,slow=14,SNR=2.3						
INK	Inuvik	11.89	35	P	P	15 04 25.0	0.0
YKA	Yellowknife Ar	18.25	65	P	P	15 05 46.1	+0.1
	0.2nm,0.3s,baz=277,slow=10,SNR=24						
PDAR	Pinedale Array	30.95	104	P	P	15 07 49.4	+1.1
	0.6nm,0.7s,mb3.4,baz=329,slow=5.3,SNR=4.2						
TXAR	Lajitas Array	44.52	111	P	P	15 09 43.5	+1.5
	0.3nm,0.4s,mb3.4,baz=329,slow=5.3,SNR=3.0						
TXAR	Lajitas Array	44.52	111	P	P	15 09 43.5	+1.5
SONM	Songino Array	55.29	307	P	P	15 11 04.0	+0.1
	0.3nm,0.7s,mb3.4,baz=29,slow=7.1,SNR=3.9						

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*IDC **14** 15:01:40.9±5.5, 24.56S×179.97E, h504^{km}±61^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.5/15, mbtmp4.4/7, Error ellipse: s-maj=44.8km s-min=27.0km az=14.0*

*NEIC **14** 15:01:42.3±3.8, 24.71S×179.99E, h528^{km}±44^{km}, mb4.4/6, Error ellipse: s-maj=45.4km s-min=18.3km az=195.0*

ISC 14 15:01:40.2±1.1, **24.45S**±0.10×**179.9E**±0.2, **h500**^{km}, **n18**, σ**0^{s}74**/17, **mb4.1**/10, **4D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.97	189	P	P	15 04 38.3	-1.8
	0.7nm,0.3s,baz=333,slow=14,SNR=4.8						
URZ				S	S	15 07 06.0	+1.0
	0.9nm,0.3s,baz=27,slow=22,SNR=8.5						
CTA	Charters Tower	31.35	271	⇓iP	P	15 07 21.6	+1.1
	11nm,0.4s,mb4.6						
CTAO	Charters Tower	31.35	271	eP	P	15 07 21.2	+0.8
	19nm,0.7s,mb4.6						
STKA	Stephens Creek	34.40	249	⇓iP	P	15 07 46.8	+0.8
	3.3nm,0.6s,mb3.9						
STKA	Stephens Creek	34.40	249	P	P	15 07 46.2	+0.1
	2.9nm,0.6s,mb3.9,baz=97,slow=10,SNR=19						
PMG	Port Moresby	34.55	290	P	P	15 07 47.6	+0.2
	7.2nm,0.7s,mb4.2,baz=61,slow=6.3,SNR=5.1						
PMG	Port Moresby	34.55	290	eP	P	15 07 48.1	+0.6
ASAR	Alice Springs	41.81	261	P	P	15 08 46.9	+0.1
	2.7nm,0.7s,mb3.8,baz=95,slow=6.7,SNR=71						
ASPA	Alice Springs	41.82	261	eP	P	15 08 46.9	+0.1
WB2	Warramunga Arr	42.23	267	⇓iP	P	15 08 49.7	-0.4
WRAB	Tennant Creek	42.23	267	eP	P	15 08 49.4	-0.7
	4.2nm,0.7s,mb4.0						
WRA	Warramunga Arr	42.24	267	P	P	15 08 49.9	-0.3
	6.7nm,0.5s,mb4.3,baz=102,slow=8.1,SNR=196						
KAKA	Kakadu	46.23	276	⇓iP	P	15 09 20.5	-0.9
	6.1nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	50.65	266	eP	P	15 09 54.4	-0.2
	12nm,0.7s,mb4.3						
CMAR	Chiang Mai Arr	89.59	290	P	P	15 13 46.0	+0.8
	0.6nm,0.8s,mb3.5,baz=150,slow=4.2,SNR=5.4						
TXAR	Lajitas Array	90.83	58	P	P	15 13 51.0	+0.3
	0.5nm,0.4s,mb3.8,baz=214,slow=6.5,SNR=5.3						
HFS	Hagfors	143.05	349	PKP	PKPdf	15 20 13.8	-1.9
	0.7nm,0.4s,baz=18,slow=4.7,SNR=6.8						
BRTR	Keskin Array B	147.79	306	PKPbc	PKPdf	15 20 28.6	+4.4
	1.0nm,1.0s,baz=90,slow=2.9,SNR=3.2						
BRTR				PKPab	PKPab	15 20 33.5	-1.0
	1.0nm,0.6s,baz=103,slow=2.7,SNR=4.8						

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*MOS **14** 15:08:25.9±1.5, 0.16S×122.62E, h133^{km}, mb4.4/10, Error ellipse: s-maj=35.0km s-min=10.5km az=110.2*

*BJI **14** 15:08:33.6, 0.25S×123.83E, h217^{km}, mB4.8, mb4.6*

*IDC **14** 15:08:33.1±1.9, 0.07S×123.31E, h172^{km}±16^{km}, mb4.3/19, mb1 4.3/20, mb1mx4.3/24, mbtmp4.7/20, Error ellipse: s-maj=18.7km s-min=8.7km az=72.0*

*NEIC **14** 15:08:35.1±1.4, 0.09S×123.37E, h192^{km}±13^{km}, mb4.7/23, Error ellipse: s-maj=10.4km s-min=5.0km az=68.0*

ISC 14 15:08:36.2±1.3, **0.07S**±0.04×**123.47E**±0.07, **h222**^{km}±13^{km}, **n105**, σ**1^{s}03**/99, **mb4.6**/57, **5C-8D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSM	Tawau	7.08	308	P	P	15 10 13.3	-5.0
KKM	Kota Kinabalu	9.45	310	P	P	15 10 49.5	+0.6
TGY	Tagaytay City	14.30	350	P	P	15 11 49.2	-1.0
	baz=260,slow=5.8,SNR=2.1						
KAKA	Kakadu	15.39	145	⇑iP	P	15 12 01.5	-2.1
	64nm,0.6s						
FITZ	Fitzroy Crossi	18.05	173	⇓iP	P	15 12 31.9	-1.6
	69nm,1.2s						
MBWA	Marble Bar	21.28	190	eP	P	15 13 05.4	-0.5
	22nm,0.9s,mb4.7						
WRAB	Tennant Creek	22.43	152	⇑iP	P	15 13 17.4	+0.2
WRAB	Tennant Creek	22.43	152	eP	P	15 13 18.1	+0.9
	32nm,0.6s,mb5.0						
WRA	Warramunga Arr	22.44	152	P	P	15 13 18.2	+1.0
	19nm,0.5s,mb4.9,baz=331,slow=10,SNR=388						
WRA				S	S	15 17 11.1	+7.3
	3.0nm,0.8s,baz=336,slow=16,SNR=5.6						
WRA				ScP		15 20 29.8	
	1.4nm,0.6s,baz=337,slow=3.0,SNR=6.9						
WB2	Warramunga Arr	22.44	152	⇓iP	P	15 13 18.3	+1.0
WB2				eS	S	15 17 11.1	+7.2
IPM	Ipoh	22.89	282	P	P	15 13 23.1	+1.2
QIZ	Qiongzhong	23.22	326	P	P	15 13 25.4	+0.5
QIZ	Qiongzhong	23.22	326	eP	P	15 13 25.7	+0.8
	18nm,0.7s,mb4.7						
ASPA	Alice Springs	25.55	157	eP	P	15 13 47.5	+1.0
ASAR	Alice Springs	25.55	157	P	P	15 13 47.0	+0.4
	7.1nm,0.7s,mb4.4,baz=347,slow=14,SNR=47						
ASAR				pP	pP	15 14 17.9	-12
	4.5nm,0.7s,baz=333,slow=12,SNR=4.9						
ASAR				PcP	PcP	15 17 14.3	+2.2
	1.4nm,0.6s,baz=331,slow=2.2,SNR=6.7						
ASAR				ScP		15 20 38.6	
	1.3nm,0.6s,baz=332,slow=2.9,SNR=12						
KKTK	Khon Kaen	26.09	310	P	P	15 13 52.0	+0.5
	741nm,0.9s						
JOW	Kunigami	27.14	9	P	P	15 14 01.8	+0.7
	14nm,0.8s,mb4.7,baz=227,slow=18,SNR=4.7						
NANT	Nan	29.18	311	P	P	15 14 19.0	-0.3
CM31	Chiang Mai Arr	30.33	309	eP	P	15 14 28.8	-0.6
	7.8nm,0.7s,mb4.5						
CMAR	Chiang Mai Arr	30.33	309	P	P	15 14 29.6	+0.2
	9.5nm,0.8s,mb4.5,baz=133,slow=7.1,SNR=63						
CMAR				PcP	PcP	15 17 25.4	+1.6
	2.0nm,0.7s,baz=166,slow=1.8,SNR=13						
CHG	Chiang Mai	30.53	309	⇓P	P	15 14 31.3	+0.2
	24nm,0.7s,mb4.9						
FORT	Forrest	30.85	172	⇓iP	P	15 14 33.6	-0.2
	1µm,0.5s						
SSE	Sheshan	31.07	356	P	P	15 14 33.4	-2.3
SSE				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.3						
SSE				AMB	AMB		
	comp=Z,125nm,4.2s						
KLBR	Kellerberrin	31.82	189	⇓iP	P	15 14 41.3	-0.9
	comp=Z,67nm,0.4s,mb5.5						
NJ2	Nanjing	32.24	353	eP	P	15 14 46.0	+0.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
CBIJ	Chichi jima	32.45	32	P	P	15 14 46.9	-0.9
	comp=Z,96nm,0.7s,mb5.4,baz=119,slow=22,SNR=4.6						
ENH	Enshi	32.98	337	eP	P	15 14 53.2	+0.9
	comp=Z,22nm,1.0s,mb4.7						
NWAO	Narrogin (SRO)	33.21	190	P	P	15 14 53.7	-0.4
	comp=Z,6.7nm,0.5s,mb4.5,baz=36,slow=11,SNR=13						
NWAO	Narrogin (SRO)	33.21	190	P	P	15 14 53.7	-0.4
STKA	Stephens Creek	35.98	153	⇓iP	P	15 15 19.1	+1.4
	comp=Z,8.1nm,0.8s,mb4.3						
STKA	Stephens Creek	35.98	153	P	P	15 15 18.8	+1.1
	comp=Z,8.2nm,0.7s,mb4.4,baz=332,slow=9.1,SNR=19						
STKA				PcP	PcP	15 17 41.3	+1.8
	comp=Z,1.4nm,0.4s,baz=121,slow=5.5,SNR=4.3						
CD2	Chengdu	36.05	330	P	P	15 15 19.3	+1.1
CD2				AMB	AMB		
	comp=Z,28nm,1.0s,mb4.8						
XAN	Xi'an	36.57	340	P	P	15 15 23.1	+0.5
XAN				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.5						
MAJO	Matsushiro	38.91	19	eP	P	15 15 41.4	-0.6
	comp=Z,6.5nm,0.7s,mb4.3						
MAT	Matsushiro	38.91	19	eP	P	15 15 42.0	0.0
MAT	Matsushiro	38.91	19	P	P	15 15 41.5	-0.5
LZH	Lanzhou	40.34	335	eP	P	15 15 55.5	+1.8
LZH				AMB	AMB		
	comp=Z,48nm,1.7s,mb4.7						
LZH				AMB	AMB		
	comp=Z,123nm,4.0s						
BJI	Beijing	40.47	351	eP	P	15 15 54.1	-0.7
BJI				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.0						
LSA	Lhasa	42.72	317	P	P	15 16 15.4	+2.1
LSA	Lhasa	42.72	317	eP	P	15 16 14.8	+1.5
	comp=Z,13nm,0.6s,mb4.5						
MDJ	Mudanjiang	44.82	6	P	P	15 16 30.0	+0.2
MDJ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,105nm,4.6s						
MDJ	Mudanjiang	44.82	6	eP	P	15 16 30.2	+0.3
	comp=Z,6.0nm,0.7s,mb4.0						
GTA	Gaotai	44.86	334	P	P	15 16 31.5	+1.3
GTA				PCP	PcP	15 18 10.3	+2.0
GTA				S	S	15 22 43.0	-7.0
GTA				AMB	AMB		
	comp=Z,23nm,0.7s,mb4.6						
JIRN	Jiri	45.16	311	eP	P	15 16 33.6	+0.9
	comp=Z,74nm,0.5s,mb5.3						
GUN	Gumba	45.52	311	eP	P	15 16 36.3	+0.7
	comp=Z,107nm,0.5s,mb5.5						
PKI	Pulchoki	45.70	310	eP	P	15 16 37.5	+0.5
	comp=Z,37nm,0.5s,mb5.0						
KKN	Kakani	45.91	310	eP	P	15 16 39.0	+0.3
	comp=Z,45nm,0.5s,mb5.0						
DMN	Daman	45.95	310	eP	P	15 16 39.7	+0.7
	comp=Z,46nm,0.6s,mb5.0						
GKN	Gorkha	46.51	310	eP	P	15 16 43.5	+0.2
	comp=Z,82nm,0.6s,mb5.3						
ASAJ	Asahikawa	47.18	19	P	P	15 16 49.0	+0.8
	comp=Z,11nm,0.6s,mb4.4,baz=206,slow=13,SNR=11						
KOLN	Koldanda	47.20	309	eP	P	15 16 49.1	+0.5
	comp=Z,135nm,0.7s,mb5.4						
HYB	Hyderabad	47.49	294	eP	P	15 16 50.0	-1.0
HYB	Hyderabad	47.49	294	i P	P	15 16 50.0	-1.0
YSS	Yuzh-Sakhalins	49.78	17	eP	P	15 17 08.0	-0.1
ULN	Ulaanbaatar	49.83	346	⇓iP	P	15 17 06.6	-1.9
ULN	Ulaanbaatar	49.83	346	eP	P	15 17 08.6	+0.1
	comp=Z,9.1nm,0.6s,mb4.3						
SONM	Songino Array	49.97	345	P	P	15 17 09.5	0.0
	comp=Z,7.9nm,0.5s,mb4.3,baz=161,slow=8.6,SNR=81						
SONM				PcP	PcP	15 18 27.2	+0.7
	comp=Z,2.2nm,0.6s,baz=168,slow=3.4,SNR=8.3						
NDI	New Delhi	52.63	307	eP	P	15 17 27.5	-2.1
ZAK	Zakamensk	53.13	344	eP	P	15 17 31.7	-1.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SDNR	Sundarnagar	54.03	310	eP	P	15 17 41.6	+1.8
TLY	Talaya	54.21	345	⇓iP	P	15 17 39.1	-1.8
TLY				i *PP	pP	15 18 29.8	-0.7
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
TLY	Talaya	54.21	345	eP	P	15 17 40.5	-0.4
	comp=Z,5.2nm,0.8s,mb4.1						
MOY	Mondy	54.93	343	eP	P	15 17 46.2	+0.2
BOD	Bodaibo	58.21	354	eP	P	15 18 07.6	-1.5
BOD				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
MKAR	Makanchi Array	58.92	328	eP	P	15 18 13.5	-0.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAK	Ala-Archa	61.08	320	⇑iP	P	15 18 22.6	-6.2
AAK				i *PP	PcP	15 19 05.0	-4.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
AAK	Ala-Archa	61.08	320	eP	P	15 18 28.0	-0.8
	comp=Z,1.9nm,0.4s,mb4.1						
YAK	Yakutsk	62.12	3	eP	P	15 18 34.6	-0.9
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK	Yakutsk	62.12	3	eP	P	15 18 35.5	+0.1
	comp=N,52nm,0.7s,mb5.3						
ZAL	Zalesovo	62.57	335	i P	P	15 18 37.8	-0.8
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAL	Zalesovo	62.57	335	P	P	15 18 37.2	-1.4
	comp=Z,2.5nm,0.3s,mb4.2,baz=356,slow=5.2,SNR=11						
MA2	Magadan	63.18	15	eP	P	15 18 43.5	+1.0
MA2				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8						
MA2	Magadan	63.18	15	eP	P	15 18 43.5	+1.1
	comp=Z,28nm,1.0s,mb4.8						
KURK	Kurchatov	63.27	330	⇑iP	P	15 18 39.5	-3.7
KURK	Kurchatov	63.27	330	eP	P	15 18 42.1	-1.1
	comp=Z,11nm,0.6s,mb4.7						
NVS	Novosibirsk	63.86	335	eP	P	15 18 44.5	-2.5
NVS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
FX1	Attu Island--F	66.98	30	P	P	15 19 07.8	+0.9
	comp=Z,56nm,1.0s,mb5.2,baz=256,slow=22,SNR=8.6						
BVAR	Borovoye Array	68.78	329	P	P	15 19 17.2	-0.8
	comp=Z,1.3nm,0.4s,mb3.9,baz=142,slow=10,SNR=12						
BRVK	Borovoye	68.86	329	eP	P	15 19 17.4	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.1						
BRVK	Borovoye	68.86	329	eP	P	15 19 17.4	-1.0
	comp=Z,6.3nm,1.2s,mb4.1						
CHKZ	Chkalovo	69.01	329	eP	P	15 19 18.2	-1.1
	comp=Z,2.4nm,0.8s,mb3.9						
TIXI	Tiksi	71.69	2	eP	P	15 19 34.7	-0.5
TIXI				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.7						
GNI	Garni	81.43	311	eP	P	15 20 24.8	-5.1
GNI				pmax	pmax		
	comp=Z,12nm,2.5s						
SOC	Sochi	85.51	314	eP	P	15 20 44.9	-5.6
SOC				e		15 24 11.8	
SOC				ePPP	PPP	15 26 07.3	-3.9
SOC				eS	SKS	15 30 48.2	-2.8
SOC				eSSS	SSS	15 40 12.4	-3.9
SOC				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.2						
SOC				pmax	pmax		
	comp=N,35nm,0.8s						
SOC				pmax	pmax		
	comp=E,8.0nm,0.8s						
KMBO	Kilima Mbogo	86.22	269	P	P	15 20 54.2	-0.4
	comp=E,1.1nm,0.6s,mb3.8,baz=236,slow=23,SNR=4.6						
ASF	Jabal al Asfar	87.13	302	P	P	15 20 58.8	+0.2
	comp=E,1.8nm,0.4s,mb4.2,baz=302,slow=3.6,SNR=3.7						
IMA	Indian Mountai	87.15	24	eP	P	15 21 00.7	+2.9
	comp=E,3.8nm,0.7s,mb4.2						
ILAR	Eielson Array	89.91	25	P	P	15 21 11.8	+0.9
	comp=E,1.1nm,0.6s,mb3.9,baz=244,slow=5.2,SNR=5.6						
AKASG	Malin Array Be	92.75	321	P	P	15 21 23.7	-0.6
	comp=E,0.8nm,0.3s,mb4.2,baz=65,slow=4.7,SNR=7.0						
ARCES	ARCESS Array B	92.86	340	P	P	15 21 24.2	-0.2
	comp=E,16nm,1.2s,mb4.9,baz=85,slow=6.1,SNR=11						
DAWY	Dawson	93.19	26	eP	P	15 21 27.8	+1.7
FINES	FINESS Array B	93.61	331	i P	P	15 21 26.5	-1.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	93.61	331	P	P	15 21 27.1	-0.8
	comp=Z,1.4nm,0.6s,mb4.2,baz=90,slow=5.7,SNR=9.8						
INK	Inuvik	94.86	21	P	P	15 21 35.1	+1.5
	comp=Z,2.3nm,0.7s,mb4.4,baz=258,slow=4.2,SNR=15						
INK	Inuvik	94.86	21	eP	P	15 21 35.1	+1.6
	comp=Z,2.4nm,0.7s,mb4.4						
HFS	Hagfors	99.81	331	P	P	15 21 55.4	-0.8
	comp=Z,2.1nm,0.6s,mb4.8,baz=104,slow=6.1,SNR=13						
VNA2	Neumayer--Watz	102.36	195	P	Pdif	15 22 04.7	-2.6
VNA2	Neumayer--Watz	102.36	195	⇑i		15 26 25.1	
YKA	Yellowknife Ar	104.27	24	Pdiff	Pdif	15 22 18.0	+2.1
	comp=Z,0.3nm,0.8s,baz=296,slow=4.7,SNR=5.2						
PDAR	Pinedale Array	116.34	41	PKP	PKPdf	15 26 57.3	+3.9
	comp=Z,0.4nm,0.6s,baz=100,slow=0.7,SNR=4.3						
ULM	Lac du Bonnet	119.83	28	PKP	PKPdf	15 27 02.5	+2.5
	comp=Z,2.6nm,0.6s,baz=277,slow=4.4,SNR=6.8						
ULM	Lac du Bonnet	119.83	28	PKP	PKPdf	15 27 02.5	+2.5
ANMO	Albuquerque	121.97	48	PKP	PKPdf	15 27 09.1	+4.6
	comp=Z,0.4nm,0.4s,baz=189,slow=7.6,SNR=4.8						
SCHQ	Schefferville	124.77	7	PKP	PKPdf	15 27 12.9	+3.5
	comp=Z,2.3nm,0.5s,baz=66,slow=6.7,SNR=8.7						
TXAR	Lajitas Array	126.48	53	PKP	PKPdf	15 27 18.2	+4.8
	comp=Z,0.7nm,0.8s,baz=135,slow=1.8,SNR=4.2						

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*NEIC **14** 15:19:00.1, 34.92S×70.50W, ML2.8(GUC), After GUC.*

GUC 14 15:19:00.1±0.7, **34.92S×70.50W**, **MD3.9**, **ML2.8**, **2C-3D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.52	306	⇓iP	Pg	15 19 10.6	+0.1
SFDO				i S	Sg	15 19 18.9	+1.3
CICH	Cipreses	0.61	6	⇓iP	Pg	15 19 12.3	+0.1
CICH				i S	Sg	15 19 21.8	+1.5
CACH	El Canelo	0.81	354	⇑iP	Pg	15 19 15.9	-0.3
CACH				i S	Sg	15 19 28.5	+1.5
CHCH	Chadas Angostu	1.00	353	⇓iP	Pb	15 19 19.4	-0.5
CHCH				i S	Sg	15 19 34.1	+0.9
LMEL	Las Melosas	1.10	13	eP	Pb	15 19 21.1	-0.6
LMEL				i S	Sb	15 19 37.5	+1.0
LMEL				AMP		15 19 39.2	
	comp=N,251nm,0.1s						
PCH	Pirque	1.30	359	i P	Pb	15 19 24.7	-0.4
PCH				i S	Sb	15 19 43.4	+1.2
TACH	Talagante	1.32	344	⇑iP	Pb	15 19 24.9	-0.6
TACH				i S	Sb	15 19 43.5	+0.8
CLCH	Cerro Calan	1.52	359	eP	Pn	15 19 28.1	-0.5
CLCH				i S	Sb	15 19 49.9	+1.1
CLCH				AMP		15 19 52.8	
	comp=E,259nm,0.3s						
FCH	Farellones	1.60	6	eP	Pn	15 19 30.0	+0.2
FCH				i S	Sb	15 19 52.5	+1.5
FCH				AMP		15 19 53.9	
	comp=N,348nm,0.3s						
LCCH	Las Cruces	1.70	328	eP	Pn	15 19 30.7	-0.5
LCCH				i S	Sb	15 19 53.6	-0.1

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*BJI **14** 15:22:01.6, 2.20N×128.70E, h241^{km}, mb4.2*

*NEIC **14** 15:22:01.6±4.0, 2.19N×128.69E, h241^{km}±42^{km}, mb4.3/12, Error ellipse: s-maj=26.5km s-min=8.6km az=62.0*

*IDC **14** 15:22:02.9±2.2, 2.23N×128.74E, h252^{km}±20^{km}, mb3.7/10, mb1 3.9/10, mb1mx3.8/17, mbtmp4.3/10, Error ellipse: s-maj=36.5km s-min=10.1km az=66.0*

ISC 14 15:22:04.1±5.2**, 2.2N**±0.1×**128.7E**±0.2**, h283^{km}**±56^{km}**, n26, σ0^{s}54**/26**, mb4.0**/21**, 2C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	15.26	166	eP	P	15 25 22.7	-4.9
	10nm,0.5s						
FITZ	Fitzroy Crossi	20.38	188	eP	P	15 26 20.4	-0.1
	5.3nm,0.3s						
WRAB	Tennant Creek	22.67	166	eP	P	15 26 43.1	+0.3
	16nm,0.4s,mb4.7						
WRA	Warramunga Arr	22.68	166	P	P	15 26 42.6	-0.3
	8.0nm,0.3s,mb4.5,baz=345,slow=10.0,SNR=148						
WRA				ScP		15 33 40.6	
	1.0nm,0.7s,baz=341,slow=3.1,SNR=16						
WB2	Warramunga Arr	22.68	166	⇓iP	P	15 26 43.1	+0.2
ASAR	Alice Springs	26.19	169	P	P	15 27 14.6	-0.6
	3.1nm,0.7s,mb3.9,baz=355,slow=8.1,SNR=92						
ASAR				ScP		15 33 50.4	
	1.0nm,0.6s,baz=340,slow=2.4,SNR=16						
ASPA	Alice Springs	26.19	169	⇑iP	P	15 27 14.7	-0.5
CTA	Charters Tower	28.06	143	P	P	15 27 32.5	+0.4
	10nm,1.1s,mb4.2,baz=348,slow=8.1,SNR=3.5						
CMAR	Chiang Mai Arr	33.33	301	P	P	15 28 18.8	+0.9
	1.7nm,0.8s,mb3.6,baz=124,slow=7.5,SNR=12						
ENH	Enshi	33.34	329	eP	P	15 28 17.8	0.0
	3.5nm,0.7s,mb4.0						
STKA	Stephens Creek	36.02	161	⇑iP	P	15 28 40.6	+0.1
	3.6nm,0.4s,mb4.2						
STKA	Stephens Creek	36.02	161	P	P	15 28 40.9	+0.4
	4.4nm,0.4s,mb4.3,baz=342,slow=8.3,SNR=42						
BJT	Baijiatuau	39.34	345	eP	P	15 29 07.4	-0.4
	7.2nm,0.9s,mb4.1						
BJI	Beijing	39.36	345	eP	P	15 29 07.4	-0.6
BJI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.2						
LSA	Lhasa	44.91	311	eP	P	15 29 54.2	+1.2
	comp=Z,5.2nm,0.7s,mb3.9						
GTA	Gaotai	45.42	328	P	P	15 29 56.8	0.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb3.6						
ULN	Ulaanbaatar	49.19	341	eP	P	15 30 26.1	+0.3
	comp=Z,5.2nm,0.9s,mb3.9						
SONM	Songino Array	49.39	340	P	P	15 30 27.2	-0.1
	comp=Z,2.5nm,0.7s,mb3.7,baz=154,slow=8.3,SNR=28						
SONM				PcP	PcP	15 31 45.4	-0.1
	comp=Z,0.4nm,0.5s,baz=158,slow=3.3,SNR=4.5						
YAK	Yakutsk	59.71	1	eP	P	15 31 40.8	-0.2
	comp=Z,9.8nm,0.6s,mb4.5						
ZAL	Zalesovo	62.84	333	P	P	15 32 01.4	-0.5
	comp=Z,1.0nm,0.4s,mb3.8,baz=338,slow=7.3,SNR=6.1						
KURK	Kurchatov	64.08	327	eP	P	15 32 09.7	-0.3
	comp=Z,12nm,0.6s,mb4.7						
BVAR	Borovoye Array	69.67	327	P	P	15 32 44.5	-0.3
	comp=Z,1.6nm,0.6s,mb3.9,baz=117,slow=6.6,SNR=12						
BRVK	Borovoye	69.74	327	eP	P	15 32 44.8	-0.4
	comp=Z,2.2nm,0.4s,mb4.2						
CHKZ	Chkalovo	69.82	327	eP	P	15 32 45.2	-0.6
	comp=Z,0.9nm,0.4s,mb3.9						
ILAR	Eielson Array	85.66	25	P	P	15 34 13.4	+1.5
	comp=Z,0.2nm,0.5s,mb3.2,baz=244,slow=4.9,SNR=5.9						
ARCES	ARCESS Array B	92.56	340	P	P	15 34 44.3	0.0
	comp=Z,1.5nm,0.7s,mb4.0,baz=72,slow=7.7,SNR=4.9						

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*IDC **14** 15:30:12.6±0.9, 6.92N×91.22E, mb4.1/10, mb1 4.3/11, mb1mx4.2/19, mbtmp4.1/11, ML4.0/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/24, Error ellipse: s-maj=33.3km s-min=17.2km az=43.0*

*BJI **14** 15:30:14.0, 6.78N×91.55E, h22^{km}, mB5.1, mb4.4, Ms3.8*

*NEIC **14** 15:30:16.1±3.7, 6.91N×91.34E, h20^{km}±23^{km}, mb4.6/7, Error ellipse: s-maj=10.1km s-min=7.9km az=212.0*

ISC 14 15:30:15.8±0.6**, 6.86N**±0.08×**91.31E**±0.08**, h33^{km}, n42, σ1^{s}00**/41**, mb4.4**/27**, MS3.7**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	10.54	273	Pn	P	15 32 46.0	-1.7
	196nm,0.4s,SNR=24						
PALK	Pallekele	10.54	273	ePn	P	15 32 46.1	-1.6
	17nm,0.5s						
PALK				eSn	S	15 34 30.8	-15
CM31	Chiang Mai Arr	13.71	32	ePn	P	15 33 27.8	-2.6
	5.5nm,0.7s						
CMAR	Chiang Mai Arr	13.71	32	Pn	P	15 33 28.1	-2.2
	0.2nm,0.3s,baz=230,slow=14,SNR=38						
CMAR				LR	LR	15 39 49.6	
	comp=Z,80nm,19.2s,baz=220,slow=42						
CHG	Chiang Mai	14.01	31	P	P	15 33 40.6	+6.4
NANT	Nan	14.97	37	P	P	15 33 53.5	+6.6
HYB	Hyderabad	16.28	311	eP	P	15 34 08.0	+4.3
HYB	Hyderabad	16.28	311	i P	P	15 34 08.0	+4.3
KMI	Kunming	21.19	30	P	P	15 34 58.4	-2.4
KMI				AMB	AMB		
	comp=Z,8.0nm,1.5s,mb3.8						
JIRN	Jiri	21.25	347	eP	P	15 35 02.0	+0.7
	comp=Z,47nm,0.9s,mb4.8						
PKI	Pulchoki	21.34	345	eP	P	15 35 02.7	+0.4
	comp=Z,21nm,0.6s,mb4.7						
DMN	Daman	21.46	345	eP	P	15 35 03.8	+0.4
	comp=Z,24nm,0.4s,mb4.8						
GUN	Gumba	21.56	347	eP	P	15 35 05.0	+0.6
	comp=Z,26nm,0.9s,mb4.7						
KKN	Kakani	21.59	345	eP	P	15 35 04.8	+0.1
	comp=Z,27nm,0.9s,mb4.7						
GKN	Gorkha	21.96	344	eP	P	15 35 08.8	+0.4
	comp=Z,42nm,1.1s,mb4.8						
KOLN	Koldanda	22.04	342	eP	P	15 35 09.9	+0.6
	comp=Z,120nm,1.3s,mb5.2						
LSA	Lhasa	22.72	360	P	P	15 35 16.8	+0.8
LSA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
LSA	Lhasa	22.72	360	eP	P	15 35 17.7	+1.7
	comp=Z,42nm,0.7s,mb5.0						
NDI	New Delhi	25.46	330	eP	P	15 35 42.5	-0.1
DDI	Dehra Dun	26.45	334	e	P	15 35 53.8	+2.0
CD2	Chengdu	26.61	24	eP	P	15 35 52.5	-0.8
TGY	Tagaytay City	29.98	74	P	P	15 36 22.8	-0.8
	comp=Z,124nm,0.5s,baz=96,slow=14,SNR=4.6						
LZH	Lanzhou	31.27	20	eP	P	15 36 35.3	+0.4
LZH				AP	pP	15 36 43.6	-1.0
LZH				XP	sP	15 36 48.0	-0.9
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb4.9						
GTA	Gaotai	33.30	12	eP	P	15 36 52.8	+0.2
GTA				AP	pP	15 37 01.6	-0.6
GTA				XP	sP	15 37 05.3	-1.3
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
WMQ	Urumqi	36.95	356	P	P	15 37 25.0	+1.4
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.6						
WMQ				LR	LR		
	comp=N,89nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=E,75nm,18.0s,MS3.7						
AAK	Ala-Archa	38.60	340	eP	P	15 37 37.6	+0.1
	comp=E,5.3nm,1.4s,mb4.1						
SONM	Songino Array	42.80	15	P	P	15 38 12.2	+0.1
	comp=E,5.4nm,0.7s,mb4.4,baz=197,slow=8.8,SNR=56						
ULN	Ulaanbaatar	43.01	16	eP	P	15 38 13.8	+0.1
	comp=E,1.7nm,0.6s,mb4.0						
KURK	Kurchatov	44.97	349	eP	P	15 38 29.8	+0.2
	comp=E,13nm,1.2s,mb4.6						
ZAL	Zalesovo	47.23	355	P	P	15 38 47.6	+0.2
	comp=E,5.8nm,0.5s,mb4.8,baz=307,slow=6.7,SNR=38						
ZAL				LR	LR	16 01 26.5	
	comp=E,87nm,19.6s,MS3.7,baz=83,slow=40						
BVAR	Borovoye Array	49.09	343	P	P	15 39 01.6	-0.3
	comp=E,2.1nm,0.8s,mb4.2,baz=135,slow=4.2,SNR=9.3						
CHKZ	Chkalovo	49.61	344	eP	P	15 39 05.6	-0.2
	comp=E,8.3nm,1.1s,mb4.7						
WRA	Warramunga Arr	50.01	123	P	P	15 39 10.4	+1.0
	comp=E,1.3nm,0.6s,mb4.1,baz=303,slow=8.3,SNR=21						
WRAB	Tennant Creek	50.02	123	eP	P	15 39 10.1	+0.7
	comp=E,7.3nm,1.1s,mb4.6						
ASAR	Alice Springs	51.48	128	P	P	15 39 20.9	+0.5
	comp=E,0.9nm,0.6s,mb3.9,baz=301,slow=8.1,SNR=24						
ASAR				LR	LR	16 00 21.7	
	comp=E,48nm,19.6s,MS3.5,baz=174,slow=35						
BRTR	Keskin Array B	60.98	312	P	P	15 40 27.7	-0.7
	comp=E,1.5nm,0.6s,mb4.3,baz=128,slow=8.4,SNR=8.4						
AKASG	Malin Array Be	67.22	322	P	P	15 41 07.2	-1.6
	comp=E,0.3nm,0.3s,mb3.8,baz=85,slow=5.5,SNR=4.9						
LBTB	Lobatse	71.30	241	LR	LR	16 11 40.5	
	comp=E,54nm,19.4s,MS3.8,baz=250,slow=35						
FINES	FINESS Array B	72.30	333	P	P	15 41 39.2	-0.4
	comp=E,2.8nm,0.7s,mb4.3,baz=124,slow=6.9,SNR=8.0						
GERES	GERESS Array B	76.71	318	P	P	15 42 06.4	+1.0
	comp=E,1.4nm,0.8s,mb3.9,baz=104,slow=5.5,SNR=6.8						
NOA	NORSAR Array B	79.23	331	P	P	15 42 17.2	-1.9
	comp=E,0.5nm,0.6s,mb3.6,baz=115,slow=14,SNR=3.0						
NOA				LR	LR	16 22 08.0	
	comp=E,47nm,18.7s,MS3.9,baz=230,slow=39						
BDFB	Brasilia	139.23	254	PKP	PKPdf	15 49 43.2	+2.8
	comp=E,1.3nm,0.5s,baz=187,slow=3.1,SNR=3.4						

IDC 14 15:41:32.4±1.5**, 1.09N**×**126.92E, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/16**, mbtmp3.8**/4**, Error ellipse: s-maj=158.9km s-min=23.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.13	161	P	P	15 46 29.8	-1.6
	2.3nm,0.4s,baz=340,slow=11,SNR=58						
WB2	Warramunga Arr	22.13	161	eP	P	15 46 30.0	-1.5
ASAR	Alice Springs	25.52	165	P	P	15 47 02.7	-1.8
	0.7nm,0.3s,baz=341,slow=9.0,SNR=37						
ASAR				PcP	PcP	15 50 34.3	-2.6
	0.1nm,0.5s,baz=338,slow=1.4,SNR=4.2						
STKA	Stephens Creek	35.61	158	P	P	15 48 32.2	-1.8
	1.7nm,1.0s,baz=332,slow=12,SNR=4.6						
BVAR	Borovoye Array	69.63	327	P	P	15 52 43.7	-2.0
	0.1nm,0.3s,baz=135,slow=8.2,SNR=3.3						

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*NEIC **14** 15:46:20.7±0.4, 5.07N×94.56E, h30^{km}, mb4.5/8, Error ellipse: s-maj=13.8km s-min=6.6km az=58.0*

*IDC **14** 15:46:23.9±1.1, 5.23N×94.78E, h53^{km}±7^{km}, mb4.0/8, mb1 4.1/9, mb1mx3.8/19, mbtmp4.2/9, MS2.7/1, Ms1 2.9/1, ms1mx2.5/25, Error ellipse: s-maj=44.9km s-min=14.7km az=55.0*

ISC 14 15:46:22.5±5.6**, 5.2N**±0.2×**94.7E**±0.2**, h57^{km}**±46^{km}**, h54^{km}**±.7^{km}**:pP-P, n26, σ0^{s}69**/26**, mb4.4**/21**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	13.83	17	Pn	P	15 49 36.9	-0.5
	3.4nm,0.4s						
CMAR	Chiang Mai Arr	13.83	17	P	P	15 49 37.5	0.0
	0.4nm,0.3s,baz=209,slow=14,SNR=15						
CMAR				LR	LR	15 54 43.6	
	comp=Z,32nm,18.4s,baz=200,slow=36						
JIRN	Jiri	23.80	341	eP	P	15 51 32.0	+0.9
	6.6nm,0.3s,mb4.6						
PKI	Pulchoki	23.99	339	eP	P	15 51 34.0	+1.2
DMN	Daman	24.13	339	eP	P	15 51 34.7	+0.4
	8.4nm,0.7s,mb4.3						
GUN	Gumba	24.14	341	eP	P	15 51 33.6	-0.7
	5.7nm,0.3s,mb4.5						
KKN	Kakani	24.23	339	eP	P	15 51 35.2	-0.1
	4.4nm,0.4s,mb4.3						
LSA	Lhasa	24.64	352	eP	P	15 51 39.9	+0.7
	6.7nm,0.5s,mb4.4						
GKN	Gorkha	24.66	338	eP	P	15 51 39.1	-0.3
	11nm,0.3s,mb4.9						
KOLN	Koldanda	24.85	336	eP	P	15 51 41.4	+0.1
	6.7nm,0.3s,mb4.7						
BJT	Baijiatuau	39.71	26	eP	P	15 53 52.6	+1.6
	3.9nm,0.5s,mb4.4						
AAK	Ala-Archa	41.41	337	eP	P	15 54 05.8	+0.8
	2.1nm,0.8s,mb3.8						
SONM	Songino Array	43.67	11	P	P	15 54 22.4	-1.0
	1.2nm,0.5s,mb3.9,baz=195,slow=7.8,SNR=20						
SONM				PcP	PcP	15 56 09.8	-0.5
	0.5nm,0.4s,baz=199,slow=3.8,SNR=9.9						
SONM				pPcP		15 56 24.8	
	0.4nm,0.7s,baz=197,slow=4.7,SNR=4.2						
WRA	Warramunga Arr	46.24	124	P	P	15 54 44.4	+0.1
	4.5nm,0.7s,mb4.5,baz=304,slow=9.2,SNR=66						
WRAB	Tennant Creek	46.24	124	eP	P	15 54 44.7	+0.3
	6.9nm,0.6s,mb4.8						
WB2	Warramunga Arr	46.25	124	⇑iP	P	15 54 44.4	0.0
KURK	Kurchatov	47.36	346	eP	P	15 54 52.7	0.0
	3.4nm,0.6s,mb4.5						
ASAR	Alice Springs	47.75	129	P	P	15 54 55.8	-0.4
	1.1nm,0.4s,mb4.2,baz=299,slow=7.8,SNR=36						
ASAR				pP	pP	15 55 10.1	-1.0
	0.5nm,0.4s,baz=302,slow=7.9,SNR=4.0						
ASAR				PcP	PcP	15 56 24.4	-0.5
	0.4nm,0.7s,baz=297,slow=3.7,SNR=4.0						
ZAL	Zalesovo	49.29	352	P	P	15 55 07.2	-0.4
	5.5nm,0.4s,mb4.9,baz=300,slow=5.4,SNR=34						
BVAR	Borovoye Array	51.73	342	P	P	15 55 25.1	-1.1
	1.4nm,0.5s,mb4.2,baz=140,slow=12,SNR=18						
BVAR				pP	pP	15 55 39.9	-1.3
	0.7nm,0.4s,baz=146,slow=11,SNR=4.6						
BRVK	Borovoye	51.79	341	eP	P	15 55 25.6	-1.0
	2.0nm,0.5s,mb4.3						
CHKZ	Chkalovo	52.22	342	eP	P	15 55 29.3	-0.5
	6.5nm,0.6s,mb4.7						
FINES	FINESS Array B	75.37	332	P	P	15 58 01.0	-0.5
	1.9nm,0.8s,mb4.1,baz=90,slow=7.6,SNR=8.2						
FINES				pP	pP	15 58 16.1	-1.4
	3.3nm,1.1s,baz=117,slow=4.3,SNR=1.3						
ARCES	ARCESS Array B	78.00	340	P	P	15 58 15.8	-0.3
	1.8nm,0.7s,mb4.1,baz=102,slow=6.9,SNR=13						
ARCES	ARCESS Array B	78.00	340	P	P	15 58 15.8	-0.3
GERES	GERESS Array B	80.23	319	P	P	15 58 29.5	+0.8
	1.1nm,0.5s,mb4.0,baz=104,slow=5.5,SNR=9.4						

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*NEIC **14** 16:04:52.6±0.7, 12.93N×91.52E, mb4.2/9, Error ellipse: s-maj=17.3km s-min=8.4km az=53.0*

*IDC **14** 16:04:53.0±0.9, 12.86N×91.65E, h24^{km}±4^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.8/19, mbtmp3.9/9, ML3.2/1, Error ellipse: s-maj=32.7km s-min=14.0km az=59.0*

*BJI **14** 16:04:53.7, 13.06N×90.56E, h21^{km}, mb4.1*

ISC 14 16:04:50.7±0.6**, 12.92N**±0.07×**91.58E**±0.08**, h24^{km}, h24^{km}**±.3^{km}**:pP-P, n29, σ1^{s}09**/30**, mb4.1**/15**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	8.97	51	Pn	P	16 07 03.0	+1.1
	1.8nm,0.5s						
CMAR	Chiang Mai Arr	8.97	51	Pn	P	16 07 01.6	-0.2
	0.1nm,0.3s,baz=242,slow=13,SNR=3.9						
VIS	Vishakhapatnam	9.28	302	eP	P	16 07 06.6	+0.5
VIS				eS	Sn	16 08 45.4	-5.4
JIRN	Jiri	15.50	342	eP	P	16 08 28.2	-1.4
	11nm,0.5s						
PKI	Pulchoki	15.68	339	eP	P	16 08 31.2	-0.6
DMN	Daman	15.82	338	eP	P	16 08 32.6	-1.0
	26nm,0.9s						
GUN	Gumba	15.83	341	eP	P	16 08 31.7	-2.2
KKN	Kakani	15.92	339	eP	P	16 08 33.2	-1.8
GKN	Gorkha	16.34	338	eP	P	16 08 39.1	-1.3
	12nm,0.3s						
KOLN	Koldanda	16.55	334	eP	P	16 08 41.9	-1.0
	19nm,0.8s						
LSA	Lhasa	16.70	359	P	P	16 08 49.0	+4.2
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
LSA	Lhasa	16.70	359	eP	P	16 08 49.0	+4.2
	comp=Z,14nm,0.9s						
ENH	Enshi	23.92	41	eP	P	16 10 04.1	+0.2
	comp=Z,5.4nm,0.6s,mb4.2						
AAK	Ala-Archa	33.10	337	eP	P	16 11 27.8	+0.9
	comp=Z,2.4nm,1.1s,mb4.0						
SONM	Songino Array	36.94	17	P	P	16 12 00.2	+0.6
	comp=Z,1.7nm,1.0s,mb3.8,baz=195,slow=7.3,SNR=6.0						
SONM				pP	pP	16 12 07.4	+0.6
	comp=Z,1.1nm,0.7s,baz=204,slow=7.7,SNR=8.7						
KURK	Kurchatov	39.14	347	eP	P	16 12 19.3	+1.2
	comp=Z,4.6nm,0.9s,mb4.2						
KURK				epP	pP	16 12 26.3	+0.9
ZAL	Zalesovo	41.27	354	P	P	16 12 37.1	+1.5
	comp=Z,0.8nm,0.7s,mb3.5,baz=303,slow=8.7,SNR=6.9						
ZAL				pP	pP	16 12 44.4	+1.6
	comp=Z,0.8nm,0.8s,baz=282,slow=10,SNR=3.0						
BVAR	Borovoye Array	43.43	341	P	P	16 12 54.2	+1.0
	comp=Z,0.5nm,0.6s,mb3.5,baz=141,slow=9.5,SNR=4.7						
BRVK	Borovoye	43.49	341	eP	P	16 12 55.6	+1.9
	comp=Z,0.8nm,0.3s,mb3.9						
CHKZ	Chkalovo	43.92	342	eP	P	16 12 58.6	+1.4
	comp=Z,3.4nm,0.9s,mb4.1						
FITZ	Fitzroy Crossi	45.60	132	eP	P	16 13 10.5	-0.7
	comp=Z,4.9nm,0.4s,mb4.8						
WRA	Warramunga Arr	53.27	127	P	P	16 14 09.3	-0.8
	comp=Z,2.0nm,0.9s,mb4.0,baz=300,slow=9.8,SNR=18						
WRA				pP	pP	16 14 16.8	-0.7
	comp=Z,3.6nm,0.7s,baz=300,slow=9.9,SNR=14						
WRA				PcP	PcP	16 15 17.8	+0.2
	comp=Z,0.6nm,0.9s,baz=317,slow=3.7,SNR=2.8						
WRA				pPcP		16 15 25.4	
	comp=Z,0.9nm,0.7s,baz=320,slow=3.0,SNR=6.8						
WRAB	Tennant Creek	53.27	127	eP	P	16 14 09.6	-0.5
	comp=Z,6.5nm,0.6s,mb4.7						
WRAB				epP	pP	16 14 16.9	-0.7
WB2	Warramunga Arr	53.27	127	eP	P	16 14 09.5	-0.6
ASPA	Alice Springs	55.09	131	eP	P	16 14 23.7	+0.3
ASAR	Alice Springs	55.09	131	P	P	16 14 22.4	-1.0
	comp=Z,1.5nm,0.8s,mb4.1,baz=308,slow=6.8,SNR=38						
ASAR				pP	pP	16 14 30.2	-0.7
	comp=Z,2.6nm,0.5s,baz=312,slow=7.1,SNR=19						
BRTR	Keskin Array B	57.28	309	P	P	16 14 39.5	+0.6
	comp=Z,1.7nm,0.7s,mb4.2,baz=119,slow=7.1,SNR=9.7						
FINES	FINESS Array B	67.10	332	P	P	16 15 44.1	0.0
	comp=Z,1.5nm,0.8s,mb4.1,baz=117,slow=4.3,SNR=6.7						
GERES	GERESS Array B	72.42	317	P	P	16 16 18.6	+1.7
	comp=Z,2.8nm,1.1s,mb4.1,baz=72,slow=4.2,SNR=6.6						

WEL 14 16:11:04.4±0.1**, 40.09S**×**175.02E, h12^{km}, ML3.7**/22**, 11C-2D, Error ellipse: s-maj=1.4km s-min=0.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.33	356	⇑P*	Pb	16 11 11.8	0.0
WAZ				S*	Sb	16 11 17.0	+0.4
MRZ	Mangatainoka R	0.72	143	⇑P*	Pb	16 11 18.4	+0.1
MRZ				S*	Sb	16 11 28.2	+0.3
TSZ	Takapari Road	0.72	88	⇓P*	Pb	16 11 18.6	+0.1
TSZ				S*	Sb	16 11 28.3	+0.2
KIW	Kapiti Island	0.78	186	⇑P*	Pb	16 11 18.2	-1.2
KIW				S*	Sb	16 11 27.8	-1.9
MOVZ	Moawhango	0.88	40	P*	Pb	16 11 20.0	-1.2
MOVZ				S*	Sb	16 11 32.4	-0.3
DRZ	Dome Shelter	0.91	28	P*	Pb	16 11 20.9	-0.8
DRZ				S*	Sb	16 11 34.1	+0.5
FWVZ	Far West T-bar	0.93	27	P*	Pb	16 11 21.0	-0.9
FWVZ				S*	Sb	16 11 34.0	+0.1
RAEZ	Rainy Point	0.93	329	⇑P*	Pb	16 11 22.5	+0.5
TUVZ	Tukino	0.95	31	P*	Pb	16 11 21.6	-0.7
WPVZ	Whakapapa	0.97	25	⇑P*	Pb	16 11 21.8	-0.9
WPVZ				S*	Sb	16 11 35.4	+0.2
CNZ	Chateau	0.98	25	⇓P*	Pb	16 11 21.9	-0.8
VRZ	Vera Road	0.98	348	⇑P*	Pb	16 11 22.4	-0.5
NGZ	Ngauruhoe	1.01	27	⇑P*	Pb	16 11 22.5	-0.9
NGZ				S*	Sb	16 11 36.2	-0.3
CAW	Cannon Point	1.02	178	⇑P*	Pb	16 11 23.0	-0.6
DFE	Dawson Falls	1.03	317	P*	Pb	16 11 24.3	+0.5
OTVZ	Oturere	1.05	29	⇑P*	Pb	16 11 23.3	-0.8
OTVZ				S*	Sb	16 11 37.2	-0.2
TWVZ	Taurewa	1.06	18	P*	Pb	16 11 23.0	-1.3
WTVZ	West Tongariro	1.06	25	⇑P*	Pb	16 11 23.4	-0.9
NEZ	North Egmont	1.08	319	P*	Pb	16 11 24.4	-0.1
BFZ	Birch Farm	1.11	123	P*	Pb	16 11 25.7	+0.6
NRZ	Ngariki Road	1.12	311	P*	Pb	16 11 25.1	-0.2
MTW	Mount Morrison	1.13	161	P*	Pb	16 11 25.4	-0.1
MGZ	Maungaku	1.16	21	⇑P*	Pb	16 11 24.7	-1.1
MRW	Makara Radio	1.17	192	P*	Pb	16 11 24.8	-1.2
PKE	Pukeiti	1.19	318	P*	Pb	16 11 26.2	-0.3
NWEZ	Newall Road	1.20	312	P*	Pb	16 11 26.3	-0.3
WEL	Wellington	1.21	189	P*	Pb	16 11 25.8	-1.1
KATZ	Kakaramea	1.23	26	P*	Pb	16 11 26.2	-0.9
RITZ	Rihia Road	1.28	31	ePN	Pn	16 11 27.6	-0.7
BHW	Baring Head	1.33	185	PN	Pn	16 11 27.8	-1.0
PAWZ	Paruwai Farm	1.33	167	PN	Pn	16 11 27.7	-1.2
MSWZ	Moikau Station	1.34	172	PN	Pn	16 11 27.9	-1.1
RATZ	Rangitukua	1.35	26	PN	Pn	16 11 28.4	-0.8
PWZ	Pawanui	1.42	88	PN	Pn	16 11 29.4	-0.7
HATZ	Hinemaiaia	1.45	35	PN	Pn	16 11 29.8	-0.8
WATZ	Wairara	1.48	22	PN	Pn	16 11 29.9	-1.2
NNZ	Nelson	1.68	227	PN	Pn	16 11 32.4	-1.5
CMWZ	Cape Campbell	1.77	200	ePN	Pn	16 11 35.5	+0.3
PATZ	Paeroa	1.96	30	PN	Pn	16 11 39.7	+1.9
QRZ	Quartz Range	2.04	248	PN	Pn	16 11 37.4	-1.7
UTU	Utuhina	2.11	26	ePN	Pn	16 11 43.0	+2.9
TAZ	Tarawera	2.18	33	PN	Pn	16 11 42.4	+1.3
KNZ	Kokohu	2.31	63	PN	Pn	16 11 41.7	-1.3
THZ	Tophouse	2.32	223	PN	Pn	16 11 41.9	-1.1
TOZ	Tahuroa Road	2.38	9	ePN	Pn	16 11 45.3	+1.3
URZ	Urewera	2.44	42	ePN	Pn	16 11 43.0	-1.8
MWZ	Matawai	2.62	49	ePN	Pn	16 11 45.8	-1.5
DSZ	Denniston Nort	2.95	235	ePN	Pn	16 11 50.2	-1.8
PUZ	Puketiti	3.23	52	ePN	Pn	16 11 53.1	-2.8
KUZ	Kuaotunu	3.38	10	ePN	Pn	16 11 55.6	-2.5
LTZ	Lake Taylor	3.40	217	PN	Pn	16 11 55.7	-2.6
MQZ	McQueen's Vall	4.03	205	PN	Pn	16 12 02.3	-5.1
WCZ	Waipu Caves	4.17	352	ePN	Pn	16 12 07.5	-1.9
WVZ	Waitaha Valley	4.38	226	ePN	Pn	16 12 09.3	-3.1
RPZ	Rata Peaks	4.68	218	ePN	Pn	16 12 12.3	-4.3
FOZ	Fox Glacier	5.28	227	ePN	Pn	16 12 19.4	-5.8
LBZ	Lake Benmore	5.60	218	ePN	Pn	16 12 25.5	-4.1
ODZ	Otahua Downs	5.91	212	ePN	Pn	16 12 28.0	-6.0
JCZ	Jackson Bay	6.13	227	ePN	Pn	16 12 32.1	-5.0
TUZ	Tuapeka	7.07	212	ePN	Pn	16 12 44.2	-6.1

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*BJI **14** 16:15:17.9, 6.79N×91.82E, h34^{km}, mB5.1, mb4.0, Ms4.1, Msz3.8*

*MOS **14** 16:15:23.4±1.2, 7.73N×92.36E, h33^{km}, mb4.9/9, Error ellipse: s-maj=17.6km s-min=8.8km az=102.7*

*NEIC **14** 16:15:25.7±0.3, 7.66N×92.26E, mb4.7/9, Error ellipse: s-maj=9.0km s-min=6.7km az=59.0*

*IDC **14** 16:15:25.8±0.8, 7.83N×92.31E, h34^{km}±4^{km}, mb4.0/15, mb1 4.1/16, mb1mx4.0/24, mbtmp4.2/16, ML3.4/1, MS3.2/4, Ms1 3.3/4, ms1mx3.0/21, Error ellipse: s-maj=22.8km s-min=15.6km az=44.0*

ISC 14 16:15:23.9±1.6**, 7.60N**±0.06×**92.21E**±0.06**, h35^{km}**±14^{km}**, h34^{km}**±1.2^{km}**:pP-P, n79, σ1^{s}27**/75**, mb4.5**/38**, MS3.8**/6**, 1C-2D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.42	269	Pn	P	16 18 07.4	-0.4
	443nm,0.5s,SNR=19						
PALK	Pallekele	11.42	269	ePn	P	16 18 06.1	-1.6
	35nm,0.4s						
CM31	Chiang Mai Arr	12.62	31	ePn	P	16 18 22.6	-1.3
	2.9nm,0.4s						
CMAR	Chiang Mai Arr	12.62	31	Pn	P	16 18 20.9	-3.1
	0.1nm,0.3s,baz=230,slow=13,SNR=3.4						
CMAR				LR	LR	16 23 12.1	
	comp=Z,118nm,19.4s,baz=225,slow=38						
VIS	Vishakhapatnam	13.27	320	eP	P	16 18 28.9	-3.7
VIS				e		16 18 31.8	
	comp=Z,56nm,0.6s						
VIS				eS	S	16 20 46.2	-14
HYB	Hyderabad	16.51	308	i P	P	16 19 16.5	+1.9
BLSP	Bilaspur	17.41	327	eP	P	16 19 24.6	-1.3
BLSP				e		16 19 26.4	
	comp=Z,19nm,1.1s						
BLSP				e		16 22 45.1	
SHL	Shillong	17.87	359	eP	P	16 19 33.5	+1.9
KAD	Karad	20.06	300	e	P	16 19 56.7	-0.4
QIZ	Qiongzhong	20.55	55	P	P	16 20 04.0	+1.7
QIZ				LR	LR		
	comp=N,681nm,12.3s						
QIZ				LR	LR		
	comp=Z,324nm,13.2s,MS3.9						
JIRN	Jiri	20.75	345	eP	P	16 20 04.7	+0.4
	comp=Z,30nm,0.4s						
PKI	Pulchoki	20.88	343	eP	P	16 20 05.9	+0.2
	comp=Z,34nm,0.4s						
DMN	Daman	21.01	342	eP	P	16 20 07.6	+0.7
	comp=Z,60nm,0.7s,mb5.1						
BHPL	Bhopal	21.06	319	eP	P	16 20 06.0	-1.5
GUN	Gumba	21.07	344	eP	P	16 20 07.2	-0.4
	comp=Z,52nm,0.6s,mb5.0						
KKN	Kakani	21.13	343	eP	P	16 20 07.0	-1.1
	comp=Z,47nm,0.8s,mb4.9						
GKN	Gorkha	21.52	341	eP	P	16 20 12.3	+0.2

	comp=Z,68nm,0.6s,mb5.2						
KOLN	Koldanda	21.66	339	*e*P	P	16 20 13.9	+0.5
	comp=Z,113nm,1.1s,mb5.2						
LSA	Lhasa	22.01	358	P	P	16 20 19.0	+2.1
LSA	Lhasa	22.01	358	*e*P	P	16 20 17.1	+0.2
LSA				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.6						
LSA	Lhasa	22.01	358	*e*P	P	16 20 17.1	+0.2
	comp=Z,15nm,0.6s,mb4.6						
GYA	Guiyang	23.25	35	⇓*i*P	P	16 20 35.6	+6.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
CD2	Chengdu	25.58	23	*e*P	P	16 20 54.0	+2.3
DDI	Dehra Dun	26.21	331	*e*	P	16 21 03.0	+5.4
ENH	Enshi	27.77	33	*e*P	P	16 21 11.2	-0.6
	comp=Z,11nm,0.9s,mb4.5						
GTA	Gaotai	32.40	11	P	P	16 21 54.8	+2.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.7s,mb4.0						
GTA				AMB	AMB		
	comp=Z,95nm,6.1s						
GTA				LR	LR		
	comp=N,90nm,16.3s,MS3.8						
GTA				LR	LR		
	comp=E,113nm,15.6s,MS3.8						
GTA				LR	LR		
	comp=Z,108nm,14.8s,MS3.7						
NJ2	Nanjing	34.73	42	*e*P	P	16 22 13.3	+0.3
NJ2				AMB	AMB		
	comp=Z,420nm,3.8s						
NJ2				LR	LR		
	comp=N,300nm,14.0s,MS4.3						
NJ2				LR	LR		
	comp=E,210nm,10.6s,MS4.3						
NJ2				LR	LR		
	comp=Z,230nm,10.5s,MS4.2						
SSE	Sheshan	35.76	45	P	P	16 22 21.0	-0.7
SSE				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.5						
SSE				AMB	AMB		
	comp=Z,79nm,4.0s						
SSE				LR	LR		
	comp=N,67nm,26.4s,MS3.4						
SSE				LR	LR		
	comp=E,47nm,26.4s,MS3.4						
SSE				LR	LR		
	comp=Z,42nm,20.3s						
UCH	Uchtor	37.87	338	P	P	16 22 40.9	+1.5
	SNR=6.4						
KBK	Karagaybulak	38.09	339	P	P	16 22 42.6	+1.4
	SNR=7.5						
AML	Almayashu	38.09	337	P	P	16 22 42.9	+1.7
	SNR=14						
AAK	Ala-Archa	38.23	339	P	P	16 22 43.9	+1.5
	SNR=5.2						
AAK	Ala-Archa	38.23	339	*e*P	P	16 22 43.0	+0.6
AAK				*e**PP	pP	16 22 52.3	-0.2
AAK				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
AAK	Ala-Archa	38.23	339	*e*P	P	16 22 43.0	+0.6
	comp=Z,17nm,1.2s,mb4.7						
AAK				*e*pP	pP	16 22 52.3	-0.3
EKS2	Erkin-Say	38.52	338	P	P	16 22 46.5	+1.8
	SNR=5.2						
USP	Ospenovka	38.78	339	P	P	16 22 47.6	+0.7
	SNR=7.3						
FITZ	Fitzroy Crossi	41.73	128	*e*P	P	16 23 11.9	+0.2
	comp=Z,14nm,0.8s,mb4.6						
SONM	Songino Array	41.87	14	P	P	16 23 12.2	-0.3
	comp=Z,2.3nm,0.9s,mb3.8,baz=196,slow=9.0,SNR=6.5						
ULN	Ulaanbaatar	42.06	15	*e*P	P	16 23 09.8	-4.2
ZAK	Zakamensk	43.63	10	*e*P	P	16 23 33.0	+6.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
KURK	Kurchatov	44.44	348	*e*P	P	16 23 33.0	-0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.7						
KURK	Kurchatov	44.44	348	*e*P	P	16 23 33.0	-0.3
	comp=Z,4.6nm,0.3s,mb4.7						
TLY	Talaya	44.95	10	*e*P	P	16 23 34.1	-3.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
ZAL	Zalesovo	46.59	354	*i* P	P	16 23 50.6	+0.3
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL	Zalesovo	46.59	354	P	P	16 23 49.1	-1.3
	comp=Z,0.9nm,0.4s,mb4.1,baz=288,slow=4.4,SNR=4.2						
NWAO	Narrogin (SRO)	46.81	151	LR	LR	16 42 51.8	
	comp=Z,1.8nm,18.9s,baz=172,slow=35						
NVS	Novosibirsk	47.66	353	*e*P	P	16 23 56.9	-1.8
BVAR	Borovoye Array	48.65	343	P	P	16 24 05.3	-1.2
	comp=Z,1.9nm,0.6s,mb4.3,baz=143,slow=7.4,SNR=18						
BRVK	Borovoye	48.71	343	*e*P	P	16 24 05.9	-1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BRVK	Borovoye	48.71	343	*e*P	P	16 24 05.8	-1.1
	comp=Z,3.6nm,0.9s,mb4.4						
CHKZ	Chkalovo	49.16	343	*e*P	P	16 24 10.0	-0.4
CHKZ				*e**PP	pP	16 24 20.0	-0.7
CHKZ				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
CHKZ	Chkalovo	49.16	343	*e*P	P	16 24 10.0	-0.3
	comp=Z,12nm,1.0s,mb4.9						
CHKZ				*e*pP	pP	16 24 20.0	-0.7
WRA	Warramunga Arr	49.67	124	P	P	16 24 14.5	-0.3
	comp=Z,3.9nm,0.8s,mb4.5,baz=308,slow=8.4,SNR=34						
WRAB	Tennant Creek	49.68	124	*e*P	P	16 24 14.3	-0.5
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
WRAB	Tennant Creek	49.68	124	*e*P	P	16 24 14.3	-0.6
	comp=Z,5.9nm,0.6s,mb4.8						
WB2	Warramunga Arr	49.68	124	⇓*i*P	P	16 24 14.6	-0.3
ASPA	Alice Springs	51.22	129	*e*P	P	16 24 26.7	+0.2
ASAR	Alice Springs	51.22	129	P	P	16 24 26.4	-0.1
	comp=Z,2.1nm,0.8s,mb4.1,baz=300,slow=7.8,SNR=43						
ASAR				PcP	PcP	16 25 42.1	+0.5
	comp=Z,1.1nm,0.6s,baz=309,slow=4.0,SNR=5.3						
ASAR				pPcP		16 25 52.9	
	comp=Z,0.7nm,0.6s,baz=302,slow=3.8,SNR=4.2						
BOD	Bodaibo	52.87	14	*e*P	P	16 24 34.3	-4.1
GNI	Garni	53.27	315	LR	LR	16 50 27.3	
	comp=Z,57nm,18.1s,MS3.7,baz=140,slow=40						
KMBO	Kilima Mbogo	55.49	263	P	P	16 24 59.6	+1.3
	comp=Z,1.6nm,0.6s,mb4.2,baz=40,slow=23,SNR=6.9						
KIV	Kislovodsk	56.25	319	*e*P	P	16 25 04.5	+1.2
KIV				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
EIL	Elat	57.91	300	P	P	16 25 16.2	+1.0
	comp=Z,3.9nm,0.8s,mb4.5,baz=316,slow=4.3,SNR=6.8						
EIL				pP	pP	16 25 25.8	0.0
	comp=Z,4.2nm,0.7s,baz=88,slow=8.4,SNR=4.5						
SOC	Sochi	58.07	317	*e*P	P	16 25 23.2	+7.0
SOC				*e*		16 27 28.5	
SOC				*e*PPP	PPP	16 28 46.5	-3.2
SOC				*e*S	S	16 33 10.2	-2.6
SOC				*e*		16 35 05.9	
SOC				*e*SS	SS	16 37 01.6	-4.3
SOC				*e*SSS	SSS	16 39 18.8	-7.6
SOC				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
SOC				pmax	pmax		
	comp=N,67nm,0.9s						
SOC				pmax	pmax		
	comp=E,21nm,0.9s						
YAK	Yakutsk	60.87	19	⇑*i*P	P	16 25 37.1	+1.9
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
BRTR	Keskin Array B	61.17	311	P	P	16 25 35.5	-2.0
	comp=Z,1.3nm,0.8s,mb4.1,baz=123,slow=6.7,SNR=6.4						
BRTR				pP	pP	16 25 47.0	-1.1
	comp=Z,1.0nm,0.6s,baz=137,slow=7.1,SNR=3.5						
STKA	Stephens Creek	61.31	133	LR	LR	16 53 05.3	
	comp=Z,90nm,19.5s,MS3.9,baz=24,slow=37						
TIXI	Tiksi	67.88	12	*e*P	P	16 26 19.7	-0.9
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
MA2	Magadan	67.90	28	*e*P	P	16 26 24.6	+3.7
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
MLR	Muntele Rosu	68.03	316	P	P	16 26 20.3	-1.7
	comp=Z,3.7nm,0.8s,mb4.5,baz=118,slow=3.4,SNR=5.4						
FINES	FINESS Array B	72.06	332	P	P	16 26 43.9	-2.3
	comp=Z,1.7nm,0.8s,mb4.0,baz=124,slow=5.0,SNR=4.0						
GERES	GERESS Array B	76.76	318	P	P	16 27 13.3	-0.4
	comp=Z,1.5nm,0.8s,mb4.0,baz=90,slow=4.0,SNR=11						
GERES				pP	pP	16 27 24.0	-0.4
	comp=Z,2.7nm,1.0s,baz=135,slow=1.9,SNR=6.2						
HFS	Hagfors	77.73	330	P	P	16 27 17.9	-0.9
	comp=Z,3.3nm,1.0s,mb4.2,baz=82,slow=10,SNR=3.5						
HFS				pP	pP	16 27 29.1	-0.5
	comp=Z,20nm,1.2s,baz=117,slow=3.3,SNR=3.7						
SUR	Sutherland	78.61	235	P	P	16 27 26.8	+2.6
	comp=Z,4.1nm,0.9s,mb4.4,baz=219,slow=3.5,SNR=3.8						
DAVOX	Davos	79.26	316	P	P	16 27 27.4	-0.1
	comp=Z,1.5nm,0.5s,mb4.2,baz=94,slow=15,SNR=3.1						
DAVOX				pP	pP	16 27 38.2	-0.2
	comp=Z,3.2nm,0.6s,baz=86,slow=5.0,SNR=3.2						
ILAR	Eielson Array	95.71	22	P	P	16 28 46.0	-1.1
	comp=Z,0.3nm,0.7s,mb3.8,baz=300,slow=4.6,SNR=4.4						
PDAR	Pinedale Array	126.09	20	PKP	PKPdf	16 34 24.9	+1.8
	comp=Z,0.6nm,0.7s,SNR=6.2						
NVAR	Mina Array Bea	126.12	30	PKP	PKPdf	16 34 25.4	+2.1
	comp=Z,1.0nm,0.8s,baz=318,slow=0.5,SNR=7.8						
NVAR	Mina Array Bea	126.12	30	PKP	PKPdf	16 34 25.4	+2.1

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*IDC **14** 16:21:48.7±0.6, 56.26S×25.51W, mb4.7/8, mb1 4.7/9, mb1mx4.4/17, mbtmp4.6/9, ML3.9/1, MS3.7/5, Ms1 3.7/5, ms1mx3.2/13, Error ellipse: s-maj=22.6km s-min=18.6km az=166.0*

*NEIC **14** 16:21:53.2±3.2, 56.28S×25.52W, h30^{km}±22^{km}, mb5.1/12, Error ellipse: s-maj=9.8km s-min=7.0km az=201.0*

ISC 14 16:21:50.9±6.6**, 56.3S**±0.1×**25.5W**±0.1**, h27**^{km}±48^{km}**, n44,** σ**0^{s}91**/27**, mb4.8**/17**, MS3.8**/4**, 2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	16.50	162		P	16 25 42.0	+0.3
VNA2	Neumayer--Watz	16.66	159	⇑*i*	P	16 25 43.6	-0.2
SNAA	Sanae	18.18	157	⇑*i*	P	16 26 05.2	+2.3
SNAA	Sanae	18.18	157	P	P	16 26 03.4	+0.5
	0.4nm,0.3s,baz=328,slow=16,SNR=36						
SNAA				LR	LR	16 30 47.8	
	comp=Z,75nm,21.3s,baz=222,slow=30						
SNAA	Sanae	18.18	157	*e*P	P	16 26 03.5	+0.7
	164nm,0.8s						
PMSA	Palmer Station	20.47	230	*e*P	P	16 26 28.0	-0.9
	98nm,0.9s						
USHA	Ushuaia	24.03	255	P	P	16 27 05.8	+1.6
	11nm,0.8s,mb4.4,baz=68,slow=5.0,SNR=3.6						
USHA				LR	LR	16 34 00.9	
	comp=Z,671nm,20.6s,MS4.1,baz=31,slow=30						
TRQA	Tornquist	30.26	291	*e*P	P	16 27 59.7	-1.9
	5.5nm,0.8s,mb4.3						
PLCA	Paso Flores	32.95	279	P	P	16 28 23.6	-1.5
	2.3nm,0.9s,mb4.1,baz=155,slow=10,SNR=5.8						
PLCA				LR	LR	16 40 44.6	
	comp=Z,209nm,21.9s,MS3.8,baz=168,slow=34						
QSPA	South Pole Qui	34.00	180	*e*P	P	16 28 32.9	-0.9
	49nm,0.7s,mb5.5						
BOSA	Boshof	45.13	74	*e*P	P	16 30 06.5	-0.1
	7.0nm,1.0s,mb4.5						
SBA	Scott Base	45.94	184	*e*P	P	16 30 12.3	-0.1
	15nm,0.8s,mb5.0						
LVC	Limon Verde	46.21	298	P	P	16 30 16.4	+1.2
	71nm,0.7s,mb5.7,baz=145,slow=4.0,SNR=109						
LVC				LR	LR	16 47 16.0	
	comp=Z,76nm,18.7s,MS3.7,baz=17,slow=33						
LVC	Limon Verde	46.21	298	*e*P	P	16 30 16.1	+0.8
	81nm,0.8s,mb5.7						
LVC				LR	LR	16 47 15.9	
VNDA	Vanda	46.41	182	P	P	16 30 16.1	-0.1
	12nm,0.7s,mb4.9,baz=182,slow=6.1,SNR=43						
VNDA				LR	LR	16 46 42.1	
	comp=Z,80nm,20.7s,MS3.6,baz=222,slow=32						
LBTB	Lobatse	48.19	71	P	P	16 30 30.2	-0.6
	3.9nm,0.6s,mb4.6,baz=212,slow=8.0,SNR=11						
LBTB	Lobatse	48.19	71	*e*P	P	16 30 30.6	-0.2
TSUM	Tsumeb	48.98	59	P	P	16 30 36.7	-0.3
	3.4nm,0.8s,mb4.4,baz=206,slow=4.4,SNR=6.7						
ARE	Arequipa	52.70	300	*e*P	P	16 31 07.0	+1.7
SAML	Samuel	55.61	313	*e*P	P	16 31 26.3	-0.4
	14nm,1.0s,mb4.9						
LSZ	Lusaka	57.59	67	*e*P	P	16 31 40.1	-0.6
	1.4nm,0.4s,mb4.3						
NNA	Nana	59.16	297	*e*P	P	16 31 51.1	-0.6
	21nm,0.8s,mb5.2						
DBIC	Dimbokro	64.98	23	P	P	16 32 31.0	+0.4
	7.6nm,0.6s,mb4.9,baz=173,slow=7.5,SNR=23						
DBIC	Dimbokro	64.98	23	P	P	16 32 31.0	+0.4
OTAV	Otavalo	70.55	302	*e*P	P	16 33 06.0	+0.5
	50nm,1.4s,mb5.2						
SDV	Santo Domingo	74.81	314	*e*P	P	16 33 31.6	+0.9
	8.2nm,0.8s,mb4.7						
ASAR	Alice Springs	98.51	161	P	P	16 35 28.7	+0.7
	1.3nm,0.7s,mb4.6,baz=187,slow=3.8,SNR=9.5						
ASAR				PKKPbc		16 51 57.5	
	0.5nm,0.6s,baz=3.1,slow=2.2,SNR=5.9						
PDAR	Pinedale Array	121.24	301	PKP	PKPdf	16 40 41.3	-4.4
	0.3nm,0.6s,baz=135,slow=6.4,SNR=3.2						
NVAR	Mina Array Bea	122.33	292	PKP	PKPdf	16 40 45.5	-2.4
	0.6nm,0.7s,baz=209,slow=6.0,SNR=5.0						
CMAR	Chiang Mai Arr	124.12	109	PKP	PKPdf	16 40 48.8	-3.1
	1.0nm,0.9s,baz=233,slow=3.5,SNR=6.6						
FINES	FINESS Array B	124.13	27	PKP	PKPdf	16 40 47.7	-3.2
	1.9nm,1.0s,baz=180,slow=5.6,SNR=5.4						
ARCES	ARCESS Array B	130.79	21	PKP	PKPdf	16 40 57.8	-5.4
	8.4nm,1.2s,slow=6.1,SNR=4.4						
BVAR	Borovoye Array	134.11	57	PKP	PKPdf	16 41 07.0	-2.9
	0.5nm,0.5s,baz=135,slow=2.1,SNR=5.3						
YKA	Yellowknife Ar	136.95	317	PKP	PKPdf	16 41 11.2	-3.6
	1.0nm,0.5s,baz=125,slow=2.4,SNR=20						
YKA	Yellowknife Ar	136.95	317	PKP	PKPdf	16 41 11.2	-3.6
RES	Resolute Bay	138.39	338	*e*PKPdf	PKPdf	16 41 15.0	-2.3
INK	Inuvik	146.55	320	*e*PKPbc	PKPbc	16 41 30.0	+2.1
DAWY	Dawson	147.62	311	*e*PKPbc	PKPdf	16 41 32.9	-0.4
SONM	Songino Array	149.81	86	PKPbc	PKPdf	16 41 39.4	+2.0
	3.5nm,0.8s,baz=227,slow=3.3,SNR=26						
ULN	Ulaanbaatar	150.20	86	*e*PKPbc	PKPdf	16 41 39.6	+1.7
ILAR	Eielson Array	150.95	311	PKPbc	PKPdf	16 41 41.5	+2.9
	15nm,0.9s,baz=93,slow=1.3,SNR=57						
COLA	College	151.37	311	*e*PKPbc	PKPdf	16 41 42.1	+3.0
COLA				*e*PKPab	PKPab	16 41 51.1	+0.2
MCK	McKinley	151.62	309	*e*PKPbc	PKPdf	16 41 43.2	+3.7
IMA	Indian Mountai	153.93	313	*e*PKPbc	PKPdf	16 41 48.9	+6.2
IMA				*e*PKPab	PKPab	16 42 00.9	-0.7

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*NIED **14** 16:24:00, 39.30N×138.60E, h14^{km}, Mw3.3 Best double couple: $M_0$9.36×10^{13} NP1:ϕ_s253°, δ78°, λ152°. NP2: ϕ_s350°, δ63°, λ14°.*

*JMA **14** 16:24:46.2±0.1, 39.34N×138.63E, h31^{km}±2^{km}, M3.9*

ISC 14 16:24:45.9±1.1**, 39.33N**±0.05×**138.61E**±0.06**, h27**^{km}±8^{km}**, n14,** σ**0^{s}45**/25**, 8C-1D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTB	Tobi-shima	0.75	100	⇓P	Pb	16 25 00.1	-0.1
JTB				*e*S	Sb	16 25 09.9	-0.2
JAW	Awa shima	1.00	150	⇑P	Pn	16 25 04.0	-0.3
JOG2	Oga 2	1.09	57	⇑P	Pn	16 25 05.3	-0.3
JOG2				*e*S	Sb	16 25 20.0	+0.2
JYA	Atsumi	1.13	130	⇑P	Pn	16 25 06.0	-0.2
JYA				*e*S	Sn	16 25 21.1	+0.2
JSD	Sado	1.32	192	⇑P	Pn	16 25 09.0	+0.2
JYK	Kaneyama	1.42	106	⇑P	Pn	16 25 10.1	-0.2
JYK				*e*S	Sn	16 25 28.2	-0.1
JYS	Shirataka	1.59	134	⇑P	Pn	16 25 12.8	+0.1
JYS				*e*S	Sn	16 25 32.8	+0.3
JNS	Sasagawa	1.60	160	⇑P	Pn	16 25 12.9	-0.1
JNS				*e*S	Sn	16 25 33.1	+0.1
JAH	Hinai	1.79	61	⇑P	Pn	16 25 15.7	+0.2
JAH				*e*S	Sn	16 25 37.4	-0.1
JOU	Okura	1.87	120	P	Pn	16 25 16.9	+0.1
JOU				*e*S	Sn	16 25 40.3	+0.6
JMK	Ichinoseki	2.06	100	P	Pn	16 25 19.7	+0.1
JOM	Ohasama	2.08	85	P	Pn	16 25 19.8	0.0
JOM				*e*S	Sn	16 25 44.8	-0.4
JSZ	Suzu	2.12	208	P	Pn	16 25 20.8	+0.5
JSZ				*e*S	Sn	16 25 45.9	0.0
MAT	Matsushiro	2.80	187	P	Pn	16 25 30.4	+0.4
MAT				S	Sn	16 26 00.1	-3.1

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*IDC **14** 16:39:52.7±1.2, 6.94S×129.66E, mb3.7/3, mb1 3.8/6, mb1mx3.8/13, mbtmp3.7/6, ML3.3/3, Error ellipse: s-maj=50.9km s-min=21.0km az=59.0*

*NEIC **14** 16:39:58.9±2.3, 6.98S×129.69E, h52^{km}±26^{km}, mb4.0/2, Error ellipse: s-maj=19.3km s-min=16.5km az=57.0*

ISC 14 16:39:55.2±0.7**, 7.06S**±0.09×**129.6E**±0.2**, h33**^{km}**, n9,** σ**1^{s}34**/11**, mb3.7**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	13.61	161	*e*Pn	P	16 43 09.6	+1.1
WRA	Warramunga Arr	13.62	161	Pn	P	16 43 09.7	+1.2
	0.5nm,0.3s,baz=344,slow=14,SNR=31						
WRA				Sn	S	16 45 30.5	-9.1
	1.7nm,0.3s,baz=336,slow=23,SNR=13						
ASAR	Alice Springs	17.03	166	P	P	16 43 54.6	+2.1
	0.1nm,0.3s,baz=330,slow=9.1,SNR=8.4						
ASAR				S	S	16 46 56.0	-3.4
	0.5nm,0.3s,baz=350,slow=26,SNR=9.3						
PMG	Port Moresby	17.55	99	P	P	16 43 59.0	-0.1
	0.1nm,0.3s,baz=288,slow=19,SNR=2.6						
STKA	Stephens Creek	27.12	157	P	P	16 45 37.4	0.0
	1.5nm,0.8s,mb3.6,baz=333,slow=11,SNR=5.1						
CMAR	Chiang Mai Arr	39.45	310	P	P	16 47 25.1	+0.9
	0.5nm,0.6s,mb3.4,baz=128,slow=6.8,SNR=6.4						
SONM	Songino Array	58.36	342	P	P	16 49 49.0	-0.6
	0.3nm,0.4s,mb3.7,baz=160,slow=7.3,SNR=9.1						
KURK	Kurchatov	72.35	329	*e*P	P	16 51 18.9	-0.6
	1.3nm,0.6s,mb4.0						
CHKZ	Chkalovo	78.09	329	*e*P	P	16 51 51.5	-0.9
	1.1nm,0.8s,mb3.8						

OTT 14 16:58:15.7±0.1**, 52.73N**×**67.34W, MN2.8**/6**, Blast, Mount Wright, Qc Mining explosion., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	2.12	8	PN	Pn	16 58 52.1	-0.8
SCHQ				SN	Sn	16 59 19.1	-1.3
SCHQ				Trac		16 59 22.4	
	comp=Z,29nm,0.2s						
MNQ	Manicouagan	2.38	203	PN	Pn	16 58 56.6	+0.2
MNQ				Trac		16 59 31.1	
	comp=Z,14nm,0.2s						
SMQ	Clarke City	2.55	171	PN	Pn	16 58 58.1	-0.8
SMQ				SG	Sg	16 59 30.1	-10
SMQ				Trac		16 59 34.2	
	comp=Z,16nm,0.2s						
ICQ	Pointe Anglais	3.22	179	PN	Pn	16 59 06.8	-1.6
ICQ				SN	Sn	16 59 44.5	-3.5
CNQ	Baie Comeau	3.47	188	PN	Pn	16 59 11.6	-0.4
CNQ				Trac		17 00 06.2	
	comp=Z,4.4nm,0.2s						
GSQ	Grosses Roches	3.83	178	PN	Pn	16 59 15.1	-2.1
GSQ				SN	Sn	17 00 01.1	-2.4
GSQ				Trac		17 00 21.0	
	comp=Z,5.6nm,0.2s						
LG4Q	La Grande 4	4.16	285	PN	Pn	16 59 19.2	-2.6
LG4Q				SN	Sn	17 00 08.1	-3.9
LG4Q				SG	Sg	17 00 22.4	-12
LG4Q				Trac		17 00 26.8	
	comp=Z,2.5nm,0.2s						
LMQ	La Malbaie	5.53	201	PN	Pn	16 59 37.7	-3.6
LMN	Caledonia Moun	7.08	165	PN	Pn	16 59 59.9	-3.2
DRLN	Deer Lake	7.12	115	PN	Pn	16 59 59.3	-4.3
DRLN				SN	Sn	17 01 18.4	-7.7
DRLN				LG		17 01 47.9	
VLDQ	Val d'Or	7.94	238	PN	Pn	17 00 12.4	-2.8
MALO	McAlpine Lake	8.23	256	PN	P	17 00 13.8	-5.4
VIMO	Victor Mine	9.95	277	PN	P	17 00 36.9	-5.9
SILO	Sutton Inlier	10.59	286	PN	P	17 00 44.9	-6.7

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*DJA **14** 17:06:47.6±0.6, 0.52S×98.21E, h80^{km}, mb5.5/4, Error ellipse: s-maj=20.3km s-min=7.1km az=66.0*

*BGS **14** 17:06:50.6, 0.13S×98.73E, h33^{km}, mb5.9*

*MOS **14** 17:06:50.0±0.9, 0.06S×98.69E, h34^{km}, mb6.2/113, MS5.1/55, Error ellipse: s-maj=7.5km s-min=3.5km az=124.8*

*BJI **14** 17:06:50.9, 0.47S×98.82E, h70^{km}, mB6.0, mb6.2, Ms5.6, Msz5.3*

*NEIC **14** 17:06:52.6±0.8, 0.13S×98.73E, h47^{km}±7^{km}, mb6.0/120, ME5.5, MS5.9/108, MW5.8, Error ellipse: s-maj=4.3km s-min=2.5km az=222.0 Broadband fault plane solution: P waves. NP1:ϕ_s185°, δ45°, λ20°. NP2:ϕ_s81°, δ76°, λ133°. Principal axes: T Plg42°, Azm31°; N Plg0°, Azm0°; P Plg19°, Azm140°; Moment Tensor Solution. s27 Moment tensor: Scale 10^{17} Nm; M_{rr}1.86; $M_{\theta\theta}$0.19; $M_{\phi\phi}$-2.05; $M_{r\theta}$4.06; $M_{\theta\phi}$-4.06; $M_{\phi r}$0.11; Best double couple: $M_0$6.1×10^{17} NP1:ϕ_s179°, δ45°, λ18°. NP2:ϕ_s76°, δ77°, λ134°. Principal axes: T 6.06, Plg41°, Azm26°; N .04, Plg42°, Azm244°; P -6.09, Plg20°, Azm134°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Padang.

*HRVD **14** 17:06:52.6±0.1, 0.22S×98.65E, h44^{km}, MW5.8/67, Centroid moment Tensor Solution. LP body waves: s65,c130; Mantle waves: s67,c182; Half duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}1.45±.06; $M_{\theta\theta}$-1.09±.06; $M_{\phi\phi}$-0.36±.07; $M_{r\theta}$4.14±.06; $M_{\theta\phi}$-3.32±.05; $M_{\phi r}$-0.31±.08; Best double couple: $M_0$5.475×10^{17} NP1: ϕ_s189°, δ38°, λ16°. NP2:ϕ_s87°, δ80°, λ127°. Principal axes: T 5.464, Plg42°, Azm32°; N .016, Plg36°, Azm260°; P -5.485, Plg26°, Azm148°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **14** 17:06:53.4±0.6, 0.18S×98.74E, h54^{km}±4^{km}, mb5.5/27, mb1 5.6/28, mb1mx5.6/28, mbtmp5.8/28, MS4.9/18, Ms1 5.0/18, ms1mx4.9/22 Error ellipse: s-maj=8.9km s-min=6.3km az=59.0*

ISC 14 17:06:52.1±0.1**, 0.16S**±0.02×**98.75E**±0.02**, h56**^{km}**, h56**^{km}±1.4^{km}**:pP-P, n980,** σ**0^{s}97**/876**, mb6.0**/205**, MS5.6**/161**, 298C-52D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	Padang Panjang	1.67	100	*e*P	P	17 07 23.0	+3.4
PSI	Prapat	2.83	3	*e*P	P	17 07 37.8	+1.8
KGM	Kluang	5.05	65	P	P	17 08 09.2	+2.0
KSI	Kapahiang	5.17	132	*e*P	P	17 08 05.0	-3.9
IPM	Ipoh	5.22	26	P	P	17 08 10.9	+1.4
IPM	Ipoh	5.22	26	P	P	17 08 10.9	+1.4
SNG	Songkhla	7.52	14	P	P	17 08 41.0	-0.5
	1μm,1.0s						
PENI	Pendagan	8.36	130	*e*P	P	17 08 52.1	-1.1
PASI	Pasiripis	9.41	134	*e*P	P	17 09 03.2	-4.4
PULI	Pulasari	9.47	131	*e*P	P	17 09 06.4	-2.0
COCO	West Island	12.11	189	*e*P	P	17 09 40.4	-3.9
	215nm,0.6s						
NNT	Nongplab	12.70	4	P	P	17 09 52.5	+0.4
NST	Nakhon Sawan	15.79	5	⇓P	P	17 10 32.0	-0.3
	450nm,0.8s						
UBT	Ubonrachathani	16.51	22	⇓P	P	17 10 42.0	+0.6
KKTK	Khon Kaen	16.87	14	⇑P	P	17 10 45.6	-0.4
	4μm,0.6s						
SRDI	Scrawed	17.42	119	*e*S	S	17 13 59.6	-3.2
SRDI	Scrawed	17.42	119	⇓*i*P	P	17 10 50.4	-2.5
	721nm,0.6s						
KELI	Kelakatan	17.61	117	⇓*i*P	P	17 10 54.6	-0.7
	516nm,0.8s						
KELI				*e*S	S	17 14 09.2	+2.1
KKM	Kota Kinabalu	18.49	70	P	P	17 11 07.7	+1.6
CM31	Chiang Mai Arr	18.50	1	*e*P	P	17 11 04.3	-1.8
	1μm,1.1s						
CMAR	Chiang Mai Arr	18.50	1	P	P	17 11 04.8	-1.3
	14nm,0.3s,baz=190,slow=10.0,SNR=526						
CMAR				S	S	17 14 33.5	+6.5
	baz=245,slow=44,SNR=2.1						
CMAR				LR	LR	17 18 26.1	
	comp=Z,13μm,19.6s,baz=175,slow=37						
CMAR				ScP		17 19 05.0	
	0.0nm,0.3s,baz=222,slow=3.3,SNR=5.1						
RATI	Rata	18.76	117	⇑*i*P	P	17 11 06.7	-2.5
	2μm,0.4s						
RATI				⇑*i*S	S	17 14 30.2	-2.7
CHG	Chiang Mai	18.85	1	⇑P	P	17 11 09.3	-1.0
	150nm,1.2s						
NANT	Nan	18.93	6	P	P	17 11 09.5	-1.7
KEDI	Kedomdong	19.17	116	⇓*i*P	P	17 11 11.0	-2.9
	566nm,0.6s						
KEDI				⇑*i*S	S	17 14 39.7	-2.5
PALK	Pallekele	19.46	293	Pn	P	17 11 17.0	0.0

	874nm,0.9s,SNR=18						
PALK	**Pallekele**	**19.46**	**293**	*e*P	**P**	**17 11 17.1**	**+0.1**
	101nm,0.7s						
PALK				*e*S	**S**	**17 14 38.2**	**-10**
TSM	**Tawau**	**19.61**	**77**	P	**P**	**17 11 19.2**	**+0.5**
CHRT	**Chiangrai**	**19.93**	**3**	⇑P	**P**	**17 11 21.0**	**-1.0**
	3µm,0.9s						
BATP	**Bataraza**	**20.95**	**64**	*e*P	**P**	**17 11 33.5**	**+0.8**
QIZ	**Qiongzhong**	**21.95**	**29**	⇑*i*P	**P**	**17 11 41.5**	**-1.1**
QIZ				AP		17 11 55.9	
QIZ				S	**S**	**17 15 34.5**	**-2.0**
QIZ				AMB	AMB		
	comp=Z,2µm,11.9s						
QIZ				LR	LR		
	comp=N,7µm,20.2s						
QIZ				LR	LR		
	comp=Z,7µm,24.0s,MS5.0						
QIZ	**Qiongzhong**	**21.95**	**29**	*e*P	**P**	**17 11 43.6**	**+0.9**
	comp=Z,891nm,1.5s,mb6.0						
MDRS	**Chennai**	**22.57**	**306**	*e*P	**P**	**17 11 50.5**	**+1.7**
MDRS				*e*		17 11 53.4	
	comp=Z,482nm,1.1s						
MDRS				*e*S	**S**	**17 15 52.7**	**+5.0**
VIS	**Vishakhapatnam**	**23.36**	**320**	*e*P	**P**	**17 11 58.0**	**+1.4**
VIS				*e*		17 12 00.9	
	comp=Z,476nm,1.5s						
VIS				*e*S	**S**	**17 16 04.1**	**+2.4**
ENPP	**El Nido**	**23.44**	**61**	*e*P	**P**	**17 11 58.9**	**+1.6**
BWNR	**Bhubaneshwar**	**23.95**	**329**	*e*	**P**	**17 11 58.0**	**-4.2**
BWNR				*e*		17 13 37.0	
BUSP	**Coron**	**24.48**	**60**	*e*P	**P**	**17 12 08.4**	**+1.0**
CUYO	**Cuyo Island**	**24.69**	**63**	*e*P	**P**	**17 12 10.4**	**+1.0**
CAL	**Calcutta**	**24.74**	**336**	*e*P	**P**	**17 12 08.6**	**-1.2**
CAL				*e*		17 16 34.9	
AGT	**Agartala**	**24.98**	**344**	⇓*i*P	**P**	**17 12 14.0**	**+1.8**
AGT				*i*		17 12 52.0	
IPIL	**Ipil**	**25.02**	**71**	*e*P	**P**	**17 12 13.5**	**+0.8**
IMP	**Imphal**	**25.23**	**350**	*e*P	**P**	**17 12 15.0**	**+0.5**
LUBP	**Lubang**	**25.37**	**56**	*e*P	**P**	**17 12 16.6**	**+0.7**
KMI	**Kunming**	**25.42**	**8**	⇑P	**P**	**17 12 18.6**	**+2.3**
KMI				AP	pP	17 12 34.4	+4.3
KMI				XP	sP	17 12 42.8	+5.9
KMI				PP	PP	17 13 00.4	+3.6
KMI				S	**S**	**17 16 41.5**	**+4.9**
KMI				XS		17 17 05.8	
KMI				SS	SS	17 17 48.0	+5.9
KMI				AMB	AMB		
	comp=Z,724nm,1.0s,mb6.2						
KMI				LR	LR		
	comp=N,8µm,19.0s,MS5.3						
KMI				LR	LR		
	comp=E,7µm,20.2s,MS5.3						
KMI				LR	LR		
	comp=Z,10µm,19.6s,MS5.3						
SJMP	**San Jose**	**25.49**	**60**	*e*P	**P**	**17 12 17.4**	**+0.4**
PAGZ	**Pagadian**	**25.81**	**72**	*e*P	**P**	**17 12 21.2**	**+1.2**
DCPH	**Dipolog City**	**26.00**	**70**	⇑*e*P	**P**	**17 12 22.2**	**+0.4**
GUIM	**Jordan**	**26.01**	**65**	*e*P	**P**	**17 12 22.4**	**+0.5**
TGY	**Tagaytay City**	**26.13**	**56**	*e*P	**P**	**17 12 24.0**	**+1.0**
TGY	**Tagaytay City**	**26.13**	**56**	P	**P**	**17 12 23.3**	**+0.3**
TGY				S	**S**	**17 16 53.4**	**+5.0**
TGY				pmax	pmax		
	comp=Z,678nm,0.8s						
TGY				smax			
	comp=N,69nm,0.3s						
TGY				MLR	MLR		
	comp=Z,6µm,21.0s						
TGY	**Tagaytay City**	**26.13**	**56**	P	**P**	**17 12 23.3**	**+0.2**
	comp=Z,678nm,0.8s,mb6.2,baz=274,slow=3.7,SNR=23						
TGY				S	**S**	**17 16 53.4**	**+5.0**
	comp=Z,69nm,0.3s,baz=302,slow=9.1,SNR=2.6						
TGY				LR	LR	17 22 32.0	
	comp=Z,6µm,21.0s,MS5.1,baz=68,slow=36						
TGY	**Tagaytay City**	**26.13**	**56**	P	**P**	**17 12 23.3**	**+0.2**
TGY				S	**S**	**17 16 53.4**	**+5.0**
TGY				LR	LR	17 22 32.0	
SNPH	**Sibulan**	**26.14**	**68**	*e*P	**P**	**17 12 24.5**	**+1.4**
SCZP	**Santa Cruz**	**26.21**	**52**	*e*P	**P**	**17 12 23.9**	**+0.2**
OTRP	**Odiongan**	**26.23**	**61**	*e*P	**P**	**17 12 24.6**	**+0.7**
SHL	**Shillong**	**26.42**	**346**	*e*P	**P**	**17 12 27.5**	**+1.9**
	comp=Z,621nm,0.8s,mb6.2						
SHL				*e*		17 17 03.5	
HYB	**Hyderabad**	**26.47**	**312**	⇑*e*P	**P**	**17 12 25.5**	**-0.6**
HYB				*e*	pP	17 12 39.0	-0.9
HYB				*e*S	**S**	**17 17 00.0**	**+6.2**
HYB				pmax	pmax		
	comp=Z,500nm,1.4s,mb5.8						
HYB	**Hyderabad**	**26.47**	**312**	⇑*e*P	**P**	**17 12 25.5**	**-0.6**
	comp=Z,500nm,1.4s,mb5.8						
HYB				*e*	pP	17 12 39.0	-0.9
HYB				*e*S	**S**	**17 17 00.0**	**+6.2**
HYB	**Hyderabad**	**26.47**	**312**	⇑*i*P	**P**	**17 12 25.5**	**-0.6**
	comp=Z,500nm,1.4s,mb5.8						
HYB				*e*	pP	17 12 39.0	-0.9
HYB				*e*S	**S**	**17 17 00.0**	**+6.2**
HYB				LR	LR	17 23 40.0	
	comp=Z,7.1nm,20.0s						
BOLP	**Bolinao**	**26.56**	**51**	*e*P	**P**	**17 12 26.4**	**-0.6**
BOAC	**Boac**	**26.58**	**59**	*e*P	**P**	**17 12 27.3**	**+0.1**
PCPH	**Palayan**	**27.04**	**54**	⇓*e*P	**P**	**17 12 30.5**	**-0.9**
MNGI	**Mangalore**	**27.06**	**300**	*i* P	**P**	**17 12 32.6**	**+1.0**
	comp=Z,394nm,0.5s,mb6.2						
MNGI				*i*		17 17 21.2	
BCPH	**Baguio City Da**	**27.08**	**52**	⇓*i*P	**P**	**17 12 31.8**	**0.0**
GZH	**Guangzhou**	**27.11**	**31**	P	**P**	**17 12 36.8**	**+4.8**
GZH				S	**S**	**17 17 11.8**	**+7.4**
GZH				LR	LR		
	comp=N,4µm,25.5s						
GZH				LR	LR		
	comp=E,6µm,17.5s						
GZH				LR	LR		
	comp=Z,6µm,18.3s						
LLP	**Lapu-Lapu**	**27.15**	**67**	*e*P	**P**	**17 12 32.6**	**+0.2**
DGAR	**Diego Garcia**	**27.20**	**254**	*e*P	**P**	**17 12 32.8**	**-0.1**
DGAR				pmax	pmax		
	comp=Z,825nm,1.6s,mb6.0						
DGAR				MLR	MLR		
	comp=Z,795nm,20.0s						
DGAR	**Diego Garcia**	**27.20**	**254**	*e*P	**P**	**17 12 32.8**	**0.0**
	comp=Z,825nm,1.6s						
DGAR				LR	LR		
	comp=Z,795nm,20.0s						
AUQP	**San Andres**	**27.23**	**60**	*e*P	**P**	**17 12 35.0**	**+1.9**
POLP	**Polilio Island**	**27.29**	**56**	*e*P	**P**	**17 12 33.6**	**0.0**
BUKP	**Musuan**	**27.41**	**72**	*e*P	**P**	**17 12 35.1**	**+0.2**
BLSP	**Bilaspur**	**27.44**	**325**	*e*P	**P**	**17 12 35.2**	**+0.2**
BLSP				*e*		17 12 36.3	
	comp=Z,253nm,0.9s						
BLSP				*e*S	**S**	**17 17 08.7**	**-1.0**
BALP	**Baler**	**27.52**	**54**	*e*P	**P**	**17 12 35.9**	**+0.2**
GYA	**Guiyang**	**27.54**	**15**	⇓*i*P	**P**	**17 12 35.1**	**-0.7**
GYA				AP	pP	17 12 49.6	-0.1
GYA				XP	sP	17 12 56.3	-0.3
GYA				AMB	AMB		
	comp=Z,1µm,1.0s,mb6.4						
GYA				LR	LR		
	comp=N,4µm,17.1s,MS5.2						
GYA				LR	LR		
	comp=E,4µm,14.4s,MS5.2						
GYA				LR	LR		
	comp=Z,6µm,21.6s						
DAV	**Davao City (W)**	**27.70**	**74**	*e*P	**P**	**17 12 38.0**	**+0.5**
MSLP	**Maasin**	**27.91**	**68**	*e*P	**P**	**17 12 38.9**	**-0.4**
ABRA	**Dolores**	**27.93**	**50**	*e*P	**P**	**17 12 39.2**	**-0.3**
MATI	**Mati**	**28.33**	**75**	*e*P	**P**	**17 12 42.9**	**-0.2**
CAUP	**Cauayan**	**28.38**	**52**	*e*P	**P**	**17 12 43.1**	**-0.4**
APYP	**Conner**	**28.46**	**50**	*e*P	**P**	**17 12 43.7**	**-0.5**
LATR	**Latur**	**28.57**	**311**	*e*P	**P**	**17 12 44.5**	**-0.7**
PVCP	**Virac**	**28.63**	**61**	*e*P	**P**	**17 12 45.6**	**-0.2**
CVP	**Callao Caves**	**28.81**	**51**	⇑*e*P	**P**	**17 12 46.2**	**-1.1**
	comp=Z,20µm,1.0s						
PALP	**Palanan**	**28.92**	**53**	*e*P	**P**	**17 12 52.6**	**+4.3**
GOA	**Goa**	**29.12**	**303**	*e*P	**P**	**17 12 54.0**	**+3.9**
	comp=Z,3µm,16.6s						
GOA				*e*S	**S**	**17 17 42.2**	**+5.5**
MBWA	**Marble Bar**	**29.25**	**137**	⇓*i*P	**P**	**17 12 50.8**	**-0.4**
	comp=Z,185nm,0.9s,mb5.8						
MBWA				LR	LR		
	comp=Z,5µm,20.0s,MS5.2						
SGCP	**Mt. Cagua**	**29.30**	**50**	*e*P	**P**	**17 12 50.9**	**-0.8**
KAD	**Karad**	**29.77**	**307**	⇑*i*P	**P**	**17 12 55.7**	**-0.2**
ALBI	**Allahabad**	**30.15**	**328**	*e*P	**P**	**17 12 58.0**	**-1.2**
JIRN	**Jiri**	**30.17**	**337**	*e*P	**P**	**17 12 59.5**	**+0.2**
	comp=Z,608nm,1.0s,mb6.3						
PKI	**Pulchoki**	**30.40**	**336**	*e*P	**P**	**17 13 01.4**	**0.0**
GUN	**Gumba**	**30.52**	**337**	*e*P	**P**	**17 13 02.5**	**+0.1**
	comp=Z,427nm,0.7s,mb6.4						
DMN	**Daman**	**30.56**	**336**	*e*P	**P**	**17 13 02.7**	**-0.1**
	comp=Z,302nm,1.2s,mb6.0						
LSA	**Lhasa**	**30.56**	**347**	P	**P**	**17 13 03.8**	**+1.0**
LSA				AP	pP	17 13 19.1	+2.2
LSA				S	**S**	**17 17 57.1**	**-2.1**
LSA				AMB	AMB		
	comp=Z,310nm,0.8s,mb6.2						
LSA				AMB	AMB		
	comp=Z,820nm,4.6s						
LSA				LR	LR		
	comp=N,3µm,26.0s,MS5.0						
LSA				LR	LR		
	comp=E,3µm,26.0s,MS5.0						
LSA				LR	LR		
	comp=Z,7µm,24.0s,MS5.2						
LSA	**Lhasa**	**30.56**	**347**	⇑*i*P	**P**	**17 13 03.3**	**+0.5**
LSA				pmax	pmax		
	comp=Z,615nm,1.3s,mb6.3						
LSA	**Lhasa**	**30.56**	**347**	⇑*i*P	**P**	**17 13 03.3**	**+0.6**
	comp=Z,615nm,1.3s,mb6.3						
BBP	**Basco**	**30.58**	**47**	*e*P	**P**	**17 13 01.9**	**-1.1**
KKN	**Kakani**	**30.65**	**336**	*e*P	**P**	**17 13 03.3**	**-0.2**
	comp=Z,443nm,1.0s,mb6.2						
POO	**Poona**	**30.71**	**309**	*e*P	**P**	**17 13 04.1**	**-0.1**
POO				*e*		17 18 16.0	
GKN	**Gorkha**	**31.10**	**335**	*e*P	**P**	**17 13 07.3**	**-0.2**
	comp=Z,533nm,1.1s,mb6.3						
BHPL	**Bhopal**	**31.16**	**320**	*e*P	**P**	**17 13 08.0**	**-0.1**
BHPL				*e*		17 13 09.7	
	comp=Z,154nm,1.3s						
CD2	**Chengdu**	**31.26**	**8**	P	**P**	**17 13 08.4**	**-0.5**
CD2				AP	pP	17 13 26.0	+2.9
CD2				PP	PP	17 14 16.0	+2.6
CD2				S	**S**	**17 18 09.0**	**-1.2**
CD2				SS	SS	17 20 05.0	+5.5
CD2				AMB	AMB		
	comp=Z,880nm,1.2s,mb6.5						
CD2				LR	LR		
	comp=E,6µm,12.0s						
KOLN	**Koldanda**	**31.34**	**334**	*e*P	**P**	**17 13 09.8**	**+0.1**
	comp=E,615nm,0.8s,mb6.5						
QZH	**Quanzhou**	**31.48**	**36**	P	**P**	**17 13 09.0**	**-1.9**
QZH				S	**S**	**17 18 11.0**	**-2.8**
QZH				AMB	AMB		
	comp=Z,410nm,1.0s,mb6.2						
QZH				LR	LR		
	comp=N,5µm,12.0s,MS5.7						
QZH				LR	LR		
	comp=E,9µm,16.6s,MS5.7						
QZH				LR	LR		
	comp=Z,13µm,16.0s,MS5.7						
BOM	**Bombay**	**31.73**	**308**	*e*P	**P**	**17 13 12.5**	**-0.6**
BOM				*e*		17 16 39.9	
FITZ	**Fitzroy Crossi**	**31.88**	**125**	⇓*i*P	**P**	**17 13 12.8**	**-1.7**
	comp=Z,116nm,0.9s,mb5.7						
FITZ				*e*S	**S**	**17 18 15.5**	**-4.6**
ENH	**Enshi**	**31.94**	**18**	⇑*i*P	**P**	**17 13 14.1**	**-0.8**
	comp=Z,2µm,0.9s,mb7.0						
JHNI	**Jhansi**	**32.10**	**324**	⇑*i*P	**P**	**17 13 14.0**	**-2.3**
JHNI				*e*	pP	17 13 26.0	-4.6
TATO	**Taipei**	**33.29**	**40**	⇑*i*P	**P**	**17 13 26.2**	**-0.5**
	comp=Z,237nm,0.7s,mb6.2						
TATO				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
WHN	**Wuhan**	**33.94**	**25**	⇑P	**P**	**17 13 32.5**	**+0.3**
WHN				LR	LR		
	comp=Z,11µm,31.0s,MS5.4						
LGTI	**Lohaghat**	**34.33**	**331**	⇑*i*P	**P**	**17 13 36.3**	**+0.7**
PTH	**Pithoragarh**	**34.43**	**331**	*e*P	**P**	**17 13 36.8**	**+0.4**
PTH				*e*S	**S**	**17 19 00.0**	**+0.5**
AJM	**Ajmer**	**35.22**	**321**	⇑*i*P	**P**	**17 13 43.0**	**-0.2**
NDI	**New Delhi**	**35.31**	**326**	*i* P	**P**	**17 13 41.5**	**-2.4**
NDI				*e*		17 19 08.0	
XAN	**Xi’an**	**35.33**	**15**	P	**P**	**17 13 42.8**	**-1.2**
XAN				S	**S**	**17 19 14.4**	**+1.0**
XAN				AMB	AMB		
	comp=Z,3µm,1.2s,mb7.1						
XAN				LR	LR		
	comp=N,3µm,23.5s,MS5.2						
XAN				LR	LR		
	comp=E,4µm,19.7s,MS5.2						
XAN				LR	LR		
	comp=Z,6µm,23.5s,MS5.3						
KAKA	**Kakadu**	**35.66**	**112**	⇓*i*P	**P**	**17 13 43.9**	**-3.1**
	comp=Z,20nm,0.6s,mb5.2						
MUN	**Mundaring**	**35.70**	**154**	⇓*i*P	**P**	**17 13 48.6**	**+1.4**
	comp=Z,180nm,1.2s,mb5.9						
MUN	**Mundaring**	**35.70**	**154**	⇓*i*P	**P**	**17 13 48.6**	**+1.4**
MUN				pmax	pmax		
	comp=Z,180nm,1.2s,mb5.9						
KLBR	**Kellerberrin**	**36.07**	**152**	⇓*i*P	**P**	**17 13 51.2**	**+0.8**
	comp=Z,3µm,1.3s,mb7.1						
DDI	**Dehra Dun**	**36.15**	**329**	⇑*i*P	**P**	**17 13 51.3**	**+0.3**
DDI				*e*S	**S**	**17 19 30.2**	**+4.2**
LZH	**Lanzhou**	**36.37**	**7**	⇑*i*P	**P**	**17 13 53.6**	**+0.8**
LZH				AP	pP	17 14 08.5	+1.2
LZH				XP	sP	17 14 15.1	+0.9
LZH				PP	PP	17 15 19.0	+1.5
LZH				PCP	PcP	17 16 16.5	-0.2
LZH				S	**S**	**17 19 30.3**	**+1.0**
LZH				XS		17 19 56.5	
LZH				SS	SS	17 22 01.0	+4.2
LZH				SCS	ScS	17 24 03.5	+1.6
LZH				AMB	AMB		
	comp=Z,820nm,1.5s,mb6.4						
LZH				AMB	AMB		
	comp=Z,2µm,4.0s						
LZH				LR	LR		
	comp=E,6µm,15.4s						
LZH				LR	LR		
	comp=Z,9µm,16.7s,MS5.6						
BHJ	**Bhuj**	**36.62**	**311**	*e*S	**S**	**17 19 38.1**	**+4.7**
NWAO	**Narrogin (SRO)**	**36.95**	**154**	P	**P**	**17 13 58.3**	**+0.5**
NWAO				S	**S**	**17 19 41.6**	**+3.3**
NWAO				pmax	pmax		
	comp=Z,181nm,0.8s						
NWAO				smax			
	comp=N,6.0nm,0.7s						
NWAO				MLR	MLR		
	comp=Z,30nm,19.3s						
NWAO	**Narrogin (SRO)**	**36.95**	**154**	P	**P**	**17 13 58.3**	**+0.6**
	comp=Z,181nm,0.8s,mb6.0,baz=321,slow=8.8,SNR=62						
NWAO				S	**S**	**17 19 41.6**	**+3.2**
	comp=Z,5.9nm,0.7s,baz=137,slow=18,SNR=1.6						
NWAO				LR	LR	17 27 52.2	
	comp=Z,30nm,19.3s,baz=330,slow=34						
NJ2	**Nanjing**	**37.25**	**29**	*e*P	**P**	**17 14 00.3**	**+0.1**
NJ2				AP	pP	17 14 14.5	-0.2
NJ2				XP	sP	17 14 22.5	+0.9
NJ2				PP	PP	17 15 27.3	-1.1
NJ2				S	**S**	**17 19 43.0**	**+0.2**
NJ2				AMB	AMB		
	comp=Z,310nm,1.2s,mb6.0						
NJ2				AMB	AMB		
	comp=Z,2µm,8.5s						
NJ2				LR	LR		
	comp=N,7µm,14.2s,MS5.8						
NJ2				LR	LR		
	comp=E,9µm,17.0s,MS5.8						
NJ2				LR	LR		
	comp=Z,7µm,21.5s,MS5.4						
SMLA	**Simla**	**37.25**	**329**	⇑*i*P	**P**	**17 14 14.2**	**+14**
	comp=Z,638nm,2.7s,mb6.0						
SMLA				*i* S	**S**	**17 19 56.5**	**+14**
SDNR	**Sundarnagar**	**37.65**	**329**	*e*P	**P**	**17 14 05.0**	**+1.5**
SSE	**Sheshan**	**37.67**	**32**	P	**P**	**17 14 04.4**	**+0.6**
SSE				PP	PP	17 15 29.5	-3.8
SSE				S	**S**	**17 19 51.6**	**+2.4**
SSE				AMB	AMB		
	comp=Z,192nm,1.0s,mb5.8						
SSE				AMB	AMB		
	comp=Z,660nm,11.7s						
SSE				LR	LR		
	comp=N,2µm,24.7s,MS5.2						
SSE				LR	LR		
	comp=E,4µm,24.7s,MS5.2						
SSE				LR	LR		
	comp=Z,4µm,18.9s						
BHK	**Bhakra**	**37.87**	**328**	*e*	**P**	**17 14 02.1**	**-3.3**
BHK				*e*		17 19 50.5	
BHK				*e*		17 19 59.7	
THN	**Thein Dam**	**39.03**	**328**	*e*P	**P**	**17 14 13.3**	**-1.8**
JOW	**Kunigami**	**39.07**	**44**	P	**P**	**17 14 16.1**	**+0.7**
	comp=Z,104nm,0.9s,mb5.5,baz=257,slow=6.1,SNR=20						
JOW				LR	LR	17 30 30.8	
	comp=Z,401nm,21.5s,baz=228,slow=36						
GTA	**Gaotai**	**39.39**	**1**	⇑*i*P	**P**	**17 14 18.6**	**+0.7**
GTA				AP	pP	17 14 33.8	+1.3
GTA				XP	sP	17 14 40.3	+1.0
GTA				PP	PP	17 15 53.9	+1.0
GTA				PPP	PPP	17 16 18.3	+0.5
GTA				PCP	PcP	17 16 25.9	-0.1
GTA				SCP		17 20 09.8	
GTA				S	**S**	**17 20 14.8**	**-0.4**
GTA				SCS	ScS	17 24 19.5	+0.4
GTA				AMB	AMB		
	comp=Z,357nm,1.5s,mb5.9						
GTA				AMB	AMB		
	comp=Z,3µm,6.8s						
GTA				LR	LR		
	comp=N,5µm,24.3s,MS5.4						
GTA				LR	LR		
	comp=E,4µm,20.1s,MS5.4						
GTA				LR	LR		
	comp=Z,6µm,22.8s,MS5.3						
WRA	**Warramunga Arr**	**40.01**	**122**	P	**P**	**17 14 21.9**	**-1.4**
WRA				*PP	pP	17 14 36.8	-1.0
WRA						17 20 18.9	
WRA				pmax	pmax		
	comp=Z,84nm,0.7s						
WRA				pmax	pmax		
	comp=Z,54nm,0.5s						
WRA				pmax	pmax		
	comp=N,8.0nm,1.0s						
WRA				smax			
	comp=N,32nm,1.1s						
WRA	**Warramunga Arr**	**40.01**	**122**	P	**P**	**17 14 21.9**	**-1.4**
	comp=N,84nm,0.7s,mb5.6,baz=302,slow=8.9,SNR=495						
WRA				pP	pP	17 14 36.8	-1.1
	comp=N,54nm,0.5s,baz=302,slow=9.0,SNR=9.4						
WRA				ScP		17 20 13.0	
	comp=N,7.6nm,1.0s,baz=308,slow=3.5,SNR=7.8						
WRA				S	**S**	**17 20 18.9**	**-5.7**
	comp=N,32nm,1.1s,baz=295,slow=16,SNR=13						
TIA	**Tai’an**	**40.01**	**23**	P	**P**	**17 14 22.8**	**-0.3**
TIA				AMB	AMB		
	comp=Z,139nm,1.1s,mb5.6						
WRAB	**Tennant Creek**	**40.01**	**122**	⇓*i*P	**P**	**17 14 22.2**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,145nm,0.6s,mb5.9						
WRAB				MLR	MLR		
	comp=Z,1µm,22.0s,MS4.7						
WRAB	**Tennant Creek**	**40.01**	**122**	⇓*i*P	**P**	**17 14 22.2**	**-1.1**
	comp=Z,145nm,0.6s,mb5.9						
WRAB				LR	LR		
	comp=Z,1µm,22.0s,MS4.7						
WB2	**Warramunga Arr**	**40.02**	**122**	⇓*i*P	**P**	**17 14 22.2**	**-1.1**
WB2				*i*	pP	17 14 39.1	+1.2
WB2				*e*S	**S**	**17 20 18.7**	**-6.1**
WB2				*e*SCS	ScS	17 24 23.3	+0.4
FORT	**Forrest**	**41.25**	**140**	⇓*i*P	**P**	**17 14 35.1**	**+1.7**
	comp=Z,8µm,0.6s						
FORT				*e*S	**S**	**17 20 42.4**	**-0.6**
ASPA	**Alice Springs**	**41.34**	**127**	⇓*i*P	**P**	**17 14 34.1**	**-0.1**
ASPA				*i*	pP	17 14 50.5	+1.6
ASPA				*e*S	**S**	**17 20 40.7**	**-3.7**
ASPA				*e*SCS	ScS	17 24 32.3	+1.6
ASAR	**Alice Springs**	**41.34**	**127**	P	**P**	**17 14 33.8**	**-0.5**
	comp=Z,90nm,0.9s,mb5.4,baz=299,slow=7.7,SNR=553						
ASAR				pP	pP	17 14 48.6	-0.2
	comp=Z,90nm,0.8s,baz=302,slow=7.4,SNR=14						
ASAR				ScP		17 20 16.6	
	comp=Z,10nm,1.2s,baz=284,slow=5.8,SNR=4.3						
ASAR				S	**S**	**17 20 40.8**	**-3.7**
	comp=Z,18nm,0.8s,baz=294,slow=14,SNR=13						
ASAR				ScS	ScS	17 24 33.8	+3.0
	comp=Z,3.6nm,1.0s,baz=286,slow=6.6,SNR=4.8						
ASAR				LR	LR	17 34 07.9	
	comp=Z,3µm,20.2s,MS5.1,baz=299,slow=40						
BTO	**Baotou**	**41.84**	**13**	*i* P	**P**	**17 14 39.5**	**+1.2**
BTO				AMB	AMB		
	comp=Z,593nm,1.8s,mb5.9						
BTO				LR	LR		
	comp=N,1µm,5.7s						
BTO				LR	LR		
	comp=E,3µm,6.9s						
HHC	**Hu-ho-hao-te**	**42.44**	**14**	*e*P	**P**	**17 14 44.9**	**+1.7**
HHC				AP	pP	17 14 57.0	-0.8
HHC				PP	PP	17 16 29.8	+4.9
HHC				PCP	PcP	17 16 34.0	-2.0
HHC				SCP		17 20 21.1	
HHC				S	**S**	**17 21 09.3**	**+8.8**
HHC				XS		17 21 29.1	
HHC				SCS	ScS	17 24 38.3	+1.0
HHC				AMB	AMB		
	comp=Z,510nm,1.3s,mb6.0						
HHC				LR	LR		
	comp=N,5µm,15.5s,MS5.6						
HHC				LR	LR		
	comp=E,5µm,19.0s,MS5.6						
HHC				LR	LR		
	comp=Z,4µm,19.0s,MS5.3						
BJT	**Baijiatuau**	**43.03**	**20**	⇑*i*P	**P**	**17 14 48.8**	**+0.8**
BJT				pmax	pmax		
	comp=Z,2µm,1.4s						
BJT	**Baijiatuau**	**43.03**	**20**	⇑*i*P	**P**	**17 14 48.8**	**+0.9**
	comp=Z,2µm,1.4s,mb6.5						
BJI	**Beijing**	**43.05**	**20**	*e*P	**P**	**17 14 49.0**	**+0.9**
BJI				S	**S**	**17 21 13.5**	**+4.1**
BJI				SCS	ScS	17 24 41.6	+0.6
BJI				AMB	AMB		
	comp=Z,781nm,1.4s,mb6.2						
BJI				AMB	AMB		
	comp=Z,4µm,2.4s,mb6.7						
BJI				LR	LR		
	comp=N,2µm,23.7s,MS5.1						
BJI				LR	LR		
	comp=E,2µm,21.6s,MS5.1						
BJI				LR	LR		
	comp=Z,3µm,34.2s						
DL2	**Dalian**	**44.18**	**26**	⇑*i*P	**P**	**17 14 57.6**	**+0.3**
DL2				S	**S**	**17 21 25.3**	**-0.5**
DL2				AMB	AMB		
	comp=Z,340nm,1.2s,mb6.0						
DL2				AMB	AMB		
	comp=Z,930nm,5.4s						
DL2				LR	LR		
	comp=N,2µm,16.7s,MS5.1						
DL2				LR	LR		
	comp=E,1µm,15.5s,MS5.1						
DL2				LR	LR		
	comp=Z,2µm,17.8s,MS5.0						
KSH	**Kashi**	**44.64**	**335**	⇑P	**P**	**17 15 01.5**	**+0.5**
KSH				*e*AP	pP	17 15 17.0	+1.3
KSH				*e*XP	sP	17 15 23.0	+0.7
KSH				*e*PP	PP	17 16 44.6	-2.3
KSH				*e*SCP		17 20 30.0	
KSH				*e*PCS		17 20 38.0	
KSH				*e*S	**S**	**17 21 32.0**	**-0.5**
KSH				AMB	AMB		
	comp=Z,800nm,4.0s						
KSH				LR	LR		
	comp=N,75µm,55.5s						
KSH				LR	LR		
	comp=E,35µm,41.4s						
WBK	**Wadi Bani Khal**	**44.84**	**303**	P	**P**	**17 15 03.8**	**+1.0**
	SNR=19						
WMQ	**Urumqi**	**44.88**	**349**	⇑*i*P	**P**	**17 15 04.0**	**+1.1**
WMQ				AP	pP	17 15 20.0	+2.4
WMQ				XP	sP	17 15 27.0	+2.8
WMQ				PCP	PcP	17 16 44.0	-0.2
WMQ				PP	PP	17 16 51.0	+1.8
WMQ				SCP		17 20 31.0	
WMQ				S	**S**	**17 21 36.0**	**+0.1**
WMQ				XS		17 22 03.0	
WMQ				SS	SS	17 24 52.0	+2.6
WMQ				AMB	AMB		
	comp=Z,764nm,1.1s,mb6.4						
WMQ				AMB	AMB		
	comp=Z,371nm,8.0s						
WMQ				LR	LR		
	comp=N,4µm,18.0s,MS5.5						
WMQ				LR	LR		
	comp=E,3µm,17.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,3µm,18.0s,MS5.3						
INCN	**Inchon**	**45.45**	**31**	⇑*i*P	**P**	**17 15 06.2**	**-1.2**

```
      comp=Z,932nm,1.6s,mb6.4
INCN                             LR     LR
      comp=Z,5µm,22.0s,MS5.4
JMDO  Jabal Madar      45.47 302  P     P      17 15 08.0 +0.1
      SNR=13
SMDO  Samad            45.80 303  P     P      17 15 11.0 +0.6
      SNR=22
BIDO  Bidbid           45.93 304  P     P      17 15 12.2 +0.8
      SNR=26
KS15  Wonju Array Si   46.08  33⇑eP     P      17 15 12.1 -0.4
BSY   Bisya            46.39 302  P     P      17 15 15.7 +0.6
      SNR=26
HOQ   Hoqain           46.63 303  P     P      17 15 17.6 +0.6
      SNR=24
ULHL  Ulahol           46.83 337  P     P      17 15 19.2 +0.9
      SNR=31
KZA   Kyzart           47.09 336  P     P      17 15 21.3 +1.0
      SNR=55
ARQ   Araqi            47.19 303  P     P      17 15 22.1 +0.7
      SNR=23
RBK   Rabkut           47.21 294  P     P      17 15 21.9 +0.3
      SNR=32
SNY   Shenyang         47.43  25 ⇑P     P      17 15 22.0 -1.0
SNY                               S     S      17 22 11.6 -0.5
SNY                               AMB   AMB
      comp=Z,250nm,1.4s,mb6.0
SNY                               AMB   AMB
      comp=Z,1µm,6.0s
SNY                               LR    LR
      comp=N,3µm,18.6s
SNY                               LR    LR
      comp=Z,3µm,21.6s,MS5.2
AAA   Alma-Ata         47.44 338c iP    P      17 15 24.0 +0.9
AAA                              iS     S      17 22 16.0 +3.6
AAA                               pmax  pmax
      comp=Z,300nm,0.8s,mb6.3
AAA                               MLR   MLR
      comp=Z,1µm,18.0s,MS4.8
UCH   Uchtor           47.51 336  P     P      17 15 24.7 +1.0
      SNR=6.4
TKM2  Tokmak 2         47.66 337  P     P      17 15 25.6 +0.8
      SNR=332
KBK   Karagaybulak     47.69 336  P     P      17 15 26.1 +1.0
      SNR=282
WHFO  Wadi Hawf        47.73 295  P     P      17 15 25.4 -0.3
      SNR=48
AML   Almayashu        47.77 335  P     P      17 15 26.6 +0.9
      SNR=133
AAK   Ala-Archa        47.86 336  P     P      17 15 27.2 +0.8
      SNR=77
AAK   Ala-Archa        47.86 336⇑iP     P      17 15 26.2 -0.2
AAK                               pmax  pmax
      comp=Z,454nm,1.5s,mb6.3
AAK                               MLR   MLR
      comp=Z,1µm,22.0s,MS4.9
AAK   Ala-Archa        47.86 336⇑iP     P      17 15 26.1 -0.2
      comp=Z,454nm,1.5s,mb6.3
AAK                               LR    LR
      comp=Z,1µm,22.0s,MS4.9
FRU   Bishkek          47.97 336⇑iP     P      17 15 28.5 +1.2
FRU                              eS     S      17 22 22.0 +2.2
FRU                               pmax  pmax
      comp=Z,970nm,2.1s,mb6.5
FRU                               pmax  pmax
      comp=Z,3µm,3.8s
FRU                               smax
      comp=E,2µm,8.6s
FRU                               MLR   MLR
      comp=N,4µm,22.0s
FRU                               MLR   MLR
      comp=Z,6µm,22.0s,MS5.5
ABTO  Aybut            48.00 294  P     P      17 15 27.7 -0.1
      SNR=45
CHMS  Chumysh          48.06 336  P     P      17 15 28.1 +0.2
      SNR=160
ASHO  Ashiyiah         48.13 304  P     P      17 15 29.3 +0.6
      SNR=13
EKS2  Erkin-Say        48.18 335  P     P      17 15 29.8 +1.0
      SNR=147
SONM  Songino Array    48.26   7  P     P      17 15 30.4 +1.0
      comp=Z,332nm,0.6s,mb6.5,baz=190,slow=8.3,SNR=1761
SONM                              pP    pP     17 15 43.5 -0.6
      comp=Z,48nm,0.6s,baz=192,slow=6.9,SNR=3.0
SONM                              PcP   PcP    17 16 56.0  0.0
      comp=Z,43nm,0.7s,baz=170,slow=3.2,SNR=3.8
SONM                              S     S      17 22 25.2 +1.4
      comp=Z,1.0nm,1.0s,baz=128,slow=30,SNR=2.6
SONM                              ScS   ScS    17 25 15.3 +1.1
      comp=Z,0.9nm,1.0s,baz=225,slow=6.1,SNR=3.0
ULN   Ulaanbaatar      48.37   7⇑iP     P      17 15 30.6 +0.4
ULN                              e             17 17 24.8
ULN                               pmax  pmax
      comp=Z,432nm,0.7s,mb6.6
ULN                               MLR   MLR
      comp=Z,5µm,20.0s,MS5.5
ULN   Ulaanbaatar      48.37   7⇑iP     P      17 15 30.6 +0.3
      comp=Z,432nm,0.7s,mb6.6
ULN                              ePP    PP     17 17 24.8 +2.0
ULN                               LR    LR
      comp=Z,5µm,20.0s,MS5.5
USP   Ospenovka        48.38 336  P     P      17 15 30.9 +0.5
      SNR=28
MKAR  Makanchi Array   48.93 345 i P    P      17 15 34.7 +0.1
MKAR                              pmax  pmax
      comp=Z,360nm,0.8s
MKAR  Makanchi Array   48.93 345 i P    P      17 15 34.8 +0.2
PMG   Port Moresby     49.04 102 eP     P      17 15 35.6 -0.3
PMG                               pmax  pmax
      comp=Z,36nm,0.8s
PMG                               MLR   MLR
      comp=Z,2µm,22.0s
PMG   Port Moresby     49.04 102  S     S      17 22 33.6 -1.6
      comp=Z,5.1nm,1.0s,baz=346,slow=22,SNR=2.7
PMG   Port Moresby     49.04 102 eP     P      17 15 35.6 -0.3
      comp=Z,36nm,0.8s,mb5.5
PMG                               LR    LR
      comp=Z,2µm,22.0s,MS5.1
CN2   Changchun        49.83  25 ⇑P     P      17 15 40.9 -0.7
CN2                              eAP    pP     17 15 55.6 -0.8
CN2                               PP    PP     17 17 36.0 -1.4
CN2                              eS     S      17 22 45.8  0.0
CN2                               SS    SS     17 26 16.0 +0.6
CN2                               AMB   AMB
      comp=Z,400nm,1.3s,mb6.3
CN2                               AMB   AMB
      comp=Z,2µm,6.0s
CN2                               LR    LR
      comp=N,3µm,16.0s,MS5.4
CN2                               LR    LR
      comp=E,2µm,16.0s,MS5.4
CN2                               LR    LR
      comp=Z,3µm,19.0s,MS5.3
ZAK   Zakamensk        50.49   4⇓iP     P      17 15 46.6 +0.1
ZAK                              e             17 17 04.1
ZAK                               pmax  pmax
      comp=Z,98nm,1.1s,mb5.8
ZAK                               pmax  pmax
      comp=Z,30nm,1.3s,mb5.2
CTA   Charters Tower   50.51 116 eP     P      17 15 46.5 -0.6
      comp=Z,32nm,0.9s,mb5.3
CTA                              eS     S      17 22 53.9 -1.6
CTA   Charters Tower   50.51 116  P     P      17 15 46.7 -0.4
CTA                                            17 22 53.7
CTA                               pmax  pmax
      comp=Z,40nm,0.9s
CTA                               smax
      comp=N,10.0nm,1.0s
CTA                               MLR   MLR
      comp=Z,2µm,21.6s
CTA   Charters Tower   50.51 116  P     P      17 15 46.6 -0.4
      comp=Z,40nm,0.9s,mb5.4,baz=291,slow=9.4,SNR=15
CTA                               S     S      17 22 53.7 -1.8
      comp=Z,10nm,1.0s,baz=68,slow=19,SNR=7.0
CTA                               LR    LR     17 38 37.0
      comp=Z,2µm,21.6s,MS5.2,baz=282,slow=38
CTAO  Charters Tower   50.51 116⇓iP     P      17 15 46.2 -0.9
CTAO                              pmax  pmax
      comp=Z,69nm,1.0s,mb5.5
CTAO                              MLR   MLR
      comp=Z,2µm,21.0s,MS5.1
CTAO  Charters Tower   50.51 116⇓iP     P      17 15 46.2 -0.9
      comp=Z,68nm,1.0s,mb5.5
CTAO                              LR    LR
      comp=Z,2µm,21.0s,MS5.1
STKA  Stephens Creek   51.30 132⇓iP     P      17 15 53.1 +0.2
      comp=Z,79nm,0.7s,mb5.8
STKA                             i      pP     17 16 08.4 +0.6
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STKA                             eS     S      17 23 04.4 -1.8
STKA  Stephens Creek   51.30 132  P     P      17 15 52.6 -0.3
      comp=Z,142nm,0.9s,mb5.9,baz=307,slow=7.2,SNR=179
STKA                              pP    pP     17 16 06.6 -1.2
      comp=Z,90nm,0.6s,baz=310,slow=6.3,SNR=14
STKA                              S     S      17 23 06.0 -0.2
      comp=Z,6.0nm,0.8s,baz=221,slow=23,SNR=7.3
STKA                              LR    LR     17 41 12.9
      comp=Z,3µm,19.6s,MS5.2,baz=297,slow=40
MAJO  Matsushiro       51.67  41⇑iP     P      17 15 53.8 -1.8
MAJO                              pmax  pmax
      comp=Z,261nm,1.3s,mb6.0
MAJO                              MLR   MLR
      comp=Z,2µm,19.0s,MS5.1
MAJO  Matsushiro       51.67  41⇑iP     P      17 15 53.8 -1.8
      comp=Z,261nm,1.3s,mb6.0
MAJO                              LR    LR
      comp=Z,2µm,19.0s,MS5.1
MAT   Matsushiro       51.67  41 eP     P      17 15 54.0 -1.6
MAT                              eS     S      17 23 08.0 -3.2
MAT                               LR    LR
      comp=Z,2µm,20.0s,MS5.2
MAT   Matsushiro       51.67  41  P     P      17 15 53.7 -1.9
MAT                               S     S      17 23 07.0 -4.2
MOY   Mondy            51.67   2 eP     P      17 15 56.0 +0.6
MOY                               pmax  pmax
      comp=Z,385nm,2.3s,mb5.9
TLY   Talaya           51.81   4  P     P      17 15 57.8 +1.3
      comp=Z,2µm,0.7s,mb7.1
TLY   Talaya           51.81   4c iP    P      17 15 57.1 +0.6
TLY                              e             17 17 55.3
TLY                              ePPP   PPP    17 18 54.4 -4.8
TLY                              eS     S      17 23 16.6 +3.6
TLY                              eSS    SS     17 26 55.6 +7.5
TLY                               pmax  pmax
      comp=Z,264nm,0.9s,mb6.2
TLY                               MLR   MLR
      comp=Z,5µm,18.0s,MS5.6
TLY   Talaya           51.81   4⇑iP     P      17 15 57.0 +0.5
      comp=Z,264nm,0.8s,mb6.2
TLY                               LR    LR
      comp=Z,1µm,19.0s,MS5.0
MDJ   Mudanjiang       52.31  28  P     P      17 16 00.1 -0.2
MDJ                               AP    pP     17 16 14.8 -0.5
MDJ                               PP    PP     17 17 59.9 -0.3
MDJ                               S     S      17 23 20.0 +0.1
MDJ                               PS    PS     17 23 32.8 -5.7
MDJ                               XS           17 23 48.5
MDJ                               SS    SS     17 26 53.4 -3.1
MDJ                               AMB   AMB
      comp=Z,115nm,0.9s,mb5.8
MDJ                               AMB   AMB
      comp=Z,875nm,4.1s
MDJ                               LR    LR
      comp=N,3µm,15.2s,MS5.6
MDJ                               LR    LR
      comp=E,2µm,13.9s,MS5.6
MDJ                               LR    LR
      comp=Z,5µm,17.1s,MS5.6
MDJ   Mudanjiang       52.31  28⇑iP     P      17 15 59.7 -0.6
      comp=Z,109nm,1.0s,mb5.7
VLA   Vladivostok      52.32  30 i P    P      17 16 00.0 -0.4
VLA                              i      pP     17 16 12.0 -3.3
VLA                              i             17 18 00.0
VLA                              i S    S      17 23 21.0 +1.0
VLA                              eSS    SS     17 27 03.0 +6.4
VLA                               pmax  pmax
      comp=Z,2µm,7.0s
VLA                               pmax  pmax
      comp=N,800nm,5.0s
VLA                               pmax  pmax
      comp=E,2µm,3.6s
VLA                               pmax  pmax
      comp=Z,900nm,8.0s
VLA                               smax
      comp=N,600nm,12.0s
VLA                               MLR   MLR
      comp=N,600nm,12.0s,MS5.3
VLA                               MLR   MLR
      comp=E,2µm,12.0s,MS5.3
VLA                               MLR   MLR
      comp=Z,3µm,12.0s,MS5.5
IRK   Irkutsk          52.42   4 eP     P      17 16 01.3 +0.3
IRK                              e             17 17 11.5
IRK                              e             17 18 02.3
IRK                               pmax  pmax
      comp=Z,569nm,2.0s,mb6.2
HIA   Hailar           52.44  17⇑iP     P      17 16 00.7 -0.5
HIA                               pmax  pmax
      comp=Z,617nm,1.5s
HIA   Hailar           52.44  17⇑iP     P      17 16 00.7 -0.5
      comp=Z,617nm,1.5s,mb6.3
KURK  Kurchatov        53.50 344⇑iP     P      17 16 08.7 -0.4
KURK                              pmax  pmax
      comp=Z,584nm,1.0s,mb6.5
KURK                              MLR   MLR
      comp=Z,869nm,21.0s,MS4.8
KURK  Kurchatov        53.50 344⇑iP     P      17 16 08.7 -0.4
      comp=Z,584nm,1.0s,mb6.5
KURK                              LR    LR
      comp=Z,869nm,21.0s,MS4.8
LBOS                   54.76 287⇑eP     P      17 16 19.2 +0.5
ZAL   Zalesovo         55.13 350  P     P      17 16 20.9 -0.1
ZAL                               S     S      17 24 00.7 +2.8
ZAL                               pmax  pmax
      comp=Z,472nm,1.1s
ZAL                               smax
      comp=N,2.0nm,0.7s
ZAL   Zalesovo         55.13 350  P     P      17 16 20.9 -0.1
      comp=N,472nm,1.1s,mb6.5,baz=296,slow=5.8,SNR=1138
ZAL                               S     S      17 24 00.7 +2.8
      comp=N,2.1nm,0.7s,baz=176,slow=22,SNR=3.7
DHBB  Dhamar BB        55.70 288⇑eP     P      17 16 26.8 +1.2
NVS   Novosibirsk      56.28 349⇑iP     P      17 16 27.3 -1.9
NVS                              e*PP   pP     17 16 44.4 +0.1
NVS                              i             17 24 12.5
NVS                               pmax  pmax
      comp=Z,531nm,1.3s,mb6.4
NVS                               pmax  pmax
      comp=N,593nm,1.5s
NVS                               pmax  pmax
      comp=E,291nm,1.4s
NVS                               smax
      comp=N,139nm,2.1s
NVS                               smax
      comp=E,111nm,2.1s
KLR   Kul'dur          56.78  25⇓iP     P      17 16 29.1 -3.8
KLR                              e             17 26 12.5
KLR                               pmax  pmax
      comp=N,180nm,1.6s
KLR                               pmax  pmax
      comp=E,300nm,1.6s
KLR                               pmax  pmax
      comp=Z,470nm,1.6s,mb6.3
KLR                               pmax  pmax
      comp=N,1µm,7.0s
KLR                               pmax  pmax
      comp=E,800nm,7.0s
KLR                               pmax  pmax
      comp=Z,2µm,7.0s
KLR                               MLR   MLR
      comp=E,4µm,19.0s
KLR                               MLR   MLR
      comp=Z,4µm,16.0s,MS5.6
TOO   Toolangi         56.89 136⇓iP     P      17 16 35.3 +1.5
      comp=Z,4.5nm,0.9s
TOO   Toolangi         56.89 136⇓iP     P      17 16 35.3 +1.5
TOO                               pmax  pmax
      comp=Z,5.0nm,0.9s
BVA0  Borovoye Array   58.04 340  P     P      17 16 39.9 -1.7
BVA0                              pmax  pmax
      comp=Z,32nm,0.9s,mb5.3
BVAR  Borovoye Array   58.04 340  S     S      17 24 35.1 -1.1
      comp=Z,0.4nm,0.7s,baz=163,slow=31,SNR=2.4
BRVK  Borovoye         58.10 340⇑iP     P      17 16 40.4 -1.7
BRVK                              pmax  pmax
      comp=Z,265nm,1.0s,mb6.2
BRVK                              MLR   MLR
      comp=Z,609nm,20.0s,MS4.7
BRVK  Borovoye         58.10 340⇑iP     P      17 16 40.4 -1.6
      comp=Z,265nm,1.0s,mb6.2
BRVK                              LR    LR
      comp=Z,609nm,20.0s,MS4.7
CHKZ  Chkalovo         58.50 341⇑iP     P      17 16 43.7 -1.1
CHKZ                              pmax  pmax
      comp=Z,1µm,0.2s
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CHKZ  Chkalovo         58.50 341⇑iP     P      17 16 43.7 -1.1
      comp=Z,1µm,0.2s
CNB   Canberra Magne   58.63 132⇓iP     P      17 16 46.2 +0.2
      comp=Z,656nm,1.0s,mb6.6
CNB                              i      pP     17 17 01.5 +0.2
ASAJ  Asahikawa        58.83  36  P     P      17 16 47.0 -0.2
ASAJ                              S     S      17 24 49.2 +2.5
ASAJ                              pmax  pmax
      comp=Z,51nm,0.5s
ASAJ                              smax
      comp=N,5.0nm,0.9s
ASAJ                              MLR   MLR
      comp=Z,1µm,18.1s
ASAJ  Asahikawa        58.83  36  P     P      17 16 47.0 -0.3
      comp=Z,51nm,0.5s,mb5.8,baz=244,slow=9.2,SNR=52
ASAJ                              S     S      17 24 49.2 +2.5
      comp=Z,4.5nm,0.9s,baz=313,slow=12,SNR=2.8
ASAJ                              LR    LR     17 46 35.1
      comp=Z,1µm,18.1s,MS5.0,baz=73,slow=40
BOD   Bodaibo          59.07   9⇓iP     P      17 16 48.4 -0.3
BOD                               pmax  pmax
      comp=Z,562nm,1.3s,mb6.4
RIV   Riverview        59.38 130⇑iP     P      17 16 52.0 +0.8
CLNS  Chul'man         60.58  16⇑iP     P      17 16 59.1  0.0
CLNS                             e*PP   pP     17 17 06.8 -7.7
CLNS                             e             17 17 41.8
CLNS                             e             17 19 10.5
CLNS                             eS     S      17 25 12.7 +3.5
CLNS                             e             17 26 39.9
CLNS                              pmax  pmax
      comp=N,182nm,0.8s
CLNS                              pmax  pmax
      comp=E,143nm,0.8s
CLNS                              pmax  pmax
      comp=Z,339nm,0.8s,mb6.5
CLNS                              pmax  pmax
      comp=Z,81nm,1.2s,mb5.7
CLNS                              pmax  pmax
      comp=N,73nm,1.0s
CLNS                              pmax  pmax
      comp=E,68nm,1.8s
CLNS                              smax
      comp=N,330nm,12.0s
CLNS                              smax
      comp=Z,238nm,13.1s
CLNS                              smax
      comp=E,55nm,13.0s
YSS   Yuzh-Sakhalins   60.61  33α iP    P      17 16 58.0 -1.4
YSS                              e*PP   pP     17 17 15.0 +0.2
YSS                              e             17 19 12.0
YSS                              e             17 25 04.0
YSS                               pmax  pmax
      comp=N,60nm,0.9s
YSS                               pmax  pmax
      comp=E,50nm,0.9s
YSS                               pmax  pmax
      comp=Z,180nm,0.9s,mb6.2
YSS                               MLR   MLR
      comp=N,800nm,20.0s
YSS                               MLR   MLR
      comp=Z,1µm,20.0s,MS5.0
YSS   Yuzh-Sakhalins   60.61  33⇑iP     P      17 16 58.8 -0.7
      comp=Z,394nm,1.0s,mb6.5
YSS                              ePP    PP     17 19 12.6 -2.9
YSS                               LR    LR
      comp=Z,1µm,20.0s,MS5.1
TAU   Tasmania Unive   60.79 141⇓eP     P      17 17 02.0 +1.3
TAU                               pmax  pmax
      comp=Z,396nm,1.5s,mb6.3
TAU                               MLR   MLR
      comp=Z,608nm,20.0s,MS4.7
TAU   Tasmania Unive   60.79 141⇓eP     P      17 17 02.0 +1.2
      comp=Z,396nm,1.5s,mb6.3
TAU                               LR    LR
      comp=Z,608nm,20.0s,MS4.7
BHD   Baghdad          60.89 309 i P    P      17 16 53.0 -8.5
BHD                              eS     S      17 25 02.0  -11
BHD                              ePS    PS     17 25 29.0 -8.1
KMBO  Kilima Mbogo     61.50 269  P     P      17 17 06.7 +0.8
KMBO                              S     S      17 25 24.5 +3.0
KMBO                              pmax  pmax
      comp=Z,29nm,1.0s
KMBO                              smax
      comp=N,1.0nm,0.3s
KMBO  Kilima Mbogo     61.50 269  P     P      17 17 06.7 +0.7
      comp=N,29nm,1.0s,mb5.4,baz=64,slow=8.5,SNR=69
KMBO                              S     S      17 25 24.5 +3.1
      comp=N,0.5nm,0.3s,baz=216,slow=22,SNR=2.8
KMBO  Kilima Mbogo     61.50 269⇑iP     P      17 17 06.0 +0.1
      comp=N,51nm,1.0s,mb5.6
KMBO                             epP    pP     17 17 20.1 -1.2
KMBO                              LR    LR
      comp=Z,905nm,22.0s,MS4.9
HNR   Honiara          61.59 101 eP     P      17 17 04.9 -1.6
HNR                               pmax  pmax
      comp=Z,498nm,1.0s,mb6.6
HNR                               MLR   MLR
      comp=Z,840nm,21.0s,MS4.9
HNR   Honiara          61.59 101 eP     P      17 17 04.9 -1.6
      comp=Z,498nm,1.0s,mb6.6
HNR                               LR    LR
      comp=Z,840nm,21.0s,MS4.9
MAK   Makhachkala      62.76 320⇓iP     P      17 17 13.0 -1.0
MAK                              i *PP  pP     17 17 27.5 -1.9
MAK                              e             17 17 55.0
MAK                              eS     S      17 25 57.0  +20
MAK                              e             17 27 01.0
MAK                               pmax  pmax
      comp=Z,363nm,1.0s,mb6.5
MAK                               pmax  pmax
      comp=Z,2µm,3.0s
MAK                               smax
      comp=E,1µm,7.0s
MSL   Mosul            62.99 312 i P    P      17 17 13.5 -2.1
MSL                              eS     S      17 25 32.5 -7.4
MSL                              ePPS   PPS    17 26 02.5  -13
HKR   Hakkari          63.00 313 i P    P      17 17 14.5 -1.2
GNI   Garni            63.34 316 eP     P      17 17 17.6 -0.2
GNI   Garni            63.34 316⇑iP     P      17 17 16.3 -1.5
GNI                               pmax  pmax
      comp=Z,518nm,1.7s
GNI                               MLR   MLR
      comp=Z,800nm,19.0s
GNI   Garni            63.34 316  S     S      17 25 46.5 +2.3
      comp=Z,3.1nm,0.7s,baz=310,slow=4.2,SNR=2.3
GNI                               LR    LR     17 45 49.2
      comp=Z,850nm,21.3s,MS4.9,baz=309,slow=37
TVAN  Van              63.62 314 i P    P      17 17 15.7 -4.1
VANB  Van              63.66 314 eP     P      17 17 15.5 -4.5
MTA   Mtatsminda       63.97 318  P     P      17 17 21.1 -0.8
MTA                               S     S      17 25 51.4 -0.6
TI2   Plekhanov        64.02 318α iP    P      17 17 21.0 -1.2
TI2                              i S    S      17 25 53.0 +0.4
TI2                               pmax  pmax
      comp=Z,560nm,0.4s,mb7.0
TI2                               pmax  pmax
      comp=Z,3µm,1.5s,mb7.1
DUS   Dusheti          64.20 318  P     P      17 17 22.6 -0.9
KARS  Kars             64.68 316  P     P      17 17 26.0 -0.6
BTMT  Batman           64.89 313 i P    P      17 17 27.4 -0.6
BEST  Besiri           64.94 313 i P    P      17 17 27.1 -1.2
VRT   Varto            65.21 314 eP     P      17 17 21.5 -8.5
ONI   Oni              65.25 318  P     P      17 17 29.9 -0.4
ONI                               S     S      17 25 57.6  -10
EZM   Erzurum          65.62 315 i P    P      17 17 31.2 -1.5
DIY   Diyarbakir       65.71 312 i P    P      17 17 31.6 -1.7
BINT  Bingol           65.86 313 i P    P      17 17 33.7 -0.6
BCA   Borcka           66.03 316 i P    P      17 17 34.3 -0.9
YAK   Yakutsk          66.29  15c iP    P      17 17 35.7 -0.8
YAK                              i *PP  pP     17 17 47.2 -4.9
YAK                              e             17 20 01.3
YAK                              e             17 26 20.0
YAK                              i SS   SS     17 30 38.6  0.0
YAK                               pmax  pmax
      comp=Z,683nm,1.0s,mb6.6
YAK                               pmax  pmax
      comp=N,299nm,1.1s
YAK                               pmax  pmax
      comp=E,213nm,1.3s
YAK                               pmax  pmax
      comp=Z,24nm,0.9s,mb5.2
YAK                               pmax  pmax
      comp=N,10.0nm,1.0s
YAK                               pmax  pmax
      comp=E,10.0nm,0.9s
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YAK				smax			
	comp=N,186nm,18.0s						
YAK				smax			
	comp=Z,41nm,17.3s						
YAK				smax			
	comp=E,63nm,16.7s						
YAK				pmax	pmax		
	comp=E,933nm,21.2s						
YAK				pmax	pmax		
	comp=N,565nm,20.7s						
YAK				MLR	MLR		
	comp=N,706nm,19.0s,MS5.0						
YAK				MLR	MLR		
	comp=Z,968nm,19.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,620nm,21.0s,MS5.0						
YAK	**Yakutsk**	**66.29**	**15**	⇑*i*P	**P**	**17 17 35.2**	**-1.3**
	comp=E,966nm,0.9s,mb6.8						
YAK				*e*PP	PP	17 20 01.2	-3.9
YAK				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
KIV	**Kislovodsk**	**66.34**	**319**	P	**P**	**17 17 36.8**	**-0.4**
	comp=Z,2μm,1.0s,mb7.0,SNR=93						
KIV	**Kislovodsk**	**66.34**	**319**	*de*P	**P**	**17 17 34.4**	**-2.8**
KIV				*e*		17 18 04.3	
KIV				*e*		17 20 01.4	
KIV				*i*		17 26 18.3	
KIV				pmax	pmax		
	comp=Z,351nm,1.0s,mb6.3						
KIV				smax			
	comp=N,462nm,4.4s						
KIV				smax			
	comp=E,150nm,2.2s						
KIV	**Kislovodsk**	**66.34**	**319**	⇑*i*P	**P**	**17 17 36.2**	**-1.0**
	comp=E,527nm,1.3s,mb6.4						
KIV				LR	LR		
	comp=Z,286nm,21.0s,MS4.5						
ASF	**Jabal al Asfar**	**66.51**	**305**	P	**P**	**17 17 38.4**	**0.0**
	comp=Z,110nm,1.0s,mb5.8,baz=338,slow=4.2,SNR=70						
ASF				pP	pP	17 17 52.3	-1.7
	comp=Z,19nm,0.8s,baz=321,slow=2.2,SNR=3.2						
ASF				S	S	17 26 25.7	+2.4
	comp=Z,1.6nm,0.6s,baz=216,slow=15,SNR=1.7						
ASF				LR	LR	17 47 04.9	
	comp=Z,1μm,21.9s,MS5.0,baz=107,slow=36						
CASY	**Casey**	**66.52**	**175**	⇑*i*P	**P**	**17 17 38.4**	**+0.5**
GOF	**Gofitskoye**	**66.59**	**320**	⇓*i*P	**P**	**17 17 37.5**	**-1.2**
GOF				*i*	pP	17 17 51.0	-3.3
GOF				pmax	pmax		
	comp=Z,350nm,1.4s,mb6.2						
GOF				pmax	pmax		
	comp=Z,2μm,4.0s						
URFA	**Urfa**	**66.60**	**311**	*e*P	**P**	**17 17 36.6**	**-2.3**
EZC	**Erzincan**	**66.67**	**314**	*i* P	**P**	**17 17 38.8**	**-0.5**
PTK	**Pertek**	**66.67**	**313**	*i* P	**P**	**17 17 37.4**	**-2.0**
ELZG	**Elazig**	**66.83**	**312**	*i* P	**P**	**17 17 40.3**	**0.0**
GUMT	**Gumushane**	**67.16**	**315**	P	**P**	**17 17 36.6**	**-5.7**
MALT	**Malatya**	**67.18**	**312**	P	**P**	**17 17 41.9**	**-0.6**
MALT	**Malatya**	**67.18**	**312**	⇑P	**P**	**17 17 42.4**	**-0.2**
MYA	**Malataya**	**67.19**	**312**	*e*P	**P**	**17 17 42.9**	**+0.3**
EIL	**Elat**	**67.49**	**302**	⇑P	**P**	**17 17 44.3**	**-0.3**
ZFRI	**Zfri**	**67.51**	**303**	⇑P	**P**	**17 17 44.7**	**0.0**
GZT	**Gaziantep**	**67.52**	**311**	*i* P	**P**	**17 17 44.3**	**-0.4**
MZDA	**Masada**	**67.54**	**304**	P	**P**	**17 17 44.5**	**-0.4**
MBH	**Mount Berech**	**67.55**	**302**	⇑P	**P**	**17 17 44.9**	**-0.1**
DRGI	**Dragot**	**67.59**	**304**	⇑P	**P**	**17 17 45.1**	**-0.1**
KSHT	**Keshet**	**67.61**	**306**	⇑P	**P**	**17 17 45.8**	**+0.5**
GAZ	**Gaziantep**	**67.73**	**311**	*e*P	**P**	**17 17 46.3**	**+0.3**
MMLI	**Mount Malkishu**	**67.78**	**305**	⇑P	**P**	**17 17 46.6**	**+0.2**
SOKR	**Solikamsk**	**67.90**	**338**	*c* *i*P	**P**	**17 17 46.1**	**-0.6**
SOKR						17 26 35.9	
SOKR				SS	SS	17 31 09.0	+5.5
SOKR				pmax	pmax		
	comp=Z,390nm,0.9s,mb6.4						
SOKR				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.5						
MASH	**Mash‘abbe Sade**	**67.94**	**304**	⇑P	**P**	**17 17 47.3**	**-0.1**
MBAR	**Mbarara**	**68.02**	**269**	⇑*i*P	**P**	**17 17 47.4**	**-0.8**
MBAR				*e**PP	pP	17 18 01.7	-2.1
MBAR				pmax	pmax		
	comp=Z,226nm,1.7s,mb5.9						
MBAR				MLR	MLR		
	comp=Z,154nm,20.0s						
MBAR	**Mbarara**	**68.02**	**269**	⇑*i*P	**P**	**17 17 47.4**	**-0.8**
	comp=Z,226nm,1.7s,mb5.9						
MBAR				*e*pP	pP	17 18 01.7	-2.1
MBAR				LR	LR		
	comp=Z,154nm,20.0s						
RTMM	**Retamin**	**68.04**	**304**	P	**P**	**17 17 47.9**	**-0.1**
SLTI	**Sal’it**	**68.05**	**305**	P	**P**	**17 17 48.0**	**0.0**
KAHT	**Ahir Dag**	**68.13**	**311**	*i* P	**P**	**17 17 48.5**	**0.0**
SOC	**Sochi**	**68.16**	**318**	*i* P	**P**	**17 17 46.1**	**-2.5**
SOC				*e*		17 18 07.6	
SOC				*e*		17 20 19.1	
SOC				*e*PPP	PPP	17 21 51.6	-7.1
SOC				*e*		17 26 37.5	
SOC				*e*		17 27 34.9	
SOC				*e*SS	SS	17 31 04.2	-3.6
SOC				pmax	pmax		
	comp=Z,437nm,0.7s,mb6.6						
SOC				pmax	pmax		
	comp=N,100nm,1.0s						
SOC				pmax	pmax		
	comp=E,62nm,0.9s						
SOC				MLR	MLR		
	comp=N,711nm,22.0s,MS5.0						
SOC				MLR	MLR		
	comp=Z,775nm,22.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,487nm,20.0s,MS5.0						
OFRI	**‘Ofer**	**68.19**	**305**	⇑P	**P**	**17 17 48.9**	**0.0**
HAF	**Haifa**	**68.20**	**306**	⇑P	**P**	**17 17 49.0**	**0.0**
KZIT	**Kziot**	**68.25**	**303**	⇑P	**P**	**17 17 49.1**	**-0.2**
COBT	**Iskenderun**	**68.26**	**310**	*i* P	**P**	**17 17 45.7**	**-3.6**
SVST	**Sivas**	**68.75**	**313**	*i* P	**P**	**17 17 48.5**	**-3.8**
CEYT	**Ceyhan**	**68.79**	**310**	*e*P	**P**	**17 17 51.2**	**-1.4**
NOUC	**Port Laguerre**	**69.20**	**114**	*e*P	**P**	**17 17 56.1**	**+0.8**
NOUC	**Port Laguerre**	**69.20**	**114**	*e*P	**P**	**17 17 56.1**	**+0.8**
BNN	**Bunyan**	**69.27**	**312**	*e*P	**P**	**17 17 54.8**	**-0.7**
PHNC	**Paralimni**	**69.57**	**308**	P	**P**	**17 17 56.1**	**-1.3**
MEST	**Erdemli**	**69.91**	**309**	*i* P	**P**	**17 17 56.0**	**-3.4**
NIG	**Nigde**	**69.98**	**311**	*e*P	**P**	**17 17 59.7**	**-0.1**
SKR	**Severo-Kuril’s**	**70.06**	**35**	*e*P	**P**	**17 17 55.5**	**-4.6**
SKR				*e*	pP	17 18 10.4	-5.4
SKR				pmax	pmax		
	comp=N,160nm,1.0s						
SKR				pmax	pmax		
	comp=E,160nm,1.0s						
SKR				pmax	pmax		
	comp=Z,310nm,1.0s,mb6.2						
CSS	**Prodhromos**	**70.12**	**307**	⇑P	**P**	**17 18 00.3**	**-0.4**
	comp=Z,3.3nm,0.8s						
CSS	**Prodhromos**	**70.12**	**307**	⇑*e*P	**P**	**17 18 00.3**	**-0.4**
ANN	**Anapa**	**70.14**	**318**	*e*P	**P**	**17 17 57.9**	**-2.8**
ANN				*e**PP	pP	17 18 19.0	+2.6
ANN				*e*		17 27 07.2	
ANN				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.7						
MAMC	**Mammari**	**70.26**	**308**	P	**P**	**17 18 01.6**	**0.0**
SZAC	**Souni-Zanaja**	**70.42**	**307**	⇑P	**P**	**17 18 02.1**	**-0.5**
SZAC	**Souni-Zanaja**	**70.42**	**307**	⇑*i*P	**P**	**17 18 02.1**	**-0.5**
LEF	**Lefka**	**70.51**	**307**	*e*P	**P**	**17 18 03.2**	**+0.1**
CTKT	**Corum**	**70.59**	**314**	*i* P	**P**	**17 18 02.3**	**-1.1**
ALFC	**Alevga**	**70.75**	**307**	⇑P	**P**	**17 18 03.6**	**-1.0**
	comp=Z,2.4nm,0.8s						
ALFC	**Alevga**	**70.75**	**307**	⇑*e*P	**P**	**17 18 03.6**	**-1.0**
BOYT	**Boyabat**	**70.75**	**314**	*i* P	**P**	**17 18 02.7**	**-1.8**
BYBT	**Boyabat**	**70.86**	**314**	*e*P	**P**	**17 18 05.0**	**-0.1**
PPCY	**Paphos**	**70.88**	**307**	P	**P**	**17 18 04.5**	**-0.9**
KAMT	**Kaman**	**71.01**	**312**	*i* P	**P**	**17 18 05.4**	**-0.6**
BR131	**Keskin Array S**	**71.17**	**312**	PFAKE		17 18 20.0	+13
BR131				LR	LR		
	comp=Z,3μm,21.0s,MS5.6						
BRTR	**Keskin Array B**	**71.17**	**312**	P	**P**	**17 18 05.7**	**-1.3**
BRTR				pmax	pmax		
	comp=Z,65nm,0.8s						
BRTR	**Keskin Array B**	**71.17**	**312**	P	**P**	**17 18 05.7**	**-1.3**
	comp=Z,65nm,0.8s,mb5.6,baz=133,slow=7.0,SNR=240						
LSZ	**Lusaka**	**71.23**	**254**	*e*P	**P**	**17 18 09.4**	**+1.7**
LSZ				*e**PP	pP	17 18 21.9	-1.5
LSZ				pmax	pmax		
	comp=Z,207nm,1.5s,mb5.8						
LSZ				MLR	MLR		
	comp=Z,1μm,22.0s,MS5.2						
LSZ	**Lusaka**	**71.23**	**254**	*e*P	**P**	**17 18 09.4**	**+1.6**
	comp=Z,207nm,1.5s,mb5.8						
LSZ				*e*pP	pP	17 18 21.9	-1.5
LSZ				LR	LR		
	comp=Z,1μm,22.0s,MS5.2						
PECR	**Pechory**	**71.34**	**331**	α*i*P	**P**	**17 18 06.4**	**-1.3**
PECR				*i*	pP	17 18 26.0	+2.6
PECR				*e*		17 27 15.0	
PECR				pmax	pmax		
	comp=Z,4μm,1.6s,mb7.1						
PECR				pmax	pmax		
	comp=Z,1μm,6.4s						
PECR				MLR	MLR		
	comp=Z,800nm,16.0s,MS5.1						
CANT	**Cankiri**	**71.43**	**313**	*i* P	**P**	**17 18 05.0**	**-3.6**
ELDT	**Eldivan**	**71.54**	**313**	*i* P	**P**	**17 18 07.6**	**-1.6**
BZK	**Bozkurt**	**71.56**	**315**	*e*P	**P**	**17 18 06.4**	**-2.8**
KONT	**Konya--Tatoy**	**71.64**	**310**	*e*P	**P**	**17 18 10.1**	**+0.2**
MAW	**Mawson**	**71.76**	**194**	P	**P**	**17 18 10.4**	**+0.3**
MAW	**Mawson**	**71.76**	**194**	P	**P**	**17 18 10.0**	**-0.1**
	comp=Z,22nm,0.9s,mb5.1,baz=285,slow=20,SNR=4.0						
MAW				LR	LR	17 43 39.2	
	comp=Z,1μm,18.1s,MS5.3,baz=20,slow=31						
ANTO	**Ankara**	**71.83**	**312**	⇑P	**P**	**17 18 10.0**	**-1.0**
LOD	**Lodumlu**	**71.86**	**312**	P	**P**	**17 18 10.8**	**-0.3**
BALT	**Daday**	**71.87**	**314**	*i* P	**P**	**17 18 10.6**	**-0.6**
MA2	**Magadan**	**71.89**	**25**	*c* *i*P	**P**	**17 18 09.8**	**-1.1**
MA2				*e*		17 20 48.6	
MA2				*e*		17 27 26.3	
MA2				pmax	pmax		
	comp=N,30nm,0.8s						
MA2				pmax	pmax		
	comp=Z,100nm,0.8s,mb5.8						
MA2				MLR	MLR		
	comp=Z,7μm,22.0s,MS5.9						
MA2	**Magadan**	**71.89**	**25**	⇑*i*P	**P**	**17 18 10.7**	**-0.2**
	comp=Z,190nm,0.8s,mb6.1						
MA2				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
KIZT	**Kizilcal**	**72.25**	**311**	*e*P	**P**	**17 18 12.6**	**-0.9**
SAFT	**Safranbolu**	**72.29**	**314**	*e*P	**P**	**17 18 13.1**	**-0.5**
SIM	**Simferopol’**	**72.41**	**318**	⇑*e*P	**P**	**17 18 14.7**	**+0.4**
SIM				*e*		17 27 30.3	
SIM				pmax	pmax		
	comp=Z,160nm,9.5s						
DRV	**Dumont d’Urvil**	**72.43**	**164**	P	sP	17 18 34.0	-1.8
DRV				S	S	17 27 33.0	+0.8
DRV				L		17 37 00.0	
PET	**Petropavlovsk**	**72.49**	**33**	⇑*i*P	**P**	**17 18 14.6**	**0.0**
PET				*e**SP	sP	17 18 38.5	+2.1
PET				*e*		17 20 59.9	
PET				*e*S	S	17 27 36.4	+3.2
PET				*e*PPS	PPS	17 28 17.8	-8.8
PET				pmax	pmax		
	comp=Z,430nm,1.4s,mb6.2						
PET				pmax	pmax		
	comp=N,187nm,0.8s						
PET				pmax	pmax		
	comp=E,123nm,0.9s						
PET				pmax	pmax		
	comp=Z,300nm,13.1s						
PET				pmax	pmax		
	comp=Z,200nm,15.2s						
PET				smax			
	comp=N,300nm,15.8s						
PET				smax			
	comp=E,600nm,33.0s						
PET				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
PET	**Petropavlovsk**	**72.49**	**33**	⇑*i*P	**P**	**17 18 14.1**	**-0.5**
	comp=Z,547nm,1.1s,mb6.4						
PET				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
ISP	**Isparta**	**73.03**	**310**	*e*P	**P**	**17 18 10.1**	**-8.1**
ISP	**Isparta**	**73.03**	**310**	*e*P	**P**	**17 18 15.9**	**-2.2**
ISP				pmax	pmax		
	comp=Z,63nm,0.8s,mb5.6						
ISP	**Isparta**	**73.03**	**310**	*e*P	**P**	**17 18 15.9**	**-2.2**
	comp=Z,63nm,0.8s,mb5.6						
MDU	**Mudurnu**	**73.16**	**313**	*e*P	**P**	**17 18 18.0**	**-0.8**
ESKT	**Eskisehir**	**73.19**	**312**	*e*P	**P**	**17 18 15.9**	**-3.1**
ESKT	**Eskisehir**	**73.19**	**312**	*i* P	**P**	**17 18 17.8**	**-1.2**
ELL	**Elmali**	**73.25**	**309**	*e*P	**P**	**17 18 19.9**	**+0.5**
HENT	**Hendek**	**73.48**	**313**	*i* P	**P**	**17 18 18.7**	**-2.0**
ALT	**Altintas**	**73.63**	**311**	*e*P	**P**	**17 18 21.0**	**-0.6**
TIXI	**Tiksi**	**74.25**	**10**	⇑*i*P	**P**	**17 18 22.8**	**-1.8**
TIXI				*e*		17 21 08.4	
TIXI				*e*		17 27 52.4	
TIXI				pmax	pmax		
	comp=N,124nm,1.2s						
TIXI				pmax	pmax		
	comp=E,77nm,1.2s						
TIXI				pmax	pmax		
	comp=Z,567nm,1.2s,mb6.4						
TIXI				pmax	pmax		
	comp=Z,1μm,1.7s,mb6.6						
TIXI				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.3						
TIXI	**Tiksi**	**74.25**	**10**	⇓*i*P	**P**	**17 18 21.0**	**-3.6**
TIXI				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
MOS	**Moscow**	**74.28**	**329**	α*i*P	**P**	**17 18 24.6**	**-0.5**
MOS				*e*		17 18 34.7	
MOS				*e*	pP	17 18 39.2	-1.6
MOS				*e*PPP	PPP	17 22 56.4	-2.0
MOS				*e*		17 27 51.3	
MOS				pmax	pmax		
	comp=Z,1μm,1.0s,mb6.7						
MOS				pmax	pmax		
	comp=Z,666nm,0.8s,mb6.6						
MOS				MLR	MLR		
	comp=Z,2μm,23.0s,MS5.3						
MOS				MLR	MLR		
	comp=N,1μm,23.1s						
SEY	**Seymchan**	**74.40**	**22**	*i* P	**P**	**17 18 27.8**	**+2.2**
SEY					pP	17 18 41.6	+0.2
SEY				*e*		17 21 14.3	
SEY				*e*PPP	PPP	17 23 04.2	+4.9
SEY				*e*S	S	17 27 58.8	+4.4
SEY						17 28 39.9	
SEY				*e*SS	SS	17 32 50.6	+6.9
SEY				pmax	pmax		
	comp=Z,170nm,0.9s,mb6.0						
SEY				smax			
	comp=N,1μm,19.9s						
SEY				smax			
	comp=E,17μm,23.9s						
SEY				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.7						
SEY				MLR	MLR		
	comp=N,16μm,16.0s,MS6.4						
SEY				MLR	MLR		
	comp=E,2μm,18.0s,MS6.4						
YLV	**Yalova**	**74.54**	**312**	*e*P	**P**	**17 18 25.6**	**-1.2**
OBN	**Obninsk**	**74.58**	**328**	P	**P**	**17 18 26.8**	**0.0**
	comp=E,2μm,1.2s,mb7.0,SNR=40						
OBN	**Obninsk**	**74.58**	**328**	*c* *i*P	**P**	**17 18 24.1**	**-2.7**
OBN				*i*	pP	17 18 38.9	-3.7
OBN				*e*		17 21 11.9	
OBN				*e*		17 27 53.7	
OBN				pmax	pmax		
	comp=Z,671nm,1.4s,mb6.4						
OBN				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.1						
OBN	**Obninsk**	**74.58**	**328**	⇑*i*P	**P**	**17 18 25.8**	**-0.9**
	comp=Z,570nm,1.2s,mb6.4						
OBN				LR	LR		
	comp=Z,334nm,20.0s,MS4.6						
LBTB	**Lobatse**	**74.69**	**244**	*e*P	**P**	**17 18 28.4**	**+0.4**
LBTB				*e**PP	pP	17 18 44.2	+0.4
LBTB				pmax	pmax		
	comp=Z,148nm,1.4s,mb5.7						
LBTB				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.3						
LBTB	**Lobatse**	**74.69**	**244**	S	S	17 28 01.2	+2.8
	comp=Z,1.7nm,0.8s,baz=59,slow=16,SNR=2.2						
LBTB	**Lobatse**	**74.69**	**244**	*e*P	**P**	**17 18 28.4**	**+0.4**
	comp=Z,148nm,1.4s,mb5.7						
LBTB				*e*pP	pP	17 18 44.2	+0.4
LBTB				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
BOSA	**Boshof**	**75.46**	**241**	*e*P	**P**	**17 18 32.4**	**0.0**
BOSA				*e**PP	pP	17 18 48.0	-0.2
BOSA				pmax	pmax		
	comp=Z,135nm,1.4s,mb5.7						
BOSA				MLR	MLR		
	comp=Z,8μm,19.0s,MS6.1						
BOSA	**Boshof**	**75.46**	**241**	*e*P	**P**	**17 18 32.4**	**0.0**
	comp=Z,135nm,1.4s,mb5.7						
BOSA				*e*pP	pP	17 18 48.0	-0.2
BOSA				LR	LR		
	comp=Z,8μm,19.0s,MS6.1						
JCZ	**Jackson Bay**	**75.62**	**136**	P	**P**	**17 18 34.3**	**+1.3**
JCZ				pP	pP	17 18 49.7	+0.9
JCZ	**Jackson Bay**	**75.62**	**136**	PN	**P**	**17 18 34.3**	**+1.3**
JCZ				pP	pP	17 18 49.7	+0.9
JCZ	**Jackson Bay**	**75.62**	**136**	PN	**P**	**17 18 34.3**	**+1.3**
JCZ				pP	pP	17 18 49.7	+0.9
KDAG	**Bornova**	**75.65**	**310**	*i* P	**P**	**17 18 30.6**	**-2.6**
IZM	**Izmir**	**75.65**	**310**	*e*P	**P**	**17 18 33.4**	**+0.1**
TLCR		**76.07**	**317**	⇓P	**P**	**17 18 34.5**	**-1.0**
TLCR		**76.07**	**317**	⇑P	**P**	**17 18 34.9**	**-0.6**
PSN	**Preselentsi**	**76.14**	**315**	*i* P	**P**	**17 18 35.0**	**-0.9**
TIRR	**Tirgusor**	**76.17**	**316**	⇑P	**P**	**17 18 35.3**	**-0.8**
TIRR	**Tirgusor**	**76.17**	**316**	⇑P	**P**	**17 18 35.2**	**-0.9**
AYVA	**Ayvalik**	**76.28**	**311**	*i* P	**P**	**17 18 27.0**	**-10**
KIS	**Kishinev**	**76.53**	**319**	⇑*i*P	**P**	**17 18 36.0**	**-2.1**
KIS				*i*		17 18 44.0	
KIS				*i*	pP	17 18 49.0	-4.9
KIS				*e*	pP	17 18 55.0	+1.1
KIS				*e*		17 28 12.0	
KIS				pmax	pmax		
	comp=Z,530nm,1.3s,mb6.3						
KIS				pmax	pmax		
	comp=E,260nm,1.5s						
CFR	**Carcaliu**	**76.54**	**317**	⇑P	**P**	**17 18 37.4**	**-0.7**
CFR	**Carcaliu**	**76.54**	**317**	⇑*i*P	**P**	**17 18 37.5**	**-0.6**
HARR	**Harsova**	**76.56**	**316**	⇑*i*P	**P**	**17 18 37.9**	**-0.4**
PRD	**Provadia**	**76.59**	**315**	*i* P	**P**	**17 18 37.0**	**-1.5**
TUZ	**Tuapeka**	**76.68**	**137**	*e*P	**P**	**17 18 40.0**	**+1.1**
TUZ				pP	pP	17 18 54.0	-0.8
TUZ	**Tuapeka**	**76.68**	**137**	PN	**P**	**17 18 40.0**	**+1.1**
TUZ				pP	pP	17 18 54.0	-0.8
TUZ	**Tuapeka**	**76.68**	**137**	PN	**P**	**17 18 40.0**	**+1.1**
TUZ				pP	pP	17 18 54.0	-0.8
SANT	**Santorini**	**76.68**	**307**	*e*P	**P**	**17 18 37.5**	**-1.6**
APE	**Apeiranthos**	**76.75**	**308**	*i* P	**P**	**17 18 37.4**	**-2.1**
WVZ	**Waitaha Valley**	**76.79**	**134**	PN	**P**	**17 18 40.1**	**+0.5**
WVZ				pP	pP	17 18 55.7	+0.2
WVZ	**Waitaha Valley**	**76.79**	**134**	PN	**P**	**17 18 40.1**	**+0.5**
WVZ				pP	pP	17 18 55.7	+0.2
AKASG	**Malin Array Be**	**77.27**	**322**	P	**P**	**17 18 40.4**	**-1.7**
AKASG						17 28 24.4	
AKASG				pmax	pmax		
	comp=Z,80nm,0.7s						
AKASG	**Malin Array Be**	**77.27**	**322**	P	**P**	**17 18 40.4**	**-1.7**
	comp=Z,80nm,0.7s,mb5.7,baz=88,slow=4.8,SNR=230						
AKASG				S	S	17 28 24.4	-1.8
	comp=Z,0.1nm,0.3s,baz=23,slow=25,SNR=3.6						
IAS	**Iasi**	**77.41**	**319**	⇓P	**P**	**17 18 42.4**	**-0.6**
ISR	**Istrita**	**77.62**	**316**	⇓*i*P	**P**	**17 18 45.4**	**+1.2**
SZH	**Strazhica**	**77.65**	**314**	*i* P	**P**	**17 18 43.0**	**-1.4**
QRZ	**Quartz Range**	**77.66**	**132**	P	**P**	**17 18 44.7**	**+0.2**
QRZ	**Quartz Range**	**77.66**	**132**	PN	**P**	**17 18 45.4**	**+0.9**
QRZ				pP	pP	17 19 01.8	+1.5
QRZ	**Quartz Range**	**77.66**	**132**	PN	**P**	**17 18 45.4**	**+0.9**
QRZ				pP	pP	17 19 01.8	+1.5
VRI	**Vrincioaia**	**77.66**	**317**	⇑P	**P**	**17 18 44.6**	**+0.2**
VRI	**Vrincioaia**	**77.66**	**317**	⇓P	**P**	**17 18 44.7**	**+0.3**
VRI	**Vrincioaia**	**77.66**	**317**	⇑*i*P	**P**	**17 18 44.8**	**+0.4**
DIM	**Dimitrovgrad**	**77.69**	**313**	*i* P	**P**	**17 18 44.0**	**-0.6**
KDZ	**Kurdzhali**	**77.69**	**313**	*i* P	**P**	**17 18 43.0**	**-1.7**
BUC1	**Bucharest**	**77.81**	**316**	P	**P**	**17 18 44.9**	**-0.3**
PVL	**Pavlikeni**	**78.07**	**314**	*i* P	**P**	**17 18 46.0**	**-0.7**
MLR	**Muntele Rosu**	**78.11**	**317**	P	**P**	**17 18 46.9**	**0.0**
MLR				pmax	pmax		
	comp=Z,153nm,0.8s						
MLR	**Muntele Rosu**	**78.11**	**317**	P	**P**	**17 18 46.9**	**+0.1**
	comp=Z,153nm,0.8s,mb6.0,baz=107,slow=1.6,SNR=151						
MLR	**Muntele Rosu**	**78.11**	**317**	⇑*i*P	**P**	**17 18 46.9**	**0.0**
PLD	**Plovdiv**	**78.31**	**313**	*i* P	**P**	**17 18 46.0**	**-2.0**
SNX	**Sinaia**	**78.38**	**316**	⇑P	**P**	**17 18 48.1**	**-0.2**
MTUR	**Matau**	**78.66**	**316**	⇓P	**P**	**17 18 49.4**	**-0.5**
PAIG	**Paliouri**	**78.68**	**311**	*e*P	**P**	**17 18 49.3**	**-0.8**
PGB	**Panagyurishte**	**78.78**	**313**	*i* P	**P**	**17 18 49.0**	**-1.6**
MMB	**Musomiste**	**78.93**	**312**	*i* P	**P**	**17 18 49.0**	**-2.4**
SRS	**Serrai**	**78.95**	**312**	*e*P	**P**	**17 18 50.2**	**-1.3**
BURAR	**Bucovina Array**	**79.06**	**319**	⇓P	**P**	**17 18 52.8**	**+0.7**
BURAR	**Bucovina Array**	**79.06**	**319**	⇑P	**P**	**17 18 52.6**	**+0.6**
SOH	**Sokhos**	**79.07**	**312**	*e*P	**P**	**17 18 51.3**	**-1.0**
MNK	**Minsk**	**79.14**	**326**	⇑*e*P	**P**	**17 18 48.0**	**-4.3**
SYO	**Syowa Base**	**79.21**	**198**	⇑P	**P**	**17 18 51.9**	**-0.5**
SYO	**Syowa Base**	**79.21**	**198**	⇑pP	pP	17 19 08.7	+0.4
SYO	**Syowa Base**	**79.21**	**198**	⇑sP	sP	17 19 17.8	+3.2
PUL	**Pulkovo**	**79.42**	**331**	*e*P	**P**	**17 18 53.8**	**+0.1**
PUL				pmax	pmax		
	comp=Z,632nm,0.7s,mb6.7						
PUL				pmax	pmax		
	comp=N,69nm,0.4s						
PUL				pmax	pmax		
	comp=E,337nm,0.7s						
PUL				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.2						
PUL				MLR	MLR		
	comp=E,1μm,20.0s						
PUL	**Pulkovo**	**79.42**	**331**	*e*P	**P**	**17 18 52.8**	**-0.9**
KKB	**Krupnik**	**79.45**	**313**	*i* P	**P**	**17 18 52.0**	**-2.3**
KNT	**Kendrikon**	**79.47**	**312**	*e*P	**P**	**17 18 53.1**	**-1.3**
VTS	**Vitosha**	**79.48**	**313**	⇑P	**P**	**17 18 53.6**	**-0.8**
VTS	**Vitosha**	**79.48**	**313**	*i* P	**P**	**17 18 53.0**	**-1.4**
AGG	**Agios Georgios**	**79.56**	**310**	*e*P	**P**	**17 18 52.9**	**-2.0**
LIT	**Litokhoron**	**79.61**	**311**	*e*P	**P**	**17 18 53.4**	**-1.8**
MGZ	**Maungaku**	**79.64**	**130**	*e*P	**P**	**17 18 56.5**	**+1.1**
MGZ	**Maungaku**	**79.64**	**130**	PN	**P**	**17 18 57.0**	**+1.7**
MGZ				pP	pP	17 19 12.6	+1.3
MGZ	**Maungaku**	**79.64**	**130**	PN	**P**	**17 18 57.0**	**+1.7**
MGZ				pP	pP	17 19 12.6	+1.3
CNZ	**Chateau**	**79.68**	**130**	*e*P	**P**	**17 18 56.8**	**+1.2**
CNZ	**Chateau**	**79.68**	**130**	PN	**P**	**17 18 56.8**	**+1.3**
CNZ	**Chateau**	**79.68**	**130**	PN	**P**	**17 18 56.8**	**+1.3**
NGZ	**Ngauruhoe**	**79.72**	**130**	*e*P	**P**	**17 18 56.5**	**+0.7**
NGZ	**Ngauruhoe**	**79.72**	**130**	PN	**P**	**17 18 56.5**	**+0.7**
NGZ	**Ngauruhoe**	**79.72**	**130**	PN	**P**	**17 18 56.5**	**+0.7**
SUR	**Sutherland**	**79.73**	**237**	LR	LR	17 47 15.1	
	comp=E,1μm,20.6s,MS5.2,baz=109,slow=30						
SUR	**Sutherland**	**79.73**	**237**	*e*P	**P**	**17 18 57.6**	**+1.6**
	comp=E,206nm,1.4s,mb5.9						
SUR				*e*pP	pP	17 19 12.7	+0.8
SUR				LR	LR		
	comp=Z,404nm,22.0s,MS4.7						
TUVZ	**Tukino**	**79.77**	**130**	P	**P**	**17 18 57.9**	**+1.8**
TUVZ	**Tukino**	**79.77**	**130**	PN	**P**	**17 18 57.9**	**+1.8**
TUVZ	**Tukino**	**79.77**	**130**	PN	**P**	**17 18 57.9**	**+1.8**
GRG	**Griva**	**79.81**	**312**	*e*P	**P**	**17 18 54.0**	**-2.2**
IDID	**Didziasalis**	**79.96**	**326**	⇑*i*P	**P**	**17 18 56.6**	**-0.1**
IDID				AMPb	AMB	17 18 58.6	
	comp=Z,116nm,1.1s,mb5.7						
JOF	**Joensuu**	**80.03**	**335**	*e*p	**P**	**17 18 56.4**	**-0.5**
	comp=Z,165nm,0.9s,mb6.0						
TSZ	**Takapari Road**	**80.12**	**131**	PN	**P**	**17 18 58.7**	**+0.8**
TSZ				pP	pP	17 19 14.3	+0.5
TSZ	**Takapari Road**	**80.12**	**131**	PN	**P**	**17 18 58.7**	**+0.8**
TSZ				pP	pP	17 19 14.3	+0.5
IIGN	**Ignalina**	**80.26**	**326**	⇑*i*P	**P**	**17 18 58.4**	**+0.1**
IIGN				AMPb	AMB	17 19 00.2	
	comp=Z,129nm,1.2s,mb5.7						
LVV	**L’vov**	**80.29**	**321**	⇑*i*P	**P**	**17 18 58.4**	**-0.2**
LVV				*e*		17 28 51.8	
LVV				MLR	MLR		
	comp=E,100nm,22.0s,MS4.5						
LVV				MLR	MLR		
	comp=N,200nm,20.0s,MS4.5						
LVV				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.4						
IZAR	**Zarasai**	**80.34**	**327**	⇑*i*P	**P**	**17 18 58.8**	**0.0**
IZAR				AMPb	AMB	17 19 00.5	
	comp=Z,74nm,0.9s						
ISAL	**Salakas**	**80.36**	**327**	⇑*i*P	**P**	**17 18 58.8**	**-0.1**
ISAL				AMPb	AMB	17 19 00.7	
	comp=Z,90nm,1.1s,mb5.6						
BARS	**Barje**	**80.53**	**313**	⇑*i*P	**P**	**17 18 58.9**	**-1.1**
FNA	**Florina**	**80.55**	**311**	*e*P	**P**	**17 18 58.4**	**-1.8**
BOLS	**Boljevac**	**80.59**	**314**	⇑*i*P	**P**	**17 18 59.5**	**-0.9**
LVZ	**Lovozero**	**80.63**	**340**	P	**P**	**17 18 59.7**	**-0.4**
	comp=Z,719nm,0.8s,mb6.7,SNR=9.0						
LVZ	**Lovozero**	**80.63**	**340**	*e*P	**P**	**17 18 58.9**	**-1.2**
LVZ				pmax	pmax		

	comp=Z,121nm,0.9s,mb5.8						
LVZ				pmax	pmax		
	comp=N,28nm,1.8s						
LVZ				pmax	pmax		
	comp=E,32nm,1.0s						
LVZ				pmax	pmax		
	comp=Z,591nm,1.8s,mb6.2						
LVZ				pmax	pmax		
	comp=N,157nm,2.2s						
LVZ				pmax	pmax		
	comp=E,157nm,2.1s						
LVZ				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.7						
LVZ				MLR	MLR		
	comp=N,1µm,23.0s,MS5.5						
LVZ				MLR	MLR		
	comp=E,2µm,21.0s,MS5.5						
LVZ	**Lovozero**	**80.63**	**340**	⇑iP	**P**	**17 18 58.3**	**-1.8**
SKO	**Skopje**	**80.68**	**313**	⇓iP	**P**	**17 18 59.4**	**-1.4**
SKO				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.5						
SKO	**Skopje**	**80.68**	**313**	⇓iP	**P**	**17 18 59.4**	**-1.4**
	comp=Z,0.1nm,0.9s						
FX1	**Attu Island--F**	**80.75**	**36**	P	**P**	**17 19 01.5**	**+0.5**
FX1				S	S	17 29 06.4	+3.5
FX1				pmax	pmax		
	comp=Z,88nm,0.8s						
FX1				smax			
	comp=N,15nm,0.8s						
FX1	**Attu Island--F**	**80.75**	**36**	P	**P**	**17 19 01.5**	**+0.5**
	comp=N,88nm,0.8s,mb5.8,baz=228,slow=1.3,SNR=13						
FX1				S	S	17 29 06.4	+3.5
	comp=N,15nm,0.8s,baz=269,slow=22,SNR=1.6						
FX1	**Attu Island--F**	**80.75**	**36**	eP	**P**	**17 19 01.3**	**+0.3**
KWP	**Kalwaria**	**81.10**	**320**	eP	**P**	**17 19 03.1**	**+0.2**
KWP				e*PP	pP	17 19 16.0	-2.8
KWP				e		17 29 07.0	
KWP	**Kalwaria**	**81.10**	**320**	eP	**P**	**17 19 03.1**	**+0.2**
KWP				ePcP	PcP	17 19 05.8	-3.6
KWP				epP	pP	17 19 16.0	-2.8
KWP				eS	S	17 29 07.0	+0.4
KWP				eSS		17 29 35.6	
KWP	**Kalwaria**	**81.10**	**320**	eP	**P**	**17 19 03.1**	**+0.2**
	comp=N,600nm,1.4s,mb6.3						
KWP				ePcP	PcP	17 19 05.8	-3.6
KWP				epP	pP	17 19 16.0	-2.9
KWP				eS	S	17 29 07.0	+0.5
KWP				esS		17 29 35.6	
KWP				MLR	MLR	17 49 51.5	
	comp=N,1µm,34.8s,MS5.0						
BZS	**Buzias**	**81.12**	**316**	⇓P	**P**	**17 19 03.1**	**0.0**
IGT	**Igoumenitsa**	**81.17**	**310**	eP	**P**	**17 19 02.5**	**-0.9**
SVIS	**Svilajnac**	**81.19**	**315**	⇑iP	**P**	**17 19 02.8**	**-0.7**
KOLS	**Kolonicke sedl**	**81.25**	**320**	i P	**P**	**17 19 05.0**	**+1.3**
SMY	**Shemya**	**81.27**	**37**	eP	**P**	**17 19 03.5**	**-0.2**
SMY				pmax	pmax		
	comp=Z,499nm,1.1s,mb6.4						
SMY				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.6						
SMY	**Shemya**	**81.27**	**37**	eP	**P**	**17 19 03.5**	**-0.3**
	comp=Z,499nm,1.1s,mb6.4						
SMY				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
TSUM	**Tsumeb**	**81.61**	**251**	eP	**P**	**17 19 07.3**	**+1.2**
	comp=Z,14nm,1.0s						
TSUM				LR	LR		
	comp=Z,1µm,21.0s						
SUW	**Suwalki**	**81.67**	**325**	eP	**P**	**17 19 05.3**	**-0.5**
SUW				e*PP	pP	17 19 19.2	-2.5
SUW				e		17 29 09.5	
SUW	**Suwalki**	**81.67**	**325**	eP	**P**	**17 19 05.3**	**-0.5**
SUW				ePcP	PcP	17 19 08.8	-3.0
SUW				epP	pP	17 19 19.2	-2.5
SUW				eS	S	17 29 09.5	-2.9
SUW	**Suwalki**	**81.67**	**325**	eP	**P**	**17 19 05.3**	**-0.5**
	comp=Z,1µm,1.1s,mb6.7						
SUW				ePcP	PcP	17 19 08.8	-3.0
SUW				epP	pP	17 19 19.2	-2.5
SUW				eS	S	17 29 09.5	-2.8
SUW				MLR	MLR	17 54 01.1	
	comp=Z,1µm,26.8s,MS5.0						
CRVS	**Cervenica-Dubn**	**81.77**	**319**	i P	**P**	**17 19 06.8**	**+0.4**
PVY	**Plav**	**81.84**	**313**	eP	**P**	**17 19 05.1**	**-1.9**
BILL	**Bilibino**	**81.87**	**21**	⇑iP	**P**	**17 19 05.4**	**-1.2**
BILL				eS	S	17 29 15.1	+0.9
BILL				pmax	pmax		
	comp=Z,89nm,2.1s,mb5.3						
BILL				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
BILL	**Bilibino**	**81.87**	**21**	⇑iP	**P**	**17 19 05.6**	**-1.0**
	comp=Z,79nm,1.5s,mb5.4						
BILL				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
FINES	**FINESS Array B**	**81.91**	**332**	P	**P**	**17 19 07.0**	**+0.1**
FINES				pmax	pmax		
	comp=Z,100nm,0.7s						
FINES				MLR	MLR		
	comp=Z,2µm,22.0s						
FINES	**FINESS Array B**	**81.91**	**332**	P	**P**	**17 19 07.0**	**+0.1**
	comp=Z,100nm,0.7s,mb5.9,baz=102,slow=6.3,SNR=499						
FINES				LR	LR	18 00 38.2	
	comp=Z,2µm,21.9s,MS5.3,baz=254,slow=39						
IVA	**Berane**	**81.94**	**313**	⇑iP	**P**	**17 19 06.1**	**-1.3**
KAF	**Kangasniemi**	**81.98**	**333**	ep	**P**	**17 19 06.4**	**-0.8**
	comp=Z,205nm,0.7s,mb6.2,baz=117,slow=5.1						
KAF	**Kangasniemi**	**81.98**	**333**	eP	**P**	**17 19 06.4**	**-0.8**
KAF				pmax	pmax		
	comp=Z,205nm,0.7s,mb6.2						
DIVS	**Divcibare**	**82.04**	**314**	⇓iP	**P**	**17 19 07.6**	**-0.3**
ULC	**Ulcinj**	**82.30**	**312**	⇑iP	**P**	**17 19 09.0**	**-0.3**
KECS	**Kecovo**	**82.34**	**319**	i P	**P**	**17 19 09.8**	**+0.5**
TTG	**Podgorica**	**82.34**	**313**	⇑iP	**P**	**17 19 08.6**	**-0.9**
PLE	**Pljevlja**	**82.36**	**314**	⇑iP	**P**	**17 19 09.7**	**+0.1**
NKY	**Niksic**	**82.58**	**313**	⇑iP	**P**	**17 19 10.2**	**-0.5**
BUM	**Brajici-Budva**	**82.59**	**313**	⇑iP	**P**	**17 19 10.7**	**0.0**
NIE	**Niedzica**	**82.60**	**320**	⇑iP	**P**	**17 19 09.8**	**-0.8**
WAR	**Warsaw**	**82.61**	**323**	eP	**P**	**17 19 11.3**	**+0.7**
WAR				MLR	MLR	17 51 58.9	
	comp=Z,1µm,34.0s,MS5.1						
PSZ	**Piszkesteto**	**82.65**	**318**	⇑iP	**P**	**17 19 10.8**	**-0.1**
PSZ				pmax	pmax		
	comp=Z,134nm,1.0s,mb5.9						
PSZ	**Piszkesteto**	**82.65**	**318**	⇑iP	**P**	**17 19 10.8**	**-0.1**
	comp=Z,134nm,1.0s,mb5.9						
PSZ	**Piszkesteto**	**82.65**	**318**	⇑iP	**P**	**17 19 11.1**	**+0.2**
UPM	**Unac-Piva**	**82.70**	**313**	⇑iP	**P**	**17 19 10.8**	**-0.5**
HCY	**Herceg Novi**	**82.91**	**313**	⇑iP	**P**	**17 19 10.2**	**-2.2**
BRY	**Bratogost**	**82.93**	**313**	⇑iP	**P**	**17 19 11.1**	**-1.3**
OJC	**Ojcow**	**83.05**	**321**	⇑iP	**P**	**17 19 13.1**	**+0.2**
OJC				eS	S	17 29 26.1	-0.3
OJC				MLR	MLR	17 58 22.2	
	comp=Z,800nm,24.5s,MS5.0						
PKSM	**Moragy**	**83.26**	**316**	⇓P	**P**	**17 19 13.7**	**-0.4**
VYHS	**Vyhne**	**83.43**	**319**	i P	**P**	**17 19 14.8**	**-0.1**
VYHS				e		17 29 28.1	
VYHS	**Vyhne**	**83.43**	**319**	i P	**P**	**17 19 14.8**	**-0.1**
VYHS				ePcP	PcP	17 19 19.2	-0.3
VYHS				eS	S	17 29 28.1	-2.1
SRO2	**Moca**	**83.63**	**318**	i P	**P**	**17 19 17.2**	**+1.3**
KOLL	**Kolacno**	**83.72**	**319**	i P	**P**	**17 19 16.9**	**+0.5**
SRO1	**Iza**	**83.73**	**318**	i P	**P**	**17 19 17.4**	**+0.9**
KEV	**Kevo**	**83.89**	**341**	ep	**P**	**17 19 17.4**	**+0.7**
	comp=Z,92nm,1.0s,mb5.9						
KEV	**Kevo**	**83.89**	**341**	eP	**P**	**17 19 17.4**	**+0.7**
KEV				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.9						
OKC	**Ostrava-Krasne**	**84.05**	**320**	⇑iP	**P**	**17 19 18.5**	**+0.5**
OKC				eSKS	SKS	17 29 36.7	+4.2
RAC	**Raciborz**	**84.05**	**320**	eP	**P**	**17 19 19.0**	**+1.0**
RAC				MLR	MLR	17 58 57.5	
	comp=Z,600nm,23.0s,MS4.9						
ORI	**Oriolo Calabro**	**84.20**	**310**	eP	**P**	**17 19 20.1**	**+1.1**
VNDA	**Vanda**	**84.20**	**169**	P	**P**	**17 19 19.2**	**+1.0**
VNDA						17 29 36.9	
VNDA				pmax	pmax		
	comp=Z,33nm,1.0s						
VNDA				MLR	MLR		
	comp=Z,1µm,20.9s						
VNDA	**Vanda**	**84.20**	**169**	P	**P**	**17 19 19.2**	**+1.0**
	comp=Z,33nm,1.0s,mb5.4,baz=297,slow=5.0,SNR=38						
VNDA				S	S	17 29 36.9	-0.5
	comp=Z,0.4nm,0.3s,baz=18,slow=14,SNR=6.8						
VNDA				LR	LR	17 51 50.4	
	comp=Z,1µm,20.9s,MS5.3,baz=309,slow=32						
VNDA	**Vanda**	**84.20**	**169**	P	**P**	**17 19 19.2**	**+1.0**
VNDA				S	S	17 29 36.9	-0.5
VNDA				LR	LR	17 51 50.4	
ARCES	**ARCESS Array B**	**84.33**	**340**	P	**P**	**17 19 19.6**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,90nm,0.9s						
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,3µm,21.0s						
ARCES	**ARCESS Array B**	**84.33**	**340**	P	**P**	**17 19 19.6**	**+0.7**
	comp=Z,90nm,0.9s,mb5.9,baz=102,slow=4.9,SNR=102						
ARCES				PP	PP	17 22 27.7	-8.2
	comp=Z,5.8nm,0.8s,baz=98,slow=6.4,SNR=2.6						
ARCES				LR	LR	18 00 28.8	
	comp=Z,3µm,21.0s,MS5.6,baz=111,slow=38						
ARE0	**ARCESS Array S**	**84.33**	**340**	eP	**P**	**17 19 19.4**	**+0.5**
ARE0				epP	pP	17 19 38.0	+3.0
SMOL	**Smolenice**	**84.36**	**319**	i P	**P**	**17 19 20.2**	**+0.6**
SMOL				e		17 19 23.5	
MORC	**Moravsky Berou**	**84.43**	**320**	eP	**P**	**17 19 20.2**	**+0.3**
MORC				e*PP	pP	17 19 38.3	+2.3
MORC				pmax	pmax		
	comp=Z,179nm,1.2s,mb6.1						
MORC	**Moravsky Berou**	**84.43**	**320**	eP	**P**	**17 19 20.1**	**+0.2**
	comp=Z,179nm,1.2s,mb6.1						
MORC				epP	pP	17 19 38.3	+2.3
ZST	**Bratislava**	**84.54**	**318**	i P	**P**	**17 19 21.1**	**+0.6**
ZST				eS	S	17 30 00.5	+19
SOP	**Sopron**	**84.85**	**318**	⇑eP	**P**	**17 19 22.4**	**+0.4**
MGR	**Morigerati**	**84.89**	**310**	eP	**P**	**17 19 22.2**	**-0.3**
KTK1	**Kautokeino**	**84.97**	**340**	⇑iP	**P**	**17 19 23.5**	**+1.3**
	comp=Z,261nm,1.5s,mb6.1						
KTK1	**Kautokeino**	**84.97**	**340**	⇑iP	**P**	**17 19 23.5**	**+1.3**
KTK1				AMb	AMB	17 19 25.9	
	comp=Z,261nm,1.5s,mb6.2						
KTK1				epP	pP	17 19 36.5	-1.8
VRAC	**Vranov**	**84.99**	**319**	P	**P**	**17 19 23.1**	**+0.4**
VRAC				pmax	pmax		
	comp=Z,14nm,0.8s						
VRAC	**Vranov**	**84.99**	**319**	P	**P**	**17 19 23.1**	**+0.3**
	comp=Z,14nm,0.8s,mb5.2,baz=80,slow=7.0,SNR=17						
FG4	**Candela**	**85.00**	**311**	eP	**P**	**17 19 24.1**	**+1.2**
GKP	**Gorka Klasztor**	**85.04**	**323**	eP	**P**	**17 19 23.0**	**+0.2**
GKP				MLR	MLR		
	comp=Z,1µm,30.5s,MS5.1						
GKP	**Gorka Klasztor**	**85.04**	**323**	eP	**P**	**17 19 23.0**	**+0.2**
	comp=Z,0.4nm,1.5s						
GKP				ePcP	PcP	17 19 25.1	-1.4
GKP				LR	LR		
	comp=Z,1µm,30.5s						
GKP	**Gorka Klasztor**	**85.04**	**323**	eP	**P**	**17 19 23.0**	**+0.2**
	comp=Z,400nm,1.5s,mb6.3						
GKP				ePcP	PcP	17 19 25.1	-1.4
GKP				MLR	MLR	17 54 37.2	
	comp=Z,1µm,30.5s,MS5.1						
SGO	**Sicignano**	**85.11**	**311**	eP	**P**	**17 19 24.0**	**+0.5**
DPC	**Dobruska-Polom**	**85.28**	**320**	⇑iP	**P**	**17 19 25.0**	**+0.9**
DPC				eSKS	SKS	17 29 43.8	+3.1
DPC				AMS	AMS	18 02 20.0	
	comp=Z,800nm,20.4s						
SBA	**Scott Base**	**85.30**	**169**	eP	**P**	**17 19 25.7**	**+2.1**
SBA				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.8						
SBA				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.4						
SBA	**Scott Base**	**85.30**	**169**	eP	**P**	**17 19 25.7**	**+2.1**
	comp=Z,80nm,1.0s,mb5.8						
SBA				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
KSP	**Ksiaz**	**85.35**	**321**	⇑eP	**P**	**17 19 25.2**	**+0.8**
KSP				epP	pP	17 19 38.8	-1.7
KSP				eS	S	17 29 49.0	-0.2
KSP				LR	LR		
	comp=Z,2µm,23.4s,MS5.4						
KSP	**Ksiaz**	**85.35**	**321**	eP	**P**	**17 19 25.1**	**+0.7**
	comp=Z,400nm,1.6s,mb6.3						
KSP				epP	pP	17 19 41.0	+0.5
KSP				eS	S	17 30 05.4	+16
KSP				MLR	MLR	17 52 25.6	
	comp=Z,2µm,34.9s,MS5.2						
UPC	**Upice**	**85.49**	**321**	⇑iP	**P**	**17 19 25.9**	**+0.8**
ARSA	**Arzberg**	**85.51**	**317**	⇑iP	**P**	**17 19 25.7**	**+0.4**
	comp=Z,222nm,1.6s,mb6.1						
BOJS	**Bojanci**	**85.54**	**316**	⇑eP	**P**	**17 19 25.4**	**-0.1**
BOJS				epP	pP	17 19 39.2	-2.4
VAE	**Valguarnera**	**85.59**	**307**	P	**P**	**17 19 26.5**	**+0.6**
	comp=Z,60nm,0.9s,mb5.8,baz=169,slow=5.8,SNR=7.0						
LJU	**Ljubljana**	**86.09**	**316**	⇑eP	**P**	**17 19 28.8**	**+0.6**
LJU				e	pP	17 19 48.5	+4.2
OBKA	**Obir**	**86.11**	**316**	⇑iP	**P**	**17 19 28.8**	**+0.5**
	comp=Z,73nm,1.2s,mb5.8						
PRU	**Pruhonice**	**86.39**	**320**	⇑iP	**P**	**17 19 30.3**	**+0.8**
PRU				eS	S	17 29 57.6	-1.6
PRU				AMS	AMS	18 00 10.0	
	comp=Z,1µm,29.1s						
MOA	**Molln**	**86.40**	**318**	⇓iP	**P**	**17 19 29.7**	**0.0**
	comp=Z,315nm,2.4s,mb6.1						
PVCC	**Panska Ves**	**86.41**	**320**	⇑iP	**P**	**17 19 30.3**	**+0.7**
KIWB	**Kanaga Island**	**86.46**	**38**	eP	**P**	**17 19 29.7**	**-0.1**
VOY	**Vojsko**	**86.53**	**316**	eP	**P**	**17 19 30.3**	**0.0**
VOY				e	pP	17 19 49.7	+3.2
BSD	**Bornholm Skovb**	**86.59**	**325**	⇑iP	**P**	**17 19 30.5**	**+0.1**
BSD				pmax	pmax		
	comp=Z,170nm,0.9s,mb6.3						
BSD				MLR	MLR		
	comp=Z,720nm,19.0s,MS5.1						
BSD	**Bornholm Skovb**	**86.59**	**325**	⇑iP	**P**	**17 19 30.5**	**+0.1**
	comp=Z,169nm,0.9s,mb6.3						
BSD				i		17 31 19.1	
	comp=Z,710nm,19.0s						
TRO	**Tromso**	**86.60**	**340**	⇑iP	**P**	**17 19 29.0**	**-1.1**
	comp=Z,173nm,1.5s,mb6.1						
TRO	**Tromso**	**86.60**	**340**	⇑iP	**P**	**17 19 29.0**	**-1.1**
TRO				AMb	AMB	17 19 31.6	
	comp=Z,173nm,1.5s,mb6.0						
TRO				epP	pP	17 19 44.5	-1.7
PTQR	**Pietraquaria**	**86.64**	**312**	eP	**P**	**17 19 31.4**	**+0.4**
AQU	**L'Aquila**	**86.66**	**312**	eP	**P**	**17 19 32.1**	**+1.0**
ROBS	**Robic**	**86.81**	**316**	⇑eP	**P**	**17 19 31.4**	**-0.3**
GEC2	**GERESS Array S**	**86.85**	**319**	eP	**P**	**17 19 32.4**	**+0.6**
GEC2				pmax	pmax		
	comp=Z,226nm,1.4s,mb6.2						
GEC2	**GERESS Array S**	**86.85**	**319**	eP	**P**	**17 19 32.4**	**+0.6**
	comp=Z,226nm,1.4s,mb6.2						
GERES	**GERESS Array B**	**86.85**	**319**	P	**P**	**17 19 32.4**	**+0.6**
GERES						17 30 03.4	
GERES				pmax	pmax		
	comp=Z,45nm,0.9s						
GERES	**GERESS Array B**	**86.85**	**319**	P	**P**	**17 19 32.4**	**+0.6**
	comp=Z,45nm,0.9s,mb5.7,baz=108,slow=4.2,SNR=202						
GERES				S	S	17 30 03.4	-0.3
	comp=Z,0.4nm,0.6s,baz=207,slow=33,SNR=2.4						
NRCA	**Norcia**	**86.90**	**313**	eP	**P**	**17 19 32.5**	**+0.3**
PTCC	**Patocco-Chiusa**	**86.93**	**316**	eP	**P**	**17 19 32.4**	**+0.1**
KHC	**Kasperske Hory**	**86.95**	**319**	⇑iP	**P**	**17 19 32.6**	**+0.3**
KHC				eSKS	SKS	17 30 00.4	+8.5
KHC				AMS	AMS	18 03 20.0	
	comp=Z,800nm,24.0s						
KBA	**Koelnbreinsper**	**86.98**	**317**	⇑iP	**P**	**17 19 32.3**	**-0.2**
	comp=Z,56nm,1.4s,mb5.6						
KBA	**Koelnbreinsper**	**86.98**	**317**	⇑iP	**P**	**17 19 32.3**	**-0.2**
KBA				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.6						
GMNA	**Gemona**	**87.00**	**316**	eP	**P**	**17 19 32.8**	**+0.1**
RUE	**Ruedersdorf**	**87.05**	**322**	⇑iP	**P**	**17 19 33.3**	**+0.6**
	comp=Z,408nm,1.3s,mb6.5						
ARV	**Arcevia**	**87.06**	**313**	eP	**P**	**17 19 33.9**	**+0.9**
FSSB	**Fossombrone**	**87.19**	**314**	eP	**P**	**17 19 34.5**	**+0.9**
MNS	**Montasola**	**87.19**	**312**	eP	**P**	**17 19 33.2**	**-0.5**
FVI	**Forni Avoltri**	**87.34**	**316**	eP	**P**	**17 19 34.4**	**+0.1**
WET	**Wettzell**	**87.41**	**319**	eP	**P**	**17 19 35.0**	**+0.5**
WET				pmax	pmax		
	comp=Z,98nm,1.0s,mb6.0						
WET	**Wettzell**	**87.41**	**319**	eP	**P**	**17 19 35.0**	**+0.5**
	comp=Z,98nm,1.0s,mb6.0						
CLL	**Collm**	**87.45**	**321**	⇑iP	**P**	**17 19 35.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,111nm,1.2s,mb6.0						
CLL	**Collm**	**87.45**	**321**	⇑iP	**P**	**17 19 35.0**	**+0.3**
CLL				i	pP	17 19 54.8	+3.9
CLL	**Collm**	**87.45**	**321**	⇑P	**P**	**17 19 35.0**	**+0.3**
	comp=Z,logA/T=2.0,mb6.0						
CLL				i *SP	sP	17 19 54.8	-2.0
CLL				e		17 22 06.0	
CLL				ePP	PP	17 23 15.0	+13
HFS	**Hagfors**	**87.66**	**330**	P	**P**	**17 19 36.1**	**+0.6**
HFS				pmax	pmax		
	comp=Z,155nm,0.9s						
HFS	**Hagfors**	**87.66**	**330**	P	**P**	**17 19 36.1**	**+0.6**
	comp=Z,155nm,0.8s,mb6.3,baz=117,slow=3.3,SNR=112						
NKC	**Novy Kostel**	**87.75**	**320**	⇑iP	**P**	**17 19 36.1**	**0.0**
CRE	**Caprese Michel**	**87.78**	**313**	eP	**P**	**17 19 36.6**	**+0.1**
MOR8	**Moi Rana**	**87.83**	**336**	⇑iP	**P**	**17 19 36.3**	**+0.1**
	comp=Z,185nm,1.5s,mb6.1						
MOR8	**Moi Rana**	**87.83**	**336**	⇑iP	**P**	**17 19 36.3**	**+0.1**
MOR8				AMb	AMB	17 19 38.4	
	comp=Z,185nm,1.6s,mb6.1						
SFI	**Santa Sofia**	**87.87**	**314**	eP	**P**	**17 19 38.4**	**+1.5**
COP	**Copenhagen**	**88.04**	**326**	⇑iP	**P**	**17 19 38.5**	**+1.1**
COP				i		17 19 44.7	
COP				pmax	pmax		
	comp=Z,170nm,0.9s,mb6.3						
COP	**Copenhagen**	**88.04**	**326**	⇑iP	**P**	**17 19 38.5**	**+1.1**
	comp=Z,169nm,0.9s,mb6.3						
COP				i		17 19 44.7	
VMG	**Vicchio**	**88.09**	**314**	eP	**P**	**17 19 39.0**	**+1.0**
CTI	**Castel Tesino**	**88.09**	**316**	eP	**P**	**17 19 38.8**	**+0.9**
WTTA	**Wattenberg**	**88.15**	**317**	⇑iP	**P**	**17 19 38.0**	**-0.1**
	comp=Z,342nm,2.4s,mb6.2						
WTTA	**Wattenberg**	**88.15**	**317**	⇑iP	**P**	**17 19 38.0**	**-0.1**
WTTA				pmax	pmax		
	comp=Z,342nm,2.4s,mb6.2						
WATA	**Walderalm**	**88.19**	**317**	⇑iP	**P**	**17 19 38.1**	**-0.2**
	comp=Z,44nm,1.1s,mb5.6						
WATA	**Walderalm**	**88.19**	**317**	⇑iP	**P**	**17 19 38.1**	**-0.2**
WATA				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.6						
SEI	**Scarperia**	**88.23**	**314**	eP	**P**	**17 19 39.4**	**+0.8**
MOX	**Moxa**	**88.30**	**320**	eP	**P**	**17 19 39.4**	**+0.7**
MOX				pmax	pmax		
	comp=Z,161nm,1.6s,mb6.0						
MOX				MLR	MLR		
	comp=Z,600nm,21.0s,MS5.0						
MOX	**Moxa**	**88.30**	**320**	eP	**P**	**17 19 39.4**	**+0.7**
	comp=Z,161nm,1.6s,mb6.0						
MOX				LR	LR		
	comp=Z,600nm,21.0s,MS5.0						
MOX	**Moxa**	**88.30**	**320**	i P	**P**	**17 19 39.4**	**+0.7**
	comp=Z,logA/T=2.0,mb6.0						
MOX				S	S	17 30 21.0	+3.8
MOX				L		18 05 32.0	
LOF	**Lofoten**	**88.35**	**338**	eP	**P**	**17 19 41.3**	**+2.7**
FUR	**Furstenfeldbru**	**88.43**	**318**	eP	**P**	**17 19 39.4**	**0.0**
FUR				pmax	pmax		
	comp=Z,91nm,1.2s,mb5.9						
FUR	**Furstenfeldbru**	**88.43**	**318**	eP	**P**	**17 19 39.4**	**0.0**
	comp=Z,91nm,1.2s,mb5.9						
SQTA	**Sankt Quirin**	**88.44**	**317**	⇓iP	**P**	**17 19 39.5**	**0.0**
	comp=Z,35nm,0.9s,mb5.6						
SQTA	**Sankt Quirin**	**88.44**	**317**	⇓iP	**P**	**17 19 39.5**	**0.0**
SQTA				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.6						
ZCCA	**Zocca**	**88.51**	**314**	eP	**P**	**17 19 41.3**	**+1.4**
GRA1	**Grafenberg Arr**	**88.51**	**320**	eP	**P**	**17 19 40.7**	**+0.9**
	comp=Z,209nm,1.3s,mb6.3						
GRA1				epP	pP	17 20 00.5	+4.5
GRA1				ePP	PP	17 23 09.2	-1.6
GRA1				LR	LR		
	comp=Z,600nm,21.3s,MS5.0						
GRF	**Grafenberg Arr**	**88.51**	**320**	eP	**P**	**17 19 40.7**	**+0.9**
GRF				e		17 23 09.2	
GRF				pmax	pmax		
	comp=Z,209nm,1.3s,mb6.3						
GRF				MLR	MLR		
	comp=Z,600nm,21.3s,MS5.0						
GRF	**Grafenberg Arr**	**88.51**	**320**	eP	**P**	**17 19 40.7**	**+0.9**
GRF				e		17 23 09.2	
GRF				pmax	pmax		
	comp=Z,209nm,1.3s,mb6.3						
GRF				MLR	MLR		
	comp=Z,600nm,21.3s,MS5.0						
GRF	**Grafenberg Arr**	**88.51**	**320**	eP	**P**	**17 19 40.7**	**+0.9**
	comp=Z,209nm,1.3s,mb6.3						
GRF				epP	pP	17 20 00.5	+4.5
GRF				ePP	PP	17 23 09.2	-1.6
GRF				LR	LR		
	comp=Z,600nm,21.3s,MS5.0						
MOTA	**Moosalm**	**88.52**	**317**	⇑iP	**P**	**17 19 39.7**	**-0.2**
	comp=Z,33nm,1.0s,mb5.6						
MOTA	**Moosalm**	**88.52**	**317**	⇑iP	**P**	**17 19 39.7**	**-0.2**
MOTA				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.6						
HSP	**Hornsund**	**88.62**	**347**	eP	**P**	**17 19 39.5**	**-0.3**
NSS	**Namsos**	**88.75**	**334**	eP	**P**	**17 19 40.1**	**-0.4**
	comp=Z,115nm,1.9s,mb5.9						
NSS	**Namsos**	**88.75**	**334**	eP	**P**	**17 19 40.1**	**-0.4**
NSS				AMb	AMB	17 19 42.3	
	comp=Z,115nm,1.9s,mb5.9						
BDI	**Bagni Di Lucca**	**88.78**	**314**	eP	**P**	**17 19 40.3**	**-0.9**
GSCL	**Gusciola**	**88.79**	**314**	eP	**P**	**17 19 42.7**	**+1.4**
SAL	**Salo**	**88.86**	**315**	eP	**P**	**17 19 43.0**	**+1.4**
MAIT	**Maitri**	**88.87**	**199**	eP	**P**	**17 19 43.8**	**+2.8**
ERBM	**Eremo**	**88.92**	**314**	eP	**P**	**17 19 43.4**	**+1.6**
SARO	**Sassorosso**	**88.92**	**314**	P	**P**	**17 19 41.2**	**-0.7**
NB2	**NORSAR Subarra**	**88.94**	**331**	P	**P**	**17 19 41.4**	**-0.1**
	comp=Z,162nm,1.2s,mb6.2,baz=96,slow=4.5						
NB2	**NORSAR Subarra**	**88.94**	**331**	P	**P**	**17 19 41.4**	**-0.1**
NB2				pmax	pmax		
	comp=Z,162nm,1.2s,mb6.2						
NB2	**NORSAR Subarra**	**88.94**	**331**	P	**P**	**17 19 41.4**	**-0.1**
	baz=96,slow=4.6						
NOA	**NORSAR Array B**	**88.94**	**331**	P	**P**	**17 19 41.5**	**0.0**
NOA						17 23 14.0	
NOA				pmax	pmax		
	comp=Z,42nm,1.0s						
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,939nm,20.9s						
NOA	**NORSAR Array B**	**88.94**	**331**	P	**P**	**17 19 41.5**	**0.0**
	comp=Z,42nm,0.9s,mb5.7,baz=95,slow=4.7,SNR=43						
NOA				PP	PP	17 23 14.0	+0.1
	comp=Z,3.1nm,0.8s,baz=90,slow=7.7,SNR=3.5						
NOA				LR	LR	18 02 41.1	
	comp=Z,939nm,20.9s,MS5.2,baz=75,slow=38						
NOA	**NORSAR Array B**	**88.94**	**331**	P	**P**	**17 19 41.5**	**-0.1**
NOA				PP	PP	17 23 14.0	+0.1
NOA				LR	LR	18 02 41.1	
BRMO	**Bormio**	**88.99**	**316**	eP	**P**	**17 19 43.0**	**+0.9**
VALM		**89.04**	**314**	P	**P**	**17 19 42.7**	**+0.3**
FUORN	**Ofenpass**	**89.07**	**316**	⇑iP	**P**	**17 19 43.5**	**+1.0**
NAO01	**NORSAR Array S**	**89.09**	**331**	eP	**P**	**17 19 42.5**	**+0.2**
	comp=Z,99nm,1.2s,mb6.0						
VINC	**Vinca**	**89.10**	**314**	P	**P**	**17 19 41.9**	**-0.9**
CLZ	**Clausthal**	**89.12**	**322**	eP	**P**	**17 19 43.4**	**+0.8**
	comp=Z,317nm,1.3s,mb6.5						
CLZ				epP	pP	17 20 03.3	+4.5
HDH	**Heidenheim**	**89.15**	**318**	⇑eP	**P**	**17 19 42.9**	**+0.1**
BACM		**89.16**	**314**	P	**P**	**17 19 42.9**	**-0.1**
GRAM		**89.17**	**314**	P	**P**	**17 19 43.7**	**+0.7**
UBR	**Uberruh**	**89.20**	**317**	eP	**P**	**17 19 43.3**	**+0.2**
BSEG	**Bad Segeberg**	**89.20**	**324**	eP	**P**	**17 19 43.9**	**+1.0**
BSEG				epP	pP	17 20 03.8	+4.6
BERNI	**Berninapass**	**89.23**	**316**	⇑iP	**P**	**17 19 44.3**	**+1.0**
CODM		**89.32**	**314**	P	**P**	**17 19 43.5**	**-0.2**
DAVOX	**Davos**	**89.34**	**317**	P	**P**	**17 19 44.6**	**+0.9**
	comp=Z,112nm,0.8s,mb6.3,baz=120,slow=4.7,SNR=109						
DAVOX	**Davos**	**89.34**	**317**	⇑iP	**P**	**17 19 44.6**	**+0.8**
DAVA	**Damuels**	**89.35**	**317**	⇑iP	**P**	**17 19 44.4**	**+0.6**
	comp=Z,253nm,1.3s,mb6.4						
SIND	**Sindeldorf**	**89.56**	**319**	⇑eP	**P**	**17 19 45.4**	**+0.7**
LIENZ	**Alp Oberkamor**	**89.61**	**317**	⇑iP	**P**	**17 19 45.7**	**+0.7**
BOB	**Bobbio (Coli)**	**89.61**	**315**	eP	**P**	**17 19 46.0**	**+0.9**
VSL	**Villasalto**	**89.61**	**309**	eP	**P**	**17 19 45.5**	**+0.3**
	comp=Z,80nm,1.3s,mb5.9						
PLONS	**Plons**	**89.68**	**317**	⇑iP	**P**	**17 19 45.9**	**+0.5**
KONO	**Kongsberg**	**89.70**	**329**	PFAKE		17 20 00.0	+15
KONO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
BUCH	**Bad Urach**	**89.72**	**318**	⇑eP	**P**	**17 19 46.0**	**+0.5**
QSPA	**South Pole Qui**	**89.80**	**180**	⇓iP	**P**	**17 19 45.1**	**-0.1**
	comp=Z,102nm,1.3s,mb6.0						
STU	**Stuttgart**	**89.82**	**319**	eP	**P**	**17 19 46.1**	**+0.1**
GUT	**Gutenstein**	**89.87**	**318**	⇑eP	**P**	**17 19 46.6**	**+0.4**
MUD	**Monsted U'grnd**	**89.89**	**326**	⇑iP	**P**	**17 19 47.5**	**+1.4**
MUD				i	pP	17 20 01.7	-0.7
MUD				pmax	pmax		
	comp=Z,96nm,1.2s,mb6.0						

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MUD                              MLR     MLR
      comp=Z,680nm,20.0s,MS5.1
MUD   Monsted U'grnd   89.89 326⇑iP      P       17 19 47.5 +1.4
      comp=Z,96nm,1.2s,mb6.0
MUD                              i       pP      17 20 01.7 -0.7
      comp=Z,680nm,20.0s
MUGIO Muggio           89.91 316⇑iP      P       17 19 45.8 -0.7
PGF   Pioggiola        89.92 312⇑iP      P       17 19 47.0 +0.4
      comp=Z,189nm,1.1s,mb6.0
PGF   Pioggiola        89.92 312⇑iP      P       17 19 47.0 +0.4
PGF                              pmax    pmax
      comp=Z,95nm,1.1s,mb6.0
LLS   Linth-Limmern    89.94 317⇑iP      P       17 19 47.0 +0.4
WEIN  Weingarten       89.96 317⇑iP      P       17 19 46.9 +0.3
DOMB  Dombas           89.99 332 eP      P       17 19 47.4 +1.0
      comp=Z,82nm,1.6s,mb5.8
DOMB  Dombas           89.99 332 eP      P       17 19 47.4 +1.0
DOMB                             AMb     AMB     17 19 49.7
      comp=Z,82nm,1.6s,mb5.8
WILA  Wila             90.01 317⇑iP      P       17 19 47.2 +0.3
STEIN Stein am Rhein   90.03 317⇑iP      P       17 19 47.2 +0.2
TOD   Tromm            90.08 319⇑eP      P       17 19 47.3 +0.1
TOD   Tromm            90.08 319⇑eP      P       17 19 47.6 +0.4
LBG   Lerchenberg      90.09 318⇑eP      P       17 19 47.6 +0.4
SPAK  Spaichingen      90.09 318⇑eP      P       17 19 47.7 +0.4
SPAK  Spaichingen      90.09 318⇑eP      P       17 19 47.9 +0.6
VAI   Varese           90.10 316 eP      P       17 19 46.8 -0.6
MUO   Muotathal        90.19 317⇑iP      P       17 19 48.5 +0.7
ZUR   Zurich           90.23 317⇑iP      P       17 19 48.3 +0.4
PCP   Pian Castagno    90.26 314  P      P       17 19 47.9 -0.2
TNS   Taunus Mts       90.31 320 eP      P       17 19 49.1 +0.8
TNS                              pmax    pmax
      comp=Z,212nm,1.0s,mb6.4
TNS   Taunus Mts       90.31 320 eP      P       17 19 49.1 +0.8
      comp=Z,212nm,1.0s,mb6.4
BNALP Bannalp          90.34 317⇑iP      P       17 19 49.0 +0.5
BFO   Black Forest     90.40 318 eP      P       17 19 48.7  0.0
BFO                              pmax    pmax
      comp=Z,78nm,0.9s,mb6.0
BFO   Black Forest     90.40 318 eP      P       17 19 48.7  0.0
      comp=Z,78nm,0.9s,mb6.0
FIN   Finale Ligure    90.50 314 eP      P       17 19 49.8 +0.5
HASLI Hasliberg        90.53 317⇑iP      P       17 19 49.8 +0.5
SULZ  Sulz-Cheisache   90.55 317⇑iP      P       17 19 49.5 +0.1
FELD  Feldberg         90.62 318⇑eP      P       17 19 50.0 +0.2
MCGN  Macugnaga        90.64 316 eP      P       17 19 50.2 +0.2
ORO   Oropa            90.65 315 eP      P       17 19 49.4 -0.6
ORX   Oropa            90.65 315  P      P       17 19 49.2 -0.8
KIZ   Kirchzarten      90.67 318⇑eP      P       17 19 50.2 +0.2
IMI   Imperia          90.73 314 eP      P       17 19 50.7 +0.3
LANF  Langenberg       90.74 319⇑eP      P       17 19 51.0 +0.7
ROB   Roburent         90.74 314  P      P       17 19 50.5 +0.1
TRAV                   90.82 315  P      P       17 19 49.2 -1.6
MONE  Monesi           90.83 314  P      P       17 19 51.0 +0.2
BALST Balsthal         90.83 317⇑iP      P       17 19 50.9 +0.1
NEGI  Negi             90.87 314  P      P       17 19 50.9 -0.2
LIBD  Limburg          90.89 318⇑eP      P       17 19 51.6 +0.6
LIBD  Limburg          90.89 318 eP      P       17 19 51.7 +0.7
WIMIS Wimmis           90.89 316⇑iP      P       17 19 51.4 +0.3
LKBD  Leukerbad        90.89 316⇑iP      P       17 19 51.7 +0.6
ABH   Alteburg         90.90 320⇑eP      P       17 19 51.8 +0.8
BBS   Basel-Blauen     90.96 317⇑eP      P       17 19 51.4  0.0
BBS   Basel-Blauen     90.96 317⇑eP      P       17 19 51.5 +0.1
SAOF  Saorge           90.97 314⇑eP      P       17 19 51.9 +0.4
DIX   Grande Dixence   91.05 316⇑iP      P       17 19 53.0 +1.2
WLS   Welschbruch      91.05 318⇑eP      P       17 19 52.0 +0.2
SBF   Sospel           91.06 314⇑iP      P       17 19 52.3 +0.4
      comp=Z,321nm,1.0s,mb6.3
SBF   Sospel           91.06 314⇑iP      P       17 19 52.3 +0.4
SBF                              pmax    pmax
      comp=Z,161nm,1.0s,mb6.3
ENR   Entracque        91.06 314  P      P       17 19 51.4 -0.5
SENIN Lac Senin        91.12 316⇑iP      P       17 19 52.8 +0.7
STV   Sta Anna Valdi   91.13 314  P      P       17 19 51.2 -1.1
RSP   Reno Superiore   91.17 315  P      P       17 19 51.5 -0.9
BHB   Bricherasio      91.17 315  P      P       17 19 50.6 -1.8
ECH   Echery           91.18 318⇑eP      P       17 19 52.5 +0.1
ODD1  Odda             91.20 330 eP      P       17 19 52.6 +0.4
      comp=Z,131nm,2.2s,mb5.9
ODD1  Odda             91.20 330 eP      P       17 19 52.6 +0.4
ODD1                             AMb     AMB     17 20 00.0
      comp=Z,131nm,2.2s,mb5.9
MOF   Molkenrain       91.20 318⇑eP      P       17 19 52.3 -0.2
RUP   Ruppelstein      91.22 320⇑eP      P       17 19 53.1 +0.6
RUP   Ruppelstein      91.22 320⇑eP      P       17 19 53.3 +0.8
LSD   Ceresole Reale   91.23 315  P      P       17 19 53.3 +0.6
GRYON Gryon            91.25 316⇑iP      P       17 19 53.3 +0.6
MVIF  Mont Vial        91.26 314 eP      P       17 19 53.6 +0.7
PZZ   Prazzo           91.29 314  P      P       17 19 52.7 -0.3
BLS5  Blasjo           91.31 329⇑iP      P       17 19 54.7 +2.0
      comp=Z,95nm,1.7s,mb5.8
BLS5  Blasjo           91.31 329⇑iP      P       17 19 54.7 +2.0
BLS5                             AMb     AMB     17 19 57.3
      comp=Z,95nm,1.7s,mb5.8
FENE  Fenestrelle      91.31 315  P      P       17 19 53.0 -0.1
TORNY Torny            91.34 317⇑iP      P       17 19 53.8 +0.6
SALAN Lac Salanfe      91.35 316⇑iP      P       17 19 53.8 +0.6
AIGLE Aigle            91.36 316⇑iP      P       17 19 53.6 +0.4
HYA   Hoyanger         91.38 331 eP      P       17 19 55.0 +2.0
      comp=Z,120nm,2.0s,mb5.9
HYA   Hoyanger         91.38 331 eP      P       17 19 55.0 +2.0
HYA                              AMb     AMB     17 19 57.9
      comp=Z,120nm,2.0s,mb5.9
HINF  Hinteralfeld     91.39 318⇑iP      P       17 19 53.2 -0.2
      comp=Z,73nm,1.1s,mb5.6
HINF  Hinteralfeld     91.39 318⇑iP      P       17 19 53.2 -0.2
HINF                             pmax    pmax
      comp=Z,36nm,1.1s,mb5.6
EMV   Vieux Emosson    91.40 316⇑iP      P       17 19 54.2 +0.7
LOMF  Lomont           91.42 317⇑eP      P       17 19 53.6 +0.1
RRL   Cesana Torines   91.51 315  P      P       17 19 53.6 -0.4
LPG   La Plagne        91.52 315⇑iP      P       17 19 54.8 +0.8
      comp=Z,189nm,0.9s,mb6.1
LPG   La Plagne        91.52 315⇑iP      P       17 19 54.8 +0.8
LPG                              pmax    pmax
      comp=Z,95nm,0.9s,mb6.1
MBDF  Montbardon       91.52 315⇑iP      P       17 19 53.9 -0.1
      comp=Z,77nm,1.0s,mb5.7
MBDF  Montbardon       91.52 315⇑iP      P       17 19 53.9 -0.1
MBDF                             pmax    pmax
      comp=Z,39nm,1.0s,mb5.7
TNA   Tin City         91.52  25 eP      P       17 19 53.4 -0.2
      comp=Z,10nm,1.3s,mb5.0
TNA                              LR      LR
      comp=Z,836nm,19.0s,MS5.2
LPL   La Plagne        91.53 315⇑iP      P       17 19 54.8 +0.7
      comp=Z,253nm,1.0s,mb6.2
LPL   La Plagne        91.53 315⇑iP      P       17 19 54.8 +0.7
LPL                              pmax    pmax
      comp=Z,126nm,1.0s,mb6.2
OG01  Vacheresse       91.55 316⇑eP      P       17 19 51.2 -2.9
BNI   Bardonecchia     91.58 315 eP      P       17 19 54.7 +0.4
BNI                              pmax    pmax
      comp=Z,52nm,1.0s,mb5.8
BNI   Bardonecchia     91.58 315 eP      P       17 19 54.7 +0.4
      comp=Z,52nm,1.0s,mb5.8
FRF   La Foret Royal   91.64 313⇑iP      P       17 19 55.1 +0.5
      comp=Z,231nm,1.0s,mb6.2
FRF   La Foret Royal   91.64 313⇑iP      P       17 19 55.1 +0.5
FRF                              pmax    pmax
      comp=Z,116nm,1.0s,mb6.2
BRANT Les Verrieres    91.67 317⇑iP      P       17 19 55.2 +0.5
STAV  Stavanger        91.71 329 eP      P       17 19 55.8 +1.3
      comp=Z,146nm,1.6s,mb6.1
STAV  Stavanger        91.71 329 eP      P       17 19 55.8 +1.3
STAV                             AMb     AMB     17 19 57.3
      comp=Z,146nm,1.6s,mb6.0
HAU   Haudompre        91.73 318⇑iP      P       17 19 55.2 +0.3
      comp=Z,405nm,1.1s,mb6.4
HAU                              eR
      comp=Z,753nm,21.5s
HAU   Haudompre        91.73 318⇑iP      P       17 19 55.2 +0.3
HAU                              pmax    pmax
      comp=Z,203nm,1.1s,mb6.4
HAU                              MLR     MLR
      comp=Z,750nm,21.5s,MS5.1
LMR   La Mourre        91.74 313 eP      P       17 19 55.4 +0.3
      comp=Z,117nm,1.0s,mb5.9
LMR   La Mourre        91.74 313 eP      P       17 19 55.4 +0.3
LMR                              pmax    pmax
      comp=Z,58nm,1.0s,mb5.9
WLF   Walferdange      91.81 320⇑iP      P       17 19 56.1 +0.9
WLF                              pmax    pmax
      comp=Z,120nm,1.1s,mb6.1
WLF   Walferdange      91.81 320⇑iP      P       17 19 56.0 +0.8
      comp=Z,120nm,1.1s,mb6.1
GIMEL Gimel            91.83 316⇑iP      P       17 19 56.0 +0.6
FOO   Floro            91.91 331 eP      P       17 19 56.4 +1.0
CABF  La Chapelle      91.95 316⇑iP      P       17 19 56.7 +0.8
      comp=Z,415nm,1.3s,mb6.3
CABF  La Chapelle      91.95 316⇑iP      P       17 19 56.7 +0.8
CABF                             pmax    pmax
      comp=Z,208nm,1.3s,mb6.3
THEF  They Montfort    91.96 318⇑eP      P       17 19 56.2 +0.2
OG25  Le Caire         92.03 314⇑eP      P       17 19 55.7 -0.7
ORIF  Oris-en-Rattie   92.15 315 eP      P       17 19 57.6 +0.7
      comp=Z,165nm,1.2s,mb5.9
ORIF                             eR
      comp=Z,783nm,21.0s
SMRF  Simiane la Rot   92.40 314⇑iP      P       17 19 59.1 +1.0
      comp=Z,283nm,1.4s,mb6.1
OG05  Jujurieux        92.41 316⇑eP      P       17 19 58.6 +0.5
MEZF  Maizieres J'vi   92.58 318⇑iP      P       17 19 59.3 +0.5
      comp=Z,232nm,1.1s,mb6.2
GIVF  Givet            92.65 320⇑iP      P       17 19 59.7 +0.6
      comp=Z,222nm,1.4s,mb6.1
GIVF  Givet            92.65 320⇑iP      P       17 19 59.7 +0.6
GIVF                             pmax    pmax
      comp=Z,111nm,1.4s,mb6.1
VIVF  Saint-Julien-l   93.01 315⇑iP      P       17 20 01.3 +0.4
      comp=Z,104nm,1.2s,mb5.8
VIVF  Saint-Julien-l   93.01 315⇑iP      P       17 20 01.3 +0.4
VIVF                             pmax    pmax
      comp=Z,52nm,1.2s,mb5.8
BAIF  Baives           93.05 320⇑iP      P       17 20 01.7 +0.8
      comp=Z,173nm,1.1s,mb6.1
BAIF  Baives           93.05 320⇑iP      P       17 20 01.7 +0.8
BAIF                             pmax    pmax
      comp=Z,87nm,1.1s,mb6.1
SMF   Signal de Mont   93.49 317⇑iP      P       17 20 03.3 +0.3
      comp=Z,189nm,1.0s,mb6.2
SMF   Signal de Mont   93.49 317⇑iP      P       17 20 03.3 +0.3
SMF                              pmax    pmax
      comp=Z,95nm,1.0s,mb6.2
SNAA  Sanae            93.50 198 eP      P       17 20 02.9 +0.4
SNAA                             pmax    pmax
      comp=Z,444nm,1.4s
SNAA  Sanae            93.50 198 LR      LR      17 56 38.1
      comp=Z,296nm,21.3s,MS4.7,baz=47,slow=32
SNAA  Sanae            93.50 198 eP      P       17 20 02.9 +0.4
      comp=Z,444nm,1.4s,mb6.7
PLDF  La Plantade      93.69 316⇑eP      P       17 20 04.6 +0.7
SSF   Saint Saulge     93.70 317⇑iP      P       17 20 04.4 +0.5
SSF                              pmax    pmax
      comp=Z,80nm,1.4s,mb6.0
SSF   Saint Saulge     93.70 317⇑iP      P       17 20 04.4 +0.5
      comp=Z,80nm,1.4s,mb6.0
AVF   Avril sur Loir   93.82 317⇑iP      P       17 20 04.9 +0.4
      comp=Z,149nm,1.2s,mb6.0
AVF   Avril sur Loir   93.82 317⇑iP      P       17 20 04.9 +0.4
AVF                              pmax    pmax
      comp=Z,74nm,1.2s,mb6.0
LBL   Lubilhac         94.00 315⇑eP      P       17 20 06.2 +0.9
AGO   Saint Agoulin    94.02 316⇑eP      P       17 20 06.0 +0.6
PYM   Petit Puy Mans   94.13 316⇑eP      P       17 20 06.4 +0.5
BGF   Bois d'Agland    94.18 317⇑iP      P       17 20 06.9 +0.8
      comp=Z,279nm,1.4s,mb6.2
BGF   Bois d'Agland    94.18 317⇑iP      P       17 20 06.9 +0.8
BGF                              pmax    pmax
      comp=Z,139nm,1.4s,mb6.2
HYF   Humbligny        94.27 317⇑iP      P       17 20 07.5 +1.0
TCF   Toulx Ste Croi   94.64 316⇑iP      P       17 20 08.9 +0.7
      comp=Z,78nm,1.4s,mb5.7
TCF   Toulx Ste Croi   94.64 316⇑iP      P       17 20 08.9 +0.7
TCF                              pmax    pmax
      comp=Z,39nm,1.4s,mb5.6
CAF   Calviac          94.86 315⇑iP      P       17 20 10.0 +0.7
      comp=Z,60nm,1.3s,mb5.6
CAF   Calviac          94.86 315⇑iP      P       17 20 10.0 +0.7
CAF                              pmax    pmax
      comp=Z,30nm,1.3s,mb5.6
MTLF  Montolieu        94.87 313⇑iP      P       17 20 09.9 +0.5
      comp=Z,50nm,0.9s,mb5.7
MTLF  Montolieu        94.87 313⇑iP      P       17 20 09.9 +0.5
MTLF                             pmax    pmax
      comp=Z,25nm,0.9s,mb5.6
RJF   Les Rejaudoux    95.21 315⇑iP      P       17 20 11.7 +0.8
      comp=Z,82nm,1.2s,mb5.7
RJF                              eR
      comp=Z,615nm,22.0s
RJF   Les Rejaudoux    95.21 315⇑iP      P       17 20 11.7 +0.8
RJF                              pmax    pmax
      comp=Z,41nm,1.2s,mb5.7
RJF                              MLR     MLR
      comp=Z,610nm,22.0s,MS5.0
JMIC  Jan Mayen        95.73 342 LR      LR      18 04 53.0
      comp=Z,581nm,21.6s,MS5.0,baz=280,slow=36
LFF   La Frestale      95.79 315⇑iP      P       17 20 14.4 +0.9
      comp=Z,80nm,1.1s,mb5.8
LFF   La Frestale      95.79 315⇑iP      P       17 20 14.4 +0.9
LFF                              pmax    pmax
      comp=Z,40nm,1.1s,mb5.8
LDF   La Druitiere     96.00 319⇑iP      P       17 20 14.6 +0.3
      comp=Z,45nm,0.9s,mb5.6
LDF   La Druitiere     96.00 319⇑iP      P       17 20 14.6 +0.3
LDF                              pmax    pmax
      comp=Z,23nm,0.9s,mb5.6
FLN   La Foliniere     96.21 319⇑iP      P       17 20 15.5 +0.2
      comp=Z,63nm,0.9s,mb5.8
FLN                              eR
      comp=Z,783nm,21.0s
FLN   La Foliniere     96.21 319⇑iP      P       17 20 15.5 +0.2
FLN                              pmax    pmax
      comp=Z,32nm,0.9s,mb5.8
FLN                              MLR     MLR
      comp=Z,780nm,21.0s,MS5.2
MFF   Saint Martin d   96.23 317⇑iP      P       17 20 15.7 +0.2
      comp=Z,64nm,1.0s,mb5.7
MFF   Saint Martin d   96.23 317⇑iP      P       17 20 15.7 +0.2
MFF                              pmax    pmax
      comp=Z,32nm,1.0s,mb5.7
DAG   Danmarks Havn    96.24 348⇓eP      P       17 20 14.4 -0.4
DAG                              pmax    pmax
      comp=Z,35nm,1.0s,mb5.7
DAG   Danmarks Havn    96.24 348⇓iP      P       17 20 14.4 -0.4
      comp=Z,35nm,1.0s,mb5.7
KBI1  Birley Grange    96.28 324 eP      P       17 20 15.2 -0.3
KBI1                             AMb     AMB     17 20 17.1
      comp=Z,67nm,1.3s,mb5.9
LHO   Holmfirth        96.43 324 eP      P       17 20 16.6 +0.4
LHO                              AMb     AMB     17 20 16.9
      comp=Z,76nm,1.3s,mb6.0
KWE   Weaver Farm      96.50 323 eP      P       17 20 17.0 +0.5
KWE                              AMb     AMB     17 20 21.8
      comp=Z,69nm,1.8s,mb5.8
GRR   Gorron           96.51 319⇑iP      P       17 20 16.9 +0.3
      comp=Z,86nm,1.3s,mb5.7
GRR   Gorron           96.51 319⇑iP      P       17 20 16.9 +0.3
GRR                              pmax    pmax
      comp=Z,43nm,1.3s,mb5.7
EKA   Eskdalemuir Ar   96.90 326  P      P       17 20 18.7 +0.4
EKA                              pmax    pmax
      comp=Z,21nm,0.9s
EKA   Eskdalemuir Ar   96.90 326  P      P       17 20 18.7 +0.4
      comp=Z,21nm,0.9s,mb5.6,baz=99,slow=5.1,SNR=23
ESK   Eskdalemuir      96.93 326 eP      P       17 20 18.6 +0.2
ESK                              pmax    pmax
      comp=Z,23nm,0.8s,mb5.7
ESK                              MLR     MLR
      comp=Z,334nm,19.0s,MS4.8
ESK   Eskdalemuir      96.93 326 eP      P       17 20 18.6 +0.1
      comp=Z,23nm,0.8s,mb5.7
ESK                              LR      LR
      comp=Z,334nm,19.0s,MS4.8
ESK   Eskdalemuir      96.93 326 eP      P       17 20 18.4 -0.1
ESK                              AMb     AMB     17 20 25.0
      comp=Z,46nm,2.7s,mb5.4
ETSF  Etsaut           96.93 313 eP      P       17 20 18.3 -0.5
      comp=Z,26nm,0.9s,mb5.3
ETSF  Etsaut           96.93 313 eP      P       17 20 18.3 -0.5
ETSF                             pmax    pmax
      comp=Z,13nm,0.9s,mb5.4
IMA   Indian Mountai   97.21  23 eP      P       17 20 20.1 +0.6
IMA                              pmax    pmax
      comp=Z,65nm,0.6s,mb6.2
IMA   Indian Mountai   97.21  23 eP      P       17 20 20.4 +0.9
MCK   McKinley         99.87  25 eP      P       17 20 31.3 -0.3
MCK                              pmax    pmax
      comp=Z,38nm,1.6s,mb5.6
MCK                              MLR     MLR
      comp=Z,378nm,19.0s,MS4.9
MCK   McKinley         99.87  25 eP      P       17 20 31.3 -0.2
      comp=Z,38nm,1.6s,mb5.6
MCK                              LR      LR
      comp=Z,378nm,19.0s,MS4.9
ESDC  Sonseca Array    99.88 310  P      P       17 20 32.3  0.0
      comp=Z,0.3nm,0.3s,baz=63,slow=3.3,SNR=5.4
ESDC                              PP     PP      17 24 29.2 -11
      comp=Z,1.7nm,0.8s,baz=106,slow=9.3,SNR=3.3
COLA  College          99.90  23  P      P       17 20 32.2 +0.5
COLA  College          99.90  23  PFAKE          17 20 40.0 +8.3
COLA                              LR     LR
      comp=Z,907nm,21.0s,MS5.2
KDAK  Kodiak Island   100.00  31  PFAKE          17 20 40.0 +7.7
KDAK                              LR     LR
      comp=Z,312nm,20.0s,MS4.8
FIB   Fire Island     100.17  27  PFAKE          17 20 40.0 +7.0
FIB                               LR     LR
      comp=Z,3µm,22.0s,MS5.7
ILAR  Eielson Array   100.32  23  P      P       17 20 33.4 -0.2
ILAR                              pmax   pmax
      comp=Z,1.0nm,0.6s
ILAR                              pmax   pmax
      comp=Z,1.0nm,0.8s
ILAR  Eielson Array   100.32  23  P      P       17 20 33.4 -0.2
      comp=Z,1.0nm,0.6s,baz=298,slow=4.4,SNR=11
ILAR                              PKKPbc         17 36 50.2
      comp=Z,0.6nm,0.8s,baz=152,slow=1.7,SNR=5.2
DIV   Divide          102.19  27  PFAKE          17 20 50.0 +8.0
DIV                               LR     LR
      comp=Z,3µm,19.0s,MS5.9
INK   Inuvik          103.30  18  P      Pdif    17 20 46.6 -0.2
INK                               pmax   pmax
      comp=Z,4.0nm,0.9s
INK   Inuvik          103.30  18  Pdiff  Pdif    17 20 46.6 -0.2
      comp=Z,3.5nm,0.9s,baz=290,slow=5.2,SNR=9.4
RES   Resolute Bay    105.12   4 eP      Pdif    17 20 56.0 +1.3
RES                               pmax   pmax
      comp=Z,4.0nm,0.8s
RES   Resolute Bay    105.12   4 ePdif   Pdif    17 20 56.0 +1.3
      comp=Z,4.2nm,0.8s
RES                              ePKP            17 25 08.7
SIT   Sitka           108.83  28  PFAKE          17 25 30.0
SIT                               LR     LR
      comp=Z,2µm,20.0s,MS5.6
TBI   Tubuai          109.88 115 eSP     SP      17 34 59.4 -12
TBI                              eSS     SS      17 41 06.9 -5.9
TBI                              eLR     LR      17 57 56.7
      comp=Z,2µm,30.5s
SFJ   Sondre          109.92 348  PFAKE          17 25 30.0
SFJ                               LR     LR
      comp=Z,3µm,19.0s,MS5.8
DLBC  Dease Lake      110.42  25  PKiKP          17 25 20.2
      comp=Z,2.9nm,1.0s,baz=329,slow=5.9,SNR=3.8
DLBC                              PP     PP      17 25 45.4 -13
      comp=Z,7.1nm,1.1s,baz=332,slow=9.9,SNR=4.6
DLBC  Dease Lake      110.42  25 ePKP    PKPdf   17 25 19.9 +2.2
PPT   Papeete         110.58 109 ePS     PS      17 35 40.9 +15
PPT                              eLR     LR      17 57 46.7
      comp=Z,792nm,23.8s
YKA   Yellowknife Ar  112.97  16  Pdiff  Pdif    17 21 30.8 +1.4
      comp=Z,0.3nm,0.6s,baz=328,slow=4.6,SNR=6.4
YKA                               PKiKP          17 25 19.4
      comp=Z,2.7nm,1.1s,baz=326,slow=4.7,SNR=9.0
YKA                               PP     PP      17 26 04.8 -12
      comp=Z,7.1nm,1.0s,baz=330,slow=7.7,SNR=10
YKA                               PKKPbc         17 36 11.1
      comp=Z,0.4nm,0.7s,baz=145,slow=3.4,SNR=8.4
OCWA  Octopus Mounta  119.74  32  PFAKE          17 25 50.0 +14
OCWA                              LR     LR
      comp=Z,3µm,20.0s,MS6.0
VDB   Vedder Mountai  119.99  30  P      PKPdf   17 25 37.6 +1.0
TAOE  Nuku Hiva Isla  120.67 100 eSP     SP      17 36 52.4 +0.1
TAOE                             eLR     LR      18 02 59.8
FCC   Fort Churchill  120.69   8 ePKIKP  PKPdf   17 25 38.1 +0.4
FCC                              e               17 27 04.6
EDM   Edmonton        120.77  22 ePKIKP  PKPdf   17 25 39.2 +1.2
EDM                              e               17 27 07.6
TBM   Table Mountain  121.98  31  P      PKPdf   17 25 42.4 +1.9
COR   Corvallis       122.17  34  PFAKE          17 25 50.0 +9.1
COR                               LR     LR
      comp=Z,740nm,21.0s,MS5.3
VLMM  Larch Mountain  122.28  33  P      PKPdf   17 25 43.5 +2.4
EPH   Ephrata         122.36  30  P      PKPdf   17 25 43.1 +1.9
VFP   Flag Point      122.73  33  P      PKPdf   17 25 44.2 +2.2
OD2   Odessa Site #2  122.77  29  P      PKPdf   17 25 43.8 +1.7
NEW   Newport         122.92  28  PKIKP  PKPdf   17 25 43.7 +1.4
NEW                                              17 27 20.1
NEW                               pmax   pmax
      comp=Z,8.0nm,0.7s
NEW                               pmax   pmax
      comp=Z,2.0nm,0.4s
NEW   Newport         122.92  28  PKP    PKPdf   17 25 43.6 +1.4
      comp=Z,8.3nm,0.7s,baz=273,slow=3.7,SNR=6.9
NEW                               PP     PP      17 27 20.1 -6.0
      comp=Z,1.8nm,0.4s,baz=129,slow=11,SNR=3.8
NEW   Newport         122.92  28 ePKPdf  PKPdf   17 25 43.5 +1.2
NEW                               LR     LR
      comp=Z,5µm,19.0s,MS6.2
FFC   Flin Flon       123.01  14 ePKIKP  PKPdf   17 25 42.8 +0.5
HBO   Huckleberry Mo  123.18  35  P      PKPdf   17 25 44.8 +1.9
HUMO  Hull Mountain   123.57  36 ePKPdf  PKPdf   17 25 46.0 +2.3
HUMO                              LR     LR
      comp=Z,2µm,20.0s,MS5.9
WALA  Waterton Lakes  123.77  25 ePKPdf  PKPdf   17 25 45.3 +1.4
KHMM  Horse Mountain  124.12  38 ePKPdf  PKPdf   17 25 46.9 +2.0
SCHQ  Schefferville   124.23 350  PKP    PKPdf   17 25 45.8 +1.1
      comp=Z,5.6nm,0.9s,baz=40,slow=3.1,SNR=9.0
SCHQ                              PP     PP      17 27 26.6 -8.3
      comp=Z,28nm,0.9s,baz=22,slow=8.4,SNR=14
SCHQ  Schefferville   124.23 350  PKP    PKPdf   17 25 45.8 +1.1
SCHQ                              PP     PP      17 27 26.6 -8.3
SCHQ                              LR     LR
      comp=Z,8µm,22.0s,MS6.3
YBH   Yreka Blue Hor  124.24  37  PKIKP  PKPdf   17 25 46.6 +1.6
YBH                               pmax   pmax
      comp=Z,6.0nm,1.0s
YBH                               pmax   pmax
      comp=Z,2.0nm,0.9s
YBH   Yreka Blue Hor  124.24  37  PKP    PKPdf   17 25 46.6 +1.6
      comp=Z,5.5nm,1.0s,baz=74,slow=2.1,SNR=7.9
YBH                               PP     PP      17 27 26.1 -9.2
      comp=Z,1.5nm,0.9s,baz=207,slow=9.5,SNR=2.3
YBH   Yreka Blue Hor  124.24  37 ePKPdf  PKPdf   17 25 46.8 +1.7
YBH                               LR     LR
      comp=Z,2µm,22.0s,MS5.7
LHEM  Herd Peak       124.60  37  P      PKPdf   17 25 47.6 +1.8
WDC   Whiskeytown Da  125.03  38 ePKIKP  PKPdf   17 25 48.2 +1.6
WDC                               MLR    MLR
      comp=Z,3µm,20.0s,MS6.0
BMO   Blue Mountains  125.23  31 ePKPdf  PKPdf   17 25 48.0 +1.1
BMO                               LR     LR
      comp=Z,5µm,20.0s,MS6.2
MSO   Missoula        125.44  27 ePKPdf  PKPdf   17 25 48.6 +1.5
MSO                               PP     PP      17 27 38.3 -4.5
MSO                               LR     LR
      comp=Z,4µm,19.0s,MS6.1
MOD   Modoc           125.56  35 ePKPdf  PKPdf   17 25 49.4 +1.9
MOD                               LR     LR
      comp=Z,4µm,20.0s,MS6.1
LBCM  Butte Creek Ri  125.60  37  P      PKPdf   17 25 49.5 +1.8
HOPS  Hopland         125.62  40  PFAKE          17 26 00.0 +12
HOPS                              LR     LR
      comp=Z,4µm,22.0s,MS6.1
CHMT  Chamberlain Mo  125.68  27 ePKPdf  PKPdf   17 25 48.6 +1.0
CHMT                             ePP     PP      17 27 40.6 -3.9
WVOR  Wild Horse Val  126.16  34 ePKIKP  PKPdf   17 25 50.9 +2.2
WVOR                              MLR    MLR
      comp=Z,5µm,19.0s,MS6.2
OHCM  Honcut          126.42  39 ePKPdf  PKPdf   17 25 50.6 +1.3
BOZ   Bozeman (W)     127.38  27  PKIKP  PKPdf   17 25 52.7 +1.7
BOZ   Bozeman (W)     127.38  27 ePKPdf  PKPdf   17 25 52.6 +1.6
BOZ                              ePP     PP      17 27 51.3 -4.1
BOZ                               LR     LR
      comp=Z,6µm,21.0s,MS6.2
MCMT  McKenzie Canyo  127.44  28 ePKPdf  PKPdf   17 25 53.1 +1.9
HLID  Hailey          127.61  30 ePKPdf  PKPdf   17 25 53.6 +2.0
HLID                              LR     LR
      comp=Z,4µm,19.0s,MS6.1
CMB   Columbia Colle  127.89  39 ePKIKP  PKPdf   17 25 54.0 +1.8
CMB                               MLR    MLR
      comp=Z,4µm,19.0s,MS6.1
DGMT  Dagmar          127.94  19 ePKPdf  PKPdf   17 25 53.5 +1.5
DGMT                             ePP     PP      17 27 55.5 -3.8
DGMT                              LR     LR
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	comp=Z,4µm,20.0s,MS6.2						
SAO	**San Andreas Ge**	**127.95**	**41**	*e*PKIKP	PKPdf	17 25 54.8	+2.4
SAO				MLR	MLR		
	comp=Z,4µm,20.0s,MS6.0						
QLMT	**Earthquake Lak**	**128.10**	**27**	*e*PKPdf	PKPdf	17 25 53.7	+1.3
QLMT				*e*PP	PP	17 27 57.5	-3.0
BMN	**Battle Mountai**	**128.28**	**35**	*e*PKPdf	PKPdf	17 25 54.7	+1.8
BMN				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
LRV	**Little Rabbit**	**128.43**	**41**	*e*PKPdf	PKPdf	17 25 55.7	+2.5
YMR	**Madison River**	**128.43**	**27**	*e*PKPdf	PKPdf	17 25 54.9	+1.8
YMR				*e*PP	PP	17 27 59.6	-3.2
YNR	**Norris Junctio**	**128.52**	**27**	*e*PKPdf	PKPdf	17 25 55.9	+2.6
YNR				*e*PP	PP	17 27 58.4	-5.1
ULM	**Lac du Bonnet**	**128.55**	**12**	PKP	PKPdf	17 25 54.3	+1.2
	comp=Z,13nm,0.7s,baz=0.9,slow=2.4,SNR=24						
ULM				PP	PP	17 27 52.7	-11
	comp=Z,15nm,1.0s,baz=345,slow=5.9,SNR=13						
ULM	**Lac du Bonnet**	**128.55**	**12**	*e*PKPdf	PKPdf	17 25 54.2	+1.1
ULM				*e*PP	PP	17 27 55.7	-7.8
ULM				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
YFT	**Old Faithful**	**128.66**	**27**	*e*PKPdf	PKPdf	17 25 57.7	+4.2
LAO	**LASA Array**	**128.75**	**22**	*e*PKPdf	PKPdf	17 25 55.9	+2.3
LAO				LR	LR		
	comp=Z,8µm,19.0s,MS6.4						
LKWY	**Lake**	**128.77**	**27**	*e*PKIKP	PKPdf	17 25 56.7	+3.0
LKWY				*e*		17 28 01.5	
LKWY				MLR	MLR		
	comp=Z,10µm,21.0s,MS6.5						
NVAR	**Mina Array Bea**	**128.94**	**37**	PKP	PKPdf	17 25 56.5	+2.3
	comp=Z,11nm,0.8s,baz=244,slow=6.2,SNR=22						
NVAR				SKPbc		17 29 12.9	
	comp=Z,3.3nm,0.8s,baz=270,slow=2.7,SNR=3.9						
OMM	**Old Mammoth Mi**	**129.02**	**39**	*e*PKPdf	PKPdf	17 25 55.6	+1.3
MNV	**Mina**	**129.03**	**37**	*e*PKIKP	PKPdf	17 25 56.8	+2.4
MNV				MLR	MLR		
	comp=Z,5µm,19.0s,MS6.2						
IMW	**Indian Meadow**	**129.04**	**27**	*e*PKPdf	PKPdf	17 25 56.5	+2.2
MOOW	**Moose Ponds**	**129.24**	**27**	*e*PKPdf	PKPdf	17 25 56.4	+1.8
TPAW	**Teton Pass**	**129.35**	**28**	*e*PKPdf	PKPdf	17 25 56.5	+1.6
TPAW				*e*PP	PP	17 28 06.0	-3.0
WUWY	**Wally Ulrich**	**129.41**	**28**	*e*PKPdf	PKPdf	17 25 57.1	+2.2
WUWY				*e*pPKPdf		17 26 12.2	
WUWY				*e*PP	PP	17 28 05.2	-4.0
LOHW	**Long Hollow**	**129.41**	**27**	*e*PKPdf	PKPdf	17 25 57.0	+2.1
LOHW				*e*PP	PP	17 28 05.0	-4.3
SNOW	**Snow King Moun**	**129.46**	**28**	*e*PKPdf	PKPdf	17 25 57.1	+2.1
SNOW				*e*PP	PP	17 28 06.2	-3.5
HVU	**Hansel Valley**	**129.74**	**31**	*e*PKIKP	PKPdf	17 25 57.7	+2.1
HVU				*e*		17 28 09.9	
TPH	**Tonopah**	**129.82**	**37**	*e*PKIKP	PKPdf	17 25 58.1	+2.2
TPH				MLR	MLR		
	comp=Z,4µm,20.0s,MS6.2						
AHID	**Auburn Hatcher**	**129.83**	**29**	PFAKE		17 26 10.0	+14
AHID				LR	LR		
	comp=Z,5µm,19.0s,MS6.2						
BGU	**Big Grassy Mou**	**130.23**	**32**	*e*PKPdf	PKPdf	17 25 58.5	+1.9
BGU				*e*SKPab		17 29 16.8	
HWUT	**Hardware Ranch**	**130.48**	**30**	*e*PKPdf	PKPdf	17 25 58.8	+1.8
BW06	**Boulder Array**	**130.55**	**27**	*e*PKPdf	PKPdf	17 25 58.5	+1.4
BW06				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
PDAR	**Pinedale Array**	**130.55**	**27**	PKP	PKPdf	17 25 58.3	+1.1
	comp=Z,4.5nm,0.7s,baz=270,slow=1.5,SNR=31						
PDAR				PP	PP	17 28 04.8	-12
	comp=Z,2.1nm,1.0s,slow=2.7,SNR=3.8						
PDAR				SKPbc		17 29 17.9	
	comp=Z,11nm,1.0s,baz=306,slow=1.2,SNR=12						
TRCR	**Troy Canyon**	**130.61**	**36**	*e*PKPdf	PKPdf	17 25 59.8	+2.4
TRCR				*e*SKPbc		17 29 18.1	
DAC	**Darwin (Calif)**	**130.72**	**39**	PFAKE		17 26 10.0	+12
DAC				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
DUG	**Dugway**	**130.87**	**32**	*e*PKIKP	PKPdf	17 25 59.7	+1.9
DUG				*e*		17 28 16.3	
DUG				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.2						
DUG	**Dugway**	**130.87**	**32**	*e*PKPdf	PKPdf	17 25 59.7	+1.9
DUG				*e*PP	PP	17 28 16.3	-2.7
DUG				*e*SKP		17 29 19.6	
DUG				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
NLU	**North Lily Min**	**131.44**	**32**	*e*PKPdf	PKPdf	17 26 00.9	+2.1
NLU				*e*SKPbc		17 29 21.6	
DAU	**Daniels Canyon**	**131.52**	**31**	*e*PKIKP	PKPdf	17 26 01.3	+2.3
EYMN	**Ely**	**131.57**	**9**	PFAKE		17 26 10.0	+11
EYMN				LR	LR		
	comp=Z,6µm,20.0s,MS6.3						
MPU	**Maple Canyon**	**131.62**	**31**	*e*PKPdf	PKPdf	17 26 00.9	+1.7
MWC	**Mount Wilson**	**131.67**	**42**	*e*PKPdf	PKPdf	17 26 01.5	+2.0
MWC				*e*SKPbc		17 29 21.8	
ARUT	**Antelope Range**	**132.23**	**35**	*e*PKIKP	PKPdf	17 26 02.7	+2.2
TMUT	**Trail Mountain**	**132.37**	**32**	*e*PKPdf	PKPdf	17 26 03.1	+2.4
MSU	**Marysvale**	**132.42**	**33**	*e*PKPdf	PKPdf	17 26 02.8	+2.0
MSU				*e*SKPbc		17 29 25.6	
NEN	**Nelson**	**132.84**	**38**	*e*PKPdf	PKPdf	17 26 04.1	+2.4
SRU	**San Rafael**	**132.87**	**31**	*e*PKIKP	PKPdf	17 26 03.3	+1.7
LDFC	**Landfair**	**133.05**	**39**	*e*PKPdf	PKPdf	17 26 03.5	+1.4
LDFC				*e*SKPbc		17 29 26.9	
PFO	**Pinyon Flat Ob**	**133.11**	**41**	PKIKP	PKPdf	17 26 05.0	+2.8
PFO	**Pinyon Flat Ob**	**133.11**	**41**	*e*PKPdf	PKPdf	17 26 02.6	+0.3
PFO				*e*SKPbc		17 29 27.1	
PFO				LR	LR		
	comp=Z,876nm,21.0s,MS5.5						
BAR	**Barrett**	**133.52**	**42**	*e*PKPdf	PKPdf	17 26 03.9	+0.8
PV10	**Paradox Valley**	**134.19**	**31**	*e*PKPdf	PKPdf	17 26 05.9	+1.8
PV10				*e*PP	PP	17 28 37.0	-3.0
PV10				*e*SKPbc		17 29 30.2	
RCBR	**Riachuelo**	**134.34**	**262**	PFAKE		17 26 20.0	+15
RCBR				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
PV01	**Paradox Valley**	**134.61**	**31**	PKPdf	PKPdf	17 26 06.2	+1.3
ISCO	**Idaho Springs**	**134.71**	**27**	*e*PKIKP	PKPdf	17 26 06.9	+1.9
ISCO				*e*		17 28 38.0	
ISCO				MLR	MLR		
	comp=Z,6µm,20.0s,MS6.3						
NCB	**Newcomb**	**135.93**	**353**	PFAKE		17 26 20.0	+13
NCB				LR	LR		
	comp=Z,6µm,22.0s,MS6.3						
SDCO	**Great Sand Dun**	**136.42**	**28**	*e*PKPdf	PKPdf	17 26 10.1	+1.9
SDCO				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
JFWS	**Jewell Farm**	**136.67**	**10**	PFAKE		17 26 20.0	+11
JFWS				LR	LR		
	comp=Z,8µm,19.0s,MS6.4						
HRV	**Harvard--Oak R**	**136.95**	**349**	PFAKE		17 26 20.0	+11
HRV				LR	LR		
	comp=Z,8µm,21.0s,MS6.4						
WES	**Weston**	**137.02**	**349**	PFAKE		17 26 20.0	+11
WES				LR	LR		
	comp=Z,8µm,20.0s,MS6.5						
TUC	**Tucson**	**137.58**	**38**	*e*PKPdf	PKPdf	17 26 12.4	+1.9
TUC				*e*SKPbc		17 29 41.4	
TUC				LR	LR		
	comp=Z,4µm,19.0s,MS6.2						
BINY	**Binghamton**	**137.88**	**354**	*e*PKPdf	PKPdf	17 26 12.4	+1.6
BINY				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
CBKS	**Cedar Bluff**	**137.95**	**22**	PFAKE		17 26 20.0	+9.0
CBKS				LR	LR		
	comp=Z,5µm,22.0s,MS6.2						
AAM	**Ann Arbor**	**137.99**	**3**	PFAKE		17 26 20.0	+9.0
AAM				LR	LR		
	comp=Z,7µm,21.0s,MS6.3						
TRQA	**Tornquist**	**138.03**	**203**	PFAKE		17 26 20.0	+8.8
TRQA				LR	LR		
	comp=Z,4µm,19.0s,MS6.2						
ANMO	**Albuquerque**	**138.14**	**32**	*e*PKHKP		17 26 03.5	
ANMO				*e*		17 26 13.9	
ANMO				MLR	MLR		
	comp=Z,4µm,19.0s						
PLCA	**Paso Flores**	**138.16**	**192**	PKP	PKPdf	17 26 13.2	+1.9
	comp=Z,7.7nm,1.2s,baz=193,slow=5.0,SNR=3.6						
PLCA				SKPbc		17 29 42.7	
	comp=Z,5.8nm,1.1s,baz=114,slow=1.7,SNR=3.0						
PLCA	**Paso Flores**	**138.16**	**192**	PKP	PKPdf	17 26 13.2	+1.9
PLCA				SKPbc		17 29 42.7	
PLCA				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
ERPA	**Erie**	**138.21**	**359**	PFAKE		17 26 20.0	+8.6
ERPA				LR	LR		
	comp=Z,6µm,20.0s,MS6.4						
KSU1	**Kansas State U**	**138.76**	**18**	*e*PKPdf	PKPdf	17 26 13.8	+1.3
KSU1				*e*PP	PP	17 29 03.7	-4.5
ACSO	**Alum Creek Sta**	**140.08**	**2**	PFAKE		17 26 30.0	+15
ACSO				LR	LR		
	comp=Z,6µm,20.0s,MS6.4						
MCWV	**Mont Chateau**	**140.66**	**358**	PFAKE		17 26 30.0	+14
MCWV				LR	LR		
	comp=Z,10µm,19.0s,MS6.6						
CCM	**Cathedral Cave**	**141.18**	**13**	*e*PP	PP	17 29 15.2	-7.6
CCM				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
MNTX	**Cornudas Mount**	**141.20**	**34**	*e*PKPpre		17 26 15.0	
MNTX				*e*PKPdf	PKPdf	17 26 19.2	+2.1
MNTX				LR	LR		
	comp=Z,3µm,19.0s,MS6.1						
WCI	**Wyandotte Cave**	**141.83**	**6**	*e*PKPpre		17 26 13.3	
WCI				*e*PP	PP	17 29 20.9	-5.8
WCI				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
WMOK	**Wichita Mounta**	**141.89**	**24**	*e*PKPpre		17 26 14.0	
WMOK				*e*PP	PP	17 29 22.3	-4.9
WMOK				LR	LR		
	comp=Z,5µm,21.0s,MS6.3						
CBN	**Corbin**	**141.97**	**355**	PFAKE		17 26 30.0	+12
CBN				LR	LR		
	comp=Z,10µm,19.0s,MS6.6						
BLA	**Blacksburg**	**143.12**	**359**	PFAKE		17 26 30.0	+12
BLA				LR	LR		
	comp=Z,10µm,19.0s,MS6.6						
GNAR	**Gosnell**	**143.45**	**12**	*e*PKPdf	PKPdf	17 26 19.0	-1.8
BDFB	**Brasilia**	**143.62**	**243**	PKP	PKPdf	17 26 20.5	-1.1
	comp=Z,7.4nm,0.9s,baz=164,slow=4.3,SNR=8.0						
WVT	**Waverly**	**143.69**	**9**	*e*PKPdf	PKPdf	17 26 19.8	-1.4
WVT				LR	LR		
	comp=Z,6µm,19.0s,MS6.4						
MIAR	**Mount Ida**	**143.90**	**17**	*e*PKPdf	PKPdf	17 26 20.7	-0.9
MIAR				LR	LR		
	comp=Z,5µm,19.0s,MS6.3						
LTX	**Lajitas**	**143.95**	**34**	*e*PKPdf	PKPdf	17 26 21.7	-0.1
LTX				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
TXAR	**Lajitas Array**	**143.95**	**34**	PKP	PKPdf	17 26 22.2	+0.3
	comp=Z,18nm,0.8s,baz=282,slow=1.5,SNR=67						
TXAR				PP	PP	17 29 39.4	-0.3
	comp=Z,3.4nm,0.9s,baz=304,slow=3.3,SNR=4.2						
TXAR				SKPbc		17 29 56.0	
	comp=Z,5.4nm,0.8s,baz=315,slow=1.8,SNR=4.3						
UALR	**University of**	**144.03**	**16**	*e*PKPdf	PKPdf	17 26 21.2	-0.6
BBSR	**BB Station**	**144.35**	**336**	*e*PKPdf	PKPdf	17 26 22.4	-0.1
BBSR				LR	LR		
	comp=Z,14µm,22.0s						
CPCT	**Cooper Cave**	**144.75**	**5**	*e*PKPdf	PKPdf	17 26 23.3	+0.1
OXF	**Oxford**	**144.98**	**12**	*e*PKPdf	PKPdf	17 26 23.9	+0.3
OXF				LR	LR		
	comp=Z,5µm,19.0s,MS6.3						
JCT	**Junction City**	**145.06**	**29**	*e*PKPdf	PKPdf	17 26 25.1	+1.3
JCT				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
JSC	**Jenkinsville**	**146.05**	**0**	*e*PKPdf	PKPdf	17 26 27.3	+1.9
NATX	**Nacogdoches**	**146.10**	**21**	*e*PKPdf	PKPdf	17 26 27.6	+2.0
NATX				LR	LR		
	comp=Z,6µm,20.0s,MS6.3						
LRAL	**Lakeview Retre**	**146.85**	**9**	PFAKE		17 26 40.0	+13
LRAL				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
GOGA	**Godfrey**	**146.85**	**3**	*e*PKPbc	PKPbc	17 26 30.1	+1.7
GOGA				LR	LR		
	comp=Z,9µm,20.0s,MS6.5						
COW	**Cow Castle Cre**	**146.95**	**359**	*e*PKPbc	PKPbc	17 26 30.4	+1.8
NHSC	**New Hope**	**147.21**	**358**	*e*PKPbc	PKPdf	17 26 31.1	+3.7
NHSC				LR	LR		
	comp=Z,10µm,21.0s,MS6.6						
HKT	**Hockley**	**147.28**	**24**	*e*PKPdf	PKPdf	17 26 29.3	+1.7
HKT				*e*PKPbc	PKPdf	17 26 32.0	+4.5
HKT				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
CJM	**Chamela**	**149.77**	**49**	⇑*i*P	PKPdf	17 26 38.9	+7.1
SFJM	**Santa Fe**	**150.63**	**45**	*i* P	PKPdf	17 26 35.0	+1.9
COLM	**Colima**	**150.98**	**48**	*i* P	PKPdf	17 26 42.4	+8.7
DWPF	**Disney**	**152.20**	**0**	PFAKE		17 26 50.0	+15
DWPF				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
LVC	**Limon Verde**	**154.38**	**207**	PKPbc	PKPdf	17 26 50.0	+12
	comp=Z,13nm,1.0s,baz=335,slow=2.2,SNR=4.3						
LVC	**Limon Verde**	**154.38**	**207**	*e*PKPbc	PKPdf	17 26 49.9	+11
LVC				*e*PKPab	PKPab	17 27 03.8	+0.2
LVC				LR	LR		
	comp=Z,16µm,22.0s						
PPM	**Popocatepetl**	**154.62**	**41**	*i* P	PKPdf	17 26 41.9	+3.1
SJG	**San Juan**	**156.79**	**321**	PFAKE		17 26 50.0	+8.3
SJG				LR	LR		
	comp=Z,10µm,19.0s						
TEIG	**Tepich**	**158.90**	**19**	PFAKE		17 27 00.0	+16
TEIG				LR	LR		
	comp=Z,5µm,20.0s,MS6.3						
SAML	**Samuel**	**159.86**	**243**	*e*PKPdf	PKPdf	17 26 47.4	+1.8
SAML				*e*PKPab	PKPab	17 27 27.1	-0.2
SAML				LR	LR		
	comp=Z,16µm,20.0s						
SDV	**Santo Domingo**	**166.33**	**310**	PKP	PKPdf	17 26 52.4	+0.5
	comp=Z,5.6nm,0.9s,baz=287,slow=5.0,SNR=3.7						
SDV				PKPab	PKPab	17 27 54.7	-0.7
	comp=Z,18nm,1.0s,baz=41,slow=3.0,SNR=8.6						
SDV				PP	PP	17 31 43.7	-0.3
	comp=Z,17nm,0.9s,baz=2.4,slow=3.9,SNR=9.9						
SDV	**Santo Domingo**	**166.33**	**310**	PKP	PKPdf	17 26 52.4	+0.5
SDV				PKPab	PKPab	17 27 54.8	-0.7
SDV				PP	PP	17 31 43.7	-0.3
SDV				LR	LR		
	comp=Z,7µm,20.0s						
NNA	**Nana**	**167.17**	**200**	PFAKE		17 27 10.0	+18
NNA				LR	LR		
	comp=Z,4µm,21.0s						
JTS	**JuntasAbangare**	**169.28**	**20**	PFAKE		17 27 10.0	+16
JTS				LR	LR		
	comp=Z,956nm,22.0s						
PAYG	**Puerto Ayora**	**170.92**	**95**	PFAKE		17 27 10.0	+15
PAYG				LR	LR		
	comp=Z,4µm,20.0s						
OTAV	**Otavalo**	**177.20**	**272**	PFAKE		17 27 10.0	+13
OTAV				LR	LR		
	comp=Z,3µm,19.0s						

IDC ***14*** *17:19:52.9±0.5, 12.94N×91.75E, mb4.4/17, mb1 4.5/18, mb1mx4.4/25, mbtmp4.4/18, ML3.6/1, Error ellipse: s-maj=27.3km s-min=12.2km az=49.0*

NEIC ***14*** *17:19:56.3±0.3, 12.91N×91.70E, mb4.6/12, Error ellipse: s-maj=10.3km s-min=6.6km az=49.0*

ISC 14 17:19:54.2±0.4**, 12.96N**±0.06×**91.72E**±0.06**, h24^{km}, h24^{km}±.2^{km}:pP-P, n50,** σ1§**12**/49**, mb4.5**/26**, 2C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**8.85**	**51**	*e*Pn	**P**	**17 22 05.7**	**+2.0**
CMAR	**Chiang Mai Arr**	**8.85**	**51**	Pn	**P**	**17 22 04.9**	**+1.2**
	0.2nm,0.3s,baz=243,slow=14,SNR=14						
CMAR				Sn	**Sn**	**17 23 32.1**	**-12**
	0.1nm,0.3s,baz=235,slow=14,SNR=3.3						
VIS	**Vishakhapatnam**	**9.38**	**301**	*i* P	**Sn**	**17 23 50.5**	**-6.3**
HYB	**Hyderabad**	**13.46**	**291**	*e*P	**P**	**17 23 08.0**	**+1.7**
HYB				*e*S	**S**	**17 25 36.0**	**-0.1**
HYB	**Hyderabad**	**13.46**	**291**	*i* P	**P**	**17 23 08.0**	**+1.7**
HYB				*e*S	**S**	**17 25 36.0**	**-0.1**
JIRN	**Jiri**	**15.51**	**341**	*e*P	**P**	**17 23 30.1**	**-3.2**
	38nm,0.9s						
PKI	**Pulchoki**	**15.69**	**339**	*e*P	**P**	**17 23 32.3**	**-3.3**
	37nm,0.8s						
DMN	**Daman**	**15.83**	**338**	*e*P	**P**	**17 23 34.2**	**-3.3**
	79nm,1.1s						
GUN	**Gumba**	**15.85**	**341**	*e*P	**P**	**17 23 35.2**	**-2.4**
	65nm,1.3s						
KKN	**Kakani**	**15.94**	**339**	*e*P	**P**	**17 23 35.1**	**-3.7**
	23nm,1.0s						
GKN	**Gorkha**	**16.36**	**337**	*e*P	**P**	**17 23 42.6**	**-1.6**
	9.2nm,0.3s						
KOLN	**Koldanda**	**16.57**	**334**	*e*P	**P**	**17 23 45.8**	**-1.1**
	34nm,0.7s						
LSA	**Lhasa**	**16.67**	**358**	*e*P	**P**	**17 23 51.3**	**+3.3**
	42nm,1.1s						
LSA				*e*pP		17 23 58.7	
ENH	**Enshi**	**23.81**	**41**	*e*P	**P**	**17 25 06.7**	**+0.3**
	14nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**33.12**	**336**	*e*P	**P**	**17 26 30.9**	**+0.2**
	3.3nm,0.9s,mb4.3						
SONM	**Songino Array**	**36.87**	**17**	P	**P**	**17 27 03.8**	**+1.2**
	2.0nm,1.0s,mb3.9,baz=192,slow=9.5,SNR=6.9						
KURK	**Kurchatov**	**39.14**	**347**	*e*P	**P**	**17 27 22.4**	**+0.8**
	6.5nm,0.6s,mb4.5						
ZAL	**Zalesovo**	**41.24**	**354**	P	**P**	**17 27 39.6**	**+0.6**
	1.8nm,0.9s,mb3.7,baz=296,slow=4.9,SNR=3.8						
BVAR	**Borovoye Array**	**43.44**	**341**	P	**P**	**17 27 57.7**	**+0.7**
	1.8nm,0.8s,mb3.8,baz=135,slow=10,SNR=4.8						
BRVK	**Borovoye**	**43.50**	**341**	*e*P	**P**	**17 27 57.5**	**+0.1**
	6.2nm,1.0s,mb4.3						
FITZ	**Fitzroy Crossi**	**45.52**	**132**	⇑*i*P	**P**	**17 28 13.5**	**-0.7**
	13nm,0.8s,mb4.9						
FITZ				*i*	pP	17 28 20.8	-0.5
GNI	**Garni**	**49.24**	**312**	P	**P**	**17 28 45.4**	**+2.5**
	19nm,1.1s,mb5.0,baz=8.4,slow=5.9,SNR=6.2						
GNI	**Garni**	**49.24**	**312**	*e*P	**P**	**17 28 43.6**	**+0.7**
	14nm,1.0s,mb5.0						
NWAO	**Narrogin (SRO)**	**51.73**	**153**	P	**P**	**17 29 02.4**	**+0.4**
	9.0nm,0.7s,mb4.8,baz=334,slow=8.4,SNR=4.7						
NWAO	**Narrogin (SRO)**	**51.73**	**153**	P	**P**	**17 29 02.4**	**+0.4**
KIV	**Kislovodsk**	**52.00**	**316**	*e*P	**P**	**17 29 04.9**	**+1.0**
	9.9nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**53.18**	**127**	P	**P**	**17 29 12.4**	**-0.7**
	5.5nm,0.8s,mb4.5,baz=300,slow=10.0,SNR=48						
WRAB	**Tennant Creek**	**53.18**	**127**	*e*P	**P**	**17 29 12.5**	**-0.6**
	14nm,0.6s,mb5.1						
WRAB				*e*pP	pP	17 29 19.4	-0.9
WB2	**Warramunga Arr**	**53.19**	**127**	⇑*i*P	**P**	**17 29 12.5**	**-0.6**
WB2				*i*	pP	17 29 19.7	-0.7
ASPA	**Alice Springs**	**55.01**	**131**	*e*P	**P**	**17 29 25.8**	**-0.7**
ASPA				*i*	pP	17 29 33.1	-0.6
ASAR	**Alice Springs**	**55.01**	**131**	P	**P**	**17 29 25.9**	**-0.7**
	4.7nm,0.7s,mb4.6,baz=308,slow=7.0,SNR=36						
BRTR	**Keskin Array B**	**57.36**	**309**	P	**P**	**17 29 42.9**	**-0.2**
	3.3nm,0.7s,mb4.5,baz=120,slow=6.8,SNR=11						
PMG	**Port Moresby**	**59.37**	**109**	P	**P**	**17 29 57.5**	**+0.1**
	12nm,0.9s,mb4.9,baz=263,slow=7.1,SNR=6.7						
AKASG	**Malin Array Be**	**62.73**	**321**	P	**P**	**17 30 18.9**	**-0.7**
	0.3nm,0.3s,mb3.9,baz=86,slow=5.6,SNR=6.5						
CTA	**Charters Tower**	**62.90**	**121**	P	**P**	**17 30 21.1**	**-0.2**
	7.6nm,0.9s,mb4.8,baz=292,slow=5.4,SNR=2.8						
MA2	**Magadan**	**63.45**	**29**	*e*P	**P**	**17 30 23.2**	**-1.1**
	7.5nm,0.9s,mb4.8						
MA2				*e*pP	pP	17 30 30.6	-1.1
MLR	**Muntele Rosu**	**63.91**	**314**	P	**P**	**17 30 28.8**	**+1.2**
	13nm,0.9s,mb5.0,baz=46,slow=1.0,SNR=11						
MLR	**Muntele Rosu**	**63.91**	**314**	P	**P**	**17 30 28.8**	**+1.2**
STKA	**Stephens Creek**	**65.33**	**134**	P	**P**	**17 30 36.5**	**-0.5**
	1.2nm,0.7s,mb4.0,baz=349,slow=5.2,SNR=2.9						
STKA	**Stephens Creek**	**65.33**	**134**	P	**P**	**17 30 36.5**	**-0.5**
FINES	**FINESS Array B**	**67.13**	**332**	P	**P**	**17 30 48.0**	**0.0**
	2.7nm,0.9s,mb4.3,baz=104,slow=7.9,SNR=8.2						
MORC	**Moravsky Berou**	**70.00**	**318**	*e*P	**P**	**17 31 06.8**	**+0.8**
	4.3nm,1.0s,mb4.3						
GERES	**GERESS Array B**	**72.48**	**317**	P	**P**	**17 31 21.8**	**+0.9**
	4.3nm,1.1s,mb4.3,baz=76,slow=5.5,SNR=9.5						
NOA	**NORSAR Array B**	**74.16**	**330**	P	**P**	**17 31 30.5**	**+0.1**
	2.0nm,0.9s,mb4.1,baz=90,slow=6.2,SNR=2.7						
LBTB	**Lobatse**	**74.67**	**239**	P	**P**	**17 31 34.9**	**+0.8**
	4.7nm,0.6s,mb4.6,baz=68,slow=4.5,SNR=8.5						
LBTB	**Lobatse**	**74.67**	**239**	*e*P	**P**	**17 31 34.9**	**+0.8**
PDAR	**Pinedale Array**	**121.21**	**18**	PKP	PKPdf	17 38 47.5	-2.7
	0.8nm,0.9s,baz=90,slow=1.5,SNR=4.6						
NVAR	**Mina Array Bea**	**121.67**	**27**	PKP	PKPdf	17 38 50.2	-0.9
	0.9nm,0.9s,baz=218,slow=1.1,SNR=4.1						
TXAR	**Lajitas Array**	**135.41**	**19**	PKhKP		17 39 10.7	
	0.1nm,0.4s,baz=47,slow=24,SNR=2.5						
PLCA	**Paso Flores**	**148.26**	**206**	PKPbc	PKPdf	17 39 41.5	+1.8
	1.8nm,0.8s,baz=67,slow=4.5,SNR=4.8						

IDC 14 17:56:12.3±4.0**, 5.59S**×**130.81E, mb3.4**/1**, mb1 3.9**/3**, mb1mx3.7**/12**, mbtmp3.7**/3**, ML3.6**/2**, Error ellipse: s-maj=141.7km s-min=30.7km az=62.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.68**	**167**	Pn	P	17 59 41.7	-1.6
	0.2nm,0.3s,baz=350,slow=13,SNR=14						
ASAR	**Alice Springs**	**18.22**	**171**	P	P	18 00 26.4	-2.1
	0.6nm,0.3s,baz=350,slow=10,SNR=72						
CMAR	**Chiang Mai Arr**	**39.47**	**308**	P	P	18 03 44.7	-1.6
	0.5nm,0.8s,baz=132,slow=8.6,SNR=5.1						

TIF ***14*** *18:00:26.2, 40.18N×41.98E, h3^{km}±2^{km}*

ISK ***14*** *18:00:27.9, 40.20N×41.99E, h8^{km}, MD3.6, ML3.6*

CSEM ***14*** *18:00:27.8±0.1, 40.18N×41.93E, h5^{km}, MD3.6, Error ellipse: s-maj=3.2km s-min=3.1km az=160.0*

NSSP ***14*** *18:00:42.5, 39.51N×44.02E, h13^{km}, ML3.2*

ISC 14 18:00:28.2±0.9**, 40.20N**±0.03×**42.00E**±0.05**, h2^{km}**±8^{km}**, n22,** σ1§**02**/30**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZM	**Erzurum**	**0.57**	**240**	*i* PG	**Pg**	**18 00 39.2**	**-0.4**
KARS	**Kars**	**0.93**	**63**	PG	**Pg**	**18 00 46.3**	**-0.5**
VRT	**Varto**	**1.12**	**199**	PN	**Pn**	**18 00 48.9**	**-2.0**
VRT				SN	**Sn**	**18 01 06.5**	**-0.6**
BCA	**Borcka**	**1.28**	**347**	PN	**Pn**	**18 00 52.8**	**-0.4**
BCA				SN	**Sn**	**18 01 10.8**	**-0.3**
VNNZ	**Vanand**	**1.40**	**93**	⇓P	**Pb**	**18 00 55.2**	**+0.4**
VNNZ				S	**Sb**	**18 01 08.1**	**-4.9**
KAMZ	**Kamo**	**1.61**	**66**	P	**Pn**	**18 00 54.6**	**-3.3**
EZC	**Erzincan**	**1.74**	**256**	*e*PN	**Pn**	**18 01 03.9**	**+4.2**
AMBZ	**Amberd**	**1.74**	**83**	P	**Pn**	**18 01 00.3**	**+0.6**
BINT	**Bingol**	**1.76**	**222**	PN	**Pn**	**18 00 58.9**	**-1.1**
VANB	**Van**	**1.93**	**146**	*e*PN	**Pn**	**18 01 02.2**	**-0.2**
GUMT	**Gumushane**	**1.94**	**279**	*e*PN	**Pn**	**18 01 02.2**	**-0.4**
TVAN	**Van**	**1.99**	**146**	*i* P	**Pn**	**18 01 04.3**	**+1.0**
TVAN				*i* S	**Sn**	**18 01 27.1**	**-2.0**
BTMT	**Batman**	**2.04**	**191**	*e*PN	**Pn**	**18 01 04.5**	**+0.5**
VANT	**Van**	**2.05**	**148**	*e*PN	**Pn**	**18 01 03.9**	**-0.3**
GNI	**Garni**	**2.10**	**90**	*e*PN	**Pn**	**18 01 03.9**	**-1.0**
BEST	**Besiri**	**2.37**	**194**	*i* P	**Pn**	**18 01 09.6**	**+0.9**
BEST				*i* S	**Sn**	**18 01 40.9**	**+2.1**
PTK	**Pertek**	**2.40**	**238**	*e*PN	**Pn**	**18 01 09.5**	**+0.3**
TI2	**Plekhanov**	**2.59**	**53**	*i* P	**Pn**	**18 01 12.8**	**+1.0**
	50nm,0.4s						
MTA	**Mtatsminda**	**2.59**	**54**	P	**Pn**	**18 01 12.2**	**+0.3**
MTA				S	**Sg**	**18 01 56.2**	**+1.7**
ONI	**Oni**	**2.62**	**24**	P	**Pn**	**18 01 13.4**	**+1.1**
ONI				S	**Sg**	**18 01 54.2**	**-1.2**
DIY	**Diyarbakir**	**2.68**	**212**	*e*PN	**Pn**	**18 01 12.8**	**-0.4**
ELZG	**Elazig**	**2.89**	**235**	*i* P	**Pn**	**18 01 17.0**	**+0.9**
ELZG				*i* S	**Sb**	**18 01 57.0**	**+0.7**

BGS ***14*** *18:05:48.7, 15.63N×64.06W, h10^{km}, mb5.6*

LDG ***14*** *18:05:56.0±0.1, 15.86N×61.83W, h10^{km}, Mb5.7/37, Ms5.6/8, Error ellipse: s-maj=9.4km s-min=6.1km az=129.0*

IGIL ***14*** *18:05:57.5, 15.65N×61.66W, h0^{km}, MS5.8*

TRN ***14*** *18:05:57.5, 15.84N×61.54W, h13^{km}, MD5.8*

IDC ***14*** *18:05:57.5±0.3, 15.78N×61.66W, mb5.3/24, mb1 5.5/26, mb1mx5.4/28, mbtmp5.3/26, ML6.0/2, MS5.5/23, Ms1 5.5/23, ms1mx5.3/28, Error ellipse: s-maj=6.2km s-min=5.5km az=100.0*

MOS ***14*** *18:05:58.3±1.0, 16.04N×61.70W, h10^{km}, mb5.7/125, MS5.5/77, Error ellipse: s-maj=4.2km s-min=3.6km az=57.7*

BJI ***14*** *18:05:58.8, 15.80N×61.70W, h11^{km}, mB6.1, Ms6.0, Msz5.8*

NEIC ***14*** *18:05:59.3±0.1, 15.78N×61.74W, mb5.6/202, ME5.5, MS5.5/137, MW5.8, MD6.1(RSPR), MD5.8(TRN), Error ellipse: s-maj=3.2km s-min=2.3km az=205.0 Broadband fault plane solution: P waves. NP1: ϕ_s330°, δ45°, λ-90°. NP2: ϕ_s150°, δ45°, λ-90°. Principal axes: T Plg0°, Azm60°; N Plg0°, Azm0°; P Plg90°, Azm0°; Moment Tensor Solution. s38 Moment tensor: Scale 10^{17} Nm; M_{rr}-7.11; $M_{\theta\theta}$2.20; $M_{\phi\phi}$4.91; $M_{r\theta}$2.00; $M_{\theta\phi}$-1.76; $M_{\phi r}$-2.33; Best double couple: $M_0$7.1×10^{17} NP1: ϕ_s158°, δ33°, λ-82°. NP2: ϕ_s328°, δ58°, λ-95°. Principal axes: T 6.44, Plg12°, Azm62°; N 1.39, Plg4°, Azm331°; P -7.82, Plg77°, Azm223°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] at Portsmouth and [IV] at Roseau, Dominica. Also felt [V] at Pointe-a-Pitre, Guadeloupe. Felt on Antigua, *Dominica, Guadeloupe, Martinique, Nevis, Saint Lucia and Saint Vincent.*

*HRVD **14** 18:05:59.3±0.1, 15.89N×61.56W, h12^{km}, MW5.8/71, Centroid moment Tensor Solution. LP body waves: s62,c124;Mantle waves: s71,c246; Half duration: $2^{s}0$ Moment tensor: Scale 10^{17}Nm; M_{rr}-6.71±.06; $M_{\theta\theta}$2.82±.06; $M_{\phi\phi}$3.89±.07; $M_{r\theta}$-1.30±.17; $M_{\theta\phi}$-3.59±.05; $M_{\phi r}$0.23±.19; Best double couple: $M_0$6.976×10^{17} NP1: ϕ_s326°,δ41°,λ-79°. NP2:ϕ_s132°,δ50°,λ-99°. Principal axes: T 7.061, Plg4°, Azm229°; N -.171, Plg7°, Azm138°; P -6.891, Plg82°, Azm350°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*RSPR **14** 18:06:03.0, 14.90N×62.40W, h25^{km}±69^{km}, MD6.1/10, MD6.1/10*

ISC 14 18:05:58.7±0.4**, 15.84N**±0.02×**61.73W**±0.02**, h17^{km}**±2^{km}**, h14^{km}**±1.3^{km}**:pP-P, n831,** σ1^{s}**04**/758**, mb5.5**/243**, MS5.5**/175**, 49C-20D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCG	**Saint Claude**	0.20	14	⇑*i*P	Pb	18 06 04.2	+0.6
DOG	**Dongo Capester**	0.22	29	*e*P	Pb	18 06 03.9	0.0
BCG	**Bois Riant Cap**	0.27	23	*e*P	Pb	18 06 04.7	0.0
PSDMZ	**Portsmouth**	0.37	134	⇑*i*P	Pb	18 06 04.7	-1.7
BBL	**Barber's Block**	0.40	141	⇑*e*P	Pb	18 06 05.2	-1.7
BBL	**Barber's Block**	0.40	141	⇑*e*P	Pb	18 06 06.2	-0.6
MGG	**Marie-Galante**	0.41	79	⇑*e*P	Pb	18 06 04.7	-2.3
DLVT	**Layou Valley**	0.51	141	*e*P	Pb	18 06 09.3	+0.5
DLVT	**Layou Valley**	0.51	141	*e*	Pb	18 06 09.3	+0.5
DLVT				*e*S	Sb	18 06 15.7	-0.1
SEG	**Port Louis**	0.60	21	⇑*i*P	Pb	18 06 10.0	-0.3
MDN	**Morne-Daniel**	0.61	148	*e*P	Pb	18 06 10.3	-0.2
MDN				*e*S	Sb	18 06 19.9	+1.4
DBCT	**Belle View Cho**	0.67	147	*e*P	Pb	18 06 11.4	-0.1
DSHT	**Scott's Head**	0.71	151	*e*P	Pb	18 06 12.0	-0.1
DSTT	**Stowe**	0.72	145	*e*P	Pb	18 06 11.9	-0.3
BPA	**Boggy Peak**	1.21	354	*e*P	Pb	18 06 20.9	+0.2
BPA				*e*S	Sb	18 06 40.8	+4.9
CPB	**Codrington**	1.79	357	⇓*i*P	Pn	18 06 29.8	+0.5
STAT	**Sint Eustatius**	2.04	324	*e*P	Pn	18 06 36.2	+3.5
SVV	**Soufriere Volc**	2.55	169	*e*P	Pn	18 06 39.4	-0.8
STMA	**St. Maarten, A**	2.56	329	*e*P	Pn	18 06 42.7	+2.5
STMA				*e*S	Sn	18 07 18.3	+7.1
SVB	**Belmont**	2.59	170	*e*P	Pn	18 06 42.5	+1.9
SVB				*e*S	Sn	18 07 13.4	+1.3
BBSP	**Saint Philip**	3.50	141	*e*P	Pn	18 06 56.9	+3.4
GRSS	**Sisters**	3.52	178	*e*P	Pn	18 06 54.2	+0.3
GRIC	**Isle de Caille**	3.53	178	*e*P	Pn	18 06 54.9	+0.8
GRHS	**Sauteurs**	3.59	179	*e*P	Pn	18 06 56.0	+1.1
GRW	**Mount Saint Ca**	3.66	179	*e*P	Pn	18 06 56.7	+0.9
MTP	**Monte Pirata**	4.29	302	⇑*e*P	Pn	18 07 05.6	+0.7
HUMP	**Col San Antoni**	4.56	301	⇑*e*P	Pn	18 07 14.3	+5.7
CPD	**Cerro la Pandu**	4.56	299	⇑*e*P	Pn	18 07 09.5	+0.8
CPD				*e*S	Sn	18 08 01.7	-0.3
CBYP	**Canovanas**	4.63	302	⇓*e*P	Pn	18 07 15.7	+6.1
TPR	**Prospect**	4.71	169	*e*P	Pn	18 07 10.9	0.0
TPR				*e*S	Sn	18 08 06.3	+0.5
BOT	**Bacolet**	4.75	168	*e*P	Pn	18 07 12.1	+0.8
BOT				*e*S	Sn	18 08 06.8	+0.3
SJG	**San Juan**	4.80	299	⇑*e*P	Pn	18 07 13.0	+1.0
SJG				*e*S	Sn	18 08 07.1	-0.7
SJG	**San Juan**	4.80	299	⇑*e*P	Pn	18 07 12.8	+0.9
SJG	**San Juan**	4.80	299	*e*S	Sn	18 08 09.3	+1.5
SJG	**San Juan**	4.80	299	P	Pn	18 07 12.7	+0.7
SJG						18 08 08.3	
SJG				pmax	pmax		
	comp=Z,168nm,0.3s						
SJG				smax			
	comp=N,348nm,0.3s						
SJG				MLR	MLR		
	comp=Z,17µm,21.4s						
SJG	**San Juan**	4.80	299	Pn	Pn	18 07 12.7	+0.7
	comp=Z,168nm,0.3s,baz=188,slow=2.5,SNR=54						
SJG				Sn	Sn	18 08 08.3	+0.5
	comp=Z,348nm,0.3s,baz=311,slow=12,SNR=6.4						
SJG				LR	LR	18 08 21.5	
	comp=Z,17µm,21.4s,baz=142,slow=30						
SJG	**San Juan**	4.80	299	⇑*e*P	Pn	18 07 12.8	+0.9
SJG				*e*S	Sn	18 08 09.3	+1.5
CSB	**Colonia Sabana**	4.88	301	⇑*e*P	Pn	18 07 14.3	+1.0
CELP	**Cerrillos**	5.15	296	⇑*e*P	Pn	18 07 17.2	+0.3
TRN	**Trinidad (W)**	5.17	176	*e*P	Pn	18 07 18.5	+1.3
TRN				*e*S	Sn	18 08 15.3	-1.8
PORP	**Portuguez**	5.19	296	⇑*e*P	Pn	18 07 17.7	+0.2
TBH	**Brigand Hill**	5.36	173	*e*P	Pn	18 07 25.3	+5.4
AOPR	**Arecibo Observ**	5.41	298	⇓*e*P	Pn	18 07 21.6	+1.0
AOPR				*e*S	Sn	18 08 23.1	-0.2
LRS	**Lares**	5.47	297	⇑*e*P	Pn	18 07 21.9	+0.4
LRS				*e*S	Sn	18 08 22.2	-2.5
TPP	**Pointe-a-Pierr**	5.49	177	*e*P	Pn	18 07 26.4	+4.6
TPP				*e*S	Sn	18 08 06.3	-19
MGP	**Maguayo**	5.56	294	⇓*e*P	Pn	18 07 22.5	-0.3
MGP				*e*S	Sn	18 08 22.5	-4.6
SDV	**Santo Domingo**	11.10	233	Pn	P	18 08 36.4	-3.5
	comp=Z,7.0nm,0.3s,baz=76,slow=8.4,SNR=23						
SDV				Sn	S	18 10 44.9	+0.2
	comp=Z,3.5nm,0.3s,baz=45,slow=22,SNR=2.5						
SDV				LR	LR	18 13 11.4	
	comp=Z,45µm,20.4s,baz=70,slow=39						
SDV	**Santo Domingo**	11.10	233	*e*P	P	18 08 36.3	-3.6
GWJ	**Greenwich**	14.52	281	⇓*e*P	P	18 09 30.5	+5.0
STH	**Stony Hill**	14.60	281	⇓*e*P	P	18 09 31.4	+4.9
CVJ	**Coleyville**	15.30	281	⇓*e*P	P	18 09 40.0	+4.3
MCJ	**Malvern**	15.41	280	⇑*e*P	P	18 09 43.7	+6.5
NEJ	**Negril**	16.05	281	⇑*e*P	P	18 09 44.7	-0.8
BBSR	**BB Station**	16.68	351	*e*P	P	18 09 48.2	-5.1
	comp=Z,89nm,0.5s						
BBSR				*e*S	S	18 12 41.3	-16
DWPF	**Disney**	21.94	307	*e*P	P	18 10 51.7	-1.6
	comp=Z,275nm,1.0s,mb5.6						
DWPF				LR	LR		
	comp=Z,2µm,19.0s,MS4.5						
OTAV	**Otavalo**	22.64	228	*e*P	P	18 11 00.5	+0.1
	comp=Z,316nm,1.4s,mb5.5						
OTAV				LR	LR		
	comp=Z,36µm,20.0s,MS5.8						
JTS	**JuntasAbangare**	23.27	259	P	P	18 11 08.8	+2.2
JTS				S	S	18 15 21.7	+7.7
JTS				pmax	pmax		
	comp=Z,41nm,1.0s						
JTS				smax			
	comp=N,2.0nm,0.5s						
JTS				MLR	MLR		
	comp=Z,6µm,19.2s						
JTS	**JuntasAbangare**	23.27	259	P	P	18 11 08.8	+2.2
	comp=Z,41nm,0.9s,mb4.8,baz=76,slow=3.2,SNR=15						
JTS				S	S	18 15 21.7	+7.7
	comp=Z,2.2nm,0.5s,baz=110,slow=23,SNR=1.9						
JTS				LR	LR	18 19 30.7	
	comp=Z,6µm,19.2s,MS5.1,baz=296,slow=35						
JTS	**JuntasAbangare**	23.27	259	*e*P	P	18 11 07.7	+1.1
	comp=Z,219nm,1.5s,mb5.4						
JTS				LR	LR		
	comp=Z,3µm,22.0s,MS4.7						
CSU	**Charleston Sou**	23.82	319	*e*P	P	18 11 12.8	+1.0
RGRS	**Roger Stewart**	23.84	319	*e*P	P	18 11 14.3	+2.4
TWB	**Tillmans-White**	23.92	319	*e*P	P	18 11 13.8	+1.1
NHSC	**New Hope**	23.96	319	*e*P	P	18 11 15.1	+1.9
	comp=Z,644nm,1.6s,mb5.8						
NHSC				LR	LR		
	comp=Z,10µm,21.0s,MS5.3						
HBF	**Harts Bluff**	23.98	319	*e*P	P	18 11 14.5	+1.2
COW	**Cow Castle Cre**	24.47	319	*e*P	P	18 11 20.3	+2.2
SAML	**Samuel**	24.67	183	*e*P	P	18 11 18.6	-1.6
	comp=Z,292nm,1.2s,mb5.7						
SAML				LR	LR		
	comp=Z,16µm,20.0s,MS5.5						
JSC	**Jenkinsville**	25.42	320	*e*P	P	18 11 27.3	+0.2
TEIG	**Tepich**	25.60	284	*e*P	P	18 11 27.3	-1.6
	comp=Z,35nm,0.8s,mb4.9						
TEIG				*e*PcP	PcP	18 14 59.4	-1.2
TEIG				LR	LR		
	comp=Z,5µm,20.0s,MS5.0						
CBN	**Corbin**	26.20	331	*e*P	P	18 11 34.8	+0.5
	comp=Z,256nm,0.9s,mb5.8						
CBN				LR	LR		
	comp=Z,10µm,19.0s,MS5.4						
GOGA	**Godfrey**	26.30	316	*e*P	P	18 11 35.6	+0.3
GOGA				pmax	pmax		
	comp=Z,97nm,0.8s,mb5.4						
GOGA				MLR	MLR		
	comp=Z,7µm,20.0s,MS5.2						
GOGA	**Godfrey**	26.30	316	*e*P	P	18 11 35.6	+0.3
	comp=Z,97nm,0.8s,mb5.4						
GOGA				LR	LR		
	comp=Z,7µm,20.0s,MS5.2						
SDMD	**Soldier's Deli**	26.95	334	*e*P	P	18 11 41.6	+0.4
BLA	**Blacksburg**	26.97	326	P	P	18 11 42.4	+1.0
BLA				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.4						
BLA				MLR	MLR		
	comp=Z,10µm,19.0s,MS5.4						
BLA	**Blacksburg**	26.97	326	*e*P	P	18 11 41.7	+0.2
	comp=Z,126nm,1.0s,mb5.4						
BLA				LR	LR		
	comp=Z,10µm,19.0s,MS5.4						
BRNJ	**Basking Ridge**	27.15	338	*e*P	P	18 11 42.8	-0.2
ELN	**Prospectdale**	27.16	325	*e*P	P	18 11 43.8	+0.6
PAL	**Palisades**	27.21	340	*e*P	P	18 11 41.3	-2.3
PAL				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.1						
PAL	**Palisades**	27.21	340	*e*P	P	18 11 41.3	-2.3
	comp=Z,66nm,1.1s,mb5.1						
FWV	**Forest Hill**	27.45	326	*e*P	P	18 11 45.9	+0.1
WES	**Weston**	27.71	345	P	P	18 11 48.4	+0.3
WES				pmax	pmax		
	comp=Z,89nm,1.1s,mb5.3						
WES				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.3						
WES	**Weston**	27.71	345	*e*P	P	18 11 48.0	-0.1
	comp=Z,89nm,1.2s,mb5.3						
WES				LR	LR		
	comp=Z,8µm,20.0s,MS5.3						
HRV	**Harvard--Oak R**	27.89	344	*e*P	P	18 11 51.1	+1.4
HRV				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.9						
HRV				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.3						
HRV	**Harvard--Oak R**	27.89	344	*e*P	P	18 11 51.1	+1.4
	comp=Z,25nm,0.8s,mb4.9						
HRV				LR	LR		
	comp=Z,8µm,21.0s,MS5.3						
CPCT	**Cooper Cave**	28.23	318	*e*P	P	18 11 52.8	0.0
MCWV	**Mont Chateau**	28.52	330	*e*P	P	18 11 56.5	+1.0
	comp=Z,87nm,1.0s,mb5.4						
MCWV				LR	LR		
	comp=Z,10µm,19.0s,MS5.5						
LRAL	**Lakeview Retre**	28.56	311	PFAKE		18 12 10.0	+14
LRAL				LR	LR		
	comp=Z,7µm,21.0s,MS5.2						
FFD	**Franklin Falls**	28.81	345	*e*P	P	18 11 57.7	-0.3
BINY	**Binghamton**	28.99	338	*e*P	P	18 11 59.9	+0.2
	comp=Z,80nm,1.2s,mb5.3						
BINY				LR	LR		
	comp=Z,7µm,20.0s,MS5.2						
EMMW	**East Machias**	29.19	352	PFAKE		18 12 10.0	+8.6
EMMW				LR	LR		
	comp=Z,32µm,22.0s,MS5.9						
HNH	**Hanover**	29.20	344	*e*P	P	18 12 01.8	+0.3
	comp=Z,3.0nm,0.8s						
ACCN	**Adirondack Com**	29.29	342	*e*P	P	18 12 02.0	-0.3
WVL	**Waterville**	29.41	348	PFAKE		18 12 20.0	+17
WVL				LR	LR		
	comp=Z,28µm,19.0s,MS5.9						
MIV	**Mineville/With**	29.88	343	*e*P	P	18 12 07.6	0.0
NCB	**Newcomb**	29.99	342	*e*P	P	18 12 09.1	+0.5
	comp=Z,55nm,0.8s,mb5.3						
NCB				LR	LR		
	comp=Z,6µm,22.0s,MS5.2						
GENY	**Geneseo**	30.17	336	*e*P	P	18 12 10.0	-0.2
ERPA	**Erie**	30.54	333	*e*P	P	18 12 13.6	+0.2
	comp=Z,121nm,0.8s,mb5.8						
ERPA				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
ACSO	**Alum Creek Sta**	30.54	327	*e*P	P	18 12 13.6	+0.1
	comp=Z,65nm,0.7s,mb5.6						
ACSO				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
WVT	**Waverly**	30.80	316	P	P	18 12 14.3	-1.5
WVT				pmax	pmax		
	comp=Z,93nm,0.7s,mb5.7						
WVT				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.2						
WVT	**Waverly**	30.80	316	*e*P	P	18 12 15.0	-0.8
	comp=Z,93nm,0.7s,mb5.7						
WVT				LR	LR		
	comp=Z,6µm,19.0s,MS5.2						
OXF	**Oxford**	31.04	312	P	P	18 12 17.6	-0.3
OXF				pmax	pmax		
	comp=Z,220nm,0.9s,mb6.0						
OXF				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.2						
OXF	**Oxford**	31.04	312	*e*P	P	18 12 17.3	-0.6
	comp=Z,219nm,0.9s,mb6.0						
OXF				LR	LR		
	comp=Z,5µm,19.0s,MS5.2						
WCI	**Wyandotte Cave**	31.07	321	P	P	18 12 18.2	+0.1
WCI				pmax	pmax		
	comp=Z,95nm,0.9s,mb5.6						
WCI				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.6						
WCI	**Wyandotte Cave**	31.07	321	*e*P	P	18 12 17.8	-0.3
	comp=Z,95nm,0.8s,mb5.7						
WCI				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
PQI	**Presque Isle**	31.19	352	PFAKE		18 12 30.0	+11
PQI				LR	LR		
	comp=Z,27µm,20.0s,MS5.9						
NNA	**Nana**	31.43	209	P	P	18 12 18.5	-3.0
	comp=Z,30nm,0.8s,mb5.2						
NNA				LR	LR		
	comp=Z,4µm,21.0s,MS5.0						
UTMT	**University of**	31.61	315	*e*P	P	18 12 23.7	+0.7
	comp=Z,870nm,1.1s,mb6.5						
SIV	**San Ignacio**	31.63	179	P	P	18 12 21.0	-2.3
HALT	**Halls**	31.70	314	*e*P	P	18 12 24.0	+0.2
USIN	**University of**	31.76	319	*e*P	P	18 12 23.1	-1.1
	comp=Z,141nm,0.8s,mb5.8						
BLO	**Bloomington**	31.80	322	*e*P	P	18 12 24.5	-0.1
BLO				pmax	pmax		
	comp=Z,79nm,0.8s,mb5.6						
BLO	**Bloomington**	31.80	322	*e*P	P	18 12 24.5	-0.1
	comp=Z,79nm,0.8s,mb5.6						
GLAT	**Glass**	31.86	315	*e*P	P	18 12 25.4	+0.3
GNAR	**Gosnell**	32.20	314	*e*P	P	18 12 27.9	-0.2
SADO	**Sadowa**	32.38	337	P	P	18 12 28.8	-0.8
	comp=Z,96nm,0.8s,mb5.7,baz=173,slow=7.8,SNR=31						
SADO				PcP	PcP	18 15 17.2	+0.1
	comp=Z,6.9nm,0.6s,baz=239,slow=3.4,SNR=3.7						
SADO				S	S	18 17 46.9	+5.1
	comp=Z,12nm,1.1s,baz=176,slow=7.2,SNR=2.1						
AAM	**Ann Arbor**	32.41	329	P	P	18 12 31.1	+1.3
AAM				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.8						
AAM				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.3						
AAM	**Ann Arbor**	32.41	329	*e*P	P	18 12 30.2	+0.4
	comp=Z,135nm,0.9s,mb5.8						
AAM				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
HBAR	**Harrisburg**	32.44	313	*e*P	P	18 12 29.9	-0.3
PAYG	**Puerto Ayora**	32.63	242	*e*P	P	18 12 31.9	-0.1
	comp=Z,108nm,1.0s,mb5.7						
PAYG				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
UALR	**University of**	33.29	310	*e*P	P	18 12 37.2	-0.4
	comp=Z,108nm,1.1s,mb5.7						
RCBR	**Riachuelo**	33.43	128	*e*P	P	18 12 35.0	-4.0
	comp=Z,104nm,1.5s,mb5.5						
RCBR				LR	LR		
	comp=Z,3µm,20.0s,MS4.9						
FVM	**French Village**	33.55	317	*e*P	P	18 12 39.1	-0.8
FVM				pmax	pmax		
	comp=Z,71nm,0.6s,mb5.8						
FVM	**French Village**	33.55	317	*e*P	P	18 12 39.1	-0.8
	comp=Z,71nm,0.6s,mb5.8						
SLM	**Saint Louis**	33.79	318	*e*P	P	18 12 42.6	+0.7
SLM				pmax	pmax		
	comp=Z,99nm,0.9s,mb5.7						
SLM	**Saint Louis**	33.79	318	*e*P	P	18 12 42.6	+0.7
	comp=Z,99nm,0.9s,mb5.7						
NATX	**Nacogdoches**	33.88	304	*e*P	P	18 12 44.0	+1.2
	comp=Z,350nm,1.1s,mb6.2						
NATX				LR	LR		
	comp=Z,6µm,20.0s,MS5.3						
BDFB	**Brasilia**	34.08	156	P	P	18 12 43.7	-1.0
BDFB						18 15 21.5	
BDFB				S	S	18 18 13.4	+4.8
BDFB				pmax	pmax		
	comp=Z,25nm,1.0s						
BDFB				pmax	pmax		
	comp=Z,17nm,0.8s						
BDFB				smax			
	comp=N,3.0nm,0.8s						
BDFB				MLR	MLR		
	comp=Z,9µm,18.5s						
BDFB	**Brasilia**	34.08	156	P	P	18 12 43.7	-0.9
	comp=Z,25nm,1.0s,mb5.1,baz=333,slow=9.9,SNR=19						
BDFB				PcP	PcP	18 15 21.5	-0.7
	comp=Z,17nm,0.8s,baz=308,slow=2.9,SNR=5.7						
BDFB				S	S	18 18 13.4	+4.8
	comp=Z,3.3nm,0.8s,baz=181,slow=23,SNR=1.7						
BDFB				LR	LR	18 28 04.9	
	comp=Z,9µm,18.5s,MS5.5,baz=331,slow=39						
MIAR	**Mount Ida**	34.10	309	P	P	18 12 44.4	-0.3
MIAR				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.5						
MIAR				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.3						
MIAR	**Mount Ida**	34.10	309	*e*P	P	18 12 44.1	-0.6
	comp=Z,48nm,0.8s,mb5.5						
MIAR				LR	LR		
	comp=Z,5µm,19.0s,MS5.3						
CCM	**Cathedral Cave**	34.13	316	P	P	18 12 43.9	-1.0
CCM				pmax	pmax		
	comp=Z,91nm,0.7s,mb5.8						
CCM				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.8						
CCM	**Cathedral Cave**	34.13	316	*e*P	P	18 12 44.0	-0.9
	comp=Z,91nm,0.7s,mb5.8						
CCM				*e*PcP	PcP	18 15 21.6	-0.6
CCM				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
HKT	**Hockley**	34.27	300	P	P	18 12 46.1	0.0
HKT				pmax	pmax		
	comp=Z,150nm,1.2s,mb5.8						
HKT				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.7						
HKT	**Hockley**	34.27	300	*e*P	P	18 12 46.0	-0.1
	comp=Z,146nm,1.3s,mb5.8						
HKT				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
PPM	**Popocatepetl**	35.30	281	*e*P	P	18 12 55.4	+0.3
JFWS	**Jewell Farm**	36.36	324	*e*P	P	18 13 03.2	-0.6
JFWS				pmax	pmax		
	comp=Z,98nm,0.8s,mb5.8						
JFWS				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.5						
JFWS	**Jewell Farm**	36.36	324	*e*P	P	18 13 03.2	-0.6
	comp=Z,98nm,0.8s,mb5.8						
JFWS				LR	LR		
	comp=Z,7µm,19.0s,MS5.5						
JCT	**Junction City**	37.72	300	*e*P	P	18 13 14.5	-0.8
JCT				*e*		18 15 32.4	
JCT				pmax	pmax		
	comp=Z,261nm,1.1s,mb5.9						
JCT				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.2						
JCT	**Junction City**	37.72	300	*e*P	P	18 13 14.5	-0.8
	comp=Z,261nm,1.1s,mb5.9						
JCT				*e*PcP	PcP	18 15 32.4	-0.5
JCT				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
ADH	**Angra Heroismo**	37.83	46	*e*S		18 19 20.0	
ADH				*e*		18 22 36.5	
ADH				*i*		18 23 45.0	
ZIIG	**Zihuatanejo**	38.05	278	*i* P	P	18 13 21.3	+3.1
WMOK	**Wichita Mounta**	38.14	307	*e*P	P	18 13 18.0	-0.8
WMOK				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.3						
WMOK				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.3						
WMOK	**Wichita Mounta**	38.14	307	*e*P	P	18 13 18.0	-0.8
	comp=Z,51nm,0.8s,mb5.3						
WMOK				LR	LR		
	comp=Z,5µm,21.0s,MS5.3						
KSU1	**Kansas State U**	38.30	314	*e*P	P	18 13 18.7	-1.4
PDA	**Ponta Delgada**	38.55	48	*i* S		18 19 29.0	
PDA				*i*		18 24 04.0	
LVC	**Limon Verde**	38.85	191	P	P	18 13 22.9	-2.0
	comp=Z,12nm,0.7s,mb4.7,baz=18,slow=5.5,SNR=16						
LVC				PP	PP	18 14 57.3	-0.6
	comp=Z,4.6nm,0.8s,baz=44,slow=3.5,SNR=2.5						
LVC				S	S	18 19 25.3	+3.7
	comp=Z,1.4nm,0.6s,baz=41,slow=20,SNR=2.0						
LVC				LR	LR	18 30 35.8	
	comp=Z,15µm,21.8s,MS5.8,baz=162,slow=38						
LVC	**Limon Verde**	38.85	191	*e*P	P	18 13 21.3	-3.6
	comp=Z,62nm,1.4s,mb5.2						
LVC				LR	LR		
	comp=Z,16µm,22.0s,MS5.8						
SCHQ	**Schefferville**	39.12	355	P	P	18 13 26.8	0.0
	comp=Z,19nm,0.7s,mb5.0,baz=174,slow=7.2,SNR=39						
SCHQ				PP	PP	18 15 01.7	+1.2
	comp=Z,6.4nm,0.8s,baz=156,slow=10,SNR=1.6						
SCHQ				PcP	PcP	18 15 36.2	-0.7
	comp=Z,10.0nm,0.9s,baz=119,slow=3.0,SNR=3.3						
SCHQ				S	S	18 19 30.6	+5.3
	comp=Z,3.9nm,0.9s,baz=202,slow=8.3,SNR=2.5						
SCHQ				LR	LR	18 27 16.5	
	comp=Z,5µm,21.2s,MS5.3,baz=178,slow=33						
SCHQ	**Schefferville**	39.12	355	*e*P	P	18 13 26.8	+0.1
	comp=Z,123nm,1.3s,mb5.5						
SCHQ				LR	LR		
	comp=Z,8µm,22.0s,MS5.5						
SFJM	**Santa Fe**	39.45	283	*i* P	P	18 13 31.0	+1.1
EYMN	**Ely**	40.31	329	PFAKE		18 13 50.0	+13
EYMN				LR	LR		
	comp=Z,6µm,19.0s,MS5.4						
CBKS	**Cedar Bluff**	40.38	312	*e*P	P	18 13 36.9	-0.5
CBKS				pmax	pmax		
	comp=Z,257nm,1.0s,mb5.9						
CBKS				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.3						
CBKS	**Cedar Bluff**	40.38	312	*e*P	P	18 13 36.9	-0.5
	comp=Z,257nm,1.0s,mb5.9						
CBKS				LR	LR		
	comp=Z,5µm,21.0s,MS5.3						
AMTX	**Amarillo**	40.45	306	*e*P	P	18 13 38.3	+0.3
	comp=Z,86nm,1.0s,mb5.4						
LTX	**Lajitas**	40.77	297	*e*P	P	18 13 41.2	+0.5
LTX				pmax	pmax		
	comp=Z,71nm,1.3s,mb5.1						
LTX				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.2						
LTX	**Lajitas**	40.77	297	*e*P	P	18 13 41.2	+0.5
	comp=Z,71nm,1.3s,mb5.1						
LTX				LR	LR		
	comp=Z,3µm,21.0s,MS5.2						
TXAR	**Lajitas Array**	40.77	297	P	P	18 13 40.5	-0.1
	comp=Z,33nm,1.1s,mb4.9,baz=113,slow=7.7,SNR=48						
TXAR				PP	PP	18 15 20.4	+2.4
	comp=Z,2.4nm,0.9s,baz=184,slow=40,SNR=1.6						
TXAR				PcP	PcP	18 15 43.7	+1.2
	comp=Z,13nm,0.8s,baz=121,slow=5.3,SNR=6.9						
TXAR				S	S	18 19 56.4	+6.1
	comp=Z,1.0nm,1.1s,baz=153,slow=5.6,SNR=2.6						
TXAR				LR	LR	18 33 47.1	
	comp=Z,2µm,20.7s,MS5.0,baz=60,slow=41						
TXAR	**Lajitas Array**	40.77	297	P	P	18 13 40.5	-0.1
TXAR				PP	PP	18 15 20.4	+2.4
TXAR				PcP	PcP	18 15 43.7	+1.2
TXAR				S	S	18 19 56.4	+6.1
TXAR				LR	LR	18 33 47.1	
CHIE	**El Hierro**	42.13	66	P	P	18 13 53.1	+1.2
	comp=Z,34nm,0.8s,mb5.0						
CAM4	**Nova Friburgo**	42.35	153	*e*P	P	18 13 51.3	-2.5
CAM4				*i*		18 13 54.3	
CAM4				*i*		18 13 59.5	
CAM4				*i*		18 14 11.9	
CAM4				*i*		18 14 19.7	
MNTX	**Cornudas Mount**	42.66	300	*e*P	P	18 13 56.1	-0.1
	comp=Z,264nm,1.4s,mb5.8						
MNTX				*e*PcP	PcP	18 15 48.4	-0.3
MNTX				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
ULM	**Lac du Bonnet**	44.00	329	P	P	18 14 05.7	-1.2
	comp=Z,103nm,0.5s,mb5.8,baz=130,slow=8.3,SNR=173						
ULM				S	S	18 20 41.1	+3.6
	comp=Z,1.9nm,0.7s,baz=241,slow=19,SNR=1.7						
ULM				LR	LR	18 31 17.4	
	comp=Z,4µm,19.1s,MS5.4,baz=128,slow=34						
ULM	**Lac du Bonnet**	44.00	329	*e*P	P	18 14 05.5	-1.3
	comp=Z,158nm,0.6s,mb5.9						
ULM				LR	LR		

	comp=Z,7µm,20.0s,MS5.6						
ANMO	**Albuquerque**	**44.24**	**304**	*e*P	**P**	**18 14 09.4**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,48nm,1.0s						
ANMO				MLR	MLR		
	comp=Z,4µm,19.0s						
ANMO	**Albuquerque**	**44.24**	**304**	*e*P	**P**	**18 14 09.4**	**+0.3**
	comp=Z,48nm,1.0s,mb5.2						
ANMO				LR	LR		
	comp=Z,4µm,19.0s,MS5.3						
SDCO	**Great Sand Dun**	**44.25**	**308**	*e*P	**P**	**18 14 08.6**	**-0.5**
	comp=Z,55nm,0.8s,mb5.3						
SDCO				*e*PcP	PcP	18 15 54.7	+0.7
SDCO				LR	LR		
	comp=Z,7µm,20.0s,MS5.6						
ISCO	**Idaho Springs**	**44.98**	**311**	*e*P	**P**	**18 14 15.7**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.4						
ISCO				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.5						
ISCO	**Idaho Springs**	**44.98**	**311**	*e*P	**P**	**18 14 15.7**	**+0.8**
	comp=Z,67nm,1.1s,mb5.4						
ISCO				LR	LR		
	comp=Z,6µm,21.0s,MS5.5						
PHWY	**Pilot Hill**	**45.38**	**313**	*e*P	**P**	**18 14 18.2**	**+0.1**
RSSD	**Black Hills**	**45.51**	**317**	P	**P**	**18 14 20.2**	**+1.2**
LPIG	**La Paz**	**46.21**	**288**	*i* P	**P**	**18 14 26.2**	**+1.4**
PV01	**Paradox Valley**	**46.69**	**308**	*e*P	**P**	**18 14 28.5**	**0.0**
PV10	**Paradox Valley**	**47.11**	**308**	*e*P	**P**	**18 14 33.0**	**+1.2**
TUC	**Tucson**	**47.28**	**299**	*e*P	**P**	**18 14 33.4**	**+0.2**
TUC				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.5						
TUC				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.4						
TUC	**Tucson**	**47.28**	**299**	*e*P	**P**	**18 14 33.4**	**+0.2**
	comp=Z,73nm,1.2s,mb5.5						
TUC				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
DGMT	**Dagmar**	**47.55**	**322**	*e*P	**P**	**18 14 34.8**	**-0.3**
	comp=Z,195nm,0.6s,mb6.3						
DGMT				LR	LR		
	comp=Z,4µm,20.0s,MS5.4						
LAO	**LASA Array**	**47.98**	**320**	*e*P	**P**	**18 14 38.6**	**+0.1**
	comp=Z,140nm,0.8s,mb6.0						
LAO				LR	LR		
	comp=Z,8µm,20.0s,MS5.7						
FRB	**Frobisher Bay**	**48.09**	**356**	P	**P**	**18 14 38.9**	**-0.2**
FRB				S	**S**	**18 21 40.9**	**+5.1**
FRB				pmax	pmax		
	comp=Z,52nm,0.7s						
FRB				smax			
	comp=N,3.0nm,0.8s						
FRB	**Frobisher Bay**	**48.09**	**356**	P	**P**	**18 14 38.9**	**-0.3**
	comp=N,52nm,0.7s,mb5.7,baz=164,slow=8.3,SNR=80						
FRB				S	**S**	**18 21 40.9**	**+5.0**
	comp=N,2.8nm,0.8s,baz=59,slow=15,SNR=2.3						
SRU	**San Rafael**	**48.42**	**309**	*e*P	**P**	**18 14 41.8**	**-0.2**
SRU				*e*		18 16 07.8	
BW06	**Boulder Array**	**48.75**	**313**	*e*P	**P**	**18 14 44.0**	**-0.5**
	comp=N,19nm,0.4s,mb5.5						
BW06				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
PDAR	**Pinedale Array**	**48.75**	**313**	P	**P**	**18 14 44.0**	**-0.5**
	comp=Z,104nm,0.7s,mb6.0,baz=119,slow=9.4,SNR=208						
PDAR				PcP	PcP	18 16 10.2	+0.4
	comp=Z,12nm,0.6s,baz=115,slow=5.2,SNR=3.4						
PDAR				PP	PP	18 16 35.6	-2.1
	comp=Z,12nm,1.0s,baz=90,slow=7.4,SNR=2.0						
PDAR				S	**S**	**18 21 52.9**	**+7.5**
	comp=Z,1.1nm,0.2s,baz=293,slow=34,SNR=2.5						
PDAR				LR	LR	18 37 08.2	
	comp=Z,3µm,19.0s,MS5.3,baz=118,slow=38						
PDAR	**Pinedale Array**	**48.75**	**313**	P	**P**	**18 14 44.0**	**-0.5**
PDAR				PcP	PcP	18 16 10.2	+0.4
PDAR				PP	PP	18 16 35.6	-2.1
PDAR				S	**S**	**18 21 52.9**	**+7.5**
PDAR				LR	LR	18 37 08.2	
TMUT	**Trail Mountain**	**48.98**	**309**	*e*P	**P**	**18 14 46.6**	**+0.3**
TMUT				*e*PcP	PcP	18 16 10.5	-0.2
FCC	**Fort Churchill**	**49.06**	**338**	*e*P	**P**	**18 14 45.3**	**-1.4**
FCC				pmax	pmax		
	comp=Z,84nm,0.7s,mb5.9						
FCC	**Fort Churchill**	**49.06**	**338**	*e*P	**P**	**18 14 45.3**	**-1.4**
	comp=Z,84nm,0.7s,mb5.9						
DAU	**Daniels Canyon**	**49.29**	**310**	*e*P	**P**	**18 14 49.2**	**+0.4**
MPU	**Maple Canyon**	**49.47**	**309**	*e*P	**P**	**18 14 50.5**	**+0.3**
MPU				*e*PcP	PcP	18 16 11.4	-1.0
JLU	**Jordanelle**	**49.48**	**310**	*e*P	**P**	**18 14 50.7**	**+0.5**
MSU	**Marysvale**	**49.53**	**307**	*e*P	**P**	**18 14 51.1**	**+0.5**
MSU				*e*		18 16 13.2	
TCUT	**Toone Canyon**	**49.59**	**311**	*e*P	**P**	**18 14 53.0**	**+2.0**
FFC	**Flin Flon**	**49.68**	**331**	P	**P**	**18 14 50.0**	**-1.5**
	comp=Z,630nm,0.8s						
LOHW	**Long Hollow**	**49.74**	**314**	*e*P	**P**	**18 14 51.9**	**-0.3**
LOHW				*e*PcP	PcP	18 16 13.0	-0.4
NLU	**North Lily Min**	**49.79**	**309**	*e*P	**P**	**18 14 52.3**	**-0.2**
SNOW	**Snow King Moun**	**49.80**	**314**	*e*P	**P**	**18 14 53.2**	**+0.6**
WUWY	**Wally Ulrich**	**49.81**	**314**	*e*P	**P**	**18 14 52.4**	**-0.3**
AHID	**Auburn Hatcher**	**49.83**	**313**	*e*P	**P**	**18 14 52.9**	**+0.1**
	comp=Z,134nm,0.9s,mb6.0						
AHID				*e*PcP	PcP	18 16 13.2	-0.6
AHID				LR	LR		
	comp=Z,6µm,19.0s,MS5.6						
HWUT	**Hardware Ranch**	**49.84**	**311**	*e*P	**P**	**18 14 52.4**	**-0.5**
	comp=Z,172nm,1.4s,mb5.9						
MOOW	**Moose Ponds**	**49.88**	**314**	*e*P	**P**	**18 14 53.3**	**+0.1**
MOOW				*e*PcP	PcP	18 16 13.9	0.0
LKWY	**Lake**	**49.91**	**315**	*e*P	**P**	**18 14 53.8**	**+0.4**
LKWY				*e*		18 16 13.9	
LKWY				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.3						
LKWY				MLR	MLR		
	comp=Z,10µm,21.0s,MS5.8						
LKWY	**Lake**	**49.91**	**315**	*e*P	**P**	**18 14 53.8**	**+0.3**
	comp=Z,23nm,0.7s,mb5.3						
LKWY				*e*PcP	PcP	18 16 13.9	0.0
LKWY				LR	LR		
	comp=Z,10µm,21.0s,MS5.8						
TPAW	**Teton Pass**	**49.94**	**314**	*e*P	**P**	**18 14 54.3**	**+0.6**
TPAW				*e*PcP	PcP	18 16 14.2	+0.1
NOQ	**North Oquirrh**	**49.99**	**310**	*e*P	**P**	**18 14 55.1**	**+1.0**
IMW	**Indian Meadow**	**50.06**	**314**	*e*P	**P**	**18 14 54.8**	**+0.2**
IMW				*e*PcP	PcP	18 16 14.2	-0.4
YNR	**Norris Junctio**	**50.14**	**316**	*e*P	**P**	**18 14 56.0**	**+0.8**
YNR				*e*PcP	PcP	18 16 15.2	+0.4
YFT	**Old Faithful**	**50.16**	**315**	*e*P	**P**	**18 14 55.9**	**+0.6**
YMR	**Madison River**	**50.32**	**315**	*e*P	**P**	**18 14 57.3**	**+0.7**
YMR				*e*PcP	PcP	18 16 14.7	-0.8
ARUT	**Antelope Range**	**50.36**	**306**	*e*P	**P**	**18 14 57.0**	**+0.1**
DUG	**Dugway**	**50.39**	**309**	*e*P	**P**	**18 14 56.9**	**-0.3**
DUG				*e*		18 16 15.6	
DUG				pmax	pmax		
	comp=Z,112nm,1.2s,mb5.8						
DUG				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.5						
DUG	**Dugway**	**50.39**	**309**	*e*P	**P**	**18 14 56.9**	**-0.2**
	comp=Z,112nm,1.2s,mb5.8						
DUG				*e*PcP	PcP	18 16 15.6	-0.3
DUG				LR	LR		
	comp=Z,5µm,20.0s,MS5.5						
SPUT	**South Promonto**	**50.40**	**311**	*e*P	**P**	**18 14 57.0**	**-0.2**
LPA	**La Plata**	**50.59**	**176**	*ce*P	**P**	**18 14 57.0**	**-1.8**
LPA				*e*pP	pP	18 14 59.0	-5.0
LPA				*e*PP	PP	18 16 57.0	+1.4
LPA				*e*S	**S**	**18 22 11.0**	**-0.1**
LPA				*e*pS		18 22 14.0	
LPA				*e*SS	SS	18 26 04.0	+21
QLMT	**Earthquake Lak**	**50.69**	**315**	*e*P	**P**	**18 15 00.4**	**+1.1**
BGU	**Big Grassy Mou**	**50.73**	**310**	*e*P	**P**	**18 14 59.3**	**-0.4**
HVU	**Hansel Valley**	**50.76**	**311**	*e*P	**P**	**18 14 59.2**	**-0.7**
HVU				*e*		18 16 16.7	
BOZ	**Bozeman (W)**	**51.08**	**316**	*e*P	**P**	**18 15 01.9**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,97nm,1.2s,mb5.6						
BOZ				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.6						
BOZ	**Bozeman (W)**	**51.08**	**316**	*e*P	**P**	**18 15 01.9**	**-0.4**
	comp=Z,97nm,1.2s,mb5.6						
BOZ				LR	LR		
	comp=Z,6µm,21.0s,MS5.6						
NEN	**Nelson**	**51.10**	**303**	*e*P	**P**	**18 15 03.1**	**+0.5**
LIS	**Lisbon**	**51.21**	**53**	*e*P	**P**	**18 15 03.0**	**-0.4**
LIS				*e*S	**S**	**18 22 24.0**	**+4.4**
LIS				*e*S	**S**	**18 22 24.2**	**+4.6**
LIS				AMS	AMS	18 31 55.1	
	comp=Z,11µm,23.9s,MS5.8						
LIS	**Lisbon**	**51.21**	**53**	*e*P	**P**	**18 15 03.0**	**-0.4**
LIS				*e*S	**S**	**18 22 24.0**	**+4.4**
	comp=Z,11µm,23.9s						
LDFC	**Landfair**	**51.24**	**302**	*e*P	**P**	**18 15 04.4**	**+0.7**
PTEO	**Sao Teotonio**	**51.32**	**54**	*e*P	**P**	**18 15 03.3**	**-1.0**
	comp=Z,20nm,1.4s,mb4.9						
HRY	**Holter Researc**	**51.56**	**318**	*e*P	**P**	**18 15 05.7**	**-0.3**
SFJ	**Sondre**	**51.64**	**6**	*e*P	**P**	**18 15 05.2**	**-1.0**
	comp=Z,55nm,1.0s,mb5.4						
SFJ				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
MCMT	**McKenzie Canyo**	**51.65**	**315**	*e*P	**P**	**18 15 06.5**	**-0.1**
MOE	**Montemor**	**51.79**	**53**	*e*P	**P**	**18 15 06.6**	**-1.2**
EVO	**Evora**	**52.05**	**53**	*e*P	**P**	**18 15 10.1**	**+0.3**
	comp=Z,73nm,1.1s,mb5.2						
EVO				*e*R			
	comp=Z,14µm,21.5s						
PBEJ	**Beja**	**52.08**	**54**	*e*P	**P**	**18 15 10.1**	**+0.1**
	comp=Z,22nm,1.0s,mb5.0						
PBEJ				*i* -	pP	18 15 16.3	+1.1
TRCR	**Troy Canyon**	**52.12**	**306**	*e*P	**P**	**18 15 10.2**	**-0.1**
TRCR				*e*PcP	PcP	18 16 23.0	+0.7
PFO	**Pinyon Flat Ob**	**52.17**	**300**	*e*P	**P**	**18 15 10.1**	**-0.7**
PFO				pmax	pmax		
	comp=Z,254nm,2.3s,mb5.7						
PFO				MLR	MLR		
	comp=Z,876nm,21.0s,MS4.8						
PFO	**Pinyon Flat Ob**	**52.17**	**300**	*e*P	**P**	**18 15 10.1**	**-0.6**
	comp=Z,254nm,2.3s,mb5.7						
PFO				LR	LR		
	comp=Z,876nm,21.0s,MS4.8						
BAR	**Barrett**	**52.27**	**299**	*e*P	**P**	**18 15 11.5**	**0.0**
EMAZ	**Mazaricos**	**52.28**	**48**	P	**P**	**18 15 14.3**	**+2.9**
	comp=Z,27nm,0.7s,mb5.3						
EZAM	**Zamans**	**52.28**	**49**	P	**P**	**18 15 14.6**	**+3.1**
EZAM				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
EZAM	**Zamans**	**52.28**	**49**	P	**P**	**18 15 14.6**	**+3.1**
	comp=Z,30nm,0.9s,mb5.2						
PALC	**Alcoutim**	**52.29**	**55**	*e*P	**P**	**18 15 10.8**	**-0.8**
	comp=Z,43nm,1.6s,mb5.1						
HLID	**Hailey**	**52.38**	**313**	*e*P	**P**	**18 15 11.8**	**-0.4**
	comp=Z,76nm,1.2s,mb5.5						
HLID				*e*PcP	PcP	18 16 23.0	-0.2
HLID				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
CHMT	**Chamberlain Mo**	**52.55**	**317**	*e*P	**P**	**18 15 12.4**	**-1.0**
PVIS	**Viseu**	**52.56**	**51**	*e*P	**P**	**18 15 12.8**	**-0.8**
	comp=Z,22nm,2.0s,mb4.7						
STS	**Santiago**	**52.56**	**48**	P	**P**	**18 15 17.0**	**+3.4**
STS				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
STS	**Santiago**	**52.56**	**48**	P	**P**	**18 15 17.0**	**+3.4**
	comp=Z,36nm,1.1s,mb5.2						
ELOB	**Lobios**	**52.68**	**49**	P	**P**	**18 15 17.5**	**+3.0**
	comp=Z,27nm,0.7s,mb5.3						
PCBR	**Castelo Branco**	**52.70**	**52**	*e*P	**P**	**18 15 13.2**	**-1.4**
	comp=Z,12nm,0.8s,mb4.9						
MTE	**Manteigas**	**52.76**	**51**	*e*P	**P**	**18 15 14.9**	**-0.1**
	comp=Z,24nm,1.4s,mb4.9						
MTE				*e*S	**S**	**18 22 42.9**	**+2.2**
MTE				*e*LQ		18 28 29.8	
MTE				*e*LR	LR	18 30 23.3	
	comp=Z,6µm,23.1s						
MTE	**Manteigas**	**52.76**	**51**	P	**P**	**18 15 14.4**	**-0.6**
	comp=Z,62nm,1.0s,mb5.5						
PVRL	**Vila Real**	**52.81**	**50**	*e*P	**P**	**18 15 14.4**	**-1.0**
	comp=Z,28nm,1.6s,mb4.9						
EMIN	**Mina Concepcio**	**52.97**	**54**	P	**P**	**18 15 18.3**	**+1.6**
	comp=Z,50nm,1.1s,mb5.4						
MSO	**Missoula**	**52.98**	**317**	*e*P	**P**	**18 15 16.1**	**-0.5**
	comp=Z,36nm,1.3s,mb5.2						
MSO				*e*PcP	PcP	18 16 25.2	0.0
MSO				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
TPH	**Tonopah**	**53.35**	**306**	*e*P	**P**	**18 15 19.1**	**-0.4**
TPH				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
TPH				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
TPH	**Tonopah**	**53.35**	**306**	*e*P	**P**	**18 15 19.1**	**-0.4**
	comp=Z,21nm,0.9s,mb5.1						
TPH				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
EINC	**Incio**	**53.37**	**48**	P	**P**	**18 15 21.4**	**+1.9**
	comp=Z,11nm,0.8s,mb4.8						
DAC	**Darwin (Calif)**	**53.40**	**304**	*e*P	**P**	**18 15 20.4**	**+0.5**
DAC				pmax	pmax		
	comp=Z,135nm,1.7s,mb5.6						
DAC				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.4						
DAC	**Darwin (Calif)**	**53.40**	**304**	*e*P	**P**	**18 15 20.4**	**+0.6**
	comp=Z,135nm,1.7s,mb5.6						
DAC				LR	LR		
	comp=Z,4µm,21.0s,MS5.4						
ERUA	**La Rua**	**53.46**	**49**	P	**P**	**18 15 22.6**	**+2.4**
ERUA				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
ERUA	**La Rua**	**53.46**	**49**	P	**P**	**18 15 22.6**	**+2.4**
	comp=Z,43nm,1.0s,mb5.3						
ESPR	**Espera**	**53.48**	**56**	P	**P**	**18 15 21.3**	**+0.9**
	comp=Z,8.2nm,0.8s,mb4.7						
MWC	**Mount Wilson**	**53.56**	**301**	*e*P	**P**	**18 15 21.3**	**+0.3**
TRQA	**Tornquist**	**53.61**	**180**	*e*P	**P**	**18 15 19.5**	**-1.9**
	comp=Z,21nm,0.8s,mb5.1						
TRQA				LR	LR		
	comp=Z,4µm,22.0s,MS5.4						
PBRG	**Braganca**	**53.63**	**50**	*e*P	**P**	**18 15 20.9**	**-0.6**
	comp=Z,25nm,1.5s,mb4.9						
PBRG	**Braganca**	**53.63**	**50**	*e*P	**P**	**18 15 23.9**	**+2.4**
ECAL	**Calabor**	**53.66**	**49**	P	**P**	**18 15 22.9**	**+1.3**
	comp=Z,13nm,0.6s,mb5.0						
WALA	**Waterton Lakes**	**53.67**	**320**	*e*P	**P**	**18 15 20.6**	**-1.0**
	comp=Z,48nm,1.0s,mb5.4						
BMN	**Battle Mountai**	**53.74**	**309**	*e*P	**P**	**18 15 21.8**	**-0.5**
BMN				pmax	pmax		
	comp=Z,111nm,1.2s,mb5.7						
BMN				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
BMN	**Battle Mountai**	**53.74**	**309**	*e*P	**P**	**18 15 21.8**	**-0.5**
	comp=Z,111nm,1.2s,mb5.7						
BMN				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
MNV	**Mina**	**54.13**	**306**	*e*P	**P**	**18 15 24.4**	**-0.7**
MNV				pmax	pmax		
	comp=Z,112nm,1.4s,mb5.6						
MNV				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.6						
MNV	**Mina**	**54.13**	**306**	*e*P	**P**	**18 15 24.4**	**-0.8**
	comp=Z,112nm,1.4s,mb5.6						
MNV				LR	LR		
	comp=Z,5µm,19.0s,MS5.6						
NVAR	**Mina Array Bea**	**54.24**	**306**	P	**P**	**18 15 25.8**	**-0.2**
	comp=Z,22nm,0.7s,mb5.2,baz=90,slow=7.9,SNR=74						
NVAR				PcP	PcP	18 16 31.7	+1.5
	comp=Z,17nm,0.7s,baz=170,slow=3.2,SNR=7.6						
NVAR				ScP		18 20 30.5	
	comp=Z,1.3nm,0.9s,baz=124,slow=6.5,SNR=3.7						
NVAR				S	**S**	**18 23 08.2**	**+7.2**
	comp=Z,0.1nm,0.3s,baz=229,slow=16,SNR=2.1						
NVAR				LR	LR	18 38 03.3	
	comp=Z,4µm,19.8s,MS5.5,baz=85,slow=35						
NVAR	**Mina Array Bea**	**54.24**	**306**	P	**P**	**18 15 25.8**	**-0.2**
NVAR				PcP	PcP	18 16 31.7	+1.5
NVAR				ScP		18 20 30.5	
NVAR				S	**S**	**18 23 08.2**	**+7.2**
NVAR				LR	LR	18 38 03.3	
EMIJ	**Mijas**	**54.31**	**56**	P	**P**	**18 15 29.1**	**+2.6**
	comp=Z,41nm,1.0s,mb5.3						
EADA	**Adamuz**	**54.66**	**54**	P	**P**	**18 15 32.8**	**+3.7**
	comp=Z,5.4nm,0.5s,mb4.8						
OMM	**Old Mammoth Mi**	**54.68**	**305**	*e*P	**P**	**18 15 28.4**	**-0.7**
BMO	**Blue Mountains**	**54.71**	**314**	*e*P	**P**	**18 15 27.7**	**-1.7**
BMO				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
BMO				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.5						
BMO	**Blue Mountains**	**54.71**	**314**	*e*P	**P**	**18 15 27.7**	**-1.6**
	comp=Z,60nm,1.3s,mb5.5						
BMO				LR	LR		
	comp=Z,5µm,21.0s,MS5.5						
EDM	**Edmonton**	**54.83**	**325**	*e*P	**P**	**18 15 28.4**	**-1.7**
ELUQ	**Luque**	**54.83**	**55**	P	**P**	**18 15 33.9**	**+3.6**
ELUQ				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
ELUQ	**Luque**	**54.83**	**55**	P	**P**	**18 15 33.9**	**+3.6**
	comp=Z,18nm,0.8s,mb5.1						
ELOJ	**Sierra Loja**	**54.87**	**56**	P	**P**	**18 15 30.5**	**-0.1**
ELOJ				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.5						
ELOJ	**Sierra Loja**	**54.87**	**56**	P	**P**	**18 15 30.5**	**-0.2**
	comp=Z,47nm,0.9s,mb5.5						
EARI	**Arriondas**	**55.04**	**48**	P	**P**	**18 15 36.2**	**+4.4**
	comp=Z,8.1nm,0.6s,mb4.9						
ERON	**Agron**	**55.13**	**56**	P	**P**	**18 15 32.4**	**-0.2**
	comp=Z,26nm,0.9s,mb5.3						
WVOR	**Wild Horse Val**	**55.15**	**311**	*e*P	**P**	**18 15 31.2**	**-1.4**
WVOR				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
WVOR				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.6						
WVOR	**Wild Horse Val**	**55.15**	**311**	*e*P	**P**	**18 15 31.2**	**-1.4**
	comp=Z,30nm,1.1s,mb5.2						
WVOR				LR	LR		
	comp=Z,5µm,19.0s,MS5.6						
EBAN	**Banos Encina**	**55.28**	**54**	P	**P**	**18 15 33.1**	**-0.5**
EBAN				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.5						
EBAN	**Banos Encina**	**55.28**	**54**	P	**P**	**18 15 33.0**	**-0.6**
	comp=Z,46nm,0.9s,mb5.5						
ESDC	**Sonseca Array**	**55.34**	**53**	P	**P**	**18 15 33.2**	**-0.9**
	comp=Z,14nm,0.8s,mb5.0,baz=254,slow=7.6,SNR=24						
ESDC				S	**S**	**18 23 19.5**	**+3.9**
	comp=Z,0.3nm,0.3s,baz=42,slow=39,SNR=2.4						
ESDC	**Sonseca Array**	**55.34**	**53**	P	**P**	**18 15 33.5**	**-0.5**
	comp=Z,15nm,1.1s,mb4.9						
ESLA	**Sonseca Array**	**55.34**	**53**	*e*P	**P**	**18 15 34.0**	**0.0**
	comp=Z,38nm,1.4s,mb5.2						
ESLA				LR	LR		
	comp=Z,35µm,21.0s,MS6.4						
ECOG	**Cogollos-Vega**	**55.35**	**55**	P	**P**	**18 15 33.5**	**-0.6**
ECOG				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
ECOG	**Cogollos-Vega**	**55.35**	**55**	P	**P**	**18 15 33.5**	**-0.6**
	comp=Z,18nm,0.8s,mb5.1						
NEW	**Newport**	**55.45**	**318**	*e*P	**P**	**18 15 33.3**	**-1.4**
NEW				pmax	pmax		
	comp=Z,162nm,1.0s						
NEW				MLR	MLR		
	comp=Z,5µm,19.0s						
NEW	**Newport**	**55.45**	**318**	*e*P	**P**	**18 15 33.3**	**-1.4**
	comp=Z,162nm,1.0s,mb6.0						
NEW				LR	LR		
	comp=Z,5µm,19.0s,MS5.6						
WCN	**Washoe City**	**55.49**	**307**	P	**P**	**18 15 35.0**	**-0.1**
WCN				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
WCN	**Washoe City**	**55.49**	**307**	P	**P**	**18 15 35.0**	**-0.1**
	comp=Z,14nm,1.0s,mb4.9						
LNOR	**Lincton Mounta**	**55.62**	**315**	P	**P**	**18 15 36.0**	**0.0**
EQES	**Quesada**	**55.80**	**55**	P	**P**	**18 15 40.9**	**+3.5**
	comp=Z,99nm,1.1s,mb5.8						
CMB	**Columbia Colle**	**55.82**	**305**	*e*P	**P**	**18 15 36.9**	**-0.6**
CMB				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
CMB				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.5						
CMB	**Columbia Colle**	**55.82**	**305**	*e*P	**P**	**18 15 36.9**	**-0.7**
	comp=Z,35nm,1.3s,mb5.2						
CMB				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
EBER	**Berja**	**55.85**	**56**	P	**P**	**18 15 39.6**	**+1.9**
	comp=Z,50nm,1.0s,mb5.5						
BORG	**Borgarnes**	**55.99**	**20**	PFAKE		18 15 50.0	+12
BORG				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
LRV	**Little Rabbit**	**56.16**	**303**	*e*P	**P**	**18 15 39.2**	**-0.7**
OD2	**Odessa Site #2**	**56.26**	**317**	P	**P**	**18 15 40.4**	**-0.1**
MOD	**Modoc**	**56.28**	**310**	*e*P	**P**	**18 15 40.1**	**-0.6**
	comp=Z,12nm,0.6s,mb5.1						
MOD				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
ELAN	**Lanestosa**	**56.30**	**48**	P	**P**	**18 15 42.9**	**+2.0**
	comp=Z,20nm,0.5s,mb5.4						
EVIA	**Vianos**	**56.34**	**54**	P	**P**	**18 15 44.4**	**+3.2**
EVIA				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.5						
EVIA	**Vianos**	**56.34**	**54**	P	**P**	**18 15 44.4**	**+3.2**
	comp=Z,29nm,0.6s,mb5.5						
DBIC	**Dimbokro**	**56.37**	**92**	P	**P**	**18 15 40.6**	**-1.2**
DBIC				S	**S**	**18 23 31.3**	**+1.6**
DBIC				pmax	pmax		
	comp=Z,66nm,0.9s						
DBIC				smax			
	comp=N,2.0nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,4µm,19.0s						
DBIC	**Dimbokro**	**56.37**	**92**	P	**P**	**18 15 40.6**	**-1.2**
	comp=Z,66nm,0.9s,mb5.7,baz=276,slow=8.0,SNR=28						
DBIC				S	**S**	**18 23 31.3**	**+1.6**
	comp=Z,2.1nm,0.8s,baz=172,slow=19,SNR=3.4						
DBIC				LR	LR	18 36 53.2	
	comp=Z,4µm,19.0s,MS5.6,baz=266,slow=33						
DBIC	**Dimbokro**	**56.37**	**92**	P	**P**	**18 15 40.6**	**-1.2**
DBIC				S	**S**	**18 23 31.3**	**+1.6**
DBIC				LR	LR	18 36 53.1	
ENIJ	**Nijar**	**56.40**	**56**	P	**P**	**18 15 40.8**	**-0.9**
ENIJ				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.8						
ENIJ	**Nijar**	**56.40**	**56**	P	**P**	**18 15 40.8**	**-0.8**
	comp=Z,100nm,0.9s,mb5.8						
DCN	**Croghan**	**56.46**	**36**	⇑*i*P	**P**	**18 15 40.6**	**-1.2**
SAO	**San Andreas Ge**	**56.54**	**304**	*e*P	**P**	**18 15 42.5**	**-0.2**
SAO				pmax	pmax		
	comp=Z,67nm,1.6s,mb5.4						
SAO				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
SAO	**San Andreas Ge**	**56.54**	**304**	*e*P	**P**	**18 15 42.5**	**-0.2**
	comp=Z,67nm,1.6s,mb5.4						
SAO				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
OHCM	**Honcut**	**56.82**	**307**	*e*P	**P**	**18 15 43.9**	**-0.8**
DMUB	**Kingscourt**	**56.85**	**35**	*e*P	**P**	**18 15 44.0**	**-0.7**
DLF	**Lyons Farm**	**56.86**	**36**	⇑*i*P	**P**	**18 15 43.3**	**-1.5**
PLCA	**Paso Flores**	**56.87**	**188**	P	**P**	**18 15 41.9**	**-3.1**
PLCA				S	**S**	**18 23 40.8**	**+4.9**
PLCA				pmax	pmax		
	comp=Z,15nm,0.8s						
PLCA				smax			
	comp=N,1.0nm,0.7s						
PLCA				MLR	MLR		
	comp=Z,4µm,19.3s						
PLCA	**Paso Flores**	**56.87**	**188**	P	**P**	**18 15 41.9**	**-3.1**
	comp=Z,15nm,0.8s,mb5.1,baz=1.8,slow=8.6,SNR=21						
PLCA				S	**S**	**18 23 40.8**	**+4.9**
	comp=Z,1.0nm,0.7s,baz=296,slow=18,SNR=2.8						
PLCA				LR	LR	18 43 05.8	
	comp=Z,4µm,19.2s,MS5.6,baz=12,slow=39						
PLCA	**Paso Flores**	**56.87**	**188**	*e*P	**P**	**18 15 41.6**	**-3.4**
	comp=Z,56nm,1.4s,mb5.4						
PLCA				LR	LR		
	comp=Z,5µm,20.0s,MS5.6						
VIPM	**Ingram Point**	**56.95**	**313**	P	**P**	**18 15 47.0**	**+1.4**
ETOB	**Tobarra**	**57.08**	**54**	P	**P**	**18 15 49.4**	**+2.8**
	comp=Z,26nm,0.8s,mb5.3						
EMUR	**La Murta**	**57.25**	**55**	P	**P**	**18 15 49.6**	**+1.9**
	comp=Z,21nm,0.7s,mb5.3						
QUIF	**Quistinic**	**57.43**	**43**	*e*P	**P**	**18 15 47.8**	**-1.0**
	comp=Z,114nm,1.0s,mb5.6						
QUIF	**Quistinic**	**57.43**	**43**	*e*P	**P**	**18 15 47.8**	**-1.0**
QUIF				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.6						
ROSF	**Rostrenen**	**57.45**	**42**	*e*P	**P**	**18 15 47.8**	**-1.2**
	comp=Z,44nm,0.7s,mb5.3						
ROSF	**Rostrenen**	**57.45**	**42**	*e*P	**P**	**18 15 47.8**	**-1.2**
ROSF				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
HPE	**Pembroke**	**57.46**	**38**	*e*P	**P**	**18 15 48.6**	**-0.3**
HPE				AMb	AMB	18 15 53.0	
	comp=Z,146nm,2.3s,mb5.6						
TBM	**Table Mountain**	**57.47**	**316**	P	**P**	**18 15 49.4**	**+0.3**
EALK	**Alkurruntz**	**57.69**	**49**	P	**P**	**18 15 54.1**	**+3.3**
	comp=Z,61nm,0.9s,mb5.6						
HSA	**Swansea**	**57.77**	**38**	*e*P	**P**	**18 15 51.7**	**+0.5**
HSA				AMb	AMB	18 16 02.2	
	comp=Z,107nm,0.9s,mb5.9						
WDC	**Whiskeytown Da**	**57.77**	**308**	*e*P	**P**	**18 15 50.0**	**-1.4**
WDC				*e*		18 16 43.1	
WDC				pmax	pmax		
	comp=Z,63nm,1.4s,mb5.5						
WDC				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.4						

WDC	Whiskeytown Da	57.77	308	eP	P	18 15 50.0	-1.4
	comp=Z,63nm,1.4s,mb5.5						
WDC				ePcP	PcP	18 16 43.1	-0.7
WDC				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
HEX	Exmoor	57.80	39	eP	P	18 15 50.8	-0.6
HEX				AMb	AMB	18 15 56.6	
	comp=Z,101nm,1.3s,mb5.7						
OSSF	Osses	57.87	49	eP	P	18 15 52.7	+0.7
SJPF	Ste Jean	57.88	49	eP	P	18 15 50.6	-1.4
	comp=Z,246nm,1.0s,mb5.9						
SJPF	Ste Jean	57.88	49	eP	P	18 15 50.6	-1.4
SJPF				pmax	pmax		
	comp=Z,123nm,1.0s,mb5.9						
SGMF	Saint Gilles	57.90	43	eP	P	18 15 51.4	-0.7
	comp=Z,102nm,0.9s,mb5.6						
SGMF	Saint Gilles	57.90	43	eP	P	18 15 51.4	-0.7
SGMF				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.5						
WPW	White Pass	58.01	315	P	P	18 15 53.3	+0.4
HOPS	Hopland	58.02	306	P	P	18 15 53.4	+0.3
	comp=Z,75nm,1.2s,mb5.6						
HOPS				LR	LR		
	comp=Z,4µm,22.0s,MS5.5						
YBH	Yreka Blue Hor	58.04	310	eP	P	18 15 51.7	-1.5
YBH				e		18 16 45.1	
YBH				pmax	pmax		
	comp=Z,47nm,1.2s						
YBH				MLR	MLR		
	comp=Z,5µm,19.0s						
YBH	Yreka Blue Hor	58.04	310	eP	P	18 15 51.7	-1.5
	comp=Z,48nm,1.2s,mb5.4						
YBH				ePcP	PcP	18 16 45.1	+0.2
YBH				LR	LR		
	comp=Z,5µm,19.0s,MS5.7						
EMOS	Mosqueruela	58.09	52	P	P	18 15 55.4	+1.9
	comp=Z,17nm,0.8s,mb5.1						
ESAC	San Caprasio	58.25	51	P	P	18 15 56.6	+2.0
	comp=Z,48nm,0.6s,mb5.7						
ETSF	Etsaut	58.33	49	eP	P	18 15 55.0	-0.2
	comp=Z,200nm,1.4s,mb5.7						
ETSF	Etsaut	58.33	49	eP	P	18 15 55.0	-0.2
ETSF				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.7						
HUMO	Hull Mountain	58.33	311	eP	P	18 15 53.6	-1.7
	comp=Z,20nm,0.9s,mb5.1						
HUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
SUMG	Summit	58.33	8	eP	P	18 15 54.3	-0.6
	comp=Z,222nm,1.1s,mb6.1						
KHMM	Horse Mountain	58.70	308	P	P	18 15 58.3	+0.5
ERTA	Horta de San J	58.76	51	P	P	18 15 59.1	+0.9
	comp=Z,94nm,0.8s,mb5.9						
LCHF	La Chataignera	58.79	45	eP	P	18 16 01.3	+2.9
EBIE	Bielsa	58.82	49	P	P	18 16 00.3	+1.6
	comp=Z,26nm,0.6s,mb5.4						
COR	Corvallis	58.86	313	eP	P	18 15 58.7	-0.2
COR				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.6						
COR				MLR	MLR		
	comp=Z,736nm,21.0s,MS4.8						
COR	Corvallis	58.86	313	eP	P	18 15 58.7	-0.1
	comp=Z,54nm,0.9s,mb5.6						
COR				LR	LR		
	comp=Z,736nm,21.0s,MS4.8						
EBR	Ebro Roquetas	58.87	52	eP	P	18 16 02.0	+3.0
RESF	Ens	58.98	49	eP	P	18 16 03.5	+3.8
EPF	Esparros	59.00	49	eP	P	18 15 59.7	-0.2
	comp=Z,262nm,1.2s,mb5.8						
EPF	Esparros	59.00	49	eP	P	18 15 59.7	-0.2
EPF				pmax	pmax		
	comp=Z,131nm,1.2s,mb5.8						
EAB	Aberfoyle	59.01	33	eP	P	18 15 57.8	-2.0
GRR	Gorron	59.04	43	eP	P	18 15 59.1	-1.0
	comp=Z,158nm,1.0s,mb5.7						
GRR	Gorron	59.04	43	eP	P	18 15 59.1	-1.0
GRR				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.7						
MFF	Saint Martin d	59.19	45	eP	P	18 16 00.4	-0.7
	comp=Z,131nm,1.0s,mb5.6						
MFF	Saint Martin d	59.19	45	eP	P	18 16 00.4	-0.7
MFF				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.6						
KBO	Bosley Butte	59.22	310	eP	P	18 16 00.5	-0.9
MELF	Melles	59.29	49	eP	P	18 16 02.6	+0.7
YKA	Yellowknife Ar	59.34	335	P	P	18 15 59.9	-2.1
YKA				S	S	18 24 11.1	+3.1
YKA				pmax	pmax		
	comp=Z,147nm,0.7s						
YKA				smax			
	comp=N,1.0nm,1.0s						
YKA				MLR	MLR		
	comp=Z,5µm,19.1s						
YKA	Yellowknife Ar	59.34	335	P	P	18 15 59.9	-2.0
	comp=Z,147nm,0.7s,mb6.1,baz=107,slow=7.3,SNR=294						
YKA				S	S	18 24 11.1	+3.1
	comp=Z,0.7nm,1.0s,baz=110,slow=14,SNR=3.0						
YKA				LR	LR	18 40 48.4	
	comp=Z,5µm,19.1s,MS5.7,baz=115,slow=35						
YKA				PKP2bc		18 45 39.2	
	comp=Z,0.2nm,0.5s,baz=294,slow=2.7,SNR=5.9						
YKA	Yellowknife Ar	59.34	335	P	P	18 15 59.9	-2.0
YKA				S	S	18 24 11.1	+3.1
YKA				LR	LR	18 40 48.4	
YKA				⇑e		18 45 39.2	
ESK	Eskdalemuir	59.35	35	eP	P	18 16 01.5	-0.6
ESK				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
ESK	Eskdalemuir	59.35	35	eP	P	18 16 01.6	-0.6
ESK				AMb	AMB	18 16 07.5	
	comp=Z,88nm,1.3s,mb5.6						
FLN	La Foliniere	59.36	42	eP	P	18 16 01.3	-1.0
	comp=Z,157nm,0.9s,mb5.8						
FLN				eR			
	comp=Z,11µm,21.2s						
FLN	La Foliniere	59.36	42	eP	P	18 16 01.3	-1.0
FLN				pmax	pmax		
	comp=Z,78nm,0.9s,mb5.7						
FLN				MLR	MLR		
	comp=Z,11µm,21.3s,MS6.0						
EPOB	Poblet	59.36	51	P	P	18 16 02.8	+0.4
	comp=Z,30nm,1.8s,mb5.0						
EIBI	Ibiza	59.36	54	P	P	18 16 03.4	+0.9
	comp=Z,19nm,0.6s,mb5.3						
KEBM	Edson Butte	59.37	311	P	P	18 16 03.0	+0.6
YKW3	Yellowknife Ar	59.38	335	eP	P	18 15 59.5	-2.8
EAU	Auchinoon	59.38	34	eP	P	18 15 59.4	-2.9
EAU				AMb	AMB	18 16 04.6	
	comp=Z,90nm,1.9s,mb5.5						
KWE	Weaver Farm	59.48	37	eP	P	18 16 01.1	-2.0
KWE				AMb	AMB	18 16 09.4	
	comp=Z,139nm,1.5s,mb5.8						
EDI	Edinburgh	59.54	34	eP	P	18 16 03.5	+0.1
LFF	La Frestale	59.54	47	eP	P	18 16 02.4	-1.2
	comp=Z,254nm,1.2s,mb5.8						
LFF	La Frestale	59.54	47	eP	P	18 16 02.4	-1.2
LFF				pmax	pmax		
	comp=Z,127nm,1.2s,mb5.8						
MLS	Moulis	59.55	49	eP	P	18 16 05.5	+1.8
LDF	La Druitiere	59.56	43	eP	P	18 16 02.9	-0.8
	comp=Z,79nm,0.9s,mb5.4						
LDF	La Druitiere	59.56	43	eP	P	18 16 02.9	-0.8
LDF				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
SALF	Salau	59.59	49	eP	P	18 16 04.5	+0.5
LHO	Holmfirth	59.61	37	eP	P	18 16 02.4	-1.6
LHO				AMb	AMB	18 16 12.5	
	comp=Z,114nm,1.6s,mb5.7						
PGC	Sidney	59.64	317	eP	P	18 16 03.0	-1.2
	comp=Z,187nm,1.1s,mb6.0						
KBI1	Birley Grange	59.72	37	eP	P	18 16 04.6	-0.2
KBI1				AMb	AMB	18 16 13.6	
	comp=Z,163nm,1.4s,mb5.9						
SCO	Scoresbysund	59.73	14	eP	P	18 16 05.1	+0.5
SCO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
SCO	Scoresbysund	59.73	14	eP	P	18 16 05.1	+0.5
	comp=Z,6.5nm,1.0s,mb4.6						
SCO	Scoresbysund	59.73	14	i P	P	18 16 05.1	+0.5
	comp=Z,6.5nm,1.0s,mb4.6						
EMIR	Miracle	59.75	50	P	P	18 16 05.3	+0.2
	comp=Z,6.5nm,0.3s,mb5.1						
OSR	Olympics--Salm	59.77	316	P	P	18 16 05.8	+0.6
HPK	Haverah Park	59.85	36	eP	P	18 16 05.7	+0.1
RJF	Les Rejaudoux	60.14	47	eP	P	18 16 06.6	-1.1
	comp=Z,130nm,0.9s,mb5.7						
RJF				eR			
	comp=Z,19µm,20.8s						
RJF	Les Rejaudoux	60.14	47	eP	P	18 16 06.6	-1.1
RJF				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.7						
RJF				MLR	MLR		
	comp=Z,19µm,20.8s,MS6.2						
MTLF	Montolieu	60.40	49	eP	P	18 16 08.5	-1.0
	comp=Z,149nm,1.0s,mb5.7						
MTLF	Montolieu	60.40	49	eP	P	18 16 08.5	-1.0
MTLF				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.7						
CAF	Calviac	60.47	47	eP	P	18 16 08.6	-1.4
	comp=Z,110nm,0.9s,mb5.6						
CAF	Calviac	60.47	47	eP	P	18 16 08.6	-1.4
CAF				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.6						
TCF	Toulx Ste Croi	60.75	46	eP	P	18 16 10.7	-1.1
	comp=Z,115nm,1.0s,mb5.7						
TCF	Toulx Ste Croi	60.75	46	eP	P	18 16 10.7	-1.1
TCF				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.7						
SJAF	Saint Jean de	60.81	50	eP	P	18 16 13.6	+1.3
EJON	La Jonquera	60.81	50	P	P	18 16 16.2	+3.9
	comp=Z,33nm,0.7s,mb5.6						
HYF	Humbligny	61.17	44	eP	P	18 16 13.9	-0.8
BGF	Bois d'Agland	61.22	45	eP	P	18 16 14.1	-0.9
	comp=Z,194nm,1.2s,mb5.8						
BGF	Bois d'Agland	61.22	45	eP	P	18 16 14.1	-0.9
BGF				pmax	pmax		
	comp=Z,97nm,1.2s,mb5.8						
PYM	Petit Puy Mans	61.23	46	eP	P	18 16 15.9	+0.8
LBL	Lubilhac	61.34	47	eP	P	18 16 17.1	+1.2
AVF	Avril sur Loir	61.60	45	eP	P	18 16 16.1	-1.5
	comp=Z,137nm,1.0s,mb5.7						
AVF	Avril sur Loir	61.60	45	eP	P	18 16 16.1	-1.5
AVF				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.7						
RES	Resolute Bay	61.60	350	eP	P	18 16 15.8	-1.5
RES				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.4						
RES	Resolute Bay	61.60	350	eP	P	18 16 15.8	-1.5
	comp=Z,26nm,0.8s,mb5.4						
LASF	Ste Croix	61.66	48	eP	P	18 16 17.4	-0.6
	comp=Z,258nm,1.5s,mb5.8						
SSF	Saint Saulge	61.73	45	eP	P	18 16 17.0	-1.5
SSF				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.7						
SSF	Saint Saulge	61.73	45	eP	P	18 16 17.0	-1.5
	comp=Z,69nm,1.1s,mb5.7						
SMF	Signal de Mont	61.91	45	eP	P	18 16 18.7	-1.0
	comp=Z,268nm,1.2s,mb5.9						
SMF	Signal de Mont	61.91	45	eP	P	18 16 18.7	-1.0
SMF				pmax	pmax		
	comp=Z,134nm,1.2s,mb6.0						
VIVF	Saint-Julien-l	62.31	47	eP	P	18 16 20.9	-1.5
	comp=Z,153nm,1.2s,mb5.7						
VIVF	Saint-Julien-l	62.31	47	eP	P	18 16 20.9	-1.5
VIVF				pmax	pmax		
	comp=Z,76nm,1.2s,mb5.7						
BAIF	Baives	62.59	42	eP	P	18 16 22.7	-1.5
SMRF	Simiane la Rot	62.89	48	eP	P	18 16 25.3	-0.9
MEZF	Maizieres J'vi	62.94	43	eP	P	18 16 25.3	-1.2
	comp=Z,282nm,1.1s,mb6.0						
GIVF	Givet	62.99	42	eP	P	18 16 25.3	-1.5
	comp=Z,89nm,0.8s,mb5.6						
GIVF	Givet	62.99	42	eP	P	18 16 25.3	-1.5
GIVF				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.7						
GRN	Grenoble	63.10	47	eP	P	18 16 28.6	+1.0
ORIF	Oris-en-Rattie	63.17	47	eP	P	18 16 27.2	-0.9
	comp=Z,107nm,1.3s,mb5.5						
ORIF				eR			
	comp=Z,10µm,20.8s						
CABF	La Chapelle	63.45	46	eP	P	18 16 28.8	-1.1
	comp=Z,143nm,1.3s,mb5.6						
CABF	La Chapelle	63.45	46	eP	P	18 16 28.8	-1.1
CABF				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.6						
LMR	La Mourre	63.52	49	eP	P	18 16 29.3	-1.2
THEF	They Montfort	63.53	44	eP	P	18 16 30.4	0.0
JMIC	Jan Mayen	63.57	17	LR	LR	18 38 18.4	
	comp=Z,3µm,20.9s,MS5.5,baz=247,slow=30						
FRF	La Foret Royal	63.64	49	eP	P	18 16 30.3	-0.9
	comp=Z,145nm,1.3s,mb5.5						
FRF	La Foret Royal	63.64	49	eP	P	18 16 30.3	-0.9
FRF				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.5						
BNI	Bardonecchia	63.74	47	eP	P	18 16 33.4	+1.5
BNI				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
BNI	Bardonecchia	63.74	47	eP	P	18 16 33.4	+1.5
	comp=Z,50nm,1.1s,mb5.5						
HAU	Haudompre	63.75	44	eP	P	18 16 30.2	-1.7
	comp=Z,51nm,0.8s,mb5.3						
HAU				eR			
	comp=Z,3µm,19.2s						
HAU	Haudompre	63.75	44	eP	P	18 16 30.2	-1.7
HAU				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
HAU				MLR	MLR		
	comp=Z,3µm,19.3s,MS5.5						
HGN	Heimansgroeve	63.78	41	eP	P	18 16 32.7	+0.7
	comp=Z,15nm,0.6s,mb5.2						
MBDF	Montbardon	63.79	48	eP	P	18 16 31.3	-0.9
	comp=Z,99nm,1.0s,mb5.5						
MBDF	Montbardon	63.79	48	eP	P	18 16 31.3	-0.9
MBDF				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
WLF	Walferdange	63.79	42	eP	P	18 16 30.9	-1.2
WLF				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.6						
WLF	Walferdange	63.79	42	eP	P	18 16 30.9	-1.2
	comp=Z,46nm,0.8s,mb5.5						
RRL	Cesana Torines	63.81	47	P	P	18 16 33.3	+1.0
LPL	La Plagne	63.81	47	eP	P	18 16 30.9	-1.4
	comp=Z,80nm,0.9s,mb5.4						
LPL	La Plagne	63.81	47	eP	P	18 16 30.9	-1.4
LPL				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
LPG	La Plagne	63.83	47	eP	P	18 16 31.0	-1.4
	comp=Z,103nm,1.0s,mb5.5						
LPG	La Plagne	63.83	47	eP	P	18 16 31.0	-1.4
LPG				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.5						
PZZ	Prazzo	64.01	48	P	P	18 16 34.6	+0.9
FENE	Fenestrelle	64.02	47	P	P	18 16 35.3	+1.7
LOMF	Lomont	64.02	45	eP	P	18 16 33.2	-0.4
HINF	Hinteralfeld	64.07	44	eP	P	18 16 32.2	-1.8
	comp=Z,68nm,0.9s,mb5.4						
HINF	Hinteralfeld	64.07	44	eP	P	18 16 32.2	-1.8
HINF				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.4						
LSD	Ceresole Reale	64.11	47	P	P	18 16 35.5	+1.2
DOI	San Damiano	64.12	48	eP	P	18 16 35.2	+0.9
BHB	Bricherasio	64.15	48	P	P	18 16 35.3	+0.8
STV	Sta Anna Valdi	64.16	48	P	P	18 16 36.0	+1.4
RSP	Reno Superiore	64.16	47	P	P	18 16 36.4	+1.8
STV2	Anna di Valdie	64.16	48	P	P	18 16 35.2	+0.6
SBF	Sospel	64.22	49	eP	P	18 16 34.1	-0.9
ENR	Entracque	64.23	48	P	P	18 16 35.8	+0.7
MOF	Molkenrain	64.26	44	eP	P	18 16 33.7	-1.5
ECH	Echery	64.31	44	eP	P	18 16 34.1	-1.4
RUP	Ruppelstein	64.38	42	eP	P	18 16 36.5	+0.5
NEGI	Negi	64.42	49	P	P	18 16 36.4	+0.2
WLS	Welschbruch	64.46	44	eP	P	18 16 36.7	+0.2
MONE	Monesi	64.46	48	P	P	18 16 37.2	+0.6
WTSB	Winterswijk	64.47	40	eP	P	18 16 37.0	+0.6
BBS	Basel-Blauen	64.49	45	eP	P	18 16 37.0	+0.3
TRAV		64.53	47	P	P	18 16 37.7	+0.7
IMI	Imperia	64.55	49	P	P	18 16 37.0	-0.1
ROB	Roburent	64.55	48	P	P	18 16 37.1	-0.1
ORX	Oropa	64.70	47	P	P	18 16 39.4	+1.3
ABH	Alteburg	64.71	42	eP	P	18 16 37.9	-0.2
MCGN	Macugnaga	64.72	46	eP	P	18 16 39.7	+1.5
FIN	Finale Ligure	64.79	48	P	P	18 16 38.5	-0.2
DAG	Danmarks Havn	64.80	10	⇑iP	P	18 16 37.9	-0.4
DAG				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.6						
DAG				MLR	MLR		
	comp=N,6µm,20.0s						
DAG				MLR	MLR		
	comp=Z,9µm,20.0s,MS6.0						
DAG	Danmarks Havn	64.80	10	⇑iP	P	18 16 37.9	-0.4
	comp=Z,59nm,1.0s,mb5.6						
	comp=Z,9µm,20.0s						
KIZ	Kirchzarten	64.80	44	P	P	18 16 39.3	+0.6
LANF	Langenberg	64.80	43	eP	P	18 16 37.7	-1.0
FELD	Feldberg	64.85	44	eP	P	18 16 37.9	-1.1
PCP	Pian Castagno	65.05	48	P	P	18 16 39.5	-0.9
BFO	Black Forest	65.10	44	eP	P	18 16 40.4	-0.2
VAI	Varese	65.26	46	eP	P	18 16 42.7	+1.0
DLBC	Dease Lake	65.30	327	eP	P	18 16 41.6	-0.1
TNS	Taunus Mts	65.32	42	eP	P	18 16 42.3	+0.3
PGF	Pioggiola	65.33	50	eP	P	18 16 41.3	-0.9
	comp=Z,280nm,1.4s,mb5.8						
PGF	Pioggiola	65.33	50	eP	P	18 16 41.3	-0.9
PGF				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.8						
SPAK	Spaichingen	65.39	44	eP	P	18 16 42.8	+0.3
BLS5	Blasjo	65.42	31	eP	P	18 16 44.0	+1.5
LBG	Lerchenberg	65.43	43	P	P	18 16 42.6	-0.2
SISB	Singen-Sch Ber	65.48	44	P	P	18 16 43.5	+0.4
TOD	Tromm	65.50	42	eP	P	18 16 43.0	-0.2
GUT	Gutenstein	65.61	44	P	P	18 16 45.5	+1.6
VSL	Villasalto	65.61	53	eP	P	18 16 44.2	+0.2
	comp=Z,62nm,0.9s,mb5.6						
BOB	Bobbio (Coli)	65.70	48	eP	P	18 16 44.7	+0.2
STU	Stuttgart	65.70	43	eP	P	18 16 43.9	-0.6
STU				pmax	pmax		
	comp=Z,84nm,1.0s,mb5.7						
STU	Stuttgart	65.70	43	eP	P	18 16 43.9	-0.5
	comp=Z,84nm,1.0s,mb5.7						
BUCH	Bad Urach	65.79	44	P	P	18 16 45.0	0.0
CODM		65.98	48	P	P	18 16 45.6	-0.7
SIND	Sindeldorf	66.01	43	P	P	18 16 46.0	-0.4
DAVA	Damuels	66.09	45	⇑iP	P	18 16 44.7	-2.3
	comp=Z,95nm,0.9s,mb5.8						
GRAM		66.13	48	P	P	18 16 46.2	-1.1
BACM		66.13	48	P	P	18 16 46.6	-0.7
HDH	Heidenheim	66.36	44	P	P	18 16 49.3	+0.6
SARO	Sassorosso	66.37	48	P	P	18 16 48.9	0.0
BRMO	Bormio	66.39	46	eP	P	18 16 49.1	+0.2
MUD	Monsted U'grnd	66.40	35	i P	P	18 16 49.5	+0.7
MUD				i S	S	18 25 43.5	+7.0
MUD				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
MUD				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.5						
MUD	Monsted U'grnd	66.40	35	i P	P	18 16 49.5	+0.7
	comp=Z,38nm,0.8s,mb5.5						
MUD				i S	S	18 25 43.5	+7.0
	comp=Z,3µm,19.0s						
GSCL	Gusciola	66.50	48	eP	P	18 16 50.1	+0.4
MOL	Molde	66.54	28	eP	P	18 16 55.4	+5.8
	comp=Z,105nm,1.5s,mb5.7						
MOL	Molde	66.54	28	eP	P	18 16 55.4	+5.8
MOL				AMb	AMB	18 17 00.9	
	comp=Z,105nm,1.5s,mb5.7						
CLZ	Clausthal	66.66	40	eP	P	18 16 50.8	+0.3
	comp=Z,63nm,1.2s,mb5.5						
ZCCA	Zocca	66.78	48	eP	P	18 16 52.0	+0.5
BSEG	Bad Segeberg	66.79	38	eP	P	18 16 51.5	+0.2
MOTA	Moosalm	66.92	45	⇑iP	P	18 16 51.3	-1.0
	comp=Z,27nm,1.1s,mb5.2						
MOTA	Moosalm	66.92	45	⇑iP	P	18 16 51.3	-1.0
MOTA				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
SQTA	Sankt Quirin	66.99	45	⇑iP	P	18 16 52.0	-0.7
	comp=Z,70nm,1.3s,mb5.5						
SQTA	Sankt Quirin	66.99	45	⇑iP	P	18 16 52.0	-0.7
SQTA				pmax	pmax		
	comp=Z,70nm,1.3s,mb5.5						
KONO	Kongsberg	67.04	32	PFAKE		18 17 00.0	+7.2
KONO				LR	LR		
	comp=Z,4µm,22.0s,MS5.6						
FUR	Furstenfeldbru	67.06	44	eP	P	18 16 53.2	0.0
GRA1	Grafenberg Arr	67.08	42	eP	P	18 16 53.4	+0.1
	comp=Z,76nm,1.2s,mb5.6						
GRA1				epP	pP	18 16 57.5	-1.1
GRA1				eS	S	18 25 51.7	+6.9
GRA1				eS	S	18 25 52.2	+7.4
GRA1				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
GRF	Grafenberg Arr	67.08	42	eP	P	18 16 53.4	+0.1
GRF				e*PP	pP	18 16 57.5	-1.1
GRF				eS	S	18 25 51.7	+6.9
GRF				eS	S	18 25 52.2	+7.4
GRF				pmax	pmax		
	comp=Z,76nm,1.2s,mb5.6						
GRF				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.6						
GRF	Grafenberg Arr	67.08	42	eP	P	18 16 53.4	+0.1
GRF				e*PP	pP	18 16 57.5	-1.1
GRF				eS	S	18 25 51.7	+6.9
GRF				eS	S	18 25 52.2	+7.4
GRF				pmax	pmax		
	comp=Z,76nm,1.2s,mb5.6						
GRF				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.6						
GRF	Grafenberg Arr	67.08	42	eP	P	18 16 53.4	+0.1
	comp=Z,76nm,1.2s,mb5.6						
GRF				epP	pP	18 16 57.5	-1.1
GRF				eS	S	18 25 51.7	+6.9
GRF				eS	S	18 25 52.2	+7.4
GRF				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
WATA	Walderalm	67.24	45	⇑iP	P	18 16 53.6	-0.7
	comp=Z,18nm,0.9s,mb5.1						
WATA	Walderalm	67.24	45	⇑iP	P	18 16 53.6	-0.7
WATA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
CTI	Castel Tesino	67.27	46	eP	P	18 16 54.0	-0.6
WTTA	Wattenberg	67.28	45	⇑iP	P	18 16 53.7	-0.9
	comp=Z,50nm,1.1s,mb5.5						
WTTA	Wattenberg	67.28	45	⇑iP	P	18 16 53.7	-0.9
WTTA				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
MOX	Moxa	67.37	41	eP	P	18 16 55.3	+0.2
MOX				MLR	MLR		
	comp=Z,5µm,22.0s,MS5.7						
MOX	Moxa	67.37	41	i P	P	18 16 55.3	+0.2
MOX				S	S	18 25 54.0	+5.7
MOX				L		18 41 07.0	
SFI	Santa Sofia	67.41	49	eP	P	18 16 55.2	-0.3
NAO01	NORSAR Array S	67.83	30	eP	P	18 16 58.0	+0.2
	comp=Z,16nm,0.6s,mb5.2						
NAO01				LR	LR		
	comp=Z,7µm,21.0s,MS5.9						
NKC	Novy Kostel	67.89	42	eP	P	18 16 57.5	-0.8
NKC				ePS	PS	18 26 20.3	-0.8
NKC				AMS	AMS	18 43 00.0	
	comp=Z,5µm,17.2s						
SIT	Sitka	67.93	326	eP	P	18 17 00.3	+1.8
NB2	NORSAR Subarra	68.02	30	P	P	18 16 58.5	-0.5
	comp=Z,43nm,0.9s,mb5.5,baz=261,slow=6.2						
NB2	NORSAR Subarra	68.02	30	P	P	18 16 58.5	-0.5
NB2				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.5						
NB2	NORSAR Subarra	68.02	30	P	P	18 16 58.5	-0.5
	baz=260,slow=6.5						
NOA	NORSAR Array B	68.02	30	P	P	18 16 58.8	-0.2
NOA				S	S	18 26 01.5	+5.6
NOA				pmax	pmax		
	comp=Z,17nm,0.7s						
NOA				smax			
	comp=N,2.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,5µm,21.9s						
NOA	NORSAR Array B	68.02	30	P	P	18 16 58.8	-0.2
	comp=Z,17nm,0.7s,mb5.2,baz=262,slow=6.3,SNR=52						
NOA				S	S	18 26 01.5	+5.6
	comp=Z,1.7nm,0.9s,baz=208,slow=15,SNR=2.6						
NOA				LR	LR	18 41 29.4	
	comp=Z,5µm,21.9s,MS5.7,baz=280,slow=31						
MNS	Montasola	68.05	50	eP	P	18 16 58.9	-0.6
FVI	Forni Avoltri	68.06	46	eP	P	18 16 59.9	+0.4
WET	Wettzell	68.14	43	eP	P	18 17 00.0	0.0
WET				pmax	pmax		
	comp=Z,92nm,1.7s,mb5.5						
WET	Wettzell	68.14	43	eP	P	18 17 00.0	0.0
	comp=Z,92nm,1.7s,mb5.5						
COP	Copenhagen	68.14	36	i P	P	18 17 07.7	+7.9
COP				e		18 17 48.8	
	comp=Z,2µm,18.0s						
SNTG	Esanatoglia	68.22	49	eP	P	18 16 59.2	-1.4
CLL	Collm	68.27	41	i P	P	18 16 59.9	-0.8
CLL				i	pP	18 17 04.2	-1.8
CLL				eS	S	18 26 03.0	+3.9

CLL				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
CLL				MLR	MLR		
	comp=Z,7µm,20.0s,MS5.9						
CLL	**Collm**	**68.27**	**41**	P	**P**	**18 16 59.9**	**-0.8**
	comp=Z,logA/T=1.4,mb5.2						
CLL				*i* *PP	pP	18 17 04.2	-1.8
CLL				*e*PP	PP	18 19 38.0	+4.5
CLL				*e*		18 20 17.0	
CLL				*e*S	S	18 26 03.0	+3.9
GMNA	**Gemona**	**68.38**	**46**	*e*P	**P**	**18 16 58.4**	**-3.1**
KBA	**Koelnbreinsper**	**68.44**	**45**	⇑*i*P	**P**	**18 17 00.6**	**-1.3**
	comp=Z,93nm,1.2s,mb5.7						
KBA	**Koelnbreinsper**	**68.44**	**45**	⇑*i*P	**P**	**18 17 00.6**	**-1.3**
KBA				pmax	pmax		
	comp=Z,93nm,1.2s,mb5.7						
PTCC	**Patocco-Chiusa**	**68.45**	**46**	*e*P	**P**	**18 17 00.8**	**-1.2**
ROBS	**Robic**	**68.56**	**46**	*e*P	**P**	**18 17 02.2**	**-0.5**
AQU	**L'Aquila**	**68.59**	**50**	*e*P	**P**	**18 17 00.6**	**-2.2**
AQU				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.5						
AQU	**L'Aquila**	**68.59**	**50**	*e*P	**P**	**18 17 00.6**	**-2.2**
	comp=Z,53nm,0.9s,mb5.5						
KHC	**Kasperske Hory**	**68.60**	**43**	*e*P	**P**	**18 17 01.7**	**-1.1**
KHC				*e*	pP	18 17 08.5	+0.4
KHC				*e*		18 26 42.1	
KHC				MLR	MLR		
	comp=Z,3µm,16.4s,MS5.5						
KHC	**Kasperske Hory**	**68.60**	**43**	*e*P	**P**	**18 17 01.7**	**-1.1**
KHC				pP	pP	18 17 08.5	+0.4
KHC				*e*x	x	18 26 42.1	
KHC				AMS	AMS	18 47 50.0	
	comp=Z,3µm,16.4s						
INK	**Inuvik**	**68.68**	**338**	*e*P	**P**	**18 17 01.0**	**-2.0**
INK				pmax	pmax		
	comp=Z,107nm,0.7s						
INK	**Inuvik**	**68.68**	**338**	*e*P	**P**	**18 17 01.0**	**-2.0**
	comp=Z,107nm,0.7s,mb5.9						
GEC2	**GERESS Array S**	**68.68**	**43**	*e*P	**P**	**18 17 03.3**	**0.0**
GEC2				pmax	pmax		
	comp=Z,65nm,1.5s,mb5.3						
GEC2	**GERESS Array S**	**68.68**	**43**	*e*P	**P**	**18 17 03.3**	**0.0**
	comp=Z,65nm,1.5s,mb5.3						
GERES	**GERESS Array B**	**68.68**	**43**	P	**P**	**18 17 02.6**	**-0.7**
GERES				S	S	18 26 07.3	+3.3
GERES				pmax	pmax		
	comp=Z,26nm,1.1s						
GERES	**GERESS Array B**	**68.68**	**43**	P	**P**	**18 17 02.6**	**-0.7**
	comp=Z,26nm,1.1s,mb5.1,baz=276,slow=5.0,SNR=49						
GERES				S	S	18 26 07.3	+3.3
	comp=Z,0.3nm,0.5s,baz=251,slow=32,SNR=3.6						
NSS	**Namsos**	**68.82**	**26**	*e*P	**P**	**18 17 03.0**	**-0.8**
VOY	**Vojsko**	**68.83**	**46**	*e*P	**P**	**18 17 04.8**	**+0.5**
VOY				*e*	pP	18 17 11.5	+1.9
BRG	**Berggiesshubel**	**68.86**	**41**	*e*P	**P**	**18 17 03.5**	**-0.8**
BRG				*i*	pP	18 17 07.9	-1.8
BRG				*i*		18 17 29.9	
BRG				*i*		18 19 39.0	
BRG				*i* S	S	18 26 10.0	+4.0
BRG				*i* SS	SS	18 30 33.0	-0.2
BRG				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.5						
BRG				MLR	MLR		
	comp=N,2µm,22.0s,MS5.7						
BRG				MLR	MLR		
	comp=E,4µm,22.0s,MS5.7						
BRG				MLR	MLR		
	comp=Z,8µm,22.0s,MS5.9						
BRG	**Berggiesshubel**	**68.86**	**41**	*e*P	**P**	**18 17 03.5**	**-0.8**
	comp=Z,55nm,0.9s,mb5.5						
BRG				*i*	pP	18 17 07.9	-1.8
BRG				*i*		18 17 29.9	
BRG				*i* PP	PP	18 19 39.0	+0.2
BRG				*e*		18 19 41.7	
BRG				*i* S	S	18 26 10.0	+4.0
BRG				*i* SS	SS	18 30 33.0	-0.2
BRG				*e*P'P'		18 45 19.9	
BRG				LR	LR		
	comp=Z,8µm,22.0s,MS5.9						
JAVS	**Javornik**	**68.96**	**47**	*e*P	**P**	**18 17 05.0**	**-0.1**
JAVS				*e*	pP	18 17 09.3	-1.1
MOA	**Molln**	**69.06**	**44**	⇑*i*P	**P**	**18 17 03.3**	**-2.4**
	comp=Z,42nm,1.3s,mb5.2						
PRU	**Pruhonice**	**69.23**	**42**	*e*P	**P**	**18 17 06.4**	**-0.3**
PRU				*e*S	S	18 26 14.9	+4.4
PRU				AMS	AMS	18 43 50.0	
	comp=Z,4µm,18.4s						
PVCC	**Panska Ves**	**69.25**	**42**	*e*P	**P**	**18 17 07.8**	**+1.0**
PVCC				AMS	AMS	18 41 20.0	
	comp=Z,5µm,20.2s						
LJU	**Ljubljana**	**69.28**	**46**	*e*P	**P**	**18 17 07.9**	**+0.9**
LJU				*e*	pP	18 17 11.9	-0.4
OBKA	**Obir**	**69.28**	**46**	⇑*i*P	**P**	**18 17 05.7**	**-1.3**
	comp=Z,98nm,0.9s,mb5.7						
CII	**Carovilli**	**69.29**	**51**	P	**P**	**18 17 07.0**	**-0.2**
	comp=Z,93nm,1.1s,mb5.6						
BSD	**Bornholm Skovb**	**69.53**	**37**	*i* P	PcP	18 17 26.3	-5.4
	comp=Z,81nm,1.0s						
BSD				*e*S	S	18 26 22.3	+8.4
	comp=Z,3µm,17.0s						
VAE	**Valguarnera**	**69.65**	**55**	LR	LR	18 43 02.5	
	comp=Z,11µm,20.0s,MS6.1,baz=115,slow=32						
BOJS	**Bojanci**	**69.80**	**47**	*e*P	**P**	**18 17 10.1**	**-0.1**
ARSA	**Arzberg**	**69.93**	**45**	⇓*i*P	**P**	**18 17 10.1**	**-0.8**
	comp=Z,40nm,1.1s,mb5.3						
MOR8	**Moi Rana**	**70.05**	**25**	*e*P	**P**	**18 17 12.7**	**+1.4**
	comp=Z,28nm,1.9s,mb4.9						
MOR8	**Moi Rana**	**70.05**	**25**	*e*P	**P**	**18 17 12.7**	**+1.4**
MOR8				AMb	AMB	18 17 26.1	
	comp=Z,28nm,1.9s,mb4.9						
UPC	**Upice**	**70.17**	**42**	*e*P	**P**	**18 17 11.3**	**-1.1**
TRIS	**Tristan da Cun**	**70.24**	**140**	PFAKE		18 17 20.0	+7.0
TRIS				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
KSP	**Ksiaz**	**70.34**	**41**	*e*P	**P**	**18 17 13.4**	**0.0**
KSP				*e**PP	pP	18 17 18.1	-0.7
KSP				*e*S	S	18 26 22.5	-1.1
KSP				*e*		18 27 10.0	
KSP				*e*SS	SS	18 30 54.0	-2.0
KSP				MLR	MLR		
	comp=Z,13µm,21.6s,MS6.1						
KSP	**Ksiaz**	**70.34**	**41**	*e*P	**P**	**18 17 14.3**	**+0.9**
KSP				*e*S	S	18 26 23.1	-0.5
KSP				MLR	MLR	18 42 05.8	
	comp=Z,10µm,21.8s,MS6.0						
DPC	**Dobruska-Polom**	**70.37**	**42**	*e*P	**P**	**18 17 13.2**	**-0.4**
DPC				LR	LR		
	comp=Z,5µm,20.9s,MS5.8						
DPC	**Dobruska-Polom**	**70.37**	**42**	*e*P	**P**	**18 17 13.2**	**-0.4**
DPC				AMS	AMS	18 42 10.0	
	comp=Z,5µm,20.9s						
KRUC	**Moravsky**	**70.45**	**43**	P	**P**	**18 17 13.7**	**-0.4**
VRAC	**Vranov**	**70.58**	**43**	⇑P	**P**	**18 17 15.0**	**+0.1**
VRAC	**Vranov**	**70.58**	**43**	LR	LR	18 45 16.4	
	comp=Z,1µm,19.7s,MS5.1,baz=298,slow=33						
USHA	**Ushuaia**	**70.62**	**184**	P	**P**	**18 17 14.5**	**-0.5**
	comp=Z,8.1nm,0.6s,mb4.8,baz=30,slow=4.1,SNR=7.2						
USHA				LR	LR	18 50 31.7	
	comp=Z,5µm,19.7s,MS5.8,baz=357,slow=38						
GKP	**Gorka Klasztor**	**70.89**	**39**	*e*P	**P**	**18 17 17.9**	**+1.3**
GKP				MLR	MLR	18 41 44.3	
	comp=Z,14µm,24.7s,MS6.1						
ZST	**Bratislava**	**70.96**	**44**	*i* P	**P**	**18 17 18.1**	**+0.9**
ZST				*i* pP	pP	18 17 20.9	-1.6
ZST				*i*		18 17 37.8	
ZST				*i* S	S	18 26 27.3	-3.5
SMOL	**Smolenice**	**71.16**	**44**	*i* P	**P**	**18 17 19.1**	**+0.7**
MORC	**Moravsky Berou**	**71.18**	**42**	*e*P	**P**	**18 17 17.7**	**-0.8**
MORC				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.3						
MORC	**Moravsky Berou**	**71.18**	**42**	⇑P	**P**	**18 17 18.4**	**-0.1**
MORC	**Moravsky Berou**	**71.18**	**42**	*e*P	**P**	**18 17 17.7**	**-0.8**
	comp=Z,38nm,0.9s,mb5.3						
JAVC	**Velka Javorina**	**71.30**	**43**	P	**P**	**18 17 20.2**	**+0.9**
OKC	**Ostrava-Krasne**	**71.57**	**42**	*e*P	**P**	**18 17 20.5**	**-0.3**
OKC				AMS	AMS	18 45 20.0	
	comp=Z,3µm,19.1s						
SRO1	**Iza**	**71.74**	**44**	*i* P	**P**	**18 17 22.4**	**+0.5**
KOLL	**Kolacno**	**71.80**	**44**	*i* P	**P**	**18 17 22.4**	**+0.1**
TRO	**Tromso**	**72.02**	**21**	*e*P	**P**	**18 17 22.2**	**-1.0**
	comp=Z,73nm,2.1s,mb5.2						
TRO	**Tromso**	**72.02**	**21**	*e*P	**P**	**18 17 22.2**	**-1.0**
TRO				AMb	AMB	18 17 26.1	
	comp=Z,73nm,2.1s,mb5.2						
VYHS	**Vyhne**	**72.09**	**44**	*i* P	**P**	**18 17 24.0**	**0.0**
VYHS				*i* pP	pP	18 17 28.2	-1.2
VYHS				*i*		18 17 45.0	
VYHS				*i* S	S	18 26 45.2	+1.3
PKSM	**Moragy**	**72.12**	**46**	P	**P**	**18 17 24.2**	**0.0**
MENT	**Mentasta**	**72.39**	**332**	*e*P	**P**	**18 17 25.6**	**+0.1**
OJC	**Ojcow**	**72.61**	**42**	*e*P	**P**	**18 17 27.2**	**+0.2**
OJC				*e*S	S	18 26 53.6	+3.9
OJC				MLR	MLR	18 43 51.4	
	comp=Z,4µm,21.1s,MS5.7						
PSZ	**Piszkesteto**	**72.84**	**44**	*e*P	**P**	**18 17 28.6**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
PSZ	**Piszkesteto**	**72.84**	**44**	*e*P	**P**	**18 17 28.6**	**+0.2**
	comp=Z,28nm,1.0s,mb5.2						
PSZ	**Piszkesteto**	**72.84**	**44**	⇓*e*P	**P**	**18 17 30.3**	**+1.8**
NIE	**Niedzica**	**73.00**	**43**	*e*P	**P**	**18 17 29.7**	**+0.4**
NVSS	**Nova Varos 2**	**73.12**	**49**	⇑*i*P	**P**	**18 17 31.6**	**+1.5**
WAR	**Warsaw**	**73.23**	**40**	*e*P	**P**	**18 17 35.6**	**+5.0**
WAR				MLR	MLR	18 41 54.2	
	comp=Z,9µm,30.1s,MS5.9						
DIVS	**Divcibare**	**73.27**	**48**	⇑*i*P	**P**	**18 17 31.3**	**+0.3**
THY	**Trims Highway**	**73.30**	**332**	*e*P	**P**	**18 17 30.8**	**-0.1**
DIV	**Divide**	**73.40**	**330**	*e*P	**P**	**18 17 31.6**	**+0.1**
	comp=Z,103nm,0.7s,mb5.9						
DIV				LR	LR		
	comp=Z,6µm,20.0s,MS5.8						
EYAK	**Cordova Ski Ar**	**73.42**	**329**	*e*P	**P**	**18 17 32.8**	**+1.2**
BEO	**Belgrade**	**73.52**	**47**	⇑*i*P	pP	18 17 39.7	+1.8
KTK1	**Kautokeino**	**73.54**	**22**	*e*P	**P**	**18 17 34.0**	**+1.9**
	comp=Z,77nm,1.4s,mb5.4						
KTK1	**Kautokeino**	**73.54**	**22**	*e*P	**P**	**18 17 34.0**	**+1.9**
KTK1				AMb	AMB	18 17 40.3	
	comp=Z,77nm,1.4s,mb5.5						
ILAR	**Eielson Array**	**73.75**	**334**	P	**P**	**18 17 32.4**	**-1.0**
ILAR				S	S	18 27 06.4	+4.2
ILAR				pmax	pmax		
	comp=Z,41nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,3µm,19.9s						
ILAR	**Eielson Array**	**73.75**	**334**	P	**P**	**18 17 32.4**	**-1.0**
	comp=Z,41nm,0.9s,mb5.3,baz=107,slow=3.4,SNR=156						
ILAR				S	S	18 27 06.4	+4.2
	comp=Z,0.3nm,0.7s,baz=192,slow=28,SNR=3.1						
ILAR				LR	LR	18 50 44.7	
	comp=Z,3µm,19.9s,MS5.6,baz=319,slow=36						
CRVS	**Cervenica-Dubn**	**73.80**	**43**	*i* P	**P**	**18 17 34.8**	**+0.8**
CRVS				*i* pP	pP	18 17 38.8	-0.5
CRVS				*e*		18 17 55.7	
CRVS				*i*		18 25 54.2	
IGT	**Igoumenitsa**	**74.06**	**53**	*e*P	**P**	**18 17 36.9**	**+1.2**
SVIS	**Svilajnac**	**74.12**	**48**	⇑*i*P	**P**	**18 17 36.8**	**+0.8**
BZS	**Buzias**	**74.25**	**46**	P	**P**	**18 17 37.1**	**+0.4**
BZS	**Buzias**	**74.25**	**46**	⇓P	**P**	**18 17 36.9**	**+0.2**
ARCES	**ARCESS Array B**	**74.32**	**21**	P	**P**	**18 17 37.2**	**+0.6**
ARCES				S	S	18 27 14.8	+6.2
ARCES				pmax	pmax		
	comp=Z,12nm,0.7s						
ARCES				smax			
	comp=N,2.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,1µm,20.9s						
ARCES	**ARCESS Array B**	**74.32**	**21**	P	**P**	**18 17 37.2**	**+0.5**
	comp=Z,12nm,0.7s,mb5.0,baz=281,slow=3.2,SNR=41						
ARCES				S	S	18 27 14.8	+6.2
	comp=Z,2.2nm,0.8s,baz=5.0,slow=28,SNR=2.0						
ARCES				LR	LR	18 44 06.7	
	comp=Z,1µm,20.9s,MS5.2,baz=252,slow=31						
ARCES	**ARCESS Array B**	**74.32**	**21**	P	**P**	**18 17 37.2**	**+0.5**
ARCES				S	S	18 27 14.8	+6.2
ARCES				LR	LR	18 44 06.7	
ARE0	**ARCESS Array S**	**74.32**	**21**	*e*P	**P**	**18 17 36.2**	**-0.4**
KOLS	**Kolonicke sedl**	**74.33**	**43**	*i* P	**P**	**18 17 38.9**	**+1.9**
KOLS				*i* pP	pP	18 17 42.8	+0.4
SUW	**Suwalki**	**74.38**	**38**	*e*P	**P**	**18 17 38.0**	**+0.8**
SUW				*e*pP	pP	18 17 39.9	-2.7
SUW				*e*S	S	18 27 13.3	+3.8
SUW	**Suwalki**	**74.38**	**38**	*e*P	**P**	**18 17 38.0**	**+0.7**
SUW				*e*pP	pP	18 17 39.9	-2.7
SUW				*e*S	S	18 27 13.3	+3.8
SUW				MLR	MLR	18 41 52.1	
	comp=Z,8µm,36.6s,MS5.7						
KWP	**Kalwaria**	**74.53**	**42**	*e*P	**P**	**18 17 39.3**	**+1.1**
KWP				*e*pP	pP	18 17 42.2	-1.4
KWP				MLR	MLR	18 41 32.2	
	comp=Z,5µm,39.0s,MS5.5						
SKO	**Skopje**	**74.57**	**50**	*i* P	**P**	**18 17 40.0**	**+1.4**
SKO				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.3						
SKO	**Skopje**	**74.57**	**50**	*i* P	**P**	**18 17 40.0**	**+1.4**
	comp=Z,0.0nm,0.9s						
SML	**Sawmill**	**74.59**	**331**	*e*P	**P**	**18 17 38.7**	**+0.4**
FNA	**Florina**	**74.68**	**51**	*e*P	**P**	**18 17 39.8**	**+0.6**
MCK	**McKinley**	**74.71**	**333**	*e*P	**P**	**18 17 38.4**	**-0.5**
MCK				pmax	pmax		
	comp=Z,76nm,1.2s,mb5.5						
MCK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
MCK	**McKinley**	**74.71**	**333**	*e*P	**P**	**18 17 38.4**	**-0.5**
	comp=Z,76nm,1.2s,mb5.5						
MCK				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
BOLS	**Boljevac**	**74.71**	**48**	⇓*i*P	**P**	**18 17 37.8**	**-1.5**
KEV	**Kevo**	**74.83**	**21**	*e*pkp	**P**	**18 17 41.1**	**+1.5**
FINES	**FINESS Array B**	**75.19**	**30**	P	**P**	**18 17 41.1**	**-0.7**
FINES				pmax	pmax		
	comp=Z,24nm,0.7s						
FINES				MLR	MLR		
	comp=Z,4µm,21.7s						
FINES	**FINESS Array B**	**75.19**	**30**	P	**P**	**18 17 41.1**	**-0.7**
	comp=Z,24nm,0.7s,mb5.3,baz=256,slow=2.4,SNR=65						
FINES				LR	LR	18 44 58.6	
	comp=Z,4µm,21.7s,MS5.7,baz=276,slow=31						
KAF	**Kangasniemi**	**75.23**	**29**	*e*pkp	**P**	**18 17 40.7**	**-1.3**
	baz=258,slow=2.7						
LVV	**L'vov**	**75.36**	**42**	*e*P	**P**	**18 17 44.4**	**+1.4**
LVV				*e*PPP	PPP	18 22 24.0	+4.3
LVV				*e*S	S	18 27 13.2	-7.3
LVV				*e*PS	PS	18 27 58.0	-1.3
LVV				*e*SS	SS	18 32 04.8	-8.5
GRG	**Griva**	**75.43**	**51**	*e*P	**P**	**18 17 44.3**	**+0.7**
FIB	**Fire Island**	**75.53**	**330**	PFAKE		18 18 00.0	+16
FIB				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
SLKM	**Skilak Lake**	**75.63**	**329**	*e*P	**P**	**18 17 44.6**	**+0.3**
SLKM	**Skilak Lake**	**75.63**	**329**	*e*P	**P**	**18 17 43.9**	**-0.4**
AGG	**Agios Georgios**	**75.66**	**53**	*e*P	**P**	**18 17 43.8**	**-1.1**
KNT	**Kendrikon**	**75.77**	**51**	*e*P	**P**	**18 17 46.4**	**+0.9**
VTS	**Vitosha**	**75.78**	**49**	⇑P	**P**	**18 17 46.4**	**+0.9**
VTS	**Vitosha**	**75.78**	**49**	*i* P	**P**	**18 17 46.0**	**+0.4**
KKB	**Krupnik**	**75.80**	**50**	*i* P	**P**	**18 17 47.0**	**+1.3**
MMB	**Musomiste**	**76.32**	**50**	*i* P	**P**	**18 17 49.0**	**+0.4**
BURAR	**Bucovina Array**	**76.44**	**44**	⇓P	**P**	**18 17 50.1**	**+1.0**
BURAR	**Bucovina Array**	**76.44**	**44**	⇓P	**P**	**18 17 50.2**	**+1.0**
IMA	**Indian Mountai**	**76.45**	**335**	*e*P	**P**	**18 17 48.3**	**-0.5**
MTUR	**Matau**	**76.71**	**46**	P	**P**	**18 17 51.4**	**+0.7**
MTUR	**Matau**	**76.71**	**46**	⇓P	**P**	**18 17 51.6**	**+0.9**
RSO	**Redoubt South**	**76.88**	**329**	*e*P	**P**	**18 17 51.4**	**+0.1**
MNK	**Minsk**	**77.02**	**37**	*e*P	**P**	**18 17 50.0**	**-2.2**
RZN	**Rozhen**	**77.03**	**50**	*i* P	**P**	**18 17 53.0**	**+0.4**
KDAK	**Kodiak Island**	**77.21**	**327**	*e*P	**P**	**18 17 53.2**	**0.0**
	comp=Z,197nm,1.3s,mb5.9						
KDAK				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
MLR	**Muntele Rosu**	**77.28**	**46**	P	**P**	**18 17 54.3**	**+0.4**
MLR				S	S	18 27 45.6	+4.1
MLR				pmax	pmax		
	comp=Z,88nm,1.3s						
MLR				smax			
	comp=N,3.0nm,0.9s						
MLR				MLR	MLR		
	comp=Z,3µm,22.0s						
MLR	**Muntele Rosu**	**77.28**	**46**	P	**P**	**18 17 54.3**	**+0.4**
	comp=Z,88nm,1.3s,mb5.5						
MLR				S	S	18 27 45.6	+4.1
	comp=Z,2.5nm,0.9s,baz=180,slow=12,SNR=2.7						
MLR				LR	LR	18 47 06.4	
	comp=Z,3µm,22.0s,MS5.6,baz=280,slow=32						
MLR	**Muntele Rosu**	**77.28**	**46**	P	**P**	**18 17 55.1**	**+1.2**
MLR	**Muntele Rosu**	**77.28**	**46**	⇑P	**P**	**18 17 55.1**	**+1.2**
JOF	**Joensuu**	**77.42**	**28**	*e*pkp	**P**	**18 17 54.5**	**+0.2**
PUL	**Pulkovo**	**77.50**	**31**	*i* P	**P**	**18 17 53.8**	**-0.9**
VRI	**Vrincioaia**	**77.75**	**46**	⇓P	**P**	**18 17 57.7**	**+1.2**
VRI	**Vrincioaia**	**77.75**	**46**	⇑P	**P**	**18 18 02.7**	**+6.2**
AKASG	**Malin Array Be**	**78.52**	**40**	P	**P**	**18 18 00.3**	**-0.2**
	comp=Z,36nm,1.1s,mb5.2,baz=278,slow=4.7,SNR=43						
AKASG				S	S	18 27 58.6	+3.9
	comp=Z,0.1nm,0.2s,baz=161,slow=26,SNR=3.5						
HARR	**Harsova**	**78.81**	**47**	⇓P	**P**	**18 18 02.3**	**0.0**
HARR	**Harsova**	**78.81**	**47**	⇓P	**P**	**18 18 02.3**	**0.0**
CFR	**Carcaliu**	**78.85**	**46**	⇑P	**P**	**18 18 01.1**	**-1.4**
PMSA	**Palmer Station**	**80.38**	**181**	PFAKE		18 18 20.0	+10
PMSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
TAOE	**Nuku Hiva Isla**	**81.40**	**258**	*e*S	S	18 28 25.6	-0.1
TAOE				*e*S	S	18 28 25.7	0.0
TAOE				*e*LQ		18 40 11.4	
TAOE				*e*LR	LR	18 43 33.7	
	baz=68						
OBN	**Obninsk**	**81.83**	**35**	P	**P**	**18 18 19.2**	**+1.1**
	comp=Z,552nm,0.7s,SNR=10.0						
OBN	**Obninsk**	**81.83**	**35**	*e*P	**P**	**18 18 17.4**	**-0.7**
OBN				*i*	pP	18 18 23.8	+0.3
OBN				*e*S	S	18 28 33.7	+4.5
OBN				*i* SS	SS	18 33 50.6	-0.2
OBN				pmax	pmax		
	comp=Z,66nm,0.7s,mb5.7						
OBN	**Obninsk**	**81.83**	**35**	*e*P	**P**	**18 18 17.3**	**-0.8**
	comp=Z,62nm,0.8s,mb5.6						
OBN				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
ESKT	**Eskisehir**	**82.05**	**51**	*i* P	**P**	**18 18 18.9**	**-0.7**
ISP	**Isparta**	**82.19**	**53**	*e*P	**P**	**18 18 22.5**	**+2.1**
TNA	**Tin City**	**82.25**	**336**	*e*P	**P**	**18 18 20.8**	**+0.7**
	comp=Z,118nm,1.0s,mb5.8						
TNA				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
SIM	**Simferopol'**	**83.03**	**45**	P	**P**	**18 18 30.1**	**+5.5**
SIM				S	S	18 28 48.8	+7.1
SIM				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
SIM				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.7						
BALT	**Daday**	**83.41**	**49**	*i* P	**P**	**18 18 20.2**	**-6.4**
BR131	**Keskin Array S**	**84.08**	**51**	PFAKE		18 18 40.0	+10
BR131				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
BRTR	**Keskin Array B**	**84.08**	**51**	P	**P**	**18 18 30.5**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,17nm,0.9s						
BRTR	**Keskin Array B**	**84.08**	**51**	P	**P**	**18 18 30.4**	**+0.4**
	comp=Z,17nm,0.9s,mb5.2,baz=269,slow=4.9,SNR=35						
VOR	**Voronezh**	**84.33**	**38**	P	**P**	**18 18 32.0**	**+1.0**
VOR				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.7						
CSS	**Prodhromos**	**85.13**	**55**	*e*P	**P**	**18 18 35.9**	**+0.5**
	comp=Z,22nm,0.8s,mb5.3						
ANN	**Anapa**	**85.34**	**45**	*e*P	**P**	**18 18 33.2**	**-3.0**
ANN				*e*S	S	18 28 57.5	-7.1
ANN				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.6						
TSUM	**Tsumeb**	**85.41**	**111**	*e*P	**P**	**18 18 37.8**	**+0.6**
	comp=Z,50nm,1.6s,mb5.4						
TSUM				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
PECR	**Pechory**	**85.47**	**33**	*e*P	**P**	**18 18 37.6**	**+1.0**
PECR				pmax	pmax		
	comp=Z,2µm,2.0s						
PECR				pmax	pmax		
	comp=Z,2µm,6.0s						
PECR				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.6						
UNV	**Unalaska Valle**	**85.81**	**325**	*e*P	**P**	**18 18 39.9**	**+1.6**
	comp=Z,460nm,1.1s						
UNV				LR	LR		
	comp=Z,8µm,21.0s,MS6.1						
KAHT	**Ahir Dag**	**87.10**	**52**	*i* P	**P**	**18 18 44.1**	**-1.0**
EIL	**Elat**	**87.93**	**60**	S	SKS	18 29 17.1	-3.7
	comp=Z,1.6nm,0.6s,baz=34,slow=27,SNR=2.0						
EIL	**Elat**	**87.93**	**60**	*e*P	**P**	**18 18 50.6**	**+1.3**
	comp=Z,32nm,1.2s,mb5.4						
MALT	**Malatya**	**88.06**	**51**	*e*P	**P**	**18 18 49.7**	**0.0**
MALT				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.5						
MALT	**Malatya**	**88.06**	**51**	*e*P	**P**	**18 18 49.7**	**0.0**
	comp=Z,21nm,0.7s,mb5.5						
ELZG	**Elazig**	**88.41**	**50**	*i* P	**P**	**18 18 52.4**	**+1.1**
ASF	**Jabal al Asfar**	**88.78**	**57**	P	**P**	**18 18 54.9**	**+1.6**
	comp=Z,12nm,0.8s,mb5.2,baz=154,slow=5.8,SNR=12						
ASF				S	S	18 29 23.1	-15
	comp=Z,1.1nm,0.4s,baz=144,slow=23,SNR=2.3						
GOF	**Gofitskoye**	**89.00**	**43**	⇓*i*P	**P**	**18 18 55.0**	**+1.0**
GOF				*i* S	SKS	18 29 22.0	-5.0
GOF				pmax	pmax		
	comp=Z,160nm,1.6s,mb6.1						
GOF				pmax	pmax		
	comp=Z,2µm,4.0s						
GOF				smax			
	comp=E,3µm,8.0s						
KIV	**Kislovodsk**	**89.17**	**44**	*e*P	**P**	**18 18 54.6**	**-0.2**
KIV				*e*		18 22 26.2	
KIV				*e*PPP	PPP	18 24 21.1	-5.5
KIV				*e*		18 29 24.5	
KIV				pmax	pmax		
	comp=N,15nm,1.0s						
KIV				pmax	pmax		
	comp=E,14nm,1.0s						
KIV				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.7						
KIV	**Kislovodsk**	**89.17**	**44**	*e*P	**P**	**18 18 55.3**	**+0.4**
	comp=Z,45nm,1.0s,mb5.8						
KIV				LR	LR		
	comp=Z,406nm,21.0s,MS4.8						
BILL	**Bilibino**	**89.48**	**344**	⇓*i*P	**P**	**18 18 54.2**	**-1.5**
BILL				*i* S	S	18 29 29.7	-13
BILL				pmax	pmax		
	comp=Z,63nm,1.6s,mb5.7						
BILL				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.8						
BILL	**Bilibino**	**89.48**	**344**	*e*P	**P**	**18 18 55.5**	**-0.2**
	comp=Z,44nm,1.1s,mb5.7						
BILL				LR	LR		
	comp=Z,4µm,21.0s,MS5.8						
SOKR	**Solikamsk**	**90.03**	**27**	*e*P	**P**	**18 18 59.0**	**+0.5**
SOKR				S	SKS	18 29 30.5	-2.5
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.0						
TI2	**Plekhanov**	**91.41**	**46**	*e*P	**P**	**18 19 07.0**	**+1.7**
GNI	**Garni**	**92.01**	**47**	*e*P	**P**	**18 19 10.0**	**+1.9**
GNI				pmax	pmax		
	comp=Z,15nm,0.9s						
GNI				MLR	MLR		
	comp=Z,837nm,22.0s						
GNI	**Garni**	**92.01**	**47**	S	SKS	18 29 44.5	-0.5
	comp=Z,1.3nm,0.5s,baz=13,slow=22,SNR=2.2						
GNI	**Garni**	**92.01**	**47**	*e*P	**P**	**18 19 09.9**	**+1.9**
	comp=Z,15nm,0.9s,mb5.3						
GNI				LR	LR		
	comp=Z,837nm,22.0s,MS5.1						
SUR	**Sutherland**	**92.22**	**123**	*e*P	**P**	**18 19 10.5**	**+1.2**
	comp=Z,16nm,0.8s,mb5.4						
SUR				LR	LR		
	comp=Z,507nm,20.0s,MS5.0						
MSL	**Mosul**	**92.24**	**51**	*e*P	**P**	**18 19 10.0**	**+0.8**
MSL				*e*pP	pP	18 19 17.5	+2.8
MSL	**Mosul**	**92.24**	**51**	*e*SKS	SKS	18 29 40.0	-6.4
MSL				*e*S	S	18 30 05.0	-3.6
MSL				*e*sS		18 30 18.0	
TIXI	**Tiksi**	**92.43**	**357**	*e*P	**P**	**18 19 08.0**	**-1.3**
TIXI				pmax	pmax		
	comp=N,7.0nm,0.9s						
TIXI				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.6						
TIXI				pmax	pmax		
	comp=E,6.0nm,0.8s						
TIXI				pmax	pmax		
	comp=Z,443nm,5.1s						
TIXI				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.4						
TIXI	**Tiksi**	**92.43**	**357**	⇓*i*P	**P**	**18 19 08.5**	**-0.8**
TIXI				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
MBAR	**Mbarara**	**92.54**	**90**	*e*P	**P**	**18 19 10.7**	**-0.4**
MBAR				pmax	pmax		
	comp=Z,17nm,1.5s,mb5.2						
MBAR				MLR	MLR		
	comp=Z,739nm,19.0s,MS5.2						
MBAR	**Mbarara**	**92.54**	**90**	*e*P	**P**	**18 19 10.7**	**-0.4**
	comp=Z,17nm,1.5s,mb5.3						
MBAR				LR	LR		

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         comp=Z,739nm,19.0s,MS5.2
PPT   Papeete          92.69 253 eSS     SS      18 36 29.9 +0.3
PPT                              eLR     LR      18 49 03.5
         comp=Z,2µm,24.0s,baz=70
MAK   Makhachkala      92.79  44 eP      P       18 19 15.0 +3.4
MAK                              e               18 29 47.0
MAK                              e               18 30 09.0
MAK                               pmax   pmax
         comp=Z,1µm,4.0s
MAK                               pmax   pmax
         comp=E,4µm,8.0s
MAK                               smax
         comp=E,2µm,8.0s
MAK                               MLR    MLR
         comp=N,2µm,20.0s,MS5.9
MAK                               MLR    MLR
         comp=E,4µm,20.0s,MS5.9
MAK                               MLR    MLR
         comp=Z,2µm,20.0s,MS5.7
LSZ   Lusaka           94.00 105 eP      P       18 19 18.1 +0.4
LSZ                               pmax   pmax
         comp=Z,21nm,1.2s,mb5.4
LSZ                               MLR    MLR
         comp=Z,1µm,21.0s,MS5.4
LSZ   Lusaka           94.00 105 eP      P       18 19 18.1 +0.3
         comp=Z,21nm,1.2s,mb5.4
LSZ                               LR     LR
         comp=Z,1µm,21.0s,MS5.4
TBI   Tubuai           94.12 247 eSS     SS      18 36 49.5  -0.4
TBI                              eLR     LR      18 49 39.0
         comp=Z,6µm,33.2s,baz=75
LBTB  Lobatse          94.20 115 eP      P       18 19 19.2 +0.7
LBTB                              pmax   pmax
         comp=Z,4.0nm,0.7s,mb5.0
LBTB                              MLR    MLR
         comp=Z,1µm,19.0s,MS5.4
LBTB  Lobatse          94.20 115  S      SKS     18 29 56.5  -1.1
         comp=Z,1.1nm,0.8s,baz=228,slow=14,SNR=1.6
LBTB                              PKKPbc         18 36 20.5
         comp=Z,1.4nm,0.5s,baz=147,slow=2.5,SNR=4.7
LBTB  Lobatse          94.20 115 eP      P       18 19 19.2 +0.7
         comp=Z,3.9nm,0.7s,mb5.0
LBTB                              LR     LR
         comp=Z,1µm,19.0s,MS5.4
BHD   Baghdad          94.34  54 eP      P       18 19 17.5  -1.5
BHD   Baghdad          94.34  54 eSKS    SKS     18 29 50.0  -8.1
BHD                              eS      S       18 30 11.5   -15
BOSA  Boshof           94.86 118 eP      P       18 19 20.9  -0.6
BOSA                              pmax   pmax
         comp=Z,4.0nm,0.6s,mb5.0
BOSA                              MLR    MLR
         comp=Z,1µm,20.0s,MS5.4
BOSA  Boshof           94.86 118 eP      P       18 19 20.9  -0.5
         comp=Z,3.5nm,0.6s,mb5.0
BOSA                              LR     LR
         comp=Z,1µm,20.0s,MS5.4
SMY   Shemya           96.52 330  PFAKE          18 19 40.0   +12
SMY                               LR     LR
         comp=Z,6µm,20.0s,MS6.1
SEY   Seymchan         97.09 345 eP      P       18 19 34.2 +3.4
SEY                                              18 23 27.6
SEY                                              18 30 07.5
SEY                              eS      S       18 30 58.4 +9.0
SEY                              eSS     SS      18 37 28.4  -2.1
SEY                               pmax   pmax
         comp=Z,50nm,1.0s,mb5.9
SEY                               smax
         comp=N,1µm,11.9s
SEY                               smax
         comp=E,700nm,8.7s
SEY                               MLR    MLR
         comp=Z,2µm,18.0s,MS5.6
KMBO  Kilima Mbogo     98.95  89  P      P       18 19 43.0 +2.7
         comp=Z,0.3nm,0.3s,baz=231,slow=23,SNR=2.2
KMBO                              PP     PP      18 23 39.5  -5.1
         comp=Z,0.8nm,0.8s,baz=29,slow=21,SNR=2.8
KMBO                              S      S       18 30 22.9   -43
         comp=Z,0.2nm,0.3s,baz=16,slow=22,SNR=2.5
KMBO                              LR     LR      19 02 11.2
         comp=Z,4µm,20.3s,baz=282,slow=34
KMBO  Kilima Mbogo     98.95  89  P      P       18 19 43.0 +2.6
KMBO                              PP     PP      18 23 39.5  -5.1
KMBO                              S      S       18 30 22.9   -43
KMBO                              LR     LR      19 02 11.2
BRVK  Borovoye         99.94  27 eP      P       18 19 44.0 +0.1
BRVK                              MLR    MLR
         comp=Z,2µm,22.0s,MS5.5
BVAR  Borovoye Array  100.01  27  S      SKS     18 30 23.8  -3.3
         comp=Z,0.2nm,0.6s,baz=173,slow=24,SNR=2.1
BVAR                              PKKPbc         18 36 03.2
         comp=Z,0.7nm,0.7s,baz=135,slow=4.2,SNR=4.1
MA2   Magadan         100.35 344 eP      P       18 19 46.4 +0.8
MA2                               pmax   pmax
         comp=Z,7.0nm,1.7s
MA2   Magadan         100.35 344  PFAKE          18 20 00.0   +14
MA2                               LR     LR
         comp=Z,2µm,20.0s,MS5.7
YAK   Yakutsk         101.87 355 eP      P       18 19 50.4  -2.0
YAK                              e               18 38 32.7
YAK                               pmax   pmax
         comp=Z,5.0nm,1.0s
YAK                               pmax   pmax
         comp=N,251nm,21.6s
YAK                               pmax   pmax
         comp=Z,156nm,21.6s
YAK                               pmax   pmax
         comp=E,126nm,16.9s
YAK                               pmax   pmax
         comp=E,1µm,23.6s
YAK                               pmax   pmax
         comp=Z,335nm,21.3s
YAK                               pmax   pmax
         comp=N,414nm,22.3s
YAK                               MLR    MLR
         comp=Z,2µm,21.0s,MS5.7
YAK                               MLR    MLR
         comp=N,2µm,22.0s,MS5.6
YAK                               MLR    MLR
         comp=E,618nm,20.0s,MS5.6
YAK   Yakutsk         101.87 355 ePdif   P       18 19 52.9 +0.5
         comp=E,6.9nm,0.4s
YAK                               LR     LR
         comp=Z,4µm,22.0s,MS5.9
PET   Petropavlovsk   103.11 336  PFAKE          18 20 10.0   +12
PET                               LR     LR
         comp=Z,2µm,20.0s,MS5.7
ZAL   Zalesovo        104.83  20  PKKPbc         18 35 49.5
         comp=Z,0.4nm,0.3s,baz=165,slow=22,SNR=3.6
KURK  Kurchatov       105.18  25  PFAKE          18 24 30.0
KURK                              LR     LR
         comp=Z,1µm,22.0s,MS5.4
QSPA  South Pole Qui  105.80 180  PFAKE          18 24 30.0
QSPA                              LR     LR
         comp=Z,2µm,20.0s,MS5.7
AAK   Ala-Archa       109.26  33  PFAKE          18 24 40.0
AAK                               LR     LR
         comp=Z,999nm,21.0s,MS5.4
TLY   Talaya          111.57  10  PFAKE          18 24 50.0   +14
TLY                               LR     LR
         comp=Z,570nm,21.0s,MS5.1
SBA   Scott Base      113.59 190  PFAKE          18 24 50.0   +11
SBA                               LR     LR
         comp=Z,2µm,19.0s,MS5.8
YSS   Yuzh-Sakhalins  113.73 342  PFAKE          18 24 50.0   +10
YSS                               LR     LR
         comp=Z,2µm,20.0s,MS5.7
WMQ   Urumqi          114.38  24 ePDIF   Pdif    18 20 50.6 +2.7
WMQ                               PP     PP      18 25 42.0 +3.1
WMQ                               SKS    SKS     18 31 51.0   +21
WMQ                               S              18 33 19.0
WMQ                               PS     PS      18 35 15.0 +3.0
WMQ                               SS     SS      18 41 33.0 +6.4
WMQ                               PP     PP
         comp=Z,146nm,12.0s
WMQ                               LR     LR
         comp=N,4µm,24.0s,MS6.1
WMQ                               LR     LR
         comp=E,3µm,24.0s,MS6.1
WMQ                               LR     LR
         comp=Z,4µm,24.0s,MS6.0
VNDA  Vanda           114.61 189  PFAKE          18 24 50.0 +8.7
VNDA                              LR     LR
         comp=Z,2µm,20.0s,MS5.8
SONM  Songino Array   115.74   9  PKP    PKPdf   18 24 41.4  -2.8
         comp=Z,1.3nm,0.6s,baz=318,slow=1.4,SNR=14
SONM                              PP     PP      18 25 39.2  -9.1
         comp=Z,2.1nm,1.2s,baz=333,slow=3.2,SNR=4.7
SONM                              PKKPbc         18 35 13.0
         comp=Z,0.4nm,0.5s,baz=174,slow=4.2,SNR=8.4
ULN   Ulaanbaatar     115.80   8  PFAKE          18 24 50.0 +5.7
ULN                               LR     LR
         comp=Z,2µm,21.0s,MS5.7
MAW   Mawson          117.38 159  PKP    PKPdf   18 24 44.8  -2.0
         comp=Z,24nm,0.8s,baz=352,slow=5.2,SNR=5.4
MAW   Mawson          117.38 159  PKP    PKPdf   18 24 44.8  -2.0
MAW                               LR     LR
         comp=Z,6µm,22.0s,MS6.2
MDJ   Mudanjiang      118.96 351  PKP    PKPdf   18 24 48.9  -1.6
MDJ                               SS     SS      18 42 25.3  -0.9
MDJ                               PP     PP
         comp=Z,415nm,6.1s
MDJ                               LR     LR
         comp=N,2µm,19.0s
MDJ                               LR     LR
         comp=Z,3µm,20.6s,MS5.8
CN2   Changchun       120.29 354 ePKP    PKPdf   18 24 45.4  -7.6
CN2                               LR     LR
         comp=N,2µm,19.0s,MS5.8
CN2                               LR     LR
         comp=E,2µm,19.0s,MS5.8
CN2                               LR     LR
         comp=Z,2µm,21.0s,MS5.8
GTA   Gaotai          122.40  17  PKP    PKPdf   18 24 55.0  -2.2
GTA                               PP     PP      18 26 35.0 +0.8
GTA                               PKS    PKS     18 28 30.8 +1.6
GTA                               SKKS           18 33 22.0
GTA                               PP     PP
         comp=Z,543nm,7.2s
GTA                               LR     LR
         comp=N,2µm,22.1s,MS5.7
GTA                               LR     LR
         comp=E,1µm,24.0s,MS5.7
GTA                               LR     LR
         comp=Z,2µm,29.7s
HHC   Hu-ho-hao-te    123.26   6 ePKP    PKPdf   18 24 58.0  -0.9
HHC                               PP     PP      18 26 38.3  -1.9
HHC                               PKS    PKS     18 28 34.8 +4.0
HHC                               SKS    SKS     18 32 08.3 +7.2
HHC                               SKKS           18 33 33.3
HHC                               SS     SS      18 43 24.3 +2.4
HHC                               PP     PP
         comp=Z,449nm,8.4s
HHC                               LR     LR
         comp=N,1µm,22.8s,MS5.6
HHC                               LR     LR
         comp=E,1µm,25.2s,MS5.6
HHC                               LR     LR
         comp=Z,2µm,22.8s,MS5.7
URZ   Urewera         124.01 234  PP     PP      18 26 43.3  -2.1
         comp=Z,20nm,1.2s,baz=306,slow=3.3,SNR=2.3
BJI   Beijing         124.38   2  PKP    PKPdf   18 24 56.8  -4.3
BJI                               PP     PP
         comp=Z,709nm,7.3s
BJI                               LR     LR
         comp=N,1µm,29.4s
BJI                               LR     LR
         comp=E,1µm,21.2s
BJI                               LR     LR
         comp=Z,2µm,28.1s,MS5.7
BJT   Baijiatuau      124.40   2 ePKIKP  PKPdf   18 24 57.8  -3.3
MAJO  Matsushiro      124.61 341 ePKIKP  PKPdf   18 24 58.1  -3.6
MAJO                              MLR    MLR
         comp=Z,2µm,22.0s,MS5.6
MAT   Matsushiro      124.61 341 ePKP    PKPdf   18 24 59.0  -2.7
MAT   Matsushiro      124.61 341  PKP    PKPdf   18 24 58.5  -3.2
KOLN  Koldanda        125.15  38 eP      PKPdf   18 24 59.9  -3.1
         comp=Z,31nm,1.3s
DL2   Dalian          125.46 357 ePKP    PKPdf   18 25 03.1  -0.1
DL2                               PP     PP      18 26 58.8 +4.2
DL2                               SS     SS      18 43 52.3 +3.0
DL2                               PP     PP
         comp=Z,370nm,4.9s
DL2                               LR     LR
         comp=N,710nm,20.6s,MS5.3
DL2                               LR     LR
         comp=E,240nm,19.8s,MS5.3
DL2                               LR     LR
         comp=Z,810nm,20.8s,MS5.4
GKN   Gorkha          125.59  37 eP      PKPdf   18 24 59.8  -4.0
         comp=Z,37nm,0.7s
KKN   Kakani          126.12  37 eP      PKPdf   18 25 01.2  -3.6
         comp=Z,21nm,0.7s
DMN   Daman           126.16  37 eP      PKPdf   18 25 01.1  -3.7
         comp=Z,16nm,0.6s
PKI   Pulchoki        126.36  37 eP      PKPdf   18 25 01.7  -3.5
         comp=Z,36nm,1.1s
GUN   Gumba           126.37  36 eP      PKPdf   18 25 03.0  -2.2
         comp=Z,24nm,0.7s
INCN  Inchon          126.39 352  PFAKE          18 25 10.0 +5.0
INCN                              LR     LR
         comp=Z,1µm,22.0s,MS5.5
LZH   Lanzhou         126.59  15 ePKP    PKPdf   18 24 58.5  -6.9
LZH                               XPKP           18 25 04.5
LZH                               PP     PP      18 26 59.0  -3.0
LZH                              eSKKS           18 33 48.3
LZH                               PP     PP
         comp=Z,551nm,7.8s
LZH                               LR     LR
         comp=E,2µm,19.0s
LZH                               LR     LR
         comp=Z,4µm,21.0s,MS6.1
JIRN  Jiri            126.74  36 eP      PKPdf   18 25 03.2  -2.7
         comp=Z,11nm,0.7s
LSA   Lhasa           127.71  30  PKP    PKPdf   18 25 04.6  -3.2
LSA   Lhasa           127.71  30 ePKPdf  PKPdf   18 25 05.8  -2.1
HYB   Hyderabad       128.77  51 i PKP   PKPdf   18 25 08.5  -1.6
CASY  Casey           129.34 176  PFAKE          18 25 20.0   +10
CASY                              LR     LR
         comp=Z,3µm,21.0s,MS5.9
XAN   Xi'an           129.61  10  PKP    PKPdf   18 25 06.4  -5.0
CD2   Chengdu         131.47  17  PKP    PKPdf   18 25 14.0  -1.0
NJ2   Nanjing         132.38 359 ePKP    PKPdf   18 25 10.0  -6.7
NJ2                               PKS    PKS     18 28 44.0  -4.0
NJ2                               PP     PP
         comp=Z,690nm,9.5s
NJ2                               LR     LR
         comp=N,4µm,30.8s,MS6.0
NJ2                               LR     LR
         comp=E,3µm,28.8s,MS6.0
NJ2                               LR     LR
         comp=Z,4µm,37.2s
MDRS  Chennai         132.68  55 e       PKPdf   18 25 13.0  -4.7
MDRS                             e               18 27 39.0
MDRS                             e               18 28 44.0
MDRS                             e               18 30 47.0
SSE   Sheshan         133.25 357  PKP    PKPdf   18 25 16.3  -2.0
SSE                               PP     PP      18 27 46.5 +1.1
SSE                               SS     SS      18 45 28.0 +2.0
SSE                               PP     PP
         comp=Z,393nm,7.8s
SSE                               LR     LR
         comp=N,901nm,27.3s,MS5.5
SSE                               LR     LR
         comp=E,1µm,27.3s,MS5.5
SSE                               LR     LR
         comp=Z,1µm,23.4s,MS5.6
ENH   Enshi           133.39  10 ePKPpre         18 25 07.7
ENH                              ePKPdf  PKPdf   18 25 15.9  -2.7
DGAR  Diego Garcia    134.43  85  PFAKE          18 25 30.0 +9.1
DGAR                              LR     LR
         comp=Z,418nm,19.0s,MS5.2
PALK  Pallekele       136.28  61  PFAKE          18 25 30.0 +5.7
PALK                              LR     LR
         comp=Z,504nm,22.0s,MS5.2
GYA   Guiyang         136.47  15⇑iPKP    PKPdf   18 25 21.8  -2.5
GYA                               PKS    PKS     18 28 56.1 +0.4
GYA                               SKS    SKS     18 32 30.8  -3.4
GYA                               SKKS           18 34 50.6
GYA                               PP     PP
         comp=Z,510nm,7.5s
GYA                               LR     LR
         comp=N,1µm,22.8s,MS5.8
GYA                               LR     LR
         comp=E,1µm,21.0s,MS5.8
GYA                               LR     LR
         comp=Z,2µm,21.9s,MS5.7
KMI   Kunming         136.56  21  PKP    PKPdf   18 25 20.8  -3.7
KMI                               PP     PP      18 28 05.3  -0.9
KMI                               PKS    PKS     18 28 55.1  -0.7
KMI                               SKS    SKS     18 32 28.9  -5.4
KMI                               SKKS           18 34 57.4
KMI                               SS     SS      18 46 04.1  -1.6
KMI                               PP     PP
         comp=Z,338nm,10.9s
KMI                               LR     LR
         comp=N,2µm,20.5s,MS5.9
KMI                               LR     LR
         comp=E,2µm,23.3s,MS5.9
KMI                               LR     LR
         comp=Z,1µm,24.7s,MS5.5
HNR   Honiara         138.89 274  PFAKE          18 25 40.0   +11
HNR                               LR     LR
         comp=Z,1µm,21.0s,MS5.7
TATO  Taipei          139.31 356  PFAKE          18 25 40.0   +10
TATO                              LR     LR
         comp=Z,1µm,21.0s,MS5.7
QZH   Quanzhou        139.47 360  PKP    PKPdf   18 25 20.5  -9.4
QZH                               PP     PP      18 28 23.5  -1.1
QZH                               LR     LR
         comp=Z,3µm,20.8s,MS6.1
CHG   Chiang Mai      140.66  30  P      PKPdf   18 25 32.7 +0.4
CM31  Chiang Mai Arr  140.97  30  PFAKE          18 25 40.0 +7.2
CM31                              LR     LR
         comp=Z,2µm,22.0s,MS5.8
CMAR  Chiang Mai Arr  140.97  30  PKHKP          18 25 24.6
CMAR                                             18 25 30.7
CMAR                                             18 28 27.5
CMAR                              pmax   pmax
         comp=Z,3.0nm,0.6s
CMAR                              pmax   pmax
         comp=Z,4.0nm,0.7s
CMAR                              pmax   pmax
         comp=Z,2.0nm,1.0s
CMAR  Chiang Mai Arr  140.97  30  PKhKP          18 25 24.6
         comp=Z,2.5nm,0.6s,baz=310,slow=5.0,SNR=11
CMAR                              PKP    PKPdf   18 25 30.6  -2.2
         comp=Z,3.6nm,0.7s,baz=316,slow=3.4,SNR=26
CMAR                              PP     PP      18 28 27.5  -6.3
         comp=Z,1.5nm,1.0s,baz=315,slow=5.1,SNR=3.2
NANT  Nan             141.48  27 ⇑P      PKPdf   18 25 25.0  -8.7
TAU   Tasmania Unive  143.34 217  PFAKE          18 25 50.0   +19
TAU                               LR     LR
         comp=Z,1µm,19.0s,MS5.6
NST   Nakhon Sawan    143.93  31  P      PKPbc   18 25 33.2   0.0
QIZ   Qiongzhong      144.38  14  PKP    PKPdf   18 25 32.5  -6.1
QIZ                               PP     PP      18 28 52.9  -1.4
QIZ                               LR     LR
         comp=N,716nm,25.3s,MS5.5
QIZ                               LR     LR
         comp=E,908nm,27.7s,MS5.5
QIZ                               LR     LR
         comp=Z,2µm,24.9s,MS5.7
KKTK  Khon Kaen       144.58  26  P      PKPbc   18 25 35.0   0.0
         comp=Z,864nm,0.6s
CNB   Canberra Magne  146.11 229 ePKP    PKPdf   18 25 41.0  -0.2
         comp=Z,3µm,1.6s
APYP  Conner          146.39 355 eP      PKPbc   18 25 40.3 +0.7
ABRA  Dolores         146.64 356 eP      PKPbc   18 25 42.5 +2.3
TOO   Toolangi        147.65 223 ePKP    PKPdf   18 25 42.8  -0.9
         comp=Z,2.6nm,1.4s
TGY   Tagaytay City   150.14 355  PKHKP          18 25 48.7
TGY                               pmax   pmax
         comp=Z,49nm,0.5s
TGY   Tagaytay City   150.14 355  PKPbc  PKPdf   18 25 48.7 +0.5
         comp=Z,49nm,0.5s,baz=94,slow=22,SNR=3.5
PMG   Port Moresby    151.12 279  PKIKP  PKPdf   18 25 46.4  -3.4
PMG                                              18 25 54.3
PMG                               pmax   pmax
         comp=Z,4.0nm,0.7s
PMG                               pmax   pmax
         comp=Z,18nm,0.7s
PMG   Port Moresby    151.12 279  PKP    PKPdf   18 25 46.4  -3.4
         comp=Z,3.6nm,0.7s,baz=14,slow=13,SNR=5.1
PMG                               PKPbc  PKPdf   18 25 54.3 +4.5
         comp=Z,18nm,0.7s,baz=12,slow=4.8,SNR=16
PMG   Port Moresby    151.12 279  PKP    PKPdf   18 25 46.4  -3.4
PMG                              ePKPbc  PKPdf   18 25 53.4 +3.6
PMG                               PKPbc  PKPdf   18 25 54.3 +4.5
PMG                               LR     LR
         comp=Z,1µm,19.0s,MS5.8
SNG   Songkhla        151.22  39  P      PKPdf   18 25 54.0 +4.0
CTA   Charters Tower  153.06 257  PKIKP  PKPdf   18 25 50.7  -1.7
CTA                                              18 25 58.1
CTA                                              18 26 09.4
CTA                               pmax   pmax
         comp=Z,12nm,1.1s
CTA                               pmax   pmax
         comp=Z,15nm,0.7s
CTA                               pmax   pmax
         comp=Z,28nm,1.0s
CTA   Charters Tower  153.06 257  PKP    PKPdf   18 25 50.7  -1.7
         comp=Z,12nm,1.1s,baz=353,slow=2.3,SNR=3.9
CTA                               PKPbc  PKPdf   18 25 58.1 +5.7
         comp=Z,15nm,0.7s,baz=326,slow=4.4,SNR=3.0
CTA                               PKPab  PKPab   18 26 09.4  -0.5
         comp=Z,28nm,1.0s,baz=84,slow=4.7,SNR=8.2
CTA   Charters Tower  153.06 257  PKP    PKPdf   18 25 50.7  -1.7
CTA                               PKPbc  PKPdf   18 25 58.1 +5.7
CTA                               PKPab  PKPab   18 26 09.4  -0.5
CTAO  Charters Tower  153.06 257 ePKIKP  PKPdf   18 25 51.8  -0.6
CTAO                             e               18 25 58.7
CTAO                              MLR    MLR
         comp=Z,2µm,19.0s,MS5.9
STKA  Stephens Creek  153.44 229 ePKP    PKPdf   18 25 50.8  -1.8
         comp=Z,9.6nm,0.9s
STKA  Stephens Creek  153.44 229  PKP    PKPdf   18 25 50.9  -1.8
         comp=Z,7.2nm,0.9s,baz=19,slow=2.6,SNR=13
STKA                              PKPbc  PKPdf   18 25 59.1 +6.5
         comp=Z,12nm,0.9s,baz=125,slow=2.4,SNR=10.0
STKA                              PKPab  PKPab   18 26 11.4 +0.2
         comp=Z,11nm,0.7s,baz=98,slow=4.4,SNR=11
COCO  West Island     158.89  83  PFAKE          18 26 10.0   +10
COCO                              LR     LR
         comp=Z,679nm,21.0s,MS5.5
FORT  Forrest         162.64 209 ePKP    PKPdf   18 26 00.4  -3.3
         comp=Z,749nm,0.6s
FORT  Forrest         162.64 209 eP      PKPab   18 26 49.1  -1.6
         comp=Z,732nm,0.7s
ASAR  Alice Springs   163.36 240  PKP    PKPdf   18 26 01.2  -3.4
         comp=Z,9.4nm,0.8s,baz=94,slow=1.0,SNR=82
ASAR                              PKPab  PKPab   18 26 52.4  -1.6
         comp=Z,2.3nm,0.7s,baz=116,slow=3.7,SNR=6.1
ASAR                              PP     PP      18 30 38.3  -1.7
         comp=Z,0.8nm,1.0s,baz=135,slow=4.0,SNR=2.4
ASPA  Alice Springs   163.36 240 eP      PKPdf   18 26 01.3  -3.3
WB2   Warramunga Arr  164.16 253 ePKP    PKPdf   18 26 01.9  -3.6
WRAB  Tennant Creek   164.16 253 ePKIKP  PKPdf   18 26 02.0  -3.5
WRAB                             e               18 26 56.4
WRAB                              MLR    MLR
         comp=Z,910nm,19.0s
WRA   Warramunga Arr  164.17 253  PKIKP  PKPdf   18 26 01.9  -3.6
WRA                                              18 26 58.0
WRA                                              18 30 44.1
WRA                               pmax   pmax
         comp=Z,14nm,0.7s
WRA                               pmax   pmax
         comp=Z,4.0nm,0.6s
WRA                               pmax   pmax
         comp=Z,5.0nm,1.4s
WRA   Warramunga Arr  164.17 253  PKP    PKPdf   18 26 01.9  -3.6
         comp=Z,14nm,0.7s,baz=67,slow=0.2,SNR=116
WRA                               PKPab  PKPab   18 26 58.0 +0.3
         comp=Z,4.2nm,0.6s,baz=98,slow=4.3,SNR=13
WRA                               PP     PP      18 30 44.1  -0.7
         comp=Z,4.5nm,1.4s,baz=90,slow=3.3,SNR=3.6
KAKA  Kakadu          165.92 281 ePKP    PKPdf   18 26 04.4  -2.9
         comp=Z,11nm,1.0s
FITZ  Fitzroy Crossi  172.60 251 ePKP    PKPdf   18 26 08.7  -2.6
         comp=Z,15nm,1.0s
FITZ  Fitzroy Crossi  172.60 251 eP      PKPab   18 27 36.3 +1.6
         comp=Z,24nm,1.1s
MBWA  Marble Bar      174.53 194  PFAKE          18 26 20.0 +8.1
MBWA                              LR     LR
         comp=Z,2µm,19.0s
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*TRN **14** 18:08:32.0, 15.86N×61.62W, h3^{km}, M2.8(FDF)*

*IDC **14** 18:08:35.5±0.8, 15.80N×61.63W, mb4.5/8, mb1 4.8/9, mb1mx4.4/21, mbtmp4.5/9, ML7.1/1, Error ellipse: s-maj=12.7km s-min=10.3km az=115.0*

ISC 14 18:08:31.3±0.5**, 15.73N**±0.04×**61.60W**±0.07**, h3^{km}, n18,** σ**1^{s}82**/23**, mb4.4**/8**, 4C-1D, Leeward Islands**

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Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
BBL   Barber's Block     0.24 149⇓eP     Pg       18 08 37.4 +1.3
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SCG	Saint Claude	0.31	345	⇑eP	Pg	18 08 35.7	-1.8
MGG	Marie-Galante	0.33	55	⇑iP	Pg	18 08 37.2	-0.7
BCG	Bois Riant Cap	0.35	357	eP	Pg	18 08 36.5	-2.0
SEG	Port Louis	0.68	8	⇑eP	Pg	18 08 42.1	-2.7
FDF	Fort de France	1.08	156	⇑eP	Pb	18 08 50.9	-1.4
FDF				eS	Sb	18 09 06.3	-0.3
CRM	Caravelle	1.17	146	eP	Pb	18 08 52.6	-1.3
CRM				eS	Sb	18 09 09.2	-0.1
BIM	Bigot	1.31	157	eP	Pb	18 08 54.5	-1.7
BIM				eS	Sb	18 09 15.6	+2.3
MVM	Montagne Vaucl	1.35	150	eP	Pb	18 08 55.7	-1.3
MVM				eS	Sb	18 09 12.1	-2.5
SJG	San Juan	4.96	299	Pn	Pn	18 09 51.9	+3.4
	142nm,0.3s,baz=162,slow=12,SNR=11						
SJG				Sn	Sn	18 10 45.1	-2.1
	42nm,0.3s,baz=83,slow=22,SNR=2.9						
PDAR	Pinedale Array	48.92	313	P	P	18 17 23.3	+2.7
	4.7nm,0.6s,mb4.7,baz=121,slow=10,SNR=4.1						
ESDC	Sonseca Array	55.31	52	P	P	18 18 11.7	+3.0
	1.7nm,0.7s,mb4.2,baz=259,slow=7.8,SNR=3.9						
DBIC	Dimbokro	56.24	92	P	P	18 18 18.5	+2.8
	21nm,0.9s,mb5.2,baz=277,slow=5.7,SNR=4.5						
YKA	Yellowknife Ar	59.49	335	P	P	18 18 38.8	+0.9
	3.1nm,0.4s,mb4.7,baz=104,slow=7.4,SNR=4.1						
NOA	NORSAR Array B	68.05	30	P	P	18 19 37.3	+3.3
	2.0nm,0.9s,mb4.2,baz=256,slow=6.3,SNR=2.6						
GERES	GERESS Array B	68.67	43	P	P	18 19 39.2	+1.0
	2.2nm,0.9s,mb4.1,baz=280,slow=6.0,SNR=4.9						
ILAR	Eielson Array	73.90	334	P	P	18 20 11.2	+2.0
	4.1nm,1.0s,mb4.3,baz=85,slow=5.7,SNR=8.9						
FINES	FINESS Array B	75.22	30	P	P	18 20 19.4	+2.4
	2.3nm,0.9s,mb4.1,baz=297,slow=4.3,SNR=3.6						

NNC 14 18:27:49.4±5.4, 40.04N×75.48E, h6^{km}±11^{km}, mpv3.6, 4C, Error ellipse: s-maj=54.8km s-min=19.2km az=32.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	Kyzart	2.04	355	P	Pn	18 28 28.4	+3.8
	SNR=57						
ULHL	Ulahol	2.27	14	P	Pn	18 28 31.8	+3.7
	SNR=84						
UCH	Uchtor	2.30	342	P	Pn	18 28 32.7	+4.2
	SNR=54						
AML	Almayashu	2.49	328	P	Pn	18 28 35.6	+4.5
	SNR=70						
KBK	Karagaybulak	2.64	351	P	Pn	18 28 37.5	+4.2
	SNR=97						
AAK	Ala-Archa	2.69	344	⇑Pg	Pn	18 28 38.6	+4.5
	42nm,0.7s						
AAK				⇑Lg		18 29 15.1	
	44nm,0.5s						
AAK	Ala-Archa	2.69	344	P	Pn	18 28 38.6	+4.5
	SNR=76						
TKM2	Tokmak 2	2.88	2	P	Pn	18 28 40.6	+4.0
	SNR=16						
EKS2	Erkin-Say	2.92	334	P	Pn	18 28 41.9	+4.7
	SNR=16						
CHMS	Chumysh	3.00	350	P	Pn	18 28 42.3	+3.9
	SNR=10						
USP	Ospenovka	3.31	347	P	Pn	18 28 46.2	+3.5
	SNR=58						
MK31	Makanchi Array	8.37	34	⇑Pn	P	18 29 53.8	-0.3
	1.2nm,0.8s,baz=224,slow=13,SNR=10						
MK31				⇑Lg		18 32 12.3	
	0.8nm,0.7s,baz=215,slow=25,SNR=3.7						

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*IDC **14** 18:30:23.5±1.1, 15.82N×61.66W, mb3.5/3, mb1 3.9/3, mb1mx3.5/20, mbtmp3.5/3, MS4.3/1, Ms1 4.3/1, ms1mx2.9/30, Error ellipse: s-maj=13.1km s-min=10.7km az=118.0*

*TRN **14** 18:30:25.9, 15.82N×61.62W, h3^{km}, M2.7(FDF)*

ISC 14 18:30:24.9±1.0, 15.82N±0.09×61.6W±0.2, h22^{km}±8^{km}, n12, σ0^{s}42/9, mb3.6/3, 4C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOG	Dongo Capester	0.21	2	⇑iP	Pb	18 30 30.2	-0.2
SCG	Saint Claude	0.21	345	⇑iP	Pb	18 30 30.4	-0.1
BCG	Bois Riant Cap	0.26	1	eP	Pb	18 30 31.1	-0.1
MGG	Marie-Galante	0.31	72	⇑eP	Pb	18 30 31.9	0.0
BBL	Barber's Block	0.33	153	⇑eP	Pb	18 30 32.2	0.0
SEG	Port Louis	0.59	11	eP	Pb	18 30 36.8	+0.4
SVV	Soufriere Volc	2.52	171	eT		18 30 56.7	
SVV	Soufriere Volc	2.52	171	eT		18 46 41.1	
SJG	San Juan	4.89	298	LR	LR	18 33 19.4	
	comp=Z,3μm,18.1s,baz=82,slow=36						
PDAR	Pinedale Array	48.84	313	P	P	18 39 11.4	+0.7
	0.3nm,0.6s,mb3.5,baz=107,slow=9.4,SNR=3.3						
YKA	Yellowknife Ar	59.40	334	P	P	18 40 26.9	-1.0
	0.7nm,0.5s,mb3.9,baz=107,slow=7.3,SNR=12						
ILAR	Eielson Array	73.81	334	P	P	18 41 59.3	+0.1
	0.4nm,0.6s,mb3.5,baz=90,slow=5.0,SNR=6.6						

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*IDC **14** 18:34:25.6±0.9, 15.91N×61.57W, mb3.7/5, mb1 4.0/5, mb1mx3.6/20, mbtmp3.7/5, Error ellipse: s-maj=12.3km s-min=9.7km az=125.0*

*NEIC **14** 18:34:27.7±1.1, 15.90N×61.68W, h10^{km}, Error ellipse: s-maj=24.0km s-min=16.7km az=68.0*

ISC 14 18:34:25.9±3.9, 15.75N±0.07×61.7W±0.2, h14^{km}±24^{km}, n9, σ0^{s}84/10, mb3.7/5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPA	Boggy Peak	1.30	353	eP	Pb	18 34 49.5	-0.1
BPA				eS	Sb	18 35 05.6	-0.5
CPB	Codrington	1.89	356	eP	Pn	18 34 58.8	+0.6
CPB				eS	Sn	18 35 22.5	+0.7
SVV	Soufriere Volc	2.46	169	eT		18 33 32.6	
TXAR	Lajitas Array	40.84	297	P	P	18 42 10.6	+1.6
	0.3nm,0.6s,mb3.1,baz=121,slow=7.3,SNR=3.4						
PDAR	Pinedale Array	48.84	314	P	P	18 43 12.5	-0.4
	0.7nm,0.7s,mb3.8,baz=107,slow=9.4,SNR=6.4						
DBIC	Dimbokro	56.33	92	P	P	18 44 09.6	+0.3
	2.8nm,0.8s,mb4.4,baz=252,slow=6.4,SNR=4.1						
YKA	Yellowknife Ar	59.44	335	P	P	18 44 28.9	-1.4
	0.5nm,0.6s,mb3.8,baz=106,slow=7.4,SNR=8.3						
YKA	Yellowknife Ar	59.44	335	P	P	18 44 28.9	-1.4
ILAR	Eielson Array	73.84	334	P	P	18 46 00.9	-0.7
	0.5nm,0.9s,mb3.4,baz=76,slow=3.7,SNR=4.4						

MAN 14 18:37:34.7, 9.61N×126.09E, h4^{km}, mb4.4, ML3.2, MS3.1, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.62	286	⇓eP	Pg	18 37 47.1	-0.1
SCPH				eS	Sg	18 37 56.5	+1.1
BUTP	Butuan	0.79	216	eP	Pg	18 37 50.0	-0.4
BUTP				eS	Sg	18 38 01.9	+1.0
MSLP	Maasin	1.32	293	eP	Pb	18 37 58.6	-1.2
MSLP				eS	Sb	18 38 18.2	+1.2
BIPH	Bislig	1.44	169	⇓eP	Pn	18 38 00.6	-1.1
BIPH				eS	Sb	18 38 18.9	-1.4
BUKP	Musuan	2.00	211	eP	Pn	18 38 09.5	-0.2
BUKP				eS	Sn	18 38 36.0	+0.7
MATI	Mati	2.65	176	eP	Pn	18 38 19.5	+0.5
MATI				eS	Sn	18 38 54.0	+2.1
PAGZ	Pagadian	3.20	237	eP	Pn	18 38 25.6	-1.2

IDC 14 18:37:53.7±1.2, 12.41N×92.92E, mb3.6/5, mb1 3.8/6, mb1mx3.6/18, mbtmp3.7/6, ML4.1/1, Error ellipse: s-maj=48.8km s-min=22.0km az=49.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.36	43	Pn	P	18 39 57.3	-1.7
	0.7nm,0.3s,baz=235,slow=15,SNR=38						
BVAR	Borovoye Array	44.34	341	P	P	18 46 04.5	-2.7
	0.3nm,0.6s,baz=135,slow=4.1,SNR=4.1						
WRA	Warramunga Arr	51.91	128	P	P	18 47 04.5	-2.2
	0.1nm,0.3s,baz=310,slow=7.7,SNR=3.0						
ASAR	Alice Springs	53.77	132	P	P	18 47 18.4	-2.0
	0.3nm,0.4s,baz=306,slow=6.8,SNR=11						
BRTR	Keskin Array B	58.62	309	P	P	18 47 53.8	-1.2
	0.6nm,0.6s,baz=124,slow=5.2,SNR=2.8						
FINES	FINESS Array B	68.17	332	P	P	18 48 55.1	-2.6
	3.5nm,1.1s,baz=112,slow=10,SNR=4.5						

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*IDC **14** 18:43:56.0±5.2, 53.21N×4.55W, mb3.7/1, mb1 3.7/7, mb1mx3.4/22, mbtmp3.6/7, ML3.3/6, Error ellipse: s-maj=72.4km s-min=22.1km az=84.0*

*MOS **14** 18:43:57.3±0.7, 53.15N×3.86W, h10^{km}, mb4.0/1, Error ellipse: s-maj=14.5km s-min=4.4km az=106.3*

*NEIC **14** 18:44:00.8, 53.27N×3.85W, h5^{km}, ML3.8(LDG), ML3.3(BGS), After BGS.*

NEIC Felt in the Conwy-Llandudno area.

*CSEM **14** 18:44:00.0±0.0, 53.28N×3.85W, h10^{km}, ML3.8/24, Error ellipse: s-maj=1.2km s-min=0.7km az=73.0*

*LDG **14** 18:44:01.6±0.1, 53.22N×3.82W, h10^{km}, Ml3.8/29, Error ellipse: s-maj=2.3km s-min=1.3km az=71.0*

BGS 14 18:44:01.5±0.4, 53.25N×3.83W, h10^{km}±2^{km}, ML3.3, 9C-11D, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WPM1	Penmaenmawr	0.05	282	⇓iP	Pg	18 44 03.8	+0.2
YLL	Llanberis	0.23	243	⇑iP	Pg	18 44 06.2	-0.3
WME	Myndd Eilian	0.32	298	⇓iP	Pg	18 44 07.8	-0.3
WME				eS	Sg	18 44 11.6	-1.1
WLF1	Llynfaes	0.34	277	⇓iP	Pg	18 44 08.1	-0.5
YRC	Rhoscolyn	0.45	271	⇑iP	Pg	18 44 09.9	-0.7
YRC				eS	Sg	18 44 15.5	-1.3
YRE	Yr Eifl	0.45	234	⇑iP	Pg	18 44 10.0	-0.6
WCB1	Church Bay	0.45	287	⇓iP	Pg	18 44 10.0	-0.7
WCB1				eS	Sg	18 44 15.8	-1.1
SBD1	Bryn Du	0.48	135	⇓iP	Pg	18 44 10.4	-1.0
HLM1	Long Mynd	0.93	142	⇓iP	Pb	18 44 18.5	-0.7
HLM1				eS	Sb	18 44 30.9	-0.5
SSP1	Stoney Pound	0.94	152	⇓iP	Pb	18 44 18.8	-0.6
SSP1				eS	Sb	18 44 30.5	-1.2
SSP1				AML	AML	18 44 31.7	
	comp=E,689nm,0.3s						
SSP1				AML	AML	18 44 35.4	
	comp=N,560nm,0.2s						
WIM	Isle of Man	1.03	331	⇓eP	Pb	18 44 20.4	-0.6
WIM				eS	Sb	18 44 33.0	-1.4
KWE	Weaver Farm	1.22	100	eP	Pb	18 44 23.6	-0.6
KWE				eS	Sb	18 44 38.0	-1.7
KWE	Weaver Farm	1.22	100	eP	Pb	18 44 23.6	-0.6
KWE				eS	Sb	18 44 38.0	-1.8
LHO	Holmfirth	1.22	75	eP	Pb	18 44 23.3	-0.9
HTR	Trewern Hill	1.22	164	⇓iP	Pb	18 44 23.4	-0.8
HTR				AML	AML	18 44 39.7	
	comp=Z,563nm,0.4s						
MCH1	Michaelchurch	1.35	158	⇓iP	Pb	18 44 25.5	-1.0
MCH1				eS	Sb	18 44 42.6	-1.1
MCH1				AML	AML	18 44 44.6	
	comp=E,742nm,0.4s						
MCH1				AML	AML	18 44 46.0	
	comp=N,650nm,0.3s						
KBI1	Birley Grange	1.38	89	eP	Pn	18 44 26.0	-0.9
HPE	Pembroke	1.44	204	eP	Pn	18 44 26.5	-1.2
HAE	Alders End	1.44	147	⇓iP	Pn	18 44 27.4	-0.4
HAE				eS	Sb	18 44 44.5	-1.8
HAE				AML	AML	18 44 49.7	
	comp=Z,354nm,0.6s						
LDU	Leeds Universi	1.47	67	eP	Pn	18 44 26.8	-1.3
LDU				AML	AML	18 44 48.2	
	comp=Z,315nm,0.3s						
HPK	Haverah Park	1.49	61	eP	Pn	18 44 27.2	-1.3
HPK				eS	Sb	18 44 46.3	-1.5
HSA	Swansea	1.52	188	eP	Pn	18 44 27.7	-1.1
BBO1	Bothel	1.53	13	⇑eP	Pn	18 44 27.4	-1.6
BBO1				eS	Sb	18 44 46.1	-2.7
DSB	Dublin	1.53	271	ePn	Pn	18 44 27.5	-1.6
DSB				eSn	Sn	18 44 46.4	-2.8
GMM	Mts of Mourne	1.60	309	eP	Pn	18 44 28.3	-1.8
DLF	Lyons Farm	1.62	273	⇑iP	Pn	18 44 29.2	-1.2
DLF				eS	Sn	18 44 49.1	-2.4
BDL	Dobcross Hall	1.64	18	⇑eP	Pn	18 44 29.1	-1.6
GAL1	Galloway	1.70	343	eP	Pn	18 44 29.7	-1.8
GAL1				eS	Sn	18 44 50.2	-3.3
GAL1				AML	AML	18 44 55.1	
	comp=N,202nm,0.3s						
GAL1				AML	AML	18 44 55.2	
	comp=E,293nm,0.3s						
HGH	Gray Hill	1.73	158	eP	Pn	18 44 31.1	-0.8
HGH				AML	AML	18 44 58.4	
	comp=Z,358nm,0.3s						
BTA	Talkin	1.79	22	⇑eP	Pn	18 44 31.1	-1.6
BTA				eS	Sn	18 44 52.3	-3.5
BTA	Talkin	1.79	22	⇑eP	Pn	18 44 31.1	-1.7
BTA				eS	Sn	18 44 52.3	-3.5
BCC1	Chapelcross	1.81	11	eP	Pn	18 44 31.2	-1.8
BHH	Howats Hill	1.88	11	eP	Pn	18 44 32.0	-2.1
BHH				eS	Sn	18 44 54.7	-3.4
BWH	Wardlaw	1.94	3	⇑eP	Pn	18 44 33.0	-1.9
DMUB	Kingscourt	1.95	291	eP	Pn	18 44 33.2	-1.9
DMUB				eS	Sn	18 45 00.6	+0.8
BBH	Bruntsheil	1.96	15	eP	Pn	18 44 33.1	-2.1
LCP	Cassop	2.04	42	eP	Pn	18 44 34.4	-1.9
SMD	Mendips	2.06	160	eP	Pn	18 44 36.7	+0.1
DCN	Croghan	2.07	274	eP	Pn	18 44 35.4	-1.4
DCN				eS	Sn	18 44 59.9	-3.0
ESK	Eskdalemuir	2.10	10	eP	Pn	18 44 34.9	-2.4
ESK				e		18 45 00.1	
ESK	Eskdalemuir	2.10	10	ePn	Pn	18 44 34.9	-2.4
ESK				ePg	Pg	18 44 40.4	-3.2
ESK				eSn	Sn	18 45 00.1	-3.6
ESK				eSg	Sg	18 45 06.4	-5.2
ESK	Eskdalemuir	2.10	10	eP	Pn	18 44 35.2	-2.1
ESK				eS	Sn	18 45 00.0	-3.7
EKA	Eskdalemuir Ar	2.13	10	P	Pn	18 44 35.4	-2.2
EKA						18 45 00.1	
EKA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
EKA				pmax	pmax		
	comp=Z,23nm,0.3s						
EKA				smax			
	comp=N,35nm,0.3s						
EKA	Eskdalemuir Ar	2.13	10	Pn	Pn	18 44 35.4	-2.2
	comp=N,3.1nm,0.3s,baz=192,slow=12,SNR=53						
EKA				Pg	Pg	18 44 40.2	-3.8
	comp=N,23nm,0.3s,baz=187,slow=17,SNR=82						
EKA				Sn	Sn	18 45 00.1	-4.1
	comp=N,35nm,0.3s,baz=201,slow=24,SNR=22						
EKA				Lg		18 45 08.1	
	comp=N,52nm,0.3s,baz=189,slow=29,SNR=22						
SWN1	Swindon	2.14	144	eP	Pn	18 44 37.7	0.0
LWH	Whinny Nab	2.17	59	eP	Pn	18 44 36.6	-1.5
HEX	Exmoor	2.19	180	eP	Pn	18 44 37.2	-1.2
GCL	Cushendall	2.28	324	eP	Pn	18 44 37.5	-2.2
GCL	Cushendall	2.28	324	eP	Pn	18 44 37.5	-2.2
HTL	Hartland	2.29	190	eP	Pn	18 44 38.9	-1.1
HTL				AML	AML	18 45 12.2	
	comp=N,249nm,0.5s						
HTL				AML	AML	18 45 12.8	
	comp=E,157nm,0.2s						
SWK	Warminster	2.32	155	eP	Pn	18 44 39.7	-0.6
GMK	Mull of Kintyr	2.34	334	eP	Pn	18 44 38.5	-2.1
GMK	Mull of Kintyr	2.34	334	eP	Pn	18 44 38.5	-2.2
EAU	Auchinoon	2.61	5	eP	Pn	18 44 42.5	-2.1
EDI	Edinburgh	2.71	8	eP	Pn	18 44 43.7	-2.2
EAB	Aberfoyle	2.96	354	eP	Pn	18 44 46.9	-2.6
CSA1	St Austell	2.97	193	eP	Pn	18 44 47.7	-2.0
EBH	Black Hill	3.01	3	eP	Pn	18 44 48.2	-2.0
CRQ2	Rosemanowes 2	3.20	196	eP	Pn	18 44 50.7	-2.2
CRQ2				AML	AML	18 45 41.2	
	comp=N,45nm,0.2s						
CRQ2				AML	AML	18 45 44.0	
	comp=E,118nm,0.6s						
CMA1	Manaccan	3.27	195	eP	Pn	18 44 51.7	-2.2
CPZ	Penzance	3.28	200	eP	Pn	18 44 52.0	-2.1
CGH1	Goonhilly	3.31	195	eP	Pn	18 44 52.2	-2.2
TEB	Eastbourne	3.46	133	eP	Pn	18 44 55.0	-1.5
ROSF	Rostrenen	4.93	176	ePn	Pn	18 45 13.7	-3.8
ROSF				eSn	Sn	18 46 07.4	-7.9
ROSF				eSg	Sg	18 46 35.8	-10
	comp=E,29nm,0.4s						
FLN	La Foliniere	4.96	153	ePn	Pn	18 45 14.4	-3.5
	baz=335						
FLN				ePg	Pg	18 45 32.9	-7.7
FLN				eSn	Sn	18 46 07.9	-8.2
FLN				eSg	Sg	18 46 36.5	-10
	comp=E,32nm,0.4s,baz=328						
FLN	La Foliniere	4.96	153	eP	Pn	18 45 14.4	-3.5
FLN				e		18 46 07.9	
FLN	La Foliniere	4.96	153	ePg	Pg	18 45 32.9	-7.7
FLN				eSn	Sn	18 46 07.9	-8.2
FLN				eSg	Sg	18 46 36.5	-10
	comp=E,16nm,0.4s						
SGMF	Saint Gilles	5.07	170	ePn	Pn	18 45 15.1	-4.3
SGMF				eSn	Sn	18 46 09.9	-8.7
SGMF				eSg	Sg	18 46 39.9	-10
	comp=E,16nm,0.4s						
LDF	La Druitiere	5.22	152	ePn	Pn	18 45 17.6	-3.9
LDF				eSn	Sn	18 46 13.0	-9.4
LDF				eSg	Sg	18 46 43.9	-11
	comp=E,36nm,0.6s						
GRR	Gorron	5.22	158	ePn	Pn	18 45 17.1	-4.4
GRR				eSn	Sn	18 46 13.7	-8.8
GRR				eSg	Sg	18 46 44.3	-11
	comp=E,26nm,0.4s						
QUIF	Quistinic	5.36	175	ePn	Pn	18 45 19.5	-3.9
QUIF				eSn	Sn	18 46 17.3	-8.6
QUIF				eSg	Sg	18 46 48.6	-11
	comp=E,24nm,0.4s						
BAIF	Baives	5.93	119	ePn	Pn	18 45 28.5	-3.1
BAIF				eSn	Sn	18 46 30.8	-10
BAIF				eSg	Sg	18 47 06.1	-13
	comp=E,25nm,0.5s						
GIVF	Givet	6.23	117	ePn	Pn	18 45 32.4	-3.5
GIVF				eSn	Sn	18 46 37.7	-10
GIVF				eSg	Sg	18 47 15.8	-13
	comp=E,21nm,0.4s						
MFF	Saint Martin d	7.06	159	ePn	Pn	18 45 42.5	-5.0
MFF				eSn	Sn	18 46 57.2	-11
MFF				eSg	Sg	18 47 41.9	-15
	comp=E,18nm,0.7s						
HYF	Humbligny	7.28	143	ePn	Pn	18 45 45.3	-5.2
HYF				eSn	Sn	18 47 03.1	-11
MEZF	Maizieres J'vi	7.36	127	ePn	Pn	18 45 47.3	-4.3
	baz=308						
MEZF				eSn	Sn	18 47 04.6	-11
	comp=E,12nm,0.3s						
RFYF	Reffroy	7.47	124	ePn	Pn	18 45 47.9	-5.4
	baz=310						
RFYF				eSn	Sn	18 47 07.4	-12
	comp=E,9.4nm,0.2s,baz=298						
SFTF	Sexfontaines	7.56	128	ePn	Pn	18 45 50.0	-4.4
SFTF				eSn	Sn	18 47 09.4	-12
	comp=E,10nm,0.3s,baz=312						
SSF	Saint Saulge	7.78	140	ePn	Pn	18 45 51.8	-5.7
SSF				eSn	Sn	18 47 14.0	-13
SSF				eSg	Sg	18 48 03.5	-17
	comp=E,7.2nm,0.6s						
AVF	Avril sur Loir	7.94	142	ePn	Pn	18 45 54.0	-5.8
AVF				ePg	Pg	18 46 26.5	-14
AVF				eSn	Sn	18 47 19.1	-12
	comp=E,6.9nm,0.4s						
AVF	Avril sur Loir	7.94	142	eP	Pn	18 45 54.0	-5.8
AVF				e		18 47 19.1	
BGF	Bois d'Agland	7.96	145	ePn	Pn	18 45 54.6	-5.5
BGF				eSn	Sn	18 47 19.5	-12
	comp=E,22nm,0.4s						
TCF	Toulx Ste Croi	7.99	148	ePn	Pn	18 45 54.3	-6.1
TCF				eSg	Sg	18 48 10.6	-17
	comp=E,4.2nm,0.4s						
SMF	Signal de Mont	8.25	140	ePn	P	18 45 58.6	-5.5
SMF				eSn	Sn	18 47 26.0	-12
	comp=E,6.6nm,0.4s						
HAU	Haudompre	8.33	125	ePn	P	18 46 00.0	-5.2
HAU				eSn	Sn	18 47 27.8	-12
	comp=E,7.3nm,0.2s						
BLS5	Blasjo	8.41	39	eP	P	18 46 01.2	-5.2
BLS5				eS	Sn	18 47 27.9	-15
BLS5				AML	AML	18 47 36.5	
	comp=Z,6.2nm,0.4s						
BLS5	Blasjo	8.41	39	eP	P	18 46 01.2	-5.2
	SNR=47						
BLS5				eS	Sn	18 47 27.9	-15
	comp=Z,6.2nm,0.4s,SNR=47						
EGD	Espegrend	8.61	32	eP	P	18 46 02.9	-6.3
EGD				eS	Sn	18 47 35.4	-12
EGD	Espegrend	8.61	32	eP	P	18 46 02.8	-6.3
	SNR=47						
EGD				eS	Sn	18 47 35.4	-12
	SNR=47						
RJF	Les Rejaudoux	8.68	154	ePn	P	18 46 03.6	-6.5
RJF				eSn	Sn	18 47 35.7	-13
	comp=Z,7.2nm,0.3s						
HINF	Hinteralfeld	8.70	124	ePn	P	18 46 05.2	-5.2
HINF				eSn	Sn	18 47 36.7	-13
	comp=Z,3.7nm,0.3s						
RUND	Rundenannen	8.77	31	eP	P	18 46 06.1	-5.2
ASK	Askoy	8.77	31	eP	P	18 46 03.9	-7.5
ASK				eS	Sn	18 47 36.9	-14
ASK				AML	AML	18 47 44.4	
	comp=Z,7.9nm,0.9s						
ASK	Askoy	8.77	31	eP	P	18 46 03.8	-7.5
	SNR=47						
ASK				eS	Sn	18 47 36.9	-14
	comp=Z,7.9nm,0.9s,SNR=47						
ODD1	Odda	8.82	37	eP	P	18 46 04.5	-7.5
ODD1				eS	Sn	18 47 37.6	-15
LFF	La Frestale	8.84	158	ePn	P	18 46 06.6	-5.7
LFF				eSn	Sn	18 47 39.9	-13
	comp=Z,8.3nm,0.3s						
CAF	Calviac	9.18	153	ePn	P	18 46 11.1	-5.9
CAF				eSn	Sn	18 47 47.9	-14
	comp=Z,5.7nm,0.3s						
CABF	La Chapelle	9.21	132	ePn	P	18 46 11.7	-5.8
CABF				eSn	Sn	18 47 48.9	-13
	comp=Z,3.5nm,0.3s						
FOO	Floro	9.63	26	eP	P	18 46 16.9	-6.1
FOO				eS	Sn	18 47 58.4	-14
VIVF	Saint-Julien-l	10.07	143	ePn	P	18 46 23.5	-5.7
VIVF				eSn	S	18 48 09.9	-14
	comp=Z,5.7nm,0.5s						
SJPF	Ste Jean	10.29	169	ePn	P	18 46 25.4	-6.8
LPL	La Plagne	10.35	134	ePn	P	18 46 28.6	-4.4
LPL				eSn	S	18 48 16.1	-14
	comp=Z,1.5nm,0.3s						
LPG	La Plagne	10.37	134	ePn	P	18 46 29.2	-4.1
ORIF	Oris-en-Rattie	10.48	139	ePn	P	18 46 29.9	-4.9
ORIF				eSn	S	18 48 19.1	-14
	comp=Z,6.6nm,0.4s						
LASF	Ste Croix	10.48	148	ePn	P	18 46 28.8	-6.1
LASF				eSn	S	18 48 19.4	-14
ETSF	Etsaut	10.58	167	ePn	P	18 46 29.8	-6.4
EPF	Esparros	10.59	163	ePn	P	18 46 30.5	-5.9
EPF				eSn	S	18 48 22.5	-14
	comp=Z,2.3nm,0.2s						
MTLF	Montolieu	10.70	156	ePn	P	18 46 30.7	-7.0
DAVOX	Davos	10.93	121	Pn	P	18 46 38.1	-2.8
	comp=Z,0.8nm,0.3s,baz=220,slow=1.8,SNR=7.3						
DAVOX				Sn	S	18 48 35.7	-8.6
	comp=Z,0.6nm,0.3s,baz=338,slow=20,SNR=3.9						
MBDF	Montbardon	11.00	137	ePn	P	18 46 35.9	-6.0
NOA	NORSAR Array B	11.28	40	Pn	P	18 46 39.4	-6.2
	comp=Z,0.2nm,0.3s,baz=222,slow=12,SNR=2.6						
NOA				Sn	S	18 48 36.3	-16
	comp=Z,0.1nm,0.3s,baz=104,slow=18,SNR=2.2						
HFS	Hagfors	11.82	47	Pn	P	18 46 45.9	-7.1
	comp=Z,0.0nm,0.3s,baz=244,slow=14,SNR=6.7						
HFS				Sn	S	18 48 48.4	-18
	comp=Z,0.0nm,0.3s,baz=251,slow=26,SNR=2.6						
GERES	GERESS Array B	11.87	105	Pn	P	18 46 49.9	-3.9
	comp=Z,0.1nm,0.3s,baz=315,slow=40,SNR=2.1						
FINES	FINESS Array B	17.96	51	P	P	18 48 10.2	-2.3
FINES	FINESS Array B	17.96	51	P	P	18 48 10.1	-2.4
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=3.5						
ARCES	ARCESS Array B	21.18	28	P	P	18 48 44.9	-4.0
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	21.18	28	P	P	18 48 44.9	-4.0
	comp=Z,4.1nm,1.0s,baz=229,slow=11,SNR=5.3						

IDC 14 18:46:15.8±3.6, 12.79N×91.16E, mb3.6/3, mb1 3.6/4, mb1mx3.4/17, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=91.0km s-min=32.5km az=85.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.37	52	Pn	P	18 48 31.8	-3.4
	0.1nm,0.3s,baz=242,slow=15,SNR=2.4						
SONM	Songino Array	37.18	17	P	P	18 53 28.7	-1.6
	0.8nm,1.2s,baz=191,slow=7.3,SNR=3.3						
WRA	Warramunga Arr	53.52	127	P	P	18 55 38.4	-2.3
	0.3nm,0.5s,baz=301,slow=9.3,SNR=4.8						
ASAR	Alice Springs	55.32	131	P	P	18 55 51.7	-2.2

0.5nm,0.6s,baz=308,slow=6.7,SNR=6.0

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*NEIC **14** 18:49:14.9±1.8, 15.66N×61.41W, h10^{km}, Error ellipse: s-maj=28.0km s-min=23.7km az=123.0*

*IDC **14** 18:49:14.8±0.9, 15.75N×61.64W, mb3.9/5, mb1 4.2/6, mb1mx3.8/22, mbtmp4.0/6, ML5.8/1, MS3.8/1, Ms1 3.8/1, ms1mx2.6/29, Error ellipse: s-maj=12.2km s-min=10.6km az=118.0*

*TRN **14** 18:49:19.3, 15.81N×61.57W, h5^{km}, MD3.7, M3.1(FDF)*

ISC 14 18:49:16.8±0.7**, 15.73N**±0.04×**61.66W**±0.08**, h23**^{km}±6^{km}**, n19,** σ**0^{s}.84**/28**, mb3.9**/5**, 2C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCG	Saint Claude	0.30	356	⇑eP	Pb	18 49 24.2	+0.5
DOG	Dongo Capester	0.30	8	eP	Pb	18 49 23.9	+0.1
BCG	Bois Riant Cap	0.36	6	eP	Pb	18 49 24.6	+0.1
MGG	Marie-Galante	0.38	60	eP	Pb	18 49 23.5	-1.5
SEG	Port Louis	0.69	12	⇑eP	Pb	18 49 29.8	-0.3
SEG				eS	Sb	18 49 38.6	-0.5
FDF	Fort de France	1.10	154	eP	Pn	18 49 36.9	-0.2
FDF				eS	Sb	18 49 52.0	+0.9
CRM	Caravelle	1.21	143	eP	Pn	18 49 37.9	-0.7
CRM				eS	Sb	18 49 53.9	-0.2
BPA	Boggy Peak	1.32	352	eP	Pn	18 49 40.6	+0.4
BPA				eS	Sn	18 49 58.0	+0.8
BIM	Bigot	1.33	155	eP	Pn	18 49 40.5	+0.2
BIM				eS	Sn	18 49 58.8	+1.3
MVM	Montagne Vaucl	1.38	148	eP	Pn	18 49 41.1	0.0
MVM				eS	Sn	18 49 58.4	-0.3
CPB	Codrington	1.91	355	eP	Pn	18 49 49.5	+0.9
CPB				eS	Sn	18 50 13.8	+1.8
SJG	San Juan	4.91	300	Pn	Pn	18 50 32.2	+0.9
	7.3nm,0.3s,baz=294,slow=19,SNR=3.6						
SJG				Sn	Sn	18 51 27.0	-1.0
	5.4nm,0.3s,baz=258,slow=22,SNR=2.7						
SJG				LR	LR	18 52 12.2	
	comp=Z,901nm,19.6s,baz=266,slow=36						
SJG	San Juan	4.91	300	Pn	Pn	18 50 32.2	+1.0
SJG				Sn	Sn	18 51 27.0	-1.0
SJG				LR	LR	18 52 12.2	
ULM	Lac du Bonnet	44.13	329	P	P	18 57 24.2	-1.0
	2.2nm,0.7s,mb4.0,baz=133,slow=8.7,SNR=3.4						
PDAR	Pinedale Array	48.87	314	P	P	18 58 03.5	+0.6
	1.7nm,1.0s,mb4.0,baz=125,slow=11,SNR=6.5						
YKA	Yellowknife Ar	59.47	335	P	P	18 59 18.9	-1.3
	0.7nm,0.5s,mb4.0,baz=106,slow=7.4,SNR=10						
INK	Inuvik	68.80	338	P	P	19 00 19.7	-1.4
	2.3nm,1.1s,mb4.0,baz=90,slow=6.9,SNR=3.6						
INK	Inuvik	68.80	338	P	P	19 00 19.7	-1.4
ILAR	Eielson Array	73.87	334	P	P	19 00 51.1	-0.3
	0.3nm,0.6s,mb3.4,baz=76,slow=7.2,SNR=4.4						

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*NEIC **14** 18:54:59.9±4.4, 17.50S×167.60E, h7^{km}±26^{km}, mb5.1/25, MS5.0/10, Error ellipse: s-maj=9.7km s-min=8.4km az=225.0*

*IDC **14** 18:54:59.7±0.7, 17.45S×167.54E, mb4.5/13, mb1 4.7/13, mb1mx4.7/18, mbtmp4.5/13, MS4.7/12, Ms1 4.7/12, ms1mx4.5/23, Error ellipse: s-maj=22.0km s-min=17.8km az=150.0*

*HRVD **14** 18:54:59.9±0.4, 17.36S×167.27E, h13^{km}±1^{km}, MW5.4/63, Centroid moment Tensor Solution. LP body waves: s31,c46;Mantle waves: s63,c107; Half duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.97±.07; M$_{\theta\theta}$0.01±.04; M$_{\phi\phi}$-0.98±.05; M$_{r\theta}$0.03±.11; M$_{\theta\phi}$0.14±.03; M$_{\phi r}$-1.03±.15; Best double couple: M$_{0}$1.427×10^{17} NP1:ϕ_s347°, δ22°, λ81°. NP2:ϕ_s177°, δ68°, λ93°. Principal axes: T 1.413, Plg67°, Azm93°; N .028, Plg3°, Azm355°; P -1.441, Plg23°, Azm264°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **14** 18:55:02.6±1.8, 17.70S×167.47E, h33^{km}, mb5.2/13, MS5.0/7 Error ellipse: s-maj=14.0km s-min=12.1km az=8.0*

*LDG **14** 18:55:03.9±0.5, 17.55S×167.04E, h10^{km}, Mb5.3/3, Error ellipse: s-maj=61.7km s-min=9.7km az=90.0*

*BJI **14** 18:55:06.6, 16.80S×167.19E, h17^{km}, mB5.4, mb4.7, Ms5.4, Msz5.1*

ISC 14 18:55:01.5±4.3**, 17.68S**±0.06×**167.60E**±0.07**, h27**^{km}±30^{km}**, h30**^{km}±1.7^{km}**: pP-P, n152,** σ**1^{s}.42**/99**, mb4.9**/51**, MS4.9**/27**, 4C-6D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.50	194	eP	Pn	18 56 09.8	0.0
DZM				eS	Sn	18 56 57.4	-4.6
DZM	Mont Dzumac	4.50	194	eP	Pn	18 56 09.8	0.0
DZM				eS	Sn	18 56 57.4	-4.6
NOUC	Port Laguerre	4.56	195	eP	Pn	18 56 12.1	+1.3
NOUC				eS	Sn	18 57 02.9	-0.7
HNR	Honiara	11.07	317	eP	P	18 57 36.4	-4.9
	375nm,0.9s						
CTA	Charters Tower	20.34	260	⇓iP	P	18 59 38.7	+0.1
	39nm,0.9s						
CTA	Charters Tower	20.34	260	⇓iP	P	18 59 38.7	+0.1
CTA				pmax	pmax		
	comp=Z,39nm,0.9s						
CTA	Charters Tower	20.34	260	P	P	18 59 38.6	0.0
	comp=Z,35nm,0.8s,baz=83,slow=12,SNR=19						
CTA				LR	LR	19 06 25.3	
	comp=Z,5μm,19.9s,MS4.8,baz=50,slow=34						
CTAO	Charters Tower	20.34	260	eP	P	18 59 38.0	-0.6
CTAO				pmax	pmax		
	comp=Z,168nm,1.4s						
CTAO				MLR	MLR		
	comp=Z,5μm,21.0s,MS4.8						
CTAO	Charters Tower	20.34	260	eP	P	18 59 38.0	-0.7
	comp=Z,168nm,1.4s						
CTAO				LR	LR		
	comp=Z,5μm,21.0s,MS4.8						
PMG	Port Moresby	21.49	290	P	P	18 59 50.0	-0.5
	comp=Z,21nm,0.9s,mb4.4,baz=140,slow=5.5,SNR=14						
PMG				LR	LR	19 05 47.3	
	comp=Z,2μm,19.6s,MS4.6,baz=102,slow=30						
URZ	Urewera	22.13	160	P	P	18 59 59.6	+2.9
	comp=Z,31nm,0.9s,mb4.7,baz=94,slow=2.4,SNR=9.3						
CNB	Canberra Magne	23.91	219	eP	P	19 00 17.5	+3.4
	comp=Z,920nm,1.3s,mb6.0						
STKA	Stephens Creek	27.43	234	⇓iP	P	19 00 48.2	+1.0
	comp=Z,38nm,1.3s,mb4.8						
STKA	Stephens Creek	27.43	234	P	P	19 00 48.4	+1.2
	comp=Z,21nm,0.9s,mb4.7,baz=59,slow=7.4,SNR=21						
STKA				LR	LR	19 10 40.0	
	comp=Z,3μm,20.2s,MS4.9,baz=95,slow=34						
RAR	Rarotonga	30.94	102	LR	LR	19 11 38.6	
	comp=Z,708nm,20.0s,MS4.3,baz=100,slow=32						
WB2	Warramunga Arr	31.52	261	eP	P	19 01 22.0	-1.9
WRAB	Tennant Creek	31.52	261	⇓iP	P	19 01 20.8	-3.1
WRAB	Tennant Creek	31.52	261	eP	P	19 01 20.9	-3.0
	comp=Z,29nm,1.2s,mb5.0						
WRA	Warramunga Arr	31.54	261	P	P	19 01 22.2	-1.8
	comp=Z,6.2nm,0.9s,mb4.4,baz=90,slow=9.4,SNR=23						
ASAR	Alice Springs	32.03	254	P	P	19 01 26.9	-1.4
	comp=Z,8.7nm,0.8s,mb4.6,baz=82,slow=9.1,SNR=48						
ASAR				LR	LR	19 13 36.6	
	comp=Z,3μm,21.3s,MS4.9,baz=64,slow=35						
ASPA	Alice Springs	32.03	254	eP	P	19 01 26.5	-1.8
KAKA	Kakadu	34.25	273	eP	P	19 01 46.2	-1.5
	comp=Z,27nm,1.5s,mb5.0						
FITZ	Fitzroy Crossi	39.87	263	eP	P	19 02 34.6	-0.3
	comp=Z,31nm,0.9s,mb5.0						
TBI	Tubuai	40.50	105	eLQ		19 12 19.7	
TBI				eLR	LR	19 13 47.0	
	comp=Z,2μm,31.8s						
PPT	Papeete	40.75	97	eLQ		19 12 14.9	
PPT				eLR	LR	19 14 26.4	
	comp=Z,3μm,28.0s,baz=260						
MBWA	Marble Bar	45.15	258	eP	P	19 03 17.6	-0.4
	comp=Z,20nm,0.9s,mb4.9						
TAOE	Nuku Hiva Isla	51.47	87	eLR	LR	19 19 20.4	
	baz=263						
VNDA	Vanda	59.94	181	P	P	19 05 09.6	+2.2
	comp=Z,3.6nm,1.1s,mb4.3,baz=45,slow=7.1,SNR=2.5						
VNDA				LR	LR	19 29 25.0	
	comp=Z,565nm,18.9s,MS4.7,baz=303,slow=34						
VNDA	Vanda	59.94	181	P	P	19 05 05.9	-1.5
VNDA				LR	LR	19 29 25.0	
MAT	Matsushiro	60.66	333	P	P	19 05 10.0	-2.8
MAT	Matsushiro	60.66	333	P	P	19 05 09.9	-2.9
SSE	Sheshan	65.87	317	P	P	19 05 47.0	-0.3
SSE				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
SSE				AMB	AMB		
	comp=Z,216nm,11.7s						
NJ2	Nanjing	68.01	316	eP	P	19 06 02.1	+1.2
NJ2				AP	pP	19 06 12.6	+3.4
NJ2				XP	sP	19 06 17.3	+5.1
NJ2				PCP	PcP	19 06 27.9	+0.9
NJ2				S	S	19 14 59.0	+2.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,510nm,4.4s						
NJ2				LR	LR		
	comp=N,1μm,13.6s,MS5.4						
NJ2				LR	LR		
	comp=E,1μm,15.0s,MS5.4						
NJ2				LR	LR		
	comp=Z,980nm,18.0s,MS5.1						
YSS	Yuzh-Sakhalins	68.11	342	eP	P	19 06 03.0	+1.8
YSS				e	pP	19 06 09.6	0.0
WHN	Wuhan	70.15	313	eP	P	19 06 15.0	+1.0
FX1	Attu Island--F	70.43	4	LR	LR	19 30 33.8	
	comp=Z,57nm,19.7s,MS3.8,baz=175,slow=30						
MDJ	Mudanjiang	71.02	332	P	P	19 06 17.3	-1.8
MDJ				AP	pP	19 06 28.3	+0.8
MDJ				XP	sP	19 06 32.6	+2.2
MDJ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,107nm,4.6s						
MDJ	Mudanjiang	71.02	332	eP	P	19 06 17.5	-1.6
	comp=Z,82nm,1.7s,mb5.4						
CN2	Changchun	72.33	329	eP	P	19 06 28.3	+1.4
CN2				eAP	pP	19 06 38.3	+3.0
CN2				eS	S	19 15 48.9	+1.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,18.0s,MS5.2						
CN2				LR	LR		
	comp=E,700nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
QSPA	South Pole Qui	72.37	180	eP	P	19 06 28.0	+1.4
	comp=Z,41nm,1.1s,mb5.3						
ENH	Enshi	73.48	310	eP	P	19 06 32.5	-1.4
	comp=Z,14nm,1.0s,mb4.8						
GYA	Guiyang	73.65	305	P	P	19 06 37.1	+2.1
GYA				PP	PP	19 09 25.4	+4.2
GYA				S	S	19 16 05.9	+3.5
GYA				PS	PS	19 16 46.5	+7.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
GYA				AMB	AMB		
	comp=Z,120nm,5.3s						
GYA				LR	LR		
	comp=N,640nm,18.2s,MS5.0						
GYA				LR	LR		
	comp=E,480nm,17.4s,MS5.0						
GYA				LR	LR		
	comp=Z,720nm,16.8s,MS5.0						
KLR	Kul'dur	73.82	336	eP	P	19 06 32.2	-3.3
NST	Nakhon Sawan	74.28	292	P	P	19 06 37.0	-1.8
BJT	Baijiatuau	74.74	322	eP	P	19 06 40.3	-0.8
BJT				pmax	pmax		
	comp=Z,34nm,1.4s						
BJT	Baijiatuau	74.74	322	eP	P	19 06 40.3	-0.8
	comp=Z,34nm,1.4s,mb5.1						
BJI	Beijing	74.75	322	eP	P	19 06 42.3	+1.2
BJI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
NANT	Nan	75.07	296	P	P	19 06 44.0	+0.7
XAN	Xi'an	75.91	313	P	P	19 06 49.6	+1.7
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
KMI	Kunming	76.13	302	P	P	19 06 52.0	+2.7
KMI				AP	pP	19 07 01.6	+3.9
KMI				PP	PP	19 09 44.3	+2.3
KMI				S	S	19 16 31.1	+1.2
KMI				AMB	AMB		
	comp=Z,14nm,1.4s,mb4.7						
KMI				AMB	AMB		
	comp=Z,256nm,4.9s						
KMI				LR	LR		
	comp=N,2μm,24.0s						
KMI				LR	LR		
	comp=E,2μm,18.9s						
KMI				LR	LR		
	comp=Z,3μm,23.2s,MS5.5						
CHRT	Chiangrai	76.30	296	⇑P	P	19 07 00.1	+10
	comp=Z,140nm,1.3s,mb5.7						
CM31	Chiang Mai Arr	76.44	295	eP	P	19 06 52.0	+0.8
	comp=Z,9.4nm,0.9s,mb4.7						
CMAR	Chiang Mai Arr	76.44	295	i P	P	19 06 52.4	+1.3
CMAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	Chiang Mai Arr	76.44	295	P	P	19 06 52.0	+0.9
	comp=Z,5.5nm,1.0s,mb4.4,baz=124,slow=4.5,SNR=17						
HHC	Hu-ho-hao-te	78.03	320	eP	P	19 07 01.8	+2.3
HHC				AMB	AMB		
	comp=Z,8.0nm,1.6s,mb4.4						
CD2	Chengdu	78.05	308	eP	P	19 07 00.8	+1.0
MA2	Magadan	78.19	351	eP	P	19 06 57.3	-2.7
MA2				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
MA2				MLR	MLR		
	comp=Z,2μm,24.0s,MS5.4						
BTO	Baotou	78.84	319	eP	P	19 07 06.3	+2.4
HIA	Hailar	78.99	330	eP	P	19 07 04.0	-0.6
HIA				pmax	pmax		
	comp=Z,25nm,1.4s						
HIA	Hailar	78.99	330	eP	P	19 07 04.0	-0.6
	comp=Z,25nm,1.4s,mb5.0						
LZH	Lanzhou	80.53	313	eP	P	19 07 16.0	+2.9
LZH				AP	pP	19 07 26.0	+4.3
LZH				XP	sP	19 07 30.4	+5.9
LZH				PP	PP	19 10 22.0	+3.5
LZH				eS	S	19 17 19.0	+2.3
LZH				AMB	AMB		
	comp=Z,23nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,80nm,4.0s						
LZH				LR	LR		
	comp=N,413nm,16.0s						
LZH				LR	LR		
	comp=Z,775nm,17.1s,MS5.1						
ULN	Ulaanbaatar	84.69	324	eP	P	19 07 34.6	+0.3
ULN				pmax	pmax		
	comp=Z,72nm,1.6s,mb5.5						
ULN	Ulaanbaatar	84.69	324	eP	P	19 07 34.6	+0.3
	comp=Z,72nm,1.6s,mb5.6						
GTA	Gaotai	84.93	314	eP	P	19 07 37.4	+1.7
GTA				AP	pP	19 07 48.3	+4.0
GTA				XP	sP	19 07 52.1	+5.0
GTA				PP	PP	19 10 56.5	+2.4
GTA				PPP	PPP	19 12 52.4	+2.3
GTA				S	S	19 18 03.1	+2.0
GTA				XS		19 18 21.3	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.4s,mb4.2						
GTA				AMB	AMB		
	comp=Z,410nm,7.6s						
GTA				LR	LR		
	comp=N,684nm,16.0s						
GTA				LR	LR		
	comp=E,588nm,23.6s						
GTA				LR	LR		
	comp=Z,761nm,22.4s						
YAK	Yakutsk	84.93	343	eP	P	19 07 35.1	0.0
YAK				pmax	pmax		
	comp=Z,147nm,1.6s,mb5.9						
YAK	Yakutsk	84.93	343	eP	P	19 07 35.0	-0.1
	comp=Z,147nm,1.6s,mb5.9						
TNA	Tin City	85.04	10	eP	P	19 07 33.3	-2.3
	comp=Z,2.2nm,1.0s,mb4.2						
SONM	Songino Array	85.05	324	P	P	19 07 36.8	+0.8
	comp=Z,1.2nm,0.8s,mb4.1,baz=143,slow=4.2,SNR=9.1						
BILL	Bilibino	85.48	359	eP	P	19 07 37.6	-0.1
BILL				i	pP	19 07 45.5	-0.8
BILL				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.6						
BILL	Bilibino	85.48	359	eP	P	19 07 37.0	-0.7
	comp=Z,78nm,1.4s,mb5.6						
BILL				LR	LR		
	comp=Z,498nm,21.0s,MS4.9						
SYO	Syowa Base	85.98	197	⇓P	P	19 07 38.4	-1.9
OHCM	Honcut	87.07	47	P	P	19 07 45.5	-0.7
BOD	Bodaibo	87.26	334	eP	P	19 07 44.5	-2.2
BOD				e		19 07 59.0	
BOD				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.9						
YBH	Yreka Blue Hor	87.28	45	P	P	19 07 47.3	+0.1
	comp=Z,5.4nm,1.0s,mb4.7,baz=291,slow=2.2,SNR=4.7						
CMB	Columbia Colle	87.29	49	eP	P	19 07 47.1	-0.3
CMB				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
CMB				MLR	MLR		
	comp=Z,655nm,19.0s,MS5.1						
CMB	Columbia Colle	87.29	49	eP	P	19 07 47.1	-0.3
	comp=Z,12nm,1.0s,mb5.1						
CMB				LR	LR		
	comp=Z,655nm,19.0s,MS5.1						
LSA	Lhasa	87.39	302	P	P	19 07 51.6	+3.6
LSA	Lhasa	87.39	302	eP	P	19 07 48.7	+0.7
LSA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
LSA	Lhasa	87.39	302	eP	P	19 07 48.7	+0.6
	comp=Z,8.9nm,1.1s,mb4.9						
ZAK	Zakamensk	88.13	325	eP	P	19 07 53.4	+2.3
ZAK				e		19 11 13.1	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.8s,mb4.7						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb4.1						
TLY	Talaya	88.60	326	eP	P	19 07 48.0	-5.3
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
NVAR	Mina Array Bea	88.95	49	P	P	19 07 55.7	+0.4
	comp=Z,3.2nm,0.9s,mb4.7,baz=231,slow=6.4,SNR=13						
MNV	Mina	89.06	49	eP	P	19 07 55.9	+0.1
MNV				pmax	pmax		
	comp=Z,47nm,1.5s,mb5.6						
MNV				MLR	MLR		
	comp=Z,715nm,19.0s,MS5.1						
MNV	Mina	89.06	49	eP	P	19 07 55.9	+0.1
	comp=Z,47nm,1.5s,mb5.6						
MNV				LR	LR		
	comp=Z,715nm,19.0s,MS5.1						
ILAR	Eielson Array	89.22	18	P	P	19 07 57.0	+1.0
	comp=Z,0.8nm,0.7s,mb4.2,baz=231,slow=4.9,SNR=11						
ILAR				LR	LR	19 44 41.2	
	comp=Z,809nm,18.6s,MS5.2,baz=226,slow=34						
MOY	Mondy	90.02	325	eP	P	19 08 02.4	+2.4
MOY				pmax	pmax		
	comp=Z,77nm,1.9s,mb5.7						
WVOR	Wild Horse Val	90.32	45	eP	P	19 08 01.7	+0.1
WVOR				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.4						
WVOR				MLR	MLR		
	comp=Z,850nm,20.0s,MS5.2						
WVOR	Wild Horse Val	90.32	45	eP	P	19 08 01.7	+0.1
	comp=Z,27nm,1.4s,mb5.4						
WVOR				LR	LR		
	comp=Z,850nm,20.0s,MS5.2						
NEN	Nelson	90.45	53	eP	P	19 08 02.8	+0.4
SNAA	Sanae	90.64	183	LR	LR	19 49 13.0	
	comp=Z,286nm,18.0s,MS4.8,baz=222,slow=36						
BMO	Blue Mountains	92.16	43	eP	P	19 08 09.3	-0.7
BMO				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.8						
BMO				MLR	MLR		
	comp=Z,460nm,19.0s,MS5.0						
BMO	Blue Mountains	92.16	43	eP	P	19 08 09.3	-0.7
	comp=Z,7.0nm,1.5s,mb4.8						
BMO				LR	LR		
	comp=Z,460nm,19.0s,MS5.0						
TUC	Tucson	92.46	57	P	P	19 08 10.2	-1.5
TUC				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.4						
TUC	Tucson	92.46	57	P	P	19 08 10.2	-1.4
	comp=Z,1.4nm,0.5s,mb4.5						
TIXI	Tiksi	92.91	349	⇑iP	P	19 08 11.9	-0.9
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb5.1						
HLID	Hailey	93.61	45	eP	P	19 08 16.0	-0.7
HLID				LR	LR		
	comp=Z,866nm,19.0s,MS5.2						
HWUT	Hardware Ranch	94.92	48	eP	P	19 08 21.2	-1.6
	comp=Z,8.0nm,1.1s,mb5.1						
WMQ	Urumqi	95.01	314	eP	P	19 08 24.0	+0.9
WMQ				AMB	AMB		
	comp=Z,15nm,1.2s,mb5.3						
INK	Inuvik	95.57	19	LR	LR	19 47 44.2	
	comp=Z,516nm,18.8s,MS5.0,baz=220,slow=33						
MNTX	Cornudas Mount	96.64	59	P	P	19 08 30.0	-0.9
MNTX				LR	LR		
	comp=Z,304nm,19.0s,MS4.8						
BW06	Boulder Array	96.70	47	P	P	19 08 29.8	-1.1
BW06				LR	LR		
	comp=Z,491nm,22.0s,MS4.9						
TXAR	Lajitas Array	97.40	62	LR	LR	19 45 31.0	
	comp=Z,299nm,19.0s,MS4.8,baz=220,slow=31						
YKA	Yellowknife Ar	100.01	27	i P	P	19 08 48.5	+3.1
YKA	Yellowknife Ar	100.01	27	P	P	19 08 44.8	-0.5
	comp=Z,0.2nm,0.6s,baz=231,slow=4.0,SNR=2.9						
YKA				LR	LR	19 50 23.9	
	comp=Z,319nm,18.4s,MS4.9,baz=190,slow=33						
WMOK	Wichita Mounta	102.76	57	eP	Pdif	19 09 01.1	+2.8
WMOK				pmax	pmax		
	comp=Z,12nm,1.3s						
WMOK				MLR	MLR		
	comp=Z,434nm,22.0s,MS4.9						
WMOK	Wichita Mounta	102.76	57	ePdif	Pdif	19 09 01.1	+2.7
	comp=Z,12nm,1.3s						
WMOK				LR	LR		
	comp=Z,434nm,22.0s,MS4.9						
FRB	Frobisher Bay	120.43	25	PKP	PKPdf	19 13 52.0	-3.1
	comp=Z,2.3nm,0.8s,baz=229,slow=9.3,SNR=2.8						
FRB	Frobisher Bay	120.43	25	PKP	PKPdf	19 13 52.0	-3.2
ARCES	ARCESS Array B	123.17	345	PKP	PKPdf	19 13 55.9	-4.4
	comp=Z,1.7nm,0.8s,baz=63,slow=2.0,SNR=4.7						
SAML	Samuel	123.29	114	PKP	PKPdf	19 13 58.4	-3.4
GNI	Garni	126.18	307	i PKIKP	PKPdf	19 14 08.5	+1.7
MOS	Moscow	126.53	327	ePKIKP	PKPdf	19 14 17.4	+10
KIV	Kislovodsk	127.07	312	ePKIKP	PKPdf	19 14 10.7	+2.3
KIV				pmax	pmax		
	comp=N,9.0nm,1.2s						
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN	Obninsk	127.34	327	i PKIKP	PKPdf	19 14 08.4	-0.2
OBN				pmax	pmax		
	comp=Z,30nm,2.7s						
KOLS	Kolonicke sedl	138.07	326	ePKP	PKPdf	19 14 27.2	-1.7
KOLS				e		19 14 38.6	
GERES	GERESS Array B	142.39	332	PKP	PKPdf	19 14 33.1	-3.5
	comp=Z,0.5nm,0.6s,slow=2.9,SNR=4.5						
RUP	Ruppelstein	144.41	338	PKP	PKPdf	19 14 41.3	+1.3
WTTA	Wattenberg	144.49	331	⇑iP	PKPbc	19 14 37.2	+2.1
MOTA	Moosalm	144.67	332	⇓iP	PKPbc	19 14 35.0	-0.6
WLF	Walferdange	144.76	339	PKP	PKPdf	19 14 36.3	-4.4
BFO	Black Forest	145.07	336	ePKIKP	PKPdf	19 14 38.0	-3.2
DAVA	Damuels	145.25	333	⇑iP	PKPbc	19 14 38.7	+1.5
WLS	Welschbruch	145.37	337	PKP	PKPdf	19 14 44.9	+3.1
FELD	Feldberg	145.56	335	PKP	PKPdf	19 14 45.1	+3.0
ECH	Echery	145.61	337	PKP	PKPdf	19 14 45.1	+2.9
BRMO	Bormio	145.65	332	ePKP	PKPdf	19 14 40.4	-1.9
THEF	They Montfort	146.03	338	PKP	PKPdf	19 14 43.9	+1.0
HINF	Hinteralfeld	146.06	337	ePKP1	PKPbc	19 14 40.6	+1.4
HAU	Haudompre	146.09	337	ePKP1	PKPbc	19 14 41.2	+2.0
	comp=Z,257nm,1.4s						
BBS	Basel-Blauen	146.09	336	PKP	PKPdf	19 14 46.7	+3.7
MEZF	Maizieres J'vi	146.13	339	ePKP1	PKPbc	19 14 41.5	+2.2
	comp=Z,465nm,1.5s						
LOMF	Lomont	146.45	336	PKP	PKPdf	19 14 45.4	+1.8
SFI	Santa Sofia	146.81	327	ePKP	PKPdf	19 14 44.3	0.0
VAI	Varese	146.84	333	ePKP	PKPdf	19 14 42.8	-1.6
RCBR	Riachuelo	147.08	133	ePKPbc	PKPdf	19 14 42.6	-3.1
MCGN	Macugnaga	147.10	333	ePKP	PKPdf	19 14 47.9	+3.1
ORO	Oropa	147.37	333	ePKP	PKPdf	19 14 50.7	+5.5
LDF	La Druitiere	147.58	345	ePKP1	PKPdf	19 14 47.8	+2.3
	comp=Z,92nm,1.3s						
SSF	Saint Saulge	147.90	339	ePKP1	PKPdf	19 14 46.3	+0.3
	comp=Z,314nm,1.6s						
GRR	Gorron	147.96	345	ePKP1	PKPdf	19 14 49.4	+3.3
	comp=Z,118nm,1.3s						
LPL	La Plagne	147.99	334	ePKP1	PKPdf	19 14 49.5	+3.3
LPG	La Plagne	147.99	334	ePKP1	PKPdf	19 14 49.6	+3.4
	comp=Z,43nm,1.0s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HYF	**Humbligny**	**148.00**	**341**	*e*PKP1	PKPdf	19 14 50.2	+4.0
SMF	**Signal de Mont**	**148.14**	**339**	*e*PKP1	PKPdf	19 14 47.2	+0.8
	comp=Z,221nm,1.6s						
AVF	**Avril sur Loir**	**148.19**	**339**	*e*PKP1	PKPdf	19 14 47.3	+0.8
	comp=Z,327nm,1.9s						
BNI	**Bardonecchia**	**148.38**	**334**	*e*PKPab	PKPab	19 14 51.5	+0.5
BGF	**Bois d'Agland**	**148.56**	**340**	*e*PKP1	PKPdf	19 14 49.0	+1.9
	comp=Z,132nm,1.4s						
ORIF	**Oris-en-Rattie**	**148.82**	**334**	*e*PKP1	PKPdf	19 14 50.6	+3.0
	comp=Z,240nm,1.5s						
AGO	**Saint Agoulin**	**148.90**	**339**	PKP	PKPdf	19 14 53.5	+5.8
TCF	**Toulx Ste Croi**	**149.00**	**340**	*e*PKP1	PKPdf	19 14 50.5	+2.7
	comp=Z,281nm,1.7s						
LBL	**Lubilhac**	**149.57**	**338**	PKP	PKPdf	19 14 55.6	+6.8
ESDC	**Sonseca Array**	**156.89**	**343**	PKPab	PKPab	19 15 25.5	-1.4
	comp=Z,0.3nm,0.4s,baz=18,slow=4.7,SNR=4.0						

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*IDC **14** 18:55:32.4±1.9, 27.19S×176.24W, mb4.5/4, mb1 4.6/5, mb1mx4.3/14, mbtmp4.4/5, ML4.2/1, Error ellipse: s-maj=56.2km s-min=32.8km az=138.0*

*NEIC **14** 18:55:34.7±1.1, 27.03S×176.42W, h10^{km}, mb4.8/6, Error ellipse: s-maj=24.0km s-min=22.3km az=101.0*

ISC 14 18:55:39.2±3.0, **27.3S**±0.3×**176.9W**±0.4, **h33^{km}, n20, σ0^{s}.88**/13, **mb4.6**/8, **1C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**19.05**	**208**	P	**P**	**19 00 00.8**	**-0.5**
	0.7nm,0.3s,baz=7.1,slow=8.1,SNR=3.9						
CTA	**Charters Tower**	**34.44**	**274**	*e*P	**P**	**19 02 28.3**	**+2.4**
	6.3nm,0.5s,mb4.8						
CTA	**Charters Tower**	**34.44**	**274**	P	**P**	**19 02 27.7**	**+1.8**
	14nm,0.7s,mb5.0,baz=114,slow=9.8,SNR=18						
CTAO	**Charters Tower**	**34.44**	**274**	*e*P	**P**	**19 02 27.9**	**+2.0**
	8.7nm,0.5s,mb4.9						
STKA	**Stephens Creek**	**36.25**	**253**	P	**P**	**19 02 42.1**	**+0.9**
	2.6nm,0.6s,mb4.3,baz=95,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**44.36**	**263**	P	**P**	**19 03 48.6**	**+0.2**
	1.5nm,0.5s,mb4.0,baz=90,slow=6.7,SNR=10						
ASPA	**Alice Springs**	**44.37**	**263**	*e*P	**P**	**19 03 48.8**	**+0.4**
WB2	**Warramunga Arr**	**45.07**	**268**	*e*P	**P**	**19 03 53.9**	**-0.2**
WRAB	**Tennant Creek**	**45.07**	**269**	*e*P	**P**	**19 03 53.6**	**-0.5**
	8.0nm,0.7s,mb4.7						
WRA	**Warramunga Arr**	**45.08**	**268**	P	**P**	**19 03 54.0**	**-0.2**
	5.7nm,0.7s,mb4.5,baz=108,slow=6.2,SNR=54						
KAKA	**Kakadu**	**49.48**	**277**	*e*P	**P**	**19 04 26.9**	**-1.8**
	3.1nm,0.3s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.44**	**267**	*e*P	**P**	**19 04 58.0**	**-0.5**
	11nm,1.2s,mb4.7						
QSPA	**South Pole Qui**	**62.78**	**180**	*e*P	**P**	**19 06 03.6**	**+0.4**
	7.5nm,0.7s,mb4.9						
SYO	**Syowa Base**	**80.33**	**193**	⇓sP	pP	19 07 55.6	-2.9
FINES	**FINESS Array B**	**142.57**	**342**	PKhKP		19 15 03.4	
	4.7nm,1.2s,SNR=2.5						
NB2	**NORSAR Subarra**	**145.85**	**353**	PKP	PKPdf	19 15 12.8	-1.1
	13nm,1.4s,baz=12,slow=2.5						
NB2	**NORSAR Subarra**	**145.85**	**353**	⇑PKPab	PKPdf	19 15 12.8	-1.1
NOA	**NORSAR Array B**	**145.85**	**353**	PKPbc	PKPdf	19 15 12.3	-1.5
	1.8nm,0.8s,baz=8.4,slow=2.4,SNR=5.7						
AKASG	**Malin Array Be**	**149.37**	**327**	PKPbc	PKPdf	19 15 22.5	+2.5
	4.6nm,1.0s,baz=39,slow=3.4,SNR=11						
BRTR	**Keskin Array B**	**151.86**	**304**	PKPab	PKPab	19 15 40.2	-1.8
	0.8nm,0.6s,baz=90,slow=2.9,SNR=2.6						

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*IDC **14** 19:03:39.1±2.8, 43.07N×105.12W, mb3.5/3, mb1 3.7/6, mb1mx3.5/20, mbtmp3.5/6, ML3.3/3, Error ellipse: s-maj=62.4km s-min=9.8km az=159.0*

*NEIC **14** 19:03:45.0±0.7, 43.53N×105.24W, ML3.4, Error ellipse: s-maj=8.5km s-min=5.4km az=97.0, Suspected Mining explosion.*

NEIC 85 km [55 miles] E of Midwest.

ISC 14 19:03:39.8±0.7, **43.41N**±0.05×**104.87W**±0.08, **n31, σ1^{s}.05**/31, **mb4.0**/2, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHWY	**Pilot Hill**	**2.15**	**192**	*e*P	**Pg**	**19 04 23.1**	**+0.3**
LAO	**LASA Array**	**3.41**	**344**	*e*Pn	**Pn**	**19 04 36.0**	**+0.6**
PDAR	**Pinedale Array**	**3.50**	**261**	Pn	**Pn**	**19 04 35.8**	**-0.7**
	2.6nm,0.3s,baz=70,slow=16,SNR=71						
PDAR				Lg		19 05 20.2	
	3.1nm,0.3s,baz=72,slow=30,SNR=5.6						
ISCO	**Idaho Springs**	**3.65**	**189**	*e*P	**Pb**	**19 04 45.1**	**+0.1**
LOHW	**Long Hollow**	**4.18**	**275**	*e*Pn	**Pn**	**19 04 46.4**	**+0.2**
WUWY	**Wally Ulrich**	**4.28**	**274**	*e*Pn	**Pn**	**19 04 48.4**	**+0.7**
MOOW	**Moose Ponds**	**4.28**	**277**	*e*Pn	**Pn**	**19 04 47.0**	**-0.7**
SNOW	**Snow King Moun**	**4.29**	**273**	*e*Pn	**Pn**	**19 04 47.9**	**+0.1**
TPAW	**Teton Pass**	**4.43**	**273**	Pn	**Pn**	**19 04 50.8**	**+1.0**
IMW	**Indian Meadow**	**4.43**	**278**	*e*Pn	**Pn**	**19 04 48.7**	**-1.1**
YFT	**Old Faithful**	**4.43**	**286**	Pn	**Pn**	**19 04 50.2**	**+0.3**
YMR	**Madison River**	**4.57**	**288**	*e*Pn	**Pn**	**19 04 52.3**	**+0.5**
AHID	**Auburn Hatcher**	**4.61**	**264**	Pn	**Pn**	**19 04 53.1**	**+0.8**
QLMT	**Earthquake Lak**	**4.93**	**289**	*e*Pn	**Pn**	**19 04 56.9**	**0.0**
DGMT	**Dagmar**	**5.08**	**5**	*e*Pn	**Pn**	**19 05 01.0**	**+2.0**
BOZ	**Bozeman (W)**	**5.33**	**297**	*e*Pn	**Pn**	**19 04 58.3**	**-4.2**
	4.3nm,0.4s						
MCMT	**McKenzie Canyo**	**5.92**	**287**	*e*Pn	**Pn**	**19 05 10.0**	**-0.8**
PV10	**Paradox Valley**	**5.94**	**214**	*e*Pg	**Pg**	**19 05 37.4**	**-1.0**
SRU	**San Rafael**	**6.05**	**227**	*e*Pn	**Pn**	**19 05 14.6**	**+1.9**
HVU	**Hansel Valley**	**6.06**	**257**	*e*Pn	**Pn**	**19 05 11.7**	**-1.1**
TMUT	**Trail Mountain**	**6.30**	**231**	*e*Pn	**Pn**	**19 05 17.7**	**+1.6**
BGU	**Big Grassy Mou**	**6.55**	**250**	*e*Pg	**Pg**	**19 05 46.6**	**-4.0**
DUG	**Dugway**	**6.75**	**244**	*e*Pn	**Pn**	**19 05 22.3**	**-0.3**
	4.4nm,0.5s						
CHMT	**Chamberlain Mo**	**6.88**	**303**	*e*Pn	**Pn**	**19 05 20.7**	**-3.7**
MSU	**Marysvale**	**7.38**	**231**	*e*Pn	**Pn**	**19 05 32.2**	**+0.7**
ULM	**Lac du Bonnet**	**9.20**	**39**	Pn	**P**	**19 05 55.7**	**-1.1**
ULM	**Lac du Bonnet**	**9.20**	**39**	Pn	**P**	**19 05 55.7**	**-1.1**
	1.3nm,0.3s,baz=232,slow=10,SNR=8.8						
NVAR	**Mina Array Bea**	**11.31**	**248**	Pn	**P**	**19 06 23.4**	**-2.3**
	0.0nm,0.3s,baz=65,slow=12,SNR=2.0						
YKA	**Yellowknife Ar**	**19.95**	**347**	P	**P**	**19 08 16.5**	**+0.6**
	0.3nm,0.4s,baz=152,slow=8.4,SNR=5.7						
ARCES	**ARCESS Array B**	**61.64**	**18**	P	**P**	**19 13 59.1**	**-1.9**
	2.8nm,0.8s,mb4.6,baz=333,slow=5.4,SNR=8.9						
SONM	**Songino Array**	**85.05**	**339**	P	**P**	**19 16 18.2**	**+0.2**
	0.2nm,0.7s,mb3.5,baz=334,slow=2.9,SNR=4.8						

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*NEIC **14** 19:04:12.6, 19.99N×68.58W, h56^{km}, MD3.5(RSPR), After RSPR.*

RSPR 14 19:04:12.6, 19.99N×68.58W, h56^{km}±21^{km}, **MD3.5**/4, **MD3.5**/4, **3C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGP	**Maguayo**	**2.42**	**144**	⇑*e*P	P	19 04 49.3	-1.4
MGP				*e*S	S	19 05 17.5	-1.7
PORP	**Portuguez**	**2.66**	**136**	⇑*e*P	P	19 04 52.4	-1.6
PORP				*e*S	S	19 05 23.6	-1.5
CELP	**Cerrillos**	**2.68**	**135**	⇑*e*P	P	19 04 52.6	-1.7
CELP				*e*S	S	19 05 23.6	-2.1
CSB	**Colonia Sabana**	**2.84**	**126**	⇓*e*P	P	19 04 54.7	-1.9
CSB				*e*S	S	19 05 28.3	-1.6

IDC 14 19:10:22.1±3.0, **33.35S**×**178.80W, mb3.7**/2, **mb1 3.9**/3, **mb1mx3.7**/13, **mbtmp3.7**/3, **ML3.4**/1, **Error ellipse: s-maj=68.3km s-min=36.0km az=117.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.92**	**213**	Pn	Pn	19 11 50.5	-2.7
	1.1nm,0.3s,baz=324,slow=12,SNR=6.1						
URZ				Sn	Sn	19 12 59.2	-3.5
	2.1nm,0.3s,baz=144,slow=21,SNR=6.9						
ASAR	**Alice Springs**	**42.37**	**271**	P	P	19 18 18.4	-1.3
	0.7nm,0.6s,baz=110,slow=7.3,SNR=12						
WRA	**Warramunga Arr**	**43.62**	**276**	P	P	19 18 28.2	-1.8
	0.6nm,0.4s,baz=115,slow=7.8,SNR=22						
FINES	**FINESS Array B**	**147.65**	**338**	PKPbc	PKPdf	19 30 06.9	+0.2
	1.3nm,0.7s,baz=53,slow=6.9,SNR=7.0						

IDC 14 19:14:24.6±2.5, **21.63N**×**143.04E, h299^{km}**±25^{km}, **mb3.1**/6, **mb1 3.3**/7, **mb1mx3.1**/22, **mbtmp3.8**/7, **Error ellipse: s-maj=44.2km s-min=15.0km az=89.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.50**	**352**	P	P	19 15 47.8	-0.7
	7.3nm,0.3s,baz=278,slow=22,SNR=3.8						
SONM	**Songino Array**	**39.31**	**321**	P	P	19 21 25.5	-1.1
	0.2nm,0.5s,baz=128,slow=7.5,SNR=7.9						
WRA	**Warramunga Arr**	**42.18**	**192**	P	P	19 21 48.9	-1.5
	0.4nm,0.4s,baz=15,slow=9.1,SNR=30						
ASAR	**Alice Springs**	**45.89**	**192**	P	P	19 22 17.9	-1.9
	0.3nm,0.9s,baz=8.9,slow=7.4,SNR=4.3						
YKA	**Yellowknife Ar**	**76.58**	**28**	P	P	19 25 42.3	-1.3
	0.2nm,0.4s,baz=290,slow=5.5,SNR=5.8						
ARCES	**ARCESS Array B**	**78.94**	**341**	P	P	19 25 55.5	-0.7
	3.8nm,1.0s,baz=70,slow=8.2,SNR=9.1						
FINES	**FINESS Array B**	**83.19**	**334**	P	P	19 26 16.4	-1.9
	2.4nm,0.7s,baz=74,slow=5.4,SNR=11						

TRN 14 19:25:05.1, 15.83N×61.61W, h14^{km}, MD3.8, Md3.1(FDF), **3C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCG	**Bois Riant Cap**	**0.26**	**357**	*e*P	Pg	19 25 12.3	+1.5
MGG	**Marie-Galante**	**0.29**	**72**	⇑*i*P	Pg	19 25 13.9	+2.4
BBL	**Barber's Block**	**0.33**	**157**	*e*P	Pg	19 25 14.3	+2.2
BBL				*e*S	Sg	19 25 19.8	+3.0
SEG	**Port Louis**	**0.58**	**10**	⇑*i*P	Pb	19 25 18.3	+1.8
DEG	**La Desirade**	**0.71**	**47**	⇑*i*P	Pb	19 25 20.2	+1.4
FDF	**Fort de France**	**1.17**	**158**	*e*P	Pb	19 25 28.1	+1.5
FDF				*e*S	Sb	19 25 44.9	+3.4
BPA	**Boggy Peak**	**1.23**	**349**	*e*P	Pb	19 25 29.8	+2.0
BPA				*e*S	Sb	19 25 47.0	+3.8
CRM	**Caravelle**	**1.26**	**148**	*e*P	Pb	19 25 29.5	+1.4
CRM				*e*S	Sb	19 25 46.7	+2.8
BIM	**Bigot**	**1.40**	**158**	*e*P	Pn	19 25 32.4	+2.1
BIM				*e*S	Sb	19 25 49.2	+1.1
MVM	**Montagne Vaucl**	**1.44**	**151**	*e*P	Pn	19 25 32.8	+1.9
MVM				*e*S	Sb	19 25 49.9	+0.7
CPB	**Codrington**	**1.81**	**353**	*e*P	Pn	19 25 37.9	+1.7
CPB				*e*S	Sn	19 26 02.5	+3.4

IDC 14 19:34:39.9±7.3, **5.17S**×**146.30E, h158^{km}**±51^{km}, **mb3.0**/2, **mb1 3.0**/4, **mb1mx2.9**/13, **mbtmp3.4**/4, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.5**/10, **Error ellipse: s-maj=71.0km s-min=60.7km az=58.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.30**	**169**	P	P	19 35 45.1	0.0
	1.5nm,0.3s,baz=342,slow=10,SNR=9.0						
PMG				S	S	19 36 34.6	-0.6
	2.2nm,0.3s,baz=126,slow=23,SNR=17						
PMG				LR	LR	19 37 21.6	
	comp=Z,344nm,19.4s,baz=329,slow=38						
WB2	**Warramunga Arr**	**18.73**	**217**	*e*P	P	19 38 45.6	-3.5
WRA	**Warramunga Arr**	**18.74**	**217**	P	P	19 38 45.6	-3.6
	0.1nm,0.3s,baz=27,slow=11,SNR=14						
ASAR	**Alice Springs**	**21.93**	**212**	P	P	19 39 22.2	+0.8
	0.3nm,0.5s,baz=39,slow=7.9,SNR=13						
FITZ	**Fitzroy Crossi**	**23.94**	**236**	*e*P	P	19 39 39.2	-1.7
	4.0nm,0.8s						
STKA	**Stephens Creek**	**26.94**	**189**	P	P	19 40 06.1	-2.5
	1.4nm,0.7s,baz=347,slow=14,SNR=3.7						

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*CSEM **14** 19:44:46.7, 36.47N×54.84E, h10^{km}, ML3.3, After TEH*

TEH 14 19:44:46.7, 36.47N×54.84E, h10^{km}, Mn3.3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGLO	**Galoogah**	**1.10**	**262**	Pg	Pn	19 44 56.8	-11
IANJ	**Anjiloo**	**1.25**	**217**	Pn	Pn	19 45 10.2	0.0
ILAS	**Lasjerd**	**1.87**	**235**	Pn	Pn	19 45 19.6	+0.5
IFIR	**Firoozkooh**	**1.88**	**245**	Pn	Pn	19 45 18.8	-0.5
IPRN	**Paran-Amol**	**2.11**	**265**	Pn	Pn	19 45 18.2	-4.4
IDMV	**Damavand**	**2.44**	**250**	Pn	Pn	19 45 26.4	-0.9
IKRD	**Kardeh**	**2.98**	**83**	Pn	Pg	19 45 44.5	-1.6
IKRD	**Kardeh**	**2.98**	**83**	Pn	Pg	19 45 44.5	-1.6
IPAY	**Payeh**	**3.35**	**89**	Pn	Pn	19 45 38.7	-1.5
IPAY	**Payeh**	**3.35**	**89**	Pn	Pn	19 45 38.7	-1.5
IMOG	**Moghan**	**3.65**	**94**	Pn	Pn	19 45 42.8	-1.7
IRAZ	**Razeghan**	**4.12**	**257**	Pn	Pn	19 45 49.7	-1.5
IMYA	**Miamay**	**4.25**	**90**	Pn	Pn	19 45 50.5	-2.5

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*IDC **14** 19:50:24.8±1.3, 30.70S×177.54W, mb4.7/5, mb1 4.8/6, mb1mx4.4/16, mbtmp4.6/6, ML3.5/1, Error ellipse: s-maj=45.8km s-min=23.2km az=147.0*

*NEIC **14** 19:50:29.5±1.1, 30.80S×177.55W, h35^{km}, mb4.8/2, Error ellipse: s-maj=25.2km s-min=18.0km az=119.0*

ISC 14 19:50:32.3±2.8, **31.1S**±0.1×**177.7W**±0.2, **h69^{km}**±28^{km}, **n29, σ0^{s}.78**/24, **mb4.7**/7, **1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	**Matawai**	**8.21**	**207**	*e*PN	**P**	**19 52 30.7**	**-0.3**
MWZ	**Matawai**	**8.21**	**207**	*e*PN	**P**	**19 52 30.7**	**-0.3**
URZ	**Urewera**	**8.31**	**209**	Pn	**P**	**19 52 32.0**	**-0.4**
	0.5nm,0.3s,baz=51,slow=15,SNR=6.7						
URZ				Sn	**S**	**19 54 12.4**	**+6.7**
	3.2nm,0.3s,baz=192,slow=8.1,SNR=10.0						
MRZ	**Mangatainoka R**	**10.98**	**208**	SN	**S**	**19 55 10.0**	**-0.5**
MRZ	**Mangatainoka R**	**10.98**	**208**	SN	**S**	**19 55 10.0**	**-0.5**
THZ	**Tophouse**	**13.04**	**213**	*e*PN	**P**	**19 53 37.1**	**+1.0**
THZ				SN	**S**	**19 56 00.0**	**+0.2**
THZ	**Tophouse**	**13.04**	**213**	*e*PN	**P**	**19 53 37.1**	**+1.0**
THZ				SN	**S**	**19 56 00.0**	**+0.2**
MQZ	**McQueen's Vall**	**14.71**	**208**	SN	**S**	**19 56 34.2**	**-5.4**
MQZ	**McQueen's Vall**	**14.71**	**208**	SN	**S**	**19 56 34.2**	**-5.4**
CTA	**Charters Tower**	**34.14**	**280**	*e*P	**P**	**19 57 13.2**	**+0.4**
	12nm,0.5s,mb5.0						
CTA	**Charters Tower**	**34.14**	**280**	P	**P**	**19 57 13.4**	**+0.7**
	21nm,0.7s,mb5.1,baz=103,slow=10.0,SNR=22						
CTAO	**Charters Tower**	**34.14**	**280**	*e*P	**P**	**19 57 13.1**	**+0.3**
	17nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**34.55**	**258**	*e*P	**P**	**19 57 18.6**	**+2.4**
	15nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**34.55**	**258**	P	**P**	**19 57 18.8**	**+2.6**
	25nm,0.7s,mb5.1,baz=96,slow=9.8,SNR=65						
ASAR	**Alice Springs**	**43.30**	**268**	P	**P**	**19 58 29.6**	**+0.4**
	4.0nm,0.5s,mb4.5,baz=104,slow=7.3,SNR=105						
ASPA	**Alice Springs**	**43.31**	**268**	*e*P	**P**	**19 58 29.3**	**+0.2**
WB2	**Warramunga Arr**	**44.35**	**273**	*e*P	**P**	**19 58 36.8**	**-0.7**
WRAB	**Tennant Creek**	**44.35**	**273**	*e*P	**P**	**19 58 36.9**	**-0.7**
	10nm,0.5s,mb4.8						
WRA	**Warramunga Arr**	**44.36**	**273**	P	**P**	**19 58 36.9**	**-0.7**
	7.2nm,0.4s,mb4.8,baz=111,slow=8.0,SNR=229						
FITZ	**Fitzroy Crossi**	**52.59**	**270**	*e*P	**P**	**19 59 40.6**	**-0.8**
	7.0nm,0.8s,mb4.7						
NVAR	**Mina Array Bea**	**88.59**	**43**	P	**P**	**20 03 18.8**	**+0.1**
	0.6nm,0.7s,mb3.7,baz=225,slow=11,SNR=3.8						
BVAR	**Borovoye Array**	**127.06**	**315**	PKP	PKPdf	20 09 29.9	+1.6
	1.4nm,0.5s,baz=154,slow=2.2,SNR=12						
FINES	**FINESS Array B**	**145.87**	**340**	PKPbc	PKPbc	20 10 03.2	-0.1
	22nm,1.1s,baz=68,slow=4.2,SNR=28						
FINES	**FINESS Array B**	**145.87**	**340**	PKPbc	PKPbc	20 10 03.2	-0.1
NB2	**NORSAR Subarra**	**149.47**	**351**	PKP	PKPdf	20 10 13.6	+5.4
	1.5nm,0.6s,baz=17,slow=2.9						
NB2	**NORSAR Subarra**	**149.47**	**351**	⇑PKPab	PKPdf	20 10 13.6	+5.4
NOA	**NORSAR Array B**	**149.47**	**351**	PKPbc	PKPdf	20 10 13.9	+5.7
	2.7nm,0.8s,baz=15,slow=4.3,SNR=5.6						
AKASG	**Malin Array Be**	**151.99**	**322**	PKPbc	PKPdf	20 10 20.4	+8.1
	4.7nm,0.6s,baz=50,slow=2.8,SNR=20						
BRTR	**Keskin Array B**	**153.12**	**297**	PKPbc	PKPdf	20 10 28.2	+14
	0.9nm,0.9s,baz=135,slow=3.5,SNR=4.1						

IDC 14 19:57:43.0±3.6, **2.05S**×**99.62E, mb3.4**/5, **mb1 3.7**/5, **mb1mx3.6**/15, **mbtmp3.5**/5, **Error ellipse: s-maj=142.4km s-min=23.8km az=60.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.39**	**358**	P	P	20 02 21.2	-3.1
	0.4nm,0.6s,baz=185,slow=8.1,SNR=4.5						
WRA	**Warramunga Arr**	**38.30**	**120**	P	P	20 05 05.7	-1.6
	0.5nm,0.8s,baz=303,slow=8.8,SNR=4.2						
ASAR	**Alice Springs**	**39.53**	**126**	P	P	20 05 15.8	-1.8
	0.2nm,0.4s,baz=304,slow=8.2,SNR=3.3						
SONM	**Songino Array**	**50.03**	**6**	P	P	20 06 39.5	-1.8
	0.5nm,0.7s,baz=192,slow=9.9,SNR=5.9						
ZAL	**Zalesovo**	**57.14**	**350**	P	P	20 07 31.4	-2.4
	1.0nm,0.4s,baz=316,slow=3.2,SNR=5.9						
TXAR	**Lajitas Array**	**144.98**	**37**	PKP	PKPdf	20 17 22.4	-2.4
	0.4nm,0.4s,baz=224,slow=1.5,SNR=4.8						

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*JMA **14** 20:03:01.1±0.5, 23.70N×121.51E, h67^{km}, M2.6*

TAP 14 20:03:00.0, 23.76N×121.51E, h48^{km}±1^{km}, **ML3.1, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.54**	**63**	P	P	20 03 27.4	+1.8
YOJ				*e*S	S	20 03 46.5	+2.0
IRIF	**Iriomote-Funau**	**2.11**	**74**	P	P	20 03 34.9	+1.3
IRIF				S	S	20 04 00.8	+2.2
HATJ	**Hateruma jima**	**2.12**	**82**	S	S	20 04 01.1	+2.2
JKRS	**Kuro-shima**	**2.33**	**78**	P	P	20 03 38.4	+1.6
JKRS				S	S	20 04 06.5	+2.1
JIJ	**Ishigaki jima**	**2.48**	**75**	P	P	20 03 39.5	+0.6
JIJ				S	S	20 04 08.5	+0.4

IDC 14 20:31:52.0±10.0, **4.63N**×**61.30E, mb3.9**/4, **mb1 4.2**/4, **mb1mx3.7**/17, **mbtmp3.9**/4, **Error ellipse: s-maj=334.0km s-min=35.0km az=76.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAL	**Zalesovo**	**52.76**	**17**	P	P	20 41 08.4	-2.4
	0.4nm,0.4s,baz=137,slow=14,SNR=3.7						
SONM	**Songino Array**	**57.77**	**34**	P	P	20 41 45.1	-2.2
	0.4nm,0.7s,baz=225,slow=8.7,SNR=5.2						
WRA	**Warramunga Arr**	**75.74**	**112**	P	P	20 43 40.3	-1.6
	3.4nm,0.8s,baz=290,slow=5.1,SNR=26						
ASAR	**Alice Springs**	**76.05**	**116**	P	P	20 43 41.9	-1.7
	2.1nm,0.9s,baz=280,slow=5.4,SNR=15						

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*TRN **14** 20:34:23.9, 15.74N×61.50W, h21^{km}, MD4.2, Md3.1(FDF)*

*IDC **14** 20:34:24.0±0.8, 15.72N×61.58W, mb4.0/8, mb1 4.3/10, mb1mx3.9/25, mbtmp4.1/10, ML4.9/2, Error ellipse: s-maj=13.3km s-min=9.7km az=111.0*

*NEIC **14** 20:34:25.4±0.4, 15.71N×61.71W, h10^{km}, mb3.9/2, Error ellipse: s-maj=11.1km s-min=7.1km az=92.0*

ISC 14 20:34:25.3±0.6, **15.71N**±0.03×**61.64W**±0.07, **h21^{km}**±5^{km}, **n31, σ1^{s}.01**/40, **mb4.0**/10, **6C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBL	**Barber's Block**	**0.25**	**138**	⇑*i*P	**Pb**	**20 34 30.9**	**-0.3**
SCG	**Saint Claude**	**0.32**	**353**	⇑*i*P	**Pb**	**20 34 32.7**	**+0.4**
DOG	**Dongo Capester**	**0.32**	**4**	⇑*i*P	**Pb**	**20 34 32.4**	**+0.1**
BCG	**Bois Riant Cap**	**0.37**	**3**	*e*P	**Pb**	**20 34 33.2**	**+0.1**
MGG	**Marie-Galante**	**0.38**	**57**	⇑*i*P	**Pb**	**20 34 31.8**	**-1.4**
SEG	**Port Louis**	**0.70**	**11**	⇑*i*P	**Pb**	**20 34 38.4**	**-0.3**
FDF	**Fort de France**	**1.08**	**154**	⇓*e*P	**Pb**	**20 34 44.7**	**-0.5**
FDF				*e*S	**Sb**	**20 35 00.4**	**+1.6**
CRM	**Caravelle**	**1.18**	**144**	⇓*e*P	**Pn**	**20 34 46.0**	**-0.7**
CRM				*e*S	**Sb**	**20 35 01.2**	**-0.5**
BIM	**Bigot**	**1.31**	**155**	*e*P	**Pn**	**20 34 48.4**	**-0.1**
BIM				*e*S	**Sb**	**20 35 06.4**	**+0.9**
BPA	**Boggy Peak**	**1.34**	**351**	⇑*e*P	**Pn**	**20 34 50.2**	**+1.1**
BPA				*e*S	**Sn**	**20 35 07.7**	**+1.3**
MVM	**Montagne Vaucl**	**1.36**	**148**	*e*P	**Pn**	**20 34 49.0**	**-0.3**
MVM				*e*S	**Sn**	**20 35 06.7**	**-0.1**
CPB	**Codrington**	**1.93**	**355**	*e*P	**Pn**	**20 34 58.3**	**+0.9**
CPB				*e*S	**Sn**	**20 35 21.3**	**+0.1**
GRW	**Mount Saint Ca**	**3.53**	**180**	*e*P	**Pn**	**20 35 21.2**	**+1.0**
GRW				*e*S	**Sn**	**20 36 05.9**	**+4.0**
SJG	**San Juan**	**4.93**	**300**	Pn	**Pn**	**20 35 38.7**	**-1.4**
	10.0nm,0.3s,baz=311,slow=20,SNR=5.2						
SJG				Sn	**Sn**	**20 36 33.9**	**-3.4**
	9.4nm,0.3s,baz=74,slow=22,SNR=4.4						
TRN	**Trinidad (W)**	**5.04**	**177**	*e*P	**Pn**	**20 35 42.6**	**+0.9**
TRN				*e*S	**Sn**	**20 36 40.1**	**+0.1**
SDV	**Santo Domingo**	**11.10**	**233**	P	**P**	**20 37 03.0**	**-3.1**
	0.8nm,0.3s,baz=44,slow=13,SNR=3.7						
OTAV	**Otavalo**	**22.62**	**229**	P	**P**	**20 39 25.7**	**-0.7**
SAML	**Samuel**	**24.55**	**184**	*e*P	**P**	**20 39 44.2**	**-0.9**
	3.2nm,0.9s,mb3.9						
MNTX	**Cornudas Mount**	**42.79**	**300**	P	**P**	**20 42 23.6**	**+0.2**
SDCO	**Great Sand Dun**	**44.39**	**308**	P	**P**	**20 42 39.0**	**+2.6**
BW06	**Boulder Array**	**48.90**	**314**	*e*P	**P**	**20 43 11.7**	**0.0**
PDAR	**Pinedale Array**	**48.90**	**314**	P	**P**	**20 43 12.4**	**+0.7**
	1.4nm,0.9s,mb4.0,baz=115,slow=10.0,SNR=6.8						
FCC	**Fort Churchill**	**49.21**	**338**	*e*P	**P**	**20 43 12.4**	**-1.5**
	0.9nm,0.7s,mb3.9						
DBIC	**Dimbokro**	**56.28**	**92**	P	**P**	**20 44 06.3**	**-0.9**
	4.7nm,0.8s,mb4.5,baz=262,slow=5.0,SNR=5.5						
EKA	**Eskdalemuir Ar**	**59.44**	**34**	P	**P**	**20 44 28.1**	**-0.7**
	1.6nm,0.9s,mb4.1,baz=247,slow=6.4,SNR=4.7						
YKA	**Yellowknife Ar**	**59.49**	**335**	P	**P**	**20 44 27.7**	**-1.3**
	0.8nm,0.5s,mb4.0,baz=106,slow=7.3,SNR=20						
NB2	**NORSAR Subarra**	**68.08**	**30**	P	**P**	**20 45 25.4**	**0.0**
	1.0nm,0.7s,mb4.0,baz=261,slow=6.2						
NOA	**NORSAR Array B**	**68.08**	**30**	P	**P**	**20 45 25.8**	**+0.4**
	1.1nm,0.7s,mb4.0,baz=261,slow=5.9,SNR=5.0						
GERES	**GERESS Array B**	**68.72**	**43**	P	**P**	**20 45 28.9**	**-0.7**
	0.5nm,0.6s,mb3.6,baz=252,slow=4.2,SNR=4.2						
HFS	**Hagfors**	**69.21**	**31**	P	**P**	**20 45 32.9**	**+0.5**
	6.8nm,1.1s,mb4.5,baz=180,slow=1.5,SNR=4.4						
ILAR	**Eielson Array**	**73.90**	**334**	P	**P**	**20 46 02.5**	**+2.2**
	0.3nm,0.5s,mb3.5,baz=78,slow=6.5,SNR=5.1						

ISC 14 21:00:44.0±3.7, **36.6N**±0.1×**72.0E**±0.6, **h33^{km}, n12, σ0^{s}.54**/13, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.18**	**142**	*e*P	**P**	**21 02 01.9**	**+0.7**
THN				*e*S	**S**	**21 03 00.0**	**-0.6**
AML	**Almayashu**	**5.69**	**13**	P	**P**	**21 02 08.2**	**-0.1**
	SNR=29						
UCH	**Uchtor**	**5.96**	**19**	P	**P**	**21 02 12.6**	**+0.5**
	SNR=10						
KZA	**Kyzart**	**6.04**	**24**	P	**P**	**21 02 13.7**	**+0.5**
	SNR=26						
EKS2	**Erkin-Say**	**6.22**	**12**	P	**P**	**21 02 15.5**	**-0.3**
	SNR=25						
AAK	**Ala-Archa**	**6.34**	**17**	P	**P**	**21 02 17.8**	**+0.3**
	SNR=8.3						
KBK	**Karagaybulak**	**6.47**	**20**	P	**P**	**21 02 19.7**	**+0.3**
	SNR=12						
ULHL	**Ulahol**	**6.54**	**29**	P	**P**	**21 02 20.8**	**+0.5**
	SNR=9.0						
SDNR	**Sundarnagar**	**6.56**	**139**	*e*S	**S**	**21 03 30.0**	**-5.2**
CHMS	**Chumysh**	**6.74**	**18**	P	**P**	**21 02 22.7**	**-0.5**
	SNR=7.3						
TKM2	**Tokmak 2**	**6.91**	**23**	P	**P**	**21 02 25.4**	**0.0**
	SNR=7.7						
USP	**Ospenovka**	**6.94**	**15**	P	**P**	**21 02 24.8**	**-1.2**
	SNR=22						

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*IDC **14** 21:03:43.5±2.6, 42.96N×105.07W, mb3.5/2, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=51.7km s-min=9.5km az=158.0*

*NEIC **14** 21:03:47.3±0.8, 43.71N×105.27W, ML3.0, Error ellipse: s-maj=11.3km s-min=10.1km az=174.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

ISC 14 21:03:45.3±0.8, **43.78N**±0.08×**105.2W**±0.1, **n14, σ0^{s}.85**/14, **mb4.5**/1, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHWY	**Pilot Hill**	**2.49**	**184**	*e*P	**Pn**	**21 04 28.6**	**+0.9**
PDAR	**Pinedale Array**	**3.34**	**254**	Pn	**Pn**	**21 04 40.6**	**+0.9**
	2.5nm,0.3s,baz=72,slow=15,SNR=68						
PDAR				Lg		21 05 25.8	
	5.7nm,0.3s,baz=68,slow=29,SNR=8.8						
LOHW	**Long Hollow**	**3.92**	**269**	*e*P	**Pn**	**21 04 48.7**	**+0.7**
ISCO	**Idaho Springs**	**3.99**	**185**	*e*P	**Pn**	**21 04 48.4**	**-0.7**
MOOW	**Moose Ponds**	**4.01**	**271**	*e*P	**Pn**	**21 04 50.0**	**+0.6**
SNOW	**Snow King Moun**	**4.04**	**267**	P	**Pn**	**21 04 50.2**	**+0.4**
IMW	**Indian Meadow**	**4.15**	**274**	P	**Pn**	**21 04 50.2**	**-1.1**
HWUT	**Hardware Ranch**	**5.17**	**247**	P	**Pn**	**21 05 04.0**	**-1.8**
	5.5nm,0.4s						
SRU	**San Rafael**	**6.14**	**222**	P	**Pn**	**21 05 14.1**	**-5.5**
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**P**	**21 06 00.5**	**-0.1**
ULM				Pg	P	21 06 36.1	+36
ULM				Lg		21 08 42.1	
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**P**	**21 06 00.5**	**-0.1**
	1.4nm,0.3s,baz=231,slow=10,SNR=8.7						

ULM				Pg	P	21 06 36.1	+36
	0.6nm,0.3s,baz=226,slow=12,SNR=3.7						
ULM				Lg		21 08 42.1	
	0.3nm,0.3s,baz=133,slow=16,SNR=3.4						
YKA	**Yellowknife Ar**	**19.53**	**347**	P	**P**	**21 08 22.4**	**+5.6**
YKA	**Yellowknife Ar**	**19.53**	**347**	P	**P**	**21 08 22.4**	**+5.6**
	0.3nm,0.4s,baz=155,slow=8.6,SNR=4.3						
ARCES	**ARCESS Array B**	**61.36**	**18**	P	**P**	**21 14 04.7**	**0.0**
	3.8nm,1.0s,mb4.5,slow=6.1,SNR=4.8						

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*TAP **14** 21:04:01.5,23.95N×122.56E,h21^{km}±1^{km},ML3.0*

JMA 14 21:04:02.4±0.3,23.98N×122.58E,h13^{km},M2.3,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.62**	**39**	P	Pb	21 04 14.3	-0.3
YOJ				S	Sb	21 04 22.7	-0.2
IRIF	**Iriomote-Funau**	**1.11**	**71**	P	Pb	21 04 22.7	-0.2
IRIF				S	Sb	21 04 37.2	+0.1
HATJ	**Hateruma jima**	**1.12**	**86**	P	Pb	21 04 23.0	-0.2
HATJ				S	Sb	21 04 38.3	+0.8
JKRS	**Kuro-shima**	**1.33**	**79**	P	Pb	21 04 27.1	+0.4
JKRS				*e*S	Sb	21 04 44.5	+1.0
JIJ	**Ishigaki jima**	**1.48**	**75**	P	Pn	21 04 28.1	-0.8
JIJ				S	Sb	21 04 46.5	-1.3
JTJ	**Tarama**	**2.04**	**71**	*e*S	Sn	21 05 02.8	+0.3

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*TAP **14** 21:08:20.6,23.94N×122.58E,h27^{km}±1^{km},ML3.1*

JMA 14 21:08:21.6±0.4,24.06N×122.50E,h22^{km},M1.8,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.61**	**49**	P	Pb	21 08 33.5	-0.1
YOJ				S	Sb	21 08 41.9	+0.2
IRIF	**Iriomote-Funau**	**1.16**	**76**	P	Pn	21 08 42.2	-0.4
IRIF				*e*S	Sb	21 08 56.8	-0.6
JKRS	**Kuro-shima**	**1.39**	**82**	P	Pn	21 08 46.6	+0.6
JKRS				S	Sn	21 09 04.1	+0.3
JIJ	**Ishigaki jima**	**1.53**	**78**	P	Pn	21 08 47.2	-0.8
JIJ				S	Sn	21 09 05.7	-1.7

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*IDC **14** 21:16:02.6±3.8,36.85N×81.58W,mb3.5/3,mb1 4.0/6, mb1mx3.6/24,mbtmp3.6/6,ML3.1/3,Error ellipse: s-maj=60.4km s-min=23.9km az=135.0*

*NEIC **14** 21:16:04.8±0.5,37.17N×81.85W,MN3.0,Error ellipse: s-maj=7.9km s-min=5.8km az=169.0,Suspected Mining explosion.*

NEIC 55 km [35 miles] W of Bluefield.

ISC 14 21:16:03.3±0.6,37.20N±0.06×81.89W±0.07,n17,σ0.^{s}66/17, mb3.3/3,West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELN	**Prospectdale**	**0.91**	**88**	*e*P	**Pg**	**21 16 22.3**	**+0.8**
BLA	**Blacksburg**	**1.17**	**89**	*e*P	**Pb**	**21 16 26.6**	**+0.4**
CPCT	**Cooper Cave**	**2.75**	**231**	*e*P	**Pn**	**21 16 50.0**	**+0.5**
MCWV	**Mont Chateau**	**2.93**	**33**	*e*P	**Pn**	**21 16 52.3**	**+0.3**
JSC	**Jenkinsville**	**2.96**	**170**	*e*P	**Pn**	**21 16 52.1**	**-0.3**
ACSO	**Alum Creek Sta**	**3.14**	**345**	*e*P	**Pn**	**21 16 55.0**	**-0.1**
CBN	**Corbin**	**3.72**	**73**	P	**Pn**	**21 17 01.7**	**-1.5**
SSPA	**Standing Stone**	**4.63**	**41**	*e*P	**Pn**	**21 17 16.1**	**-0.1**
SADO	**Sadowa**	**7.84**	**15**	Pn	**Pn**	**21 18 01.8**	**+0.5**
SADO				Lg		21 20 04.8	
SADO	**Sadowa**	**7.84**	**15**	Pn	**Pn**	**21 18 01.8**	**+0.5**
	0.6nm,0.3s,baz=193,slow=15,SNR=2.9						
SADO				Lg		21 20 04.8	
	0.8nm,0.3s,baz=132,slow=22,SNR=6.3						
ULM	**Lac du Bonnet**	**16.46**	**327**	Pn	**P**	**21 19 57.0**	**-0.1**
ULM	**Lac du Bonnet**	**16.46**	**327**	Pn	**P**	**21 19 57.0**	**-0.1**
	0.3nm,0.3s,baz=126,slow=8.2,SNR=8.0						
TXAR	**Lajitas Array**	**19.80**	**253**	P	**P**	**21 20 37.5**	**-0.7**
	0.1nm,0.3s,baz=82,slow=13,SNR=2.7						
PDAR	**Pinedale Array**	**21.86**	**293**	P	**P**	**21 21 00.3**	**+0.9**
	0.7nm,0.8s,mb3.2,baz=104,slow=12,SNR=5.8						
PDAR				Lg		21 27 44.7	
	0.6nm,0.9s,baz=78,slow=34,SNR=3.4						
NVAR	**Mina Array Bea**	**28.68**	**284**	P	**P**	**21 22 04.2**	**+0.3**
	0.2nm,0.4s,mb3.3,baz=68,slow=1.5,SNR=3.9						
YKA	**Yellowknife Ar**	**32.31**	**332**	P	**P**	**21 22 34.8**	**-1.0**
YKA	**Yellowknife Ar**	**32.31**	**332**	P	**P**	**21 22 34.8**	**-1.0**
	0.4nm,0.8s,mb3.4,baz=118,slow=8.8,SNR=5.3						

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*NEIC **14** 21:27:36.3±2.6,23.34S×179.26E,h544^{km}±32^{km},mb4.1/3, Error ellipse: s-maj=23.3km s-min=13.6km az=187.0*

*IDC **14** 21:27:40.3±4.5,23.61S×179.21E,h591^{km}±55^{km},mb3.2/8, mb1 3.5/9,mb1mx3.4/16,mbtmp4.3/9,Error ellipse: s-maj=36.3km s-min=21.7km az=17.0*

ISC 14 21:27:34.4±3.0,23.2S±0.1×179.2E±0.1,h526^{km}±39^{km}, n44,σ1.^{s}01/35,mb3.8/9,1C-3D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**14.81**	**183**	SN	**S**	**21 33 15.3**	**+1.7**
PUZ	**Puketiti**	**14.81**	**183**	SN	**S**	**21 33 15.3**	**+1.7**
URZ	**Urewera**	**15.08**	**186**	P	**P**	**21 30 44.7**	**-0.1**
	7.6nm,0.3s,baz=328,slow=1.6,SNR=30						
URZ				S	**S**	**21 33 17.8**	**-0.7**
	1.5nm,0.3s,baz=156,slow=20,SNR=9.3						
MWZ	**Matawai**	**15.12**	**185**	P	**P**	**21 30 45.0**	**-0.2**
MWZ	**Matawai**	**15.12**	**185**	PN	**P**	**21 30 45.0**	**-0.1**
MWZ	**Matawai**	**15.12**	**185**	PN	**P**	**21 30 45.0**	**-0.1**
QRZ	**Quartz Range**	**18.42**	**196**	*e*P	**P**	**21 31 19.1**	**+1.7**
QRZ	**Quartz Range**	**18.42**	**196**	PN	**P**	**21 31 19.1**	**+1.8**
QRZ	**Quartz Range**	**18.42**	**196**	PN	**P**	**21 31 19.1**	**+1.8**
THZ	**Tophouse**	**19.21**	**194**	P	**P**	**21 31 25.5**	**+0.6**
THZ	**Tophouse**	**19.21**	**194**	PN	**P**	**21 31 25.0**	**+0.1**
THZ	**Tophouse**	**19.21**	**194**	PN	**P**	**21 31 25.0**	**+0.1**
LTZ	**Lake Taylor**	**20.32**	**195**	*e*P	**P**	**21 31 34.1**	**-1.2**
LTZ	**Lake Taylor**	**20.32**	**195**	PN	**P**	**21 31 34.1**	**-1.2**
LTZ	**Lake Taylor**	**20.32**	**195**	PN	**P**	**21 31 34.1**	**-1.2**
RPZ	**Rata Peaks**	**21.50**	**196**	P	**P**	**21 31 44.6**	**-1.6**
	6.2nm,0.6s,mb4.4,baz=146,slow=16,SNR=6.6						
JCZ	**Jackson Bay**	**22.49**	**200**	*e*P	**P**	**21 31 55.0**	**-0.2**
JCZ	**Jackson Bay**	**22.49**	**200**	PN	**P**	**21 31 55.1**	**-0.1**
JCZ	**Jackson Bay**	**22.49**	**200**	PN	**P**	**21 31 55.1**	**-0.1**
CTA	**Charters Tower**	**30.75**	**269**	⇓*i*P	**P**	**21 33 09.1**	**+1.1**
	4.1nm,0.3s,mb4.4						
CTA	**Charters Tower**	**30.75**	**269**	P	**P**	**21 33 08.9**	**+0.9**
	7.7nm,0.5s,mb4.5,baz=99,slow=10,SNR=9.4						
STKA	**Stephens Creek**	**34.30**	**247**	⇑*i*P	**P**	**21 33 38.9**	**+1.0**
	2.4nm,0.7s,mb3.8						
STKA	**Stephens Creek**	**34.30**	**247**	P	**P**	**21 33 38.8**	**+0.9**
	4.4nm,0.8s,mb4.0,baz=101,slow=6.4,SNR=6.4						
ASAR	**Alice Springs**	**41.43**	**260**	P	**P**	**21 34 36.4**	**+0.3**
	1.0nm,0.5s,mb3.6,baz=94,slow=8.2,SNR=16						
WB2	**Warramunga Arr**	**41.72**	**266**	⇓*i*P	**P**	**21 34 38.2**	**-0.3**
WRAB	**Tennant Creek**	**41.72**	**266**	*e*P	**P**	**21 34 37.0**	**-1.6**
WRA	**Warramunga Arr**	**41.73**	**266**	P	**P**	**21 34 38.2**	**-0.4**
	0.7nm,0.3s,mb3.7,baz=95,slow=8.1,SNR=95						
NVAR	**Mina Array Bea**	**84.79**	**44**	P	**P**	**21 39 14.5**	**+0.5**
	0.7nm,0.7s,mb3.3,baz=223,slow=5.9,SNR=4.9						
PLCA	**Paso Flores**	**89.24**	**135**	P	**P**	**21 39 31.3**	**-3.7**
MNTX	**Cornudas Mount**	**90.44**	**56**	*e*P	**P**	**21 39 40.0**	**-0.7**
	1.4nm,0.8s,mb3.8						
TXAR	**Lajitas Array**	**90.70**	**58**	P	**P**	**21 39 42.4**	**+0.4**
	2.1nm,1.1s,mb4.0,baz=207,slow=5.6,SNR=6.1						
ILAR	**Eielson Array**	**91.56**	**14**	P	**P**	**21 39 46.8**	**+1.7**
	0.2nm,0.5s,mb3.4,baz=235,slow=3.6,SNR=4.4						
BW06	**Boulder Array**	**92.72**	**44**	P	**P**	**21 39 49.7**	**-1.3**
ISCO	**Idaho Springs**	**93.95**	**48**	P	**P**	**21 39 57.0**	**+0.3**
BVAR	**Borovoye Array**	**119.47**	**319**	PKP	PKPdf	21 45 23.2	-0.4
	0.7nm,0.4s,baz=121,slow=1.7,SNR=11						
ARCES	**ARCESS Array B**	**131.09**	**348**	PKP	PKPdf	21 45 45.2	-0.3
	2.3nm,0.9s,baz=45,slow=1.3,SNR=7.3						
ARCES	**ARCESS Array B**	**131.09**	**348**	PKP	PKPdf	21 45 45.2	-0.3
FINES	**FINESS Array B**	**137.59**	**341**	PKP	PKPdf	21 45 58.0	+0.3
	1.3nm,0.8s,baz=117,slow=4.3,SNR=4.4						
AKASG	**Malin Array Be**	**144.03**	**327**	PKP	PKPdf	21 46 08.4	-0.7
	1.9nm,0.4s,baz=46,slow=4.0,SNR=15						
BRTR	**Keskin Array B**	**146.60**	**308**	PKPbc	PKPbc	21 46 17.1	+1.2
	0.9nm,0.5s,baz=124,slow=4.5,SNR=4.3						
CLL	**Collm**	**150.01**	**343**	⇓*i*PKP1	PKPdf	21 46 25.3	+6.3
BRG	**Berggiesshubel**	**150.13**	**341**	*i* P	PKPdf	21 46 26.0	+6.8
KHC	**Kasperske Hory**	**151.78**	**340**	*e*PKPbc	PKPdf	21 46 29.0	+7.3
GERES	**GERESS Array B**	**151.99**	**339**	PKPbc	PKPdf	21 46 29.8	+7.8
	0.6nm,0.5s,baz=45,slow=1.9,SNR=6.9						

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*ISK **14** 21:46:17.4,37.00N×27.96E,h15^{km},MD3.0*

*ATH **14** 21:46:17.1,37.00N×28.13E,h10^{km},MD2.9/3*

*CSEM **14** 21:46:17.9±0.1,37.05N×27.96E,h15^{km},MD3.0,Error ellipse: s-maj=3.2km s-min=3.1km az=58.0*

ISC 14 21:46:17.7±0.7,36.97N±0.04×27.96E±0.04,h10^{km}±6^{km}, n14,σ0.^{s}69/20,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.31**	**58**	*e*PG	**Pg**	**21 46 24.6**	**+0.5**
YER				*e*SG	**Sg**	**21 46 28.6**	**+0.2**
MLSB	**Milas**	**0.36**	**336**	*e*PG	**Pg**	**21 46 24.5**	**-0.6**
MLSB				*e*SG	**Sg**	**21 46 30.1**	**+0.2**
BDRM	**Kayabasi**	**0.42**	**283**	*i* P	**Pg**	**21 46 25.6**	**-0.8**
BDRM				*i* S	**Sg**	**21 46 32.4**	**+0.2**
BODT	**Bodrum**	**0.53**	**280**	*e*PG	**Pg**	**21 46 27.8**	**-0.6**
BODT				*e*SG	**Sg**	**21 46 36.1**	**+0.6**
AYDN	**Tasoluk**	**0.69**	**355**	*i* P	**Pb**	**21 46 31.0**	**-0.4**
AYDN				*i* S	**Sb**	**21 46 40.9**	**+0.1**
ARG	**Arkhangelos**	**0.77**	**170**	*e*PB	**Pb**	**21 46 32.7**	**0.0**
ARG	**Arkhangelos**	**0.77**	**170**	*e*Pb	**Pb**	**21 46 33.5**	**+0.8**
DNZL	**Cakiroluk**	**1.12**	**50**	*i* P	**Pb**	**21 46 38.9**	**0.0**
DNZL				*i* S	**Sb**	**21 46 54.3**	**+0.9**
DENT	**Denizli**	**1.16**	**47**	*e*PN	**Pn**	**21 46 39.0**	**-1.0**
SMG	**Samos**	**1.16**	**310**	*e*PB	**Pb**	**21 46 41.5**	**+2.0**
IZM	**Izmir**	**1.53**	**339**	*e*PN	**Pn**	**21 46 44.5**	**-0.8**
KARP	**Karpathos**	**1.56**	**205**	*e*PN	**Pn**	**21 46 46.0**	**+0.2**
ELL	**Elmali**	**1.58**	**97**	*e*PN	**Pn**	**21 46 45.6**	**-0.4**
BLCB	**Balcova**	**1.59**	**333**	*e*PN	**Pn**	**21 46 45.9**	**-0.3**

DJA 14 21:50:02.5±1.0,10.81S×115.38E,h160^{km},MD5.0/4, ML3.6/4,6C-2D,Error ellipse: s-maj=25.2km s-min=15.6km az=168.0,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**2.08**	**4**	⇑*i*Pn	P	21 50 38.7	-0.8
	41nm,0.2s						
RATI				⇑*i*Sn	S	21 51 05.0	-3.0
KEDI	**Kedomdong**	**2.42**	**18**	⇑*i*Pn	P	21 50 44.0	+0.3
	26nm,0.2s						
KEDI				⇑*i*Sn	S	21 51 13.5	-1.8
SRDI	**Scrawed**	**2.62**	**332**	⇑*i*Pn	P	21 50 45.3	-0.8
	47nm,0.2s						
SRDI	**Scrawed**	**2.62**	**332**	⇓*i*P	P	21 50 45.5	-0.6
SRDI				⇑*i*Sn	S	21 51 18.5	-1.0
KELI	**Kelakatan**	**2.72**	**341**	⇓*i*Pn	P	21 50 48.2	+0.8
	14nm,0.2s						

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*NIED **14** 22:00:00,34.10N×141.80E,h17^{km},Mw3.9 Best double couple: M$_0$7.1×10^{14} NP1:φ$_s$242°,δ84°,λ-173°. NP2: φ$_s$152°,δ83°,λ-6°.*

*JMA **14** 22:00:38.3±0.5,34.09N×141.82E,h25^{km}±5^{km},M3.5*

ISC 14 22:00:39.4±2.0,34.09N±0.07×141.8E±0.1,h28^{km}±11^{km}, n10,σ0.^{s}52/15,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.86**	**311**	P	**Pb**	**22 00 54.8**	**-0.8**
BSO1				*e*S	**Sb**	**22 01 07.3**	**+0.6**
BSO3	**Boso 3**	**1.25**	**305**	P	**Pn**	**22 01 01.4**	**+0.1**
BSO4	**Boso 4**	**1.48**	**308**	P	**Pn**	**22 01 05.3**	**+0.8**
BSO4				*e*S	**Sn**	**22 01 22.8**	**-0.2**
JHJ2	**Mitsune**	**1.89**	**240**	P	**Pn**	**22 01 11.2**	**+0.8**
JHJ2				*e*S	**Sn**	**22 01 33.4**	**-0.1**
JIM2	**Oshima 3**	**2.02**	**289**	P	**Pn**	**22 01 11.3**	**-1.0**
JOD2	**Odawara 2**	**2.49**	**299**	P	**Pn**	**22 01 18.8**	**-0.2**
JYN	**Shimob**	**3.00**	**299**	P	**Pn**	**22 01 25.8**	**-0.4**
JYN				*e*S	**Sn**	**22 02 01.5**	**-0.1**
JAG	**Ashikaga**	**3.00**	**322**	P	**Pn**	**22 01 26.0**	**-0.2**
JRY	**Ryogami san**	**3.03**	**310**	P	**Pn**	**22 01 26.8**	**+0.1**
MAT	**Matsushiro**	**3.80**	**311**	P	**Pn**	**22 01 38.2**	**+0.6**
MAT				S	**Sn**	**22 02 22.1**	**+0.2**

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*IDC **14** 22:06:26.1±1.2,13.42N×92.78E,mb3.9/6,mb1 4.0/7, mb1mx3.7/18,mbtmp3.8/7,ML3.4/1,Error ellipse: s-maj=47.2km s-min=20.3km az=61.0*

*NEIC **14** 22:06:30.7±0.7,13.49N×92.86E,h30^{km},mb3.8/2,Error ellipse: s-maj=16.8km s-min=10.1km az=65.0*

ISC 14 22:06:28.8±0.8,13.50N±0.09×92.94E±0.10,h30^{km},n11, σ0.^{s}60/12,mb3.9/8,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.59**	**49**	Pn	**Pn**	**22 08 20.4**	**0.0**
	0.2nm,0.3s,baz=239,slow=15,SNR=5.0						
CMAR				Sn	**Sn**	**22 09 45.9**	**-0.4**
	0.3nm,0.3s,baz=240,slow=28,SNR=6.2						
LSA	**Lhasa**	**16.21**	**354**	P	**P**	**22 10 15.9**	**-0.3**
ENH	**Enshi**	**22.63**	**40**	*e*P	**P**	**22 11 29.8**	**+1.0**
SONM	**Songino Array**	**36.03**	**15**	P	**P**	**22 13 29.5**	**+0.1**
	0.3nm,0.5s,mb3.5,baz=206,slow=6.8,SNR=5.1						
KURK	**Kurchatov**	**38.91**	**346**	P	**P**	**22 13 53.1**	**-0.5**
	0.7nm,0.6s,mb3.6						
ZAL	**Zalesovo**	**40.86**	**353**	P	**P**	**22 14 10.9**	**+1.4**
	1.2nm,0.4s,mb3.9,baz=297,slow=8.7,SNR=5.8						
WRA	**Warramunga Arr**	**52.57**	**128**	P	**P**	**22 15 42.3**	**0.0**
	0.5nm,0.5s,mb3.7,baz=305,slow=10,SNR=12						
WRA				PcP	PcP	22 16 52.6	+0.3
	0.2nm,0.4s,baz=324,slow=3.3,SNR=4.6						
WRA				pPcP		22 17 00.8	
	0.3nm,0.5s,baz=319,slow=3.3,SNR=6.2						
WRAB	**Tennant Creek**	**52.57**	**128**	*e*P	**P**	**22 15 42.1**	**-0.2**
	1.7nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**54.48**	**132**	P	**P**	**22 15 56.3**	**0.0**
	0.4nm,0.4s,mb3.7,baz=309,slow=6.6,SNR=6.1						
FINES	**FINESS Array B**	**67.23**	**331**	P	**P**	**22 17 21.3**	**-1.0**
	7.5nm,1.3s,mb4.6,baz=76,slow=5.7,SNR=4.3						
ARCES	**ARCESS Array B**	**69.61**	**340**	P	**P**	**22 17 37.1**	**+0.1**
	4.6nm,1.1s,mb4.3,baz=85,slow=10.0,SNR=4.2						

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*IDC **14** 22:11:15.8±1.3,29.73S×112.33W,mb4.2/9,mb1 4.4/9, mb1mx4.1/20,mbtmp4.2/9,MS4.2/17,Ms1 4.2/17, ms1mx4.1/24,Error ellipse: s-maj=37.9km s-min=33.2km az=7.0*

*NEIC **14** 22:11:16.7±0.8,29.89S×112.25W,h10^{km},mb4.8/7,Error ellipse: s-maj=23.6km s-min=13.6km az=216.0*

*BJI **14** 22:11:20.3,29.90S×112.30W,h10^{km}*

ISC 14 22:11:13.1±1.7,30.2S±0.3×112.6W±0.3,h10^{km},n46, σ0.^{s}86/24,mb4.3/16,MS4.3/17,1C,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**35.52**	**119**	LR	LR	22 28 25.2	
	comp=Z,144nm,19.2s,MS3.8,baz=274,slow=29						
PLCA	**Paso Flores**	**35.52**	**119**	P	**P**	**22 18 11.6**	**-0.5**
LVC	**Limon Verde**	**39.64**	**90**	LR	LR	22 30 55.0	
	comp=Z,643nm,21.1s,MS4.4,baz=227,slow=30						
LVC	**Limon Verde**	**39.64**	**90**	P	**P**	**22 18 46.7**	**-0.2**
LPAZ	**La Paz**	**42.85**	**81**	P	**P**	**22 19 14.7**	**+1.4**
	1.0nm,0.6s,mb3.7,baz=242,slow=6.6,SNR=3.7						
LPAZ				LR	LR	22 32 51.9	
	comp=Z,329nm,20.5s,MS4.2,baz=98,slow=30						
RAR	**Rarotonga**	**43.21**	**270**	LR	LR	22 31 38.8	
	comp=Z,486nm,20.5s,MS4.4,baz=58,slow=28						
JTS	**JuntasAbangare**	**48.20**	**38**	LR	LR	22 34 35.5	
	comp=Z,113nm,20.1s,MS3.9,baz=138,slow=29						
ROSC	**El Rosal**	**50.52**	**53**	P	**P**	**22 20 14.5**	**+0.7**
	3.7nm,0.4s,mb4.7,baz=90,slow=17,SNR=7.0						
ROSC				LR	LR	22 37 42.1	
	comp=Z,292nm,18.6s,MS4.3,baz=359,slow=32						
SAML	**Samuel**	**50.64**	**76**	*e*P	**P**	**22 20 14.3**	**-0.4**
	3.1nm,0.9s,mb4.2						
TXAR	**Lajitas Array**	**59.77**	**9**	P	**P**	**22 21 21.0**	**+0.3**
	0.2nm,0.3s,mb3.7,baz=186,slow=9.1,SNR=3.3						
TXAR				LR	LR	22 41 39.0	
	comp=Z,83nm,19.8s,MS3.9,baz=175,slow=31						
TXAR	**Lajitas Array**	**59.77**	**9**	P	**P**	**22 21 21.0**	**+0.3**
TXAR				LR	LR	22 41 39.0	
VNDA	**Vanda**	**59.84**	**195**	LR	LR	22 40 47.7	
	comp=Z,318nm,19.2s,MS4.5,baz=96,slow=29						
BDFB	**Brasilia**	**60.50**	**92**	LR	LR	22 44 25.8	
	comp=Z,118nm,19.9s,MS4.0,baz=182,slow=33						
JCT	**Junction City**	**61.51**	**13**	*e*P	**P**	**22 21 31.1**	**-1.5**
	11nm,0.9s,mb5.0						
WMOK	**Wichita Mounta**	**65.85**	**12**	P	**P**	**22 22 00.1**	**-0.9**
MNV	**Mina**	**68.43**	**355**	*e*P	**P**	**22 22 17.8**	**+0.5**
	20nm,1.4s,mb5.0						
NVAR	**Mina Array Bea**	**68.44**	**355**	P	**P**	**22 22 17.7**	**+0.3**
	4.0nm,0.9s,mb4.4,baz=170,slow=7.9,SNR=20						
NVAR	**Mina Array Bea**	**68.44**	**355**	P	**P**	**22 22 17.7**	**+0.3**
ELK	**Elko**	**70.59**	**358**	*e*P	**P**	**22 22 30.9**	**+0.5**
YBH	**Yreka Blue Hor**	**72.14**	**352**	P	**P**	**22 22 39.9**	**+0.1**
	0.7nm,0.4s,mb3.9,baz=225,slow=13,SNR=3.0						
WVOR	**Wild Horse Val**	**72.45**	**355**	*e*P	**P**	**22 22 42.5**	**+0.9**
	14nm,1.3s,mb4.7						
BW06	**Boulder Array**	**72.62**	**2**	P	**P**	**22 22 41.2**	**-1.4**
	5.7nm,0.6s,mb4.7						
PDAR	**Pinedale Array**	**72.62**	**2**	P	**P**	**22 22 41.0**	**-1.6**
	1.4nm,1.0s,mb3.9,baz=45,slow=10,SNR=8.7						
PDAR				LR	LR	22 49 00.3	
	comp=Z,173nm,18.3s,MS4.4,baz=204,slow=31						
HLID	**Hailey**	**73.38**	**359**	*e*P	**P**	**22 22 47.1**	**+0.1**
	8.3nm,1.3s,mb4.5						
MCMT	**McKenzie Canyo**	**74.63**	**360**	*e*P	**P**	**22 22 54.0**	**-0.2**
BMO	**Blue Mountains**	**74.78**	**357**	*e*P	**P**	**22 22 56.4**	**+1.3**
	10.0nm,1.6s,mb4.5						
NEW	**Newport**	**78.17**	**357**	P	**P**	**22 23 15.4**	**+1.4**
	1.5nm,0.6s,mb4.1,baz=100,slow=11,SNR=4.4						
ULM	**Lac du Bonnet**	**81.41**	**11**	P	**P**	**22 23 30.5**	**-0.9**
	2.7nm,0.6s,mb4.4,baz=196,slow=5.5,SNR=5.2						
EDM	**Edmonton**	**83.03**	**360**	*e*P	**P**	**22 23 39.9**	**+0.2**
STKA	**Stephens Creek**	**86.47**	**235**	LR	LR	22 54 14.0	
	comp=Z,119nm,19.4s,MS4.3,baz=171,slow=30						
CTA	**Charters Tower**	**89.26**	**247**	LR	LR	22 56 04.2	
	comp=Z,129nm,19.2s,MS4.4,baz=48,slow=30						
YKA	**Yellowknife Ar**	**92.34**	**359**	P	**P**	**22 24 24.2**	**-0.1**
	1.1nm,1.1s,mb4.1,baz=173,slow=4.4,SNR=9.0						
YKA				LR	LR	23 01 06.2	
	comp=Z,292nm,18.6s,MS4.8,baz=195,slow=32						
PMG	**Port Moresby**	**94.08**	**257**	LR	LR	22 59 56.5	
	comp=Z,159nm,18.4s,MS4.5,baz=342,slow=31						
ASAR	**Alice Springs**	**96.75**	**238**	LR	LR	23 03 14.1	
	comp=Z,107nm,18.9s,MS4.3,baz=195,slow=32						
ILAR	**Eielson Array**	**98.34**	**346**	LR	LR	23 00 15.0	
	comp=Z,77nm,20.4s,MS4.2,baz=359,slow=30						
INK	**Inuvik**	**99.40**	**352**	LR	LR	23 01 53.5	
	comp=Z,153nm,19.2s,MS4.5,baz=86,slow=31						
XAN	**Xi'an**	**144.81**	**287**	PKP	PKPdf	22 30 56.3	+2.8
AKASG	**Malin Array Be**	**144.94**	**43**	PKP	PKPdf	22 30 51.7	-1.5
	0.2nm,0.3s,baz=281,slow=4.7,SNR=3.0						
ULN	**Ulaanbaatar**	**144.96**	**312**	*e*PKP	PKPdf	22 30 53.8	+0.5
GYA	**Guiyang**	**145.38**	**274**	⇑PKP	PKPdf	22 31 00.3	+5.6
SONM	**Songino Array**	**145.40**	**312**	PKPbc	PKPbc	22 30 54.4	+2.9
	1.2nm,0.7s,baz=86,slow=2.0,SNR=13						
LZH	**Lanzhou**	**149.06**	**291**	*e*PKP	PKPdf	22 31 07.6	+7.1
CMAR	**Chiang Mai Arr**	**149.11**	**255**	PKPbc	PKPdf	22 31 08.2	+7.2
	1.7nm,1.0s,baz=128,slow=2.0,SNR=10						
BRTR	**Keskin Array B**	**150.85**	**62**	PKPbc	PKPdf	22 31 07.2	+4.1
	1.7nm,1.0s,baz=262,slow=2.2,SNR=4.7						
ZAL	**Zalesovo**	**153.11**	**337**	PKPbc	PKPdf	22 31 15.3	+9.4
	0.5nm,0.4s,baz=344,slow=11,SNR=3.5						
ZAL	**Zalesovo**	**153.11**	**337**	PKPbc	PKPdf	22 31 15.3	+9.4

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*IDC **14** 22:34:09.6±0.9,8.12S×128.49E,mb4.1/7,mb1 4.2/10, mb1mx4.1/15,mbtmp4.1/10,ML3.9/3,MS3.2/1,Ms1 3.2/1, ms1mx2.6/20,Error ellipse: s-maj=48.1km s-min=16.9km az=53.0*

*NEIC **14** 22:34:13.1±5.3,8.22S×128.44E,h25^{km}±41^{km},mb4.4/2, Error ellipse: s-maj=17.0km s-min=13.7km az=205.0*

ISC 14 22:34:12.2±0.5,8.29S±0.05×128.44E±0.07,h33^{km},n24, σ1.^{s}06/31,mb4.1/8,1C,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.90**	**139**	⇑*i*P	**P**	**22 35 41.1**	**+1.7**
	34nm,0.3s						
KAKA				*e*S	**S**	**22 36 47.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**10.13**	**195**	*e*P	**P**	**22 36 42.8**	**+4.3**
	12nm,0.4s						
FITZ				*e*S	**S**	**22 38 31.0**	**-1.1**
WRAB	**Tennant Creek**	**12.91**	**154**	*e*P	**P**	**22 37 14.9**	**-1.2**
	14nm,0.6s						
WRA	**Warramunga Arr**	**12.92**	**154**	Pn	**P**	**22 37 15.0**	**-1.2**
	1.2nm,0.3s,baz=341,slow=11,SNR=55						
WRA				Sn	**S**	**22 39 29.6**	**-10**
	2.7nm,0.3s,baz=325,slow=24,SNR=13						
WRA	**Warramunga Arr**	**12.92**	**154**	Pn	**P**	**22 37 15.0**	**-1.2**
WRA				Sn	**S**	**22 39 29.6**	**-10**
WB2	**Warramunga Arr**	**12.92**	**154**	*e*P	**P**	**22 37 15.6**	**-0.7**
WB2				*e*S	**S**	**22 39 30.2**	**-10**
MBWA	**Marble Bar**	**15.31**	**212**	P	**P**	**22 37 48.4**	**+0.7**
ASPA	**Alice Springs**	**16.16**	**162**	*e*P	**P**	**22 38 02.9**	**+4.4**
ASPA				*e*S	**S**	**22 40 51.1**	**-5.3**
ASAR	**Alice Springs**	**16.16**	**162**	Pn	**P**	**22 37 59.5**	**+1.0**
	0.4nm,0.3s,baz=338,slow=9.5,SNR=11						
ASAR				Sn	**S**	**22 40 47.0**	**-9.4**
	0.4nm,0.3s,baz=335,slow=17,SNR=3.8						
ASAR				LR	LR	22 43 38.9	
	comp=Z,76nm,18.3s,baz=343,slow=35						
ASAR	**Alice Springs**	**16.16**	**162**	Pn	**P**	**22 37 59.5**	**+1.0**
ASAR				Sn	**S**	**22 40 47.0**	**-9.4**
ASAR				LR	LR	22 43 38.9	
PMG	**Port Moresby**	**18.53**	**95**	P	**P**	**22 38 27.6**	**-0.7**
	1.0nm,0.3s,baz=293,slow=6.5,SNR=8.1						
CTA	**Charters Tower**	**20.85**	**126**	P	**P**	**22 38 54.4**	**+0.6**
	4.6nm,0.8s,baz=296,slow=15,SNR=2.4						
STKA	**Stephens Creek**	**26.47**	**154**	*e*P	**P**	**22 39 49.9**	**+1.6**
	2.9nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**26.47**	**154**	P	**P**	**22 39 49.7**	**+1.4**
	3.9nm,0.7s,mb4.0,baz=309,slow=9.6,SNR=7.5						
CMAR	**Chiang Mai Arr**	**39.41**	**313**	P	**P**	**22 41 42.3**	**+1.5**
	1.2nm,0.9s,mb3.6,baz=147,slow=7.3,SNR=6.0						
LSA	**Lhasa**	**52.09**	**318**	*e*P	**P**	**22 43 22.8**	**+1.4**
	2.2nm,0.5s,mb4.3						
ULN	**Ulaanbaatar**	**59.02**	**343**	*e*P	**P**	**22 44 09.9**	**-1.3**
SONM	**Songino Array**	**59.19**	**343**	P	**P**	**22 44 12.1**	**-0.2**
	1.1nm,0.7s,mb4.0,baz=164,slow=6.5,SNR=10						
CASY	**Casey**	**59.21**	**188**	P	**P**	**22 44 12.6**	**+0.3**
ZAL	**Zalesovo**	**72.06**	**335**	P	**P**	**22 45 33.6**	**-1.1**
	1.3nm,0.4s,mb4.2,baz=340,slow=5.8,SNR=7.0						
KURK	**Kurchatov**	**72.82**	**329**	*e*P	**P**	**22 45 38.6**	**-0.7**
	3.8nm,0.9s,mb4.3						
BVAR	**Borovoye Array**	**78.33**	**328**	P	**P**	**22 46 09.5**	**-1.2**
	1.0nm,0.7s,mb3.9,baz=124,slow=5.3,SNR=5.1						
BRTR	**Keskin Array B**	**98.92**	**309**	P	**P**	**22 47 51.4**	**+0.7**
	0.8nm,0.7s,mb4.3,baz=119,slow=13,SNR=4.4						
DBIC	**Dimbokro**	**133.69**	**271**	PKP	PKPdf	22 53 30.8	+4.0
	1.2nm,0.5s,baz=125,slow=4.0,SNR=4.6						

IDC 14 22:49:25.1±6.2,20.94S×178.56W,h563^{km}±66^{km}, mb3.0/5,mb1 3.2/6,mb1mx3.1/16,mbtmp4.1/6,Error ellipse: s-maj=42.8km s-min=30.6km az=46.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.66**	**191**	P	P	22 52 58.9	-0.6
	2.6nm,0.3s,baz=293,slow=1.6,SNR=13						
PMG	**Port Moresby**	**34.94**	**284**	P	P	22 55 30.4	-1.4
	5.4nm,0.6s,baz=260,slow=21,SNR=4.9						
STKA	**Stephens Creek**	**37.13**	**245**	P	P	22 55 49.0	-0.8
	1.4nm,0.7s,baz=263,slow=21,SNR=3.1						
ASAR	**Alice Springs**	**43.91**	**257**	P	P	22 56 43.1	-0.9
	0.4nm,0.3s,baz=92,slow=8.2,SNR=6.7						
ASAR				PcP	PcP	22 58 16.4	-1.5
	1.2nm,1.0s,baz=96,slow=4.5,SNR=5.5						
WRA	**Warramunga Arr**	**44.02**	**263**	P	P	22 56 43.3	-1.8
	0.5nm,0.2s,baz=97,slow=6.6,SNR=21						
ILAR	**Eielson Array**	**88.86**	**13**	P	P	23 01 19.5	-0.7
	0.3nm,0.5s,baz=220,slow=5.6,SNR=5.2						
BVAR	**Borovoye Array**	**119.08**	**320**	PKP	PKPdf	23 07 09.8	-0.1
	0.6nm,0.3s,baz=91,slow=1.8,SNR=8.2						
ARCES	**ARCESS Array B**	**129.25**	**349**	PKP	PKPdf	23 07 29.8	+0.7
	2.5nm,0.8s,baz=39,slow=7.8,SNR=4.6						
HFS	**Hagfors**	**139.89**	**351**	PKhKP		23 07 43.2	
	0.9nm,0.3s,baz=63,slow=3.3,SNR=12						
AKASG	**Malin Array Be**	**143.14**	**330**	PKP	PKPdf	23 07 52.8	-2.0
	1.7nm,0.4s,baz=43,slow=4.2,SNR=17						
BRTR	**Keskin Array B**	**146.74**	**311**	PKPbc	PKPbc	23 08 04.0	+0.5
	0.7nm,0.6s,baz=170,slow=2.5,SNR=4.4						
GERES	**GERESS Array B**	**150.48**	**343**	PKPbc	PKPdf	23 08 13.9	+7.0
	0.3nm,0.6s,baz=326,slow=4.8,SNR=3.6						

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*NIED **14** 22:50:00,36.60N×141.50E,h29^{km},Mw3.9 Best double couple: M$_0$8.79×10^{14} NP1:φ$_s$181°,δ88°,λ-71°. NP2: φ$_s$279°,δ19°,λ-172°.*

*JMA **14** 22:50:44.9±0.1,36.61N×141.39E,h49^{km}±3^{km},M4.0*

JMA Felt I J1.

*NEIC **14** 22:50:45.5±0.5,36.56N×141.52E,mb4.5/2,MW3.9(NIED),*

Error ellipse: s-maj=11.8km s-min=10.3km az=175.0

NEIC Recorded [1 JMA] in Ibaraki and Tochigi Prefectures.

*IDC **14** 22:50:46.0±3.3, 36.56N×141.38E, h43^{km}±33^{km}, mb3.7/10, mb1 4.0/11, mb1mx3.7/23, mbtmp4.0/11, ML4.3/1, Error ellipse: s-maj=25.4km s-min=16.0km az=81.0*

ISC 14 22:50:43.9±1.2**, 36.56N**±0.05×**141.5E**±0.1**, h45**^{km}±10^{km}**, n22, σ0^{s}83**/27**, mb4.0**/12**, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.74	274	⇓P	P	22 50 57.9	-0.1
JHO				S	S	22 51 07.5	-0.9
ONAJ	Iwakimizuishiy	0.77	315	⇓P	P	22 50 58.2	-0.3
ONAJ				eS	S	22 51 08.0	-1.1
JFK	Kawauchi	0.94	329	⇓P	P	22 51 00.6	-0.2
JYT	Yasato	1.09	253	⇓P	P	22 51 03.2	+0.2
JYT				eS	S	22 51 16.8	-0.4
JAG	Ashikaga	1.64	266	P	P	22 51 11.3	+0.4
MAJO	Matsushiro	2.64	271	eP	P	22 51 26.4	+1.4
MAT	Matsushiro	2.64	271	eP	P	22 51 27.0	+2.0
MAT				eS	S	22 51 59.0	+3.0
MAT	Matsushiro	2.64	271	P	P	22 51 26.5	+1.5
MAT				S	S	22 51 59.1	+3.1
JHJ	Hachijo jima 2	3.71	203	P	P	22 51 40.8	+0.6
	61nm,0.3s,baz=49,slow=12,SNR=17						
JHJ				S	S	22 52 22.4	-0.7
	54nm,0.3s,baz=57,slow=23,SNR=8.2						
SONM	Songino Array	28.10	305	P	P	22 56 32.7	-0.7
	1.5nm,0.5s,mb3.9,baz=104,slow=9.2,SNR=15						
ZAL	Zalesovo	42.29	313	P	P	22 58 34.1	-0.3
	0.9nm,0.4s,mb3.8,baz=43,slow=4.0,SNR=5.9						
KURK	Kurchatov	46.27	308	eP	P	22 59 06.0	-0.4
	6.6nm,0.9s,mb4.6						
ILAR	Eielson Array	49.86	32	P	P	22 59 35.0	+0.8
	0.5nm,0.7s,mb3.6,baz=274,slow=6.4,SNR=5.2						
ILAR				pP	pP	22 59 46.2	-0.5
	0.5nm,0.8s,baz=272,slow=5.2,SNR=3.9						
BVAR	Borovoye Array	50.93	313	P	P	22 59 41.4	-1.2
	0.2nm,0.4s,mb3.4,baz=98,slow=10,SNR=2.4						
WRAB	Tennant Creek	56.59	188	eP	P	23 00 23.6	-1.0
	3.7nm,0.8s,mb4.5						
WRA	Warramunga Arr	56.60	188	P	P	23 00 24.2	-0.4
	2.5nm,0.9s,mb4.2,baz=5.0,slow=7.2,SNR=13						
ASAR	Alice Springs	60.33	188	P	P	23 00 50.3	-0.3
	1.3nm,0.8s,mb4.0,baz=9.7,slow=5.8,SNR=12						
ASAR				pP	pP	23 01 02.3	-1.1
	0.7nm,0.8s,baz=9.8,slow=7.6,SNR=3.8						
YKA	Yellowknife Ar	64.19	30	P	P	23 01 15.8	+0.1
	0.3nm,0.5s,mb3.6,baz=302,slow=6.7,SNR=8.6						
ARCES	ARCESS Array B	64.46	339	P	P	23 01 18.2	+0.9
	17nm,1.3s,mb4.9,baz=63,slow=8.1,SNR=2.7						
FINES	FINESS Array B	69.26	332	P	P	23 01 48.5	+0.7
	2.0nm,0.9s,mb4.0,baz=79,slow=7.1,SNR=2.5						
NVAR	Mina Array Bea	75.23	53	P	P	23 02 23.9	+0.4
	0.7nm,0.7s,mb3.7,baz=272,slow=5.4,SNR=5.2						
LPAZ	La Paz	146.88	60	PKPbc	PKPbc	23 10 24.9	+3.6
	0.7nm,0.5s,baz=45,slow=2.9,SNR=5.3						

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*TEH **14** 22:59:44.8, 31.92N×55.74E, h7^{km}, Mn3.6*

*CSEM **14** 22:59:44.3±0.1, 31.97N×55.64E, h16^{km}, ML4.2/2, Error ellipse: s-maj=4.9km s-min=2.9km az=39.0*

*THR **14** 22:59:44.0±0.7, 31.98N×55.64E, h14^{km}±11^{km}, ML3.5*

ISC 14 22:59:43.6±0.7**, 31.95N**±0.06×**55.67E**±0.08**, h7**^{km}**, n15, σ1^{s}12**/18**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.36	194	Pg	Pg	22 59 51.7	+0.7
IMEH	Mehriz	1.06	239	Pg	Pg	23 00 04.2	-0.6
ICHK	Chekchek	1.11	286	Pg	Pg	23 00 04.4	-1.5
ISAD	Sadrabad	1.69	269	Pn	Pn	23 00 15.7	+1.9
KRBR	Kerman	2.17	154	eP	Pn	23 00 22.6	+2.0
KRBR				eSG	Sg	23 00 53.9	-1.9
KRBR				AML	AML	23 01 02.9	
	comp=N,360nm,0.6s						
KRBR	Kerman	2.17	154	eP	Pn	23 00 22.6	+2.0
	SNR=52						
KRBR				eSg	Sg	23 00 53.9	-1.9
	comp=N,360nm,0.6s,SNR=90						
NASN	Na'in	2.57	290	ePN	Pn	23 00 27.4	+1.1
NASN				eSG	Sg	23 01 03.3	-5.8
NASN				AML	AML	23 01 10.2	
	comp=N,155nm,0.4s						
NASN	Na'in	2.57	290	ePn	Pn	23 00 27.4	+1.1
	SNR=52						
NASN				eSg	Sg	23 01 03.3	-5.9
	comp=N,155nm,0.4s,SNR=90						
IFIR	Firoozkooh	4.42	327	Pn	Pn	23 00 52.0	-0.6
IFIR	Firoozkooh	4.42	327	Lg		23 02 04.0	
IDMV	Damavand	4.72	321	Pn	Pn	23 00 57.4	+0.4
DAMV	Damavand	4.80	321	ePN	Pn	23 00 57.6	-0.4
ZHSF	Zahedan	4.97	117	ePN	Pn	23 01 00.7	+0.2
ASAO	Ashtian	5.40	300	ePN	Pn	23 01 06.2	-0.3
IRAZ	Razeghan	5.90	307	Pn	Pn	23 01 12.7	-0.9

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*NIED **14** 23:01:00, 36.60N×141.40E, h32^{km}, Mw3.9 Best double couple: M$_0$7.36×10^{14} NP1:φ$_s$27°, δ84°, λ58°. NP2:φ$_s$288°, δ32°, λ169°.*

*JMA **14** 23:01:37.6±0.2, 36.60N×141.37E, h44^{km}±3^{km}, M4.0*

*IDC **14** 23:01:38.3±2.8, 36.53N×141.41E, h40^{km}±29^{km}, mb3.5/6, mb1 3.8/8, mb1mx3.6/23, mbtmp3.8/8, ML3.7/2, Error ellipse: s-maj=28.9km s-min=14.8km az=103.0*

*NEIC **14** 23:01:39.9±1.8, 36.50N×141.37E, h58^{km}±16^{km}, mb4.1/1, Error ellipse: s-maj=18.1km s-min=15.9km az=155.0*

ISC 14 23:01:36.4±1.0**, 36.56N**±0.04×**141.50E**±0.09**, h42**^{km}±10^{km}**, n24, σ0^{s}99**/33**, mb3.8**/7**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.75	274	⇓P	P	23 01 50.3	-0.3
JHO				eS	S	23 01 59.0	-1.9
ONAJ	Iwakimizuishiy	0.78	314	P	P	23 01 50.6	-0.4
ONAJ				eS	S	23 02 00.7	-1.1
JFK	Kawauchi	0.95	329	⇓P	P	23 01 53.1	-0.3
JFK				eS	S	23 02 05.1	-0.9
JYT	Yasato	1.10	253	P	P	23 01 55.8	+0.3
JFT	Otama	1.34	316	⇓P	P	23 01 59.7	+0.7
JFT				eS	S	23 02 15.9	+0.1
JMM	Marumori	1.42	337	⇓P	P	23 02 00.1	-0.1
JAG	Ashikaga	1.65	266	P	P	23 02 03.9	+0.5
JFY	Yanaizu	1.67	301	⇑P	P	23 02 04.6	+0.9
JFY				eS	S	23 02 25.2	+1.2
JKT	Katashina	1.82	277	P	P	23 02 06.8	+1.0
MAJO	Matsushiro	2.65	271	eP	P	23 02 18.6	+1.0
MAT	Matsushiro	2.65	271	eP	P	23 02 19.0	+1.4
MAT				eS	S	23 02 52.0	+3.2
MAT	Matsushiro	2.65	271	P	P	23 02 18.5	+0.9
MAT				S	S	23 02 43.5	-5.3
JHJ	Hachijo jima 2	3.71	203	P	P	23 02 33.5	+0.9
	30nm,0.3s,baz=244,slow=18,SNR=14						
JHJ				S	S	23 03 14.1	-1.5
	64nm,0.3s,baz=72,slow=22,SNR=7.8						
ASAJ	Asahikawa	7.60	6	P	P	23 03 26.1	-1.2
	0.9nm,0.3s,baz=165,slow=16,SNR=2.9						
ASAJ				S	S	23 04 45.9	-7.2
	0.7nm,0.3s,baz=234,slow=28,SNR=1.6						
ENH	Enshi	27.36	266	eP	P	23 07 18.3	-1.4
SONM	Songino Array	28.11	305	P	P	23 07 25.5	-0.7
	1.9nm,0.6s,mb3.9,baz=102,slow=8.7,SNR=18						
ZAL	Zalesovo	42.30	313	P	P	23 09 28.3	+1.0
	0.6nm,0.5s,mb3.5,baz=20,slow=9.9,SNR=3.9						
ZAL	Zalesovo	42.30	313	P	P	23 09 28.3	+1.0
KURK	Kurchatov	46.28	308	eP	P	23 09 58.7	-0.7
	1.5nm,0.6s,mb4.1						
ILAR	Eielson Array	49.86	32	P	P	23 10 27.0	0.0
	0.4nm,0.6s,mb3.6,baz=266,slow=5.9,SNR=5.5						
WRA	Warramunga Arr	56.60	188	P	P	23 11 16.4	-1.1
	2.3nm,1.1s,mb4.1,baz=6.4,slow=7.5,SNR=5.4						
YKA	Yellowknife Ar	64.19	30	P	P	23 12 08.7	+0.2
	0.2nm,0.4s,mb3.5,baz=302,slow=6.6,SNR=5.8						
YKA	Yellowknife Ar	64.19	30	P	P	23 12 08.7	+0.2
NVAR	Mina Array Bea	75.22	53	P	P	23 13 18.2	+1.9
	0.6nm,0.6s,mb3.7,baz=307,slow=4.5,SNR=3.8						

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*NEIC **14** 23:01:40.0±7.6, 19.06N×146.41E, h48^{km}±70^{km}, mb4.5/6, Error ellipse: s-maj=17.3km s-min=10.2km az=75.0*

*IDC **14** 23:01:41.2±3.7, 19.02N×146.43E, h61^{km}±33^{km}, mb3.9/17, mb1 4.0/18, mb1mx3.9/26, mbtmp4.2/18, ML4.0/1, Error ellipse: s-maj=22.6km s-min=11.8km az=92.0*

ISC 14 23:01:39.5±2.8**, 19.05N**±0.06×**146.3E**±0.1**, h59**^{km}±24^{km}**, n33, σ1^{s}02**/33**, mb4.3**/25**, 2C, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	8.87	335	P	P	23 03 49.2	+1.7
	6.0nm,0.3s,baz=305,slow=23,SNR=2.5						
CBIJ				S	S	23 05 25.6	-1.5
	7.4nm,0.3s,baz=290,slow=22,SNR=3.2						
PMG	Port Moresby	28.29	178	P	P	23 07 27.9	-1.9
	3.6nm,0.3s,mb4.4,baz=8.9,slow=7.0,SNR=4.4						
KAKA	Kakadu	34.40	205	⇑iP	P	23 08 22.4	-1.0
	3.1nm,0.5s,mb4.5						
WRAB	Tennant Creek	40.48	198	eP	P	23 09 14.6	+0.3
	6.1nm,0.5s,mb4.6						
WB2	Warramunga Arr	40.49	198	eP	P	23 09 15.9	+1.5
WRA	Warramunga Arr	40.49	198	P	P	23 09 14.6	+0.1
	2.5nm,0.3s,mb4.3,baz=15,slow=8.3,SNR=19						
FITZ	Fitzroy Crossi	42.15	210	⇑iP	P	23 09 29.5	+1.4
	5.7nm,0.7s,mb4.3						
ULN	Ulaanbaatar	42.87	321	P	P	23 09 34.3	+0.6
SONM	Songino Array	43.25	321	P	P	23 09 36.5	-0.2
	0.7nm,0.6s,mb3.6,baz=122,slow=5.8,SNR=7.1						
SONM				PcP	PcP	23 11 25.7	+0.1
	0.6nm,0.7s,baz=146,slow=5.2,SNR=3.5						
ASAR	Alice Springs	44.15	196	P	P	23 09 43.0	-1.4
	1.4nm,0.5s,mb3.9,baz=18,slow=7.0,SNR=16						
CMAR	Chiang Mai Arr	44.77	277	P	P	23 09 50.6	+1.2
	0.4nm,0.5s,mb3.5,baz=67,slow=6.9,SNR=3.0						
STKA	Stephens Creek	50.84	185	P	P	23 10 36.1	-0.4
	1.3nm,0.4s,mb4.2,baz=358,slow=12,SNR=5.4						
ZAL	Zalesovo	58.12	322	P	P	23 11 29.1	-0.1
	1.0nm,0.6s,mb4.0,baz=358,slow=7.2,SNR=6.9						
ZAL				PcP	PcP	23 12 19.3	-0.9
	0.9nm,0.5s,baz=265,slow=4.9,SNR=4.2						
ZAL	Zalesovo	58.12	322	P	P	23 11 29.1	-0.1
ZAL				PcP	PcP	23 12 19.3	-0.9
NWAO	Narrogin (SRO)	58.69	209	P	P	23 11 33.4	-0.2
	4.8nm,0.6s,mb4.7,baz=95,slow=19,SNR=6.1						
KURK	Kurchatov	61.41	318	eP	P	23 11 50.0	-1.9
	2.9nm,0.6s,mb4.6						
ILAR	Eielson Array	63.07	26	P	P	23 12 01.1	-1.7
	1.8nm,1.1s,mb4.1,baz=279,slow=5.5,SNR=5.6						
BVAR	Borovoye Array	66.59	320	P	P	23 12 25.3	-0.3
	5.8nm,0.6s,mb4.8,baz=90,slow=7.4,SNR=18						
BVAR				pP	pP	23 12 41.6	-0.1
	5.0nm,0.7s,baz=100,slow=9.0,SNR=6.6						
INK	Inuvik	68.82	23	P	P	23 12 39.3	0.0
	0.8nm,0.7s,mb3.8,baz=185,slow=3.8,SNR=4.0						
DLBC	Dease Lake	70.67	34	P	P	23 12 50.9	+0.2
	1.1nm,0.7s,mb3.9,baz=221,slow=10,SNR=3.5						
DLBC	Dease Lake	70.67	34	P	P	23 12 50.9	+0.2
YKA	Yellowknife Ar	77.40	28	P	P	23 13 29.1	-0.5
	1.5nm,1.0s,mb3.9,baz=292,slow=5.5,SNR=11						
KEV	Kevo	81.79	342	ep	P	23 13 53.6	+0.5
	25nm,1.7s,mb4.9						
ARCES	ARCESS Array B	82.35	342	P	P	23 13 57.9	+1.9
	2.4nm,0.8s,mb4.2,baz=80,slow=7.4,SNR=11						
NVAR	Mina Array Bea	82.45	52	P	P	23 13 58.0	+0.9
	0.9nm,0.7s,mb3.8,baz=262,slow=6.2,SNR=4.8						
JOF	Joensuu	83.95	335	ep	P	23 14 04.5	+0.3
	2.7nm,0.6s,mb4.5						
KAF	Kangasniemi	86.34	336	ep	P	23 14 06.4	-10
	6.9nm,1.4s,mb4.7						
FINES	FINESS Array B	86.82	335	P	P	23 14 17.7	-0.7
	2.0nm,0.4s,mb4.7,baz=76,slow=5.6,SNR=40						
BW06	Boulder Array	87.15	46	eP	P	23 14 20.8	+0.3
FCC	Fort Churchill	88.08	27	P	P	23 14 25.6	+1.0
	1.8nm,1.0s,mb4.3						
HFS	Hagfors	92.28	338	P	P	23 14 43.8	-0.4
	1.2nm,0.7s,mb4.4,baz=135,slow=4.2,SNR=5.3						
HFS	Hagfors	92.28	338	P	P	23 14 43.8	-0.4
LPAZ	La Paz	147.08	91	PKPbc	PKPdf	23 21 17.2	+2.7
	0.6nm,0.6s,baz=294,slow=2.9,SNR=4.7						

DJA 14 23:08:03.1±0.8**, 9.63S×115.16E, h33**^{km}**, MD5.4**/3**, ML4.3**/4**, 2C-6D, Error ellipse: s-maj=18.9km s-min=7.5km az=2.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	0.97	22	⇓iPn	Pn	23 08 18.9	-1.7
	1µm,0.2s						
RATI				⇑iSn	Sn	23 08 30.5	-2.8
KEDI	Kedomdong	1.48	40	ePn	Pn	23 08 26.7	-1.1
	108nm,0.2s						
KEDI	Kedomdong	1.48	40	⇓iP	P	23 08 27.1	-0.5
KEDI				⇓iSn	Sn	23 08 43.7	-2.4
SRDI	Scrawed	1.52	319	⇓iPn	Pn	23 08 26.8	-1.6
	519nm,0.2s						
SRDI				⇓iSn	Sn	23 08 43.9	-3.3
KELI	Kelakatan	1.55	335	⇓iPn	Pn	23 08 28.0	-0.8
	120nm,0.3s						
KELI				⇑iSn	Sn	23 08 45.6	-2.4

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*CSEM **14** 23:16:52.8, 37.19N×56.56E, h19^{km}, ML3.2, After TEH*

TEH 14 23:16:52.8, 37.19N×56.56E, h19^{km}**, Mn3.2, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKRD	Kardeh	1.63	104	Pn	Pn	23 17 31.2	+10
IKRD	Kardeh	1.63	104	Pn	Pn	23 17 31.2	+10
IPAY	Payeh	2.09	110	Pn	Pn	23 17 26.6	-0.9
IPAY	Payeh	2.09	110	Pn	Pn	23 17 26.6	-0.9
IMOG	Moghan	2.48	115	Pn	Pn	23 17 32.2	-0.9
MHI	Mashhad	2.50	110	Pn	Pn	23 17 32.7	-0.6
IMYA	Miamay	2.97	105	Pn	Pn	23 17 38.6	-1.4
IFIR	Firoozkooh	3.43	244	Pn	Pn	23 17 45.0	-1.6
IFIR				Sn	Sn	23 18 23.7	-3.5
IDMV	Damavand	3.99	248	Pn	Pn	23 17 52.4	-2.1

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*SOF **14** 23:36:48.1, 45.97N×22.00E, h2^{km}, MD3.3*

*CSEM **14** 23:36:59.9±0.1, 45.34N×22.57E, h10^{km}, ML4.2, Error ellipse: s-maj=1.9km s-min=1.3km az=23.0*

*IDC **14** 23:37:00.5±1.5, 45.56N×22.63E, mb1 3.2/5, mb1mx3.2/21, mbtmp3.0/5, ML2.8/5, Error ellipse: s-maj=22.8km s-min=8.8km az=16.0*

*MOS **14** 23:37:01.9±1.3, 45.39N×22.51E, h33^{km}, mb3.5/1, Error ellipse: s-maj=9.8km s-min=5.4km az=113.3*

*BUC **14** 23:37:01.1±2.3, 45.35N×22.55E, h18^{km}±16^{km}, MD4.2/7, Error ellipse: s-maj=8.5km s-min=5.4km az=27.0*

*NEIC **14** 23:37:01.9, 45.40N×22.44E, h21^{km}, ML4.2(BUC), After BUC.*

*BEO **14** 23:37:02.6±0.3, 45.41N×22.45E, h21^{km}±1^{km}*

ISC 14 23:37:01.6±0.8**, 45.43N**±0.02×**22.58E**±0.03**, h23**^{km}±8^{km}**, n70, σ1^{s}24**/104**, 20C-13D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZS	Buzias	0.70	286	P	Pb	23 37 15.2	+0.1
BZS	Buzias	0.70	286	⇓iP	Pb	23 37 15.1	0.0
BZS				i S	Sb	23 37 24.3	-0.1
CRAR	CRAIOVA	1.40	141	S	Sn	23 37 47.9	+4.0
SVIS	Svilajnac	1.49	221	⇑iPn	Pn	23 37 28.2	+0.9
SVIS				Sn	Sn	23 37 48.6	+2.5
BEO	Belgrade	1.62	249	⇓iPn	Pn	23 37 29.4	+0.3
BEO				Sg	Sn	23 37 50.0	+0.5
BOLS	Boljevac	1.66	196	⇑iPn	Pn	23 37 30.5	+0.8
BOLS				Sn	Sn	23 37 52.6	+2.2
MTUR	Matau	1.76	96	⇑P	Pn	23 37 32.4	+1.2
MTUR				S	Sn	23 37 56.2	+3.1
MTUR	Matau	1.76	96	P	Pn	23 37 34.8	+3.6
MTUR	Matau	1.76	96	⇑iP	Pn	23 37 32.4	+1.2
MTUR				S	Sn	23 37 59.5	+6.4
SNX	Sinaia	2.07	91	⇓P	Pn	23 37 37.8	+2.2
SNX				S	Sn	23 38 03.3	+2.3
SNX	Sinaia	2.07	91	P	Pn	23 37 38.0	+2.4
SNX	Sinaia	2.07	91	⇑iP	Pn	23 37 35.5	-0.1
SNX				S	Sn	23 38 06.7	+5.7
DIVS	Divcibare	2.27	235	⇑iPn	Pn	23 37 38.5	-0.1
DIVS				Sn	Sn	23 38 05.0	-1.1
MLR	Muntele Rosu	2.37	87	⇓P	Pn	23 37 40.6	+0.7
MLR				S	Sn	23 38 12.0	+3.4
MLR	Muntele Rosu	2.37	87	Pn	Pn	23 37 40.4	+0.5
	4.5nm,0.3s,baz=314,slow=8.7,SNR=26						
MLR				Lg		23 38 14.4	
	7.1nm,0.3s,baz=295,slow=23,SNR=2.9						
MLR	Muntele Rosu	2.37	87	P	Pn	23 37 42.7	+2.8
MLR	Muntele Rosu	2.37	87	⇓iP	Pn	23 37 40.5	+0.6
MLR				S	Sn	23 38 15.9	+7.3
PKSN	Nyarlorinc	2.39	309	eP	Pn	23 37 40.9	+0.7
BARS	Barje	2.66	192	⇑iPn	Pn	23 37 44.1	0.0
BARS				Sn	Sn	23 38 18.8	+2.9
ZIMR		2.66	131	⇓iP	Pn	23 37 43.4	-0.7
ZIMR				i S	Sn	23 38 14.3	-1.7
BUC1	Bucharest	2.68	113	i S	Sn	23 38 16.6	+0.2
BUC	Bucharest	2.70	111	i S	Sn	23 38 16.6	-0.2
BURAR	Bucovina Array	2.85	39	⇑P	Pn	23 37 47.5	+0.7
BURAR				S	Sn	23 38 22.9	+2.2
BURAR	Bucovina Array	2.85	39	⇑iP	Pn	23 37 47.3	+0.6
BURAR				i S	Sn	23 38 20.3	-0.4
BURAR	Bucovina Array	2.85	39	⇑P	Pn	23 37 47.5	+0.8
BURAR				S	Sn	23 38 22.9	+2.2
PKSM	Moragy	2.86	287	⇓eP	Pn	23 37 46.9	-0.1
PKSM				eS	Sn	23 38 20.1	-1.0
VTS	Vitosha	2.87	171	P	Pn	23 37 45.6	-1.4
VTS	Vitosha	2.87	171	i P	Pn	23 37 45.0	-2.0
VTS	Vitosha	2.87	171	⇑iP	Pn	23 37 45.9	-1.1
VTS				i S	Sn	23 38 18.8	-2.4
VTS	Vitosha	2.87	171	P	Pn	23 37 45.6	-1.4
PKS7	Kunszentmiklos	2.87	306	eP	Pn	23 37 49.3	+2.2
VRI	Vrincioaia	2.94	80	⇑P	Pn	23 37 48.6	+0.5
VRI				P		23 37 53.7	
VRI	Vrincioaia	2.94	80	⇑iP	Pn	23 37 48.5	+0.4
VRI				S	Sn	23 38 29.1	+6.0
PVL	Pavlikeni	2.96	137	i P	Pn	23 37 47.0	-1.4
RHK3	Tenkes	3.07	280	eS	Sn	23 38 25.4	-0.9
	0.4nm,0.3s						
PGB	Panagyurishte	3.10	158	i P	Pn	23 37 49.0	-1.2
PSZ	Piszkesteto	3.10	324	⇑ePn	Pn	23 37 49.8	-0.6
PSZ				eSn	Sn	23 38 25.0	-2.1
PSZ	Piszkesteto	3.10	324	eP	Pn	23 37 49.7	-0.7
PSZ				eS	Sn	23 38 25.0	-2.1
BUD	Budapest	3.21	311	eSn	Sn	23 38 31.1	+1.4
BUD	Budapest	3.21	311	eS	Sn	23 38 31.3	+1.6
	1.1nm,0.4s						
KECS	Kecovo	3.38	336	ePN	Pn	23 37 54.9	+0.6
KECS				eSN	Sn	23 38 31.6	-2.5
PKSG		3.50	306	⇑eP	Pn	23 37 55.9	-0.1
PKSG				eS	Sn	23 38 38.4	+1.2
	0.3nm,0.4s						
KOLS	Kolonicke sedl	3.52	357	ePN	Pn	23 37 56.5	+0.3
KOLS				e		23 38 10.2	
KOLS				e		23 38 53.7	
KOLS	Kolonicke sedl	3.52	357	ePg	Pn	23 38 10.2	+14
KOLS				eSg	Sn	23 38 53.7	+16
SKO	Skopje	3.55	194	i Pn	Pn	23 37 57.0	+0.3
CRVS	Cervenica-Dubn	3.56	348	ePN	Pn	23 37 56.9	+0.1
KKB	Krupnik	3.58	174	i P	Pn	23 37 58.0	+0.9
HARR	Harsova	3.86	99	⇓P	Pn	23 38 01.8	+0.7
IAS	Iasi	3.88	61	i S	Sn	23 38 47.6	+0.8
MMB	Musomiste	3.92	167	i P	Pn	23 38 01.0	-1.0
CFR	Carcaliu	3.93	92	⇑iP	Pn	23 38 02.4	+0.3
CFR				i S	Sn	23 38 48.2	+0.2
CFR	Carcaliu	3.93	92	⇑P	Pn	23 38 01.9	-0.2
CFR				i S	Sn	23 38 48.2	+0.2
VYHS	Vyhne	4.00	321	ePN	Pn	23 38 02.6	-0.5
VYHS				eSN	Sn	23 38 50.5	+0.7
RZN	Rozhen	4.05	157	i P	Pn	23 38 02.0	-1.8
TIRR	Tirgusor	4.25	101	⇑iP	Pn	23 38 06.2	-0.5
TIRR				i S	Sn	23 38 54.0	-2.3
TIRR	Tirgusor	4.25	101	⇓P	Pn	23 38 06.1	-0.6
TLCR		4.41	91	⇓iP	Pn	23 38 09.7	+0.8
TLCR				i S	Sn	23 38 59.4	-0.7
TLCR		4.41	91	⇓P	Pn	23 38 09.6	+0.7
ZST	Bratislava	4.67	308	eSN	Sn	23 39 06.4	-0.4
MORC	Moravsky Berou	5.53	324	eP	Pn	23 38 21.8	-2.9
MORC	Moravsky Berou	5.53	324	⇑iP	Pn	23 38 24.2	-0.5
MORC				i S	Sn	23 39 24.2	-4.1
VRAC	Vranov	5.62	316	P	Pn	23 38 24.2	-1.8
VRAC						23 39 28.0	
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC				smax			
	comp=N,1.0nm,0.3s						
VRAC	Vranov	5.62	316	Pn	Pn	23 38 24.2	-1.8
	comp=N,0.5nm,0.3s,baz=118,slow=12,SNR=3.3						
VRAC				Sn	Sn	23 39 28.0	-2.7
	comp=N,0.7nm,0.3s,baz=271,slow=19,SNR=2.6						
VRAC	Vranov	5.62	316	⇓P	Pn	23 38 24.1	-1.9
VRAC	Vranov	5.62	316	⇑iP	Pn	23 38 24.3	-1.7
VRAC				i S	Sn	23 39 24.4	-6.3
VRAC	Vranov	5.62	316	⇓P	Pn	23 38 24.1	-1.9
AKASG	Malin Array Be	6.90	38	P	Pn	23 38 40.5	-3.6
AKASG						23 39 55.8	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				smax			
	comp=N,1.0nm,0.3s						
AKASG	Malin Array Be	6.90	38	Pn	Pn	23 38 40.5	-3.6
	comp=N,1.2nm,0.3s,baz=222,slow=12,SNR=3.5						
AKASG				Sn	Sn	23 39 55.8	-6.9
	comp=N,0.8nm,0.3s,baz=218,slow=22,SNR=2.2						
GERES	GERESS Array B	6.95	303	Pn	Pn	23 38 45.1	+0.3
	comp=N,0.1nm,0.3s,baz=119,slow=12,SNR=2.1						
GERES				Sn	Sn	23 40 00.1	-3.9
	comp=N,0.3nm,0.3s,baz=112,slow=26,SNR=3.4						
BRTR	Keskin Array B	9.95	121	Pn	P	23 39 25.1	-1.2
	comp=N,0.0nm,0.3s,baz=294,slow=14,SNR=1.9						

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*BGS **14** 23:37:49.0, 39.84N×81.97E, h22^{km}, mb6.0*

*MOS **14** 23:38:07.4±0.9, 41.76N×79.40E, h24^{km}, mb6.3/89, MS6.3/49, Error ellipse: s-maj=5.6km s-min=2.9km az=40.1*

*NEIC **14** 23:38:08.7±0.1, 41.73N×79.44E, h22^{km}, mb6.1/204, ME5.7, MS6.2/138, MW6.0, MW6.2(MOS), Error ellipse: s-maj=3.6km s-min=2.1km az=4.0 Broadband fault plane solution: P waves. NP1:φ$_s$80°, δ75°, λ80°. NP2:φ$_s$294°, δ18°, λ123°. Principal axes: T Plg59°, Azm336°; N Plg0°, Azm0°; P Plg29°, Azm178°; Moment Tensor Solution. s52 Moment tensor: Scale 10^{18} Nm; M$_{rr}$0.25; M$_{\theta\theta}$-0.29; M$_{\phi\phi}$0.04; M$_{r\theta}$1.02; M$_{\theta\phi}$0.16; M$_{\phi r}$0.19; Best double couple: M$_0$1.1×10^{18} NP1:φ$_s$320°, δ13°, λ148°. NP2:φ$_s$81°, δ83°, λ79°. Principal axes: T 1.1, Plg51°, Azm339°; N -.02, Plg11°, Azm82°; P -1.08, Plg37°, Azm181°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 6,000 homes destroyed or damaged in the Wushi area. Felt [V] at Almaty, Kazakhstan.

*HRVD **14** 23:38:08.7±0.1, 41.72N×79.27E, h23^{km}, MW6.1/70, Centroid moment Tensor Solution. LP body waves: s64,c151;Mantle waves: s70,c212; Half duration: 2^{s}6 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.22±.01; M$_{\theta\theta}$-0.38±.01; M$_{\phi\phi}$0.16±.01; M$_{r\theta}$1.61±.01; M$_{\theta\phi}$0.16±.01; M$_{\phi r}$0.32±.01; Best double couple: M$_0$1.681×10^{18} NP1: φ$_s$321°, δ10°, λ152°. NP2:φ$_s$79°, δ85°, λ81°. Principal axes: T 1.64, Plg49°, Azm340°; N .083, Plg9°, Azm80°; P -1.722, Plg40°, Azm177°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BJI **14** 23:38:09.5, 41.66N×79.57E, h27^{km}, mB5.9, mb5.5, ML6.5, Ms6.2, Msz6.0*

*IDC **14** 23:38:09.1±2.5, 41.72N×79.44E, h26^{km}±15^{km}, mb5.5/39, mb1 5.6/41, mb1mx5.6/41, mbtmp5.6/41, ML5.0/2, MS6.1/21, Ms1 6.1/21, ms1mx6.0/23, Error ellipse: s-maj=10.9km s-min=10.1km az=2.0*

*NNC **14** 23:38:11.6±2.5, 42.00N×79.28E, h12^{km}±12^{km}, mpv6.1, Error ellipse: s-maj=25.1km s-min=9.6km az=146.0*

ISC 14 23:38:08.4±0.1**, 41.67N**±0.02×**79.34E**±0.02**, h31**^{km}**, h31**^{km}±.9^{km}**:pP-P, n1162, σ1^{s}02**/1179**, mb6.0**/297**, MS6.1**/191**, 210C-49D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	2.38	285	P	Pn	23 38 49.3	+3.1
	SNR=6676						
AAA	Alma-Ata	2.39	313	i PN	Pn	23 38 49.9	+3.6
TKM2	Tokmak 2	3.05	295	P	Pn	23 38 58.5	+2.9
	SNR=1930						
KZA	Kyzart	3.08	279	P	Pn	23 38 59.0	+2.9
	SNR=1115						
KSH	Kashi	3.35	231	⇓iP	Pn	23 39 04.1	+4.2
KSH				S	Sn	23 39 48.5	+9.5

KSH				Smax			
	comp=N,66µm,0.9s						
KSH				Smax			
	comp=E,224µm,1.2s						
KBK	**Karagaybulak**	**3.41**	**288**	P	**Pn**	**23 39 03.6**	**+2.9**
	SNR=2175						
UCH	**Uchtor**	**3.64**	**280**	P	**Pn**	**23 39 06.6**	**+2.5**
	SNR=172						
CHMS	**Chumysh**	**3.65**	**293**	P	**Pn**	**23 39 06.2**	**+2.0**
	SNR=274						
FRU	**Bishkek**	**3.69**	**290**	⇑*i*PN	**Pn**	**23 39 07.2**	**+2.4**
FRU				*i*		23 39 16.0	
FRU				*i* S	**Sn**	**23 39 52.0**	**+4.2**
FRU				MLR	MLR		
	comp=E,490µm,7.0s						
AAK	**Ala-Archa**	**3.73**	**287**	⇑Pn	**Pn**	**23 39 07.8**	**+2.5**
	comp=E,715nm,0.4s						
AAK				⇓Pg	**Pn**	**23 39 17.7**	**+12**
	comp=E,15µm,0.8s						
AAK				⇓Lg		23 40 04.1	
	comp=E,119µm,0.9s						
AAK				⇑Rg		23 40 20.6	
	comp=E,294µm,13.1s						
AAK	**Ala-Archa**	**3.73**	**287**	P	**Pn**	**23 39 07.8**	**+2.5**
	SNR=650						
AAK	**Ala-Archa**	**3.73**	**287**	PN	**Pn**	**23 39 17.5**	**+12**
AAK						23 40 03.3	
AAK				pmax	pmax		
	comp=Z,7µm,0.8s						
AAK	**Ala-Archa**	**3.73**	**287**	⇑*i*Pn	**Pn**	**23 39 06.6**	**+1.3**
AAK				*e*Sn	**Sn**	**23 40 00.3**	**+12**
USP	**Ospenovka**	**3.92**	**296**	P	**Pn**	**23 39 09.8**	**+1.7**
	SNR=485						
AML	**Almayashu**	**4.24**	**278**	P	**Pn**	**23 39 14.8**	**+2.2**
	SNR=81						
EKS2	**Erkin-Say**	**4.25**	**285**	P	**Pn**	**23 39 14.8**	**+2.1**
	SNR=87						
MK31	**Makanchi Array**	**5.54**	**21**	⇑Pn	**Pn**	**23 39 32.4**	**+1.4**
	comp=Z,4µm,0.9s,baz=200,slow=12						
MK31				⇑Sn	**Sn**	**23 40 36.7**	**+2.3**
	comp=Z,1µm,0.4s,baz=204,slow=23,SNR=4.0						
MK31				⇓Lg		23 41 01.0	
	comp=Z,12µm,0.9s						
MK31				⇓Rg		23 41 33.7	
	comp=Z,298µm,11.7s						
MKAR	**Makanchi Array**	**5.54**	**21**	PN	**Pn**	**23 39 32.3**	**+1.3**
MKAR				*e*		23 40 36.7	
MKAR						23 41 08.5	
MKAR				pmax	pmax		
	comp=Z,59nm,0.4s						
MKAR				smax			
	comp=E,411nm,0.4s						
MKAR				smax			
	comp=E,11µm,0.9s						
WMQ	**Urumqi**	**6.51**	**68**	P	**Pn**	**23 39 45.4**	**+0.7**
WMQ				S	**Sn**	**23 40 58.3**	**-0.4**
WMQ				Smax			
	comp=N,16µm,1.0s						
WMQ				Smax			
	comp=E,19µm,1.0s						
WMQ				LR	LR		
	comp=N,99µm,12.0s						
WMQ				LR	LR		
	comp=E,55µm,9.0s						
WMQ				LR	LR		
	comp=Z,70µm,8.0s						
KURK	**Kurchatov**	**9.06**	**357**	⇑Pn	**P**	**23 40 18.7**	**-1.5**
	comp=Z,253nm,0.7s,baz=189,slow=10,SNR=1736						
KURK				⇑Lg		23 42 49.5	
	comp=Z,14µm,1.3s						
KURK				⇓Rg		23 43 33.3	
	comp=Z,141µm,12.7s						
KURK	**Kurchatov**	**9.06**	**357**	*i* P	**P**	**23 40 18.6**	**-1.6**
KURK				pmax	pmax		
	comp=Z,157nm,0.9s						
KURK	**Kurchatov**	**9.06**	**357**	⇑*i*Pn	**P**	**23 40 17.0**	**-3.2**
CHCP	**Chirah Chowk**	**9.33**	**213**	P	**P**	**23 40 24.4**	**+0.5**
DLH	**Dalhousie**	**9.50**	**198**	*e*P	**P**	**23 40 26.0**	**-0.2**
DLH				*e*		23 42 18.0	
JMU	**Jammu**	**9.61**	**203**	*e*P	**P**	**23 40 28.0**	**+0.3**
JMU				*e*S	**Sn**	**23 42 10.0**	**-5.7**
THN	**Thein Dam**	**9.66**	**199**	*e*P	**P**	**23 40 25.9**	**-2.5**
THN				*e*		23 42 24.3	
CEP	**Cherat**	**9.79**	**219**	⇓P	**P**	**23 40 29.5**	**-0.7**
SDNR	**Sundarnagar**	**10.33**	**191**	⇓*e*P	**P**	**23 40 36.2**	**-1.3**
SDNR				*e*		23 42 41.2	
BHK	**Bhakra**	**10.50**	**194**	*e*P	**P**	**23 40 36.3**	**-3.6**
BHK				*e*		23 41 44.5	
SMLA	**Simla**	**10.66**	**190**	⇑*i*P	**P**	**23 40 56.2**	**+14**
SMLA				*i* S	**S**	**23 42 50.6**	**+9.1**
THW	**Thamme Wali**	**10.73**	**217**	P	**P**	**23 40 41.0**	**-2.0**
SARP	**Sargodha**	**11.10**	**211**	P	**P**	**23 40 45.5**	**-2.6**
SARP				S	**S**	**23 42 50.0**	**-2.0**
DDI	**Dehra Dun**	**11.37**	**186**	⇓*i*P	**P**	**23 40 49.8**	**-2.0**
DDI				*e*S	**S**	**23 42 50.5**	**-8.2**
SBDP	**Sheikh Budin**	**11.57**	**219**	⇑P	**P**	**23 40 53.2**	**-1.3**
PTH	**Pithoragarh**	**12.11**	**176**	*e*P	**P**	**23 40 57.4**	**-4.4**
LGTI	**Lohaghat**	**12.21**	**176**	*e*P	**P**	**23 41 01.0**	**-2.2**
LGTI				*e*		23 43 13.0	
ZAL	**Zalesovo**	**12.80**	**15**	P	**P**	**23 41 08.6**	**-2.4**
ZAL						23 43 27.4	
ZAL				pmax	pmax		
	comp=Z,27nm,0.3s						
ZAL				smax			
	comp=N,71nm,0.3s						
ZAL	**Zalesovo**	**12.80**	**15**	Pn	**P**	**23 41 08.6**	**-2.4**
	comp=N,27nm,0.3s,baz=272,slow=12,SNR=163						
ZAL				Sn	**S**	**23 43 27.4**	**-6.0**
	comp=N,71nm,0.3s,baz=174,slow=24,SNR=3.5						
ZAL				Lg		23 44 55.8	
	comp=N,27nm,0.3s,baz=83,slow=7.6,SNR=2.4						
BVAR	**Borovoye Array**	**12.87**	**335**	Pn	**P**	**23 41 09.1**	**-2.7**
	comp=N,5.9nm,0.3s,baz=145,slow=13,SNR=113						
BVAR				Sn	**S**	**23 43 32.8**	**-2.1**
	comp=N,23nm,0.3s,baz=166,slow=24,SNR=3.7						
BVAR				Lg		23 44 47.6	
	comp=N,42nm,0.3s,baz=142,slow=26,SNR=4.5						
BRVK	**Borovoye**	**12.93**	**335**	⇑*i*P	**P**	**23 41 09.5**	**-3.1**
BRVK				pmax	pmax		
	comp=Z,2µm,1.0s						
BRVK	**Borovoye**	**12.93**	**335**	⇑*i*P	**P**	**23 41 09.5**	**-3.1**
	comp=Z,2µm,1.0s						
NDI	**New Delhi**	**13.07**	**188**	⇓*i*P	**P**	**23 41 09.5**	**-5.1**
NDI				*e*S	**S**	**23 43 29.5**	**-10**
NVS	**Novosibirsk**	**13.43**	**10**	*e*P	**P**	**23 41 18.9**	**-0.3**
KOLN	**Koldanda**	**14.30**	**165**	*e*P	**P**	**23 41 24.7**	**-6.0**
	comp=Z,2µm,1.0s						
GKN	**Gorkha**	**14.30**	**161**	*e*P	**P**	**23 41 26.1**	**-4.7**
	comp=Z,3µm,1.1s						
KKN	**Kakani**	**14.68**	**159**	*e*P	**P**	**23 41 31.1**	**-4.5**
	comp=Z,2µm,1.1s						
VLK	**Valmikinagar**	**14.79**	**164**	*i*	**P**	**23 41 32.0**	**-5.2**
VLK				*i*		23 41 55.0	
DMN	**Daman**	**14.80**	**160**	*e*P	**P**	**23 41 33.0**	**-4.3**
	comp=Z,3µm,1.1s						
PKI	**Pulchoki**	**14.92**	**159**	*e*P	**P**	**23 41 34.7**	**-4.1**
	comp=Z,3µm,1.2s						
JIRN	**Jiri**	**15.06**	**156**	*e*P	**P**	**23 41 37.2**	**-3.5**
	comp=Z,2µm,0.9s						
LSA	**Lhasa**	**15.30**	**138**	P	**P**	**23 41 44.4**	**+0.6**
LSA				AP		23 41 53.5	
LSA				XP		23 41 58.5	
LSA				S	**S**	**23 44 27.9**	**-4.8**
LSA				SS	SS	23 44 45.8	-4.8
LSA				LR	LR		
	comp=N,75µm,17.0s						
LSA				LR	LR		
	comp=E,69µm,17.0s						
LSA				LR	LR		
	comp=Z,100µm,17.0s						
LSA	**Lhasa**	**15.30**	**138**	*e*P	**P**	**23 41 44.3**	**+0.5**
LSA				pmax	pmax		
	comp=Z,846nm,1.1s						
LSA	**Lhasa**	**15.30**	**138**	*e*P	**P**	**23 41 44.3**	**+0.5**
	comp=Z,846nm,1.1s						
AJM	**Ajmer**	**15.64**	**196**	*e*	**P**	**23 41 43.5**	**-4.7**
AJM				*e*		23 41 47.3	
	comp=Z,837nm,1.0s						
AJM				*e*		23 44 30.9	
GTA	**Gaotai**	**15.73**	**91**	*e*P	**P**	**23 41 46.3**	**-2.9**
GTA				PP	PP	23 41 59.4	-2.3
GTA				S	**S**	**23 44 44.4**	**+1.8**
GTA				AMB	AMB		
	comp=Z,463nm,5.7s						
GTA				LR	LR		
	comp=N,31µm,11.4s						
GTA				LR	LR		
	comp=E,33µm,11.0s						
GTA				LR	LR		
	comp=Z,33µm,11.0s						
GTK	**Gangtok**	**16.20**	**149**	*e*P	**P**	**23 41 50.0**	**-5.3**
GTK				*e*		23 41 56.0	
ALBI	**Allahabad**	**16.45**	**172**	⇑*i*P	**P**	**23 41 56.0**	**-2.5**
SLGI	**Shiliguri**	**16.70**	**151**	*e*	**P**	**23 42 01.0**	**-0.6**
VAN	**Vannovskaya**	**16.73**	**264**	*i* P	**P**	**23 41 59.0**	**-2.9**
MOY	**Mondy**	**17.85**	**49**	*e*P	**P**	**23 42 15.6**	**-0.2**
MOY				pmax	pmax		
	comp=Z,1µm,2.2s						
BHPL	**Bhopal**	**18.45**	**186**	*e*P	**P**	**23 42 19.2**	**-4.3**
BHPL				*e*		23 42 31.9	
	comp=Z,1µm,1.3s						
BHPL				*e*		23 45 15.3	
BHPL				*e*		23 45 31.8	
	comp=Z,201nm,0.9s						
BOK	**Bokaro**	**18.64**	**161**	⇑*i*P	**P**	**23 42 23.0**	**-2.9**
BOK				*i*		23 46 00.0	
ZAK	**Zakamensk**	**18.70**	**54**	*e*P	**P**	**23 42 25.6**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,480nm,1.5s						
SHL	**Shillong**	**19.12**	**143**	*e*P	**P**	**23 42 31.0**	**-0.5**
SHL				*e*		23 46 16.0	
TLY	**Talaya**	**19.36**	**51**	Pn	**P**	**23 42 33.3**	**-0.8**
	comp=Z,516nm,1.3s,SNR=80						
TLY	**Talaya**	**19.36**	**51**	*c* *i*P	**P**	**23 42 33.3**	**-0.8**
TLY				*e*S	**S**	**23 46 06.2**	**+0.8**
TLY				pmax	pmax		
	comp=Z,205nm,1.5s						
TLY				MLR	MLR		
	comp=Z,41µm,17.0s						
TLY	**Talaya**	**19.36**	**51**	⇑*e*P	**P**	**23 42 33.4**	**-0.8**
	comp=Z,131nm,1.0s						
BLSP	**Bilaspur**	**19.62**	**172**	*e*P	**P**	**23 42 32.8**	**-4.4**
BLSP				*e*		23 42 41.4	
	comp=Z,833nm,1.2s						
BLSP				*e*		23 46 02.6	
LKP	**Lekhapani**	**19.81**	**131**	*e*P	**P**	**23 42 37.5**	**-1.8**
LKP				*e*		23 43 09.5	
LZH	**Lanzhou**	**19.84**	**98**	⇓P	**P**	**23 42 39.6**	**0.0**
LZH				AP		23 42 43.3	
LZH				PP	PP	23 42 58.1	-0.2
LZH				S	**S**	**23 46 17.3**	**+1.5**
LZH				XS		23 46 25.0	
LZH				SS	SS	23 46 45.3	+1.6
LZH				AMB	AMB		
	comp=Z,230nm,1.0s						
LZH				AMB	AMB		
	comp=Z,930nm,4.0s						
LZH				LR	LR		
	comp=E,44µm,12.1s						
LZH				LR	LR		
	comp=Z,47µm,12.5s						
IRK	**Irkutsk**	**19.93**	**49**	*e*P	**P**	**23 42 40.5**	**+0.1**
IRK				pmax	pmax		
	comp=Z,1µm,1.9s						
KRF	**Krasnovodsk**	**19.97**	**274**	⇑*i*P	**P**	**23 42 40.1**	**-0.9**
KRF				S	**S**	**23 46 24.5**	**+6.0**
BHJ	**Bhuj**	**20.07**	**207**	*e*P	**P**	**23 42 41.4**	**-0.7**
BHJ				*e*		23 42 43.7	
	comp=Z,634nm,1.9s						
BHJ				*e*S	**S**	**23 46 25.3**	**+4.7**
BHJ				*e*S	**S**	**23 46 29.5**	**+8.9**
SONM	**Songino Array**	**20.12**	**63**	P	**P**	**23 42 41.7**	**-0.6**
	comp=Z,423nm,0.8s,baz=267,slow=11,SNR=1343						
SONM				P3KPbc		00 16 56.9	
	comp=Z,1.1nm,0.8s,baz=93,slow=3.1,SNR=7.2						
AGT	**Agartala**	**20.33**	**147**	⇑*i*P	**P**	**23 42 41.0**	**-3.7**
AGT				*i*		23 43 22.0	
CAL	**Calcutta**	**20.51**	**156**	*e*P	**P**	**23 42 42.8**	**-3.8**
ULN	**Ulaanbaatar**	**20.56**	**63**	*e*P	**P**	**23 42 46.6**	**-0.3**
ULN	**Ulaanbaatar**	**20.56**	**63**	⇑*i*P	**P**	**23 42 46.8**	**-0.2**
	comp=Z,2µm,1.4s						
ULN				LR	LR		
	comp=Z,57µm,19.0s,MS6.0						
IMP	**Imphal**	**20.75**	**140**	*e*P	**P**	**23 42 48.0**	**-1.0**
BHV	**Bhavnagar**	**20.77**	**199**	*e*P	**P**	**23 42 48.5**	**-0.7**
BWNR	**Bhubaneshwar**	**22.00**	**164**	*e*P	**P**	**23 42 58.0**	**-3.7**
BWNR				*e*		23 43 30.0	
CD2	**Chengdu**	**22.35**	**111**	P	**P**	**23 43 06.4**	**+1.4**
CD2				PP	PP	23 43 31.0	-1.4
CD2				S	**S**	**23 47 10.0**	**+6.2**
CD2				AMB	AMB		
	comp=Z,997nm,1.4s,mb6.0						
CD2				LR	LR		
	comp=E,38µm,13.0s						
SOKR	**Solikamsk**	**22.73**	**330**	*c* *i*P	**P**	**23 43 08.5**	**0.0**
SOKR				S	**S**	**23 47 13.2**	**+2.7**
SOKR				pmax	pmax		
	comp=Z,920nm,0.9s,mb6.2						
SOKR				MLR	MLR		
	comp=Z,149µm,17.0s,MS6.5						
BTO	**Baotou**	**23.08**	**82**	*e*P	**P**	**23 43 14.3**	**+2.2**
BTO				S	**S**	**23 47 15.1**	**-1.7**
BTO				AMB	AMB		
	comp=Z,236nm,0.9s,mb5.6						
BTO				LR	LR		
	comp=N,28µm,4.4s						
BTO				LR	LR		
	comp=E,20µm,8.2s						
LATR	**Latur**	**23.30**	**187**	*e*P	**P**	**23 43 15.3**	**+0.9**
LATR				*e*		23 46 55.0	
BOM	**Bombay**	**23.37**	**196**	*e*P	**P**	**23 43 15.8**	**+0.7**
BOM				*e*S	**S**	**23 47 28.2**	**+6.0**
	comp=E,4µm,1.8s						
MAK	**Makhachkala**	**23.51**	**284**	*d* *i*P	**P**	**23 43 18.0**	**+1.7**
MAK				*i*		23 43 52.0	
MAK				*i* S	**S**	**23 47 32.0**	**+7.7**
MAK				*i* SS	SS	23 48 24.0	+11
MAK				pmax	pmax		
	comp=N,1µm,3.0s						
MAK				pmax	pmax		
	comp=E,4µm,3.0s						
MAK				pmax	pmax		
	comp=Z,12µm,3.0s						
MAK				pmax	pmax		
	comp=Z,1µm,1.5s,mb6.0						
MAK				pmax	pmax		
	comp=N,900nm,1.0s						
MAK				pmax	pmax		
	comp=E,600nm,1.0s						
MAK				smax			
	comp=N,39µm,12.0s						
MAK				smax			
	comp=E,17µm,12.0s						
MAK				smax			
	comp=Z,4µm,10.0s						
MAK				MLR	MLR		
	comp=N,18µm,13.0s,MS6.0						
MAK				MLR	MLR		
	comp=E,28µm,13.0s,MS6.0						
MAK				MLR	MLR		
	comp=Z,59µm,13.0s,MS6.2						
POO	**Poona**	**23.54**	**193**	⇓*i*P	**P**	**23 43 17.3**	**+0.6**
POO				*e*		23 43 21.0	
	comp=Z,447nm,0.7s						
POO				*e*		23 47 28.9	
VIS	**Vishakhapatnam**	**24.11**	**171**	*e*P	**P**	**23 43 22.5**	**+0.1**
VIS				*e*		23 43 25.7	
	comp=Z,728nm,1.6s						
VIS				*e*		23 47 34.2	
HHC	**Hu-ho-hao-te**	**24.17**	**81**	*e*P	**P**	**23 43 24.5**	**+1.8**
HHC				AP		23 43 30.3	
HHC				XP		23 43 33.3	
HHC				PP	PP	23 44 01.9	+4.3
HHC				PCP	PcP	23 47 01.8	-2.6
HHC				S	**S**	**23 47 43.8**	**+8.2**
HHC				XS		23 47 53.3	
HHC				SCP		23 50 38.8	
HHC				LR	LR		
	comp=N,39µm,9.6s						
HHC				LR	LR		
	comp=E,17µm,15.6s						
HHC				LR	LR		
	comp=Z,13µm,13.2s,MS5.6						
HYB	**Hyderabad**	**24.18**	**182**	⇓*e*P	**P**	**23 43 23.0**	**0.0**
HYB				pmax	pmax		
	comp=Z,620nm,1.0s,mb6.0						
HYB	**Hyderabad**	**24.18**	**182**	⇓*e*P	**P**	**23 43 23.0**	**0.0**
	comp=Z,620nm,1.0s,mb6.0						
HYB				*e*S	**S**	**23 47 52.0**	**+16**
HYB	**Hyderabad**	**24.18**	**182**	⇓*i*P	**P**	**23 43 23.0**	**0.0**
	comp=Z,620nm,1.0s,mb6.0						
HYB				*e*S	**S**	**23 47 52.0**	**+16**
HYB				LR	LR	23 53 28.0	
	comp=Z,135nm,14.0s						
XAN	**Xi’an**	**24.48**	**98**	P	**P**	**23 43 26.5**	**+0.7**
XAN				S	**S**	**23 47 46.6**	**+5.5**
XAN				AMB	AMB		
	comp=Z,150nm,1.7s,mb5.2						
XAN				AMB	AMB		
	comp=Z,3µm,8.5s						
XAN				LR	LR		
	comp=N,16µm,17.8s,MS5.8						
XAN				LR	LR		
	comp=E,23µm,15.8s,MS5.8						
XAN				LR	LR		
	comp=Z,37µm,17.4s,MS5.9						
BANOM	**Banah**	**24.66**	**238**	⇓P	**P**	**23 43 29.2**	**+1.7**
KAD	**Karad**	**24.68**	**192**	⇑*i*P	**P**	**23 43 28.2**	**+0.3**
KAD				*i* S	**S**	**23 47 50.9**	**+6.3**
KMI	**Kunming**	**25.45**	**123**	⇓P	**P**	**23 43 36.3**	**+1.2**
KMI				PP	PP	23 44 16.6	+2.2
KMI				S	**S**	**23 48 02.3**	**+4.9**
KMI				SS	SS	23 49 02.4	+1.9
KMI				AMB	AMB		
	comp=Z,59nm,0.7s,mb5.2						
KMI				LR	LR		
	comp=N,29µm,18.5s,MS5.9						
KMI				LR	LR		
	comp=E,19µm,19.7s,MS5.9						
KMI				LR	LR		
	comp=Z,47µm,21.8s,MS6.0						
TIY	**Taiyuan**	**25.68**	**88**	⇑P	**P**	**23 43 33.0**	**-4.1**
TIY				S	**S**	**23 48 02.0**	**+0.9**
TIY				LR	LR		
	comp=N,31µm,10.0s						
DUS	**Dusheti**	**25.69**	**283**	P	**P**	**23 43 37.9**	**+0.7**
ASHO	**Ashiyiah**	**25.70**	**236**	⇑P	**P**	**23 43 38.3**	**+0.9**
	SNR=56						
MTA	**Mtatsminda**	**25.70**	**282**	P	**P**	**23 43 37.5**	**+0.2**
MTA				S	**S**	**23 48 06.7**	**+5.2**
TI2	**Plekhanov**	**25.73**	**282**	α *i*P	**P**	**23 43 37.6**	**+0.1**
TI2				*i*		23 43 39.8	
TI2				*i*	pP	23 43 47.0	+0.3
TI2				*i* S	**S**	**23 48 06.8**	**+4.9**
TI2				MLR	MLR		
	comp=N,26µm,12.0s,MS6.0						
TI2				MLR	MLR		
	comp=E,17µm,12.0s,MS6.0						
TI2				MLR	MLR		
	comp=Z,26µm,12.0s,MS6.0						
GNI	**Garni**	**26.09**	**278**	P	**P**	**23 43 42.3**	**+1.4**
GNI	**Garni**	**26.09**	**278**	*c* *i*P	**P**	**23 43 40.1**	**-0.8**
GNI				pmax	pmax		
	comp=Z,644nm,1.3s						
GNI				MLR	MLR		
	comp=Z,17µm,15.0s						
GNI	**Garni**	**26.09**	**278**	P	**P**	**23 43 42.7**	**+1.8**
	comp=Z,581nm,1.2s,mb6.0,baz=179,slow=2.1,SNR=82						
GNI				LR	LR	23 55 35.6	
	comp=Z,23µm,20.1s,MS5.7,baz=82,slow=40						
JMDO	**Jabal Madar**	**26.23**	**229**	⇓P	**P**	**23 43 41.9**	**-0.5**
	SNR=5.7						
GOF	**Gofitskoye**	**26.47**	**290**	⇓*i*P	**P**	**23 43 45.0**	**+0.6**
GOF				*i*		23 43 58.0	
GOF				*i*		23 49 38.0	
GOF				pmax	pmax		
	comp=Z,460nm,1.2s,mb5.9						
GOF				pmax	pmax		
	comp=Z,11µm,7.0s						
GOF				pmax	pmax		
	comp=Z,700nm,1.3s,mb6.0						
GOF				MLR	MLR		
	comp=N,87µm,16.0s,MS6.6						
GOF				MLR	MLR		
	comp=E,110µm,16.0s,MS6.6						
GOF				MLR	MLR		
	comp=Z,86µm,16.0s,MS6.4						
GOA	**Goa**	**26.52**	**192**	*e*	**P**	**23 43 53.5**	**+8.4**
	comp=Z,730nm,1.6s,mb6.0						
GOA				*e*		23 48 25.3	
ONI	**Oni**	**26.52**	**284**	P	**P**	**23 43 46.1**	**+1.3**
ONI				S	**S**	**23 48 21.2**	**+6.2**
ENH	**Enshi**	**26.79**	**105**	*e*P	**P**	**23 43 47.9**	**+0.5**
	comp=Z,0.3nm,0.4s						
KIV	**Kislovodsk**	**26.85**	**287**	P	**P**	**23 43 48.0**	**+0.2**
	comp=Z,2µm,0.6s,mb6.7,SNR=68						
KIV	**Kislovodsk**	**26.85**	**287**	*d* *i*P	**P**	**23 43 46.9**	**-0.9**
KIV				*e*		23 47 08.6	
KIV				*i* S	**S**	**23 48 21.8**	**+1.4**
KIV				pmax	pmax		
	comp=Z,150nm,0.6s,mb5.7						
KIV				pmax	pmax		
	comp=N,150nm,1.0s						
KIV				pmax	pmax		
	comp=E,124nm,0.8s						
KIV				smax			
	comp=N,723nm,2.4s						
KIV				smax			
	comp=E,485nm,2.4s						
KIV				MLR	MLR		
	comp=E,19µm,16.0s						
KIV				MLR	MLR		
	comp=Z,25µm,16.0s,MS5.9						
KIV	**Kislovodsk**	**26.85**	**287**	⇑*i*P	**P**	**23 43 47.8**	**0.0**
	comp=Z,463nm,0.9s,mb6.0						
KIV				LR	LR		
	comp=Z,5µm,19.0s,MS5.1						
CLDR	**Caldiran**	**26.98**	**276**	P	**P**	**23 43 43.5**	**-5.6**
PECR	**Pechory**	**27.02**	**315**	*i* P	**P**	**23 43 47.6**	**-1.6**
PECR				*e*S	**S**	**23 48 26.0**	**+3.1**
PECR				pmax	pmax		
	comp=Z,4µm,12.0s						
PECR				MLR	MLR		
	comp=Z,110µm,16.0s,MS6.5						
GYA	**Guiyang**	**27.10**	**115**	⇓*i*P	**P**	**23 43 50.8**	**+0.5**
GYA				S	**S**	**23 48 26.0**	**+1.4**
GYA				AMB	AMB		
	comp=Z,200nm,1.4s,mb5.5						
GYA				AMB	AMB		
	comp=Z,4µm,7.8s						
GYA				LR	LR		
	comp=N,22µm,16.2s,MS6.0						
GYA				LR	LR		
	comp=E,16µm,12.3s,MS6.0						
GYA				LR	LR		
	comp=Z,33µm,15.6s,MS6.0						
KARS	**Kars**	**27.20**	**280**	P	**P**	**23 43 51.3**	**+0.2**
VANB	**Van**	**27.54**	**276**	P	**P**	**23 43 56.0**	**+1.9**
HKR	**Hakkari**	**27.60**	**273**	P	**P**	**23 43 55.8**	**+1.1**
BJI	**Beijing**	**27.78**	**81**	*e*P	**P**	**23 43 56.9**	**+0.6**
BJI				S	**S**	**23 48 41.4**	**+6.1**
BJI				AMB	AMB		
	comp=Z,758nm,5.7s						
BJI				LR	LR		
	comp=N,34µm,8.7s						
BJI				LR	LR		
	comp=E,13µm,9.3s						
BJI				LR	LR		
	comp=Z,9µm,29.4s,MS5.2						
BJT	**Baijiatuau**	**27.78**	**81**	*e*P	**P**	**23 43 56.0**	**-0.3**
BJT				pmax	pmax		
	comp=Z,119nm,1.0s						
BJT	**Baijiatuau**	**27.78**	**81**	*e*P	**P**	**23 43 56.0**	**-0.3**
	comp=Z,119nm,1.0s,mb5.5						
BCA	**Borcka**	**28.08**	**282**	P	**P**	**23 43 58.1**	**-1.0**
CHG	**Chiang Mai**	**28.25**	**138**	⇓P	**P**	**23 44 00.1**	**-0.7**
	comp=Z,145nm,0.8s,mb5.7						
MDRS	**Chennai**	**28.50**	**178**	*e*P	**P**	**23 44 01.9**	**-1.2**
MDRS				*e*		23 48 44.9	
MSL	**Mosul**	**28.55**	**271**	*e*P	**P**	**23 44 02.5**	**-0.8**
MSL				*e*pP	pP	23 44 12.5	0.0
MSL				*e*sP	sP	23 44 23.0	+6.4
MSL				*e*PP	PP	23 45 04.0	+8.4
MSL				*e*PcP	rx	23 46 38.0	
MSL				*e*S	S	23 49 17.0	+29
MSL				*e*SS		23 51 05.0	
MSL				*e*SSS	rx	23 51 33.0	
MSL				*e*LQ		23 55 22.5	
MSL				*e*LR	LR	23 57 37.0	
CM31	**Chiang Mai Arr**	**28.55**	**138**	*e*P	**P**	**23 44 02.6**	**-0.9**
	comp=Z,101nm,0.8s,mb5.6						
CM31				LR	LR		
	comp=Z,36µm,19.0s,MS6.0						
CMAR	**Chiang Mai Arr**	**28.55**	**138**	P	**P**	**23 44 03.0**	**-0.5**
	comp=Z,30nm,0.8s,mb5.1,baz=318,slow=9.1,SNR=67						

Code	Station	Dist	Azi	Phase	ISC	Time	Res
CMAR				ScP		23 50 54.4	
	comp=Z,12nm,0.9s,baz=312,slow=5.1,SNR=6.8						
CMAR				LR	LR	23 57 30.5	
	comp=Z,42µm,19.5s,MS6.0,baz=330,slow=41						
CMAR				P3KPbc		00 16 23.4	
	comp=Z,2.8nm,0.9s,baz=172,slow=3.3,SNR=13						
CMAR	**Chiang Mai Arr**	**28.55**	**138**	P	**P**	**23 44 03.0**	**-0.5**
CMAR				ScP		23 50 54.4	
CMAR				LR	LR	23 57 30.5	
CMAR				*e*		00 16 23.4	
EZM	**Erzurum**	**28.66**	**279**	P	**P**	**23 44 07.0**	**+2.7**
VRT	**Varto**	**28.76**	**278**	P	**P**	**23 44 08.0**	**+2.8**
BHD	**Baghdad**	**28.83**	**265**	*e*S	**S**	**23 48 47.0**	**-5.4**
MNGI	**Mangalore**	**28.89**	**189**	*i* P	**P**	**23 44 05.6**	**-0.9**
MNGI				*i*		23 49 48.0	
VOR	**Voronezh**	**28.97**	**304**	⇑*i*P	**P**	**23 44 06.8**	**-0.2**
VOR				pmax	pmax		
	comp=Z,680nm,1.2s,mb6.2						
SOC	**Sochi**	**29.03**	**287**	⇑*i*P	**P**	**23 44 06.8**	**-0.8**
HIA	**Hailar**	**29.05**	**61**	*e*P	**P**	**23 44 07.7**	**0.0**
HIA				pmax	pmax		
	comp=Z,160nm,1.3s						
HIA	**Hailar**	**29.05**	**61**	*e*P	**P**	**23 44 07.7**	**0.0**
	comp=Z,160nm,1.3s,mb5.6						
BTMT	**Batman**	**29.08**	**276**	P	**P**	**23 44 10.0**	**+1.9**
NANT	**Nan**	**29.17**	**135**	⇑P	**P**	**23 44 09.0**	**-0.1**
	comp=Z,156nm,1.0s,mb5.7						
BINT	**Bingol**	**29.61**	**278**	P	**P**	**23 44 10.6**	**-2.3**
TIA	**Tai'an**	**29.72**	**88**	P	**P**	**23 44 15.8**	**+1.9**
TIA				S	**S**	**23 49 04.1**	**-2.4**
TIA				AMB	AMB		
	comp=Z,86nm,1.2s,mb5.4						
TIA				LR	LR		
	comp=N,9µm,6.8s						
TIA				LR	LR		
	comp=E,9µm,6.6s						
EZC	**Erzincan**	**29.85**	**280**	P	**P**	**23 44 16.8**	**+1.9**
GUMT	**Gumushane**	**29.90**	**281**	P	**P**	**23 44 17.4**	**+2.0**
DIY	**Diyarbakir**	**30.12**	**276**	P	**P**	**23 44 17.4**	**0.0**
WHN	**Wuhan**	**30.19**	**100**	*e*P	**P**	**23 44 18.1**	**0.0**
WHN				S	**S**	**23 49 16.0**	**+1.9**
WHN				LR	LR		
	comp=N,23µm,14.0s						
WHN				LR	LR		
	comp=Z,51µm,20.0s						
MOS	**Moscow**	**30.40**	**312**	α*i*P	**P**	**23 44 19.2**	**-0.4**
MOS				*e*		23 45 20.0	
MOS				*e*PPP	PPP	23 45 33.8	-0.1
MOS				*e*S	**S**	**23 49 16.2**	**-0.9**
MOS				*e*SS	SS	23 51 16.2	+19
MOS				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.5						
MOS				pmax	pmax		
	comp=E,500nm,1.1s						
MOS				pmax	pmax		
	comp=E,486nm,0.9s						
MOS				pmax	pmax		
	comp=Z,854nm,0.9s,mb6.5						
MOS				smax			
	comp=E,4µm,6.0s						
MOS				MLR	MLR		
	comp=Z,135µm,12.3s,MS6.8						
MOS				MLR	MLR		
	comp=E,108µm,12.5s						
PTK	**Pertek**	**30.42**	**278**	P	**P**	**23 44 21.7**	**+1.7**
ANN	**Anapa**	**30.45**	**290**	⇓*i*P	**P**	**23 44 18.6**	**-1.6**
ANN				*e*S	**S**	**23 49 18.6**	**+0.6**
ANN				pmax	pmax		
	comp=Z,599nm,0.7s,mb6.4						
ANN				MLR	MLR		
	comp=N,43µm,15.0s,MS6.3						
ANN				MLR	MLR		
	comp=E,37µm,15.0s,MS6.3						
ANN				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.2						
ANN	**Anapa**	**30.45**	**290**	⇓*i*P	**P**	**23 44 18.5**	**-1.7**
OBN	**Obninsk**	**30.90**	**311**	P	**P**	**23 44 23.4**	**-0.6**
	comp=Z,2µm,0.5s,SNR=66						
OBN	**Obninsk**	**30.90**	**311**	*c i*P	**P**	**23 44 22.8**	**-1.2**
OBN				*i*		23 44 35.5	
OBN				*i*		23 45 24.2	
OBN				*e*		23 47 18.4	
OBN				*i* S	**S**	**23 49 31.9**	**+7.0**
OBN				pmax	pmax		
	comp=Z,470nm,1.2s,mb6.2						
OBN				MLR	MLR		
	comp=Z,70µm,18.0s,MS6.4						
OBN	**Obninsk**	**30.90**	**311**	⇑*i*P	**P**	**23 44 23.0**	**-1.1**
	comp=Z,479nm,1.0s,mb6.3						
OBN				LR	LR		
	comp=Z,5µm,21.0s,MS5.1						
MYA	**Malataya**	**31.32**	**278**	P	**P**	**23 44 29.7**	**+1.8**
MALT	**Malatya**	**31.32**	**278**	P	**P**	**23 44 29.6**	**+1.7**
MALT	**Malatya**	**31.32**	**278**	⇑*i*P	**P**	**23 44 29.3**	**+1.4**
MALT				pmax	pmax		
	comp=Z,390nm,1.3s,mb6.1						
URFA	**Urfa**	**31.32**	**276**	P	**P**	**23 44 29.2**	**+1.2**
NST	**Nakhon Sawan**	**31.51**	**139**	⇑P	**P**	**23 44 30.5**	**+0.7**
	comp=Z,124nm,0.8s,mb5.8						
DL2	**Dalian**	**32.14**	**81**	PR		23 44 38.9	
DL2				S	**S**	**23 49 48.1**	**+3.6**
DL2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
DL2				AMB	AMB		
	comp=Z,510nm,11.2s						
DL2				LR	LR		
	comp=N,7µm,12.5s,MS5.6						
DL2				LR	LR		
	comp=E,5µm,11.8s,MS5.6						
DL2				LR	LR		
	comp=Z,7µm,17.7s						
WHFO	**Wadi Hawf**	**32.22**	**230**	P	**P**	**23 44 35.0**	**-1.0**
	SNR=68						
RBK	**Rabkut**	**32.30**	**229**	P	**P**	**23 44 35.6**	**-1.1**
	SNR=30						
KKTK	**Khon Kaen**	**32.34**	**134**	P	**P**	**23 44 40.5**	**+3.5**
	comp=Z,741nm,0.6s,mb6.7						
GAZ	**Gaziantep**	**32.62**	**276**	P	**P**	**23 44 40.5**	**+1.2**
CLNS	**Chul'man**	**32.68**	**47**	*e*P	**P**	**23 44 39.6**	**0.0**
CLNS				*e*		23 45 44.3	
CLNS				*e*		23 47 27.4	
CLNS				*e*S	**S**	**23 49 52.8**	**+0.1**
CLNS				*e*SSS	SSS	23 52 15.9	+1.2
CLNS				pmax	pmax		
	comp=N,22nm,1.0s						
CLNS				pmax	pmax		
	comp=E,76nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,116nm,1.0s,mb5.8						
CLNS				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.5						
CLNS				pmax	pmax		
	comp=N,24nm,0.8s						
CLNS				pmax	pmax		
	comp=E,51nm,1.0s						
CLNS				smax			
	comp=N,3µm,17.0s						
CLNS				smax			
	comp=Z,643nm,10.1s						
CLNS				smax			
	comp=E,412nm,16.2s						
CLNS				MLR	MLR		
	comp=Z,38µm,16.0s,MS6.2						
CLNS				MLR	MLR		
	comp=N,8µm,11.0s,MS5.7						
CLNS				MLR	MLR		
	comp=E,5µm,13.0s,MS5.7						
SNY	**Shenyang**	**32.73**	**75**	⇑P	**P**	**23 44 40.5**	**+0.3**
SNY				S	**S**	**23 49 44.4**	**-9.2**
SNY				SCS	ScS	23 55 01.8	-2.3
SNY				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SNY				AMB	AMB		
	comp=Z,770nm,7.6s						
SNY				LR	LR		
	comp=E,24µm,19.4s						
SNY				LR	LR		
	comp=Z,21µm,17.2s,MS5.9						
SIM	**Simferopol'**	**32.75**	**291**	⇑*e*P	**P**	**23 44 41.2**	**+0.9**
SIM				*e*S	**S**	**23 49 57.4**	**+3.5**
SIM				*e*		23 55 09.0	
SIM				pmax	pmax		
	comp=Z,453nm,1.0s,mb6.4						
SIM				MLR	MLR		
	comp=Z,13µm,15.0s,MS5.8						
NJ2	**Nanjing**	**32.80**	**94**	*e*P	**P**	**23 44 43.1**	**+2.2**
NJ2				AP	pP	23 44 48.1	-2.1
NJ2				XP	sP	23 44 51.3	-2.9
NJ2				PP	PP	23 45 50.8	-0.1
NJ2				S	**S**	**23 49 54.0**	**-0.7**
NJ2				AMB	AMB		
	comp=Z,410nm,1.3s,mb6.2						
NJ2				AMB	AMB		
	comp=Z,2µm,9.4s						
NJ2				LR	LR		
	comp=N,29µm,18.8s						
NJ2				LR	LR		
	comp=E,26µm,12.8s						
NJ2				LR	LR		
	comp=Z,29µm,17.2s,MS6.0						
ABTO	**Aybut**	**32.94**	**230**	P	**P**	**23 44 41.2**	**-1.0**
	SNR=24						
BNN	**Bunyan**	**33.05**	**280**	P	**P**	**23 44 42.9**	**-0.1**
BYBT	**Boyabat**	**33.07**	**285**	*e*P	**P**	**23 44 44.2**	**+1.0**
YOZ	**Yozgat**	**33.19**	**281**	P	**P**	**23 44 41.8**	**-2.5**
RAYN	**Ar Rayn**	**33.48**	**248**	P	**P**	**23 44 46.8**	**-0.2**
	comp=Z,1µm,1.0s,mb6.8						
BZK	**Bozkurt**	**33.49**	**286**	*e*P	**P**	**23 44 45.8**	**-1.1**
CORM	**Corum**	**33.53**	**283**	*e*P	**P**	**23 44 42.9**	**-4.3**
CN2	**Changchun**	**33.60**	**71**	*e*P	**P**	**23 44 48.5**	**+0.7**
CN2				*e*S	**S**	**23 50 10.3**	**+3.2**
CN2				*e*SS	SS	23 52 11.5	-0.8
CN2				AMB	AMB		
	comp=Z,900nm,6.0s						
CN2				LR	LR		
	comp=N,29µm,11.0s,MS6.3						
CN2				LR	LR		
	comp=E,10µm,11.0s,MS6.3						
CN2				LR	LR		
	comp=Z,8µm,12.0s,MS5.7						
TOS	**Tosya**	**33.73**	**284**	*e*P	**P**	**23 44 50.5**	**+1.6**
CEYT	**Ceyhan**	**33.77**	**277**	*e*P	**P**	**23 44 42.9**	**-6.4**
HTY	**Hatay**	**33.81**	**275**	*e*P	**P**	**23 44 49.3**	**-0.4**
GZH	**Guangzhou**	**33.88**	**113**	P	**P**	**23 44 49.3**	**-1.1**
GZH				LR	LR		
	comp=N,15µm,18.6s,MS6.0						
GZH				LR	LR		
	comp=E,18µm,15.9s,MS6.0						
GZH				LR	LR		
	comp=Z,34µm,16.2s,MS6.2						
NNT	**Nongplab**	**34.00**	**143**	P	**P**	**23 44 53.0**	**+1.5**
CANT	**Cankiri**	**34.14**	**284**	*e*P	**P**	**23 44 50.3**	**-2.2**
PALK	**Pallekele**	**34.27**	**178**	⇓*i*P	**P**	**23 44 53.9**	**0.0**
	comp=Z,197nm,1.2s,mb5.9						
PALK				LR	LR		
	comp=Z,12µm,21.0s,MS5.6						
QIZ	**Qiongzhong**	**34.38**	**122**	⇑P	**P**	**23 44 55.0**	**+0.3**
QIZ				AP	pP	23 45 01.9	-2.1
QIZ				PP	PP	23 46 11.0	+0.5
QIZ				S	**S**	**23 50 15.3**	**-4.0**
QIZ				AMB	AMB		
	comp=Z,94nm,1.2s,mb5.6						
QIZ				LR	LR		
	comp=N,17µm,16.8s						
QIZ				LR	LR		
	comp=Z,29µm,20.2s,MS6.0						
QIZ	**Qiongzhong**	**34.38**	**122**	*e*P	**P**	**23 44 54.4**	**-0.3**
	comp=Z,106nm,1.0s,mb5.7						
BR131	**Keskin Array S**	**34.40**	**282**	PFAKE		23 45 10.0	+15
BR131				LR	LR		
	comp=Z,6µm,19.0s,MS5.3						
BRTR	**Keskin Array B**	**34.40**	**282**	P	**P**	**23 44 55.0**	**+0.3**
	comp=Z,112nm,0.5s,mb6.0,baz=98,slow=7.9,SNR=244						
BRTR				ScP		23 51 12.1	
	comp=Z,6.7nm,1.0s,baz=153,slow=2.8,SNR=3.9						
KAMT	**Kaman**	**34.46**	**282**	*e*P	**P**	**23 44 56.2**	**+1.0**
SAFT	**Safranbolu**	**34.64**	**285**	*e*P	**P**	**23 44 57.6**	**+0.8**
PUL	**Pulkovo**	**34.93**	**318**	*e*P	**P**	**23 44 58.2**	**-0.8**
PUL				*e*S	**S**	**23 50 21.8**	**-5.7**
PUL				pmax	pmax		
	comp=E,2µm,0.9s						
PUL				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.8						
PUL				pmax	pmax		
	comp=N,334nm,0.8s						
PUL				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.8						
PUL				pmax	pmax		
	comp=N,323nm,0.8s						
PUL				pmax	pmax		
	comp=E,2µm,1.0s						
PUL				MLR	MLR		
	comp=Z,116µm,23.0s,MS6.6						
PUL				MLR	MLR		
	comp=E,60µm,15.0s						
PUL	**Pulkovo**	**34.93**	**318**	⇑*i*P	**P**	**23 44 57.4**	**-1.6**
ASF	**Jabal al Asfar**	**34.93**	**268**	P	**P**	**23 44 59.8**	**+0.5**
	comp=E,125nm,1.0s,mb5.8,baz=322,slow=2.1,SNR=36						
ASF				LR	LR	00 02 03.2	
	comp=E,11µm,19.3s,MS5.6,baz=141,slow=41						
ANTO	**Ankara**	**34.97**	**283**	*e*P	**P**	**23 45 00.1**	**+0.4**
HKC	**Hong Kong**	**34.97**	**113**	P	**P**	**23 45 02.0**	**+2.2**
HKC				S	**S**	**23 50 34.0**	**+5.5**
LOD	**Lodumlu**	**34.98**	**283**	*e*P	**P**	**23 44 60.0**	**+0.2**
SSE	**Sheshan**	**35.00**	**94**	P	**P**	**23 45 01.6**	**+1.7**
SSE				AP	pP	23 45 04.8	-4.5
SSE				PP	PP	23 46 17.0	-1.5
SSE				S	**S**	**23 50 33.0**	**+4.1**
SSE				AMB	AMB		
	comp=Z,50nm,1.3s,mb5.3						
SSE				LR	LR		
	comp=N,7µm,23.2s,MS5.4						
SSE				LR	LR		
	comp=E,4µm,23.2s,MS5.4						
SSE				LR	LR		
	comp=Z,6µm,23.6s,MS5.3						
AKASG	**Malin Array Be**	**35.25**	**302**	P	**P**	**23 45 00.9**	**-1.0**
	comp=Z,155nm,1.1s,mb5.9,baz=71,slow=8.8,SNR=97						
AKASG				PP	PP	23 46 08.5	-13
	comp=Z,20nm,0.7s,baz=73,slow=8.7,SNR=4.7						
KSHT	**Keshet**	**35.37**	**270**	P	**P**	**23 45 03.9**	**+0.8**
LVZ	**Lovozero**	**35.45**	**333**	P	**P**	**23 45 03.9**	**+0.5**
	comp=Z,2µm,1.1s,mb7.0,SNR=14						
LVZ	**Lovozero**	**35.45**	**333**	*e*P	**P**	**23 45 02.3**	**-1.1**
LVZ				*e*S	**S**	**23 50 35.9**	**+0.4**
LVZ				pmax	pmax		
	comp=Z,466nm,1.0s,mb6.4						
LVZ				pmax	pmax		
	comp=N,56nm,0.8s						
LVZ				pmax	pmax		
	comp=E,264nm,1.2s						
LVZ				smax			
	comp=E,295nm,1.9s						
LVZ				smax			
	comp=Z,259nm,1.5s						
LVZ				smax			
	comp=N,252nm,1.7s						
LVZ				MLR	MLR		
	comp=Z,68µm,15.0s,MS6.5						
LVZ				MLR	MLR		
	comp=N,19µm,11.0s,MS6.5						
LVZ				MLR	MLR		
	comp=E,43µm,13.0s,MS6.5						
LVZ	**Lovozero**	**35.45**	**333**	⇓*i*P	**P**	**23 45 01.0**	**-2.4**
PHNC	**Paralimni**	**35.83**	**274**	P	**P**	**23 45 07.2**	**+0.2**
MNK	**Minsk**	**35.91**	**309**	⇑*e*P	**P**	**23 45 04.0**	**-3.4**
MMLI	**Mount Malkishu**	**35.91**	**270**	P	**P**	**23 45 08.5**	**+0.8**
MDU	**Mudurnu**	**35.93**	**285**	*e*P	**P**	**23 45 07.3**	**-0.4**
KONT	**Konya--Tatoy**	**35.94**	**280**	*e*P	**P**	**23 45 06.2**	**-1.6**
YAK	**Yakutsk**	**35.95**	**38**	*c i*P	**P**	**23 45 06.9**	**-0.8**
YAK				*e**PP	pP	23 45 16.6	-0.4
YAK				*e*		23 46 23.8	
YAK				*e*PPP	PPP	23 46 41.9	-7.6
YAK				*i*		23 47 32.8	
YAK				*e*S	**S**	**23 50 42.3**	**-1.0**
YAK				*e*SS	SS	23 53 08.1	+2.0
YAK				*e*SSS	SSS	23 53 25.1	-9.0
YAK				*e*		23 55 22.6	
YAK				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.9						
YAK				pmax	pmax		
	comp=N,36nm,1.0s						
YAK				pmax	pmax		
	comp=E,176nm,1.3s						
YAK				pmax	pmax		
	comp=N,21nm,1.0s						
YAK				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
YAK				pmax	pmax		
	comp=E,55nm,1.2s						
YAK				smax			
	comp=N,23nm,1.3s						
YAK				smax			
	comp=E,23nm,1.1s						
YAK				MLR	MLR		
	comp=N,7µm,11.0s,MS5.9						
YAK				MLR	MLR		
	comp=E,11µm,13.0s,MS5.9						
YAK				MLR	MLR		
	comp=Z,7µm,13.0s,MS5.6						
YAK	**Yakutsk**	**35.95**	**38**	⇑*i*P	**P**	**23 45 06.6**	**-1.1**
	comp=Z,491nm,0.9s,mb6.4						
YAK				LR	LR		
	comp=Z,40µm,21.0s,MS6.2						
KIZT	**Kizilcal**	**35.96**	**282**	*e*P	**P**	**23 45 09.0**	**+1.0**
KIS	**Kishinev**	**36.01**	**296**	α*i*P	**P**	**23 45 07.0**	**-1.4**
KIS				*i*	pP	23 45 16.0	-1.7
KIS				*e*		23 46 26.0	
KIS				*i* S	**S**	**23 50 43.0**	**-1.4**
KIS				*i*		23 55 20.0	
KIS				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.5						
KIS				pmax	pmax		
	comp=N,450nm,1.5s						
KIS				pmax	pmax		
	comp=E,640nm,1.5s						
KIS				pmax	pmax		
	comp=E,2µm,4.0s						
KIS				pmax	pmax		
	comp=Z,2µm,4.0s						
KIS				pmax	pmax		
	comp=Z,4µm,6.0s						
KIS				smax			
	comp=N,4µm,9.0s						
KIS				smax			
	comp=E,2µm,9.0s						
KIS				MLR	MLR		
	comp=E,31µm,12.0s,MS6.3						
KIS				MLR	MLR		
	comp=Z,31µm,12.0s,MS6.3						
KIS				MLR	MLR		
	comp=N,17µm,14.0s,MS6.3						
KIS				MLR	MLR		
	comp=Z,32µm,12.0s						
KIS	**Kishinev**	**36.01**	**296**	*i* P	**P**	**23 45 06.0**	**-2.4**
HAF	**Haifa**	**36.05**	**270**	P	**P**	**23 45 09.4**	**+0.5**
OFRI	**'Ofer**	**36.16**	**270**	P	**P**	**23 45 10.7**	**+1.0**
HDMB	**Hadim**	**36.20**	**278**	*e*P	**P**	**23 45 01.7**	**-8.4**
MDJ	**Mudanjiang**	**36.32**	**68**	P	**P**	**23 45 12.1**	**+1.1**
MDJ				AP	pP	23 45 18.6	-1.7
MDJ				XP	sP	23 45 23.4	-0.9
MDJ				PP	PP	23 46 32.8	-1.7
MDJ				S	**S**	**23 50 50.9**	**+1.8**
MDJ				XS		23 51 06.3	
MDJ				AMB	AMB		
	comp=Z,68nm,1.1s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,723nm,4.2s						
MDJ				LR	LR		
	comp=N,14µm,13.9s,MS6.2						
MDJ				LR	LR		
	comp=E,28µm,15.0s,MS6.2						
MDJ				LR	LR		
	comp=Z,38µm,15.0s,MS6.3						
MDJ	**Mudanjiang**	**36.32**	**68**	*e*P	**P**	**23 45 09.6**	**-1.3**
	comp=Z,207nm,1.2s,mb5.9						
DRGI	**Dragot**	**36.33**	**268**	P	**P**	**23 45 11.9**	**+0.7**
INCN	**Inchon**	**36.33**	**81**	*e*P	**P**	**23 45 10.0**	**-1.2**
	comp=Z,145nm,0.8s,mb6.0						
INCN				LR	LR		
	comp=Z,8µm,19.0s,MS5.5						
MAMC	**Mammari**	**36.37**	**275**	P	**P**	**23 45 13.1**	**+1.6**
CSS	**Prodhromos**	**36.37**	**275**	P	**P**	**23 45 11.8**	**+0.3**
TLCR		**36.38**	**293**	⇑P	**P**	**23 45 11.6**	**+0.1**
QZH	**Quanzhou**	**36.44**	**105**	P	**P**	**23 45 15.0**	**+2.8**
QZH				S	**S**	**23 50 53.3**	**+2.1**
QZH				LR	LR		
	comp=N,9µm,9.4s						
QZH				LR	LR		
	comp=E,27µm,15.6s						
QZH				LR	LR		
	comp=Z,25µm,17.5s,MS6.0						
MZDA	**Masada**	**36.49**	**268**	P	**P**	**23 45 15.9**	**+3.3**
ESKT	**Eskisehir**	**36.50**	**283**	*e*P	**P**	**23 45 13.6**	**+1.0**
IDID	**Didziasalis**	**36.53**	**310**	⇑*e*P	**P**	**23 45 12.5**	**-0.1**
IDID				AMPb	AMB	23 45 17.0	
	comp=Z,141nm,0.9s,mb5.8						
IDID				*e*ScP		23 51 12.6	
IDID	**Didziasalis**	**36.53**	**310**	⇑*e*P	**P**	**23 45 12.5**	**-0.1**
IDID				*e*ScP		23 51 12.6	
LEF	**Lefka**	**36.63**	**275**	*e*P	**P**	**23 45 15.4**	**+1.7**
SZAC	**Souni-Zanaja**	**36.79**	**275**	P	**P**	**23 45 15.2**	**+0.2**
	comp=Z,6.3nm,0.7s						
IZAR	**Zarasai**	**36.81**	**311**	⇑*e*P	**P**	**23 45 14.9**	**0.0**
IZAR				AMPb	AMB	23 45 19.5	
	comp=Z,175nm,1.0s,mb5.8						
IZAR				*e*ScP		23 51 15.3	
IZAR	**Zarasai**	**36.81**	**311**	⇑*e*P	**P**	**23 45 14.9**	**0.0**
IZAR				*e*ScP		23 51 15.4	
IIGN	**Ignalina**	**36.82**	**310**	⇑*e*P	**P**	**23 45 15.2**	**+0.1**
IIGN				AMPb	AMB	23 45 19.8	
	comp=Z,144nm,1.2s,mb5.7						
TIRR	**Tirgusor**	**36.83**	**292**	⇑P	**P**	**23 45 15.4**	**+0.2**
TIRR	**Tirgusor**	**36.83**	**292**	P	**P**	**23 45 16.8**	**+1.6**
ALFC	**Alevga**	**36.84**	**276**	P	**P**	**23 45 15.0**	**-0.4**
	comp=Z,11nm,0.9s						
CFR	**Carcaliu**	**36.85**	**293**	P	**P**	**23 45 17.3**	**+1.9**
CFR	**Carcaliu**	**36.85**	**293**	⇑*i*P	**P**	**23 45 15.5**	**+0.1**
ISAL	**Salakas**	**36.88**	**311**	⇑*e*P	**P**	**23 45 15.6**	**+0.1**
ISAL				AMPb	AMB	23 45 20.2	
	comp=Z,173nm,1.0s,mb5.8						
ISAL				*e*ScP		23 51 14.5	
ISAL	**Salakas**	**36.88**	**311**	⇑*e*P	**P**	**23 45 15.6**	**+0.1**
ISAL				*e*ScP		23 51 14.5	
KLR	**Kul'dur**	**36.89**	**60**	*e*P	**P**	**23 45 13.2**	**-2.5**
KLR				*e*		23 45 26.8	
KLR				*e*		23 46 43.5	
KLR				*e*S	**S**	**23 50 55.5**	**-2.3**
KLR				*e*		23 55 24.0	
KLR				pmax	pmax		
	comp=Z,2µm,7.5s						
KLR				pmax	pmax		
	comp=N,160nm,1.4s						
KLR				pmax	pmax		
	comp=E,270nm,1.4s						
KLR				pmax	pmax		
	comp=Z,300nm,1.4s,mb5.9						
KLR				MLR	MLR		
	comp=E,47µm,17.0s						
HRT	**Hereke**	**36.94**	**286**	*e*P	**P**	**23 45 13.0**	**-3.2**
HRT	**Hereke**	**36.94**	**286**	P	**P**	**23 45 13.0**	**-3.2**
HRT				P		23 45 17.0	
ZFRI	**Zfri**	**37.00**	**267**	P	**P**	**23 45 17.9**	**+1.1**
MASH	**Mash'abbe Sade**	**37.08**	**268**	P	**P**	**23 45 18.4**	**+0.9**
HARR	**Harsova**	**37.10**	**292**	⇑P	**P**	**23 45 18.0**	**+0.4**
HARR	**Harsova**	**37.10**	**292**	P	**P**	**23 45 18.6**	**+1.1**
HARR	**Harsova**	**37.10**	**292**	⇑*i*P	**P**	**23 45 18.1**	**+0.5**
GBZT	**Gebze**	**37.11**	**286**	P	**P**	**23 45 16.4**	**-1.2**
RTMM	**Retamin**	**37.12**	**268**	P	**P**	**23 45 18.8**	**+0.9**
PPCY	**Paphos**	**37.14**	**275**	P	**P**	**23 45 17.6**	**-0.4**
PSN	**Preselentsi**	**37.18**	**291**	*i* P	**P**	**23 45 19.5**	**+1.3**
KAF	**Kangasniemi**	**37.22**	**322**	*e*p	**P**	**23 45 17.9**	**-0.4**
	baz=97,slow=8.4						
FINES	**FINESS Array B**	**37.23**	**320**	P	**P**	**23 45 18.0**	**-0.5**
	comp=E,166nm,0.8s,mb5.9,baz=101,slow=9.7,SNR=133						
FINES				PP	PP	23 46 32.9	-13
	comp=E,28nm,0.8s,baz=146,slow=5.0,SNR=2.0						
FINES				LR	LR	00 01 12.9	
	comp=E,88µm,18.8s,MS6.6,baz=95,slow=37						
YLV	**Yalova**	**37.23**	**285**	*e*P	**P**	**23 45 13.6**	**-5.1**
KS15	**Wonju Array Si**	**37.27**	**80**	*e*P	**P**	**23 45 17.9**	**-1.1**
ISK	**Istanbul-Kandi**	**37.30**	**286**	*e*P	**P**	**23 45 20.2**	**+1.0**
ISP	**Isparta**	**37.34**	**281**	*e*P	**P**	**23 45 20.1**	**+0.5**
ISP	**Isparta**	**37.34**	**281**	P	**P**	**23 45 20.4**	**+0.8**
KZIT	**Kziot**	**37.41**	**268**	P	**P**	**23 45 21.1**	**+0.8**
BCK	**Bucak**	**37.42**	**280**	*e*P	**P**	**23 45 17.6**	**-2.7**
EIL	**Elat**	**37.61**	**266**	P	**P**	**23 45 22.9**	**+0.8**
	comp=E,117nm,0.8s,mb5.7,baz=17,slow=8.0,SNR=76						
EIL	**Elat**	**37.61**	**266**	P	**P**	**23 45 22.9**	**+0.9**
VRI	**Vrincioaia**	**37.66**	**295**	⇑P	**P**	**23 45 22.9**	**+0.7**
VRI				⇓P		23 45 23.5	
VRI	**Vrincioaia**	**37.66**	**295**	⇑*i*P	**P**	**23 45 23.0**	**+0.8**
MUKL	**Al Mukalla**	**37.71**	**233**	⇑*i*P	**P**	**23 45 23.2**	**+0.2**
MUKL				AMb	AMB	23 45 25.4	

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       comp=Z,433nm,1.7s,mb5.9
KHL    Karahalli         37.89 282  eP      P       23 45 22.7  -1.5
ISR    Istrita           37.96 294 ⇓P       P       23 45 26.1  +1.4
ISR    Istrita           37.96 294  P       P       23 45 27.3  +2.6
ISR    Istrita           37.96 294⇓iP       P       23 45 27.2  +2.5
DST    Dursunbey         38.09 284  eP      P       23 45 27.0  +1.1
ELL    Elmali            38.20 279  eP      P       23 45 25.0  -1.9
MLR    Muntele Rosu      38.28 294  P       P       23 45 28.2  +0.8
MLR                                 pmax    pmax
       comp=Z,251nm,0.7s
MLR                                 MLR     MLR
       comp=Z,46µm,18.1s
MLR    Muntele Rosu      38.28 294  P       P       23 45 28.2  +0.8
       comp=Z,251nm,0.7s,mb6.0,baz=5.4,slow=5.8,SNR=164
MLR                                 LR      LR      00 03 25.5
       comp=Z,46µm,18.1s,MS6.3,baz=72,slow=40
MLR    Muntele Rosu      38.28 294  P       P       23 45 28.7  +1.3
MLR    Muntele Rosu      38.28 294⇑iP       P       23 45 28.8  +1.4
BURAR  Bucovina Array    38.30 298 ⇑P       P       23 45 27.8  +0.2
VLA    Vladivostok       38.31  70 i P      P       23 45 24.0  -3.7
VLA                                i                23 47 02.0
VLA                                i S      S       23 51 21.0  +1.5
VLA                                 pmax    pmax
       comp=Z,2µm,13.0s
VLA                                 pmax    pmax
       comp=Z,2µm,13.0s
VLA                                 smax
       comp=E,2µm,16.0s
VLA                                 smax
       comp=N,2µm,10.0s
VLA                                 MLR     MLR
       comp=Z,55µm,14.0s,MS6.5
VLA                                 MLR     MLR
       comp=E,44µm,15.0s,MS6.5
VLA                                 MLR     MLR
       comp=N,20µm,13.0s,MS6.5
MRMT   Marmara Adasi     38.50 286  eP      P       23 45 24.9  -4.4
BUC1   Bucharest         38.51 292 ⇑P       P       23 45 30.9  +1.5
BUC1   Bucharest         38.51 292  P       P       23 45 31.0  +1.6
TATO   Taipei            38.53 102  eP      P       23 45 30.6  +0.8
TATO                                LR      LR
       comp=Z,7µm,20.0s,MS5.5
TIXI   Tiksi             38.53  23⇑iP       P       23 45 28.7  -0.6
TIXI                                e               23 46 55.3
TIXI                                eS      S       23 51 26.7  +4.1
TIXI                                eSS     SS      23 54 01.1  -2.8
TIXI                                pmax    pmax
       comp=E,91nm,1.1s
TIXI                                pmax    pmax
       comp=Z,306nm,1.1s,mb5.9
TIXI                                pmax    pmax
       comp=N,29nm,1.3s
TIXI                                pmax    pmax
       comp=Z,2µm,2.8s,mb6.3
TIXI                                smax
       comp=N,2µm,16.8s
TIXI                                smax
       comp=E,3µm,18.5s
TIXI                                MLR     MLR
       comp=Z,65µm,15.0s,MS6.6
TIXI                                MLR     MLR
       comp=N,10µm,10.0s,MS6.5
TIXI                                MLR     MLR
       comp=E,38µm,14.0s,MS6.5
TIXI   Tiksi             38.53  23⇑iP       P       23 45 27.4  -1.9
TIXI                                LR      LR
       comp=Z,64µm,20.0s,MS6.4
SNX    Sinaia            38.60 294 ⇑P       P       23 45 31.4  +1.2
SNX    Sinaia            38.60 294  P       P       23 45 31.8  +1.7
JMB    Yambol            38.65 289 i P      P       23 45 31.0  +0.5
SUW    Suwalki           38.66 308⇑eP       P       23 45 30.1  -0.4
SUW                                e*PP     pP      23 45 41.6  +1.7
SUW                                e                23 46 56.9
SUW                                e                23 47 43.0
SUW                                eS       S       23 51 24.5  -0.1
SUW                                eSS              23 51 36.7
SUW    Suwalki           38.66 308⇑eP       P       23 45 30.1  -0.4
SUW                                epP      pP      23 45 41.6  +1.7
SUW                                ePP      PP      23 46 56.9  -6.0
SUW                                ePcP     PcP     23 47 43.0  +0.4
SUW                                eS       S       23 51 24.5  -0.1
SUW                                esS              23 51 36.7
SUW                                 MLR     MLR     00 01 49.0
       comp=Z,65µm,18.9s,MS6.5
LVV    L'vov             38.67 302⇑iP       P       23 45 30.8  +0.2
LVV                                e                23 46 56.0
LVV                                ePPP     PPP     23 47 26.6  +0.6
LVV                                eS       S       23 51 19.2  -5.6
LVV    L'vov             38.67 302  eP      P       23 45 29.0  -1.6
MFT    Murefte           38.67 287  P       P       23 45 22.1  -8.7
KEV    Kevo              38.72 334  ep      P       23 45 29.5  -1.4
       comp=Z,210nm,0.8s,mb5.9
KEV    Kevo              38.72 334  eP      P       23 45 29.5  -1.4
KEV                                 pmax    pmax
       comp=Z,210nm,0.8s,mb5.9
EDRB   Edirne            38.72 288  eP      P       23 45 29.5  -1.7
AKS    Akhisar           38.94 284  eP      P       23 45 31.7  -1.3
MTUR   Matau             38.95 294 ⇑P       P       23 45 34.7  +1.7
MTUR   Matau             38.95 294  P       P       23 45 35.1  +2.0
MTUR   Matau             38.95 294⇓iP       P       23 45 36.1  +3.1
ARCES  ARCESS Array B    39.15 333  P       P       23 45 34.3  -0.2
ARCES                               pmax    pmax
       comp=Z,259nm,0.8s
ARCES                               MLR     MLR
       comp=Z,45µm,19.7s
ARCES  ARCESS Array B    39.15 333  P       P       23 45 34.2  -0.2
       comp=Z,258nm,0.8s,mb6.0,baz=103,slow=3.5,SNR=159
ARCES                               LR      LR      00 02 48.9
       comp=Z,45µm,19.7s,MS6.3,baz=109,slow=38
ARE0   ARCESS Array S    39.15 333⇑iP       P       23 45 34.3  -0.1
ARE0                               e        pP      23 45 43.5  -0.4
ZIMR                     39.16 292 ⇑P       P       23 45 35.7  +0.9
SNG    Songkhla          39.20 145  P       P       23 45 35.0  -0.4
       comp=Z,220nm,0.9s,mb5.9
PVL    Pavlikeni         39.30 291 i P      P       23 45 38.0  +2.0
DIM    Dimitrovgrad      39.52 289 i P      P       23 45 39.0  +1.2
ALN    Alexandroupoli    39.52 287  eP      P       23 45 34.2  -3.6
KWP    Kalwaria          39.55 301⇑eP       P       23 45 38.6  +0.6
KWP                                epP      pP      23 45 46.5  -0.8
KWP                                ePP      PP      23 47 12.5  -0.1
KWP                                eS       S       23 51 40.5  +2.4
KWP                                esS              23 51 51.7
KWP                                 MLR     MLR     00 02 48.6
       comp=Z,48µm,20.9s,MS6.3
KTK1   Kautokeino        39.79 332⇑iP       P       23 45 40.2  +0.4
       comp=Z,596nm,1.1s,mb6.2
KTK1   Kautokeino        39.79 332⇑iP       P       23 45 40.2  +0.4
KTK1                                AMb     AMB     23 45 45.3
       comp=Z,596nm,1.1s,mb6.2
KOLS   Kolonicke sedl    39.96 300  eP      P       23 45 41.4   0.0
KOLS                               epP      pP      23 45 47.5  -3.3
KOLS                               ePP      PP      23 47 19.3  +2.3
KOLS                               eSS      SS      23 54 48.7   +13
UZH    Uzhgorod          40.01 300  eP      P       23 45 37.0  -4.8
UZH                                eS       S       23 51 39.0  -6.1
PLD    Plovdiv           40.08 290 i P      P       23 45 43.0  +0.5
WAR    Warsaw            40.16 306⇑eP       P       23 45 43.4  +0.4
WAR                                epP      pP      23 45 53.1  +0.8
WAR                                ePP      PP      23 47 15.1  -3.9
WAR                                eS       S       23 51 48.2  +0.9
WAR                                esS              23 52 00.1
WAR                                 MLR     MLR     00 03 07.8
       comp=Z,51µm,18.1s,MS6.4
RZN    Rozhen            40.21 289 i P      P       23 45 45.0  +1.5
PGB    Panagyurishte     40.32 290 i P      P       23 45 45.0  +0.6
CRVS   Cervenica-Dubn    40.49 301  eP      P       23 45 45.4  -0.3
CRVS                               epP      pP      23 45 53.2  -1.9
CRVS                               ePP      PP      23 47 20.7  -1.6
CRVS                               eS       S       23 51 47.1  -5.1
CRVS                               eSS      SS      23 54 44.5  -2.5
LBOS                     40.50 237⇑eP       P       23 45 46.9  +0.8
LBOS                                AMb     AMB     23 45 49.8
       comp=Z,1µm,1.8s,mb6.2
DHBB   Dhamar BB         40.52 239⇑eP       P       23 45 47.1  +0.8
DHBB                                AMb     AMB     23 45 49.3
       comp=Z,180nm,1.0s,mb5.7
MMB    Musomiste         40.94 289 i P      P       23 45 50.0  +0.5
VTS    Vitosha           40.98 291  P       P       23 45 51.0  +1.2
VTS    Vitosha           40.98 291 i P      P       23 45 50.0  +0.2
NIE    Niedzica          41.12 302⇑iP       P       23 45 50.3  -0.6
BZS    Buzias            41.19 296  P       P       23 45 52.5  +1.0
OUR    Ouranopolis       41.19 287  eP      P       23 45 51.8  +0.2
SRS    Serrai            41.20 289  eP      P       23 45 51.9  +0.3
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KECS   Kecovo            41.21 300  eP      P       23 45 52.4  +0.7
KECS                               ePP      PP      23 47 25.1  -4.6
OJC    Ojcow             41.27 303⇑iP       P       23 45 52.3  +0.2
OJC                                ePP      PP      23 47 31.8  +1.4
OJC                                i S      S       23 52 04.2  +0.3
OJC                                 MLR     MLR     00 03 52.9
       comp=Z,49µm,19.9s,MS6.4
APE    Apeiranthos       41.29 282  P       P       23 45 53.4  +1.0
KKB    Krupnik           41.30 290 i P      P       23 45 52.0  -0.5
TRO    Tromso            41.42 333  eP      P       23 45 51.4  -1.7
       comp=Z,310nm,2.0s,mb5.6
TRO    Tromso            41.42 333  eP      P       23 45 51.4  -1.7
TRO                                 AMb     AMB     23 45 59.2
       comp=Z,310nm,2.0s,mb5.6
SOH    Sokhos            41.47 288  eP      P       23 45 55.0  +1.2
BOLS   Boljevac          41.47 293⇑iP       P       23 45 54.0  +0.3
PAIG   Paliouri          41.55 287  eP      P       23 45 55.8  +1.3
KNT    Kendrikon         41.67 289  eP      P       23 45 55.8  +0.4
IPM    Ipoh              41.71 146  P       P       23 45 56.2   0.0
PSZ    Piszkesteto       41.73 300⇑iP       P       23 45 56.5  +0.6
PSZ                                e                23 47 31.0
PSZ                                e                23 47 49.0
PSZ                                 pmax    pmax
       comp=Z,380nm,1.5s,mb5.8
PSZ    Piszkesteto       41.73 300⇑iP       P       23 45 56.5  +0.7
       comp=Z,380nm,1.5s,mb5.8
PSZ                                ePP      PP      23 47 31.0  -4.4
PSZ                                ePcP     PcP     23 47 49.0  -3.6
PSZ    Piszkesteto       41.73 300⇑iP       P       23 45 56.7  +0.8
PSZ                                i PP     PP      23 47 37.6  +2.2
THE    Thessaloniki      41.81 288  eP      P       23 45 56.4  -0.2
SVIS   Svilajnac         41.83 294⇑iP       P       23 45 57.2  +0.4
VAY    Valandovo         41.85 289 i P      P       23 45 57.4  +0.5
BARS   Barje             41.88 292⇑iP       P       23 45 57.7  +0.6
LIKS   Likavka           41.97 301  eP      P       23 46 00.1  +2.3
NPS    Neapolis          41.98 279  P       P       23 45 58.4  +0.3
XOR    Xorichti          42.10 286  eP      P       23 45 59.4  +0.4
BEO    Belgrade          42.20 295⇑iP       P       23 46 00.5  +0.8
GKP    Gorka Klasztor    42.26 308⇑eP       P       23 46 00.5  +0.4
GKP                                epP      pP      23 46 09.6   0.0
GKP                                ePP      PP      23 47 37.5  -3.4
GKP                                ePcP     PcP     23 47 51.5  -2.7
GKP                                eS       S       23 52 20.7  +2.3
GKP                                esS              23 52 31.3
GKP                                 MLR     MLR     00 04 15.4
       comp=Z,71µm,18.6s,MS6.6
VYHS   Vyhne             42.28 301  eP      P       23 46 00.9  +0.6
VYHS                               epP      pP      23 46 09.1  -0.6
VYHS                               ePP      PP      23 47 35.5  -5.6
VYHS                               eS       S       23 52 11.1  -7.5
VYHS                               eSS      SS      23 55 35.0   +13
RAC    Raciborz          42.31 303  eP      P       23 46 01.4  +0.8
RAC                                eS       S       23 52 19.8  +0.7
RAC                                 MLR     MLR
       comp=Z,52µm,19.4s,MS6.4
RAC    Raciborz          42.31 303  eP      P       23 46 01.4  +0.8
RAC                                eS       S       23 52 19.8  +0.7
RAC                                 LMN             00 03 17.9
RAC                                 MLR     MLR     00 04 23.9
RAC                                 LME             00 04 37.1
       comp=Z,49µm,18.7s
LIT    Litokhoron        42.34 288  eP      P       23 46 00.4  -0.5
OKC    Ostrava-Krasne    42.40 303⇑iP       P       23 46 01.3   0.0
OKC                                ePP      PP      23 47 38.2  -4.1
OKC                                eS       S       23 52 21.7  +1.3
OKC                                 AMS     AMS     00 04 20.0
       comp=Z,36µm,16.0s
BUD    Budapest          42.41 299⇑eP       P       23 46 02.1  +0.7
SKO    Skopje            42.42 291⇑iP       P       23 46 02.0  +0.4
SKO                                i                23 46 13.5
SKO                                i PPP    PPP     23 48 18.3  +2.4
SKO                                i SSS    SSS     23 55 56.3   -14
SKO                                 pmax    pmax
       comp=Z,185nm,0.9s,mb5.7
SKO    Skopje            42.42 291⇑iP       P       23 46 02.0  +0.4
       comp=Z,0.2nm,0.9s
SKO                                i                23 46 13.5
SKO                                i PPP    PPP     23 48 18.3  +2.4
SKO                                i SSS    SSS     23 55 56.3   -14
IDI    Anoyia            42.50 280  P       P       23 46 01.0  -1.4
       comp=Z,96nm,0.5s,mb5.8,baz=69,slow=8.4,SNR=56
KOLL   Kolacno           42.53 301  eP      P       23 46 03.4  +1.0
KOLL                               epP      pP      23 46 14.9  +3.1
KOLL                               ePP      PP      23 47 42.9  -0.8
ABRA   Dolores           42.63 111  eP      P       23 46 06.7  +3.1
DIVS   Divcibare         42.74 294⇓iP       P       23 46 04.5  +0.4
SRO2   Moca              42.75 300  eP      P       23 46 05.0  +0.8
SRO2                               e                23 46 17.3
MOR8   Moi Rana          42.75 327⇑iP       P       23 46 02.8  -1.2
       comp=Z,673nm,1.4s,mb6.2
MOR8   Moi Rana          42.75 327⇑iP       P       23 46 02.8  -1.2
MOR8                                AMb     AMB     23 46 07.7
       comp=Z,673nm,1.4s,mb6.2
SRO    Srobarova         42.79 300  eP      P       23 46 05.2  +0.7
SRO                                e        pP      23 46 14.8  +0.9
MORC   Moravsky Berou    42.79 303⇑iP       P       23 46 04.5   0.0
MORC                                pmax    pmax
       comp=Z,141nm,0.8s,mb5.8
MORC   Moravsky Berou    42.79 303⇑iP       P       23 46 04.5   0.0
       comp=Z,141nm,0.8s,mb5.8
SRO1   Iza               42.85 300  eP      P       23 46 05.7  +0.6
SRO1                               e        pP      23 46 16.6  +2.1
SRO1                               e                23 47 56.1
AGG    Agios Georgios    42.85 286  eP      P       23 46 04.5  -0.7
APYP   Conner            42.86 111  eP      P       23 46 09.4  +3.9
FNA    Florina           42.88 289  eP      P       23 46 05.6  +0.2
JAVC   Velka Javorina    42.94 301  P       P       23 46 07.5  +1.8
VAM    Vamos             42.96 280  P       P       23 46 06.6  +0.5
PKSM   Moragy            43.01 297 ⇓P       P       23 46 06.6  +0.2
NVSS   Nova Varos 2      43.12 293⇑iP       P       23 46 08.0  +0.7
SGCP   Mt. Cagua         43.17 110  eP      P       23 46 12.5  +4.5
SMOL   Smolenice         43.18 301  eP      P       23 46 08.3  +0.6
SMOL                               epP      pP      23 46 16.3  -0.8
SMOL                               ePP      PP      23 47 47.5  -2.6
LOF    Lofoten           43.19 330⇑iP       P       23 46 08.7  +1.3
       comp=Z,796nm,1.0s,mb6.4
LOF    Lofoten           43.19 330⇑iP       P       23 46 08.7  +1.3
LOF                                 AMb     AMB     23 46 13.7
       comp=Z,796nm,1.0s,mb6.4
IVA    Berane            43.20 292⇑iP       P       23 46 09.0  +1.1
PVY    Plav              43.24 292⇑iP       P       23 46 09.1  +0.9
HFS    Hagfors           43.28 318  P       P       23 46 08.0  -0.3
HFS                                 pmax    pmax
       comp=Z,407nm,0.8s
HFS    Hagfors           43.28 318  P       P       23 46 08.0  -0.3
       comp=Z,407nm,0.8s,mb6.2,baz=108,slow=6.1,SNR=220
BSD    Bornholm Skovb    43.29 311⇑iP       P       23 46 08.8  +0.3
BSD                                i                23 47 46.5
BSD                                i                23 47 55.9
BSD                                i                23 52 32.4
BSD                                 pmax    pmax
       comp=Z,160nm,0.7s,mb5.9
BSD                                 MLR     MLR
       comp=Z,40µm,18.0s,MS6.4
BSD    Bornholm Skovb    43.29 311⇑iP       P       23 46 08.8  +0.3
       comp=Z,164nm,0.7s,mb5.9
BSD                                i                23 47 46.5
BSD                                i                23 47 55.9
BSD                                i                23 52 32.4
       comp=Z,40µm,18.0s
GVD    Gavdhos           43.29 280  eP      P       23 46 07.2  -1.6
       comp=Z,937nm,1.0s,mb6.5
KSP    Ksiaz             43.32 305⇑eP       P       23 46 08.9  +0.1
KSP                                e*PP     pP      23 46 11.9  -6.3
KSP                                e                23 47 55.1
KSP                                eS       S       23 52 32.5  -1.4
KSP                                eSS      SS      23 55 41.0  +0.1
KSP                                 MLR     MLR
       comp=Z,116µm,17.4s,MS6.8
KSP    Ksiaz             43.32 305⇑eP       P       23 46 09.2  +0.3
KSP                                epP      pP      23 46 18.8  +0.6
KSP                                ePcP     PcP     23 47 58.0  +0.2
KSP                                eS       S       23 52 35.2  +1.3
KSP                                esS              23 52 45.5
KSP                                 MLR     MLR     00 05 03.0
       comp=Z,101µm,17.4s,MS6.8
STOK   Stokkvaagen       43.33 327  eP      P       23 46 07.9  -0.7
       comp=Z,306nm,1.5s,mb5.8
STOK   Stokkvaagen       43.33 327  eP      P       23 46 07.9  -0.7
STOK                                AMb     AMB     23 46 14.6
       comp=Z,306nm,1.5s,mb5.8
SCZP   Santa Cruz        43.37 114  eP      P       23 46 10.9  +1.2
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CVP    Callao Caves      43.37 110  eP      P       23 46 12.0  +2.3
       comp=Z,11µm,1.0s
PLE    Pljevlja          43.39 293⇑iP       P       23 46 10.6  +1.1
DPC    Dobruska-Polom    43.42 304⇑iP       P       23 46 10.3  +0.7
DPC                                ePP      PP      23 47 49.8  -2.7
DPC                                eS       S       23 52 38.1  +2.8
DPC                                 AMS     AMS     00 05 00.0
       comp=Z,57µm,20.3s
ZST    Bratislava        43.47 301  eP      P       23 46 10.2  +0.2
ZST                                e                23 46 22.1
ZST                                e                23 47 52.4
ZST                                eSS      SS      23 56 04.3   +21
ZST    Bratislava        43.47 301  eP      P       23 46 10.2  +0.2
ZST                                e                23 46 22.1
ZST                                ePP      PP      23 47 52.4  -0.6
ZST                                eS       S       23 52 21.6   -14
ZST                                eSS      SS      23 56 04.3   +21
PUK    Puka              43.48 291 i p      P       23 46 10.9  +0.7
VRAC   Vranov            43.51 302  P       P       23 46 10.7  +0.4
VRAC                                pmax    pmax
       comp=Z,67nm,1.0s
VRAC   Vranov            43.51 302  P       P       23 46 10.7  +0.4
       comp=Z,67nm,1.0s,mb5.3,baz=71,slow=9.8,SNR=33
VRAC   Vranov            43.51 302  P       P       23 46 11.0  +0.7
UPC    Upice             43.58 304⇑iP       P       23 46 11.2  +0.3
UPC                                ePP      PP      23 47 57.0  +2.9
QSH    Qafa e Shtames    43.66 291 i p      P       23 46 12.4  +0.7
KRUC   Moravsky          43.70 302  P       P       23 46 12.6  +0.7
UPM    Unac-Piva         43.77 293⇑iP       P       23 46 13.3  +0.7
TTG    Podgorica         43.79 292⇑iP       P       23 46 12.6  -0.1
NSS    Namsos            43.79 325  eP      P       23 46 10.7  -1.8
       comp=Z,186nm,2.4s,mb5.4
NSS    Namsos            43.79 325  eP      P       23 46 10.7  -1.8
NSS                                 AMb     AMB     23 46 29.0
       comp=Z,186nm,2.4s,mb5.4
NKY    Niksic            43.84 293⇑iP       P       23 46 13.8  +0.7
CAUP   Cauayan           43.89 111  eP      P       23 46 18.3  +4.5
HSP    Hornsund          43.95 343  eP      P       23 46 14.1  +0.6
VKA    Vienna            43.96 301⇑iP       P       23 46 14.4  +0.4
       comp=Z,2µm,4.0s
VKA    Vienna            43.96 301⇑iP       P       23 46 14.4  +0.4
VKA                                 pmax    pmax
       comp=Z,2µm,4.0s
ULC    Ulcinj            43.96 291⇑iP       P       23 46 14.9  +0.8
SOP    Sopron            43.96 300  P       P       23 46 15.3  +1.3
SOP    Sopron            43.96 300⇑iP       P       23 46 14.6  +0.6
SOP                                i                23 48 11.6
BUM    Brajici-Budva     44.09 292⇑iP       P       23 46 15.6  +0.5
IGT    Igoumenitsa       44.09 288  eP      P       23 46 14.2  -1.0
BRY    Bratogost         44.12 293⇑iP       P       23 46 17.0  +1.6
SRN    Sarande           44.20 288 i p      P       23 46 15.0  -1.1
RGN    Rugen             44.30 310  eP      P       23 46 16.5  -0.2
       comp=Z,1µm,1.1s,mb6.5
HCY    Herceg Novi       44.31 292⇑iP       P       23 46 17.9  +0.9
NB2    NORSAR Subarra    44.40 320  P       P       23 46 17.0  -0.4
       comp=Z,331nm,0.8s,mb6.1,baz=86,slow=7.9
NB2    NORSAR Subarra    44.40 320  P       P       23 46 17.0  -0.4
NB2                                 pmax    pmax
       comp=Z,331nm,0.8s,mb6.1
NB2    NORSAR Subarra    44.40 320  P       P       23 46 17.0  -0.4
       baz=86,slow=8.6
NOA    NORSAR Array B    44.40 320  P       P       23 46 16.9  -0.5
NOA                                 pmax    pmax
       comp=Z,182nm,0.7s
NOA                                 MLR     MLR
       comp=Z,84µm,18.0s
NOA    NORSAR Array B    44.40 320  P       P       23 46 16.9  -0.5
       comp=Z,182nm,0.7s,mb6.0,baz=84,slow=7.9,SNR=246
NOA                                 LR      LR      00 05 24.5
       comp=Z,84µm,18.0s,MS6.7,baz=80,slow=37
NOA    NORSAR Array B    44.40 320  P       P       23 46 16.9  -0.5
NOA                                 LR      LR      00 05 24.5
PVCC   Panska Ves        44.47 304⇑iP       P       23 46 18.5  +0.4
PVCC                               ePP      PP      23 48 03.6  +0.7
PVCC                                AMS     AMS     00 05 30.0
       comp=Z,41µm,16.0s
RUE    Ruedersdorf       44.47 307  eP      P       23 46 17.2  -0.9
       comp=Z,236nm,1.2s,mb5.8
TRON   Trondheim         44.53 323⇑iP       P       23 46 17.8  -0.6
BALP   Baler             44.54 113  eP      P       23 46 22.2  +3.0
COP    Copenhagen        44.58 312⇑iP       P       23 46 19.3  +0.4
COP                                e                23 48 03.4
COP                                i S      S       23 52 52.6  +0.6
COP                                 pmax    pmax
       comp=Z,270nm,0.8s,mb6.1
COP                                 MLR     MLR
       comp=Z,21µm,20.0s,MS6.1
COP    Copenhagen        44.58 312⇑iP       P       23 46 19.3  +0.4
       comp=Z,269nm,0.8s,mb6.1
COP                                e                23 48 03.4
COP                                i S      S       23 52 52.6  +0.6
       comp=Z,21µm,20.0s
NAO01  NORSAR Array S    44.59 320  eP      P       23 46 17.7  -1.2
       comp=Z,49nm,0.4s,mb5.7
NAO01                               LR      LR
       comp=Z,91µm,20.0s,MS6.7
YSS    Yuzh-Sakhalins    44.59  61c iP      P       23 46 19.0  -0.1
YSS                                e*SP     sP      23 46 30.0  -2.4
YSS                                i                23 48 06.3
YSS                                i S      S       23 52 53.0  +0.8
YSS                                e                23 53 09.0
YSS                                eSS      SS      23 56 08.0  +4.2
YSS                                 pmax    pmax
       comp=Z,190nm,1.6s,mb5.7
YSS                                 pmax    pmax
       comp=Z,1µm,8.0s
YSS                                 smax
       comp=N,4µm,10.0s
YSS                                 MLR     MLR
       comp=Z,21µm,17.0s,MS6.1
YSS                                 MLR     MLR
       comp=N,9µm,18.0s,MS6.1
YSS                                 MLR     MLR
       comp=E,18µm,18.0s,MS6.1
YSS    Yuzh-Sakhalins    44.59  61  eP      P       23 46 19.6  +0.5
       comp=E,225nm,1.4s,mb5.8
YSS                                 LR      LR
       comp=Z,21µm,20.0s,MS6.1
PRU    Pruhonice         44.62 304⇑iP       P       23 46 19.4  +0.1
PRU                                ePP      PP      23 48 06.8  +2.3
PRU                                eS       S       23 52 54.9  +2.2
PRU                                 AMS     AMS     00 05 50.0
       comp=Z,54µm,18.0s
PRA    Prague            44.67 304 ⇑P       P       23 46 19.0  -0.7
PRA                                 PP      PP      23 48 10.0  +5.0
PRA                                ex       x       23 48 24.0
PRA                                 AMS     AMS     00 07 30.0
SISC   Sisak             44.75 297 i P      P       23 46 20.7  +0.2
ARSA   Arzberg           44.76 300⇑iP       P       23 46 20.4  -0.1
       comp=Z,804nm,3.4s
BRG    Berggiesshubel    44.76 305 i P      P       23 46 20.6  +0.1
BRG                                i *PP    pP      23 46 33.1  +3.2
BRG                                e                23 48 10.9
BRG                                i S      S       23 52 54.0  -0.7
BRG                                i SS     SS      23 56 14.0  +7.0
BRG                                 pmax    pmax
       comp=Z,209nm,1.7s,mb5.7
BRG                                 MLR     MLR
       comp=N,23µm,14.2s,MS6.5
BRG                                 MLR     MLR
       comp=E,38µm,14.2s,MS6.5
BRG                                 MLR     MLR
       comp=Z,55µm,14.2s,MS6.6
BRG    Berggiesshubel    44.76 305 i P      P       23 46 20.6  +0.1
       comp=Z,209nm,1.7s,mb5.7
BRG                                i pP     pP      23 46 33.1  +3.2
BRG                                ePP      PP      23 48 10.9  +5.0
BRG                                i S      S       23 52 54.0  -0.7
BRG                                i SS     SS      23 56 14.0  +7.0
BRG                                 LR      LR
       comp=Z,55µm,14.2s,MS6.6
OSL    Oslo              44.78 318  eP      P       23 46 20.6   0.0
       comp=Z,89nm,0.8s,mb5.7
OSL    Oslo              44.78 318  eP      P       23 46 20.6   0.0
OSL                                 AMb     AMB     23 46 24.6
       comp=Z,89nm,0.8s,mb5.6
KGM    Kluang            44.98 145  P       P       23 46 24.1  +1.4
LUBP   Lubang            45.05 116  eP      P       23 46 24.9  +1.7
MAT    Matsushiro        45.20  76  eP      P       23 46 24.0  -0.2
MAT                                eS       S       23 53 02.0  +0.8
MAT                                 LR      LR
       comp=Z,11µm,20.0s,MS5.8
MAT    Matsushiro        45.20  76  P       P       23 46 23.9  -0.3
MAT                                 S       S       23 53 02.0  +0.8
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MAJO	Matsushiro	45.20	76	*e*P	P	23 46 23.7	-0.5
MAJO				*e*	pP	23 46 35.0	+1.4
MAJO				pmax	pmax		
	comp=Z,303nm,1.5s,mb5.9						
MAJO				MLR	MLR		
	comp=Z,10µm,19.0s,MS5.8						
MAJO	Matsushiro	45.20	76	*e*P	P	23 46 23.7	-0.4
	comp=Z,303nm,1.5s,mb5.9						
MAJO				*e*	pP	23 46 35.0	+1.4
MAJO				LR	LR		
	comp=Z,10µm,19.0s,MS5.8						
PERS	Pernice	45.21	299⇑	*e*P	P	23 46 24.2	+0.1
PERS				*e*	pP	23 46 34.8	+1.2
CLL	Collm	45.23	306⇑	*i*P	P	23 46 24.0	-0.1
CLL				*i* *PP	pP	23 46 35.8	+2.2
CLL				*e*S	S	23 53 04.0	+2.6
CLL				MLR	MLR		
	comp=Z,36µm,22.0s,MS6.3						
CLL	Collm	45.23	306	⇑P	P	23 46 24.0	-0.1
	comp=Z,logA/T=2.4,mb6.0						
CLL				*i*		23 46 35.8	
CLL				*e*		23 48 16.0	
CLL				*i*		23 48 22.7	
CLL				*e*PPP	PPP	23 48 45.0	-7.2
CLL				*e*		23 49 14.0	
CLL				*e*S	S	23 53 04.0	+2.6
CLL				*e*SS	SS	23 56 30.0	+15
DOMB	Dombas	45.31	321⇑	*i*P	P	23 46 24.2	-0.4
	comp=Z,704nm,1.2s,mb6.4						
DOMB	Dombas	45.31	321⇑	*i*P	P	23 46 24.2	-0.4
DOMB				AMb	AMB	23 46 29.1	
	comp=Z,704nm,1.2s,mb6.4						
ASAJ	Asahikawa	45.39	65	LR	LR	00 07 11.0	
	comp=Z,21µm,18.4s,MS6.1,baz=295,slow=38						
KONO	Kongsberg	45.39	318	PFAKE		23 46 40.0	+15
KONO				LR	LR		
	comp=Z,79µm,20.0s,MS6.7						
MOA	Molln	45.40	301⇑	*i*P	P	23 46 25.5	0.0
	comp=Z,904nm,3.5s						
KHC	Kasperske Hory	45.46	303⇑	*i*P	P	23 46 26.0	0.0
KHC				*e*x	x	23 46 37.0	
KHC				*e*PP	PP	23 48 12.4	-0.5
KHC				*e*S	S	23 53 09.1	+4.4
KHC				AMS	AMS	00 08 30.0	
	comp=Z,45µm,17.1s						
GERES	GERESS Array B	45.46	302	P	P	23 46 26.5	+0.5
GERES						23 48 17.4	
GERES				pmax	pmax		
	comp=Z,58nm,0.9s						
GERES				pmax	pmax		
	comp=Z,91nm,1.2s						
GERES	GERESS Array B	45.46	302	P	P	23 46 26.5	+0.4
	comp=Z,58nm,0.9s,mb5.4,baz=64,slow=6.7,SNR=128						
GERES				PP	PP	23 48 17.4	+4.4
	comp=Z,91nm,1.2s,baz=72,slow=4.2,SNR=4.9						
BOJS	Bojanci	45.48	297⇑	*e*P	P	23 46 26.6	+0.3
POLP	Polilio Island	45.50	113	*e*P	P	23 46 29.9	+3.2
OBKA	Obir	45.62	299⇑	*i*P	P	23 46 27.6	+0.2
	comp=Z,2µm,3.3s						
LJU	Ljubljana	45.79	298⇑	*e*P	P	23 46 28.8	+0.1
LJU				*e*	pP	23 46 38.2	+0.1
LJU				*e*PcP	PcP	23 48 00.8	-5.5
LJU				*e*S	S	23 53 12.8	+3.3
LJU				*e*SS	SS	23 56 49.4	+24
BRT	Bari-Castellan	45.79	291	P	P	23 46 29.7	+0.9
NKC	Novy Kostel	45.85	305⇑	*i*P	P	23 46 29.3	+0.2
NKC				*e*PP	PP	23 48 16.1	-0.7
NKC				*e*S	S	23 53 09.9	-0.4
NKC				AMS	AMS	00 06 10.0	
	comp=Z,66µm,14.7s						
WET	Wettzell	45.90	303	*e*P	P	23 46 30.1	+0.6
WET				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.8						
WET	Wettzell	45.90	303	*e*P	P	23 46 30.1	+0.6
	comp=Z,140nm,1.1s,mb5.8						
MOL	Molde	45.94	322⇑	*i*P	P	23 46 30.1	+0.4
	comp=Z,718nm,1.6s,mb6.3						
MOL	Molde	45.94	322⇑	*i*P	P	23 46 30.1	+0.4
MOL				AMb	AMB	23 46 35.2	
	comp=Z,718nm,1.6s,mb6.3						
JAVS	Javornik	46.14	298⇑	*e*P	P	23 46 30.8	-0.6
JAVS				*e*	pP	23 46 41.3	+0.4
BSEG	Bad Segeberg	46.16	310	*e*P	P	23 46 32.3	+0.9
LTRZ	Laterza	46.16	291	*e*P	P	23 46 32.3	+0.5
VOY	Vojsko	46.21	299	*e*P	P	23 46 31.8	-0.2
MUD	Monsted U’grnd	46.21	314⇑	*i*P	P	23 46 32.6	+0.7
MUD				*e*		23 48 20.8	
MUD				*i* S	S	23 53 22.3	+6.9
MUD				*i*		23 56 36.6	
MUD				pmax	pmax		
	comp=Z,390nm,1.0s,mb6.3						
MUD				MLR	MLR		
	comp=Z,49µm,17.0s,MS6.5						
MUD	Monsted U’grnd	46.21	314⇑	*i*P	P	23 46 32.6	+0.7
	comp=Z,393nm,1.0s,mb6.3						
MUD				*e*		23 48 20.8	
MUD				*i* S	S	23 53 22.3	+6.9
MUD				*i*		23 56 36.6	
	comp=Z,49µm,17.0s						
KBA	Koelnbreinsper	46.23	300⇑	*i*P	P	23 46 32.1	0.0
	comp=Z,681nm,2.5s,mb6.1						
KBA	Koelnbreinsper	46.23	300⇑	*i*P	P	23 46 32.1	0.0
KBA				pmax	pmax		
	comp=Z,681nm,2.5s,mb6.1						
MA2	Magadan	46.24	42	*e*P	P	23 46 32.0	-0.1
MA2				*e*		23 48 20.2	
MA2				*e*S	S	23 53 17.5	+1.7
MA2				*e*		23 56 19.8	
MA2				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.5						
MA2				MLR	MLR		
	comp=Z,44µm,25.0s,MS6.3						
MA2	Magadan	46.24	42	*e*P	P	23 46 31.4	-0.7
	comp=Z,89nm,0.9s,mb5.7						
MA2				LR	LR		
	comp=Z,11µm,21.0s,MS5.8						
MOX	Moxa	46.25	305	*e*P	P	23 46 32.2	0.0
MOX				*e*		23 48 22.0	
MOX				pmax	pmax		
	comp=Z,285nm,1.5s,mb6.0						
MOX				MLR	MLR		
	comp=Z,37µm,18.0s,MS6.4						
MOX	Moxa	46.25	305	*e*P	P	23 46 32.2	0.0
	comp=Z,285nm,1.5s,mb6.0						
MOX				*e*		23 48 22.0	
MOX				LR	LR		
	comp=Z,37µm,18.0s,MS6.4						
MOX	Moxa	46.25	305⇑	*i*P	P	23 46 32.2	0.0
	comp=Z,logA/T=2.3,mb6.0						
MOX				PP	PP	23 48 22.0	+1.2
MOX				S	S	23 53 20.0	+4.0
MOX				SS	SS	23 56 34.0	+0.3
MOX				L		00 07 18.0	
LSR	Lussari	46.30	299⇓	*e*P	P	23 46 33.0	+0.3
DRE	Drenchia	46.33	299⇓	*e*P	P	23 46 32.0	-0.9
ENPP	El Nido	46.34	119	*e*P	P	23 46 41.4	+8.0
FGMS	Monte Sant’Ang	46.35	292	*e*P	P	23 46 33.5	+0.4
ROBS	Robic	46.39	299⇑	*e*P	P	23 46 32.5	-0.9
ROBS				*e*		23 46 44.3	
TRI	Trieste	46.40	298	*e*P	P	23 46 33.6	+0.1
PTCC	Patocco-Chiusa	46.44	299	*e*P	P	23 46 33.0	-0.8
SEY	Seymchan	46.45	37	*e*P	P	23 46 33.8	+0.1
SEY				*e*		23 48 22.4	
SEY				*e*PPP	PPP	23 49 13.6	+5.6
SEY				*e*S	S	23 53 18.3	-0.5
SEY						23 56 20.3	
SEY				*e*SS	SS	23 56 40.9	+3.9
SEY				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.8						
SEY				pmax	pmax		
	comp=E,150nm,0.9s						
SEY				smax			
	comp=N,8µm,18.5s						
SEY				smax			
	comp=E,3µm,17.9s						
SEY				MLR	MLR		
	comp=N,61µm,16.0s,MS6.7						
SEY				MLR	MLR		
	comp=E,34µm,18.0s,MS6.7						
SEY				MLR	MLR		
	comp=Z,54µm,18.0s,MS6.5						
COLI	Coloredo	46.51	299⇓	*e*P	P	23 46 34.0	-0.4
SJMP	San Jose	46.55	116	*e*P	P	23 46 34.8	-0.2
GMNA	Gemona	46.56	299	*e*P	P	23 46 34.7	-0.1
BAD	Bernadia	46.57	299⇓	*e*P	P	23 46 35.0	+0.2
RGNG	Rignano Grg	46.61	292	*e*P	P	23 46 36.4	+1.1
ORI	Oriolo Calabro	46.64	290	*e*P	P	23 46 36.5	+1.0
ZOU	Zoufplan	46.64	300⇓	*e*P	P	23 46 35.0	-0.4
BUA	Buia	46.65	299⇓	*e*P	P	23 46 37.0	+1.5
CLZ	Clausthal	46.67	307	*e*P	P	23 46 35.9	+0.4
	comp=Z,130nm,1.1s,mb5.8						
FVI	Forni Avoltri	46.75	300	*e*P	P	23 46 35.8	-0.5
GRA1	Grafenberg Arr	46.77	304	*e*P	P	23 46 37.4	+1.1
	comp=Z,439nm,1.0s,mb6.3						
GRA1				*e*S	S	23 53 26.7	+3.3
GRA1				*e*S	S	23 53 27.9	+4.5
GRF	Grafenberg Arr	46.77	304	*e*P	P	23 46 37.4	+1.1
GRF				*e*S	S	23 53 26.7	+3.3
GRF				pmax	pmax		
	comp=Z,439nm,1.0s,mb6.3						
GRF	Grafenberg Arr	46.77	304	*e*P	P	23 46 37.4	+1.1
GRF				*e*S	S	23 53 26.7	+3.3
GRF				pmax	pmax		
	comp=Z,439nm,1.0s,mb6.3						
GRF				MLR	MLR		
	comp=Z,54µm,19.7s,MS6.5						
GRF	Grafenberg Arr	46.77	304	*e*P	P	23 46 37.4	+1.1
	comp=Z,439nm,1.0s,mb6.3						
GRF				*e*S	S	23 53 26.7	+3.3
GRF				*e*S	S	23 53 27.9	+4.5
GRF				LR	LR		
	comp=Z,54µm,19.7s,MS6.5						
TLI	Talmassons	46.77	299⇓	*e*P	P	23 46 38.0	+1.6
TIP	Timpagrande	46.77	289⇑	*i*P	P	23 46 36.0	-0.6
TIP				*e*		23 46 47.7	
HYA	Hoyanger	46.80	320	*e*P	P	23 46 37.9	+1.4
	comp=Z,422nm,1.6s,mb6.1						
HYA	Hoyanger	46.80	320	*e*P	P	23 46 37.9	+1.4
HYA				AMb	AMB	23 46 43.0	
	comp=Z,422nm,1.6s,mb6.1						
SNART	Snartemo	46.85	317	*e*P	P	23 46 37.4	+0.6
	comp=Z,504nm,1.3s,mb6.3						
SNART	Snartemo	46.85	317	*e*P	P	23 46 37.4	+0.6
SNART				AMb	AMB	23 46 42.0	
	comp=Z,504nm,1.3s,mb6.3						
FG4	Candela	46.87	292	P	P	23 46 38.6	+1.3
PPR	Puerto Princes	46.96	121	*e*P	P	23 46 39.7	+1.4
FG5	Orsara di Pugl	46.98	292	*e*P	P	23 46 39.5	+1.3
BLS5	Blasjo	47.00	318	*e*P	P	23 46 39.0	+0.9
	comp=Z,132nm,0.7s,mb6.0						
BLS5	Blasjo	47.00	318	*e*P	P	23 46 39.0	+0.9
BLS5				AMb	AMB	23 46 43.2	
	comp=Z,132nm,0.7s,mb6.0						
MRLC	Muro Lucano	47.04	291	*e*P	P	23 46 39.0	+0.3
SEST	Monte Rota	47.07	300	P	P	23 46 38.6	-0.2
CIGN	Sant’Elia a Pi	47.09	293	P	P	23 46 39.6	+0.5
GRI	Girifalco	47.16	288	*e*P	P	23 46 40.3	+0.7
FUR	Furstenfeldbru	47.21	302	*e*P	P	23 46 40.8	+0.9
FUR				*e*S	S	23 53 34.9	+5.2
FUR				pmax	pmax		
	comp=Z,472nm,1.1s,mb6.3						
FUR	Furstenfeldbru	47.21	302	*e*P	P	23 46 40.8	+0.9
	comp=Z,472nm,1.1s,mb6.3						
FUR				*e*S	S	23 53 34.9	+5.2
OTRP	Odiongan	47.23	116	*e*P	P	23 46 43.0	+2.5
MGR	Morigerati	47.24	290	*e*P	P	23 46 40.1	-0.1
SGO	Sicignano	47.24	291	*e*P	P	23 46 40.8	+0.6
WTTA	Wattenberg	47.27	301⇑	*i*P	P	23 46 40.2	-0.2
	comp=Z,2µm,2.6s,mb6.5						
WTTA	Wattenberg	47.27	301⇑	*i*P	P	23 46 40.2	-0.2
WTTA				pmax	pmax		
	comp=Z,2µm,2.6s,mb6.5						
WATA	Walderalm	47.28	301⇑	*i*P	P	23 46 40.4	-0.1
	comp=Z,604nm,1.6s,mb6.3						
WATA	Walderalm	47.28	301⇑	*i*P	P	23 46 40.4	-0.1
WATA				pmax	pmax		
	comp=Z,604nm,1.6s,mb6.3						
PSB1	Pescosannita	47.33	292	P	P	23 46 41.5	+0.6
RUND	Rundenannen	47.34	320⇑	*i*P	P	23 46 40.8	+0.1
RUND				AMb	AMB	23 46 45.8	
	comp=Z,413nm,1.3s,mb6.2						
BER	Bergen	47.36	320	*e*P	P	23 46 40.8	-0.1
	comp=Z,483nm,0.9s,mb6.4						
BER	Bergen	47.36	320	*e*P	P	23 46 40.8	-0.1
BER				AMb	AMB	23 46 45.8	
	comp=Z,483nm,0.9s,mb6.5						
BRES	Bressanone	47.40	300	P	P	23 46 40.7	-0.7
ASK	Askoy	47.41	320	*e*P	P	23 46 41.1	-0.1
	comp=Z,789nm,1.4s,mb6.5						
ASK	Askoy	47.41	320	*e*P	P	23 46 41.1	-0.1
ASK				AMb	AMB	23 46 46.3	
	comp=Z,789nm,1.4s,mb6.5						
EGD	Espegrend	47.44	319	*e*P	P	23 46 41.6	+0.1
	comp=Z,621nm,1.4s,mb6.3						
EGD	Espegrend	47.44	319	*e*P	P	23 46 41.6	+0.1
EGD				AMb	AMB	23 46 46.6	
	comp=Z,621nm,1.4s,mb6.3						
CII	Carovilli	47.48	293	*e*P	P	23 46 44.4	+2.2
STAV	Stavanger	47.49	318	*e*P	P	23 46 42.2	+0.2
	comp=Z,322nm,1.1s,mb6.2						
STAV	Stavanger	47.49	318	*e*P	P	23 46 42.2	+0.2
STAV				AMb	AMB	23 46 46.5	
	comp=Z,322nm,1.1s,mb6.2						
SUE	Sulen	47.50	321	*e*P	P	23 46 44.0	+2.0
MIDA	Miranda	47.55	293	P	P	23 46 43.3	+0.7
SQTA	Sankt Quirin	47.56	301⇑	*i*P	P	23 46 42.3	-0.4
	comp=Z,498nm,1.7s,mb6.3						
SQTA	Sankt Quirin	47.56	301⇑	*i*P	P	23 46 42.3	-0.4
SQTA				pmax	pmax		
	comp=Z,498nm,1.7s,mb6.3						
MOTA	Moosalm	47.59	301⇑	*i*P	P	23 46 42.4	-0.5
	comp=Z,199nm,1.3s,mb6.0						
MOTA	Moosalm	47.59	301⇑	*i*P	P	23 46 42.4	-0.5
MOTA				pmax	pmax		
	comp=Z,199nm,1.3s,mb6.0						
RNI2	Rionero Sannit	47.59	293	P	P	23 46 44.0	+1.0
CING	Cingoli	47.61	295	P	P	23 46 43.3	+0.2
TERO	Teramo	47.62	294	P	P	23 46 44.2	+1.0
YUK	Yuzh-Kuril’sk	47.62	64	*e*P	P	23 46 44.0	+0.8
YUK				*e*S	S	23 53 37.0	+1.5
YUK				pmax	pmax		
	comp=N,3µm,2.5s						
YUK				pmax	pmax		
	comp=Z,2µm,2.5s,mb6.8						
YUK				pmax	pmax		
	comp=N,290nm,0.6s						
YUK				pmax	pmax		
	comp=Z,320nm,0.6s,mb6.5						
YUK				smax			
	comp=N,8µm,11.0s						
YUK				MLR	MLR		
	comp=Z,30µm,16.5s,MS6.3						
YUK				MLR	MLR		
	comp=N,19µm,18.0s,MS6.4						
YUK				MLR	MLR		
	comp=E,30µm,17.0s,MS6.4						
INTR	Introdacqua	47.64	293	P	P	23 46 43.5	+0.1
CUYO	Cuyo Island	47.66	118	*e*P	P	23 46 45.2	+1.4
CTI	Castel Tesino	47.67	299	*e*P	P	23 46 42.6	-1.0
ARV	Arcevia	47.74	296	*e*P	P	23 46 44.5	+0.4
SOI	Samo	47.74	288	*e*P	P	23 46 44.4	+0.2
HDH	Heidenheim	47.75	303	P	P	23 46 44.4	+0.3
HDH	Heidenheim	47.75	303⇑	*e*P	P	23 46 44.0	-0.1
CEL	Celeste	47.77	288	P	P	23 46 45.1	+0.6
FSSB	Fossombrone	47.77	296	*e*P	P	23 46 44.3	-0.1
APPI	Appiano	47.80	300	P	P	23 46 45.5	+0.9
PVCP	Virac	47.82	112	*e*P	P	23 46 47.2	+2.2
SDI	San Donato	47.83	293	*e*P	P	23 46 44.7	-0.1
SNTG	Esanatoglia	47.83	295	*e*P	P	23 46 44.8	0.0
AQU	L’Aquila	47.86	294	P	P	23 46 45.5	+0.4
AQU				pmax	pmax		
	comp=Z,550nm,0.9s,mb6.6						
AQU	L’Aquila	47.86	294	*e*P	P	23 46 45.6	+0.6
RFI	Roccamonfina	47.87	293	*e*P	P	23 46 45.9	+0.7
NRCA	Norcia	47.87	295	*e*P	P	23 46 45.3	+0.2
SIND	Sindeldorf	47.88	304	P	P	23 46 45.9	+0.8
SIND	Sindeldorf	47.88	304	*e*P	P	23 46 44.7	-0.4
VVLD	Villa Vallelon	47.89	293	P	P	23 46 45.7	+0.3
RSM	Repubblica di	47.91	296	P	P	23 46 46.5	+1.1
PTQR	Pietraquaria	47.99	294	*e*P	P	23 46 46.8	+0.7
MTTG	Motta San Giov	48.02	288	*e*P	P	23 46 46.9	+0.4
FIAM	Fiamignano	48.09	294	P	P	23 46 47.5	+0.7
MURB	Monte Urbino	48.11	296	P	P	23 46 48.0	+1.0
UBR	Uberruh	48.11	302⇑	*e*P	P	23 46 46.8	-0.1
GUAR	Guarcino	48.14	293	P	P	23 46 47.5	+0.3
BADI	Badiali	48.20	296	P	P	23 46 48.6	+0.9
TOD	Tromm	48.29	305⇑	*e*P	P	23 46 47.7	-0.6
TOD	Tromm	48.29	305⇑	*e*P	P	23 46 48.1	-0.2
KKM	Kota Kinabalu	48.29	127	P	P	23 46 49.7	+1.0
CERT	Cerreto	48.30	294	P	P	23 46 48.5	0.0
TNS	Taunus Mts	48.31	306	*e*P	P	23 46 48.7	+0.3
TNS				*e*S	S	23 53 50.0	+4.8
STU	Stuttgart	48.32	304	*e*P	P	23 46 48.0	-0.5
STU				*e*	pP	23 46 58.9	+0.9
STU				pmax	pmax		
	comp=Z,356nm,1.3s,mb6.2						
STU	Stuttgart	48.32	304	*e*P	P	23 46 48.0	-0.5
	comp=Z,356nm,1.3s,mb6.2						
STU				*e*	pP	23 46 58.9	+0.9
SFI	Santa Sofia	48.32	297	*e*P	P	23 46 49.7	+1.1
BUCH	Bad Urach	48.33	303	P	P	23 46 49.7	+1.1
BUCH	Bad Urach	48.33	303⇑	*e*P	P	23 46 48.4	-0.2
MNS	Montasola	48.34	294	*e*P	P	23 46 48.7	-0.1
BRMO	Bormio	48.35	300	*e*P	P	23 46 48.1	-0.7
CRE	Caprese Michel	48.36	296	*e*P	P	23 46 49.7	+0.8
DAVA	Damuels	48.39	301⇑	*i*P	P	23 46 48.8	-0.3
	comp=Z,1µm,3.4s						
MABI	Malga Bissina	48.41	300	P	P	23 46 48.2	-1.1
VMG	Vicchio	48.50	297	*e*P	P	23 46 51.0	+1.0
WIT	Witteveen	48.56	309⇑	*i*P	P	23 46 50.3	0.0
	comp=Z,481nm,3.9s						
DAVOX	Davos	48.56	301	P	P	23 46 50.0	-0.4
	comp=Z,235nm,1.0s,mb6.2,baz=84,slow=6.8,SNR=87						
SAL	Salo	48.57	299	*e*P	P	23 46 50.7	+0.2
SEI	Scarperia	48.59	297	*e*P	P	23 46 52.2	+1.5
MA9	Marino	48.59	294	*e*P	P	23 46 51.1	+0.3
LBG	Lerchenberg	48.60	304	P	P	23 46 51.2	+0.5
LBG	Lerchenberg	48.60	304⇑	*e*P	P	23 46 50.5	-0.2
GUT	Gutenstein	48.60	303	P	P	23 46 51.1	+0.4
GUT	Gutenstein	48.60	303⇑	*e*P	P	23 46 50.7	0.0
LAV9	Lanuvio	48.60	294	P	P	23 46 51.4	+0.6
BUG	Bochum--Univer	48.63	307	P	P	23 46 52.0	+1.1
AGST	Augusta-Monte	48.68	287	*e*P	P	23 46 51.0	-0.5
FNVD	Fontana Vidola	48.70	297	P	P	23 46 52.8	+1.2
ZCCA	Zocca	48.73	297	*e*P	P	23 46 53.1	+1.3
WTSB	Winterswijk	48.75	308⇑	*i*P	P	23 46 51.0	-0.8
	comp=Z,192nm,4.3s						
SPAK	Spaichingen	48.80	303⇑	*e*P	P	23 46 52.3	+0.1
SPAK	Spaichingen	48.80	303	*e*P	P	23 46 52.3	+0.1
KTD	Kalmit	48.83	305	*e*P	P	23 46 52.5	+0.1
KTD	Kalmit	48.83	305	*e*P	P	23 46 52.2	-0.2
SISB	Singen-Sch Ber	48.83	302	P	P	23 46 53.3	+0.8
GUIM	Jordan	48.87	117	*e*P	P	23 46 56.3	+3.1
TOLF	Tolfa	48.93	294	P	P	23 46 54.6	+1.3
ABH	Alteburg	48.97	305⇑	*e*P	P	23 46 53.6	+0.1
ABH	Alteburg	48.97	305⇑	*e*P	P	23 46 53.4	-0.1
PZI	Palazzolo	48.97	287	P	P	23 46 54.1	+0.4
GSCL	Gusciola	48.99	298	*e*P	P	23 46 54.6	+0.8
BFO	Black Forest	49.01	303	*e*P	P	23 46 53.8	0.0
BFO				*e*S	S	23 53 59.5	+4.5
ERBM	Eremo	49.08	298	*e*P	P	23 46 55.8	+1.3
BDI	Bagni Di Lucca	49.09	297	*e*P	P	23 46 54.1	-0.5
LANF	Langenberg	49.11	304⇑	*e*P	P	23 46 54.5	-0.1
VAE	Valguarnera	49.17	288	P	P	23 46 55.5	+0.3
	comp=Z,138nm,1.0s,mb5.9,baz=314,slow=6.1,SNR=12						
SARO	Sassorosso	49.18	297	P	P	23 46 56.0	+0.8
GRFL	Gerfalco	49.20	296	*e*P	P	23 46 55.0	-0.4
VLC	Villacollemand	49.20	297	*e*P	P	23 46 55.4	+0.1
	comp=Z,798nm,1.1s,mb6.7						
VALM		49.22	298	P	P	23 46 55.4	-0.1
DGAR	Diego Garcia	49.25	189	*e*P	P	23 46 57.8	+1.7
DGAR				pmax	pmax		
	comp=Z,300nm,1.1s,mb6.2						
DGAR	Diego Garcia	49.25	189	*e*P	P	23 46 55.4	-0.7
	comp=Z,296nm,1.1s,mb6.2						
DGAR				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
PII	Pisa	49.27	297	*e*P	P	23 46 55.2	-0.8
GRAM		49.28	298	P	P	23 46 56.5	+0.5
RUP	Ruppelstein	49.33	305⇑	*e*P	P	23 46 56.2	-0.1
RUP	Ruppelstein	49.33	305⇑	*e*P	P	23 46 56.1	-0.2
BACM		49.36	298	P	P	23 46 56.9	+0.2
VINC	Vinca	49.36	298	P	P	23 46 57.2	+0.5
FELD	Feldberg	49.37	303⇑	*e*P	P	23 46 56.0	-0.7
KIZ	Kirchzarten	49.40	303	P	P	23 46 57.4	+0.5
KIZ	Kirchzarten	49.40	303	*e*P	P	23 46 56.1	-0.8
CODM		49.47	298	P	P	23 46 58.0	+0.6
LIBD	Limburg	49.53	303⇑	*e*P	P	23 46 57.5	-0.3
LIBD	Limburg	49.53	303⇑	*e*P	P	23 46 57.6	-0.2
BOB	Bobbio (Coli)	49.59	299	*e*P	P	23 46 58.9	+0.5
WLS	Welschbruch	49.59	304⇑	*e*P	P	23 46 57.9	-0.4
VAI	Varese	49.61	300	*e*P	P	23 46 56.9	-1.6
HGN	Heimansgroeve	49.65	307⇑	*i*P	P	23 46 58.1	-0.7
	comp=Z,120nm,2.2s,mb5.5						
HGN				*e*PP	PP	23 48 46.7	-7.1
HGN				*e*x	x	23 51 06.5	
HGN				*e*S	S	23 54 08.7	+4.8
HGN				*e*SS	ScS	23 56 35.0	-10
ECH	Echery	49.78	304⇑	*e*P	P	23 46 59.2	-0.6
BBS	Basel-Blauen	49.83	302⇑	*e*P	P	23 46 59.2	-1.0
BBS	Basel-Blauen	49.83	302⇑	*e*P	P	23 46 59.4	-0.8
WLF	Walferdange	49.89	306	P	P	23 47 01.4	+0.8
WLF				pmax	pmax		
	comp=Z,250nm,1.2s,mb6.1						
WLF	Walferdange	49.89	306	*e*P	P	23 47 00.0	-0.6
	comp=Z,247nm,1.2s,mb6.1						
WLF				*e*	pP	23 47 11.0	+0.8
MOF	Molkenrain	49.93	303⇑	*e*P	P	23 47 00.7	-0.2
LLP	Lapu-Lapu	50.02	116	*e*P	P	23 47 03.4	+1.4
GENL	Genova Univers	50.04	298	P	P	23 47 00.3	-1.6
MCGN	Macugnaga	50.09	300	*e*P	P	23 47 02.5	+0.4
HINF	Hinteralfeld	50.12	303	*e*P	P	23 47 01.8	-0.6
	comp=Z,407nm,0.9s,mb6.1						
HINF	Hinteralfeld	50.12	303	*e*P	P	23 47 01.8	-0.6
HINF				pmax	pmax		
	comp=Z,204nm,0.9s,mb6.2						
ORX	Oropa	50.21	300	P	P	23 47 01.0	-2.1
ORO	Oropa	50.22	300	*e*P	P	23 47 02.1	-1.0
PCP	Pian Castagno	50.27	299	P	P	23 47 03.6	0.0
LOMF	Lomont	50.30	303⇑	*e*P	P	23 47 03.1	-0.7
HAU	Haudompre	50.36	304	*e*P	P	23 47 03.7	-0.5
HAU				*e*R			
	comp=Z,51µm,19.5s						
TBP	Tagbilaran	50.40	116	*e*P	P	23 47 05.2	+0.2
TRAV		50.41	300	P	P	23 47 02.5	-2.2
THEF	They Montfort	50.51	304⇑	*e*P	P	23 47 05.1	-0.2
GIVF	Givet	50.54	307	*e*P	P	23 47 05.4	-0.2
	comp=Z,303nm,1.0s,mb5.9						
GIVF	Givet	50.54	307	*e*P	P	23 47 05.4	-0.2
GIVF				pmax	pmax		
	comp=Z,151nm,1.0s,mb5.9						
LRW	Lerwick	50.57	320	*e*P	P	23 47 06.0	+0.3
JMIC	Jan Mayen	50.59	335	P	P	23 47 05.5	-0.2
	comp=Z,82nm,0.8s,mb5.7,baz=138,slow=7.5,SNR=2.4						
JMIC				LR	LR	00 12 15.6	
	comp=Z,11µm,18.1s,MS5.9,baz=246,slow=40						
FIN	Finale Ligure	50.62	298	*e*P	P	23 47 05.7	-0.5
TSM	Tawau	50.67	127	P	P	23 47 07.7	+0.6
WAL1	Walls	50.74	321	*e*P	P	23 47 06.7	-0.3
PGF	Pioggiola	50.77	296	*e*P	P	23 47 07.0	-0.4
	comp=Z,1µm,1.1s,mb6.3						
PGF	Pioggiola	50.77	296	*e*P	P	23 47 07.0	-0.4
PGF				pmax	pmax		
	comp=Z,517nm,1.1s,mb6.4						
OG01	Vacheresse	50.78	301⇑	*e*P	P	23 47 03.3	-4.1
ROB	Roburent	50.81	299	P	P	23 47 07.8	+0.1
LSD	Ceresole Reale	50.82	300	P	P	23 47 07.5	-0.2
RSP	Reno Superiore	50.87	300	P	P	23 47 06.4	-1.7
BAIF	Baives	50.93	307	*e*P	P	23 47 08.3	-0.2
	comp=Z,256nm,0.9s,mb5.8						
BAIF	Baives	50.93	307	*e*P	P	23 47 08.3	-0.2
BAIF				pmax	pmax		
	comp=Z,128nm,0.9s,mb5.8						
IPIL	Ipil	50.94	119	*e*P	P	23 47 12.7	+3.6
IMI	Imperia	50.95	298	*e*P	P	23 47 08.9	+0.2
MONE	Monesi	50.97	298	P	P	23 47 08.2	-0.7
MEZF	Maizieres J’vi	50.98	305	*e*P	P	23 47 08.8	-0.1
	comp=Z,2µm,1.3s,mb6.5						
BHB	Bricherasio	50.99	299	P	P	23 47 07.6	-1.4
OSPF	L’Ospedale	51.01	295	*e*P	P	23 47 09.6	+0.4
BILL	Bilibino	51.04	29	*e*P	P	23 47 08.8	-0.3
BILL				*i*		23 49 08.6	
BILL				*i* S	S	23 54 24.8	+1.9
BILL				pmax	pmax		
	comp=Z,68nm,1.2s,mb5.5						
BILL				MLR	MLR		
	comp=Z,25µm,18.0s,MS6.3						
BILL	Bilibino	51.04	29	*e*P	P	23 47 09.1	-0.1
	comp=Z,275nm,1.4s,mb6.0						
BILL				LR	LR		

	comp=Z,23µm,19.0s,MS6.2						
FENE	Fenestrelle	51.05	300	P	P	23 47 07.5	-1.9
CABF	La Chapelle	51.05	302	*e*P	P	23 47 08.7	-0.8
	comp=Z,421nm,1.2s,mb6.0						
CABF	La Chapelle	51.05	302	*e*P	P	23 47 08.7	-0.8
CABF				pmax	pmax		
	comp=Z,211nm,1.2s,mb6.0						
LPG	La Plagne	51.06	300	*e*P	P	23 47 09.7	+0.1
	comp=Z,1µm,1.1s,mb6.4						
LPG	La Plagne	51.06	300	*e*P	P	23 47 09.7	+0.1
LPG				pmax	pmax		
	comp=Z,523nm,1.1s,mb6.4						
LPL	La Plagne	51.07	300	*e*P	P	23 47 09.8	+0.2
	comp=Z,2µm,1.2s,mb6.5						
LPL	La Plagne	51.07	300	*e*P	P	23 47 09.8	+0.2
LPL				pmax	pmax		
	comp=Z,763nm,1.2s,mb6.5						
NEGI	Negi	51.10	298	P	P	23 47 09.6	-0.3
ENR	Entracque	51.13	299	P	P	23 47 08.8	-1.3
DOI	San Damiano	51.13	299	*e*P	P	23 47 09.0	-1.1
SAOF	Saorge	51.14	298	⇑*e*P	P	23 47 09.5	-0.7
STV2	Anna di Valdie	51.19	299	P	P	23 47 10.0	-0.5
STV	Sta Anna Valdi	51.19	299	P	P	23 47 09.7	-0.9
OG22	Abries	51.20	300	⇑*e*P	P	23 47 10.1	-0.6
AUTN	L'Aution	51.22	298	*e*P	P	23 47 10.9	+0.1
PZZ	Prazzo	51.23	299	P	P	23 47 10.5	-0.4
RRL	Cesana Torines	51.27	300	P	P	23 47 11.0	-0.2
SBF	Sospel	51.27	298	*e*P	P	23 47 10.9	-0.3
	comp=Z,816nm,0.9s,mb6.4						
BNI	Bardonecchia	51.29	300	*e*P	P	23 47 10.6	-0.7
BNI				pmax	pmax		
	comp=Z,794nm,1.2s,mb6.5						
BNI	Bardonecchia	51.29	300	*e*P	P	23 47 10.6	-0.7
	comp=Z,794nm,1.2s,mb6.5						
TOUF	Mont Tournerai	51.33	298	*e*P	P	23 47 11.3	-0.3
MBDF	Montbardon	51.36	299	*e*P	P	23 47 11.1	-0.7
	comp=Z,662nm,1.1s,mb6.2						
MBDF	Montbardon	51.36	299	*e*P	P	23 47 11.1	-0.7
MBDF				pmax	pmax		
	comp=Z,331nm,1.1s,mb6.2						
SURF	Saint Ours	51.43	299	⇑*e*P	P	23 47 12.1	-0.3
MVIF	Mont Vial	51.44	298	P	P	23 47 13.4	+0.9
GDM	Grand'Maison	51.59	300	⇑*e*P	P	23 47 13.0	-0.6
DAG	Danmarks Havn	51.65	343	⇓*i*P	P	23 47 13.0	-0.6
DAG				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.7						
DAG				MLR	MLR		
	comp=Z,37µm,18.0s,MS6.5						
DAG				MLR	MLR		
	comp=N,10µm,22.0s,MS6.4						
DAG				MLR	MLR		
	comp=E,35µm,20.0s,MS6.4						
DAG	Danmarks Havn	51.65	343	⇓*i*P	P	23 47 13.0	-0.6
	comp=E,1µm,1.5s,mb6.7						
	comp=Z,37µm,18.0s						
GRN	Grenoble	51.81	300	⇑*e*P	P	23 47 15.1	-0.2
VSL	Villasalto	51.82	292	*e*P	P	23 47 14.5	-0.9
	comp=Z,147nm,1.0s,mb5.9						
ORIF	Oris-en-Rattie	51.86	300	*e*P	P	23 47 14.7	-0.9
	comp=Z,319nm,0.8s,mb6.0						
ORIF				*e*R			
	comp=Z,32µm,17.5s						
FRF	La Foret Royal	51.92	298	*e*P	P	23 47 15.4	-0.7
	comp=Z,931nm,1.1s,mb6.3						
FRF	La Foret Royal	51.92	298	*e*P	P	23 47 15.4	-0.7
FRF				pmax	pmax		
	comp=Z,465nm,1.1s,mb6.3						
OG25	Le Caire	51.96	299	⇑*e*P	P	23 47 13.8	-2.6
MENF	Mencas	51.97	308	*e*P	P	23 47 15.6	-0.8
LMR	La Mourre	52.10	298	*e*P	P	23 47 16.9	-0.6
	comp=Z,788nm,1.2s,mb6.2						
LMR	La Mourre	52.10	298	*e*P	P	23 47 16.9	-0.6
LMR				pmax	pmax		
	comp=Z,394nm,1.2s,mb6.2						
LWH	Whinny Nab	52.20	313	*e*P	P	23 47 17.4	-0.6
MLA1	Latheron	52.21	318	*e*P	P	23 47 17.3	-0.8
TAVF	Tavernes	52.28	298	*e*P	P	23 47 19.3	+0.5
PET	Petropavlovsk	52.28	49	*e*P	P	23 47 18.5	-0.2
PET				*e*		23 48 27.4	
PET				*e*		23 49 23.7	
PET				*e*PPP	PPP	23 50 23.4	+0.8
PET				*e*S	S	23 54 41.5	+1.3
PET				*e*		23 57 01.6	
PET				pmax	pmax		
	comp=Z,1µm,18.7s						
PET				pmax	pmax		
	comp=Z,112nm,1.2s,mb5.7						
PET				pmax	pmax		
	comp=Z,1µm,13.2s						
PET	Petropavlovsk	52.28	49	PFAKE		23 47 30.0	+11
PET				LR	LR		
	comp=Z,9µm,20.0s,MS5.8						
LMK	Market Rasen	52.32	312	*e*P	P	23 47 18.6	-0.4
OCF	Saint Nazaire	52.37	300	⇑*e*P	P	23 47 19.2	-0.3
OG26	St.-Nazaire-De	52.37	300	⇑*e*P	P	23 47 19.2	-0.3
VILF	Villemus	52.41	299	*e*P	P	23 47 21.5	+1.7
MCD	Coleburn Disti	52.41	318	*e*P	P	23 47 18.8	-0.8
SMRF	Simiane la Rot	52.45	299	*e*P	P	23 47 19.6	-0.5
	comp=Z,466nm,1.0s,mb6.0						
SMF	Signal de Mont	52.46	303	*e*P	P	23 47 19.0	-1.1
	comp=Z,464nm,0.9s,mb6.1						
LCP	Cassop	52.49	314	*e*P	P	23 47 20.1	-0.1
SSF	Saint Saulge	52.51	303	*e*P	P	23 47 19.3	-1.2
	comp=Z,551nm,1.4s,mb6.0						
PUYF	Puyloubier	52.55	298	*e*P	P	23 47 21.3	+0.4
BERF	Bertagne	52.65	298	*e*P	P	23 47 22.1	+0.5
EDU	Dundee	52.65	316	*e*P	P	23 47 21.6	+0.1
VIVF	Saint-Julien-l	52.67	300	*e*P	P	23 47 20.9	-0.8
	comp=Z,575nm,0.9s,mb6.2						
AVF	Avril sur Loir	52.71	303	*e*P	P	23 47 21.0	-1.0
	comp=Z,930nm,1.1s,mb6.3						
TREF	Trevaresse	52.72	299	*e*P	P	23 47 22.8	+0.7
PRAF	Pradon	52.79	299	P	P	23 47 23.6	+1.0
HPK	Haverah Park	52.86	313	*e*P	P	23 47 22.8	-0.2
PLDF	La Plantade	52.88	302	⇑*e*P	P	23 47 22.2	-1.1
HYF	Humbligny	52.96	304	*e*P	P	23 47 23.0	-0.9
EDI	Edinburgh	52.97	316	*e*P	P	23 47 22.5	-1.3
COLF	Collangettes	53.02	301	⇑*e*P	P	23 47 23.6	-0.7
MDO	Dochfour	53.02	318	*e*P	P	23 47 22.7	-1.4
BTA	Talkin	53.08	314	*e*P	P	23 47 23.4	-1.2
BBH	Bruntsheil	53.12	315	*e*P	P	23 47 23.3	-1.7
BGF	Bois d'Agland	53.12	303	*e*P	P	23 47 24.0	-1.1
	comp=Z,308nm,1.0s,mb5.9						
EAU	Auchinoon	53.13	316	*e*P	P	23 47 24.3	-0.7
EAU				AMb	AMB	23 47 29.1	
	comp=Z,564nm,1.7s,mb6.2						
LHO	Holmfirth	53.14	313	*e*P	P	23 47 24.5	-0.6
AGO	Saint Agoulin	53.15	302	⇑*e*P	P	23 47 24.5	-0.8
EKA	Eskdalemuir Ar	53.17	315	P	P	23 47 24.2	-1.1
EKA						23 49 23.2	
EKA				pmax	pmax		
	comp=Z,108nm,0.8s						
EKA				pmax	pmax		
	comp=Z,32nm,0.8s						
EKA	Eskdalemuir Ar	53.17	315	P	P	23 47 24.1	-1.1
	comp=Z,108nm,0.8s,mb5.8,baz=74,slow=5.8,SNR=89						
EKA				PP	PP	23 49 23.2	-3.6
	comp=Z,32nm,0.8s,baz=78,slow=9.1,SNR=3.6						
ESK	Eskdalemuir	53.20	315	P	P	23 47 24.6	-0.9
ESK				pmax	pmax		
	comp=Z,290nm,1.1s,mb6.1						
ESK	Eskdalemuir	53.20	315	*e*P	P	23 47 23.3	-2.2
	comp=Z,289nm,1.1s,mb6.1						
ESK				LR	LR		
	comp=Z,11µm,20.0s,MS5.9						
ESK	Eskdalemuir	53.20	315	*e*P	P	23 47 24.3	-1.2
ESK				AMb	AMB	23 47 28.7	
	comp=Z,287nm,1.1s,mb6.1						
BDL	Dobcross Hall	53.25	314	*e*P	P	23 47 25.0	-0.9
PYM	Petit Puy Mans	53.36	302	⇑*e*P	P	23 47 26.2	-0.6
PCOU	Corrie	53.42	316	*e*P	P	23 47 26.1	-1.0
LBL	Lubilhac	53.42	301	⇑*e*P	P	23 47 26.4	-0.9
BBO1	Bothel	53.44	314	*e*P	P	23 47 25.6	-1.6
DAV	Davao City (W)	53.47	117	*e*P	P	23 47 33.0	+5.0
EAB	Aberfoyle	53.47	316	*e*P	P	23 47 26.3	-1.2
EAB				AMb	AMB	23 47 31.4	
	comp=Z,231nm,1.7s,mb5.8						
BWH	Wardlaw	53.49	315	*e*P	P	23 47 26.4	-1.2
LASF	Ste Croix	53.53	300	*e*P	P	23 47 27.5	-0.5
	comp=Z,1µm,1.2s,mb6.4						
PCA1	Carrot	53.61	316	*e*P	P	23 47 27.7	-0.8
TCF	Toulx Ste Croi	53.64	303	*e*P	P	23 47 28.1	-0.7
	comp=Z,386nm,1.0s,mb6.0						
VERF	Verneugheol	53.69	302	⇑*e*P	P	23 47 28.8	-0.4
FRNF	Fournols	53.80	302	⇑*e*P	P	23 47 32.3	+2.3
PMSU	Muirshiel	53.81	316	*e*P	P	23 47 29.8	-0.2
LDF	La Druitiere	54.11	306	*e*P	P	23 47 30.9	-1.3
	comp=Z,382nm,1.1s,mb6.0						
HLM1	Long Mynd	54.11	312	*e*P	P	23 47 31.3	-0.8
HLM1				AMb	AMB	23 47 35.6	
	comp=Z,382nm,1.2s,mb6.2						
HAE	Alders End	54.12	311	*e*P	P	23 47 31.1	-1.1
HAE				AMb	AMB	23 47 36.3	
	comp=Z,672nm,1.6s,mb6.3						
SBD1	Bryn Du	54.17	312	*e*P	P	23 47 31.7	-0.9
GAL1	Galloway	54.17	315	*e*P	P	23 47 31.2	-1.4
FLN	La Foliniere	54.26	307	*e*P	P	23 47 31.8	-1.5
	comp=Z,236nm,1.0s,mb5.8						
FLN				*e*R			
	comp=Z,27µm,18.2s						
SSP1	Stoney Pound	54.28	312	*e*P	P	23 47 32.5	-1.0
CAF	Calviac	54.31	301	*e*P	P	23 47 33.4	-0.4
	comp=Z,538nm,1.2s,mb6.1						
WPM1	Penmaenmawr	54.38	313	*e*P	P	23 47 33.3	-0.9
WPM1				AMb	AMB	23 47 37.5	
	comp=Z,388nm,1.4s,mb6.2						
MCH1	Michaelchurch	54.39	311	*e*P	P	23 47 33.2	-1.1
HGH	Gray Hill	54.42	311	*e*P	P	23 47 32.8	-1.7
HGH				AMb	AMB	23 47 37.8	
	comp=Z,672nm,1.2s,mb6.5						
WIM	Isle of Man	54.44	314	*e*P	P	23 47 33.9	-0.7
WIM				AMb	AMB	23 47 39.6	
	comp=Z,430nm,1.5s,mb6.2						
RJF	Les Rejaudoux	54.50	302	*e*P	P	23 47 34.7	-0.4
	comp=Z,509nm,0.9s,mb6.1						
HTR	Trewern Hill	54.51	311	*e*P	P	23 47 34.1	-1.0
HTR				AMb	AMB	23 47 38.5	
	comp=Z,613nm,1.1s,mb6.5						
CMAH	Djebel Manchou	54.52	290	P	P	23 47 36.0	+0.6
WME	Myndd Eilian	54.54	313	*e*P	P	23 47 34.6	-0.7
WME				AMb	AMB	23 47 38.6	
	comp=Z,116nm,1.6s,mb5.7						
GRR	Gorron	54.64	306	*e*P	P	23 47 34.7	-1.5
	comp=Z,501nm,1.0s,mb6.2						
WCB1	Church Bay	54.68	313	*e*P	P	23 47 35.5	-0.9
WCB1				AMb	AMB	23 47 40.4	
	comp=Z,278nm,1.4s,mb6.1						
YRC	Rhoscolyn	54.75	313	*e*P	P	23 47 35.5	-1.4
YRC				AMb	AMB	23 47 40.2	
	comp=Z,289nm,1.5s,mb6.1						
YRE	Yr Eifl	54.78	313	*e*P	P	23 47 35.7	-1.4
CAEH	'Ain El Ouahch	54.84	291	P	P	23 47 39.0	+1.2
SJAF	Saint Jean de	54.87	298	*e*P	P	23 47 36.6	-1.4
EJON	La Jonquera	54.88	298	P	P	23 47 37.6	-0.4
	comp=Z,124nm,0.9s,mb5.9						
LRDF	Laroque-de-Fa	54.89	299	*e*P	P	23 47 37.0	-1.1
MTLF	Montolieu	54.92	300	*e*P	P	23 47 37.7	-0.6
	comp=Z,759nm,1.1s,mb6.3						
SCO	Scoresbysund	54.94	336	*i* P	P	23 47 38.9	+0.8
	comp=Z,32nm,1.1s,mb5.3						
MFF	Saint Martin d	54.97	304	*e*P	P	23 47 37.1	-1.6
	comp=Z,534nm,1.3s,mb6.1						
JLP	Les Platons	55.02	308	*e*P	P	23 47 37.6	-1.3
FILF	Fillols	55.05	299	*e*P	P	23 47 38.8	-0.4
GMM	Mts of Mourne	55.09	314	*e*P	P	23 47 38.1	-1.3
CKFL	Kef-Lekhel	55.12	290	P	P	23 47 39.5	-0.4
HSA	Swansea	55.14	311	*e*P	P	23 47 38.3	-1.5
LFF	La Frestale	55.15	302	*e*P	P	23 47 39.4	-0.6
	comp=Z,936nm,1.0s,mb6.5						
HEX	Exmoor	55.23	310	*e*P	P	23 47 39.4	-1.0
LPEF	Le Peyrat	55.30	299	*e*P	P	23 47 40.3	-0.8
LCHF	La Chataignera	55.31	304	⇑*e*P	P	23 47 40.5	-0.6
CASM	Ain Smara	55.35	290	P	P	23 47 41.0	-0.5
CTEI	Djebel Teioual	55.51	290	P	P	23 47 42.0	-0.7
DFRA	Djebel Bou Aff	55.64	291	P	P	23 47 45.0	+1.4
SGMF	Saint Gilles	55.72	307	*e*P	P	23 47 42.8	-1.2
	comp=Z,504nm,1.1s,mb6.2						
SGMF	Saint Gilles	55.72	307	*e*P	P	23 47 42.8	-1.2
SGMF				pmax	pmax		
	comp=Z,252nm,1.1s,mb6.2						
DSB	Dublin	55.74	314	*e*P	P	23 47 44.1	0.0
	comp=Z,82nm,1.1s,mb5.7						
DSB				*e*pP	pP	23 47 50.1	-3.6
DMUB	Kingscourt	55.74	314	*e*P	P	23 47 43.0	-1.1
DLF	Lyons Farm	55.80	314	⇑*i*P	P	23 47 43.3	-1.2
MLS	Moulis	55.82	300	*e*P	P	23 47 43.6	-1.2
LRYF	La Roche-sur-Y	55.85	305	⇑*e*P	P	23 47 43.9	-1.1
SALF	Salau	55.85	299	*e*P	P	23 47 44.6	-0.4
COCO	West Island	55.96	159	PFAKE		23 48 00.0	+14
COCO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
EMIR	Miracle	56.03	298	P	P	23 47 46.4	+0.1
	comp=Z,408nm,1.1s,mb6.4						
MELF	Melles	56.08	300	*e*P	P	23 47 47.5	+0.8
ROSF	Rostrenen	56.11	307	*e*P	P	23 47 45.6	-1.2
	comp=Z,282nm,1.0s,mb5.9						
ROSF	Rostrenen	56.11	307	*e*P	P	23 47 45.6	-1.2
ROSF				pmax	pmax		
	comp=Z,141nm,1.0s,mb6.0						
SET	Setif	56.15	291	P	P	23 47 49.0	+1.8
DCN	Croghan	56.18	314	⇑*i*P	P	23 47 46.4	-0.8
QUIF	Quistinic	56.23	307	*e*P	P	23 47 46.4	-1.3
	comp=Z,441nm,1.1s,mb6.1						
QUIF	Quistinic	56.23	307	*e*P	P	23 47 46.4	-1.3
QUIF				pmax	pmax		
	comp=Z,221nm,1.1s,mb6.1						
EPF	Esparros	56.28	300	*e*P	P	23 47 46.5	-1.6
	comp=Z,316nm,1.1s,mb6.0						
EPF	Esparros	56.28	300	*e*P	P	23 47 46.5	-1.6
EPF				pmax	pmax		
	comp=Z,158nm,1.0s,mb6.0						
RESF	Ens	56.38	300	*e*P	P	23 47 48.4	-0.5
CRQ2	Rosemanowes 2	56.41	310	*e*P	P	23 47 47.8	-1.1
CRQ2				AMb	AMB	23 47 53.9	
	comp=Z,202nm,1.8s,mb5.8						
CMA1	Manaccan	56.42	310	*e*P	P	23 47 47.8	-1.2
LABF	Labassere	56.44	300	*e*P	P	23 47 49.0	-0.3
CGW	Gweek	56.47	310	*e*P	P	23 47 48.0	-1.4
VIEF	Viey	56.55	300	*e*P	P	23 47 49.5	-0.6
EBIE	Bielsa	56.57	300	P	P	23 47 50.5	+0.3
	comp=Z,220nm,1.0s,mb6.1						
EPOB	Poblet	56.59	298	P	P	23 47 50.1	-0.2
	comp=Z,208nm,0.9s,mb6.2						
REYF	Montagne du Re	56.73	300	*e*P	P	23 47 50.8	-0.6
ETSF	Etsaut	56.92	300	*e*P	P	23 47 52.2	-0.5
	comp=Z,509nm,0.9s,mb6.2						
ETSF	Etsaut	56.92	300	*e*P	P	23 47 52.2	-0.5
ETSF				pmax	pmax		
	comp=Z,254nm,0.9s,mb6.2						
FDAF	Les Forges d'A	56.97	300	*e*P	P	23 47 50.6	-2.5
KMBO	Kilima Mbogo	57.12	233	P	P	23 47 54.0	-0.5
	comp=Z,5.9nm,0.8s,baz=41,slow=11,SNR=21						
KMBO				LR	LR	00 15 13.1	
	comp=Z,11µm,19.4s,MS6.0,baz=39,slow=39						
KMBO	Kilima Mbogo	57.12	233	*e*P	P	23 47 54.0	-0.5
	comp=Z,84nm,1.3s,mb5.6						
KMBO				LR	LR		
	comp=Z,11µm,19.0s,MS6.0						
LARF	Larrau	57.13	301	*e*P	P	23 47 55.0	+0.8
OSSF	Osses	57.21	301	*e*P	P	23 47 54.3	-0.4
EBR	Ebro Roquetas	57.23	298	*e*P	P	23 47 54.0	-0.9
SJPF	Ste Jean	57.25	301	*e*P	P	23 47 54.0	-1.0
	comp=Z,346nm,1.0s,mb6.0						
SJPF	Ste Jean	57.25	301	*e*P	P	23 47 54.0	-1.0
SJPF				pmax	pmax		
	comp=Z,173nm,1.0s,mb6.0						
ERTA	Horta de San J	57.27	298	P	P	23 47 54.8	-0.4
	comp=Z,450nm,1.0s,mb6.5						
EALK	Alkurruntz	57.38	301	P	P	23 47 55.8	-0.1
	comp=Z,261nm,1.1s,mb6.2						
BORG	Borgarnes	57.40	330	P	P	23 47 56.3	+0.6
	comp=Z,46nm,0.9s,mb5.5,baz=92,slow=5.3,SNR=7.0						
BORG	Borgarnes	57.40	330	*e*P	P	23 47 55.4	-0.4
	comp=Z,521nm,2.0s,mb6.2						
BORG				LR	LR		
	comp=Z,9µm,19.0s,MS5.9						
ESAC	San Caprasio	57.43	299	P	P	23 47 56.2	-0.1
	comp=Z,587nm,0.9s,mb6.6						
ABA	Alger-Bouzarea	57.49	292	P	P	23 47 58.0	+1.2
EIBI	Ibiza	57.54	295	P	P	23 47 58.3	+1.2
	comp=Z,385nm,0.9s,mb6.4						
EMHD	Djebel Mahouad	57.85	292	P	P	23 48 02.0	+2.7
EMOS	Mosqueruela	58.10	298	P	P	23 48 01.4	+0.4
	comp=Z,337nm,0.9s,mb6.4						
SUMG	Summit	58.24	342	*e*P	P	23 48 00.9	-0.7
	comp=Z,178nm,1.0s,mb6.0						
VAL	Valentia	58.43	313	*e*P	P	23 48 03.0	-0.2
ELAN	Lanestosa	58.61	302	P	P	23 48 04.9	+0.4
	comp=Z,484nm,1.1s,mb6.4						
EBEN	Beniarda	58.76	296	P	P	23 48 06.5	+0.8
	comp=Z,214nm,0.9s,mb6.2						
EBNR	Beni Rached	58.80	293	P	P	23 48 06.0	+0.1
ECHA	Ech Chlef	58.98	293	P	P	23 48 07.0	-0.2
EANR	'Ain N'Sour	59.27	292	P	P	23 48 10.0	+0.8
ETRT	Tiaret	59.42	292	P	P	23 48 10.5	+0.2
ETOB	Tobarra	59.68	296	P	P	23 48 12.5	+0.5
	comp=Z,202nm,0.8s,mb6.2						
EARI	Arriondas	59.70	303	P	P	23 48 11.1	-1.0
	comp=Z,264nm,1.5s,mb6.0						
CART	Cartagena	59.86	295	*e*P	P	23 48 11.3	-2.0
	comp=Z,464nm,1.0s,mb6.5						
CART				*e*		23 48 23.7	
EMUR	La Murta	59.89	295	P	P	23 48 13.2	-0.3
	comp=Z,468nm,0.9s,mb6.5						
FX1	Attu Island--F	60.23	44	*e*P	P	23 48 14.7	-0.8
EVIA	Vianos	60.32	297	P	P	23 48 15.6	-0.8
EVIA				pmax	pmax		
	comp=Z,352nm,0.9s,mb6.4						
EVIA	Vianos	60.32	297	P	P	23 48 15.6	-0.8
	comp=Z,352nm,0.9s,mb6.4						
USTO	Oran	60.52	293	P	pP	23 48 27.0	-0.6
ESDC	Sonseca Array	60.75	299	P	P	23 48 18.2	-1.1
	comp=Z,127nm,0.8s,mb6.1,baz=55,slow=7.1,SNR=63						
ESDC				PP	PP	23 50 29.9	-5.4
	comp=Z,28nm,1.1s,baz=53,slow=6.4,SNR=2.0						
ESDC				PKP2bc		00 17 47.1	
	comp=Z,0.9nm,0.8s,baz=225,slow=2.1,SNR=4.8						
ESDC	Sonseca Array	60.75	299	⇑P	P	23 48 18.0	-1.3
	comp=Z,182nm,1.0s,mb6.2						
ESLA	Sonseca Array	60.75	299	*e*P	P	23 48 17.4	-1.9
	comp=Z,96nm,1.1s,mb5.8						
ESLA				*e*		23 48 29.4	
ESLA				LR	LR		
	comp=Z,101µm,21.0s,MS6.9						
MBAR	Mbarara	60.76	239	*e*P	P	23 48 16.4	-3.3
MBAR				*e**PP	pP	23 48 25.5	-4.0
MBAR				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.9						
MBAR				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
MBAR	Mbarara	60.76	239	*e*P	P	23 48 16.4	-3.3
	comp=Z,78nm,0.8s,mb5.9						
MBAR				*e*pP	pP	23 48 25.5	-3.9
MBAR				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
SMY	Shemya	60.79	44	PFAKE		23 48 30.0	+11
SMY				LR	LR		
	comp=Z,11µm,20.0s,MS6.0						
EPON	Pontenova	60.90	304	P	P	23 48 19.8	-0.4
	comp=Z,215nm,1.4s,mb6.1						
OTSS	Djebel Tessala	60.93	293	P	P	23 48 23.0	+2.4
ENIJ	Nijar	61.00	295	P	P	23 48 21.3	+0.3
ENIJ				pmax	pmax		
	comp=Z,163nm,1.0s,mb6.1						
ENIJ	Nijar	61.00	295	P	P	23 48 21.3	+0.2
	comp=Z,163nm,1.0s,mb6.1						
EQES	Quesada	61.14	296	P	P	23 48 21.0	-1.0
	comp=Z,241nm,1.5s,mb6.1						
TNA	Tin City	61.20	26	*e*P	P	23 48 21.9	-0.1
	comp=Z,34µm,1.2s						
TNA				LR	LR		
	comp=Z,6µm,20.0s,MS5.8						
ECAL	Calabor	61.36	302	P	P	23 48 23.5	+0.1
	comp=Z,256nm,1.1s,mb6.3						
EINC	Incio	61.38	303	P	P	23 48 24.1	+0.6
	comp=Z,322nm,1.3s,mb6.3						
ERUA	La Rua	61.38	303	P	P	23 48 23.5	-0.1
ERUA				pmax	pmax		
	comp=Z,618nm,2.0s,mb6.4						
ERUA	La Rua	61.38	303	P	P	23 48 23.5	-0.1
	comp=Z,618nm,2.0s,mb6.4						
EBAN	Banos Encina	61.43	297	P	P	23 48 23.8	-0.1
	comp=Z,11nm,1.8s						
PBRG	Braganca	61.44	302	*e*P	P	23 48 23.4	-0.5
	comp=Z,84nm,1.1s,mb5.8						
PBRG				*i* -		23 48 35.8	
EBER	Berja	61.50	295	P	P	23 48 22.3	-2.2
	comp=Z,292nm,1.4s,mb6.2						
ECOG	Cogollos-Vega	61.76	296	P	P	23 48 24.7	-1.5
ECOG				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.8						
ECOG	Cogollos-Vega	61.76	296	P	P	23 48 24.7	-1.4
	comp=Z,83nm,1.0s,mb5.8						
EADA	Adamuz	61.96	297	P	P	23 48 26.4	-1.1
	comp=Z,917nm,3.5s						
STS	Santiago	62.01	304	P	P	23 48 28.1	+0.3
STS				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.7						
STS	Santiago	62.01	304	P	P	23 48 28.1	+0.3
	comp=Z,69nm,1.1s,mb5.7						
ERON	Agron	62.06	296	P	P	23 48 26.2	-2.0
	comp=Z,108nm,0.8s,mb6.0						
ELUQ	Luque	62.08	297	P	P	23 48 27.6	-0.7
ELUQ				pmax	pmax		
	comp=Z,368nm,0.9s,mb6.5						
ELUQ	Luque	62.08	297	P	P	23 48 27.6	-0.7
	comp=Z,368nm,0.9s,mb6.5						
EALB	Alboran	62.12	294	P	P	23 48 29.8	+1.2
	comp=Z,478nm,1.0s,mb6.6						
ELOJ	Sierra Loja	62.22	296	P	P	23 48 27.9	-1.4
ELOJ				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.7						
ELOJ	Sierra Loja	62.22	296	P	P	23 48 27.9	-1.4
	comp=Z,40nm,0.7s,mb5.7						
EMAZ	Mazaricos	62.24	304	P	P	23 48 30.9	+1.6
	comp=Z,137nm,1.4s,mb5.9						
ELOB	Lobios	62.24	303	P	P	23 48 29.6	+0.2
	comp=Z,427nm,1.3s,mb6.4						
PVRL	Vila Real	62.34	302	*e*P	P	23 48 29.7	-0.3
	comp=Z,128nm,1.0s,mb6.0						
EZAM	Zamans	62.49	303	P	P	23 48 31.5	+0.5
EZAM				pmax	pmax		
	comp=Z,195nm,1.3s,mb6.1						
EZAM	Zamans	62.49	303	P	P	23 48 31.5	+0.5
	comp=Z,195nm,1.3s,mb6.1						
MTE	Manteigas	62.70	301	*e*P	P	23 48 33.3	+0.9
	comp=Z,402nm,1.2s,mb6.4						
MTE				*i* -		23 52 37.4	
MTE				*i* LQ		00 11 49.6	
MTE				*e*LR	LR	00 14 52.3	
	comp=Z,14µm,19.1s						
MTE				*i* -		00 17 47.8	
MTE	Manteigas	62.70	301	*e*P	P	23 48 31.8	-0.6
	comp=Z,259nm,1.0s,mb6.3						
PVIS	Viseu	62.75	301	*e*P	P	23 48 33.0	+0.3
	comp=Z,96nm,1.0s,mb5.9						
PVIS				*i* -	pP	23 48 43.8	+1.3
EMIJ	Mijas	62.95	296	P	P	23 48 32.5	-1.6
	comp=Z,150nm,1.0s,mb6.1						
PCBR	Castelo Branco	62.96	300	*e*P	P	23 48 33.8	-0.3
	comp=Z,119nm,1.1s,mb5.9						
PCBR				*i* -		23 48 46.5	
EJIF	Jimena Fronter	63.48	296	P	P	23 48 38.6	+1.0
	comp=Z,0.3nm,0.5s						
ESPR	Espera	63.52	297	P	P	23 48 36.2	-1.6
	comp=Z,314nm,1.1s,mb6.3						
EMIN	Mina Concepcio	63.56	298	P	P	23 48 37.3	-0.8
	comp=Z,174nm,1.0s,mb6.0						
RES	Resolute Bay	63.87	358	*e*P	P	23 48 38.5	-1.0
RES				*e*	pP	23 48 47.2	-2.1
RES				pmax	pmax		
	comp=Z,79nm,1.0s,mb5.7						
RES	Resolute Bay	63.87	358	*e*P	P	23 48 38.5	-1.0
	comp=Z,79nm,1.0s,mb5.7						
RES				*e*	pP	23 48 47.2	-2.1
EVO	Evora	64.02	299	*e*P	P	23 48 40.8	-0.3
	comp=Z,896nm,1.7s,mb6.2						
EVO				*e*R			
	comp=Z,15µm,23.0s						
ALMR	Almeirim	64.05	300	*e*P	P	23 48 41.5	+0.3
PBEJ	Beja	64.21	299	*e*P	P	23 48 42.8	+0.5
	comp=Z,181nm,1.1s,mb6.0						
PBEJ				*i* -	pP	23 48 53.6	+1.5
MOE	Montemor	64.25	300	*e*P	P	23 48 41.8	-0.8
PALC	Alcoutim	64.26	298	*e*P	P	23 48 42.0	-0.7
	comp=Z,135nm,1.3s,mb5.8						
PALC				*i* -		23 48 54.7	
PLOU	Loures	64.57	300	*e*P	P	23 48 45.2	+0.6
	comp=Z,142nm,1.7s,mb5.7						
PLOU				*i* -		23 48 57.1	
LIS	Lisbon	64.66	300	*e*P	P	23 48 44.9	-0.3
LIS				*e*S	S	23 57 26.3	+4.9
LIS				*e*S	S	23 57 26.3	+4.9
LIS				AMS	AMS	00 19 24.6	
	comp=Z,6µm,18.4s,MS5.8						

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LIS   Lisbon           64.66 300  eP      P        23 48 44.9 -0.3
LIS                               eS      S        23 57 26.3 +4.9
      comp=Z,6µm,18.4s
PTEO  Sao Teotonio     65.04 299  eP      P        23 48 47.1 -0.6
      comp=Z,126nm,1.6s,mb5.7
IMA   Indian Mountai   65.11  21   P      P        23 48 47.0 -0.7
IMA                                pmax   pmax
      comp=Z,2µm,1.3s,mb6.9
IMA   Indian Mountai   65.11  21  eP      P        23 48 47.3 -0.4
SFJ   Sondre           65.17 341  eP      P        23 48 46.8 -1.3
      comp=Z,227nm,1.1s,mb6.1
SFJ                               e       pP       23 48 57.0 -0.8
SFJ                                LR     LR
      comp=Z,11µm,22.0s,MS6.0
COLA  College          67.57  20⇓iP      P        23 49 01.2 -2.2
COLA  College          67.57  20  eP      P        23 49 03.1 -0.3
INK   Inuvik           67.61  13   P      P        23 49 02.4 -1.2
      comp=Z,150nm,1.0s,mb6.0,baz=352,slow=7.1,SNR=106
INK                                PKP2bc          00 17 27.1
      comp=Z,5.2nm,1.2s,baz=159,slow=5.7,SNR=5.9
INK                                LR     LR       00 23 02.9
      comp=Z,10µm,20.9s,MS6.0,baz=279,slow=40
INK   Inuvik           67.61  13  eP      P        23 49 02.9 -0.7
      comp=Z,387nm,1.3s,mb6.3
INK                               e       pP       23 49 12.0 -1.4
ILAR  Eielson Array    67.90  20   P      P        23 49 03.3 -2.1
      comp=Z,57nm,0.8s,mb5.6,baz=332,slow=4.6,SNR=103
ILAR                               PP     PP       23 51 30.4 -6.6
      comp=Z,26nm,1.0s,baz=314,slow=5.5,SNR=3.6
ILAR                               PKP2bc          00 17 25.6
      comp=Z,1.6nm,1.0s,baz=226,slow=1.9,SNR=5.7
ILAR                               LR     LR       00 22 58.6
      comp=Z,26µm,18.4s,MS6.5,baz=336,slow=40
ILAR  Eielson Array    67.90  20   P      P        23 49 03.3 -2.1
ILAR                               PP     PP       23 51 30.4 -6.6
ILAR                             ⇑e                00 17 25.6
ILAR                               LR     LR       00 22 58.6
MCK   McKinley         68.21  21  eP      P        23 49 07.0 -0.3
MCK                                pmax   pmax
      comp=Z,25nm,0.7s,mb5.3
MCK                                MLR    MLR
      comp=Z,12µm,22.0s,MS6.1
MCK   McKinley         68.21  21  eP      P        23 49 07.0 -0.3
      comp=Z,25nm,0.7s,mb5.3
MCK                                LR     LR
      comp=Z,12µm,22.0s,MS6.1
SVW2  Sparrevohn       68.30  25  eP      P        23 49 10.0 +2.0
THY   Trims Highway    69.30  20  eP      P        23 49 13.1 -0.9
UNV   Unalaska Valle   69.40  35  eP      P        23 49 13.6 -1.3
      comp=Z,282nm,1.2s,mb6.1
UNV                                LR     LR
      comp=Z,30µm,19.0s,MS6.6
PWA   Palmer West      69.61  23  eP      P        23 49 15.0 -1.0
RSO   Redoubt South    69.68  25  eP      P        23 49 16.4 -0.1
PMR   Palmer           69.87  22  eP      P        23 49 18.0 +0.4
FIB   Fire Island      69.91  23   PFAKE           23 49 30.0 +12
FIB                                LR     LR
      comp=Z,9µm,19.0s,MS6.0
SML   Sawmill          69.92  22   P      P        23 49 18.0 +0.1
SML   Sawmill          69.92  22  eP      P        23 49 16.6 -1.3
MENT  Mentasta         70.21  19  eP      P        23 49 18.9 -0.7
DAWY  Dawson           70.25  17  eP      P        23 49 18.3 -1.6
SLKM  Skilak Lake      70.42  24  eP      P        23 49 20.7 -0.3
DIV   Divide           71.19  21  eP      P        23 49 25.0 -0.6
      comp=Z,729nm,1.4s,mb6.4
DIV                                LR     LR
      comp=Z,40µm,19.0s,MS6.7
EYAK  Cordova Ski Ar   71.68  22  eP      P        23 49 29.0 +0.4
KDAK  Kodiak Island    71.83  26  eP      P        23 49 30.2 +0.7
FRB   Frobisher Bay    71.88 346   P      P        23 49 28.5 -1.2
FRB                                pmax   pmax
      comp=Z,98nm,1.0s
FRB   Frobisher Bay    71.88 346   P      P        23 49 28.5 -1.2
      comp=Z,98nm,1.0s,mb5.7,baz=12,slow=6.8,SNR=31
MBWA  Marble Bar       72.84 141  eP      P        23 49 34.7 -1.5
      comp=Z,89nm,0.9s,mb5.7
MBWA                               LR     LR
      comp=Z,4µm,21.0s,MS5.7
KAKA  Kakadu           72.89 125⇓iP      P        23 49 35.8 -0.7
      comp=Z,58nm,1.1s,mb5.4
EFAM  Famara           73.27 294   P      P        23 49 40.1 +1.6
      comp=Z,175nm,1.1s,mb5.9
FITZ  Fitzroy Crossi   73.27 134⇓iP      P        23 49 38.3 -0.4
      comp=Z,76nm,0.8s,mb5.7
FITZ                              eS      S        23 59 07.0 +3.4
LSZ   Lusaka           73.73 232  eP      P        23 49 39.9 -1.5
LSZ                               e*PP    pP       23 49 48.4 -2.9
LSZ                                pmax   pmax
      comp=Z,64nm,0.8s,mb5.6
LSZ                                MLR    MLR
      comp=Z,9µm,20.0s,MS6.0
LSZ   Lusaka           73.73 232  eP      P        23 49 39.9 -1.5
      comp=Z,64nm,0.8s,mb5.6
LSZ                               epP     pP       23 49 48.4 -2.9
LSZ                                LR     LR
      comp=Z,9µm,20.0s,MS6.0
CFTV  Fuerteventura    74.09 294   P      P        23 49 45.9 +2.6
      comp=Z,59nm,1.1s,mb5.4
EOSO  Osorio           75.31 294   P      P        23 49 53.5 +3.2
      comp=Z,264nm,1.0s,mb6.1
WAKE  Wake Island      75.49  77   PFAKE           23 50 00.0 +8.5
WAKE                               LR     LR
      comp=Z,75µm,20.0s,MS7.0
YKW3  Yellowknife Ar   75.52   7  eP      P        23 49 49.7 -1.0
YKW3                              e       pP       23 50 00.4 -0.2
PDA   Ponta Delgada    75.52 308  eLR     LR       00 14 30.0
EBAJ  Bajamar          75.55 295   P      P        23 49 53.9 +2.2
      comp=Z,135nm,1.0s,mb5.8
YKA   Yellowknife Ar   75.58   7   P      P        23 49 50.6 -0.5
      comp=Z,39nm,1.0s,mb5.3,baz=346,slow=5.4,SNR=152
YKA                                PKKPbc          00 09 09.7
      comp=Z,0.2nm,0.7s,baz=162,slow=2.5,SNR=4.0
YKA                                PKP2bc          00 16 53.5
      comp=Z,0.1nm,0.4s,baz=172,slow=3.1,SNR=3.9
YKA                                PKPPKP          00 17 06.0
      comp=Z,0.7nm,1.0s,baz=178,slow=2.1,SNR=5.5
YKA                                LR     LR       00 24 34.6
      comp=Z,10µm,21.8s,MS6.1,baz=355,slow=37
YKA   Yellowknife Ar   75.58   7   P      P        23 49 50.6 -0.5
YKA                                PKKPbc          00 09 09.7
YKA                              ⇑e                00 16 53.5
YKA                                P'P'            00 17 06.0
YKA                                LR     LR       00 24 34.6
ADH   Angra Heroismo   75.84 309  i LR    LR       00 13 17.5
EGOM  La Gomera        76.38 296   P      P        23 49 58.8 +2.4
      comp=Z,95nm,0.9s,mb5.7
CHIE  El Hierro        77.17 296   P      P        23 50 04.6 +3.8
      comp=Z,40nm,1.0s,mb5.3
DLBC  Dease Lake       77.30  15   P      P        23 50 00.7 -0.1
      comp=Z,23nm,1.1s,mb5.0,baz=333,slow=7.1,SNR=22
DLBC                               LR     LR       00 28 11.1
      comp=Z,6µm,21.9s,MS5.9,baz=326,slow=39
DLBC  Dease Lake       77.30  15  eP      P        23 50 00.6 -0.2
DLBC                              e       pP       23 50 09.2 -1.6
SIT   Sitka            77.41  19  eP      P        23 50 03.2 +1.8
SCHQ  Schefferville    79.62 341   P      P        23 50 12.9 -0.7
      comp=Z,39nm,0.9s,mb5.3,baz=27,slow=5.4,SNR=46
SCHQ                               LR     LR       00 26 47.5
      comp=Z,8µm,20.9s,MS6.0,baz=22,slow=37
SCHQ  Schefferville    79.62 341  eP      P        23 50 12.0 -1.7
      comp=Z,131nm,1.2s,mb5.7
SCHQ                               LR     LR
      comp=Z,12µm,21.0s,MS6.2
WRAB  Tennant Creek    79.64 128⇓iP      P        23 50 13.2 -1.2
WRAB  Tennant Creek    79.64 128  eP      P        23 50 14.3 -0.1
      comp=Z,388nm,1.4s,mb6.1
WRAB                               LR     LR
      comp=Z,2µm,22.0s,MS5.3
WRA   Warramunga Arr   79.64 128   P      P        23 50 13.8 -0.7
      comp=Z,23nm,0.7s,mb5.2,baz=328,slow=5.4,SNR=124
WRA                                S      S        00 00 15.6 +2.6
      comp=Z,2.0nm,1.2s,baz=324,slow=8.2,SNR=4.8
WRA                                PKKPbc          00 09 09.3
      comp=Z,1.2nm,0.6s,baz=143,slow=2.1,SNR=5.2
WRA                                PKPPKP          00 17 14.8
      comp=Z,4.3nm,1.2s,baz=136,slow=1.6,SNR=5.1
WB2   Warramunga Arr   79.65 128  eS      S        00 00 15.3 +2.2
WB2   Warramunga Arr   79.65 128⇓iP      P        23 50 14.5  0.0
WB2                               eS      S        00 00 15.3 +2.2
FCC   Fort Churchill   79.78 357  eP      P        23 50 13.4 -1.0
FCC                               e       pP       23 50 23.2 -1.1
PMG   Port Moresby     80.12 112  eP      P        23 50 17.2 +0.1
      comp=Z,70nm,0.8s,mb5.6
PMG                                LR     LR
      comp=Z,2µm,20.0s,MS5.3
MUN   Mundaring        80.77 149  eP      P        23 50 19.4 -0.8
      comp=Z,59nm,0.9s,mb5.5
KLBR  Kellerberrin     81.04 148  eP      P        23 50 21.7 +0.1
      comp=Z,608nm,1.1s,mb6.4
DBIC  Dimbokro         81.28 271   P      P        23 50 22.7 -0.5
      comp=Z,14nm,0.5s,mb5.2,baz=36,slow=6.2,SNR=31
DBIC                               PKKPbc          00 08 57.8
      comp=Z,1.6nm,0.7s,baz=286,slow=4.2,SNR=3.0
DBIC                               LR     LR       00 31 32.4
      comp=Z,7µm,18.4s,MS6.0,baz=25,slow=39
ASPA  Alice Springs    82.30 131  eS      S        00 00 44.2 +3.8
ASPA  Alice Springs    82.30 131⇓iP      P        23 50 28.3  0.0
ASPA                              eS      S        00 00 44.2 +3.8
ASAR  Alice Springs    82.30 131   P      P        23 50 28.3  0.0
      comp=Z,108nm,1.1s,mb5.7,baz=324,slow=5.2,SNR=114
ASAR                               PKKPbc          00 08 58.9
      comp=Z,0.9nm,0.8s,baz=137,slow=2.0,SNR=4.2
ASAR                               PKPPKP          00 17 00.2
      comp=Z,0.7nm,0.9s,baz=170,slow=1.6,SNR=4.1
LBTB  Lobatse          82.91 228  eP      P        23 50 31.1 -0.4
      comp=Z,220nm,1.3s,mb6.0
LBTB                               LR     LR
      comp=Z,5µm,19.0s,MS5.9
TSUM  Tsumeb           83.19 237   P      P        23 50 33.6 +0.5
      comp=Z,28nm,0.8s,mb5.3,baz=28,slow=5.8,SNR=44
TSUM  Tsumeb           83.19 237  eP      P        23 50 33.1  0.0
      comp=Z,259nm,1.6s,mb6.0
TSUM                               LR     LR
      comp=Z,7µm,19.0s,MS6.1
BBB   Bella Bella      83.54  17   P      P        23 50 34.0 -0.1
      comp=Z,28nm,1.0s,mb5.3,baz=302,slow=2.5,SNR=5.4
BBB                                LR     LR       00 28 40.7
      comp=Z,4µm,21.9s,MS5.8,baz=327,slow=36
FFC   Flin Flon        83.97   1   P      P        23 50 36.6 +0.4
      comp=Z,596nm,1.2s,mb6.6
EDM   Edmonton         84.85   8  eP      P        23 50 39.4 -1.3
FORT  Forrest          84.94 140  eP      P        23 50 41.4 -0.2
      comp=Z,2µm,0.8s
BOSA  Boshof           85.94 226  eP      P        23 50 45.6 -1.1
      comp=Z,178nm,1.4s,mb6.1
BOSA                               LR     LR
      comp=Z,6µm,20.0s,MS6.0
CTA   Charters Tower   87.13 120  eS      S        00 01 17.6  -10
CTA   Charters Tower   87.13 120   P      P        23 50 53.1 +0.4
      comp=Z,24nm,0.8s,mb5.5,baz=304,slow=5.3,SNR=11
CTA   Charters Tower   87.13 120  eP      P        23 50 53.4 +0.7
      comp=Z,47nm,1.1s,mb5.6
CTA                               eS      S        00 01 17.6  -10
CTAO  Charters Tower   87.13 120  eP      P        23 50 52.5 -0.2
      comp=Z,119nm,1.3s,mb6.0
CTAO                               LR     LR
      comp=Z,2µm,22.0s,MS5.5
PQI   Presque Isle     87.38 338   PFAKE           23 51 00.0 +6.8
PQI                                LR     LR
      comp=Z,44µm,20.0s,MS6.9
PGC   Sidney           87.84  15  eP      P        23 50 56.5 +1.1
      comp=Z,79nm,1.0s,mb5.9
ULM   Lac du Bonnet    88.37 357   P      P        23 50 57.2 -0.6
      comp=Z,29nm,1.0s,mb5.5,baz=355,slow=5.3,SNR=21
ULM                                LR     LR       00 34 18.4
      comp=Z,13µm,19.2s,MS6.4,baz=11,slow=38
ULM   Lac du Bonnet    88.37 357  eP      P        23 50 56.9 -1.0
      comp=Z,248nm,1.6s,mb6.2
ULM                               epP     pP       23 51 04.7 -3.2
ULM                                LR     LR
      comp=Z,19µm,20.0s,MS6.5
OCWA  Octopus Mounta   88.56  16  eP      P        23 50 58.8 -0.1
      comp=Z,343nm,1.8s,mb6.4
OCWA                               LR     LR
      comp=Z,13µm,20.0s,MS6.3
WALA  Waterton Lakes   88.90   9  eP      P        23 50 59.3 -1.2
      comp=Z,92nm,1.2s,mb6.0
EMMW  East Machias     89.01 337   PFAKE           23 51 10.0 +8.9
EMMW                               LR     LR
      comp=Z,44µm,22.0s,MS6.8
HNR   Honiara          89.26 103   P      P        23 51 03.5 +0.5
HNR                                LR     LR
      comp=Z,1µm,20.0s,MS5.4
NEW   Newport          89.28  11   P      P        23 51 02.0 -0.2
      comp=Z,35nm,1.0s,mb5.7,baz=337,slow=4.2,SNR=21
NEW   Newport          89.28  11  eP      P        23 51 02.3  0.0
      comp=Z,40nm,1.0s,mb5.7
NEW                                LR     LR
      comp=Z,9µm,19.0s,MS6.2
WVL   Waterville       89.77 338  eP      P        23 51 04.6  0.0
      comp=Z,46nm,0.7s,mb5.9
WVL                                LR     LR
      comp=Z,33µm,21.0s,MS6.7
EPH   Ephrata          89.78  13   P      P        23 51 05.5 +0.9
TBM   Table Mountain   89.79  13   P      P        23 51 05.7 +1.0
DGMT  Dagmar           90.19   2  eP      P        23 51 06.6  0.0
      comp=Z,498nm,1.7s,mb6.6
DGMT                               LR     LR
      comp=Z,15µm,19.0s,MS6.5
EYMN  Ely              90.40 354  eP      P        23 51 07.0 -0.5
      comp=Z,121nm,1.2s,mb6.1
EYMN                               LR     LR
      comp=Z,19µm,20.0s,MS6.5
CHMT  Chamberlain Mo   91.09   9  eP      P        23 51 09.7 -1.1
MSO   Missoula         91.10   9  eP      P        23 51 09.8 -1.0
      comp=Z,94nm,1.6s,mb5.9
MSO                                LR     LR
      comp=Z,6µm,19.0s,MS6.0
MIV   Mineville/With   91.23 341  eP      P        23 51 12.0 +0.6
SUR   Sutherland       91.26 226   PFAKE           23 51 20.0 +8.1
SUR                                LR     LR
      comp=Z,1µm,22.0s,MS5.3
HNH   Hanover          91.27 340  eP      P        23 51 12.0 +0.4
      comp=Z,5.9nm,1.4s
NCB   Newcomb          91.50 341  eP      P        23 51 12.9 +0.3
      comp=Z,150nm,1.8s,mb6.0
NCB                               e       pP       23 51 24.0 +1.2
NCB                                LR     LR
      comp=Z,12µm,19.0s,MS6.4
COR   Corvallis        91.76  16  eP      P        23 51 14.2 +0.4
      comp=Z,98nm,0.9s,mb6.1
COR                                LR     LR
      comp=Z,1µm,21.0s,MS5.2
SADO  Sadowa           91.81 345   P      P        23 51 14.1 +0.1
      comp=Z,27nm,1.0s,mb5.5,baz=356,slow=6.0,SNR=5.6
LAO   LASA Array       91.89   4  eP      P        23 51 14.7 +0.3
      comp=Z,662nm,1.9s,mb6.6
LAO                               e       pP       23 51 25.5 +1.0
LAO                                LR     LR
      comp=Z,8µm,20.0s,MS6.2
ACCN  Adirondack Com   91.92 341  eP      P        23 51 14.3 -0.2
HRV   Harvard--Oak R   92.19 339   PFAKE           23 51 30.0  +14
HRV                                LR     LR
      comp=Z,7µm,21.0s,MS6.1
WES   Weston           92.24 339   PFAKE           23 51 30.0  +14
WES                                LR     LR
      comp=Z,13µm,19.0s,MS6.4
BOZ   Bozeman (W)      92.52   8  eP      P        23 51 16.9 -0.4
      comp=Z,112nm,0.6s,mb6.5
BOZ                               e       pP       23 51 27.7 +0.4
BOZ                                LR     LR
      comp=Z,10µm,19.0s,MS6.3
BMO   Blue Mountains   92.58  12  eP      P        23 51 16.3 -1.3
      comp=Z,30nm,1.3s,mb5.6
BMO                                LR     LR
      comp=Z,6µm,19.0s,MS6.1
STKA  Stephens Creek   92.94 131  eS                00 01 49.1
STKA  Stephens Creek   92.94 131   P      P        23 51 19.4 -0.2
      comp=Z,6.7nm,0.6s,mb5.2,baz=331,slow=6.8,SNR=9.6
STKA                               LR     LR       00 40 08.9
      comp=Z,2µm,21.7s,MS5.5,baz=312,slow=40
STKA  Stephens Creek   92.94 131  eP      P        23 51 20.4 +0.8
      comp=Z,15nm,0.9s,mb5.4
STKA                              eS                00 01 49.1
MCMT  McKenzie Canyo   93.20   9  eP      P        23 51 20.3 -0.2
QLMT  Earthquake Lak   93.35   8  eP      P        23 51 21.3 +0.2
GENY  Geneseo          93.46 343  eP      P        23 51 21.0 -0.7
GENY                              e       pP       23 51 32.5 +0.7
BINY  Binghamton       93.59 342  eP      P        23 51 22.1 -0.2
      comp=Z,61nm,1.1s,mb5.9
BINY                               LR     LR
      comp=Z,17µm,19.0s,MS6.5
HUMO  Hull Mountain    93.73  16  eP      P        23 51 23.0 +0.1
      comp=Z,48nm,1.3s,mb5.8
HUMO                               LR     LR
      comp=Z,7µm,20.0s,MS6.1
YFT   Old Faithful     93.78   7  eP      P        23 51 23.1 -0.1
HLID  Hailey           94.25  10  eP      P        23 51 25.2 -0.1
      comp=Z,10nm,0.9s,mb5.3
HLID                               LR     LR
      comp=Z,7µm,20.0s,MS6.1
IMW   Indian Meadow    94.32   7  eP      P        23 51 26.4 +0.8
MOOW  Moose Ponds      94.48   7  eP      P        23 51 26.3 -0.1
ERPA  Erie             94.53 345  eP      P        23 51 26.7 +0.1
      comp=Z,44nm,0.8s,mb5.9
ERPA                               LR     LR
      comp=Z,11µm,22.0s,MS6.3
YBH   Yreka Blue Hor   94.62  16   P      P        23 51 27.6 +0.5
      comp=Z,12nm,1.0s,mb5.3,baz=38,slow=1.8,SNR=18
YBH                                PKPPKP          00 16 35.6
      comp=Z,1.7nm,0.9s,baz=200,slow=2.9,SNR=3.6
YBH   Yreka Blue Hor   94.62  16  eP      P        23 51 27.1  0.0
      comp=Z,13nm,1.0s,mb5.3
YBH                                LR     LR
      comp=Z,10µm,21.0s,MS6.2
LOHW  Long Hollow      94.63   7  eP      P        23 51 27.4 +0.3
TPAW  Teton Pass       94.72   7  eP      P        23 51 27.6 +0.1
TPAW                              e       pP       23 51 38.6 +1.0
WVOR  Wild Horse Val   94.72  13  eP      P        23 51 27.0 -0.5
      comp=Z,26nm,1.2s,mb5.5
WVOR                              e                23 51 39.6
WVOR                               LR     LR
      comp=Z,8µm,19.0s,MS6.2
LHEM  Herd Peak        94.82  16   P      P        23 51 29.8 +1.8
MOD   Modoc            94.94  15  eP      P        23 51 28.7 +0.2
      comp=Z,30nm,1.0s,mb5.7
MOD                                LR     LR
      comp=Z,6µm,19.0s,MS6.1
ALLY  Alegheny Colle   95.01 345  eP      P        23 51 29.2 +0.4
ALLY                              e       pP       23 51 39.9 +0.9
AAM   Ann Arbor        95.02 347   PFAKE           23 51 40.0  +11
AAM                                LR     LR
      comp=Z,14µm,22.0s,MS6.4
JFWS  Jewell Farm      95.28 352  eP      P        23 51 30.3 +0.2
      comp=Z,74nm,0.7s,mb6.2
JFWS                               LR     LR
      comp=Z,13µm,21.0s,MS6.4
AHID  Auburn Hatcher   95.42   8  eP      P        23 51 30.8 +0.1
      comp=Z,39nm,1.1s,mb5.8
AHID                               LR     LR
      comp=Z,14µm,19.0s,MS6.5
SSPA  Standing Stone   95.51 343  eP      P        23 51 29.9 -1.3
      comp=Z,41nm,1.2s,mb5.7
BW06  Boulder Array    95.57   7  eP      P        23 51 30.9 -0.5
      comp=Z,12nm,1.0s,mb5.3
BW06                              e       pP       23 51 41.1 -0.4
BW06                               LR     LR
      comp=Z,10µm,20.0s,MS6.3
PDAR  Pinedale Array   95.57   7   P      P        23 51 31.2 -0.2
      comp=Z,6.2nm,0.9s,mb5.0,baz=49,slow=2.4,SNR=26
PDAR                               PKKPbc          00 08 28.9
      comp=Z,1.1nm,1.0s,baz=180,slow=1.5,SNR=4.5
PDAR                               PKPPKP          00 16 40.8
      comp=Z,1.4nm,1.3s,baz=190,slow=5.5,SNR=4.3
PDAR                               LR     LR       00 39 11.7
      comp=Z,9µm,20.2s,MS6.2,baz=351,slow=38
WDC   Whiskeytown Da   95.76  17  eP      P        23 51 31.9 -0.4
      comp=Z,14nm,1.0s,mb5.3
WDC                                LR     LR
      comp=Z,10µm,22.0s,MS6.2
LBCM  Butte Creek Ri   95.76  16   P      P        23 51 32.8 +0.4
HVU   Hansel Valley    96.22   9  eP      P        23 51 34.9 +0.5
HWUT  Hardware Ranch   96.52   8  eP      P        23 51 36.5 +0.7
      comp=Z,45nm,1.0s,mb5.9
HWUT                               LR     LR
      comp=Z,13µm,20.0s,MS6.4
MCWV  Mont Chateau     96.87 344  eP      P        23 51 38.2 +0.8
      comp=Z,129nm,1.6s,mb6.1
MCWV                               LR     LR
      comp=Z,17µm,20.0s,MS6.5
BMN   Battle Mountai   96.91  13  eP      P        23 51 38.3 +0.8
      comp=Z,5.5nm,0.4s,mb5.3
BMN                                LR     LR
      comp=Z,4µm,19.0s,MS6.0
ELK   Elko             96.91  11   PFAKE           23 51 50.0  +12
ELK                                LR     LR
      comp=Z,13µm,21.0s,MS6.4
ACSO  Alum Creek Sta   96.92 346  eP      P        23 51 37.0 -0.6
      comp=Z,60nm,1.2s,mb5.9
ACSO                               LR     LR
      comp=Z,15µm,21.0s,MS6.5
TCUT  Toone Canyon     97.02   8  eP      P        23 51 38.2 +0.2
BGU   Big Grassy Mou   97.03   9  eP      P        23 51 38.0  0.0
HOPS  Hopland          97.16  17   PFAKE           23 51 50.0  +11
HOPS                               LR     LR
      comp=Z,5µm,20.0s,MS6.0
OHCM  Honcut           97.18  16  eP      P        23 51 39.2 +0.4
OHCM                              e       pP       23 51 48.7 -0.2
PHWY  Pilot Hill       97.30   4  eP      P        23 51 38.2 -1.0
JLU   Jordanelle       97.53   8  eP      P        23 51 40.6 +0.3
CBN   Corbin           97.72 342   PFAKE           23 51 50.0 +8.8
CBN                                LR     LR
      comp=Z,26µm,21.0s,MS6.7
DAU   Daniels Canyon   97.74   8  eP      P        23 51 42.4 +1.1
DUG   Dugway           97.77   9  eP      P        23 51 42.2 +0.8
      comp=Z,50nm,1.4s,mb5.9
DUG                                LR     LR
      comp=Z,8µm,20.0s,MS6.2
KIP   Kipapa           97.82  52   PFAKE           23 51 50.0 +7.9
KIP                                LR     LR
      comp=Z,5µm,20.0s,MS6.0
NLU   North Lily Min   98.10   9  eP      P        23 51 42.7 -0.2
CMB   Columbia Colle   98.66  16   PFAKE           23 52 00.0  +15
CMB                                LR     LR
      comp=Z,6µm,21.0s,MS6.1
NVAR  Mina Array Bea   98.67  14   P      P        23 51 46.3 +0.8
      comp=Z,2.1nm,0.3s,mb5.1,baz=288,slow=2.9,SNR=20
NVAR                               PKKPbc          00 08 16.3
      comp=Z,1.2nm,0.9s,baz=179,slow=3.9,SNR=5.3
NVAR                               LR     LR       00 40 34.4
      comp=Z,9µm,20.5s,MS6.3,baz=330,slow=38
NVAR  Mina Array Bea   98.67  14   P      P        23 51 46.3 +0.8
NVAR                               PKKPbc          00 08 16.3
NVAR                               LR     LR       00 40 34.4
MNV   Mina             98.70  14   PFAKE           23 52 00.0  +14
MNV                                LR     LR
      comp=Z,11µm,20.0s,MS6.3
ISCO  Idaho Springs    98.79   4  eP      P        23 51 45.9 -0.1
      comp=Z,15nm,1.1s,mb5.4
ISCO                               LR     LR
      comp=Z,15µm,19.0s,MS6.5
TMUT  Trail Mountain   98.84   8   P      P        23 51 46.6 +0.4
TPH   Tonopah          99.21  13   PFAKE           23 52 00.0  +12
TPH                                LR     LR
      comp=Z,9µm,21.0s,MS6.2
BBSR  BB Station       99.22 330   PFAKE           23 52 00.0  +12
BBSR                               LR     LR
      comp=Z,7µm,21.0s,MS6.1
BLA   Blacksburg       99.35 344   PFAKE           23 52 00.0  +11
BLA                                LR     LR
      comp=Z,17µm,20.0s,MS6.5
WCI   Wyandotte Cave   99.41 349  eP      P        23 51 49.3 +0.4
      comp=Z,130nm,1.8s,mb6.2
WCI                                LR     LR
      comp=Z,4µm,19.0s,MS6.0
MSU   Marysvale        99.51   9  eP      P        23 51 49.6 +0.2
MVU   Marysvale        99.52   9   PFAKE           23 52 00.0  +11
MVU                                LR     LR
      comp=Z,9µm,21.0s,MS6.2
KSU1  Kansas State U   99.53 357  eP      P        23 51 49.1 -0.3
SAO   San Andreas Ge   99.66  17   PFAKE           23 52 00.0  +10
SAO                                LR     LR
      comp=Z,6µm,19.0s,MS6.1
CBKS  Cedar Bluff      99.89 359  ePdif   P        23 51 51.2 +0.1
      comp=Z,175nm,1.8s,mb6.2
CBKS                               LR     LR
      comp=Z,10µm,19.0s,MS6.3
PV10  Paradox Valley   99.97   7  ePdif   P        23 51 51.3 -0.1
LRV   Little Rabbit   100.08  17   Pdif   P        23 51 51.5 -0.5
CCM   Cathedral Cave  100.19 352  ePdif   P        23 51 52.5  0.0
      comp=Z,421nm,1.7s
CCM                                LR     LR
      comp=Z,3µm,19.0s,MS5.8
PV01  Paradox Valley  100.25   6  ePdif   P        23 51 53.4 +0.7
POHA  Pohakuloa       100.57  52   PFAKE           23 52 10.0  +15
POHA                               LR     LR
      comp=Z,52µm,22.0s,MS7.0
SDCO  Great Sand Dun  100.84   4  ePdif   P        23 51 56.0 +0.6
      comp=Z,61nm,1.6s
SDCO                               LR     LR
      comp=Z,13µm,19.0s,MS6.5
DAC   Darwin (Calif)  100.89  14   PFAKE           23 52 10.0  +14
DAC                                LR     LR
      comp=Z,5µm,22.0s,MS6.0
WVT   Waverly         101.69 349   P      P        23 52 02.2 +3.0
WVT                                pmax   pmax
      comp=Z,13nm,1.0s
WVT   Waverly         101.69 349  ePdif   P        23 51 58.4 -0.8
      comp=Z,13nm,1.0s
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WVT				LR	LR		
	comp=Z,7µm,19.0s,MS6.2						
NEN	**Nelson**	**101.96**	**12**	*e*Pdif	P	23 52 00.3	-0.2
NHSC	**New Hope**	**103.24**	**342**	PFAKE		23 52 20.0	+14
NHSC				LR	LR		
	comp=Z,20µm,19.0s,MS6.7						
OXF	**Oxford**	**103.49**	**350**	PFAKE		23 52 20.0	+13
OXF				LR	LR		
	comp=Z,11µm,19.0s,MS6.4						
ANMO	**Albuquerque**	**103.57**	**5**	PFAKE		23 52 20.0	+13
ANMO				LR	LR		
	comp=Z,10µm,19.0s,MS6.3						
GOGA	**Godfrey**	**103.63**	**345**	PFAKE		23 52 20.0	+12
GOGA				LR	LR		
	comp=Z,13µm,20.0s,MS6.5						
PFO	**Pinyon Flat Ob**	**103.69**	**14**	PFAKE		23 52 20.0	+12
PFO				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
AMTX	**Amarillo**	**103.81**	**1**	PFAKE		23 52 20.0	+11
AMTX				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
MIAR	**Mount Ida**	**103.88**	**354**	PFAKE		23 52 20.0	+11
MIAR				LR	LR		
	comp=Z,20µm,20.0s,MS6.7						
WMOK	**Wichita Mounta**	**103.95**	**358**	PFAKE		23 52 20.0	+11
WMOK				LR	LR		
	comp=Z,12µm,20.0s,MS6.4						
TAU	**Tasmania Unive**	**104.06**	**135**	PFAKE		23 52 20.0	+11
TAU				LR	LR		
	comp=Z,774nm,22.0s,MS5.2						
LRAL	**Lakeview Retre**	**104.61**	**348**	PFAKE		23 52 20.0	+7.9
LRAL				LR	LR		
	comp=Z,19µm,20.0s,MS6.6						
TUC	**Tucson**	**105.80**	**9**	PFAKE		23 56 40.0	
TUC				LR	LR		
	comp=Z,7µm,21.0s,MS6.2						
NATX	**Nacogdoches**	**106.73**	**355**	PKP		23 56 32.6	
NATX				LR	LR		
	comp=Z,21µm,20.0s,MS6.7						
MNTX	**Cornudas Mount**	**106.87**	**4**	PFAKE		23 56 40.0	
MNTX				LR	LR		
	comp=Z,12µm,19.0s,MS6.5						
JCT	**Junction City**	**108.21**	**359**	PKP		23 56 35.2	
JCT				LR	LR		
	comp=Z,9µm,21.0s,MS6.3						
DWPF	**Disney**	**108.33**	**342**	PFAKE		23 56 50.0	
DWPF				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
HKT	**Hockley**	**108.60**	**356**	PFAKE		23 56 50.0	
HKT				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
LTX	**Lajitas**	**109.30**	**3**	*e*PKP		23 56 35.6	
LTX				LR	LR		
	comp=Z,9µm,19.0s,MS6.3						
TXAR	**Lajitas Array**	**109.30**	**3**	Pdiff	Pdif	23 52 35.7	+2.9
	comp=Z,0.9nm,0.8s,slow=3.8,SNR=7.3						
TXAR				PKiKP		23 56 36.7	
	comp=Z,1.6nm,0.8s,baz=23,slow=6.9,SNR=2.8						
TXAR				PKKPbc		00 07 42.1	
	comp=Z,0.6nm,0.7s,baz=162,slow=4.0,SNR=4.2						
CASY	**Casey**	**110.27**	**167**	PFAKE		23 56 50.0	+8.7
CASY				LR	LR		
	comp=Z,8µm,20.0s,MS6.3						
SJG	**San Juan**	**112.49**	**324**	PFAKE		23 56 50.0	+3.3
SJG				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
RCBR	**Riachuelo**	**112.62**	**283**	PFAKE		23 57 00.0	+13
RCBR				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
SYO	**Syowa Base**	**114.22**	**195**	⇓Pdiff	Pdif	23 52 59.0	+5.5
TRIS	**Tristan da Cun**	**114.51**	**241**	PFAKE		23 57 00.0	+10
TRIS				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
TEIG	**Tepich**	**117.36**	**347**	PFAKE		23 57 00.0	+3.8
TEIG				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
SDV	**Santo Domingo**	**122.64**	**324**	*e*PKP	PKPdf	23 57 01.9	-4.6
SDV				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
VNA2	**Neumayer--Watz**	**127.70**	**205**	⇑*i*	PKPdf	23 57 22.6	+7.7
VNA2	**Neumayer--Watz**	**127.70**	**205**	P	PKPdf	23 57 19.1	+4.2
VNA2				⇑*i*P		23 57 22.6	
ROSC	**El Rosal**	**127.84**	**326**	PKP	PKPdf	23 57 14.6	-2.1
	comp=Z,9.9nm,0.6s,baz=90,slow=17,SNR=6.4						
BDFB	**Brasilia**	**127.98**	**284**	PKIKP	PKPdf	23 57 15.2	-1.7
BDFB						23 59 15.0	
BDFB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BDFB	**Brasilia**	**127.98**	**284**	PKP	PKPdf	23 57 15.2	-1.7
	comp=Z,1.3nm,0.5s,baz=97,slow=4.1,SNR=3.0						
BDFB				PP	PP	23 59 15.0	-3.8
	comp=Z,10.0nm,1.1s,baz=41,slow=11,SNR=4.2						
CAM4	**Nova Friburgo**	**128.10**	**273**	(P)	PKPdf	23 57 21.1	+4.1
VNA3	**Neumayer Olymp**	**128.50**	**204**	⇑*i*	PKPdf	23 57 14.1	-2.4
VNDA	**Vanda**	**128.70**	**164**	PKIKP	PKPdf	23 57 12.6	-4.2
VNDA						23 59 25.3	
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNDA	**Vanda**	**128.70**	**164**	PKP	PKPdf	23 57 12.6	-4.1
	comp=Z,4.2nm,0.8s,baz=300,slow=4.2,SNR=7.7						
VNDA				PP	PP	23 59 25.3	+3.0
	comp=Z,6.2nm,1.0s,baz=274,slow=10,SNR=3.2						
SBA	**Scott Base**	**129.80**	**164**	PFAKE		23 57 30.0	+11
SBA				LR	LR		
	comp=Z,8µm,22.0s,MS6.3						
QSPA	**South Pole Qui**	**131.45**	**180**	*e*P	PKPdf	23 57 18.8	-3.1
PPT	**Papeete**	**131.94**	**75**	*e*PP	PP	23 59 32.9	-12
PPT				*e*PS	PS	00 09 52.7	-1.7
PPT				*e*SS	SS	00 17 17.3	+1.3
PPT				*e*LR	LR	00 39 14.5	
	comp=Z,4µm,22.0s						
TAOE	**Nuku Hiva Isla**	**132.28**	**58**	*e*LR	LR	00 39 23.3	
SAML	**Samuel**	**133.61**	**304**	*e*PKP	PKPdf	23 57 23.7	-3.9
SAML				LR	LR		
	comp=Z,6µm,21.0s,MS6.3						
OTAV	**Otavalo**	**133.70**	**328**	*e*PKP	PKPdf	23 57 24.3	-3.5
OTAV				LR	LR		
	comp=Z,5µm,22.0s,MS6.2						
TBI	**Tubuai**	**135.61**	**81**	*e*PP	PP	00 00 00.5	-6.9
TBI				*e*PS	PS	00 10 29.7	+4.1
TBI				*e*SS	SS	00 17 56.6	-3.0
TBI				*e*LR	LR	00 40 55.3	
	comp=Z,2µm,27.5s						
PAYG	**Puerto Ayora**	**138.13**	**344**	PFAKE		23 57 40.0	+4.0
PAYG				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
LPAZ	**La Paz**	**142.30**	**302**	*e*PKHKP		23 57 34.0	
LPAZ				MLR	MLR		
	comp=Z,6µm,22.0s						
LPAZ	**La Paz**	**142.30**	**302**	PKhKP		23 57 33.8	
	comp=Z,1.3nm,0.7s,baz=310,slow=3.3,SNR=3.6						
NNA	**Nana**	**143.84**	**318**	*e*PKP	PKPdf	23 57 39.8	-6.2
NNA				LR	LR		
	comp=Z,628nm,19.0s,MS5.4						
ARE	**Arequipa**	**144.51**	**306**	*e*PKIKP	PKPdf	23 57 43.0	-4.1
ARE				*i*		23 57 52.0	
RKT	**Rikitea**	**145.92**	**68**	*e*PKPbc	PKPbc	23 57 48.2	+3.1
	comp=Z,422nm,1.3s						
LPA	**La Plata**	**146.06**	**267**	*ce*PKP	PKPdf	23 57 46.0	-3.3
LPA				*e*pPKP		23 57 54.0	
	comp=Z,4µm,21.0s						
LVC	**Limon Verde**	**147.34**	**296**	PKPbc	PKPdf	23 57 49.8	-2.0
	comp=Z,28nm,0.6s,baz=56,slow=1.9,SNR=27						
LVC	**Limon Verde**	**147.34**	**296**	*e*PKPdf	PKPdf	23 57 48.7	-3.0
LVC				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
PMSA	**Palmer Station**	**148.89**	**210**	PFAKE		23 58 00.0	+7.0
PMSA				LR	LR		
	comp=Z,5µm,21.0s,MS6.3						
PTCN	**Pitcairn Islan**	**150.56**	**65**	PFAKE		23 58 00.0	+3.2
PTCN				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
PLCA	**Paso Flores**	**157.38**	**262**	PKIKP	PKPdf	23 58 00.0	-5.8
PLCA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PLCA	**Paso Flores**	**157.38**	**262**	PKP	PKPdf	23 58 00.0	-5.8
	comp=Z,8.0nm,1.3s,baz=18,slow=2.6,SNR=2.0						
PLCA	**Paso Flores**	**157.38**	**262**	*e*PKP	PKPdf	23 58 00.6	-5.2
PLCA				LR	LR		
	comp=Z,3µm,20.0s,MS6.2						

BJI 14 23:58:44.6, 41.42N×79.79E, h15^{km}, ML3.6, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.78**	**288**	P	Pn	23 59 21.3	-8.2
	SNR=7.3						
TKM2	**Tokmak 2**	**3.46**	**297**	P	Pn	23 59 30.1	-9.0
	SNR=11						
KZA	**Kyzart**	**3.46**	**282**	P	Pn	23 59 31.3	-7.9
	SNR=7.2						
KSH	**Kashi**	**3.48**	**238**	*e*P	Pn	23 59 40.0	+0.6
KSH				S	Sn	00 00 24.0	+3.4
KSH				Smax			
	comp=N,240nm,1.1s						
KSH				Smax			
	comp=E,170nm,1.0s						
KBK	**Karagaybulak**	**3.81**	**291**	P	Pn	23 59 35.5	-8.6
	SNR=6.2						
UCH	**Uchtor**	**4.03**	**283**	P	Pn	23 59 45.3	-1.8
	SNR=8.4						
USP	**Ospenovka**	**4.33**	**297**	P	Pn	23 59 51.9	+0.3
	SNR=6.5						
AML	**Almayashu**	**4.61**	**281**	P	Pn	23 59 56.8	+1.3
	SNR=12						
EKS2	**Erkin-Say**	**4.65**	**287**	P	Pn	23 59 57.0	+1.0
	SNR=8.3						

NNC ***15*** *00:05:03.4±8.3, 41.93N×79.05E, mpv2.8, Error ellipse: s-maj=126.2km s-min=64.2km az=114.0*

BJI 15 00:05:02.1, 41.80N×79.31E, h18^{km}, ML3.5, 3C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.41**	**229**	*e*PG	Pn	00 06 06.3	+11
KSH				SG	Sn	00 06 51.4	+15
KSH				Smax			
	comp=N,240nm,1.9s						
KSH				Smax			
	comp=E,60nm,1.2s						
MK31	**Makanchi Array**	**5.43**	**22**	⇑Pn	Pn	00 06 25.4	+1.1
	comp=E,0.2nm,0.2s,baz=207,slow=14,SNR=25						
MK31				⇑Pg	Pn	00 06 40.2	+16
	comp=E,0.6nm,0.3s,baz=197,slow=12,SNR=14						
MK31				⇑Sn	Sn	00 07 29.3	+2.2
	comp=E,1.8nm,0.4s,baz=198,slow=26,SNR=3.8						
MK31				Lg		00 07 53.7	
	comp=E,1.8nm,0.2s,baz=193,slow=29,SNR=4.1						

BJI 15 00:06:12.3, 41.91N×79.56E, h13^{km}, ML3.8, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.63**	**230**	*e*P	Pn	00 07 12.5	+3.1
KSH				S	Sn	00 07 56.1	+3.6
KSH				Smax			
	comp=N,130nm,1.0s						
KSH				Smax			
	comp=E,140nm,1.0s						

IDC 15 00:27:31.3±5.7**, 8.31S×117.84E, mb3.6**/2**, mb1 3.7**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, ML3.3**/1**, Error ellipse: s-maj=281.4km s-min=28.6km az=58.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.72**	**128**	P	P	00 32 01.8	-3.6
	0.1nm,0.3s,baz=301,slow=13,SNR=4.0						
ASAR	**Alice Springs**	**21.68**	**137**	P	P	00 32 24.6	-1.2
	1.1nm,0.8s,baz=309,slow=8.8,SNR=6.5						
SONM	**Songino Array**	**56.81**	**351**	P	P	00 37 17.4	-2.4
	0.9nm,0.9s,baz=179,slow=4.8,SNR=4.7						

MOS ***15*** *00:29:17.7±1.6, 34.66N×70.58E, h33^{km}, mb4.2/14, Error ellipse: s-maj=16.8km s-min=9.7km az=88.7*

NDI ***15*** *00:29:18.2±6.9, 34.63N×70.25E, h26^{km}±317^{km}, ML4.1, mb3.7(NEIC)*

BJI ***15*** *00:29:20.9, 34.83N×70.53E, h58^{km}, mb4.1, ML4.1*

NEIC ***15*** *00:29:20.1±2.5, 34.68N×70.68E, h40^{km}±21^{km}, mb3.7/5, Error ellipse: s-maj=18.9km s-min=12.3km az=207.0*

IDC ***15*** *00:29:24.6±7.1, 34.83N×70.57E, h77^{km}±62^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.7/21, mbtmp4.0/13, ML4.1/1, Error ellipse: s-maj=32.0km s-min=18.3km az=179.0*

NNC ***15*** *00:29:27.6±57.0, 34.78N×72.88E, mpv4.4, Error ellipse: s-maj=1405.3km s-min=492.3km az=89.0*

ISC 15 00:29:19.1±1.0**, 34.57N**±0.03×**70.64E**±0.08**, h56**^{km}±12^{km}**, n71, σ1**^{s}**43**/77**, mb3.9**/18**, 3C-2D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**4.75**	**115**	*e*P	**P**	**00 30 31.7**	**+1.8**
THN				*e*		00 31 32.0	
DLH	**Dalhousie**	**4.89**	**113**	*e*P	**P**	**00 30 36.0**	**+4.1**
DLH				*e*		00 31 34.0	
SDNR	**Sundarnagar**	**6.13**	**118**	*e*P	**P**	**00 30 51.2**	**+2.0**
SDNR				*e*S	**S**	**00 32 02.4**	**+3.5**
KSH	**Kashi**	**6.53**	**39**	⇑P	**P**	**00 30 57.8**	**+3.1**
KSH				S	**S**	**00 32 08.8**	**+0.2**
KSH				Smax			
	comp=N,80nm,0.8s						
KSH				Smax			
	comp=E,110nm,0.6s						
KLP	**Kalpa**	**7.07**	**113**	*e*P	**P**	**00 31 03.1**	**+0.7**
KLP				*e*		00 32 25.0	
DDI	**Dehra Dun**	**7.56**	**122**	*e*	**P**	**00 31 11.0**	**+1.9**
DDI				*e*		00 33 15.5	
JASL	**Jaisalmer**	**7.62**	**178**	*e*P	**P**	**00 31 08.3**	**-1.6**
KHET	**Khetri**	**7.84**	**144**	*e*P	**P**	**00 31 13.1**	**+0.2**
KHET				*e*		00 32 40.1	
AML	**Almayashu**	**7.92**	**17**	P	**P**	**00 31 13.3**	**-0.8**
	SNR=12						
NDI	**New Delhi**	**8.12**	**134**	*e*P	**P**	**00 31 18.0**	**+1.3**
NDI				*e*S	**S**	**00 32 44.5**	**-3.5**
NDI				*e*		00 33 36.0	
KUDL	**Kundal**	**8.12**	**140**	*e*P	**P**	**00 31 17.0**	**+0.1**
KUDL				*e*		00 32 46.5	
AYAN	**Aya Nagar**	**8.21**	**136**	*e*P	**P**	**00 31 19.0**	**+0.9**
AYAN				*e*		00 32 50.5	
UCH	**Uchtor**	**8.23**	**21**	P	**P**	**00 31 17.8**	**-0.6**
	SNR=18						
SONA	**Sohna**	**8.37**	**137**	*e*P	**P**	**00 31 20.7**	**+0.5**
SONA				*e*		00 32 52.8	
SONA				*e*		00 32 56.8	
	comp=E,79nm,0.6s						
SONA				*e*		00 32 57.0	
	comp=N,54nm,0.2s						
EKS2	**Erkin-Say**	**8.45**	**16**	P	**P**	**00 31 24.9**	**+3.6**
	SNR=11						
JOSI	**Joshimath**	**8.53**	**116**	*e*	**P**	**00 31 16.8**	**-5.6**
JOSI				*e*S	**S**	**00 32 51.8**	**-6.3**
AAK	**Ala-Archa**	**8.60**	**19**	⇑P	**P**	**00 31 23.9**	**+0.5**
	comp=N,18nm,0.8s						
AAK				⇑S	**S**	**00 32 56.3**	**-3.7**
	comp=N,27nm,1.1s						
AAK	**Ala-Archa**	**8.60**	**19**	P	**P**	**00 31 23.9**	**+0.5**
	SNR=22						
AAK	**Ala-Archa**	**8.60**	**19**	*e*P	**P**	**00 31 21.3**	**-2.1**
CHMS	**Chumysh**	**9.01**	**20**	P	**P**	**00 31 29.5**	**+0.5**
	SNR=22						
USP	**Ospenovka**	**9.19**	**18**	P	**P**	**00 31 32.3**	**+0.7**
	SNR=6.4						
TKM2	**Tokmak 2**	**9.20**	**23**	P	**P**	**00 31 33.1**	**+1.5**
	SNR=7.3						
LGTI	**Lohaghat**	**9.62**	**119**	*e*	**P**	**00 31 41.0**	**+3.6**
LGTI				*e*		00 33 26.0	
AGRA	**Agra**	**9.63**	**137**	*e*P	**P**	**00 31 37.0**	**-0.6**
AGRA				*e*		00 33 23.8	
BHPL	**Bhopal**	**12.75**	**150**	*e*P	**P**	**00 32 18.9**	**-0.8**
BHPL				*e*		00 32 21.9	
	comp=Z,13nm,0.9s						
BHPL				*e*	**S**	**00 34 36.3**	**-4.5**
BHPL				*e*		00 34 42.1	
	comp=N,112nm,0.3s						
KOLN	**Koldanda**	**13.00**	**118**	*e*P	**P**	**00 32 21.6**	**-1.4**
	comp=N,20nm,0.5s						
GKN	**Gorkha**	**13.64**	**115**	*e*P	**P**	**00 32 29.1**	**-2.2**
	comp=N,45nm,0.5s						
DMN	**Daman**	**14.20**	**115**	*e*P	**P**	**00 32 36.8**	**-1.9**
	comp=N,66nm,0.8s						
KKN	**Kakani**	**14.23**	**114**	*e*P	**P**	**00 32 36.8**	**-2.3**
	comp=N,51nm,0.8s						
PKI	**Pulchoki**	**14.45**	**115**	*e*P	**P**	**00 32 39.8**	**-2.1**
	comp=N,56nm,0.6s						
JIRN	**Jiri**	**14.99**	**113**	*e*P	**P**	**00 32 46.9**	**-2.0**
	comp=N,60nm,0.4s						
MK31	**Makanchi Array**	**15.06**	**32**	⇓P	**P**	**00 32 47.7**	**-2.0**
	comp=N,7.2nm,1.1s,baz=210,slow=11,SNR=38						
KURK	**Kurchatov**	**17.16**	**17**	*e*P	**P**	**00 33 14.7**	**-1.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURK	**Kurchatov**	**17.16**	**17**	*e*P	**P**	**00 33 14.7**	**-1.5**
	comp=Z,4.3nm,0.8s						
LSA	**Lhasa**	**18.03**	**100**	P	**P**	**00 33 29.1**	**+1.8**
LSA	**Lhasa**	**18.03**	**100**	P	**P**	**00 33 26.9**	**-0.4**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LSA	**Lhasa**	**18.03**	**100**	P	**P**	**00 33 26.9**	**-0.4**
	comp=Z,7.5nm,0.7s						
BVAR	**Borovoye Array**	**18.45**	**360**	P	**P**	**00 33 30.7**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=166,slow=10,SNR=11						
BRVK	**Borovoye**	**18.49**	**359**	*e*P	**P**	**00 33 31.0**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRVK	**Borovoye**	**18.49**	**359**	*e*P	**P**	**00 33 31.0**	**-1.7**
	comp=Z,5.0nm,0.7s						
GNI	**Garni**	**21.29**	**293**	P	**P**	**00 34 03.6**	**+0.8**
GNI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GNI	**Garni**	**21.29**	**293**	P	**P**	**00 34 03.6**	**+0.8**
	comp=Z,4.3nm,0.7s,mb3.9,baz=316,slow=1.4,SNR=5.9						
GNI	**Garni**	**21.29**	**293**	P	**P**	**00 34 03.6**	**+0.8**
GNI				*e*P		00 34 05.0	
ZAL	**Zalesovo**	**21.78**	**23**	P	**P**	**00 34 06.9**	**-0.7**
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZAL	**Zalesovo**	**21.78**	**23**	P	**P**	**00 34 06.9**	**-0.7**
	comp=Z,3.7nm,0.3s,mb4.3,baz=252,slow=6.4,SNR=12						
NVS	**Novosibirsk**	**22.09**	**20**	*e*P	**P**	**00 34 13.6**	**+2.9**
GTA	**Gaotai**	**23.75**	**70**	*e*P	**P**	**00 34 30.4**	**+3.5**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb3.9						
ZAK	**Zakamensk**	**28.51**	**46**	*e*P	**P**	**00 35 14.8**	**+3.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
SONM	**Songino Array**	**29.71**	**53**	P	**P**	**00 35 23.1**	**+1.2**
	comp=Z,1.3nm,0.7s,mb3.8,baz=254,slow=9.8,SNR=16						
AKASG	**Malin Array Be**	**33.96**	**311**	P	**P**	**00 35 58.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**33.96**	**311**	P	**P**	**00 35 58.5**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.9,baz=85,slow=7.5,SNR=6.9						
JOF	**Joensuu**	**37.41**	**331**	*e*p	**P**	**00 36 23.2**	**-4.9**
	comp=Z,0.4nm,0.4s,mb3.6						
FINES	**FINESS Array B**	**38.94**	**328**	P	**P**	**00 36 41.3**	**+0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**38.94**	**328**	P	**P**	**00 36 41.2**	**+0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=104,slow=7.9,SNR=4.5						
KAF	**Kangasniemi**	**39.10**	**329**	*e*p	**P**	**00 36 45.2**	**+3.0**
	comp=Z,0.4nm,0.3s,mb3.6						
APA	**Apatity**	**39.31**	**339**	⇓*i*P	**P**	**00 36 57.0**	**+13**
APA				*i*	pP	00 37 11.0	+13
APA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
KEV	**Kevo**	**42.49**	**339**	*e*p	**P**	**00 37 09.2**	**-0.7**
	comp=Z,0.4nm,0.3s,mb3.5						
ARCES	**ARCESS Array B**	**42.82**	**338**	P	**P**	**00 37 12.5**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**42.82**	**338**	P	**P**	**00 37 12.5**	**-0.1**
	comp=Z,2.0nm,0.7s,mb4.0,baz=100,slow=7.4,SNR=9.4						
NB2	**NORSAR Subarra**	**45.76**	**324**	P	**P**	**00 37 35.2**	**-1.1**
	comp=Z,1.3nm,0.4s,mb4.2,baz=100,slow=7.9						
NOA	**NORSAR Array B**	**45.76**	**324**	P	**P**	**00 37 35.3**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**45.76**	**324**	P	**P**	**00 37 35.2**	**-1.1**
	comp=Z,1.3nm,0.5s,mb4.1,baz=98,slow=7.9,SNR=8.0						
ESDC	**Sonseca Array**	**58.11**	**299**	P	**P**	**00 39 09.6**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.3,baz=66,slow=7.9,SNR=6.8						
DBIC	**Dimbokro**	**74.31**	**267**	P	**P**	**00 40 53.4**	**+0.7**
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DBIC	**Dimbokro**	**74.31**	**267**	P	**P**	**00 40 53.4**	**+0.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=31,slow=8.4,SNR=4.1						
ILAR	**Eielson Array**	**76.72**	**16**	P	**P**	**00 41 05.4**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.5,baz=301,slow=4.6,SNR=7.1						
WRA	**Warramunga Arr**	**81.23**	**121**	P	**P**	**00 41 33.3**	**+2.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	**Warramunga Arr**	**81.23**	**121**	P	**P**	**00 41 33.3**	**+2.5**
	comp=Z,1.2nm,0.9s,mb3.8,baz=323,slow=5.1,SNR=4.2						
YKA	**Yellowknife Ar**	**83.19**	**2**	P	**P**	**00 41 40.7**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YKA	**Yellowknife Ar**	**83.19**	**2**	P	**P**	**00 41 40.7**	**+0.8**
	comp=Z,0.9nm,0.3s,mb4.3,baz=350,slow=5.3,SNR=21						
YKA	**Yellowknife Ar**	**83.19**	**2**	P	**P**	**00 41 40.7**	**+0.8**

NEIC ***15*** *00:29:26.6, 39.10S×174.90E, h226^{km}, After WEL.*

WEL 15 00:29:26.5±0.3**, 39.10S×174.89E, h227**^{km}±2^{km}**, ML4.0**/11**, 4C-1D, Error ellipse: s-maj=5.0km s-min=2.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.10**	**258**	P	P	00 29 55.3	-0.8
VRZ	**Vera Road**	**0.10**	**258**	PN	P	00 29 55.3	-0.8
VRZ				SN	S	00 30 17.9	-1.1
TWVZ	**Taurewa**	**0.43**	**86**	⇑P	P	00 29 56.2	-0.6
TWVZ				S	S	00 30 19.1	-1.1
TWVZ	**Taurewa**	**0.43**	**86**	⇑PN	P	00 29 56.2	-0.6
TWVZ				SN	S	00 30 19.1	-1.1
MGZ	**Maungaku**	**0.52**	**79**	⇑P	P	00 29 56.6	-0.4
MGZ	**Maungaku**	**0.52**	**79**	PN	P	00 29 56.6	-0.4
MGZ				SN	S	00 30 19.6	-1.2
CNZ	**Chateau**	**0.52**	**101**	P	P	00 29 56.7	-0.3
CNZ	**Chateau**	**0.52**	**101**	PN	P	00 29 56.7	-0.3
WPVZ	**Whakapapa**	**0.52**	**101**	P	P	00 29 56.7	-0.3
WPVZ	**Whakapapa**	**0.52**	**101**	PN	P	00 29 56.4	-0.6
FWVZ	**Far West T-bar**	**0.54**	**107**	⇓P	P	00 29 56.8	-0.3
FWVZ				S	S	00 30 19.7	-1.2
FWVZ	**Far West T-bar**	**0.54**	**107**	PN	P	00 29 56.8	-0.2
FWVZ				SN	S	00 30 19.8	-1.1
WTVZ	**West Tongariro**	**0.55**	**92**	⇑P	P	00 29 56.7	-0.4
WTVZ	**West Tongariro**	**0.55**	**92**	PN	P	00 29 56.7	-0.4
WTVZ				SN	S	00 30 20.3	-0.6
NGZ	**Ngauruhoe**	**0.56**	**98**	P	P	00 29 56.7	-0.5
NGZ	**Ngauruhoe**	**0.56**	**98**	PN	P	00 29 56.8	-0.3
NGZ				SN	S	00 30 20.3	-0.6
HIZ	**Hauiti**	**0.59**	**358**	PN	P	00 29 56.2	-1.1
HIZ				SN	S	00 30 20.0	-1.1
OTVZ	**Oturere**	**0.61**	**96**	PN	P	00 29 57.3	0.0
OTVZ				SN	S	00 30 20.1	-1.2
TUVZ	**Tukino**	**0.62**	**106**	P	P	00 29 57.1	-0.3
TUVZ	**Tukino**	**0.62**	**106**	PN	P	00 29 57.2	-0.2
TUVZ				SN	S	00 30 20.5	-0.9
WAZ	**Wanganui**	**0.66**	**173**	P	P	00 29 57.7	+0.2
WAZ	**Wanganui**	**0.66**	**173**	PN	P	00 29 57.6	+0.1
WAZ				SN	S	00 30 21.5	-0.1
MOVZ	**Moawhango**	**0.74**	**115**	P	P	00 29 57.2	-0.7
MOVZ				S	S	00 30 20.1	-2.1
MOVZ	**Moawhango**	**0.74**	**115**	PN	P	00 29 57.2	-0.6
MOVZ				SN	S	00 30 20.1	-2.1
BKZ	**Black Stump Fm**	**1.25**	**93**	P	P	00 30 00.0	-1.0
BKZ	**Black Stump Fm**	**1.25**	**93**	PN	P	00 29 60.0	-1.0
BKZ				SN	S	00 30 25.2	-2.6
TSZ	**Takapari Road**	**1.27**	**139**	P	P	00 30 01.0	-0.1
TSZ	**Takapari Road**	**1.27**	**139**	PN	P	00 30 01.0	-0.1
TSZ				SN	S	00 30 26.6	-1.3
MRZ	**Mangatainoka R**	**1.65**	**161**	P	P	00 30 03.4	-0.8
MRZ	**Mangatainoka R**	**1.65**	**161**	PN	P	00 30 03.4	-0.8
MRZ				SN	S	00 30 31.9	-1.3
KIW	**Kapiti Island**	**1.76**	**179**	P	P	00 30 04.3	-0.8
KIW	**Kapiti Island**	**1.76**	**179**	PN	P	00 30 04.3	-0.8
PWZ	**Pawanui**	**1.79**	**122**	*e*P	P	00 30 04.7	-0.7
PWZ	**Pawanui**	**1.79**	**122**	PN	P	00 30 04.7	-0.7
BFZ	**Birch Farm**	**1.89**	**147**	*e*P	P	00 30 05.5	-0.8
BFZ	**Birch Farm**	**1.89**	**147**	PN	P	00 30 05.5	-0.8
CAW	**Cannon Point**	**2.01**	**176**	P	P	00 30 06.6	-0.8
CAW	**Cannon Point**	**2.01**	**176**	PN	P	00 30 06.6	-0.8

CAW				SN	S	00 30 38.5	-0.5
MTW	**Mount Morrison**	2.11	167	P	P	00 30 07.3	-1.1
MTW	**Mount Morrison**	2.11	167	PN	P	00 30 07.3	-1.1
MRW	**Makara Radio**	2.13	184	P	P	00 30 07.6	-1.0
MRW	**Makara Radio**	2.13	184	PN	P	00 30 07.6	-1.0
KNZ	**Kokohu**	2.17	89	*e*P	P	00 30 07.7	-1.4
KNZ	**Kokohu**	2.17	89	PN	P	00 30 07.7	-1.4
WEL	**Wellington**	2.18	182	P	P	00 30 08.3	-0.9
WEL	**Wellington**	2.18	182	PN	P	00 30 08.3	-0.9
MWZ	**Matawai**	2.21	70	P	P	00 30 07.1	-2.3
MWZ	**Matawai**	2.21	70	PN	P	00 30 07.1	-2.3
BHW	**Baring Head**	2.30	180	P	P	00 30 08.8	-1.6
BHW	**Baring Head**	2.30	180	PN	P	00 30 09.1	-1.4
PAWZ	**Paruwai Farm**	2.31	170	PN	P	00 30 09.4	-1.2
MSWZ	**Moikau Station**	2.33	173	P	P	00 30 09.4	-1.3
MSWZ	**Moikau Station**	2.33	173	PN	P	00 30 09.4	-1.2
NNZ	**Nelson**	2.41	208	PN	P	00 30 10.2	-1.3
QRZ	**Quartz Range**	2.50	226	PN	P	00 30 10.3	-2.2
PUZ	**Puketiti**	2.84	70	PN	P	00 30 13.2	-2.9
THZ	**Tophouse**	3.06	209	P	P	00 30 16.8	-1.8
THZ	**Tophouse**	3.06	209	PN	P	00 30 16.8	-1.9
MXZ	**Matakaoa Point**	3.10	61	P	P	00 30 16.1	-3.0
MXZ	**Matakaoa Point**	3.10	61	PN	P	00 30 16.1	-3.0
KHZ	**Kahutara**	3.46	197	P	P	00 30 21.5	-1.9
KHZ	**Kahutara**	3.46	197	PN	P	00 30 21.5	-1.9
DSZ	**Denniston Nort**	3.54	221	*e*P	P	00 30 21.5	-2.8
DSZ	**Denniston Nort**	3.54	221	PN	P	00 30 21.5	-2.7
LTZ	**Lake Taylor**	4.17	207	*e*P	P	00 30 29.4	-2.5
LTZ	**Lake Taylor**	4.17	207	PN	P	00 30 29.4	-2.6
MQZ	**McQueen's Vall**	4.90	199	*e*P	P	00 30 37.1	-3.8
MQZ	**McQueen's Vall**	4.90	199	PN	P	00 30 37.1	-3.8
WVZ	**Waitaha Valley**	5.06	217	*e*P	P	00 30 39.7	-3.2
WVZ	**Waitaha Valley**	5.06	217	PN	P	00 30 39.8	-3.1
RPZ	**Rata Peaks**	5.43	211	*e*P	P	00 30 44.1	-3.5
RPZ	**Rata Peaks**	5.43	211	PN	P	00 30 44.1	-3.5
ODZ	**Otahua Downs**	6.72	207	*e*P	P	00 31 01.4	-2.6
ODZ	**Otahua Downs**	6.72	207	PN	P	00 31 01.4	-2.7
JCZ	**Jackson Bay**	6.76	221	*e*P	P	00 30 59.8	-4.8
JCZ	**Jackson Bay**	6.76	221	PN	P	00 30 59.8	-4.7

IDC 15 00:48:09.1±9.4**, 5.28S**×**151.27E, h51**^{km}±69^{km}**, mb3.1**/3**, mb1 3.4**/4**, mb1mx3.3**/13**, mbtmp3.5**/4**, ML2.7**/1**, Error ellipse: s-maj=106.6km s-min=37.5km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	5.78	225	P	P	00 49 32.7	-1.7
	1.3nm,0.3s,baz=51,slow=13,SNR=5.7						
PMG				S	S	00 50 38.0	-2.3
	1.4nm,0.3s,baz=171,slow=19,SNR=2.7						
WRA	**Warramunga Arr**	21.99	227	P	P	00 52 59.2	-1.4
	0.4nm,0.3s,baz=52,slow=9.9,SNR=3.6						
ASAR	**Alice Springs**	24.78	221	P	P	00 53 26.6	-1.2
	0.9nm,0.7s,baz=54,slow=8.8,SNR=9.8						
SONM	**Songino Array**	65.93	329	P	P	00 58 49.9	-2.2
	0.2nm,0.6s,baz=147,slow=4.2,SNR=4.2						

*SKHL **15** 01:03:59.7±1.4, 46.23N×153.56E, h47^{km}±17^{km}, mb5.0/5, msh5.4/1*
*MOS **15** 01:04:07.6±1.9, 46.68N×152.64E, h59^{km}, mb4.4/18, Error ellipse: s-maj=11.3km s-min=8.4km az=81.3*
*IDC **15** 01:04:09.4±0.9, 46.71N×152.53E, h56^{km}±7^{km}, mb3.7/19, mb1 4.0/21, mb1mx3.9/28, mbtmp4.1/21, Error ellipse: s-maj=18.3km s-min=16.8km az=137.0*
*BJI **15** 01:04:11.0, 46.80N×152.87E, h98^{km}, mB5.3, mb4.7*
*NEIC **15** 01:04:12.3±1.8, 46.92N×152.59E, h76^{km}±12^{km}, mb4.3/9, Error ellipse: s-maj=26.2km s-min=8.8km az=156.0*
ISC 15 01:04:08.1±1.1**, 46.78N**±0.08×**152.63E**±0.08**, h57**^{km}±9^{km}**, h55**^{km}±1.4^{km}**:pP-P, n80,** $\sigma 1\overset{s}{.}12$/87**, mb4.1**/28**, MS4.1**/1**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	3.66	247	*e*PN	**P**	**01 05 00.5**	**-3.1**
KUR				*e*S	**S**	**01 05 45.0**	**-0.8**
KUR				pmax	pmax		
	comp=E,110nm,0.5s						
KUR				pmax	pmax		
	comp=Z,210nm,0.5s						
KUR				smax			
	comp=N,6μm,4.0s						
KUR				smax			
	comp=N,1μm,0.5s						
KUR				smax			
	comp=E,530nm,0.5s						
KUR	**Kuril'sk**	3.66	247	*e*P	**P**	**01 05 00.5**	**-3.1**
KUR				AMB	AMB	01 05 09.6	
	comp=E,110nm,0.5s						
KUR				AMB	AMB	01 05 09.6	
	comp=E,210nm,0.5s						
KUR				*e*S	**S**	**01 05 45.0**	**-0.8**
KUR				A		01 05 50.0	
	comp=E,6μm,4.0s						
KUR				A		01 06 01.2	
	comp=E,1μm,0.5s						
KUR				A		01 06 01.2	
	comp=E,530nm,0.5s						
SKR	**Severo-Kuril's**	4.54	29	*e*P	**P**	**01 05 12.0**	**-4.0**
YUK	**Yuzh-Kuril'sk**	5.50	243	*e*PN	**P**	**01 05 27.9**	**-1.4**
YUK				*e*S	**S**	**01 06 35.1**	**+3.2**
YUK				pmax	pmax		
	comp=Z,400nm,0.5s						
YUK				pmax	pmax		
	comp=N,290nm,0.3s						
YUK				pmax	pmax		
	comp=E,180nm,0.3s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,4μm,1.0s						
YUK				smax			
	comp=N,1μm,0.5s						
YUK				smax			
	comp=E,1μm,0.7s						
YUK	**Yuzh-Kuril'sk**	5.50	243	*e*P	**P**	**01 05 27.9**	**-1.4**
YUK				AMB	AMB	01 05 35.5	
	comp=E,290nm,0.4s						
YUK				AMB	AMB	01 05 35.5	
	comp=E,180nm,0.4s						
YUK				AMB	AMB	01 05 35.5	
	comp=E,400nm,0.4s						
YUK				*e*S	**S**	**01 06 35.1**	**+3.2**
YUK				A		01 06 54.0	
	comp=E,2μm,1.0s						
YUK				A		01 06 54.0	
	comp=E,4μm,1.0s						
YUK				A		01 06 55.0	
	comp=E,1μm,0.5s						
YUK				A		01 06 55.0	
	comp=E,1μm,0.5s						
YSS	**Yuzh-Sakhalins**	6.77	275	*e*PN	**P**	**01 05 47.2**	**+0.1**
YSS				S	**S**	**01 07 03.2**	**-0.4**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,70nm,0.8s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
YSS	**Yuzh-Sakhalins**	6.77	275	*e*P	**P**	**01 05 48.7**	**+1.6**
YSS	**Yuzh-Sakhalins**	6.77	275	*e*P	**P**	**01 05 47.2**	**+0.1**
YSS				AMB	AMB	01 05 50.0	
	comp=Z,30nm,0.9s						
YSS				*e*S	**S**	**01 07 03.2**	**-0.4**
YSS				AMS	AMS	01 08 42.0	
	comp=Z,700nm,15.0s						
PET	**Petropavlovsk**	7.36	30	*e*PN	**P**	**01 06 00.4**	**+5.1**
PET				pmax	pmax		
	comp=Z,80nm,0.7s						
UGL	**Uglegorsk**	7.46	292	*e*P	**P**	**01 05 56.5**	**-0.1**
UGL				AMB	AMB	01 05 57.5	
	comp=Z,48nm,0.8s						
ASAJ	**Asahikawa**	7.54	253	PN	**P**	**01 05 59.3**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ	**Asahikawa**	7.54	253	P	**P**	**01 05 59.3**	**+1.6**
	comp=Z,4.5nm,0.3s,baz=82,slow=19,SNR=22						
MA2	**Magadan**	12.87	356	*e*PN	**P**	**01 07 11.3**	**+1.3**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MA2	**Magadan**	12.87	356	*e*P	**P**	**01 07 10.7**	**+0.7**
EKMR	**Ekimchan**	14.13	304	*e*P	**P**	**01 07 33.0**	**+6.6**
EKMR				AMB	AMB	01 07 34.5	
	comp=Z,8.0nm,0.6s						
FX1	**Attu Island--F**	14.57	58	P	**P**	**01 07 32.0**	**-0.2**
	comp=Z,2.2nm,0.3s,baz=198,slow=17,SNR=11						
FX1				S	**S**	**01 10 01.1**	**-12**
	comp=Z,2.4nm,0.3s,baz=37,slow=24,SNR=5.6						
FX1	**Attu Island--F**	14.57	58	*e*P	**P**	**01 07 32.2**	**0.0**
MDJ	**Mudanjiang**	16.23	271	*e*P	**P**	**01 07 54.3**	**+0.9**
	comp=Z,8.3nm,0.8s						
YASR	**Yasnyy**	17.07	301	*e*P	**P**	**01 08 03.4**	**-0.5**
YASR				AMB	AMB	01 08 08.4	
	comp=Z,4.0nm,0.5s						
CN2	**Changchun**	19.32	271	*e*P	**P**	**01 08 33.0**	**+2.0**
BILL	**Bilibino**	22.44	13	*e*P	**P**	**01 09 06.1**	**+3.3**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.2						
BOD	**Bodaibo**	25.71	310	*e*P	**P**	**01 09 33.1**	**-1.1**
BJT	**Baijiatuau**	27.16	269	*e*P	**P**	**01 09 50.1**	**+2.3**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJT	**Baijiatuau**	27.16	269	*e*P	**P**	**01 09 50.1**	**+2.3**
	comp=Z,5.8nm,0.6s,mb4.3						
HHC	**Hu-ho-hao-te**	29.96	274	⇓P	**P**	**01 10 13.3**	**+0.5**
HHC				PP	PP	01 11 14.3	+2.1
HHC				PCP	PcP	01 13 12.9	-1.4
HHC				S	**S**	**01 15 05.6**	**+0.5**
HHC				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,559nm,10.3s						
HHC				LR	LR		
	comp=N,359nm,14.4s,MS4.2						
HHC				LR	LR		
	comp=E,272nm,16.8s,MS4.2						
HHC				LR	LR		
	comp=Z,319nm,15.6s,MS4.1						
ULN	**Ulaanbaatar**	30.57	289	*e*P	**P**	**01 10 21.6**	**+3.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	30.57	289	*e*P	**P**	**01 10 21.6**	**+3.4**
	comp=Z,5.6nm,1.0s,mb4.3						
SONM	**Songino Array**	31.01	289	P	**P**	**01 10 21.6**	**-0.5**
	comp=Z,1.3nm,0.5s,mb4.0,baz=79,slow=7.5,SNR=11						
COLA	**College**	36.32	38	P	pP	01 11 21.6	-0.8
ILAR	**Eielson Array**	36.74	39	P	**P**	**01 11 11.6**	**+0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	36.74	39	P	**P**	**01 11 11.6**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.7,baz=266,slow=8.1,SNR=5.9						
GTA	**Gaotai**	38.63	279	*e*P	**P**	**01 11 28.4**	**+1.2**
INK	**Inuvik**	41.81	32	P	**P**	**01 11 53.7**	**+0.7**
INK				*PP	pP	01 12 08.5	+0.7
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	41.81	32	P	**P**	**01 11 53.6**	**+0.7**
	comp=Z,4.9nm,1.3s,mb4.0,baz=280,slow=11,SNR=4.3						
INK				pP	pP	01 12 08.5	+0.7
	comp=Z,2.2nm,0.6s,baz=286,slow=7.1,SNR=4.3						
ZAL	**Zalesovo**	42.34	306	P	**P**	**01 11 57.0**	**-0.5**
ZAL						01 13 50.0	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	42.34	306	P	**P**	**01 11 57.0**	**-0.6**
	comp=Z,0.6nm,0.3s,mb3.6,baz=336,slow=7.1,SNR=3.1						
ZAL				PcP	PcP	01 13 50.0	-0.8
	comp=Z,0.7nm,0.3s,baz=82,slow=4.0,SNR=4.5						
ZAL	**Zalesovo**	42.34	306	P	**P**	**01 11 57.0**	**-0.6**
ZAL				PcP	PcP	01 13 50.0	-0.8
KURK	**Kurchatov**	47.07	303	*e*P	**P**	**01 12 33.5**	**-2.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KURK	**Kurchatov**	47.07	303	*e*P	**P**	**01 12 33.5**	**-2.0**
	comp=Z,3.7nm,0.6s,mb4.5						
LSA	**Lhasa**	49.94	273	P	**P**	**01 12 58.8**	**+0.8**
LSA	**Lhasa**	49.94	273	*e*P	**P**	**01 12 59.3**	**+1.3**
LSA				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
LSA	**Lhasa**	49.94	273	*e*P	**P**	**01 12 59.3**	**+1.3**
	comp=Z,12nm,0.6s,mb5.1						
BVAR	**Borovoye Array**	50.58	309	P	**P**	**01 13 01.7**	**-0.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=31,slow=8.6,SNR=8.5						
BVAR				PcP	PcP	01 14 18.5	-1.3
	comp=Z,0.7nm,0.5s,baz=108,slow=4.6,SNR=3.8						
BRVK	**Borovoye**	50.62	309	P	**P**	**01 13 01.8**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	50.62	309	P	**P**	**01 13 01.8**	**-1.1**
	comp=Z,2.1nm,0.6s,mb4.2						
YKA	**Yellowknife Ar**	51.10	37	P	**P**	**01 13 06.8**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=297,slow=7.0,SNR=4.5						
JIRN	**Jiri**	54.61	274	*e*P	**P**	**01 13 33.4**	**+0.5**
	comp=Z,29nm,0.6s						
KKN	**Kakani**	55.15	275	*e*P	**P**	**01 13 37.2**	**+0.3**
	comp=Z,26nm,0.7s						
DMN	**Daman**	55.38	275	*e*P	**P**	**01 13 38.5**	**-0.1**
	comp=Z,30nm,0.8s						
GKN	**Gorkha**	55.46	276	*e*P	**P**	**01 13 38.8**	**-0.3**
	comp=Z,25nm,0.6s						
KOLN	**Koldanda**	56.31	276	*e*P	**P**	**01 13 45.3**	**+0.1**
	comp=Z,28nm,0.9s,mb5.3						
ARCES	**ARCESS Array B**	57.72	341	P	**P**	**01 13 55.5**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	57.72	341	P	**P**	**01 13 55.5**	**+0.9**
	comp=Z,2.7nm,0.8s,mb4.3,baz=37,slow=6.8,SNR=5.0						
KAF	**Kangasniemi**	63.28	335	*e*p	**P**	**01 14 31.1**	**-1.4**
	comp=Z,0.3nm,0.3s,mb3.9						
FINES	**FINESS Array B**	63.87	335	P	**P**	**01 14 35.4**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	63.87	335	P	**P**	**01 14 35.4**	**-0.8**
	comp=Z,1.1nm,0.4s,mb4.2,baz=30,slow=6.2,SNR=14						
FINES	**FINESS Array B**	63.87	335	P	**P**	**01 14 35.4**	**-0.8**
PDAR	**Pinedale Array**	65.00	54	P	**P**	**01 14 43.9**	**0.0**
	comp=Z,0.6nm,0.9s,mb3.6,slow=1.5,SNR=4.5						
PDAR				pP	pP	01 14 59.6	-0.1
	comp=Z,4.3nm,1.3s,baz=257,slow=1.7,SNR=3.7						
NB2	**NORSAR Subarra**	68.09	341	P	**P**	**01 15 02.6**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=27,slow=6.2						
NOA	**NORSAR Array B**	68.09	341	P	**P**	**01 15 02.9**	**-0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	**NORSAR Array B**	68.09	341	P	**P**	**01 15 02.9**	**-0.3**
	comp=Z,1.5nm,0.5s,mb4.2,baz=27,slow=6.3,SNR=9.1						
HFS	**Hagfors**	68.31	339	P	**P**	**01 15 04.0**	**-0.5**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HFS	**Hagfors**	68.31	339	P	**P**	**01 15 04.0**	**-0.5**
	comp=Z,2.8nm,0.4s,mb4.7,baz=45,slow=6.3,SNR=20						
WRA	**Warramunga Arr**	68.43	199	P	**P**	**01 15 04.0**	**-1.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	68.43	199	P	**P**	**01 15 04.0**	**-1.9**
	comp=Z,0.6nm,0.7s,mb3.7,baz=15,slow=6.9,SNR=4.3						
AKASG	**Malin Array Be**	71.34	326	P	**P**	**01 15 22.4**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	71.34	326	P	**P**	**01 15 22.4**	**-0.7**
	comp=Z,1.9nm,0.3s,mb4.4,baz=34,slow=6.3,SNR=16						
ASAR	**Alice Springs**	72.13	198	P	**P**	**01 15 28.1**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=14,slow=5.3,SNR=8.9						
MORC	**Moravsky Berou**	76.26	332	P	**P**	**01 15 49.6**	**-2.0**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MORC	**Moravsky Berou**	76.26	332	P	**P**	**01 15 49.6**	**-2.1**
	comp=Z,2.5nm,0.7s,mb4.2						
CLL	**Collm**	76.30	335	P	**P**	**01 15 51.0**	**-0.9**
MLR	**Muntele Rosu**	76.85	325	P	**P**	**01 15 56.2**	**+1.1**
MLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MLR	**Muntele Rosu**	76.85	325	P	**P**	**01 15 56.2**	**+1.2**
	comp=Z,2.8nm,0.7s,mb4.3,baz=239,slow=5.9,SNR=6.8						
VRAC	**Vranov**	76.97	332	P	**P**	**01 15 56.5**	**+0.8**
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VRAC	**Vranov**	76.97	332	P	**P**	**01 15 56.5**	**+0.8**
	comp=Z,2.5nm,0.8s,mb4.2,baz=19,slow=10,SNR=4.5						
TXAR	**Lajitas Array**	77.77	60	P	**P**	**01 16 01.7**	**+1.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=306,slow=3.6,SNR=7.5						
TXAR				pP	pP	01 16 16.7	+0.1
	comp=Z,1.4nm,0.6s,baz=294,slow=4.0,SNR=12						
KHC	**Kasperske Hory**	78.07	334	*e*P	**P**	**01 15 58.5**	**-3.2**
BRTR	**Keskin Array B**	78.14	316	P	**P**	**01 16 02.8**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	78.14	316	P	**P**	**01 16 02.8**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=78,slow=5.7,SNR=5.6						
GERES	**GERESS Array B**	78.28	334	P	**P**	**01 16 03.3**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.4,baz=34,slow=4.8,SNR=6.8						

*PRU **15** 01:06:16.5, 50.17N×19.20E*
WAR 15 01:06:15.1, 50.16N×19.31E, h0^{km}**, ML2.6, 1C-3D, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.32	79	⇓*i*PG	Pg	01 06 22.1	+0.6
OJC				⇓*i*SG	Sg	01 06 26.8	+1.0
RAC	**Raciborz**	0.72	264	*e*Pg	Pg	01 06 30.4	+0.9
RAC				*e*Sg	Sg	01 06 41.2	+2.1
OKC	**Ostrava-Krasne**	0.82	247	*e*PG	Pg	01 06 30.9	-0.5
OKC				*e*SG	Sg	01 06 42.1	-0.2
	30nm,0.3s						
NIE	**Niedzica**	0.99	138	*e*PG	Pg	01 06 33.0	-1.8
NIE				*e*SG	Sg	01 06 48.0	0.0
KOLL	**Kolacno**	1.69	201	*e*SN	Sn	01 07 09.9	+1.2
VYHS	**Vyhne**	1.70	191	*i* PN	Pn	01 06 45.5	-0.6
VYHS				*e*SN	Sn	01 07 08.3	-0.5
KECS	**Kecovo**	1.85	155	*e*PG	Pg	01 06 50.2	-1.8
CRVS	**Cervenica-Dubn**	1.89	131	*e*PG	Pg	01 06 51.7	-1.1
CRVS				*e*SN	Sn	01 07 17.2	+3.6
DPC	**Dobruska-Polom**	1.93	277	*e*PG	Pg	01 06 48.1	-5.4
DPC				*e*SG	Sg	01 07 13.8	-5.4
	27nm,0.4s						
KSP	**Ksiaz**	2.04	291	*e*PG	Pg	01 06 53.0	-2.9
KSP				*e*SG	Sg	01 07 20.0	-3.1
SMOL	**Smolenice**	2.06	217	*e*PN	Pn	01 06 50.2	-1.1
SMOL				*e*PG	Pg	01 06 56.2	0.0
UPC	**Upice**	2.14	281	*e*SG	Sg	01 07 19.6	-6.7
KWP	**Kalwaria**	2.26	102	*e*PG	Pg	01 06 58.0	-2.3
KWP				*e*SG	Sg	01 07 28.0	-2.4
PSZ	**Piszkesteto**	2.28	170	⇓*e*P	Pn	01 06 59.0	+4.6
KOLS	**Kolonicke sedl**	2.29	121	*e*PN	Pn	01 06 54.7	+0.1
KOLS				*e*PG	Pg	01 07 00.5	-0.3
PRU	**Pruhonice**	3.08	269	*e*SG	Sg	01 07 49.8	-7.7
GKP	**Gorka Klasztor**	3.37	338	*e*PG	Pg	01 07 24.0	+1.7
KHC	**Kasperske Hory**	3.86	257	*e*PN	Pn	01 07 14.0	-3.0
KHC				*e*PG	Pg	01 07 24.5	-7.7
KHC				*e*SN	Sn	01 08 00.0	-3.7
KHC				*e*SG	Sg	01 08 15.9	-7.8
MOA	**Molln**	4.04	237	⇑*i*PN	Pn	01 07 18.7	-0.9
MOA				*i* SG	Sg	01 08 23.1	-6.7
	3.0nm,0.5s						
CLL	**Collm**	4.17	288	*e*PG	Pg	01 07 35.0	-3.3
CLL				*e*SG	Sg	01 08 27.0	-6.8

JMA 15 01:11:41.1±0.4**, 40.16N**×**145.19E, h46**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	**Erimo**	2.41	321	P	P	01 12 19.4	+0.5
JEM				*e*S	S	01 12 48.0	+0.6
MIYJ	**Miyakonagasawa**	2.66	258	P	P	01 12 23.1	+0.6
MIYJ				*e*S	S	01 12 53.9	+0.2
JNBK	**Urakawa-nobuka**	2.81	320	P	P	01 12 25.4	+0.8
JNBK				*e*S	S	01 12 58.9	+1.5
JCH	**Churui**	2.81	331	P	P	01 12 24.6	-0.1
JCH				*e*S	S	01 12 56.8	-0.8
JANG	**Nango**	2.82	276	P	P	01 12 25.1	+0.3
JANG				*e*S	S	01 12 56.6	-1.2
JAK	**Akkeshi**	2.86	353	P	P	01 12 24.2	-1.2
JAK				*e*S	S	01 12 55.6	-3.2
JOM	**Ohasama**	3.08	258	P	P	01 12 29.4	+0.9
JOM				*e*S	S	01 13 04.8	+0.4
NEM2	**Nemuro 2**	3.23	7	P	P	01 12 27.3	-3.3
NEM2				*e*S	S	01 13 01.6	-6.6
JMK	**Ichinoseki**	3.30	250	P	P	01 12 32.1	+0.5
JMK				*e*S	S	01 13 09.6	-0.3
JAR	**Ashorobuto**	3.31	342	P	P	01 12 29.9	-1.9
JAR				*e*S	S	01 13 06.7	-3.5
JOT	**Ohata**	3.37	293	P	P	01 12 33.5	+0.8
JOT				*e*S	S	01 13 11.4	-0.5
JFR	**Furan**	3.58	328	*e*S	S	01 13 15.0	-2.0
JTKR	**Abashiri--Toko**	3.93	346	*e*S	S	01 13 23.0	-2.8

*IDC **15** 01:12:55.6±0.9, 14.76N×93.70E, mb3.8/6, mb1 4.0/7, mb1mx3.8/19, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=31.8km s-min=20.0km az=68.0*
*NEIC **15** 01:13:01.9±2.9, 14.81N×93.86E, h43^{km}±25^{km}, mb4.1/4, Error ellipse: s-maj=25.3km s-min=13.8km az=64.0*
ISC 15 01:12:55.4±3.6**, 14.71N**±0.09×**93.78E**±0.09**, h12**^{km}±22^{km}**, n18,** $\sigma 0\overset{s}{.}88$/17**, mb4.0**/10**, 1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	6.19	52	*e*P	**Pn**	**01 14 29.0**	**+0.1**
CMAR	**Chiang Mai Arr**	6.19	52	Pn	**Pn**	**01 14 29.7**	**+0.7**
	0.9nm,0.3s,baz=242,slow=15,SNR=29						
CMAR				Sn	**Sn**	**01 15 40.5**	**+0.1**
	baz=239,slow=24,SNR=2.5						
NST	**Nakhon Sawan**	6.21	80	P	**Pn**	**01 14 28.0**	**-1.1**
CHRT	**Chiangrai**	7.69	47	⇓P	**Pn**	**01 14 51.0**	**+1.0**
	126nm,1.0s						
NANT	**Nan**	7.77	57	P	**Pn**	**01 15 01.0**	**+10**
VIS	**Vishakhapatnam**	10.48	288	*i* P	**P**	**01 15 24.2**	**-4.5**
ENH	**Enshi**	21.18	40	*e*P	**P**	**01 17 41.3**	**-1.8**
	9.5nm,0.8s,mb4.2						
SONM	**Songino Array**	34.65	15	P	**P**	**01 19 46.7**	**0.0**
	1.6nm,1.1s,mb3.9,baz=187,slow=5.1,SNR=7.9						
SONM				PcP	PcP	01 22 21.6	+0.5
	0.7nm,1.1s,baz=207,slow=3.2,SNR=3.1						
KURK	**Kurchatov**	37.95	344	P	**P**	**01 20 16.4**	**+1.9**
	2.3nm,0.9s,mb3.9						
ZAL	**Zalesovo**	39.77	352	P	**P**	**01 20 29.1**	**-0.6**
	0.7nm,0.3s,mb3.8,baz=48,slow=16,SNR=4.3						
WRA	**Warramunga Arr**	52.69	130	P	**P**	**01 22 12.7**	**+0.4**
	0.9nm,0.7s,mb3.8,baz=312,slow=8.2,SNR=8.0						
ASAR	**Alice Springs**	54.71	134	P	**P**	**01 22 27.4**	**+0.3**
	0.8nm,0.6s,mb3.9,baz=312,slow=6.6,SNR=11						
ASAR				PcP	PcP	01 23 30.1	+0.3
	0.9nm,0.9s,baz=308,slow=4.4,SNR=4.6						
STKA	**Stephens Creek**	65.15	136	P	**P**	**01 23 38.8**	**+0.1**
	3.3nm,1.1s,mb4.3,baz=315,slow=10.0,SNR=3.2						
LSZ	**Lusaka**	71.35	248	*e*P	**P**	**01 24 18.0**	**+0.4**
	1.8nm,0.7s,mb4.1						
GERES	**GERESS Array B**	72.57	317	P	**P**	**01 24 23.4**	**-0.9**
	0.9nm,0.8s,mb3.7,baz=108,slow=4.2,SNR=5.2						
INK	**Inuvik**	90.56	16	P	**P**	**01 25 58.2**	**0.0**
	0.7nm,0.7s,mb4.1						
PLCA	**Paso Flores**	150.70	205	PKPbc	PKPdf	01 32 51.0	+5.5
	1.4nm,0.8s,baz=297,slow=2.3,SNR=4.4						
PLCA	**Paso Flores**	150.70	205	PKPbc	PKPdf	01 32 51.0	+5.5

*IDC **15** 01:45:17.4±1.5, 15.85N×60.24W, mb3.8/3, mb1 4.1/3, mb1mx3.5/21, mbtmp3.8/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/24, Error ellipse: s-maj=19.0km s-min=11.7km az=68.0*
*TRN **15** 01:45:19.7, 15.69N×61.45W, h20^{km}, MD3.8, Md3.1(FDF)*
ISC 15 01:45:21.7±0.5**, 15.71N**±0.03×**61.47W**±0.09**, h14**^{km}±4^{km}**, n23,** $\sigma 0\overset{s}{.}75$/30**, mb3.9**/3**, 8C-4D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBL	**Barber's Block**	0.18	181	⇓*i*P	**Pg**	**01 45 26.1**	**0.0**
BBL	**Barber's Block**	0.18	181	⇓*i*P	**Pg**	**01 45 26.1**	**0.0**
BBL				*e*S	**Sg**	**01 45 28.9**	**-0.3**
MGG	**Marie-Galante**	0.25	35	⇑*i*P	**Pg**	**01 45 27.9**	**+0.6**
DOG	**Dongo Capester**	0.35	336	⇑*i*P	**Pg**	**01 45 29.5**	**+0.4**
SCG	**Saint Claude**	0.38	327	⇑*i*P	**Pg**	**01 45 29.9**	**+0.2**
MDN	**Morne-Daniel**	0.40	169	⇓*i*P	**Pb**	**01 45 29.9**	**0.0**
MDN				*e*S	**Sg**	**01 45 35.5**	**0.0**
BCG	**Bois Riant Cap**	0.40	339	⇑*i*P	**Pb**	**01 45 30.3**	**+0.3**
DBCT	**Belle View Cho**	0.45	165	*e*P	**Pb**	**01 45 30.9**	**0.0**
DBCT				*e*S	**Sb**	**01 45 36.4**	**-0.7**
DSHT	**Scott's Head**	0.50	170	⇓*e*P	**Pb**	**01 45 31.9**	**+0.2**
DSHT				*e*S	**Sb**	**01 45 39.5**	**+1.0**
SEG	**Port Louis**	0.69	357	⇑*i*P	**Pb**	**01 45 35.2**	**+0.2**
DEG	**La Desirade**	0.72	33	⇑*i*P	**Pb**	**01 45 35.0**	**-0.4**
FDF	**Fort de France**	1.02	162	*e*P	**Pb**	**01 45 39.9**	**-0.6**

FDF				eS	Sb	01 45 54.4	+0.9
CRM	Caravelle	1.09	151	⇑eP	Pb	01 45 41.4	-0.3
CRM				eS	Sb	01 45 56.1	+0.5
BIM	Bigot	1.25	162	eP	Pb	01 45 43.9	-0.6
BIM				eS	Sb	01 46 00.7	+0.6
MVM	Montagne Vaucl	1.27	154	eP	Pb	01 45 44.5	-0.4
BPA	Boggy Peak	1.38	344	⇑eP	Pn	01 45 46.0	-0.6
BPA				eS	Sb	01 46 04.1	0.0
CPB	Codrington	1.95	350	eP	Pn	01 45 54.1	-0.6
CPB				eS	Sn	01 46 19.2	+0.1
GRW	Mount Saint Ca	3.53	183	eP	Pn	01 46 16.1	-1.2
SJG	San Juan	5.08	299	LR	LR	01 48 05.7	
	comp=Z,321nm,19.1s,baz=260,slow=28						
ROSC	El Rosal	16.61	231	LR	LR	01 56 20.6	
	comp=Z,372nm,18.5s,baz=359,slow=38						
ULM	Lac du Bonnet	44.24	329	P	P	01 53 32.7	+0.5
	1.4nm,0.6s,mb3.9,baz=134,slow=6.6,SNR=4.2						
PDAR	Pinedale Array	49.02	313	P	P	01 54 12.7	+2.7
	0.9nm,0.7s,mb3.9,baz=112,slow=9.7,SNR=10						
YKA	Yellowknife Ar	59.56	334	P	P	01 55 24.2	-2.7
	0.7nm,0.7s,mb3.8,baz=106,slow=7.5,SNR=4.6						

BJI ***15*** *01:45:39.6, 1.03N×92.00E, h30^{km}, mB5.1, mb4.8, Ms5.0, Msz4.7*

IDC ***15*** *01:45:42.7±0.6, 1.82N×92.10E, mb4.3/14, mb1 4.5/15, mb1mx4.5/19, mbtmp4.4/15, ML4.6/1, MS4.5/8, Ms1 4.6/8, ms1mx4.4/17, Error ellipse: s-maj=23.6km s-min=15.5km az=50.0*

MOS ***15*** *01:45:45.6±1.3, 1.85N×92.14E, h33^{km}, mb4.9/17, MS4.8/10, Error ellipse: s-maj=12.1km s-min=6.9km az=105.1*

NEIC ***15*** *01:45:47.1±0.3, 1.81N×92.18E, h30^{km}, mb4.8/17, MS4.4/11, Error ellipse: s-maj=8.9km s-min=6.8km az=54.0*

ISC 15 01:45:41.8±1.1**, 1.78N**±0.05×**92.14E**±0.04**, h7**^{km}±6^{km}**, h29**^{km}±2.0^{km}**:pP-P, n131, σ1^{s}14**/140**, mb4.7**/63**, MS4.6**/40**, 12C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	10.01	57	P	P	01 48 07.0	-2.1
	1µm,1.0s						
KGM	Kluang	11.18	89	P	P	01 48 24.1	-1.1
PALK	Pallekele	12.64	296	eP	P	01 48 41.3	-3.7
	70nm,1.1s						
NST	Nakhon Sawan	15.89	29	P	P	01 49 27.0	-0.8
	75nm,0.9s						
CM31	Chiang Mai Arr	17.87	21	eP	P	01 49 51.6	-1.0
CMAR	Chiang Mai Arr	17.87	21	P	P	01 49 51.8	-0.8
	0.7nm,0.3s,baz=216,slow=13,SNR=52						
CMAR				LR	LR	01 56 53.3	
	comp=Z,359nm,21.8s,baz=215,slow=38						
KKTK	Khon Kaen	17.89	35	P	P	01 49 53.0	+0.1
	741nm,0.6s						
VIS	Vishakhapatnam	18.05	332	eP	P	01 49 54.3	-0.7
VIS				e		01 49 57.4	
	comp=Z,51nm,0.5s						
VIS				eS	S	01 53 14.1	+0.1
NANT	Nan	18.88	26	P	P	01 50 04.0	-1.2
CHRT	Chiangrai	19.47	22	⇑P	P	01 50 12.0	-0.1
	comp=Z,216nm,1.1s						
MNGI	Mangalore	20.42	304	i P	P	01 50 24.5	+2.0
MNGI				i S	S	01 54 11.9	+5.7
HYB	Hyderabad	20.49	320	eP	P	01 50 22.5	-0.6
HYB				eS	S	01 53 57.0	-11
HYB	Hyderabad	20.49	320	i P	P	01 50 22.5	-0.6
HYB				eS	S	01 54 06.0	-1.6
CAL	Calcutta	20.96	350	e	P	01 50 20.9	-7.1
CAL				e		01 54 27.9	
CAL				e		01 55 32.0	
BLSP	Bilaspur	22.45	335	eP	P	01 50 43.3	+0.3
BLSP				e		01 50 49.9	
	comp=Z,66nm,1.7s						
BLSP				e		01 54 43.0	
LATR	Latur	22.51	318	eP	P	01 50 44.5	+0.8
LATR				e		01 54 45.2	
KAD	Karad	23.45	312	eP	P	01 50 57.7	+4.9
KAD				eS	S	01 55 04.6	+2.0
SHL	Shillong	23.65	359	eP	P	01 50 55.0	+0.3
SHL				eS	S	01 55 12.0	+5.9
KKM	Kota Kinabalu	24.38	79	P	P	01 51 03.8	+1.7
QIZ	Qiongzhong	24.38	44	⇑P	P	01 51 04.9	+2.9
QIZ				S	S	01 55 18.0	-0.8
QIZ				XS		01 55 31.8	
QIZ				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.5						
QIZ				LR	LR		
	comp=N,2µm,16.4s,MS4.8						
QIZ				LR	LR		
	comp=E,2µm,17.5s,MS4.8						
QIZ				LR	LR		
	comp=Z,2µm,15.0s,MS4.7						
POO	Poona	24.47	314	eP	P	01 51 01.8	-1.0
KMI	Kunming	25.36	23	P	P	01 51 14.6	+3.3
KMI				AP	pP	01 51 23.3	+10
KMI				XP	sP	01 51 26.8	+13
KMI				PP	PP	01 51 52.9	+3.0
KMI				S	S	01 55 38.0	+2.8
KMI				XS		01 55 51.3	
KMI				AMB	AMB		
	comp=Z,37nm,1.1s,mb4.8						
KMI				AMB	AMB		
	comp=Z,132nm,3.9s						
KMI				LR	LR		
	comp=N,2µm,16.4s,MS4.8						
KMI				LR	LR		
	comp=E,2µm,16.4s,MS4.8						
KMI				LR	LR		
	comp=Z,2µm,13.1s,MS4.7						
BHPL	Bhopal	25.67	327	eP	P	01 51 14.1	0.0
BHPL				e	pP	01 51 18.1	+1.9
	comp=Z,21nm,0.9s						
TSM	Tawau	25.82	84	P	P	01 51 18.3	+2.7
JIRN	Jiri	26.36	348	eP	P	01 51 21.1	+0.6
	comp=Z,81nm,0.8s,mb5.3						
PKI	Pulchoki	26.44	346	eP	P	01 51 21.6	+0.3
	comp=Z,15nm,0.6s,mb4.7						
DMN	Daman	26.55	346	eP	P	01 51 22.9	+0.6
KKN	Kakani	26.68	346	eP	P	01 51 24.3	+0.8
	comp=Z,72nm,1.1s,mb5.1						
GKN	Gorkha	27.05	345	eP	P	01 51 27.5	+0.7
	comp=Z,50nm,0.7s,mb5.2						
KOLN	Koldanda	27.11	343	eP	P	01 51 27.9	+0.5
	comp=Z,28nm,0.7s,mb4.9						
LSA	Lhasa	27.78	358	P	P	01 51 39.8	+6.3
LSA				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.1						
LSA				LR	LR		
	comp=N,440nm,22.0s,MS4.5						
LSA				LR	LR		
	comp=E,1µm,19.0s,MS4.5						
LSA				LR	LR		
	comp=Z,1µm,19.0s,MS4.4						
LSA	Lhasa	27.78	358	eP	P	01 51 34.6	+1.1
LSA				pmax	pmax		
	comp=Z,48nm,0.6s,mb5.3						
LSA	Lhasa	27.78	358	eP	P	01 51 34.6	+1.1
	comp=Z,48nm,0.6s,mb5.3						
GYA	Guiyang	28.23	28	⇑iP	P	01 51 38.8	+1.2
GYA				AP	pP	01 51 49.9	+10
GYA				XP	sP	01 51 55.3	+15
GYA				S	S	01 56 22.6	+0.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,230nm,3.6s						
GYA				LR	LR		
	comp=N,1µm,16.8s,MS4.7						
GYA				LR	LR		
	comp=E,1µm,15.6s,MS4.7						
GYA				LR	LR		
	comp=Z,1µm,19.2s,MS4.4						
GZH	Guangzhou	29.52	43	P	P	01 51 51.9	+2.6
GZH				S	S	01 56 51.1	+8.2
GZH				LR	LR		
	comp=N,1µm,13.9s,MS4.9						
GZH				LR	LR		
	comp=E,2µm,15.0s,MS4.9						
GZH				LR	LR		
	comp=Z,2µm,16.3s,MS4.9						
NDI	New Delhi	30.31	333	eP	P	01 51 56.0	-0.2
	comp=Z,43nm,0.5s,mb5.4						
NDI				e		01 57 52.0	
TGY	Tagaytay City	30.98	65	LR	LR	02 03 33.8	
	comp=Z,761nm,19.7s,MS4.4,baz=81,slow=34						
DDI	Dehra Dun	31.38	336	eP	P	01 52 06.2	+0.6
ENH	Enshi	32.77	28	eP	P	01 52 17.0	-0.8
	comp=Z,19nm,0.8s,mb5.1						
ENH				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
SDNR	Sundarnagar	32.85	336	eP	P	01 52 20.2	+1.7
WHN	Wuhan	35.52	34	⇑P	P	01 52 43.0	+1.5
WHN				S	S	01 58 15.0	-1.4
WHN				LR	LR		
	comp=Z,2µm,13.8s,MS5.1						
XAN	Xi'an	35.72	24	P	P	01 52 42.8	-0.4
XAN				AMB	AMB		
	comp=Z,36nm,0.9s,mb5.3						
XAN				LR	LR		
	comp=N,1µm,17.4s,MS4.8						
XAN				LR	LR		
	comp=E,960nm,18.9s,MS4.8						
XAN				LR	LR		
	comp=Z,1µm,13.9s						
LZH	Lanzhou	35.82	16	eP	P	01 52 44.4	+0.4
LZH				AP	pP	01 52 54.0	+8.0
LZH				XP	sP	01 52 57.0	+10
LZH				PP	PP	01 54 06.5	+1.6
LZH				eS	S	01 58 22.0	+1.0
LZH				XS		01 58 38.0	
LZH				AMB	AMB		
	comp=Z,37nm,1.8s,mb5.0						
LZH				AMB	AMB		
	comp=Z,101nm,4.0s						
LZH				LR	LR		
	comp=E,1µm,16.0s						
LZH				LR	LR		
	comp=Z,2µm,17.1s,MS4.9						
GTA	Gaotai	38.10	10	eP	P	01 53 03.8	+0.7
GTA				AP	pP	01 53 11.8	+6.6
GTA				XP	sP	01 53 15.8	+10
GTA				PP	PP	01 54 35.5	+2.2
GTA				PPP	PPP	01 54 57.3	+1.9
GTA				PCP	PcP	01 55 15.0	-3.7
GTA				S	S	01 58 56.3	+0.4
GTA				XS		01 59 10.8	
GTA				SCS	ScS	02 03 11.5	-2.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GTA				AMB	AMB		
	comp=Z,74nm,4.8s						
GTA				LR	LR		
	comp=N,393nm,20.9s						
GTA				LR	LR		
	comp=E,648nm,15.2s						
GTA				LR	LR		
	comp=Z,421nm,23.6s,MS4.2						
NJ2	Nanjing	39.24	37	eP	P	01 53 14.5	+1.7
NJ2				AP	pP	01 53 23.3	+8.5
NJ2				XP	sP	01 53 27.3	+12
NJ2				PP	PP	01 54 49.3	+2.6
NJ2				S	S	01 59 13.0	-0.2
NJ2				AMB	AMB		
	comp=Z,540nm,5.0s						
NJ2				LR	LR		
	comp=Z,1µm,15.5s,MS4.9						
SSE	Sheshan	40.05	40	P	P	01 53 19.3	-0.2
SSE				XP	sP	01 53 32.0	+10
SSE				PP	PP	01 54 51.8	-3.7
SSE				S	S	01 59 23.8	-1.6
SSE				XS		01 59 38.8	
SSE				SS	SS	02 02 22.6	+6.7
SSE				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.4						
SSE				AMB	AMB		
	comp=Z,233nm,4.2s						
SSE				LR	LR		
	comp=N,909nm,19.6s,MS4.7						
SSE				LR	LR		
	comp=E,460nm,19.6s,MS4.7						
SSE				LR	LR		
	comp=Z,543nm,18.4s,MS4.4						
WMQ	Urumqi	42.05	355	P	P	01 53 36.6	+0.9
WMQ				XP	sP	01 53 50.0	+11
WMQ				PP	PP	01 55 17.0	+0.7
WMQ				S	S	01 59 53.0	-1.9
WMQ				AMB	AMB		
	comp=Z,31nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,675nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=E,468nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,615nm,20.0s,MS4.5						
HHC	Hu-ho-hao-te	42.68	22	eP	P	01 53 42.5	+1.6
HHC				PP	PP	01 55 27.4	+4.7
HHC				PCP	PcP	01 55 32.3	-1.2
HHC				PCS		01 59 18.8	
HHC				S	S	02 00 06.8	+2.5
HHC				SS	SS	02 03 15.0	+6.7
HHC				SCS	ScS	02 03 36.6	-4.1
HHC				AMB	AMB		
	comp=Z,17nm,1.2s,mb4.7						
HHC				LR	LR		
	comp=Z,675nm,16.8s,MS4.6						
JOW	Kunigami	42.68	51	LR	LR	02 11 20.1	
	comp=Z,507nm,19.9s,MS4.4,baz=272,slow=36						
AAK	Ala-Archa	43.64	341	⇓iP	P	01 53 46.8	-1.9
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
AAK	Ala-Archa	43.64	341	eP	P	01 53 48.0	-0.7
AAK				LR	LR		
	comp=Z,272nm,21.0s,MS4.1						
BJT	Baijiatuau	43.88	27	eP	P	01 53 51.8	+1.1
BJT				pmax	pmax		
	comp=Z,26nm,1.0s						
BJT				MLR	MLR		
	comp=Z,685nm,20.0s						
BJT	Baijiatuau	43.88	27	eP	P	01 53 51.8	+1.2
	comp=Z,26nm,1.0s,mb4.9						
BJT				LR	LR		
	comp=Z,685nm,20.0s,MS4.6						
BJI	Beijing	43.90	27	P	P	01 53 52.8	+1.9
BJI				AMB	AMB		
	comp=Z,24nm,0.9s,mb4.9						
BJI				LR	LR		
	comp=N,445nm,19.5s,MS4.7						
BJI				LR	LR		
	comp=E,737nm,19.5s,MS4.7						
BJI				LR	LR		
	comp=Z,470nm,21.9s,MS4.4						
MKAR	Makanchi Array	45.65	351	i P	P	01 54 04.5	-0.3
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRA	Warramunga Arr	46.67	120	P	P	01 54 13.0	-0.2
	comp=Z,2.4nm,0.6s,mb4.3,baz=299,slow=8.6,SNR=18						
WRAB	Tennant Creek	46.68	120	⇑eP	P	01 54 13.4	+0.1
WRAB	Tennant Creek	46.68	120	eP	P	01 54 12.3	-1.0
	comp=Z,12nm,0.8s,mb4.9						
WRAB				LR	LR		
	comp=Z,205nm,19.0s,MS4.1						
WB2	Warramunga Arr	46.68	120	eP	P	01 54 13.5	+0.1
WB2				i		01 54 22.1	
SONM	Songino Array	47.51	13	P	P	01 54 20.3	+0.8
	comp=Z,9.5nm,0.6s,mb5.0,baz=193,slow=8.3,SNR=88						
ULN	Ulaanbaatar	47.69	14	eP	P	01 54 20.7	-0.2
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ULN				MLR	MLR		
	comp=Z,575nm,19.0s,MS4.6						
ULN	Ulaanbaatar	47.69	14	eP	P	01 54 20.6	-0.3
	comp=Z,5.4nm,0.8s,mb4.6						
ULN				LR	LR		
	comp=Z,575nm,19.0s,MS4.6						
ASAR	Alice Springs	47.84	125	P	P	01 54 23.1	+0.7
	comp=Z,1.6nm,1.0s,mb4.0,baz=292,slow=5.7,SNR=7.6						
ASAR				PcP	PcP	01 55 51.8	+0.2
	comp=Z,2.2nm,0.7s,baz=302,slow=3.6,SNR=7.7						
ZAK	Zakamensk	49.34	9	⇓iP	P	01 54 34.1	+0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
KURK	Kurchatov	50.09	349	⇑iP	P	01 54 38.1	-1.3
KURK	Kurchatov	50.09	349	eP	P	01 54 38.2	-1.1
	comp=Z,7.7nm,1.0s,mb4.7						
KURK				LR	LR		
	comp=Z,166nm,20.0s,MS4.0						
TLY	Talaya	50.66	9	⇑iP	P	01 54 41.8	-1.9
TLY				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
CN2	Changchun	51.23	31	eP	P	01 54 48.3	+0.1
CN2				eAP	pP	01 54 56.3	+6.0
CN2				eS	S	02 02 04.3	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				LR	LR		
	comp=N,400nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,600nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=Z,600nm,19.0s,MS4.6						
ZAL	Zalesovo	52.34	355	P	P	01 54 56.2	-0.2
	comp=Z,4.1nm,0.6s,mb4.6,baz=302,slow=7.2,SNR=27						
NVS	Novosibirsk	53.39	354	eP	P	01 55 02.1	-2.1
NVS				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=N,10.0nm,1.3s						
MDJ	Mudanjiang	53.96	32	P	P	01 55 07.8	-0.7
MDJ				AP	pP	01 55 17.0	+6.3
MDJ				XP	sP	01 55 21.1	+10
MDJ				PCP	PcP	01 56 08.9	-5.0
MDJ				SCP		02 00 05.0	
MDJ				PCS		02 00 08.6	
MDJ				S	S	02 02 41.9	-1.0
MDJ				XS		02 03 01.1	
MDJ				SCS	ScS	02 04 53.0	-2.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.7s,mb4.2						
MDJ				LR	LR		
	comp=N,149nm,20.4s,MS4.6						
MDJ				LR	LR		
	comp=E,538nm,17.7s,MS4.6						
MDJ				LR	LR		
	comp=Z,388nm,18.2s,MS4.5						
BVA0	Borovoye Array	54.17	344	P	P	01 55 08.2	-1.7
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
BVAR	Borovoye Array	54.17	344	P	P	01 55 08.6	-1.4
	comp=Z,3.9nm,0.7s,mb4.5,baz=149,slow=8.6,SNR=34						
BRVK	Borovoye	54.23	344	eP	P	01 55 08.3	-2.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BRVK				MLR	MLR		
	comp=Z,231nm,20.0s,MS4.2						
BRVK	Borovoye	54.23	344	eP	P	01 55 08.3	-2.1
	comp=Z,5.6nm,0.9s,mb4.5						
BRVK				LR	LR		
	comp=Z,231nm,20.0s,MS4.2						
KMBO	Kilima Mbogo	54.96	267	P	P	01 55 16.9	+0.5
	comp=Z,0.5nm,0.5s,mb3.8,baz=50,slow=17,SNR=3.6						
KMBO				LR	LR	02 16 18.8	
	comp=Z,833nm,18.5s,MS4.8,baz=279,slow=33						
KMBO	Kilima Mbogo	54.96	267	P	P	01 55 16.9	+0.5
KMBO				LR	LR	02 16 18.8	
PMG	Port Moresby	55.91	103	eP	P	01 55 23.0	-0.2
GNI	Garni	57.42	318	eP	P	01 55 31.3	-2.4
	comp=Z,18nm,1.1s,mb5.0						
GNI				LR	LR		
	comp=Z,296nm,21.0s,MS4.4						
STKA	Stephens Creek	57.55	130	P	P	01 55 34.5	-0.2
	comp=Z,3.0nm,0.7s,mb4.4,baz=242,slow=3.6,SNR=5.7						
STKA	Stephens Creek	57.55	130	eP	P	01 55 32.6	-2.1
KLR	Kul'dur	58.12	29	eP	P	01 55 35.2	-3.2
KLR				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.3						
KLR				MLR	MLR		
	comp=E,1µm,23.0s						
TI2	Plekhanov	58.20	320	eP	P	01 55 39.4	+0.3
BOD	Bodaibo	58.50	14	eP	P	01 55 40.3	-0.6
BOD				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
KIV	Kislovodsk	60.62	321	⇑iP	P	01 55 55.0	-0.7
KIV				pmax	pmax		
	comp=Z,20nm,1.7s,mb5.0						
CLNS	Chul'man	60.80	20	eP	P	01 55 57.6	+0.8
CLNS				e		01 56 43.5	
CLNS				e		01 58 19.7	
CLNS				eS	S	02 04 08.4	-4.3
CLNS				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.6s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=N,2.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,2.0nm,0.8s						
CLNS				smax			
	comp=N,668nm,14.0s						
CLNS				smax			
	comp=Z,72nm,13.7s						
CLNS				smax			
	comp=E,84nm,12.7s						
CLNS				MLR	MLR		
	comp=N,400nm,13.0s,MS4.8						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS4.8						
CLNS				MLR	MLR		
	comp=Z,500nm,13.0s,MS4.8						
EIL	Elat	60.88	303	eP	P	01 55 57.0	-0.8
	comp=Z,8.5nm,1.0s,mb4.8						
MALT	Malatya	61.03	314	eP	P	01 55 59.3	+0.7
MALT				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.7						
MALT	Malatya	61.03	314	eP	P	01 55 59.3	+0.7
	comp=Z,6.9nm,1.1s,mb4.7						
MBAR	Mbarara	61.44	268	eP	P	01 56 01.1	-0.6
MBAR				MLR	MLR		
	comp=Z,154nm,22.0s,MS4.1						
SOC	Sochi	62.35	319	eP	P	01 56 04.1	-3.3
SOC				e		01 56 42.2	
SOC				e		01 58 18.3	
SOC				ePPP	PPP	01 59 51.2	-5.1
SOC				eS	S	02 04 25.9	-6.6
SOC				e		02 05 52.4	
SOC				eSS	SS	02 08 29.3	-8.5
SOC				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.4						
BRTR	Keskin Array B	65.01	313	P	P	01 56 24.7	-0.3
	comp=Z,1.9nm,0.8s,mb4.2,baz=130,slow=7.5,SNR=9.9						
LSZ	Lusaka	65.45	252	eP	P	01 56 26.7	-1.5
LSZ				MLR	MLR		
	comp=Z,910nm,20.0s,MS5.0						
YAK	Yakutsk	66.37	18	eP	P	01 56 32.1	-1.2
YAK				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=E,230nm,15.1s						
YAK				pmax	pmax		
	comp=N,108nm,13.3s						
YAK				MLR	MLR		
	comp=Z,252nm,12.0s,MS4.7						
YAK				MLR	MLR		
	comp=N,232nm,14.0s,MS4.6						
YAK				MLR	MLR		
	comp=E,137nm,13.0s,MS4.6						
MOS	Moscow	69.29	331	eP	P	01 56 50.9	-0.8
MOS				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
OBN	Obninsk	69.52	330	⇓eP	P	01 56 52.2	-0.9
OBN				e		01 57 04.0	
OBN						01 57 15.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
LBTB	Lobatse	69.64	243	eP	P	01 56 54.2	-0.1
LBTB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
LBTB				MLR	MLR		
	comp=Z,986nm,21.0s,MS5.0						
LBTB	Lobatse	69.64	243	P	P	01 56 54.4	+0.1
	comp=Z,5.9nm,0.8s,mb4.6,baz=104,slow=6.6,SNR=11						
LBTB	Lobatse	69.64	243	eP	P	01 56 54.2	-0.1
	comp=Z,9.1nm,0.9s,mb4.7						
LBTB				LR	LR		
	comp=Z,986nm,21.0s,MS5.0						
AKASG	Malin Array Be	71.75	323	P	P	01 57 05.3	-1.3
	comp=Z,1.1nm,0.6s,mb3.9,baz=93,slow=4.9,SNR=6.8						
MA2	Magadan	73.06	27	eP	P	01 57 13.9	-0.4

MA2				*e*		02 01 44.8	
MA2				*e*S	S	02 06 38.7	-1.9
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MA2				MLR	MLR		
	comp=Z,900nm,20.0s,MS5.0						
TIXI	**Tiksi**	**73.56**	**11**	*e*P	**P**	**01 57 15.5**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
JOF	**Joensuu**	**75.50**	**336**	*e*p	**P**	**01 57 27.0**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9						
SUW	**Suwalki**	**76.31**	**325**	*e*P	**P**	**01 57 33.9**	**+0.8**
FINES	**FINESS Array B**	**77.18**	**333**	P	**P**	**01 57 37.5**	**-0.2**
	comp=Z,2.8nm,0.6s,mb4.4,baz=101,slow=4.8,SNR=14						
KAF	**Kangasniemi**	**77.31**	**334**	*e*p	**P**	**01 57 38.1**	**-0.4**
	comp=Z,2.7nm,0.7s,mb4.3,baz=110,slow=5.3						
KAF	**Kangasniemi**	**77.31**	**334**	*e*P	**P**	**01 57 38.1**	**-0.4**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SYO	**Syowa Base**	**79.03**	**197**	⇑P	**P**	**01 57 47.5**	**-0.3**
ARSA	**Arzberg**	**79.62**	**318**	⇑*i*P	**P**	**01 57 52.8**	**+1.4**
	comp=Z,6.0nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	**80.31**	**341**	P	**P**	**01 57 55.0**	**+0.2**
	comp=Z,6.8nm,0.8s,mb4.6,baz=135,slow=3.4,SNR=11						
ARCES				LR	LR	02 35 42.9	
	comp=Z,698nm,18.1s,MS5.0,baz=10,slow=37						
GERES	**GERESS Array B**	**81.06**	**319**	P	**P**	**01 58 00.4**	**+1.3**
	comp=Z,5.6nm,0.8s,mb4.5,baz=104,slow=5.5,SNR=40						
KHC	**Kasperske Hory**	**81.17**	**319**	*e*P	**P**	**01 58 01.5**	**+1.9**
BRG	**Berggiesshubel**	**81.18**	**321**	P	**P**	**01 58 01.3**	**+1.7**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BRG	**Berggiesshubel**	**81.18**	**321**	P	**P**	**01 58 01.3**	**+1.7**
	comp=Z,4.8nm,1.2s,mb4.3						
CLL	**Collm**	**81.82**	**321**	*e*P	**P**	**01 58 04.0**	**+1.0**
CLL				*e*		01 58 16.0	
CLL	**Collm**	**81.82**	**321**	P	**P**	**01 58 04.0**	**+1.0**
CLL				*e**SP	sP	01 58 16.0	+10
BILL	**Bilibino**	**82.45**	**21**	⇓*i*P	**P**	**01 58 06.5**	**+0.6**
BILL				*e*S	S	02 08 17.5	-3.8
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BILL				MLR	MLR		
	comp=Z,600nm,16.0s,MS5.0						
MOTA	**Moosalm**	**82.62**	**317**	⇑*i*P	**P**	**01 58 07.8**	**+0.6**
	comp=Z,2.9nm,1.0s,mb4.3						
MOTA	**Moosalm**	**82.62**	**317**	⇑*i*P	**P**	**01 58 07.8**	**+0.6**
MOTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
DAVA	**Damuels**	**83.44**	**317**	⇓*i*P	**P**	**01 58 12.6**	**+1.2**
	comp=Z,13nm,0.9s,mb5.0						
NOA	**NORSAR Array B**	**84.05**	**331**	P	**P**	**01 58 14.4**	**+0.2**
	comp=Z,1.3nm,0.8s,mb4.1,baz=100,slow=5.0,SNR=3.3						
NOA				LR	LR	02 40 32.4	
	comp=Z,228nm,18.2s,MS4.6,baz=75,slow=39						
VNDA	**Vanda**	**87.41**	**168**	LR	LR	02 30 38.3	
	comp=Z,426nm,21.6s,MS4.8,baz=244,slow=31						
DBIC	**Dimbokro**	**96.74**	**277**	LR	LR	02 37 19.8	
	comp=Z,245nm,21.2s,MS4.7,baz=61,slow=32						
YKA	**Yellowknife Ar**	**112.78**	**13**	PP	PP	02 05 01.8	-10
	comp=Z,0.6nm,1.0s,baz=330,slow=7.8,SNR=4.6						
NVAR	**Mina Array Bea**	**131.12**	**32**	PKP	PKPdf	02 04 58.1	+0.2
	comp=Z,0.5nm,0.6s,baz=353,slow=2.0,SNR=5.2						
PDAR	**Pinedale Array**	**131.53**	**21**	PKP	PKPdf	02 04 58.0	-0.5
	comp=Z,0.8nm,0.8s,baz=48,slow=0.4,SNR=6.9						
MSU	**Marysvale**	**134.06**	**27**	*e*PKIKP	PKPdf	02 05 04.0	+0.8
LTX	**Lajitas**	**145.56**	**25**	*e*PKP2	PKPab	02 05 23.8	-0.2
TXAR	**Lajitas Array**	**145.56**	**25**	PKPbc	PKPbc	02 05 24.0	+1.8
	comp=Z,12nm,0.8s,baz=283,slow=1.7,SNR=103						
JCT	**Junction City**	**145.96**	**19**	*e*PKP	PKPdf	02 05 24.4	-0.4
NATX	**Nacogdoches**	**146.03**	**10**	*e*PKP	PKPdf	02 05 23.9	-1.1

GUC 15 01:55:16.8±0.7**, 33.60S**×**70.06W, h9**^{km}±1^{km}**, MD3.6, ML2.2, 3C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJCH	**San Jose de Ma**	**0.25**	**261**	⇓*i*P	Pg	01 55 22.4	+0.4
SJCH				*i* S	Sg	01 55 26.6	+1.0
SJCH				AMP		01 55 27.4	
	comp=N,546nm,0.2s						
LMEL	**Las Melosas**	**0.27**	**206**	⇓*i*P	Pg	01 55 22.9	+0.4
LMEL				*i* S	Sg	01 55 27.3	+0.9
LMEL				AMP		01 55 27.9	
	comp=N,2µm,0.1s						
FCH	**Farellones**	**0.34**	**325**	⇓*i*P	Pg	01 55 24.0	+0.3
FCH				*i* S	Sg	01 55 28.9	+0.6
PCH	**Pirque**	**0.38**	**267**	⇑*i*P	Pg	01 55 25.2	+0.7
FSR	**Penalolen**	**0.41**	**287**	*i* P	Pg	01 55 25.5	+0.3
FSR				*i* S	Sg	01 55 32.0	+1.3
FSR				AMP		01 55 35.4	
	comp=E,258nm,0.4s						
CLCH	**Cerro Calan**	**0.45**	**297**	⇓*i*P	Pg	01 55 26.3	+0.4
CLCH				*i* S	Sg	01 55 33.2	+1.1
CLCH				AMP		01 55 33.9	
	comp=N,308nm,0.2s						
CHCH	**Chadas Angostu**	**0.59**	**236**	⇑*i*P	Pg	01 55 28.8	0.0
CHCH				*i* S	Sg	01 55 37.8	+0.9
RCDM	**Rinconada Maip**	**0.64**	**280**	*i* P	Pb	01 55 29.6	0.0
RCDM				*i* S	Sg	01 55 39.0	+0.9
RCDM				AMP		01 55 41.9	
	comp=E,241nm,0.1s						
TACH	**Talagante**	**0.74**	**266**	⇑*i*P	Pb	01 55 31.4	+0.1
TACH				*i* S	Sb	01 55 42.0	+0.8
JACH	**Jahuel**	**1.02**	**334**	*i* P	Pb	01 55 35.4	-0.8
JACH				*i* S	Sb	01 55 49.8	+0.3

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*IDC **15** 01:57:50.3±2.3, 33.82N×142.38E, mb3.6/3, mb1 3.8/4, mb1mx3.5/21, mbtmp3.7/4, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/34, Error ellipse: s-maj=44.3km s-min=30.9km az=38.0*

*JMA **15** 01:57:53.3±0.4, 34.05N×142.35E, h67^{km}, M3.3*

ISC 15 01:57:53.1±1.7**, 34.02N**±0.06×**142.4E**±0.1**, h43**^{km}±16^{km}**, n13,** σ**0**^{s}**73**/18**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.31**	**299**	P	**P**	**01 58 15.6**	**+0.2**
BSO1				*e*S	**S**	**01 58 32.1**	**+0.2**
BSO2	**Boso 2**	**1.52**	**299**	*e*S	**S**	**01 58 37.3**	**+0.2**
BSO3	**Boso 3**	**1.72**	**297**	P	**P**	**01 58 21.9**	**+0.7**
BSO4	**Boso 4**	**1.93**	**301**	P	**P**	**01 58 24.5**	**+0.3**
BSO4				*e*S	**S**	**01 58 47.0**	**-0.4**
JHJ2	**Mitsune**	**2.32**	**248**	P	**P**	**01 58 29.9**	**+0.3**
JHJ2				*e*S	**S**	**01 58 57.7**	**+0.7**
JHJ	**Hachijo jima 2**	**2.34**	**248**	Pn	**P**	**01 58 29.6**	**-0.4**
	52nm,0.3s,baz=65,slow=18,SNR=9.2						
JHJ				LR	LR	01 58 56.0	
	comp=Z,636nm,20.2s,baz=112,slow=29						
JHJ				Sn	**S**	**01 58 57.0**	**-0.6**
	84nm,0.3s,baz=58,slow=23,SNR=20						
JOD2	**Odawara 2**	**2.97**	**296**	P	**P**	**01 58 38.4**	**-0.6**
JOD2				*e*S	**S**	**01 59 13.6**	**-0.2**
JAG	**Ashikaga**	**3.38**	**316**	*e*S	**S**	**01 59 22.7**	**-1.4**
JRY	**Ryogami san**	**3.47**	**306**	*e*S	**S**	**01 59 26.2**	**-0.2**
JYN	**Shimob**	**3.48**	**296**	*e*S	**S**	**01 59 27.1**	**+0.6**
SONM	**Songino Array**	**30.18**	**308**	P	**P**	**02 04 03.3**	**+1.9**
	0.3nm,0.6s,mb3.2,baz=98,slow=7.9,SNR=3.2						
WRA	**Warramunga Arr**	**54.20**	**189**	P	**P**	**02 07 15.6**	**-1.3**
	0.9nm,0.4s,mb4.1,baz=6.3,slow=7.6,SNR=9.6						
ASAR	**Alice Springs**	**57.93**	**189**	P	**P**	**02 07 43.6**	**+0.1**
	0.6nm,1.0s,mb3.6,baz=15,slow=9.3,SNR=4.6						

IDC 15 02:01:29.5±4.1**, 13.49N**×**92.98E, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.7**/18**, mbtmp3.7**/5**, ML4.0**/1**, Error ellipse: s-maj=165.0km s-min=25.2km az=68.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.57**	**48**	Pn	Pn	02 03 29.6	+5.8
	0.6nm,0.3s,baz=214,slow=13,SNR=4.6						
CMAR				Sn	Sn	02 04 47.3	-4.0
	0.4nm,0.3s,baz=239,slow=28,SNR=11						
SONM	**Songino Array**	**36.02**	**15**	P	P	02 08 32.5	-1.8
	0.3nm,0.6s,baz=206,slow=6.1,SNR=3.5						
ZAL	**Zalesovo**	**40.86**	**353**	P	P	02 09 12.9	-1.8
	1.0nm,0.4s,baz=312,slow=7.3,SNR=5.4						
WRA	**Warramunga Arr**	**52.53**	**128**	P	P	02 10 44.9	-2.2
	0.6nm,0.4s,baz=309,slow=7.9,SNR=6.9						
ASAR	**Alice Springs**	**54.45**	**132**	P	P	02 10 59.0	-2.2
	0.5nm,0.6s,baz=309,slow=6.8,SNR=7.6						

BJI 15 02:09:57.3, 37.68N×**121.56E, h15**^{km}**, ML3.7, 1C, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DL2	**Dalian**	**1.23**	**2**	*e*P	Pb	02 10 19.6	-0.1
DL2				SG	Sg	02 10 36.4	-1.9
DL2				Smax			
	comp=N,1µm,0.6s						
DL2				Smax			
	comp=E,2µm,0.6s						
TIA	**Tai'an**	**3.84**	**249**	PG	Pg	02 11 08.3	-5.8
TIA				SG	Sg	02 11 59.3	-6.0
TIA				Smax			
	comp=N,121nm,0.5s						
TIA				Smax			
	comp=E,56nm,0.5s						
SNY	**Shenyang**	**4.42**	**20**	⇑PG	Pg	02 11 16.9	-8.8
SNY				SG	Sg	02 12 10.5	-14
SNY				Smax			
	comp=N,140nm,0.4s						
SNY				Smax			
	comp=E,120nm,0.5s						
CN2	**Changchun**	**6.79**	**25**	*e*PG	Pg	02 12 00.8	-12
CN2				SG	Sg	02 13 23.8	-20
CN2				Smax			
	comp=N,80nm,0.8s						
CN2				Smax			
	comp=E,80nm,0.8s						

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*NEIC **15** 02:18:42.2, 38.26S×74.19W, h35^{km}, ML4.1(GUC), After GUC.*

GUC 15 02:18:42.2±0.9**, 38.26S**×**74.19W, h35**^{km}±11^{km}**, ML4.1, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMCH	**Temuco**	**1.32**	**112**	*i* P		02 20 29.6	
TMCH				*i* S		02 20 45.8	
VLCH	**Valdivia**	**1.71**	**155**	*e*P	P	02 19 10.7	+0.7
VLCH				*i* S	S	02 19 32.7	+1.8
VLCH				AMP		02 19 36.3	
	comp=E,5µm,0.2s						
CCHI	**Chillan**	**2.35**	**46**	*e*P	P	02 19 20.1	+0.8
CCHI				*i* S	S	02 19 48.5	+1.2
CCHI				AMP		02 20 09.2	
	comp=E,547nm,0.7s						
OSCH	**Osorno**	**2.46**	**161**	*e*P	P	02 19 21.0	+0.3
OSCH				*i* S	S	02 19 50.9	+1.1
OSCH				AMP		02 19 54.1	
	comp=E,2µm,0.5s						
PMCH	**Puerto Montt**	**3.38**	**163**	*e*P	P	02 19 33.8	-0.1
PMCH				*i* S	S	02 20 12.5	-0.7
SFDO	**San Fernando**	**4.45**	**36**	*e*P	P	02 19 47.3	-1.7
LMEL	**Las Melosas**	**5.46**	**37**	*e*P	P	02 20 02.1	-1.1
LMEL				*i* S	S	02 21 03.5	-2.2

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*IGQ **15** 02:27:42.7, 1.64S×81.60W, h29^{km}±21^{km}, mb4.7, Error ellipse: s-maj=18.1km s-min=6.6km az=163.4*

*BJI **15** 02:27:50.1, 1.50S×80.80W, h10^{km}, mB5.4, Ms5.0, Msz5.0*

*NEIC **15** 02:27:50.1±0.6, 1.53S×80.82W, h10^{km}, mb4.3/6, MD4.7(IGQ), Error ellipse: s-maj=14.2km s-min=10.2km az=45.0*

NEIC Felt strongly at Manta, Portoviejo and Puerto Lopez.

*IDC **15** 02:28:01.1±1.0, 1.30S×80.43W, h96^{km}±7^{km}, mb3.6/11, mb1 3.8/14, mb1mx3.7/23, mbtmp4.0/14, MS3.6/3, Ms1 3.6/3, ms1mx3.1/23, Error ellipse: s-maj=30.0km s-min=13.2km az=49.0*

ISC 15 02:27:53.2±1.1**, 1.54S**±0.08×**80.98W**±0.07**, h51**^{km}±11^{km}**, h90**^{km}±3.0^{km}**:pP-P, n52,** σ**1**^{s}**18**/51**, mb3.9**/12**, 4C-4D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	**2.34**	**89**	⇓P	**P**	**02 28 29.6**	**-0.5**
CUSU	**Cusua**	**2.50**	**88**	P	**P**	**02 28 32.8**	**+0.4**
JUIV	**Juive**	**2.52**	**87**	P	**P**	**02 28 32.5**	**-0.2**
ARRY	**Arrayan**	**2.52**	**89**	⇓P	**P**	**02 28 32.2**	**-0.6**
ARRY				S	**S**	**02 29 02.9**	**+0.5**
RETU	**Refugio**	**2.54**	**88**	P	**P**	**02 28 33.5**	**+0.6**
RETU				S	**S**	**02 29 09.2**	**+6.6**
RUN2	**Runtun**	**2.57**	**87**	P	**P**	**02 28 33.7**	**+0.3**
RUN2				S	**S**	**02 29 08.3**	**+4.8**
ULBA	**Ulba**	**2.57**	**88**	⇓P	**P**	**02 28 33.4**	**0.0**
PISA	**Pisayambo**	**2.64**	**80**	P	**P**	**02 28 34.5**	**+0.2**
PISA				S	**S**	**02 29 11.5**	**+6.2**
NAS1	**Nasa**	**2.66**	**70**	P	**P**	**02 28 34.6**	**0.0**
JUA2	**San Juan 2**	**2.72**	**61**	P	**P**	**02 28 34.7**	**-0.8**
VC1	**Cotopaxi 1**	**2.73**	**71**	P	**P**	**02 28 36.8**	**+1.2**
TERV	**Terraza Guagua**	**2.74**	**60**	P	**P**	**02 28 34.6**	**-1.2**
PINO	**Pino**	**2.74**	**60**	⇑P	**P**	**02 28 34.2**	**-1.6**
TAMB	**Tambo**	**2.74**	**72**	P	**P**	**02 28 35.9**	**0.0**
YANA	**Yana**	**2.79**	**60**	⇑P	**P**	**02 28 35.3**	**-1.3**
ANTI	**Antisana**	**3.02**	**69**	P	**P**	**02 28 40.0**	**+0.2**
OTAV	**Otavalo**	**3.08**	**55**	*e*Pn	**P**	**02 28 39.1**	**-1.5**
COTA	**Cotacachi**	**3.23**	**55**	⇓P	**P**	**02 28 43.1**	**+0.4**
ELAGU	**Cayambe Volc**	**3.35**	**63**	P	**P**	**02 28 46.3**	**+1.9**
CAYR	**Refugio Cayamb**	**3.35**	**63**	P	**P**	**02 28 46.4**	**+2.0**
CAYA	**Cayambe**	**3.39**	**62**	⇑P	**P**	**02 28 46.3**	**+1.2**
LORE	**San Lorenzo**	**3.54**	**37**	P	**P**	**02 28 45.9**	**-1.2**
CONE	**Cono NE Rev Vo**	**3.64**	**66**	P	**P**	**02 28 50.8**	**+2.2**
ECEN	**Cerro Negro**	**3.82**	**52**	⇑P	**P**	**02 28 51.0**	**0.0**
ROSC	**El Rosal**	**9.19**	**46**	P	**P**	**02 30 05.2**	**-0.6**
	0.9nm,0.3s,baz=270,slow=20,SNR=9.3						
PAYG	**Puerto Ayora**	**9.34**	**275**	*e*P	**P**	**02 30 06.9**	**-1.0**
NNA	**Nana**	**11.16**	**159**	P	**P**	**02 30 28.7**	**-4.2**
JTS	**JuntasAbangare**	**12.40**	**341**	LR	LR	02 34 35.9	
	comp=Z,390nm,18.9s,baz=152,slow=32						
SDV	**Santo Domingo**	**14.62**	**45**	P	**P**	**02 31 17.3**	**-1.4**
	0.5nm,0.3s,baz=256,slow=9.7,SNR=5.0						
SDV				LR	LR	02 36 32.8	
	comp=Z,141nm,20.1s,baz=295,slow=36						
SDV	**Santo Domingo**	**14.62**	**45**	*e*P	**P**	**02 31 14.9**	**-3.8**
SAML	**Samuel**	**19.18**	**113**	*e*P	**P**	**02 32 12.7**	**-2.8**
	28nm,0.9s						
LPAZ	**La Paz**	**19.36**	**140**	P	**P**	**02 32 18.1**	**+0.6**
	0.3nm,0.3s,baz=334,slow=11,SNR=10						
LPAZ	**La Paz**	**19.36**	**140**	*e*P	**P**	**02 32 17.3**	**-0.2**
	12nm,1.0s						
LVC	**Limon Verde**	**24.01**	**152**	P	**P**	**02 33 07.1**	**+2.7**
	10.0nm,0.8s,mb4.3,baz=322,slow=7.2,SNR=10						
LVC				LR	LR	02 43 45.0	
	comp=Z,203nm,20.3s,baz=320,slow=39						
LVC	**Limon Verde**	**24.01**	**152**	P	**P**	**02 33 05.0**	**+0.7**
	16nm,0.9s,mb4.5						
BDFB	**Brasilia**	**35.39**	**115**	P	**P**	**02 34 45.2**	**-1.2**
	5.3nm,0.9s,mb4.5,baz=295,slow=10,SNR=7.7						
TXAR	**Lajitas Array**	**37.60**	**326**	P	**P**	**02 35 09.0**	**+4.2**
	0.4nm,0.8s,mb3.2,baz=144,slow=8.5,SNR=4.0						
TXAR				pP	pP	02 35 30.5	+12
	0.4nm,0.8s,baz=194,slow=16,SNR=3.8						
TXAR				PcP	PcP	02 37 23.2	+0.9
	0.9nm,0.8s,baz=143,slow=6.3,SNR=8.1						
ANMO	**Albuquerque**	**43.44**	**329**	P	**P**	**02 35 56.0**	**+2.9**
	0.8nm,0.7s,mb3.6,baz=135,slow=12						
ANMO	**Albuquerque**	**43.44**	**329**	*e*P	**P**	**02 35 54.3**	**+1.2**
	2.7nm,0.8s,mb4.0						
PDAR	**Pinedale Array**	**51.07**	**333**	P	**P**	**02 36 53.3**	**+0.6**
	0.4nm,0.8s,mb3.4,baz=164,slow=6.6,SNR=2.9						
NVAR	**Mina Array Bea**	**52.57**	**323**	P	**P**	**02 37 07.8**	**+3.8**
	1.4nm,0.8s,mb4.0,baz=130,slow=8.3,SNR=9.5						
NVAR				pP	pP	02 37 28.5	+11
	1.1nm,0.8s,baz=202,slow=5.2,SNR=3.3						
ULM	**Lac du Bonnet**	**53.15**	**348**	P	**P**	**02 37 07.0**	**-1.2**
	7.7nm,0.8s,mb4.7,baz=165,slow=7.7,SNR=16						
ULM	**Lac du Bonnet**	**53.15**	**348**	*e*P	**P**	**02 37 07.4**	**-0.8**
	10nm,0.8s,mb4.8						
HLID	**Hailey**	**53.98**	**330**	P	**P**	**02 37 18.4**	**+4.1**
	1.8nm,0.8s,mb4.0						
YBH	**Yreka Blue Hor**	**57.27**	**324**	P	**P**	**02 37 39.9**	**+1.8**
	1.3nm,0.8s,mb4.0,baz=83,slow=8.1,SNR=3.0						
YKA	**Yellowknife Ar**	**68.73**	**344**	P	**P**	**02 38 53.1**	**-0.3**
	0.4nm,0.7s,mb3.5,baz=140,slow=6.1,SNR=11						
YKA				pP	pP	02 39 17.5	+10
	1.0nm,0.8s,baz=139,slow=5.0,SNR=5.1						
DBIC	**Dimbokro**	**76.41**	**83**	P	**P**	**02 39 37.3**	**-2.5**
	3.2nm,1.0s,mb4.2,baz=253,slow=13,SNR=3.4						
ILAR	**Eielson Array**	**81.33**	**337**	P	**P**	**02 40 05.5**	**0.0**
	0.8nm,0.9s,mb3.6,baz=117,slow=3.9,SNR=5.1						
MDJ	**Mudanjiang**	**129.30**	**332**	PKP	PKPdf	02 46 57.4	+0.9
CN2	**Changchun**	**131.80**	**334**	*e*PKP	PKPdf	02 47 03.6	+2.3
NJ2	**Nanjing**	**144.35**	**330**	*e*PKP	PKPdf	02 47 22.1	-2.2
NJ2				LR	LR		
	comp=Z,7µm,15.4s						
LZH	**Lanzhou**	**145.34**	**353**	*e*PKP	PKPdf	02 47 24.3	-1.6
LZH				APKP		02 47 28.5	
LZH				XPKP		02 47 32.0	

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*NEIC **15** 02:32:03.9±0.5, 13.47N×92.95E, mb4.6/1, Error ellipse: s-maj=16.4km s-min=10.2km az=59.0*

*IDC **15** 02:32:04.0±0.9, 13.52N×92.95E, h29^{km}±5^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.8/17, mbtmp3.9/9, ML3.9/1, Error ellipse: s-maj=31.4km s-min=17.0km az=54.0*

ISC 15 02:32:02.1±0.7**, 13.56N**±0.08×**93.02E**±0.09**, h29**^{km}**, h29**^{km}±.2^{km}**:pP-P, n12,** σ**0**^{s}**80**/13**, mb4.1**/9**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.49**	**49**	Pn	**Pn**	**02 33 52.6**	**+0.4**
	0.5nm,0.3s,baz=237,slow=15,SNR=3.9						
CMAR				Sn	**Sn**	**02 35 16.7**	**-0.4**
	0.5nm,0.3s,baz=234,slow=29,SNR=3.3						
KGM	**Kluang**	**15.34**	**138**	P	**P**	**02 35 40.9**	**+2.3**
SONM	**Songino Array**	**35.94**	**15**	P	**P**	**02 39 03.1**	**+1.0**
	0.4nm,0.9s,mb3.3,baz=216,slow=9.4,SNR=2.8						
WRA	**Warramunga Arr**	**52.55**	**129**	P	**P**	**02 41 15.1**	**-0.4**
	2.6nm,0.7s,mb4.2,baz=306,slow=8.2,SNR=16						
WRAB	**Tennant Creek**	**52.55**	**129**	*e*P	**P**	**02 41 14.1**	**-1.5**
	4.8nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	**52.56**	**129**	*e*P	**P**	**02 41 15.1**	**-0.5**
ASAR	**Alice Springs**	**54.47**	**132**	P	**P**	**02 41 29.4**	**-0.3**
	1.2nm,0.5s,mb4.1,baz=311,slow=6.7,SNR=16						
STKA	**Stephens Creek**	**64.85**	**135**	P	**P**	**02 42 41.1**	**+0.1**
	2.3nm,1.0s,mb4.2,baz=286,slow=14,SNR=4.2						
FINES	**FINESS Array B**	**67.21**	**331**	P	**P**	**02 42 55.3**	**-0.3**
	2.7nm,1.0s,mb4.2,baz=135,slow=3.9,SNR=3.3						
FINES				pP	pP	02 43 04.3	-0.4
	1.4nm,0.8s,baz=101,slow=9.7,SNR=1.6						
ARCES	**ARCESS Array B**	**69.58**	**340**	P	**P**	**02 43 10.2**	**0.0**
	11nm,1.2s,mb4.7,baz=113,slow=6.9,SNR=4.8						
ARCES				pP	pP	02 43 19.1	-0.1
	2.8nm,0.8s,baz=101,slow=6.2,SNR=2.6						
GERES	**GERESS Array B**	**72.90**	**317**	P	**P**	**02 43 30.9**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=90,slow=6.7,SNR=5.4						
GERES				pP	pP	02 43 40.1	+0.6
	1.1nm,0.8s,baz=104,slow=5.5,SNR=5.0						
NOA	**NORSAR Array B**	**74.28**	**330**	P	**P**	**02 43 37.9**	**-0.3**
	0.9nm,0.9s,mb3.7,baz=97,slow=5.5,SNR=3.3						

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*BJI **15** 02:32:56.6, 1.33N×91.94E, h26^{km}, mB5.2, mb5.0, Ms5.4, Msz5.2*

*IDC **15** 02:32:58.6±0.4, 1.91N×92.26E, mb4.8/24, mb1 4.9/25, mb1mx4.9/26, mbtmp4.8/25, ML4.7/1, MS4.9/14, Ms1 4.9/14, ms1mx4.6/20, Error ellipse: s-maj=23.7km s-min=11.1km az=44.0*

*MOS **15** 02:33:00.8±1.4, 1.72N×92.12E, h33^{km}, mb5.4/25, MS5.1/14, Error ellipse: s-maj=12.9km s-min=7.0km az=110.5*

*CSEM **15** 02:33:02.2, 2.02N×92.57E, h33^{km}, mb5.6*

*NEIC **15** 02:33:02.4±0.2, 1.82N×92.19E, mb5.2/42, MS5.0/22, Error ellipse: s-maj=6.6km s-min=4.8km az=225.0*

*HRVD **15** 02:33:02.4±0.2, 1.85N×92.11E, h12^{km}, MW5.4/64, Centroid moment Tensor Solution. LP body waves: s49,c91;Mantle waves: s64,c142; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.12±.03; $M_{\theta\theta}$-0.72±.03; $M_{\phi\phi}$0.83±.03; $M_{r\theta}$-0.32±.07; $M_{\theta\phi}$-1.33±.02; $M_{\phi r}$-0.62±.07; Best double couple: $M_0$1.696×10^{17} NP1: ϕ_s106°, δ66°, λ-174°. NP2: ϕ_s14°, δ84°, λ-24°. Principal axes: T 1.686, Plg13°, Azm63°; N .02, Plg65°, Azm182°; P -1.706, Plg21°, Azm328°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 02:33:00.4±0.2**, 1.80N**±0.04×**92.21E**±0.03**, h25**^{km}**, h25**^{km}±.9^{km}**:pP-P, n265,** σ**1**^{s}**01**/262**, mb5.1**/103**, MS5.1**/54**, 23C-27D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**9.23**	**72**	P	**P**	**02 35 12.9**	**-2.2**
SNG	**Songkhla**	**9.94**	**57**	P	**P**	**02 35 23.5**	**-1.5**
	1µm,1.0s						
PALK	**Pallekele**	**12.69**	**296**	Pn	**P**	**02 35 58.2**	**-4.1**
	789nm,0.7s,SNR=14						
PALK	**Pallekele**	**12.69**	**296**	*e*P	**P**	**02 35 57.5**	**-4.8**
NNT	**Nongplab**	**13.06**	**34**	P	**P**	**02 36 07.0**	**-0.2**
NST	**Nakhon Sawan**	**15.85**	**29**	P	**P**	**02 36 42.0**	**-1.8**
	108nm,1.2s						
MDRS	**Chennai**	**16.30**	**314**	*e*	**P**	**02 36 45.0**	**-4.5**
MDRS				*e*		02 39 50.0	
TRD	**Trivandrum**	**16.58**	**294**	*e*P	**P**	**02 36 55.0**	**+2.0**
TRD				AMb	AMB	02 36 59.4	
	comp=Z,158nm,1.2s						
TRD				*e*		02 40 08.5	
TRD				*i*		02 40 10.1	
CMAR	**Chiang Mai Arr**	**17.83**	**21**	*i* P	**P**	**02 37 07.4**	**-1.2**
CMAR				pmax	pmax		
	comp=Z,45nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.83**	**21**	P	**P**	**02 37 07.4**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=216,slow=13,SNR=110						
CMAR				LR	LR	02 45 00.7	
	comp=Z,3µm,18.3s,baz=200,slow=41						
KKTK	**Khon Kaen**	**17.83**	**35**	P	**P**	**02 37 08.5**	**-0.2**
	comp=Z,556nm,1.0s						
VIS	**Vishakhapatnam**	**18.07**	**332**	*e*P	**P**	**02 37 10.2**	**-1.5**
VIS				AMb	AMB	02 37 12.3	
	comp=Z,180nm,1.0s						
VIS				*e*		02 40 37.3	
NANT	**Nan**	**18.84**	**26**	⇑P	**P**	**02 37 20.0**	**-1.1**
	comp=Z,62nm,1.0s						
MNGI	**Mangalore**	**20.47**	**304**	*i* S	**S**	**02 41 25.6**	**+3.7**
HYB	**Hyderabad**	**20.52**	**320**	⇓*e*P	**P**	**02 37 38.5**	**-1.2**
	comp=Z,314nm,1.2s						
HYB				*e*		02 38 04.0	
HYB				*e*		02 38 42.0	
HYB				*e*S	**S**	**02 41 39.0**	**+16**
HYB	**Hyderabad**	**20.52**	**320**	⇓*i*P	**P**	**02 37 38.5**	**-1.2**
	comp=Z,314nm,1.2s						
HYB				*e*		02 38 04.0	
HYB				*e*		02 38 42.0	
HYB				*e*S	**S**	**02 41 19.0**	**-3.9**
CAL	**Calcutta**	**20.96**	**350**	*e*	**P**	**02 37 39.5**	**-4.6**
CAL				*e*		02 41 43.8	
DGAR	**Diego Garcia**	**21.73**	**245**	*e*P	**P**	**02 37 47.6**	**-4.4**
AGT	**Agartala**	**21.98**	**358**	⇓*i*P	**P**	**02 37 57.0**	**+2.6**
AGT				*i*		02 38 44.0	
BLSP	**Bilaspur**	**22.46**	**335**	*e*P	**P**	**02 37 58.8**	**-0.4**
BLSP				AMb	AMB	02 38 03.5	
	comp=Z,183nm,0.9s,mb5.5						
BLSP				*e*S	**S**	**02 42 08.8**	**+9.4**
BLSP				*i*		02 44 13.2	
LATR	**Latur**	**22.55**	**318**	*e*P	**P**	**02 38 01.0**	**+0.8**
LATR				*e*		02 41 44.5	
KAD	**Karad**	**23.48**	**312**	⇓*i*P	**P**	**02 38 09.6**	**+0.3**
KAD				*e*S	**S**	**02 42 25.0**	**+7.3**
KKM	**Kota Kinabalu**	**24.32**	**79**	P	**P**	**02 38 19.9**	**+2.4**
QIZ	**Qiongzhong**	**24.32**	**44**	⇑P	**P**	**02 38 18.1**	**+0.6**
QIZ				S	**S**	**02 42 38.8**	**+6.6**
QIZ				AMB	AMB		
	comp=Z,33nm,1.5s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,607nm,9.0s						
QIZ				LR	LR		
	comp=N,6µm,14.0s,MS5.3						
QIZ				LR	LR		
	comp=E,6µm,15.4s,MS5.3						
QIZ				LR	LR		
	comp=Z,5µm,14.8s,MS5.1						
QIZ	**Qiongzhong**	**24.32**	**44**	P	**P**	**02 38 19.0**	**+1.5**
	comp=Z,50nm,1.1s,mb4.9						
POO	**Poona**	**24.51**	**314**	⇓*i*P	**P**	**02 38 19.0**	**-0.3**
POO				*e*		02 42 52.0	
KMI	**Kunming**	**25.32**	**23**	⇑P	**P**	**02 38 29.3**	**+2.3**
KMI				AP	pP	02 38 32.1	-2.3
KMI				PP	PP	02 39 11.6	+5.8
KMI				S	**S**	**02 42 55.3**	**+6.4**
KMI				SS	SS	02 43 56.6	+5.8
KMI				AMB	AMB		
	comp=Z,104nm,1.3s,mb5.2						
KMI				LR	LR		
	comp=N,5µm,12.5s,MS5.3						

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KMI                                  LR     LR
     comp=E,5µm,16.5s,MS5.3
KMI                                  LR     LR
     comp=Z,4µm,14.3s,MS5.1
BOM  Bombay              25.49 313   eP     P      02 38 30.2 +1.5
BOM                                  eS     S      02 42 55.1 +3.3
GTK  Gangtok             25.62 353   e      P      02 38 25.0 -4.8
BHPL Bhopal              25.69 327   eP     P      02 38 29.4 -1.1
BHPL                                 AMb    AMB    02 38 36.6
     comp=Z,109nm,1.0s,mb5.4
BHPL                                 e             02 43 02.4
BHPL                                 i             02 45 48.2
BHPL                                 e             02 48 02.6
     comp=Z,5µm,17.9s
TSM  Tawau               25.75  84   P      P      02 38 33.2 +2.1
JIRN Jiri                26.35 348   eP     P      02 38 37.0 +0.4
     comp=Z,236nm,1.0s,mb5.7
PKI  Pulchoki            26.44 346   eP     P      02 38 37.5 +0.1
     comp=Z,156nm,1.2s,mb5.4
DMN  Daman               26.55 346   eP     P      02 38 38.5 +0.1
     comp=Z,120nm,1.0s,mb5.4
KKN  Kakani              26.68 346   eP     P      02 38 39.7 +0.1
     comp=Z,187nm,1.1s,mb5.5
GKN  Gorkha              27.05 345   eP     P      02 38 43.1 +0.2
     comp=Z,305nm,1.2s,mb5.7
KOLN Koldanda            27.11 343   eP     P      02 38 43.8 +0.3
     comp=Z,353nm,1.6s,mb5.7
LSA  Lhasa               27.77 358   P      P      02 38 50.8 +1.4
LSA                                  eS     S      02 43 26.1 -2.8
LSA                                  AMB    AMB
     comp=Z,80nm,1.0s,mb5.3
LSA                                  LR     LR
     comp=N,950nm,19.0s,MS4.8
LSA                                  LR     LR
     comp=E,2µm,17.8s,MS4.8
LSA                                  LR     LR
     comp=Z,2µm,19.0s,MS4.8
LSA  Lhasa               27.77 358   eP     P      02 38 50.5 +1.0
     comp=Z,76nm,0.7s,mb5.4
LSA                                  LR     LR
     comp=Z,2µm,21.0s,MS4.8
GYA  Guiyang             28.18  28⇑iP    P      02 38 53.3 +0.1
GYA                                  S      S      02 43 38.6 +2.9
GYA                                  AMB    AMB
     comp=Z,30nm,1.3s,mb4.8
GYA                                  AMB    AMB
     comp=Z,130nm,5.1s
GYA                                  LR     LR
     comp=N,4µm,21.2s,MS5.2
GYA                                  LR     LR
     comp=E,6µm,20.4s,MS5.2
GYA                                  LR     LR
     comp=Z,5µm,19.2s,MS5.1
GZH  Guangzhou           29.47  42   P      P      02 39 10.3 +5.5
GZH                                  S      S      02 44 09.6  +13
GZH                                  LR     LR
     comp=N,1µm,13.9s,MS4.9
GZH                                  LR     LR
     comp=E,2µm,15.0s,MS4.9
GZH                                  LR     LR
     comp=Z,2µm,16.3s,MS4.9
LGTI Lohaghat            29.76 339   eP     P      02 39 07.5 +0.1
NDI  New Delhi           30.32 333   eP     P      02 39 11.5 -0.9
     comp=Z,91nm,0.8s,mb5.6
NDI                                  e             02 44 19.0
CD2  Chengdu             30.95  20⇓iP    P      02 39 18.1 +0.2
CD2                                  AP     pP     02 39 22.8 -2.6
CD2                                  S      S      02 44 21.3 +1.7
CD2                                  XS            02 44 36.0
CD2                                  AMB    AMB
     comp=Z,157nm,1.2s,mb5.7
CD2                                  LR     LR
     comp=E,7µm,13.0s
DDI  Dehra Dun           31.39 336   eP     P      02 39 22.0 +0.3
SMLA Simla               32.46 336⇑i     P      02 39 45.0  +14
SMLA                                 i             02 45 07.6
ENH  Enshi               32.72  28   eP     P      02 39 32.7 -0.7
     comp=E,75nm,1.2s,mb5.5
ENH                                  LR     LR
     comp=Z,6µm,19.0s,MS5.3
SDNR Sundarnagar         32.86 336   eP     P      02 39 36.2 +1.6
PONG Pong                33.69 335   eP     P      02 39 41.5 -0.3
MBWA Marble Bar          35.30 132   eP     P      02 39 55.8 +0.1
     comp=Z,32nm,1.1s,mb5.2
MBWA                                 LR     LR
     comp=Z,3µm,20.0s,MS5.0
WHN  Wuhan               35.47  34  ⇓P     P      02 39 58.3 +1.3
WHN                                  S      S      02 45 30.0 +0.2
WHN                                  AMB    AMB
     comp=Z,106nm,1.5s,mb5.5
WHN                                  LR     LR
     comp=Z,7µm,18.2s,MS5.5
XAN  Xi'an               35.68  24   P      P      02 39 58.3 -0.5
XAN                                  S      S      02 45 28.5 -4.6
XAN                                  AMB    AMB
     comp=Z,74nm,1.2s,mb5.5
XAN                                  LR     LR
     comp=N,2µm,14.5s,MS5.4
XAN                                  LR     LR
     comp=E,5µm,17.2s,MS5.4
XAN                                  LR     LR
     comp=Z,9µm,14.2s,MS5.7
LZH  Lanzhou             35.78  16  ⇑P     P      02 40 00.3 +0.6
LZH                                  AP     pP     02 40 08.8 +1.6
LZH                                  XP     sP     02 40 13.0 +2.5
LZH                                  PP     PP     02 41 22.0 +1.1
LZH                                  S      S      02 45 34.1 -0.6
LZH                                  XS            02 45 49.0
LZH                                  AMB    AMB
     comp=Z,31nm,1.1s,mb5.2
LZH                                  AMB    AMB
     comp=Z,170nm,4.6s
LZH                                  LR     LR
     comp=E,3µm,16.1s
LZH                                  LR     LR
     comp=Z,3µm,16.8s,MS5.2
GTA  Gaotai              38.07  10   eP     P      02 40 19.9 +1.0
GTA                                  AP     pP     02 40 23.8 -2.7
GTA                                  PP     PP     02 41 51.5 +2.1
GTA                                  PPP    PPP    02 42 15.0 +3.5
GTA                                  PCP    PcP    02 42 32.3 -2.0
GTA                                  S      S      02 46 16.5 +6.9
GTA                                  SCP           02 46 19.6
GTA                                  PCS           02 46 20.9
GTA                                  SS     SS     02 48 56.3 +8.7
GTA                                  AMB    AMB
     comp=Z,23nm,1.1s,mb4.8
GTA                                  AMB    AMB
     comp=Z,149nm,5.7s
GTA                                  LR     LR
     comp=N,1µm,15.2s,MS5.1
GTA                                  LR     LR
     comp=E,2µm,13.7s,MS5.1
GTA                                  LR     LR
     comp=Z,1µm,15.6s,MS4.9
FITZ Fitzroy Crossi      38.40 122   eP     P      02 40 21.5 -0.3
     comp=Z,33nm,1.1s,mb5.0
NJ2  Nanjing             39.19  37   eP     P      02 40 29.3 +1.0
NJ2                                  AP     pP     02 40 34.8 -1.1
NJ2                                  XP     sP     02 40 37.9 -1.2
NJ2                                  PP     PP     02 42 07.6 +5.4
NJ2                                  S      S      02 46 31.0 +4.4
NJ2                                  AMB    AMB
     comp=Z,1µm,5.2s
NJ2                                  LR     LR
     comp=N,6µm,13.2s,MS5.8
NJ2                                  LR     LR
     comp=E,9µm,14.8s,MS5.8
SSE  Sheshan             40.00  40   P      P      02 40 35.5 +0.5
SSE                                  XP     sP     02 40 47.6 +1.8
SSE                                  S      S      02 46 42.3 +3.5
SSE                                  XS            02 46 56.9
SSE                                  SS     SS     02 49 42.8  +13
SSE                                  AMB    AMB
     comp=Z,11nm,0.9s,mb4.6
SSE                                  AMB    AMB
     comp=Z,141nm,6.7s
SSE                                  LR     LR
     comp=N,2µm,19.1s,MS5.1
SSE                                  LR     LR
     comp=E,948nm,19.1s,MS5.1
SSE                                  LR     LR
     comp=Z,2µm,18.7s,MS5.0
KSH  Kashi               40.35 340   eP     P      02 40 38.5 +0.7
KSH                                  eAP    pP     02 40 43.6 -1.9
KSH                                  eXP    sP     02 40 45.3 -3.3
KSH                                  ePP    PP     02 42 16.0 +1.8
KSH                                  ePCS          02 46 30.3
KSH                                  eS     S      02 46 46.0 +2.0
KSH                                  eSCS   ScS    02 50 42.0 +1.8
KSH                                  AMB    AMB
     comp=Z,10.0nm,0.3s,mb5.0
KSH                                  AMB    AMB
     comp=Z,300nm,5.9s
KSH                                  LR     LR
     comp=N,3µm,22.9s
KSH                                  LR     LR
     comp=E,3µm,17.6s
NWAO Narrogin (SRO)      41.85 148   P      P      02 40 50.8 +0.5
     comp=E,17nm,0.8s,mb4.7,baz=289,slow=5.2,SNR=5.2
BTO  Baotou              41.87  20   eP     P      02 40 49.0 -1.3
WMQ  Urumqi              42.03 355   P      P      02 40 52.4 +0.8
WMQ                                  XP     sP     02 41 00.0 -2.4
WMQ                                  PP     PP     02 42 33.0 +0.9
WMQ                                  S      S      02 47 11.0 +2.1
WMQ                                  SS     SS     02 50 12.0 +1.0
WMQ                                  AMB    AMB
     comp=Z,38nm,1.2s,mb4.9
WMQ                                  AMB    AMB
     comp=Z,129nm,12.0s
WMQ                                  LR     LR
     comp=N,1µm,18.0s,MS5.1
WMQ                                  LR     LR
     comp=E,2µm,18.0s,MS5.1
WMQ                                  LR     LR
     comp=Z,2µm,18.0s,MS4.9
HHC  Hu-ho-hao-te        42.64  22   eP     P      02 40 57.6 +1.0
HHC                                  AP     pP     02 41 06.8 +2.6
HHC                                  XP     sP     02 41 11.5 +4.1
HHC                                  PP     PP     02 42 41.4 +3.3
HHC                                  PCP    PcP    02 42 51.0 +2.0
HHC                                  S      S      02 47 22.0 +4.2
HHC                                  XS            02 47 35.3
HHC                                  SS     SS     02 50 25.4 +3.1
HHC                                  SCS    ScS    02 50 51.8 -2.2
HHC                                  AMB    AMB
     comp=Z,36nm,1.7s,mb4.8
HHC                                  LR     LR
     comp=N,3µm,14.4s,MS5.5
HHC                                  LR     LR
     comp=E,3µm,16.8s,MS5.5
HHC                                  LR     LR
     comp=Z,2µm,18.0s,MS5.1
UCH  Uchtor              43.27 341   P      P      02 41 02.7 +0.9
     SNR=10
AML  Almayashu           43.46 340   P      P      02 41 04.3 +1.1
     SNR=23
KBK  Karagaybulak        43.52 341   P      P      02 41 04.0 +0.3
     SNR=12
AAK  Ala-Archa           43.64 341   P      P      02 41 05.6 +0.8
     SNR=7.3
AAK  Ala-Archa           43.64 341⇓iP    P      02 41 02.8 -1.9
AAK                                  pmax   pmax
     comp=Z,32nm,1.7s,mb4.8
AAK  Ala-Archa           43.64 341⇓iP    P      02 41 02.9 -1.8
BJT  Baijiatuau          43.83  27⇑eP    P      02 41 07.5 +1.2
     comp=Z,138nm,1.4s,mb5.5
BJT                                  LR     LR
     comp=Z,2µm,22.0s,MS5.1
BJI  Beijing             43.85  27   P      P      02 41 07.9 +1.4
BJI                                  PP     PP     02 42 53.3 +3.0
BJI                                  S      S      02 47 40.8 +5.4
BJI                                  AMB    AMB
     comp=Z,59nm,1.5s,mb5.1
BJI                                  AMB    AMB
     comp=Z,270nm,3.8s
BJI                                  LR     LR
     comp=N,2µm,19.1s,MS5.3
BJI                                  LR     LR
     comp=E,3µm,19.1s,MS5.3
BJI                                  LR     LR
     comp=Z,2µm,22.6s,MS4.9
EKS2 Erkin-Say           43.90 340   P      P      02 41 07.4 +0.5
     SNR=10
USP  Ospenovka           44.21 341   P      P      02 41 09.1 -0.3
     SNR=15
MKAR Makanchi Array      45.64 350   i P    P      02 41 20.1 -0.6
MKAR                                 pmax   pmax
     comp=Z,22nm,1.0s
WRA  Warramunga Arr      46.62 120   P      P      02 41 28.8 -0.1
     comp=Z,18nm,0.6s,mb5.2,baz=297,slow=8.6,SNR=61
WRAB Tennant Creek       46.63 120⇓iP    P      02 41 27.5 -1.4
WRAB Tennant Creek       46.63 120   eP     P      02 41 28.4 -0.5
     comp=Z,67nm,1.0s,mb5.5
WRAB                                 LR     LR
     comp=Z,269nm,20.0s,MS4.2
WB2  Warramunga Arr      46.63 120⇓iP    P      02 41 28.8 -0.1
WB2                                  i S    S      02 48 16.3 +0.6
SONM Songino Array       47.48  13   P      P      02 41 36.2 +0.9
     comp=Z,21nm,0.7s,mb5.2,baz=195,slow=8.6,SNR=142
ULN  Ulaanbaatar         47.65  13⇑iP    P      02 41 35.9 -0.7
ULN  Ulaanbaatar         47.65  13⇑iP    P      02 41 35.0 -1.6
ASPA Alice Springs       47.79 125   eP     P      02 41 37.7 -0.3
ASAR Alice Springs       47.79 125   P      P      02 41 37.9 -0.1
     comp=Z,19nm,1.2s,mb5.0,baz=300,slow=7.3,SNR=36
ASAR                                 PcP    PcP    02 43 07.0 -0.2
     comp=Z,2.2nm,0.6s,baz=295,slow=3.6,SNR=4.2
ASAR                                 LR     LR     03 02 54.4
     comp=Z,648nm,18.2s,MS4.6,baz=293,slow=38
ASAR Alice Springs       47.79 125   P      P      02 41 37.9 -0.1
ASAR                                 PcP    PcP    02 43 07.0 -0.2
ASAR                                 LR     LR     03 02 54.4
ZAK  Zakamensk           49.31   9   eP     P      02 41 48.8 -0.6
ZAK                                  pmax   pmax
     comp=Z,6.0nm,1.0s,mb4.6
KURK Kurchatov           50.08 349⇓iP    P      02 41 53.2 -2.1
KURK Kurchatov           50.08 349   eP     P      02 41 54.2 -1.1
     comp=Z,14µm,2.8s
KURK                                 e      pP     02 42 01.8 -1.3
KURK                                 LR     LR
     comp=Z,356nm,22.0s
RAYN Ar Rayn             50.09 299   P      P      02 41 55.7 -0.1
     comp=Z,103nm,0.9s,mb5.9,SNR=24
TLY  Talaya              50.63   9   eP     P      02 42 00.6 +1.1
TLY                                  eS     S      02 49 16.7 +5.5
TLY                                  pmax   pmax
     comp=Z,12nm,0.9s,mb4.8
TLY                                  MLR    MLR
     comp=Z,948nm,16.0s,MS4.9
TLY  Talaya              50.63   9⇓iP    P      02 41 59.0 -0.5
IRK  Irkutsk             51.27   9   eP     P      02 42 04.6 +0.3
IRK                                  pmax   pmax
     comp=Z,24nm,0.8s,mb5.2
HIA  Hailar              52.84  22   eP     P      02 42 16.6 +0.5
     comp=Z,44nm,1.3s,mb5.2
HIA                                  LR     LR
     comp=Z,3µm,19.0s,MS5.4
NVS  Novosibirsk         53.38 354⇓iP    P      02 42 17.8 -2.3
NVS                                  e      pP     02 42 27.0 -0.9
NVS                                  eS     S      02 49 47.9 -0.9
NVS                                  pmax   pmax
     comp=Z,27nm,1.0s,mb5.1
NVS                                  pmax   pmax
     comp=N,25nm,1.4s
NVS                                  smax
     comp=N,34nm,1.8s
MDJ  Mudanjiang          53.91  32   P      P      02 42 24.3 +0.2
MDJ                                  PCP    PcP    02 43 28.5 -0.9
MDJ                                  PP     PP     02 44 25.1 -1.8
MDJ                                  AMB    AMB
     comp=Z,26nm,1.5s,mb4.9
MDJ                                  AMB    AMB
     comp=Z,216nm,10.3s
MDJ                                  LR     LR
     comp=N,796nm,21.6s,MS5.0
MDJ                                  LR     LR
     comp=E,998nm,19.1s,MS5.0
MDJ                                  LR     LR
     comp=Z,1µm,21.6s,MS4.9
MDJ  Mudanjiang          53.91  32   P      P      02 42 24.8 +0.7
     comp=Z,50nm,1.5s,mb5.2
MDJ                                  LR     LR
     comp=Z,2µm,19.0s,MS5.1
CBIJ Chichi jima         54.05  57   LR     LR     03 03 32.8
     comp=Z,645nm,21.8s,MS4.7,baz=266,slow=34
BVAR Borovoye Array      54.17 344   P      P      02 42 23.9 -2.0
     comp=Z,12nm,0.8s,mb4.9,baz=153,slow=6.6,SNR=57
JHJ  Hachijo jima 2      54.35  50   LR     LR     03 06 23.6
     comp=Z,496nm,18.7s,MS4.6,baz=258,slow=37
BHD  Baghdad             54.60 310   eP     P      02 42 20.5 -8.9
KMBO Kilima Mbogo        55.02 267   P      P      02 42 33.5 +0.7
     comp=Z,2.5nm,0.9s,mb4.2,baz=58,slow=8.9,SNR=11
KMBO                                 LR     LR     03 03 17.9
     comp=Z,2µm,18.9s,MS5.1,baz=94,slow=33
KMBO Kilima Mbogo        55.02 267   eP     P      02 42 32.8 +0.1
     comp=Z,55nm,1.8s,mb5.3
KMBO                                 LR     LR
     comp=Z,2µm,20.0s,MS5.1
PMG  Port Moresby        55.85 103   P      P      02 42 37.7 -0.9
     comp=Z,4.6nm,0.3s,mb5.0,baz=292,slow=8.1,SNR=5.3
PMG  Port Moresby        55.85 103   eP     P      02 42 37.5 -1.2
     comp=Z,12nm,0.8s,mb5.0
MSL  Mosul               56.84 313   eP     P      02 42 44.5 -1.0
CTA  Charters Tower      57.25 115   eP     P      02 42 48.3 -0.3
     comp=Z,16nm,0.9s,mb5.1
CTA  Charters Tower      57.25 115   P      P      02 42 48.8 +0.2
     comp=Z,24nm,1.0s,mb5.2,baz=282,slow=8.3,SNR=8.5
GNI  Garni               57.45 318⇑iP    P      02 42 48.0 -1.8
GNI                                  pmax   pmax
     comp=Z,63nm,1.7s
GNI  Garni               57.45 318   P      P      02 42 50.1 +0.3
     comp=Z,30nm,1.1s,mb5.2,baz=90,slow=1.2,SNR=16
GNI  Garni               57.45 318⇑iP    P      02 42 48.1 -1.7
STKA Stephens Creek      57.51 130⇓iP    P      02 42 49.9 -0.4
     comp=Z,14nm,0.9s,mb5.0
STKA Stephens Creek      57.51 130   P      P      02 42 50.0 -0.3
     comp=Z,18nm,0.9s,mb5.1,baz=306,slow=6.6,SNR=19
STKA                                 LR     LR     03 08 15.5
     comp=Z,1µm,18.8s,MS5.1,baz=288,slow=37
STKA Stephens Creek      57.51 130⇓iP    P      02 42 49.9 -0.4
     comp=Z,14nm,0.9s,mb5.0
KLR  Kul'dur             58.08  29   eP     P      02 42 50.5 -3.5
KLR                                  eS     S      02 50 47.0 -4.5
KLR                                  e             02 52 32.5
KLR                                  e             02 54 39.0
KLR                                  pmax   pmax
     comp=E,28nm,1.4s
KLR                                  pmax   pmax
     comp=Z,43nm,1.4s,mb5.3
KLR                                  MLR    MLR
     comp=N,2µm,14.5s,MS5.6
KLR                                  MLR    MLR
     comp=E,3µm,14.5s,MS5.6
KLR                                  MLR    MLR
     comp=Z,4µm,14.5s,MS5.6
MTA  Mtatsminda          58.18 320   P      P      02 42 54.3 -0.5
TI2  Plekhanov           58.23 320   eP     P      02 42 54.6 -0.6
TI2                                  eS     S      02 51 04.8  +11
TI2                                  pmax   pmax
     comp=Z,80nm,0.6s,mb5.9
DUS  Dusheti             58.44 320   P      P      02 42 56.3 -0.3
BOD  Bodaibo             58.47  13   eP     P      02 42 56.4 -0.2
BOD                                  pmax   pmax
     comp=Z,27nm,1.3s,mb5.1
ONI  Oni                 59.49 320   P      P      02 43 04.4 +0.5
ASF  Jabal al Asfar      60.07 306   P      P      02 43 08.4 +0.3
     comp=Z,8.2nm,0.9s,mb4.7,baz=95,slow=3.1,SNR=5.8
ASF                                  LR     LR     03 06 33.7
     comp=Z,464nm,20.4s,MS4.6,baz=184,slow=34
KIV  Kislovodsk          60.65 321   P      P      02 43 11.0 -0.8
     comp=Z,246nm,1.7s,mb6.1,SNR=15
KIV  Kislovodsk          60.65 321⇓iP    P      02 43 09.9 -1.9
KIV                                  pmax   pmax
     comp=Z,74nm,1.7s,mb5.5
KIV  Kislovodsk          60.65 321⇓iP    P      02 43 09.0 -2.8
CLNS Chul'man            60.77  20   eP     P      02 43 12.5 +0.1
CLNS                                 e             02 43 57.3
CLNS                                 eS     S      02 51 25.3 -0.9
CLNS                                 eSS    SS     02 55 25.2 -1.3
CLNS                                 pmax   pmax
     comp=Z,37nm,1.0s,mb5.5
CLNS                                 pmax   pmax
     comp=N,26nm,1.3s
CLNS                                 pmax   pmax
     comp=E,18nm,1.2s
CLNS                                 pmax   pmax
     comp=Z,9.0nm,1.0s,mb4.8
CLNS                                 pmax   pmax
     comp=N,7.0nm,0.9s
CLNS                                 pmax   pmax
     comp=E,9.0nm,1.2s
CLNS                                 smax
     comp=N,4.0nm,0.7s
CLNS                                 smax
     comp=Z,3.0nm,0.7s
CLNS                                 smax
     comp=E,3.0nm,0.6s
CLNS                                 MLR    MLR
     comp=Z,2µm,15.0s,MS5.3
CLNS                                 MLR    MLR
     comp=N,600nm,13.0s,MS5.0
CLNS                                 MLR    MLR
     comp=E,200nm,13.0s,MS5.0
EIL  Elat                60.93 303   eP     P      02 43 12.9 -1.0
     comp=E,20nm,0.9s,mb5.2
EIL                                  e      pP     02 43 21.7 -0.1
GOF  Gofitskoye          60.98 322⇑iP    P      02 43 13.0 -1.0
GOF                                  pmax   pmax
     comp=Z,60nm,1.4s,mb5.5
MALT Malatya             61.06 314   eP     P      02 43 14.9 +0.2
     comp=Z,54nm,1.4s,mb5.5
MALT                                 e      pP     02 43 22.2 -0.4
ASAJ Asahikawa           61.27  39   LR     LR     03 09 02.8
     comp=Z,600nm,20.6s,MS4.7,baz=336,slow=35
MBAR Mbarara             61.51 268   eP     P      02 43 14.1 -3.9
MBAR Mbarara             61.51 268   eP     P      02 43 17.0 -1.0
     comp=Z,55nm,1.6s,mb5.4
MBAR                                 LR     LR
     comp=Z,156nm,19.0s,MS4.2
SOC  Sochi               62.38 319   eP     P      02 43 19.4 -4.1
SOC                                  e             02 43 55.1
SOC                                  eS     S      02 51 44.6 -2.2
SOC                                  e             02 53 05.5
SOC                                  eSS    SS     02 55 53.8 +1.4
SOC                                  eSSS   SSS    02 58 40.6 +5.3
SOC                                  pmax   pmax
     comp=Z,36nm,0.7s,mb5.6
SOC                                  pmax   pmax
     comp=N,31nm,0.8s
SOC                                  pmax   pmax
     comp=E,6.0nm,0.6s
SOC                                  MLR    MLR
     comp=N,780nm,19.0s,MS5.0
SOC                                  MLR    MLR
     comp=Z,656nm,19.0s,MS4.8
SOC                                  MLR    MLR
     comp=E,520nm,18.0s,MS5.0
YSS  Yuzh-Sakhalins      62.76  37   eP     P      02 43 25.0 -0.9
YSS                                  e             02 43 39.0
YSS                                  e             02 51 42.0
YSS                                  pmax   pmax
     comp=Z,40nm,1.2s,mb5.4
YSS                                  MLR    MLR
     comp=Z,1µm,18.0s,MS5.2
YSS                                  MLR    MLR
     comp=N,2µm,17.0s,MS5.3
YSS                                  MLR    MLR
     comp=E,900nm,17.0s,MS5.3
YSS  Yuzh-Sakhalins      62.76  37⇑iP    P      02 43 25.2 -0.7
SOKR Solikamsk           63.80 341⇑iP    P      02 43 31.2 -1.4
SOKR                                 pmax   pmax
     comp=Z,30nm,1.1s,mb5.2
SOKR                                 MLR    MLR
     comp=Z,2µm,20.0s,MS5.2
BRTR Keskin Array B      65.05 313   P      P      02 43 40.4 -0.7
     comp=Z,8.6nm,0.9s,mb4.8,baz=130,slow=7.1,SNR=24
LSZ  Lusaka              65.52 252   eP     P      02 43 43.4 -1.0
     comp=Z,17nm,0.9s,mb5.1
LSZ                                  LR     LR
     comp=Z,1µm,22.0s,MS5.2
YAK  Yakutsk             66.33  18   eP     P      02 43 46.6 -2.3
YAK                                  eS     S      02 52 34.7 -0.7
YAK                                  pmax   pmax
     comp=N,17nm,1.1s
YAK                                  pmax   pmax
     comp=Z,35nm,1.1s,mb5.3
YAK                                  pmax   pmax
     comp=E,19nm,1.2s
YAK                                  smax
     comp=E,107nm,10.4s
YAK  Yakutsk             66.33  18⇑iP    P      02 43 46.9 -2.0
VOR  Voronezh            66.52 327   eP     P      02 43 48.5 -1.8
VOR                                  pmax   pmax
     comp=Z,50nm,1.4s,mb5.3
SIM  Simferopol'         66.60 319   P      P      02 43 51.1 +0.2
SIM                                  pmax   pmax
     comp=Z,38nm,1.0s,mb5.4
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MOS	**Moscow**	69.31	330	*e*P	P	02 44 05.8	-1.9
MOS				*e*	pP	02 44 14.2	-1.4
MOS				*e*		02 44 26.7	
MOS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
MOS				MLR	MLR		
	comp=Z,3µm,26.0s,MS5.4						
OBN	**Obninsk**	69.54	330	*i*P	P	02 44 07.6	-1.4
OBN				*i*	pP	02 44 16.3	-0.7
OBN				*i*		02 44 29.9	
OBN						02 46 44.0	
OBN				*e*S	S	02 53 19.1	+5.3
OBN				*e*		02 53 34.6	
OBN				*e*SS	SS	02 57 36.9	-6.4
OBN				pmax	pmax		
	comp=Z,49nm,1.7s,mb5.2						
OBN				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.1						
OBN	**Obninsk**	69.54	330	⇓*i*P	P	02 44 06.3	-2.7
LBTB	**Lobatse**	69.70	243	*e*P	P	02 44 09.8	-0.8
	comp=Z,51nm,0.9s,mb5.5						
LBTB				*e*	pP	02 44 18.9	+0.4
LBTB				LR	LR		
	comp=Z,3µm,22.0s,MS5.4						
CFR	**Carcaliu**	70.66	318	⇑P	P	02 44 15.7	-0.4
BOSA	**Boshof**	70.78	239	*e*P	P	02 44 16.2	-0.9
	comp=Z,40nm,1.1s,mb5.3						
BOSA				*e*	pP	02 44 24.8	-0.2
BOSA				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
KIS	**Kishinev**	70.78	320	*e*P	P	02 44 15.0	-1.8
KIS				*e*		02 44 32.0	
KIS				*e*S	S	02 53 19.0	-10
KIS				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.8						
AKASG	**Malin Array Be**	71.77	323	P	P	02 44 21.5	-1.2
	comp=Z,2.8nm,0.7s,mb4.3,baz=93,slow=4.9,SNR=15						
VRI	**Vrincioaia**	71.81	318	⇑P	P	02 44 22.4	-0.6
MLR	**Muntele Rosu**	72.23	317	⇓P	P	02 44 25.2	-0.3
MLR	**Muntele Rosu**	72.23	317	P	P	02 44 26.1	+0.6
	comp=Z,23nm,0.8s,mb5.2,baz=169,slow=4.5,SNR=29						
MAW	**Mawson**	72.23	191	LR	LR	03 09 40.0	
	comp=Z,539nm,19.3s,MS4.8,baz=212,slow=30						
MA2	**Magadan**	73.01	27	*e*P	P	02 44 30.3	+0.5
MA2				*e*S	S	02 53 52.2	-1.7
MA2				MLR	MLR		
	comp=Z,2µm,17.9s,MS5.4						
MA2	**Magadan**	73.01	27	⇓*i*P	P	02 44 28.2	-1.6
PUL	**Pulkovo**	74.62	332	⇓*e*P	P	02 44 37.3	-1.9
PUL				pmax	pmax		
	comp=E,37nm,0.7s						
PUL				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.5						
PUL				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
PUL	**Pulkovo**	74.62	332	*e*P	P	02 44 37.0	-2.2
SEY	**Seymchan**	75.22	24	*e*P	P	02 44 44.8	+2.3
SEY				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
KWP	**Kalwaria**	75.45	321	*e*P	P	02 44 44.1	-0.1
JOF	**Joensuu**	75.51	336	*e*p	P	02 44 42.7	-1.5
	comp=Z,8.3nm,0.8s,mb4.7						
JOF	**Joensuu**	75.51	336	*e*P	P	02 44 42.7	-1.5
JOF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
KOLS	**Kolonicke sedl**	75.55	320	*i* P	P	02 44 45.5	+0.8
KOLS				*e*		02 44 58.4	
TSUM	**Tsumeb**	76.10	250	*e*P	P	02 44 48.6	+0.2
	comp=Z,5.7nm,1.4s,mb4.3						
TSUM				*e*	pP	02 44 56.9	+0.5
TSUM				LR	LR		
	comp=Z,588nm,20.0s,MS4.9						
SUW	**Suwalki**	76.33	325	*e*P	P	02 44 48.3	-0.7
NIE	**Niedzica**	76.91	320	*e*P	P	02 44 51.7	-0.7
FINES	**FINESS Array B**	77.19	333	P	P	02 44 53.2	-0.4
	comp=Z,9.9nm,0.8s,mb4.8,baz=104,slow=7.9,SNR=19						
FINES				LR	LR	03 20 49.5	
	comp=Z,1µm,21.1s,MS5.1,baz=308,slow=37						
FINES	**FINESS Array B**	77.19	333	P	P	02 44 53.2	-0.4
FINES				LR	LR	03 20 49.5	
KAF	**Kangasniemi**	77.33	334	*e*p	P	02 44 53.1	-1.3
	comp=Z,7.8nm,0.8s,mb4.7,baz=108,slow=5.0						
KAF	**Kangasniemi**	77.33	334	*e*P	P	02 44 53.1	-1.3
KAF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
OJC	**Ojcow**	77.41	321	*e*P	P	02 44 54.7	-0.4
VYHS	**Vyhne**	77.67	319	*i* P	P	02 44 57.0	+0.4
VYHS				*e*pP	pP	02 45 05.2	+0.6
OKC	**Ostrava-Krasne**	78.38	321	*e*P	P	02 45 00.5	+0.1
OKC				*e*pP	pP	02 45 09.0	+0.5
SMOL	**Smolenice**	78.59	319	*e*P	P	02 45 02.2	+0.6
SMOL				*e*pP	pP	02 45 10.8	+1.1
MORC	**Moravsky Berou**	78.75	320	*e*P	P	02 45 02.3	-0.1
	comp=Z,27nm,1.3s,mb5.0						
ZST	**Bratislava**	78.75	319	*e*P	P	02 45 02.9	+0.4
ZST				*e*pP	pP	02 45 12.0	+1.4
ZST				*e*		02 45 26.4	
SYO	**Syowa Base**	79.07	197	⇓pP	pP	02 45 08.4	-3.5
SYO	**Syowa Base**	79.07	197	⇑PcP	PcP	02 45 14.0	+1.3
VRAC	**Vranov**	79.28	320	P	P	02 45 05.8	+0.4
	comp=Z,3.0nm,0.9s,mb4.2,baz=56,slow=7.3,SNR=4.3						
BOJS	**Bojanci**	79.58	316	*e*P	P	02 45 07.0	-0.1
DPC	**Dobruska-Polom**	79.62	321	*e*P	P	02 45 08.4	+1.2
DPC				*e*pP	pP	02 45 16.9	+1.6
DPC				AMS	AMS	03 25 20.0	
	comp=Z,600nm,20.9s						
ARSA	**Arzberg**	79.65	318	⇑*i*P	P	02 45 08.4	+1.0
	comp=Z,21nm,0.9s,mb5.1						
KSP	**Ksiaz**	79.73	321	*e*P	P	02 45 08.7	+1.0
KSP				*e*pP	pP	02 45 16.6	+0.8
KSP				LR	LR		
	comp=Z,2µm,24.2s,MS5.2						
KSP	**Ksiaz**	79.73	321	*e*P	P	02 45 09.1	+1.3
PERS	**Pernice**	79.84	317	*e*P	P	02 45 08.9	+0.5
UPC	**Upice**	79.85	321	*e*P	P	02 45 09.2	+0.8
UPC				*e*pP	pP	02 45 17.7	+1.2
ARCES	**ARCESS Array B**	80.32	341	P	P	02 45 10.3	-0.3
	comp=Z,16nm,0.9s,mb4.9,baz=101,slow=6.2,SNR=21						
ARCES				LR	LR	03 22 59.2	
	comp=Z,2µm,18.3s,MS5.4,baz=112,slow=37						
ARCES	**ARCESS Array B**	80.32	341	P	P	02 45 10.3	-0.3
ARCES				LR	LR	03 22 59.2	
ARE0	**ARCESS Array S**	80.32	341	*e*P	P	02 45 09.6	-1.0
PRU	**Pruhonice**	80.70	320	*e*P	P	02 45 13.3	+0.4
PRU				AMS	AMS	03 21 00.0	
	comp=Z,500nm,23.5s						
GERES	**GERESS Array B**	81.08	319	P	P	02 45 15.9	+0.9
	comp=Z,17nm,0.9s,mb5.0,baz=104,slow=5.5,SNR=76						
KHC	**Kasperske Hory**	81.20	319	*e*P	P	02 45 16.1	+0.5
KHC				*e*pP	pP	02 45 24.5	+0.8
KHC				AMS	AMS	03 21 30.0	
	comp=Z,500nm,20.1s						
BRG	**Berggiesshubel**	81.20	321	*e*P	P	02 45 16.6	+1.0
BRG				*e*		02 45 32.6	
BRG				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
BRG	**Berggiesshubel**	81.20	321	*e*P	P	02 45 16.6	+1.0
	comp=Z,25nm,1.4s,mb5.0						
BRG				*e*		02 45 32.6	
FVI	**Forni Avoltri**	81.43	317	*e*P	P	02 45 17.3	+0.4
SFI	**Santa Sofia**	81.81	314	*e*P	P	02 45 20.5	+1.6
CLL	**Collm**	81.85	321	*i* P	P	02 45 19.5	+0.6
CLL				*e*		02 45 35.0	
CLL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
CLL	**Collm**	81.85	321	*i* P	P	02 45 19.5	+0.6
	comp=Z,9.0nm,1.1s,mb4.6						
CLL				*e*		02 45 35.0	
CLL	**Collm**	81.85	321	P	P	02 45 19.5	+0.6
	comp=Z,logA/T=0.9,mb4.6						
CLL				*e*		02 45 35.0	
CLL				*e*		02 45 49.0	
VMG	**Vicchio**	82.03	314	*e*P	P	02 45 22.1	+2.1
NKC	**Novy Kostel**	82.07	320	*e*P	P	02 45 21.1	+1.0
CTI	**Castel Tesino**	82.15	316	*e*P	P	02 45 21.6	+1.0
WTTA	**Wattenberg**	82.28	317	⇑*i*P	P	02 45 21.7	+0.5
	comp=Z,23nm,1.0s,mb5.1						
WATA	**Walderalm**	82.33	317	⇑*i*P	P	02 45 21.5	0.0
	comp=Z,8.7nm,1.0s,mb4.6						
BILL	**Bilibino**	82.41	21	*e*P	P	02 45 20.8	-0.7
BILL				*e*		02 48 29.7	
BILL				*e*SS	SS	03 01 02.6	+3.5
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BILL				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.3						
BILL	**Bilibino**	82.41	21	*e*P	P	02 45 21.9	+0.4
	comp=Z,16nm,1.4s,mb4.8						
BILL				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
SQTA	**Sankt Quirin**	82.56	317	⇑*i*P	P	02 45 22.8	+0.1
	comp=Z,7.7nm,0.9s,mb4.7						
MOX	**Moxa**	82.64	321	*e*P	P	02 45 32.0	+9.0
MOX				L		03 28 05.0	
MOTA	**Moosalm**	82.65	317	⇑*i*P	P	02 45 23.2	+0.1
	comp=Z,6.8nm,1.0s,mb4.6						
HFS	**Hagfors**	82.73	330	P	P	02 45 23.1	-0.2
	comp=Z,12nm,1.0s,mb4.8,baz=153,slow=9.7,SNR=5.5						
GSCL	**Gusciola**	82.75	314	*e*P	P	02 45 25.1	+1.4
GRA1	**Grafenberg Arr**	82.80	320	*e*P	P	02 45 25.6	+1.7
	comp=Z,9.0nm,1.0s,mb4.8						
GRA1				*e*pP	pP	02 45 33.9	+1.9
GRA1				LR	LR		
	comp=Z,400nm,20.1s,MS4.8						
GRF	**Grafenberg Arr**	82.80	320	*e*P	P	02 45 25.6	+1.7
	comp=Z,9.0nm,1.0s,mb4.8						
GRF				*e*pP	pP	02 45 33.9	+1.9
GRF				LR	LR		
	comp=Z,400nm,20.1s,MS4.8						
BRMO	**Bormio**	83.07	316	*e*P	P	02 45 26.6	+1.2
RPZ	**Rata Peaks**	83.18	134	LR	LR	03 04 05.9	
	comp=Z,259nm,19.2s,MS4.6,baz=229,slow=29						
DAVOX	**Davos**	83.43	317	P	P	02 45 28.6	+1.4
	comp=Z,17nm,0.8s,mb5.1,baz=112,slow=6.7,SNR=13						
DAVA	**Damuels**	83.47	317	⇑*i*P	P	02 45 28.6	+1.2
	comp=Z,34nm,0.9s,mb5.4						
PGF	**Pioggiola**	83.78	312	*e*P	P	02 45 28.8	-0.3
NB2	**NORSAR Subarra**	84.07	331	P	P	02 45 29.2	-0.9
	comp=Z,6.4nm,1.0s,mb4.7,baz=95,slow=5.6						
NOA	**NORSAR Array B**	84.07	331	P	P	02 45 29.9	-0.2
	comp=Z,3.8nm,0.9s,mb4.5,baz=96,slow=5.5,SNR=6.9						
NOA				LR	LR	03 26 12.6	
	comp=Z,557nm,19.2s,MS5.0,baz=80,slow=38						
SBF	**Sospel**	84.99	314	*e*P	P	02 45 34.8	-0.3
MBDF	**Montbardon**	85.50	315	*e*P	P	02 45 37.6	0.0
	comp=Z,51nm,1.2s,mb5.2						
LPG	**La Plagne**	85.53	315	*e*P	P	02 45 37.8	0.0
	comp=Z,34nm,0.9s,mb5.3						
FRF	**La Foret Royal**	85.55	313	*e*P	P	02 45 37.7	-0.2
LPL	**La Plagne**	85.55	315	*e*P	P	02 45 37.9	0.0
	comp=Z,52nm,1.1s,mb5.4						
HINF	**Hinteralfeld**	85.55	318	*e*P	P	02 45 37.5	-0.3
HAU	**Haudompre**	85.90	318	*e*P	P	02 45 38.8	-0.7
	comp=Z,36nm,1.2s,mb5.2						
HAU				*e*R			
	comp=Z,492nm,20.2s						
CABF	**La Chapelle**	86.03	316	*e*P	P	02 45 40.2	-0.1
ORIF	**Oris-en-Rattie**	86.13	315	*e*P	P	02 45 40.9	+0.1
	comp=Z,37nm,1.1s,mb5.2						
ORIF				*e*R			
	comp=Z,682nm,20.0s						
SMRF	**Simiane la Rot**	86.33	314	*e*P	P	02 45 41.2	-0.6
MEZF	**Maizieres J'vi**	86.78	318	*e*P	P	02 45 43.4	-0.4
VIVF	**Saint-Julien-l**	86.99	315	*e*P	P	02 45 44.8	-0.2
VNDA	**Vanda**	87.41	168	P	P	02 45 47.1	+0.8
	comp=Z,5.4nm,1.2s,mb4.6,baz=296,slow=4.7,SNR=3.6						
VNDA				LR	LR	03 19 34.8	
	comp=Z,1µm,18.0s,MS5.3,baz=292,slow=32						
SMF	**Signal de Mont**	87.58	316	*e*P	P	02 45 47.3	-0.5
SSF	**Saint Saulge**	87.81	317	*e*P	P	02 45 48.6	-0.3
AVF	**Avril sur Loir**	87.92	317	*e*P	P	02 45 49.7	+0.3
	comp=Z,52nm,1.4s,mb5.3						
MTLF	**Montolieu**	88.77	313	*e*P	P	02 45 53.7	+0.1
CAF	**Calviac**	88.84	315	*e*P	P	02 45 53.5	-0.4
RJF	**Les Rejaudoux**	89.22	315	*e*P	P	02 45 56.0	+0.3
RJF				*e*R			
	comp=Z,423nm,19.2s						
LFF	**La Frestale**	89.78	315	*e*P	P	02 45 58.7	+0.4
FLN	**La Foliniere**	90.44	319	*e*P	P	02 46 00.0	-1.3
FLN				*e*R			
	comp=Z,683nm,20.5s						
DAG	**Danmarks Havn**	92.96	348	⇓*e*P	P	02 46 12.2	-0.1
DAG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.4						
DAG	**Danmarks Havn**	92.96	348	⇓*i*P	P	02 46 12.2	-0.1
	comp=Z,1.3nm,0.6s,mb4.5						
ESDC	**Sonseca Array**	93.62	310	P	P	02 46 17.3	+1.2
	comp=Z,1.3nm,0.8s,mb4.4,baz=102,slow=3.7,SNR=4.5						
DBIC	**Dimbokro**	96.81	277	P	P	02 46 33.4	+2.1
	comp=Z,4.9nm,1.0s,mb4.9,baz=143,slow=5.1,SNR=3.5						
DBIC				LR	LR	03 26 54.1	
	comp=Z,350nm,21.3s,MS4.8,baz=70,slow=33						
YKA	**Yellowknife Ar**	112.74	13	PKiKP		02 51 35.0	
	comp=Z,0.6nm,1.0s,baz=320,slow=2.5,SNR=4.5						
YKA				PP	PP	02 52 15.9	-11
	comp=Z,0.8nm,0.9s,baz=331,slow=7.4,SNR=5.3						
YKA				PKKPbc		03 02 33.3	
	comp=Z,0.6nm,1.0s,baz=147,slow=3.6,SNR=5.1						
YKA	**Yellowknife Ar**	112.74	13	PKPdf		02 51 35.0	
YKA				PP	PP	02 52 15.9	-11
YKA				PKKPbc		03 02 33.3	
TBI	**Tubuai**	116.63	115	*e*LR	LR	03 27 18.9	
	comp=Z,523nm,24.8s						
TBI	**Tubuai**	116.63	115	*e*LQ		02 49 21.0	
TBI				*e*LR	LR	02 50 23.4	
	comp=Z,265nm,22.8s						
PPT	**Papeete**	117.40	109	*e*LR	LR	03 27 39.7	
	comp=Z,434nm,24.8s						
USHA	**Ushuaia**	124.82	194	LR	LR	02 55 18.1	
	comp=Z,613nm,18.5s,MS5.3,baz=218,slow=29						
TAOE	**Nuku Hiva Isla**	127.45	100	*e*LR	LR	03 32 17.5	
ULM	**Lac du Bonnet**	127.69	7	PKP	PKPdf	02 52 05.9	-2.7
	comp=Z,1.6nm,0.7s,baz=39,slow=6.4,SNR=3.4						
NVAR	**Mina Array Bea**	131.07	32	PKP	PKPdf	02 52 13.4	-2.0
	comp=Z,1.2nm,0.7s,baz=293,slow=3.4,SNR=7.8						
PDAR	**Pinedale Array**	131.49	21	PKP	PKPdf	02 52 14.2	-1.9
	comp=Z,1.2nm,0.9s,baz=270,slow=3.0,SNR=8.6						
PDAR				PP	PP	02 54 30.3	-4.6
	comp=Z,2.4nm,1.1s,baz=45,slow=2.1,SNR=4.5						
MVU	**Marysvale**	134.01	27	*e*PKP	PKPdf	02 52 19.0	-1.8
MSU	**Marysvale**	134.02	27	PKP	PKPdf	02 52 19.0	-1.9
ANMO	**Albuquerque**	139.47	24	PKP	PKPdf	02 52 28.1	-2.9
	comp=Z,1.1nm,0.8s,baz=302,slow=1.8,SNR=3.4						
MIAR	**Mount Ida**	143.44	8	*e*PKP	PKPdf	02 52 32.7	-5.3
LRAL	**Lakeview Retre**	145.35	359	*e*PKP	PKPdf	02 52 36.8	-4.6
LTX	**Lajitas**	145.52	25	*e*PKP	PKPdf	02 52 39.5	-2.2
TXAR	**Lajitas Array**	145.52	25	PKPbc	PKPbc	02 52 39.7	+1.9
	comp=Z,22nm,0.9s,baz=297,slow=2.8,SNR=83						
JCT	**Junction City**	145.92	19	*e*PKP	PKPdf	02 52 40.0	-2.4
NATX	**Nacogdoches**	146.00	10	*e*PKP	PKPdf	02 52 40.7	-1.9
HKT	**Hockley**	147.51	13	*e*PKPbc	PKPdf	02 52 45.1	0.0
LVC	**Limon Verde**	152.35	220	PKPbc	PKPdf	02 52 58.8	+6.0
	comp=Z,7.4nm,0.8s,baz=160,slow=1.5,SNR=10						
SAML	**Samuel**	154.50	253	*e*PKPbc	PKPdf	02 53 01.8	+5.9
LPAZ	**La Paz**	155.87	232	PKP	PKPdf	02 52 57.1	-0.6
	comp=Z,1.9nm,1.1s,baz=29,slow=2.8,SNR=3.9						
ROSC	**El Rosal**	165.01	296	PKP	PKPdf	02 53 06.9	-1.0
	comp=Z,2.8nm,0.6s,baz=90,slow=18,SNR=4.4						

IDC 15 02:35:06.5±6.7**,29.44S**×**114.96W,mb3.5**/2**,mb1 3.9**/2**, mb1mx3.4**/17**,mbtmp3.5**/2**,MS4.4**/2**,Ms1 4.4**/2**, ms1mx3.2**/14**,Error ellipse: s-maj=644.8km s-min=137.6km az=98.0,Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	67.59	357	P	P	02 46 04.7	-2.4
	1.0nm,1.0s,baz=174,slow=8.2,SNR=3.2						
YKA	**Yellowknife Ar**	91.61	0	P	P	02 48 15.5	-0.6
	0.1nm,0.5s,baz=166,slow=4.7,SNR=3.6						
SONM	**Songino Array**	143.37	312	PKP	PKPdf	02 54 41.2	-3.2
	0.3nm,0.7s,baz=90,slow=1.4,SNR=3.2						

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*IDC **15** 02:36:47.3±4.5,36.81N×80.91W,mb3.2/5,mb1 3.8/7, mb1mx3.5/23,mbtmp3.5/7,ML2.7/2,Error ellipse: s-maj=74.4km s-min=18.6km az=125.0*

*NEIC **15** 02:36:54.1±0.4,37.22N×81.87W,MN3.1,Error ellipse: s-maj=7.3km s-min=5.3km az=166.0,Suspected Mining explosion.*

NEIC 60 km [35 miles] W of Bluefield.

ISC 15 02:36:52.8±0.4**,37.16N**±0.04×**81.92W**±0.03**,n29,**$\sigma 0^{s}$**92**/40**, mb3.2**/3**,West Virginia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELN	**Prospectdale**	0.93	86	*e*Pg	Pg	02 37 12.1	+0.7
ELN				*e*Sg	Sg	02 37 23.1	-0.7
FWV	**Forest Hill**	0.98	64	*e*Pg	Pg	02 37 12.1	-0.1
FWV				*e*Sg	Sg	02 37 24.9	-0.4
BLA	**Blacksburg**	1.20	87	*e*P	Pb	02 37 16.1	+0.1
BLA				*e*S	Sb	02 37 32.3	+0.5
CPCT	**Cooper Cave**	2.71	232	*e*Pn	Pn	02 37 39.7	+1.4
CPCT				*e*S	Sn	02 38 19.0	+6.7
JSC	**Jenkinsville**	2.92	169	*e*Pn	Pn	02 37 42.0	+0.6
JSC				*e*S	Sn	02 38 26.0	+8.3
MCWV	**Mont Chateau**	2.98	33	*e*Pn	Pn	02 37 42.3	+0.2
MCWV				*e*S	Sn	02 38 19.9	+0.8
ACSO	**Alum Creek Sta**	3.18	345	*e*Pn	Pn	02 37 45.0	+0.1
ACSO				*e*S	Sn	02 38 26.4	+2.3
WCI	**Wyandotte Cave**	3.63	288	*e*Pn	Pn	02 37 52.0	+0.5
WCI				*e*S	Sn	02 38 41.2	+5.5
CBN	**Corbin**	3.75	73	*e*Pn	Pn	02 37 59.8	+6.6
CBN				*e*S	Sn	02 38 48.5	+10
COW	**Cow Castle Cre**	3.90	165	Pn	Pn	02 37 55.0	-0.2
GOGA	**Godfrey**	3.95	199	Pn	Pn	02 38 02.1	+6.1
GOGA				*e*S	Sn	02 38 55.9	+12
BLO	**Bloomington**	4.15	300	*e*P	Pn	02 38 06.0	+7.2
SDMD	**Soldier's Deli**	4.58	59	*e*P	Pn	02 38 13.8	+8.9
USIN	**University of**	4.64	282	*e*P	Pn	02 38 15.3	+10
SSPA	**Standing Stone**	4.68	41	*e*Pn	Pn	02 38 05.3	-1.0
SSPA				*e*		02 38 14.6	
WVT	**Waverly**	4.86	260	*e*Pn	Pn	02 38 09.2	+0.3
AAM	**Ann Arbor**	5.31	346	Pn	Pn	02 38 14.8	-0.3
LRAL	**Lakeview Retre**	5.86	227	*e*Pn	Pn	02 38 23.1	+0.2
FVM	**French Village**	6.81	280	*e*Pn	Pn	02 38 33.6	-2.8
CCM	**Cathedral Cave**	7.46	280	*e*Pn	Pn	02 38 43.6	-1.9
SADO	**Sadowa**	7.88	15	Pn	Pn	02 38 45.6	-5.8
	0.5nm,0.3s,baz=215,slow=14,SNR=3.8						
SADO				Pg	Pg	02 39 15.2	-15
	1.3nm,0.3s,baz=192,slow=13,SNR=6.7						
SADO				Lg		02 40 54.2	
	1.1nm,0.3s,baz=126,slow=18,SNR=6.2						
ULM	**Lac du Bonnet**	16.48	327	Pn	P	02 40 46.0	-0.8
	0.2nm,0.3s,baz=134,slow=10,SNR=6.3						
TXAR	**Lajitas Array**	19.77	253	P	P	02 41 26.6	-0.6
	0.5nm,0.7s,baz=75,slow=13,SNR=8.5						
ANMO	**Albuquerque**	19.95	271	P	P	02 41 30.2	+0.9
ANMO	**Albuquerque**	19.95	271	P	P	02 41 30.2	+0.9
	0.8nm,0.6s,baz=52,slow=12,SNR=5.3						
PDAR	**Pinedale Array**	21.86	293	P	P	02 41 49.4	+0.6
	0.7nm,0.9s,mb3.1,baz=80,slow=9.0,SNR=4.2						
NVAR	**Mina Array Bea**	28.67	284	P	P	02 42 53.5	+0.2
	0.4nm,0.8s,mb3.3,baz=81,slow=8.8,SNR=3.6						
YKA	**Yellowknife Ar**	32.34	332	P	P	02 43 24.1	-1.4
YKA	**Yellowknife Ar**	32.34	332	P	P	02 43 24.1	-1.4
	0.1nm,0.3s,mb3.2,baz=120,slow=8.7,SNR=4.8						

TRN 15 02:38:13.3,15.81N×61.50W,h19^{km},MD3.6,3C-6D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	**Dongo Capester**	0.24	333	⇓*i*P	Pb	02 38 20.6	+1.6
SCG	**Saint Claude**	0.28	321	⇓*i*P	Pb	02 38 20.9	+1.4
BBL	**Barber's Block**	0.29	174	⇓*i*P	Pb	02 38 21.9	+2.2
BBL	**Barber's Block**	0.29	174	⇓*i*P	Pb	02 38 22.3	+2.6
BBL				*i* S	Sb	02 38 26.5	+2.4
BBL				*e*S	Sb	02 38 26.8	+2.8
BCG	**Bois Riant Cap**	0.29	337	⇓*i*P	Pb	02 38 21.4	+1.5
MDN	**Morne-Daniel**	0.50	168	⇓*i*P	Pb	02 38 26.0	+2.7
MDN				*e*S	Sb	02 38 33.7	+3.6
DBCT	**Belle View Cho**	0.56	164	*e*P	Pb	02 38 27.1	+2.8
SEG	**Port Louis**	0.59	360	*e*P	Pb	02 38 26.7	+1.9
SEG				*e*S	Sb	02 38 34.9	+2.3
DSHT	**Scott's Head**	0.61	168	*e*P	Pb	02 38 28.0	+2.8
DSHT				*e*S	Sb	02 38 37.9	+4.6
DEG	**La Desirade**	0.66	41	⇑*i*P	Pb	02 38 27.8	+1.9
FDF	**Fort de France**	1.13	162	⇑*e*P	Pb	02 38 35.3	+1.3
FDF				*e*S	Sb	02 38 50.3	+2.1
CRM	**Caravelle**	1.20	152	*e*P	Pb	02 38 36.7	+1.6
CRM				*e*S	Sb	02 38 52.4	+2.2
BPA	**Boggy Peak**	1.27	345	*e*P	Pn	02 38 38.4	+2.1
BPA				*e*S	Sb	02 38 55.1	+2.7
BIM	**Bigot**	1.35	162	⇑*e*P	Pn	02 38 38.9	+1.4
BIM				*e*S	Sb	02 38 57.1	+2.4
MVM	**Montagne Vaucl**	1.38	155	*e*P	Pn	02 38 39.7	+1.9
CPB	**Codrington**	1.84	350	*e*P	Pn	02 38 46.6	+2.1
CPB				*e*S	Sn	02 39 10.1	+2.7

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*CSEM **15** 02:55:19.3,36.99N×45.09E,h10^{km},ML3.0,After TEH*

TEH 15 02:55:19.3,36.99N×45.09E,h10^{km},Mn3.0,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IAZR	**Azarshahr**	0.99	46	Pn	Pn	02 55 37.8	-1.3
ITBZ	**Tabriz**	1.50	34	Pn	Pn	02 55 46.2	-0.2
IBST	**Bostanabad**	1.60	63	Pn	Pn	02 55 47.0	-0.9
MSL	**Mosul**	1.75	247	*i* Pn	Px	02 55 48.5	
MSL				*i* Pg	Px	02 55 50.0	
MSL				*e*Sn	Sx	02 56 10.0	
MSL				*i* Sg	Sg	02 56 11.5	-6.3
IDHR	**Dehrash**	2.52	155	Pn	Pn	02 56 00.0	-1.0
IDHR	**Dehrash**	2.52	155	Pn	Pn	02 56 00.0	-1.0
IKOM	**Komasi**	3.43	144	Pn	Pn	02 56 12.2	-1.8
IDMV	**Damavand**	5.78	102	Pn	Pn	02 56 44.3	-3.0
IFIR	**Firoozkooh**	6.33	100	Pn	Pn	02 56 52.0	-3.1

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*MOS **15** 02:59:27.6±1.3,45.20N×150.32E,h33^{km},mb4.3/12,Error ellipse: s-maj=16.3km s-min=13.0km az=52.1*

*IDC **15** 02:59:34.0±4.4,45.23N×150.03E,h76^{km}±42^{km},mb3.6/9, mb1 3.9/10,mb1mx3.6/22,mbtmp3.9/10,ML3.3/1,Error ellipse: s-maj=36.6km s-min=16.7km az=123.0*

*NEIC **15** 02:59:37.8±6.4,45.24N×150.08E,h111^{km}±59^{km},mb4.1/8, Error ellipse: s-maj=21.8km s-min=12.4km az=137.0*

ISC 15 02:59:31.4±1.8**,45.3N**±0.1×**149.9E**±0.2**,h68**^{km}±18^{km}**,n41,** $\sigma 1^{s}$**03**/40**,mb3.9**/15**,1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	1.47	269	⇓*i*PN	P	02 59 54.4	-2.0
KUR				*i* S	S	03 00 13.0	-1.8
KUR				pmax	pmax		
	comp=N,190nm,0.5s						
KUR				pmax	pmax		
	comp=E,210nm,0.5s						
KUR				pmax	pmax		
	comp=Z,610nm,0.5s						
KUR				smax			
	comp=N,1µm,0.5s						
KUR				smax			
	comp=E,620nm,0.5s						
KUR				smax			
	comp=N,5µm,2.0s						
KUR				smax			
	comp=E,5µm,2.0s						
YUK	**Yuzh-Kuril'sk**	3.17	248	*e*PN	P	03 00 22.2	+2.1
YUK				pmax	pmax		
	comp=Z,220nm,0.3s						
YSS	**Yuzh-Sakhalins**	5.27	291	*e*PN	P	03 00 49.8	+0.5
ASAJ	**Asahikawa**	5.36	260	PN	P	03 00 53.0	+2.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	5.36	260	P	P	03 00 53.0	+2.3
	comp=Z,0.8nm,0.3s,baz=73,slow=19,SNR=3.0						
YAK	**Yakutsk**	20.47	332	*e*P	P	03 04 06.7	+1.2
YAK				pmax	pmax		
	comp=N,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,615nm,16.7s						
YAK				pmax	pmax		
	comp=N,404nm,17.7s						
YAK	**Yakutsk**	20.47	332	*e*P	P	03 04 09.3	+3.8
	comp=N,50nm,0.6s						
IMA	**Indian Mountai**	36.28	35	P	P	03 06 29.6	+0.1
MCK	**McKinley**	38.19	39	*e*P	P	03 06 45.2	-0.2
MCK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
MCK	**McKinley**	38.19	39	*e*P	P	03 06 45.2	-0.3
	comp=Z,2.1nm,0.8s,mb4.0						
ILAR	**Eielson Array**	39.06	37	P	P	03 06 52.2	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

ILAR	**Eielson Array**	39.06	37	P	P	03 06 52.2	-0.5
	comp=Z,0.6nm,0.5s,mb3.6,baz=268,slow=7.3,SNR=11						
DAWY	**Dawson**	42.36	38	*e*P	P	03 07 19.9	+0.1
INK	**Inuvik**	44.06	31	*e*P	P	03 07 33.4	-0.2
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	44.06	31	P	P	03 07 33.9	+0.3
	comp=Z,0.7nm,0.5s,mb3.7,baz=291,slow=6.9,SNR=12						
INK	**Inuvik**	44.06	31	*e*P	P	03 07 33.4	-0.2
	comp=Z,1.2nm,0.6s,mb3.8						
KURK	**Kurchatov**	46.33	304	*e*P	P	03 07 51.7	-0.1
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
KURK	**Kurchatov**	46.33	304	*e*P	P	03 07 51.7	-0.1
	comp=Z,0.9nm,0.6s,mb3.7						
RES	**Resolute Bay**	52.91	18	*e*P	P	03 08 41.2	-0.8
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
RES	**Resolute Bay**	52.91	18	*e*P	P	03 08 41.2	-0.8
	comp=Z,2.9nm,0.9s,mb4.3						
YKA	**Yellowknife Ar**	53.41	35	P	P	03 08 44.9	-0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	53.41	35	P	P	03 08 44.9	-0.9
	comp=Z,0.6nm,0.4s,mb3.9,baz=298,slow=6.8,SNR=17						
YKA	**Yellowknife Ar**	53.41	35	P	P	03 08 44.9	-0.9
WVOR	**Wild Horse Val**	62.41	57	*e*P	P	03 09 49.3	+0.2
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
WVOR	**Wild Horse Val**	62.41	57	*e*P	P	03 09 49.3	+0.2
	comp=Z,1.8nm,0.7s,mb4.2						
CHMT	**Chamberlain Mo**	62.73	50	*e*P	P	03 09 50.8	-0.4
BOZ	**Bozeman (W)**	64.39	50	*e*P	P	03 10 01.9	-0.1
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
BOZ	**Bozeman (W)**	64.39	50	*e*P	P	03 10 01.9	-0.2
	comp=Z,1.7nm,0.8s,mb3.9						
FINES	**FINESS Array B**	64.40	334	P	P	03 10 01.9	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	64.40	334	P	P	03 10 01.9	+0.1
	comp=Z,1.8nm,0.6s,mb4.0,baz=34,slow=6.9,SNR=7.8						
NVAR	**Mina Array Bea**	65.08	60	P	P	03 10 07.0	+0.4
	comp=Z,1.6nm,0.7s,mb4.0,baz=292,slow=7.9,SNR=11						
WRAB	**Tennant Creek**	66.44	196	P	P	03 10 14.8	-0.8
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
WRAB	**Tennant Creek**	66.44	196	P	P	03 10 14.8	-0.8
	comp=Z,2.1nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	66.45	196	P	P	03 10 13.6	-2.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	66.45	196	P	P	03 10 13.6	-2.0
	comp=Z,0.7nm,0.8s,mb3.5,baz=20,slow=6.9,SNR=4.3						
PDAR	**Pinedale Array**	67.39	52	P	P	03 10 21.4	+0.2
	comp=Z,1.8nm,1.1s,mb3.8,baz=308,slow=1.4,SNR=8.9						
ASAR	**Alice Springs**	70.16	196	P	P	03 10 39.2	+0.6
	comp=Z,0.3nm,0.6s,mb3.3,baz=11,slow=5.2,SNR=5.5						
PV10	**Paradox Valley**	70.62	55	P	P	03 10 42.4	+1.3
TXAR	**Lajitas Array**	80.14	58	P	P	03 11 36.1	+0.7
	comp=Z,2.2nm,0.7s,mb4.1,baz=302,slow=4.3,SNR=31						
BDFB	**Brasilia**	146.80	33	PKP2	PKPab	03 19 08.2	-1.1
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BDFB	**Brasilia**	146.80	33	PKPbc	PKPbc	03 19 08.2	+2.7
	comp=Z,2.7nm,0.7s,baz=268,slow=2.5,SNR=4.8						

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*NEIC **15** 03:01:11.4,26.50S×70.53W,h50^{km},MD3.9(GUC),After GUC.*

NEIC Felt [III] at Chanaral.

GUC 15 03:01:11.4±0.8**,26.50S×70.53W,h50**^{km}**,MD3.9,ML3.9, 2C,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	0.87	170	⇑*i*P	P	03 01 28.0	+0.5
CPCH				*i* S	S	03 01 40.0	+0.6
CPCH				AMP		03 01 40.3	
	comp=E,14µm,0.1s						
CPCH				*e*		03 02 29.5	
CPCH	**Copiapo**	0.87	170	⇑*i*P	P	03 01 28.0	+0.5
CPCH				*e*		03 02 29.5	
CPN1	**Cerro Paranal**	1.87	4	*e*P	P	03 01 42.5	+0.9
CPN1				*i* S	S	03 02 05.3	+1.3
VACH	**Vallenar**	2.08	186	*e*P	P	03 01 42.3	-2.2
VACH				*i* S	S	03 02 07.1	-2.1
VACH				AMP		03 02 20.1	
	comp=N,652nm,0.1s						
LCO	**Las Campanas**	2.51	183	*e*P	P	03 01 49.3	-1.4
LCO				*i* S	S	03 02 17.9	-2.2
ANCH	**Antofagasta**	2.81	2	*e*P	P	03 01 53.9	-1.0
ANCH				*i* S	S	03 02 27.1	-0.6
LVC	**Limon Verde**	4.14	21	Pn	P	03 02 14.9	+1.2

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*IDC **15** 03:23:01.7±0.7,4.79N×62.21E,mb4.1/11,mb1 4.3/11, mb1mx4.1/18,mbtmp4.1/11,MS4.0/5,Ms1 4.0/5, ms1mx3.6/19,Error ellipse: s-maj=23.4km s-min=16.7km az=175.0*

*BJI **15** 03:23:02.8,4.88N×61.78E,h19^{km},mB5.0,mb4.3*

*NEIC **15** 03:23:03.5±0.4,4.71N×62.16E,h10^{km},mb4.4/8,Error ellipse: s-maj=13.8km s-min=8.7km az=150.0*

ISC 15 03:23:01.7±0.5**,4.8N**±0.1×**62.16E**±0.08**,h10**^{km}**,n25,** $\sigma 0\overset{s}{.}95$/22**,mb4.2**/17**,MS4.0**/5**,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HYB	**Hyderabad**	20.41	51	*e*P	P	03 27 43.0	+1.3
HYB	**Hyderabad**	20.41	51	*i* P	P	03 27 43.0	+1.3
KMBO	**Kilima Mbogo**	25.55	257	P	P	03 28 34.5	+1.8
	17nm,1.0s,mb4.5,baz=59,slow=12,SNR=34						
KMBO				LR	LR	03 37 45.8	
	comp=Z,402nm,18.8s,MS4.0,baz=278,slow=34						
KMBO	**Kilima Mbogo**	25.55	257	*e*P	P	03 28 33.9	+1.2
	28nm,1.0s,mb4.8						
LSA	**Lhasa**	36.97	45	*e*P	P	03 30 14.0	+0.9
	4.5nm,0.6s,mb4.5						
CMAR	**Chiang Mai Arr**	38.42	66	P	P	03 30 25.1	-0.4
	0.9nm,0.4s,mb3.9,baz=277,slow=12,SNR=8.9						
CMAR				LR	LR	03 43 34.4	
	comp=Z,127nm,20.2s,MS3.7,baz=275,slow=32						
LSZ	**Lusaka**	39.09	239	*e*P	P	03 30 31.1	0.0
	5.6nm,1.0s,mb4.2						
MALT	**Malatya**	39.78	330	*e*P	P	03 30 37.6	+1.0
	6.0nm,1.3s,mb4.2						
BRTR	**Keskin Array B**	43.31	328	P	P	03 31 06.8	+1.2
	0.6nm,0.8s,mb3.4,baz=144,slow=12,SNR=3.0						
LBTB	**Lobatse**	46.23	228	P	P	03 31 29.1	-0.1
	6.4nm,1.0s,mb4.5,baz=45,slow=8.6,SNR=7.5						
LBTB	**Lobatse**	46.23	228	*e*P	P	03 31 29.2	+0.1
	7.7nm,1.0s,mb4.6						
KURK	**Kurchatov**	47.85	14	*e*P	P	03 31 40.3	-1.3
	1.6nm,0.8s,mb4.1						
BOSA	**Boshof**	48.58	225	*e*P	P	03 31 47.1	-0.5
	3.0nm,0.7s,mb4.4						
TSUM	**Tsumeb**	49.90	240	P	P	03 31 57.8	0.0
	0.7nm,0.3s,mb4.2,baz=67,slow=3.0,SNR=3.6						
AKASG	**Malin Array Be**	53.46	335	P	P	03 32 22.3	-1.9
	0.2nm,0.3s,mb3.5,baz=122,slow=6.6,SNR=4.6						
SONM	**Songino Array**	57.19	34	P	P	03 32 50.0	-1.4
	1.3nm,0.8s,mb4.0,baz=230,slow=7.5,SNR=11						
DBIC	**Dimbokro**	66.67	275	P	P	03 33 55.1	-0.3
	2.5nm,0.8s,mb4.3,baz=48,slow=11,SNR=4.4						
DBIC				LR	LR	04 00 24.4	
	comp=Z,123nm,20.6s,MS4.1,baz=34,slow=34						
CN2	**Changchun**	67.60	44	*e*P	P	03 34 02.0	+1.1
ESDC	**Sonseca Array**	68.67	311	P	P	03 34 06.5	-1.1
	1.3nm,0.8s,mb3.9,baz=84,slow=5.4,SNR=5.0						
WRA	**Warramunga Arr**	74.99	112	P	P	03 34 45.4	-0.3
	5.7nm,0.8s,mb4.5,baz=289,slow=5.2,SNR=23						
WRAB	**Tennant Creek**	75.00	112	*e*P	P	03 34 45.8	+0.1
	8.4nm,0.9s,mb4.7						
ASAR	**Alice Springs**	75.32	116	P	P	03 34 47.5	-0.1
	2.6nm,0.8s,mb4.2,baz=288,slow=5.4,SNR=16						
PMG	**Port Moresby**	85.85	100	LR	LR	04 12 34.8	
	comp=Z,53nm,21.6s,MS3.9,baz=3.6,slow=35						
CTA	**Charters Tower**	86.09	110	LR	LR	04 08 58.1	
	comp=Z,89nm,19.8s,MS4.2,baz=48,slow=32						
TXAR	**Lajitas Array**	143.48	339	PKP	PKPdf	03 42 40.6	+0.3
	0.3nm,0.8s,baz=78,slow=3.0,SNR=4.8						

SKHL 15 03:45:03.1±0.1**,54.04N×127.68E,h10**^{km}±1^{km}**,mb3.9**/5**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEA	**Zeya**	0.40	220	*i* Pg	Pg	03 45 09.9	-1.3
ZEA				AMB	AMB	03 45 10.4	
	170nm,0.4s						
ZEA				*e*rx	rx	03 45 11.4	
ZEA				pPg		03 45 12.4	
ZEA				*i* Sg	Sg	03 45 15.1	-1.5
ZEA				A		03 45 15.2	
	590nm,0.4s						
ZEA				A		03 45 15.2	
	1µm,0.4s						
ZEA				A		03 45 15.5	
	700nm,0.5s						
KROS	**Kirovskiy**	0.57	314	*i* Pg	Pg	03 45 13.2	-1.5
KROS				AMB	AMB	03 45 13.4	
	53nm,0.3s						
KROS				AMB	AMB	03 45 13.4	
	87nm,0.3s						
KROS				AMB	AMB	03 45 13.4	
	160nm,0.3s						
KROS				*i* Sg	Sg	03 45 20.5	-1.9
KROS				A		03 45 21.0	
	410nm,0.4s						
KROS				A		03 45 21.0	
	210nm,0.4s						
KROS				A		03 45 21.0	
	170nm,0.4s						
YASR	**Yasnyy**	0.77	167	*i* Pg	Pg	03 45 16.9	-1.7
YASR				AMB	AMB	03 45 17.1	
	70nm,0.2s						
YASR				AMB	AMB	03 45 17.1	
	7.0nm,0.2s						
YASR				AMB	AMB	03 45 17.1	
	96nm,0.2s						
YASR				pPg		03 45 20.4	
YASR				*i* Sg	Sg	03 45 26.8	-2.2
YASR				A		03 45 27.9	
	280nm,0.3s						
YASR				A		03 45 27.9	
	240nm,0.3s						
YASR				A		03 45 27.9	
	110nm,0.3s						
EKMR	**Ekimchan**	3.29	105	*e*Pn	Pn	03 45 54.0	-1.8
EKMR				*e*Pg	Pg	03 46 02.0	-6.8
EKMR				AMB	AMB	03 46 03.5	
	5.0nm,0.5s						
EKMR				pPg		03 46 05.0	
EKMR				*e*Sg	Sg	03 46 45.0	-7.7
EKMR				A		03 46 52.5	
	23nm,0.6s						
EKMR				A		03 46 52.5	
	31nm,0.6s						
TUP	**Tupik**	4.55	278	*e*Pn	Pn	03 46 14.4	+0.7
TUP				*e*Pg	Pg	03 46 27.0	-7.0
TUP				AMB	AMB	03 46 33.1	
	4.0nm,0.3s						
TUP				*e*Sg	Sg	03 47 27.7	-6.9
TUP				A		03 47 30.4	
	25nm,0.9s						

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*NEIC **15** 03:52:02.0,38.39S×176.01E,h155^{km},After WEL.*

WEL 15 03:52:02.1±0.3**,38.40S×176.03E,h155**^{km}±2^{km}**,ML3.9**/14**, 7C,Error ellipse: s-maj=2.4km s-min=1.6km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGZ	**Maungaku**	0.71	213	⇑P	P	03 52 25.5	-0.1
MGZ	**Maungaku**	0.71	213	⇑PN	P	03 52 25.5	-0.1
WTVZ	**West Tongariro**	0.79	206	PN	P	03 52 25.8	-0.3
OTVZ	**Oturere**	0.81	200	PN	P	03 52 26.3	+0.1
TWVZ	**Taurewa**	0.81	215	⇑P	P	03 52 25.9	-0.3
TWVZ	**Taurewa**	0.81	215	⇑PN	P	03 52 26.0	-0.2
NGZ	**Ngauruhoe**	0.84	203	P	P	03 52 26.4	0.0
NGZ	**Ngauruhoe**	0.84	203	PN	P	03 52 26.4	0.0
BKZ	**Black Stump Fm**	0.84	155	P	P	03 52 26.3	-0.1
BKZ	**Black Stump Fm**	0.84	155	PN	P	03 52 26.4	0.0
BKZ				SN	S	03 52 44.0	-1.0
URZ	**Urewera**	0.86	81	P	P	03 52 26.1	-0.4
URZ	**Urewera**	0.86	81	PN	P	03 52 26.1	-0.4
URZ				SN	S	03 52 43.9	-1.4
CNZ	**Chateau**	0.88	205	P	P	03 52 26.5	-0.1
CNZ	**Chateau**	0.88	205	PN	P	03 52 26.5	-0.2
WPVZ	**Whakapapa**	0.89	205	PN	P	03 52 26.6	-0.1
TUVZ	**Tukino**	0.91	199	P	P	03 52 26.8	-0.1
TUVZ	**Tukino**	0.91	199	PN	P	03 52 26.9	+0.1
HIZ	**Hauiti**	0.93	263	*e*P	P	03 52 26.2	-0.8
HIZ	**Hauiti**	0.93	263	PN	P	03 52 26.4	-0.5
HIZ				SN	S	03 52 45.6	-0.5
FWVZ	**Far West T-bar**	0.93	204	P	P	03 52 26.8	-0.2
FWVZ	**Far West T-bar**	0.93	204	PN	P	03 52 27.0	0.0
MOVZ	**Moawhango**	1.03	192	⇑P	P	03 52 27.3	-0.4
MOVZ	**Moawhango**	1.03	192	⇑PN	P	03 52 27.3	-0.4
MWZ	**Matawai**	1.18	87	P	P	03 52 29.0	-0.2
MWZ	**Matawai**	1.18	87	PN	P	03 52 29.0	-0.1
MWZ				SN	S	03 52 49.0	-1.0
VRZ	**Vera Road**	1.23	234	P	P	03 52 29.1	-0.6
VRZ	**Vera Road**	1.23	234	PN	P	03 52 29.2	-0.5
VRZ				SN	S	03 52 51.1	+0.2
KNZ	**Kokohu**	1.43	116	*e*P	P	03 52 31.7	+0.1
KNZ	**Kokohu**	1.43	116	PN	P	03 52 31.7	+0.1
KNZ				SN	S	03 52 53.5	-0.9
WAZ	**Wanganui**	1.58	211	P	P	03 52 32.4	-0.8
WAZ	**Wanganui**	1.58	211	PN	P	03 52 32.4	-0.8
TSZ	**Takapari Road**	1.66	182	PN	P	03 52 33.3	-0.7
PWZ	**Pawanui**	1.75	159	*e*P	P	03 52 34.7	-0.3
PWZ	**Pawanui**	1.75	159	PN	P	03 52 34.7	-0.3
MXZ	**Matakaoa Point**	1.98	66	PN	P	03 52 38.0	+0.3
BFZ	**Birch Farm**	2.28	176	PN	P	03 52 39.7	-1.6
MRZ	**Mangatainoka R**	2.28	189	P	P	03 52 39.4	-1.9
MRZ	**Mangatainoka R**	2.28	189	⇑PN	P	03 52 39.4	-1.9
MRZ				*e*SN	S	03 53 07.7	-3.8
KIW	**Kapiti Island**	2.60	199	P	P	03 52 42.6	-2.7
KIW	**Kapiti Island**	2.60	199	PN	P	03 52 42.5	-2.8
MTW	**Mount Morrison**	2.78	188	P	P	03 52 44.6	-3.0
MTW	**Mount Morrison**	2.78	188	PN	P	03 52 44.6	-3.0
CAW	**Cannon Point**	2.80	195	P	P	03 52 45.1	-2.7
CAW	**Cannon Point**	2.80	195	PN	P	03 52 44.9	-2.9
MRW	**Makara Radio**	3.00	200	P	P	03 52 47.1	-3.3
MRW	**Makara Radio**	3.00	200	PN	P	03 52 47.0	-3.4
PAWZ	**Paruwai Farm**	3.01	189	PN	P	03 52 47.3	-3.2
MSWZ	**Moikau Station**	3.07	191	P	P	03 52 47.8	-3.4
MSWZ	**Moikau Station**	3.07	191	PN	P	03 52 47.8	-3.4
BHW	**Baring Head**	3.13	196	P	P	03 52 48.3	-3.7
BHW	**Baring Head**	3.13	196	PN	P	03 52 48.3	-3.7
NNZ	**Nelson**	3.48	215	*e*P	P	03 52 52.5	-4.0
NNZ	**Nelson**	3.48	215	PN	P	03 52 52.5	-4.0
QRZ	**Quartz Range**	3.63	227	*e*P	P	03 52 53.9	-4.6
QRZ	**Quartz Range**	3.63	227	PN	P	03 52 53.9	-4.6
BSWZ	**Blackbirch Sta**	3.70	206	PN	P	03 52 55.7	-3.6
THZ	**Tophouse**	4.12	215	*e*P	P	03 53 00.3	-4.6
THZ	**Tophouse**	4.12	215	PN	P	03 53 00.3	-4.6
KHZ	**Kahutara**	4.44	205	PN	P	03 53 04.8	-4.2
DSZ	**Denniston Nort**	4.66	223	PN	P	03 53 07.1	-4.8
LTZ	**Lake Taylor**	5.23	212	PN	P	03 53 14.5	-4.9
MQZ	**McQueen's Vall**	5.88	205	*e*P	P	03 53 21.8	-6.3
MQZ	**McQueen's Vall**	5.88	205	PN	P	03 53 21.8	-6.3

DJA 15 04:02:53.3±0.9**,8.69S×117.00E,h33**^{km}**,MD5.1**/4**, ML3.8**/4**,7D,Error ellipse: s-maj=45.3km s-min=18.0km az=6.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	0.90	283	*e*Pn	Pn	04 03 07.7	-2.1
	284nm,0.2s						
KEDI				⇓*i*Sn	Sn	04 03 20.8	-0.9
RATI	**Rata**	1.45	269	⇓*i*Pn	Pn	04 03 15.7	-2.0
	163nm,0.2s						
RATI				⇓*i*Sn	Sn	04 03 35.8	+0.1
KELI	**Kelakatan**	2.53	280	⇓*i*Pn	Pn	04 03 33.4	+0.4
	10nm,0.2s						
KELI				⇓*i*Sn	Sn	04 03 59.4	-3.6
SRDI	**Scrawed**	2.84	274	⇓*i*Pn	Pn	04 03 36.1	-1.3
	35nm,0.2s						
SRDI				⇓*i*Sn	Sn	04 04 04.2	-6.6

IGQ 15 04:19:00.6,1.58S×81.17W,h12^{km}±18^{km}**,mb4.4,Error ellipse: s-maj=18.5km s-min=4.5km az=161.9,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	**Igualata**	2.53	88	P	Pn	04 19 44.2	+2.0
IGUA				S	Sn	04 20 16.1	+2.8
CUSU	**Cusua**	2.69	87	P	Pn	04 19 46.1	+1.6
JUIV	**Juive**	2.71	87	P	Pn	04 19 46.7	+1.9
ARRY	**Arrayan**	2.71	89	P	Pn	04 19 45.7	+0.9
ARRY				S	Sn	04 20 18.5	+0.6
RETU	**Refugio**	2.72	87	P	Pn	04 19 48.0	+2.9
ULBA	**Ulba**	2.76	87	P	Pn	04 19 47.2	+1.6
PISA	**Pisayambo**	2.83	80	P	Pn	04 19 48.4	+1.9
NAS1	**Nasa**	2.85	71	P	Pn	04 19 48.3	+1.5
JUA2	**San Juan 2**	2.90	62	P	Pn	04 19 47.3	-0.2
VC1	**Cotopaxi 1**	2.92	71	P	Pn	04 19 49.3	+1.6
TERV	**Terraza Guagua**	2.92	62	P	Pn	04 19 48.0	+0.2
PINO	**Pino**	2.92	61	P	Pn	04 19 47.6	-0.2
TAMB	**Tambo**	2.93	73	P	Pn	04 19 49.2	+1.2
YANA	**Yana**	2.97	61	P	Pn	04 19 48.2	-0.4
ANTI	**Antisana**	3.21	70	P	Pn	04 19 53.5	+1.6
COTA	**Cotacachi**	3.41	56	P	Pn	04 19 56.2	+1.5
CAYR	**Refugio Cayamb**	3.53	63	P	Pn	04 19 59.2	+2.7
CAYA	**Cayambe**	3.57	63	P	Pn	04 19 59.4	+2.3
CAYA				S	Sn	04 20 46.2	+6.5
CONE	**Cono NE Rev Vo**	3.83	67	P	Pn	04 20 04.1	+3.4
ECEN	**Cerro Negro**	3.99	53	P	Pn	04 20 04.2	+1.3

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*IDC **15** 04:21:30.5±13.0,15.94N×90.00W,mb3.6/2,mb1 3.9/3, mb1mx3.5/18,mbtmp3.4/3,ML3.6/1,MS3.1/1,Ms1 3.1/1, ms1mx2.3/21,Error ellipse: s-maj=261.2km s-min=101.3km az=2.0*

*CASC **15** 04:21:42.0±2.3,15.87N×90.97W,MD4.4*

ISC 15 04:21:40.4±2.3**,16.12N**±0.07×**91.07W**±0.10**,h24**^{km}±22^{km}**, n16,**σ**1**$\overset{s}{.}$**00**/22**,mb3.6**/2**,3C,Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TP2	**Tecpan 2**	1.33	178	⇑*e*P	**Pn**	**04 22 02.2**	**-1.4**
TP2				*e*S	**Sn**	**04 22 20.8**	**+0.1**
NBG	**Las Nubes**	1.67	155	*e*S	**Sn**	**04 22 28.5**	**-1.0**
JAT	**Jato**	1.87	197	⇑*e*P	**Pn**	**04 22 13.4**	**+2.0**
IXG	**Ixpaco**	2.02	163	*e*P	**Pn**	**04 22 11.9**	**-1.7**
IXG				*e*S	**Sn**	**04 22 38.6**	**+0.3**
RBDL	**Robledal**	2.40	146	*e*P	**Pn**	**04 22 16.3**	**-2.7**
RBDL				*e*S	**Sn**	**04 22 48.7**	**+0.7**
RTR	**El Retiro**	2.60	148	*e*P	**Pn**	**04 22 22.0**	**+0.1**
SNJE	**San Jose**	2.65	147	*e*P	**Pn**	**04 22 22.9**	**+0.4**
SNJE				*e*S	**Sn**	**04 22 54.2**	**0.0**
SBLS	**San Blas**	2.66	148	*e*P	**Pn**	**04 22 23.3**	**+0.6**
SBLS				*e*S	**Sn**	**04 22 54.6**	**0.0**
BOQS	**Boqueron**	2.93	144	*e*P	**Pn**	**04 22 27.3**	**+0.7**
BOQS				*e*S	**Sn**	**04 23 00.8**	**-0.7**
LFU	**La Fuente**	3.02	141	*e*P	**Pn**	**04 22 29.1**	**+1.2**
LFRS	**El Faro**	3.15	142	*e*P	**Pn**	**04 22 29.6**	**-0.1**
LCBS	**La Ceiba**	3.17	140	⇑*e*P	**Pn**	**04 22 29.4**	**-0.6**
LCBS				*e*S	**Sn**	**04 23 08.8**	**+1.2**
JTS	**JuntasAbangare**	8.31	133	LR	LR	04 26 39.5	
	comp=Z,150nm,19.9s,baz=158,slow=41						
TXAR	**Lajitas Array**	17.53	321	P	**P**	**04 25 45.9**	**+0.9**
	0.0nm,0.3s,baz=143,slow=12,SNR=4.5						
NVAR	**Mina Array Bea**	32.65	318	P	**P**	**04 28 11.7**	**-1.0**
	1.3nm,1.0s,mb3.8,baz=126,slow=9.8,SNR=5.5						
YKA	**Yellowknife Ar**	49.19	346	P	**P**	**04 30 23.4**	**-5.0**
	0.2nm,0.6s,mb3.3,baz=144,slow=7.9,SNR=5.6						

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*TRN **15** 04:31:43.9,15.77N×61.42W,h8^{km},MD4.2,Md3.1(FDF)*

*IDC **15** 04:31:44.4±0.6,15.71N×61.69W,mb4.0/10,mb1 4.3/13, mb1mx4.0/22,mbtmp4.1/13,ML4.0/1,MS3.1/3,Ms1 3.2/3, ms1mx2.6/23,Error ellipse: s-maj=11.3km s-min=9.6km az=135.0*

*BJI **15** 04:31:45.3,15.80N×61.70W,h10^{km},mB5.6,Ms4.7, Msz4.6*

*NEIC **15** 04:31:46.3±0.5,15.78N×61.72W,h10^{km},mb4.3/6,Error ellipse: s-maj=11.5km s-min=7.3km az=74.0*

ISC 15 04:31:45.5±0.5**,15.74N**±0.02×**61.70W**±0.05**,h19**^{km}±4^{km}**, n49,**σ**1**$\overset{s}{.}$**00**/63**,mb4.1**/15**,MS3.5**/1**,12C,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCG	**Saint Claude**	0.29	3	⇑*i*P	**Pb**	**04 31 52.7**	**+0.8**
DOG	**Dongo Capester**	0.30	15	⇑*i*P	**Pb**	**04 31 52.5**	**+0.4**
BBL	**Barber's Block**	0.31	134	⇑*i*P	**Pb**	**04 31 52.1**	**-0.1**
BBL	**Barber's Block**	0.31	134	⇑*i*P	**Pb**	**04 31 52.8**	**+0.6**
BBL				*e*S	**Sb**	**04 31 55.5**	**-1.2**
BCG	**Bois Riant Cap**	0.35	12	⇑*i*P	**Pb**	**04 31 53.2**	**+0.3**
MGG	**Marie-Galante**	0.41	64	⇑*i*P	**Pb**	**04 31 52.7**	**-1.2**
MDN	**Morne-Daniel**	0.51	145	⇑*e*P	**Pb**	**04 31 56.1**	**+0.4**
MDN				*e*S	**Sb**	**04 32 03.3**	**+0.8**
DBCT	**Belle View Cho**	0.58	144	*e*P	**Pb**	**04 31 57.2**	**+0.4**
DSHT	**Scott's Head**	0.61	149	*e*P	**Pb**	**04 31 57.6**	**+0.3**
DSHT				*e*S	**Sb**	**04 32 04.2**	**-1.2**
SEG	**Port Louis**	0.68	16	⇑*i*P	**Pb**	**04 31 58.6**	**0.0**
SEG				*i* S	**Sb**	**04 32 07.7**	**+0.1**
DEG	**La Desirade**	0.84	47	⇑*i*P	**Pb**	**04 31 59.4**	**-1.8**
FDF	**Fort de France**	1.13	152	*e*P	**Pb**	**04 32 06.4**	**+0.2**
FDF				*e*S	**Sb**	**04 32 21.5**	**+1.0**
CRM	**Caravelle**	1.24	142	⇑*e*P	**Pn**	**04 32 07.6**	**-0.3**
CRM				*e*S	**Sb**	**04 32 23.3**	**-0.2**
BIM	**Bigot**	1.36	153	⇑*e*P	**Pn**	**04 32 09.6**	**-0.1**
BIM				*e*S	**Sb**	**04 32 26.5**	**-0.6**
MVM	**Montagne Vaucl**	1.41	147	⇑*e*P	**Pn**	**04 32 10.4**	**0.0**
MVM				*e*S	**Sn**	**04 32 29.1**	**+0.5**
NVBH	**Bath Hotel, Ne**	1.63	327	*e*P	**Pn**	**04 32 17.8**	**+4.3**
NVBH				*e*S	**Sn**	**04 32 40.8**	**+6.7**
SKI	**Saint Kitts**	1.87	328	*e*P	**Pn**	**04 32 27.1**	**+10**
SKI				*e*S	**Sn**	**04 32 48.7**	**+8.4**
BSK	**Brimstone Hill**	1.94	326	*e*P	**Pn**	**04 32 22.5**	**+4.6**
BSK				*e*S	**Sn**	**04 32 50.8**	**+8.8**
SVV	**Soufriere Volc**	2.45	169	*e*P	**Pn**	**04 32 26.4**	**+1.1**
SVV				*e*S	**Sn**	**04 32 54.3**	**-0.7**
GRHS	**Sauteurs**	3.50	179	*e*P	**Pn**	**04 32 37.3**	**-2.9**
GRW	**Mount Saint Ca**	3.56	179	*e*P	**Pn**	**04 32 44.6**	**+3.6**
GRW				*e*S	**Sn**	**04 33 29.4**	**+6.3**
HUMP	**Col San Antoni**	4.64	302	*e*Pn	**Pn**	**04 32 56.9**	**+0.6**
SJG	**San Juan**	4.87	300	Pn	**Pn**	**04 32 59.8**	**+0.2**
	19nm,0.3s,baz=153,slow=15,SNR=37						
SJG				Sn	**Sn**	**04 33 53.5**	**-2.7**
	8.5nm,0.3s,baz=320,slow=18,SNR=2.7						
SJG				LR	LR	04 34 35.1	
	comp=Z,106nm,20.3s,baz=128,slow=35						
SJG	**San Juan**	4.87	300	*e*Pn	**Pn**	**04 33 00.1**	**+0.5**
TRN	**Trinidad (W)**	5.07	177	*e*P	**Pn**	**04 33 04.3**	**+1.8**
TRN				*e*S	**Sn**	**04 34 01.2**	**0.0**
AOPR	**Arecibo Observ**	5.48	299	*e*Pn	**Pn**	**04 33 08.9**	**+0.6**
SDV	**Santo Domingo**	11.07	233	Pn	**P**	**04 34 24.2**	**-1.9**
	1.0nm,0.3s,baz=82,slow=6.4,SNR=11						
SDV				Sn	**S**	**04 36 27.9**	**-2.5**
	0.3nm,0.3s,baz=24,slow=19,SNR=3.4						
SDV				LR	LR	04 38 08.6	
	comp=Z,108nm,20.4s,baz=276,slow=35						
SDV	**Santo Domingo**	11.07	233	*e*P	**P**	**04 34 23.2**	**-2.9**
ROSC	**El Rosal**	16.46	230	Pn	**P**	**04 35 37.6**	**+0.3**
	1.5nm,0.3s,baz=90,slow=20,SNR=3.7						
OTAV	**Otavalo**	22.60	229	P	**P**	**04 36 48.6**	**+2.0**
	1.4nm,0.6s,mb3.6						
SAML	**Samuel**	24.57	184	*e*P	**P**	**04 37 05.5**	**-0.3**
	2.8nm,0.6s,mb4.0						
JCT	**Junction City**	37.79	300	P	**P**	**04 39 01.0**	**-1.5**
	6.8nm,0.8s,mb4.4						
SCHQ	**Schefferville**	39.21	355	P	**P**	**04 39 14.8**	**+0.7**
	1.2nm,0.8s,mb3.7,baz=207,slow=19,SNR=7.7						
TXAR	**Lajitas Array**	40.84	297	P	**P**	**04 39 27.9**	**+0.2**
	1.0nm,1.0s,mb3.4,baz=119,slow=8.8,SNR=5.4						
TXAR				PcP	PcP	04 41 30.1	+0.9
	0.9nm,1.1s,baz=127,slow=6.3,SNR=4.3						
ULM	**Lac du Bonnet**	44.10	329	P	**P**	**04 39 53.4**	**-0.8**
	4.1nm,0.5s,mb4.5,baz=135,slow=8.1,SNR=13						
ULM	**Lac du Bonnet**	44.10	329	*e*P	**P**	**04 39 53.4**	**-0.8**
	5.1nm,0.6s,mb4.4						
DGMT	**Dagmar**	47.64	323	*e*P	**P**	**04 40 21.9**	**-0.5**
	7.3nm,0.6s,mb4.9						
PDAR	**Pinedale Array**	48.84	314	P	**P**	**04 40 32.2**	**+0.5**
	2.6nm,0.7s,mb4.4,baz=121,slow=9.6,SNR=24						
QLMT	**Earthquake Lak**	50.78	316	*e*P	**P**	**04 40 48.6**	**+2.1**
BGU	**Big Grassy Mou**	50.81	310	*e*P	**P**	**04 40 47.2**	**+0.3**
HLID	**Hailey**	52.47	313	P	**P**	**04 40 57.8**	**-1.6**
	0.8nm,0.5s,mb3.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**54.33**	**306**	P	**P**	**04 41 13.9**	**+0.8**
	0.6nm,0.8s,mb3.6,baz=94,slow=7.2,SNR=3.6						
NVAR				PcP	PcP	04 42 18.2	+1.2
	0.6nm,0.8s,baz=181,slow=3.2,SNR=3.6						
DBIC	**Dimbokro**	**56.34**	**92**	P	**P**	**04 41 27.8**	**-0.2**
	3.1nm,1.1s,mb4.3,baz=259,slow=5.0,SNR=3.4						
YKA	**Yellowknife Ar**	**59.44**	**335**	P	**P**	**04 41 48.1**	**-1.0**
	3.0nm,0.4s,mb4.6,baz=105,slow=7.5,SNR=61						
NOA	**NORSAR Array B**	**68.09**	**30**	P	**P**	**04 42 46.4**	**+0.4**
	1.0nm,0.8s,mb3.9,baz=261,slow=6.3,SNR=3.7						
NOA				LR	LR	05 09 13.7	
	comp=Z,28nm,18.3s,MS3.5,baz=35,slow=33						
ILAR	**Eielson Array**	**73.85**	**334**	P	**P**	**04 43 20.4**	**0.0**
	0.9nm,0.5s,mb4.0,baz=78,slow=5.9,SNR=21						
FINES	**FINESS Array B**	**75.26**	**30**	P	**P**	**04 43 28.8**	**+0.1**
	1.1nm,0.6s,mb4.0,baz=214,slow=6.9,SNR=5.8						
MDJ	**Mudanjiang**	**119.06**	**351**	PKP	PKPdf	04 50 32.8	-4.6
MDJ				PP	PP		
	comp=Z,137nm,4.8s						
ASAR	**Alice Springs**	**163.34**	**239**	PKPab	PKPab	04 52 40.3	-0.1
	comp=Z,0.7nm,0.7s,baz=112,slow=4.5,SNR=4.3						

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*IDC **15** 05:00:32.5±1.6, 41.89N×46.58E, mb3.4/3, mb1 3.6/5, mb1mx3.5/17, mbtmp3.5/5, ML2.6/2, Error ellipse: s-maj=42.9km s-min=11.5km az=117.0*
*NEIC **15** 05:00:34.9±0.8, 42.07N×46.69E, h10^{km}, mb3.6/2, Error ellipse: s-maj=16.4km s-min=10.2km az=150.0*
*CSEM **15** 05:00:34.0±0.1, 41.80N×46.98E, h32^{km}±1^{km}, mb3.6/2, Error ellipse: s-maj=4.0km s-min=2.8km az=134.0*
*TIF **15** 05:00:35.2, 41.86N×46.36E, h7^{km}±2^{km}*
*MOS **15** 05:00:35.0±1.8, 41.82N×46.81E, h25^{km}, mb3.7/1, Error ellipse: s-maj=10.8km s-min=7.4km az=110.8*
ISC 15 05:00:34.2±0.7**, 41.80N**±0.03×**46.49E**±0.05**, h1**^{km}±7^{km}**, n28, σ1^{s}35**/36**, mb3.4**/3**, 3C-4D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNBR	**Gunib**	**0.69**	**31**	*e*PG	**Pg**	**05 00 48.0**	**+0.1**
GNBR				*e*S	**Sg**	**05 00 57.0**	**0.0**
BTLR	**Botlikh**	**0.89**	**347**	⇑*i*PG	**Pg**	**05 00 50.0**	**-1.9**
BTLR				pmax	pmax		
	comp=Z,297nm,0.3s						
UNCR	**Uncukul**	**0.94**	**14**	*i* PG	**Pg**	**05 00 54.3**	**+1.3**
UNCR				*i* S	**Sg**	**05 01 07.3**	**+1.8**
UNCR				pmax	pmax		
	comp=Z,287nm,0.2s						
AKT	**Akhty**	**0.98**	**108**	⇑*i*PG	**Pg**	**05 00 53.0**	**-0.8**
AKT				*e*S	**Sb**	**05 01 08.0**	**+1.0**
DBC	**Dubki**	**1.25**	**12**	⇓*i*PG	**Pg**	**05 00 59.0**	**0.0**
DBC				*i* S	**Sb**	**05 01 15.0**	**+0.3**
DBC				pmax	pmax		
	comp=Z,190nm,0.3s						
DLMR	**Dylym**	**1.27**	**5**	*e*PG	**Pg**	**05 00 57.1**	**-2.5**
DLMR				*i* S	**Sb**	**05 01 14.9**	**-0.6**
DLMR				pmax	pmax		
	comp=Z,903nm,0.3s						
MTA	**Mtatsminda**	**1.27**	**266**	P	**Pb**	**05 00 59.3**	**+0.6**
MTA				S	**Sb**	**05 01 16.5**	**+1.0**
TI2	**Plekhanov**	**1.30**	**268**	κ *i*PG	**Pb**	**05 00 59.4**	**+0.2**
TI2				pmax	pmax		
	comp=Z,230nm,0.2s						
TI2	**Plekhanov**	**1.30**	**268**	⇓*i*P	**Pb**	**05 00 59.4**	**+0.2**
	comp=Z,1μm,0.6s						
TI2				*i* S	**Sb**	**05 01 17.4**	**+1.1**
	comp=Z,840nm,0.4s						
MAK	**Makhachkala**	**1.38**	**33**	⇑*i*PG	**Pg**	**05 01 03.8**	**+2.0**
MAK				pmax	pmax		
	comp=Z,370nm,0.3s						
MAK				pmax	pmax		
	comp=N,210nm,0.5s						
MAK				pmax	pmax		
	comp=E,370nm,0.3s						
STE	**Stepanavan**	**1.76**	**244**	*i* PN	**Pn**	**05 01 06.0**	**-0.1**
GNI	**Garni**	**2.11**	**219**	Pn	**Pn**	**05 01 14.6**	**+3.5**
	comp=E,60nm,0.3s,baz=354,slow=3.0,SNR=192						
GNI				Pg	**Pg**	**05 01 15.7**	**-0.6**
	comp=E,62nm,0.3s,baz=16,slow=4.2,SNR=190						
GNI				Lg		05 01 44.1	
	comp=E,66nm,0.3s,baz=350,slow=10,SNR=3.4						
GNI	**Garni**	**2.11**	**219**	Pg	**Pg**	**05 01 15.7**	**-0.6**
ZEI	**Tsey**	**2.15**	**298**	*i* PN	**Pn**	**05 01 13.5**	**+1.8**
KIV	**Kislovodsk**	**3.53**	**309**	PN	**Pn**	**05 01 29.4**	**-1.9**
KIV	**Kislovodsk**	**3.53**	**309**	Pn	**Pn**	**05 01 29.4**	**-1.9**
GOF	**Gofitskoye**	**4.12**	**323**	*e*PN	**Pg**	**05 01 49.5**	**-6.8**
GOF				pmax	pmax		
	comp=Z,30nm,1.0s						
BRVK	**Borovoye**	**19.55**	**47**	*e*P	**P**	**05 04 58.6**	**-7.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	**Borovoye**	**19.55**	**47**	*e*P	**P**	**05 04 58.6**	**-7.2**
	comp=Z,3.8nm,0.9s						
BRVK	**Borovoye**	**19.55**	**47**	*e*P	**P**	**05 04 58.6**	**-7.2**
	comp=Z,3.8nm,0.9s						
BVAR	**Borovoye Array**	**19.59**	**47**	P	**P**	**05 05 01.1**	**-5.2**
	comp=Z,0.1nm,0.3s,baz=249,slow=12,SNR=3.8						
CHKZ	**Chkalovo**	**20.00**	**45**	*e*P	**P**	**05 05 03.5**	**-7.4**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHKZ	**Chkalovo**	**20.00**	**45**	*e*P	**P**	**05 05 03.5**	**-7.4**
	comp=Z,2.5nm,0.8s						
CHKZ	**Chkalovo**	**20.00**	**45**	*e*P	**P**	**05 05 03.5**	**-7.4**
	comp=Z,2.5nm,0.8s						
FINES	**FINESS Array B**	**23.21**	**335**	P	**P**	**05 05 39.5**	**-3.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**23.21**	**335**	P	**P**	**05 05 39.5**	**-3.7**
	comp=Z,0.9nm,0.5s,mb3.6,baz=153,slow=13,SNR=7.5						
GERES	**GERESS Array B**	**23.97**	**298**	P	**P**	**05 05 49.6**	**-1.1**
	comp=Z,0.4nm,0.6s,mb3.1,baz=90,slow=9.3,SNR=5.5						
YKA	**Yellowknife Ar**	**74.95**	**351**	P	**P**	**05 12 14.4**	**-3.7**
	comp=Z,0.2nm,0.6s,mb3.3,baz=12,slow=5.8,SNR=6.9						

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*NEIC **15** 05:28:13.2, 53.95N×164.93W, h70^{km}, After AEIC.*
*IDC **15** 05:29:32.9±12.0, 57.81N×155.64W, h364^{km}±79^{km}, mb2.5/5, mb1 2.7/7, mb1mx2.6/22, mbtmp3.2/7, Error ellipse: s-maj=261.9km s-min=43.8km az=90.0*
ISC 15 05:28:11.8±0.7**, 54.1N**±0.2×**165.1W**±0.2**, h87**^{km}±7^{km}**, n28, σ0^{s}64**/36**, mb3.2**/3**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKA	**Akutan**	**0.41**	**277**	P	**P**	**05 28 25.8**	**+0.1**
AKA				S	**S**	**05 28 36.0**	**-0.2**
AKUT	**Akutan**	**0.42**	**277**	P	**P**	**05 28 25.7**	**0.0**
AKUT				S	**S**	**05 28 35.9**	**-0.3**
AHB	**Akutan Harbor**	**0.44**	**274**	P	**P**	**05 28 26.0**	**+0.1**
AHB				S	**S**	**05 28 36.7**	**+0.2**
WESS	**West Dahl Sout**	**0.44**	**27**	P	**P**	**05 28 25.8**	**-0.1**
WESS				S	**S**	**05 28 36.1**	**-0.4**
WFAR	**Faris Peak**	**0.48**	**21**	P	**P**	**05 28 26.2**	**0.0**
AKLV	**Akutan Long Va**	**0.53**	**278**	P	**P**	**05 28 26.6**	**0.0**
AKLV				S	**S**	**05 28 37.5**	**-0.2**
AKGG	**Akutan Green G**	**0.55**	**282**	P	**P**	**05 28 27.2**	**+0.3**
WESN	**West Dahl Nort**	**0.56**	**31**	P	**P**	**05 28 27.1**	**+0.1**
LVA	**Lava Point**	**0.57**	**278**	P	**P**	**05 28 27.3**	**+0.3**
WTUG	**Tugumak**	**0.86**	**27**	P	**P**	**05 28 30.0**	**+0.1**
WTUG				S	**S**	**05 28 44.1**	**+0.7**
SSLW	**Shishaldin Wes**	**0.88**	**39**	P	**P**	**05 28 30.1**	**-0.1**
UNV	**Unalaska Valle**	**0.88**	**255**	P	**P**	**05 28 30.0**	**-0.1**
UNV				S	**S**	**05 28 42.9**	**-1.0**
MTBL	**Makushin Table**	**0.96**	**263**	P	**P**	**05 28 31.6**	**+0.6**
MTBL				S	**S**	**05 28 44.9**	**-0.5**
SSLN	**Shishaldin Nor**	**0.96**	**40**	P	**P**	**05 28 31.4**	**+0.4**
MSW	**Makushin Switc**	**1.03**	**261**	P	**P**	**05 28 32.1**	**+0.3**
MSW				S	**S**	**05 28 47.3**	**+0.3**
FALS	**False Pass**	**1.23**	**51**	P	**P**	**05 28 34.5**	**0.0**
FALS				S	**S**	**05 28 51.3**	**-0.1**
OKFG	**Magazine Ridge**	**1.82**	**249**	P	**P**	**05 28 42.7**	**+0.7**
DTNA	**Dutton South F**	**1.95**	**56**	P	**P**	**05 28 43.8**	**0.0**
DOL	**Dolgoi Island**	**2.15**	**59**	P	**P**	**05 28 46.3**	**-0.2**
HAG	**Hague Volcano**	**2.21**	**55**	P	**P**	**05 28 48.4**	**+1.0**
SDPT	**Sand Point**	**2.95**	**63**	P	**P**	**05 28 56.4**	**-1.3**
ILAR	**Eielson Array**	**14.08**	**33**	P	**P**	**05 31 28.2**	**+0.3**
	0.0nm,0.3s,baz=197,slow=9.4,SNR=2.8						
ILAR				S	rx	05 32 51.8	
	0.1nm,0.3s,baz=184,slow=25,SNR=4.6						
INK	**Inuvik**	**20.48**	**34**	P	**P**	**05 32 41.2**	**-3.1**
	0.1nm,0.3s,baz=242,slow=9.5,SNR=6.7						
YKA	**Yellowknife Ar**	**27.15**	**52**	P	**P**	**05 33 46.5**	**-1.7**
	0.1nm,0.3s,mb2.8,baz=275,slow=9.4,SNR=4.4						
NVAR	**Mina Array Bea**	**35.20**	**97**	P	pP	05 35 18.4	-1.3
	0.8nm,0.8s,baz=313,slow=6.7,SNR=6.4						
PDAR	**Pinedale Array**	**37.60**	**84**	P	**P**	**05 35 29.8**	**+11**
	0.2nm,0.7s,mb3.1,baz=297,slow=2.0,SNR=2.6						
ULM	**Lac du Bonnet**	**41.07**	**66**	P	**P**	**05 35 49.5**	**+1.6**
	0.6nm,0.4s,mb3.8,baz=284,slow=8.3,SNR=2.5						
TXAR	**Lajitas Array**	**50.20**	**94**	P	pP	05 37 17.8	-4.1
	0.2nm,0.7s,baz=302,slow=5.3,SNR=3.6						

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*BJI **15** 05:31:20.5, 41.71N×79.36E, h28^{km}, ML3.5*
NNC 15 05:31:24.0±2.6**, 41.89N×79.69E, mpv3.3, 4C-3D, Error ellipse: s-maj=28.4km s-min=6.6km az=151.0, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.69**	**231**	*e*PG	Pn	05 32 22.5	-1.0
KSH				SG	Sn	05 33 04.3	-4.0
KSH				Smax			
	comp=N,70nm,0.4s						
KSH				Smax			
	comp=E,60nm,0.7s						
AAK	**Ala-Archa**	**3.92**	**283**	⇓Pn	Pn	05 32 25.9	-0.9
	comp=E,11nm,0.6s						
AAK				⇑Pg	Pg	05 32 36.0	-6.3
	comp=E,9.5nm,0.9s						
AAK				⇓Sn	Sn	05 33 13.4	-0.9
	comp=E,29nm,0.8s						
MK31	**Makanchi Array**	**5.24**	**20**	⇓Pn	Pn	05 32 43.5	-2.0
	comp=E,0.3nm,0.2s,baz=203,slow=13,SNR=55						
MK31				⇑Pg	Pg	05 32 57.6	-11
	comp=E,1.7nm,0.6s,baz=230,slow=12,SNR=6.0						
MK31				⇑Sn	Sn	05 33 46.7	-0.8
	comp=E,3.3nm,0.5s,baz=209,slow=24,SNR=5.5						
MK31				⇑Lg		05 34 09.8	
	comp=E,4.5nm,0.6s,baz=200,slow=22,SNR=3.9						

IGQ 15 05:43:43.7, 0.40S×81.36W, h12^{km}±32^{km}**, mb4.1, 4C-1D, Error ellipse: s-maj=30.8km s-min=7.5km az=4.0, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUA2	**San Juan 2**	**2.76**	**86**	P	Pn	05 44 29.9	+1.2
PINO	**Pino**	**2.77**	**85**	⇑P	Pn	05 44 29.3	+0.6
TERV	**Terraza Guagua**	**2.77**	**85**	P	Pn	05 44 29.4	+0.7
YANA	**Yana**	**2.81**	**84**	P	Pn	05 44 29.9	+0.6
NAS1	**Nasa**	**2.89**	**95**	⇓P	Pn	05 44 32.8	+2.2
NAS1				S	Sn	05 45 07.7	+2.1
IGUA	**Igualata**	**2.93**	**112**	P	Pn	05 44 32.1	+1.1
VC1	**Cotopaxi 1**	**2.97**	**95**	⇑P	Pn	05 44 33.8	+2.2
TAMB	**Tambo**	**3.01**	**96**	⇑P	Pn	05 44 34.2	+2.0
PISA	**Pisayambo**	**3.05**	**102**	P	Pn	05 44 35.0	+2.3
JUIV	**Juive**	**3.07**	**109**	P	Pn	05 44 35.6	+2.5
ARRY	**Arrayan**	**3.11**	**111**	⇑P	Pn	05 44 34.8	+1.2
ARRY				S	Sn	05 45 09.9	-1.1
COTA	**Cotacachi**	**3.11**	**76**	P	Pn	05 44 36.0	+2.3
ULBA	**Ulba**	**3.13**	**109**	P	Pn	05 44 35.6	+1.6
ANTI	**Antisana**	**3.20**	**91**	P	Pn	05 44 37.3	+2.4
CAYR	**Refugio Cayamb**	**3.38**	**83**	P	Pn	05 44 40.4	+3.0
CAYR				S	Sn	05 45 18.4	+0.5
CAYA	**Cayambe**	**3.41**	**82**	P	Pn	05 44 40.5	+2.7
ECEN	**Cerro Negro**	**3.60**	**70**	P	Pn	05 44 42.4	+1.8

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*MDD **15** 06:16:16.5±2.7, 37.19N×13.55W, mb3.6/6, Error ellipse: s-maj=23.3km s-min=18.5km az=76.0, PRXIMO*
*CSEM **15** 06:16:18.1±0.7, 37.32N×13.57W, h10^{km}, ML3.2/10, Error ellipse: s-maj=12.6km s-min=8.7km az=64.0*
*INMG **15** 06:16:19.0±0.8, 36.99N×13.83W, h10^{km}, ML2.2, Error ellipse: s-maj=7.8km s-min=4.7km az=94.0*
ISC 15 06:16:19.1±1.4**, 37.44N**±0.05×**13.18W**±0.09**, h10**^{km}**, n35, σ1^{s}08**/54**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOU	**Loures**	**3.49**	**64**	*e*Pn	**Pn**	**06 17 16.8**	**+2.2**
PLOU				*e*Sn	**Sn**	**06 17 59.4**	**+2.9**
	9.7nm,0.4s						
PLOU	**Loures**	**3.49**	**64**	*e*Pn	**Pn**	**06 17 16.8**	**+2.2**
PLOU				*e*Sn	**Sn**	**06 17 59.4**	**+2.9**
	9.7nm,0.4s						
PTEO	**Sao Teotonio**	**3.55**	**87**	*e*Pn	**Pn**	**06 17 15.9**	**+0.4**
	8.3nm,0.1s						
PTEO	**Sao Teotonio**	**3.55**	**87**	*e*Pn	**Pn**	**06 17 15.9**	**+0.4**
	8.3nm,0.1s						
MOE	**Montemor**	**3.97**	**73**	*e*Pn	**Pn**	**06 17 22.0**	**+0.6**
MOE				*e*Sn	**Sn**	**06 18 10.3**	**+1.7**
PBEJ	**Beja**	**4.25**	**80**	*e*Pn	**Pn**	**06 17 25.8**	**+0.3**
PBEJ				*e*Sn	**Sn**	**06 18 16.0**	**+0.2**
	1.8nm,0.3s						
PBEJ	**Beja**	**4.25**	**80**	*e*Pn	**Pn**	**06 17 25.8**	**+0.3**
PBEJ				*e*Sn	**Sn**	**06 18 16.0**	**+0.2**
	1.8nm,0.3s						
PALC	**Alcoutim**	**4.54**	**88**	*e*Pn	**Pn**	**06 17 29.6**	**0.0**
PALC				*e*Sn	**Sn**	**06 18 21.8**	**-1.3**
	2.6nm,0.2s						
PALC	**Alcoutim**	**4.54**	**88**	*e*Pn	**Pn**	**06 17 29.6**	**0.0**
PALC				*e*Sn	**Sn**	**06 18 21.8**	**-1.3**
	2.6nm,0.2s						
PCBR	**Castelo Branco**	**5.07**	**60**	*e*Sn	**Sn**	**06 18 37.2**	**+0.8**
	1.8nm,0.4s						
PCBR	**Castelo Branco**	**5.07**	**60**	Sn	**Sn**	**06 18 37.2**	**+0.8**
	0.9nm,0.4s						
PCBR	**Castelo Branco**	**5.07**	**60**	S	**Sn**	**06 18 38.2**	**+1.8**
EMIN	**Mina Concepcio**	**5.18**	**84**	Pn	**Pn**	**06 17 38.5**	**-0.1**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 18 38.8**	**-0.4**
	0.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.18**	**84**	Pn	**Pn**	**06 17 38.5**	**-0.1**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 18 38.8**	**-0.4**
	0.7nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**5.26**	**50**	*e*Sn	**Sn**	**06 18 42.8**	**+1.7**
PVRL	**Vila Real**	**5.71**	**46**	*e*Sn	**Sn**	**06 18 53.0**	**+0.5**
	2.3nm,0.1s						
PVRL	**Vila Real**	**5.71**	**46**	Sn	**Sn**	**06 18 53.0**	**+0.5**
	1.1nm,0.1s						
PVRL	**Vila Real**	**5.71**	**46**	S	**Sn**	**06 18 52.7**	**+0.2**
ESPR	**Espera**	**5.88**	**93**	Sn	**Sn**	**06 18 55.1**	**-1.6**
	2.7nm,0.3s,SNR=7.9						
ESPR	**Espera**	**5.88**	**93**	Sn	**Sn**	**06 18 55.1**	**-1.6**
	2.7nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**5.93**	**40**	Pn	**Pn**	**06 17 48.8**	**-0.4**
	0.1nm,0.0s,SNR=7.9						
ELOB				Sn	**Sn**	**06 18 58.5**	**+0.6**
	0.4nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.93**	**40**	Pn	**Pn**	**06 17 48.8**	**-0.4**
	0.1nm,0.0s,SNR=7.9						
ELOB				Sn	**Sn**	**06 18 58.5**	**+0.5**
	0.4nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.37**	**29**	Sn	**Sn**	**06 19 06.5**	**-2.6**
	2.1nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.37**	**29**	Sn	**Sn**	**06 19 06.5**	**-2.6**
	2.1nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**6.61**	**47**	*e*Sn	**Sn**	**06 19 14.7**	**-0.3**
	1.4nm,0.3s						
PBRG	**Braganca**	**6.61**	**47**	Sn	**Sn**	**06 19 14.7**	**-0.3**
	0.7nm,0.3s						
PBRG	**Braganca**	**6.61**	**47**	S	**Sn**	**06 19 15.1**	**+0.1**
ECAL	**Calabor**	**6.70**	**46**	Pn	**Pn**	**06 18 00.4**	**+0.3**
	0.6nm,0.3s,SNR=7.9						
ECAL				Sn	**Sn**	**06 19 17.1**	**-0.2**
	4.2nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**6.70**	**46**	Pn	**Pn**	**06 18 00.4**	**+0.3**
	0.6nm,0.3s,SNR=7.9						
ECAL				Sn	**Sn**	**06 19 17.1**	**-0.2**
	1.2nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.85**	**81**	Pn	**Pn**	**06 18 01.7**	**-0.5**
	0.3nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**06 19 19.7**	**-1.3**
	0.4nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.85**	**81**	Pn	**Pn**	**06 18 01.7**	**-0.5**
	SNR=7.9						
EADA				Sn	**Sn**	**06 19 19.7**	**-1.4**
	SNR=7.9						
EINC	**Incio**	**6.87**	**39**	Pn	**Pn**	**06 18 02.4**	**0.0**
	0.3nm,0.2s,SNR=7.9						
EINC				Sn	**Sn**	**06 19 20.8**	**-0.7**
	0.4nm,0.1s,SNR=7.9						
EINC	**Incio**	**6.87**	**39**	Pn	**Pn**	**06 18 02.4**	**0.0**
	0.3nm,0.2s,SNR=7.9						
EINC				Sn	**Sn**	**06 19 20.8**	**-0.7**
	0.4nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.47**	**36**	Pn	**Pn**	**06 18 10.4**	**-0.4**
	0.5nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**06 19 34.8**	**-1.7**
	5.5nm,0.5s,SNR=7.9						
EPON	**Pontenova**	**7.47**	**36**	Pn	**Pn**	**06 18 10.4**	**-0.4**
	0.5nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**06 19 34.8**	**-1.6**
	5.5nm,0.5s,SNR=7.9						

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*MOS **15** 06:32:17.8±1.6, 47.99N×153.98E, h75^{km}, mb4.2/8, Error ellipse: s-maj=17.9km s-min=9.6km az=61.9*
*NEIC **15** 06:32:21.6±1.3, 48.15N×153.82E, h86^{km}±10^{km}, mb4.2/1, Error ellipse: s-maj=14.9km s-min=8.1km az=151.0*
*IDC **15** 06:32:23.2±3.8, 48.09N×153.78E, h101^{km}±34^{km}, mb3.5/15, mb1 3.9/17, mb1mx3.7/26, mbtmp4.0/17, Error ellipse: s-maj=19.7km s-min=12.6km az=147.0*
ISC 15 06:32:16.7±0.9**, 48.10N**±0.07×**154.01E**±0.09**, h59**^{km}±9^{km}**, n38, σ1^{s}21**/44**, mb4.0**/16**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.93**	**27**	*e*PN	**P**	**06 33 01.8**	**-0.3**
SKR				*i* S	**S**	**06 33 34.4**	**-1.8**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax			
	comp=N,240nm,0.4s						
SKR				smax			
	comp=E,490nm,0.4s						
KUR	**Kuril'sk**	**5.11**	**238**	⇑*i*PN	**P**	**06 33 31.5**	**-1.1**
KUR				*i* S	**S**	**06 34 34.3**	**+3.4**
KUR				pmax	pmax		
	comp=N,60nm,0.5s						
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,140nm,0.5s						
KUR				smax			
	comp=N,190nm,0.6s						
KUR				smax			
	comp=E,160nm,0.6s						
PET	**Petropavlovsk**	**5.75**	**29**	*e*PN	**P**	**06 33 47.1**	**+5.7**
PET	**Petropavlovsk**	**5.75**	**29**	*e*Pn	**P**	**06 33 43.6**	**+2.1**
PET				*e*S	**S**	**06 34 46.3**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**6.97**	**237**	PN	**P**	**06 33 57.5**	**-1.1**
YUK				*e*S	**S**	**06 35 16.0**	**-1.2**
YUK				smax			
	comp=E,190nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.71**	**266**	⇑*i*PN	**P**	**06 34 10.3**	**+1.6**
YSS				S	**S**	**06 35 37.0**	**+1.6**
YSS	**Yuzh-Sakhalins**	**7.71**	**266**	*e*P	**P**	**06 34 10.3**	**+1.6**
ASAJ	**Asahikawa**	**8.87**	**248**	PN	**P**	**06 34 26.2**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.87**	**248**	P	**P**	**06 34 26.2**	**+1.5**
	comp=Z,1.6nm,0.3s,baz=79,slow=18,SNR=11						
MA2	**Magadan**	**11.66**	**352**	*e*PN	**P**	**06 35 04.3**	**+1.9**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MA2				pmax	pmax		
	comp=N,1.0nm,0.4s						
MA2				pmax	pmax		
	comp=E,2.0nm,0.5s						
MA2	**Magadan**	**11.66**	**352**	*e*P	**P**	**06 35 03.5**	**+1.1**
FX1	**Attu Island--F**	**13.09**	**61**	P	**P**	**06 35 21.0**	**-0.6**
	comp=E,3.1nm,0.3s,baz=333,slow=14,SNR=14						
FX1				S	**S**	**06 37 34.7**	**-11**
	comp=E,4.5nm,0.3s,baz=54,slow=22,SNR=7.4						
SONM	**Songino Array**	**31.48**	**288**	P	**P**	**06 38 34.6**	**-0.1**
	comp=E,0.3nm,0.9s,mb3.1,baz=100,slow=8.8,SNR=2.9						
SONM				PcP	PcP	06 41 25.3	-1.4
	comp=E,0.5nm,0.9s,baz=63,slow=2.8,SNR=3.5						
ILAR	**Eielson Array**	**35.12**	**40**	P	**P**	**06 39 06.6**	**+0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**35.12**	**40**	P	**P**	**06 39 06.6**	**+0.7**
	comp=Z,0.5nm,0.5s,mb3.7,baz=259,slow=6.1,SNR=12						
INK	**Inuvik**	**40.19**	**33**	P	**P**	**06 39 50.2**	**+1.9**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**40.19**	**33**	P	**P**	**06 39 50.2**	**+1.9**
	comp=Z,2.8nm,0.5s,mb4.2,baz=305,slow=6.6,SNR=36						
INK	**Inuvik**	**40.19**	**33**	P	**P**	**06 39 50.2**	**+1.9**
KURK	**Kurchatov**	**47.13**	**303**	*e*P	**P**	**06 40 42.8**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KURK	**Kurchatov**	**47.13**	**303**	*e*P	**P**	**06 40 42.8**	**-1.6**
	comp=Z,2.2nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**49.48**	**38**	P	**P**	**06 41 03.6**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.6,baz=296,slow=7.1,SNR=8.4						
YKA				PcP	PcP	06 42 23.6	-0.5
	comp=Z,0.2nm,0.5s,baz=291,slow=3.6,SNR=4.3						
BVAR	**Borovoye Array**	**50.48**	**309**	P	**P**	**06 41 08.6**	**-1.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=56,slow=11,SNR=6.7						
CMAR	**Chiang Mai Arr**	**53.28**	**256**	P	**P**	**06 41 31.6**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**53.28**	**256**	P	**P**	**06 41 31.6**	**-0.2**
	comp=Z,0.7nm,0.3s,mb4.0,baz=18,slow=7.8,SNR=7.4						
YBH	**Yreka Blue Hor**	**56.58**	**63**	P	**P**	**06 41 56.2**	**+0.8**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YBH	**Yreka Blue Hor**	**56.58**	**63**	P	**P**	**06 41 56.2**	**+0.8**
	comp=Z,1.7nm,0.9s,mb4.1,baz=228,slow=6.9,SNR=3.3						
NVAR	**Mina Array Bea**	**61.28**	**63**	P	**P**	**06 42 29.2**	**+1.3**
	comp=Z,3.8nm,1.1s,mb4.5,baz=311,slow=6.3,SNR=12						
FINES	**FINESS Array B**	**63.08**	**335**	P	**P**	**06 42 37.8**	**-1.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**63.08**	**335**	P	**P**	**06 42 37.8**	**-1.9**
	comp=Z,1.4nm,0.7s,mb4.2,baz=18,slow=6.0,SNR=5.8						
PDAR	**Pinedale Array**	**63.47**	**55**	P	**P**	**06 42 43.0**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.1,baz=246,slow=1.4,SNR=12						
NOA	**NORSAR Array B**	**67.15**	**341**	P	**P**	**06 43 05.4**	**-0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NOA	**NORSAR Array B**	**67.15**	**341**	P	**P**	**06 43 05.4**	**-0.3**
	comp=Z,1.3nm,1.0s,mb3.9,baz=74,slow=14,SNR=2.6						
WRA	**Warramunga Arr**	**69.98**	**200**	P	**P**	**06 43 22.2**	**-1.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**69.98**	**200**	P	**P**	**06 43 22.2**	**-1.7**
	comp=Z,0.7nm,0.5s,mb3.8,baz=16,slow=6.4,SNR=4.5						
ASAR	**Alice Springs**	**73.68**	**199**	P	**P**	**06 43 45.5**	**-0.3**
	comp=Z,1.0nm,0.7s,mb3.9,baz=12,slow=5.5,SNR=8.3						
CLL	**Collm**	**75.49**	**336**	P	**P**	**06 43 55.0**	**-0.7**
TXAR	**Lajitas Array**	**76.31**	**61**	P	**P**	**06 44 02.0**	**+1.2**
	comp=Z,6.9nm,1.1s,mb4.5,baz=301,slow=4.3,SNR=33						
GERES	**GERESS Array B**	**77.51**	**334**	P	**P**	**06 44 07.2**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=16,slow=7.1,SNR=3.5						

CASC 15 06:49:58.1±1.9**, 10.40N×86.30W, MD3.9, 4C-2D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCR	**Vista de Mar**	**0.71**	**112**	⇑*e*P	Pg	06 50 13.2	+1.0
VCR				*e*S	Sg	06 50 23.8	+2.1
SSNN	**San Juan del S**	**0.99**	**26**	⇑*e*P	Pb	06 50 17.3	-0.5
SSNN				*e*S	Sg	06 50 32.5	+1.5
MADN	**Villa Maderas**	**1.25**	**37**	⇑*e*P	Pb	06 50 21.8	-0.5
CONN	**Concepcion**	**1.33**	**30**	*e*P	Pb	06 50 22.5	-1.2
APON	**Apoyo**	**1.53**	**8**	*e*P	Pn	06 50 24.7	-2.0
TICN	**Ticuantepe**	**1.63**	**2**	*e*P	Pn	06 50 27.6	-0.6
MGAN	**Managua**	**1.74**	**2**	*e*P	Pn	06 50 30.2	+0.4
MGAN				*e*S	Sn	06 50 53.5	+0.6
XAVN	**Gruta Xavier**	**1.74**	**359**	*e*P	Pn	06 50 28.5	-1.3
COPN	**Copaltepe**	**1.79**	**351**	⇓*e*P	Pn	06 50 28.8	-1.8
COPN				*e*S	Sn	06 50 56.8	+2.4
APYN	**Apoyeque**	**1.82**	**358**	⇓*e*P	Pn	06 50 31.4	+0.3
CGA2	**Cerro Gallo 2**	**1.84**	**102**	⇑*e*P	Pn	06 50 31.3	+0.1
PRS1	**Puriscal**	**2.00**	**102**	*e*P	Pn	06 50 33.0	-0.5
MOMJ	**Momotombo**	**2.01**	**353**	*e*P	Pn	06 50 34.1	+0.4
VPS2	**Volcan Poas 2**	**2.04**	**96**	*e*P	Pn	06 50 33.7	-0.4
MIRN	**Miramar**	**2.07**	**349**	*e*P	Pn	06 50 33.6	-0.9
MIRN				*e*S	Sn	06 51 01.8	+0.4
LEON	**Leon**	**2.09**	**344**	*e*P	Pn	06 50 35.0	+0.3
LAJ	**Bijagual**	**2.21**	**104**	*e*P	Pn	06 50 31.5	-4.9
TEL3	**Telica 3**	**2.23**	**346**	*e*P	Pn	06 50 35.1	-1.6
TRTC	**Tortuguero**	**2.55**	**86**	*e*P	Pn	06 50 40.7	-0.7

MEX 15 06:57:07.2±0.8**, 15.06N×98.72W, h14**^{km}±132^{km}**, MD3.7, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	1.44	23	iP	Pn	06 57 29.3	-3.8
PNIG				iS	Sb	06 57 46.4	-5.0
ACX	Acapulco	2.14	327	iP	Pn	06 57 39.5	-3.5
ACX				iS	Sn	06 58 03.5	-6.0
OXX	Oaxaca	2.78	43	eP	Pn	06 57 48.0	-4.1
OXX				iS	Sn	06 58 22.0	-3.7

IDC 15 07:02:31.2±1.3**, 16.52S×172.89W, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/17**, mbtmp3.9**/4**, Error ellipse: s-maj=55.2km s-min=27.3km az=135.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	23.38	200	P	P	07 07 41.6	-0.8
	6.2nm,0.8s,baz=133,slow=19,SNR=4.7						
WRA	Warramunga Arr	50.08	258	P	P	07 11 28.4	-1.7
	0.2nm,0.6s,baz=95,slow=7.4,SNR=4.6						
ASAR	Alice Springs	50.24	253	P	P	07 11 29.4	-2.0
	2.6nm,0.6s,baz=88,slow=8.4,SNR=45						
NVAR	Mina Array Bea	74.83	42	P	P	07 14 14.2	-1.2
	0.5nm,0.7s,baz=217,slow=5.6,SNR=5.2						
NOA	NORSAR Array B	135.44	357	PKP	PKPdf	07 21 50.3	-4.5
	0.6nm,0.7s,baz=1.5,slow=4.5,SNR=3.3						
BRTR	Keskin Array B	147.33	320	PKPbc	PKPdf	07 22 16.9	+0.5
	1.2nm,0.8s,baz=27,slow=3.2,SNR=3.6						

IDC 15 07:34:10.3±2.1**, 6.59S×150.60E, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.7**/13**, mbtmp3.6**/4**, ML2.6**/1**, Error ellipse: s-maj=126.5km s-min=25.2km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.41	230	Pn	Pn	07 35 20.2	+0.2
	2.5nm,0.3s,baz=10,slow=5.8,SNR=9.7						
PMG				Sn	Sn	07 36 09.5	-3.4
	6.4nm,0.3s,baz=104,slow=24,SNR=16						
WB2	Warramunga Arr	20.62	228	eP	P	07 38 51.8	-2.2
WRA	Warramunga Arr	20.63	228	P	P	07 38 51.3	-2.8
	0.9nm,0.5s,baz=54,slow=11,SNR=7.0						
ASAR	Alice Springs	23.36	222	P	P	07 39 20.1	-1.4
	0.6nm,0.5s,baz=58,slow=8.5,SNR=8.4						
ILAR	Eielson Array	84.63	22	P	P	07 46 45.8	-0.9
	0.6nm,0.9s,baz=252,slow=4.7,SNR=5.2						

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*NEIC **15** 07:34:47.8±3.8, 39.65N×75.55E, h17^{km}±27^{km}, Error ellipse: s-maj=20.4km s-min=6.3km az=66.0*

*NNC **15** 07:34:50.9±6.5, 40.06N×75.40E, mpv3.6, Error ellipse: s-maj=62.8km s-min=32.3km az=41.0*

*IDC **15** 07:34:58.6±10.0, 40.30N×75.58E, h79^{km}±71^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.4/21, mbtmp3.7/8, ML3.0/2, MS4.2/1, Ms1 4.2/1, ms1mx3.0/13, Error ellipse: s-maj=99.0km s-min=27.3km az=2.0*

ISC 15 07:34:48.7±0.6**, 39.48N**±0.06×**75.5E**±0.1**, h33**^{km}**, n32, σ1**^{s}**14**/30**, mb3.6**/6**, MS4.2**/1**, 5C-1D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	2.60	356	P	P	07 35 29.4	+0.1
	SNR=26						
ULHL	Ulahol	2.82	11	P	P	07 35 34.7	+2.3
	SNR=40						
UCH	Uchtor	2.84	345	P	P	07 35 33.2	+0.5
	SNR=258						
AML	Almayashu	2.98	333	P	P	07 35 35.5	+0.8
	SNR=32						
KBK	Karagaybulak	3.20	353	P	P	07 35 38.2	+0.5
	SNR=7.3						
AAK	Ala-Archa	3.24	347	⇑Pg	P	07 35 39.1	+0.7
	110nm,0.7s						
AAK				⇑Lg		07 36 15.8	
	141nm,0.8s						
AAK	Ala-Archa	3.24	347	P	P	07 35 39.2	+0.8
	SNR=56						
AAK	Ala-Archa	3.24	347	⇑ePn	Pn	07 35 38.0	-0.5
EKS2	Erkin-Say	3.43	338	P	P	07 35 42.8	+1.7
	SNR=12						
TKM2	Tokmak 2	3.44	1	P	P	07 35 41.5	+0.3
	SNR=10						
CHMS	Chumysh	3.56	351	P	P	07 35 43.1	+0.2
	SNR=15						
USP	Ospenovka	3.86	349	P	P	07 35 46.8	-0.3
	SNR=12						
MK31	Makanchi Array	8.84	32	Pn	P	07 36 54.6	-2.4
	1.4nm,0.8s,baz=207,slow=14,SNR=9.8						
MK31				⇑Pg	P	07 37 23.2	+26
	1.0nm,0.7s,baz=223,slow=16,SNR=3.3						
MK31				⇓Lg		07 39 15.8	
	4.5nm,1.0s,baz=215,slow=26,SNR=3.5						
KURK	Kurchatov	11.45	10	⇑Lg		07 40 36.5	
	12nm,1.1s,baz=111,slow=14,SNR=10						
KOLN	Koldanda	13.48	148	eP	P	07 38 00.5	+0.5
	7.4nm,0.4s						
GKN	Gorkha	13.74	144	eP	P	07 38 03.7	+0.4
	24nm,0.6s						
BVAR	Borovoye Array	13.99	347	P	P	07 38 02.1	-4.4
	0.1nm,0.3s,baz=148,slow=14,SNR=5.0						
BRVK	Borovoye	14.04	347	P	P	07 38 02.9	-4.3
KKN	Kakani	14.22	142	eP	P	07 38 09.5	-0.1
	14nm,0.5s						
DMN	Daman	14.29	143	eP	P	07 38 10.8	+0.2
	9.9nm,0.4s						
PKI	Pulchoki	14.46	142	eP	P	07 38 12.7	-0.2
	8.8nm,0.4s						
JIRN	Jiri	14.77	140	eP	P	07 38 17.5	+0.6
	44nm,0.6s						
ZAL	Zalesovo	15.79	21	P	P	07 38 26.4	-3.5
	0.2nm,0.3s,baz=278,slow=12,SNR=4.0						
SONM	Songino Array	23.75	59	P	P	07 39 59.7	+1.2
	0.1nm,0.4s,mb2.6,baz=270,slow=10,SNR=4.2						
FINES	FINESS Array B	37.12	323	P	P	07 41 55.5	-2.1
	3.4nm,1.0s,mb4.1,baz=108,slow=6.0,SNR=5.5						
ARCES	ARCESS Array B	39.84	335	P	P	07 42 18.7	-1.5
	1.5nm,0.6s,mb3.9,baz=90,slow=4.9,SNR=6.6						
ARCES	ARCESS Array B	39.84	335	P	P	07 42 18.7	-1.5
GERES	GERESS Array B	44.18	303	P	P	07 42 56.4	+0.6
	0.9nm,0.8s,mb3.6,baz=67,slow=7.5,SNR=4.3						
GERES	GERESS Array B	44.18	303	P	P	07 42 56.4	+0.5
BORG	Borgarnes	57.82	330	LR	LR	08 11 15.0	
	comp=Z,184nm,18.8s,MS4.2,baz=185,slow=38						
ILAR	Eielson Array	70.91	18	P	P	07 46 01.4	-2.4
	0.4nm,0.8s,mb3.4,baz=324,slow=6.1,SNR=4.7						
YKA	Yellowknife Ar	78.05	5	P	P	07 46 43.6	-1.3
	0.9nm,0.6s,mb3.9,baz=348,slow=5.6,SNR=31						

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*IDC **15** 07:39:25.2±1.0, 14.58N×52.41E, mb3.7/9, mb1 3.9/9, mb1mx3.8/20, mbtmp3.7/9, MS3.4/3, Ms1 3.5/3, ms1mx3.0/26, Error ellipse: s-maj=27.7km s-min=23.7km az=95.0*

*NEIC **15** 07:39:27.3±0.6, 14.58N×52.53E, h10^{km}, mb3.8/2, Error ellipse: s-maj=19.4km s-min=13.1km az=119.0*

*CSEM **15** 07:39:29.3±0.1, 14.62N×52.43E, h33^{km}, mb3.8/2, Error ellipse: s-maj=9.4km s-min=6.7km az=116.0*

ISC 15 07:39:25.5±0.8**, 14.70N**±0.09×**52.5E**±0.1**, h10**^{km}**, n20, σ0**^{s}**98**/18**, mb3.8**/10**, MS3.4**/3**, 3C-1D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABTO	Aybut	2.75	17	⇑P	Pn	07 40 09.7	-0.8
	SNR=8.8						
RBK	Rabkut	3.25	31	⇑P	Pn	07 40 17.5	0.0
	SNR=118						
WHFO	Wadi Hawf	3.43	21	⇑P	Pn	07 40 19.5	-0.7
	SNR=36						
BSY	Bisya	9.17	29	⇓P	P	07 41 37.4	-3.4
KMBO	Kilima Mbogo	21.78	225	P	P	07 44 17.9	-1.7
	0.3nm,0.3s,mb3.2,baz=73,slow=19,SNR=2.7						
KMBO	Kilima Mbogo	21.78	225	P	P	07 44 19.3	-0.3
	3.5nm,1.2s,mb3.7						
KMBO	Kilima Mbogo	21.78	225	P	P	07 44 19.3	-0.3
	3.5nm,1.2s,mb3.7						
GNI	Garni	26.24	347	P	P	07 45 04.1	+1.6
	2.5nm,0.5s,mb4.0,baz=65,slow=5.3,SNR=3.0						
GNI				LR	LR	07 57 03.4	
	comp=Z,61nm,19.2s,MS3.2,baz=15,slow=40						
GNI	Garni	26.24	347	P	P	07 45 04.2	+1.7
AKASG	Malin Array Be	40.53	337	P	P	07 47 05.6	-0.8
	0.4nm,0.3s,mb3.5,baz=135,slow=6.7,SNR=7.4						
BVAR	Borovoye Array	40.78	17	P	P	07 47 09.8	+1.4
	1.3nm,0.8s,mb3.6,baz=191,slow=7.6,SNR=6.7						
KURK	Kurchatov	41.68	25	eP	P	07 47 16.9	+1.1
	2.5nm,0.9s,mb3.8						
CMAR	Chiang Mai Arr	44.61	79	P	P	07 47 40.2	+0.1
	0.6nm,0.3s,mb3.9,baz=281,slow=7.8,SNR=5.8						
CMAR				LR	LR	08 06 28.8	
	comp=Z,20nm,18.4s,MS3.1,baz=71,slow=36						
CMAR	Chiang Mai Arr	44.61	79	P	P	07 47 40.2	+0.1
ZAL	Zalesovo	46.62	26	P	P	07 47 54.7	-0.9
	1.1nm,0.9s,mb3.8,baz=257,slow=6.4,SNR=5.5						
TSUM	Tsumeb	48.11	227	LR	LR	08 09 16.7	
	comp=Z,101nm,18.2s,MS3.8,baz=320,slow=37						
SONM	Songino Array	55.23	42	P	P	07 49 02.0	+0.9
	0.4nm,0.7s,mb3.6,baz=256,slow=5.9,SNR=2.5						
WRA	Warramunga Arr	87.52	111	P	P	07 52 15.2	-0.3
	0.7nm,0.9s,mb3.9,baz=296,slow=3.7,SNR=3.6						
ASAR	Alice Springs	88.20	115	P	P	07 52 18.7	0.0
	0.5nm,0.7s,mb3.9,baz=293,slow=4.7,SNR=7.2						
TXAR	Lajitas Array	130.53	332	PKP	PKPdf	07 58 39.5	-1.0
	0.3nm,0.9s,baz=79,slow=4.6,SNR=3.8						

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*NEIC **15** 07:55:22.3, 14.88N×94.29W, h20^{km}, MD4.0(MEX), After MEX.*

MEX 15 07:55:22.0±0.8**, 14.86N×94.29W, h20**^{km}±35^{km}**, MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	San Cristobal	2.46	40	iP	Pn	07 55 58.0	-3.8
SCX				iS	Sn	07 56 28.0	-3.6
CCIG	Comitan	2.52	55	iP	Pn	07 55 59.8	-2.9
CCIG				iS	Sn	07 56 28.6	-4.5
OXX	Oaxaca	3.22	314	eP	Pn	07 56 09.0	-3.7
OXX				iS	Sn	07 56 52.0	+1.1
VHO	Vista Hermosa	3.22	314	iP	Pn	07 56 10.6	-2.1
VHO				iS	Sn	07 56 43.9	-7.0
VHO	Vista Hermosa	3.22	314	iP	Pn	07 56 09.4	-3.3
VHO				iS	Sn	07 56 45.5	-5.3
TEIG	Tepich	7.84	46	eP	Pn	07 57 10.4	-7.5

IDC 15 09:00:05.6±47.0**, 16.05S×170.89W, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/17**, mbtmp4.0**/3**, Error ellipse: s-maj=924.8km s-min=193.2km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.82	241	P	P	09 08 29.0	-2.3
	1.1nm,0.4s,baz=96,slow=9.2,SNR=2.3						
WRA	Warramunga Arr	52.05	257	P	P	09 09 17.2	-2.3
	0.2nm,0.4s,baz=94,slow=6.8,SNR=18						
ASAR	Alice Springs	52.21	252	P	P	09 09 19.1	-1.6
	2.6nm,0.5s,baz=89,slow=7.7,SNR=74						

IDC 15 09:16:23.7±3.3**, 6.46S×148.35E, mb3.9**/2**, mb1 4.0**/4**, mb1mx3.8**/13**, mbtmp3.9**/4**, ML4.0**/1**, Error ellipse: s-maj=76.3km s-min=32.0km az=109.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.16	202	Pn	Pn	09 17 15.6	0.0
	3.3nm,0.3s,baz=58,slow=7.3,SNR=9.3						
PMG				Sn	Sn	09 17 55.3	+0.7
	6.1nm,0.3s,baz=290,slow=22,SNR=4.8						
PMG				Lg		09 18 03.7	
	9.3nm,0.3s,baz=90,slow=17,SNR=7.5						
WRA	Warramunga Arr	19.10	224	P	P	09 20 46.9	-3.7
	0.5nm,0.3s,baz=51,slow=11,SNR=21						
ASAR	Alice Springs	22.04	218	P	P	09 21 19.6	-2.2
	2.7nm,0.4s,baz=53,slow=8.7,SNR=58						
ASPA	Alice Springs	22.04	218	eP	P	09 21 19.7	-2.1
FITZ	Fitzroy Crossi	24.99	240	eP	P	09 21 47.2	-3.5
	5.0nm,0.4s						
STKA	Stephens Creek	26.07	193	P	P	09 21 59.8	-0.9
	1.2nm,0.4s,baz=15,slow=12,SNR=5.0						

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*NEIC **15** 09:24:10.4±1.9, 5.48S×147.06E, h160^{km}±21^{km}, mb4.3/4, Error ellipse: s-maj=31.4km s-min=18.3km az=114.0*

*IDC **15** 09:24:10.1±2.2, 5.54S×146.73E, h139^{km}±31^{km}, mb3.3/2, mb1 3.6/4, mb1mx3.5/13, mbtmp3.9/4, Error ellipse: s-maj=58.4km s-min=14.8km az=101.0*

ISC 15 09:24:08.2±1.7**, 5.5S**±0.1×**147.1E**±0.3**, h156**^{km}±22^{km}**, n11, σ0**^{s}**92**/16**, mb4.1**/4**, 2C-2D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.90	180	P	P	09 25 09.5	+1.4
	14nm,0.3s,baz=38,slow=5.9,SNR=57						
PMG				S	S	09 25 53.1	-1.2
	8.7nm,0.3s,baz=255,slow=22,SNR=15						
KAKA	Kakadu	16.18	243	⇓iP	P	09 27 48.7	+0.5
	3.1nm,0.2s						
WRAB	Tennant Creek	19.00	220	eP	P	09 28 19.8	-0.5
	8.0nm,0.5s						
WB2	Warramunga Arr	19.00	220	⇑iP	P	09 28 20.0	-0.4
WB2				eS	S	09 31 43.1	+0.1
WRA	Warramunga Arr	19.01	220	P	P	09 28 19.8	-0.6
	0.7nm,0.3s,baz=42,slow=10,SNR=44						
WRA				S	S	09 31 43.4	+0.3
	0.1nm,0.3s,baz=40,slow=21,SNR=6.9						
ASAR	Alice Springs	22.12	214	P	P	09 28 52.9	+1.3
	3.9nm,0.9s,mb3.8,baz=45,slow=7.8,SNR=22						
ASAR				S	S	09 32 45.5	+5.3
	2.5nm,0.8s,baz=33,slow=19,SNR=13						
ASAR	Alice Springs	22.12	214	P	P	09 28 52.9	+1.3
ASAR				S	S	09 32 45.5	+5.3
ASPA	Alice Springs	22.12	214	⇓iP	P	09 28 53.0	+1.4
FITZ	Fitzroy Crossi	24.45	237	⇑iP	P	09 29 14.0	-0.2
	16nm,0.4s,mb4.9						
MBWA	Marble Bar	30.80	237	eP	P	09 30 09.9	-1.7
	2.7nm,0.5s,mb4.2						
SONM	Songino Array	64.01	331	P	P	09 34 27.0	-0.3
	0.4nm,0.5s,mb3.5,baz=139,slow=7.4,SNR=4.7						

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*KRSC **15** 09:55:59.7±0.6, 52.00N×154.65E, h457^{km}±7^{km}, ML4.2*

*MOS **15** 09:56:00.3±1.0, 52.43N×153.87E, h400^{km}, mb3.7/13, Error ellipse: s-maj=14.8km s-min=10.0km az=88.3*

*NEIC **15** 09:56:02.3±0.7, 52.43N×153.79E, h405^{km}±7^{km}, mb4.0/10, Error ellipse: s-maj=10.0km s-min=7.2km az=153.0*

*IDC **15** 09:56:04.1±1.7, 52.51N×153.59E, h423^{km}±18^{km}, mb3.1/14, mb1 3.4/16, mb1mx3.3/23, mbtmp4.0/16, Error ellipse: s-maj=14.3km s-min=11.5km az=133.0*

ISC 15 09:56:00.9±0.3**, 52.40N**±0.06×**153.86E**±0.09**, h404**^{km}±4^{km}**, n78, σ1**^{s}**13**/92**, mb3.7**/25**, 1C-5D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.05	116	iP	P	09 56 59.2	+1.2
APC	Apacha	2.08	74	eP	P	09 57 00.0	+1.9
APC				eS	S	09 57 43.9	+0.8
SKR	Severo-Kuril's	2.22	140	ePN	P	09 56 55.5	-3.6
SKR				eS	S	09 57 42.4	-2.4
SKR				pmax	pmax		
	comp=E,70nm,0.5s						
SKR				pmax	pmax		
	comp=Z,100nm,0.5s						
SKR				smax			
	comp=N,300nm,1.1s						
SKR				smax			
	comp=E,330nm,1.1s						
GRL	Gorelyy	2.58	85	eP	P	09 57 01.8	+0.2
GRL				eS	S	09 57 46.5	-2.8
GNL	Ganaly	2.79	61	eP	P	09 57 04.0	+0.9
GNL				eS	S	09 57 51.4	-0.7
RUS	Russkaya	2.85	87	P	P	09 57 03.2	-0.4
RUS				S	S	09 57 49.7	-3.3
RUS	Russkaya	2.85	87	iP	P	09 57 03.7	+0.1
RUS				iS	S	09 57 50.8	-2.2
PET	Petropavlovsk	2.98	76	ePN	P	09 57 04.9	+0.3
PET				eS	S	09 57 55.4	+0.5
PET	Petropavlovsk	2.98	76	eS	S	09 57 54.6	-0.3
KOK	Koryaka	3.03	71	eP	P	09 57 06.3	+1.3
AVH	Avacha	3.08	72	eP	P	09 57 06.9	+1.4
AVH				eS	S	09 57 55.7	-0.7
SDLR	Sedlovina	3.17	72	eP	P	09 57 06.9	+0.7
SDLR				eS	S	09 57 55.5	-2.2
NLC	Nalytchevo	3.42	75	eS	S	09 57 59.6	-1.9
SPN	Mys Shipunski	3.81	77	P	P	09 57 10.6	-1.3
SPN				S	S	09 58 01.7	-6.1
SPN	Mys Shipunski	3.81	77	eP	P	09 57 11.3	-0.6
SPN				eS	S	09 58 03.6	-4.2
ESO	Esso	4.54	37	eP	P	09 57 21.1	+2.1
TUMR	Tumrok	4.71	50	eP	P	09 57 22.7	+1.9
SRDR	Sredinnyy	5.21	39	eP	P	09 57 27.5	+1.6
SVLR	Shiveluch	5.99	43	eP	P	09 57 36.7	+2.6
KBG	Krutoberegovo	6.46	50	eP	P	09 57 38.0	-1.3
KBG				eS	S	09 58 49.0	-7.9
KBG				Smax			
	comp=E,300nm,0.9s						
KBG	Krutoberegovo	6.46	50	eP	P	09 57 39.0	-0.3
KBG				eS	S	09 58 51.4	-5.5
KBG				Smax			
	comp=E,220nm,0.7s						
KBTR	Krutoberegovo	6.48	50	P	P	09 57 38.0	-1.6
KBTR				S	S	09 58 49.2	-8.2
KBTR	Krutoberegovo	6.48	50	eP	P	09 57 39.5	-0.1
KBTR				eS	S	09 58 52.7	-4.7
YSS	Yuzh-Sakhalins	9.03	237	ePN	P	09 58 09.7	+1.1
ASAJ	Asahikawa	11.17	227	PN	P	09 58 34.8	+1.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	11.17	227	P	P	09 58 34.8	+1.4
	comp=Z,1.2nm,0.3s,baz=76,slow=3.9,SNR=11						
FX1	Attu Island--F	11.74	80	P	P	09 58 40.2	+0.4
	comp=Z,2.9nm,0.3s,baz=330,slow=21,SNR=5.7						
FX1				S	S	10 00 57.7	+11
	comp=Z,1.2nm,0.3s,baz=251,slow=18,SNR=2.4						
YAK	Yakutsk	16.16	316	eP	P	09 59 26.1	-0.6
YAK				S	S	10 02 12.4	-0.9
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax			
	comp=N,8.0nm,1.0s						
YAK				smax			
	comp=E,7.0nm,0.7s						
YAK	Yakutsk	16.16	316	P	P	09 59 27.1	+0.3
	comp=E,24nm,0.5s						
BILL	Bilibino	16.80	16	⇑iP	P	09 59 33.9	+0.8
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BILL	Bilibino	16.80	16	eP	P	09 59 33.5	+0.3
	comp=Z,2.1nm,0.3s						
HIA	Hailar	21.66	275	eP	P	10 00 21.2	+0.3
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HIA	Hailar	21.66	275	eP	P	10 00 21.2	+0.3
	comp=Z,3.8nm,0.5s,mb4.1						
TIXI	Tiksi	22.25	339	⇓iP	P	10 00 26.8	+0.5
TIXI				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.4						
SONM	Songino Array	30.34	281	P	P	10 01 37.4	-0.9
	comp=Z,0.2nm,0.4s,mb2.8,baz=72,slow=9.1,SNR=3.4						
SONM				PcP	PcP	10 04 26.1	-1.2
	comp=Z,0.5nm,0.7s,baz=105,slow=2.3,SNR=4.7						
SONM				ScP		10 07 25.3	
	comp=Z,0.4nm,0.8s,baz=192,slow=7.3,SNR=4.1						
ZAK	Zakamensk	31.11	287	eP	P	10 01 45.2	+0.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.9s,mb3.1						
ILAR	Eielson Array	31.98	44	P	P	10 01 52.9	+0.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	Eielson Array	31.98	44	P	P	10 01 52.9	+0.7
	comp=Z,0.6nm,0.5s,mb3.2,baz=281,slow=11,SNR=8.7						
INK	Inuvik	36.71	36	eP	P	10 02 32.7	+0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	36.71	36	eP	P	10 02 32.6	+0.5
	comp=Z,0.6nm,0.4s,mb3.3						
ZAL	Zalesovo	39.93	301	P	P	10 02 58.4	-0.3
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAL	Zalesovo	39.93	301	P	P	10 02 58.4	-0.3
	comp=Z,1.9nm,0.9s,mb3.4,baz=31,slow=9.8,SNR=5.1						
NVS	Novosibirsk	40.34	303	iP	P	10 03 02.0	0.0
NVS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.3						
NVS				pmax	pmax		
	comp=E,12nm,0.9s						
KURK	Kurchatov	44.82	299	⇓eP	P	10 03 37.9	+0.2
KURK				pmax	pmax		
	comp=Z,17nm,0.4s,mb4.7						
KURK	Kurchatov	44.82	299	⇓eP	P	10 03 37.9	+0.2
	comp=Z,18nm,0.4s,mb4.7						
RES	Resolute Bay	45.34	20	eP	P	10 03 41.4	-0.1
RES				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
RES	Resolute Bay	45.34	20	eP	P	10 03 41.4	-0.1
	comp=Z,3.3nm,0.6s,mb3.8						
YKA	Yellowknife Ar	46.19	40	P	P	10 03 48.6	+0.4
	comp=Z,0.3nm,0.5s,mb2.9,baz=302,slow=7.4,SNR=10						
YKA				PcP	PcP	10 05 16.1	-0.6
	comp=Z,0.2nm,0.6s,baz=311,slow=3.4,SNR=6.8						
YKA				ScP		10 08 29.3	
	comp=Z,0.1nm,0.5s,baz=290,slow=3.2,SNR=3.7						
YKA	Yellowknife Ar	46.19	40	P	P	10 03 48.6	+0.5
YKA				PcP	PcP	10 05 16.1	-0.6
YKA				ScP		10 08 29.3	
BRVK	Borovoye	47.82	306	⇓eP	P	10 04 00.7	-0.1
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
BRVK	Borovoye	47.82	306	⇓eP	P	10 04 00.7	-0.1
	comp=Z,10nm,0.6s,mb4.3						
AAK	Ala-Archa	51.92	293	eP	P	10 04 31.0	-0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.8						
AAK	Ala-Archa	51.92	293	eP	P	10 04 31.0	-0.7
	comp=Z,3.2nm,0.5s,mb3.8						
ARCES	ARCESS Array B	52.69	340	P	P	10 04 35.6	-1.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	52.69	340	P	P	10 04 35.6	-1.3
	comp=Z,2.9nm,0.9s,mb3.5,baz=51,slow=7.3,SNR=8.1						
FINES	FINESS Array B	59.16	334	P	P	10 05 20.7	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	59.16	334	P	P	10 05 20.7	-1.4
	comp=Z,1.6nm,0.5s,mb3.6,baz=46,slow=9.2,SNR=11						
FINES	FINESS Array B	59.16	334	P	P	10 05 20.7	-1.4
NVAR	Mina Array Bea	59.51	66	P	P	10 05 26.0	+1.2
	comp=Z,0.7nm,0.8s,mb3.1,baz=288,slow=8.7,SNR=4.8						
OBN	Obninsk	60.96	324	eP	P	10 05 33.7	-0.5
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.3						
PDAR	Pinedale Array	61.12	57	P	P	10 05 36.2	+0.7
	comp=Z,0.4nm,0.8s,mb2.9,baz=315,slow=4.2,SNR=3.7						
NB2	NORSAR Subarra	63.04	341	P	P	10 05 46.5	-1.2
	comp=Z,0.5nm,0.5s,mb3.3,baz=23,slow=6.5						
NB2	NORSAR Subarra	63.04	341	P	P	10 05 46.5	-1.2
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
NOA	NORSAR Array B	63.04	341	P	P	10 05 46.7	-1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	63.04	341	P	P	10 05 46.6	-1.1
	comp=Z,1.3nm,0.8s,mb3.5,baz=25,slow=6.5,SNR=4.0						
AKASG	Malin Array Be	67.14	325	P	P	10 06 12.5	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	67.14	325	P	P	10 06 12.5	-1.2
	comp=Z,0.8nm,0.3s,mb3.8,baz=32,slow=6.8,SNR=5.6						
SCHQ	Schefferville	67.93	24	P	P	10 06 18.0	-0.4
	comp=Z,1.9nm,0.4s,mb4.1,baz=358,slow=4.5,SNR=18						
GERES	GERESS Array B	73.59	334	P	P	10 06 50.9	-1.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	73.59	334	P	P	10 06 50.9	-1.0
	comp=Z,0.5nm,0.6s,mb3.4,baz=34,slow=4.8,SNR=4.2						
WRAB	Tennant Creek	74.00	199	P	P	10 06 53.5	-1.4
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
WRAB	Tennant Creek	74.00	199	P	P	10 06 53.5	-1.3
	comp=Z,3.6nm,0.8s,mb4.0						
WRA	Warramunga Arr	74.02	199	P	P	10 06 54.8	-0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						

WRA	**Warramunga Arr**	**74.02**	**199**	P	**P**	**10 06 54.8**	**-0.2**
	comp=Z,0.8nm,0.4s,mb3.7,baz=14,slow=6.0,SNR=28						
ASAR	**Alice Springs**	**77.72**	**199**	P	**P**	**10 07 16.2**	**+0.8**
	comp=Z,1.3nm,0.6s,mb3.7,baz=11,slow=5.5,SNR=26						
PLCA	**Paso Flores**	**147.81**	**87**	PKP2	PKPdf	10 14 59.8	+5.5
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PLCA	**Paso Flores**	**147.81**	**87**	PKPbc	PKPdf	10 14 59.8	+5.5
	comp=Z,0.6nm,0.8s,baz=277,slow=3.7,SNR=4.0						
PLCA	**Paso Flores**	**147.81**	**87**	PKPbc	PKPdf	10 14 59.8	+5.5

IDC ***15*** *10:10:57.9±1.2, 5.49N×93.26E, mb4.0/7, mb1 4.2/8, mb1mx3.9/18, mbtmp3.9/8, ML4.2/1, Error ellipse: s-maj=52.6km s-min=20.3km az=54.0*

NEIC ***15*** *10:11:03.2±0.7, 5.52N×93.28E, h35^{km}, mb4.4/3, Error ellipse: s-maj=22.6km s-min=11.1km az=62.0*

ISC 15 10:11:01.2±0.9, **5.5N**±0.1×**93.3E**±0.2, **h33**^{km}, **n12,** σ**0**^{s}**70**/12, **mb4.1**/10, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.97**	**23**	Pn	**P**	**10 14 19.6**	**+0.4**
	0.4nm,0.3s,baz=214,slow=13,SNR=1.4						
CMAR	**Chiang Mai Arr**	**13.97**	**23**	Pn	**P**	**10 14 19.6**	**+0.4**
SONM	**Songino Array**	**43.61**	**13**	P	**P**	**10 19 04.2**	**+0.1**
	0.8nm,0.7s,mb3.6,baz=195,slow=6.9,SNR=6.2						
SONM				PcP	PcP	10 20 52.2	+0.5
	0.2nm,0.4s,baz=181,slow=4.2,SNR=3.6						
KURK	**Kurchatov**	**46.68**	**347**	P	**P**	**10 19 28.7**	**+0.2**
	1.8nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	**47.64**	**123**	P	**P**	**10 19 35.4**	**-1.1**
	2.3nm,0.6s,mb4.4,baz=302,slow=9.1,SNR=22						
WRAB	**Tennant Creek**	**47.64**	**123**	*e*P	**P**	**10 19 37.1**	**+0.6**
	5.1nm,0.6s,mb4.7						
WRAB				*e*	pP	10 19 47.5	+1.1
ZAL	**Zalesovo**	**48.75**	**353**	P	**P**	**10 19 44.3**	**-0.3**
	1.4nm,0.3s,mb4.5,baz=40,slow=20,SNR=3.3						
ASAR	**Alice Springs**	**49.10**	**128**	P	**P**	**10 19 48.1**	**+0.3**
	0.7nm,0.6s,mb3.9,baz=295,slow=7.7,SNR=12						
BRVK	**Borovoye**	**51.00**	**342**	P	**P**	**10 20 00.5**	**-1.3**
	3.9nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**74.38**	**333**	P	**P**	**10 22 37.0**	**-0.3**
	1.3nm,0.8s,mb3.9,baz=74,slow=10,SNR=3.0						
ARCES	**ARCESS Array B**	**77.17**	**340**	P	**P**	**10 22 53.1**	**+0.1**
	0.5nm,0.4s,mb3.8,baz=94,slow=6.7,SNR=7.9						
GERES	**GERESS Array B**	**79.01**	**319**	P	**P**	**10 23 04.9**	**+1.3**
	0.9nm,0.8s,mb3.8,baz=90,slow=7.8,SNR=5.2						

IDC 15 10:17:22.5±1.1, **10.82N**×**141.16E, mb3.5**/5, **mb1 3.8**/5, **mb1mx3.7**/18, **mbtmp3.5**/5, **Error ellipse: s-maj=60.4km s-min=22.8km az=97.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.30**	**192**	P	P	10 23 43.6	-3.1
	0.9nm,1.0s,baz=11,slow=9.5,SNR=4.0						
ASAR	**Alice Springs**	**35.00**	**192**	P	P	10 24 17.6	-1.2
	0.6nm,0.8s,baz=19,slow=12,SNR=5.3						
SONM	**Songino Array**	**47.03**	**328**	P	P	10 25 56.0	-1.5
	0.2nm,0.6s,baz=127,slow=7.2,SNR=2.7						
ILAR	**Eielson Array**	**72.61**	**25**	P	P	10 28 50.6	-2.7
	0.2nm,0.7s,baz=245,slow=5.7,SNR=4.3						
YKA	**Yellowknife Ar**	**86.96**	**27**	P	P	10 30 10.2	-0.3
	0.2nm,0.7s,baz=292,slow=5.2,SNR=5.7						

NEIC ***15*** *10:26:06.8, 38.38S×176.06E, h164^{km}, After WEL.*

WEL 15 10:26:06.8±0.2, **38.38S**×**176.06E, h162**^{km}±2^{km}, **ML3.8**/12, **4C, Error ellipse: s-maj=2.2km s-min=2.2km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGZ	**Maungaku**	**0.74**	**213**	P	P	10 26 31.1	-0.1
MGZ	**Maungaku**	**0.74**	**213**	PN	P	10 26 31.1	-0.2
URZ	**Urewera**	**0.84**	**82**	*e*P	P	10 26 31.5	-0.3
URZ	**Urewera**	**0.84**	**82**	PN	P	10 26 31.4	-0.4
URZ				SN	S	10 26 50.1	-0.9
URZ				SN	S	10 26 50.4	-0.7
BKZ	**Black Stump Fm**	**0.86**	**157**	P	P	10 26 32.1	+0.2
BKZ				S	S	10 26 50.9	-0.4
BKZ	**Black Stump Fm**	**0.86**	**157**	⇑PN	P	10 26 32.1	+0.1
BKZ				SN	S	10 26 51.0	-0.3
NGZ	**Ngauruhoe**	**0.88**	**204**	P	P	10 26 28.0	-4.0
NGZ				P		10 26 32.0	
NGZ	**Ngauruhoe**	**0.88**	**204**	PN	P	10 26 32.0	0.0
NGZ				SN	S	10 26 51.5	+0.1
CNZ	**Chateau**	**0.91**	**206**	P	P	10 26 32.1	-0.2
CNZ	**Chateau**	**0.91**	**206**	PN	P	10 26 32.1	-0.2
TUVZ	**Tukino**	**0.94**	**199**	PN	P	10 26 32.5	0.0
TUVZ				SN	S	10 26 51.7	-0.7
MOVZ	**Moawhango**	**1.06**	**193**	P	P	10 26 33.0	-0.4
MOVZ	**Moawhango**	**1.06**	**193**	⇑PN	P	10 26 33.0	-0.5
MOVZ				SN	S	10 26 52.8	-1.1
MWZ	**Matawai**	**1.16**	**88**	P	P	10 26 34.6	+0.3
MWZ				S	S	10 26 55.2	-0.4
MWZ	**Matawai**	**1.16**	**88**	PN	P	10 26 34.6	+0.2
MWZ				SN	S	10 26 55.3	-0.3
TSZ	**Takapari Road**	**1.68**	**183**	P	P	10 26 38.8	-0.8
TSZ	**Takapari Road**	**1.68**	**183**	PN	P	10 26 38.8	-0.8
PUZ	**Puketiti**	**1.76**	**81**	*e*P	P	10 26 39.7	-0.7
PUZ				S	S	10 27 04.4	-1.9
PUZ	**Puketiti**	**1.76**	**81**	PN	P	10 26 39.7	-0.7
PUZ				SN	S	10 27 04.6	-1.7
PWZ	**Pawanui**	**1.77**	**159**	⇑*e*P	P	10 26 40.2	-0.2
PWZ	**Pawanui**	**1.77**	**159**	⇑PN	P	10 26 40.2	-0.2
PWZ				SN	S	10 27 05.9	-0.5
MXZ	**Matakaoa Point**	**1.95**	**66**	P	P	10 26 42.0	-0.5
MXZ	**Matakaoa Point**	**1.95**	**66**	PN	P	10 26 42.0	-0.5
MXZ				SN	S	10 27 08.8	-1.2
BFZ	**Birch Farm**	**2.31**	**176**	*e*PN	P	10 26 45.2	-1.6
MRZ	**Mangatainoka R**	**2.31**	**189**	P	P	10 26 44.7	-2.1
MRZ	**Mangatainoka R**	**2.31**	**189**	PN	P	10 26 44.7	-2.1
MRZ				SN	S	10 27 14.2	-3.4
KIW	**Kapiti Island**	**2.64**	**199**	P	P	10 26 47.8	-3.0
KIW	**Kapiti Island**	**2.64**	**199**	PN	P	10 26 47.8	-3.0
KIW				SN	S	10 27 20.4	-4.1
MTW	**Mount Morrison**	**2.81**	**189**	P	P	10 26 49.9	-3.1
MTW	**Mount Morrison**	**2.81**	**189**	PN	P	10 26 49.9	-3.0
CAW	**Cannon Point**	**2.83**	**195**	P	P	10 26 50.3	-2.9
CAW	**Cannon Point**	**2.83**	**195**	PN	P	10 26 50.2	-3.0
MRW	**Makara Radio**	**3.04**	**200**	SN	S	10 27 28.0	-5.4
MSWZ	**Moikau Station**	**3.10**	**191**	P	P	10 26 53.1	-3.5
MSWZ	**Moikau Station**	**3.10**	**191**	PN	P	10 26 53.1	-3.4
NNZ	**Nelson**	**3.51**	**215**	PN	P	10 26 57.5	-4.3
NNZ				SN	S	10 27 38.6	-5.6
THZ	**Tophouse**	**4.16**	**215**	PN	P	10 27 08.1	-2.2
THZ				SN	S	10 27 53.5	-5.6
KHZ	**Kahutara**	**4.47**	**205**	*e*P	P	10 27 09.7	-4.6
KHZ	**Kahutara**	**4.47**	**205**	PN	P	10 27 09.8	-4.5
DSZ	**Denniston Nort**	**4.69**	**223**	SN	S	10 28 03.3	-8.2
LTZ	**Lake Taylor**	**5.26**	**212**	SN	S	10 28 15.7	-9.3
MQZ	**McQueen's Vall**	**5.91**	**205**	SN	S	10 28 29.4	-11

NEIC ***15*** *10:33:15.7±0.8, 17.38S×69.51W, h145^{km}±8^{km}, Error ellipse: s-maj=13.9km s-min=12.6km az=222.0*

IDC ***15*** *10:33:16.8±1.0, 17.55S×69.35W, h154^{km}±9^{km}, mb4.0/7, mb1 4.1/8, mb1mx3.9/16, mbtmp4.5/8, Error ellipse: s-maj=19.3km s-min=10.1km az=95.0*

ISC 15 10:33:15.3±0.6, **17.50S**±0.06×**69.49W**±0.07, **h155**^{km}±6^{km}, **n19,** σ**1**^{s}**30**/23, **mb4.0**/7, **1C-1D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.77**	**47**	P	**P**	**10 33 49.6**	**+1.2**
	baz=233,slow=7.7						
LPAZ				S	**S**	**10 34 15.0**	**+1.0**
	16nm,0.3s,baz=28,slow=15,SNR=5.9						
LPAZ	**La Paz**	**1.77**	**47**	⇓*i*Pn	**P**	**10 33 49.7**	**+1.3**
LPAZ				*e*Sn	**S**	**10 34 14.5**	**+0.5**
ARE	**Arequipa**	**2.18**	**298**	⇑*i*P	**P**	**10 33 53.0**	**-0.3**
ARE				*e*S	**S**	**10 34 22.0**	**-0.4**
LVC	**Limon Verde**	**5.12**	**174**	P	**P**	**10 34 31.8**	**+0.6**
	16nm,0.3s,baz=333,slow=6.5,SNR=114						
LVC				S	**S**	**10 35 28.0**	**-1.8**
	10nm,0.3s,baz=111,slow=20,SNR=12						
LVC	**Limon Verde**	**5.12**	**174**	*e*Pn	**P**	**10 34 31.6**	**+0.4**
NNA	**Nana**	**8.98**	**307**	P	**P**	**10 35 19.1**	**-3.6**
SAML	**Samuel**	**10.48**	**37**	*e*P	**P**	**10 35 39.3**	**-3.2**
SAML				*e*S	**S**	**10 37 28.2**	**-9.5**
BDFB	**Brasilia**	**20.66**	**88**	P	**P**	**10 37 44.1**	**-0.4**
	11nm,0.6s,baz=268,slow=8.9,SNR=13						
PLCA	**Paso Flores**	**23.17**	**182**	P	**P**	**10 38 10.9**	**+2.0**
	4.9nm,0.8s,mb4.0,baz=343,slow=11,SNR=16						
JTS	**JuntasAbangare**	**31.56**	**330**	P	**P**	**10 39 27.2**	**+1.6**
	14nm,0.6s,mb4.9,baz=183,slow=13,SNR=15						
JTS	**JuntasAbangare**	**31.56**	**330**	P	**P**	**10 39 27.2**	**+1.6**
TXAR	**Lajitas Array**	**57.07**	**324**	P	**P**	**10 42 48.9**	**+1.1**
	0.1nm,0.4s,mb3.0,baz=167,slow=6.8,SNR=4.5						
DBIC	**Dimbokro**	**68.18**	**75**	P	**P**	**10 44 00.4**	**-1.1**
	18nm,0.6s,mb5.0,baz=229,slow=6.3,SNR=41						
MSU	**Marysvale**	**68.60**	**325**	P	**P**	**10 44 04.0**	**+0.3**
PDAR	**Pinedale Array**	**70.39**	**330**	P	**P**	**10 44 13.6**	**-0.9**
	0.3nm,0.5s,mb3.2,baz=120,slow=7.3,SNR=3.1						
ULM	**Lac du Bonnet**	**71.36**	**342**	P	**P**	**10 44 18.9**	**-1.2**
	4.0nm,0.5s,mb4.4,baz=146,slow=5.0,SNR=10						
YKA	**Yellowknife Ar**	**87.25**	**341**	P	**P**	**10 45 45.7**	**+0.7**
	1.0nm,0.5s,mb3.9,baz=133,slow=4.9,SNR=39						
YKA				pP	pP	10 46 24.3	+0.1
	0.8nm,0.8s,baz=133,slow=4.5,SNR=8.6						
YKA	**Yellowknife Ar**	**87.25**	**341**	P	**P**	**10 45 45.7**	**+0.7**
YKA				pP	pP	10 46 24.3	+0.1
SONM	**Songino Array**	**149.56**	**5**	PKPbc	PKPdf	10 52 47.4	+5.9
	0.8nm,0.6s,baz=322,slow=2.8,SNR=12						

IDC ***15*** *10:48:40.7±1.2, 9.80S×159.72E, mb4.1/8, mb1 4.3/9, mb1mx4.3/14, mbtmp4.1/9, ML3.5/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/21, Error ellipse: s-maj=48.1km s-min=21.7km az=134.0*

NEIC ***15*** *10:48:46.6±1.3, 9.67S×159.75E, h38^{km}±13^{km}, mb4.3/3, Error ellipse: s-maj=45.5km s-min=11.7km az=134.0*

ISC 15 10:48:44.1±1.5, **9.8S**±0.2×**159.7E**±0.2, **h32**^{km}±10^{km}, **n16,** σ**0**^{s}**38**/16, **mb4.0**/10, **MS3.4**/2, **1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.50**	**36**	⇓*i*Pg	**Pb**	**10 48 54.0**	**-0.7**
HNR				*e*Sg	**Sb**	**10 49 02.5**	**+0.6**
PMG	**Port Moresby**	**12.32**	**271**	LR	LR	10 55 59.9	
	comp=Z,289nm,20.2s,baz=274,slow=35						
CTA	**Charters Tower**	**16.46**	**230**	Pn	**P**	**10 52 39.4**	**+4.9**
	0.1nm,0.3s,baz=57,slow=13,SNR=4.6						
CTA				LR	LR	10 57 47.0	
	comp=Z,161nm,21.7s,baz=63,slow=33						
CTAO	**Charters Tower**	**16.46**	**230**	*e*P	**P**	**10 52 39.5**	**+5.0**
	14nm,0.9s						
WRAB	**Tennant Creek**	**26.39**	**245**	*e*P	**P**	**10 54 19.8**	**0.0**
	8.2nm,1.0s,mb4.2						
WB2	**Warramunga Arr**	**26.39**	**245**	*e*P	**P**	**10 54 20.5**	**+0.7**
WRA	**Warramunga Arr**	**26.40**	**245**	P	**P**	**10 54 20.1**	**+0.1**
	1.5nm,0.7s,mb3.7,baz=72,slow=9.9,SNR=17						
STKA	**Stephens Creek**	**27.58**	**215**	P	**P**	**10 54 30.8**	**+0.2**
	1.1nm,0.3s,mb3.9,baz=349,slow=10,SNR=2.5						
STKA				LR	LR	11 05 50.3	
	comp=Z,113nm,19.2s,MS3.5,baz=25,slow=37						
ASAR	**Alice Springs**	**28.16**	**238**	P	**P**	**10 54 35.2**	**-0.6**
	0.8nm,0.6s,mb3.5,baz=62,slow=9.7,SNR=6.0						
ASAR				LR	LR	11 04 21.1	
	comp=Z,81nm,19.6s,MS3.3,baz=116,slow=33						
CMAR	**Chiang Mai Arr**	**66.16**	**295**	P	**P**	**10 59 31.0**	**-0.3**
	0.7nm,0.3s,mb4.1,baz=108,slow=5.5,SNR=4.1						
SONM	**Songino Array**	**74.23**	**326**	P	**P**	**11 00 20.0**	**+0.1**
	1.2nm,0.6s,mb4.0,baz=140,slow=5.3,SNR=13						
MCK	**McKinley**	**83.03**	**21**	*e*P	**P**	**11 01 07.4**	**-0.1**
	5.1nm,0.9s,mb4.5						
ILAR	**Eielson Array**	**84.38**	**20**	P	**P**	**11 01 14.1**	**-0.2**
	1.6nm,1.0s,mb4.1,baz=262,slow=4.4,SNR=8.0						
NVAR	**Mina Array Bea**	**89.89**	**51**	P	**P**	**11 01 41.8**	**+0.2**
	0.7nm,0.7s,mb4.1,baz=247,slow=3.4,SNR=6.0						
YKA	**Yellowknife Ar**	**96.69**	**28**	P	**P**	**11 02 12.2**	**0.0**
	0.4nm,0.8s,mb3.9,baz=253,slow=5.1,SNR=7.1						
YKA	**Yellowknife Ar**	**96.69**	**28**	P	**P**	**11 02 12.2**	**0.0**

ISK ***15*** *11:01:01.3, 37.92N×25.44E, h26^{km}, MD3.2*

ATH ***15*** *11:01:02.5, 38.46N×25.54E, h24^{km}±17^{km}, MD3.4/6*

CSEM ***15*** *11:01:02.5±0.2, 38.49N×25.60E, h8^{km}, MD3.2, Error ellipse: s-maj=5.0km s-min=3.6km az=154.0*

NEIC ***15*** *11:01:03.0, 38.48N×25.56E, h28^{km}, MD3.4(ATH), After ATH.*

ISC 15 11:01:02.5±2.6, **38.44N**±0.08×**25.54E**±0.07, **h4**^{km}±21^{km}, **n11,** σ**1**^{s}**02**/14, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.99**	**35**	*e*PN	**Pn**	**11 01 21.0**	**-1.9**
BLCB	**Balcova**	**1.18**	**92**	PN	**Pn**	**11 01 25.0**	**-0.7**
BLCB				SN	**Sn**	**11 01 41.6**	**-0.7**
SMG	**Samos**	**1.26**	**125**	*e*PN	**Pn**	**11 01 27.5**	**+0.8**
SMG				*e*SN	**Sn**	**11 01 44.5**	**+0.3**
IZM	**Izmir**	**1.35**	**91**	PN	**Pn**	**11 01 27.1**	**-1.0**
IZM				SN	**Sn**	**11 01 47.0**	**+0.3**
APE	**Apeiranthos**	**1.36**	**180**	*e*PB	**Pb**	**11 01 27.5**	**-0.7**
PTL	**Penteli**	**1.37**	**254**	*e*PN	**Pn**	**11 01 28.5**	**+0.1**
PTL	**Penteli**	**1.37**	**254**	*e*Pn	**Pn**	**11 01 29.1**	**+0.7**
MPAR	**Parnis Oros**	**1.45**	**259**	*e*PN	**Pn**	**11 01 29.5**	**0.0**
AKS	**Akhisar**	**1.83**	**75**	*e*PN	**Pn**	**11 01 36.5**	**+1.5**
MGER	**Gerania Oros**	**1.85**	**257**	*e*PN	**Pn**	**11 01 35.2**	**0.0**
BALB	**Balikesir**	**2.18**	**56**	*e*PN	**Pn**	**11 01 42.4**	**+2.4**

IDC ***15*** *11:15:06.4±0.5, 24.52N×92.47E, mb5.0/21, mb1 5.1/22, mb1mx5.0/29, mbtmp5.0/22, ML4.7/1, MS4.1/4, Ms1 4.2/4, ms1mx3.6/30, Error ellipse: s-maj=17.9km s-min=11.7km az=48.0*

MOS ***15*** *11:15:08.8±0.9, 24.42N×92.39E, h33^{km}, mb5.4/14, Error ellipse: s-maj=10.9km s-min=8.1km az=119.8*

BJI ***15*** *11:15:11.9, 24.79N×92.66E, h35^{km}, mB5.0, mb5.1, ML5.5, Ms4.8, Msz4.4*

HRVD ***15*** *11:15:11.7±0.4, 24.52N×92.61E, h27^{km}±1^{km}, MW5.0/58, Centroid moment Tensor Solution. LP body waves: s15,c17;Mantle waves: s58,c93; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.53±.22; M$_{\theta\theta}$-2.85±.15; M$_{\phi\phi}$3.39±.17; M$_{r\theta}$-2.01±.34; M$_{\theta\phi}$1.06±.12; M$_{\phi r}$-1.56±.31; Best double couple: M$_{0}$4.179×10^{16} NP1:φ$_{s}$145°,δ52°, λ-174°. NP2:φ$_{s}$52°,δ86°,λ-38°. Principal axes: T 4.344, Plg23°, Azm105°; N -.324, Plg51°, Azm226°; P -4.015, Plg30°, Azm1°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***15*** *11:15:11.7±0.5, 24.55N×92.52E, h35^{km}±4^{km}, mb5.1/30 Error ellipse: s-maj=5.7km s-min=3.6km az=223.0*

NEIC Some monuments slightly damaged at Khaspur, India. Felt strongly at Shillong, India and at Moulvi Bazaar and Syhlet, Bangladesh. Also felt at Guwahati, India and as far as Chittagong, Bangladesh.

ISC 15 11:15:05.8±1.0, **24.53N**±0.03×**92.38E**±0.02, **h11**^{km}±6^{km}, **n190,** σ**1**^{s}**20**/215, **mb5.1**/52, **MS4.5**/13, **18C-15D, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.12**	**337**	⇑*i*P	**Pb**	**11 15 31.9**	**+5.1**
SHL				*e*S	**Sb**	**11 15 46.3**	**+5.1**
SHL				*e*		11 15 55.7	
	comp=E,593μm,0.8s						
SHL				*e*		11 15 56.5	
	comp=N,550μm,0.7s						
AGT	**Agartala**	**1.22**	**238**	⇓*i*P	**Pb**	**11 15 37.0**	**+8.6**
AGT				*i*		11 19 33.0	
IMP	**Imphal**	**1.44**	**80**	⇓*i*P	**Pn**	**11 15 37.0**	**+5.0**
SLGI	**Shiliguri**	**4.17**	**302**	⇓*i*P	**Pn**	**11 16 15.1**	**+4.1**
SLGI				*e*S	**Sn**	**11 17 00.8**	**+0.4**
CAL	**Calcutta**	**4.21**	**243**	*e*P	**Pn**	**11 16 18.2**	**+6.7**
CAL				*e*		11 17 06.3	
LKP	**Lekhapani**	**4.34**	**49**	*e*P	**Pn**	**11 16 15.0**	**+1.7**
LKP				*e*		11 17 26.0	
GTK	**Gangtok**	**4.38**	**310**	*e*	**Pn**	**11 16 12.0**	**-2.0**
GTK				*e*S	**Sn**	**11 17 02.0**	**-3.7**
LSA	**Lhasa**	**5.26**	**348**	P	**Pn**	**11 16 29.8**	**+3.4**
LSA				S	**Sn**	**11 17 28.3**	**+0.5**
LSA				LR	LR		
	comp=E,4μm,4.0s						
LSA	**Lhasa**	**5.26**	**348**	⇓*i*Pn	**Pn**	**11 16 29.9**	**+3.5**
LSA				*e*S	**Sn**	**11 17 29.1**	**+1.4**
BOK	**Bokaro**	**5.97**	**264**	*e*P	**Pn**	**11 16 39.9**	**+3.5**
BOK				*e*S	**Sn**	**11 17 45.2**	**-0.4**
BOK				*e*		11 17 50.1	
	comp=N,4μm,0.7s						
BOK				*e*		11 17 50.3	
	comp=E,2μm,0.7s						
JIRN	**Jiri**	**6.37**	**301**	*e*Sn	**Sn**	**11 17 55.7**	**+0.1**
	comp=E,5μm,0.6s						
JIRN	**Jiri**	**6.37**	**301**	*e*Pn	**Pn**	**11 16 45.4**	**+3.3**
JIRN				*e*Sn	**Sn**	**11 17 55.7**	**+0.1**
PKI	**Pulchoki**	**6.96**	**297**	*e*Sn	**Sn**	**11 18 09.8**	**-0.4**
	comp=E,631nm,0.3s						
PKI	**Pulchoki**	**6.96**	**297**	*e*Pn	**Pn**	**11 16 53.0**	**+2.7**
PKI				*e*Sn	**Sn**	**11 18 09.8**	**-0.4**
KKN	**Kakani**	**7.15**	**298**	*e*Sn	**Sn**	**11 18 14.3**	**-0.8**
	comp=E,681nm,0.3s						
KKN	**Kakani**	**7.15**	**298**	*e*Pn	**Pn**	**11 16 55.3**	**+2.3**
KKN				*e*Sn	**Sn**	**11 18 14.3**	**-0.8**
DMN	**Daman**	**7.22**	**297**	*e*Sn	**Sn**	**11 18 15.7**	**-1.1**
	comp=E,669nm,0.3s						
DMN	**Daman**	**7.22**	**297**	*e*Pn	**Pn**	**11 16 56.2**	**+2.2**
DMN				*e*Sn	**Sn**	**11 18 15.7**	**-1.1**
BWNR	**Bhubaneshwar**	**7.40**	**237**	*e*P	**Pn**	**11 16 58.2**	**+1.7**
BWNR				AMb	AMB	11 17 00.7	
	comp=Z,88nm,0.3s						
BWNR				*e*		11 18 12.2	
GKN	**Gorkha**	**7.76**	**298**	*e*Sn	**Sn**	**11 18 28.9**	**-1.4**
	comp=Z,3μm,0.4s						
GKN	**Gorkha**	**7.76**	**298**	*e*Pn	**Pn**	**11 17 03.5**	**+2.0**
GKN				*e*Sn	**Sn**	**11 18 28.9**	**-1.4**
VLK	**Valmikinagar**	**8.15**	**292**	*i* P	**P**	**11 17 07.0**	**+0.1**
VLK				*i*		11 18 38.0	
CHRT	**Chiangrai**	**8.28**	**123**	⇓P	**P**	**11 17 08.5**	**-0.3**
	comp=Z,590nm,1.3s						
KOLN	**Koldanda**	**8.52**	**294**	*e*Sn	**Sn**	**11 18 45.2**	**-4.0**
	comp=Z,2μm,0.5s						
KOLN	**Koldanda**	**8.52**	**294**	*e*Pn	**P**	**11 17 13.3**	**+1.2**
KOLN				*e*Sn	**Sn**	**11 18 45.2**	**-4.0**
CM31	**Chiang Mai Arr**	**8.60**	**133**	*e*P	**P**	**11 17 12.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**8.60**	**133**	Pn	**P**	**11 17 12.6**	**-0.6**
	comp=Z,2.6nm,0.3s,baz=311,slow=14,SNR=111						
CMAR				LR	LR	11 19 59.3	
	comp=Z,322nm,20.8s,baz=325,slow=34						
KMI	**Kunming**	**9.43**	**84**	⇑P	**P**	**11 17 26.5**	**+1.7**
KMI				PP	PP	11 17 35.1	+2.5
KMI				S	**Sn**	**11 19 12.3**	**+0.4**
KMI				SS	SS	11 19 24.8	-0.2
KMI				AMB	AMB		
	comp=Z,87nm,0.9s						
KMI				AMB	AMB		
	comp=Z,366nm,4.0s						
KMI				LR	LR		
	comp=N,3μm,10.5s						
KMI				LR	LR		
	comp=E,1μm,14.1s						
KMI				LR	LR		
	comp=Z,2μm,16.2s						
NANT	**Nan**	**9.61**	**125**	⇑P	**P**	**11 17 25.0**	**-2.3**
	comp=Z,100nm,1.0s						
ALBI	**Allahabad**	**9.62**	**277**	⇑*i*P	**P**	**11 17 26.5**	**-0.9**
BLSP	**Bilaspur**	**9.71**	**258**	*e*P	**P**	**11 17 30.3**	**+1.6**
BLSP				AMb	AMB	11 17 31.6	
	comp=Z,473nm,0.2s						
BLSP				*e*S	**Sn**	**11 19 10.8**	**-8.0**
BLSP				*e*		11 19 49.3	
	comp=E,497nm,0.6s						
BLSP				*e*		11 20 51.5	
	comp=N,662nm,1.1s						
VIS	**Vishakhapatnam**	**10.82**	**233**	*e*P	**P**	**11 17 46.0**	**+2.1**
VIS				AMb	AMB	11 17 48.2	
	comp=Z,12nm,0.1s						
VIS				*e*S	**S**	**11 19 36.9**	**-9.3**
NST	**Nakhon Sawan**	**11.43**	**139**	P	**P**	**11 17 51.0**	**-1.2**
	comp=Z,83nm,1.0s						
LGTI	**Lohaghat**	**11.87**	**297**	⇓*i*P	**P**	**11 17 59.3**	**+1.2**
CD2	**Chengdu**	**11.91**	**55**	P	**P**	**11 17 56.8**	**-1.9**
PTH	**Pithoragarh**	**11.93**	**297**	*e*P	**P**	**11 17 59.2**	**+0.2**
PTH				*e*		11 20 05.4	
JHNI	**Jhansi**	**12.58**	**277**	⇓*i*	**P**	**11 18 04.0**	**-3.7**
JHNI				*i*		11 19 55.0	
KKTK	**Khon Kaen**	**12.74**	**128**	P	**P**	**11 18 09.0**	**-0.8**
NGP	**Nagpur**	**12.74**	**257**	*e*P	**P**	**11 18 10.0**	**+0.1**
GYA	**Guiyang**	**13.05**	**79**	⇓*i*P	**P**	**11 18 12.3**	**-1.6**
GYA				AP		11 18 20.4	
GYA				XP		11 18 26.8	
GYA				S	**S**	**11 20 35.8**	**-4.3**
GYA				AMB	AMB		
	comp=Z,40nm,0.9s						
GYA				AMB	AMB		
	comp=Z,310nm,4.2s						
GYA				LR	LR		
	comp=N,3μm,15.0s						
GYA				LR	LR		
	comp=E,720nm,20.6s						
GYA				LR	LR		
	comp=Z,1μm,19.5s						
AGRA	**Agra**	**13.27**	**285**	*e*	**P**	**11 18 15.1**	**-1.7**
AGRA				*e*S	**S**	**11 20 36.1**	**-9.2**
ASOR	**Ausora**	**13.72**	**291**	*e*P	**P**	**11 18 21.4**	**-1.4**
BHPL	**Bhopal**	**13.74**	**268**	*e*P	**P**	**11 18 22.4**	**-0.7**
BHPL				*e*S	**S**	**11 20 44.0**	**-13**
NNT	**Nongplab**	**13.77**	**148**	P	**P**	**11 18 32.0**	**+8.4**
DDI	**Dehra Dun**	**13.96**	**298**	*e*P	**P**	**11 18 24.3**	**-1.7**
DDI				*e*		11 20 56.1	
NDI	**New Delhi**	**14.18**	**290**	*e*P	**P**	**11 18 27.0**	**-1.8**
NDI				*e*S	**S**	**11 20 52.0**	**-15**
SONA	**Sohna**	**14.20**	**288**	*e*P	**P**	**11 18 28.0**	**-1.1**
SONA				*e*S	**S**	**11 20 55.1**	**-12**
AYAN	**Aya Nagar**	**14.21**	**289**	*e*P	**P**	**11 18 27.2**	**-2.0**
AYAN				AMb	AMB	11 18 29.5	
	comp=Z,94nm,0.9s						
BHGR	**Bahadurgarh**	**14.41**	**290**	*e*P	**P**	**11 18 29.6**	**-2.4**
KUDL	**Kundal**	**14.69**	**288**	*i* P	**P**	**11 18 34.6**	**-1.0**
KUDL				*e*		11 18 37.1	
	comp=Z,90nm,0.9s						
KUDL				*e*S	**S**	**11 21 07.1**	**-12**
HYB	**Hyderabad**	**14.72**	**244**	⇑*e*P	**P**	**11 18 35.0**	**-1.0**
HYB				pmax	pmax		
	comp=Z,100nm,0.8s						
HYB	**Hyderabad**	**14.72**	**244**	⇑*e*P	**P**	**11 18 35.0**	**-1.0**
	comp=Z,100nm,0.8s						
HYB				*e*		11 18 47.0	
HYB				*e*S	**S**	**11 21 08.0**	**-12**
HYB	**Hyderabad**	**14.72**	**244**	⇑*i*P	**P**	**11 18 35.0**	**-1.0**
	comp=Z,100nm,0.8s						
HYB				*e*		11 18 47.0	
HYB				*e*		11 21 08.0	
HYB				*e*S	**S**	**11 21 22.0**	**+2.0**
RTK	**Rohtak**	**14.94**	**291**	*i* P	**P**	**11 18 38.0**	**-0.8**
RTK				*e*		11 21 16.1	
LZH	**Lanzhou**	**15.17**	**38**	⇓*e*P	**P**	**11 18 40.5**	**-1.3**
LZH				AP		11 18 49.0	
LZH				XP		11 18 55.0	
LZH				AMB	AMB		
	comp=Z,352nm,1.3s						
LZH				AMB	AMB		
	comp=Z,1μm,4.6s						
LZH				LR	LR		
	comp=E,1μm,9.2s						
LZH				LR	LR		
	comp=Z,2μm,10.1s						
SDNR	**Sundarnagar**	**15.27**	**300**	*e*P	**P**	**11 18 43.0**	**-0.1**
SDNR				*e*		11 20 34.2	
KHET	**Khetri**	**15.27**	**287**	*e*P	**P**	**11 18 41.3**	**-1.9**
KHET				*i* P		11 18 42.3	
KHET				*e*S	**S**	**11 21 20.9**	**-12**
BHK	**Bhakra**	**15.67**	**300**	*e*	**P**	**11 18 45.3**	**-3.0**
BHK				*e*		11 20 34.5	
LATR	**Latur**	**15.93**	**251**	*e*P	**P**	**11 18 52.4**	**+0.7**
LATR				*e*		11 21 10.5	
GTA	**Gaotai**	**16.11**	**21**	P	**P**	**11 18 50.9**	**-3.0**
GTA				AP		11 18 58.8	
GTA				XP		11 19 05.8	
GTA				S	**S**	**11 21 44.9**	**-7.6**
GTA				LG1		11 23 17.3	
GTA				LG2		11 23 41.3	
GTA				AMB	AMB		
	comp=Z,28nm,1.1s						
GTA				AMB	AMB		
	comp=Z,148nm,7.2s						
GTA				LR	LR		
	comp=N,2μm,12.2s						
GTA				LR	LR		
	comp=E,2μm,10.6s						
GTA				LR	LR		

	comp=Z,2µm,19.8s						
AJM	**Ajmer**	16.13	281	⇓*i*P	P	11 18 52.0	-2.2
ENH	**Enshi**	16.23	66	*e*P	P	11 18 51.0	-4.5
	comp=Z,247nm,0.7s						
ENH				*e*S	S	11 21 54.2	-1.2
QIZ	**Qiongzhong**	17.12	105	⇑*i*P	P	11 19 08.8	+2.0
QIZ				S	S	11 22 16.5	+0.7
QIZ				XS		11 22 30.3	
QIZ				AMB	AMB		
	comp=Z,98nm,1.3s						
QIZ				LR	LR		
	comp=N,733nm,13.3s						
QIZ				LR	LR		
	comp=Z,1µm,12.6s						
QIZ	**Qiongzhong**	17.12	105	*e*P	P	11 19 06.8	0.0
	comp=Z,270nm,1.4s						
XAN	**Xi’an**	17.24	53	P	P	11 19 10.0	+1.7
XAN				AP		11 19 20.9	
XAN				AMB	AMB		
	comp=Z,182nm,1.0s						
POO	**Poona**	18.23	254	⇓*i*P	P	11 19 21.5	+0.7
	comp=Z,90nm,1.0s						
POO				*e*S	S	11 22 32.0	-9.3
BHV	**Bhavnagar**	18.81	266	*e*P	P	11 19 29.0	+1.2
SNG	**Songkhla**	18.98	154	P	P	11 19 30.0	+0.2
	comp=Z,180nm,1.0s						
BOM	**Bombay**	19.02	257	*e*	P	11 19 30.8	+0.5
BOM				*e*S	S	11 22 48.9	-10
GZH	**Guangzhou**	19.24	90	P	P	11 19 34.0	+1.1
GZH				S	S	11 23 06.5	+2.5
GZH				LR	LR		
	comp=N,5µm,13.9s						
GZH				LR	LR		
	comp=E,4µm,16.0s						
GZH				LR	LR		
	comp=Z,7µm,15.7s						
JASL	**Jaisalmer**	19.49	282	*e*P	P	11 19 39.5	+3.7
JASL				*e*		11 19 41.2	
WMQ	**Urumqi**	19.62	350	*e*P	P	11 19 39.3	+2.2
WHN	**Wuhan**	20.37	68	*e*P	P	11 19 45.6	+0.3
WHN				LR	LR		
	comp=Z,1µm,13.3s,MS4.4						
PALK	**Pallekele**	20.48	215	*e*P	P	11 19 49.1	+2.5
	comp=Z,26nm,0.8s						
IPM	**Ipoh**	21.51	156	P	P	11 19 57.9	+0.8
TRD	**Trivandrum**	21.70	225	*e*	P	11 20 03.6	+4.7
BTO	**Baotou**	21.80	38	*e*P	P	11 19 58.0	-1.8
BTO				S	S	11 23 47.8	-7.8
BTO				AMB	AMB		
	comp=Z,64nm,0.8s,mb5.1						
BTO				LR	LR		
	comp=N,840nm,5.2s						
BTO				LR	LR		
	comp=E,756nm,7.9s						
HHC	**Hu-ho-hao-te**	22.84	40	⇓P	P	11 20 10.3	+0.1
HHC				AP		11 20 21.1	
HHC				XP		11 20 24.8	
HHC				PP	PP	11 20 40.3	+0.9
HHC				PCP	PcP	11 24 04.1	+1.5
HHC				S	S	11 24 16.1	+1.3
HHC				XS		11 24 29.3	
HHC				SCP		11 27 35.1	
HHC				PCS		11 27 41.1	
HHC				AMB	AMB		
	comp=Z,32nm,1.4s,mb4.6						
HHC				LR	LR		
	comp=N,1µm,7.2s						
HHC				LR	LR		
	comp=E,731nm,8.4s						
HHC				LR	LR		
	comp=Z,690nm,16.8s,MS4.2						
QZH	**Quanzhou**	23.80	84	⇑*i*P	P	11 20 19.1	-0.6
QZH				S	S	11 24 30.0	-1.8
QZH				AMB	AMB		
	comp=Z,140nm,1.2s,mb5.3						
QZH				LR	LR		
	comp=N,2µm,10.5s						
QZH				LR	LR		
	comp=E,250nm,3.9s						
QZH				LR	LR		
	comp=Z,2µm,20.4s						
TIA	**Tai’an**	24.25	56	P	P	11 20 25.6	+1.7
NJ2	**Nanjing**	24.45	66	*e*P	P	11 20 25.9	0.0
NJ2				AP		11 20 37.0	
NJ2				XP		11 20 43.1	
NJ2				PP	PP	11 21 03.4	+1.9
NJ2				AMB	AMB		
	comp=Z,530nm,1.1s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,1µm,4.2s						
NJ2				LR	LR		
	comp=N,3µm,16.7s,MS5.0						
NJ2				LR	LR		
	comp=E,3µm,19.2s,MS5.0						
NJ2				LR	LR		
	comp=Z,3µm,16.6s,MS4.9						
KGM	**Kluang**	24.76	153	P	P	11 20 30.4	+1.4
BJT	**Baijiatuau**	25.25	47	*e*P	P	11 20 34.1	+0.7
BJT				pmax	pmax		
	comp=Z,43nm,0.7s						
BJT	**Baijiatuau**	25.25	47	*e*P	P	11 20 34.1	+0.6
	comp=Z,43nm,0.7s,mb5.1						
BJI	**Beijing**	25.26	47	*e*P	P	11 20 34.6	+1.0
BJI				XP	sP	11 20 45.9	+7.8
BJI				AMB	AMB		
	comp=Z,34nm,1.0s,mb4.8						
BJI				AMB	AMB		
	comp=Z,143nm,3.6s						
BJI				LR	LR		
	comp=N,947nm,10.8s,MS4.5						
BJI				LR	LR		
	comp=E,452nm,14.8s,MS4.5						
BJI				LR	LR		
	comp=Z,778nm,21.2s						
SONM	**Songino Array**	25.78	22	P	P	11 20 39.2	+0.9
	comp=Z,72nm,0.6s,mb5.3,baz=206,slow=8.3,SNR=223						
ULN	**Ulaanbaatar**	26.03	23	⇓*e*P	P	11 20 41.2	+0.5
ULN				pmax	pmax		
	comp=Z,88nm,0.6s,mb5.5						
ULN	**Ulaanbaatar**	26.03	23	⇓*e*P	P	11 20 41.2	+0.5
	comp=Z,88nm,0.6s,mb5.5						
KURK	**Kurchatov**	28.22	341	P	P	11 20 57.0	-3.6
KURK				pmax	pmax		
	comp=Z,3µm,0.9s						
KURK	**Kurchatov**	28.22	341	P	P	11 20 57.0	-3.6
	comp=Z,3µm,0.9s						
KKM	**Kota Kinabalu**	29.34	125	P	P	11 21 11.7	+0.6
ZAL	**Zalesovo**	29.91	351	LR	LR	11 35 33.9	
	comp=Z,371nm,20.2s,MS4.0,baz=292,slow=41						
SNY	**Shenyang**	31.07	49	⇑P	P	11 21 25.8	-0.3
TSM	**Tawau**	31.73	125	P	P	11 21 31.9	-0.4
JOW	**Kunigami**	32.37	78	P	P	11 21 36.4	-1.3
	comp=Z,35nm,0.6s,mb5.4,baz=305,slow=6.0,SNR=12						
JOW				LR	LR	11 36 06.1	
	comp=Z,898nm,21.2s,MS4.4,baz=274,slow=39						
HIA	**Hailar**	32.67	34	*e*P	P	11 21 39.6	-0.4
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
HIA	**Hailar**	32.67	34	*e*P	P	11 21 39.6	-0.4
	comp=Z,16nm,0.8s,mb5.0						
CN2	**Changchun**	33.13	46	*e*P	P	11 21 43.5	-0.7
CN2				*e*XP	sP	11 21 55.5	+6.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS4.8						
CN2				LR	LR		
	comp=E,700nm,15.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,17.0s,MS4.7						
SCPH	**Surigao**	34.75	109	⇓*e*P	P	11 21 58.4	-0.1
MDJ	**Mudanjiang**	36.19	47	P	P	11 22 09.3	-1.1
MDJ				AP	pP	11 22 20.3	+6.7
MDJ				XP	sP	11 22 25.8	+11
MDJ				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,61nm,3.8s						
MDJ				LR	LR		
	comp=N,1µm,17.0s,MS4.8						
MDJ				LR	LR		
	comp=E,402nm,12.5s,MS4.8						
MDJ				LR	LR		
	comp=Z,434nm,18.4s						
MDJ	**Mudanjiang**	36.19	47	*e*P	P	11 22 09.4	-1.0
	comp=Z,13nm,1.1s,mb4.8						
CLNS	**Chul’man**	39.91	27	*e*P	P	11 22 42.4	+1.0
CLNS				pmax	pmax		
	comp=N,26nm,0.8s						
CLNS				pmax	pmax		
	comp=E,30nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.3						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
MAJO	**Matsushiro**	40.90	62	*e*P	P	11 22 49.8	+0.1
MAJO				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.9						
MAJO	**Matsushiro**	40.90	62	*e*P	P	11 22 49.8	+0.1
	comp=Z,34nm,1.0s,mb4.9						
MAT	**Matsushiro**	40.90	62	*e*P	P	11 22 50.0	+0.3
MAT				S	S	11 28 54.0	-7.0
MAT				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
MAT	**Matsushiro**	40.90	62	*e*P	P	11 22 50.0	+0.3
	comp=Z,6.8nm,0.7s,mb4.4						
MAT				S	S	11 28 54.0	-7.0
MAT	**Matsushiro**	40.90	62	P	P	11 22 49.9	+0.2
MAT				*e*S	S	11 28 53.6	-7.4
ASAJ	**Asahikawa**	45.08	51	P	P	11 23 24.6	+0.9
	comp=Z,8.5nm,0.8s,mb4.6,baz=244,slow=21,SNR=4.1						
YSS	**Yuzh-Sakhalins**	45.68	48	⇑*i*P	P	11 23 28.0	-0.4
YSS				*e*		11 23 41.0	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	45.68	48	*e*P	P	11 23 28.6	+0.3
	comp=Z,46nm,1.2s,mb5.3						
YSS				*e*		11 23 41.4	
MBWA	**Marble Bar**	52.64	147	*e*P	P	11 24 21.5	-0.9
	comp=Z,19nm,0.7s,mb5.1						
MA2	**Magadan**	53.25	33	*e*P	P	11 24 25.4	-1.0
MA2				*e*		11 24 38.8	
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MA2				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
MA2	**Magadan**	53.25	33	*e*P	P	11 24 24.4	-2.1
	comp=Z,18nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	53.36	139	⇑*i*P	P	11 24 26.8	-1.0
	comp=Z,6.8nm,0.5s,mb4.8						
KAKA	**Kakadu**	53.85	129	⇑*i*P	P	11 24 29.3	-2.1
	comp=Z,8.9nm,0.7s,mb4.8						
AKASG	**Malin Array Be**	54.53	316	P	P	11 24 35.8	-0.2
	comp=Z,7.7nm,0.4s,mb5.0,baz=79,slow=6.5,SNR=14						
SEY	**Seymchan**	54.87	29	*PP	pP	11 24 55.0	+13
SEY						11 25 43.9	
SEY						11 26 43.9	
SEY				PPP	PPP	11 27 59.3	+4.6
SEY				*e*S	S	11 32 16.9	-0.8
SEY				*e*SS	SS	11 35 58.3	-2.6
SEY				*e*SSS	SSS	11 38 04.0	+3.4
SEY				MLR	MLR		
	comp=Z,1µm,22.0s,MS4.9						
SEY				MLR	MLR		
	comp=N,700nm,26.0s,MS4.8						
SEY				MLR	MLR		
	comp=E,700nm,28.0s,MS4.8						
JOF	**Joensuu**	55.33	331	*e*p	P	11 24 41.4	-0.3
	comp=E,11nm,0.3s,mb5.4						
APA	**Apatity**	55.84	337	⇑*i*P	P	11 24 44.6	-0.7
APA				*i*		11 24 58.4	
APA				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.5						
APA				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.8						
MLR	**Muntele Rosu**	56.66	309	P	P	11 24 52.1	+0.6
	comp=Z,14nm,0.7s,mb5.1,baz=105,slow=3.2,SNR=4.0						
KAF	**Kangasniemi**	57.44	329	*e*p	P	11 24 53.9	-2.9
	comp=Z,0.8nm,0.3s,mb4.2						
KAF	**Kangasniemi**	57.44	329	*e*P	P	11 24 53.9	-2.9
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	57.45	329	P	P	11 24 57.0	+0.2
	comp=Z,25nm,0.8s,mb5.3,baz=91,slow=8.0,SNR=7.5						
SUW	**Suwalki**	58.38	320	*e*P	P	11 25 03.4	0.0
KEV	**Kevo**	58.72	338	*e*p	P	11 25 04.7	-0.9
	comp=Z,1.9nm,0.3s,mb4.6						
KEV	**Kevo**	58.72	338	*e*P	P	11 25 04.7	-0.9
KEV				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
KMBO	**Kilima Mbogo**	59.16	253	P	P	11 25 10.6	+1.1
	comp=Z,1.7nm,0.6s,mb4.2,baz=45,slow=21,SNR=5.5						
ARCES	**ARCESS Array B**	59.18	338	P	P	11 25 08.6	-0.3
	comp=Z,23nm,0.8s,mb5.2,baz=103,slow=6.6,SNR=12						
KTK1	**Kautokeino**	59.87	337	*e*P	P	11 25 13.6	+0.1
WRA	**Warramunga Arr**	60.19	134	P	P	11 25 15.7	-0.8
	comp=Z,21nm,0.6s,mb5.3,baz=322,slow=7.4,SNR=279						
WRAB	**Tennant Creek**	60.19	134	*e*P	P	11 25 15.6	-0.8
WRAB				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.6						
WRAB	**Tennant Creek**	60.19	134	*e*P	P	11 25 15.6	-0.9
	comp=Z,40nm,0.6s,mb5.6						
WB2	**Warramunga Arr**	60.20	134	⇑*i*P	P	11 25 15.7	-0.8
MUN	**Mundaring**	60.63	157	*e*P	P	11 25 18.5	-0.8
	comp=Z,17nm,0.7s,mb5.3						
MUN	**Mundaring**	60.63	157	*e*P	P	11 25 18.5	-0.8
MUN				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.3						
KLBR	**Kellerberrin**	60.86	155	*e*P	P	11 25 19.6	-1.2
	comp=Z,403nm,1.5s						
BILL	**Bilibino**	61.47	24	*i*	P	11 25 24.4	-0.1
BILL				*e*		11 25 34.0	
NWAO	**Narrogin (SRO)**	61.86	156	P	P	11 25 26.4	-1.2
	comp=Z,5.3nm,0.6s,mb4.8,baz=323,slow=4.5,SNR=7.1						
MORC	**Moravsky Berou**	62.04	315	*e*P	P	11 25 28.4	-0.2
MORC				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
MORC	**Moravsky Berou**	62.04	315	*e*P	P	11 25 28.4	-0.2
	comp=Z,7.6nm,0.7s,mb4.9						
ASPA	**Alice Springs**	62.59	137	⇑*i*P	P	11 25 32.3	-0.3
ASAR	**Alice Springs**	62.59	137	P	P	11 25 32.2	-0.4
	comp=Z,20nm,0.7s,mb5.3,baz=318,slow=6.7,SNR=265						
KSP	**Ksiaz**	62.73	316	*e*P	P	11 25 33.5	+0.4
MOR8	**Moi Rana**	62.96	334	*e*P	P	11 25 33.6	-0.8
	comp=Z,55nm,0.6s,mb5.9						
MOR8	**Moi Rana**	62.96	334	*e*P	P	11 25 33.6	-0.8
MOR8				AMb	AMB	11 25 34.9	
	comp=Z,55nm,0.6s,mb5.8						
PMG	**Port Moresby**	63.18	115	P	P	11 25 36.3	-0.3
PMG	**Port Moresby**	63.18	115	P	P	11 25 36.2	-0.3
	comp=Z,12nm,0.7s,mb5.1,baz=32,slow=7.5,SNR=6.2						
LOF	**Lofoten**	63.33	336	*e*P	P	11 25 38.5	+1.7
STOK	**Stokkvaagen**	63.53	334	*e*P	P	11 25 38.3	+0.1
	comp=Z,48nm,0.9s,mb5.5						
STOK	**Stokkvaagen**	63.53	334	*e*P	P	11 25 38.3	+0.1
STOK				AMb	AMB	11 25 39.1	
	comp=Z,48nm,0.9s,mb5.5						
BRG	**Berggiesshubel**	64.20	316	*i* P	P	11 25 43.8	+1.0
BRG				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
BRG	**Berggiesshubel**	64.20	316	*i* P	P	11 25 43.8	+1.0
	comp=Z,14nm,0.7s,mb5.1						
NB2	**NORSAR Subarra**	64.61	328	P	P	11 25 44.8	-0.5
	comp=Z,28nm,0.8s,mb5.3,baz=85,slow=6.5						
NB2	**NORSAR Subarra**	64.61	328	P	P	11 25 44.8	-0.5
NB2				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
NB2	**NORSAR Subarra**	64.61	328	P	P	11 25 44.8	-0.5
	baz=85,slow=6.5						
NOA	**NORSAR Array B**	64.61	328	P	P	11 25 45.4	+0.1
	comp=Z,22nm,0.7s,mb5.3,baz=85,slow=6.5,SNR=22						
GERES	**GERESS Array B**	64.65	314	P	P	11 25 46.9	+1.1
	comp=Z,11nm,0.6s,mb5.0,baz=77,slow=5.7,SNR=11						
KHC	**Kasperske Hory**	64.69	315	*e*P	P	11 25 46.5	+0.5
CLL	**Collm**	64.73	317	P	P	11 25 47.0	+0.8
CLL				*i*		11 28 05.6	
CLL				*e*PP	PP	11 28 11.0	+0.3
TRON	**Trondheim**	64.77	331	*e*P	P	11 25 47.0	+0.7
FX1	**Attu Island--F**	65.37	41	P	P	11 25 50.2	-0.1
	comp=Z,14nm,0.6s,mb5.2,baz=309,slow=13,SNR=5.0						
DOMB	**Dombas**	65.53	329	*e*P	P	11 25 52.0	+0.7
	comp=Z,50nm,0.9s,mb5.5						
DOMB	**Dombas**	65.53	329	*e*P	P	11 25 52.0	+0.7
DOMB				AMb	AMB	11 25 52.6	
	comp=Z,50nm,0.9s,mb5.5						
DOMB				*e*pP	pP	11 26 02.6	+8.1
MOL	**Molde**	66.17	330	*e*P	P	11 25 56.7	+1.4
VAE	**Valguarnera**	66.34	302	LR	LR	11 55 35.3	
	comp=Z,297nm,20.7s,MS4.5,baz=272,slow=36						
DAVOX	**Davos**	67.56	313	P	P	11 26 05.5	+1.1
	comp=Z,8.2nm,0.7s,mb4.9,baz=122,slow=13,SNR=2.2						
CTA	**Charters Tower**	68.67	125	*e*P	P	11 26 11.5	-0.3
	comp=Z,12nm,1.1s,mb4.7						
CTA	**Charters Tower**	68.67	125	P	P	11 26 11.5	-0.3
	comp=Z,13nm,1.0s,mb4.8,baz=334,slow=10,SNR=5.5						
STKA	**Stephens Creek**	73.19	138	⇑*i*P	P	11 26 38.2	-0.7
	comp=Z,5.6nm,0.8s,mb4.5						
STKA	**Stephens Creek**	73.19	138	P	P	11 26 38.6	-0.3
	comp=Z,6.6nm,0.7s,mb4.7,baz=319,slow=6.6,SNR=13						
TOO	**Toolangi**	79.42	140	*e*P	P	11 27 14.8	+1.0
	comp=Z,0.3nm,0.8s						
ILAR	**Eielson Array**	80.00	22	P	P	11 27 17.8	+1.4
	comp=Z,20nm,0.8s,mb5.1,baz=304,slow=5.2,SNR=16						
ILAR				PP	PP	11 30 16.5	-3.3
	comp=Z,2.6nm,0.8s,baz=296,slow=4.7,SNR=4.3						
ILAR	**Eielson Array**	80.00	22	P	P	11 27 17.8	+1.4
ILAR				PP	PP	11 30 16.5	-3.3
CNB	**Canberra Magne**	80.32	136	⇑*i*P	P	11 27 19.3	+0.6
	comp=Z,503nm,1.4s						
PMR	**Palmer**	81.09	25	*e*P	P	11 27 22.9	+0.7
	comp=Z,58nm,0.9s,mb5.5						
LBTB	**Lobatse**	81.25	238	P	P	11 27 25.4	+1.7
	comp=Z,3.6nm,0.5s,mb4.6,baz=80,slow=4.7,SNR=12						
LBTB	**Lobatse**	81.25	238	*e*P	P	11 27 25.2	+1.4
	comp=Z,8.2nm,0.8s,mb4.7						
INK	**Inuvik**	81.51	16	P	P	11 27 25.2	+1.0
	comp=Z,24nm,0.8s,mb5.2,baz=299,slow=3.7,SNR=14						
INK	**Inuvik**	81.51	16	*e*P	P	11 27 24.9	+0.6
	comp=Z,20nm,0.5s,mb5.3						
MENT	**Mentasta**	82.25	23	*e*P	P	11 27 26.8	-1.4
BOSA	**Boshof**	83.42	235	*e*P	P	11 27 36.4	+1.5
	comp=Z,6.1nm,0.8s,mb4.7						
YKA	**Yellowknife Ar**	90.64	12	PKKP	PKKP	11 45 32.8	+6.4
	comp=Z,0.1nm,0.7s,baz=135,slow=2.6,SNR=2.6						
ANMO	**Albuquerque**	118.20	18	PKP	PKPdf	11 33 55.7	-0.9
	comp=Z,0.3nm,0.4s,baz=271,slow=9.5,SNR=4.3						
ANMO	**Albuquerque**	118.20	18	PKP	PKPdf	11 33 55.7	-0.9
JCT	**Junction City**	124.07	13	*e*PKP	PKPdf	11 34 06.8	-1.3
TXAR	**Lajitas Array**	124.27	17	PKP	PKPdf	11 34 07.6	-0.9
	comp=Z,1.4nm,0.7s,baz=244,slow=0.4,SNR=15						
SDV	**Santo Domingo**	142.88	331	PKhKP		11 34 38.9	
	comp=Z,6.7nm,0.6s,baz=94,slow=3.0,SNR=10						
SDV				PKP	PKPdf	11 34 44.6	+1.1
	comp=Z,3.5nm,0.7s,baz=36,slow=4.9,SNR=4.0						
USHA	**Ushuaia**	146.56	200	PKPbc	PKPbc	11 34 49.4	+2.6
	comp=Z,6.5nm,0.8s,baz=225,slow=1.4,SNR=3.2						
ROSC	**El Rosal**	148.05	334	PKPbc	PKPdf	11 34 55.8	+3.4
	comp=Z,12nm,0.6s,baz=270,slow=2.0,SNR=6.0						
SAML	**Samuel**	152.01	299	*e*PKPbc	PKPdf	11 35 04.2	+5.8

MOS ***15*** *11:16:14.1±0.9, 41.82N×79.37E, h23^{km}, mb5.4/95, MS4.7/38, Error ellipse: s-maj=6.2km s-min=3.6km az=130.3*

BJI ***15*** *11:16:15.9, 41.67N×79.57E, h29^{km}, mB5.0, mb4.8, ML5.5, Ms4.8, Msz4.6*

NEIC ***15*** *11:16:16.3±0.2, 41.75N×79.40E, mb5.3/103, MS4.8/81, Error ellipse: s-maj=4.7km s-min=3.2km az=182.0*

NEIC Felt [III] at Almaty, Kazakhstan.

NNC ***15*** *11:16:17.3±5.1, 41.88N×79.30E, h4^{km}±22^{km}, mpv5.2, Error ellipse: s-maj=45.7km s-min=14.9km az=144.0*

IDC ***15*** *11:16:17.7±2.1, 41.77N×79.43E, h39^{km}±17^{km}, mb4.7/35, mb1 4.9/37, mb1mx4.8/38, mbtmp5.0/37, ML4.6/2, MS4.5/17, Ms1 4.5/17, ms1mx4.3/28, Error ellipse: s-maj=12.7km s-min=10.1km az=178.0*

ISC 15 11:16:14.6±0.2, **41.72N**±0.03×**79.40E**±0.02, **h30**^{km}, **h30**^{km}±1.0^{km}**:pP-P, n515,** σ1^{s}**02**/468, **mb5.2**/153, **MS4.7**/117, **76C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	2.39	311	*i* PN	Pn	11 16 56.5	+4.0
AAA				*i* S	Sn	11 17 28.7	+7.6
ULHL	**Ulahol**	2.41	284	P	Pn	11 16 56.0	+3.0
	SNR=2926						
TKM2	**Tokmak 2**	3.07	294	P	Pn	11 17 05.2	+3.0
	SNR=1395						
KZA	**Kyzart**	3.12	278	P	Pn	11 17 06.0	+3.0
	SNR=516						
KSH	**Kashi**	3.42	231	⇓*i*P	Pn	11 17 11.3	+4.1
KSH				S	Sn	11 17 54.8	+7.7
KSH				Smax			
	comp=N,12µm,1.1s						
KSH				Smax			
	comp=E,15µm,0.8s						
KBK	**Karagaybulak**	3.44	287	P	Pn	11 17 10.6	+3.1
	SNR=312						
CHMS	**Chumysh**	3.67	292	P	Pn	11 17 13.0	+2.2
	SNR=170						
UCH	**Uchtor**	3.68	280	P	Pn	11 17 13.5	+2.6
	SNR=362						
FRU	**Bishkek**	3.72	289	⇑*i*PN	Pn	11 17 14.0	+2.5
FRU				*i*		11 17 25.0	
FRU				*i* S	Sn	11 18 08.5	+14
FRU				pmax	pmax		
	comp=Z,6µm,0.8s						
FRU				smax			
	comp=E,33µm,1.6s						
AAK	**Ala-Archa**	3.76	286	⇑Pn	Pn	11 17 14.6	+2.6
	comp=E,286nm,0.5s						
AAK				⇑Pg	Pn	11 17 25.0	+13
	comp=E,2µm,0.8s						
AAK				⇑Lg		11 18 11.3	
	comp=E,6µm,0.8s						
AAK	**Ala-Archa**	3.76	286	P	Pn	11 17 14.7	+2.6
	SNR=450						
AAK	**Ala-Archa**	3.76	286*c*	*i*PN	Pn	11 17 13.7	+1.6
AAK	**Ala-Archa**	3.76	286	*e*Pn	Pn	11 17 13.7	+1.7
AAK				*e*Sn	Sn	11 17 52.5	-3.3
USP	**Ospenovka**	3.94	295	P	Pn	11 17 16.6	+1.9
	SNR=308						
AML	**Almayashu**	4.28	277	P	Pn	11 17 21.2	+1.7
	SNR=164						
EKS2	**Erkin-Say**	4.28	285	P	Pn	11 17 21.7	+2.2
	SNR=75						
MK31	**Makanchi Array**	5.48	21	⇑Pn	Pn	11 17 38.7	+2.3
	comp=E,54nm,0.2s,baz=198,slow=12,SNR=1421						
MK31				⇑Pg	Pn	11 17 53.6	+17
	comp=E,197nm,0.7s,baz=203,slow=14,SNR=4.3						
MK31				⇓Sn	Sn	11 18 41.6	+2.5
	comp=E,1µm,0.8s,baz=198,slow=19,SNR=7.6						
MK31				⇑Lg		11 19 07.6	
	comp=E,770nm,0.7s,baz=200,slow=22,SNR=5.7						
MKAR	**Makanchi Array**	5.48	21	*e*PN	Pn	11 17 38.6	+2.2
MKAR						11 18 42.6	
MKAR				pmax	pmax		
	comp=Z,76nm,0.5s						
MKAR				smax			
	comp=E,36nm,0.3s						
WMQ	**Urumqi**	6.45	68	P	Pn	11 17 51.4	+1.3
WMQ				S	Sn	11 19 03.4	-0.1
WMQ				Smax			
	comp=N,2µm,1.0s						
WMQ				Smax			
	comp=E,1µm,1.1s						
WMQ				LR	LR		
	comp=N,4µm,10.0s						
WMQ				LR	LR		
	comp=E,1µm,10.0s						
WMQ				LR	LR		
	comp=Z,2µm,9.0s						
KURK	**Kurchatov**	9.01	357	⇓Pn	P	11 18 25.8	0.0
	comp=Z,74nm,0.8s,baz=185,slow=10,SNR=154						
KURK				⇑Lg		11 20 56.6	
	comp=Z,2µm,1.1s,baz=162,slow=15,SNR=4.9						
KURK	**Kurchatov**	9.01	357	*i* P	P	11 18 24.7	-1.1
KURK				pmax	pmax		
	comp=Z,74nm,0.8s						
KURK	**Kurchatov**	9.01	357	*e*P	P	11 18 25.3	-0.5
CHCP	**Chirah Chowk**	9.40	213	P	P	11 18 31.0	-0.2
DLH	**Dalhousie**	9.56	198	*e*	P	11 18 33.0	-0.4
DLH				*e*	Sn	11 20 13.0	-7.9
THN	**Thein Dam**	9.73	199	*e*	P	11 18 33.0	-2.6
THN				*e*	Sn	11 20 21.7	-3.2
CEP	**Cherat**	9.86	219	⇑P	P	11 18 37.0	-0.5
PONG	**Pong**	10.13	197	*e*	P	11 18 39.5	-1.7
PONG				*e*		11 20 28.5	

SMLA	**Simla**	**10.72**	**190**	⇓*i*	**P**	**11 18 51.8**	**+2.4**
SMLA				*i*		11 20 53.2	
THW	**Thamme Wali**	**10.80**	**217**	P	**P**	**11 18 48.6**	**-1.7**
SARP	**Sargodha**	**11.16**	**211**	P	**P**	**11 18 52.7**	**-2.6**
SBDP	**Sheikh Budin**	**11.64**	**219**	P	**P**	**11 19 01.0**	**-0.8**
ZAL	**Zalesovo**	**12.74**	**15**	Pn	**P**	**11 19 14.4**	**-2.1**
	comp=Z,7.4nm,0.3s,baz=272,slow=12,SNR=68						
ZAL				Sn	**S**	**11 21 31.9**	**-6.4**
	comp=Z,17nm,0.3s,baz=322,slow=19,SNR=11						
ZAL				Lg		11 23 05.5	
	comp=Z,1.1nm,0.3s,baz=342,slow=16,SNR=2.0						
BVA0	**Borovoye Array**	**12.84**	**335**	⇑Pn	**P**	**11 19 15.6**	**-2.2**
	comp=Z,31nm,0.8s						
BVA0	**Borovoye Array**	**12.84**	**335**	P	**P**	**11 19 15.5**	**-2.2**
BVA0				pmax	pmax		
	comp=Z,49nm,1.0s						
BVAR	**Borovoye Array**	**12.84**	**335**	Pn	**P**	**11 19 15.9**	**-1.9**
	comp=Z,4.1nm,0.3s,baz=140,slow=12,SNR=88						
BVAR				Sn	**S**	**11 21 32.2**	**-8.4**
	comp=Z,1.6nm,0.3s,baz=141,slow=18,SNR=2.5						
BVAR				Lg		11 23 01.0	
	comp=Z,11nm,0.3s,baz=168,slow=27,SNR=5.1						
BRVK	**Borovoye**	**12.90**	**335**	⇑*e*P	**P**	**11 19 16.4**	**-2.2**
NVS	**Novosibirsk**	**13.37**	**10**	*e*P	**P**	**11 19 22.8**	**-1.9**
NVS				*e*		11 21 48.8	
MOY	**Mondy**	**17.78**	**49**	*e*P	**P**	**11 20 22.6**	**+1.3**
MOY				pmax	pmax		
	comp=Z,69nm,2.4s						
ZAK	**Zakamensk**	**18.64**	**54**	*e*P	**P**	**11 20 32.0**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,62nm,1.0s						
TLY	**Talaya**	**19.30**	**51**	*e*P	**P**	**11 20 39.7**	**0.0**
TLY				*e*S	**S**	**11 24 07.9**	**-2.3**
TLY				pmax	pmax		
	comp=Z,21nm,1.4s						
TLY				MLR	MLR		
	comp=Z,852nm,16.0s						
TLY	**Talaya**	**19.30**	**51**	*e*P	**P**	**11 20 39.4**	**-0.3**
	comp=Z,19nm,0.9s						
SVE	**Sverdlovsk**	**19.35**	**328**	⇑*i*P	**P**	**11 20 38.6**	**-1.7**
SVE				*e*		11 24 14.0	
SVE				pmax	pmax		
	comp=Z,124nm,2.0s						
SVE				MLR	MLR		
	comp=N,4µm,14.0s						
SVE				MLR	MLR		
	comp=E,4µm,14.0s						
SVE				MLR	MLR		
	comp=Z,8µm,14.0s						
LZH	**Lanzhou**	**19.81**	**98**	*e*P	**P**	**11 20 46.5**	**+1.0**
LZH				AP		11 20 54.0	
LZH				XP		11 20 57.5	
LZH				PP	PP	11 21 05.5	+1.3
LZH				*e*S	**S**	**11 24 22.5**	**+1.1**
LZH				XS		11 24 35.0	
LZH				SS	SS	11 24 50.0	+0.8
LZH				AMB	AMB		
	comp=Z,81nm,1.2s						
LZH				AMB	AMB		
	comp=Z,300nm,4.9s						
LZH				LR	LR		
	comp=E,2µm,10.7s						
LZH				LR	LR		
	comp=Z,2µm,11.6s						
IRK	**Irkutsk**	**19.86**	**50**	*e*P	**P**	**11 20 45.0**	**-1.0**
IRK				pmax	pmax		
	comp=Z,86nm,1.6s						
SONM	**Songino Array**	**20.05**	**63**	P	**P**	**11 20 48.2**	**+0.2**
	comp=Z,38nm,0.6s,baz=263,slow=11,SNR=59						
SONM				PP	PP	11 21 03.3	-4.2
	comp=Z,40nm,0.7s,baz=261,slow=11,SNR=7.7						
SONM	**Songino Array**	**20.05**	**63**	P	**P**	**11 20 48.2**	**+0.2**
SONM				PP	PP	11 21 03.3	-4.2
ULN	**Ulaanbaatar**	**20.50**	**63**	*i* P	**P**	**11 20 53.6**	**+1.0**
ULN				MLR	MLR		
	comp=Z,179nm,20.0s						
SOKR	**Solikamsk**	**22.71**	**330**	*c* *i*P	**P**	**11 21 14.8**	**+0.1**
SOKR				pmax	pmax		
	comp=Z,230nm,0.9s,mb5.6						
SOKR				MLR	MLR		
	comp=Z,4µm,17.0s,MS4.9						
KMI	**Kunming**	**25.44**	**123**	P	**P**	**11 21 42.0**	**+0.6**
KMI				AP	pP	11 21 51.3	+1.0
KMI				XP	sP	11 21 56.3	+2.0
KMI				PP	PP	11 22 23.6	+2.9
KMI				S	**S**	**11 26 04.6**	**+0.9**
KMI				XS		11 26 19.9	
KMI				SS	SS	11 27 07.5	+0.8
KMI				AMB	AMB		
	comp=Z,44nm,0.9s,mb5.0						
KMI				LR	LR		
	comp=N,1µm,18.9s,MS4.4						
KMI				LR	LR		
	comp=E,674nm,19.7s,MS4.4						
KMI				LR	LR		
	comp=Z,1µm,18.9s,MS4.5						
TIY	**Taiyuan**	**25.63**	**88**	*e*P	**P**	**11 21 39.4**	**-3.6**
TIY				S	**S**	**11 26 07.0**	**+0.3**
TIY				LR	LR		
	comp=N,1µm,7.0s						
TIY				LR	LR		
	comp=Z,500nm,6.0s						
MTA	**Mtatsminda**	**25.74**	**282**	P	**P**	**11 21 46.7**	**+2.7**
TI2	**Plekhanov**	**25.76**	**282**	*i* P	**P**	**11 21 45.0**	**+0.8**
TI2				*i*	pP	11 21 54.0	+0.9
TI2				*e*S	**S**	**11 26 10.8**	**+1.9**
TI2				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.0						
TI2				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.5						
GNI	**Garni**	**26.13**	**278**	⇑*e*P	**P**	**11 21 49.1**	**+1.5**
GNI				pmax	pmax		
	comp=Z,111nm,0.9s						
GNI				MLR	MLR		
	comp=Z,780nm,19.0s						
GNI	**Garni**	**26.13**	**278**	P	**P**	**11 21 49.2**	**+1.5**
	comp=Z,45nm,0.7s,mb5.1,baz=22,slow=1.8,SNR=23						
GNI				LR	LR	11 33 41.8	
	comp=Z,735nm,19.8s,MS4.2,baz=82,slow=40						
GNI	**Garni**	**26.13**	**278**	⇑*e*P	**P**	**11 21 49.1**	**+1.5**
	comp=Z,112nm,0.9s,mb5.4						
GNI				LR	LR		
	comp=Z,780nm,19.0s,MS4.3						
GOF	**Gofitskoye**	**26.50**	**290**	⇓*i*P	**P**	**11 21 52.0**	**+1.0**
GOF				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.5						
GOF				MLR	MLR		
	comp=Z,2µm,14.0s,MS4.9						
KIV	**Kislovodsk**	**26.88**	**287**	P	**P**	**11 21 55.0**	**+0.6**
	comp=Z,566nm,0.7s,mb6.2,SNR=11						
KIV	**Kislovodsk**	**26.88**	**287**	⇑*e*P	**P**	**11 21 54.3**	**-0.1**
KIV				pmax	pmax		
	comp=Z,67nm,0.7s,mb5.3						
KIV				MLR	MLR		
	comp=Z,142nm,19.0s						
KIV	**Kislovodsk**	**26.88**	**287**	⇑*e*P	**P**	**11 21 54.3**	**-0.1**
	comp=Z,67nm,0.7s,mb5.3						
KIV				LR	LR		
	comp=Z,142nm,19.0s						
PECR	**Pechory**	**27.01**	**315**	*i* P	**P**	**11 21 55.0**	**-0.6**
PECR				pmax	pmax		
	comp=Z,2.0nm,1.6s						
PECR				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.0						
PECR				MLR	MLR		
	comp=N,2µm,17.0s						
GYA	**Guiyang**	**27.08**	**116**	⇓*i*P	**P**	**11 21 56.8**	**+0.3**
GYA				AP	pP	11 22 05.9	+0.5
GYA				XP	sP	11 22 10.3	+0.9
GYA				PP	PP	11 22 46.8	+3.8
GYA				S	**S**	**11 26 35.8**	**+5.1**
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,170nm,4.2s						
GYA				LR	LR		
	comp=N,1µm,16.7s,MS4.7						
GYA				LR	LR		
	comp=E,780nm,15.6s,MS4.7						
GYA				LR	LR		
	comp=Z,1µm,17.3s,MS4.5						
BOD	**Bodaibo**	**27.14**	**42**	*e*P	**P**	**11 21 57.2**	**+0.5**
BOD				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.6						
BJT	**Baijiatuau**	**27.72**	**81**	PFAKE		11 22 10.0	+7.8
BJT				LR	LR		
	comp=Z,1µm,19.0s,MS4.5						
CM31	**Chiang Mai Arr**	**28.56**	**138**	PFAKE		11 22 20.0	+10
CM31				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
CMAR	**Chiang Mai Arr**	**28.56**	**138**	P	**P**	**11 22 10.0**	**0.0**
CMAR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CMAR				pmax	pmax		
	comp=N,2.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,1µm,19.3s						
CMAR	**Chiang Mai Arr**	**28.56**	**138**	P	**P**	**11 22 10.0**	**+0.1**
	comp=Z,8.5nm,1.0s,mb4.5,baz=315,slow=7.1,SNR=4.2						
CMAR				ScP		11 28 59.9	
	comp=Z,2.4nm,0.8s,baz=320,slow=6.0,SNR=5.7						
CMAR				LR	LR	11 35 35.9	
	comp=Z,1µm,19.3s,MS4.5,baz=330,slow=40						
HIA	**Hailar**	**28.98**	**61**	PFAKE		11 22 30.0	+17
HIA				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
SOC	**Sochi**	**29.06**	**287**	*e*P	**P**	**11 22 13.3**	**-0.9**
SOC				*e*PPP	PPP	11 23 16.8	-4.8
SOC				*e*		11 25 20.6	
SOC				*e*S	**S**	**11 27 02.3**	**-0.1**
SOC				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
SOC				pmax	pmax		
	comp=N,21nm,1.0s						
SOC				pmax	pmax		
	comp=E,16nm,0.8s						
SOC				MLR	MLR		
	comp=Z,872nm,17.0s,MS4.4						
SOC				MLR	MLR		
	comp=N,725nm,18.0s,MS4.6						
SOC				MLR	MLR		
	comp=E,931nm,17.0s,MS4.6						
WHN	**Wuhan**	**30.16**	**100**	⇓P	**P**	**11 22 26.5**	**+2.4**
WHN				LR	LR		
	comp=Z,2µm,17.9s,MS4.7						
MOS	**Moscow**	**30.40**	**312**	*i* P	**P**	**11 22 25.7**	**-0.3**
MOS				*e*PPP	PPP	11 23 33.8	-6.4
MOS				*e*		11 25 24.6	
MOS				pmax	pmax		
	comp=Z,170nm,0.9s,mb5.8						
MOS				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.8						
MOS				MLR	MLR		
	comp=Z,3µm,13.0s,MS5.2						
MOS				MLR	MLR		
	comp=E,3µm,12.0s						
ANN	**Anapa**	**30.48**	**290**	*e*P	**P**	**11 22 26.2**	**-0.6**
ANN				*e*S	**S**	**11 27 26.3**	**+1.5**
ANN				pmax	pmax		
	comp=Z,145nm,0.9s,mb5.7						
ANN				MLR	MLR		
	comp=N,2µm,20.0s						
ANN				MLR	MLR		
	comp=Z,257nm,20.0s,MS3.9						
ANN				MLR	MLR		
	comp=E,595nm,10.0s						
ELZG	**Elazig**	**30.88**	**278**	*i* P	**P**	**11 22 30.0**	**-0.4**
OBN	**Obninsk**	**30.90**	**310**	P	**P**	**11 22 29.0**	**-1.4**
	comp=E,432nm,0.5s,SNR=7.3						
OBN	**Obninsk**	**30.90**	**310**	α*i*P	**P**	**11 22 29.8**	**-0.6**
OBN				*e*	pP	11 22 38.3	-1.1
OBN						11 23 40.0	
OBN				*e*S	**S**	**11 27 28.1**	**-3.3**
OBN				pmax	pmax		
	comp=Z,84nm,1.0s,mb5.5						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.8						
OBN	**Obninsk**	**30.90**	**310**	P	**P**	**11 22 29.8**	**-0.6**
	comp=Z,42nm,0.8s,mb5.3						
OBN				LR	LR		
	comp=Z,564nm,19.0s,MS4.2						
MALT	**Malatya**	**31.36**	**278**	*e*P	**P**	**11 22 35.8**	**+1.2**
MALT				pmax	pmax		
	comp=Z,171nm,0.9s,mb5.9						
MALT	**Malatya**	**31.36**	**278**	*e*P	**P**	**11 22 35.8**	**+1.1**
	comp=Z,171nm,0.9s,mb5.9						
GZT	**Gaziantep**	**32.33**	**276**	*i* P	**P**	**11 22 41.4**	**-1.7**
CLNS	**Chul'man**	**32.61**	**47**	*e*PPP	PP	11 23 51.5	-3.1
CLNS				*e*		11 25 31.4	
CLNS				*e*S	**S**	**11 27 50.9**	**-7.2**
CLNS				smax			
	comp=N,10.0nm,1.3s						
CLNS				smax			
	comp=Z,3.0nm,0.7s						
CLNS				smax			
	comp=E,10.0nm,1.4s						
CLNS				MLR	MLR		
	comp=Z,800nm,13.0s,MS4.6						
CLNS				MLR	MLR		
	comp=N,200nm,11.0s,MS4.2						
CLNS				MLR	MLR		
	comp=E,200nm,12.0s,MS4.2						
SNY	**Shenyang**	**32.67**	**75**	⇓P	**P**	**11 22 47.1**	**+1.0**
SNY				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
SNY				LR	LR		
	comp=E,1µm,17.7s						
SNY				LR	LR		
	comp=Z,1µm,16.2s,MS4.6						
NJ2	**Nanjing**	**32.75**	**94**	*e*P	**P**	**11 22 48.1**	**+1.2**
NJ2				AP	pP	11 22 57.1	+1.2
NJ2				XP	sP	11 23 00.0	+0.2
NJ2				PP	PP	11 23 58.1	+1.4
NJ2				S	**S**	**11 28 00.0**	**-0.5**
NJ2				XS		11 28 14.0	
NJ2				LR	LR		
	comp=N,3µm,20.6s,MS5.3						
NJ2				LR	LR		
	comp=E,5µm,16.0s,MS5.3						
NJ2				LR	LR		
	comp=Z,4µm,12.8s,MS5.3						
SIM	**Simferopol'**	**32.77**	**291**	*c* *e*P	**P**	**11 22 48.1**	**+1.2**
SIM				pmax	pmax		
	comp=Z,82nm,0.9s,mb5.7						
SIM				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.3						
BOYT	**Boyabat**	**33.01**	**285**	*i* P	**P**	**11 22 46.7**	**-2.3**
CN2	**Changchun**	**33.54**	**71**	*e*P	**P**	**11 22 53.5**	**-0.1**
CN2				*e*AP	pP	11 23 04.0	+1.4
CN2				*e*S	**S**	**11 28 11.4**	**-1.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				LR	LR		
	comp=N,1µm,16.0s,MS4.8						
CN2				LR	LR		
	comp=E,900nm,16.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,18.0s,MS4.7						
RAYN	**Ar Rayn**	**33.55**	**248**	P	**P**	**11 22 53.4**	**-0.5**
	comp=Z,635nm,0.5s,SNR=84						
BALT	**Daday**	**34.08**	**285**	*i* P	**P**	**11 22 56.6**	**-1.7**
PALK	**Pallekele**	**34.33**	**178**	PFAKE		11 23 10.0	+9.3
PALK				LR	LR		
	comp=Z,275nm,21.0s,MS4.0						
ELDT	**Eldivan**	**34.35**	**284**	*i* P	**P**	**11 22 58.9**	**-1.8**
QIZ	**Qiongzhong**	**34.37**	**122**	P	**P**	**11 23 00.8**	**-0.2**
QIZ				*e*S	**S**	**11 28 24.4**	**-1.2**
QIZ				LR	LR		
	comp=N,471nm,13.4s,MS4.6						
QIZ				LR	LR		
	comp=E,521nm,14.3s,MS4.6						
QIZ				LR	LR		
	comp=Z,963nm,18.9s,MS4.6						
QIZ	**Qiongzhong**	**34.37**	**122**	PFAKE		11 23 10.0	+9.0
QIZ				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
BRTR	**Keskin Array B**	**34.43**	**282**	P	**P**	**11 23 01.6**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,27nm,0.7s						
BRTR	**Keskin Array B**	**34.43**	**282**	P	**P**	**11 23 01.6**	**+0.3**
	comp=Z,27nm,0.7s,mb5.3,baz=90,slow=7.4,SNR=106						
PUL	**Pulkovo**	**34.92**	**318**	*i* P	**P**	**11 23 05.2**	**-0.1**
SSE	**Sheshan**	**34.96**	**94**	P	**P**	**11 23 04.3**	**-1.6**
SSE				XP	sP	11 23 23.5	+4.6
SSE				S	**S**	**11 28 32.3**	**-2.4**
SSE				XS		11 28 55.1	
SSE				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.7						
SSE				AMB	AMB		
	comp=Z,97nm,4.7s						
SSE				LR	LR		
	comp=N,303nm,23.8s,MS4.0						
SSE				LR	LR		
	comp=E,171nm,23.7s,MS4.0						
SSE				LR	LR		
	comp=Z,334nm,21.7s,MS4.0						
ASF	**Jabal al Asfar**	**34.98**	**268**	P	**P**	**11 23 06.7**	**+0.6**
	comp=Z,16nm,0.9s,mb5.0,baz=326,slow=0.7,SNR=10						
ASF				LR	LR	11 40 09.7	
	comp=Z,353nm,19.2s,MS4.1,baz=128,slow=41						
JOF	**Joensuu**	**35.08**	**324**	*e*p	**P**	**11 23 06.1**	**-0.5**
	comp=Z,7.1nm,0.3s,mb5.1						
JOF	**Joensuu**	**35.08**	**324**	*e*P	**P**	**11 23 06.1**	**-0.5**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb5.1						
MEST	**Erdemli**	**35.16**	**277**	*i* P	**P**	**11 23 01.6**	**-6.0**
AKASG	**Malin Array Be**	**35.26**	**302**	P	**P**	**11 23 07.5**	**-0.8**
AKASG						11 24 21.7	
AKASG				pmax	pmax		
	comp=Z,19nm,1.0s						
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**35.26**	**302**	P	**P**	**11 23 07.5**	**-0.8**
	comp=Z,19nm,0.9s,mb5.0,baz=71,slow=8.7,SNR=38						
AKASG				PP	PP	11 24 21.7	-6.1
	comp=Z,3.3nm,0.6s,baz=73,slow=11,SNR=4.2						
SGKT	**Sivrigoynuk**	**35.32**	**284**	*i* P	**P**	**11 23 17.9**	**+8.9**
LVZ	**Lovozero**	**35.42**	**333**	P	**P**	**11 23 09.8**	**+0.3**
	comp=Z,635nm,1.0s,SNR=9.4						
LVZ	**Lovozero**	**35.42**	**333**	*c* *i*P	**P**	**11 23 09.1**	**-0.4**
LVZ				pmax	pmax		
	comp=Z,125nm,1.0s,mb5.8						
LVZ				MLR	MLR		
	comp=Z,2µm,18.0s,MS4.8						
LVZ	**Lovozero**	**35.42**	**333**	⇑*i*P	**P**	**11 23 09.2**	**-0.3**
APA	**Apatity**	**35.73**	**332**	⇑*i*P	**P**	**11 23 13.0**	**+0.9**
APA				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
APA				MLR	MLR		
	comp=Z,3µm,12.0s,MS5.2						
YAK	**Yakutsk**	**35.88**	**38**	*e*P	**P**	**11 23 12.6**	**-0.8**
YAK				*e**PP	pP	11 23 22.4	-0.1
YAK				*e*		11 24 29.0	
YAK				*e*PPP	PPP	11 24 48.6	-6.3
YAK				*e*		11 25 38.8	
YAK				*e*S	**S**	**11 28 48.6**	**-0.1**
YAK				*e*SS	SS	11 31 16.7	+5.8
YAK				*e*SSS	SSS	11 31 33.8	-5.0
YAK				*e*		11 33 27.8	
YAK				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
YAK				pmax	pmax		
	comp=E,17nm,1.2s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax			
	comp=N,8.0nm,1.0s						
YAK				smax			
	comp=E,4.0nm,0.9s						
YAK				MLR	MLR		
	comp=Z,484nm,12.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,205nm,13.0s,MS4.4						
YAK				MLR	MLR		
	comp=E,364nm,12.0s,MS4.4						
YAK	**Yakutsk**	**35.88**	**38**	PFAKE		11 23 30.0	+17
YAK				LR	LR		
	comp=Z,839nm,21.0s,MS4.5						
KIS	**Kishinev**	**36.03**	**296**	*e*P	**P**	**11 23 13.0**	**-1.9**
KIS				*e*		11 23 25.0	
KIS				MLR	MLR		
	comp=Z,900nm,12.0s,MS4.8						
KIS				MLR	MLR		
	comp=Z,1µm,12.0s						
MDJ	**Mudanjiang**	**36.26**	**68**	P	**P**	**11 23 15.8**	**-1.0**
MDJ				AP	pP	11 23 25.9	0.0
MDJ				XP	sP	11 23 28.3	-1.4
MDJ				PCP	PcP	11 25 40.4	-1.4
MDJ				S	**S**	**11 28 54.8**	**+0.2**
MDJ				SCP		11 29 24.3	
MDJ				PCS		11 29 28.3	
MDJ				SCS	ScS	11 33 28.3	-1.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,80nm,3.6s						
MDJ				LR	LR		
	comp=N,455nm,13.8s,MS4.7						
MDJ				LR	LR		
	comp=E,751nm,15.9s,MS4.7						
MDJ				LR	LR		
	comp=Z,1µm,14.5s,MS4.8						
MDJ	**Mudanjiang**	**36.26**	**68**	PFAKE		11 23 30.0	+13
MDJ				LR	LR		
	comp=Z,601nm,19.0s,MS4.4						
INCN	**Inchon**	**36.28**	**81**	PFAKE		11 23 30.0	+13
INCN				LR	LR		
	comp=Z,744nm,22.0s,MS4.4						
TLCR		**36.40**	**293**	⇑P	**P**	**11 23 17.8**	**-0.2**
CFR	**Carcaliu**	**36.87**	**293**	⇓P	**P**	**11 23 22.4**	**+0.5**
CFR	**Carcaliu**	**36.87**	**293**	P	**P**	**11 23 22.7**	**+0.8**
CFR	**Carcaliu**	**36.87**	**293**	⇑*i*P	**P**	**11 23 21.8**	**-0.1**
HARR	**Harsova**	**37.13**	**292**	P	**P**	**11 23 25.1**	**+1.0**
KAF	**Kangasniemi**	**37.20**	**322**	*e*p	**P**	**11 23 23.1**	**-1.5**
	comp=Z,6.8nm,0.5s,mb4.7						
KAF	**Kangasniemi**	**37.20**	**322**	*e*P	**P**	**11 23 23.1**	**-1.5**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
FINES	**FINESS Array B**	**37.22**	**320**	P	**P**	**11 23 24.6**	**-0.1**
FINES						11 24 45.2	
FINES				pmax	pmax		
	comp=Z,36nm,0.6s						
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,2µm,18.8s						
FINES	**FINESS Array B**	**37.22**	**320**	P	**P**	**11 23 24.6**	**-0.1**
	comp=Z,36nm,0.6s,mb5.3,baz=100,slow=12,SNR=112						
FINES				PP	PP	11 24 45.2	-7.0
	comp=Z,5.9nm,0.7s,baz=101,slow=14,SNR=2.3						
FINES				LR	LR	11 39 17.8	
	comp=Z,2µm,18.8s,MS5.0,baz=110,slow=37						
FINES	**FINESS Array B**	**37.22**	**320**	P	**P**	**11 23 24.6**	**-0.1**
FINES				PP	PP	11 24 45.2	-7.0
ISP	**Isparta**	**37.37**	**281**	⇑*i*P	**P**	**11 23 26.4**	**+0.1**
EIL	**Elat**	**37.66**	**266**	P	**P**	**11 23 29.6**	**+0.8**
	comp=Z,19nm,0.6s,mb5.0,baz=28,slow=9.9,SNR=24						
EIL				LR	LR	11 42 15.6	
	comp=Z,389nm,18.2s,MS4.2,baz=286,slow=41						
EIL	**Elat**	**37.66**	**266**	*e*P	**P**	**11 23 28.5**	**-0.2**
	comp=Z,56nm,1.3s,mb5.1						
VRI	**Vrincioaia**	**37.68**	**295**	⇑P	**P**	**11 23 30.3**	**+1.6**
VRI	**Vrincioaia**	**37.68**	**295**	P	**P**	**11 23 30.0**	**+1.3**
VRI	**Vrincioaia**	**37.68**	**295**	⇓*i*P	**P**	**11 23 30.1**	**+1.4**
MLR	**Muntele Rosu**	**38.30**	**294**	P	**P**	**11 23 35.3**	**+1.3**
MLR				pmax	pmax		
	comp=Z,47nm,0.6s						
MLR	**Muntele Rosu**	**38.30**	**294**	P	**P**	**11 23 35.3**	**+1.3**
	comp=Z,47nm,0.6s,mb5.4,baz=15,slow=5.9,SNR=58						
MLR	**Muntele Rosu**	**38.30**	**294**	P	**P**	**11 23 35.4**	**+1.5**
MLR	**Muntele Rosu**	**38.30**	**294**	⇑*i*P	**P**	**11 23 35.3**	**+1.3**
BURAR	**Bucovina Array**	**38.32**	**298**	P	**P**	**11 23 34.7**	**+0.6**
TIXI	**Tiksi**	**38.47**	**23**	⇑*i*P	**P**	**11 23 35.3**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.9						
TIXI	**Tiksi**	**38.47**	**23**	PFAKE		11 23 50.0	+15
TIXI				LR	LR		
	comp=Z,2µm,19.0s,MS4.9						
TATO	**Taipei**	**38.50**	**102**	PFAKE		11 23 50.0	+14
TATO				LR	LR		
	comp=Z,717nm,20.0s,MS4.5						
SUW	**Suwalki**	**38.66**	**308**	*e*P	**P**	**11 23 36.9**	**0.0**
LVV	**L'vov**	**38.68**	**301**	*e*P	**P**	**11 23 35.8**	**-1.3**
LVV				*e*		11 25 06.0	
LVV				MLR	MLR		
	comp=E,700nm,16.0s,MS4.6						
LVV				MLR	MLR		
	comp=Z,700nm,16.0s,MS4.6						
LVV				MLR	MLR		
	comp=N,300nm,14.0s,MS4.6						

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KEV   Kevo              38.69 334  ep      P       11 23 36.0 -1.0
      comp=N,3.9nm,0.5s,mb4.4
KEV   Kevo              38.69 334  eP      P       11 23 36.0 -1.0
KEV                                 pmax   pmax
      comp=Z,4.0nm,0.5s,mb4.4
ARCES ARCESS Array B    39.12 333   P      P       11 23 40.9 +0.3
ARCES                               pmax   pmax
      comp=Z,81nm,0.7s
ARCES                               MLR    MLR
      comp=Z,1µm,19.5s
ARCES ARCESS Array B    39.12 333   P      P       11 23 40.9 +0.2
      comp=Z,81nm,0.7s,mb5.6,baz=97,slow=9.8,SNR=213
ARCES                               LR     LR      11 40 53.5
      comp=Z,1µm,19.5s,MS4.7,baz=104,slow=38
ARE0  ARCESS Array S    39.12 333  eP      P       11 23 40.8 +0.2
KWP   Kalwaria          39.56 301  eP      P       11 23 45.1 +0.7
KTK1  Kautokeino        39.77 332⇑iP       P       11 23 45.8 -0.1
      comp=Z,137nm,0.7s,mb5.8
KTK1  Kautokeino        39.77 332⇑iP       P       11 23 45.8 -0.1
KTK1                                AMb    AMB     11 23 46.8
      comp=Z,137nm,0.7s,mb5.8
KOLS  Kolonicke sedl    39.97 300  eP      P       11 23 48.1 +0.3
KOLS                               epP     pP      11 23 57.9 +0.9
KOLS                               ePP     PP      11 25 20.8 -2.7
KOLS                               e               11 25 32.2
RZN   Rozhen            40.23 289  eP      P       11 23 52.0 +1.9
PGB   Panagyurishte     40.35 290  i P     P       11 23 53.0 +2.0
MMB   Musomiste         40.97 289  i P     P       11 23 57.0 +0.9
VTS   Vitosha           41.01 291   P      P       11 23 57.8 +1.4
VTS   Vitosha           41.01 291  i P     P       11 23 58.0 +1.6
NIE   Niedzica          41.13 302  eP      P       11 23 56.9 -0.4
NIE                                ePP     PP      11 25 34.1 -1.1
BZS   Buzias            41.20 296   P      P       11 23 59.3 +1.3
KECS  Kecovo            41.23 300  eP      P       11 23 58.5 +0.4
KECS                               epP     pP      11 24 08.5 +1.2
OJC   Ojcow             41.28 303⇑iP       P       11 23 58.7 +0.1
OJC                                ePP     PP      11 25 37.7 +0.8
KKB   Krupnik           41.33 290  i P     P       11 24 00.5 +1.5
PSZ   Piszkesteto       41.75 299  eP      P       11 24 02.8 +0.5
PSZ                                 pmax   pmax
      comp=Z,102nm,1.9s,mb5.1
PSZ   Piszkesteto       41.75 299  eP      P       11 24 02.8 +0.4
      comp=Z,102nm,1.9s,mb5.1
PSZ   Piszkesteto       41.75 299⇑e        P       11 24 03.3 +1.0
BARS  Barje             41.90 292⇑iP       P       11 24 04.0 +0.4
BEO   Belgrade          42.22 295⇑iP       P       11 24 07.0 +0.8
GKP   Gorka Klasztor    42.27 308  eP      P       11 24 07.3 +0.8
VYHS  Vyhne             42.29 301  eP      P       11 24 07.7 +0.9
VYHS                               epP     pP      11 24 16.1 +0.2
VYHS                               ePP     PP      11 25 42.1 -5.5
OKC   Ostrava-Krasne    42.41 303  eP      P       11 24 08.3 +0.6
OKC                                epP     pP      11 24 14.4 -2.5
OKC                                 AMS    AMS     11 42 20.0
      comp=Z,1µm,14.9s
SKO   Skopje            42.45 291  i P     P       11 24 09.0 +0.8
IDI   Anoyia            42.54 280   P      P       11 24 08.6 -0.4
      comp=Z,26nm,0.6s,mb5.1,baz=52,slow=11,SNR=12
MOR8  Moi Rana          42.73 327⇑iP       P       11 24 09.3 -0.9
      comp=Z,136nm,0.7s,mb5.8
MOR8  Moi Rana          42.73 327⇑iP       P       11 24 09.3 -0.9
MOR8                                AMb    AMB     11 24 10.3
      comp=Z,136nm,0.7s,mb5.8
DIVS  Divcibare         42.76 294⇓iP       P       11 24 10.7  0.0
SRO   Srobarova         42.80 300  eP      P       11 24 12.0 +1.0
LOF   Lofoten           43.16 330⇑iP       P       11 24 15.3 +1.7
      comp=Z,140nm,1.3s,mb5.5
LOF   Lofoten           43.16 330⇑iP       P       11 24 15.3 +1.7
LOF                                 AMb    AMB     11 24 18.8
      comp=Z,140nm,1.3s,mb5.5
IVA   Berane            43.22 292⇑iP       P       11 24 14.8 +0.3
PVY   Plav              43.26 292⇑iP       P       11 24 14.6 -0.1
BSD   Bornholm Skovb    43.29 311  i P     P       11 24 11.8 -3.0
BSD                                 pmax   pmax
      comp=Z,98nm,1.1s,mb5.5
BSD   Bornholm Skovb    43.29 311  i P     P       11 24 11.8 -3.0
      comp=Z,98nm,1.1s,mb5.5
STOK  Stokkvaagen       43.31 327⇑iP       P       11 24 14.6 -0.3
KSP   Ksiaz             43.33 305  eP      P       11 24 15.4 +0.2
KSP                                e*PP    pP      11 24 27.1 +2.7
KSP                                e               11 26 01.0
KSP   Ksiaz             43.33 305  eP      P       11 24 15.5 +0.3
PLE   Pljevlja          43.41 293⇑iP       P       11 24 17.1 +1.1
DPC   Dobruska-Polom    43.43 304  eP      P       11 24 16.7 +0.7
DPC                                epP     pP      11 24 27.1 +1.9
DPC                                 AMS    AMS     11 42 50.0
      comp=Z,2µm,20.2s
ZST   Bratislava        43.48 301  ePP     PP      11 26 03.9 +4.4
UPC   Upice             43.59 304  eP      P       11 24 18.0 +0.7
NSS   Namsos            43.78 325  eP      P       11 24 17.2 -1.5
UPM   Unac-Piva         43.79 293⇑iP       P       11 24 19.9 +0.9
TTG   Podgorica         43.81 292⇑iP       P       11 24 18.8 -0.4
NKY   Niksic            43.86 293⇑iP       P       11 24 19.1 -0.5
HSP   Hornsund          43.91 343  eP      P       11 24 21.0 +1.4
ULC   Ulcinj            43.98 291⇑iP       P       11 24 20.5 -0.1
BUM   Brajici-Budva     44.11 292⇑iP       P       11 24 21.6 -0.1
BRY   Bratogost         44.15 293⇑iP       P       11 24 22.2 +0.2
HCY   Herceg Novi       44.34 292⇑iP       P       11 24 23.4 -0.2
NB2   NORSAR Subarra    44.39 320   P      P       11 24 23.6 -0.1
      comp=Z,100nm,1.0s,mb5.5,baz=84,slow=7.9
NB2   NORSAR Subarra    44.39 320   P      P       11 24 23.6 -0.1
NB2                                 pmax   pmax
      comp=Z,100nm,1.0s,mb5.5
NB2   NORSAR Subarra    44.39 320   P      P       11 24 23.6 -0.1
      baz=84,slow=8.6
NOA   NORSAR Array B    44.39 320   P      P       11 24 23.5 -0.2
NOA                                 pmax   pmax
      comp=Z,39nm,0.8s
NOA                                 MLR    MLR
      comp=Z,2µm,18.6s
NOA   NORSAR Array B    44.39 320   P      P       11 24 23.5 -0.2
      comp=Z,39nm,0.8s,mb5.2,baz=84,slow=7.9,SNR=103
NOA                                 LR     LR      11 43 47.7
      comp=Z,2µm,18.6s,MS5.0,baz=65,slow=37
NOA   NORSAR Array B    44.39 320   P      P       11 24 23.5 -0.2
PVCC  Panska Ves        44.47 304  eP      P       11 24 25.2 +0.7
PVCC                                AMS    AMS     11 43 40.0
      comp=Z,1µm,16.6s
TRON  Trondheim         44.52 323⇓iP       P       11 24 24.8 +0.1
YSS   Yuzh-Sakhalins    44.52  61   PFAKE          11 24 40.0  +15
YSS                                 LR     LR
      comp=Z,772nm,19.0s,MS4.7
NAO01 NORSAR Array S    44.58 320  eP      P       11 24 24.4 -0.8
      comp=Z,8.8nm,0.4s,mb4.9
COP   Copenhagen        44.58 312  eP      P       11 24 26.7 +1.4
COP                                 pmax   pmax
      comp=Z,62nm,1.0s,mb5.4
COP   Copenhagen        44.58 312  i P     P       11 24 26.7 +1.4
      comp=Z,62nm,1.0s,mb5.4
PRU   Pruhonice         44.63 304  eP      P       11 24 26.0 +0.2
PRU                                epP     pP      11 24 38.0 +3.1
PRU                                 AMS    AMS     11 43 50.0
      comp=Z,1µm,17.5s
BRG   Berggiesshubel    44.77 305  i P     P       11 24 27.2 +0.3
BRG                                i               11 24 39.7
BRG                                 pmax   pmax
      comp=Z,18nm,1.1s,mb4.8
BRG   Berggiesshubel    44.77 305  i P     P       11 24 27.2 +0.3
      comp=Z,18nm,1.1s,mb4.8
BRG                                i               11 24 39.7
ARSA  Arzberg           44.77 300⇑iP       P       11 24 27.1 +0.1
      comp=Z,39nm,1.6s,mb5.0
MAJO  Matsushiro        45.14  76   PFAKE          11 24 40.0  +10
MAJO                                LR     LR
      comp=Z,305nm,21.0s,MS4.2
DOBS  Dobrina           45.15 298  eP      P       11 24 30.0  0.0
PERS  Pernice           45.23 299  eP      P       11 24 30.6 +0.1
CLL   Collm             45.23 306⇑iP       P       11 24 30.6 +0.1
CLL                                i               11 24 42.3
CLL                                 pmax   pmax
      comp=Z,87nm,1.8s,mb5.3
CLL                                 MLR    MLR
      comp=Z,1µm,19.1s,MS4.8
CLL   Collm             45.23 306⇑iP       P       11 24 30.6 +0.1
      comp=Z,87nm,1.8s,mb5.3
CLL                                i               11 24 42.3
CLL   Collm             45.23 306  ⇑P      P       11 24 30.6 +0.1
      comp=Z,logA/T=1.7,mb5.3
CLL                                i               11 24 33.4
CLL                                i *SP   sP      11 24 42.3 -1.2
CLL                                ePP     PP      11 26 13.0 -4.0
CLL                                i *PPP          11 26 22.8
CLL                                i               11 26 34.5
CLL                                e               11 27 11.0
DOMB  Dombas            45.29 321⇑iP       P       11 24 30.9  0.0
      comp=Z,109nm,0.9s,mb5.7
DOMB  Dombas            45.29 321⇑iP       P       11 24 30.9  0.0
DOMB                                AMb    AMB     11 24 32.6
      comp=Z,109nm,0.9s,mb5.7
DOMB                               epP     pP      11 24 38.8 -1.2
ASAJ  Asahikawa         45.32  65   P      P       11 24 31.7 +0.3
ASAJ                                pmax   pmax
      comp=Z,10.0nm,0.9s
ASAJ  Asahikawa         45.32  65   P      P       11 24 31.7 +0.3
      comp=Z,10nm,0.9s,mb4.7,baz=252,slow=20,SNR=2.1
KONO  Kongsberg         45.38 318   PFAKE          11 24 40.0 +8.4
KONO                                LR     LR
      comp=Z,2µm,22.0s,MS5.1
MOA   Molln             45.41 301⇑iP       P       11 24 32.2 +0.2
      comp=Z,73nm,2.3s,mb5.1
KHC   Kasperske Hory    45.47 303  eP      P       11 24 32.7 +0.2
KHC                                epP     pP      11 24 40.4 -1.2
KHC   Kasperske Hory    45.47 303  eP      P       11 24 32.7 +0.2
KHC                                epP     pP      11 24 40.4 -1.2
KHC                                 AMS    AMS     11 46 40.0
      comp=Z,1µm,17.8s
GEC2  GERESS Array S    45.47 302  eP      P       11 24 33.1 +0.6
GEC2                                pmax   pmax
      comp=Z,50nm,1.5s,mb5.1
GEC2  GERESS Array S    45.47 302  eP      P       11 24 33.1 +0.6
      comp=Z,50nm,1.5s,mb5.1
GERES GERESS Array B    45.47 302   P      P       11 24 33.1 +0.6
GERES                               pmax   pmax
      comp=Z,5.0nm,0.7s
GERES GERESS Array B    45.47 302   P      P       11 24 33.1 +0.6
      comp=Z,4.5nm,0.7s,mb4.4,baz=63,slow=7.7,SNR=38
OBKA  Obir              45.64 299⇑iP       P       11 24 33.2 -0.6
      comp=Z,486nm,3.4s
VISS  Visnje            45.68 298  eP      P       11 24 34.4 +0.3
NKC   Novy Kostel       45.86 305  eP      P       11 24 35.8 +0.3
NKC                                 AMS    AMS     11 44 30.0
      comp=Z,2µm,14.2s
WET   Wettzell          45.91 303  eP      P       11 24 36.2 +0.3
WET                                 pmax   pmax
      comp=Z,100nm,2.2s,mb5.4
WET   Wettzell          45.91 303  eP      P       11 24 36.2 +0.3
      comp=Z,100nm,2.2s,mb5.4
MOL   Molde             45.92 322⇑iP       P       11 24 36.8 +1.0
      comp=Z,87nm,1.6s,mb5.4
MOL   Molde             45.92 322⇑iP       P       11 24 36.8 +1.0
MOL                                 AMb    AMB     11 24 39.0
      comp=Z,87nm,1.6s,mb5.4
BSEG  Bad Segeberg      46.16 310  eP      P       11 24 38.1 +0.3
MA2   Magadan           46.17  42c iP      P       11 24 38.6 +0.7
MA2                                 pmax   pmax
      comp=Z,43nm,1.5s,mb5.2
MA2                                 MLR    MLR
      comp=Z,200nm,19.0s,MS4.1
MA2   Magadan           46.17  42  eP      P       11 24 38.6 +0.7
MUD   Monsted U'grnd    46.21 314  i P     P       11 24 38.7 +0.5
MUD                                 pmax   pmax
      comp=Z,40nm,1.1s,mb5.3
MUD                                 MLR    MLR
      comp=Z,1µm,18.0s,MS4.8
MUD   Monsted U'grnd    46.21 314  i P     P       11 24 38.7 +0.5
      comp=Z,40nm,1.1s,mb5.3
      comp=Z,1µm,18.0s
KBA   Koelnbreinsper    46.24 300⇑iP       P       11 24 38.8 +0.2
      comp=Z,95nm,1.9s,mb5.4
KBA   Koelnbreinsper    46.24 300⇑iP       P       11 24 38.8 +0.2
KBA                                 pmax   pmax
      comp=Z,95nm,1.9s,mb5.4
MOX   Moxa              46.26 305  eP      P       11 24 39.2 +0.6
MOX                                e       pP      11 24 49.2 +1.4
MOX                                 pmax   pmax
      comp=Z,51nm,1.6s,mb5.2
MOX                                 MLR    MLR
      comp=Z,900nm,18.0s,MS4.8
MOX   Moxa              46.26 305  eP      P       11 24 39.2 +0.6
      comp=Z,51nm,1.6s,mb5.2
MOX                                e       pP      11 24 49.2 +1.4
MOX   Moxa              46.26 305⇑iP       P       11 24 39.2 +0.6
      comp=Z,logA/T=1.5,mb5.2
MOX                                 pP     pP      11 24 49.0 +1.2
MOX                                 L              11 45 23.0
SEY   Seymchan          46.38  37  eP      P       11 24 39.7 +0.2
SEY                                                11 34 26.1
SEY                                 pmax   pmax
      comp=E,20nm,0.8s
SEY                                 pmax   pmax
      comp=Z,30nm,0.8s,mb5.3
CLZ   Clausthal         46.67 307  eP      P       11 24 41.7 -0.2
      comp=Z,24nm,1.2s,mb5.0
GRA1  Grafenberg Arr    46.77 304  eP      P       11 24 43.6 +0.8
      comp=Z,48nm,0.9s,mb5.4
GRA1                               e               11 25 57.8
GRF   Grafenberg Arr    46.77 304  eP      P       11 24 43.6 +0.8
GRF                                 pmax   pmax
      comp=Z,48nm,0.9s,mb5.4
GRF                                 MLR    MLR
      comp=Z,2µm,19.4s,MS5.0
GRF   Grafenberg Arr    46.77 304  eP      P       11 24 43.6 +0.8
GRF                                 pmax   pmax
      comp=Z,48nm,0.9s,mb5.4
GRF   Grafenberg Arr    46.77 304  eP      P       11 24 43.6 +0.8
      comp=Z,48nm,0.9s,mb5.4
GRF                                e               11 25 57.8
TIP   Timpagrande       46.80 289  eP      P       11 24 42.5 -0.6
ODD1  Odda              46.81 319  eP      P       11 24 42.5 -0.5
      comp=Z,56nm,1.8s,mb5.2
ODD1  Odda              46.81 319  eP      P       11 24 42.5 -0.5
ODD1                                AMb    AMB     11 24 59.6
      comp=Z,56nm,1.8s,mb5.2
BLS5  Blasjo            46.99 318  eP      P       11 24 45.4 +1.0
FUR   Furstenfeldbru    47.22 302  eP      P       11 24 47.0 +0.7
FOO   Floro             47.25 321⇓iP       P       11 24 46.6 +0.3
MGR   Morigerati        47.26 290  eP      P       11 24 46.9 +0.1
SGO   Sicignano         47.26 291  eP      P       11 24 47.3 +0.5
WTTA  Wattenberg        47.28 301⇑iP       P       11 24 46.8  0.0
      comp=Z,112nm,1.7s,mb5.5
WTTA  Wattenberg        47.28 301⇑iP       P       11 24 46.8  0.0
WTTA                                pmax   pmax
      comp=Z,112nm,1.7s,mb5.5
WATA  Walderalm         47.30 301⇓iP       P       11 24 46.8 -0.2
      comp=Z,55nm,1.4s,mb5.3
WATA  Walderalm         47.30 301⇓iP       P       11 24 46.8 -0.2
WATA                                pmax   pmax
      comp=Z,55nm,1.4s,mb5.3
RUND  Rundenannen       47.33 320  eP      P       11 24 47.5 +0.5
RUND                                AMb    AMB     11 24 49.5
      comp=Z,61nm,1.9s,mb5.2
RUND                               epP     pP      11 24 55.8 -0.5
SQTA  Sankt Quirin      47.57 301⇑iP       P       11 24 48.7 -0.4
      comp=Z,103nm,1.8s,mb5.6
SQTA  Sankt Quirin      47.57 301⇑iP       P       11 24 48.7 -0.4
SQTA                                pmax   pmax
      comp=Z,103nm,1.8s,mb5.6
MOTA  Moosalm           47.60 301⇑iP       P       11 24 48.8 -0.5
      comp=Z,18nm,1.2s,mb5.0
MOTA  Moosalm           47.60 301⇑iP       P       11 24 48.8 -0.5
MOTA                                pmax   pmax
      comp=Z,18nm,1.2s,mb5.0
JHJ   Hachijo jima 2    47.85  80   LR     LR      11 46 12.6
      comp=Z,292nm,20.8s,MS4.2,baz=298,slow=38
AQU   L'Aquila          47.88 294  eP      P       11 24 52.5 +0.9
PTQR  Pietraquaria      48.01 294  eP      P       11 24 53.8 +1.2
MTTG  Motta San Giov    48.05 288  eP      P       11 24 53.1 +0.1
TNS   Taunus Mts        48.31 306  eP      P       11 24 54.8  0.0
SFI   Santa Sofia       48.34 297  eP      P       11 24 56.1 +1.0
BRMO  Bormio            48.37 300  eP      P       11 24 54.6 -0.7
DAVA  Damuels           48.40 301⇑iP       P       11 24 55.3 -0.2
      comp=Z,70nm,1.4s,mb5.5
VMG   Vicchio           48.52 297  eP      P       11 24 57.9 +1.4
DAVOX Davos             48.58 301   P      P       11 24 57.0 +0.1
      comp=Z,16nm,0.7s,mb5.2,baz=85,slow=7.6,SNR=22
GSCL  Gusciola          49.01 298  eP      P       11 25 01.2 +0.9
BFO   Black Forest      49.02 303  eP      P       11 25 00.0 -0.3
BFO                                 pmax   pmax
      comp=Z,83nm,1.8s,mb5.5
BFO   Black Forest      49.02 303  eP      P       11 25 00.0 -0.3
      comp=Z,83nm,1.8s,mb5.5
ERBM  Eremo             49.10 298  eP      P       11 25 02.2 +1.2
BDI   Bagni Di Lucca    49.11 297  eP      P       11 25 01.3 +0.2
GRFL  Gerfalco          49.21 296  eP      P       11 25 01.8  0.0
VLC   Villacollemand    49.21 297  eP      P       11 25 02.2 +0.3
      comp=Z,64nm,0.8s,mb5.7
PII   Pisa              49.29 297  eP      P       11 25 01.8 -0.7
WLS   Welschbruch       49.60 304  eP      P       11 25 04.1 -0.7
BOB   Bobbio (Coli)     49.60 299  eP      P       11 25 05.6 +0.8
VAI   Varese            49.63 300  eP      P       11 25 03.3 -1.7
ECH   Echery            49.79 303  eP      P       11 25 05.2 -1.0
MOF   Molkenrain        49.94 303  eP      P       11 25 07.1 -0.3
HINF  Hinteralfeld      50.13 303  eP      P       11 25 08.3 -0.5
      comp=Z,58nm,1.0s,mb5.3
HINF  Hinteralfeld      50.13 303  eP      P       11 25 08.3 -0.5
HINF                                pmax   pmax
      comp=Z,29nm,1.0s,mb5.3
HAU   Haudompre         50.37 303  eP      P       11 25 10.1 -0.6
HAU                                eR
      comp=Z,1µm,19.8s
THEF  They Montfort     50.52 304  eP      P       11 25 11.1 -0.7
GIVF  Givet             50.55 306  eP      P       11 25 11.9 -0.1
PGF   Pioggiola         50.78 296  eP      P       11 25 13.5 -0.4
      comp=Z,121nm,1.0s,mb5.5
PGF   Pioggiola         50.78 296  eP      P       11 25 13.5 -0.4
PGF                                 pmax   pmax
      comp=Z,61nm,1.0s,mb5.5
BAIF  Baives            50.93 307  eP      P       11 25 14.8 -0.1
      comp=Z,37nm,0.9s,mb5.0
BAIF  Baives            50.93 307  eP      P       11 25 14.8 -0.1
BAIF                                pmax   pmax
      comp=Z,18nm,0.9s,mb5.0
BILL  Bilibino          50.97  29  i P     P       11 25 15.4 +0.5
BILL                               i               11 26 31.9
BILL                               i               11 27 11.8
BILL                               eS      S       11 32 26.4 -2.0
BILL                               eSS     SS      11 36 02.0 +0.8
BILL                                pmax   pmax
      comp=Z,24nm,1.0s,mb5.1
BILL                                MLR    MLR
      comp=Z,500nm,15.0s,MS4.7
BILL  Bilibino          50.97  29  eP      P       11 25 15.4 +0.5
      comp=Z,20nm,0.6s,mb5.2
BILL                               e       pP      11 25 24.2 -0.1
BILL                                LR     LR
      comp=Z,573nm,19.0s,MS4.6
MEZF  Maizieres J'vi    50.99 304  eP      P       11 25 15.3 -0.1
      comp=Z,123nm,1.2s,mb5.4
CABF  La Chapelle       51.06 302  eP      P       11 25 15.1 -0.8
      comp=Z,70nm,1.2s,mb5.2
CABF  La Chapelle       51.06 302  eP      P       11 25 15.1 -0.8
CABF                                pmax   pmax
      comp=Z,35nm,1.2s,mb5.2
LPG   La Plagne         51.08 300  eP      P       11 25 16.1 +0.1
      comp=Z,82nm,1.0s,mb5.3
LPG   La Plagne         51.08 300  eP      P       11 25 16.1 +0.1
LPG                                 pmax   pmax
      comp=Z,41nm,1.0s,mb5.3
LPL   La Plagne         51.08 300  eP      P       11 25 16.1  0.0
      comp=Z,103nm,1.0s,mb5.4
LPL   La Plagne         51.08 300  eP      P       11 25 16.1  0.0
LPL                                 pmax   pmax
      comp=Z,52nm,1.0s,mb5.4
SBF   Sospel            51.29 298  eP      P       11 25 17.2 -0.5
      comp=Z,45nm,0.7s,mb5.2
SBF   Sospel            51.29 298  eP      P       11 25 17.2 -0.5
SBF                                 pmax   pmax
      comp=Z,23nm,0.7s,mb5.2
BNI   Bardonecchia      51.30 300  eP      P       11 25 17.1 -0.6
BNI                                 pmax   pmax
      comp=Z,87nm,1.3s,mb5.5
BNI   Bardonecchia      51.30 300  eP      P       11 25 17.1 -0.6
      comp=Z,87nm,1.3s,mb5.5
MBDF  Montbardon        51.37 299  eP      P       11 25 17.3 -1.0
      comp=Z,76nm,1.0s,mb5.3
MBDF  Montbardon        51.37 299  eP      P       11 25 17.3 -1.0
MBDF                                pmax   pmax
      comp=Z,38nm,1.0s,mb5.3
DAG   Danmarks Havn     51.61 343⇓iP       P       11 25 19.6 -0.1
DAG                                 pmax   pmax
      comp=Z,60nm,1.0s,mb5.5
DAG   Danmarks Havn     51.61 343⇓iP       P       11 25 19.6 -0.1
      comp=Z,60nm,1.0s,mb5.5
ORIF  Oris-en-Rattie    51.87 300  eP      P       11 25 21.1 -1.0
      comp=Z,26nm,0.6s,mb5.0
ORIF                               eR
      comp=Z,2µm,22.2s
FRF   La Foret Royal    51.93 298  eP      P       11 25 21.8 -0.8
      comp=Z,118nm,1.3s,mb5.4
FRF   La Foret Royal    51.93 298  eP      P       11 25 21.8 -0.8
FRF                                 pmax   pmax
      comp=Z,59nm,1.3s,mb5.4
LMR   La Mourre         52.12 298  eP      P       11 25 23.0 -1.0
      comp=Z,39nm,1.0s,mb5.0
LMR   La Mourre         52.12 298  eP      P       11 25 23.0 -1.0
LMR                                 pmax   pmax
      comp=Z,20nm,1.0s,mb5.0
SMRF  Simiane la Rot    52.46 299  eP      P       11 25 25.9 -0.7
      comp=Z,115nm,1.3s,mb5.3
SMF   Signal de Mont    52.47 303  eP      P       11 25 25.5 -1.1
      comp=Z,56nm,1.0s,mb5.2
SMF   Signal de Mont    52.47 303  eP      P       11 25 25.5 -1.1
SMF                                 pmax   pmax
      comp=Z,28nm,1.0s,mb5.2
SSF   Saint Saulge      52.51 303  eP      P       11 25 25.8 -1.1
VIVF  Saint-Julien-l    52.68 300  eP      P       11 25 27.4 -0.8
      comp=Z,66nm,0.9s,mb5.2
VIVF  Saint-Julien-l    52.68 300  eP      P       11 25 27.4 -0.8
VIVF                                pmax   pmax
      comp=Z,33nm,0.9s,mb5.3
AVF   Avril sur Loir    52.72 303  eP      P       11 25 27.3 -1.1
      comp=Z,86nm,0.9s,mb5.3
AVF   Avril sur Loir    52.72 303  eP      P       11 25 27.3 -1.1
AVF                                 pmax   pmax
      comp=Z,43nm,0.9s,mb5.4
BGF   Bois d'Agland     53.13 303  eP      P       11 25 30.4 -1.1
      comp=Z,26nm,0.9s,mb4.8
BGF   Bois d'Agland     53.13 303  eP      P       11 25 30.4 -1.1
BGF                                 pmax   pmax
      comp=Z,13nm,0.9s,mb4.9
ESK   Eskdalemuir       53.20 315   PFAKE          11 25 40.0 +8.2
ESK                                 LR     LR
      comp=Z,341nm,22.0s,MS4.4
LASF  Ste Croix         53.54 300  eP      P       11 25 34.0 -0.5
      comp=Z,232nm,1.5s,mb5.6
TCF   Toulx Ste Croi    53.65 303  eP      P       11 25 34.6 -0.7
      comp=Z,81nm,1.2s,mb5.2
TCF   Toulx Ste Croi    53.65 303  eP      P       11 25 34.6 -0.7
TCF                                 pmax   pmax
      comp=Z,41nm,1.2s,mb5.2
LDF   La Druitiere      54.11 306  eP      P       11 25 37.4 -1.2
      comp=Z,31nm,0.8s,mb5.0
LDF   La Druitiere      54.11 306  eP      P       11 25 37.4 -1.2
LDF                                 pmax   pmax
      comp=Z,15nm,0.8s,mb5.0
FLN   La Foliniere      54.26 307  eP      P       11 25 38.2 -1.5
      comp=Z,43nm,1.0s,mb5.0
FLN                                eR
      comp=Z,742nm,20.5s
CAF   Calviac           54.32 301  eP      P       11 25 39.8 -0.4
      comp=Z,50nm,1.2s,mb5.0
CAF   Calviac           54.32 301  eP      P       11 25 39.8 -0.4
CAF                                 pmax   pmax
      comp=Z,25nm,1.2s,mb5.0
RJF   Les Rejaudoux     54.51 302  eP      P       11 25 41.2 -0.4
      comp=Z,65nm,1.0s,mb5.3
RJF                                eR
      comp=Z,703nm,21.5s
GRR   Gorron            54.65 306  eP      P       11 25 41.1 -1.5
      comp=Z,80nm,1.0s,mb5.4
GRR   Gorron            54.65 306  eP      P       11 25 41.1 -1.5
GRR                                 pmax   pmax
      comp=Z,40nm,1.0s,mb5.4
MTLF  Montolieu         54.93 300  eP      P       11 25 44.0 -0.8
      comp=Z,81nm,1.1s,mb5.4
MTLF  Montolieu         54.93 300  eP      P       11 25 44.0 -0.8
MTLF                                pmax   pmax
      comp=Z,41nm,1.1s,mb5.4
MFF   Saint Martin d    54.98 304  eP      P       11 25 43.6 -1.5
      comp=Z,36nm,1.0s,mb5.0
MFF   Saint Martin d    54.98 304  eP      P       11 25 43.6 -1.5
MFF                                 pmax   pmax
      comp=Z,18nm,1.0s,mb5.1
LFF   La Frestale       55.16 302  eP      P       11 25 45.9 -0.5
      comp=Z,73nm,0.9s,mb5.4
LFF   La Frestale       55.16 302  eP      P       11 25 45.9 -0.5
LFF                                 pmax   pmax
      comp=Z,37nm,0.9s,mb5.4
SGMF  Saint Gilles      55.72 307  eP      P       11 25 49.4 -1.0
      comp=Z,66nm,1.0s,mb5.3
SGMF  Saint Gilles      55.72 307  eP      P       11 25 49.4 -1.0
SGMF                                pmax   pmax
      comp=Z,33nm,1.0s,mb5.3
DLF   Lyons Farm        55.80 314  eP      P       11 25 54.0 +3.2
DLF   Lyons Farm        55.80 314  eP      P       11 25 53.9 +3.1
EMIR  Miracle           56.04 298   P      P       11 25 52.6 -0.2
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	comp=Z,37nm,0.9s,mb5.4						
DCN	**Croghan**	**56.18**	**314**	eP	**P**	**11 25 52.0**	**-1.6**
DCN	**Croghan**	**56.18**	**314**	eP	**P**	**11 25 52.4**	**-1.2**
QUIF	**Quistinic**	**56.24**	**307**	eP	**P**	**11 25 52.8**	**-1.3**
	comp=Z,83nm,1.1s,mb5.4						
QUIF	**Quistinic**	**56.24**	**307**	eP	**P**	**11 25 52.8**	**-1.3**
QUIF				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.4						
EPF	**Esparros**	**56.29**	**300**	eP	**P**	**11 25 52.9**	**-1.7**
	comp=Z,36nm,0.9s,mb5.1						
EPF	**Esparros**	**56.29**	**300**	eP	**P**	**11 25 52.9**	**-1.7**
EPF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
EBIE	**Bielsa**	**56.58**	**300**	P	**P**	**11 25 56.4**	**-0.2**
	comp=Z,16nm,0.8s,mb5.1						
EPOB	**Poblet**	**56.60**	**298**	P	**P**	**11 25 57.0**	**+0.2**
	comp=Z,74nm,2.1s,mb5.3						
ETSF	**Etsaut**	**56.94**	**300**	eP	**P**	**11 25 58.6**	**-0.6**
	comp=Z,56nm,1.0s,mb5.3						
ETSF	**Etsaut**	**56.94**	**300**	eP	**P**	**11 25 58.6**	**-0.6**
ETSF				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
KMBO	**Kilima Mbogo**	**57.18**	**233**	P	**P**	**11 26 01.2**	**-0.1**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KMBO				MLR	MLR		
	comp=Z,230nm,18.4s						
KMBO	**Kilima Mbogo**	**57.18**	**233**	P	**P**	**11 26 01.1**	**-0.2**
	comp=Z,1.6nm,0.5s,mb4.3,baz=18,slow=13,SNR=2.5						
KMBO				LR	LR	11 53 21.0	
	comp=Z,230nm,18.4s,MS4.3,baz=91,slow=39						
EBR	**Ebro Roquetas**	**57.25**	**298**	eP	**P**	**11 26 01.0**	**-0.4**
ERTA	**Horta de San J**	**57.29**	**298**	P	**P**	**11 26 01.4**	**-0.3**
	comp=Z,26nm,0.8s,mb5.3						
ESAC	**San Caprasio**	**57.44**	**299**	P	**P**	**11 26 03.0**	**+0.3**
	comp=Z,16nm,0.5s,mb5.3						
EMOS	**Mosqueruela**	**58.11**	**298**	P	**P**	**11 26 05.0**	**-2.4**
SUMG	**Summit**	**58.21**	**342**	eP	**P**	**11 26 07.9**	**+0.2**
	comp=Z,25nm,0.9s,mb5.2						
EMUR	**La Murta**	**59.91**	**295**	P	**P**	**11 26 20.2**	**+0.2**
	comp=Z,8.6nm,0.4s,mb5.1						
EVIA	**Vianos**	**60.34**	**297**	P	**P**	**11 26 22.9**	**0.0**
EVIA				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
EVIA	**Vianos**	**60.34**	**297**	P	**P**	**11 26 22.9**	**0.0**
	comp=Z,28nm,0.8s,mb5.3						
ESDC	**Sonseca Array**	**60.77**	**299**	P	**P**	**11 26 25.3**	**-0.5**
	comp=Z,13nm,0.9s,mb5.0,baz=54,slow=7.2,SNR=18						
ESDC	**Sonseca Array**	**60.77**	**299**	P	**P**	**11 26 24.9**	**-0.9**
	comp=Z,12nm,0.9s,mb5.0						
MBAR	**Mbarara**	**60.83**	**239**	eP	**P**	**11 26 23.5**	**-3.0**
MBAR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
MBAR				MLR	MLR		
	comp=Z,69nm,20.0s,MS3.8						
MBAR	**Mbarara**	**60.83**	**239**	eP	**P**	**11 26 23.5**	**-3.0**
	comp=Z,7.8nm,0.8s,mb4.9						
MBAR				LR	LR		
	comp=Z,69nm,20.0s,MS3.8						
TNA	**Tin City**	**61.13**	**26**	eP	**P**	**11 26 28.4**	**+0.5**
	comp=Z,32nm,1.1s,mb5.4						
TNA				LR	LR		
	comp=Z,292nm,22.0s,MS4.4						
EQES	**Quesada**	**61.16**	**296**	P	**P**	**11 26 28.5**	**0.0**
	comp=Z,26nm,1.1s,mb5.3						
EINC	**Incio**	**61.38**	**303**	P	**P**	**11 26 30.2**	**+0.3**
	comp=Z,19nm,0.9s,mb5.2						
EBAN	**Banos Encina**	**61.45**	**297**	P	**P**	**11 26 29.0**	**-1.4**
EBAN				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.1						
EBAN	**Banos Encina**	**61.45**	**297**	P	**P**	**11 26 29.0**	**-1.4**
	comp=Z,10nm,0.7s,mb5.1						
EADA	**Adamuz**	**61.97**	**297**	P	**P**	**11 26 34.8**	**+0.8**
	comp=Z,4.2nm,0.8s,mb4.6						
ELUQ	**Luque**	**62.09**	**297**	P	**P**	**11 26 34.0**	**-0.8**
ELUQ				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb5.3						
ELUQ	**Luque**	**62.09**	**297**	P	**P**	**11 26 34.0**	**-0.8**
	comp=Z,6.9nm,0.3s,mb5.3						
ELOJ	**Sierra Loja**	**62.24**	**296**	P	**P**	**11 26 33.0**	**-2.8**
ELOJ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
ELOJ	**Sierra Loja**	**62.24**	**296**	P	**P**	**11 26 33.0**	**-2.8**
	comp=Z,5.3nm,0.6s,mb4.8						
GUMO	**Guam**	**62.80**	**96**	PFAKE		11 26 50.0	+10
GUMO				LR	LR		
	comp=Z,915nm,19.0s,MS5.0						
ESPR	**Espera**	**63.53**	**297**	P	**P**	**11 26 42.7**	**-1.6**
	comp=Z,11nm,0.8s,mb5.0						
EMIN	**Mina Concepcio**	**63.58**	**298**	P	**P**	**11 26 43.8**	**-0.8**
	comp=Z,16nm,0.8s,mb5.1						
RES	**Resolute Bay**	**63.82**	**358**	⇑eP	**P**	**11 26 45.0**	**-0.5**
RES				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
RES	**Resolute Bay**	**63.82**	**358**	⇑eP	**P**	**11 26 45.0**	**-0.5**
	comp=Z,10.0nm,0.9s,mb4.8						
IMA	**Indian Mountai**	**65.05**	**21**	eP	**P**	**11 26 54.0**	**+0.4**
IMA				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.6						
IMA	**Indian Mountai**	**65.05**	**21**	eP	**P**	**11 26 54.0**	**+0.4**
	comp=Z,42nm,0.7s,mb5.6						
SFJ	**Sondre**	**65.14**	**341**	eP	**P**	**11 26 52.3**	**-1.8**
	comp=Z,21nm,0.8s,mb5.2						
COLA	**College**	**67.50**	**20**	eP	**P**	**11 27 09.2**	**-0.1**
COLA				pmax	pmax		
	comp=Z,56nm,0.7s,mb5.7						
COLA				MLR	MLR		
	comp=Z,565nm,22.0s,MS4.8						
COLA	**College**	**67.50**	**20**	eP	**P**	**11 27 09.2**	**-0.1**
	comp=Z,56nm,0.7s,mb5.7						
COLA				LR	LR		
	comp=Z,565nm,22.0s,MS4.8						
INK	**Inuvik**	**67.55**	**13**	⇑iP	**P**	**11 27 09.6**	**0.0**
INK				pmax	pmax		
	comp=Z,46nm,1.0s						
INK	**Inuvik**	**67.55**	**13**	P	**P**	**11 27 09.7**	**+0.1**
	comp=Z,27nm,0.8s,mb5.3,baz=358,slow=7.3,SNR=168						
INK				LR	LR	11 58 59.1	
	comp=Z,189nm,18.0s,MS4.4,baz=176,slow=38						
INK	**Inuvik**	**67.55**	**13**	⇑iP	**P**	**11 27 09.6**	**0.0**
	comp=Z,46nm,1.0s,mb5.5						
ILAR	**Eielson Array**	**67.83**	**20**	P	**P**	**11 27 10.9**	**-0.5**
ILAR				pmax	pmax		
	comp=Z,29nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,556nm,19.7s						
ILAR	**Eielson Array**	**67.83**	**20**	P	**P**	**11 27 10.8**	**-0.5**
	comp=Z,29nm,0.8s,mb5.3,baz=318,slow=5.0,SNR=25						
ILAR				LR	LR	12 00 53.2	
	comp=Z,556nm,19.6s,MS4.8,baz=331,slow=40						
MCK	**McKinley**	**68.14**	**21**	eP	**P**	**11 27 12.4**	**-0.9**
MCK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MCK				MLR	MLR		
	comp=Z,331nm,20.0s,MS4.6						
MCK	**McKinley**	**68.14**	**21**	eP	**P**	**11 27 12.3**	**-1.0**
	comp=Z,9.6nm,0.9s,mb4.8						
MCK				LR	LR		
	comp=Z,331nm,20.0s,MS4.6						
THY	**Trims Highway**	**69.23**	**20**	eP	**P**	**11 27 19.2**	**-0.8**
FIB	**Fire Island**	**69.84**	**23**	PFAKE		11 27 40.0	+16
FIB				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
SML	**Sawmill**	**69.86**	**22**	eP	**P**	**11 27 23.5**	**-0.4**
DAWY	**Dawson**	**70.19**	**17**	eP	**P**	**11 27 25.3**	**-0.6**
SLKM	**Skilak Lake**	**70.36**	**24**	eP	**P**	**11 27 22.6**	**-4.3**
DIV	**Divide**	**71.12**	**21**	PFAKE		11 27 40.0	+8.4
DIV				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
KDAK	**Kodiak Island**	**71.77**	**26**	eP	**P**	**11 27 35.9**	**+0.4**
MBWA	**Marble Bar**	**72.86**	**141**	PFAKE		11 27 50.0	+7.4
MBWA				LR	LR		
	comp=Z,322nm,20.0s,MS4.6						
FITZ	**Fitzroy Crossi**	**73.28**	**134**	eP	**P**	**11 27 45.4**	**+0.3**
	comp=Z,13nm,0.9s,mb4.9						
LSZ	**Lusaka**	**73.80**	**232**	PFAKE		11 28 00.0	+12
LSZ				LR	LR		
	comp=Z,306nm,19.0s,MS4.6						
YKW3	**Yellowknife Ar**	**75.46**	**7**	eP	**P**	**11 27 55.7**	**-1.1**
YKA	**Yellowknife Ar**	**75.52**	**7**	P	**P**	**11 27 57.1**	**-0.1**
YKA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,284nm,21.0s						
YKA	**Yellowknife Ar**	**75.52**	**7**	P	**P**	**11 27 57.1**	**-0.1**
	comp=Z,8.9nm,0.7s,mb4.8,baz=346,slow=5.7,SNR=196						
YKA				LR	LR	12 02 16.2	
	comp=Z,284nm,21.0s,MS4.5,baz=355,slow=36						
DLBC	**Dease Lake**	**77.24**	**15**	P	**P**	**11 28 07.7**	**+0.9**
	comp=Z,6.3nm,0.9s,mb4.5,baz=326,slow=5.6,SNR=15						
SCHQ	**Schefferville**	**79.59**	**341**	P	**P**	**11 28 19.5**	**-0.3**
	comp=Z,5.4nm,0.7s,mb4.6,baz=31,slow=5.9,SNR=24						
SCHQ				LR	LR	12 04 51.7	
	comp=Z,260nm,20.2s,MS4.6,baz=24,slow=37						
SCHQ	**Schefferville**	**79.59**	**341**	eP	**P**	**11 28 19.2**	**-0.6**
	comp=Z,7.6nm,0.7s,mb4.7						
SCHQ				LR	LR		
	comp=Z,790nm,20.0s,MS5.0						
WRAB	**Tennant Creek**	**79.64**	**128**	i P	**P**	**11 28 21.8**	**+1.0**
WRAB	**Tennant Creek**	**79.64**	**128**	P	**P**	**11 28 17.7**	**-3.1**
	comp=Z,34nm,0.9s,mb5.3						
WRAB				LR	LR		
	comp=Z,85nm,21.0s,MS4.1						
WRA	**Warramunga Arr**	**79.64**	**128**	P	**P**	**11 28 21.4**	**+0.6**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**79.64**	**128**	P	**P**	**11 28 21.4**	**+0.7**
	comp=Z,5.0nm,0.6s,mb4.6,baz=328,slow=5.5,SNR=11						
WRA	**Warramunga Arr**	**79.64**	**128**	P	**P**	**11 28 21.4**	**+0.6**
WB2	**Warramunga Arr**	**79.65**	**128**	⇓iP	**P**	**11 28 21.3**	**+0.5**
FCC	**Fort Churchill**	**79.73**	**357**	eP	**P**	**11 28 20.4**	**-0.1**
FCC				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
FCC	**Fort Churchill**	**79.73**	**357**	eP	**P**	**11 28 20.4**	**-0.1**
	comp=Z,27nm,1.3s,mb5.0						
PMG	**Port Moresby**	**80.10**	**112**	P	**P**	**11 28 24.5**	**+1.2**
PMG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PMG	**Port Moresby**	**80.10**	**112**	P	**P**	**11 28 24.5**	**+1.1**
	comp=Z,5.8nm,0.6s,mb4.7,baz=174,slow=10,SNR=2.9						
DBIC	**Dimbokro**	**81.32**	**271**	P	**P**	**11 28 29.0**	**-0.8**
	comp=Z,7.8nm,0.7s,mb4.8,baz=23,slow=6.7,SNR=18						
NWAO	**Narrogin (SRO)**	**82.03**	**149**	P	**P**	**11 28 33.6**	**+0.5**
NWAO				pmax	pmax		
	comp=Z,12nm,1.0s						
NWAO	**Narrogin (SRO)**	**82.03**	**149**	P	**P**	**11 28 33.5**	**+0.4**
	comp=Z,12nm,1.0s,mb4.8,baz=7.5,slow=7.0,SNR=4.0						
ASPA	**Alice Springs**	**82.30**	**131**	eP	**P**	**11 28 36.5**	**+1.8**
ASAR	**Alice Springs**	**82.30**	**131**	P	**P**	**11 28 35.1**	**+0.4**
	comp=Z,8.8nm,0.7s,mb4.8,baz=327,slow=5.5,SNR=8.6						
LBTB	**Lobatse**	**82.98**	**228**	P	**P**	**11 28 38.5**	**+0.3**
	comp=Z,13nm,0.8s,mb5.0,baz=40,slow=4.5,SNR=3.6						
LBTB	**Lobatse**	**82.98**	**228**	P	**P**	**11 28 38.5**	**+0.3**
LBTB				LR	LR		
	comp=Z,157nm,19.0s,MS4.4						
TSUM	**Tsumeb**	**83.26**	**237**	eP	**P**	**11 28 39.6**	**-0.2**
	comp=Z,14nm,0.9s,mb5.0						
TSUM				e	pP	11 28 48.2	-1.3
TSUM				LR	LR		
	comp=Z,233nm,19.0s,MS4.6						
BBB	**Bella Bella**	**83.47**	**17**	P	**P**	**11 28 39.3**	**-0.9**
	comp=Z,18nm,1.2s,mb5.0,baz=348,slow=20,SNR=14						
FFC	**Flin Flon**	**83.92**	**1**	P	**P**	**11 28 42.6**	**+0.3**
	comp=Z,69nm,0.7s,mb5.9,SNR=16						
FFC	**Flin Flon**	**83.92**	**1**	eP	**P**	**11 28 42.4**	**+0.1**
FFC				e	pP	11 28 50.6	-1.5
FFC				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.3						
FFC				MLR	MLR		
	comp=Z,115nm,19.0s,MS4.3						
FFC	**Flin Flon**	**83.92**	**1**	eP	**P**	**11 28 42.4**	**+0.2**
	comp=Z,39nm,1.4s,mb5.3						
FFC				e	pP	11 28 50.6	-1.4
FFC				LR	LR		
	comp=Z,115nm,19.0s,MS4.3						
CTA	**Charters Tower**	**87.12**	**120**	eP	**P**	**11 29 00.3**	**+1.3**
	comp=Z,8.4nm,1.0s,mb4.9						
CTA	**Charters Tower**	**87.12**	**120**	eP	**P**	**11 29 00.3**	**+1.3**
CTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CTA	**Charters Tower**	**87.12**	**120**	P	**P**	**11 28 59.9**	**+0.9**
	comp=Z,7.0nm,0.8s,mb5.0,baz=315,slow=5.7,SNR=4.7						
PQI	**Presque Isle**	**87.34**	**338**	PFAKE		11 29 10.0	+11
PQI				LR	LR		
	comp=Z,4μm,19.0s						
ULM	**Lac du Bonnet**	**88.32**	**357**	P	**P**	**11 29 03.9**	**-0.1**
	comp=Z,5.5nm,1.0s,mb4.7,baz=8.0,slow=4.9,SNR=5.6						
ULM				LR	LR	12 12 12.3	
	comp=Z,303nm,20.4s,MS4.7,baz=23,slow=38						
ULM	**Lac du Bonnet**	**88.32**	**357**	eP	**P**	**11 29 03.2**	**-0.8**
ULM				e	pP	11 29 11.8	-1.9
ULM				LR	LR		
	comp=Z,422nm,19.0s,MS4.9						
EMMW	**East Machias**	**88.97**	**337**	PFAKE		11 29 20.0	+13
EMMW				LR	LR		
	comp=Z,4μm,22.0s						
NEW	**Newport**	**89.21**	**11**	eP	**P**	**11 29 08.7**	**+0.4**
NEW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEW				MLR	MLR		
	comp=Z,283nm,19.0s						
NEW	**Newport**	**89.21**	**11**	P	**P**	**11 29 08.8**	**+0.5**
	comp=Z,6.6nm,0.8s,mb5.0,baz=345,slow=5.2,SNR=16						
NEW	**Newport**	**89.21**	**11**	eP	**P**	**11 29 08.7**	**+0.3**
	comp=Z,6.6nm,0.8s,mb5.0						
NEW				LR	LR		
	comp=Z,283nm,19.0s,MS4.7						
WVL	**Waterville**	**89.73**	**338**	PFAKE		11 29 20.0	+9.1
WVL				LR	LR		
	comp=Z,4μm,21.0s						
DGMT	**Dagmar**	**90.14**	**2**	eP	**P**	**11 29 13.8**	**+1.2**
	comp=Z,6.7nm,0.7s,mb5.1						
EYMN	**Ely**	**90.35**	**354**	PFAKE		11 29 30.0	+16
EYMN				LR	LR		
	comp=Z,581nm,20.0s,MS5.0						
CHMT	**Chamberlain Mo**	**91.03**	**9**	eP	**P**	**11 29 17.1**	**+0.3**
NCB	**Newcomb**	**91.46**	**341**	PFAKE		11 29 30.0	+11
NCB				LR	LR		
	comp=Z,672nm,21.0s,MS5.1						
HRV	**Harvard--Oak R**	**92.16**	**339**	PFAKE		11 29 30.0	+7.9
HRV				LR	LR		
	comp=Z,285nm,20.0s,MS4.7						
WES	**Weston**	**92.21**	**339**	PFAKE		11 29 30.0	+7.7
WES				LR	LR		
	comp=Z,920nm,22.0s,MS5.2						
BOZ	**Bozeman (W)**	**92.46**	**8**	eP	**P**	**11 29 24.2**	**+0.8**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
BOZ				MLR	MLR		
	comp=Z,502nm,19.0s,MS5.0						
BOZ	**Bozeman (W)**	**92.46**	**8**	eP	**P**	**11 29 24.2**	**+0.8**
	comp=Z,4.2nm,0.9s,mb4.8						
BOZ				LR	LR		
	comp=Z,502nm,19.0s,MS5.0						
BMO	**Blue Mountains**	**92.52**	**12**	PFAKE		11 29 40.0	+16
BMO				LR	LR		
	comp=Z,366nm,22.0s,MS4.8						
STKA	**Stephens Creek**	**92.94**	**131**	LR	LR	12 14 49.7	
	comp=Z,158nm,19.3s,MS4.5,baz=119,slow=38						
MCMT	**McKenzie Canyo**	**93.14**	**9**	eP	**P**	**11 29 26.4**	**-0.1**
BINY	**Binghamton**	**93.56**	**342**	PFAKE		11 29 40.0	+11
BINY				LR	LR		
	comp=Z,548nm,19.0s,MS5.0						
HLID	**Hailey**	**94.19**	**10**	PFAKE		11 29 40.0	+8.6
HLID				LR	LR		
	comp=Z,196nm,21.0s,MS4.5						
IMW	**Indian Meadow**	**94.26**	**7**	eP	**P**	**11 29 32.5**	**+0.8**
ERPA	**Erie**	**94.49**	**345**	PFAKE		11 29 40.0	+7.2
ERPA				LR	LR		
	comp=Z,540nm,20.0s,MS5.0						
YBH	**Yreka Blue Hor**	**94.56**	**16**	P	**P**	**11 29 33.7**	**+0.6**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YBH	**Yreka Blue Hor**	**94.56**	**16**	P	**P**	**11 29 33.7**	**+0.6**
	comp=Z,2.1nm,0.8s,mb4.6,baz=65,slow=1.0,SNR=4.4						
WVOR	**Wild Horse Val**	**94.66**	**13**	PFAKE		11 29 50.0	+16
WVOR				LR	LR		
	comp=Z,538nm,20.0s,MS5.0						
AAM	**Ann Arbor**	**94.97**	**347**	PFAKE		11 29 50.0	+15
AAM				LR	LR		
	comp=Z,452nm,21.0s,MS4.9						
JFWS	**Jewell Farm**	**95.23**	**352**	PFAKE		11 29 50.0	+14
JFWS				LR	LR		
	comp=Z,556nm,19.0s,MS5.0						
AHID	**Auburn Hatcher**	**95.36**	**8**	PFAKE		11 29 50.0	+13
AHID				LR	LR		
	comp=Z,524nm,19.0s,MS5.0						
BW06	**Boulder Array**	**95.51**	**7**	PFAKE		11 29 50.0	+13
BW06				LR	LR		
	comp=Z,289nm,19.0s,MS4.8						
PDAR	**Pinedale Array**	**95.51**	**7**	P	**P**	**11 29 38.1**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.6,baz=30,slow=3.5,SNR=13						
PDAR				PKiKP		11 34 17.2	
	comp=Z,0.5nm,0.5s,baz=28,slow=2.6,SNR=4.1						
PDAR				LR	LR	12 17 14.8	
	comp=Z,197nm,19.3s,MS4.6,baz=353,slow=38						
HWUT	**Hardware Ranch**	**96.46**	**8**	eP	**P**	**11 29 43.0**	**+1.1**
	comp=Z,12nm,1.1s,mb5.2						
HWUT				LR	LR		
	comp=Z,391nm,20.0s,MS4.9						
ELK	**Elko**	**96.85**	**11**	PFAKE		11 30 00.0	+16
ELK				LR	LR		
	comp=Z,332nm,19.0s,MS4.8						
ACSO	**Alum Creek Sta**	**96.88**	**347**	PFAKE		11 30 00.0	+16
ACSO				LR	LR		
	comp=Z,435nm,20.0s,MS4.9						
CBN	**Corbin**	**97.68**	**342**	PFAKE		11 30 00.0	+13
CBN				LR	LR		
	comp=Z,844nm,21.0s,MS5.2						
DUG	**Dugway**	**97.71**	**9**	PFAKE		11 30 00.0	+12
DUG				LR	LR		
	comp=Z,247nm,20.0s,MS4.7						
NVAR	**Mina Array Bea**	**98.61**	**14**	P	**P**	**11 29 53.0**	**+1.3**
	comp=Z,1.1nm,0.8s,mb4.5,baz=23,slow=4.0,SNR=10						
NVAR				LR	LR	12 18 37.3	
	comp=Z,177nm,20.9s,MS4.5,baz=270,slow=38						
MNV	**Mina**	**98.64**	**14**	PFAKE		11 30 00.0	+8.3
MNV				LR	LR		
	comp=Z,447nm,21.0s,MS4.9						
ISCO	**Idaho Springs**	**98.73**	**4**	PFAKE		11 30 00.0	+7.9
ISCO				LR	LR		
	comp=Z,420nm,20.0s,MS4.9						
TPH	**Tonopah**	**99.15**	**13**	PFAKE		11 30 10.0	+16
TPH				LR	LR		
	comp=Z,362nm,19.0s,MS4.9						
BLA	**Blacksburg**	**99.31**	**344**	PFAKE		11 30 10.0	+15
BLA				LR	LR		
	comp=Z,530nm,20.0s,MS5.0						
WCI	**Wyandotte Cave**	**99.36**	**349**	PFAKE		11 30 10.0	+15
WCI				LR	LR		
	comp=Z,592nm,19.0s,MS5.1						
MVU	**Marysvale**	**99.45**	**9**	PFAKE		11 30 10.0	+15
MVU				LR	LR		
	comp=Z,292nm,19.0s,MS4.8						
CBKS	**Cedar Bluff**	**99.84**	**359**	PFAKE		11 30 10.0	+13
CBKS				LR	LR		
	comp=Z,393nm,19.0s,MS4.9						
CCM	**Cathedral Cave**	**100.14**	**353**	PFAKE		11 30 10.0	+11
CCM				LR	LR		
	comp=Z,350nm,19.0s,MS4.9						
SDCO	**Great Sand Dun**	**100.78**	**4**	PFAKE		11 30 10.0	+8.5
SDCO				LR	LR		
	comp=Z,659nm,20.0s,MS5.1						
DAC	**Darwin (Calif)**	**100.83**	**14**	PFAKE		11 30 10.0	+8.2
DAC				LR	LR		
	comp=Z,352nm,20.0s,MS4.9						
WVT	**Waverly**	**101.64**	**349**	PFAKE		11 30 20.0	+15
WVT				LR	LR		
	comp=Z,396nm,19.0s,MS5.0						
NHSC	**New Hope**	**103.20**	**342**	PFAKE		11 30 20.0	+7.7
NHSC				LR	LR		
	comp=Z,576nm,19.0s,MS5.1						
OXF	**Oxford**	**103.44**	**351**	PFAKE		11 30 30.0	+17
OXF				LR	LR		
	comp=Z,307nm,21.0s,MS4.8						
ANMO	**Albuquerque**	**103.51**	**5**	Pdiff	Pdif	11 30 16.4	+2.8
	comp=Z,0.7nm,0.8s,baz=30,slow=6.4,SNR=3.3						
ANMO	**Albuquerque**	**103.51**	**5**	PFAKE		11 30 30.0	+16
ANMO				LR	LR		
	comp=Z,528nm,19.0s,MS5.1						
ANMO	**Albuquerque**	**103.51**	**5**	Pdif	Pdif	11 30 16.4	+2.8
GOGA	**Godfrey**	**103.59**	**345**	PFAKE		11 30 30.0	+16
GOGA				LR	LR		
	comp=Z,369nm,20.0s,MS4.9						
MIAR	**Mount Ida**	**103.83**	**354**	PFAKE		11 30 30.0	+15
MIAR				LR	LR		
	comp=Z,678nm,20.0s,MS5.2						
WMOK	**Wichita Mounta**	**103.89**	**358**	PFAKE		11 30 30.0	+15
WMOK				LR	LR		
	comp=Z,369nm,20.0s,MS4.9						
LRAL	**Lakeview Retre**	**104.56**	**348**	PFAKE		11 30 30.0	+12
LRAL				LR	LR		
	comp=Z,573nm,19.0s,MS5.1						
NATX	**Nacogdoches**	**106.68**	**355**	PFAKE		11 34 50.0	
NATX				LR	LR		
	comp=Z,765nm,21.0s,MS5.2						
MNTX	**Cornudas Mount**	**106.81**	**4**	PFAKE		11 34 50.0	
MNTX				LR	LR		
	comp=Z,397nm,19.0s,MS5.0						
JCT	**Junction City**	**108.16**	**359**	PFAKE		11 34 50.0	
JCT				LR	LR		
	comp=Z,384nm,22.0s,MS4.9						
DWPF	**Disney**	**108.29**	**342**	PFAKE		11 34 50.0	
DWPF				LR	LR		
	comp=Z,448nm,21.0s,MS5.0						
HKT	**Hockley**	**108.55**	**356**	PFAKE		11 34 50.0	
HKT				LR	LR		
	comp=Z,547nm,20.0s,MS5.1						
LTX	**Lajitas**	**109.24**	**3**	PFAKE		11 35 00.0	
LTX				LR	LR		
	comp=Z,362nm,22.0s,MS4.9						
TXAR	**Lajitas Array**	**109.24**	**3**	PKKPbc		11 45 48.4	
	comp=Z,0.3nm,0.7s,baz=179,slow=6.0,SNR=3.9						
TEIG	**Tepich**	**117.32**	**347**	PFAKE		11 35 10.0	+7.6
TEIG				LR	LR		
	comp=Z,181nm,22.0s,MS4.7						
SAML	**Samuel**	**133.62**	**304**	PFAKE		11 35 40.0	+6.1
SAML				LR	LR		
	comp=Z,302nm,21.0s,MS5.0						
OTAV	**Otavalo**	**133.68**	**329**	PFAKE		11 35 40.0	+5.9
OTAV				LR	LR		
	comp=Z,138nm,19.0s,MS4.7						
ARE	**Arequipa**	**144.52**	**306**	eP	PKPbc	11 35 49.0	+1.0
LVC	**Limon Verde**	**147.36**	**296**	PKPbc	PKPdf	11 35 57.5	-0.7
	comp=Z,5.8nm,0.5s,baz=80,slow=4.7,SNR=6.3						
LVC	**Limon Verde**	**147.36**	**296**	ePKPbc	PKPdf	11 35 57.9	-0.3

BJI ***15*** *11:33:56.8, 41.78N×79.49E, h15km, mB4.6, mb4.5, ML4.9, Ms4.1, Msz4.0*

MOS ***15*** *11:33:57.4±0.9, 41.68N×79.37E, h33km, mb4.7/29, Error ellipse: s-maj=10.0km s-min=5.5km az=105.4*

NEIC ***15*** *11:33:58.5±0.2, 41.62N×79.36E, mb4.7/16, Error ellipse: s-maj=6.6km s-min=3.8km az=58.0*

IDC ***15*** *11:33:59.3±0.5, 41.71N×79.48E, h30km±3km, mb4.1/17, mb1 4.3/19, mb1mx4.2/24, mbtmp4.3/19, ML3.9/2, MS3.8/2, Ms1 3.9/2, ms1mx3.2/24, Error ellipse: s-maj=13.6km s-min=10.4km az=46.0*

NNC ***15*** *11:34:01.5±1.5, 42.03N×79.20E, mpv4.6, Error ellipse: s-maj=17.6km s-min=4.6km az=148.0*

ISC 15 11:33:57.1±0.2**, 41.66N**±0.02×**79.41E**±0.03**, h29km, h29km±.9km:pP-P, n154,** σ1**s**.**29**/177**, mb4.5**/43**, MS4.0**/10**, 11C-6D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	**2.43**	**312**	i PN	**Pn**	**11 34 39.5**	**+3.7**
AAA				i S	**Sn**	**11 35 10.9**	**+6.1**
ULHL	**Ulahol**	**2.43**	**285**	P	**Pn**	**11 34 39.3**	**+3.5**
	SNR=92						
TKM2	**Tokmak 2**	**3.09**	**295**	P	**Pn**	**11 34 48.1**	**+2.9**
	SNR=142						
KZA	**Kyzart**	**3.13**	**279**	P	**Pn**	**11 34 49.5**	**+3.8**
	SNR=324						
KSH	**Kashi**	**3.38**	**232**	eP	**Pn**	**11 34 54.5**	**+5.2**
KSH				S	**Sn**	**11 35 37.3**	**+8.4**
KSH				Smax			
	comp=N,2μm,1.2s						
KSH				Smax			
	comp=E,3μm,0.9s						
KBK	**Karagaybulak**	**3.46**	**288**	P	**Pn**	**11 34 53.6**	**+3.1**
	SNR=209						
UCH	**Uchtor**	**3.69**	**280**	P	**Pn**	**11 34 57.1**	**+3.4**
	SNR=44						
CHMS	**Chumysh**	**3.70**	**293**	P	**Pn**	**11 34 56.0**	**+2.2**
	SNR=55						
FRU	**Bishkek**	**3.74**	**290**	ePN	**Pn**	**11 34 57.0**	**+2.5**
FRU				i		11 35 04.0	
FRU				eS	**Sn**	**11 35 52.0**	**+14**
FRU				pmax	pmax		
	comp=Z,1μm,1.0s						
FRU				smax			
	comp=N,3μm,1.0s						
AAK	**Ala-Archa**	**3.78**	**286**	⇑Pn	**Pn**	**11 34 57.8**	**+2.8**
	comp=N,31nm,0.3s						
AAK				⇑Pg	**Pn**	**11 35 06.8**	**+12**
	comp=N,300nm,0.5s						

AAK				⇑Lg		11 35 54.0	
	comp=N,2µm,0.7s						
AAK	Ala-Archa	3.78	286	P	Pn	11 34 57.8	+2.9
	SNR=57						
AAK	Ala-Archa	3.78	286	PN	Pn	11 34 57.7	+2.7
AAK						11 35 50.8	
AAK				pmax	pmax		
	comp=Z,150nm,0.5s						
AAK				smax			
	comp=E,2µm,0.7s						
AAK	Ala-Archa	3.78	286	ePn	Pn	11 34 56.7	+1.7
USP	Ospenovka	3.97	295	P	Pn	11 34 59.6	+1.9
	SNR=94						
AML	Almayashu	4.29	278	P	Pn	11 35 04.9	+2.7
	SNR=40						
EKS2	Erkin-Say	4.30	285	P	Pn	11 35 04.8	+2.4
	SNR=17						
MK31	Makanchi Array	5.53	21	Pn	Pn	11 35 21.6	+1.8
	comp=E,41nm,0.6s,baz=203,slow=12,SNR=1251						
MK31				⇑Pg	Pn	11 35 36.4	+17
	comp=E,26nm,0.3s,baz=210,slow=10,SNR=10						
MK31				⇓Sn	Sn	11 36 24.0	+0.9
	comp=E,198nm,0.7s,baz=201,slow=22,SNR=6.8						
MK31				⇓Lg		11 36 47.3	
	comp=E,242nm,0.8s						
MKAR	Makanchi Array	5.53	21	PN	Pn	11 35 21.6	+1.8
MKAR				e		11 36 24.5	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
MKAR				smax			
	comp=E,139nm,0.7s						
WMQ	Urumqi	6.47	68	P	Pn	11 35 35.0	+1.9
WMQ				S	Sn	11 36 48.0	+1.3
WMQ				Smax			
	comp=N,398nm,1.0s						
WMQ				Smax			
	comp=E,587nm,1.0s						
WMQ				LR	LR		
	comp=N,485nm,9.0s						
WMQ				LR	LR		
	comp=E,154nm,12.0s						
WMQ				LR	LR		
	comp=Z,127nm,9.0s						
KURK	Kurchatov	9.07	357	⇑Pn	P	11 36 08.6	-0.7
	comp=Z,15nm,0.8s,baz=206,slow=10,SNR=47						
KURK				⇓Lg		11 38 37.4	
	comp=Z,301nm,0.9s,baz=84,slow=7.5,SNR=13						
KURK	Kurchatov	9.07	357	iP	P	11 36 08.5	-0.8
KURK				pmax	pmax		
	comp=Z,12nm,0.8s						
KURK	Kurchatov	9.07	357	ePn	P	11 36 07.9	-1.3
	comp=Z,10µm,2.0s						
CHCP	Chirah Chowk	9.36	213	⇑P	P	11 36 14.6	+1.4
DLH	Dalhousie	9.51	198	eP	P	11 36 17.0	+1.7
	comp=Z,6.0nm,0.8s						
DLH				eS	Sn	11 37 58.0	-4.3
THN	Thein Dam	9.67	199	eP	P	11 36 16.6	-1.0
THN				eS	Sn	11 38 00.0	-6.3
CEP	Cherat	9.82	220	⇑P	P	11 36 20.8	+1.2
SDNR	Sundarnagar	10.33	192	eP	P	11 36 27.4	+0.8
SDNR				eS	S	11 38 17.2	-5.2
THW	Thamme Wali	10.75	217	P	P	11 36 32.6	+0.3
SARP	Sargodha	11.12	211	P	P	11 36 37.1	-0.2
DDI	Dehra Dun	11.37	186	eP	P	11 36 38.5	-2.3
DDI				eS	S	11 38 38.3	-10
LGTI	Lohaghat	12.21	177	eP	P	11 36 51.3	-0.8
LGTI				eS	S	11 39 03.5	-4.7
ZAL	Zalesovo	12.80	15	Pn	P	11 36 58.7	-1.2
	comp=Z,1.3nm,0.3s,baz=278,slow=12,SNR=9.1						
ZAL				Sn	S	11 39 14.7	-7.6
	comp=Z,5.8nm,0.3s,baz=302,slow=21,SNR=10						
ZAL				Lg		11 40 48.3	
	comp=Z,1.4nm,0.3s,baz=328,slow=13,SNR=3.3						
ZAL	Zalesovo	12.80	15	Pn	P	11 36 58.7	-1.2
ZAL				Sn	S	11 39 14.8	-7.6
ZAL				Lg		11 40 48.4	
BVA0	Borovoye Array	12.89	335	⇑Pn	P	11 36 58.9	-2.2
	comp=Z,4.4nm,0.7s						
BVA0				⇑Lg		11 40 38.3	
	comp=Z,29nm,0.9s						
BVA0	Borovoye Array	12.89	335	P	P	11 36 58.8	-2.3
BVA0				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BVAR	Borovoye Array	12.89	335	Pn	P	11 36 59.0	-2.1
	comp=Z,1.3nm,0.3s,baz=145,slow=15,SNR=22						
BVAR				Lg		11 40 52.2	
	comp=Z,5.8nm,0.3s,baz=150,slow=24,SNR=6.7						
BRVK	Borovoye	12.95	335	eP	P	11 36 59.5	-2.4
BRVK				pmax	pmax		
	comp=Z,56nm,0.8s						
BRVK	Borovoye	12.95	335	ePn	P	11 36 59.5	-2.5
	comp=Z,56nm,0.8s						
NVS	Novosibirsk	13.43	10	eP	P	11 37 07.6	-0.6
KOLN	Koldanda	14.28	165	eP	P	11 37 16.3	-3.2
	comp=Z,27nm,0.3s						
GKN	Gorkha	14.29	161	eP	P	11 37 17.5	-2.0
	comp=Z,88nm,0.4s						
KKN	Kakani	14.65	159	eP	P	11 37 22.9	-1.4
	comp=Z,39nm,0.5s						
DMN	Daman	14.78	160	eP	P	11 37 24.5	-1.5
	comp=Z,79nm,0.7s						
PKI	Pulchoki	14.90	159	eP	P	11 37 25.9	-1.6
	comp=Z,56nm,0.7s						
JIRN	Jiri	15.04	156	eP	P	11 37 28.6	-0.8
	comp=Z,82nm,0.6s						
LSA	Lhasa	15.26	138	eP	P	11 37 35.4	+3.1
LSA	Lhasa	15.26	138	eP	P	11 37 36.2	+3.9
LSA				pmax	pmax		
	comp=Z,22nm,0.9s						
LSA	Lhasa	15.26	138	eP	P	11 37 36.2	+3.9
	comp=Z,22nm,0.9s						
LSA				e		11 37 40.2	
GTA	Gaotai	15.68	92	eP	P	11 37 37.6	0.0
GTA				AP		11 37 44.5	
GTA				XP		11 37 48.4	
GTA				S	S	11 40 27.4	-3.2
GTA				AMB	AMB		
	comp=Z,7.0nm,0.4s						
GTA				AMB	AMB		
	comp=Z,174nm,5.0s						
GTA				LR	LR		
	comp=N,282nm,17.1s						
GTA				LR	LR		
	comp=E,429nm,11.4s						
GTA				LR	LR		
	comp=Z,348nm,18.3s						
ZAK	Zakamensk	18.67	54	eP	P	11 38 15.6	+0.6
ZAK				pmax	pmax		
	comp=Z,34nm,1.1s						
SVE	Sverdlovsk	19.40	328	⇑eP	P	11 38 22.9	-0.6
SVE				MLR	MLR		
	comp=Z,1µm,10.0s						
SVE				MLR	MLR		
	comp=N,600nm,9.0s						
SVE				MLR	MLR		
	comp=E,500nm,9.0s						
LZH	Lanzhou	19.80	98	eP	P	11 38 29.9	+1.8
LZH				AP		11 38 38.9	
LZH				XP		11 38 42.9	
LZH				PP	PP	11 38 49.0	+2.3
LZH				eS	S	11 42 04.3	+0.4
LZH				XS		11 42 16.0	
LZH				SS	SS	11 42 31.0	-0.7
LZH				AMB	AMB		
	comp=Z,29nm,1.2s						
LZH				AMB	AMB		
	comp=Z,129nm,4.1s						
LZH				LR	LR		
	comp=N,400nm,12.0s						
LZH				LR	LR		
	comp=Z,642nm,13.0s						
SONM	Songino Array	20.08	63	P	P	11 38 31.0	0.0
	comp=Z,7.0nm,0.6s,baz=266,slow=11,SNR=77						
ULN	Ulaanbaatar	20.52	63	eP	P	11 38 35.4	-0.2
ULN				pmax	pmax		
	comp=Z,16nm,1.0s						
ULN	Ulaanbaatar	20.52	63	eP	P	11 38 35.4	-0.2
	comp=Z,16nm,1.0s						
CD2	Chengdu	22.30	111	P	P	11 38 56.6	+3.0
SOKR	Solikamsk	22.76	330	⇑iP	P	11 38 58.9	+1.0
SOKR				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,720nm,18.0s,MS4.2						
HYB	Hyderabad	24.18	182	eP	P	11 39 12.0	-0.1
HYB	Hyderabad	24.18	182	iP	P	11 39 12.0	-0.1
XAN	Xi'an	24.43	98	P	P	11 39 16.9	+2.5
XAN				AP		11 39 25.3	
XAN				AMB	AMB		
	comp=Z,5.0nm,2.1s,mb3.6						
KMI	Kunming	25.41	123	P	P	11 39 26.1	+2.3
KMI				AP	pP	11 39 35.0	+2.8
KMI				S	S	11 43 50.8	+4.8
KMI				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.5						
KMI				AMB	AMB		
	comp=Z,51nm,3.8s						
KMI				LR	LR		
	comp=N,242nm,15.8s,MS4.0						
KMI				LR	LR		
	comp=E,219nm,11.9s,MS4.0						
KMI				LR	LR		
	comp=Z,413nm,13.6s,MS4.1						
TI2	Plekhanov	25.78	282	eP	P	11 39 28.0	+1.0
GNI	Garni	26.14	278	eP	P	11 39 30.6	+0.2
GNI				pmax	pmax		
	comp=Z,18nm,0.9s						
GNI	Garni	26.14	278	P	P	11 39 31.6	+1.1
	comp=Z,8.6nm,0.7s,mb4.4,baz=299,slow=6.0,SNR=6.9						
GNI				LR	LR	11 51 25.4	
	comp=Z,127nm,19.3s,MS3.5,baz=340,slow=40						
GNI	Garni	26.14	278	eP	P	11 39 30.6	+0.1
	comp=Z,18nm,0.9s,mb4.6						
ENH	Enshi	26.74	105	eP	P	11 39 36.6	+0.5
	comp=Z,16nm,0.8s,mb4.6						
KIV	Kislovodsk	26.90	287	eP	P	11 39 39.3	+2.0
KIV				eS	S	11 44 10.9	+0.5
KIV				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
KIV				pmax	pmax		
	comp=N,11nm,0.9s						
GYA	Guiyang	27.05	115	⇓iP	P	11 39 44.8	+5.8
GYA				S	S	11 44 23.4	+10
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
GYA				AMB	AMB		
	comp=Z,160nm,3.8s						
GYA				LR	LR		
	comp=N,200nm,14.0s,MS4.0						
GYA				LR	LR		
	comp=E,250nm,14.2s,MS4.0						
GYA				LR	LR		
	comp=Z,440nm,14.6s,MS4.2						
BOD	Bodaibo	27.19	42	eP	P	11 39 40.2	+0.4
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
CMAR	Chiang Mai Arr	28.52	138	P	P	11 39 52.7	+0.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,233nm,18.3s						
CMAR	Chiang Mai Arr	28.52	138	P	P	11 39 52.7	+0.4
	comp=Z,1.4nm,0.8s,mb3.8,baz=315,slow=8.7,SNR=12						
CMAR				LR	LR	11 53 28.1	
	comp=Z,233nm,18.3s,MS3.8,baz=325,slow=41						
SOC	Sochi	29.08	287	eP	P	11 39 56.3	-0.8
SOC				eS	S	11 44 44.7	-0.8
SOC				eSS	SS	11 46 10.8	-4.8
SOC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
SOC				pmax	pmax		
	comp=N,30nm,1.1s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.6s						
SOC				MLR	MLR		
	comp=Z,180nm,15.0s,MS3.8						
SOC				MLR	MLR		
	comp=N,179nm,17.0s,MS3.9						
SOC				MLR	MLR		
	comp=E,157nm,15.0s,MS3.9						
WHN	Wuhan	30.14	100	eP	P	11 40 08.5	+1.8
OBN	Obninsk	30.94	311	eP	P	11 40 12.5	-1.0
OBN				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS3.8						
NJ2	Nanjing	32.75	94	eP	P	11 40 30.9	+1.4
NJ2				AP	pP	11 40 38.4	+0.3
NJ2				XP	sP	11 40 42.1	+0.2
NJ2				PP	PP	11 41 39.3	0.0
NJ2				S	S	11 45 42.0	-1.3
NJ2				XS		11 46 00.0	
NJ2				LR	LR		
	comp=N,2µm,16.0s,MS5.0						
NJ2				LR	LR		
	comp=E,2µm,13.4s,MS5.0						
NJ2				LR	LR		
	comp=Z,2µm,17.5s,MS4.8						
RAYN	Ar Rayn	33.53	248	P	P	11 40 35.4	-1.0
	comp=Z,143nm,0.5s,SNR=16						
CN2	Changchun	33.55	71	eP	P	11 40 36.5	+0.1
BRTR	Keskin Array B	34.45	282	P	P	11 40 44.9	+0.7
BRTR				*PP	pP	11 40 53.9	+1.1
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRTR				pmax	pmax		
	comp=Z,14nm,1.2s						
BRTR	Keskin Array B	34.45	282	P	P	11 40 44.9	+0.7
	comp=Z,5.1nm,0.6s,mb4.6,baz=97,slow=8.1,SNR=17						
BRTR				pP	pP	11 40 53.9	+1.1
	comp=Z,14nm,1.1s,baz=104,slow=6.9,SNR=6.4						
JOF	Joensuu	35.13	324	ep	P	11 40 48.9	-0.9
	comp=Z,2.2nm,0.3s,mb4.6						
JOF	Joensuu	35.13	324	eP	P	11 40 48.9	-0.9
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
AKASG	Malin Array Be	35.29	302	P	P	11 40 50.9	-0.4
AKASG				*PP	pP	11 41 00.8	+0.8
AKASG				pmax	pmax		
	comp=Z,14nm,1.2s						
AKASG	Malin Array Be	35.29	302	P	P	11 40 50.9	-0.4
	comp=Z,0.4nm,0.3s,mb3.8,baz=72,slow=9.1,SNR=4.8						
AKASG				pP	pP	11 41 00.8	+0.8
	comp=Z,14nm,1.2s,baz=71,slow=8.9,SNR=4.8						
LVZ	Lovozero	35.48	333	iP	P	11 40 52.5	-0.2
LVZ				pmax	pmax		
	comp=Z,115nm,2.8s,mb5.3						
YAK	Yakutsk	35.92	38	iP	P	11 40 56.5	0.0
YAK				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
MDJ	Mudanjiang	36.27	68	P	P	11 40 59.5	-0.2
MDJ				AP	pP	11 41 05.3	-3.0
MDJ				XP	sP	11 41 08.8	-3.2
MDJ				PCP	PcP	11 43 24.9	+0.3
MDJ				S	S	11 46 38.3	+0.6
MDJ				SCP		11 47 10.3	
MDJ				PCS		11 47 12.5	
MDJ				SCS	ScS	11 51 15.8	+3.5
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,253nm,9.7s						
MDJ				LR	LR		
	comp=N,66nm,21.9s,MS3.5						
MDJ				LR	LR		
	comp=E,71nm,22.3s,MS3.5						
MDJ				LR	LR		
	comp=Z,94nm,25.2s,MS3.5						
KAF	Kangasniemi	37.25	322	ep	P	11 41 05.5	-2.2
	comp=Z,1.2nm,0.3s,mb4.2						
KAF	Kangasniemi	37.25	322	eP	P	11 41 05.5	-2.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
FINES	FINESS Array B	37.27	320	P	P	11 41 07.8	0.0
FINES				*PP	pP	11 41 16.8	+0.3
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	37.27	320	P	P	11 41 07.8	0.0
	comp=Z,4.8nm,0.6s,mb4.5,baz=94,slow=9.4,SNR=25						
FINES				pP	pP	11 41 16.8	+0.2
	comp=Z,2.5nm,0.5s,baz=68,slow=10,SNR=4.9						
TIXI	Tiksi	38.52	23	eP	P	11 41 17.9	-0.4
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
KEV	Kevo	38.74	334	ep	P	11 41 18.8	-1.3
	comp=Z,1.0nm,0.3s,mb4.0						
KEV	Kevo	38.74	334	eP	P	11 41 18.8	-1.3
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
ARCES	ARCESS Array B	39.17	333	P	P	11 41 24.1	+0.3
ARCES				pmax	pmax		
	comp=Z,13nm,0.6s						
ARCES	ARCESS Array B	39.17	333	P	P	11 41 24.1	+0.3
	comp=Z,13nm,0.6s,mb4.8,baz=97,slow=9.8,SNR=53						
ARE0	ARCESS Array S	39.17	333	eP	P	11 41 23.1	-0.7
NIE	Niedzica	41.16	302	eP	P	11 41 40.0	-0.3
OJC	Ojcow	41.32	303	eP	P	11 41 45.6	+4.0
NB2	NORSAR Subarra	44.44	320	P	P	11 42 06.6	-0.2
	comp=Z,26nm,1.2s,mb4.8,baz=84,slow=7.9						
NB2	NORSAR Subarra	44.44	320	P	P	11 42 06.6	-0.2
NB2				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.8						
NOA	NORSAR Array B	44.44	320	P	P	11 42 06.6	-0.2
NOA				*PP	pP	11 42 16.5	+1.0
NOA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	44.44	320	P	P	11 42 06.6	-0.2
	comp=Z,5.6nm,0.7s,mb4.4,baz=84,slow=8.0,SNR=22						
NOA				pP	pP	11 42 16.5	+1.0
	comp=Z,3.0nm,0.6s,baz=84,slow=8.0,SNR=5.5						
NAO01	NORSAR Array S	44.62	320	eP	P	11 42 07.5	-0.8
CLL	Collm	45.27	306	P	P	11 42 12.0	-1.5
CLL				e*SP	sP	11 42 29.0	+3.1
KHC	Kasperske Hory	45.50	303	eP	P	11 42 16.0	+0.6
GERES	GERESS Array B	45.51	302	P	P	11 42 15.7	+0.2
GERES				*PP	pP	11 42 25.4	+1.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	45.51	302	P	P	11 42 15.7	+0.2
	comp=Z,1.3nm,0.7s,mb4.0,baz=64,slow=7.6,SNR=9.7						
GERES				pP	pP	11 42 25.4	+1.2
	comp=Z,0.8nm,0.4s,baz=72,slow=8.4,SNR=5.4						
MA2	Magadan	46.22	42	iP	P	11 42 21.7	+0.8
MA2				pmax	pmax		
	comp=Z,9.0nm,2.7s,mb4.2						
GRF	Grafenberg Arr	46.81	304	eP	P	11 42 38.1	+12
HINF	Hinteralfeld	50.16	303	eP	P	11 42 50.6	-1.2
	comp=Z,4.0nm,0.5s,mb4.4						
HINF	Hinteralfeld	50.16	303	eP	P	11 42 50.6	-1.2
HINF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
PGF	Pioggiola	50.81	296	eP	P	11 42 55.9	-0.9
BILL	Bilibino	51.02	29	iP	P	11 42 58.5	+0.5
BILL				i		11 43 11.1	
BILL				e		11 44 13.9	
BILL				eS	S	11 50 06.4	-5.5
BILL				eSS	SS	11 53 47.1	+2.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.0						
CABF	La Chapelle	51.10	302	eP	P	11 42 57.9	-1.0
	comp=Z,44nm,1.2s,mb5.0						
CABF	La Chapelle	51.10	302	eP	P	11 42 57.9	-1.0
CABF				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
LPG	La Plagne	51.11	300	eP	P	11 42 58.9	-0.1
LPL	La Plagne	51.11	300	eP	P	11 42 59.0	0.0
SBF	Sospel	51.31	298	eP	P	11 42 59.7	-0.9
	comp=Z,80nm,1.1s,mb5.3						
SBF	Sospel	51.31	298	eP	P	11 42 59.7	-0.9
SBF				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
MBDF	Montbardon	51.40	299	eP	P	11 43 00.1	-1.1
	comp=Z,34nm,1.1s,mb4.9						
MBDF	Montbardon	51.40	299	eP	P	11 43 00.1	-1.1
MBDF				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
DAG	Danmarks Havn	51.66	343	⇓eP	P	11 43 02.2	-0.7
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
DAG	Danmarks Havn	51.66	343	⇓iP	P	11 43 02.2	-0.7
	comp=Z,3.7nm,0.8s,mb4.4						
ORIF	Oris-en-Rattie	51.90	300	eP	P	11 43 03.1	-2.0
	comp=Z,12nm,0.7s,mb4.6						
ORIF	Oris-en-Rattie	51.90	300	eP	P	11 43 03.1	-2.0
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
VIVF	Saint-Julien-l	52.71	300	eP	P	11 43 10.0	-1.1
AVF	Avril sur Loir	52.75	303	eP	P	11 43 09.7	-1.7
	comp=Z,7.1nm,0.7s,mb4.4						
AVF	Avril sur Loir	52.75	303	eP	P	11 43 09.7	-1.7
AVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LASF	Ste Croix	53.57	300	eP	P	11 43 15.8	-1.7
ESDC	Sonseca Array	60.80	299	P	P	11 44 08.3	-0.5
	comp=Z,1.6nm,0.7s,mb4.3,baz=63,slow=6.6,SNR=4.3						
ESDC				pP	pP	11 44 17.9	+0.1
	comp=Z,0.6nm,0.4s,baz=49,slow=7.2,SNR=3.0						
IMA	Indian Mountai	65.10	21	eP	P	11 44 36.1	-0.6
IMA				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
IMA	Indian Mountai	65.10	21	eP	P	11 44 36.0	-0.6
	comp=Z,43nm,1.0s,mb5.4						
COLA	College	67.56	20	eP	P	11 44 51.6	-0.8
COLA				e*PP	pP	11 45 00.2	-1.3
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
COLA	College	67.56	20	eP	P	11 44 51.6	-0.8
	comp=Z,5.6nm,1.0s,mb4.5						
COLA				epP	pP	11 45 00.2	-1.3
INK	Inuvik	67.61	13	eP	P	11 44 52.0	-0.6
INK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
INK	Inuvik	67.61	13	P	P	11 44 52.4	-0.2
	comp=Z,3.2nm,0.7s,mb4.5,baz=349,slow=7.7,SNR=26						
INK				pP	pP	11 45 01.8	0.0
	comp=Z,3.6nm,0.6s,baz=325,slow=7.1,SNR=8.3						
INK	Inuvik	67.61	13	eP	P	11 44 52.0	-0.7
	comp=Z,9.2nm,1.0s,mb4.8						
ILAR	Eielson Array	67.89	20	P	P	11 44 53.9	-0.5
ILAR				*PP	pP	11 45 02.7	-0.8
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR	Eielson Array	67.89	20	P	P	11 44 53.9	-0.6
	comp=Z,3.8nm,0.8s,mb4.5,baz=317,slow=5.5,SNR=44						
ILAR				pP	pP	11 45 02.7	-0.8
	comp=Z,2.7nm,0.8s,baz=321,slow=5.2,SNR=9.0						
MCK	McKinley	68.19	21	P	P	11 44 56.5	+0.1
DAWY	Dawson	70.25	17	eP	P	11 45 07.8	-1.1
YKW3	Yellowknife Ar	75.51	7	eP	P	11 45 38.9	-1.0
YKW3				epP	pP	11 45 48.2	-0.9
YKA	Yellowknife Ar	75.58	7	P	P	11 45 40.0	-0.2
YKA				*PP	pP	11 45 49.0	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	Yellowknife Ar	75.58	7	P	P	11 45 40.0	-0.2
	comp=Z,1.7nm,0.8s,mb4.0,baz=345,slow=5.8,SNR=23						
YKA				pP	pP	11 45 49.0	-0.4
	comp=Z,3.0nm,0.6s,baz=344,slow=5.7,SNR=21						
YKA	Yellowknife Ar	75.58	7	P	P	11 45 40.0	-0.2
YKA				pP	pP	11 45 49.0	-0.4
WRA	Warramunga Arr	79.60	128	P	P	11 46 04.1	+0.8
WRA				*PP	pP	11 46 12.7	+0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	79.60	128	P	P	11 46 04.1	+0.8
	comp=Z,2.0nm,0.5s,mb4.3,baz=328,slow=5.6,SNR=51						
WRA				pP	pP	11 46 12.7	+0.1
	comp=Z,2.7nm,0.8s,baz=331,slow=5.2,SNR=7.7						
WRAB	Tennant Creek	79.60	128	eP	P	11 46 03.7	+0.4
WB2	Warramunga Arr	79.61	128	eP	P	11 46 04.1	+0.7
SCHQ	Schefferville	79.64	341	P	P	11 46 02.8	0.0
	comp=Z,0.9nm,0.7s,mb3.8,baz=24,slow=14,SNR=4.7						
DBIC	Dimbokro	81.33	271	P	P	11 46 12.0	-0.6
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DBIC	Dimbokro	81.33	271	P	P	11 46 12.0	-0.6
	comp=Z,1.1nm,0.7s,mb3.9,baz=48,slow=4.2,SNR=3.3						
ASAR	Alice Springs	82.26	131	P	P	11 46 18.1	+0.9
	comp=Z,2.8nm,0.8s,mb4.3,baz=324,slow=5.3,SNR=24						
ASAR				pP	pP	11 46 27.2	+0.7
	comp=Z,2.7nm,0.8s,baz=326,slow=4.9,SNR=7.5						
BOSA	Boshof	85.97	226	P	P	11 46 38.9	+3.0

*NEIC **15** 11:34:06.1±0.6,3.24S×142.71E,h10^{km},mb4.6/6,Error ellipse: s-maj=17.5km s-min=11.0km az=102.0*

*IDC **15** 11:34:12.7±3.5,3.31S×142.81E,h62^{km}±31^{km},mb3.9/6, mb1 4.2/8,mb1mx4.0/14,mbtmp4.3/8,ML3.6/2,MS3.7/2, Ms1 3.7/2,ms1mx3.2/17,Error ellipse: s-maj=24.1km s-min=12.5km az=109.0*

ISC 15 11:34:08.1±0.6**,3.32S**±0.07×**142.64E**±0.08**,h33**^{km}**,n20,** σ**0**^{s}**.94**/19**,mb4.3**/9**,MS3.8**/1**,3D,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.53**	**144**	P	**P**	**11 35 57.8**	**-0.5**
	1.0nm,0.3s,baz=8.7,slow=5.2,SNR=8.5						
PMG				S	**S**	**11 37 24.2**	**+0.7**
	0.4nm,0.3s,baz=121,slow=23,SNR=1.4						
KAKA	**Kakadu**	**13.74**	**227**	⇓*i*P	**P**	**11 37 22.8**	**-0.3**
	27nm,0.6s						
CTA	**Charters Tower**	**17.03**	**168**	LR	LR	11 44 36.1	
	comp=Z,182nm,19.4s,baz=358,slow=37						
WRAB	**Tennant Creek**	**18.38**	**205**	*e*P	**P**	**11 38 21.3**	**-1.1**
	46nm,0.9s						
WB2	**Warramunga Arr**	**18.39**	**205**	*e*P	**P**	**11 38 21.2**	**-1.3**
WRA	**Warramunga Arr**	**18.39**	**205**	P	**P**	**11 38 22.3**	**-0.3**
	0.5nm,0.3s,baz=27,slow=11,SNR=37						
WRA				S	**S**	**11 41 51.7**	**+8.4**
	baz=25,slow=22,SNR=5.1						
ASAR	**Alice Springs**	**21.91**	**202**	P	**P**	**11 39 01.9**	**+1.5**
	5.6nm,0.9s,mb4.0,baz=28,slow=9.3,SNR=22						
ASAR				S	**S**	**11 43 02.2**	**+6.7**
	0.8nm,0.8s,baz=13,slow=24,SNR=2.5						
ASAR				LR	LR	11 48 21.4	
	comp=Z,327nm,19.4s,MS3.8,baz=7.5,slow=39						
ASPA	**Alice Springs**	**21.92**	**202**	*e*P	**P**	**11 39 03.5**	**+3.1**
FITZ	**Fitzroy Crossi**	**22.20**	**227**	*e*P	**P**	**11 39 03.6**	**+0.3**
	27nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**28.42**	**182**	*e*P	**P**	**11 40 01.7**	**-0.3**
	4.0nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**28.42**	**182**	P	**P**	**11 40 01.7**	**-0.3**
	5.9nm,0.8s,mb4.2,baz=4.3,slow=7.7,SNR=6.4						
CMAR	**Chiang Mai Arr**	**48.16**	**298**	P	**P**	**11 42 48.6**	**+1.1**
	1.6nm,0.7s,mb4.2,baz=119,slow=6.4,SNR=9.5						
HIA	**Hailar**	**56.02**	**342**	P	**P**	**11 43 45.4**	**-0.5**
	2.1nm,0.4s,mb4.5						
VNDA	**Vanda**	**74.85**	**176**	P	**P**	**11 45 46.2**	**-0.5**
	0.9nm,0.9s,mb3.7,baz=39,slow=6.5,SNR=2.9						
BVAR	**Borovoye Array**	**82.07**	**324**	P	**P**	**11 46 27.7**	**+1.1**
	2.4nm,0.8s,mb4.2,baz=121,slow=8.4,SNR=5.0						
MCK	**McKinley**	**83.58**	**25**	P	**P**	**11 46 33.7**	**-0.4**
	3.7nm,0.7s,mb4.6						
ILAR	**Eielson Array**	**84.78**	**24**	P	**P**	**11 46 39.4**	**-0.7**
	3.6nm,0.7s,mb4.6,baz=256,slow=4.6,SNR=10						
QSPA	**South Pole Qui**	**86.63**	**180**	⇓*i*P	PcP	11 46 55.0	+3.3
	4.8nm,0.8s						
QSPA				⇓*i*P	pP	11 46 59.6	+0.2
SDV	**Santo Domingo**	**146.48**	**79**	PKPbc	PKPbc	11 53 47.2	+0.2
	1.8nm,0.5s,baz=294,slow=20,SNR=2.8						
DBIC	**Dimbokro**	**147.45**	**277**	PKPbc	PKPdf	11 53 50.0	+2.7
	5.4nm,1.0s,baz=108,slow=5.2,SNR=6.7						

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*NEIC **15** 11:38:34.7±0.9,22.09S×67.24W,h175^{km}±8^{km},mb4.0/2, Error ellipse: s-maj=16.3km s-min=10.1km az=100.0*

*IDC **15** 11:38:34.8±1.3,22.12S×67.24W,h177^{km}±11^{km},mb3.4/3, mb1 3.6/6,mb1mx3.4/15,mbtmp3.9/6,Error ellipse: s-maj=25.1km s-min=14.6km az=107.0*

ISC 15 11:38:33.7±1.0**,22.17S**±0.07×**67.2W**±0.1**,h182**^{km}±10^{km}**, n14,** σ**0**^{s}**.90**/16**,mb3.7**/5**,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.65**	**254**	P	**P**	**11 39 08.5**	**+0.9**
	24nm,0.3s,baz=54,slow=6.8,SNR=289						
LVC				S	**S**	**11 39 33.6**	**-0.2**
	56nm,0.3s,baz=265,slow=20,SNR=77						
LVC	**Limon Verde**	**1.65**	**254**	P	**P**	**11 39 08.5**	**+0.8**
LVC				S	**S**	**11 39 33.6**	**-0.2**
LPAZ	**La Paz**	**5.91**	**351**	P	**P**	**11 40 01.1**	**+0.7**
	9.7nm,0.3s,baz=151,slow=7.2,SNR=137						
LPAZ				S	**S**	**11 41 08.4**	**+0.7**
	baz=73,slow=7.7,SNR=2.3						
ARE	**Arequipa**	**6.98**	**324**	*e*P	**P**	**11 40 12.0**	**-2.4**
ARE				*e*S	**S**	**11 41 25.0**	**-7.8**
SAML	**Samuel**	**13.69**	**17**	P	**P**	**11 41 40.8**	**-0.7**
PLCA	**Paso Flores**	**18.73**	**188**	P	**P**	**11 42 40.2**	**-0.6**
	0.1nm,0.3s,baz=7.2,slow=11,SNR=4.0						
BDFB	**Brasilia**	**19.26**	**74**	P	**P**	**11 42 46.3**	**-0.2**
	0.3nm,0.3s,baz=270,slow=11,SNR=2.8						
QSPA	**South Pole Qui**	**68.03**	**180**	*e*P	**P**	**11 49 15.6**	**+0.8**
	3.4nm,0.5s,mb4.3						
PDAR	**Pinedale Array**	**75.49**	**329**	P	**P**	**11 50 00.4**	**+0.9**
	0.4nm,0.8s,mb3.1,baz=106,slow=6.6,SNR=3.0						
ULM	**Lac du Bonnet**	**76.44**	**342**	P	**P**	**11 50 03.5**	**-1.2**
	0.8nm,0.3s,mb3.8,baz=166,slow=4.2,SNR=2.6						
HLID	**Hailey**	**78.46**	**327**	*e*P	**P**	**11 50 16.6**	**+0.7**
	1.0nm,0.7s,mb3.5						
YKA	**Yellowknife Ar**	**92.35**	**340**	P	**P**	**11 51 24.1**	**0.0**
	1.2nm,1.0s,mb3.9,baz=134,slow=4.5,SNR=12						
ASAR	**Alice Springs**	**130.04**	**206**	PKP	PKPdf	11 57 24.1	+1.6
	0.6nm,0.8s,baz=135,slow=2.2,SNR=4.4						
WRA	**Warramunga Arr**	**133.16**	**208**	PKP	PKPdf	11 57 30.5	+1.9
	0.4nm,0.5s,baz=152,slow=1.8,SNR=10						

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*IDC **15** 12:13:02.9±3.1,29.09S×177.89W,mb3.6/2,mb1 3.9/3, mb1mx3.8/14,mbtmp3.7/3,ML3.7/1,Error ellipse: s-maj=64.5km s-min=39.9km az=102.0*

*NEIC **15** 12:13:35.0±4.2,30.13S×178.51W,h268^{km}±41^{km},mb3.9/3, Error ellipse: s-maj=44.2km s-min=26.7km az=190.0*

ISC 15 12:13:27.3±1.5**,29.59S**±0.06×**178.6W**±0.2**,h200**^{km}**,n44,** σ**1**^{s}**.23**/67**,mb3.7**/5**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**8.37**	**197**	*e*P	**P**	**12 15 27.1**	**+0.9**
MXZ				S	**S**	**12 17 02.1**	**+3.0**
MXZ	**Matakaoa Point**	**8.37**	**197**	PN	**P**	**12 15 27.5**	**+1.4**
MXZ				SN	**S**	**12 17 01.7**	**+2.6**
MXZ	**Matakaoa Point**	**8.37**	**197**	PN	**P**	**12 15 27.5**	**+1.4**
MXZ				SN	**S**	**12 17 01.7**	**+2.6**
PUZ	**Puketiti**	**8.86**	**196**	*e*P	**P**	**12 15 32.1**	**-0.5**
PUZ				S	**S**	**12 17 11.5**	**+0.9**
PUZ	**Puketiti**	**8.86**	**196**	PN	**P**	**12 15 32.2**	**-0.5**
PUZ				SN	**S**	**12 17 11.6**	**+1.0**
PUZ	**Puketiti**	**8.86**	**196**	PN	**P**	**12 15 32.2**	**-0.5**
PUZ				SN	**S**	**12 17 11.6**	**+1.0**
MWZ	**Matawai**	**9.31**	**199**	*e*P	**P**	**12 15 39.8**	**+1.5**
MWZ				S	**S**	**12 17 22.4**	**+1.6**
MWZ	**Matawai**	**9.31**	**199**	PN	**P**	**12 15 39.5**	**+1.1**
MWZ				SN	**S**	**12 17 22.4**	**+1.6**
MWZ	**Matawai**	**9.31**	**199**	PN	**P**	**12 15 39.5**	**+1.1**
MWZ				SN	**S**	**12 17 22.4**	**+1.6**
URZ	**Urewera**	**9.36**	**201**	Pn	**P**	**12 15 28.8**	**-10**
	0.6nm,0.3s,baz=100,slow=12,SNR=4.5						
URZ				Sn	**S**	**12 17 23.2**	**+1.0**
	5.8nm,0.3s,baz=140,slow=19,SNR=17						
URZ	**Urewera**	**9.36**	**201**	*e*P	**P**	**12 15 39.5**	**+0.4**
URZ				Sn	**S**	**12 17 23.2**	**+1.0**
URZ	**Urewera**	**9.36**	**201**	PN	**P**	**12 15 39.5**	**+0.4**
URZ				SN	**S**	**12 17 24.5**	**+2.3**
URZ	**Urewera**	**9.36**	**201**	PN	**P**	**12 15 39.5**	**+0.4**
URZ				SN	**S**	**12 17 24.5**	**+2.3**
BKZ	**Black Stump Fm**	**10.39**	**202**	*e*P	**P**	**12 15 51.4**	**-0.9**
BKZ	**Black Stump Fm**	**10.39**	**202**	PN	**P**	**12 15 51.4**	**-0.9**
BKZ	**Black Stump Fm**	**10.39**	**202**	PN	**P**	**12 15 51.4**	**-0.9**
MRZ	**Mangatainoka R**	**12.04**	**202**	*e*P	**P**	**12 16 10.9**	**-2.5**
MRZ				*e*S	**S**	**12 18 18.4**	**-5.8**
MRZ	**Mangatainoka R**	**12.04**	**202**	PN	**P**	**12 16 10.9**	**-2.5**
MRZ				SN	**S**	**12 18 19.5**	**-4.7**
MRZ	**Mangatainoka R**	**12.04**	**202**	PN	**P**	**12 16 10.9**	**-2.5**
MRZ				SN	**S**	**12 18 19.5**	**-4.7**
KIW	**Kapiti Island**	**12.44**	**204**	PN	**P**	**12 16 18.7**	**+0.2**
KIW	**Kapiti Island**	**12.44**	**204**	PN	**P**	**12 16 18.7**	**+0.2**
CAW	**Cannon Point**	**12.61**	**203**	PN	**P**	**12 16 19.3**	**-1.3**
CAW	**Cannon Point**	**12.61**	**203**	PN	**P**	**12 16 19.3**	**-1.3**
TUWZ	**Tuamarina**	**13.29**	**205**	PN	**P**	**12 16 29.0**	**-0.2**
TUWZ	**Tuamarina**	**13.29**	**205**	PN	**P**	**12 16 29.0**	**-0.2**
NNZ	**Nelson**	**13.32**	**207**	*e*P	**P**	**12 16 29.3**	**-0.3**
NNZ				S	**S**	**12 18 51.9**	**-1.7**
NNZ	**Nelson**	**13.32**	**207**	PN	**P**	**12 16 29.3**	**-0.3**
NNZ				SN	**S**	**12 18 51.9**	**-1.7**
NNZ	**Nelson**	**13.32**	**207**	PN	**P**	**12 16 29.3**	**-0.3**
NNZ				SN	**S**	**12 18 51.9**	**-1.7**
THZ	**Tophouse**	**13.97**	**207**	*e*P	**P**	**12 16 35.5**	**-2.3**
THZ				S	**S**	**12 19 08.6**	**+0.3**
THZ	**Tophouse**	**13.97**	**207**	*e*PN	**P**	**12 16 35.8**	**-1.9**
THZ				SN	**S**	**12 19 08.7**	**+0.4**
THZ	**Tophouse**	**13.97**	**207**	*e*PN	**P**	**12 16 35.8**	**-1.9**
THZ				SN	**S**	**12 19 08.7**	**+0.4**
KHZ	**Kahutara**	**14.30**	**204**	*e*P	**P**	**12 16 41.1**	**-0.7**
KHZ				S	**S**	**12 19 13.3**	**-2.2**
KHZ	**Kahutara**	**14.30**	**204**	PN	**P**	**12 16 41.1**	**-0.7**
KHZ				SN	**S**	**12 19 13.3**	**-2.3**
KHZ	**Kahutara**	**14.30**	**204**	PN	**P**	**12 16 41.1**	**-0.7**
KHZ				SN	**S**	**12 19 13.3**	**-2.3**
DSZ	**Denniston Nort**	**14.42**	**210**	*e*P	**P**	**12 16 43.4**	**+0.1**
DSZ	**Denniston Nort**	**14.42**	**210**	PN	**P**	**12 16 43.7**	**+0.4**
DSZ	**Denniston Nort**	**14.42**	**210**	PN	**P**	**12 16 43.7**	**+0.4**
CTAO	**Charters Tower**	**33.19**	**278**	P	**P**	**12 19 48.1**	**+1.0**
	12nm,1.0s,mb4.4						
ASAR	**Alice Springs**	**42.66**	**266**	P	**P**	**12 21 06.5**	**+0.6**
	0.4nm,0.4s,mb3.2,baz=104,slow=7.4,SNR=13						
WRAB	**Tennant Creek**	**43.57**	**272**	P	**P**	**12 21 13.3**	**+0.1**
	2.2nm,0.6s,mb3.7						
WRA	**Warramunga Arr**	**43.58**	**272**	P	**P**	**12 21 13.6**	**+0.3**
	0.7nm,0.6s,mb3.2,baz=110,slow=8.1,SNR=23						
QSPA	**South Pole Qui**	**60.52**	**180**	P	**P**	**12 23 22.1**	**+4.3**
	3.0nm,1.0s,mb3.9						
ARCES	**ARCESS Array B**	**137.69**	**348**	PKP	PKPdf	12 32 27.6	+0.8
	3.4nm,1.0s,baz=63,slow=2.0,SNR=4.9						
FINES	**FINESS Array B**	**144.22**	**340**	PKP	PKPdf	12 32 38.6	+0.2
	1.8nm,0.7s,baz=42,slow=3.7,SNR=15						

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*CSEM **15** 12:28:09.3±0.2,70.99N×8.44W,h40^{km},ML3.1,Error ellipse: s-maj=9.1km s-min=4.7km az=128.0*

*NEIC **15** 12:28:10.8,71.19N×8.54W,h33^{km},ML3.2(BER),After BER.*

BER 15 12:28:10.8±0.8**,71.28N**×**8.79W,h10**^{km}**,MD2.8,ML3.1, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.28**	**155**	*e*P	Pg	12 28 16.2	-0.5
JNW				*e*S	Sg	12 28 20.3	-0.4
JNW				AML	AML	12 28 25.5	
	comp=Z,2µm,0.3s						
JNW	**Jan Mayen West**	**0.28**	**155**	*e*P	Pg	12 28 16.2	-0.5
	SNR=108						
JNW				*e*S	Sg	12 28 20.3	-0.4
	comp=Z,2µm,0.3s,SNR=108						
JNE	**Jan Mayen East**	**0.34**	**151**	*e*P	Pg	12 28 16.8	-1.0
JNE				*e*S	Sg	12 28 20.9	-1.5
JNE				AML	AML	12 28 25.5	
	comp=Z,1µm,0.3s						
JNE	**Jan Mayen East**	**0.34**	**151**	*e*P	Pg	12 28 16.8	-1.0
	SNR=105						
JNE				*e*S	Sg	12 28 20.9	-1.5
	comp=Z,1µm,0.3s,SNR=105						
JMI	**Jan Mayen**	**0.36**	**177**	*e*P	Pg	12 28 17.1	-1.0
JMI				*e*S	Sg	12 28 22.0	-1.1
JMI				AML	AML	12 28 24.0	
	comp=Z,2µm,0.5s						
JMI	**Jan Mayen**	**0.36**	**177**	*e*P	Pg	12 28 17.1	-1.1
	SNR=104						
JMI				*e*S	Sg	12 28 22.0	-1.1
	comp=Z,2µm,0.5s,SNR=104						

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*LDG **15** 12:41:43.6±0.7,47.63N×89.61E,h10^{km},Mb5.0/9,Ms4.0/6, Error ellipse: s-maj=43.6km s-min=4.9km az=76.0*

*BJI **15** 12:41:43.2,47.68N×89.47E,h6^{km},mB4.9,mb4.5,ML5.3, Ms4.8,Msz4.4*

*IDC **15** 12:41:44.5±0.6,47.70N×89.54E,mb4.3/19,mb1 4.5/22, mb1mx4.5/23,mbtmp4.3/22,ML4.4/3,MS3.9/8,Ms1 3.9/8, ms1mx3.6/29,Error ellipse: s-maj=16.0km s-min=9.8km az=52.0*

*NEIC **15** 12:41:46.0±2.4,47.67N×89.46E,h8^{km}±15^{km},mb4.9/26, Error ellipse: s-maj=5.8km s-min=4.8km az=221.0*

*HRVD **15** 12:41:46.0±0.6,47.69N×89.61E,h13^{km}±3^{km},MW4.6/34, Centroid moment Tensor Solution. LP body waves: s3,c3; Mantle waves: s34,c49; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.09; $M_{\theta\theta}$-1.03±.09; $M_{\phi\phi}$1.04±.09; $M_{r\theta}$-0.02±.18; $M_{\theta\phi}$-0.01±.06; $M_{\phi r}$0.11±.18; Best double couple: $M_0$1.041×10^{16} NP1:ϕ_s45°,δ85°,λ3°. NP2:ϕ_s314°, δ87°,λ175°. Principal axes: T 1.051, Plg6°, Azm270°; N -.022, Plg84°, Azm100°; P -1.03, Plg1°, Azm360°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **15** 12:41:47.0±1.4,47.59N×89.52E,h33^{km},mb5.0/28, MS4.0/10 Error ellipse: s-maj=7.8km s-min=5.2km az=100.5*

*NNC **15** 12:41:50.4±15.0,47.52N×88.99E,h17^{km}±61^{km},mpv4.8, Error ellipse: s-maj=103.9km s-min=63.4km az=74.0*

ISC 15 12:41:44.5±1.1**,47.65N**±0.03×**89.43E**±0.03**,h11**^{km}±7^{km}**, n171,** σ**1**^{s}**.18**/191**,mb4.6**/54**,MS4.1**/22**,10C-6D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	**2.93**	**337**	*e*PN	**Pn**	**12 42 36.0**	**+4.1**
AKAR				*e*S	**Sn**	**12 43 16.5**	**+9.1**
WMQ	**Urumqi**	**4.02**	**198**	P	**Pn**	**12 42 49.0**	**+1.6**
WMQ				S	**Sn**	**12 43 37.0**	**+2.0**
WMQ				Smax			
	comp=N,3µm,0.6s						
WMQ				Smax			
	comp=E,3µm,0.8s						
WMQ				LR	LR		
	comp=N,674nm,10.0s						
WMQ				LR	LR		
	comp=E,1µm,10.0s						
WMQ				LR	LR		
	comp=Z,1µm,10.0s						
ARTR	**Artybash**	**4.38**	**342**	*e*PN	**Pn**	**12 42 55.8**	**+3.2**
ARTR				*e*		12 43 05.3	
ARTR				*e*S	**Sn**	**12 44 01.6**	**+17**
UKR	**Ust'-Kan**	**4.49**	**319**	*e*PN	**Pn**	**12 42 58.0**	**+3.9**
UKR				*e*		12 43 09.7	
UKR				*e*		12 43 48.6	
UKR				*e*S	Sn	12 44 08.0	+21
MK31	**Makanchi Array**	**4.94**	**263**	Pn	**Pn**	**12 43 01.5**	**+0.9**
	comp=Z,14nm,0.3s,baz=89,slow=15,SNR=3784						
MK31				⇑Pg	**Pg**	**12 43 13.8**	**-9.4**
	comp=Z,417nm,0.7s,baz=82,slow=19,SNR=34						
MK31				⇑Lg		12 44 18.0	
	comp=Z,2µm,1.1s,baz=95,slow=24,SNR=6.2						
MKAR	**Makanchi Array**	**4.94**	**263**	*e*PN	**Pn**	**12 43 01.4**	**+0.9**
MKAR						12 44 18.0	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MKAR				pmax	pmax		
	comp=Z,36nm,0.3s						
MKAR				smax			
	comp=E,330nm,0.6s						
TASR	**Tashtagol**	**5.21**	**350**	*e*PN	**Pn**	**12 43 20.9**	**+17**
TASR				*e*S	Sn	12 44 29.2	+24
CERR	**Cheremushki**	**5.36**	**13**	*e*PN	**Pn**	**12 43 07.6**	**+1.1**
CERR				*e*		12 43 23.0	
CERR				*e*S	**Sn**	**12 44 28.3**	**+19**
ELT	**Yel'tsovka**	**5.98**	**341**	*e*PN	**Pn**	**12 43 16.5**	**+1.4**
ELT				*e*		12 43 34.5	
ELT				*e*S	Sn	12 44 50.4	+26
ZAL	**Zalesovo**	**6.95**	**337**	Pn	**Pn**	**12 43 28.1**	**-0.7**
	comp=E,16nm,0.3s,baz=327,slow=8.8,SNR=71						
ZAL				Pg	**Pg**	**12 43 49.9**	**-13**
	comp=E,13nm,0.3s,baz=317,slow=14,SNR=16						
ZAL				Sn	**Sn**	**12 44 46.8**	**-1.8**
	comp=E,17nm,0.3s,baz=42,slow=7.0,SNR=4.5						
ZAL				Lg		12 45 21.6	
	comp=E,26nm,0.3s,baz=246,slow=24,SNR=3.9						
KURK	**Kurchatov**	**7.72**	**297**	⇑P	**Pn**	**12 43 38.1**	**-1.5**
	comp=E,45nm,0.5s						
KURK				⇓Lg		12 45 50.4	
	comp=E,1µm,1.0s,baz=11,slow=16,SNR=9.3						
KURK	**Kurchatov**	**7.72**	**297**	P	**Pn**	**12 43 38.1**	**-1.5**
KURK						12 45 04.7	
KURK				pmax	pmax		
	comp=Z,22nm,0.5s						
KURK				smax			
	comp=E,299nm,1.0s						
KURK				smax			
	comp=E,835nm,0.8s						
KURK	**Kurchatov**	**7.72**	**297**	*e*P	**Pn**	**12 43 38.0**	**-1.7**
NVS	**Novosibirsk**	**8.18**	**334**	*e*P	**P**	**12 43 45.5**	**-0.5**
ZAK	**Zakamensk**	**9.50**	**68**	*e*P	**P**	**12 44 04.6**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,289nm,0.7s						
TLY	**Talaya**	**10.05**	**61**	*i* P	**P**	**12 44 11.4**	**-0.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY				MLR	MLR		
	comp=Z,800nm,18.0s						
ULHL	**Ulahol**	**10.79**	**245**	P	**P**	**12 44 21.0**	**-1.0**
	SNR=15						
TKM2	**Tokmak 2**	**10.83**	**249**	P	**P**	**12 44 21.6**	**-0.9**
	SNR=16						
GTA	**Gaotai**	**11.15**	**134**	*e*P	**P**	**12 44 23.3**	**-3.6**
GTA				AP		12 44 28.4	
GTA				XP		12 44 31.3	
GTA				S	**S**	**12 46 25.4**	**-7.2**
GTA				LG1		12 46 59.0	
GTA				LG2		12 47 34.8	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s						
GTA				AMB	AMB		
	comp=Z,95nm,6.1s						
GTA				LR	LR		
	comp=N,3µm,15.2s						
GTA				LR	LR		
	comp=E,3µm,10.7s						
GTA				LR	LR		
	comp=Z,1µm,12.6s						
CHMS	**Chumysh**	**11.33**	**251**	P	**P**	**12 44 28.9**	**-0.5**
	SNR=7.5						
USP	**Ospenovka**	**11.37**	**253**	P	**P**	**12 44 29.2**	**-0.6**
	SNR=19						
KBK	**Karagaybulak**	**11.38**	**249**	P	**P**	**12 44 29.2**	**-0.8**
	SNR=81						
SONM	**Songino Array**	**11.43**	**83**	Pn	**P**	**12 44 31.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=279,slow=14,SNR=53						
SONM				Pg	P	12 45 09.8	+39
	comp=Z,1.9nm,0.3s,baz=277,slow=18,SNR=14						
SONM				Lg		12 47 37.3	
	comp=Z,3.7nm,0.3s,baz=272,slow=30,SNR=6.7						
FRU	**Bishkek**	**11.50**	**251**	*e*P	**P**	**12 44 30.0**	**-1.6**
FRU				pmax	pmax		
	comp=Z,175nm,1.5s						
FRU				MLR	MLR		
	comp=N,4µm,8.0s						
KZA	**Kyzart**	**11.50**	**246**	P	**P**	**12 44 32.6**	**+1.0**
	SNR=13						
AAK	**Ala-Archa**	**11.68**	**250**	⇑Pn	**P**	**12 44 32.7**	**-1.4**
	comp=N,125nm,0.9s						
AAK				⇑Lg		12 47 53.2	
	comp=N,324nm,1.9s						
AAK	**Ala-Archa**	**11.68**	**250**	P	**P**	**12 44 34.0**	**-0.1**
	SNR=14						
AAK	**Ala-Archa**	**11.68**	**250**	*i* P	**P**	**12 44 31.9**	**-2.1**
AAK				pmax	pmax		
	comp=Z,154nm,1.1s						
AAK				MLR	MLR		
	comp=Z,800nm,25.0s						
AAK	**Ala-Archa**	**11.68**	**250**	*e*P	**P**	**12 44 31.6**	**-2.4**
ULN	**Ulaanbaatar**	**11.87**	**82**	*e*P	**P**	**12 44 36.3**	**-0.3**
UCH	**Uchtor**	**11.88**	**248**	P	**P**	**12 44 36.9**	**+0.2**
	SNR=91						
EKS2	**Erkin-Say**	**12.12**	**251**	P	**P**	**12 44 40.3**	**+0.3**
	SNR=7.4						
AML	**Almayashu**	**12.44**	**249**	P	**P**	**12 44 44.8**	**+0.5**
	SNR=197						
KSH	**Kashi**	**12.69**	**235**	*e*P	**P**	**12 44 47.0**	**-0.6**
KSH				*e*AP		12 44 51.3	
KSH				*e*XP		12 44 55.0	
KSH				*e*PP	PP	12 44 57.9	+0.2
KSH				*e*S	**S**	**12 47 07.1**	**-2.8**
KSH				*e*SS	SS	12 47 22.6	-2.3
KSH				AMB	AMB		
	comp=Z,30nm,1.0s						
KSH				AMB	AMB		
	comp=Z,60nm,5.6s						
KSH				LR	LR		
	comp=N,970nm,6.8s						
KSH				LR	LR		
	comp=E,2µm,6.7s						
BVA0	**Borovoye Array**	**13.29**	**301**	⇑P	**P**	**12 44 52.7**	**-2.8**
	comp=E,2.9nm,0.6s						
BVA0				⇑Sn	**S**	**12 47 17.9**	**-6.4**
	comp=E,9.3nm,0.8s						
BVA0				⇓Lg		12 48 46.6	
	comp=E,49nm,1.2s						
BVAR	**Borovoye Array**	**13.29**	**301**	Pn	**P**	**12 44 54.3**	**-1.2**
	comp=E,4.3nm,0.3s,baz=104,slow=14,SNR=77						
BVAR				Sn	**S**	**12 47 15.3**	**-8.9**
	comp=E,2.1nm,0.3s,baz=108,slow=23,SNR=4.4						
BVAR				Lg		12 48 45.6	
	comp=E,1.4nm,0.3s,baz=103,slow=32,SNR=2.5						
BRVK	**Borovoye**	**13.36**	**301**	P	**P**	**12 44 53.7**	**-2.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**13.36**	**301**	*e*P	**P**	**12 44 53.4**	**-3.0**
LZH	**Lanzhou**	**15.74**	**132**	*e*P	**P**	**12 45 28.3**	**+0.6**
LZH				AP		12 45 30.6	
LZH				XP		12 45 33.0	
LZH				AMB	AMB		
	comp=Z,23nm,1.2s						
BTO	**Baotou**	**16.34**	**108**	*e*P	**P**	**12 45 38.1**	**+2.7**
BTO				S	**S**	**12 48 43.8**	**+7.4**
BTO				AMB	AMB		
	comp=Z,20nm,1.4s						
BTO				LR	LR		
	comp=N,1µm,3.4s						
BTO				LR	LR		
	comp=E,610nm,4.7s						
HHC	**Hu-ho-hao-te**	**17.22**	**105**	⇓P	**P**	**12 45 47.6**	**+1.2**
HHC				AP		12 45 51.9	
HHC				XP		12 45 55.5	
HHC				PP	PP	12 46 02.1	+1.2
HHC				S	**S**	**12 49 02.0**	**+5.6**
HHC				XS		12 49 09.3	
HHC				AMB	AMB		
	comp=Z,22nm,1.5s						
HHC				LR	LR		
	comp=N,3µm,9.6s						
HHC				LR	LR		
	comp=E,2µm,10.8s						
HHC				LR	LR		
	comp=Z,2µm,11.4s						
BOD	**Bodaibo**	**17.92**	**46**	*e*P	**P**	**12 45 52.8**	**-2.3**
BOD				pmax	pmax		
	comp=Z,20nm,1.4s						
LSA	**Lhasa**	**17.97**	**175**	P	**P**	**12 46 00.6**	**+4.7**
LSA				*e*S	**S**	**12 49 23.0**	**+9.4**
LSA				AMB	AMB		
	comp=Z,20nm,1.1s						
LSA				LR	LR		
	comp=N,200nm,9.9s						
LSA				LR	LR		
	comp=E,310nm,9.9s						
LSA				LR	LR		
	comp=Z,410nm,10.0s						
LSA	**Lhasa**	**17.97**	**175**	*e*P	**P**	**12 45 59.5**	**+3.6**
LSA				pmax	pmax		
	comp=Z,19nm,0.7s						
LSA	**Lhasa**	**17.97**	**175**	*e*P	**P**	**12 45 59.5**	**+3.6**
	comp=Z,19nm,0.7s						
SMLA	**Simla**	**18.99**	**214**	⇓*i*P	**P**	**12 46 22.1**	**+14**
SMLA				*i* S	**S**	**12 49 36.7**	**+0.1**
DDI	**Dehra Dun**	**19.39**	**211**	*e*P	**P**	**12 46 12.2**	**-0.9**
DDI				*e*S	**S**	**12 49 31.2**	**-15**
SVE	**Sverdlovsk**	**19.75**	**308**	⇑*i*P	**P**	**12 46 16.7**	**-0.2**
SVE				*e*SS	SS	12 50 02.2	-19
SVE				pmax	pmax		
	comp=Z,50nm,1.1s						
SVE				MLR	MLR		
	comp=N,200nm,12.0s						
SVE				MLR	MLR		
	comp=E,500nm,12.0s						
SVE				MLR	MLR		
	comp=Z,1µm,12.0s						
GKN	**Gorkha**	**19.97**	**193**	*e*P	**P**	**12 46 18.7**	**-0.9**
	comp=Z,85nm,0.5s						
XAN	**Xi'an**	**19.98**	**126**	P	**P**	**12 46 18.6**	**-1.0**
XAN				LG2		12 52 05.9	
XAN				AMB	AMB		
	comp=Z,12nm,1.3s						
XAN				LR	LR		
	comp=N,2µm,9.1s						
XAN				LR	LR		

	comp=Z,1µm,9.1s						
KKN	**Kakani**	**20.09**	**191**	*e*P	**P**	**12 46 20.3**	**-0.5**
	comp=Z,85nm,0.8s						
HIA	**Hailar**	**20.11**	**74**	*e*P	**P**	**12 46 20.1**	**-0.7**
HIA				pmax	pmax		
	comp=Z,57nm,1.4s						
HIA	**Hailar**	**20.11**	**74**	*e*P	**P**	**12 46 20.1**	**-0.7**
	comp=Z,57nm,1.4s						
JIRN	**Jiri**	**20.12**	**188**	*e*P	**P**	**12 46 21.3**	**+0.2**
	comp=Z,89nm,0.8s						
PKI	**Pulchoki**	**20.29**	**190**	*e*P	**P**	**12 46 22.5**	**-0.4**
	comp=Z,53nm,0.6s						
DMN	**Daman**	**20.29**	**191**	*e*P	**P**	**12 46 22.3**	**-0.6**
	comp=Z,39nm,0.6s						
KOLN	**Koldanda**	**20.36**	**195**	*e*P	**P**	**12 46 22.7**	**-1.0**
	comp=Z,62nm,0.9s						
BJI	**Beijing**	**20.66**	**102**	*e*P	**P**	**12 46 26.3**	**-0.4**
BJI				S	**S**	**12 50 21.4**	**+9.0**
BJI				AMB	AMB		
	comp=Z,51nm,1.3s						
BJI				AMB	AMB		
	comp=Z,119nm,2.3s						
BJI				LR	LR		
	comp=N,1µm,9.6s						
BJI				LR	LR		
	comp=E,1µm,10.6s						
BJI				LR	LR		
	comp=Z,544nm,16.2s						
BJT	**Baijiatuau**	**20.67**	**102**	*e*P	**P**	**12 46 25.7**	**-1.1**
BJT				pmax	pmax		
	comp=Z,86nm,1.3s						
BJT	**Baijiatuau**	**20.67**	**102**	*e*P	**P**	**12 46 25.6**	**-1.1**
	comp=Z,86nm,1.3s						
NDI	**New Delhi**	**21.18**	**211**	*e*P	**P**	**12 46 39.0**	**+6.9**
SOKR	**Solikamsk**	**22.48**	**314**	⇑*i*P	**P**	**12 46 47.0**	**+2.1**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
SOKR				MLR	MLR		
	comp=Z,510nm,16.0s,MS4.0						
ENH	**Enshi**	**23.22**	**131**	*e*P	**P**	**12 46 51.5**	**-0.8**
	comp=Z,13nm,0.8s,mb4.4						
SNY	**Shenyang**	**24.80**	**91**	⇓P	**P**	**12 47 08.8**	**+1.2**
SNY				LR	LR		
	comp=N,750nm,9.6s						
SNY				LR	LR		
	comp=E,850nm,13.8s						
SNY				LR	LR		
	comp=Z,960nm,17.8s,MS4.3						
KMI	**Kunming**	**24.83**	**150**	P	**P**	**12 47 10.6**	**+2.6**
KMI				AP		12 47 13.6	
KMI				S	**S**	**12 51 30.8**	**+3.2**
KMI				SS	SS	12 52 28.5	+3.3
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.3						
KMI				AMB	AMB		
	comp=Z,87nm,3.8s						
KMI				LR	LR		
	comp=N,568nm,15.9s,MS4.6						
KMI				LR	LR		
	comp=E,1µm,17.8s,MS4.6						
KMI				LR	LR		
	comp=Z,461nm,13.9s,MS4.1						
GYA	**Guiyang**	**25.12**	**141**	⇓*i*P	**P**	**12 47 11.6**	**+0.9**
GYA				AP	pP	12 47 15.8	+1.7
GYA				XP	sP	12 47 18.3	+2.7
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,140nm,4.2s						
GYA				LR	LR		
	comp=N,990nm,12.9s,MS4.9						
GYA				LR	LR		
	comp=E,2µm,13.2s,MS4.9						
GYA				LR	LR		
	comp=Z,420nm,11.4s,MS4.2						
CN2	**Changchun**	**25.29**	**85**	*e*P	**P**	**12 47 12.4**	**+0.2**
CN2				*e*XP	sP	12 47 19.4	+2.4
CN2				*e*S	**S**	**12 51 34.6**	**-0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,800nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,1µm,15.0s,MS4.5						
WHN	**Wuhan**	**25.63**	**123**	P	**P**	**12 47 15.3**	**-0.2**
YAK	**Yakutsk**	**26.74**	**43**	*e*P	**P**	**12 47 24.3**	**-1.1**
YAK				*e*		12 48 07.2	
YAK				pmax	pmax		
	comp=E,11nm,1.0s						
YAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK	**Yakutsk**	**26.74**	**43**	*e*P	**P**	**12 47 25.0**	**-0.4**
	comp=E,19nm,0.8s,mb4.7						
MDJ	**Mudanjiang**	**27.78**	**81**	P	**P**	**12 47 34.0**	**-1.1**
MDJ				AP	pP	12 47 36.9	-1.5
MDJ				XP	sP	12 47 38.8	-1.1
MDJ				PCP	PcP	12 50 50.9	-0.9
MDJ				S	**S**	**12 52 16.9**	**+1.0**
MDJ				SCP		12 54 31.1	
MDJ				PCS		12 54 33.0	
MDJ				AMB	AMB		
	comp=Z,13nm,1.8s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,104nm,4.3s						
MDJ				LR	LR		
	comp=N,254nm,18.6s,MS3.9						
MDJ				LR	LR		
	comp=E,135nm,19.0s,MS3.9						
MDJ				LR	LR		
	comp=Z,318nm,16.0s,MS4.0						
KLR	**Kul'dur**	**27.86**	**71**	*e*P	**P**	**12 47 33.8**	**-1.9**
KLR				MLR	MLR		
	comp=E,1µm,12.0s						
KLR				MLR	MLR		
	comp=Z,2µm,12.0s,MS4.8						
SSE	**Sheshan**	**29.32**	**113**	P	**P**	**12 47 48.9**	**-0.3**
SSE				XP	sP	12 47 53.4	-0.6
SSE				S	**S**	**12 52 41.3**	**+0.4**
SSE				XS		12 52 47.0	
SSE				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.8						
SSE				AMB	AMB		
	comp=Z,162nm,3.5s						
SSE				LR	LR		
	comp=N,280nm,22.8s,MS4.0						
SSE				LR	LR		
	comp=E,273nm,22.8s,MS4.0						
SSE				LR	LR		
	comp=Z,282nm,18.8s,MS3.9						
CMAR	**Chiang Mai Arr**	**30.14**	**162**	P	**P**	**12 47 56.4**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**30.14**	**162**	P	**P**	**12 47 56.4**	**-0.1**
	comp=Z,3.0nm,0.9s,mb4.0,baz=344,slow=9.3,SNR=17						
TIXI	**Tiksi**	**30.20**	**24**	*e*P	**P**	**12 47 55.2**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,355nm,15.0s,MS4.1						
HYB	**Hyderabad**	**31.45**	**200**	*i* P	**P**	**12 48 08.0**	**-0.1**
KIV	**Kislovodsk**	**32.41**	**281**	*i* P	**P**	**12 48 19.1**	**+2.8**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.5						
MOS	**Moscow**	**32.43**	**304**	*e*P	**P**	**12 48 15.8**	**-0.5**
GNI	**Garni**	**32.69**	**273**	*e*P	**P**	**12 48 20.2**	**+1.5**
GNI				pmax	pmax		
	comp=Z,92nm,1.4s						
GNI	**Garni**	**32.69**	**273**	LR	LR	13 03 15.3	
	comp=Z,193nm,19.9s,MS3.8,baz=237,slow=39						
GNI	**Garni**	**32.69**	**273**	*e*P	**P**	**12 48 20.2**	**+1.5**
	comp=Z,92nm,1.4s,mb5.5						
QIZ	**Qiongzhong**	**33.04**	**143**	*e*P	**P**	**12 48 22.8**	**+0.8**
QIZ				*e*S	**S**	**12 53 42.0**	**+2.6**
QIZ				LR	LR		
	comp=E,1µm,15.6s						
QIZ				LR	LR		
	comp=Z,472nm,9.5s						
OBN	**Obninsk**	**33.12**	**303**	*e*P	**P**	**12 48 21.0**	**-1.3**
OBN						12 49 31.0	
OBN				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
OBN				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.2						
APA	**Apatity**	**34.38**	**326**	⇑*e*P	**P**	**12 48 32.5**	**-0.6**
APA				*i*		12 48 42.0	
APA				MLR	MLR		
	comp=Z,1µm,12.0s,MS4.9						
SOC	**Sochi**	**34.53**	**282**	*e*P	**P**	**12 48 31.5**	**-3.2**
SOC				*e*		12 49 47.2	
SOC				*e*PPP	PPP	12 50 04.5	-4.3
SOC				*e*		12 51 07.9	
SOC				*e*S	**S**	**12 53 59.0**	**-3.2**
SOC				*e*SS	SS	12 56 09.2	-4.3
SOC				*e*		12 58 53.5	
SOC				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
SOC				pmax	pmax		
	comp=N,25nm,1.0s						
SOC				MLR	MLR		
	comp=Z,457nm,21.0s,MS4.2						
SOC				MLR	MLR		
	comp=N,302nm,22.0s,MS4.1						
SOC				MLR	MLR		
	comp=E,244nm,24.0s,MS4.1						
JOF	**Joensuu**	**35.06**	**317**	*e*p	**P**	**12 48 37.3**	**-1.7**
	comp=E,0.9nm,0.3s,mb4.2						
JOF	**Joensuu**	**35.06**	**317**	*e*P	**P**	**12 48 37.3**	**-1.7**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
KEV	**Kevo**	**36.91**	**329**	*e*p	**P**	**12 48 54.3**	**-0.2**
	comp=Z,0.9nm,0.3s,mb4.1						
KEV	**Kevo**	**36.91**	**329**	*e*P	**P**	**12 48 54.3**	**-0.2**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
MA2	**Magadan**	**36.94**	**48**	*e*P	**P**	**12 48 54.7**	**-0.2**
MA2				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.6						
MA2	**Magadan**	**36.94**	**48**	*e*P	**P**	**12 48 54.7**	**-0.2**
	comp=Z,14nm,1.3s,mb4.6						
ARCES	**ARCESS Array B**	**37.42**	**329**	P	**P**	**12 48 59.7**	**+0.9**
ARCES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARCES	**ARCESS Array B**	**37.42**	**329**	P	**P**	**12 48 59.6**	**+0.8**
	comp=Z,8.7nm,0.8s,mb4.7,baz=89,slow=8.3,SNR=28						
KAF	**Kangasniemi**	**37.45**	**316**	*e*p	**P**	**12 49 01.7**	**+2.6**
	comp=Z,0.5nm,0.3s,mb3.8						
KAF	**Kangasniemi**	**37.45**	**316**	*e*P	**P**	**12 49 01.7**	**+2.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**37.64**	**315**	*e*P	**P**	**12 49 01.7**	**+0.9**
FINES	**FINESS Array B**	**37.64**	**315**	P	**P**	**12 49 01.4**	**+0.6**
	comp=Z,4.7nm,0.6s,mb4.4,baz=81,slow=7.1,SNR=18						
FINES				LR	LR	13 05 35.1	
	comp=Z,240nm,18.0s,MS4.0,baz=270,slow=38						
MALT	**Malatya**	**37.86**	**275**	*e*P	**P**	**12 49 04.6**	**+1.8**
MALT				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.9						
MALT	**Malatya**	**37.86**	**275**	*e*P	**P**	**12 49 04.6**	**+1.8**
	comp=Z,24nm,1.1s,mb4.8						
AKASG	**Malin Array Be**	**38.54**	**298**	*i* P	**P**	**12 49 09.6**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKASG	**Malin Array Be**	**38.54**	**298**	P	**P**	**12 49 07.9**	**-0.5**
	comp=Z,4.0nm,0.7s,mb4.3,baz=58,slow=8.7,SNR=9.9						
KIS	**Kishinev**	**40.16**	**292**	*e*P	**P**	**12 49 31.0**	**+9.0**
KIS				MLR	MLR		
	comp=Z,400nm,10.0s,MS4.6						
KIS				MLR	MLR		
	comp=Z,400nm,12.0s						
BRTR	**Keskin Array B**	**40.35**	**280**	P	**P**	**12 49 24.7**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,13nm,0.9s						
BRTR	**Keskin Array B**	**40.35**	**280**	P	**P**	**12 49 24.6**	**+1.1**
	comp=Z,13nm,0.9s,mb4.7,baz=87,slow=6.8,SNR=30						
BILL	**Bilibino**	**42.22**	**33**	*i* P	**P**	**12 49 38.4**	**-0.1**
BILL				*i*		12 49 50.0	
BILL				*e*		12 51 17.9	
BILL				*e*		12 51 33.7	
BILL				*e*S	**S**	**12 55 56.7**	**-1.6**
BILL				*e*SS	SS	12 59 02.1	+1.4
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.8						
RAYN	**Ar Rayn**	**42.32**	**251**	P	**P**	**12 49 40.4**	**+0.5**
	comp=Z,97nm,0.7s,mb5.5,SNR=26						
ASF	**Jabal al Asfar**	**42.34**	**268**	P	**P**	**12 49 40.2**	**+0.3**
	comp=Z,29nm,0.9s,mb4.9,baz=291,slow=4.6,SNR=22						
ASF				LR	LR	13 10 31.1	
	comp=Z,55nm,19.2s,MS3.5,baz=45,slow=41						
MLR	**Muntele Rosu**	**42.61**	**292**	LR	LR	13 08 00.8	
	comp=Z,116nm,18.8s,MS3.8,baz=72,slow=37						
NB2	**NORSAR Subarra**	**44.70**	**317**	P	**P**	**12 49 58.2**	**-0.5**
	comp=Z,16nm,0.8s,mb4.9,baz=68,slow=7.4						
NB2	**NORSAR Subarra**	**44.70**	**317**	P	**P**	**12 49 58.2**	**-0.5**
NB2				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
NOA	**NORSAR Array B**	**44.70**	**317**	P	**P**	**12 49 59.0**	**+0.3**
NOA				pmax	pmax		
	comp=Z,12nm,0.8s						
NOA				MLR	MLR		
	comp=Z,225nm,19.6s						
NOA	**NORSAR Array B**	**44.70**	**317**	P	**P**	**12 49 59.0**	**+0.3**
	comp=Z,12nm,0.8s,mb4.8,baz=67,slow=7.6,SNR=28						
NOA				LR	LR	13 08 08.7	
	comp=Z,225nm,19.6s,MS4.1,baz=85,slow=35						
NOA	**NORSAR Array B**	**44.70**	**317**	P	**P**	**12 49 59.0**	**+0.2**
NAO01	**NORSAR Array S**	**44.92**	**317**	P	**P**	**12 50 01.0**	**+0.5**
	comp=Z,13nm,0.8s,mb4.8						
CLL	**Collm**	**47.69**	**304**	*e*P	**P**	**12 50 24.0**	**+1.4**
CLL	**Collm**	**47.69**	**304**	P	**P**	**12 50 24.0**	**+1.4**
CLL				*e*		12 50 46.0	
CLL				*e*		12 51 15.0	
JMIC	**Jan Mayen**	**48.29**	**334**	LR	LR	13 14 54.2	
	comp=Z,105nm,18.9s,MS3.8,baz=81,slow=41						
GERES	**GERESS Array B**	**48.46**	**301**	P	**P**	**12 50 29.6**	**+1.1**
GERES	**GERESS Array B**	**48.46**	**301**	P	**P**	**12 50 29.5**	**+1.0**
	comp=Z,0.2nm,0.2s,mb3.7,baz=225,slow=28,SNR=4.0						
LPG	**La Plagne**	**54.25**	**301**	*e*P	**P**	**12 51 13.3**	**+1.1**
	comp=Z,34nm,1.1s,mb4.9						
LPG	**La Plagne**	**54.25**	**301**	*e*P	**P**	**12 51 13.3**	**+1.1**
LPG				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
LPL	**La Plagne**	**54.25**	**301**	*e*P	**P**	**12 51 13.0**	**+0.8**
MBDF	**Montbardon**	**54.67**	**300**	*e*P	**P**	**12 51 15.7**	**+0.3**
	comp=Z,25nm,0.8s,mb5.0						
MBDF	**Montbardon**	**54.67**	**300**	*e*P	**P**	**12 51 15.7**	**+0.3**
MBDF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
ORIF	**Oris-en-Rattie**	**55.08**	**301**	*e*P	**P**	**12 51 19.4**	**+1.0**
ORIF				*e*R			
	comp=Z,415nm,18.0s						
LDF	**La Druitiere**	**56.33**	**307**	*e*P	**P**	**12 51 27.3**	**0.0**
	comp=Z,30nm,0.9s,mb5.0						
LDF	**La Druitiere**	**56.33**	**307**	*e*P	**P**	**12 51 27.3**	**0.0**
LDF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
FLN	**La Foliniere**	**56.42**	**307**	*e*P	**P**	**12 51 28.6**	**+0.6**
	comp=Z,26nm,0.6s,mb5.1						
FLN				*e*R			
	comp=Z,317nm,18.0s						
IMA	**Indian Mountai**	**56.77**	**26**	*e*P	**P**	**12 51 29.4**	**-0.9**
IMA				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
IMA	**Indian Mountai**	**56.77**	**26**	*e*P	**P**	**12 51 29.4**	**-0.9**
	comp=Z,14nm,0.9s,mb5.0						
GRR	**Gorron**	**56.84**	**307**	*e*P	**P**	**12 51 31.8**	**+0.7**
	comp=Z,42nm,1.0s,mb5.1						
GRR	**Gorron**	**56.84**	**307**	*e*P	**P**	**12 51 31.8**	**+0.7**
GRR				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
QUIF	**Quistinic**	**58.37**	**308**	*e*P	**P**	**12 51 42.3**	**+0.6**
	comp=Z,77nm,1.1s,mb5.4						
QUIF	**Quistinic**	**58.37**	**308**	*e*P	**P**	**12 51 42.3**	**+0.6**
QUIF				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
COLA	**College**	**59.32**	**25**	*i* P	**P**	**12 51 47.6**	**-0.6**
ILAR	**Eielson Array**	**59.67**	**24**	P	**P**	**12 51 49.6**	**-1.0**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ILAR	**Eielson Array**	**59.67**	**24**	P	**P**	**12 51 49.5**	**-1.0**
	comp=Z,1.9nm,0.5s,mb4.3,baz=317,slow=5.0,SNR=28						
INK	**Inuvik**	**60.00**	**17**	*e*P	**P**	**12 51 51.6**	**-1.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK	**Inuvik**	**60.00**	**17**	*e*P	**P**	**12 51 51.6**	**-1.2**
	comp=Z,4.6nm,0.6s,mb4.7						
THY	**Trims Highway**	**61.03**	**25**	P	**P**	**12 51 57.5**	**-2.4**
DAWY	**Dawson**	**62.23**	**22**	*e*P	**P**	**12 52 06.5**	**-1.4**
ESDC	**Sonseca Array**	**64.05**	**301**	P	**P**	**12 52 20.7**	**+0.5**
	comp=Z,4.3nm,0.9s,mb4.5,baz=44,slow=7.2,SNR=7.1						
KMBO	**Kilima Mbogo**	**66.41**	**240**	P	**P**	**12 52 35.5**	**-0.4**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMBO	**Kilima Mbogo**	**66.41**	**240**	P	**P**	**12 52 35.5**	**-0.4**
	comp=Z,1.4nm,0.6s,mb4.2,baz=38,slow=13,SNR=6.3						
YKW3	**Yellowknife Ar**	**68.48**	**12**	*e*P	**P**	**12 52 47.1**	**-1.0**
YKA	**Yellowknife Ar**	**68.54**	**12**	P	**P**	**12 52 47.4**	**-1.1**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA				MLR	MLR		
	comp=Z,63nm,18.6s						
YKA	**Yellowknife Ar**	**68.54**	**12**	P	**P**	**12 52 47.4**	**-1.1**
	comp=Z,3.7nm,0.9s,mb4.3,baz=341,slow=6.3,SNR=37						
YKA				LR	LR	13 24 23.7	
	comp=Z,63nm,18.6s,MS3.9,baz=10.0,slow=37						
KAKA	**Kakadu**	**71.25**	**135**	*e*P	**P**	**12 53 04.9**	**-0.9**
	comp=Z,6.1nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**73.06**	**144**	*e*P	**P**	**12 53 15.5**	**-1.0**
	comp=Z,4.9nm,0.8s,mb4.5						
FCC	**Fort Churchill**	**73.91**	**2**	*e*P	**P**	**12 53 19.9**	**-0.7**
FCC				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
FCC	**Fort Churchill**	**73.91**	**2**	*e*P	**P**	**12 53 19.9**	**-0.7**
	comp=Z,21nm,1.3s,mb4.9						
SCHQ	**Schefferville**	**75.95**	**346**	P	**P**	**12 53 33.5**	**+1.1**
	comp=Z,2.0nm,0.7s,mb4.2,baz=32,slow=8.1,SNR=7.1						
FFC	**Flin Flon**	**77.55**	**7**	P	**P**	**12 53 41.7**	**+0.4**
	comp=Z,78nm,1.5s,mb5.4,SNR=14						
FFC	**Flin Flon**	**77.55**	**7**	*e*P	**P**	**12 53 40.8**	**-0.5**
FFC				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
FFC	**Flin Flon**	**77.55**	**7**	*e*P	**P**	**12 53 40.8**	**-0.5**
	comp=Z,8.3nm,0.7s,mb4.8						
WRA	**Warramunga Arr**	**78.42**	**137**	P	**P**	**12 53 46.2**	**-0.6**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**78.42**	**137**	P	**P**	**12 53 46.2**	**-0.6**
	comp=Z,1.7nm,0.7s,mb4.1,baz=342,slow=6.0,SNR=21						
WB2	**Warramunga Arr**	**78.42**	**137**	*e*P	**P**	**12 53 46.2**	**-0.6**
ASAR	**Alice Springs**	**81.47**	**139**	P	**P**	**12 54 03.1**	**0.0**
	comp=Z,1.1nm,0.5s,mb4.0,baz=335,slow=5.0,SNR=15						
ULM	**Lac du Bonnet**	**82.38**	**3**	P	**P**	**12 54 07.5**	**+0.3**
	comp=Z,2.1nm,0.6s,mb4.3,baz=356,slow=2.8,SNR=5.7						
ULM				LR	LR	13 31 49.4	
	comp=Z,69nm,18.6s,MS4.0,baz=252,slow=36						
DGMT	**Dagmar**	**83.53**	**9**	P	**P**	**12 54 13.9**	**+0.7**
	comp=Z,19nm,1.0s,mb5.2						
BOZ	**Bozeman (W)**	**85.27**	**15**	*e*P	**P**	**12 54 23.5**	**+1.6**
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.7						
BOZ	**Bozeman (W)**	**85.27**	**15**	*e*P	**P**	**12 54 23.5**	**+1.6**
	comp=Z,8.7nm,1.6s,mb4.6						
MCMT	**McKenzie Canyo**	**85.85**	**16**	*e*P	**P**	**12 54 26.9**	**+2.1**
IMW	**Indian Meadow**	**87.09**	**15**	*e*P	**P**	**12 54 33.2**	**+2.2**
DBIC	**Dimbokro**	**88.01**	**278**	P	**P**	**12 54 36.1**	**0.0**
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DBIC	**Dimbokro**	**88.01**	**278**	P	**P**	**12 54 36.0**	**0.0**
	comp=Z,3.5nm,1.1s,mb4.5,baz=119,slow=4.8,SNR=3.5						
PDAR	**Pinedale Array**	**88.42**	**14**	P	**P**	**12 54 38.9**	**+1.6**
	comp=Z,0.3nm,0.7s,mb3.6,baz=27,slow=4.0,SNR=3.3						
NVAR	**Mina Array Bea**	**90.80**	**21**	P	**P**	**12 54 51.2**	**+2.5**
	comp=Z,2.5nm,1.1s,mb4.4,baz=14,slow=4.6,SNR=6.7						
LVC	**Limon Verde**	**149.58**	**318**	*e*PKPbc	PKPdf	13 01 37.2	+4.7

IGQ 15 12:41:53.2, 1.38S×81.57W, h12^{km}±25^{km}, mb4.1, 3C, Error ellipse: s-maj=24.5km s-min=9.4km az=164.8, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	**2.94**	**92**	P	Pn	12 42 41.9	+1.3
ARRY	**Arrayan**	**3.12**	**92**	P	Pn	12 42 43.9	+0.6
ULBA	**Ulba**	**3.17**	**91**	P	Pn	12 42 45.2	+1.3
NAS1	**Nasa**	**3.19**	**77**	P	Pn	12 42 46.1	+2.0
TERV	**Terraza Guagua**	**3.20**	**68**	P	Pn	12 42 45.2	+0.8
PISA	**Pisayambo**	**3.20**	**84**	P	Pn	12 42 46.9	+2.5
PISA				S	Sn	12 43 23.4	+0.5
PINO	**Pino**	**3.21**	**68**	P	Pn	12 42 44.9	+0.4
VC1	**Cotopaxi 1**	**3.25**	**77**	P	Pn	12 42 47.6	+2.4
YANA	**Yana**	**3.25**	**67**	⇑P	Pn	12 42 45.5	+0.3
TAMB	**Tambo**	**3.28**	**78**	P	Pn	12 42 47.9	+2.5
ANTI	**Antisana**	**3.54**	**75**	⇑P	Pn	12 42 51.4	+2.3
COTA	**Cotacachi**	**3.66**	**62**	P	Pn	12 42 52.3	+1.4
CAYR	**Refugio Cayamb**	**3.83**	**69**	P	Pn	12 42 55.8	+2.5
CAYA	**Cayambe**	**3.86**	**68**	P	Pn	12 42 56.0	+2.2
ECEN	**Cerro Negro**	**4.22**	**59**	⇑P	Pn	12 43 00.6	+1.7

MAN 15 12:47:25.9, 12.69N×123.13E, h16^{km}, mb3.9, ML2.7, MS2.3, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	**San Andres**	**0.77**	**325**	*e*P	Pb	12 47 40.8	+0.3
RCP	**Roxas**	**1.18**	**198**	⇓*e*P	Pb	12 47 47.0	-0.5
PVCP	**Virac**	**1.35**	**48**	*e*P	Pn	12 47 49.2	-1.0
GQP	**Guinayangan**	**1.38**	**331**	⇓*i*P	Pn	12 47 50.2	-0.5
GQP				*e*S	Sb	12 48 09.2	+1.1
BOAC	**Boac**	**1.46**	**302**	*e*P	Pn	12 47 49.7	-2.2
BOAC				*e*S	Sb	12 48 11.5	+0.9

IDC 15 13:00:04.3±1.4**, 3.13N×126.50E, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.8**/16**, mbtmp3.8**/4**, 1C, Error ellipse: s-maj=165.9km s-min=24.8km az=72.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.19**	**162**	P	P	13 05 22.3	-1.3
	2.5nm,0.5s,baz=340,slow=10,SNR=31						
WB2	**Warramunga Arr**	**24.20**	**162**	⇑*i*P	P	13 05 21.9	-1.8
ASAR	**Alice Springs**	**27.60**	**165**	P	P	13 05 53.7	-1.8
	0.6nm,0.5s,baz=351,slow=7.7,SNR=15						
ASAR				ScP		13 12 55.0	
	0.5nm,0.5s,baz=344,slow=2.4,SNR=4.6						
STKA	**Stephens Creek**	**37.66**	**159**	P	P	13 07 21.4	-1.7
	4.2nm,1.0s,baz=338,slow=9.0,SNR=5.5						
SONM	**Songino Array**	**47.78**	**342**	P	P	13 08 42.8	-2.5
	0.2nm,0.5s,baz=156,slow=8.1,SNR=4.6						

*IDC **15** 13:01:18.1±0.7, 3.49N×94.05E, mb4.4/17, mb1 4.5/18, mb1mx4.5/23, mbtmp4.4/18, ML4.4/1, Error ellipse: s-maj=27.2km s-min=16.7km az=47.0*

*BJI **15** 13:01:20.4, 3.45N×93.83E, h17^{km}, mB4.8, mb4.9, Ms5.3, Msz4.9*

*NEIC **15** 13:01:21.2±0.5, 3.34N×94.06E, mb4.6/15, Error ellipse: s-maj=13.2km s-min=9.4km az=65.0*

ISC 15 13:01:21.1±0.5**, 3.39N**±0.07×**94.15E**±0.08**, h33^{km}, (h27^{km}**±3.0^{km}**:pP-P), n54, **σ1^{s}.**03**/49**, mb4.5**/38**, MS4.9**/2**, 1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**15.69**	**17**	*e*P	**P**	**13 05 04.2**	**+2.7**
	9.7nm,0.4s						
CM31				*e*		13 05 10.4	
CMAR	**Chiang Mai Arr**	**15.69**	**17**	Pn	**P**	**13 05 03.5**	**+2.0**
	0.5nm,0.3s,baz=213,slow=12,SNR=33						
JIRN	**Jiri**	**25.30**	**343**	*e*P	**P**	**13 06 46.9**	**+0.4**
	27nm,0.7s,mb4.9						
PKI	**Pulchoki**	**25.45**	**342**	*e*P	**P**	**13 06 48.8**	**+0.9**
	18nm,0.8s,mb4.7						
DMN	**Daman**	**25.59**	**341**	*e*P	**P**	**13 06 49.3**	**+0.2**
	11nm,0.7s,mb4.5						
KKN	**Kakani**	**25.70**	**342**	*e*P	**P**	**13 06 50.0**	**-0.2**
	38nm,1.1s,mb4.8						
GKN	**Gorkha**	**26.10**	**341**	*e*P	**P**	**13 06 53.9**	**-0.1**
	35nm,0.8s,mb4.9						
KOLN	**Koldanda**	**26.25**	**338**	*e*P	**P**	**13 06 55.4**	**+0.1**
	17nm,0.8s,mb4.6						
LSA	**Lhasa**	**26.32**	**354**	P	**P**	**13 06 57.1**	**+1.1**
LSA				LR	LR		
	comp=N,2µm,5.0s						
LSA				LR	LR		
	comp=E,6µm,5.0s						

LSA				LR	LR		
	comp=Z,4µm,5.0s						
LSA	Lhasa	26.32	354	*e*P	P	13 06 57.4	+1.4
	comp=Z,36nm,0.8s,mb5.0						
LSA				*e*pP	pP	13 07 04.5	-0.8
CD2	Chengdu	28.84	17	P	P	13 07 17.3	-1.4
ENH	Enshi	30.42	27	*e*P	P	13 07 30.8	-2.0
	comp=Z,5.3nm,0.8s,mb4.3						
ENH				*e*		13 07 36.6	
XAN	Xi'an	33.46	23	P	P	13 07 57.3	-2.1
XAN				AP	pP	13 08 06.8	-2.3
XAN				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.0						
MBWA	Marble Bar	34.98	135	*e*P	P	13 08 11.9	-0.7
	comp=Z,4.8nm,0.9s,mb4.4						
GTA	Gaotai	36.22	7	*e*P	P	13 08 22.3	-0.7
GTA				AP	pP	13 08 31.0	-1.7
GTA				XP	sP	13 08 36.3	-0.7
GTA				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.1						
GTA				LR	LR		
	comp=N,853nm,13.3s,MS5.0						
GTA				LR	LR		
	comp=E,1µm,11.8s,MS5.0						
GTA				LR	LR		
	comp=Z,776nm,22.4s						
HHC	Hu-ho-hao-te	40.46	20	*e*P	P	13 09 04.9	+6.6
HHC				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,133nm,10.8s						
HHC				LR	LR		
	comp=N,1µm,15.6s,MS5.0						
HHC				LR	LR		
	comp=E,1µm,15.6s,MS5.0						
HHC				LR	LR		
	comp=Z,864nm,13.2s,MS4.8						
BJI	Beijing	41.57	26	*e*P	P	13 09 08.3	+0.8
BJI				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.5						
UCH	Uchtor	42.47	338	P	P	13 09 16.0	+1.2
	SNR=11						
KBK	Karagaybulak	42.68	339	P	P	13 09 18.0	+1.4
	SNR=8.6						
AML	Almayashu	42.69	337	P	P	13 09 17.6	+0.9
	SNR=17						
AAK	Ala-Archa	42.83	339	*e*P	P	13 09 17.9	+0.1
	comp=Z,5.9nm,0.8s,mb4.4						
EKS2	Erkin-Say	43.12	338	P	P	13 09 21.3	+1.2
	SNR=8.3						
USP	Ospenovka	43.38	339	P	P	13 09 22.8	+0.6
	SNR=12						
SONM	Songino Array	45.52	12	P	P	13 09 38.9	-0.5
	comp=Z,4.7nm,0.7s,mb4.5,baz=191,slow=8.2,SNR=51						
ULN	Ulaanbaatar	45.68	12	*e*P	P	13 09 39.6	-1.1
	comp=Z,2.5nm,0.9s,mb4.1						
WRA	Warramunga Arr	45.77	122	P	P	13 09 42.6	+0.8
	comp=Z,8.6nm,0.7s,mb4.8,baz=298,slow=9.1,SNR=14						
WRAB	Tennant Creek	45.78	122	*e*P	P	13 09 42.3	+0.5
	comp=Z,28nm,0.9s,mb5.2						
WRAB				*e*		13 09 49.5	
ASAR	Alice Springs	47.14	127	P	P	13 09 53.4	+0.9
	comp=Z,3.8nm,0.7s,mb4.5,baz=296,slow=7.9,SNR=17						
ASAR				PcP	PcP	13 11 25.0	+0.7
	comp=Z,1.3nm,0.6s,baz=315,slow=3.7,SNR=5.5						
KURK	Kurchatov	48.94	347	*e*P	P	13 10 05.6	-0.6
	comp=Z,4.6nm,0.8s,mb4.6						
HIA	Hailar	50.64	21	*e*P	P	13 10 18.5	-0.7
	comp=Z,7.4nm,0.7s,mb4.7						
ZAL	Zalesovo	50.97	353	P	P	13 10 20.7	-0.9
	comp=Z,7.2nm,0.4s,mb4.9,baz=300,slow=5.0,SNR=37						
BVAR	Borovoye Array	53.22	342	P	P	13 10 37.6	-0.9
	comp=Z,6.8nm,0.6s,mb4.8,baz=141,slow=9.5,SNR=52						
BRVK	Borovoye	53.28	342	*e*P	P	13 10 37.9	-1.1
	comp=Z,7.3nm,0.6s,mb4.8						
KMBO	Kilima Mbogo	57.05	266	P	P	13 11 06.4	-0.5
	comp=Z,0.5nm,0.5s,mb3.8,baz=52,slow=22,SNR=3.5						
STKA	Stephens Creek	57.08	132	*e*P	P	13 11 01.2	-5.6
	comp=Z,4.3nm,0.8s,mb4.5						
STKA	Stephens Creek	57.08	132	P	P	13 11 01.1	-5.7
	comp=Z,5.4nm,0.8s,mb4.6,baz=314,slow=12,SNR=7.6						
MALT	Malatya	61.41	312	*e*P	P	13 11 35.5	-1.1
	comp=Z,5.0nm,0.9s,mb4.6						
EIL	Elat	61.72	302	P	P	13 11 36.0	-2.9
	comp=Z,4.3nm,0.9s,mb4.6,baz=48,slow=14,SNR=2.1						
BRTR	Keskin Array B	65.39	312	P	P	13 12 02.4	-0.4
	comp=Z,1.5nm,0.8s,mb4.1,baz=135,slow=7.0,SNR=6.9						
MA2	Magadan	70.72	27	*e*P	P	13 12 35.4	-0.3
	comp=Z,7.9nm,0.8s,mb4.7						
AKASG	Malin Array Be	71.68	323	P	P	13 12 40.0	-1.5
	comp=Z,1.5nm,0.6s,mb4.1,baz=81,slow=4.2,SNR=6.4						
LBTB	Lobatse	72.15	243	P	P	13 12 45.9	+1.1
	comp=Z,3.0nm,0.9s,mb4.2,baz=110,slow=16,SNR=4.0						
FINES	FINESS Array B	76.67	333	P	P	13 13 10.0	-0.3
	comp=Z,2.4nm,0.6s,mb4.3,baz=104,slow=5.4,SNR=14						
ARCES	ARCESS Array B	79.47	341	P	P	13 13 25.9	+0.3
	comp=Z,2.8nm,0.7s,mb4.3,baz=90,slow=6.8,SNR=11						
SYO	Syowa Base	81.15	197	⇓PcP	PcP	13 13 40.6	-0.5
SYO	Syowa Base	81.15	197	⇑pP	pP	13 13 42.6	-2.4
GERES	GERESS Array B	81.17	319	P	P	13 13 36.2	+1.1
	comp=Z,3.0nm,0.8s,mb4.3,baz=90,slow=5.3,SNR=16						
HFS	Hagfors	82.32	330	P	P	13 13 40.9	+0.2
	comp=Z,1.2nm,0.5s,mb4.1,baz=121,slow=8.6,SNR=5.6						
DAVOX	Davos	83.62	317	P	P	13 13 48.7	+1.0
	comp=Z,2.2nm,0.5s,mb4.6,baz=108,slow=13,SNR=5.5						
DAVOX	Davos	83.62	317	P	P	13 13 48.7	+1.0
NOA	NORSAR Array B	83.62	331	P	P	13 13 47.0	-0.3
	comp=Z,0.7nm,0.7s,mb3.9,baz=124,slow=3.2,SNR=3.7						
RES	Resolute Bay	101.85	2	P	P	13 15 13.9	+1.7
	comp=Z,1.4nm,0.8s						
TXAR	Lajitas Array	143.25	27	PKP	PKPdf	13 20 52.3	-0.4
	comp=Z,0.4nm,0.6s,baz=186,slow=0.1,SNR=7.8						
JCT	Junction City	143.78	21	*e*PKP	PKPdf	13 20 52.7	-0.8

LDG ***15*** *13:05:42.6±0.3,24.61N×94.12E,h10^{km},Mb5.4/23, Ms3.9/7,Error ellipse: s-maj=16.9km s-min=8.0km az=123.0*

MOS ***15*** *13:05:43.3±1.0,24.22N×94.59E,h33^{km},mb5.2/25,Error ellipse: s-maj=12.8km s-min=5.8km az=115.6*

CSEM ***15*** *13:05:44.3,24.45N×94.62E,h33^{km},mb5.5*

BJI ***15*** *13:05:47.5,24.45N×94.42E,h69^{km},mB5.1,mb5.2,ML5.7, Ms4.9,Msz4.5*

NEIC ***15*** *13:05:49.8±0.1,24.43N×94.54E,mb5.2/83,Error ellipse: s-maj=5.1km s-min=3.2km az=213.0*

IDC ***15*** *13:05:50.0±0.4,24.42N×94.61E,h71^{km}±3^{km},mb4.8/31, mb1 4.9/32,mb1mx4.9/34,mbtmp5.2/32,MS4.2/12, Ms1 4.2/12,ms1mx4.0/30,Error ellipse: s-maj=13.4km s-min=7.8km az=41.0*

HRVD ***15*** *13:05:49.8±0.3,24.40N×94.62E,h60^{km}±1^{km},MW5.2/63, Centroid moment Tensor Solution. LP body waves: s40,c57;Mantle waves: s63,c120; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.18±.25; $M_{\theta\theta}$-1.86±.21; $M_{\phi\phi}$-1.32±.20; $M_{r\theta}$-2.32±.15; $M_{\theta\phi}$6.21±.17; $M_{\phi r}$-3.16±.14; Best double couple: $M_0$7.848×10^{16} NP1: ϕ_s276°,δ61°,λ28°. NP2:ϕ_s171°,δ65°,λ147°. Principal axes: T 7.863, Plg40°, Azm132°; N -.031, Plg50°, Azm318°; P -7.832, Plg3°, Azm225°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 13:05:48.2±0.1**,24.41N**±0.02×**94.45E**±0.02**,h70**^{km}**, h70**^{km}±.6^{km}**:pP-P,n383,**σ**1^{s}18**/398**,mb5.1**/131**,39C-17D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	Imphal	0.60	309	⇓*i*P	P	13 06 04.0	+1.8
IMP	Imphal	0.60	309	⇓*i*P	P	13 06 04.0	+1.8
SHL	Shillong	2.60	297	*e*P	P	13 06 29.3	+0.4
SHL				*e*		13 06 57.0	
AGT	Agartala	2.97	261	⇑*i*P	P	13 06 35.0	+0.9
AGT				*i*		13 09 38.0	
LKP	Lekhapani	3.26	26	*e*P	P	13 06 36.0	-2.2
LKP				*e*		13 07 27.0	
SLGI	Shiliguri	5.91	294	*e*P	P	13 07 15.6	+0.7
SLGI				*e*S	S	13 08 17.8	-4.2
CAL	Calcutta	5.92	253	*e*P	P	13 07 14.2	-0.8
CAL				*e*S	S	13 08 18.6	-3.6
LSA	Lhasa	6.04	332	P	P	13 07 18.3	+1.6
LSA				S	S	13 08 22.6	-2.7
LSA				LR	LR		
	comp=N,2µm,5.0s						
LSA				LR	LR		
	comp=E,6µm,5.0s						
LSA				LR	LR		
	comp=Z,4µm,5.0s						
CHRT	Chiangrai	6.69	131	⇑PN	P	13 07 27.5	+1.5
CHRT				PG	P	13 07 34.0	+8.0
CHRT				SG	S	13 09 12.0	+31
CM31	Chiang Mai Arr	7.25	144	*e*P	P	13 07 34.2	+0.5
	comp=Z,435nm,0.8s						
CMAR	Chiang Mai Arr	7.25	144	P	P	13 07 34.2	+0.5
	comp=Z,13nm,0.3s,baz=318,slow=13,SNR=416						
CMAR				ScP		13 17 39.0	
	comp=Z,0.4nm,0.3s,baz=298,slow=1.9,SNR=13						
KMI	Kunming	7.57	83	⇑P	P	13 07 42.8	+4.7
KMI				XP		13 08 01.3	
KMI				S	S	13 09 08.6	+5.4
KMI				AMB	AMB		
	comp=Z,410nm,1.1s						
KMI				LR	LR		
	comp=N,8µm,6.7s						
KMI				LR	LR		
	comp=E,3µm,6.7s						
KMI				LR	LR		
	comp=Z,3µm,10.5s						
NANT	Nan	8.06	133	PG	P	13 07 44.0	-0.7
NANT				SG	rx	13 07 45.5	
JIRN	Jiri	8.10	295	*e*Sn	S	13 09 10.1	-6.2
	comp=Z,1µm,0.3s						
JIRN	Jiri	8.10	295	*e*Pn	P	13 07 44.3	-1.1
JIRN				*e*Sn	S	13 09 10.1	-6.2
PKI	Pulchoki	8.72	293	*e*Sn	S	13 09 25.4	-6.1
	comp=Z,665nm,0.4s						
PKI	Pulchoki	8.72	293	*e*Pn	P	13 07 52.2	-1.6
PKI				*e*Sn	S	13 09 25.4	-6.1
KKN	Kakani	8.90	294	*e*Sn	S	13 09 29.4	-6.6
	comp=Z,617nm,0.4s						
KKN	Kakani	8.90	294	*e*Pn	P	13 07 54.5	-1.8
KKN				*e*Sn	S	13 09 29.4	-6.6
BWNR	Bhubaneshwar	8.98	245	*e*	P	13 07 50.0	-7.4
BWNR				*e*S	S	13 09 25.0	-13
DMN	Daman	8.99	293	*e*Pn	P	13 07 55.4	-2.0
GKN	Gorkha	9.51	294	*e*Sn	S	13 09 43.4	-7.5
	comp=Z,971nm,0.4s						
GKN	Gorkha	9.51	294	*e*Pn	P	13 08 02.5	-2.1
GKN				*e*Sn	S	13 09 43.4	-7.5
VLK	Valmikinagar	9.96	289	*i* P	P	13 08 08.0	-2.8
VLK				*i*		13 10 05.0	
NST	Nakhon Sawan	10.20	147	P	P	13 08 15.0	+1.0
	comp=Z,208nm,0.8s						
KOLN	Koldanda	10.31	291	*e*Sn	S	13 10 02.3	-8.0
	comp=Z,648nm,0.4s						
KOLN	Koldanda	10.31	291	*e*Pn	P	13 08 13.2	-2.3
KOLN				*e*Sn	S	13 10 02.3	-8.0
CD2	Chengdu	10.49	50	P	P	13 08 17.3	-0.6
KKTK	Khon Kaen	11.23	134	PG	P	13 08 29.0	+1.1
KKTK				SG	rx	13 08 43.0	
GYA	Guiyang	11.23	77	⇑*i*P	P	13 08 28.5	+0.6
GYA				PP	PP	13 08 38.3	+1.3
GYA				XP		13 08 47.5	
GYA				S	S	13 10 34.8	+2.3
GYA				AMB	AMB		
	comp=Z,50nm,0.8s						
GYA				AMB	AMB		
	comp=Z,280nm,3.6s						
GYA				LR	LR		
	comp=N,5µm,7.2s						
GYA				LR	LR		
	comp=E,2µm,6.0s						
GYA				LR	LR		
	comp=Z,2µm,7.1s						
ALBI	Allahabad	11.51	277	*e*	P	13 08 23.5	-8.2
BLSP	Bilaspur	11.55	261	*e*P	P	13 08 29.1	-3.1
BLSP				*e*S	S	13 10 26.8	-13
BLSP				*e*		13 11 13.8	
	comp=N,250nm,0.4s						
BLSP				*e*		13 11 13.9	
	comp=E,160nm,0.8s						
VIS	Vishakhapatnam	12.32	239	*e*P	P	13 08 41.0	-1.6
VIS				*e*S	S	13 10 46.2	-13
NNT	Nongplab	12.77	156	P	P	13 08 51.5	+2.9
LGTI	Lohaghat	13.62	295	*e*P	P	13 08 58.0	-1.7
LGTI				*e*		13 10 30.0	
PTH	Pithoragarh	13.68	295	*e*P	P	13 08 59.7	-0.7
PTH				*e*S	S	13 11 21.0	-10
LZH	Lanzhou	14.18	33	*e*P	P	13 09 04.8	-2.1
LZH				XP		13 09 25.5	
LZH				AMB	AMB		
	comp=Z,127nm,1.0s						
JHNI	Jhansi	14.47	278	*e*	P	13 09 05.0	-5.8
JHNI				*e*S	S	13 11 35.0	-15
JOSI	Joshimath	14.56	298	*e*P	P	13 09 02.3	-10
JOSI				*e*S	S	13 11 32.9	-19
NGP	Nagpur	14.57	260	*e*P	P	13 09 09.0	-3.0
NGP				*e*S	S	13 11 40.8	-11
	comp=Z,103nm,1.4s						
ENH	Enshi	14.58	63	*e*P	P	13 09 10.5	-1.7
	comp=Z,244nm,0.7s						
QIZ	Qiongzhong	15.27	108	P	P	13 09 20.9	-0.2
QIZ				AP		13 09 30.3	
QIZ				S	S	13 12 10.3	+1.8
QIZ				XS		13 12 28.3	
QIZ				AMB	AMB		
	comp=Z,240nm,0.9s						
QIZ				AMB	AMB		
	comp=Z,551nm,3.7s						
QIZ				LR	LR		
	comp=N,2µm,17.2s						
QIZ	Qiongzhong	15.27	108	*e*P	P	13 09 22.9	+1.9
	comp=N,158nm,0.8s						
BHPL	Bhopal	15.62	269	*e*P	P	13 09 22.8	-2.8
BHPL				*e*		13 09 32.0	
	comp=Z,264nm,0.9s						
BHPL				*e*S	S	13 12 02.1	-14
GTA	Gaotai	15.63	16	*e*P	P	13 09 22.4	-3.2
GTA				S	S	13 12 07.9	-8.8
GTA				PCP	PcP	13 14 24.9	+0.8
GTA				SCP		13 17 50.3	
GTA				PCS		13 17 59.3	
GTA				SCS	ScS	13 21 28.8	+0.8
GTA				AMB	AMB		
	comp=Z,18nm,1.6s						
GTA				AMB	AMB		
	comp=Z,226nm,7.2s						
GTA				LR	LR		
	comp=N,853nm,13.3s						
GTA				LR	LR		
	comp=E,1µm,11.8s						
GTA				LR	LR		
	comp=Z,776nm,22.4s						
DDI	Dehra Dun	15.70	296	*e*P	P	13 09 24.2	-2.3
DDI				*e*S	S	13 12 07.2	-11
XAN	Xi'an	15.85	49	P	P	13 09 24.3	-4.1
XAN				S	S	13 12 21.1	-0.7
XAN				AMB	AMB		
	comp=Z,39nm,0.9s						
XAN				LR	LR		
	comp=N,896nm,9.0s						
XAN				LR	LR		
	comp=E,611nm,9.6s						
XAN				LR	LR		
	comp=Z,750nm,14.1s						
KLP	Kalpa	15.96	300	*e*P	P	13 09 29.0	-0.9
NDI	New Delhi	15.99	289	*e*P	P	13 09 28.0	-2.2
NDI				*e*S	S	13 12 11.0	-14
SONA	Sohna	16.03	288	*e*P	P	13 09 28.7	-1.9
SONA				*e*		13 09 35.7	
	comp=Z,80nm,0.8s						
SONA				*e*S	S	13 12 12.7	-13
AYAN	Aya Nagar	16.03	288	*e*P	P	13 09 29.8	-1.0
HYB	Hyderabad	16.39	248	*e*P	P	13 09 33.0	-2.2
	comp=Z,700nm,1.3s						
HYB				*e*		13 09 39.0	
HYB				*e*S	S	13 12 28.0	-6.2
HYB	Hyderabad	16.39	248	*i* P	P	13 09 33.0	-2.2
	comp=Z,350nm,1.0s						
HYB				*e*		13 09 39.0	
HYB				*e*		13 12 28.0	
HYB				*e*S	S	13 12 35.5	+1.3
KUDL	Kundal	16.53	287	*e*P	P	13 09 35.0	-1.9
SMLA	Simla	16.69	297	⇑*i*	P	13 09 51.4	+13
SMLA				*i*		13 12 45.3	
KHET	Khetri	17.12	286	*e*P	P	13 09 43.3	-1.0
GZH	Guangzhou	17.35	90	P	P	13 09 50.3	+3.0
GZH				LR	LR		
	comp=N,3µm,6.0s						
GZH				LR	LR		
	comp=E,949nm,2.9s						
GZH				LR	LR		
	comp=Z,2µm,7.6s						
BHK	Bhakra	17.39	298	*e*	P	13 09 57.5	+10
BHK				*e*S	S	13 12 46.5	-10
MDRS	Chennai	17.53	233	*i*	P	13 09 47.0	-2.6
MDRS				*i*		13 10 22.0	
MDRS				*e*		13 13 07.0	
MDRS				*e*		13 15 56.0	
PONG	Pong	17.94	299	*e*P	P	13 09 54.0	-0.5
PONG				*e*		13 13 03.0	
AJM	Ajmer	18.01	281	⇑*i*	P	13 09 52.0	-3.3
AJM				*i* S	S	13 13 00.0	-11
SNG	Songkhla	18.12	160	P	P	13 09 58.0	+1.2
	comp=Z,460nm,0.9s						
DLH	Dalhousie	18.14	301	*e*P	P	13 09 58.0	+1.1
DLH				*e*		13 12 54.0	
THN	Thein Dam	18.30	300	*e*P	P	13 09 57.3	-1.5
THN				*e*		13 13 11.3	
WHN	Wuhan	18.68	67	⇓P	P	13 10 03.0	-0.2
POO	Poona	20.03	257	⇓*i*	P	13 10 18.0	-0.1
	comp=Z,464nm,1.5s						
POO				*i* S	S	13 13 47.0	-7.4
WMQ	Urumqi	20.14	346	P	P	13 10 19.5	+0.5
WMQ				AP		13 10 33.0	
WMQ				XP		13 10 41.0	
WMQ				S	S	13 13 57.0	+0.6
WMQ				SS	SS	13 14 28.0	-0.9
WMQ				AMB	AMB		
	comp=Z,165nm,1.0s						
WMQ				LR	LR		
	comp=N,1µm,14.0s						
WMQ				LR	LR		
	comp=E,2µm,14.0s						
WMQ				LR	LR		
	comp=Z,1µm,14.0s						
KAD	Karad	20.20	253	*e*	P	13 10 20.8	+1.0
KAD				*e*		13 10 25.6	
	comp=Z,163nm,1.8s						
IPM	Ipoh	20.70	161	P	P	13 10 25.7	+0.6
BTO	Baotou	20.77	35	*e*P	P	13 10 22.5	-3.0
BTO				LR	LR		
	comp=N,920nm,3.3s						
BTO				LR	LR		
	comp=E,1µm,8.6s						
BOM	Bombay	20.83	259	*e*	P	13 10 28.6	+2.3
	comp=E,903nm,1.7s						
BOM				*e*S	S	13 14 01.2	-8.5
GOA	Goa	21.30	249	*e*P	P	13 10 40.1	+9.1
	comp=E,316nm,1.3s,mb5.5						
GOA				*e*		13 14 36.6	
JASL	Jaisalmer	21.36	282	*e*	P	13 10 32.8	+1.2
PALK	Pallekele	21.53	220	P	P	13 10 36.8	+3.5
	comp=E,574nm,1.0s,mb5.9,SNR=26						
PALK	Pallekele	21.53	220	*e*P	P	13 10 35.4	+2.1
	comp=E,107nm,1.0s,mb5.1						
KSH	Kashi	21.68	318	*e*P	P	13 10 37.0	+2.4
KSH				*e*AP		13 10 54.1	
KSH				*e*XP		13 11 03.1	
KSH				*e*S	S	13 14 27.8	+2.6
KSH				AMB	AMB		
	comp=Z,210nm,2.4s,mb5.0						
KSH				LR	LR		
	comp=E,2µm,6.9s						
KSH				LR	LR		
	comp=N,1µm,6.3s						
HHC	Hu-ho-hao-te	21.77	37	*e*P	P	13 10 34.9	-0.6
HHC				AP		13 10 48.9	
HHC				XP		13 10 55.9	
HHC				PP	PP	13 11 02.9	+0.4
HHC				S	S	13 14 31.8	+4.9
HHC				XS		13 14 54.8	
HHC				SCP		13 18 00.5	
HHC				SCS	ScS	13 21 45.3	-2.0
HHC				AMB	AMB		
	comp=Z,23nm,0.8s,mb4.6						
HHC				LR	LR		
	comp=N,478nm,39.0s						
HHC				LR	LR		
	comp=E,466nm,29.0s						
HHC				LR	LR		
	comp=Z,253nm,9.0s						
MNGI	Mangalore	21.78	242	*i*	P	13 10 36.8	+1.1
	comp=Z,134nm,1.5s,mb5.0						
MNGI				*i*		13 14 42.1	
QZH	Quanzhou	21.94	84	⇑*i*P	P	13 10 37.0	-0.4
QZH				S	S	13 14 35.0	+4.8
QZH				AMB	AMB		
	comp=Z,130nm,0.6s,mb5.4						
QZH				AMB	AMB		
	comp=Z,820nm,5.2s						
QZH				LR	LR		
	comp=E,860nm,5.0s						
QZH				LR	LR		
	comp=Z,2µm,14.9s						
BHJ	Bhuj	22.70	272	*e*	P	13 10 49.0	+4.1
NJ2	Nanjing	22.78	65	*e*P	P	13 10 45.9	+0.4
NJ2				AP		13 10 58.9	
NJ2				XP		13 11 05.9	
NJ2				PP	PP	13 11 17.5	+1.0
NJ2				S	S	13 14 44.0	-1.1
NJ2				XS		13 15 07.0	
NJ2				AMB	AMB		
	comp=Z,160nm,0.8s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,1µm,6.2s						
NJ2				LR	LR		
	comp=N,4µm,17.5s						
NJ2				LR	LR		
	comp=E,3µm,18.8s						
NJ2				LR	LR		
	comp=Z,4µm,18.5s						
KGM	Kluang	23.85	158	P	P	13 10 57.8	+1.7
BJT	Baijiatuau	23.99	44	*e*P	P	13 10 56.3	-0.8
	comp=Z,25nm,0.6s,mb4.7						
BJI	Beijing	24.01	44	*e*P	P	13 10 57.0	-0.3
BJI				S	S	13 15 06.6	+0.2
BJI				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.3						
BJI				LR	LR		
	comp=N,470nm,8.0s						
BJI				LR	LR		
	comp=E,1µm,9.6s						
BJI				LR	LR		
	comp=Z,293nm,20.9s						
TKM2	Tokmak 2	24.14	325	P	P	13 11 01.7	+3.2
	SNR=6.1						
UCH	Uchtor	24.26	322	P	P	13 11 03.1	+3.4
	SNR=15						
KBK	Karagaybulak	24.30	323	P	P	13 11 03.6	+3.5
	SNR=13						
MKAR	Makanchi Array	24.37	339	P	P	13 11 02.9	+2.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AAK	Ala-Archa	24.54	323	P	P	13 11 05.5	+3.1
	SNR=16						
AAK	Ala-Archa	24.54	323	P	P	13 11 05.4	+2.9
AAK				pmax	pmax		
	comp=Z,348nm,1.6s,mb5.5						
AAK	Ala-Archa	24.54	323	*e*P	P	13 11 03.8	+1.4
	comp=Z,180nm,1.3s,mb5.3						
AAK				*e*pP		13 11 20.0	
SSE	Sheshan	24.55	68	P	P	13 11 01.4	-1.3
SSE				AP		13 11 17.3	
SSE				S	S	13 15 15.3	-0.3
SSE				XS		13 15 43.9	
SSE				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.4						
SSE				AMB	AMB		
	comp=Z,97nm,3.7s						
SSE				LR	LR		
	comp=N,491nm,25.5s						
SSE				LR	LR		
	comp=E,272nm,25.4s						
SSE				LR	LR		
	comp=Z,506nm,25.0s						
CHMS	Chumysh	24.64	324	P	P	13 11 06.8	+3.3
	SNR=7.7						
AML	Almayashu	24.66	321	P	P	13 11 07.5	+3.8
	SNR=14						
EKS2	Erkin-Say	24.96	322	P	P	13 11 09.5	+3.0
	SNR=17						
USP	Ospenovka	24.96	324	P	P	13 11 08.8	+2.3

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          SNR=8.0
SONM  Songino Array    25.23  19  P      P        13 11 10.5 +1.4
          comp=Z,102nm,0.9s,mb5.3,baz=202,slow=8.3,SNR=158
SONM                              PcP    PcP      13 14 41.3  -0.4
          comp=Z,3.8nm,0.5s,baz=195,slow=3.7,SNR=8.9
SONM                              ScP             13 18 12.5
          comp=Z,8.9nm,0.9s,baz=207,slow=2.7,SNR=16
ULN   Ulaanbaatar      25.46  20d iP     P        13 11 11.6 +0.4
ULN   Ulaanbaatar      25.46  20  eP     P        13 11 11.6 +0.4
          comp=Z,128nm,0.8s,mb5.4
ZAK   Zakamensk        26.82  13⇑iP     P        13 11 24.2 +0.4
ZAK                              e                13 14 45.1
ZAK                               pmax   pmax
          comp=Z,30nm,1.0s,mb4.8
TGY   Tagaytay City    26.98 107  LR     LR       13 22 28.3
          comp=Z,237nm,19.9s,baz=294,slow=37
MOY   Mondy            27.68   9  eP     P        13 11 32.8 +1.2
MOY                               pmax   pmax
          comp=Z,40nm,1.6s,mb4.7
KKM   Kota Kinabalu    27.75 128  P      P        13 11 33.1 +0.5
TLY   Talaya           28.13  12  P      P        13 11 37.8 +2.2
          comp=Z,45nm,1.2s,mb4.9,SNR=9.0
TLY   Talaya           28.13  12  eP     P        13 11 37.2 +1.6
TLY                               pmax   pmax
          comp=Z,8.0nm,1.0s,mb4.2
TLY                               MLR    MLR
          comp=Z,532nm,26.0s
TLY   Talaya           28.13  12  eP     P        13 11 36.1 +0.5
          comp=Z,25nm,0.6s,mb4.9
IRK   Irkutsk          28.79  13  eP     P        13 11 42.6 +1.1
IRK                              e                13 12 46.0
IRK                               pmax   pmax
          comp=Z,50nm,2.1s,mb4.8
KURK  Kurchatov        28.98 339c iP     P        13 11 43.3 +0.1
KURK                              pmax   pmax
          comp=Z,18nm,1.0s,mb4.7
KURK  Kurchatov        28.98 339  eP     P        13 11 42.9  -0.3
          comp=Z,14nm,0.6s,mb4.8
TSM   Tawau            30.14 128  P      P        13 11 53.5  -0.4
ZAL   Zalesovo         30.37 349  P      P        13 11 55.7 +0.2
          comp=Z,22nm,0.5s,mb5.1,baz=306,slow=5.5,SNR=58
ZAL                               ScP             13 18 27.7
          comp=Z,3.3nm,0.7s,baz=312,slow=2.8,SNR=6.8
ZAL                               LR     LR       13 25 23.9
          comp=Z,230nm,21.8s,baz=302,slow=39
ZAL   Zalesovo         30.37 349  P      P        13 11 55.7 +0.2
ZAL                               ScP             13 18 27.7
JOW   Kunigami         30.55  78  P      P        13 11 55.4  -2.0
          comp=Z,44nm,0.3s,mb5.6,baz=222,slow=7.6,SNR=16
JOW                               ScP             13 18 28.2
          comp=Z,30nm,0.8s,baz=188,slow=12,SNR=4.0
JOW                               LR     LR       13 25 29.6
          comp=Z,724nm,19.0s,baz=303,slow=39
KS15  Wonju Array Si   31.32  58  P      P        13 12 02.8  -1.3
NVS   Novosibirsk      31.52 348  eP     P        13 12 02.8  -2.8
NVS                              e*PP    pP       13 12 19.7  -2.8
NVS                              e                13 14 53.9
NVS                               pmax   pmax
          comp=N,24nm,0.4s
NVS                               pmax   pmax
          comp=E,24nm,0.4s
NVS                               pmax   pmax
          comp=Z,53nm,0.4s,mb5.6
HIA   Hailar           31.74  32  eP     P        13 12 05.8  -1.8
          comp=Z,16nm,0.9s,mb4.8
CN2   Changchun        31.87  45  eP     P        13 12 08.0  -0.8
CN2                              eXP     sP       13 12 34.3 +0.1
CN2                              eS      S        13 17 20.9 +7.6
CN2                               AMB    AMB
          comp=Z,10.0nm,0.5s,mb4.8
CN2                               LR     LR
          comp=N,300nm,11.0s
CN2                               LR     LR
          comp=E,200nm,11.0s
CN2                               LR     LR
          comp=Z,500nm,13.0s
BVAR  Borovoye Array   33.87 334  P      P        13 12 26.9 +0.9
          comp=Z,3.8nm,0.3s,mb4.6,baz=140,slow=12,SNR=30
BVAR                              PcP    PcP      13 15 03.8 +0.3
          comp=Z,5.6nm,0.5s,baz=153,slow=4.7,SNR=7.3
BVAR                              ScP             13 18 41.4
          comp=Z,29nm,0.7s,baz=135,slow=4.2,SNR=47
BRVK  Borovoye         33.94 334  P      P        13 12 27.6 +1.0
BRVK                              pmax   pmax
          comp=Z,7.0nm,1.0s,mb4.5
BRVK  Borovoye         33.94 334  eP     P        13 12 27.0 +0.4
          comp=Z,21nm,0.8s,mb5.0
MDJ   Mudanjiang       34.91  46  P      P        13 12 33.8  -1.2
MDJ                               AP     pP       13 12 49.3  -2.9
MDJ                               XP     sP       13 12 55.6  -5.1
MDJ                               PP     PP       13 13 56.3 +1.5
MDJ                               PCP    PcP      13 15 03.8  -2.8
MDJ                               S      S        13 18 04.9 +4.5
MDJ                               SCP             13 18 42.4
MDJ                               PCS             13 18 51.4
MDJ                               SCS    ScS      13 22 48.0 +1.1
MDJ                               AMB    AMB
          comp=Z,109nm,6.3s
MDJ                               LR     LR
          comp=N,224nm,33.1s
MDJ                               LR     LR
          comp=E,123nm,31.9s
MDJ                               LR     LR
          comp=Z,175nm,33.1s
BOD   Bodaibo          36.21  18⇓iP     P        13 12 47.0 +1.1
BOD                              e                13 15 05.3
BOD                               pmax   pmax
          comp=Z,27nm,0.7s,mb5.3
SHAO  Shalim           36.66 268 ⇓P     P        13 12 52.4 +2.4
RBK   Rabkut           38.10 268  P      P        13 13 04.4 +2.3
          SNR=12
KLR   Kul'dur          38.22  40  eP     P        13 12 58.4  -4.3
WHFO  Wadi Hawf        38.38 268  P      P        13 13 05.6 +1.2
          SNR=24
ABTO  Aybut            38.97 268  P      P        13 13 11.0 +1.6
          SNR=10.0
MAJO  Matsushiro       39.30  62  eP     P        13 13 09.4  -2.4
          comp=Z,28nm,0.8s,mb5.1
MAT   Matsushiro       39.30  62  eP     P        13 13 10.0  -1.9
          comp=Z,15nm,0.8s,mb4.9
MAT                               S      S        13 19 18.0  +11
MAT   Matsushiro       39.30  62  P      P        13 13 09.5  -2.4
MAT                              eS      S        13 19 14.8 +7.4
SVE   Sverdlovsk       40.56 332⇓eP     P        13 13 24.5 +2.4
SVE                              e       pP       13 13 41.0 +1.5
SVE                              eS      S        13 19 32.0 +5.9
SVE                               pmax   pmax
          comp=Z,40nm,0.8s,mb5.3
SVE                               MLR    MLR
          comp=N,200nm,16.0s
SVE                               MLR    MLR
          comp=E,300nm,16.0s
SVE                               MLR    MLR
          comp=Z,600nm,16.0s
CBIJ  Chichi jima      42.88  76  P      P        13 13 38.5  -3.0
          comp=Z,59nm,0.5s,mb5.6,baz=276,slow=21,SNR=7.9
ASAJ  Asahikawa        43.69  51  P      P        13 13 46.8  -1.0
          comp=Z,6.9nm,0.5s,mb4.7,baz=320,slow=2.8,SNR=9.9
SOKR  Solikamsk        43.86 333⇑iP     P        13 13 51.4 +2.4
SOKR                              pmax   pmax
          comp=Z,50nm,0.9s,mb5.2
GNI   Garni            44.29 303 i P     P        13 13 55.5 +2.8
GNI                               pmax   pmax
          comp=Z,14nm,1.6s
GNI   Garni            44.29 303  P      P        13 13 53.2 +0.5
          comp=Z,2.5nm,0.4s,mb4.3,baz=210,slow=20,SNR=2.3
GNI   Garni            44.29 303  eP     P        13 13 55.3 +2.6
          comp=Z,98nm,1.4s,mb5.3
GNI                              epP     pP       13 14 12.3 +2.1
YSS   Yuzh-Sakhalins   44.38  47 ⇑P     P        13 13 51.0  -2.4
BHD   Baghdad          44.39 293  eP     P        13 14 04.0  +10
TI2   Plekhanov        44.45 305  eP     P        13 13 56.0 +2.0
TI2                              i       pP       13 14 13.4 +1.9
TI2                               pmax   pmax
          comp=Z,50nm,1.0s,mb5.2
YAK   Yakutsk          44.48  23  eP     P        13 13 54.0   0.0
YAK                              e                13 15 37.9
YAK                              e                13 15 39.5
YAK                              ePPP    PPP      13 16 17.3  -2.6
YAK                              eS      S        13 20 19.6  -3.7
YAK                              eSS     SS       13 23 41.1 +5.5
YAK                              e                13 23 42.4
YAK                               pmax   pmax
          comp=Z,8.0nm,0.7s,mb4.6
YAK                               pmax   pmax
          comp=N,2.0nm,0.8s
YAK                               pmax   pmax
          comp=E,1.0nm,0.7s
YAK                               pmax   pmax
          comp=Z,3.0nm,0.8s,mb4.1
YAK                               pmax   pmax
          comp=N,2.0nm,0.9s
YAK                               pmax   pmax
          comp=E,3.0nm,0.9s
YAK                               smax
          comp=N,10.0nm,1.1s
YAK                               smax
          comp=E,11nm,1.1s
YAK   Yakutsk          44.48  23  eP     P        13 13 53.0  -1.0
          comp=E,44nm,0.6s,mb5.4
RAYN  Ar Rayn          44.55 279  P      P        13 13 56.4 +1.4
          comp=E,80nm,1.0s,mb5.4,SNR=14
MSL   Mosul            45.41 298  eP     P        13 14 20.0  +18
GOF   Gofitskoye       46.14 310⇑iP     P        13 14 09.0 +1.6
GOF                               pmax   pmax
          comp=Z,40nm,1.0s,mb5.1
KIV   Kislovodsk       46.23 308  eP     P        13 14 09.8 +1.7
KIV                              e                13 15 43.5
KIV                              eS      S        13 20 55.6 +6.9
KIV                               pmax   pmax
          comp=N,19nm,1.1s
KIV                               pmax   pmax
          comp=Z,35nm,1.1s,mb5.0
KIV                               MLR    MLR
          comp=N,129nm,19.0s
KIV                               MLR    MLR
          comp=E,196nm,19.0s
KIV                               MLR    MLR
          comp=Z,226nm,19.0s
KIV   Kislovodsk       46.23 308  eP     P        13 14 10.4 +2.2
          comp=Z,146nm,1.2s,mb5.6
KIV                              epP     pP       13 14 27.2 +1.5
MALT  Malatya          49.12 300  eP     P        13 14 33.5 +2.8
          comp=Z,42nm,1.4s,mb5.2
ASF   Jabal al Asfar   50.76 292  P      P        13 14 45.4 +2.0
          comp=Z,5.3nm,0.5s,mb4.8,baz=335,slow=1.0,SNR=8.2
TIXI  Tiksi            51.10  13⇑iP     P        13 14 44.6  -0.8
TIXI                              pmax   pmax
          comp=Z,38nm,0.5s,mb5.7
MBWA  Marble Bar       51.54 149  eP     P        13 14 48.2  -1.2
          comp=Z,141nm,0.8s,mb6.0
MOS   Moscow           51.61 323  eP     P        13 14 53.9 +4.5
MOS                              e                13 15 03.2
MOS                               pmax   pmax
          comp=Z,80nm,1.2s,mb5.6
FITZ  Fitzroy Crossi   52.06 141  eP     P        13 14 51.8  -1.5
          comp=Z,84nm,1.1s,mb5.7
FITZ                             eSCP             13 19 51.3
OBN   Obninsk          52.06 322⇑iP     P        13 14 53.7 +0.9
OBN                              e                13 14 59.8
OBN                              e                13 15 06.0
OBN                              eS               13 22 36.1
OBN                               SSS    SSS      13 27 33.0 +2.0
OBN                               pmax   pmax
          comp=Z,11nm,0.5s,mb5.1
OBN                               MLR    MLR
          comp=Z,200nm,19.0s
KAKA  Kakadu           52.32 131⇑iP     P        13 14 53.1  -2.2
          comp=Z,89nm,1.1s,mb5.7
KAKA                             eSCP             13 19 52.6
MA2   Magadan          52.34  32  eP     P        13 14 54.0  -0.8
MA2                              ePPP    PPP      13 18 03.3 +2.6
MA2                              eS      S        13 22 17.5 +4.1
MA2                              eSSS    SSS      13 27 45.2 +7.9
MA2                               pmax   pmax
          comp=Z,5.0nm,0.6s,mb4.7
MA2                               MLR    MLR
          comp=Z,2µm,24.5s
MA2   Magadan          52.34  32  eP     P        13 14 52.6  -2.3
          comp=Z,12nm,0.6s,mb5.1
EIL   Elat             52.76 290  P      P        13 14 58.8 +0.3
          comp=Z,6.3nm,0.5s,mb4.9,baz=33,slow=6.1,SNR=5.2
BRTR  Keskin Array B   52.81 302  P      P        13 14 59.5 +0.8
          comp=Z,5.6nm,0.5s,mb4.9,baz=119,slow=7.6,SNR=30
BRTR                              ScP             13 19 57.1
          comp=Z,10nm,1.3s,baz=135,slow=5.2,SNR=5.5
SEY   Seymchan         54.07  29  eP     P        13 15 08.9 +1.3
SEY                                               13 16 04.9
SEY                              e                13 17 07.9
SEY                              ePPP    PPP      13 18 15.3  -7.2
SEY                              eS      S        13 22 36.2  -0.7
SEY                                               13 24 48.0
SEY                               SS     SS       13 26 28.4  +10
SEY                              eSSS    SSS      13 28 23.0 +5.9
SEY                               pmax   pmax
          comp=E,6.0nm,0.5s
SEY                               pmax   pmax
          comp=Z,10.0nm,0.5s,mb5.1
SEY                               smax
          comp=N,380nm,21.5s
SEY                               smax
          comp=E,320nm,20.1s
SEY                               MLR    MLR
          comp=E,1µm,22.0s
SEY                               MLR    MLR
          comp=Z,3µm,22.0s
SEY                               MLR    MLR
          comp=N,1µm,23.0s
AKASG Malin Array Be   55.94 316  P      P        13 15 20.6  -0.7
          comp=N,9.7nm,0.3s,mb5.3,baz=75,slow=6.4,SNR=49
AKASG                             pP     pP       13 15 38.9  -0.5
          comp=N,19nm,0.6s,baz=80,slow=6.4,SNR=8.5
AKASG                             ScP             13 20 09.6
          comp=N,1.8nm,0.6s,baz=79,slow=4.1,SNR=5.6
TLCR                   56.19 309 ⇓P     P        13 15 26.6 +3.4
LVZ   Lovozero         56.37 337⇑eP     P        13 15 24.5 +0.4
LVZ                               pmax   pmax
          comp=Z,23nm,0.7s,mb5.3
LVZ                               pmax   pmax
          comp=N,12nm,1.4s
LVZ                               MLR    MLR
          comp=Z,343nm,12.0s
LVZ                               MLR    MLR
          comp=N,183nm,11.0s
LVZ                               MLR    MLR
          comp=E,174nm,10.0s
JOF   Joensuu          56.37 331  ep     P        13 15 24.0  -0.2
          comp=E,6.4nm,0.4s,mb5.0
JOF   Joensuu          56.37 331  eP     P        13 15 24.0  -0.2
JOF                               pmax   pmax
          comp=Z,6.0nm,0.4s,mb5.0
CFR   Carcaliu         56.66 309 ⇓P     P        13 15 27.0 +0.4
CFR   Carcaliu         56.66 309⇑iP     P        13 15 26.7 +0.1
APA   Apatity          56.71 336⇓iP     P        13 15 27.0 +0.4
APA                              i                13 15 37.0
APA                              eS      S        13 23 20.0 +8.0
APA                               pmax   pmax
          comp=Z,28nm,0.4s,mb5.7
HARR  Harsova          56.83 309⇑iP     sP       13 15 46.4  -7.5
VRI   Vrincioaia       57.62 310⇓iP     P        13 15 34.5 +1.1
MLR   Muntele Rosu     58.19 310 ⇓P     P        13 15 38.5 +1.2
KAF   Kangasniemi      58.52 329  ep     P        13 15 38.9  -0.4
          comp=Z,3.1nm,0.4s,mb4.7
KAF   Kangasniemi      58.52 329  eP     P        13 15 38.9  -0.4
KAF                               pmax   pmax
          comp=Z,3.0nm,0.4s,mb4.7
FINES FINESS Array B   58.55 328 i P     P        13 15 39.6 +0.1
FINES                             pmax   pmax
          comp=Z,10.0nm,0.4s
FINES FINESS Array B   58.55 328  P      P        13 15 39.6   0.0
          comp=Z,10nm,0.4s,mb5.2,baz=95,slow=7.0,SNR=108
FINES                             pP     pP       13 15 56.9  -0.9
          comp=Z,11nm,0.7s,baz=112,slow=10,SNR=6.0
FINES                             ScP             13 20 22.0
          comp=Z,2.5nm,0.7s,baz=90,slow=3.8,SNR=4.4
FINES                             LR     LR       13 43 12.6
          comp=Z,200nm,19.8s,baz=18,slow=38
BURAR Bucovina Array   58.58 312 ⇓P     P        13 15 40.3 +0.3
WRA   Warramunga Arr   58.75 135  P      P        13 15 40.3  -1.2
          comp=Z,48nm,0.5s,mb5.8,baz=325,slow=7.4,SNR=551
WRA                               ScP             13 20 20.5
          comp=Z,5.8nm,0.9s,baz=321,slow=4.5,SNR=6.9
WRA                               PKPPKP          13 45 18.3
          comp=Z,1.3nm,1.0s,baz=108,slow=2.8,SNR=4.6
WRA                               PKP2bc          13 45 26.1
          comp=Z,2.0nm,1.0s,baz=132,slow=2.4,SNR=6.4
WRA                               PKP2ab          13 45 41.6
          comp=Z,0.9nm,0.9s,baz=139,slow=3.6,SNR=5.0
WRA   Warramunga Arr   58.75 135  P      P        13 15 40.3  -1.2
WRA                               ScP             13 20 20.5
WRA                               P'P'            13 45 18.3
WRA                             ⇑e                13 45 26.1
WRA                               P'P'ab          13 45 41.6
WRAB  Tennant Creek    58.75 135c iP     P        13 15 40.4  -1.1
WRAB  Tennant Creek    58.75 135  eP     P        13 15 39.9  -1.6
          comp=Z,160nm,0.9s,mb6.0
WB2   Warramunga Arr   58.76 135⇑iP     P        13 15 40.3  -1.3
WB2                              e                13 16 29.0
WB2                              eSCP             13 20 19.6
RZN   Rozhen           59.42 305  eP     P        13 15 52.0 +6.2
KEV   Kevo             59.54 338  ep     P        13 15 46.0  -0.3
          comp=Z,11nm,0.3s,mb5.4
KEV   Kevo             59.54 338  eP     P        13 15 46.0  -0.3
KEV                               pmax   pmax
          comp=Z,11nm,0.3s,mb5.4
SUW   Suwalki          59.70 320  eP     P        13 15 47.2  -0.4
PGB   Panagyurishte    59.73 306  eP     P        13 15 49.0 +1.0
MUN   Mundaring        59.80 159⇑iP     P        13 15 47.8  -0.8
          comp=Z,58nm,0.5s,mb5.9
MUN                              e                13 16 33.1
KLBR  Kellerberrin     59.98 157⇑iP     P        13 15 48.6  -1.3
          comp=Z,881nm,0.9s
KLBR                             e                13 16 33.5
ARCES ARCESS Array B   60.01 338  P      P        13 15 50.0 +0.4
          comp=Z,18nm,0.6s,mb5.3,baz=99,slow=6.3,SNR=53
ARCES                             ScP             13 20 29.0
          comp=Z,10.0nm,1.0s,baz=112,slow=6.5,SNR=6.0
ARCES                             LR     LR       13 45 06.0
          comp=Z,259nm,21.2s,baz=280,slow=39
ARE0  ARCESS Array S   60.01 338  eP     P        13 15 49.0  -0.5
KWP   Kalwaria         60.14 315  eP     P        13 15 51.2 +0.5
KWP                              eP      pP       13 16 10.0 +1.0
KWP   Kalwaria         60.14 315  eP     P        13 15 51.2 +0.5
KWP                              e       pP       13 16 09.9 +1.0
IDI   Anoyia           60.21 298  P      P        13 15 51.9 +0.5
          comp=Z,13nm,0.3s,mb5.4,baz=33,slow=11,SNR=17
VTS   Vitosha          60.42 306 ⇑P     P        13 15 52.8 +0.1
VTS   Vitosha          60.42 306  eP     P        13 15 53.0 +0.3
KOLS  Kolonicke sedl   60.47 314  eP     P        13 15 52.8  -0.1
KOLS                             e                13 16 03.1
KOLS                             epP     pP       13 16 11.3   0.0
KTK1  Kautokeino       60.72 337  eP     P        13 15 54.6 +0.2
BILL  Bilibino         60.81  24d iP     P        13 15 54.5  -0.5
BILL                             i       pP       13 16 12.5  -0.9
BILL                             i                13 16 35.6
BILL                             eS      S        13 24 05.3   0.0
BILL                             eSS     SS       13 28 09.3 +2.8
BILL                              pmax   pmax
          comp=Z,30nm,0.5s,mb5.6
BILL                              MLR    MLR
          comp=Z,200nm,20.0s
BILL  Bilibino         60.81  24  eP     P        13 15 54.1  -0.9
          comp=Z,43nm,0.5s,mb5.7
KMBO  Kilima Mbogo     60.93 254  P      P        13 15 58.0 +1.4
          comp=Z,2.2nm,0.6s,mb4.4,baz=46,slow=15,SNR=10
KMBO                              ScP             13 20 33.6
          comp=Z,1.8nm,0.8s,baz=30,slow=8.7,SNR=3.6
KMBO                              LR     LR       13 41 26.9
          comp=Z,122nm,20.5s,baz=90,slow=35
KMBO  Kilima Mbogo     60.93 254  eP     P        13 15 56.5  -0.1
          comp=Z,18nm,1.4s,mb4.9
NWAO  Narrogin (SRO)   61.01 158  P      P        13 15 55.7  -1.2
          comp=Z,116nm,0.8s,mb6.0,baz=335,slow=6.3,SNR=128
ASPA  Alice Springs    61.22 138⇑iP     P        13 15 57.7  -0.7
ASAR  Alice Springs    61.22 138  P      P        13 15 57.5  -1.0
          comp=Z,38nm,0.5s,mb5.7,baz=322,slow=6.8,SNR=427
ASAR                              pP     pP       13 16 15.0  -1.7
          comp=Z,9.8nm,0.7s,baz=323,slow=7.0,SNR=2.6
ASAR                              ScP             13 20 31.6
          comp=Z,5.2nm,0.9s,baz=325,slow=4.6,SNR=8.6
ASAR                              PKP2bc          13 45 21.9
          comp=Z,8.5nm,1.3s,baz=135,slow=2.3,SNR=8.6
ASAR  Alice Springs    61.22 138  P      P        13 15 57.5  -1.0
ASAR                              pP     pP       13 16 15.0  -1.7
ASAR                              ScP             13 20 31.6
ASAR                            ⇑e                13 45 21.9
PMG   Port Moresby     61.43 117  P      P        13 15 59.3  -0.6
          comp=Z,57nm,0.7s,mb5.7,baz=356,slow=4.3,SNR=34
PMG   Port Moresby     61.43 117  eP     P        13 15 58.1  -1.8
          comp=Z,71nm,0.9s,mb5.7
KECS  Kecovo           61.68 313  eP     P        13 15 59.3  -1.9
KECS                             e       pP       13 16 20.4 +0.9
NIE   Niedzica         61.71 314  eP     P        13 16 00.9  -0.4
NIE                              e       pP       13 16 20.1 +0.4
PSZ   Piszkesteto      62.14 313  eP     P        13 16 03.5  -0.7
          comp=Z,17nm,0.9s,mb5.1
PSZ                              epP     pP       13 16 22.3  -0.3
TRO   Tromso           62.31 337  eP     P        13 16 04.0  -1.1
TRO                              epP     pP       13 16 23.0  -0.4
VYHS  Vyhne            62.77 314  eP     P        13 16 07.9  -0.6
VYHS                             e       pP       13 16 27.5 +0.6
OKC   Ostrava-Krasne   63.07 315  eP     P        13 16 10.7 +0.3
OKC                              epP     pP       13 16 29.7 +0.9
SRO2  Moca             63.16 313  epP    pP       13 16 30.7 +1.2
PKSM  Moragy           63.20 311 ⇑P     P        13 16 10.7  -0.6
SRO   Srobarova        63.21 313  epP    pP       13 16 31.2 +1.4
MORC  Moravsky Berou   63.46 315  eP     P        13 16 12.6  -0.4
          comp=Z,25nm,0.9s,mb5.1
MORC                             epP     pP       13 16 31.0  -0.5
FORT  Forrest          63.62 148⇑iP     P        13 16 13.7  -0.7
          comp=Z,2µm,1.4s
MOR8  Moi Rana         63.91 334  eP     P        13 16 14.8  -0.8
ZST   Bratislava       63.96 313  epP    pP       13 16 35.2 +0.5
KSP   Ksiaz            64.12 316  eP     P        13 16 17.0  -0.2
KSP                              epP     pP       13 16 36.2 +0.5
KSP   Ksiaz            64.12 316  eP     P        13 16 17.6 +0.4
KSP                              e       pP       13 16 37.0 +1.3
VRAC  Vranov           64.14 315  P      P        13 16 18.0 +0.6
          comp=Z,9.3nm,0.6s,mb4.8,baz=95,slow=9.6,SNR=8.7
VRAC                              pP     pP       13 16 36.7 +0.9
VRAC  Vranov           64.14 315 ⇓P     P        13 16 18.2 +0.9
DPC   Dobruska-Polom   64.17 316  eP     P        13 16 18.3 +0.8
DPC                              epP     pP       13 16 36.1 +0.1
LOF   Lofoten          64.22 336  eP     P        13 16 19.1 +1.6
FX1   Attu Island--F   64.22  41  eP     P        13 16 15.3  -2.5
UPC   Upice            64.35 316  eP     P        13 16 19.2 +0.5
UPC                              epP     pP       13 16 36.4  -0.8
STOK  Stokkvaagen      64.48 334  eP     P        13 16 19.1  -0.2
HFS   Hagfors          64.59 327  P      P        13 16 20.2 +0.1
          comp=Z,35nm,0.5s,mb5.5,baz=108,slow=4.7,SNR=194
HFS                               pP     pP       13 16 38.2  -0.4
          comp=Z,18nm,0.5s,baz=76,slow=6.1,SNR=4.5
NSS   Namsos           65.03 332  eP     P        13 16 21.9  -1.1
ARSA  Arzberg          65.16 313⇑iP     P        13 16 24.6 +0.6
          comp=Z,5.3nm,0.9s,mb4.4
GROS  Grobnik          65.31 312  eP     sP       13 16 44.4  -6.8
PRU   Pruhonice        65.36 316  eP     P        13 16 25.8 +0.6
PRU                              epP     pP       13 16 44.2 +0.4
BRG   Berggiesshubel   65.59 317  eP     P        13 16 27.1 +0.4
BRG                               pmax   pmax
          comp=Z,20nm,1.0s,mb4.9
BRG   Berggiesshubel   65.59 317  eP     P        13 16 27.1 +0.4
          comp=Z,20nm,1.0s,mb4.9
BRG                              i       pP       13 16 46.6 +1.3
NB2   NORSAR Subarra   65.72 328  P      P        13 16 27.0  -0.3
          comp=Z,12nm,0.5s,mb5.0,baz=83,slow=6.2
NB2   NORSAR Subarra   65.72 328  P      P        13 16 27.0  -0.3
          baz=83,slow=6.5
NOA   NORSAR Array B   65.72 328  P      P        13 16 27.2  -0.1
          comp=Z,5.7nm,0.4s,mb4.8,baz=88,slow=4.8,SNR=57
NOA                               pP     pP       13 16 45.4  -0.5
          comp=Z,25nm,1.0s,baz=85,slow=6.4,SNR=8.0
NOA                               LR     LR       13 47 45.0
          comp=Z,238nm,18.1s,baz=70,slow=38
PDKS  Podkum           65.72 311  eP     sP       13 16 47.6  -6.3
MOA   Molln            65.89 313⇑iP     P        13 16 28.7   0.0
          comp=Z,10nm,1.1s,mb4.6
NAO01 NORSAR Array S   65.90 328  eP     P        13 16 27.7  -0.8
          comp=Z,11nm,0.4s,mb5.0
NAO01                            epP     pP       13 16 45.7  -1.4
GEC2  GERESS Array S   66.09 315  eP     P        13 16 30.2 +0.3
GEC2                              pmax   pmax
          comp=Z,9.0nm,0.8s,mb4.7
GEC2  GERESS Array S   66.09 315  eP     P        13 16 30.2 +0.3
          comp=Z,9.0nm,0.8s,mb4.7
GERES GERESS Array B   66.09 315  P      P        13 16 30.5 +0.6
          comp=Z,3.7nm,0.5s,mb4.5,baz=76,slow=5.5,SNR=28
GERES                             pP     pP       13 16 48.9 +0.4
          comp=Z,42nm,1.0s,baz=76,slow=5.5,SNR=17
OSL   Oslo             66.10 327  eP     P        13 16 30.2 +0.4
OSL                              epP     pP       13 16 48.3  -0.1
CLL   Collm            66.11 317  eP     P        13 16 30.0   0.0
CLL                              i pP    pP       13 16 49.7 +1.1
CLL   Collm            66.11 317  P      P        13 16 30.0   0.0
CLL                              i                13 16 36.9
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CLL				*i* *PP	pP	13 16 49.7	+1.1
CLL				*e*PCP	PcP	13 17 00.0	+0.2
KHC	**Kasperske Hory**	**66.12**	**315**	*e*P	**P**	**13 16 30.3**	**+0.2**
KHC				*e*pP	pP	13 16 47.9	-0.8
MBAR	**Mbarara**	**66.45**	**258**	*e*P	**P**	**13 16 33.2**	**+0.3**
	comp=Z,7.2nm,0.7s,mb4.6						
WET	**Wettzell**	**66.57**	**315**	*e*P	**P**	**13 16 33.2**	**+0.3**
WET				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
WET	**Wettzell**	**66.57**	**315**	*e*P	**P**	**13 16 33.2**	**+0.3**
	comp=Z,5.0nm,0.8s,mb4.4						
DOMB	**Dombas**	**66.61**	**329**	*e*P	**P**	**13 16 33.1**	**+0.1**
	comp=Z,27nm,0.9s,mb5.1						
DOMB	**Dombas**	**66.61**	**329**	*e*P	**P**	**13 16 33.1**	**+0.1**
DOMB				AMb	AMB	13 16 34.5	
	comp=Z,27nm,0.9s,mb5.0						
DOMB				*e*pP	pP	13 16 51.7	+0.1
NKC	**Novy Kostel**	**66.64**	**316**	*e*P	**P**	**13 16 33.8**	**+0.4**
CTA	**Charters Tower**	**67.07**	**127**⇑	*i*P	**P**	**13 16 35.8**	**-0.8**
	comp=Z,20nm,0.6s,mb5.1						
CTA	**Charters Tower**	**67.07**	**127**	P	**P**	**13 16 35.8**	**-0.8**
	comp=Z,31nm,0.7s,mb5.2,baz=319,slow=7.9,SNR=27						
CTAO	**Charters Tower**	**67.07**	**127**	*e*P	**P**	**13 16 35.4**	**-1.2**
	comp=Z,63nm,1.3s,mb5.3						
MOX	**Moxa**	**67.09**	**317**	*e*P	**P**	**13 16 36.6**	**+0.4**
MOX				*e*	pP	13 16 55.2	+0.4
MOX				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.0						
MOX	**Moxa**	**67.09**	**317**	*e*P	**P**	**13 16 36.6**	**+0.4**
	comp=Z,29nm,1.1s,mb5.0						
MOX				*e*	pP	13 16 55.2	+0.4
MOX	**Moxa**	**67.09**	**317**	*i* P	**P**	**13 16 36.6**	**+0.4**
MOX				pP	pP	13 16 55.0	+0.2
MOL	**Molde**	**67.23**	**330**⇑	*i*P	**P**	**13 16 38.0**	**+1.2**
	comp=Z,43nm,1.8s,mb5.0						
MOL	**Molde**	**67.23**	**330**⇑	*i*P	**P**	**13 16 38.0**	**+1.2**
MOL				AMb	AMB	13 16 41.2	
	comp=Z,43nm,1.8s,mb5.0						
BSEG	**Bad Segeberg**	**67.26**	**320**	*e*P	**P**	**13 16 38.4**	**+1.2**
GRA1	**Grafenberg Arr**	**67.53**	**316**	*e*P	**P**	**13 16 39.9**	**+1.0**
	comp=Z,2µm,6.9s						
GRA1				*e*pP	pP	13 16 58.4	+0.8
GRF	**Grafenberg Arr**	**67.53**	**316**	*e*P	**P**	**13 16 39.9**	**+1.0**
GRF				*e**PP	pP	13 16 58.4	+0.8
GRF				pmax	pmax		
	comp=Z,2µm,6.9s						
GRF	**Grafenberg Arr**	**67.53**	**316**	*e*P	**P**	**13 16 39.9**	**+1.0**
	comp=Z,2µm,6.9s						
GRF				*e*pP	pP	13 16 58.4	+0.8
AQU	**L'Aquila**	**67.61**	**308**	*e*P	**P**	**13 16 39.8**	**+0.2**
	comp=Z,66nm,1.1s,mb5.4						
AQU				*e*pP	pP	13 16 57.9	-0.3
CLZ	**Clausthal**	**67.63**	**318**	*e*P	**P**	**13 16 39.9**	**+0.4**
	comp=Z,20nm,1.1s,mb4.9						
WTTA	**Wattenberg**	**67.76**	**313**⇑	*i*P	**P**	**13 16 40.4**	**0.0**
	comp=Z,18nm,1.5s,mb4.7						
FUR	**Furstenfeldbru**	**67.80**	**314**	*e*P	**P**	**13 16 41.4**	**+0.7**
SQTA	**Sankt Quirin**	**68.05**	**313**⇑	*i*P	**P**	**13 16 41.9**	**-0.3**
	comp=Z,5.8nm,1.1s,mb4.3						
MOTA	**Moosalm**	**68.09**	**313**⇓	*i*P	**P**	**13 16 42.2**	**-0.3**
	comp=Z,3.9nm,1.0s,mb4.2						
ODD1	**Odda**	**68.14**	**327**	*e*P	**P**	**13 16 42.2**	**-0.4**
ODD1				*e*pP	pP	13 17 00.9	-0.4
ODD1				*e*sP	sP	13 17 09.0	+0.3
BLS5	**Blasjo**	**68.32**	**327**	*e*P	**P**	**13 16 45.1**	**+1.4**
DAVA	**Damuels**	**68.92**	**313**⇑	*i*P	**P**	**13 16 46.2**	**-1.4**
	comp=Z,7.6nm,0.8s,mb4.6						
DAVOX	**Davos**	**69.03**	**313**	P	**P**	**13 16 48.5**	**+0.1**
	comp=Z,8.2nm,0.7s,mb4.7,baz=102,slow=5.2,SNR=5.8						
DAVOX				pP	pP	13 17 07.5	+0.4
	comp=Z,26nm,0.8s,baz=119,slow=9.0,SNR=8.6						
DAVOX	**Davos**	**69.03**	**313**	P	**P**	**13 16 48.5**	**+0.1**
DAVOX				pP	pP	13 17 07.5	+0.4
TNS	**Taunus Mts**	**69.16**	**317**	*e*P	**P**	**13 16 49.8**	**+0.7**
VLC	**Villacollemand**	**69.32**	**310**	*e*P	**P**	**13 16 50.2**	**+0.1**
	comp=Z,24nm,0.9s,mb5.0						
BFO	**Black Forest**	**69.68**	**315**	*e*P	**P**	**13 16 51.9**	**-0.4**
BFO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BFO	**Black Forest**	**69.68**	**315**	*e*P	**P**	**13 16 51.9**	**-0.4**
	comp=Z,5.0nm,0.7s,mb4.5						
PGF	**Pioggiola**	**70.71**	**309**	*e*P	**P**	**13 16 58.5**	**-0.1**
	comp=Z,144nm,1.2s,mb5.4						
WLF	**Walferdange**	**70.73**	**317**	*e*P	**P**	**13 16 59.2**	**+0.6**
	comp=Z,25nm,1.0s,mb5.0						
WLF				*e*pP	pP	13 17 18.0	+0.5
HINF	**Hinteralfeld**	**70.77**	**315**	*e*P	**P**	**13 16 58.4**	**-0.5**
HAU	**Haudompre**	**71.05**	**315**	*e*P	**P**	**13 17 00.2**	**-0.3**
	comp=Z,28nm,0.8s,mb4.8						
HAU				*e*R			
	comp=Z,190nm,21.5s						
TNA	**Tin City**	**71.14**	**26**	*e*P	**P**	**13 16 59.5**	**-1.2**
	comp=Z,5.0nm,0.8s,mb4.4						
JMIC	**Jan Mayen**	**71.27**	**340**	LR	LR	13 48 52.8	
	comp=Z,181nm,20.5s,baz=82,slow=36						
GIVF	**Givet**	**71.45**	**317**	*e*P	**P**	**13 17 03.0**	**+0.1**
SBF	**Sospel**	**71.45**	**310**	*e*P	**P**	**13 17 02.9**	**-0.1**
	comp=Z,47nm,0.8s,mb5.1						
LPG	**La Plagne**	**71.47**	**312**	*e*P	**P**	**13 17 03.6**	**+0.5**
	comp=Z,66nm,0.9s,mb5.2						
LPL	**La Plagne**	**71.47**	**312**	*e*P	**P**	**13 17 03.6**	**+0.5**
	comp=Z,83nm,1.0s,mb5.2						
DAG	**Danmarks Havn**	**71.49**	**347**⇑	*e*P	**P**	**13 17 02.7**	**-0.1**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
DAG	**Danmarks Havn**	**71.49**	**347**⇑	*i*P	**P**	**13 17 02.7**	**-0.1**
	comp=Z,6.8nm,0.7s,mb4.6						
CABF	**La Chapelle**	**71.60**	**313**	*e*P	**P**	**13 17 03.9**	**0.0**
	comp=Z,67nm,1.1s,mb5.1						
BNI	**Bardonecchia**	**71.64**	**312**	*e*P	**P**	**13 17 04.5**	**+0.3**
	comp=Z,39nm,1.3s,mb5.1						
BNI				*e*pP	pP	13 17 22.8	-0.2
MBDF	**Montbardon**	**71.67**	**311**	*e*P	**P**	**13 17 04.7**	**+0.4**
MEZF	**Maizieres J'vi**	**71.75**	**316**	*e*P	**P**	**13 17 04.9**	**+0.2**
	comp=Z,87nm,0.8s,mb5.3						
BAIF	**Baives**	**71.84**	**317**	*e*P	**P**	**13 17 05.5**	**+0.3**
STKA	**Stephens Creek**	**71.84**	**139**⇑	*i*P	**P**	**13 17 04.7**	**-0.9**
	comp=Z,8.9nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**71.84**	**139**	P	**P**	**13 17 04.7**	**-0.9**
	comp=Z,13nm,0.4s,mb5.1,baz=324,slow=6.0,SNR=72						
FRF	**La Foret Royal**	**72.09**	**310**	*e*P	**P**	**13 17 06.6**	**-0.2**
	comp=Z,97nm,1.0s,mb5.3						
ORIF	**Oris-en-Rattie**	**72.22**	**312**	*e*P	**P**	**13 17 08.1**	**+0.5**
ORIF				*e*R			
	comp=Z,219nm,22.8s						
LMR	**La Mourre**	**72.25**	**310**	*e*P	**P**	**13 17 07.7**	**-0.1**
	comp=Z,45nm,0.9s,mb5.0						
SMRF	**Simiane la Rot**	**72.71**	**311**	*e*P	**P**	**13 17 10.8**	**+0.3**
VIVF	**Saint-Julien-l**	**73.06**	**312**	*e*P	**P**	**13 17 12.6**	**+0.1**
	comp=Z,114nm,1.2s,mb5.3						
SMF	**Signal de Mont**	**73.07**	**314**	*e*P	**P**	**13 17 12.4**	**-0.1**
	comp=Z,65nm,0.9s,mb5.1						
SSF	**Saint Saulge**	**73.17**	**314**	*e*P	**P**	**13 17 13.0**	**-0.1**
	comp=Z,65nm,1.0s,mb5.1						
AVF	**Avril sur Loir**	**73.35**	**314**	*e*P	**P**	**13 17 14.1**	**0.0**
	comp=Z,56nm,1.0s,mb5.1						
HYF	**Humbligny**	**73.66**	**315**	*e*P	**P**	**13 17 16.6**	**+0.6**
LASF	**Ste Croix**	**73.86**	**311**	*e*P	**P**	**13 17 17.8**	**+0.6**
	comp=Z,156nm,1.3s,mb5.3						
TCF	**Toulx Ste Croi**	**74.25**	**314**	*e*P	**P**	**13 17 19.9**	**+0.4**
	comp=Z,56nm,1.0s,mb5.0						
EKA	**Eskdalemuir Ar**	**74.44**	**324**	P	**P**	**13 17 21.1**	**+0.7**
	comp=Z,4.4nm,0.5s,mb4.5,baz=74,slow=5.7,SNR=17						
EKA				pP	pP	13 17 40.2	+1.0
	comp=Z,24nm,1.0s,baz=73,slow=5.9,SNR=11						
CAF	**Calviac**	**74.80**	**313**	*e*P	**P**	**13 17 23.3**	**+0.7**
	comp=Z,56nm,1.1s,mb4.9						
LDF	**La Druitiere**	**74.99**	**317**	*e*P	**P**	**13 17 23.5**	**-0.1**
RJF	**Les Rejaudoux**	**75.04**	**313**	*e*P	**P**	**13 17 24.8**	**+0.9**
	comp=Z,104nm,1.2s,mb5.1						
RJF				*e*R			
	comp=Z,142nm,22.8s						
MTLF	**Montolieu**	**75.22**	**311**	*e*P	**P**	**13 17 25.4**	**+0.4**
	comp=Z,95nm,1.1s,mb5.1						
SCO	**Scoresbysund**	**75.48**	**342**	*e*P	**P**	**13 17 27.3**	**+1.3**
SCO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
SCO	**Scoresbysund**	**75.48**	**342**	*e*P	**P**	**13 17 27.3**	**+1.3**
	comp=Z,4.5nm,0.7s,mb4.3						
SCO	**Scoresbysund**	**75.48**	**342**	*i* P	**P**	**13 17 27.3**	**+1.3**
	comp=Z,4.5nm,0.7s,mb4.3						
LFF	**La Frestale**	**75.68**	**313**	*e*P	**P**	**13 17 28.2**	**+0.6**
MFF	**Saint Martin d**	**75.69**	**315**	*e*P	**P**	**13 17 28.4**	**+0.8**
LSZ	**Lusaka**	**75.72**	**246**	*e*P	**P**	**13 17 29.0**	**+0.6**
	comp=Z,27nm,0.9s,mb5.0						
IMA	**Indian Mountai**	**76.31**	**23**	*e*P	**P**	**13 17 31.8**	**+1.0**
	comp=Z,13nm,0.5s,mb4.9						
EPF	**Esparros**	**76.61**	**311**	*e*P	**P**	**13 17 32.9**	**-0.1**
SGMF	**Saint Gilles**	**76.62**	**317**	*e*P	**P**	**13 17 33.3**	**+0.4**
ROSF	**Rostrenen**	**77.04**	**317**	*e*P	**P**	**13 17 35.6**	**+0.4**
ETSF	**Etsaut**	**77.28**	**311**	*e*P	**P**	**13 17 37.4**	**+0.7**
ARMA	**Armidale**	**77.30**	**132**	*e*P	**P**	**13 17 37.8**	**+0.7**
SVW2	**Sparrevohn**	**78.00**	**28**	*e*P	**P**	**13 17 40.7**	**+0.4**
TOO	**Toolangi**	**78.11**	**141**	*e*P	**P**	**13 17 41.3**	**-0.1**
	comp=Z,0.8nm,1.4s						
SUMG	**Summit**	**78.18**	**347**	*e*P	**P**	**13 17 41.4**	**+0.3**
	comp=Z,23nm,0.6s,mb5.1						
SDPT	**Sand Point**	**78.36**	**34**	*e*P	**P**	**13 17 41.1**	**-1.2**
	comp=Z,215nm,1.7s,mb5.6						
CNB	**Canberra Magne**	**78.92**	**137**	*e*P	**P**	**13 17 44.7**	**-1.2**
	comp=Z,174nm,0.6s,mb6.1						
COLA	**College**	**79.01**	**23**	*i* P	**P**	**13 17 45.7**	**0.0**
COLA	**College**	**79.01**	**23**	*e*P	**P**	**13 17 46.5**	**+0.8**
	comp=Z,23nm,0.5s,mb5.3						
MCK	**McKinley**	**79.27**	**24**	*e*P	**P**	**13 17 46.5**	**-0.7**
	comp=Z,15nm,0.5s,mb5.1						
ILAR	**Eielson Array**	**79.41**	**22**	P	**P**	**13 17 47.5**	**-0.4**
	comp=Z,17nm,0.5s,mb5.1,baz=310,slow=5.4,SNR=238						
SPU	**Mount Spurr**	**79.44**	**27**	*e*P	**P**	**13 17 46.6**	**-1.5**
RSO	**Redoubt South**	**79.52**	**28**	*e*P	**P**	**13 17 47.9**	**-0.7**
PMR	**Palmer**	**80.39**	**26**	*e*P	**P**	**13 17 53.4**	**+0.2**
	comp=Z,32nm,0.6s,mb5.3						
SML	**Sawmill**	**80.59**	**25**	*e*P	**P**	**13 17 54.1**	**-0.2**
THY	**Trims Highway**	**80.61**	**23**	*e*P	**P**	**13 17 54.1**	**-0.2**
ESDC	**Sonseca Array**	**80.89**	**309**	P	**P**	**13 17 55.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=65,slow=5.6,SNR=5.2						
ESDC				pP	pP	13 18 16.0	+0.5
	comp=Z,5.2nm,0.9s,baz=60,slow=4.6,SNR=4.2						
RES	**Resolute Bay**	**80.97**	**3**	*e*P	**P**	**13 17 56.2**	**+0.2**
	comp=Z,15nm,0.7s,mb4.9						
KDAK	**Kodiak Island**	**81.00**	**30**	*e*P	**P**	**13 17 56.4**	**-0.1**
INK	**Inuvik**	**81.11**	**16**	LR	LR	13 59 44.1	
	comp=Z,235nm,18.9s,baz=298,slow=40						
INK	**Inuvik**	**81.11**	**16**	*e*P	**P**	**13 17 57.0**	**+0.1**
	comp=Z,0.1nm,0.4s						
MENT	**Mentasta**	**81.64**	**23**	*e*P	**P**	**13 18 00.8**	**+1.1**
DAWY	**Dawson**	**82.39**	**21**	*e*P	**P**	**13 18 03.6**	**0.0**
LBTB	**Lobatse**	**82.78**	**239**	P	**P**	**13 18 08.2**	**+1.8**
	comp=Z,36nm,0.8s,mb5.3,baz=84,slow=4.5,SNR=77						
LBTB	**Lobatse**	**82.78**	**239**	*e*P	**P**	**13 18 07.6**	**+1.2**
	comp=Z,21nm,0.5s,mb5.2						
BOSA	**Boshof**	**84.89**	**236**	*e*P	**P**	**13 18 18.2**	**+1.2**
	comp=Z,68nm,0.9s,mb5.6						
TSUM	**Tsumeb**	**86.47**	**247**	LR	LR	13 56 15.4	
	comp=Z,126nm,18.4s,baz=141,slow=35						
DLBC	**Dease Lake**	**89.58**	**22**	*e*P	**P**	**13 18 39.8**	**+0.9**
SUR	**Sutherland**	**90.09**	**234**	LR	LR	13 53 25.6	
	comp=Z,239nm,21.8s,baz=17,slow=32						
YKW3	**Yellowknife Ar**	**90.29**	**13**	*e*P	**P**	**13 18 41.6**	**-0.5**
YKA	**Yellowknife Ar**	**90.35**	**13**	P	**P**	**13 18 42.6**	**+0.2**
	comp=Z,4.5nm,0.8s,mb4.7,baz=330,slow=4.3,SNR=98						
DBIC	**Dimbokro**	**95.68**	**280**	P	**P**	**13 19 08.6**	**+0.6**
	comp=Z,2.7nm,0.5s,mb5.0,baz=35,slow=4.3,SNR=9.2						
DBIC				pP	pP	13 19 28.8	+1.1
	comp=Z,3.1nm,0.8s,baz=43,slow=6.0,SNR=3.4						
DBIC				LR	LR	14 04 30.9	
	comp=Z,123nm,19.3s,baz=62,slow=37						
DBIC	**Dimbokro**	**95.68**	**280**	P	**P**	**13 19 08.6**	**+0.6**
DBIC				pP	pP	13 19 28.8	+1.1
ULM	**Lac du Bonnet**	**105.12**	**7**	PKKPab		13 35 46.0	
	comp=Z,1.3nm,0.5s,baz=208,slow=5.7,SNR=3.4						
PDAR	**Pinedale Array**	**109.59**	**19**	Pdiff	Pdif	13 20 13.4	+4.2
	comp=Z,0.5nm,1.0s,baz=270,slow=5.9,SNR=3.0						
PDAR				PKiKP		13 24 12.6	
	comp=Z,2.0nm,0.6s,baz=87,slow=1.2,SNR=20						
PDAR				PKKPbc		13 35 15.8	
	comp=Z,0.7nm,0.6s,baz=161,slow=4.8,SNR=8.3						
PDAR				PKKP	PKKP	13 35 27.9	+6.1
	comp=Z,2.0nm,0.7s,baz=135,slow=6.0,SNR=11						
NVAR	**Mina Array Bea**	**110.36**	**27**	PKiKP		13 24 14.9	
	comp=Z,1.5nm,0.5s,baz=330,slow=2.4,SNR=13						
NVAR				PKKPbc		13 35 14.8	
	comp=Z,1.2nm,0.8s,baz=144,slow=3.5,SNR=6.8						
NVAR				PKKP	PKKP	13 35 26.0	+5.5
	comp=Z,0.2nm,0.4s,baz=154,slow=2.9,SNR=3.6						
NVAR	**Mina Array Bea**	**110.36**	**27**	PKPdf	PKPdf	13 24 14.9	+2.7
NVAR				PKKPbc		13 35 14.8	
NVAR				PKKP	PKKP	13 35 26.0	+5.5
MSU	**Marysvale**	**112.62**	**22**	*e*PKP	PKPdf	13 24 18.9	+2.3
ANMO	**Albuquerque**	**117.73**	**19**	PKKPbc		13 34 50.0	
	comp=Z,1.3nm,0.6s,baz=147,slow=7.4,SNR=6.9						
WVT	**Waverly**	**119.75**	**2**	*e*PKP	PKPdf	13 24 31.2	+0.6
WMOK	**Wichita Mounta**	**119.86**	**13**	*e*PKP	PKPdf	13 24 31.2	+0.3
MIAR	**Mount Ida**	**120.88**	**8**	*e*PKP	PKPdf	13 24 34.0	+1.1
MNTX	**Cornudas Mount**	**121.08**	**20**	*e*PKP	PKPdf	13 24 34.3	+1.0
JCT	**Junction City**	**123.74**	**15**	*e*PKP	PKPdf	13 24 39.8	+1.3
LTX	**Lajitas**	**123.80**	**19**	*e*PKP	PKPdf	13 24 40.0	+1.4
TXAR	**Lajitas Array**	**123.80**	**19**	PKP	PKPdf	13 24 40.6	+2.0
	comp=Z,10nm,0.6s,baz=129,slow=0.6,SNR=100						
TXAR				PKKPbc		13 34 27.6	
	comp=Z,0.8nm,0.7s,baz=151,slow=6.8,SNR=5.7						
BDFB	**Brasilia**	**143.76**	**277**	PKP	PKPdf	13 25 16.6	+0.7
	comp=Z,12nm,0.6s,baz=352,slow=1.1,SNR=8.9						
SDV	**Santo Domingo**	**143.85**	**334**	PKP	PKPdf	13 25 16.1	0.0
	comp=Z,67nm,0.4s,baz=76,slow=1.8,SNR=86						
SDV	**Santo Domingo**	**143.85**	**334**	*e*PKP	PKPdf	13 25 15.5	-0.7
JTS	**JuntasAbangare**	**145.51**	**359**	PKPbc	PKPbc	13 25 18.8	-1.0
	comp=Z,10nm,0.3s,baz=25,slow=5.8,SNR=11						
ROSC	**El Rosal**	**148.93**	**338**	PKPbc	PKPdf	13 25 29.1	+4.3
	comp=Z,87nm,0.5s,baz=270,slow=20,SNR=8.8						
ROSC				PKPab	PKPab	13 25 32.5	-2.8
	comp=Z,87nm,0.5s,baz=90,slow=4.7,SNR=54						
SAML	**Samuel**	**153.69**	**302**	*e*PKPdf	PKPdf	13 25 33.4	+1.6
SAML				*e*PKPbc	PKPdf	13 25 41.4	+10
OTAV	**Otavalo**	**154.55**	**343**	*e*PKPdf	PKPdf	13 25 36.2	+3.3
OTAV				*e*PKPbc	PKPdf	13 25 44.2	+11
LPAZ	**La Paz**	**161.79**	**293**	PKP	PKPdf	13 25 44.8	+3.3
	comp=Z,6.8nm,0.8s,baz=51,slow=0.7,SNR=24						
LPAZ				PKPab	PKPab	13 26 29.3	-0.5
	comp=Z,2.2nm,0.7s,baz=50,slow=5.1,SNR=4.5						
LPAZ	**La Paz**	**161.79**	**293**	PKP	PKPdf	13 25 44.8	+3.3
LPAZ				PKPab	PKPab	13 26 29.3	-0.5
LVC	**Limon Verde**	**164.63**	**273**	PKP	PKPdf	13 25 48.2	+4.0
	comp=Z,3.9nm,0.8s,baz=225,slow=1.4,SNR=4.3						
LVC				PKPab	PKPab	13 26 40.5	-1.5
	comp=Z,3.0nm,0.8s,baz=352,slow=1.7,SNR=3.9						

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*NEIC **15** 13:06:52.0±2.3, 15.31S×167.45E, h94^{km}±20^{km}, mb4.9/12, Error ellipse: s-maj=15.7km s-min=11.2km az=134.0*

*HRVD **15** 13:06:52.0±0.9, 15.12S×167.40E, h94^{km}±7^{km}, MW5.0/34, Centroid moment Tensor Solution. LP body waves: s6,c6; Mantle waves: s34,c45; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.22±.42; $M_{\theta\theta}$0.51±.78; $M_{\phi\phi}$1.71±.53; $M_{r\theta}$1.50±.23; $M_{\theta\phi}$3.09±.61; $M_{\phi r}$-0.57±.22; Best double couple: $M_0$3.984×10^{16} NP1:ϕ_s5°,δ55°,λ-146°. NP2: ϕ_s253°,δ63°,λ-40°. Principal axes: T 4.302, Plg5°, Azm311°; N -.633, Plg43°, Azm45°; P -3.667, Plg47°, Azm216°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **15** 13:06:57.8±9.7, 15.55S×167.42E, h153^{km}±91^{km}, mb4.0/10, mb1 4.1/10, mb1mx4.0/18, mbtmp4.5/10, MS4.4/7, Ms1 4.4/7, ms1mx3.9/28 Error ellipse: s-maj=33.4km s-min=24.9km az=36.0*

ISC 15 13:06:51.2±0.4**, 15.66S**±0.05×**167.47E**±0.07**, h100^{km}, n51, σ1^{s}18**/40**, mb4.5**/19**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.45**	**189**	*e*P	**P**	**13 08 19.1**	**-6.0**
DZM				*e*S	**S**	**13 09 37.3**	**-0.5**
NOUC	**Port Laguerre**	**6.50**	**190**	*e*P	**P**	**13 08 22.2**	**-3.6**
NOUC				*e*S	**S**	**13 09 38.2**	**-0.9**
HNR	**Honiara**	**9.61**	**309**	*e*P	**P**	**13 09 03.1**	**-5.0**
ARMA	**Armidale**	**20.66**	**222**	*e*P	**P**	**13 11 28.8**	**+4.0**
CTA	**Charters Tower**	**20.66**	**255**	P	**P**	**13 11 25.4**	**+0.5**
	8.9nm,1.1s,baz=79,slow=12,SNR=2.6						
CTA				LR	LR	13 18 15.6	
	comp=Z,1µm,20.4s,baz=80,slow=33						
CTA	**Charters Tower**	**20.66**	**255**	P	**P**	**13 11 25.4**	**+0.5**
PMG	**Port Moresby**	**20.77**	**285**	P	**P**	**13 11 25.9**	**-0.1**
	14nm,0.8s,baz=102,slow=9.3,SNR=9.6						
PMG				LR	LR	13 18 42.7	
	comp=Z,1µm,18.1s,baz=110,slow=34						
PMG	**Port Moresby**	**20.77**	**285**	*e*P	**P**	**13 11 26.2**	**+0.1**
	89nm,1.3s						
URZ	**Urewera**	**24.06**	**161**	P	**P**	**13 12 00.1**	**+2.0**
	12nm,0.7s,mb4.3,slow=6.1,SNR=4.0						
URZ				LR	LR	13 19 35.7	
	comp=Z,1µm,21.5s,baz=227,slow=31						
RPZ	**Rata Peaks**	**28.13**	**174**	LR	LR	13 22 10.3	
	comp=Z,491nm,18.5s,baz=40,slow=32						
STKA	**Stephens Creek**	**28.55**	**231**	P	**P**	**13 12 38.0**	**-1.7**
	5.6nm,1.1s,mb4.1,baz=64,slow=7.7,SNR=3.2						
STKA				LR	LR	13 23 51.5	
	comp=Z,694nm,18.0s,baz=317,slow=36						
STKA	**Stephens Creek**	**28.55**	**231**	P	**P**	**13 12 38.0**	**-1.7**
WB2	**Warramunga Arr**	**31.79**	**257**	*e*P	**P**	**13 13 07.4**	**-1.0**
WRAB	**Tennant Creek**	**31.79**	**257**	*e*P	**P**	**13 13 10.7**	**+2.3**
	8.3nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**31.80**	**257**	P	**P**	**13 13 08.0**	**-0.5**
	2.8nm,0.8s,mb4.1,baz=86,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**32.53**	**250**	P	**P**	**13 13 16.1**	**+1.2**
	5.3nm,0.8s,mb4.5,baz=79,slow=9.0,SNR=24						
ASAR				LR	LR	13 25 59.6	
	comp=Z,723nm,18.7s,baz=83,slow=35						
ASPA	**Alice Springs**	**32.54**	**250**	*e*P	**P**	**13 13 16.1**	**+1.2**
FITZ	**Fitzroy Crossi**	**40.04**	**260**	*e*P	**P**	**13 14 19.2**	**+1.0**
	9.6nm,0.6s,mb4.8						
PPT	**Papeete**	**41.14**	**99**	*e*S	**S**	**13 20 26.8**	**-5.7**
PPT				*e*LR	LR	13 25 53.3	
	664nm,25.8s,baz=257						
TBI	**Tubuai**	**41.19**	**108**	*e*S	**S**	**13 20 28.4**	**-4.8**
TBI				*e*LQ		13 24 22.3	
TBI				*e*LR	LR	13 25 54.9	
	649nm,29.0s						
TAOE	**Nuku Hiva Isla**	**51.53**	**89**	*e*LR	LR	13 30 23.6	
JHJ	**Hachijo jima 2**	**55.25**	**332**	LR	LR	13 35 19.6	
	comp=Z,204nm,21.0s,baz=158,slow=31						
MAJO	**Matsushiro**	**58.82**	**333**	P	**P**	**13 16 37.5**	**-4.1**
	6.9nm,0.7s,mb4.8						
QSPA	**South Pole Qui**	**74.37**	**180**	*e*P	**P**	**13 18 20.2**	**+1.1**
	6.7nm,0.8s,mb4.4						
HIA	**Hailar**	**77.19**	**330**	*e*P	**P**	**13 18 31.8**	**-3.8**
	24nm,1.1s,mb4.8						
YAK	**Yakutsk**	**82.97**	**343**	*e*P	**P**	**13 19 03.9**	**-2.3**
	6.1nm,0.5s,mb4.7						
ULN	**Ulaanbaatar**	**83.00**	**324**	P	**P**	**13 19 01.8**	**-4.8**
	30nm,1.5s,mb4.9						
SONM	**Songino Array**	**83.36**	**324**	P	**P**	**13 19 06.4**	**-2.0**
	2.9nm,1.1s,mb4.0,baz=135,slow=3.5,SNR=4.4						
YBH	**Yreka Blue Hor**	**85.94**	**45**	P	**P**	**13 19 20.5**	**-0.9**
	1.4nm,0.8s,mb3.9,baz=238,slow=3.3,SNR=3.4						
MWC	**Mount Wilson**	**86.36**	**53**	P	**P**	**13 19 23.2**	**-0.4**
NVAR	**Mina Array Bea**	**87.73**	**49**	P	**P**	**13 19 30.1**	**0.0**
	1.6nm,0.7s,mb4.1,baz=227,slow=6.0,SNR=12						
MNV	**Mina**	**87.84**	**49**	*e*P	**P**	**13 19 30.8**	**+0.1**
	28nm,1.5s,mb5.1						
LDFC	**Landfair**	**88.93**	**53**	*e*P	**P**	**13 19 36.2**	**+0.3**
WVOR	**Wild Horse Val**	**89.00**	**45**	*e*P	**P**	**13 19 35.0**	**-1.0**
	56nm,1.8s,mb5.3						
NEN	**Nelson**	**89.33**	**53**	*e*P	**P**	**13 19 37.6**	**-0.2**
BMO	**Blue Mountains**	**90.79**	**43**	*e*P	**P**	**13 19 45.0**	**+0.5**
	18nm,1.5s,mb5.0						
ARUT	**Antelope Range**	**91.10**	**51**	*e*P	**P**	**13 19 47.2**	**+1.2**
MSU	**Marysvale**	**92.28**	**51**	*e*P	**P**	**13 19 53.0**	**+1.6**
HLID	**Hailey**	**92.29**	**45**	*e*P	**P**	**13 19 51.9**	**+0.6**
	8.8nm,1.4s,mb4.8						
PV10	**Paradox Valley**	**94.59**	**52**	P	**P**	**13 20 02.0**	**+0.1**
TXAR	**Lajitas Array**	**96.55**	**61**	P	**P**	**13 20 10.1**	**-1.0**
	0.2nm,0.6s,mb3.8,baz=224,slow=4.6,SNR=4.7						
VAI	**Varese**	**144.99**	**334**	*e*P	PKPdf	13 26 17.3	+0.6
MCGN	**Macugnaga**	**145.25**	**335**	*e*P	PKPdf	13 26 18.9	+1.8
CABF	**La Chapelle**	**145.46**	**337**	*e*PKP1	PKPbc	13 26 16.0	-2.1
	40nm,1.0s						
SSF	**Saint Saulge**	**145.97**	**340**	*e*PKP1	PKPbc	13 26 18.8	-0.6
	71nm,1.3s						
LPG	**La Plagne**	**146.13**	**335**	*e*PKP1	PKPbc	13 26 19.9	+0.1
SMF	**Signal de Mont**	**146.23**	**340**	*e*PKP1	PKPbc	13 26 19.5	-0.5
AVF	**Avril sur Loir**	**146.26**	**340**	*e*PKP1	PKPbc	13 26 18.7	-1.3
	53nm,1.3s						
MBDF	**Montbardon**	**146.75**	**335**	*e*PKP1	PKPbc	13 26 21.3	+0.1
ORIF	**Oris-en-Rattie**	**146.95**	**336**	*e*PKP1	PKPbc	13 26 21.8	+0.1
TCF	**Toulx Ste Croi**	**147.07**	**341**	*e*PKP1	PKPdf	13 26 21.4	+1.2
	23nm,1.0s						

IDC 15 13:26:23.6±1.9**, 45.02S**×**112.44W, mb3.8**/4**, mb1 4.3**/4**, mb1mx3.9**/14**, mbtmp3.8**/4**, Error ellipse: s-maj=76.2km s-min=39.0km az=166.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**46.85**	**67**	P	P	13 34 56.1	-1.1
	3.0nm,0.8s,baz=249,slow=6.7,SNR=8.1						
TXAR	**Lajitas Array**	**74.43**	**8**	P	P	13 38 04.0	-1.2
	0.4nm,0.4s,baz=164,slow=6.6,SNR=3.3						
NVAR	**Mina Array Bea**	**83.24**	**355**	P	P	13 38 51.0	-1.9
	0.4nm,0.7s,baz=164,slow=6.6,SNR=2.8						
PDAR	**Pinedale Array**	**87.44**	**2**	P	P	13 39 12.5	-1.2
	0.5nm,0.8s,baz=139,slow=7.1,SNR=3.8						
CMAR	**Chiang Mai Arr**	**142.80**	**235**	PKhKP		13 45 52.5	
	4.7nm,1.3s,baz=104,slow=3.7,SNR=5.9						
CMAR				PKP	PKPdf	13 45 59.7	-1.2
	1.2nm,1.0s,baz=123,slow=3.4,SNR=5.5						
SONM	**Songino Array**	**153.27**	**290**	PKPbc	PKPdf	13 46 22.3	+5.5
	0.3nm,0.5s,baz=94,slow=2.8,SNR=3.3						
SONM				PKPab	PKPab	13 46 35.1	-1.7
	1.4nm,1.1s,baz=90,slow=4.3,SNR=3.0						

DJA 15 13:26:34.5±0.9**, 9.50S**×**114.07E, h33^{km}, MD4.7**/4**, ML5.2**/4**, 4D, Error ellipse: s-maj=19.1km s-min=9.6km az=32.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	**Scrawed**	**1.01**	**4**⇓	*e*Pn	Pn	13 26 51.3	-1.3
	3µm,0.1s						
SRDI				*e*Sn	Sn	13 27 03.2	-2.6
KELI	**Kelakatan**	**1.34**	**18**⇓	*e*Pn	Pn	13 26 56.1	-1.1
	2µm,0.2s						
KELI	**Kelakatan**	**1.34**	**18**	*e*P	P	13 26 56.8	-0.2
KELI				*e*Sn	Sn	13 27 12.4	-1.6
RATI	**Rata**	**1.63**	**62**⇓	*e*Pn	Pn	13 27 00.1	-1.3
	4µm,0.2s						
RATI				*e*Sn	Sn	13 27 18.2	-3.3
KEDI	**Kedomdong**	**2.25**	**64**⇓	*i*Pn	Pn	13 27 08.7	-1.6
	904nm,0.2s						
KEDI				*e*Sn	Sn	13 27 33.2	-4.0

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*BJI **15** 13:28:16.9, 15.32S×167.00E, h71^{km}, mB5.2, mb4.6, Ms5.0, Msz4.8*

*NEIC **15** 13:28:17.1±2.3, 15.25S×167.52E, h87^{km}±19^{km}, mb4.8/16, Error ellipse: s-maj=15.3km s-min=10.5km az=133.0*

*IDC **15** 13:28:18.5±9.0, 15.43S×167.54E, h96^{km}±82^{km}, mb4.1/14, mb1 4.3/14, mb1mx4.2/19, mbtmp4.4/14, MS4.7/13, Ms1 4.7/13, ms1mx4.3/26, Error ellipse: s-maj=30.5km s-min=23.0km az=24.0*

ISC 15 13:28:17.2±0.4**, 15.62S**±0.05×**167.53E**±0.07**, h100^{km}, n74, σ1^{s}15**/52**, mb4.5**/28**, 1C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.50**	**189**	*e*P	**P**	**13 29 46.4**	**-5.4**
DZM				*e*S	**S**	**13 31 02.5**	**-2.6**
NOUC	**Port Laguerre**	**6.55**	**190**	*e*P	**P**	**13 29 48.4**	**-4.2**
NOUC				*e*S	**S**	**13 31 05.7**	**-0.7**
HNR	**Honiara**	**9.62**	**309**	*e*P	**P**	**13 30 27.4**	**-6.9**
ARMA	**Armidale**	**20.73**	**222**	*e*P	**P**	**13 32 55.4**	**+3.8**
CTA	**Charters Tower**	**20.73**	**254**	*e*P	**P**	**13 32 56.0**	**+4.3**
	15nm,0.9s						
CTA	**Charters Tower**	**20.73**	**254**	P	**P**	**13 32 53.5**	**+1.8**
	14nm,0.9s,baz=74,slow=13,SNR=4.2						
CTA				LR	LR	13 39 42.2	
	comp=Z,3µm,20.6s,baz=78,slow=33						
CTAO	**Charters Tower**	**20.73**	**254**	*e*P	**P**	**13 32 53.0**	**+1.3**
	111nm,1.6s						
PMG	**Port Moresby**	**20.82**	**285**	P	**P**	**13 32 51.6**	**-1.0**
	29nm,1.0s,baz=94,slow=6.4,SNR=11						
PMG				LR	LR	13 40 08.8	
	comp=Z,4µm,19.6s,baz=120,slow=34						
PMG	**Port Moresby**	**20.82**	**285**	*e*P	**P**	**13 32 52.1**	**-0.4**
	103nm,1.0s						
URZ	**Urewera**	**24.08**	**161**	P	**P**	**13 33 26.2**	**+1.9**
	16nm,1.0s,mb4.3,baz=324,slow=6.6,SNR=5.9						
URZ				LR	LR	13 41 02.4	
	comp=Z,3µm,20.8s,baz=207,slow=32						
STKA	**Stephens Creek**	**28.62**	**231**	*e*P	**P**	**13 34 07.8**	**+1.4**
	9.4nm,1.0s,mb4.4						
STKA	**Stephens Creek**	**28.62**	**231**	P	**P**	**13 34 07.3**	**+0.9**
	9.7nm,0.9s,mb4.5,baz=71,slow=7.5,SNR=12						
STKA				LR	LR	13 45 17.5	
	comp=Z,2µm,18.0s,baz=49,slow=35						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	31.48	105	LR	LR	13 44 28.0	
	comp=Z,932nm,20.4s,baz=286,slow=31						
WB2	Warramunga Arr	31.85	257	⇑*i*P	P	13 34 34.3	-0.7
WRAB	Tennant Creek	31.86	257	*e*P	P	13 34 34.1	-1.0
	8.1nm,0.9s,mb4.5						
WRA	Warramunga Arr	31.86	257	P	P	13 34 34.5	-0.7
	2.4nm,0.6s,mb4.1,baz=85,slow=8.7,SNR=16						
ASAR	Alice Springs	32.60	250	P	P	13 34 41.8	+0.2
	13nm,0.8s,mb4.8,baz=80,slow=9.0,SNR=88						
ASAR				LR	LR	13 47 25.9	
	comp=Z,2µm,18.5s,baz=80,slow=35						
ASPA	Alice Springs	32.61	250	*e*P	P	13 34 41.8	+0.3
KAKA	Kakadu	34.12	270	*e*P	P	13 34 55.5	+0.8
	7.4nm,1.0s,mb4.5						
FORT	Forrest	39.07	240	*e*P	P	13 35 38.1	+2.0
	960nm,0.7s						
FITZ	Fitzroy Crossi	40.11	260	*e*P	P	13 35 44.9	+0.1
	12nm,0.7s,mb4.8						
PPT	Papeete	41.09	99	*e*S	S	13 41 49.3	-8.6
PPT				*e*LR	LR	13 47 18.4	
	2µm,25.8s,baz=259						
TBI	Tubuai	41.15	108	*e*S	S	13 41 54.5	-4.2
TBI				*e*LQ		13 45 49.4	
TBI				*e*LR	LR	13 47 20.5	
	2µm,29.0s,baz=274						
MBWA	Marble Bar	45.56	256	*e*P	P	13 36 28.5	-0.6
	37nm,1.3s,mb5.0						
NWAO	Narrogin (SRO)	48.52	240	P	P	13 36 53.0	+1.0
	10nm,0.7s,mb4.8,baz=79,slow=10,SNR=4.0						
CBIJ	Chichi jima	49.08	330	LR	LR	13 54 40.3	
	comp=Z,677nm,19.5s,baz=15,slow=32						
TAOE	Nuku Hiva Isla	51.47	89	*e*LR	LR	13 51 52.1	
	baz=270						
JOW	Kunigami	56.87	318	LR	LR	13 59 15.3	
	comp=Z,599nm,19.0s,baz=113,slow=33						
VNDA	Vanda	61.98	181	LR	LR	14 02 46.5	
	comp=Z,427nm,21.9s,baz=137,slow=33						
ASAJ	Asahikawa	63.66	340	LR	LR	14 03 08.9	
	comp=Z,999nm,19.8s,baz=187,slow=33						
MDJ	Mudanjiang	69.18	332	P	P	13 39 13.6	-1.4
MDJ				PP	PP	13 41 49.4	-2.0
MDJ				AMB	AMB		
	comp=Z,11nm,2.3s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,232nm,6.4s						
MDJ				LR	LR		
	comp=N,300nm,22.1s						
MDJ				LR	LR		
	comp=E,207nm,24.1s						
MDJ				LR	LR		
	comp=Z,416nm,18.1s						
CN2	Changchun	70.53	329	*e*P	P	13 39 24.5	+1.2
ENH	Enshi	72.12	310	*e*P	P	13 39 30.7	-2.3
	comp=Z,38nm,1.0s,mb5.2						
QSPA	South Pole Qui	74.41	180	P	P	13 39 48.0	+2.5
	comp=Z,14nm,1.0s,mb4.7						
CMAR	Chiang Mai Arr	75.54	294	P	P	13 39 53.3	+0.3
	comp=Z,0.9nm,0.8s,mb3.5,baz=92,slow=2.9,SNR=7.1						
CMAR				LR	LR	14 11 59.6	
	comp=Z,130nm,20.0s,baz=100,slow=35						
LZH	Lanzhou	79.10	312	*e*P	P	13 40 13.1	+0.6
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.9						
ULN	Ulaanbaatar	83.00	324	*e*P	P	13 40 32.4	-0.3
	comp=Z,8.1nm,1.2s,mb4.4						
SONM	Songino Array	83.36	324	P	P	13 40 34.4	-0.1
	comp=Z,2.1nm,1.1s,mb3.9,baz=124,slow=4.5,SNR=10						
BILL	Bilibino	83.43	360	*e*P	P	13 40 32.7	-1.8
	comp=Z,8.7nm,1.2s,mb4.5						
GTA	Gaotai	83.46	314	P	P	13 40 35.6	+0.4
GTA				PP	PP	13 43 51.3	+1.5
GTA				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.2						
GTA				AMB	AMB		
	comp=Z,271nm,6.8s						
GTA				LR	LR		
	comp=N,172nm,16.3s						
GTA				LR	LR		
	comp=E,318nm,20.5s						
GTA				LR	LR		
	comp=Z,419nm,20.5s						
YBH	Yreka Blue Hor	85.87	45	P	P	13 40 47.1	0.0
	comp=Z,3.0nm,0.8s,mb4.3,baz=179,slow=2.6,SNR=4.0						
CMB	Columbia Colle	85.99	49	*e*P	P	13 40 46.5	-1.3
	comp=Z,15nm,1.2s,mb4.8						
LSA	Lhasa	86.24	302	*e*P	P	13 40 53.4	+4.2
IMA	Indian Mountai	86.44	15	*e*P	P	13 40 48.0	-1.3
	comp=Z,46nm,1.5s,mb5.2						
ILAR	Eielson Array	87.29	18	P	P	13 40 54.0	+0.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=236,slow=3.3,SNR=4.3						
ILAR				LR	LR	14 19 37.8	
	comp=Z,259nm,18.3s,baz=71,slow=35						
PFO	Pinyon Flat Ob	87.31	54	*e*P	P	13 40 53.9	-0.4
	comp=Z,8.4nm,1.1s,mb4.6						
NVAR	Mina Array Bea	87.66	49	P	P	13 40 56.5	+0.6
	comp=Z,3.1nm,1.0s,mb4.3,baz=221,slow=6.2,SNR=11						
SYO	Syowa Base	87.93	197	⇓P	P	13 40 56.4	0.0
SYO	Syowa Base	87.93	197	⇓sP	sP	13 41 33.6	-0.1
LDFC	Landfair	88.86	53	*e*P	P	13 41 02.3	+0.6
NEN	Nelson	89.26	53	*e*P	P	13 41 04.2	+0.7
BMO	Blue Mountains	90.72	43	*e*P	P	13 41 09.9	-0.2
	comp=Z,7.3nm,1.4s,mb4.6						
MSU	Marysvale	92.20	51	*e*P	P	13 41 18.5	+1.4
WMQ	Urumqi	93.53	314	*e*P	P	13 41 24.5	+1.4
WMQ				PP	PP	13 45 11.0	-0.3
WMQ				S	S	13 52 24.0	+4.2
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb5.1						
WMQ				LR	LR		
	comp=N,228nm,23.0s						
WMQ				LR	LR		
	comp=E,265nm,23.0s						
WMQ				LR	LR		
	comp=Z,284nm,24.0s						
TXAR	Lajitas Array	96.48	61	LR	LR	14 19 52.4	
	comp=Z,151nm,19.9s,baz=245,slow=32						
YKA	Yellowknife Ar	98.22	27	P	P	13 41 42.5	-1.4
	comp=Z,1.2nm,1.1s,mb4.3,baz=257,slow=4.6,SNR=8.1						
YKA	Yellowknife Ar	98.22	27	P	P	13 41 42.5	-1.4
ZAL	Zalesovo	98.26	324	P	P	13 41 42.6	-1.7
	comp=Z,0.6nm,0.5s,mb4.4,baz=347,slow=12,SNR=6.0						
BRG	Berggiesshubel	138.92	335	*i* P	PKPdf	13 47 26.8	-5.1
CLL	Collm	138.97	336	*e*PKP	PKPdf	13 47 33.0	+1.0
VAI	Varese	144.98	334	*e*PKP	PKPdf	13 47 43.8	+1.1
MCGN	Macugnaga	145.24	335	*e*PKP	PKPdf	13 47 45.4	+2.3
CABF	La Chapelle	145.44	337	*e*PKIKP	PKPdf	13 47 43.1	-0.4
	comp=Z,19nm,1.0s						
FLN	La Foliniere	145.52	346	*e*PKIKP	PKPdf	13 47 43.5	0.0
BOB	Bobbio (Coli)	145.54	332	*e*PKP	PKPdf	13 47 46.6	+2.9
LDF	La Druitiere	145.59	345	*e*PKIKP	PKPdf	13 47 43.4	-0.2
	comp=Z,39nm,1.1s						
SSF	Saint Saulge	145.95	340	*e*PKIKP	PKPdf	13 47 44.3	0.0
	comp=Z,21nm,0.9s						
LPG	La Plagne	146.11	335	*e*PKIKP	PKPdf	13 47 44.9	+0.3
SMF	Signal de Mont	146.21	340	*e*PKIKP	PKPdf	13 47 44.8	0.0
ORIF	Oris-en-Rattie	146.94	336	*e*PKIKP	PKPdf	13 47 45.2	-0.9
	comp=Z,38nm,1.3s						
TCF	Toulx Ste Croi	147.05	341	*e*PKIKP	PKPdf	13 47 45.9	-0.3
	comp=Z,17nm,0.9s						
SBF	Sospel	147.15	333	*e*PKIKP	PKPdf	13 47 45.7	-0.7
	comp=Z,68nm,1.0s						
MFF	Saint Martin d	147.44	344	*e*PKIKP	PKPdf	13 47 46.6	-0.2
PGF	Pioggiola	147.45	330	*e*PKIKP	PKPdf	13 47 46.5	-0.5
	comp=Z,141nm,1.5s						

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*IDC **15** 13:33:39.1±57.0, 14.77S×169.56E, mb4.1/4, mb1 4.2/4, mb1mx3.8/15, mbtmp4.1/4, Error ellipse: s-maj=975.3km s-min=68.8km az=66.0*

ISC 15 13:33:56.1±4.6,**15.4S**±0.2×**168.3E**±0.8,**h60**^{km}±53^{km},**n8,** σ**0**^{s}**82**/9,**mb4.1**/5,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.88	194	*e*P	P	13 35 35.9	-0.7
DZM				*e*S	S	13 36 54.4	+0.1
NOUC	Port Laguerre	6.94	195	*e*P	P	13 35 38.3	+0.7
PMG	Port Moresby	21.47	284	P	P	13 38 41.5	0.0
	20nm,1.2s,mb4.3,baz=90,slow=18,SNR=4.8						
STKA	Stephens Creek	29.34	231	P	P	13 39 55.2	-0.3
	1.7nm,0.8s,mb3.9,baz=82,slow=7.1,SNR=3.7						
WRA	Warramunga Arr	32.63	257	P	P	13 40 24.3	-0.3
	0.7nm,0.7s,mb3.7,baz=86,slow=9.2,SNR=4.5						
ASAR	Alice Springs	33.37	250	P	P	13 40 31.4	+0.4
	3.2nm,0.7s,mb4.4,baz=77,slow=9.0,SNR=19						
ASPA	Alice Springs	33.38	250	*e*P	P	13 40 29.5	-1.5
FITZ	Fitzroy Crossi	40.87	260	*e*P	P	13 41 35.6	+1.6
	3.6nm,0.6s,mb4.2						

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*IDC **15** 13:38:59.5±8.0, 6.03S×151.36E, h56^{km}±68^{km}, mb3.1/3, mb1 3.5/4, mb1mx3.3/13, mbtmp3.5/4, ML2.2/1, Error ellipse: s-maj=128.8km s-min=36.8km az=126.0*

ISC 15 13:39:01.3±5.5,**5 S**±1 ×**15 0E**± ,**h68**^{km}±65^{km},**n4,**σ**0**^{s}**23**/5, **mb3.2**/3,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.18	213	P	P	13 40 18.0	+0.1
	0.5nm,0.3s,baz=308,slow=12,SNR=2.8						
PMG				S	S	13 41 16.9	-0.1
	0.8nm,0.3s,baz=38,slow=19,SNR=3.2						
WRA	Warramunga Arr	21.26	224	P	P	13 43 43.9	0.0
	0.4nm,0.5s,mb3.0,baz=56,slow=11,SNR=5.5						
ASAR	Alice Springs	24.16	218	P	P	13 44 12.5	+0.2
	1.4nm,0.8s,mb3.3,baz=56,slow=9.1,SNR=8.3						
ILAR	Eielson Array	83.44	23	P	P	13 51 22.3	-0.1
	0.3nm,0.7s,mb3.2,baz=249,slow=5.5,SNR=5.5						

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*IDC **15** 13:43:11.2±1.9, 15.17S×167.50E, mb3.9/6, mb1 4.2/6, mb1mx4.1/14, mbtmp3.9/6, Error ellipse: s-maj=67.1km s-min=28.5km az=141.0*

ISC 15 13:43:12.3±5.4,**15.56S**±0.09×**167.6E**±0.2,**h22**^{km}±39^{km}, **n9,**σ**0**^{s}**78**/10,**mb3.9**/6,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.57	189	*e*P	Pn	13 44 49.8	-0.4
DZM				*e*S	Sn	13 46 04.9	-0.2
NOUC	Port Laguerre	6.62	190	*e*P	Pn	13 44 51.0	+0.1
STKA	Stephens Creek	28.70	231	P	P	13 49 11.3	+1.2
	5.5nm,1.2s,mb4.2,baz=73,slow=12,SNR=4.3						
WRA	Warramunga Arr	31.93	257	P	P	13 49 40.0	+1.1
	0.6nm,0.9s,mb3.4,baz=81,slow=5.9,SNR=7.0						
ASAR	Alice Springs	32.68	250	P	P	13 49 45.4	0.0
	3.7nm,0.8s,mb4.4,baz=78,slow=8.9,SNR=14						
ASPA	Alice Springs	32.68	250	*e*P	P	13 49 44.6	-0.8
CMAR	Chiang Mai Arr	75.57	294	P	P	13 54 57.4	-0.4
	0.9nm,1.0s,mb3.7,baz=124,slow=3.3,SNR=5.2						
SONM	Songino Array	83.35	324	P	P	13 55 37.6	-1.4
	1.2nm,1.0s,mb3.9,baz=124,slow=4.5,SNR=7.0						
NVAR	Mina Array Bea	87.58	49	P	P	13 56 01.1	+0.8
	0.8nm,0.8s,mb4.0,baz=236,slow=8.9,SNR=5.2						

DJA 15 13:44:02.2±0.9,**9.54S**×**114.02E,h33**^{km}**,MD4.5**/3, **ML4.5**/4,**1C-3D,Error ellipse: s-maj=18.9km s-min=10.0km az=33.0,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.06	7	⇓*i*Pn	Pn	13 44 20.0	-0.9
	517nm,0.1s						
SRDI				*e*Sn	Sn	13 44 31.8	-2.7
KELI	Kelakatan	1.39	20	⇓*e*Pn	Pn	13 44 24.5	-1.2
	363nm,0.2s						
KELI	Kelakatan	1.39	20	*e*P	P	13 44 25.2	-0.3
KELI				*e*Sn	Sn	13 44 40.8	-2.3
RATI	Rata	1.70	62	⇑*e*Pn	Pn	13 44 28.6	-1.5
	1µm,0.2s						
RATI				*e*Sn	Sn	13 44 47.4	-3.5
KEDI	Kedomdong	2.32	63	⇓*i*Pn	Pn	13 44 37.1	-1.9
	142nm,0.2s						
KEDI				*e*Sn	Sn	13 45 03.7	-2.9

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*IDC **15** 13:58:11.2±2.2, 32.24S×179.77E, h418^{km}±25^{km}, mb4.0/5, mb1 4.2/6, mb1mx3.9/14, mbtmp4.8/6, Error ellipse: s-maj=29.5km s-min=20.0km az=173.0*

*NEIC **15** 13:58:12.2±1.0, 32.46S×179.96E, h450^{km}±11^{km}, mb4.4/8, Error ellipse: s-maj=15.8km s-min=15.3km az=137.0*

ISC 15 13:58:09.9±0.6,**32.46S**±0.05×**179.8W**±0.1,**h458**^{km}±6^{km}, **n208,**σ**1**^{s}**23**/248,**mb4.3**/10,**2C-7D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.32	196	*e*P	P	13 59 37.6	-0.9
MXZ				S	S	14 00 49.0	+0.5
MXZ	Matakaoa Point	5.32	196	PN	P	13 59 37.6	-0.9
MXZ				SN	S	14 00 49.1	+0.6
MXZ	Matakaoa Point	5.32	196	PN	P	13 59 37.6	-0.9
MXZ				SN	S	14 00 49.1	+0.6
WIZ	White Island	5.62	205	*e*P	P	13 59 42.5	+1.0
WIZ	White Island	5.62	205	PN	P	13 59 41.3	-0.3
WIZ	White Island	5.62	205	PN	P	13 59 41.3	-0.3
KUZ	Kuaotunu	5.64	219	*e*P	P	13 59 42.6	+0.9
KUZ	Kuaotunu	5.64	219	PN	P	13 59 43.0	+1.2
KUZ	Kuaotunu	5.64	219	PN	P	13 59 43.0	+1.2
MYRZ	Mayor Island	5.80	213	PN	P	13 59 44.1	+0.8
MYRZ	Mayor Island	5.80	213	PN	P	13 59 44.1	+0.8
PUZ	Puketiti	5.82	195	*e*P	P	13 59 42.8	-0.7
PUZ	Puketiti	5.82	195	PN	P	13 59 43.1	-0.4
PUZ				SN	S	14 00 55.2	-2.2
PUZ	Puketiti	5.82	195	PN	P	13 59 43.1	-0.4
PUZ				SN	S	14 00 55.2	-2.2
WCZ	Waipu Caves	5.95	233	⇓P	P	13 59 45.1	+0.2
WCZ	Waipu Caves	5.95	233	⇓PN	P	13 59 45.1	+0.2
WCZ	Waipu Caves	5.95	233	⇓PN	P	13 59 45.1	+0.2
MTAZ	Motutapu	6.12	224	P	P	13 59 48.4	+1.7
MTAZ	Motutapu	6.12	224	PN	P	13 59 48.4	+1.7
MTAZ	Motutapu	6.12	224	PN	P	13 59 48.4	+1.7
OUZ	Omahuta	6.13	242	⇑*e*P	P	13 59 45.8	-1.0
OUZ	Omahuta	6.13	242	⇓PN	P	13 59 45.8	-1.0
OUZ	Omahuta	6.13	242	⇓PN	P	13 59 45.8	-1.0
TGRZ	Tauranga	6.16	210	P	P	13 59 48.1	+1.0
TGRZ				S	S	14 01 07.1	+3.3
TGRZ	Tauranga	6.16	210	*e*PN	P	13 59 48.2	+1.1
TGRZ				SN	S	14 01 02.3	-1.5
TGRZ	Tauranga	6.16	210	*e*PN	P	13 59 48.2	+1.1
TGRZ				SN	S	14 01 02.3	-1.5
MARZ	Manawahe	6.21	207	P	P	13 59 49.5	+1.9
MARZ	Manawahe	6.21	207	*e*PN	P	13 59 47.6	0.0
MARZ	Manawahe	6.21	207	*e*PN	P	13 59 47.6	0.0
MWZ	Matawai	6.25	200	*e*P	P	13 59 47.3	-0.7
MWZ	Matawai	6.25	200	PN	P	13 59 47.3	-0.7
MWZ				SN	S	14 01 05.8	+0.4
MWZ	Matawai	6.25	200	PN	P	13 59 47.3	-0.7
MWZ				SN	S	14 01 05.8	+0.4
KAAZ	Kauri Point	6.27	225	P	P	13 59 49.9	+1.7
KAAZ	Kauri Point	6.27	225	*e*PN	P	13 59 49.8	+1.6
EDRZ	Edgecumbe	6.30	206	P	P	13 59 50.5	+2.0
EDRZ	Edgecumbe	6.30	206	*e*PN	P	13 59 49.6	+1.2
EDRZ	Edgecumbe	6.30	206	*e*PN	P	13 59 49.6	+1.2
URZ	Urewera	6.31	203	P	P	13 59 50.2	+1.7
	233nm,0.3s,baz=343,slow=3.0,SNR=158						
URZ				S	S	14 01 06.4	-0.2
	82nm,0.3s,baz=2.2,slow=23,SNR=12						
URZ	Urewera	6.31	203	P	P	13 59 47.3	-1.3
URZ	Urewera	6.31	203	PN	P	13 59 47.3	-1.3
URZ				*e*SN	S	14 01 07.0	+0.5
URZ	Urewera	6.31	203	PN	P	13 59 47.3	-1.3
URZ				*e*SN	S	14 01 07.0	+0.5
LIRZ	Lichensteins R	6.34	208	*e*P	P	13 59 50.0	+1.1
WTAZ	Waiatarua	6.42	224	PN	P	13 59 50.9	+1.1
TAZ	Tarawera	6.49	207	*e*P	P	13 59 51.7	+1.2
TAZ	Tarawera	6.49	207	PN	P	13 59 52.1	+1.6
PATZ	Paeroa	6.72	207	P	P	13 59 53.5	+0.6
KNZ	Kokohu	6.86	197	*e*P	P	13 59 55.2	+0.9
KNZ	Kokohu	6.86	197	PN	P	13 59 55.2	+0.9
KNZ				SN	S	14 01 16.9	0.0
KNZ	Kokohu	6.86	197	PN	P	13 59 55.2	+0.9
KNZ				SN	S	14 01 16.9	0.0
HATZ	Hinemaiaia	7.23	206	P	P	13 59 59.8	+1.5
HATZ				S	rx	14 00 00.2	
HATZ	Hinemaiaia	7.23	206	PN	P	13 59 59.8	+1.5
HATZ	Hinemaiaia	7.23	206	PN	P	13 59 59.8	+1.5
BKZ	Black Stump Fm	7.33	203	*e*P	P	13 59 57.7	-1.7
BKZ	Black Stump Fm	7.33	203	PN	P	13 59 57.7	-1.7
BKZ				SN	S	14 01 25.8	-0.3
BKZ	Black Stump Fm	7.33	203	PN	P	13 59 57.7	-1.7
BKZ				SN	S	14 01 25.8	-0.3
RATZ	Rangitukua	7.33	208	*e*P	P	13 59 59.1	-0.3
RATZ	Rangitukua	7.33	208	PN	P	13 59 59.2	-0.2
RATZ	Rangitukua	7.33	208	PN	P	13 59 59.2	-0.2
RITZ	Rihia Road	7.39	207	*e*P	P	14 00 00.3	+0.2
RITZ	Rihia Road	7.39	207	*e*PN	P	14 00 00.5	+0.5
RITZ	Rihia Road	7.39	207	*e*PN	P	14 00 00.5	+0.5
HIZ	Hauiti	7.44	214	P	P	14 00 01.6	+1.0
HIZ	Hauiti	7.44	214	PN	P	14 00 01.7	+1.1
HIZ	Hauiti	7.44	214	PN	P	14 00 01.7	+1.1
MGZ	Maungaku	7.54	209	P	P	14 00 01.2	-0.4
WTVZ	West Tongariro	7.62	208	PN	P	14 00 01.5	-1.0
WTVZ	West Tongariro	7.62	208	PN	P	14 00 01.5	-1.0
OTVZ	Oturere	7.63	207	PN	P	14 00 01.7	-1.0
OTVZ	Oturere	7.63	207	PN	P	14 00 01.7	-1.0
TWVZ	Taurewa	7.64	209	P	P	14 00 02.1	-0.6
TWVZ	Taurewa	7.64	209	PN	P	14 00 02.1	-0.7
TWVZ	Taurewa	7.64	209	PN	P	14 00 02.1	-0.7
NGZ	Ngauruhoe	7.66	208	P	P	14 00 02.0	-1.0
NGZ	Ngauruhoe	7.66	208	PN	P	14 00 02.1	-0.9
NGZ	Ngauruhoe	7.66	208	PN	P	14 00 02.1	-0.9
CNZ	Chateau	7.70	208	*e*P	P	14 00 02.4	-1.0
CNZ	Chateau	7.70	208	PN	P	14 00 02.4	-1.1
CNZ	Chateau	7.70	208	PN	P	14 00 02.4	-1.1
WPVZ	Whakapapa	7.71	208	*e*P	P	14 00 04.0	+0.5
TUVZ	Tukino	7.72	207	P	P	14 00 02.3	-1.3
TUVZ				*e*P		14 00 02.7	
TUVZ				S	S	14 01 36.0	+2.3
TUVZ	Tukino	7.72	207	PN	P	14 00 02.7	-1.0
TUVZ				SN	S	14 01 36.0	+2.3
TUVZ	Tukino	7.72	207	PN	P	14 00 02.7	-1.0
TUVZ				SN	S	14 01 36.0	+2.3
FWVZ	Far West T-bar	7.75	208	*e*P	P	14 00 02.9	-1.1
FWVZ	Far West T-bar	7.75	208	*e*PN	P	14 00 03.0	-1.0
FWVZ				*e*SN	S	14 01 35.7	+1.4
FWVZ	Far West T-bar	7.75	208	*e*PN	P	14 00 03.0	-1.0
FWVZ				*e*SN	S	14 01 35.7	+1.4
DRZ	Dome Shelter	7.76	208	*e*P	P	14 00 05.5	+1.4
DRZ	Dome Shelter	7.76	208	PN	P	14 00 05.5	+1.4
DRZ	Dome Shelter	7.76	208	PN	P	14 00 05.5	+1.4
MOVZ	Moawhango	7.81	206	*e*P	P	14 00 02.7	-1.9
MOVZ				S	S	14 01 34.0	-1.4
MOVZ	Moawhango	7.81	206	PN	P	14 00 02.7	-1.8
MOVZ				SN	S	14 01 34.0	-1.4
MOVZ	Moawhango	7.81	206	PN	P	14 00 02.7	-1.8
MOVZ				SN	S	14 01 34.0	-1.4
VRZ	Vera Road	7.98	212	*e*P	P	14 00 06.2	-0.2
VRZ	Vera Road	7.98	212	*e*PN	P	14 00 06.3	-0.1
VRZ	Vera Road	7.98	212	*e*PN	P	14 00 06.3	-0.1
PWZ	Pawanui	8.01	199	*e*P	P	14 00 05.7	-1.1
PWZ	Pawanui	8.01	199	PN	P	14 00 05.8	-1.0
PWZ				*e*SN	S	14 01 38.4	-1.0
PWZ	Pawanui	8.01	199	PN	P	14 00 05.8	-1.0
PWZ				*e*SN	S	14 01 38.4	-1.0
RAEZ	Rainy Point	8.27	213	*e*P	P	14 00 11.5	+1.8
TSZ	Takapari Road	8.31	203	P	P	14 00 07.9	-2.2
TSZ	Takapari Road	8.31	203	PN	P	14 00 07.9	-2.2
TSZ				SN	S	14 01 45.3	0.0
TSZ	Takapari Road	8.31	203	PN	P	14 00 07.9	-2.2
TSZ				SN	S	14 01 45.3	0.0
NEZ	North Egmont	8.40	214	*e*P	P	14 00 13.5	+2.4
NEZ	North Egmont	8.40	214	PN	P	14 00 13.5	+2.5
NEZ	North Egmont	8.40	214	PN	P	14 00 13.5	+2.5
WAZ	Wanganui	8.40	209	P	P	14 00 10.5	-0.6
WAZ	Wanganui	8.40	209	*e*PN	P	14 00 09.4	-1.7
WAZ	Wanganui	8.40	209	*e*PN	P	14 00 09.4	-1.7
NWEZ	Newall Road	8.51	215	*e*P	P	14 00 15.6	+3.3
NRZ	Ngariki Road	8.53	215	P	P	14 00 15.3	+2.8
BFZ	Birch Farm	8.79	200	*e*P	P	14 00 16.1	+0.7
MRZ	Mangatainoka R	8.98	203	*e*P	P	14 00 15.3	-2.1
MRZ	Mangatainoka R	8.98	203	PN	P	14 00 15.5	-1.9
MRZ				SN	S	14 01 59.4	+0.8
MRZ	Mangatainoka R	8.98	203	PN	P	14 00 15.5	-1.9
MRZ				SN	S	14 01 59.4	+0.8
KIW	Kapiti Island	9.39	205	*e*P	P	14 00 20.8	-1.1
KIW	Kapiti Island	9.39	205	PN	P	14 00 21.0	-0.9
KIW	Kapiti Island	9.39	205	PN	P	14 00 21.0	-0.9
MTW	Mount Morrison	9.46	202	*e*P	P	14 00 22.5	-0.1
MTW	Mount Morrison	9.46	202	PN	P	14 00 22.6	0.0
MTW				SN	S	14 02 07.7	-0.3
MTW	Mount Morrison	9.46	202	PN	P	14 00 22.6	0.0
MTW				SN	S	14 02 07.7	-0.3
CAW	Cannon Point	9.55	204	*e*P	P	14 00 22.3	-1.4
CAW	Cannon Point	9.55	204	PN	P	14 00 22.4	-1.3
CAW	Cannon Point	9.55	204	PN	P	14 00 22.4	-1.3
MSWZ	Moikau Station	9.77	202	*e*P	P	14 00 25.0	-1.0
MSWZ	Moikau Station	9.77	202	PN	P	14 00 25.3	-0.8
MSWZ	Moikau Station	9.77	202	PN	P	14 00 25.3	-0.8
MRW	Makara Radio	9.79	205	*e*P	P	14 00 24.6	-1.6
MRW	Makara Radio	9.79	205	PN	P	14 00 24.7	-1.6
MRW				*e*SN	S	14 02 14.1	-0.5
MRW	Makara Radio	9.79	205	PN	P	14 00 24.7	-1.6
MRW				*e*SN	S	14 02 14.1	-0.5
BHW	Baring Head	9.89	204	*e*P	P	14 00 26.0	-1.3
BHW	Baring Head	9.89	204	PN	P	14 00 26.1	-1.3
BHW	Baring Head	9.89	204	PN	P	14 00 26.1	-1.3
NNZ	Nelson	10.30	210	*e*P	P	14 00 29.8	-2.0
NNZ	Nelson	10.30	210	*e*PN	P	14 00 30.0	-1.8
NNZ				SN	S	14 02 23.0	-1.8
NNZ	Nelson	10.30	210	*e*PN	P	14 00 30.0	-1.8
NNZ				SN	S	14 02 23.0	-1.8
QRZ	Quartz Range	10.36	214	*e*P	P	14 00 31.3	-1.2
QRZ	Quartz Range	10.36	214	PN	P	14 00 31.3	-1.3
QRZ				SN	S	14 02 26.4	+0.2
QRZ	Quartz Range	10.36	214	PN	P	14 00 31.3	-1.3
QRZ				SN	S	14 02 26.4	+0.2
BSWZ	Blackbirch Sta	10.52	207	PN	P	14 00 34.9	+0.7
BSWZ	Blackbirch Sta	10.52	207	PN	P	14 00 34.9	+0.7
THZ	Tophouse	10.95	210	*e*P	P	14 00 38.0	-0.9
THZ				S	S	14 02 37.8	0.0
THZ	Tophouse	10.95	210	PN	P	14 00 38.1	-0.8
THZ				SN	S	14 02 37.8	0.0
THZ	Tophouse	10.95	210	PN	P	14 00 38.1	-0.8
THZ				SN	S	14 02 37.8	0.0
KHZ	Kahutara	11.25	206	*e*P	P	14 00 41.2	-1.0
KHZ	Kahutara	11.25	206	PN	P	14 00 41.2	-1.0
KHZ	Kahutara	11.25	206	PN	P	14 00 41.2	-1.0
DSZ	Denniston Nort	11.42	213	*e*P	P	14 00 43.3	-0.7
DSZ	Denniston Nort	11.42	213	*e*PN	P	14 00 43.5	-0.5
DSZ				SN	S	14 02 45.7	-1.7
DSZ	Denniston Nort	11.42	213	*e*PN	P	14 00 43.5	-0.5
DSZ				SN	S	14 02 45.7	-1.7
LTZ	Lake Taylor	12.05	209	P	P	14 00 52.2	+1.4
LTZ	Lake Taylor	12.05	209	PN	P	14 00 52.2	+1.4
LTZ	Lake Taylor	12.05	209	PN	P	14 00 52.2	+1.4
CRLZ	Canterbury Las	12.59	206	*e*P	P	14 00 57.3	+0.7
CRLZ	Canterbury Las	12.59	206	PN	P	14 00 57.3	+0.7
CRLZ	Canterbury Las	12.59	206	PN	P	14 00 57.3	+0.7
MQZ	McQueen's Vall	12.69	206	*e*P	P	14 00 58.5	+0.8
MQZ				S	S	14 03 14.1	+1.8
MQZ	McQueen's Vall	12.69	206	PN	P	14 00 58.7	+1.0
MQZ				SN	S	14 03 14.1	+1.8
MQZ	McQueen's Vall	12.69	206	PN	P	14 00 58.7	+1.0
MQZ				SN	S	14 03 14.1	+1.8
WVZ	Waitaha Valley	12.96	212	*e*P	P	14 01 00.7	+0.2
WVZ	Waitaha Valley	12.96	212	PN	P	14 01 00.7	+0.2
WVZ				*e*SN	S	14 03 17.2	-0.3
WVZ	Waitaha Valley	12.96	212	PN	P	14 01 00.7	+0.2
WVZ				*e*SN	S	14 03 17.2	-0.3
RPZ	Rata Peaks	13.33	210	P	P	14 01 05.5	+1.0
	7.0nm,0.3s,baz=120,slow=0.4,SNR=15						
RPZ				S	S	14 03 27.1	+2.3
	2.4nm,0.3s,baz=213,slow=0.6,SNR=7.8						
RPZ	Rata Peaks	13.33	210	*e*P	P	14 01 05.7	+1.3
RPZ	Rata Peaks	13.33	210	PN	P	14 01 05.8	+1.3
RPZ	Rata Peaks	13.33	210	PN	P	14 01 05.8	+1.3
FOZ	Fox Glacier	13.82	214	*e*PN	P	14 01 09.9	+0.4
FOZ	Fox Glacier	13.82	214	*e*PN	P	14 01 09.9	+0.4
LBZ	Lake Benmore	14.24	210	PN	P	14 01 15.8	+1.9
LBZ	Lake Benmore	14.24	210	PN	P	14 01 15.8	+1.9
ODZ	Otahua Downs	14.59	208	*e*P	P	14 01 20.0	+2.5
ODZ	Otahua Downs	14.59	208	PN	P	14 01 20.0	+2.5
ODZ	Otahua Downs	14.59	208	PN	P	14 01 20.0	+2.5
JCZ	Jackson Bay	14.64	214	P	P	14 01 19.6	+1.5
JCZ	Jackson Bay	14.64	214	*e*PN	P	14 01 18.9	+0.8
JCZ	Jackson Bay	14.64	214	*e*PN	P	14 01 18.9	+0.8
MSZ	Milford Sound	15.49	215	PN	P	14 01 30.8	+4.2
MSZ	Milford Sound	15.49	215	PN	P	14 01 30.8	+4.2
TUZ	Tuapeka	15.74	208	*e*PN	P	14 01 34.2	+5.0
TUZ	Tuapeka	15.74	208	*e*PN	P	14 01 34.2	+5.0
DZM	Mont Dzumac	15.99	307	*e*P	P	14 01 26.5	-5.4
NOUC	Port Laguerre	16.07	307	*e*P	P	14 01 28.8	-3.8
NOUC	Port Laguerre	16.07	307	*e*P	P	14 01 28.8	-3.9
AFI	Afiamalu	19.88	24	*e*P	P	14 02 11.2	+1.0
	153nm,0.9s						

ARMA	Armidale	24.42	267	⇓*i*P	P	14 02 54.0	+2.0
STKA	Stephens Creek	32.55	260	*e*P	P	14 04 03.6	+0.6
	3.8nm,0.9s,mb3.8						
STKA	Stephens Creek	32.55	260	P	P	14 04 04.0	+1.1
	2.4nm,0.5s,mb3.9,baz=78,slow=8.8,SNR=5.4						
CTA	Charters Tower	32.68	284	*e*P	P	14 04 03.5	-0.7
	19nm,0.6s,mb4.7						
CTA	Charters Tower	32.68	284	P	P	14 04 03.7	-0.5
	24nm,0.7s,mb4.8,baz=108,slow=9.6,SNR=32						
CTAO	Charters Tower	32.68	284	*e*P	P	14 04 03.5	-0.7
	25nm,0.5s,mb4.9						
ASPA	Alice Springs	41.51	270	*e*P	P	14 05 12.6	-4.4
WB2	Warramunga Arr	42.67	275	*e*P	P	14 05 25.7	-0.6
WRAB	Tennant Creek	42.68	275	*e*P	P	14 05 25.2	-1.2
	21nm,0.6s,mb4.8						
WRA	Warramunga Arr	42.68	275	P	P	14 05 25.9	-0.5
	10nm,0.4s,mb4.6,baz=115,slow=7.6,SNR=55						
WRA				ScP		14 10 22.1	
	0.5nm,0.9s,baz=121,slow=4.2,SNR=5.1						
KAKA	Kakadu	47.82	283	*e*P	P	14 06 04.3	-2.0
	5.0nm,0.5s,mb4.1						
FITZ	Fitzroy Crossi	50.85	272	*e*P	P	14 06 27.9	-1.1
	11nm,0.8s,mb4.2						
QSPA	South Pole Qui	57.65	180	⇓*i*P	P	14 07 25.1	+8.7
	18nm,1.4s,mb4.2						
YBH	Yreka Blue Hor	90.61	39	P	P	14 10 27.7	+4.7
	2.3nm,0.8s,mb4.1,baz=231,slow=4.4,SNR=4.7						
NVAR	Mina Array Bea	90.80	44	P	P	14 10 29.8	+5.8
	2.8nm,0.8s,mb4.2,baz=211,slow=6.5,SNR=13						
HLID	Hailey	96.37	42	P	P	14 10 55.0	+5.6
	0.9nm,0.7s,mb4.0						
ARCES	ARCESS Array B	140.25	346	PKhKP		14 16 42.6	
	3.0nm,0.8s,baz=45,slow=1.7,SNR=4.3						
ARCES				PKP	PKPdf	14 16 50.7	+6.1
	2.0nm,0.8s,baz=71,slow=2.5,SNR=5.0						
JOF	Joensuu	143.72	336	*e*pkp	PKPdf	14 16 52.3	+1.7
	0.6nm,0.3s						
KAF	Kangasniemi	145.93	338	*e*pkp	PKPdf	14 16 58.7	+4.2
	2.5nm,0.4s						
FINES	FINESS Array B	146.50	338	PKPbc	PKPbc	14 17 01.6	+4.3
	7.7nm,0.6s,baz=57,slow=4.4,SNR=64						
NB2	NORSAR Subarra	150.51	349	PKP	PKPdf	14 17 12.0	+10
	3.0nm,0.6s,baz=17,slow=2.6						
NB2	NORSAR Subarra	150.51	349	⇑PKPab	PKPdf	14 17 12.0	+10
NOA	NORSAR Array B	150.51	349	PKPbc	PKPdf	14 17 12.4	+11
	2.1nm,0.5s,baz=16,slow=4.1,SNR=11						
NOA				PKPab	PKPab	14 17 19.6	+0.9
	2.2nm,0.7s,baz=23,slow=3.1,SNR=5.4						
HFS	Hagfors	150.91	346	PKPbc	PKPdf	14 17 13.1	+11
	3.3nm,0.5s,baz=108,slow=4.6,SNR=13						
HFS				PKPab	PKPab	14 17 21.1	+0.8
	1.9nm,0.5s,baz=76,slow=6.1,SNR=9.8						
AKASG	Malin Array Be	151.91	319	PKPbc	PKPdf	14 17 15.8	+12
	0.3nm,0.3s,baz=58,slow=2.4,SNR=5.2						
AKASG				PKPab	PKPab	14 17 27.4	+2.5
	0.2nm,0.3s,baz=62,slow=3.9,SNR=2.9						
MORC	Moravsky Berou	158.40	328	*e*Pn	PKPdf	14 17 21.0	+8.2

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*IDC **15** 13:59:59.2±1.0, 8.67S×114.64E, mb4.1/6, mb1 4.3/6, mb1mx4.1/14, mbtmp4.1/6, Error ellipse: s-maj=50.2km s-min=18.6km az=45.0*

*DJA **15** 14:00:02.5±0.3, 8.08S×115.01E, h28^{km}±5^{km}, MD4.8/4, ML5.1/2, Error ellipse: s-maj=18.8km s-min=5.0km az=16.0*

*NEIC **15** 14:00:04.3±3.1, 8.69S×114.77E, h37^{km}±33^{km}, mb4.3/1, Error ellipse: s-maj=33.9km s-min=14.8km az=218.0*

ISC 15 14:00:02.7±0.7**, 8.5S**±0.1×**114.92E**±0.06**, h36**^{km}±9^{km}**, n19, σ1^{s}05**/23**, mb4.1**/7**, 2C-6D, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	Denpasar	0.33	121	*e*Pg	P	14 00 23.5	+12
DNP				*e*Sg	S	14 00 30.0	+13
KELI	Kelakatan	0.51	304	⇓*i*Pg	P	14 00 12.9	-0.6
	4μm,0.2s						
KELI				⇓*i*Sg	S	14 00 20.6	-0.6
RATI	Rata	0.64	110	⇓*i*Pn	P	14 00 15.3	0.0
RATI	Rata	0.64	110	*e*Pg	P	14 00 16.2	+0.9
SRDI	Scrawed	0.77	272	⇓*i*Pn	P	14 00 19.2	+2.1
	3μm,0.2s						
SRDI				⇓*i*Sn	S	14 00 27.5	-0.2
KEDI	Kedomdong	1.18	89	⇑*i*Pn	P	14 00 22.1	-0.8
	3μm,0.2s						
KEDI	Kedomdong	1.18	89	⇑*i*P	P	14 00 22.8	-0.1
KEDI				⇓*i*Sn	S	14 00 28.9	-9.2
TRT	Tretes	2.40	289	*e*Pn	P	14 00 41.0	+0.6
MBWA	Marble Bar	13.41	160	*e*Pn	P	14 03 10.7	-2.4
WRA	Warramunga Arr	21.96	123	P	P	14 04 54.8	-0.3
	2.1nm,0.6s,mb3.8,baz=298,slow=12,SNR=26						
WRAB	Tennant Creek	21.96	123	*e*P	P	14 04 55.6	+0.4
	16nm,1.2s,mb4.3						
WB2	Warramunga Arr	21.97	123	*e*P	P	14 04 53.8	-1.5
WB2				*e*		14 04 57.6	
ASAR	Alice Springs	23.61	132	P	P	14 05 13.0	+1.5
	5.1nm,0.9s,mb4.0,baz=308,slow=8.9,SNR=40						
CMAR	Chiang Mai Arr	31.09	330	P	P	14 06 20.7	+0.6
	0.9nm,0.8s,mb3.6,baz=161,slow=8.1,SNR=6.0						
CTAO	Charters Tower	32.41	114	P	P	14 06 32.5	+0.8
STKA	Stephens Creek	33.98	137	P	P	14 06 46.9	+1.7
	3.6nm,0.4s,mb4.6,baz=316,slow=9.9,SNR=10						
STKA	Stephens Creek	33.98	137	*e*P	P	14 06 45.2	0.0
SONM	Songino Array	56.60	353	P	P	14 09 44.1	-0.3
	0.8nm,0.8s,mb3.8,baz=169,slow=7.4,SNR=4.6						
KMBO	Kilima Mbogo	77.64	271	P	P	14 11 56.5	-1.4
	1.7nm,0.3s,mb4.5,baz=90,slow=20,SNR=7.8						

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*WAR **15** 14:04:46.0, 50.07N×18.46E, h0^{km}, ML2.5, Mining Induced*

*PRU **15** 14:04:46.5, 50.09N×18.40E*

ISC 15 14:04:44.5±0.5**, 50.12N**±0.03×**18.43E**±0.04**, n15, σ1^{s}27**/24**, 2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.15	258	⇓*i*PG	Pg	14 04 50.2	+2.6
RAC				⇓*i*SG	Sg	14 04 53.7	+4.0
OKC	Ostrava-Krasne	0.33	213	*e*PG	Pg	14 04 52.2	+1.0
OKC				*e*SG	Sg	14 04 57.3	+1.7
	171nm,0.6s						
OJC	Ojcow	0.89	83	*e*PG	Pg	14 05 02.0	-0.2
OJC				*e*SG	Sg	14 05 15.0	+0.9
LIKS	Likavka	1.15	157	*e*SN	Sn	14 05 24.5	0.0
DPC	Dobruska-Polom	1.37	281	*e*PG	Pg	14 05 11.3	-0.7
DPC				*e*SG	Sg	14 05 30.2	-0.1
	58nm,0.3s						
NIE	Niedzica	1.41	119	*e*Pg	Pg	14 05 10.8	-1.8
NIE				*e*Sg	Sg	14 05 30.4	-1.0
KOLL	Kolacno	1.54	181	*e*SN	Sn	14 05 34.5	+0.2
KSP	Ksiaz	1.55	299	*e*PN	Pn	14 05 14.0	+0.5
KSP				*e*PG	Pg	14 05 17.0	+1.6
KSP				*e*SN	Sn	14 05 36.0	+1.5
UPC	Upice	1.60	285	*e*SG	Sg	14 05 36.9	-0.9
VYHS	Vyhne	1.64	171	*e*PN	Pn	14 05 14.8	0.0
VYHS				*e*SN	Sn	14 05 37.2	+0.2
PRU	Pruhonice	2.51	269	*e*SG	Sg	14 06 03.4	-4.7
KHC	Kasperske Hory	3.30	255	*e*PG	Pg	14 05 47.5	-3.0
KHC				*e*SG	Sg	14 06 29.7	-4.8
MOA	Molln	3.56	232	*i*	Pn	14 05 49.4	+7.2
MOA	Molln	3.56	232	*i* SG	Sg	14 06 41.2	-1.8
	4.6nm,0.5s						
CLL	Collm	3.65	291	*e*SG	Sg	14 06 44.0	-2.0

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*IDC **15** 14:27:47.6±1.1, 5.01N×93.93E, mb3.9/8, mb1 4.1/9, mb1mx3.9/19, mbtmp3.9/9, ML4.0/1, Error ellipse: s-maj=47.1km s-min=19.0km az=52.0*

*NEIC **15** 14:27:52.0±0.6, 4.98N×93.94E, h30^{km}, mb4.6/4, Error ellipse: s-maj=21.2km s-min=10.0km az=61.0*

ISC 15 14:27:50.6±0.9**, 5.0N**±0.1×**94.0E**±0.2**, h33**^{km}**, n14, σ0^{s}56**/14**, mb4.1**/12**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	14.25	20	P	P	14 31 17.5	+5.2
	2.9nm,0.4s						
CMAR	Chiang Mai Arr	14.25	20	Pn	P	14 31 12.6	+0.3
	0.2nm,0.3s,baz=202,slow=15,SNR=5.4						
LSA	Lhasa	24.73	354	P	P	14 33 10.9	+0.4
	3.6nm,0.6s,mb4.1						
ENH	Enshi	29.11	28	P	P	14 33 46.2	-4.5
	3.6nm,0.3s,mb4.6						
SONM	Songino Array	44.01	12	P	P	14 35 55.7	-1.1
	0.9nm,0.7s,mb3.6,baz=194,slow=8.0,SNR=10						
SONM				PcP	PcP	14 37 42.3	-0.3
	0.2nm,0.4s,baz=201,slow=3.6,SNR=3.7						
WRA	Warramunga Arr	46.79	123	P	P	14 36 19.6	+0.3
	2.1nm,0.6s,mb4.2,baz=302,slow=9.2,SNR=32						
WRAB	Tennant Creek	46.80	123	*e*P	P	14 36 18.9	-0.4
	4.7nm,0.6s,mb4.6						
KURK	Kurchatov	47.36	347	*e*P	P	14 36 23.7	+0.4
	2.7nm,0.5s,mb4.4						
ASAR	Alice Springs	48.25	128	P	P	14 36 30.9	+0.1
	1.2nm,0.9s,mb3.9,baz=298,slow=7.6,SNR=10						
ZAL	Zalesovo	49.37	353	P	P	14 36 38.4	-0.6
	1.6nm,0.3s,mb4.6,baz=300,slow=6.1,SNR=6.3						
BVAR	Borovoye Array	51.66	342	P	P	14 36 56.2	-0.1
	0.6nm,0.5s,mb3.8,baz=131,slow=11,SNR=6.2						
BRTR	Keskin Array B	64.19	312	P	P	14 38 23.8	-0.7
	0.9nm,1.0s,mb3.8,baz=112,slow=7.8,SNR=3.0						
FINES	FINESS Array B	75.17	333	P	P	14 39 31.9	+0.6
	0.8nm,0.4s,mb4.0,baz=106,slow=5.9,SNR=10						
ARCES	ARCESS Array B	77.91	340	P	P	14 39 47.3	+0.7
	1.8nm,0.8s,mb4.0,baz=72,slow=5.7,SNR=4.6						

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*MAN **15** 14:42:18.2, 4.16N×126.97E, h14^{km}, mb6.5, ML5.6, MS6.4*

*MOS **15** 14:42:23.5±0.9, 4.78N×126.44E, h33^{km}, mb6.3/66, MS6.1/55, Error ellipse: s-maj=8.4km s-min=4.4km az=115.1*

*BJI **15** 14:42:24.4, 4.67N×126.39E, h47^{km}, mB6.4, mb5.9, Ms6.2, Msz6.1*

*NEIC **15** 14:42:25.9±0.1, 4.76N×126.42E, mb6.1/97, ME6.1, MS6.0/140, MW6.4, Error ellipse: s-maj=5.2km s-min=3.2km az=64.0 Broadband fault plane solution: P waves. NP1:φ$_s$20°, δ75°, λ75°. NP2:φ$_s$246°, δ21°, λ134°. Principal axes: T Plg57°, Azm270°; N Plg0°, Azm0°; P Plg28°, Azm122°; Moment Tensor Solution. s32 Moment tensor: Scale 10^{18} Nm; M$_{rr}$2.63; M$_{θθ}$0.38; M$_{φφ}$-3.01; M$_{rθ}$1.34; M$_{θφ}$-0.50; M$_{φr}$3.93; Best double couple: M$_0$5×10^{18} NP1:φ$_s$177°, δ18°, λ70°. NP2:φ$_s$17°, δ73°, λ96°. Principal axes: T 4.86, Plg62°, Azm297°; N .37, Plg6°, Azm196°; P -5.23, Plg28°, Azm102°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV PIVS] at General Santos; [III PIVS] at Davao and Zamboanga; [II PIVS] at Kidapawan, Mindanao, Philippines.

*HRVD **15** 14:42:25.9±0.1, 4.80N×126.66E, h57^{km}, MW6.5/81, Centroid moment Tensor Solution. LP body waves: s80,c209;Mantle waves: s81,c338; Half duration: 4^{s}4 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.31±.04; M$_{θθ}$-0.59±.03; M$_{φφ}$-1.72±.04; M$_{rθ}$1.12±.04; M$_{θφ}$-2.91±.03; M$_{φr}$5.97±.06; Best double couple: M$_0$7.025×10^{18} NP1: φ$_s$254°, δ23°, λ150°. NP2:φ$_s$12°, δ79°, λ70°. Principal axes: T 6.69, Plg52°, Azm259°; N .67, Plg20°, Azm16°; P -7.359, Plg31°, Azm118°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **15** 14:42:28.4±1.1, 4.89N×126.52E, h60^{km}±8^{km}, mb5.5/29, mb1 5.5/30, mb1mx5.5/31, mbtmp5.8/30, MS5.9/20, Ms1 5.9/20, ms1mx5.7/23 Error ellipse: s-maj=13.3km s-min=8.0km az=83.0*

ISC 15 14:42:23.6±0.1**, 4.75N**±0.02×**126.51E**±0.03**, h36**^{km}**, h36**^{km}±2.4^{km}**:pP-P, n811, σ1^{s}03**/630**, mb6.1**/150**, MS6.0**/193**, 108C-33D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	2.49	338	⇓*e*P	P	14 43 09.0	+6.4
KCP	Kidapawan	2.66	328	⇓*e*P	P	14 43 12.0	+7.0
KCP				*i* S	S	14 43 52.6	+16
CTBH	Cotabato--PC H	3.34	318	*e*P	P	14 43 30.0	+15
CTBH				*i* S	S	14 44 08.0	+14
BIPH	Bislig	3.42	357	⇑*e*P	P	14 43 41.9	+26
BIPH				*e*S	S	14 44 09.8	+14
BUKP	Musuan	3.43	335	*e*P	P	14 43 22.0	+6.0
MNI	Manado	3.68	207	*e*Pn	P	14 43 18.9	-0.7
CGP	Cagayan de Oro	4.10	334	⇑*e*P	P	14 43 34.2	+8.7
CGP				*i* S	S	14 44 28.2	+15
BUTP	Butuan	4.29	348	*e*P	P	14 43 36.2	+8.0
PAGZ	Pagadian	4.38	315	*e*P	P	14 43 35.9	+6.4
ZMPH	Zamboanga City	4.94	297	⇓*i*P	P	14 43 42.8	+5.4
ZMPH				*i* S	S	14 44 33.6	-0.5
IPIL	Ipil	4.95	308	*e*P	P	14 43 44.2	+6.7
SCPH	Surigao	5.10	349	⇓*e*P	P	14 43 48.8	+9.1
SCPH				*e*S	S	14 44 56.5	+18
TBP	Tagbilaran	5.57	332	⇓*e*P	P	14 43 50.9	+4.7
TBP				*i* S	S	14 45 03.0	+13
MSLP	Maasin	5.60	343	*e*P	P	14 43 52.2	+5.6
SNPH	Sibulan	5.61	325	⇓*i*P	P	14 44 01.1	+14
SNPH				*i* S	S	14 45 13.5	+23
LLP	Lapu-Lapu	6.08	336	*e*P	P	14 43 58.9	+5.5
LLP				*e*S	S	14 45 10.0	+7.2
PLP	Palo	6.55	347	*e*P	P	14 44 05.8	+5.8
PLP				*i* S	S	14 45 17.9	+3.4
AAP	Anini-y	7.23	321	*e*P	P	14 44 11.0	+1.5
RCP	Roxas	7.73	331	⇑*e*P	P	14 44 22.4	+5.9
KALP	Kalibo	8.03	329	*e*P	P	14 44 14.0	-6.6
	6μm,1.0s						
CUYO	Cuyo Island	8.15	318	*e*P	P	14 44 27.6	+5.3
TSM	Tawau	8.63	267	P	P	14 44 35.7	+6.8
OTRP	Odiongan	8.77	330	*e*P	P	14 44 36.8	+5.9
OTRP	Odiongan	8.77	330	*e*P	P	14 44 36.8	+5.9
PPR	Puerto Princes	9.20	303	*e*P	P	14 44 42.9	+6.1
AUQP	San Andres	9.32	336	*e*P	P	14 44 49.2	+11
SJMP	San Jose	9.34	326	*e*P	P	14 44 45.4	+6.6
SJMP	San Jose	9.34	326	*e*P	P	14 44 45.4	+6.6
ENPP	El Nido	9.51	313	*e*P	P	14 44 46.4	+5.1
BUSP	Coron	9.54	319	*e*P	P	14 44 48.0	+6.3
BUSP	Coron	9.54	319	*e*P	P	14 44 48.0	+6.3
BATP	Bataraza	9.54	295	*e*P	P	14 44 47.2	+5.5
BATP	Bataraza	9.54	295	*e*P	P	14 44 47.2	+5.5
BOAC	Boac	9.81	332	*e*P	P	14 44 52.8	+7.4
BOAC	Boac	9.81	332	*e*P	P	14 44 52.8	+7.4
GQP	Guinayangan	9.94	336	⇑*e*P	P	14 44 54.7	+7.4
	1318μm,1.0s						
KKM	Kota Kinabalu	10.33	278	P	P	14 45 00.6	+8.0
LQP	Lukban	10.52	333	⇓*e*P	P	14 45 04.8	+10
TGY	Tagaytay City	10.80	330	⇓*e*P	P	14 45 10.0	+11
TGY	Tagaytay City	10.80	330	P	P	14 45 04.2	+5.2
TGY				S	S	14 46 53.7	-5.9
TGY				pmax	pmax		
	comp=Z,9.0nm,0.3s						
TGY				MLR	MLR		
	comp=Z,103μm,18.6s						
TGY	Tagaytay City	10.80	330	P	P	14 45 04.2	+5.2
	comp=Z,9.2nm,0.3s,baz=199,slow=18,SNR=3.4						
TGY				S	S	14 46 53.7	-5.9
	baz=90,slow=17,SNR=1.1						
TGY				LR	LR	14 50 01.6	
	comp=Z,103μm,18.6s,baz=172,slow=42						
LUBP	Lubang	10.86	326	*e*P	P	14 45 06.9	+7.1
LUBP	Lubang	10.86	326	*e*P	P	14 45 06.9	+7.1
LUBP	Lubang	10.86	326	*e*P	P	14 45 07.1	+7.3
POLP	Polilio Island	10.89	336	*e*P	P	14 45 08.2	+8.0
BALP	Baler	11.95	336	*e*P	P	14 45 21.1	+6.5
BALP	Baler	11.95	336	*e*P	P	14 45 21.1	+6.5
PCPH	Palayan	11.99	334	⇓*e*P	P	14 45 20.7	+5.6
SCZP	Santa Cruz	12.74	330	*e*P	P	14 45 30.9	+5.8
PALP	Palanan	12.88	342	*e*P	P	14 45 36.9	+10
BCPH	Baguio City Da	12.95	334	⇓*e*P	P	14 45 30.2	+2.4
	comp=Z,13330μm,25.0s						
BCPH				*e*S	S	14 48 07.4	+16
APYP	Conner	14.02	339	*e*P	P	14 45 46.0	+4.0
YOMI	Yo Moklole	15.84	117	⇑*i*P	P	14 46 02.8	-2.9
	comp=Z,3μm,1.0s						
KEDI	Kedomdong	16.75	218	⇑*i*P	P	14 46 19.2	+2.0
	comp=Z,3μm,0.6s						
RATI	Rata	17.29	219	⇑*i*pP		14 46 31.4	
RATI	Rata	17.29	219	⇑*i*P	P	14 46 26.0	+2.0
	comp=Z,2μm,0.4s						
KELI	Kelakatan	17.60	223	⇑*i*P	P	14 46 28.5	+0.6
SRDI	Scrawed	18.02	223	⇑*i*P	P	14 46 34.7	+1.5
KAKA	Kakadu	18.32	161	⇓*i*P	P	14 46 34.9	-2.0
	comp=Z,773nm,0.8s						
KAKA				*e*SCP		14 54 38.4	
KAKA				*e*		15 21 21.3	
GUMO	Guam	20.12	63	P	P	14 46 59.1	+1.7
GUMO				pmax	pmax		
	comp=Z,806nm,1.1s						
GUMO				MLR	MLR		
	comp=Z,48μm,22.0s,MS5.8						
GUMO	Guam	20.12	63	P	P	14 46 59.1	+1.7
	comp=Z,806nm,1.1s						
GUMO				LR	LR		
	comp=Z,48μm,22.0s,MS5.8						
TATO	Taipei	20.68	347	*e*P	P	14 47 03.1	-0.1
	comp=Z,358nm,0.8s						
TATO				LR	LR		
	comp=Z,39μm,20.0s,MS5.8						
HKC	Hong Kong	21.15	327	⇑*i*P	P	14 47 10.0	+2.0
HKC				*i* S	S	14 51 12.0	+16
QZH	Quanzhou	21.48	340	⇑*i*P	P	14 47 10.8	-0.4
QZH				S	S	14 50 52.5	-10
QIZ	Qiongzhong	21.59	312	⇑P	P	14 47 12.3	-0.1
QIZ				AP		14 47 23.3	
QIZ				PP	PP	14 47 37.8	+0.4
QIZ				S	S	14 51 03.3	-1.2
QIZ				SS	SS	14 51 36.0	-5.4
QIZ				AMB	AMB		
	comp=Z,326nm,0.8s,mb5.8						
QIZ				LR	LR		
	comp=N,71μm,19.1s,MS6.2						
QIZ				LR	LR		
	comp=E,41μm,18.9s,MS6.2						
QIZ				LR	LR		
	comp=Z,134μm,25.9s						
QIZ	Qiongzhong	21.59	312	*e*P	P	14 47 13.2	+0.8
	comp=Z,342nm,0.9s,mb5.8						
JOW	Kunigami	22.03	4	P	P	14 47 17.3	+0.6
	comp=Z,255nm,0.7s,mb5.8,baz=197,slow=9.7,SNR=35						
JOW				S	S	14 51 16.2	+3.7
	comp=Z,101nm,1.2s,baz=144,slow=19,SNR=2.6						
JOW				ScP		14 54 46.4	
	comp=Z,54nm,0.9s,baz=176,slow=6.0,SNR=3.8						
JOW				LR	LR	14 56 14.4	
	comp=Z,31μm,19.2s,MS5.7,baz=2.8,slow=38						
LEM	Lembang	22.09	239	*e*P	P	14 47 22.0	+4.6
GZH	Guangzhou	22.23	326	P	P	14 47 21.6	+2.8
GZH				S	S	14 51 15.6	-0.7
GZH				LR	LR		
	comp=N,38μm,12.3s,MS6.2						
GZH				LR	LR		
	comp=E,51μm,14.5s,MS6.2						
GZH				LR	LR		
	comp=Z,114μm,34.5s						
FITZ	Fitzroy Crossi	22.72	182	*e*P	P	14 47 24.3	+0.6
	comp=Z,786nm,0.8s,mb6.2						
FITZ				*i* S	S	14 51 25.7	+0.4
KGM	Kluang	23.31	264	P	P	14 47 34.1	+4.5
PMG	Port Moresby	24.92	124	P	P	14 47 41.4	-3.8
PMG				S	S	14 52 03.1	-0.3
PMG				pmax	pmax		
	comp=Z,19nm,1.0s						
PMG				MLR	MLR		
	comp=Z,18μm,19.1s						
PMG	Port Moresby	24.92	124	P	P	14 47 41.4	-3.8
	comp=Z,19nm,1.0s,baz=299,slow=13,SNR=6.0						
PMG				S	S	14 52 03.1	-0.3
	comp=Z,13nm,0.9s,baz=291,slow=16,SNR=2.1						
PMG				LR	LR	14 58 48.6	
	comp=Z,18μm,19.1s,baz=125,slow=39						
PMG	Port Moresby	24.92	124	*e*P	P	14 47 41.1	-4.0
	comp=Z,178nm,0.8s,mb5.7						
PMG				LR	LR		
	comp=Z,22μm,21.0s,MS5.6						
IPM	Ipoh	25.41	271	P	P	14 47 51.6	+1.9
WRAB	Tennant Creek	25.71	163	*e*P	P	14 47 51.3	-1.2
WRAB				pmax	pmax		
	comp=Z,615nm,0.8s,mb6.2						
WRAB				MLR	MLR		
	comp=Z,9μm,21.0s,MS5.3						
WRAB	Tennant Creek	25.71	163	*e*P	P	14 47 51.3	-1.2
	comp=Z,615nm,0.8s,mb6.2						
WRAB				LR	LR		
	comp=Z,9μm,21.0s,MS5.3						
WRA	Warramunga Arr	25.71	163	P	P	14 47 51.8	-0.8
	comp=Z,200nm,0.8s,mb5.7,baz=343,slow=9.5,SNR=322						
WRA				S	S	14 52 14.9	-1.6
	comp=Z,13nm,0.8s,baz=322,slow=14,SNR=2.3						
WRA				ScP		14 54 57.5	
	comp=Z,46nm,0.9s,baz=336,slow=3.4,SNR=5.5						
WRA				P3KPbc		15 20 46.8	
	comp=Z,5.2nm,0.8s,baz=159,slow=3.9,SNR=17						
WRA	Warramunga Arr	25.71	163	P	P	14 47 51.8	-0.8
WRA				S	S	14 52 14.9	-1.6
WRA				ScP		14 54 57.5	
WRA				*e*		15 20 46.8	
WB2	Warramunga Arr	25.72	163	⇓*i*P	P	14 47 51.4	-1.2
WB2				*e*S	S	14 52 09.0	-7.6
WB2				*e*SCS	ScS	14 58 43.5	-2.5
WB2				*e*		15 20 46.8	
SNG	Songkhla	25.87	277	P	P	14 47 56.0	+1.9
	comp=Z,770nm,1.0s,mb6.2						
MBWA	Marble Bar	26.59	194	⇑*i*P	P	14 48 00.3	-0.4
	comp=Z,514nm,0.9s,mb6.1						
MBWA				LR	LR		
	comp=Z,19μm,20.0s,MS5.7						
SSE	Sheshan	26.68	350	P	P	14 48 01.8	+0.3
SSE				S	S	14 52 33.1	+0.7
SSE				AMB	AMB		
	comp=Z,205nm,1.2s,mb5.5						
SSE				AMB	AMB		
	comp=Z,10μm,11.7s						
SSE				LR	LR		
	comp=N,15μm,25.8s,MS5.6						
SSE				LR	LR		
	comp=E,19μm,25.8s,MS5.6						
SSE				LR	LR		
	comp=Z,20μm,23.3s,MS5.6						
CBIJ	Chichi jima	26.79	32	P	P	14 48 00.5	-2.0
	comp=Z,304nm,0.4s,mb6.2,baz=266,slow=0.8,SNR=47						
CBIJ				S	S	14 52 29.6	-4.5
	comp=Z,88nm,0.8s,baz=253,slow=20,SNR=2.9						
CBIJ				LR	LR	14 56 32.7	
	comp=Z,34μm,21.8s,MS5.9,baz=211,slow=32						
NNT	Nongplab	27.57	288	P	P	14 48 11.3	+1.6
NJ2	Nanjing	28.10	346	*e*P	P	14 48 15.6	+1.3
NJ2				AP	pP	14 48 22.0	-2.4
NJ2				PP	PP	14 49 04.4	-0.5
NJ2				S	S	14 52 54.0	-1.2
NJ2				AMB	AMB		
	comp=Z,3μm,4.6s						
NJ2				LR	LR		
	comp=N,18μm,17.7s						
NJ2				LR	LR		
	comp=E,11μm,26.4s						
NJ2				LR	LR		
	comp=Z,15μm,20.8s,MS5.6						
WHN	Wuhan	28.11	337	⇓P	P	14 48 14.8	+0.4
WHN				AMB	AMB		
	comp=Z,112nm,1.0s,mb5.5						
GYA	Guiyang	28.75	321	⇓*i*P	P	14 48 19.1	-1.0
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
GYA				LR	LR		
	comp=N,69μm,19.4s,MS6.3						
GYA				LR	LR		
	comp=E,32μm,17.9s,MS6.3						
GYA				LR	LR		
	comp=Z,82μm,19.9s,MS6.3						
NANT	Nan	28.81	301	⇑P	P	14 48 18.0	-2.8
	comp=Z,336nm,1.0s,mb6.0						
ASAR	Alice Springs	29.15	166	P	P	14 48 23.6	-0.1
	comp=Z,25nm,0.7s,mb5.1,baz=351,slow=7.5,SNR=123						
ASAR				S	S	14 53 13.0	+0.9
	comp=Z,8.8nm,0.9s,baz=3.3,slow=32,SNR=2.2						
ASAR				ScP		14 55 07.6	
	comp=Z,50nm,0.9s,baz=343,slow=2.9,SNR=8.2						
ASAR				P3KPbc		15 20 31.4	
	comp=Z,3.1nm,0.8s,baz=158,slow=3.9,SNR=19						
ASAR	Alice Springs	29.15	166	P	P	14 48 23.6	-0.1
ASAR				S	S	14 53 13.0	+0.9
ASAR				ScP		14 55 07.6	
ASAR				*e*		15 20 31.4	
ASPA	Alice Springs	29.15	166	*e*P	P	14 48 27.2	+3.5
ASPA				*e*SCS	ScS	14 58 58.1	-3.0
ASPA				*e*		15 20 32.0	
ENH	Enshi	30.05	330	⇑*e*P	P	14 48 30.7	-0.9
	comp=Z,1.6nm,0.3s						
CHRT	Chiangrai	30.06	302	⇑P	P	14 48 32.0	+0.1
	comp=Z,1μm,0.8s,mb6.8						
CM31	Chiang Mai Arr	30.18	299	*e*P	P	14 48 32.7	-0.3
	comp=Z,138nm,0.7s,mb5.8						
CM31				LR	LR		

	comp=Z,35µm,19.0s,MS6.0						
CMAR	**Chiang Mai Arr**	**30.18**	**299**	P	**P**	**14 48 32.9**	**-0.1**
CMAR						14 51 34.7	
CMAR				S	**S**	**14 53 27.9**	**-0.6**
CMAR						14 55 11.0	
CMAR				pmax	pmax		
	comp=Z,67nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,37nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,33µm,19.6s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**30.18**	**299**	P	**P**	**14 48 32.9**	**-0.1**
	comp=Z,67nm,0.7s,mb5.5,baz=121,slow=7.7,SNR=92						
CMAR				PcP	PcP	14 51 34.7	+1.0
	comp=Z,37nm,0.9s,baz=105,slow=6.3,SNR=7.6						
CMAR				S	**S**	**14 53 27.9**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=143,slow=4.5,SNR=1.8						
CMAR				ScP		14 55 11.0	
	comp=Z,20nm,0.8s,baz=129,slow=1.8,SNR=8.9						
CMAR				LR	LR	15 00 34.5	
	comp=Z,33µm,19.6s,MS6.0,baz=115,slow=36						
CMAR				P3KPbc		15 20 31.2	
	comp=Z,1.0nm,1.0s,baz=280,slow=5.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**30.18**	**299**	P	**P**	**14 48 32.9**	**-0.1**
CMAR				PcP	PcP	14 51 34.7	+1.0
CMAR				S	**S**	**14 53 27.9**	**-0.6**
CMAR				ScP		14 55 11.0	
CMAR				LR	LR	15 00 34.5	
CMAR				*e*		15 20 31.2	
KMI	**Kunming**	**30.52**	**314**	⇑P	**P**	**14 48 36.8**	**+0.9**
KMI				AP	pP	14 48 45.1	-1.0
KMI				XP	sP	14 48 49.0	-1.8
KMI				PP	PP	14 49 39.3	+2.8
KMI				S	**S**	**14 53 31.8**	**-1.9**
KMI				SS	SS	14 55 15.3	-0.3
KMI				AMB	AMB		
	comp=Z,235nm,1.3s,mb5.9						
KMI				AMB	AMB		
	comp=Z,4µm,9.2s						
KMI				LR	LR		
	comp=N,36µm,21.6s,MS6.2						
KMI				LR	LR		
	comp=E,47µm,23.7s,MS6.2						
KMI				LR	LR		
	comp=Z,92µm,29.1s						
JHJ	**Hachijo jima 2**	**30.82**	**22**	P	**P**	**14 48 37.9**	**-0.7**
	comp=Z,139nm,0.9s,mb5.8,baz=144,slow=8.7,SNR=2.9						
JHJ				LR	LR	15 01 22.9	
	comp=Z,23µm,18.5s,MS5.9,baz=29,slow=37						
CTA	**Charters Tower**	**31.39**	**142**	*e*P	**P**	**14 48 43.3**	**-0.4**
	comp=Z,162nm,0.9s,mb5.8						
CTA				*e*S	**S**	**14 53 42.4**	**-5.1**
CTA				*e*SCP		14 55 17.3	
CTA				*e*		15 20 24.1	
CTA	**Charters Tower**	**31.39**	**142**	*e*P	**P**	**14 48 43.3**	**-0.4**
CTA				*e*S	**S**	**14 53 42.4**	**-5.1**
CTA				pmax	pmax		
	comp=Z,162nm,0.9s						
CTA	**Charters Tower**	**31.39**	**142**	P3KPbc		15 20 23.4	
	comp=Z,15nm,0.8s,baz=188,slow=3.1,SNR=8.5						
CTAO	**Charters Tower**	**31.39**	**142**	*e*P	**P**	**14 48 43.0**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,159nm,0.8s,mb5.9						
CTAO				MLR	MLR		
	comp=Z,11µm,19.0s,MS5.5						
CTAO	**Charters Tower**	**31.39**	**142**	*e*P	**P**	**14 48 43.0**	**-0.7**
	comp=Z,159nm,0.8s,mb5.9						
CTAO				LR	LR		
	comp=Z,11µm,19.0s,MS5.5						
TIA	**Tai’an**	**32.48**	**346**	P	**P**	**14 48 53.3**	**+0.2**
TIA				S	**S**	**14 54 00.0**	**-4.4**
TIA				LR	LR		
	comp=N,6µm,25.5s						
TIA				LR	LR		
	comp=E,6µm,18.6s						
KS15	**Wonju Array Si**	**32.56**	**2**	*e*P	**P**	**14 48 54.3**	**+0.5**
INCN	**Inchon**	**32.58**	**0**	*e*P	**P**	**14 48 55.4**	**+1.4**
	comp=E,143nm,0.8s,mb6.0						
INCN				*e*	pP	14 49 06.4	+2.2
INCN				LR	LR		
	comp=Z,20µm,21.0s,MS5.8						
MAJO	**Matsushiro**	**33.42**	**17**	*e*P	**P**	**14 48 59.6**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,182nm,0.8s,mb6.1						
MAJO				MLR	MLR		
	comp=Z,14µm,20.0s,MS5.7						
MAJO	**Matsushiro**	**33.42**	**17**	*e*P	**P**	**14 48 59.6**	**-1.5**
	comp=Z,182nm,0.8s,mb6.1						
MAJO				LR	LR		
	comp=Z,14µm,20.0s,MS5.7						
MAT	**Matsushiro**	**33.42**	**17**	*e*P	**P**	**14 48 59.0**	**-2.2**
MAT				*e*S	**S**	**14 54 12.0**	**-6.9**
MAT				LR	LR		
	comp=Z,18µm,20.0s,MS5.8						
MAT	**Matsushiro**	**33.42**	**17**	P	**P**	**14 48 58.6**	**-2.6**
MAT				S	**S**	**14 54 12.0**	**-6.9**
XAN	**Xi’an**	**33.42**	**333**	P	**P**	**14 49 00.3**	**-0.9**
XAN				PP	PP	14 50 13.8	+0.2
XAN				S	**S**	**14 54 11.4**	**-7.6**
XAN				AMB	AMB		
	comp=Z,514nm,1.0s,mb6.4						
XAN				LR	LR		
	comp=N,48µm,26.9s,MS6.1						
XAN				LR	LR		
	comp=E,26µm,29.3s,MS6.1						
XAN				LR	LR		
	comp=Z,82µm,30.9s,MS6.2						
CD2	**Chengdu**	**33.70**	**323**	⇑*i*P	**P**	**14 49 03.3**	**-0.4**
CD2				S	**S**	**14 54 18.5**	**-4.9**
CD2				AMB	AMB		
	comp=Z,638nm,1.0s,mb6.5						
CD2				LR	LR		
	comp=E,38µm,13.0s						
COCO	**West Island**	**33.97**	**240**	PFAKE		14 49 20.0	+14
COCO				LR	LR		
	comp=Z,4µm,21.0s,MS5.1						
DL2	**Dalian**	**34.29**	**353**	⇑P	**P**	**14 49 10.4**	**+1.7**
DL2				S	**S**	**14 54 32.5**	**+0.1**
DL2				AMB	AMB		
	comp=Z,570nm,0.9s,mb6.5						
DL2				AMB	AMB		
	comp=Z,4µm,9.5s						
DL2				LR	LR		
	comp=E,16µm,18.9s						
DL2				LR	LR		
	comp=Z,10µm,20.6s,MS5.5						
FORT	**Forrest**	**35.36**	**178**	*e*P	**P**	**14 49 18.2**	**+0.3**
	comp=Z,6µm,0.6s						
FORT				*i* S	**S**	**14 54 42.7**	**-6.3**
HNR	**Honiara**	**36.17**	**113**	*e*P	**P**	**14 49 24.4**	**-0.6**
HNR				pmax	pmax		
	comp=Z,404nm,0.9s,mb6.3						
HNR				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.5						
HNR	**Honiara**	**36.17**	**113**	*e*P	**P**	**14 49 24.4**	**-0.6**
	comp=Z,404nm,0.9s,mb6.3						
HNR				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
BJT	**Baijiatuau**	**36.33**	**347**	⇑*e*P	**P**	**14 49 26.5**	**+0.4**
BJT				pmax	pmax		
	comp=Z,962nm,0.9s						
BJT	**Baijiatuau**	**36.33**	**347**	⇑*e*P	**P**	**14 49 26.5**	**+0.4**
	comp=Z,962nm,0.9s,mb6.7						
BJI	**Beijing**	**36.35**	**347**	P	**P**	**14 49 26.6**	**+0.4**
BJI				AP	pP	14 49 41.3	+4.8
BJI				PP	PP	14 50 49.8	-0.3
BJI				PCP	PcP	14 51 48.0	-2.6
BJI				S	**S**	**14 55 01.8**	**-2.5**
BJI				SCS	ScS	14 59 36.6	-1.2
BJI				AMB	AMB		
	comp=Z,887nm,1.0s,mb6.7						
BJI				AMB	AMB		
	comp=Z,8µm,9.6s						
BJI				LR	LR		
	comp=N,15µm,15.6s,MS6.0						
BJI				LR	LR		
	comp=E,21µm,20.3s,MS6.0						
BJI				LR	LR		
	comp=Z,26µm,20.9s,MS6.0						
SNY	**Shenyang**	**37.01**	**356**	⇑P	**P**	**14 49 32.9**	**+1.2**
SNY				S	**S**	**14 55 14.4**	**0.0**
SNY				AMB	AMB		
	comp=Z,7µm,10.2s						
SNY				LR	LR		
	comp=E,32µm,17.1s						
SNY				LR	LR		
	comp=Z,17µm,26.1s						
KLBR	**Kellerberrin**	**37.09**	**192**	*e*P	**P**	**14 49 32.4**	**-0.1**
	comp=Z,8µm,1.4s						
IMP	**Imphal**	**37.10**	**306**	*e*P	**P**	**14 49 33.0**	**+0.4**
LZH	**Lanzhou**	**37.52**	**329**	⇑*i*P	**P**	**14 49 37.1**	**+1.0**
LZH				AP	pP	14 49 43.1	-3.3
LZH				PP	PP	14 51 00.3	-4.5
LZH				S	**S**	**14 55 17.0**	**-5.2**
LZH				AMB	AMB		
	comp=Z,1µm,1.1s,mb6.5						
LZH				AMB	AMB		
	comp=Z,3µm,4.8s						
LZH				LR	LR		
	comp=E,20µm,14.1s						
LZH				LR	LR		
	comp=Z,36µm,16.0s,MS6.3						
MUN	**Mundaring**	**37.82**	**194**	*e*P	**P**	**14 49 39.0**	**+0.4**
	comp=Z,187nm,0.5s,mb6.1						
MUN				*i* S	**S**	**14 55 24.9**	**-1.8**
MUN	**Mundaring**	**37.82**	**194**	*e*P	**P**	**14 49 39.0**	**+0.4**
MUN				*i* S	**S**	**14 55 24.9**	**-1.8**
MUN				pmax	pmax		
	comp=Z,187nm,0.5s,mb6.1						
NWAO	**Narrogin (SRO)**	**38.49**	**193**	P	**P**	**14 49 45.0**	**+0.8**
NWAO				S	**S**	**14 55 32.9**	**-4.0**
NWAO				pmax	pmax		
	comp=Z,139nm,0.7s						
NWAO	**Narrogin (SRO)**	**38.49**	**193**	P	**P**	**14 49 45.0**	**+0.8**
	comp=Z,139nm,0.7s,mb5.8,baz=15,slow=9.0,SNR=62						
NWAO				S	**S**	**14 55 32.9**	**-4.1**
	comp=Z,33nm,1.0s,baz=64,slow=10,SNR=3.1						
NWAO	**Narrogin (SRO)**	**38.49**	**193**	*e*P	**P**	**14 49 43.6**	**-0.5**
	comp=Z,247nm,0.8s,mb6.0						
NWAO				LR	LR		
	comp=Z,7µm,21.0s,MS5.5						
VLA	**Vladivostok**	**38.51**	**6**	⇓*i*P	**P**	**14 49 48.0**	**+3.8**
VLA				*i* S	**S**	**14 55 36.0**	**-1.1**
VLA				pmax	pmax		
	comp=Z,8µm,11.0s						
VLA				pmax	pmax		
	comp=N,4µm,10.0s						
VLA				pmax	pmax		
	comp=E,2µm,10.0s						
VLA				pmax	pmax		
	comp=N,2µm,9.0s						
VLA				pmax	pmax		
	comp=Z,2µm,9.0s						
VLA				smax			
	comp=E,21µm,14.0s						
VLA				smax			
	comp=N,18µm,18.0s						
VLA				MLR	MLR		
	comp=Z,12µm,19.0s,MS5.7						
VLA				MLR	MLR		
	comp=N,9µm,20.0s,MS5.8						
VLA				MLR	MLR		
	comp=E,12µm,18.0s,MS5.8						
BTO	**Baotou**	**38.66**	**340**	*e*P	**P**	**14 49 45.3**	**-0.2**
BTO				PP	PP	14 51 15.4	-2.7
BTO				LR	LR		
	comp=N,2µm,7.9s						
BTO				LR	LR		
	comp=E,10µm,11.6s						
CN2	**Changchun**	**38.90**	**359**	⇑P	**P**	**14 49 48.4**	**+0.9**
CN2				*e*S	**S**	**14 55 46.1**	**+3.0**
CN2				AMB	AMB		
	comp=Z,6µm,10.0s						
CN2				LR	LR		
	comp=N,13µm,16.0s,MS6.0						
CN2				LR	LR		
	comp=E,12µm,16.0s,MS6.0						
CN2				LR	LR		
	comp=Z,14µm,18.0s,MS5.8						
AGT	**Agartala**	**38.92**	**303**	⇑*i*	**P**	**14 49 51.0**	**+3.1**
AGT				*i*		14 50 15.0	
STKA	**Stephens Creek**	**39.15**	**159**	*e*P	**P**	**14 49 49.4**	**-0.3**
	comp=Z,416nm,0.9s,mb6.2						
STKA				*e*PP	PP	14 51 21.5	-2.2
STKA				*e*S	rx	14 55 13.0	
STKA				*e*SS	SS	14 58 31.1	-1.7
STKA	**Stephens Creek**	**39.15**	**159**	P	**P**	**14 49 49.9**	**+0.2**
	comp=Z,698nm,1.1s,mb6.3,baz=334,slow=8.0,SNR=95						
STKA				S	**S**	**14 55 42.3**	**-4.6**
	comp=Z,24nm,0.8s,baz=209,slow=19,SNR=3.1						
STKA				LR	LR	15 08 36.3	
	comp=Z,10µm,19.1s,MS5.7,baz=331,slow=40						
MDJ	**Mudanjiang**	**39.80**	**3**	P	**P**	**14 49 56.5**	**+1.6**
MDJ				AP	pP	14 50 05.4	+0.1
MDJ				XP	sP	14 50 09.1	-0.7
MDJ				PP	PP	14 51 30.5	+0.1
MDJ				SCP		14 55 47.8	
MDJ				PCS		14 55 52.4	
MDJ				S	**S**	**14 55 57.3**	**+0.7**
MDJ				SCS	ScS	15 00 00.4	+3.0
MDJ				AMB	AMB		
	comp=Z,209nm,0.9s,mb5.9						
MDJ				AMB	AMB		
	comp=Z,5µm,9.6s						
MDJ				LR	LR		
	comp=N,11µm,22.8s,MS5.8						
MDJ				LR	LR		
	comp=E,14µm,25.1s,MS5.8						
MDJ				LR	LR		
	comp=Z,14µm,21.6s,MS5.8						
MDJ	**Mudanjiang**	**39.80**	**3**	⇑*e*P	**P**	**14 49 55.2**	**+0.3**
	comp=Z,420nm,1.0s,mb6.1						
ERM	**Erimo**	**39.97**	**19**	PFAKE		14 50 10.0	+14
ERM				LR	LR		
	comp=Z,7.0nm,20.0s						
LSA	**Lhasa**	**41.61**	**311**	P	**P**	**14 50 11.3**	**+1.1**
LSA				S	**S**	**14 56 18.9**	**-4.9**
LSA				XS		14 56 46.8	
LSA				AMB	AMB		
	comp=Z,180nm,1.3s,mb5.5						
LSA				AMB	AMB		
	comp=Z,6µm,11.9s						
LSA				LR	LR		
	comp=N,14µm,32.0s,MS6.0						
LSA				LR	LR		
	comp=E,30µm,30.0s,MS6.0						
LSA				LR	LR		
	comp=Z,47µm,32.0s,MS6.2						
LSA	**Lhasa**	**41.61**	**311**	⇑*e*P	**P**	**14 50 10.9**	**+0.7**
LSA				pmax	pmax		
	comp=Z,234nm,0.6s,mb6.0						
LSA	**Lhasa**	**41.61**	**311**	⇑*e*P	**P**	**14 50 10.9**	**+0.8**
	comp=Z,234nm,0.6s,mb6.0						
ASAJ	**Asahikawa**	**41.69**	**17**	P	**P**	**14 50 11.2**	**+0.6**
	comp=Z,56nm,0.8s,mb5.3,baz=229,slow=12,SNR=15						
ASAJ				S	**S**	**14 56 19.8**	**-5.0**
	comp=Z,18nm,0.9s,baz=168,slow=14,SNR=3.2						
ASAJ				LR	LR	15 04 39.7	
	comp=Z,16µm,21.5s,MS5.9,baz=213,slow=32						
GTA	**Gaotai**	**42.12**	**329**	⇑*i*P	**P**	**14 50 14.3**	**+0.1**
GTA				PP	PP	14 51 56.3	+1.5
GTA				PCP	PcP	14 52 07.8	-1.1
GTA				PPP	PPP	14 52 29.0	+1.8
GTA				SCP		14 55 54.4	
GTA				PCS		14 55 57.6	
GTA				S	**S**	**14 56 34.3**	**+3.2**
GTA				SS	SS	14 59 37.8	+4.0
GTA				SCS	ScS	15 00 10.5	-0.8
GTA				AMB	AMB		
	comp=Z,119nm,1.3s,mb5.4						
GTA				AMB	AMB		
	comp=Z,5µm,7.2s						
GTA				LR	LR		
	comp=N,28µm,32.7s,MS6.1						
GTA				LR	LR		
	comp=E,31µm,31.9s,MS6.1						
GTA				LR	LR		
	comp=Z,65µm,33.1s,MS6.3						
ARMA	**Armidale**	**42.43**	**147**	*e*P	**P**	**14 50 16.7**	**-0.2**
ARMA				*e*S	**S**	**14 56 28.7**	**-7.1**
GTK	**Gangtok**	**42.51**	**306**	*e*P	**P**	**14 50 14.0**	**-3.5**
YUK	**Yuzh-Kuril’sk**	**42.68**	**21**	*e*P	**P**	**14 50 19.0**	**+0.3**
YUK				*e*S	**S**	**14 56 32.0**	**-7.2**
YUK				pmax	pmax		
	comp=Z,5µm,8.0s						
YUK				pmax	pmax		
	comp=Z,190nm,0.5s,mb6.1						
YUK				pmax	pmax		
	comp=N,190nm,0.4s						
YUK				pmax	pmax		
	comp=E,3µm,3.0s						
YUK				smax			
	comp=E,12µm,14.0s						
YUK				smax			
	comp=N,8µm,10.0s						
VIS	**Vishakhapatnam**	**44.15**	**291**	*e*P	**P**	**14 50 31.8**	**+0.8**
YSS	**Yuzh-Sakhalins**	**44.33**	**16**	α*e*P	**P**	**14 50 31.0**	**-1.0**
YSS				*e**SP	sP	14 50 41.0	-5.9
YSS				*i*		14 50 46.0	
YSS				*e*		14 52 10.0	
YSS				*i* S	**S**	**14 56 56.0**	**-7.2**
YSS				*e*		15 00 20.0	
YSS				pmax	pmax		
	comp=Z,130nm,1.2s,mb5.5						
YSS				pmax	pmax		
	comp=Z,3µm,9.0s						
YSS				pmax	pmax		
	comp=Z,250nm,1.0s,mb5.9						
YSS				smax			
	comp=E,7µm,16.0s						
YSS				smax			
	comp=N,6µm,14.0s						
YSS				MLR	MLR		
	comp=Z,13µm,20.0s,MS5.8						
YSS				MLR	MLR		
	comp=N,9µm,19.0s,MS5.8						
YSS				MLR	MLR		
	comp=E,7µm,17.0s,MS5.8						
YSS	**Yuzh-Sakhalins**	**44.33**	**16**	*e*P	**P**	**14 50 31.7**	**-0.3**
	comp=E,568nm,1.3s,mb6.1						
YSS				LR	LR		
	comp=Z,13µm,20.0s,MS5.8						
KLR	**Kul’dur**	**44.55**	**5**	⇓*i*P	**P**	**14 50 30.5**	**-3.2**
KLR				*e*		14 52 15.5	
KLR				*e*S	**S**	**14 56 59.0**	**-7.3**
KLR				*e*		15 00 18.0	
KLR				pmax	pmax		
	comp=Z,9µm,11.0s						
KLR				MLR	MLR		
	comp=E,36µm,20.0s						
KLR				MLR	MLR		
	comp=Z,12µm,18.0s,MS5.8						
JIRN	**Jiri**	**44.61**	**305**	*e*P	**P**	**14 50 33.4**	**-1.1**
HIA	**Hailar**	**44.73**	**354**	⇑*e*P	**P**	**14 50 35.2**	**0.0**
HIA				pmax	pmax		
	comp=Z,277nm,1.0s						
HIA	**Hailar**	**44.73**	**354**	⇑*e*P	**P**	**14 50 35.2**	**0.0**
	comp=Z,277nm,1.0s,mb6.0						
RIV	**Riverview**	**44.89**	**151**	*e*P	**P**	**14 50 38.7**	**+2.0**
PKI	**Pulchoki**	**45.21**	**305**	*e*P	**P**	**14 50 38.9**	**-0.5**
	comp=Z,684nm,1.0s,mb6.4						
PKI	**Pulchoki**	**45.21**	**305**	*e*P	**P**	**14 50 38.9**	**-0.5**
PKI				pmax	pmax		
	comp=Z,342nm,1.0s,mb6.1						
CNB	**Canberra Magne**	**45.27**	**153**	*e*P	**P**	**14 50 41.8**	**+2.1**
	comp=Z,3µm,1.3s,mb6.9						
KKN	**Kakani**	**45.40**	**305**	*e*P	**P**	**14 50 40.2**	**-0.7**
	comp=Z,276nm,0.8s,mb6.2						
DMN	**Daman**	**45.48**	**305**	*e*P	**P**	**14 50 41.2**	**-0.3**
PALK	**Pallekele**	**45.62**	**275**	P	**P**	**14 50 43.2**	**+0.4**
	comp=Z,694nm,1.1s,mb6.5,SNR=21						
PALK	**Pallekele**	**45.62**	**275**	⇑*e*P	**P**	**14 50 42.4**	**-0.4**
	comp=Z,155nm,1.1s,mb5.8						
PALK				*e*		14 52 22.2	
PALK				*e*ScP		14 56 09.0	
PALK				LR	LR		
	comp=Z,4µm,22.0s,MS5.3						
TOO	**Toolangi**	**45.66**	**159**	*e*P	**P**	**14 50 44.2**	**+1.4**
	comp=Z,5.3nm,0.9s						
TOO				*e*S	**S**	**14 57 19.8**	**-2.6**
TOO				*e*SS	SS	15 00 33.9	-4.3
TOO	**Toolangi**	**45.66**	**159**	*e*P	**P**	**14 50 44.2**	**+1.4**
TOO				*e*S	**S**	**14 57 19.8**	**-2.6**
TOO				*e*SS	SS	15 00 33.9	-4.3
TOO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GKN	**Gorkha**	**46.01**	**305**	*e*P	**P**	**14 50 44.7**	**-1.0**
	comp=Z,212nm,0.5s,mb6.3						
ULN	**Ulaanbaatar**	**46.09**	**342**	⇑*e*P	**P**	**14 50 46.3**	**+0.2**
	comp=Z,276nm,1.0s,mb6.1						
ULN				LR	LR		
	comp=Z,29µm,21.0s,MS6.2						
SONM	**Songino Array**	**46.27**	**341**	P	**P**	**14 50 47.3**	**-0.2**
	comp=Z,93nm,0.9s,mb5.7,baz=164,slow=4.2,SNR=99						
SONM				PcP	PcP	14 52 23.9	+0.9
	comp=Z,39nm,0.7s,baz=162,slow=4.6,SNR=3.4						
SONM				ScP		14 56 10.2	
	comp=Z,9.7nm,0.8s,baz=154,slow=5.1,SNR=3.9						
SONM				S	**S**	**14 57 29.7**	**-1.3**
	comp=Z,2.8nm,0.7s,baz=162,slow=4.6,SNR=1.5						
SONM	**Songino Array**	**46.27**	**341**	P	**P**	**14 50 47.3**	**-0.2**
SONM				PcP	PcP	14 52 23.9	+0.9
SONM				ScP		14 56 10.2	
SONM				S	**S**	**14 57 29.7**	**-1.3**
BLSP	**Bilaspur**	**46.27**	**296**	*e*P	**P**	**14 50 48.2**	**+0.3**
BLSP				*e*		14 50 53.5	
	comp=Z,317nm,0.9s						
BLSP				*e*		14 57 27.5	
MDRS	**Chennai**	**46.38**	**283**	*e*	**P**	**14 50 51.2**	**+2.4**
MDRS				*e*		14 50 53.0	
	comp=Z,280nm,1.2s						
VLK	**Valmikinagar**	**46.39**	**304**	*i* P	**P**	**14 50 50.0**	**+1.3**
VLK				*i*		14 51 13.0	
KOLN	**Koldanda**	**46.77**	**304**	*e*P	**P**	**14 50 51.0**	**-0.7**
	comp=Z,774nm,0.6s,mb6.8						
NOUC	**Port Laguerre**	**47.20**	**126**	*e*P	**P**	**14 50 54.3**	**-0.8**
DZM	**Mont Dzumac**	**47.30**	**126**	*e*P	**P**	**14 50 55.4**	**-0.5**
DZM	**Mont Dzumac**	**47.30**	**126**	*e*P	**P**	**14 50 55.4**	**-0.5**
ALBI	**Allahabad**	**47.46**	**300**	*e*P	**P**	**14 50 55.5**	**-1.7**
HYB	**Hyderabad**	**48.58**	**289**	⇑*e*P	**P**	**14 51 05.0**	**-0.9**
HYB				*e*S	**S**	**14 58 00.0**	**-4.0**
HYB				pmax	pmax		
	comp=Z,250nm,1.0s,mb6.2						
HYB	**Hyderabad**	**48.58**	**289**	⇑*e*P	**P**	**14 51 05.0**	**-0.9**
	comp=Z,250nm,1.0s,mb6.2						
HYB				*e*S	**S**	**14 58 00.0**	**-4.0**
HYB	**Hyderabad**	**48.58**	**289**	⇑*i*P	**P**	**14 51 05.0**	**-0.9**
	comp=Z,250nm,1.0s,mb6.2						
HYB				*e*sP	sP	14 51 20.5	-0.3
HYB				*e*PcP	PcP	14 52 35.5	+3.9
HYB				*e*PP	PP	14 53 02.0	+3.4
HYB				*e*		14 53 30.0	
HYB				*e*		14 54 18.0	
HYB				*e*		14 56 20.0	
HYB				*e*ScP		14 56 27.5	
HYB				*e*S	**S**	**14 58 00.0**	**-4.0**
HYB				*e*		14 59 20.0	
HYB				*e*ScS	ScS	15 00 54.0	+1.4
HYB				*e*SS	SS	15 01 34.0	+4.6
HYB				LR	LR	15 07 04.0	
	comp=Z,30nm,28.0s						
TRD	**Trivandrum**	**49.34**	**277**	*e*P	**P**	**14 51 12.6**	**+0.8**
TRD				*i*		14 51 14.4	
	comp=Z,663nm,1.5s						
TRD				*e*S	**S**	**14 58 15.1**	**+0.4**
ZAK	**Zakamensk**	**49.50**	**341**	⇑*i*P	**P**	**14 51 12.6**	**0.0**
ZAK				*e*		14 52 33.8	
ZAK				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.6						
LGTI	**Lohaghat**	**50.12**	**305**	*e*P	**P**	**14 51 18.0**	**+0.3**
LGTI				*e*		14 52 37.5	
JHNI	**Jhansi**	**50.34**	**299**	⇓*i*P	**P**	**14 51 17.0**	**-2.4**
JHNI				*i*		14 52 35.0	
TLY	**Talaya**	**50.50**	**342**	P	**P**	**14 51 20.2**	**0.0**
	comp=Z,581nm,0.9s,mb6.5,SNR=65						
TLY	**Talaya**	**50.50**	**342**	*c* *i*P	**P**	**14 51 20.4**	**+0.2**
TLY				*e*	PP	14 53 09.8	-7.1
TLY				*e*SS	ScS	15 01 03.0	-2.1
TLY				pmax	pmax		
	comp=Z,135nm,1.1s,mb5.8						
TLY				MLR	MLR		
	comp=Z,26µm,23.0s,MS6.2						
TLY	**Talaya**	**50.50**	**342**	⇑*e*P	**P**	**14 51 20.4**	**+0.2**
	comp=Z,156nm,1.0s,mb5.9						
TLY				LR	LR		
	comp=Z,4µm,21.0s,MS5.4						
LATR	**Latur**	**50.61**	**290**	*e*P	**P**	**14 51 21.7**	**+0.2**
BHPL	**Bhopal**	**50.76**	**296**	*e*P	**P**	**14 51 22.4**	**-0.1**
BHPL				*e*		14 51 24.5	
	comp=Z,222nm,1.2s						
IRK	**Irkutsk**	**50.80**	**343**	⇑*i*P	**P**	**14 51 22.2**	**-0.3**
IRK				*e*S	**S**	**14 58 34.5**	**+0.1**
IRK				*e*		15 01 02.7	
IRK				pmax	pmax		
	comp=Z,311nm,1.9s,mb5.9						

TAU	**Tasmania Unive**	**51.05**	**160**	*e*P	**P**	**14 51 27.5**	**+3.0**
TAU				pmax	pmax		
	comp=Z,223nm,1.1s,mb6.0						
TAU				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.3						
TAU	**Tasmania Unive**	**51.05**	**160**	*e*P	**P**	**14 51 27.5**	**+3.0**
	comp=Z,224nm,1.1s,mb6.0						
TAU				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
MOY	**Mondy**	**51.36**	**340**	*e*P	**P**	**14 51 27.0**	**+0.3**
MOY				pmax	pmax		
	comp=Z,535nm,2.1s,mb6.1						
MNGI	**Mangalore**	**51.64**	**283**	*i* S	**S**	**14 58 44.7**	**-1.8**
WMQ	**Urumqi**	**51.77**	**325**	P	**P**	**14 51 30.0**	**+0.1**
WMQ				PP	PP	14 53 29.0	+0.6
WMQ				S	**S**	**14 58 49.0**	**+1.0**
WMQ				SS	SS	15 02 23.0	+0.4
WMQ				AMB	AMB		
	comp=Z,201nm,1.0s,mb6.0						
WMQ				AMB	AMB		
	comp=Z,3µm,8.0s						
WMQ				LR	LR		
	comp=N,58µm,20.0s,MS6.7						
WMQ				LR	LR		
	comp=E,43µm,20.0s,MS6.7						
WMQ				LR	LR		
	comp=Z,54µm,20.0s,MS6.6						
CLNS	**Chul’man**	**51.96**	**359**	*e*P	**P**	**14 51 31.5**	**+0.4**
CLNS				*e**PP	pP	14 51 38.8	-2.9
CLNS				*e*		14 52 48.1	
CLNS				*e*		14 53 24.2	
CLNS				*e*S	**S**	**14 58 51.0**	**+0.7**
CLNS				*e*		15 01 13.3	
CLNS				*e*SS	SS	15 02 30.0	+4.6
CLNS				pmax	pmax		
	comp=Z,104nm,0.9s,mb5.8						
CLNS				pmax	pmax		
	comp=N,62nm,1.1s						
CLNS				pmax	pmax		
	comp=E,21nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,63nm,0.7s,mb5.7						
CLNS				pmax	pmax		
	comp=N,65nm,0.9s						
CLNS				pmax	pmax		
	comp=E,35nm,0.7s						
CLNS				smax			
	comp=N,136nm,1.5s						
CLNS				smax			
	comp=Z,39nm,1.2s						
CLNS				smax			
	comp=E,133nm,1.4s						
CLNS				MLR	MLR		
	comp=N,6µm,18.0s,MS5.8						
CLNS				MLR	MLR		
	comp=Z,9µm,18.0s,MS5.8						
CLNS				MLR	MLR		
	comp=E,2µm,14.0s,MS5.8						
SKR	**Severo-Kuril’s**	**52.07**	**23**	*e*P	**P**	**14 51 32.0**	**-0.1**
SKR				*e*	pP	14 51 44.7	+2.1
SKR				*e*S	**S**	**14 58 45.0**	**-7.0**
SKR				*e*SS	SS	15 02 24.0	-3.3
SKR				pmax	pmax		
	comp=N,180nm,1.0s						
SKR				pmax	pmax		
	comp=E,180nm,1.0s						
SKR				pmax	pmax		
	comp=Z,220nm,1.0s,mb6.0						
SKR				pmax	pmax		
	comp=N,2µm,4.0s						
SKR				pmax	pmax		
	comp=E,2µm,4.0s						
SKR				pmax	pmax		
	comp=Z,4µm,4.0s						
SKR				smax			
	comp=E,8µm,10.0s						
SKR				MLR	MLR		
	comp=N,6µm,20.0s,MS5.7						
SKR				MLR	MLR		
	comp=E,4µm,20.0s,MS5.7						
SKR				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.7						
DDI	**Dehra Dun**	**52.21**	**305**	*e*P	**P**	**14 51 32.2**	**-1.2**
DDI				*e*		14 56 42.2	
NDI	**New Delhi**	**52.39**	**303**	*e*P	**P**	**14 51 31.0**	**-3.8**
NDI				*e*		14 58 50.0	
KAD	**Karad**	**52.69**	**288**	*e*P	**P**	**14 51 35.9**	**-1.2**
KAD				*i*		14 51 39.8	
	comp=Z,250nm,0.9s						
POO	**Poona**	**53.17**	**290**	*e*P	**P**	**14 51 40.0**	**-0.7**
POO				*i*		14 51 42.9	
	comp=Z,392nm,1.2s						
MNCY	**Minicoy**	**53.22**	**277**	⇓*i*P	**P**	**14 51 40.0**	**-1.2**
MNCY				*i*		14 54 27.0	
SDNR	**Sundarnagar**	**53.48**	**306**	*e*P	**P**	**14 51 42.2**	**-0.7**
SDNR				*e*S	**S**	**14 59 09.8**	**-1.6**
BOD	**Bodaibo**	**53.83**	**352**	*e*P	**P**	**14 51 44.9**	**-0.2**
BOD				*e*		15 01 24.7	
BOD				pmax	pmax		
	comp=Z,456nm,1.0s,mb6.4						
BHK	**Bhakra**	**53.90**	**306**	*e*P	**P**	**14 51 45.6**	**-0.4**
BHK				*e*		14 59 14.0	
AJM	**Ajmer**	**53.99**	**299**	⇑*i*P	**P**	**14 51 44.0**	**-2.7**
BOM	**Bombay**	**54.19**	**290**	*e*P	**P**	**14 51 47.1**	**-1.2**
BOM				*e*		14 59 18.2	
DLH	**Dalhousie**	**54.63**	**307**	*e*P	**P**	**14 51 50.0**	**-1.3**
DLH				*e*		14 53 53.0	
THN	**Thein Dam**	**54.79**	**307**	*e*P	**P**	**14 51 49.6**	**-2.9**
THN				*e*		14 59 22.9	
PET	**Petropavlovsk**	**54.88**	**23**	*e*P	**P**	**14 51 54.4**	**+1.6**
PET				*e*		14 52 55.9	
PET				*i* S	**S**	**14 59 27.4**	**-2.5**
PET				*e*		15 01 33.9	
PET				pmax	pmax		
	comp=Z,3µm,9.7s						
PET				pmax	pmax		
	comp=Z,189nm,1.0s,mb6.1						
PET				pmax	pmax		
	comp=Z,2µm,13.2s						
PET				pmax	pmax		
	comp=Z,2µm,13.5s						
PET				pmax	pmax		
	comp=Z,1µm,10.5s						
PET				pmax	pmax		
	comp=Z,2µm,5.9s						
PET				pmax	pmax		
	comp=Z,1µm,7.0s						
PET				pmax	pmax		
	comp=Z,1µm,13.8s						
PET				smax			
	comp=N,5µm,12.5s						
PET				smax			
	comp=E,5µm,10.1s						
PET				smax			
	comp=N,6µm,13.0s						
PET				pmax	pmax		
	comp=E,4µm,9.0s						
PET				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.8						
PET				MLR	MLR		
	comp=Z,6µm,21.0s						
PET	**Petropavlovsk**	**54.88**	**23**	*e*P	**P**	**14 51 51.9**	**-0.9**
	comp=Z,229nm,1.0s,mb6.2						
PET				LR	LR		
	comp=Z,7µm,20.0s,MS5.7						
BHV	**Bhavnagar**	**55.25**	**293**	*e*P	**P**	**14 51 56.0**	**+0.1**
DGAR	**Diego Garcia**	**55.28**	**258**	*e*P	**P**	**14 51 53.9**	**-2.3**
DGAR				pmax	pmax		
	comp=Z,603nm,1.1s,mb6.5						
DGAR				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.4						
DGAR	**Diego Garcia**	**55.28**	**258**	*e*P	**P**	**14 51 53.9**	**-2.4**
	comp=Z,603nm,1.1s,mb6.5						
DGAR				LR	LR		
	comp=Z,4µm,22.0s,MS5.4						
MKAR	**Makanchi Array**	**56.60**	**325**	*e*P	**P**	**14 52 04.2**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,132nm,0.6s						
KSH	**Kashi**	**57.18**	**315**	⇑P	**P**	**14 52 10.0**	**+0.5**
KSH				*e*PCP	PcP	14 53 05.1	+1.5
KSH				*e*PP	PP	14 54 18.0	-0.1
KSH				*e*SCP		14 57 02.3	
KSH				*e*S	**S**	**15 00 02.3**	**+1.6**
KSH				*e*SCS	ScS	15 01 54.3	+2.1
KSH				*e*SS	SS	15 03 50.5	-0.6
KSH				AMB	AMB		
	comp=Z,3µm,6.8s						
KSH				LR	LR		
	comp=N,15µm,15.6s,MS6.3						
KSH				LR	LR		
	comp=E,14µm,15.3s,MS6.3						
YAK	**Yakutsk**	**57.20**	**2**	*c* *i*P	**P**	**14 52 09.2**	**-0.2**
YAK				*e**PP	pP	14 52 21.4	+1.2
YAK				*e*		14 53 07.2	
YAK				*e*		14 54 14.4	
YAK				*e*S	**S**	**14 59 56.1**	**-4.6**
YAK				*e*		15 01 48.2	
YAK				pmax	pmax		
	comp=N,116nm,0.9s						
YAK				pmax	pmax		
	comp=Z,400nm,0.9s,mb6.5						
YAK				pmax	pmax		
	comp=E,36nm,0.8s						
YAK				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=N,16nm,0.8s						
YAK				pmax	pmax		
	comp=E,10.0nm,0.7s						
YAK				smax			
	comp=E,20nm,1.2s						
YAK				smax			
	comp=Z,33nm,1.3s						
YAK				smax			
	comp=N,55nm,1.1s						
YAK				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.6						
YAK				MLR	MLR		
	comp=N,3µm,15.0s,MS5.7						
YAK				MLR	MLR		
	comp=E,4µm,17.0s,MS5.7						
YAK	**Yakutsk**	**57.20**	**2**	⇑*e*P	**P**	**14 52 08.2**	**-1.2**
	comp=E,847nm,0.8s,mb6.8						
YAK				LR	LR		
	comp=Z,9µm,19.0s,MS5.9						
BHJ	**Bhuj**	**57.77**	**294**	*e*P	**P**	**14 52 13.8**	**-0.1**
BHJ				*i*		14 52 15.2	
	comp=Z,534nm,0.9s						
MA2	**Magadan**	**57.78**	**14**	*e*P	**P**	**14 52 13.5**	**0.0**
MA2				*e*S	**S**	**15 00 06.7**	**-1.5**
MA2				*e*PS	PS	15 00 27.3	+1.0
MA2				*e*SS	SS	15 04 02.7	+2.3
MA2				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.7						
MA2				MLR	MLR		
	comp=Z,27µm,21.0s,MS6.3						
MA2	**Magadan**	**57.78**	**14**	*e*P	**P**	**14 52 13.0**	**-0.5**
	comp=Z,109nm,0.8s,mb5.9						
MA2				*e*	pP	14 52 22.9	-1.3
MA2				*e*ScP		14 56 59.9	
MA2				LR	LR		
	comp=Z,10µm,20.0s,MS5.9						
AAA	**Alma-Ata**	**58.11**	**319**	*i* P	**P**	**14 52 15.5**	**-0.5**
AAA				*i* S	**S**	**15 00 11.0**	**-1.8**
AAA				pmax	pmax		
	comp=Z,4µm,7.0s						
AAA				smax			
	comp=N,4µm,8.0s						
AAA				MLR	MLR		
	comp=Z,11µm,20.0s,MS6.0						
ULHL	**Ulahol**	**58.13**	**318**	P	**P**	**14 52 16.0**	**-0.1**
	SNR=19						
KZA	**Kyzart**	**58.73**	**317**	P	**P**	**14 52 20.6**	**+0.2**
	SNR=44						
TKM2	**Tokmak 2**	**58.85**	**318**	P	**P**	**14 52 20.6**	**-0.6**
	SNR=35						
KBK	**Karagaybulak**	**59.17**	**318**	P	**P**	**14 52 23.0**	**-0.4**
	SNR=145						
UCH	**Uchtor**	**59.28**	**317**	P	**P**	**14 52 24.3**	**+0.1**
	SNR=270						
OUZ	**Omahuta**	**59.44**	**136**	PN	**P**	**14 52 25.9**	**+0.5**
OUZ	**Omahuta**	**59.44**	**136**	PN	**P**	**14 52 25.9**	**+0.5**
CHMS	**Chumysh**	**59.44**	**318**	P	**P**	**14 52 24.2**	**-1.1**
	SNR=8.1						
AAK	**Ala-Archa**	**59.46**	**318**	P	**P**	**14 52 24.8**	**-0.7**
	SNR=60						
AAK	**Ala-Archa**	**59.46**	**318**	⇑*e*P	**P**	**14 52 23.7**	**-1.7**
AAK				*e*		14 53 12.4	
AAK				pmax	pmax		
	comp=Z,224nm,1.0s,mb6.2						
AAK				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.5						
AAK	**Ala-Archa**	**59.46**	**318**	⇑*e*P	**P**	**14 52 23.7**	**-1.7**
	comp=Z,224nm,1.0s,mb6.2						
AAK				*e*PcP	PcP	14 53 12.4	-0.2
AAK				LR	LR		
	comp=Z,4µm,21.0s,MS5.5						
FRU	**Bishkek**	**59.46**	**318**	*e*P	**P**	**14 52 25.5**	**+0.1**
FRU				*e*		15 00 29.0	
FRU				pmax	pmax		
	comp=Z,250nm,2.0s,mb5.9						
FRU				MLR	MLR		
	comp=Z,37µm,24.0s,MS6.4						
ZAL	**Zalesovo**	**59.59**	**333**	P	**P**	**14 52 24.0**	**-2.2**
ZAL				S	**S**	**15 00 28.0**	**-4.0**
ZAL				pmax	pmax		
	comp=Z,40nm,0.8s						
ZAL				MLR	MLR		
	comp=Z,17µm,18.2s						
ZAL	**Zalesovo**	**59.59**	**333**	P	**P**	**14 52 24.0**	**-2.2**
	comp=Z,40nm,0.8s,mb5.5,baz=349,slow=7.2,SNR=141						
ZAL				S	**S**	**15 00 28.0**	**-4.0**
	comp=Z,3.0nm,0.8s,baz=183,slow=17,SNR=3.3						
ZAL				LR	LR	15 21 11.7	
	comp=Z,17µm,18.2s,MS6.2,baz=337,slow=39						
USP	**Ospenovka**	**59.72**	**318**	P	**P**	**14 52 26.2**	**-1.0**
	SNR=280						
AML	**Almayashu**	**59.80**	**317**	P	**P**	**14 52 27.6**	**-0.2**
	SNR=162						
EKS2	**Erkin-Say**	**59.96**	**317**	P	**P**	**14 52 28.4**	**-0.4**
	SNR=151						
WCZ	**Waipu Caves**	**60.34**	**136**	*e*P	**P**	**14 52 32.3**	**+0.8**
WCZ	**Waipu Caves**	**60.34**	**136**	PN	**P**	**14 52 32.3**	**+0.8**
KURK	**Kurchatov**	**60.77**	**327**	⇑*e*P	**P**	**14 52 32.9**	**-1.4**
KURK				*e*		14 52 48.1	
KURK				pmax	pmax		
	comp=Z,457nm,0.7s,mb6.7						
KURK				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.5						
KURK	**Kurchatov**	**60.77**	**327**	⇑*e*P	**P**	**14 52 32.9**	**-1.3**
	comp=Z,457nm,0.7s,mb6.7						
KURK				*e*		14 52 48.0	
KURK				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
NVS	**Novosibirsk**	**60.87**	**333**	*e*P	**P**	**14 52 32.1**	**-2.8**
NVS				*e*S	**S**	**15 00 40.9**	**-7.5**
NVS				pmax	pmax		
	comp=N,75nm,1.0s						
NVS				pmax	pmax		
	comp=E,107nm,1.0s						
NVS				pmax	pmax		
	comp=Z,273nm,1.0s,mb6.3						
NVS				smax			
	comp=N,193nm,2.2s						
NVS				smax			
	comp=E,326nm,2.2s						
SEY	**Seymchan**	**61.10**	**13**	*e*P	**P**	**14 52 38.7**	**+2.4**
SEY						14 53 26.2	
SEY						14 54 59.7	
SEY				PPP	PPP	14 56 21.5	+0.3
SEY				*e*S	**S**	**15 00 57.3**	**+6.2**
SEY						15 02 23.9	
SEY				SS	SS	15 04 58.4	+5.9
SEY				*e*SSS	SSS	15 07 25.1	-5.9
SEY				pmax	pmax		
	comp=Z,610nm,1.0s,mb6.7						
SEY				pmax	pmax		
	comp=N,190nm,1.1s						
SEY				pmax	pmax		
	comp=E,160nm,1.1s						
SEY				smax			
	comp=N,47µm,24.7s						
SEY				smax			
	comp=E,11µm,15.6s						
SEY				MLR	MLR		
	comp=Z,47µm,21.0s,MS6.6						
SEY				MLR	MLR		
	comp=N,14µm,19.0s,MS6.3						
SEY				MLR	MLR		
	comp=E,19µm,24.0s,MS6.3						
FX1	**Attu Island--F**	**61.31**	**30**	P	**P**	**14 52 37.8**	**-0.1**
	comp=E,105nm,0.7s,mb6.1,baz=80,slow=20,SNR=23						
FX1				LR	LR	15 15 11.7	
	comp=E,96nm,20.1s,baz=244,slow=32						
FX1	**Attu Island--F**	**61.31**	**30**	*e*P	**P**	**14 52 37.8**	**-0.1**
MSZ	**Milford Sound**	**61.60**	**148**	PN	**P**	**14 52 40.6**	**+0.7**
JCZ	**Jackson Bay**	**61.66**	**147**	*e*P	**P**	**14 52 40.8**	**+0.5**
JCZ	**Jackson Bay**	**61.66**	**147**	PN	**P**	**14 52 42.1**	**+1.8**
SMY	**Shemya**	**61.70**	**31**	*e*P	**P**	**14 52 40.7**	**+0.2**
SMY				pmax	pmax		
	comp=Z,306nm,1.0s,mb6.4						
SMY				MLR	MLR		
	comp=Z,16µm,21.0s,MS6.2						
SMY	**Shemya**	**61.70**	**31**	*e*P	**P**	**14 52 40.7**	**+0.2**
	comp=Z,306nm,1.0s,mb6.4						
SMY				LR	LR		
	comp=Z,16µm,21.0s,MS6.2						
KUZ	**Kuaotunu**	**61.70**	**136**	*e*P	**P**	**14 52 39.9**	**-0.8**
KUZ	**Kuaotunu**	**61.70**	**136**	PN	**P**	**14 52 39.9**	**-0.8**
QRZ	**Quartz Range**	**61.86**	**142**	PN	**P**	**14 52 42.0**	**+0.3**
DSZ	**Denniston Nort**	**61.96**	**143**	*e*P	**P**	**14 52 41.1**	**-1.3**
DSZ	**Denniston Nort**	**61.96**	**143**	PN	**P**	**14 52 42.2**	**-0.1**
HIZ	**Hauiti**	**62.05**	**138**	*e*P	**P**	**14 52 43.9**	**+0.9**
HIZ	**Hauiti**	**62.05**	**138**	PN	**P**	**14 52 43.7**	**+0.7**
WVZ	**Waitaha Valley**	**62.13**	**145**	PN	**P**	**14 52 43.6**	**+0.1**
WKZ	**Wanaka**	**62.28**	**147**	*e*P	**P**	**14 52 46.3**	**+1.8**
WKZ	**Wanaka**	**62.28**	**147**	PN	**P**	**14 52 46.6**	**+2.1**
NNZ	**Nelson**	**62.61**	**142**	PN	**P**	**14 52 46.8**	**+0.1**
THZ	**Tophouse**	**62.63**	**142**	*e*P	**P**	**14 52 45.5**	**-1.4**
THZ	**Tophouse**	**62.63**	**142**	PN	**P**	**14 52 45.5**	**-1.4**
LBZ	**Lake Benmore**	**62.64**	**146**	*e*P	**P**	**14 52 46.4**	**-0.5**
LBZ	**Lake Benmore**	**62.64**	**146**	PN	**P**	**14 52 46.6**	**-0.3**
RPZ	**Rata Peaks**	**62.71**	**145**	LR	LR	15 20 15.7	
	comp=Z,6µm,19.1s,MS5.8,baz=296,slow=36						
RPZ	**Rata Peaks**	**62.71**	**145**	*e*P	**P**	**14 52 46.9**	**-0.5**
RPZ	**Rata Peaks**	**62.71**	**145**	PN	**P**	**14 52 47.0**	**-0.4**
RAO	**Raoul Island**	**63.10**	**126**	PFAKE		14 53 00.0	+10
RAO				LR	LR		
	comp=Z,4µm,22.0s,MS5.5						
TUZ	**Tuapeka**	**63.34**	**148**	*e*P	**P**	**14 52 53.0**	**+1.4**
TUZ	**Tuapeka**	**63.34**	**148**	PN	**P**	**14 52 53.0**	**+1.4**
KHZ	**Kahutara**	**63.40**	**143**	*e*P	**P**	**14 52 49.7**	**-2.2**
KHZ	**Kahutara**	**63.40**	**143**	PN	**P**	**14 52 50.0**	**-2.0**
URZ	**Urewera**	**63.43**	**137**	LR	LR	15 20 05.5	
	comp=Z,9µm,20.0s,MS5.9,baz=312,slow=36						
URZ				PKPPKP		15 21 46.9	
	comp=Z,8.1nm,0.8s,baz=339,slow=8.6,SNR=3.2						
URZ	**Urewera**	**63.43**	**137**	*e*P	**P**	**14 52 51.7**	**-0.5**
URZ	**Urewera**	**63.43**	**137**	PN	**P**	**14 52 51.8**	**-0.4**
BKZ	**Black Stump Fm**	**63.48**	**138**	*e*P	**P**	**14 52 50.8**	**-1.7**
BKZ	**Black Stump Fm**	**63.48**	**138**	PN	**P**	**14 52 51.2**	**-1.4**
TSZ	**Takapari Road**	**63.60**	**139**	*e*P	**P**	**14 52 53.8**	**+0.4**
TSZ	**Takapari Road**	**63.60**	**139**	PN	**P**	**14 52 52.8**	**-0.6**
MWZ	**Matawai**	**63.75**	**137**	*e*P	**P**	**14 52 52.0**	**-2.3**
MWZ	**Matawai**	**63.75**	**137**	PN	**P**	**14 52 53.5**	**-0.8**
AFI	**Afiamalu**	**63.96**	**108**	PFAKE		14 53 10.0	+14
AFI				LR	LR		
	comp=Z,7µm,20.0s,MS5.8						
PUZ	**Puketiti**	**64.12**	**136**	*e*P	**P**	**14 52 56.9**	**+0.2**
PUZ	**Puketiti**	**64.12**	**136**	PN	**P**	**14 52 56.9**	**+0.2**
PWZ	**Pawanui**	**64.17**	**139**	*e*P	**P**	**14 52 56.1**	**-1.0**
PWZ	**Pawanui**	**64.17**	**139**	PN	**P**	**14 52 56.1**	**-0.9**
MCQ	**Macquarie Isla**	**64.92**	**160**	*e*P	**P**	**14 53 04.2**	**+2.5**
MCQ				*e*S	**S**	**15 01 43.3**	**+4.2**
KIWB	**Kanaga Island**	**65.97**	**34**	*e*P	**P**	**14 53 07.0**	**-1.4**
BVAR	**Borovoye Array**	**66.36**	**327**	P	**P**	**14 53 09.7**	**-1.2**
	comp=Z,254nm,0.8s,mb6.3,baz=127,slow=7.4,SNR=272						
BVAR				S	S	15 01 51.4	-5.2
	comp=Z,3.4nm,0.9s,baz=149,slow=8.4,SNR=2.5						
BRVK	**Borovoye**	**66.43**	**327**	⇑*i*P	**P**	**14 53 10.2**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,408nm,0.8s,mb6.5						
BRVK				MLR	MLR		
	comp=Z,5µm,22.0s,MS5.7						
BRVK	**Borovoye**	**66.43**	**327**	⇑*i*P	**P**	**14 53 10.2**	**-1.1**
	comp=Z,408nm,0.8s,mb6.5						
BRVK				LR	LR		
	comp=Z,5µm,22.0s,MS5.7						
GSTR	**Great Sitkin T**	**66.69**	**34**	*e*P	**P**	**14 53 12.9**	**-0.1**
TIXI	**Tiksi**	**66.83**	**1**	*e*P	**P**	**14 53 11.8**	**-1.8**
TIXI				*e*S	S	15 02 00.6	-1.5
TIXI				pmax	pmax		
	comp=N,75nm,1.1s						
TIXI				pmax	pmax		
	comp=Z,279nm,1.1s,mb6.2						
TIXI				pmax	pmax		
	comp=E,46nm,0.8s						
TIXI				pmax	pmax		
	comp=Z,3µm,5.0s						
TIXI				MLR	MLR		
	comp=Z,8µm,18.0s,MS6.0						
TIXI				MLR	MLR		
	comp=N,6µm,17.0s,MS6.0						
TIXI				MLR	MLR		
	comp=E,5µm,14.0s,MS6.0						
TIXI	**Tiksi**	**66.83**	**1**	⇑*i*P	**P**	**14 53 13.2**	**-0.4**
TIXI				LR	LR		
	comp=Z,10µm,19.0s,MS6.0						
WBK	**Wadi Bani Khal**	**67.47**	**292**	P	**P**	**14 53 17.7**	**-0.7**
	SNR=12						
JMDO	**Jabal Madar**	**68.25**	**292**	P	**P**	**14 53 22.2**	**-1.1**
	SNR=24						
BIDO	**Bidbid**	**68.31**	**293**	P	**P**	**14 53 23.4**	**-0.3**
	SNR=22						
SMDO	**Samad**	**68.35**	**293**	P	**P**	**14 53 22.6**	**-1.3**
	SNR=12						
BILL	**Bilibino**	**68.63**	**15**	*i* P	**P**	**14 53 24.6**	**-0.3**
BILL				*i*	pP	14 53 35.4	-0.5
BILL				*i*		14 53 49.3	
BILL				*e*		14 55 54.6	
BILL				*i* S	S	15 02 22.4	-1.2
BILL				*e*SS	SS	15 06 52.2	+2.2
BILL				pmax	pmax		
	comp=Z,78nm,1.1s,mb5.5						
BILL				MLR	MLR		
	comp=Z,5µm,17.0s,MS5.8						
BILL	**Bilibino**	**68.63**	**15**	*e*P	**P**	**14 53 24.1**	**-0.7**
	comp=Z,143nm,1.0s,mb5.9						
BILL				LR	LR		
	comp=Z,7µm,20.0s,MS5.9						
HOQ	**Hoqain**	**69.06**	**293**	P	**P**	**14 53 27.9**	**-0.3**
	SNR=17						
ARQ	**Araqi**	**69.77**	**293**	P	**P**	**14 53 31.9**	**-0.7**
	SNR=16						
ASHO	**Ashiyiah**	**70.28**	**294**	P	**P**	**14 53 35.1**	**-0.6**
	SNR=18						
NIKO	**Nikolski**	**71.11**	**35**	*e*P	**P**	**14 53 38.7**	**-1.5**
RBK	**Rabkut**	**71.73**	**287**	P	**P**	**14 53 40.6**	**-3.9**
	SNR=41						
CASY	**Casey**	**71.79**	**187**	*e*P	**P**	**14 53 44.6**	**+0.5**
CASY				*i* S	S	15 03 00.1	-0.5
DRV	**Dumont d’Urvil**	**71.90**	**174**	P	**P**	**14 53 47.0**	**+2.3**
DRV				S	S	15 02 59.0	-2.9
UNV	**Unalaska Valle**	**72.72**	**35**	*e*P	**P**	**14 53 49.4**	**-0.4**
	comp=Z,384nm,0.6s,mb6.5						
SVE	**Sverdlovsk**	**72.99**	**328**	⇑*i*P	**P**	**14 53 50.5**	**-0.8**
SVE				*e*PPP	PPP	14 58 20.0	+0.9
SVE				*i* S	S	15 03 08.0	-6.4
SVE				pmax	pmax		
	comp=Z,640nm,1.0s,mb6.5						
SVE				pmax	pmax		
	comp=N,600nm,10.0s						
SVE				pmax	pmax		
	comp=E,2µm,10.0s						
SVE				pmax	pmax		
	comp=Z,5µm,10.0s						
SVE				smax			
	comp=N,5µm,8.0s						
SVE				smax			
	comp=E,3µm,8.0s						
SVE				MLR	MLR		
	comp=N,4µm,10.0s,MS6.5						
SVE				MLR	MLR		
	comp=E,12µm,10.0s,MS6.5						
SVE				MLR	MLR		
	comp=Z,17µm,10.0s,MS6.6						
AKUT	**Akutan**	**73.21**	**35**	*e*P	**P**	**14 53 52.7**	**0.0**
	comp=Z,187nm,0.6s,mb6.2						
KIP	**Kipapa**	**74.76**	**69**	PFAKE		14 54 10.0	+7.6
KIP				LR	LR		
	comp=Z,4µm,21.0s,MS5.7						
SOKR	**Solikamsk**	**75.72**	**330**	*c* *i*P	**P**	**14 54 06.5**	**-0.6**
SOKR						14 57 05.1	
SOKR				S	S	15 03 36.5	-8.4
SOKR				pmax	pmax		
	comp=Z,180nm,0.9s,mb6.0						

SOKR				MLR	MLR		
	comp=Z,21µm,24.0s,MS6.4						
TNA	**Tin City**	**75.74**	**23**	*e*P	**P**	**14 54 07.0**	**0.0**
	comp=Z,21nm,0.8s						
TNA				*e*	pP	14 54 17.8	-0.3
SDPT	**Sand Point**	**76.48**	**34**	*e*P	**P**	**14 54 10.9**	**-0.6**
	comp=Z,274nm,0.8s,mb6.2						
RAR	**Rarotonga**	**76.63**	**113**	LR	LR	15 26 41.4	
	comp=Z,2µm,18.8s,MS5.5,baz=280,slow=35						
RAR	**Rarotonga**	**76.63**	**113**	PFAKE		14 54 30.0	+17
RAR				LR	LR		
	comp=Z,7µm,19.0s,MS6.0						
POHA	**Pohakuloa**	**77.08**	**71**	PFAKE		14 54 30.0	+14
POHA				LR	LR		
	comp=Z,80µm,20.0s,MS7.0						
MAK	**Makhachkala**	**78.74**	**313**	*d i*P	**P**	**14 54 24.0**	**-0.3**
MAK				*i* S	S	15 04 13.7	-4.1
MAK				pmax	pmax		
	comp=E,4µm,12.0s						
MAK				pmax	pmax		
	comp=Z,8µm,12.0s						
MAK				smax			
	comp=N,8µm,10.0s						
MAK				MLR	MLR		
	comp=Z,9µm,19.0s,MS6.1						
MAK				MLR	MLR		
	comp=N,14µm,21.0s,MS6.4						
MAK				MLR	MLR		
	comp=E,11µm,21.0s,MS6.4						
RAYN	**Ar Rayn**	**79.89**	**293**	P	**P**	**14 54 29.3**	**-1.6**
	comp=E,952nm,0.7s,mb6.8						
SVW2	**Sparrevohn**	**80.02**	**29**	*e*P	**P**	**14 54 31.8**	**+1.0**
LBOS		**80.41**	**283**	⇑*e*P	**P**	**14 54 34.3**	**+0.5**
LBOS				AMb	AMB	14 54 35.3	
	comp=Z,289nm,1.2s,mb6.1						
GNI	**Garni**	**80.67**	**310**	*i* P	**P**	**14 54 33.3**	**-1.4**
GNI	**Garni**	**80.67**	**310**	⇑*i*P	**P**	**14 54 35.6**	**+0.9**
GNI				pmax	pmax		
	comp=Z,99nm,2.1s						
GNI				MLR	MLR		
	comp=Z,7µm,19.0s						
GNI	**Garni**	**80.67**	**310**	P	**P**	**14 54 34.8**	**+0.1**
	comp=Z,18nm,1.0s,baz=357,slow=4.3,SNR=13						
GNI	**Garni**	**80.67**	**310**	⇑*e*P	**P**	**14 54 35.0**	**+0.3**
	comp=Z,166nm,1.0s,mb5.9						
GNI				LR	LR		
	comp=Z,5µm,21.0s,MS5.8						
MTA	**Mtatsminda**	**80.68**	**311**	P	**P**	**14 54 34.9**	**+0.2**
TI2	**Plekhanov**	**80.71**	**311**	α *i*P	**P**	**14 54 34.2**	**-0.7**
TI2				*e*		14 59 32.0	
TI2				*e*S	S	15 04 32.2	-6.3
TI2				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
TI2				pmax	pmax		
	comp=Z,6µm,7.0s						
TI2				pmax	pmax		
	comp=Z,140µm,0.8s						
TI2				pmax	pmax		
	comp=Z,250µm,1.0s						
TI2				pmax	pmax		
	comp=Z,250µm,1.0s						
TI2				pmax	pmax		
	comp=Z,2µm,11.0s						
TI2				smax			
	comp=E,3µm,8.0s						
BHD	**Baghdad**	**80.84**	**303**	*i* P	**P**	**14 54 26.5**	**-9.3**
BHD	**Baghdad**	**80.84**	**303**	*e*S	S	15 04 42.0	+2.0
BHD				*i* sS		15 04 42.0	
STE	**Stepanavan**	**80.95**	**311**	*i* P	**P**	**14 54 35.0**	**-1.2**
STE				*e*S	S	15 04 35.0	-6.0
KDAK	**Kodiak Island**	**81.15**	**32**	*e*P	**P**	**14 54 37.7**	**+0.8**
DHBB	**Dhamar BB**	**81.21**	**284**	⇑*e*P	**P**	**14 54 38.6**	**+0.6**
DHBB				AMb	AMB	14 54 40.9	
	comp=Z,490nm,2.1s,mb6.1						
HKR	**Hakkari**	**81.40**	**307**	P	**P**	**14 54 39.1**	**+0.5**
TRBA	**At Turbah**	**81.54**	**283**	⇑*e*P	**P**	**14 54 40.3**	**+0.5**
TRBA				AMb	AMB	14 54 41.9	
	comp=Z,289nm,1.9s,mb5.9						
IMA	**Indian Mountai**	**81.55**	**24**	*e*P	**P**	**14 54 39.9**	**+1.1**
IMA				pmax	pmax		
	comp=Z,83nm,0.7s,mb5.8						
IMA	**Indian Mountai**	**81.55**	**24**	*e*P	**P**	**14 54 39.9**	**+1.1**
	comp=Z,83nm,0.7s,mb5.8						
TVAN	**Van**	**81.67**	**308**	*i* P	**P**	**14 54 41.3**	**+1.3**
VANB	**Van**	**81.69**	**308**	P	**P**	**14 54 39.7**	**-0.4**
PECR	**Pechory**	**81.87**	**326**	*e*P	**P**	**14 54 39.4**	**-1.2**
PECR				*e*		14 57 44.0	
PECR				*i* S	S	15 04 45.2	-4.9
PECR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PECR				pmax	pmax		
	comp=Z,5µm,11.0s						
PECR				smax			
	comp=N,6µm,9.0s						
PECR				MLR	MLR		
	comp=Z,15µm,21.0s						
PECR				MLR	MLR		
	comp=N,2µm,14.0s						
MSL	**Mosul**	**81.91**	**306**	*e*P	**P**	**14 54 40.5**	**-0.8**
MSL	**Mosul**	**81.91**	**306**	*e*S	S	15 04 45.0	-6.0
MSL				*e*PS	PS	15 05 32.0	-13
GOF	**Gofitskoye**	**82.06**	**315**	⇑*i*P	**P**	**14 54 42.0**	**+0.2**
GOF				*i*	pP	14 54 52.0	-1.0
GOF				*i* S	S	15 04 48.0	-4.3
GOF				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0						
GOF				pmax	pmax		
	comp=Z,8µm,14.0s						
GOF				pmax	pmax		
	comp=Z,8µm,14.0s						
GOF				smax			
	comp=N,8µm,9.0s						
KIV	**Kislovodsk**	**82.28**	**314**	P	**P**	**14 54 44.0**	**+1.0**
	comp=N,836nm,0.7s,mb6.8,SNR=21						
KIV	**Kislovodsk**	**82.28**	**314**	*c i*P	**P**	**14 54 42.9**	**-0.1**
KIV				*e*		14 57 53.1	
KIV				*e*S	S	15 04 51.0	-3.6
KIV				*e*SS	SS	15 10 19.7	+1.2
KIV				pmax	pmax		
	comp=Z,75nm,0.6s,mb5.8						
KIV				pmax	pmax		
	comp=N,66nm,1.0s						
KIV				pmax	pmax		
	comp=E,24nm,0.6s						
KIV				MLR	MLR		
	comp=E,9µm,21.0s						
KIV				MLR	MLR		
	comp=Z,13µm,21.0s,MS6.3						
KIV	**Kislovodsk**	**82.28**	**314**	*e*P	**P**	**14 54 42.2**	**-0.8**
	comp=Z,87nm,0.7s,mb5.8						
KIV				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
SLKM	**Skilak Lake**	**82.57**	**30**	*e*P	**P**	**14 54 44.1**	**-0.1**
FIB	**Fire Island**	**82.64**	**29**	*e*P	**P**	**14 54 45.2**	**+0.7**
FIB				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
BCA	**Borcka**	**83.06**	**311**	*e*P	**P**	**14 54 46.9**	**-0.1**
VRT	**Varto**	**83.14**	**309**	P	**P**	**14 54 49.1**	**+1.6**
PMR	**Palmer**	**83.16**	**29**	*e*P	**P**	**14 54 47.3**	**+0.2**
PMR				pmax	pmax		
	comp=Z,160nm,0.9s,mb6.0						
PMR	**Palmer**	**83.16**	**29**	*e*P	**P**	**14 54 47.3**	**+0.2**
	comp=Z,160nm,0.9s,mb6.0						
BTMT	**Batman**	**83.18**	**308**	P	**P**	**14 54 48.1**	**+0.3**
EZM	**Erzurum**	**83.26**	**309**	*e*P	**P**	**14 54 49.0**	**+0.9**
MCK	**McKinley**	**83.35**	**26**	*e*P	**P**	**14 54 47.7**	**-0.4**
MCK				*e*	pP	14 54 59.3	+0.1
MCK				pmax	pmax		
	comp=Z,410nm,1.5s,mb6.2						
MCK				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.6						
MCK	**McKinley**	**83.35**	**26**	*e*P	**P**	**14 54 47.7**	**-0.4**
	comp=Z,410nm,1.5s,mb6.2						
MCK				*e*	pP	14 54 59.3	0.0
MCK				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
BEST	**Besiri**	**83.36**	**307**	*i* P	**P**	**14 54 48.8**	**+0.2**
SML	**Sawmill**	**83.55**	**28**	*e*P	**P**	**14 54 48.8**	**-0.3**
COLA	**College**	**83.87**	**25**	P	**P**	**14 54 50.7**	**0.0**
COLA				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.9						
COLA	**College**	**83.87**	**25**	*e*P	**P**	**14 54 50.6**	**-0.1**
	comp=Z,69nm,0.9s,mb5.8						
BINT	**Bingol**	**83.95**	**308**	*e*P	**P**	**14 54 50.8**	**-0.9**
ILAR	**Eielson Array**	**84.28**	**25**	P	**P**	**14 54 51.8**	**-0.9**
ILAR				S	S	15 05 08.2	-6.0
ILAR				pmax	pmax		
	comp=Z,29nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR				MLR	MLR		
	comp=Z,4µm,21.8s						
ILAR	**Eielson Array**	**84.28**	**25**	P	**P**	**14 54 51.8**	**-1.0**
	comp=Z,29nm,0.9s,mb5.4,baz=257,slow=4.7,SNR=72						
ILAR				S	S	15 05 08.2	-5.9
	comp=Z,0.9nm,0.9s,baz=234,slow=7.8,SNR=2.7						
ILAR				PKKP	PKKP	15 12 56.0	+7.2
	comp=Z,0.8nm,0.7s,baz=352,slow=2.3,SNR=4.6						
ILAR				PKKPbc		15 13 07.3	
	comp=Z,5.1nm,1.1s,baz=72,slow=2.4,SNR=6.7						
ILAR				PKPPKP		15 21 11.5	
	comp=Z,2.4nm,1.0s,baz=157,slow=1.5,SNR=8.4						
ILAR				LR	LR	15 31 10.7	
	comp=Z,4µm,21.8s,MS5.8,baz=265,slow=35						
SOC	**Sochi**	**84.44**	**313**	*i* P	**P**	**14 54 52.1**	**-1.9**
SOC				*e*		14 58 10.7	
SOC				*e*PPP	PPP	14 59 59.4	-7.1
SOC				*i* S	S	15 05 08.6	-7.6
SOC				*e*SS	SS	15 10 53.6	+3.7
SOC				*e*SSS	SSS	15 14 17.6	+0.2
SOC				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.5						
SOC				pmax	pmax		
	comp=N,5.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,8µm,20.0s,MS6.1						
SOC				MLR	MLR		
	comp=N,14µm,22.0s,MS6.4						
SOC				MLR	MLR		
	comp=E,6µm,21.0s,MS6.4						
VNDA	**Vanda**	**84.45**	**173**	P	**P**	**14 54 54.2**	**+0.8**
VNDA				S	S	15 05 13.7	-2.0
VNDA				pmax	pmax		
	comp=Z,25nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,3µm,18.4s						
VNDA	**Vanda**	**84.45**	**173**	P	**P**	**14 54 54.2**	**+0.8**
	comp=Z,25nm,0.8s,mb5.4,baz=308,slow=6.0,SNR=18						
VNDA				S	S	15 05 13.7	-1.9
	comp=Z,2.2nm,0.9s,baz=284,slow=4.2,SNR=2.3						
VNDA				LR	LR	15 33 11.9	
	comp=Z,3µm,18.4s,MS5.7,baz=337,slow=36						
VNDA	**Vanda**	**84.45**	**173**	*e*P	**P**	**14 54 54.4**	**+1.0**
	comp=Z,97nm,1.0s,mb5.9						
VNDA				*e*		14 55 11.9	
VNDA				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
EZC	**Erzincan**	**84.46**	**309**	*e*P	**P**	**14 54 57.4**	**+3.2**
MAW	**Mawson**	**84.63**	**200**	*e*P	**P**	**14 55 00.7**	**+6.3**
	comp=Z,36nm,0.7s,mb5.6						
MAW	**Mawson**	**84.63**	**200**	P	**P**	**14 54 58.3**	**+3.9**
	comp=Z,38nm,0.9s,mb5.5,baz=45,slow=4.3,SNR=3.9						
MAW				LR	LR	15 26 29.6	
	comp=Z,6µm,21.6s,MS6.0,baz=63,slow=31						
MAW	**Mawson**	**84.63**	**200**	*e*P	**P**	**14 54 55.8**	**+1.4**
	comp=Z,200nm,1.3s,mb6.1						
MAW				*e*P		14 55 00.7	
MAW				LR	LR		
	comp=Z,19µm,20.0s,MS6.5						
VOR	**Voronezh**	**84.64**	**321**	*e*P	**P**	**14 54 54.8**	**0.0**
VOR				pmax	pmax		
	comp=Z,550nm,0.8s,mb6.7						
GUMT	**Gumushane**	**84.69**	**310**	P	**P**	**14 54 56.2**	**+0.8**
DIV	**Divide**	**84.77**	**29**	*e*P	**P**	**14 54 56.0**	**+0.8**
	comp=Z,1µm,1.1s,mb7.0						
DIV				LR	LR		
	comp=Z,13µm,20.0s,MS6.3						
THY	**Trims Highway**	**84.77**	**27**	*e*P	**P**	**14 54 56.5**	**+1.3**
EYAK	**Cordova Ski Ar**	**84.78**	**30**	*e*P	**P**	**14 54 55.5**	**+0.2**
PTK	**Pertek**	**84.81**	**308**	P	**P**	**14 54 56.0**	**0.0**
ELZG	**Elazig**	**85.14**	**308**	*i* P	**P**	**14 54 59.3**	**+1.6**
URFA	**Urfa**	**85.31**	**307**	P	**P**	**14 54 57.2**	**-1.3**
SBA	**Scott Base**	**85.36**	**172**	*e*P	**P**	**14 55 00.4**	**+2.5**
	comp=Z,78nm,1.0s,mb5.8						
SBA				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
MOS	**Moscow**	**85.48**	**325**	*i* P	**P**	**14 54 58.6**	**-0.3**
MOS				*e*		14 55 04.4	
MOS				*e*		14 58 16.9	
MOS				*e*		15 05 16.5	
MOS				*e*S	S	15 05 26.2	0.0
MOS				pmax	pmax		
	comp=Z,2µm,1.5s,mb7.1						
MOS				pmax	pmax		
	comp=Z,890nm,0.8s,mb7.0						
MOS				MLR	MLR		
	comp=Z,24µm,20.0s,MS6.6						
MALT	**Malatya**	**85.59**	**308**	⇑*e*P	**P**	**14 55 00.2**	**+0.4**
MALT				pmax	pmax		
	comp=Z,34nm,3.4s						
MALT	**Malatya**	**85.59**	**308**	⇑*e*P	**P**	**14 55 00.1**	**+0.3**
	comp=Z,34nm,3.4s						
MYA	**Malataya**	**85.59**	**308**	*e*P	**P**	**14 55 01.3**	**+1.4**
PPT	**Papeete**	**85.63**	**108**	*e*P	**P**	**14 55 00.7**	**+0.2**
	comp=Z,34nm,1.0s,mb5.5						
PPT	**Papeete**	**85.63**	**108**	*e*SS	SS	15 11 08.8	+0.5
PPT				*e*LQ		15 18 24.6	
PPT				*e*LR	LR	15 21 45.7	
	comp=Z,50µm,35.2s						
PAE	**Paea**	**85.64**	**108**	*e*P	**P**	**14 55 00.5**	**0.0**
	comp=Z,254nm,1.4s,mb6.2						
MENT	**Mentasta**	**85.70**	**27**	*e*P	**P**	**14 55 00.5**	**+0.7**
TIAR	**Tiarei**	**85.85**	**108**	*e*P	**P**	**14 55 01.7**	**+0.1**
	comp=Z,205nm,1.3s,mb6.2						
TVO	**Taravao**	**85.96**	**108**	*e*P	**P**	**14 55 02.4**	**+0.3**
	comp=Z,314nm,1.5s,mb6.3						
ANN	**Anapa**	**86.04**	**314**	*e*P	**P**	**14 55 00.8**	**-1.1**
ANN				*e*		14 58 22.0	
ANN				*i* S	S	15 05 19.3	-12
ANN				*e*		15 06 38.9	
ANN				pmax	pmax		
	comp=Z,334nm,0.9s,mb6.6						
ANN				pmax	pmax		
	comp=N,122nm,1.0s						
ANN				pmax	pmax		
	comp=E,79nm,1.0s						
ANN				MLR	MLR		
	comp=N,10µm,26.0s,MS6.3						
ANN				MLR	MLR		
	comp=E,15µm,26.0s,MS6.3						
ANN				MLR	MLR		
	comp=Z,1µm,26.0s,MS5.1						
OBN	**Obninsk**	**86.11**	**325**	P	**P**	**14 55 01.5**	**-0.5**
	comp=Z,6µm,0.9s,SNR=80						
OBN	**Obninsk**	**86.11**	**325**	α *i*P	**P**	**14 55 01.8**	**-0.2**
OBN				*e*		14 55 08.7	
OBN				*i*		14 58 24.4	
OBN				*i* PPP	PPP	15 00 23.9	+2.6
OBN				*e*		15 05 20.6	
OBN				*e*		15 05 31.7	
OBN				*e*SS	SS	15 11 15.3	+0.7
OBN				pmax	pmax		
	comp=Z,200nm,1.4s,mb6.2						
OBN				pmax	pmax		
	comp=Z,1µm,1.3s,mb7.0						
OBN				MLR	MLR		
	comp=Z,15µm,19.0s,MS6.4						
OBN	**Obninsk**	**86.11**	**325**	⇑*i*P	**P**	**14 55 01.5**	**-0.4**
	comp=Z,1µm,1.1s,mb7.1						
OBN				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
GZT	**Gaziantep**	**86.32**	**307**	*i* P	**P**	**14 55 04.0**	**+0.6**
LVZ	**Lovozero**	**86.34**	**338**	P	**P**	**14 55 03.2**	**+0.4**
	comp=Z,1µm,0.9s,SNR=21						
LVZ	**Lovozero**	**86.34**	**338**	⇑*i*P	**P**	**14 55 03.3**	**+0.5**
LVZ				*e*		14 58 28.3	
LVZ				*e*PPP	PPP	15 00 18.0	-5.1
LVZ				*e*S	S	15 05 28.8	-5.4
LVZ				*e*SS	SS	15 11 17.5	0.0
LVZ				pmax	pmax		
	comp=Z,282nm,1.1s,mb6.4						
LVZ				pmax	pmax		
	comp=N,18nm,0.7s						
LVZ				pmax	pmax		
	comp=E,36nm,1.0s						
LVZ				smax			
	comp=N,11µm,6.2s						
LVZ				smax			
	comp=E,8µm,6.5s						
LVZ				MLR	MLR		
	comp=Z,21µm,23.0s,MS6.5						
LVZ				MLR	MLR		
	comp=N,3µm,19.0s						
LVZ				MLR	MLR		
	comp=E,16µm,26.0s						
LVZ	**Lovozero**	**86.34**	**338**	*i* P	**P**	**14 55 03.7**	**+0.9**
TBI	**Tubuai**	**86.39**	**114**	*e*P	**P**	**14 55 04.2**	**+0.1**
	comp=E,534nm,1.3s,mb6.6						
TBI				*e*SS	SS	15 11 16.4	-2.9
TBI				*e*LQ		15 18 52.4	
TBI				*e*LR	LR	15 22 10.5	
	comp=E,31µm,39.5s						
GAZ	**Gaziantep**	**86.61**	**307**	*e*P	**P**	**14 55 05.8**	**+0.9**
SVST	**Sivas**	**86.66**	**309**	*i* P	**P**	**14 55 06.7**	**+1.6**
APA	**Apatity**	**86.84**	**337**	⇑*i*P	**P**	**14 55 05.0**	**-0.3**
APA				*i*	pP	14 55 16.3	-0.2
APA				*i*		14 58 30.0	
APA				*i*		15 05 26.0	
APA				*i* S	S	15 05 37.0	-1.9
APA				*e*PS	PS	15 06 42.0	-3.1
APA				*i* SS	SS	15 11 30.0	+5.5
APA				pmax	pmax		
	comp=Z,310nm,1.1s,mb6.5						
APA				pmax	pmax		
	comp=Z,5µm,11.0s						
KAHT	**Ahir Dag**	**86.85**	**307**	*i* P	**P**	**14 55 06.9**	**+0.9**
PMOR	**Pomariorio Ree**	**86.97**	**105**	*e*P	**P**	**14 55 07.4**	**+0.3**
	comp=Z,248nm,1.4s,mb6.2						
MEH	**Mehetia**	**87.09**	**108**	*e*P	**P**	**14 55 07.5**	**-0.1**
	comp=Z,165nm,1.5s,mb6.0						
ASF	**Jabal al Asfar**	**87.18**	**302**	P	**P**	**14 55 08.1**	**+0.3**
	comp=Z,56nm,0.8s,mb5.8,baz=331,slow=3.7,SNR=45						
ASF				S	S	15 05 30.4	-13
	comp=Z,1.5nm,0.4s,baz=180,slow=7.1,SNR=2.5						
HTY	**Hatay**	**87.54**	**306**	*e*P	**P**	**14 55 09.6**	**+0.1**
DAWY	**Dawson**	**87.56**	**26**	*e*P	**P**	**14 55 09.4**	**+0.6**
CEYT	**Ceyhan**	**87.79**	**307**	*e*P	**P**	**14 55 11.2**	**+0.6**
BOYT	**Boyabat**	**88.10**	**311**	*i* P	**P**	**14 55 11.2**	**-0.8**
JOF	**Joensuu**	**88.18**	**333**	*e*p	**P**	**14 55 11.4**	**-0.4**
	comp=Z,47nm,0.4s,mb6.1						
JOF	**Joensuu**	**88.18**	**333**	*e*P	**P**	**14 55 11.4**	**-0.4**
JOF				pmax	pmax		
	comp=Z,47nm,0.4s,mb6.1						
CTKT	**Corum**	**88.25**	**310**	*i* P	**P**	**14 55 12.8**	**+0.1**
AVNT	**Avonos**	**88.35**	**309**	*i* P	**P**	**14 55 13.2**	**-0.1**
SIM	**Simferopol’**	**88.38**	**315**	*c i*P	**P**	**14 55 13.6**	**+0.4**
SIM				*e*		14 58 45.0	
SIM				*e*		15 05 37.0	
SIM				*e*S	S	15 05 53.0	-1.0
SIM				*e*PS	PS	15 07 06.0	+1.8
SIM				pmax	pmax		
	comp=Z,2µm,12.0s						
NIG	**Nigde**	**88.60**	**308**	*e*P	**P**	**14 55 15.1**	**+0.7**
TOS	**Tosya**	**88.80**	**311**	*e*P	**P**	**14 55 15.4**	**+0.1**
KEV	**Kevo**	**88.87**	**340**	*e*p	**P**	**14 55 14.5**	**-0.5**
	comp=Z,6.3nm,0.3s,mb5.4						
KEV	**Kevo**	**88.87**	**340**	*e*P	**P**	**14 55 14.5**	**-0.5**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb5.4						
EIL	**Elat**	**89.04**	**300**	⇑*i*P	**P**	**14 55 16.6**	**-0.1**
	comp=Z,95nm,1.0s,mb6.1						
PUL	**Pulkovo**	**89.06**	**330**	⇓*i*P	**P**	**14 55 16.6**	**+0.5**
PUL				*e*		14 58 50.2	
PUL				*e*		15 05 35.2	
PUL				*e*		15 05 57.6	
PUL				*e*SP	SP	15 07 11.4	+4.9
PUL				*e*SS	SS	15 12 01.8	+5.0
PUL				*e*SSS	SSS	15 15 29.6	-1.3
PUL				pmax	pmax		
	comp=N,356nm,1.0s						
PUL				pmax	pmax		
	comp=E,760nm,1.0s						
PUL				pmax	pmax		
	comp=Z,926nm,1.0s,mb7.1						
PUL				MLR	MLR		
	comp=Z,27µm,31.0s,MS6.5						
PUL	**Pulkovo**	**89.06**	**330**	*i* P	**P**	**14 55 16.5**	**+0.4**
MEST	**Erdemli**	**89.10**	**306**	*i* P	**P**	**14 55 16.9**	**0.0**
KAMT	**Kaman**	**89.19**	**309**	*e*P	**P**	**14 55 15.4**	**-1.8**
BR131	**Keskin Array S**	**89.21**	**310**	PFAKE		14 55 30.0	+13
BR131				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
BRTR	**Keskin Array B**	**89.21**	**310**	P	**P**	**14 55 16.8**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,50nm,0.9s						
BRTR	**Keskin Array B**	**89.21**	**310**	P	**P**	**14 55 16.8**	**-0.6**
	comp=Z,50nm,0.9s,mb5.8,baz=112,slow=4.8,SNR=52						
BALT	**Daday**	**89.23**	**311**	*i* P	**P**	**14 55 17.2**	**-0.1**
ELDT	**Eldivan**	**89.30**	**310**	*i* P	**P**	**14 55 17.4**	**-0.3**
INK	**Inuvik**	**89.30**	**21**	P	**P**	**14 55 17.2**	**+0.1**
INK				pmax	pmax		
	comp=Z,170nm,1.3s						
INK	**Inuvik**	**89.30**	**21**	P	**P**	**14 55 16.0**	**-1.1**
	comp=Z,46nm,1.0s,mb5.8,baz=282,slow=5.8,SNR=32						
INK				S	SKS	15 05 39.9	-2.2
	comp=Z,4.0nm,0.8s,baz=123,slow=30,SNR=15						
INK				PKKPbc		15 12 53.6	
	comp=Z,7.3nm,0.7s,baz=102,slow=3.6,SNR=12						
INK	**Inuvik**	**89.30**	**21**	*e*P	**P**	**14 55 16.3**	**-0.8**
	comp=Z,0.7nm,1.0s						
KMBO	**Kilima Mbogo**	**89.36**	**269**	P	**P**	**14 55 19.2**	**+0.6**
	comp=Z,94nm,1.1s,mb6.0,baz=49,slow=6.2,SNR=59						
KMBO				S	S	15 05 45.9	-18
	comp=Z,0.5nm,0.5s,baz=233,slow=20,SNR=4.2						
KMBO				LR	LR	15 32 12.0	
	comp=Z,6µm,21.6s,MS6.0,baz=81,slow=33						
KMBO	**Kilima Mbogo**	**89.36**	**269**	*e*P	**P**	**14 55 19.2**	**+0.6**
	comp=Z,98nm,1.0s,mb6.1						
KMBO				LR	LR		
	comp=Z,8µm,22.0s,MS6.1						
ARCES	**ARCESS Array B**	**89.43**	**340**	P	**P**	**14 55 17.0**	**-0.6**
	comp=Z,165nm,0.6s,mb6.5,baz=80,slow=5.4,SNR=102						
ARCES				PKiKP		15 00 17.1	
	comp=Z,7.0nm,1.0s,baz=63,slow=2.0,SNR=4.3						
ARCES				LR	LR	15 40 25.6	
	comp=Z,9µm,19.4s,MS6.2,baz=87,slow=39						
ARE0	**ARCESS Array S**	**89.43**	**340**	*e*P	**P**	**14 55 17.3**	**-0.3**
SAFT	**Safranbolu**	**89.78**	**311**	*e*P	**P**	**14 55 19.6**	**-0.4**
CSS	**Prodhromos**	**89.92**	**305**	*e*P	**P**	**14 55 19.5**	**-1.2**
	comp=Z,73nm,0.8s,mb6.1						
KBS	**Kingsbay**	**89.97**	**350**	P	**P**	**14 55 21.3**	**+1.3**
KBS				pmax	pmax		
	comp=Z,51nm,0.6s,mb6.0						
KBS	**Kingsbay**	**89.97**	**350**	⇑*i*P	**P**	**14 55 19.9**	**-0.1**
KBS				LR	LR		
	comp=Z,10960µm,21.9s						
KBS	**Kingsbay**	**89.97**	**350**	⇑*i*P	**P**	**14 55 19.9**	**-0.1**
KBS				*e*SKSa		15 05 49.8	
KBS				AMS	AMS	15 40 01.1	
	comp=Z,11µm,21.9s,MS6.2						
HSP	**Hornsund**	**90.03**	**348**	*e*P	**P**	**14 55 21.6**	**+1.3**
KTK1	**Kautokeino**	**90.33**	**339**	*e*P	**P**	**14 55 21.2**	**-0.7**
	comp=Z,213nm,0.8s,mb6.5						
KTK1	**Kautokeino**	**90.33**	**339**	*e*P	**P**	**14 55 21.2**	**-0.7**
KTK1				AMb	AMB	14 55 24.6	
	comp=Z,213nm,0.8s,mb6.5						
SIT	**Sitka**	**90.48**	**33**	PFAKE		14 55 30.0	+7.2
SIT				LR	LR		
	comp=Z,8µm,22.0s,MS6.1						
KAF	**Kangasniemi**	**90.60**	**332**	*e*p	**P**	**14 55 22.6**	**-0.7**
	comp=Z,126nm,0.7s,mb6.4						
KAF	**Kangasniemi**	**90.60**	**332**	*e*P	**P**	**14 55 22.6**	**-0.7**
KAF				pmax	pmax		
	comp=Z,126nm,0.7s,mb6.4						
KIZT	**Kizilcal**	**90.66**	**309**	*e*P	**P**	**14 55 23.3**	**-0.8**
FINES	**FINESS Array B**	**90.84**	**332**	P	**P**	**14 55 24.4**	**0.0**
	comp=Z,116nm,0.6s,mb6.4,baz=63,slow=5.8,SNR=169						
FINES				S	SKS	15 05 49.9	-1.6
	comp=Z,2.2nm,0.8s,baz=53,slow=9.5,SNR=4.0						
FINES				PKKPbc		15 12 53.0	
	comp=Z,2.1nm,1.0s,baz=146,slow=5.0,SNR=3.3						
FINES				LR	LR	15 39 21.4	
	comp=Z,15µm,21.2s,MS6.4,baz=189,slow=38						
AKASG	**Malin Array Be**	**90.97**	**321**	P	**P**	**14 55 24.1**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,105nm,1.0s						
AKASG	**Malin Array Be**	**90.97**	**321**	P	**P**	**14 55 24.1**	**-1.2**
	comp=Z,104nm,1.0s,mb6.1,baz=70,slow=4.1,SNR=153						
HENT	**Hendek**	**91.17**	**311**	*i* P	**P**	**14 55 25.4**	**-1.1**
MNK	**Minsk**	**91.20**	**325**	*e*P	**P**	**14 55 22.0**	**-4.3**

MNK				*e*S	S	15 06 14.0	-5.3
TRO	**Tromso**	**91.63**	**340**	*e*P	**P**	**14 55 27.8**	**-0.1**
	comp=Z,158nm,1.1s,mb6.3						
TRO	**Tromso**	**91.63**	**340**	*e*P	**P**	**14 55 27.8**	**-0.1**
TRO				AMb	AMB	14 55 39.5	
	comp=Z,158nm,1.1s,mb6.3						
IDID	**Didziasalis**	**91.68**	**326**	*i* P	**P**	**14 55 28.6**	**+0.2**
IDID				AMPb	AMB	14 55 31.4	
	comp=Z,110nm,0.9s,mb6.2						
KIS	**Kishinev**	**91.80**	**317**α	*i*P	**P**	**14 55 25.0**	**-4.2**
KIS				*e*		14 59 05.0	
KIS				*e*		15 01 12.0	
KIS				*i*		15 05 52.0	
KIS				*e*S	S	15 06 18.0	-6.8
KIS				pmax	pmax		
	comp=Z,2µm,12.0s						
KIS				pmax	pmax		
	comp=Z,2µm,12.0s						
KIS				MLR	MLR		
	comp=Z,17µm,22.0s,MS6.4						
KIS				MLR	MLR		
	comp=N,36µm,40.0s						
KIS				MLR	MLR		
	comp=E,17µm,21.0s						
KIS				MLR	MLR		
	comp=Z,77µm,21.0s						
IZAR	**Zarasai**	**91.87**	**326**	*i* P	**P**	**14 55 29.2**	**-0.1**
IZAR				AMPb	AMB	14 55 31.8	
	comp=Z,90nm,0.9s,mb6.1						
IIGN	**Ignalina**	**91.96**	**326**	*e*P	**P**	**14 55 29.5**	**-0.2**
IIGN				AMPb	AMB	14 55 32.3	
	comp=Z,94nm,0.9s,mb6.1						
ISAL	**Salakas**	**91.97**	**326**	*i* P	**P**	**14 55 29.8**	**0.0**
ISAL				AMPb	AMB	14 55 32.2	
	comp=Z,60nm,1.0s,mb5.9						
TLCR		**92.08**	**315**	⇑P	**P**	**14 55 31.5**	**+1.0**
TIRR	**Tirgusor**	**92.48**	**315**	⇑P	**P**	**14 55 31.7**	**-0.7**
CFR	**Carcaliu**	**92.56**	**316**	⇑P	**P**	**14 55 33.6**	**+0.9**
CFR	**Carcaliu**	**92.56**	**316**	P	**P**	**14 55 33.7**	**+0.9**
CFR	**Carcaliu**	**92.56**	**316**	⇓P	**P**	**14 55 32.9**	**+0.2**
ULDT	**Uludag**	**92.60**	**310**	*i* P	**P**	**14 55 31.2**	**-1.9**
PSN	**Preselentsi**	**92.76**	**314**	*i* P	**P**	**14 55 38.0**	**+4.3**
HARR	**Harsova**	**92.78**	**315**	⇓*e*P	**P**	**14 55 34.5**	**+0.7**
DLBC	**Dease Lake**	**92.99**	**31**	P	**P**	**14 55 34.2**	**-0.1**
	comp=Z,9.2nm,0.8s,mb5.3,baz=305,slow=7.4,SNR=16						
DLBC	**Dease Lake**	**92.99**	**31**	*e*P	**P**	**14 55 35.0**	**+0.6**
SYO	**Syowa Base**	**93.29**	**201**	⇑P	**P**	**14 55 37.1**	**+1.6**
SYO	**Syowa Base**	**93.29**	**201**	⇓pP	pP	14 55 46.8	-0.1
PRD	**Provadia**	**93.40**	**314**	*i* P	**P**	**14 55 37.0**	**+0.3**
VRI	**Vrincioaia**	**93.42**	**316**	P	**P**	**14 55 37.7**	**+1.1**
VRI	**Vrincioaia**	**93.42**	**316**	⇑*e*P	**P**	**14 55 37.5**	**+0.9**
SUW	**Suwalki**	**93.97**	**325**	*e*P	**P**	**14 55 39.1**	**+0.2**
SUW				*e*SKS	SKS	15 06 08.0	-1.3
SUW				*e*S	S	15 06 43.6	+0.1
SUW				MLR	MLR	15 38 50.7	
	comp=Z,16µm,24.6s,MS6.4						
LOF	**Lofoten**	**93.99**	**340**	*e*P	**P**	**14 55 42.6**	**+3.9**
	comp=Z,130nm,1.6s,mb6.1						
LOF	**Lofoten**	**93.99**	**340**	*e*P	**P**	**14 55 42.6**	**+3.9**
LOF				AMb	AMB	14 55 53.1	
	comp=Z,130nm,1.6s,mb6.1						
TAOE	**Nuku Hiva Isla**	**94.01**	**99**	*e*LR	LR	15 25 35.0	
BURAR	**Bucovina Array**	**94.10**	**318**	P	**P**	**14 55 40.8**	**+1.1**
LVV	**L'vov**	**94.41**	**321**	*i* P	**P**	**14 55 40.3**	**-0.7**
LVV				*i*		15 06 11.7	
LVV				*i* PS	PS	15 08 11.9	-1.1
MOR8	**Moi Rana**	**94.42**	**338**	*e*P	**P**	**14 55 38.8**	**-1.9**
	comp=Z,86nm,0.7s,mb6.3						
MOR8	**Moi Rana**	**94.42**	**338**	*e*P	**P**	**14 55 38.8**	**-1.9**
MOR8				AMb	AMB	14 55 45.0	
	comp=Z,86nm,0.7s,mb6.3						
SZH	**Strazhica**	**94.45**	**314**	*e*P	**P**	**14 55 44.0**	**+2.6**
QSPA	**South Pole Qui**	**94.65**	**180**	⇓*i*P	**P**	**14 55 47.9**	**+6.4**
	comp=Z,61nm,0.9s,mb6.0						
QSPA				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
STOK	**Stokkvaagen**	**94.89**	**338**	*e*P	**P**	**14 55 42.8**	**-0.1**
KWP	**Kalwaria**	**95.29**	**321**	*e*P	**P**	**14 55 45.3**	**+0.2**
KWP				*e*SKS	SKS	15 06 17.9	+1.2
KWP				*e*S	S	15 06 50.6	-4.2
KWP				MLR	MLR	15 37 12.1	
	comp=Z,14µm,33.6s,MS6.2						
BBB	**Bella Bella**	**95.62**	**37**	P	**P**	**14 55 48.2**	**+1.7**
	comp=Z,17nm,0.8s,mb5.5,baz=255,slow=11,SNR=3.3						
BBB				LR	LR	15 32 11.2	
	comp=Z,3µm,21.3s,MS5.7,baz=300,slow=31						
RZN	**Rozhen**	**95.63**	**313**	*i* P	**P**	**14 55 48.0**	**+1.2**
WAR	**Warsaw**	**95.67**	**323**	*e*P	**P**	**14 55 48.0**	**+1.3**
WAR				*e*SKS	SKS	15 06 23.6	+5.0
WAR				*e*S	S	15 07 00.2	+2.2
WAR				LR	LR		
	comp=Z,15µm,25.6s,MS6.3						
WAR	**Warsaw**	**95.67**	**323**	*e*P	**P**	**14 55 48.0**	**+1.3**
WAR				*e*SKS	SKS	15 06 23.6	+4.9
WAR				*e*S	S	15 07 00.2	+2.2
WAR				MLR	MLR	15 39 44.0	
	comp=Z,15µm,25.6s,MS6.3						
KOLS	**Kolonicke sedl**	**95.73**	**320**	*i* P	**P**	**14 55 47.7**	**+0.6**
MBAR	**Mbarara**	**95.81**	**270**	*e*P	**P**	**14 55 47.1**	**-1.2**
MBAR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
MBAR				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.3						
MBAR	**Mbarara**	**95.81**	**270**	*e*P	**P**	**14 55 47.1**	**-1.2**
	comp=Z,9.6nm,0.9s,mb5.2						
MBAR				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
PGB	**Panagyurishte**	**95.86**	**313**	*e*P	**P**	**14 55 49.0**	**+1.2**
NSS	**Namsos**	**96.02**	**337**	*e*P	**P**	**14 55 46.8**	**-1.2**
	comp=Z,68nm,1.5s,mb5.9						
NSS	**Namsos**	**96.02**	**337**	*e*P	**P**	**14 55 46.8**	**-1.2**
NSS				AMb	AMB	14 55 49.2	
	comp=Z,68nm,1.5s,mb5.9						
NSS				*e*SKSa		15 06 12.9	
NSS				AMS	AMS	15 42 54.3	
	comp=Z,19µm,21.0s,MS6.6						
DAG	**Danmarks Havn**	**96.22**	**352**	⇓*e*P	**P**	**14 55 47.7**	**-1.0**
DAG				pmax	pmax		
	comp=Z,120nm,0.9s,mb6.3						
DAG				MLR	MLR		
	comp=Z,8µm,22.0s,MS6.2						
DAG				MLR	MLR		
	comp=N,4µm,21.0s,MS6.0						
DAG				MLR	MLR		
	comp=E,5µm,22.0s,MS6.0						
DAG	**Danmarks Havn**	**96.22**	**352**	⇓*i*P	**P**	**14 55 47.7**	**-1.0**
	comp=E,117nm,0.9s,mb6.3						
	comp=Z,8µm,22.0s						
MMB	**Musomiste**	**96.38**	**313**	*e*P	**P**	**14 55 50.0**	**-0.2**
VTS	**Vitosha**	**96.54**	**314**	⇓P	**P**	**14 55 50.2**	**-0.7**
VTS	**Vitosha**	**96.54**	**314**	P	**P**	**14 55 51.2**	**+0.3**
VTS	**Vitosha**	**96.54**	**314**	*i* P	**P**	**14 55 51.0**	**+0.1**
KKB	**Krupnik**	**96.79**	**313**	*i* P	**P**	**14 55 52.0**	**-0.1**
NIE	**Niedzica**	**96.85**	**321**	*e*P	**P**	**14 55 51.8**	**-0.4**
RES	**Resolute Bay**	**96.86**	**10**	*e*P	**P**	**14 55 51.9**	**+0.2**
RES				*e*	pP	14 56 04.7	+1.7
OJC	**Ojcow**	**96.96**	**322**	⇑*i*P	**P**	**14 55 52.5**	**-0.1**
OJC				*i* PP	PP	14 59 50.3	-0.7
OJC				⇑*e*SKSa		15 06 23.6	
OJC				*e*S	S	15 07 04.8	-4.2
OJC				*e*SS	SS	15 13 52.4	+2.8
OJC				MLR	MLR	15 42 09.0	
	comp=Z,10µm,20.7s,MS6.3						
BZS	**Buzias**	**96.97**	**317**	⇑P	**P**	**14 55 51.8**	**-1.0**
BZS	**Buzias**	**96.97**	**317**	P	**P**	**14 55 53.4**	**+0.6**
KECS	**Kecovo**	**96.99**	**320**	*e*P	**P**	**14 55 52.8**	**0.0**
HFS	**Hagfors**	**97.02**	**332**	P	**P**	**14 55 52.2**	**-0.5**
HFS				pmax	pmax		
	comp=Z,43nm,0.6s						
HFS	**Hagfors**	**97.02**	**332**	P	**P**	**14 55 52.2**	**-0.5**
	comp=Z,43nm,0.6s,mb6.1,baz=108,slow=4.7,SNR=51						
PSZ	**Piszkesteto**	**97.52**	**319**	⇑*e*P	**P**	**14 55 54.8**	**-0.5**
PSZ				*e*	pP	14 56 09.0	+2.4
PSZ				pmax	pmax		
	comp=Z,62nm,1.1s,mb6.0						
PSZ	**Piszkesteto**	**97.52**	**319**	⇑*e*P	**P**	**14 55 54.8**	**-0.5**
	comp=Z,62nm,1.1s,mb6.0						
PSZ				*e*	pP	14 56 09.0	+2.4
PSZ	**Piszkesteto**	**97.52**	**319**	⇑*e*P	**P**	**14 55 55.7**	**+0.4**
GKP	**Gorka Klasztor**	**97.58**	**325**	*e*P	**P**	**14 55 55.7**	**+0.3**
GKP				*e*SKS	SKS	15 06 30.7	+2.0
GKP				*e*S	S	15 07 14.5	+0.3
GKP				MLR	MLR	15 41 17.7	
	comp=Z,22µm,26.6s,MS6.5						
LIKS	**Likavka**	**97.72**	**321**	*e*P	**P**	**14 55 57.9**	**+1.8**
NB2	**NORSAR Subarra**	**97.79**	**334**	P	**P**	**14 55 55.5**	**-0.6**
	comp=Z,65nm,0.8s,mb6.2,baz=66,slow=4.5						
NB2	**NORSAR Subarra**	**97.79**	**334**	P	**P**	**14 55 55.5**	**-0.6**
NB2				pmax	pmax		
	comp=Z,65nm,0.8s,mb6.2						
NB2	**NORSAR Subarra**	**97.79**	**334**	P	**P**	**14 55 55.5**	**-0.6**
	baz=66,slow=4.6						
NOA	**NORSAR Array B**	**97.79**	**334**	P	**P**	**14 55 55.5**	**-0.6**
NOA						14 59 55.1	
NOA				pmax	pmax		
	comp=Z,51nm,0.7s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**97.79**	**334**	P	**P**	**14 55 55.5**	**-0.6**
	comp=Z,50nm,0.7s,mb6.1,baz=66,slow=4.5,SNR=93						
NOA				PP	PP	14 59 55.1	-2.3
	comp=Z,1.8nm,0.7s,baz=84,slow=7.2,SNR=3.0						
NOA				PKKP	PKKP	15 12 37.5	+12
	comp=Z,0.7nm,0.7s,baz=242,slow=2.5,SNR=3.6						
NOA				LR	LR	15 44 48.2	
	comp=Z,8µm,19.1s,MS6.2,baz=70,slow=38						
SKO	**Skopje**	**97.96**	**313**	*e*P	**P**	**14 55 58.0**	**+0.6**
RAC	**Raciborz**	**97.99**	**322**	*e*P	**P**	**14 55 58.4**	**+1.1**
RAC				*e*		15 06 30.9	
RAC				*e*S	S	15 07 19.9	+2.3
RAC				MLR	MLR		
	comp=Z,10µm,20.3s,MS6.3						
RAC	**Raciborz**	**97.99**	**322**	*e*P	**P**	**14 55 58.4**	**+1.1**
RAC				⇑*e*SKSa		15 06 30.9	
RAC				*e*S	S	15 07 19.9	+2.3
RAC				LMN		15 35 43.0	
RAC				LME		15 37 25.0	
RAC				MLR	MLR	15 42 47.2	
	comp=Z,10µm,20.3s,MS6.3						
NAO01	**NORSAR Array S**	**98.01**	**334**	*e*P	**P**	**14 55 56.3**	**-0.8**
	comp=Z,38nm,0.6s,mb6.1						
NAO01				LR	LR		
	comp=Z,14µm,22.0s,MS6.4						
VYHS	**Vyhne**	**98.04**	**320**	*e*P	**P**	**14 55 57.5**	**-0.1**
VYHS				*e*		15 06 30.6	
VYHS	**Vyhne**	**98.04**	**320**	*e*P	**P**	**14 55 57.5**	**-0.1**
VYHS				*e*		14 56 17.8	
VYHS				*e*		15 06 30.6	
VYHS	**Vyhne**	**98.04**	**320**	⇑*e*SKSp		15 06 30.6	
OKC	**Ostrava-Krasne**	**98.09**	**322**	*e*P	**P**	**14 55 58.0**	**+0.3**
OKC				*e*PP	PP	14 59 54.6	-5.4
OKC				*e*SKS	SKS	15 06 30.9	-0.5
OKC				AMS	AMS	15 42 30.0	
	comp=Z,6µm,18.7s						
BUD	**Budapest**	**98.21**	**319**	⇑*e*P	**P**	**14 55 58.6**	**+0.3**
BSD	**Bornholm Skovb**	**98.25**	**327**	⇑*i*P	**P**	**14 55 58.2**	**-0.1**
BSD				pmax	pmax		
	comp=Z,220nm,0.9s,mb6.7						
BSD	**Bornholm Skovb**	**98.25**	**327**	⇑*i*P	**P**	**14 55 58.2**	**-0.1**
	comp=Z,220nm,0.9s,mb6.7						
DOMB	**Dombas**	**98.28**	**335**	*e*P	**P**	**14 55 58.2**	**-0.1**
	comp=Z,65nm,1.4s,mb6.0						
DOMB	**Dombas**	**98.28**	**335**	*e*P	**P**	**14 55 58.2**	**-0.1**
DOMB				AMb	AMB	14 56 03.8	
	comp=Z,65nm,1.4s,mb6.0						
DIVS	**Divcibare**	**98.47**	**316**	⇑*i*P	**P**	**14 56 00.1**	**+0.5**
OSL	**Oslo**	**98.47**	**333**	*e*P	**P**	**14 55 58.8**	**-0.5**
MORC	**Moravsky Berou**	**98.48**	**322**	⇑*e*P	**P**	**14 55 59.6**	**+0.1**
MORC				pmax	pmax		
	comp=Z,66nm,1.1s,mb6.1						
MORC	**Moravsky Berou**	**98.48**	**322**	⇑*e*P	**P**	**14 55 59.6**	**+0.1**
	comp=Z,66nm,1.1s,mb6.1						
SRO2	**Moca**	**98.54**	**320**	*e*P	**P**	**14 56 00.4**	**+0.6**
SRO2	**Moca**	**98.54**	**320**	PDIF	**P**	**14 56 00.4**	**+0.6**
SRO	**Srobarova**	**98.57**	**320**	*e*P	**P**	**14 56 01.0**	**+1.0**
SRO	**Srobarova**	**98.57**	**320**	PDIF	**P**	**14 56 01.0**	**+1.0**
YKW3	**Yellowknife Ar**	**98.63**	**24**	*e*P	**P**	**14 55 59.7**	**-0.1**
YKW3				*e*	pP	14 56 12.7	+1.5
SRO1	**Iza**	**98.64**	**320**	*e*P	**P**	**14 56 00.8**	**+0.5**
SRO1	**Iza**	**98.64**	**320**	PDIF	**P**	**14 56 00.8**	**+0.5**
MOL	**Molde**	**98.67**	**336**	*e*P	**P**	**14 56 02.2**	**+2.2**
	comp=Z,98nm,1.1s,mb6.2						
MOL	**Molde**	**98.67**	**336**	*e*P	**P**	**14 56 02.2**	**+2.2**
MOL				AMb	AMB	14 56 08.9	
	comp=Z,98nm,1.1s,mb6.2						
YKA	**Yellowknife Ar**	**98.67**	**24**	P	**P**	**14 56 00.3**	**+0.3**
YKA				pmax	pmax		
	comp=Z,12nm,0.8s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**98.67**	**24**	P	**P**	**14 56 00.3**	**+0.3**
	comp=Z,12nm,0.8s,mb5.5,baz=299,slow=4.6,SNR=44						
YKA				PKKPbc		15 12 28.0	
	comp=Z,1.9nm,0.6s,baz=115,slow=2.8,SNR=13						
YKA	**Yellowknife Ar**	**98.67**	**24**	P	**P**	**14 56 00.3**	**+0.3**
YKA				PKKPbc		15 12 28.1	
JMIC	**Jan Mayen**	**98.83**	**346**	*e*P	**P**	**14 56 06.2**	**+5.6**
JMIC				*e*SKSa		15 06 34.6	
JMIC				AMS	AMS	15 45 49.0	
	comp=Z,8µm,22.2s,MS6.2						
KSP	**Ksiaz**	**98.91**	**323**	*e*P	**P**	**14 56 01.3**	**-0.1**
KSP				*e*		14 56 16.5	
KSP				*e*		15 00 00.5	
KSP				*e*		15 06 34.0	
KSP				*e*S	S	15 07 16.0	-9.4
KSP				*e*SS	SS	15 14 13.0	-3.8
KSP				MLR	MLR		
	comp=Z,34µm,20.3s,MS6.8						
KSP	**Ksiaz**	**98.91**	**323**	*e*P	**P**	**14 56 01.3**	**-0.1**
KSP				*e*		14 56 16.5	
KSP				*e*PP	PP	15 00 00.5	-5.2
KSP				*e*PPPP		15 03 57.5	
KSP				*e*SKS	SKS	15 06 34.0	-1.6
KSP				*e*S	S	15 07 16.0	-9.4
KSP				*e*SP	SP	15 08 46.0	-10
KSP				*e*SS	SS	15 14 13.0	-3.8
KSP				LR	LR		
	comp=Z,34µm,20.3s,MS6.8						
KSP	**Ksiaz**	**98.91**	**323**	*e*P	**P**	**14 56 01.9**	**+0.5**
KSP				*e*SKS	SKS	15 06 34.9	-0.7
KSP				*e*S	S	15 07 27.3	+1.9
KSP				*e*sS		15 07 37.2	
KSP				MLR	MLR	15 43 24.4	
	comp=Z,28µm,20.1s,MS6.8						
DPC	**Dobruska-Polom**	**99.05**	**322**	*e*PDIF	**P**	**14 56 02.5**	**+0.4**
DPC				*e*PP	PP	15 00 05.1	-1.6
DPC				*e*SKS	SKS	15 06 31.5	-4.8
DPC				AMS	AMS	15 43 20.0	
	comp=Z,20µm,20.8s						
UPC	**Upice**	**99.19**	**323**	*e*PDIF	**P**	**14 56 02.9**	**+0.2**
VRAC	**Vranov**	**99.21**	**321**	⇓P	**P**	**14 56 04.3**	**+1.5**
VRAC	**Vranov**	**99.21**	**321**	P	**P**	**14 56 04.2**	**+1.3**
ZST	**Bratislava**	**99.24**	**320**	*e*P	**P**	**14 56 03.7**	**+0.7**
ZST				*e*		14 56 10.4	
ZST				*e*		15 06 36.2	
ZST	**Bratislava**	**99.24**	**320**	PDIF	**P**	**14 56 03.7**	**+0.7**
ZST				*e*		14 56 10.4	
LSZ	**Lusaka**	**99.25**	**255**	*e*P	**P**	**14 56 03.3**	**-0.5**
LSZ				pmax	pmax		
	comp=Z,67nm,0.9s,mb6.2						
LSZ				MLR	MLR		
	comp=Z,10µm,22.0s,MS6.2						
LSZ	**Lusaka**	**99.25**	**255**	*e*P	**P**	**14 56 03.3**	**-0.5**
	comp=Z,67nm,0.9s,mb6.2						
LSZ				LR	LR		
	comp=Z,10µm,22.0s,MS6.2						
OCWA	**Octopus Mounta**	**99.31**	**40**	*e*P	**P**	**14 56 05.3**	**+2.0**
	comp=Z,28nm,0.8s,mb5.8						
OCWA				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
COP	**Copenhagen**	**99.36**	**328**	*e*P	**P**	**14 56 05.1**	**+1.8**
COP				pmax	pmax		
	comp=Z,36nm,0.6s,mb6.1						
COP	**Copenhagen**	**99.36**	**328**	*i* P	**P**	**14 56 05.1**	**+1.8**
	comp=Z,36nm,0.6s,mb6.1						
RUE	**Ruedersdorf**	**99.82**	**325**	*e*P	**P**	**14 56 05.7**	**+0.1**
	comp=Z,345nm,0.9s,mb6.8						
PVCC	**Panska Ves**	**100.05**	**323**	*e*PDIF	P	14 56 06.3	-0.3
PVCC				*e*SKS	SKS	15 06 39.0	-2.2
PVCC				AMS	AMS	15 43 50.0	
	comp=Z,9µm,20.1s						
PRU	**Pruhonice**	**100.25**	**323**	*e*PDIF	P	14 56 07.7	+0.1
PRU				*e*PP	PP	15 00 12.9	-3.5
PRU				*e*SKS	SKS	15 06 40.1	-2.1
PRU				AMS	AMS	15 44 00.0	
	comp=Z,18µm,20.2s						
PRA	**Prague**	**100.29**	**323**	AMS	AMS	15 44 00.0	
BRG	**Berggiesshubel**	**100.30**	**324**	*i* P	P	14 56 07.9	+0.1
BRG				*e*		15 00 12.0	
BRG				*i*		15 06 43.0	
BRG				pmax	pmax		
	comp=Z,179nm,1.3s						
BRG				MLR	MLR		
	comp=N,10µm,22.6s,MS6.4						
BRG				MLR	MLR		
	comp=E,9µm,22.6s,MS6.4						
BRG				MLR	MLR		
	comp=Z,13µm,22.6s,MS6.4						
BRG	**Berggiesshubel**	**100.30**	**324**	*i* P	P	14 56 07.9	+0.1
	comp=Z,179nm,1.3s						
BRG				*i*		14 56 39.5	
BRG				*i*		14 59 31.1	
BRG				*e*PP	PP	15 00 12.0	-4.7
BRG				*i* SKS	SKS	15 06 43.0	+0.6
BRG				*i* S	S	15 07 27.0	-10
BRG				*i* PS	PS	15 08 59.0	-16
BRG				*i* SS	SS	15 14 28.0	-8.3
BRG				LR	LR		
	comp=Z,13µm,22.6s,MS6.4						
ODD1	**Odda**	**100.32**	**334**	*e*P	P	14 56 07.0	-0.7
	comp=Z,94nm,1.7s						
ODD1	**Odda**	**100.32**	**334**	*e*P	P	14 56 07.0	-0.7
ODD1				AMb	AMB	14 56 21.0	
	comp=Z,94nm,1.7s						
ARSA	**Arzberg**	**100.55**	**320**	⇓*i*P	P	14 56 08.8	-0.2
	comp=Z,420nm,4.4s						
SISC	**Sisak**	**100.55**	**318**	*i* P	P	14 56 11.1	+2.0
BLS5	**Blasjo**	**100.64**	**333**	*e*P	P	14 56 09.8	+0.7
	comp=Z,71nm,0.8s						
BLS5	**Blasjo**	**100.64**	**333**	*e*P	P	14 56 09.8	+0.7
BLS5				AMb	AMB	14 56 18.1	
	comp=Z,71nm,0.8s						
BER	**Bergen**	**100.66**	**334**	*e*SKSa		15 06 44.0	
BER				AMS	AMS	15 44 09.1	
	comp=Z,15µm,26.9s,MS6.4						
CLL	**Collm**	**100.69**	**324**	⇓*i*P	P	14 56 10.4	+0.9
CLL				*e*		15 06 42.0	
CLL				*e*S	S	15 07 33.0	-7.4
CLL				pmax	pmax		
	comp=Z,105nm,1.2s						
CLL				MLR	MLR		
	comp=Z,12µm,20.0s,MS6.4						
CLL	**Collm**	**100.69**	**324**	⇓*i*P	P	14 56 10.4	+0.9
	comp=Z,105nm,1.2s						
CLL				*e*SKS	SKS	15 06 42.0	-2.3
CLL				*e*S	S	15 07 33.0	-7.4
CLL				LR	LR		
	comp=Z,12µm,20.0s,MS6.4						
CLL	**Collm**	**100.69**	**324**	P	P	14 56 09.0	-0.5
	comp=Z,logA/T=1.9						
CLL				*e**PP		14 56 21.0	
CLL				*e*PP	PP	15 00 12.0	-7.9
CLL				*e*		15 06 42.0	
CLL				*e*S	S	15 07 33.0	-7.4
CLL				*e*SP	SP	15 09 06.0	-8.7
CLL				*e*		15 09 44.0	
CLL				*e*PPS	PPS	15 10 05.0	-2.8
CLL				*e*SS	SS	15 14 48.0	+6.2
CLL				*e*		15 19 24.0	
MUD	**Monsted U'grnd**	**100.70**	**330**	*i* P	P	14 56 09.1	-0.4
MUD				pmax	pmax		
	comp=Z,45nm,0.8s						
MUD	**Monsted U'grnd**	**100.70**	**330**	*i* P	P	14 56 09.1	-0.4
	comp=Z,45nm,0.8s						
COR	**Corvallis**	**100.85**	**43**	PFAKE		14 56 20.0	+10
COR				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
PERS	**Pernice**	**101.01**	**319**	*e*Pdiff	P	14 56 11.2	+0.1
PERS				*e*PP	PP	15 00 21.4	-1.2
PERS				*e*		15 04 22.9	
PERS				*e*SKSac		15 06 43.9	
PERS				*e*Sdiff		15 07 48.9	
KHC	**Kasperske Hory**	**101.14**	**322**	*e*P	P	14 56 11.5	-0.1
KHC				*e*		15 00 20.2	
KHC				*e*		15 06 44.4	
KHC				MLR	MLR		
	comp=Z,13µm,20.1s,MS6.4						
KHC	**Kasperske Hory**	**101.14**	**322**	*e*P	P	14 56 11.5	-0.1
KHC				*e*		14 56 28.5	
KHC				*e*PP	PP	15 00 20.2	-3.1
KHC				*e*SKS	SKS	15 06 44.4	-2.1
KHC				LR	LR		
	comp=Z,13µm,20.1s,MS6.4						
KHC	**Kasperske Hory**	**101.14**	**322**	*e*PDIF	P	14 56 11.5	-0.1
KHC				x	x	14 56 28.5	
KHC				*e*PP	PP	15 00 20.2	-3.1
KHC				*e*SKS	SKS	15 06 44.4	-2.1
KHC				AMS	AMS	15 44 40.0	
	comp=Z,13µm,20.1s						
MOA	**Molln**	**101.15**	**321**	⇑*i*P	P	14 56 12.0	+0.3
	comp=Z,270nm,3.6s						
GEC2	**GERESS Array S**	**101.16**	**322**	*e*P	P	14 56 12.5	+0.8
GEC2				*e*		15 06 47.4	
GERES	**GERESS Array B**	**101.16**	**322**	P	P	14 56 11.6	-0.1
GERES				pmax	pmax		
	comp=Z,35nm,0.9s						
GERES				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**101.16**	**322**	P	P	14 56 11.6	-0.1
	comp=Z,35nm,0.9s,baz=72,slow=4.2,SNR=92						
GERES				PKiKP		15 00 38.7	
	comp=Z,7.6nm,1.0s,baz=73,slow=2.8,SNR=5.0						
GERES				PKKPbc		15 12 23.7	
	comp=Z,1.4nm,0.8s,baz=166,slow=4.0,SNR=2.9						
BSEG	**Bad Segeberg**	**101.18**	**327**	*e*P	P	14 56 12.6	+1.0
BSEG				*e*		15 06 48.2	
NKC	**Novy Kostel**	**101.42**	**323**	*e*PDIF	P	14 56 12.9	+0.1
NKC				*e*SKS	SKS	15 06 44.4	-3.5
NKC				AMS	AMS	15 44 30.0	
	comp=Z,13µm,20.3s						
OBKA	**Obir**	**101.42**	**319**	⇑*i*P	P	14 56 12.8	-0.1
	comp=Z,301nm,3.0s						
WET	**Wettzell**	**101.56**	**322**	*e*P	P	14 56 14.4	+0.9
WET				*e*		15 06 49.0	
LJU	**Ljubljana**	**101.59**	**319**	*e*Pdiff	P	14 56 13.8	+0.1
LJU				*e*PP	PP	15 00 27.0	+0.4
LJU				*e*SKSac		15 06 48.1	
LJU				*e*Sdiff		15 07 51.7	
LJU				*e*SP	SP	15 09 37.9	+14
LJU				*e*		15 10 44.0	
LJU				*e*SS	tx	15 15 39.1	
HUMO	**Hull Mountain**	**101.69**	**45**	PFAKE		14 56 30.0	+16
HUMO				LR	LR		
	comp=Z,5µm,20.0s,MS6.0						
MOX	**Moxa**	**101.76**	**324**	*e*P	P	14 56 13.9	-0.4
MOX				pmax	pmax		
	comp=Z,76nm,1.1s						
MOX				MLR	MLR		
	comp=Z,8µm,21.0s,MS6.2						
MOX	**Moxa**	**101.76**	**324**	*e*P	P	14 56 13.9	-0.4
	comp=Z,76nm,1.1s						
MOX				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
MOX	**Moxa**	**101.76**	**324**	*i* P	P	14 56 13.9	-0.4
	comp=Z,logA/T=1.8						
MOX				PP	PP	15 00 19.0	-8.7
MOX				SKS	SKS	15 06 53.0	+3.5
MOX				S	S	15 07 50.0	+0.8
MOX				PS	tx	15 09 10.0	
MOX				PPS	PPS	15 10 20.0	-0.6
MOX				SSS	SSS	15 18 40.0	-10
MOX				L		15 45 31.0	
LBTB	**Lobatse**	**101.88**	**246**	*e*P	P	14 56 15.5	0.0
LBTB				pmax	pmax		
	comp=Z,28nm,1.0s						
LBTB				MLR	MLR		
	comp=Z,6µm,21.0s,MS6.1						
LBTB	**Lobatse**	**101.88**	**246**	P	P	14 56 16.0	+0.5
	comp=Z,18nm,0.9s,baz=118,slow=4.5,SNR=21						
LBTB				PP	PP	15 00 26.4	-2.7
	comp=Z,8.1nm,0.8s,baz=112,slow=8.0,SNR=3.7						
LBTB	**Lobatse**	**101.88**	**246**	*e*Pdif	P	14 56 15.5	0.0
	comp=Z,28nm,1.0s						
LBTB				LR	LR		
	comp=Z,6µm,21.0s,MS6.1						
CLZ	**Clausthal**	**102.00**	**325**	*e*Pdif	Pdif	14 56 16.8	+1.4
CLZ				*e*SKSac		15 06 51.7	
CLZ				*e*		15 07 53.1	

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KBA  Koelnbreinsper  102.00 320⇑iP      Pdif     14 56 15.3 -0.2
     comp=Z,524nm,5.2s
KBA  Koelnbreinsper  102.00 320⇑iP      Pdif     14 56 15.3 -0.2
KBA                              pmax   pmax
     comp=Z,524nm,5.2s
VOY  Vojsko          102.01 319 ePdiff  Pdif     14 56 15.2 -0.4
CADS Cadrg           102.05 319 ePdiff  Pdif     14 56 15.3 -0.4
YBH  Yreka Blue Hor  102.13  46  P      Pdif     14 56 19.8 +3.6
YBH                              pmax   pmax
     comp=Z,3.0nm,1.0s
YBH                              pmax   pmax
     comp=Z,1.0nm,0.6s
YBH  Yreka Blue Hor  102.13  46  P      Pdif     14 56 19.8 +3.6
     comp=Z,3.3nm,0.9s,baz=210,slow=13,SNR=3.9
YBH                              PKKPbc          15 12 21.3
     comp=Z,1.4nm,0.6s,baz=141,slow=4.7,SNR=3.2
BOSA Boshof          102.14 242  P      Pdif     14 56 16.2 -0.4
BOSA                             pmax   pmax
     comp=Z,19nm,1.1s
BOSA                             MLR    MLR
     comp=Z,3µm,20.0s,MS5.8
BOSA Boshof          102.14 242  Pdif   Pdif     14 56 16.2 -0.4
     comp=Z,19nm,1.1s
BOSA                             LR     LR
     comp=Z,3µm,20.0s,MS5.8
SUMG Summit          102.22 355 ePdif   Pdif     14 56 17.1 +1.2
     comp=Z,21nm,0.8s
GRA1 Grafenberg Arr  102.36 323 ePdif   Pdif     14 56 18.1 +1.1
GRA1                            ePP     PP       15 00 33.5 +1.3
GRA1                            eSKSac           15 06 52.8
GRA1                            e                15 07 55.7
GRA1                             LR     LR
     comp=Z,17µm,21.2s,MS6.5
GRF  Grafenberg Arr  102.36 323 eP      Pdif     14 56 18.1 +1.1
GRF                             e                15 00 33.5
GRF                             e                15 06 52.8
GRF                             e                15 07 55.7
GRF                              MLR    MLR
     comp=Z,17µm,21.2s,MS6.5
WDC  Whiskeytown Da  102.60  47  PFAKE           14 56 30.0  +12
WDC                              LR     LR
     comp=Z,12µm,20.0s,MS6.4
HOPS Hopland         102.67  48  PFAKE           14 56 30.0  +11
HOPS                             LR     LR
     comp=Z,9µm,20.0s,MS6.3
FUR  Furstenfeldbru  102.91 322 eP      Pdif     14 56 19.6 +0.1
FUR                             e                15 06 54.1
WTTA Wattenberg      103.02 321⇑iP      Pdif     14 56 19.4 -0.6
     comp=Z,177nm,2.8s
WTTA Wattenberg      103.02 321⇑iP      Pdif     14 56 19.4 -0.6
WTTA                             pmax   pmax
     comp=Z,177nm,2.8s
WATA Walderalm       103.03 321⇓iP      Pdif     14 56 19.9 -0.2
     comp=Z,41nm,1.2s
WATA Walderalm       103.03 321⇓iP      Pdif     14 56 19.9 -0.2
WATA                             pmax   pmax
     comp=Z,41nm,1.2s
SQTA Sankt Quirin    103.31 321⇑iP      Pdif     14 56 20.0 -1.3
     comp=Z,44nm,1.2s
SQTA Sankt Quirin    103.31 321⇑iP      Pdif     14 56 20.0 -1.3
SQTA                             pmax   pmax
     comp=Z,44nm,1.2s
MOTA Moosalm         103.33 321⇑iP      Pdif     14 56 20.4 -1.0
     comp=Z,14nm,0.9s
MOTA Moosalm         103.33 321⇑iP      Pdif     14 56 20.4 -1.0
MOTA                             pmax   pmax
     comp=Z,14nm,0.9s
NEW  Newport         103.56  38 eP      Pdif     14 56 23.4 +1.0
NEW                              pmax   pmax
     comp=Z,27nm,1.3s
NEW                              MLR    MLR
     comp=Z,5µm,21.0s
NEW  Newport         103.56  38  Pdiff  Pdif     14 56 26.2 +3.8
     comp=Z,3.8nm,0.6s,baz=239,slow=4.6,SNR=6.2
NEW                              PP     PP       15 00 37.2 -4.2
     comp=Z,2.0nm,0.5s,baz=58,slow=5.3,SNR=3.5
NEW  Newport         103.56  38 ePdif   Pdif     14 56 23.4 +1.1
     comp=Z,27nm,1.3s
NEW                              LR     LR
     comp=Z,5µm,21.0s,MS6.0
EDM  Edmonton        103.60  32 eP      Pdif     14 56 24.7 +2.3
WIT  Witteveen       103.64 327 eP      Pdif     14 56 24.3 +1.8
MOD  Modoc           103.78  45  PFAKE           14 56 40.0  +17
MOD                              LR     LR
     comp=Z,4µm,19.0s,MS6.0
TNS  Taunus Mts      103.78 324 eP      Pdif     14 56 25.0 +1.7
TNS                             e                15 07 01.1
TOD  Tromm           103.83 324 eP      Pdif     14 56 23.3 -0.2
WTSB Winterswijk     103.95 326⇑iP      Pdif     14 56 24.3 +0.4
     comp=Z,57nm,1.3s
DAVA Damuels         104.12 321⇑iP      Pdif     14 56 25.4 +0.6
     comp=Z,579nm,6.5s
PTCN Pitcairn Islan  104.12 115  PFAKE           14 56 40.0  +15
PTCN                             LR     LR
     comp=Z,4µm,21.0s,MS5.9
KTD  Kalmit          104.38 324 eP      Pdif     14 56 27.3 +1.4
ABH  Alteburg        104.45 324 eP      Pdif     14 56 27.0 +0.8
SPAK Spaichingen     104.47 322 eP      Pdif     14 56 26.1 -0.2
SAO  San Andreas Ge  104.56  50  PFAKE           14 56 40.0  +13
SAO                              LR     LR
     comp=Z,5µm,20.0s,MS6.0
BFO  Black Forest    104.65 323 eP      Pdif     14 56 27.4 +0.3
BFO                             e                15 00 49.3
BFO                             e                15 08 13.3
LANF Langenberg      104.69 323 eP      Pdif     14 56 28.1 +0.8
WVOR Wild Horse Val  104.76  44  PFAKE           14 56 40.0  +12
WVOR                             LR     LR
     comp=Z,7µm,21.0s,MS6.2
BMO  Blue Mountains  104.77  41 eP      Pdif     14 56 30.3 +2.5
BMO                              pmax   pmax
     comp=Z,4.0nm,0.9s
BMO                              MLR    MLR
     comp=Z,4µm,21.0s,MS6.0
BMO  Blue Mountains  104.77  41 ePdif   Pdif     14 56 30.3 +2.5
     comp=Z,4.4nm,0.9s
BMO                              LR     LR
     comp=Z,4µm,21.0s,MS6.0
RUP  Ruppelstein     104.81 324 eP      Pdif     14 56 28.2 +0.4
STR  Strasbourg      104.88 323 eP      Pdif     14 56 29.2 +1.0
CMB  Columbia Colle  104.97  49  PFAKE           15 01 00.0
CMB                              LR     LR
     comp=Z,8µm,19.0s,MS6.3
HGN  Heimansgroeve   104.98 326⇑iP      Pdif     14 56 29.5 +0.9
     comp=Z,52nm,1.5s
HGN                             ePP     PP       15 00 41.6  -11
HGN                             eS      SKS      15 06 57.6 -6.8
HGN                             ex      x        15 09 56.2
FELD Feldberg        105.04 322 eP      Pdif     14 56 29.3 +0.4
LIBD Limburg         105.17 323 eP      Pdif     14 56 29.0 -0.4
WLS  Welschbruch     105.20 323 eP      Pdif     14 56 30.2 +0.6
WLF  Walferdange     105.36 324 eP      Pdif     14 56 31.5 +1.3
WLF                              pmax   pmax
     comp=Z,57nm,0.9s
WLF  Walferdange     105.36 324 ePdif   Pdif     14 56 31.5 +1.3
     comp=Z,57nm,0.9s
WLF                             e                14 56 44.5
ECH  Echery          105.41 323 eP      Pdif     14 56 30.0 -0.5
MOF  Molkenrain      105.58 322 eP      Pdif     14 56 28.1 -3.1
HINF Hinteralfeld    105.76 323 eP      Pdif     14 56 32.6 +0.5
SUR  Sutherland      105.78 238  Pdiff  Pdif     14 56 34.9 +2.4
     comp=Z,6.5nm,0.8s,baz=191,slow=10,SNR=2.9
SUR  Sutherland      105.78 238  Pdif   Pdif     14 56 34.9 +2.4
SUR                              LR     LR
     comp=Z,2µm,21.0s,MS5.7
GIVF Givet           105.92 325 eP      Pdif     14 56 34.1 +1.4
     comp=Z,86nm,1.0s
GIVF Givet           105.92 325 eP      Pdif     14 56 34.1 +1.4
GIVF                             pmax   pmax
     comp=Z,43nm,1.0s
LOMF Lomont          105.98 322 eP      Pdif     14 56 25.3 -7.7
HAU  Haudompre       105.99 323 eP      Pdif     14 56 33.4 +0.4
THEF They Montfort   106.10 323 eP      Pdif     14 56 33.3 -0.2
MSO  Missoula        106.12  38 ePP     PP       15 00 58.6 -1.8
MSO                              LR     LR
     comp=Z,4µm,21.0s,MS5.9
BAIF Baives          106.29 325 eP      Pdif     14 56 35.8 +1.5
NVAR Mina Array Bea  106.39  48  Pdiff  Pdif     14 56 39.4 +4.3
     comp=Z,2.7nm,0.7s,baz=290,slow=3.4,SNR=7.7
NVAR                             PP     PP       15 00 56.3 -6.5
     comp=Z,2.8nm,0.7s,baz=278,slow=4.6,SNR=5.0
NVAR                             PKKP   PKKP     15 12 18.9 +8.1
     comp=Z,6.6nm,0.8s,baz=144,slow=3.3,SNR=5.1
BMN  Battle Mountai  106.47  46  PFAKE           15 01 00.0
BMN                              LR     LR
     comp=Z,6µm,20.0s,MS6.1
MNV  Mina            106.50  48  PFAKE           15 01 00.0
MNV                              LR     LR
     comp=Z,6µm,19.0s,MS6.2
MEZF Maizieres J'vi  106.53 324 eP      Pdif     14 56 35.7 +0.3
BORG Borgarnes       106.72 346  PFAKE           15 01 00.0
BORG                             LR     LR
     comp=Z,3µm,22.0s,MS5.7
CABF La Chapelle     106.76 322 eP      Pdif     14 56 36.6 +0.1
LPG  La Plagne       106.83 320 eP      Pdif     14 56 37.2 +0.4
     comp=Z,34nm,0.9s
LPG  La Plagne       106.83 320 eP      Pdif     14 56 37.2 +0.4
LPG                              pmax   pmax
     comp=Z,17nm,0.9s
LPL  La Plagne       106.83 320 eP      Pdif     14 56 37.0 +0.2
     comp=Z,54nm,1.0s
LPL  La Plagne       106.83 320 eP      Pdif     14 56 37.0 +0.2
LPL                              pmax   pmax
     comp=Z,27nm,1.0s
HLID Hailey          107.19  42  PFAKE           15 01 00.0
HLID                             LR     LR
     comp=Z,5µm,20.0s,MS6.1
EKA  Eskdalemuir Ar  107.22 333  PKKPbc          15 12 07.8
     comp=Z,2.0nm,0.7s,baz=256,slow=2.9,SNR=3.4
EKA                              PKKP   PKKP     15 12 16.8 +7.9
     comp=Z,4.7nm,0.9s,baz=270,slow=2.5,SNR=6.3
ESK  Eskdalemuir     107.25 333  PFAKE           15 01 00.0
ESK                              LR     LR
     comp=Z,3µm,20.0s,MS5.8
TPH  Tonopah         107.31  48  PFAKE           15 01 00.0
TPH                              LR     LR
     comp=Z,6µm,21.0s,MS6.1
ORIF Oris-en-Rattie  107.64 320 eP      Pdif     14 56 41.4 +1.0
     comp=Z,16nm,0.9s
ORIF Oris-en-Rattie  107.64 320 eP      Pdif     14 56 41.4 +1.0
ORIF                             pmax   pmax
     comp=Z,8.0nm,0.9s
DAC  Darwin (Calif)  107.65  50  PFAKE           15 01 00.0
DAC                              LR     LR
     comp=Z,5µm,19.0s,MS6.1
ELK  Elko            107.75  45 eP      Pdif     14 56 44.7 +3.7
ELK                              pmax   pmax
     comp=Z,4.0nm,0.9s
ELK                              MLR    MLR
     comp=Z,5µm,19.0s
ELK  Elko            107.75  45 ePdif   Pdif     14 56 44.7 +3.7
     comp=Z,4.2nm,0.9s
ELK                              LR     LR
     comp=Z,5µm,19.0s,MS6.1
BOZ  Bozeman (W)     108.08  39  P      Pdif     14 56 57.5  +15
BOZ  Bozeman (W)     108.08  39  PFAKE           15 01 00.0
BOZ                              LR     LR
     comp=Z,4µm,21.0s,MS6.0
SMF  Signal de Mont  108.12 322 eP      Pdif     14 56 43.4 +0.9
     comp=Z,17nm,0.9s
SMF  Signal de Mont  108.12 322 eP      Pdif     14 56 43.4 +0.9
SMF                              pmax   pmax
     comp=Z,9.0nm,0.9s
SSF  Saint Saulge    108.13 323 eP      Pdif     14 56 43.4 +0.9
AVF  Avril sur Loir  108.35 323 eP      Pdif     14 56 44.2 +0.7
     comp=Z,18nm,0.8s
AVF  Avril sur Loir  108.35 323 eP      Pdif     14 56 44.2 +0.7
AVF                              pmax   pmax
     comp=Z,9.0nm,0.8s
SFJ  Sondre          108.40 359 ePP     PP       15 01 13.3 -3.8
SFJ                              LR     LR
     comp=Z,4µm,20.0s,MS5.9
TCF  Toulx Ste Croi  109.28 323 eP      Pdif     14 56 48.8 +1.2
     comp=Z,43nm,1.1s
TSUM Tsumeb          109.42 251  Pdiff  Pdif     14 56 50.2 +1.4
     comp=Z,4.3nm,0.9s,baz=96,slow=5.4,SNR=8.3
TSUM                             PKiKP           15 00 54.2
     comp=Z,2.5nm,0.8s,SNR=3.3
TSUM Tsumeb          109.42 251  Pdif   Pdif     14 56 50.2 +1.4
TSUM                             PKPdf           15 00 54.2
TSUM                             LR     LR
     comp=Z,7µm,22.0s,MS6.2
PFO  Pinyon Flat Ob  109.43  52  PFAKE           15 01 00.0
PFO                              LR     LR
     comp=Z,912nm,21.0s,MS5.3
LDF  La Druitiere    109.47 326 eP      Pdif     14 56 48.4  0.0
     comp=Z,81nm,1.3s
DUG  Dugway          109.67  44  PFAKE           15 01 00.0
DUG                              LR     LR
     comp=Z,4µm,19.0s,MS6.0
AHID Auburn Hatcher  109.72  41  PFAKE           15 01 00.0
AHID                             LR     LR
     comp=Z,5µm,21.0s,MS6.1
HWUT Hardware Ranch  109.93  43  PFAKE           15 01 10.0
HWUT                             LR     LR
     comp=Z,8µm,20.0s,MS6.3
RJF  Les Rejaudoux   110.19 322 eP      Pdif     14 56 52.6 +1.0
     comp=Z,44nm,1.0s
MFF  Saint Martin d  110.53 324 eP      Pdif     14 56 55.5 +2.4
     comp=Z,55nm,0.9s
BW06 Boulder Array   110.73  41  PFAKE           15 01 10.0  +17
BW06                             LR     LR
     comp=Z,5µm,21.0s,MS6.1
PDAR Pinedale Array  110.73  41  Pdiff  Pdif     14 56 58.0 +4.0
     comp=Z,0.4nm,0.7s,baz=270,slow=3.0,SNR=4.6
PDAR                             PKiKP           15 00 56.2
     comp=Z,1.8nm,0.9s,baz=315,slow=2.1,SNR=5.2
PDAR                             PP     PP       15 01 27.4 -7.3
     comp=Z,4.4nm,0.9s,baz=83,slow=4.0,SNR=5.9
PDAR                             PKKPbc          15 11 51.4
     comp=Z,1.1nm,0.6s,baz=133,slow=5.3,SNR=7.4
PDAR                             PKKPab          15 12 05.5
     comp=Z,9.9nm,0.9s,baz=124,slow=5.3,SNR=10
FRB  Frobisher Bay   110.76   7  PKKPab          15 11 59.7
     comp=Z,2.1nm,0.6s,baz=137,slow=5.7,SNR=4.2
FRB                              PKKP   PKKP     15 12 13.1  +11
     comp=Z,5.0nm,0.7s,baz=152,slow=5.4,SNR=7.1
MVU  Marysvale       110.79  46  PFAKE           15 01 10.0  +17
MVU                              LR     LR
     comp=Z,10µm,20.0s,MS6.4
LAO  LASA Array      110.84  36  PFAKE           15 01 10.0  +17
LAO                              LR     LR
     comp=Z,4µm,21.0s,MS6.0
DGMT Dagmar          111.02  33  PFAKE           15 01 10.0  +17
DGMT                             LR     LR
     comp=Z,3µm,21.0s,MS5.9
PV10 Paradox Valley  113.09  45 ePKPdf  PKPdf    15 01 01.6 +4.0
RSSD Black Hills     113.52  37  PFAKE           15 01 10.0  +12
RSSD                             LR     LR
     comp=Z,1.0nm,21.0s
PV01 Paradox Valley  113.53  45 ePKPdf  PKPdf    15 01 03.9 +5.5
ULM  Lac du Bonnet   114.17  28  PKKPbc          15 11 42.4
     comp=Z,6.8nm,1.0s,baz=115,slow=0.6,SNR=4.6
ULM                              PKKPab          15 11 50.7
     comp=Z,1.5nm,0.5s,baz=118,slow=7.1,SNR=3.5
TUC  Tucson          114.34  51  PFAKE           15 01 10.0  +10
TUC                              LR     LR
     comp=Z,3µm,20.0s,MS5.9
ISCO Idaho Springs   114.77  42 ePKPdf  PKPdf    15 01 01.7 +0.9
ISCO                             LR     LR
     comp=Z,7µm,21.0s,MS6.3
SDCO Great Sand Dun  115.86  44 ePKPdf  PKPdf    15 01 06.2 +3.2
SDCO                             LR     LR
     comp=Z,9µm,22.0s,MS6.3
ANMO Albuquerque     116.49  47  PKKPbc          15 11 40.9
     comp=Z,7.8nm,1.2s,baz=70,slow=3.9,SNR=5.1
ANMO Albuquerque     116.49  47 ePKP    PKPdf    15 01 07.9 +3.6
ANMO                            e                15 01 20.4
ANMO                             LR     LR
     comp=Z,5µm,19.0s,MS6.1
ESDC Sonseca Array   116.55 319  PKP    PKPdf    15 01 09.7 +5.4
     comp=Z,1.1nm,0.5s,baz=344,slow=0.3,SNR=6.6
ESDC                             PP     PP       15 02 08.0 -8.6
     comp=Z,5.6nm,0.8s,baz=50,slow=7.7,SNR=5.1
ESDC                             PKKPab          15 11 37.5
     comp=Z,1.8nm,0.8s,baz=259,slow=2.7,SNR=4.2
ESDC                             PKKP   PKKP     15 11 56.8 +5.3
     comp=Z,5.3nm,0.9s,baz=243,slow=4.6,SNR=4.6
ESLA Sonseca Array   116.55 319  PFAKE           15 01 20.0  +16
ESLA                             LR     LR
     comp=Z,23µm,20.0s,MS6.8
PBRG Braganca        117.13 322 ePKPdf  PKPdf    15 01 06.8 +1.5
EYMN Ely             117.84  28  PFAKE           15 01 20.0  +14
EYMN                             LR     LR
     comp=Z,5µm,22.0s,MS6.1
PVRL Vila Real       118.03 322 ePKPdf  PKPdf    15 01 08.7 +1.7
MTE  Manteigas       118.44 321 ePKPdf  PKPdf    15 01 10.5 +2.6
MTE                             i -              15 12 46.3
MTE                             i LQ             15 37 20.3
MTE                             eLR     LR       15 40 51.4
     comp=Z,8µm,25.1s
PVIS Viseu           118.47 322 ePKPdf  PKPdf    15 01 10.9 +3.0
PCBR Castelo Branco  118.72 321 ePKPdf  PKPdf    15 01 10.7 +2.3
MNTX Cornudas Mount  118.77  50 ePKP    PKPdf    15 01 10.9 +2.2
MNTX                            e                15 01 23.9
MNTX                             LR     LR
     comp=Z,4µm,20.0s,MS6.1
CBKS Cedar Bluff     119.15  40  PFAKE           15 01 20.0  +11
CBKS                             LR     LR
     comp=Z,8µm,21.0s,MS6.3
SCHQ Schefferville   119.60   9  PKKPbc          15 11 22.1
     comp=Z,2.5nm,0.7s,baz=207,slow=4.5,SNR=4.4
PMSA Palmer Station  119.61 175  PFAKE           15 01 20.0  +10
PMSA                             LR     LR
     comp=Z,5µm,19.0s,MS6.2
EVO  Evora           119.81 320 eP      PKPdf    15 01 11.2 +0.6
     comp=Z,24nm,0.8s
PBEJ Beja            120.00 319 ePKPdf  PKPdf    15 01 13.7 +2.7
PALC Alcoutim        120.06 319 ePKPdf  PKPdf    15 01 12.6 +1.4
PTEO Sao Teotonio    120.84 319 i -              15 01 24.1
KSU1 Kansas State U  120.96  38 ePKP    PKPdf    15 01 14.4 +1.6
KSU1                            e                15 01 27.4
LTX  Lajitas         121.14  52  PKP    PKPdf    15 01 15.8 +2.3
LTX                             e                15 01 28.4
LTX                              LR     LR
     comp=Z,5µm,20.0s,MS6.2
TXAR Lajitas Array   121.14  52  PKP    PKPdf    15 01 15.6 +2.2
     comp=Z,3.3nm,0.7s,baz=336,slow=0.6,SNR=15
TXAR                             PKKPbc          15 11 16.5
     comp=Z,1.0nm,0.6s,baz=127,slow=4.5,SNR=5.6
TXAR                             PKKP   PKKP     15 11 46.0 +2.5
     comp=Z,6.1nm,0.8s,baz=141,slow=5.8,SNR=6.6
TXAR Lajitas Array   121.14  52  PKP    PKPdf    15 01 15.6 +2.2
TXAR                             PKKPbc          15 11 16.5
TXAR                             PKKP   PKKP     15 11 46.0 +2.5
WMOK Wichita Mounta  122.06  44 ePKP    PKPdf    15 01 16.0 +1.0
WMOK                             LR     LR
     comp=Z,7µm,21.0s,MS6.3
JFWS Jewell Farm     122.06  31 ePKP    PKPdf    15 01 16.5 +1.6
JFWS                             LR     LR
     comp=Z,4µm,22.0s,MS6.0
JCT  Junction City   123.56  49 ePKP    PKPdf    15 01 19.9 +1.8
JCT                             e                15 01 32.9
JCT                              LR     LR
     comp=Z,4µm,20.0s,MS6.1
CCM  Cathedral Cave  124.86  36 ePKP    PKPdf    15 01 22.3 +1.8
CCM                             epPKP            15 01 33.1
CCM                              LR     LR
     comp=Z,810nm,19.0s,MS5.4
SFJM Santa Fe        125.28  61 eP      PKPdf    15 01 26.5 +4.8
FVM  French Village  125.38  36 ePKP    PKPdf    15 01 22.6 +1.2
MIAR Mount Ida       125.66  41 ePKP    PKPdf    15 01 24.6 +2.5
MIAR                            e                15 01 36.7
MIAR                             LR     LR
     comp=Z,8µm,21.0s,MS6.4
AAM  Ann Arbor       125.74  27  PFAKE           15 01 40.0  +18
AAM                              LR     LR
     comp=Z,4µm,21.0s,MS6.1
UALR University of   126.31  40 ePKP    PKPdf    15 01 27.9 +4.6
NATX Nacogdoches     126.58  44  PKP    PKPdf    15 01 27.7 +3.8
NATX                            e                15 01 37.8
NATX                             LR     LR
     comp=Z,5µm,21.0s,MS6.2
HKT  Hockley         126.76  47 ePKP    PKPdf    15 01 28.9 +4.6
HKT                             epPKP            15 01 38.0
HKT                              LR     LR
     comp=Z,1µm,19.0s,MS5.7
PQI  Presque Isle    127.21  13  PFAKE           15 01 40.0  +15
PQI                              LR     LR
     comp=Z,19µm,20.0s,MS6.8
ERPA Erie            127.49  25  PKP    PKPdf    15 01 27.0 +1.6
ERPA                             LR     LR
     comp=Z,5µm,21.0s,MS6.2
WCI  Wyandotte Cave  127.52  33 ePKP    PKPdf    15 01 28.1 +2.5
WCI                              LR     LR
     comp=Z,1µm,22.0s,MS5.6
ACSO Alum Creek Sta  127.68  28 ePKP    PKPdf    15 01 28.4 +2.6
ACSO                             LR     LR
     comp=Z,4µm,20.0s,MS6.1
GENY Geneseo         127.81  23 ePKP    PKPdf    15 01 27.6 +1.6
NCB  Newcomb         128.03  19 ePKP    PKPdf    15 01 28.4 +2.0
MIV  Mineville/With  128.16  18 ePKP    PKPdf    15 01 28.9 +2.3
WVT  Waverly         128.16  36 ePKP    PKPdf    15 01 28.4 +1.6
WVT                              LR     LR
     comp=Z,4µm,22.0s,MS6.1
OXF  Oxford          128.32  38 ePKP    PKPdf    15 01 30.0 +2.8
OXF                             eSKP             15 04 42.8
OXF                              LR     LR
     comp=Z,5µm,20.0s,MS6.2
USHA Ushuaia         128.62 169  PKP    PKPdf    15 01 31.8 +4.6
     comp=Z,11nm,0.6s,baz=257,slow=5.0,SNR=7.5
ACCN Adirondack Com  128.74  19 ePKP    PKPdf    15 01 29.5 +1.8
WVL  Waterville      128.81  15  PFAKE           15 01 40.0  +12
WVL                              LR     LR
     comp=Z,14µm,21.0s,MS6.6
HNH  Hanover         128.87  17 ePKP    PKPdf    15 01 29.7 +1.7
BINY Binghamton      128.99  21 ePKP    PKPdf    15 01 30.5 +2.3
BINY                             LR     LR
     comp=Z,4µm,21.0s,MS6.0
EMMW East Machias    129.20  13  PFAKE           15 01 40.0  +11
EMMW                             LR     LR
     comp=Z,20µm,21.0s,MS6.8
MCWV Mont Chateau    129.58  26  PFAKE           15 01 40.0  +11
MCWV                             LR     LR
     comp=Z,5µm,22.0s,MS6.1
SSPA Standing Stone  129.60  24 ePKP    PKPdf    15 01 31.2 +1.7
SSPA                            eSKP             15 04 44.2
SSPA                             LR     LR
     comp=Z,971nm,22.0s,MS5.5
PPM  Popocatepetl    129.66  61 i P     PKPdf    15 01 36.4 +6.3
DBIC Dimbokro        130.15 283  PKhKP           15 01 20.1
     comp=Z,3.0nm,0.5s,baz=56,slow=3.6,SNR=6.3
DBIC                             PKP    PKPdf    15 01 32.5 +1.3
     comp=Z,19nm,1.1s,baz=26,slow=4.2,SNR=4.5
DBIC                             SKPab           15 04 50.0
     comp=Z,88nm,0.9s,baz=69,slow=3.2,SNR=10.0
DBIC Dimbokro        130.15 283  PKP             15 01 20.1
DBIC                             PKP    PKPdf    15 01 32.5 +1.3
DBIC                             SKPab           15 04 50.0
HRV  Harvard--Oak R  130.19  17  PFAKE           15 01 40.0 +9.5
HRV                              LR     LR
     comp=Z,4µm,21.0s,MS6.1
WES  Weston          130.37  17  PFAKE           15 01 40.0 +9.1
WES                              LR     LR
     comp=Z,4µm,22.0s,MS6.1
PDA  Ponta Delgada   130.44 331 e                15 47 38.0
PDA                             e                15 53 14.0
TRIS Tristan da Cun  130.50 224  PFAKE           15 01 40.0 +8.7
TRIS                             LR     LR
     comp=Z,5µm,20.0s,MS6.2
LRAL Lakeview Retre  130.80  38 ePKP    PKPdf    15 01 35.6 +3.6
LRAL                             LR     LR
     comp=Z,4µm,21.0s,MS6.1
BLA  Blacksburg      131.29  29  PFAKE           15 01 50.0  +17
BLA                              LR     LR
     comp=Z,6µm,22.0s,MS6.2
CBN  Corbin          131.86  25  PFAKE           15 01 50.0  +16
CBN                              LR     LR
     comp=Z,7µm,22.0s,MS6.3
GOGA Godfrey         132.61  35 ePKP    PKPdf    15 01 35.5 +0.1
GOGA                             LR     LR
     comp=Z,4µm,19.0s,MS6.2
NHSC New Hope        134.64  32  PFAKE           15 01 50.0  +11
NHSC                             LR     LR
     comp=Z,4µm,22.0s,MS6.1
DWPF Disney          137.66  38  PFAKE           15 02 00.0  +15
DWPF                             LR     LR
     comp=Z,2µm,21.0s,MS5.7
TEIG Tepich          137.76  53  PFAKE           15 02 00.0  +15
TEIG                             LR     LR
     comp=Z,2µm,22.0s,MS5.8
BBSR BB Station      141.58  15 ePKP    PKPdf    15 01 52.3 +0.5
BBSR                             LR     LR
     comp=Z,3µm,20.0s,MS6.0
PAYG Puerto Ayora    143.03  85 ePKP    PKPdf    15 02 00.5 +5.7
PAYG                             LR     LR
     comp=Z,3µm,20.0s,MS6.0
JTS  JuntasAbangare  145.28  64  PKPbc  PKPbc    15 02 00.8 +1.6
     comp=Z,72nm,0.8s,baz=300,slow=4.7,SNR=21
TRQA Tornquist       145.95 168 ePKP    PKPdf    15 02 01.5 +2.3
CVJ  Coleyville      147.08  45 eP      PKPdf    15 02 06.4 +4.8
LMEL Las Melosas     147.13 154 eP      PKPdf    15 02 06.4 +5.1
MCJ  Malvern         147.17  46 eP      PKPdf    15 02 06.8 +5.0
CLCH Cerro Calan     147.37 153 eP      PKPdf    15 02 05.7 +4.0
FCH  Farellones      147.54 153 eP      PKPdf    15 02 08.1 +6.1
STH  Stony Hill      147.69  45 eP      PKPdf    15 02 06.8 +4.2
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GWJ	**Greenwich**	**147.75**	**45**	*e*P	PKPdf	15 02 05.4	+2.7
LPA	**La Plata**	**149.71**	**173**	*ce*PKP	PKPdf	15 02 07.0	+1.6
LPA				PKIKP	PKPdf	15 02 13.0	+7.6
ZON	**Zonda**	**149.76**	**154**	*e*P	PKPdf	15 02 11.0	+5.4
SJG	**San Juan**	**154.08**	**28**	*e*PKPbc	PKPdf	15 02 22.1	+10
SJG				LR	LR		
	comp=Z,3µm,22.0s,MS6.1						
OTAV	**Otavalo**	**154.58**	**79**	*e*PKP	PKPdf	15 02 18.7	+5.6
OTAV				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
NNA	**Nana**	**155.81**	**109**	PFAKE		15 02 30.0	+15
NNA				LR	LR		
	comp=Z,613nm,21.0s,MS5.4						
LVC	**Limon Verde**	**156.81**	**141**	PKP	PKPdf	15 02 19.1	+3.4
	comp=Z,2.0nm,0.6s,baz=264,slow=2.7,SNR=3.5						
LVC				PKPab	PKPab	15 02 48.6	+0.7
	comp=Z,35nm,0.8s,baz=247,slow=3.2,SNR=12						
LVC	**Limon Verde**	**156.81**	**141**	*e*PKPdf	PKPdf	15 02 21.1	+5.3
LVC				LR	LR		
	comp=Z,3µm,22.0s,MS6.0						
ROSC	**El Rosal**	**157.10**	**66**	PKP	PKPdf	15 02 19.9	+3.5
	comp=Z,5.0nm,0.4s,baz=90,slow=20,SNR=7.9						
SDV	**Santo Domingo**	**158.19**	**52**	*e*PKPdf	PKPdf	15 02 19.9	+2.1
SDV				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
ARE	**Arequipa**	**158.84**	**125**	P	PKPdf	15 02 29.0	+11
LPAZ	**La Paz**	**161.61**	**130**	PKP	PKPdf	15 02 25.7	+4.4
	comp=Z,7.0nm,0.8s,baz=293,slow=1.7,SNR=16						
LPAZ				PKPab	PKPab	15 03 09.5	+0.8
	comp=Z,15nm,0.8s,baz=227,slow=8.4,SNR=2.9						
LPAZ	**La Paz**	**161.61**	**130**	*e*PKPdf	PKPdf	15 02 25.4	+4.1
LPAZ				LR	LR		
	comp=Z,2µm,21.0s						
RCBR	**Riachuelo**	**162.46**	**266**	*e*PKPdf	PKPdf	15 02 25.8	+3.4
RCBR				*e*PKPab	PKPab	15 03 12.6	+0.1
RCBR				LR	LR		
	comp=Z,5µm,22.0s						
BDFB	**Brasilia**	**167.91**	**206**	PKP	PKPdf	15 02 29.9	+3.0
	comp=Z,14nm,1.0s,baz=34,slow=2.0,SNR=12						
BDFB				PKPab	PKPab	15 03 38.3	+2.1
	comp=Z,37nm,0.9s,baz=170,slow=1.8,SNR=4.9						
SAML	**Samuel**	**169.51**	**114**	*e*PKPdf	PKPdf	15 02 30.3	+2.4
SAML				LR	LR		
	comp=Z,4µm,22.0s						

JMA 15 14:51:09.9±0.3, 33.90N×141.96E, h34^{km}, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.11**	**313**	P	P	14 51 29.5	+0.4
BSO1				*e*S	S	14 51 44.2	+0.8
BSO2	**Boso 2**	**1.31**	**311**	S	S	14 51 50.0	+1.5
BSO3	**Boso 3**	**1.50**	**307**	P	P	14 51 35.4	+0.7
BSO4	**Boso 4**	**1.73**	**310**	P	P	14 51 39.3	+1.3
BSO4				S	S	14 52 00.3	+1.3
KTR	**Katsuura**	**1.84**	**313**	P	P	14 51 40.7	+1.1
KTR				S	S	14 52 03.2	+1.2
JHJ2	**Mitsune**	**1.96**	**247**	P	P	14 51 42.7	+1.4
JHJ2				*e*S	S	14 52 05.8	+0.9
JIM2	**Oshima 3**	**2.25**	**292**	P	P	14 51 45.3	-0.1
JIZS	**Izushimoda**	**2.68**	**289**	P	P	14 51 51.5	-0.1
JIZS				S	S	14 52 21.6	-1.6
JOD2	**Odawara 2**	**2.73**	**301**	P	P	14 51 52.2	-0.2
JAG	**Ashikaga**	**3.25**	**322**	P	P	14 52 00.2	+0.5

*CSEM **15** 15:00:21.8, 35.07N×60.05E, h15^{km}, ML3.3, After TEH*

TEH 15 15:00:21.8, 35.07N×60.05E, h15^{km}, Mn3.3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMOG	**Moghan**	**1.18**	**331**	Pg	Pg	15 00 42.9	-2.6
IMYA	**Miamay**	**1.27**	**2**	Pn	Pn	15 00 45.0	0.0
MHI	**Mashhad**	**1.32**	**339**	Pg	Pg	15 00 45.8	-2.4
IKRD	**Kardeh**	**2.10**	**324**	Pn	Pn	15 00 53.5	-3.5
IKRD	**Kardeh**	**2.10**	**324**	Pn	Pn	15 00 53.5	-3.5
IFIR	**Firoozkooh**	**5.99**	**278**	Lg		15 03 28.4	
IFIR	**Firoozkooh**	**5.99**	**278**	Pn	Pn	15 01 49.0	-3.1
IDMV	**Damavand**	**6.57**	**277**	Pn	Pn	15 01 57.1	-3.3
IVRN	**Varamin**	**6.83**	**272**	Pn	Pn	15 01 58.0	-6.0
IQOM	**Qom**	**7.37**	**271**	Pn	Pn	15 02 07.2	-4.5

DJA 15 15:10:32.1±0.4, 8.26S×115.00E, h15^{km}, MD4.4/2, ML3.5/2, 4D, Error ellipse: s-maj=22.6km s-min=4.7km az=9.0, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELI	**Kelakatan**	**0.50**	**274**	⇓*e*Pg	Pg	15 10 40.9	-1.6
KELI				*e*Sg	Sg	15 10 48.4	-1.0
RATI	**Rata**	**0.70**	**131**	⇓*e*Pg	Pg	15 10 44.2	-2.2
SRDI	**Scrawed**	**0.88**	**255**	⇓*e*Pn	Pn	15 10 47.0	-2.7
	60nm,0.2s						
SRDI				*e*Sn	Sn	15 10 59.8	-2.3
KEDI	**Kedomdong**	**1.13**	**102**	⇓*e*Pn	Pn	15 10 50.3	-3.0
	117nm,0.2s						
KEDI				*e*Sn	Sn	15 11 05.4	-3.2

IDC 15 15:19:18.6±1.7, 1.99S×126.34E, mb3.2/2, mb1 3.4/3, mb1mx3.3/15, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=153.5km s-min=25.9km az=71.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.48**	**157**	P	P	15 23 46.5	-3.5
	0.1nm,0.3s,baz=334,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**22.76**	**162**	P	P	15 24 22.9	-1.1
	0.6nm,1.1s,baz=347,slow=7.5,SNR=4.5						
SONM	**Songino Array**	**52.59**	**343**	P	P	15 28 34.4	-1.9
	1.0nm,0.9s,baz=166,slow=5.9,SNR=6.2						

*NEIC **15** 15:49:16.4, 33.38S×70.61W, h94^{km}, MD3.0(GUC), After GUC.*

GUC 15 15:49:16.4±0.7, 33.38S×70.61W, h94^{km}±2^{km}, MD3.0, ML3.6, 7C-10D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLCH	**Cerro Calan**	**0.06**	**104**	⇑*i*P	P	15 49 29.9	+0.3
CLCH				*i*S	S	15 49 40.1	+0.5
CLCH				AMP		15 49 40.7	
	comp=N,4µm,0.2s						
CLCH				AMP		15 49 41.7	
	comp=E,5µm,0.7s						
SAN	**Santiago**	**0.08**	**211**	⇑*i*P	P	15 49 29.8	+0.1
SAN				*i*S	S	15 49 39.9	+0.2
SAN				AMP		15 49 40.5	
	comp=E,5µm,0.2s						
ANTU	**Antumapu**	**0.19**	**186**	*i*P	P	15 49 30.2	+0.3
ANTU				*i*S	S	15 49 40.3	+0.3
ANTU				AMP		15 49 40.6	
	comp=E,2µm,0.2s						
RCDM	**Rinconada Maip**	**0.20**	**237**	⇑*i*P	P	15 49 30.2	+0.3
RCDM				*i*S	S	15 49 40.5	+0.4
RCDM				AMP		15 49 41.1	
	comp=N,12µm,0.1s						
PEL	**Peldehue**	**0.24**	**345**	⇓*i*P	P	15 49 30.6	+0.5
PEL				*i*S	S	15 49 41.2	+0.8
PCH	**Pirque**	**0.25**	**161**	⇓*i*P	P	15 49 30.2	+0.2
PCH				*i*S	S	15 49 40.7	+0.2
FCH	**Farellones**	**0.27**	**79**	⇓*i*P	P	15 49 30.4	+0.2
FCH				*i*S	S	15 49 41.3	+0.7
FCH				AMP		15 49 43.1	
	comp=N,6µm,0.2s						
TACH	**Talagante**	**0.39**	**225**	⇓*i*P	P	15 49 31.0	+0.2
TACH				*i*S	S	15 49 42.0	+0.2
ROCH	**El Roble**	**0.53**	**320**	⇓*i*P	P	15 49 32.3	+0.4
ROCH				*i*S	S	15 49 44.9	+1.3
CHCH	**Chadas Angostu**	**0.55**	**184**	⇑*i*P	P	15 49 32.2	+0.1
CHCH				*i*S	S	15 49 44.2	+0.4
LMEL	**Las Melosas**	**0.58**	**144**	⇓*i*P	P	15 49 32.3	-0.1
LMEL				*i*S	S	15 49 45.1	+0.9
LMEL				AMP		15 49 49.0	
	comp=N,3µm,0.1s						
JACH	**Jahuel**	**0.70**	**1**	⇓*i*P	P	15 49 33.6	+0.1
JACH				*i*S	S	15 49 46.7	+0.5
CACH	**El Canelo**	**0.73**	**179**	⇓*i*P	P	15 49 34.3	+0.5
CACH				*i*S	S	15 49 48.0	+1.2
LCCH	**Las Cruces**	**0.81**	**263**	⇓*i*P	P	15 49 35.2	+0.6
LCCH				*i*S	S	15 49 49.2	+1.2
LNV	**Longovilo**	**0.88**	**229**	⇑*i*P	P	15 49 35.0	-0.2
LNV				*i*S	S	15 49 49.0	-0.4
CICH	**Cipreses**	**0.95**	**170**	⇑*i*P	P	15 49 36.2	+0.2
CICH				*i*S	S	15 49 51.5	+0.8
PACH	**Papudo**	**1.09**	**320**	⇑*i*P	P	15 49 37.7	0.0
PACH				*i*S	S	15 49 53.7	-0.1
SFDO	**San Fernando**	**1.27**	**195**	⇓*i*P	P	15 49 40.2	+0.1
SFDO				*i*S	S	15 49 58.3	+0.6

*NEIC **15** 15:55:21.3±1.3, 2.40N×84.48W, h38^{km}±13^{km}, mb4.3/2, Error ellipse: s-maj=14.9km s-min=12.0km az=210.0*
*IDC **15** 15:55:24.4±5.9, 2.68N×84.26W, h56^{km}±50^{km}, mb3.7/6, mb1 4.1/9, mb1mx3.8/20, mbtmp4.1/9, ML2.4/1, Error ellipse: s-maj=72.7km s-min=17.4km az=59.0*

ISC 15 15:55:19.6±1.5, 2.46N±0.09×84.54W±0.08, h36^{km}±16^{km}, n19, σ0^{s}93/16, mb4.0/8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**6.47**	**110**	*e*Pn	**P**	**15 56 50.9**	**-4.0**
PAYG	**Puerto Ayora**	**6.53**	**242**	*e*P	**P**	**15 56 55.6**	**-0.1**
JTS	**JuntasAbangare**	**7.80**	**357**	P	**P**	**15 57 13.0**	**-0.3**
	4.2nm,0.3s,baz=187,slow=20,SNR=18						
JTS				S	**S**	**15 58 36.5**	**-4.8**
	baz=338,slow=19						
ROSC	**El Rosal**	**10.46**	**77**	P	**P**	**15 57 49.8**	**-0.6**
	0.7nm,0.3s,baz=90,slow=20,SNR=4.8						
SDV	**Santo Domingo**	**15.23**	**65**	P	**P**	**15 58 55.8**	**+1.9**
	baz=225,slow=1.4						
SAML	**Samuel**	**24.11**	**118**	*e*P	**P**	**16 00 31.8**	**-1.5**
	11nm,1.2s,mb4.2						
LPAZ	**La Paz**	**24.69**	**140**	P	**P**	**16 00 40.1**	**+1.2**
	7.1nm,0.8s,mb4.2,baz=331,slow=11,SNR=22						
PV10	**Paradox Valley**	**42.20**	**331**	P	**P**	**16 03 10.8**	**0.0**
NEN	**Nelson**	**43.35**	**323**	*e*P	**P**	**16 03 20.5**	**+0.2**
PDAR	**Pinedale Array**	**45.93**	**334**	P	**P**	**16 03 40.9**	**0.0**
	0.5nm,0.8s,mb3.5,baz=141,slow=9.5,SNR=4.9						
PDAR				PcP	PcP	16 05 20.2	+2.4
	0.4nm,0.7s,baz=135,slow=4.2,SNR=4.5						
NVAR	**Mina Array Bea**	**47.26**	**324**	P	**P**	**16 03 52.8**	**+1.5**
	1.6nm,0.8s,mb4.0,baz=132,slow=8.0,SNR=8.0						
ULM	**Lac du Bonnet**	**48.59**	**350**	P	**P**	**16 04 00.7**	**-0.8**
	1.1nm,0.3s,mb4.3,baz=180,slow=20						
YKA	**Yellowknife Ar**	**63.95**	**345**	P	**P**	**16 05 50.1**	**-1.1**
	1.2nm,0.6s,mb4.1,baz=142,slow=6.7,SNR=20						
INK	**Inuvik**	**73.54**	**343**	*e*P	**P**	**16 06 50.5**	**+0.2**
	3.5nm,1.1s,mb4.2						
ILAR	**Eielson Array**	**76.28**	**337**	P	**P**	**16 07 05.9**	**-0.2**
	1.3nm,0.9s,mb3.8,baz=130,slow=3.7,SNR=8.0						
ASAR	**Alice Springs**	**137.26**	**237**	PKP	PKPdf	16 14 42.9	+2.7
	0.3nm,0.8s,baz=101,slow=1.8,SNR=5.1						
WRAB	**Tennant Creek**	**138.25**	**243**	*e*PKP	PKPdf	16 14 45.2	+3.2
WRA	**Warramunga Arr**	**138.26**	**242**	PKP	PKPdf	16 14 44.6	+2.5
	0.7nm,0.9s,baz=104,slow=2.0,SNR=9.2						
ENH	**Enshi**	**144.81**	**339**	*e*PKP	PKPdf	16 14 52.4	-1.0

IDC 15 16:09:30.1±4.8, 29.66S×178.16W, mb3.9/3, mb1 4.1/3, mb1mx3.9/12, mbtmp3.9/3, Error ellipse: s-maj=181.6km s-min=74.3km az=158.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.52**	**256**	P	P	16 16 20.5	-1.7
	1.4nm,0.5s,baz=118,slow=13,SNR=6.0						
ASAR	**Alice Springs**	**43.02**	**266**	P	P	16 17 31.4	-1.8
	0.6nm,0.7s,baz=104,slow=7.1,SNR=18						
WRA	**Warramunga Arr**	**43.94**	**271**	P	P	16 17 38.7	-2.0
	0.8nm,0.3s,baz=111,slow=8.1,SNR=68						
FINES	**FINESS Array B**	**144.41**	**340**	PKP	PKPdf	16 29 07.2	-2.1
	1.3nm,0.9s,baz=63,slow=4.3,SNR=3.4						

PRE 15 16:10:11.1±1.8, 26.40S×27.34E, h2^{km}, ML3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLR	**Silverton**	**1.07**	**52**	*e*P	Pb	16 10 31.1	-1.0
SLR				*e*S	Sb	16 10 43.9	-2.5
SLR				*e*		16 10 50.1	
	comp=Z,1µm,0.2s						
SEK	**Senekal**	**1.93**	**173**	*e*P	Pn	16 10 45.6	+0.3
SEK				*e*S	Sn	16 11 08.7	-1.9
SEK				*e*		16 11 11.5	
	comp=Z,319nm,0.3s						
BOSA	**Boshof**	**2.88**	**220**	*e*P	Pn	16 10 57.4	-1.4
BOSA				*e*S	Sn	16 11 30.4	-4.2

IDC 15 16:20:47.9±13.0, 3.45N×93.81E, mb3.5/2, mb1 3.8/3, mb1mx3.4/18, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=341.8km s-min=50.1km az=82.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.74**	**18**	Pn	P	16 24 31.4	-1.5
	0.1nm,0.3s,baz=213,slow=11,SNR=7.7						
WRA	**Warramunga Arr**	**46.09**	**122**	P	P	16 29 13.8	-2.1
	0.8nm,0.6s,baz=301,slow=9.1,SNR=8.9						
ASAR	**Alice Springs**	**47.44**	**127**	P	P	16 29 24.9	-1.7
	0.5nm,0.8s,baz=295,slow=8.0,SNR=4.5						

*IDC **15** 16:25:03.8±0.9, 27.81N×101.41E, mb3.8/7, mb1 4.0/8, mb1mx3.8/17, mbtmp3.8/8, ML3.4/1, Error ellipse: s-maj=34.1km s-min=15.8km az=72.0*
*BJI **15** 16:25:06.3, 27.61N×101.21E, h9^{km}, mb4.5, ML3.6*
*NEIC **15** 16:25:10.6±0.8, 27.71N×101.25E, h53^{km}±9^{km}, mb4.3/2, Error ellipse: s-maj=9.7km s-min=8.0km az=82.0*

ISC 15 16:25:02.6±0.5, 27.61N±0.05×101.33E±0.06, h9^{km}, n16, σ1^{s}02/21, mb4.0/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.78**	**153**	P	**Pn**	**16 25 53.8**	**+5.6**
KMI				PG	**Pg**	**16 25 58.3**	**+0.1**
KMI				SG	**Sg**	**16 26 34.5**	**-0.8**
KMI				Smax			
	comp=N,310nm,0.9s						
KMI				Smax			
	comp=E,228nm,1.0s						
KMI				LR	LR		
	comp=N,1µm,5.0s						
KMI				LR	LR		
	comp=E,807nm,4.4s						
CD2	**Chengdu**	**3.91**	**32**	P	**Pn**	**16 26 12.4**	**+8.1**
GYA	**Guiyang**	**4.89**	**102**	P	**Pn**	**16 26 25.4**	**+7.2**
GYA				PG	**Pg**	**16 26 33.8**	**-6.5**
GYA				S	**Sn**	**16 27 15.3**	**-0.4**
GYA				Smax			
	comp=N,60nm,0.8s						
GYA				Smax			
	comp=E,70nm,0.8s						
ENH	**Enshi**	**7.62**	**68**	*e*P	**Pn**	**16 26 58.9**	**+2.3**
XAN	**Xi’an**	**9.14**	**44**	P	**P**	**16 27 20.8**	**+3.0**
XAN				S	**Sn**	**16 29 00.8**	**-1.1**
XAN				Smax			
	comp=N,43nm,1.2s						
XAN				Smax			
	comp=E,43nm,1.4s						
LSA	**Lhasa**	**9.18**	**285**	*e*P	**P**	**16 27 18.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**9.37**	**194**	Pn	**P**	**16 27 25.1**	**+4.2**
	comp=E,0.1nm,0.3s,baz=5.1,slow=11,SNR=7.2						
CMAR				Pg	P	16 28 00.1	+39
	comp=E,0.1nm,0.3s,baz=4.0,slow=17,SNR=15						
CMAR				Lg		16 30 07.6	
	comp=E,0.1nm,0.3s,baz=2.9,slow=30,SNR=8.0						
SONM	**Songino Array**	**20.57**	**10**	P	**P**	**16 29 43.2**	**-1.1**
	comp=E,1.2nm,0.6s,baz=188,slow=11,SNR=19						
ULN	**Ulaanbaatar**	**20.71**	**11**	*e*P	**P**	**16 29 46.0**	**+0.3**
	comp=E,2.8nm,0.6s						
ZAL	**Zalesovo**	**28.98**	**340**	P	**P**	**16 31 03.1**	**-1.4**
	comp=E,0.5nm,0.5s,mb3.5,baz=315,slow=13,SNR=2.3						
BVAR	**Borovoye Array**	**34.19**	**326**	P	**P**	**16 31 50.6**	**+0.3**
	comp=E,1.0nm,0.9s,mb3.7,baz=146,slow=10,SNR=3.3						
BRTR	**Keskin Array B**	**56.41**	**301**	P	**P**	**16 34 46.6**	**-0.2**
	comp=E,0.8nm,0.7s,mb3.8,baz=117,slow=6.4,SNR=3.8						
WRAB	**Tennant Creek**	**57.06**	**142**	*e*P	**P**	**16 34 51.4**	**-0.3**
	comp=E,4.3nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**57.06**	**142**	P	**P**	**16 34 52.4**	**+0.7**
	comp=E,2.8nm,0.5s,mb4.5,baz=330,slow=7.9,SNR=37						
ASAR	**Alice Springs**	**59.89**	**145**	P	**P**	**16 35 12.3**	**+0.9**
	comp=E,1.5nm,0.8s,mb4.1,baz=326,slow=6.8,SNR=17						
GERES	**GERESS Array B**	**68.26**	**315**	P	**P**	**16 36 05.2**	**-0.6**
	comp=E,0.4nm,0.5s,mb3.7,baz=68,slow=5.3,SNR=5.7						

*JMA **15** 16:25:49.1±0.4, 23.39N×121.95E, h68^{km}*

TAP 15 16:25:47.6, 23.29N×121.90E, h29^{km}±1^{km}, ML2.9, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.55**	**41**	P	Pn	16 26 13.7	+0.1
YOJ				*e*S	Sn	16 26 31.8	-1.0
HATJ	**Hateruma jima**	**1.91**	**66**	*e*S	Sn	16 26 40.7	-1.2
IRIF	**Iriomote-Funau**	**1.97**	**58**	P	Pn	16 26 20.0	+0.3
IRIF				S	Sn	16 26 43.3	-0.3
JKRS	**Kuro-shima**	**2.15**	**64**	P	Pn	16 26 22.4	+0.2
JKRS				*e*S	Sn	16 26 47.2	-1.0
JIJ	**Ishigaki jima**	**2.31**	**62**	P	Pn	16 26 24.1	-0.5
JIJ				S	Sn	16 26 50.2	-2.2

*MOS **15** 16:31:10.6±0.9, 43.13N×0.23E, h10^{km}, mb3.5/1, Error ellipse: s-maj=10.2km s-min=6.0km az=70.2*
*STR **15** 16:31:12.3±0.2, 43.03N×0.21E, h5^{km}±1^{km}, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*LDG **15** 16:31:12.9±0.1, 43.01N×0.20E, h10^{km}, Md3.3/4, Ml3.3/33, Error ellipse: s-maj=1.2km s-min=0.9km az=171.0*
*CSEM **15** 16:31:12.8±0.0, 43.01N×0.21E, h12^{km}, ML3.4/33, Error ellipse: s-maj=0.7km s-min=0.6km az=144.0*
*NEIC **15** 16:31:12.9, 43.01N×0.20E, h10^{km}, ML3.3(LDG), MN3.0(MDD), After LDG.*
*MDD **15** 16:31:13.2±0.2, 43.00N×0.21E, h9^{km}±2^{km}, mbLg2.9/23, Error ellipse: s-maj=1.9km s-min=1.5km az=6.0, PRXIMO*

ISC 15 16:31:10.7±0.2, 43.19N±0.01×0.25E±0.01, h9^{km}, n112, σ1^{s}48/211, 2C, France

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPF	**Esparros**	**0.17**	**156**	*e*Pg	**Pg**	**16 31 15.6**	**+1.1**
EPF				*e*Sg	**Sg**	**16 31 17.7**	**+0.7**
	1µm,0.2s						
LABF	**Labassere**	**0.19**	**222**	Pg	**Pg**	**16 31 15.6**	**+0.8**
LABF				Sg	**Sg**	**16 31 17.2**	**-0.3**
LABF	**Labassere**	**0.19**	**222**	P	**Pg**	**16 31 15.6**	**+0.8**
LABF				S	**Sg**	**16 31 17.5**	**0.0**
VIEF	**Viey**	**0.34**	**208**	Pg	**Pg**	**16 31 16.6**	**-1.2**
VIEF				Sg	**Sg**	**16 31 20.1**	**-2.4**
VIEF	**Viey**	**0.34**	**208**	P	**Pg**	**16 31 16.7**	**-1.1**
VIEF				S	**Sg**	**16 31 19.3**	**-3.2**
RESF	**Ens**	**0.39**	**170**	Pg	**Pg**	**16 31 17.6**	**-1.0**
RESF				Sg	**Sg**	**16 31 21.0**	**-2.8**
RESF	**Ens**	**0.39**	**170**	P	**Pg**	**16 31 17.6**	**-1.0**
RESF				S	**Sg**	**16 31 20.8**	**-3.0**
REYF	**Montagne du Re**	**0.48**	**256**	Pg	**Pg**	**16 31 21.1**	**+0.6**
REYF				Sg	**Sg**	**16 31 27.4**	**+0.4**
REYF	**Montagne du Re**	**0.48**	**256**	P	**Pg**	**16 31 21.1**	**+0.7**
REYF				S	**Sg**	**16 31 27.5**	**+0.6**
MELF	**Melles**	**0.49**	**130**	Pg	**Pg**	**16 31 20.8**	**+0.2**
MELF				Sg	**Sg**	**16 31 26.5**	**-0.8**
MELF	**Melles**	**0.49**	**130**	P	**Pg**	**16 31 20.9**	**+0.3**
MELF				S	**Sg**	**16 31 26.4**	**-0.8**
EBIE	**Bielsa**	**0.51**	**189**	⇑Pg	**Pg**	**16 31 19.3**	**-1.7**
EBIE				Lg		16 31 23.3	
EBIE	**Bielsa**	**0.51**	**189**	⇑Pg	**Pg**	**16 31 19.3**	**-1.7**
	SNR=18						
EBIE				Lg		16 31 23.3	
	301nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**0.51**	**189**	Pg	**Pg**	**16 31 19.3**	**-1.6**
	SNR=18						
EBIE				Lg		16 31 23.3	
	301nm,0.1s,SNR=7.9						
ETSF	**Etsaut**	**0.66**	**244**	*e*Pg	**Pg**	**16 31 23.6**	**-0.3**
ETSF				*e*Sg	**Sg**	**16 31 30.9**	**-1.8**
	783nm,0.3s						
MLS	**Moulis**	**0.66**	**110**	Pg	**Pg**	**16 31 25.0**	**+1.0**
MLS	**Moulis**	**0.66**	**110**	P	**Pb**	**16 31 24.5**	**+0.5**
MLS				S	**Sg**	**16 31 34.8**	**+1.9**
ATE	**Arette**	**0.70**	**262**	P	**Pb**	**16 31 25.3**	**+0.7**
ATE				S	**Sb**	**16 31 34.7**	**+0.6**
FDAF	**Les Forges d’A**	**0.70**	**239**	Pg	**Pg**	**16 31 22.1**	**-2.7**
FDAF				Sg	**Sg**	**16 31 30.1**	**-4.1**
FDAF	**Les Forges d’A**	**0.70**	**239**	P	**Pb**	**16 31 22.1**	**-2.6**
FDAF				S	**Sb**	**16 31 30.1**	**-4.1**
SALF	**Salau**	**0.81**	**121**	Pg	**Pg**	**16 31 26.6**	**-0.4**
SALF				Sg	**Sg**	**16 31 37.5**	**-0.4**
SALF	**Salau**	**0.81**	**121**	P	**Pb**	**16 31 26.5**	**0.0**
SALF				S	**Sb**	**16 31 37.3**	**-0.1**
ORDF	**Ordiarp**	**0.86**	**272**	Pg	**Pg**	**16 31 29.5**	**+1.5**
ORDF				Sg	**Sg**	**16 31 40.9**	**+1.3**
ORDF	**Ordiarp**	**0.86**	**272**	P	**Pb**	**16 31 29.3**	**+1.9**
ORDF				S	**Sb**	**16 31 40.8**	**+1.9**
LARF	**Larrau**	**0.92**	**261**	Pg	**Pg**	**16 31 29.1**	**+0.1**
LARF				Sg	**Sg**	**16 31 41.6**	**+0.3**
LARF	**Larrau**	**0.92**	**261**	P	**Pb**	**16 31 29.1**	**+0.8**
LARF				S	**Sb**	**16 31 41.4**	**+1.0**
SJPF	**Ste Jean**	**1.08**	**267**	*e*Pn	**Pn**	**16 31 31.9**	**0.0**
SJPF				*e*Pg	**Pg**	**16 31 33.0**	**+0.7**
SJPF				*e*Sg	**Sg**	**16 31 46.3**	**-0.4**
	108nm,0.2s						
SJPF	**Ste Jean**	**1.08**	**267**	*e*P	**Pn**	**16 31 31.9**	**0.0**
SJPF				*e*		16 31 46.3	
OSSF	**Osses**	**1.10**	**274**	Pg	**Pg**	**16 31 33.1**	**+0.3**
OSSF	**Osses**	**1.10**	**274**	P	**Pb**	**16 31 34.5**	**+2.9**
OSSF				S	**Sb**	**16 31 46.7**	**+0.9**
PAND	**Andorre**	**1.17**	**124**	P	**Pb**	**16 31 33.8**	**+1.2**
PAND				S	**Sb**	**16 31 47.8**	**+0.2**
EALK	**Alkurruntz**	**1.28**	**272**	Pn	**Pn**	**16 31 36.0**	**+1.2**
	0.2nm,0.0s,SNR=24						
EALK				Pg	**Pg**	**16 31 37.4**	**+1.1**
	3.3nm,0.1s,SNR=7.9						
EALK				Sn	**Sn**	**16 31 53.9**	**+1.7**
	53nm,0.3s,SNR=7.9						
EALK				Lg		16 31 55.6	
	140nm,0.2s,SNR=8.8						
EALK	**Alkurruntz**	**1.28**	**272**	Pg	**Pg**	**16 31 37.4**	**+1.1**
	3.3nm,0.1s,SNR=7.9						
EALK				Sn	**Sn**	**16 31 53.9**	**+1.7**
	53nm,0.3s,SNR=7.9						
CARF	**Carcanieres**	**1.44**	**108**	Pg	**Pg**	**16 31 40.5**	**+0.9**
CARF				Sg	**Sg**	**16 32 00.1**	**+1.2**
CARF	**Carcanieres**	**1.44**	**108**	P	**Pn**	**16 31 40.6**	**+3.5**
CARF				S	**Sb**	**16 31 59.1**	**+3.4**
MTLF	**Montolieu**	**1.45**	**83**	*e*Pn	**Pn**	**16 31 39.0**	**+1.8**
MTLF				*e*Pg	**Pg**	**16 31 41.5**	**+1.9**
MTLF				*e*Sn	**Sn**	**16 31 57.0**	**+0.6**
MTLF				*e*Sg	**Sg**	**16 32 00.8**	**+1.8**
	127nm,0.2s						
MTLF	**Montolieu**	**1.45**	**83**	*e*P	**Pn**	**16 31 39.0**	**+1.8**
MTLF				*e*		16 31 57.0	
VALF	**Valcebollere**	**1.52**	**120**	P	**Pn**	**16 31 40.9**	**+2.6**
VALF				S	**Sb**	**16 32 00.7**	**+2.7**
ESAC	**San Caprasio**	**1.56**	**200**	Pg	**Pg**	**16 31 39.2**	**-2.6**
ESAC				Lg		16 31 58.3	
ESAC	**San Caprasio**	**1.56**	**200**	Pg	**Pg**	**16 31 39.2**	**-2.6**
	136nm,0.3s,SNR=22						
ESAC				Lg		16 31 58.3	
	125nm,0.2s,SNR=5.5						
ESAC	**San Caprasio**	**1.56**	**200**	Pg	**Pg**	**16 31 39.2**	**-2.6**
	136nm,0.3s,SNR=22						
EMIR	**Miracle**	**1.58**	**143**	Pg	**Pg**	**16 31 40.6**	**-1.8**
	20nm,0.4s,SNR=32						
EMIR				Lg		16 32 00.4	
	60nm,0.1s,SNR=12						
EMIR	**Miracle**	**1.58**	**143**	Pg	**Pg**	**16 31 40.6**	**-1.8**
	20nm,0.4s,SNR=32						
LFF	**La Frestale**	**1.79**	**11**	*e*Pn	**Pn**	**16 31 45.1**	**+3.1**
LFF				*e*Pg	**Pg**	**16 31 49.5**	**+3.1**
LFF				*e*Sn	**Sn**	**16 32 07.9**	**+2.9**
LFF				*e*Sg	**Sg**	**16 32 14.8**	**+4.5**
	88nm,0.2s						
LFF	**La Frestale**	**1.79**	**11**	*e*P	**Pn**	**16 31 45.1**	**+3.1**
LFF				*e*		16 32 07.9	
FILF	**Fillols**	**1.81**	**109**	Pg	**Pg**	**16 31 45.1**	**-1.8**
FILF	**Fillols**	**1.81**	**109**	P	**Pn**	**16 31 45.2**	**+2.8**
FILF				S	**Sn**	**16 32 08.3**	**+2.6**
EPOB	**Poblet**	**1.94**	**161**	Pn	**Pn**	**16 31 44.1**	**-0.1**
EPOB				Pg	**Pg**	**16 31 45.8**	**-3.6**

EPOB				Lg		16 32 08.7	
EPOB	**Poblet**	**1.94**	**161**	Pn	**Pn**	**16 31 44.1**	**0.0**
	0.6nm,0.1s,SNR=7.9						
EPOB				Pg	**Pg**	**16 31 45.7**	**-3.6**
	10.0nm,0.3s,SNR=33						
EPOB				Lg		16 32 08.7	
	112nm,0.2s,SNR=21						
EPOB	**Poblet**	**1.94**	**161**	Pn	**Pn**	**16 31 44.1**	**-0.1**
	0.6nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**1.94**	**161**	Pg	**Pg**	**16 31 45.7**	**-3.7**
	10.0nm,0.3s,SNR=33						
EJON	**La Jonquera**	**2.08**	**110**	Pg	**Pg**	**16 31 50.7**	**-1.5**
	5.0nm,0.3s,SNR=8.4						
EJON				Lg		16 32 19.4	
	20nm,0.3s,SNR=7.5						
EJON	**La Jonquera**	**2.08**	**110**	Pg	**Pg**	**16 31 50.7**	**-1.5**
	5.0nm,0.3s,SNR=8.4						
CAF	**Calviac**	**2.18**	**36**	*e*Pn	**Pn**	**16 31 50.2**	**+2.6**
CAF				*e*Pg	**Pg**	**16 31 56.3**	**+2.1**
CAF				*e*Sn	**Sn**	**16 32 16.4**	**+1.5**
CAF				*e*Sg	**Sg**	**16 32 26.8**	**+3.6**
	50nm,0.2s						
CAF	**Calviac**	**2.18**	**36**	*e*P	**Pn**	**16 31 50.2**	**+2.6**
CAF				*e*		16 32 16.4	
ERTA	**Horta de San J**	**2.23**	**178**	Pg	**Pg**	**16 31 51.3**	**-4.0**
ERTA				Lg		16 32 17.4	
ERTA	**Horta de San J**	**2.23**	**178**	Pg	**Pg**	**16 31 51.3**	**-4.0**
	8.4nm,0.3s,SNR=26						
ERTA				Lg		16 32 17.4	
	37nm,0.3s,SNR=19						
ERTA	**Horta de San J**	**2.23**	**178**	Pg	**Pg**	**16 31 51.3**	**-4.0**
	8.4nm,0.3s,SNR=26						
RJF	**Les Rejaudoux**	**2.31**	**23**	*e*Pn	**Pn**	**16 31 50.5**	**+1.1**
RJF				*e*Pg	**Pg**	**16 31 58.5**	**+1.8**
RJF				*e*Sn	**Sn**	**16 32 20.5**	**+2.3**
	68nm,0.2s						
RJF				*e*Sg	**Sg**	**16 32 30.8**	**+3.3**
	63nm,0.2s						
RJF	**Les Rejaudoux**	**2.31**	**23**	*e*P	**Pn**	**16 31 50.5**	**+1.1**
RJF				*e*		16 32 20.5	
EBR	**Ebro Roquetas**	**2.37**	**175**	*e*PNPN		16 31 58.0	
EBR				*e*S*	**Sb**	**16 32 22.5**	**-0.2**
ELAN	**Lanestosa**	**2.69**	**272**	Pn	**Pn**	**16 31 54.1**	**-0.8**
ELAN				Lg		16 32 32.1	
ELAN	**Lanestosa**	**2.69**	**272**	Pn	**Pn**	**16 31 54.1**	**-0.8**
	SNR=4.0						
ELAN				Lg		16 32 35.6	
	2.8nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**2.69**	**272**	Pn	**Pn**	**16 31 54.1**	**-0.9**
	SNR=4.0						
LASF	**Ste Croix**	**2.77**	**70**	*e*Pn	**Pn**	**16 31 57.0**	**+0.9**
LASF				*e*Pg	**Pg**	**16 32 05.9**	**-0.1**
LASF				*e*Sn	**Sn**	**16 32 29.0**	**-1.0**
LASF				*e*Sg	**Sg**	**16 32 42.6**	**-0.3**
	35nm,0.2s						
EMOS	**Mosqueruela**	**2.87**	**191**	Pn	**Pn**	**16 31 54.8**	**-2.8**
	35nm,0.7s,SNR=8.1						
EMOS				Pg	**Pg**	**16 32 00.6**	**-7.5**
	8.1nm,1.1s,SNR=7.9						
EMOS				Lg		16 32 37.2	
	11nm,0.1s,SNR=8.2						
EMOS	**Mosqueruela**	**2.87**	**191**	Pn	**Pn**	**16 31 54.8**	**-2.8**
	35nm,0.7s,SNR=8.1						
EMOS	**Mosqueruela**	**2.87**	**191**	Pg	**Pg**	**16 32 00.6**	**-7.5**
	8.1nm,1.1s,SNR=7.9						
LBL	**Lubilhac**	**2.97**	**46**	Pn	**Pn**	**16 32 00.9**	**+1.9**
LBL				Sg	**Sg**	**16 32 53.0**	**+3.3**
PYM	**Petit Puy Mans**	**3.24**	**37**	Pn	**Pn**	**16 32 02.8**	**+0.1**
PYM				Sg	**Sg**	**16 33 02.2**	**+3.7**
TCF	**Toulx Ste Croi**	**3.40**	**24**	*e*Pn	**Pn**	**16 32 06.6**	**+1.5**
TCF				*e*Pg	**Pg**	**16 32 18.9**	**+0.3**
TCF				*e*Sn	**Sn**	**16 32 46.0**	**0.0**
TCF				*e*Sg	**Sg**	**16 33 05.1**	**+1.1**
	26nm,0.3s						
TCF	**Toulx Ste Croi**	**3.40**	**24**	*e*P	**Pn**	**16 32 06.6**	**+1.5**
TCF				*e*		16 32 46.0	
MFF	**Saint Martin d**	**3.43**	**355**	*e*Pn	**Pn**	**16 32 06.7**	**+1.3**
MFF				*e*Pg	**Pg**	**16 32 19.1**	**0.0**
MFF				*e*Sn	**Sn**	**16 32 47.1**	**+0.5**
MFF				*e*Sg	**Sg**	**16 33 04.7**	**-0.1**
	27nm,0.3s						
MFF	**Saint Martin d**	**3.43**	**355**	*e*P	**Pn**	**16 32 06.7**	**+1.3**
MFF				*e*		16 32 47.1	
AGO	**Saint Agoulin**	**3.53**	**35**	Pn	**Pn**	**16 32 07.1**	**+0.2**
VIVF	**Saint-Julien-l**	**3.60**	**61**	*e*Pn	**Pn**	**16 32 06.7**	**-1.2**
VIVF				*e*Pg	**Pg**	**16 32 21.0**	**-1.6**
VIVF				*e*Sg	**Sg**	**16 33 09.8**	**-0.8**
	33nm,0.4s						
BGF	**Bois d'Agland**	**3.84**	**28**	*e*Pg	**Pg**	**16 32 26.1**	**-1.3**
BGF				*e*Sg	**Sg**	**16 33 18.8**	**+0.1**
	92nm,0.4s						
SMRF	**Simiane la Rot**	**3.95**	**77**	*e*Pn	**Pn**	**16 32 13.1**	**+0.2**
SMRF				*e*Sg	**Sg**	**16 33 19.4**	**-2.9**
	8.7nm,0.3s						
EARI	**Arriondas**	**3.99**	**273**	Pn	**Pn**	**16 32 15.2**	**+1.8**
	0.9nm,0.2s,SNR=12						
EARI				Sn	**Sn**	**16 32 60.0**	**-0.9**
	SNR=7.9						
EARI				Lg		16 33 20.6	
	307nm,2.0s,SNR=4.0						
EARI	**Arriondas**	**3.99**	**273**	Pn	**Pn**	**16 32 15.2**	**+1.8**
	0.9nm,0.2s,SNR=12						
EARI				Sn	**Sn**	**16 33 00.0**	**-0.8**
	SNR=7.9						
AVF	**Avril sur Loir**	**4.22**	**30**	*e*Pn	**Pn**	**16 32 18.8**	**+2.1**
AVF				*e*Pg	**Pg**	**16 32 34.0**	**-1.0**
AVF				*e*Sn	**Sn**	**16 33 05.8**	**-1.0**
AVF				*e*Sg	**Sg**	**16 33 30.7**	**-0.6**
	15nm,0.3s						
AVF	**Avril sur Loir**	**4.22**	**30**	*e*P	**Pn**	**16 32 18.8**	**+2.1**
AVF				*e*		16 33 05.8	
SMF	**Signal de Mont**	**4.30**	**35**	*e*Pn	**Pn**	**16 32 19.6**	**+1.8**
SMF				*e*Pg	**Pg**	**16 32 36.5**	**0.0**
SMF				*e*Sn	**Sn**	**16 33 07.8**	**-0.9**
SMF				*e*Sg	**Sg**	**16 33 32.7**	**-1.1**
	9.0nm,0.3s						
SMF	**Signal de Mont**	**4.30**	**35**	*e*P	**Pn**	**16 32 19.6**	**+1.8**
SMF				*e*		16 33 07.8	
ORIF	**Oris-en-Rattie**	**4.41**	**65**	*e*Pn	**Pn**	**16 32 19.7**	**+0.2**
ORIF				*e*Sg	**Sg**	**16 33 34.9**	**-2.8**
	3.5nm,0.4s						
HYF	**Humbligny**	**4.42**	**22**	*e*Sg	**Sg**	**16 33 37.5**	**-0.3**
EBEN	**Beniarda**	**4.49**	**185**	Pn	**Pn**	**16 32 17.7**	**-2.9**
	273nm,1.9s,SNR=4.0						
EBEN	**Beniarda**	**4.49**	**185**	Pn	**Pn**	**16 32 17.7**	**-2.9**
	273nm,1.9s,SNR=4.0						
SSF	**Saint Saulge**	**4.51**	**30**	*e*Pn	**Pn**	**16 32 22.4**	**+1.6**
SSF				*e*Pg	**Pg**	**16 32 40.2**	**-0.5**
SSF				*e*Sg	**Sg**	**16 33 39.0**	**-1.8**
	7.8nm,0.3s						
LMR	**La Mourre**	**4.58**	**86**	*e*Sg	**Sg**	**16 33 37.5**	**-5.6**
	4.4nm,0.2s						
FRF	**La Foret Royal**	**4.68**	**83**	*e*Pn	**Pn**	**16 32 21.3**	**-1.9**
FRF				*e*Sg	**Sg**	**16 33 41.2**	**-5.4**
	5.5nm,0.3s						
ESDC	**Sonseca Array**	**4.72**	**223**	Pn	**Pn**	**16 32 22.5**	**-1.4**
	1.4nm,0.2s,baz=42,slow=14,SNR=12						
ESDC				Sn	**Sn**	**16 33 12.7**	**-6.8**
	7.0nm,0.2s,baz=44,slow=25,SNR=7.9						
ESDC				Lg		16 33 35.4	
	3.4nm,0.3s,baz=41,slow=30,SNR=4.3						
ESDC	**Sonseca Array**	**4.72**	**223**	Pn	**Pn**	**16 32 22.5**	**-1.4**
	1.4nm,0.2s,baz=42,slow=14,SNR=12						
ESDC				Sn	**Sn**	**16 33 12.7**	**-6.8**
	7.0nm,0.2s,baz=44,slow=25,SNR=7.9						
MBDF	**Montbardon**	**4.96**	**70**	*e*Pn	**Pn**	**16 32 26.6**	**-0.5**
MBDF				*e*Sg	**Sg**	**16 33 51.4**	**-4.3**
	2.6nm,0.5s						
LPL	**La Plagne**	**5.20**	**61**	*e*Pn	**Pn**	**16 32 30.4**	**-0.2**
LPL				*e*Sg	**Sg**	**16 33 59.8**	**-4.1**
	2.7nm,0.3s						
LPG	**La Plagne**	**5.21**	**61**	*e*Sg	**Sg**	**16 34 00.3**	**-3.7**
	2.6nm,0.4s						
GRR	**Gorron**	**5.26**	**352**	*e*Sn	**Sn**	**16 33 30.7**	**-2.2**
GRR				*e*Sg	**Sg**	**16 34 03.1**	**-2.7**
	9.5nm,0.3s						
QUIF	**Quistinic**	**5.30**	**334**	*e*Pn	**Pn**	**16 32 32.5**	**+0.5**
QUIF				*e*Sn	**Sn**	**16 33 30.4**	**-3.6**
QUIF				*e*Sg	**Sg**	**16 34 03.7**	**-3.5**
	4.8nm,0.3s						
ECAL	**Calabor**	**5.31**	**259**	Pn	**Pn**	**16 32 31.9**	**-0.1**
ECAL				Sn	**Sn**	**16 33 28.9**	**-5.2**
ECAL				Lg		16 33 56.2	
ECAL	**Calabor**	**5.31**	**259**	Pn	**Pn**	**16 32 31.9**	**-0.1**
	4.4nm,0.3s,SNR=9.1						
ECAL				Sn	**Sn**	**16 33 28.9**	**-5.2**
	SNR=7.9						
ECAL				Lg		16 33 56.2	
	11nm,0.4s,SNR=4.0						
ECAL	**Calabor**	**5.31**	**259**	Pn	**Pn**	**16 32 31.9**	**-0.2**
	4.4nm,0.3s,SNR=9.1						
ECAL				Sn	**Sn**	**16 33 28.9**	**-5.2**
	SNR=7.9						
CABF	**La Chapelle**	**5.38**	**48**	*e*Pg	**Pg**	**16 32 56.1**	**-2.0**
CABF				*e*Sn	**Sn**	**16 33 32.1**	**-3.8**
CABF				*e*Sg	**Sg**	**16 34 06.2**	**-3.6**
	16nm,0.6s						
EPON	**Pontenova**	**5.40**	**274**	Pn	**Pn**	**16 32 34.6**	**+1.1**
	11nm,0.9s,SNR=4.5						
EPON				Sn	**Sn**	**16 33 33.9**	**-2.6**
	SNR=7.9						
EPON				Lg		16 34 06.5	
	2.1nm,0.2s,SNR=4.0						
EPON	**Pontenova**	**5.40**	**274**	Pn	**Pn**	**16 32 34.6**	**+1.2**
EPON				Sn	**Sn**	**16 33 33.9**	**-2.6**
LDF	**La Druitiere**	**5.41**	**357**	*e*Sn	**Sn**	**16 33 33.2**	**-3.6**
LDF				*e*Sg	**Sg**	**16 34 08.0**	**-2.9**
	13nm,0.4s						
SGMF	**Saint Gilles**	**5.43**	**340**	*e*Pn	**Pn**	**16 32 34.0**	**+0.1**
SGMF				*e*Pg	**Pg**	**16 32 57.6**	**-1.6**
SGMF				*e*Sn	**Sn**	**16 33 33.6**	**-3.7**
SGMF				*e*Sg	**Sg**	**16 34 08.1**	**-3.5**
	3.9nm,0.3s						
SGMF	**Saint Gilles**	**5.43**	**340**	*e*P	**Pn**	**16 32 34.0**	**+0.1**
SGMF				*e*		16 33 33.6	
FLN	**La Foliniere**	**5.60**	**355**	*e*Pn	**Pn**	**16 32 34.7**	**-1.5**
FLN				*e*Sn	**Sn**	**16 33 38.3**	**-3.2**
FLN				*e*Sg	**Sg**	**16 34 13.5**	**-3.6**
	14nm,0.5s						
ROSF	**Rostrenen**	**5.71**	**336**	*e*Pn	**Pn**	**16 32 37.0**	**-0.7**
ROSF				*e*Sn	**Sn**	**16 33 39.6**	**-4.6**
ROSF				*e*Sg	**Sg**	**16 34 16.4**	**-4.3**
	3.9nm,0.3s						
MEZF	**Maizieres J'vi**	**6.29**	**31**	*e*Sn	**Sn**	**16 33 54.9**	**-3.7**
MEZF				*e*Sg	**Sg**	**16 34 35.2**	**-4.7**
	14nm,0.5s						
HAU	**Haudompre**	**6.44**	**40**	*e*Sg	**Sg**	**16 34 39.5**	**-5.7**
	3.7nm,0.3s						
HINF	**Hinteralfeld**	**6.55**	**43**	*e*Sn	**Sn**	**16 34 00.9**	**-4.5**
HINF				*e*Sg	**Sg**	**16 34 43.1**	**-5.8**
	3.2nm,0.4s						

*NEIC **15** 16:50:10.9,38.15S×176.35E,h149^{km},After WEL.*

WEL 15 16:50:11.5±0.2**,38.18S×176.37E,h144**^{km}±1^{km}**,ML3.9**/7**, 31C-6D,Error ellipse: s-maj=1.1km s-min=0.9km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAZ	**Tarawera**	**0.12**	**118**	⇓P	P	16 50 31.0	-0.2
TAZ	**Tarawera**	**0.12**	**118**	⇓PN	P	16 50 31.0	-0.2
UTU	**Utuhina**	**0.14**	**270**	P	P	16 50 31.1	-0.2
UTU	**Utuhina**	**0.14**	**270**	PN	P	16 50 31.1	-0.2
LIRZ	**Lichensteins R**	**0.17**	**4**	P	P	16 50 30.9	-0.5
LIRZ	**Lichensteins R**	**0.17**	**4**	PN	P	16 50 30.9	-0.4
PATZ	**Paeroa**	**0.22**	**203**	⇑P	P	16 50 31.3	-0.2
PATZ	**Paeroa**	**0.22**	**203**	⇑PN	P	16 50 31.3	-0.2
EDRZ	**Edgecumbe**	**0.30**	**77**	PN	P	16 50 31.1	-0.6
MARZ	**Manawahe**	**0.31**	**52**	⇑P	P	16 50 31.4	-0.4
MARZ	**Manawahe**	**0.31**	**52**	⇑PN	P	16 50 31.4	-0.4
TGRZ	**Tauranga**	**0.45**	**349**	⇓P	P	16 50 31.6	-0.8
TGRZ				S	S	16 50 47.4	-1.0
TGRZ	**Tauranga**	**0.45**	**349**	⇓PN	P	16 50 31.6	-0.8
TGRZ				SN	S	16 50 47.4	-1.0
WATZ	**Wairara**	**0.73**	**223**	⇑P	P	16 50 33.7	-0.2
WATZ	**Wairara**	**0.73**	**223**	⇑PN	P	16 50 33.7	-0.3
WATZ				SN	S	16 50 50.6	-0.6
HATZ	**Hinemaiaia**	**0.75**	**197**	P	P	16 50 33.6	-0.4
HATZ	**Hinemaiaia**	**0.75**	**197**	PN	P	16 50 33.6	-0.4
TOZ	**Tahuroa Road**	**0.82**	**303**	⇑P	P	16 50 33.9	-0.6
TOZ	**Tahuroa Road**	**0.82**	**303**	⇑PN	P	16 50 33.9	-0.6
RATZ	**Rangitukua**	**0.84**	**214**	⇑P	P	16 50 34.4	-0.2
RATZ	**Rangitukua**	**0.84**	**214**	⇑PN	P	16 50 34.4	-0.2
RITZ	**Rihia Road**	**0.90**	**206**	P	P	16 50 35.3	+0.2
RITZ	**Rihia Road**	**0.90**	**206**	PN	P	16 50 35.3	+0.2
MYRZ	**Mayor Island**	**0.90**	**353**	⇓PN	P	16 50 34.5	-0.5
MWZ	**Matawai**	**0.93**	**100**	⇑P	P	16 50 35.2	-0.1
MWZ	**Matawai**	**0.93**	**100**	⇑PN	P	16 50 35.2	0.0
MWZ				SN	S	16 50 52.8	-0.7
BKZ	**Black Stump Fm**	**0.99**	**175**	⇓P	P	16 50 35.7	-0.1
BKZ	**Black Stump Fm**	**0.99**	**175**	⇑PN	P	16 50 35.7	-0.1
BKZ				SN	S	16 50 53.6	-0.9
MGZ	**Maungaku**	**1.05**	**218**	⇑P	P	16 50 36.3	0.0
MGZ	**Maungaku**	**1.05**	**218**	⇑PN	P	16 50 36.3	0.0
WTVZ	**West Tongariro**	**1.12**	**213**	P	P	16 50 36.8	-0.2
WTVZ	**West Tongariro**	**1.12**	**213**	PN	P	16 50 36.8	-0.3
OTVZ	**Oturere**	**1.13**	**209**	PN	P	16 50 37.3	+0.1
TWVZ	**Taurewa**	**1.16**	**219**	⇑P	P	16 50 37.1	-0.3
TWVZ	**Taurewa**	**1.16**	**219**	⇑PN	P	16 50 37.1	-0.3
NGZ	**Ngauruhoe**	**1.17**	**211**	P	P	16 50 37.0	-0.5
NGZ				P		16 50 37.2	
NGZ	**Ngauruhoe**	**1.17**	**211**	PN	P	16 50 37.3	-0.1
CNZ	**Chateau**	**1.21**	**212**	P	P	16 50 37.1	-0.8
CNZ	**Chateau**	**1.21**	**212**	PN	P	16 50 37.3	-0.6
WPVZ	**Whakapapa**	**1.21**	**212**	P	P	16 50 37.4	-0.6
WPVZ	**Whakapapa**	**1.21**	**212**	PN	P	16 50 37.5	-0.5
TUVZ	**Tukino**	**1.23**	**207**	⇑P	P	16 50 38.0	-0.1
TUVZ	**Tukino**	**1.23**	**207**	⇑PN	P	16 50 38.0	-0.1
TUVZ				SN	S	16 50 58.2	-0.3
HIZ	**Hauiti**	**1.24**	**254**	*e*P	P	16 50 37.8	-0.4
HIZ	**Hauiti**	**1.24**	**254**	PN	P	16 50 37.8	-0.4
HIZ				SN	S	16 50 57.9	-0.8
FWVZ	**Far West T-bar**	**1.25**	**210**	P	P	16 50 37.8	-0.6
FWVZ	**Far West T-bar**	**1.25**	**210**	PN	P	16 50 37.9	-0.5
FWVZ				SN	S	16 50 58.4	-0.6
DRZ	**Dome Shelter**	**1.27**	**210**	PN	P	16 50 39.1	+0.6
MOVZ	**Moawhango**	**1.32**	**201**	⇑P	P	16 50 38.3	-0.8
MOVZ	**Moawhango**	**1.32**	**201**	⇑PN	P	16 50 38.3	-0.7
MOVZ				SN	S	16 50 58.1	-2.1
KNZ	**Kokohu**	**1.32**	**130**	⇑P	P	16 50 39.1	0.0
KNZ	**Kokohu**	**1.32**	**130**	⇑PN	P	16 50 39.1	0.0
KNZ				SN	S	16 50 59.1	-1.2
PUZ	**Puketiti**	**1.49**	**87**	P	P	16 50 40.3	-0.6
PUZ	**Puketiti**	**1.49**	**87**	PN	P	16 50 40.3	-0.6
PUZ				SN	S	16 51 02.1	-1.3
KUZ	**Kuaotunu**	**1.52**	**340**	PN	P	16 50 40.0	-1.1
MXZ	**Matakaoa Point**	**1.65**	**69**	P	P	16 50 42.4	-0.2
MXZ	**Matakaoa Point**	**1.65**	**69**	PN	P	16 50 42.4	-0.1
MXZ				SN	S	16 51 06.4	-0.1
MTAZ	**Motutapu**	**1.81**	**320**	P	P	16 50 43.5	-0.9
MTAZ	**Motutapu**	**1.81**	**320**	PN	P	16 50 43.5	-0.9
PWZ	**Pawanui**	**1.89**	**168**	⇑P	P	16 50 44.7	-0.6
PWZ	**Pawanui**	**1.89**	**168**	⇑PN	P	16 50 44.7	-0.6
PWZ				SN	S	16 51 09.4	-1.8
WTAZ	**Waiatarua**	**1.89**	**310**	PN	P	16 50 44.4	-0.9
KAAZ	**Kauri Point**	**1.89**	**315**	PN	P	16 50 44.5	-0.9
TSZ	**Takapari Road**	**1.91**	**189**	⇑P	P	16 50 44.3	-1.2
TSZ	**Takapari Road**	**1.91**	**189**	PN	P	16 50 44.4	-1.1
TSZ				SN	S	16 51 09.8	-1.8
WAZ	**Wanganui**	**1.91**	**214**	⇑P	P	16 50 44.8	-0.7
WAZ	**Wanganui**	**1.91**	**214**	PN	P	16 50 44.8	-0.8
WAZ				SN	S	16 51 11.0	-0.6
BFZ	**Birch Farm**	**2.50**	**182**	P	P	16 50 51.2	-1.8
BFZ	**Birch Farm**	**2.50**	**182**	PN	P	16 50 51.1	-1.9
BFZ				SN	S	16 51 21.2	-3.4
MRZ	**Mangatainoka R**	**2.56**	**194**	⇑P	P	16 50 51.2	-2.5
MRZ	**Mangatainoka R**	**2.56**	**194**	⇑PN	P	16 50 51.2	-2.4
MRZ				*e*SN	S	16 51 21.5	-4.4
KIW	**Kapiti Island**	**2.91**	**202**	P	P	16 50 54.9	-3.3
KIW	**Kapiti Island**	**2.91**	**202**	PN	P	16 50 55.0	-3.2
MTW	**Mount Morrison**	**3.05**	**192**	⇑P	P	16 50 56.8	-3.3
MTW	**Mount Morrison**	**3.05**	**192**	⇑PN	P	16 50 56.8	-3.3
CAW	**Cannon Point**	**3.10**	**199**	P	P	16 50 57.1	-3.5
CAW	**Cannon Point**	**3.10**	**199**	PN	P	16 50 57.3	-3.3
PAWZ	**Paruwai Farm**	**3.28**	**193**	PN	P	16 50 59.4	-3.7
MRW	**Makara Radio**	**3.31**	**202**	P	P	16 50 59.7	-3.7
MRW	**Makara Radio**	**3.31**	**202**	PN	P	16 50 59.8	-3.6
WEL	**Wellington**	**3.34**	**201**	P	P	16 51 00.3	-3.5
WEL	**Wellington**	**3.34**	**201**	PN	P	16 51 00.3	-3.5
MSWZ	**Moikau Station**	**3.35**	**195**	P	P	16 51 00.1	-3.8
MSWZ	**Moikau Station**	**3.35**	**195**	PN	P	16 51 00.1	-3.8
BHW	**Baring Head**	**3.43**	**199**	P	P	16 51 00.9	-4.1
BHW	**Baring Head**	**3.43**	**199**	PN	P	16 51 00.9	-4.1
TUWZ	**Tuamarina**	**3.75**	**209**	PN	P	16 51 04.9	-4.3
NNZ	**Nelson**	**3.81**	**216**	PN	P	16 51 06.1	-4.0
NNZ				SN	S	16 51 50.8	-4.1
QRZ	**Quartz Range**	**3.98**	**227**	PN	P	16 51 08.1	-4.1
THZ	**Tophouse**	**4.46**	**216**	*e*P	P	16 51 13.5	-5.1
THZ	**Tophouse**	**4.46**	**216**	PN	P	16 51 13.8	-4.8
THZ				SN	S	16 52 04.7	-5.6
KHZ	**Kahutara**	**4.76**	**206**	*e*P	P	16 51 17.7	-4.8
KHZ	**Kahutara**	**4.76**	**206**	PN	P	16 51 17.7	-4.9
DSZ	**Denniston Nort**	**5.00**	**223**	PN	P	16 51 21.1	-4.6
MQZ	**McQueen's Vall**	**6.20**	**206**	PN	P	16 51 34.9	-6.9
MQZ				SN	S	16 52 39.7	-12
ODZ	**Otahua Downs**	**8.09**	**210**	PN	P	16 52 01.0	-6.2
ODZ				SN	S	16 53 25.8	-12

OTT 15 16:57:53.4±0.2**,52.82N×67.33W,MN2.9**/6**,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**2.04**	**8**	PN	Pn	16 58 29.2	-0.1
SCHQ				SG	Sg	16 58 56.5	-4.7
SCHQ				Trac		16 58 59.1	
	comp=Z,40nm,0.3s						
MNQ	**Manicouagan**	**2.46**	**202**	PN	Pn	16 58 34.2	-1.2
MNQ				Trac		16 59 09.3	
	comp=Z,40nm,0.2s						
SMQ	**Clarke City**	**2.63**	**171**	PN	Pn	16 58 36.9	-1.0
SMQ				Trac		16 59 12.6	
	comp=Z,26nm,0.3s						
ICQ	**Pointe Anglais**	**3.31**	**179**	PN	Pn	16 58 45.5	-2.0
ICQ				Trac		16 59 36.0	
	comp=Z,8.8nm,0.1s						
CNQ	**Baie Comeau**	**3.56**	**188**	PN	Pn	16 58 49.3	-1.7
CNQ				SN	Sn	16 59 31.2	-3.2
CNQ				Trac		16 59 41.9	
	comp=Z,8.4nm,0.2s						
LG4Q	**La Grande 4**	**4.14**	**284**	PN	Pn	16 58 57.2	-2.1
LG4Q				Trac		17 00 06.7	
	comp=Z,7.5nm,0.2s						
LMQ	**La Malbaie**	**5.62**	**201**	PN	Pn	16 59 16.6	-3.6
LMQ				SN	Sn	17 00 19.2	-7.2
DRLN	**Deer Lake**	**7.15**	**116**	PN	Pn	16 59 33.9	-8.0
DRLN				SN	Sn	17 00 51.7	-13
VLDQ	**Val d'Or**	**7.99**	**238**	PN	Pn	16 59 50.5	-3.1
VIMO	**Victor Mine**	**9.94**	**277**	PN	P	17 00 15.5	-5.0
SILO	**Sutton Inlier**	**10.57**	**286**	PN	P	17 00 22.7	-6.4

*NEIC **15** 17:06:21.5±0.9,51.48N×179.80W,h48^{km}±6^{km},mb3.7/1, ML3.4(AEIC),Error ellipse: s-maj=23.9km s-min=5.8km az=184.0*

*IDC **15** 17:06:24.8±3.8,51.83N×179.90W,h61^{km}±34^{km},mb3.6/12, mb1 3.8/13,mb1mx3.6/25,mbtmp3.9/13,ML3.3/1,MS3.8/1, Ms1 3.8/1,ms1mx2.6/23,Error ellipse: s-maj=47.0km s-min=17.4km az=5.0*

ISC 15 17:06:20.0±1.2**,51.5N**±0.2×**179.92W**±0.07**,h54**^{km}±7^{km}**, n31,**σ**0**$\overset{s}{.}$**98**/35**,mb3.8**/13**,MS3.8**/1**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**1.70**	**79**	P	**P**	**17 06 46.7**	**-1.2**
KIMD				S	**S**	**17 07 10.8**	**+2.3**
KIKV	**Kanaga Island**	**1.76**	**75**	P	**P**	**17 06 48.4**	**-0.3**
KIWB	**Kanaga Island**	**1.77**	**76**	P	**P**	**17 06 48.8**	**0.0**
KIWB				S	**S**	**17 07 11.4**	**+1.2**
ADAG	**Mount Adagdak**	**2.13**	**75**	P	**P**	**17 06 53.9**	**0.0**
GSTD	**Great Sitkin T**	**2.42**	**74**	P	**P**	**17 06 57.1**	**-0.9**
GSTD				S	**S**	**17 07 28.7**	**+2.2**
GSMY	**Great Sitkin M**	**2.47**	**75**	P	**P**	**17 06 57.9**	**-0.8**
GSTR	**Great Sitkin T**	**2.48**	**74**	P	**P**	**17 06 58.2**	**-0.7**
GSIG	**Igitkin Island**	**2.54**	**77**	P	**P**	**17 06 58.8**	**-0.9**
ATKA	**Atka Island**	**3.63**	**76**	P	**P**	**17 07 13.3**	**-1.8**
ATKA				S	**S**	**17 08 01.1**	**+4.1**
SMY	**Shemya**	**3.90**	**291**	P	**P**	**17 07 19.2**	**+0.3**
FX1	**Attu Island--F**	**4.49**	**291**	P	**P**	**17 07 28.8**	**+1.7**
	5.9nm,0.3s,baz=230,slow=4.0,SNR=44						
FX1				S	**S**	**17 08 32.3**	**+14**
	8.0nm,0.3s,baz=78,slow=19,SNR=6.7						
FX1	**Attu Island--F**	**4.49**	**291**	*e*P	**P**	**17 07 28.8**	**+1.6**
UNV	**Unalaska Valle**	**8.50**	**68**	P	**P**	**17 08 23.1**	**+0.1**
IMA	**Indian Mountai**	**19.75**	**32**	*e*P	**P**	**17 10 46.8**	**-0.8**
ILAR	**Eielson Array**	**21.62**	**39**	P	**P**	**17 11 07.0**	**+0.2**
	0.4nm,0.5s,mb3.1,baz=233,slow=8.7,SNR=6.7						
YKA	**Yellowknife Ar**	**35.68**	**46**	P	**P**	**17 13 13.6**	**-0.8**
	0.3nm,0.4s,mb3.6,baz=276,slow=12,SNR=7.5						
HLID	**Hailey**	**43.59**	**74**	*e*P	**P**	**17 14 19.4**	**-0.7**
NVAR	**Mina Array Bea**	**44.24**	**82**	LR	LR	17 31 44.7	
	comp=Z,103nm,18.8s,MS3.8,baz=265,slow=34						
SONM	**Songino Array**	**45.98**	**296**	P	**P**	**17 14 39.9**	**+0.8**
	0.4nm,0.5s,mb3.6,baz=64,slow=5.8,SNR=9.3						
PDAR	**Pinedale Array**	**46.95**	**72**	P	**P**	**17 14 46.4**	**-0.4**
	1.0nm,0.5s,mb4.0,baz=334,slow=3.8,SNR=9.3						
SDCO	**Great Sand Dun**	**52.50**	**74**	P	**P**	**17 15 30.4**	**+0.9**
	0.5nm,0.6s,mb3.6						
FRB	**Frobisher Bay**	**53.32**	**31**	P	**P**	**17 15 34.5**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=351,slow=8.4,SNR=3.2						
MNTX	**Cornudas Mount**	**56.63**	**80**	P	**P**	**17 16 00.5**	**+0.8**
ARCES	**ARCESS Array B**	**57.88**	**350**	P	**P**	**17 16 07.6**	**-0.4**
	3.8nm,0.9s,mb4.4,baz=27,slow=8.1,SNR=3.3						
TXAR	**Lajitas Array**	**59.33**	**80**	P	**P**	**17 16 21.6**	**+3.1**
	0.3nm,0.3s,mb3.8,baz=281,slow=9.2,SNR=4.5						
BVAR	**Borovoye Array**	**60.37**	**319**	P	**P**	**17 16 25.3**	**0.0**
	1.2nm,0.5s,mb4.2,baz=51,slow=7.1,SNR=12						
FINES	**FINESS Array B**	**65.54**	**347**	P	**P**	**17 16 58.4**	**-0.8**
	0.6nm,0.6s,mb3.8,baz=36,slow=12,SNR=3.8						
NOA	**NORSAR Array B**	**67.49**	**354**	P	**P**	**17 17 11.7**	**+0.2**
	0.8nm,0.9s,mb3.7,baz=357,slow=7.9,SNR=2.5						
HFS	**Hagfors**	**68.22**	**353**	P	**P**	**17 17 16.3**	**+0.3**
	0.6nm,0.4s,mb4.0,baz=315,slow=2.1,SNR=5.7						
HFS	**Hagfors**	**68.22**	**353**	P	**P**	**17 17 16.3**	**+0.3**
AKASG	**Malin Array Be**	**75.25**	**341**	P	**P**	**17 17 58.0**	**0.0**
	0.2nm,0.3s,mb3.5,baz=20,slow=6.3,SNR=4.2						

*HLW **15** 17:09:13.0,34.67N×31.76E,h33^{km},Mb3.0*

*CSEM **15** 17:09:15.0±0.2,34.41N×32.06E,h30^{km},Mw3.1,Error ellipse: s-maj=8.9km s-min=2.6km az=104.0*

*NEIC **15** 17:09:16.9,34.43N×32.07E,h25^{km},ML3.2(NIC),After NIC.*

*NIC **15** 17:09:16.9±0.1,34.43N×32.07E,h25^{km},ML3.2,MW3.1*

ISC 15 17:09:15.6±1.0**,34.37N**±0.04×**32.1E**±0.1**,h33**^{km}**,n10,** σ**0**$\overset{s}{.}$**52**/16**,1C-1D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.55**	**23**	P	**P**	**17 09 26.4**	**-0.4**
AKMC	**Akamas**	**0.68**	**17**	⇑*e*P	**P**	**17 09 28.6**	**-0.1**
SZAC	**Souni-Zanaja**	**0.76**	**60**	P	**P**	**17 09 29.9**	**+0.1**
	28nm,0.2s						
SZAC				S	**S**	**17 09 40.5**	**+0.2**
ALFC	**Alevga**	**0.89**	**28**	⇓*e*P	**P**	**17 09 31.6**	**0.0**
	15nm,0.2s						
ALFC				S	**S**	**17 09 42.7**	**-0.8**
CSS	**Prodhromos**	**1.18**	**60**	P	**P**	**17 09 36.1**	**+0.3**
	5.7nm,0.3s						
CSS				S	**S**	**17 09 50.8**	**-0.3**
MAMC	**Mammari**	**1.23**	**49**	P	**P**	**17 09 37.5**	**+1.1**
SUZ		**4.56**	**172**	P	**P**	**17 10 24.7**	**+0.6**
SUZ				S	**S**	**17 11 16.7**	**+0.1**
HNKL	**Nakhl**	**4.71**	**160**	P	**P**	**17 10 26.9**	**+0.7**
ZAF		**5.09**	**175**	P	**P**	**17 10 31.4**	**-0.2**
ZAF				S	**S**	**17 11 29.4**	**-0.6**
TR2		**6.13**	**166**	P	**P**	**17 10 46.5**	**+0.3**
TR2				S	**S**	**17 11 55.1**	**-1.0**

*NNC **15** 17:18:36.3±3.0,42.17N×78.98E,mpv3.1,Error ellipse: s-maj=37.1km s-min=8.5km az=149.0*

BJI 15 17:18:32.8,41.58N×79.76E,h15^{km}**,ML3.5,3C-5D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.55**	**236**	*e*P	Pn	17 19 31.3	+2.8
KSH				S	Sn	17 20 12.3	+1.7
KSH				Smax			
	comp=N,40nm,1.0s						
KSH				Smax			
	comp=E,50nm,0.6s						
AAK	**Ala-Archa**	**4.06**	**287**	⇑Pn	Pn	17 19 30.3	-5.5
	comp=E,5.0nm,1.4s						
AAK				⇑Pg	Pg	17 19 38.2	-16
	comp=E,7.3nm,0.6s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK				⇓Lg		17 20 21.1	
	comp=E,17nm,0.6s						
MK31	**Makanchi Array**	**5.52**	**18**	⇓Pn	Pn	17 19 54.6	-1.9
	comp=E,0.7nm,0.2s,baz=197,slow=12,SNR=215						
MK31				⇑Pg	Pg	17 20 10.5	-13
	comp=E,0.6nm,0.3s,baz=203,slow=13,SNR=3.5						
MK31				⇓Sn	Sn	17 20 57.7	-2.7
	comp=E,4.5nm,0.6s,baz=202,slow=17,SNR=3.7						
MK31				⇓Lg		17 21 21.7	
	comp=E,3.0nm,0.5s,baz=211,slow=26,SNR=3.7						
KURK	**Kurchatov**	**9.17**	**355**	⇓Lg		17 23 07.0	
	comp=E,7.0nm,1.0s,baz=301,slow=16,SNR=4.7						

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*NEIC **15** 17:22:27.1±0.3, 7.18N×77.17W, mb4.4/6, Error ellipse: s-maj=11.1km s-min=7.5km az=56.0*

*IDC **15** 17:22:27.1±0.5, 7.17N×77.15W, h31^{km}±3^{km}, mb4.0/17, mb1 4.3/20, mb1mx4.1/24, mbtmp4.2/20, ML3.5/3, MS3.6/3, Ms1 3.6/3, ms1mx3.0/19, Error ellipse: s-maj=18.7km s-min=11.3km az=55.0*

*BJI **15** 17:22:29.1, 7.20N×77.20W, h32^{km}*

*CASC **15** 17:22:33.4±17.0, 6.95N×77.77W, h36^{km}±999^{km}, MD4.9, mb4.4(NEIC)*

ISC 15 17:22:26.0±0.4**, 7.27N**±0.06×**77.04W**±0.04**, h32**^{km}**, h32**^{km}±.7^{km}**:pP-P, n52,** σ1^{s}**22**/48**, mb4.3**/21**, MS4.0**/1**, 2C-1D, Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UPD1	**Univ de Panama**	**1.60**	**323**	eS	**Sn**	**17 23 16.0**	**+3.9**
UPD1				eS	**Sn**	**17 23 22.2**	**+10**
AZU2	**Pedas**	**2.97**	**275**	⇑iP	**Pn**	**17 23 12.8**	**+0.6**
AZU2				eS	**Pb**	**17 23 20.8**	**+2.7**
UPA	**Univ. de Panam**	**3.00**	**305**	eP	**Pn**	**17 23 13.6**	**+1.1**
UPA				eS	**Sn**	**17 23 48.7**	**+1.0**
AZU	**Azuero**	**3.25**	**279**	⇓eP	**Pn**	**17 23 17.3**	**+1.3**
AZU				eS	**Sn**	**17 23 53.6**	**-0.4**
ROSC	**El Rosal**	**3.61**	**131**	Pn	**Pn**	**17 23 23.5**	**+2.4**
	35nm,0.3s,baz=270,slow=1.5,SNR=42						
ROSC				Sn	**Sn**	**17 24 06.2**	**+3.1**
	13nm,0.3s,baz=270,slow=23,SNR=3.5						
ROSC				Lg		17 24 19.8	
	16nm,0.3s,baz=270,slow=22,SNR=7.1						
ROSC				LR	LR	17 24 41.3	
	comp=Z,291nm,18.7s,baz=358,slow=37						
DVD	**David**	**5.48**	**283**	eP	**Pn**	**17 23 47.9**	**+0.2**
SDV	**Santo Domingo**	**6.54**	**75**	Pn	**Pn**	**17 24 04.1**	**+1.4**
	4.1nm,0.3s,baz=265,slow=8.5,SNR=31						
SDV				Sn	**Sn**	**17 25 17.0**	**+0.1**
	12nm,0.3s,baz=354,slow=15,SNR=6.9						
SDV				LR	LR	17 27 06.3	
	comp=Z,386nm,19.5s,baz=104,slow=42						
SDV	**Santo Domingo**	**6.54**	**75**	ePn	**Pn**	**17 24 03.3**	**+0.6**
SDV				eSn	**Sn**	**17 25 16.5**	**-0.5**
OTAV	**Otavalo**	**7.12**	**191**	eP	**Pn**	**17 24 08.8**	**-2.0**
JTS	**JuntasAbangare**	**8.38**	**292**	Pn	**P**	**17 24 26.2**	**-2.0**
	0.7nm,0.3s,baz=70,slow=13,SNR=2.6						
SAML	**Samuel**	**21.22**	**139**	eP	**P**	**17 27 06.3**	**-5.2**
	6.2nm,0.9s,mb3.9						
LPAZ	**La Paz**	**25.01**	**159**	P	**P**	**17 27 49.2**	**+0.4**
	1.6nm,0.5s,mb3.8,baz=350,slow=11,SNR=7.3						
LPAZ	**La Paz**	**25.01**	**159**	eP	**P**	**17 27 47.9**	**-0.9**
	3.9nm,0.8s,mb4.0						
LVC	**Limon Verde**	**30.74**	**165**	P	**P**	**17 28 40.3**	**-0.5**
	4.5nm,0.6s,mb4.5,baz=331,slow=5.8,SNR=7.2						
LVC				pP	pP	17 28 49.2	-1.1
	12nm,0.9s,baz=344,slow=5.6,SNR=9.9						
LVC	**Limon Verde**	**30.74**	**165**	eP	**P**	**17 28 40.2**	**-0.6**
	11nm,0.9s,mb4.7						
LVC				e	pP	17 28 50.3	0.0
USIN	**University of**	**32.04**	**344**	eP	**P**	**17 28 50.5**	**-1.6**
CCM	**Cathedral Cave**	**33.24**	**339**	eP	**P**	**17 29 00.7**	**-1.8**
	6.8nm,0.6s,mb4.8						
TXAR	**Lajitas Array**	**33.32**	**315**	P	**P**	**17 29 03.1**	**-0.1**
	0.3nm,0.3s,mb3.7,baz=164,slow=6.6,SNR=4.3						
TXAR				pP	pP	17 29 12.7	-0.1
	2.2nm,1.0s,baz=141,slow=8.0,SNR=5.0						
TXAR				PcP	PcP	17 31 43.8	-1.1
	0.9nm,0.8s,baz=135,slow=5.1,SNR=4.6						
TXAR				pPcP		17 31 55.7	
	0.2nm,0.4s,baz=135,slow=3.5,SNR=4.2						
WMOK	**Wichita Mounta**	**33.88**	**327**	P	**P**	**17 29 06.3**	**-1.8**
	1.9nm,0.8s,mb4.1						
BDFB	**Brasilia**	**36.67**	**128**	LR	LR	17 45 32.4	
	comp=Z,276nm,20.1s,MS4.0,baz=157,slow=38						
SADO	**Sadowa**	**37.40**	**358**	P	**P**	**17 29 39.1**	**+1.3**
	7.5nm,0.5s,mb4.8,baz=196,slow=7.4,SNR=8.5						
ANMO	**Albuquerque**	**38.60**	**320**	P	**P**	**17 29 49.1**	**+1.1**
	1.7nm,0.7s,mb3.9,baz=138,slow=8.0,SNR=3.4						
PV10	**Paradox Valley**	**42.36**	**322**	P	**P**	**17 30 19.3**	**+0.3**
PDAR	**Pinedale Array**	**45.49**	**326**	P	**P**	**17 30 44.7**	**+0.5**
	1.2nm,1.0s,mb3.7,baz=121,slow=8.6,SNR=8.1						
PDAR				PcP	PcP	17 32 21.4	-1.8
	1.1nm,0.7s,baz=121,slow=5.3,SNR=6.1						
ULM	**Lac du Bonnet**	**45.64**	**343**	P	**P**	**17 30 44.0**	**-1.3**
	baz=270,slow=20						
NVAR	**Mina Array Bea**	**48.43**	**316**	P	**P**	**17 31 08.3**	**+0.8**
	1.7nm,0.9s,mb4.1,baz=132,slow=6.8,SNR=9.1						
NVAR				PcP	PcP	17 32 31.9	-1.8
	0.7nm,0.6s,baz=101,slow=4.6,SNR=4.0						
NVAR	**Mina Array Bea**	**48.43**	**316**	P	**P**	**17 31 08.3**	**+0.8**
NVAR				PcP	PcP	17 32 31.9	-1.8
YKA	**Yellowknife Ar**	**61.55**	**341**	P	**P**	**17 32 40.5**	**-1.8**
	3.4nm,0.7s,mb4.6,baz=131,slow=7.1,SNR=48						
YKA				pP	pP	17 32 50.5	-1.8
	1.7nm,0.8s,baz=131,slow=7.3,SNR=4.7						
YKA	**Yellowknife Ar**	**61.55**	**341**	P	**P**	**17 32 40.5**	**-1.8**
YKA				pP	pP	17 32 50.5	-1.8
YKW3	**Yellowknife Ar**	**61.60**	**341**	eP	**P**	**17 32 40.2**	**-2.4**
DLBC	**Dease Lake**	**65.10**	**332**	P	**P**	**17 33 05.7**	**0.0**
	1.8nm,0.7s,mb4.2,baz=120,slow=6.0,SNR=6.1						
DLBC	**Dease Lake**	**65.10**	**332**	P	**P**	**17 33 05.7**	**0.0**
SUMG	**Summit**	**69.30**	**12**	eP	**P**	**17 33 31.9**	**0.0**
	18nm,0.7s,mb5.1						
INK	**Inuvik**	**71.32**	**341**	P	**P**	**17 33 43.3**	**-1.0**
	2.3nm,0.6s,mb4.3,baz=110,slow=6.6,SNR=14						
DBIC	**Dimbokro**	**71.58**	**85**	P	**P**	**17 33 45.9**	**-0.9**
	1.9nm,0.7s,mb4.2,baz=215,slow=5.9,SNR=5.5						
ESDC	**Sonseca Array**	**72.38**	**51**	P	**P**	**17 33 51.5**	**+0.4**
	0.2nm,0.3s,mb3.5,baz=273,slow=5.6,SNR=4.9						
ILAR	**Eielson Array**	**74.93**	**335**	P	**P**	**17 34 04.6**	**-0.8**
	2.6nm,0.7s,mb4.3,baz=120,slow=4.1,SNR=42						
ILAR				pP	pP	17 34 14.6	-0.9
	1.3nm,0.7s,baz=109,slow=4.0,SNR=8.1						
NOA	**NORSAR Array B**	**82.85**	**29**	P	**P**	**17 34 49.4**	**+1.0**
	3.6nm,1.1s,mb4.3,baz=274,slow=5.3,SNR=5.1						
NOA	**NORSAR Array B**	**82.85**	**29**	P	**P**	**17 34 49.4**	**+1.0**
GERES	**GERESS Array B**	**85.08**	**42**	P	**P**	**17 35 01.4**	**+1.5**
	1.5nm,0.8s,mb4.2,baz=270,slow=4.0,SNR=7.9						
ARCES	**ARCESS Array B**	**87.60**	**20**	P	**P**	**17 35 12.6**	**+0.7**
	4.2nm,0.7s,mb4.8,baz=304,slow=4.4,SNR=12						
FINES	**FINESS Array B**	**89.88**	**28**	P	**P**	**17 35 23.5**	**+0.5**
	2.2nm,0.8s,mb4.5,baz=233,slow=9.5,SNR=3.8						
SONM	**Songino Array**	**125.05**	**357**	PKP	PKPdf	17 41 23.9	-4.8
	0.4nm,0.6s,baz=323,slow=1.7,SNR=7.5						
SONM				pPKP		17 41 34.9	
	0.3nm,0.7s,baz=45,slow=1.7,SNR=3.6						
STKA	**Stephens Creek**	**136.50**	**231**	pPKP		17 41 57.0	
	0.9nm,0.7s,baz=141,slow=6.5,SNR=2.9						
ASAR	**Alice Springs**	**146.13**	**238**	PKPbc	PKPbc	17 42 03.5	-0.4
	3.6nm,0.7s,baz=118,slow=3.6,SNR=47						
ASAR				pPKPbc		17 42 14.8	
	4.3nm,1.0s,baz=116,slow=3.7,SNR=8.7						
ASPA	**Alice Springs**	**146.13**	**238**	eP	PKPbc	17 42 04.0	+0.1
GYA	**Guiyang**	**146.28**	**354**	⇑PKP	PKPdf	17 42 04.1	-4.2
WB2	**Warramunga Arr**	**147.07**	**244**	eP	PKPdf	17 42 04.9	-4.9
WRAB	**Tennant Creek**	**147.07**	**244**	ePKPbc	PKPdf	17 42 04.8	-5.0
WRA	**Warramunga Arr**	**147.08**	**244**	PKPbc	PKPdf	17 42 05.0	-4.8
	4.1nm,1.0s,baz=100,slow=1.9,SNR=28						
WRA				pPKPbc		17 42 15.5	
	2.0nm,0.7s,baz=97,slow=3.1,SNR=7.8						
KAKA	**Kakadu**	**150.48**	**257**	eP	PKPdf	17 42 15.3	-0.1
	5.5nm,0.6s						
CMAR	**Chiang Mai Arr**	**154.13**	**9**	PKP	PKPdf	17 42 15.9	-4.5
	0.4nm,0.8s,baz=310,slow=0.9,SNR=4.6						
CMAR				PKPbc	PKPdf	17 42 24.1	+3.6
	1.4nm,0.6s,baz=331,slow=3.4,SNR=15						
CMAR				PKPab	PKPab	17 42 38.0	-1.5
	3.9nm,1.1s,baz=329,slow=5.1,SNR=14						

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*ATH **15** 17:25:28.3, 38.58N×21.98E, h26^{km}±2^{km}, MD3.3/11, ML3.4*

*NEIC **15** 17:25:28.5, 38.57N×21.99E, h20^{km}, ML3.4(ATH), After ATH.*

*CSEM **15** 17:25:28.8±0.1, 38.57N×22.05E, h2^{km}, ML3.4, Error ellipse: s-maj=2.6km s-min=2.1km az=111.0*

*THE **15** 17:25:31.2, 38.59N×22.27E, h20^{km}, ML3.1*

ISC 15 17:25:28.9±0.4**, 38.54N**±0.03×**21.97E**±0.05**, h20**^{km}**, n31,** σ1^{s}**16**/36**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.40**	**342**	ePB	**Pb**	**17 25 36.0**	**-1.2**
EVR				eSB	**Sb**	**17 25 42.7**	**-0.1**
AGG	**Agios Georgios**	**0.56**	**30**	ePg	**Pb**	**17 25 45.0**	**+5.1**
RLS	**Riolos of Patr**	**0.62**	**220**	ePN	**Pn**	**17 25 41.3**	**-1.1**
RLS				eSN	**Sn**	**17 25 51.7**	**-0.1**
LKR	**Lokris**	**0.81**	**82**	ePB	**Pb**	**17 25 43.3**	**-0.9**
VLS	**Valsamata**	**1.14**	**252**	ePB	**Pb**	**17 25 49.5**	**-0.3**
NEO	**Neokhori**	**1.24**	**51**	ePN	**Pn**	**17 25 52.0**	**+0.7**
NEO	**Neokhori**	**1.24**	**51**	ePn	**Pn**	**17 25 52.4**	**+1.1**
XOR	**Xorichti**	**1.26**	**49**	ePg	**Pn**	**17 25 51.0**	**-0.6**
XOR				eSg	**Sb**	**17 26 08.0**	**+0.3**
ITM	**Ithomi**	**1.36**	**181**	ePN	**Pn**	**17 25 54.3**	**+1.3**
ITM	**Ithomi**	**1.36**	**181**	ePn	**Pn**	**17 25 55.5**	**+2.5**
JAN	**Janina**	**1.42**	**322**	ePN	**Pn**	**17 25 55.0**	**+1.2**
JAN	**Janina**	**1.42**	**322**	ePn	**Pn**	**17 25 56.1**	**+2.3**
NAIG	**Nisos Aigina**	**1.43**	**123**	ePN	**Pn**	**17 25 52.5**	**-1.5**
MPAR	**Parnis Oros**	**1.44**	**105**	ePN	**Pn**	**17 25 55.0**	**+0.8**
MPAR	**Parnis Oros**	**1.44**	**105**	ePn	**Pn**	**17 25 56.5**	**+2.3**
ATH	**Athens Observa**	**1.49**	**112**	ePN	**Pn**	**17 25 56.5**	**+1.7**
ATH	**Athens Observa**	**1.49**	**112**	ePn	**Pn**	**17 25 57.1**	**+2.3**
PTL	**Penteli**	**1.57**	**108**	ePN	**Pn**	**17 25 57.0**	**+1.0**
LIT	**Litokhoron**	**1.61**	**14**	ePb	**Pb**	**17 25 56.9**	**-0.9**
LIT				eSb	**Sb**	**17 26 17.9**	**+0.1**
IGT	**Igoumenitsa**	**1.62**	**308**	ePb	**Pb**	**17 26 01.4**	**+3.6**
KZN	**Kozani**	**1.77**	**355**	ePB	**Pb**	**17 25 58.5**	**-2.0**
VLI	**Veliai**	**1.97**	**157**	ePb	**Pb**	**17 26 02.5**	**-1.4**
VLI	**Veliai**	**1.97**	**157**	ePN	**Pn**	**17 26 02.0**	**+0.2**
FNA	**Florina**	**2.29**	**349**	ePn	**Pn**	**17 26 07.7**	**+1.4**
FNA				eSn	**Sn**	**17 26 35.7**	**+1.5**
GRG	**Griva**	**2.44**	**8**	ePn	**Pn**	**17 26 08.4**	**0.0**
SOH	**Sokhos**	**2.52**	**25**	ePn	**Pn**	**17 26 09.0**	**-0.6**
KNT	**Kendrikon**	**2.72**	**15**	ePn	**Pn**	**17 26 12.3**	**-0.1**
MMB	**Musomiste**	**3.33**	**23**	i P	**Pn**	**17 26 21.0**	**-0.2**
KKB	**Krupnik**	**3.43**	**14**	i P	**Pn**	**17 26 22.0**	**-0.6**
RZN	**Rozhen**	**3.79**	**33**	eP	**Pn**	**17 26 25.0**	**-2.6**
VTS	**Vitosha**	**4.16**	**13**	eP	**Pn**	**17 26 34.0**	**+1.1**

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*IDC **15** 17:40:30.6±1.4, 39.30N×110.31E, mb3.4/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=38.7km s-min=22.7km az=97.0*

*BJI **15** 17:40:31.2, 39.18N×110.20E, h15^{km}, mb3.1, ML3.4, Ms3.4*

*NEIC **15** 17:40:31.5±0.8, 39.36N×110.36E, h10^{km}, mb3.6/1, Error ellipse: s-maj=18.6km s-min=9.2km az=102.0*

*MOS **15** 17:40:35.9±2.0, 39.34N×109.87E, h33^{km}, mb3.8/4, Error ellipse: s-maj=21.0km s-min=14.5km az=103.9*

ISC 15 17:40:29.5±0.5**, 39.28N**±0.03×**110.47E**±0.05**, h10**^{km}**, n21,** σ1^{s}**12**/25**, mb3.6**/5**, 1D, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.36**	**346**	ePG	**Pn**	**17 40 53.4**	**-1.3**
BTO				SG	**Sg**	**17 41 15.9**	**+0.8**
BTO				Smax			
	comp=N,359nm,1.0s						
BTO				Smax			
	comp=E,121nm,0.6s						
HHC	**Hu-ho-hao-te**	**1.78**	**28**	ePG	**Pg**	**17 41 04.1**	**-1.0**
HHC				SG	**Sg**	**17 41 30.5**	**+1.7**
HHC				Smax			
	comp=N,308nm,0.7s						
HHC				Smax			
	comp=E,331nm,0.6s						
TIY	**Taiyuan**	**2.20**	**135**	⇓P	**Pn**	**17 41 05.6**	**-1.1**
TIY				SG	**Sb**	**17 41 37.3**	**+1.0**
TIY				Smax			
	comp=N,282nm,0.6s						
TIY				Smax			
	comp=E,253nm,0.5s						
BJT	**Baijiatuau**	**4.46**	**79**	eP	**Pg**	**17 41 53.7**	**-4.9**
BJT				eS	**Sg**	**17 42 53.2**	**-4.9**
BJI	**Beijing**	**4.47**	**78**	PG	**Pg**	**17 41 53.8**	**-5.0**
BJI				SG	**Sg**	**17 42 58.0**	**-0.4**
BJI				Smax			
	comp=N,59nm,0.9s						
BJI				Smax			
	comp=E,31nm,0.7s						
LZH	**Lanzhou**	**6.14**	**241**	ePG	**Pb**	**17 42 18.1**	**+1.6**
ULN	**Ulaanbaatar**	**8.93**	**345**	eP	**P**	**17 42 39.9**	**-1.7**
ENH	**Enshi**	**9.03**	**185**	eP	**P**	**17 42 42.1**	**-0.8**
SONM	**Songino Array**	**9.04**	**342**	Pn	**P**	**17 42 41.8**	**-1.3**
	comp=E,0.1nm,0.3s,baz=162,slow=13,SNR=12						
SONM				Sn	**Sn**	**17 44 19.6**	**-6.5**
	comp=E,0.1nm,0.3s,baz=184,slow=17,SNR=3.7						
SONM				Lg		17 45 14.2	
	comp=E,0.4nm,0.3s,baz=165,slow=28,SNR=8.0						
LSA	**Lhasa**	**18.54**	**245**	P	**P**	**17 44 47.1**	**-1.0**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	**Lhasa**	**18.54**	**245**	P	**P**	**17 44 47.1**	**-1.0**
	comp=Z,2.9nm,0.7s						
ZAL	**Zalesovo**	**22.75**	**319**	P	**P**	**17 45 33.9**	**+1.1**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAL	**Zalesovo**	**22.75**	**319**	P	**P**	**17 45 33.9**	**+1.1**
	comp=Z,0.7nm,0.7s,mb3.2,baz=341,slow=13,SNR=6.5						
CMAR	**Chiang Mai Arr**	**23.03**	**209**	P	**P**	**17 45 36.7**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**23.03**	**209**	P	**P**	**17 45 36.7**	**+0.8**
	comp=Z,2.8nm,0.8s,mb3.8,baz=13,slow=9.2,SNR=22						
KURK	**Kurchatov**	**25.06**	**308**	eP	**P**	**17 45 55.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
ILAR	**Eielson Array**	**60.20**	**29**	P	**P**	**17 50 40.2**	**+0.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ILAR	**Eielson Array**	**60.20**	**29**	P	**P**	**17 50 40.2**	**+0.6**
	comp=Z,1.0nm,1.2s,mb3.7,baz=280,slow=5.5,SNR=4.3						
YKA	**Yellowknife Ar**	**72.30**	**20**	P	**P**	**17 51 57.7**	**+1.1**
	comp=Z,0.4nm,0.8s,mb3.4,baz=324,slow=5.4,SNR=7.0						
LPAZ	**La Paz**	**157.06**	**357**	PKIKP	PKPdf	18 00 34.6	+6.1
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
LPAZ	**La Paz**	**157.06**	**357**	PKP	PKPdf	18 00 34.5	+6.1
	comp=Z,0.8nm,0.4s,baz=50,slow=5.4,SNR=3.8						

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*BJI **15** 17:45:06.0, 15.08S×167.53E, h11^{km}, mB5.3, mb4.3*

*NEIC **15** 17:45:09.1±1.6, 15.41S×167.74E, h35^{km}±13^{km}, mb4.5/12, Error ellipse: s-maj=11.9km s-min=10.9km az=55.0*

*IDC **15** 17:45:17.6±8.1, 15.41S×167.53E, h110^{km}±72^{km}, mb4.1/16, mb1 4.2/16, mb1mx4.2/19, mbtmp4.4/16, MS4.2/2, Ms1 4.2/2, ms1mx3.4/21, Error ellipse: s-maj=25.2km s-min=19.5km az=43.0*

ISC 15 17:45:06.8±3.5**, 15.47S**±0.05×**167.68E**±0.09**, h32**^{km}±24^{km}**, n51,** σ1^{s}**17**/44**, mb4.4**/24**, MS4.1**/2**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.67**	**190**	⇑eP	**Pn**	**17 46 44.6**	**-0.7**
DZM				eS	**Sn**	**17 47 57.8**	**-3.1**
DZM	**Mont Dzumac**	**6.67**	**190**	⇑eP	**Pn**	**17 46 44.6**	**-0.7**
DZM				eS	**Sn**	**17 47 57.8**	**-3.1**
NOUC	**Port Laguerre**	**6.72**	**191**	eP	**Pn**	**17 46 45.6**	**-0.4**
NOUC				eS	**Sn**	**17 48 02.7**	**+0.4**
NOUC	**Port Laguerre**	**6.72**	**191**	eP	**Pn**	**17 46 45.6**	**-0.4**
NOUC				eS	**Sn**	**17 48 02.6**	**+0.4**
HNR	**Honiara**	**9.64**	**308**	eP	**P**	**17 47 26.1**	**-0.5**
CTA	**Charters Tower**	**20.91**	**254**	P	**P**	**17 49 51.5**	**+2.3**
	6.5nm,0.8s,baz=89,slow=13,SNR=4.0						
CTA	**Charters Tower**	**20.91**	**254**	P	**P**	**17 49 51.5**	**+2.3**
CTAO	**Charters Tower**	**20.91**	**254**	eP	**P**	**17 49 50.9**	**+1.7**
	13nm,0.8s						
PMG	**Port Moresby**	**20.91**	**284**	P	**P**	**17 49 50.2**	**+0.9**
	18nm,0.9s,baz=107,slow=14,SNR=4.1						
PMG	**Port Moresby**	**20.91**	**284**	eP	**P**	**17 49 50.1**	**+0.8**
	14nm,0.9s						
URZ	**Urewera**	**24.18**	**162**	P	**P**	**17 50 24.1**	**+2.6**
	18nm,0.7s,mb4.6,baz=319,slow=2.6,SNR=8.9						
STKA	**Stephens Creek**	**28.82**	**231**	eP	**P**	**17 51 05.1**	**+0.7**
	4.7nm,1.0s,mb4.2						
STKA	**Stephens Creek**	**28.82**	**231**	P	**P**	**17 51 05.5**	**+1.0**
	7.3nm,0.8s,mb4.5,baz=55,slow=5.5,SNR=9.0						
STKA				LR	LR	18 01 57.3	
	comp=Z,529nm,18.1s,MS4.2,baz=125,slow=35						
WB2	**Warramunga Arr**	**32.02**	**257**	eP	**P**	**17 51 35.0**	**+2.1**
WRAB	**Tennant Creek**	**32.02**	**257**	P	**P**	**17 51 27.2**	**-5.7**
	11nm,1.1s,mb4.6						
WRA	**Warramunga Arr**	**32.04**	**257**	P	**P**	**17 51 31.7**	**-1.3**
	3.3nm,0.9s,mb4.2,baz=86,slow=8.5,SNR=16						
ASAR	**Alice Springs**	**32.79**	**250**	P	**P**	**17 51 38.9**	**-0.6**
	21nm,0.8s,mb5.1,baz=79,slow=8.9,SNR=48						
ASAR				LR	LR	18 03 42.2	
	comp=Z,328nm,19.2s,MS4.0,baz=51,slow=34						
ASPA	**Alice Springs**	**32.79**	**250**	eP	**P**	**17 51 38.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**40.27**	**260**	eP	**P**	**17 52 42.8**	**0.0**
	10nm,0.8s,mb4.6						
MBWA	**Marble Bar**	**45.73**	**255**	eP	**P**	**17 53 27.0**	**-0.2**
	17nm,1.0s,mb4.9						
NWAO	**Narrogin (SRO)**	**48.71**	**240**	P	**P**	**17 53 51.2**	**+0.8**
	23nm,1.0s,mb5.2,baz=56,slow=11,SNR=4.2						
NWAO	**Narrogin (SRO)**	**48.71**	**240**	P	**P**	**17 53 51.2**	**+0.8**
VNDA	**Vanda**	**62.14**	**181**	P	**P**	**17 55 26.8**	**-0.1**
	1.1nm,0.8s,mb4.0,baz=9.7,slow=7.4,SNR=3.1						
CN2	**Changchun**	**70.48**	**329**	eP	**P**	**17 56 21.0**	**+0.6**
ENH	**Enshi**	**72.14**	**309**	eP	**P**	**17 56 29.0**	**-1.6**
	13nm,1.1s,mb4.8						
QSPA	**South Pole Qui**	**74.56**	**180**	eP	**P**	**17 56 43.2**	**-0.6**
	7.4nm,0.9s,mb4.6						
CMAR	**Chiang Mai Arr**	**75.61**	**294**	P	**P**	**17 56 51.5**	**+0.5**
	0.6nm,0.6s,mb3.7,baz=124,slow=4.4,SNR=4.5						
HIA	**Hailar**	**77.12**	**330**	eP	**P**	**17 56 59.6**	**+0.7**
	3.2nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**82.96**	**324**	eP	**P**	**17 57 29.4**	**-0.7**
	5.1nm,0.9s,mb4.5						
BILL	**Bilibino**	**83.28**	**359**	eP	**P**	**17 57 29.8**	**-1.6**
	4.0nm,0.9s,mb4.5						
BILL				e	pP	17 57 40.6	-1.0
SONM	**Songino Array**	**83.32**	**323**	P	**P**	**17 57 31.5**	**-0.5**
	1.8nm,0.8s,mb4.1,baz=141,slow=7.9,SNR=13						
GTA	**Gaotai**	**83.46**	**314**	eP	**P**	**17 57 33.5**	**+0.7**
GTA				AP	pP	17 57 39.0	-4.2
GTA				XP	sP	17 57 42.3	-4.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.3						
YBH	**Yreka Blue Hor**	**85.66**	**45**	P	**P**	**17 57 46.4**	**+2.6**
	comp=Z,4.6nm,1.1s,mb4.6,baz=189,slow=2.5,SNR=4.4						
ILAR	**Eielson Array**	**87.11**	**18**	P	**P**	**17 57 48.7**	**-1.7**
	comp=Z,1.0nm,0.7s,mb4.2,baz=246,slow=4.9,SNR=12						
NVAR	**Mina Array Bea**	**87.45**	**49**	P	**P**	**17 57 54.0**	**+1.3**
	comp=Z,2.7nm,0.7s,mb4.6,baz=225,slow=5.1,SNR=16						
NEN	**Nelson**	**89.06**	**53**	P	**P**	**17 57 58.9**	**-1.6**
BMO	**Blue Mountains**	**90.52**	**43**	eP	**P**	**17 58 07.2**	**+0.2**
	comp=Z,1.9nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**95.16**	**47**	P	**P**	**17 58 30.1**	**+1.7**
	comp=Z,0.4nm,0.8s,mb3.9,baz=180,slow=8.1,SNR=3.2						
YKA	**Yellowknife Ar**	**98.02**	**27**	P	**P**	**17 58 40.3**	**-0.5**
	comp=Z,0.4nm,0.7s,mb4.0,baz=254,slow=4.6,SNR=8.0						
ZAL	**Zalesovo**	**98.23**	**324**	P	**P**	**17 58 40.6**	**-1.4**
	comp=Z,0.7nm,0.6s,mb4.4,baz=349,slow=4.9,SNR=6.6						
BRTR	**Keskin Array B**	**133.29**	**310**	PKP	PKPdf	18 04 20.6	-4.8
	comp=Z,0.4nm,0.6s,baz=72,slow=4.6,SNR=3.2						
GERES	**GERESS Array B**	**140.48**	**333**	PKP	PKPdf	18 04 35.8	-2.6
	comp=Z,0.4nm,0.7s,baz=56,slow=3.5,SNR=3.9						
CABF	**La Chapelle**	**145.36**	**337**	⇑iPKP1	PKPbc	18 04 43.1	+1.1
	comp=Z,56nm,1.1s						
SSF	**Saint Saulge**	**145.86**	**341**	⇑iPKP1	PKPbc	18 04 44.4	+1.2
	comp=Z,17nm,0.8s						
LPL	**La Plagne**	**146.03**	**336**	ePKP1	PKPbc	18 04 44.5	+0.8
	comp=Z,20nm,1.1s						
LPG	**La Plagne**	**146.03**	**336**	ePKP1	PKPbc	18 04 45.6	+1.9
SMF	**Signal de Mont**	**146.12**	**340**	ePKP1	PKPbc	18 04 45.5	+1.6
AVF	**Avril sur Loir**	**146.15**	**341**	ePKP1	PKPbc	18 04 45.6	+1.7
BGF	**Bois d’Agland**	**146.51**	**341**	ePKP1	PKPbc	18 04 46.1	+1.3
ORIF	**Oris-en-Rattie**	**146.86**	**336**	ePKP1	PKPbc	18 04 47.4	+1.8
	comp=Z,18nm,0.9s						
TCF	**Toulx Ste Croi**	**146.95**	**341**	ePKP1	PKPbc	18 04 46.6	+0.8
	comp=Z,9.8nm,0.9s						

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*IDC **15** 17:55:31.4±0.9, 22.86S×169.30E, mb4.2/9, mb1 4.4/9, mb1mx4.4/13, mbtmp4.2/9, MS4.0/2, Ms1 4.0/2, ms1mx3.6/15, Error ellipse: s-maj=32.3km s-min=23.3km az=155.0*

*NEIC **15** 17:55:33.9±8.8, 22.77S×169.25E, h14^{km}±51^{km}, mb4.7/5, Error ellipse: s-maj=24.0km s-min=16.7km az=86.0*

ISC 15 17:55:34.8±0.7**, 22.9S**±0.1×**169.29E**±0.08**, h33**^{km}**, n35,** σ1^{s}**23**/21**, mb4.3**/14**, MS3.9**/1**, 1C-1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.75**	**286**	eP	**P**	**17 56 17.0**	**-0.6**
NOUC	**Port Laguerre**	**2.86**	**285**	eP	**P**	**17 56 18.9**	**-0.3**
NOUC				eS	**S**	**17 56 54.5**	**+1.6**
NOUC	**Port Laguerre**	**2.86**	**285**	eP	**P**	**17 56 18.9**	**-0.3**
NOUC				eS	**S**	**17 56 54.5**	**+1.6**
URZ	**Urewera**	**16.74**	**158**	LR	LR	18 04 50.6	
	comp=Z,300nm,18.8s,baz=245,slow=33						
RPZ	**Rata Peaks**	**20.85**	**176**	LR	LR	18 07 15.3	
	comp=Z,500nm,18.3s,MS3.9,baz=262,slow=34						
CTA	**Charters Tower**	**21.61**	**273**	P	**P**	**18 00 24.5**	**+0.5**
	12nm,1.1s,mb4.2,baz=101,slow=16,SNR=2.6						
CTA	**Charters Tower**	**21.61**	**273**	P	**P**	**18 00 24.5**	**+0.5**
STKA	**Stephens Creek**	**26.12**	**244**	P	**P**	**18 01 08.3**	**+0.6**
	2.8nm,0.9s,mb3.8,baz=80,slow=6.1,SNR=4.0						
ASAR	**Alice Springs**	**32.47**	**262**	P	**P**	**18 02 02.9**	**-1.7**
	3.8nm,1.1s,mb4.1,baz=83,slow=9.1,SNR=16						
ASAR				PcP	PcP	18 04 49.5	-1.8
	0.8nm,0.8s,baz=144,slow=2.3,SNR=5.5						
WRA	**Warramunga Arr**	**32.62**	**268**	P	**P**	**18 02 03.8**	**-2.2**
	0.5nm,0.6s,mb3.6,baz=100,slow=8.3,SNR=8.5						
WRA				PcP	PcP	18 04 50.2	-1.5
	0.4nm,0.7s,baz=103,slow=2.9,SNR=6.4						
MBWA	**Marble Bar**	**45.80**	**262**	eP	**P**	**18 03 54.3**	**-1.3**
	6.9nm,0.6s,mb4.8						
VNDA	**Vanda**	**54.83**	**182**	P	**P**	**18 05 03.4**	**-0.2**
	3.0nm,1.0s,mb4.3,baz=45,slow=5.7,SNR=3.8						
MAJO	**Matsushiro**	**65.98**	**333**	P	**P**	**18 06 17.7**	**-2.4**
	4.6nm,0.6s,mb4.7						
QSPA	**South Pole Qui**	**67.20**	**180**	⇓iP	**P**	**18 06 28.8**	**+1.6**
	4.3nm,0.8s,mb4.5						
ENH	**Enshi**	**78.02**	**310**	eP	**P**	**18 07 32.5**	**+0.5**
	9.8nm,1.1s,mb4.7						
CMAR	**Chiang Mai Arr**	**80.04**	**295**	P	**P**	**18 07 44.6**	**+1.4**
	3.1nm,0.9s,mb4.2,baz=138,slow=4.1,SNR=18						
ULN	**Ulaanbaatar**	**89.79**	**323**	P	**P**	**18 08 31.1**	**-0.1**
	4.3nm,1.2s,mb4.7						
SONM	**Songino Array**	**90.14**	**323**	P	**P**	**18 08 34.4**	**+1.6**
	2.1nm,0.9s,mb4.5,baz=124,slow=4.2,SNR=14						
NVAR	**Mina Array Bea**	**91.16**	**48**	P	**P**	**18 08 38.9**	**+1.1**
	2.1nm,0.8s,mb4.5,baz=216,slow=6.2,SNR=8.4						
NVAR	**Mina Array Bea**	**91.16**	**48**	P	**P**	**18 08 38.9**	**+1.1**
ILAR	**Eielson Array**	**93.66**	**17**	P	**P**	**18 08 47.9**	**-0.8**
	0.7nm,0.8s,mb4.1,baz=250,slow=5.6,SNR=5.9						
ARCES	**ARCESS Array B**	**128.56**	**345**	PKP	PKPdf	18 14 39.5	+1.4
	2.5nm,0.8s,baz=333,slow=2.7,SNR=3.6						
KECS	**Kecovo**	**144.43**	**324**	eP	PKPdf	18 15 01.5	-6.0
KECS	**Kecovo**	**144.43**	**324**	e	PKPdf	18 15 01.5	-6.0
OKC	**Ostrava-Krasne**	**144.83**	**327**	ePKP	PKPdf	18 15 09.6	+1.4
KSP	**Ksiaz**	**145.06**	**330**	eP	PKPdf	18 15 10.5	+1.9
VYHS	**Vyhne**	**145.31**	**325**	ePKP	PKPdf	18 15 11.8	+2.7
DPC	**Dobruska-Polom**	**145.39**	**329**	ePKP	PKPdf	18 15 11.8	+2.6
UPC	**Upice**	**145.43**	**330**	ePKP	PKPdf	18 15 11.9	+2.7
BRG	**Berggiesshubel**	**146.10**	**332**	eP	PKPdf	18 15 13.0	+2.6
CLL	**Collm**	**146.19**	**333**	⇑iP	PKPdf	18 15 13.7	+3.2
CLL				e		18 15 31.0	
PRU	**Pruhonice**	**146.47**	**330**	ePKP	PKPdf	18 15 14.5	+3.5
NKC	**Novy Kostel**	**147.22**	**332**	ePKP	PKPdf	18 15 16.9	+4.6
KHC	**Kasperske Hory**	**147.52**	**330**	ePKP	PKPdf	18 15 17.1	+4.3
GERES	**GERESS Array B**	**147.66**	**329**	PKPbc	PKPdf	18 15 16.8	+3.8
	4.7nm,1.0s,baz=90,slow=1.3,SNR=15						

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*BJI **15** 18:00:45.6, 5.10N×94.00E, h30^{km}, mb4.7*

*NEIC **15** 18:00:47.6±0.7, 5.13N×94.00E, h30^{km}, mb4.4/5, Error ellipse: s-maj=24.3km s-min=10.9km az=59.0*

*IDC **15** 18:00:52.2±8.7, 5.27N×94.16E, h66^{km}±77^{km}, mb3.6/9, mb1 3.9/10, mb1mx3.8/19, mbtmp4.0/10, ML4.5/1, Error ellipse: s-maj=51.2km s-min=16.5km az=53.0*

ISC 15 18:00:45.8±0.7**, 5.2N**±0.1×**94.1E**±0.1**, h30**^{km}**, n22,** σ1^{s}**00**/22**, mb4.2**/17**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**14.01**	**19**	P	**P**	**18 04 09.2**	**+4.5**

CMAR	Chiang Mai Arr	14.01	19	P	P	18 04 07.2	+2.6
	0.7nm,0.3s,baz=212,slow=13,SNR=28						
GYA	Guiyang	24.32	28	⇑iP	P	18 06 03.0	+0.8
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
LSA	Lhasa	24.53	354	eP	P	18 06 04.8	+0.7
LSA	Lhasa	24.53	354	P	P	18 06 03.5	-0.7
	comp=Z,7.6nm,0.7s,mb4.3						
XAN	Xi'an	31.84	24	P	P	18 07 08.3	-2.1
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
GTA	Gaotai	34.45	8	eP	P	18 07 32.1	-0.9
GTA				AP	pP	18 07 41.0	-0.9
GTA				XP	sP	18 07 44.6	-1.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
SONM	Songino Array	43.77	12	P	P	18 08 49.9	-0.5
	comp=Z,3.5nm,0.9s,mb4.1,baz=191,slow=8.6,SNR=20						
SONM				PcP	PcP	18 10 37.3	-0.1
	comp=Z,0.5nm,0.6s,baz=203,slow=3.4,SNR=3.6						
ULN	Ulaanbaatar	43.94	13	P	P	18 08 50.0	-1.8
	comp=Z,4.3nm,1.2s,mb4.0						
WRA	Warramunga Arr	46.81	123	P	P	18 09 15.3	+0.3
	comp=Z,1.9nm,0.6s,mb4.2,baz=301,slow=9.7,SNR=27						
WRAB	Tennant Creek	46.81	123	eP	P	18 09 14.9	-0.2
	comp=Z,4.7nm,0.6s,mb4.6						
WB2	Warramunga Arr	46.82	123	⇑iP	P	18 09 15.3	+0.2
KURK	Kurchatov	47.18	347	eP	P	18 09 18.2	+0.7
	comp=Z,2.5nm,0.5s,mb4.4						
ASAR	Alice Springs	48.29	128	P	P	18 09 26.8	+0.1
	comp=Z,0.6nm,0.7s,mb3.8,baz=301,slow=7.3,SNR=13						
ZAL	Zalesovo	49.17	353	P	P	18 09 33.1	+0.1
	comp=Z,3.2nm,0.9s,mb4.3,baz=296,slow=4.1,SNR=10						
BVAR	Borovoye Array	51.49	342	P	P	18 09 50.9	+0.2
	comp=Z,1.7nm,0.7s,mb4.1,baz=141,slow=9.5,SNR=15						
BRVK	Borovoye	51.55	342	eP	P	18 09 50.9	-0.2
	comp=Z,1.7nm,0.5s,mb4.2						
BRTR	Keskin Array B	64.13	312	P	P	18 11 20.3	+0.5
	comp=Z,0.6nm,0.8s,mb3.7,baz=59,slow=7.2,SNR=3.0						
AKASG	Malin Array Be	70.21	322	P	P	18 11 56.5	-1.3
	comp=Z,0.5nm,0.4s,mb3.8,baz=88,slow=5.3,SNR=5.1						
FINES	FINESS Array B	75.03	333	P	P	18 12 26.5	+0.3
	comp=Z,0.8nm,0.4s,mb4.0,baz=99,slow=6.6,SNR=12						
FINES	FINESS Array B	75.03	333	P	P	18 12 26.5	+0.3
GERES	GERESS Array B	79.77	319	P	P	18 12 54.0	+1.3
	comp=Z,1.2nm,0.8s,mb3.9,baz=90,slow=4.0,SNR=7.2						

IGQ 15 18:00:54.8,1.20S×81.22W,h12^{km}±3^{km},mb4.1,1C,Error ellipse: s-maj=9.3km s-min=5.6km az=137.2,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.69	78	⇑P	Pb	18 01 07.0	-1.4
IGUA	Igualata	2.60	96	P	Pn	18 01 38.8	+1.4
ARRY	Arrayan	2.79	96	P	Pn	18 01 41.4	+1.4
ARRY				S	Sn	18 02 15.7	+1.8
JUA2	San Juan 2	2.79	70	P	Pn	18 01 41.8	+1.5
PINO	Pino	2.81	68	P	Pn	18 01 40.9	+0.4
ULBA	Ulba	2.83	95	P	Pn	18 01 42.3	+1.6
PISA	Pisayambo	2.84	87	P	Pn	18 01 42.9	+2.0
YANA	Yana	2.86	68	P	Pn	18 01 41.6	+0.4
VC1	Cotopaxi 1	2.87	79	P	Pn	18 01 43.6	+2.3
TAMB	Tambo	2.90	80	P	Pn	18 01 44.5	+2.7
ANTI	Antisana	3.15	76	P	Pn	18 01 47.0	+1.7
ANTI				S	Sn	18 02 28.9	+5.8
CAYR	Refugio Cayamb	3.44	69	P	Pn	18 01 52.0	+2.7
CAYA	Cayambe	3.47	69	P	Pn	18 01 52.1	+2.3
ECEN	Cerro Negro	3.82	58	P	Pn	18 01 57.0	+2.1

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*BJI **15** 18:12:09.1,41.73N×79.39E,h8^{km},ML3.6*
*NNC **15** 18:12:12.0±3.3,41.90N×79.29E,mpv3.4,Error ellipse: s-maj=38.2km s-min=9.7km az=148.0*
ISC 15 18:12:10.7±1.4**,41.85N**±0.09×**79.3E**±0.1**,h8^{km},n12, σ0^{s}.82**/16**,7C-2D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	2.32	281	P	Pn	18 12 50.4	+0.6
	SNR=149						
TKM2	Tokmak 2	2.95	293	P	Pn	18 12 59.6	+0.7
	SNR=38						
KZA	Kyzart	3.04	276	P	Pn	18 13 00.6	+0.6
	SNR=22						
KBK	Karagaybulak	3.33	285	P	Pn	18 13 04.8	+0.5
	SNR=44						
KSH	Kashi	3.44	229	eP	Pn	18 13 05.5	-0.3
KSH				S	Sn	18 13 47.4	+0.1
KSH				Smax			
	comp=N,80nm,0.6s						
KSH				Smax			
	comp=E,80nm,0.6s						
CHMS	Chumysh	3.56	290	P	Pn	18 13 07.4	-0.1
	SNR=5.6						
AAK	Ala-Archa	3.66	284	⇑Pn	Pn	18 13 09.1	+0.2
	comp=E,2.3nm,0.3s						
AAK				⇓Pg	Pg	18 13 20.1	-3.7
	comp=E,10nm,0.3s						
AAK				⇑Lg		18 14 05.7	
	comp=E,128nm,0.7s						
AAK	Ala-Archa	3.66	284	P	Pn	18 13 09.3	+0.4
	SNR=8.8						
USP	Ospenovka	3.82	293	P	Pn	18 13 10.9	-0.3
	SNR=8.5						
EKS2	Erkin-Say	4.18	283	P	Pg	18 13 31.1	-3.2
	SNR=7.3						
MK31	Makanchi Array	5.39	22	⇑Pn	Pn	18 13 33.0	-0.3
	comp=E,0.8nm,0.4s,baz=202,slow=13,SNR=123						
MK31				⇓Pg	Pg	18 13 47.8	-10
	comp=E,1.0nm,0.3s,baz=175,slow=16,SNR=7.2						
MK31				⇑Sn	Sn	18 14 37.1	+0.7
	comp=E,4.4nm,0.5s,baz=153,slow=40,SNR=3.6						
MK31				⇑Lg		18 15 00.8	
	comp=E,4.0nm,0.5s						
KURK	Kurchatov	8.88	357	⇑Pn	P	18 14 21.3	-1.1
	comp=E,4.3nm,1.8s						
KURK				⇑Lg		18 16 50.9	
	comp=E,8.0nm,0.9s						

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*NEIC **15** 18:21:08.2,33.52S×70.95W,h85^{km},MD3.7(GUC),After GUC.*
NEIC Felt [II] at Santiago.
GUC 15 18:21:08.2±0.6**,33.52S×70.95W,h85^{km}±2^{km},MD3.7, ML3.7,6C-8D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCDM	Rinconada Maip	0.13	77	eP	P	18 21 20.6	+0.2
RCDM				iS	S	18 21 29.9	+0.4
RCDM				AMP		18 21 31.6	
	comp=E,14µm,0.1s						
TACH	Talagante	0.14	175	⇓iP	P	18 21 20.6	+0.2
TACH				iS	S	18 21 29.9	+0.4
SAN	Santiago	0.25	75	eP	P	18 21 20.9	0.0
SAN				iS	S	18 21 30.8	+0.4
ANTU	Antumapu	0.27	101	⇑iP	P	18 21 21.3	+0.3
ANTU				iS	S	18 21 31.0	+0.4
ANTU				AMP		18 21 31.8	
	comp=E,5µm,0.2s						
CLCH	Cerro Calan	0.37	71	⇑iP	P	18 21 22.0	+0.5
CLCH				iS	S	18 21 32.1	+0.5
PCH	Pirque	0.38	106	⇓iP	P	18 21 21.9	+0.3
PCH				iS	S	18 21 32.3	+0.6
CHCH	Chadas Angostu	0.48	149	⇓iP	P	18 21 22.5	+0.1
CHCH				iS	S	18 21 33.5	+0.4
LCCH	Las Cruces	0.52	275	⇑iP	P	18 21 23.0	+0.3
ROCH	El Roble	0.55	355	⇓iP	P	18 21 23.8	+0.8
ROCH				iS	S	18 21 35.0	+1.0
FCH	Farellones	0.59	71	⇑iP	P	18 21 24.0	+0.6
FCH				iS	S	18 21 36.2	+1.7
FCH				AMP		18 21 37.3	
	comp=E,2µm,0.2s						
CACH	El Canelo	0.67	154	iP	P	18 21 24.5	+0.3
CACH				iS	S	18 21 37.4	+1.4
LMEL	Las Melosas	0.71	118	⇑iP	P	18 21 25.1	+0.6
LMEL				iS	S	18 21 38.0	+1.3
LMEL				AMP		18 21 39.1	
	comp=N,4µm,0.2s						
IHA	Instituto Hidr	0.76	310	⇓iP	P	18 21 25.2	+0.1
JACH	Jahuel	0.89	20	⇓iP	P	18 21 26.7	+0.2
JACH				iS	S	18 21 40.7	+0.5
CICH	Cipreses	0.91	151	⇓iP	P	18 21 27.3	+0.5
CICH				iS	S	18 21 41.6	+0.9
PACH	Papudo	1.06	337	⇓iP	P	18 21 28.3	-0.2
SFDO	San Fernando	1.09	183	⇑iP	P	18 21 28.9	0.0
SFDO				iS	S	18 21 44.7	+0.1

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*NEIC **15** 18:28:54.1,36.97S×177.57E,h162^{km},After WEL.*
WEL 15 18:28:54.6±0.3**,36.96S×177.60E,h156^{km}±3^{km},ML3.7**/5**, 1C,Error ellipse: s-maj=4.5km s-min=3.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.82	137	eP	P	18 29 18.4	-0.5
MXZ	Matakaoa Point	0.82	137	PN	P	18 29 18.4	-0.5
MXZ				SN	S	18 29 37.3	-0.3
PUZ	Puketiti	1.23	155	P	P	18 29 21.9	-0.3
PUZ				S	S	18 29 42.5	-1.1
PUZ	Puketiti	1.23	155	PN	P	18 29 21.9	-0.3
PUZ				SN	S	18 29 42.5	-1.1
URZ	Urewera	1.35	197	⇑P	P	18 29 23.4	-0.1
URZ	Urewera	1.35	197	PN	P	18 29 23.4	-0.1
URZ				SN	S	18 29 45.1	-0.7
MWZ	Matawai	1.37	182	P	P	18 29 23.7	0.0
MWZ				S	S	18 29 45.5	-0.6
MWZ	Matawai	1.37	182	PN	P	18 29 23.7	+0.1
MWZ				SN	S	18 29 45.5	-0.6
KNZ	Kokohu	2.05	178	eP	P	18 29 30.6	-0.5
KNZ	Kokohu	2.05	178	PN	P	18 29 30.7	-0.4
MOVZ	Moawhango	2.84	210	P	P	18 29 39.4	-1.5
MOVZ	Moawhango	2.84	210	PN	P	18 29 39.5	-1.4
PWZ	Pawanui	3.12	190	eP	P	18 29 42.3	-2.1
PWZ	Pawanui	3.12	190	PN	P	18 29 42.0	-2.4
PWZ				SN	S	18 30 20.0	-2.5
TSZ	Takapari Road	3.35	202	P	P	18 29 44.7	-2.7
TSZ	Takapari Road	3.35	202	PN	P	18 29 44.8	-2.6
MRZ	Mangatainoka R	4.01	203	eP	P	18 29 52.7	-3.4
MRZ	Mangatainoka R	4.01	203	PN	P	18 29 52.7	-3.3
MRZ				SN	S	18 30 38.4	-4.9
KIW	Kapiti Island	4.42	207	PN	P	18 29 57.8	-3.6
KIW				SN	S	18 30 48.2	-4.7
QRZ	Quartz Range	5.52	224	PN	P	18 30 11.8	-4.1
THZ	Tophouse	6.02	216	eP	P	18 30 18.0	-4.4
THZ	Tophouse	6.02	216	PN	P	18 30 18.0	-4.4
THZ				SN	S	18 31 25.2	-5.5

IDC 15 18:55:14.1±6.9**,9.25N×92.42E,mb3.4**/2**,mb1 3.6**/3**, mb1mx3.3**/18**,mbtmp3.3**/3**,ML3.5**/1**,Error ellipse: s-maj=153.3km s-min=45.6km az=94.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.13	34	Pn	P	18 57 55.0	-2.8
	0.1nm,0.3s,baz=226,slow=15,SNR=4.7						
WRA	Warramunga Arr	50.44	125	P	P	19 04 14.0	-2.0
	0.4nm,0.4s,baz=306,slow=8.4,SNR=20						
ASAR	Alice Springs	52.10	130	P	P	19 04 26.2	-2.3
	0.2nm,0.3s,baz=306,slow=7.3,SNR=9.0						

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*NNC **15** 19:21:60.0±2.0,43.15N×79.00E,h1^{km}±9^{km},mpv3.4, Error ellipse: s-maj=25.9km s-min=6.0km az=142.0*
ISC 15 19:21:59.7±2.0**,43.3N**±0.2×**78.9E**±0.2**,h1^{km},n13, σ1^{s}.22**/16**,8C-3D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	2.21	244	P	Pn	19 22 34.7	-3.3
	SNR=97						
TKM2	Tokmak 2	2.45	263	P	Pn	19 22 42.0	+0.6
	SNR=46						
KZA	Kyzart	2.95	248	P	Pn	19 22 48.2	-0.3
	SNR=18						
KBK	Karagaybulak	2.97	260	P	Pn	19 22 48.3	-0.6
	SNR=29						
CHMS	Chumysh	3.06	267	P	Pn	19 22 52.4	+2.3
	SNR=13						
USP	Ospenovka	3.22	272	P	Pn	19 22 56.6	+4.2
	SNR=10						
AAK	Ala-Archa	3.30	261	⇓Pn	Pn	19 22 53.1	-0.4
	6.8nm,0.3s						
AAK				⇓Pg	Pg	19 23 02.5	-3.1
	11nm,0.4s						
AAK				⇑Lg		19 23 44.8	
	75nm,0.7s						
AAK	Ala-Archa	3.30	261	P	Pn	19 22 55.3	+1.7
	SNR=15						
EKS2	Erkin-Say	3.81	263	P	Pn	19 23 05.3	+4.4
	SNR=11						
AML	Almayashu	4.01	255	P	Pn	19 23 10.4	+6.8
	SNR=7.6						
MK31	Makanchi Array	4.27	33	⇑Pn	Pn	19 23 07.1	-0.2
	1.4nm,0.2s,baz=212,slow=12,SNR=233						
MK31				⇑Pg	Pg	19 23 17.9	-7.0
	1.7nm,0.3s,baz=203,slow=17,SNR=5.0						
MK31				⇑Sn	Sn	19 23 59.3	+0.7
	4.1nm,0.5s,baz=342,slow=22,SNR=4.3						
MK31				⇑Lg		19 24 17.0	
	11nm,0.5s,baz=212,slow=27,SNR=6.3						
KURK	Kurchatov	7.46	359	⇑Pn	Pn	19 23 51.7	-0.7
	2.3nm,1.4s						
KURK				⇑Lg		19 26 00.1	
	22nm,1.0s						
BVA0	Borovoye Array	11.30	333	⇑Pn	P	19 24 44.7	-0.6
	0.7nm,1.7s						
BVA0				⇓Lg		19 28 02.5	
	2.7nm,1.6s						

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*NIED **15** 19:46:00,36.00N×140.00E,h53^{km},Mw5.4 Best double couple: $M_0$1.33×10^{17} NP1:ϕ_s50°,δ72°,λ80°. NP2:ϕ_s259°, δ21°,λ118°.*
*BJI **15** 19:46:27.4,35.81N×140.55E,h46^{km},mB5.3,mb4.8, Ms4.8,Msz4.7*
*NEIC **15** 19:46:35.9±0.1,35.98N×139.69E,mb5.2/101,MW5.5, MW5.3(NIED),Error ellipse: s-maj=3.8km s-min=3.2km az=163.0,Moment Tensor Solution. s6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00; $M_{\theta\theta}$-1.70; $M_{\phi\phi}$0.71; $M_{r\theta}$0.81; $M_{\theta\phi}$0.16; $M_{\phi r}$0.93; Best double couple: $M_0$1.9×10^{17} NP1: ϕ_s307°,δ42°,λ149°. NP2:ϕ_s61°,δ70°,λ52°. Principal axes: T 1.93, Plg50°, Azm288°; N 0, Plg35°, Azm76°; P -1.93, Plg16°, Azm178°;*
NEIC At least 7 people injured in Ibaraki; 7 in Chiba; 6 in Tokyo; 6 in Saitama; and 1 in Kanagawa Prefectures. Recorded [5L JMA] in Chiba, Ibaraki and Saitama; [4 JMA] in Kanagawa, Tochigi and Tokyo; [3 JMA] in Fukushima and Gumma; [2 JMA] in Miyagi, Nagano, Shizuoka and Yamanashi Prefectures. Also recorded [2 JMA] on O-shima and [1 JMA] on Hachijo-jima, Kozu-shima, Mikura-jima, Miyake-jima and Nii-jima.
*IDC **15** 19:46:35.4±1.8,35.98N×139.68E,h41^{km}±16^{km},mb4.6/22, mb1 4.8/25,mb1mx4.8/27,mbtmp4.9/25,ML4.4/3,MS4.5/24, Ms1 4.5/24,ms1mx4.4/31 Error ellipse: s-maj=15.0km s-min=9.2km az=90.0*
*HRVD **15** 19:46:35.9±0.2,35.98N×139.89E,h42^{km},MW5.4/64, Centroid moment Tensor Solution. LP body waves: s49,c89;Mantle waves: s64,c126; Half duration: 1^{s}.2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.09±.05; $M_{\theta\theta}$-0.95±.03; $M_{\phi\phi}$-0.14±.03; $M_{r\theta}$0.79±.03; $M_{\theta\phi}$-0.45±.03; $M_{\phi r}$0.84±.03; Best double couple: $M_0$1.603×10^{17} NP1: ϕ_s261°,δ25°,λ119°. NP2:ϕ_s50°,δ68°,λ78°. Principal axes: T 1.622, Plg64°, Azm299°; N -.041, Plg12°, Azm55°; P -1.585, Plg22°, Azm150°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **15** 19:46:36.1±0.9,36.01N×139.67E,h61^{km},mb5.4/80, MS4.7/28 Error ellipse: s-maj=7.7km s-min=4.5km az=109.0*
*JMA **15** 19:46:36.1±0.1,36.04N×139.89E,h46^{km}±2^{km},M5.3 Broadband fault plane solution: P waves. NP1:ϕ_s250°, δ24°,λ112°. NP2:ϕ_s46°,δ68°,λ80°. Principal axes: T Plg66°, Azm299°; N Plg9°, Azm49°; P Plg22°, Azm143°;*
ISC 15 19:46:34.8±0.1**,35.99N**±0.02×**139.78E**±0.02**,h48^{km}, h48^{km}±2.2^{km}:pP-P,n493,σ1^{s}.15**/498**,mb5.2**/143**,MS4.7**/50**, 56C-39D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	Tokyo	0.30	183	P	P	19 46 46.5	+2.6
JYT	Yasato	0.41	55	⇑P	P	19 46 45.0	0.0
JYT				S	S	19 46 51.4	-0.8
JHU	Hanno	0.42	251	⇓P	P	19 46 47.1	+2.0
JAG	Ashikaga	0.51	329	⇓P	P	19 46 47.6	+1.5
JRY	Ryogami san	0.71	272	⇓P	P	19 46 51.0	+2.4
JKT	Katashina	0.88	331	⇓P	P	19 46 52.4	+1.4
JHO	Hitachi	0.89	46	⇑P	P	19 46 50.6	-0.6
JOD2	Odawara 2	0.92	218	P	P	19 46 53.9	+2.4
JOD2				S	S	19 47 06.7	+2.8
JSB	Shiboa	0.98	7	⇓P	P	19 46 53.4	+1.0
JSB				S	S	19 47 06.4	+0.9
JGK	Kuni	1.08	302	⇓P	P	19 46 55.2	+1.4
BSO4	Boso 4	1.10	155	⇓P	P	19 46 55.6	+1.5
JYN	Shimob	1.12	244	⇑P	P	19 46 57.5	+3.2
JIM2	Oshima 3	1.30	193	⇓P	P	19 46 58.1	+1.0
JIM2				S	S	19 47 14.5	+0.9
BSO3	Boso 3	1.33	153	⇓P	P	19 46 57.8	+0.3
JNT	Takato	1.33	265	⇓P	P	19 47 01.2	+3.7
MAJO	Matsushiro	1.38	294	eP	P	19 46 59.5	+1.3
MAT	Matsushiro	1.38	294	eP	P	19 47 00.0	+1.8
MAT				eS	S	19 47 21.0	+5.5
MAT	Matsushiro	1.38	294	P	P	19 46 59.9	+1.7
MAT				S	S	19 47 20.7	+5.2
MAT	Matsushiro	1.38	294	P	P	19 46 59.6	+1.4
ONAJ	Iwakimizuishiy	1.38	36	⇓P	P	19 46 57.8	-0.4
JHK	Hiroka	1.40	334	P	P	19 46 59.8	+1.4
JFY	Yanaizu	1.41	358	⇓P	P	19 46 59.7	+1.1
JNG	Nsakai	1.42	287	⇓P	P	19 47 01.0	+2.3
JIZS	Izushimoda	1.47	210	⇓P	P	19 47 01.2	+1.8
BSO2	Boso 2	1.47	147	P	P	19 46 59.8	+0.3
SHZ3	Shizuoka 3	1.58	235	P	P	19 47 04.4	+3.5
SHZ3				S	S	19 47 25.7	+5.5
JFK	Kawauchi	1.63	32	⇓P	P	19 47 01.5	-0.2
NJJJ	Nii jima 2	1.64	194	⇓P	P	19 47 03.2	+1.5
NJJJ				S	S	19 47 24.1	+2.4
BSO1	Boso 1	1.66	143	⇓P	P	19 47 01.4	-0.7
JNY	Yasuok	1.68	248	P	P	19 47 06.0	+3.6
JJN	Nakama	1.71	311	⇓P	P	19 47 05.2	+2.5
JIZZ	Izumozaki	1.76	331	P	P	19 47 05.9	+2.4
JNS	Sasagawa	1.86	349	⇓P	P	19 47 06.0	+1.1
JKO	Kozu shima	1.88	196	⇓P	P	19 47 06.8	+1.7
JYZW	Yoshizawa	1.94	240	P	P	19 47 09.5	+3.5
JGN	Niukaw	2.00	277	⇓P	P	19 47 10.2	+3.3
HMMJ	Hamamatsu 2	2.02	237	⇑P	P	19 47 10.5	+3.3
JMM	Marumori	2.04	23	P	P	19 47 07.6	+0.2
JTT	Ttatey	2.06	288	P	P	19 47 10.9	+3.1
JAO	Obara	2.17	251	⇑P	P	19 47 12.6	+3.3
TK04	Tokai 4	2.23	225	P	P	19 47 12.9	+2.7
JYS	Shirataka	2.24	6	⇓P	P	19 47 11.5	+1.3
JSD	Sado	2.37	330	⇓P	P	19 47 13.1	+0.9
JOU	Okura	2.47	16	⇓P	P	19 47 14.5	+0.9
JAW	Awa shima	2.50	350	P	P	19 47 14.7	+0.8
JAA	Atsumi	2.54	239	P	P	19 47 17.3	+2.7
JJH	Hakui	2.59	292	P	P	19 47 18.3	+3.1
JYA	Atsumi	2.60	359	⇓P	P	19 47 16.5	+1.1
TK02	Tokai 2	2.63	220	P	P	19 47 17.5	+1.7
JKG	Kaga	2.80	277	P	P	19 47 21.8	+3.5
JHJ	Hachijo jima 2	2.87	180	P	P	19 47 19.3	+0.1
	4µm,0.3s,baz=274,slow=1.0,SNR=1037						
JHJ				S	S	19 47 51.8	-0.9
	2µm,0.3s,baz=69,slow=24,SNR=10						
JHJ2	Mitsune	2.87	179	⇓P	P	19 47 19.3	0.0
JYK	Kaneyama	2.96	9	⇓P	P	19 47 21.6	+1.1
ASAJ	Asahikawa	8.40	14	P	P	19 48 33.8	-2.8
ASAJ				S	S	19 50 12.1	+1.0
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,4µm,21.8s						
ASAJ	Asahikawa	8.40	14	P	P	19 48 33.8	-2.8
	comp=Z,2.3nm,0.3s,baz=239,slow=21,SNR=19						
ASAJ				S	S	19 50 12.1	+1.0
	comp=Z,5.4nm,0.3s,baz=278,slow=33,SNR=2.0						
ASAJ				LR	LR	19 51 58.2	
	comp=Z,4µm,21.8s,baz=202,slow=38						
CBIJ	Chichi jima	9.10	166	P	P	19 48 40.6	-5.7
	comp=Z,113nm,0.3s,baz=4.3,slow=3.6,SNR=92						
CBIJ				S	S	19 50 17.6	-11
	comp=Z,90nm,0.3s,baz=135,slow=18,SNR=3.4						
YUK	Yuzh-Kuril'sk	9.29	28	eP	P	19 48 41.5	-7.4
YUK				pmax	pmax		
	comp=Z,620nm,0.4s						
YUK				pmax	pmax		
	comp=N,220nm,0.3s						
YUK				pmax	pmax		
	comp=E,230nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				MLR	MLR		
	comp=Z,3µm,24.0s						
YUK				MLR	MLR		
	comp=N,4µm,23.0s						
YUK				MLR	MLR		
	comp=E,2µm,18.0s						
VLA	Vladivostok	9.36	322	⇓iP	P	19 48 56.0	+6.1
VLA				pmax	pmax		
	comp=N,2µm,6.0s						
VLA				pmax	pmax		
	comp=Z,1µm,6.0s						
VLA				pmax	pmax		
	comp=E,1µm,5.0s						
VLA				MLR	MLR		
	comp=N,4µm,15.0s						
VLA				MLR	MLR		
	comp=E,2µm,15.0s						
VLA				MLR	MLR		
	comp=Z,4µm,15.0s						
KS15	Wonju Array Si	9.66	282	eP	P	19 48 57.2	+3.2
YSS	Yuzh-Sakhalins	11.18	11	⇑eP	P	19 49 11.2	-3.4
YSS				eS	S	19 51 13.0	-6.1
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				MLR	MLR		
	comp=N,5µm,18.0s						
YSS				MLR	MLR		
	comp=Z,5µm,18.0s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
YSS	Yuzh-Sakhalins	11.18	11	eP	P	19 49 11.6	-3.1
MDJ	Mudanjiang	11.60	321	P	P	19 49 20.0	-0.2
MDJ				AP		19 49 28.0	
MDJ				S	S	19 51 25.8	-3.4
MDJ				AMB	AMB		
	comp=Z,98nm,1.7s						
MDJ				AMB	AMB		
	comp=Z,2µm,8.9s						
MDJ				LR	LR		
	comp=N,2µm,15.6s						
MDJ				LR	LR		
	comp=E,2µm,16.2s						
MDJ				LR	LR		
	comp=Z,4µm,26.7s						
MDJ	Mudanjiang	11.60	321	eP	P	19 49 22.1	+1.9
JOW	Kunigami	13.40	230	P	P	19 49 47.9	+3.5
	comp=Z,1.4nm,0.3s,baz=293,slow=6.7,SNR=2.0						
JOW				LR	LR	19 54 46.2	
	comp=Z,2µm,21.4s,baz=100,slow=37						
CN2	Changchun	13.47	310	eP	P	19 49 45.8	+0.6
CN2				eAP		19 49 57.8	
CN2				eS	S	19 52 12.5	-1.8
CN2				AMB	AMB		
	comp=Z,30nm,1.1s						
CN2				AMB	AMB		
	comp=Z,900nm,5.0s						
CN2				LR	LR		
	comp=N,2µm,13.0s						
CN2				LR	LR		
	comp=E,3µm,13.0s						
CN2				LR	LR		
	comp=Z,3µm,17.0s						
SNY	Shenyang	13.89	300	⇑P	P	19 49 53.1	+2.5
SNY				S	S	19 52 35.6	+11
SNY				LR	LR		
	comp=N,2µm,16.5s						
SNY				LR	LR		
	comp=E,3µm,15.9s						
SNY				LR	LR		
	comp=Z,4µm,17.6s						
KLR	Kul'dur	14.48	339	eP	P	19 49 56.8	-1.5
KLR				e		19 52 40.0	
KLR				pmax	pmax		

	comp=E,1µm,11.0s						
KLR				pmax	pmax		
	comp=Z,2µm,11.0s						
KLR				MLR	MLR		
	comp=Z,5µm,14.0s						
DL2	**Dalian**	**14.71**	**287**	P	**P**	**19 50 06.3**	**+4.9**
DL2				S	**S**	**19 52 55.9**	**+12**
DL2				AMB	AMB		
	comp=Z,60nm,1.4s						
DL2				AMB	AMB		
	comp=Z,800nm,5.0s						
DL2				LR	LR		
	comp=E,2µm,18.1s						
DL2				LR	LR		
	comp=Z,3µm,17.4s						
TYV	**Tymovskoe**	**15.01**	**7**	*e*P	**P**	**19 49 59.5**	**-5.7**
TYV				*e*S	**S**	**19 52 58.0**	**+7.4**
TYV				pmax	pmax		
	comp=Z,60nm,1.0s						
TYV				smax			
	comp=N,1µm,5.0s						
TYV				smax			
	comp=E,1µm,7.0s						
TYV				MLR	MLR		
	comp=Z,5µm,24.0s						
TYV				MLR	MLR		
	comp=N,5µm,26.0s						
SSE	**Sheshan**	**16.24**	**258**	P	**P**	**19 50 20.5**	**-0.6**
SSE				XP		19 50 39.6	
SSE				S	**S**	**19 53 17.1**	**-2.2**
SSE				AMB	AMB		
	comp=Z,24nm,1.0s						
SSE				AMB	AMB		
	comp=Z,770nm,4.9s						
SSE				LR	LR		
	comp=N,2µm,23.4s						
SSE				LR	LR		
	comp=E,973nm,23.4s						
SSE				LR	LR		
	comp=Z,2µm,23.0s						
NJ2	**Nanjing**	**17.78**	**263**	*e*P	**P**	**19 50 42.6**	**+2.2**
NJ2				AP		19 50 53.1	
NJ2				PP	PP	19 50 58.6	+3.3
NJ2				XP		19 51 01.1	
NJ2				S	**S**	**19 54 04.0**	**+10**
NJ2				XS		19 54 21.0	
NJ2				AMB	AMB		
	comp=Z,3µm,5.4s						
NJ2				LR	LR		
	comp=N,5µm,13.7s						
NJ2				LR	LR		
	comp=E,7µm,14.3s						
NJ2				LR	LR		
	comp=Z,6µm,20.2s						
TIA	**Tai’an**	**18.30**	**277**	P	**P**	**19 50 47.3**	**+0.5**
TIA				AMB	AMB		
	comp=Z,75nm,1.0s						
SKR	**Severo-Kuril’s**	**18.83**	**34**	*e*P	**P**	**19 50 50.0**	**-3.0**
SKR				pmax	pmax		
	comp=Z,220nm,1.0s						
SKR				pmax	pmax		
	comp=N,180µm,1.0s						
SKR				pmax	pmax		
	comp=E,220µm,1.0s						
BJI	**Beijing**	**19.01**	**289**	P	**P**	**19 50 55.6**	**+0.4**
BJI				S	**S**	**19 54 22.3**	**+0.4**
BJI				AMB	AMB		
	comp=Z,36nm,0.8s						
BJI				AMB	AMB		
	comp=Z,576nm,4.2s						
BJI				LR	LR		
	comp=N,807nm,15.4s						
BJI				LR	LR		
	comp=E,2µm,16.8s						
BJI				LR	LR		
	comp=Z,3µm,31.8s						
BJT	**Baijiatuau**	**19.02**	**289**	*e*P	**P**	**19 50 52.9**	**-2.4**
BJT				pmax	pmax		
	comp=Z,55nm,0.7s						
BJT	**Baijiatuau**	**19.02**	**289**	*e*P	**P**	**19 50 52.9**	**-2.4**
	comp=Z,55nm,0.7s						
HIA	**Hailar**	**19.75**	**318**	*e*P	**P**	**19 50 59.4**	**-3.8**
HIA				pmax	pmax		
	comp=Z,28nm,0.9s						
HIA	**Hailar**	**19.75**	**318**	*e*P	**P**	**19 50 59.4**	**-3.9**
	comp=Z,28nm,0.9s						
PET	**Petropavlovsk**	**21.60**	**32**	*e*P	**P**	**19 51 21.2**	**-1.0**
PET				*e*S	**S**	**19 55 14.4**	**+0.9**
PET				pmax	pmax		
	comp=Z,400nm,8.3s						
PET				pmax	pmax		
	comp=Z,92nm,1.2s,mb5.1						
PET				MLR	MLR		
	comp=Z,900nm,14.0s,MS4.3						
PET	**Petropavlovsk**	**21.60**	**32**	P	**P**	**19 51 17.6**	**-4.6**
	comp=Z,118nm,1.3s,mb5.2						
PET				*i* P		19 51 22.2	
WHN	**Wuhan**	**21.91**	**263**	*e*P	**P**	**19 51 25.8**	**+0.3**
WHN				S	**S**	**19 55 22.0**	**+2.5**
WHN				LR	LR		
	comp=Z,5µm,14.3s,MS5.0						
TIY	**Taiyuan**	**21.92**	**283**	*e*P	**P**	**19 51 24.0**	**-1.5**
TIY				S	**S**	**19 55 30.0**	**+10**
TIY				LR	LR		
	comp=N,2µm,15.0s						
TIY				LR	LR		
	comp=Z,435nm,9.0s						
HHC	**Hu-ho-hao-te**	**22.58**	**291**	*e*P	**P**	**19 51 32.3**	**+0.3**
HHC				AP		19 51 43.1	
HHC				XP		19 51 49.1	
HHC				PP	PP	19 52 03.5	+2.3
HHC				PCP	PcP	19 55 20.1	-5.3
HHC				S	**S**	**19 55 36.9**	**+5.4**
HHC				XS		19 55 54.9	
HHC				SS	SS	19 56 26.1	+10
HHC				SCP		19 58 53.5	
HHC				PCS		19 58 59.5	
HHC				AMB	AMB		
	comp=Z,8.0nm,1.1s						
HHC				AMB	AMB		
	comp=Z,303nm,6.7s						
HHC				LR	LR		
	comp=N,933nm,14.4s						
HHC				LR	LR		
	comp=E,1µm,16.8s						
HHC				LR	LR		
	comp=Z,2µm,16.8s						
GUMO	**Guam**	**22.77**	**167**	P	**P**	**19 51 33.2**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,871nm,1.3s,mb6.0						
GUMO	**Guam**	**22.77**	**167**	P	**P**	**19 51 33.2**	**-0.9**
	comp=Z,871nm,1.3s,mb6.0						
CLNS	**Chul’man**	**23.14**	**339**	*e*P	**P**	**19 51 39.0**	**+1.7**
CLNS				*e*PPP	PPP	19 52 11.4	-7.7
CLNS				*e*		19 55 30.5	
CLNS				*e*S	**S**	**19 55 42.6**	**+1.4**
CLNS				*e*SS	SS	19 56 28.6	-0.4
CLNS				*e*		20 02 48.1	
CLNS				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,43nm,0.8s						
CLNS				pmax	pmax		
	comp=E,28nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,85nm,1.3s,mb5.0						
CLNS				pmax	pmax		
	comp=N,72nm,1.1s						
CLNS				pmax	pmax		
	comp=E,39nm,1.0s						
CLNS				smax			
	comp=N,1µm,11.5s						
CLNS				smax			
	comp=Z,462nm,13.4s						
CLNS				smax			
	comp=E,146nm,12.3s						
CLNS				MLR	MLR		
	comp=Z,2µm,14.0s,MS4.7						
CLNS				MLR	MLR		
	comp=N,2µm,16.0s,MS4.6						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS4.6						
BTO	**Baotou**	**23.74**	**290**	*e*P	**P**	**19 51 40.5**	**-2.8**
MA2	**Magadan**	**24.66**	**13***c*	*i*P	**P**	**19 51 51.5**	**-0.5**
MA2				*e*S	**S**	**19 56 07.5**	**+0.1**
MA2				*e*		19 57 01.4	
MA2				*e*SSS	SSS	19 57 29.5	+6.3
MA2				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.2						
MA2				MLR	MLR		
	comp=Z,900nm,20.0s,MS4.3						
MA2	**Magadan**	**24.66**	**13**	⇑*i*P	**P**	**19 51 51.4**	**-0.6**
	comp=Z,87nm,0.8s,mb5.3						
XAN	**Xi’an**	**25.30**	**275**	P	**P**	**19 51 57.0**	**-1.3**
XAN				AMB	AMB		
	comp=Z,17nm,1.5s,mb4.3						
ENH	**Enshi**	**25.94**	**266**	*e*P	**P**	**19 52 02.3**	**-2.1**
	comp=Z,49nm,0.6s,mb5.2						
GZH	**Guangzhou**	**26.25**	**248**	P	**P**	**19 52 01.3**	**-6.1**
GZH				LR	LR		
	comp=N,1µm,19.6s,MS4.6						
GZH				LR	LR		
	comp=E,1µm,17.7s,MS4.6						
GZH				LR	LR		
	comp=Z,2µm,18.7s,MS4.6						
YAK	**Yakutsk**	**26.82**	**349**	⇑*i*P	**P**	**19 52 09.6**	**-2.6**
YAK				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.2						
YAK	**Yakutsk**	**26.82**	**349**	⇑*i*P	**P**	**19 52 09.6**	**-2.7**
	comp=Z,59nm,0.8s,mb5.2						
ULN	**Ulaanbaatar**	**26.88**	**306**	*e*P	**P**	**19 52 11.8**	**-1.1**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**26.88**	**306**	*e*P	**P**	**19 52 11.8**	**-1.1**
	comp=Z,12nm,0.8s,mb4.5						
SONM	**Songino Array**	**27.30**	**306**	P	**P**	**19 52 15.1**	**-1.7**
	comp=Z,6.0nm,0.8s,mb4.2,baz=105,slow=8.0,SNR=39						
SONM				PcP	PcP	19 55 36.0	+0.4
	comp=Z,1.8nm,0.6s,baz=100,slow=2.1,SNR=3.7						
SONM	**Songino Array**	**27.30**	**306**	P	**P**	**19 52 15.1**	**-1.7**
SONM				PcP	PcP	19 55 36.0	+0.4
BOD	**Bodaibo**	**27.74**	**330**	⇑*i*P	**P**	**19 52 19.3**	**-1.3**
BOD				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.0						
SEY	**Seymchan**	**28.08**	**12**	*e*P	**P**	**19 52 25.4**	**+1.8**
SEY				*PP	pP	19 52 40.1	+4.0
SEY						19 53 29.5	
SEY				*e*S	**S**	**19 57 05.7**	**+2.3**
SEY				*SS		19 57 31.2	
SEY				pmax	pmax		
	comp=E,30nm,0.8s						
SEY				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.4						
SEY				pmax	pmax		
	comp=N,40nm,0.9s						
SEY				smax			
	comp=N,630nm,6.4s						
SEY				smax			
	comp=E,160nm,5.0s						
FX1	**Attu Island--F**	**28.87**	**44**	P	**P**	**19 52 32.9**	**+2.2**
FX1				pmax	pmax		
	comp=Z,27nm,0.6s						
FX1				MLR	MLR		
	comp=Z,24nm,21.0s						
FX1	**Attu Island--F**	**28.87**	**44**	P	**P**	**19 52 32.9**	**+2.2**
	comp=Z,27nm,0.6s,mb5.2,baz=143,slow=14,SNR=11						
FX1				LR	LR	20 01 53.4	
	comp=Z,24nm,21.0s,baz=36,slow=32						
FX1	**Attu Island--F**	**28.87**	**44**	*e*P	**P**	**19 52 32.8**	**+2.1**
LZH	**Lanzhou**	**28.95**	**281**	*e*P	**P**	**19 52 31.3**	**-0.4**
LZH				AP	pP	19 52 39.9	-4.3
LZH				XP	sP	19 52 44.4	-5.8
LZH				*e*S	**S**	**19 57 17.0**	**-0.7**
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,150nm,4.0s						
LZH				LR	LR		
	comp=E,3µm,17.0s						
LZH				LR	LR		
	comp=Z,4µm,18.1s,MS5.0						
GYA	**Guiyang**	**29.75**	**261**	⇑*i*P	**P**	**19 52 36.3**	**-2.6**
GYA				AP	pP	19 52 51.4	-0.1
GYA				XP	sP	19 52 58.5	+1.1
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
GYA				AMB	AMB		
	comp=Z,120nm,3.6s						
GYA				LR	LR		
	comp=N,2µm,17.3s,MS4.8						
GYA				LR	LR		
	comp=E,960nm,16.8s,MS4.8						
GYA				LR	LR		
	comp=Z,1µm,21.2s,MS4.5						
IRK	**Irkutsk**	**29.85**	**314**	*e*P	**P**	**19 52 38.6**	**-0.9**
IRK				*e*		19 53 02.1	
IRK				*e*		19 53 51.6	
IRK				pmax	pmax		
	comp=Z,21nm,2.7s,mb4.4						
ZAK	**Zakamensk**	**29.91**	**310**	*e*P	**P**	**19 52 38.1**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	**Talaya**	**30.04**	**313**	*e*P	**P**	**19 52 40.0**	**-1.2**
TLY				*e*PPP	PPP	19 54 02.5	+8.0
TLY				*e*S	**S**	**19 57 39.1**	**+4.3**
TLY				*e*SS	SS	19 59 20.5	+6.1
TLY				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
TLY				MLR	MLR		
	comp=Z,2µm,16.0s,MS4.7						
TLY	**Talaya**	**30.04**	**313**	*e*P	**P**	**19 52 39.4**	**-1.8**
	comp=Z,6.7nm,0.8s,mb4.4						
QIZ	**Qiongzhong**	**31.30**	**245**	*e*P	**P**	**19 52 52.4**	**-0.2**
QIZ				S	**S**	**19 58 01.9**	**+7.1**
QIZ				LR	LR		
	comp=N,956nm,20.2s,MS4.5						
QIZ				LR	LR		
	comp=E,536nm,20.2s,MS4.5						
QIZ				LR	LR		
	comp=Z,878nm,19.3s,MS4.4						
GTA	**Gaotai**	**31.62**	**288**	P	**P**	**19 52 54.1**	**-1.2**
GTA				AP	pP	19 53 11.6	+3.6
GTA				PP	PP	19 53 59.4	-1.6
GTA				PPP	PPP	19 54 14.6	-1.5
GTA				PCP	PcP	19 55 46.1	-0.6
GTA				S	**S**	**19 57 55.5**	**-4.3**
GTA				XS		19 58 21.8	
GTA				SCP		19 59 24.4	
GTA				PCS		19 59 30.0	
GTA				SCS	ScS	20 03 19.8	-1.4
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s						
GTA				AMB	AMB		
	comp=Z,170nm,6.5s						
GTA				LR	LR		
	comp=N,964nm,15.6s						
GTA				LR	LR		
	comp=E,1µm,20.9s						
GTA				LR	LR		
	comp=Z,2µm,29.3s						
MOY	**Mondy**	**31.63**	**312**	*e*P	**P**	**19 52 54.4**	**-0.8**
KMI	**Kunming**	**33.50**	**262**	⇑P	**P**	**19 53 09.6**	**-2.2**
KMI				PP	PP	19 54 22.1	-2.9
KMI				S	**S**	**19 58 29.5**	**+0.4**
KMI				XS		19 58 55.3	
KMI				AMB	AMB		
	comp=Z,16nm,1.9s,mb4.6						
KMI				AMB	AMB		
	comp=Z,199nm,6.0s						
KMI				LR	LR		
	comp=N,1µm,23.1s						
KMI				LR	LR		
	comp=E,644nm,16.9s						
KMI				LR	LR		
	comp=Z,2µm,21.5s,MS4.7						
BILL	**Bilibino**	**35.40**	**17**	*i* P	**P**	**19 53 26.0**	**-1.6**
BILL				*i*		19 53 51.3	
BILL				*i*		19 55 55.9	
BILL				*e*S	**S**	**19 58 58.5**	**+0.4**
BILL				*e*SS	SS	20 01 22.6	+4.5
BILL				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.0						
BILL				MLR	MLR		
	comp=Z,800nm,16.0s,MS4.6						
BILL	**Bilibino**	**35.40**	**17**	*e*P	**P**	**19 53 24.9**	**-2.7**
	comp=Z,19nm,0.9s,mb5.0						
TIXI	**Tiksi**	**36.18**	**354**	*e*P	**P**	**19 53 32.2**	**-2.0**
TIXI				*e*S	**S**	**19 59 05.5**	**-4.5**
TIXI				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,1µm,15.0s,MS4.8						
TIXI	**Tiksi**	**36.18**	**354**	⇑*i*P	**P**	**19 53 32.7**	**-1.5**
KKTK	**Khon Kaen**	**38.20**	**249**	P	**P**	**19 53 48.0**	**-3.7**
CHRT	**Chiangrai**	**38.51**	**256**	⇑P	**P**	**19 53 54.0**	**-0.2**
	comp=Z,140nm,0.9s,mb5.7						
CM31	**Chiang Mai Arr**	**39.95**	**255**	*e*P	**P**	**19 54 05.1**	**-1.1**
	comp=Z,3.7nm,0.4s,mb4.5						
CMAR	**Chiang Mai Arr**	**39.95**	**255**	P	**P**	**19 54 05.3**	**-0.9**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR				MLR	MLR		
	comp=Z,797nm,18.5s						
CMAR	**Chiang Mai Arr**	**39.95**	**255**	P	**P**	**19 54 05.2**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=46,slow=8.2,SNR=16						
CMAR				LR	LR	20 12 17.7	
	comp=Z,797nm,18.5s,baz=55,slow=39						
WMQ	**Urumqi**	**40.14**	**298**	P	**P**	**19 54 07.8**	**+0.3**
WMQ				XP	sP	19 54 26.0	-0.4
WMQ				S	**S**	**20 00 11.0**	**+0.6**
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,49nm,8.0s						
WMQ				LR	LR		
	comp=N,985nm,18.0s,MS4.8						
WMQ				LR	LR		
	comp=E,797nm,16.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,853nm,17.0s,MS4.7						
NST	**Nakhon Sawan**	**40.66**	**251**	P	**P**	**19 54 07.0**	**-5.0**
LSA	**Lhasa**	**40.99**	**276**	P	**P**	**19 54 16.0**	**+1.3**
LSA				AP	pP	19 54 27.6	-0.1
LSA				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.8						
LSA				LR	LR		
	comp=N,220nm,20.0s,MS4.6						
LSA				LR	LR		
	comp=E,820nm,21.0s,MS4.6						
LSA				LR	LR		
	comp=Z,1µm,23.0s,MS4.7						
ZAL	**Zalesovo**	**41.66**	**313**	P	**P**	**19 54 19.0**	**-0.9**
ZAL				pmax	pmax		
	comp=Z,35nm,0.6s						
ZAL				MLR	MLR		
	comp=Z,537nm,20.8s						
ZAL	**Zalesovo**	**41.66**	**313**	P	**P**	**19 54 19.0**	**-0.9**
	comp=Z,35nm,0.6s,mb5.2,baz=17,slow=7.8,SNR=197						
ZAL				LR	LR	20 12 09.4	
	comp=Z,536nm,20.8s,MS4.4,baz=21,slow=37						
SHL	**Shillong**	**42.08**	**269**	*e*P	**P**	**19 54 23.0**	**-0.6**
TNA	**Tin City**	**42.41**	**29**	*e*P	**P**	**19 54 26.1**	**+0.3**
	comp=Z,35nm,1.3s,mb4.8						
NVS	**Novosibirsk**	**42.62**	**315**	*e*P	**P**	**19 54 26.0**	**-1.7**
NVS				pmax	pmax		
	comp=N,23nm,0.8s						
NVS				pmax	pmax		
	comp=E,87nm,0.8s						
NVS				pmax	pmax		
	comp=Z,104nm,0.8s,mb5.6						
NNT	**Nongplab**	**42.87**	**247**	P	**P**	**19 54 27.3**	**-3.0**
MKAR	**Makanchi Array**	**43.56**	**303**	*i* P	**P**	**19 54 35.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	**45.54**	**309***c*	*i*P	**P**	**19 54 50.3**	**-1.0**
KURK				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.4						
KURK	**Kurchatov**	**45.54**	**309**	⇑*i*P	**P**	**19 54 50.3**	**-1.0**
	comp=Z,71nm,0.6s,mb5.8						
PMG	**Port Moresby**	**45.69**	**170**	*e*P	**P**	**19 54 50.3**	**-2.6**
PMG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PMG	**Port Moresby**	**45.69**	**170**	LR	LR	20 13 27.4	
	comp=Z,504nm,18.5s,MS4.5,baz=178,slow=35						
PMG	**Port Moresby**	**45.69**	**170**	*e*P	**P**	**19 54 50.3**	**-2.6**
	comp=Z,7.6nm,0.8s,mb4.7						
JIRN	**Jiri**	**45.80**	**275**	*e*P	**P**	**19 54 54.1**	**+0.4**
	comp=Z,71nm,0.7s,mb5.7						
PKI	**Pulchoki**	**46.47**	**276**	*e*P	**P**	**19 54 58.6**	**-0.3**
	comp=Z,42nm,0.7s,mb5.5						
KKN	**Kakani**	**46.48**	**276**	*e*P	**P**	**19 54 58.9**	**-0.1**
	comp=Z,32nm,0.6s,mb5.4						
DMN	**Daman**	**46.69**	**276**	*e*P	**P**	**19 55 00.3**	**-0.4**
	comp=Z,54nm,1.0s,mb5.4						
GKN	**Gorkha**	**46.91**	**277**	*e*P	**P**	**19 55 02.1**	**-0.3**
	comp=Z,392nm,1.2s,mb6.2						
KOLN	**Koldanda**	**47.84**	**277**	*e*P	**P**	**19 55 09.6**	**-0.1**
	comp=Z,470nm,1.6s						
IMA	**Indian Mountai**	**48.25**	**30**	*e*P	**P**	**19 55 13.3**	**+0.9**
IMA				pmax	pmax		
	comp=Z,46nm,1.5s,mb5.3						
IMA	**Indian Mountai**	**48.25**	**30**	*e*P	**P**	**19 55 13.3**	**+0.9**
	comp=Z,46nm,1.5s,mb5.3						
RSO	**Redoubt South**	**48.53**	**38**	*e*P	**P**	**19 55 14.9**	**+0.3**
ULHL	**Ulahol**	**48.68**	**298**	P	**P**	**19 55 17.2**	**+1.2**
	SNR=6.7						
KDAK	**Kodiak Island**	**48.75**	**41**	*e*P	**P**	**19 55 15.9**	**-0.5**
KAKA	**Kakadu**	**48.93**	**190**	⇑*i*P	**P**	**19 55 16.8**	**-1.5**
	comp=Z,131nm,1.0s,mb5.9						
TKM2	**Tokmak 2**	**48.97**	**299**	P	**P**	**19 55 19.0**	**+0.8**
	SNR=14						
KZA	**Kyzart**	**49.44**	**298**	P	**P**	**19 55 22.9**	**+1.1**
	SNR=15						
BWNR	**Bhubaneshwar**	**49.49**	**267**	*e*P	**P**	**19 55 21.3**	**-1.3**
BWNR				*e*		19 55 25.9	
	comp=Z,38nm,1.7s						
KBK	**Karagaybulak**	**49.50**	**299**	P	**P**	**19 55 22.6**	**+0.3**
	SNR=58						
CHMS	**Chumysh**	**49.55**	**299**	P	**P**	**19 55 22.6**	**-0.1**
	SNR=16						
KSH	**Kashi**	**49.63**	**294**	*e*P	**P**	**19 55 24.0**	**+0.6**
KSH				*e*AP	pP	19 55 40.0	+3.5
KSH				*e*PCP	PcP	19 56 45.1	+0.6
KSH				*e*PP	PP	19 57 16.0	-2.6
KSH				*e*S	**S**	**20 02 25.0**	**-2.0**
KSH				*e*XS		20 02 52.4	
KSH				*e*SCS	ScS	20 05 07.3	-0.3
KSH				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.8						
KSH				AMB	AMB		
	comp=Z,290nm,3.7s						
KSH				LR	LR		
	comp=N,1µm,18.0s,MS5.0						
KSH				LR	LR		
	comp=E,690nm,14.4s,MS5.0						
USP	**Ospenovka**	**49.66**	**299**	P	**P**	**19 55 23.4**	**-0.2**
	SNR=19						
FRU	**Bishkek**	**49.69**	**299**	*e*P	**P**	**19 55 23.8**	**0.0**
FRU				pmax	pmax		
	comp=Z,111nm,1.8s,mb5.6						
FRU				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.0						
AAK	**Ala-Archa**	**49.83**	**299**	P	**P**	**19 55 24.8**	**-0.1**
	SNR=24						
AAK	**Ala-Archa**	**49.83**	**299**	*i* P	**P**	**19 55 23.7**	**-1.2**
AAK				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.3						
AAK				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.0						
AAK	**Ala-Archa**	**49.83**	**299**	⇑*i*P	**P**	**19 55 23.7**	**-1.2**
	comp=Z,21nm,0.7s,mb5.3						
UCH	**Uchtor**	**49.92**	**298**	P	**P**	**19 55 26.5**	**+0.9**
	SNR=22						
MCK	**McKinley**	**50.23**	**33**	*e*P	**P**	**19 55 27.0**	**-0.6**
MCK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
MCK	**McKinley**	**50.23**	**33**	*e*P	**P**	**19 55 27.0**	**-0.7**
	comp=Z,12nm,0.8s,mb5.0						
PMR	**Palmer**	**50.25**	**36**	*e*P	**P**	**19 55 27.7**	**-0.1**
PMR				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
PMR	**Palmer**	**50.25**	**36**	*e*P	**P**	**19 55 27.7**	**-0.1**
	comp=Z,22nm,0.7s,mb5.3						
EKS2	**Erkin-Say**	**50.33**	**299**	P	**P**	**19 55 28.6**	**-0.1**
	SNR=11						
BRVK	**Borovoye**	**50.36**	**313**	⇑*i*P	**P**	**19 55 27.7**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
BRVK	**Borovoye**	**50.36**	**313**	⇑*i*P	**P**	**19 55 27.7**	**-1.1**
	comp=Z,27nm,0.9s,mb5.3						
AML	**Almayashu**	**50.53**	**298**	P	**P**	**19 55 31.2**	**+0.9**
	SNR=64						
SML	**Sawmill**	**50.61**	**36**	*e*P	**P**	**19 55 30.0**	**-0.6**
COLA	**College**	**50.66**	**32**	*e*P	**P**	**19 55 31.3**	**+0.4**
COLA				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.4						
COLA	**College**	**50.66**	**32**	*e*P	**P**	**19 55 31.3**	**+0.4**
	comp=Z,45nm,0.9s,mb5.4						

ILAR	**Eielson Array**	51.08	32	P	P	19 55 33.2	-0.9
ILAR				pmax	pmax		
	comp=Z,19nm,0.7s						
ILAR				MLR	MLR		
	comp=Z,267nm,21.5s						
ILAR	**Eielson Array**	51.08	32	P	P	19 55 33.1	-0.9
	comp=Z,19nm,0.7s,mb5.1,baz=274,slow=6.2,SNR=105						
ILAR				LR	LR	20 17 56.3	
	comp=Z,267nm,21.5s,MS4.2,baz=91,slow=37						
DDI	**Dehra Dun**	51.23	282	*e*P	P	19 55 35.0	-0.7
SDNR	**Sundarnagar**	51.62	284	*e*P	P	19 55 38.6	0.0
THY	**Trims Highway**	51.67	34	*e*P	P	19 55 38.0	-0.5
DIV	**Divide**	51.90	36	*e*P	P	19 55 40.2	-0.1
	comp=Z,212nm,1.2s,mb6.0						
THN	**Thein Dam**	52.24	286	*e*P	P	19 55 40.3	-3.0
NDI	**New Delhi**	52.57	281	*e*P	P	19 55 43.0	-2.8
MENT	**Mentasta**	52.64	34	*e*P	P	19 55 46.4	+0.6
VIS	**Vishakhapatnam**	52.83	265	*e*P	P	19 55 47.5	-0.3
VIS				*e*		19 55 48.6	
	comp=Z,39nm,0.9s						
DAWY	**Dawson**	54.39	32	*e*P	P	19 55 58.1	-0.6
BHPL	**Bhopal**	54.85	275	*e*P	P	19 55 59.9	-2.7
BHPL				*e*		19 56 00.2	
	comp=Z,7.2nm,0.6s						
SVE	**Sverdlovsk**	55.06	319⇑	*i*P	P	19 56 03.0	-0.7
SVE				*e*		20 56 28.0	
SVE				*e*		20 57 09.4	
SVE				pmax	pmax		
	comp=Z,160nm,2.0s,mb5.7						
FITZ	**Fitzroy Crossi**	55.44	196⇓	*i*P	P	19 56 05.8	-1.1
	comp=Z,54nm,0.6s,mb5.8						
AJM	**Ajmer**	55.59	280⇑	*i*P	P	19 56 06.0	-1.9
WRAB	**Tennant Creek**	55.85	186	*e*P	P	19 56 08.1	-1.8
WRAB				pmax	pmax		
	comp=Z,473nm,1.1s						
WRAB	**Tennant Creek**	55.85	186	*e*P	P	19 56 08.1	-1.9
	comp=Z,473nm,1.1s						
WB2	**Warramunga Arr**	55.86	186⇑	*i*P	P	19 56 07.7	-2.3
WRA	**Warramunga Arr**	55.87	186	P	P	19 56 07.9	-2.1
WRA				pmax	pmax		
	comp=Z,26nm,0.5s						
WRA	**Warramunga Arr**	55.87	186	P	P	19 56 07.9	-2.1
	comp=Z,26nm,0.5s,mb5.5,baz=1.1,slow=7.5,SNR=237						
INK	**Inuvik**	55.91	27⇑	*i*P	P	19 56 08.7	-1.0
INK				pmax	pmax		
	comp=Z,26nm,0.8s						
INK	**Inuvik**	55.91	27	LR	LR	20 22 37.9	
	comp=Z,360nm,18.8s,MS4.5,baz=30,slow=39						
INK	**Inuvik**	55.91	27⇑	*i*P	P	19 56 08.7	-1.0
	comp=Z,26nm,0.8s,mb5.3						
CTA	**Charters Tower**	56.11	173	*e*P	P	19 56 09.8	-1.9
	comp=Z,12nm,0.7s,mb5.0						
CTA	**Charters Tower**	56.11	173	*e*P	P	19 56 09.8	-1.9
CTA				pmax	pmax		
	comp=Z,12nm,0.7s						
CTA	**Charters Tower**	56.11	173	LR	LR	20 19 47.0	
	comp=Z,597nm,20.2s,MS4.7,baz=350,slow=36						
CTAO	**Charters Tower**	56.11	173	P	P	19 56 10.6	-1.1
CTAO				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
CTAO	**Charters Tower**	56.11	173	P	P	19 56 10.6	-1.1
	comp=Z,25nm,1.0s,mb5.2						
SOKR	**Solikamsk**	56.36	323⇑	*i*P	P	19 56 12.8	-0.2
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,940nm,22.0s,MS4.8						
HYB	**Hyderabad**	56.85	268⇑	*e*P	P	19 56 16.0	-1.1
HYB	**Hyderabad**	56.85	268⇑	*i*P	P	19 56 16.0	-1.1
MDRS	**Chennai**	57.85	263	*e*	P	19 56 22.0	-2.1
MDRS				*e*		19 59 06.0	
ASAR	**Alice Springs**	59.59	186	P	P	19 56 34.5	-1.6
	comp=Z,3.5nm,0.5s,mb4.6,baz=18,slow=6.5,SNR=59						
ASAR				LR	LR	20 21 39.3	
	comp=Z,538nm,21.5s,MS4.7,baz=3.1,slow=35						
ASPA	**Alice Springs**	59.59	186⇓	*i*P	P	19 56 34.9	-1.2
MBWA	**Marble Bar**	59.92	202	*e*P	P	19 56 36.7	-1.7
	comp=Z,165nm,1.4s,mb5.9						
POO	**Poona**	60.09	272	*e*P	P	19 56 38.2	-1.4
POO				*e*		19 56 41.9	
	comp=Z,50nm,0.9s						
DLBC	**Dease Lake**	60.26	37	LR	LR	20 22 26.3	
	comp=Z,192nm,18.3s,MS4.3,baz=88,slow=36						
DLBC	**Dease Lake**	60.26	37	*e*P	P	19 56 40.6	+0.3
DLBC				*e*	pP	19 56 53.5	-0.2
KAD	**Karad**	60.45	271	*e*P	P	19 56 40.6	-1.5
KAD				*e*		19 56 43.5	
	comp=Z,85nm,1.0s						
PALK	**Pallekele**	60.85	257	P	P	19 56 44.3	-0.6
	comp=Z,166nm,0.6s,SNR=8.3						
PALK	**Pallekele**	60.85	257	*e*P	P	19 56 44.0	-0.9
	comp=Z,10nm,0.6s,mb5.1						
DZM	**Mont Dzumac**	63.02	152	*e*P	P	19 56 59.8	+0.5
APA	**Apatity**	63.09	336⇑	*i*P	P	19 56 57.7	-1.5
APA				*i* *PP	pP	19 57 19.0	+6.2
APA				*i*		19 57 29.5	
APA				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.4						
APA				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.2						
BBB	**Bella Bella**	63.73	43	LR	LR	20 19 55.9	
	comp=Z,228nm,20.7s,MS4.3,baz=74,slow=31						
PECR	**Pechory**	63.83	322	*i* P	P	19 57 02.6	-1.4
PECR				pmax	pmax		
	comp=Z,1µm,1.6s						
PECR				pmax	pmax		
	comp=Z,400nm,6.8s						
PECR				MLR	MLR		
	comp=Z,2µm,16.0s						
RES	**Resolute Bay**	63.93	14	*e*P	P	19 57 03.0	-1.4
RES				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
RES	**Resolute Bay**	63.93	14	*e*P	P	19 57 03.0	-1.4
	comp=Z,19nm,1.0s,mb5.1						
KEV	**Kevo**	63.95	339	*e*p	P	19 57 03.9	-0.7
	comp=Z,1.9nm,0.4s,mb4.5						
KEV	**Kevo**	63.95	339	*e*P	P	19 57 03.9	-0.7
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
ARCES	**ARCESS Array B**	64.50	339	P	P	19 57 07.6	-0.6
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARCES				MLR	MLR		
	comp=Z,447nm,18.3s						
ARCES	**ARCESS Array B**	64.50	339	P	P	19 57 07.6	-0.6
	comp=Z,4.2nm,0.6s,mb4.7,baz=49,slow=7.8,SNR=22						
ARCES				LR	LR	20 28 17.2	
	comp=Z,447nm,18.3s,MS4.7,baz=34,slow=39						
ARCES	**ARCESS Array B**	64.50	339	P	P	19 57 07.6	-0.6
YKW3	**Yellowknife Ar**	65.33	29	*e*P	P	19 57 11.9	-1.7
YKA	**Yellowknife Ar**	65.37	29	P	P	19 57 12.9	-1.0
YKA	**Yellowknife Ar**	65.37	29	P	P	19 57 12.8	-1.0
	comp=Z,6.9nm,0.9s,mb4.7,baz=302,slow=6.5,SNR=89						
YKA				LR	LR	20 24 59.2	
	comp=Z,269nm,21.8s,MS4.4,baz=280,slow=35						
JOF	**Joensuu**	66.26	332	*e*p	P	19 57 18.1	-1.4
	comp=Z,4.2nm,0.3s,mb5.0						
JOF	**Joensuu**	66.26	332	*e*P	P	19 57 18.1	-1.4
JOF				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.9						
DAG	**Danmarks Havn**	66.69	355⇓	*i*P	P	19 57 21.2	-0.9
DAG				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.4						
DAG	**Danmarks Havn**	66.69	355⇓	*i*P	P	19 57 21.2	-0.9
	comp=Z,56nm,1.4s,mb5.4						
MOS	**Moscow**	67.30	323	*e*P	P	19 57 22.1	-4.1
MOS				*e*	pP	19 57 38.8	-1.2
MOS				*e*		19 57 46.9	
MOS				*e*		19 59 50.9	
MOS				*e*S	S	20 06 17.4	+1.1
MOS				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.6						
MOS				pmax	pmax		
	comp=Z,200nm,1.9s,mb5.8						
MOS				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.3						
FORT	**Forrest**	67.32	191	*e*P	P	19 57 26.1	-0.7
	comp=Z,3µm,0.6s						
STKA	**Stephens Creek**	67.53	178	*e*P	P	19 57 27.1	-1.0
	comp=Z,14nm,0.6s,mb5.2						
STKA	**Stephens Creek**	67.53	178	P	P	19 57 27.2	-0.9
	comp=Z,15nm,1.1s,mb4.9,baz=356,slow=5.9,SNR=11						
STKA				LR	LR	20 27 50.5	
	comp=Z,616nm,20.6s,MS4.8,baz=7.5,slow=37						
OBN	**Obninsk**	68.14	323α	*i*P	P	19 57 30.4	-1.1
OBN				*e*	pP	19 57 45.3	0.0
OBN				*e*		19 57 57.4	
OBN				*e*		20 07 22.8	
OBN				pmax	pmax		
	comp=Z,70nm,1.9s,mb5.4						
OBN				MLR	MLR		
	comp=Z,1µm,12.0s,MS5.3						
OBN	**Obninsk**	68.14	323	*e*P	P	19 57 29.8	-1.7
	comp=Z,49nm,1.1s,mb5.5						
VOR	**Voronezh**	68.56	319	*e*P	P	19 57 33.0	-1.1
VOR				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
KAF	**Kangasniemi**	68.62	332	*e*p	P	19 57 32.7	-1.7
	comp=Z,6.2nm,0.4s,mb4.9,baz=50,slow=6.0						
KAF	**Kangasniemi**	68.62	332	*e*P	P	19 57 32.7	-1.7
KAF				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
LOF	**Lofoten**	68.72	341	*e*P	P	19 57 42.3	+7.4
FINES	**FINESS Array B**	69.12	332	P	P	19 57 36.3	-1.1
FINES				pmax	pmax		
	comp=Z,15nm,0.8s						
FINES				MLR	MLR		
	comp=Z,353nm,20.1s						
FINES	**FINESS Array B**	69.12	332	P	P	19 57 36.3	-1.1
	comp=Z,15nm,0.8s,mb5.0,baz=76,slow=7.9,SNR=44						
FINES				LR	LR	20 29 28.9	
	comp=Z,353nm,20.1s,MS4.6,baz=47,slow=37						
GOF	**Gofitskoye**	69.80	311⇑	*i*P	P	19 57 41.0	-0.9
GOF				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
MOR8	**Moi Rana**	69.88	339⇑	*i*P	P	19 57 39.8	-2.2
	comp=Z,90nm,1.9s,mb5.4						
MOR8	**Moi Rana**	69.88	339⇑	*i*P	P	19 57 39.8	-2.2
MOR8				AMb	AMB	19 57 42.1	
	comp=Z,90nm,1.9s,mb5.4						
KLBR	**Kellerberrin**	70.33	200	*e*P	P	19 57 43.9	-1.5
	comp=Z,325nm,0.8s						
TI2	**Plekhanov**	70.44	308⇑	*i*P	P	19 57 45.2	-0.6
TI2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
TI2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
TI2				MLR	MLR		
	comp=N,400nm,15.0s,MS5.0						
TI2				MLR	MLR		
	comp=E,500nm,15.0s,MS5.0						
TI2				MLR	MLR		
	comp=Z,600nm,15.0s,MS5.0						
WTV	**Waterville**	70.50	45	P	P	19 57 46.3	+0.2
KIV	**Kislovodsk**	70.59	311	P	P	19 57 47.9	+1.2
	comp=Z,209nm,0.8s,mb6.1,SNR=7.7						
KIV	**Kislovodsk**	70.59	311*c*	*i*P	P	19 57 46.6	-0.1
KIV				*e*		20 00 23.1	
KIV				*e*S	S	20 06 58.4	+3.0
KIV				*e*SS	SS	20 11 30.7	+1.3
KIV				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
KIV				MLR	MLR		
	comp=N,202nm,16.0s						
KIV				MLR	MLR		
	comp=Z,442nm,16.0s,MS4.8						
KIV	**Kislovodsk**	70.59	311⇑	*e*P	P	19 57 46.2	-0.5
	comp=Z,50nm,0.8s,mb5.5						
VLL	**Laurance Lake**	70.68	48	P	P	19 57 48.3	+1.1
BROR	**Big Rock Looko**	70.84	49	P	P	19 57 49.2	+0.9
VFP	**Flag Point**	70.89	48	P	P	19 57 49.1	+0.6
MXC	**Moxie City**	70.91	46	P	P	19 57 49.4	+0.8
JMIC	**Jan Mayen**	70.93	349	LR	LR	20 26 29.7	
	comp=Z,276nm,20.9s,MS4.5,baz=75,slow=34						
EDM	**Edmonton**	70.98	37	*e*P	P	19 57 48.2	-0.7
BSY	**Bisya**	71.24	285	P	P	19 57 51.1	+0.1
	SNR=7.6						
GNI	**Garni**	71.26	306	*e*P	P	19 57 51.2	+0.4
GNI				pmax	pmax		
	comp=Z,28nm,1.0s						
GNI	**Garni**	71.26	306	LR	LR	20 31 59.4	
	comp=Z,828nm,18.6s,MS5.0,baz=59,slow=38						
GNI	**Garni**	71.26	306	*e*P	P	19 57 51.2	+0.4
	comp=Z,28nm,1.0s,mb5.2						
OD2	**Odessa Site #2**	71.38	45	P	P	19 57 51.5	+0.1
ARQ	**Araqi**	71.46	286	P	P	19 57 52.4	+0.1
	SNR=6.0						
SUMG	**Summit**	71.72	359	*e*P	P	19 57 53.5	+0.5
	comp=Z,39nm,0.8s,mb5.4						
NWAO	**Narrogin (SRO)**	71.73	200	*e*P	P	19 57 54.6	+0.8
NWAO				pmax	pmax		
	comp=Z,36nm,0.9s						
NWAO	**Narrogin (SRO)**	71.73	200	*e*P	P	19 57 54.6	+0.9
	comp=Z,36nm,0.9s,mb5.3						
NSS	**Namsos**	71.78	339	*e*P	P	19 57 56.9	+3.4
NEW	**Newport**	71.79	43	*e*P	P	19 57 53.6	-0.2
NEW				pmax	pmax		
	comp=Z,15nm,0.9s						
NEW	**Newport**	71.79	43	*e*P	P	19 57 53.6	-0.2
	comp=Z,15nm,0.9s,mb4.9						
VIPM	**Ingram Point**	71.83	48	P	P	19 57 55.0	+0.9
YBH	**Yreka Blue Hor**	72.03	51	*e*P	P	19 57 55.8	+0.5
YBH				pmax	pmax		
	comp=Z,23nm,1.1s						
YBH	**Yreka Blue Hor**	72.03	51	*e*P	P	19 57 55.8	+0.4
	comp=Z,23nm,1.1s,mb5.0						
SOC	**Sochi**	72.60	311	*i* P	P	19 57 57.5	-1.2
SOC				*e*	pP	19 58 13.6	+1.0
SOC				*e*		20 00 37.2	
SOC				*e*PPP	PPP	20 02 19.3	-5.9
SOC				*e*S	S	20 07 16.0	-2.6
SOC				*e*		20 07 58.5	
SOC				*e*SS	SS	20 11 54.8	-5.8
SOC				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
SOC				pmax	pmax		
	comp=N,5.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,11nm,1.0s						
SOC				MLR	MLR		
	comp=N,523nm,18.0s,MS5.0						
SOC				MLR	MLR		
	comp=E,396nm,18.0s,MS5.0						
SOC				MLR	MLR		
	comp=Z,467nm,18.0s,MS4.8						
WDC	**Whiskeytown Da**	72.75	52	*e*P	P	19 58 00.4	+0.8
WDC				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
WDC	**Whiskeytown Da**	72.75	52	*e*P	P	19 58 00.3	+0.7
	comp=Z,24nm,1.2s,mb5.0						
SCO	**Scoresbysund**	73.01	354	*e*P	P	19 58 00.1	-0.5
SCO				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
SCO	**Scoresbysund**	73.01	354	*e*P	P	19 58 00.1	-0.5
	comp=Z,7.1nm,0.7s,mb4.7						
SCO	**Scoresbysund**	73.01	354	*i* P	P	19 58 00.1	-0.5
	comp=Z,7.1nm,0.7s,mb4.7						
LTIM	**Timbered Crate**	73.10	51	P	P	19 58 02.8	+1.1
BMO	**Blue Mountains**	73.60	46	*e*P	P	19 58 04.7	+0.2
	comp=Z,32nm,1.3s,mb5.1						
WVOR	**Wild Horse Val**	74.17	49	*e*P	P	19 58 08.1	+0.2
WVOR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
WVOR	**Wild Horse Val**	74.17	49	*e*P	P	19 58 08.1	+0.2
	comp=Z,19nm,1.0s,mb5.0						
AKASG	**Malin Array Be**	74.31	322	P	P	19 58 07.6	-0.9
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG	**Malin Array Be**	74.31	322	P	P	19 58 07.5	-0.9
	comp=Z,8.4nm,0.6s,mb4.8,baz=47,slow=6.2,SNR=62						
MOL	**Molde**	74.57	339	*e*P	P	19 58 11.9	+2.1
NB2	**NORSAR Subarra**	74.63	337	P	P	19 58 09.3	-0.8
	comp=Z,25nm,0.9s,mb5.1,baz=41,slow=5.6						
NB2	**NORSAR Subarra**	74.63	337	P	P	19 58 09.3	-0.8
NB2				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
NB2	**NORSAR Subarra**	74.63	337	P	P	19 58 09.3	-0.8
	baz=41,slow=5.9						
NOA	**NORSAR Array B**	74.63	337	P	P	19 58 09.5	-0.6
NOA						20 00 58.2	
NOA				pmax	pmax		
	comp=Z,11nm,0.7s						
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,647nm,19.7s						
NOA	**NORSAR Array B**	74.63	337	P	P	19 58 09.5	-0.6
	comp=Z,11nm,0.7s,mb4.9,baz=40,slow=5.8,SNR=47						
NOA				PP	PP	20 00 58.1	-1.2
	comp=Z,2.5nm,0.8s,baz=45,slow=8.7,SNR=3.8						
NOA				LR	LR	20 33 57.5	
	comp=Z,647nm,19.7s,MS4.9,baz=25,slow=38						
NAO01	**NORSAR Array S**	74.88	337	P	P	19 58 10.3	-1.3
	comp=Z,9.9nm,0.8s,mb4.8						
SUW	**Suwalki**	75.05	327	*e*P	pP	19 58 26.6	0.0
FFC	**Flin Flon**	75.29	32	P	P	19 58 13.3	-0.8
	comp=Z,126nm,1.1s,mb5.8,SNR=18						
FFC	**Flin Flon**	75.29	32⇑	*e*P	P	19 58 13.5	-0.6
FFC				*e*	pP	19 58 32.2	+4.2
FFC				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
FFC	**Flin Flon**	75.29	32⇑	*e*P	P	19 58 13.5	-0.6
	comp=Z,21nm,0.9s,mb5.1						
FFC				*e*	pP	19 58 32.2	+4.2
FCC	**Fort Churchill**	75.52	26	*e*P	P	19 58 14.6	-0.7
FCC				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.4						
FCC	**Fort Churchill**	75.52	26	*e*P	P	19 58 14.6	-0.7
	comp=Z,59nm,1.1s,mb5.4						
CMB	**Columbia Colle**	75.55	53	*e*P	P	19 58 16.0	+0.1
CMB				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
CMB	**Columbia Colle**	75.55	53	*e*P	P	19 58 16.0	+0.1
	comp=Z,44nm,1.0s,mb5.3						
HLID	**Hailey**	76.05	46	*e*P	P	19 58 19.3	+0.7
	comp=Z,11nm,1.0s,mb4.7						
BMN	**Battle Mountai**	76.19	50⇑	*e*P	P	19 58 20.4	+0.9
BMN				*e*	pP	19 58 33.5	0.0
BMN				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
BMN	**Battle Mountai**	76.19	50⇑	*e*P	P	19 58 20.4	+0.9
	comp=Z,26nm,0.9s,mb5.2						
BMN				*e*	pP	19 58 33.5	0.0
MALT	**Malatya**	76.37	307	*e*P	P	19 58 21.2	+0.6
MALT				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
MALT	**Malatya**	76.37	307	*e*P	P	19 58 21.2	+0.7
	comp=Z,25nm,0.9s,mb5.2						
BOZ	**Bozeman (W)**	76.38	43	*e*P	P	19 58 20.4	0.0
BOZ				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
BOZ	**Bozeman (W)**	76.38	43	*e*P	P	19 58 20.4	0.0
	comp=Z,14nm,0.9s,mb4.9						
RBK	**Rabkut**	76.43	282	P	P	19 58 20.6	-0.7
	SNR=8.5						
WHFO	**Wadi Hawf**	76.54	282	P	P	19 58 20.8	-1.2
	SNR=22						
NVAR	**Mina Array Bea**	76.67	52	P	P	19 58 23.1	+0.8
	comp=Z,8.9nm,0.8s,mb4.8,baz=298,slow=4.1,SNR=52						
OMM	**Old Mammoth Mi**	76.69	53	*e*P	P	19 58 23.4	+1.0
MNV	**Mina**	76.76	52	*e*P	P	19 58 23.3	+0.5
MNV				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
MNV	**Mina**	76.76	52	*e*P	P	19 58 23.3	+0.5
	comp=Z,17nm,1.2s,mb4.9						
KIS	**Kishinev**	76.82	319	*e*P	P	19 58 20.0	-2.9
KIS				*e*S	S	20 08 02.0	-3.3
KIS				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.2						
KIS				MLR	MLR		
	comp=N,400nm,17.0s						
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
RUND	**Rundenannen**	76.92	339	*e*P	P	19 58 24.2	+1.0
RUND	**Rundenannen**	76.92	339	*e*P	P	19 58 23.7	+0.5
ELK	**Elko**	77.23	49	*e*P	P	19 58 26.0	+0.6
ELK				pmax	pmax		
	comp=Z,15nm,1.0s						
ELK	**Elko**	77.23	49	*e*P	P	19 58 26.0	+0.7
	comp=Z,16nm,1.0s,mb4.9						
ABTO	**Aybut**	77.23	282	P	P	19 58 25.0	-0.8
	SNR=15						
BLS5	**Blasjo**	77.39	338	*e*P	P	19 58 27.2	+1.3
	comp=Z,27nm,1.7s,mb4.9						
BLS5	**Blasjo**	77.39	338	*e*P	P	19 58 27.2	+1.3
BLS5				AMb	AMB	19 58 30.8	
	comp=Z,27nm,1.7s,mb4.9						
LVV	**L'vov**	77.43	323	*e*P	P	19 58 22.5	-3.8
LVV				MLR	MLR		
	comp=N,400nm,15.0s,MS5.0						
LVV				MLR	MLR		
	comp=E,400nm,15.0s,MS5.0						
LVV				MLR	MLR		
	comp=Z,600nm,15.0s,MS5.0						
YNR	**Norris Junctio**	77.48	43	*e*P	P	19 58 28.6	+2.0
YFT	**Old Faithful**	77.56	44	*e*P	P	19 58 29.3	+2.2
TPH	**Tonopah**	77.57	52	*e*P	P	19 58 27.7	+0.4
TPH				*e*	pP	19 58 41.1	-0.2
TPH				pmax	pmax		
	comp=Z,81nm,1.2s,mb5.5						
TPH	**Tonopah**	77.57	52	*e*P	P	19 58 27.7	+0.4
	comp=Z,81nm,1.2s,mb5.5						
TPH				*e*	pP	19 58 41.1	-0.2
IMW	**Indian Meadow**	77.84	44	*e*P	P	19 58 30.0	+1.4
MOOW	**Moose Ponds**	78.04	44	*e*P	P	19 58 30.6	+0.9
HVU	**Hansel Valley**	78.08	47	*e*P	P	19 58 31.0	+1.0
TPAW	**Teton Pass**	78.09	45	*e*P	P	19 58 31.2	+1.2
KWP	**Kalwaria**	78.20	324	*e*P	P	19 58 30.8	+0.3
LOHW	**Long Hollow**	78.21	44	*e*P	P	19 58 31.5	+0.8
SNOW	**Snow King Moun**	78.22	45	*e*P	P	19 58 29.3	-1.4
TRCR	**Troy Canyon**	78.44	51	*e*P	P	19 58 32.7	+0.6
TRCR				*e*	pP	19 58 45.7	-0.4
BGU	**Big Grassy Mou**	78.46	48	*e*P	P	19 58 32.0	0.0
BRTR	**Keskin Array B**	78.55	311	P	P	19 58 32.4	-0.2
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRTR	**Keskin Array B**	78.55	311	P	P	19 58 32.4	-0.3
	comp=Z,6.3nm,1.1s,mb4.5,baz=124,slow=4.5,SNR=16						
KOLS	**Kolonicke sedl**	78.88	323	*e*P	P	19 58 34.0	-0.3
KOLS				*e*	pP	19 58 44.5	-3.8
KOLS				*e*		19 59 00.9	
KOLS				*e*		19 59 06.2	
HWUT	**Hardware Ranch**	78.91	46	*e*P	P	19 58 35.2	+0.6
	comp=Z,62nm,1.5s,mb5.3						
DUG	**Dugway**	79.03	48	*e*P	P	19 58 35.9	+0.6
DUG				*e*	pP	19 58 50.0	+0.7
DUG				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
DUG	**Dugway**	79.03	48	*e*P	P	19 58 35.9	+0.6
	comp=Z,39nm,1.1s,mb5.2						
DUG				*e*	pP	19 58 50.0	+0.7
OJC	**Ojcow**	79.16	325	*e*P	P	19 58 35.7	-0.1
MWC	**Mount Wilson**	79.29	56	*e*P	P	19 58 37.3	+0.5
TCUT	**Toone Canyon**	79.30	47	*e*P	P	19 58 37.1	+0.4
MLR	**Muntele Rosu**	79.32	319	P	P	19 58 38.3	+1.6
MLR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MLR				MLR	MLR		
	comp=Z,514nm,18.6s						
MLR	**Muntele Rosu**	79.32	319	P	P	19 58 38.3	+1.5
	comp=Z,1.6nm,0.4s,mb4.3,baz=340,slow=23,SNR=4.4						
MLR				LR	LR	20 37 42.7	
	comp=Z,514nm,18.6s,MS4.9,baz=44,slow=39						
PDAR	**Pinedale Array**	79.34	45	P	P	19 58 37.0	+0.2
	comp=Z,4.3nm,0.7s,mb4.5,baz=266,slow=1.5,SNR=32						
PDAR				LR	LR	20 33 23.0	
	comp=Z,158nm,19.3s,MS4.4,baz=331,slow=35						
NIE	**Niedzica**	79.48	325	*e*P	P	19 58 36.4	-1.1
JLU	**Jordanelle**	79.60	47	*e*P	P	19 58 39.1	+0.8
RAYN	**Ar Rayn**	79.82	292	P	P	19 58 39.1	-0.8
	comp=Z,110nm,0.8s,mb5.8,SNR=27						
MPU	**Maple Canyon**	79.86	48	*e*P	P	19 58 40.4	+0.6
KECS	**Kecovo**	80.05	324	*e*sP	sP	19 58 59.1	-0.9
OKC	**Ostrava-Krasne**	80.18	326	*e*P	P	19 58 41.1	-0.2
OKC				AMS	AMS	20 37 50.0	
	comp=Z,900nm,15.4s						
KSP	**Ksiaz**	80.28	328	*e*P	P	19 58 41.3	-0.5
KSP				*e**PP	pP	19 58 54.6	-1.2
KSP	**Ksiaz**	80.28	328	*e*P	P	19 58 42.1	+0.4
BSEG	**Bad Segeberg**	80.38	332	*e*P	P	19 58 42.3	+0.1
MORC	**Moravsky Berou**	80.50	326	*e*P	P	19 58 42.2	-0.8
MORC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
MORC	**Moravsky Berou**	80.50	326	*e*P	P	19 58 42.2	-0.7
	comp=Z,12nm,0.9s,mb4.8						
NEN	**Nelson**	80.55	53	*e*P	P	19 58 43.8	+0.3
TMUT	**Trail Mountain**	80.56	48	*e*P	P	19 58 43.2	-0.3
DPC	**Dobruska-Polom**	80.63	327	*e*P	P	19 58 43.8	+0.2
DPC				*e*pP	pP	19 58 58.8	+1.1
DPC				AMS	AMS	20 38 30.0	
	comp=Z,700nm,14.1s						
UPC	**Upice**	80.65	327	*e*P	P	19 58 43.8	+0.1
UPC				*e*pP	pP	19 58 58.0	+0.2
PFO	**Pinyon Flat Ob**	80.72	55	*e*P	P	19 58 44.6	+0.1
PFO				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.3						
PFO	**Pinyon Flat Ob**	80.72	55	*e*P	P	19 58 44.5	+0.1

	comp=Z,54nm,1.3s,mb5.3						
PSZ	Piszkesteto	80.73	324	eP	P	19 58 43.1	-1.1
PSZ				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
PSZ	Piszkesteto	80.73	324	eP	P	19 58 43.0	-1.2
	comp=Z,14nm,0.9s,mb4.9						
PSZ	Piszkesteto	80.73	324	⇑iP	P	19 58 44.4	+0.2
VYHS	Vyhne	80.82	325	eP	P	19 58 45.0	+0.3
VYHS				e	pP	19 58 54.3	-4.5
VYHS				e		20 02 15.8	
ASF	Jabal al Asfar	80.98	303	P	P	19 58 46.5	+0.6
	comp=Z,7.6nm,0.8s,mb4.7,baz=273,slow=2.8,SNR=10						
ASF				LR	LR	20 38 38.9	
	comp=Z,336nm,19.6s,MS4.7,baz=115,slow=39						
SRU	San Rafael	81.09	48	eP	P	19 58 46.9	+0.6
ULM	Lac du Bonnet	81.09	32	P	P	19 58 46.0	-0.1
	comp=Z,6.5nm,0.8s,mb4.6,baz=316,slow=7.1,SNR=10						
ULM	Lac du Bonnet	81.09	32	eP	P	19 58 44.9	-1.1
	comp=Z,36nm,1.2s,mb5.2						
BAR	Barrett	81.13	56	eP	P	19 58 46.5	-0.2
PVCC	Panska Ves	81.26	328	eP	P	19 58 47.0	+0.1
BRG	Berggiesshubel	81.27	329	eP	P	19 58 46.8	-0.2
BRG				e	pP	19 58 59.6	-1.5
BRG				pmax	pmax		
	comp=Z,54nm,1.6s,mb5.2						
BRG	Berggiesshubel	81.27	329	eP	P	19 58 46.8	-0.2
	comp=Z,54nm,1.6s,mb5.2						
BRG				e	pP	19 58 59.6	-1.5
CLL	Collm	81.33	329	⇑iP	P	19 58 46.7	-0.6
CLL				i *PP	pP	19 59 05.2	+3.8
CLL				i *SP	sP	19 59 15.0	+8.3
CLL				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
CLL				MLR	MLR		
	comp=Z,600nm,18.0s,MS5.0						
CLL	Collm	81.33	329	⇑iP	P	19 58 46.7	-0.6
	comp=Z,31nm,1.1s,mb5.2						
CLL				i pP	pP	19 59 05.2	+3.8
CLL				i sP	sP	19 59 15.0	+8.3
CLL	Collm	81.33	329	⇑P	P	19 58 46.7	-0.6
	comp=Z,logA/T=1.4,mb5.1						
CLL				i *PP	pP	19 58 59.0	-2.4
CLL				i *SP	sP	19 59 05.2	-1.5
CLL				i		19 59 15.0	
CLL				ePP	PP	20 01 53.0	-2.4
CLL				e*PPP		20 02 07.0	
PRU	Pruhonice	81.67	328	eP	P	19 58 48.8	-0.3
PRU				epP	pP	19 59 02.3	-0.9
PRU				AMS	AMS	20 39 10.0	
	comp=Z,800nm,14.8s						
CLZ	Clausthal	81.98	331	eP	P	19 58 50.8	+0.1
	comp=Z,59nm,1.7s,mb5.2						
NKC	Novy Kostel	82.38	329	eP	P	19 58 52.5	-0.2
MOX	Moxa	82.41	330	eP	P	19 58 52.6	-0.3
MOX				pmax	pmax		
	comp=Z,42nm,1.9s,mb5.0						
MOX				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.7						
MOX	Moxa	82.41	330	eP	P	19 58 52.6	-0.3
	comp=Z,42nm,1.9s,mb5.0						
MOX	Moxa	82.41	330	i P	P	19 58 52.6	-0.3
	comp=Z,logA/T=1.3,mb5.0						
MOX				L		20 43 55.0	
RZN	Rozhen	82.51	317	i P	P	19 58 47.0	-6.6
BEO	Belgrade	82.62	321	⇑iP	P	19 58 54.2	+0.1
VTS	Vitosha	82.72	318	i P	P	19 58 56.0	+1.3
KHC	Kasperske Hory	82.73	328	eP	P	19 58 54.3	-0.2
KHC				epP	pP	19 59 07.6	-1.1
KHC				AMS	AMS	20 39 40.0	
	comp=Z,900nm,16.2s						
GEC2	GERESS Array S	82.89	327	eP	P	19 58 55.4	0.0
GEC2				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.8						
GEC2	GERESS Array S	82.89	327	eP	P	19 58 55.4	0.0
	comp=Z,15nm,1.5s,mb4.8						
GERES	GERESS Array B	82.89	327	P	P	19 58 55.1	-0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	82.89	327	P	P	19 58 55.1	-0.2
	comp=Z,1.3nm,0.4s,mb4.3,baz=39,slow=4.9,SNR=15						
PV01	Paradox Valley	82.89	48	eP	P	19 58 56.4	+0.8
WET	Wettzell	83.02	328	eP	P	19 58 56.2	+0.2
WET				pmax	pmax		
	comp=Z,62nm,2.0s,mb5.3						
WET	Wettzell	83.02	328	eP	P	19 58 56.2	+0.2
	comp=Z,62nm,2.0s,mb5.3						
MMB	Musomiste	83.12	317	i P	P	19 58 57.0	+0.3
ARSA	Arzberg	83.26	325	⇓iP	P	19 58 58.1	+0.8
	comp=Z,24nm,1.7s,mb5.0						
KKB	Krupnik	83.29	318	i P	P	19 58 58.0	+0.5
GRA1	Grafenberg Arr	83.30	329	eP	P	19 58 57.7	+0.3
	comp=Z,64nm,1.2s,mb5.5						
GRA1				epP	pP	19 59 10.9	-0.7
GRF	Grafenberg Arr	83.30	329	eP	P	19 58 57.7	+0.3
GRF				e*PP	pP	19 59 10.9	-0.7
GRF				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.5						
GRF				MLR	MLR		
	comp=Z,400nm,20.4s,MS4.8						
GRF	Grafenberg Arr	83.30	329	eP	P	19 58 57.7	+0.3
GRF				e*PP	pP	19 59 10.9	-0.7
GRF				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.5						
GRF	Grafenberg Arr	83.30	329	eP	P	19 58 57.7	+0.3
	comp=Z,64nm,1.2s,mb5.5						
GRF				epP	pP	19 59 10.9	-0.7
MOA	Molln	83.39	326	⇑iP	P	19 58 58.2	+0.3
	comp=Z,22nm,1.8s,mb4.9						
ISCO	Idaho Springs	83.52	45	eP	P	19 58 59.8	+1.0
ISCO				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.1						
ISCO	Idaho Springs	83.52	45	eP	P	19 58 59.8	+1.1
	comp=Z,22nm,1.4s,mb5.1						
EIL	Elat	83.83	302	LR	LR	20 40 46.0	
	comp=Z,319nm,21.3s,MS4.7,baz=217,slow=39						
EIL	Elat	83.83	302	eP	P	19 59 00.3	-0.2
	comp=Z,29nm,0.8s,mb5.5						
PERS	Pernice	83.90	325	eP	P	19 59 00.1	-0.5
TNS	Taunus Mts	84.01	331	eP	P	19 59 01.5	+0.6
SKO	Skopje	84.10	319	⇑iP	P	19 59 02.5	+0.9
SKO				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.5						
SKO	Skopje	84.10	319	⇑iP	P	19 59 02.5	+0.9
	comp=Z,0.0nm,0.8s						
GOLS	Golise	84.13	325	eP	P	19 59 01.1	-0.5
KBA	Koelnbreinsper	84.38	326	⇓iP	P	19 59 03.9	+1.0
	comp=Z,11nm,0.8s,mb5.0						
KBA	Koelnbreinsper	84.38	326	⇓iP	P	19 59 03.9	+1.0
KBA				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
FUR	Furstenfeldbru	84.45	328	eP	P	19 59 03.8	+0.6
FUR				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.6						
FUR	Furstenfeldbru	84.45	328	eP	P	19 59 03.8	+0.6
	comp=Z,43nm,0.9s,mb5.6						
EYMN	Ely	84.72	32	P	P	19 59 03.3	-1.3
	comp=Z,45nm,1.3s,mb5.4						
STU	Stuttgart	84.85	330	P	P	19 59 05.0	-0.2
STU				pmax	pmax		
	comp=Z,94nm,1.5s,mb5.7						
STU	Stuttgart	84.85	330	P	P	19 59 05.0	-0.2
	comp=Z,94nm,1.5s,mb5.7						
SDCO	Great Sand Dun	84.97	46	eP	P	19 59 07.0	+1.0
	comp=Z,22nm,1.1s,mb5.2						
WTTA	Wattenberg	84.99	327	⇑iP	P	19 59 06.1	+0.2
	comp=Z,15nm,1.4s,mb4.9						
WTTA	Wattenberg	84.99	327	⇑iP	P	19 59 06.1	+0.2
WTTA				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.9						
MOTA	Moosalm	85.16	328	⇓iP	P	19 59 06.7	-0.1
	comp=Z,38nm,2.1s,mb5.2						
MOTA	Moosalm	85.16	328	⇓iP	P	19 59 06.7	-0.1
MOTA				pmax	pmax		
	comp=Z,38nm,2.1s,mb5.2						
SQTA	Sankt Quirin	85.21	328	⇑iP	P	19 59 07.3	+0.3
	comp=Z,45nm,1.9s,mb5.3						
SQTA	Sankt Quirin	85.21	328	⇑iP	P	19 59 07.3	+0.3
SQTA				pmax	pmax		
	comp=Z,45nm,1.9s,mb5.3						
TUC	Tucson	85.26	53	eP	P	19 59 07.6	0.0
TUC				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
TUC	Tucson	85.26	53	eP	P	19 59 07.6	-0.1
	comp=Z,20nm,0.9s,mb5.2						
GIVF	Givet	85.49	333	eP	P	19 59 09.3	+1.0
	comp=Z,87nm,1.5s,mb5.4						
GIVF	Givet	85.49	333	eP	P	19 59 09.3	+1.0
GIVF				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.4						
BFO	Black Forest	85.55	330	eP	P	19 59 08.6	-0.1
DAVA	Damuels	85.73	328	⇓iP	P	19 59 10.2	+0.6
	comp=Z,30nm,1.8s,mb5.2						
BAIF	Baives	85.75	333	eP	P	19 59 09.2	-0.4
DMUB	Kingscourt	85.95	341	eP	P	19 59 11.7	+1.2
DMUB	Kingscourt	85.95	341	eP	sP	19 59 36.9	+7.1
ANMO	Albuquerque	86.26	49	⇓iP	P	19 59 13.7	+1.2
ANMO	Albuquerque	86.26	49	⇑eP	P	19 59 13.7	+1.2
	comp=Z,13nm,1.0s,mb5.1						
DLF	Lyons Farm	86.39	341	eP	P	19 59 13.4	+0.8
DLF	Lyons Farm	86.39	341	eP	sP	19 59 39.0	+7.0
DCN	Croghan	86.55	341	eP	P	19 59 14.5	+1.1
DCN	Croghan	86.55	341	eP	sP	19 59 40.0	+7.2
HINF	Hinteralfeld	86.56	330	eP	P	19 59 12.9	-0.7
	comp=Z,123nm,1.9s,mb5.5						
HINF	Hinteralfeld	86.56	330	eP	P	19 59 12.9	-0.7
HINF				pmax	pmax		
	comp=Z,62nm,1.9s,mb5.5						
HAU	Haudompre	86.61	331	eP	P	19 59 13.3	-0.5
HAU				eR			
	comp=Z,527nm,22.2s						
SCHQ	Schefferville	86.69	15	P	P	19 59 15.1	+1.0
	comp=Z,6.0nm,0.6s,mb5.0,baz=360,slow=4.8,SNR=14						
SCHQ				LR	LR	20 42 18.6	
	comp=Z,169nm,19.2s,MS4.5,baz=15,slow=38						
SCHQ	Schefferville	86.69	15	eP	P	19 59 14.5	+0.4
	comp=Z,8.2nm,0.8s,mb5.0						
MEZF	Maizieres J’vi	86.71	332	eP	P	19 59 14.0	-0.3
	comp=Z,268nm,1.9s,mb5.8						
LPL	La Plagne	88.46	329	eP	P	19 59 22.9	+0.1
LPG	La Plagne	88.47	329	eP	P	19 59 22.8	-0.1
SSF	Saint Saulge	88.49	332	eP	P	19 59 22.5	-0.4
LDF	La Druitiere	88.53	335	eP	P	19 59 22.6	-0.5
	comp=Z,83nm,1.5s,mb5.5						
LDF	La Druitiere	88.53	335	eP	P	19 59 22.6	-0.5
LDF				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.5						
SMF	Signal de Mont	88.70	331	eP	P	19 59 23.4	-0.6
	comp=Z,200nm,1.9s,mb5.8						
SMF	Signal de Mont	88.70	331	eP	P	19 59 23.4	-0.6
SMF				pmax	pmax		
	comp=Z,100nm,1.9s,mb5.8						
AVF	Avril sur Loir	88.77	332	eP	P	19 59 23.8	-0.5
	comp=Z,182nm,1.9s,mb5.8						
AVF	Avril sur Loir	88.77	332	eP	P	19 59 23.8	-0.5
AVF				pmax	pmax		
	comp=Z,91nm,1.9s,mb5.8						
KSU1	Kansas State U	88.96	40	eP	P	19 59 24.9	-0.5
MBDF	Montbardon	89.08	329	eP	P	19 59 24.8	-1.0
MNTX	Cornudas Mount	89.11	51	eP	P	19 59 26.4	+0.1
	comp=Z,3.4nm,0.8s,mb4.7						
BGF	Bois d’Agland	89.16	332	eP	P	19 59 25.8	-0.3
ORIF	Oris-en-Rattie	89.30	329	eP	P	19 59 26.6	-0.2
ORIF				eR			
	comp=Z,370nm,18.5s						
TCF	Toulx Ste Croi	89.63	332	eP	P	19 59 28.3	0.0
	comp=Z,45nm,1.5s,mb5.3						
TCF	Toulx Ste Croi	89.63	332	eP	P	19 59 28.3	0.0
TCF				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.3						
RJF	Les Rejaudoux	90.72	332	eP	P	19 59 33.2	-0.3
RJF				eR			
	comp=Z,441nm,22.0s						
CAF	Calviac	90.83	331	eP	P	19 59 32.6	-1.4
	comp=Z,116nm,1.7s,mb5.6						
CAF	Calviac	90.83	331	eP	P	19 59 32.6	-1.4
CAF				pmax	pmax		
	comp=Z,58nm,1.7s,mb5.6						
WMOK	Wichita Mounta	90.95	45	eP	P	19 59 34.6	-0.2
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
WMOK	Wichita Mounta	90.95	45	eP	P	19 59 34.6	-0.2
	comp=Z,7.3nm,0.9s,mb5.0						
LTX	Lajitas	91.80	51	eP	P	19 59 39.7	+0.8
LTX				pmax	pmax		
	comp=Z,63nm,1.6s,mb5.7						
LTX	Lajitas	91.80	51	eP	P	19 59 39.6	+0.8
	comp=Z,63nm,1.6s,mb5.7						
TXAR	Lajitas Array	91.80	51	P	P	19 59 39.8	+0.9
	comp=Z,5.2nm,0.6s,mb5.0,baz=303,slow=3.3,SNR=39						
TXAR				LR	LR	20 34 50.5	
	comp=Z,188nm,20.3s,MS4.5,baz=295,slow=32						
JCT	Junction City	93.40	48	eP	P	19 59 46.3	+0.1
JCT				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.5						
JCT	Junction City	93.40	48	eP	P	19 59 46.2	+0.1
	comp=Z,30nm,1.4s,mb5.5						
MAW	Mawson	118.03	205	PKIKP	PKPdf	20 05 16.7	+1.2
MAW				pmax	pmax		
	comp=Z,12nm,0.3s						
MAW	Mawson	118.03	205	PKP	PKPdf	20 05 16.7	+1.2
	comp=Z,12nm,0.3s,baz=247,slow=22,SNR=9.5						
LBTB	Lobatse	123.19	262	ePKIKP	PKPdf	20 05 27.4	+0.8
DBIC	Dimbokro	126.11	315	PKIKP	PKPdf	20 05 33.3	+0.8
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	126.11	315	PKP	PKPdf	20 05 33.2	+0.7
	comp=Z,3.1nm,0.7s,baz=348,slow=3.2,SNR=12						
SDV	Santo Domingo	126.97	39	ePKP	PKPdf	20 05 35.0	+0.8
ROSC	El Rosal	128.31	45	PKP	PKPdf	20 05 38.3	+1.5
	comp=Z,6.6nm,0.4s,baz=90,slow=22,SNR=5.0						
OTAV	Otavalo	129.40	53	ePKP	PKPdf	20 05 40.2	+1.3
SAML	Samuel	145.91	43	ePKP	PKPdf	20 06 10.0	+1.2
ARE	Arequipa	146.09	63	ePKP2	PKPab	20 06 13.0	+0.3
LPAZ	La Paz	148.36	59	ePKIKP	PKPdf	20 06 15.2	+2.5
LPAZ						20 06 18.8	
LPAZ	La Paz	148.36	59	PKPbc	PKPdf	20 06 18.8	+6.1
	comp=Z,9.3nm,0.6s,baz=344,slow=3.0,SNR=20						
LPAZ	La Paz	148.36	59	ePKPdf	PKPdf	20 06 15.2	+2.5
LPAZ				ePKPbc	PKPdf	20 06 18.6	+5.8
LPAZ				PKPbc	PKPdf	20 06 18.8	+6.1
LVC	Limon Verde	151.77	70	ePKPbc	PKPdf	20 06 26.6	+8.7
PLCA	Paso Flores	155.82	110	PKIKP	PKPdf	20 06 38.5	+16
PLCA						20 06 52.0	
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PLCA	Paso Flores	155.82	110	PKPbc	PKPdf	20 06 38.5	+16
	comp=Z,1.5nm,0.7s,baz=243,slow=6.7,SNR=3.1						
PLCA				PKPab	PKPab	20 06 52.0	-0.3
	comp=Z,3.5nm,0.9s,baz=286,slow=7.0,SNR=6.2						
PLCA	Paso Flores	155.82	110	PKPbc	PKPdf	20 06 38.5	+16
PLCA				PKPab	PKPab	20 06 52.0	-0.3
BDFB	Brasilia	158.57	21	PKP2	PKPab	20 07 04.2	-0.5
BDFB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BDFB	Brasilia	158.57	21	PKPab	PKPab	20 07 04.2	-0.6
	comp=Z,8.9nm,1.0s,baz=12,slow=2.2,SNR=5.5						

MOS ***15*** *20:01:39.8±0.8, 1.78S×126.32E, h33^{km}, mb5.0/4, Error ellipse: s-maj=68.4km s-min=17.8km az=112.5*

BJI ***15*** *20:01:42.5, 1.70S×126.40E, h29^{km}, mB5.9, mb4.9, Ms4.9, Msz4.5*

NEIC ***15*** *20:01:42.5±0.3, 1.68S×126.41E, mb4.5/14, Error ellipse: s-maj=16.1km s-min=5.9km az=61.0*

IDC ***15*** *20:01:42.2±0.7, 1.65S×126.38E, h28^{km}±5^{km}, mb4.0/9, mb1 4.2/10, mb1mx4.1/17, mbtmp4.2/10, ML4.6/1, Error ellipse: s-maj=38.6km s-min=12.8km az=64.0*

ISC 15 20:01:38.9±3.9**, 1.67S**±0.07×**126.5E**±0.1**, h19**^{km}±29^{km}**, h29**^{km}±1.4^{km}**:pP-P, n53, σ1**^{s}**10**/54**, mb4.6**/31**, MS4.8**/2**, 2C-2D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.43	152	⇑iP	P	20 04 38.6	+0.7
	7.7nm,0.3s						
FITZ	Fitzroy Crossi	16.35	183	⇓iP	P	20 05 34.3	+5.1
	6.3nm,0.6s						
WRAB	Tennant Creek	19.69	158	eP	P	20 06 09.2	-1.0
	21nm,0.6s						
WRA	Warramunga Arr	19.70	158	i P	P	20 06 09.3	-0.9
WRA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WRA	Warramunga Arr	19.70	158	P	P	20 06 09.3	-0.9
	comp=Z,1.8nm,0.3s,baz=340,slow=12,SNR=113						
WRA				PcP	PcP	20 10 28.0	-0.5
	comp=Z,0.0nm,0.3s,baz=337,slow=2.3,SNR=4.8						
WB2	Warramunga Arr	19.70	158	⇓iP	P	20 06 09.5	-0.7
MBWA	Marble Bar	20.47	198	eP	P	20 06 17.1	-1.3
	comp=Z,13nm,0.8s						
PMG	Port Moresby	21.91	111	P	P	20 06 35.8	+2.8
	comp=Z,8.9nm,0.7s,mb4.3,baz=340,slow=5.9,SNR=5.9						
ASAR	Alice Springs	23.00	162	P	P	20 06 44.5	+0.7
	comp=Z,14nm,0.6s,mb4.5,baz=335,slow=9.0,SNR=94						
ASPA	Alice Springs	23.00	162	eP	P	20 06 44.6	+0.7
CTAO	Charters Tower	26.58	135	eP	P	20 07 22.0	+4.0
	comp=Z,3.9nm,0.6s,mb4.1						
SSE	Sheshan	32.98	352	eP	P	20 08 13.8	-1.1
SSE				AMB	AMB		
	comp=Z,14nm,0.7s,mb5.0						
STKA	Stephens Creek	33.23	156	⇑iP	P	20 08 17.7	+0.6
	comp=Z,3.1nm,0.6s,mb4.4						
STKA	Stephens Creek	33.23	156	P	P	20 08 17.7	+0.6
	comp=Z,3.5nm,0.5s,mb4.5,baz=320,slow=10,SNR=17						
STKA				pP	pP	20 08 26.7	+3.9
	comp=Z,2.0nm,0.6s,baz=308,slow=17,SNR=2.3						
CMAR	Chiang Mai Arr	33.72	308	P	P	20 08 18.5	-3.0
	comp=Z,0.3nm,0.7s,baz=117,slow=4.0,SNR=2.7						
CMAR				PcP	PcP	20 11 02.1	+1.0
	comp=Z,1.4nm,0.7s,baz=146,slow=1.6,SNR=8.9						
CMAR				pPcP		20 11 11.3	
	comp=Z,0.9nm,0.8s,baz=151,slow=1.6,SNR=4.4						
WHN	Wuhan	34.08	341	eP	P	20 08 27.3	+2.8
NJ2	Nanjing	34.32	348	eP	P	20 08 27.0	+0.4
NJ2				AP	pP	20 08 36.0	+3.7
NJ2				XP	sP	20 08 39.9	+5.2
NJ2				PP	PP	20 09 45.6	+3.6
NJ2				S	S	20 13 53.0	+1.1
NJ2				XS		20 14 10.0	
NJ2				AMB	AMB		
	comp=Z,2µm,5.6s						
NJ2				LR	LR		
	comp=N,3µm,18.0s,MS5.3						
NJ2				LR	LR		
	comp=E,4µm,17.8s,MS5.3						
NJ2				LR	LR		
	comp=Z,5µm,13.6s,MS5.5						
ENH	Enshi	35.69	334	eP	P	20 08 38.0	-0.3
	comp=Z,3.6nm,0.7s,mb4.4						
XAN	Xi’an	39.20	337	P	P	20 09 07.4	-0.3
XAN				AP	pP	20 09 17.1	+3.7
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2						
BJT	Baijiatuau	42.56	348	P	P	20 09 35.5	+0.2
	comp=Z,5.3nm,0.5s,mb4.5						
LZH	Lanzhou	43.11	333	eP	P	20 09 42.1	+2.2
LZH				AP	pP	20 09 46.5	+0.8
LZH				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.8						
LSA	Lhasa	45.99	316	eP	P	20 10 04.4	+1.3
LSA	Lhasa	45.99	316	eP	P	20 10 03.9	+0.9
	comp=Z,5.3nm,0.5s,mb4.7						
GTA	Gaotai	47.67	332	eP	P	20 10 17.8	+1.6
GTA				AP	pP	20 10 26.8	+4.7
GTA				XP	sP	20 10 31.5	+7.1
GTA				AMB	AMB		
	comp=Z,15nm,0.8s,mb5.1						
GTA				LR	LR		
	comp=N,112nm,18.6s,MS4.2						
GTA				LR	LR		
	comp=E,179nm,16.3s,MS4.2						
GTA				LR	LR		
	comp=Z,179nm,14.8s,MS4.2						
JIRN	Jiri	48.52	310	eP	P	20 10 23.2	+0.3
	comp=Z,12nm,0.8s,mb5.0						
PKI	Pulchoki	49.08	309	eP	P	20 10 27.7	+0.5
	comp=Z,4.7nm,0.5s,mb4.8						
KKN	Kakani	49.28	310	eP	P	20 10 29.1	+0.3
	comp=Z,17nm,0.9s,mb5.1						
DMN	Daman	49.33	309	eP	P	20 10 30.4	+1.2
	comp=Z,18nm,0.9s,mb5.1						
GKN	Gorkha	49.88	309	eP	P	20 10 34.1	+0.7
	comp=Z,11nm,0.7s,mb5.0						
KOLN	Koldanda	50.58	309	eP	P	20 10 39.6	+0.9
	comp=Z,41nm,0.7s,mb5.5						
HYB	Hyderabad	50.94	294	eP	P	20 10 42.0	+0.4
HYB	Hyderabad	50.94	294	i P	P	20 10 42.0	+0.4
ULN	Ulaanbaatar	52.19	343	eP	P	20 10 50.6	0.0
	comp=Z,7.8nm,0.7s,mb4.8						
ULN				epP	pP	20 11 00.6	+4.1
SONM	Songino Array	52.35	343	P	P	20 10 52.1	+0.2
	comp=Z,2.8nm,0.7s,mb4.3,baz=154,slow=8.5,SNR=26						
SONM				pP	pP	20 11 01.0	+3.2
	comp=Z,4.2nm,0.7s,baz=156,slow=7.6,SNR=18						
ZAK	Zakamensk	55.55	342	eP	P	20 11 14.9	-0.5
ZAK				e		20 12 14.3	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
YAK	Yakutsk	63.58	2	eP	P	20 12 09.2	-1.3
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
YAK	Yakutsk	63.58	2	eP	P	20 12 10.0	-0.5
	comp=Z,35nm,0.7s,mb5.5						
YAK				epP	pP	20 12 19.3	+2.9
MA2	Magadan	63.97	13	eP	P	20 12 12.8	-0.3
MA2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MA2	Magadan	63.97	13	eP	P	20 12 12.3	-0.8
	comp=Z,11nm,0.9s,mb4.9						
AAK	Ala-Archa	64.27	320	i P	P	20 12 14.5	-0.8
AAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
AAK	Ala-Archa	64.27	320	eP	P	20 12 14.1	-1.3
	comp=Z,5.4nm,0.9s,mb4.6						
ZAL	Zalesovo	65.31	334	P	P	20 12 19.8	-2.1
	comp=Z,1.3nm,0.8s,mb4.0,baz=346,slow=7.4,SNR=11						
KURK	Kurchatov	66.20	329	i P	P	20 12 27.3	-0.3
KURK	Kurchatov	66.20	329	eP	P	20 12 27.2	-0.4
	comp=Z,18nm,0.9s,mb5.1						
NVS	Novosibirsk	66.60	334	eP	P	20 12 28.2	-1.9
BVAR	Borovoye Array	71.74	328	P	P	20 13 01.7	-0.2
	comp=Z,2.0nm,0.8s,mb4.1,baz=129,slow=9.5,SNR=13						
BVAR				pP	pP	20 13 09.5	+1.6
	comp=Z,1.6nm,0.8s,baz=127,slow=7.4,SNR=6.7						
BRVK	Borovoye	71.82	328	eP	P	20 13 01.6	-0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BRVK	Borovoye	71.82	328	eP	P	20 13 01.6	-0.6
	comp=Z,2.3nm,0.6s,mb4.3						
TIXI	Tiksi	73.21	1	eP	P	20 13 09.6	-0.6
TIXI				e		20 13 19.4	
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
VNDA	Vanda	78.13	173	P	P	20 13 39.2	+1.3
	comp=Z,2.3nm,0.8s,mb4.2,baz=310,slow=5.6,SNR=7.3						
VNDA	Vanda	78.13	173	P	P	20 13 39.2	+1.3
SOC	Sochi	88.83	313	eP	P	20 14 30.2	-3.1
SOC				e		20 17 57.1	
SOC				eS		20 24 56.2	
SOC				eSS	SS	20 31 14.0	+0.9
SOC				eSSS	SSS	20 34 45.1	-1.7
SOC				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.2						
SOC				pmax	pmax		
	comp=N,18nm,1.3s						
SOC				pmax	pmax		
	comp=E,13nm,0.9s						
ILAR	Eielson Array	90.04	25	P	P	20 14 37.7	-0.8
	comp=E,0.3nm,0.7s,mb3.7,baz=248,slow=4.5,SNR=4.5						
ILAR				pP	pP	20 14 47.1	+2.6
	comp=E,0.2nm,0.5s,baz=245,slow=5.2,SNR=2.6						

IDC ***15*** *20:08:38.0±0.5, 8.78N×93.85E, mb4.7/29, mb1 4.8/30, mb1mx4.8/32, mbtmp4.7/30, ML4.6/1, Error ellipse: s-maj=22.2km s-min=11.4km az=46.0*

MOS ***15*** *20:08:40.5±0.7, 8.80N×93.77E, h33^{km}, mb5.1/14, Error ellipse: s-maj=27.3km s-min=15.5km az=101.6*

BJI ***15*** *20:08:41.1, 8.73N×93.68E, h37^{km}, mB5.1, mb4.8, Ms4.5, Msz4.1*

NEIC ***15*** *20:08:42.5±0.2, 8.78N×93.86E, h30^{km}, mb4.9/52, Error ellipse: s-maj=6.5km s-min=5.3km az=49.0*

ISC 15 20:08:41.8±0.9**, 8.74N**±0.04×**93.85E**±0.03**, h39**^{km}±7^{km}**, h35**^{km}±3.1^{km}**:pP-P, n202, σ1**^{s}**03**/201**, mb4.8**/95**, MS4.1**/9**, 2C-9D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.88	103	P	P	20 10 26.0	+3.2
	330nm,0.9s						
NNT	Nongplab	6.94	56	P	P	20 10 21.5	-2.1
NST	Nakhon Sawan	9.23	41	P	P	20 10 49.0	-6.4
CM31	Chiang Mai Arr	10.86	27	eP	P	20 11 17.6	-0.2

CMAR	**Chiang Mai Arr**	**10.86**	**27**	Pn	**P**	**20 11 17.2**	**-0.6**
	1.2nm,0.3s,baz=212,slow=15,SNR=41						
KKTK	**Khon Kaen**	**11.56**	**48**	P	**P**	**20 11 40.0**	**+13**
CHRT	**Chiangrai**	**12.47**	**27**	PG	**P**	**20 11 42.0**	**+2.4**
CHRT				SG	rx	20 13 11.5	
PALK	**Pallekele**	**13.10**	**265**	*e*P	**P**	**20 11 48.8**	**+0.8**
VIS	**Vishakhapatnam**	**13.58**	**312**	*e*P	**P**	**20 11 51.3**	**-3.1**
VIS				*e*		20 11 56.6	
	comp=Z,58nm,0.6s						
VIS				*e*		20 14 12.3	
MDRS	**Chennai**	**14.03**	**289**	*e*	**P**	**20 12 02.0**	**+1.7**
MDRS				*e*		20 12 40.0	
SHL	**Shillong**	**16.84**	**354**	*e*P	**P**	**20 12 37.0**	**+0.6**
SHL				*e*S	**S**	**20 15 42.0**	**+0.9**
HYB	**Hyderabad**	**17.21**	**302**	*e*P	**P**	**20 12 42.5**	**+1.5**
	comp=Z,50nm,1.0s						
HYB				*e*S	**S**	**20 15 49.0**	**-0.5**
HYB	**Hyderabad**	**17.21**	**302**	*i* P	**P**	**20 12 42.5**	**+1.5**
	comp=Z,50nm,1.0s						
HYB				*e*S	**S**	**20 15 49.0**	**-0.5**
KMI	**Kunming**	**18.37**	**26**	P	**P**	**20 12 57.6**	**+2.1**
KMI				AP		20 13 04.8	
KMI				XP		20 13 09.4	
KMI				S	**S**	**20 16 17.9**	**+2.2**
KMI				AMB	AMB		
	comp=Z,28nm,1.2s						
KMI				AMB	AMB		
	comp=Z,430nm,10.2s						
KMI				LR	LR		
	comp=N,393nm,10.5s						
KMI				LR	LR		
	comp=E,451nm,10.5s						
KMI				LR	LR		
	comp=Z,238nm,12.3s						
QIZ	**Qiongzhong**	**18.58**	**55**	P	**P**	**20 12 58.5**	**+0.5**
QIZ				S	**S**	**20 16 24.8**	**+4.4**
QIZ				LR	LR		
	comp=N,2µm,13.3s						
QIZ				LR	LR		
	comp=Z,639nm,11.3s						
JIRN	**Jiri**	**20.17**	**340**	*e*P	**P**	**20 13 15.2**	**-0.5**
	comp=Z,138nm,1.0s						
PKI	**Pulchoki**	**20.36**	**338**	*e*P	**P**	**20 13 17.2**	**-0.6**
	comp=Z,106nm,1.1s						
DMN	**Daman**	**20.51**	**337**	*e*P	**P**	**20 13 18.7**	**-0.6**
	comp=Z,67nm,0.8s						
KKN	**Kakani**	**20.61**	**338**	*e*P	**P**	**20 13 19.6**	**-0.7**
	comp=Z,80nm,0.8s						
LSA	**Lhasa**	**21.01**	**353**	P	**P**	**20 13 23.4**	**-1.0**
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
LSA	**Lhasa**	**21.01**	**353**	*e*P	**P**	**20 13 23.4**	**-1.0**
	comp=Z,55nm,0.7s,mb5.0						
GKN	**Gorkha**	**21.05**	**337**	*e*P	**P**	**20 13 24.4**	**-0.4**
	comp=Z,102nm,0.7s,mb5.3						
KOLN	**Koldanda**	**21.27**	**334**	*e*P	**P**	**20 13 27.0**	**0.0**
	comp=Z,112nm,1.0s,mb5.2						
BHPL	**Bhopal**	**21.35**	**314**	*e*P	**P**	**20 13 29.3**	**+1.4**
BHPL				*e*		20 13 33.0	
	comp=Z,26nm,0.7s						
GYA	**Guiyang**	**21.41**	**33**	⇓*i*P	**P**	**20 13 28.6**	**+0.1**
GYA				AP		20 13 37.1	
GYA				XP		20 13 41.8	
GYA				S	**S**	**20 17 11.8**	**-7.0**
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,260nm,3.5s						
GYA				LR	LR		
	comp=N,320nm,13.2s,MS4.1						
GYA				LR	LR		
	comp=E,420nm,13.5s,MS4.1						
GYA				LR	LR		
	comp=Z,330nm,10.5s,MS4.0						
POO	**Poona**	**21.72**	**299**	*e*P	**P**	**20 13 35.8**	**+4.3**
POO				*e*		20 13 42.4	
	comp=Z,21nm,0.7s						
POO				*i* S	**S**	**20 17 29.0**	**+4.5**
CD2	**Chengdu**	**23.92**	**21**	P	**P**	**20 13 54.1**	**+0.9**
LGTI	**Lohaghat**	**24.24**	**330**	*e*P	**P**	**20 13 58.0**	**+1.7**
NDI	**New Delhi**	**25.27**	**324**	*e*P	**P**	**20 14 06.0**	**-0.3**
ENH	**Enshi**	**25.94**	**32**	⇓*e*P	**P**	**20 14 11.7**	**-0.9**
	comp=Z,29nm,0.8s,mb4.8						
DDI	**Dehra Dun**	**26.07**	**328**	*e*P	**P**	**20 14 15.1**	**+1.4**
SMLA	**Simla**	**27.17**	**327**	*i*	sP	20 14 38.1	-1.2
SDNR	**Sundarnagar**	**27.57**	**328**	*e*P	**P**	**20 14 28.2**	**+0.8**
LZH	**Lanzhou**	**28.71**	**17**	*e*P	**P**	**20 14 37.0**	**-0.6**
LZH				AMB	AMB		
	comp=Z,27nm,1.4s,mb4.8						
XAN	**Xi’an**	**28.75**	**27**	P	**P**	**20 14 36.8**	**-1.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
WHN	**Wuhan**	**28.94**	**39**	P	**P**	**20 14 40.8**	**+1.1**
GTA	**Gaotai**	**31.01**	**9**	*e*P	**P**	**20 14 57.8**	**-0.2**
GTA				AP	pP	20 15 07.4	-1.5
GTA				XP	sP	20 15 11.9	-2.1
GTA				PP	PP	20 16 02.4	+1.7
GTA				PPP	PPP	20 16 16.9	+1.1
GTA				PCP	PcP	20 17 51.3	-2.1
GTA				S	**S**	**20 20 02.0**	**+3.1**
GTA				XS		20 20 18.3	
GTA				SS	SS	20 21 50.0	+5.4
GTA				SCS	ScS	20 25 25.0	-2.3
GTA				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,194nm,4.9s						
GTA				LR	LR		
	comp=N,112nm,16.3s,MS3.9						
GTA				LR	LR		
	comp=E,179nm,16.4s,MS3.9						
GTA				LR	LR		
	comp=Z,179nm,13.3s,MS3.9						
NJ2	**Nanjing**	**32.81**	**41**	*e*P	**P**	**20 15 14.3**	**+0.4**
NJ2				AP	pP	20 15 23.9	-0.9
NJ2				XP	sP	20 15 28.1	-1.8
NJ2				PP	PP	20 16 24.4	+0.2
NJ2				S	**S**	**20 20 28.0**	**+0.8**
NJ2				XS		20 20 45.0	
NJ2				AMB	AMB		
	comp=Z,1µm,4.5s						
NJ2				LR	LR		
	comp=N,2µm,16.6s,MS5.0						
NJ2				LR	LR		
	comp=E,2µm,18.3s,MS5.0						
SSE	**Sheshan**	**33.81**	**45**	P	**P**	**20 15 21.1**	**-1.4**
SSE				XP	sP	20 15 33.8	-4.8
SSE				S	**S**	**20 20 43.0**	**+0.3**
SSE				XS		20 20 59.5	
SSE				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
SSE				LR	LR		
	comp=N,81nm,18.2s,MS3.6						
SSE				LR	LR		
	comp=E,84nm,18.2s,MS3.6						
SSE				LR	LR		
	comp=Z,113nm,18.1s,MS3.6						
KSH	**Kashi**	**34.58**	**335**	*e*P	**P**	**20 15 28.8**	**-0.2**
KSH				*e*AP	pP	20 15 39.8	-0.2
KSH				*e*XP	sP	20 15 44.4	-0.7
KSH				*e*PP	PP	20 16 44.3	-1.8
KSH				*e*PCP	PcP	20 18 03.6	+0.3
KSH				*e*S	**S**	**20 20 54.1**	**-0.4**
KSH				*e*PS		20 21 01.0	
KSH				*e*XS		20 21 09.0	
KSH				*e*SCP		20 21 44.1	
KSH				*e*SS	SS	20 23 04.0	-3.6
KSH				*e*SCS	ScS	20 25 45.5	-0.1
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
KSH				AMB	AMB		
	comp=Z,120nm,3.6s						
KSH				LR	LR		
	comp=N,180nm,6.8s						
KSH				LR	LR		
	comp=E,270nm,5.6s						
WMQ	**Urumqi**	**35.36**	**352**	P	**P**	**20 15 36.0**	**+0.3**
WMQ				XP	sP	20 15 49.6	-2.1
WMQ				PP	PP	20 16 56.0	+0.1
WMQ				S	**S**	**20 21 07.0**	**+0.5**
WMQ				SS	SS	20 23 22.0	-3.6
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
HHC	**Hu-ho-hao-te**	**35.64**	**23**	⇓P	**P**	**20 15 38.0**	**-0.1**
HHC				AP	pP	20 15 46.1	-3.0
HHC				XP	sP	20 15 52.1	-2.0
HHC				PP	PP	20 17 00.4	+1.1
HHC				PCP	PcP	20 18 04.0	-2.3
HHC				S	**S**	**20 21 13.4**	**+2.5**
HHC				XS		20 21 29.0	
HHC				SCP		20 21 47.0	
HHC				PCS		20 21 50.6	
HHC				SS	SS	20 23 38.5	+6.4
HHC				SCS	ScS	20 25 50.3	-1.0
HHC				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,219nm,10.8s						
HHC				LR	LR		
	comp=N,218nm,16.8s,MS4.4						
HHC				LR	LR		
	comp=E,501nm,19.2s,MS4.4						
HHC				LR	LR		
	comp=Z,261nm,15.6s,MS4.1						
BJT	**Baijiatuau**	**36.97**	**29**	*e*P	**P**	**20 15 50.5**	**+1.2**
	comp=Z,11nm,0.8s,mb4.8						
BJI	**Beijing**	**36.99**	**29**	*e*P	**P**	**20 15 50.6**	**+1.1**
BJI				AMB	AMB		
	comp=Z,15nm,0.7s,mb4.9						
BJI				LR	LR		
	comp=Z,137nm,21.1s,MS3.7						
UCH	**Uchtor**	**37.45**	**336**	P	**P**	**20 15 54.1**	**+0.7**
	SNR=9.6						
KBK	**Karagaybulak**	**37.65**	**337**	P	**P**	**20 15 55.8**	**+0.9**
	SNR=18						
AML	**Almayashu**	**37.71**	**335**	P	**P**	**20 15 56.5**	**+1.1**
	SNR=18						
AAK	**Ala-Archa**	**37.80**	**336**	P	**P**	**20 15 57.4**	**+1.2**
	SNR=12						
AAK	**Ala-Archa**	**37.80**	**336**	*d i*P	**P**	**20 15 55.7**	**-0.6**
AAK				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.9						
AAK	**Ala-Archa**	**37.80**	**336**	*e*P	**P**	**20 15 55.9**	**-0.4**
	comp=Z,19nm,0.8s,mb4.9						
CHMS	**Chumysh**	**38.01**	**337**	P	**P**	**20 15 58.4**	**+0.4**
	SNR=13						
EKS2	**Erkin-Say**	**38.12**	**336**	P	**P**	**20 15 59.7**	**+0.8**
	SNR=8.9						
USP	**Ospenovka**	**38.34**	**337**	P	**P**	**20 16 00.9**	**+0.2**
	SNR=12						
SONM	**Songino Array**	**40.39**	**13**	P	**P**	**20 16 17.7**	**0.0**
	comp=Z,3.2nm,0.8s,mb4.1,baz=194,slow=8.9,SNR=21						
SONM				PcP	PcP	20 18 21.5	+0.5
	comp=Z,3.8nm,0.7s,baz=198,slow=3.8,SNR=16						
ULN	**Ulaanbaatar**	**40.57**	**14**	*e*P	**P**	**20 16 17.9**	**-1.3**
	comp=Z,3.2nm,0.7s,mb4.1						
ZAK	**Zakamensk**	**42.25**	**9**	*e*P	**P**	**20 16 30.3**	**-2.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
TLY	**Talaya**	**43.57**	**9**	*i* P	**P**	**20 16 43.5**	**-0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.8s,mb3.9						
KURK	**Kurchatov**	**43.71**	**346**	*d i*P	**P**	**20 16 44.2**	**-0.7**
KURK	**Kurchatov**	**43.71**	**346**	*e*P	**P**	**20 16 44.5**	**-0.3**
	comp=Z,15nm,1.2s,mb4.6						
CN2	**Changchun**	**44.46**	**33**	*e*P	**P**	**20 16 51.8**	**+0.8**
CN2				*e*AP	pP	20 17 02.3	+0.1
CN2				*e*S	**S**	**20 23 23.8**	**+1.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,13.0s,MS4.5						
CN2				LR	LR		
	comp=Z,400nm,15.0s,MS4.5						
ZAL	**Zalesovo**	**45.66**	**353**	P	**P**	**20 16 59.7**	**-0.8**
	comp=Z,19nm,0.6s,mb5.2,baz=304,slow=6.6,SNR=150						
ZAL	**Zalesovo**	**45.66**	**353**	P	**P**	**20 16 59.7**	**-0.8**
MUN	**Mundaring**	**45.78**	**153**	*e*P	**P**	**20 17 02.7**	**+1.0**
	comp=Z,13nm,0.8s,mb4.9						
HIA	**Hailar**	**45.85**	**23**	*e*P	**P**	**20 17 01.9**	**-0.1**
	comp=Z,6.6nm,0.8s,mb4.6						
KLBR	**Kellerberrin**	**46.16**	**151**	*e*P	**P**	**20 17 05.0**	**+0.3**
	comp=Z,298nm,1.3s						
NVS	**Novosibirsk**	**46.76**	**352**	*e*P	**P**	**20 17 07.4**	**-1.6**
NVS				pmax	pmax		
	comp=N,44nm,0.8s						
NVS				pmax	pmax		
	comp=E,22nm,0.8s						
NVS				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.6						
NWAO	**Narrogin (SRO)**	**47.04**	**153**	P	**P**	**20 17 11.3**	**-0.3**
	comp=Z,11nm,0.8s,mb4.8,baz=229,slow=6.9,SNR=9.5						
NWAO	**Narrogin (SRO)**	**47.04**	**153**	P	**P**	**20 17 11.4**	**-0.2**
	comp=Z,7.2nm,0.6s,mb4.8						
BVAR	**Borovoye Array**	**48.09**	**341**	P	**P**	**20 17 18.4**	**-1.1**
	comp=Z,45nm,1.3s,mb5.3,baz=141,slow=9.5,SNR=36						
BVAR				PcP	PcP	20 18 47.1	0.0
	comp=Z,2.0nm,0.6s,baz=167,slow=3.8,SNR=7.6						
BRVK	**Borovoye**	**48.15**	**341**	*e*P	**P**	**20 17 18.4**	**-1.7**
	comp=Z,6.4nm,0.8s,mb4.7						
RAYN	**Ar Rayn**	**48.48**	**294**	P	**P**	**20 17 24.1**	**+1.2**
	comp=Z,163nm,0.8s,SNR=28						
MAT	**Matsushiro**	**48.80**	**48**	*e*P	**P**	**20 17 25.0**	**-0.3**
	comp=Z,4.5nm,0.8s,mb4.5						
MAT	**Matsushiro**	**48.80**	**48**	P	**P**	**20 17 24.5**	**-0.8**
WRA	**Warramunga Arr**	**48.99**	**126**	P	**P**	**20 17 26.2**	**-0.8**
	comp=Z,1.5nm,0.5s,mb4.3,baz=304,slow=8.8,SNR=49						
WRA				PcP	PcP	20 18 50.9	0.0
	comp=Z,1.9nm,0.7s,baz=308,slow=3.1,SNR=9.5						
WRAB	**Tennant Creek**	**49.00**	**126**	*e*P	**P**	**20 17 25.8**	**-1.2**
	comp=Z,3.2nm,0.5s,mb4.6						
WB2	**Warramunga Arr**	**49.00**	**126**	*e*P	**P**	**20 17 26.2**	**-0.8**
ASAR	**Alice Springs**	**50.69**	**130**	P	**P**	**20 17 38.7**	**-1.2**
	comp=Z,1.4nm,0.6s,mb4.1,baz=302,slow=6.8,SNR=27						
ASAR				PcP	PcP	20 18 57.3	+0.3
	comp=Z,3.6nm,0.8s,baz=312,slow=3.6,SNR=17						
KLR	**Kul’dur**	**51.30**	**31**	*e*P	**P**	**20 17 42.2**	**-1.9**
BOD	**Bodaibo**	**51.38**	**14**	*e*P	**P**	**20 17 43.5**	**-1.2**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
GNI	**Garni**	**53.63**	**314**	*i* P	**P**	**20 18 00.5**	**-1.3**
GNI				pmax	pmax		
	comp=Z,16nm,1.2s						
GNI	**Garni**	**53.63**	**314**	P	**P**	**20 18 02.4**	**+0.6**
	comp=Z,5.7nm,0.7s,mb4.6,baz=7.8,slow=10,SNR=6.5						
GNI	**Garni**	**53.63**	**314**	*e*P	**P**	**20 18 01.5**	**-0.3**
	comp=Z,12nm,0.9s,mb4.8						
SVE	**Sverdlovsk**	**54.50**	**338**	*e*P	**P**	**20 18 07.3**	**-0.6**
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
ASAJ	**Asahikawa**	**54.96**	**41**	P	**P**	**20 18 11.7**	**+0.3**
	comp=Z,21nm,1.2s,mb5.0,baz=278,slow=12,SNR=3.5						
PMG	**Port Moresby**	**56.06**	**107**	P	**P**	**20 18 20.9**	**+1.2**
	comp=Z,3.7nm,0.6s,mb4.6,baz=229,slow=4.3,SNR=3.6						
YSS	**Yuzh-Sakhalins**	**56.29**	**38**	*i* P	**P**	**20 18 20.7**	**-0.2**
YSS				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
YSS	**Yuzh-Sakhalins**	**56.29**	**38**	*e*P	**P**	**20 18 20.8**	**-0.1**
	comp=Z,15nm,0.9s,mb5.0						
KIV	**Kislovodsk**	**56.49**	**318**	*i* P	**P**	**20 18 21.3**	**-1.1**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**56.49**	**318**	*e*P	**P**	**20 18 20.9**	**-1.5**
	comp=Z,23nm,1.0s,mb5.2						
KMBO	**Kilima Mbogo**	**57.24**	**263**	P	**P**	**20 18 31.2**	**+3.0**
	comp=Z,3.8nm,0.7s,mb4.6,baz=58,slow=11,SNR=22						
KMBO	**Kilima Mbogo**	**57.24**	**263**	*e*P	**P**	**20 18 31.0**	**+2.8**
	comp=Z,5.1nm,0.8s,mb4.6						
ASF	**Jabal al Asfar**	**57.51**	**303**	P	**P**	**20 18 30.2**	**+0.4**
	comp=Z,7.5nm,1.0s,mb4.7,baz=349,slow=4.3,SNR=7.0						
MALT	**Malatya**	**57.69**	**310**	*e*P	**P**	**20 18 29.6**	**-1.4**
	comp=Z,3.9nm,1.0s,mb4.4						
SOC	**Sochi**	**58.36**	**316**	*e*P	**P**	**20 18 32.6**	**-3.0**
SOC				*e*		20 19 20.4	
SOC				*e*		20 20 46.2	
SOC				*e*PPP	PPP	20 22 03.5	-6.7
SOC				*e*S	**S**	**20 26 31.8**	**-1.9**
SOC				*e*SS	SS	20 30 26.8	-0.9
SOC				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
SOC				pmax	pmax		
	comp=N,13nm,0.8s						
SOC				pmax	pmax		
	comp=E,18nm,0.9s						
EIL	**Elat**	**58.75**	**299**	P	**P**	**20 18 39.1**	**+0.5**
	comp=E,7.3nm,0.6s,mb4.9,baz=98,slow=7.0,SNR=14						
EIL	**Elat**	**58.75**	**299**	*e*P	**P**	**20 18 38.7**	**+0.2**
	comp=E,11nm,1.0s,mb4.8						
YAK	**Yakutsk**	**59.27**	**19**	*e*P	**P**	**20 18 39.6**	**-2.1**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK	**Yakutsk**	**59.27**	**19**	*e*P	**P**	**20 18 40.0**	**-1.7**
	comp=E,18nm,0.7s,mb5.2						
STKA	**Stephens Creek**	**60.91**	**134**	P	**P**	**20 18 51.7**	**-1.6**
	comp=E,1.5nm,0.6s,mb4.3,baz=301,slow=6.9,SNR=3.2						
BRTR	**Keskin Array B**	**61.65**	**310**	P	**P**	**20 18 56.5**	**-1.8**
	comp=E,7.0nm,0.8s,mb4.8,baz=123,slow=7.3,SNR=27						
OBN	**Obninsk**	**64.50**	**328**	*e*P	**P**	**20 19 15.5**	**-1.3**
OBN						20 19 51.0	
OBN						20 21 38.0	
OBN				SS	SS	20 32 02.0	-1.7
OBN				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.0						
MA2	**Magadan**	**66.14**	**28**	*e*P	**P**	**20 19 27.0**	**-0.2**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
MA2	**Magadan**	**66.14**	**28**	*e*P	**P**	**20 19 27.0**	**-0.2**
	comp=Z,13nm,0.9s,mb5.0						
MA2				*e*	pP	20 19 36.8	-2.2
TIXI	**Tiksi**	**66.45**	**11**	*e*P	**P**	**20 19 27.6**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.4						
AKASG	**Malin Array Be**	**67.31**	**321**	P	**P**	**20 19 32.9**	**-1.8**
	comp=Z,4.7nm,0.9s,mb4.5,baz=91,slow=5.1,SNR=14						
AKASG				PP	PP	20 22 03.3	-1.7
	comp=Z,0.2nm,0.3s,baz=99,slow=8.0,SNR=4.1						
VRI	**Vrincioaia**	**67.89**	**316**	⇓P	**P**	**20 19 38.0**	**-0.4**
MLR	**Muntele Rosu**	**68.36**	**315**	P	**P**	**20 19 41.8**	**+0.4**
	comp=Z,11nm,0.9s,mb4.9,baz=122,slow=5.9,SNR=9.8						
MLR	**Muntele Rosu**	**68.36**	**315**	P	**P**	**20 19 41.7**	**+0.3**
BURAR	**Bucovina Array**	**69.22**	**318**	⇑P	**P**	**20 19 46.7**	**0.0**
LSZ	**Lusaka**	**69.29**	**250**	*e*P	**P**	**20 19 49.5**	**+1.9**
	comp=Z,4.3nm,0.8s,mb4.4						
JOF	**Joensuu**	**69.95**	**334**	*e*p	**P**	**20 19 49.5**	**-1.4**
	comp=Z,6.4nm,0.7s,mb4.7						
JOF	**Joensuu**	**69.95**	**334**	*e*P	**P**	**20 19 49.5**	**-1.4**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
APA	**Apatity**	**70.95**	**339**	⇓*i*P	**P**	**20 19 56.4**	**-0.5**
APA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
KOLS	**Kolonicke sedl**	**71.37**	**319**	*e*P	**P**	**20 20 00.0**	**+0.3**
KOLS				*e*		20 20 04.6	
SUW	**Suwalki**	**71.64**	**324**	*e*P	**P**	**20 20 00.4**	**-0.8**
FINES	**FINESS Array B**	**71.82**	**332**	P	**P**	**20 20 01.3**	**-0.8**
	comp=Z,3.1nm,0.6s,mb4.4,baz=100,slow=6.8,SNR=14						
KAF	**Kangasniemi**	**71.90**	**333**	*e*p	**P**	**20 19 59.1**	**-3.5**
	comp=Z,0.5nm,0.3s,mb3.9						
KAF	**Kangasniemi**	**71.90**	**333**	*e*P	**P**	**20 19 59.1**	**-3.5**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
OJC	**Ojcow**	**73.14**	**320**	*e*P	**P**	**20 20 10.1**	**-0.1**
VYHS	**Vyhne**	**73.58**	**318**	*e*P	**P**	**20 20 12.1**	**-0.7**
KEV	**Kevo**	**73.93**	**341**	*e*p	**P**	**20 20 11.5**	**-2.9**
	comp=Z,5.9nm,0.6s,mb4.7						
KEV	**Kevo**	**73.93**	**341**	*e*P	**P**	**20 20 11.5**	**-2.9**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
OKC	**Ostrava-Krasne**	**74.16**	**319**	*e*P	**P**	**20 20 16.1**	**0.0**
ARCES	**ARCESS Array B**	**74.36**	**340**	P	**P**	**20 20 17.1**	**+0.2**
	comp=Z,6.8nm,0.7s,mb4.7,baz=86,slow=6.9,SNR=23						
MORC	**Moravsky Berou**	**74.54**	**319**	*e*P	**P**	**20 20 17.4**	**-0.9**
	comp=Z,12nm,0.9s,mb4.8						
ZST	**Bratislava**	**74.71**	**318**	*e*P	**P**	**20 20 19.5**	**+0.2**
VRAC	**Vranov**	**75.12**	**319**	P	**P**	**20 20 22.2**	**+0.5**
	comp=Z,2.3nm,0.5s,mb4.3,baz=101,slow=6.8,SNR=4.3						
DPC	**Dobruska-Polom**	**75.37**	**320**	*e*P	**P**	**20 20 23.8**	**+0.7**
BILL	**Bilibino**	**75.40**	**22**	*i* P	**P**	**20 20 22.4**	**-0.5**
BILL				*i*	pP	20 20 37.1	+2.4
BILL				*e*S	S	20 30 01.1	+2.5
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.3						
KSP	**Ksiaz**	**75.42**	**320**	*e*P	**P**	**20 20 23.2**	**-0.2**
KSP	**Ksiaz**	**75.42**	**320**	*e*P	**P**	**20 20 23.5**	**+0.2**
UPC	**Upice**	**75.58**	**320**	*e*P	**P**	**20 20 22.6**	**-1.7**
BOSA	**Boshof**	**75.80**	**238**	*e*P	**P**	**20 20 28.0**	**+2.0**
	comp=Z,3.6nm,0.6s,mb4.5						
PRU	**Pruhonice**	**76.49**	**319**	*e*P	**P**	**20 20 29.8**	**+0.3**
FX1	**Attu Island--F**	**76.64**	**38**	P	**P**	**20 20 31.0**	**+0.8**
	comp=Z,12nm,0.8s,mb4.9,baz=113,slow=20,SNR=5.5						
BRG	**Berggiesshubel**	**76.91**	**320**	*i* P	**P**	**20 20 32.4**	**+0.6**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
BRG	**Berggiesshubel**	**76.91**	**320**	*i* P	**P**	**20 20 32.4**	**+0.6**
	comp=Z,10nm,1.0s,mb4.7						
GERES	**GERESS Array B**	**77.00**	**318**	P	**P**	**20 20 32.9**	**+0.5**
	comp=Z,8.5nm,0.9s,mb4.7,baz=90,slow=5.3,SNR=36						
KHC	**Kasperske Hory**	**77.09**	**318**	*e*P	**P**	**20 20 32.8**	**-0.1**
CLL	**Collm**	**77.52**	**321**	P	**P**	**20 20 35.0**	**-0.2**
HFS	**Hagfors**	**77.57**	**330**	P	**P**	**20 20 35.0**	**-0.3**
	comp=Z,8.6nm,0.8s,mb4.7,baz=117,slow=6.6,SNR=20						
HFS	**Hagfors**	**77.57**	**330**	P	**P**	**20 20 35.0**	**-0.3**
GRA1	**Grafenberg Arr**	**78.63**	**319**	*e*P	**P**	**20 20 42.1**	**+0.7**
	comp=Z,12nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**78.63**	**319**	*e*P	**P**	**20 20 42.1**	**+0.7**
GRF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	**78.63**	**319**	*e*P	**P**	**20 20 42.1**	**+0.7**
	comp=Z,12nm,1.0s,mb4.8						
NB2	**NORSAR Subarra**	**78.84**	**331**	P	**P**	**20 20 41.5**	**-0.8**
	comp=Z,7.5nm,0.7s,mb4.7,baz=96,slow=5.0						
NOA	**NORSAR Array B**	**78.84**	**331**	P	**P**	**20 20 41.8**	**-0.5**
	comp=Z,5.4nm,0.7s,mb4.6,baz=92,slow=5.7,SNR=18						
DAVOX	**Davos**	**79.58**	**316**	P	**P**	**20 20 46.3**	**-0.2**
	comp=Z,7.9nm,0.8s,mb4.7,baz=103,slow=7.9,SNR=8.1						
MUD	**Monsted U’grnd**	**79.84**	**326**	*i* P	**P**	**20 20 47.3**	**-0.5**
MUD				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
MUD	**Monsted U’grnd**	**79.84**	**326**	*i* P	**P**	**20 20 47.3**	**-0.5**
	comp=Z,13nm,0.7s,mb5.0						
LPG	**La Plagne**	**81.81**	**315**	*e*P	**P**	**20 20 58.6**	**+0.2**
	comp=Z,33nm,0.9s,mb5.0						
LPL	**La Plagne**	**81.82**	**315**	*e*P	**P**	**20 20 58.5**	**0.0**
	comp=Z,37nm,0.8s,mb5.1						
MBDF	**Montbardon**	**81.85**	**314**	*e*P	**P**	**20 20 57.8**	**-0.8**
	comp=Z,22nm,1.0s,mb4.7						
BNI	**Bardonecchia**	**81.89**	**314**	*e*P	**P**	**20 20 58.9**	**0.0**
	comp=Z,9.4nm,0.8s,mb4.8						
HAU	**Haudompre**	**81.91**	**317**	*e*P	**P**	**20 20 58.2**	**-0.6**
	comp=Z,33nm,0.9s,mb5.0						
FRF	**La Foret Royal**	**82.03**	**313**	*e*P	**P**	**20 20 59.5**	**-0.1**
	comp=Z,29nm,0.9s,mb4.9						
CABF	**La Chapelle**	**82.19**	**316**	*e*P	**P**	**20 21 00.2**	**-0.1**
ORIF	**Oris-en-Rattie**	**82.47**	**314**	*e*P	**P**	**20 21 01.2**	**-0.6**
	comp=Z,35nm,1.2s,mb4.9						
GIVF	**Givet**	**82.75**	**320**	*e*P	**P**	**20 21 02.2**	**-0.9**
BAIF	**Baives**	**83.15**	**320**	*e*P	**P**	**20 21 05.2**	**+0.1**
	comp=Z,18nm,0.9s,mb4.8						
SMF	**Signal de Mont**	**83.73**	**316**	*e*P	**P**	**20 21 07.7**	**-0.5**
	comp=Z,20nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**83.91**	**317**	*e*P	**P**	**20 21 08.8**	**-0.3**
AVF	**Avril sur Loir**	**84.05**	**316**	*e*P	**P**	**20 21 09.4**	**-0.4**
	comp=Z,13nm,0.9s,mb4.8						
BGF	**Bois d’Agland**	**84.42**	**316**	*e*P	**P**	**20 21 11.7**	**0.0**
	comp=Z,50nm,1.1s,mb5.3						
CAF	**Calviac**	**85.17**	**315**	*e*P	**P**	**20 21 15.6**	**+0.2**
MTLF	**Montolieu**	**85.26**	**313**	*e*P	**P**	**20 21 16.0**	**+0.1**
	comp=Z,20nm,0.9s,mb5.0						
RJF	**Les Rejaudoux**	**85.50**	**315**	*e*P	**P**	**20 21 17.5**	**+0.5**
TNA	**Tin City**	**85.51**	**24**	*e*P	**P**	**20 21 17.2**	**+0.7**
	comp=Z,5.2nm,0.7s,mb4.9						
LFF	**La Frestale**	**86.09**	**315**	*e*P	**P**	**20 21 20.5**	**+0.5**
	comp=Z,43nm,1.1s,mb5.3						
LDF	**La Druitiere**	**86.14**	**318**	*e*P	**P**	**20 21 19.8**	**-0.3**
	comp=Z,68nm,1.3s,mb5.4						
SYO	**Syowa Base**	**86.14**	**197**	⇑P	**P**	**20 21 22.0**	**+2.4**
SYO	**Syowa Base**	**86.14**	**197**	⇓PcP	PcP	20 21 25.3	+2.6
SYO	**Syowa Base**	**86.14**	**197**	⇓pP	pP	20 21 28.1	-3.6
FLN	**La Foliniere**	**86.35**	**319**	*e*P	**P**	**20 21 21.0**	**-0.1**
	comp=Z,37nm,1.1s,mb5.2						
MFF	**Saint Martin d**	**86.46**	**316**	*e*P	**P**	**20 21 21.7**	**0.0**
	comp=Z,14nm,0.9s,mb4.9						
GRR	**Gorron**	**86.65**	**318**	*e*P	**P**	**20 21 22.8**	**+0.2**
EKA	**Eskdalemuir Ar**	**86.85**	**325**	P	**P**	**20 21 24.6**	**+1.1**
	comp=Z,8.7nm,0.7s,mb5.1,baz=97,slow=5.5,SNR=30						
ETSF	**Etsaut**	**87.34**	**313**	*e*P	**P**	**20 21 25.9**	**-0.2**

	comp=Z,20nm,0.9s,mb5.0						
ROSF	Rostrenen	88.25	319	eP	P	20 21 30.5	+0.2
ESDC	Sonseca Array	90.45	310	P	P	20 21 42.0	+1.1
	comp=Z,4.2nm,0.8s,mb4.8,baz=53,slow=4.7,SNR=11						
IMA	Indian Mountai	90.94	22	eP	P	20 21 44.5	+1.9
	comp=Z,62nm,0.7s						
MCK	McKinley	93.79	23	eP	P	20 21 57.0	+1.3
	comp=Z,12nm,1.5s,mb5.1						
ILAR	Eielson Array	94.06	22	P	P	20 21 57.0	+0.1
	comp=Z,4.0nm,0.7s,mb5.0,baz=304,slow=4.4,SNR=44						
SML	Sawmill	94.95	25	eP	P	20 22 02.5	+1.5
INK	Inuvik	96.25	16	P	P	20 22 08.1	+1.3
	comp=Z,6.9nm,0.8s,mb5.2,baz=340,slow=4.9,SNR=23						
INK	Inuvik	96.25	16	eP	P	20 22 07.4	+0.6
	comp=Z,17nm,1.0s,mb5.4						
RES	Resolute Bay	96.56	2	eP	P	20 22 08.9	+0.9
	comp=Z,4.2nm,0.8s,mb4.9						
DAWY	Dawson	97.16	21	eP	P	20 22 12.2	+1.1
DBIC	Dimbokro	97.54	278	P	P	20 22 15.9	+2.0
	comp=Z,2.3nm,0.7s,mb4.8,baz=284,slow=1.7,SNR=4.6						
YKA	Yellowknife Ar	105.66	13	Pdiff	Pdif	20 22 50.1	+1.0
	comp=Z,0.7nm,1.0s,baz=323,slow=5.0,SNR=6.1						
YKA				PP	PP	20 27 08.0	-6.5
	comp=Z,0.4nm,0.8s,baz=335,slow=7.4,SNR=3.8						
YKA				PKKPbc		20 38 26.5	
	comp=Z,0.8nm,0.8s,baz=152,slow=3.2,SNR=12						
TBI	Tubuai	117.87	112	eLR	LR	20 27 06.7	
	comp=Z,1µm,26.2s,baz=316						
ULM	Lac du Bonnet	120.65	7	PKP	PKPdf	20 27 31.7	+1.9
	comp=Z,1.1nm,0.6s,baz=158,slow=2.5,SNR=4.3						
ULM	Lac du Bonnet	120.65	7	PKP	PKPdf	20 27 31.7	+1.9
NVAR	Mina Array Bea	124.33	30	PKP	PKPdf	20 27 40.5	+3.4
	comp=Z,1.6nm,0.5s,baz=346,slow=1.4,SNR=12						
PDAR	Pinedale Array	124.47	21	PKP	PKPdf	20 27 39.1	+1.9
	comp=Z,1.7nm,0.7s,baz=20,slow=0.8,SNR=18						
MDV	Middlebury	126.21	348	ePKP	PKPdf	20 27 41.4	+0.7
TXAR	Lajitas Array	138.56	23	PKP	PKPdf	20 28 07.8	+3.6
	comp=Z,1.0nm,0.5s,baz=180,slow=1.3,SNR=8.1						
JCT	Junction City	138.87	18	ePKP	PKPdf	20 28 05.9	+1.2
BDFB	Brasilia	142.14	256	PKP	PKPdf	20 28 14.8	+3.8
	comp=Z,1.8nm,0.3s,baz=98,slow=2.8,SNR=4.6						
PLCA	Paso Flores	145.25	201	PKPbc	PKPbc	20 28 18.7	+2.6
	comp=Z,22nm,0.7s,baz=156,slow=3.0,SNR=78						
SDV	Santo Domingo	156.65	318	ePKPab	PKPab	20 29 05.2	-0.1
LPAZ	La Paz	160.89	245	ePKP	PKPdf	20 28 40.7	+2.3

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*IDC **15** 20:20:38.6±0.5, 8.86N×93.93E, mb4.6/24, mb1 4.7/25, mb1mx4.6/28, mbtmp4.5/25, ML4.1/1, MS4.1/9, Ms1 4.1/9, ms1mx3.9/21, Error ellipse: s-maj=25.7km s-min=11.5km az=49.0*

*MOS **15** 20:20:42.1±1.1, 8.88N×93.97E, h33^{km}, mb4.9/25, Error ellipse: s-maj=12.0km s-min=6.2km az=115.2*

*BJI **15** 20:20:42.1, 8.72N×93.73E, h37^{km}, mB5.0, mb4.6, Ms4.5, Msz4.3*

*NEIC **15** 20:20:43.2±0.2, 8.77N×93.91E, h30^{km}, mb4.7/26, Error ellipse: s-maj=8.4km s-min=5.6km az=57.0*

ISC 15 20:20:42.3±0.3**, 8.76N**±0.04×**93.89E**±0.04**, h36^{km}, h36^{km}**±2.4^{km}**:pP-P, n158,** σ1^{s}**10**/153**, mb4.6**/61**, MS4.2**/15**, 2C-4D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	10.82	26	eP	P	20 23 17.9	+0.1
CMAR	Chiang Mai Arr	10.82	26	Pn	P	20 23 17.6	-0.2
	0.4nm,0.3s,baz=212,slow=14,SNR=50						
CMAR				LR	LR	20 27 53.3	
	comp=Z,448nm,19.0s,baz=215,slow=41						
VIS	Vishakhapatnam	13.60	312	i P	P	20 23 52.6	-2.5
VIS				i		20 26 20.0	
BWNR	Bhubaneshwar	13.88	327	eP	P	20 23 56.5	-2.3
BWNR				e		20 26 19.8	
BWNR				e		20 26 23.5	
	comp=E,52nm,0.7s						
BWNR				i S	S	20 26 23.8	-8.8
MDRS	Chennai	14.06	289	e	P	20 24 04.0	+2.7
MDRS				e		20 28 07.0	
HYB	Hyderabad	17.23	302	eP	P	20 24 42.0	+0.1
HYB				eS	S	20 27 43.0	-7.7
HYB	Hyderabad	17.23	302	i P	P	20 24 42.0	+0.1
HYB				eS	S	20 27 43.0	-7.7
KMI	Kunming	18.33	26	P	P	20 24 56.8	+1.2
KMI				AP		20 25 07.3	
KMI				XP		20 25 11.5	
KMI				PP	PP	20 25 15.0	+4.1
KMI				S	S	20 28 15.3	-0.3
KMI				XS		20 28 30.5	
KMI				SS	SS	20 28 40.4	+0.7
KMI				AMB	AMB		
	comp=Z,25nm,1.9s						
KMI				AMB	AMB		
	comp=Z,608nm,3.9s						
KMI				LR	LR		
	comp=N,551nm,10.9s						
KMI				LR	LR		
	comp=E,684nm,10.5s						
KMI				LR	LR		
	comp=Z,387nm,12.1s						
QIZ	Qiongzhong	18.53	55	P	P	20 24 58.4	+0.2
QIZ				S	S	20 28 20.8	+0.6
QIZ				XS		20 28 32.0	
QIZ				LR	LR		
	comp=N,3µm,12.5s						
QIZ				LR	LR		
	comp=E,1µm,13.3s						
QIZ				LR	LR		
	comp=Z,1µm,11.0s						
JIRN	Jiri	20.16	340	eP	P	20 25 15.8	-0.5
	comp=Z,108nm,1.1s						
PKI	Pulchoki	20.36	338	eP	P	20 25 17.8	-0.6
	comp=Z,135nm,1.3s						
DMN	Daman	20.50	337	eP	P	20 25 19.3	-0.7
	comp=Z,214nm,1.5s						
KKN	Kakani	20.60	338	eP	P	20 25 20.1	-0.9
	comp=Z,60nm,0.9s						
KAD	Karad	20.98	296	e	P	20 25 29.0	+4.1
LSA	Lhasa	20.99	353	eP	P	20 25 24.0	-1.0
LSA				pmax	pmax		
	comp=Z,21nm,0.6s						
LSA	Lhasa	20.99	353	eP	P	20 25 24.0	-1.0
	comp=Z,21nm,0.6s						
LSA				eS	S	20 28 55.6	-16
GKN	Gorkha	21.04	337	eP	P	20 25 25.0	-0.5
	comp=Z,98nm,0.9s,mb5.2						
KOLN	Koldanda	21.26	334	eP	P	20 25 27.6	-0.1
	comp=Z,90nm,1.1s,mb5.0						
BHPL	Bhopal	21.36	314	eP	P	20 25 29.6	+0.9
BHPL				e		20 25 32.8	
	comp=Z,26nm,0.8s						
BHPL				e		20 29 15.0	
GYA	Guiyang	21.37	33	⇓iP	P	20 25 30.1	+1.3
GYA				AP		20 25 39.8	
GYA				XP		20 25 43.8	
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.8						
GYA				LR	LR		
	comp=N,450nm,13.0s,MS4.3						
GYA				LR	LR		
	comp=E,700nm,14.0s,MS4.3						
GYA				LR	LR		
	comp=Z,470nm,13.4s,MS4.0						
POO	Poona	21.74	299	eP	P	20 25 33.5	+1.0
POO				e		20 25 54.1	
	comp=Z,17nm,1.4s						
CD2	Chengdu	23.88	21	P	P	20 25 56.1	+2.5
LGTI	Lohaghat	24.24	330	eP	P	20 25 59.0	+1.9
ENH	Enshi	25.90	32	eP	P	20 26 12.8	-0.1
	comp=Z,22nm,0.9s,mb4.7						
DDI	Dehra Dun	26.07	328	e	P	20 26 15.2	+0.8
LZH	Lanzhou	28.68	17	eP	P	20 26 39.3	+1.2
LZH				AP	pP	20 26 49.0	+0.8
LZH				XP	sP	20 26 52.5	-0.4
LZH				PP	PP	20 27 32.0	+0.9
LZH				AMB	AMB		
	comp=Z,46nm,1.8s,mb4.9						
LZH				AMB	AMB		
	comp=Z,111nm,4.0s						
LZH				LR	LR		
	comp=E,509nm,13.0s						
LZH				LR	LR		
	comp=Z,769nm,14.1s,MS4.5						
XAN	Xi'an	28.71	27	P	P	20 26 37.8	-0.6
XAN				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.2						
WHN	Wuhan	28.89	39	eP	P	20 26 41.3	+1.2
GTA	Gaotai	30.98	9	eP	P	20 26 58.5	0.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.4						
GTA				LR	LR		
	comp=N,152nm,11.8s,MS4.2						
GTA				LR	LR		
	comp=E,254nm,10.3s,MS4.2						
GTA				LR	LR		
	comp=Z,187nm,15.6s						
NJ2	Nanjing	32.77	41	eP	P	20 27 15.8	+1.5
NJ2				AP	pP	20 27 25.1	+0.5
NJ2				XP	sP	20 27 28.8	-0.5
NJ2				PP	PP	20 28 23.6	-0.7
NJ2				S	S	20 32 23.0	-4.5
SSE	Sheshan	33.77	45	P	P	20 27 20.6	-2.3
SSE				XP	sP	20 27 33.3	-4.6
SSE				S	S	20 32 43.0	-0.1
SSE				XS		20 32 58.3	
SSE				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
SSE				LR	LR		
	comp=N,94nm,19.9s,MS3.7						
SSE				LR	LR		
	comp=E,122nm,19.9s,MS3.7						
SSE				LR	LR		
	comp=Z,98nm,17.3s,MS3.6						
KSH	Kashi	34.57	335	eP	P	20 27 30.8	+1.1
KSH				eAP	pP	20 27 40.8	+0.7
KSH				eXP	sP	20 27 44.5	-0.2
KSH				ePCP	PcP	20 30 04.6	+0.5
KSH				eS	S	20 32 54.0	-1.4
KSH				ePS		20 33 03.5	
KSH				eXS		20 33 11.6	
KSH				eSS	SS	20 35 06.3	-1.9
KSH				AMB	AMB		
	comp=Z,100nm,6.4s						
KSH				LR	LR		
	comp=N,240nm,5.6s						
KSH				LR	LR		
	comp=E,220nm,4.2s						
WMQ	Urumqi	35.34	352	P	P	20 27 36.4	+0.1
WMQ				XP	sP	20 27 50.0	-1.3
WMQ				PP	PP	20 28 57.0	+0.7
WMQ				S	S	20 33 08.0	+0.7
WMQ				SS	SS	20 35 23.0	-2.9
WMQ				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
HHC	Hu-ho-hao-te	35.60	23	⇓P	P	20 27 39.8	+1.3
HHC				AP	pP	20 27 49.1	+0.2
HHC				XP	sP	20 27 53.5	-0.1
HHC				PP	PP	20 29 01.0	+1.5
HHC				PCP	PcP	20 30 05.8	-1.3
HHC				S	S	20 33 14.0	+2.7
HHC				XS		20 33 29.6	
HHC				SCP		20 33 47.6	
HHC				PCS		20 33 53.5	
HHC				SS	SS	20 35 34.3	+2.3
HHC				SCS	ScS	20 37 50.9	-1.4
HHC				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,174nm,7.2s						
HHC				LR	LR		
	comp=N,338nm,14.4s,MS4.4						
HHC				LR	LR		
	comp=E,348nm,15.6s,MS4.4						
HHC				LR	LR		
	comp=Z,437nm,15.6s,MS4.3						
JOW	Kunigami	37.17	57	LR	LR	20 44 29.4	
	comp=Z,207nm,20.1s,MS3.9,baz=214,slow=39						
UCH	Uchtor	37.45	336	P	P	20 27 54.3	+0.3
	SNR=9.9						
KBK	Karagaybulak	37.64	337	P	P	20 27 56.4	+0.8
	SNR=9.2						
AML	Almayashu	37.70	335	P	P	20 27 57.2	+1.0
	SNR=10.0						
AAK	Ala-Archa	37.80	336	P	P	20 27 57.9	+0.9
	SNR=8.4						
AAK	Ala-Archa	37.80	336	i P	P	20 27 56.2	-0.8
AAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
AAK				MLR	MLR		
	comp=Z,500nm,23.0s,MS4.3						
AAK	Ala-Archa	37.80	336	eP	P	20 27 56.6	-0.4
	comp=Z,14nm,1.0s,mb4.6						
CHMS	Chumysh	38.01	337	P	P	20 27 58.8	+0.1
	SNR=6.8						
EKS2	Erkin-Say	38.11	336	P	P	20 28 00.5	+0.9
	SNR=5.8						
USP	Ospenovka	38.33	337	P	P	20 28 01.3	-0.1
	SNR=16						
SONM	Songino Array	40.36	13	P	P	20 28 18.0	-0.2
	comp=Z,2.3nm,1.0s,mb3.9,baz=194,slow=6.3,SNR=16						
SONM				PcP	PcP	20 30 21.8	+0.1
	comp=Z,1.4nm,0.5s,baz=205,slow=2.8,SNR=16						
ULN	Ulaanbaatar	40.54	14	eP	P	20 28 19.4	-0.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ULN	Ulaanbaatar	40.54	14	eP	P	20 28 19.4	-0.3
	comp=Z,2.1nm,0.8s,mb3.8						
ZAK	Zakamensk	42.22	9	eP	P	20 28 30.3	-3.2
ZAK				e		20 30 07.3	
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.0s						
KURK	Kurchatov	43.70	346	i P	P	20 28 45.4	-0.1
KURK	Kurchatov	43.70	346	eP	P	20 28 45.1	-0.4
	comp=Z,13nm,1.1s,mb4.6						
CN2	Changchun	44.42	33	eP	P	20 28 53.1	+1.7
CN2				eAP	pP	20 29 03.5	+1.5
CN2				eS	S	20 35 26.0	+2.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CN2				LR	LR		
	comp=N,200nm,13.0s,MS4.4						
CN2				LR	LR		
	comp=E,200nm,13.0s,MS4.4						
CN2				LR	LR		
	comp=Z,330nm,15.0s,MS4.4						
ZAL	Zalesovo	45.64	352	P	P	20 29 00.4	-0.7
	comp=Z,8.7nm,0.6s,mb4.8,baz=301,slow=7.4,SNR=59						
MUN	Mundaring	45.78	153	eP	P	20 29 03.2	+0.7
	comp=Z,8.8nm,0.6s,mb4.9						
MUN	Mundaring	45.78	153	eP	P	20 29 03.2	+0.7
MUN				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
KLBR	Kellerberrin	46.17	151	eP	P	20 29 05.0	-0.5
	comp=Z,379nm,1.5s						
NVS	Novosibirsk	46.74	352	eP	P	20 29 07.6	-2.1
NVS				pmax	pmax		
	comp=N,27nm,0.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3						
NWAO	Narrogin (SRO)	47.04	153	P	P	20 29 12.8	+0.4
	comp=Z,15nm,0.8s,mb5.0,baz=355,slow=6.5,SNR=6.8						
MDJ	Mudanjiang	47.22	35	P	P	20 29 13.3	-0.3
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.6s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,151nm,7.8s						
BVAR	Borovoye Array	48.08	341	P	P	20 29 18.7	-1.5
	comp=Z,2.0nm,0.6s,mb4.4,baz=143,slow=7.4,SNR=21						
BVAR				PcP	PcP	20 30 47.6	-0.4
	comp=Z,0.9nm,0.6s,baz=162,slow=4.6,SNR=5.1						
BRVK	Borovoye	48.14	341	eP	P	20 29 19.4	-1.3
BRVK				e	pP	20 29 27.9	-3.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	Borovoye	48.14	341	eP	P	20 29 19.4	-1.3
	comp=Z,3.8nm,0.8s,mb4.5						
BRVK				e	pP	20 29 27.9	-3.4
RAYN	Ar Rayn	48.50	294	P	P	20 29 25.1	+1.2
	comp=Z,116nm,0.9s,SNR=29						
JHJ	Hachijo jima 2	48.73	53	LR	LR	20 50 41.0	
	comp=Z,166nm,19.9s,MS4.0,baz=115,slow=37						
MAT	Matsushiro	48.76	48	P	P	20 29 26.9	+1.2
WRA	Warramunga Arr	48.98	126	P	P	20 29 26.4	-1.2
	comp=Z,12nm,1.2s,mb4.8,baz=305,slow=8.5,SNR=33						
WRA				PcP	PcP	20 30 50.9	-0.8
	comp=Z,1.5nm,0.7s,baz=307,slow=3.1,SNR=8.5						
WRAB	Tennant Creek	48.98	126	eP	P	20 29 26.2	-1.4
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
WRAB	Tennant Creek	48.98	126	eP	P	20 29 26.2	-1.4
	comp=Z,12nm,1.0s,mb4.9						
WB2	Warramunga Arr	48.99	126	eP	P	20 29 26.4	-1.3
ASAR	Alice Springs	50.67	130	P	P	20 29 39.0	-1.6
	comp=Z,1.7nm,0.7s,mb4.1,baz=301,slow=6.5,SNR=18						
ASAR				PcP	PcP	20 30 57.6	-0.2
	comp=Z,1.9nm,0.7s,baz=312,slow=3.4,SNR=14						
ASAR				LR	LR	20 56 11.1	
	comp=Z,103nm,18.4s,MS3.9,baz=297,slow=42						
BOD	Bodaibo	51.35	14	eP	P	20 29 44.5	-0.7
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
GNI	Garni	53.65	314	P	P	20 30 02.4	-0.2
	comp=Z,5.6nm,0.8s,mb4.5,baz=155,slow=12,SNR=3.3						
SVE	Sverdlovsk	54.49	338	eP	P	20 30 08.5	-0.1
SVE				e		20 30 23.0	
ASAJ	Asahikawa	54.91	41	LR	LR	20 55 45.1	
	comp=Z,91nm,18.8s,MS3.9,baz=237,slow=38						
PMG	Port Moresby	56.03	108	P	P	20 30 21.0	+0.7
PMG	Port Moresby	56.03	108	P	P	20 30 20.9	+0.7
	comp=Z,14nm,0.7s,mb5.1,baz=312,slow=3.2,SNR=5.8						
YSS	Yuzh-Sakhalins	56.24	38	eP	P	20 30 20.5	-0.9
KIV	Kislovodsk	56.50	318	eP	P	20 30 22.0	-1.3
KIV				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
KIV	Kislovodsk	56.50	318	eP	P	20 30 22.0	-1.3
	comp=Z,24nm,1.0s,mb5.2						
KMBO	Kilima Mbogo	57.28	263	eP	P	20 30 31.8	+2.6
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KMBO	Kilima Mbogo	57.28	263	P	P	20 30 32.1	+2.9
	comp=Z,4.9nm,1.0s,mb4.5,baz=48,slow=9.8,SNR=13						
KMBO				LR	LR	20 51 15.6	
	comp=Z,348nm,20.2s,MS4.5,baz=278,slow=32						
KMBO	Kilima Mbogo	57.28	263	eP	P	20 30 31.8	+2.6
	comp=Z,3.8nm,0.8s,mb4.5						
ASF	Jabal al Asfar	57.53	303	P	P	20 30 31.0	+0.2
	comp=Z,4.0nm,0.9s,mb4.4,baz=334,slow=13,SNR=4.1						
MALT	Malatya	57.71	310	eP	P	20 30 30.8	-1.1
MALT				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
MALT	Malatya	57.71	310	eP	P	20 30 30.8	-1.1
	comp=Z,6.9nm,1.0s,mb4.6						
EIL	Elat	58.78	299	P	P	20 30 39.7	+0.2
	comp=Z,8.6nm,1.0s,mb4.8,baz=77,slow=8.8,SNR=7.4						
EIL	Elat	58.78	299	eP	P	20 30 39.3	-0.2
	comp=Z,8.5nm,0.8s,mb4.8						
CTA	Charters Tower	58.96	120	LR	LR	20 56 37.2	
	comp=Z,153nm,18.1s,MS4.2,baz=268,slow=37						
YAK	Yakutsk	59.24	19	c iP	P	20 30 40.8	-1.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
STKA	Stephens Creek	60.89	134	P	P	20 30 53.1	-0.9
	comp=Z,2.9nm,0.9s,mb4.4,baz=241,slow=6.8,SNR=3.8						
STKA				PcP	PcP	20 31 37.0	0.0
	comp=Z,2.7nm,0.9s,baz=192,slow=4.7,SNR=3.8						
STKA				LR	LR	20 57 58.9	
	comp=Z,229nm,19.6s,MS4.3,baz=15,slow=37						
BRTR	Keskin Array B	61.67	310	P	P	20 30 57.6	-1.5
	comp=Z,5.5nm,0.9s,mb4.7,baz=121,slow=7.2,SNR=14						
BRTR				PcP	PcP	20 31 40.5	+0.4
	comp=Z,1.4nm,0.7s,baz=135,slow=2.0,SNR=3.5						
OBN	Obninsk	64.50	328	eP	P	20 31 15.7	-1.9
OBN				e		20 31 53.8	
OBN				SS	SS	20 44 11.0	+6.3
OBN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
MA2	Magadan	66.10	28	eP	P	20 31 26.8	-0.9
MA2	Magadan	66.10	28	eP	P	20 31 27.0	-0.7
	comp=Z,7.8nm,0.9s,mb4.7						
TIXI	Tiksi	66.42	11	⇓iP	P	20 31 28.2	-1.4
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
AKASG	Malin Array Be	67.31	321	P	P	20 31 34.0	-1.5
	comp=Z,3.4nm,0.9s,mb4.4,baz=85,slow=5.3,SNR=8.2						
MLR	Muntele Rosu	68.37	315	P	P	20 31 42.1	-0.1
	comp=Z,9.7nm,1.0s,mb4.8,baz=63,slow=6.9,SNR=7.7						
LSZ	Lusaka	69.33	250	eP	P	20 31 49.5	+0.8
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
LSZ	Lusaka	69.33	250	eP	P	20 31 49.5	+0.8
	comp=Z,2.8nm,0.8s,mb4.2						
JOF	Joensuu	69.95	334	ep	P	20 31 50.0	-1.6
	comp=Z,3.4nm,0.9s,mb4.3						
KOLS	Kolonicke sedl	71.38	319	eP	P	20 32 01.2	+0.7
KOLS				esP	sP	20 32 13.9	-1.7
FINES	FINESS Array B	71.82	332	P	P	20 32 01.9	-1.0
	comp=Z,3.5nm,0.8s,mb4.3,baz=124,slow=6.9,SNR=9.7						
KAF	Kangasniemi	71.89	333	ep	P	20 32 02.6	-0.8
	comp=Z,1.8nm,0.6s,mb4.2						
KAF	Kangasniemi	71.89	333	eP	P	20 32 02.6	-0.8
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
OJC	Ojcow	73.14	320	eP	P	20 32 12.5	+1.5
VYHS	Vyhne	73.59	318	eP	P	20 32 13.1	-0.5
KEV	Kevo	73.92	341	ep	P	20 32 08.4	-6.8
	comp=Z,4.8nm,0.9s,mb4.4						
KEV	Kevo	73.92	341	eP	P	20 32 08.4	-6.8
KEV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
OKC	Ostrava-Krasne	74.16	319	eP	P	20 32 16.8	-0.1
ARCES	ARCESS Array B	74.35	340	P	P	20 32 16.6	-1.1
	comp=Z,5.7nm,0.9s,mb4.5,baz=90,slow=7.3,SNR=7.7						
ARCES				LR	LR	21 07 57.4	
	comp=Z,309nm,20.1s,MS4.6,baz=197,slow=38						
LBTB	Lobatse	74.45	241	eP	P	20 32 20.8	+1.7
LBTB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LBTB	Lobatse	74.45	241	eP	P	20 32 20.8	+1.7
	comp=Z,5.6nm,0.7s,mb4.6						
MORC	Moravsky Berou	74.55	319	eP	P	20 32 19.0	-0.2
MORC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
MORC	Moravsky Berou	74.55	319	eP	P	20 32 19.0	-0.1
	comp=Z,11nm,1.1s,mb4.7						
ZST	Bratislava	74.72	318	eP	P	20 32 19.8	-0.4
BILL	Bilibino	75.36	22	i P	P	20 32 23.1	-0.4
BILL				e		20 35 12.0	
BILL				eS	S	20 42 01.0	+1.7
BILL				eSS	SS	20 46 57.3	+5.1
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BILL				MLR	MLR		
	comp=Z,2µm,21.0s						
DPC	Dobruska-Polom	75.37	320	eP	P	20 32 24.3	+0.4
UPC	Upice	75.58	320	eP	P	20 32 27.4	+2.3
PRU	Pruhonice	76.50	319	eP	P	20 32 30.4	+0.1
BRG	Berggiesshubel	76.92	320	eP	P	20 32 35.2	+2.5
BRG				pmax	pmax		
	comp=Z,20nm,1.6s,mb4.8						
BRG	Berggiesshubel	76.92	320	eP	P	20 32 35.2	+2.5
	comp=Z,20nm,1.6s,mb4.8						
GERES	GERESS Array B	77.00	318	P	P	20 32 33.2	0.0
	comp=Z,4.3nm,0.8s,mb4.4,baz=90,slow=5.3,SNR=19						
KHC	Kasperske Hory	77.09	318	eP	P	20 32 33.4	-0.3
CLL	Collm	77.52	321	eP	P	20 32 36.0	0.0
CLL	Collm	77.52	321	P	P	20 32 36.0	0.0
HFS	Hagfors	77.57	330	P	P	20 32 35.6	-0.5
	comp=Z,6.8nm,1.0s,mb4.5,baz=108,slow=4.7,SNR=7.0						
GRA1	Grafenberg Arr	78.64	319	eP	P	20 32 43.0	+0.8
	comp=Z,8.0nm,1.0s,mb4.6						
GRA1				epP	pP	20 32 55.6	+2.3
GRF	Grafenberg Arr	78.64	319	eP	P	20 32 43.0	+0.8
GRF				e*PP	pP	20 32 55.6	+2.3
GRF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	78.64	319	eP	P	20 32 43.0	+0.8
GRF				e*PP	pP	20 32 55.6	+2.3
GRF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	78.64	319	eP	P	20 32 43.0	+0.8
	comp=Z,8.0nm,1.0s,mb4.6						
GRF				epP	pP	20 32 55.6	+2.3
NB2	NORSAR Subarra	78.84	331	P	P	20 32 42.1	-1.0
	comp=Z,3.7nm,0.8s,mb4.4,baz=91,slow=5.8						
NB2	NORSAR Subarra	78.84	331	P	P	20 32 42.1	-1.0
NB2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
NOA	NORSAR Array B	78.84	331	P	P	20 32 42.0	-1.1
	comp=Z,3.3nm,0.8s,mb4.3,baz=92,slow=5.7,SNR=11						
LPG	La Plagne	81.82	315	eP	P	20 32 59.8	+0.5
	comp=Z,17nm,0.8s,mb4.8						
LPG	La Plagne	81.82	315	eP	P	20 32 59.8	+0.5
LPG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
SYO	Syowa Base	86.17	197	⇓P	P	20 33 21.0	+0.4

SYO	**Syowa Base**	**86.17**	**197**	⇑PcP	PcP	20 33 25.2	+1.5
EKA	**Eskdalemuir Ar**	**86.86**	**325**	P	**P**	**20 33 25.2**	**+1.0**
	comp=Z,8.0nm,1.0s,mb4.9,baz=97,slow=5.2,SNR=10						
ESDC	**Sonseca Array**	**90.46**	**310**	P	**P**	**20 33 42.8**	**+1.0**
	comp=Z,6.9nm,1.1s,mb4.9,baz=53,slow=4.5,SNR=7.0						
IMA	**Indian Mountai**	**90.90**	**22**	*e*P	**P**	**20 33 45.2**	**+2.0**
IMA				pmax	pmax		
	comp=Z,37nm,0.7s						
IMA	**Indian Mountai**	**90.90**	**22**	*e*P	**P**	**20 33 45.2**	**+2.0**
	comp=Z,37nm,0.7s						
ILAR	**Eielson Array**	**94.02**	**22**	P	**P**	**20 33 57.7**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.6,baz=301,slow=4.4,SNR=23						
INK	**Inuvik**	**96.22**	**16**	*e*P	**P**	**20 34 08.3**	**+0.9**
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	**Inuvik**	**96.22**	**16**	P	**P**	**20 34 08.3**	**+0.8**
	comp=Z,4.2nm,0.7s,mb5.0,baz=302,slow=5.9,SNR=14						
INK	**Inuvik**	**96.22**	**16**	*e*P	**P**	**20 34 08.2**	**+0.8**
	comp=Z,6.7nm,0.9s,mb5.1						
RES	**Resolute Bay**	**96.53**	**2**	*e*P	**P**	**20 34 09.7**	**+0.9**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.7						
RES	**Resolute Bay**	**96.53**	**2**	*e*P	**P**	**20 34 09.7**	**+0.9**
	comp=Z,3.0nm,0.9s,mb4.7						
YKA	**Yellowknife Ar**	**105.63**	**13**	Pdiff	Pdif	20 34 50.7	+1.0
	comp=Z,0.6nm,1.1s,baz=328,slow=4.6,SNR=4.0						
YKA				PKKPbc		20 50 27.0	
	comp=Z,0.2nm,0.3s,baz=152,slow=3.1,SNR=6.1						
YKA	**Yellowknife Ar**	**105.63**	**13**	Pdif	Pdif	20 34 50.7	+1.0
YKA				PKKPbc		20 50 27.1	
NVAR	**Mina Array Bea**	**124.29**	**30**	PKP	PKPdf	20 39 41.3	+3.4
	comp=Z,0.8nm,0.5s,baz=274,slow=1.0,SNR=7.1						
PDAR	**Pinedale Array**	**124.43**	**21**	PKP	PKPdf	20 39 39.8	+1.7
	comp=Z,0.7nm,0.5s,baz=28,slow=0.9,SNR=7.1						
TXAR	**Lajitas Array**	**138.52**	**23**	PKP	PKPdf	20 40 07.1	+2.1
	comp=Z,1.2nm,0.7s,baz=178,slow=1.1,SNR=3.5						
TXAR	**Lajitas Array**	**138.52**	**23**	PKP	PKPdf	20 40 07.1	+2.1
JCT	**Junction City**	**138.83**	**18**	*e*PKPdf	PKPdf	20 40 08.8	+3.2
BDFB	**Brasilia**	**142.19**	**256**	PKP	PKPdf	20 40 11.7	-0.2
	comp=Z,1.9nm,0.5s,baz=97,slow=9.3,SNR=3.4						
PLCA	**Paso Flores**	**145.28**	**201**	PKPbc	PKPbc	20 40 19.3	+2.3
	comp=Z,13nm,0.7s,baz=153,slow=2.6,SNR=33						
PLCA	**Paso Flores**	**145.28**	**201**	*e*PKPdf	PKPdf	20 40 18.8	+2.2
SDV	**Santo Domingo**	**156.66**	**318**	*e*PKPab	PKPab	20 41 04.9	-1.2
LPAZ	**La Paz**	**160.93**	**245**	PKPab	PKPab	20 41 25.5	+1.1
	comp=Z,1.1nm,0.6s,baz=123,slow=5.1,SNR=5.6						

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*HLW **15** 20:27:29.5, 34.38N×25.16E, h33^{km}, Mb3.2*
*ATH **15** 20:27:36.5, 35.85N×25.26E, h10^{km}, MD3.4/3*
*CSEM **15** 20:27:36.5, 35.85N×25.26E, h10^{km}, MD3.4/3, After ATH*
ISC 15 20:27:27.4±0.7, **34.14N**±0.04×**25.4E**±0.1, **h10^{km}, n12, σ1^{s}34**/15, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**1.14**	**10**	*e*PB	**Pb**	**20 27 48.6**	**-0.2**
VAM	**Vamos**	**1.59**	**323**	*e*PB	**Pb**	**20 27 55.1**	**-1.3**
KARP	**Karpathos**	**2.04**	**46**	*e*PB	**Pb**	**20 28 06.1**	**+2.0**
SLUM		**2.64**	**183**	P	**Pn**	**20 28 12.6**	**+1.8**
SLUM				S	**Sn**	**20 28 45.0**	**+1.8**
HMAT	**Matruh**	**3.37**	**154**	P	**Pn**	**20 28 23.4**	**+2.3**
SWA1		**4.87**	**176**	P	**Pn**	**20 28 43.5**	**+1.1**
SWA1				S	**Sn**	**20 29 37.9**	**-1.6**
SWA2		**4.88**	**179**	P	**Pn**	**20 28 43.1**	**+0.5**
SWA2				S	**Sn**	**20 29 38.1**	**-1.7**
HNKL	**Nakhl**	**8.43**	**117**	P	**P**	**20 29 32.1**	**-0.4**
ASUT		**8.57**	**140**	P	**P**	**20 29 34.3**	**-0.1**
TR2		**9.16**	**126**	P	**P**	**20 29 41.2**	**-1.4**
HDK1	**Dakhla**	**9.25**	**157**	P	**P**	**20 29 43.2**	**-0.7**
TR1		**9.56**	**127**	P	**P**	**20 29 46.9**	**-1.3**

MAN 15 20:34:33.9, 12.81N×122.85E, h15^{km}, mb4.2, ML3.1, MS2.8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTRP	**Odiongan**	**0.93**	**241**	*e*P	Pb	20 34 51.0	-0.1
OTRP				*e*S	Sb	20 35 04.3	+1.4
GQP	**Guinayangan**	**1.16**	**340**	⇓*e*P	Pb	20 34 52.3	-2.8
GQP				*e*S	Sb	20 35 08.0	-1.7
BOAC	**Boac**	**1.18**	**303**	*e*P	Pb	20 34 53.2	-2.2
KALP	**Kalibo**	**1.23**	**204**	*e*P	Pb	20 34 50.0	-6.3
RCP	**Roxas**	**1.25**	**185**	⇑*e*P	Pb	20 34 56.8	+0.2
PVCP	**Virac**	**1.49**	**58**	*e*P	Pn	20 34 59.5	-0.8
LQP	**Lukban**	**1.82**	**316**	*e*P	Pn	20 35 04.1	-0.9
LQP				*e*S	Sn	20 35 28.7	+0.8
POLP	**Polilio Island**	**2.10**	**335**	*e*P	Pn	20 35 07.7	-1.4
POLP				*e*S	Sn	20 35 36.2	+1.1
BALP	**Baler**	**3.17**	**337**	*e*P	Pn	20 35 24.5	+0.3

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*IDC **15** 20:42:50.7±0.7, 8.74N×93.88E, mb3.8/10, mb1 4.0/11, mb1mx4.0/18, mbtmp3.8/11, ML3.8/1, Error ellipse: s-maj=42.1km s-min=17.2km az=53.0*
*NEIC **15** 20:42:55.3±0.6, 8.69N×93.98E, h30^{km}, mb4.2/6, Error ellipse: s-maj=18.0km s-min=10.6km az=65.0*
ISC 15 20:42:53.8±0.6, **8.71N**±0.09×**94.0E**±0.1, **h33^{km}, n23, σ0^{s}99**/21, **mb4.0**/17, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.82**	**26**	Pn	**P**	**20 45 30.5**	**+1.0**
	0.2nm,0.3s,baz=213,slow=14,SNR=9.8						
PKI	**Pulchoki**	**20.44**	**338**	*e*P	**P**	**20 47 32.5**	**+1.4**
	5.2nm,0.5s						
DMN	**Daman**	**20.59**	**337**	*e*P	**P**	**20 47 34.0**	**+1.3**
	15nm,0.8s						
KKN	**Kakani**	**20.69**	**338**	*e*P	**P**	**20 47 34.1**	**+0.4**
	9.9nm,0.6s						
LSA	**Lhasa**	**21.05**	**353**	*e*P	**P**	**20 47 36.7**	**-0.7**
	5.4nm,0.5s,mb4.1						
GKN	**Gorkha**	**21.12**	**337**	*e*P	**P**	**20 47 38.1**	**0.0**
	18nm,0.7s,mb4.5						
KOLN	**Koldanda**	**21.35**	**334**	*e*P	**P**	**20 47 40.7**	**+0.3**
	16nm,0.7s,mb4.5						
ENH	**Enshi**	**25.89**	**32**	P	**P**	**20 48 22.6**	**-2.0**
	6.1nm,0.8s,mb4.2						
SONM	**Songino Array**	**40.39**	**13**	P	**P**	**20 50 31.2**	**+0.9**
	0.2nm,0.8s,mb2.9,baz=121,slow=8.4,SNR=2.5						
SONM				PcP	PcP	20 52 34.3	+0.6
	0.8nm,1.2s,baz=207,slow=2.9,SNR=4.6						
KURK	**Kurchatov**	**43.77**	**346**	P	**P**	**20 50 56.1**	**-1.8**
	1.6nm,0.6s,mb3.9						
ZAL	**Zalesovo**	**45.71**	**352**	P	**P**	**20 51 13.6**	**+0.1**
	1.5nm,0.6s,mb4.1,baz=284,slow=7.4,SNR=9.8						
WRA	**Warramunga Arr**	**48.87**	**126**	P	**P**	**20 51 38.4**	**-0.2**
	0.7nm,0.5s,mb4.0,baz=305,slow=8.5,SNR=27						
WRA				PcP	PcP	20 53 03.8	+0.7
	0.5nm,0.7s,baz=313,slow=2.9,SNR=8.0						
WRAB	**Tennant Creek**	**48.87**	**126**	*e*P	**P**	**20 51 39.0**	**+0.4**
	2.3nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**50.56**	**130**	P	**P**	**20 51 51.6**	**0.0**
	0.5nm,0.7s,mb3.6,baz=300,slow=7.2,SNR=9.0						
ASAR				PcP	PcP	20 53 10.1	+0.8
	1.1nm,0.9s,baz=305,slow=3.6,SNR=8.7						
BRTR	**Keskin Array B**	**61.78**	**310**	P	**P**	**20 53 10.3**	**-1.4**
	1.1nm,0.7s,mb4.1,baz=112,slow=6.7,SNR=5.5						
AKASG	**Malin Array Be**	**67.41**	**321**	P	**P**	**20 53 48.0**	**-0.1**
	0.4nm,0.5s,mb3.7,baz=90,slow=5.6,SNR=4.1						
FINES	**FINESS Array B**	**71.91**	**332**	P	**P**	**20 54 14.3**	**-1.0**
	2.4nm,1.0s,mb4.1,baz=109,slow=7.9,SNR=5.7						
ARCES	**ARCESS Array B**	**74.44**	**340**	P	**P**	**20 54 29.0**	**-1.0**
	1.6nm,0.8s,mb4.0,baz=96,slow=8.2,SNR=3.0						
BOSA	**Boshof**	**75.90**	**238**	*e*P	**P**	**20 54 40.5**	**+1.3**
	1.6nm,0.5s,mb4.2						
GERES	**GERESS Array B**	**77.11**	**318**	P	**P**	**20 54 45.3**	**-0.4**
	1.0nm,0.8s,mb3.8,baz=74,slow=9.7,SNR=6.4						
ILAR	**Eielson Array**	**94.03**	**22**	P	**P**	**20 56 10.8**	**+1.3**
	0.3nm,0.5s,mb4.0,baz=306,slow=4.0,SNR=6.1						
PDAR	**Pinedale Array**	**124.45**	**21**	PKP	PKPdf	21 01 52.6	+2.6
	0.5nm,0.9s,baz=270,slow=1.8,SNR=3.3						
PLCA	**Paso Flores**	**145.27**	**201**	PKPbc	PKPbc	21 02 31.3	+2.4
	4.7nm,0.7s,baz=151,slow=2.2,SNR=15						

IDC 15 21:03:57.9±53.0, **18.17S**×**178.98W**, **mb3.7**/3, **mb1 3.8**/3, **mb1mx3.6**/15, **mbtmp3.7**/3, **Error ellipse: s-maj=971.6km s-min=158.7km az=79.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.03**	**241**	P	P	21 11 18.8	-1.0
	1.3nm,0.7s,baz=76,slow=8.3,SNR=3.2						
WRA	**Warramunga Arr**	**44.06**	**260**	P	P	21 12 07.7	-1.9
	0.3nm,0.3s,baz=97,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**44.20**	**255**	P	P	21 12 08.7	-2.1
	0.4nm,0.4s,baz=88,slow=8.2,SNR=8.4						

JSN 15 21:12:37.8±1.4, **18.24N**×**76.63W, h22^{km}**±6^{km}**, MD3.6, 4C-4D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GWJ	**Greenwich**	**0.19**	**208**	⇓*e*P	Pb	21 12 43.6	+0.6
STH	**Stony Hill**	**0.24**	**225**	⇓*i*P	Pb	21 12 43.3	-0.3
STH				*i* S	Sb	21 12 46.3	-1.2
HOJ	**Hope**	**0.26**	**205**	⇓*e*P	Pb	21 12 44.2	+0.2
HOJ				*i* S	Sb	21 12 47.7	-0.5
CMJ	**Castle Mountai**	**0.27**	**113**	⇑*i*P	Pb	21 12 43.6	-0.6
BNJ	**Bonny Gate**	**0.31**	**284**	⇓*i*P	Pb	21 12 44.5	-0.2
BBJ	**Bamboo Saint A**	**0.62**	**283**	⇑*e*P	Pb	21 12 48.9	-0.9
CVJ	**Coleyville**	**0.86**	**269**	⇑*e*P	Pb	21 12 52.3	-1.5
MCJ	**Malvern**	**1.05**	**253**	⇑*e*P	Pb	21 12 55.3	-1.9
MCJ				*i* S	Sb	21 13 09.9	-0.6

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*IDC **15** 21:19:15.8±2.4, 43.41N×105.26W, mb4.1/1, mb1 4.1/3, mb1mx3.6/20, mbtmp4.0/3, ML3.6/2, Error ellipse: s-maj=58.6km s-min=8.1km az=154.0*
*NEIC **15** 21:19:18.2±0.6, 43.70N×105.20W, ML3.3, Error ellipse: s-maj=8.8km s-min=6.4km az=116.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 15 21:19:16.3±0.7, **43.76N**±0.04×**105.16W**±0.08, **n26, σ1^{s}34**/29, **mb4.3**/1, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHWY	**Pilot Hill**	**2.46**	**185**	*e*Pn	**Pn**	**21 19 58.7**	**+0.3**
LAO	**LASA Array**	**3.03**	**346**	Pn	**Pn**	**21 20 08.8**	**+2.4**
PDAR	**Pinedale Array**	**3.36**	**254**	Pn	**Pn**	**21 20 11.3**	**+0.1**
	3.2nm,0.3s,baz=85,slow=14,SNR=45						
PDAR				Pg	**Pg**	**21 20 16.9**	**-6.5**
	8.7nm,0.3s,baz=80,slow=18,SNR=46						
PDAR				Lg		21 20 56.2	
	9.8nm,0.3s,baz=240,slow=12,SNR=7.0						
BW06	**Boulder Array**	**3.36**	**254**	*e*Pn	**Pn**	**21 20 10.9**	**-0.3**
BW06				*e*S	**Sn**	**21 20 55.6**	**+3.3**
LOHW	**Long Hollow**	**3.95**	**270**	*e*Pn	**Pn**	**21 20 19.8**	**+0.2**
ISCO	**Idaho Springs**	**3.97**	**185**	*e*Pn	**Pn**	**21 20 20.8**	**+1.0**
ISCO				*e*S	**Sb**	**21 21 17.8**	**+1.8**
MOOW	**Moose Ponds**	**4.05**	**272**	*e*Pn	**Pn**	**21 20 21.1**	**+0.2**
WUWY	**Wally Ulrich**	**4.06**	**269**	*e*Pn	**Pn**	**21 20 19.8**	**-1.3**
SNOW	**Snow King Moun**	**4.08**	**268**	P	**Pn**	**21 20 23.8**	**+2.5**
IMW	**Indian Meadow**	**4.18**	**274**	*e*Pn	**Pn**	**21 20 23.1**	**+0.3**
TPAW	**Teton Pass**	**4.21**	**268**	*e*Pn	**Pn**	**21 20 23.2**	**-0.1**
YMR	**Madison River**	**4.27**	**284**	*e*Pn	**Pn**	**21 20 25.9**	**+1.8**
AHID	**Auburn Hatcher**	**4.45**	**259**	*e*P	**Pb**	**21 20 37.5**	**+2.2**
DGMT	**Dagmar**	**4.76**	**8**	*e*Pn	**Pn**	**21 20 33.6**	**+2.5**
BOZ	**Bozeman (W)**	**4.98**	**295**	*e*Pn	**Pn**	**21 20 33.5**	**-0.7**
HWUT	**Hardware Ranch**	**5.19**	**248**	*e*Pn	**Pn**	**21 20 35.9**	**-1.2**
TCUT	**Toone Canyon**	**5.32**	**242**	P	**Pn**	**21 20 37.0**	**-2.0**
DAU	**Daniels Canyon**	**5.63**	**236**	*e*Pn	**Pn**	**21 20 43.2**	**-0.1**
HVU	**Hansel Valley**	**5.94**	**253**	*e*Pn	**Pn**	**21 20 46.4**	**-1.3**
PV10	**Paradox Valley**	**6.12**	**210**	*e*Pn	**Pn**	**21 20 50.2**	**-0.1**
SRU	**San Rafael**	**6.15**	**223**	*e*Pn	**Pn**	**21 20 48.9**	**-1.7**
TMUT	**Trail Mountain**	**6.36**	**228**	*e*Pn	**Pn**	**21 20 52.3**	**-1.3**
CHMT	**Chamberlain Mo**	**6.52**	**302**	*e*Pn	**Pn**	**21 20 54.8**	**-1.1**
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**P**	**21 21 29.9**	**-1.6**
ULM				Lg		21 24 05.5	
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**P**	**21 21 29.9**	**-1.6**
	2.0nm,0.3s,baz=218,slow=13,SNR=15						
ULM				Lg		21 24 05.5	
	0.4nm,0.3s,baz=314,slow=22,SNR=3.8						
ARCES	**ARCESS Array B**	**61.38**	**18**	P	**P**	**21 29 34.5**	**-1.3**
	2.5nm,0.9s,mb4.3,baz=326,slow=6.5,SNR=4.4						

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*BJI **15** 21:19:18.5, 13.98S×172.85E, h18^{km}, mB5.1, mb4.6, Ms4.8, Msz4.5*
*IDC **15** 21:19:20.2±0.8, 13.88S×171.98E, mb4.5/13, mb1 4.7/13, mb1mx4.7/17, mbtmp4.5/13, MS4.0/13, Ms1 4.0/13, ms1mx3.8/24, Error ellipse: s-maj=43.4km s-min=16.4km az=151.0*
*NEIC **15** 21:19:23.6±0.5, 13.87S×171.93E, mb4.9/10, Error ellipse: s-maj=23.7km s-min=7.8km az=152.0*
*HRVD **15** 21:19:23.6±0.7, 13.71S×171.88E, h22^{km}±1^{km}, MW5.0/45, Centroid moment Tensor Solution. LP body waves: s22,c30;Mantle waves: s45,c62; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.69±.41; M$_{\theta\theta}$3.28±.27; M$_{\phi\phi}$1.41±.25; M$_{r\theta}$0.10±.43; M$_{\theta\phi}$0.73±.17; M$_{\phi r}$0.85±.55; Best double couple: M$_0$4.177×10^{16} NP1:ϕ_s78°,δ43°,λ-79°. NP2:ϕ_s243°,δ48°,λ-100°. Principal axes: T 3.547, Plg3°, Azm340°; N 1.259, Plg7°, Azm250°; P -4.806, Plg82°, Azm90°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 15 21:19:21.9±0.6, **14.1S**±0.1×**171.98E**±0.09, **h21^{km}, h21^{km}**±.3^{km}**:pP-P, n65, σ0^{s}81**/42, **mb4.7**/29, **MS4.1**/18, **3C-2D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**24.54**	**170**	LR	LR	21 32 18.7	
	comp=Z,335nm,18.3s,MS3.9,baz=302,slow=32						
PMG	**Port Moresby**	**24.73**	**278**	P	**P**	**21 24 44.1**	**+0.7**
	17nm,1.1s,mb4.5,baz=116,slow=9.0,SNR=4.2						
PMG				LR	LR	21 31 40.9	
	comp=Z,128nm,21.5s,MS3.4,baz=301,slow=30						
PMG	**Port Moresby**	**24.73**	**278**	P	**P**	**21 24 43.8**	**+0.3**
	15nm,1.0s,mb4.5						
CTA	**Charters Tower**	**25.30**	**253**	LR	LR	21 32 42.3	
	comp=Z,120nm,20.9s,MS3.4,baz=51,slow=32						
RPZ	**Rata Peaks**	**29.58**	**181**	LR	LR	21 35 13.5	
	comp=Z,407nm,19.2s,MS4.1,baz=25,slow=32						
STKA	**Stephens Creek**	**32.97**	**232**	⇑*i*P	**P**	**21 25 59.0**	**+1.5**
	11nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**32.97**	**232**	P	**P**	**21 25 58.7**	**+1.2**
	6.9nm,0.9s,mb4.6,baz=62,slow=5.1,SNR=7.3						
STKA				PcP	PcP	21 28 40.9	-0.6
	3.7nm,1.1s,baz=333,slow=2.3,SNR=2.9						
STKA				LR	LR	21 36 54.0	
	comp=Z,114nm,21.2s,MS3.5,baz=29,slow=32						
WB2	**Warramunga Arr**	**36.40**	**255**	*e*P	**P**	**21 26 26.2**	**-0.8**
WB2				*e*		21 28 51.0	
WRAB	**Tennant Creek**	**36.41**	**255**	*e*P	**P**	**21 26 26.4**	**-0.6**
	24nm,1.2s,mb5.0						
WRA	**Warramunga Arr**	**36.41**	**255**	P	**P**	**21 26 26.4**	**-0.7**
	4.6nm,1.1s,mb4.3,baz=86,slow=8.7,SNR=20						
WRA				PcP	PcP	21 28 50.7	-0.9
	2.0nm,0.9s,baz=88,slow=3.0,SNR=9.4						
PPT	**Papeete**	**37.11**	**101**	*e*LQ		21 34 52.6	
PPT				*e*LR	LR	21 36 23.6	
	210nm,28.2s						
ASAR	**Alice Springs**	**37.18**	**249**	P	**P**	**21 26 33.2**	**-0.3**
	9.5nm,0.9s,mb4.6,baz=73,slow=9.4,SNR=73						
ASAR				PcP	PcP	21 28 53.9	+0.1
	2.5nm,0.8s,baz=91,slow=2.9,SNR=9.5						
ASAR				LR	LR	21 40 06.4	
	comp=Z,101nm,19.0s,MS3.6,baz=94,slow=34						
ASPA	**Alice Springs**	**37.18**	**249**	*e*P	**P**	**21 26 32.6**	**-1.0**
TBI	**Tubuai**	**37.58**	**110**	*e*LQ		21 35 15.4	
TBI				*e*LR	LR	21 36 32.9	
	298nm,32.5s						
KAKA	**Kakadu**	**38.46**	**267**	*e*P	**P**	**21 26 43.3**	**-1.1**
	5.4nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**44.62**	**258**	⇓*i*P	**P**	**21 27 36.2**	**+1.2**
	18nm,1.1s,mb4.8						
TAOE	**Nuku Hiva Isla**	**47.14**	**89**	*e*LR	LR	21 41 12.8	
MBWA	**Marble Bar**	**50.12**	**254**	*e*P	**P**	**21 28 17.7**	**-0.3**
	20nm,1.0s,mb5.1						
MBWA				*e*	pP	21 28 24.0	-0.5
VNDA	**Vanda**	**63.69**	**182**	LR	LR	21 55 52.9	
	comp=Z,246nm,19.0s,MS4.4,baz=266,slow=34						
ASAJ	**Asahikawa**	**63.78**	**337**	LR	LR	21 52 40.2	
	comp=Z,197nm,20.7s,MS4.3,baz=350,slow=31						
FX1	**Attu Island--F**	**66.66**	**1**	LR	LR	21 58 40.8	
	comp=Z,4.5nm,18.1s,baz=199,slow=36						
MDJ	**Mudanjiang**	**69.93**	**329**	P	**P**	**21 30 33.4**	**-0.2**
MDJ				AP	pP	21 30 40.3	0.0
MDJ				XP	sP	21 30 42.9	+0.2
MDJ				PP	PP	21 33 10.6	+0.4
MDJ				S	S	21 39 40.3	-0.8
MDJ				SS	SS	21 44 15.3	+3.5
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.6s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,98nm,3.8s						
MDJ				LR	LR		
	comp=N,61nm,28.2s,MS3.8						
MDJ				LR	LR		
	comp=E,55nm,29.0s,MS3.8						
MDJ				LR	LR		
	comp=Z,89nm,26.1s,MS3.9						
WHN	**Wuhan**	**70.95**	**310**	⇑P	**P**	**21 30 40.0**	**-0.1**
CN2	**Changchun**	**71.51**	**326**	*e*P	**P**	**21 30 43.3**	**0.0**
CN2				*e*AP	pP	21 30 50.0	0.0
CN2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
ENH	**Enshi**	**74.53**	**307**	*e*P	**P**	**21 31 00.1**	**-1.1**
	comp=Z,27nm,1.1s,mb5.1						
ENH				*e*	pP	21 31 07.1	-0.9
GYA	**Guiyang**	**75.14**	**303**	⇑*i*P	**P**	**21 31 11.4**	**+6.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN	**Xi’an**	**76.66**	**310**	P	**P**	**21 31 13.3**	**0.0**
XAN				AP	pP	21 31 19.9	-0.1
XAN				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
KMI	**Kunming**	**77.88**	**300**	P	**P**	**21 31 22.4**	**+2.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.4						
KMI				LR	LR		
	comp=Z,101nm,31.2s,MS4.0						
HHC	**Hu-ho-hao-te**	**78.09**	**318**	*e*P	**P**	**21 31 21.5**	**+0.5**
HHC				AP	pP	21 31 28.8	+1.0
HHC				PCP	PcP	21 31 31.1	0.0
HHC				XP	sP	21 31 32.3	+2.2
HHC				PP	PP	21 34 20.1	+0.5
HHC				S	S	21 41 11.3	-1.3
HHC				SKS	SKS	21 41 29.3	-6.6
HHC				SCS	ScS	21 41 36.5	+0.3
HHC				PS	PS	21 41 55.8	-0.9
HHC				SS	SS	21 46 15.8	-1.5
HHC				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,130nm,6.0s						
HHC				LR	LR		
	comp=N,201nm,22.8s,MS4.6						
HHC				LR	LR		
	comp=E,278nm,22.8s,MS4.6						
HHC				LR	LR		
	comp=Z,585nm,24.0s,MS4.8						
CMAR	**Chiang Mai Arr**	**78.88**	**292**	P	**P**	**21 31 26.5**	**+0.7**
	comp=Z,2.3nm,0.9s,mb4.1,baz=108,slow=4.5,SNR=10						
CMAR				LR	LR	22 00 23.7	
	comp=Z,67nm,21.9s,MS3.9,baz=150,slow=31						
CD2	**Chengdu**	**79.27**	**306**	P	**P**	**21 31 28.3**	**+0.6**
TNA	**Tin City**	**80.80**	**8**	*e*P	**P**	**21 31 34.5**	**-0.6**
TNA				*e*	pP	21 31 41.3	-0.7
LZH	**Lanzhou**	**81.30**	**310**	*e*P	**P**	**21 31 39.5**	**+1.1**
LZH				AP	pP	21 31 46.0	+0.8
LZH				XP	sP	21 31 48.9	+1.5
LZH				*e*PP	PP	21 34 47.5	+1.2
LZH				*e*S	S	21 41 47.0	+0.7
LZH				SS	SS	21 47 06.5	+1.0
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,90nm,5.5s						
LZH				LR	LR		
	comp=E,203nm,17.3s						
LZH				LR	LR		
	comp=Z,313nm,18.0s,MS4.7						
YBH	**Yreka Blue Hor**	**81.75**	**43**	P	**P**	**21 31 41.1**	**+0.5**
	comp=Z,2.7nm,1.1s,mb4.1,baz=290,slow=3.7,SNR=4.1						
NVAR	**Mina Array Bea**	**83.40**	**48**	P	**P**	**21 31 49.4**	**+0.2**
	comp=Z,2.4nm,0.8s,mb4.3,baz=220,slow=6.0,SNR=12						
NVAR				LR	LR	21 59 59.0	
	comp=Z,70nm,20.1s,MS4.0,slow=29						
NVAR	**Mina Array Bea**	**83.40**	**48**	P	**P**	**21 31 49.4**	**+0.2**
BBB	**Bella Bella**	**83.71**	**32**	LR	LR	22 01 38.0	
	comp=Z,131nm,21.7s,MS4.3,baz=134,slow=30						
IMA	**Indian Mountai**	**83.88**	**13**	*e*P	**P**	**21 31 51.4**	**+0.4**
IMA				*e*	pP	21 31 57.8	-0.1
ULN	**Ulaanbaatar**	**84.34**	**322**	*e*P	**P**	**21 31 53.6**	**-0.1**
	comp=Z,14nm,1.4s,mb4.9						
ULN				*e*	pP	21 32 00.3	-0.3
COLA	**College**	**84.34**	**16**	*e*P	**P**	**21 31 52.4**	**-1.0**
	comp=Z,37nm,1.4s,mb5.3						
LDFC	**Landfair**	**84.50**	**52**	*e*P	**P**	**21 31 55.5**	**+0.7**
ILAR	**Eielson Array**	**84.53**	**16**	P	**P**	**21 31 53.4**	**-0.9**
	comp=Z,11nm,0.8s,mb5.0,baz=236,slow=5.3,SNR=92						
ILAR				LR	LR	22 04 36.1	
	comp=Z,121nm,20.0s,MS4.3,baz=183,slow=32						
SONM	**Songino Array**	**84.72**	**322**	P	**P**	**21 31 55.9**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.9,baz=146,slow=5.3,SNR=7.2						
NEN	**Nelson**	**84.90**	**52**	*e*P	**P**	**21 31 55.9**	**-1.0**
GTA	**Gaotai**	**85.54**	**312**	P	**P**	**21 32 00.8**	**+0.8**
GTA				AP	pP	21 32 07.9	+1.1
GTA				XP	sP	21 32 11.1	+2.1
GTA				AMB	AMB		
	comp=Z,9.0nm,1.7s,mb4.7						
SYO	**Syowa Base**	**90.62**	**195**	⇓PcP	PcP	21 32 27.1	+2.1
MNTX	**Cornudas Mount**	**91.15**	**58**	*e*P	**P**	**21 32 26.4**	**-0.5**
	comp=Z,4.3nm,0.8s,mb4.8						
MNTX				*e*	pP	21 32 33.6	-0.3
ANMO	**Albuquerque**	**91.18**	**54**	P	**P**	**21 32 27.6**	**+0.7**
	comp=Z,5.0nm,0.9s,mb4.8,baz=219,slow=5.6,SNR=8.0						
TXAR	**Lajitas Array**	**91.96**	**60**	P	**P**	**21 32 31.5**	**+0.8**
	comp=Z,6.1nm,1.1s,mb4.8,baz=225,slow=5.3,SNR=17						
YKA	**Yellowknife Ar**	**94.88**	**27**	P	**P**	**21 32 42.4**	**-0.9**
	comp=Z,2.2nm,0.7s,mb4.7,baz=253,slow=4.6,SNR=41						
YKA				LR	LR	22 08 47.5	
	comp=Z,138nm,19.3s,MS4.4,baz=180,slow=31						
YKA	**Yellowknife Ar**	**94.88**	**27**	P	**P**	**21 32 42.4**	**-0.9**
WMQ	**Urumqi**	**95.53**	**314**	*e*P	**P**	**21 32 47.3**	**+0.5**
WMQ				PP	PP	21 36 40.0	-0.1
WMQ				SKS	SKS	21 43 19.4	-7.8
WMQ				S	S	21 43 58.4	-0.5
WMQ				SS	SS	21 50 29.4	-2.0
WMQ				LR	LR		
	comp=N,68nm,26.0s,MS4.2						
WMQ				LR	LR		
	comp=E,98nm,26.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,105nm,26.0s,MS4.2						
ZAL	**Zalesovo**	**99.57**	**323**	P	**P**	**21 33 03.2**	**-1.5**
	comp=Z,0.7nm,0.8s,mb4.1,baz=5.1,slow=5.6,SNR=5.5						
ARCES	**ARCESS Array B**	**120.68**	**347**	PKP	PKPdf	21 38 11.2	-5.1
	comp=Z,2.9nm,0.8s,baz=315,slow=1.7,SNR=5.3						
GERES	**GERESS Array B**	**140.95**	**337**	PKP	PKPdf	21 38 50.0	-4.9
	comp=Z,0.9nm,1.0s,baz=45,slow=1.9,SNR=2.7						
BAIF	**Baives**	**142.72**	**347**	*e*PKP1	PKPdf	21 38 54.6	-3.3
CABF	**La Chapelle**	**145.44**	**343**	*e*PKP1	PKPbc	21 38 59.7	+0.7
	comp=Z,32nm,1.0s						
SSF	**Saint Saulge**	**145.70**	**346**	*e*PKP1	PKPbc	21 39 00.4	+0.8
	comp=Z,38nm,1.1s						
LPG	**La Plagne**	**146.25**	**341**	*e*PKP1	PKPbc	21 39 02.6	+1.6
TCF	**Toulx Ste Croi**	**146.73**	**347**	*e*PKP1	PKPbc	21 39 03.2	+1.1
	comp=Z,44nm,1.4s						
ORIF	**Oris-en-Rattie**	**147.04**	**342**	*e*PKP1	PKPdf	21 39 05.3	-0.2
	comp=Z,24nm,1.1s						
SBF	**Sospel**	**147.47**	**339**	*e*PKP1	PKPdf	21 39 05.1	-1.1
PGF	**Pioggiola**	**148.02**	**336**	*e*PKP1	PKPdf	21 39 05.3	-1.8
	comp=Z,95nm,1.3s						
ETSF	**Etsaut**	**150.54**	**349**	*e*PKP1	PKPdf	21 39 13.1	+2.0
	comp=Z,38nm,1.2s						
ESDC	**Sonseca Array**	**154.22**	**353**	PKPab	PKPab	21 39 36.1	-0.7
	comp=Z,2.3nm,0.8s,baz=12,slow=3.7,SNR=7.2						

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*IDC **15** 21:42:12.9±0.7, 1.87N×92.20E, mb4.2/13, mb1 4.4/14, mb1mx4.2/21, mbtmp4.2/14, ML4.0/1, MS4.0/4, Ms1 4.1/4, ms1mx3.6/12, Error ellipse: s-maj=27.7km s-min=17.4km az=49.0*
*BJI **15** 21:42:14.1, 1.80N×92.30E, h25^{km}, mB4.6, mb4.3, Ms4.1, Msz3.8*
*NEIC **15** 21:42:16.8±0.5, 1.83N×92.31E, h25^{km}, mb4.5/3, Error ellipse: s-maj=14.3km s-min=10.1km az=60.0*
ISC 15 21:42:16.1±0.6, **1.84N**±0.09×**92.3E**±0.1, **h33^{km}, n30, σ0^{s}89**/28, **mb4.2**/16, **MS4.0**/5, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**12.75**	**295**	*e*P	**P**	**21 45 11.7**	**-6.3**

CM31	Chiang Mai Arr	17.75	21	*e*P	P	21 46 21.7	-0.8
	16nm,0.9s						
CMAR	Chiang Mai Arr	17.75	21	P	P	21 46 21.1	-1.3
	0.2nm,0.3s,baz=216,slow=13,SNR=32						
HYB	Hyderabad	20.54	320	*e*P	P	21 46 54.0	-0.6
HYB				*e*S	S	21 50 42.0	+4.4
HYB	Hyderabad	20.54	320	*i* P	P	21 46 54.0	-0.6
HYB				*e*		21 50 42.0	
HYB				*e*S	S	21 50 52.5	+15
KMI	Kunming	25.24	23	P	P	21 47 46.0	+5.1
KMI				AP	pP	21 47 52.0	+1.7
KMI				S	S	21 52 07.9	+6.2
KMI				SS	SS	21 53 10.5	+7.2
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.3						
KMI				AMB	AMB		
	comp=Z,65nm,4.0s						
KMI				LR	LR		
	comp=N,201nm,14.6s,MS4.0						
KMI				LR	LR		
	comp=E,213nm,13.0s,MS4.0						
KMI				LR	LR		
	comp=Z,157nm,11.4s,MS3.8						
LSA	Lhasa	27.73	358	*e*P	P	21 48 05.4	+1.6
LSA				*e*		21 48 12.7	
ENH	Enshi	32.64	28	*e*P	P	21 48 47.5	+0.2
	comp=Z,6.7nm,0.7s,mb4.7						
WRA	Warramunga Arr	46.57	120	P	P	21 50 43.1	+0.1
	comp=Z,3.7nm,1.1s,mb4.2,baz=298,slow=8.7,SNR=11						
WRAB	Tennant Creek	46.58	120	*e*P	P	21 50 40.4	-2.7
	comp=Z,5.9nm,0.9s,mb4.5						
SONM	Songino Array	47.41	13	P	P	21 50 50.3	+1.0
	comp=Z,1.5nm,0.6s,mb4.1,baz=194,slow=8.9,SNR=17						
ASAR	Alice Springs	47.74	125	P	P	21 50 52.4	+0.2
	comp=Z,0.9nm,1.0s,mb3.8,baz=301,slow=8.3,SNR=4.5						
ASAR				PcP	PcP	21 52 22.1	+0.6
	comp=Z,0.4nm,0.7s,baz=296,slow=2.7,SNR=4.3						
KURK	Kurchatov	50.05	349	*e*P	P	21 51 10.1	+0.4
CN2	Changchun	51.10	31	*e*P	P	21 51 19.4	+1.7
ZAL	Zalesovo	52.29	354	P	P	21 51 26.0	-0.5
	comp=Z,1.5nm,0.5s,mb4.2,baz=308,slow=6.0,SNR=8.4						
KMBO	Kilima Mbogo	55.12	267	LR	LR	22 11 53.8	
	comp=Z,103nm,20.5s,MS3.9,baz=88,slow=32						
STKA	Stephens Creek	57.47	130	P	P	21 52 05.4	+0.8
	comp=Z,2.5nm,1.0s,mb4.2,baz=231,slow=4.6,SNR=3.3						
BRTR	Keskin Array B	65.08	313	P	P	21 52 54.9	-0.9
	comp=Z,1.2nm,0.8s,mb4.0,baz=127,slow=6.0,SNR=4.9						
LBTB	Lobatse	69.80	243	P	P	21 53 25.5	-0.1
	comp=Z,3.3nm,0.9s,mb4.3,baz=130,slow=9.4,SNR=4.2						
LBTB	Lobatse	69.80	243	P	P	21 53 25.5	-0.1
MLR	Muntele Rosu	72.26	317	P	P	21 53 40.6	+0.6
	comp=Z,3.0nm,0.9s,mb4.2,baz=188,slow=7.5,SNR=4.9						
FINES	FINESS Array B	77.19	333	P	P	21 54 07.7	-0.6
	comp=Z,1.2nm,0.7s,mb4.0,baz=90,slow=3.8,SNR=4.5						
FINES				LR	LR	22 30 35.1	
	comp=Z,110nm,21.8s,MS4.1,baz=219,slow=38						
ARCES	ARCESS Array B	80.30	341	P	P	21 54 24.8	-0.3
	comp=Z,4.8nm,1.1s,mb4.4,baz=124,slow=6.4,SNR=3.0						
GERES	GERESS Array B	81.11	319	P	P	21 54 29.6	-0.1
	comp=Z,1.6nm,0.8s,mb4.0,baz=101,slow=6.8,SNR=12						
FX1	Attu Island--F	83.02	37	P	P	21 54 39.2	-0.3
	comp=Z,6.2nm,0.6s,mb4.8,baz=234,slow=5.4,SNR=3.1						
DAVOX	Davos	83.46	317	P	P	21 54 42.5	+0.7
	comp=Z,2.1nm,0.7s,mb4.3,baz=106,slow=7.2,SNR=3.5						
NOA	NORSAR Array B	84.07	331	LR	LR	22 31 07.8	
	comp=Z,39nm,20.8s,MS3.8,baz=45,slow=35						
VNDA	Vanda	87.43	168	LR	LR	22 28 48.7	
	comp=Z,226nm,19.7s,MS4.6,baz=167,slow=32						
TXAR	Lajitas Array	145.44	25	PKPbc	PKPbc	22 01 54.0	+1.9
	comp=Z,1.4nm,0.9s,baz=297,slow=2.8,SNR=8.2						
JCT	Junction City	145.85	19	PKP	PKPdf	22 01 54.8	+2.7

*IDC **15** 21:48:31.6±0.9, 31.81N×75.06E, mb3.8/11, mb1 4.1/11, mb1mx3.9/23, mbtmp3.9/11, Error ellipse: s-maj=35.5km s-min=16.5km az=47.0*

*MOS **15** 21:48:35.2±0.6, 31.82N×75.01E, h33^{km}, mb4.3/6, Error ellipse: s-maj=22.9km s-min=13.5km az=129.0*

*NDI **15** 21:48:36.5±4.1, 31.54N×74.85E, h5^{km}±10^{km}, MD4.1, ML3.8, mb4.2(NEIC)*

*NEIC **15** 21:48:38.4±1.0, 31.85N×74.99E, h50^{km}±9^{km}, mb4.2/2, Error ellipse: s-maj=17.0km s-min=5.6km az=51.0*

NEIC Felt at Lahore, Pakistan.

*BJI **15** 21:48:44.0, 32.16N×75.34E, h50^{km}, mb4.3, ML4.3*

ISC 15 21:48:36.3±0.4, **31.55N**±0.03×**74.68E**±0.04, **h60**^{km}±5^{km}, **n54**, σ**1**$\overset{s}{.}$**28**/76, **mb3.8**/12, **4C-2D, India-Pakistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PONG	Pong	1.15	69	*e*P	P	21 48 57.0	+0.4
PONG				*e*		21 48 58.5	
JMU	Jammu	1.17	9	*e*P	P	21 49 01.5	+4.6
JMU				*e*S	S	21 49 17.0	+4.7
THN	Thein Dam	1.24	45	⇓*i*P	P	21 48 57.0	-0.9
THN				*e*S	S	21 49 12.9	-1.0
DLH	Dalhousie	1.47	48	*e*P	P	21 49 00.0	-1.1
DLH				*e*S	S	21 49 20.0	+0.5
BHK	Bhakra	1.49	95	*e*P	P	21 49 03.2	+1.8
BHK				*e*S	S	21 49 21.8	+1.9
SARP	Sargodha	1.75	283	⇑P	P	21 49 05.4	+0.4
SDNR	Sundarnagar	1.96	91	*e*PN	P	21 49 09.8	+2.0
SDNR				*e*SN	S	21 49 32.4	+1.3
CHCP	Chirah Chowk	2.42	331	⇑P	P	21 49 14.0	-0.3
KKR	Kurukshetra	2.43	130	*e*P	P	21 49 15.2	+0.7
KKR				*e*S	S	21 49 44.2	+1.1
THW	Thamme Wali	2.78	297	⇑P	P	21 49 19.5	0.0
KLP	Kalpa	3.05	89	*e*P	P	21 49 24.9	+1.6
DDI	Dehra Dun	3.15	112	*e*PG	P	21 49 36.2	+12
DDI				*e*SG	S	21 50 18.2	+17
CEP	Cherat	3.25	315	⇓P	P	21 49 25.5	-0.7
CEP				S	S	21 50 02.0	-1.9
KHET	Khetri	3.60	164	*e*P	P	21 49 32.8	+1.8
KHET				*e*S	S	21 50 12.7	0.0
NDI	New Delhi	3.61	142	*e*PB	P	21 49 36.0	+4.9
NDI				*e*SN	S	21 50 11.0	-1.8
AYAN	Aya Nagar	3.72	145	*e*P	P	21 49 33.2	+0.5
AYAN				*e*S	S	21 50 15.7	0.0
KUDL	Kundal	3.74	155	*e*P	P	21 49 34.1	+1.1
KUDL				*e*S	S	21 50 16.1	-0.1
DRP	Derazinda	3.83	274	⇑P	P	21 49 34.0	-0.2
SONA	Sohna	3.90	147	*e*P	P	21 49 36.3	+1.2
SONA				*e*S	S	21 50 19.8	-0.3
SONA				*e*		21 50 48.3	
	comp=E,205nm,0.3s						
SONA				*e*		21 50 48.4	
	comp=N,152nm,0.2s						
KALG	Kalgarh	4.06	119	*e*	P	21 49 41.6	+4.1
KALG				*e*		21 50 09.6	
AJM	Ajmer	5.06	180	*e*P	P	21 49 52.5	+1.1
AJM				*e*S	S	21 50 48.4	-0.8
AJM				*e*		21 51 24.8	
	comp=E,149nm,0.1s						
AJM				*e*		21 51 24.9	
	comp=N,118nm,0.1s						
AGRA	Agra	5.16	146	*e*S	S	21 50 48.1	-3.7
PTH	Pithoragarh	5.17	111	*e*	P	21 50 05.4	+12
PTH				*e*SN	S	21 50 50.0	-2.1
JHNI	Jhansi	6.95	150	*e*P	P	21 50 16.0	-1.8
JHNI				*e*S	S	21 51 30.0	-6.2
KSH	Kashi	8.02	7	*e*P	P	21 50 34.1	+1.6
KSH				Smax			
	comp=N,70nm,0.5s						
KSH				Smax			
	comp=E,40nm,0.6s						
KOLN	Koldanda	8.62	114	*e*Pn	P	21 50 39.2	-1.7
KOLN				*e*Sn	S	21 52 12.9	-4.8
	comp=E,30nm,0.5s						
GKN	Gorkha	9.35	110	*e*Pn	P	21 50 49.4	-1.3
GKN				*e*Sn	S	21 52 27.4	-7.9
	comp=E,52nm,0.3s						
BHJ	Bhuj	9.39	210	*e*S	S	21 52 32.5	-4.1
DMN	Daman	9.89	111	*e*Pn	P	21 50 56.5	-1.7
DMN				*e*Sn	S	21 52 40.3	-8.3
	comp=E,65nm,0.7s						
KKN	Kakani	9.95	109	*e*Pn	P	21 50 56.8	-2.2
KKN				*e*Sn	S	21 52 41.3	-8.9
	comp=E,55nm,0.5s						
PKI	Pulchoki	10.15	110	*e*Pn	P	21 50 59.3	-2.4
JIRN	Jiri	10.74	108	*e*Pn	P	21 51 08.1	-1.7
JIRN				*e*Sn	S	21 52 59.8	-9.5
	comp=E,34nm,0.3s						
AAK	Ala-Archa	11.06	359	*e*P	P	21 51 09.8	-4.2
BLSP	Bilaspur	11.50	143	*e*P	P	21 51 19.6	-0.4
BLSP				*e*S	S	21 53 16.9	-11
BVAR	Borovoye Array	21.68	353	P	P	21 53 22.1	-1.4
	comp=E,1.4nm,0.4s,mb3.7,baz=162,slow=7.0,SNR=11						
ZAL	Zalesovo	23.52	15	P	P	21 53 41.0	-0.4
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	23.52	15	P	P	21 53 41.0	-0.4
	comp=Z,1.2nm,0.3s,mb3.8,baz=265,slow=3.3,SNR=4.3						
CMAR	Chiang Mai Arr	25.49	115	P	P	21 54 01.3	+0.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CMAR	Chiang Mai Arr	25.49	115	P	P	21 54 01.2	+0.5
	comp=Z,0.8nm,0.9s,mb3.3,baz=297,slow=11,SNR=5.2						
GNI	Garni	25.64	298	P	P	21 54 04.5	+2.6
GNI				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GNI	Garni	25.64	298	P	P	21 54 06.0	+4.0
	comp=Z,1.3nm,0.5s,mb3.7,baz=190,slow=11,SNR=3.1						
GNI	Garni	25.64	298	P	P	21 54 04.5	+2.6
	comp=Z,2.1nm,0.6s,mb3.8						
MLR	Muntele Rosu	39.99	305	P	P	21 56 09.6	+3.1
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	39.99	305	P	P	21 56 09.6	+3.1
	comp=Z,2.4nm,0.7s,mb4.0,baz=73,slow=3.5,SNR=3.0						
ARCES	ARCESS Array B	46.86	339	P	P	21 57 01.7	-0.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	ARCESS Array B	46.86	339	P	P	21 57 01.7	-0.1
	comp=Z,1.9nm,0.5s,mb4.2,baz=114,slow=7.6,SNR=14						
NOA	NORSAR Array B	50.17	325	P	P	21 57 26.8	-0.7
	comp=Z,0.4nm,0.6s,mb3.6,baz=244,slow=2.5,SNR=2.9						
WRA	Warramunga Arr	76.75	123	P	P	22 00 24.6	+1.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	76.75	123	P	P	22 00 24.6	+1.3
	comp=Z,0.7nm,0.3s,mb4.0,baz=323,slow=5.4,SNR=39						
WRAB	Tennant Creek	76.75	123	*e*P	P	22 00 24.4	+1.1
WRAB				*e*		22 00 34.5	
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
WRAB	Tennant Creek	76.75	123	*e*P	P	22 00 24.4	+1.1
	comp=Z,3.0nm,0.5s,mb4.5						
WRAB				*e*		22 00 34.5	
ILAR	Eielson Array	78.65	17	P	P	22 00 33.0	+0.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=301,slow=4.8,SNR=6.5						
ASAR	Alice Springs	78.89	127	P	P	22 00 35.9	+0.8
	comp=Z,0.3nm,0.5s,mb3.5,baz=297,slow=6.0,SNR=5.4						
YKA	Yellowknife Ar	85.99	4	P	P	22 01 11.4	+0.8
	comp=Z,0.3nm,0.5s,mb3.8,baz=348,slow=4.9,SNR=6.6						

*IDC **15** 22:04:24.6±1.6, 2.69N×95.14E, mb4.0/7, mb1 4.2/8, mb1mx3.9/19, mbtmp4.0/8, ML4.4/1, MS3.0/1, Ms1 3.2/1, ms1mx2.2/22, Error ellipse: s-maj=67.5km s-min=20.1km az=57.0*

*NEIC **15** 22:04:29.0±0.7, 2.65N×95.20E, h30^{km}, mb4.1/6, Error ellipse: s-maj=22.5km s-min=9.9km az=65.0*

ISC 15 22:04:27.1±1.0, **2.6N**±0.1×**95.2E**±0.2, **h30**^{km}, **n16**, σ**0**$\overset{s}{.}$**74**/16, **mb4.1**/12, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	16.14	13	*e*P	P	22 08 14.0	+0.3
	13nm,0.8s						
CMAR	Chiang Mai Arr	16.14	13	Pn	P	22 08 14.6	+0.9
	0.5nm,0.3s,baz=202,slow=11,SNR=58						
CMAR				LR	LR	22 15 10.9	
	comp=Z,51nm,18.6s,baz=84,slow=40						
BJT	Baijiatuau	41.79	24	*e*P	P	22 12 15.7	0.0
	6.4nm,0.7s,mb4.4						
BJT				*e*	pP	22 12 24.3	-0.4
AAK	Ala-Archa	43.90	338	P	P	22 12 34.0	+1.1
	2.5nm,0.8s,mb4.0						
WRA	Warramunga Arr	44.50	122	P	P	22 12 38.5	+0.5
	0.8nm,0.7s,mb3.7,baz=300,slow=9.3,SNR=10						
WRAB	Tennant Creek	44.51	122	P	P	22 12 37.1	-1.0
	1.8nm,0.6s,mb4.1						
ASAR	Alice Springs	45.86	127	P	P	22 12 49.6	+0.8
	0.3nm,0.7s,mb3.4,baz=291,slow=7.7,SNR=2.9						
SONM	Songino Array	46.05	10	P	P	22 12 49.2	-0.7
	2.6nm,0.6s,mb4.3,baz=190,slow=8.7,SNR=30						
SONM				PcP	PcP	22 14 26.9	+0.4
	0.9nm,0.8s,baz=209,slow=3.2,SNR=4.8						
ULN	Ulaanbaatar	46.20	11	*e*P	P	22 12 50.0	-1.2
	1.6nm,0.7s,mb4.1						
KURK	Kurchatov	49.91	346	P	P	22 13 19.8	-0.2
	1.1nm,0.6s,mb4.1						
ZAL	Zalesovo	51.84	352	P	P	22 13 33.7	-0.9
	4.6nm,1.0s,mb4.3,baz=298,slow=6.5,SNR=16						
ZAL	Zalesovo	51.84	352	P	P	22 13 33.7	-0.9
BVAR	Borovoye Array	54.25	342	P	P	22 13 51.9	-0.5
	2.1nm,0.9s,mb4.1,baz=149,slow=8.6,SNR=7.2						
FINES	FINESS Array B	77.80	333	P	P	22 16 22.9	-0.1
	1.5nm,0.8s,mb4.0,baz=14,slow=7.9,SNR=3.6						
FINES	FINESS Array B	77.80	333	P	P	22 16 22.9	-0.1
ARCES	ARCESS Array B	80.51	340	P	P	22 16 38.4	+0.9
	4.4nm,0.9s,mb4.4,baz=79,slow=6.2,SNR=6.0						

IGQ 15 22:20:13.7, 1.25S×81.19W, h12^{km}±9^{km}, mb4.1, 1C, Error ellipse: s-maj=14.6km s-min=12.3km az=54.3, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.67	73	⇑P	Pb	22 20 24.8	-2.1
HOJA				S	Sb	22 20 36.0	+0.1
ARRY	Arrayan	2.75	95	P	Pn	22 20 58.8	+0.4
NAS1	Nasa	2.78	77	P	Pn	22 21 01.4	+2.6
ULBA	Ulba	2.79	94	P	Pn	22 21 01.5	+2.5
TERV	Terraza Guagua	2.79	68	P	Pn	22 21 01.8	+2.6
PINO	Pino	2.80	67	P	Pn	22 21 02.0	+2.8
PISA	Pisayambo	2.81	86	P	Pn	22 21 01.3	+1.9
VC1	Cotopaxi 1	2.85	78	P	Pn	22 21 02.7	+2.8
CAYR	Refugio Cayamb	3.42	69	P	Pn	22 21 08.6	+0.6

NEIC 15 22:20:51.6, 34.80N×116.26W, h7^{km}, ML3.4(PAS)**, After PAS., Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDFC	Landfair	0.98	73	*e*P	Pb	22 21 08.6	-1.9
PFO	Pinyon Flat Ob	1.20	188	*e*P	Pb	22 21 12.8	-1.4
NEN	Nelson	1.43	53	*e*P	Pn	22 21 15.7	-2.4
MWC	Mount Wilson	1.59	249	*e*P	Pn	22 21 19.3	-1.0
DAC	Darwin (Calif)	1.83	324	*e*P	Pn	22 21 21.6	-2.2
BAR	Barrett	2.14	189	*e*Pn	Pn	22 21 24.8	-3.5
BAR				*e*Pg	Pg	22 21 29.8	-4.6
TPH	Tonopah	3.36	347	Pn	Pn	22 21 42.9	-2.6
OMM	Old Mammoth Mi	3.58	323	Pn	Pn	22 21 46.7	-1.9
OMM				*e*Pg	Pg	22 21 56.2	-6.8
ARUT	Antelope Range	3.75	37	*e*Pn	Pn	22 21 49.4	-1.7
MNV	Mina	3.93	338	Pn	Pn	22 21 55.2	+1.5
MNV				*e*Pg	Pg	22 22 04.8	-5.3
MVU	Marysvale	4.92	40	*e*Pn	Pn	22 22 06.5	-1.3
MSU	Marysvale	4.95	40	*e*Pn	Pn	22 22 06.9	-1.2
TMUT	Trail Mountain	6.04	41	*e*Pg	Pg	22 22 44.0	-8.1
DUG	Dugway	6.04	26	Pn	Pn	22 22 27.5	+4.0
DUG				*e*Pg	Pg	22 22 43.3	-8.9
LTX	Lajitas	11.99	114	*e*P	P	22 23 42.9	-2.9
	5.5nm,0.8s						

*IDC **15** 22:22:59.3±0.9, 8.77N×93.80E, mb3.7/8, mb1 3.9/9, mb1mx3.8/19, mbtmp3.7/9, ML3.9/1, Error ellipse: s-maj=37.1km s-min=22.2km az=62.0*

*NEIC **15** 22:23:04.2±0.8, 8.83N×93.93E, h30^{km}, mb4.1/2, Error ellipse: s-maj=21.9km s-min=16.6km az=103.0*

ISC 15 22:23:02.8±1.0, **8.9N**±0.1×**93.9E**±0.2, **h33**^{km}, **n12**, σ**0**$\overset{s}{.}$**90**/11, **mb3.8**/8, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.71	26	Pn	P	22 25 37.7	+0.7
	0.3nm,0.3s,baz=211,slow=14,SNR=11						
LSA	Lhasa	20.90	353	*e*P	P	22 27 44.1	-0.7
	4.7nm,0.5s						
SONM	Songino Array	40.25	13	P	P	22 30 38.8	+0.6
	0.3nm,0.8s,mb3.1,baz=190,slow=8.8,SNR=2.9						
SONM				PcP	PcP	22 32 42.9	+0.6
	0.3nm,0.9s,baz=200,slow=4.5,SNR=3.9						
ZAL	Zalesovo	45.55	352	P	P	22 31 21.3	+0.1
	1.6nm,0.7s,mb4.0,baz=292,slow=9.0,SNR=11						
BVAR	Borovoye Array	48.00	341	P	P	22 31 39.8	-0.8
	0.6nm,0.6s,mb3.8,baz=135,slow=10,SNR=5.6						
WRA	Warramunga Arr	48.99	126	P	P	22 31 47.8	-0.8
	0.4nm,0.4s,mb3.8,baz=306,slow=8.6,SNR=11						
WRA				PcP	PcP	22 33 12.4	-0.2
	0.2nm,0.7s,baz=317,slow=2.8,SNR=5.1						
KMBO	Kilima Mbogo	57.34	263	P	P	22 32 52.2	+1.6
	0.8nm,0.8s,mb3.8,baz=55,slow=19,SNR=3.7						
KMBO	Kilima Mbogo	57.34	263	P	P	22 32 52.7	+2.1
	1.6nm,0.9s,mb4.0						
BRTR	Keskin Array B	61.65	310	P	P	22 33 18.4	-1.5
	1.0nm,0.9s,mb4.0,baz=128,slow=7.4,SNR=5.3						
GERES	GERESS Array B	76.97	318	P	P	22 34 54.0	+0.1
	1.0nm,0.9s,mb3.8,baz=101,slow=6.8,SNR=5.9						
ILAR	Eielson Array	93.91	22	P	P	22 36 18.6	+0.6
	0.4nm,0.7s,mb4.0,baz=298,slow=4.1,SNR=5.7						
PLCA	Paso Flores	145.39	201	PKPbc	PKPbc	22 42 39.6	+1.4
	2.4nm,0.7s,baz=194,slow=0.6,SNR=7.3						

*IDC **15** 22:23:26.7±2.8, 31.52N×115.97W, mb3.6/2, mb1 3.9/5, mb1mx3.5/21, mbtmp3.5/5, ML3.8/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/27, Error ellipse: s-maj=47.8km s-min=15.4km az=44.0*

*NEIC **15** 22:23:27.3, 31.65N×115.97W, h4^{km}, ML4.2(PAS), After PAS.*

*ECX **15** 22:23:28.0±0.5, 31.66N×115.90W, h6^{km}, MD4.1, ML4.4, Fault plane solution: NP1:ϕ_s105°, δ90°, λ0°.*

ISC 15 22:23:26.8±0.9, **31.66N**±0.03×**115.88W**±0.03, **h13**^{km}±6^{km}, **n30**, σ**0**$\overset{s}{.}$**69**/40, **mb3.4**/2, **5C-6D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDX	Rancho Dowling	0.28	348	⇓*e*P	Pg	22 23 33.4	+0.5
RDX				*e*S	Sg	22 23 37.4	+0.4
ECNX	Esteban Cantu	0.61	270	⇑*i*P	Pb	22 23 38.6	-0.2
ECNX				⇑*e*P		22 23 40.2	
ECNX				*e*S	Sb	22 23 46.8	-0.2
ECNX				*i* S	Sb	22 23 49.5	+2.4
SPX	San Pedro Mart	0.70	150	⇓*i*P	Pb	22 23 40.8	+0.4
SPX				*e*S	Sb	22 23 50.3	+0.7
ENX	Ensenada	0.71	289	⇑*e*P	Pb	22 23 40.3	-0.2
ENX				*i* S	Sb	22 23 49.6	-0.2
ENX				⇑*e*		22 23 50.7	
	comp=E,20µm,0.6s						
PBX	Punta Banda	0.73	277	⇑*i*P	Pb	22 23 40.6	-0.2
PBX				*e*S	Sb	22 23 50.0	-0.3
CPBX	Cerro Prieto	0.90	33	*e*P	Pb	22 23 44.5	+0.7
CBX	Cerro Bola	0.94	315	*e*P	Pb	22 23 44.2	-0.2
CBX				*e*S	Sb	22 23 56.6	+0.2
RMX	La Rumorosa	0.96	350	⇓*e*P	Pb	22 23 45.0	+0.2
RMX				*e*S	Sb	22 23 57.4	+0.3
YUH	Yuha Desert	0.99	358	⇓*i*P	Pb	22 23 45.4	+0.1
SGL	Mount Signal	1.00	7	⇓*i*P	Pb	22 23 45.9	+0.5
BAR	Barrett	1.22	327	⇓*i*P	Pb	22 23 48.8	-0.5
BAR	Barrett	1.22	327	*e*P	Pb	22 23 48.0	-1.2
BAR				*e*S	Sb	22 24 04.0	-0.8
PFO	Pinyon Flat Ob	2.01	346	*e*P	Pn	22 24 00.4	-0.4
PFO				*e*S	Sn	22 24 27.5	+1.6
MWC	Mount Wilson	3.15	325	*e*Pn	Pn	22 24 16.8	-0.3
NEN	Nelson	4.08	12	*e*Pn	Pn	22 24 29.9	-0.4
TUC	Tucson	4.38	80	Pn	Pn	22 24 34.1	-0.5
DAC	Darwin (Calif)	4.83	343	*e*Pn	Pn	22 24 40.8	-0.1
ARUT	Antelope Range	6.44	17	*e*Pn	Pn	22 25 04.3	+0.6
OMM	Old Mammoth Mi	6.48	338	*e*Pn	Pn	22 25 03.5	-0.7
TPH	Tonopah	6.50	351	*e*Pn	Pn	22 25 04.4	-0.2
MNV	Mina	7.01	345	*e*Pn	Pn	22 25 11.8	0.0
NVAR	Mina Array Bea	7.04	344	Pn	Pn	22 25 12.7	+0.5
	comp=E,0.3nm,0.3s,baz=161,slow=14,SNR=3.2						
NVAR				Pg	Pg	22 25 35.4	-12
	comp=E,1.0nm,0.3s,baz=168,slow=17,SNR=10.0						
NVAR				Lg		22 27 11.8	
	comp=E,0.4nm,0.3s,baz=145,slow=33,SNR=3.1						
NVAR				LR	LR	22 27 22.3	
	comp=E,90nm,21.1s,baz=5.0,slow=33						
MVU	Marysvale	7.46	23	*e*Pn	Pn	22 25 16.9	-1.2
MSU	Marysvale	7.48	23	*e*Pn	Pn	22 25 17.3	-1.1
ANMO	Albuquerque	8.54	65	LR	LR	22 28 47.0	
	comp=E,89nm,21.3s,slow=37						
MNTX	Cornudas Mount	8.95	87	*e*Pn	P	22 25 37.4	-1.3
TXAR	Lajitas Array	10.79	99	Pn	P	22 26 04.3	+0.3
	comp=E,0.7nm,0.3s,baz=278,slow=14,SNR=7.5						
PDAR	Pinedale Array	12.18	23	Pn	P	22 26 28.1	+5.2
	comp=E,0.1nm,0.3s,baz=211,slow=8.6,SNR=3.8						
ULM	Lac du Bonnet	23.81	33	P	P	22 28 44.3	+4.3
	comp=E,1.6nm,0.8s,mb3.5,baz=234,slow=7.1,SNR=3.3						
ILAR	Eielson Array	38.27	339	P	P	22 30 49.6	+1.5
	comp=E,0.5nm,0.7s,mb3.4,baz=151,slow=7.0,SNR=8.4						

*ROM **15** 22:37:13.6±0.2, 46.32N×13.64E, h10^{km}, MD2.7/2, ML1.9/2, Error ellipse: s-maj=1.9km s-min=1.7km az=90.0*

*NEIC **15** 22:37:14.6±0.6, 46.32N×13.57E, h10^{km}, ML2.5(VIE), ML2.3(LJU), Error ellipse: s-maj=7.7km s-min=4.7km az=194.0*

NEIC Felt at Kobarid.

*LJU **15** 22:37:14.6, 46.31N×13.60E, h11^{km}, ML2.0*

*CSEM **15** 22:37:14.6±0.1, 46.29N×13.59E, h12^{km}, ML2.6/7, Error ellipse: s-maj=2.5km s-min=1.7km az=26.0*

ISC 15 22:37:14.4±0.2, **46.33N**±0.02×**13.61E**±0.02, **h10**^{km}, **n57**, σ**0**$\overset{s}{.}$**91**/93, **12C-11D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROBS	Robic	0.11	221	⇓*i*Pg	Pg	22 37 17.0	-0.2
ROBS				*i* Sg	Sg	22 37 18.5	-0.6
	comp=Z,557nm,0.1s						
ROBS	Robic	0.11	221	⇓*i*Pg	Pg	22 37 17.0	-0.2
ROBS				*i* Sg	Sg	22 37 18.5	-0.6
	comp=Z,557nm,0.1s						
CADS	Cadrg	0.13	139	⇓*i*Pg	Pg	22 37 17.8	+0.3
CADS				*i* Sg	Sg	22 37 20.1	+0.4
	comp=Z,1µm,0.1s						
CADS	Cadrg	0.13	139	⇓*i*Pg	Pg	22 37 17.8	+0.2
CADS				*i* Sg	Sg	22 37 20.1	+0.4
	comp=Z,1µm,0.1s						
DRE	Drenchia	0.16	172	⇓*i*Pg	Pg	22 37 17.9	0.0
DRE				*i* Sg	Sg	22 37 20.3	-0.1
LSR	Lussari	0.16	338	⇓*e*Pg	Pg	22 37 18.4	+0.3
LSR				*e*Sg	Sg	22 37 21.3	+0.9
PTCC	Patocco-Chiusa	0.20	293	*e*PG	Pg	22 37 18.6	-0.1
	comp=Z,138nm,0.3s						
PTCC	Patocco-Chiusa	0.20	293	*e*Pg	Pg	22 37 18.6	-0.1
	comp=Z,138nm,0.3s						
COLI	Coloredo	0.25	220	⇓*i*Pg	Pg	22 37 19.6	-0.1
COLI				*i* Sg	Sg	22 37 23.6	+0.2
GMNA	Gemona	0.27	259	*e*PG	Pg	22 37 21.1	+1.1
GMNA				SG	Sg	22 37 26.5	+2.8
	comp=Z,191nm,0.2s						
GMNA	Gemona	0.27	259	*e*Pg	Pg	22 37 21.1	+1.1
	comp=Z,191nm,0.2s						
GMNA	Gemona	0.27	259	Sg	Sg	22 37 26.5	+2.8
BAD	Bernadia	0.27	251	⇓*i*Pg	Pg	22 37 19.8	-0.3
VOJS	Vojsko	0.35	148	⇓*i*Pg	Pg	22 37 21.6	0.0
VOJS				*i* Sg	Sg	22 37 27.4	+1.0
BOO	Bordano	0.36	269	⇑*i*Pg	Pg	22 37 21.4	-0.3
BUA	Buia	0.36	252	⇑*i*Pg	Pg	22 37 21.5	-0.2
BUA				*e*Sg	Sg	22 37 27.1	+0.5
PLRO	Paularo	0.39	305	⇑*e*Pg	Pg	22 37 22.4	0.0
PLRO				*e*Sg	Sg	22 37 28.9	+1.1
ZOU	Zoufplan	0.50	298	⇑*e*Pg	Pg	22 37 24.5	0.0
ZOU				*e*Sg	Sg	22 37 32.3	+1.0
JAVS	Javornik	0.54	144	*i* Pg	Pg	22 37 24.7	-0.5
JAVS				*i* Sg	Sg	22 37 33.1	+0.7
	comp=Z,18nm,0.1s						
JAVS	Javornik	0.54	144	*i* Pg	Pg	22 37 24.7	-0.5
JAVS				*i* Sg	Sg	22 37 33.2	+0.7
	comp=Z,18nm,0.1s						
TRI	Trieste	0.63	170	*e*PG	Pg	22 37 26.2	-0.8
TRI				SG	Sg	22 37 35.7	+0.2
	comp=Z,102nm,0.3s						
TRI	Trieste	0.63	170	*e*Pg	Pg	22 37 26.2	-0.8
	comp=Z,102nm,0.3s						
TRI				Sg	Sg	22 37 35.7	+0.2
FVI	Forni Avoltri	0.64	295	*e*PG	Pg	22 37 26.7	-0.5
FVI				SG	Sg	22 37 37.1	+1.4
	comp=Z,29nm,0.3s						
FVI	Forni Avoltri	0.64	295	*e*Pg	Pg	22 37 26.7	-0.5
	comp=Z,29nm,0.3s						

FVI				Sg	Sg	22 37 37.1	+1.4
OBKA	Obir	0.67	74	⇓*i*PG	Pg	22 37 28.0	+0.1
OBKA				*i* SG	Sg	22 37 37.7	+0.7
	comp=Z,23nm,0.1s						
LJU	Ljubljana	0.70	114	*i* Pg	Pg	22 37 29.0	+0.6
LJU				*e*Sg	Sg	22 37 39.6	+1.9
KBA	Koelnbreinsper	0.77	346	⇑*i*PG	Pg	22 37 30.0	+0.1
KBA				*i* SG	Sg	22 37 41.1	+0.8
	comp=Z,6.8nm,0.2s						
CEY	Cerknica	0.82	136	*i* Pg	Pg	22 37 30.9	+0.1
CEY				*i* Sg	Sg	22 37 42.8	+1.1
	comp=Z,15nm,0.1s						
CEY	Cerknica	0.82	136	*i* Pg	Pg	22 37 30.9	+0.1
CEY				*i* Sg	Sg	22 37 42.8	+1.0
	comp=Z,15nm,0.1s						
PDKS	Podkum	1.00	105	⇑*i*Pg	Pg	22 37 34.0	-0.3
	comp=Z,20nm,0.2s						
PDKS	Podkum	1.00	105	⇑*i*Pg	Pg	22 37 34.0	-0.4
	comp=Z,20nm,0.2s						
VISS	Visnje	1.00	121	*i* Pg	Pg	22 37 34.3	-0.1
	comp=Z,17nm,0.1s						
VISS	Visnje	1.00	121	*i* Pg	Pg	22 37 34.3	-0.2
	comp=Z,17nm,0.1s						
PERS	Pernice	1.08	73	*i* Pg	Pg	22 37 35.7	-0.4
PERS				*e*Sg	Sg	22 37 50.8	+0.2
	comp=Z,1.0nm,0.0s						
LEGS	Legarje	1.24	107	*i* Pg	Pg	22 37 39.0	-0.3
	comp=Z,11nm,0.1s						
LEGS	Legarje	1.24	107	*i* Pg	Pg	22 37 39.0	-0.3
	comp=Z,11nm,0.1s						
DOBS	Dobrina	1.30	97	*i* Pg	Pg	22 37 40.0	-0.5
	comp=Z,11nm,0.2s						
DOBS	Dobrina	1.30	97	*i* Pg	Pg	22 37 40.0	-0.4
	comp=Z,11nm,0.2s						
GROS	Grobnik	1.31	83	*i* Pg	Pg	22 37 41.3	+0.6
	comp=Z,3.0nm,0.1s						
GROS	Grobnik	1.31	83	*i* Pg	Pg	22 37 41.3	+0.6
	comp=Z,3.0nm,0.1s						
CRES	Cresnjev	1.38	111	*i* Pg	Pg	22 37 41.0	-0.9
CRES				*i* Sg	Sg	22 38 00.3	0.0
CRES	Cresnjev	1.38	111	*i* Pg	Pg	22 37 41.0	-1.0
CRES				*i* Sg	Sg	22 38 00.3	-0.1
	comp=Z,1.0nm,0.1s						
BOJS	Bojanci	1.41	125	*i* Pg	Pg	22 37 41.7	-0.9
BOJS				*i* Sg	Sg	22 38 01.0	-0.4
	comp=Z,7.0nm,0.1s						
BOJS	Bojanci	1.41	125	*i* Pg	Pg	22 37 41.7	-0.9
BOJS				*i* Sg	Sg	22 38 01.0	-0.4
	comp=Z,7.0nm,0.1s						
GOLS	Golise	1.43	102	*i* Pg	Pg	22 37 42.5	-0.6
	comp=Z,12nm,0.3s						
GOLS	Golise	1.43	102	*i* Pg	Pg	22 37 42.5	-0.6
	comp=Z,12nm,0.3s						
GCIS	Gornji Cirnik	1.48	107	*e*Pg	Pg	22 37 42.6	-1.3
	comp=Z,11nm,0.2s						
MOA	Molln	1.59	16	⇑*i*PG	Pg	22 37 46.2	+0.1
MOA				*i* SG	Sg	22 38 08.7	+1.4
	comp=Z,7.9nm,0.4s						
ARSA	Arzberg	1.60	54	⇓*i*PG	Pg	22 37 45.2	-1.3
ARSA				*i* SG	Sg	22 38 06.9	-1.0
	comp=Z,4.9nm,0.2s						
WTTA	Wattenberg	1.65	305	⇑*i*PG	Pg	22 37 46.1	-1.3
WTTA				*i* SG	Sg	22 38 09.0	-0.4
	comp=Z,7.4nm,0.4s						
WATA	Walderalm	1.72	307	⇑*i*PG	Pg	22 37 46.8	-2.0
WATA				*i* SG	Sg	22 38 11.7	-0.2
	comp=Z,5.1nm,0.2s						
SQTA	Sankt Quirin	1.88	299	⇑*i*PG	Pg	22 37 49.9	-2.0
SQTA				*i* SG	Sg	22 38 16.7	-0.3
	comp=Z,8.3nm,0.5s						
MOTA	Moosalm	2.00	301	⇑*i*PG	Pg	22 37 52.9	-1.5
MOTA				*i* SG	Sg	22 38 20.7	-0.4
	comp=Z,3.2nm,0.4s						
KHC	Kasperske Hory	2.81	360	*e*PN	Pn	22 38 02.4	+2.2
KHC				*e*x	x	22 38 10.8	
KHC				*e*SN	Sn	22 38 37.4	+3.0
KHC				*e*x	x	22 38 45.1	
KHC	Kasperske Hory	2.81	360	*e*Pn	Pn	22 38 02.4	+2.2
KHC				*e*Sn	Sn	22 38 37.4	+3.0
PRU	Pruhonice	3.71	9	*e*SG	Sg	22 39 12.8	-5.3
NKC	Novy Kostel	3.98	349	*e*SN	Sn	22 39 02.1	-2.2

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*IDC **15** 22:47:56.2±5.5, 17.07S×167.41E, mb3.9/4, mb1 4.1/4, mb1mx3.9/14, mbtmp3.9/4, Error ellipse: s-maj=142.5km s-min=46.9km az=121.0*

ISC 15 22:47:46.3±5.3, **19.0S**±0.4×**169.4E**±0.7, **h26**^{km}±57^{km}**, n7, σ0^{s}92**/9**, mb4.0**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.11	221	*e*P	Pn	22 48 48.7	-0.5
DZM				*e*S	Sn	22 49 35.6	-1.4
NOUC	Port Laguerre	4.22	222	*e*P	Pn	22 48 51.4	+0.6
NOUC				*e*S	Sn	22 49 41.3	+1.5
STKA	Stephens Creek	28.08	237	P	P	22 53 45.5	+7.5
	1.2nm,0.6s,mb3.7,baz=68,slow=5.4,SNR=3.0						
WRA	Warramunga Arr	33.00	262	P	P	22 54 20.6	-1.0
	0.7nm,1.1s,mb3.5,baz=88,slow=8.5,SNR=8.8						
ASAR	Alice Springs	33.30	256	P	P	22 54 24.1	-0.2
	1.8nm,0.4s,mb4.3,baz=83,slow=8.7,SNR=23						
FITZ	Fitzroy Crossi	41.38	264	*e*P	P	22 55 33.2	+1.0
	5.2nm,0.7s,mb4.3						
SONM	Songino Array	87.08	323	P	P	23 00 31.1	+0.1
	1.5nm,1.3s,mb4.1,baz=128,slow=5.3,SNR=3.9						

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*MDD **15** 22:48:07.2±1.8, 36.75N×11.10W, mb4.0/7, Error ellipse: s-maj=16.0km s-min=9.0km az=59.0, PRXIMO*

*CSEM **15** 22:48:07.7±0.6, 36.70N×11.11W, h10^{km}, ML3.2/13, Error ellipse: s-maj=11.1km s-min=7.5km az=57.0*

*NEIC **15** 22:48:08.3, 36.75N×11.17W, MG3.9(MDD), After MDD.*

*INMG **15** 22:48:08.4±1.0, 36.68N×11.14W, h10^{km}, ML2.1, Error ellipse: s-maj=6.3km s-min=4.0km az=76.0*

*IGIL **15** 22:48:09.7, 36.80N×11.20W, h0^{km}, ML3.0*

ISC 15 22:48:07.3±1.1, **36.84N**±0.05×**10.91W**±0.06, **h10**^{km}**, n41, σ1^{s}29**/81**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	Sao Teotonio	1.88	67	*e*Pn	Pb	22 48 41.8	+0.5
PTEO				*e*Sn	Sb	22 49 06.6	+1.7
	6.0nm,0.2s						
PTEO	Sao Teotonio	1.88	67	Pn	Pb	22 48 42.0	+0.7
PTEO				Sn	Sb	22 49 06.5	+1.6
PTEO	Sao Teotonio	1.88	67	*e*Pn	Pb	22 48 41.8	+0.5
PTEO				Sn	Sb	22 49 06.5	+1.6
LIS	Lisbon	2.34	36	*e*P	Pb	22 48 49.5	+0.4
LIS				*e*S	Sb	22 49 19.3	+1.3
LIS				*e*S	Sb	22 49 19.3	+1.3
LIS				AML	AML	22 49 20.1	
	comp=N,77nm,0.1s						
PLOU	Loures	2.47	34	*e*Pn	Pn	22 48 50.0	+1.7
PLOU				*e*Sn	Sn	22 49 21.4	+2.6
	comp=N,8.4nm,0.3s						
PLOU	Loures	2.47	34	Pn	Pn	22 48 49.9	+1.6
PLOU				Sn	Sn	22 49 21.5	+2.7
PLOU	Loures	2.47	34	Pn	Pn	22 48 49.9	+1.6
PLOU				*e*Sn	Sn	22 49 21.4	+2.6
	comp=N,8.4nm,0.3s						
MOE	Montemor	2.64	50	*e*Pn	Pn	22 48 52.0	+1.3
MOE				*e*Sn	Sn	22 49 25.0	+2.0
PBEJ	Beja	2.70	63	*e*Pn	Pn	22 48 53.0	+1.5
PBEJ				*e*Sn	Sn	22 49 26.8	+2.2
	comp=N,4.6nm,0.1s						
PBEJ	Beja	2.70	63	Pn	Pn	22 48 52.9	+1.4
PBEJ				*e*Sn	Sn	22 49 26.8	+2.2
	comp=N,4.6nm,0.1s						
PALC	Alcoutim	2.81	76	*e*Pn	Pn	22 48 54.5	+1.3
PALC				*e*Sn	Sn	22 49 28.9	+1.4
	comp=N,3.7nm,0.1s						
PALC	Alcoutim	2.81	76	Pn	Pn	22 48 54.4	+1.2
PALC				Sn	Sn	22 49 28.9	+1.4
EMIN	Mina Concepcio	3.50	73	Pn	Pn	22 49 04.0	+1.0
	comp=N,1.2nm,0.1s,SNR=20						
EMIN				Sn	Sn	22 49 45.5	+0.5
	comp=N,1.5nm,0.2s,SNR=12						
EMIN	Mina Concepcio	3.50	73	Pn	Pn	22 49 04.0	+1.0
	comp=N,1.2nm,0.1s,SNR=20						
EMIN				Sn	Sn	22 49 45.5	+0.5
	comp=N,1.5nm,0.2s,SNR=12						
PCBR	Castelo Branco	4.03	41	*e*Pn	Pn	22 49 11.5	+1.0
PCBR				*e*Sn	Sn	22 49 58.9	+0.5
	comp=N,1.4nm,0.2s						
PCBR	Castelo Branco	4.03	41	Pn	Pn	22 49 11.2	+0.7
PCBR				Sn	Sn	22 49 58.8	+0.4
ESPR	Espera	4.05	88	Pn	Pn	22 49 11.0	+0.2
	comp=N,3.0nm,0.2s,SNR=11						
ESPR				Sn	Sn	22 49 58.3	-0.6
	comp=N,6.7nm,0.2s						
ESPR	Espera	4.05	88	Pn	Pn	22 49 11.0	+0.2
	comp=N,3.0nm,0.2s,SNR=11						
ESPR				Sn	Sn	22 49 58.3	-0.6
	comp=N,6.7nm,0.2s						
MTE	Manteigas	4.43	36	*e*Sn	Sn	22 50 08.3	0.0
PVIS	Viseu	4.53	30	*e*Pn	Pn	22 49 17.9	+0.3
PVIS				*e*Sn	Sn	22 50 10.5	-0.5
	comp=N,2.5nm,0.1s						
PVIS	Viseu	4.53	30	Pn	Pn	22 49 17.8	+0.2
PVIS				Sn	Sn	22 50 10.6	-0.4
EMIJ	Mijas	4.94	91	Pn	Pn	22 49 23.7	+0.3
	comp=N,0.5nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	22 50 20.4	-1.0
	comp=N,1.0nm,0.2s,SNR=7.9						
PVRL	Vila Real	5.08	28	*e*Pn	Pn	22 49 25.8	+0.5
PVRL				*e*Sn	Sn	22 50 23.2	-1.6
	comp=N,2.2nm,0.1s						
PVRL	Vila Real	5.08	28	Pn	Pn	22 49 25.8	+0.5
PVRL				Sn	Sn	22 50 23.0	-1.8
EADA	Adamuz	5.21	73	Pn	Pn	22 49 27.5	+0.3
	comp=N,1.4nm,0.2s,SNR=8.3						
EADA				Sn	Sn	22 50 26.2	-1.9
	comp=N,2.0nm,0.2s,SNR=4.7						
EADA	Adamuz	5.21	73	Pn	Pn	22 49 27.5	+0.3
	comp=N,1.4nm,0.2s,SNR=8.3						
EADA				Sn	Sn	22 50 26.2	-1.8
	comp=N,2.0nm,0.2s,SNR=4.7						
ELUQ	Luque	5.35	80	Pn	Pn	22 49 29.2	0.0
	comp=N,0.4nm,0.3s,SNR=4.0						
ELUQ				Sn	Sn	22 50 30.9	-0.8
	comp=N,1.0nm,0.2s,SNR=4.0						
ELOB	Lobios	5.49	23	Pn	Pn	22 49 30.3	-0.7
	comp=N,1.1nm,0.1s,SNR=4.0						
ELOB				Sn	Sn	22 50 31.7	-3.3
	comp=N,1.6nm,0.1s,SNR=7.9						
ELOB	Lobios	5.49	23	Pn	Pn	22 49 30.4	-0.7
ELOB				Sn	Sn	22 50 31.7	-3.3
	comp=N,1.6nm,0.1s,SNR=7.9						
ECAL	Calabor	6.03	31	Pn	Pn	22 49 38.7	-0.1
	comp=N,1.6nm,0.3s,SNR=4.0						
ECAL				Sn	Sn	22 50 46.2	-2.6
	comp=N,4.8nm,0.3s,SNR=7.9						
ECAL	Calabor	6.03	31	Pn	Pn	22 49 38.8	0.0
ECAL				Sn	Sn	22 50 46.2	-2.5
	comp=N,4.8nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	6.16	61	Pn	Pn	22 49 40.3	-0.2
	comp=N,1.3nm,0.1s,baz=245,slow=13,SNR=10						
ESDC				Sn	Sn	22 50 49.8	-2.0
	comp=N,1.0nm,0.2s,baz=245,slow=23,SNR=7.2						
ESDC	Sonseca Array	6.16	61	Pn	Pn	22 49 40.3	-0.2
	comp=N,1.3nm,0.1s,baz=245,slow=13,SNR=10						
ESDC				Sn	Sn	22 50 49.8	-2.0
	comp=N,1.0nm,0.2s,baz=245,slow=23,SNR=7.2						
EQES	Quesada	6.32	79	Pn	Pn	22 49 41.8	-1.1
	comp=N,0.7nm,0.1s,SNR=4.0						
EQES				Sn	Sn	22 50 53.5	-2.5
	comp=N,0.8nm,0.1s,SNR=4.0						
EQES	Quesada	6.32	79	Pn	Pn	22 49 41.8	-1.1
	comp=N,0.7nm,0.1s,SNR=4.0						
EQES				Sn	Sn	22 50 53.5	-2.4
	comp=N,0.8nm,0.1s,SNR=4.0						
EINC	Incio	6.43	24	Pn	Pn	22 49 43.4	-1.0
	comp=N,0.9nm,0.2s,SNR=7.9						
EINC				Sn	Sn	22 50 54.1	-4.5
	comp=N,4.1nm,0.3s,SNR=7.9						
EINC	Incio	6.43	24	Pn	Pn	22 49 43.4	-1.0
	comp=N,0.9nm,0.2s,SNR=7.9						
EPON	Pontenova	7.09	23	Pn	Pn	22 49 51.9	-1.8
	comp=N,1.0nm,0.2s,SNR=4.0						
EPON				Sn	Sn	22 51 10.7	-4.5
	comp=N,3.6nm,0.4s,SNR=7.9						
EPON	Pontenova	7.09	23	Pn	Pn	22 49 51.9	-1.8
	comp=N,1.0nm,0.2s,SNR=4.0						
EPON				Sn	Sn	22 51 10.7	-4.5
	comp=N,3.6nm,0.4s,SNR=7.9						
ETOB	Tobarra	7.63	74	Pn	Pn	22 49 60.0	-1.3
	SNR=7.9						
ETOB				Sn	Sn	22 51 25.3	-3.5
	comp=N,0.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	7.63	74	Pn	Pn	22 50 00.0	-1.3
	SNR=7.9						
ETOB				Sn	Sn	22 51 25.3	-3.5
	comp=N,0.2nm,0.2s,SNR=7.9						

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*NEIC **15** 22:54:48.2±3.7, 55.96S×26.14W, h53^{km}±33^{km}, mb4.5/2, Error ellipse: s-maj=15.8km s-min=13.2km az=55.0*

*IDC **15** 22:54:48.5±0.6, 56.01S×26.35W, h53^{km}±5^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.7/15, mbtmp4.3/7, MS3.7/3, Ms1 3.7/3, ms1mx3.0/16, Error ellipse: s-maj=29.0km s-min=18.3km az=50.0*

ISC 15 22:54:41.0±0.7, **55.9S**±0.1×**26.1W**±0.2, **h10**^{km}**, n19, σ0^{s}85**/10**, mb4.3**/8**, MS3.6**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	18.62	157	P	P	22 59 00.8	+0.5
	0.2nm,0.3s,baz=273,slow=11,SNR=5.5						
USHA	Ushuaia	23.84	255	LR	LR	23 06 57.9	
	comp=Z,301nm,21.2s,MS3.7,baz=104,slow=31						
PLCA	Paso Flores	32.60	279	LR	LR	23 13 36.0	
	comp=Z,116nm,20.7s,MS3.6,baz=167,slow=35						
BOSA	Boshof	45.32	75	P	P	23 03 01.6	+0.9
	4.5nm,0.8s,mb4.3						
LVC	Limon Verde	45.78	299	P	P	23 03 04.4	-0.1
	1.4nm,0.4s,mb4.3,baz=341,slow=1.7,SNR=5.1						
LVC				pP	pP	23 03 18.7	+11
	5.4nm,0.9s,baz=106,slow=8.5,SNR=3.7						
VNDA	Vanda	46.74	182	P	P	23 03 10.3	-1.0
	2.6nm,0.6s,mb4.3,baz=109,slow=13,SNR=9.9						
LPAZ	La Paz	50.82	304	P	P	23 03 43.9	+0.3
	1.6nm,0.5s,mb4.2,baz=142,slow=6.1,SNR=6.7						
LPAZ				pP	pP	23 03 57.2	+11
	1.6nm,0.4s,baz=141,slow=4.8,SNR=4.5						
LSZ	Lusaka	57.73	68	*e*P	P	23 04 32.8	-1.5
	4.8nm,1.0s,mb4.5						
DBIC	Dimbokro	64.78	23	P	P	23 05 22.2	+0.2
	2.3nm,0.8s,mb4.3,baz=213,slow=9.0,SNR=4.6						
DBIC				LR	LR	23 27 14.1	
	comp=Z,44nm,21.6s,MS3.6,baz=122,slow=30						
DBIC	Dimbokro	64.78	23	P	P	23 05 22.2	+0.2
STKA	Stephens Creek	91.93	170	P	P	23 07 51.7	+1.2
	1.4nm,0.7s,mb4.4,baz=180,slow=6.1,SNR=2.5						
ASAR	Alice Springs	98.93	161	P	P	23 08 21.9	-0.7
	0.4nm,0.7s,mb4.1,baz=189,slow=3.6,SNR=4.7						
ARCES	ARCESS Array B	130.58	21	PKP	PKPdf	23 13 51.2	-2.7
	2.2nm,0.8s,baz=207,slow=2.7,SNR=4.8						
ARCES	ARCESS Array B	130.58	21	PKP	PKPdf	23 13 51.2	-2.7
YKA	Yellowknife Ar	136.49	318	PKP	PKPdf	23 14 02.2	-2.8
	0.4nm,0.5s,baz=126,slow=2.4,SNR=7.1						
YKA	Yellowknife Ar	136.49	318	PKP	PKPdf	23 14 02.2	-2.8
INK	Inuvik	146.09	321	*e*PKP	PKPdf	23 14 19.7	-2.0
SONM	Songino Array	150.08	85	PKPbc	PKPdf	23 14 32.3	+3.6
	1.4nm,0.5s,baz=220,slow=3.6,SNR=20						
SONM				PKPab	PKPab	23 14 39.0	+0.1
	1.3nm,0.7s,baz=235,slow=4.3,SNR=8.9						
SONM				pPKPbc		23 14 48.5	
	2.0nm,0.6s,baz=219,slow=3.8,SNR=12						
ILAR	Eielson Array	150.50	312	PKPbc	PKPdf	23 14 32.0	+3.2
	4.2nm,1.1s,baz=144,slow=2.0,SNR=14						
ILAR				PKPab	PKPab	23 14 38.5	-1.6
	1.1nm,0.8s,baz=132,slow=1.9,SNR=4.8						
ILAR				pPKPbc		23 14 47.6	
	3.0nm,0.8s,baz=132,slow=1.9,SNR=12						

IDC 15 23:12:09.7±8.2**, 30.76S**×**179.81E, h497**^{km}±94^{km}**, mb2.6**/2**, mb1 3.0**/3**, mb1mx2.9**/13**, mbtmp3.8**/3**, Error ellipse: s-maj=104.8km s-min=46.9km az=19.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.81	196	P	P	23 14 04.3	-0.9
	4.6nm,0.3s,baz=288,slow=2.2,SNR=17						
URZ				S	S	23 15 37.3	+0.4
	3.1nm,0.3s,baz=48,slow=23,SNR=12						
ASAR	Alice Springs	41.20	268	P	P	23 19 10.7	-0.9
	0.3nm,0.7s,baz=105,slow=8.1,SNR=3.0						
WRA	Warramunga Arr	42.23	274	P	P	23 19 18.5	-1.3
	0.7nm,0.5s,baz=112,slow=7.5,SNR=8.9						
FINES	FINESS Array B	144.80	338	PKP	PKPdf	23 30 48.1	-0.2
	0.6nm,0.7s,slow=5.6,SNR=6.5						

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*NNC **15** 23:23:52.9±4.2, 41.83N×79.49E, mpv2.5, Error ellipse: s-maj=120.5km s-min=31.1km az=111.0*

BJI 15 23:23:46.7, 41.86N×79.55E, h27^{km}**, ML2.9, 4C, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	3.59	230	*e*PG	Pn	23 24 48.3	+6.3
KSH				Smax			
	comp=N,110nm,0.4s						
KSH				Smax			
	comp=E,110nm,0.6s						
MK31	Makanchi Array	5.31	21	⇑Pn	Pn	23 25 14.4	+8.0
	comp=E,0.1nm,0.2s,baz=203,slow=13,SNR=36						
MK31				⇑Pg	Pn	23 25 29.4	+23
	comp=E,0.5nm,0.6s,baz=203,slow=14,SNR=5.4						
MK31				⇑Sn	Sn	23 26 18.0	+11
	comp=E,0.7nm,0.5s,baz=200,slow=21,SNR=4.9						
MK31				⇑Lg		23 26 42.4	
	comp=E,1.5nm,0.6s,baz=199,slow=15,SNR=3.6						

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*IDC **15** 23:25:27.4±1.2, 18.31N×121.08E, mb3.5/5, mb1 3.8/5, mb1mx3.6/17, mbtmp3.5/5, Error ellipse: s-maj=42.9km s-min=23.9km az=66.0*

*MAN **15** 23:25:32.3, 18.49N×120.57E, h44^{km}, mb4.9, ML3.8, MS3.8*

MAN PASUQUIN ILOCOS NORTE INTENSITY II.

ISC 15 23:25:33.2±0.9**, 18.42N**±0.07×**120.61E**±0.09**, h44**^{km}**, n7, σ0^{s}95**/9**, mb3.4**/4**, 2C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	Callao Caves	1.35	122	⇑*e*P	P	23 25 56.2	+0.1
CVP				*e*S	S	23 26 14.0	+0.8
BCPH	Baguio City Da	2.03	181	⇑*i*P	P	23 26 05.2	-0.4
BCPH				*i* S	S	23 26 30.2	+0.3
CMAR	Chiang Mai Arr	20.56	274	P	P	23 30 12.1	+1.3
	1.3nm,0.7s,baz=80,slow=9.3,SNR=7.7						
SONM	Songino Array	31.55	342	P	P	23 31 53.7	+0.1
	0.4nm,0.7s,mb3.3,baz=169,slow=9.1,SNR=3.6						
WRA	Warramunga Arr	40.43	160	P	P	23 33 04.5	-4.7
	0.2nm,0.6s,mb3.0,baz=348,slow=8.7,SNR=11						
ASAR	Alice Springs	43.80	162	P	P	23 33 34.5	-2.3
	0.2nm,0.4s,mb3.2,baz=343,slow=7.1,SNR=4.0						
YKA	Yellowknife Ar	88.47	22	P	P	23 38 21.3	-0.4
	0.6nm,0.8s,mb3.9,baz=310,slow=4.0,SNR=7.9						

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*NEIC **16** 00:07:58.5±1.5, 8.17N×92.73E, mb3.9/1, Error ellipse: s-maj=42.3km s-min=16.2km az=74.0*

*IDC **16** 00:08:00.2±1.8, 8.21N×93.01E, h35^{km}±6^{km}, mb3.2/4, mb1 3.6/5, mb1mx3.4/18, mbtmp3.5/5, ML4.1/1, Error ellipse: s-maj=66.9km s-min=17.2km az=68.0*

ISC 16 00:07:58.2±4.1**, 8.2N**±0.2×**93.0E**±0.2**, h44**^{km}±39^{km}**, h38**^{km}±.5^{km}**:pP-P, n8, σ1^{s}30**/8**, mb3.5**/5**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.68	29	Pn	P	00 10 45.2	+0.1
	0.4nm,0.3s,baz=217,slow=18,SNR=4.7						
HYB	Hyderabad	16.77	304	*i* P	P	00 11 52.0	+0.4
LSA	Lhasa	21.42	356	*e*P	P	00 12 43.0	-1.5
	2.2nm,0.4s,mb3.8						
SONM	Songino Array	41.06	14	P	P	00 15 41.0	+1.9
	0.2nm,0.8s,mb2.8,baz=202,slow=7.8,SNR=2.2						
SONM				sP	sP	00 15 56.4	-0.2
	0.4nm,0.6s,baz=188,slow=9.1,SNR=3.4						
SONM				PcP	PcP	00 17 40.9	+1.9
	0.4nm,0.7s,baz=203,slow=4.8,SNR=3.4						
ZAL	Zalesovo	46.04	353	P	P	00 16 18.9	-0.5
	1.0nm,0.5s,mb4.0,baz=295,slow=6.5,SNR=6.7						
ZAL				pP	pP	00 16 30.2	-1.4
	2.1nm,0.7s,baz=278,slow=6.2,SNR=7.6						
ZAL	Zalesovo	46.04	353	P	P	00 16 18.9	-0.5
ZAL				pP	pP	00 16 30.2	-1.4
WRA	Warramunga Arr	49.39	125	P	P	00 16 45.8	-0.2
	0.3nm,0.5s,mb3.6,baz=305,slow=8.6,SNR=5.2						
WRA				pP	pP	00 16 56.8	-1.4
	0.4nm,0.4s,baz=306,slow=8.5,SNR=4.6						
ASAR	Alice Springs	51.02	129	P	P	00 16 58.3	0.0
	0.6nm,1.1s,mb3.5,baz=301,slow=7.1,SNR=4.5						
ASAR				pP	pP	00 17 09.2	-1.3
	0.5nm,0.7s,baz=306,slow=6.9,SNR=4.7						
ASAR				PcP	PcP	00 18 15.9	+1.9
	0.7nm,0.8s,baz=321,slow=3.5,SNR=5.2						
ASAR				pPcP		00 18 27.2	
	2.1nm,1.1s,baz=319,slow=4.0,SNR=5.1						

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*BJI **16** 00:16:04.1, 13.60N×93.00E, h30^{km}, mB4.4, mb4.3, Ms3.9, Msz3.9*

*NEIC **16** 00:16:04.2±0.6, 13.60N×92.96E, h30^{km}, mb4.4/5, Error ellipse: s-maj=12.3km s-min=11.4km az=142.0*

*IDC **16** 00:16:06.7±6.4, 13.70N×93.10E, h51^{km}±55^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.7/20, mbtmp3.9/13, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/29, Error ellipse: s-maj=38.8km s-min=19.3km az=53.0*

ISC 16 00:16:05.6±2.6**, 13.63N**±0.10×**93.1E**±0.1**, h57**^{km}±23^{km}**, n30, σ1^{s}21**/29**, mb4.1**/18**, MS3.8**/2**, 1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NST	Nakhon Sawan	7.11	72	P	P	00 17 50.4	+1.1
CM31	Chiang Mai Arr	7.39	49	*e*P	P	00 17 53.3	0.0
	15nm,0.6s						
CMAR	Chiang Mai Arr	7.39	49	P	P	00 17 51.6	-1.7
	1.2nm,0.3s,baz=238,slow=16,SNR=36						
CMAR				S	S	00 19 14.8	-1.7
	0.9nm,0.3s,baz=246,slow=30,SNR=5.7						
CMAR				LR	LR	00 21 28.4	
	comp=Z,265nm,20.7s,baz=228,slow=44						
NANT	Nan	8.93	54	P	Px	00 18 28.5	
HYB	Hyderabad	14.52	287	*e*P	Px	00 19 38.0	
LSA	Lhasa	16.10	354	P	P	00 19 52.5	+2.8
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	16.10	354	*e*P	P	00 19 50.4	+0.7
	comp=Z,9.7nm,0.7s						
GYA	Guiyang	18.02	43	⇓*i*P	P	00 20 16.6	+2.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
ENH	Enshi	22.43	40	*e*P	P	00 21 01.4	+0.7
	comp=Z,11nm,0.9s,mb4.3						
LZH	Lanzhou	24.36	21	*e*P	P	00 21 21.5	+2.0
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,108nm,4.5s						
LZH				LR	LR		
	comp=N,179nm,13.2s						
LZH				LR	LR		
	comp=Z,294nm,17.0s,MS3.8						
LZH	Lanzhou	24.36	21	*e*P	P	00 21 21.5	+2.0
	comp=Z,27nm,1.3s,mb4.5						
LZH				pP		00 21 26.1	
LZH				sP		00 21 29.8	
LZH				LR	LR		
	comp=Z,290nm,17.0s,MS3.8						
XAN	Xi’an	24.88	33	P	P	00 21 25.6	+1.0
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.5						
GTA	Gaotai	26.36	12	P	P	00 21 40.0	+1.7
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb3.9						
SONM	Songino Array	35.86	15	P	P	00 23 00.4	-1.4
	comp=Z,1.8nm,1.0s,mb3.9,baz=210,slow=6.5,SNR=9.5						
KURK	Kurchatov	38.82	345	*e*P	P	00 23 25.0	-1.5
	comp=Z,4.3nm,1.2s,mb4.0						
ZAL	Zalesovo	40.75	352	P	P	00 23 41.7	-0.8
	comp=Z,1.4nm,1.0s,mb3.5,baz=312,slow=11,SNR=6.5						
ZAL				LR	LR	00 44 34.9	
	comp=Z,116nm,20.1s,MS3.7,baz=261,slow=42						
ZAL	Zalesovo	40.75	352	P	P	00 23 41.7	-0.8
ZAL				LR	LR	00 44 34.9	
BVAR	Borovoye Array	43.26	340	P	P	00 24 02.0	-1.0

	comp=Z,0.6nm,0.7s,mb3.5,baz=191,slow=7.6,SNR=4.0						
GNI	Garni	49.80	311	P	P	00 24 59.0	+4.3
	comp=Z,1.9nm,0.5s,mb4.3,baz=120,slow=9.9,SNR=4.3						
ASAR	Alice Springs	54.46	133	P	P	00 25 29.6	-0.2
	comp=Z,1.2nm,0.5s,mb4.1,baz=316,slow=7.6,SNR=6.3						
BRTR	Keskin Array B	57.99	308	P	P	00 25 53.6	-1.2
	comp=Z,1.4nm,0.8s,mb4.1,baz=112,slow=6.7,SNR=6.8						
STKA	Stephens Creek	64.84	135	P	P	00 26 40.8	-0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=306,slow=8.7,SNR=3.0						
FINES	FINESS Array B	67.19	331	P	P	00 26 55.1	-0.4
	comp=Z,1.4nm,0.8s,mb4.0,baz=63,slow=4.3,SNR=4.4						
ARCES	ARCESS Array B	69.55	340	P	P	00 27 09.8	-0.3
	comp=Z,2.2nm,0.7s,mb4.2,baz=90,slow=6.1,SNR=4.4						
ARCES	ARCESS Array B	69.55	340	P	P	00 27 09.8	-0.3
GERES	GERESS Array B	72.91	317	P	P	00 27 31.2	+0.6
	comp=Z,1.0nm,0.8s,mb3.8,baz=270,slow=1.3,SNR=3.0						
NOA	NORSAR Array B	74.26	330	P	P	00 27 38.3	+0.1
	comp=Z,0.6nm,0.7s,mb3.6,baz=91,slow=5.7,SNR=2.9						
BOSA	Boshof	77.83	236	P	P	00 27 59.8	+0.8
ILAR	Eielson Array	89.82	22	P	P	00 28 59.5	+0.6
	comp=Z,0.5nm,0.7s,mb4.0,baz=306,slow=4.4,SNR=6.3						
VNDA	Vanda	98.73	168	P	P	00 29 36.0	-3.5
	comp=Z,8.8nm,1.1s,mb5.2						

IDC ***16*** *00:18:56.6±1.1, 6.10S×130.13E, mb4.0/5, mb1 4.2/7, mb1mx4.2/14, mbtmp4.1/7, ML4.0/2, Error ellipse: s-maj=64.6km s-min=20.9km az=59.0*

NEIC ***16*** *00:19:00.8±0.6, 6.01S×130.37E, h30^{km}, mb4.0/2, Error ellipse: s-maj=21.2km s-min=8.2km az=68.0*

ISC 16 00:19:07.8±2.0**, 6.37S**±0.09×**130.3E**±0.2**, h123**^{km}±21^{km}**, n14, σ1^{s}05**/21**, mb3.9**/5**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.65	161	⇑*i*P	P	00 20 45.3	+1.0
	13nm,0.2s						
KAKA				*e*S	S	00 21 55.9	-3.3
FITZ	Fitzroy Crossi	12.51	201	*e*P	P	00 22 03.0	+0.5
	3.2nm,0.4s						
FITZ				*e*S	S	00 24 09.4	-10
WRAB	Tennant Creek	14.05	164	*e*P	P	00 22 21.3	-1.2
	7.9nm,0.6s						
WRAB				*e*S	S	00 24 48.1	-7.6
WRA	Warramunga Arr	14.06	164	Pn	P	00 22 21.1	-1.5
	0.8nm,0.3s,baz=341,slow=13,SNR=24						
WRA				Sn	S	00 24 48.3	-7.6
	2.0nm,0.3s,baz=349,slow=21,SNR=9.2						
ASAR	Alice Springs	17.55	169	P	P	00 23 07.1	+0.9
	1.1nm,0.3s,baz=352,slow=10,SNR=54						
ASAR				S	S	00 26 15.1	-0.2
	0.5nm,0.3s,baz=357,slow=27,SNR=6.1						
ASAR	Alice Springs	17.55	169	P	P	00 23 07.1	+0.9
ASAR				S	S	00 26 15.1	-0.2
ASPA	Alice Springs	17.55	169	*e*P	P	00 23 07.6	+1.3
ASPA				*e*S	S	00 26 15.2	0.0
CTA	Charters Tower	20.66	133	P	P	00 23 41.1	+1.5
	9.4nm,1.1s,baz=303,slow=13,SNR=3.8						
CTAO	Charters Tower	20.66	133	*e*P	P	00 23 41.1	+1.5
	3.5nm,0.6s						
CMAR	Chiang Mai Arr	39.54	309	P	P	00 26 29.1	+0.6
	1.2nm,0.6s,mb3.9,baz=144,slow=7.9,SNR=6.2						
SONM	Songino Array	57.93	341	P	P	00 28 48.9	-0.6
	0.6nm,0.3s,mb4.1,baz=163,slow=6.6,SNR=16						
ZAL	Zalesovo	71.14	334	P	P	00 30 13.6	-1.3
	1.0nm,0.9s,mb3.6,baz=326,slow=22,SNR=5.4						
KURK	Kurchatov	72.13	328	*e*P	P	00 30 20.3	-0.4
	1.6nm,0.6s,mb4.0						
BVAR	Borovoye Array	77.68	328	P	P	00 30 52.8	+0.5
	0.9nm,0.6s,mb3.7,baz=135,slow=8.4,SNR=5.4						

NEIC ***16*** *00:20:54.7±2.9, 23.06S×179.18E, h551^{km}±31^{km}, mb4.8/3, Error ellipse: s-maj=26.5km s-min=15.8km az=215.0*

IDC ***16*** *00:20:55.7±1.6, 23.02S×179.02E, h554^{km}±15^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.6/18, mbtmp4.6/10, Error ellipse: s-maj=18.9km s-min=12.5km az=174.0*

ISC 16 00:20:55.7±1.8**, 23.16S**±0.08×**179.0E**±0.1**, h565**^{km}±24^{km}**, n51, σ1^{s}00**/30**, mb4.1**/11**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	Puketiti	14.88	182	SN	S	00 26 34.9	+0.6
PUZ	Puketiti	14.88	182	SN	S	00 26 34.9	+0.6
URZ	Urewera	15.14	186	P	P	00 24 04.5	-1.3
	5.5nm,0.3s,baz=1.6,slow=4.8,SNR=45						
URZ				S	S	00 26 40.4	+1.4
	3.8nm,0.3s,baz=216,slow=23,SNR=17						
MWZ	Matawai	15.18	184	SN	S	00 26 38.0	-1.7
MWZ	Matawai	15.18	184	SN	S	00 26 38.0	-1.7
QRZ	Quartz Range	18.44	196	*e*PN	P	00 24 38.6	+1.2
QRZ	Quartz Range	18.44	196	*e*PN	P	00 24 38.6	+1.2
NNZ	Nelson	18.61	193	PN	P	00 24 38.7	-0.4
NNZ	Nelson	18.61	193	PN	P	00 24 38.7	-0.4
THZ	Tophouse	19.24	194	PN	P	00 24 44.7	-0.2
THZ	Tophouse	19.24	194	PN	P	00 24 44.7	-0.2
KHZ	Kahutara	19.74	192	*e*PN	P	00 24 47.7	-1.9
KHZ	Kahutara	19.74	192	*e*PN	P	00 24 47.7	-1.9
RPZ	Rata Peaks	21.52	196	P	P	00 25 06.3	+0.3
	17nm,0.9s,mb4.7,baz=22,slow=5.4,SNR=3.0						
ARMA	Armidale	25.43	248	*e*P	P	00 25 43.0	+2.0
CTA	Charters Tower	30.54	269	P	P	00 26 26.2	+0.8
	31nm,0.7s,mb5.0,baz=96,slow=10,SNR=40						
CTAO	Charters Tower	30.54	269	*e*P	P	00 26 26.5	+1.1
	22nm,0.6s,mb4.9						
PMG	Port Moresby	33.37	289	P	P	00 26 49.4	+0.1
	5.6nm,0.6s,mb4.3,baz=105,slow=12,SNR=3.5						
STKA	Stephens Creek	34.14	247	P	P	00 26 56.5	+1.0
	2.6nm,0.5s,mb4.0,baz=84,slow=9.8,SNR=4.3						
ASAR	Alice Springs	41.24	260	P	P	00 27 53.2	-0.2
	5.9nm,0.8s,mb4.2,baz=87,slow=8.8,SNR=16						
ASAR				PcP	PcP	00 29 38.3	-0.9
	2.7nm,0.7s,baz=105,slow=3.7,SNR=6.2						
ASAR				ScP		00 32 38.9	
	1.6nm,0.8s,baz=102,slow=4.3,SNR=6.3						
ASAR				S	S	00 33 27.4	-0.6
	1.8nm,0.9s,baz=96,slow=15,SNR=6.0						
WRAB	Tennant Creek	41.52	266	*e*P	P	00 27 54.6	-1.2
	7.9nm,0.8s,mb4.3						
WRA	Warramunga Arr	41.53	266	P	P	00 27 54.9	-1.0
	2.8nm,0.6s,mb4.0,baz=99,slow=8.2,SNR=5.7						
WRA				ScP		00 32 39.9	
	1.9nm,0.8s,baz=99,slow=4.1,SNR=7.1						
WRA				S	S	00 33 31.2	-1.0
	2.8nm,1.0s,baz=95,slow=15,SNR=8.9						
VNDA	Vanda	55.04	184	P	P	00 29 36.2	+0.3
	1.3nm,0.6s,mb3.4,baz=348,slow=8.3,SNR=7.0						
VNDA	Vanda	55.04	184	P	P	00 29 36.2	+0.3
QSPA	South Pole Qui	66.92	180	⇓*i*P	P	00 30 54.1	+0.7
	29nm,0.7s,mb4.9						
YBH	Yreka Blue Hor	84.11	40	P	P	00 32 28.5	0.0
	0.4nm,0.4s,mb3.3,baz=145,slow=10,SNR=3.2						
TXAR	Lajitas Array	90.84	58	P	P	00 33 00.6	0.0
	0.4nm,0.7s,mb3.4,baz=198,slow=7.9,SNR=4.4						
BVAR	Borovoye Array	119.27	319	PKP	PKPdf	00 38 40.6	-0.1
	1.5nm,0.5s,baz=90,slow=1.5,SNR=5.3						
BDFB	Brasilia	120.00	126	PKP	PKPdf	00 38 42.8	-0.2
	1.3nm,0.4s,baz=198,slow=6.4,SNR=3.3						
ARCES	ARCESS Array B	130.97	348	PKP	PKPdf	00 39 02.2	-0.5
	1.9nm,0.7s,baz=90,slow=1.2,SNR=4.1						
FINES	FINESS Array B	137.44	341	PKP	PKPdf	00 39 14.0	-0.9
	2.4nm,1.0s,baz=56,slow=6.9,SNR=3.4						
HFS	Hagfors	141.63	348	PKhKP		00 39 17.8	
	4.5nm,1.0s,baz=90,slow=3.0,SNR=4.3						
AKASG	Malin Array Be	143.84	327	PKP	PKPdf	00 39 25.6	-0.8
	5.4nm,0.6s,baz=42,slow=4.1,SNR=22						
AKASG				SKPbc		00 42 14.3	
	0.3nm,0.4s,baz=60,slow=2.1,SNR=5.4						
ASF	Jabal al Asfar	145.38	293	PKPbc	PKPbc	00 39 33.1	+2.3
	4.1nm,0.7s,baz=122,slow=4.5,SNR=6.3						
BRTR	Keskin Array B	146.38	308	PKPbc	PKPbc	00 39 34.5	+1.5
	2.5nm,0.6s,baz=121,slow=2.7,SNR=8.3						
EIL	Elat	147.23	289	PKPbc	PKPdf	00 39 38.0	+5.2
	5.3nm,0.9s,baz=164,slow=5.5,SNR=4.9						
EKA	Eskdalemuir Ar	147.83	2	PKPbc	PKPdf	00 39 36.6	+3.7
	2.3nm,0.6s,baz=315,slow=2.4,SNR=6.5						
KOLS	Kolonicke sedl	148.37	330	*e*PKP	PKPdf	00 39 46.2	+12
OKC	Ostrava-Krasne	149.42	335	*e*PKPdf	PKPdf	00 39 37.3	+1.7
OKC				*e*PKPbc	PKPdf	00 39 41.8	+6.2
KECS	Kecovo	149.50	331	*e*	PKPdf	00 39 55.1	+19
UPC	Upice	149.64	338	*e*PKPbc	PKPdf	00 39 42.6	+6.7
DPC	Dobruska-Polom	149.66	338	*e*PKPbc	PKPdf	00 39 42.7	+6.7
CLL	Collm	149.87	342	⇓*i*PKP1	PKPdf	00 39 42.8	+6.5
BRG	Berggiesshubel	149.99	341	*i* PKP	PKPdf	00 39 43.3	+6.8
VYHS	Vyhne	150.20	333	*e*PKP	PKPdf	00 39 43.5	+6.6
PRU	Pruhonice	150.57	339	*e*PKPdf	PKPdf	00 39 38.7	+1.3
PRU				*e*PKPbc	PKPdf	00 39 44.4	+7.0
NKC	Novy Kostel	150.99	342	*e*PKPbc	PKPdf	00 39 45.5	+7.5
KHC	Kasperske Hory	151.63	340	*e*PKPbc	PKPdf	00 39 44.6	+5.7
GERES	GERESS Array B	151.84	339	PKPbc	PKPdf	00 39 47.0	+7.8
	1.8nm,0.7s,baz=45,slow=1.9,SNR=4.9						
DBIC	Dimbokro	163.20	167	PKP	PKPdf	00 39 54.4	+0.5
	2.3nm,0.6s,baz=220,slow=4.2,SNR=6.4						
DBIC				PKPab	PKPab	00 40 49.9	-0.4
	4.0nm,0.9s,baz=225,slow=4.3,SNR=3.9						
DBIC	Dimbokro	163.20	167	PKP	PKPdf	00 39 54.4	+0.5
DBIC				PKPab	PKPab	00 40 49.9	-0.4

MOS ***16*** *00:25:20.2±0.9, 5.30N×94.84E, h33^{km}, mb5.0/25, Error ellipse: s-maj=11.8km s-min=6.5km az=110.1*

BJI ***16*** *00:25:20.2, 4.97N×94.77E, h49^{km}, mB4.9, mb4.9, Ms4.1, Msz3.8*

NEIC ***16*** *00:25:21.4±0.2, 5.29N×94.87E, h30^{km}, mb4.8/27, Error ellipse: s-maj=7.5km s-min=5.2km az=51.0*

IDC ***16*** *00:25:24.6±0.6, 5.32N×94.85E, h56^{km}±4^{km}, mb4.3/19, mb1 4.4/20, mb1mx4.4/24, mbtmp4.6/20, MS3.9/7, Ms1 3.9/7, ms1mx3.5/23, Error ellipse: s-maj=24.0km s-min=11.7km az=43.0*

ISC 16 00:25:22.1±0.3**, 5.23N**±0.05×**94.86E**±0.05**, h51**^{km}**, h51**^{km}±2.9^{km}**:pP-P, n148, σ1^{s}04**/145**, mb4.8**/66**, MS3.9**/17**, 10C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	6.04	71	P	P	00 26 54.0	+3.0
	466nm,1.0s						
CM31	Chiang Mai Arr	13.74	17	P	P	00 28 34.8	-1.3
	13nm,0.3s						
CMAR	Chiang Mai Arr	13.74	17	P	P	00 28 39.2	+3.1
	1.3nm,0.3s,baz=211,slow=12,SNR=24						
CMAR				LR	LR	00 33 45.3	
	comp=Z,225nm,19.5s,baz=195,slow=37						
CMAR				ScP		00 37 26.9	
	0.9nm,0.3s,baz=239,slow=2.7,SNR=4.9						
NANT	Nan	14.64	22	P	P	00 28 52.0	+4.1
HYB	Hyderabad	20.04	309	*i* P	P	00 29 54.0	+0.4
QIZ	Qiongzhong	20.04	46	*e*P	P	00 29 55.8	+2.1
QIZ				LR	LR		
	comp=N,373nm,21.1s,MS3.9						
QIZ				LR	LR		
	comp=E,371nm,18.1s,MS3.9						
QIZ				LR	LR		
	comp=Z,474nm,18.1s,MS3.9						
KMI	Kunming	21.18	20	P	P	00 30 05.4	0.0
KMI				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
KMI				LR	LR		
	comp=N,306nm,17.1s,MS3.9						
KMI				LR	LR		
	comp=E,282nm,14.7s,MS3.9						
KMI				LR	LR		
	comp=Z,289nm,24.2s						
KMI	Kunming	21.18	20	P	P	00 30 05.4	0.0
	comp=Z,20nm,0.8s,mb4.5						
KMI				pP		00 30 12.2	
KMI				S	S	00 33 56.2	+3.3
KMI				LR	LR		
	comp=Z,290nm,24.2s,MS3.6						
JIRN	Jiri	23.79	341	*e*P	P	00 30 30.4	-0.6
	comp=Z,36nm,0.6s,mb5.0						
GYA	Guiyang	23.94	27	⇓*i*P	P	00 30 34.8	+2.3
GYA				AP		00 30 41.9	
GYA				S	S	00 34 54.6	+12
GYA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.0						
GYA				AMB	AMB		
	comp=Z,70nm,3.9s						
GYA				LR	LR		
	comp=N,570nm,16.8s,MS4.2						
GYA				LR	LR		
	comp=E,340nm,14.1s,MS4.2						
GYA				LR	LR		
	comp=Z,540nm,15.0s,MS4.2						
PKI	Pulchoki	23.97	339	*e*P	P	00 30 32.5	-0.3
DMN	Daman	24.12	338	*e*P	P	00 30 34.3	0.0
	comp=Z,23nm,0.6s,mb4.8						
KKN	Kakani	24.22	339	*e*P	P	00 30 35.0	-0.3
LSA	Lhasa	24.59	352	P	P	00 30 40.8	+1.9
LSA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
LSA	Lhasa	24.59	352	*e*P	P	00 30 39.6	+0.7
LSA				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.0						
LSA	Lhasa	24.59	352	*e*P	P	00 30 39.5	+0.7
	comp=Z,27nm,0.6s,mb5.0						
GKN	Gorkha	24.65	338	*e*P	P	00 30 39.5	+0.1
	comp=Z,30nm,0.3s,mb5.3						
KOLN	Koldanda	24.85	336	*e*P	P	00 30 41.0	-0.4
	comp=Z,76nm,0.8s,mb5.3						
CD2	Chengdu	26.88	17	P	P	00 30 59.6	-0.7
CD2				AMB	AMB		
	comp=Z,25nm,1.2s,mb4.6						
ENH	Enshi	28.47	27	*e*P	P	00 31 13.9	-0.7
	comp=Z,10nm,0.6s,mb4.6						
XAN	Xi'an	31.50	23	P	P	00 31 40.5	-1.0
XAN				AMB	AMB		
	comp=Z,34nm,1.0s,mb5.1						
LZH	Lanzhou	31.80	14	⇑P	P	00 31 42.5	-1.6
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb4.9						
LZH	Lanzhou	31.80	14	⇑P	P	00 31 42.5	-1.6
LZH				*PP	pP	00 31 50.2	-7.1
LZH				*SP	sP	00 31 56.3	-7.4
LZH				pmax	pmax		
	comp=Z,29nm,1.5s,mb4.9						
LZH	Lanzhou	31.80	14	⇑P	P	00 31 42.5	-1.6
	comp=Z,29nm,1.5s,mb4.9						
LZH				pP	pP	00 31 50.2	-7.1
LZH				sP	sP	00 31 56.3	-7.4
GTA	Gaotai	34.32	7	P	P	00 32 05.8	-0.1
GTA				AP	pP	00 32 18.6	-0.6
GTA				XP	sP	00 32 23.5	-2.1
GTA				PCP	PcP	00 34 42.0	+0.7
GTA				SCP		00 38 22.3	
GTA				AMB	AMB		
	comp=Z,22nm,1.2s,mb5.0						
GTA				AMB	AMB		
	comp=Z,111nm,5.0s						
GTA				LR	LR		
	comp=N,147nm,22.4s,MS3.8						
GTA				LR	LR		
	comp=E,140nm,24.0s,MS3.8						
GTA				LR	LR		
	comp=Z,190nm,20.1s,MS3.8						
SSE	Sheshan	35.69	41	*e*P	P	00 32 16.3	-1.3
SSE				S	S	00 37 55.3	+5.4
SSE				XS		00 38 08.8	
SSE				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,101nm,2.8s,mb5.3						
SSE				LR	LR		
	comp=N,112nm,21.8s,MS3.7						
SSE				LR	LR		
	comp=E,93nm,21.8s,MS3.7						
SSE				LR	LR		
	comp=Z,158nm,20.4s,MS3.8						
SSE	Sheshan	35.69	41	*e*P	P	00 32 16.2	-1.4
	comp=Z,18nm,0.8s,mb5.0						
SSE				sP	sP	00 32 28.7	-8.6
SSE				S	S	00 37 55.2	+5.3
SSE				sS		00 38 08.7	
SSE				SS	SS	00 40 28.8	+17
SSE				LR	LR		
	comp=Z,160nm,20.4s,MS3.8						
TIA	Tai'an	37.00	31	*e*P	P	00 32 29.1	+0.4
FITZ	Fitzroy Crossi	38.20	128	⇑*i*P	P	00 32 38.6	-0.2
	comp=Z,11nm,0.7s,mb4.7						
JOW	Kunigami	38.42	52	LR	LR	00 48 25.2	
	comp=Z,250nm,19.8s,MS4.0,baz=302,slow=36						
HHC	Hu-ho-hao-te	38.50	21	⇑P	P	00 32 42.1	+1.0
HHC				AP	pP	00 32 51.6	-2.9
HHC				XP	sP	00 32 55.8	-5.0
HHC				PP	PP	00 34 17.3	+3.9
HHC				PCP	PcP	00 34 51.0	-2.8
HHC				SCP		00 38 35.9	
HHC				S	S	00 38 40.0	+7.2
HHC				XS		00 39 00.0	
HHC				SCS	ScS	00 42 45.5	+0.4
HHC				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,86nm,3.7s						
HHC				LR	LR		
	comp=N,124nm,18.0s,MS4.2						
HHC				LR	LR		
	comp=E,287nm,15.6s,MS4.2						
HHC				LR	LR		
	comp=Z,291nm,18.0s,MS4.1						
WMQ	Urumqi	38.95	352	*e*P	P	00 32 45.6	+0.8
WMQ				XP	sP	00 32 59.0	-5.4
WMQ				PP	PP	00 34 20.0	+1.4
WMQ				S	S	00 38 42.0	+2.5
WMQ				SS	SS	00 41 27.0	+2.0
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,94nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=E,175nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,91nm,18.0s,MS3.6						
BJT	Baijiatuau	39.60	26	*e*P	P	00 32 50.6	+0.3
BJT				pmax	pmax		
	comp=Z,28nm,0.8s						
BJT	Baijiatuau	39.60	26	*e*P	P	00 32 50.5	+0.3
	comp=Z,28nm,0.8s,mb5.0						
BJI	Beijing	39.62	26	*e*P	P	00 32 52.0	+1.6
BJI				AMB	AMB		
	comp=Z,46nm,0.9s,mb5.2						
BJI				LR	LR		
	comp=Z,186nm,24.1s,MS3.8						
BJI	Beijing	39.62	26	*e*P	P	00 32 52.0	+1.6
	comp=Z,46nm,0.9s,mb5.2						
BJI				S	tx	00 39 27.9	
BJI				LR	LR		
	comp=Z,190nm,24.1s,MS3.9						
KZA	Kyzart	40.64	337	P	P	00 33 00.6	+1.8
	SNR=7.5						
UCH	Uchtor	41.05	337	P	P	00 33 03.5	+1.3
	SNR=18						
TKM2	Tokmak 2	41.23	338	P	P	00 33 04.4	+0.7
	SNR=5.9						
KBK	Karagaybulak	41.25	338	P	P	00 33 05.4	+1.6
	SNR=18						
AML	Almayashu	41.30	336	P	P	00 33 05.6	+1.4
	SNR=18						
KAKA	Kakadu	41.38	116	*e*P	P	00 33 04.7	-0.5
	comp=Z,8.7nm,0.9s,mb4.4						
AAK	Ala-Archa	41.40	337	P	P	00 33 07.4	+2.3
	SNR=9.0						
AAK	Ala-Archa	41.40	337	*e*P	P	00 33 04.2	-0.9
AAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
AAK	Ala-Archa	41.40	337	*e*P	P	00 33 04.2	-0.9
	comp=Z,12nm,0.8s,mb4.6						
CHMS	Chumysh	41.62	338	P	P	00 33 07.8	+0.9
	SNR=5.9						
EKS2	Erkin-Say	41.71	336	P	P	00 33 08.8	+1.1
	SNR=6.8						
USP	Ospenovka	41.94	338	P	P	00 33 10.3	+0.7
	SNR=21						
SONM	Songino Array	43.59	11	P	P	00 33 22.8	-0.2
	comp=Z,9.7nm,0.7s,mb4.6,baz=191,slow=8.1,SNR=96						
SONM				PcP	PcP	00 35 10.6	+0.2
	comp=Z,3.1nm,0.6s,baz=197,slow=3.8,SNR=15						
SONM				pPcP		00 35 25.5	
	comp=Z,4.4nm,0.7s,baz=202,slow=3.6,SNR=7.5						
SONM				ScP		00 38 55.7	
	comp=Z,0.6nm,1.0s,baz=225,slow=5.2,SNR=3.8						
ULN	Ulaanbaatar	43.75	12	*e*P	P	00 33 23.5	-0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
ULN	Ulaanbaatar	43.75	12	*e*P	P	00 33 23.5	-0.7
	comp=Z,4.9nm,0.6s,mb4.4						
ZAK	Zakamensk	45.55	8	*e*P	P	00 33 38.6	-0.1
ZAK				*e*		00 35 16.6	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
WRA	Warramunga Arr	46.17	124	P	P	00 33 44.0	0.0
	comp=Z,35nm,0.7s,mb5.4,baz=303,slow=9.1,SNR=167						
WRAB	Tennant Creek	46.18	124	*c i*P	P	00 33 44.6	+0.6
WRAB	Tennant Creek	46.18	124	*e*P	P	00 33 44.5	+0.5
	comp=Z,67nm,0.8s,mb5.6						
TLY	Talaya	46.87	7	*i* P	P	00 33 49.4	+0.4
TLY				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
CN2	Changchun	46.91	30	*e*P	P	00 33 49.8	+0.4
CN2				*e*AP	pP	00 33 58.9	-4.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
KURK	Kurchatov	47.33	346	*c i*P	P	00 33 52.7	0.0
KURK	Kurchatov	47.33	346	*e*P	P	00 33 52.6	-0.1
	comp=Z,26nm,0.8s,mb5.2						
ASPA	Alice Springs	47.69	129	*e*P	P	00 33 56.3	+0.4
ASAR	Alice Springs	47.70	129	P	P	00 33 56.0	+0.1
	comp=Z,11nm,0.7s,mb5.0,baz=299,slow=7.6,SNR=52						
ASAR				LR	LR	00 56 58.7	
	comp=Z,72nm,19.1s,MS3.7,baz=288,slow=40						
HIA	Hailar	48.68	22	*e*P	P	00 34 03.0	-0.2
HIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HIA	Hailar	48.68	22	*e*P	P	00 34 03.0	-0.2
	comp=Z,11nm,0.8s,mb4.9						
ZAL	Zalesovo	49.25	352	P	P	00 34 06.7	-0.8
	comp=Z,16nm,0.5s,mb5.4,baz=303,slow=5.8,SNR=120						
MDJ	Mudanjiang	49.62	32	P	P	00 34 09.8	-0.7
MDJ				PCS		00 39 26.1	
MDJ				S	S	00 41 17.4	+3.6
MDJ				SS	SS	00 44 49.8	+7.2
MDJ				AMB	AMB		
	comp=Z,11nm,1.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,114nm,4.1s						
MDJ				LR	LR		
	comp=N,20nm,21.9s,MS3.7						
MDJ				LR	LR		
	comp=E,81nm,22.7s,MS3.7						
MDJ				LR	LR		
	comp=Z,107nm,24.4s,MS3.8						
NVS	Novosibirsk	50.35	351	*e*P	P	00 34 14.3	-1.6
NVS				*e*S	S	00 41 45.4	+22
NVS				pmax	pmax		
	comp=N,8.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.2						
NVS				smax			
	comp=N,9.0nm,1.6s						
NVS				smax			
	comp=E,21nm,1.6s						
RAYN	Ar Rayn	50.85	296	P	P	00 34 20.2	0.0
	comp=E,30nm,0.9s,mb5.2,SNR=7.5						
BVAR	Borovoye Array	51.71	341	P	P	00 34 25.6	-0.6
	comp=E,9.5nm,0.6s,mb4.9,baz=149,slow=8.6,SNR=57						
BVAR				pP	pP	00 34 39.4	-0.6
	comp=E,2.6nm,0.7s,baz=3.2,slow=27,SNR=6.8						
BRVK	Borovoye	51.77	341	*e*P	P	00 34 25.9	-0.8
BRVK				*e**PP	pP	00 34 37.5	-3.0
BRVK				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
BRVK	Borovoye	51.77	341	*e*P	P	00 34 25.9	-0.8
	comp=Z,16nm,0.8s,mb5.0						
BRVK				*e*pP	pP	00 34 37.5	-2.9
KLR	Kul'dur	53.81	29	*e*P	P	00 34 38.8	-3.1
PMG	Port Moresby	54.11	105	P	P	00 34 44.9	+0.3
	comp=Z,10nm,0.6s,mb5.0,baz=338,slow=4.1,SNR=6.3						
BOD	Bodaibo	54.55	12	⇓*i*P	P	00 34 46.1	-1.1
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
CTA	Charters Tower	56.42	118	P	P	00 35 01.3	+0.1
	comp=Z,6.7nm,0.8s,mb4.7,baz=288,slow=9.1,SNR=5.6						
CTAO	Charters Tower	56.42	118	P	P	00 34 58.7	-2.5
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
CTAO	Charters Tower	56.42	118	P	P	00 34 58.7	-2.5
	comp=Z,8.4nm,0.9s,mb4.8						
GNI	Garni	56.80	315	P	P	00 35 03.5	-0.2
	comp=Z,3.4nm,0.7s,mb4.5,baz=13,slow=6.6,SNR=5.5						
ASAJ	Asahikawa	56.96	39	P	P	00 35 08.0	+3.2
	comp=Z,7.5nm,0.9s,mb4.7,baz=226,slow=17,SNR=3.7						
ASAJ				LR	LR	00 58 35.6	

	comp=Z,79nm,21.6s,MS3.8,baz=207,slow=35						
STKA	**Stephens Creek**	**57.78**	**133**	*e*P	**P**	**00 35 10.8**	**+0.1**
	comp=Z,7.9nm,2.0s,mb4.4						
STKA	**Stephens Creek**	**57.78**	**133**	P	**P**	**00 35 10.9**	**+0.1**
	comp=Z,6.6nm,1.0s,mb4.6,baz=256,slow=4.5,SNR=5.0						
KMBO	**Kilima Mbogo**	**57.88**	**265**	P	**P**	**00 35 12.6**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMBO	**Kilima Mbogo**	**57.88**	**265**	P	**P**	**00 35 12.2**	**+0.5**
	comp=Z,1.8nm,1.1s,mb4.0,baz=237,slow=22,SNR=3.5						
KMBO				pP	pP	00 35 27.3	+1.6
	comp=Z,4.1nm,0.8s,baz=54,slow=7.5,SNR=7.2						
KMBO				LR	LR	00 54 56.7	
	comp=Z,155nm,21.0s,MS4.1,baz=100,slow=31						
KMBO	**Kilima Mbogo**	**57.88**	**265**	P	**P**	**00 35 12.6**	**+0.9**
	comp=Z,6.0nm,1.0s,mb4.6						
SVE	**Sverdlovsk**	**58.11**	**339**	⇑*e*P	**P**	**00 35 11.9**	**-0.7**
SVE				*e*	pP	00 35 23.0	-3.7
SVE				*e*		00 36 10.5	
SVE				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
KIV	**Kislovodsk**	**59.76**	**319**	*e*P	**P**	**00 35 21.7**	**-2.5**
KIV				pmax	pmax		
	comp=E,12nm,1.1s						
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
EIL	**Elat**	**61.37**	**301**	LR	LR	01 03 01.6	
	comp=Z,103nm,18.5s,MS4.0,baz=250,slow=37						
YAK	**Yakutsk**	**62.27**	**18**	*i* P	**P**	**00 35 39.7**	**-1.3**
YAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3						
MBAR	**Mbarara**	**64.30**	**267**	*e*P	**P**	**00 35 55.9**	**+0.8**
MBAR				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
MBAR	**Mbarara**	**64.30**	**267**	*e*P	**P**	**00 35 55.9**	**+0.8**
	comp=Z,11nm,1.3s,mb4.7						
BRTR	**Keskin Array B**	**64.70**	**312**	P	**P**	**00 35 55.4**	**-1.9**
	comp=Z,3.2nm,0.7s,mb4.5,baz=121,slow=7.3,SNR=12						
BRTR				pP	pP	00 36 11.9	+0.3
	comp=Z,2.3nm,0.7s,baz=127,slow=6.2,SNR=4.2						
OBN	**Obninsk**	**67.99**	**328**	*i* P	**P**	**00 36 15.9**	**-1.9**
OBN				*i*	pP	00 36 31.6	-0.7
OBN				*i*		00 38 44.3	
OBN				*e*S	S	00 45 06.6	-5.1
OBN				*e*SS	SS	00 49 30.6	-5.2
OBN				pmax	pmax		
	comp=Z,37nm,2.4s,mb5.0						
TIXI	**Tiksi**	**69.67**	**11**	*e*P	**P**	**00 36 26.6**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,106nm,18.0s,MS4.1						
CFR	**Carcaliu**	**69.98**	**316**	⇑P	**P**	**00 36 30.0**	**-0.3**
AKASG	**Malin Array Be**	**70.66**	**322**	P	**P**	**00 36 32.4**	**-2.0**
	comp=Z,6.0nm,1.0s,mb4.5,baz=89,slow=4.5,SNR=11						
AKASG				pP	pP	00 36 49.9	+1.1
	comp=Z,2.4nm,0.7s,baz=90,slow=4.5,SNR=3.4						
VRI	**Vrincioaia**	**71.10**	**317**	⇑P	**P**	**00 36 37.1**	**0.0**
MLR	**Muntele Rosu**	**71.56**	**316**	⇓P	**P**	**00 36 39.9**	**+0.1**
JOF	**Joensuu**	**73.53**	**335**	*e*p	**P**	**00 36 49.3**	**-1.8**
	comp=Z,2.4nm,0.6s,mb4.3						
LBTB	**Lobatse**	**73.63**	**242**	*e*P	**P**	**00 36 52.8**	**+0.3**
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
LBTB	**Lobatse**	**73.63**	**242**	*e*P	**P**	**00 36 52.8**	**+0.3**
	comp=Z,2.6nm,0.7s,mb4.3						
KWP	**Kalwaria**	**74.50**	**320**	*e*P	**P**	**00 36 57.1**	**0.0**
KWP				*e*		00 39 37.9	
KOLS	**Kolonicke sedl**	**74.66**	**319**	*e*P	**P**	**00 36 57.8**	**-0.1**
KOLS				*e*		00 37 05.3	
BOSA	**Boshof**	**74.81**	**239**	*e*P	**P**	**00 37 01.5**	**+2.2**
BOSA				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
BOSA	**Boshof**	**74.81**	**239**	*e*P	**P**	**00 37 01.5**	**+2.2**
	comp=Z,14nm,1.2s,mb4.8						
SUW	**Suwalki**	**75.06**	**325**	*e*P	**P**	**00 37 10.9**	**+11**
SUW				*e*		00 39 27.6	
FINES	**FINESS Array B**	**75.37**	**332**	P	**P**	**00 37 01.2**	**-0.6**
	comp=Z,1.7nm,0.5s,mb4.2,baz=97,slow=5.5,SNR=15						
KAF	**Kangasniemi**	**75.46**	**333**	*e*p	**P**	**00 37 01.1**	**-1.2**
	comp=Z,2.0nm,0.6s,mb4.2						
KAF	**Kangasniemi**	**75.46**	**333**	*e*P	**P**	**00 37 01.1**	**-1.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
KECS	**Kecovo**	**75.76**	**319**	*e*P	**P**	**00 37 04.4**	**+0.2**
KECS				*e*	pP	00 37 17.4	-1.4
NIE	**Niedzica**	**76.00**	**320**	*e*P	**P**	**00 37 05.2**	**-0.4**
OJC	**Ojcow**	**76.45**	**320**	*e*P	**P**	**00 37 08.0**	**-0.1**
VYHS	**Vyhne**	**76.84**	**318**	*e*P	**P**	**00 37 09.9**	**-0.5**
OKC	**Ostrava-Krasne**	**77.46**	**320**	*e*P	**P**	**00 37 14.0**	**+0.2**
KEV	**Kevo**	**77.55**	**341**	*e*p	**P**	**00 37 05.9**	**-8.0**
	comp=Z,6.4nm,0.7s,mb4.7						
KEV	**Kevo**	**77.55**	**341**	*e*P	**P**	**00 37 05.9**	**-8.0**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ZST	**Bratislava**	**77.96**	**318**	*e*P	**P**	**00 37 16.9**	**+0.3**
ZST				*e*	pP	00 37 32.4	+1.2
ARCES	**ARCESS Array B**	**77.98**	**340**	P	**P**	**00 37 16.6**	**+0.3**
	comp=Z,6.3nm,0.8s,mb4.6,baz=101,slow=6.8,SNR=40						
ARE0	**ARCESS Array S**	**77.98**	**340**	*e*P	**P**	**00 37 14.8**	**-1.5**
BILL	**Bilibino**	**78.27**	**21**	*e*P	**P**	**00 37 17.1**	**-0.8**
BILL				*i*		00 40 20.8	
BILL				*e*SS	SS	00 52 11.5	-2.0
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.3						
DPC	**Dobruska-Polom**	**78.68**	**320**	*e*P	**P**	**00 37 21.1**	**+0.6**
KSP	**Ksiaz**	**78.75**	**321**	*e*P	**P**	**00 37 21.5**	**+0.6**
FX1	**Attu Island--F**	**78.79**	**37**	*e*P	**P**	**00 37 19.3**	**-1.8**
UPC	**Upice**	**78.89**	**320**	*e*P	**P**	**00 37 21.9**	**+0.2**
BOJS	**Bojanci**	**79.01**	**315**	*i* P	**P**	**00 37 22.5**	**+0.1**
PERS	**Pernice**	**79.18**	**316**	*e*P	**P**	**00 37 23.5**	**+0.2**
LJU	**Ljubljana**	**79.55**	**316**	*e*P	**P**	**00 37 25.8**	**+0.5**
PRU	**Pruhonice**	**79.79**	**320**	*e*P	**P**	**00 37 26.5**	**0.0**
GERES	**GERESS Array B**	**80.27**	**319**	P	**P**	**00 37 29.3**	**+0.2**
	comp=Z,7.6nm,0.7s,mb4.7,baz=100,slow=5.4,SNR=58						
KHC	**Kasperske Hory**	**80.36**	**319**	*e*P	**P**	**00 37 29.8**	**+0.2**
CLL	**Collm**	**80.85**	**321**	P	**P**	**00 37 35.0**	**+2.8**
GRA1	**Grafenberg Arr**	**81.92**	**319**	*e*P	**P**	**00 37 38.1**	**+0.3**
	comp=Z,8.0nm,1.0s,mb4.6						
GRF	**Grafenberg Arr**	**81.92**	**319**	*e*P	**P**	**00 37 38.1**	**+0.3**
GRF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GRF	**Grafenberg Arr**	**81.92**	**319**	*e*P	**P**	**00 37 38.1**	**+0.3**
GRF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GRF	**Grafenberg Arr**	**81.92**	**319**	*e*P	**P**	**00 37 38.1**	**+0.3**
	comp=Z,8.0nm,1.0s,mb4.6						
NOA	**NORSAR Array B**	**82.37**	**331**	P	**P**	**00 37 39.7**	**-0.1**
	comp=Z,0.9nm,1.0s,mb3.7,baz=211,slow=16,SNR=2.8						
NOA				pP	pP	00 37 55.1	+0.6
	comp=Z,1.6nm,0.9s,baz=92,slow=5.2,SNR=3.5						
LPG	**La Plagne**	**84.98**	**315**	*e*P	**P**	**00 37 53.7**	**+0.3**
	comp=Z,27nm,1.0s,mb5.0						
LPG	**La Plagne**	**84.98**	**315**	*e*P	**P**	**00 37 53.7**	**+0.3**
LPG				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
EKA	**Eskdalemuir Ar**	**90.29**	**326**	P	**P**	**00 38 19.4**	**+0.8**
	comp=Z,2.7nm,0.7s,mb4.7,baz=94,slow=5.0,SNR=11						
EKA				pP	pP	00 38 36.8	+3.2
	comp=Z,1.8nm,0.8s,baz=90,slow=5.0,SNR=3.2						
ESDC	**Sonseca Array**	**93.46**	**310**	P	**P**	**00 38 34.4**	**+0.7**
	comp=Z,0.7nm,0.8s,mb4.2,baz=46,slow=3.9,SNR=4.2						
ESDC				pP	pP	00 38 50.4	+1.8
	comp=Z,1.3nm,0.8s,baz=63,slow=3.3,SNR=4.0						
DBIC	**Dimbokro**	**99.00**	**278**	LR	LR	01 19 45.0	
	comp=Z,65nm,19.3s,MS4.1,baz=72,slow=33						
INK	**Inuvik**	**99.32**	**16**	P	**P**	**00 38 59.6**	**0.0**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**99.32**	**16**	P	**P**	**00 38 59.6**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.5						
ULM	**Lac du Bonnet**	**123.97**	**8**	PKP	PKPdf	00 44 15.7	+0.7
	comp=Z,2.3nm,0.8s,baz=355,slow=4.4,SNR=5.8						
NVAR	**Mina Array Bea**	**126.78**	**32**	PKP	PKPdf	00 44 23.2	+2.5
	comp=Z,1.2nm,0.6s,baz=311,slow=0.6,SNR=7.9						
NVAR				pPKP		00 44 38.3	
	comp=Z,0.7nm,0.7s,baz=288,slow=1.4,SNR=3.5						
NVAR	**Mina Array Bea**	**126.78**	**32**	PKP	PKPdf	00 44 23.2	+2.5
NVAR				pPKP		00 44 38.3	
PDAR	**Pinedale Array**	**127.34**	**23**	PKP	PKPdf	00 44 23.1	+1.4
	comp=Z,1.7nm,0.8s,baz=86,slow=2.0,SNR=12						
PDAR				pPKP		00 44 39.0	
	comp=Z,0.8nm,0.9s,baz=108,slow=4.7,SNR=3.3						
DUG	**Dugway**	**128.13**	**27**	*e*PKPdf	PKPdf	00 44 25.0	+1.8
TXAR	**Lajitas Array**	**141.30**	**26**	PKhKP		00 44 45.4	
	comp=Z,1.2nm,0.7s,baz=10,slow=1.3,SNR=3.4						
TXAR				PKP	PKPdf	00 44 50.5	+2.5
	comp=Z,1.5nm,0.8s,baz=133,slow=0.7,SNR=7.3						
TXAR	**Lajitas Array**	**141.30**	**26**	PKP	PKPdf	00 44 45.4	-2.7
TXAR				PKP	PKPdf	00 44 50.5	+2.5

IDC ***16*** *00:37:46.4±2.8, 35.84N×140.37E, h58^{km}±27^{km}, mb3.8/10, mb1 3.9/12, mb1mx3.7/24, mbtmp4.1/12, ML4.1/2, Error ellipse: s-maj=31.8km s-min=15.8km az=80.0*

NEIC ***16*** *00:37:48.8±1.7, 35.79N×140.20E, h82^{km}±12^{km}, mb4.4/4, MW3.9(NIED), Error ellipse: s-maj=21.3km s-min=10.7km az=82.0*

NEIC Recorded [2 JMA] in Chiba, Kanagawa and Tokyo; [1 JMA] in Ibaraki, Saitama, Shizuoka and Tochigi Prefectures.

JMA ***16*** *00:37:49.6±0.2, 35.74N×140.04E, h80^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves. NP1:ϕ_s266°, δ22°, λ-14°. NP2:ϕ_s9°, δ85°, λ-112°. Principal axes: T Plg36°, Azm118°; N Plg22°, Azm11°; P Plg46°, Azm257°;*

JMA Felt II J1.

NIED ***16*** *00:38:00, 35.70N×140.00E, h74^{km}, Mw3.9 Best double couple: $M_0$8.46×10^{14} NP1:ϕ_s19°, δ86°, λ-92°. NP2:ϕ_s230°, δ5°, λ-59°.*

ISC 16 00:37:48.3±0.4, **35.71N**±0.04×**140.08E**±0.07, **h92**^{km}±3^{km}, **n33, σ0^{s}95**/45, **mb4.1**/15, **4C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.26**	**266**	⇑P	**P**	**00 38 02.2**	**+0.5**
TOK				S	**S**	**00 38 11.6**	**-0.4**
JCN	**Nagara**	**0.30**	**161**	⇓P	**P**	**00 38 02.8**	**+0.9**
JCN				S	**S**	**00 38 13.1**	**+0.8**
JYT	**Yasato**	**0.53**	**10**	⇓P	**P**	**00 38 03.4**	**-0.2**
JYT				S	**S**	**00 38 13.8**	**-1.2**
JAG	**Ashikaga**	**0.88**	**325**	⇑P	**P**	**00 38 07.1**	**+0.1**
JAG				S	**S**	**00 38 20.4**	**-0.5**
JOD2	**Odawara 2**	**0.92**	**242**	⇑P	**P**	**00 38 07.1**	**-0.3**
JOD2				S	**S**	**00 38 19.9**	**-1.9**
BSO3	**Boso 3**	**0.97**	**159**	⇓P	**P**	**00 38 08.1**	**+0.2**
BSO3				S	**S**	**00 38 23.5**	**+0.8**
JRY	**Ryogami san**	**1.01**	**288**	⇑P	**P**	**00 38 09.1**	**+0.7**
JRY				S	**S**	**00 38 23.9**	**+0.4**
JIM2	**Oshima 3**	**1.12**	**209**	P	**P**	**00 38 09.2**	**-0.6**
JIM2				S	**S**	**00 38 24.2**	**-1.7**
MAJO	**Matsushiro**	**1.73**	**299**	*e*P	**P**	**00 38 17.9**	**+0.4**
MAT	**Matsushiro**	**1.73**	**299**	*e*P	**P**	**00 38 18.0**	**+0.5**
MAT				*e*S	**S**	**00 38 41.0**	**+1.9**
MAT	**Matsushiro**	**1.73**	**299**	P	**P**	**00 38 18.4**	**+0.9**
MAT				S	**S**	**00 38 40.8**	**+1.7**
JHJ	**Hachijo jima 2**	**2.59**	**186**	P	**P**	**00 38 29.6**	**+0.3**
	124nm,0.3s,baz=67,slow=6.7,SNR=30						
JHJ				S	**S**	**00 39 00.7**	**+0.9**
	214nm,0.3s,baz=56,slow=23,SNR=15						
CBIJ	**Chichi jima**	**8.77**	**168**	P	**P**	**00 39 49.9**	**-4.1**
	5.5nm,0.3s,baz=102,slow=22,SNR=9.2						
CBIJ				S	**S**	**00 41 22.1**	**-10**
	6.1nm,0.3s,baz=281,slow=23,SNR=3.7						
ENH	**Enshi**	**26.17**	**267**	P	**P**	**00 43 15.1**	**-0.7**
SONM	**Songino Array**	**27.67**	**306**	P	**P**	**00 43 29.2**	**-0.2**
	1.0nm,0.6s,mb3.5,baz=107,slow=8.7,SNR=9.3						
ZAL	**Zalesovo**	**42.04**	**313**	P	**P**	**00 45 32.2**	**+0.3**
	1.5nm,0.5s,mb4.0,baz=19,slow=7.0,SNR=14						
ZAL	**Zalesovo**	**42.04**	**313**	P	**P**	**00 45 32.2**	**+0.3**
KURK	**Kurchatov**	**45.92**	**309**	*e*P	**P**	**00 46 03.7**	**+0.5**
	5.6nm,0.6s,mb4.5						
BVAR	**Borovoye Array**	**50.68**	**313**	P	**P**	**00 46 40.3**	**+0.2**
	2.1nm,0.9s,mb4.2,baz=122,slow=8.2,SNR=5.4						
ILAR	**Eielson Array**	**51.19**	**32**	P	**P**	**00 46 41.2**	**-2.5**
	0.4nm,1.0s,mb3.4,baz=233,slow=6.5,SNR=3.2						
WRAB	**Tennant Creek**	**55.60**	**187**	P	**P**	**00 47 16.6**	**-0.3**
WRA	**Warramunga Arr**	**55.61**	**187**	P	**P**	**00 47 16.8**	**-0.1**
	2.0nm,0.4s,mb4.5,baz=0.8,slow=7.6,SNR=33						
ASAR	**Alice Springs**	**59.34**	**187**	P	**P**	**00 47 43.9**	**+0.9**
	0.5nm,0.6s,mb3.8,baz=11,slow=13,SNR=9.3						
MBWA	**Marble Bar**	**59.75**	**202**	*e*P	**P**	**00 47 45.3**	**-0.6**
	5.0nm,0.6s,mb4.7						
ARCES	**ARCESS Array B**	**64.86**	**339**	P	**P**	**00 48 18.7**	**-0.5**
	2.1nm,0.8s,mb4.0,baz=50,slow=7.0,SNR=5.5						
JOF	**Joensuu**	**66.63**	**332**	*e*p	**P**	**00 48 28.6**	**-1.9**
	2.3nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**68.99**	**333**	*e*p	**P**	**00 48 43.9**	**-1.4**
	2.2nm,0.6s,mb4.2						
FINES	**FINESS Array B**	**69.48**	**332**	P	**P**	**00 48 48.5**	**+0.2**
	1.6nm,0.4s,mb4.2,baz=75,slow=6.3,SNR=22						
FINES	**FINESS Array B**	**69.48**	**332**	P	**P**	**00 48 48.5**	**+0.2**
AKASG	**Malin Array Be**	**74.69**	**322**	P	**P**	**00 49 20.0**	**+0.8**
	1.6nm,0.3s,mb4.2,baz=48,slow=6.2,SNR=14						
NB2	**NORSAR Subarra**	**74.99**	**337**	P	**P**	**00 49 21.9**	**+1.2**
	0.8nm,0.6s,mb3.6,baz=41,slow=5.6						
NOA	**NORSAR Array B**	**74.99**	**337**	P	**P**	**00 49 21.6**	**+0.9**
	2.0nm,0.9s,mb3.8,baz=42,slow=5.4,SNR=5.4						
CLL	**Collm**	**81.70**	**330**	P	**P**	**00 49 59.8**	**+2.2**
	logA/T=0.8,mb4.4						

IDC ***16*** *00:48:27.9±4.2, 23.00S×168.81E, mb3.9/5, mb1 4.1/5, mb1mx4.0/12, mbtmp3.9/5, MS3.6/3, Ms1 3.6/3, ms1mx3.0/24, Error ellipse: s-maj=131.9km s-min=41.1km az=140.0*

ISC 16 00:48:30.0±1.6, **23.3S**±0.2×**169.0E**±0.2, **h33**^{km}, **n10, σ0^{s}86**/7, **mb3.8**/5, **MS3.6**/2, **New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.63**	**297**	*e*P	**P**	**00 49 10.4**	**-0.7**
DZM				*e*S	**S**	**00 49 42.7**	**+0.5**
URZ	**Urewera**	**16.47**	**157**	LR	LR	00 57 03.2	
	comp=Z,148nm,21.6s,baz=182,slow=31						
RPZ	**Rata Peaks**	**20.45**	**176**	LR	LR	00 59 49.9	
	comp=Z,191nm,18.3s,MS3.5,baz=3.3,slow=33						
STKA	**Stephens Creek**	**25.68**	**245**	P	**P**	**00 53 59.9**	**+1.1**
	2.5nm,0.9s,mb3.8,baz=66,slow=12,SNR=3.0						
ASAR	**Alice Springs**	**32.13**	**262**	P	**P**	**00 54 56.0**	**-0.7**
	3.1nm,1.1s,mb4.0,baz=81,slow=9.1,SNR=10						
WRA	**Warramunga Arr**	**32.33**	**269**	P	**P**	**00 54 57.3**	**-1.3**
	0.4nm,0.8s,mb3.3,baz=98,slow=8.2,SNR=2.9						
ASAJ	**Asahikawa**	**71.30**	**340**	LR	LR	01 29 08.1	
	comp=Z,47nm,18.9s,MS3.8,baz=314,slow=34						
CMAR	**Chiang Mai Arr**	**79.96**	**295**	P	**P**	**01 00 39.0**	**+1.1**
	0.7nm,0.4s,mb3.9,baz=140,slow=4.0,SNR=7.1						
SONM	**Songino Array**	**90.30**	**323**	P	**P**	**01 01 28.6**	**-0.1**
	0.9nm,1.1s,mb4.0,baz=143,slow=6.2,SNR=4.3						
GERES	**GERESS Array B**	**147.87**	**329**	PKPbc	PKPdf	01 08 13.0	+4.6
	1.3nm,1.0s,baz=56,slow=4.8,SNR=4.3						

IDC ***16*** *00:56:19.0±7.5, 22.72S×168.20E, mb3.9/4, mb1 4.1/4, mb1mx4.0/13, mbtmp3.9/4, MS3.8/3, Ms1 3.8/3, ms1mx3.1/24, Error ellipse: s-maj=172.1km s-min=63.7km az=122.0*

ISC 16 00:56:16.7±2.5, **23.3S**±0.3×**169.0E**±0.3, **h33**^{km}, **n8, σ1^{s}45**/6, **mb3.9**/4, **MS4.2**/2, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.67**	**297**	*e*P	**P**	**00 56 57.6**	**-0.7**
DZM				*e*S	**S**	**00 57 30.4**	**+0.5**
URZ	**Urewera**	**16.44**	**157**	LR	LR	01 05 24.0	
	comp=Z,118nm,20.9s,baz=157,slow=32						
STKA	**Stephens Creek**	**25.71**	**245**	P	**P**	**01 01 46.7**	**+1.0**
	4.4nm,0.9s,mb4.0,baz=91,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**32.16**	**262**	P	**P**	**01 02 43.6**	**-0.1**
	1.1nm,0.8s,mb3.7,baz=83,slow=8.9,SNR=7.3						
WRA	**Warramunga Arr**	**32.37**	**269**	P	**P**	**01 02 43.6**	**-2.0**
	0.5nm,0.5s,mb3.6,baz=99,slow=8.1,SNR=5.6						
CMAR	**Chiang Mai Arr**	**80.00**	**295**	P	**P**	**01 08 25.9**	**+1.0**
	1.2nm,0.5s,mb4.1,baz=141,slow=4.5,SNR=6.4						
NVAR	**Mina Array Bea**	**91.63**	**49**	LR	LR	01 41 02.8	
	comp=Z,69nm,21.7s,MS4.1,baz=30,slow=29						
PLCA	**Paso Flores**	**95.64**	**139**	LR	LR	01 44 04.5	
	comp=Z,98nm,21.9s,MS4.2,baz=188,slow=30						

IDC ***16*** *01:00:33.0±1.7, 11.81S×166.03E, mb3.9/6, mb1 4.2/6, mb1mx4.0/14, mbtmp3.8/6, MS3.7/6, Ms1 3.7/6, ms1mx3.2/25, Error ellipse: s-maj=78.1km s-min=25.4km az=146.0*

ISC 16 01:00:38.6±0.8, **10.7S**±0.1×**165.2E**±0.2, **h33**^{km}, **n12, σ0^{s}39**/7, **mb3.8**/6, **MS3.5**/5, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.35**	**174**	*e*P	**P**	**01 03 21.7**	**+0.1**
PMG	**Port Moresby**	**17.78**	**273**	LR	LR	01 11 27.8	
	comp=Z,278nm,18.5s,baz=291,slow=35						
CTA	**Charters Tower**	**20.46**	**241**	LR	LR	01 11 40.7	
	comp=Z,127nm,20.8s,MS3.3,baz=52,slow=32						
STKA	**Stephens Creek**	**30.29**	**222**	LR	LR	01 18 32.7	
	comp=Z,222nm,18.6s,MS3.8,baz=24,slow=36						
WRA	**Warramunga Arr**	**31.07**	**249**	P	**P**	**01 06 56.5**	**+0.4**
	1.2nm,0.7s,mb3.8,baz=80,slow=8.9,SNR=5.5						
ASAR	**Alice Springs**	**32.44**	**243**	P	**P**	**01 07 07.6**	**-0.5**
	1.0nm,0.5s,mb3.9,baz=65,slow=10,SNR=9.2						
ASAR				LR	LR	01 18 03.4	
	comp=Z,77nm,18.9s,MS3.4,baz=80,slow=32						
RPZ	**Rata Peaks**	**33.27**	**172**	LR	LR	01 16 58.6	
	comp=Z,78nm,19.4s,MS3.4,baz=210,slow=31						
CBIJ	**Chichi jima**	**43.71**	**330**	LR	LR	01 25 17.2	
	comp=Z,95nm,18.3s,MS3.7,baz=107,slow=33						
SONM	**Songino Array**	**78.07**	**324**	P	**P**	**01 12 42.3**	**+6.5**
	0.2nm,0.5s,mb3.4,baz=135,slow=2.0,SNR=2.5						
ILAR	**Eielson Array**	**83.39**	**19**	P	**P**	**01 13 04.1**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=238,slow=4.9,SNR=6.8						
NVAR	**Mina Array Bea**	**86.25**	**50**	P	**P**	**01 13 18.1**	**-0.3**
	1.6nm,1.0s,mb4.2,baz=219,slow=6.4,SNR=4.7						
PDAR	**Pinedale Array**	**93.75**	**47**	P	**P**	**01 13 53.3**	**-0.3**
	1.1nm,1.2s,mb4.2,baz=333,slow=4.0,SNR=3.5						

SFS ***16*** *01:04:00.0, 37.84N×1.79W*

CSEM ***16*** *01:04:01.0±0.1, 37.82N×1.73W, h12^{km}, ML3.0/2, Error ellipse: s-maj=3.7km s-min=2.5km az=172.0*

MDD 16 01:04:01.0±0.3, **37.85N×1.79W, mbLg2.0**/10, **1C, Error ellipse: s-maj=3.9km s-min=2.2km az=180.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMUR	**La Murta**	**0.43**	**91**	⇑Pg	Pg	01 04 08.8	-0.9
	11nm,0.2s,SNR=18						
EMUR				Lg		01 04 14.8	
	30nm,0.2s,SNR=7.3						
EMUR	**La Murta**	**0.43**	**91**	Pg	Pg	01 04 08.8	-0.8
	11nm,0.2s,SNR=18						
CART	**Cartagena**	**0.68**	**113**	P	Pg	01 04 14.1	-0.4
CART				S	Sg	01 04 23.2	-0.3
CART	**Cartagena**	**0.68**	**113**	*e*P	Pg	01 04 14.1	-0.4
CART				*e*S	Sg	01 04 23.2	-0.3
ETOB	**Tobarra**	**0.82**	**13**	Pg	Pg	01 04 15.9	-1.3
	16nm,0.1s,SNR=7.9						
ETOB				Lg		01 04 27.8	
	66nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**0.82**	**13**	Pg	Pg	01 04 15.9	-1.4
	16nm,0.1s,SNR=7.9						
ENIJ	**Nijar**	**0.94**	**201**	Pg	Pg	01 04 18.8	-0.9
	4.8nm,0.3s,SNR=8.9						
ENIJ				Lg		01 04 30.6	
	9.0nm,0.4s,SNR=6.4						
EVIA	**Vianos**	**0.97**	**325**	Pg	Pg	01 04 19.6	-0.7
	8.4nm,0.2s,SNR=15						
EVIA				Lg		01 04 33.4	
	6.1nm,0.1s,SNR=7.0						
EQES	**Quesada**	**1.02**	**268**	Pg	Pg	01 04 19.9	-1.4
	5.8nm,0.2s,SNR=41						
EQES				Lg		01 04 34.7	
	12nm,0.2s						
EQES	**Quesada**	**1.02**	**268**	Pg	Pg	01 04 19.9	-1.4
	5.8nm,0.2s,SNR=41						
EBER	**Berja**	**1.29**	**223**	Pg	Pg	01 04 24.4	-2.4
	0.6nm,0.1s,SNR=8.2						
EBER				Lg		01 04 41.7	
	2.7nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.29**	**223**	Pg	Pg	01 04 24.4	-2.4
	0.6nm,0.1s,SNR=8.2						
EBEN	**Beniarda**	**1.50**	**55**	Pg	Pg	01 04 28.1	-2.8
	0.1nm,0.1s,SNR=7.9						
EBEN				Lg		01 04 48.3	
	0.7nm,0.1s,SNR=4.0						
EBEN	**Beniarda**	**1.50**	**55**	Pg	Pg	01 04 28.1	-2.8
	0.1nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.52**	**249**	Pg	Pg	01 04 29.8	-1.6
	2.2nm,0.2s,SNR=7.9						
ECOG				Lg		01 04 51.4	
	4.8nm,0.2s,SNR=4.0						
EBAN	**Banos Encina**	**1.61**	**282**	Pg	Pg	01 04 29.3	-3.8
	6.7nm,0.2s,SNR=7.0						
EBAN				Lg		01 04 51.3	
	10nm,0.2s,SNR=9.6						
ERON	**Agron**	**1.81**	**243**	Pn	Pn	01 04 31.0	-2.6
	0.7nm,0.2s,SNR=4.0						
ERON				Lg		01 04 53.7	
	1.1nm,0.1s,SNR=4.0						
ELUQ	**Luque**	**1.99**	**262**	Pg	Pg	01 04 35.4	-5.3
	2.3nm,0.2s,SNR=7.9						
ELUQ				Sn	Sn	01 05 00.9	-1.2
	6.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.23**	**279**	Pn	Pn	01 04 37.6	-2.0
	1.5nm,0.4s,SNR=9.6						
EADA				Sn	Sn	01 05 05.2	-3.0
	4.4nm,0.2s,SNR=6.9						
EADA				Lg		01 05 11.8	
	4.2nm,0.1s,SNR=6.7						
EADA	**Adamuz**	**2.23**	**279**	Pn	Pn	01 04 37.6	-2.0
	1.5nm,0.4s,SNR=9.6						
EADA				Sn	Sn	01 05 05.2	-3.0
	4.4nm,0.2s,SNR=6.9						
ESDC	**Sonseca Array**	**2.49**	**318**	Pn	Pn	01 04 40.4	-3.0
	0.7nm,0.2s,baz=134,slow=14,SNR=5.7						
ESDC				Pg	Pg	01 04 45.0	-5.7
	3.1nm,0.2s,baz=133,slow=17,SNR=14						
ESDC				Lg		01 05 18.4	
	5.9nm,0.6s,baz=135,slow=29,SNR=3.8						
ESDC	**Sonseca Array**	**2.49**	**318**	Pn	Pn	01 04 40.4	-3.0
	0.7nm,0.2s,slow=14,SNR=5.7						
ESDC	**Sonseca Array**	**2.49**	**318**	Pg	Pg	01 04 45.0	-5.7
	3.1nm,0.2s,slow=17,SNR=14						
EMIN	**Mina Concepcio**	**3.87**	**270**	Pn	Pn	01 05 00.2	-2.8
	0.1nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	01 05 44.1	-5.8
	1.8nm,0.4s,SNR=7.9						
EMIN				Lg		01 06 00.4	
	SNR=7.9						
EMIN	**Mina Concepcio**	**3.87**	**270**	Pn	Pn	01 05 00.2	-2.8
	0.1nm,0.2s,SNR=7.9						

NEIC 16 01:04:35.8, 59.80N×152.76W, h87^{km}, After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILS	**Iliamna Low So**	**0.22**	**315**	P	P	01 04 48.1	-0.4
OPT	**Oil Point**	**0.28**	**238**	P	P	01 04 48.4	-0.5
ILIM	**Iliamna**	**0.30**	**340**	P	P	01 04 48.3	-0.6
INE	**Iliamna NE**	**0.30**	**330**	P	P	01 04 48.6	-0.4
INE				S	S	01 04 59.7	+0.7
ILW	**Iliamna West**	**0.32**	**324**	P	P	01 04 48.6	-0.5
ILW				S	S	01 05 00.2	+1.1
AUE	**Augustine Isla**	**0.54**	**215**	P	P	01 04 50.0	-0.8
AUL	**Augustine Lava**	**0.54**	**219**	P	P	01 04 50.2	-0.6
AUL				S	S	01 05 01.6	-0.3
AUW	**Augustine West**	**0.56**	**220**	P	P	01 04 50.3	-0.7
AUI	**Augustine Isla**	**0.58**	**216**	P	P	01 04 50.3	-0.8
AUI				S	S	01 05 01.6	-0.8
HOM	**Homer**	**0.58**	**104**	P	P	01 04 50.8	-0.4
XLV	**Seldovia**	**0.63**	**123**	P	P	01 04 50.8	-0.9
RSO	**Redoubt South**	**0.66**	**0**	*e*P	P	01 04 51.5	-0.4
RDN	**Redoubt North**	**0.71**	**360**	P	P	01 04 52.0	-0.5
NCT	**North Crescent**	**0.77**	**354**	P	P	01 04 52.4	-0.7
NCT				S	S	01 05 05.3	-0.4
NNL	**Ninilchik**	**0.78**	**71**	P	P	01 04 53.4	+0.3
DFR	**Drift River**	**0.79**	**3**	P	P	01 04 52.7	-0.6
CNPM	**China Poot**	**0.82**	**109**	P	P	01 04 52.8	-0.8
CNPM				S	S	01 05 05.9	-0.8
MCNL	**McNeil River**	**1.01**	**233**	P	P	01 04 54.5	-1.3
NKA	**Nikishka**	**1.21**	**38**	P	P	01 04 59.1	+0.9
SYI	**Shuyak Island**	**1.21**	**171**	P	P	01 04 57.3	-0.9
SPU	**Mount Spurr**	**1.43**	**14**	*e*P	P	01 04 59.9	-1.1
SLKM	**Skilak Lake**	**1.45**	**60**	P	P	01 05 00.4	-1.0
CKN	**Chakachatna No**	**1.46**	**11**	P	P	01 05 00.7	-0.6
KAPH	**Katmai Pasha**	**1.46**	**215**	P	P	01 05 00.3	-1.1
KAPH				S	S	01 05 19.3	-1.0
KAHC	**Katmai Hardscr**	**1.63**	**226**	P	P	01 05 02.4	-1.3

VOGL	Vogel Lake	1.67	43	P	P	01 05 04.5	+0.4
SEW	Seward	1.69	78	P	P	01 05 03.0	-1.4
SEW				S	S	01 05 24.2	-1.3
STLK	Strandline Lak	1.76	15	P	P	01 05 04.4	-0.9
KAWH	Katmai	1.77	217	P	P	01 05 04.0	-1.4
FIB	Fire Island	1.87	42	P	P	01 05 06.8	0.0
SVW2	Sparrevohn	1.91	314	P	P	01 05 05.7	-1.6
RC01	Rabbit Creek A	1.98	48	P	P	01 05 06.8	-1.4
RC01				S	S	01 05 31.4	-0.7
KDAK	Kodiak Island	2.03	177	P	P	01 05 06.4	-2.4
KDAK				S	S	01 05 30.5	-2.7
PWA	Palmer West	2.33	36	*e*P	P	01 05 12.3	-0.8
PWL	Port Wells	2.44	62	P	P	01 05 12.3	-2.3
LTI	Latouche	2.48	82	P	P	01 05 12.8	-2.4
PMR	Palmer	2.53	43	P	P	01 05 13.6	-2.3
PMR				S	S	01 05 42.1	-3.7
KNK	Knik Glacier	2.67	51	P	P	01 05 15.6	-2.2
GHO	Glory Hole Cre	2.73	42	P	P	01 05 16.6	-2.0
CUT	Chulitna	2.88	24	P	P	01 05 19.4	-1.3
SML	Sawmill	2.96	45	P	P	01 05 19.4	-2.4
SML				S	S	01 05 52.8	-3.6
GLI	Glacier Island	3.02	67	P	P	01 05 19.0	-3.6
HIN	Hinchinbrook I	3.19	77	P	P	01 05 22.2	-2.8
FID	Port Fidalgo	3.27	70	P	P	01 05 22.1	-4.0
MID	Middleton Isla	3.28	94	*e*P	P	01 05 23.8	-2.5
JPK	Jack Peak	3.30	65	P	P	01 05 23.6	-3.0
SCM	Sheep Creek Mo	3.35	50	P	P	01 05 24.9	-2.4
VLZ	Valdez	3.45	64	P	P	01 05 25.4	-3.2
VLZ				S	S	01 06 03.5	-5.0
TT01	Tatalina	3.49	335	P	P	01 05 26.9	-2.2
EYAK	Cordova Ski Ar	3.58	75	P	P	01 05 26.9	-3.5
DIV	Divide	3.71	66	P	P	01 05 28.9	-3.3
TRF	Thorofare Moun	3.85	17	P	P	01 05 32.2	-1.8
KTH	Kantishna Hill	3.87	12	P	P	01 05 32.4	-1.9
RAGM	Ragged Mountai	4.09	78	P	P	01 05 34.0	-3.5
KAIM	Kayak Island	4.21	85	P	P	01 05 36.5	-2.6
MCK	McKinley	4.34	23	P	P	01 05 39.3	-1.6
GLB	Gilahina Butte	4.71	66	P	P	01 05 42.4	-3.6
PAX	Paxson	4.73	45	P	P	01 05 43.8	-2.5
THY	Trims Highway	4.93	40	*e*P	P	01 05 47.6	-1.4
BALM	Baldy	5.31	72	P	P	01 05 50.8	-3.3
CCB	Clear Creek Bu	5.38	23	P	P	01 05 52.0	-3.2
YAH	Yahtse	5.54	79	P	P	01 05 54.6	-2.7
MDM	Murphy Dome	5.59	20	P	P	01 05 55.4	-2.6
IL1	Eielson Array	5.69	26	P	P	01 05 56.2	-3.1
BCA3	Beaver Creek A	6.20	53	P	P	01 06 04.7	-1.7
IM3	Indian Mountai	6.22	356	P	P	01 06 04.9	-1.9
PNL	Peninsula	6.76	85	P	P	01 06 10.9	-3.3
BM3	Burnt Mountain	8.46	22	P	P	01 06 33.7	-3.7
DLBC	Dease Lake	11.75	87	*e*P	P	01 07 20.5	-1.0

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*NEIC **16** 01:24:34.8±2.3, 7.19S×120.27E, h556^{km}±37^{km}, mb4.3/4, Error ellipse: s-maj=40.1km s-min=13.3km az=221.0*

*IDC **16** 01:24:35.3±5.6, 7.11S×120.38E, h559^{km}±70^{km}, mb2.9/6, mb1 3.0/7, mb1mx3.0/17, mbtmp3.9/7, Error ellipse: s-maj=88.0km s-min=20.9km az=63.0*

ISC 16 01:24:34.9±3.7, **7.2S**±0.3×**120.3E**±0.2, **h577**^{km}±63^{km}, **n12**, σ**0$\overset{s}{.}$50**/12, **mb3.5**/6, **1C, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.03	155	⇑*i*P	P	01 27 13.9	-0.1
	9.9nm,0.7s						
MBWA	Marble Bar	13.90	182	*e*P	P	01 27 32.6	-0.2
	8.1nm,0.7s						
WRA	Warramunga Arr	18.60	134	P	P	01 28 18.3	+0.4
	0.4nm,0.3s,baz=314,slow=11,SNR=17						
WRAB	Tennant Creek	18.61	134	*e*P	P	01 28 18.1	+0.1
	7.2nm,0.8s						
WB2	Warramunga Arr	18.61	134	*e*P	P	01 28 18.3	+0.3
ASAR	Alice Springs	20.95	143	P	P	01 28 39.6	0.0
	0.6nm,0.4s,baz=321,slow=8.7,SNR=12						
ASAR				PcP	PcP	01 32 22.8	+0.2
	0.4nm,0.5s,baz=325,slow=1.9,SNR=5.5						
CTA	Charters Tower	28.23	120	P	P	01 29 43.2	-1.0
	2.7nm,0.9s,mb3.9,baz=266,slow=13,SNR=3.1						
STKA	Stephens Creek	31.58	144	P	P	01 30 13.2	+0.5
	1.3nm,0.4s,mb3.9,baz=320,slow=9.5,SNR=3.5						
SONM	Songino Array	56.14	349	P	P	01 33 23.0	+0.7
	0.5nm,0.7s,mb2.9,baz=164,slow=6.3,SNR=4.7						
ZAL	Zalesovo	67.83	338	P	P	01 34 36.8	-0.9
	1.5nm,0.9s,mb3.4,baz=337,slow=9.6,SNR=6.3						
KURK	Kurchatov	67.97	333	*e*P	P	01 34 38.5	-0.1
	2.2nm,1.0s,mb3.5						
BVAR	Borovoye Array	73.33	331	P	P	01 35 10.1	+0.3
	0.3nm,0.4s,mb3.2,baz=129,slow=9.2,SNR=4.3						

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*IDC **16** 02:25:46.6±3.2, 23.17S×169.13E, mb4.1/5, mb1 4.3/5, mb1mx4.1/13, mbtmp4.0/5, MS3.8/5, Ms1 3.8/5, ms1mx3.4/22, Error ellipse: s-maj=146.1km s-min=33.4km az=160.0*

*NEIC **16** 02:25:48.4±0.8, 23.09S×169.09E, h10^{km}, mb4.6/1, Error ellipse: s-maj=29.8km s-min=12.9km az=180.0*

ISC 16 02:25:46.1±1.0, **23.4S**±0.2×**169.2E**±0.1, **h10**^{km}, **n18**, σ**0$\overset{s}{.}$65**/14, **mb4.0**/6, **MS3.8**/4, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.81	297	*e*P	Pn	02 26 31.3	-0.6
DZM				*e*S	Sn	02 27 07.4	+1.3
DZM	Mont Dzumac	2.81	297	*e*P	Pn	02 26 31.3	-0.6
DZM				*e*S	Sn	02 27 07.4	+1.3
NOUC	Port Laguerre	2.91	295	*e*P	Pn	02 26 32.6	-0.8
NOUC				*e*S	Sn	02 27 08.3	-0.5
NOUC	Port Laguerre	2.91	295	*e*P	Pn	02 26 32.6	-0.8
NOUC				*e*S	Sn	02 27 08.3	-0.5
URZ	Urewera	16.34	157	LR	LR	02 34 54.7	
	comp=Z,184nm,18.1s,baz=37,slow=33						
RPZ	Rata Peaks	20.36	176	LR	LR	02 37 07.8	
	comp=Z,287nm,18.1s,MS3.7,baz=325,slow=33						
CTA	Charters Tower	21.51	274	LR	LR	02 38 01.4	
	comp=Z,84nm,20.6s,MS3.1,baz=227,slow=34						
ASAR	Alice Springs	32.27	262	P	P	02 32 17.6	+0.4
	1.1nm,0.8s,mb3.7,baz=78,slow=9.6,SNR=8.6						
WRA	Warramunga Arr	32.48	269	P	P	02 32 18.3	-0.8
	1.4nm,1.0s,mb3.7,baz=102,slow=8.8,SNR=5.4						
MBWA	Marble Bar	45.61	263	P	P	02 34 09.2	+0.6
	4.3nm,0.6s,mb4.6						
CMAR	Chiang Mai Arr	80.14	295	P	P	02 37 58.9	+0.4
	1.5nm,0.6s,mb4.1,baz=136,slow=3.5,SNR=7.6						
SONM	Songino Array	90.45	323	P	P	02 38 49.1	-0.1
	1.1nm,1.0s,mb4.1,baz=146,slow=4.5,SNR=4.6						
NVAR	Mina Array Bea	91.58	49	P	P	02 38 54.8	+0.2
	0.4nm,0.6s,mb4.0,baz=205,slow=6.9,SNR=4.7						
PLCA	Paso Flores	95.51	139	LR	LR	03 11 41.4	
	comp=Z,160nm,20.4s,MS4.5,baz=194,slow=29						
TXAR	Lajitas Array	98.79	62	LR	LR	03 13 36.0	
	comp=Z,53nm,21.0s,MS4.0,baz=5.0,slow=29						
VYHS	Vyhne	145.64	324	*e*PKP	PKPdf	02 45 26.9	-0.7
CLL	Collm	146.57	333	*e*PKP1	PKPbc	02 45 29.0	+1.6
GERES	GERESS Array B	148.02	329	PKPbc	PKPdf	02 45 33.7	+2.2
	5.2nm,1.2s,baz=90,slow=4.0,SNR=5.1						

IDC 16 02:34:21.6±11.0, **5.08N**×**127.84E**, **h250**^{km}±118^{km}, **mb3.6**/8, **mb1 3.7**/8, **mb1mx3.5**/19, **mbtmp4.1**/8, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.5**/22, **1C-1D, Error ellipse: s-maj=51.9km s-min=21.2km az=73.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	3.34	305	⇓*e*P	P	02 34 51.1	-27
BIPH	Bislig	3.42	335	⇑*i*P	P	02 35 01.2	-18
BIPH				*i* S	S	02 36 25.6	+22
PMG	Port Moresby	24.04	127	P	P	02 39 14.1	-1.6
	12nm,0.4s,baz=192,slow=11,SNR=6.8						
PMG				LR	LR	02 48 44.8	
	comp=Z,53nm,19.4s,baz=222,slow=36						
WRA	Warramunga Arr	25.67	166	P	P	02 39 27.8	-2.9
	2.4nm,0.8s,baz=344,slow=9.9,SNR=11						
ASAR	Alice Springs	29.17	169	P	P	02 40 01.5	-0.6
	0.9nm,0.4s,baz=356,slow=8.2,SNR=15						
STKA	Stephens Creek	39.02	161	P	P	02 41 23.8	-1.9
	4.6nm,0.8s,baz=329,slow=7.1,SNR=7.2						
SONM	Songino Array	46.40	340	P	P	02 42 23.8	-1.0
	0.3nm,0.4s,baz=143,slow=7.2,SNR=3.5						
BVAR	Borovoye Array	66.81	326	P	P	02 44 44.9	-3.2
	1.4nm,0.8s,baz=121,slow=8.4,SNR=4.8						
ARCES	ARCESS Array B	89.57	340	P	P	02 46 50.6	-0.8
	6.9nm,1.1s,baz=90,slow=5.4,SNR=3.5						
FINES	FINESS Array B	91.17	332	P	P	02 46 58.9	-0.1
	2.7nm,1.1s,baz=90,slow=3.8,SNR=4.5						

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*IDC **16** 02:57:14.6±3.1, 3.07N×125.96E, mb4.4/4, mb1 4.6/4, mb1mx4.1/16, mbtmp4.4/4, Error ellipse: s-maj=144.3km s-min=42.4km az=66.0*

*NEIC **16** 02:57:18.4±2.3, 3.16N×126.10E, h30^{km}, mb4.5/5, Error ellipse: s-maj=39.6km s-min=30.3km az=203.0*

ISC 16 02:57:16.9±0.6, **3.18N**±0.09×**126.0E**±0.3, **h33**^{km}, **n13**, σ**0$\overset{s}{.}$61**/16, **mb4.3**/7, **3C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	3.92	346	⇓*e*P	P	02 58 17.8	+1.5
KCP				*i* S	S	02 59 00.7	-1.1
KAKA	Kakadu	17.02	158	⇑*i*P	P	03 01 13.1	-0.9
	27nm,0.6s						
FITZ	Fitzroy Crossi	21.14	181	⇑*i*P	P	03 02 01.3	-0.2
	16nm,1.0s,mb4.3						
WRAB	Tennant Creek	24.37	161	*e*P	P	03 02 33.5	+0.2
	39nm,0.8s,mb4.9						
WRA	Warramunga Arr	24.38	161	P	P	03 02 33.8	+0.4
	20nm,0.7s,mb4.7,baz=340,slow=11,SNR=59						
WRA				S	S	03 06 55.8	+7.8
	0.3nm,0.3s,baz=328,slow=20,SNR=5.0						
WB2	Warramunga Arr	24.38	161	*e*P	P	03 02 33.6	+0.1
WB2				*e*S	S	03 06 56.4	+8.3
MBWA	Marble Bar	24.96	194	*e*P	P	03 02 39.0	0.0
	2.3nm,0.6s,mb3.9						
ASAR	Alice Springs	27.76	164	P	P	03 03 04.7	-0.3
	2.0nm,0.6s,mb3.9,baz=344,slow=7.4,SNR=26						
ASPA	Alice Springs	27.76	164	*e*P	P	03 03 04.7	-0.2
FORT	Forrest	33.82	177	⇑*i*P	P	03 03 58.1	-0.2
	468nm,0.6s						
STKA	Stephens Creek	37.87	158	⇓*i*P	P	03 04 32.9	+0.3
	6.4nm,0.7s,mb4.5						
STKA	Stephens Creek	37.87	158	P	P	03 04 33.2	+0.6
	10.0nm,0.8s,mb4.6,baz=331,slow=6.7,SNR=15						
VNDA	Vanda	82.97	173	P	P	03 09 39.6	+0.1
	0.7nm,0.4s,mb4.0,baz=319,slow=6.2,SNR=5.8						

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*CSEM **16** 03:11:46.9±0.1, 36.85N×4.96W, h12^{km}, ML3.0/5, Error ellipse: s-maj=1.7km s-min=1.2km az=178.0*

*SFS **16** 03:11:46.0, 36.92N×4.95W*

*INMG **16** 03:11:47.2±1.6, 36.92N×4.95W, h18^{km}±6^{km}, ML2.3, Error ellipse: s-maj=3.2km s-min=2.5km az=16.0*

MDD 16 03:11:47.0±0.3, **36.89N**×**4.92W**, **h11**^{km}, **mbLg2.3**/19, **1C-1D, Error ellipse: s-maj=2.9km s-min=2.4km az=169.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMIJ	Mijas	0.34	160	⇑Pg	Pg	03 11 53.3	-0.8
	5.2nm,0.3s,SNR=18						
EMIJ				Lg		03 11 59.2	
	202nm,0.3s,SNR=5.0						
LIJA	Lijar	0.39	273	P	Pg	03 11 54.5	-0.5
LIJA				S	Sg	03 12 02.9	+2.5
LIJA	Lijar	0.39	273	*i* P	Pg	03 11 54.5	-0.5
LIJA				*i* S	Sg	03 12 02.8	+2.4
EMAL	Malaga-Limoner	0.41	108	Pg	Pg	03 11 53.9	-1.5
	3.7nm,0.1s,SNR=7.9						
EMAL				Lg		03 12 01.2	
	58nm,0.1s,SNR=7.9						
REAL	Reales	0.47	210	⇓P	Pg	03 11 56.3	-0.2
REAL				S	Sg	03 12 06.7	+3.9
REAL	Reales	0.47	210	*i* P	Pg	03 11 56.3	-0.2
REAL				*e*S	Sg	03 12 06.7	+3.8
EJIF	Jimena Fronter	0.62	226	Pg	Pg	03 11 59.1	-0.5
	0.2nm,0.1s,SNR=7.9						
EJIF				Lg		03 12 03.7	
	4.8nm,0.1s,SNR=4.0						
ELOJ	Sierra Loja	0.66	67	Pg	Pg	03 11 58.8	-1.6
	0.3nm,0.1s,SNR=14						
ELOJ				Lg		03 12 09.4	
	48nm,0.4s,SNR=32						
ESPR	Espera	0.75	269	Pg	Pg	03 12 01.8	-0.3
	1.9nm,0.2s,SNR=37						
ESPR				Lg		03 12 14.2	
	36nm,0.3s,SNR=4.0						
ESPR	Espera	0.75	269	Pg	Pg	03 12 01.8	-0.3
	1.9nm,0.2s,SNR=37						
ERON	Agron	0.90	81	Pg	Pg	03 12 04.0	-1.0
	3.5nm,0.3s,SNR=7.9						
ERON				Lg		03 12 18.7	
	17nm,0.4s,SNR=7.9						
ECOG	Cogollos-Vega	1.15	70	Pg	Pg	03 12 09.1	-0.8
	1.9nm,0.2s,SNR=7.9						
ECOG				Lg		03 12 26.7	
	34nm,0.3s,SNR=7.9						
EADA	Adamuz	1.30	12	Pg	Pg	03 12 09.1	-4.0
	4.3nm,0.3s,SNR=7.9						
EADA				Pg	Pg	03 12 09.9	-3.2
	32nm,0.5s,SNR=96						
EADA				Lg		03 12 26.4	
	31nm,0.2s,SNR=16						
EADA	Adamuz	1.30	12	Pg	Pg	03 12 09.9	-3.2
	32nm,0.5s,SNR=96						
EBAN	Banos Encina	1.56	35	Pn	Pn	03 12 13.6	-1.2
	2.5nm,0.1s,SNR=20						
EBAN				Pg	Pg	03 12 14.5	-3.6
	18nm,0.2s,SNR=7.9						
EBAN				Lg		03 12 34.6	
	86nm,0.3s,SNR=28						
EBER	Berja	1.62	89	Pg	Pg	03 12 16.7	-2.7
	1.0nm,0.2s,SNR=4.0						
EBER				Lg		03 12 42.2	
	36nm,0.4s,SNR=5.0						
EBER	Berja	1.62	89	Pg	Pg	03 12 16.7	-2.8
	1.0nm,0.2s,SNR=4.0						
EMIN	Mina Concepcio	1.65	303	Pn	Pn	03 12 13.6	-2.6
	0.4nm,0.1s,SNR=28						
EMIN				Pg	Pg	03 12 16.8	-3.2
	3.5nm,0.2s,SNR=7.9						
EMIN				Lg		03 12 36.8	
	12nm,0.2s,SNR=12						
EMIN	Mina Concepcio	1.65	303	Pn	Pn	03 12 13.6	-2.6
	0.4nm,0.1s,SNR=28						
EMIN	Mina Concepcio	1.65	303	Pg	Pg	03 12 16.8	-3.2
	3.5nm,0.2s,SNR=7.9						
EQES	Quesada	1.73	58	Pn	Pn	03 12 16.6	-0.7
	SNR=4.0						
EQES				Pg	Pg	03 12 18.6	-3.0
	2.0nm,0.1s,SNR=28						
EQES				Lg		03 12 42.6	
	68nm,0.4s,SNR=20						
EQES	Quesada	1.73	58	Pn	Pn	03 12 16.6	-0.7
	SNR=4.0						
EQES	Quesada	1.73	58	Pg	Pg	03 12 18.6	-3.0
	2.0nm,0.1s,SNR=28						
PALC	Alcoutim	2.12	286	*e*Pn	Pn	03 12 20.3	-2.6
PALC				*e*Sn	Sn	03 12 44.8	-4.7
PALC				*e*Sg	Sg	03 12 51.8	-5.9
	17nm,0.6s						
PALC	Alcoutim	2.12	286	*e*Pn	Pn	03 12 20.3	-2.6
PALC				*e*Sn	Sn	03 12 44.8	-4.7
PALC				*e*Sg	Sg	03 12 51.8	-5.9
	17nm,0.6s						
ENIJ	Nijar	2.17	87	Pg	Pg	03 12 25.5	-4.9
	2.0nm,0.3s,SNR=4.0						
ENIJ				Lg		03 12 54.7	
	6.6nm,0.4s,SNR=4.0						
EVIA	Vianos	2.59	47	Pg	Pg	03 12 33.5	-5.2
	3.1nm,0.2s,SNR=6.4						
EVIA				Sn	Sn	03 12 59.1	-2.3
	33nm,0.6s,SNR=4.0						
EVIA				Lg		03 13 09.9	
	18nm,0.4s,SNR=7.9						
PBEJ	Beja	2.61	297	*e*Sg	Sg	03 13 05.9	-7.9
	9.1nm,0.5s						
PBEJ	Beja	2.61	297	*e*Sg	Sg	03 13 05.9	-7.9
	9.1nm,0.5s						
ESDC	Sonseca Array	2.88	15	Pn	Pn	03 12 31.7	-2.1
	1.7nm,0.2s,baz=196,slow=12,SNR=15						
ESDC				Pg	Pg	03 12 39.3	-5.2
	0.7nm,0.2s,baz=199,slow=16,SNR=23						
ESDC				Lg		03 13 16.0	
	12nm,0.5s,baz=198,slow=27,SNR=13						
ESDC	Sonseca Array	2.88	15	Pn	Pn	03 12 31.7	-2.0
	1.7nm,0.2s,baz=196,slow=12,SNR=15						
ESDC	Sonseca Array	2.88	15	Pg	Pg	03 12 39.3	-5.2
	0.7nm,0.2s,baz=199,slow=16,SNR=23						
EMUR	La Murta	3.08	71	Lg		03 13 25.2	
	2.5nm,0.3s,SNR=4.0						
PTEO	Sao Teotonio	3.11	283	*e*Pn	Pn	03 12 34.5	-2.5
PTEO				*e*Sn	Sn	03 13 09.1	-5.4
	9.8nm,0.5s						
PTEO	Sao Teotonio	3.11	283	*e*Pn	Pn	03 12 34.5	-2.5
PTEO				*e*Sn	Sn	03 13 09.1	-5.4
	9.8nm,0.5s						
MOE	Montemor	3.17	302	*e*Sn	Sn	03 13 10.7	-5.5
MOE				*e*Sg	Sg	03 13 25.7	-7.0
ETOB	Tobarra	3.19	56	Pn	Pn	03 12 36.7	-1.5
	1.6nm,0.2s,SNR=7.9						
ETOB				Pg	Pg	03 12 43.8	-7.0
	0.8nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	03 13 13.3	-3.4
	0.6nm,0.2s,SNR=7.9						
ETOB				Lg		03 13 27.2	
	11nm,0.3s,SNR=7.9						
PCBR	Castelo Branco	3.57	326	*e*Pn	Pn	03 12 41.0	-2.5
PCBR				*e*Sn	Sn	03 13 19.6	-6.5
PCBR				*e*Sg	Sg	03 13 36.9	-8.9
	7.1nm,0.7s						
PCBR	Castelo Branco	3.57	326	*e*Pn	Pn	03 12 41.0	-2.5
PCBR				*e*Sn	Sn	03 13 19.6	-6.5
PCBR				*e*Sg	Sg	03 13 36.9	-8.9
	7.1nm,0.7s						
PVRL	Vila Real	4.89	334	*e*Sn	Sn	03 13 51.9	-7.7
	4.4nm,0.6s						
EMOS	Mosqueruela	4.91	44	Lg		03 14 23.0	
	3.7nm,0.4s,SNR=4.0						
PBRG	Braganca	5.11	344	*e*Sn	Sn	03 13 57.5	-7.6
PBRG				*e*Sg	Sg	03 14 24.4	-13
	3.6nm,0.6s						
ECAL	Calabor	5.24	345	Lg		03 14 27.8	
	2.8nm,0.5s,SNR=4.0						

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*IDC **16** 03:14:50.7±2.9, 13.46N×93.44E, mb3.8/4, mb1 4.0/4, mb1mx3.6/17, mbtmp3.8/4, Error ellipse: s-maj=173.9km s-min=27.2km az=57.0*

ISC 16 03:14:49.7±1.1, **12.6N**±0.4×**92.0E**±0.3, **h33**^{km}, **n5**, σ**1$\overset{s}{.}$50**/6, **mb3.8**/4, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	Vishakhapatnam	9.83	302	*i* P	P	03 17 11.5	-0.4
VIS				*i* S	S	03 18 54.9	-7.3
WRA	Warramunga Arr	52.71	127	P	P	03 24 03.7	-0.1
	0.7nm,0.7s,mb3.7,baz=307,slow=8.1,SNR=4.2						
ASAR	Alice Springs	54.54	131	P	P	03 24 17.4	+0.2
	0.4nm,0.4s,mb3.8,baz=314,slow=6.8,SNR=7.0						
ARCES	ARCESS Array B	70.15	340	P	P	03 26 02.9	+2.3
	2.9nm,0.9s,mb4.2,baz=74,slow=6.6,SNR=2.6						
ILAR	Eielson Array	91.16	22	P	P	03 27 51.0	-1.2
	0.2nm,0.6s,mb3.6,baz=284,slow=4.3,SNR=4.7						

MAN 16 03:17:46.1, 10.40N×125.31E, h21^{km}**, mb4.3, ML3.1, MS2.9, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.64	164	⇓*e*P	Pb	03 17 58.8	+0.4
SCPH				*e*S	Sb	03 18 10.7	+3.7
PLP	Palo	0.83	337	*e*P	Pb	03 18 01.7	+0.1
PLP				*i* S	Sb	03 18 14.9	+2.6
TBP	Tagbilaran	1.59	244	*e*P	Pn	03 18 12.9	-0.5

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*IDC **16** 03:27:59.7±7.3, 4.54S×144.74E, h54^{km}±69^{km}, mb3.5/3, mb1 3.9/6, mb1mx3.7/13, mbtmp3.9/6, ML3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/12, Error ellipse: s-maj=47.7km s-min=31.6km az=136.0*

*NEIC **16** 03:28:00.2±5.6, 4.65S×144.76E, h43^{km}±54^{km}, mb4.2/2, Error ellipse: s-maj=53.2km s-min=19.7km az=141.0*

ISC 16 03:27:56.7±4.5, **4.5S**±0.2×**144.8E**±0.1, **h39**^{km}±41^{km}, **n12**, σ**0$\overset{s}{.}$70**/14, **mb3.9**/4, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.43	154	P	P	03 29 17.0	-0.2
	5.3nm,0.3s,baz=25,slow=3.4,SNR=12						
PMG				S	S	03 30 19.4	+0.2
	7.5nm,0.3s,baz=159,slow=22,SNR=8.4						
PMG	Port Moresby	5.43	154	*e*P	P	03 29 16.6	-0.6
PMG				S	S	03 30 19.4	+0.2
CTA	Charters Tower	15.57	175	P	P	03 31 38.5	+3.3
	0.4nm,0.3s,baz=7.5,slow=14,SNR=3.9						
CTA				LR	LR	03 36 03.3	
	comp=Z,50nm,21.0s,baz=46,slow=31						
CTA	Charters Tower	15.57	175	P	P	03 31 38.5	+3.3
CTA				LR	LR	03 36 03.3	
WRAB	Tennant Creek	18.41	213	*e*P	P	03 32 10.5	-0.3
	8.1nm,0.8s						
WB2	Warramunga Arr	18.42	213	*e*P	P	03 32 11.0	+0.1
WRA	Warramunga Arr	18.42	213	P	P	03 32 10.9	-0.2
	0.9nm,0.3s,baz=36,slow=12,SNR=23						
ASAR	Alice Springs	21.76	208	P	P	03 32 46.4	-0.5
	1.1nm,0.5s,mb3.5,baz=33,slow=11,SNR=17						
ASPA	Alice Springs	21.77	208	*e*P	P	03 32 47.6	+0.7
FITZ	Fitzroy Crossi	23.10	233	*e*P	P	03 33 00.6	+0.4
	11nm,0.6s,mb4.5						
STKA	Stephens Creek	27.41	186	P	P	03 33 39.9	-1.0
	2.1nm,0.8s,mb3.7,baz=79,slow=12,SNR=3.5						
ILAR	Eielson Array	84.98	24	P	P	03 40 29.0	+0.1
	0.5nm,0.9s,mb3.6,baz=242,slow=6.1,SNR=4.6						

IDC 16 03:37:05.7±1.9, **11.22N**×**90.93E**, **mb3.7**/4, **mb1 3.9**/5, **mb1mx3.7**/18, **mbtmp3.7**/5, **ML3.9**/1, **Error ellipse: s-maj=58.5km s-min=23.6km az=67.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.57	46	Pn	P	03 39 38.5	-3.2
	0.3nm,0.3s,baz=238,slow=15,SNR=11						
SONM	Songino Array	38.74	17	P	P	03 44 32.0	-1.4
	1.8nm,0.9s,baz=202,slow=9.3,SNR=12						
BVAR	Borovoye Array	44.84	343	P	P	03 45 21.3	-2.0
	0.2nm,0.3s,baz=135,slow=6.1,SNR=3.3						
WRA	Warramunga Arr	52.77	126	P	P	03 46 22.3	-2.8
	0.8nm,0.7s,baz=307,slow=8.2,SNR=5.6						
ASAR	Alice Springs	54.48	130	P	P	03 46 35.8	-1.9
	1.0nm,0.7s,baz=311,slow=6.4,SNR=9.3						

IGQ 16 03:47:25.9, 1.52S×81.49W, h12^{km}±8^{km}**, mb4.2, 2C-3D, Error ellipse: s-maj=10.4km s-min=7.7km az=23.8, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	1.05	64	⇑P	Pb	03 47 44.1	-1.5
IGUA	Igualata	2.85	89	P	Pn	03 48 13.0	+0.9
JUIV	Juive	3.03	88	P	Pn	03 48 16.6	+2.0
ARRY	Arrayan	3.04	90	P	Pn	03 48 15.5	+0.8
ARRY				S	Sn	03 48 48.9	-2.4
ULBA	Ulba	3.08	89	P	Pn	03 48 17.0	+1.6
PISA	Pisayambo	3.14	82	P	Pn	03 48 17.9	+1.7
NAS1	Nasa	3.14	74	P	Pn	03 48 17.8	+1.5
NAS1				S	Sn	03 48 55.4	+1.4
JUA2	San Juan 2	3.17	66	P	Pn	03 48 17.4	+0.8
JUA2				S	Sn	03 48 54.6	0.0
TERV	Terraza Guagua	3.18	65	P	Pn	03 48 18.4	+1.5
TERV				S	Sn	03 48 59.0	+4.0
PINO	Pino	3.19	65	⇓P	Pn	03 48 17.4	+0.5
VC1	Cotopaxi 1	3.21	74	P	Pn	03 48 18.8	+1.6
VC1				S	Sn	03 48 57.7	+1.9
TAMB	Tambo	3.23	75	P	Pn	03 48 19.2	+1.7
YANA	Yana	3.24	64	⇓P	Pn	03 48 18.3	+0.7
ANTI	Antisana	3.50	72	P	Pn	03 48 23.7	+2.4
COTA	Cotacachi	3.65	60	⇓P	Pn	03 48 25.2	+1.7
CAYR	Refugio Cayamb	3.81	66	⇑P	Pn	03 48 28.6	+3.0
CAYA	Cayambe	3.84	66	P	Pn	03 48 29.3	+3.1
ECEN	Cerro Negro	4.22	57	P	Pn	03 48 33.9	+2.3

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*IDC **16** 04:00:29.6±1.3, 12.89N×123.38E, mb3.6/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, ML4.1/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/22, Error ellipse: s-maj=53.6km s-min=19.7km az=58.0*

*MAN **16** 04:00:30.6, 12.73N×123.21E, h12^{km}, mb4.8, ML3.7, MS3.7*

*NEIC **16** 04:00:31.5±0.9, 12.86N×123.28E, h10^{km}, mb4.4/5, Error*

ellipse: s-maj=36.8km s-min=12.4km az=60.0

ISC 16 04:00:31.5±1.1,12.75N±0.06×123.3E±0.1,h23^{km}±10^{km}, n23,σ1^{s}32/25,mb4.0/10,MS3.6/2,4C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.53	137	⇑iP	Pb	04 00 41.8	-0.3
MMPH				i S	Sb	04 00 49.8	+0.3
RCP	Roxas	1.29	203	⇑eP	Pn	04 00 52.2	-2.0
GQP	Guinayangan	1.39	326	⇑iP	Pn	04 00 55.4	-0.4
GQP				i S	Sn	04 01 14.6	+1.1
KALP	Kalibo	1.39	220	eP	Pn	04 00 46.0	-10
LQP	Lukban	2.15	309	⇑eP	Pn	04 01 06.2	-0.4
PLP	Palo	2.31	133	eP	Pn	04 01 08.8	-0.1
PLP				i S	Sn	04 01 45.1	+8.2
LLP	Lapu-Lapu	2.52	164	eP	Pn	04 01 14.7	+2.8
LLP				eS	Sn	04 01 42.1	-0.1
TGY	Tagaytay City	2.62	301	i P	Pn	04 01 16.0	+2.6
TGY	Tagaytay City	2.62	301	Pn	Pn	04 01 13.5	+0.1
	35nm,0.3s,baz=113,slow=12,SNR=6.4						
TBP	Tagbilaran	3.10	169	eP	Pn	04 01 17.7	-2.5
SNPH	Sibulan	3.39	180	eP	Pn	04 01 25.6	+1.3
CMAR	Chiang Mai Arr	24.08	287	P	P	04 05 48.2	+1.8
	0.6nm,0.4s,mb3.4,baz=102,slow=8.3,SNR=4.7						
MBWA	Marble Bar	33.88	186	P	P	04 07 14.1	-0.7
	12nm,1.2s,mb4.7						
WRAB	Tennant Creek	34.27	161	eP	P	04 07 20.7	+2.5
	6.9nm,1.2s,mb4.5						
WRA	Warramunga Arr	34.27	161	P	P	04 07 20.3	+2.0
	0.5nm,0.6s,mb3.6,baz=340,slow=9.8,SNR=5.9						
ULN	Ulaanbaatar	37.53	342	P	P	04 07 41.5	-4.1
	3.0nm,0.9s,mb4.0						
ASAR	Alice Springs	37.66	164	P	P	04 07 45.7	-1.2
	0.4nm,0.4s,mb3.5,baz=342,slow=6.7,SNR=5.6						
SONM	Songino Array	37.70	341	P	P	04 07 45.7	-1.3
	1.0nm,1.0s,mb3.5,baz=158,slow=7.7,SNR=6.0						
STKA	Stephens Creek	47.73	159	LR	LR	04 30 39.8	
	comp=Z,71nm,18.4s,MS3.7,baz=214,slow=38						
KURK	Kurchatov	52.36	326	eP	P	04 09 43.5	-0.4
	5.7nm,0.8s,mb4.5						
BVAR	Borovoye Array	57.95	325	P	P	04 10 23.8	-0.6
	0.6nm,0.6s,mb3.8,baz=104,slow=5.9,SNR=4.5						
BRVK	Borovoye	58.03	325	eP	P	04 10 24.0	-0.9
	3.2nm,1.0s,mb4.3						
NOA	NORSAR Array B	89.23	333	LR	LR	04 53 34.4	
	comp=Z,22nm,20.2s,MS3.6,baz=310,slow=36						

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*ISK **16** 04:01:36.6,39.52N×25.80E,h19^{km},MD3.2*

*ATH **16** 04:01:36.8,39.56N×26.50E,h12^{km},MD3.2/3*

*NEIC **16** 04:01:37.4,39.47N×25.92E,h20^{km},MD3.2(ISK), MD3.2(ATH),After ISK.*

*CSEM **16** 04:01:39.9±0.1,39.48N×26.29E,h10^{km},MD3.2,Error ellipse: s-maj=4.2km s-min=3.0km az=108.0*

ISC 16 04:01:36.8±1.6,39.41N±0.04×25.94E±0.10,h9^{km}±7^{km}, n16,σ0^{s}75/23,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	Paraskevi	0.30	122	ePB	Pb	04 01 44.1	+0.1
PRK				eSB	Sb	04 01 48.9	+0.1
EZN	Ezine	0.52	35	i PG	Pg	04 01 47.3	+0.1
EZN				i SG	Sg	04 01 54.9	+0.8
EZN	Ezine	0.52	35	i Pg	Pg	04 01 47.3	+0.1
EZN				Sg	Sg	04 01 54.3	+0.2
AYVA	Ayvalik	0.59	99	i P	Pg	04 01 48.5	-0.3
AYVA				i S	Sg	04 01 56.7	+0.1
KDAG	Bornova	1.44	134	i P	Pn	04 02 03.9	+0.7
KDAG				i S	Sb	04 02 21.0	-0.7
BALB	Balikesir	1.52	81	ePN	Pn	04 02 04.0	-0.3
BALB				eSN	Sn	04 02 26.5	+2.1
SART	Tekirdag	1.60	36	i P	Pn	04 02 05.4	0.0
SART				i S	Sb	04 02 25.4	-0.9
MFT	Murefte	1.72	36	ePN	Pn	04 02 05.8	-1.4
MRMT	Marmara Adasi	1.75	46	ePN	Pn	04 02 07.7	+0.1
RDO	Rodhopi	1.77	350	ePN	Pn	04 02 09.0	+1.2
BNT	Bandirma	1.80	58	ePN	Pn	04 02 07.9	-0.4
BNT	Bandirma	1.80	58	Pn	Pn	04 02 07.9	-0.3
KCT	Karacabey	2.05	64	ePN	Pn	04 02 11.3	-0.6
KCT	Karacabey	2.05	64	Pn	Pn	04 02 11.5	-0.4
KCT	Karacabey	2.05	64	Pn	Pn	04 02 11.5	-0.4
PLG	Polygyros	2.15	298	ePN	Pn	04 02 19.0	+5.7

IGQ 16 04:28:05.0,1.44S×81.19W,h11^{km}±7^{km},mb4.1,2C,Error ellipse: s-maj=13.8km s-min=9.2km az=143.7,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.75	59	⇑P	Pb	04 28 18.9	-0.6
IGUA	Igualata	2.54	91	P	Pn	04 28 48.4	+1.4
ARRY	Arrayan	2.73	91	⇑P	Pn	04 28 50.4	+0.8
ARRY				S	Sn	04 29 23.8	+0.9
ULBA	Ulba	2.78	90	P	Pn	04 28 52.5	+2.2
NAS1	Nasa	2.82	73	P	Pn	04 28 52.5	+1.6
PISA	Pisayambo	2.82	82	P	Pn	04 28 53.5	+2.5
JUA2	San Juan 2	2.85	65	P	Pn	04 28 52.3	+1.0
TERV	Terraza Guagua	2.87	64	P	Pn	04 28 52.1	+0.5
PINO	Pino	2.88	64	P	Pn	04 28 52.2	+0.6
VC1	Cotopaxi 1	2.89	74	P	Pn	04 28 54.7	+2.8
TAMB	Tambo	2.91	75	P	Pn	04 28 55.0	+2.8
YANA	Yana	2.93	63	P	Pn	04 28 53.1	+0.7
ANTI	Antisana	3.18	72	P	Pn	04 28 58.4	+2.4
COTA	Cotacachi	3.35	58	P	Pn	04 28 60.0	+1.6
CAYR	Refugio Cayamb	3.49	66	P	Pn	04 29 04.0	+3.6
CAYA	Cayambe	3.53	65	P	Pn	04 29 04.0	+3.0
ECEN	Cerro Negro	3.92	55	P	Pn	04 29 08.8	+2.3

MAN 16 04:37:59.6,12.73N×123.41E,h31^{km},mb3.7,ML2.4, MS2.0,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.43	150	eP	Pb	04 38 10.2	+1.3
MMPH				i S	Sb	04 38 18.2	+2.8
RCP	Roxas	1.33	209	⇑eP	Pn	04 38 22.0	-0.4
GQP	Guinayangan	1.49	321	⇑iP	Pn	04 38 24.1	-0.6
GQP				i S		07 38 43.1	
LQP	Lukban	2.28	307	i P	Pn	04 38 37.3	+1.4

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*ISK **16** 04:42:11.8,38.51N×26.64E,h30^{km},MD3.3*

*CSEM **16** 04:42:13.2±0.1,38.61N×26.79E,h30^{km},MD3.3,Error ellipse: s-maj=3.3km s-min=1.5km az=43.0*

*ATH **16** 04:42:14.7,38.57N×26.04E,h15^{km},MD3.2/3*

ISC 16 04:42:13.0±0.8,38.70N±0.03×26.70E±0.05,h6^{km}±5^{km}, n18,σ1^{s}03/27,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.41	139	i PG	Pg	04 42 20.1	-1.1
BLCB				i SG	Sg	04 42 26.5	-0.3
IZM	Izmir	0.53	124	i PG	Pg	04 42 23.3	-0.3
IZM				i SG	Sg	04 42 31.1	+0.3
KDAG	Bornova	0.53	124	i P	Pg	04 42 23.1	-0.5
KDAG				i S	Sg	04 42 30.3	-0.5
AYVA	Ayvalik	0.61	359	i P	Pg	04 42 25.8	+0.6
AYVA				i S	Sg	04 42 35.9	+2.5
PRK	Paraskevi	0.64	329	ePB	Pb	04 42 27.4	+1.2
PRK				eSN	Sn	04 42 38.4	-0.4
AKS	Akhisar	0.89	78	i PG	Pg	04 42 30.6	-0.1
AKS				i SG	Sg	04 42 43.0	+0.5
SMG	Samos	0.99	174	ePN	Pn	04 42 35.1	+1.8
EZN	Ezine	1.16	346	i PN	Pn	04 42 34.7	-1.0
BALB	Balikesir	1.31	44	PN	Pn	04 42 37.9	+0.1
MANT	Manisa	1.47	98	i P	Pn	04 42 41.3	+1.3
MANT				i S	Sb	04 42 59.2	+0.1
BTOK	Tokmak	1.48	44	i P	Pn	04 42 41.5	+1.3
BTOK				i S	Sb	04 42 59.3	-0.1
BDRM	Kayabasi	1.73	160	i P	Pn	04 42 45.3	+1.4
BDRM				i S	Sn	04 43 07.6	+1.2
DST	Dursunbey	1.75	58	PN	Pn	04 42 43.5	-0.6
APE	Apeiranthos	1.87	210	ePN	Pn	04 42 44.0	-1.8
BNT	Bandirma	1.91	29	ePN	Pn	04 42 44.9	-1.4
KCT	Karacabey	2.02	39	ePN	Pn	04 42 46.6	-1.4
MRMT	Marmara Adasi	2.02	20	ePN	Pn	04 42 47.1	-0.9
MFT	Murefte	2.13	12	ePN	Pn	04 42 48.7	-0.9

IDC 16 04:42:36.9±1.1,13.50N×92.66E,mb4.0/4,mb1 4.2/5, mb1mx3.8/17,mbtmp3.9/5,ML3.9/1,MS2.7/1,Ms1 2.9/1, ms1mx2.5/17,Error ellipse: s-maj=51.1km s-min=22.3km az=40.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.80	50	Pn	Pn	04 44 32.2	-2.1
	0.4nm,0.3s,baz=234,slow=16,SNR=4.5						
CMAR				LR	LR	04 48 14.9	
	comp=Z,59nm,20.4s,baz=200,slow=43						
WRA	Warramunga Arr	52.78	128	P	P	04 51 54.1	-2.3
	2.9nm,0.7s,baz=309,slow=7.6,SNR=20						
ASAR	Alice Springs	54.69	132	P	P	04 52 08.2	-2.1
	1.1nm,0.4s,baz=310,slow=6.9,SNR=19						
BRTR	Keskin Array B	57.74	309	P	P	04 52 31.4	-0.7
	0.3nm,0.4s,baz=121,slow=7.2,SNR=4.8						
GERES	GERESS Array B	72.71	317	P	P	04 54 05.9	-2.8
	1.3nm,0.7s,baz=90,slow=5.9,SNR=3.3						

IDC 16 04:45:19.9±17.0,6.60N×89.20E,mb3.6/2,mb1 3.9/3, mb1mx3.5/17,mbtmp3.7/3,ML4.5/1,Error ellipse: s-maj=371.9km s-min=59.8km az=98.0,Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.14	38	Pn	P	04 48 56.0	-0.9
	0.7nm,0.3s,baz=230,slow=14,SNR=6.9						
WRA	Warramunga Arr	51.64	122	P	P	04 54 28.3	-2.6
	0.6nm,0.5s,baz=304,slow=8.7,SNR=4.4						
ASAR	Alice Springs	53.00	126	P	P	04 54 39.3	-1.7
	0.5nm,0.7s,baz=309,slow=7.7,SNR=4.7						

MAN 16 04:52:31.0,12.73N×123.39E,h30^{km},mb4.1,ML2.9, MS2.5,3C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.44	148	eP	Pb	04 52 42.0	+1.5
MMPH				i S	Sb	04 52 50.0	+3.1
RCP	Roxas	1.32	209	⇑eP	Pn	04 52 53.1	-0.7
KALP	Kalibo	1.47	225	eP	Pn	04 52 56.0	+0.1
GQP	Guinayangan	1.48	322	⇑iP	Pn	04 52 55.7	-0.4
GQP				i S	Sn	04 53 14.9	+0.3
LQP	Lukban	2.26	308	⇑eP	Pn	04 53 06.7	-0.6

IGQ 16 04:53:24.4,1.45S×81.10W,h12^{km}±6^{km},mb4.0,1C,Error ellipse: s-maj=11.7km s-min=8.6km az=142.0,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.68	54	⇑P	Pb	04 53 36.3	-1.3
IGUA	Igualata	2.46	91	P	Pn	04 54 06.0	+1.0
ARRY	Arrayan	2.64	91	P	Pn	04 54 09.3	+1.7
ARRY				S	Sn	04 54 41.5	+1.7
ULBA	Ulba	2.69	90	P	Pn	04 54 09.6	+1.4
PISA	Pisayambo	2.74	82	P	Pn	04 54 09.6	+0.7
VC1	Cotopaxi 1	2.81	73	P	Pn	04 54 13.3	+3.3
VC1				S	Sn	04 54 53.4	+9.3
TAMB	Tambo	2.83	75	P	Pn	04 54 12.8	+2.5
ANTI	Antisana	3.10	71	P	Pn	04 54 16.7	+2.6
COTA	Cotacachi	3.28	57	P	Pn	04 54 17.2	+0.6
CAYR	Refugio Cayamb	3.41	65	P	Pn	04 54 21.6	+3.0
CAYA	Cayambe	3.45	64	P	Pn	04 54 21.8	+2.6
ECEN	Cerro Negro	3.85	54	P	Pn	04 54 26.3	+1.5
ECEN				S	Sn	04 55 13.7	+3.2

IDC 16 04:59:58.7±3.8,30.42S×138.35E,mb1 3.0/3, mb1mx3.0/9,mbtmp2.7/3,ML2.7/3,Error ellipse: s-maj=89.0km s-min=15.7km az=43.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	3.13	118	Pn	Pn	05 00 48.6	-1.6
	0.3nm,0.3s,baz=315,slow=21,SNR=5.0						
STKA				Pg	Pg	05 00 57.4	-3.8
	1.0nm,0.3s,baz=296,slow=14,SNR=16						
STKA				Lg		05 01 37.2	
	2.6nm,0.3s,baz=206,slow=21,SNR=8.5						
ASAR	Alice Springs	7.81	328	Pn	Pn	05 01 54.0	-2.3
	0.1nm,0.3s,baz=151,slow=11,SNR=4.4						
ASAR				Sn	Sn	05 03 25.0	-1.5
	0.2nm,0.3s,baz=152,slow=22,SNR=4.7						
WRA	Warramunga Arr	11.05	340	Pn	P	05 02 37.4	-3.7
	0.1nm,0.3s,baz=163,slow=12,SNR=3.1						
WRA				Sn	S	05 04 42.9	-3.7
	0.1nm,0.3s,baz=162,slow=24,SNR=3.3						

DJA 16 05:01:24.8±0.8,9.58S×117.09E,h33^{km},MD4.7/4, ML4.5/4,9D,Error ellipse: s-maj=24.8km s-min=17.2km az=27.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	Kedomdong	1.45	318	⇓iPn	Pn	05 01 48.2	-0.9
	514nm,0.2s						
KEDI				⇓iSn	Sn	05 02 05.4	-1.7
RATI	Rata	1.75	299	⇓iPn	Pn	05 01 52.0	-1.5
	704nm,0.2s						
RATI	Rata	1.75	299	⇓iP	P	05 01 53.0	-0.3
RATI				⇓iSn	Sn	05 02 12.1	-2.8
KELI	Kelakatan	2.90	298	⇓iPn	Pn	05 02 08.6	-1.2
	99nm,0.2s						
KELI				⇓iSn	Sn	05 02 39.8	-4.2
SRDI	Scrawed	3.11	290	⇓iPn	Pn	05 02 11.4	-1.4
	175nm,0.2s						
SRDI				⇓iSn	Sn	05 02 45.6	-3.6

IDC 16 05:19:45.5±1.1,6.55N×92.48E,mb3.8/5,mb1 4.1/6, mb1mx3.8/17,mbtmp3.8/6,ML3.9/1,Error ellipse: s-maj=50.2km s-min=22.6km az=55.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.41	27	Pn	P	05 22 58.0	-1.7
	0.2nm,0.3s,baz=230,slow=14,SNR=27						
SONM	Songino Array	42.82	14	P	P	05 27 44.2	-2.6
	0.3nm,0.4s,baz=210,slow=12,SNR=3.6						
SONM				PcP	PcP	05 29 38.1	-0.6
	0.6nm,0.5s,baz=225,slow=3.5,SNR=5.1						
WRA	Warramunga Arr	48.87	124	P	P	05 28 32.5	-2.8
	1.5nm,0.5s,baz=303,slow=9.0,SNR=13						
ASAR	Alice Springs	50.37	128	P	P	05 28 44.2	-2.5
	1.7nm,1.1s,baz=310,slow=7.2,SNR=8.7						
ASAR				PcP	PcP	05 30 04.5	-1.1
	0.7nm,0.5s,baz=291,slow=2.2,SNR=6.3						
BRTR	Keskin Array B	62.06	312	P	P	05 30 07.4	-3.0
	0.3nm,0.4s,baz=355,slow=17,SNR=3.4						
ARCES	ARCESS Array B	75.95	341	P	P	05 31 33.6	-2.1
	2.0nm,0.8s,baz=101,slow=4.6,SNR=3.1						
PDAR	Pinedale Array	126.98	20	PKP	PKPdf	05 38 52.4	-1.3
	0.2nm,0.5s,baz=45,slow=2.1,SNR=4.9						
TXAR	Lajitas Array	141.09	23	PKiKP		05 39 22.6	
	0.2nm,0.5s,baz=340,slow=1.4,SNR=7.2						

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*IDC **16** 05:48:25.0±1.3,23.89S×66.55W,h205^{km}±10^{km},mb3.7/8, mb1 3.8/12,mb1mx3.7/17,mbtmp4.1/12,Error ellipse: s-maj=22.2km s-min=14.7km az=18.0*

*GUC **16** 05:48:25.8±0.6,24.01S×67.21W,h236^{km}±9^{km},MD4.0, ML4.3*

*NEIC **16** 05:48:25.5±1.2,23.96S×66.62W,h216^{km}±18^{km},mb4.2/1, Error ellipse: s-maj=25.1km s-min=14.4km az=102.0*

ISC 16 05:48:24.1±0.9,24.06S±0.06×66.7W±0.1,h220^{km}±8^{km}, n20,σ1^{s}39/27,mb3.7/8,2C-1D,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	San Pedro de A	1.76	310	⇑iP	P	05 49 03.8	+1.5
SPCH				i S	S	05 49 33.3	+1.6
SPCH				AMP		05 49 35.9	
	comp=E,311nm,0.1s						
LVC	Limon Verde	2.46	305	⇑iP	P	05 49 10.2	+0.9
LVC				i S	S	05 49 43.6	-0.6
LVC				AMP		05 49 47.0	
	comp=E,435nm,0.4s						
LVC	Limon Verde	2.46	305	P	P	05 49 10.3	+1.0
	comp=E,55nm,0.3s,baz=125,slow=5.4,SNR=824						
LVC				S	S	05 49 44.7	+0.4
	comp=E,50nm,0.3s,baz=286,slow=19,SNR=19						
ANCH	Antofagasta	3.38	276	⇓iP	P	05 49 20.3	+0.6
ANCH				i S	S	05 50 00.5	-2.3
ANCH				AMP		05 50 03.4	
	comp=N,958nm,0.4s						
CPN1	Cerro Paranal	3.39	260	eP	P	05 49 20.1	+0.3
CPN1				i S	S	05 50 01.1	-1.9
CPN1				AMP		05 50 03.9	
	comp=E,802nm,0.1s						
CPCH	Copiapo	4.62	224	eP	P	05 49 32.8	-2.1
CPCH				i S	S	05 50 26.3	-3.6
LPAZ	La Paz	7.84	350	P	P	05 50 16.4	+0.4
	comp=E,1.3nm,0.3s,baz=168,slow=9.7,SNR=24						
LPAZ				S	S	05 51 43.0	-0.6
	comp=E,0.2nm,0.3s,baz=351,slow=25,SNR=4.7						
ARE	Arequipa	8.78	329	eP	P	05 50 31.0	+2.9
ARE				eS	S	05 52 03.0	-2.1
SAML	Samuel	15.41	13	eP	P	05 51 50.2	-1.5
	comp=E,7.8nm,0.8s						
PLCA	Paso Flores	16.93	190	P	P	05 52 10.6	+1.1
	comp=E,0.1nm,0.3s,baz=360,slow=13,SNR=5.3						
BDFB	Brasilia	19.49	68	P	P	05 52 35.1	-1.2
	comp=E,1.4nm,0.3s,baz=242,slow=10,SNR=26						
SDV	Santo Domingo	32.97	353	P	P	05 54 38.4	-1.9
	comp=E,2.7nm,0.8s,mb3.9,baz=314,slow=12,SNR=4.4						
TXAR	Lajitas Array	63.86	324	P	P	05 58 36.0	+0.6
	comp=E,0.7nm,0.5s,mb3.5,baz=152,slow=8.4,SNR=16						
DBIC	Dimbokro	67.60	71	P	P	05 58 57.5	-1.8
	comp=E,3.4nm,0.8s,mb4.0,baz=265,slow=4.6,SNR=3.8						
PDAR	Pinedale Array	77.32	329	P	P	05 59 57.2	+1.4
	comp=E,0.8nm,0.5s,mb3.6,baz=127,slow=7.9,SNR=9.6						
ULM	Lac du Bonnet	78.36	341	P	P	06 00 01.8	+0.4
	comp=E,1.1nm,0.7s,mb3.6,baz=158,slow=6.9,SNR=6.9						
SCHQ	Schefferville	78.57	360	P	P	06 00 02.6	+0.2
	comp=E,1.8nm,0.8s,mb3.7,baz=219,slow=6.5,SNR=4.7						
NVAR	Mina Array Bea	78.73	321	P	P	06 00 05.6	+1.9
	comp=E,0.2nm,0.4s,mb3.1,baz=141,slow=5.8,SNR=4.5						
YKA	Yellowknife Ar	94.26	340	P	P	06 01 19.6	+0.8
	comp=E,1.2nm,0.7s,mb4.0,baz=140,slow=4.2,SNR=30						
SONM	Songino Array	155.66	11	PKPab	PKPab	06 08 19.7	-1.0
	comp=E,0.3nm,0.5s,baz=320,slow=2.7,SNR=3.8						

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*NEIC **16** 05:58:23.0,23.51S×70.63W,h44^{km},MD4.2(GUC),After GUC.*

GUC 16 05:58:23.0±1.0,23.51S×70.63W,h44^{km}±4^{km},MD4.2, ML4.0,1C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANCH	Antofagasta	0.27	131	⇓iP	P	05 58 31.3	0.0
ANCH				i S	S	05 58 37.0	-0.1
ANCH				AMP		05 58 37.4	
	comp=N,32μm,0.1s						
CPN1	Cerro Paranal	1.13	169	eP	P	05 58 43.4	+0.8
CPN1				i S	S	05 59 00.0	+2.7
CPN1				AMP		05 59 01.7	
	comp=E,4μm,0.6s						
LVC	Limon Verde	1.82	61	⇑iP	P	05 58 53.6	+1.2
LVC				i S	S	05 59 16.8	+2.5
LVC				AMP		05 59 19.4	
	comp=N,1μm,0.8s						
SPCH	San Pedro de A	2.32	76	eP	P	05 59 03.2	+3.7
SPCH				i S	S	05 59 31.4	+4.5
SPCH				AMP		05 59 42.8	
	comp=N,2μm,0.3s						
ARE	Arequipa	7.05	353	eP	P	06 00 05.0	-1.3
ARE				eS	S	06 01 20.0	-6.0
LPAZ	La Paz	7.56	19	eP	P	06 00 12.7	-0.5
	comp=N,3.4nm,0.6s						

IGQ 16 06:14:43.3,1.48S×81.21W,h9^{km}±10^{km},mb4.0,1C,Error ellipse: s-maj=14.0km s-min=10.2km az=9.0,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.79	57	⇑P	Pb	06 14 58.1	-0.6
HOJA				S	Sb	06 15 08.4	-1.0
IGUA	Igualata	2.57	90	P	Pn	06 15 27.0	+1.1
ARRY	Arrayan	2.75	91	P	Pn	06 15 29.2	+0.7
ULBA	Ulba	2.80	89	P	Pn	06 15 31.0	+1.8
PISA	Pisayambo	2.85	82	P	Pn	06 15 32.4	+2.5
JUA2	San Juan 2	2.89	64	P	Pn	06 15 30.8	+0.3
TERV	Terraza Guagua	2.91	64	P	Pn	06 15 31.3	+0.5
PINO	Pino	2.92	63	P	Pn	06 15 32.1	+1.3
VC1	Cotopaxi 1	2.93	73	P	Pn	06 15 34.3	+3.4
TAMB	Tambo	2.95	75	P	Pn	06 15 34.5	+3.2
YANA	Yana	2.97	63	P	Pn	06 15 32.9	+1.3
ANTI	Antisana	3.22	71	P	Pn	06 15 37.6	+2.5
CAYR	Refugio Cayamb	3.53	65	P	Pn	06 15 42.8	+3.2
ECEN	Cerro Negro	3.97	55	P	Pn	06 15 47.7	+1.9

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*NIED **16** 06:27:00,34.10N×141.90E,h14^{km},Mw3.6 Best double couple: M$_0$3.11×10^{14} NP1:φ$_s$46°,δ64°,λ128°. NP2:φ$_s$166°, δ45°,λ38°.*

*JMA **16** 06:27:59.5±0.4,34.07N×141.93E,h15^{km}±2^{km},M3.6*

ISC 16 06:28:00.7±1.5,34.14N±0.06×141.87E±0.10,h15^{km},n11, σ0^{s}93/19,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	0.90	305	P	Pb	06 28 17.9	+0.5
BSO3	Boso 3	1.30	301	P	Pb	06 28 24.1	-0.3
BSO4	Boso 4	1.52	304	P	Pn	06 28 27.9	+0.3
JHJ2	Mitsune	2.00	240	P	Pn	06 28 33.6	-0.7
JHJ2				S	Sn	06 28 57.9	-1.3
JIM2	Oshima 3	2.10	287	P	Pn	06 28 37.5	+1.7
JIM2				S	Sn	06 29 03.2	+1.5
JOD2	Odawara 2	2.55	297	P	Pn	06 28 43.0	+0.7
JOD2				S	Sn	06 29 13.2	-0.1
JAG	Ashikaga	3.02	320	P	Pn	06 28 48.9	0.0
JAG				S	Sn	06 29 24.9	-0.2
JYN	Shimob	3.05	297	P	Pn	06 28 50.2	+0.8
JYN				S	Sn	06 29 25.1	-0.9
JRY	Ryogami san	3.07	308	P	Pn	06 28 49.0	-0.7
JRY				S	Sn	06 29 27.0	+0.6
JMM	Marumori	3.82	347	P	Pn	06 29 01.4	+1.1
JMM				S	Sn	06 29 42.9	-2.5
MAT	Matsushiro	3.84	310	P	Pn	06 28 59.9	-0.6
MAT				S	Sn	06 29 45.2	-0.6

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*IDC **16** 06:28:29.8±1.1,49.31S×164.48E,mb4.1/4,mb1 4.3/6, mb1mx4.1/13,mbtmp4.2/6,ML3.9/2,MS4.2/12,Ms1 4.2/12, ms1mx3.8/19,Error ellipse: s-maj=35.2km s-min=24.9km az=178.0*

*NEIC **16** 06:28:32.8±0.8,49.61S×164.54E,h35^{km}±26^{km},mb4.7/3, Error ellipse: s-maj=37.1km s-min=7.4km az=126.0*

ISC 16 06:28:32.2±0.8,49.41S±0.08×164.58E±0.09,h33^{km},n81, σ1^{s}23/95,mb4.3/7,MS4.1/10,2C,Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHZ	Wether Hill Ro	4.19	34	P	P	06 29 36.5	+1.0
WHZ				S	S	06 30 23.3	-0.7
WHZ	Wether Hill Ro	4.19	34	PN	Pn	06 29 36.5	+0.9
WHZ				SN	Sn	06 30 24.4	+0.4
WHZ	Wether Hill Ro	4.19	34	PN	Pn	06 29 36.5	+0.9
WHZ				SN	Sn	06 30 24.4	+0.4
DCZ	Deep Cove	4.31	25	PN	Pn	06 29 37.6	+0.4
DCZ	Deep Cove	4.31	25	PN	Pn	06 29 37.6	+0.4
MLZ	Mavora Lakes	4.74	32	eP	P	06 29 44.3	+1.0
MLZ				S	S	06 30 37.4	-0.4
MLZ	Mavora Lakes	4.74	32	PN	Pn	06 29 44.3	+0.9
MLZ				SN	Sn	06 30 37.3	-0.6
MLZ	Mavora Lakes	4.74	32	PN	Pn	06 29 44.3	+0.9
MLZ				SN	Sn	06 30 37.3	-0.6
TUZ	Tuapeka	4.86	46	eP	P	06 29 46.2	+1.3
TUZ				S	S	06 30 43.0	+2.3
TUZ	Tuapeka	4.86	46	PN	Pn	06 29 46.2	+1.1
TUZ				eSN	Sn	06 30 43.0	+2.1
TUZ	Tuapeka	4.86	46	PN	Pn	06 29 46.2	+1.1
TUZ				eSN	Sn	06 30 43.0	+2.1
MSZ	Milford Sound	5.26	27	ePN	Pn	06 29 52.2	+1.4
MSZ				SN	Sn	06 30 54.0	+2.9
MSZ	Milford Sound	5.26	27	ePN	Pn	06 29 52.2	+1.4
MSZ				SN	Sn	06 30 54.0	+2.9
EAZ	Earnscleugh	5.27	39	eP	P	06 29 51.2	+0.4

EAZ	Earnscleugh	5.27	39	PN	Pn	06 29 51.2	+0.4
EAZ				eSN	Sn	06 30 51.3	0.0
EAZ	Earnscleugh	5.27	39	PN	Pn	06 29 51.2	+0.4
EAZ				eSN	Sn	06 30 51.3	0.0
WKZ	Wanaka	5.50	35	eP	P	06 29 55.2	+1.4
WKZ	Wanaka	5.50	35	PN	Pn	06 29 55.2	+1.2
WKZ				SN	Sn	06 30 57.0	+0.2
WKZ	Wanaka	5.50	35	PN	Pn	06 29 55.2	+1.2
WKZ				SN	Sn	06 30 57.0	+0.2
ODZ	Otahua Downs	6.01	46	eP	P	06 30 00.9	-0.2
ODZ				eS	S	06 31 07.2	-2.5
ODZ	Otahua Downs	6.01	46	PN	Pn	06 30 01.1	-0.2
ODZ				eSN	Sn	06 31 07.2	-2.5
ODZ	Otahua Downs	6.01	46	PN	Pn	06 30 01.1	-0.2
ODZ				eSN	Sn	06 31 07.2	-2.5
JCZ	Jackson Bay	6.06	30	eP	P	06 30 03.5	+1.7
JCZ	Jackson Bay	6.06	30	PN	Pn	06 30 03.7	+1.6
JCZ				eSN	Sn	06 31 10.8	-0.2
JCZ	Jackson Bay	6.06	30	PN	Pn	06 30 03.7	+1.6
JCZ				eSN	Sn	06 31 10.8	-0.2
MCQ	Macquarie Isla	6.17	212	eP	P	06 29 58.7	-4.6
LBZ	Lake Benmore	6.32	39	eP	P	06 30 04.5	-1.0
LBZ				S	S	06 31 15.6	-1.9
LBZ	Lake Benmore	6.32	39	PN	Pn	06 30 04.5	-1.2
LBZ				SN	Sn	06 31 15.6	-2.0
LBZ	Lake Benmore	6.32	39	PN	Pn	06 30 04.5	-1.2
LBZ				SN	Sn	06 31 15.6	-2.0
FOZ	Fox Glacier	6.83	33	PN	Pn	06 30 14.4	+1.6
FOZ				eSN	Sn	06 31 30.1	0.0
FOZ	Fox Glacier	6.83	33	PN	Pn	06 30 14.4	+1.6
FOZ				eSN	Sn	06 31 30.1	0.0
RPZ	Rata Peaks	7.23	40	Pn	Pn	06 30 16.2	-2.3
	3.4nm,0.3s,baz=214,slow=3.6,SNR=14						
RPZ				Sn	Sn	06 31 37.9	-2.4
	12nm,0.3s,baz=20,slow=18,SNR=11						
RPZ				LR	LR	06 33 25.3	
	comp=Z,3µm,18.5s,baz=216,slow=41						
RPZ	Rata Peaks	7.23	40	eP	P	06 30 15.5	-2.8
RPZ	Rata Peaks	7.23	40	PN	Pn	06 30 15.5	-3.0
RPZ				eSN	Sn	06 31 36.8	-3.5
RPZ	Rata Peaks	7.23	40	PN	Pn	06 30 15.5	-3.0
RPZ				eSN	Sn	06 31 36.8	-3.5
WVZ	Waitaha Valley	7.64	36	eP	P	06 30 23.4	-0.5
WVZ	Waitaha Valley	7.64	36	ePN	Pn	06 30 23.4	-0.8
WVZ	Waitaha Valley	7.64	36	ePN	Pn	06 30 23.4	-0.8
MQZ	McQueen's Vall	7.96	47	eP	P	06 30 28.6	+0.2
MQZ	McQueen's Vall	7.96	47	ePN	Pn	06 30 28.6	-0.1
MQZ	McQueen's Vall	7.96	47	ePN	Pn	06 30 28.6	-0.1
LTZ	Lake Taylor	8.51	42	eP	P	06 30 34.5	-1.5
LTZ	Lake Taylor	8.51	42	PN	P	06 30 34.5	-1.5
LTZ	Lake Taylor	8.51	42	PN	P	06 30 34.5	-1.5
KHZ	Kahutara	9.37	45	eP	P	06 30 48.4	+0.4
KHZ	Kahutara	9.37	45	ePN	P	06 30 48.3	+0.3
KHZ	Kahutara	9.37	45	ePN	P	06 30 48.3	+0.3
THZ	Tophouse	9.62	40	eP	P	06 30 50.5	-0.7
THZ	Tophouse	9.62	40	PN	P	06 30 50.6	-0.7
THZ	Tophouse	9.62	40	PN	P	06 30 50.6	-0.7
QRZ	Quartz Range	10.25	36	eP	P	06 30 58.7	-1.3
QRZ	Quartz Range	10.25	36	PN	P	06 30 59.1	-1.0
QRZ	Quartz Range	10.25	36	PN	P	06 30 59.1	-1.0
CAW	Cannon Point	11.11	46	ePN	P	06 31 13.9	+2.2
TAU	Tasmania Unive	13.60	292	eP	P	06 31 40.9	-4.1
	89nm,0.4s						
URZ	Urewera	14.33	44	Pn	P	06 31 53.5	-1.1
	0.4nm,0.3s,baz=146,slow=3.4,SNR=5.1						
URZ				LR	LR	06 38 07.3	
	comp=Z,2µm,19.0s,baz=232,slow=40						
TOO	Toolangi	18.16	304	eP	P	06 32 45.1	+1.7
	0.6nm,0.4s						
STKA	Stephens Creek	24.57	307	P	P	06 33 50.3	+0.1
	0.8nm,0.3s,mb3.7,baz=144,slow=16,SNR=2.1						
STKA				LR	LR	06 41 28.9	
	comp=Z,741nm,18.2s,MS4.2,baz=306,slow=32						
VNDA	Vanda	28.23	181	LR	LR	06 43 07.1	
	comp=Z,357nm,21.4s,MS3.9,baz=355,slow=31						
CTA	Charters Tower	32.73	327	P	P	06 35 03.1	-0.8
	5.3nm,0.9s,mb4.5,baz=160,slow=13,SNR=3.0						
CTA				LR	LR	06 46 19.2	
	comp=Z,432nm,19.3s,MS4.2,baz=300,slow=33						
ASAR	Alice Springs	35.19	306	P	P	06 35 24.7	-0.4
	1.5nm,0.6s,mb4.1,baz=132,slow=8.8,SNR=19						
ASAR				PcP	PcP	06 37 56.0	0.0
	0.7nm,0.6s,baz=145,slow=3.9,SNR=4.4						
ASAR				LR	LR	06 48 36.3	
	comp=Z,164nm,20.9s,MS3.8,baz=289,slow=34						
WB2	Warramunga Arr	38.04	310	eP	P	06 35 47.7	-1.4
WRA	Warramunga Arr	38.04	310	P	P	06 35 48.6	-0.5
	3.4nm,0.6s,mb4.2,baz=140,slow=7.8,SNR=22						
WRA				PcP	PcP	06 38 05.0	+0.3
	2.9nm,0.9s,baz=153,slow=2.6,SNR=6.2						
WRAB	Tennant Creek	38.05	310	eP	P	06 35 48.4	-0.8
	8.8nm,0.8s,mb4.5						
RAR	Rarotonga	39.86	58	LR	LR	06 49 56.3	
	comp=Z,68nm,18.6s,MS3.5,baz=285,slow=32						
PMG	Port Moresby	42.45	334	LR	LR	06 50 56.6	
	comp=Z,327nm,18.5s,MS4.2,baz=184,slow=32						
FITZ	Fitzroy Crossi	44.19	301	⇑iP	P	06 36 39.5	-0.3
	4.2nm,0.7s,mb4.3						
TBI	Tubuai	44.30	71	eS	S	06 43 22.6	+11
TBI				eLQ		06 46 55.0	
TBI				eLQ		06 48 55.6	
	143nm,27.0s						
KAKA	Kakadu	45.16	313	⇑iP	P	06 36 47.0	-0.5
	10nm,0.6s,mb4.8						
PPT	Papeete	48.61	66	eS	S	06 44 23.2	+10
PPT				eLR	LR	06 50 42.5	
	244nm,22.8s						
MAW	Mawson	49.56	210	LR	LR	06 56 44.3	
	comp=Z,404nm,21.9s,MS4.4,baz=298,slow=34						
USHA	Ushuaia	67.03	150	LR	LR	07 03 06.2	
	comp=Z,350nm,21.6s,MS4.5,baz=290,slow=31						
PLCA	Paso Flores	77.97	140	LR	LR	07 06 23.2	
	comp=Z,102nm,19.2s,MS4.2,baz=205,slow=29						
JOW	Kunigami	82.51	328	LR	LR	07 15 42.2	
	comp=Z,142nm,19.8s,MS4.3,baz=292,slow=34						
INK	Inuvik	126.06	24	PKP	PKPdf	06 47 32.2	+2.3
	1.5nm,1.0s,baz=222,slow=3.0,SNR=4.3						
YKA	Yellowknife Ar	128.48	36	PKP	PKPdf	06 47 36.9	+2.1
	0.1nm,0.5s,baz=243,slow=1.5,SNR=4.0						
BRTR	Keskin Array B	144.30	273	PKP	PKPdf	06 48 05.5	+1.3
	3.0nm,1.0s,baz=130,slow=5.7,SNR=4.1						
FRB	Frobisher Bay	148.49	43	PKPbc	PKPdf	06 48 17.1	+6.6
	3.3nm,0.7s,baz=311,slow=5.8,SNR=9.5						
AKASG	Malin Array Be	151.63	290	PKPbc	PKPdf	06 48 23.7	+8.0
	1.4nm,0.5s,baz=79,slow=2.3,SNR=14						
AKASG				PKPab	PKPab	06 48 30.7	-2.3
	4.2nm,0.6s,baz=77,slow=2.5,SNR=25						
ARCES	ARCESS Array B	151.94	331	PKPbc	PKPdf	06 48 25.1	+9.5
	1.3nm,0.5s,baz=72,slow=2.9,SNR=6.1						
ARCES				PKPab	PKPab	06 48 32.4	-1.4
	5.8nm,0.9s,baz=90,slow=2.4,SNR=5.5						
MLR	Muntele Rosu	152.01	278	PKPbc	PKPdf	06 48 26.1	+10
	1.9nm,0.6s,baz=165,slow=9.0,SNR=4.3						

IGQ 16 06:29:28.4, 1.61S×81.45W, h12^{km}±11^{km}, mb4.4, 1C-3D, Error ellipse: s-maj=12.4km s-min=7.9km az=171.8, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	1.06	59	P	Pb	06 29 46.6	-1.7
IGUA	Igualata	2.82	88	P	Pn	06 30 15.2	+1.1
IGUA				S	Sn	06 30 48.9	+0.6
CUSU	Cusua	2.98	87	P	Pn	06 30 19.1	+2.7
JUIV	Juive	2.99	87	P	Pn	06 30 18.8	+2.1
ARRY	Arrayan	3.00	88	P	Pn	06 30 17.6	+0.8
ARRY				S	Sn	06 30 51.8	-1.1
ULBA	Ulba	3.05	87	P	Pn	06 30 19.1	+1.6
ULBA				S	Sn	06 30 55.2	+1.0
PISA	Pisayambo	3.12	80	P	Pn	06 30 20.1	+1.7
JUA2	San Juan 2	3.17	64	P	Pn	06 30 18.8	-0.3
TERV	Terraza Guagua	3.19	63	P	Pn	06 30 19.6	+0.2
PINO	Pino	3.19	63	P	Pn	06 30 19.6	+0.1
GGP	Refugio Guagua	3.19	64	P	Pn	06 30 21.2	+1.7
VC1	Cotopaxi 1	3.20	73	⇓P	Pn	06 30 22.2	+2.7
TAMB	Tambo	3.21	74	P	Pn	06 30 22.5	+2.7
YANA	Yana	3.24	63	P	Pn	06 30 20.1	-0.1
ANTI	Antisana	3.49	71	⇓P	Pn	06 30 25.7	+2.1
ANTI				S	Sn	06 31 07.7	+2.4
COTA	Cotacachi	3.67	58	⇓P	Pn	06 30 27.4	+1.3
COTA				S	Sn	06 31 12.8	+3.0
ELAGU	Cayambe Volc	3.80	66	P	Pn	06 30 31.8	+3.6
CAYR	Refugio Cayamb	3.81	65	P	Pn	06 30 30.8	+2.6
CAYA	Cayambe	3.84	64	P	Pn	06 30 31.6	+2.9
ECEN	Cerro Negro	4.24	55	P	Pn	06 30 36.5	+2.2
ECEN				S	Sn	06 31 24.2	-0.1
SNAA	Sanae	84.90	162	⇑i	P	06 42 29.6	+26

IDC 16 06:36:37.5±0.7, 13.59N×92.83E, mb4.1/12, mb1 4.3/13, mb1mx4.1/20, mbtmp4.1/13, ML3.8/1, MS3.7/3, Ms1 3.8/3, ms1mx3.3/20, Error ellipse: s-maj=31.3km s-min=14.8km az=52.0

NEIC 16 06:36:41.7±0.4, 13.66N×92.76E, h30^{km}, mb4.4/8, Error ellipse: s-maj=9.5km s-min=7.1km az=51.0

BJI 16 06:36:42.9, 13.77N×93.37E, h15^{km}, mB4.4, mb4.2, Ms3.7, Msz3.9

ISC 16 06:36:40.0±0.4, 13.60N±0.06×92.77E±0.05, h33^{km}, n46, σ1$\overset{s}{.}$14/46, mb4.2/21, MS3.8/4, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NST	Nakhon Sawan	7.42	73	P	P	06 38 33.1	+4.4
CM31	Chiang Mai Arr	7.66	50	P	P	06 38 32.2	+0.3
	31nm,0.6s						
CMAR	Chiang Mai Arr	7.66	50	Pn	Pn	06 38 29.9	-2.2
	0.4nm,0.3s,baz=244,slow=14,SNR=17						
CMAR				Sn	Sn	06 39 53.6	-5.0
	2.5nm,0.3s,baz=237,slow=27,SNR=6.6						
CHRT	Chiangrai	9.17	46	P	P	06 38 57.0	+4.1
NANT	Nan	9.21	55	P	P	06 38 53.5	0.0
PALK	Pallekele	13.42	243	eP	P	06 39 49.2	-1.4
	10nm,0.7s						
HYB	Hyderabad	14.21	287	eP	P	06 40 02.0	+0.9
HYB				eS	S	06 42 23.0	-16
HYB	Hyderabad	14.21	287	iP	P	06 40 02.0	+0.9
HYB				e		06 42 23.0	
HYB				eS	S	06 42 39.0	+0.4
JIRN	Jiri	15.28	337	eP	P	06 40 13.8	-1.2
	8.9nm,0.3s						
PKI	Pulchoki	15.51	335	eP	P	06 40 15.7	-2.3
GUN	Gumba	15.62	337	eP	P	06 40 18.8	-0.6
DMN	Daman	15.67	334	eP	P	06 40 19.3	-0.7
KKN	Kakani	15.75	335	eP	P	06 40 20.1	-1.0
LSA	Lhasa	16.09	355	P	P	06 40 30.3	+4.8
LSA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
LSA	Lhasa	16.09	355	eP	P	06 40 29.8	+4.4
	comp=Z,8.4nm,0.6s						
GKN	Gorkha	16.21	333	eP	P	06 40 25.3	-1.7
	comp=Z,28nm,0.5s						
KOLN	Koldanda	16.49	330	eP	P	06 40 29.3	-1.2
	comp=Z,15nm,0.7s						
GYA	Guiyang	18.26	43	⇑iP	P	06 40 54.8	+2.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
KAD	Karad	18.29	284	eP	P	06 40 55.0	+1.9
KAD				eS	S	06 44 03.2	-10
CD2	Chengdu	19.98	29	P	P	06 41 11.8	-0.7
ENH	Enshi	22.66	40	eP	P	06 41 39.0	-0.7
	comp=Z,13nm,0.8s,mb4.4						
LZH	Lanzhou	24.51	22	eP	P	06 41 59.8	+2.2
LZH				AP		06 42 09.3	
LZH				XP		06 42 13.8	
LZH				AMB	AMB		
	comp=Z,24nm,1.2s,mb4.6						
LZH				AMB	AMB		
	comp=Z,96nm,4.5s						
LZH				LR	LR		
	comp=N,263nm,15.2s						
LZH				LR	LR		
	comp=Z,345nm,17.8s,MS3.9						
LZH	Lanzhou	24.51	22	eP	P	06 41 59.8	+2.2
	comp=Z,24nm,1.2s,mb4.6						
LZH				pP		06 42 09.3	
LZH				sP		06 42 13.8	
LZH				LR	LR		
	comp=Z,350nm,17.8s,MS3.9						
XAN	Xi'an	25.08	33	P	P	06 42 02.8	-0.4
XAN				AP	pP	06 42 08.3	-4.2
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GTA	Gaotai	26.45	12	P	P	06 42 18.1	+2.2
GTA				AP	pP	06 42 27.9	+2.6
GTA				XP	sP	06 42 30.8	+1.5
GTA				AMB	AMB		
	comp=Z,3.0nm,1.6s,mb3.6						
SONM	Songino Array	35.97	16	P	P	06 43 40.3	+0.6
	comp=Z,0.4nm,0.3s,mb3.8,baz=225,slow=2.0,SNR=5.6						
KURK	Kurchatov	38.77	346	eP	P	06 44 02.5	-0.5
	comp=Z,5.6nm,1.0s,mb4.2						
BVAR	Borovoye Array	43.17	340	P	P	06 44 40.4	+1.1
	comp=Z,1.0nm,0.6s,mb3.8,baz=240,slow=39,SNR=4.6						
FITZ	Fitzroy Crossi	45.20	133	eP	P	06 44 55.4	-0.7
	comp=Z,7.6nm,1.5s,mb4.3						
NWAO	Narrogin (SRO)	51.83	154	eP	P	06 45 47.0	-0.3
	comp=Z,16nm,1.1s,mb4.9						
WRA	Warramunga Arr	52.76	128	P	P	06 45 53.8	-0.6
	comp=Z,2.9nm,0.6s,mb4.4,baz=301,slow=10,SNR=42						
WRA				PcP	PcP	06 47 04.2	+0.6
	comp=Z,0.7nm,0.4s,baz=319,slow=3.0,SNR=4.7						
WRAB	Tennant Creek	52.77	128	eP	P	06 45 53.9	-0.5
	comp=Z,6.3nm,0.6s,mb4.7						
ASAR	Alice Springs	54.68	132	P	P	06 46 08.0	-0.5
	comp=Z,2.3nm,0.5s,mb4.5,baz=310,slow=6.7,SNR=36						
EIL	Elat	55.54	297	LR	LR	07 11 59.9	
	comp=Z,31nm,19.1s,MS3.4,baz=314,slow=38						
BRTR	Keskin Array B	57.76	308	P	P	06 46 30.6	+0.3
	comp=Z,0.7nm,0.6s,mb3.9,baz=118,slow=6.6,SNR=3.0						
MLR	Muntele Rosu	64.20	314	P	P	06 47 13.8	0.0
	comp=Z,2.5nm,0.9s,mb4.2,baz=143,slow=7.5,SNR=4.1						
STKA	Stephens Creek	65.05	135	P	P	06 47 19.4	-0.3
	comp=Z,15nm,1.5s,mb4.8,baz=278,slow=7.1,SNR=2.3						
JOF	Joensuu	65.14	334	ep	P	06 47 19.8	+0.2
	comp=Z,3.5nm,0.9s,mb4.4						
FINES	FINESS Array B	67.06	331	P	P	06 47 32.6	+0.8
	comp=Z,1.1nm,0.6s,mb4.1,baz=108,slow=6.0,SNR=8.8						
ARCES	ARCESS Array B	69.46	340	P	P	06 47 47.1	+0.5
	comp=Z,3.8nm,0.9s,mb4.3,baz=91,slow=6.7,SNR=12						
GERES	GERESS Array B	72.71	317	P	P	06 48 08.3	+1.7
	comp=Z,1.2nm,0.6s,mb4.0,baz=104,slow=5.5,SNR=6.1						
HFS	Hagfors	72.87	329	P	P	06 48 08.4	+1.1
	comp=Z,2.1nm,0.8s,mb4.1,baz=106,slow=10,SNR=3.4						
NOA	NORSAR Array B	74.12	330	LR	LR	07 25 30.6	
	comp=Z,32nm,19.7s,MS3.6,baz=230,slow=40						
ILAR	Eielson Array	89.97	22	P	P	06 49 38.5	+1.6
	comp=Z,0.4nm,0.9s,mb3.8,baz=284,slow=3.7,SNR=4.2						
ILAR				LR	LR	07 33 35.8	
	comp=Z,88nm,18.2s,MS4.2,baz=352,slow=38						
TXAR	Lajitas Array	134.47	20	PKP	PKPdf	06 55 58.9	+3.2
	comp=Z,0.2nm,0.8s,baz=135,slow=1.3,SNR=3.0						
PLCA	Paso Flores	149.28	205	PKPab	PKPab	06 56 34.0	+1.7
	comp=Z,2.0nm,1.1s,baz=142,slow=2.4,SNR=3.7						

IDC 16 06:37:39.2±2.8, 48.27S×163.87E, mb3.7/2, mb1 4.0/3, mb1mx3.7/10, mbtmp3.8/3, ML3.9/1, MS4.1/3, Ms1 4.1/3, ms1mx3.4/13, Error ellipse: s-maj=71.1km s-min=31.0km az=164.0

ISC 16 06:37:30.9±1.3, 49.5S±0.1×164.5E±0.2, h10^{km}, n27, σ1$\overset{s}{.}$43/39, mb3.7/2, MS4.1/3, Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHZ	Wether Hill Ro	4.28	34	PN	Pn	06 38 38.1	+0.4
WHZ				SN	Sn	06 39 28.0	-0.3
WHZ	Wether Hill Ro	4.28	34	PN	Pn	06 38 38.1	+0.4
WHZ				SN	Sn	06 39 28.0	-0.3
MLZ	Mavora Lakes	4.83	32	PN	Pn	06 38 45.8	+0.3
MLZ				SN	Sn	06 39 41.5	-0.7
MLZ	Mavora Lakes	4.83	32	PN	Pn	06 38 45.8	+0.3
MLZ				SN	Sn	06 39 41.5	-0.7
TUZ	Tuapeka	4.94	46	ePN	Pn	06 38 48.1	+1.0
TUZ				SN	Sn	06 39 43.8	-1.2
TUZ	Tuapeka	4.94	46	ePN	Pn	06 38 48.1	+1.0
TUZ				SN	Sn	06 39 43.8	-1.2
MSZ	Milford Sound	5.35	27	PN	Pn	06 38 56.0	+3.2
MSZ	Milford Sound	5.35	27	PN	Pn	06 38 56.0	+3.2
EAZ	Earnscleugh	5.36	39	ePN	Pn	06 38 53.8	+0.8
EAZ				eSN	Sn	06 39 54.3	-1.2
EAZ	Earnscleugh	5.36	39	ePN	Pn	06 38 53.8	+0.8
EAZ				eSN	Sn	06 39 54.3	-1.2
WKZ	Wanaka	5.58	35	PN	Pn	06 38 57.6	+1.5
WKZ				SN	Sn	06 40 01.4	+0.2
WKZ	Wanaka	5.58	35	PN	Pn	06 38 57.6	+1.5
WKZ				SN	Sn	06 40 01.4	+0.2
ODZ	Otahua Downs	6.10	45	ePN	Pn	06 39 02.5	-0.8
ODZ	Otahua Downs	6.10	45	ePN	Pn	06 39 02.5	-0.8
JCZ	Jackson Bay	6.15	30	PN	Pn	06 39 05.4	+1.3
JCZ				SN	Sn	06 40 17.5	+2.2
JCZ	Jackson Bay	6.15	30	PN	Pn	06 39 05.4	+1.3
JCZ				SN	Sn	06 40 17.5	+2.2
LBZ	Lake Benmore	6.41	39	PN	Pn	06 39 05.5	-2.3
LBZ				eSN	Sn	06 40 17.4	-4.4
LBZ	Lake Benmore	6.41	39	PN	Pn	06 39 05.5	-2.3
LBZ				eSN	Sn	06 40 17.4	-4.4
FOZ	Fox Glacier	6.92	33	ePN	Pn	06 39 17.7	+2.8
FOZ	Fox Glacier	6.92	33	ePN	Pn	06 39 17.7	+2.8
RPZ	Rata Peaks	7.32	40	Pn	Pn	06 39 18.8	-1.8
	2.2nm,0.3s,baz=58,slow=15,SNR=7.8						
RPZ				Sn	Sn	06 40 41.3	-3.3
	11nm,0.3s,baz=46,slow=15,SNR=8.8						
MQZ	McQueen's Vall	8.05	47	ePN	P	06 39 31.8	+1.0
STKA	Stephens Creek	24.58	307	LR	LR	06 50 22.1	
	comp=Z,450nm,18.1s,MS4.0,baz=67,slow=32						
ASAR	Alice Springs	35.20	306	P	P	06 44 26.4	-0.8
	0.6nm,0.6s,mb3.7,baz=137,slow=7.8,SNR=9.4						
ASAR				LR	LR	06 56 56.8	
	comp=Z,189nm,19.1s,MS3.9,baz=262,slow=34						
WRA	Warramunga Arr	38.06	310	P	P	06 44 49.4	-1.9
	1.9nm,1.1s,mb3.7,baz=138,slow=8.3,SNR=6.2						
MAW	Mawson	49.47	210	LR	LR	07 05 24.0	
	comp=Z,356nm,21.4s,MS4.3,baz=276,slow=33						
AKASG	Malin Array Be	151.62	290	PKPbc	PKPdf	06 57 32.4	+11
	1.7nm,0.8s,baz=74,slow=2.6,SNR=9.4						

IDC 16 06:57:33.7±5.8, 4.07N×92.79E, mb3.8/3, mb1 4.0/4, mb1mx3.7/18, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=172.0km s-min=28.8km az=73.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.52	22	Pn	P	07 01 14.8	-0.9
	0.2nm,0.3s,baz=216,slow=11,SNR=13						
SONM	Songino Array	45.15	13	P	P	07 05 52.0	-1.8
	1.1nm,0.8s,baz=202,slow=6.7,SNR=9.1						
WRA	Warramunga Arr	47.28	122	P	P	07 06 08.9	-2.2
	2.1nm,0.7s,baz=300,slow=9.0,SNR=12						
ASAR	Alice Springs	48.63	127	P	P	07 06 19.8	-1.7
	0.7nm,0.8s,baz=319,slow=8.4,SNR=5.9						

IDC 16 07:04:46.5±4.2, 1.47N×83.97W, mb3.6/6, mb1 4.0/7, mb1mx3.7/21, mbtmp3.7/7, ML3.6/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/23, Error ellipse: s-maj=113.2km s-min=84.2km az=83.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	JuntasAbangare	8.82	354	Pn	P	07 06 56.0	-2.1
	0.7nm,0.3s,baz=311,slow=9.7,SNR=3.3						
JTS				LR	LR	07 09 34.3	
	comp=Z,256nm,21.2s,baz=222,slow=33						
LPAZ	La Paz	23.58	139	P	P	07 10 11.1	+11
	1.5nm,1.1s,baz=314,slow=11,SNR=3.7						
LVC	Limon Verde	28.08	149	LR	LR	07 21 13.5	
	comp=Z,91nm,18.2s,baz=223,slow=35						
TXAR	Lajitas Array	33.46	328	P	P	07 11 26.8	-2.8
	0.2nm,0.8s,baz=135,slow=7.1,SNR=3.5						
NVAR	Mina Array Bea	48.38	324	P	P	07 13 30.9	-1.4
	0.7nm,1.1s,baz=122,slow=7.1,SNR=4.5						
YKA	Yellowknife Ar	65.04	345	P	P	07 15 28.0	-2.6
	0.7nm,0.9s,baz=142,slow=6.5,SNR=11						
INK	Inuvik	74.64	343	P	P	07 16 27.6	-1.6
	1.7nm,0.9s,baz=157,slow=9.0,SNR=5.2						
ILAR	Eielson Array	77.40	337	P	P	07 16 43.5	-1.3
	1.1nm,0.9s,baz=118,slow=3.9,SNR=9.9						

BJI 16 07:05:50.9, 9.00N×93.50E, h30^{km}, mb4.3

NEIC 16 07:05:50.9±0.9, 9.01N×93.52E, h30^{km}, mb4.3/1, Error ellipse: s-maj=29.6km s-min=17.9km az=120.0

IDC 16 07:05:53.4±6.4, 9.08N×93.61E, h47^{km}±54^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.7/19, mbtmp3.9/8, ML4.4/1, MS3.1/1, Ms1 3.3/1, ms1mx2.9/23, Error ellipse: s-maj=46.2km s-min=45.5km az=69.0

ISC 16 07:05:51.1±2.1, 9.2N±0.3×93.4E±0.2, h33^{km}, n14, σ0$\overset{s}{.}$87/12, mb4.0/8, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.63	30	P	P	07 08 23.8	-0.5
	0.9nm,0.3s,baz=210,slow=14,SNR=4.8						
CMAR				LR	LR	07 12 38.3	
	comp=Z,96nm,18.1s,baz=83,slow=38						
LSA	Lhasa	20.50	354	eP	P	07 10 30.4	+1.4
LSA	Lhasa	20.50	354	eP	P	07 10 28.8	-0.2
	12nm,0.9s						
GYA	Guiyang	21.25	34	⇓iP	P	07 10 37.6	+0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
SONM	Songino Array	40.03	14	P	P	07 13 24.4	-0.2
	comp=Z,1.0nm,1.1s,mb3.5,baz=233,slow=6.2,SNR=3.9						
BRTR	Keskin Array B	61.04	310	P	P	07 16 04.2	+0.1
	comp=Z,1.1nm,0.8s,mb4.0,baz=117,slow=2.8,SNR=4.3						
FINES	FINESS Array B	71.22	332	P	P	07 17 06.7	-1.9
	comp=Z,1.6nm,1.0s,mb3.9,baz=124,slow=6.9,SNR=3.4						
ARCES	ARCESS Array B	73.78	340	P	P	07 17 23.3	-0.3
	comp=Z,3.8nm,0.9s,mb4.3,baz=76,slow=5.0,SNR=4.4						
ARCES	ARCESS Array B	73.78	340	P	P	07 17 23.3	-0.3
GERES	GERESS Array B	76.38	318	P	P	07 17 40.3	+1.4
	comp=Z,0.3nm,0.2s,mb3.8,baz=82,slow=6.9,SNR=3.4						
ILAR	Eielson Array	93.78	22	P	P	07 19 05.6	0.0
	comp=Z,0.5nm,0.7s,mb4.0,baz=306,slow=4.1,SNR=7.1						
INK	Inuvik	95.91	16	P	P	07 19 15.1	-0.2
	comp=Z,1.7nm,1.0s,mb4.4,baz=301,slow=8.1,SNR=4.0						
TXAR	Lajitas Array	138.28	23	PKP	PKPdf	07 25 15.3	+1.5
	comp=Z,0.1nm,0.4s,baz=190,slow=1.1,SNR=6.3						
PLCA	Paso Flores	145.54	202	PKPbc	PKPbc	07 25 25.6	-1.3
	comp=Z,3.1nm,0.7s,baz=122,slow=2.3,SNR=12						

BJI 16 07:06:54.0, 36.20N×69.84E, h158^{km}, mb4.7

MOS 16 07:07:02.6±1.2, 36.62N×70.59E, h164^{km}, mb4.1/15, Error ellipse: s-maj=13.9km s-min=7.9km az=98.9

NEIC 16 07:07:03.5±1.3, 36.65N×70.73E, h158^{km}±15^{km}, mb4.1/5, Error ellipse: s-maj=13.4km s-min=6.7km az=57.0

NNC 16 07:07:04.8±17.0, 36.72N×70.46E, h154^{km}±90^{km}, mpv4.3, Error ellipse: s-maj=192.8km s-min=131.6km az=7.0

IDC 16 07:07:08.9±7.5, 36.82N×70.54E, h195^{km}±55^{km}, mb3.5/11, mb1 3.8/13, mb1mx3.5/24, mbtmp4.2/13, Error ellipse: s-maj=63.7km s-min=18.7km az=160.0

ISC 16 07:07:03.5±0.4, 36.53N±0.03×70.83E±0.05, h184^{km}±5^{km}, n88, σ1$\overset{s}{.}$35/112, mb4.0/16, 6C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.84	161	⇓P	P	07 07 51.7	+0.8
CEP				S	S	07 08 28.0	+0.5
CHCP	Chirah Chowk	3.49	144	⇓P	P	07 07 59.8	+0.8
THW	Thamme Wali	3.80	168	⇓P	P	07 08 03.0	+0.1
DRP	Derazinda	4.80	186	⇑P	P	07 08 14.9	-0.8
SARP	Sargodha	4.84	161	⇓P	P	07 08 16.1	-0.1
KSH	Kashi	5.04	52	P	P	07 08 21.9	+3.1
KSH				S	S	07 09 21.5	+4.3
THN	Thein Dam	5.74	134	eP	P	07 08 26.6	-1.3
THN				eS	S	07 09 34.9	+1.3
DLH	Dalhousie	5.81	132	e	P	07 08 33.0	+4.1
DLH				eS	S	07 09 36.0	+0.8
AML	Almayashu	6.02	21	P	P	07 08 31.3	-0.3
	SNR=105						
UCH	Uchtor	6.37	26	P	P	07 08 36.2	0.0
	SNR=40						
KZA	Kyzart	6.52	30	P	P	07 08 38.0	-0.1
	SNR=22						
EKS2	Erkin-Say	6.54	19	P	P	07 08 37.8	-0.6
	SNR=18						
AAK	Ala-Archa	6.72	24	⇑P	P	07 08 40.7	-0.2
	12nm,0.5s						
AAK				⇑S	S	07 09 54.7	-1.9
	38nm,0.6s						
AAK	Ala-Archa	6.72	24	P	P	07 08 40.9	0.0
	SNR=25						
AAK	Ala-Archa	6.72	24	PN	P	07 08 40.6	-0.2
AAK				S	S	07 09 54.6	-2.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.5s						

AAK				smax			
	comp=Z,21nm,0.6s						
AAK	Ala-Archa	6.72	24	*e*P	P	07 08 39.5	-1.3
	comp=Z,18nm,0.5s						
BHK	Bhakra	6.89	136	*e*S	S	07 09 59.5	-1.2
ULHL	Ulahol	7.08	35	P	P	07 08 46.8	+1.3
	SNR=5.5						
CHMS	Chumysh	7.13	24	P	P	07 08 45.8	-0.5
	SNR=21						
SDNR	Sundarnagar	7.15	133	*e*P	P	07 08 48.4	+2.0
SDNR				*e*S	S	07 10 05.6	-1.1
USP	Ospenovka	7.30	22	P	P	07 08 47.2	-1.2
	SNR=36						
TKM2	Tokmak 2	7.37	28	P	P	07 08 49.4	+0.2
	SNR=27						
SMLA	Simla	7.54	134	⇓*i*P	P	07 09 05.8	+14
SMLA				*i* S	S	07 10 28.1	+12
KLP	Kalpa	7.92	127	*e*P	P	07 08 58.8	+2.3
KLP				*e*S	S	07 10 24.6	-0.3
DDI	Dehra Dun	8.65	134	*e*	P	07 09 22.7	+17
DDI				*e*		07 10 46.4	
BHGR	Bahadurgarh	9.36	145	*e*S	S	07 10 55.2	-3.4
JOSI	Joshimath	9.41	127	*e*	P	07 09 10.5	-5.5
KHET	Khetri	9.42	152	*e*P	P	07 09 14.3	-1.9
KHET				*e*S	S	07 10 52.4	-7.7
KHET				*e*S	S	07 10 53.7	-6.3
KHET				*e*		07 10 58.9	
	comp=N,45nm,0.3s						
KHET				*e*		07 10 59.4	
	comp=E,78nm,1.1s						
NDI	New Delhi	9.49	144	*e*P	P	07 09 17.0	-0.2
NDI				*e*S	S	07 10 56.0	-5.8
AYAN	Aya Nagar	9.62	145	*e*P	P	07 09 18.2	-0.6
AYAN				*e*S	S	07 10 59.9	-4.9
KUDL	Kundal	9.63	149	*e*P	P	07 09 17.6	-1.4
KUDL				*e*S	S	07 10 58.5	-6.4
SONA	Sohna	9.80	146	*e*P	P	07 09 20.6	-0.5
SONA				*e*S	S	07 11 03.9	-5.0
SONA				*e*		07 11 06.3	
	comp=N,52nm,1.1s						
SONA				*e*		07 11 07.8	
	comp=E,112nm,0.7s						
LGTI	Lohaghat	10.60	129	*e*P	P	07 09 34.0	+2.5
LGTI				*e*S	S	07 11 24.5	-3.0
AGRA	Agra	11.06	145	*e*P	P	07 09 36.9	-0.7
AGRA				*e*S	S	07 11 32.6	-5.8
AGRA				*e*		07 11 35.5	
	comp=N,104nm,1.1s						
AGRA				*e*		07 11 36.8	
	comp=E,115nm,0.5s						
MK31	Makanchi Array	13.35	36	⇑P	P	07 10 07.2	+0.6
	comp=E,8.6nm,0.8s,baz=212,slow=10,SNR=7.4						
MKAR	Makanchi Array	13.35	36	*e*P	P	07 10 07.3	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KOLN	Koldanda	13.89	125	*e*P	P	07 10 15.5	+1.9
	comp=Z,12nm,0.4s						
KOLN				*e*S	S	07 12 42.1	-1.5
GKN	Gorkha	14.44	122	*e*P	P	07 10 21.6	+1.2
	comp=Z,31nm,0.3s						
GKN				*e*S	S	07 12 54.3	-1.6
DMN	Daman	15.01	122	*e*P	P	07 10 28.9	+1.4
	comp=Z,52nm,0.7s						
DMN				*e*S	S	07 13 07.6	-1.2
KKN	Kakani	15.01	121	*e*P	P	07 10 29.5	+2.0
	comp=Z,111nm,0.6s						
KKN				*e*S	S	07 13 07.1	-1.8
PKI	Pulchoki	15.24	122	*e*P	P	07 10 32.5	+2.2
	comp=Z,83nm,0.5s						
PKI				*e*S	S	07 13 13.3	-0.7
KURK	Kurchatov	15.25	19	P	P	07 10 32.4	+2.1
	comp=Z,4.0nm,1.0s,baz=232,slow=13,SNR=15						
KURK	Kurchatov	15.25	19	*e*P	P	07 10 28.2	-2.1
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	15.25	19	*e*P	P	07 10 28.2	-2.2
	comp=Z,7.8nm,0.9s						
GUN	Gumba	15.35	120	*e*P	P	07 10 34.3	+2.5
GUN				*e*S	S	07 13 15.3	-1.3
JIRN	Jiri	15.72	120	*e*P	P	07 10 38.7	+2.4
	comp=Z,56nm,0.4s						
JIRN				*e*S	S	07 13 24.8	-0.1
BVAR	Borovoye Array	16.50	359	P	P	07 10 43.8	-1.9
	comp=Z,3.3nm,0.3s,baz=172,slow=12,SNR=64						
BRVK	Borovoye	16.54	359	⇑P	P	07 10 44.4	-1.7
	comp=Z,3.2nm,0.8s						
BRVK	Borovoye	16.54	359	*e*P	P	07 10 44.0	-2.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	Borovoye	16.54	359	*e*P	P	07 10 44.0	-2.1
	comp=Z,5.5nm,0.6s						
CHKZ	Chkalovo	17.15	360	⇑P	P	07 10 51.4	-1.8
ZAL	Zalesovo	19.93	25	P	P	07 11 24.1	+1.5
ZAL				pmax	pmax		
	comp=Z,13nm,0.3s						
ZAL	Zalesovo	19.93	25	P	P	07 11 24.1	+1.5
	comp=Z,13nm,0.3s,baz=251,slow=6.0,SNR=45						
NVS	Novosibirsk	20.21	21	*e*P	P	07 11 25.6	+0.3
NVS				pmax	pmax		
	comp=N,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,11nm,0.7s						
GNI	Garni	20.75	288	P	P	07 11 31.8	+0.9
GNI				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GNI	Garni	20.75	288	P	P	07 11 31.8	+0.9
	comp=Z,3.6nm,0.4s,baz=332,slow=2.1,SNR=3.9						
SVE	Sverdlovsk	21.43	345	*e*P	P	07 11 38.0	+0.6
BRTR	Keskin Array B	29.29	288	P	P	07 12 50.2	-0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	29.29	288	P	P	07 12 50.2	-0.4
	comp=Z,0.8nm,0.7s,mb3.6,baz=96,slow=9.5,SNR=3.0						
BRTR	Keskin Array B	29.29	288	P	P	07 12 50.2	-0.4
OBN	Obninsk	29.83	319	*e*P	P	07 12 53.1	-2.0
OBN				*e*		07 13 49.8	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
AKASG	Malin Array Be	32.82	309	P	P	07 13 19.7	-1.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	32.82	309	P	P	07 13 19.7	-1.6
	comp=Z,1.0nm,0.4s,mb3.9,baz=82,slow=7.4,SNR=7.6						
MLR	Muntele Rosu	34.65	299	P	P	07 13 37.5	+0.7
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	34.65	299	P	P	07 13 37.5	+0.7
	comp=Z,2.3nm,0.7s,mb3.9,baz=186,slow=5.8,SNR=4.4						
JOF	Joensuu	35.78	330	*e*p	P	07 13 43.4	-2.8
	comp=Z,1.9nm,0.4s,mb4.1						
JOF	Joensuu	35.78	330	*e*P	P	07 13 43.4	-2.8
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
FINES	FINESS Array B	37.38	326	P	P	07 13 59.4	-0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	37.38	326	P	P	07 13 59.4	-0.3
	comp=Z,1.3nm,0.4s,mb3.9,baz=124,slow=10.0,SNR=16						
FINES	FINESS Array B	37.38	326	P	P	07 13 59.4	-0.3
NJ2	Nanjing	39.61	82	*e*P	P	07 14 20.4	+1.9
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
KEV	Kevo	40.73	338	*e*p	P	07 14 26.5	-0.7
ARCES	ARCESS Array B	41.07	338	P	P	07 14 30.4	+0.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	41.07	338	P	P	07 14 30.4	+0.4
	comp=Z,2.8nm,0.7s,mb4.0,baz=108,slow=7.7,SNR=11						
ARCES	ARCESS Array B	41.07	338	P	P	07 14 30.4	+0.4
SSE	Sheshan	41.81	82	*e*P	P	07 14 35.5	-1.0
SSE				AMB	AMB		
	comp=Z,21nm,0.8s,mb4.8						
HFS	Hagfors	42.96	322	P	P	07 14 45.1	-0.3
HFS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HFS	Hagfors	42.96	322	P	P	07 14 45.1	-0.3
	comp=Z,3.1nm,0.5s,mb4.2,baz=98,slow=10,SNR=21						
NB2	NORSAR Subarra	44.27	323	P	P	07 14 55.1	-0.8
	comp=Z,1.7nm,0.5s,mb3.9,baz=98,slow=7.4						
NB2	NORSAR Subarra	44.27	323	P	P	07 14 55.1	-0.8
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
NOA	NORSAR Array B	44.27	323	P	P	07 14 55.4	-0.5
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	NORSAR Array B	44.27	323	P	P	07 14 55.4	-0.6
	comp=Z,1.7nm,0.5s,mb3.9,baz=97,slow=7.7,SNR=7.5						
TIXI	Tiksi	45.80	22	*e*P	P	07 15 09.6	+1.7
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
BILL	Bilibino	58.65	26	*e*P	P	07 16 45.4	+2.4
BILL				*e*		07 18 53.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
INK	Inuvik	73.90	9	P	P	07 18 21.0	+1.8
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	73.90	9	P	P	07 18 20.9	+1.7
	comp=Z,1.4nm,0.6s,mb3.9,baz=21,slow=5.2,SNR=15						
ILAR	Eielson Array	74.79	16	P	P	07 18 25.0	+0.6
	comp=Z,0.4nm,0.7s,mb3.2,baz=321,slow=6.1,SNR=4.7						
YKA	Yellowknife Ar	81.23	3	P	P	07 19 01.0	+1.5
	comp=Z,0.3nm,0.4s,mb3.3,baz=350,slow=5.5,SNR=12						

*BJI **16** 07:07:27.7, 12.36N×123.66E, h44^{km}, mB5.1, mb4.4, Ms4.2, Msz4.5*
*MAN **16** 07:07:29.7, 12.74N×123.22E, h21^{km}, mb5.2, ML4.1, MS4.3*
MAN LIGNON HILL LEGASPI CITY INTENSITY I.
*MOS **16** 07:07:29.0±1.2, 12.65N×123.51E, h33^{km}, mb4.7/9, Error ellipse: s-maj=23.8km s-min=10.4km az=121.9*
*NEIC **16** 07:07:30.4±0.4, 12.61N×123.20E, mb4.5/10, Error ellipse: s-maj=19.4km s-min=7.7km az=68.0*
NEIC Felt [I PIVS] at Legaspi, Luzon.
*IDC **16** 07:07:32.3±8.3, 12.53N×123.03E, h31^{km}±60^{km}, mb3.9/12, mb1 4.0/12, mb1mx3.9/21, mbtmp4.0/12, ML4.5/1, MS3.9/3, Ms1 3.9/3, ms1mx3.2/26, Error ellipse: s-maj=37.7km s-min=14.1km az=69.0*

ISC 16 07:07:29.9±0.7**, 12.67N**±0.03×**123.23E**±0.05**, h28**^{km}±5^{km}**, h24**^{km}±3.3^{km}**:pP-P, n75,** σ1§**06**/76**, mb4.3**/33**, MS4.0**/6**, 7C-10D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.50	128	⇓*i*P	Pb	07 07 40.8	+0.7
MMPH				*i* S	Sb	07 07 47.0	-0.1
AUQP	San Andres	0.84	321	*e*P	Pb	07 07 45.4	-0.4
RCP	Roxas	1.20	203	⇑*e*P	Pn	07 07 51.3	+0.3
OTRP	Odiongan	1.21	256	*e*P	Pn	07 07 50.8	-0.5
GQP	Guinayangan	1.44	328	⇓*i*P	Pn	07 07 54.5	-0.1
GQP				*i* S	Sn	07 08 13.7	+0.9
BOAC	Boac	1.56	300	*e*P	Pn	07 07 55.0	-1.2
BOAC				*e*S	Sn	07 08 18.6	+3.0
SJMP	San Jose	2.07	265	*e*P	Pn	07 08 03.7	+0.2
LQP	Lukban	2.18	311	⇓*i*P	Pn	07 08 05.1	0.0
LQP				*i* S	Sn	07 08 32.2	+0.8
PLP	Palo	2.28	131	*e*P	Pn	07 08 06.8	+0.3
PLP				*i* S	Sn	07 08 44.6	+11
LLP	Lapu-Lapu	2.45	163	⇑*e*P	Pn	07 08 10.4	+1.4
LLP				*e*S	Sn	07 08 41.3	+3.1
AAP	Anini-y	2.56	209	*e*P	Pn	07 08 10.0	-0.6
TGY	Tagaytay City	2.64	303	Pn	Pn	07 08 12.4	+0.7
	91nm,0.3s,baz=107,slow=7.4,SNR=21						
TBP	Tagbilaran	3.02	168	*e*P	Pn	07 08 18.4	+1.3
SNPH	Sibulan	3.31	180	⇓*e*P	Pn	07 08 22.5	+1.4
PCPH	Palayan	3.54	325	⇑*i*P	Pn	07 08 23.6	-0.9
DCPH	Dipolog City	4.06	178	⇑*e*P	Pn	07 08 31.4	-0.5
BCPH	Baguio City Da	4.49	326	⇓*i*P	Pn	07 08 37.1	-0.8
CVP	Callao Caves	5.18	345	*e*P	Pn	07 08 46.9	-0.9
PPR	Puerto Princes	5.26	237	⇑*i*P	Pn	07 08 49.1	+0.2
SSE	Sheshan	18.43	354	*e*P	P	07 11 43.1	-2.3
SSE				XP		07 11 55.5	
SSE				AMB	AMB		
	comp=Z,23nm,1.1s						
SSE	Sheshan	18.43	354	*e*P	P	07 11 43.1	-2.3
	comp=Z,23nm,1.1s						
SSE				sP		07 11 55.5	
SSE				S	S	07 15 08.7	+1.9
SSE				sS		07 15 30.4	
NJ2	Nanjing	19.71	349	*e*P	P	07 12 01.6	+1.4
NJ2				AP		07 12 10.3	
NJ2				XP		07 12 14.8	
NJ2				PP	PP	07 12 22.6	+4.0
NJ2				PPP	PPP	07 12 31.4	+3.8
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,406nm,4.2s						
NJ2				LR	LR		
	comp=N,460nm,14.9s						
NJ2				LR	LR		
	comp=E,214nm,13.7s						
NJ2				LR	LR		
	comp=Z,1µm,12.7s						
GYA	Guiyang	20.74	314	⇓*i*P	P	07 12 11.4	+0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s						
ENH	Enshi	21.65	326	*e*P	P	07 12 21.0	+0.7
	comp=Z,18nm,0.8s,mb4.6						
CMAR	Chiang Mai Arr	24.08	287	P	P	07 12 44.2	0.0
	comp=Z,1.2nm,0.4s,mb3.7,baz=88,slow=8.5,SNR=9.2						
TIA	Tai'an	24.08	348	*e*P	P	07 12 44.0	-0.1
TIA				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.4						
KAKA	Kakadu	26.82	160	*e*P	P	07 13 10.8	+0.7
	comp=Z,6.1nm,0.7s,mb4.2						
BJT	Baijiatuau	27.95	348	P	P	07 13 20.0	-0.1
BJI	Beijing	27.96	348	*e*P	P	07 13 18.3	-2.0
BJI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
BJI	Beijing	27.96	348	*e*P	P	07 13 18.2	-2.1
	comp=Z,8.0nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	30.67	175	*e*P	P	07 13 42.6	-2.0
	comp=Z,4.9nm,0.9s,mb4.3						
GTA	Gaotai	33.73	326	P	P	07 14 11.4	+0.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
WRAB	Tennant Creek	34.20	161	⇓*e*P	P	07 14 12.9	-2.5
WRAB	Tennant Creek	34.20	161	*e*P	P	07 14 12.5	-2.9
	comp=Z,6.4nm,1.0s,mb4.5						
WRA	Warramunga Arr	34.20	161	P	P	07 14 13.9	-1.6
	comp=Z,2.6nm,0.9s,mb4.2,baz=339,slow=9.8,SNR=11						
LSA	Lhasa	34.21	305	P	P	07 14 16.9	+1.4
LSA	Lhasa	34.21	305	*e*P	P	07 14 16.3	+0.8
	comp=Z,19nm,1.3s,mb4.9						
ASAR	Alice Springs	37.59	164	P	P	07 14 43.6	-0.5
	comp=Z,1.4nm,0.6s,mb3.9,baz=336,slow=6.6,SNR=21						
ULN	Ulaanbaatar	37.60	342	*e*P	P	07 14 44.3	+0.3
	comp=Z,4.7nm,0.6s,mb4.4						
SONM	Songino Array	37.77	341	P	P	07 14 45.7	+0.3
	comp=Z,2.8nm,0.8s,mb4.1,baz=166,slow=10,SNR=14						
YSS	Yuzh-Sakhalins	37.92	22	⇑*e*P	P	07 14 41.6	-5.1
YSS				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
ZAK	Zakamensk	41.00	341	*e*P	P	07 15 12.5	+0.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.3						
TLY	Talaya	42.01	342	⇓*e*P	P	07 15 20.9	+0.5
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
TLY				MLR	MLR		
	comp=Z,100nm,23.0s,MS3.6						
MOY	Mondy	42.85	340	*e*P	P	07 15 28.0	+0.7
NWAO	Narrogin (SRO)	45.70	187	P	P	07 15 49.1	-1.4
	comp=Z,9.1nm,0.7s,mb4.8,baz=278,slow=4.9,SNR=5.4						
MKAR	Makanchi Array	48.32	323	*i* P	P	07 16 11.2	+0.2
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZAL	Zalesovo	51.11	332	*i* P	P	07 16 32.5	+0.3
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZAL	Zalesovo	51.11	332	P	P	07 16 31.7	-0.5
	comp=Z,2.6nm,0.4s,mb4.5,baz=347,slow=7.9,SNR=7.9						
ZAL				LR	LR	07 40 00.9	
	comp=Z,97nm,19.4s,MS3.8,baz=144,slow=38						
NVS	Novosibirsk	52.39	332	*e*P	P	07 16 40.6	-1.3
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
KURK	Kurchatov	52.41	326	*d i*P	P	07 16 42.1	0.0
KURK				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
KURK	Kurchatov	52.41	326	*e*P	P	07 16 41.6	-0.5
	comp=Z,42nm,0.9s,mb5.4						
KURK				*e*pP	pP	07 16 48.2	-2.3
BVAR	Borovoye Array	58.01	325	P	P	07 17 22.5	0.0
	comp=Z,3.9nm,0.8s,mb4.5,baz=129,slow=9.5,SNR=10						
BVAR				PcP	PcP	07 18 14.2	+0.1
	comp=Z,0.7nm,0.6s,baz=111,slow=12,SNR=2.7						
BRVK	Borovoye	58.08	325	P	P	07 17 22.8	-0.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BRVK	Borovoye	58.08	325	*e*P	P	07 17 23.0	0.0
	comp=Z,14nm,0.9s,mb5.0						
BRVK				*e*pP	pP	07 17 28.8	-2.9
TIXI	Tiksi	59.05	2	⇑*e*P	P	07 17 28.7	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.9						
BILL	Bilibino	61.95	17	*e*P	P	07 17 46.0	-3.5
BILL				*e*SS	SS	07 30 08.0	-6.2
BILL				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.7						
KIV	Kislovodsk	74.54	312	⇓*e*P	P	07 19 08.6	+0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,12.0s,MS4.3						
SOC	Sochi	76.71	312	*e*P	P	07 19 18.6	-1.9
SOC				*e*		07 22 12.5	
SOC				*e*PPP	PPP	07 24 02.8	+0.5
SOC				*e*S	S	07 29 06.5	+2.4
SOC				*e*		07 29 33.2	
SOC				*e*SS	SS	07 34 03.7	+0.7
SOC				*e*SSS	SSS	07 37 26.3	+7.6
SOC				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
SOC				pmax	pmax		
	comp=N,28nm,0.8s						
SOC				pmax	pmax		
	comp=E,21nm,0.6s						
OBN	Obninsk	77.82	324	*e*P	P	07 19 26.4	+0.1
OBN				*e*	pP	07 19 36.2	+1.1
OBN				*e*S	S	07 29 20.9	+5.1
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ILAR	Eielson Array	78.60	26	P	P	07 19 32.3	+1.9
	comp=Z,0.3nm,0.6s,mb3.4,baz=236,slow=3.8,SNR=6.7						
JOF	Joensuu	79.70	332	*e*p	P	07 19 34.6	-1.8
	comp=Z,2.8nm,0.6s,mb4.4						
JOF	Joensuu	79.70	332	*e*P	P	07 19 34.6	-1.8
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ARCES	ARCESS Array B	80.92	339	P	P	07 19 43.4	+0.6
	comp=Z,2.2nm,0.7s,mb4.2,baz=70,slow=14,SNR=3.8						
FINES	FINESS Array B	82.37	331	*i* P	P	07 19 50.5	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	82.37	331	P	P	07 19 50.5	0.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=56,slow=6.9,SNR=7.1						
FINES	FINESS Array B	82.37	331	P	P	07 19 50.5	0.0
AKASG	Malin Array Be	82.83	320	P	P	07 19 52.7	-0.4
	comp=Z,0.3nm,0.5s,mb3.6,baz=63,slow=5.2,SNR=4.1						
INK	Inuvik	83.16	21	P	P	07 19 56.5	+2.0
	comp=Z,0.7nm,0.8s,mb3.7,baz=315,slow=1.4,SNR=1.9						
INK	Inuvik	83.16	21	P	P	07 19 56.5	+2.0
MLR	Muntele Rosu	86.11	316	LR	LR	08 04 38.7	
	comp=Z,52nm,19.9s,MS3.9,baz=231,slow=40						
NOA	NORSAR Array B	89.29	333	LR	LR	08 03 47.8	
	comp=Z,70nm,18.4s,MS4.1,baz=75,slow=38						
SNAA	Sanae	112.86	196	*e*	PKPdf	07 26 07.8	-0.8
VNA2	Neumayer--Watz	114.50	196	*e*P	PKPdf	07 26 11.4	-0.4
VNA2				*e*		07 26 22.4	
VNA3	Neumayer Olymp	114.90	195	*e*	PKPdf	07 26 14.1	+1.5
PLCA	Paso Flores	149.54	159	PKPbc	PKPdf	07 27 19.2	+2.0
	comp=Z,0.9nm,0.8s,baz=225,slow=1.4,SNR=2.8						

JMA 16 07:33:41.0±0.3**, 33.92N**×**142.59E, h60**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	Boso 1	1.52	299	P	P	07 34 06.5	0.0
BSO1				S	S	07 34 25.2	-0.2
BSO2	Boso 2	1.73	299	S	S	07 34 31.4	+1.0
BSO3	Boso 3	1.93	298	P	P	07 34 12.7	+0.5
BSO3				*e*S	S	07 34 36.1	+0.9
JHJ2	Mitsune	2.45	252	P	P	07 34 20.2	+0.6
JHJ2				*e*S	S	07 34 48.5	+0.1
JOD2	Odawara 2	3.18	296	P	P	07 34 29.9	0.0
JOD2				S	S	07 35 07.3	+0.4
JHU	Hanno	3.33	306	*e*S	S	07 35 10.4	-0.2
JRY	Ryogami san	3.68	306	P	P	07 34 36.8	-0.1
JRY				*e*S	S	07 35 20.0	+0.7
JYN	Shimob	3.69	296	P	P	07 34 37.3	+0.4
JYN				*e*S	S	07 35 20.0	+0.5
JMM	Marumori	4.20	340	P	P	07 34 42.7	-1.4

IDC 16 07:50:03.2±16.0**, 16.66S**×**168.66E, mb4.0**/4**, mb1 4.1**/4**, mb1mx3.8**/15**, mbtmp4.0**/4**, MS3.4**/3**, Ms1 3.4**/3**, ms1mx3.1**/19**, Error ellipse: s-maj=265.4km s-min=113.2km az=57.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	21.53	257	P	P	07 54 54.3	-1.9
	4.2nm,0.9s,baz=71,slow=13,SNR=3.6						
CTA				LR	LR	08 01 10.0	
	comp=Z,66nm,20.7s,baz=46,slow=31						
RPZ	Rata Peaks	27.05	176	LR	LR	08 04 50.3	
	comp=Z,115nm,18.3s,baz=15,slow=33						
STKA	Stephens Creek	28.84	233	P	P	07 56 04.1	-1.4
	2.4nm,0.8s,baz=68,slow=9.7,SNR=4.0						
WRA	Warramunga Arr	32.71	259	P	P	07 56 37.6	-2.2
	0.4nm,0.5s,baz=92,slow=9.1,SNR=4.8						
ASAR	Alice Springs	33.30	252	P	P	07 56 42.5	-2.4
	2.3nm,0.7s,baz=79,slow=8.5,SNR=23						
ASAR				LR	LR	08 10 34.6	
	comp=Z,56nm,19.1s,baz=42,slow=37						

*NAO **16** 07:56:17.8±2.9, 61.11N×29.07E, ML2.5*
*BER **16** 07:56:18.8±4.8, 61.03N×29.08E, ML2.5(NAO)*
*IDC **16** 07:56:18.7±2.0, 60.97N×29.01E, mb1 3.5/3, mb1mx3.2/19, mbtmp3.5/3, ML2.8/3, Error ellipse: s-maj=18.2km s-min=12.3km az=157.0*

HEL 16 07:56:15.7±0.3**, 60.92N**×**29.30E, ML1.8, ML2.5**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	Virojoki	0.94	247	*e*P	Pg	07 56 32.6	-1.7
VJF				*e*S	Sg	07 56 44.8	-2.1
FIA0	FINESS Array S	1.65	290	Pn	Pn	07 56 44.8	-1.3
	baz=116,slow=16						
FIA0				Lg		07 57 06.2	
	baz=110,slow=28						
FIA0				Rg		07 57 14.4	
	baz=119,slow=37						
FIA0	FINESS Array S	1.65	290	*e*P	Pn	07 56 44.7	-1.4
FIA0				*e*S	Sb	07 57 06.4	-1.5
FINES	FINESS Array B	1.65	290	Pg	Pg	07 56 44.7	-3.9
	1.2nm,0.3s,baz=110,slow=16,SNR=55						
FINES				Lg		07 57 05.7	
	0.3nm,0.3s,baz=101,slow=30,SNR=6.9						
PVF	Pernaja	1.73	259	*e*P	Pn	07 56 45.9	-1.4
PVF				*e*S	Sb	07 57 08.3	-1.9
KAF	Kangasniemi	1.87	311	*e*S	Sn	07 57 12.6	-1.3
JOF	Joensuu	2.22	25	MSG		07 57 27.0	
	comp=Z,4.7nm,0.2s						
SUF	Sumiainen	2.35	322	MSG		07 57 29.9	
	comp=Z,5.3nm,0.2s						
KEF	Keuruu	2.46	303	MSG		07 57 32.2	
	comp=Z,3.2nm,0.2s						
HFS	Hagfors	7.74	271	Pn	Pn	07 58 09.0	-3.3
	baz=95,slow=11						
HFS				Sn	Sn	07 59 33.0	-8.7
	baz=84,slow=28						
HFS				Lg		08 00 13.5	
	baz=83,slow=37						
HFS	Hagfors	7.74	271	*e*P	Pn	07 58 09.0	-3.3
HFS				*e*S	Sn	07 59 33.0	-8.7
HFS				*e*SG		08 00 13.5	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HFS	**Hagfors**	**7.74**	**271**	Pn	Pn	07 58 08.8	-3.5
	comp=Z,0.0nm,0.3s,baz=78,slow=13,SNR=4.7						
NOA	**NORSAR Array B**	**8.79**	**279**	Pn	P	07 58 22.9	-4.1
	comp=Z,0.1nm,0.3s,baz=209,slow=17,SNR=2.4						
NOA				Lg		08 00 51.1	
	comp=Z,0.2nm,0.3s,baz=56,slow=22,SNR=3.4						
ARA0	**ARCESS Array S**	**8.80**	**351**	Pn	P	07 58 23.8	-3.4
	baz=168,slow=14						
ARA0				Sn	Sn	07 59 59.0	-9.2
	baz=174,slow=28						
ARA0				Lg		08 00 42.6	
	baz=167,slow=37						
ARA0	**ARCESS Array S**	**8.80**	**351**	*e*P	P	07 58 23.8	-3.4
ARA0				*e*S	Sn	07 59 59.0	-9.2
ARA0				*e*SG		08 00 42.6	
ARCES	**ARCESS Array B**	**8.80**	**351**	Pn	P	07 58 23.6	-3.5
	comp=Z,0.1nm,0.3s,baz=165,slow=14,SNR=6.9						
ARCES				Sn	Sn	07 59 58.5	-10
	comp=Z,0.1nm,0.3s,baz=175,slow=23,SNR=3.5						

IDC 16 08:00:39.0±3.1, 30.11S×177.31W, mb4.0/3, mb1 4.1/3, mb1mx3.7/15, mbtmp4.0/3, Error ellipse: s-maj=146.1km s-min=44.3km az=163.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.35**	**278**	P	P	08 07 28.7	-0.9
	1.6nm,0.5s,baz=114,slow=10.0,SNR=3.4						
STKA	**Stephens Creek**	**35.13**	**256**	P	P	08 07 34.4	-1.8
	1.0nm,0.4s,baz=107,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**44.69**	**271**	P	P	08 08 52.6	-3.1
	0.4nm,0.3s,baz=110,slow=8.0,SNR=8.6						
FINES	**FINESS Array B**	**145.08**	**341**	PKP	PKPdf	08 20 18.2	-1.1
	0.6nm,0.4s,baz=45,slow=3.9,SNR=8.7						
NOA	**NORSAR Array B**	**148.55**	**352**	PKPbc	PKPdf	08 20 25.7	+0.5
	0.6nm,0.8s,baz=67,slow=1.8,SNR=2.3						

GUC 16 08:09:21.6±0.6, 22.26S×68.75W, h115^{km}±4^{km}, MD3.6, ML2.8, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.38**	**203**	*e*P	P	08 09 39.0	+0.6
LVC				*i* S	S	08 09 52.6	+1.4
LVC				AMP		08 09 53.9	
	comp=N,177nm,0.2s						
SPCH	**San Pedro de A**	**0.82**	**142**	⇑*i*P	P	08 09 42.3	+0.5
SPCH				*i* S	S	08 09 58.4	+1.5
SPCH				AMP		08 09 59.1	
	comp=E,386nm,0.3s						
ANCH	**Antofagasta**	**2.09**	**227**	*e*P	P	08 09 58.0	+1.6
ANCH				*i* S	S	08 10 24.6	+2.0
CPN1	**Cerro Paranal**	**2.80**	**212**	*e*P	P	08 10 07.2	+1.2
CPN1				*e*		08 10 40.6	
CPN1				*i* S	S	08 10 41.3	+1.7
CPN1				AMP		08 10 50.8	
	comp=E,58nm,0.4s						

TAP ***16*** *08:10:41.5, 23.90N×122.77E, h37^{km}±1^{km}, ML2.7*

JMA 16 08:10:39.8±0.2, 23.98N×122.86E, h1^{km}, M2.4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.50**	**16**	P	Pg	08 10 50.0	+0.2
YOJ				S	Sg	08 10 56.9	+0.5
HATJ	**Hateruma jima**	**0.87**	**85**	P	Pg	08 10 56.6	-0.5
HATJ				*e*S	Sg	08 11 08.4	-0.3
IRIF	**Iriomote-Funau**	**0.87**	**66**	P	Pg	08 10 56.8	-0.4
IRIF				*e*S	Sg	08 11 09.6	+0.8
JKRS	**Kuro-shima**	**1.08**	**76**	P	Pb	08 11 00.9	-0.1
JIJ	**Ishigaki jima**	**1.23**	**72**	P	Pb	08 11 03.3	-0.3
JIJ				*e*S	Sb	08 11 19.0	-0.8
JTJ	**Tarama**	**1.81**	**68**	P	Pn	08 11 13.0	+0.7

BJI ***16*** *08:19:39.3, 8.19N×93.69E, h5^{km}, mB6.1, mb5.3, Ms6.1, Msz5.8*

IDC ***16*** *08:19:39.9±0.4, 8.27N×94.12E, mb5.0/32, mb1 5.0/33, mb1mx5.0/33, mbtmp4.9/33, ML5.0/1, MS5.6/28, Ms1 5.6/28, ms1mx5.5/32, Error ellipse: s-maj=19.6km s-min=12.4km az=54.0*

HRVD ***16*** *08:19:39.8±0.1, 8.17N×94.23E, h13^{km}, MW5.9/76, Centroid moment Tensor Solution. LP body waves: s66,c133;Mantle waves: s76,c238; Half duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.84±.07; $M_{\theta\theta}$-1.90±.07; $M_{\phi\phi}$2.74±.08; $M_{r\theta}$0.63±.18; $M_{\theta\phi}$7.45±.06; $M_{\phi r}$0.79±.19; Best double couple: $M_0$7.858×10^{17} NP1: ϕ_s351°,δ85°,λ176°. NP2:ϕ_s82°,δ86°,λ5°. Principal axes: T 8.333, Plg6°, Azm306°; N -.947, Plg84°, Azm123°; P -7.383, Plg0°, Azm216°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***16*** *08:19:41.5±0.2, 8.10N×93.95E, h11^{km}, mb5.6/116, ME6.2, MS5.7/119, MW5.9 Error ellipse: s-maj=5.7km s-min=4.4km az=222.0 Broadband fault plane solution: P waves. NP1:ϕ_s350°,δ83°,λ-176°. NP2:ϕ_s260°,δ86°,λ-7°. Principal axes: T Plg2°, Azm305°; N Plg0°, Azm0°; P Plg8°, Azm215°; Moment Tensor Solution. s30 Moment tensor: Scale 10^{17} Nm; M_{rr}0.86; $M_{\theta\theta}$-1.99; $M_{\phi\phi}$1.13; $M_{r\theta}$1.03; $M_{\theta\phi}$8.75; $M_{\phi r}$-1.02; Best double couple: $M_0$9×10^{17} NP1: ϕ_s265°,δ84°,λ-5°. NP2:ϕ_s355°,δ85°,λ-174°. Principal axes: T 8.46, Plg1°, Azm130°; N 1.05, Plg82°, Azm34°; P -9.51, Plg8°, Azm220°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Phuket, Thailand.

BGS ***16*** *08:19:42.6, 8.11N×93.97E, h10^{km}, mb5.8*

MOS ***16*** *08:19:44.8±1.0, 8.37N×93.81E, h33^{km}, mb5.8/93, MS5.6/52, Error ellipse: s-maj=7.8km s-min=3.8km az=120.7*

ISC 16 08:19:41.3±0.2, 8.17N±0.03×93.96E±0.02, h17^{km}, h17^{km}±1.6^{km}:pP-P, n739, σ1^{s}23/627, mb5.5/185, MS5.7/182, 43C-23D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.67**	**98**	P	**Pn**	**08 21 16.0**	**-5.1**
	780nm,1.0s						
NNT	**Nongplab**	**7.18**	**52**	P	**Pn**	**08 21 24.0**	**-4.2**
IPM	**Ipoh**	**7.87**	**116**	P	**Pn**	**08 21 32.0**	**-6.0**
NST	**Nakhon Sawan**	**9.60**	**38**	P	**P**	**08 22 02.0**	**+0.1**
KGM	**Kluang**	**11.14**	**123**	P	**P**	**08 22 17.1**	**-6.0**
CM31	**Chiang Mai Arr**	**11.32**	**25**	*e*P	**P**	**08 22 22.4**	**-3.1**
	109nm,0.8s						
CMAR	**Chiang Mai Arr**	**11.32**	**25**	Pn	**P**	**08 22 24.4**	**-1.1**
	3.2nm,0.3s,baz=212,slow=14,SNR=108						
CMAR				LR	LR	08 26 58.5	
	comp=Z,26µm,19.6s,baz=210,slow=39						
CHTO	**Chiang Mai**	**11.64**	**24**	Pn	**P**	**08 22 29.3**	**-0.6**
CHTO				SnSn		08 24 59.0	
KKTK	**Khon Kaen**	**11.87**	**46**	P	**P**	**08 22 31.0**	**-2.0**
	679nm,0.5s						
NANT	**Nan**	**12.43**	**31**	P	**P**	**08 22 40.5**	**0.0**
CHRT	**Chiangrai**	**12.93**	**25**	⇓P	**P**	**08 22 47.5**	**+0.3**
	705nm,1.4s						
PALK	**Pallekele**	**13.17**	**267**	*e*P	**P**	**08 22 52.7**	**+2.3**
	72nm,0.9s						
VIS	**Vishakhapatnam**	**14.05**	**314**	*e*P	**P**	**08 23 00.9**	**-1.1**
VIS				*e*		08 23 08.3	
	comp=Z,271nm,1.0s						
VIS				*e*S	**S**	**08 25 32.7**	**-5.7**
MDRS	**Chennai**	**14.33**	**291**	*e*	**P**	**08 23 07.0**	**+1.2**
MDRS				*e*		08 25 55.0	
MDRS				*e*		08 32 29.0	
BWNR	**Bhubaneshwar**	**14.41**	**328**	*e*P	**P**	**08 23 04.4**	**-2.4**
BWNR				*e*		08 23 11.1	
	comp=Z,250nm,1.3s						
BWNR				*e*S	**S**	**08 25 37.4**	**-10**
CAL	**Calcutta**	**15.28**	**340**	*e*	**P**	**08 23 24.2**	**+6.1**
CAL				*e*		08 26 22.3	
AGT	**Agartala**	**15.84**	**351**	⇓*i*	**P**	**08 23 26.0**	**+0.6**
AGT				*i*		08 24 14.0	
TRD	**Trivandrum**	**16.83**	**272**	*e*P	**P**	**08 23 44.7**	**+6.7**
HYB	**Hyderabad**	**17.60**	**303**	⇑*e*P	**P**	**08 23 48.0**	**+0.3**
HYB				pmax	pmax		
	comp=Z,140nm,1.0s						
HYB	**Hyderabad**	**17.60**	**303**	⇑*e*P	**P**	**08 23 48.0**	**+0.3**
	comp=Z,140nm,1.0s						
HYB				*e*S	**S**	**08 27 10.0**	**+8.8**
HYB	**Hyderabad**	**17.60**	**303**	⇑*i*P	**P**	**08 23 48.0**	**+0.3**
	comp=Z,140nm,1.0s						
HYB				*e*S	**S**	**08 27 01.0**	**-0.2**
HYB				LR	LR	08 29 50.0	
	comp=Z,22nm,24.0s						
BLSP	**Bilaspur**	**17.95**	**322**	*e*P	**P**	**08 23 51.7**	**-0.3**
BLSP				*e*		08 24 04.0	
	comp=Z,418nm,1.3s						
BLSP				*e*S	**S**	**08 27 03.2**	**-6.0**
QIZ	**Qiongzhong**	**18.82**	**53**	⇑P	**P**	**08 24 03.8**	**+1.1**
QIZ				PP	PP	08 24 19.3	+0.3
QIZ				S	**S**	**08 27 35.3**	**+6.6**
QIZ				AMB	AMB		
	comp=Z,11µm,6.5s						
QIZ				LR	LR		
	comp=E,8µm,13.9s						
QIZ				LR	LR		
	comp=Z,27µm,18.4s						
KMI	**Kunming**	**18.83**	**25**	P	**P**	**08 24 04.3**	**+1.5**
KMI				AP		08 24 07.4	
KMI				XP		08 24 09.1	
KMI				PP	PP	08 24 20.6	+1.5
KMI				S	**S**	**08 27 29.1**	**+0.2**
KMI				SSS	SSS	08 28 06.8	-0.8
KMI				AMB	AMB		
	comp=Z,184nm,1.9s						
KMI				AMB	AMB		
	comp=Z,9µm,7.1s						
KMI				LR	LR		
	comp=N,24µm,14.3s						
KMI				LR	LR		
	comp=E,34µm,17.1s						
KMI				LR	LR		
	comp=Z,20µm,16.0s						
KMI	**Kunming**	**18.83**	**25**	P	**P**	**08 24 04.2**	**+1.4**
KMI				S	**S**	**08 27 29.1**	**+0.2**
KMI				pmax	pmax		
	comp=Z,184nm,1.9s						
KMI	**Kunming**	**18.83**	**25**	P	**P**	**08 24 04.3**	**+1.5**
	comp=Z,180nm,1.9s						
KMI				pP		08 24 07.4	
KMI				sP		08 24 09.1	
KMI				PP	PP	08 24 20.6	+1.5
KMI				S	**S**	**08 27 29.1**	**+0.2**
NGP	**Nagpur**	**19.33**	**313**	*e*P	**P**	**08 24 09.6**	**+0.9**
NGP				*e*		08 27 50.6	
MNGI	**Mangalore**	**19.40**	**286**	*i* S		08 27 54.7	
GTK	**Gangtok**	**19.72**	**346**	*e*P	**P**	**08 24 06.0**	**-7.2**
LATR	**Latur**	**19.74**	**303**	*e*P	**P**	**08 24 14.5**	**+1.1**
COCO	**West Island**	**20.42**	**172**	P	**P**	**08 24 19.1**	**-1.6**
	comp=Z,538nm,1.1s						
COCO				LR	LR		
	comp=Z,2µm,19.0s						
JIRN	**Jiri**	**20.74**	**340**	*e*P	**P**	**08 24 23.1**	**-0.7**
	comp=Z,2µm,1.3s						
PKI	**Pulchoki**	**20.93**	**338**	*e*P	**P**	**08 24 25.2**	**-0.6**
	comp=Z,2µm,1.3s						
GOA	**Goa**	**21.00**	**292**	*e*P	**P**	**08 24 37.2**	**+11**
GOA				*e*S	**S**	**08 28 29.8**	**+15**
GUN	**Gumba**	**21.07**	**340**	*e*P	**P**	**08 24 26.5**	**-0.7**
DMN	**Daman**	**21.07**	**338**	*e*P	**P**	**08 24 26.7**	**-0.6**
KKN	**Kakani**	**21.17**	**338**	*e*P	**P**	**08 24 27.5**	**-0.8**
	comp=Z,537nm,0.9s,mb5.9						
KAD	**Karad**	**21.30**	**297**	⇑*i*P	**P**	**08 24 31.5**	**+1.9**
KAD				*i* S	**S**	**08 28 26.9**	**+6.3**
VLK	**Valmikinagar**	**21.31**	**335**	*i* P	**P**	**08 24 30.0**	**+0.3**
VLK				*i*		08 24 42.0	
LSA	**Lhasa**	**21.58**	**353**	P	**P**	**08 24 31.6**	**-0.8**
LSA				AP		08 24 37.3	
LSA				XP		08 24 40.0	
LSA				S	**S**	**08 28 26.6**	**+0.8**
LSA				PCS		08 32 06.5	
LSA				AMB	AMB		
	comp=Z,60nm,1.1s,mb4.9						
LSA				LR	LR		
	comp=N,5µm,20.6s,MS5.5						
LSA				LR	LR		
	comp=E,17µm,16.7s,MS5.5						
LSA				LR	LR		
	comp=Z,9µm,20.6s,MS5.1						
LSA	**Lhasa**	**21.58**	**353**	*e*P	**P**	**08 24 31.6**	**-0.8**
LSA				pmax	pmax		
	comp=Z,380nm,0.9s,mb5.8						
LSA	**Lhasa**	**21.58**	**353**	P	**P**	**08 24 31.6**	**-0.8**
	comp=Z,60nm,1.1s,mb4.9						
LSA				pP		08 24 37.3	
LSA				sP		08 24 40.0	
LSA				S	**S**	**08 28 26.6**	**+0.8**
LSA				PcS		08 32 06.5	
LSA				LR	LR		
	comp=Z,9µm,20.6s,MS5.1						
GKN	**Gorkha**	**21.61**	**337**	*e*P	**P**	**08 24 32.3**	**-0.4**
	comp=Z,981nm,1.0s,mb6.2						
KOLN	**Koldanda**	**21.82**	**335**	*e*P	**P**	**08 24 35.0**	**+0.2**
	comp=Z,1µm,1.1s,mb6.2						
BHPL	**Bhopal**	**21.83**	**315**	*e*P	**P**	**08 24 36.8**	**+2.0**
BHPL				*e*		08 24 43.3	
	comp=Z,246nm,1.4s						
GYA	**Guiyang**	**21.83**	**32**	⇑*i*P	**P**	**08 24 34.3**	**-0.6**
GYA				AP		08 24 37.6	
GYA				PP	PP	08 25 02.4	+2.2
GYA				S	**S**	**08 28 36.6**	**+6.2**
GYA				AMB	AMB		
	comp=Z,210nm,1.6s,mb5.3						
GYA				AMB	AMB		
	comp=Z,4µm,11.4s						
GYA				LR	LR		
	comp=N,26µm,15.5s,MS6.0						
GYA				LR	LR		
	comp=E,31µm,14.6s,MS6.0						
GYA				LR	LR		
	comp=Z,22µm,19.8s						
POO	**Poona**	**22.09**	**300**	*e*P	**P**	**08 24 40.0**	**+2.4**
POO				*e*		08 24 47.0	
	comp=Z,211nm,1.5s						
POO				*i* S	**S**	**08 28 44.0**	**+8.7**
KKM	**Kota Kinabalu**	**22.18**	**94**	P	**P**	**08 24 37.1**	**-1.4**
BOM	**Bombay**	**23.13**	**300**	*e*P	**P**	**08 24 50.7**	**+2.8**
	comp=Z,664nm,12.6s						
BOM				*e*S	**S**	**08 29 04.4**	**+10**
HKC	**Hong Kong**	**23.99**	**52**	⇓*i*P	**P**	**08 25 00.0**	**+3.8**
HKC				*i* S	**S**	**08 29 14.0**	**+4.9**
TSM	**Tawau**	**24.07**	**98**	P	**P**	**08 24 55.4**	**-1.7**
CD2	**Chengdu**	**24.41**	**21**	P	**P**	**08 25 02.3**	**+2.1**
CD2				AP		08 25 06.9	
CD2				XP		08 25 08.3	
CD2				S	**S**	**08 29 20.5**	**+4.3**
CD2				XS		08 29 27.0	
CD2				SS	SS	08 30 15.9	+5.2
CD2				AMB	AMB		
	comp=Z,2µm,1.9s,mb6.2						
CD2				LR	LR		
	comp=N,21µm,10.0s						
PPR	**Puerto Princes**	**24.52**	**84**	*e*P	**P**	**08 25 03.6**	**+2.2**
LGTI	**Lohaghat**	**24.79**	**330**	*e*P	**P**	**08 25 05.0**	**+1.1**
PTH	**Pithoragarh**	**24.88**	**331**	*e*P	**P**	**08 25 07.8**	**+3.0**
PTH				*e*		08 29 38.8	
NDI	**New Delhi**	**25.80**	**324**	*e*P	**P**	**08 25 12.0**	**-1.4**
NDI				*e*S	**S**	**08 29 40.0**	**+0.5**
AJM	**Ajmer**	**25.85**	**317**	⇑*i*P	**P**	**08 25 16.0**	**+2.1**
ENH	**Enshi**	**26.36**	**31**	*e*P	**P**	**08 25 17.0**	**-1.7**
	comp=N,74nm,0.9s,mb5.2						
DGAR	**Diego Garcia**	**26.45**	**235**	PFAKE		08 25 30.0	+10
DGAR				LR	LR		
	comp=Z,3µm,22.0s,MS4.8						
DDI	**Dehra Dun**	**26.60**	**328**	*e*P	**P**	**08 25 20.8**	**0.0**
DDI				*e*		08 30 03.4	
BCPH	**Baguio City Da**	**27.23**	**70**	⇓*i*P	**P**	**08 25 28.5**	**+1.7**
SMLA	**Simla**	**27.71**	**328**	⇓*i*	**P**	**08 25 44.9**	**+14**
	comp=Z,80nm,0.4s,mb5.7						
SMLA				*i*		08 30 49.5	
SDNR	**Sundarnagar**	**28.10**	**328**	*e*P	**P**	**08 25 35.0**	**+0.5**
BHK	**Bhakra**	**28.33**	**327**	*e*P	**P**	**08 25 38.2**	**+1.7**
BHK				*e*		08 31 10.8	
RCP	**Roxas**	**28.55**	**81**	⇑*e*P	**P**	**08 25 38.4**	**-0.2**
CVP	**Callao Caves**	**28.72**	**68**	*e*P	**P**	**08 25 42.0**	**+1.8**
QZH	**Quanzhou**	**28.82**	**52**	⇓*i*P	**P**	**08 25 42.6**	**+1.6**
QZH				AMB	AMB		
	comp=Z,190nm,1.6s,mb5.6						
QZH				AMB	AMB		
	comp=Z,3µm,4.4s						
QZH				LR	LR		
	comp=N,19µm,12.8s,MS6.2						
QZH				LR	LR		
	comp=E,36µm,13.7s,MS6.2						
QZH				LR	LR		
	comp=Z,57µm,14.7s,MS6.3						
PONG	**Pong**	**29.00**	**327**	*e*P	**P**	**08 25 44.0**	**+1.5**
XAN	**Xi’an**	**29.21**	**26**	P	**P**	**08 25 42.5**	**-1.9**
XAN				AP	pP	08 25 48.3	-1.1
XAN				PP	PP	08 26 40.4	+1.2
XAN				S	**S**	**08 30 34.9**	**+0.1**
XAN				SS	SS	08 32 08.6	+3.2
XAN				AMB	AMB		
	comp=Z,91nm,1.6s,mb5.2						
XAN				AMB	AMB		
	comp=Z,1µm,11.8s						
XAN				LR	LR		
	comp=N,16µm,16.2s,MS5.9						
XAN				LR	LR		
	comp=E,21µm,16.4s,MS5.9						
XAN				LR	LR		
	comp=Z,26µm,14.5s,MS6.0						
LZH	**Lanzhou**	**29.22**	**17**	⇑P	**P**	**08 25 44.0**	**-0.5**
LZH				AP	pP	08 25 48.3	-1.2
LZH				XP	sP	08 25 51.4	-0.3
LZH				PP	PP	08 26 38.8	-0.5
LZH				S	**S**	**08 30 34.5**	**-0.4**
LZH				XS		08 30 42.1	
LZH				SS	SS	08 32 04.6	-1.1
LZH				AMB	AMB		
	comp=Z,197nm,1.3s,mb5.7						
LZH				AMB	AMB		
	comp=Z,2µm,5.4s						
LZH				LR	LR		
	comp=N,20µm,15.4s						
LZH				LR	LR		
	comp=Z,25µm,17.0s,MS5.9						
LZH	**Lanzhou**	**29.22**	**17**	⇑P	**P**	**08 25 44.0**	**-0.5**
LZH				*SP	sP	08 25 51.4	-0.3
LZH						08 26 38.7	
LZH				S	**S**	**08 30 34.5**	**-0.4**
LZH				SS	SS	08 32 04.6	-1.1
LZH				pmax	pmax		
	comp=Z,197nm,1.3s,mb5.7						
LZH				MLR	MLR		
	comp=Z,25µm,17.0s,MS5.9						
LZH	**Lanzhou**	**29.22**	**17**	⇑P	**P**	**08 25 44.0**	**-0.5**
	comp=Z,200nm,1.3s,mb5.7						
LZH				pP	pP	08 25 48.3	-1.2
LZH				sP	sP	08 25 51.4	-0.3
LZH				PP	PP	08 26 38.8	-0.5
LZH				S	**S**	**08 30 34.5**	**-0.4**
LZH				sS		08 30 42.1	
LZH				SS	SS	08 32 04.6	-1.1
LZH				LR	LR		
	comp=Z,25µm,17.0s,MS5.9						
WHN	**Wuhan**	**29.31**	**38**	⇓P	**P**	**08 25 47.0**	**+1.6**
WHN				S	**S**	**08 30 39.3**	**+2.8**
WHN				AMB	AMB		
	comp=Z,447nm,2.0s,mb5.8						
WHN				LR	LR		
	comp=N,6µm,12.0s,MS6.1						
WHN				LR	LR		
	comp=E,29µm,13.0s,MS6.1						
WHN				LR	LR		
	comp=Z,33µm,12.9s,MS6.1						
THN	**Thein Dam**	**29.49**	**327**	*e*P	**P**	**08 25 45.0**	**-2.0**
TATO	**Taipei**	**31.12**	**54**	PFAKE		08 26 10.0	+8.5
TATO				LR	LR		
	comp=Z,16µm,19.0s,MS5.7						
DAV	**Davao City (W)**	**31.35**	**90**	*e*P	**P**	**08 26 08.0**	**+4.4**
GTA	**Gaotai**	**31.55**	**9**	P	**P**	**08 26 04.8**	**-0.3**
GTA				AP	pP	08 26 08.1	-2.0
GTA				XP	sP	08 26 11.0	-1.3
GTA				PP	PP	08 27 08.6	-1.0
GTA				PPP	PPP	08 27 22.6	-2.0
GTA				PCP	PcP	08 29 00.5	+2.8
GTA				S	**S**	**08 31 09.8**	**-1.8**
GTA				XS		08 31 17.6	
GTA				SCP		08 32 38.5	
GTA				SCS	ScS	08 36 32.8	-2.5
GTA				AMB	AMB		
	comp=Z,10.0nm,1.8s						
GTA				AMB	AMB		
	comp=Z,877nm,6.8s						
GTA				LR	LR		
	comp=N,8µm,17.9s						
GTA				LR	LR		
	comp=E,7µm,18.6s						
GTA				LR	LR		
	comp=Z,9µm,27.4s						
SSE	**Sheshan**	**34.14**	**44**	P	**P**	**08 26 29.5**	**+1.8**
SSE				AP	pP	08 26 35.3	+2.5
SSE				PP	PP	08 27 44.8	+2.5
SSE				S	**S**	**08 31 52.0**	**0.0**
SSE				XS		08 32 02.0	
SSE				SCS	ScS	08 36 49.8	+1.1
SSE				AMB	AMB		
	comp=Z,34nm,1.3s,mb5.1						
SSE				AMB	AMB		
	comp=Z,926nm,5.3s						
SSE				LR	LR		
	comp=N,12µm,18.0s,MS5.9						
SSE				LR	LR		
	comp=E,14µm,18.0s,MS5.9						
SSE				LR	LR		
	comp=Z,11µm,13.2s,MS5.8						
SSE	**Sheshan**	**34.14**	**44**	P	**P**	**08 26 29.5**	**+1.8**
	comp=Z,34nm,1.3s,mb5.1						
SSE				pP	pP	08 26 35.3	+2.5
SSE				PP	PP	08 27 44.8	+2.5
SSE				S	**S**	**08 31 52.0**	**0.0**
SSE				sS		08 32 02.0	
SSE				ScS	ScS	08 36 49.8	+1.1
SSE				LR	LR		
	comp=Z,11µm,13.2s,MS5.8						
TIA	**Tai’an**	**35.00**	**34**	P	**P**	**08 26 37.3**	**+2.2**
TIA				S	**S**	**08 32 07.6**	**+2.2**
TIA				AMB	AMB		
	comp=Z,267nm,2.2s,mb5.8						
TIA				LR	LR		
	comp=N,10µm,16.0s,MS6.1						
TIA				LR	LR		
	comp=E,25µm,16.0s,MS6.1						
TIA				LR	LR		
	comp=N,4µm,13.9s						
TIA				LR	LR		
	comp=E,9µm,13.9s						
KSH	**Kashi**	**35.13**	**335**	*e*P	**P**	**08 26 35.0**	**-1.2**
KSH				*e*AP	pP	08 26 45.1	+3.8
KSH				*e*PP	PP	08 27 53.3	-1.7
KSH				*e*PCP	PcP	08 29 07.1	-0.6
KSH				*e*S	**S**	**08 32 03.0**	**-4.4**
KSH				*e*PS		08 32 12.0	
KSH				*e*XS		08 32 20.3	
KSH				*e*SCP		08 32 48.3	
KSH				*e*PCS		08 32 52.3	
KSH				*e*SS	SS	08 34 20.1	-3.4
KSH				*e*SCS	ScS	08 36 56.8	+2.9
KSH				AMB	AMB		
	comp=Z,6µm,3.0s						
KSH				AMB	AMB		
	comp=Z,160nm,3.4s						
KSH				LR	LR		
	comp=N,9µm,16.2s,MS5.8						
KSH				LR	LR		
	comp=E,11µm,14.1s,MS5.8						
BTO	**Baotou**	**35.33**	**21**	*e*P	**P**	**08 26 39.4**	**+1.6**
BTO				S	**S**	**08 32 16.6**	**+6.2**
BTO				AMB	AMB		
	comp=Z,50nm,1.8s,mb5.1						
BTO				LR	LR		
	comp=N,2µm,10.3s,MS5.7						
BTO				LR	LR		
	comp=E,9µm,14.7s,MS5.7						
WMQ	**Urumqi**	**35.94**	**352**	P	**P**	**08 26 42.5**	**-0.4**
WMQ				PP	PP	08 28 05.0	+0.4
WMQ				S	**S**	**08 32 18.0**	**-1.7**
WMQ				SS	SS	08 34 42.0	+0.1
WMQ				AMB	AMB		
	comp=Z,94nm,1.0s,mb5.7						
WMQ				LR	LR		
	comp=N,7µm,20.0s,MS5.7						

WMQ				LR	LR		
	comp=E,13µm,25.0s,MS5.7						
WMQ				LR	LR		
	comp=Z,6µm,21.0s,MS5.4						
HHC	**Hu-ho-hao-te**	**36.12**	**23**	*e*P	**P**	**08 26 47.3**	**+2.8**
HHC				AP	pP	08 26 51.5	+1.9
HHC				XP	sP	08 26 54.4	+2.7
HHC				PP	PP	08 28 08.5	+1.5
HHC				PCP	PcP	08 29 11.4	+0.8
HHC				S	**S**	**08 32 23.6**	**+1.1**
HHC				XS		08 32 31.0	
HHC				SCP		08 32 59.3	
HHC				SCS	ScS	08 37 02.3	+3.1
HHC				AMB	AMB		
	comp=Z,81nm,1.7s,mb5.4						
HHC				AMB	AMB		
	comp=Z,2µm,4.6s						
HHC				LR	LR		
	comp=N,11µm,15.2s,MS6.0						
HHC				LR	LR		
	comp=E,17µm,17.0s,MS6.0						
HHC				LR	LR		
	comp=Z,12µm,17.2s,MS5.7						
BJT	**Baijiatuau**	**37.41**	**29**	*e*P	**P**	**08 26 55.5**	**+0.1**
BJT				pmax	pmax		
	comp=Z,855nm,2.0s						
BJT	**Baijiatuau**	**37.41**	**29**	*e*P	**P**	**08 26 55.5**	**+0.2**
	comp=Z,855nm,2.0s,mb6.2						
BJI	**Beijing**	**37.43**	**29**	P	**P**	**08 26 58.8**	**+3.3**
BJI				XP	sP	08 27 07.8	+5.0
BJI				PP	PP	08 28 26.5	+2.9
BJI				S	**S**	**08 32 48.0**	**+5.3**
BJI				AMB	AMB		
	comp=Z,126nm,2.5s,mb5.3						
BJI				AMB	AMB		
	comp=Z,4µm,4.4s						
BJI				LR	LR		
	comp=N,9µm,17.9s,MS6.0						
BJI				LR	LR		
	comp=E,19µm,20.0s,MS6.0						
BJI				LR	LR		
	comp=Z,12µm,21.2s,MS5.7						
BJI	**Beijing**	**37.43**	**29**	P	**P**	**08 26 58.7**	**+3.2**
BJI				*SP	sP	08 27 07.7	+4.9
BJI						08 28 26.5	
BJI				S	**S**	**08 32 48.0**	**+5.3**
BJI				pmax	pmax		
	comp=Z,126nm,2.5s,mb5.3						
BJI				MLR	MLR		
	comp=Z,12µm,21.2s,MS5.7						
BJI	**Beijing**	**37.43**	**29**	P	**P**	**08 26 58.8**	**+3.3**
	comp=Z,130nm,2.5s,mb5.3						
BJI				sP	sP	08 27 07.8	+5.0
BJI				PP	PP	08 28 26.5	+2.9
BJI				S	**S**	**08 32 48.0**	**+5.3**
BJI				LR	LR		
	comp=Z,12µm,21.2s,MS5.7						
JOW	**Kunigami**	**37.44**	**56**	P	**P**	**08 26 57.2**	**+1.5**
	comp=Z,18nm,0.8s,mb4.9,baz=279,slow=12,SNR=3.1						
JOW				LR	LR	08 43 49.4	
	comp=Z,13µm,18.8s,MS5.8,baz=18,slow=39						
KZA	**Kyzart**	**37.60**	**337**	P	**P**	**08 26 57.0**	**+0.1**
	SNR=12						
AAA	**Alma-Ata**	**38.02**	**340**	*e*P	**P**	**08 27 00.0**	**-0.4**
AAA				*e*		08 28 31.0	
AAA				*e*S	**S**	**08 32 56.0**	**+4.5**
AAA				*e*SS	SS	08 35 23.0	-5.7
AAA				pmax	pmax		
	comp=Z,800nm,3.0s						
AAA				MLR	MLR		
	comp=N,7µm,16.0s,MS5.6						
AAA				MLR	MLR		
	comp=E,2µm,16.0s,MS5.6						
AAA				MLR	MLR		
	comp=Z,6µm,16.0s,MS5.5						
UCH	**Uchtor**	**38.02**	**336**	P	**P**	**08 27 00.6**	**+0.1**
	SNR=13						
BSY	**Bisya**	**38.15**	**297**	P	**P**	**08 27 05.7**	**+4.0**
	SNR=18						
BSY				P		08 27 05.7	
	SNR=18						
TKM2	**Tokmak 2**	**38.19**	**338**	P	**P**	**08 27 01.5**	**-0.4**
	SNR=14						
AML	**Almayashu**	**38.27**	**335**	P	**P**	**08 27 02.8**	**+0.2**
	SNR=28						
HOQ	**Hoqain**	**38.29**	**298**	P	**P**	**08 27 06.7**	**+3.8**
	SNR=26						
HOQ				P		08 27 06.7	
	SNR=26						
AAK	**Ala-Archa**	**38.37**	**337**	P	**P**	**08 27 04.2**	**+0.9**
	SNR=18						
AAK	**Ala-Archa**	**38.37**	**337**	*e*P	**P**	**08 27 02.3**	**-1.1**
AAK				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.5						
AAK	**Ala-Archa**	**38.37**	**337**	*e*P	**P**	**08 27 02.3**	**-1.1**
	comp=Z,110nm,1.1s,mb5.5						
FRU	**Bishkek**	**38.49**	**337**	*e*P	**P**	**08 27 04.0**	**-0.4**
FRU				*i*	pP	08 27 09.0	-0.5
FRU				*e*		08 33 04.0	
FRU				pmax	pmax		
	comp=Z,240nm,2.0s,mb5.6						
FRU				MLR	MLR		
	comp=Z,18µm,20.0s,MS5.9						
CHMS	**Chumysh**	**38.58**	**337**	P	**P**	**08 27 04.7**	**-0.4**
	SNR=9.9						
MBWA	**Marble Bar**	**38.60**	**139**	P	**P**	**08 27 01.7**	**-3.8**
	comp=Z,172nm,1.8s,mb5.5						
MBWA				LR	LR		
	comp=Z,5µm,20.0s,MS5.3						
EKS2	**Erkin-Say**	**38.67**	**336**	P	**P**	**08 27 06.2**	**+0.3**
	SNR=12						
USP	**Ospenovka**	**38.90**	**337**	P	**P**	**08 27 07.4**	**-0.4**
	SNR=19						
DL2	**Dalian**	**39.43**	**35**	⇑P	**P**	**08 27 16.0**	**+3.7**
DL2				PP	PP	08 28 51.0	+4.2
DL2				S	**S**	**08 33 16.5**	**+3.5**
DL2				AMB	AMB		
	comp=Z,100nm,1.6s,mb5.3						
DL2				AMB	AMB		
	comp=Z,970nm,4.1s						
DL2				LR	LR		
	comp=N,4µm,21.6s						
DL2				LR	LR		
	comp=E,4µm,15.3s						
DL2				LR	LR		
	comp=Z,5µm,12.6s						
MKAR	**Makanchi Array**	**39.77**	**347**	*i* P	**P**	**08 27 13.6**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,39nm,0.8s						
WHFO	**Wadi Hawf**	**40.26**	**288**	P	**P**	**08 27 22.4**	**+3.1**
	SNR=65						
WHFO				P		08 27 22.4	
	SNR=65						
ABTO	**Aybut**	**40.62**	**287**	P	**P**	**08 27 25.7**	**+3.4**
	SNR=15						
ABTO				P		08 27 25.7	
	SNR=15						
SONM	**Songino Array**	**40.92**	**13**	P	**P**	**08 27 23.2**	**-1.3**
	comp=Z,24nm,1.1s,mb4.7,baz=204,slow=5.6,SNR=30						
SONM				PcP	PcP	08 29 24.1	-1.4
	comp=Z,2.9nm,0.6s,baz=201,slow=4.7,SNR=4.1						
ULN	**Ulaanbaatar**	**41.09**	**13**	*e*P	**P**	**08 27 24.8**	**-1.0**
	comp=Z,30nm,1.0s,mb4.9						
ULN				LR	LR		
	comp=Z,6µm,20.0s,MS5.5						
INCN	**Inchon**	**41.54**	**40**	P	**P**	**08 27 29.9**	**+0.2**
	comp=Z,65nm,1.0s,mb5.2						
INCN				LR	LR		
	comp=Z,15µm,20.0s,MS5.9						
SNY	**Shenyang**	**42.52**	**33**	⇑P	**P**	**08 27 36.9**	**-0.8**
SNY				AP	pP	08 27 47.4	+4.6
SNY				XP	sP	08 27 51.0	+6.0
SNY				PP	PP	08 29 20.1	+0.9
SNY				S	**S**	**08 33 56.9**	**-2.0**
SNY				XS		08 34 11.6	
SNY				SS	SS	08 37 10.6	+7.8
SNY				AMB	AMB		
	comp=Z,100nm,1.9s,mb5.2						
SNY				AMB	AMB		
	comp=Z,1µm,7.6s						
SNY				LR	LR		
	comp=N,6µm,15.2s,MS5.9						
SNY				LR	LR		
	comp=E,9µm,13.2s,MS5.9						
SNY				LR	LR		
	comp=Z,7µm,13.5s,MS5.7						
ZAK	**Zakamensk**	**42.79**	**9**	*e*P	**P**	**08 27 38.8**	**-1.0**
ZAK				*e*		08 29 26.5	
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.5						
KAKA	**Kakadu**	**43.50**	**118**	*e*P	**P**	**08 27 43.5**	**-2.5**
	comp=Z,9.6nm,0.7s,mb4.6						
MOY	**Mondy**	**43.75**	**6**	*e*P	**P**	**08 27 50.2**	**+2.7**
MOY				pmax	pmax		
	comp=Z,55nm,2.9s,mb4.8						
TLY	**Talaya**	**44.11**	**9**	P	**P**	**08 27 53.2**	**+2.8**
	comp=Z,103nm,0.9s,mb5.6,SNR=12						
TLY	**Talaya**	**44.11**	**9**	*d* *i*P	**P**	**08 27 52.8**	**+2.4**
TLY				*e*		08 29 33.4	
TLY				*e*PPP	PPP	08 30 12.4	-0.3
TLY				*e*S	**S**	**08 34 19.6**	**-2.2**
TLY				*e*SS	SS	08 37 43.0	+12
TLY				pmax	pmax		
	comp=Z,40nm,1.9s,mb4.8						
TLY				MLR	MLR		
	comp=Z,6µm,22.0s,MS5.5						
KURK	**Kurchatov**	**44.28**	**346**	⇑*i*P	**P**	**08 27 50.8**	**-1.1**
KURK				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.4						
CN2	**Changchun**	**44.88**	**32**	⇓P	**P**	**08 27 59.3**	**+2.5**
CN2				*e*AP	pP	08 28 03.6	+1.7
CN2				PCP	PcP	08 29 41.3	+2.5
CN2				*e*S	**S**	**08 34 37.5**	**+4.4**
CN2				SS	SS	08 37 47.0	+1.0
CN2				AMB	AMB		
	comp=Z,80nm,1.5s,mb5.3						
CN2				AMB	AMB		
	comp=Z,2µm,6.0s						
CN2				LR	LR		
	comp=N,6µm,15.0s,MS6.0						
CN2				LR	LR		
	comp=E,14µm,15.0s,MS6.0						
CN2				LR	LR		
	comp=Z,9µm,15.0s,MS5.8						
MUN	**Mundaring**	**45.22**	**153**	*e*P	**P**	**08 27 59.5**	**-0.2**
	comp=Z,37nm,0.7s,mb5.3						
MUN	**Mundaring**	**45.22**	**153**	*e*P	**P**	**08 27 59.5**	**-0.2**
MUN				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.3						
KLBR	**Kellerberrin**	**45.62**	**151**	*e*P	**P**	**08 28 00.8**	**-2.0**
	comp=Z,583nm,0.9s,mb6.5						
ZAL	**Zalesovo**	**46.23**	**353**	*i* P	**P**	**08 28 08.2**	**+0.8**
ZAL				pmax	pmax		
	comp=Z,35nm,1.1s						
ZAL	**Zalesovo**	**46.23**	**353**	P	**P**	**08 28 06.8**	**-0.6**
	comp=Z,35nm,1.1s,mb5.2,baz=297,slow=7.4,SNR=18						
HIA	**Hailar**	**46.32**	**23**	*e*P	**P**	**08 28 06.3**	**-1.8**
HIA				pmax	pmax		
	comp=Z,78nm,1.0s						
HIA	**Hailar**	**46.32**	**23**	*e*P	**P**	**08 28 06.3**	**-1.8**
	comp=Z,78nm,1.0s,mb5.6						
NWAO	**Narrogin (SRO)**	**46.49**	**153**	P	**P**	**08 28 08.8**	**-0.9**
	comp=Z,69nm,1.1s,mb5.5,baz=318,slow=9.8,SNR=12						
NWAO				LR	LR	08 46 45.5	
	comp=Z,38nm,18.4s,baz=343,slow=35						
NWAO	**Narrogin (SRO)**	**46.49**	**153**	P	**P**	**08 28 08.8**	**-0.9**
NWAO				LR	LR	08 46 45.5	
NVS	**Novosibirsk**	**47.33**	**352**	*e*P	**P**	**08 28 13.5**	**-2.5**
NVS				*e*S	**S**	**08 35 01.1**	**-6.8**
NVS				*e*		08 38 07.5	
NVS				pmax	pmax		
	comp=N,243nm,1.6s						
NVS				pmax	pmax		
	comp=E,167nm,1.6s						
NVS				pmax	pmax		
	comp=Z,329nm,1.6s,mb6.0						
NVS				smax			
	comp=N,110nm,2.5s						
NVS				smax			
	comp=E,95nm,1.8s						
MDJ	**Mudanjiang**	**47.66**	**34**	P	**P**	**08 28 20.4**	**+1.6**
MDJ				AP	pP	08 28 24.5	+0.5
MDJ				XP	sP	08 28 26.4	+0.3
MDJ				PP	PP	08 30 12.8	+2.9
MDJ				S	**S**	**08 35 18.5**	**+5.7**
MDJ				XS		08 35 23.1	
MDJ				AMB	AMB		
	comp=Z,60nm,2.2s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,1µm,6.1s						
MDJ				LR	LR		
	comp=N,6µm,15.2s,MS5.8						
MDJ				LR	LR		
	comp=E,7µm,16.0s,MS5.8						
MDJ				LR	LR		
	comp=Z,9µm,16.3s,MS5.8						
MDJ	**Mudanjiang**	**47.66**	**34**	*e*P	**P**	**08 28 17.3**	**-1.5**
	comp=Z,204nm,1.5s,mb5.9						
BDHA	**Al Bayda’**	**47.78**	**281**	⇑*e*P	**P**	**08 28 22.5**	**+2.4**
	comp=Z,38nm,0.3s,mb5.9						
LBOS		**48.08**	**281**	⇓*e*P	**P**	**08 28 25.4**	**+2.9**
VLA	**Vladivostok**	**48.10**	**37**	⇑*i*P	**P**	**08 28 26.0**	**+3.8**
VLA				*i*		08 30 16.0	
VLA				*i* S	**S**	**08 35 26.0**	**+7.1**
VLA				pmax	pmax		
	comp=N,500nm,5.0s						
VLA				pmax	pmax		
	comp=E,1µm,5.0s						
VLA				pmax	pmax		
	comp=Z,3µm,5.0s						
VLA				pmax	pmax		
	comp=Z,1µm,8.0s						
VLA				pmax	pmax		
	comp=N,1µm,5.0s						
VLA				pmax	pmax		
	comp=E,500nm,5.0s						
VLA				smax			
	comp=E,3µm,15.0s						
VLA				smax			
	comp=N,2µm,10.0s						
WRA	**Warramunga Arr**	**48.57**	**126**	P	**P**	**08 28 22.4**	**-3.8**
	comp=N,5.3nm,0.6s,mb4.7,baz=306,slow=8.7,SNR=23						
WRAB	**Tennant Creek**	**48.58**	**126**	*e*P	**P**	**08 28 22.7**	**-3.5**
	comp=N,25nm,0.6s,mb5.4						
WRAB				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
BVAR	**Borovoye Array**	**48.66**	**341**	P	**P**	**08 28 25.2**	**-1.1**
	comp=Z,16nm,1.1s,mb5.0,baz=143,slow=7.4,SNR=27						
BVAR				PcP	PcP	08 29 54.5	+2.4
	comp=Z,15nm,0.7s,baz=153,slow=3.3,SNR=5.1						
BRVK	**Borovoye**	**48.72**	**341**	*e*P	**P**	**08 28 24.7**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.2						
BRVK	**Borovoye**	**48.72**	**341**	*e*P	**P**	**08 28 24.7**	**-2.1**
	comp=Z,25nm,0.9s,mb5.2						
DHBB	**Dhamar BB**	**48.94**	**282**	⇑*e*P	**P**	**08 28 31.7**	**+2.7**
JHJ	**Hachijo jima 2**	**49.02**	**53**	LR	LR	08 47 34.0	
	comp=Z,4µm,20.5s,MS5.4,baz=270,slow=34						
MAJO	**Matsushiro**	**49.10**	**48**	*e*P	**P**	**08 28 24.2**	**-5.8**
	comp=Z,227nm,1.9s,mb5.9						
MAJO				LR	LR		
	comp=Z,8µm,21.0s,MS5.7						
MAT	**Matsushiro**	**49.10**	**48**	*e*P	**P**	**08 28 30.0**	**0.0**
MAT				*e*S	**S**	**08 35 36.0**	**+2.9**
MAT				pmax	pmax		
	comp=Z,340nm,2.1s,mb6.0						
MAT				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.7						
MAT	**Matsushiro**	**49.10**	**48**	*e*P	**P**	**08 28 30.0**	**0.0**
	comp=Z,340nm,2.1s,mb6.0						
MAT				*e*S	**S**	**08 35 36.0**	**+2.9**
MAT				LR	LR		
	comp=Z,8µm,20.0s,MS5.7						
MAT	**Matsushiro**	**49.10**	**48**	P	**P**	**08 28 30.4**	**+0.4**
MAT				S	**S**	**08 35 35.0**	**+1.9**
TRBA	**At Turbah**	**49.17**	**280**	⇓*e*P	**P**	**08 28 33.4**	**+2.5**
CBIJ	**Chichi jima**	**49.31**	**61**	P	**P**	**08 28 30.1**	**-1.7**
	comp=Z,68nm,0.8s,mb5.7,baz=317,slow=11,SNR=2.8						
CBIJ				LR	LR	08 46 58.2	
	comp=Z,3µm,20.6s,MS5.2,baz=286,slow=33						
GUMO	**Guam**	**50.21**	**79**	PFAKE		08 28 50.0	+11
GUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
ASPA	**Alice Springs**	**50.24**	**130**	*e*P	**P**	**08 28 35.0**	**-3.9**
ASAR	**Alice Springs**	**50.24**	**130**	P	**P**	**08 28 35.0**	**-3.9**
	comp=Z,5.4nm,0.7s,mb4.7,baz=305,slow=7.1,SNR=31						
ASAR				PcP	PcP	08 30 01.8	+3.6
	comp=Z,4.7nm,0.6s,baz=308,slow=3.5,SNR=5.6						
ASAR				LR	LR	08 54 47.8	
	comp=Z,4µm,18.6s,MS5.5,baz=298,slow=42						
KLR	**Kul’dur**	**51.72**	**31**	*e*P	**P**	**08 28 46.2**	**-3.7**
KLR				*e*		08 30 09.8	
KLR				*e*		08 30 42.0	
KLR				*e*		08 36 11.5	
KLR				*e*		08 39 42.0	
KLR				pmax	pmax		
	comp=N,480nm,4.0s						
KLR				pmax	pmax		
	comp=E,680nm,4.0s						
KLR				pmax	pmax		
	comp=Z,900nm,4.0s						
KLR				MLR	MLR		
	comp=N,8µm,14.0s						
KLR				MLR	MLR		
	comp=Z,15µm,14.0s,MS6.2						
BOD	**Bodaibo**	**51.91**	**13**	*e*P	**P**	**08 28 48.9**	**-2.2**
BOD				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
BHD	**Baghdad**	**52.06**	**306**	*e*P	**P**	**08 28 52.0**	**-0.7**
BHD				*e*S	**S**	**08 36 16.0**	**+1.9**
GNI	**Garni**	**54.11**	**314**	*e*P	**P**	**08 29 06.0**	**-1.7**
GNI	**Garni**	**54.11**	**314**	P	**P**	**08 29 07.8**	**+0.1**
GNI				pmax	pmax		
	comp=Z,100nm,1.1s						
GNI	**Garni**	**54.11**	**314**	P	**P**	**08 29 08.6**	**+1.0**
	comp=Z,12nm,0.8s,mb4.9,baz=135,slow=4.3,SNR=5.3						
GNI				LR	LR	08 57 06.5	
	comp=Z,3µm,18.7s,MS5.4,baz=288,slow=42						
GNI	**Garni**	**54.11**	**314**	P	**P**	**08 29 07.8**	**+0.1**
	comp=Z,100nm,1.1s,mb5.7						
CLNS	**Chul’man**	**54.22**	**20**	*e*P	**P**	**08 29 10.8**	**+2.5**
CLNS				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.4						
CLNS				pmax	pmax		
	comp=N,35nm,1.1s						
CLNS				pmax	pmax		
	comp=E,29nm,1.2s						
VANB	**Van**	**54.52**	**312**	*e*P	**P**	**08 29 12.9**	**+2.1**
MTA	**Mtatsminda**	**54.67**	**316**	P	**P**	**08 29 10.8**	**-1.0**
MTA				S	**S**	**08 36 47.9**	**-1.4**
TI2	**Plekhanov**	**54.72**	**316**	⇑*i*P	**P**	**08 29 11.8**	**-0.3**
TI2				*e*S	**S**	**08 36 55.0**	**+5.1**
DUS	**Dusheti**	**54.89**	**316**	P	**P**	**08 29 14.9**	**+1.5**
SVE	**Sverdlovsk**	**55.06**	**338**	⇑*i*P	**P**	**08 29 13.0**	**-1.5**
SVE				*e*		08 30 19.8	
SVE				*e*		08 31 22.5	
SVE				pmax	pmax		
	comp=Z,80nm,1.5s,mb5.5						
ASAJ	**Asahikawa**	**55.31**	**41**	P	**P**	**08 29 18.4**	**+1.9**
	comp=Z,17nm,0.8s,mb5.1,baz=250,slow=10,SNR=9.8						
ASAJ				LR	LR	08 52 33.0	
	comp=Z,6µm,21.4s,MS5.6,baz=96,slow=36						
PMG	**Port Moresby**	**55.79**	**107**	P	**P**	**08 29 18.0**	**-2.3**
PMG	**Port Moresby**	**55.79**	**107**	*e*P	**P**	**08 29 15.8**	**-4.5**
PMG				pmax	pmax		
	comp=Z,80nm,1.1s						
PMG	**Port Moresby**	**55.79**	**107**	P	**P**	**08 29 18.2**	**-2.0**
	comp=Z,22nm,0.7s,mb5.3,baz=310,slow=3.5,SNR=8.8						
PMG	**Port Moresby**	**55.79**	**107**	*e*P	**P**	**08 29 17.6**	**-2.7**
	comp=Z,80nm,1.1s,mb5.7						
PMG				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
ONI	**Oni**	**55.94**	**317**	P	**P**	**08 29 20.1**	**-0.9**
ONI				S	**S**	**08 37 07.8**	**+1.6**
VRT	**Varto**	**56.07**	**312**	*e*P	**P**	**08 29 21.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**56.66**	**38**	κ*e*P	**P**	**08 29 27.3**	**+1.2**
YSS				*e**SP	sP	08 29 38.0	+4.6
YSS				S	**S**	**08 37 16.0**	**+0.2**
YSS				*e*PS	PS	08 37 39.0	+8.9
YSS				*e*		08 39 03.0	
YSS				*e*SS	SS	08 41 03.0	-1.5
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
YSS				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.7						
YSS				MLR	MLR		
	comp=N,4µm,16.0s,MS5.9						
YSS				MLR	MLR		
	comp=Z,7µm,16.0s,MS5.8						
YSS				MLR	MLR		
	comp=E,7µm,17.0s,MS5.9						
YSS	**Yuzh-Sakhalins**	**56.66**	**38**	*e*Pdr		08 29 27.3	
	comp=E,60nm,1.0s						
YSS				*e*sP	sP	08 29 38.0	+4.6
YSS				S	**S**	**08 37 16.0**	**+0.2**
YSS				*e*PS	PS	08 37 39.0	+8.9
YSS				*e*		08 39 03.0	
YSS				*e*SS	SS	08 41 03.0	-1.5
YSS				LR	LR		
	comp=Z,7µm,16.0s,MS5.8						
KIV	**Kislovodsk**	**56.98**	**318**	*c**e*P	**P**	**08 29 27.4**	**-1.1**
KIV				*e*		08 31 34.3	
KIV				*i* S	**S**	**08 37 20.9**	**+0.9**
KIV				pmax	pmax		
	comp=Z,98nm,1.0s,mb5.8						
KIV				smax			
	comp=N,730nm,5.2s						
KIV				smax			
	comp=E,366nm,5.2s						
KIV	**Kislovodsk**	**56.98**	**318**	⇑*e*P	**P**	**08 29 27.4**	**-1.1**
	comp=E,98nm,1.0s,mb5.8						
KIV				*e*		08 31 34.3	
KIV				*i* S	**S**	**08 37 20.9**	**+0.9**
GOF	**Gofitskoye**	**57.19**	**319**	*e*P	**P**	**08 29 31.0**	**+1.0**
GOF				*i* S	**S**	**08 37 21.0**	**-1.8**
GOF				pmax	pmax		
	comp=Z,58nm,1.4s,mb5.4						
GOF				smax			
	comp=N,4µm,10.0s						
GOF				MLR	MLR		
	comp=Z,8µm,16.0s,MS5.9						
KMBO	**Kilima Mbogo**	**57.28**	**263**	P	**P**	**08 29 34.4**	**+3.4**
	comp=Z,32nm,0.9s,mb5.4,baz=57,slow=11,SNR=38						
KMBO				LR	LR	08 54 22.8	
	comp=Z,3µm,18.8s,MS5.5,baz=82,slow=36						
KMBO	**Kilima Mbogo**	**57.28**	**263**	*e*P	**P**	**08 29 34.0**	**+3.0**
	comp=Z,34nm,0.8s,mb5.4						
KMBO				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
PTK	**Pertek**	**57.58**	**311**	*e*P	**P**	**08 29 32.2**	**-0.6**
URFA	**Urfa**	**57.60**	**309**	*e*P	**P**	**08 29 36.3**	**+3.4**
ELZG	**Elazig**	**57.77**	**311**	*i* P	**P**	**08 29 33.6**	**-0.5**
ASF	**Jabal al Asfar**	**57.91**	**303**	P	**P**	**08 29 35.8**	**+0.6**
	comp=Z,11nm,0.9s,mb4.9,baz=331,slow=4.4,SNR=3.9						
ASF				LR	LR	08 57 17.2	
	comp=Z,4µm,21.0s,MS5.5,baz=325,slow=39						
GUMT	**Gumushane**	**57.99**	**313**	*e*P	**P**	**08 29 31.5**	**-4.1**
MALT	**Malatya**	**58.14**	**310**	*e*P	**P**	**08 29 34.9**	**-1.8**
MALT				pmax	pmax		
	comp=Z,118nm,0.8s,mb6.0						
MALT	**Malatya**	**58.14**	**310**	*e*P	**P**	**08 29 34.9**	**-1.8**
	comp=Z,118nm,0.8s,mb6.0						
MYA	**Malataya**	**58.15**	**310**	*e*P	**P**	**08 29 36.1**	**-0.6**
SOKR	**Solikamsk**	**58.46**	**339**	*c* *i*P	**P**	**08 29 41.3**	**+2.7**
SOKR				S	**S**	**08 37 41.6**	**+2.3**
SOKR				pmax	pmax		
	comp=Z,130nm,1.1s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,17µm,21.0s,MS6.1						
GZT	**Gaziantep**	**58.54**	**309**	*i* P	**P**	**08 29 38.4**	**-1.1**
CTA	**Charters Tower**	**58.60**	**119**	*e*P	**P**	**08 29 38.7**	**-1.4**
	comp=Z,10nm,1.6s,mb4.6						
CTA	**Charters Tower**	**58.60**	**119**	*e*P	**P**	**08 29 38.7**	**-1.4**
CTA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
CTA	**Charters Tower**	**58.60**	**119**	P	**P**	**08 29 38.5**	**-1.6**
	comp=Z,7.3nm,1.1s,mb4.6,baz=272,slow=10.0,SNR=3.8						
CTA				LR	LR	08 58 21.0	
	comp=Z,5µm,21.1s,MS5.6,baz=285,slow=40						
CTAO	**Charters Tower**	**58.60**	**119**	PFAKE		08 29 50.0	+10
CTAO				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
SOC	**Sochi**	**58.85**	**316**	*i* P	**P**	**08 29 41.0**	**-0.5**
SOC				*e*		08 30 30.9	
SOC				*e*		08 31 47.9	
SOC				*e*PPP	PPP	08 33 09.7	-7.8
SOC				*e*S	**S**	**08 37 43.3**	**-1.3**
SOC				*e*		08 39 30.7	
SOC				*e*SS	SS	08 41 33.0	-6.9
SOC				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.7						
SOC				pmax	pmax		
	comp=N,48nm,1.1s						
SOC				pmax	pmax		
	comp=E,35nm,0.9s						
SOC				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.4						

SOC				MLR	MLR		
	comp=N,3µm,22.0s,MS5.4						
SOC				MLR	MLR		
	comp=E,2µm,22.0s,MS5.4						
EIL	**Elat**	**59.13**	**300**	*e*P	**P**	**08 29 43.5**	**-0.2**
	comp=E,99nm,1.4s,mb5.7						
YAK	**Yakutsk**	**59.77**	**19**	*e*P	**P**	**08 29 48.7**	**+1.0**
YAK				*e**PP	pP	08 29 59.3	+6.3
YAK				*e*		08 30 33.0	
YAK				*e*PPP	PPP	08 33 21.7	-5.5
YAK				*e*S	**S**	**08 37 58.5**	**+2.2**
YAK				*e*		08 39 35.1	
YAK				*e*SS	SS	08 41 48.8	-4.9
YAK				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
YAK				pmax	pmax		
	comp=N,23nm,1.1s						
YAK				pmax	pmax		
	comp=E,21nm,1.2s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax			
	comp=N,41nm,3.5s						
YAK				smax			
	comp=E,39nm,4.7s						
YAK				MLR	MLR		
	comp=N,2µm,15.0s,MS5.5						
YAK				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.5						
YAK				MLR	MLR		
	comp=E,2µm,16.0s,MS5.5						
YAK	**Yakutsk**	**59.77**	**19**	*e*P	**P**	**08 29 48.7**	**+1.0**
	comp=E,43nm,1.0s,mb5.4						
YAK				*e*pP	pP	08 29 59.3	+6.3
YAK				*e*		08 30 33.0	
YAK				*e*PPP	PPP	08 33 21.7	-5.5
YAK				*e*S	**S**	**08 37 58.5**	**+2.2**
YAK				*e*		08 39 35.1	
YAK				*e*SS	SS	08 41 48.8	-4.9
YAK				LR	LR		
	comp=Z,3µm,15.0s,MS5.5						
STKA	**Stephens Creek**	**60.44**	**134**	⇓*i*P	**P**	**08 29 49.1**	**-3.5**
	comp=Z,9.9nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**60.44**	**134**	P	**P**	**08 29 49.2**	**-3.4**
	comp=Z,8.0nm,0.9s,mb4.8,baz=305,slow=6.6,SNR=6.1						
STKA				LR	LR	08 58 48.2	
	comp=Z,9µm,19.7s,MS5.9,baz=294,slow=39						
PECR	**Pechory**	**61.79**	**331**	*e*P	**P**	**08 30 00.0**	**-1.5**
PECR				*e*S	**S**	**08 38 24.0**	**+1.9**
PECR				pmax	pmax		
	comp=Z,1µm,1.6s						
PECR				pmax	pmax		
	comp=Z,400nm,2.0s,mb6.2						
PECR				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
PECR				MLR	MLR		
	comp=Z,4µm,18.0s						
BRTR	**Keskin Array B**	**62.10**	**311**	P	**P**	**08 30 01.9**	**-2.0**
	comp=Z,18nm,0.9s,mb5.2,baz=126,slow=5.9,SNR=24						
BR131	**Keskin Array S**	**62.10**	**311**	PFAKE		08 30 10.0	+6.2
BR131				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
VOR	**Voronezh**	**62.24**	**325**	P	**P**	**08 30 07.0**	**+2.4**
VOR				pmax	pmax		
	comp=Z,300nm,1.2s,mb6.3						
ELDT	**Eldivan**	**62.44**	**311**	*i* P	**P**	**08 30 04.9**	**-1.2**
BALT	**Daday**	**62.72**	**313**	*i* P	**P**	**08 30 04.2**	**-3.6**
SIM	**Simferopol’**	**63.09**	**316**	*e*P	**P**	**08 30 10.6**	**+0.3**
SIM				S	**S**	**08 38 40.2**	**+1.5**
SIM				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.6						
SIM				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.5						
SGKT	**Sivrigoynuk**	**63.48**	**311**	*i* P	**P**	**08 30 12.3**	**-0.6**
MBAR	**Mbarara**	**63.61**	**265**	*e*P	**P**	**08 30 15.8**	**+1.6**
	comp=Z,78nm,1.3s,mb5.6						
MBAR				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
ISP	**Isparta**	**64.12**	**308**	*e*P	**P**	**08 30 14.9**	**-2.3**
ISP				pmax	pmax		
	comp=Z,101nm,1.4s,mb5.7						
ISP	**Isparta**	**64.12**	**308**	*e*P	**P**	**08 30 14.9**	**-2.3**
	comp=Z,101nm,1.4s,mb5.7						
ESKT	**Eskisehir**	**64.17**	**310**	*i* P	**P**	**08 30 15.9**	**-1.6**
MOS	**Moscow**	**64.74**	**329**	*e*P	**P**	**08 30 19.1**	**-1.8**
MOS				*e*		08 30 59.1	
MOS				*e*		08 32 42.8	
MOS				*e*S	**S**	**08 38 56.0**	**-2.9**
MOS				*e*SS	SS	08 43 07.7	-4.3
MOS				pmax	pmax		
	comp=Z,700nm,1.8s,mb6.4						
MOS				pmax	pmax		
	comp=Z,518nm,1.9s,mb6.2						
MOS				smax			
	comp=N,3µm,5.1s						
MOS				MLR	MLR		
	comp=Z,9µm,19.1s,MS6.0						
OBN	**Obninsk**	**65.04**	**328**	P	**P**	**08 30 22.5**	**-0.3**
	comp=Z,718nm,1.7s,mb6.4,SNR=7.3						
OBN	**Obninsk**	**65.04**	**328**	*d i*P	**P**	**08 30 21.6**	**-1.2**
OBN				*e*		08 32 51.8	
OBN				*e*S	S	08 39 04.6	+2.0
OBN				*e*SS	SS	08 43 17.3	+0.6
OBN				pmax	pmax		
	comp=Z,64nm,1.5s,mb5.4						
OBN	**Obninsk**	**65.04**	**328**	*i* Pr		08 30 21.6	
	comp=Z,64nm,1.5s						
OBN				*e*		08 32 51.8	
OBN				*e*S	S	08 39 04.6	+2.0
OBN				*e*SS	SS	08 43 17.3	+0.6
SKR	**Severo-Kuril’s**	**66.23**	**38**	*e*P	**P**	**08 30 29.0**	**-1.6**
SKR				*e*PPP	PPP	08 34 30.0	-4.1
SKR				*e*S	S	08 39 16.0	-1.3
SKR				*e*		08 39 58.0	
SKR				pmax	pmax		
	comp=N,2µm,4.0s						
SKR				pmax	pmax		
	comp=Z,25µm,4.0s						
SKR				smax			
	comp=N,3µm,10.0s						
SKR				smax			
	comp=E,31µm,10.0s						
SKR				MLR	MLR		
	comp=N,4µm,16.0s,MS5.8						
SKR				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.8						
SKR				MLR	MLR		
	comp=E,3µm,18.0s,MS5.8						
MA2	**Magadan**	**66.59**	**28**	*e*P	**P**	**08 30 34.6**	**+1.9**
MA2				*e*		08 31 07.7	
MA2				*e*S	S	08 39 22.8	+1.3
MA2				*e*SS	SS	08 43 40.4	-0.1
MA2				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.5						
MA2				MLR	MLR		
	comp=Z,12µm,24.0s,MS6.0						
TIXI	**Tiksi**	**66.98**	**11**	⇑*i*P	**P**	**08 30 32.5**	**-2.5**
TIXI				*e*		08 32 57.7	
TIXI				*e*S	S	08 39 19.1	-7.0
TIXI				*e*SS	SS	08 43 38.0	-8.6
TIXI				pmax	pmax		
	comp=Z,96nm,0.8s,mb5.9						
TIXI				MLR	MLR		
	comp=Z,5µm,15.0s,MS5.8						
TIXI	**Tiksi**	**66.98**	**11**	PFAKE		08 30 40.0	+5.0
TIXI				LR	LR		
	comp=Z,5µm,20.0s,MS5.7						
KIS	**Kishinev**	**67.19**	**318**	*e*P	**P**	**08 30 36.0**	**-0.7**
KIS				*e*		08 30 50.0	
KIS				*e*		08 31 10.0	
KIS				*e*		08 33 10.0	
KIS				*e*S	S	08 39 29.0	+0.1
KIS				*e*PS	PS	08 40 22.0	+28
KIS				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
CFR	**Carcaliu**	**67.26**	**316**	P	**P**	**08 30 44.9**	**+7.6**
CFR	**Carcaliu**	**67.26**	**316**	⇓*i*P	**P**	**08 30 35.9**	**-1.3**
PRD	**Provadia**	**67.41**	**313**	*e*P	**P**	**08 30 28.0**	**-10**
AKASG	**Malin Array Be**	**67.82**	**322**	P	**P**	**08 30 38.2**	**-2.4**
	comp=Z,9.6nm,0.8s,mb4.9,baz=88,slow=4.7,SNR=21						
AKASG				PP	PP	08 33 11.0	-1.2
	comp=Z,7.4nm,0.9s,baz=94,slow=7.3,SNR=5.9						
HNR	**Honiara**	**68.00**	**104**	P	**P**	**08 30 43.2**	**+0.8**
	comp=Z,102nm,0.8s,mb5.9						
HNR				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
VRI	**Vrincioaia**	**68.37**	**316**	P	**P**	**08 30 44.3**	**+0.1**
VRI	**Vrincioaia**	**68.37**	**316**	⇓*i*P	**P**	**08 30 44.0**	**-0.2**
PET	**Petropavlovsk**	**68.40**	**36**	*d i*P	**P**	**08 30 45.1**	**+0.9**
PET				*e*		08 31 15.8	
PET				*e*		08 33 14.1	
PET				*i* S	S	08 39 42.7	-0.6
PET				*e*PS	PS	08 40 15.2	+4.6
PET				*e*SS	SS	08 44 02.4	-6.2
PET				pmax	pmax		
	comp=Z,600nm,5.9s						
PET				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
PET				pmax	pmax		
	comp=Z,300nm,13.8s						
PET				pmax	pmax		
	comp=Z,400nm,8.5s						
PET				pmax	pmax		
	comp=Z,300nm,9.2s						
PET				pmax	pmax		
	comp=Z,200nm,13.5s						
PET				smax			
	comp=E,900nm,5.5s						
PET				smax			
	comp=N,700nm,8.5s						
PET				smax			
	comp=E,1µm,18.4s						
PET				smax			
	comp=N,800nm,7.8s						
PET				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.8						
PET				MLR	MLR		
	comp=Z,4µm,17.0s						
PET	**Petropavlovsk**	**68.40**	**36**	PFAKE		08 30 50.0	+5.8
PET				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
SEY	**Seymchan**	**68.74**	**25**	*e*P	**P**	**08 30 49.2**	**+3.1**
SEY				*e*		08 31 04.2	
SEY				*e*		08 31 14.9	
SEY				*e*		08 33 18.5	
SEY				*e*S	S	08 39 49.4	+2.2
SEY				*e*		08 40 44.9	
SEY				*e*SS	SS	08 44 13.9	+0.1
SEY				*e*SSS	SSS	08 47 08.3	-7.0
SEY				pmax	pmax		
	comp=N,40nm,1.1s						
SEY				pmax	pmax		
	comp=Z,90nm,1.1s,mb5.6						
SEY				smax			
	comp=N,5µm,26.0s						
SEY				smax			
	comp=E,2µm,23.6s						
SEY				MLR	MLR		
	comp=N,31µm,15.0s,MS6.8						
SEY				MLR	MLR		
	comp=E,21µm,15.0s,MS6.8						
SEY				MLR	MLR		
	comp=Z,53µm,15.0s						
MLR	**Muntele Rosu**	**68.84**	**316**	P	**P**	**08 30 46.9**	**-0.2**
MLR	**Muntele Rosu**	**68.84**	**316**	P	**P**	**08 30 46.4**	**-0.7**
	comp=Z,41nm,1.1s,mb5.3,baz=156,slow=0.8,SNR=13						
MLR				LR	LR	09 06 22.4	
	comp=Z,4µm,19.5s,MS5.7,baz=65,slow=41						
MLR	**Muntele Rosu**	**68.84**	**316**	⇓*i*P	**P**	**08 30 46.2**	**-0.9**
PVL	**Pavlikeni**	**68.90**	**313**	P	**P**	**08 30 48.0**	**+0.5**
SNX	**Sinaia**	**69.11**	**315**	P	**P**	**08 30 55.0**	**+6.2**
RZN	**Rozhen**	**69.13**	**311**	P	**P**	**08 30 48.0**	**-0.9**
LSZ	**Lusaka**	**69.20**	**250**	*e*P	**P**	**08 30 49.6**	**-0.2**
LSZ				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
LSZ				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.7						
LSZ	**Lusaka**	**69.20**	**250**	*e*P	**P**	**08 30 49.6**	**-0.1**
	comp=Z,16nm,0.8s,mb5.0						
LSZ				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
MTUR	**Matau**	**69.41**	**315**	P	**P**	**08 30 52.5**	**+1.9**
MNK	**Minsk**	**69.61**	**325**	*e*P	**P**	**08 30 47.0**	**-4.7**
PGB	**Panagyurishte**	**69.65**	**312**	P	**P**	**08 30 51.0**	**-1.1**
BURAR	**Bucovina Array**	**69.71**	**318**	P	**P**	**08 30 56.4**	**+4.0**
MMB	**Musomiste**	**69.85**	**311**	P	**P**	**08 30 54.0**	**+0.7**
PUL	**Pulkovo**	**69.87**	**331**	⇑*e*P	**P**	**08 31 00.6**	**+7.5**
PUL				*e*S	S	08 40 00.0	-0.6
PUL				pmax	pmax		
	comp=Z,68nm,0.4s,mb5.9						
PUL				pmax	pmax		
	comp=E,134nm,0.7s						
TAU	**Tasmania Unive**	**70.22**	**141**	PFAKE		08 31 00.0	+4.4
TAU				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
VTS	**Vitosha**	**70.36**	**312**	P	**P**	**08 31 04.2**	**+7.8**
VTS	**Vitosha**	**70.36**	**312**	P	**P**	**08 30 55.0**	**-1.4**
KKB	**Krupnik**	**70.36**	**311**	P	**P**	**08 30 55.0**	**-1.4**
JOF	**Joensuu**	**70.51**	**334**	*e*p	**P**	**08 30 55.2**	**-1.8**
	comp=Z,29nm,0.8s,mb5.3						
JOF	**Joensuu**	**70.51**	**334**	*e*P	**P**	**08 30 55.2**	**-1.8**
JOF				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
LVV	**L’vov**	**70.88**	**320**	*e*P	**P**	**08 30 58.3**	**-1.1**
LVV				*e*		08 31 06.9	
LVV				*e*		08 33 42.9	
LVV				MLR	MLR		
	comp=Z,2µm,19.4s,MS5.4						
LVV				MLR	MLR		
	comp=N,800nm,20.7s,MS5.3						
LVV				MLR	MLR		
	comp=E,2µm,19.6s,MS5.3						
WAKE	**Wake Island**	**71.06**	**72**	PFAKE		08 31 10.0	+8.9
WAKE				LR	LR		
	comp=Z,69µm,21.0s						
LVZ	**Lovozero**	**71.22**	**340**	⇓*e*P	**P**	**08 31 03.0**	**+1.8**
LVZ				*e*S	S	08 40 17.0	+0.7
LVZ				*e*		08 41 06.1	
LVZ				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.4						
LVZ				pmax	pmax		
	comp=E,14nm,1.6s						
LVZ				smax			
	comp=N,1µm,6.3s						
LVZ				smax			
	comp=Z,751nm,5.3s						
LVZ				smax			
	comp=E,597nm,4.8s						
LVZ				MLR	MLR		
	comp=Z,13µm,19.0s,MS6.2						
LVZ				MLR	MLR		
	comp=N,5µm,23.0s,MS6.0						
LVZ				MLR	MLR		
	comp=E,9µm,22.0s,MS6.0						
BOLS	**Boljevac**	**71.41**	**313**	⇑*i*P	**P**	**08 31 01.1**	**-1.7**
APA	**Apatity**	**71.51**	**339**	⇑*i*P	**P**	**08 31 02.7**	**-0.3**
APA				*i* S	S	08 40 22.0	+2.4
APA				*e*		08 41 09.0	
APA				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.4						
APA				MLR	MLR		
	comp=Z,13µm,20.0s,MS6.2						
SKO	**Skopje**	**71.59**	**311**	*e*P	**P**	**08 31 03.5**	**-0.4**
KWP	**Kalwaria**	**71.69**	**320**	*e*P	**P**	**08 31 03.8**	**-0.5**
KWP				*e*pP	pP	08 31 11.8	+2.1
KWP				*e*S	S	08 40 23.7	+1.7
KWP				MLR	MLR	09 04 15.6	
	comp=Z,3µm,28.3s,MS5.4						
BZS	**Buzias**	**71.86**	**315**	P	**P**	**08 31 05.8**	**+0.4**
KOLS	**Kolonicke sedl**	**71.87**	**319**	*e*P	**P**	**08 31 05.7**	**+0.3**
KOLS				*e*P		08 31 06.7	
KOLS				*e*		08 31 13.3	
KOLS				*e*		08 31 13.8	
KOLS	**Kolonicke sedl**	**71.87**	**319**	*e*P	**P**	**08 31 06.7**	**+1.3**
KOLS				*e*	pP	08 31 13.8	+3.0
KOLS	**Kolonicke sedl**	**71.87**	**319**	*e*P	**P**	**08 31 05.7**	**+0.3**
KOLS				*e*		08 31 13.3	
SUW	**Suwalki**	**72.17**	**324**	*e*P	**P**	**08 31 05.6**	**-1.5**
SUW				*e**PP	pP	08 31 14.1	+1.7
SUW				MLR	MLR		
	comp=Z,2µm,27.5s,MS5.3						
SUW	**Suwalki**	**72.17**	**324**	*e*P	**P**	**08 31 05.6**	**-1.5**
SUW				*e*P		08 31 08.7	
SUW				*e*pP	pP	08 31 14.1	+1.7
SUW				*e*S	S	08 40 09.4	-18
SUW	**Suwalki**	**72.17**	**324**	*e*P	**P**	**08 31 05.6**	**-1.5**
SUW				*e*pP	pP	08 31 14.1	+1.7
SUW				*e*S	S	08 40 09.4	-18
SUW				MLR	MLR	09 05 00.4	
	comp=Z,2µm,27.5s,MS5.3						
GRUS	**Gruza**	**72.31**	**313**	⇑*i*P	**P**	**08 31 07.0**	**-1.1**
FINES	**FINESS Array B**	**72.37**	**332**	*i* P	**P**	**08 31 07.1**	**-1.1**
FINES				pmax	pmax		
	comp=Z,17nm,1.1s						
FINES	**FINESS Array B**	**72.37**	**332**	P	**P**	**08 31 07.0**	**-1.1**
	comp=Z,17nm,1.1s,mb4.9,baz=98,slow=6.8,SNR=20						
FINES				LR	LR	09 09 14.7	
	comp=Z,6µm,19.0s,MS5.9,baz=264,slow=41						
KAF	**Kangasniemi**	**72.45**	**333**	*e*p	**P**	**08 31 06.6**	**-2.0**
	comp=Z,16nm,0.7s,mb5.1,baz=103,slow=5.5						
KAF	**Kangasniemi**	**72.45**	**333**	*e*P	**P**	**08 31 06.6**	**-2.0**
KAF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
KECS	**Kecovo**	**72.98**	**318**	*e*P	**P**	**08 31 13.5**	**+1.5**
KECS				*e*P		08 31 14.0	
KECS				*e*	pP	08 31 19.6	+2.2
KECS	**Kecovo**	**72.98**	**318**	*e*P	**P**	**08 31 14.0**	**+2.0**
KECS	**Kecovo**	**72.98**	**318**	*e*P	**P**	**08 31 13.5**	**+1.5**
KECS				*e*sP	sP	08 31 19.6	+0.4
WAR	**Warsaw**	**73.15**	**322**	*e*P	**P**	**08 31 16.8**	**+3.9**
WAR				*e*S	S	08 40 38.6	+0.1
WAR				MLR	MLR	09 05 57.9	
	comp=Z,5µm,23.8s,MS5.7						
NIE	**Niedzica**	**73.21**	**319**	*e*P	**P**	**08 31 11.4**	**-1.9**
PSZ	**Piszkesteto**	**73.31**	**318**	*e*P	**P**	**08 31 11.0**	**-2.9**
PSZ				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.4						
PSZ	**Piszkesteto**	**73.31**	**318**	⇑*i*P	**P**	**08 31 13.1**	**-0.8**
OJC	**Ojcow**	**73.64**	**320**	*e*P	**P**	**08 31 15.1**	**-0.7**
OJC				*e*PcP	PcP	08 31 32.8	+0.9
OJC				*e*S	S	08 40 41.4	-2.6
OJC				MLR	MLR	09 09 43.7	
	comp=Z,3µm,19.3s,MS5.6						
VYHS	**Vyhne**	**74.07**	**318**	*e*P	**P**	**08 31 17.8**	**-0.5**
VYHS				*e*		08 31 25.5	
VYHS	**Vyhne**	**74.07**	**318**	*e*P	**P**	**08 31 17.8**	**-0.5**
VYHS				*e*P		08 31 19.0	
VYHS				*e*	pP	08 31 21.8	-1.9
VYHS				*e*		08 31 25.5	
VYHS	**Vyhne**	**74.07**	**318**	*e*P	**P**	**08 31 17.8**	**-0.5**
VYHS				*e*	pP	08 31 21.8	-1.9
VYHS				*e*		08 31 25.5	
VYHS	**Vyhne**	**74.07**	**318**	*e*P	**P**	**08 31 19.0**	**+0.7**
LBTB	**Lobatse**	**74.23**	**241**	P	**P**	**08 31 20.1**	**+0.4**
	comp=Z,16nm,0.7s,mb5.0,baz=81,slow=7.1,SNR=6.0						
LBTB				LR	LR	09 00 09.3	
	comp=Z,5µm,20.1s,MS5.8,baz=86,slow=33						
LBTB	**Lobatse**	**74.23**	**241**	*e*P	**P**	**08 31 20.3**	**+0.6**
	comp=Z,36nm,0.9s,mb5.3						
LBTB				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
KEV	**Kevo**	**74.50**	**341**	*e*p	**P**	**08 31 18.0**	**-2.4**
	comp=Z,18nm,0.5s,mb5.3						
KEV	**Kevo**	**74.50**	**341**	*e*P	**P**	**08 31 18.0**	**-2.4**
KEV				pmax	pmax		
	comp=Z,18nm,0.5s,mb5.3						
OKC	**Ostrava-Krasne**	**74.66**	**319**	*e*P	**P**	**08 31 21.5**	**-0.2**
OKC				AMS	AMS	09 10 50.0	
	comp=Z,2µm,17.2s						
ARCES	**ARCESS Array B**	**74.93**	**340**	P	**P**	**08 31 22.2**	**-0.7**
	comp=Z,20nm,1.1s,mb5.0,baz=108,slow=7.7,SNR=18						
ARCES				LR	LR	09 07 19.0	
	comp=Z,13µm,20.8s,MS6.2,baz=114,slow=38						
ARE0	**ARCESS Array S**	**74.93**	**340**	*e*P	**P**	**08 31 22.1**	**-0.8**
TIP	**Timpagrande**	**74.98**	**308**	*e*P	**P**	**08 31 23.6**	**-0.2**
SMOL	**Smolenice**	**75.01**	**318**	*e*P	**P**	**08 31 27.5**	**+3.8**
SMOL				*e*	pP	08 31 31.8	+2.7
SMOL	**Smolenice**	**75.01**	**318**	*e*P	**P**	**08 31 27.5**	**+3.8**
SMOL				*e*pP	pP	08 31 27.8	-1.3
SMOL				*e*	pP	08 31 31.8	+2.7
MORC	**Moravsky Berou**	**75.04**	**319**	*e*P	**P**	**08 31 23.4**	**-0.5**
MORC				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.7						
MORC	**Moravsky Berou**	**75.04**	**319**	*e*P	**P**	**08 31 23.4**	**-0.5**
	comp=Z,118nm,1.3s,mb5.7						
ZST	**Bratislava**	**75.20**	**318**	*e*P	**P**	**08 31 24.7**	**-0.2**
ZST				*e*		08 31 32.6	
ZST	**Bratislava**	**75.20**	**318**	*e*P	**P**	**08 31 24.7**	**-0.2**
ZST				*e*	pP	08 31 29.0	-1.2
ZST				*e*		08 31 32.6	
ZST	**Bratislava**	**75.20**	**318**	*e*P	**P**	**08 31 24.8**	**-0.1**
CASY	**Casey**	**75.24**	**173**	P	**P**	**08 31 26.4**	**+1.7**
	comp=Z,22nm,0.8s,mb5.1						
CASY				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
KTK1	**Kautokeino**	**75.56**	**339**	*e*P	**P**	**08 31 27.9**	**+1.4**
	comp=Z,162nm,1.8s,mb5.7						
KTK1	**Kautokeino**	**75.56**	**339**	*e*P	**P**	**08 31 27.9**	**+1.4**
KTK1				AMb	AMB	08 31 39.7	
	comp=Z,162nm,1.8s,mb5.7						
GKP	**Gorka Klasztor**	**75.56**	**323**	*e*P	**P**	**08 31 27.1**	**+0.3**
GKP				*e*pP	pP	08 31 34.6	+2.4
GKP				*e*S	S	08 40 58.1	-7.3
GKP				MLR	MLR	09 07 37.7	
	comp=Z,5µm,24.1s,MS5.7						
VRAC	**Vranov**	**75.62**	**319**	P	**P**	**08 31 26.6**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.4,baz=163,slow=3.8,SNR=4.5						
VRAC				LR	LR	09 09 44.2	
	comp=Z,2µm,19.1s,MS5.5,baz=120,slow=40						
VRAC	**Vranov**	**75.62**	**319**	*e*P	**P**	**08 31 26.6**	**-0.6**
DPC	**Dobruska-Polom**	**75.87**	**320**	*e*P	**P**	**08 31 28.4**	**-0.2**
DPC				*e*S	S	08 41 08.7	-0.1
DPC				AMS	AMS	09 11 50.0	
	comp=Z,3µm,17.5s						
BILL	**Bilibino**	**75.88**	**22**	⇑*e*P	**P**	**08 31 30.7**	**+2.4**
BILL				*e*		08 31 41.7	
BILL				*e*		08 34 17.1	
BILL				*e*S	S	08 41 12.8	+4.2
BILL				*e*SS	SS	08 46 06.2	+2.2
BILL				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
BILL				MLR	MLR		
	comp=Z,5µm,18.0s,MS5.9						
BILL	**Bilibino**	**75.88**	**22**	⇑*e*P	**P**	**08 31 30.7**	**+2.4**
	comp=Z,27nm,1.1s,mb5.1						
BILL				*e*		08 31 41.7	
BILL				*e*		08 34 17.1	
BILL				*e*S	S	08 41 12.8	+4.2
BILL				*e*SS	SS	08 46 06.2	+2.2
BILL				LR	LR		
	comp=Z,5µm,18.0s,MS5.9						
KSP	**Ksiaz**	**75.92**	**320**	⇑*e*P	**P**	**08 31 28.5**	**-0.4**
KSP				*e*		08 31 37.2	
KSP				*e*S	S	08 41 08.0	-1.4
KSP				*e*SS	SS	08 45 55.0	-10
KSP				MLR	MLR		
	comp=Z,7µm,19.5s,MS6.0						
KSP	**Ksiaz**	**75.92**	**320**	⇑*e*P	**P**	**08 31 28.5**	**-0.4**
KSP				*e*pP	pP	08 31 33.1	-1.2
KSP				*e*		08 31 37.2	
KSP				*e*S	S	08 41 08.0	-1.4
KSP				*e*SS	SS	08 45 55.0	-10
KSP				LR	LR		
	comp=Z,7µm,19.5s,MS6.0						
KSP	**Ksiaz**	**75.92**	**320**	*e*P	**P**	**08 31 29.0**	**+0.1**
KSP				*e*pP	pP	08 31 33.4	-0.9
KSP				*e*PcP	PcP	08 31 37.5	-4.2
KSP				*e*S	S	08 41 11.9	+2.5
KSP				*e*sS		08 41 25.2	
KSP				*e*SS	SS	08 46 14.1	+9.0
KSP				MLR	MLR	09 11 00.6	
	comp=Z,6µm,19.5s,MS5.9						
UPC	**Upice**	**76.08**	**320**	*e*P	**P**	**08 31 29.9**	**+0.1**
ARSA	**Arzberg**	**76.20**	**317**	⇑*i*P	**P**	**08 31 30.4**	**-0.2**
	comp=Z,75nm,1.6s,mb5.4						
BOJS	**Bojanci**	**76.31**	**315**	*i* P	**P**	**08 31 30.6**	**-0.6**
BOJS				*e*PcP	PcP	08 31 35.5	-8.0
VAE	**Valguarnera**	**76.80**	**307**	LR	LR	09 12 13.2	
	comp=Z,1µm,19.4s,MS5.3,baz=4.8,slow=41						
LJU	**Ljubljana**	**76.84**	**315**	*e*P	**P**	**08 31 34.0**	**-0.2**
LJU				*e*		08 31 41.8	
OBKA	**Obir**	**76.84**	**316**	⇑*i*P	**P**	**08 31 35.2**	**+1.1**
	comp=Z,54nm,1.2s,mb5.3						
PRU	**Pruhonice**	**76.99**	**319**	*e*P	**P**	**08 31 34.7**	**-0.2**
PRU				*e*S	S	08 41 23.4	+2.3
PRU				AMS	AMS	09 10 40.0	
	comp=Z,2µm,20.3s						
PVCC	**Panska Ves**	**77.00**	**320**	*e*P	**P**	**08 31 38.4**	**+3.4**
PVCC				AMS	AMS	09 10 00.0	
	comp=Z,3µm,20.0s						

MOA	**Molln**	**77.08**	**317**	⇑*i*P	**P**	**08 31 34.8**	**-0.7**
	comp=Z,46nm,1.1s,mb5.3						
BSD	**Bornholm Skovb**	**77.08**	**325**	*e*P	PcP	08 31 53.1	+6.5
BSD				*i* S	S	08 41 23.0	+1.1
BSD				pmax	pmax		
	comp=Z,74nm,0.9s,mb5.6						
BSD				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.8						
BSD	**Bornholm Skovb**	**77.08**	**325**	*i* P	PcP	08 31 53.1	+6.5
	comp=Z,74nm,0.9s						
BSD				*i* S	S	08 41 23.0	+1.1
BSD				*i*		08 50 38.3	
	comp=Z,4µm,19.0s						
TRO	**Tromso**	**77.19**	**340**	*e*P	**P**	**08 31 38.4**	**+2.7**
TRO				LR	LR		
	comp=Z,10759µm,22.0s						
TRO	**Tromso**	**77.19**	**340**	*e*P	**P**	**08 31 38.4**	**+2.7**
TRO				*e*S	S	08 41 24.2	+1.3
TRO				AMS	AMS	09 08 39.9	
	comp=Z,11µm,22.0s,MS6.1						
VOY	**Vojsko**	**77.28**	**315**	*e*P	**P**	**08 31 35.7**	**-0.9**
VOY				*e*	pP	08 31 40.1	-1.9
VOY				*e*		08 31 54.8	
BRG	**Berggiesshubel**	**77.41**	**320**	*i* P	**P**	**08 31 37.1**	**-0.1**
BRG				*i*		08 31 45.4	
BRG				*i* S	S	08 41 26.0	+0.4
BRG				*i* SS	SS	08 46 23.0	-4.5
BRG				pmax	pmax		
	comp=Z,138nm,1.6s,mb5.6						
BRG				MLR	MLR		
	comp=N,2µm,18.6s,MS5.7						
BRG				MLR	MLR		
	comp=E,3µm,18.6s,MS5.7						
BRG				MLR	MLR		
	comp=Z,4µm,18.6s,MS5.8						
BRG	**Berggiesshubel**	**77.41**	**320**	*i* P	**P**	**08 31 37.1**	**-0.1**
	comp=Z,138nm,1.6s,mb5.6						
BRG				*i*		08 31 45.4	
BRG				*e*PP	PP	08 34 43.8	+10
BRG				*i* S	S	08 41 26.0	+0.4
BRG				*i* SS	SS	08 46 23.0	-4.5
BRG				LR	LR		
	comp=Z,4µm,18.6s,MS5.8						
GEC2	**GERESS Array S**	**77.49**	**318**	*e*P	**P**	**08 31 37.4**	**-0.3**
GERES	**GERESS Array B**	**77.49**	**318**	P	**P**	**08 31 37.6**	**-0.1**
	comp=Z,16nm,0.8s,mb5.0,baz=90,slow=5.3,SNR=44						
ROBS	**Robic**	**77.55**	**316**	*e*P	**P**	**08 31 37.3**	**-0.8**
SMY	**Shemya**	**77.58**	**38**	PFAKE		08 31 50.0	+12
SMY				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
KHC	**Kasperske Hory**	**77.58**	**318**	*e*P	**P**	**08 31 37.7**	**-0.5**
KHC				*e*	pP	08 31 42.0	-1.6
KHC				*e*S	S	08 41 30.2	+2.7
KHC				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.6						
KHC	**Kasperske Hory**	**77.58**	**318**	*e*P	**P**	**08 31 37.7**	**-0.5**
KHC				pP	pP	08 31 42.0	-1.6
KHC				*e*S	S	08 41 30.2	+2.7
KHC				AMS	AMS	09 13 40.0	
	comp=Z,2µm,17.0s						
RUE	**Ruedersdorf**	**77.59**	**322**	*e*P	**P**	**08 31 37.9**	**-0.2**
	comp=Z,518nm,1.5s,mb6.2						
PTCC	**Patocco-Chiusa**	**77.66**	**316**	*e*P	**P**	**08 31 38.5**	**-0.2**
KBA	**Koelnbreinsper**	**77.68**	**316**	⇑*i*P	**P**	**08 31 39.2**	**+0.4**
	comp=Z,72nm,1.3s,mb5.4						
KBA	**Koelnbreinsper**	**77.68**	**316**	⇑*i*P	**P**	**08 31 39.2**	**+0.4**
KBA				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.4						
GMNA	**Gemona**	**77.74**	**316**	*e*P	**P**	**08 31 39.8**	**+0.7**
ARV	**Arcevia**	**77.92**	**313**	*e*P	**P**	**08 31 44.1**	**+3.9**
SNTG	**Esanatoglia**	**77.92**	**312**	*e*P	**P**	**08 31 41.9**	**+1.7**
CLL	**Collm**	**78.02**	**321**	*i* P	**P**	**08 31 39.9**	**-0.7**
CLL				*i*		08 31 47.5	
CLL				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
CLL				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.6						
CLL	**Collm**	**78.02**	**321**	*i* P	**P**	**08 31 39.9**	**-0.7**
	comp=Z,28nm,1.4s,mb5.0						
CLL				*i*	pP	08 31 44.1	-1.9
CLL				*i*		08 31 47.5	
CLL				*e*S	S	08 41 18.0	-14
CLL				LR	LR		
	comp=Z,3µm,18.0s,MS5.6						
CLL	**Collm**	**78.02**	**321**	P	**P**	**08 31 39.9**	**-0.7**
	comp=Z,logA/T=1.3,mb5.0						
CLL				*i*	pP	08 31 44.1	-1.9
CLL				*i*		08 31 47.5	
CLL				*e*S	S	08 41 18.0	-14
CLL				*e*PS	PS	08 42 18.0	+2.4
CLL				*e*SS	SS	08 46 42.0	+5.4
CLL				*e*		08 47 44.0	
WET	**Wettzell**	**78.04**	**318**	*e*P	**P**	**08 31 40.4**	**-0.3**
FVI	**Forni Avoltri**	**78.06**	**316**	*e*P	**P**	**08 31 41.0**	**+0.1**
HFS	**Hagfors**	**78.11**	**330**	P	**P**	**08 31 40.3**	**-0.6**
	comp=Z,85nm,1.2s,mb5.5,baz=117,slow=6.6,SNR=27						
MOR8	**Moi Rana**	**78.34**	**336**	*e*P	**P**	**08 31 44.1**	**+2.1**
	comp=Z,49nm,1.6s,mb5.2						
MOR8	**Moi Rana**	**78.34**	**336**	*e*P	**P**	**08 31 44.1**	**+2.1**
MOR8				AMb	AMB	08 31 49.3	
	comp=Z,49nm,1.6s,mb5.2						
NKC	**Novy Kostel**	**78.35**	**320**	*e*P	**P**	**08 31 42.4**	**0.0**
NKC				AMS	AMS	09 12 30.0	
	comp=Z,2µm,16.5s						
COP	**Copenhagen**	**78.53**	**325**	*e*P	**P**	**08 31 52.7**	**+9.5**
COP				pmax	pmax		
	comp=Z,63nm,0.8s,mb5.6						
COP				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.3						
COP	**Copenhagen**	**78.53**	**325**	*i* P	**P**	**08 31 52.7**	**+9.5**
	comp=Z,63nm,0.8s,mb5.6						
	comp=Z,1µm,18.0s						
CRE	**Caprese Michel**	**78.64**	**313**	*e*P	**P**	**08 31 48.4**	**+4.3**
SFI	**Santa Sofia**	**78.72**	**313**	*e*P	**P**	**08 31 45.0**	**+0.5**
MAW	**Mawson**	**78.78**	**192**	P	**P**	**08 31 44.1**	**-0.3**
	comp=Z,23nm,1.0s,mb5.1,baz=180,slow=6.1,SNR=1.9						
MAW				LR	LR	09 02 22.5	
	comp=Z,2µm,19.8s,MS5.4,baz=29,slow=32						
PGD	**Poggio Sodo**	**78.81**	**313**	*e*P	**P**	**08 31 46.1**	**+1.1**
CTI	**Castel Tesino**	**78.84**	**315**	*e*P	**P**	**08 31 45.1**	**-0.1**
WTTA	**Wattenberg**	**78.85**	**317**	⇑*i*P	**P**	**08 31 44.5**	**-0.7**
	comp=Z,143nm,1.4s,mb5.7						
WTTA	**Wattenberg**	**78.85**	**317**	⇑*i*P	**P**	**08 31 44.5**	**-0.7**
WTTA				pmax	pmax		
	comp=Z,143nm,1.4s,mb5.7						
MOX	**Moxa**	**78.89**	**320**	*e*P	**P**	**08 31 45.0**	**-0.3**
MOX				pmax	pmax		
	comp=Z,135nm,1.9s,mb5.5						
MOX				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.6						
MOX	**Moxa**	**78.89**	**320**	*e*P	**P**	**08 31 45.0**	**-0.3**
	comp=Z,135nm,1.9s,mb5.5						
MOX				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
MOX	**Moxa**	**78.89**	**320**	*i* P	**P**	**08 31 45.0**	**-0.3**
	comp=Z,logA/T=1.9,mb5.6						
MOX				L		09 11 31.0	
WATA	**Walderalm**	**78.89**	**317**	⇑*i*P	**P**	**08 31 44.3**	**-1.1**
	comp=Z,113nm,1.4s,mb5.6						
WATA	**Walderalm**	**78.89**	**317**	⇑*i*P	**P**	**08 31 44.3**	**-1.1**
WATA				pmax	pmax		
	comp=Z,113nm,1.4s,mb5.6						
LOF	**Lofoten**	**78.90**	**338**	*e*P	**P**	**08 31 52.4**	**+7.3**
VMG	**Vicchio**	**78.93**	**313**	*e*P	**P**	**08 31 46.8**	**+1.0**
FUR	**Furstenfeldbru**	**79.09**	**317**	*e*P	**P**	**08 31 45.8**	**-0.7**
GRA1	**Grafenberg Arr**	**79.13**	**319**	*e*P	**P**	**08 31 46.8**	**+0.1**
GRA1				*e*	pP	08 31 51.2	-0.9
GRA1				*e*		08 31 55.2	
GRA1				*e*		08 31 58.2	
GRA1				*e*S	S	08 41 47.8	+3.8
GRA1				LR	LR		
	comp=Z,2µm,18.1s,MS5.5						
GRF	**Grafenberg Arr**	**79.13**	**319**	*e*P	**P**	**08 31 46.8**	**+0.1**
GRF				*e*		08 31 55.2	
GRF				*e*		08 31 58.2	
GRF				*e*S	S	08 41 47.8	+3.8
GRF	**Grafenberg Arr**	**79.13**	**319**	*e*P	**P**	**08 31 46.8**	**+0.1**
GRF				*e*		08 31 55.2	
GRF				*e*		08 31 58.2	
GRF				*e*S	S	08 41 47.8	+3.8
GRF				MLR	MLR		
	comp=Z,2µm,18.1s,MS5.5						
GRF	**Grafenberg Arr**	**79.13**	**319**	*e*P	**P**	**08 31 46.8**	**+0.1**
GRF				*e*	pP	08 31 51.2	-0.9
GRF				*e*		08 31 55.2	
GRF				*e*		08 31 58.2	
GRF				*e*S	S	08 41 47.8	+3.8
GRF				LR	LR		
	comp=Z,2µm,18.1s,MS5.5						
SQTA	**Sankt Quirin**	**79.14**	**316**	⇑*i*P	**P**	**08 31 46.0**	**-0.8**
	comp=Z,99nm,1.3s,mb5.6						
SQTA	**Sankt Quirin**	**79.14**	**316**	⇑*i*P	**P**	**08 31 46.0**	**-0.8**
SQTA				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.6						
MOTA	**Moosalm**	**79.21**	**317**	⇓*i*P	**P**	**08 31 46.3**	**-0.9**
	comp=Z,54nm,1.1s,mb5.4						
MOTA	**Moosalm**	**79.21**	**317**	⇓*i*P	**P**	**08 31 46.3**	**-0.9**
MOTA				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.4						
NSS	**Namsos**	**79.23**	**334**	*e*P	**P**	**08 31 45.7**	**-1.2**
	comp=Z,127nm,1.6s,mb5.6						
NSS	**Namsos**	**79.23**	**334**	*e*P	**P**	**08 31 45.7**	**-1.2**
NSS				AMb	AMB	08 31 51.5	
	comp=Z,127nm,1.6s,mb5.6						
NSS				*e*S	S	08 41 46.6	+1.8
NSS				AMS	AMS	09 13 12.4	
	comp=Z,5µm,12.9s,MS6.1						
ZCCA	**Zocca**	**79.34**	**314**	*e*P	**P**	**08 31 53.1**	**+5.2**
GRFL	**Gerfalco**	**79.36**	**312**	*e*P	**P**	**08 31 47.2**	**-0.8**
NB2	**NORSAR Subarra**	**79.39**	**331**	P	**P**	**08 31 47.0**	**-0.8**
	comp=Z,45nm,0.9s,mb5.4,baz=92,slow=5.8						
NB2	**NORSAR Subarra**	**79.39**	**331**	P	**P**	**08 31 47.0**	**-0.8**
NB2				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.4						
NB2	**NORSAR Subarra**	**79.39**	**331**	P	**P**	**08 31 47.0**	**-0.8**
	baz=92,slow=5.9						
NOA	**NORSAR Array B**	**79.39**	**331**	P	**P**	**08 31 47.1**	**-0.7**
	comp=Z,5.2nm,0.6s,mb4.6,baz=95,slow=5.0,SNR=15						
NOA				LR	LR	09 10 42.9	
	comp=Z,4µm,21.4s,MS5.8,baz=85,slow=39						
NAO01	**NORSAR Array S**	**79.54**	**330**	*e*P	**P**	**08 31 48.1**	**-0.6**
	comp=Z,24nm,0.8s,mb5.2						
NAO01				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
GSCL	**Gusciola**	**79.61**	**314**	*e*P	**P**	**08 31 50.0**	**+0.6**
CLZ	**Clausthal**	**79.67**	**321**	*e*P	**P**	**08 31 49.3**	**-0.3**
BSEG	**Bad Segeberg**	**79.71**	**323**	*e*P	**P**	**08 31 49.6**	**-0.1**
BRMO	**Bormio**	**79.72**	**316**	*e*P	**P**	**08 31 50.1**	**+0.2**
ERBM	**Eremo**	**79.74**	**314**	*e*P	**P**	**08 31 53.1**	**+3.0**
SARO	**Sassorosso**	**79.75**	**313**	P	**P**	**08 31 49.5**	**-0.6**
VALM		**79.86**	**314**	P	**P**	**08 31 50.5**	**-0.2**
TSUM	**Tsumeb**	**79.97**	**249**	*e*P	**P**	**08 31 52.6**	**+0.9**
	comp=Z,18nm,1.1s,mb4.9						
TSUM				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
GRAM		**79.98**	**314**	P	**P**	**08 31 50.9**	**-0.5**
BACM		**79.99**	**314**	P	**P**	**08 31 50.3**	**-1.1**
DAVA	**Damuels**	**80.05**	**317**	⇑*i*P	**P**	**08 31 51.6**	**-0.1**
	comp=Z,78nm,1.2s,mb5.5						
DAVOX	**Davos**	**80.06**	**316**	P	**P**	**08 31 52.2**	**+0.5**
	comp=Z,27nm,0.6s,mb5.3,baz=117,slow=8.3,SNR=13						
CODM		**80.14**	**314**	P	**P**	**08 31 51.3**	**-0.9**
KONO	**Kongsberg**	**80.16**	**329**	PFAKE		08 32 00.0	+8.0
KONO				LR	LR		
	comp=Z,8µm,19.0s,MS6.1						
SUR	**Sutherland**	**80.35**	**235**	LR	LR	09 01 37.6	
	comp=Z,3µm,20.7s,MS5.7,baz=73,slow=31						
SUR	**Sutherland**	**80.35**	**235**	*e*P	**P**	**08 31 56.8**	**+3.2**
	comp=Z,34nm,0.8s,mb5.3						
SUR				LR	LR		
	comp=Z,952nm,21.0s,MS5.1						
MUD	**Monsted U’grnd**	**80.37**	**326**	*i* P	**P**	**08 31 57.8**	**+4.6**
MUD				*i* S	S	08 41 58.8	+2.0
MUD				pmax	pmax		
	comp=Z,96nm,0.9s,mb5.7						
MUD				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.6						
MUD	**Monsted U’grnd**	**80.37**	**326**	*i* P	**P**	**08 31 57.8**	**+4.6**
	comp=Z,96nm,0.9s,mb5.7						
MUD	**Monsted U’grnd**	**80.37**	**326**	*i* S	S	08 41 58.8	+2.0
	comp=Z,3µm,18.0s						
BOB	**Bobbio (Coli)**	**80.42**	**314**	*e*P	**P**	**08 31 54.4**	**+0.7**
DOMB	**Dombas**	**80.45**	**332**	*e*P	**P**	**08 31 54.0**	**+0.5**
	comp=Z,58nm,1.5s,mb5.3						
DOMB	**Dombas**	**80.45**	**332**	*e*P	**P**	**08 31 54.0**	**+0.5**
DOMB				AMb	AMB	08 32 01.3	
	comp=Z,58nm,1.5s,mb5.3						
KBS	**Kingsbay**	**80.50**	**349**	PFAKE		08 32 00.0	+6.5
KBS				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
TOD	**Tromm**	**80.70**	**319**	*e*P	**P**	**08 31 53.9**	**-1.2**
SPAK	**Spaichingen**	**80.76**	**317**	*e*P	**P**	**08 31 55.1**	**-0.3**
PGF	**Pioggiola**	**80.83**	**312**	*e*P	**P**	**08 31 55.2**	**-0.7**
	comp=Z,180nm,1.3s,mb5.5						
PGF	**Pioggiola**	**80.83**	**312**	*e*P	**P**	**08 31 55.2**	**-0.7**
PGF				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.5						
VAI	**Varese**	**80.86**	**315**	*e*P	**P**	**08 31 57.7**	**+1.7**
TNS	**Taunus Mts**	**80.92**	**320**	*e*P	**P**	**08 31 56.0**	**-0.2**
BFO	**Black Forest**	**81.06**	**318**	*e*P	**P**	**08 31 56.2**	**-0.8**
PCP	**Pian Castagno**	**81.07**	**314**	P	**P**	**08 31 55.8**	**-1.3**
MOL	**Molde**	**81.16**	**332**	*e*P	**P**	**08 31 59.2**	**+2.0**
	comp=Z,74nm,1.4s,mb5.4						
MOL	**Molde**	**81.16**	**332**	*e*P	**P**	**08 31 59.2**	**+2.0**
MOL				AMb	AMB	08 32 10.9	
	comp=Z,74nm,1.4s,mb5.4						
KTD	**Kalmit**	**81.18**	**319**	*e*P	**P**	**08 31 56.5**	**-1.1**
FELD	**Feldberg**	**81.30**	**317**	*e*P	**P**	**08 31 58.1**	**-0.1**
FIN	**Finale Ligure**	**81.33**	**313**	*e*P	**P**	**08 31 58.2**	**-0.3**
LANF	**Langenberg**	**81.38**	**318**	*e*P	**P**	**08 31 58.4**	**-0.3**
MCGN	**Macugnaga**	**81.40**	**315**	*e*P	**P**	**08 31 59.6**	**+0.8**
ORX	**Oropa**	**81.42**	**315**	P	**P**	**08 31 57.4**	**-1.5**
ABH	**Alteburg**	**81.51**	**319**	*e*P	**P**	**08 31 58.3**	**-1.0**
LIBD	**Limburg**	**81.55**	**317**	*e*P	**P**	**08 31 59.0**	**-0.6**
ROB	**Roburent**	**81.57**	**314**	P	**P**	**08 31 58.3**	**-1.4**
IMI	**Imperia**	**81.57**	**313**	P	**P**	**08 31 59.0**	**-0.7**
TRAV		**81.59**	**315**	P	**P**	**08 31 58.5**	**-1.3**
BBS	**Basel-Blauen**	**81.65**	**317**	*e*P	**P**	**08 31 59.3**	**-0.8**
ODD1	**Odda**	**81.66**	**329**	*e*P	**P**	**08 31 59.9**	**+0.1**
	comp=Z,58nm,1.8s,mb5.2						
ODD1	**Odda**	**81.66**	**329**	*e*P	**P**	**08 31 59.9**	**+0.1**
ODD1				AMb	AMB	08 32 10.0	
	comp=Z,58nm,1.8s,mb5.2						
MONE	**Monesi**	**81.66**	**313**	P	**P**	**08 31 59.7**	**-0.5**
DRV	**Dumont d’Urvil**	**81.70**	**163**	S	S	08 42 10.0	-0.5
NEGI	**Negi**	**81.71**	**313**	P	**P**	**08 31 59.6**	**-0.9**
BLS5	**Blasjo**	**81.76**	**329**	*e*P	**P**	**08 32 02.2**	**+1.8**
	comp=Z,63nm,0.5s,mb5.8						
BLS5	**Blasjo**	**81.76**	**329**	*e*P	**P**	**08 32 02.2**	**+1.8**
BLS5				AMb	AMB	08 32 11.2	
	comp=Z,63nm,0.5s,mb5.8						
SAOF	**Saorge**	**81.81**	**313**	*e*P	**P**	**08 32 01.9**	**+0.9**
RUP	**Ruppelstein**	**81.83**	**319**	*e*P	**P**	**08 32 00.0**	**-1.0**
ECH	**Echery**	**81.85**	**318**	*e*P	**P**	**08 32 00.7**	**-0.4**
WTSB	**Winterswijk**	**81.88**	**321**	*e*P	**P**	**08 32 02.8**	**+1.6**
	comp=Z,11nm,2.2s,mb4.4						
ENR	**Entracque**	**81.89**	**314**	P	**P**	**08 32 01.1**	**-0.3**
AUTN	**L’Aution**	**81.90**	**313**	*e*P	**P**	**08 32 02.3**	**+0.8**
SBF	**Sospel**	**81.90**	**313**	*e*P	**P**	**08 32 01.8**	**+0.3**
	comp=Z,276nm,1.0s,mb5.8						
SBF	**Sospel**	**81.90**	**313**	*e*P	**P**	**08 32 01.8**	**+0.3**
SBF				pmax	pmax		
	comp=Z,138nm,1.0s,mb5.8						
WIT	**Witteveen**	**81.92**	**322**	*e*P	**P**	**08 32 07.8**	**+6.4**
RSP	**Reno Superiore**	**81.95**	**314**	P	**P**	**08 32 01.0**	**-0.7**
STV2	**Anna di Valdie**	**81.96**	**314**	P	**P**	**08 32 00.6**	**-1.1**
REVF	**Revere**	**81.96**	**313**	*e*P	**P**	**08 32 02.3**	**+0.5**
STV	**Sta Anna Valdi**	**81.96**	**314**	P	**P**	**08 32 01.0**	**-0.8**
BHB	**Bricherasio**	**81.97**	**314**	P	**P**	**08 32 01.4**	**-0.4**
LSD	**Ceresole Reale**	**82.01**	**315**	P	**P**	**08 32 02.1**	**+0.1**
TOUF	**Mont Tournerai**	**82.03**	**313**	*e*P	**P**	**08 32 02.3**	**+0.2**
HINF	**Hinteralfeld**	**82.07**	**317**	*e*P	**P**	**08 32 01.7**	**-0.6**
FENE	**Fenestrelle**	**82.10**	**314**	P	**P**	**08 32 01.9**	**-0.6**
PZZ	**Prazzo**	**82.10**	**314**	P	**P**	**08 32 01.7**	**-0.8**
LOMF	**Lomont**	**82.12**	**317**	*e*P	**P**	**08 32 02.3**	**-0.2**
BER	**Bergen**	**82.28**	**330**	*e*	Px	08 32 23.7	
BER				*e*S	S	08 42 16.8	+0.2
BER				*e*SS	SS	08 47 41.5	+1.1
BER				AMS	AMS	09 13 21.7	
	comp=Z,6µm,19.8s,MS6.0						
LPG	**La Plagne**	**82.29**	**315**	*e*P	**P**	**08 32 03.2**	**-0.2**
	comp=Z,211nm,1.0s,mb5.7						
LPG	**La Plagne**	**82.29**	**315**	*e*P	**P**	**08 32 03.2**	**-0.2**
LPG				pmax	pmax		
	comp=Z,105nm,1.0s,mb5.7						
LPL	**La Plagne**	**82.30**	**315**	*e*P	**P**	**08 32 03.2**	**-0.3**
	comp=Z,334nm,1.1s,mb5.9						
LPL	**La Plagne**	**82.30**	**315**	*e*P	**P**	**08 32 03.2**	**-0.3**
LPL				pmax	pmax		
	comp=Z,167nm,1.1s,mb5.9						
RRL	**Cesana Torines**	**82.30**	**314**	P	**P**	**08 32 02.1**	**-1.4**
SURF	**Saint Ours**	**82.31**	**314**	*e*P	**P**	**08 32 03.9**	**+0.3**
MBDF	**Montbardon**	**82.32**	**314**	*e*P	**P**	**08 32 04.3**	**+0.6**
	comp=Z,109nm,0.9s,mb5.5						
MBDF	**Montbardon**	**82.32**	**314**	*e*P	**P**	**08 32 04.3**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.5						
BNI	**Bardonecchia**	**82.37**	**314**	*e*P	**P**	**08 32 05.7**	**+1.8**
BNI				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
BNI	**Bardonecchia**	**82.37**	**314**	*e*P	**P**	**08 32 05.7**	**+1.8**
	comp=Z,50nm,0.8s,mb5.5						
HAU	**Haudompre**	**82.40**	**317**	*e*P	**P**	**08 32 03.5**	**-0.5**
	comp=Z,225nm,1.3s,mb5.6						
HAU				*e*R			
	comp=Z,2µm,22.8s						
HAU	**Haudompre**	**82.40**	**317**	*e*P	**P**	**08 32 03.5**	**-0.5**
HAU				pmax	pmax		
	comp=Z,112nm,1.3s,mb5.6						
HAU				MLR	MLR		
	comp=Z,2µm,22.8s,MS5.5						
CMAH	**Djebel Manchou**	**82.42**	**306**	P	**P**	**08 32 11.0**	**+6.7**
WLF	**Walferdange**	**82.42**	**319**	*e*P	**P**	**08 32 04.3**	**+0.2**
WLF				pmax	pmax		
	comp=Z,150nm,1.6s,mb5.7						
WLF	**Walferdange**	**82.42**	**319**	*e*P	**P**	**08 32 04.3**	**+0.2**
	comp=Z,149nm,1.6s,mb5.7						
FRF	**La Foret Royal**	**82.49**	**313**	*e*P	**P**	**08 32 03.8**	**-0.8**
HGN	**Heimansgroeve**	**82.49**	**320**	*e*P	**P**	**08 32 07.3**	**+2.9**
	comp=Z,42nm,3.5s						
HGN				*e*PP	PP	08 35 38.2	+22
HGN				*e*S	S	08 42 31.3	+12
HGN				*e*SS	SS	08 47 14.3	-29
HGN				*e*SSS	SSS	08 51 50.7	+43
CABF	**La Chapelle**	**82.67**	**316**	*e*P	**P**	**08 32 05.6**	**+0.2**
	comp=Z,152nm,1.1s,mb5.6						
CABF	**La Chapelle**	**82.67**	**316**	*e*P	**P**	**08 32 05.6**	**+0.2**
CABF				pmax	pmax		
	comp=Z,76nm,1.1s,mb5.6						
GDM	**Grand’Maison**	**82.75**	**315**	*e*P	**P**	**08 32 05.8**	**-0.1**
OG25	**Le Caire**	**82.85**	**314**	*e*P	**P**	**08 32 07.0**	**+0.6**
CAEH	**’Ain El Ouahch**	**82.87**	**306**	P	**P**	**08 32 12.0**	**+5.4**
CKFL	**Kef-Lekhel**	**83.00**	**306**	P	**P**	**08 32 12.5**	**+5.1**
GRN	**Grenoble**	**83.01**	**315**	*e*P	**P**	**08 32 07.5**	**+0.3**
OG05	**Jujurieux**	**83.15**	**315**	*e*P	**P**	**08 32 07.2**	**-0.7**
SMRF	**Simiane la Rot**	**83.24**	**313**	*e*P	**P**	**08 32 08.5**	**+0.1**
	comp=Z,156nm,1.3s,mb5.6						
GIVF	**Givet**	**83.25**	**320**	*e*P	**P**	**08 32 08.2**	**-0.1**
	comp=Z,91nm,1.2s,mb5.4						
GIVF	**Givet**	**83.25**	**320**	*e*P	**P**	**08 32 08.2**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.4						
CTEI	**Djebel Teioual**	**83.28**	**305**	P	**P**	**08 32 14.0**	**+5.2**
BAIF	**Baives**	**83.65**	**320**	*e*P	**P**	**08 32 10.5**	**+0.1**
	comp=Z,237nm,1.3s,mb5.8						
BAIF	**Baives**	**83.65**	**320**	*e*P	**P**	**08 32 10.5**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.9						
DFRA	**Djebel Bou Aff**	**83.67**	**306**	P	**P**	**08 32 13.0**	**+2.2**
CMER	**Merouana**	**83.74**	**305**	P	**P**	**08 32 15.0**	**+3.8**
VIVF	**Saint-Julien-l**	**83.80**	**314**	*e*P	**P**	**08 32 10.6**	**-0.7**
	comp=Z,119nm,1.2s,mb5.6						
VIVF	**Saint-Julien-l**	**83.80**	**314**	*e*P	**P**	**08 32 10.6**	**-0.7**
VIVF				pmax	pmax		
	comp=Z,59nm,1.2s,mb5.6						
SET	**Setif**	**84.08**	**306**	P	**P**	**08 32 15.0**	**+2.1**
SMF	**Signal de Mont**	**84.21**	**316**	*e*P	**P**	**08 32 12.9**	**-0.4**
	comp=Z,108nm,1.1s,mb5.6						
SMF	**Signal de Mont**	**84.21**	**316**	*e*P	**P**	**08 32 12.9**	**-0.4**
SMF				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.6						
SSF	**Saint Saulge**	**84.40**	**317**	*e*P	**P**	**08 32 14.8**	**+0.6**
SSF				pmax	pmax		
	comp=Z,74nm,1.4s,mb5.6						
SSF	**Saint Saulge**	**84.40**	**317**	*e*P	**P**	**08 32 14.8**	**+0.6**
	comp=Z,74nm,1.4s,mb5.6						
PLDF	**La Plantade**	**84.43**	**316**	*e*P	**P**	**08 32 13.9**	**-0.5**
LASF	**Ste Croix**	**84.46**	**314**	*e*P	**P**	**08 32 15.6**	**+1.0**
	comp=Z,290nm,1.7s,mb5.8						
AVF	**Avril sur Loir**	**84.53**	**316**	*e*P	**P**	**08 32 14.5**	**-0.4**
	comp=Z,120nm,1.2s,mb5.6						
AVF	**Avril sur Loir**	**84.53**	**316**	*e*P	**P**	**08 32 14.5**	**-0.4**
AVF				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.6						
AGO	**Saint Agoulin**	**84.76**	**316**	*e*P	**P**	**08 32 15.6**	**-0.5**
LBL	**Lubilhac**	**84.77**	**315**	*e*P	**P**	**08 32 15.8**	**-0.3**
PYM	**Petit Puy Mans**	**84.88**	**315**	*e*P	**P**	**08 32 15.2**	**-1.5**
BGF	**Bois d’Agland**	**84.90**	**316**	*e*P	**P**	**08 32 16.8**	**0.0**
HYF	**Humbligny**	**84.96**	**317**	*e*P	**P**	**08 32 17.4**	**+0.4**
TCF	**Toulx Ste Croi**	**85.37**	**316**	*e*P	**P**	**08 32 18.6**	**-0.5**
	comp=Z,190nm,1.6s,mb5.7						
TCF	**Toulx Ste Croi**	**85.37**	**316**	*e*P	**P**	**08 32 18.6**	**-0.5**
TCF				pmax	pmax		
	comp=Z,95nm,1.6s,mb5.7						
SYO	**Syowa Base**	**85.63**	**197**	⇑P	**P**	**08 32 21.8**	**+1.9**
SYO	**Syowa Base**	**85.63**	**197**	⇓sP	sP	08 32 29.9	+2.8
CAF	**Calviac**	**85.64**	**315**	*e*P	**P**	**08 32 20.2**	**-0.3**
	comp=Z,104nm,1.2s,mb5.6						
CAF	**Calviac**	**85.64**	**315**	*e*P	**P**	**08 32 20.2**	**-0.3**
CAF				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.6						
MTLF	**Montolieu**	**85.73**	**313**	*e*P	**P**	**08 32 20.6**	**-0.4**
	comp=Z,71nm,1.1s,mb5.5						
MTLF	**Montolieu**	**85.73**	**313**	*e*P	**P**	**08 32 20.6**	**-0.4**
MTLF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.5						
TNA	**Tin City**	**85.97**	**24**	*e*P	**P**	**08 32 21.6**	**-0.1**
	comp=Z,11nm,0.4s,mb5.4						
RJF	**Les Rejaudoux**	**85.98**	**315**	*e*P	**P**	**08 32 23.2**	**+1.0**
	comp=Z,138nm,1.2s,mb5.8						
RJF				*e*R			
	comp=Z,2µm,21.8s						
RJF	**Les Rejaudoux**	**85.98**	**315**	*e*P	**P**	**08 32 23.2**	**+1.0**
RJF				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.8						
RJF				MLR	MLR		
	comp=Z,2µm,21.8s,MS5.5						
JMIC	**Jan Mayen**	**86.38**	**341**	LR	LR	09 13 11.4	
	comp=Z,4µm,20.4s,MS5.8,baz=82,slow=37						
JMIC	**Jan Mayen**	**86.38**	**341**	*e*SKSa		08 42 50.1	
JMIC				AMS	AMS	09 13 26.6	
	comp=Z,4µm,21.6s,MS5.8						
RPZ	**Rata Peaks**	**86.38**	**135**	LR	LR	09 10 29.8	
	comp=Z,5µm,21.3s,MS5.9,baz=287,slow=35						
LFF	**La Frestale**	**86.57**	**315**	*e*P	**P**	**08 32 26.2**	**+1.1**
	comp=Z,73nm,1.0s,mb5.6						
LFF	**La Frestale**	**86.57**	**315**	*e*P	**P**	**08 32 26.2**	**+1.1**
LFF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.6						
LDF	**La Druitiere**	**86.63**	**318**	*e*P	**P**	**08 32 24.7**	**-0.6**
	comp=Z,88nm,1.1s,mb5.6						
LDF	**La Druitiere**	**86.63**	**318**	*e*P	**P**	**08 32 24.7**	**-0.6**
LDF				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.6						
HPK	**Haverah Park**	**86.74**	**324**	*e*P	**P**	**08 32 26.9**	**+1.3**
KBI1	**Birley Grange**	**86.80**	**323**	*e*P	**P**	**08 32 26.1**	**+0.1**
EPOB	**Poblet**	**86.82**	**311**	P	**P**	**08 32 30.4**	**+3.9**
	comp=Z,78nm,1.7s,mb5.7						
FLN	**La Foliniere**	**86.84**	**319**	*e*P	**P**	**08 32 25.6**	**-0.7**
	comp=Z,228nm,1.4s,mb5.9						
FLN				*e*R			
	comp=Z,3µm,21.8s						
FLN	**La Foliniere**	**86.84**	**319**	*e*P	**P**	**08 32 25.6**	**-0.7**
FLN				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.9						
FLN				MLR	MLR		
	comp=Z,3µm,21.8s,MS5.6						
LHO	**Holmfirth**	**86.94**	**324**	*e*P	**P**	**08 32 26.6**	**-0.1**
MFF	**Saint Martin d**	**86.94**	**316**	*e*P	**P**	**08 32 26.1**	**-0.8**
	comp=Z,97nm,1.2s,mb5.6						
MFF	**Saint Martin d**	**86.94**	**316**	*e*P	**P**	**08 32 26.1**	**-0.8**
MFF				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.6						
KWE	**Weaver Farm**	**87.02**	**323**	*e*P	**P**	**08 32 27.3**	**+0.2**
GRR	**Gorron**	**87.15**	**318**	*e*P	**P**	**08 32 27.3**	**-0.5**
	comp=Z,105nm,1.3s,mb5.6						
GRR	**Gorron**	**87.15**	**318**	*e*P	**P**	**08 32 27.3**	**-0.5**
GRR				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.6						
DAG	**Danmarks Havn**	**87.15**	**348**	*e*P	**P**	**08 32 25.0**	**-2.2**
DAG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
DAG	**Danmarks Havn**	**87.15**	**348**	*i* P	**P**	**08 32 25.0**	**-2.2**

	comp=Z,2.2nm,0.8s,mb4.4						
EDI	**Edinburgh**	**87.29**	**326**	*e*P	**P**	**08 32 29.9**	**+1.6**
EBIE	**Bielsa**	**87.32**	**313**	P	**P**	**08 32 32.4**	**+3.6**
	comp=Z,45nm,1.5s,mb5.5						
EBR	**Ebro Roquetas**	**87.34**	**311**	*e*P	**P**	**08 32 34.0**	**+5.1**
ESK	**Eskdalemuir**	**87.41**	**325**	*e*P	**P**	**08 32 29.2**	**+0.3**
	comp=Z,59nm,0.8s,mb5.9						
ESK				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
ESK	**Eskdalemuir**	**87.41**	**325**	*e*P	**P**	**08 32 29.5**	**+0.6**
ESK				AMb	AMB	08 32 39.3	
	comp=Z,102nm,2.0s,mb5.7						
EAU	**Auchinoon**	**87.45**	**326**	*e*P	**P**	**08 32 33.7**	**+4.6**
EAU				AMb	AMB	08 32 41.4	
	comp=Z,149nm,1.4s,mb6.0						
ETSF	**Etsaut**	**87.80**	**313**	*e*P	**P**	**08 32 33.7**	**+2.6**
	comp=Z,49nm,0.8s,mb5.5						
ETSF	**Etsaut**	**87.80**	**313**	*e*P	**P**	**08 32 33.7**	**+2.6**
ETSF				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.5						
EAB	**Aberfoyle**	**87.87**	**326**	*e*P	**P**	**08 32 35.1**	**+4.0**
EAB				AMb	AMB	08 32 43.3	
	comp=Z,90nm,1.3s,mb5.8						
EMOS	**Mosqueruela**	**88.13**	**310**	P	**P**	**08 32 37.0**	**+4.3**
	comp=Z,84nm,1.2s,mb5.8						
SJPF	**Ste Jean**	**88.25**	**313**	*e*P	**P**	**08 32 34.3**	**+1.1**
	comp=Z,143nm,1.5s,mb5.7						
SJPF	**Ste Jean**	**88.25**	**313**	*e*P	**P**	**08 32 34.3**	**+1.1**
SJPF				pmax	pmax		
	comp=Z,71nm,1.5s,mb5.7						
SGMF	**Saint Gilles**	**88.29**	**318**	*e*P	**P**	**08 32 34.1**	**+0.8**
HEX	**Exmoor**	**88.56**	**321**	*e*P	**P**	**08 32 38.6**	**+4.0**
ROSF	**Rostrenen**	**88.74**	**319**	*e*P	**P**	**08 32 36.0**	**+0.5**
	comp=Z,169nm,1.5s,mb5.9						
ROSF	**Rostrenen**	**88.74**	**319**	*e*P	**P**	**08 32 36.0**	**+0.5**
ROSF				pmax	pmax		
	comp=Z,85nm,1.5s,mb5.8						
QUIF	**Quistinic**	**88.75**	**318**	*e*P	**P**	**08 32 36.0**	**+0.5**
HPE	**Pembroke**	**88.98**	**322**	*e*P	**P**	**08 32 37.2**	**+0.7**
ETOB	**Tobarra**	**89.24**	**309**	P	**P**	**08 32 43.5**	**+5.4**
	comp=Z,39nm,0.9s,mb5.7						
URZ	**Urewera**	**89.66**	**129**	LR	LR	09 15 18.0	
	comp=Z,4µm,20.1s,MS5.8,baz=116,slow=37						
DLF	**Lyons Farm**	**89.73**	**324**	*e*P	**P**	**08 32 49.2**	**+9.2**
DMUB	**Kingscourt**	**89.81**	**324**	*e*P	**P**	**08 32 34.8**	**-5.6**
DMUB	**Kingscourt**	**89.81**	**324**	*e*P	**P**	**08 32 49.8**	**+9.4**
EVIA	**Vianos**	**89.97**	**309**	P	**P**	**08 32 46.3**	**+4.8**
EVIA				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.4						
EVIA	**Vianos**	**89.97**	**309**	P	**P**	**08 32 46.3**	**+4.8**
	comp=Z,22nm,1.0s,mb5.4						
DCN	**Croghan**	**90.16**	**324**	*e*P	**P**	**08 32 37.3**	**-4.7**
DCN	**Croghan**	**90.16**	**324**	*e*P	**P**	**08 32 51.4**	**+9.4**
EQES	**Quesada**	**90.57**	**308**	P	**P**	**08 32 48.3**	**+4.1**
	comp=Z,44nm,1.6s,mb5.5						
EBER	**Berja**	**90.59**	**307**	P	**P**	**08 32 51.8**	**+7.4**
	comp=Z,126nm,1.2s,mb6.1						
ESDC	**Sonseca Array**	**90.89**	**310**	P	**P**	**08 32 45.8**	**+0.1**
	comp=Z,8.5nm,0.7s,mb5.2,baz=60,slow=4.1,SNR=22						
ESLA	**Sonseca Array**	**90.89**	**310**	*e*P	**P**	**08 32 47.0**	**+1.3**
	comp=Z,12nm,1.2s,mb5.1						
ESLA				LR	LR		
	comp=Z,7µm,19.0s,MS6.1						
ECOG	**Cogollos-Vega**	**91.05**	**308**	P	**P**	**08 32 53.1**	**+6.6**
EBAN	**Banos Encina**	**91.05**	**309**	P	**P**	**08 32 49.8**	**+3.3**
EBAN				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.3						
EBAN	**Banos Encina**	**91.05**	**309**	P	**P**	**08 32 49.8**	**+3.3**
	comp=Z,10nm,0.7s,mb5.3						
ERON	**Agron**	**91.29**	**308**	P	**P**	**08 32 52.8**	**+5.1**
IMA	**Indian Mountai**	**91.42**	**22**	*e*P	**P**	**08 32 48.5**	**+1.0**
IMA				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.7						
IMA	**Indian Mountai**	**91.42**	**22**	*e*P	**P**	**08 32 48.5**	**+1.0**
	comp=Z,36nm,0.9s,mb5.7						
EADA	**Adamuz**	**91.66**	**309**	P	**P**	**08 32 54.2**	**+4.9**
	comp=Z,20nm,0.9s,mb5.4						
SVW2	**Sparrevohn**	**92.56**	**27**	*e*P	**P**	**08 32 55.2**	**+2.3**
ERUA	**La Rua**	**92.66**	**313**	P	**P**	**08 32 52.8**	**-1.0**
BORG	**Borgarnes**	**93.09**	**337**	LR	LR	09 16 55.9	
	comp=Z,3µm,19.1s,MS5.8,baz=253,slow=37						
BORG	**Borgarnes**	**93.09**	**337**	PFAKE		08 33 10.0	+15
BORG				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
VNDA	**Vanda**	**93.25**	**168**	P	**P**	**08 32 56.1**	**+0.4**
	comp=Z,2.2nm,0.8s,mb4.7,baz=248,slow=3.9,SNR=3.6						
VNDA				LR	LR	09 12 14.9	
	comp=Z,3µm,18.3s,MS5.8,baz=196,slow=34						
VNDA	**Vanda**	**93.25**	**168**	P	**P**	**08 32 56.1**	**+0.4**
VNDA				LR	LR	09 12 14.9	
SUMG	**Summit**	**93.82**	**347**	*e*P	**P**	**08 32 59.3**	**+0.9**
	comp=Z,50nm,1.3s,mb5.8						
RSO	**Redoubt South**	**94.09**	**27**	P	**P**	**08 33 01.2**	**+1.4**
SPU	**Mount Spurr**	**94.10**	**26**	*e*P	**P**	**08 33 03.2**	**+3.3**
COLA	**College**	**94.13**	**22**	*e*P	**P**	**08 33 01.1**	**+1.1**
COLA				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.3						
COLA	**College**	**94.13**	**22**	*e*P	**P**	**08 33 02.2**	**+2.2**
	comp=Z,14nm,1.2s,mb5.3						
MCK	**McKinley**	**94.26**	**23**	*e*P	**P**	**08 33 00.5**	**-0.1**
	comp=Z,55nm,1.6s,mb5.7						
MCK				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
ILAR	**Eielson Array**	**94.54**	**22**	P	**P**	**08 33 01.2**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.8,baz=299,slow=4.6,SNR=13						
ILAR				PP	PP	08 36 50.1	-2.2
	comp=Z,1.4nm,0.9s,baz=304,slow=6.5,SNR=4.4						
ILAR				PKKPbc		08 50 04.7	
	comp=Z,0.8nm,0.9s,baz=150,slow=1.4,SNR=5.7						
ILAR				LR	LR	09 21 10.9	
	comp=Z,2µm,18.8s,MS5.6,baz=75,slow=39						
PWA	**Palmer West**	**94.84**	**25**	*e*P	**P**	**08 33 04.5**	**+1.2**
PWA				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.9						
PWA	**Palmer West**	**94.84**	**25**	*e*P	**P**	**08 33 04.5**	**+1.2**
	comp=Z,40nm,0.8s,mb5.9						
FIB	**Fire Island**	**94.93**	**26**	PFAKE		08 33 10.0	+6.3
FIB				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
SLKM	**Skilak Lake**	**95.20**	**27**	P	**P**	**08 33 06.9**	**+1.9**
KDAK	**Kodiak Island**	**95.27**	**30**	PFAKE		08 33 20.0	+15
KDAK				LR	LR		
	comp=Z,758nm,20.0s,MS5.2						
SML	**Sawmill**	**95.42**	**25**	*e*P	**P**	**08 33 06.6**	**+0.6**
MENT	**Mentasta**	**96.69**	**23**	*e*P	**P**	**08 33 15.9**	**+4.1**
INK	**Inuvik**	**96.76**	**16**	*e*P	**P**	**08 33 11.1**	**-0.8**
INK				pmax	pmax		
	comp=Z,44nm,1.3s						
INK	**Inuvik**	**96.76**	**16**	P	**P**	**08 33 11.2**	**-0.8**
	comp=Z,26nm,1.1s,mb5.6,baz=331,slow=5.2,SNR=15						
INK	**Inuvik**	**96.76**	**16**	*e*P	**P**	**08 33 11.1**	**-0.8**
	comp=Z,44nm,1.3s,mb5.7						
RES	**Resolute Bay**	**97.12**	**2**	*e*P	**P**	**08 33 13.6**	**+0.2**
RES				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.7						
RES	**Resolute Bay**	**97.12**	**2**	*e*P	**P**	**08 33 13.6**	**+0.1**
	comp=Z,25nm,0.8s,mb5.7						
DAWY	**Dawson**	**97.65**	**21**	*e*P	**P**	**08 33 15.9**	**-0.1**
DBIC	**Dimbokro**	**97.73**	**278**	P	**P**	**08 33 18.2**	**+0.7**
	comp=Z,7.1nm,0.8s,mb5.2,baz=18,slow=8.5,SNR=5.5						
DBIC				LR	LR	09 19 18.2	
	comp=Z,2µm,18.9s,MS5.6,baz=68,slow=37						
QSPA	**South Pole Qui**	**98.07**	**180**	PFAKE		08 33 30.0	+12
QSPA				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
SNAA	**Sanae**	**99.84**	**199**	LR	LR	09 15 38.1	
	comp=Z,705nm,18.3s,MS5.2,baz=41,slow=34						
SFJ	**Sondre**	**100.80**	**347**	PFAKE		08 33 40.0	+10
SFJ				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
SIT	**Sitka**	**103.57**	**25**	PFAKE		08 33 50.0	+7.2
SIT				LR	LR		
	comp=Z,5µm,22.0s,MS6.0						
YKA	**Yellowknife Ar**	**106.18**	**13**	Pdiff	Pdif	08 33 54.4	+0.2
	comp=Z,1.7nm,1.0s,baz=329,slow=4.7,SNR=11						
YKA				PP	PP	08 38 16.1	-4.9
	comp=Z,2.1nm,0.8s,baz=334,slow=7.7,SNR=7.6						
YKA				PKKPbc		08 49 30.5	
	comp=Z,0.6nm,0.7s,baz=150,slow=2.9,SNR=7.5						
YKA	**Yellowknife Ar**	**106.18**	**13**	Pdif	Pdif	08 33 54.4	+0.2
YKA				PP	PP	08 38 16.1	-4.9
YKA				PKKPbc		08 49 30.6	
EDM	**Edmonton**	**114.59**	**18**	PKIKP	PKPdf	08 38 24.8	+0.3
OCWA	**Octopus Mounta**	**114.92**	**27**	PFAKE		08 38 30.0	+4.8
OCWA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
SCHQ	**Schefferville**	**115.20**	**348**	PKP	PKPdf	08 38 28.3	+2.7
	comp=Z,3.7nm,0.9s,baz=101,slow=3.0,SNR=5.9						
SCHQ				PP	PP	08 39 26.3	-0.8
	comp=Z,7.0nm,0.9s,baz=350,slow=5.6,SNR=5.6						
SCHQ	**Schefferville**	**115.20**	**348**	PKP	PKPdf	08 38 28.3	+2.7
SCHQ				PP	PP	08 39 26.3	-0.8
SCHQ				LR	LR		
	comp=Z,6µm,22.0s,MS6.2						
NEW	**Newport**	**117.48**	**23**	PFAKE		08 38 40.0	+10
NEW				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
TBI	**Tubuai**	**117.56**	**112**	*e*LQ		09 09 56.2	
TBI	**Tubuai**	**117.56**	**112**	*e*PP	PP	08 39 35.8	-8.6
TBI	**Tubuai**	**117.56**	**112**	*e*LR	LR	09 14 16.2	
	comp=Z,2µm,33.8s						
PPT	**Papeete**	**117.59**	**106**	*e*PP	PP	08 39 35.8	-8.9
PPT	**Papeete**	**117.59**	**106**	*e*LR	LR	09 13 58.3	
	comp=Z,2µm,26.5s						
COR	**Corvallis**	**117.66**	**29**	PFAKE		08 38 40.0	+9.3
COR				LR	LR		
	comp=Z,323nm,20.0s,MS5.0						
HUMO	**Hull Mountain**	**119.28**	**31**	PFAKE		08 38 40.0	+6.1
HUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
MSO	**Missoula**	**119.88**	**22**	*e*PKPdf	PKPdf	08 38 31.2	-3.7
MSO				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
YBH	**Yreka Blue Hor**	**120.05**	**31**	PFAKE		08 38 40.0	+4.6
YBH				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
CHMT	**Chamberlain Mo**	**120.05**	**21**	*e*PKPdf	PKPdf	08 38 31.9	-3.3
BMO	**Blue Mountains**	**120.18**	**25**	PFAKE		08 38 40.0	+4.5
BMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
WDC	**Whiskeytown Da**	**120.97**	**32**	PFAKE		08 38 40.0	+2.7
WDC				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
MOD	**Modoc**	**121.12**	**29**	PFAKE		08 38 50.0	+12
MOD				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
ULM	**Lac du Bonnet**	**121.20**	**7**	PKP	PKPdf	08 38 34.9	-2.5
	comp=Z,10nm,1.0s,baz=32,slow=4.0,SNR=8.6						
ULM				PKKPbc		08 48 36.9	
	comp=Z,3.6nm,1.1s,baz=251,slow=1.8,SNR=3.3						
ULM	**Lac du Bonnet**	**121.20**	**7**	*e*PKPdf	PKPdf	08 38 34.2	-3.3
ULM				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
DGMT	**Dagmar**	**121.38**	**14**	PFAKE		08 38 50.0	+12
DGMT				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
PMSA	**Palmer Station**	**121.39**	**191**	PFAKE		08 38 40.0	+2.5
PMSA				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
WVOR	**Wild Horse Val**	**121.50**	**28**	PFAKE		08 38 50.0	+12
WVOR				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
BOZ	**Bozeman (W)**	**121.72**	**21**	*e*PKPdf	PKPdf	08 38 35.6	-3.0
BOZ				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
HOPS	**Hopland**	**121.83**	**34**	PFAKE		08 38 50.0	+11
HOPS				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
MCMT	**McKenzie Canyo**	**121.98**	**22**	*e*PKPdf	PKPdf	08 38 37.6	-1.4
HLID	**Hailey**	**122.43**	**24**	*e*PKPdf	PKPdf	08 38 37.5	-2.4
HLID				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
QLMT	**Earthquake Lak**	**122.50**	**21**	PKPdf	PKPdf	08 38 38.1	-1.9
LAO	**LASA Array**	**122.50**	**16**	PKPdf	PKPdf	08 38 38.3	-1.6
LAO				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
YFT	**Old Faithful**	**123.04**	**21**	*e*PKPdf	PKPdf	08 38 44.3	+3.2
MOOW	**Moose Ponds**	**123.68**	**21**	*e*PKPdf	PKPdf	08 38 40.1	-2.3
BMN	**Battle Mountai**	**123.73**	**28**	PFAKE		08 38 50.0	+7.4
BMN				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
TPAW	**Teton Pass**	**123.83**	**22**	*e*PKPdf	PKPdf	08 38 40.5	-2.2
LOHW	**Long Hollow**	**123.85**	**21**	*e*PKPdf	PKPdf	08 38 40.3	-2.5
WUWY	**Wally Ulrich**	**123.86**	**21**	*e*PKPdf	PKPdf	08 38 39.8	-3.0
SNOW	**Snow King Moun**	**123.92**	**22**	*e*PKPdf	PKPdf	08 38 40.9	-2.0
EYMN	**Ely**	**123.92**	**4**	*e*PKPdf	PKPdf	08 38 40.6	-2.2
EYMN				*e*pPKPdf		08 38 46.8	
EYMN				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
CMB	**Columbia Colle**	**123.98**	**32**	PFAKE		08 38 50.0	+6.9
CMB				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
SAO	**San Andreas Ge**	**124.32**	**34**	PFAKE		08 38 50.0	+6.2
SAO				LR	LR		
	comp=Z,977nm,20.0s,MS5.5						
ELK	**Elko**	**124.39**	**27**	*e*PKIKP	PKPdf	08 38 40.9	-3.0
ELK				MLR	MLR		
	comp=Z,2µm,20.0s						
AHID	**Auburn Hatcher**	**124.40**	**22**	PFAKE		08 38 50.0	+6.2
AHID				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
NVAR	**Mina Array Bea**	**124.76**	**31**	PKP	PKPdf	08 38 42.4	-2.3
	comp=Z,4.2nm,0.8s,baz=50,slow=0.6,SNR=13						
NVAR				PKKPbc		08 48 23.9	
	comp=Z,0.9nm,0.8s,baz=118,slow=5.3,SNR=5.5						
MNV	**Mina**	**124.83**	**31**	*e*PKIKP	PKPdf	08 38 42.9	-1.9
MNV				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.7						
BW06	**Boulder Array**	**124.96**	**21**	PFAKE		08 38 50.0	+5.1
BW06				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
PDAR	**Pinedale Array**	**124.96**	**21**	PKP	PKPdf	08 38 42.5	-2.4
	comp=Z,9.0nm,1.2s,slow=3.0,SNR=9.3						
PDAR				PKKPbc		08 48 25.1	
	comp=Z,0.6nm,0.6s,baz=117,slow=6.6,SNR=6.0						
HWUT	**Hardware Ranch**	**125.21**	**23**	*e*PKPdf	PKPdf	08 38 42.7	-2.7
HWUT				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
TPH	**Tonopah**	**125.57**	**30**	PFAKE		08 38 50.0	+3.7
TPH				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
TCUT	**Toone Canyon**	**125.69**	**23**	PKPdf	PKPdf	08 38 46.4	+0.1
DUG	**Dugway**	**125.89**	**25**	*e*PKIKP	PKPdf	08 38 44.8	-2.0
DUG				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.6						
TRCR	**Troy Canyon**	**126.16**	**29**	*e*PKPdf	PKPdf	08 38 43.8	-3.5
DAU	**Daniels Canyon**	**126.35**	**24**	*e*PKIKP	PKPdf	08 38 49.7	+2.1
NLU	**North Lily Min**	**126.41**	**25**	*e*PKPdf	PKPdf	08 38 46.0	-1.8
DAC	**Darwin (Calif)**	**126.77**	**32**	PFAKE		08 39 00.0	+12
DAC				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
MIV	**Mineville/With**	**126.78**	**349**	PKPdf	PKPdf	08 38 47.2	-1.1
NCB	**Newcomb**	**127.02**	**349**	*e*PKPdf	PKPdf	08 38 46.9	-1.8
NCB				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
TMUT	**Trail Mountain**	**127.32**	**25**	PKPdf	PKPdf	08 38 45.7	-3.9
MVU	**Marysvale**	**127.56**	**26**	*e*PKPdf	PKPdf	08 38 48.2	-1.8
MVU				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
MSU	**Marysvale**	**127.57**	**26**	*e*PKIKP	PKPdf	08 38 48.8	-1.3
PHWY	**Pilot Hill**	**127.64**	**18**	*e*PKPdf	PKPdf	08 38 47.0	-3.2
SRU	**San Rafael**	**127.75**	**24**	*e*PKIKP	PKPdf	08 38 49.3	-1.1
HRV	**Harvard--Oak R**	**127.86**	**346**	PFAKE		08 39 00.0	+9.4
HRV				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
NEN	**Nelson**	**128.66**	**30**	*e*PKPdf	PKPdf	08 38 52.5	+0.2
GENY	**Geneseo**	**128.76**	**352**	*e*PKPdf	PKPdf	08 38 53.2	+0.9
ISCO	**Idaho Springs**	**128.95**	**19**	*e*PKIKP	PKPdf	08 38 52.2	-0.5
ISCO				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.8						
LDFC	**Landfair**	**128.97**	**31**	*e*PKPdf	PKPdf	08 38 50.8	-2.1
PV10	**Paradox Valley**	**128.98**	**23**	*e*PKPdf	PKPdf	08 38 50.4	-2.4
JFWS	**Jewell Farm**	**129.02**	**4**	PFAKE		08 39 00.0	+7.2
JFWS				LR	LR		
	comp=Z,4µm,22.0s,MS6.1						
BINY	**Binghamton**	**129.04**	**350**	*e*PKPdf	PKPdf	08 38 51.6	-1.2
BINY				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
PV01	**Paradox Valley**	**129.37**	**23**	*e*PKPdf	PKPdf	08 38 52.4	-1.2
PFO	**Pinyon Flat Ob**	**129.40**	**33**	*e*PKIKP	PKPdf	08 38 52.2	-1.5
PFO				MLR	MLR		
	comp=Z,367nm,22.0s,MS5.0						
ERPA	**Erie**	**129.66**	**354**	PFAKE		08 39 00.0	+6.0
ERPA				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
AAM	**Ann Arbor**	**129.73**	**358**	PFAKE		08 39 00.0	+5.9
AAM				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
BAR	**Barrett**	**129.98**	**34**	PKPdf	PKPdf	08 38 54.4	-0.5
RCBR	**Riachuelo**	**130.21**	**269**	PFAKE		08 39 00.0	+4.2
RCBR				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
WUAZ	**Wupatki**	**130.41**	**27**	PFAKE		08 39 00.0	+4.4
WUAZ				LR	LR		
	comp=Z,27µm,19.0s						
SDCO	**Great Sand Dun**	**130.84**	**20**	PFAKE		08 39 00.0	+3.6
SDCO				LR	LR		
	comp=Z,3µm,22.0s,MS6.0						
SSPA	**Standing Stone**	**130.86**	**352**	*e*PKPdf	PKPdf	08 38 52.5	-3.8
SSPA				LR	LR		
	comp=Z,571nm,22.0s,MS5.2						
CBKS	**Cedar Bluff**	**131.55**	**14**	PFAKE		08 39 10.0	+12
CBKS				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
ACSO	**Alum Creek Sta**	**131.76**	**357**	*e*PKPdf	PKPdf	08 38 54.2	-3.9
ACSO				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
KSU1	**Kansas State U**	**131.96**	**11**	*e*PKP	PKPdf	08 38 51.6	-6.8
MCWV	**Mont Chateau**	**132.07**	**354**	PFAKE		08 39 10.0	+11
MCWV				LR	LR		
	comp=Z,5µm,21.0s,MS6.2						
ANMO	**Albuquerque**	**132.97**	**23**	*e*PKIKP	PKPdf	08 38 58.4	-2.1
ANMO				MLR	MLR		
	comp=Z,2µm,21.0s						
ANMO	**Albuquerque**	**132.97**	**23**	PKP	PKPdf	08 38 58.2	-2.2
	comp=Z,3.2nm,0.7s,baz=164,slow=1.2,SNR=9.7						
CBN	**Corbin**	**133.17**	**351**	PFAKE		08 39 10.0	+9.3
CBN				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
TUC	**Tucson**	**133.34**	**29**	*e*PKIKP	PKPdf	08 38 59.3	-1.9
TUC				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
CCM	**Cathedral Cave**	**133.76**	**6**	PFAKE		08 39 10.0	+8.2
CCM				LR	LR		
	comp=Z,899nm,22.0s,MS5.4						
WCI	**Wyandotte Cave**	**133.84**	**0**	PFAKE		08 39 10.0	+8.1
WCI				LR	LR		
	comp=Z,818nm,20.0s,MS5.4						
FVM	**French Village**	**133.91**	**5**	*e*PKIKP	PKPdf	08 38 56.5	-5.5
BLA	**Blacksburg**	**134.56**	**354**	PKIKP	PKPdf	08 39 07.2	+3.9
BLA	**Blacksburg**	**134.56**	**354**	PKPdf	PKPdf	08 39 00.0	-3.3
BLA				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
ELN	**Prospectdale**	**134.57**	**354**	*e*PKPdf	PKPdf	08 39 05.3	+1.9
BBSR	**BB Station**	**134.84**	**334**	PFAKE		08 39 10.0	+6.0
BBSR				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
WMOK	**Wichita Mounta**	**135.66**	**15**	PKIKP	PKPdf	08 39 06.6	+1.2
WMOK	**Wichita Mounta**	**135.66**	**15**	PFAKE		08 39 10.0	+4.6
WMOK				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
WVT	**Waverly**	**135.91**	**2**	PKIKP	PKPdf	08 39 03.4	-2.4
WVT	**Waverly**	**135.91**	**2**	PFAKE		08 39 10.0	+4.2
WVT				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
CAM4	**Nova Friburgo**	**135.93**	**246**	(P)	PKPdf	08 39 12.2	+6.0
CAM4				*i*		08 39 20.0	
MNTX	**Cornudas Mount**	**136.26**	**24**	*e*PKPpre		08 38 55.1	
MNTX				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
CPCT	**Cooper Cave**	**136.60**	**358**	*e*PKPdf	PKPdf	08 39 03.4	-3.7
MIAR	**Mount Ida**	**136.93**	**9**	*e*PKIKP	PKPdf	08 38 59.2	-8.5
MIAR				MLR	MLR		
	comp=Z,3µm,22.0s,MS6.0						
OXF	**Oxford**	**137.44**	**4**	PFAKE		08 39 20.0	+11
OXF				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
JSC	**Jenkinsville**	**137.54**	**354**	*e*PKIKP	PKPdf	08 39 01.3	-7.6
COW	**Cow Castle Cre**	**138.37**	**353**	PKPdf	PKPdf	08 39 06.7	-3.8
NHSC	**New Hope**	**138.58**	**353**	PFAKE		08 39 20.0	+9.2
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
GOGA	**Godfrey**	**138.58**	**357**	PFAKE		08 39 20.0	+9.2
GOGA				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
LRAL	**Lakeview Retre**	**139.02**	**1**	PFAKE		08 39 20.0	+8.4
LRAL				LR	LR		
	comp=Z,4µm,22.0s,MS6.1						
LTX	**Lajitas**	**139.03**	**24**	PFAKE		08 39 20.0	+8.2
LTX				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
TXAR	**Lajitas Array**	**139.03**	**24**	PKhKP		08 39 02.4	
	comp=Z,1.2nm,0.7s,baz=24,slow=3.5,SNR=9.5						
TXAR				PKP	PKPdf	08 39 08.7	-3.1
	comp=Z,2.8nm,1.0s,SNR=17						
TXAR				PP	PP	08 42 04.0	-0.6
	comp=Z,2.3nm,0.9s,slow=3.8,SNR=6.2						
JCT	**Junction City**	**139.37**	**18**	*e*PKHKP		08 39 02.2	
JCT				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.9						
NATX	**Nacogdoches**	**139.45**	**11**	PFAKE		08 39 20.0	+7.6
NATX				LR	LR		
	comp=Z,4µm,21.0s,MS6.1						
HKT	**Hockley**	**140.95**	**14**	*e*PKPdf	PKPdf	08 39 10.0	-5.3
HKT				LR	LR		
	comp=Z,759nm,20.0s,MS5.5						
BDFB	**Brasilia**	**142.11**	**255**	PKP	PKPdf	08 39 16.1	-1.5
	comp=Z,10nm,0.7s,baz=46,slow=4.3,SNR=11						
DWPF	**Disney**	**143.66**	**353**	PFAKE		08 39 30.0	+15
DWPF				LR	LR		
	comp=Z,682nm,20.0s,MS5.4						
PLCA	**Paso Flores**	**144.76**	**201**	PKP	PKPdf	08 39 19.4	-2.1
	comp=Z,31nm,1.0s,baz=160,slow=3.8,SNR=42						
SFJM	**Santa Fe**	**146.98**	**30**	*e*P	PKPbc	08 39 25.0	+1.3
SJG	**San Juan**	**147.33**	**323**	*e*PKP	PKPdf	08 39 34.6	+8.2
SJG				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
COLM	**Colima**	**147.73**	**32**	*e*P	PKPdf	08 39 29.5	+2.4
YAIG	**Yautepec**	**150.23**	**25**	*i* P	PKPdf	08 39 37.4	+6.3
PPM	**Popocatepetl**	**150.23**	**25**	*i* PKIKP	PKPdf	08 39 33.2	+2.1
PLIG	**Platanillo**	**150.45**	**27**	*i* P	PKPdf	08 39 38.8	+7.3
FCH	**Farellones**	**151.04**	**208**	*e*P	PKPdf	08 39 36.1	+4.2
CLCH	**Cerro Calan**	**151.09**	**208**	*e*P	PKPdf	08 39 35.6	+3.6
TEIG	**Tepich**	**151.70**	**4**	*e*PKPdf	PKPdf	08 39 29.4	-3.9
TEIG				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
VHO	**Vista Hermosa**	**152.78**	**23**	*e*P	PKPdf	08 39 44.1	+9.2
SDV	**Santo Domingo**	**157.14**	**317**	PKP	PKPdf	08 39 40.0	-0.8
	comp=Z,13nm,1.1s,baz=284,slow=3.3,SNR=8.2						
SDV				PKPab	PKPab	08 40 09.6	-0.6
	comp=Z,14nm,0.8s,baz=37,slow=5.1,SNR=4.5						
SDV	**Santo Domingo**	**157.14**	**317**	*e*PKPdf	PKPdf	08 39 39.5	-1.4
SDV				LR	LR		
	comp=Z,918nm,21.0s,MS5.6						
SAML	**Samuel**	**157.39**	**266**	*e*PKPdf	PKPdf	08 39 38.7	-2.5
SAML				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
LVC	**Limon Verde**	**158.15**	**227**	PKP	PKPdf	08 39 43.5	+1.6
	comp=Z,5.3nm,0.8s,baz=331,slow=3.7,SNR=3.3						
LVC				PKPab	PKPab	08 40 15.9	+1.6
	comp=Z,13nm,0.7s,baz=110,slow=2.7,SNR=8.7						
LVC	**Limon Verde**	**158.15**	**227**	*e*PKPdf	PKPdf	08 39 42.9	+1.0
LVC				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
LPAZ	**La Paz**	**160.74**	**244**	PKP	PKPdf	08 39 44.8	-0.2
	comp=Z,7.3nm,1.1s,baz=83,slow=1.6,SNR=12						
LPAZ				PKPab	PKPab	08 40 27.1	+1.5
	comp=Z,3.4nm,0.7s,baz=160,slow=3.1,SNR=4.9						
LPAZ	**La Paz**	**160.74**	**244**	*e*PKPdf	PKPdf	08 39 42.6	-2.4
LPAZ				LR	LR		
	comp=Z,2µm,20.0s						
JTS	**JuntasAbangare**	**161.63**	**357**	PFAKE		08 39 50.0	+4.1
JTS				LR	LR		
	comp=Z,448nm,21.0s						
ROSC	**El Rosal**	**162.57**	**318**	PKP	PKPdf	08 39 46.4	-0.5
	comp=Z,27nm,1.1s,baz=273,slow=2.2,SNR=8.8						
ROSC				PKPab	PKPab	08 40 34.0	+0.3
	comp=Z,5.8nm,0.7s,baz=24,slow=2.2,SNR=4.5						
OTAV	**Otavalo**	**168.74**	**317**	*e*PKPdf	PKPdf	08 39 51.3	-0.6
OTAV				LR	LR		
	comp=Z,2µm,20.0s						
NNA	**Nana**	**170.18**	**247**	PFAKE		08 40 00.0	+7.2
NNA				LR	LR		
	comp=Z,330nm,20.0s						
PAYG	**Puerto Ayora**	**171.44**	**30**	PFAKE		08 40 00.0	+6.4
PAYG				LR	LR		
	comp=Z,2µm,21.0s						

IDC ***16*** *08:24:35.3±0.8, 8.02N×94.25E, mb4.3/13, mb1 4.5/13, mb1mx4.4/20, mbtmp4.3/13, Error ellipse: s-maj=35.6km s-min=20.1km az=46.0*

NEIC ***16*** *08:24:39.9±0.6, 7.95N×94.30E, h30*^{km}*, mb4.6/4, Error ellipse: s-maj=23.5km s-min=13.6km az=56.0*

ISC 16 08:24:38.7±0.7**, 8.0N**±0.1×**94.3E**±0.2**, h33^{km}, n22, σ1^{s}01**/19**, mb4.4**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	21.83	353	eP	P	08 29 30.4	+0.4
	28nm,0.8s,mb4.8						
SONM	Songino Array	41.06	12	P	P	08 32 21.7	+1.0
	3.4nm,1.1s,mb3.9,baz=191,slow=7.3,SNR=5.0						
KURK	Kurchatov	44.56	346	eP	P	08 32 50.1	+0.9
WRA	Warramunga Arr	48.22	126	P	P	08 33 18.7	+0.2
	1.7nm,0.7s,mb4.2,baz=305,slow=9.0,SNR=5.4						
BVAR	Borovoye Array	48.95	341	P	P	08 33 23.4	-0.3
	1.1nm,0.5s,mb4.1,baz=162,slow=4.6,SNR=3.6						
ASAR	Alice Springs	49.88	130	P	P	08 33 30.8	-0.4
	1.6nm,0.8s,mb4.1,baz=311,slow=7.3,SNR=5.1						
KMBO	Kilima Mbogo	57.54	264	P	P	08 34 28.9	+1.1
	4.4nm,0.8s,mb4.6,baz=53,slow=9.8,SNR=6.3						
BRTR	Keskin Array B	62.46	311	P	P	08 34 60.0	-1.2
	2.0nm,0.7s,mb4.4,baz=122,slow=7.3,SNR=5.3						
AKASG	Malin Array Be	68.16	322	P	P	08 35 35.4	-2.2
	0.9nm,0.5s,mb4.1,baz=89,slow=5.0,SNR=5.1						
MLR	Muntele Rosu	69.19	316	P	P	08 35 44.1	+0.1
	7.3nm,1.1s,mb4.5,baz=69,slow=3.5,SNR=3.2						
JOF	Joensuu	70.82	334	ep	P	08 35 52.6	-1.1
	4.7nm,0.6s,mb4.6						
FINES	FINESS Array B	72.69	332	P	P	08 36 05.1	+0.3
	3.7nm,0.7s,mb4.4,baz=104,slow=7.9,SNR=5.9						
ARCES	ARCESS Array B	75.23	340	P	P	08 36 18.2	-1.3
	3.1nm,0.8s,mb4.3,baz=100,slow=7.4,SNR=3.9						
GERES	GERESS Array B	77.84	318	P	P	08 36 35.1	+0.5
	4.0nm,0.7s,mb4.4,baz=90,slow=4.0,SNR=11						
GRA1	Grafenberg Arr	79.48	319	eP	P	08 36 45.5	+1.9
	7.0nm,1.1s,mb4.5						
GRF	Grafenberg Arr	79.48	319	eP	P	08 36 45.5	+1.9
	7.0nm,1.1s,mb4.5						
NB2	NORSAR Subarra	79.72	331	P	P	08 36 43.5	-1.1
	1.7nm,0.6s,mb4.2,baz=95,slow=5.0						
NOA	NORSAR Array B	79.72	331	P	P	08 36 43.8	-0.8
	3.6nm,0.8s,mb4.3,baz=92,slow=5.5,SNR=4.7						
DAVOX	Davos	80.41	316	P	P	08 36 49.5	+0.9
	5.4nm,0.7s,mb4.6,baz=143,slow=19,SNR=4.4						
TXAR	Lajitas Array	139.11	24	PKP	PKPdf	08 44 03.5	+0.6
	1.3nm,1.0s,baz=153,slow=2.0,SNR=2.7						
TXAR	Lajitas Array	139.11	24	PKP	PKPdf	08 44 03.5	+0.6
PLCA	Paso Flores	144.66	200	PKP	PKPdf	08 44 12.7	+0.4
	1.9nm,0.8s,baz=226,slow=4.1,SNR=3.3						

IDC 16 08:37:11.1±2.6**, 19.80S**×**179.92W, mb3.6**/3**, mb1 4.0**/3**, mb1mx3.7**/14**, mbtmp3.6**/3**, Error ellipse: s-maj=264.3km s-min=34.4km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.92	262	P	P	08 45 12.5	-1.1
	0.2nm,0.3s,baz=96,slow=7.6,SNR=8.5						
ASAR	Alice Springs	42.93	256	P	P	08 45 11.4	-2.2
	0.6nm,0.5s,baz=93,slow=8.0,SNR=14						
TXAR	Lajitas Array	88.20	58	P	P	08 50 04.6	-1.2
	0.4nm,0.8s,baz=207,slow=4.0,SNR=4.2						

MAN 16 08:47:05.1, 11.45N×**124.30E, h5^{km}, mb3.7, ML2.5, MS2.0, 1C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	Palo	0.72	113	eP	Pg	08 47 17.7	-1.9
PLP				i S	Sg	08 47 34.4	+5.1
RCP	Roxas	1.53	274	⇑eP	Pn	08 47 33.6	+0.4
SCPH	Surigao	2.03	145	⇓eP	Pn	08 47 41.2	+0.9

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*RSPR **16** 08:51:10.6, 17.92N×65.43W, h13^{km}±1^{km}, MD3.5/14, MD3.5/14*

*NEIC **16** 08:51:10.6, 17.92N×65.43W, h13^{km}, MD3.5(RSPR), After RSPR.*

ISC 16 08:51:09.0±0.9**, 17.82N**±0.06×**65.45W**±0.03**, h15^{km}**±6^{km}**, n20, σ0^{s}76**/35**, 10C-1D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTP	Monte Pirata	0.29	340	eS	Sg	08 51 19.3	-0.2
MTP	Monte Pirata	0.29	340	⇑eP	Pg	08 51 15.1	-0.3
MTP				eS	Sg	08 51 19.3	-0.2
CPD	Cerro la Pandu	0.49	296	eS	Sg	08 51 26.5	+0.6
CPD	Cerro la Pandu	0.49	296	⇑eP	Pb	08 51 19.0	+0.2
CPD				eS	Sg	08 51 26.5	+0.6
HUMP	Col San Antoni	0.49	310	eS	Sg	08 51 25.8	-0.2
HUMP	Col San Antoni	0.49	310	⇑iP	Pb	08 51 19.0	+0.1
HUMP				eS	Sg	08 51 25.8	-0.2
CBYP	Canovanas	0.59	319	⇑eP	Pb	08 51 20.5	0.0
CBYP				eS	Sb	08 51 27.9	-0.4
SJG	San Juan	0.72	294	⇓iP	Pb	08 51 22.9	+0.1
SJG				eS	Sb	08 51 31.8	-0.4
CSB	Colonia Sabana	0.81	305	⇑iP	Pb	08 51 24.3	0.0
CELP	Cerrillos	1.10	283	⇑iP	Pb	08 51 29.4	+0.1
CELP				eS	Sb	08 51 41.8	-1.4
OBIP	Obispado Ponce	1.12	281	⇑eP	Pb	08 51 29.7	+0.2
OBIP				eS	Sb	08 51 43.9	+0.2
PORP	Portuguez	1.15	282	⇑eP	Pb	08 51 30.4	+0.3
PORP				eS	Sb	08 51 43.6	-1.0
AOPR	Arecibo Observ	1.34	293	⇑eP	Pb	08 51 33.0	-0.4
AOPR				eS	Sb	08 51 50.4	+0.3
LRS	Lares	1.40	290	⇑eP	Pn	08 51 34.0	-0.3
LRS				eS	Sb	08 51 50.5	-1.5
MGP	Maguayo	1.57	277	⇑eP	Pn	08 51 36.8	+0.2
MGP				eS	Sb	08 51 58.0	+1.2
MPR	Mayaguez	1.65	284	⇑eP	Pn	08 51 38.8	+1.1
MPR				eS	Sn	08 52 01.0	+2.3
SABS	Saba	2.12	95	eP	Pn	08 51 45.3	+0.8
SABS				eS	Sn	08 52 10.4	-0.3
SABT	Saba	2.12	95	eP	Pn	08 51 45.3	+0.8
SABT				eS	Sn	08 52 10.4	-0.3
SCG	Saint Claude	4.03	116	eP	Pn	08 52 11.0	-0.6
SCG				eS	Sn	08 52 53.0	-6.1
SDV	Santo Domingo	10.21	210	eP	P	08 53 37.0	-1.3

IDC 16 08:51:12.1±3.6**, 11.27N**×**90.66E, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.7**/18**, mbtmp3.7**/4**, ML4.4**/1**, Error ellipse: s-maj=96.3km s-min=29.5km az=81.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.73	47	Pn	P	08 53 48.0	-2.2
	0.8nm,0.3s,baz=234,slow=16,SNR=4.9						
SONM	Songino Array	38.77	17	P	P	08 58 38.0	-2.0
	0.6nm,1.0s,baz=206,slow=7.7,SNR=3.3						
WRA	Warramunga Arr	53.01	126	P	P	09 00 31.1	-2.2
	1.5nm,0.5s,baz=306,slow=8.4,SNR=9.2						
ASAR	Alice Springs	54.71	130	P	P	09 00 43.6	-2.1
	0.7nm,0.5s,baz=306,slow=7.5,SNR=5.8						

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*IDC **16** 08:53:26.7±0.7, 9.44N×126.17E, mb4.2/9, mb1 4.4/9, mb1mx4.2/19, mbtmp4.2/9, Error ellipse: s-maj=58.8km s-min=16.4km az=74.0*

*NEIC **16** 08:53:32.7±4.8, 9.43N×126.14E, h41^{km}±45^{km}, mb4.3/4, Error ellipse: s-maj=29.6km s-min=9.7km az=68.0*

*MAN **16** 08:53:35.7, 9.40N×126.15E, h26^{km}, mb4.4, ML3.2, MS3.0*

ISC 16 08:53:31.1±0.5**, 9.41N**±0.05×**126.47E**±0.04**, h33^{km}, n24, σ1^{s}46**/30**, mb4.1**/12**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.95	242	eP	P	08 53 49.0	+1.0
BUTP				eS	S	08 53 58.6	-1.8
MSLP	Maasin	1.74	294	eP	P	08 54 01.2	+1.9
CGP	Cagayan de Oro	2.00	242	⇑eP	P	08 54 03.5	+0.5
CGP				i S	S	08 54 25.3	-1.7
PLP	Palo	2.27	320	eP	P	08 54 08.9	+1.9
PLP				i S	S	08 54 38.0	+3.9
MATI	Mati	2.46	185	eP	P	08 54 14.3	+4.7
TBP	Tagbilaran	2.58	276	eP	P	08 54 12.2	+0.7
TBP				eS	S	08 54 39.0	-3.0
LLP	Lapu-Lapu	2.62	290	⇑iP	P	08 54 13.7	+1.7
LLP				eS	S	08 54 39.2	-3.8
KCP	Kidapawan	2.75	210	⇑eP	P	08 54 17.0	+3.2
KCP				i S	S	08 54 48.5	+2.3
DCPH	Dipolog City	3.19	255	⇓iP	P	08 54 20.4	+0.4
DCPH				eS	S	08 54 56.7	-0.6
SNPH	Sibulan	3.19	269	⇓eP	P	08 54 21.0	+0.9
RCP	Roxas	4.24	301	⇑eP	P	08 54 36.6	+1.7
KAKA	Kakadu	22.77	165	eP	P	08 58 33.0	+1.0
	6.1nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	27.35	182	eP	P	08 59 14.9	-0.5
	2.9nm,0.4s,mb4.2						
WRA	Warramunga Arr	30.18	165	P	P	08 59 39.1	-1.6
	0.3nm,0.3s,mb3.5,baz=343,slow=8.2,SNR=9.6						
ASAR	Alice Springs	33.67	168	P	P	09 00 10.3	-0.9
	0.4nm,0.3s,mb3.9,baz=358,slow=7.1,SNR=16						
SONM	Songino Array	41.88	340	P	P	09 01 18.3	-1.6
	0.3nm,0.4s,mb3.3,baz=168,slow=9.0,SNR=4.4						
STKA	Stephens Creek	43.53	161	P	P	09 01 33.5	-0.2
	1.1nm,0.3s,mb4.0,baz=346,slow=9.3,SNR=11						
BVAR	Borovoye Array	62.48	326	P	P	09 03 50.5	-2.9
	1.9nm,0.6s,mb4.4,baz=135,slow=8.2,SNR=8.2						
ILAR	Eielson Array	80.12	26	P	P	09 05 38.5	-0.5
	0.7nm,0.7s,mb3.7,baz=243,slow=6.0,SNR=10.0						
INK	Inuvik	85.00	22	eP	P	09 06 04.4	+0.4
	2.1nm,0.8s,mb4.3						
ARCES	ARCESS Array B	85.06	340	P	P	09 06 03.4	-0.9
	3.5nm,0.5s,mb4.7,baz=81,slow=7.0,SNR=24						
FINES	FINESS Array B	86.73	332	P	P	09 06 11.0	-1.7
	8.9nm,1.2s,mb4.9,baz=90,slow=6.8,SNR=4.8						
YKA	Yellowknife Ar	94.45	24	P	P	09 06 49.3	+0.6
	0.8nm,0.7s,mb4.3,baz=300,slow=4.5,SNR=21						
PLCA	Paso Flores	145.35	157	PKPbc	PKPbc	09 13 07.4	+1.0
	1.5nm,0.6s,baz=206,slow=4.0,SNR=8.8						

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*BJI **16** 08:54:55.1, 8.20N×94.70E, h24^{km}*

*NEIC **16** 08:54:55.1±0.6, 8.20N×94.73E, mb4.5/6, Error ellipse: s-maj=20.2km s-min=14.6km az=54.0*

*IDC **16** 08:55:02.0±5.2, 8.02N×94.60E, h85^{km}±48^{km}, mb3.8/14, mb1 3.9/15, mb1mx3.8/23, mbtmp4.1/15, ML4.2/1, Error ellipse: s-maj=28.4km s-min=17.9km az=55.0*

ISC 16 08:54:55.0±0.5**, 8.04N**±0.09×**94.6E**±0.1**, h33^{km}, n24, σ1^{s}30**/24**, mb4.2**/19**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.19	22	P	P	08 57 38.2	+2.4
	0.5nm,0.3s,baz=223,slow=16,SNR=3.7						
PALK	Pallekele	13.78	268	eP	P	08 58 13.0	+2.5
	5.6nm,1.0s						
LSA	Lhasa	21.79	352	P	P	08 59 45.0	-1.0
LSA	Lhasa	21.79	352	eP	P	08 59 44.8	-1.2
	12nm,0.7s,mb4.5						
SONM	Songino Array	40.91	12	P	P	09 02 37.2	+1.3
	1.2nm,1.0s,mb3.5,baz=198,slow=7.8,SNR=3.6						
SONM				PcP	PcP	09 04 42.1	+5.6
	0.4nm,0.5s,baz=206,slow=3.5,SNR=4.2						
KURK	Kurchatov	44.56	346	P	P	09 03 04.4	-1.2
	3.0nm,0.6s,mb4.3						
KURK				epP	pP	09 03 12.1	-3.3
NWAO	Narrogin (SRO)	46.09	153	eP	P	09 03 19.6	+1.6
	28nm,1.4s,mb5.0						
ZAL	Zalesovo	46.45	352	P	P	09 03 20.0	-0.5
	1.5nm,0.3s,mb4.4,baz=310,slow=7.9,SNR=3.1						
WRA	Warramunga Arr	47.99	126	P	P	09 03 32.8	-0.3
	0.6nm,0.4s,mb3.9,baz=304,slow=8.5,SNR=5.9						
WRA				PcP	PcP	09 05 07.9	+6.7
	1.1nm,0.7s,baz=313,slow=2.9,SNR=8.7						
BVAR	Borovoye Array	48.98	341	P	P	09 03 40.0	-0.3
	0.5nm,0.4s,mb3.9,baz=213,slow=30,SNR=5.2						
BRVK	Borovoye	49.04	341	eP	P	09 03 44.4	+3.6
BRVK				epP	pP	09 03 51.0	+0.4
ASAR	Alice Springs	49.68	130	P	P	09 03 45.4	-0.7
	0.8nm,0.8s,mb3.8,baz=315,slow=8.4,SNR=5.8						
ASAR				PcP	PcP	09 05 12.8	+5.5
	1.5nm,0.9s,baz=304,slow=3.6,SNR=6.6						
KMBO	Kilima Mbogo	57.88	264	P	P	09 04 46.0	-0.5
	2.3nm,0.6s,mb4.4,baz=53,slow=13,SNR=10						
BRTR	Keskin Array B	62.66	311	P	P	09 05 19.9	+1.0
	1.7nm,0.8s,mb4.2,baz=101,slow=6.3,SNR=5.0						
AKASG	Malin Array Be	68.30	322	P	P	09 05 55.3	+0.5
	1.0nm,0.7s,mb4.0,baz=86,slow=5.3,SNR=4.6						
LBTB	Lobatse	74.71	241	P	P	09 06 32.6	-1.1
	2.6nm,0.9s,mb4.2,baz=153,slow=9.9,SNR=3.7						
BRG	Berggiesshubel	77.91	320	eP	P	09 06 51.2	-0.1
	4.2nm,0.8s,mb4.4						
GERES	GERESS Array B	78.00	318	P	P	09 06 50.5	-1.3
	0.9nm,0.7s,mb3.8,baz=68,slow=5.3,SNR=4.5						
HFS	Hagfors	78.54	330	P	P	09 06 52.4	-2.2
	4.4nm,0.9s,mb4.4,baz=90,slow=8.9,SNR=5.5						
NB2	NORSAR Subarra	79.81	331	P	P	09 06 58.4	-3.0
	2.9nm,1.0s,mb4.2,baz=92,slow=5.6						
NOA	NORSAR Array B	79.81	331	P	P	09 06 59.5	-2.0
	0.6nm,0.7s,mb3.6,baz=107,slow=4.6,SNR=2.8						
DAVOX	Davos	80.58	316	P	P	09 07 07.2	+1.3
	3.5nm,0.5s,mb4.6,baz=99,slow=7.7,SNR=5.3						
LPG	La Plagne	82.82	315	eP	P	09 07 18.8	+1.3
	18nm,0.9s,mb4.8						
EKA	Eskdalemuir Ar	87.84	325	P	P	09 07 41.3	-0.8
	0.9nm,0.7s,mb4.1,baz=289,slow=18,SNR=2.7						

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*IGQ **16** 09:00:56.2, 1.19S×81.50W, h12^{km}±6^{km}, mb4.8, Error ellipse: s-maj=8.0km s-min=6.0km az=165.7*

*IDC **16** 09:01:01.2±0.8, 1.16S×81.08W, mb4.1/12, mb1 4.2/15, mb1mx4.1/23, mbtmp4.1/15, ML3.3/3, Error ellipse: s-maj=26.3km s-min=15.4km az=54.0*

*BJI **16** 09:01:05.0, 1.10S×81.00W, h28^{km}, mB4.8, Ms4.9, Msz4.9*

*NEIC **16** 09:01:05.1±2.1, 1.12S×81.02W, h28^{km}±16^{km}, mb4.5/16, MD4.8(IGQ), Error ellipse: s-maj=8.8km s-min=5.7km az=59.0*

ISC 16 09:01:02.1±1.7**, 1.09S**±0.06×**81.19W**±0.05**, h15^{km}**±12^{km}**, n86, σ1^{s}03**/78**, mb4.3**/23**, MS5.0**/1**, 7C-1D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.65	87	⇓P	Pb	09 01 12.6	-1.9
IGUA	Igualata	2.58	99	P	Pn	09 01 44.0	-0.1
JUA2	San Juan 2	2.73	72	⇑P	Pn	09 01 45.6	-0.6
CUSU	Cusua	2.73	98	P	Pn	09 01 47.2	+0.9
TERV	Terraza Guagua	2.74	71	P	Pn	09 01 45.5	-0.9
PINO	Pino	2.74	70	⇑P	Pn	09 01 45.4	-1.0
JUIV	Juive	2.75	97	P	Pn	09 01 46.6	+0.1
ARRY	Arrayan	2.77	99	⇑P	Pn	09 01 46.7	-0.1
ARRY				S	Sn	09 02 22.0	+1.9
RETU	Refugio	2.77	98	P	Pn	09 01 48.5	+1.7
YANA	Yana	2.79	70	P	Pn	09 01 46.1	-1.0
PISA	Pisayambo	2.80	89	P	Pn	09 01 47.7	+0.4
ULBA	Ulba	2.81	97	P	Pn	09 01 47.5	+0.1
VC1	Cotopaxi 1	2.82	81	⇑P	Pn	09 01 48.0	+0.5
TAMB	Tambo	2.85	82	P	Pn	09 01 48.2	+0.3
OTAV	Otavalo	3.04	64	eP	Pn	09 01 49.4	-1.2
ANTI	Antisana	3.09	78	⇑P	Pn	09 01 52.1	+0.7
COTA	Cotacachi	3.18	64	⇑P	Pn	09 01 52.5	-0.2
LORE	San Lorenzo	3.33	45	P	Pn	09 01 59.7	+4.9
CAYR	Refugio Cayamb	3.37	71	P	Pn	09 01 56.8	+1.5
CAYR				S	Sn	09 02 40.3	+5.0
ELAGU	Cayambe Volc	3.37	72	P	Pn	09 01 57.2	+1.9
CAYA	Cayambe	3.40	70	P	Pn	09 01 57.0	+1.2
CONE	Cono NE Rev Vo	3.69	74	P	Pn	09 02 03.6	+3.8
ECEN	Cerro Negro	3.74	60	⇑P	Pn	09 02 00.1	-0.5
ROSC	El Rosal	9.04	49	Pn	P	09 03 14.7	-0.4
	1.1nm,0.3s,baz=270,slow=17,SNR=4.0						
ROSC				Sn	Sn	09 04 50.0	-7.7
	3.7nm,0.3s,baz=90,slow=21,SNR=5.7						
PAYG	Puerto Ayora	9.10	272	eP	P	09 03 16.4	+0.4
	282nm,1.5s						
NNA	Nana	11.66	158	eP	P	09 03 46.8	-4.3
	31nm,0.9s						
JTS	JuntasAbangare	11.90	342	P	P	09 03 54.5	+0.1
SDV	Santo Domingo	14.45	47	Pn	P	09 04 28.4	+0.1
	0.4nm,0.3s,baz=242,slow=9.5,SNR=9.4						
SDV	Santo Domingo	14.45	47	eP	P	09 04 26.1	-2.1
	28nm,0.8s						
ARE	Arequipa	18.02	148	eP	P	09 05 15.0	+1.1
SAML	Samuel	19.55	114	eP	P	09 05 26.3	-6.0
	3.9nm,0.8s						
LPAZ	La Paz	19.85	140	P	P	09 05 33.5	-2.0
	0.1nm,0.3s,baz=336,slow=17,SNR=8.1						
LPAZ	La Paz	19.85	140	eP	P	09 05 33.2	-2.4
	9.4nm,1.1s						
TEIG	Tepich	22.29	342	P	P	09 06 01.4	+0.9
SJG	San Juan	24.14	37	P	P	09 06 19.4	+0.6
	28nm,0.7s,mb4.8,baz=237,slow=4.5,SNR=8.0						
SJG	San Juan	24.14	37	eP	P	09 06 18.4	-0.3
	27nm,0.7s,mb4.8						
LVC	Limon Verde	24.50	152	eP	P	09 06 21.9	-0.3
	10nm,0.8s,mb4.4						
LRAL	Lakeview Retre	34.38	351	P	P	09 07 50.7	-0.1
	6.7nm,0.9s,mb4.6						
JSC	Jenkinsville	35.18	360	eP	P	09 07 56.9	-0.7
BDFB	Brasilia	35.78	116	P	P	09 08 02.2	-0.7
	1.3nm,0.5s,mb4.1,baz=302,slow=13,SNR=2.1						
JCT	Junction City	36.05	332	eP	P	09 08 06.3	+1.3
	4.1nm,0.4s,mb4.7						
CPCT	Cooper Cave	36.48	355	eP	P	09 08 08.0	-0.6
BBSR	BB Station	36.75	24	P	P	09 08 13.0	+2.1
	10nm,0.4s,mb5.0						
TXAR	Lajitas Array	37.10	326	P	P	09 08 15.2	+1.3
	1.4nm,0.8s,mb3.8,baz=150,slow=9.0,SNR=7.0						
TXAR				PcP	PcP	09 10 34.4	-0.4
	0.4nm,0.7s,baz=158,slow=4.9,SNR=4.2						
ELN	Prospectdale	38.12	1	eP	P	09 08 21.8	-0.6
FWV	Forest Hill	38.47	0	eP	P	09 08 24.4	-1.0
MNTX	Cornudas Mount	39.86	327	eP	P	09 08 37.7	+0.7
	3.6nm,0.8s,mb4.2						
CCM	Cathedral Cave	40.04	348	P	P	09 08 37.3	-1.0
	8.1nm,1.3s,mb4.3						
AMTX	Amarillo	40.60	334	eP	P	09 08 43.3	+0.3
	9.6nm,0.9s,mb4.4						
PLCA	Paso Flores	40.63	168	P	P	09 08 42.5	-0.6
	4.2nm,0.8s,mb4.1,baz=340,slow=10,SNR=12						
KSU1	Kansas State U	42.42	342	eP	P	09 08 58.2	+0.2
ANMO	Albuquerque	42.95	329	P	P	09 09 04.6	+2.3
	3.3nm,0.9s,mb4.1,baz=144,slow=9.3,SNR=12						
ANMO	Albuquerque	42.95	329	eP	P	09 09 04.2	+1.9
	6.1nm,0.9s,mb4.3						
SDCO	Great Sand Dun	44.70	332	eP	P	09 09 17.2	+0.7
	4.9nm,0.8s,mb4.4						
WUAZ	Wupatki	46.04	325	P	P	09 09 26.9	-0.2
PV01	Paradox Valley	46.48	330	eP	P	09 09 31.7	+1.0
MSU	Marysvale	48.64	327	P	P	09 09 47.9	+0.4
ARUT	Antelope Range	48.82	326	P	P	09 09 50.4	+1.5
BW06	Boulder Array	50.57	333	P	P	09 10 02.7	+0.5
PDAR	Pinedale Array	50.57	333	P	P	09 10 02.8	+0.5
	0.7nm,0.8s,mb3.6,baz=129,slow=9.5,SNR=6.1						
NVAR	Mina Array Bea	52.08	323	P	P	09 10 14.6	+0.8
	0.8nm,0.9s,mb3.6,baz=117,slow=8.1,SNR=4.2						
NVAR	Mina Array Bea	52.08	323	P	P	09 10 14.6	+0.8
ULM	Lac du Bonnet	52.66	348	P	P	09 10 18.1	+0.1
	4.6nm,0.7s,mb4.5,baz=154,slow=7.0,SNR=5.2						
ULM	Lac du Bonnet	52.66	348	eP	P	09 10 15.9	-2.0
	6.6nm,0.8s,mb4.6						
HLID	Hailey	53.48	330	eP	P	09 10 24.3	+0.2
	2.2nm,0.9s,mb4.1						
MCMT	McKenzie Canyo	53.67	332	eP	P	09 10 23.7	-1.8
BOZ	Bozeman (W)	53.75	334	eP	P	09 10 24.9	-1.1
	3.8nm,0.8s,mb4.4						
FCC	Fort Churchill	60.54	352	eP	P	09 11 12.1	-1.9
	9.9nm,0.9s,mb4.9						
YKA	Yellowknife Ar	68.23	344	P	P	09 12 03.7	-0.3
	1.8nm,0.9s,mb4.1,baz=136,slow=5.8,SNR=33						
YKA	Yellowknife Ar	68.23	344	P	P	09 12 03.7	-0.3
YKW3	Yellowknife Ar	68.29	344	eP	P	09 12 03.5	-0.9
DBIC	Dimbokro	76.56	83	P	P	09 12 52.6	-1.7
	5.1nm,1.0s,mb4.4,baz=250,slow=7.2,SNR=3.9						
ILAR	Eielson Array	80.83	337	P	P	09 13 15.6	-0.9
	1.4nm,0.8s,mb3.9,baz=144,slow=2.4,SNR=6.3						
ESDC	Sonseca Array	80.87	50	P	P	09 13 16.1	-1.2
	0.3nm,0.4s,mb3.6,baz=258,slow=5.0,SNR=3.5						
RSO	Redoubt South	81.93	332	eP	P	09 13 22.5	+0.2
CN2	Changchun	131.31	334	ePKP	PKPdf	09 20 13.0	-5.0
SONM	Songino Array	132.97	353	PKP	PKPdf	09 20 18.6	-2.4
	0.5nm,0.8s,baz=90,slow=2.9,SNR=2.4						
WMQ	Urumqi	136.31	12	ePKP	PKPdf	09 20 28.4	+1.2
ASAR	Alice Springs	137.95	232	PKhKP		09 20 21.1	
	1.7nm,1.3s,baz=142,slow=2.0,SNR=3.0						
ASAR				PKP	PKPdf	09 20 28.4	-2.4
	1.0nm,1.0s,baz=145,slow=2.1,SNR=5.8						
WRA	Warramunga Arr	139.38	237	PKP	PKPdf	09 20 30.1	-3.4
	0.8nm,0.9s,baz=110,slow=1.4,SNR=7.9						
SSE	Sheshan	143.40	327	ePKP	PKPdf	09 20 35.0	-5.3
NJ2	Nanjing	143.85	330	ePKP	PKPdf	09 20 35.1	-5.9
LZH	Lanzhou	144.86	353	ePKP	PKPdf	09 20 39.5	-3.2
LZH				APKP		09 20 47.4	
LZH				XPKP		09 20 50.3	
LZH				LR	LR		
	comp=N,149nm,18.0s						
LZH				LR	LR		
	comp=Z,259nm,20.1s,MS5.0						
DDI	Dehra Dun	144.87	32	e	PKPbc	09 20 39.9	+0.5
NDI	New Delhi	145.67	35	e	PKPbc	09 20 41.0	-0.5
ENH	Enshi	149.25	342	ePKPbc	PKPdf	09 20 51.7	+1.6

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*NEIC **16** 09:03:15.4, 31.14S×69.08W, h140^{km}, MD3.5(GUC), After GUC.*

GUC 16 09:03:15.4±0.7**, 31.14S**×**69.08W, h140^{km}, MD3.5, ML3.3, 2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	0.53	140	⇓iP	P	09 03 33.0	-3.3
ZON				eS	S	09 03 45.0	-7.3
PTCH	Petorca	1.93	234	eP	P	09 03 49.9	+0.4
PTCH				i S	S	09 04 15.4	-0.2
PTCH				AMP		09 04 17.1	
	comp=N,540nm,0.2s						
FCH	Farellones	2.41	205	eP	P	09 03 56.4	+0.9
FCH				i S	S	09 04 27.0	+0.9
FCH				AMP		09 04 33.3	
	comp=E,70nm,0.2s						
PACH	Papudo	2.44	235	⇓iP	P	09 03 55.5	-0.4
CLCH	Cerro Calan	2.56	208	eP	P	09 03 57.5	0.0
CLCH				i S	S	09 04 29.9	+0.4
CLCH				AMP		09 04 34.8	
	comp=N,60nm,0.4s						
RCDM	Rinconada Maip	2.76	211	eP	P	09 03 59.9	-0.1
RCDM				i S	S	09 04 33.7	-0.3
RCDM				AMP		09 04 35.8	
	comp=E,115nm,0.4s						
CHCH	Chadas Angostu	3.08	205	eP	P	09 04 04.0	-0.3

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*IDC **16** 09:11:23.5±0.8, 22.83S×66.33W, h233^{km}±7^{km}, mb3.8/16, mb1 4.0/19, mb1mx4.0/22, mbtmp4.5/19, Error ellipse: s-maj=12.9km s-min=9.3km az=70.0*

*GUC **16** 09:11:24.6±0.7, 23.06S×66.84W, h262^{km}±7^{km}, MD4.8, ML4.7*

*BJI **16** 09:11:24.2, 22.80S×66.30W, h239^{km}, mB4.7*

*NEIC **16** 09:11:24.2±0.6, 22.82S×66.34W, h239^{km}±4^{km}, mb4.2/22, Error ellipse: s-maj=10.1km s-min=6.2km az=85.0*

ISC 16 09:11:23.1±0.6**, 22.90S**±0.04×**66.44W**±0.07**, h246^{km}**±5^{km}**, n82, σ1^{s}06**/78**, mb4.1**/35**, 5C-7D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	San Pedro de A	1.63	269	⇑iP	P	09 12 04.5	+2.2
SPCH				i S	S	09 12 34.7	+2.0
SPCH				AMP		09 12 52.6	
	comp=N,2μm,0.9s						
LVC	Limon Verde	2.30	277	⇑iP	P	09 12 09.9	+1.5
LVC				i S	S	09 12 44.1	+0.5
LVC				AMP		09 12 45.1	
	comp=E,4μm,0.5s						
LVC	Limon Verde	2.30	277	P	P	09 12 09.7	+1.3
	comp=E,744nm,0.3s,baz=97,slow=5.9,SNR=9638						
LVC				S	S	09 12 44.2	+0.6
	comp=E,478nm,0.3s,baz=248,slow=20,SNR=37						
LVC	Limon Verde	2.30	277	eP	P	09 12 09.2	+0.7
LVC				i S	S	09 12 44.2	+0.6
ANCH	Antofagasta	3.74	257	⇑iP	P	09 12 25.5	+1.4
ANCH				i S	S	09 13 10.9	-0.7
CPN1	Cerro Paranal	4.02	244	eP	P	09 12 28.0	+0.5
CPN1				i S	S	09 13 16.5	-1.1
CPCH	Copiapo	5.69	218	⇓iP	P	09 12 46.0	-1.9
CPCH				i S	S	09 13 50.1	-4.0
LPAZ	La Paz	6.76	346	P	P	09 13 02.7	+1.3
	comp=E,13nm,0.3s,baz=147,slow=9.3,SNR=177						
LPAZ				S	S	09 14 18.5	+0.2
	comp=E,1.8nm,0.3s,baz=268,slow=22,SNR=7.5						
LPAZ	La Paz	6.76	346	eP	P	09 13 01.8	+0.4
LPAZ				eS	S	09 14 18.2	-0.1
VACH	Vallenar	6.87	214	eP	P	09 13 01.2	-1.5
VACH				i S	S	09 14 17.2	-3.5
ARE	Arequipa	7.97	322	eP	P	09 13 16.0	-0.8
ARE				eS	S	09 14 44.0	-1.9
ZON	Zonda	8.85	193	eP	P	09 13 26.0	-1.9
ZON				eS	S	09 14 56.0	-10
SAML	Samuel	14.21	13	eP	P	09 14 33.7	-1.6
	comp=E,22nm,0.6s						

NNA	**Nana**	**14.70**	**316**	*e*P	**P**	**09 14 41.4**	**+0.2**
	comp=E,17nm,0.7s						
PLCA	**Paso Flores**	**18.12**	**190**	P	**P**	**09 15 18.9**	**-0.5**
	comp=E,0.4nm,0.3s,baz=9.1,slow=12,SNR=19						
BDFB	**Brasilia**	**18.82**	**71**	P	**P**	**09 15 25.6**	**-1.0**
	comp=E,4.6nm,0.3s,baz=254,slow=11,SNR=60						
CAM4	**Nova Friburgo**	**22.04**	**93**	⇓*i*P	**P**	**09 15 58.5**	**+0.1**
CAM4				*i*		09 15 59.3	
OTAV	**Otavalo**	**25.80**	**331**	P	**P**	**09 16 34.9**	**+1.2**
	comp=E,1.2nm,0.5s,mb3.8						
SDV	**Santo Domingo**	**31.85**	**352**	P	**P**	**09 17 28.1**	**+0.7**
	comp=E,4.5nm,0.4s,mb4.4,baz=109,slow=3.1,SNR=5.4						
USHA	**Ushuaia**	**31.93**	**182**	P	**P**	**09 17 27.7**	**0.0**
	comp=E,6.6nm,1.0s,mb4.1,baz=331,slow=9.1,SNR=4.5						
TEIG	**Tepich**	**47.86**	**332**	*e*P	**P**	**09 19 37.6**	**-0.8**
	comp=E,5.1nm,0.5s,mb4.1						
VNA3	**Neumayer Olymp**	**58.03**	**161**	⇓*i*P	**P**	**09 20 52.8**	**+0.8**
VNA3	**Neumayer Olymp**	**58.03**	**161**	*e*	PcP	09 21 37.1	-4.0
JSC	**Jenkinsville**	**58.58**	**346**	*e*P	**P**	**09 20 55.3**	**-1.1**
VNA2	**Neumayer--Watz**	**58.58**	**161**	⇓*i*P	**P**	**09 20 56.8**	**+1.0**
VNA2	**Neumayer--Watz**	**58.58**	**161**	*e*	PcP	09 21 40.5	-2.8
SNAA	**Sanae**	**60.22**	**161**	*e*	PcP	09 21 44.0	-5.8
SNAA	**Sanae**	**60.22**	**161**	P	**P**	**09 21 07.1**	**+0.1**
	comp=E,5.3nm,0.8s,mb4.2,baz=306,slow=6.7,SNR=11						
SNAA	**Sanae**	**60.22**	**161**	⇓*i*P	**P**	**09 21 07.7**	**+0.7**
SNAA				*e*		09 21 44.0	
OXF	**Oxford**	**61.12**	**338**	*e*P	**P**	**09 21 11.9**	**-1.7**
	comp=E,11nm,0.6s,mb4.7						
JCT	**Junction City**	**61.99**	**327**	*e*P	**P**	**09 21 18.4**	**-0.9**
	comp=E,2.7nm,0.5s,mb4.1						
WVT	**Waverly**	**62.09**	**340**	*e*P	**P**	**09 21 18.0**	**-2.0**
	comp=E,9.7nm,0.5s,mb4.7						
MIAR	**Mount Ida**	**62.67**	**335**	*e*P	**P**	**09 21 22.6**	**-1.2**
	comp=E,2.8nm,0.5s,mb4.2						
TXAR	**Lajitas Array**	**63.09**	**324**	P	**P**	**09 21 26.4**	**-0.2**
	comp=E,0.7nm,0.4s,mb3.6,baz=154,slow=8.1,SNR=37						
SSPA	**Standing Stone**	**64.09**	**350**	*e*P	**P**	**09 21 32.2**	**-0.7**
	comp=E,1.3nm,0.6s,mb3.7						
CCM	**Cathedral Cave**	**64.95**	**339**	*e*P	**P**	**09 21 37.0**	**-1.6**
	comp=E,11nm,0.6s,mb4.7						
WMOK	**Wichita Mounta**	**65.03**	**331**	*e*P	**P**	**09 21 38.6**	**-0.4**
	comp=E,2.5nm,0.5s,mb4.1						
BINY	**Binghamton**	**65.36**	**352**	*e*P	**P**	**09 21 40.0**	**-1.0**
	comp=E,8.6nm,0.8s,mb4.4						
MNTX	**Cornudas Mount**	**65.85**	**324**	*e*P	**P**	**09 21 42.8**	**-1.5**
	comp=E,2.4nm,0.6s,mb4.0						
DBIC	**Dimbokro**	**66.96**	**72**	P	**P**	**09 21 50.0**	**-1.6**
	comp=E,3.5nm,0.5s,mb4.2,baz=217,slow=7.6,SNR=10.0						
QSPA	**South Pole Qui**	**67.31**	**180**	⇓*i*P	**P**	**09 21 54.2**	**+1.5**
	comp=E,12nm,0.8s,mb4.6						
ANMO	**Albuquerque**	**68.93**	**326**	P	**P**	**09 22 04.2**	**+0.8**
	comp=E,2.1nm,0.7s,mb3.9,baz=141,slow=6.0,SNR=11						
ANMO	**Albuquerque**	**68.93**	**326**	*e*P	**P**	**09 22 03.7**	**+0.3**
	comp=E,2.1nm,0.8s,mb3.8						
TUC	**Tucson**	**69.35**	**321**	*e*P	**P**	**09 22 06.1**	**+0.1**
	comp=E,1.0nm,0.7s,mb3.5						
PV01	**Paradox Valley**	**72.46**	**326**	*e*P	**P**	**09 22 25.8**	**+1.2**
SYO	**Syowa Base**	**74.39**	**159**	⇓P	**P**	**09 22 35.9**	**+0.7**
SYO	**Syowa Base**	**74.39**	**159**	⇑PcP	PcP	09 22 45.4	-3.5
SYO	**Syowa Base**	**74.39**	**159**	⇑pP	pP	09 23 28.6	-4.5
MSU	**Marysvale**	**74.63**	**324**	*e*P	**P**	**09 22 38.2**	**+1.0**
MVU	**Marysvale**	**74.64**	**324**	*e*P	**P**	**09 22 38.6**	**+1.3**
	comp=E,2.9nm,0.8s,mb4.0						
ARUT	**Antelope Range**	**74.80**	**323**	*e*P	**P**	**09 22 38.5**	**+0.4**
DAU	**Daniels Canyon**	**75.54**	**326**	*e*P	**P**	**09 22 43.0**	**+0.7**
JLU	**Jordanelle**	**75.78**	**326**	*e*P	**P**	**09 22 44.1**	**+0.4**
VNDA	**Vanda**	**75.87**	**190**	P	**P**	**09 22 45.2**	**+1.8**
	comp=E,1.8nm,0.8s,mb3.8,baz=199,slow=5.9,SNR=3.8						
SUR	**Sutherland**	**75.90**	**119**	P	**P**	**09 22 45.0**	**+0.5**
	comp=E,4.5nm,0.7s,mb4.2,baz=178,slow=12,SNR=4.3						
DUG	**Dugway**	**76.19**	**325**	*e*P	**P**	**09 22 47.1**	**+1.1**
	comp=E,3.1nm,1.0s,mb3.9						
PDAR	**Pinedale Array**	**76.47**	**329**	P	**P**	**09 22 48.0**	**+0.6**
	comp=E,0.9nm,0.6s,mb3.5,baz=124,slow=7.6,SNR=11						
SPUT	**South Promonto**	**76.81**	**326**	*e*P	**P**	**09 22 50.0**	**+0.7**
ULM	**Lac du Bonnet**	**77.35**	**341**	P	**P**	**09 22 51.5**	**-0.6**
	comp=E,2.5nm,0.7s,mb4.0,baz=142,slow=5.4,SNR=6.8						
SCHQ	**Schefferville**	**77.41**	**360**	P	**P**	**09 22 52.0**	**-0.3**
	comp=E,2.9nm,0.7s,mb4.0,baz=203,slow=5.4,SNR=6.9						
TSUM	**Tsumeb**	**77.45**	**106**	P	**P**	**09 22 53.1**	**-0.2**
	comp=E,4.9nm,0.7s,mb4.3,baz=231,slow=6.7,SNR=13						
TSUM				pP	pP	09 23 50.3	-1.3
	comp=E,2.6nm,0.8s,baz=215,slow=7.3,SNR=3.3						
ELK	**Elko**	**77.88**	**324**	*e*P	**P**	**09 22 55.4**	**+0.2**
	comp=E,3.6nm,1.1s,mb3.9						
MNV	**Mina**	**77.92**	**321**	P	**P**	**09 22 56.0**	**+0.5**
	comp=E,1.7nm,0.9s,mb3.7						
IMW	**Indian Meadow**	**77.98**	**329**	*e*P	**P**	**09 22 56.8**	**+1.1**
NVAR	**Mina Array Bea**	**78.01**	**321**	P	**P**	**09 22 56.2**	**+0.3**
	comp=E,0.7nm,0.5s,mb3.6,baz=132,slow=7.6,SNR=9.5						
HLID	**Hailey**	**79.45**	**327**	*e*P	**P**	**09 23 04.4**	**+0.8**
	comp=E,4.2nm,0.7s,mb4.2						
MCMT	**McKenzie Canyo**	**79.59**	**328**	*e*P	**P**	**09 23 05.6**	**+1.3**
YBH	**Yreka Blue Hor**	**82.72**	**321**	P	**P**	**09 23 20.5**	**-0.2**
	comp=E,2.1nm,0.9s,mb3.9,baz=11,slow=1.9,SNR=4.7						
FCC	**Fort Churchill**	**84.52**	**346**	*e*P	**P**	**09 23 29.3**	**+0.1**
	comp=E,6.7nm,0.6s,mb4.5						
ESDC	**Sonseca Array**	**85.24**	**43**	P	**P**	**09 23 33.3**	**0.0**
	comp=E,3.2nm,0.7s,mb4.2,baz=234,slow=5.0,SNR=13						
YKA	**Yellowknife Ar**	**93.27**	**340**	P	**P**	**09 24 10.6**	**+0.1**
	comp=E,1.1nm,0.6s,mb4.1,baz=132,slow=4.6,SNR=39						
YKA				pP	pP	09 25 08.1	-2.4
	comp=E,0.3nm,0.7s,baz=128,slow=4.6,SNR=1.9						
ASAR	**Alice Springs**	**129.67**	**204**	PKP	PKPdf	09 30 05.0	+1.4
	comp=E,2.3nm,0.7s,baz=142,slow=2.2,SNR=24						
ASAR				SKPbc		09 33 04.3	
	comp=E,1.7nm,0.8s,baz=141,slow=4.4,SNR=9.4						
WRA	**Warramunga Arr**	**132.84**	**207**	PKP	PKPdf	09 30 11.5	+1.8
	comp=E,1.5nm,0.6s,baz=166,slow=1.7,SNR=28						
WRA				SKPbc		09 33 16.5	
	comp=E,3.6nm,0.8s,baz=149,slow=3.1,SNR=17						
WRAB	**Tennant Creek**	**132.85**	**207**	*e*PKPdf	PKPdf	09 30 11.2	+1.5
BVAR	**Borovoye Array**	**135.60**	**36**	PKP	PKPdf	09 30 16.2	+2.4
	comp=E,1.2nm,0.6s,baz=297,slow=3.3,SNR=7.8						
WMQ	**Urumqi**	**150.17**	**39**	*e*PKP	PKPdf	09 30 47.0	+7.8
TLY	**Talaya**	**150.26**	**12**	*e*PKPbc	PKPdf	09 30 47.1	+8.0
SONM	**Songino Array**	**154.46**	**11**	PKP	PKPdf	09 30 47.3	+2.1
	comp=E,1.6nm,0.8s,baz=347,slow=0.8,SNR=12						
SONM				PKPbc	PKPdf	09 30 56.3	+11
	comp=E,4.1nm,1.1s,baz=316,slow=1.7,SNR=14						
SONM				PKPab	PKPab	09 31 11.6	-0.1
	comp=E,1.7nm,0.7s,baz=318,slow=4.3,SNR=8.6						
CN2	**Changchun**	**156.95**	**338**	*e*PKP	PKPdf	09 30 50.9	+2.2
LZH	**Lanzhou**	**164.38**	**31**	*e*PKP	PKPdf	09 30 57.9	+1.0
LZH				APKP		09 31 56.3	
LZH				XPKP		09 32 19.9	
CMAR	**Chiang Mai Arr**	**165.62**	**105**	PKPab	PKPab	09 32 00.7	-0.2
	comp=E,3.5nm,0.8s,baz=260,slow=5.5,SNR=10						
SSE	**Sheshan**	**169.38**	**322**	*e*PKP	PKPdf	09 31 02.8	+2.1

IGQ 16 09:17:53.8,1.13S×81.53W,h12^{km}±7^{km},mb4.0,1C,Error ellipse: s-maj=11.3km s-min=8.3km az=111.6,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.98**	**86**	P	Pb	09 18 09.9	-2.3
IGUA	**Igualata**	**2.91**	**97**	P	Pn	09 18 41.8	+0.9
JUA2	**San Juan 2**	**3.06**	**73**	P	Pn	09 18 44.1	+1.1
JUA2				S	Sn	09 19 18.5	-1.3
TERV	**Terraza Guagua**	**3.07**	**72**	P	Pn	09 18 44.0	+0.9
PINO	**Pino**	**3.07**	**72**	P	Pn	09 18 43.7	+0.5
ARRY	**Arrayan**	**3.09**	**97**	P	Pn	09 18 44.5	+1.1
ARRY				S	Sn	09 19 18.7	-2.0
YANA	**Yana**	**3.12**	**71**	P	Pn	09 18 44.4	+0.6
ULBA	**Ulba**	**3.13**	**96**	P	Pn	09 18 45.6	+1.6
ULBA				S	Sn	09 19 23.5	+1.7
PISA	**Pisayambo**	**3.14**	**89**	P	Pn	09 18 45.5	+1.4
PISA				S	Sn	09 19 22.4	+0.5
VC1	**Cotopaxi 1**	**3.16**	**81**	P	Pn	09 18 47.2	+2.9
TAMB	**Tambo**	**3.19**	**82**	P	Pn	09 18 47.7	+3.0
ANTI	**Antisana**	**3.43**	**79**	⇑P	Pn	09 18 50.5	+2.2
ANTI				S	Sn	09 19 28.4	-0.8
COTA	**Cotacachi**	**3.50**	**66**	P	Pn	09 18 50.3	+1.0
CAYR	**Refugio Cayamb**	**3.70**	**72**	P	Pn	09 18 54.8	+2.8
CAYA	**Cayambe**	**3.73**	**71**	P	Pn	09 18 55.1	+2.6
ECEN	**Cerro Negro**	**4.05**	**61**	P	Pn	09 18 59.7	+2.7

*IDC **16** 09:22:60.0±0.8,67.19N×21.13E,mb1 2.9/4, mb1mx2.9/20,mbtmp2.9/4,ML2.6/4,Error ellipse: s-maj=15.0km s-min=6.1km az=116.0*

*NAO **16** 09:22:59.6±2.1,67.19N×20.71E,ML2.1*

*BER **16** 09:23:00.8±4.7,67.18N×20.60E,ML1.9,ML2.1(NAO), Suspected explosion*

HEL 16 09:22:59.7±0.1**,67.22N×20.74E,ML2.0,ML1.9**(BER)**, ML2.1**(NAO)**,Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KIF	**Kilpisjarvi**	**1.80**	**1**	*e*P	Pn	09 23 32.0	-0.2
KIF				*e*S	Sn	09 23 55.8	-0.2
KTK1	**Kautokeino**	**2.03**	**26**	*e*P	Pn	09 23 36.8	+1.3
KTK1				*e*SG	Sg	09 24 04.3	-3.0
KTK1				AML	AML	09 24 05.3	
	comp=Z,19nm,0.2s						
SGF	**Sodankyl**	**2.25**	**82**	*e*P	Pn	09 23 37.8	-0.9
SGF				*e*S	Sn	09 24 06.8	-0.8
SGF				MSG		09 24 12.1	
	comp=Z,5.3nm,0.2s						
MOR8	**Moi Rana**	**2.72**	**250**	*e*P	Pn	09 23 43.0	-2.4
MOR8				*e*SB	Sb	09 24 16.7	-6.3
MOR8				AML	AML	09 24 21.1	
	comp=Z,12nm,0.4s						
ARA0	**ARCESS Array S**	**2.92**	**35**	Pn	Pn	09 23 47.2	-1.1
	baz=210,slow=14						
ARA0				Sn	Sn	09 24 23.6	-1.1
	baz=215,slow=28						
ARA0	**ARCESS Array S**	**2.92**	**35**	*e*P	Pn	09 23 47.2	-1.1
ARA0				*e*S	Sn	09 24 23.6	-1.1
ARCES	**ARCESS Array B**	**2.92**	**35**	Pn	Pn	09 23 47.6	-0.7
	comp=Z,0.9nm,0.3s,baz=214,slow=13,SNR=45						
ARCES				Sn	Sn	09 24 23.7	-0.9
	comp=Z,0.9nm,0.3s,baz=213,slow=25,SNR=5.0						
ARCES				Lg		09 24 28.2	
	comp=Z,2.4nm,0.3s,baz=214,slow=27,SNR=11						
OUL	**Oulu**	**2.99**	**133**	MSG		09 24 34.7	
	comp=Z,4.6nm,0.3s						
STOK	**Stokkvaagen**	**3.19**	**257**	*e*P	Pn	09 23 50.6	-1.4
STOK				*e*SG	Sg	09 24 37.8	-8.0
STOK				AML	AML	09 24 42.4	
	comp=Z,6.9nm,0.6s						
KEV	**Kevo**	**3.44**	**39**	*e*P	Pn	09 23 54.2	-1.4
KEV				*e*S	Sn	09 24 34.3	-3.4
MSF	**Maaselka**	**3.56**	**108**	*e*P	Pn	09 23 55.7	-1.7
MSF				*e*SG	Sg	09 24 49.0	-9.3
MSF				MSG		09 24 51.4	
	comp=Z,4.7nm,0.4s						
KU4	**Oulanka**	**3.60**	**100**	*e*P	Pn	09 23 56.3	-1.7
KU4				*e*S	Sn	09 24 39.4	-2.4
KU4				*e*SG	Sg	09 24 51.2	-8.4
KJN	**Kajaani**	**4.26**	**134**	*e*SG	Sg	09 25 10.3	-11
KJN				MSG		09 25 13.5	
	comp=Z,3.4nm,0.3s						
VAF	**Ylistaro**	**4.27**	**168**	*e*SG	Sg	09 25 10.4	-11
NSS	**Namsos**	**4.50**	**237**	*e*SG	Sg	09 25 17.4	-12
NSS				AML	AML	09 25 22.6	
	comp=Z,4.9nm,0.5s						
APA0	**Apatity Array**	**4.74**	**80**	Pn	Pn	09 24 12.0	-2.1
	baz=273,slow=12						
APA0				Pg	Pg	09 24 23.3	-11
	baz=271,slow=14						
APA0				Sn	Sn	09 25 06.3	-4.4
	baz=277,slow=37						
APA0	**Apatity Array**	**4.74**	**80**	*e*P	Pn	09 24 12.0	-2.1
APA0				*e*PG	Pg	09 24 23.3	-11
APA0				*e*S	Sn	09 25 06.3	-4.4
FIA0	**FINESS Array S**	**6.24**	**156**	Pn	Pn	09 24 32.9	-2.4
	baz=346,slow=12						
FIA0				Sn	Sn	09 25 41.8	-6.5
	baz=357,slow=22						
FIA0				Lg		09 26 12.2	
	baz=350,slow=28						
FIA0	**FINESS Array S**	**6.24**	**156**	*e*P	Pn	09 24 32.9	-2.4
FIA0				*e*S	Sn	09 25 41.8	-6.5
FIA0				*e*SG	Sg	09 26 12.2	-15
FINES	**FINESS Array B**	**6.24**	**156**	Pn	Pn	09 24 32.8	-2.5
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=2.9						
FINES				Sn	Sn	09 25 42.4	-5.9
	comp=Z,0.2nm,0.3s,baz=341,slow=25,SNR=5.1						
FINES				Lg		09 26 13.0	
	comp=Z,0.4nm,0.3s,baz=345,slow=32,SNR=4.2						
NOA	**NORSAR Array B**	**7.46**	**218**	Pn	Pn	09 24 49.2	-3.3
	comp=Z,0.1nm,0.3s,baz=267,slow=19,SNR=2.2						
NOA				Sn	Sn	09 26 12.4	-6.4
	comp=Z,0.1nm,0.3s,baz=214,slow=9.6,SNR=2.5						
HFS	**Hagfors**	**7.76**	**207**	Pn	Pn	09 24 52.6	-4.0
	baz=42,slow=16						
HFS				Sn	Sn	09 26 14.1	-12
	baz=21,slow=28						
HFS	**Hagfors**	**7.76**	**207**	*e*P	Pn	09 24 52.6	-4.0
HFS				*e*S	Sn	09 26 14.1	-12
HFS	**Hagfors**	**7.76**	**207**	Pn	Pn	09 24 52.6	-4.1
	comp=Z,0.0nm,0.3s,baz=21,slow=12,SNR=4.1						
HFS				Sn	Sn	09 26 18.5	-7.8
	comp=Z,0.1nm,0.3s,baz=17,slow=24,SNR=4.2						

CASC 16 09:28:27.3±2.4**,11.42N×86.31W,h99**^{km}±10^{km}**,MD3.9, ML3.4,4C-6D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**0.47**	**107**	⇓*i*P	P	09 28 43.7	+0.7
SSNN				*e*S	S	09 28 55.8	+1.1
SSNN				*i*		09 28 56.5	
	comp=Z,2μm,0.2s						
APON	**Apoyo**	**0.55**	**26**	⇓*e*P	P	09 28 43.8	+0.2
APON				*e*S	S	09 28 56.2	+0.6
MASN	**Masaya**	**0.58**	**16**	*e*S	S	09 28 58.1	+2.0
TICN	**Ticuantepe**	**0.61**	**7**	*e*P	P	09 28 44.5	+0.5
TICN				*e*S	S	09 28 57.2	+0.7
CONN	**Concepcion**	**0.69**	**78**	⇓*i*P	P	09 28 44.7	0.0
CONN				*e*S	S	09 28 57.5	-0.2
XAVN	**Gruta Xavier**	**0.72**	**359**	*e*P	P	09 28 45.4	+0.4
XAVN				*e*S	S	09 28 59.6	+1.4
MGAN	**Managua**	**0.72**	**5**	*e*P	P	09 28 43.3	-1.7
MGAN				*e*S	S	09 28 58.0	-0.2
MGAN				*i*		09 28 59.9	
	comp=N,704nm,0.3s						
WILN	**Americas 2**	**0.74**	**10**	⇓*i*P	P	09 28 45.3	+0.1
WILN				*e*S	S	09 28 59.0	+0.4
MADN	**Villa Maderas**	**0.77**	**91**	*e*P	P	09 28 45.3	-0.2
COPN	**Copaltepe**	**0.80**	**340**	⇓*e*P	P	09 28 46.1	+0.2
COPN				*e*S	S	09 28 59.8	+0.3
APYN	**Apoyeque**	**0.81**	**357**	*e*P	P	09 28 46.1	+0.2
APYN				*e*S	S	09 29 00.6	+0.9
MOMJ	**Momotombo**	**1.00**	**347**	⇑*e*P	P	09 28 47.9	0.0
MOMJ				*e*S	S	09 29 03.6	+0.1
MIRN	**Miramar**	**1.08**	**339**	⇑*e*P	P	09 28 49.2	+0.3
MIRN				*e*S	S	09 29 05.5	+0.4
CNGN	**Cerro Negro**	**1.13**	**341**	*e*S	S	09 29 06.7	+0.5
PYTN	**Playitas**	**1.14**	**13**	*e*P	P	09 28 49.2	-0.3
PYTN				⇓*i*P		09 28 49.4	
PYTN				*e*S	S	09 29 05.8	-0.4
LEON	**Leon**	**1.14**	**330**	⇑*e*P	P	09 28 49.9	+0.3
LEON				*e*S	S	09 29 05.5	-0.8
TEL3	**Telica 3**	**1.25**	**336**	⇑*e*P	P	09 28 51.4	+0.4
TEL3				*e*S	S	09 29 08.6	-0.1
TEL3				*i*		09 29 13.4	
	comp=Z,380nm,0.4s						
TELN	**Telica**	**1.28**	**337**	*e*P	P	09 28 52.3	+1.0
TELN				*e*S	S	09 29 09.1	-0.1
VCR	**Vista de Mar**	**1.45**	**152**	*e*P	P	09 28 54.2	+0.9
VCR				*e*S	S	09 29 14.7	+2.0
CRIN	**San Cristobal**	**1.46**	**330**	*e*P	P	09 28 53.8	+0.3
CRIN				*e*S	S	09 29 13.5	+0.7
JCR	**Jicaral**	**1.96**	**143**	*e*P	P	09 29 00.8	+1.0
JCR				*e*S	S	09 29 23.3	-0.5
CGA2	**Cerro Gallo 2**	**2.29**	**127**	*e*P	P	09 29 05.5	+1.2
CGA2				*e*S	S	09 29 32.7	+0.8
PRS1	**Puriscal**	**2.43**	**126**	*e*P	P	09 29 07.4	+1.1
PRS1				*e*S	S	09 29 35.9	+0.6
LAJ	**Bijagual**	**2.65**	**126**	*e*P	P	09 29 08.6	-0.7
LAJ				*e*S	S	09 29 36.1	-4.7
LCR2	**La Lucha 2**	**2.82**	**126**	*e*P	P	09 29 11.7	+0.1
LCR2				*e*S	S	09 29 44.1	-0.7
SNVI	**San Vicente**	**3.29**	**312**	*e*P	P	09 29 18.2	+0.2
SNVI				*e*S	S	09 29 54.6	-1.7
LCBS	**La Ceiba**	**3.42**	**311**	*e*P	P	09 29 18.9	-0.9
LFRS	**El Faro**	**3.46**	**309**	*e*P	P	09 29 19.8	-0.6
BOQS	**Boqueron**	**3.70**	**309**	*e*P	P	09 29 22.9	-0.6
SBLS	**San Blas**	**4.03**	**307**	*e*P	P	09 29 27.6	-0.5

*MOS **16** 09:45:10.3±1.1,53.35N×160.34E,h43^{km},mb4.2/1,Error ellipse: s-maj=80.2km s-min=23.2km az=56.7*

KRSC 16 09:45:09.9±0.6**,53.33N×160.42E,h40**^{km}±4^{km}**,ML4.1, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.33**	**226**	P	P	09 45 18.7	+0.1
SPN				S	S	09 45 25.0	+0.4
SPN	**Mys Shipunski**	**0.33**	**226**	*i* P	P	09 45 18.6	0.0
SPN				*i* S	S	09 45 25.0	+0.4
NLC	**Nalytchevo**	**0.67**	**257**	*i* P	P	09 45 23.0	+0.1
NLC				*i* S	S	09 45 32.9	+0.6
SDLR	**Sedlovina**	**0.92**	**267**	*i* P	P	09 45 27.0	+0.5
SDLR				*i* S	S	09 45 39.6	+0.8
UGLR	**Uglovaya**	**0.97**	**263**	*i* P	P	09 45 27.9	+0.8
SMAR	**Somma**	**0.97**	**267**	*i* P	P	09 45 27.7	+0.5
AVH	**Avacha**	**1.01**	**267**	*i* P	P	09 45 28.5	+0.7
AVH				*e*S	S	09 45 42.1	+1.1
KOK	**Koryaka**	**1.07**	**269**	*i* P	P	09 45 29.1	+0.5
KOK				*i* S	S	09 45 43.1	+0.6
PET	**Petropavlovsk**	**1.11**	**255**	P	P	09 45 29.2	+0.1
PET				S	S	09 45 43.5	+0.1
PET	**Petropavlovsk**	**1.11**	**255**	*i* P	P	09 45 29.3	+0.2
PET				*e*S	S	09 45 43.5	+0.1
RUS	**Russkaya**	**1.46**	**233**	P	P	09 45 33.7	-0.6
RUS				S	S	09 45 51.5	-1.0
RUS	**Russkaya**	**1.46**	**233**	*i* P	P	09 45 33.8	-0.5
RUS				*e*S	S	09 45 51.5	-1.0
KRMR	**Karymshinskiy**	**1.47**	**251**	*e*P	P	09 45 34.7	+0.3
KRMR				*e*S	S	09 45 53.3	+0.7
GNL	**Ganaly**	**1.52**	**285**	*i* P	P	09 45 35.8	+0.6
GNL				*e*S	S	09 45 54.8	+0.8
GRL	**Gorelyy**	**1.62**	**242**	*e*P	P	09 45 36.9	+0.4
GRL				*e*S	S	09 45 56.6	+0.3
TUMR	**Tumrok**	**1.96**	**355**	*i* P	P	09 45 41.8	+0.4
TUMR				*e*S	S	09 46 05.4	+0.5
APC	**Apacha**	**2.01**	**260**	*i* P	P	09 45 43.0	+1.0
APC				*i* S	S	09 46 07.4	+1.4
APC				Smax			
	170nm,0.7s						
KMNR	**Kamenistaya**	**2.43**	**358**	*e*P	P	09 45 49.2	+1.1
KMNR				*e*S	S	09 46 17.6	+0.7
ESO	**Esso**	**2.79**	**340**	*e*P	P	09 45 53.0	-0.1
ESO				*e*S	S	09 46 25.2	-0.6
ESO				Smax			
	40nm,0.9s						
PAU	**Pauzhetka**	**2.89**	**231**	*e*P	P	09 45 57.2	+2.5
PAU				*e*S	S	09 46 31.2	+2.7
PAU				Smax			
	200nm,0.7s						
SRDR	**Sredinnyy**	**3.02**	**353**	*e*P	P	09 45 56.1	-0.4
KBTR	**Krutoberegovo**	**3.20**	**25**	P	P	09 45 58.4	-0.6
KBTR				S	S	09 46 33.7	-2.7
KBTR	**Krutoberegovo**	**3.20**	**25**	*e*P	P	09 45 59.9	+0.9
KBTR				*e*S	S	09 46 36.5	+0.1
KBG	**Krutoberegovo**	**3.22**	**23**	P	P	09 45 58.7	-0.5
KBG				*e*S	S	09 46 33.7	-3.1
KBG				Smax			
	300nm,0.7s						
KBG	**Krutoberegovo**	**3.22**	**23**	*e*S	S	09 46 37.7	+0.9
SVLR	**Shiveluch**	**3.29**	**8**	*e*P	P	09 46 00.5	+0.3
SVLR				*e*S	S	09 46 37.8	-0.8
SKR	**Severo-Kuril's**	**3.75**	**227**	*e*PN	P	09 46 20.2	+13
SKR				*e*S	S	09 46 50.5	+0.1
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,110nm,0.3s						
SKR				smax			
	comp=E,90nm,0.3s						
SKR	**Severo-Kuril's**	**3.75**	**227**	*e*S	S	09 46 53.0	+2.6
BKI	**Bering**	**3.76**	**58**	*i* P	P	09 46 04.1	-2.8
BKI				*i* S	S	09 46 43.0	-7.5

*NEIC **16** 09:57:50.8±1.8,22.46S×172.58E,h52^{km}±14^{km},mb4.5/8, Error ellipse: s-maj=17.3km s-min=11.5km az=204.0*

*IDC **16** 09:57:52.6±9.1,22.57S×172.59E,h69^{km}±82^{km},mb4.0/10, mb1 4.2/11,mb1mx4.1/17,mbtmp4.3/11,ML4.0/1,MS4.3/10, Ms1 4.4/10,ms1mx4.0/23,Error ellipse: s-maj=39.2km s-min=23.6km az=9.0*

ISC 16 09:57:49.9±2.2**,22.5S**±0.1×**172.57E**±0.09**,h59**^{km}±18^{km}**, n31,**$\sigma 0^{s}94$/29**,mb4.4**/15**,MS4.3**/9**,1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.69**	**273**	*e*P	**P**	**09 59 12.7**	**-1.0**
DZM				*e*S	**S**	**10 00 19.3**	**+0.7**
DZM	**Mont Dzumac**	**5.69**	**273**	*e*P	**P**	**09 59 12.7**	**-1.0**
DZM				*e*S	**S**	**10 00 19.3**	**+0.7**
NOUC	**Port Laguerre**	**5.82**	**272**	*e*P	**P**	**09 59 14.7**	**-0.8**
NOUC				*e*S	**S**	**10 00 23.2**	**+1.4**
NOUC	**Port Laguerre**	**5.82**	**272**	*e*P	**P**	**09 59 14.7**	**-0.8**
NOUC				*e*S	**S**	**10 00 23.2**	**+1.4**
URZ	**Urewera**	**16.21**	**167**	P	**P**	**10 01 35.3**	**+0.2**
	0.5nm,0.3s,baz=57,slow=12,SNR=8.3						
URZ				LR	LR	10 06 09.0	
	comp=Z,2μm,20.6s,baz=350,slow=31						
RPZ	**Rata Peaks**	**21.22**	**183**	LR	LR	10 09 51.2	
	comp=Z,1μm,19.3s,MS4.4,baz=18,slow=34						
CTA	**Charters Tower**	**24.63**	**271**	*e*P	**P**	**10 03 08.8**	**+2.5**
	3.8nm,0.6s,mb4.1						
CTA	**Charters Tower**	**24.63**	**271**	P	**P**	**10 03 08.3**	**+2.0**
	5.6nm,0.7s,mb4.2,baz=102,slow=9.4,SNR=9.9						
CTA				LR	LR	10 11 49.8	
	comp=Z,417nm,18.1s,MS4.0,baz=88,slow=34						
CTAO	**Charters Tower**	**24.63**	**271**	*e*P	**P**	**10 03 08.1**	**+1.9**
	5.0nm,0.7s,mb4.2						
PMG	**Port Moresby**	**27.62**	**294**	P	**P**	**10 03 34.4**	**+0.3**
	4.0nm,0.6s,mb4.2,baz=13,slow=14,SNR=3.7						
PMG				LR	LR	10 12 42.6	
	comp=Z,379nm,18.1s,MS4.0,baz=358,slow=32						
STKA	**Stephens Creek**	**29.02**	**244**	*e*P	**P**	**10 03 46.0**	**-0.5**
	3.7nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**29.02**	**244**	P	**P**	**10 03 46.5**	**0.0**
	3.1nm,0.6s,mb4.2,baz=78,slow=12,SNR=8.2						
ASAR	**Alice Springs**	**35.52**	**260**	P	**P**	**10 04 42.5**	**-0.7**
	7.8nm,0.8s,mb4.7,baz=84,slow=9.1,SNR=59						
ASAR				LR	LR	10 18 42.8	
	comp=Z,180nm,18.5s,MS3.9,baz=78,slow=35						
ASPA	**Alice Springs**	**35.53**	**260**	*e*P	**P**	**10 04 42.9**	**-0.3**
WRAB	**Tennant Creek**	**35.66**	**267**	*e*P	**P**	**10 04 43.0**	**-1.4**
	8.6nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**35.67**	**267**	P	**P**	**10 04 43.7**	**-0.8**
	2.0nm,0.4s,mb4.4,baz=96,slow=8.6,SNR=38						
KAKA	**Kakadu**	**39.36**	**277**	⇓*i*P	**P**	**10 05 15.5**	**+0.1**
	7.0nm,0.6s,mb4.6						
FORT	**Forrest**	**40.43**	**248**	*e*P	**P**	**10 05 23.3**	**-0.8**
	581nm,0.6s						
FITZ	**Fitzroy Crossi**	**44.10**	**267**	*e*P	**P**	**10 05 54.6**	**+0.3**
	24nm,1.0s,mb4.9						
MBWA	**Marble Bar**	**48.86**	**261**	*e*P	**P**	**10 06 31.4**	**-0.4**
	13nm,1.0s,mb4.9						
NWAO	**Narrogin (SRO)**	**49.61**	**245**	P	**P**	**10 06 36.6**	**-0.7**
	13nm,0.9s,mb5.0,baz=210,slow=8.1,SNR=3.4						
VNDA	**Vanda**	**55.34**	**183**	LR	LR	10 27 10.7	
	comp=Z,487nm,18.5s,MS4.6,baz=62,slow=32						
CBIJ	**Chichi jima**	**57.38**	**328**	LR	LR	10 27 39.3	
	comp=Z,334nm,18.8s,MS4.5,baz=102,slow=31						
QSPA	**South Pole Qui**	**67.60**	**180**	P	**P**	**10 08 44.0**	**+2.2**
	10.0nm,1.2s,mb4.7						
ASAJ	**Asahikawa**	**71.73**	**338**	LR	LR	10 38 22.6	
	comp=Z,194nm,19.4s,MS4.4,baz=282,slow=34						
SNAA	**Sanae**	**86.05**	**181**	LR	LR	10 43 34.0	
	comp=Z,136nm,18.9s,MS4.4,baz=220,slow=32						
NVAR	**Mina Array Bea**	**88.65**	**47**	P	**P**	**10 10 39.2**	**+1.3**
	0.2nm,0.6s,mb3.6,baz=221,slow=9.6,SNR=3.0						
ILAR	**Eielson Array**	**92.41**	**16**	P	**P**	**10 10 54.0**	**-0.8**
	0.6nm,0.7s,mb4.0,baz=241,slow=5.1,SNR=7.0						
ILAR				LR	LR	10 48 14.6	
	comp=Z,203nm,18.5s,MS4.6,baz=77,slow=33						
PLCA	**Paso Flores**	**94.06**	**137**	P	**P**	**10 11 02.7**	**-0.2**
	1.2nm,0.9s,mb4.3,baz=315,slow=8.0,SNR=4.1						
TXAR	**Lajitas Array**	**95.59**	**61**	P	**P**	**10 11 10.7**	**+0.5**
	0.4nm,1.1s,mb3.8,baz=217,slow=4.5,SNR=2.5						
GERES	**GERESS Array B**	**148.79**	**333**	PKPbc	PKPdf	10 17 33.5	+7.0
	1.5nm,0.9s,baz=342,slow=3.1,SNR=4.9						

IGQ 16 10:08:29.1,1.49S×81.28W,h12^{km}±6^{km},mb4.1,1C,Error ellipse: s-maj=7.2km s-min=5.3km az=12.4,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.85	59	⇑P	Pb	10 08 44.2	-1.2
IGUA	Igualata	2.64	90	P	Pn	10 09 13.5	+1.2
IGUA				S	Sn	10 09 44.1	-0.3
ARRY	Arrayan	2.82	90	P	Pn	10 09 15.6	+0.7
ARRY				S	Sn	10 09 49.7	+0.6
ULBA	Ulba	2.87	89	P	Pn	10 09 17.4	+1.8
PISA	Pisayambo	2.92	82	P	Pn	10 09 18.4	+2.0
PISA				S	Sn	10 09 54.0	+2.2
JUA2	San Juan 2	2.96	65	P	Pn	10 09 16.9	0.0
TERV	Terraza Guagua	2.98	64	P	Pn	10 09 18.6	+1.5
PINO	Pino	2.98	64	P	Pn	10 09 17.4	+0.3
PINO				S	Sn	10 09 54.6	+1.4
VC1	Cotopaxi 1	3.00	74	P	Pn	10 09 19.2	+1.8
TAMB	Tambo	3.02	75	P	Pn	10 09 19.8	+2.2
TAMB				S	Sn	10 10 04.1	+10
YANA	Yana	3.03	63	P	Pn	10 09 18.0	+0.2
ANTI	Antisana	3.28	72	P	Pn	10 09 23.5	+2.1
COTA	Cotacachi	3.46	58	P	Pn	10 09 24.8	+0.9
CAYR	Refugio Cayamb	3.60	65	P	Pn	10 09 28.8	+2.8
CAYR				S	Sn	10 10 17.4	+8.6
CAYA	Cayambe	3.64	65	P	Pn	10 09 29.2	+2.7
ECEN	Cerro Negro	4.03	55	P	Pn	10 09 34.0	+2.0

IGQ 16 10:17:12.3, 1.44S×81.37W, h12^{km}±5^{km}, mb4.1, 3C-1D, Error ellipse: s-maj=6.3km s-min=6.1km az=96.9, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.91	65	⇑P	Pb	10 17 28.8	-0.8
IGUA	Igualata	2.73	91	P	Pn	10 17 58.3	+1.5
ARRY	Arrayan	2.92	91	P	Pn	10 18 00.3	+0.9
ARRY				S	Sn	10 18 35.7	+0.9
ULBA	Ulba	2.96	90	P	Pn	10 18 01.6	+1.5
PISA	Pisayambo	3.01	83	P	Pn	10 18 02.7	+1.9
JUA2	San Juan 2	3.02	66	P	Pn	10 18 03.0	+2.0
TERV	Terraza Guagua	3.04	66	P	Pn	10 18 03.0	+1.8
PINO	Pino	3.04	65	P	Pn	10 18 02.1	+0.8
PINO				S	Sn	10 18 39.3	+1.3
VC1	Cotopaxi 1	3.07	75	P	Pn	10 18 04.0	+2.4
TAMB	Tambo	3.10	76	P	Pn	10 18 04.0	+2.0
YANA	Yana	3.10	65	⇑P	Pn	10 18 03.1	+1.2
ANTI	Antisana	3.36	73	⇑P	Pn	10 18 08.5	+2.8
COTA	Cotacachi	3.51	60	P	Pn	10 18 09.8	+2.0
CAYR	Refugio Cayamb	3.66	67	⇓P	Pn	10 18 14.1	+4.0
ELAGU	Cayambe Volc	3.66	67	P	Pn	10 18 13.5	+3.5
CAYA	Cayambe	3.70	66	P	Pn	10 18 14.0	+3.4
ECEN	Cerro Negro	4.08	56	P	Pn	10 18 18.8	+2.8

ATH ***16*** *10:31:49.4, 36.97N×28.40E, h27^{km}±4^{km}, MD3.4/3*
ISK ***16*** *10:31:50.8, 36.94N×28.29E, h3^{km}, MD3.3*
NEIC ***16*** *10:31:51.2, 36.93N×28.28E, h8^{km}, MD3.4(ATH), ML3.4(ISK), After ISK.*
NEIC Felt at Marmaris, Turkey.
CSEM ***16*** *10:31:51.0±0.1, 36.94N×28.27E, h10^{km}, MD3.3, Error ellipse: s-maj=1.9km s-min=1.7km az=48.0*
ISC 16 10:31:50.7±0.6**, 36.88N**±0.03×**28.24E**±0.04**, h6**^{km}±5^{km}**, n35, σ0^{s}95**/46**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.25	7	*i* PG	Pg	10 31 55.5	-0.4
YER				*i* SG	Sg	10 31 59.3	0.0
YER	Yerkesik	0.25	7	Pg	Pg	10 31 55.8	0.0
YER				Sg	Sg	10 31 59.8	+0.5
YER	Yerkesik	0.25	7	Pg	Pg	10 31 55.8	-0.1
YER				*i* Sg	Sg	10 31 59.3	0.0
BDRM	Kayabasi	0.67	286	*i* P	Pg	10 32 03.4	-0.6
BDRM				*i* S	Sg	10 32 14.3	+1.4
ARG	Arkhangelos	0.67	188	*e*PN	Pn	10 32 04.6	-1.8
ARG				*e*SN	Sn	10 32 16.3	-1.0
FETY	Fethiye	0.72	110	PG	Pg	10 32 05.4	+0.3
FETY				SG	Sg	10 32 15.5	+0.8
BODT	Bodrum	0.77	284	PG	Pg	10 32 06.6	+0.5
AYDN	Tasoluk	0.83	340	*i* P	Pb	10 32 06.0	-1.1
AYDN				*i* S	Sb	10 32 18.6	+0.4
DNZL	Cakiroluk	1.03	38	*i* P	Pb	10 32 10.0	-0.5
DNZL				*i* S	Sb	10 32 24.0	-0.1
DENT	Denizli	1.07	36	PG	Pg	10 32 10.1	-2.0
DENT	Denizli	1.07	36	Pg	Pg	10 32 10.3	-1.8
DENT	Denizli	1.07	36	Pg	Pg	10 32 10.3	-1.8
ELL	Elmali	1.34	95	PN	Pn	10 32 17.3	+1.3
ELL	Elmali	1.34	95	Pn	Pn	10 32 16.8	+0.8
ELL	Elmali	1.34	95	Pn	Pn	10 32 16.8	+0.8
SMG	Samos	1.39	307	*e*PN	Pn	10 32 15.9	-0.8
KARP	Karpathos	1.59	214	*e*PN	Pn	10 32 20.1	+0.5
KARP				*e*SN	Sn	10 32 41.5	+0.8
IZM	Izmir	1.70	333	*e*PN	Pn	10 32 22.3	+1.2
IZM	Izmir	1.70	333	Pn	Pn	10 32 22.3	+1.2
KDAG	Bornova	1.70	333	*i* P	Pn	10 32 20.0	-1.2
KDAG				*i* S	Sn	10 32 44.9	+1.4
KHL	Karahalli	1.76	35	*e*PN	Pn	10 32 22.6	+0.6
KHL	Karahalli	1.76	35	Pn	Pn	10 32 22.3	+0.3
KHL	Karahalli	1.76	35	Pn	Pn	10 32 22.3	+0.3
BLCB	Balcova	1.78	328	*e*PN	Pn	10 32 22.6	+0.4
BLCB	Balcova	1.78	328	Pn	Pn	10 32 22.3	+0.1
BLCB	Balcova	1.78	328	Pn	Pn	10 32 22.3	+0.1
BCK	Bucak	1.96	72	*e*PN	Pn	10 32 25.8	+0.9
BCK	Bucak	1.96	72	Pn	Pn	10 32 25.8	+1.0
AKS	Akhisar	2.02	350	Pn	Pn	10 32 24.3	-1.4
ISP	Isparta	2.04	61	*e*P	Pn	10 32 27.1	+1.1
ISP	Isparta	2.04	61	*e*P	Pn	10 32 27.1	+1.0
BALB	Balikesir	2.77	354	Pn	Pn	10 32 35.8	-0.6
BALB	Balikesir	2.77	354	Pn	Pn	10 32 35.8	-0.6
ULDT	Uludag	3.33	12	*i* P	Pn	10 32 49.2	+4.8
ULDT				*i* S	Sn	10 33 35.6	+11
MTUR	Matau	8.67	345	P	P	10 34 04.8	+5.1

NEIC ***16*** *10:52:59.2, 31.01S×71.40W, h55^{km}, MD3.7(GUC), After GUC.*
GUC 16 10:52:59.2±0.6**, 31.01S×71.40W, h55**^{km}±6^{km}**, MD3.7, ML3.3, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILCH	Illapel	0.65	163	*e*P	P	10 53 13.1	+0.5
ILCH				*i* S	S	10 53 23.3	+0.7
ILCH				AMP		10 53 24.9	
	comp=N,2µm,0.1s						
PTCH	Petorca	1.31	162	⇓*i*P	P	10 53 21.3	-0.4
PTCH				*i* S	S	10 53 38.3	-0.1
PTCH				AMP		10 53 39.2	
	comp=E,1µm,0.3s						
JACH	Jahuel	1.80	158	*e*P	P	10 53 28.3	-0.2
JACH				*i* S	S	10 53 51.0	+0.9
ZON	Zonda	2.39	104	*e*P	P	10 53 37.0	+0.2
ZON				*e*S	S	10 53 57.0	-7.9
CLCH	Cerro Calan	2.49	163	*e*P	P	10 53 41.0	+2.8
CLCH				*i* S	S	10 54 10.6	+3.2
CLCH				AMP		10 54 21.9	
	comp=N,153nm,0.5s						
FCH	Farellones	2.49	158	*e*P	P	10 53 38.9	+0.6
FCH				*i* S	S	10 54 08.6	+1.0
FCH				AMP		10 54 18.1	
	comp=E,130nm,0.2s						
RCDM	Rinconada Maip	2.52	169	*e*P	P	10 53 38.4	-0.3
RCDM				*i* S	S	10 54 08.1	-0.2
RCDM				AMP		10 54 14.0	
	comp=E,159nm,0.2s						
TACH	Talagante	2.66	172	*e*P	P	10 53 40.2	-0.5
SFDO	San Fernando	3.61	175	*e*P	P	10 53 53.1	-0.9

MOS ***16*** *10:54:06.0±0.9, 35.32N×36.08W, h10^{km}, mb5.3/39, MS4.8/21, Error ellipse: s-maj=15.3km s-min=4.5km az=136.5*
IDC ***16*** *10:54:06.3±0.4, 35.40N×36.11W, mb4.6/32, mb1 4.7/32, mb1mx4.6/34, mbtmp4.6/32, MS4.7/23, Ms1 4.7/23, ms1mx4.5/30, Error ellipse: s-maj=13.6km s-min=10.2km az=156.0*
BJI ***16*** *10:54:07.0, 35.45N×36.78W, h26^{km}, mB5.4, mb5.0, Ms5.3, Msz5.0*
ZUR_RM ***16*** *10:54:07, 35.26N×36.07W, h9^{km}, Mw5.3/4, Moment Tensor Solution. s4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.18; M$_{\theta\theta}$0.09; M$_{\phi\phi}$-0.27; M$_{r\theta}$0.00; M$_{\theta\phi}$1.08; M$_{\phi r}$0.00; Best double couple: M$_0$1.09×10^{17} NP1:φ$_s$185°,δ90°, λ-180°. NP2:φ$_s$275°,δ90°,λ0°. Principal axes: T 1.002, Plg0°, Azm320°; N .184, Plg90°, Azm0°; P -1.186, Plg0°, Azm50°;*
HRVD ***16*** *10:54:07.6±0.2, 35.44N×36.10W, h12^{km}, MW5.3/67, Centroid moment Tensor Solution. LP body waves: s44,c72;Mantle waves: s67,c135; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.25±.03; M$_{\theta\theta}$0.57±.03; M$_{\phi\phi}$-0.32±.03; M$_{r\theta}$-0.43±.08; M$_{\theta\phi}$1.05±.02; M$_{\phi r}$-0.29±.07; Best double couple: M$_0$1.221×10^{17} NP1: φ$_s$283°,δ77°,λ12°. NP2:φ$_s$190°,δ78°,λ167°. Principal axes: T 1.426, Plg17°, Azm146°; N -.411, Plg73°, Azm329°; P -1.017, Plg1°, Azm237°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***16*** *10:54:07.6±0.2, 35.26N×36.07W, h10^{km}, mb5.1/91, MS4.8/119 Error ellipse: s-maj=6.4km s-min=2.7km az=176.0*
ISC 16 10:54:05.8±0.2**, 35.29N**±0.05×**36.08W**±0.02**, h10**^{km}**, (h17**^{km}±1.7^{km}**:pP-P), n395, σ1^{s}11**/327**, mb4.9**/137**, MS4.8**/148**, 31C-4D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	Caldeira	6.76	59	*e*P	Pn	10 55 48.8	+1.2
HOR	Horta	6.79	59	*e*		10 56 00.6	
PICO	Pico	6.92	60	*e*P	Pn	10 55 50.9	+1.0
ROSA	Rosais	7.15	59	*e*P	Pn	10 55 48.7	-4.3
ADH	Angra Heroismo	7.84	62	*e*LR	LR	10 57 57.5	
SET2	Ginetes	8.65	70	*e*		10 56 18.7	
PFET	Feteiras	8.66	70	*e*		10 56 18.0	
SET4	Mosteiros	8.66	70	*e*		10 56 17.5	
PSET	Sete Cidades	8.71	70	*e*P	P	10 56 13.1	-1.8
PSAN	Santo Antonio	8.71	70	*e*		10 56 18.0	
PDA	Ponta Delgada	8.74	71	*i* LR	LR	10 58 27.0	
PDA				*i* LQ		10 58 43.0	
FAC	Faja de Cima	8.75	70	*e*P	P	10 56 18.4	+2.9
CML	Cha da Macela	8.83	71	*e*P	P	10 56 17.7	+1.1
LFA	Lagoa do Fogo	8.88	71	*e*P	P	10 56 15.2	-2.0
PMAT	Coroa da Mata	8.90	70	*e*P	P	10 56 20.2	+2.7
VIF	Vila Franca	8.91	71	*e*P	P	10 56 15.9	-1.7
MESC	Monte Escuro	8.92	71	*e*P	P	10 56 16.1	-1.6
PCNG	Congro	8.95	71	*e*P	P	10 56 16.4	-1.8
FRA1	Furnas	8.97	71	*e*P	P	10 56 16.6	-1.9
PFAD	Fenais da Ajud	9.02	70	*e*P	P	10 56 22.6	+3.4
PSMA	Santa Maria	9.02	76	*e*P	P	10 56 15.1	-4.1
	157nm,0.7s						
MIRA	Miradouro	9.04	71	*e*P	P	10 56 19.4	-0.1
PSMN	Pico do Norte,	9.07	76	*e*P	P	10 56 16.2	-3.7
BART	Pico Bartolome	9.13	71	*e*P	P	10 56 18.4	-2.2
	327nm,0.9s						
CHIE	El Hierro	17.18	111	P	P	10 58 05.8	-1.8
	26nm,0.8s						
CCAN	Las Canadas	17.98	108	P	P	10 58 15.9	-1.7
	8.0nm,0.5s						
EOSO	Osorio	18.88	107	P	P	10 58 27.1	-1.5
CFTV	Fuerteventura	19.88	104	P	P	10 58 39.5	-0.7
	28nm,1.1s						
PTEO	Sao Teotonio	22.10	76	*e*P	P	10 59 02.7	-0.2
	67nm,1.1s,mb5.0						
EVO	Evora	22.64	73	*e*P	P	10 59 06.7	-1.5
	71nm,1.2s,mb4.7						
EVO				*e*R			
	2µm,21.5s						
PBEJ	Beja	22.77	75	*e*P	P	10 59 10.3	+0.9
	23nm,1.2s,mb4.5						
ELOB	Lobios	22.81	65	P	P	10 59 10.3	+0.5
PVIS	Viseu	22.81	68	*e*P	P	10 59 10.8	+0.9
	43nm,1.2s,mb4.8						
PVRL	Vila Real	23.00	66	*e*P	P	10 59 12.0	+0.3
	42nm,1.5s,mb4.7						
MTE	Manteigas	23.05	69	*e*P	P	10 59 13.0	+0.8
	166nm,1.5s,mb5.2						
MTE				*e*LQ		11 04 01.6	
MTE				*e*LR	LR	11 05 03.9	
	2µm,18.3s						
PCBR	Castelo Branco	23.08	70	*e*P	P	10 59 13.1	+0.6
	32nm,1.0s,mb4.7						
EINC	Incio	23.44	63	P	P	10 59 16.5	+0.5
ERUA	La Rua	23.55	64	P	P	10 59 18.1	+1.0
EMIN	Mina Concepcio	23.72	75	P	P	10 59 19.1	+0.4
PBRG	Braganca	23.78	65	*e*P	P	10 59 20.8	+1.5
	32nm,1.8s,mb4.5						
ESPR	Espera	24.43	77	P	P	10 59 28.4	+2.7
EADA	Adamuz	25.35	74	P	P	10 59 33.8	-0.7
ELOJ	Sierra Loja	25.77	76	P	P	10 59 39.1	+0.8
ESDC	Sonseca Array	25.78	71	P	P	10 59 38.0	-0.4
	13nm,0.9s,mb4.4,baz=271,slow=8.7,SNR=19						
ESDC	Sonseca Array	25.78	71	P	P	10 59 38.1	-0.3
ESLA	Sonseca Array	25.78	71	PFAKE		10 59 50.0	+12
ESLA				LR	LR		
	comp=Z,11µm,20.0s,MS5.4						
EVIA	Vianos	26.95	73	P	P	10 59 49.6	+0.3
DCN	Croghan	27.12	39	*e*P	P	10 59 48.5	-2.1
DCN	Croghan	27.12	39	*e*P	P	10 59 53.2	+2.6
DCN	Croghan	27.12	39	*e*P	P	10 59 53.2	+2.6
QUIF	Quistinic	27.44	52	*e*P	P	10 59 53.2	-0.4
DLF	Lyons Farm	27.48	40	*e*P	P	10 59 52.0	-1.9
DLF	Lyons Farm	27.48	40	*e*P	P	10 59 56.5	+2.6
DLF	Lyons Farm	27.48	40	*e*P	P	10 59 56.5	+2.6
SGMF	Saint Gilles	27.92	52	*e*P	P	10 59 59.0	+1.0
	comp=Z,224nm,1.4s,mb5.3						
SGMF	Saint Gilles	27.92	52	*e*P	P	10 59 59.0	+1.0
SGMF				pmax	pmax		
	comp=Z,112nm,1.4s,mb5.3						
SJPF	Ste Jean	27.96	63	*e*P	P	10 59 58.4	0.0
HRV	Harvard--Oak R	28.38	295	PFAKE		11 00 10.0	+7.8
HRV				LR	LR		
	comp=Z,781nm,22.0s,MS4.3						
ETSF	Etsaut	28.44	64	⇑*i*P	P	11 00 02.9	+0.2
FFD	Franklin Falls	28.52	297	P	P	11 00 05.4	+2.0
SCHQ	Schefferville	28.86	322	P	P	11 00 04.2	-2.1
	comp=Z,2.7nm,0.8s,mb4.0,baz=107,slow=8.9,SNR=3.8						
SCHQ				LR	LR	11 11 27.5	
	comp=Z,2µm,18.1s,MS4.7,baz=105,slow=36						
EBIE	Bielsa	28.94	64	P	P	11 00 06.8	-0.5
GRR	Gorron	29.05	52	*e*P	P	11 00 08.5	+0.3
EPF	Esparros	29.10	64	*e*P	P	11 00 08.0	-0.7
MFF	Saint Martin d	29.16	56	⇑*i*P	P	11 00 09.5	+0.3
	comp=Z,207nm,1.5s,mb5.3						
MFF	Saint Martin d	29.16	56	⇑*i*P	P	11 00 09.5	+0.3
MFF				pmax	pmax		
	comp=Z,104nm,1.5s,mb5.3						
LFF	La Frestale	29.55	60	*e*P	P	11 00 12.2	-0.5
ACCN	Adirondack Com	29.97	297	*e*P	P	11 00 16.1	-0.4
ESK	Eskdalemuir	30.16	38	PFAKE		11 00 30.0	+12
ESK				LR	LR		
	comp=Z,596nm,22.0s,MS4.2						
EKA	Eskdalemuir Ar	30.19	38	P	P	11 00 17.2	-1.0
	comp=Z,4.4nm,0.9s,mb4.2,baz=238,slow=7.9,SNR=6.6						
NCB	Newcomb	30.41	298	PFAKE		11 00 30.0	+10
NCB				LR	LR		
	comp=Z,628nm,20.0s,MS4.3						
CAF	Calviac	30.48	60	*e*P	P	11 00 20.5	-0.4
MTLF	Montolieu	30.49	63	⇑*i*P	P	11 00 20.8	-0.3
	comp=Z,170nm,1.6s,mb5.2						
MTLF	Montolieu	30.49	63	⇑*i*P	P	11 00 20.8	-0.3
MTLF				pmax	pmax		
	comp=Z,85nm,1.5s,mb5.2						
TCF	Toulx Ste Croi	30.73	57	⇑*i*P	P	11 00 23.2	+0.1
	comp=Z,128nm,1.0s,mb5.4						
TCF	Toulx Ste Croi	30.73	57	⇑*i*P	P	11 00 23.2	+0.1
TCF				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.4						
BORG	Borgarnes	30.81	12	LR	LR	11 09 56.9	
	comp=Z,1µm,19.3s,MS4.5,baz=278,slow=31						
BGF	Bois d’Agland	31.20	57	*e*P	P	11 00 27.1	-0.1
AVF	Avril sur Loir	31.57	56	⇑*i*P	P	11 00 31.2	+0.7
BINY	Binghamton	31.66	295	PFAKE		11 00 40.0	+8.6
BINY				LR	LR		
	comp=Z,1µm,22.0s,MS4.5						
SJG	San Juan	31.68	245	PFAKE		11 00 40.0	+8.3
SJG				LR	LR		
	comp=Z,795nm,19.0s,MS4.4						
LASF	Ste Croix	31.71	62	⇑*i*P	P	11 00 32.0	+0.2
	comp=Z,52nm,1.1s,mb5.0						
SSF	Saint Saulge	31.71	56	*e*P	P	11 00 32.4	+0.7
SSF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
SSF	Saint Saulge	31.71	56	*e*P	P	11 00 32.4	+0.7
	comp=Z,15nm,1.2s,mb4.7						
SMF	Signal de Mont	31.89	57	⇑*i*P	P	11 00 33.4	+0.1
	comp=Z,61nm,1.2s,mb5.0						
SMF	Signal de Mont	31.89	57	⇑*i*P	P	11 00 33.4	+0.1
SMF				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.0						
VIVF	Saint-Julien-l	32.33	60	*e*P	P	11 00 37.9	+0.8
SDMD	Soldier’s Deli	32.47	290	*e*P	P	11 00 37.2	-1.3
BAIF	Baives	32.66	51	⇑*i*P	P	11 00 39.6	-0.4
	comp=Z,59nm,1.1s,mb5.1						
BAIF	Baives	32.66	51	⇑*i*P	P	11 00 39.6	-0.4
BAIF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
MEZF	Maizieres J’vi	32.94	54	*e*P	P	11 00 42.7	+0.3
GENY	Geneseo	33.01	296	*e*P	P	11 00 40.3	-2.7
CBN	Corbin	33.02	287	PFAKE		11 01 00.0	+17
CBN				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
GIVF	Givet	33.05	51	*e*P	P	11 00 43.1	-0.3
SSPA	Standing Stone	33.16	292	*e*P	P	11 00 45.4	+1.0
	comp=Z,26nm,1.4s,mb5.0						
SSPA				LR	LR		
	comp=Z,890nm,22.0s,MS4.4						
ORIF	Oris-en-Rattie	33.19	60	*e*P	P	11 00 44.8	+0.2
ORIF				*e*R			
	comp=Z,2µm,19.5s						
CABF	La Chapelle	33.43	57	⇑*i*P	P	11 00 47.3	+0.6
	comp=Z,153nm,1.5s,mb5.4						
CABF	La Chapelle	33.43	57	⇑*i*P	P	11 00 47.3	+0.6
CABF				pmax	pmax		
	comp=Z,76nm,1.5s,mb5.4						
HAU	Haudompre	33.73	55	*e*P	P	11 00 49.3	-0.1
	comp=Z,68nm,1.3s,mb5.1						
HAU				*e*R			
	comp=Z,2µm,23.0s						
HAU	Haudompre	33.73	55	*e*P	P	11 00 49.3	-0.1
HAU				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.1						
HAU				MLR	MLR		
	comp=Z,2µm,23.0s,MS4.8						
LPL	La Plagne	33.81	59	*e*P	P	11 00 51.3	+1.2
MBDF	Montbardon	33.81	61	*e*P	P	11 00 51.3	+1.2
	comp=Z,59nm,1.2s,mb5.1						
MBDF	Montbardon	33.81	61	*e*P	P	11 00 51.3	+1.2
MBDF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
LPG	La Plagne	33.82	59	*e*P	P	11 00 51.4	+1.2
HINF	Hinteralfeld	34.05	55	*e*P	P	11 00 52.1	0.0
CDF	Champ du Feu	34.40	54	*e*P	P	11 00 55.4	+0.3
	comp=Z,118nm,1.5s,mb5.3						
CDF	Champ du Feu	34.40	54	*e*P	P	11 00 55.4	+0.3
CDF				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.3						
ERPA	Erie	34.64	295	PFAKE		11 01 10.0	+13
ERPA				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
FRB	Frobisher Bay	34.71	335	P	P	11 00 56.9	-0.7
	comp=Z,26nm,0.7s,mb5.3,baz=135,slow=8.1,SNR=57						
FRB				LR	LR	11 13 01.7	
	comp=Z,600nm,18.0s,MS4.4,baz=136,slow=33						
FRB	Frobisher Bay	34.71	335	P	P	11 00 56.9	-0.7
FRB				LR	LR	11 13 01.8	
MCWV	Mont Chateau	34.75	290	*e*P	P	11 00 58.3	0.0
	comp=Z,15nm,0.6s,mb5.1						
MCWV				LR	LR		
	comp=Z,1µm,21.0s,MS4.6						
BFO	Black Forest	35.09	54	*e*P	P	11 00 59.6	-1.4
BFO				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.1						
BFO	Black Forest	35.09	54	*e*P	P	11 00 59.6	-1.4
	comp=Z,34nm,1.3s,mb5.1						
TNS	Taunus Mts	35.37	51	*e*P	P	11 01 03.7	+0.3
BLA	Blacksburg	35.57	286	PFAKE		11 01 20.0	+15
BLA				LR	LR		
	comp=Z,657nm,21.0s,MS4.4						
DAVOX	Davos	36.04	57	P	P	11 01 09.9	+0.7
	comp=Z,3.5nm,0.8s,mb4.3,baz=100,slow=10,SNR=2.9						
DAVA	Damuels	36.06	56	⇑*i*P	P	11 01 10.8	+1.5
	comp=Z,22nm,1.2s,mb5.0						
NHSC	New Hope	36.32	280	PFAKE		11 01 20.0	+8.4
NHSC				LR	LR		
	comp=Z,677nm,22.0s,MS4.4						
CLZ	Clausthal	36.80	49	*e*P	P	11 01 16.1	+0.6
	comp=Z,76nm,1.5s,mb5.3						
MOTA	Moosalm	36.89	56	⇑*i*P	P	11 01 16.8	+0.5
	comp=Z,32nm,1.9s,mb4.8						
MOTA	Moosalm	36.89	56	⇑*i*P	P	11 01 16.8	+0.5
MOTA				pmax	pmax		
	comp=Z,32nm,1.9s,mb4.8						
ACSO	Alum Creek Sta	37.07	292	*e*P	P	11 01 16.8	-1.1
	comp=Z,15nm,0.8s,mb4.9						
ACSO				LR	LR		
	comp=Z,1µm,22.0s,MS4.6						
GRA1	Grafenberg Arr	37.10	52	*e*P	P	11 01 18.3	+0.3
	comp=Z,30nm,1.1s,mb5.0						
GRA1				LR	LR		
	comp=Z,2µm,18.3s,MS4.9						
GRF	Grafenberg Arr	37.10	52	*e*P	P	11 01 18.3	+0.3
GRF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
GRF				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.0						
GRF	Grafenberg Arr	37.10	52	*e*P	P	11 01 18.3	+0.3
GRF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
GRF				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.0						
GRF	Grafenberg Arr	37.10	52	*e*P	P	11 01 18.3	+0.3
	comp=Z,30nm,1.1s,mb5.0						
GRF				LR	LR		
	comp=Z,2µm,18.3s,MS4.9						
BSEG	Bad Segeberg	37.12	45	*e*P	P	11 01 18.5	+0.4
WTTA	Wattenberg	37.25	56	⇑*i*P	P	11 01 19.2	-0.1
	comp=Z,25nm,0.9s,mb5.0						
WTTA	Wattenberg	37.25	56	⇑*i*P	P	11 01 19.2	-0.1
WTTA				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.0						
AAM	Ann Arbor	37.34	295	PFAKE		11 01 30.0	+10
AAM				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
SUMG	Summit	37.38	359	*e*P	P	11 01 19.8	-0.3
	comp=Z,124nm,1.1s,mb5.7						
MOX	Moxa	37.44	51	*e*P	P	11 01 21.3	+0.5
MOX				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
MOX				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.1						
MOX	Moxa	37.44	51	*e*P	P	11 01 21.3	+0.5
	comp=Z,36nm,1.6s,mb5.0						
MOX				LR	LR		
	comp=Z,3µm,19.0s,MS5.1						
MOX	Moxa	37.44	51	*i* P	P	11 01 21.3	+0.5
	comp=Z,logA/T=1.4,mb5.0						
MOX				L		11 15 05.0	
NKC	Novy Kostel	37.93	52	*e*P	P	11 01 25.4	+0.4
NKC				*e*pP	pP	11 01 31.2	+3.3
NKC				AMS	AMS	11 15 10.0	
	comp=Z,3µm,16.3s						
WET	Wettzell	38.15	53	*e*P	P	11 01 26.1	-0.7
WET				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.7						
WET	Wettzell	38.15	53	*e*P	P	11 01 26.1	-0.7
	comp=Z,25nm,1.5s,mb4.7						
KONO	Kongsberg	38.22	36	PFAKE		11 01 40.0	+13
KONO				LR	LR		
	comp=Z,1µm,22.0s,MS4.6						
CLL	Collm	38.37	50	⇑*i*P	P	11 01 28.8	+0.1
CLL				*e*		11 01 36.0	
CLL				*e*S	S	11 07 32.0	+9.1
CLL				MLR	MLR		
	comp=Z,2µm,19.4s,MS5.0						
CLL	Collm	38.37	50	⇑P	P	11 01 28.8	+0.1
CLL				*e*		11 01 36.0	
CLL				*e*S	S	11 07 32.0	+9.1
CLL				*e*SS	SS	11 10 18.0	+16
KHC	Kasperske Hory	38.60	53	*e*P	P	11 01 30.7	+0.1
KHC				*e*S	S	11 07 34.0	+7.6
KHC				MLR	MLR		
	comp=Z,1µm,21.5s,MS4.6						
KHC	Kasperske Hory	38.60	53	*e*P	P	11 01 30.7	+0.1
KHC				*e*		11 03 35.5	
KHC				*e*S	S	11 07 34.0	+7.6
KHC				LR	LR		
	comp=Z,1µm,21.5s,MS4.6						
KHC	Kasperske Hory	38.60	53	*e*P	P	11 01 30.7	+0.1
KHC				x	x	11 03 35.5	
KHC				*e*S	S	11 07 34.0	+7.6

Code	Station	Dist	Azi	Phase	ISC	Time	Res
KHC				AMS	AMS	11 13 50.0	
	comp=Z,1µm,21.5s						
JMIC	Jan Mayen	38.65	14	LR	LR	11 13 36.3	
	comp=Z,550nm,18.1s,MS4.4,baz=211,slow=30						
GEC2	GERESS Array S	38.68	54	eP	P	11 01 31.3	+0.1
GEC2				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.7						
GEC2	GERESS Array S	38.68	54	eP	P	11 01 31.3	+0.1
	comp=Z,28nm,1.7s,mb4.7						
GERES	GERESS Array B	38.68	54	P	P	11 01 31.0	-0.2
	comp=Z,2.3nm,1.0s,mb3.9,baz=270,slow=9.3,SNR=5.5						
GOGA	Godfrey	38.88	281	PFAKE		11 01 40.0	+6.9
GOGA				LR	LR		
	comp=Z,505nm,19.0s,MS4.4						
BRG	Berggiesshubel	38.93	51	eP	P	11 01 33.5	+0.2
BRG				e		11 01 40.2	
BRG				i S	S	11 07 38.0	+6.7
BRG				pmax	pmax		
	comp=Z,49nm,1.6s,mb5.0						
BRG				MLR	MLR		
	comp=Z,3µm,18.1s,MS5.2						
BRG	Berggiesshubel	38.93	51	eP	P	11 01 33.5	+0.2
	comp=Z,49nm,1.6s,mb5.0						
BRG				e		11 01 40.2	
BRG				e		11 02 10.4	
BRG				i S	S	11 07 38.0	+6.7
BRG				i SS	SS	11 10 29.0	+15
BRG				LR	LR		
	comp=Z,3µm,18.1s,MS5.2						
JAVS	Javornik	38.95	59	eP	P	11 01 33.7	+0.1
DWPF	Disney	38.98	272	PFAKE		11 01 50.0	+16
DWPF				LR	LR		
	comp=Z,433nm,20.0s,MS4.3						
MOA	Molln	39.04	55⇑	iP	P	11 01 34.1	-0.2
	comp=Z,20nm,1.2s,mb4.7						
CPCT	Cooper Cave	39.18	285	eP	P	11 01 37.1	+1.5
OBKA	Obir	39.26	58⇑	iP	P	11 01 35.1	-1.0
	comp=Z,38nm,1.6s,mb4.9						
PRU	Pruhonice	39.26	52	eP	P	11 01 36.9	+0.8
PRU				epP	pP	11 01 37.1	-2.0
PRU				eS	S	11 07 43.5	+7.1
PRU				AMS	AMS	11 16 20.0	
	comp=Z,2µm,15.4s						
NB2	NORSAR Subarra	39.43	34	P	P	11 01 37.2	-0.2
	comp=Z,0.7nm,0.6s,baz=251,slow=8.6						
NB2	NORSAR Subarra	39.43	34	P	P	11 01 37.2	-0.2
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	39.43	34	P	P	11 01 37.5	+0.1
	comp=Z,9.7nm,0.8s,mb4.6,baz=252,slow=8.6,SNR=18						
NOA				LR	LR	11 14 24.5	
	comp=Z,386nm,20.6s,MS4.2,baz=275,slow=31						
NOA	NORSAR Array B	39.43	34	P	P	11 01 37.5	+0.1
NOA				LR	LR	11 14 24.4	
BOJS	Bojanci	39.80	59	eP	P	11 01 40.1	-0.5
WCI	Wyandotte Cave	39.94	289	PFAKE		11 01 50.0	+8.1
WCI				LR	LR		
	comp=Z,606nm,19.0s,MS4.5						
UPC	Upice	40.22	51	eP	P	11 01 43.2	-0.9
HFS	Hagfors	40.33	36	P	P	11 01 44.4	-0.4
	comp=Z,11nm,0.9s,mb4.6,baz=270,slow=4.4,SNR=8.1						
KSP	Ksiaz	40.41	51	eP	P	11 01 46.0	+0.4
KSP				e*PP	pP	11 01 51.3	+2.7
KSP				eS	S	11 07 55.0	+1.3
KSP				MLR	MLR		
	comp=Z,6µm,17.7s,MS5.5						
KSP	Ksiaz	40.41	51	eP	P	11 01 46.0	+0.4
KSP				epP	pP	11 01 51.3	+2.7
KSP				eS	S	11 07 55.0	+1.3
KSP				eSS	SS	11 10 56.0	+9.1
KSP				LR	LR		
	comp=Z,6µm,17.7s,MS5.5						
KSP	Ksiaz	40.41	51	eP	P	11 01 45.3	-0.3
KSP				epP	pP	11 01 51.7	+3.0
KSP				ePP	PP	11 03 11.8	-11
KSP				ePcP	PcP	11 03 46.6	-2.7
KSP				MLR	MLR	11 15 16.9	
	comp=Z,4µm,22.0s,MS5.3						
DPC	Dobruska-Polom	40.42	52	eP	P	11 01 45.7	0.0
DPC				eS	S	11 07 59.1	+5.4
DPC				AMS	AMS	11 16 30.0	
	comp=Z,2µm,18.0s						
DBIC	Dimbokro	40.42	127	eP	P	11 01 44.9	-1.2
DBIC				pmax	pmax		
	comp=Z,39nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,1µm,20.0s						
DBIC	Dimbokro	40.42	127	P	P	11 01 45.4	-0.7
	comp=Z,34nm,1.1s,mb5.0,baz=298,slow=9.0,SNR=30						
DBIC				PP	PP	11 03 24.0	+1.3
	comp=Z,15nm,0.9s,baz=307,slow=11,SNR=3.9						
DBIC				LR	LR	11 16 54.2	
	comp=Z,1µm,19.3s,MS4.8,baz=295,slow=34						
DBIC	Dimbokro	40.42	127	eP	P	11 01 44.9	-1.2
	comp=Z,39nm,0.9s,mb5.1						
DBIC				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
VRAC	Vranov	40.58	53	P	P	11 01 45.5	-1.6
	comp=Z,3.6nm,0.6s,mb4.2,baz=292,slow=12,SNR=4.0						
RCBR	Riachuelo	40.90	180	PFAKE		11 02 00.0	+10
RCBR				LR	LR		
	comp=Z,936nm,22.0s,MS4.6						
ZST	Bratislava	40.94	55	eP	P	11 01 41.1	-8.9
USIN	University of	41.06	289	P	P	11 01 53.5	+2.4
SDV	Santo Domingo	41.06	239	eP	P	11 01 52.8	+1.5
	comp=Z,30nm,1.1s,mb4.8						
SDV				LR	LR		
	comp=Z,426nm,22.0s,MS4.3						
GKP	Gorka Klasztor	41.12	47	eP	P	11 01 52.2	+0.8
GKP				epP	pP	11 01 57.9	+3.5
GKP				MLR	MLR	11 15 58.4	
	comp=Z,2µm,20.8s,MS4.9						
OKC	Ostrava-Krasne	41.59	52	eP	P	11 01 55.2	0.0
OKC				epP	pP	11 02 00.2	+2.0
OKC				AMS	AMS	11 18 50.0	
	comp=Z,1µm,15.1s						
WVT	Waverly	41.62	287	eP	P	11 01 54.8	-0.8
	comp=Z,22nm,1.3s,mb4.6						
WVT				LR	LR		
	comp=Z,505nm,22.0s,MS4.3						
LRAL	Lakeview Retre	41.82	282	eP	P	11 01 59.1	+1.7
	comp=Z,18nm,1.2s,mb4.6						
LRAL				LR	LR		
	comp=Z,553nm,21.0s,MS4.4						
VYHS	Vyhne	42.08	54	eP	P	11 01 58.9	-0.4
JFWS	Jewell Farm	42.10	297	PFAKE		11 02 10.0	+11
JFWS				LR	LR		
	comp=Z,799nm,20.0s,MS4.6						
DAG	Danmarks Havn	42.32	6⇑	eP	P	11 02 01.2	+0.3
DAG				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.5						
DAG	Danmarks Havn	42.32	6⇑	iP	P	11 02 01.2	+0.3
	comp=Z,15nm,1.1s,mb4.5						
EYMN	Ely	42.45	305	eP	P	11 02 01.4	-0.9
	comp=Z,8.6nm,0.8s,mb4.4						
EYMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
OJC	Ojcow	42.65	52	eP	P	11 02 04.6	+0.7
OJC				eS	S	11 08 33.5	+6.8
OJC				MLR	MLR	11 17 51.3	
	comp=Z,2µm,18.0s,MS5.0						
PSZ	Piszkesteto	42.82	55	eP	P	11 02 05.4	0.0
	comp=Z,23nm,1.4s,mb4.7						
SLM	Saint Louis	42.88	291	P	P	11 02 08.7	+2.8
FVM	French Village	43.17	290	eP	P	11 02 09.4	+1.0
	comp=Z,25nm,1.3s,mb4.8						
OXF	Oxford	43.30	285	eP	P	11 02 11.1	+1.6
	comp=Z,69nm,1.0s,mb5.3						
OXF				LR	LR		
	comp=Z,777nm,22.0s,MS4.6						
GNAR	Gosnell	43.37	287	P	P	11 02 11.3	+1.3
CCM	Cathedral Cave	43.79	291	eP	P	11 02 14.2	+0.8
	comp=Z,6.1nm,0.8s,mb4.4						
CCM				LR	LR		
	comp=Z,627nm,19.0s,MS4.5						
CRVS	Cervenica-Dubn	43.79	54	i P	P	11 02 14.2	+1.0
FCC	Fort Churchill	44.22	321	eP	P	11 02 16.7	+0.1
	comp=Z,0.3nm,1.5s						
KOLS	Kolonicke sedl	44.33	53	eP	P	11 02 17.5	-0.1
UZH	Uzhgorod	44.36	54	eP	P	11 02 11.8	-6.1
UZH				eS	S	11 08 54.0	+2.3
KWP	Kalwaria	44.56	52	eP	P	11 02 20.3	+0.9
KWP				epP	pP	11 02 25.5	+3.1
KWP				MLR	MLR	11 16 42.5	
	comp=Z,1µm,28.8s,MS4.7						
SUW	Suwalki	44.68	46	eP	P	11 02 20.3	0.0
SUW				ePP	PP	11 03 58.3	-7.6
SUW				MLR	MLR	11 18 36.1	
	comp=Z,2µm,23.6s,MS5.0						
ULM	Lac du Bonnet	45.16	309	P	P	11 02 23.0	-1.2
	comp=Z,6.9nm,0.7s,mb4.6,baz=85,slow=7.1,SNR=17						
ULM				LR	LR	11 20 30.4	
	comp=Z,1µm,19.7s,MS4.8,baz=268,slow=35						
ULM	Lac du Bonnet	45.16	309	eP	P	11 02 22.5	-1.7
	comp=Z,11nm,0.8s,mb4.8						
ULM				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
LVV	L'vov	45.40	52	eP	P	11 02 29.5	+3.4
VTS	Vitosha	45.87	62	eP	P	11 02 30.0	+0.1
KKB	Krupnik	45.92	63	eP	P	11 02 30.0	-0.4
MMB	Musomiste	46.46	63	P	P	11 02 36.0	+1.4
ROSC	El Rosal	46.48	238	P	P	11 02 36.5	+1.3
	comp=Z,3.8nm,0.4s,mb4.7,baz=270,slow=22,SNR=4.7						
ROSC				LR	LR	11 19 49.0	
	comp=Z,382nm,18.3s,MS4.4,baz=180,slow=33						
FINES	FINESS Array B	46.53	36	P	P	11 02 34.6	-0.3
	comp=Z,12nm,0.8s,mb4.9,baz=270,slow=3.8,SNR=29						
FINES				LR	LR	11 18 56.5	
	comp=Z,725nm,20.7s,MS4.6,baz=357,slow=32						
MIAR	Mount Ida	46.56	287	eP	P	11 02 35.4	-0.2
	comp=Z,36nm,1.1s,mb5.2						
MIAR				LR	LR		
	comp=Z,697nm,19.0s,MS4.6						
PGB	Panagyurishte	46.57	62	eP	P	11 02 36.0	+0.5
KAF	Kangasniemi	46.70	35	ep	P	11 02 34.6	-1.6
	comp=Z,18nm,0.8s,mb5.1,baz=264,slow=7.9						
KAF	Kangasniemi	46.70	35	eP	P	11 02 34.6	-1.6
KAF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
MLR	Muntele Rosu	47.26	58	P	P	11 02 41.2	+0.3
	comp=Z,14nm,1.0s,mb4.9,baz=341,slow=7.2,SNR=12						
ARCES	ARCESS Array B	47.53	25	P	P	11 02 42.2	-0.5
	comp=Z,18nm,1.1s,mb5.0,baz=259,slow=6.2,SNR=9.9						
ARCES				LR	LR	11 19 06.5	
	comp=Z,435nm,19.2s,MS4.4,baz=35,slow=32						
ARCES	ARCESS Array B	47.53	25	P	P	11 02 42.2	-0.5
ARCES				LR	LR	11 19 06.5	
KSU1	Kansas State U	47.59	293	eP	P	11 02 42.7	-0.9
TEIG	Tepich	48.04	266	PFAKE		11 03 00.0	+13
TEIG				LR	LR		
	comp=Z,157nm,22.0s,MS3.9						
RES	Resolute Bay	48.17	342	eP	P	11 02 47.0	-0.7
	comp=Z,15nm,0.9s,mb5.0						
NATX	Nacogdoches	48.35	283	eP	P	11 02 51.3	+1.7
	comp=Z,62nm,1.2s,mb5.5						
NATX				LR	LR		
	comp=Z,620nm,20.0s,MS4.6						
AKASG	Malin Array Be	48.61	50	P	P	11 02 50.1	-1.3
	comp=Z,29nm,0.8s,mb5.3,baz=273,slow=7.6,SNR=34						
KIS	Kishinev	48.94	55	eP	P	11 02 50.0	-4.0
JOF	Joensuu	49.06	34	ep	P	11 02 52.4	-2.3
	comp=Z,11nm,0.8s,mb5.0						
JOF	Joensuu	49.06	34	eP	P	11 02 52.4	-2.3
JOF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
HKT	Hockley	49.96	282	eP	P	11 03 04.1	+2.1
	comp=Z,54nm,1.9s,mb5.2						
HKT				LR	LR		
	comp=Z,376nm,20.0s,MS4.4						
CBKS	Cedar Bluff	50.01	294	PFAKE		11 03 10.0	+7.7
CBKS				LR	LR		
	comp=Z,991nm,21.0s,MS4.8						
APA	Apatity	50.13	28	eP	P	11 03 00.0	-2.8
APA				i		11 03 09.0	
APA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
APA				MLR	MLR		
	comp=Z,11µm,21.0s,MS5.8						
WMOK	Wichita Mounta	50.56	289	eP	P	11 03 05.6	-1.0
	comp=Z,15nm,0.9s,mb4.9						
WMOK				LR	LR		
	comp=Z,548nm,19.0s,MS4.6						
DGMT	Dagmar	50.79	307	eP	P	11 03 06.8	-1.3
	comp=Z,33nm,1.2s,mb5.1						
DGMT				LR	LR		
	comp=Z,973nm,19.0s,MS4.8						
JTS	JuntasAbangare	50.83	253	PFAKE		11 03 20.0	+11
JTS				LR	LR		
	comp=Z,173nm,19.0s,MS4.1						
SAML	Samuel	50.90	215	eP	P	11 03 07.4	-2.0
	comp=Z,21nm,1.2s,mb5.0						
SAML				LR	LR		
	comp=Z,795nm,19.0s,MS4.8						
BDFB	Brasilia	51.90	195	P	P	11 03 17.2	+0.3
	comp=Z,8.9nm,0.9s,mb4.7,baz=19,slow=11,SNR=7.9						
BDFB				LR	LR	11 20 11.6	
	comp=Z,653nm,20.8s,MS4.6,baz=262,slow=30						
OBN	Obninsk	52.35	44c	iP	P	11 03 19.1	-0.7
OBN				i		11 03 26.9	
OBN				e		11 04 32.2	
OBN				e		11 05 23.0	
OBN				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.5						
OBN	Obninsk	52.35	44	eP	P	11 03 18.2	-1.6
	comp=Z,51nm,0.9s,mb5.5						
OBN				LR	LR		
	comp=Z,375nm,20.0s,MS4.4						
LAO	LASA Array	52.52	305	eP	P	11 03 20.4	-0.8
	comp=Z,35nm,1.1s,mb5.2						
LAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
OTAV	Otavalo	52.64	238	eP	P	11 03 20.9	-1.7
	comp=Z,32nm,1.4s,mb5.0						
OTAV				LR	LR		
	comp=Z,303nm,20.0s,MS4.3						
AMTX	Amarillo	52.75	290	eP	P	11 03 22.9	-0.2
	comp=Z,21nm,0.9s,mb5.1						
MOS	Moscow	52.84	43	eP	P	11 03 29.0	+5.5
MOS				e		11 05 30.9	
MOS				MLR	MLR		
	comp=Z,2µm,19.1s,MS5.2						
JCT	Junction City	52.92	284	eP	P	11 03 23.8	-0.7
	comp=Z,27nm,1.0s,mb5.1						
JCT				LR	LR		
	comp=Z,629nm,22.0s,MS4.6						
ISCO	Idaho Springs	54.05	297	eP	P	11 03 32.3	-0.3
	comp=Z,5.0nm,0.6s,mb4.6						
ISCO				LR	LR		
	comp=Z,963nm,20.0s,MS4.9						
YKW3	Yellowknife Ar	54.20	326	eP	P	11 03 32.3	-1.0
YKA	Yellowknife Ar	54.20	326	P	P	11 03 32.8	-0.6
	comp=Z,2.6nm,0.7s,mb4.3,baz=82,slow=7.4,SNR=49						
YKA				LR	LR	11 26 10.6	
	comp=Z,1µm,18.3s,MS5.0,baz=75,slow=36						
YKA	Yellowknife Ar	54.20	326	P	P	11 03 32.8	-0.6
YKA				LR	LR	11 26 10.6	
BR131	Keskin Array S	54.21	63	PFAKE		11 03 50.0	+16
BR131				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
BRTR	Keskin Array B	54.21	63	P	P	11 03 33.5	-0.3
	comp=Z,7.3nm,1.0s,mb4.5,baz=284,slow=5.1,SNR=18						
SDCO	Great Sand Dun	54.65	295	eP	P	11 03 37.1	+0.1
	comp=Z,33nm,1.6s,mb5.1						
SDCO				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
EDM	Edmonton	55.40	315	eP	P	11 03 40.4	-1.9
PDAR	Pinedale Array	55.92	302	P	P	11 03 44.9	-1.3
	comp=Z,6.1nm,0.8s,mb4.7,baz=72,slow=7.0,SNR=32						
PDAR				LR	LR	11 27 30.1	
	comp=Z,1µm,20.0s,MS4.9,baz=78,slow=36						
BW06	Boulder Array	55.92	302	PFAKE		11 04 00.0	+14
BW06				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
YNR	Norris Junctio	56.07	304	eP	P	11 03 48.8	+1.6
YFT	Old Faithful	56.26	304	eP	P	11 03 49.6	+1.0
LOHW	Long Hollow	56.37	303	eP	P	11 03 48.6	-0.8
ANMO	Albuquerque	56.38	292⇑	eP	P	11 03 50.9	+1.3
ANMO	Albuquerque	56.38	292	eP	P	11 03 48.6	-1.0
	comp=Z,36nm,1.9s,mb5.1						
ANMO				LR	LR		
	comp=Z,598nm,20.0s,MS4.7						
BOZ	Bozeman (W)	56.42	305	eP	P	11 03 48.9	-0.9
	comp=Z,12nm,1.0s,mb4.9						
BOZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
MOOW	Moose Ponds	56.42	303	eP	P	11 03 48.6	-1.2
LTX	Lajitas	56.45	284	eP	P	11 03 50.1	0.0
	comp=Z,8.7nm,0.8s,mb4.8						
LTX				LR	LR		
	comp=Z,764nm,20.0s,MS4.8						
TXAR	Lajitas Array	56.45	284	P	P	11 03 49.6	-0.5
	comp=Z,9.2nm,1.1s,mb4.7,baz=90,slow=6.5,SNR=36						
TXAR				LR	LR	11 27 34.9	
	comp=Z,516nm,18.5s,MS4.7,baz=45,slow=36						
WUWY	Wally Ulrich	56.49	303	eP	P	11 03 48.5	-1.8
IMW	Indian Meadow	56.51	303	eP	P	11 03 50.0	-0.3
SNOW	Snow King Moun	56.52	303	eP	P	11 03 50.1	-0.4
QLMT	Earthquake Lak	56.54	304	eP	P	11 03 49.8	-0.8
TPAW	Teton Pass	56.65	303	eP	P	11 03 50.8	-0.6
MNTX	Cornudas Mount	56.83	288	PFAKE		11 04 00.0	+7.1
MNTX				LR	LR		
	comp=Z,522nm,22.0s,MS4.6						
WALA	Waterton Lakes	56.87	310	eP	P	11 03 51.7	-1.2
	comp=Z,21nm,1.1s,mb5.1						
AHID	Auburn Hatcher	56.99	302	eP	P	11 03 52.8	-1.1
	comp=Z,27nm,1.0s,mb5.2						
AHID				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
PV10	Paradox Valley	57.04	296	eP	P	11 03 54.3	0.0
CHMT	Chamberlain Mo	57.10	307	eP	P	11 03 54.8	+0.3
SOC	Sochi	57.25	57	eP	P	11 03 53.5	-2.2
SOC				e		11 04 45.1	
SOC				e		11 06 00.1	
SOC				eS	S	11 11 44.2	-5.5
SOC				e		11 13 39.7	
SOC				eSS	SS	11 15 46.7	+6.3
SOC				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
SOC				pmax	pmax		
	comp=N,12nm,0.7s						
SOC				pmax	pmax		
	comp=E,19nm,0.6s						
SOC				MLR	MLR		
	comp=Z,502nm,17.0s,MS4.7						
SOC				MLR	MLR		
	comp=N,362nm,16.0s,MS4.7						
SOC				MLR	MLR		
	comp=E,360nm,16.0s,MS4.7						
MSO	Missoula	57.57	307	PFAKE		11 04 10.0	+12
MSO				LR	LR		
	comp=Z,855nm,22.0s,MS4.8						
CAM4	Nova Friburgo	57.66	187	(P)	P	11 04 00.1	+1.3
HWUT	Hardware Ranch	57.71	301	eP	P	11 03 58.0	-0.9
	comp=Z,19nm,1.1s,mb5.0						
HWUT				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
TCUT	Toone Canyon	57.77	300	eP	P	11 03 59.2	-0.1
JLU	Jordanelle	57.98	300	eP	P	11 03 59.9	-1.0
MALT	Malatya	58.20	63	eP	P	11 04 02.0	-0.4
	comp=Z,36nm,1.3s,mb5.2						
TMUT	Trail Mountain	58.29	298	eP	P	11 04 03.8	+0.8
NOQ	North Oquirrh	58.44	300	eP	P	11 04 04.5	+0.5
HLID	Hailey	58.99	304	eP	P	11 04 07.5	-0.4
	comp=Z,8.2nm,1.1s,mb4.7						
HLID				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
EIL	Elat	59.03	74	P	P	11 04 08.6	+0.3
	comp=Z,4.9nm,0.7s,mb4.7,baz=248,slow=9.0,SNR=5.5						
DUG	Dugway	59.10	300	eP	P	11 04 08.4	-0.3
	comp=Z,44nm,1.4s,mb5.3						
DUG				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
NEW	Newport	59.14	310	LR	LR	11 29 03.3	
	comp=Z,2µm,19.6s,MS5.2,baz=68,slow=36						
NEW	Newport	59.14	310	eP	P	11 04 07.6	-1.2
	comp=Z,22nm,0.9s,mb5.2						
NEW				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
KIV	Kislovodsk	59.15	56	eP	P	11 04 06.4	-2.5
KIV				pmax	pmax		
	comp=N,14nm,1.1s						
KIV				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
KIV				MLR	MLR		
	comp=N,178nm,18.0s,MS4.4						
KIV				MLR	MLR		
	comp=E,179nm,18.0s,MS4.4						
KIV				MLR	MLR		
	comp=Z,283nm,18.0s,MS4.4						
KIV	Kislovodsk	59.15	56	PFAKE		11 04 20.0	+11
KIV				LR	LR		
	comp=Z,73nm,20.0s,MS3.8						
MVU	Marysvale	59.31	298	eP	P	11 04 10.3	+0.2
MVU				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
ASF	Jabal al Asfar	59.48	70	P	P	11 04 12.0	+0.6
	comp=Z,11nm,1.1s,mb4.8,baz=208,slow=1.3,SNR=5.3						
ASF				LR	LR	11 29 51.5	
	comp=Z,180nm,18.8s,MS4.2,baz=45,slow=36						
LPAZ	La Paz	59.63	216	P	P	11 04 13.4	+0.8
	comp=Z,11nm,0.9s,mb4.9,baz=27,slow=8.3,SNR=31						
LPAZ				LR	LR	11 28 07.8	
	comp=Z,615nm,20.4s,MS4.7,baz=32,slow=34						
LPAZ	La Paz	59.63	216	eP	P	11 04 12.6	0.0
	comp=Z,36nm,1.0s,mb5.4						
LPAZ				LR	LR		
	comp=Z,587nm,21.0s,MS4.7						
WUAZ	Wupatki	59.87	294	PFAKE		11 04 30.0	+16
WUAZ				LR	LR		
	comp=Z,12µm,19.0s						
INK	Inuvik	60.37	335	LR	LR	11 29 09.3	
	comp=Z,512nm,18.6s,MS4.7,baz=70,slow=35						
INK	Inuvik	60.37	335	eP	P	11 04 16.0	-0.9
BMO	Blue Mountains	60.46	306	eP	P	11 04 15.7	-2.3
	comp=Z,11nm,1.0s,mb4.8						
BMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
ELK	Elko	60.61	301	eP	P	11 04 18.5	-0.5
	comp=Z,28nm,1.6s,mb5.2						
ELK				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
TUC	Tucson	60.75	291	PFAKE		11 04 30.0	+10
TUC				LR	LR		
	comp=Z,510nm,20.0s,MS4.7						
TI2	Plekhanov	61.38	57	i P	P	11 04 25.0	+0.7
SOKR	Solikamsk	61.70	35⇓	iP	P	11 04 28.4	+2.3
SOKR				S	S	11 13 11.9	+25
SOKR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,660nm,16.0s,MS4.9						
TRCR	Troy Canyon	61.80	299	eP	P	11 04 28.1	+0.9
GNI	Garni	62.01	59	P	P	11 04 28.8	+0.2
	comp=Z,3.5nm,0.4s,mb4.8,baz=302,slow=9.7,SNR=3.7						
GNI	Garni	62.01	59	eP	P	11 04 28.8	+0.2
	comp=Z,34nm,1.4s,mb5.3						
GNI				LR	LR		
	comp=Z,283nm,20.0s,MS4.4						
BMN	Battle Mountai	62.12	301	eP	P	11 04 30.0	+0.7
	comp=Z,17nm,1.1s,mb5.1						
WVOR	Wild Horse Val	62.28	304	eP	P	11 04 28.8	-1.6
	comp=Z,42nm,1.3s,mb5.4						
WVOR				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
DLBC	Dease Lake	62.65	324	LR	LR	11 31 53.3	
	comp=Z,2µm,18.0s,MS5.2,baz=71,slow=36						
LDFC	Landfair	62.83	295	eP	P	11 04 35.5	+1.5
TPH	Tonopah	63.09	299	eP	P	11 04 36.3	+0.6
	comp=Z,15nm,1.1s,mb5.0						
TPH				LR	LR		
	comp=Z,893nm,20.0s,MS4.9						
MNV	Mina	63.60	300	eP	P	11 04 38.1	-1.0
	comp=Z,25nm,1.1s,mb5.2						
MNV				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
MOD	Modoc	63.63	304	eP	P	11 04 40.7	+1.5
	comp=Z,14nm,1.0s,mb5.0						
MOD				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
NVAR	Mina Array Bea	63.71	300	P	P	11 04 38.9	-0.9
	comp=Z,5.3nm,0.8s,mb4.6,baz=73,slow=8.8,SNR=33						
NVAR				PcP	PcP	11 05 11.9	-3.9
	comp=Z,5.0nm,1.0s,baz=34,slow=0.8,SNR=3.7						
NVAR				LR	LR	11 33 25.2	
	comp=Z,842nm,18.2s,MS5.0,baz=40,slow=37						
OCWA	Octopus Mounta	63.72	311	eP	P	11 04 40.7	+1.0
	comp=Z,24nm,0.8s,mb5.3						
OCWA				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
DAC	Darwin (Calif)	64.13	297	PFAKE		11 04 50.0	+7.4
DAC				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
BBB	Bella Bella	64.20	317	LR	LR	11 32 42.2	
	comp=Z,2µm,18.7s,MS5.3,baz=75,slow=36						
DAWY	Dawson	64.30	332	eP	P	11 04 43.6	+0.4
PFO	Pinyon Flat Ob	64.47	294	PFAKE		11 05 00.0	+15
PFO				LR	LR		
	comp=Z,120nm,22.0s,MS4.0						

COR	**Corvallis**	**64.49**	**308**	PFAKE		11 05 00.0	+15
COR				LR	LR		
	comp=Z,739nm,19.0s,MS4.9						
OMM	**Old Mammoth Mi**	**64.55**	**299**	*e*P	**P**	**11 04 45.3**	**0.0**
SVE	**Sverdlovsk**	**64.67**	**37**	*e*P	**P**	**11 04 36.7**	**-9.0**
HUMO	**Hull Mountain**	**65.11**	**306**	PFAKE		11 05 00.0	+11
HUMO				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
YBH	**Yreka Blue Hor**	**65.33**	**305**	PFAKE		11 05 00.0	+10
YBH				LR	LR		
	comp=Z,960nm,20.0s,MS5.0						
CMB	**Columbia Colle**	**65.36**	**300**	PFAKE		11 05 00.0	+10
CMB				LR	LR		
	comp=Z,672nm,20.0s,MS4.8						
MWC	**Mount Wilson**	**65.38**	**296**	*e*P	**P**	**11 04 52.7**	**+2.0**
LVC	**Limon Verde**	**65.46**	**213**	P	**P**	**11 04 53.2**	**+1.9**
	comp=Z,3.7nm,0.7s,mb4.5,baz=43,slow=5.2,SNR=7.7						
LVC	**Limon Verde**	**65.46**	**213**	*e*P	**P**	**11 04 50.9**	**-0.5**
	comp=Z,17nm,1.3s,mb4.9						
LVC				LR	LR		
	comp=Z,744nm,22.0s,MS4.8						
WDC	**Whiskeytown Da**	**65.72**	**303**	PFAKE		11 05 00.0	+7.2
WDC				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
SIT	**Sitka**	**65.81**	**324**	PFAKE		11 05 00.0	+7.0
SIT				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
SAO	**San Andreas Ge**	**66.69**	**299**	PFAKE		11 05 10.0	+11
SAO				LR	LR		
	comp=Z,826nm,19.0s,MS5.0						
ILAR	**Eielson Array**	**66.73**	**334**	P	**P**	**11 04 58.8**	**0.0**
	comp=Z,1.6nm,0.8s,mb4.1,baz=45,slow=4.4,SNR=21						
ILAR				LR	LR	11 33 57.6	
	comp=Z,501nm,18.1s,MS4.8,baz=72,slow=36						
COLA	**College**	**67.02**	**334**	*c i*P	**P**	**11 05 04.6**	**+4.0**
COLA	**College**	**67.02**	**334**	P	**P**	**11 05 01.9**	**+1.3**
	comp=Z,5.3nm,0.8s,mb4.6						
COLA				LR	LR		
	comp=Z,582nm,19.0s,MS4.8						
THY	**Trims Highway**	**67.06**	**333**	*e*P	**P**	**11 05 02.1**	**+1.1**
MCK	**McKinley**	**68.06**	**334**	PFAKE		11 05 20.0	+13
MCK				LR	LR		
	comp=Z,371nm,20.0s,MS4.6						
IMA	**Indian Mountai**	**68.26**	**337**	*e*P	**P**	**11 05 09.8**	**+1.4**
	comp=Z,6.3nm,0.7s,mb4.8						
SML	**Sawmill**	**68.96**	**332**	*e*P	**P**	**11 05 14.5**	**+1.7**
PMR	**Palmer**	**69.40**	**332**	*e*P	**P**	**11 05 16.0**	**+0.5**
	comp=Z,17nm,0.8s,mb5.0						
FIB	**Fire Island**	**70.06**	**332**	PFAKE		11 05 30.0	+10
FIB				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
CHKZ	**Chkalovo**	**71.19**	**37**	*e*P	**P**	**11 05 26.1**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
CHKZ	**Chkalovo**	**71.19**	**37**	*e*P	**P**	**11 05 26.1**	**-0.5**
	comp=Z,50nm,0.9s,mb5.5						
BRVK	**Borovoye**	**71.37**	**38**	*e*P	**P**	**11 05 26.4**	**-1.2**
	comp=Z,20nm,1.0s,mb5.0						
BRVK				LR	LR		
	comp=Z,195nm,20.0s,MS4.4						
BVAR	**Borovoye Array**	**71.44**	**38**	P	**P**	**11 05 28.4**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=243,slow=3.2,SNR=13						
MBAR	**Mbarara**	**71.58**	**104**	⇓*e*P	**P**	**11 05 29.3**	**-0.3**
MBAR	**Mbarara**	**71.58**	**104**	PFAKE		11 05 40.0	+10
MBAR				LR	LR		
	comp=Z,126nm,21.0s,MS4.2						
SVW2	**Sparrevohn**	**72.12**	**334**	*e*P	**P**	**11 05 32.2**	**+0.2**
TNA	**Tin City**	**72.79**	**341**	*e*P	**P**	**11 05 36.0**	**+0.2**
	comp=Z,4.1nm,0.9s,mb4.4						
TIXI	**Tiksi**	**72.83**	**5**	*e*P	**P**	**11 05 37.1**	**+1.2**
TIXI				*e*S	S	11 15 05.7	+5.2
TIXI				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,137nm,17.0s,MS4.3						
TIXI	**Tiksi**	**72.83**	**5**	PFAKE		11 05 50.0	+14
TIXI				LR	LR		
	comp=Z,323nm,21.0s,MS4.6						
KDAK	**Kodiak Island**	**73.14**	**330**	PFAKE		11 05 50.0	+12
KDAK				LR	LR		
	comp=Z,253nm,19.0s,MS4.5						
TSUM	**Tsumeb**	**74.33**	**128**	*e*P	**P**	**11 05 45.4**	**-0.2**
	comp=Z,9.8nm,1.0s,mb4.7						
TSUM				LR	LR		
	comp=Z,644nm,22.0s,MS4.9						
BILL	**Bilibino**	**75.63**	**352**	⇑*e*P	**P**	**11 05 56.0**	**+3.9**
BILL				*e*		11 06 07.2	
BILL				SS	SS	11 20 24.7	-1.1
BILL				pmax	pmax		
	comp=Z,12nm,1.9s,mb4.5						
BILL				MLR	MLR		
	comp=Z,700nm,24.0s,MS4.9						
BILL	**Bilibino**	**75.63**	**352**	*e*P	**P**	**11 05 54.7**	**+2.6**
	comp=Z,28nm,1.5s,mb5.0						
BILL				LR	LR		
	comp=Z,713nm,19.0s,MS5.0						
NVS	**Novosibirsk**	**76.27**	**31**	*e*P	**P**	**11 05 55.1**	**-0.9**
KURK	**Kurchatov**	**76.90**	**36**	⇑*e*P	**P**	**11 05 59.5**	**-0.1**
KURK	**Kurchatov**	**76.90**	**36**	*e*P	**P**	**11 05 59.0**	**-0.6**
	comp=Z,19nm,1.1s,mb4.9						
KURK				LR	LR		
	comp=Z,95nm,20.0s,MS4.1						
KMBO	**Kilima Mbogo**	**77.09**	**101**	P	**P**	**11 06 03.2**	**+1.8**
	comp=Z,0.5nm,0.3s,mb3.9,baz=284,slow=4.9,SNR=3.7						
KMBO				LR	LR	11 41 35.1	
	comp=Z,408nm,18.6s,MS4.8,baz=276,slow=37						
KMBO	**Kilima Mbogo**	**77.09**	**101**	*e*P	**P**	**11 06 03.0**	**+1.5**
	comp=Z,53nm,1.9s,mb5.2						
KMBO				LR	LR		
	comp=Z,148nm,19.0s,MS4.3						
LSZ	**Lusaka**	**78.92**	**118**	*e*P	**P**	**11 06 11.5**	**+0.1**
	comp=Z,42nm,1.3s,mb5.2						
LSZ				LR	LR		
	comp=Z,964nm,20.0s,MS5.1						
AAK	**Ala-Archa**	**79.87**	**45**	*d i*P	**P**	**11 06 18.3**	**+2.3**
AAK				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.8						
AAK				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
AAK	**Ala-Archa**	**79.87**	**45**	PFAKE		11 06 30.0	+14
AAK				LR	LR		
	comp=Z,221nm,19.0s,MS4.5						
PLCA	**Paso Flores**	**82.03**	**206**	P	**P**	**11 06 28.6**	**+1.1**
	comp=Z,4.6nm,0.9s,mb4.4,baz=42,slow=5.2,SNR=11						
YAK	**Yakutsk**	**82.34**	**7**	*e*P	**P**	**11 06 35.7**	**+7.1**
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
YAK	**Yakutsk**	**82.34**	**7**	PFAKE		11 06 40.0	+11
YAK				LR	LR		
	comp=Z,275nm,20.0s,MS4.6						
LBTB	**Lobatse**	**83.67**	**127**	*e*P	**P**	**11 06 34.1**	**-2.1**
	comp=Z,10.0nm,0.9s,mb5.0						
LBTB				*e*		11 06 43.8	
LBTB				LR	LR		
	comp=Z,483nm,20.0s,MS4.9						
BOD	**Bodaibo**	**83.90**	**16**	*e*P	**P**	**11 06 34.5**	**-2.1**
BOD				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
MA2	**Magadan**	**85.32**	**357**	⇓*e*P	**P**	**11 06 48.6**	**+4.9**
MA2				pmax	pmax		
	comp=Z,19nm,1.6s,mb5.0						
MA2				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.8						
MA2	**Magadan**	**85.32**	**357**	PFAKE		11 07 00.0	+16
MA2				LR	LR		
	comp=Z,560nm,21.0s,MS4.9						
MOY	**Mondy**	**85.59**	**25**	*e*P	**P**	**11 06 49.7**	**+4.5**
MOY				pmax	pmax		
	comp=Z,23nm,1.8s,mb5.1						
WMQ	**Urumqi**	**86.12**	**37**	*e*P	**P**	**11 06 51.0**	**+2.9**
WMQ				PP	PP	11 10 13.0	+2.8
WMQ				S	S	11 17 23.0	+2.0
WMQ				SS	SS	11 23 07.0	+4.1
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,88nm,10.0s						
WMQ				LR	LR		
	comp=N,587nm,20.0s,MS5.1						
WMQ				LR	LR		
	comp=E,565nm,20.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,686nm,20.0s,MS5.0						
TLY	**Talaya**	**86.48**	**24**	*e*P	**P**	**11 06 50.6**	**+1.0**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
TLY				MLR	MLR		
	comp=Z,323nm,18.0s,MS4.8						
TLY	**Talaya**	**86.48**	**24**	PFAKE		11 07 00.0	+10
TLY				LR	LR		
	comp=Z,83nm,20.0s,MS4.1						
ZAK	**Zakamensk**	**87.46**	**25**	*e*P	**P**	**11 06 56.0**	**+1.6**
ZAK				*e*		11 07 02.8	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.3						
FX1	**Attu Island--F**	**88.58**	**343**	LR	LR	11 41 44.4	
	comp=Z,11nm,21.3s,baz=210,slow=32						
SONM	**Songino Array**	**90.70**	**24**	P	**P**	**11 07 11.0**	**+1.2**
	comp=Z,0.9nm,1.1s,mb4.0,baz=326,slow=5.2,SNR=2.9						
ULN	**Ulaanbaatar**	**90.89**	**24**	P	**P**	**11 07 11.3**	**+0.7**
	comp=Z,4.1nm,0.9s,mb4.8						
ULN				LR	LR		
	comp=Z,332nm,19.0s,MS4.8						
PET	**Petropavlovsk**	**91.12**	**351**	PFAKE		11 07 20.0	+8.4
PET				LR	LR		
	comp=Z,511nm,19.0s,MS5.0						
HIA	**Hailar**	**93.12**	**16**	PFAKE		11 07 30.0	+9.1
HIA				LR	LR		
	comp=Z,262nm,20.0s,MS4.7						
GTA	**Gaotai**	**95.25**	**33**	P	**P**	**11 07 32.3**	**+1.4**
GTA				AP	pP	11 07 38.5	+4.4
GTA				XP	sP	11 07 41.4	+6.2
GTA				PP	PP	11 11 21.8	-1.4
GTA				PPP	PPP	11 13 26.1	-2.1
GTA				SKS	SKS	11 18 05.5	-4.8
GTA				S	S	11 18 41.8	-1.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,91nm,10.3s						
GTA				LR	LR		
	comp=N,280nm,19.4s,MS5.0						
GTA				LR	LR		
	comp=E,387nm,16.7s,MS5.0						
GTA				LR	LR		
	comp=Z,457nm,18.3s,MS5.0						
YSS	**Yuzh-Sakhalins**	**98.13**	**1**	PFAKE		11 08 00.0	+16
YSS				LR	LR		
	comp=Z,577nm,20.0s,MS5.1						
LSA	**Lhasa**	**98.46**	**44**	PFAKE		11 08 00.0	+14
LSA				LR	LR		
	comp=Z,317nm,20.0s,MS4.8						
MDJ	**Mudanjiang**	**99.41**	**10**	P	**P**	**11 07 47.9**	**-1.7**
MDJ				AMB	AMB		
	comp=Z,153nm,5.7s						
MDJ	**Mudanjiang**	**99.41**	**10**	PFAKE		11 08 00.0	+10
MDJ				LR	LR		
	comp=Z,278nm,20.0s,MS4.8						
CN2	**Changchun**	**99.51**	**13**	*e*P	**P**	**11 07 49.3**	**-0.8**
CN2				*e*S	S	11 19 16.6	-2.4
CN2				LR	LR		
	comp=N,300nm,17.0s,MS5.1						
CN2				LR	LR		
	comp=E,400nm,17.0s,MS5.1						
CN2				LR	LR		
	comp=Z,400nm,18.0s,MS5.0						
LZH	**Lanzhou**	**99.78**	**32**	*e*P	**P**	**11 07 49.8**	**-1.7**
LZH				PP	PP	11 11 55.3	-3.2
LZH				AMB	AMB		
	comp=Z,26nm,1.4s,mb5.5						
LZH				AMB	AMB		
	comp=Z,99nm,6.2s						
LZH				LR	LR		
	comp=N,705nm,15.3s						
LZH				LR	LR		
	comp=Z,1µm,17.9s,MS5.5						
LZH	**Lanzhou**	**99.78**	**32**	*e*P	**P**	**11 07 49.8**	**-1.7**
	comp=Z,26nm,1.4s,mb5.5						
LZH				pP	pP	11 07 54.3	-0.5
LZH				sP	sP	11 07 56.2	+0.4
LZH				PP	PP	11 11 55.2	-3.3
LZH				LR	LR		
	comp=Z,1µm,17.9s,MS5.5						
BJI	**Beijing**	**100.80**	**21**	*e*P	P	11 07 52.0	-4.1
BJI				LR	LR		
	comp=Z,290nm,22.9s,MS4.7						
BJT	**Baijiatuau**	**100.82**	**21**	PFAKE		11 08 10.0	+14
BJT				LR	LR		
	comp=Z,458nm,20.0s,MS5.0						
PALK	**Pallekele**	**107.06**	**68**	PFAKE		11 12 50.0	
PALK				LR	LR		
	comp=Z,61nm,20.0s,MS4.2						
ENH	**Enshi**	**107.18**	**31**	PFAKE		11 12 50.0	
ENH				LR	LR		
	comp=Z,164nm,20.0s,MS4.6						
SSE	**Sheshan**	**110.59**	**21**	*e*PKP	PKPdf	11 12 40.8	-0.9
SSE				PP	PP	11 13 20.8	+1.2
SSE				SS	SS	11 28 43.9	-1.3
SSE				PP	PP		
	comp=Z,52nm,3.7s						
SSE				LR	LR		
	comp=N,107nm,20.5s,MS4.6						
SSE				LR	LR		
	comp=E,142nm,20.5s,MS4.6						
SSE				LR	LR		
	comp=Z,221nm,19.2s,MS4.8						
SSE	**Sheshan**	**110.59**	**21**	*e*PKP	PKPdf	11 12 40.7	-1.0
SSE				PP	PP	11 13 20.7	+1.1
SSE				SS	SS	11 28 43.9	-1.3
SSE				LR	LR		
	comp=Z,220nm,19.2s,MS4.8						
CM31	**Chiang Mai Arr**	**111.61**	**46**	PFAKE		11 12 50.0	+6.2
CM31				LR	LR		
	comp=Z,584nm,20.0s,MS5.2						
QIZ	**Qiongzhong**	**117.04**	**37**	PFAKE		11 13 00.0	+5.5
QIZ				LR	LR		
	comp=Z,250nm,21.0s,MS4.8						
QSPA	**South Pole Qui**	**125.18**	**180**	*e*P	PKPdf	11 13 08.8	0.0
CASY	**Casey**	**143.35**	**158**	PFAKE		11 13 50.0	+12
CASY				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
HNR	**Honiara**	**150.39**	**327**	PFAKE		11 14 10.0	+14
HNR				LR	LR		
	comp=Z,505nm,22.0s,MS5.3						
PMG	**Port Moresby**	**154.07**	**353**	PFAKE		11 14 10.0	+9.0
PMG				LR	LR		
	comp=Z,235nm,19.0s,MS5.0						
MBWA	**Marble Bar**	**154.55**	**63**	PFAKE		11 14 10.0	+8.5
MBWA				LR	LR		
	comp=Z,479nm,21.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**157.80**	**92**	PFAKE		11 14 20.0	+15
NWAO				LR	LR		
	comp=Z,18µm,19.0s						
WRAB	**Tennant Creek**	**162.53**	**31**	PFAKE		11 14 20.0	+9.1
WRAB				LR	LR		
	comp=Z,185nm,20.0s						
WRA	**Warramunga Arr**	**162.53**	**31**	PKP	PKPdf	11 14 09.2	-1.7
	comp=Z,2.4nm,1.4s,baz=329,slow=4.6,SNR=2.7						
WRA				PKPab	PKPab	11 14 57.3	-1.1
	comp=Z,1.5nm,1.0s,baz=343,slow=4.0,SNR=5.7						
CTAO	**Charters Tower**	**164.72**	**352**	PFAKE		11 14 20.0	+6.9
CTAO				LR	LR		
	comp=Z,585nm,19.0s						
ASAR	**Alice Springs**	**165.51**	**40**	PKP	PKPdf	11 14 15.6	+1.9
	comp=Z,0.4nm,1.0s,baz=315,slow=2.6,SNR=3.3						
ASAR				PKPab	PKPab	11 15 10.8	-0.5
	comp=Z,1.9nm,0.9s,baz=308,slow=3.8,SNR=9.9						

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*NEIC **16** 11:00:40.9,38.81S×175.10E,h226^{km},After WEL.*
*WEL **16** 11:00:41.9±0.4,38.80S×175.20E,h217^{km}±2^{km},ML4.2/13,*
Error ellipse: s-maj=3.5km s-min=3.4km az=0.0
ISC 16 11:00:40.0±0.7**,38.99S**±0.04×**175.05E**±0.06**,h226**^{km}±4^{km}**,**
n74,σ1§01/105**,17C-4D,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.26**	**240**	P	**P**	**11 01 10.1**	**+0.3**
VRZ	**Vera Road**	**0.26**	**240**	PN	**P**	**11 01 10.0**	**+0.2**
TWVZ	**Taurewa**	**0.31**	**105**	P	**P**	**11 01 10.4**	**+0.5**
TWVZ	**Taurewa**	**0.31**	**105**	PN	**P**	**11 01 10.4**	**+0.5**
MGZ	**Maungaku**	**0.38**	**91**	P	**P**	**11 01 10.4**	**+0.3**
MGZ	**Maungaku**	**0.38**	**91**	⇑PN	**P**	**11 01 10.7**	**+0.6**
WTVZ	**West Tongariro**	**0.44**	**106**	P	**P**	**11 01 10.9**	**+0.7**
WTVZ				S	**S**	**11 01 33.2**	**-0.5**
WTVZ	**West Tongariro**	**0.44**	**106**	PN	**P**	**11 01 10.9**	**+0.7**
WTVZ				SN	**S**	**11 01 33.2**	**-0.5**
CNZ	**Chateau**	**0.44**	**118**	P	**P**	**11 01 11.2**	**+1.0**
CNZ	**Chateau**	**0.44**	**118**	PN	**P**	**11 01 11.1**	**+0.9**
WPVZ	**Whakapapa**	**0.44**	**119**	P	**P**	**11 01 11.1**	**+0.9**
WPVZ	**Whakapapa**	**0.44**	**119**	PN	**P**	**11 01 11.0**	**+0.8**
WPVZ				SN	**S**	**11 01 33.2**	**-0.5**
NGZ	**Ngauruhoe**	**0.47**	**113**	P	**P**	**11 01 11.2**	**+0.9**
NGZ	**Ngauruhoe**	**0.47**	**113**	⇑PN	**P**	**11 01 11.2**	**+0.9**
NGZ				SN	**S**	**11 01 33.4**	**-0.4**
FWVZ	**Far West T-bar**	**0.47**	**124**	P	**P**	**11 01 11.4**	**+1.1**
FWVZ	**Far West T-bar**	**0.47**	**124**	⇓PN	**P**	**11 01 11.4**	**+1.1**
FWVZ				SN	**S**	**11 01 33.2**	**-0.6**
HIZ	**Hauiti**	**0.50**	**342**	P	**P**	**11 01 10.1**	**-0.3**
HIZ				S	**S**	**11 01 32.9**	**-1.1**
HIZ	**Hauiti**	**0.50**	**342**	⇓PN	**P**	**11 01 10.1**	**-0.3**
HIZ				SN	**S**	**11 01 32.9**	**-1.2**
KATZ	**Kakaramea**	**0.50**	**88**	P	**P**	**11 01 11.0**	**+0.6**
KATZ	**Kakaramea**	**0.50**	**88**	PN	**P**	**11 01 11.0**	**+0.5**
OTVZ	**Oturere**	**0.51**	**110**	PN	**P**	**11 01 11.6**	**+1.1**
TUVZ	**Tukino**	**0.55**	**120**	P	**P**	**11 01 11.6**	**+1.1**
TUVZ	**Tukino**	**0.55**	**120**	PN	**P**	**11 01 11.6**	**+1.1**
TUVZ				SN	**S**	**11 01 33.7**	**-0.6**
MOVZ	**Moawhango**	**0.69**	**127**	P	**P**	**11 01 11.7**	**+0.6**
MOVZ	**Moawhango**	**0.69**	**127**	⇓PN	**P**	**11 01 11.7**	**+0.7**
MOVZ				SN	**S**	**11 01 33.7**	**-1.5**
WAZ	**Wanganui**	**0.76**	**184**	P	**P**	**11 01 13.0**	**+1.6**
WAZ	**Wanganui**	**0.76**	**184**	⇑PN	**P**	**11 01 13.0**	**+1.6**
PKE	**Pukeiti**	**0.85**	**256**	P	**P**	**11 01 12.8**	**+1.0**
PKE				S	**S**	**11 01 37.6**	**+1.0**
PKE	**Pukeiti**	**0.85**	**256**	⇑PN	**P**	**11 01 12.8**	**+1.0**
PKE				SN	**S**	**11 01 36.7**	**+0.1**
BKZ	**Black Stump Fm**	**1.14**	**99**	⇑P	**P**	**11 01 13.9**	**+0.3**
BKZ	**Black Stump Fm**	**1.14**	**99**	⇓PN	**P**	**11 01 13.9**	**+0.3**
BKZ				SN	**S**	**11 01 37.0**	**-2.7**
TSZ	**Takapari Road**	**1.28**	**147**	P	**P**	**11 01 16.1**	**+1.5**
TSZ	**Takapari Road**	**1.28**	**147**	PN	**P**	**11 01 16.1**	**+1.4**
TSZ				SN	**S**	**11 01 41.6**	**+0.1**
MRZ	**Mangatainoka R**	**1.72**	**166**	⇑P	**P**	**11 01 19.5**	**+1.3**
MRZ	**Mangatainoka R**	**1.72**	**166**	⇑PN	**P**	**11 01 19.5**	**+1.2**
MRZ				SN	**S**	**11 01 47.5**	**-0.3**
PWZ	**Pawanui**	**1.74**	**127**	P	**P**	**11 01 19.6**	**+1.1**
PWZ	**Pawanui**	**1.74**	**127**	PN	**P**	**11 01 19.5**	**+1.1**
PWZ				SN	**S**	**11 01 47.9**	**-0.3**
URZ	**Urewera**	**1.77**	**66**	P	**P**	**11 01 17.2**	**-1.5**
URZ	**Urewera**	**1.77**	**66**	PN	**P**	**11 01 17.2**	**-1.6**
URZ				SN	**S**	**11 01 43.9**	**-4.7**
KIW	**Kapiti Island**	**1.87**	**183**	P	**P**	**11 01 20.9**	**+1.3**
KIW	**Kapiti Island**	**1.87**	**183**	⇑PN	**P**	**11 01 20.8**	**+1.2**
KIW				SN	**S**	**11 01 50.7**	**+0.5**
BFZ	**Birch Farm**	**1.92**	**152**	P	**P**	**11 01 21.3**	**+1.2**
BFZ	**Birch Farm**	**1.92**	**152**	⇑PN	**P**	**11 01 21.3**	**+1.2**
BFZ				SN	**S**	**11 01 50.9**	**-0.1**
KNZ	**Kokohu**	**2.04**	**92**	P	**P**	**11 01 21.2**	**-0.1**
KNZ	**Kokohu**	**2.04**	**92**	PN	**P**	**11 01 21.3**	**0.0**
KNZ				SN	**S**	**11 01 51.6**	**-1.5**
MWZ	**Matawai**	**2.05**	**72**	P	**P**	**11 01 20.3**	**-1.0**
MWZ	**Matawai**	**2.05**	**72**	⇑PN	**P**	**11 01 20.3**	**-1.0**
CAW	**Cannon Point**	**2.11**	**180**	⇑PN	**P**	**11 01 23.2**	**+1.2**
MTW	**Mount Morrison**	**2.19**	**171**	P	**P**	**11 01 23.7**	**+1.0**
MTW	**Mount Morrison**	**2.19**	**171**	⇑PN	**P**	**11 01 23.7**	**+0.9**
MRW	**Makara Radio**	**2.25**	**187**	P	**P**	**11 01 24.5**	**+1.1**
MRW	**Makara Radio**	**2.25**	**187**	⇑PN	**P**	**11 01 24.4**	**+1.1**
MRW				SN	**S**	**11 01 57.0**	**+0.1**
PAWZ	**Paruwai Farm**	**2.40**	**173**	⇑PN	**P**	**11 01 25.9**	**+0.9**
PAWZ				SN	**S**	**11 01 59.8**	**0.0**
BHW	**Baring Head**	**2.42**	**183**	P	**P**	**11 01 25.9**	**+0.8**
BHW	**Baring Head**	**2.42**	**183**	*e*PN	**P**	**11 01 26.1**	**+1.0**
MSWZ	**Moikau Station**	**2.42**	**176**	P	**P**	**11 01 26.0**	**+0.8**
MSWZ	**Moikau Station**	**2.42**	**176**	PN	**P**	**11 01 26.0**	**+0.9**
MSWZ				SN	**S**	**11 02 00.0**	**-0.1**
NNZ	**Nelson**	**2.56**	**209**	⇑PN	**P**	**11 01 27.2**	**+0.5**
NNZ				SN	**S**	**11 02 03.1**	**+0.3**
QRZ	**Quartz Range**	**2.67**	**226**	⇑PN	**P**	**11 01 27.5**	**-0.3**
QRZ				SN	**S**	**11 02 04.2**	**-0.6**
PUZ	**Puketiti**	**2.68**	**71**	P	**P**	**11 01 26.2**	**-1.7**
PUZ	**Puketiti**	**2.68**	**71**	PN	**P**	**11 01 26.3**	**-1.6**
BSWZ	**Blackbirch Sta**	**2.86**	**198**	P	**P**	**11 01 31.1**	**+1.2**
BSWZ	**Blackbirch Sta**	**2.86**	**198**	PN	**P**	**11 01 31.1**	**+1.2**
MXZ	**Matakaoa Point**	**2.93**	**62**	P	**P**	**11 01 28.7**	**-2.0**
MXZ	**Matakaoa Point**	**2.93**	**62**	PN	**P**	**11 01 28.6**	**-2.1**
MXZ				SN	**S**	**11 02 04.5**	**-5.6**
THZ	**Tophouse**	**3.21**	**210**	⇑P	**P**	**11 01 34.0**	**0.0**
THZ				S	**S**	**11 02 15.5**	**-0.3**
KHZ	**Kahutara**	**3.61**	**198**	P	**P**	**11 01 39.0**	**+0.4**
KHZ				S	**S**	**11 02 24.5**	**+0.5**
DSZ	**Denniston Nort**	**3.70**	**221**	P	**P**	**11 01 39.0**	**-0.7**
DSZ				S	**S**	**11 02 24.2**	**-1.8**
LTZ	**Lake Taylor**	**4.33**	**208**	P	**P**	**11 01 47.0**	**-0.3**
CRLZ	**Canterbury Las**	**4.93**	**201**	P	**P**	**11 01 53.6**	**-1.2**
CRLZ				S	**S**	**11 02 51.1**	**-1.9**
MQZ	**McQueen's Vall**	**5.04**	**200**	P	**P**	**11 01 54.8**	**-1.4**
MQZ				S	**S**	**11 02 52.2**	**-3.3**
WVZ	**Waitaha Valley**	**5.22**	**217**	P	**P**	**11 01 57.6**	**-0.8**
RPZ	**Rata Peaks**	**5.59**	**211**	P	**P**	**11 02 01.7**	**-1.4**
LBZ	**Lake Benmore**	**6.50**	**212**	*e*P	**P**	**11 02 12.9**	**-1.8**
LBZ				S	**S**	**11 03 24.2**	**-4.5**

IDC 16 11:22:50.9±1.6**,23.34S**×**115.25W,mb3.8**/4**,mb1 4.2**/4**,**
mb1mx3.8/18**,mbtmp3.8**/4**,MS4.3**/2**,Ms1 4.3**/2**,**
ms1mx3.2/24**,Error ellipse: s-maj=53.3km**
s-min=39.9km az=39.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**41.19**	**126**	LR	LR	11 43 13.1	
	comp=Z,378nm,20.4s,baz=19,slow=30						
LPAZ	**La Paz**	**44.73**	**90**	P	P	11 31 06.5	-1.5
	1.0nm,0.8s,baz=255,slow=5.6,SNR=4.7						
TXAR	**Lajitas Array**	**53.54**	**13**	P	P	11 32 14.2	-1.6
	0.7nm,1.0s,baz=172,slow=8.8,SNR=4.8						
NVAR	**Mina Array Bea**	**61.50**	**357**	P	P	11 33 10.0	-1.9
	1.6nm,0.9s,baz=163,slow=9.2,SNR=9.3						
RPZ	**Rata Peaks**	**62.72**	**232**	LR	LR	11 53 06.2	
	comp=Z,252nm,20.6s,baz=166,slow=29						
YKA	**Yellowknife Ar**	**85.53**	**0**	P	P	11 35 29.0	-2.7
	1.0nm,1.0s,baz=174,slow=4.7,SNR=12						
CMAR	**Chiang Mai Arr**	**147.73**	**268**	PKPbc	PKPdf	11 42 37.9	+0.6
	0.5nm,0.4s,baz=101,slow=0.7,SNR=4.1						
BRTR	**Keskin Array B**	**149.06**	**51**	PKPbc	PKPdf	11 42 42.1	+3.4
	1.2nm,0.8s,baz=270,slow=2.5,SNR=4.3						
BVAR	**Borovoye Array**	**150.05**	**353**	PKPbc	PKPdf	11 42 42.6	+2.7
	0.3nm,0.4s,baz=353,slow=4.9,SNR=2.5						

IDC 16 11:34:17.6±11.0**,3.49N**×**127.19E,h304**^{km}±109^{km}**,**
mb3.1/4**,mb1 3.2**/4**,mb1mx3.0**/18**,mbtmp3.7**/4**,1C,Error**
ellipse: s-maj=145.3km s-min=30.4km az=64.0,Talaud
Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**4.07**	**329**	⇑*e*P	P	11 34 30.5	-55
KCP				*i* S		11 35 06.3	
WRA	**Warramunga Arr**	**24.32**	**163**	P	P	11 39 07.4	-2.6
	1.5nm,0.7s,baz=344,slow=10,SNR=27						
ASAR	**Alice Springs**	**27.77**	**167**	P	P	11 39 39.7	-1.6
	0.4nm,0.6s,baz=351,slow=7.1,SNR=4.9						
ASAR				PcP	PcP	11 42 46.5	-2.8
	0.3nm,0.5s,baz=358,slow=2.4,SNR=4.0						
STKA	**Stephens Creek**	**37.74**	**160**	P	P	11 41 06.3	-0.2
	2.8nm,0.8s,baz=336,slow=8.7,SNR=5.5						
BVAR	**Borovoye Array**	**67.77**	**327**	P	P	11 44 43.1	-1.4
	0.7nm,0.6s,baz=117,slow=6.6,SNR=3.8						

IDC 16 11:37:55.8±1.4**,11.07S**×**163.44E,mb3.9**/6**,mb1 4.2**/6**,**
mb1mx4.0/14**,mbtmp3.9**/6**,Error ellipse:**
s-maj=100.8km s-min=22.5km az=139.0,Bougainville -
Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.31**	**166**	*e*P	P	11 40 31.3	-11
DZM				*e*S	S	11 42 18.7	-32
STKA	**Stephens Creek**	**28.90**	**221**	P	P	11 43 56.5	-2.1
	3.0nm,0.9s,baz=20,slow=8.1,SNR=3.5						
WRA	**Warramunga Arr**	**29.36**	**249**	P	P	11 44 00.4	-2.5
	1.1nm,0.7s,baz=80,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**30.77**	**242**	P	P	11 44 13.9	-1.5
	1.0nm,0.8s,baz=69,slow=9.5,SNR=5.4						
ILAR	**Eielson Array**	**84.27**	**19**	P	P	11 50 29.7	-0.7
	1.0nm,1.0s,baz=244,slow=6.2,SNR=8.2						

NVAR	Mina Array Bea	87.78	50	P	P	11 50 47.5	-0.8
	0.3nm,0.4s,baz=234,slow=7.8,SNR=5.4						
YKA	Yellowknife Ar	96.04	28	P	P	11 51 23.8	-2.3
	0.9nm,1.2s,baz=256,slow=4.6,SNR=7.2						

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*BJI **16** 11:42:12.2,20.83S×176.05W,h316^{km},mB4.8,mb4.7*
*IDC **16** 11:42:13.5±2.0,21.24S×176.82W,h298^{km}±19^{km}, mb4.3/16,mb1 4.5/18,mb1mx4.4/23,mbtmp5.0/18,Error ellipse: s-maj=16.6km s-min=8.3km az=147.0*
*NEIC **16** 11:42:14.2±1.3,21.20S×176.79W,h308^{km}±13^{km}, mb4.7/37,Error ellipse: s-maj=7.8km s-min=6.0km az=148.0*
*MOS **16** 11:42:15.0±1.1,19.49S×178.26W,h236^{km},mb4.9/6, Error ellipse: s-maj=24.7km s-min=16.8km az=0.5*
ISC 16 11:42:09.1±1.1,**21.12S**±0.04×**176.86W**±0.06, **h268**^{km}±10^{km},**n343,**σ1^{s}**03**/233,**mb4.6**/55,**19C-17D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.56	263⇑	iP	P	11 45 39.9	+3.3
NOUC	Port Laguerre	15.69	263⇑	eP	P	11 45 41.0	+2.9
NOUC	Port Laguerre	15.69	263⇑	eP	P	11 45 41.0	+2.9
RAR	Rarotonga	15.94	93	P	P	11 45 40.0	-0.8
	2.9nm,0.3s,baz=261,slow=8.7,SNR=6.8						
RAR				S	S	11 48 37.8	+7.8
	3.2nm,0.3s,baz=79,slow=15,SNR=2.5						
RAR	Rarotonga	15.94	93	eP	P	11 45 40.0	-0.9
	82nm,0.8s						
OUZ	Omahuta	16.36	209	eP	P	11 45 46.6	+1.2
OUZ	Omahuta	16.36	209	ePN	P	11 45 46.6	+1.2
OUZ	Omahuta	16.36	209	ePN	P	11 45 46.6	+1.2
KUZ	Kuaotunu	16.86	201	eP	P	11 45 51.8	+1.1
KUZ	Kuaotunu	16.86	201	PN	P	11 45 51.8	+1.0
KUZ	Kuaotunu	16.86	201	PN	P	11 45 51.8	+1.0
MXZ	Matakaoa Point	16.92	193	eP	P	11 45 50.8	-0.5
MXZ	Matakaoa Point	16.92	193	ePN	P	11 45 50.4	-0.9
MXZ				eSN	S	11 48 44.5	-5.1
MXZ	Matakaoa Point	16.92	193	ePN	P	11 45 50.4	-0.9
MXZ				eSN	S	11 48 44.5	-5.1
MYRZ	Mayor Island	17.19	199	PN	P	11 45 56.7	+2.5
MYRZ	Mayor Island	17.19	199	PN	P	11 45 56.7	+2.5
PUZ	Puketiti	17.42	193	eP	P	11 45 55.8	-0.7
PUZ	Puketiti	17.42	193	ePN	P	11 45 55.8	-0.8
PUZ				eSN	S	11 48 53.7	-5.7
PUZ	Puketiti	17.42	193	ePN	P	11 45 55.8	-0.8
PUZ				eSN	S	11 48 53.7	-5.7
MARZ	Manawahe	17.72	197	eP	P	11 46 00.9	+1.3
MARZ	Manawahe	17.72	197	PN	P	11 46 00.9	+1.3
MARZ	Manawahe	17.72	197	PN	P	11 46 00.9	+1.3
EDRZ	Edgecumbe	17.81	197	eP	P	11 46 01.1	+0.5
EDRZ	Edgecumbe	17.81	197	ePN	P	11 46 00.8	+0.2
EDRZ	Edgecumbe	17.81	197	ePN	P	11 46 00.8	+0.2
MWZ	Matawai	17.83	195	eP	P	11 45 58.3	-2.5
MWZ				S	S	11 49 06.4	-0.9
MWZ	Matawai	17.83	195	PN	P	11 45 58.3	-2.5
MWZ				SN	S	11 49 06.4	-0.9
MWZ	Matawai	17.83	195	PN	P	11 45 58.3	-2.5
MWZ				SN	S	11 49 06.4	-0.9
URZ	Urewera	17.86	196	P	P	11 45 59.3	-1.8
	15nm,0.3s,baz=322,slow=12,SNR=86						
URZ				S	S	11 49 09.4	+1.5
	8.7nm,0.3s,baz=290,slow=23,SNR=11						
URZ	Urewera	17.86	196	eP	P	11 45 58.3	-2.8
URZ	Urewera	17.86	196	ePN	P	11 45 58.3	-2.8
URZ				eSN	S	11 49 08.0	+0.2
URZ	Urewera	17.86	196	ePN	P	11 45 58.3	-2.8
URZ				eSN	S	11 49 08.0	+0.2
TAZ	Tarawera	17.99	197	eP	P	11 46 03.7	+1.2
PATZ	Paeroa	18.20	198	eP	P	11 46 04.7	+0.1
PATZ	Paeroa	18.20	198	PN	P	11 46 04.7	+0.1
PATZ	Paeroa	18.20	198	PN	P	11 46 04.7	+0.1
KNZ	Kokohu	18.45	194	eP	P	11 46 07.6	+0.4
KNZ	Kokohu	18.45	194	ePN	P	11 46 07.6	+0.5
KNZ				eSN	S	11 49 18.2	-0.9
KNZ	Kokohu	18.45	194	ePN	P	11 46 07.6	+0.5
KNZ				eSN	S	11 49 18.2	-0.9
HIZ	Hauiti	18.75	201	eP	P	11 46 11.9	+1.7
HIZ	Hauiti	18.75	201	PN	P	11 46 11.9	+1.7
HIZ	Hauiti	18.75	201	PN	P	11 46 11.9	+1.7
BKZ	Black Stump Fm	18.88	196	eP	P	11 46 09.0	-2.4
BKZ	Black Stump Fm	18.88	196	ePN	P	11 46 08.3	-3.1
BKZ				eSN	S	11 49 28.0	+1.0
BKZ	Black Stump Fm	18.88	196	ePN	P	11 46 08.3	-3.1
BKZ				eSN	S	11 49 28.0	+1.0
MGZ	Maungaku	18.98	198	P	P	11 46 11.6	-0.9
MGZ	Maungaku	18.98	198	PN	P	11 46 11.6	-1.0
MGZ	Maungaku	18.98	198	PN	P	11 46 11.6	-1.0
NGZ	Ngauruhoe	19.13	198	eP	P	11 46 12.5	-1.5
NGZ	Ngauruhoe	19.13	198	PN	P	11 46 12.5	-1.4
NGZ	Ngauruhoe	19.13	198	PN	P	11 46 12.5	-1.4
TUVZ	Tukino	19.20	198	eP	P	11 46 13.2	-1.5
VRZ	Vera Road	19.34	200	eP	P	11 46 16.8	+0.7
VRZ	Vera Road	19.34	200	PN	P	11 46 16.7	+0.7
VRZ	Vera Road	19.34	200	PN	P	11 46 16.7	+0.7
PWZ	Pawanui	19.60	195	eP	P	11 46 18.1	-0.6
PWZ	Pawanui	19.60	195	ePN	P	11 46 18.1	-0.5
PWZ				eSN	S	11 49 41.3	+0.9
PWZ	Pawanui	19.60	195	ePN	P	11 46 18.1	-0.5
PWZ				eSN	S	11 49 41.3	+0.9
WAZ	Wanganui	19.85	199	eP	P	11 46 20.7	-0.4
WAZ	Wanganui	19.85	199	PN	P	11 46 20.7	-0.4
WAZ	Wanganui	19.85	199	PN	P	11 46 20.7	-0.4
TSZ	Takapari Road	19.85	196	eP	P	11 46 19.6	-1.6
TSZ	Takapari Road	19.85	196	ePN	P	11 46 19.6	-1.6
TSZ	Takapari Road	19.85	196	ePN	P	11 46 19.6	-1.6
MRZ	Mangatainoka R	20.52	197	eP	P	11 46 26.2	-1.5
MRZ	Mangatainoka R	20.52	197	PN	P	11 46 26.2	-1.5
MRZ				eSN	S	11 49 59.9	+3.1
MRZ	Mangatainoka R	20.52	197	PN	P	11 46 26.2	-1.5
MRZ				eSN	S	11 49 59.9	+3.1
MTW	Mount Morrison	21.00	196	eP	P	11 46 34.2	+1.7
CAW	Cannon Point	21.07	197	eP	P	11 46 33.1	-0.1
QRZ	Quartz Range	21.62	202	eP	P	11 46 39.4	+0.9
QRZ	Quartz Range	21.62	202	PN	P	11 46 39.2	+0.7
QRZ	Quartz Range	21.62	202	PN	P	11 46 39.2	+0.7
NNZ	Nelson	21.68	200	eP	P	11 46 38.3	-0.8
NNZ	Nelson	21.68	200	PN	P	11 46 38.3	-0.7
NNZ	Nelson	21.68	200	PN	P	11 46 38.3	-0.7
TUWZ	Tuamarina	21.70	199	PN	P	11 46 38.3	-0.9
TUWZ	Tuamarina	21.70	199	PN	P	11 46 38.3	-0.9
THZ	Tophouse	22.33	200	eP	P	11 46 45.2	-0.1
THZ	Tophouse	22.33	200	PN	P	11 46 45.1	-0.2
THZ	Tophouse	22.33	200	PN	P	11 46 45.1	-0.2
DSZ	Denniston Nort	22.69	202	eP	P	11 46 50.9	+2.1
DSZ	Denniston Nort	22.69	202	PN	P	11 46 50.6	+1.8
DSZ	Denniston Nort	22.69	202	PN	P	11 46 50.6	+1.8
KHZ	Kahutara	22.72	199	eP	P	11 46 48.9	-0.2
KHZ	Kahutara	22.72	199	PN	P	11 46 48.9	-0.2
KHZ	Kahutara	22.72	199	PN	P	11 46 48.9	-0.2
LTZ	Lake Taylor	23.45	200	ePN	P	11 46 56.1	+0.2
LTZ	Lake Taylor	23.45	200	ePN	P	11 46 56.1	+0.2
MQZ	McQueen's Vall	24.16	199	eP	P	11 47 03.8	+1.3
MQZ	McQueen's Vall	24.16	199	ePN	P	11 47 03.3	+0.8
MQZ	McQueen's Vall	24.16	199	ePN	P	11 47 03.3	+0.8
RPZ	Rata Peaks	24.68	201	P	P	11 47 07.4	+0.1
	82nm,0.5s,mb5.4,baz=349,slow=2.0,SNR=46						
RPZ	Rata Peaks	24.68	201	eP	P	11 47 07.2	-0.1
RPZ	Rata Peaks	24.68	201	PN	P	11 47 07.2	-0.1
RPZ	Rata Peaks	24.68	201	PN	P	11 47 07.2	-0.1
FOZ	Fox Glacier	25.04	204	PN	P	11 47 09.4	-1.1
FOZ	Fox Glacier	25.04	204	PN	P	11 47 09.4	-1.1
LBZ	Lake Benmore	25.57	202	eP	P	11 47 13.9	-1.5
LBZ	Lake Benmore	25.57	202	PN	P	11 47 13.9	-1.5
LBZ	Lake Benmore	25.57	202	PN	P	11 47 13.9	-1.5
JCZ	Jackson Bay	25.82	204	eP	P	11 47 16.8	-0.9
JCZ	Jackson Bay	25.82	204	PN	P	11 47 16.8	-0.9
JCZ	Jackson Bay	25.82	204	PN	P	11 47 16.8	-0.9
ODZ	Otahua Downs	26.00	200	eP	P	11 47 18.5	-0.8
ODZ	Otahua Downs	26.00	200	ePN	P	11 47 18.5	-0.7
ODZ	Otahua Downs	26.00	200	ePN	P	11 47 18.5	-0.7
WKZ	Wanaka	26.37	203	eP	P	11 47 21.2	-1.5
WKZ	Wanaka	26.37	203	PN	P	11 47 21.2	-1.4
WKZ	Wanaka	26.37	203	PN	P	11 47 21.2	-1.4
MSZ	Milford Sound	26.65	205	ePN	P	11 47 25.3	+0.1
MSZ	Milford Sound	26.65	205	ePN	P	11 47 25.3	+0.1
MLZ	Mavora Lakes	27.12	204	eP	P	11 47 29.8	+0.3
MLZ	Mavora Lakes	27.12	204	ePN	P	11 47 29.8	+0.3
MLZ	Mavora Lakes	27.12	204	ePN	P	11 47 29.8	+0.3
TUZ	Tuapeka	27.13	201	eP	P	11 47 29.7	+0.1
TUZ	Tuapeka	27.13	201	ePN	P	11 47 29.7	0.0
TUZ	Tuapeka	27.13	201	ePN	P	11 47 29.7	0.0
WHZ	Wether Hill Ro	27.67	203	eP	P	11 47 33.5	-1.0
CTA	Charters Tower	34.50	265⇓	iP	P	11 48 34.8	+0.9
	38nm,0.5s,mb5.2						
CTA	Charters Tower	34.50	265⇓	iP	P	11 48 34.8	+0.9
CTA				pmax	pmax		
	comp=Z,39nm,0.5s						
CTA	Charters Tower	34.50	265	P	P	11 48 34.9	+1.0
	comp=Z,48nm,0.5s,mb5.3,baz=96,slow=10,SNR=92						
CTAO	Charters Tower	34.50	265	eP	P	11 48 34.4	+0.5
CTAO				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.2						
CTAO	Charters Tower	34.50	265	eP	P	11 48 34.4	+0.5
	comp=Z,53nm,0.6s,mb5.2						
TOO	Toolangi	36.41	235	eP	P	11 48 50.5	+0.7
	comp=Z,2.1nm,0.6s,mb3.8						
PMG	Port Moresby	36.52	283	P	P	11 48 52.1	+1.1
PMG	Port Moresby	36.52	283	P	P	11 48 52.0	+1.0
	comp=Z,47nm,0.7s,mb5.1,baz=85,slow=5.4,SNR=31						
STKA	Stephens Creek	38.49	245	eP	P	11 49 08.0	+0.8
	comp=Z,36nm,0.7s,mb4.9						
STKA	Stephens Creek	38.49	245	P	P	11 49 07.9	+0.7
	comp=Z,48nm,0.7s,mb5.0,baz=88,slow=9.5,SNR=114						
ASAR	Alice Springs	45.42	257	P	P	11 50 02.8	-0.5
	comp=Z,37nm,0.8s,mb4.7,baz=90,slow=8.2,SNR=237						
ASAR				ScP		11 55 06.2	
	comp=Z,1.4nm,0.8s,baz=108,slow=4.4,SNR=4.2						
ASAR				S	S	11 56 22.6	-0.8
	comp=Z,0.7nm,1.0s,baz=93,slow=15,SNR=5.0						
ASPA	Alice Springs	45.42	257⇓	iP	P	11 50 03.6	+0.3
ASPA				eS	S	11 56 19.5	-3.9
ASPA				eSCS	ScS	11 59 30.3	+2.3
WRAB	Tennant Creek	45.57	262c	iP	P	11 50 04.1	-0.3
WRAB	Tennant Creek	45.57	262	eP	P	11 50 03.2	-1.2
	comp=Z,35nm,0.8s,mb4.7						
WRA	Warramunga Arr	45.58	262	P	P	11 50 03.7	-0.8
	comp=Z,18nm,0.7s,mb4.5,baz=95,slow=5.2,SNR=313						
WRA				S	S	11 56 24.2	-1.4
	comp=Z,0.8nm,0.8s,baz=116,slow=16,SNR=5.2						
KAKA	Kakadu	49.05	271⇓	iP	P	11 50 30.8	-0.6
	comp=Z,22nm,0.6s,mb4.7						
KAKA				eS	S	11 57 12.5	-1.8
FITZ	Fitzroy Crossi	54.01	263⇓	iP	P	11 51 08.1	+0.2
	comp=Z,14nm,0.7s,mb4.4						
VNDA	Vanda	57.40	185	eP	P	11 51 33.7	+2.5
	comp=Z,5.5nm,0.8s,mb4.0						
MBWA	Marble Bar	58.76	257	eP	P	11 51 40.3	-1.1
	comp=Z,16nm,0.7s,mb4.6						
KLBR	Kellerberrin	58.77	245⇓	iP	P	11 51 40.7	-0.6
	comp=Z,114nm,0.5s,mb5.6						
NWAO	Narrogin (SRO)	59.05	244	P	P	11 51 43.7	+0.5
	comp=Z,12nm,0.6s,mb4.5,baz=107,slow=11,SNR=9.8						
NWAO	Narrogin (SRO)	59.05	244	eP	P	11 51 42.6	-0.6
	comp=Z,7.4nm,0.7s,mb4.2						
MUN	Mundaring	60.02	245	eP	P	11 51 49.7	-0.2
	comp=Z,8.8nm,0.6s,mb4.5						
CASY	Casey	63.87	205	eP	P	11 52 15.9	+1.2
QSPA	South Pole Qui	68.95	180	eP	P	11 52 48.2	+1.8
	comp=Z,8.3nm,0.6s,mb4.6						
FX1	Attu Island--F	74.19	354	eP	P	11 53 16.4	-1.6
UNV	Unalaska Valle	75.19	6	eP	P	11 53 21.8	-1.8
	comp=Z,158nm,0.8s,mb5.7						
YSS	Yuzh-Sakhalins	76.92	333⇓	eP	P	11 53 33.0	-0.4
YSS				e		11 53 48.2	
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
SSE	Sheshan	78.90	310	eP	P	11 53 44.1	-0.4
SSE				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,275nm,4.0s						
SSE	Sheshan	78.90	310	eP	P	11 53 44.1	-0.4
	comp=Z,18nm,0.8s,mb4.8						
OHCM	Honcut	79.32	40	eP	P	11 53 45.1	-1.4
YBH	Yreka Blue Hor	80.11	38	P	P	11 53 51.6	+1.0
	comp=Z,9.8nm,0.6s,mb4.7,baz=218,slow=2.3,SNR=43						
NVAR	Mina Array Bea	80.74	43	P	P	11 53 54.9	+0.9
	comp=Z,3.7nm,0.7s,mb4.2,baz=228,slow=9.9,SNR=31						
NVAR	Mina Array Bea	80.74	43	P	P	11 53 54.9	+0.9
MNV	Mina	80.84	43	eP	P	11 53 55.2	+0.6
	comp=Z,8.6nm,1.1s,mb4.4						
NJ2	Nanjing	81.09	309	eP	P	11 53 57.5	+1.5
NJ2				PP	PP	11 57 08.0	+1.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
NJ2				LR	LR		
	comp=N,242nm,16.2s						
NJ2				LR	LR		
	comp=E,1µm,18.3s						
NJ2				LR	LR		
	comp=Z,840nm,14.7s						
MDJ	Mudanjiang	81.64	325	P	P	11 53 59.0	+0.5
MDJ				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,141nm,7.8s						
MDJ	Mudanjiang	81.64	325	eP	P	11 53 59.2	+0.7
	comp=Z,18nm,1.2s,mb4.7						
TUC	Tucson	82.52	51	eP	P	11 54 01.0	-2.4
	comp=Z,3.1nm,0.8s,mb4.2						
CN2	Changchun	83.44	322	eP	P	11 54 07.6	-0.1
CN2				eAP	pP	11 55 22.8	+11
CN2				eS	S	12 04 03.6	-1.2
CN2				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
CN2				LR	LR		
	comp=N,300nm,19.0s						
CN2				LR	LR		
	comp=E,300nm,19.0s						
CN2				LR	LR		
	comp=Z,300nm,19.0s						
SVW2	Sparrevohn	83.71	10	eP	P	11 54 07.9	-0.8
ELK	Elko	84.01	42	eP	P	11 54 11.2	+0.5
	comp=Z,5.7nm,0.9s,mb4.4						
SLKM	Skilak Lake	84.16	13	eP	P	11 54 10.5	-0.5
MA2	Magadan	84.66	344⇑	eP	P	11 54 12.5	-1.0
MA2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
BMO	Blue Mountains	85.14	38	eP	P	11 54 16.3	+0.1
	comp=Z,3.1nm,1.0s,mb4.1						
PMR	Palmer	85.37	13	eP	P	11 54 16.5	-0.5
	comp=Z,90nm,1.9s,mb5.3						
DIV	Divide	85.70	15	eP	P	11 54 17.9	-0.7
	comp=Z,36nm,0.6s,mb5.4						
TMUT	Trail Mountain	85.83	45	eP	P	11 54 20.6	+0.9
HLID	Hailey	86.10	40	eP	P	11 54 21.6	+0.7
	comp=Z,1.9nm,0.7s,mb4.0						
SRU	San Rafael	86.18	46	eP	P	11 54 21.9	+0.4
MNTX	Cornudas Mount	86.24	54	P	P	11 54 22.6	+0.7
	comp=Z,5.9nm,0.9s,mb4.4						
SYO	Syowa Base	86.36	192⇓	P	P	11 54 22.5	+0.9
DAU	Daniels Canyon	86.38	44	P	P	11 54 27.8	+5.4
TXAR	Lajitas Array	86.49	57	P	P	11 54 24.3	+1.1
	comp=Z,1.6nm,0.7s,mb4.0,baz=216,slow=8.2,SNR=11						
TXAR	Lajitas Array	86.49	57	P	P	11 54 24.3	+1.1
TNA	Tin City	86.67	4	eP	P	11 54 23.2	0.0
	comp=Z,10nm,0.7s,mb4.8						
TNA				e		11 57 47.4	
PV10	Paradox Valley	86.81	47	eP	P	11 54 24.6	+0.1
PV01	Paradox Valley	87.01	47	eP	P	11 54 24.4	-1.1
BJI	Beijing	87.08	315	eP	P	11 54 26.1	+0.4
BJI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.5						
BJI	Beijing	87.08	315	eP	P	11 54 26.1	+0.4
	comp=Z,10.0nm,1.3s,mb4.5						
NEW	Newport	87.25	35	P	P	11 54 26.5	+0.2
	comp=Z,2.2nm,0.7s,mb4.1,baz=214,slow=5.6,SNR=6.8						
NEW	Newport	87.25	35	P	P	11 54 26.5	+0.2
ENH	Enshi	87.27	304	eP	P	11 54 27.3	+0.5
	comp=Z,11nm,1.0s,mb4.6						
MCK	McKinley	87.34	12	eP	P	11 54 25.8	-0.6
	comp=Z,20nm,1.1s,mb4.9						
VNA3	Neumayer Olymp	87.46	176⇑	iP	P	11 54 31.3	+4.5
THY	Trims Highway	87.72	13	eP	P	11 54 27.9	-0.2
MENT	Mentasta	87.76	14	eP	P	11 54 28.4	0.0
VNA2	Neumayer--Watz	87.91	177	e	P	11 54 36.8	+7.9
VNA2	Neumayer--Watz	87.91	177⇑	iP	P	11 54 31.9	+3.0
VNA2				e		11 54 36.8	
TPAW	Teton Pass	88.18	42	P	P	11 54 31.5	+0.7
DLBC	Dease Lake	88.20	23	P	P	11 54 31.1	+0.5
	comp=Z,4.5nm,1.0s,mb4.2,baz=199,slow=4.0,SNR=7.9						
COLA	College	88.58	12d	iP	P	11 54 30.9	-1.3
COLA	College	88.58	12	eP	P	11 54 31.4	-0.8
	comp=Z,36nm,0.9s,mb5.2						
IMA	Indian Mountai	88.68	9	eP	P	11 54 33.1	+0.5
	comp=Z,11nm,0.7s,mb4.8						
ILAR	Eielson Array	88.68	12	P	P	11 54 31.6	-1.1
	comp=Z,4.0nm,0.6s,mb4.4,baz=224,slow=5.7,SNR=61						
PDAR	Pinedale Array	88.68	43	P	P	11 54 33.2	+0.1
	comp=Z,1.4nm,1.0s,mb3.7,baz=225,slow=4.2,SNR=8.7						
BOZ	Bozeman (W)	88.90	40	eP	P	11 54 34.7	+0.6
	comp=Z,5.8nm,0.7s,mb4.5						
SDCO	Great Sand Dun	88.95	49	eP	P	11 54 35.5	+0.9
	comp=Z,11nm,1.3s,mb4.5						
XAN	Xi'an	89.36	307	P	P	11 54 36.6	0.0
XAN				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.5						
BILL	Bilibino	89.76	354⇑	eP	P	11 54 37.3	-0.4
BILL				i		11 58 16.6	
BILL				eS	S	12 04 40.8	-23
BILL				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.7						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s						
BILL	Bilibino	89.76	354	eP	P	11 54 37.2	-0.4
	comp=Z,4.4nm,0.7s,mb4.4						
DAWY	Dawson	89.76	16	eP	P	11 54 37.9	+0.2
HHC	Hu-ho-hao-te	90.55	314	eP	P	11 54 42.8	+0.8
HHC				AMB	AMB		
	comp=Z,8.0nm,0.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,375nm,14.6s						
CMAR	Chiang Mai Arr	91.33	289	iP	P	11 54 47.6	+1.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CMAR	Chiang Mai Arr	91.33	289	P	P	11 54 47.5	+1.5
	comp=Z,3.9nm,1.0s,mb4.2,baz=126,slow=3.1,SNR=13						
LAO	LASA Array	92.67	41	eP	P	11 54 52.3	+0.6
	comp=Z,12nm,1.0s,mb4.8						
LZH	Lanzhou	93.99	307	eP	P	11 54 59.3	+1.4
LZH				AMB	AMB		
	comp=Z,54nm,1.5s,mb5.4						
LZH	Lanzhou	93.99	307	eP	P	11 54 59.2	+1.3
	comp=Z,54nm,1.5s,mb5.4						
LZH				pP	pP	11 56 05.5	+2.6
LZH				sP	sP	11 56 33.6	+3.5
LZH				PP	PP	11 58 52.5	+2.8
INK	Inuvik	94.59	15	eP	P	11 54 59.1	-0.8
	comp=Z,6.1nm,1.0s,mb4.7						
DGMT	Dagmar	94.71	40	eP	P	11 55 01.5	+0.6
	comp=Z,9.4nm,0.8s,mb5.0						
KSU1	Kansas State U	95.85	50	eP	P	11 55 02.6	-3.7
YKA	Yellowknife Ar	96.63	24	P	P	11 55 08.9	-0.4
	comp=Z,1.0nm,0.7s,mb4.1,baz=242,slow=4.5,SNR=27						
YKA				PKKPbc		12 11 51.3	
	comp=Z,0.1nm,0.5s,baz=36,slow=2.4,SNR=3.9						
ZAL	Zalesovo	111.65	321	Pdiff	Pdif	11 56 10.4	-5.8
	comp=Z,3.9nm,1.0s,baz=149,slow=16,SNR=21						
ZAL				PKiKP		12 00 11.7	
	comp=Z,1.5nm,0.7s,baz=327,slow=3.9,SNR=12						
NVS	Novosibirsk	112.65	322	iPKIKP	PKPdf	12 00 12.4	-0.8
KURK	Kurchatov	115.17	317d	iPKIKP	PKPdf	12 00 17.9	-0.3
KURK	Kurchatov	115.17	317	ePKPdf	PKPdf	12 00 17.6	-0.6
AAK	Ala-Archa	117.52	308⇓	iPKIKP	PKPdf	12 00 23.3	+0.3
CHKZ	Chkalovo	120.05	321	ePKPdf	PKPdf	12 00 27.2	-0.4
BVAR	Borovoye Array	120.24	320	PKP	PKPdf	12 00 28.4	+0.4
	comp=Z,5.6nm,0.5s,baz=96,slow=1.4,SNR=49						
BRVK	Borovoye	120.30	320	ePKPdf	PKPdf	12 00 28.2	+0.1
ARCES	ARCESS Array B	129.72	350	PKP	PKPdf	12 00 47.3	+1.4
	comp=Z,4.2nm,0.5s,baz=17,slow=1.4,SNR=23						
JOF	Joensuu	134.04	343	ep	PKPdf	12 00 53.8	-0.3
KAF	Kangasniemi	136.03	345	ep	PKPdf	12 00 56.8	-1.0
FINES	FINESS Array B	136.66	344	iPKHKP		12 00 57.0	
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	136.66	344	PKP	PKPdf	12 01 00.2	+1.2
	comp=Z,3.3nm,0.6s,baz=65,slow=2.7,SNR=6.8						
FINES	FINESS Array B	136.66	344	PKP	PKPdf	12 01 00.2	+1.2
NB2	NORSAR Subarra	139.71	354	PKP	PKPdf	12 00 57.2	-7.3
	comp=Z,1.0nm,0.6s,baz=20,slow=3.0						
NB2	NORSAR Subarra	139.71	354⇑	PKPab	PKPdf	12 00 57.2	-7.3
NOA	NORSAR Array B	139.71	354	PKhKP		12 00 56.7	
	comp=Z,1.7nm,0.8s,baz=22,slow=3.9,SNR=7.0						
NOA				PKP	PKPdf	12 01 07.2	+2.8
	comp=Z,1.6nm,0.7s,baz=14,slow=4.0,SNR=4.7						
NOA				SKPbc		12 04 16.8	
	comp=Z,3.3nm,0.9s,baz=15,slow=4.3,SNR=5.5						
NOA	NORSAR Array B	139.71	354	PKP	PKPdf	12 00 56.7	-7.8
NOA				PKP	PKPdf	12 01 07.2	+2.8
NOA				SKPbc		12 04 16.8	
HFS	Hagfors	140.31	352	PKhKP		12 00 58.4	
	comp=Z,2.2nm,0.4s,baz=90,slow=5.9,SNR=14						
HFS				PKP	PKPdf	12 01 07.5	+1.9
	comp=Z,2.7nm,0.8s,baz=108,slow=4.7,SNR=4.3						
HFS				SKPbc		12 04 18.3	
	comp=Z,5.2nm,0.8s,baz=117,slow=3.3,SNR=4.4						
SUW	Suwalki	143.79	340	ePKHKP		12 01 11.2	
SUW	Suwalki	143.79	340	ePKP	PKPdf	12 01 11.2	-0.5
AKASG	Malin Array Be	144.07	332	PKP	PKPdf	12 01 10.8	-1.5
	comp=Z,7.1nm,0.4s,baz=40,slow=4.3,SNR=110						
ELZG	Elazig	144.68	307	iP	PKPdf	12 01 15.8	+2.0
SIM	Simferopol'	145.15	320	iPKHKP		12 01 17.6	
SIM				pmax	pmax		
	comp=Z,20nm,0.7s						
MALT	Malatya	145.15	307	ePKPdf	PKPdf	12 01 16.0	+1.4
MBAR	Mbarara	145.45	235⇓	iPKHKP		12 01 17.8	
EKA	Eskdalemuir Ar	145.51	6	PKPbc	PKPbc	12 01 16.2	+0.6
	comp=Z,11nm,0.7s,baz=325,slow=3.0,SNR=33						
SVST	Sivas	145.70	310	iP	PKPdf	12 01 18.8	+3.3
GZT	Gaziantep	146.11	306	iP	PKPdf	12 01 19.3	+2.9
DMUB	Kingscourt	146.38	11	eP	PKPdf	12 01 19.0	+2.6
BOYT	Boyabat	146.42	314	iP	PKPdf	12 01 20.5	+3.7
BSEG	Bad Segeberg	146.78	352	ePKHKP		12 01 20.8	
KIS	Kishinev	146.83	327	ePKHKP		12 01 19.0	
DCN	Croghan	146.85	11	eP	PKPdf	12 01 20.0	+2.8
LVV	L'vov	146.92	335	ePKHKP		12 01 19.9	
DLF	Lyons Farm	147.03	11	eP	PKPdf	12 01 20.6	+3.1
BALT	Daday	147.37	315	iP	PKPdf	12 01 22.1	+3.7
ELDT	Eldivan	147.84	314	iP	PKPdf	12 01 24.0	+4.9
BRTR	Keskin Array B	148.04	312	PKPbc	PKPdf	12 01 23.9	+4.5
	comp=Z,5.5nm,0.7s,baz=129,slow=4.4,SNR=18						
OJC	Ojcow	148.12	340	ePKP	PKPdf	12 01 23.8	+4.6
BURAR	Bucovina Array	148.12	331	P	PKPdf	12 01 25.8	+6.5
WIT	Witteveen	148.24	356	ePKP	PKPdf	12 01 24.8	+5.5
KOLS	Kolonicke sedl	148.32	336	ePKP	PKPdf	12 01 21.3	+1.7
KOLS				e		12 01 27.9	
CFR	Carcaliu	148.40	325	PKIKP	PKPdf	12 01 25.1	+5.3
KSP	Ksiaz	148.59	344	ePKP	PKPdf	12 01 21.8	+1.9
KSP				ePKPdf	PKPdf	12 01 25.5	+5.6
KSP	Ksiaz	148.59	344	ePKP	PKPdf	12 01 25.5	+5.6
NIE	Niedzica	148.63	338	ePKP	PKPdf	12 01 24.9	+4.9
CRVS	Cervenica-Dubn	148.65	337	eP	PKPdf	12 01 26.0	+5.9
CRVS				e		12 01 34.3	
CRVS	Cervenica-Dubn	148.65	337	ePKP	PKPdf	12 01 26.1	+6.0
CRVS				e		12 01 34.3	
CLZ	Clausthal	148.82	351	ePKPbc	PKPdf	12 01 26.5	+6.2
CLL	Collm	148.90	348	iPKHKP		12 01 26.1	
CLL				pmax	pmax		
	comp=Z,97nm,0.7s						
CLL	Collm	148.90	348	iPKP	PKPdf	12 01 26.1	+5.7
CLL				epPKP		12 03 07.0	
CLL	Collm	148.90	348⇓	iPKP1	PKPdf	12 01 26.1	+5.7
UPC	Upice	148.96	344	ePKPbc	PKPdf	12 01 26.6	+6.1
OKC	Ostrava-Krasne	148.97	341	ePKPbc	PKPdf	12 01 26.5	+5.9
DPC	Dobruska-Polom	149.03	344	ePKPbc	PKPdf	12 01 26.7	+6.1
WTSB	Winterswijk	149.08	356	ePKP	PKPdf	12 01 26.2	+5.6
BRG	Berggiesshubel	149.11	347⇑	iPKIKP	PKPdf	12 01 27.1	+6.3
BRG				pmax	pmax		
	comp=Z,38nm,0.6s						
BRG	Berggiesshubel	149.11	347⇑	iPKP	PKPdf	12 01 27.1	+6.3
BRG				e		12 02 40.2	
MORC	Moravsky Berou	149.20	342	ePKPbc	PKPdf	12 01 26.3	+5.4
PVCC	Panska Ves	149.30	346	ePKPbc	PKPdf	12 01 27.5	+6.5
MLR	Muntele Rosu	149.32	328	PKHKP		12 01 27.2	
MLR	Muntele Rosu	149.32	328	PKPbc	PKPdf	12 01 27.3	+6.0
	comp=Z,22nm,1.2s,baz=143,slow=20,SNR=11						
KECS	Kecovo	149.36	337	ePKIKP	PKPdf	12 01 27.4	+6.2
KECS				e		12 01 32.7	
KECS	Kecovo	149.36	337	eP	PKPdf	12 01 27.4	+6.2
KECS				e		12 01 32.5	
KECS				e		12 01 32.7	
KECS	Kecovo	149.36	337	ePKP	PKPdf	12 01 26.7	+5.5
KECS				e		12 01 32.5	
SNX	Sinaia	149.63	328	PKIKP	PKPdf	12 01 28.8	+7.1
MOX	Moxa	149.79	349	ePKHKP		12 01 28.4	
MOX				pmax	pmax		
	comp=Z,66nm,1.5s						

PRU	Pruhonice	149.81	345	*e*PKPbc	PKPdf	12 01 28.4	+6.6
VRAC	Vranov	149.90	342	PKPbc	PKPdf	12 01 28.8	+6.8
	comp=Z,21nm,1.0s,baz=20,slow=3.6,SNR=13						
VRAC	Vranov	149.90	342	P	PKPdf	12 01 29.1	+7.1
VYHS	Vyhne	149.92	339	*e*PKIKP	PKPdf	12 01 28.6	+6.6
VYHS				*e*		12 01 35.1	
VYHS	Vyhne	149.92	339	*i* P	PKPdf	12 01 28.9	+6.9
VYHS				*e*		12 01 34.9	
VYHS				*e*		12 01 35.1	
NKC	Novy Kostel	150.03	348	*e*PKPbc	PKPdf	12 01 29.4	+7.3
PSZ	Piszkesteto	150.04	337	*e*PKPbc	PKPdf	12 01 28.3	+6.1
PSZ	Piszkesteto	150.04	337	⇑*e*	PKPdf	12 01 29.0	+6.7
EIL	Elat	150.10	293	PKPbc	PKPdf	12 01 30.1	+7.1
	comp=Z,6.9nm,0.8s,baz=351,slow=5.9,SNR=8.8						
EIL	Elat	150.10	293	*e*PKPbc	PKPdf	12 01 28.8	+5.8
HGN	Heimansgroeve	150.33	356	*e*PKP	PKPdf	12 01 29.5	+6.9
	comp=Z,24nm,0.2s						
SMOL	Smolenice	150.36	341	*e*P	PKPdf	12 01 30.4	+7.7
SMOL				*e*P		12 01 30.7	
SMOL				*e*		12 01 36.5	
SMOL	Smolenice	150.36	341	*e*PKP	PKPdf	12 01 30.4	+7.7
SMOL				*e*		12 01 36.6	
TNS	Taunus Mts	150.65	353	*e*PKPbc	PKPdf	12 01 30.8	+7.7
TNS				*e*PKPab	PKPab	12 01 37.8	-1.4
ZST	Bratislava	150.74	341	*e*P	PKPdf	12 01 31.1	+7.8
ZST	Bratislava	150.74	341	*e*PKP	PKPdf	12 01 31.0	+7.7
GRA1	Grafenberg Arr	150.77	349	*e*PKPbc	PKPdf	12 01 30.9	+7.6
GRF	Grafenberg Arr	150.77	349	*e*PKHKP		12 01 30.9	
KHC	Kasperske Hory	150.83	346	*e*PKHKP		12 01 30.6	
KHC				*e*		12 01 39.0	
KHC	Kasperske Hory	150.83	346	*e*PKPbc	PKPdf	12 01 30.6	+7.2
KHC				PKPab	PKPab	12 01 39.0	-1.0
ULDT	Uludag	150.85	316	*i* P	PKPdf	12 01 31.4	+7.6
WET	Wettzell	150.97	347	*e*PKPbc	PKPdf	12 01 31.4	+7.8
WET				*e*PKPab	PKPab	12 01 39.5	-1.1
GIVF	Givet	151.05	358	⇑*i*PKP1	PKPdf	12 01 31.6	+7.9
	comp=Z,95nm,0.9s						
GEC2	GERESS Array S	151.07	346	*e*PKHKP		12 01 31.6	
GERES	GERESS Array B	151.07	346	PKPbc	PKPdf	12 01 31.6	+7.8
	comp=Z,8.8nm,0.6s,baz=45,slow=1.9,SNR=48						
ABH	Alteburg	151.09	354	*e*P	PKPdf	12 01 30.8	+7.1
BAIF	Baives	151.11	359	⇑*i*PKP1	PKPdf	12 01 31.9	+8.1
	comp=Z,65nm,0.9s						
TOD	Tromm	151.22	352	*e*P	PKPdf	12 01 31.0	+7.0
BZS	Buzias	151.24	332	PKHKP		12 01 31.7	
RUP	Ruppelstein	151.31	355	*e*P	PKPdf	12 01 31.5	+7.4
WLF	Walferdange	151.41	356	*e*PKPbc	PKPdf	12 01 32.8	+8.5
BTOK	Tokmak	151.77	317	*i* P	PKPdf	12 01 32.8	+7.7
MOA	Molln	151.86	344	⇑*i*P	PKPdf	12 01 32.9	+7.9
LANF	Langenberg	151.95	353	*e*P	PKPdf	12 01 33.7	+8.6
FUR	Furstenfeldbru	152.23	348	*e*PKIKP	PKPdf	12 01 34.1	+8.6
FLN	La Foliniere	152.26	5	*e*PKP1	PKPdf	12 01 33.0	+7.5
ROSF	Rostrenen	152.36	9	*e*PKP1	PKPdf	12 01 33.6	+7.9
LDF	La Druitiere	152.46	5	*e*PKP1	PKPdf	12 01 33.3	+7.5
BFO	Black Forest	152.53	352	*e*PKPbc	PKPdf	12 01 34.7	+8.8
BFO				*e*PKPab	PKPab	12 01 45.4	-1.7
SGMF	Saint Gilles	152.54	8	*e*PKP1	PKPdf	12 01 34.6	+8.7
CDF	Champ du Feu	152.57	354	⇑*i*PKP1	PKPdf	12 01 34.9	+8.9
	comp=Z,29nm,0.9s						
RZN	Rozhen	152.58	323	*e*P	PKPdf	12 01 34.0	+7.8
GRR	Gorron	152.60	6	*e*PKP1	PKPdf	12 01 34.7	+8.7
MEZF	Maizieres J'vi	152.63	357	⇑*i*PKP1	PKPdf	12 01 35.5	+9.4
	comp=Z,36nm,0.9s						
PERS	Pernice	152.74	342	*e*PKPbc	PKPdf	12 01 34.8	+8.5
VTS	Vitosha	152.76	326	*e*P	PKPdf	12 01 35.0	+8.6
KBA	Koelnbreinsper	152.81	345	⇓*i*P	PKPdf	12 01 34.9	+8.5
THEF	They Montfort	152.86	356	*e*P	PKPdf	12 01 35.2	+8.8
WATA	Walderalm	152.97	347	⇓*i*P	PKPdf	12 01 35.5	+8.9
FELD	Feldberg	153.02	353	*e*P	PKPdf	12 01 29.5	+2.9
WTTA	Wattenberg	153.02	347	⇓*i*P	PKPdf	12 01 35.4	+8.8
HAU	Haudompre	153.05	355	⇑*i*PKP1	PKPdf	12 01 35.9	+9.2
	comp=Z,11nm,0.7s						
MOTA	Moosalm	153.05	348	⇑*i*P	PKPdf	12 01 35.9	+9.2
SQTA	Sankt Quirin	153.15	348	⇑*i*P	PKPdf	12 01 36.2	+9.4
MMB	Musomiste	153.19	324	*e*P	PKPdf	12 01 35.0	+7.9
HINF	Hinteralfeld	153.20	354	⇑*i*PKP1	PKPdf	12 01 36.0	+9.1
	comp=Z,14nm,0.9s						
DAVA	Damuels	153.33	350	⇓*i*P	PKPdf	12 01 37.3	+10
KKB	Krupnik	153.34	325	*e*P	PKPdf	12 01 36.0	+8.7
BOJS	Bojanci	153.72	341	*e*PKPbc	PKPdf	12 01 37.2	+10
DAVOX	Davos	153.82	349	PKPbc	PKPdf	12 01 38.5	+11
	comp=Z,9.1nm,0.6s,baz=44,slow=2.8,SNR=16						
SSF	Saint Saulge	154.12	359	*e*PKP1	PKPdf	12 01 38.4	+10
MFF	Saint Martin d	154.44	5	*e*PKP1	PKPdf	12 01 39.0	+10
RJF	Les Rejaudoux	155.84	3	*e*PKP1	PKPdf	12 01 43.0	+13
MBDF	Montbardon	156.26	354	*e*PKP1	PKPdf	12 01 43.8	+13
ESDC	Sonseca Array	160.53	17	PKPab	PKPab	12 02 20.1	-1.5
	comp=Z,1.5nm,0.7s,baz=331,slow=4.3,SNR=5.6						

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*IDC **16** 11:44:25.6±1.3,23.20S×114.99W,mb4.3/12,mb1 4.6/12, mb1mx4.3/22,mbtmp4.3/12,MS4.5/14,Ms1 4.5/14, ms1mx4.2/24,Error ellipse: s-maj=46.1km s-min=18.9km az=49.0*

*BJI **16** 11:44:26.7,23.20S×115.00W,h10^{km},mB5.2,Msz5.1*

*HRVD **16** 11:44:26.7±0.3,23.53S×115.38W,h12^{km},MW5.2/66, Centroid moment Tensor Solution. LP body waves: s42,c55;Mantle waves: s66,c110; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.10±.21; $M_{\theta\theta}$-3.04±.21; $M_{\phi\phi}$2.95±.22; $M_{r\theta}$-0.58±.53; $M_{\theta\phi}$6.21±.15; $M_{\phi r}$0.54±.58; Best double couple: $M_0$6.939×10^{16} NP1: ϕ_s77°,δ85°,λ-4°. NP2:ϕ_s167°,δ86°,λ-175°. Principal axes: T 6.853, Plg1°, Azm302°; N .179, Plg84°, Azm201°; P -7.025, Plg6°, Azm32°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **16** 11:44:26.7±0.7,23.21S×115.03W,h10^{km},mb5.1/12, MS4.7/3 Error ellipse: s-maj=24.2km s-min=14.7km az=58.0*

ISC 16 11:44:24.6±1.7,23.2S±0.2×115.1W±0.3,h10^{km},n47, σ1^{s}06/29,mb4.7/23,MS4.6/17,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	41.16	126	P	P	11 52 10.6	-0.1
	4.9nm,1.1s,mb4.0,baz=276,slow=9.6,SNR=6.3						
PLCA				LR	LR	12 04 59.1	
	comp=Z,1μm,18.6s,MS4.8,baz=247,slow=30						
PLCA	Paso Flores	41.16	126	P	P	11 52 10.6	-0.1
PLCA				LR	LR	12 04 59.1	
LVC	Limon Verde	42.42	99	P	P	11 52 22.3	+0.9
	4.5nm,1.1s,mb4.0,baz=230,slow=4.9,SNR=3.2						
LVC				LR	LR	12 05 24.8	
	comp=Z,550nm,18.7s,MS4.5,baz=258,slow=30						
JTS	JuntasAbangare	44.51	45	LR	LR	12 06 27.9	
	comp=Z,786nm,21.0s,MS4.6,baz=211,slow=30						
LPAZ	La Paz	44.61	90	P	P	11 52 40.0	+0.9
	5.3nm,1.0s,mb4.3,baz=256,slow=5.6,SNR=16						
LPAZ				LR	LR	12 07 03.5	
	comp=Z,434nm,20.4s,MS4.4,baz=62,slow=30						
ROSC	El Rosal	48.62	60	LR	LR	12 09 02.2	
	comp=Z,368nm,19.5s,MS4.4,baz=360,slow=30						
TXAR	Lajitas Array	53.40	12	P	P	11 53 47.8	+0.9
	0.8nm,0.9s,baz=199,slow=8.5,SNR=8.9						
TXAR				LR	LR	12 13 34.9	
	comp=Z,176nm,18.3s,baz=155,slow=33						
SDV	Santo Domingo	53.96	59	LR	LR	12 13 45.6	
	comp=Z,450nm,19.4s,MS4.5,baz=231,slow=33						
JCT	Junction City	55.38	16	*e*P	P	11 54 00.9	-0.5
	17nm,0.9s,mb5.1						
JCT				LR	LR		
	comp=Z,654nm,19.0s,MS4.7						
HKT	Hockley	56.02	20	*e*P	P	11 54 06.3	+0.3
	comp=Z,15nm,1.4s,mb4.8						
HKT				LR	LR		
	comp=Z,994nm,21.0s,MS4.9						
ANMO	Albuquerque	58.44	8	P	P	11 54 23.6	+0.6
	comp=Z,1.0nm,0.8s,mb3.9,baz=195,slow=6.3,SNR=6.1						
MNV	Mina	61.40	357	*e*P	P	11 54 42.0	-1.3
	comp=Z,22nm,1.4s,mb5.1						
NVAR	Mina Array Bea	61.40	357	P	P	11 54 44.6	+1.3
	comp=Z,4.9nm,1.0s,mb4.6,baz=160,slow=9.1,SNR=14						
SJG	San Juan	63.05	54	LR	LR	12 17 36.8	
	comp=Z,323nm,20.4s,MS4.5,baz=60,slow=32						
DUG	Dugway	63.13	2	*e*P	P	11 54 56.5	+1.7
	comp=Z,11nm,1.2s,mb4.8						
BDFB	Brasilia	63.27	96	P	P	11 54 54.9	-1.1
	comp=Z,7.3nm,1.1s,mb4.7,baz=297,slow=4.3,SNR=5.9						
BDFB				LR	LR	12 19 34.9	
	comp=Z,375nm,19.0s,MS4.6,baz=258,slow=33						
ELK	Elko	63.64	360	*e*P	P	11 54 59.0	+0.8
	comp=Z,16nm,1.4s,mb4.8						
WVT	Waverly	64.42	24	*e*P	P	11 55 01.8	-1.6
	comp=Z,13nm,0.9s,mb5.0						
WVT				LR	LR		
	comp=Z,335nm,20.0s,MS4.5						
PDAR	Pinedale Array	65.86	4	P	P	11 55 12.0	-0.6
	comp=Z,1.1nm,0.8s,mb3.9,baz=166,slow=6.1,SNR=6.4						
VNDA	Vanda	65.98	194	LR	LR	12 17 18.3	
	comp=Z,499nm,18.3s,MS4.8,baz=107,slow=30						
HLID	Hailey	66.46	1	*e*P	P	11 55 16.7	+0.4
	comp=Z,18nm,1.2s,mb5.0						
QSPA	South Pole Qui	66.93	180	P	P	11 55 27.0	+8.2
	comp=Z,20nm,1.2s,mb5.0						
BMO	Blue Mountains	67.77	358	*e*P	P	11 55 22.4	-2.3
	comp=Z,14nm,1.4s,mb4.8						
NEW	Newport	71.18	359	P	P	11 55 46.5	+1.0
	comp=Z,11nm,1.2s,mb4.7,baz=215,slow=5.2,SNR=5.9						
DGMT	Dagmar	72.03	8	*e*P	P	11 55 51.5	+0.9
	comp=Z,21nm,1.1s,mb5.0						
EYMN	Ely	73.95	16	*e*P	P	11 55 59.7	-2.1
	comp=Z,15nm,1.2s,mb4.8						
ULM	Lac du Bonnet	75.11	13	P	P	11 56 07.1	-1.4
	comp=Z,2.1nm,0.8s,mb4.2,baz=329,slow=0.8,SNR=4.9						
ULM				LR	LR	12 27 13.3	
	comp=Z,255nm,18.9s,MS4.5,baz=140,slow=34						
ULM	Lac du Bonnet	75.11	13	P	P	11 56 07.1	-1.4
ULM				LR	LR	12 27 13.3	
DLBC	Dease Lake	82.29	352	P	P	11 56 47.7	+0.3
	comp=Z,3.7nm,0.8s,mb4.4,baz=173,slow=4.0,SNR=6.0						
DLBC	Dease Lake	82.29	352	P	P	11 56 47.7	+0.3
FCC	Fort Churchill	83.52	11	*e*P	P	11 56 53.2	-0.5
	comp=Z,21nm,1.2s,mb5.2						
YKA	Yellowknife Ar	85.42	0	P	P	11 57 03.0	-0.1
	comp=Z,8.9nm,1.2s,mb4.8,baz=178,slow=4.9,SNR=31						
YKA				LR	LR	12 32 51.2	
	comp=Z,141nm,18.6s,MS4.4,baz=15,slow=34						
YKA	Yellowknife Ar	85.42	0	P	P	11 57 03.0	-0.1
YKA				LR	LR	12 32 51.2	
YKW3	Yellowknife Ar	85.49	0	*e*P	P	11 57 04.2	+0.7
SCHQ	Schefferville	88.03	26	LR	LR	12 33 18.4	
	comp=Z,197nm,20.4s,MS4.5,baz=255,slow=33						
MAW	Mawson	89.44	179	LR	LR	12 34 52.7	
	comp=Z,357nm,19.3s,MS4.8,baz=169,slow=34						
MOX	Moxa	130.74	42	PP2		12 00 28.0	
SONM	Songino Array	138.92	317	PKhKP		12 03 52.0	
	comp=Z,0.7nm,0.8s,baz=45,slow=1.7,SNR=4.5						
KMI	Kunming	145.48	281	PKP	PKPdf	12 04 04.3	-2.3
GTA	Gaotai	146.32	307	PKP	PKPdf	12 04 06.0	-1.6
GTA				APKP		12 04 12.8	
GTA				PP	PP		
	comp=Z,155nm,9.5s						
GTA				LR	LR		
	comp=Z,262nm,17.9s,MS5.1						
CMAR	Chiang Mai Arr	147.86	268	PKP	PKPdf	12 04 11.1	+0.4
	comp=Z,4.0nm,0.8s,baz=115,slow=0.9,SNR=14						
CM31	Chiang Mai Arr	147.86	268	*e*P	PKPdf	12 04 11.2	+0.5
BRTR	Keskin Array B	148.89	51	PKP	PKPdf	12 04 11.2	-0.6
	comp=Z,7.4nm,1.1s,baz=225,slow=1.7,SNR=7.1						
BRTR				PKPbc	PKPdf	12 04 15.8	+4.0
	comp=Z,5.2nm,0.9s,baz=225,slow=1.7,SNR=9.4						
BRTR				PKPab	PKPab	12 04 19.1	+0.3
	comp=Z,7.2nm,1.1s,baz=225,slow=2.0,SNR=9.4						
CHKZ	Chkalovo	149.28	353	*e*P	PKPdf	12 04 12.6	+0.7
BRVK	Borovoye	149.93	353	*e*P	PKPdf	12 04 14.6	+1.6
BVAR	Borovoye Array	149.95	353	PKP	PKPdf	12 04 13.5	+0.5
	comp=Z,1.3nm,0.6s,SNR=7.7						
BVAR				PKPbc	PKPdf	12 04 16.3	+3.3
	comp=Z,1.4nm,0.6s,baz=270,slow=1.5,SNR=8.7						
BVAR				PKPab	PKPab	12 04 22.8	+0.1
	comp=Z,5.5nm,0.9s,slow=1.5,SNR=11						
KURK	Kurchatov	150.55	342	*e*P	PKPdf	12 04 17.5	+3.5

IDC 16 11:53:52.5±3.7,49.13S×124.19E,mb3.8/3,mb1 4.1/3, mb1mx3.8/10,mbtmp3.9/3,Error ellipse: s-maj=115.7km s-min=65.7km az=110.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	21.64	44	P	P	11 58 44.6	-1.7
	5.3nm,1.0s,baz=215,slow=7.5,SNR=4.3						
ASAR	Alice Springs	26.54	20	P	P	11 59 32.1	-1.6
	1.2nm,0.7s,baz=191,slow=9.5,SNR=9.1						
WRA	Warramunga Arr	30.23	19	P	P	12 00 04.7	-2.4
	1.9nm,1.4s,baz=195,slow=8.3,SNR=3.5						
YKA	Yellowknife Ar	145.67	45	PKPbc	PKPbc	12 13 30.9	-1.2
	0.5nm,0.9s,baz=272,slow=3.4,SNR=8.3						

IGQ 16 11:57:57.9,1.49S×81.26W,h12^{km}±10^{km},mb4.1,1C-1D, Error ellipse: s-maj=8.5km s-min=5.5km az=29.3,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.83	58	⇑P	Pb	11 58 12.9	-1.0
HOJA				S	Sb	11 58 24.7	0.0
IGUA	Igualata	2.62	90	P	Pn	11 58 42.0	+1.2
ARRY	Arrayan	2.80	90	P	Pn	11 58 44.4	+1.0
ULBA	Ulba	2.85	89	P	Pn	11 58 45.8	+1.7
PISA	Pisayambo	2.90	82	P	Pn	11 58 46.7	+1.9
JUA2	San Juan 2	2.94	64	P	Pn	11 58 46.2	+0.9
TERV	Terraza Guagua	2.96	64	P	Pn	11 58 47.4	+1.8
PINO	Pino	2.96	63	P	Pn	11 58 47.2	+1.5
VC1	Cotopaxi 1	2.97	74	P	Pn	11 58 48.4	+2.5
TAMB	Tambo	2.99	75	P	Pn	11 58 49.4	+3.2
YANA	Yana	3.01	63	P	Pn	11 58 47.7	+1.3
ANTI	Antisana	3.26	72	P	Pn	11 58 52.5	+2.5
COTA	Cotacachi	3.44	58	P	Pn	11 58 54.2	+1.8
CAYR	Refugio Cayamb	3.58	65	⇓P	Pn	11 58 58.1	+3.7
CAYA	Cayambe	3.62	65	P	Pn	11 58 58.0	+3.0
ECEN	Cerro Negro	4.01	55	P	Pn	11 59 01.9	+1.3

IGQ 16 12:21:07.3,1.29S×81.46W,h12^{km}±10^{km},mb4.3,3C-1D, Error ellipse: s-maj=12.2km s-min=11.4km az=46.5,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.94	76	⇑P	Pb	12 21 22.9	-2.2
JUIV	Juive	3.00	93	P	Pn	12 21 57.4	+1.7
JUA2	San Juan 2	3.05	70	P	Pn	12 21 56.8	+0.5
ULBA	Ulba	3.06	93	P	Pn	12 21 58.8	+2.4
TERV	Terraza Guagua	3.06	69	P	Pn	12 21 59.5	+3.0
PINO	Pino	3.06	69	⇑P	Pn	12 21 56.7	+0.1
PISA	Pisayambo	3.08	86	P	Pn	12 21 58.6	+1.8
YANA	Yana	3.11	68	P	Pn	12 21 57.1	-0.1
VC1	Cotopaxi 1	3.12	78	P	Pn	12 21 59.7	+2.3
VC1				S	Sn	12 22 35.7	+0.7
TAMB	Tambo	3.15	79	P	Pn	12 21 59.9	+2.2
ANTI	Antisana	3.40	76	⇑P	Pn	12 22 03.3	+2.0
ANTI				S	Sn	12 22 43.3	+1.3
COTA	Cotacachi	3.51	63	P	Pn	12 22 06.4	+3.5
CAYR	Refugio Cayamb	3.69	70	⇓P	Pn	12 22 07.5	+2.1
CAYA	Cayambe	3.72	69	P	Pn	12 22 07.6	+1.7
ECEN	Cerro Negro	4.07	59	P	Pn	12 22 12.3	+1.5
ECEN				S	Sn	12 22 59.7	+0.8

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*FUNV **16** 12:48:02.1,10.41N×61.13W,h22^{km},MW2.6*

*NEIC **16** 12:48:05.1,10.50N×61.12W,h32^{km},MD2.5(TRN),After TRN.*

*TRN **16** 12:48:05.1,10.50N×61.12W,h32^{km},MD2.5*

ISC 16 12:48:01.7±0.9,10.33N±0.06×61.15W±0.06,h56^{km}±7^{km}, n11,σ1^{s}17/20,2C,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBH	Brigand Hill	0.17	30	⇑*e*P	P	12 48 10.3	-0.2
TBH				*e*S	S	12 48 15.0	-1.9
TPP	Pointe-a-Pierr	0.29	267	*e*P	P	12 48 14.1	+2.7
TPP				*e*S	S	12 48 20.3	+1.8
TRN	Trinidad (W)	0.40	322	⇑*i*P	P	12 48 12.6	+0.2
TRN				*e*S	S	12 48 18.8	-1.4
TPR	Prospect	0.93	24	*e*P	P	12 48 19.5	+0.7
TPR				*e*S	S	12 48 31.0	-0.5
BOT	Bacolet	0.93	27	*e*P	P	12 48 19.6	+0.7
GUIV	Guiria	1.10	287	*e*P	P	12 48 21.9	+0.6
GUIV				*e*S	S	12 48 36.4	+0.8
GRW	Mount Saint Ca	1.88	345	*e*P	P	12 48 33.5	+1.3
ITEV	Isla Los Testi	2.19	298	*e*P	P	12 48 36.6	+0.1
ITEV				*e*S	S	12 49 02.0	-0.5
GURV	El Guri	3.19	217	*e*P	P	12 48 51.0	+0.4
GURV				*e*S	S	12 49 27.4	-0.2
CUPV	Cœpira	4.57	267	*e*P	P	12 49 09.1	-1.0
CUPV				*e*S	S	12 49 58.6	-3.9
BAUV	El Baul	6.93	259	*e*P	P	12 49 40.7	-2.3
BAUV				*e*S	S	12 50 53.8	-7.5

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*IDC **16** 12:50:29.2±2.1,7.35N×93.95E,mb3.6/5,mb1 3.8/6, mb1mx3.6/19,mbtmp3.6/6,ML4.0/1,Error ellipse: s-maj=74.2km s-min=22.4km az=64.0*

*NEIC **16** 12:50:33.7±0.8,7.41N×94.00E,h30^{km},mb4.4/3,Error ellipse: s-maj=25.5km s-min=11.1km az=66.0*

ISC 16 12:50:32.5±1.2,7.5N±0.1×94.1E±0.2,h33^{km},n9,σ0^{s}50/9, mb3.9/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.92	23	Pn	P	12 53 22.6	-0.5
	0.3nm,0.3s,baz=218,slow=14,SNR=5.6						
LSA	Lhasa	22.31	353	*e*P	P	12 55 29.3	+0.6
	6.9nm,0.6s,mb4.3						
SONM	Songino Array	41.59	12	P	P	12 58 19.7	+0.8
	0.4nm,0.5s,mb3.3,baz=211,slow=7.2,SNR=4.7						
KURK	Kurchatov	45.01	346	*e*P	P	12 58 45.9	-0.7
	3.9nm,0.9s,mb4.2						
ZAL	Zalesovo	46.96	352	P	P	12 59 02.5	+0.5
	1.1nm,0.5s,mb4.1,baz=317,slow=6.1,SNR=7.1						
WRA	Warramunga Arr	48.06	125	P	P	12 59 11.1	0.0
	0.4nm,0.8s,mb3.5,baz=304,slow=8.7,SNR=6.6						
BVAR	Borovoye Array	49.37	341	P	P	12 59 20.5	-0.3
	0.7nm,0.6s,mb3.9,baz=127,slow=7.2,SNR=5.2						
ASAR	Alice Springs	49.68	130	P	P	12 59 23.6	-0.1
	0.7nm,1.0s,mb3.6,baz=308,slow=7.5,SNR=5.1						
CHKZ	Chkalovo	49.86	342	*e*P	P	12 59 24.2	-0.3
	5.4nm,0.9s,mb4.6						

IGQ 16 13:01:15.6,1.48S×81.40W,h12^{km}±10^{km},mb4.3,1C-2D, Error ellipse: s-maj=11.5km s-min=9.4km az=176.8,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.95	64	⇑P	Pb	13 01 31.7	-1.8
HOJA				S	Sb	13 01 41.9	-3.9
IGUA	Igualata	2.75	90	P	Pn	13 02 01.6	+1.1
IGUA				S	Sn	13 02 35.1	+1.1
CUSU	Cusua	2.91	89	P	Pn	13 02 06.1	+3.3
ARRY	Arrayan	2.94	91	P	Pn	13 02 04.3	+1.2
ULBA	Ulba	2.99	90	P	Pn	13 02 05.1	+1.4
ULBA				S	Sn	13 02 39.8	0.0
NAS1	Nasa	3.03	74	P	Pn	13 02 06.2	+1.8
NAS1				S	Sn	13 02 41.3	+0.3
PISA	Pisayambo	3.04	82	P	Pn	13 02 07.6	+3.1
JUA2	San Juan 2	3.06	66	P	Pn	13 02 05.0	+0.3
TERV	Terraza Guagua	3.08	65	P	Pn	13 02 06.3	+1.3
PINO	Pino	3.08	65	P	Pn	13 02 05.6	+0.6
GGP	Refugio Guagua	3.08	65	P	Pn	13 02 06.7	+1.6
VC1	Cotopaxi 1	3.10	75	P	Pn	13 02 07.3	+1.9
TAMB	Tambo	3.12	76	P	Pn	13 02 07.0	+1.3
YANA	Yana	3.13	64	P	Pn	13 02 06.1	+0.3
ANTI	Antisana	3.39	73	P	Pn	13 02 10.9	+1.4
COTA	Cotacachi	3.55	60	⇓P	Pn	13 02 13.1	+1.4
CAYR	Refugio Cayamb	3.70	66	⇓P	Pn	13 02 17.1	+3.3
CAYR				S	Sn	13 03 01.2	+3.4
ELAGU	Cayambe Volc	3.70	67	P	Pn	13 02 17.4	+3.5
ELAGU				S	Sn	13 03 03.2	+5.4
CAYA	Cayambe	3.73	66	P	Pn	13 02 17.4	+3.0
LORE	San Lorenzo	3.75	43	P	Pn	13 02 18.9	+4.3
ECEN	Cerro Negro	4.12	56	P	Pn	13 02 21.4	+1.6

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*IDC **16** 13:03:20.8±1.1,7.73N×94.36E,mb4.0/10,mb1 4.1/11, mb1mx4.0/19,mbtmp4.0/11,ML3.6/1,Error ellipse: s-maj=31.3km s-min=25.4km az=50.0*

*BJI **16** 13:03:27.8,8.59N×94.03E,h15^{km},mb4.6*

*NEIC **16** 13:03:29.4±1.4,8.38N×93.88E,h30^{km},mb4.5/7,Error ellipse: s-maj=27.7km s-min=20.9km az=119.0*

ISC 16 13:03:28.8±1.5,8.5N±0.2×93.9E±0.2,h33^{km},n26, σ1^{s}20/25,mb4.3/17,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.08	26	Pn	P	13 06 07.7	-0.3
	0.1nm,0.3s,baz=206,slow=14,SNR=6.0						
JIRN	Jiri	20.40	340	*e*P	P	13 08 04.7	-1.0
	60nm,1.3s						
PKI	Pulchoki	20.59	338	*e*P	P	13 08 07.0	-0.7
	61nm,1.2s						
DMN	Daman	20.74	338	*e*P	P	13 08 09.5	+0.3
	56nm,1.1s						
KKN	Kakani	20.84	338	*e*P	P	13 08 09.2	-1.0
	35nm,1.1s						
LSA	Lhasa	21.26	354	*e*P	P	13 08 16.3	+1.9
LSA	Lhasa	21.26	354	*e*P	P	13 08 14.1	-0.3
	12nm,0.8s,mb4.3						
GKN	Gorkha	21.27	337	*e*P	P	13 08 12.7	-1.9
	24nm,0.8s,mb4.6						
KOLN	Koldanda	21.49	335	*e*P	P	13 08 15.8	-0.9
	70nm,1.2s,mb4.9						
GTA	Gaotai	31.25	9	P	P	13 09 46.6	-1.2
GTA				AP	pP	13 09 56.9	-0.5
AAK	Ala-Archa	38.03	337	*e*P	P	13 10 47.5	+1.8
	4.5nm,1.0s,mb4.2						
SONM	Songino Array	40.63	13	P	P	13 11 07.6	+0.3
	1.3nm,0.8s,mb3.6,baz=200,slow=8.7,SNR=9.9						
KURK	Kurchatov	43.95	346	*e*P	P	13 11 36.4	+1.9
	12nm,1.3s,mb4.5						
ZAL	Zalesovo	45.91	353	P	P	13 11 52.9	+2.9
	1.5nm,0.4s,mb4.2,baz=208,slow=4.5,SNR=5.3						
BVAR	Borovoye Array	48.32	341	P	P	13 12 09.6	+0.6
	2.1nm,0.9s,mb4.2,baz=121,slow=8.6,SNR=5.1						
CHKZ	Chkalovo	48.81	342	*e*P	P	13 12 13.2	+0.5
	11nm,1.1s,mb4.8						
WRA	Warramunga Arr	48.85	126	P	P	13 12 01.4	-12
	0.4nm,0.7s,mb3.6,baz=305,slow=8.6,SNR=7.4						
KMBO	Kilima Mbogo	57.21	263	P	P	13 13 14.1	-1.5
	1.0nm,0.5s,mb4.2,baz=64,slow=17,SNR=3.0						
BRTR	Keskin Array B	61.81	311	P	P	13 13 47.5	+0.6
	1.3nm,0.8s,mb4.1,baz=129,slow=7.9,SNR=5.4						
AKASG	Malin Array Be	67.50	322	P	P	13 14 23.0	-0.5
	10nm,1.3s,mb4.7,baz=97,slow=4.6,SNR=7.3						
FINES	FINESS Array B	72.04	332	P	P	13 14 51.3	+0.2
	1.2nm,0.6s,mb4.0,baz=90,slow=7.6,SNR=5.0						
GERES	GERESS Array B	77.18	318	P	P	13 15 22.9	+1.8
	3.6nm,1.0s,mb4.3,baz=90,slow=4.0,SNR=13						
NB2	NORSAR Subarra	79.06	331	P	P	13 15 31.6	+0.5
	5.4nm,1.0s,mb4.4,baz=92,slow=5.8						
NOA	NORSAR Array B	79.06	331	P	P	13 15 32.0	+0.9
	2.4nm,0.8s,mb4.2,baz=93,slow=5.4,SNR=3.8						
IMA	Indian Mountai	91.17	22	*e*P	P	13 16 29.6	-1.8
	8.8nm,0.8s,mb5.1						
PDAR	Pinedale Array	124.70	21	PKP	PKPdf	13 22 24.9	-0.6
	0.6nm,0.8s,baz=315,slow=2.1,SNR=4.6						

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*MOS **16** 13:08:28.5±0.9,7.27N×94.04E,h33^{km},mb4.8/11,Error ellipse: s-maj=29.0km s-min=11.6km az=94.9*

*BJI **16** 13:08:34.2,7.52N×94.27E,h65^{km},mB4.9,mb4.6,Ms4.7, Msz4.3*

*NEIC **16** 13:08:34.1±1.7,7.66N×94.44E,h50^{km}±15^{km},mb4.6/17, Error ellipse: s-maj=14.1km s-min=6.3km az=51.0*

*IDC **16** 13:08:37.6±4.7,7.68N×94.52E,h76^{km}±42^{km},mb4.1/16, mb1 4.2/17,mb1mx4.1/22,mbtmp4.4/17,ML4.3/1,MS4.1/14, Ms1 4.2/14,ms1mx3.9/31,Error ellipse: s-maj=23.7km s-min=12.8km az=58.0*

ISC 16 13:08:31.3±1.3,7.50N±0.05×94.22E±0.05,h44^{km}±11^{km}, h42^{km}±2.3^{km}:pP-P,n103,σ1^{s}02/104,mb4.6/54,MS4.2/25, 2C-3D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	7.36	113	P	P	13 10 16.0	-2.9
CM31	Chiang Mai Arr	11.82	22	*e*P	P	13 11 16.5	-3.6
	11nm,0.8s						
CMAR	Chiang Mai Arr	11.82	22	*i* P	P	13 11 21.3	+1.2
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	11.82	22	P	P	13 11 18.9	-1.3
	comp=Z,0.5nm,0.3s,baz=214,slow=15,SNR=24						
CMAR				LR	LR	13 15 59.5	
	comp=Z,936nm,18.2s,baz=210,slow=38						

VIS	Vishakhapatnam	14.69	315	eP	P	13 11 55.8	-2.4
VIS				e		13 11 57.4	
	comp=Z,16nm,0.7s						
HYB	Hyderabad	18.18	304	eP	P	13 12 44.0	+1.6
HYB				eS	S	13 16 10.0	+9.4
HYB	Hyderabad	18.18	304	i P	P	13 12 44.0	+1.6
HYB				eS	S	13 16 06.0	+5.4
QIZ	Qiongzhong	19.02	51	eP	P	13 12 54.3	+1.9
QIZ				LR	LR		
	comp=N,2µm,13.1s						
QIZ				LR	LR		
	comp=E,942nm,13.4s						
QIZ				LR	LR		
	comp=Z,694nm,9.5s						
KMI	Kunming	19.32	24	P	P	13 12 56.8	+1.1
KMI				S	S	13 16 25.6	-0.5
KMI				AMB	AMB		
	comp=Z,19nm,0.8s						
KMI				LR	LR		
	comp=N,426nm,11.0s						
KMI				LR	LR		
	comp=E,537nm,11.4s						
KMI				LR	LR		
	comp=Z,651nm,15.1s						
KMI	Kunming	19.32	24	P	P	13 12 56.8	+1.1
	comp=Z,19nm,0.8s						
KMI				S	S	13 16 25.6	-0.5
JIRN	Jiri	21.44	340	eP	P	13 13 17.3	-0.6
	comp=Z,84nm,0.7s,mb5.2						
PKI	Pulchoki	21.64	338	eP	P	13 13 19.4	-0.4
	comp=Z,47nm,0.6s,mb5.1						
GUN	Gumba	21.78	340	eP	P	13 13 20.7	-0.5
	comp=Z,81nm,0.6s,mb5.3						
DMN	Daman	21.78	338	eP	P	13 13 21.0	-0.3
	comp=Z,42nm,0.7s,mb5.0						
KAD	Karad	21.84	298	eP	P	13 13 23.3	+1.4
KAD				e		13 13 27.8	
	comp=Z,30nm,1.1s						
KKN	Kakani	21.88	338	eP	P	13 13 21.5	-0.8
	comp=Z,53nm,0.8s,mb5.0						
KKM	Kota Kinabalu	21.89	92	P	P	13 13 24.5	+2.1
GYA	Guiyang	22.26	31	P	P	13 13 28.3	+2.3
GYA				AP		13 13 38.6	
GYA				XP		13 13 47.1	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
GYA				AMB	AMB		
	comp=Z,130nm,3.0s						
GYA				LR	LR		
	comp=N,1µm,15.9s,MS4.6						
GYA				LR	LR		
	comp=E,1µm,12.9s,MS4.6						
GYA				LR	LR		
	comp=Z,830nm,13.8s,MS4.3						
LSA	Lhasa	22.27	353	P	P	13 13 26.6	+0.5
LSA	Lhasa	22.27	353	eP	P	13 13 26.0	-0.1
	comp=Z,60nm,0.7s,mb5.1						
GKN	Gorkha	22.32	337	eP	P	13 13 26.0	-0.6
	comp=Z,68nm,0.7s,mb5.2						
BHPL	Bhopal	22.48	316	eP	P	13 13 29.0	+0.8
BHPL				e		13 13 35.4	
	comp=Z,39nm,1.1s						
KOLN	Koldanda	22.53	335	eP	P	13 13 29.1	+0.3
	comp=Z,50nm,0.6s,mb5.1						
POO	Poona	22.64	301	eP	P	13 13 31.0	+1.0
TSM	Tawau	23.74	96	P	P	13 13 47.3	+6.7
CD2	Chengdu	24.94	20	P	P	13 13 52.9	+0.7
SONA	Sohna	26.23	324	eP	P	13 14 04.3	0.0
SONA				AMb	AMB	13 14 05.5	
	comp=Z,18nm,0.6s,mb4.8						
NDI	New Delhi	26.48	325	e	P	13 14 06.0	-0.6
KUDL	Kundal	26.51	323	eP	P	13 14 06.5	-0.3
KUDL				AMb	AMB	13 14 14.1	
	comp=Z,8.3nm,1.3s,mb4.1						
KHET	Khetri	26.87	322	eP	P	13 14 10.2	0.0
KHET				AMb	AMB	13 14 16.0	
	comp=Z,18nm,1.6s,mb4.3						
KLP	Kalpa	28.18	330	eP	P	13 14 21.2	-0.8
KLP				AMb	AMB	13 14 26.3	
	comp=Z,7.7nm,1.3s,mb4.2						
XAN	Xi’an	29.69	25	P	P	13 14 35.8	+0.4
XAN				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.5						
GTA	Gaotai	32.16	8	P	P	13 14 57.4	+0.2
GTA				PP	PP	13 16 01.6	-3.3
GTA				S	S	13 19 56.8	-8.9
GTA				SCS	ScS	13 25 22.6	+1.0
GTA				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.7						
GTA				AMB	AMB		
	comp=Z,83nm,5.0s						
GTA				LR	LR		
	comp=N,164nm,19.0s						
GTA				LR	LR		
	comp=E,270nm,12.5s						
GTA				LR	LR		
	comp=Z,272nm,23.6s,MS3.9						
NJ2	Nanjing	33.50	40	eP	P	13 15 10.3	+1.4
NJ2				AP	pP	13 15 20.6	-0.1
NJ2				PP	PP	13 16 24.8	+2.9
NJ2				PPP	PPP	13 16 42.1	+3.1
NJ2				S	S	13 20 31.0	+4.4
NJ2				XS		13 20 48.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,410nm,4.2s						
NJ2				LR	LR		
	comp=N,1µm,12.0s,MS5.0						
NJ2				LR	LR		
	comp=E,930nm,11.7s,MS5.0						
SSE	Sheshan	34.43	43	eP	P	13 15 15.0	-1.9
SSE				S	S	13 20 40.3	-0.7
SSE				XS		13 21 02.6	
SSE				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.8						
SSE				AMB	AMB		
	comp=Z,65nm,3.8s						
SSE				LR	LR		
	comp=N,687nm,16.7s,MS4.5						
SSE				LR	LR		
	comp=E,403nm,16.7s,MS4.5						
SSE				LR	LR		
	comp=Z,488nm,4.8s						
SSE	Sheshan	34.43	43	eP	P	13 15 15.0	-1.9
	comp=Z,12nm,1.0s,mb4.8						
SSE				pP	pP	13 15 25.4	-3.4
SSE				S	S	13 20 40.3	-0.7
SSE				sS		13 21 02.6	
SSE				SS	SS	13 23 18.8	+25
KSH	Kashi	35.84	336	eP	P	13 15 35.0	+6.2
KSH				eAP	pP	13 15 47.4	+6.6
KSH				ePCP	PcP	13 17 58.4	+2.5
KSH				AMB	AMB		
	comp=Z,120nm,3.7s						
KSH				LR	LR		
	comp=N,250nm,4.5s						
KSH				LR	LR		
	comp=E,250nm,5.2s						
WMQ	Urumqi	36.62	352	eP	P	13 15 35.6	+0.2
WMQ				PP	PP	13 17 00.0	-0.8
WMQ				S	S	13 21 14.0	-0.7
WMQ				SS	SS	13 23 41.0	-2.0
WMQ				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.8						
WMQ				LR	LR		
	comp=N,172nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=E,245nm,22.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,155nm,20.0s,MS3.8						
HHC	Hu-ho-hao-te	36.63	22	eP	P	13 15 34.8	-0.7
HHC				AP	pP	13 15 47.5	+0.1
HHC				SCS	ScS	13 25 46.9	+1.6
HHC				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.7						
HHC				AMB	AMB		
	comp=Z,94nm,3.8s						
HHC				LR	LR		
	comp=N,426nm,10.8s,MS4.6						
HHC				LR	LR		
	comp=E,507nm,15.7s,MS4.6						
HHC				LR	LR		
	comp=Z,413nm,12.0s,MS4.4						
BJI	Beijing	37.89	28	eP	P	13 15 51.0	+4.9
BJI				LR	LR		
	comp=Z,177nm,25.3s,MS3.8						
MBWA	Marble Bar	37.93	139	P	P	13 15 45.9	-0.7
	comp=Z,3.5nm,0.7s,mb4.2						
AAK	Ala-Archa	39.08	337	d iP	P	13 15 56.2	+0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
AAK				MLR	MLR		
	comp=Z,200nm,13.0s,MS4.1						
AAK	Ala-Archa	39.08	337	eP	P	13 15 55.8	-0.1
	comp=Z,6.4nm,1.0s,mb4.3						
FITZ	Fitzroy Crossi	40.11	130	eP	P	13 16 03.7	-1.0
	comp=Z,7.0nm,0.8s,mb4.4						
MKAR	Makanchi Array	40.47	347	i P	P	13 16 07.2	-0.1
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	Songino Array	41.51	12	P	P	13 16 16.5	+0.6
	comp=Z,2.2nm,0.7s,mb3.9,baz=193,slow=7.8,SNR=22						
ULN	Ulaanbaatar	41.68	13	eP	P	13 16 16.6	-0.7
	comp=Z,3.4nm,1.0s,mb3.9						
ZAK	Zakamensk	43.40	8	eP	P	13 16 31.8	+0.4
ZAK				e		13 18 18.3	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.6						
TLY	Talaya	44.72	8	⇓eP	P	13 16 43.3	+1.3
TLY				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.8						
KURK	Kurchatov	44.99	346	P	P	13 16 44.3	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
KURK	Kurchatov	44.99	346	eP	P	13 16 44.3	+0.2
	comp=Z,18nm,0.9s,mb4.9						
CN2	Changchun	45.30	32	eP	P	13 16 47.5	+0.8
CN2				AP	pP	13 17 00.0	+1.1
CN2				eS	S	13 23 23.5	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				AMB	AMB		
	comp=Z,180nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s,MS4.7						
CN2				LR	LR		
	comp=E,400nm,11.0s,MS4.7						
CN2				LR	LR		
	comp=Z,350nm,11.0s,MS4.5						
NWAO	Narrogin (SRO)	45.78	153	P	P	13 16 51.8	+1.1
	comp=Z,16nm,1.0s,mb4.9,baz=1.3,slow=11,SNR=3.6						
NWAO	Narrogin (SRO)	45.78	153	eP	P	13 16 52.0	+1.3
	comp=Z,10nm,0.9s,mb4.8						
ZAL	Zalesovo	46.92	352	P	P	13 17 00.1	+0.7
	comp=Z,10.0nm,0.6s,mb5.0,baz=305,slow=5.6,SNR=53						
WRA	Warramunga Arr	47.98	125	i P	P	13 17 07.7	-0.5
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	47.98	125	P	P	13 17 07.7	-0.5
	comp=Z,3.5nm,0.9s,mb4.4,baz=305,slow=8.5,SNR=53						
WRAB	Tennant Creek	47.98	125	d iP	P	13 17 07.8	-0.4
WRAB	Tennant Creek	47.98	125	eP	P	13 17 07.3	-0.9
	comp=Z,5.4nm,0.8s,mb4.6						
NVS	Novosibirsk	48.02	351	i P	P	13 17 07.1	-0.9
MDJ	Mudanjiang	48.07	34	P	P	13 17 07.3	-1.2
MDJ				AMB	AMB		
	comp=Z,5.0nm,2.5s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,80nm,5.8s						
MDJ				LR	LR		
	comp=N,148nm,20.0s,MS4.0						
MDJ				LR	LR		
	comp=E,68nm,21.4s,MS4.0						
MDJ				LR	LR		
	comp=Z,129nm,19.0s,MS3.9						
BVAR	Borovoye Array	49.36	341	P	P	13 17 18.2	-0.2
	comp=Z,4.4nm,0.7s,mb4.6,baz=143,slow=7.4,SNR=22						
BRVK	Borovoye	49.43	341	eP	P	13 17 17.8	-1.1
	comp=Z,6.8nm,0.9s,mb4.7						
ASPA	Alice Springs	49.61	130	eP	P	13 17 20.6	-0.1
ASAR	Alice Springs	49.62	130	P	P	13 17 20.4	-0.4
	comp=Z,3.0nm,0.7s,mb4.4,baz=306,slow=7.5,SNR=25						
ASAR				LR	LR	13 41 04.4	
	comp=Z,102nm,18.6s,MS3.9,baz=196,slow=39						
BOD	Bodaibo	52.49	13	eP	P	13 17 41.7	-0.3
GNI	Garni	54.75	314	⇑eP	P	13 17 58.5	-0.5
GNI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GNI	Garni	54.75	314	P	P	13 18 01.4	+2.5
	comp=Z,35nm,1.2s,mb5.3,baz=13,slow=14,SNR=5.2						
ASAJ	Asahikawa	55.64	41	LR	LR	13 41 54.4	
	comp=Z,115nm,18.6s,MS4.0,baz=161,slow=36						
SVE	Sverdlovsk	55.77	338	eP	P	13 18 06.0	-0.1
SVE				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
KMBO	Kilima Mbogo	57.46	264	P	P	13 18 22.6	+3.9
	comp=Z,4.5nm,0.8s,mb4.5,baz=61,slow=11,SNR=12						
KMBO				LR	LR	13 39 50.6	
	comp=Z,191nm,18.7s,MS4.2,baz=83,slow=32						
KIV	Kislovodsk	57.65	318	i P	P	13 18 18.1	-1.5
KIV				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
CTA	Charters Tower	58.06	119	LR	LR	13 44 11.6	
	comp=Z,160nm,19.4s,MS4.2,baz=283,slow=37						
ASF	Jabal al Asfar	58.49	303	LR	LR	13 46 33.0	
	comp=Z,120nm,18.0s,MS4.1,baz=101,slow=39						
SOC	Sochi	59.50	317	eP	P	13 18 28.5	-4.1
SOC				e		13 19 16.3	
SOC				eS	S	13 26 32.8	-4.4
SOC				e		13 28 15.0	
SOC				eSS	SS	13 30 33.2	-1.0
SOC				eSSS	SSS	13 33 06.0	+2.5
SOC				pmax	pmax		
	comp=N,4.0nm,0.5s						
SOC				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
SOC				pmax	pmax		
	comp=E,9.0nm,0.7s						
STKA	Stephens Creek	59.79	134	P	P	13 18 34.5	-0.3
	comp=E,1.9nm,0.7s,mb4.2,baz=327,slow=11,SNR=3.3						
STKA				LR	LR	13 44 55.2	
	comp=E,173nm,21.4s,MS4.2,baz=207,slow=36						
STKA	Stephens Creek	59.79	134	eP	P	13 18 34.6	-0.1
BRTR	Keskin Array B	62.73	311	P	P	13 18 53.1	-1.3
	comp=E,1.6nm,0.8s,mb4.2,baz=112,slow=6.7,SNR=6.6						
TIXI	Tiksi	67.58	11	⇑iP	P	13 19 24.5	-0.6
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,93nm,15.0s,MS4.1						
AKASG	Malin Array Be	68.49	322	P	P	13 19 30.3	-0.9
	comp=Z,0.4nm,0.3s,mb3.9,baz=86,slow=4.8,SNR=9.3						
JOF	Joensuu	71.22	335	ep	P	13 19 46.9	-0.6
	comp=Z,4.8nm,0.7s,mb4.5						
JOF	Joensuu	71.22	335	eP	P	13 19 46.9	-0.6
JOF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
FINES	FINESS Array B	73.08	332	P	P	13 19 59.1	+0.6
	comp=Z,4.4nm,0.7s,mb4.5,baz=117,slow=8.5,SNR=16						
FINES				LR	LR	13 54 03.8	
	comp=Z,109nm,18.7s,MS4.2,baz=284,slow=37						
KAF	Kangasniemi	73.16	333	ep	P	13 19 58.7	-0.3
	comp=Z,4.3nm,0.6s,mb4.6,baz=104,slow=5.5						
KAF	Kangasniemi	73.16	333	eP	P	13 19 58.7	-0.3
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LBTB	Lobatse	74.14	241	P	P	13 20 08.6	+3.1
	comp=Z,2.7nm,0.7s,mb4.3,baz=97,slow=6.5,SNR=8.2						
LBTB	Lobatse	74.14	241	eP	P	13 20 08.5	+3.0
	comp=Z,3.4nm,0.8s,mb4.3						
ARCES	ARCESS Array B	75.64	340	P	P	13 20 13.2	0.0
	comp=Z,3.2nm,0.8s,mb4.3,baz=96,slow=9.1,SNR=3.7						
ARCES				LR	LR	13 58 29.1	
	comp=Z,166nm,18.4s,MS4.4,baz=190,slow=40						
BILL	Bilibino	76.40	22	eP	P	13 20 18.9	+1.3
BILL				eS	S	13 30 00.8	+2.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
GERES	GERESS Array B	78.16	318	P	P	13 20 28.7	+1.0
	comp=Z,1.4nm,0.7s,mb4.0,baz=72,slow=4.2,SNR=11						
MAW	Mawson	78.19	192	LR	LR	13 51 12.1	
	comp=Z,249nm,18.2s,MS4.6,baz=256,slow=33						
KHC	Kasperske Hory	78.25	319	eP	P	13 20 25.0	-3.2
NB2	NORSAR Subarra	80.09	331	P	P	13 20 37.8	-0.2
	comp=Z,2.3nm,0.7s,mb4.2,baz=96,slow=5.0						
NOA	NORSAR Array B	80.09	331	P	P	13 20 38.5	+0.5
	comp=Z,2.8nm,0.7s,mb4.3,baz=92,slow=5.7,SNR=8.5						
NOA				LR	LR	14 01 23.7	
	comp=Z,81nm,18.1s,MS4.1,baz=140,slow=40						
NOA	NORSAR Array B	80.09	331	P	P	13 20 38.5	+0.5
NOA				LR	LR	14 01 23.7	
LPG	La Plagne	82.94	315	eP	P	13 20 54.8	+1.7
	comp=Z,17nm,0.8s,mb4.8						
RPZ	Rata Peaks	85.73	135	LR	LR	13 56 55.7	
	comp=Z,158nm,19.9s,MS4.4,baz=98,slow=34						
URZ	Urewera	89.05	129	LR	LR	14 02 50.7	
	comp=Z,104nm,18.7s,MS4.3,baz=234,slow=37						
VNDA	Vanda	92.55	168	P	P	13 21 38.5	-0.3
	comp=Z,2.0nm,0.9s,mb4.5						
DBIC	Dimbokro	98.07	278	LR	LR	14 06 14.6	
	comp=Z,142nm,19.2s,MS4.5,baz=68,slow=35						
PDAR	Pinedale Array	125.48	21	PKP	PKPdf	13 27 31.3	+3.1
	comp=Z,0.4nm,0.8s,baz=315,slow=2.1,SNR=3.5						
TXAR	Lajitas Array	139.53	24	PKP	PKPdf	13 27 58.4	+3.5
	comp=Z,0.2nm,0.5s,baz=147,slow=0.2,SNR=3.8						
PLCA	Paso Flores	144.23	200	PKP	PKPdf	13 28 05.0	+2.2
	comp=Z,5.4nm,1.1s,baz=168,slow=9.3,SNR=9.7						

IDC ***16*** *13:35:02.0±4.0, 19.93N×122.45E, mb3.9/4, mb1 4.1/4, mb1mx3.7/19, mbtmp3.9/4, MS3.1/1, Ms1 3.1/1, ms1mx2.2/29, Error ellipse: s-maj=264.2km s-min=24.3km az=89.0*

MAN ***16*** *13:35:03.9, 19.85N×121.41E, h1*^{km}*, mb4.2, ML3.0, MS2.7*

ISC 16 13:35:05.9±1.4**, 20.01N**±0.07×**121.4E**±0.2**, h55**^{km}±12^{km}**, n12,** σ**1**$\overset{s}{.}$**19**/13**, mb3.8**/4**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.69	51	eP	P	13 35 19.1	-0.8
SGCP	Mt. Cagua	1.86	160	eP	P	13 35 36.4	+0.3
APYP	Conner	2.14	184	eP	P	13 35 39.2	-0.7
APYP				eS	S	13 36 04.9	-0.4
CVP	Callao Caves	2.33	170	⇓iP	P	13 35 42.0	-0.7
CVP				i S	S	13 36 11.0	+0.9
ABRA	Dolores	2.43	195	eP	P	13 35 43.5	-0.6
PALP	Palanan	3.09	161	eP	P	13 35 55.9	+2.4
BOLP	Bolinao	3.87	201	eP	P	13 36 07.7	+3.2
JOW	Kunigami	9.28	42	LR	LR	13 39 44.1	
	comp=Z,118nm,19.1s,baz=95,slow=32						
WRA	Warramunga Arr	41.68	162	P	P	13 42 49.2	-1.8
	1.3nm,0.4s,mb3.9,baz=342,slow=9.1,SNR=41						
ASAR	Alice Springs	45.09	164	P	P	13 43 17.5	-1.1
	1.0nm,0.4s,mb4.0,baz=348,slow=6.5,SNR=26						
INK	Inuvik	77.02	22	P	P	13 46 54.8	+0.6
	0.2nm,0.3s,mb3.5,baz=264,slow=2.8,SNR=6.1						
YKA	Yellowknife Ar	86.73	23	P	P	13 47 46.2	+1.5
	0.4nm,0.4s,mb4.0,baz=308,slow=4.7,SNR=13						

IDC ***16*** *13:49:51.1±1.6, 7.58N×94.41E, mb3.9/6, mb1 4.0/7, mb1mx3.8/19, mbtmp3.8/7, ML3.3/1, MS3.4/1, Ms1 3.6/1, ms1mx2.8/27, Error ellipse: s-maj=63.5km s-min=21.7km az=61.0*

NEIC ***16*** *13:49:55.6±0.9, 7.64N×94.48E, h30*^{km}*, mb4.2/4, Error ellipse: s-maj=28.4km s-min=12.5km az=57.0*

BJI ***16*** *13:49:56.8, 8.00N×94.58E, h5*^{km}

ISC 16 13:49:54.6±1.0**, 7.7N**±0.1×**94.6E**±0.2**, h33**^{km}**, n18,** σ**1**$\overset{s}{.}$**05**/18**, mb4.2**/15**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.49	21	Pn	P	13 52 38.4	-1.0
	0.1nm,0.3s,baz=217,slow=7.1,SNR=4.8						
CMAR				LR	LR	13 57 29.8	
	comp=Z,152nm,18.1s,baz=195,slow=39						
JIRN	Jiri	21.38	339	eP	P	13 54 42.1	+0.6
	17nm,0.8s,mb4.4						
PKI	Pulchoki	21.59	337	eP	P	13 54 44.7	+1.1
	19nm,0.8s,mb4.6						
DMN	Daman	21.74	337	eP	P	13 54 45.6	+0.5
	19nm,0.7s,mb4.7						
KKN	Kakani	21.84	337	eP	P	13 54 46.4	+0.4
	14nm,0.9s,mb4.4						
LSA	Lhasa	22.12	352	P	P	13 54 52.6	+3.8
LSA	Lhasa	22.12	352	eP	P	13 54 51.4	+2.6
	7.6nm,0.9s,mb4.1						
GKN	Gorkha	22.28	336	eP	P	13 54 49.2	-1.2
	12nm,0.7s,mb4.4						
KOLN	Koldanda	22.51	334	eP	P	13 54 51.8	-1.0
	12nm,0.9s,mb4.3						
SONM	Songino Array	41.23	12	P	P	13 57 39.2	+1.2
	0.8nm,0.9s,mb3.4,baz=191,slow=6.3,SNR=4.6						
KURK	Kurchatov	44.88	346	eP	P	13 58 06.9	-0.7
	4.2nm,1.1s,mb4.2						
ZAL	Zalesovo	46.77	352	P	P	13 58 22.5	-0.1
	0.9nm,0.5s,mb4.0,baz=312,slow=5.7,SNR=5.4						
WRA	Warramunga Arr	47.79	126	P	P	13 58 30.8	-0.3
	0.5nm,0.6s,mb3.8,baz=304,slow=8.6,SNR=6.3						
BVAR	Borovoye Array	49.29	341	P	P	13 58 44.0	+1.7
	0.5nm,0.6s,mb3.7,baz=149,slow=8.4,SNR=4.4						
ASAR	Alice Springs	49.46	130	P	P	13 58 44.4	+0.5
	1.1nm,1.0s,mb3.8,baz=288,slow=7.3,SNR=5.8						
CHKZ	Chkalovo	49.77	342	eP	P	13 58 44.6	-1.3
	3.2nm,0.8s,mb4.4						
FINES	FINESS Array B	73.07	332	P	P	14 01 21.7	-1.3
	1.7nm,0.7s,mb4.1,baz=108,slow=6.0,SNR=4.1						
FINES	FINESS Array B	73.07	332	P	P	14 01 21.7	-1.4

IDC 16 14:02:08.6±6.6**, 5.98S**×**151.21E, h41**^{km}±56^{km}**, mb3.5**/4**, mb1 3.9**/5**, mb1mx3.6**/12**, mbtmp3.8**/5**, ML3.1**/1**, Error ellipse: s-maj=111.5km s-min=32.3km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.26	230	P	P	14 03 26.1	-0.7
	4.3nm,0.3s,baz=41,slow=10,SNR=14						
PMG				S	S	14 04 23.8	-3.2
	4.1nm,0.3s,baz=73,slow=18,SNR=7.9						
WRA	Warramunga Arr	21.48	228	P	P	14 06 54.1	-1.7
	1.3nm,0.6s,baz=54,slow=10,SNR=20						
ASAR	Alice Springs	24.22	222	P	P	14 07 21.9	-0.9
	1.7nm,0.7s,baz=56,slow=9.4,SNR=23						
ILAR	Eielson Array	83.84	22	P	P	14 14 32.4	-2.4
	0.5nm,0.6s,baz=252,slow=5.4,SNR=9.2						
YKA	Yellowknife Ar	97.20	28	P	P	14 15 37.0	-0.7
	0.1nm,0.4s,baz=267,slow=4.6,SNR=4.3						
GERES	GERESS Array B	124.21	327	PKP	PKPdf	14 21 03.5	+0.3
	0.5nm,0.6s,baz=56,slow=4.8,SNR=4.2						

IDC ***16*** *14:21:27.0±1.2, 30.87N×142.07E, mb3.6/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=50.8km s-min=21.3km az=90.0*

ISC 16 14:21:29.5±1.0**, 30.88N**±0.07×**142.1E**±0.3**, h33**^{km}**, n6,** σ**0**$\overset{s}{.}$**35**/8**, mb3.6**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.77	179	Pn	Pn	14 22 27.1	+0.2
	6.4nm,0.3s,baz=285,slow=22,SNR=5.2						
CBIJ				Sn	Sn	14 23 10.3	-0.3
	12nm,0.3s,baz=287,slow=19,SNR=3.5						
MAT	Matsushiro	6.51	331	P	P	14 23 04.8	-0.6
MAT				S	S	14 24 13.7	-5.6
SONM	Songino Array	32.02	312	P	P	14 27 55.6	+0.6
	0.8nm,1.1s,mb3.5,baz=90,slow=4.9,SNR=4.2						
WRA	Warramunga Arr	51.07	189	P	P	14 30 31.1	+0.1
	0.8nm,0.4s,mb4.0,baz=4.2,slow=7.4,SNR=22						
ILAR	Eielson Array	54.47	30	P	P	14 30 55.7	0.0
	0.3nm,0.8s,mb3.3,baz=257,slow=4.9,SNR=5.1						
ASAR	Alice Springs	54.80	189	P	P	14 30 58.6	-0.1
	0.5nm,0.5s,mb3.8,baz=2.1,slow=5.6,SNR=8.2						

IDC 16 14:22:15.1±1.7**, 1.23N**×**98.09E, mb4.0**/6**, mb1 4.2**/7**, mb1mx3.9**/19**, mbtmp4.0**/7**, ML4.6**/1**, Error ellipse: s-maj=71.7km s-min=19.5km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	Nongplab	11.40	8	P	P	14 24 59.0	-3.4
CMAR	Chiang Mai Arr	17.14	3	Pn	P	14 26 15.4	-2.4
	0.8nm,0.3s,baz=191,slow=12,SNR=24						
WRA	Warramunga Arr	41.30	123	P	P	14 30 01.4	-2.8
	2.4nm,0.4s,baz=302,slow=9.2,SNR=45						
ASAR	Alice Springs	42.70	128	P	P	14 30 15.2	-0.6
	1.1nm,0.6s,baz=302,slow=7.9,SNR=16						
SONM	Songino Array	46.98	8	P	P	14 30 49.7	0.0
	0.3nm,0.5s,baz=193,slow=8.0,SNR=3.1						
ZAL	Zalesovo	53.67	350	P	P	14 31 36.7	-3.9
	1.2nm,0.4s,baz=302,slow=5.2,SNR=3.4						
BVAR	Borovoye Array	56.52	340	P	P	14 31 58.7	-2.7

	0.6nm,0.4s,baz=141,slow=10,SNR=8.1						
HFS	**Hagfors**	**86.14**	**330**	P	P	14 34 58.0	-1.2
	0.9nm,0.4s,baz=162,slow=4.7,SNR=6.7						

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*IDC **16** 14:33:19.6±0.5, 9.85N×93.68E, mb4.5/18, mb1 4.6/19, mb1mx4.6/24, mbtmp4.5/19, ML4.5/1, MS4.6/15, Ms1 4.6/15, ms1mx4.6/18, Error ellipse: s-maj=21.6km s-min=14.4km az=51.0*

*MOS **16** 14:33:24.4±1.2, 9.87N×93.35E, h33^{km}, mb5.0/16, Error ellipse: s-maj=14.8km s-min=7.4km az=112.1*

*BJI **16** 14:33:25.3, 10.05N×93.29E, h33^{km}, mB5.0, mb4.5, Ms5.0, Msz4.7*

*NEIC **16** 14:33:26.0±1.2, 9.75N×93.60E, h45^{km}±10^{km}, mb4.8/26, MS4.6/3, Error ellipse: s-maj=9.2km s-min=7.9km az=178.0*

ISC 16 14:33:21.0±1.3, **9.66N**±0.05×**93.54E**±0.04, **h20**^{km}±9^{km}, **h28**^{km}±3.8^{km}**:pP-P, n175,** σ1^{s}**20**/177, **mb4.7**/55, **MS4.7**/34, **12C-13D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**7.42**	**109**	P	**Pn**	**14 35 06.0**	**-5.0**
	160nm,1.0s						
NST	**Nakhon Sawan**	**8.78**	**46**	P	**P**	**14 35 29.2**	**-0.8**
CM31	**Chiang Mai Arr**	**10.20**	**30**	*e*P	**P**	**14 35 49.8**	**+0.2**
	49nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.20**	**30**	*i* P	**P**	**14 35 50.1**	**+0.5**
CMAR				pmax	pmax		
	comp=Z,38nm,0.7s						
CMAR	**Chiang Mai Arr**	**10.20**	**30**	Pn	**P**	**14 35 50.0**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=216,slow=14,SNR=266						
CMAR				LR	LR	14 40 14.4	
	comp=Z,3µm,18.5s,baz=215,slow=42						
KKTK	**Khon Kaen**	**11.22**	**53**	P	**P**	**14 36 10.0**	**+6.4**
NANT	**Nan**	**11.43**	**37**	P	**P**	**14 36 08.0**	**+1.5**
VIS	**Vishakhapatnam**	**12.75**	**310**	*i* P	**P**	**14 36 19.7**	**-4.5**
PALK	**Pallekele**	**12.92**	**260**	*e*P	**P**	**14 36 26.1**	**-0.4**
	comp=Z,23nm,1.0s						
BWNR	**Bhubaneshwar**	**12.95**	**326**	*e*	**S**	**14 38 46.8**	**-4.5**
	comp=N,98nm,0.7s						
BWNR				*e*		14 38 46.9	
	comp=E,246nm,0.5s						
MDRS	**Chennai**	**13.47**	**286**	*e*P	**P**	**14 36 32.0**	**-1.7**
CAL	**Calcutta**	**13.75**	**339**	*e*P	**P**	**14 36 45.6**	**+8.0**
CAL				*e*S	**S**	**14 39 20.6**	**+10**
SHL	**Shillong**	**15.90**	**355**	*e*P	**P**	**14 37 05.0**	**-0.6**
SHL				*e*		14 39 54.0	
HYB	**Hyderabad**	**16.48**	**299**	*e*P	**P**	**14 37 13.0**	**0.0**
HYB				*e*S	**S**	**14 40 05.0**	**-10**
HYB	**Hyderabad**	**16.48**	**299**	*i* P	**P**	**14 37 13.0**	**0.0**
HYB				*e*		14 40 05.0	
HYB				*e*S	**S**	**14 40 19.0**	**+4.2**
BLSP	**Bilaspur**	**16.55**	**320**	*e*P	**P**	**14 37 14.4**	**+0.6**
BLSP				*e*		14 40 11.0	
KMI	**Kunming**	**17.70**	**28**	P	**P**	**14 37 27.9**	**-0.3**
KMI				AMB	AMB		
	comp=Z,29nm,1.5s						
KMI				AMB	AMB		
	comp=Z,514nm,7.2s						
KMI				LR	LR		
	comp=N,3µm,14.4s						
KMI				LR	LR		
	comp=E,3µm,14.9s						
KMI				LR	LR		
	comp=Z,3µm,16.8s						
KMI	**Kunming**	**17.70**	**28**	P	**P**	**14 37 27.9**	**-0.3**
	comp=Z,29nm,1.5s						
KMI				S	**S**	**14 40 50.1**	**+7.6**
NGP	**Nagpur**	**18.03**	**311**	*e*P	**P**	**14 37 33.5**	**+1.0**
NGP				*e*		14 40 42.4	
QIZ	**Qiongzhong**	**18.32**	**58**	⇑P	**P**	**14 37 38.3**	**+2.3**
QIZ				S	**S**	**14 41 08.5**	**+12**
QIZ				AMB	AMB		
	comp=Z,27nm,2.0s						
QIZ				AMB	AMB		
	comp=Z,498nm,4.8s						
QIZ				LR	LR		
	comp=N,4µm,15.9s						
QIZ				LR	LR		
	comp=E,2µm,16.7s						
QIZ				LR	LR		
	comp=Z,2µm,14.0s						
MNGI	**Mangalore**	**18.64**	**282**	*i* P	**P**	**14 37 40.8**	**+0.8**
MNGI				*i*		14 40 54.1	
JIRN	**Jiri**	**19.20**	**340**	*e*P	**P**	**14 37 46.9**	**+0.3**
	comp=Z,104nm,0.7s						
PKI	**Pulchoki**	**19.40**	**338**	*e*P	**P**	**14 37 49.2**	**+0.3**
	comp=Z,134nm,1.0s						
DMN	**Daman**	**19.55**	**337**	*e*P	**P**	**14 37 50.4**	**-0.2**
	comp=Z,50nm,0.6s						
KKN	**Kakani**	**19.65**	**338**	*e*P	**P**	**14 37 51.3**	**-0.4**
	comp=Z,213nm,1.2s						
LSA	**Lhasa**	**20.07**	**354**	P	**P**	**14 37 57.3**	**+1.1**
LSA				XP		14 38 03.3	
LSA				S	**S**	**14 41 31.9**	**-3.4**
LSA				XS		14 41 47.3	
LSA				SCP		14 45 41.8	
LSA				AMB	AMB		
	comp=Z,440nm,9.2s						
LSA				LR	LR		
	comp=N,690nm,19.8s,MS4.1						
LSA				LR	LR		
	comp=E,650nm,19.8s,MS4.1						
LSA				LR	LR		
	comp=Z,1µm,21.5s,MS4.2						
LSA	**Lhasa**	**20.07**	**354**	*e*P	**P**	**14 37 53.8**	**-2.4**
	comp=Z,30nm,0.7s						
GKN	**Gorkha**	**20.09**	**337**	*e*P	**P**	**14 37 55.4**	**-1.0**
	comp=Z,105nm,0.6s						
KAD	**Karad**	**20.29**	**294**	*e*P	**P**	**14 37 60.0**	**+1.4**
KAD				*e*		14 38 12.7	
	comp=Z,60nm,1.8s						
KOLN	**Koldanda**	**20.31**	**334**	*e*P	**P**	**14 37 57.9**	**-0.8**
	comp=Z,209nm,1.1s						
BHPL	**Bhopal**	**20.50**	**313**	*e*P	**P**	**14 38 01.4**	**+0.6**
BHPL				*e*		14 38 24.4	
	comp=Z,76nm,1.4s						
BHPL				*e*		14 41 44.7	
GYA	**Guiyang**	**20.82**	**35**	⇓*i*P	**P**	**14 38 03.6**	**-0.4**
GYA				S	**S**	**14 41 57.9**	**+7.3**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s						
GYA				AMB	AMB		
	comp=Z,220nm,3.0s						
GYA				LR	LR		
	comp=N,3µm,18.0s,MS4.9						
GYA				LR	LR		
	comp=E,3µm,14.1s,MS4.9						
GYA				LR	LR		
	comp=Z,2µm,15.9s,MS4.7						
POO	**Poona**	**21.02**	**297**	⇓*i*P	**P**	**14 38 07.0**	**+0.9**
	comp=Z,50nm,1.0s,mb4.8						
POO				*i*		14 42 16.0	
GZH	**Guangzhou**	**23.18**	**52**	P	**P**	**14 38 32.8**	**+5.1**
GZH				LR	LR		
	comp=N,2µm,12.7s,MS4.9						
GZH				LR	LR		
	comp=E,2µm,13.8s,MS4.9						
GZH				LR	LR		
	comp=Z,2µm,15.2s,MS4.7						
CD2	**Chengdu**	**23.19**	**23**	P	**P**	**14 38 28.4**	**+0.7**
LGTI	**Lohaghat**	**23.30**	**330**	⇓*i*P	**P**	**14 38 32.0**	**+3.3**
PTH	**Pithoragarh**	**23.39**	**330**	*e*P	**P**	**14 38 30.2**	**+0.5**
PTH				*e*S	**S**	**14 42 42.3**	**+4.5**
NDI	**New Delhi**	**24.36**	**323**	*e*P	**P**	**14 38 39.0**	**-0.1**
NDI				*e*S	**S**	**14 42 56.0**	**+1.6**
AJM	**Ajmer**	**24.49**	**316**	⇓*i*P	**P**	**14 38 42.0**	**+1.6**
DDI	**Dehra Dun**	**25.13**	**327**	*e*P	**P**	**14 38 46.3**	**-0.2**
DDI				*e*S	**S**	**14 43 11.9**	**+4.4**
ENH	**Enshi**	**25.34**	**34**	*e*P	**P**	**14 38 46.7**	**-1.7**
	comp=Z,21nm,0.8s,mb4.7						
SMLA	**Simla**	**26.24**	**327**	⇓*i*	**P**	**14 39 13.1**	**+16**
	comp=Z,94nm,0.3s						
SMLA				*i*		14 43 40.6	
TGY	**Tagaytay City**	**27.16**	**78**	LR	LR	14 49 04.5	
	comp=Z,2µm,21.3s,MS4.6,baz=50,slow=35						
LZH	**Lanzhou**	**27.93**	**18**	*e*P	**P**	**14 39 12.0**	**-0.2**
LZH				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,121nm,5.3s						
LZH				LR	LR		
	comp=N,2µm,14.2s						
LZH				LR	LR		
	comp=Z,3µm,15.5s,MS5.0						
LZH	**Lanzhou**	**27.93**	**18**	*e*P	**P**	**14 39 12.0**	**-0.2**
	comp=Z,19nm,1.3s,mb4.6						
LZH				pP	pP	14 39 15.5	-2.5
LZH				sP	sP	14 39 19.0	-1.6
LZH				PP	PP	14 39 49.2	-13
LZH				*e*S	S	14 43 31.0	-22
LZH				sS		14 43 38.4	
LZH				SS	Sx	14 44 28.5	
LZH				LR	LR		
	comp=Z,3µm,15.5s,MS5.0						
XAN	**Xi’an**	**28.08**	**28**	P	**P**	**14 39 10.8**	**-2.7**
XAN				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.2						
GTA	**Gaotai**	**30.16**	**10**	P	**P**	**14 39 31.1**	**-1.0**
GTA				AP	pP	14 39 39.9	+2.0
GTA				XP	sP	14 39 43.5	+3.0
GTA				PP	PP	14 40 29.0	-1.8
GTA				S	**S**	**14 44 26.1**	**-2.7**
GTA				XS		14 44 37.6	
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,121nm,9.1s						
GTA				LR	LR		
	comp=N,656nm,19.8s,MS4.5						
GTA				LR	LR		
	comp=E,723nm,19.8s,MS4.5						
GTA				LR	LR		
	comp=Z,851nm,19.0s,MS4.4						
NJ2	**Nanjing**	**32.34**	**43**	*e*P	**P**	**14 39 53.6**	**+2.2**
NJ2				AP	pP	14 40 03.1	+5.9
NJ2				XP	sP	14 40 06.4	+6.7
NJ2				PP	PP	14 41 01.5	+2.3
NJ2				PPP	PPP	14 41 17.0	+2.4
NJ2				S	**S**	**14 45 05.0**	**+1.9**
NJ2				XS		14 45 20.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,146nm,5.2s						
NJ2				LR	LR		
	comp=N,2µm,10.1s,MS5.3						
NJ2				LR	LR		
	comp=E,2µm,10.4s,MS5.3						
NJ2				LR	LR		
	comp=Z,12µm,15.0s,MS5.7						
SSE	**Sheshan**	**33.39**	**46**	*e*P	**P**	**14 40 01.0**	**+0.4**
SSE				AP	pP	14 40 09.8	+3.4
SSE				S	**S**	**14 45 20.8**	**+1.3**
SSE				XS		14 45 36.5	
SSE				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,208nm,3.1s						
SSE				LR	LR		
	comp=N,2µm,15.3s,MS4.9						
SSE				LR	LR		
	comp=E,1µm,15.3s,MS4.9						
SSE				LR	LR		
	comp=Z,820nm,14.2s,MS4.6						
SSE	**Sheshan**	**33.39**	**46**	*e*P	**P**	**14 40 01.0**	**+0.4**
	comp=Z,11nm,0.7s,mb4.9						
SSE				pP	pP	14 40 09.7	+3.3
SSE				S	**S**	**14 45 20.8**	**+1.3**
SSE				sS		14 45 36.5	
SSE				SS	SS	14 47 54.0	+31
SSE				LR	LR		
	comp=Z,820nm,14.2s,MS4.6						
KSH	**Kashi**	**33.62**	**335**	⇑P	**P**	**14 40 03.6**	**+1.2**
KSH				*e*XP	sP	14 40 12.5	+1.7
KSH				AMB	AMB		
	comp=Z,60nm,4.4s						
WMQ	**Urumqi**	**34.41**	**353**	*e*P	**P**	**14 40 08.3**	**-1.0**
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
HHC	**Hu-ho-hao-te**	**34.93**	**24**	*e*P	**P**	**14 40 16.8**	**+3.1**
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,100nm,6.3s						
KZA	**Kyzart**	**36.08**	**337**	P	**P**	**14 40 24.3**	**+0.9**
	SNR=8.7						
UCH	**Uchtor**	**36.50**	**336**	P	**P**	**14 40 28.5**	**+1.6**
	SNR=11						
TKM2	**Tokmak 2**	**36.67**	**338**	P	**P**	**14 40 28.9**	**+0.5**
	SNR=9.9						
KBK	**Karagaybulak**	**36.69**	**337**	P	**P**	**14 40 28.8**	**+0.2**
	SNR=29						
AML	**Almayashu**	**36.75**	**335**	P	**P**	**14 40 31.0**	**+1.9**
	SNR=43						
AAK	**Ala-Archa**	**36.84**	**336**	P	**P**	**14 40 32.0**	**+2.1**
	SNR=16						
AAK	**Ala-Archa**	**36.84**	**336**	*c i*P	**P**	**14 40 29.4**	**-0.5**
AAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
AAK				MLR	MLR		
	comp=Z,1µm,17.0s,MS4.7						
AAK	**Ala-Archa**	**36.84**	**336**	*e*P	**P**	**14 40 28.0**	**-1.9**
	comp=Z,58nm,1.4s,mb5.2						
FRU	**Bishkek**	**36.97**	**337**	*e*P	**P**	**14 40 32.0**	**+1.1**
FRU				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.9						
FRU				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.6						
CHMS	**Chumysh**	**37.05**	**337**	P	**P**	**14 40 32.5**	**+0.9**
	SNR=12						
EKS2	**Erkin-Say**	**37.16**	**336**	P	**P**	**14 40 32.6**	**+0.1**
	SNR=40						
USP	**Ospenovka**	**37.38**	**337**	P	**P**	**14 40 34.3**	**-0.1**
	SNR=33						
MKAR	**Makanchi Array**	**38.23**	**347**	*i* P	**P**	**14 40 39.6**	**-1.9**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	**Songino Array**	**39.57**	**14**	P	**P**	**14 40 51.2**	**-1.4**
	comp=Z,3.8nm,0.9s,mb4.1,baz=199,slow=7.5,SNR=16						
SONM				PcP	PcP	14 43 00.3	-0.1
	comp=Z,1.7nm,0.7s,baz=210,slow=3.7,SNR=6.4						
ULN	**Ulaanbaatar**	**39.76**	**14**	*e*P	**P**	**14 40 51.4**	**-2.8**
	comp=Z,3.8nm,0.8s,mb4.2						
ZAK	**Zakamensk**	**41.40**	**9**	*e*P	**P**	**14 41 08.4**	**+0.8**
ZAK				*e*		14 42 52.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.6						
SNY	**Shenyang**	**41.52**	**34**	⇓P	**P**	**14 41 09.9**	**+1.1**
SNY				S	**S**	**14 47 18.5**	**-4.7**
SNY				XS		14 47 34.3	
SNY				AMB	AMB		
	comp=Z,20nm,2.2s,mb4.4						
SNY				LR	LR		
	comp=N,1µm,18.9s						
SNY				LR	LR		
	comp=Z,750nm,16.7s,MS4.6						
MOY	**Mondy**	**42.33**	**7**	*e*P	**P**	**14 41 16.4**	**+1.1**
MOY				pmax	pmax		
	comp=Z,18nm,2.5s,mb4.3						
TLY	**Talaya**	**42.71**	**9**	*e*P	**P**	**14 41 17.7**	**-0.7**
TLY				*e*		14 43 02.1	
TLY				*e*S	**S**	**14 47 39.2**	**-1.4**
TLY				*e*SS	ScS	14 51 20.0	+3.6
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
TLY				MLR	MLR		
	comp=Z,339nm,16.0s,MS4.3						
TLY	**Talaya**	**42.71**	**9**	*e*P	**P**	**14 41 16.7**	**-1.7**
	comp=Z,3.7nm,1.0s,mb4.1						
KURK	**Kurchatov**	**42.75**	**346**	⇓*e*P	**P**	**14 41 18.0**	**-0.7**
KURK	**Kurchatov**	**42.75**	**346**	*e*P	**P**	**14 41 15.8**	**-3.0**
	comp=Z,23nm,1.4s,mb4.7						
ZAL	**Zalesovo**	**44.72**	**353**	P	**P**	**14 41 32.8**	**-1.8**
	comp=Z,3.0nm,0.6s,mb4.3,baz=304,slow=7.6,SNR=16						
HIA	**Hailar**	**45.13**	**24**	P	**P**	**14 41 38.7**	**+0.7**
	comp=Z,29nm,1.4s,mb4.9						
HIA				LR	LR		
	comp=Z,778nm,20.0s,MS4.6						
NVS	**Novosibirsk**	**45.81**	**352**	*e*P	**P**	**14 41 40.8**	**-2.5**
BVAR	**Borovoye Array**	**47.12**	**341**	P	**P**	**14 41 51.5**	**-2.2**
	comp=Z,2.4nm,0.4s,mb4.5,baz=143,slow=7.4,SNR=35						
BVAR				ScP		14 47 19.2	
	comp=Z,0.5nm,0.7s,baz=135,slow=6.1,SNR=3.9						
BRVK	**Borovoye**	**47.19**	**341**	P	**P**	**14 41 53.3**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**47.19**	**341**	*e*P	**P**	**14 41 53.0**	**-1.2**
	comp=Z,7.7nm,0.7s,mb4.7						
CHKZ	**Chkalovo**	**47.61**	**342**	*e*P	**P**	**14 41 55.4**	**-2.1**
WRA	**Warramunga Arr**	**49.78**	**126**	P	**P**	**14 42 13.9**	**-0.8**
	comp=Z,6.7nm,1.1s,mb4.6,baz=305,slow=8.6,SNR=36						
WRAB	**Tennant Creek**	**49.78**	**126**	⇑*e*P	**P**	**14 42 17.5**	**+2.7**
WRAB	**Tennant Creek**	**49.78**	**126**	*e*P	**P**	**14 42 14.2**	**-0.6**
	comp=Z,32nm,1.4s,mb5.2						
WRAB				LR	LR		
	comp=Z,208nm,19.0s,MS4.2						
BOD	**Bodaibo**	**50.57**	**14**	*e*P	**P**	**14 42 15.3**	**-5.0**
KLR	**Kul’dur**	**50.67**	**32**	*e*P	**P**	**14 42 30.3**	**+9.1**
ASAR	**Alice Springs**	**51.51**	**131**	P	**P**	**14 42 26.2**	**-1.7**
	comp=Z,0.8nm,0.6s,mb3.8,baz=304,slow=7.6,SNR=14						
ASAR				LR	LR	15 07 22.1	
	comp=Z,235nm,18.1s,MS4.2,baz=300,slow=40						
GNI	**Garni**	**52.78**	**314**	*c i*P	**P**	**14 42 38.0**	**+0.8**
GNI				pmax	pmax		
	comp=Z,17nm,0.9s						
GNI				MLR	MLR		
	comp=Z,400nm,23.0s						
GNI	**Garni**	**52.78**	**314**	P	**P**	**14 42 37.3**	**0.0**
	comp=Z,3.8nm,0.5s,mb4.6,baz=347,slow=3.4,SNR=7.9						
TI2	**Plekhanov**	**53.37**	**315**	*i* P	**P**	**14 42 42.0**	**+0.5**
ASAJ	**Asahikawa**	**54.48**	**42**	LR	LR	15 06 12.9	
	comp=Z,384nm,18.3s,MS4.5,baz=220,slow=36						
KIV	**Kislovodsk**	**55.61**	**317**	P	**P**	**14 42 57.3**	**-0.6**
	comp=Z,377nm,0.9s,SNR=10						
KIV	**Kislovodsk**	**55.61**	**317**	*c i*P	**P**	**14 42 57.7**	**-0.2**
KIV				*e*		14 43 57.0	
KIV				*e*		14 45 02.3	
KIV				*e*PPP	PPP	14 46 12.3	-5.8
KIV				*e*S	**S**	**14 50 42.1**	**+1.2**
KIV				pmax	pmax		
	comp=N,29nm,1.0s						
KIV				pmax	pmax		
	comp=E,23nm,1.0s						
KIV				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7						
KIV				MLR	MLR		
	comp=N,140nm,20.0s,MS4.2						
KIV				MLR	MLR		
	comp=E,110nm,20.0s,MS4.2						
KIV				MLR	MLR		
	comp=Z,184nm,20.0s,MS4.2						
KIV	**Kislovodsk**	**55.61**	**317**	*e*P	**P**	**14 42 56.7**	**-1.3**
	comp=Z,94nm,1.1s,mb5.7						
YSS	**Yuzh-Sakhalins**	**55.76**	**39**	⇓*e*P	**P**	**14 43 01.5**	**+2.5**
YSS				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
YSS				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.6						
GOF	**Gofitskoye**	**55.81**	**319**	*e*P	**P**	**14 42 59.0**	**-0.3**
PMG	**Port Moresby**	**56.63**	**108**	P	**P**	**14 43 05.0**	**-0.6**
	comp=Z,9.3nm,0.8s,mb4.9,baz=325,slow=9.0,SNR=4.8						
PMG				LR	LR	15 08 31.7	
	comp=Z,438nm,21.5s,MS4.5,baz=117,slow=37						
PMG	**Port Moresby**	**56.63**	**108**	P	**P**	**14 43 05.0**	**-0.6**
PMG				LR	LR	15 08 31.7	
ASF	**Jabal al Asfar**	**56.77**	**302**	P	**P**	**14 43 06.6**	**+0.2**
	comp=Z,9.4nm,0.9s,mb4.8,baz=8.8,slow=5.8,SNR=7.9						
SOKR	**Solikamsk**	**56.94**	**339**	⇑*i*P	**P**	**14 43 07.3**	**+0.1**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
SOKR				MLR	MLR		
	comp=Z,930nm,19.0s,MS4.9						
KMBO	**Kilima Mbogo**	**57.05**	**262**	LR	LR	15 07 01.7	
	comp=Z,490nm,18.1s,MS4.7,baz=279,slow=35						
SOC	**Sochi**	**57.49**	**316**	*e*P	**P**	**14 43 08.2**	**-3.2**
SOC				*e*		14 44 01.0	
SOC				*e*PPP	PPP	14 46 35.8	-5.9
SOC				*e*S	**S**	**14 51 01.8**	**-4.0**
SOC				*e*		14 52 51.3	
SOC				*e*SSS	SSS	14 57 11.9	-1.5
SOC				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
SOC				pmax	pmax		
	comp=N,23nm,1.0s						
SOC				pmax	pmax		
	comp=E,17nm,0.8s						
SOC				MLR	MLR		
	comp=Z,380nm,20.0s,MS4.5						
SOC				MLR	MLR		
	comp=N,378nm,22.0s,MS4.6						
SOC				MLR	MLR		
	comp=E,286nm,19.0s,MS4.6						
EIL	**Elat**	**58.04**	**299**	*e*P	**P**	**14 43 15.8**	**+0.4**
	comp=E,23nm,1.2s,mb5.1						
YAK	**Yakutsk**	**58.51**	**19**	⇑*e*P	**P**	**14 43 18.8**	**+0.6**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
YAK				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.8						
YAK	**Yakutsk**	**58.51**	**19**	*e*P	**P**	**14 43 14.7**	**-3.5**
	comp=Z,13nm,0.9s,mb5.0						
YAK				LR	LR		
	comp=Z,772nm,20.0s,MS4.8						
CTA	**Charters Tower**	**59.70**	**120**	LR	LR	15 09 40.8	
	comp=Z,650nm,21.8s,MS4.7,baz=289,slow=36						
BRTR	**Keskin Array B**	**60.83**	**310**	P	**P**	**14 43 33.0**	**-1.5**
	comp=Z,7.5nm,0.7s,mb4.9,baz=125,slow=7.1,SNR=21						
BRTR				ScP		14 48 19.4	
	comp=Z,0.7nm,0.7s,baz=124,slow=5.2,SNR=4.3						
STKA	**Stephens Creek**	**61.76**	**134**	LR	LR	15 11 50.7	
	comp=Z,758nm,19.4s,MS4.9,baz=109,slow=37						
MA2	**Magadan**	**65.47**	**28**	*e*P	**P**	**14 44 07.3**	**+2.5**
MA2				*e*		14 52 41.5	
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
TIXI	**Tiksi**	**65.61**	**12**	⇑*e*P	**P**	**14 44 04.2**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.9						
CFR	**Carcaliu**	**65.92**	**315**	⇑P	**P**	**14 44 06.4**	**-1.5**
CFR	**Carcaliu**	**65.92**	**315**	⇓*i*P	**P**	**14 44 01.3**	**-6.6**
AKASG	**Malin Array Be**	**66.40**	**321**	*i* P	**P**	**14 44 09.4**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AKASG	**Malin Array Be**	**66.40**	**321**	P	**P**	**14 44 09.4**	**-1.5**
	comp=Z,7.2nm,1.0s,mb4.7,baz=90,slow=4.6,SNR=10.0						
VRI	**Vrincioaia**	**67.02**	**316**	⇑P	**P**	**14 44 14.5**	**-0.4**
VRI	**Vrincioaia**	**67.02**	**316**	⇓*i*P	**P**	**14 44 14.2**	**-0.7**
IDI	**Anoyia**	**67.08**	**304**	P	**P**	**14 44 14.6**	**-0.9**
	comp=Z,10nm,0.8s,mb4.9,baz=70,slow=12,SNR=5.2						
MLR	**Muntele Rosu**	**67.50**	**315**	⇓P	**P**	**14 44 17.5**	**-0.5**
MLR	**Muntele Rosu**	**67.50**	**315**	⇑*i*P	**P**	**14 44 17.5**	**-0.5**
BURAR	**Bucovina Array**	**68.34**	**317**	⇑P	**P**	**14 44 23.6**	**+0.4**
VTS	**Vitosha**	**69.06**	**312**	⇓P	**P**	**14 44 26.9**	**-0.9**
KWP	**Kalwaria**	**70.30**	**319**	*e*P	**P**	**14 44 35.5**	**+0.3**
	comp=Z,41nm,1.4s,mb5.2						
KOLS	**Kolonicke sedl**	**70.48**	**319**	*e*P	**P**	**14 44 37.7**	**+1.4**
FINES	**FINESS Array B**	**70.87**	**332**	*i* P	**P**	**14 44 38.0**	**-0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**70.87**	**332**	P	**P**	**14 44 37.5**	**-1.0**
	comp=Z,3.2nm,0.8s,mb4.3,baz=104,slow=6.8,SNR=14						
FINES				LR	LR	15 21 42.0	
	comp=Z,399nm,18.8s,MS4.7,baz=278,slow=41						
FINES	**FINESS Array B**	**70.87**	**332**	P	**P**	**14 44 37.5**	**-1.0**
FINES				LR	LR	15 21 42.0	
CRVS	**Cervenica-Dubn**	**71.01**	**318**	*e*P	**P**	**14 44 40.9**	**+1.4**
KECS	**Kecovo**	**71.61**	**318**	*e*P	**P**	**14 44 44.0**	**+0.9**
NIE	**Niedzica**	**71.82**	**319**	*e*P	**P**	**14 44 43.4**	**-1.0**
OJC	**Ojcow**	**72.24**	**320**	*e*P	**P**	**14 44 46.5**	**-0.4**
VYHS	**Vyhne**	**72.70**	**318**	*e*P	**P**	**14 44 49.1**	**-0.5**
OKC	**Ostrava-Krasne**	**73.26**	**319**	*e*P	**P**	**14 44 52.9**	**0.0**
ARCES	**ARCESS Array B**	**73.40**	**340**	P	**P**	**14 44 53.0**	**-0.3**
	comp=Z,14nm,1.1s,mb4.8,baz=96,slow=6.4,SNR=10						
ARCES				LR	LR	15 20 13.1	
	comp=Z,682nm,19.1s,MS5.0,baz=30,slow=38						
ARCES	**ARCESS Array B**	**73.40**	**340**	P	**P**	**14 44 53.0**	**-0.3**
ARCES				LR	LR	15 20 13.1	
MORC	**Moravsky Berou**	**73.65**	**319**	*e*P	**P**	**14 44 55.1**	**0.0**
	comp=Z,6.6nm,0.9s,mb4.6						
ZST	**Bratislava**	**73.83**	**317**	*e*P	**P**	**14 44 53.4**	**-2.8**
DPC	**Dobruska-Polom**	**74.47**	**320**	*e*P	**P**	**14 45 00.6**	**+0.7**
LBTB	**Lobatse**	**74.58**	**241**	P	**P**	**14 45 02.4**	**+1.4**
	comp=Z,5.9nm,1.0s,mb4.5,baz=88,slow=1.7,SNR=8.0						
LBTB	**Lobatse**	**74.58**	**241**	P	**P**	**14 45 02.4**	**+1.4**
BILL	**Bilibino**	**74.66**	**22**	P	**P**	**14 45 02.4**	**+1.8**
BILL				*e*SS	SS	14 59 22.0	-1.9
BILL				pmax	pmax		

	comp=Z,3.0nm,1.0s,mb4.2						
BILL				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.2						
UPC	**Upice**	**74.68**	**320**	*e*P	**P**	**14 45 05.1**	**+4.0**
PRU	**Pruhonice**	**75.60**	**319**	*e*P	**P**	**14 45 02.1**	**-4.3**
BRG	**Berggiesshubel**	**76.01**	**320**	*e*P	**P**	**14 45 09.2**	**+0.5**
BRG				*e*		14 45 24.8	
BRG				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
BRG	**Berggiesshubel**	**76.01**	**320**	*e*P	**P**	**14 45 09.2**	**+0.5**
	comp=Z,17nm,1.4s,mb4.8						
BRG				*e*		14 45 24.8	
BOSA	**Boshof**	**76.03**	**237**	*e*P	**P**	**14 45 09.9**	**+0.6**
	comp=Z,8.3nm,0.9s,mb4.7						
GERES	**GERESS Array B**	**76.11**	**318**	P	**P**	**14 45 08.9**	**-0.4**
	comp=Z,3.3nm,0.7s,mb4.4,baz=88,slow=5.1,SNR=28						
KHC	**Kasperske Hory**	**76.20**	**318**	⇓*e*P	**P**	**14 45 09.6**	**-0.2**
KHC	**Kasperske Hory**	**76.20**	**318**	*e*P	**P**	**14 45 09.0**	**-0.8**
CLL	**Collm**	**76.62**	**320**	*e*P	**P**	**14 45 18.0**	**+5.9**
CLL	**Collm**	**76.62**	**320**	P	**P**	**14 45 18.0**	**+5.9**
GRA1	**Grafenberg Arr**	**77.75**	**319**	*e*P	**P**	**14 45 18.0**	**-0.3**
	comp=Z,7.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**77.75**	**319**	*e*P	**P**	**14 45 18.0**	**-0.3**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**77.75**	**319**	*e*P	**P**	**14 45 18.0**	**-0.3**
	comp=Z,7.0nm,1.0s,mb4.5						
NB2	**NORSAR Subarra**	**77.90**	**330**	P	**P**	**14 45 18.2**	**-0.7**
	comp=Z,1.5nm,0.7s,mb4.0,baz=96,slow=5.0						
NOA	**NORSAR Array B**	**77.90**	**330**	P	**P**	**14 45 18.4**	**-0.5**
	comp=Z,5.9nm,1.1s,mb4.4,baz=92,slow=5.7,SNR=5.6						
NOA				LR	LR	15 22 45.7	
	comp=Z,286nm,21.5s,MS4.6,baz=65,slow=38						
NOA	**NORSAR Array B**	**77.90**	**330**	P	**P**	**14 45 18.4**	**-0.5**
NOA				LR	LR	15 22 45.7	
MAW	**Mawson**	**80.15**	**191**	LR	LR	15 16 42.0	
	comp=Z,473nm,20.6s,MS4.8,baz=67,slow=32						
SUR	**Sutherland**	**80.86**	**235**	P	**P**	**14 45 38.4**	**+2.9**
	comp=Z,11nm,0.8s,mb4.8,baz=55,slow=9.3,SNR=6.8						
SUR	**Sutherland**	**80.86**	**235**	P	**P**	**14 45 38.4**	**+2.9**
LPG	**La Plagne**	**80.95**	**315**	*e*P	**P**	**14 45 36.5**	**+0.7**
	comp=Z,24nm,0.8s,mb4.9						
IMA	**Indian Mountai**	**90.21**	**22**	*e*P	**P**	**14 46 18.2**	**-2.9**
	comp=Z,16nm,1.0s,mb5.3						
ILAR	**Eielson Array**	**93.33**	**22**	P	**P**	**14 46 36.1**	**+0.6**
	comp=Z,0.6nm,0.8s,mb4.1,baz=306,slow=5.5,SNR=10						
ILAR				LR	LR	15 29 32.6	
	comp=Z,224nm,20.3s,MS4.6,baz=312,slow=36						
VNDA	**Vanda**	**94.78**	**168**	LR	LR	15 24 57.3	
	comp=Z,387nm,19.5s,MS4.9,baz=294,slow=33						
INK	**Inuvik**	**95.45**	**16**	*e*P	**P**	**14 46 45.0**	**-0.2**
RES	**Resolute Bay**	**95.66**	**2**	*e*P	**P**	**14 46 46.0**	**-0.1**
	comp=Z,8.6nm,1.0s,mb5.1						
DBIC	**Dimbokro**	**97.11**	**278**	LR	LR	15 26 50.2	
	comp=Z,103nm,21.1s,MS4.3,baz=59,slow=33						
YKA	**Yellowknife Ar**	**104.84**	**13**	PP	PP	14 51 44.3	-6.2
	comp=Z,0.3nm,0.7s,baz=334,slow=7.8,SNR=5.9						
PPT	**Papeete**	**118.38**	**105**	*e*LR	LR	15 27 42.5	
	comp=Z,300nm,29.0s						
TBI	**Tubuai**	**118.49**	**111**	*e*LR	LR	15 27 39.0	
	comp=Z,230nm,27.8s						
NVAR	**Mina Array Bea**	**123.69**	**30**	PKP	PKPdf	14 52 20.4	-1.6
	comp=Z,1.4nm,0.6s,baz=40,slow=2.4,SNR=9.5						
PDAR	**Pinedale Array**	**123.72**	**20**	PKP	PKPdf	14 52 19.2	-2.8
	comp=Z,0.7nm,0.7s,baz=34,slow=3.3,SNR=4.2						
MSU	**Marysvale**	**126.41**	**25**	*e*P	PKPdf	14 52 25.4	-1.9
PLCA	**Paso Flores**	**145.99**	**202**	PKPbc	PKPbc	14 53 02.1	+2.1
	comp=Z,3.1nm,0.9s,baz=131,slow=5.3,SNR=7.0						
LPAZ	**La Paz**	**160.97**	**248**	PKPab	PKPab	14 54 07.5	+1.7
	comp=Z,1.7nm,0.6s,baz=231,slow=3.9,SNR=8.6						

MAN 16 14:43:27.9,18.67N×120.71E,h1^{km},mb4.1,ML2.8,MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.95**	**148**	*e*P	Pb	14 43 46.5	-0.3
APYP				*e*S	Sg	14 43 59.4	-0.2
ABRA	**Dolores**	**1.02**	**180**	*e*P	Pb	14 43 46.8	-1.2
SGCP	**Mt. Cagua**	**1.34**	**108**	*e*P	Pb	14 43 53.3	-0.2
CAUP	**Cauayan**	**2.02**	**148**	*e*P	Pn	14 44 05.2	+1.8

LDG ***16*** *14:57:18.9±0.1,49.94N×7.42E,h3^{km},Md3.0/1,Ml2.7/13, Error ellipse: s-maj=1.8km s-min=1.3km az=34.0*

BGR ***16*** *14:57:18.5±0.3,50.00N×7.51E,h10^{km},ML2.0/2,Error ellipse: s-maj=4.4km s-min=3.3km az=168.0*

CSEM ***16*** *14:57:19.0±0.1,49.94N×7.42E,h5^{km},ML2.5/10,Error ellipse: s-maj=1.4km s-min=0.9km az=55.0*

STR ***16*** *14:57:20.1±0.1,49.85N×7.50E,h10^{km}±1^{km},Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

NEIC ***16*** *14:57:20.1,49.85N×7.50E,h10^{km},ML2.7(LDG), ML2.4(STR),After STR.*

BNS ***16*** *14:57:20.9±0.5,50.04N×7.47E,h12^{km}±2^{km},ML1.8*

ISC 16 14:57:17.3±0.3,49.89N±0.02×7.36E±0.03,h6^{km}±3^{km},n34, σ0^{s}99/73,1D,Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABH	**Alteburg**	**0.12**	**93**	Pg	**Pg**	**14 57 22.4**	**+2.5**
RUP	**Ruppelstein**	**0.27**	**226**	Pg	**Pg**	**14 57 26.9**	**+4.1**
RUP				Sg	**Sg**	**14 57 31.8**	**+5.4**
BGG	**Burgeitz**	**0.32**	**357**	⇓*e*Pg	**Pg**	**14 57 24.9**	**+1.1**
BGG				*e*Sg	**Sg**	**14 57 28.0**	**-0.1**
	172nm,0.3s						
TNS	**Taunus Mts**	**0.78**	**64**	*e*Pg	**Pg**	**14 57 31.8**	**-1.1**
	SNR=18						
TNS				*e*Sg	**Sg**	**14 57 40.0**	**-3.2**
	SNR=6.0						
STB	**Steinbach**	**0.78**	**335**	*e*Pg	**Pg**	**14 57 33.7**	**+0.7**
STB				*e*Sg	**Sg**	**14 57 42.8**	**-0.6**
	44nm,0.6s						
WLF	**Walferdange**	**0.81**	**255**	*e*Pg	**Pg**	**14 57 36.6**	**+3.0**
	SNR=1.8						
WLF				*e*Sg	**Sg**	**14 57 49.5**	**+5.1**
	SNR=12						
LANF	**Langenberg**	**0.95**	**162**	Pg	**Pg**	**14 57 37.4**	**+1.0**
LANF				Sg	**Sg**	**14 57 50.0**	**+0.9**
TOD	**Tromm**	**0.98**	**106**	Pg	**Pg**	**14 57 37.2**	**+0.3**
TOD				Sg	**Sg**	**14 57 48.9**	**-1.0**
KLL	**Kalltalsperre**	**1.01**	**319**	*e*Pg	**Pg**	**14 57 37.9**	**+0.3**
KLL				*e*Sg	**Sg**	**14 57 50.8**	**-0.3**
	11nm,1.0s						
MEM	**Membach**	**1.13**	**310**	P	**Pb**	**14 57 40.0**	**+1.1**
MEM				S	**Sb**	**14 57 55.3**	**+1.7**
HGN	**Heimansgroeve**	**1.27**	**314**	*e*Pg	**Pg**	**14 57 42.3**	**-0.4**
	SNR=7.7						
HGN				*e*Sg	**Sg**	**14 57 58.0**	**-1.5**
	SNR=5.2						
HGN	**Heimansgroeve**	**1.27**	**314**	*e*Pg	**Pg**	**14 57 42.8**	**+0.2**
HGN				*e*Sg	**Sg**	**14 57 58.2**	**-1.3**
CDF	**Champ du Feu**	**1.48**	**182**	*e*Pn	**Pn**	**14 57 45.4**	**+0.8**
CDF				*e*Pg	**Pg**	**14 57 47.3**	**+0.5**
CDF				*e*Sg	**Sg**	**14 58 07.3**	**+0.8**
	15nm,0.2s						
GIVF	**Givet**	**1.65**	**278**	*e*Pn	**Pn**	**14 57 47.7**	**+0.7**
GIVF				*e*Pg	**Pg**	**14 57 50.2**	**-0.1**
GIVF				*e*Sn	**Sn**	**14 58 08.1**	**-0.7**
GIVF				*e*Sg	**Sg**	**14 58 11.9**	**-0.4**
	14nm,0.3s						
ECH	**Echery**	**1.68**	**185**	Pg	**Pg**	**14 57 50.2**	**-0.6**
ECH				Sg	**Sg**	**14 58 14.2**	**+1.0**
BFO	**Black Forest**	**1.69**	**157**	*e*Sg	**Sg**	**14 58 12.8**	**-0.6**
	SNR=4.5						
RFYF	**Reffroy**	**1.77**	**225**	*e*Pn	**Pn**	**14 57 49.6**	**+0.9**
RFYF				*e*Pg	**Pg**	**14 57 52.8**	**+0.3**
RFYF				*e*Sg	**Sg**	**14 58 16.4**	**+0.3**
	14nm,0.3s						
DOU	**Dourbes**	**1.80**	**278**	P	**Pn**	**14 57 51.1**	**+2.0**
DOU				S	**Sn**	**14 58 13.0**	**+0.5**
THEF	**They Montfort**	**1.89**	**209**	Pg	**Pg**	**14 57 55.6**	**+0.5**
HAU	**Haudompre**	**2.00**	**200**	*e*Pn	**Pn**	**14 57 52.7**	**+0.7**
HAU				*e*Pg	**Pg**	**14 57 57.5**	**+0.3**
HAU				*e*Sg	**Sg**	**14 58 23.8**	**-0.1**
	11nm,0.3s						
BAIF	**Baives**	**2.04**	**276**	*e*Pn	**Pn**	**14 57 52.5**	**-0.1**
BAIF				*e*Pg	**Pg**	**14 57 57.4**	**-0.7**
BAIF				*e*Sn	**Sn**	**14 58 17.6**	**-1.1**
BAIF				*e*Sg	**Sg**	**14 58 24.0**	**-1.3**
	12nm,0.3s						
MOF	**Molkenrain**	**2.04**	**184**	Pg	**Pg**	**14 57 58.2**	**+0.1**
MOF				Sg	**Sg**	**14 58 25.8**	**+0.4**
MEZF	**Maizieres J'vi**	**2.05**	**228**	*e*Pn	**Pn**	**14 57 53.6**	**+0.8**
	baz=54						
MEZF				*e*Pg	**Pg**	**14 57 58.1**	**-0.2**
	baz=53						
MEZF				*e*Sg	**Sg**	**14 58 25.8**	**+0.1**
	7.4nm,0.3s						
MEZF	**Maizieres J'vi**	**2.05**	**228**	*e*Pg	**Pg**	**14 57 58.1**	**-0.2**
MEZF				*e*Sg	**Sg**	**14 58 25.8**	**+0.1**
	3.7nm,0.3s						
FELD	**Feldberg**	**2.06**	**168**	Pg	**Pg**	**14 57 57.5**	**-0.9**
FELD				Sg	**Sg**	**14 58 25.0**	**-0.8**
HINF	**Hinteralfeld**	**2.10**	**189**	*e*Pn	**Pn**	**14 57 54.0**	**+0.5**
HINF				*e*Pg	**Pg**	**14 57 59.1**	**-0.1**
HINF				*e*Sn	**Sn**	**14 58 19.2**	**-1.0**
HINF				*e*Sg	**Sg**	**14 58 26.4**	**-0.8**
	12nm,0.3s						
WTSB	**Winterswijk**	**2.11**	**351**	*e*Sg	**Sg**	**14 58 22.1**	**-5.5**
	SNR=2.2						
CLZ	**Clausthal**	**2.73**	**43**	*e*Sg	**Sg**	**14 58 40.4**	**-7.9**
	SNR=1.9						
MOX	**Moxa**	**2.83**	**73**	*e*Sg	**Sg**	**14 58 44.4**	**-7.3**
	SNR=2.0						
CABF	**La Chapelle**	**3.39**	**195**	*e*Pn	**Pn**	**14 58 12.0**	**+0.2**
CABF				*e*Sg	**Sg**	**14 59 06.9**	**-3.2**
	0.6nm,0.2s						
SSF	**Saint Saulge**	**3.82**	**224**	*e*Pn	**Pn**	**14 58 17.2**	**-0.7**
SSF				*e*Sg	**Sg**	**14 59 20.5**	**-3.9**
	0.8nm,0.3s						
SMF	**Signal de Mont**	**4.01**	**217**	*e*Pn	**Pn**	**14 58 20.1**	**-0.5**
SMF				*e*Pg	**Pg**	**14 58 34.1**	**-3.2**
SMF				*e*Sn	**Sn**	**14 59 05.3**	**-3.2**
SMF				*e*Sg	**Sg**	**14 59 26.7**	**-4.0**
	2.0nm,0.3s						
HYF	**Humbligny**	**4.08**	**232**	*e*Pn	**Pn**	**14 58 21.2**	**-0.5**
AVF	**Avril sur Loir**	**4.09**	**222**	*e*Pn	**Pn**	**14 58 21.0**	**-0.8**
AVF				*e*Sg	**Sg**	**14 59 29.0**	**-4.5**
	0.7nm,0.2s						

MAN 16 15:01:32.5,19.02N×121.21E,h4^{km},mb4.2,ML3.1,MS2.8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**1.11**	**134**	*e*P	Pb	15 01 54.1	+0.3
APYP	**Conner**	**1.15**	**179**	*e*P	Pb	15 01 54.7	+0.1
APYP				*e*S	Sb	15 02 12.7	+2.9
CVP	**Callao Caves**	**1.43**	**156**	*e*P	Pn	15 01 59.2	-0.1
CVP				*i* S	Sb	15 02 20.0	+2.1
ABRA	**Dolores**	**1.45**	**199**	*e*P	Pn	15 01 58.8	-0.7
ABRA				*e*S	Sb	15 02 19.4	+1.1
CAUP	**Cauayan**	**2.15**	**164**	*e*P	Pn	15 02 12.2	+2.7

IGQ 16 15:14:51.2,1.10S×81.19W,h12^{km}±6^{km},mb4.0,1C-1D, Error ellipse: s-maj=10.1km s-min=7.8km az=68.6,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**0.64**	**86**	⇑P	Pb	15 15 02.8	-1.0
HOJA				S	Sb	15 15 11.9	-0.6
IGUA	**Igualata**	**2.58**	**99**	P	Pn	15 15 34.6	+1.1
JUA2	**San Juan 2**	**2.73**	**71**	P	Pn	15 15 37.0	+1.3
TERV	**Terraza Guagua**	**2.74**	**70**	P	Pn	15 15 36.0	+0.1
PINO	**Pino**	**2.74**	**70**	⇓P	Pn	15 15 36.8	+0.9
PINO				S	Sn	15 16 11.3	+2.1
ARRY	**Arrayan**	**2.76**	**98**	P	Pn	15 15 37.6	+1.5
YANA	**Yana**	**2.79**	**70**	P	Pn	15 15 37.2	+0.7
PISA	**Pisayambo**	**2.80**	**89**	P	Pn	15 15 38.6	+1.9
ULBA	**Ulba**	**2.80**	**97**	P	Pn	15 15 39.0	+2.3
VC1	**Cotopaxi 1**	**2.82**	**81**	P	Pn	15 15 40.1	+3.2
TAMB	**Tambo**	**2.84**	**82**	P	Pn	15 15 40.4	+3.1
ANTI	**Antisana**	**3.09**	**78**	P	Pn	15 15 43.0	+2.2
CAYR	**Refugio Cayamb**	**3.37**	**71**	P	Pn	15 15 47.7	+3.0
CAYA	**Cayambe**	**3.40**	**70**	P	Pn	15 15 48.0	+2.8
ECEN	**Cerro Negro**	**3.74**	**59**	P	Pn	15 15 52.7	+2.7

IDC 16 15:18:12.0±5.9,5.83S×148.51E,mb3.5/2,mb1 3.7/4, mb1mx3.5/13,mbtmp3.6/4,ML3.2/2,MS3.7/1,Ms1 3.7/1, ms1mx2.8/11,Error ellipse: s-maj=93.8km s-min=72.0km az=95.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.79**	**201**	Pn	Pn	15 19 11.4	-1.6
	6.1nm,0.3s,baz=14,slow=4.3,SNR=27						
PMG				Sn	Sn	15 19 59.6	+0.6
	11nm,0.3s,baz=358,slow=18,SNR=12						
WRA	**Warramunga Arr**	**19.66**	**223**	P	P	15 22 41.6	-3.9
	0.1nm,0.3s,baz=50,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**22.63**	**217**	P	P	15 23 15.6	-0.4
	0.3nm,0.5s,baz=41,slow=9.6,SNR=3.0						
STKA	**Stephens Creek**	**26.71**	**193**	P	P	15 23 53.0	-1.9
	2.0nm,1.0s,baz=14,slow=4.2,SNR=2.9						
RPZ	**Rata Peaks**	**42.63**	**156**	LR	LR	15 41 21.1	
	comp=Z,100nm,19.0s,baz=214,slow=33						

IGQ 16 15:37:22.0,1.37S×81.40W,h14^{km}±8^{km},mb4.5,2C-3D, Error ellipse: s-maj=8.9km s-min=8.2km az=150.9,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**0.91**	**69**	⇑P	Pb	15 37 38.8	-0.3
IGUA	**Igualata**	**2.76**	**92**	P	Pn	15 38 07.6	+0.9
JUIV	**Juive**	**2.94**	**91**	P	Pn	15 38 10.9	+1.8
ARRY	**Arrayan**	**2.95**	**93**	P	Pn	15 38 10.1	+0.7
ARRY				S	Sn	15 38 44.6	-0.2
RETU	**Refugio**	**2.96**	**92**	P	Pn	15 38 12.7	+3.2
ULBA	**Ulba**	**2.99**	**91**	P	Pn	15 38 11.3	+1.4
NAS1	**Nasa**	**3.02**	**76**	P	Pn	15 38 12.0	+1.8
JUA2	**San Juan 2**	**3.02**	**68**	P	Pn	15 38 11.2	+0.8
PISA	**Pisayambo**	**3.03**	**84**	P	Pn	15 38 12.3	+1.8
PISA				S	Sn	15 38 48.5	+1.7
TERV	**Terraza Guagua**	**3.04**	**67**	⇓P	Pn	15 38 12.0	+1.4
PINO	**Pino**	**3.04**	**67**	⇑P	Pn	15 38 11.7	+1.1
VC1	**Cotopaxi 1**	**3.08**	**76**	P	Pn	15 38 13.5	+2.2
VC1				S	Sn	15 38 55.1	+6.9
YANA	**Yana**	**3.09**	**66**	P	Pn	15 38 12.6	+1.3
TAMB	**Tambo**	**3.11**	**77**	P	Pn	15 38 13.5	+1.9
ANTI	**Antisana**	**3.37**	**74**	⇓P	Pn	15 38 18.2	+3.0
COTA	**Cotacachi**	**3.50**	**61**	P	Pn	15 38 19.9	+2.8
ECEN	**Cerro Negro**	**4.07**	**58**	⇓P	Pn	15 38 29.0	+3.8

IDC 16 15:41:28.8±3.4,18.15S×177.99W,h663^{km}±52^{km}, mb3.0/5,mb1 3.2/5,mb1mx3.0/16,mbtmp4.1/5,Error ellipse: s-maj=110.4km s-min=24.0km az=147.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.80**	**261**	P	P	15 47 19.5	-1.5
	2.2nm,0.5s,baz=84,slow=14,SNR=4.6						
STKA	**Stephens Creek**	**38.87**	**242**	P	P	15 48 00.4	-1.7
	1.3nm,0.7s,baz=95,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**44.98**	**260**	P	P	15 48 48.6	-1.6
	1.6nm,0.4s,baz=96,slow=7.6,SNR=45						
ASAR	**Alice Springs**	**45.11**	**254**	P	P	15 48 49.6	-1.5
	1.7nm,0.4s,baz=92,slow=7.8,SNR=54						
ASAR				S	S	15 54 43.8	-1.4
	0.5nm,1.0s,baz=85,slow=15,SNR=5.5						
ILAR	**Eielson Array**	**86.03**	**13**	P	P	15 53 00.8	-1.3
	0.2nm,0.5s,baz=228,slow=4.5,SNR=5.8						

IDC ***16*** *15:56:07.0±0.8,13.08N×92.23E,mb3.9/9,mb1 4.1/9, mb1mx3.9/19,mbtmp3.9/9,ML3.1/1,Error ellipse: s-maj=34.1km s-min=16.7km az=53.0*

NEIC ***16*** *15:56:11.6±0.6,13.13N×92.28E,h30^{km},mb4.0/2,Error ellipse: s-maj=16.1km s-min=11.2km az=63.0*

ISC 16 15:56:09.4±0.7,13.1N±0.1×92.3E±0.1,h30^{km},n12, σ0^{s}72/12,mb3.9/10,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.29**	**49**	Pn	**P**	**15 58 10.5**	**-0.2**
	0.1nm,0.3s,baz=241,slow=15,SNR=3.2						
LSA	**Lhasa**	**16.54**	**356**	*e*P	**P**	**16 00 01.1**	**+0.1**
	5.1nm,0.8s						
SONM	**Songino Array**	**36.55**	**16**	P	**P**	**16 03 13.6**	**-0.8**
	0.8nm,0.8s,mb3.6,baz=180,slow=4.9,SNR=4.2						
ZAL	**Zalesovo**	**41.16**	**353**	P	**P**	**16 03 54.6**	**+1.9**
	0.5nm,0.3s,mb3.6,baz=306,slow=9.2,SNR=4.3						
CHKZ	**Chkalovo**	**43.97**	**342**	*e*P	**P**	**16 04 11.2**	**-4.4**
	3.2nm,0.6s,mb4.2						
NWAO	**Narrogin (SRO)**	**51.59**	**153**	P	**P**	**16 05 15.2**	**-0.2**
	6.1nm,0.6s,mb4.7,baz=216,slow=16,SNR=6.2						
WRA	**Warramunga Arr**	**52.80**	**128**	P	**P**	**16 05 24.7**	**0.0**
	0.7nm,0.8s,mb3.7,baz=300,slow=10.0,SNR=14						
ASAR	**Alice Springs**	**54.67**	**132**	P	**P**	**16 05 38.8**	**+0.5**
	1.1nm,0.9s,mb3.9,baz=312,slow=7.1,SNR=21						
BRTR	**Keskin Array B**	**57.72**	**309**	P	**P**	**16 05 59.1**	**-0.9**
	0.8nm,0.9s,mb3.8,baz=124,slow=10,SNR=3.1						
MLR	**Muntele Rosu**	**64.23**	**314**	P	**P**	**16 06 44.4**	**+0.4**
	2.5nm,0.7s,mb4.3,baz=190,slow=7.3,SNR=5.3						
FINES	**FINESS Array B**	**67.28**	**332**	P	**P**	**16 07 02.7**	**-0.6**
	0.6nm,0.6s,mb3.8,baz=100,slow=12,SNR=6.4						
GERES	**GERESS Array B**	**72.77**	**317**	P	**P**	**16 07 37.1**	**+0.1**
	0.3nm,0.4s,mb3.6,baz=90,slow=6.9,SNR=3.6						

IDC ***16*** *16:06:40.1±1.8,7.48N×94.22E,mb3.6/5,mb1 3.8/6, mb1mx3.6/19,mbtmp3.6/6,ML3.7/1,MS3.0/1,Ms1 3.2/1, ms1mx2.8/19,Error ellipse: s-maj=67.7km s-min=21.3km az=65.0*

NEIC ***16*** *16:06:44.8±1.0,7.52N×94.32E,h30^{km},mb4.2/5,Error ellipse: s-maj=29.6km s-min=12.7km az=57.0*

ISC 16 16:06:43.2±1.0,7.6N±0.1×94.4E±0.2,h30^{km},n16, σ1^{s}07/16,mb4.1/15,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.66**	**22**	Pn	**P**	**16 09 29.8**	**-1.0**
	0.1nm,0.3s,baz=214,slow=14,SNR=2.9						
CMAR				LR	LR	16 14 11.6	
	comp=Z,73nm,19.6s,baz=205,slow=38						
JIRN	**Jiri**	**21.45**	**340**	*e*P	**P**	**16 11 32.6**	**+1.3**
	19nm,1.1s,mb4.4						
PKI	**Pulchoki**	**21.65**	**338**	*e*P	**P**	**16 11 34.5**	**+1.2**
	11nm,0.5s,mb4.5						
DMN	**Daman**	**21.80**	**337**	*e*P	**P**	**16 11 35.8**	**+1.0**
	15nm,0.8s,mb4.5						
KKN	**Kakani**	**21.89**	**338**	*e*P	**P**	**16 11 35.3**	**-0.4**
	10nm,0.9s,mb4.3						
LSA	**Lhasa**	**22.22**	**352**	*e*P	**P**	**16 11 41.4**	**+2.4**
	6.8nm,0.8s,mb4.1						
GKN	**Gorkha**	**22.33**	**337**	*e*P	**P**	**16 11 38.9**	**-1.2**
	8.8nm,0.6s,mb4.4						
KOLN	**Koldanda**	**22.55**	**334**	*e*P	**P**	**16 11 40.0**	**-2.4**
	5.9nm,0.6s,mb4.2						
SONM	**Songino Array**	**41.38**	**12**	P	**P**	**16 14 29.3**	**+1.0**
	0.5nm,0.7s,mb3.3,baz=202,slow=6.7,SNR=4.6						
KURK	**Kurchatov**	**44.97**	**346**	*e*P	**P**	**16 14 56.8**	**-0.7**
	6.0nm,1.4s,mb4.2						
ZAL	**Zalesovo**	**46.88**	**352**	P	**P**	**16 15 12.6**	**0.0**
	1.1nm,0.3s,mb4.2,baz=294,slow=8.6,SNR=6.8						
WRA	**Warramunga Arr**	**47.85**	**126**	P	**P**	**16 15 20.7**	**+0.1**
	0.4nm,0.7s,mb3.6,baz=304,slow=8.6,SNR=6.6						
BVAR	**Borovoye Array**	**49.36**	**341**	P	**P**	**16 15 31.3**	**-0.6**
	1.0nm,0.8s,mb3.9,baz=135,slow=6.3,SNR=7.8						
BVAR				PcP	PcP	16 16 59.3	+4.9
	1.2nm,1.0s,baz=162,slow=4.6,SNR=3.5						
BRVK	**Borovoye**	**49.42**	**341**	P	**P**	**16 15 32.3**	**-0.1**
	1.2nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**49.50**	**130**	P	**P**	**16 15 33.4**	**0.0**
	0.5nm,0.9s,mb3.5,baz=298,slow=7.6,SNR=4.9						
ASAR				PcP	PcP	16 16 55.5	+0.2
	0.4nm,0.7s,baz=299,slow=3.0,SNR=4.7						
CHKZ	**Chkalovo**	**49.84**	**342**	*e*P	**P**	**16 15 35.0**	**-0.6**
	4.9nm,0.9s,mb4.5						

MOS ***16*** *16:19:15.7±1.3,50.95N×179.19E,h33^{km},mb4.0/4,Error ellipse: s-maj=26.1km s-min=17.1km az=109.1*

NEIC ***16*** *16:19:16.4,50.78N×179.03E,h28^{km},mb3.8/1, ML4.1(AEIC),After AEIC.*

IDC ***16*** *16:19:19.4±3.0,51.16N×178.99E,h40^{km}±25^{km},mb3.5/11, mb1 3.8/11,mb1mx3.6/25,mbtmp3.8/11,ML4.0/1,MS3.6/1, Ms1 3.6/1,ms1mx2.9/22,Error ellipse: s-maj=27.8km s-min=15.0km az=164.0*

ISC 16 16:19:18.9±1.1,51.1N±0.1×179.10E±0.06,h53^{km}±9^{km}, n37,σ0^{s}92/40,mb4.0/16,MS3.5/1,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**2.39**	**73**	P	**P**	**16 19 56.6**	**+0.1**
KIKV	**Kanaga Island**	**2.46**	**70**	P	**P**	**16 19 57.6**	**+0.1**
KIWB	**Kanaga Island**	**2.46**	**71**	*e*P	**P**	**16 19 57.4**	**-0.2**
ADAG	**Mount Adagdak**	**2.82**	**70**	P	**P**	**16 20 03.4**	**+0.8**
GSTD	**Great Sitkin T**	**3.12**	**70**	P	**P**	**16 20 06.4**	**-0.4**
GSTD				S	**S**	**16 20 43.5**	**+0.5**
GSMY	**Great Sitkin M**	**3.16**	**71**	P	**P**	**16 20 06.9**	**-0.6**
SMY	**Shemya**	**3.49**	**300**	P	**P**	**16 20 11.7**	**-0.4**
SMY				S	**S**	**16 20 56.9**	**+4.3**
FX1	**Attu Island--F**	**4.07**	**298**	P	**P**	**16 20 19.8**	**-0.5**
FX1				S	**S**	**16 21 08.8**	**+1.6**
FX1				pmax	pmax		
	comp=Z,37nm,0.3s						
FX1	**Attu Island--F**	**4.07**	**298**	P	**P**	**16 20 19.8**	**-0.5**
	comp=Z,37nm,0.3s,baz=175,slow=2.7,SNR=59						
FX1				S	**S**	**16 21 08.8**	**+1.6**
	comp=Z,30nm,0.3s,baz=280,slow=21,SNR=8.8						
FX1	**Attu Island--F**	**4.07**	**298**	P	**P**	**16 20 19.6**	**-0.7**
ATKA	**Atka Island**	**4.32**	**73**	P	**P**	**16 20 22.8**	**-0.9**
BILL	**Bilibino**	**18.11**	**344**	*e*P	**P**	**16 23 28.3**	**+0.5**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	**Bilibino**	**18.11**	**344**	*e*P	**P**	**16 23 28.2**	**+0.4**
	comp=Z,6.3nm,0.9s						
ILAR	**Eielson Array**	**22.28**	**39**	P	**P**	**16 24 12.5**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.0,baz=252,slow=11,SNR=6.9						
ASAJ	**Asahikawa**	**25.38**	**268**	P	**P**	**16 24 42.8**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,16nm,1.2s						
ASAJ	**Asahikawa**	**25.38**	**268**	P	**P**	**16 24 42.8**	**+0.3**
	comp=Z,16nm,1.2s,mb4.4,baz=62,slow=6.2,SNR=5.6						
INK	**Inuvik**	**28.44**	**35**	P	**P**	**16 25 11.3**	**+1.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**28.44**	**35**	P	**P**	**16 25 11.3**	**+1.1**
	comp=Z,1.0nm,0.6s,mb3.6,baz=251,slow=13,SNR=3.9						
INK	**Inuvik**	**28.44**	**35**	P	**P**	**16 25 11.3**	**+1.1**
BBB	**Bella Bella**	**32.18**	**67**	LR	LR	16 35 19.2	
	comp=Z,102nm,21.9s,MS3.5,baz=25,slow=30						
YKA	**Yellowknife Ar**	**36.37**	**46**	P	**P**	**16 26 18.1**	**-1.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=280,slow=8.2,SNR=7.4						
YKA				ScP		16 32 27.0	
	comp=Z,0.3nm,0.7s,baz=282,slow=3.0,SNR=5.6						
BOD	**Bodaibo**	**37.08**	**306**	*e*P	**P**	**16 26 17.2**	**-8.1**
NVAR	**Mina Array Bea**	**44.90**	**81**	P	**P**	**16 27 30.9**	**+1.3**
	comp=Z,1.6nm,1.0s,mb3.8,baz=284,slow=8.9,SNR=4.3						
SONM	**Songino Array**	**45.58**	**296**	P	**P**	**16 27 33.9**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.7,baz=45,slow=5.2,SNR=4.8						
ZAK	**Zakamensk**	**45.96**	**300**	*e*P	**P**	**16 27 36.3**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.5						
PDAR	**Pinedale Array**	**47.65**	**71**	P	**P**	**16 27 51.7**	**+0.4**
	comp=Z,1.1nm,0.6s,mb4.1,baz=304,slow=4.6,SNR=12						
ZAL	**Zalesovo**	**53.27**	**313**	P	**P**	**16 28 31.4**	**-2.5**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL	**Zalesovo**	**53.27**	**313**	P	**P**	**16 28 31.4**	**-2.6**
	comp=Z,0.5nm,0.4s,mb3.8,baz=135,slow=14,SNR=2.1						
BVAR	**Borovoye Array**	**60.23**	**319**	P	**P**	**16 29 22.6**	**-0.8**
	comp=Z,1.6nm,0.6s,mb4.3,baz=46,slow=6.1,SNR=16						
GUN	**Gumba**	**70.72**	**291**	*e*P	**P**	**16 30 32.5**	**+1.5**
JIRN	**Jiri**	**70.73**	**290**	*e*P	**P**	**16 30 31.9**	**+0.8**
	comp=Z,11nm,0.9s,mb4.8						
KKN	**Kakani**	**71.17**	**291**	*e*P	**P**	**16 30 34.1**	**+0.4**
	comp=Z,6.3nm,0.6s,mb4.7						
GKN	**Gorkha**	**71.39**	**292**	*e*P	**P**	**16 30 34.6**	**-0.4**
	comp=Z,13nm,1.0s,mb4.8						
KOLN	**Koldanda**	**72.17**	**292**	*e*P	**P**	**16 30 39.2**	**-0.4**
	comp=Z,10nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	**80.91**	**222**	P	**P**	**16 31 28.2**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**80.91**	**222**	P	**P**	**16 31 28.2**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=32,slow=6.1,SNR=11						
ASAR	**Alice Springs**	**84.41**	**221**	P	**P**	**16 31 48.2**	**+1.6**
	comp=Z,0.3nm,0.8s,mb3.5,baz=30,slow=5.7,SNR=4.9						

IDC 16 16:28:02.5±2.6,55.46N×35.21W,mb3.6/6,mb1 3.8/8, mb1mx3.6/24,mbtmp3.6/8,ML2.9/2,MS3.6/6,Ms1 3.6/6,

ms1mx3.1/33, Error ellipse: s-maj=86.7km s-min=19.9km az=11.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	Schefferville	18.01	281	P	P	16 32 15.0	-0.6
	0.1nm,0.3s,baz=86,slow=5.2,SNR=4.8						
SCHQ				LR	LR	16 37 37.7	
	comp=Z,67nm,19.0s,baz=323,slow=32						
EKA	Eskdalemuir Ar	18.12	77	P	P	16 32 16.6	-0.3
	0.1nm,0.3s,baz=285,slow=9.5,SNR=3.5						
FRB	Frobisher Bay	18.59	310	LR	LR	16 37 53.6	
	comp=Z,149nm,21.5s,baz=93,slow=32						
GERES	GERESS Array B	30.19	82	P	P	16 34 13.8	-2.6
	0.4nm,0.7s,baz=319,slow=9.0,SNR=3.2						
ULM	Lac du Bonnet	35.97	288	LR	LR	16 48 31.4	
	comp=Z,89nm,18.6s,baz=324,slow=34						
AKASG	Malin Array Be	37.75	70	P	P	16 35 18.2	-3.2
	0.7nm,0.6s,baz=301,slow=8.1,SNR=5.0						
YKA	Yellowknife Ar	39.05	314	P	P	16 35 29.7	-2.5
	0.5nm,0.6s,baz=61,slow=9.0,SNR=7.7						
BRTR	Keskin Array B	47.02	79	P	P	16 36 36.4	-0.7
	1.5nm,0.7s,baz=311,slow=5.7,SNR=6.6						
DLBC	Dease Lake	47.63	315	LR	LR	16 56 01.2	
	comp=Z,162nm,20.3s,baz=166,slow=35						
PDAR	Pinedale Array	47.99	287	LR	LR	16 54 20.2	
	comp=Z,57nm,18.4s,baz=39,slow=33						
ILAR	Eielson Array	49.28	328	P	P	16 36 52.8	-1.5
	0.5nm,0.8s,baz=37,slow=7.8,SNR=5.6						
NVAR	Mina Array Bea	55.77	289	LR	LR	16 59 37.7	
	comp=Z,66nm,18.0s,baz=335,slow=34						
BVAR	Borovoye Array	55.77	45	P	P	16 37 41.2	-1.8
	0.9nm,0.7s,baz=315,slow=6.3,SNR=7.4						
ASAR	Alice Springs	147.24	19	PKPbc	PKPdf	16 47 46.5	-0.5
	2.7nm,0.6s,baz=346,slow=2.3,SNR=70						

IDC 16 16:55:59.0±2.8**, 8.30N×91.81E, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/18**, mbtmp3.6**/4**, ML3.8**/1**, MS2.7**/1**, Ms1 2.9**/1**, ms1mx2.6**/16**, Error ellipse: s-maj=79.1km s-min=30.9km az=67.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.24	34	Pn	P	16 58 54.0	-3.8
	0.2nm,0.3s,baz=227,slow=15,SNR=13						
CMAR				LR	LR	17 03 41.3	
	comp=Z,32nm,18.2s,baz=338,slow=38						
SONM	Songino Array	41.30	15	P	P	17 03 46.9	-0.9
	0.6nm,0.9s,baz=198,slow=8.1,SNR=5.5						
ZAL	Zalesovo	45.86	354	P	P	17 04 22.5	-2.2
	0.5nm,0.3s,baz=158,slow=19,SNR=2.5						
WRA	Warramunga Arr	50.39	124	P	P	17 04 58.3	-2.2
	0.4nm,0.6s,baz=304,slow=8.7,SNR=5.3						

OTT 16 16:58:16.4±0.2**, 52.79N×67.28W, MN3.0**/8**, Blast, Mount Wright, Qc Mining explosion., Northern Quebec**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	Schefferville	2.06	7	PN	Pn	16 58 53.2	+0.6
SCHQ				SG	Sg	16 59 20.0	-4.9
SCHQ				Trac		16 59 23.5	
	comp=Z,42nm,0.2s						
MNQ	Manicouagan	2.45	203	PN	Pn	16 58 57.5	-0.7
MNQ				Trac		16 59 32.0	
	comp=Z,38nm,0.2s						
SMQ	Clarke City	2.60	172	PN	Pn	16 58 59.0	-1.3
SMQ				Trac		16 59 38.2	
	comp=Z,24nm,0.2s						
ICQ	Pointe Anglais	3.28	180	PN	Pn	16 59 07.9	-2.1
ICQ				SN	Sn	16 59 46.1	-4.1
ICQ				Trac		16 59 56.6	
	comp=Z,13nm,0.1s						
CNQ	Baie Comeau	3.53	188	PN	Pn	16 59 12.6	-1.0
CNQ				SN	Sn	16 59 53.4	-3.3
CNQ				Trac		17 00 10.3	
	comp=Z,11nm,0.2s						
GSQ	Grosses Roches	3.89	178	PN	Pn	16 59 17.4	-1.4
GSQ				SN	Sn	16 59 59.1	-6.7
GSQ				Trac		17 00 07.0	
	comp=Z,13nm,0.2s						
LG4Q	La Grande 4	4.18	284	PN	Pn	16 59 20.4	-2.4
LG4Q				Trac		17 00 32.7	
	comp=Z,4.4nm,0.2s						
LMQ	La Malbaie	5.60	202	PN	Pn	16 59 39.5	-3.5
LMQ				Trac		17 00 50.0	
	comp=Z,6.1nm,0.2s						
DRLN	Deer Lake	7.11	116	PN	Pn	16 59 59.7	-4.5
DRLN				SN	Sn	17 01 18.5	-8.2
VLDQ	Val d'Or	8.01	238	PN	P	17 00 13.5	-3.3
VIMO	Victor Mine	9.97	277	PN	P	17 00 37.8	-6.1
SILO	Sutton Inlier	10.61	286	PN	P	17 00 45.4	-7.1

IDC 16 17:08:22.8±18.0**, 20.45S×173.27W, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, Error ellipse: s-maj=459.4km s-min=37.8km az=39.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	37.90	263	P	P	17 15 43.1	-0.5
	3.9nm,1.1s,baz=83,slow=14,SNR=5.9						
ASAR	Alice Springs	48.84	256	P	P	17 17 08.8	-3.3
	0.1nm,0.7s,baz=94,slow=7.2,SNR=6.9						
WRA	Warramunga Arr	48.99	261	P	P	17 17 11.6	-1.7
	0.3nm,0.3s,baz=97,slow=8.3,SNR=20						
VNDA	Vanda	58.39	186	P	P	17 18 19.6	-2.4
	1.0nm,0.3s,baz=7.1,slow=8.1,SNR=18						

MEX 16 17:13:43.7±0.7**, 16.83N×94.86W, h120^{km}, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	1.60	229	*i* P	P	17 14 10.6	-2.1
HUIG				*i* S	S	17 14 32.6	-2.1
OXX	Oaxaca	1.80	278	*i* P	P	17 14 14.0	-1.1
OXX				*i* S	S	17 14 37.0	-1.9
VHO	Vista Hermosa	1.81	278	*i* P	P	17 14 14.3	-0.9
VHO				*i* S	S	17 14 36.9	-2.1

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*MDD **16** 17:16:40.2±0.3, 37.85N×1.79W, h3^{km}±4^{km}, mbLg2.8/23, Error ellipse: s-maj=3.2km s-min=1.9km az=171.0, PRXIMO*

MDD EMS: II-III N LA PACA ZARCILLA DE RAMOS.

*NEIC **16** 17:16:40.2, 37.85N×1.79W, h3^{km}, ML3.1(LDG), MN2.8(MDD), After MDD.*

NEIC Felt [III] at Cehegin, La Paca and Zarcilla de Ramos.

*INMG **16** 17:16:40.5±1.8, 37.83N×1.78W, h12^{km}±5^{km}, ML2.9, Error ellipse: s-maj=3.4km s-min=2.7km az=157.0*

*SFS **16** 17:16:40.0, 37.87N×1.79W*

*CSEM **16** 17:16:40.5±0.2, 37.77N×1.72W, h15^{km}, ML3.4/11, Error ellipse: s-maj=4.0km s-min=2.5km az=152.0*

*LDG **16** 17:16:43.3±0.3, 37.97N×1.87W, h5^{km}, Md3.8/1, Ml3.1/4, Error ellipse: s-maj=5.7km s-min=2.5km az=163.0*

ISC 16 17:16:38.2±0.3**, 37.91N**±0.03×**1.89W**±0.02**, h12^{km}, n75, σ1^{s}47**/122**, 2C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMUR	La Murta	0.52	97	⇑Pg	Pg	17 16 48.0	-0.7
	91nm,0.4s,SNR=18						
EMUR				Lg		17 16 54.4	
	920nm,0.3s,SNR=14						
EMUR	La Murta	0.52	97	Pg	Pg	17 16 48.0	-0.7
	91nm,0.4s,SNR=18						
CART	Cartagena	0.77	114	*e*P	Pb	17 16 52.4	-0.7
CART	Cartagena	0.77	114	⇑P	Pb	17 16 53.0	-0.1
CART				S	Sb	17 17 01.7	-1.7
CART	Cartagena	0.77	114	*i* P	Pb	17 16 53.0	-0.1
CART				*i* S	Sb	17 17 01.7	-1.6
ETOB	Tobarra	0.79	20	Pg	Pg	17 16 55.3	+1.2
ETOB				Pb	Pb	17 16 57.5	+4.1
ETOB				Lg		17 17 06.5	
ETOB	Tobarra	0.79	20	Pg	Pg	17 16 55.3	+1.2
	59nm,0.3s,SNR=173						
ETOB				Pb	Pb	17 16 57.5	+4.1
	SNR=7.9						
ETOB				Lg		17 17 06.5	
	373nm,0.2s,SNR=20						
ETOB	Tobarra	0.79	20	Pg	Pg	17 16 55.3	+1.2
	59nm,0.3s,SNR=173						
ETOB	Tobarra	0.79	20	Pb	Pb	17 16 57.5	+4.1
	SNR=7.9						
EVIA	Vianos	0.88	327	⇓Pg	Pg	17 16 57.7	+1.8
	169nm,0.4s,SNR=18						
EVIA				Lg		17 17 12.9	
	107nm,0.2s,SNR=16						
EQES	Quesada	0.94	264	Pg	Pg	17 16 58.9	+1.7
	43nm,0.3s,SNR=44						
EQES				Lg		17 17 13.0	
	215nm,0.1s,SNR=9.9						
EQES	Quesada	0.94	264	Pg	Pg	17 16 58.9	+1.7
	43nm,0.3s,SNR=44						
ENIJ	Nijar	0.97	195	Pg	Pg	17 16 56.9	-0.7
	73nm,0.3s,SNR=13						
ENIJ				Lg		17 17 08.6	
	97nm,0.3s,SNR=10						
EBER	Berja	1.28	219	⇓Pg	Pg	17 17 03.2	-0.8
	38nm,0.3s,SNR=18						
EBER				Lg		17 17 22.6	
	172nm,0.4s,SNR=7.8						
EBER	Berja	1.28	219	Pg	Pg	17 17 03.2	-0.8
	38nm,0.3s,SNR=18						
ECOG	Cogollos-Vega	1.47	245	Pn	Pn	17 17 07.8	+3.0
	38nm,0.3s,SNR=24						
ECOG				Lg		17 17 30.1	
	56nm,0.2s,SNR=16						
EBAN	Banos Encina	1.52	280	Pn	Pn	17 17 08.3	+2.8
	53nm,0.2s,SNR=20						
EBAN				Lg		17 17 30.2	
	30nm,0.1s,SNR=30						
EBEN	Beniarda	1.53	58	Pn	Pn	17 17 05.0	-0.7
	6.4nm,0.3s,SNR=20						
EBEN				Pg	Pg	17 17 07.8	-1.1
	5.9nm,0.2s,SNR=13						
EBEN				Lg		17 17 28.9	
	75nm,0.6s,SNR=6.2						
EBEN	Beniarda	1.53	58	Pn	Pn	17 17 05.0	-0.7
	6.4nm,0.3s,SNR=20						
EBEN	Beniarda	1.53	58	Pg	Pg	17 17 07.8	-1.1
	5.9nm,0.2s,SNR=13						
ERON	Agron	1.77	240	Pg	Pg	17 17 13.3	-0.3
	19nm,0.3s,SNR=16						
ERON				Lg		17 17 38.9	
	20nm,0.4s,SNR=11						
ELUQ	Luque	1.92	260	Pn	Pn	17 17 14.4	+3.2
	22nm,0.4s,SNR=4.7						
ELUQ				Sn	Sn	17 17 39.5	+4.1
	46nm,0.2s,SNR=8.1						
ELUQ				Lg		17 17 45.3	
	40nm,0.2s,SNR=5.6						
ELOJ	Sierra Loja	1.95	248	Pn	Pn	17 17 15.1	+3.4
	13nm,0.4s,SNR=20						
ELOJ				Lg		17 17 42.5	
	17nm,0.3s,SNR=4.7						
EADA	Adamuz	2.14	278	Pn	Pn	17 17 16.1	+1.7
	6.4nm,0.3s,SNR=38						
EADA				Sn	Sn	17 17 44.0	+2.9
	13nm,0.3s,SNR=7.6						
EADA				Lg		17 17 51.6	
	23nm,0.4s,SNR=10.0						
EADA	Adamuz	2.14	278	Pn	Pn	17 17 16.1	+1.7
	6.4nm,0.3s,SNR=38						
EADA				Sn	Sn	17 17 44.0	+2.9
	13nm,0.3s,SNR=7.6						
ESDC	Sonseca Array	2.40	318	Pn	Pn	17 17 19.7	+1.6
	1.2nm,0.3s,baz=127,slow=13,SNR=8.0						
ESDC				Pg	Pg	17 17 24.5	-1.7
	3.2nm,0.5s,baz=129,slow=16,SNR=7.9						
ESDC				Lg		17 17 57.1	
	9.9nm,0.1s,baz=135,slow=28,SNR=7.9						
ESDC	Sonseca Array	2.40	318	Pn	Pn	17 17 19.7	+1.6
	1.2nm,0.3s,SNR=8.0						
ESDC	Sonseca Array	2.40	318	Pg	Pg	17 17 24.5	-1.7
	3.2nm,0.5s,SNR=7.9						
ESLA	Sonseca Array	2.40	318	*e*P	Pn	17 17 19.1	+1.0
ESLA	Sonseca Array	2.40	318	*e*P	Pn	17 17 19.1	+1.0
EMIJ	Mijas	2.66	241	Pg	Pg	17 17 30.1	-1.3
	3.3nm,0.5s,SNR=4.0						
EMIJ				Lg		17 18 08.1	
	17nm,0.4s,SNR=4.0						
EMOS	Mosqueruela	2.69	24	Pn	Pn	17 17 23.6	+1.3
	0.7nm,0.2s,SNR=8.7						
EMOS				Sn	Sn	17 17 56.5	+1.5
	22nm,0.6s,SNR=12						
EMOS				Lg		17 18 05.8	
	12nm,0.3s,SNR=5.9						
EMOS	Mosqueruela	2.69	24	Pn	Pn	17 17 23.6	+1.4
	0.7nm,0.2s,SNR=8.7						
EMOS				Sn	Sn	17 17 56.5	+1.4
	22nm,0.6s,SNR=12						
EIBI	Ibiza	2.77	65	Pn	Pn	17 17 22.5	-0.9
	5.5nm,0.2s,SNR=4.0						
EIBI				Sn	Sn	17 17 54.4	-2.8
	SNR=7.9						
EIBI	Ibiza	2.77	65	Pn	Pn	17 17 22.5	-0.9
	5.5nm,0.2s,SNR=4.0						
EIBI				Sn	Sn	17 17 54.4	-2.7
	SNR=7.9						
ERTA	Horta de San J	3.50	29	Pn	Pn	17 17 35.5	+1.8
	3.2nm,0.1s,SNR=6.2						
ERTA				Sn	Sn	17 18 15.8	+0.2
	SNR=7.9						
ERTA				Lg		17 18 29.0	
	5.5nm,0.3s,SNR=4.0						
ERTA	Horta de San J	3.50	29	Pn	Pn	17 17 35.5	+1.8
	3.2nm,0.1s,SNR=6.2						
ERTA				Sn	Sn	17 18 15.8	+0.3
	SNR=7.9						
EMIN	Mina Concepcio	3.79	269	Pn	Pn	17 17 38.9	+1.0
	0.2nm,0.1s,SNR=9.1						
EMIN				Sn	Sn	17 18 22.6	-0.3
	7.0nm,0.3s,SNR=16						
EMIN				Lg		17 18 42.6	
	13nm,0.3s,SNR=6.3						
EMIN	Mina Concepcio	3.79	269	Pn	Pn	17 17 38.9	+1.0
	0.2nm,0.1s,SNR=9.1						
EMIN				Sn	Sn	17 18 22.6	-0.3
	7.0nm,0.3s,SNR=16						
EPOB	Poblet	4.13	33	Pn	Pn	17 17 43.4	+0.6
	3.7nm,0.3s,SNR=6.6						
EPOB				Sn	Sn	17 18 30.0	-1.7
	SNR=7.9						
EPOB				Lg		17 18 47.7	
	2.1nm,0.2s,SNR=4.0						
EPOB	Poblet	4.13	33	Pn	Pn	17 17 43.4	+0.6
	3.7nm,0.3s,SNR=6.6						
EPOB				Sn	Sn	17 18 30.0	-1.6
	SNR=7.9						
ERIP	Rio Piedras	4.29	265	Pn	Pn	17 17 44.7	-0.3
ERIP				Sn	Sn	17 18 33.6	-2.1
ERIP				Lg		17 18 56.7	
ERIP	Rio Piedras	4.29	265	Pn	Pn	17 17 44.7	-0.3
	3.2nm,0.1s,SNR=7.9						
ERIP				Sn	Sn	17 18 33.6	-2.1
	17nm,0.2s,SNR=7.9						
ERIP				Lg		17 18 56.7	
	5.9nm,0.2s,SNR=7.9						
PBEJ	Beja	4.73	273	*e*Pn	Pn	17 17 55.4	+4.2
PBEJ				*e*Sn	Sn	17 18 45.5	-1.1
PBEJ				*e*Sg	Sg	17 19 13.5	-2.1
	17nm,0.6s						
PBEJ	Beja	4.73	273	*e*Pn	Pn	17 17 55.4	+4.2
PBEJ				*e*Sn	Sn	17 18 45.5	-1.1
PBEJ				*e*Sg	Sg	17 19 13.5	-2.1
	17nm,0.6s						
PCBR	Castelo Branco	4.77	296	*e*Pn	Pn	17 17 52.6	+0.8
PCBR				*e*Sn	Sn	17 18 47.7	0.0
PCBR				*e*Sg	Sg	17 19 12.3	-4.8
	20nm,0.8s						
PCBR	Castelo Branco	4.77	296	*e*Pn	Pn	17 17 52.6	+0.8
PCBR				*e*Sn	Sn	17 18 47.7	0.0
PCBR				*e*Sg	Sg	17 19 12.3	-4.8
	20nm,0.8s						
EVO	Evora	4.87	279	*e*Pn	Pn	17 17 56.1	+3.0
EVO				*e*Sn	Sn	17 18 50.3	+0.2
EVO				*e*Sg	Sg	17 19 17.3	-2.9
	35nm,0.4s						
EBIE	Bielsa	5.02	17	Pn	Pn	17 17 56.7	+1.4
	0.7nm,0.3s,SNR=7.9						
EBIE				Sn	Sn	17 18 52.3	-1.7
	SNR=7.9						
EBIE				Lg		17 19 17.6	
	0.7nm,0.2s,SNR=4.0						
EBIE	Bielsa	5.02	17	Pn	Pn	17 17 56.8	+1.5
EBIE				Sn	Sn	17 18 52.3	-1.7
	SNR=7.9						
MTE	Manteigas	5.05	301	*e*Sn	Sn	17 18 53.6	-1.2
MTE				*e*Sg	Sg	17 19 19.2	-7.3
	25nm,0.5s						
MTE	Manteigas	5.05	301	*e*Sn	Sn	17 18 53.6	-1.2
MTE				*e*Sg	Sg	17 19 19.2	-7.3
	25nm,0.5s						
ETSF	Etsaut	5.09	11	*e*Pn	Pn	17 17 57.1	+0.8
ETSF				*e*Sn	Sn	17 18 51.8	-3.9
ETSF				*e*Sg	Sg	17 19 21.2	-6.5
	2.8nm,0.5s						
MOE	Montemor	5.13	279	*e*Sn	Sn	17 18 54.9	-1.8
MOE				*e*Sg	Sg	17 19 23.9	-5.1
SJPF	Ste Jean	5.23	5	*e*Pn	Pn	17 18 00.0	+1.8
SJPF				*e*Sn	Sn	17 18 54.2	-5.0
SJPF				*e*Sg	Sg	17 19 25.5	-6.8
	2.6nm,0.4s						
EALK	Alkurruntz	5.32	3	Pn	Pn	17 18 01.6	+2.1
	7.4nm,0.5s,SNR=5.5						
EALK				Sn	Sn	17 18 59.9	-1.5
	SNR=7.9						
EPF	Esparros	5.39	18	*e*Pn	Pn	17 18 01.7	+1.1
EPF				*e*Sn	Sn	17 18 59.3	-4.1
EPF				*e*Sg	Sg	17 19 30.5	-7.4
	6.3nm,0.4s						
PBRG	Braganca	5.40	318	*e*Pn	Pn	17 18 01.1	+0.5
PBRG				*e*Sg	Sg	17 19 29.3	-8.6
	9.2nm,0.6s						
PBRG	Braganca	5.40	318	*e*Pn	Pn	17 18 01.1	+0.5
PBRG				*e*Sg	Sg	17 19 29.3	-8.6
	9.2nm,0.6s						
PTEO	Sao Teotonio	5.43	268	*e*Sn	Sn	17 19 03.4	-0.9
	14nm,0.7s						
PVIS	Viseu	5.44	303	*e*Pn	Pn	17 18 02.3	+1.1
PVIS				*e*Sg	Sg	17 19 31.8	-7.5
	6.7nm,0.4s						
ELAN	Lanestosa	5.45	348	Sn	Sn	17 18 57.1	-7.6
	5.6nm,0.3s,SNR=4.0						
ELAN				Lg		17 19 35.7	
	3.0nm,0.2s,SNR=4.0						
ECAL	Calabor	5.49	319	Pn	Pn	17 18 01.3	-0.6
	1.0nm,0.2s,SNR=7.9						
ECAL				Lg		17 19 34.7	
	6.7nm,0.4s,SNR=7.9						
ECAL	Calabor	5.49	319	Pn	Pn	17 18 01.4	-0.5
PVRL	Vila Real	5.62	309	*e*Sn	Sn	17 19 07.8	-1.3
PVRL				*e*Sg	Sg	17 19 39.7	-5.7
EARI	Arriondas	5.95	336	Pn	Pn	17 18 09.3	+0.9
	7.6nm,0.6s,SNR=9.5						
EARI				Sn	Sn	17 19 12.8	-4.6
	7.6nm,0.8s,SNR=7.3						
EARI				Lg		17 19 49.7	
	1.7nm,0.3s,SNR=5.0						
EARI	Arriondas	5.95	336	Pn	Pn	17 18 09.3	+0.8
MTLF	Montolieu	6.26	29	*e*Pn	Pn	17 18 13.1	+0.2
EPON	Pontenova	6.73	325	Lg		17 20 17.3	
	1.5nm,0.2s,SNR=4.0						
LFF	La Frestale	7.30	15	*e*Pn	Pn	17 18 27.0	-0.4
LASF	Ste Croix	7.54	33	*e*Pn	Pn	17 18 30.4	-0.4
CAF	Calviac	7.62	22	*e*Pn	Pn	17 18 31.3	-0.6
SMRF	Simiane la Rot	8.28	41	*e*Pn	P	17 18 40.9	-0.3
PGF	Pioggiola	9.53	57	*e*Pn	P	17 18 58.1	-0.3
QUIF	Quistinic	10.05	355	*e*Pn	P	17 19 04.7	-0.8

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*IDC **16** 18:15:07.2±4.1, 34.64S×178.90E, h218^{km}±34^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/14, mbtmp4.3/6, Error ellipse: s-maj=45.0km s-min=23.7km az=35.0*

*WEL **16** 18:15:12.2±0.3, 34.90S×178.50E, h228^{km}±4^{km}, ML4.5/10, Error ellipse: s-maj=7.7km s-min=3.4km az=90.0*

*NEIC **16** 18:15:15.3±2.0, 35.23S×178.15E, h253^{km}±11^{km}, mb4.6/1, Error ellipse: s-maj=31.1km s-min=17.1km az=45.0*

ISC 16 18:15:12.6±1.1**, 35.06S**±0.09×**178.3E**±0.1**, h254^{km}**±8^{km}**, n56, σ1^{s}21**/68**, mb4.0**/6**, 2C-2D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.50	180	*e*P	P	18 16 00.1	-0.4
MXZ				S	S	18 16 36.8	-0.9
MXZ	Matakaoa Point	2.50	180	PN	P	18 16 00.1	-0.4
MXZ				SN	S	18 16 36.5	-1.2
PUZ	Puketiti	3.01	181	*e*P	P	18 16 05.6	-0.2
PUZ				S	S	18 16 42.3	-4.8
PUZ	Puketiti	3.01	181	PN	P	18 16 05.5	-0.3
PUZ				SN	S	18 16 46.7	-0.4
MWZ	Matawai	3.33	191	*e*P	P	18 16 09.7	+0.3
MWZ				S	S	18 16 53.7	+0.2
MWZ	Matawai	3.33	191	PN	P	18 16 09.7	+0.3
MWZ				*e*SN	S	18 16 54.0	+0.5
URZ	Urewera	3.34	196	P	P	18 16 09.7	+0.2
	43nm,0.3s,baz=334,slow=1.8,SNR=179						
URZ				S	S	18 16 55.8	+2.1
	35nm,0.3s,baz=72,slow=23,SNR=23						
URZ	Urewera	3.34	196	PN	P	18 16 09.6	+0.1
URZ				SN	S	18 16 55.0	+1.4
KNZ	Kokohu	3.99	187	P	P	18 16 17.6	+0.7
KNZ				S	S	18 17 07.7	+0.7
KNZ	Kokohu	3.99	187	PN	P	18 16 17.6	+0.6
KNZ				SN	S	18 17 08.9	+2.0
BKZ	Black Stump Fm	4.35	199	P	P	18 16 21.6	+0.4
BKZ				S	S	18 17 15.6	+0.9
BKZ	Black Stump Fm	4.35	199	PN	P	18 16 21.6	+0.4
BKZ				*e*SN	S	18 17 15.9	+1.2
MGZ	Maungaku	4.52	209	P	P	18 16 25.1	+1.9
MGZ	Maungaku	4.52	209	PN	P	18 16 25.1	+1.9
OTVZ	Oturere	4.61	207	PN	P	18 16 25.2	+0.9
NGZ	Ngauruhoe	4.64	207	*e*P	P	18 16 26.4	+1.6
NGZ	Ngauruhoe	4.64	207	PN	P	18 16 26.5	+1.8
CNZ	Chateau	4.69	207	*e*P	P	18 16 26.4	+1.2
CNZ	Chateau	4.69	207	PN	P	18 16 26.4	+1.2
TUVZ	Tukino	4.71	206	*e*P	P	18 16 27.1	+1.6
TUVZ	Tukino	4.71	206	PN	P	18 16 27.1	+1.6
FWVZ	Far West T-bar	4.73	207	PN	P	18 16 27.1	+1.3
MOVZ	Moawhango	4.80	204	*e*P	P	18 16 26.7	+0.1
MOVZ	Moawhango	4.80	204	PN	P	18 16 26.7	+0.2
MOVZ				*e*SN	S	18 17 25.2	+0.9
PWZ	Pawanui	5.09	193	P	P	18 16 28.8	-1.4
PWZ	Pawanui	5.09	193	PN	P	18 16 28.8	-1.4
PWZ				SN	S	18 17 30.0	-0.8
TSZ	Takapari Road	5.33	200	P	P	18 16 32.2	-0.9
TSZ				S	S	18 17 36.8	+0.8
TSZ	Takapari Road	5.33	200	PN	P	18 16 32.2	-0.9
TSZ				SN	S	18 17 36.8	+0.8
MRZ	Mangatainoka R	6.00	200	*e*P	P	18 16 39.7	-1.7
MRZ				S	S	18 17 49.0	-1.8
MRZ	Mangatainoka R	6.00	200	PN	P	18 16 39.6	-1.8
MRZ				SN	S	18 17 49.0	-1.7
KIW	Kapiti Island	6.38	204	P	P	18 16 44.7	-1.5
KIW	Kapiti Island	6.38	204	PN	P	18 16 44.2	-2.0
MTW	Mount Morrison	6.48	199	*e*P	P	18 16 45.0	-2.4
MTW	Mount Morrison	6.48	199	PN	P	18 16 45.0	-2.5
CAW	Cannon Point	6.56	202	P	P	18 16 46.3	-2.1
CAW	Cannon Point	6.56	202	*e*PN	P	18 16 45.8	-2.6
MSWZ	Moikau Station	6.79	200	P	P	18 16 49.5	-1.8
MSWZ	Moikau Station	6.79	200	*e*PN	P	18 16 48.9	-2.4
NNZ	Nelson	7.27	211	*e*PN	P	18 16 55.6	-1.8
THZ	Tophouse	7.92	211	⇓PN	P	18 17 05.1	-0.6
KHZ	Kahutara	8.24	205	*e*P	P	18 17 07.1	-2.6
KHZ	Kahutara	8.24	205	*e*PN	P	18 17 07.1	-2.6
STKA	Stephens Creek	30.68	265	P	P	18 21 06.4	+0.5
	2.4nm,1.2s,mb3.7,baz=68,slow=11,SNR=2.8						
CTA	Charters Tower	31.93	289	P	P	18 21 16.8	+0.1
	1.2nm,0.3s,mb3.9,baz=110,slow=13,SNR=5.5						
ASAR	Alice Springs	40.04	274	P	P	18 22 24.7	0.0
	2.5nm,0.5s,mb3.9,baz=115,slow=7.9,SNR=57						
WRA	Warramunga Arr	41.47	279	P	P	18 22 35.8	-0.6
	3.7nm,0.4s,mb4.2,baz=118,slow=7.7,SNR=95						
VNDA	Vanda	43.17	185	P	P	18 22 50.9	+1.4
	3.7nm,1.2s,mb3.7,baz=16,slow=5.7,SNR=3.0						
QSPA	South Pole Qui	55.06	180	⇑*i*P	P	18 24 20.5	+1.0
	9.2nm,0.5s,mb4.6						
VNA3	Neumayer Olymp	73.84	177	⇑*i*	P	18 26 20.6	+0.1
VNA2	Neumayer--Watz	74.24	178		P	18 26 23.5	+0.7
VNA2	Neumayer--Watz	74.24	178	⇓*i*	PcP	18 26 35.2	-1.4
ARCES	ARCESS Array B	142.37	345	PKP	PKPdf	18 34 11.0	-2.7
	4.1nm,0.8s,baz=54,slow=10,SNR=4.0						
JOF	Joensuu	145.42	334	*e*p	PKPdf	18 34 16.5	-2.6
	4.0nm,0.5s						
KAF	Kangasniemi	147.70	336	*e*p	PKPdf	18 34 21.5	-1.5
	3.2nm,0.8s						
FINES	FINESS Array B	148.25	335	PKPbc	PKPdf	18 34 25.5	+1.6
	1.3nm,0.4s,baz=30,slow=5.8,SNR=16						
AKASG	Malin Array Be	152.74	315	PKPbc	PKPdf	18 34 36.2	+5.2

0.1nm,0.3s,baz=46,slow=2.7,SNR=4.9

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*IGQ **16** 18:16:44.2, 1.19S×81.22W, h14^{km}±4^{km}, mb4.7, Error ellipse: s-maj=7.1km s-min=2.8km az=11.8*

*NEIC **16** 18:16:46.1±0.6, 1.27S×81.03W, h10^{km}, mb4.2/3, MD4.7(IGQ), Error ellipse: s-maj=13.1km s-min=11.2km az=60.0*

*IDC **16** 18:16:55.0±6.3, 1.17S×80.92W, h80^{km}±59^{km}, mb3.8/7, mb1 4.0/10, mb1mx3.7/23, mbtmp4.1/10, ML3.4/3, MS3.8/4, Ms1 3.7/4, ms1mx3.1/28, Error ellipse: s-maj=55.7km s-min=16.5km az=78.0*

ISC 16 18:16:46.2±1.3**, 1.28S**±0.05×**81.21W**±0.05**, h18**^{km}±11^{km}**, n52, σ1^{s}05**/46**, mb4.1**/7**, MS4.5**/3**, 9C-5D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.71	71	⇑P	Pb	18 16 57.2	-2.5
SALI	Salinas	0.93	166	⇑P	Pb	18 17 03.0	-0.4
SALI				S	Sb	18 17 14.9	-0.4
IGUA	Igualata	2.58	95	⇓P	Pn	18 17 28.0	0.0
CUSU	Cusua	2.74	93	P	Pn	18 17 31.9	+1.7
JUIV	Juive	2.75	93	P	Pn	18 17 31.1	+0.7
ARRY	Arrayan	2.77	95	⇑P	Pn	18 17 30.6	0.0
RETU	Refugio	2.77	93	P	Pn	18 17 32.2	+1.6
PATA	Patacocha	2.79	95	P	Pn	18 17 32.4	+1.4
ULBA	Ulba	2.81	93	P	Pn	18 17 32.4	+1.2
ULBA				S	Sn	18 18 03.8	-1.2
NAS1	Nasa	2.81	77	⇑P	Pn	18 17 31.5	+0.2
JUA2	San Juan 2	2.82	68	P	Pn	18 17 31.0	-0.4
TERV	Terraza Guagua	2.83	67	⇓P	Pn	18 17 31.0	-0.5
PINO	Pino	2.83	67	⇓P	Pn	18 17 30.8	-0.8
PISA	Pisayambo	2.84	86	P	Pn	18 17 32.1	+0.5
GGP	Refugio Guagua	2.84	67	P	Pn	18 17 31.8	+0.1
VC1	Cotopaxi 1	2.88	77	P	Pn	18 17 32.7	+0.4
YANA	Yana	2.88	66	⇓P	Pn	18 17 31.4	-0.9
TAMB	Tambo	2.90	78	P	Pn	18 17 32.7	+0.1
OTAV	Otavalo	3.15	61	*e*P	Pn	18 17 34.6	-1.5
ANTI	Antisana	3.16	75	⇑P	Pn	18 17 36.6	+0.4
COTA	Cotacachi	3.29	61	⇑P	Pn	18 17 37.5	-0.6
CAYR	Refugio Cayamb	3.46	68	⇑P	Pn	18 17 41.6	+1.2
ELAGU	Cayambe Volc	3.46	69	P	Pn	18 17 41.8	+1.3
CAYA	Cayambe	3.49	67	⇑P	Pn	18 17 41.7	+0.8
CONE	Cono NE Rev Vo	3.77	71	P	Pn	18 17 49.5	+4.7
ECEN	Cerro Negro	3.86	57	⇓P	Pn	18 17 45.5	-0.6
PAYG	Puerto Ayora	9.09	274	*e*P	P	18 19 01.3	+1.7
	27nm,0.9s						
ROSC	El Rosal	9.19	48	P	P	18 19 01.4	+0.4
	1.3nm,0.3s,baz=90,slow=21,SNR=2.6						
NNA	Nana	11.48	158	*e*P	P	18 19 30.5	-2.1
	17nm,0.9s						
JTS	JuntasAbangare	12.08	342	LR	LR	18 23 00.4	
	comp=Z,124nm,20.5s,baz=118,slow=30						
SDV	Santo Domingo	14.60	46	P	P	18 20 12.7	-1.4
	0.4nm,0.3s,baz=207,slow=18,SNR=2.6						
SDV				LR	LR	18 26 31.9	
	comp=Z,218nm,18.8s,baz=251,slow=40						
SDV	Santo Domingo	14.60	46	P	P	18 20 12.8	-1.3
SDV				LR	LR	18 26 31.9	
SAML	Samuel	19.49	114	*e*P	P	18 21 09.9	-5.5
	56nm,1.3s						
LPAZ	La Paz	19.71	140	P	P	18 21 17.4	-0.4
	0.2nm,0.3s,baz=352,slow=15,SNR=7.6						
LPAZ	La Paz	19.71	140	*e*P	P	18 21 17.0	-0.8
	8.0nm,1.2s						
SJG	San Juan	24.32	37	P	P	18 22 03.9	-0.2
	9.4nm,0.3s,mb4.7,baz=324,slow=19,SNR=3.1						
SJG	San Juan	24.32	37	P	P	18 22 03.9	-0.2
LVC	Limon Verde	24.34	151	P	P	18 22 06.5	+2.1
	5.4nm,1.2s,mb3.9,baz=294,slow=10.0,SNR=2.5						
LVC	Limon Verde	24.34	151	*e*P	P	18 22 02.3	-2.1
BDFB	Brasilia	35.72	115	LR	LR	18 40 24.9	
	comp=Z,146nm,19.4s,MS3.8,baz=176,slow=40						
PLCA	Paso Flores	40.44	167	P	P	18 24 25.6	+0.2
	3.1nm,0.9s,mb4.0,baz=332,slow=11,SNR=8.0						
PLCA	Paso Flores	40.44	167	*e*P	P	18 24 25.8	+0.5
	6.5nm,1.1s,mb4.3						
NVAR	Mina Array Bea	52.22	323	P	P	18 25 59.5	+1.0
	1.4nm,0.9s,mb3.9,baz=135,slow=5.1,SNR=2.6						
ULM	Lac du Bonnet	52.85	348	P	P	18 26 00.6	-2.5
	2.4nm,0.6s,mb4.3,baz=157,slow=7.7,SNR=4.6						
YKA	Yellowknife Ar	68.42	344	P	P	18 27 47.9	-1.0
	2.8nm,0.9s,mb4.3,baz=139,slow=5.8,SNR=20						
ILAR	Eielson Array	81.00	337	P	P	18 29 01.1	+0.1
	0.8nm,0.9s,mb3.7,baz=130,slow=3.0,SNR=6.0						
FINES	FINESS Array B	99.34	28	LR	LR	19 10 09.5	
	comp=Z,162nm,18.4s,MS4.6,baz=313,slow=32						
ZAL	Zalesovo	126.27	10	PKP	PKPdf	18 35 46.9	-5.0
	0.5nm,0.4s,baz=318,slow=18,SNR=2.9						
ASAR	Alice Springs	137.81	232	PKP	PKPdf	18 36 12.6	-2.0
	0.8nm,0.9s,baz=108,slow=2.9,SNR=5.0						
DDI	Dehra Dun	145.05	32	*e*	PKPbc	18 36 23.2	-0.3
LZH	Lanzhou	145.06	353	⇑P	PKPbc	18 36 23.1	-0.2
LZH				pP		18 36 32.5	
LZH				sP		18 36 36.7	
LZH				LR	LR		
	comp=Z,350nm,17.7s,MS5.2						
ENH	Enshi	149.43	342	*e*PKPbc	PKPdf	18 36 35.4	+1.0

IDC 16 18:26:17.9±8.2**, 31.62S**×**131.48E, mb1 3.7**/3**, mb1mx3.5**/10**, mbtmp3.5**/3**, ML3.2**/3**, Error ellipse: s-maj=99.2km s-min=38.2km az=60.0, Near coast of South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	8.20	16	Pn	P	18 28 19.1	-1.9
	0.3nm,0.3s,baz=200,slow=12,SNR=21						
ASAR				Sn	Sn	18 29 53.6	-2.0
	0.2nm,0.3s,baz=195,slow=23,SNR=5.5						
STKA	Stephens Creek	8.62	94	Pn	P	18 28 23.9	-3.0
	0.1nm,0.3s,baz=278,slow=11,SNR=3.9						
STKA				Sn	Sn	18 29 58.2	-7.7
	0.7nm,0.3s,baz=315,slow=7.1,SNR=5.0						
WRA	Warramunga Arr	11.90	13	Pn	P	18 29 08.3	-3.7
	0.4nm,0.3s,baz=192,slow=14,SNR=25						
WRA				Sn	S	18 31 23.0	-3.8
	0.2nm,0.3s,baz=191,slow=24,SNR=4.6						

IDC 16 18:33:56.8±6.9**, 3.07N**×**127.17E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/17**, mbtmp3.7**/3**, MS3.6**/1**, Ms1 3.5**/1**, ms1mx2.5**/20**, Error ellipse: s-maj=175.8km s-min=108.6km az=75.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.92	163	P	P	18 39 12.7	-0.8
	1.4nm,0.6s,baz=342,slow=10,SNR=18						
ASAR	Alice Springs	27.37	166	P	P	18 39 44.4	-1.5
	0.3nm,0.5s,baz=349,slow=8.2,SNR=5.4						
STKA	Stephens Creek	37.36	160	P	P	18 41 10.8	-2.2
	1.4nm,0.8s,baz=349,slow=11,SNR=4.1						
STKA				LR	LR	18 57 39.6	
	comp=Z,84nm,18.4s,baz=58,slow=38						

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*BJI **16** 18:35:17.7, 61.75N×150.52W, h4^{km}, mB4.9, mb4.7, Ms4.5, Msz4.5*

*MOS **16** 18:35:19.8±0.9, 61.39N×150.15W, h33^{km}, mb5.0/16, Error ellipse: s-maj=19.7km s-min=7.0km az=90.4*

*NEIC **16** 18:35:23.5, 61.33N×149.85W, h35^{km}, mb4.9/87, MS4.1/2, ML5.0(PMR), ML4.7(AEIC), After AEIC.*

NEIC Felt [IV] at Anchorage, Big Lake, Chugiak, Eagle River, Elmendorf AFB and Palmer; [III] at Fort Richardson, Girdwood, Houston, Seward, Wasilla and Willow; [II] at Kenai and Soldotna. Also felt at Talkeetna and Valdez.

*HRVD **16** 18:35:23.5±0.4, 61.32N×150.32W, h67^{km}±4^{km}, MW4.8/51, Centroid moment Tensor Solution. LP body waves: s24,c34;Mantle waves: s51,c81; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.25±.23; $M_{\theta\theta}$-0.97±.28; $M_{\phi\phi}$2.22±.15; $M_{r\theta}$0.72±.13; $M_{\theta\phi}$-0.18±.17; $M_{\phi r}$1.10±.10; Best double couple: $M_0$2.303×10^{16} NP1:ϕ_s323°,δ40°, λ-146°. NP2:ϕ_s206°,δ69°,λ-55°. Principal axes: T 2.54, Plg16°, Azm271°; N -.476, Plg32°, Azm11°; P -2.067, Plg53°, Azm158°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **16** 18:35:25.1±1.8, 61.34N×150.18W, h69^{km}±14^{km}, mb4.4/25, mb1 4.5/30, mb1mx4.5/32, mbtmp4.6/30, MS4.1/23, Ms1 4.1/23, ms1mx4.1/26 Error ellipse: s-maj=14.3km s-min=9.6km az=51.0*

ISC 16 18:35:21.9±0.2**, 61.37N**±0.02×**149.95W**±0.03**, h53**^{km}±1^{km}**, h37**^{km}±6.5^{km}**:pP-P, n336, σ0^{s}92**/346**, mb4.8**/125**, MS4.1**/28**, 12C-6D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIB	Fire Island	0.23	208	P	P	18 35 30.5	-0.3
PWA	Palmer West	0.28	7	P	P	18 35 30.7	-0.5
RC01	Rabbit Creek A	0.30	160	P	P	18 35 30.3	-1.1
RC01				S	S	18 35 35.5	-2.8
VOGL	Vogel Lake	0.44	212	P	P	18 35 33.2	+0.5
PMR	Palmer	0.45	60	P	P	18 35 32.1	-0.8
PMR				S	S	18 35 39.5	-1.3
GHO	Glory Hole Cre	0.64	50	P	P	18 35 34.8	-0.2
KNK	Knik Glacier	0.72	86	P	P	18 35 35.7	-0.4
SLKM	Skilak Lake	0.88	189	P	P	18 35 37.8	-0.4
NKA	Nikishka	0.89	225	P	P	18 35 40.0	+1.6
SML	Sawmill	0.89	60	P	P	18 35 38.3	-0.1
SML				S	S	18 35 50.8	+0.1
STLK	Strandline Lak	0.91	279	P	P	18 35 39.8	+1.1
MPA	Moose Pass	0.93	162	P	P	18 35 38.9	0.0
PWL	Port Wells	0.94	122	P	P	18 35 38.5	-0.5
SPU	Mount Spurr	1.03	260	*e*P	P	18 35 40.7	+0.3
CUT	Chulitna	1.05	352	P	P	18 35 41.4	+0.8
CKN	Chakachatna No	1.09	263	P	P	18 35 42.0	+0.9
SEW	Seward	1.29	169	P	P	18 35 43.1	-1.0
SEW				S	S	18 36 01.1	+0.5
SCM	Sheep Creek Mo	1.34	69	P	P	18 35 45.1	+0.4
GLI	Glacier Island	1.47	108	P	P	18 35 46.1	-0.5
DFR	Drift River	1.54	241	P	P	18 35 48.1	+0.4
RDN	Redoubt North	1.62	239	P	P	18 35 48.9	+0.3
RSO	Redoubt South	1.65	238	*e*P	P	18 35 49.2	+0.2
JPK	Jack Peak	1.65	100	P	P	18 35 49.2	0.0
NCT	North Crescent	1.66	242	P	P	18 35 49.9	+0.6
BRLK	Bradley Lake	1.68	196	P	P	18 35 49.2	-0.2
LTI	Latouche	1.69	141	P	P	18 35 48.1	-1.4
VLZ	Valdez	1.77	96	P	P	18 35 50.5	-0.2
VLZ				S	S	18 36 12.6	+0.6
FID	Port Fidalgo	1.80	109	P	P	18 35 50.2	-1.0
HOM	Homer	1.91	207	P	P	18 35 53.2	+0.5
HIN	Hinchinbrook I	1.95	119	P	P	18 35 52.3	-0.9
CNPM	China Poot	1.96	200	P	P	18 35 53.2	-0.2
ILIM	Iliamna	1.96	230	P	P	18 35 54.1	+0.6
INE	Iliamna NE	2.02	231	P	P	18 35 54.9	+0.7
DIV	Divide	2.04	95	P	P	18 35 54.1	-0.3
DIV				S	S	18 36 18.0	-0.7
ILW	Iliamna West	2.04	231	P	P	18 35 55.4	+0.8
TRF	Thorofare Moun	2.09	356	P	P	18 35 56.6	+1.3
RND	Reindeer	2.11	14	P	P	18 35 56.8	+1.3
EYAK	Cordova Ski Ar	2.21	110	P	P	18 35 56.2	-0.7
KTH	Kantishna Hill	2.24	349	P	P	18 35 58.6	+1.3
KTH				S	S	18 36 26.1	+2.3
TZL	Tazlina	2.26	71	P	P	18 35 58.3	+0.6
OPT	Oil Point	2.37	225	P	P	18 36 00.2	+1.1
MCK	McKinley	2.42	11	P	P	18 36 01.4	+1.5
AUE	Augustine Isla	2.64	222	P	P	18 36 03.7	+0.7
PAX	Paxson	2.65	51	P	P	18 36 04.4	+1.3
PAX				S	S	18 36 35.4	+1.2
MID	Middleton Isla	2.65	136	P	P	18 36 02.2	-1.0
AUW	Augustine West	2.66	223	P	P	18 36 04.2	+0.8
AUI	Augustine Isla	2.67	222	P	P	18 36 04.0	+0.4
SVW2	Sparrevohn	2.74	267	P	P	18 36 05.0	+0.6
BWN	Browne	2.82	4	P	P	18 36 06.5	+0.8
THY	Trims Highway	2.83	42	P	P	18 36 07.9	+2.0
GLB	Gilahina Butte	2.95	86	P	P	18 36 06.5	-1.0
MCNL	McNeil River	3.10	227	P	P	18 36 09.8	+0.3
TT01	Tatalina	3.24	301	P	P	18 36 12.1	+0.5
MENT	Mentasta	3.32	59	P	P	18 36 12.6	-0.1
CCB	Clear Creek Bu	3.43	16	P	P	18 36 14.4	+0.1
KAPH	Katmai Pasha	3.55	220	P	P	18 36 15.6	-0.4
DOT	Dot Lake	3.56	47	P	P	18 36 16.4	+0.3
COLA	College	3.64	14	P	P	18 36 17.6	+0.4
MDM	Murphy Dome	3.69	11	P	P	18 36 18.1	+0.2
ILAR	Eielson Array	3.69	21	P	P	18 36 21.4	+3.5
	39nm,0.3s,baz=196,slow=13,SNR=227						
ILAR				S	S	18 37 06.9	+6.5
	200nm,0.3s,baz=193,slow=20,SNR=8.4						
ILAR				LR	LR	18 38 01.6	
	comp=Z,1μm,18.8s,baz=196,slow=42						
IL1	Eielson Array	3.69	21	P	P	18 36 18.7	+0.8
BALM	Baldy	3.70	92	P	P	18 36 16.6	-1.4
KAHG	Katmai Hook Gl	3.70	221	P	P	18 36 18.0	0.0
KAHC	Katmai Hardscr	3.73	225	P	P	18 36 18.3	-0.1
KDAK	Kodiak Island	3.84	202	P	P	18 36 17.9	-2.2
KAWH	Katmai	3.87	221	P	P	18 36 20.4	+0.1
YAH	Yahtse	4.14	101	P	P	18 36 22.8	-1.4
BCA3	Beaver Creek A	4.18	62	P	P	18 36 24.4	-0.5
CTGM	Chitina Glacie	4.19	92	P	P	18 36 23.8	-1.2
IM3	Indian Mountai	4.93	342	P	P	18 36 35.0	-0.3
IMA	Indian Mountai	5.00	342	*e*P	P	18 36 36.0	-0.3
DAWY	Dawson	5.56	56	P	P	18 36 43.2	-0.8
COLD	Coldfoot	5.88	359	P	P	18 36 48.7	+0.2
BM3	Burnt Mountain	6.50	19	P	P	18 36 57.3	+0.1
WHY	Whitehorse	7.36	89	P	P	18 37 06.5	-2.7
BESE	Bessie Mountai	8.07	104	P	P	18 37 16.9	-2.2
SIT	Sitka	8.65	113	*e*P	P	18 37 23.8	-3.2
TNA	Tin City	9.06	305	P	P	18 37 32.5	-0.1
INK	Inuvik	9.84	38	P	P	18 37 43.5	+0.4
	3.5nm,0.3s,baz=237,slow=17,SNR=43						
INK				S	S	18 39 34.0	+0.9
	7.7nm,0.3s,baz=339,slow=20,SNR=7.2						
INK				Lg		18 40 32.2	
	baz=332,slow=11,SNR=4.6						
INK				LR	LR	18 41 48.1	
	comp=Z,2μm,18.1s,baz=228,slow=39						
INK	Inuvik	9.84	38	*e*P	P	18 37 43.2	+0.1
DLBC	Dease Lake	10.42	98	P	P	18 37 50.5	-0.6
	1.6nm,0.3s,baz=294,slow=15,SNR=10						
DLBC				Lg		18 40 43.2	
	baz=41,slow=25,SNR=5.4						
DLBC				LR	LR	18 42 03.4	
	comp=Z,2μm,21.8s,baz=299,slow=38						
DLBC	Dease Lake	10.42	98	*e*P	P	18 37 47.7	-3.4
UNV	Unalaska Valle	11.62	237	P	P	18 38 06.1	-1.1
BBB	Bella Bella	15.02	118	P	P	18 38 52.5	+0.5
	0.6nm,0.3s,baz=319,slow=9.1,SNR=3.4						
BBB				LR	LR	18 44 16.9	
	comp=Z,446nm,20.6s,baz=297,slow=35						
YKW3	Yellowknife Ar	16.53	70	*e*P	P	18 39 08.6	-2.5
YKA	Yellowknife Ar	16.55	71	*i* P	P	18 39 09.9	-1.4
YKA				pmax	pmax		
	comp=Z,15nm,0.8s						
YKA	Yellowknife Ar	16.55	71	P	P	18 39 12.4	+1.1
	comp=Z,0.9nm,0.3s,baz=284,slow=9.8,SNR=79						
YKA				PcP	PcP	18 43 57.4	-3.3
	comp=Z,0.1nm,0.3s,baz=293,slow=1.2,SNR=7.6						
YKA				LR	LR	18 45 59.4	
	comp=Z,526nm,18.6s,baz=280,slow=38						
YKA				ScP		18 47 29.5	
	baz=284,slow=2.0,SNR=7.5						
YKA	Yellowknife Ar	16.55	71	P	P	18 39 12.4	+1.1
YKA				PcP	PcP	18 43 57.4	-3.3
YKA				LR	LR	18 45 59.4	
YKA				ScP		18 47 29.5	
BILL	Bilibino	19.47	309	⇓*e*P	P	18 39 45.0	-1.5
BILL				*e*S	S	18 43 18.9	+0.8
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,5μm,21.0s						
PGC	Sidney	19.65	118	*e*P	P	18 39 48.3	-0.3
	comp=Z,73nm,1.1s						
OSR	Olympics--Salm	20.33	121	P	P	18 39 57.3	+1.5
EDM	Edmonton	21.14	96	*e*P	P	18 40 03.8	-0.2
WRW	Wenatchee Ridg	21.36	116	P	P	18 40 07.8	+1.6
FX1	Attu Island--F	21.48	263	P	P	18 40 07.5	+0.1
	comp=Z,17nm,0.4s,mb4.7,baz=312,slow=13,SNR=23						
FX1				LR	LR	18 48 06.2	
	comp=Z,19nm,18.5s,baz=240,slow=36						
FX1	Attu Island--F	21.48	263	*e*P	P	18 40 06.4	-1.0
WTV	Waterville	21.88	115	P	P	18 40 13.0	+1.5
TBM	Table Mountain	22.01	117	P	P	18 40 14.5	+1.7
NAC	Naches	22.25	118	P	P	18 40 17.2	+2.0
EPH	Ephrata	22.30	115	P	P	18 40 17.0	+1.4
OD2	Odessa Site #2	22.66	114	P	P	18 40 21.7	+2.7
NEW	Newport	22.71	110	P	P	18 40 22.1	+2.6
	comp=Z,23nm,0.9s,mb4.6,baz=327,slow=7.7,SNR=27						
NEW				LR	LR	18 49 43.3	
	comp=Z,458nm,18.5s,MS4.0,baz=314,slow=38						
NEW	Newport	22.71	110	*e*P	P	18 40 20.6	+1.0
	comp=Z,54nm,1.1s,mb4.9						
VFP	Flag Point	23.11	121	P	P	18 40 26.5	+3.0
RES	Resolute Bay	23.34	33	*e*P	P	18 40 25.2	-0.1
	comp=Z,22nm,0.6s,mb4.8						
CROR	Criterion Ridg	23.58	121	P	P	18 40 30.8	+2.8
WALA	Waterton Lakes	23.61	105	*e*P	P	18 40 29.3	+1.1
	comp=Z,22nm,0.6s,mb4.8						
HUMO	Hull Mountain	24.78	127	*e*P	P	18 40 41.2	+1.6
	comp=Z,54nm,1.5s,mb4.8						
MSO	Missoula	25.23	109	*e*P	P	18 40 43.8	-0.1
	comp=Z,22nm,1.2s,mb4.6						
BMO	Blue Mountains	25.25	116	*e*P	P	18 40 44.0	-0.1
	comp=Z,27nm,1.0s,mb4.7						
CHMT	Chamberlain Mo	25.48	108	*e*P	P	18 40 46.1	-0.2
YBH	Yreka Blue Hor	25.62	128	P	P	18 40 49.8	+2.1
	comp=Z,15nm,0.8s,mb4.5,baz=352,slow=2.9,SNR=28						
YBH	Yreka Blue Hor	25.62	128	*e*P	P	18 40 48.9	+1.2
	comp=Z,24nm,1.1s,mb4.6						
FFC	Flin Flon	25.72	83	P	P	18 40 48.0	-0.5
	comp=Z,85nm,1.2s,mb5.2,SNR=17						
FFC	Flin Flon	25.72	83	*e*P	P	18 40 48.1	-0.4
	comp=Z,16nm,1.0s,mb4.5						
MOD	Modoc	26.42	124	*e*P	P	18 40 56.2	+1.2
	comp=Z,26nm,1.2s,mb4.6						
WVOR	Wild Horse Val	26.65	121	*e*P	P	18 40 58.1	+1.0
	comp=Z,31nm,1.1s,mb4.8						
WDC	Whiskeytown Da	26.68	129	*e*P	P	18 40 57.8	+0.4
	comp=Z,12nm,0.8s,mb4.5						
BOZ	Bozeman (W)	27.17	108	*e*P	P	18 41 01.7	-0.2
	comp=Z,6.3nm,0.7s,mb4.2						
MCMT	McKenzie Canyo	27.24	110	*e*P	P	18 41 02.9	+0.4
FCC	Fort Churchill	27.28	70	*e*P	P	18 41 01.8	-0.9
	comp=Z,58nm,1.1s,mb5.0						
HLID	Hailey	27.54	114	*e*P	P	18 41 04.8	-0.5
	comp=Z,13nm,1.0s,mb4.5						
QLMT	Earthquake Lak	27.89	109	*e*P	P	18 41 08.5	+0.1
MA2	Magadan	28.41	293	*e*P	P	18 41 14.0	+1.1
MA2				*e*S	S	18 45 55.6	+1.0
MA2				*e*SSS	SSS	18 47 34.5	-7.6
MA2				pmax	pmax		
	comp=Z,9.0nm,1.9s,mb4.1						
MA2				MLR	MLR		
	comp=Z,1μm,22.0s,MS4.4						
IMW	Indian Meadow	28.83	109	*e*P	P	18 41 17.8	+0.9
LAO	LASA Array	28.93	100	*e*P	P	18 41 17.9	+0.3
	comp=Z,67nm,1.1s,mb5.3						
MOOW	Moose Ponds	29.03	109	*e*P	P	18 41 19.1	+0.4
WUWY	Wally Ulrich	29.20	110	*e*P	P	18 41 20.8	+0.7
LOHW	Long Hollow	29.20	109	*e*P	P	18 41 20.9	+0.7
SNOW	Snow King Moun	29.25	110	*e*P	P	18 41 21.4	+0.8
ELK	Elko	29.47	118	*e*P	P	18 41 23.1	+0.5
	comp=Z,28nm,0.9s,mb5.0						
AHID	Auburn Hatcher	29.64	111	*e*P	P	18 41 24.3	+0.2
	comp=Z,7.8nm,1.0s,mb4.4						
NVAR	Mina Array Bea	30.18	125	P	P	18 41 30.1	+1.2
	comp=Z,11nm,0.8s,mb4.7,baz=328,slow=8.9,SNR=78						
NVAR				PcP	PcP	18 44 29.0	-0.1
	comp=Z,2.7nm,0.7s,baz=355,slow=1.5,SNR=7.5						
NVAR				ScP		18 48 06.3	
	comp=Z,1.6nm,1.1s,baz=274,slow=1.4,SNR=4.6						
NVAR				LR	LR	18 52 08.1	
	comp=Z,382nm,20.4s,MS4.0,baz=270,slow=33						
NVAR	Mina Array Bea	30.18	125	P	P	18 41 30.1	+1.2
NVAR				PcP	PcP	18 44 29.0	-0.1
NVAR				ScP		18 48 06.3	
NVAR				LR	LR	18 52 08.1	
MNV	Mina	30.23	125	*e*P	P	18 41 29.9	+0.5
	comp=Z,32nm,1.2s,mb4.9						
BW06	Boulder Array	30.34	109	*e*P	P	18 41 30.7	+0.4
	comp=Z,16nm,1.0s,mb4.7						
PDAR	Pinedale Array	30.34	109	P	P	18 41 30.9	+0.6
	comp=Z,8.6nm,0.6s,mb4.6,baz=322,slow=4.3,SNR=74						
PDAR				PcP	PcP	18 44 28.4	-1.1
	comp=Z,1.2nm,0.8s,baz=131,slow=1.3,SNR=4.9						
PDAR				LR	LR	18 55 16.4	
	comp=Z,271nm,18.1s,MS3.9,baz=350,slow=39						
HWUT	Hardware Ranch	30.36	113	*e*P	P	18 41 30.7	+0.2
	comp=Z,8.3nm,0.8s,mb4.5						
OMM	Old Mammoth Mi	30.61	127	*e*P	P	18 41 33.2	+0.5
TPH	Tonopah	30.91	124	*e*P	P	18 41 36.0	+0.6
	comp=Z,31nm,1.1s,mb5.0						
DUG	Dugway	30.97	116	*e*P	P	18 41 36.2	+0.4
	comp=Z,17nm,1.1s,mb4.8						
TIXI	Tiksi	31.28	323	*e*P	P	18 41 37.0	-1.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,301nm,15.0s,MS4.1						
TRCR	Troy Canyon	31.34	121	*e*P	P	18 41 39.4	+0.2
ULM	Lac du Bonnet	31.42	86	P	P	18 41 40.0	+0.3
	comp=Z,33nm,0.6s,mb5.3,baz=308,slow=9.0,SNR=106						
ULM				PcP	PcP	18 44 31.0	-1.2
	comp=Z,6.0nm,0.6s,baz=330,slow=2.6,SNR=6.3						
ULM				LR	LR	18 54 51.4	
	comp=Z,800nm,18.2s,MS4.4,baz=287,slow=37						
ULM	Lac du Bonnet	31.42	86	*e*P	P	18 41 39.1	-0.6
	comp=Z,61nm,0.9s,mb5.4						
MVU	Marysvale	32.63	117	*e*P	P	18 41 51.0	+0.5
	comp=Z,28nm,1.0s,mb5.2						
PHWY	Pilot Hill	33.38	106	*e*P	P	18 41 57.1	+0.2
NEN	Nelson	33.96	123	*e*P	P	18 42 02.0	0.0
PV10	Paradox Valley	34.12	113	*e*P	P	18 42 03.1	-0.1
LDFC	Landfair	34.35	124	*e*P	P	18 42 05.7	+0.4
ISCO	Idaho Springs	34.50	108	*e*P	P	18 42 06.9	+0.3
	comp=Z,5.2nm,1.0s,mb4.4						
PV01	Paradox Valley	34.52	113	*e*P	P	18 42 06.3	-0.4
EYMN	Ely	35.10	85	*e*P	P	18 42 11.5	-0.1
	comp=Z,61nm,0.7s,mb5.6						
PFO	Pinyon Flat Ob	35.11	127	*e*P	P	18 42 11.7	-0.2
	comp=Z,30nm,1.6s,mb5.0						
FRB	Frobisher Bay	35.22	50	P	P	18 42 12.8	+0.4
	comp=Z,8.6nm,0.8s,mb4.7,baz=315,slow=8.4,SNR=9.7						
FRB				LR	LR	18 56 49.8	
	comp=Z,372nm,18.4s,MS4.2,baz=257,slow=36						
FRB	Frobisher Bay	35.22	50	P	P	18 42 12.8	+0.4
FRB				LR	LR	18 56 49.8	
YAK	Yakutsk	35.82	307	*e*P	P	18 42 16.5	-1.0
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK	Yakutsk	35.82	307	*e*P	P	18 42 16.6	-1.0
	comp=E,35nm,0.8s,mb5.3						
SDCO	Great Sand Dun	36.22	110	*e*P	P	18 42 21.4	+0.3
	comp=E,16nm,0.9s,mb5.0						
CBKS	Cedar Bluff	38.02	103	*e*P	P	18 42 36.8	+0.7
	comp=E,18nm,0.7s,mb4.9						
ANMO	Albuquerque	38.11	114	⇑*e*P	P	18 42 38.7	+1.7
ANMO	Albuquerque	38.11	114	*e*P	P	18 42 38.0	+0.9
	comp=E,17nm,1.4s,mb4.6						
KSU1	Kansas State U	39.27	100	*e*P	P	18 42 46.2	-0.3
YSS	Yuzh-Sakhalins	40.02	281	*e*P	P	18 42 53.0	+0.2
AMTX	Amarillo	40.32	109	*e*P	P	18 42 55.7	+0.4
	comp=E,10nm,0.9s,mb4.5						
CLNS	Chul'man	41.02	303	*e*P	P	18 43 00.2	-0.7
CLNS				*e*		18 44 32.2	
CLNS				*e*		18 45 02.7	
CLNS				*e*S	S	18 49 08.6	-0.5
CLNS				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.0						
CLNS				pmax	pmax		
	comp=N,18nm,0.9s						
CLNS				pmax	pmax		
	comp=E,21nm,0.9s						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
CLNS				smax			
	comp=N,14nm,1.1s						
CLNS				smax			
	comp=Z,2.0nm,0.7s						
CLNS				smax			
	comp=E,4.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=N,100nm,13.0s,MS4.0						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS4.0						
MNTX	Cornudas Mount	41.35	115	*e*P	P	18 43 04.6	+0.8

	comp=E,3.8nm,0.8s,mb4.1						
SCHQ	Schefferville	41.57	60	P	P	18 43 05.3	+0.1
	comp=E,4.0nm,0.5s,mb4.3,baz=317,slow=9.1,SNR=19						
SCHQ				LR	LR	19 00 36.0	
	comp=E,224nm,19.8s,MS4.0,baz=300,slow=36						
WMOK	Wichita Mounta	41.77	106	*e*P	P	18 43 06.6	-0.6
	comp=E,25nm,1.1s,mb4.8						
CCM	Cathedral Cave	42.66	95	*e*P	P	18 43 13.1	-1.4
	comp=E,8.0nm,0.6s,mb4.6						
SADO	Sadowa	43.29	79	LR	LR	19 03 06.6	
	comp=E,144nm,19.8s,MS3.9,baz=20,slow=38						
KLR	Kul’dur	43.46	291	*e*P	P	18 43 17.0	-3.8
LTX	Lajitas	44.13	115	*e*P	P	18 43 27.5	+1.0
	comp=E,16nm,1.2s,mb4.6						
TXAR	Lajitas Array	44.13	115	P	P	18 43 27.5	+1.0
	comp=E,4.2nm,0.7s,mb4.3,baz=333,slow=5.6,SNR=30						
TXAR				LR	LR	19 04 25.1	
	comp=E,72nm,18.5s,MS3.6,baz=160,slow=39						
MIAR	Mount Ida	44.37	101	*e*P	P	18 43 27.5	-0.9
	comp=E,15nm,1.1s,mb4.6						
BOD	Bodaibo	44.51	311	*e*P	P	18 43 26.9	-2.2
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
JCT	Junction City	44.87	110	*e*P	P	18 43 32.8	+0.4
	comp=Z,33nm,0.8s,mb5.2						
ERPA	Erie	44.90	82	*e*P	P	18 43 32.5	0.0
	comp=Z,26nm,0.6s,mb5.2						
ACSO	Alum Creek Sta	44.92	86	*e*P	P	18 43 32.1	-0.6
	comp=Z,24nm,1.1s,mb4.9						
WVT	Waverly	45.83	94	*e*P	P	18 43 38.8	-1.2
	comp=Z,5.4nm,0.8s,mb4.5						
OXF	Oxford	46.38	97	*e*P	P	18 43 44.2	-0.1
	comp=Z,67nm,0.9s,mb5.6						
BINY	Binghamton	46.74	79	*e*P	P	18 43 46.4	-0.7
	comp=Z,15nm,0.6s,mb5.1						
SSPA	Standing Stone	47.05	82	*e*P	P	18 43 48.8	-0.7
	comp=Z,14nm,0.8s,mb5.0						
MDJ	Mudanjiang	47.90	288	P	P	18 43 54.5	-1.6
MDJ				AP	pP	18 44 01.8	-8.5
MDJ				XP	sP	18 44 05.8	-11
MDJ				PCP	PcP	18 45 24.6	+0.3
MDJ				S	S	18 50 46.0	-2.5
MDJ				XS		18 50 59.5	
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,105nm,4.7s						
MDJ				LR	LR		
	comp=N,69nm,28.6s,MS3.8						
MDJ				LR	LR		
	comp=E,104nm,24.1s,MS3.8						
MDJ				LR	LR		
	comp=Z,139nm,27.1s,MS3.8						
BLA	Blacksburg	48.53	87	*e*P	P	18 44 00.1	-1.0
	comp=Z,31nm,0.6s,mb5.5						
LRAL	Lakeview Retre	48.74	96	*e*P	P	18 44 01.6	-1.2
	comp=Z,3.9nm,0.5s,mb4.7						
KEV	Kevo	49.15	1	*e*p	P	18 44 03.1	-2.3
ARCES	ARCESS Array B	49.34	2	P	P	18 44 06.7	-0.3
	comp=Z,3.7nm,0.7s,mb4.6,baz=354,slow=7.2,SNR=7.7						
ARCES				PcP	PcP	18 45 27.9	-1.3
	comp=Z,2.1nm,0.5s,baz=315,slow=3.4,SNR=4.4						
ARCES				LR	LR	19 07 08.4	
	comp=Z,180nm,19.3s,MS4.1,baz=212,slow=38						
CN2	Changchun	50.41	291	*e*P	P	18 44 14.6	-0.9
CN2				AP	pP	18 44 24.6	-5.1
CN2				*e*S	S	18 51 33.8	+10
CN2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
CN2				AMB	AMB		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,13.0s,MS4.5						
SNY	Shenyang	52.81	291	⇑P	P	18 44 32.6	-1.0
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
TLY	Talaya	53.05	312	⇓*e*P	P	18 44 35.3	+0.1
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TLY				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.2						
MOY	Mondy	54.01	313	*e*P	P	18 44 42.8	+0.6
MOY				pmax	pmax		
	comp=Z,19nm,2.9s,mb4.5						
ZAK	Zakamensk	54.25	311	*e*P	P	18 44 43.4	-0.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
KS15	Wonju Array Si	54.35	284	*e*P	P	18 44 44.5	-0.5
ULN	Ulaanbaatar	54.90	307	*e*P	P	18 44 48.3	-0.6
	comp=Z,7.3nm,0.8s,mb4.8						
SONM	Songino Array	55.18	307	P	P	18 44 51.2	+0.3
	comp=Z,4.3nm,0.6s,mb4.7,baz=47,slow=6.7,SNR=36						
SONM				ScP		18 49 44.3	
	comp=Z,1.2nm,1.0s,baz=34,slow=4.5,SNR=4.2						
CBIJ	Chichi jima	56.02	265	LR	LR	19 09 45.3	
	comp=Z,166nm,18.8s,MS4.2,baz=88,slow=37						
JOF	Joensuu	56.03	359	*e*p	P	18 44 52.5	-4.2
NVS	Novosibirsk	56.77	326	*e*P	P	18 44 58.9	-3.3
KAF	Kangasniemi	56.81	2	*e*p	P	18 45 00.8	-1.5
NB2	NORSAR Subarra	57.06	11	P	P	18 45 02.5	-1.7
	comp=Z,1.9nm,0.7s,mb4.2,baz=350,slow=6.5						
NOA	NORSAR Array B	57.06	11	P	P	18 45 02.7	-1.5
	comp=Z,7.2nm,1.1s,mb4.6,baz=350,slow=7.0,SNR=8.2						
NOA				LR	LR	19 08 07.5	
	comp=Z,92nm,19.1s,MS3.9,baz=255,slow=34						
NOA	NORSAR Array B	57.06	11	P	P	18 45 02.7	-1.5
NOA				LR	LR	19 08 07.5	
ZAL	Zalesovo	57.15	325	P	P	18 45 03.5	-1.5
	comp=Z,2.2nm,0.4s,mb4.5,baz=84,slow=5.7,SNR=11						
ZAL				LR	LR	19 13 42.3	
	comp=Z,201nm,18.3s,MS4.3,baz=84,slow=40						
FINES	FINESS Array B	57.47	2	*i* P	P	18 45 06.3	-0.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	57.47	2	P	P	18 45 06.3	-0.8
	comp=Z,3.1nm,0.5s,mb4.6,baz=2.0,slow=8.2,SNR=56						
BJI	Beijing	57.55	295	*e*P	P	18 45 07.1	-0.8
BJI				S	S	18 53 02.0	+2.2
BJI				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.8						
BJI				LR	LR		
	comp=Z,99nm,20.9s,MS3.9						
BJI	Beijing	57.55	295	*e*P	P	18 45 07.1	-0.8
	comp=Z,8.0nm,0.9s,mb4.8						
BJI				S	S	18 53 02.0	+2.2
BJI				LR	LR		
	comp=Z,100nm,20.9s,MS3.9						
HFS	Hagfors	58.17	10	P	P	18 45 10.3	-1.6
	comp=Z,3.1nm,0.5s,mb4.6,baz=27,slow=3.3,SNR=20						
SVE	Sverdlovsk	59.73	341	*e*P	P	18 45 25.0	+2.2
SVE				*e*	pP	18 45 39.0	+1.6
SVE				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
BBSR	BB Station	59.96	77	*e*P	P	18 45 22.6	-2.1
	comp=Z,11nm,0.7s,mb5.0						
EKA	Eskdalemuir Ar	60.73	21	P	P	18 45 28.7	-0.9
	comp=Z,8.8nm,0.9s,mb4.9,baz=335,slow=5.5,SNR=16						
BRVK	Borovoye	61.52	334	*e*P	P	18 45 33.0	-2.0
	comp=Z,5.8nm,0.8s,mb4.8						
BVAR	Borovoye Array	61.53	334	P	P	18 45 33.3	-1.8
	comp=Z,5.4nm,0.8s,mb4.8,baz=48,slow=8.8,SNR=26						
KURK	Kurchatov	61.71	327	*i* P	P	18 45 34.6	-1.7
KURK	Kurchatov	61.71	327	*e*P	P	18 45 34.2	-2.1
	comp=Z,5.1nm,0.6s,mb4.8						
SSE	Sheshan	62.70	285	*e*P	P	18 45 43.8	+0.6
SSE				S	S	18 54 09.1	+3.0
SSE				SCS	ScS	18 55 37.3	+10
SSE				SS	SS	18 58 17.4	+4.1
SSE				AMB	AMB		
	comp=Z,13nm,1.1s,mb5.0						
SSE				AMB	AMB		
	comp=Z,53nm,3.1s						
SSE				LR	LR		
	comp=N,46nm,36.7s,MS3.7						
SSE				LR	LR		
	comp=E,78nm,36.7s,MS3.7						
SSE				LR	LR		
	comp=Z,96nm,23.2s						
SSE	Sheshan	62.70	285	*e*P	P	18 45 43.7	+0.5
	comp=Z,13nm,1.1s,mb5.0						
SSE				sP	sP	18 45 59.9	-4.2
SSE				S	S	18 54 09.1	+3.0
SSE				sS		18 54 30.6	
SSE				ScS	ScS	18 55 37.2	+10
SSE				SS	SS	18 58 17.4	+4.1
SSE				LR	LR		
	comp=Z,100nm,23.2s,MS3.9						
NJ2	Nanjing	62.98	288	*e*P	P	18 45 43.0	-2.1
NJ2				PP	PP	18 48 03.0	-2.5
NJ2				S	S	18 54 07.0	-2.5
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,562nm,4.9s						
NJ2				LR	LR		
	comp=Z,2µm,16.8s						
OBN	Obninsk	63.75	356	*e*P	P	18 45 48.3	-1.2
	comp=Z,16nm,0.3s,mb5.5						
BSEG	Bad Segeberg	63.98	13	*e*P	P	18 45 51.1	0.0
SUW	Suwalki	64.83	4	*e*P	P	18 45 55.4	-1.3
SUW	Suwalki	64.83	4	*e*P	P	18 45 55.5	-1.2
GTA	Gaotai	64.84	307	P	P	18 45 56.4	-0.6
GTA				AP	pP	18 46 05.8	-6.0
GTA				XP	sP	18 46 10.5	-7.3
GTA				PP	PP	18 48 20.4	-1.6
GTA				PPP	PPP	18 49 54.8	-1.1
GTA				S	S	18 54 31.9	-0.5
GTA				XS		18 54 48.3	
GTA				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
GTA				AMB	AMB		
	comp=Z,108nm,7.2s						
GTA				LR	LR		
	comp=N,237nm,18.3s,MS4.5						
GTA				LR	LR		
	comp=E,180nm,18.6s,MS4.5						
GTA				LR	LR		
	comp=Z,342nm,21.7s,MS4.5						
GKP	Gorka Klasztor	65.25	8	*e*P	P	18 45 59.8	+0.4
WMQ	Urumqi	65.28	318	*e*P	P	18 46 04.3	+4.5
WMQ				S	S	18 54 45.0	+7.3
WMQ				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.2						
WMQ				LR	LR		
	comp=N,112nm,24.0s,MS4.1						
WMQ				LR	LR		
	comp=E,115nm,24.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,121nm,20.0s,MS4.1						
CLZ	Clausthal	66.05	13	*e*P	P	18 46 05.0	+0.5
	comp=Z,18nm,1.4s,mb4.9						
LZH	Lanzhou	66.11	302	⇓P	P	18 46 03.6	-1.5
LZH				AP	pP	18 46 10.1	-10
LZH				XP	sP	18 46 14.3	-12
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb5.0						
LZH	Lanzhou	66.11	302	⇓P	P	18 46 03.6	-1.5
	comp=Z,21nm,1.2s,mb5.0						
LZH				pP	pP	18 46 10.1	-10
LZH				sP	sP	18 46 14.2	-12
CLL	Collm	66.85	12	*e*P	P	18 46 09.0	-0.5
CLL				*e*	pP	18 46 21.0	-3.5
CLL				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
CLL	Collm	66.85	12	*e*P	P	18 46 09.0	-0.5
	comp=Z,11nm,1.0s,mb4.8						
CLL				*e*	pP	18 46 21.0	-3.5
CLL	Collm	66.85	12	P	P	18 46 09.0	-0.5
	comp=Z,logA/T=1.0,mb4.8						
CLL				*e**SP	sP	18 46 21.0	-9.3
CLL				*e*		18 46 33.0	
BAIF	Baives	67.00	18	*e*P	P	18 46 10.2	-0.3
MOX	Moxa	67.36	13	*e*P	P	18 46 12.9	+0.1
MOX				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
MOX	Moxa	67.36	13	*e*P	P	18 46 12.9	+0.1
	comp=Z,23nm,1.1s,mb5.1						
MOX	Moxa	67.36	13	*i* P	P	18 46 12.9	+0.1
	comp=Z,logA/T=1.3,mb5.1						
BRG	Berggiesshubel	67.37	11	*e*P	P	18 46 13.0	+0.2
BRG				*e*	pP	18 46 28.2	+0.5
BRG				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
BRG	Berggiesshubel	67.37	11	*e*P	P	18 46 13.0	+0.2
	comp=Z,16nm,1.2s,mb4.9						
BRG				*e*	pP	18 46 28.2	+0.5
ROSF	Rostrenen	67.41	23	*e*P	P	18 46 12.4	-0.7
TNS	Taunus Mts	67.42	15	*e*P	P	18 46 13.4	+0.3
KSP	Ksiaz	67.60	9	*e*P	P	18 46 14.4	+0.2
KSP	Ksiaz	67.60	9	*e*P	P	18 46 14.6	+0.3
SGMF	Saint Gilles	67.62	23	*e*P	P	18 46 14.1	-0.3
LDF	La Druitiere	67.73	21	*e*P	P	18 46 14.2	-0.9
	comp=Z,45nm,1.3s,mb5.0						
GRR	Gorron	67.80	22	*e*P	P	18 46 15.3	-0.3
QUIF	Quistinic	67.83	23	*e*P	P	18 46 15.7	0.0
NKC	Novy Kostel	67.86	12	*e*P	P	18 46 16.2	+0.3
UPC	Upice	67.91	10	*e*P	P	18 46 16.6	+0.4
DPC	Dobruska-Polom	68.09	9	*e*P	P	18 46 18.1	+0.8
GRA1	Grafenberg Arr	68.26	13	*e*P	P	18 46 18.8	+0.4
	comp=Z,21nm,1.2s,mb5.0						
GRF	Grafenberg Arr	68.26	13	*e*P	P	18 46 18.8	+0.4
GRF				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
GRF	Grafenberg Arr	68.26	13	*e*P	P	18 46 18.8	+0.4
	comp=Z,21nm,1.2s,mb5.0						
AKASG	Malin Array Be	68.28	1	P	P	18 46 17.3	-1.2
	comp=Z,6.9nm,0.4s,mb5.0,baz=1.1,slow=6.1,SNR=66						
PRU	Pruhonice	68.30	11	*e*P	P	18 46 18.6	0.0
OJC	Ojcow	68.46	7	*e*P	P	18 46 19.9	+0.3
OKC	Ostrava-Krasne	68.73	8	*e*P	P	18 46 21.6	+0.3
WET	Wettzell	68.98	12	*e*P	P	18 46 23.6	+0.8
WET				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.0						
WET	Wettzell	68.98	12	*e*P	P	18 46 23.6	+0.8
	comp=Z,29nm,1.6s,mb5.0						
CDF	Champ du Feu	69.05	16	*e*P	P	18 46 23.2	-0.1
KHC	Kasperske Hory	69.06	12	⇑*e*P	P	18 46 23.8	+0.5
KHC	Kasperske Hory	69.06	12	*e*P	P	18 46 23.6	+0.3
VRAC	Vranov	69.14	9	P	P	18 46 24.0	+0.1
	comp=Z,8.8nm,0.8s,mb4.8,baz=360,slow=7.3,SNR=9.4						
JTS	JuntasAbangare	69.15	107	LR	LR	19 19 00.6	
	comp=Z,157nm,21.7s,MS4.2,baz=9.7,slow=38						
KWP	Kalwaria	69.19	5	*e*P	P	18 46 24.0	-0.2
BFO	Black Forest	69.26	15	*e*P	P	18 46 24.7	+0.1
BFO				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.9						
BFO	Black Forest	69.26	15	*e*P	P	18 46 24.7	+0.1
	comp=Z,23nm,1.5s,mb4.9						
NIE	Niedzica	69.29	7	*e*P	P	18 46 24.5	-0.2
HAU	Haudompre	69.32	17	*e*P	P	18 46 24.7	-0.3
HAU				*e*R			
	comp=Z,166nm,19.2s						
GEC2	GERESS Array S	69.35	11	*e*P	P	18 46 25.4	+0.2
GERES	GERESS Array B	69.35	11	P	P	18 46 26.0	+0.8
	comp=Z,2.6nm,0.8s,mb4.2,baz=348,slow=3.9,SNR=22						
HINF	Hinteralfeld	69.57	16	*e*P	P	18 46 26.1	-0.4
	comp=Z,7.0nm,0.6s,mb4.5						
SSF	Saint Saulge	69.82	19	*e*P	P	18 46 27.8	-0.2
	comp=Z,25nm,1.0s,mb4.8						
CRVS	Cervenica-Dubn	69.86	6	*e*P	P	18 46 29.9	+1.6
KOLS	Kolonicke sedl	69.87	5	*e*P	P	18 46 29.0	+0.7
KOLS				*e*		18 46 33.0	
AVF	Avril sur Loir	70.06	19	*e*P	P	18 46 29.0	-0.5
VYHS	Vyhne	70.12	8	*e*P	P	18 46 30.0	+0.2
BGF	Bois d’Agland	70.20	20	*e*P	P	18 46 30.0	-0.4
KECS	Kecovo	70.23	7	*e*P	P	18 46 29.5	-1.0
AAK	Ala-Archa	70.27	327	*c i*P	P	18 46 29.5	-1.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
AAK	Ala-Archa	70.27	327	*e*P	P	18 46 28.9	-1.9
	comp=Z,5.4nm,0.8s,mb4.5						
SMF	Signal de Mont	70.28	19	*e*P	P	18 46 30.3	-0.5
ZST	Bratislava	70.29	9	*e*P	P	18 46 32.0	+1.1
MOA	Molln	70.39	11	⇑*i*P	P	18 46 31.9	+0.4
	comp=Z,14nm,1.6s,mb4.7						
MOTA	Moosalm	70.56	14	⇑*i*P	P	18 46 33.1	+0.5
	comp=Z,12nm,1.4s,mb4.6						
WATA	Walderalm	70.63	13	⇑*i*P	P	18 46 33.6	+0.7
	comp=Z,18nm,1.2s,mb4.9						
CABF	La Chapelle	70.64	17	*e*P	P	18 46 33.2	+0.1
	comp=Z,16nm,0.9s,mb4.7						
SQTA	Sankt Quirin	70.70	13	⇑*i*P	P	18 46 34.3	+0.9
	comp=Z,33nm,1.5s,mb5.0						
WTTA	Wattenberg	70.70	13	⇑*i*P	P	18 46 33.8	+0.4
	comp=Z,20nm,0.9s,mb5.0						
PSZ	Piszkesteto	70.76	7	⇑*i*P	P	18 46 34.8	+1.1
DAVOX	Davos	70.98	15	P	P	18 46 36.1	+1.0
	comp=Z,7.3nm,0.9s,mb4.6,baz=334,slow=9.1,SNR=5.1						
KBA	Koelnbreinsper	71.07	12	⇓*i*P	P	18 46 35.7	+0.1
	comp=Z,22nm,0.7s,mb5.2						
SJG	San Juan	71.32	86	LR	LR	19 19 34.0	
	comp=Z,215nm,19.1s,MS4.4,baz=302,slow=37						
PERS	Pernice	71.67	11	*e*P	P	18 46 39.6	+0.4
OBKA	Obir	71.75	11	⇑*i*P	P	18 46 40.0	+0.3
	comp=Z,34nm,0.8s,mb5.3						
LPL	La Plagne	71.81	17	*e*P	P	18 46 41.0	+1.0
	comp=Z,29nm,1.2s,mb4.8						
LPG	La Plagne	71.83	17	*e*P	P	18 46 41.4	+1.2
	comp=Z,38nm,1.3s,mb4.9						
VIVF	Saint-Julien-l	72.15	19	*e*P	P	18 46 42.0	-0.1
ORIF	Oris-en-Rattie	72.27	18	*e*P	P	18 46 42.9	+0.1
ORIF				*e*R			
	comp=Z,129nm,19.8s						
VISS	Visnje	72.47	11	*e*P	P	18 46 44.0	+0.1
MBDF	Montbardon	72.59	17	*e*P	P	18 46 44.2	-0.3
	comp=Z,23nm,1.3s,mb4.7						
LASF	Ste Croix	72.78	19	*e*P	P	18 46 45.7	0.0
BOJS	Bojanci	72.81	11	*e*P	P	18 46 45.2	-0.7
SJPF	Ste Jean	72.82	23	*e*P	P	18 46 45.1	-0.8
SMRF	Simiane la Rot	73.15	18	*e*P	P	18 46 47.0	-0.8
ETSF	Etsaut	73.16	23	*e*P	P	18 46 48.3	+0.4
	comp=Z,38nm,1.1s,mb4.9						
MTLF	Montolieu	73.23	21	*e*P	P	18 46 48.1	-0.2
GYA	Guiyang	73.24	294	⇓*i*P	P	18 46 48.0	-0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GOF	Gofitskoye	73.41	350	*e*P	P	18 47 04.0	+15
MLR	Muntele Rosu	73.44	3	LR	LR	19 21 31.3	
	comp=Z,124nm,19.2s,MS4.2,baz=33,slow=38						
SBF	Sospel	73.53	17	*e*P	P	18 46 49.5	-0.6
KIV	Kislovodsk	74.53	351	*e*P	P	18 46 56.4	+0.5
KIV				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
KIV	Kislovodsk	74.53	351	*e*P	P	18 46 55.7	-0.2
	comp=Z,12nm,0.7s,mb4.9						
PGF	Pioggiola	75.03	16	*e*P	P	18 46 58.9	+0.1
	comp=Z,43nm,1.0s,mb5.0						
ESDC	Sonseca Array	75.57	26	P	P	18 47 02.5	+0.5
	comp=Z,3.9nm,0.6s,mb4.5,baz=343,slow=5.7,SNR=17						
VTS	Vitosha	76.24	5	*e*P	P	18 47 06.0	+0.3
LSA	Lhasa	76.73	308	*e*P	P	18 47 09.8	+1.0
LSA	Lhasa	76.73	308	*e*P	P	18 47 09.6	+0.8
	comp=Z,7.6nm,0.7s,mb4.7						
KKB	Krupnik	76.96	5	*e*P	P	18 47 10.0	+0.2
SDV	Santo Domingo	77.13	95	P	P	18 47 11.6	+0.3
	comp=Z,6.1nm,0.8s,mb4.6,baz=11,slow=3.1,SNR=7.8						
SDV				LR	LR	19 22 30.0	
	comp=Z,132nm,21.6s,MS4.2,baz=359,slow=37						
SDV	Santo Domingo	77.13	95	*e*P	P	18 47 11.1	-0.2
	comp=Z,5.6nm,0.7s,mb4.6						
ROSC	El Rosal	78.88	100	LR	LR	19 26 09.3	
	comp=Z,64nm,18.6s,MS4.0,baz=360,slow=38						
BRTR	Keskin Array B	79.21	357	P	P	18 47 22.6	+0.4
	comp=Z,9.4nm,1.3s,mb4.6,baz=41,slow=2.3,SNR=6.9						
JIRN	Jiri	80.41	312	*e*P	P	18 47 28.8	-0.1
	comp=Z,12nm,0.3s,mb5.3						
KKN	Kakani	80.61	312	*e*P	P	18 47 29.5	-0.5
	comp=Z,15nm,0.8s,mb5.0						
GKN	Gorkha	80.65	313	*e*P	P	18 47 30.0	-0.1
	comp=Z,47nm,1.0s,mb5.4						
PKI	Pulchoki	80.77	312	*e*P	P	18 47 31.4	+0.6
	comp=Z,10nm,0.7s,mb4.9						
DMN	Daman	80.84	313	*e*P	P	18 47 31.3	+0.1
	comp=Z,19nm,0.7s,mb5.1						
KOLN	Koldanda	81.22	314	*e*P	P	18 47 32.8	-0.4
	comp=Z,11nm,0.7s,mb4.9						
CM31	Chiang Mai Arr	83.62	297	*e*P	P	18 47 45.4	-0.1
	comp=Z,2.7nm,0.6s,mb4.5						
CMAR	Chiang Mai Arr	83.62	297	*i* P	P	18 47 45.0	-0.5
CMAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	Chiang Mai Arr	83.62	297	P	P	18 47 45.0	-0.5
	comp=Z,4.6nm,1.0s,mb4.6,baz=7.0,slow=5.5,SNR=28						
CMAR				LR	LR	19 28 35.5	
	comp=Z,102nm,19.2s,MS4.2,baz=25,slow=38						
TBI	Tubuai	84.42	180	*e*LR	LR	19 13 48.4	
	comp=Z,131nm,33.5s						
SAML	Samuel	96.23	97	*e*P	P	18 48 44.2	-1.1
	comp=Z,2.7nm,0.8s,mb4.7						
PLCA	Paso Flores	120.15	120	PKP	PKPdf	18 54 06.5	+0.3
	comp=Z,1.3nm,0.8s,baz=335,slow=8.0,SNR=4.3						
PLCA	Paso Flores	120.15	120	PKP	PKPdf	18 54 06.5	+0.3
BOSA	Boshof	147.09	8	*e*PKPbc	PKPdf	18 54 59.8	+3.7
QSPA	South Pole Qui	151.18	180	⇑*i*P	PKPdf	18 55 08.8	+7.8

IDC ***16*** *18:39:42.2±3.0, 1.02N×125.08E, mb4.3/3, mb1 4.5/3, mb1mx3.9/15, mbtmp4.3/3, Error ellipse: s-maj=230.7km s-min=52.5km az=67.0*

NEIC ***16*** *18:39:47.0±1.0, 0.95N×124.82E, h45^{km}, mb4.2/6, Error ellipse: s-maj=39.7km s-min=14.7km az=68.0*

ISC 16 18:39:43.8±1.1, **1.0N**±0.2×**124.8E**±0.3, **h33**^{km}**, n10, σ0^{s}45**/10**, mb4.4**/6**, 1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	15.58	151	*e*P	P	18 43 22.1	-0.7
	4.9nm,0.8s						
FITZ	Fitzroy Crossi	18.98	178	*e*P	P	18 44 05.5	+0.1
	3.4nm,0.6s						
MBWA	Marble Bar	22.56	192	*e*P	P	18 44 42.2	-0.3
	15nm,1.0s,mb4.4						
WRAB	Tennant Creek	22.80	156	*e*P	P	18 44 44.5	-0.4
	21nm,0.9s,mb4.6						
WRA	Warramunga Arr	22.80	156	P	P	18 44 44.9	-0.2
	8.5nm,0.5s,mb4.4,baz=334,slow=9.8,SNR=78						
ASAR	Alice Springs	26.05	161	P	P	18 45 16.9	+0.6
	2.9nm,0.5s,mb4.0,baz=342,slow=7.8,SNR=58						
ASAR				PcP	PcP	18 48 46.5	+2.4
	1.4nm,0.5s,baz=349,slow=2.1,SNR=20						
ASPA	Alice Springs	26.05	161	*e*P	P	18 45 16.6	+0.4
ENH	Enshi	32.56	335	*e*P	P	18 46 14.2	-0.1
	3.3nm,0.5s,mb4.5						
STKA	Stephens Creek	36.35	155	⇑*i*P	P	18 46 47.7	+0.9
	1.4nm,0.4s,mb4.2						
STKA	Stephens Creek	36.35	155	P	P	18 46 47.0	+0.2
	2.4nm,0.7s,mb4.3,baz=330,slow=8.9,SNR=8.4						

NEIC 16 18:41:21.2, 61.30N×149.86W, h36^{km}**, ML3.9**(PMR)**, ML3.6**(AEIC)**, After AEIC., Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIB	Fire Island	0.20	228	P	P	18 41 28.1	0.0
RC01	Rabbit Creek A	0.22	164	P	P	18 41 27.8	-0.5
RC01				S	S	18 41 34.1	+0.8
PWA	Palmer West	0.35	359	P	P	18 41 28.6	-1.2
VOGL	Vogel Lake	0.41	222	P	P	18 41 30.8	+0.2
PMR	Palmer	0.46	50	P	P	18 41 29.7	-1.5
PMR				S	S	18 41 37.0	-1.2
GHO	Glory Hole Cre	0.65	43	P	P	18 41 32.5	-1.4
KNK	Knik Glacier	0.69	80	P	P	18 41 33.4	-1.1
SLKM	Skilak Lake	0.82	193	P	P	18 41 35.1	-1.1
MPA	Moose Pass	0.85	163	P	P	18 41 36.1	-0.7
PWL	Port Wells	0.87	120	P	P	18 41 36.1	-0.8
NKA	Nikishka	0.88	231	P	P	18 41 37.5	+0.5
SML	Sawmill	0.89	55	P	P	18 41 35.9	-1.4
SML				S	S	18 41 48.2	-0.9
STLK	Strandline Lak	0.97	283	P	P	18 41 37.5	-0.9
CUT	Chulitna	1.12	350	P	P	18 41 39.0	-1.5
CKN	Chakachatna No	1.12	267	P	P	18 41 39.7	-0.9
CP2	Crater Peak Tw	1.15	269	P	P	18 41 40.3	-0.7
BGL	Barrier Glacie	1.22	269	P	P	18 41 41.2	-0.8
SEW	Seward	1.22	170	P	P	18 41 40.6	-1.4
SCM	Sheep Creek Mo	1.32	65	P	P	18 41 42.8	-0.8
GLI	Glacier Island	1.41	106	P	P	18 41 43.6	-1.2
GLI				S	S	18 42 01.8	-0.6
DFR	Drift River	1.55	244	P	P	18 41 45.8	-1.0
JPK	Jack Peak	1.60	98	P	P	18 41 46.7	-0.8
JPK				S	S	18 42 06.7	-0.5
LTI	Latouche	1.61	141	P	P	18 41 45.5	-2.1
RDN	Redoubt North	1.62	242	P	P	18 41 46.7	-1.1
BRLK	Bradley Lake	1.63	199	P	P	18 41 46.6	-1.3
NCT	North Crescent	1.67	245	P	P	18 41 47.5	-1.0
VLZ	Valdez	1.72	94	P	P	18 41 48.0	-1.2
VLZ				S	S	18 42 09.8	-0.3
FID	Port Fidalgo	1.74	107	P	P	18 41 47.5	-1.9
HIN	Hinchinbrook I	1.88	117	P	P	18 41 49.9	-1.6
CNPM	China Poot	1.91	202	P	P	18 41 50.7	-1.2
ILIM	Iliamna	1.96	232	P	P	18 41 51.9	-0.6
DIV	Divide	1.99	93	P	P	18 41 51.6	-1.4
DIV				S	S	18 42 16.3	-0.6
INE	Iliamna NE	2.01	233	P	P	18 41 52.7	-0.6
ILW	Iliamna West	2.04	234	P	P	18 41 53.1	-0.6

EYAK	Cordova Ski Ar	2.15	109	P	P	18 41 55.2	-0.1
RND	Reindeer	2.16	12	P	P	18 41 54.4	-1.1
TRF	Thorofare Moun	2.16	355	P	P	18 41 54.4	-1.1
TRF				S	S	18 42 21.1	-0.3
TZL	Tazlina	2.24	69	P	P	18 41 55.9	-0.7
KTH	Kantishna Hill	2.31	348	P	P	18 41 57.1	-0.6
KTH				S	S	18 42 24.5	-0.6
OPT	Oil Point	2.35	227	P	P	18 41 57.9	-0.3
MCK	McKinley	2.48	10	P	P	18 41 59.6	-0.4
MCK				S	S	18 42 29.3	0.0
MID	Middleton Isla	2.57	136	*e*P	P	18 42 04.3	+3.0
PAX	Paxson	2.66	49	P	P	18 42 02.4	-0.2
RAGM	Ragged Mountai	2.70	108	P	P	18 42 01.1	-2.1
SVW2	Sparrevohn	2.78	268	P	P	18 42 02.5	-1.8
THY	Trims Highway	2.86	40	P	P	18 42 05.8	+0.3
GLB	Gilahina Butte	2.92	85	P	P	18 42 04.3	-1.9
TT01	Tatalina	3.31	302	P	P	18 42 09.8	-2.1
MENT	Mentasta	3.32	58	P	P	18 42 10.2	-1.8
CCB	Clear Creek Bu	3.48	15	P	P	18 42 12.3	-2.0
DOT	Dot Lake	3.58	46	P	P	18 42 15.1	-0.5
BALM	Baldy	3.65	91	P	P	18 42 14.5	-2.2
COLA	College	3.70	13	P	P	18 42 16.3	-1.1
KAHC	Katmai Hardscr	3.71	226	P	P	18 42 15.0	-2.6
MDM	Murphy Dome	3.74	11	P	P	18 42 16.3	-1.8
KDAK	Kodiak Island	3.79	203	P	P	18 42 16.0	-2.8
YAH	Yahtse	4.08	100	P	P	18 42 20.6	-2.3
BCA3	Beaver Creek A	4.18	61	P	P	18 42 22.3	-1.9
IM3	Indian Mountai	5.01	341	P	P	18 42 33.1	-2.9
IMA	Indian Mountai	5.08	342	*e*P	P	18 42 35.2	-1.7
DAWY	Dawson	5.56	56	P	P	18 42 41.1	-2.5
BM3	Burnt Mountain	6.55	18	P	P	18 42 55.6	-1.9
SIT	Sitka	8.59	113	P	P	18 43 20.6	-5.4
TNA	Tin City	9.13	306	*e*P	P	18 43 30.4	-3.1
INK	Inuvik	9.86	38	*e*P	P	18 43 38.5	-4.8

*CSEM **16** 18:43:04.2±0.3, 37.86N×1.83W, h2^{km}, ML2.8/3, Error ellipse: s-maj=8.0km s-min=4.6km az=156.0*

MDD 16 18:43:03.9±0.3**, 37.86N×1.80W, mbLg2.0**/12**, 1C, Error ellipse: s-maj=4.2km s-min=1.8km az=3.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMUR	La Murta	0.44	91	⇑Pg	Pg	18 43 11.6	-1.1
	5.3nm,0.1s,SNR=18						
EMUR				Lg		18 43 18.2	
	133nm,0.4s,SNR=34						
EMUR	La Murta	0.44	91	Pg	Pg	18 43 11.6	-1.1
	5.3nm,0.1s,SNR=18						
EMUR				Lg		18 43 18.2	
	133nm,0.4s,SNR=34						
ETOB	Tobarra	0.81	14	Pg	Pg	18 43 19.0	-1.1
	12nm,0.1s,SNR=63						
ETOB				Lg		18 43 30.4	
	14nm,0.1s,SNR=10						
ETOB	Tobarra	0.81	14	Pg	Pg	18 43 19.0	-1.1
	12nm,0.1s,SNR=63						
EVIA	Vianos	0.96	325	Pg	Pg	18 43 21.4	-1.6
	14nm,0.3s,SNR=13						
EVIA				Lg		18 43 35.6	
	31nm,0.4s,SNR=9.1						
EQES	Quesada	1.01	267	Pg	Pg	18 43 22.3	-1.7
	6.1nm,0.1s,SNR=28						
EQES				Lg		18 43 36.6	
	23nm,0.2s,SNR=12						
EQES	Quesada	1.01	267	Pg	Pg	18 43 22.3	-1.7
	6.1nm,0.1s,SNR=28						
EBER	Berja	1.29	223	Pg	Pg	18 43 27.9	-1.7
	1.1nm,0.2s,SNR=69						
EBER				Lg		18 43 45.8	
	10nm,0.4s,SNR=6.3						
EBER	Berja	1.29	223	Pg	Pg	18 43 27.9	-1.7
	1.1nm,0.2s,SNR=69						
EBEN	Beniarda	1.50	55	Pg	Pg	18 43 31.4	-2.4
	0.5nm,0.1s,SNR=7.9						
EBEN				Lg		18 43 51.5	
	4.5nm,0.3s,SNR=4.0						
EBEN	Beniarda	1.50	55	Pg	Pg	18 43 31.4	-2.4
	0.5nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	1.52	248	Pg	Pg	18 43 32.2	-2.0
	2.8nm,0.1s,SNR=6.2						
ECOG				Lg		18 43 54.1	
	9.7nm,0.3s,SNR=10						
EBAN	Banos Encina	1.60	282	Pg	Pg	18 43 32.6	-3.2
	6.2nm,0.2s,SNR=13						
EBAN				Lg		18 43 53.9	
	8.7nm,0.2s,SNR=13						
ERON	Agron	1.80	243	Pg	Pg	18 43 37.6	-2.3
	2.0nm,0.2s,SNR=4.0						
ERON				Lg		18 44 01.9	
	2.5nm,0.2s,SNR=4.0						
ELUQ	Luque	1.98	262	Pg	Pg	18 43 39.1	-4.3
	3.1nm,0.3s,SNR=7.9						
ELUQ				Sn	Sn	18 44 03.0	-1.8
	1.5nm,0.2s,SNR=7.9						
ELUQ				Lg		18 44 07.0	
	7.0nm,0.4s,SNR=7.9						
EADA	Adamuz	2.22	279	Pn	Pn	18 43 40.0	-2.4
	1.8nm,0.2s,SNR=7.9						
EADA				Sn	Sn	18 44 07.7	-3.2
	5.7nm,0.1s,SNR=7.9						
EADA				Lg		18 44 14.5	
	5.0nm,0.1s,SNR=5.9						
EADA	Adamuz	2.22	279	Pn	Pn	18 43 40.0	-2.4
	1.8nm,0.2s,SNR=7.9						
EADA				Sn	Sn	18 44 07.7	-3.2
	5.7nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	2.48	318	Pn	Pn	18 43 43.8	-2.4
	0.5nm,0.3s,baz=29,slow=14,SNR=4.0						
ESDC				Pg	Pg	18 43 49.4	-4.0
	1.3nm,0.3s,baz=130,slow=17,SNR=9.8						
ESDC				Lg		18 44 21.0	
	2.7nm,0.3s,baz=91,slow=38,SNR=19						
ESDC	Sonseca Array	2.48	318	Pn	Pn	18 43 43.8	-2.4
	0.5nm,0.3s,baz=29,slow=14,SNR=4.0						
ESDC	Sonseca Array	2.48	318	Pg	Pg	18 43 49.4	-4.0
	1.3nm,0.3s,baz=130,SNR=9.8						
EMIN	Mina Concepcio	3.86	270	Pn	Pn	18 44 03.7	-2.1
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	18 44 46.4	-6.1
	1.2nm,0.2s,SNR=7.9						
EMIN				Lg		18 45 04.6	
	2.5nm,0.3s,SNR=4.0						
EMIN	Mina Concepcio	3.86	270	Pn	Pn	18 44 03.7	-2.1
	0.4nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	18 44 46.4	-6.1
	1.2nm,0.2s,SNR=7.9						

IGQ 16 18:43:10.1, 1.12S×81.49W, h12^{km}±8^{km}, mb4.1, Error ellipse: s-maj=10.8km s-min=8.3km az=144.8, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.94	86	P	Pb	18 43 25.9	-1.9
IGUA	Igualata	2.87	97	P	Pn	18 43 58.5	+1.9
IGUA				S	Sn	18 44 32.4	+1.1
JUA2	San Juan 2	3.02	73	P	Pn	18 43 59.6	+0.9
TERV	Terraza Guagua	3.03	72	P	Pn	18 43 59.5	+0.7
YANA	Yana	3.08	71	P	Pn	18 44 00.0	+0.5
YANA				S	Sn	18 44 35.2	-1.5
ULBA	Ulba	3.10	96	P	Pn	18 44 01.3	+1.6
PISA	Pisayambo	3.10	89	P	Pn	18 44 02.5	+2.7
VC1	Cotopaxi 1	3.12	81	P	Pn	18 44 02.6	+2.5
VC1				S	Sn	18 44 44.4	+6.8
TAMB	Tambo	3.15	82	P	Pn	18 44 03.1	+2.7
ANTI	Antisana	3.39	79	P	Pn	18 44 06.1	+2.2
COTA	Cotacachi	3.46	65	P	Pn	18 44 06.0	+1.0
CAYR	Refugio Cayamb	3.66	72	P	Pn	18 44 10.3	+2.5
CAYR				S	Sn	18 44 53.0	+1.8
CAYA	Cayambe	3.69	71	P	Pn	18 44 10.5	+2.3
ECEN	Cerro Negro	4.01	61	P	Pn	18 44 14.7	+2.0

*IDC **16** 18:53:10.7±5.0, 19.04N×39.17E, mb3.7/6, mb1 3.9/6, mb1mx3.7/17, mbtmp3.8/6, MS3.5/3, Ms1 3.5/3, ms1mx3.0/26, Error ellipse: s-maj=114.2km s-min=31.0km az=33.0*

*SNSN **16** 18:53:12.6, 19.37N×39.34E, h13^{km}, Ml3.2*

ISC 16 18:53:11.5±1.1**, 19.4N**±0.1×**39.30E**±0.08**, h10^{km}, n15,** σ**1^{s}00**/13**, mb3.7**/5**, MS3.3**/2**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTHS	Al Lith	1.39	48	P	Pn	18 53 36.9	-0.2
BLJS	Baljurashi	2.23	76	P	Pn	18 53 48.8	-0.2
BLJS				S	Sn	18 54 17.2	+0.3
FRSS	Farasan al Kab	3.73	134	P	Pn	18 54 09.7	-0.7
TATS	Tathlith	3.94	87	P	Pn	18 54 13.1	-0.3
UMJS	Umm Lajj	6.14	343	P	Pn	18 54 42.7	-1.9
KBRS	Khaybar	6.41	360	P	Pn	18 54 48.0	-0.4
ASF	Jabal al Asfar	12.95	351	LR	LR	19 00 56.4	
	comp=Z,163nm,18.1s,baz=236,slow=35						
KMBO	Kilima Mbogo	20.45	186	LR	LR	19 05 29.2	
	comp=Z,157nm,18.4s,MS3.4,baz=277,slow=37						
BRTR	Keskin Array B	20.89	348	P	P	18 57 59.4	+3.0
	2.5nm,0.7s,baz=166,slow=14,SNR=11						
GNI	Garni	21.25	12	LR	LR	19 07 01.3	
	comp=Z,106nm,18.5s,MS3.3,baz=199,slow=38						
AKASG	Malin Array Be	32.29	348	P	P	18 59 41.7	-0.9
	0.5nm,0.6s,mb3.6,baz=171,slow=7.1,SNR=4.8						
GERES	GERESS Array B	35.93	331	P	P	19 00 15.0	+1.1
	0.7nm,0.9s,mb3.6,baz=135,slow=7.5,SNR=4.0						
ZAL	Zalesovo	48.93	34	P	P	19 02 01.2	+1.6
	1.3nm,0.3s,mb4.4,baz=224,slow=2.6,SNR=7.7						
CMAR	Chiang Mai Arr	56.18	80	P	P	19 02 54.5	+0.4
	0.4nm,0.8s,mb3.5,baz=270,slow=7.1,SNR=4.6						
SONM	Songino Array	60.59	45	P	P	19 03 24.5	-0.2
	0.2nm,0.6s,mb3.5,baz=281,slow=6.3,SNR=4.8						

IDC 16 18:54:54.1±2.8**, 58.08N×35.41W, mb3.6**/2**, mb1 3.8**/4**, mb1mx3.4**/24**, mbtmp3.8**/4**, ML2.5**/2**, Error ellipse: s-maj=150.8km s-min=29.8km az=3.0, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRB	Frobisher Bay	16.93	303	Pn	P	18 58 49.1	-4.4
	0.1nm,0.3s,baz=59,slow=5.0,SNR=3.0						
SCHQ	Schefferville	17.58	273	P	P	18 59 00.1	-1.7
	0.1nm,0.3s,baz=66,slow=12,SNR=3.6						
AKASG	Malin Array Be	37.01	73	P	P	19 02 05.8	-1.0
	0.6nm,0.6s,baz=300,slow=8.1,SNR=4.1						
BRTR	Keskin Array B	46.70	82	P	P	19 03 22.9	-3.2
	1.1nm,1.0s,baz=322,slow=4.7,SNR=3.7						
ASAR	Alice Springs	144.77	17	PKP	PKPdf	19 14 33.5	-0.8
	0.9nm,0.6s,baz=350,slow=2.5,SNR=16						

*IDC **16** 19:19:11.2±3.6, 55.88N×152.85W, mb3.4/2, mb1 3.7/3, mb1mx3.5/20, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=68.8km s-min=32.3km az=152.0*

*NEIC **16** 19:19:18.2, 56.71N×152.83W, h27^{km}, ML3.2(AEIC), After AEIC.*

ISC 16 19:19:13.2±2.5**, 56.67N**±0.09×**152.6W**±0.1**, h6^{km}**±19^{km}**, n24,** σ**0^{s}64**/27**, mb4.1**/1**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	1.11	1	P	Pb	19 19 36.2	+1.7
KDAK				S	Sb	19 19 48.9	-0.2
SYI	Shuyak Island	1.95	4	P	Pn	19 19 48.1	+0.9
CAHL	Cahill	2.00	315	P	Pn	19 19 47.5	-0.5
CAHL				S	Sn	19 20 13.7	+0.1
KAWH	Katmai	2.08	327	P	Pn	19 19 48.4	-0.6
KJL	Kejulik	2.11	312	P	Pn	19 19 49.4	-0.2
KJL				S	Sn	19 20 16.5	+0.1
KAPH	Katmai Pasha	2.14	335	P	Pn	19 19 50.3	+0.4
KAIC	Katmai Ikaglui	2.23	325	P	Pn	19 19 52.0	+0.7
KAHC	Katmai Hardscr	2.36	328	P	Pn	19 19 53.1	0.0
MCNL	McNeil River	2.68	341	P	Pn	19 19 58.0	+0.3
BRLK	Bradley Lake	3.24	16	P	Pn	19 20 05.6	0.0
INE	Iliamna NE	3.41	356	P	Pn	19 20 08.4	+0.4
ILW	Iliamna West	3.41	356	P	Pn	19 20 08.1	0.0
ILIM	Iliamna	3.42	357	P	Pn	19 20 08.5	+0.3
RSO	Redoubt South	3.80	359	*e*P	Pn	19 20 13.7	+0.1
RDN	Redoubt North	3.85	359	P	Pn	19 20 13.8	-0.5
NCT	North Crescent	3.91	358	P	Pn	19 20 14.9	-0.2
LTI	Latouche	4.21	35	P	Pn	19 20 18.8	-0.7
SPU	Mount Spurr	4.53	4	*e*P	Pn	19 20 23.8	-0.2
RC01	Rabbit Creek A	4.68	18	P	Pn	19 20 25.1	-1.0
PWL	Port Wells	4.76	26	P	Pn	19 20 26.5	-0.7
STLK	Strandline Lak	4.86	5	P	Pn	19 20 27.7	-0.9
ILAR	Eielson Array	8.60	17	Pn	P	19 21 21.1	0.0
	0.5nm,0.3s,baz=204,slow=14,SNR=27						
YKA	Yellowknife Ar	19.88	57	P	P	19 23 49.4	+1.6
	0.2nm,0.5s,baz=270,slow=9.8,SNR=5.9						
SONM	Songino Array	56.95	308	P	P	19 29 00.8	-0.4
	1.4nm,0.8s,mb4.1,baz=40,slow=7.3,SNR=11						

*NEIC **16** 19:35:50.5, 19.31N×67.13W, h55^{km}, MD3.6(RSPR), After RSPR.*

RSPR 16 19:35:50.5, 19.31N×67.13W, h55^{km}±14^{km}**, MD3.6**/11**, MD3.6**/11**, 10C-1D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	1.02	159	⇑*e*P	P	19 36 07.1	-1.8
LRS	Lares	1.04	165	⇑*e*P	P	19 36 07.4	-1.8
LRS				*e*S	S	19 36 21.4	-1.6
LSP	Las Mesas	1.12	178	⇑*e*P	P	19 36 08.3	-2.0
LSP				*e*S	S	19 36 24.2	-0.7
MGP	Maguayo	1.29	178	⇑*e*P	P	19 36 11.3	-1.4
MGP				*e*S	S	19 36 28.0	-1.2
PORP	Portuguez	1.33	159	⇓*e*P	P	19 36 12.2	-1.1
PORP				*e*S	S	19 36 28.8	-1.4
CELP	Cerrillos	1.33	157	⇑*e*P	P	19 36 11.8	-1.5
CELP				*e*S	S	19 36 28.9	-1.3
OBIP	Obispado Ponce	1.35	158	⇑*e*P	P	19 36 12.8	-0.8
OBIP				*e*S	S	19 36 28.5	-2.2
CSB	Colonia Sabana	1.37	138	⇑*e*P	P	19 36 13.0	-0.9
SJG	San Juan	1.51	142	*e*P	P	19 36 14.4	-1.3
CBYP	Canovanas	1.58	130	⇑*e*P	P	19 36 16.3	-0.6
HUMP	Col San Antoni	1.67	134	⇑*e*P	P	19 36 17.4	-0.7
HUMP				*e*S	S	19 36 36.5	-2.0
MTP	Monte Pirata	1.92	129	⇑*e*P	P	19 36 20.2	-1.2
MTP				*e*S	S	19 36 42.6	-1.7

IGQ 16 19:38:53.6, 1.00S×81.50W, h12^{km}±4^{km}, mb4.4, 1C-4D, Error ellipse: s-maj=5.0km s-min=3.0km az=3.1, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.95	93	⇑P	Pb	19 39 09.9	-1.6
SALI	Salinas	1.28	157	P	Pb	19 39 17.8	+0.7
SALI				S	Sb	19 39 37.9	+4.6
IGUA	Igualata	2.90	100	P	Pn	19 39 41.5	+1.0
IGUA				S	Sn	19 40 13.1	-2.5
JUA2	San Juan 2	3.00	75	P	Pn	19 39 43.2	+1.3
JUA2				S	Sn	19 40 17.2	-0.8
TERV	Terraza Guagua	3.01	74	⇓P	Pn	19 39 43.8	+1.8
PINO	Pino	3.01	74	P	Pn	19 39 43.6	+1.6
PINO				S	Sn	19 40 18.8	+0.4
NAS1	Nasa	3.04	83	P	Pn	19 39 44.4	+1.9
CUSU	Cusua	3.05	98	P	Pn	19 39 45.0	+2.4
YANA	Yana	3.06	73	P	Pn	19 39 43.8	+1.1
JUIV	Juive	3.06	98	P	Pn	19 39 44.3	+1.5
ARRY	Arrayan	3.08	99	P	Pn	19 39 44.1	+1.0
ARRY				S	Sn	19 40 18.4	-1.8
PISA	Pisayambo	3.11	91	P	Pn	19 39 45.1	+1.6
PISA				S	Sn	19 40 22.2	+1.3
VC1	Cotopaxi 1	3.12	83	P	Pn	19 39 46.4	+2.9
ULBA	Ulba	3.12	98	P	Pn	19 39 44.9	+1.3
ULBA				S	Sn	19 40 20.9	-0.3
TAMB	Tambo	3.15	84	P	Pn	19 39 46.0	+2.0
TAMB				S	Sn	19 40 27.1	+5.3
ANTI	Antisana	3.38	81	⇓P	Pn	19 39 49.8	+2.4
ANTI				S	Sn	19 40 29.8	+2.0
COTA	Cotacachi	3.43	67	P	Pn	19 39 49.8	+1.8
COTA				S	Sn	19 40 30.0	+1.1
CAYR	Refugio Cayamb	3.64	74	⇓P	Pn	19 39 54.6	+3.7
CAYR				S	Sn	19 40 35.8	+1.6
ELAGU	Cayambe Volc	3.64	74	P	Pn	19 39 54.5	+3.5
CAYA	Cayambe	3.67	73	⇓P	Pn	19 39 54.8	+3.4
CAYA				S	Sn	19 40 38.3	+3.2
CONE	Cono NE Rev Vo	3.97	76	P	Pn	19 40 02.7	+7.1
ECEN	Cerro Negro	3.97	63	P	Pn	19 39 58.5	+2.8
ECEN				S	Sn	19 40 41.8	-0.8

*NEIC **16** 20:04:03.7±2.1, 35.81N×70.33E, h10^{km}, Error ellipse: s-maj=40.8km s-min=12.0km az=63.0*

*IDC **16** 20:04:03.6±3.0, 35.99N×70.90E, mb3.5/3, mb1 3.8/3, mb1mx3.4/19, mbtmp3.5/3, Error ellipse: s-maj=114.5km s-min=40.1km az=79.0*

ISC 16 20:04:22.3±1.8**, 36.4N**±0.1×**72.2E**±0.2**, h134^{km}**±14^{km}**, n16,** σ**0^{s}66**/22**, mb2.9**/2**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.85	11	P	P	20 05 47.4	-0.4
	SNR=40						
KZA	Kyzart	6.15	22	P	P	20 05 53.3	+1.5
	SNR=6.8						
SDNR	Sundarnagar	6.27	140	*e*PN	P	20 06 09.2	+16
SDNR				*e*SN	S	20 07 03.8	-0.5
EKS2	Erkin-Say	6.38	10	P	P	20 05 54.3	-0.7
	SNR=5.4						
AAK	Ala-Archa	6.48	15	P	P	20 05 56.8	+0.5
	SNR=5.6						
AAK	Ala-Archa	6.48	15	*e*P	P	20 05 55.7	-0.7
	3.3nm,0.3s						
USP	Ospenovka	7.09	14	P	P	20 06 04.4	-0.3
	SNR=5.3						
KOLN	Koldanda	12.91	129	*e*P	P	20 07 21.3	-0.4
KOLN				*e*S	S	20 09 43.5	+0.9
GKN	Gorkha	13.42	125	*e*P	P	20 07 28.2	0.0
	3.1nm,0.3s						
GKN				*e*S	S	20 09 52.9	-1.6
KKN	Kakani	13.99	124	*e*P	P	20 07 36.3	+0.8
	4.0nm,0.5s						
KKN				*e*S	S	20 10 07.9	+0.2
DMN	Daman	13.99	125	*e*P	P	20 07 36.1	+0.5
	3.0nm,0.3s						
DMN				*e*S	S	20 10 07.4	-0.4
PKI	Pulchoki	14.22	124	*e*P	P	20 07 38.4	-0.1
	3.6nm,0.4s						
PKI				*e*S	S	20 10 13.4	+0.4
JIRN	Jiri	14.69	122	*e*P	P	20 07 44.8	+0.4
	4.7nm,0.3s						
ZAL	Zalesovo	19.61	23	P	P	20 08 42.0	-0.1
	1.6nm,0.3s,baz=215,slow=6.5,SNR=6.2						
WRA	Warramunga Arr	81.10	123	P	P	20 16 24.7	+0.5
	0.2nm,0.5s,mb3.0,baz=324,slow=5.1,SNR=9.1						
YKA	Yellowknife Ar	81.31	3	P	P	20 16 23.8	-0.6
	0.1nm,0.4s,mb2.8,baz=355,slow=5.0,SNR=4.5						

IGQ 16 20:10:45.7, 1.46S×81.02W, h20^{km}±5^{km}, mb4.2, Error ellipse: s-maj=9.6km s-min=2.7km az=12.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.62	49	P	Pb	20 10 57.4	-0.4
SALI	Salinas	0.72	178	P	Pb	20 10 59.1	-0.3
SALI				S	Sb	20 11 09.1	+0.2
IGUA	Igualata	2.38	91	P	Pn	20 11 24.8	+0.4
IGUA				S	Sn	20 11 56.2	+2.9
ARRY	Arrayan	2.56	91	P	Pn	20 11 27.4	+0.4
ULBA	Ulba	2.61	90	P	Pn	20 11 28.8	+1.1
PISA	Pisayambo	2.66	81	P	Pn	20 11 30.3	+1.9
NAS1	Nasa	2.67	72	P	Pn	20 11 31.4	+2.8
JUA2	San Juan 2	2.71	63	P	Pn	20 11 30.1	+1.0
VC1	Cotopaxi 1	2.74	73	P	Pn	20 11 33.0	+3.5
TAMB	Tambo	2.76	74	P	Pn	20 11 33.0	+3.2
YANA	Yana	2.79	61	P	Pn	20 11 31.3	+1.1
ANTI	Antisana	3.03	71	P	Pn	20 11 36.1	+2.5
COTA	Cotacachi	3.22	56	P	Pn	20 11 38.3	+1.9
ELAGU	Cayambe Volc	3.35	65	P	Pn	20 11 42.5	+4.3
CAYR	Refugio Cayamb	3.35	64	P	Pn	20 11 41.4	+3.2
CAYA	Cayambe	3.39	63	P	Pn	20 11 41.9	+3.1
ECEN	Cerro Negro	3.80	53	P	Pn	20 11 46.7	+2.1

IGQ 16 20:18:41.0, 1.14S×81.34W, h8^{km}±5^{km}, mb4.1, 1D, Error ellipse: s-maj=8.8km s-min=3.0km az=36.8, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.80	84	⇓P	Pb	20 18 55.6	-1.0
HOJA				S	Sb	20 19 06.5	-0.8
SALI	Salinas	1.10	162	P	Pb	20 19 01.7	-0.1
SALI				S	Sb	20 19 19.0	+2.8
IGUA	Igualata	2.72	97	P	Pn	20 19 26.8	+1.0
PINO	Pino	2.90	70	P	Pn	20 19 28.9	+0.6
NAS1	Nasa	2.90	80	P	Pn	20 19 30.8	+2.4
ARRY	Arrayan	2.91	97	P	Pn	20 19 29.6	+1.1
PISA	Pisayambo	2.95	89	P	Pn	20 19 31.4	+2.3
VC1	Cotopaxi 1	2.98	81	P	Pn	20 19 32.2	+2.8
ANTI	Antisana	3.25	78	P	Pn	20 19 35.7	+2.4
CAYR	Refugio Cayamb	3.52	71	P	Pn	20 19 40.2	+3.1
CAYA	Cayambe	3.56	70	P	Pn	20 19 40.5	+2.9

*IDC **16** 20:27:51.9±0.4, 35.61S×16.56W, mb4.9/30, mb1 5.0/30, mb1mx4.9/32, mbtmp4.9/30, MS6.2/19, Ms1 6.1/19, ms1mx5.9/23, Error ellipse: s-maj=11.8km s-min=8.7km az=3.0*

*BJI **16** 20:27:52.4, 36.30S×16.60W, h10^{km}, mB6.0, Ms6.6, Msz6.5*

*NEIC **16** 20:27:52.5±0.3, 36.32S×16.56W, h10^{km}, mb6.0/122, ME6.7, MS6.1/120, MW6.5, Error ellipse: s-maj=11.3km s-min=8.8km az=169.0 Broadband fault plane solution: P waves. NP1:ϕ_s255°, δ88°, λ5°. NP2:ϕ_s165°, δ85°, λ178°. Principal axes: T Plg5°, Azm120°; N Plg0°, Azm0°; P Plg2°, Azm30°; Moment Tensor Solution. s23 Moment tensor: Scale 10^{18} Nm; M_{rr}0.02; $M_{\theta\theta}$-1.89; $M_{\phi\phi}$1.87; $M_{r\theta}$0.09; $M_{\theta\phi}$5.65; $M_{\phi r}$0.03; Best double couple: $M_0$6×10^{18} NP1: ϕ_s351°, δ89°, λ180°. NP2:ϕ_s81°, δ90°, λ1°. Principal axes: T 5.95, Plg1°, Azm306°; N .02, Plg89°, Azm89°; P -5.97, Plg1°, Azm216°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*HRVD **16** 20:27:52.5±0.1, 35.39S×16.00W, h13^{km}, MW6.6/83, Centroid moment Tensor Solution. LP body waves: s82,c190;Mantle waves: s83,c374; Half duration: 5^{s}0 Moment tensor: Scale 10^{19}Nm; M_{rr}0.03±.01; $M_{\theta\theta}$-0.47±.01; $M_{\phi\phi}$0.44±.00; $M_{r\theta}$0.09±.01; $M_{\theta\phi}$0.89±.00; $M_{\phi r}$0.05±.01; Best double couple: $M_0$1.007×10^{19} NP1: ϕ_s346°, δ85°, λ178°. NP2:ϕ_s77°, δ88°, λ5°. Principal axes: T .995, Plg5°, Azm302°; N .024, Plg84°, Azm96°; P -1.019, Plg3°, Azm211°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **16** 20:27:53.1±1.2, 35.70S×17.06W, h10^{km}, mb6.3/73, MS6.2/48 Error ellipse: s-maj=16.6km s-min=4.8km az=76.4*

*BGS **16** 20:27:54.6, 36.32S×16.56W, h10^{km}, mb5.6*

ISC 16 20:27:53.8±0.3**, 35.79S**±0.06×**16.43W**±0.06**, h10^{km}, (h20^{km}**±1.2^{km}**:pP-P), n789,** σ**1^{s}37**/597**, mb5.7**/164**, MS6.2**/156**, 54C-19D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIS	Tristan da Cun	3.56	112	*e*P	Pn	20 28 45.5	-4.7
SHEL	Horse Pasture	21.93	29	P	P	20 32 43.7	-5.6
	6μm,1.0s,SNR=22						
CAM3	Guarapari	25.89	299	*e*P	P	20 33 21.6	-6.0
CAM3				*e*		20 33 29.2	
CAM3				*i*		20 33 39.3	
CAM3				*i*		20 33 54.2	
CAM3				*i*		20 34 06.7	
CAM3				*i*		20 34 10.3	
CAM4	Nova Friburgo	26.38	293	*e*P	P	20 33 30.2	-1.9
CAM4				*e*		20 33 35.3	
CAM4				*e*		20 34 08.4	
CAM4				*i*		20 34 17.4	
SUR	Sutherland	30.91	95	P	P	20 34 10.5	-2.3
	80nm,1.0s,mb5.5,baz=250,slow=8.4,SNR=36						
SUR				S	S	20 39 18.5	+2.8
	12nm,1.0s,baz=272,slow=7.7,SNR=1.5						
SUR				LR	LR	20 43 39.5	
	comp=Z,106μm,20.4s,MS6.5,baz=250,slow=30						
SUR	Sutherland	30.91	95	*e*P	P	20 34 10.4	-2.4
	311nm,1.3s,mb6.0						
SUR				LR	LR		
	comp=Z,26μm,20.0s,MS5.9						
LPA	La Plata	33.68	259	*ce*P	P	20 34 32.0	-5.0

LPA				*e*pP	pP	20 34 38.0	-1.9
LPA				*e*sP	sP	20 34 43.0	+1.8
LPA				*e*PP	PP	20 35 49.0	-0.7
LPA				*e*PP	PP	20 35 54.0	+4.3
	comp=Z,28µm,20.0s						
TSUM	**Tsumeb**	**34.19**	**70**	P	**P**	**20 34 37.2**	**-4.2**
	comp=Z,49nm,1.1s,mb5.3,baz=228,slow=9.2,SNR=22						
TSUM				S	**S**	**20 40 07.1**	**+0.3**
	comp=Z,7.1nm,1.1s,baz=196,slow=14,SNR=1.5						
TSUM				LR	LR	20 45 16.6	
	comp=Z,44µm,19.7s,MS6.2,baz=225,slow=30						
TSUM	**Tsumeb**	**34.19**	**70**	*e*P	**P**	**20 34 36.5**	**-5.0**
	comp=Z,255nm,1.5s,mb5.9						
TSUM				LR	LR		
	comp=Z,35µm,19.0s,MS6.1						
BAO	**Brasilia Array**	**34.57**	**297**	*e*P	**P**	**20 34 39.1**	**-5.7**
BAO				*i*		20 34 49.0	
BAO				*i*		20 34 54.2	
BAO				*i*		20 35 57.0	
BAO				*i*		20 36 04.1	
BDFB	**Brasilia**	**34.59**	**297**	P	**P**	**20 34 39.7**	**-5.3**
	comp=Z,12nm,0.9s,mb4.8,baz=117,slow=6.9,SNR=12						
BDFB				S	**S**	**20 40 11.9**	**-1.1**
	comp=Z,15nm,0.7s,baz=103,slow=9.4,SNR=1.1						
BDFB				LR	LR	20 46 33.8	
	comp=Z,88µm,19.7s,MS6.5,baz=134,slow=33						
RCBR	**Riachuelo**	**34.78**	**324**	*e*P	**P**	**20 34 41.3**	**-5.4**
	comp=Z,124nm,1.1s,mb5.8						
RCBR				LR	LR		
	comp=Z,35µm,19.0s,MS6.1						
VNA1	**Neumayer--Stat**	**35.20**	**175**	⇑*i*P	**P**	**20 34 54.6**	**+5.0**
VNA2	**Neumayer--Watz**	**35.53**	**175**	⇑*i*P	**P**	**20 34 59.1**	**+6.7**
VNA2	**Neumayer--Watz**	**35.53**	**175**	⇑*i*	pP	20 35 01.4	+6.0
VNA2	**Neumayer--Watz**	**35.53**	**175**		sP	20 35 05.5	+8.8
VNA3	**Neumayer Olymp**	**35.70**	**176**	⇑*i*P	pP	20 35 02.6	+5.7
VNA3	**Neumayer Olymp**	**35.70**	**176**	⇓*i*	sP	20 35 08.0	+10
BOSA	**Boshof**	**35.79**	**90**	P	**P**	**20 34 51.5**	**-3.6**
BOSA				P		20 35 01.6	
BOSA				PnPn		20 36 12.0	
BOSA				S	**S**	**20 40 27.8**	**-3.8**
BOSA	**Boshof**	**35.79**	**90**	*e*P	**P**	**20 34 51.0**	**-4.1**
	comp=Z,254nm,1.2s,mb6.0						
BOSA				LR	LR		
	comp=Z,99µm,20.0s,MS6.6						
SNAA	**Sanae**	**36.64**	**173**	⇑*i*P	**P**	**20 35 08.1**	**+6.2**
SNAA	**Sanae**	**36.64**	**173**	⇑*i*	sP	20 35 13.9	+7.8
SNAA	**Sanae**	**36.64**	**173**	*e*P	**P**	**20 35 03.8**	**+1.9**
SNAA				pmax	pmax		
	comp=Z,1µm,1.1s						
SNAA	**Sanae**	**36.64**	**173**	P	**P**	**20 35 03.0**	**+1.1**
	comp=Z,3.4nm,1.0s,baz=317,slow=9.4,SNR=3.2						
SNAA				S	**S**	**20 40 51.6**	**+7.4**
	comp=Z,2.0nm,1.0s,baz=90,slow=17,SNR=2.0						
SNAA				LR	LR	20 47 24.9	
	comp=Z,4µm,18.5s,MS5.2,baz=348,slow=32						
SNAA	**Sanae**	**36.64**	**173**	*e*P	**P**	**20 35 03.8**	**+2.0**
	comp=Z,1µm,1.1s,mb6.7						
SNAA				⇑*i*P	pP	20 35 08.1	+3.3
LBTB	**Lobatse**	**37.55**	**85**	*e*P	**P**	**20 35 06.6**	**-3.4**
LBTB				pmax	pmax		
	comp=Z,230nm,1.1s,mb5.8						
LBTB				MLR	MLR		
	comp=Z,79µm,20.0s,MS6.5						
LBTB	**Lobatse**	**37.55**	**85**	P	**P**	**20 35 07.1**	**-2.9**
	comp=Z,56nm,1.0s,mb5.3,baz=256,slow=9.2,SNR=77						
LBTB				S	**S**	**20 41 05.2**	**+6.5**
	comp=Z,3.8nm,1.1s,baz=281,slow=13,SNR=1.8						
LBTB				LR	LR	20 47 22.6	
	comp=Z,87µm,20.5s,MS6.5,baz=255,slow=31						
LBTB	**Lobatse**	**37.55**	**85**	*e*P	**P**	**20 35 06.6**	**-3.4**
	comp=Z,235nm,1.2s,mb5.8						
LBTB				LR	LR		
	comp=Z,79µm,20.0s,MS6.5						
NVL	**N'lazarevskaya**	**38.13**	**165**	⇑*e*P	**P**	**20 35 26.0**	**+12**
NVL				*e*		20 37 29.0	
NVL				*e*S	**S**	**20 41 18.0**	**+11**
NVL				pmax	pmax		
	comp=Z,2µm,4.6s						
USHA	**Ushuaia**	**40.14**	**225**	P	**P**	**20 35 29.8**	**-1.5**
	comp=Z,21nm,1.2s,mb4.7,baz=66,slow=10.0,SNR=2.2						
USHA				S	**S**	**20 41 44.1**	**+6.6**
	comp=Z,3.5nm,0.5s,baz=23,slow=1.2,SNR=3.5						
USHA				LR	LR	20 50 31.6	
	comp=Z,28µm,20.4s,MS6.1,baz=64,slow=34						
PMSA	**Palmer Station**	**40.45**	**209**	P	**P**	**20 35 35.6**	**+1.9**
	comp=Z,249nm,1.2s,mb5.8						
PLCA	**Paso Flores**	**42.22**	**246**	*e*P	**P**	**20 35 49.1**	**+0.7**
PLCA				pmax	pmax		
	comp=Z,200nm,1.4s						
PLCA	**Paso Flores**	**42.22**	**246**	P	**P**	**20 35 49.4**	**+0.9**
	comp=Z,12nm,1.0s,baz=98,slow=5.2,SNR=12						
PLCA				LR	LR	20 51 36.1	
	comp=Z,25µm,19.0s,MS6.1,baz=99,slow=34						
PLCA	**Paso Flores**	**42.22**	**246**	*e*P	**P**	**20 35 49.1**	**+0.6**
	comp=Z,204nm,1.4s,mb5.6						
COYC	**Coyhaique**	**42.55**	**239**	*e*P	**P**	**20 35 54.4**	**+3.3**
DBIC	**Dimbokro**	**43.62**	**17**	P	**P**	**20 35 54.0**	**-6.2**
DBIC	**Dimbokro**	**43.62**	**17**	P	**P**	**20 35 54.2**	**-6.0**
	comp=Z,44nm,1.0s,mb5.1,baz=171,slow=8.4,SNR=19						
DBIC				S	**S**	**20 42 20.2**	**-9.0**
	comp=Z,2.6nm,1.0s,baz=156,slow=20,SNR=1.7						
DBIC				LR	LR	20 49 33.0	
	comp=Z,21µm,20.6s,MS6.0,baz=176,slow=30						
DBIC	**Dimbokro**	**43.62**	**17**	*e*P	**P**	**20 35 53.1**	**-7.0**
	comp=Z,290nm,1.4s,mb5.8						
DBIC				LR	LR		
	comp=Z,23µm,20.0s,MS6.1						
FCH	**Farellones**	**43.96**	**257**	*e*P	**P**	**20 36 02.7**	**0.0**
CLCH	**Cerro Calan**	**44.13**	**257**	*e*P	**P**	**20 36 04.7**	**+0.6**
LSZ	**Lusaka**	**44.69**	**75**	*e*P	**P**	**20 36 05.6**	**-3.2**
	comp=Z,272nm,1.4s,mb5.9						
LSZ				LR	LR		
	comp=Z,29µm,20.0s,MS6.2						
SYO	**Syowa Base**	**45.02**	**155**	⇑P	**P**	**20 36 06.2**	**-4.6**
SYO	**Syowa Base**	**45.02**	**155**	⇓pP	pP	20 36 08.4	-5.4
SYO	**Syowa Base**	**45.02**	**155**	⇓sP	sP	20 36 10.8	-4.2
LVC	**Limon Verde**	**47.15**	**271**	P	**P**	**20 36 24.5**	**-3.8**
	comp=Z,4.5nm,0.6s,baz=114,slow=5.3,SNR=7.2						
LVC				S	**S**	**20 43 14.3**	**-5.5**
	comp=Z,4.4nm,1.2s,baz=87,slow=7.7,SNR=1.4						
LVC				LR	LR	20 53 19.0	
	comp=Z,22µm,21.9s,MS6.1,baz=345,slow=32						
LVC	**Limon Verde**	**47.15**	**271**	*e*P	**P**	**20 36 24.1**	**-4.2**
	comp=Z,72nm,1.3s,mb5.4						
LPAZ	**La Paz**	**49.74**	**279**	P	**P**	**20 36 44.1**	**-4.4**
	comp=Z,8.2nm,1.1s,mb4.7,baz=90,slow=25,SNR=8.9						
LPAZ				S	**S**	**20 43 51.8**	**-4.5**
	comp=Z,1.9nm,0.9s,baz=270,slow=20,SNR=2.2						
LPAZ				LR	LR	20 57 42.1	
	comp=Z,23µm,19.5s,MS6.2,baz=288,slow=36						
SAML	**Samuel**	**50.18**	**290**	*e*P	**P**	**20 36 47.2**	**-4.7**
	comp=Z,28nm,1.8s,mb5.0						
ARE	**Arequipa**	**52.36**	**277**	*e*P	**P**	**20 37 05.0**	**-3.3**
ARE				*e*	pP	20 37 10.0	-1.3
ARE				*e*		20 44 39.0	
ARE	**Arequipa**	**52.36**	**277**	*e*P	**P**	**20 37 05.0**	**-3.3**
ARE				*e*	pP	20 37 10.0	-1.3
ARE				*i*		20 37 18.8	
ARE				*i*		20 37 25.8	
ARE				*e*		20 44 39.0	
ARE				*e*		20 53 48.0	
MAW	**Mawson**	**53.44**	**152**	*e*P	**P**	**20 37 15.9**	**+0.2**
	comp=Z,50nm,0.9s,mb5.4						
MAW				*e*S	**S**	**20 44 52.1**	**+5.7**
MAW	**Mawson**	**53.44**	**152**	*e*P	**P**	**20 37 15.9**	**+0.2**
MAW				*e*S	**S**	**20 44 52.1**	**+5.7**
MAW				pmax	pmax		
	comp=Z,50nm,0.9s						
MAW	**Mawson**	**53.44**	**152**	P	**P**	**20 37 16.4**	**+0.8**
	comp=Z,43nm,1.0s,mb5.3,baz=283,slow=8.9,SNR=5.7						
MAW				S	**S**	**20 44 54.6**	**+8.2**
	comp=Z,22nm,1.1s,baz=209,slow=19,SNR=2.9						
MAW				LR	LR	20 55 21.4	
	comp=Z,23µm,21.0s,MS6.2,baz=279,slow=31						
QSPA	**South Pole Qui**	**54.46**	**180**	*e*P	**P**	**20 37 24.5**	**+1.5**
	comp=Z,112nm,0.9s,mb5.8						
MBAR	**Mbarara**	**56.03**	**62**	*e*P	**P**	**20 37 31.6**	**-3.7**
	comp=Z,446nm,1.4s,mb6.3						
MBAR				LR	LR		
	comp=Z,12µm,20.0s,MS6.0						
OPO	**Ambohidratompo**	**58.20**	**91**	P	**P**	**20 37 47.0**	**-3.5**
KMBO	**Kilima Mbogo**	**60.48**	**68**	P	**P**	**20 38 05.4**	**-1.0**
	comp=Z,3.6nm,0.9s,baz=232,slow=6.7,SNR=9.1						
KMBO				S	**S**	**20 46 23.7**	**+3.7**
	comp=Z,0.3nm,0.3s,baz=220,slow=11,SNR=1.9						
KMBO				LR	LR	21 01 34.1	
	comp=Z,51µm,19.8s,MS6.7,baz=220,slow=33						
KMBO	**Kilima Mbogo**	**60.48**	**68**	*e*P	**P**	**20 38 04.7**	**-1.7**
	comp=Z,64nm,1.5s,mb5.4						
KMBO				LR	LR		
	comp=Z,52µm,20.0s,MS6.7						
TRN	**Trinidad (W)**	**62.71**	**309**	*e*	**S**	**20 46 51.9**	**+3.7**
CHIE	**El Hierro**	**63.19**	**358**	P	**P**	**20 38 28.6**	**+4.1**
	comp=Z,85nm,1.4s,mb5.7						
EOSO	**Osorio**	**63.53**	**1**	P	**P**	**20 38 29.2**	**+2.6**
	comp=Z,54nm,1.0s,mb5.5						
CCAN	**Las Canadas**	**63.67**	**360**	P	**P**	**20 38 30.9**	**+3.3**
	comp=Z,14nm,0.9s,mb5.0						
CFTV	**Fuerteventura**	**63.90**	**2**	P	**P**	**20 38 28.5**	**-0.6**
	comp=Z,43nm,1.3s,mb5.3						
VNDA	**Vanda**	**66.95**	**180**	P	**P**	**20 38 48.3**	**+0.4**
	comp=Z,4.2nm,1.0s,baz=186,slow=5.4,SNR=3.3						
VNDA				S	S	20 47 41.4	+1.8
	comp=Z,1.6nm,1.0s,baz=231,slow=12,SNR=2.8						
VNDA				LR	LR	21 04 17.2	
	comp=Z,8µm,19.6s,MS5.9,baz=10,slow=32						
VNDA	**Vanda**	**66.95**	**180**	*e*P	**P**	**20 38 47.3**	**-0.7**
	comp=Z,379nm,1.8s,mb6.1						
VNDA				LR	LR		
	comp=Z,8µm,19.0s,MS6.0						
ROSC	**El Rosal**	**67.57**	**294**	P	**P**	**20 38 51.7**	**-1.2**
	comp=Z,9.2nm,0.7s,mb4.9,baz=270,slow=23,SNR=8.1						
ROSC				S	S	20 47 52.7	+4.7
	comp=Z,6.3nm,0.7s,baz=270,slow=20,SNR=2.2						
ROSC				LR	LR	21 07 08.8	
	comp=Z,43µm,18.2s,MS6.7,baz=90,slow=35						
SDV	**Santo Domingo**	**67.63**	**300**	P	**P**	**20 38 49.9**	**-3.3**
	comp=Z,16nm,1.0s,mb5.0,baz=185,slow=3.7,SNR=10						
SDV				S	S	20 47 47.2	-1.5
	comp=Z,2.1nm,0.4s,baz=200,slow=0.9,SNR=2.6						
SDV				LR	LR	21 05 42.0	
	comp=Z,11µm,20.7s,MS6.1,baz=137,slow=34						
SDV	**Santo Domingo**	**67.63**	**300**	*e*P	**P**	**20 38 48.6**	**-4.7**
	comp=Z,57nm,0.8s,mb5.7						
OTAV	**Otavalo**	**67.73**	**287**	PFAKE		20 39 00.0	+6.1
OTAV				LR	LR		
	comp=Z,50µm,20.0s,MS6.7						
CASY	**Casey**	**70.45**	**160**	*e*P	**P**	**20 39 15.9**	**+6.2**
CASY				*i* S	S	20 48 26.9	+5.7
SJG	**San Juan**	**71.34**	**310**	P	**P**	**20 39 16.3**	**+0.4**
	comp=Z,38nm,0.9s,mb5.3,baz=103,slow=2.8,SNR=6.3						
SJG				S	S	20 48 29.7	-2.7
	comp=Z,5.8nm,0.3s,baz=68,slow=6.1,SNR=2.8						
SJG	**San Juan**	**71.34**	**310**	P	**P**	**20 39 15.9**	**0.0**
	comp=Z,86nm,1.3s,mb5.5						
SJG				LR	LR		
	comp=Z,11µm,21.0s,MS6.1						
ETRT	**Tiaret**	**72.72**	**15**	P	**P**	**20 39 25.0**	**+1.1**
EMIJ	**Mijas**	**72.80**	**10**	P	**P**	**20 39 23.6**	**-0.7**
	comp=Z,18nm,0.8s,mb5.0						
ESPR	**Espera**	**72.96**	**9**	P	**P**	**20 39 25.6**	**+0.4**
	comp=Z,19nm,1.0s,mb5.0						
EANR	**'Ain N'Sour**	**73.22**	**15**	P	**P**	**20 39 27.0**	**+0.2**
PTEO	**Sao Teotonio**	**73.32**	**6**	*e*P	**P**	**20 39 25.1**	**-2.2**
	comp=Z,49nm,1.5s,mb5.2						
PTEO				*e*PcP	PcP	20 39 43.0	-1.0
PTEO				*i* -		20 39 52.3	
PTEO	**Sao Teotonio**	**73.32**	**6**	*e*P	**P**	**20 39 27.2**	**-0.1**
PALC	**Alcoutim**	**73.36**	**7**	*e*P	**P**	**20 39 24.5**	**-3.1**
	comp=Z,58nm,1.7s,mb5.2						
PALC				*e*PcP	PcP	20 39 34.4	-10
ERON	**Agron**	**73.39**	**11**	P	**P**	**20 39 28.2**	**+0.5**
	comp=Z,5.8nm,0.5s,mb4.8						
EBER	**Berja**	**73.41**	**11**	P	**P**	**20 39 26.8**	**-1.0**
	comp=Z,29nm,0.9s,mb5.2						
ELOJ	**Sierra Loja**	**73.46**	**10**	P	**P**	**20 39 28.4**	**+0.2**
ELOJ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ELOJ	**Sierra Loja**	**73.46**	**10**	P	**P**	**20 39 28.4**	**+0.2**
	comp=Z,9.0nm,0.8s,mb4.8						
ECHA	**Ech Chlef**	**73.47**	**15**	P	**P**	**20 39 30.0**	**+1.8**
ENIJ	**Nijar**	**73.59**	**12**	P	**P**	**20 39 29.5**	**+0.6**
ENIJ				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
ENIJ	**Nijar**	**73.59**	**12**	P	**P**	**20 39 29.5**	**+0.6**
	comp=Z,27nm,1.0s,mb5.1						
EBNR	**Beni Rached**	**73.64**	**15**	P	**P**	**20 39 30.0**	**+0.8**
PDA	**Ponta Delgada**	**73.67**	**352**	*i* LR	LR	21 01 18.0	
ECOG	**Cogollos-Vega**	**73.67**	**11**	P	**P**	**20 39 29.8**	**+0.4**
ECOG				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ECOG	**Cogollos-Vega**	**73.67**	**11**	P	**P**	**20 39 29.8**	**+0.4**
	comp=Z,8.7nm,0.8s,mb4.7						
EMIN	**Mina Concepcio**	**73.75**	**8**	P	**P**	**20 39 31.4**	**+1.6**
	comp=Z,39nm,1.0s,mb5.3						
ELUQ	**Luque**	**73.85**	**10**	P	**P**	**20 39 33.0**	**+2.6**
ELUQ				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
ELUQ	**Luque**	**73.85**	**10**	P	**P**	**20 39 33.0**	**+2.6**
	comp=Z,23nm,0.8s,mb5.2						
EMHD	**Djebel Mahouad**	**73.86**	**16**	P	**P**	**20 39 37.0**	**+6.5**
PBEJ	**Beja**	**73.88**	**7**	*e*P	**P**	**20 39 27.7**	**-2.8**
	comp=Z,27nm,1.9s,mb4.8						
PBEJ				*e*PcP	PcP	20 39 45.8	-0.5
CMER	**Merouana**	**74.03**	**19**	P	**P**	**20 39 32.5**	**+1.0**
EQES	**Quesada**	**74.26**	**11**	P	**P**	**20 39 33.9**	**+1.1**
	comp=Z,42nm,1.4s,mb5.2						
CKHR	**Kef el Ahmar**	**74.31**	**18**	P	**P**	**20 39 33.5**	**+0.4**
EVO	**Evora**	**74.36**	**7**	*e*P	**P**	**20 39 31.0**	**-2.3**
	comp=Z,472nm,1.7s,mb5.8						
EVO				*e*R			
	comp=Z,5µm,20.8s						
CART	**Cartagena**	**74.40**	**13**	*e*P	**P**	**20 39 32.9**	**-0.6**
	comp=Z,118nm,1.1s,mb5.7						
EADA	**Adamuz**	**74.40**	**10**	P	**P**	**20 39 33.4**	**-0.2**
	comp=Z,15nm,1.1s,mb4.8						
LIS	**Lisbon**	**74.44**	**6**	*e*P	**P**	**20 39 31.6**	**-2.2**
LIS				*e*S	S	20 49 06.8	-0.4
LIS				*e*S	S	20 49 06.8	-0.4
LIS				AMS	AMS	21 08 33.5	
	comp=Z,5µm,25.9s,MS5.7						
LIS	**Lisbon**	**74.44**	**6**	*e*P	**P**	**20 39 31.6**	**-2.2**
LIS				*e*S	S	20 49 06.8	-0.4
	comp=Z,5µm,25.9s						
SET	**Setif**	**74.45**	**18**	P	**P**	**20 39 34.0**	**+0.1**
ABA	**Alger-Bouzarea**	**74.46**	**16**	P	**P**	**20 39 38.0**	**+4.1**
EBAN	**Banos Encina**	**74.51**	**10**	P	**P**	**20 39 33.5**	**-0.7**
EBAN				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
EBAN	**Banos Encina**	**74.51**	**10**	P	**P**	**20 39 33.5**	**-0.7**
	comp=Z,23nm,0.8s,mb5.2						
CTEI	**Djebel Teioual**	**74.58**	**19**	P	**P**	**20 39 33.5**	**-1.2**
EMUR	**La Murta**	**74.61**	**12**	P	**P**	**20 39 35.3**	**+0.5**
	comp=Z,26nm,0.8s,mb5.2						
PLOU	**Loures**	**74.61**	**6**	*e*P	**P**	**20 39 33.7**	**-1.1**
	comp=Z,48nm,1.4s,mb5.2						
PLOU				*e*PcP	PcP	20 39 42.8	-6.7
ADH	**Angra Heroismo**	**74.75**	**351**	*e*SS	SS	20 53 16.5	-44
ADH				*e*		20 59 25.0	
ADH				*e*LR	LR	21 00 19.5	
CASM	**Ain Smara**	**74.79**	**19**	P	**P**	**20 39 40.0**	**+4.1**
DFRA	**Djebel Bou Aff**	**74.90**	**18**	P	**P**	**20 39 43.0**	**+6.5**
CKFL	**Kef-Lekhel**	**74.98**	**19**	P	**P**	**20 39 37.0**	**0.0**
ABSA	**Djebel Ababsia**	**75.07**	**20**	P	**P**	**20 39 37.0**	**-0.5**
EVIA	**Vianos**	**75.17**	**11**	P	**P**	**20 39 39.5**	**+1.5**
EVIA				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
EVIA	**Vianos**	**75.17**	**11**	P	**P**	**20 39 39.5**	**+1.5**
	comp=Z,18nm,0.6s,mb5.2						
ETOB	**Tobarra**	**75.33**	**12**	P	**P**	**20 39 40.2**	**+1.3**
	comp=Z,24nm,0.7s,mb5.2						
CAEH	**'Ain El Ouahch**	**75.38**	**19**	P	**P**	**20 39 36.5**	**-2.7**
CMAH	**Djebel Manchou**	**75.38**	**20**	P	**P**	**20 39 39.0**	**-0.3**
PCBR	**Castelo Branco**	**75.71**	**7**	*e*P	**P**	**20 39 39.3**	**-1.8**
	comp=Z,19nm,1.5s,mb4.8						
PCBR				*e*PcP	PcP	20 39 47.7	-6.5
PCBR	**Castelo Branco**	**75.71**	**7**	*e*P	**P**	**20 39 41.0**	**-0.1**
ESDC	**Sonseca Array**	**75.97**	**10**	P	**P**	**20 39 40.7**	**-1.8**
	comp=Z,10nm,1.2s,mb4.7,baz=179,slow=5.2,SNR=12						
ESDC				S	S	20 49 23.5	-0.5
	comp=Z,0.2nm,0.4s,baz=26,slow=20,SNR=3.2						
ESDC	**Sonseca Array**	**75.97**	**10**	P	**P**	**20 39 42.7**	**+0.2**
	comp=Z,9.7nm,1.1s,mb4.7						
ESLA	**Sonseca Array**	**75.97**	**10**	*e*P	**P**	**20 39 39.6**	**-3.0**
	comp=Z,32nm,1.3s,mb5.1						
ESLA				LR	LR		
	comp=Z,34µm,20.0s,MS6.7						
MTE	**Manteigas**	**76.26**	**7**	*e*P	**P**	**20 39 41.9**	**-2.3**
MTE				*e*PcP	PcP	20 39 50.1	-6.4
MTE				*e*S	S	20 49 24.9	-2.3
MTE				*e*LQ		20 59 12.4	
MTE				*e*LR	LR	20 59 58.8	
	comp=Z,5µm,22.7s						
MTE	**Manteigas**	**76.26**	**7**	P	**P**	**20 39 41.7**	**-2.4**
	comp=Z,409nm,2.1s,mb6.0						
DRV	**Dumont d'Urvil**	**76.28**	**171**	S	S	20 49 30.0	+3.1
DRV	**Dumont d'Urvil**	**76.28**	**171**	L		21 01 00.0	
PAYG	**Puerto Ayora**	**76.53**	**279**	P	**P**	**20 39 51.7**	**+5.5**
	comp=Z,156nm,1.5s,mb5.7						
PAYG				LR	LR		
	comp=Z,11µm,22.0s,MS6.1						
PVIS	**Viseu**	**76.54**	**7**	*e*P	**P**	**20 39 43.9**	**-1.8**
PVIS				*e*PcP	PcP	20 39 52.4	-5.3
PVRL	**Vila Real**	**77.11**	**7**	*e*P	**P**	**20 39 47.4**	**-1.5**
	comp=Z,6.7nm,1.2s						
PVRL				*e*PcP	PcP	20 39 55.8	-4.4
EMOS	**Mosqueruela**	**77.19**	**12**	P	**P**	**20 39 50.2**	**+0.9**
	comp=Z,50nm,0.9s,mb5.4						
ELOB	**Lobios**	**77.66**	**6**	P	**P**	**20 39 56.0**	**+4.0**
	comp=Z,23nm,1.0s,mb5.1						
PBRG	**Braganca**	**77.73**	**7**	*e*P	**P**	**20 39 48.6**	**-3.7**
	comp=Z,32nm,2.1s,mb4.9						
PBRG				*e*PcP	PcP	20 39 59.8	-3.0
EBR	**Ebro Roquetas**	**77.81**	**13**	*e*P	**P**	**20 39 54.0**	**+1.2**
ECAL	**Calabor**	**77.87**	**7**	P	**P**	**20 39 56.2**	**+3.2**
	comp=Z,20nm,0.8s,mb5.1						
EZAM	**Zamans**	**77.89**	**6**	P	**P**	**20 39 55.3**	**+2.1**
EZAM				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
EZAM	**Zamans**	**77.89**	**6**	P	**P**	**20 39 55.3**	**+2.2**
	comp=Z,28nm,1.0s,mb5.2						
ERTA	**Horta de San J**	**77.91**	**13**	P	**P**	**20 39 55.1**	**+1.8**
	comp=Z,110nm,1.2s,mb5.7						
MTGR	**Montagna Grand**	**78.15**	**23**	P	**P**	**20 39 56.6**	**+1.9**
ERUA	**La Rua**	**78.27**	**7**	P	**P**	**20 39 57.1**	**+1.9**
ERUA				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
ERUA	**La Rua**	**78.27**	**7**	P	**P**	**20 39 57.1**	**+1.8**
	comp=Z,24nm,0.9s,mb5.1						
VAE	**Valguarnera**	**78.31**	**25**	P	**P**	**20 39 57.0**	**+1.5**
	comp=Z,35nm,1.0s,mb5.2,baz=135,slow=4.3,SNR=3.0						
VAE				S	S	20 49 51.3	+1.8
	comp=Z,8.7nm,0.8s,baz=101,slow=10,SNR=1.7						
VAE				LR	LR	21 10 46.1	
	comp=Z,15µm,19.4s,MS6.3,baz=269,slow=33						
AGST	**Augusta-Monte**	**78.39**	**25**	P	**P**	**20 39 56.3**	**+0.3**
EPOB	**Poblet**	**78.43**	**13**	P	**P**	**20 39 57.5**	**+1.3**
	comp=Z,65nm,1.2s,mb5.4						
ESAC	**San Caprasio**	**78.51**	**12**	P	**P**	**20 39 57.7**	**+1.1**
	comp=Z,118nm,1.0s,mb5.8						
VSL	**Villasalto**	**78.61**	**20**	P	**P**	**20 39 59.3**	**+2.1**
CSLB	**Castelbuono**	**78.61**	**24**	*e*P	**P**	**20 39 57.9**	**+0.7**
JTS	**JuntasAbangare**	**79.07**	**291**	*e*P	**P**	**20 39 55.6**	**-4.6**
JTS				S	S	20 49 55.3	-2.7
JTS				pmax	pmax		
	comp=Z,50nm,0.8s						
JTS	**JuntasAbangare**	**79.07**	**291**	P	**P**	**20 40 01.2**	**+1.0**
	comp=Z,16nm,0.8s,mb5.0,baz=309,slow=4.8,SNR=5.1						
JTS				S	S	20 49 55.3	-2.7
	comp=Z,2.8nm,0.4s,baz=314,slow=19,SNR=1.9						
JTS				LR	LR	21 14 41.3	
	comp=Z,12µm,19.5s,MS6.2,baz=138,slow=36						
JTS	**JuntasAbangare**	**79.07**	**291**	*e*P	**P**	**20 39 55.6**	**-4.5**
	comp=Z,50nm,0.8s,mb5.5						
JTS				S	S	20 49 55.3	-2.7
JTS				LR	LR	21 14 41.4	
MTTG	**Motta San Giov**	**79.22**	**25**	*e*P	**P**	**20 40 01.3**	**+0.8**
SOI	**Samo**	**79.41**	**26**	*e*P	**P**	**20 40 02.1**	**+0.5**
CEL	**Celeste**	**79.53**	**25**	P	**P**	**20 40 03.2**	**+1.0**
ELAN	**Lanestosa**	**79.54**	**10**	P	**P**	**20 40 06.3**	**+4.2**
	comp=Z,38nm,1.1s,mb5.2						
EBIE	**Bielsa**	**79.56**	**12**	P	**P**	**20 40 03.5**	**+1.2**
	comp=Z,18nm,1.0s,mb5.0						
FDAF	**Les Forges d'A**	**79.56**	**12**	*e*P	**P**	**20 40 04.1**	**+1.8**
ETSF	**Etsaut**	**79.64**	**12**	*e*P	**P**	**20 40 01.2**	**-1.5**
	comp=Z,866nm,1.8s,mb6.1						
ETSF	**Etsaut**	**79.64**	**12**	*e*P	**P**	**20 40 01.2**	**-1.5**
ETSF				pmax	pmax		
	comp=Z,433nm,1.8s,mb6.1						
RESF	**Ens**	**79.71**	**12**	*e*P	**P**	**20 40 03.2**	**+0.1**
LARF	**Larrau**	**79.71**	**11**	*e*P	**P**	**20 40 04.9**	**+1.8**
SJPF	**Ste Jean**	**79.75**	**11**	*e*P	**P**	**20 40 02.0**	**-1.3**
	comp=Z,1µm,1.8s,mb6.2						
SJPF	**Ste Jean**	**79.75**	**11**	*e*P	**P**	**20 40 02.0**	**-1.3**
SJPF				pmax	pmax		
	comp=Z,521nm,1.8s,mb6.2						
EALK	**Alkurruntz**	**79.81**	**11**	P	**P**	**20 40 07.4**	**+3.8**
	comp=Z,24nm,0.8s,mb5.2						
SALF	**Salau**	**79.82**	**13**	*e*P	**P**	**20 40 04.6**	**+0.9**
REYF	**Montagne du Re**	**79.84**	**12**	*e*P	**P**	**20 40 05.2**	**+1.4**
EJON	**La Jonquera**	**79.84**	**14**	P	**P**	**20 40 07.8**	**+3.9**
	comp=Z,41nm,1.0s,mb5.3						
MELF	**Melles**	**79.85**	**13**	*e*P	**P**	**20 40 05.2**	**+1.4**
FILF	**Fillols**	**79.89**	**14**	*e*P	**P**	**20 40 06.3**	**+2.3**
LABF	**Labassere**	**79.90**	**12**	*e*P	**P**	**20 40 05.4**	**+1.3**
EPF	**Esparros**	**79.93**	**12**	*e*P	**P**	**20 40 02.7**	**-1.5**
	comp=Z,946nm,1.9s,mb6.1						
EPF	**Esparros**	**79.93**	**12**	*e*P	**P**	**20 40 02.7**	**-1.5**
EPF				pmax	pmax		
	comp=Z,473nm,1.9s,mb6.1						
MLS	**Moulis**	**79.99**	**13**	*e*P	**P**	**20 40 05.2**	**+0.6**
GRI	**Girifalco**	**80.21**	**25**	*e*P	**P**	**20 40 06.9**	**+1.0**
IDI	**Anoyia**	**80.52**	**33**	P	**P**	**20 40 05.1**	**-2.5**
	comp=Z,12nm,0.6s,mb5.0,baz=201,slow=14						
MTLF	**Montolieu**	**80.57**	**14**	*e*P	**P**	**20 40 05.2**	**-2.5**
	comp=Z,518nm,1.5s,mb5.9						
MTLF	**Montolieu**	**80.57**	**14**	*e*P	**P**	**20 40 05.2**	**-2.5**
MTLF				pmax	pmax		
	comp=Z,259nm,1.5s,mb5.9						
TIP	**Timpagrande**	**80.65**	**26**	P	**P**	**20 40 08.1**	**-0.1**
	comp=Z,9.2nm,1.4s						
EIL	**Elat**	**81.09**	**43**	P	**P**	**20 40 09.5**	**-1.2**
MGR	**Morigerati**	**81.09**	**24**	*e*P	**P**	**20 40 10.3**	**-0.2**
MBH	**Mount Berech**	**81.16**	**43**	P	**P**	**20 40 11.6**	**+0.5**
ORI	**Oriolo Calabro**	**81.33**	**25**	*e*P	**P**	**20 40 12.2**	**+0.5**
PGF	**Pioggiola**	**81.36**	**19**	*e*P	**P**	**20 40 09.3**	**-2.5**
	comp=Z,189nm,1.4s,mb5.5						
PGF	**Pioggiola**	**81.36**	**19**	*e*P	**P**	**20 40 09.3**	**-2.5**
PGF				pmax	pmax		
	comp=Z,95nm,1.4s,mb5.5						
SGO	**Sicignano**	**81.39**	**24**	*e*P	**P**	**20 40 12.7**	**+0.7**
LMR	**La Mourre**	**81.48**	**17**	*e*P	**P**	**20 40 10.5**	**-1.9**
	comp=Z,373nm,1.6s,mb5.8						
LMR	**La Mourre**	**81.48**	**17**	*e*P	**P**	**20 40 10.5**	**-1.9**
LMR				pmax	pmax		
	comp=Z,186nm,1.6s,mb5.8						
BBSR	**BB Station**	**81.50**	**320**	*e*P	**P**	**20 40 13.5**	**+0.7**
	comp=Z,86nm,1.3s,mb5.5						
BBSR				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
LASF	**Ste Croix**	**81.60**	**15**	*e*P	**P**	**20 40 11.5**	**-1.6**
	comp=Z,469nm,1.4s,mb5.9						
FRF	**La Foret Royal**	**81.72**	**17**	*e*P	**P**	**20 40 11.7**	**-2.0**
	comp=Z,612nm,1.7s,mb6.0						
FRF	**La Foret Royal**	**81.72**	**17**	*e*P	**P**	**20 40 11.7**	**-2.0**
FRF				pmax	pmax		
	comp=Z,306nm,1.7s,mb6.0						
KZIT	**Kziot**	**81.73**	**42**	P	**P**	**20 40 12.8**	**-1.2**
TOLF	**Tolfa**	**81.73**	**21**	P	**P**	**20 40 14.2**	**+0.4**
PSB1	**Pescosannita**	**81.83**	**23**	P	**P**	**20 40 14.5**	**+0.2**
LFF	**La Frestale**	**81.85**	**12**	*e*P	**P**	**20 40 13.0**	**-1.3**
	comp=Z,703nm,1.6s,mb6.0						
LFF	**La Frestale**	**81.85**	**12**	*e*P	**P**	**20 40 13.0**	**-1.3**
LFF				pmax	pmax		
	comp=Z,351nm,1.6s,mb6.0						
SMRF	**Simiane la Rot**	**81.88**	**16**	*e*P	**P**	**20 40 13.4**	**-1.1**
	comp=Z,568nm,1.6s,mb6.0						
GUAR	**Guarcino**	**81.88**	**22**	P	**P**	**20 40 15.8**	**+1.3**
ZFRI	**Zfri**	**81.89**	**43**	P	**P**	**20 40 13.9**	**-0.9**
CERT	**Cerreto**	**81.92**	**22**	P	**P**	**20 40 15.0**	**+0.3**
SDI	**San Donato**	**81.95**	**22**	*e*P	**P**	**20 40 15.2**	**+0.3**
RTMM	**Retamin**	**82.00**	**42**	P	**P**	**20 40 15.9**	**+0.5**
MASH	**Mash'abbe Sade**	**82.01**	**43**	P	**P**	**20 40 14.3**	**-1.2**
MIDA	**Miranda**	**82.03**	**23**	P	**P**	**20 40 16.1**	**+0.8**
VVLD	**Villa Vallelon**	**82.04**	**22**	P	**P**	**20 40 16.3**	**+0.9**
RNI2	**Rionero Sannit**	**82.06**	**23**	P	**P**	**20 40 16.8**	**+1.4**
CAF	**Calviac**	**82.07**	**13**	*e*P	**P**	**20 40 14.1**	**-1.4**
	comp=Z,538nm,1.5s,mb6.0						
CAF	**Calviac**	**82.07**	**13**	*e*P	**P**	**20 40 14.1**	**-1.4**
CAF				pmax	pmax		
	comp=Z,269nm,1.5s,mb6.0						
PTQR	**Pietraquaria**	**82.11**	**22**	*e*P	**P**	**20 40 16.4**	**+0.6**
CII	**Carovilli**	**82.12**	**23**	*e*P	**P**	**20 40 16.7**	**+0.9**
MVIF	**Mont Vial**	**82.16**	**17**	*e*P	**P**	**20 40 17.4**	**+1.4**
SBF	**Sospel**	**82.20**	**17**	*e*P	**P**	**20 40 14.5**	**-1.6**
	comp=Z,756nm,1.8s,mb6.0						
SBF	**Sospel**	**82.20**	**17**	*e*P	**P**	**20 40 14.5**	**-1.6**

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SBF                                pmax    pmax
       comp=Z,378nm,1.8s,mb6.0
MNS    Montasola         82.23  21  eP     P       20 40 16.5 +0.2
FIAM   Fiamignano        82.25  22   P     P       20 40 17.2 +0.7
INTR   Introdacqua       82.26  22   P     P       20 40 17.8 +1.3
APE    Apeiranthos       82.29  33⇓eP     P       20 40 20.4 +3.6
TOUF   Mont Tournerai    82.30  17  eP     P       20 40 18.0 +1.4
BRT    Bari-Castellan    82.32  25   P     P       20 40 16.9 +0.1
AUTN   L'Aution          82.32  17  eP     P       20 40 18.5 +1.7
RJF    Les Rejaudoux     82.34  13  eP     P       20 40 15.4 -1.4
       comp=Z,741nm,1.5s,mb6.1
RJF                                 eR
       comp=Z,17µm,22.0s
RJF    Les Rejaudoux     82.34  13  eP     P       20 40 15.4 -1.4
RJF                                  pmax  pmax
       comp=Z,371nm,1.5s,mb6.1
RJF                                  MLR   MLR
       comp=Z,17µm,22.0s,MS6.4
SAOF   Saorge            82.34  17  eP     P       20 40 18.1 +1.2
IMI    Imperia           82.35  17  eP     P       20 40 14.7 -2.3
OG25   Le Caire          82.36  16  eP     P       20 40 17.8 +0.8
OCF    Saint Nazaire     82.39  15  eP     P       20 40 19.0 +1.9
OG26   St.-Nazaire-De    82.39  15  eP     P       20 40 19.0 +1.9
AQU    L'Aquila          82.42  22  eP     P       20 40 17.8 +0.5
AQU                                  pmax  pmax
       comp=Z,390nm,1.7s,mb6.1
AQU    L'Aquila          82.42  22  eP     P       20 40 18.1 +0.8
GRFL   Gerfalco          82.44  20  eP     P       20 40 17.9 +0.5
MONE   Monesi            82.48  17   P     P       20 40 17.2 -0.4
VIVF   Saint-Julien-l    82.52  15  eP     P       20 40 16.5 -1.3
       comp=Z,914nm,1.6s,mb6.3
VIVF   Saint-Julien-l    82.52  15  eP     P       20 40 16.5 -1.3
VIVF                                 pmax  pmax
       comp=Z,457nm,1.6s,mb6.3
STV    Sta Anna Valdi    82.53  17   P     P       20 40 17.0 -0.9
STV2   Anna di Valdie    82.53  17   P     P       20 40 16.8 -1.1
ENR    Entracque         82.54  17   P     P       20 40 17.8 -0.1
MZDA   Masada            82.57  43   P     P       20 40 17.3 -1.1
LBL    Lubilhac          82.59  14  eP     P       20 40 19.9 +1.7
AGG    Agios Georgios    82.60  29  eP     P       20 40 19.9 +1.6
ROB    Roburent          82.71  17   P     P       20 40 18.5 -0.3
FIN    Finale Ligure     82.71  18  eP     P       20 40 18.0 -0.8
PZZ    Prazzo            82.72  17   P     P       20 40 18.7 -0.2
DRGI   Dragot            82.80  43   P     P       20 40 18.5 -1.1
ORIF   Oris-en-Rattie    82.84  16  eP     P       20 40 18.5 -1.0
       comp=Z,905nm,1.7s,mb6.2
ORIF                                eR
       comp=Z,12µm,18.8s
PII    Pisa              82.85  19  eP     P       20 40 18.4 -1.2
MBDF   Montbardon        82.86  16  eP     P       20 40 18.6 -1.0
       comp=Z,511nm,1.5s,mb6.0
MBDF   Montbardon        82.86  16  eP     P       20 40 18.6 -1.0
MBDF                                 pmax  pmax
       comp=Z,256nm,1.5s,mb6.0
COLF   Collangettes      82.95  14  eP     P       20 40 21.1 +1.1
PYM    Petit Puy Mans    83.04  14  eP     P       20 40 20.6 +0.1
RRL    Cesana Torines    83.04  16   P     P       20 40 20.6 +0.1
BHB    Bricherasio       83.08  17   P     P       20 40 20.6 -0.1
LRYF   La Roche-sur-Y    83.08  10  eP     P       20 40 20.4 -0.3
SNTG   Esanatoglia       83.10  21  eP     P       20 40 20.5 -0.4
SLTI   Sal'it            83.11  42   P     P       20 40 20.2 -0.9
PCP    Pian Castagno     83.11  18   P     P       20 40 19.8 -1.1
VINC   Vinca             83.14  19   P     P       20 40 18.7 -2.3
BNI    Bardonecchia      83.14  16  eP     P       20 40 21.9 +0.9
BNI                                  pmax  pmax
       comp=Z,160nm,1.5s,mb5.8
BNI    Bardonecchia      83.14  16  eP     P       20 40 21.9 +0.9
       comp=Z,156nm,1.5s,mb5.8
BDI    Bagni Di Lucca    83.19  19  eP     P       20 40 20.8 -0.5
FENE   Fenestrelle       83.21  17   P     P       20 40 21.4  0.0
VLC    Villacollemand    83.22  19   P     P       20 40 20.7 -0.8
       comp=Z,89nm,1.5s,mb5.6
XOR    Xorichti          83.24  30  eP     P       20 40 18.4 -3.3
BACM                     83.25  19   P     P       20 40 19.7 -1.9
SARO   Sassorosso        83.25  19   P     P       20 40 19.4 -2.2
LCHF   La Chataignera    83.29  11  eP     P       20 40 23.5 +1.8
CODM                     83.30  19   P     P       20 40 20.2 -1.6
MFF    Saint Martin d    83.32  11  eP     P       20 40 20.7 -1.2
       comp=Z,877nm,1.7s,mb6.2
MFF    Saint Martin d    83.32  11  eP     P       20 40 20.7 -1.2
MFF                                  pmax  pmax
       comp=Z,439nm,1.7s,mb6.2
AGO    Saint Agoulin     83.36  14  eP     P       20 40 23.6 +1.5
VALM                     83.36  19   P     P       20 40 20.3 -1.9
OFRI   'Ofer             83.37  42   P     P       20 40 21.3 -1.1
PLDF   La Plantade       83.37  14  eP     P       20 40 22.2  0.0
RSP    Reno Superiore    83.37  17   P     P       20 40 23.0 +0.8
TCF    Toulx Ste Croi    83.41  13  eP     P       20 40 21.4 -1.0
       comp=Z,999nm,1.8s,mb6.2
TCF    Toulx Ste Croi    83.41  13  eP     P       20 40 21.4 -1.0
TCF                                  pmax  pmax
       comp=Z,500nm,1.8s,mb6.2
FNVD   Fontana Vidola    83.43  20   P     P       20 40 23.5 +1.0
GRAM                     83.45  19   P     P       20 40 20.5 -2.1
GSCL   Gusciola          83.45  19  eP     P       20 40 23.5 +0.8
MMLI   Mount Malkishu    83.46  42   P     P       20 40 22.3 -0.6
ERBM   Eremo             83.47  19  eP     P       20 40 22.3 -0.4
BOB    Bobbio (Coli)     83.54  18  eP     P       20 40 24.5 +1.5
ZCCA   Zocca             83.56  19  eP     P       20 40 23.6 +0.5
LPG    La Plagne         83.58  16  eP     P       20 40 22.4 -0.8
       comp=Z,550nm,1.5s,mb6.2
LPG    La Plagne         83.58  16  eP     P       20 40 22.4 -0.8
LPG                                  pmax  pmax
       comp=Z,275nm,1.5s,mb6.2
LIT    Litokhoron        83.59  29  eP     P       20 40 22.7 -0.7
LPL    La Plagne         83.60  16  eP     P       20 40 22.4 -0.9
       comp=Z,571nm,1.5s,mb6.2
LPL    La Plagne         83.60  16  eP     P       20 40 22.4 -0.9
LPL                                  pmax  pmax
       comp=Z,285nm,1.5s,mb6.2
LSD    Ceresole Reale    83.64  16   P     P       20 40 23.2 -0.3
TIR    Tirane            83.67  27   P     P       20 40 25.6 +1.8
RSL    Roselend          83.73  16  eP     P       20 40 25.1 +1.1
FNA    Florina           83.75  28  eP     P       20 40 22.0 -2.2
BGF    Bois d'Agland     83.79  13  eP     P       20 40 23.2 -1.0
       comp=Z,445nm,1.8s,mb6.0
BGF    Bois d'Agland     83.79  13  eP     P       20 40 23.2 -1.0
BGF                                  pmax  pmax
       comp=Z,223nm,1.8s,mb6.0
OHR    Ohrid             83.81  27  i P    P       20 40 23.3 -1.2
OHR                                 i      pP      20 40 27.1 -0.6
OHR                                 i              20 40 31.9
OG05   Jujurieux         83.81  15  eP     P       20 40 25.6 +1.2
TRAV                     83.83  17   P     P       20 40 24.2 -0.3
AYDN   Tasoluk           83.83  34  i P    P       20 40 24.1 -0.5
QSH    Qafa e Shtames    83.84  27  i p    P       20 40 26.0 +1.4
ORX    Oropa             84.00  17   P     P       20 40 25.2 -0.1
SMF    Signal de Mont    84.06  14  eP     P       20 40 24.4 -1.2
       comp=Z,972nm,1.6s,mb6.4
SMF    Signal de Mont    84.06  14  eP     P       20 40 24.4 -1.2
SMF                                  pmax  pmax
       comp=Z,486nm,1.6s,mb6.4
ASF    Jabal al Asfar    84.07  43   P     P       20 40 24.2 -1.8
       comp=Z,8.2nm,1.1s,mb4.8,baz=117,slow=4.1,SNR=10.0
ASF                                  S     S       20 50 49.9 +0.8
       comp=Z,1.1nm,0.6s,baz=14,slow=4.2,SNR=2.0
KSHT   Keshet            84.09  42   P     P       20 40 25.4 -0.7
AVF    Avril sur Loir    84.11  14  eP     P       20 40 24.8 -1.1
       comp=Z,838nm,1.5s,mb6.3
AVF    Avril sur Loir    84.11  14  eP     P       20 40 24.8 -1.1
AVF                                  pmax  pmax
       comp=Z,419nm,1.5s,mb6.3
KDAG   Bornova           84.17  33  i P    P       20 40 22.9 -3.5
QUIF   Quistinic         84.17   9  eP     P       20 40 25.1 -1.1
       comp=Z,984nm,1.7s,mb6.4
QUIF   Quistinic         84.17   9  eP     P       20 40 25.1 -1.1
QUIF                                 pmax  pmax
       comp=Z,492nm,1.7s,mb6.4
THE    Thessaloniki      84.23  29  eP     P       20 40 27.8 +1.1
GRG    Griva             84.29  29  eP     P       20 40 32.2 +5.3
MCGN   Macugnaga         84.30  17  eP     P       20 40 24.5 -2.3
OUR    Ouranopolis       84.39  30  eP     P       20 40 33.6 +6.2
SSF    Saint Saulge      84.40  14  eP     P       20 40 26.0 -1.3
SSF                                  pmax  pmax
       comp=Z,301nm,1.6s,mb6.2
SSF    Saint Saulge      84.40  14  eP     P       20 40 26.0 -1.3
       comp=Z,301nm,1.6s,mb6.2
VAI    Varese            84.41  17  eP     P       20 40 25.4 -2.0
HYF    Humbligny         84.44  13  eP     P       20 40 26.8 -0.7
ABTO   Aybut             84.47  64 ⇑P      P       20 40 27.9 -0.4
       SNR=12
CABF   La Chapelle       84.49  15  eP     P       20 40 26.1 -1.7
       comp=Z,528nm,1.5s,mb6.1
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CABF   La Chapelle       84.49  15  eP     P       20 40 26.1 -1.7
CABF                                 pmax  pmax
       comp=Z,264nm,1.5s,mb6.2
SOH    Sokhos            84.55  29  eP     P       20 40 27.6 -0.6
ROSF   Rostrenen         84.57   9  eP     P       20 40 27.4 -0.7
       comp=Z,1µm,1.7s,mb6.4
ROSF   Rostrenen         84.57   9  eP     P       20 40 27.4 -0.7
ROSF                                 pmax  pmax
       comp=Z,523nm,1.7s,mb6.4
SGMF   Saint Gilles      84.58   9  eP     P       20 40 27.1 -1.1
       comp=Z,655nm,1.5s,mb6.2
SGMF   Saint Gilles      84.58   9  eP     P       20 40 27.1 -1.1
SGMF                                 pmax  pmax
       comp=Z,328nm,1.5s,mb6.2
KNT    Kendrikon         84.66  29  eP     P       20 40 30.6 +1.9
VAY    Valandovo         84.67  28  i P    P       20 40 28.9 +0.1
BHL    Bhannes           84.71  41  eP     P       20 40 30.3 +1.1
SKO    Skopje            84.80  27  i P    P       20 40 26.2 -3.2
SKO                                 i      pP      20 40 29.5 -3.1
SKO                                 i PS   PS      20 51 55.0 +2.0
SKO                                  pmax  pmax
       comp=Z,73nm,1.0s,mb5.8
SKO    Skopje            84.80  27  i P    P       20 40 26.2 -3.2
       comp=Z,73nm,1.0s,mb5.8
SKO                                 i      pP      20 40 29.5 -3.1
SKO                                 i              20 40 36.0
SKO                                 i              20 40 52.0
SKO                                 i PS   PS      20 51 55.0 +2.0
SKO    Skopje            84.80  27  i P    P       20 40 26.2 -3.2
SKO                                ⇓i      pP      20 40 29.5 -3.1
       comp=Z,0.1nm,1.0s
SKO                                ⇓i              20 40 36.0
       comp=Z,0.2nm,1.1s
SKO                                 i              20 40 52.0
SKO                                 i PS   PS      20 51 55.0 +2.0
MANT   Manisa            84.82  34  i P    P       20 40 29.5 -0.1
DGAR   Diego Garcia      84.82  95   PFAKE         20 40 40.0  +10
DGAR                                 LR    LR
       comp=Z,6µm,21.0s,MS5.9
SRS    Serrai            84.89  29  eP     P       20 40 25.3 -4.6
GRR    Gorron            84.95  10  eP     P       20 40 28.6 -1.4
       comp=Z,265nm,1.3s,mb5.9
GRR    Gorron            84.95  10  eP     P       20 40 28.6 -1.4
GRR                                  pmax  pmax
       comp=Z,133nm,1.3s,mb5.9
MABI   Malga Bissina     85.02  18   P     P       20 40 30.8 +0.4
TUE    Stuetta           85.11  18   P     P       20 40 32.2 +1.3
WHFO   Wadi Hawf         85.17  64 ⇑P      P       20 40 31.0 -0.9
       SNR=11
ISP    Isparta           85.20  35  eP     P       20 40 28.2 -3.3
ISP                                  pmax  pmax
       comp=Z,140nm,1.5s,mb5.9
ISP    Isparta           85.20  35  eP     P       20 40 28.2 -3.4
       comp=Z,144nm,1.5s,mb5.9
RBK    Rabkut            85.23  65 ⇑P      P       20 40 29.8 -2.3
       SNR=7.7
LDF    La Druitiere      85.26  11  eP     P       20 40 30.5 -1.1
       comp=Z,605nm,1.5s,mb6.2
LDF    La Druitiere      85.26  11  eP     P       20 40 30.5 -1.1
LDF                                  pmax  pmax
       comp=Z,303nm,1.5s,mb6.2
CTI    Castel Tesino     85.31  19   P     P       20 40 33.5 +1.6
KKB    Krupnik           85.33  28   P     P       20 40 30.0 -2.1
MMB    Musomiste         85.35  29   P     P       20 40 30.0 -2.2
LOMF   Lomont            85.36  16  eP     P       20 40 33.4 +1.3
FLN    La Foliniere      85.37  11  eP     P       20 40 31.2 -0.9
       comp=Z,708nm,1.4s,mb6.3
FLN                                 eR
       comp=Z,20µm,21.2s
FLN    La Foliniere      85.37  11  eP     P       20 40 31.2 -0.9
FLN                                  pmax  pmax
       comp=Z,354nm,1.4s,mb6.3
FLN                                  MLR   MLR
       comp=Z,20µm,21.3s,MS6.5
BRMO   Bormio            85.37  18  eP     P       20 40 31.4 -0.8
DAVOX  Davos             85.53  18   P     P       20 40 29.5 -3.4
       comp=Z,72nm,1.4s,mb5.7,baz=206,slow=6.7
BBS    Basel-Blauen      85.61  16  eP     P       20 40 34.4 +1.0
BBS    Basel-Blauen      85.61  16⇑eP     P       20 40 34.5 +1.1
BTOK   Tokmak            85.62  33  i P    P       20 40 32.2 -1.4
BARS   Barje             85.67  27⇑iP     P       20 40 30.8 -3.0
ALN    Alexandroupoli    85.71  31  eP     P       20 40 30.6 -3.4
HINF   Hinteralfeld      85.80  15  eP     P       20 40 32.6 -1.7
       comp=Z,388nm,1.6s,mb6.1
HINF   Hinteralfeld      85.80  15  eP     P       20 40 32.6 -1.7
HINF                                 pmax  pmax
       comp=Z,194nm,1.6s,mb6.1
RZN    Rozhen            85.83  30  eP     P       20 40 35.0 +0.4
BOJS   Bojanci           85.84  22  eP     P       20 40 36.4 +1.8
BOJS                                e              20 40 41.7
JAVS   Javornik          85.84  21  eP     P       20 40 36.3 +1.8
JAVS                                e              20 40 42.2
HAU    Haudompre         85.87  15  eP     P       20 40 33.1 -1.5
       comp=Z,457nm,1.6s,mb6.2
HAU                                 eR
       comp=Z,5µm,19.5s
HAU    Haudompre         85.87  15  eP     P       20 40 33.1 -1.5
HAU                                  pmax  pmax
       comp=Z,229nm,1.6s,mb6.2
HAU                                  MLR   MLR
       comp=Z,5µm,19.5s,MS5.9
MOF    Molkenrain        85.90  16  eP     P       20 40 33.9 -0.9
VOY    Vojsko            85.92  21  eP     P       20 40 33.4 -1.5
VOY                                 e              20 40 41.7
GMNA   Gemona            85.95  20  eP     P       20 40 35.8 +0.7
VTS    Vitosha           86.00  28 ⇑P      P       20 40 37.8 +2.4
VTS    Vitosha           86.00  28  eP     P       20 40 33.0 -2.4
DAVA   Damuels           86.00  18⇑iP     P       20 40 33.3 -2.0
       comp=Z,502nm,1.7s,mb6.5
THEF   They Montfort     86.01  15  eP     P       20 40 37.0 +1.7
MEZF   Maizieres J'vi    86.08  14  eP     P       20 40 34.8 -0.8
       comp=Z,851nm,1.5s,mb6.5
PTCC   Patocco-Chiusa    86.10  20   P     P       20 40 35.7 -0.1
LJU    Ljubljana         86.11  21  eP     P       20 40 36.8 +0.9
LJU                                 e              20 40 42.7
FELD   Feldberg          86.11  16⇑eP     P       20 40 36.9 +1.1
DIVS   Divcibare         86.12  25⇓iP     P       20 40 31.8 -4.2
SISC   Sisak             86.15  22  i P    P       20 40 37.2 +1.2
SISB   Singen-Sch Ber    86.16  17   P     P       20 40 38.3 +2.2
KIZ    Kirchzarten       86.17  16   P     P       20 40 37.7 +1.6
KIZ    Kirchzarten       86.17  16⇑eP     P       20 40 37.0 +0.9
PLD    Plovdiv           86.17  29  eP     P       20 40 36.0 -0.3
GRUS   Gruza             86.20  26⇑iP     P       20 40 35.3 -1.1
ECH    Echery            86.25  16  eP     P       20 40 35.8 -0.7
SQTA   Sankt Quirin      86.28  18⇑iP     P       20 40 35.1 -1.6
       comp=Z,186nm,1.4s,mb6.1
SQTA   Sankt Quirin      86.28  18⇑iP     P       20 40 35.1 -1.6
SQTA                                 pmax  pmax
       comp=Z,186nm,1.4s,mb6.1
LIBD   Limburg           86.28  16  eP     P       20 40 36.3 -0.4
PGB    Panagyurishte     86.34  29  eP     P       20 40 30.0 -7.1
MOTA   Moosalm           86.37  18⇑iP     P       20 40 34.6 -2.5
       comp=Z,105nm,1.5s,mb5.8
ULDT   Uludag            86.42  33  i P    P       20 40 35.0 -2.6
UBR    Uberruh           86.43  18⇑eP     P       20 40 38.6 +1.2
WTTA   Wattenberg        86.43  19⇑iP     P       20 40 35.6 -1.8
       comp=Z,811nm,1.8s,mb6.7
WTTA   Wattenberg        86.43  19⇑iP     P       20 40 35.6 -1.8
WTTA                                 pmax  pmax
       comp=Z,811nm,1.8s,mb6.7
CDF    Champ du Feu      86.46  16  eP     P       20 40 36.2 -1.3
       comp=Z,513nm,1.7s,mb6.2
CDF    Champ du Feu      86.46  16  eP     P       20 40 36.2 -1.3
CDF                                  pmax  pmax
       comp=Z,257nm,1.7s,mb6.2
DIM    Dimitrovgrad      86.46  30  eP     P       20 40 39.0 +1.3
WLS    Welschbruch       86.47  16  eP     P       20 40 38.8 +1.2
WATA   Walderalm         86.48  19⇑iP     P       20 40 35.4 -2.2
       comp=Z,390nm,1.6s,mb6.4
WATA   Walderalm         86.48  19⇑iP     P       20 40 35.4 -2.2
WATA                                 pmax  pmax
       comp=Z,390nm,1.6s,mb6.4
SPAK   Spaichingen       86.50  17  eP     P       20 40 36.3 -1.5
GUT    Gutenstein        86.55  17   P     P       20 40 40.0 +2.0
GUT    Gutenstein        86.55  17⇑eP     P       20 40 38.8 +0.8
BOLS   Boljevac          86.60  27⇓iP     P       20 40 36.7 -1.6
SHAO   Shalim            86.60  65 ⇑P      P       20 40 38.7 -0.2
BFO    Black Forest      86.61  16  eP     P       20 40 36.5 -1.8
BFO                                  pmax  pmax
       comp=Z,178nm,1.3s,mb6.1
BFO    Black Forest      86.61  16  eP     P       20 40 36.5 -1.8
       comp=Z,178nm,1.3s,mb6.1
ESKT   Eskisehir         86.70  35  i P    P       20 40 40.7 +1.8
KBA    Koelnbreinsper    86.72  20⇑iP     P       20 40 37.1 -1.7
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       comp=Z,395nm,2.6s,mb6.2
KBA    Koelnbreinsper    86.72  20⇑iP     P       20 40 37.1 -1.7
KBA                                  pmax  pmax
       comp=Z,395nm,2.6s,mb6.2
STR    Strasbourg        86.73  16  eP     P       20 40 40.2 +1.4
BEO    Belgrade          86.92  25⇑iP     P       20 40 40.0 +0.1
BUCH   Bad Urach         86.96  17   P     P       20 40 41.9 +1.9
BUCH   Bad Urach         86.96  17⇑eP     P       20 40 41.2 +1.2
LBG    Lerchenberg       87.04  16   P     P       20 40 42.0 +1.7
LBG    Lerchenberg       87.04  16⇑eP     P       20 40 41.5 +1.2
LANF   Langenberg        87.11  16  eP     P       20 40 40.7  0.0
FUR    Furstenfeldbru    87.17  18   P     P       20 40 43.1 +2.1
STU    Stuttgart         87.23  17  eP     P       20 40 39.8 -1.5
STU                                  pmax  pmax
       comp=Z,290nm,1.3s,mb6.3
STU    Stuttgart         87.23  17  eP     P       20 40 39.8 -1.5
       comp=Z,286nm,1.4s,mb6.3
JMB    Yambol            87.24  30  eP     P       20 40 42.0 +0.5
HDH    Heidenheim        87.29  17   P     P       20 40 43.3 +1.7
HDH    Heidenheim        87.29  17⇑eP     P       20 40 42.7 +1.1
BAIF   Baives            87.41  13  eP     P       20 40 41.2 -0.9
       comp=Z,565nm,1.6s,mb6.2
BAIF   Baives            87.41  13  eP     P       20 40 41.2 -0.9
BAIF                                 pmax  pmax
       comp=Z,282nm,1.6s,mb6.2
WLF    Walferdange       87.41  14  eP     P       20 40 42.2 +0.1
WLF                                  pmax  pmax
       comp=Z,280nm,1.4s,mb6.3
WLF    Walferdange       87.41  14  eP     P       20 40 42.2 +0.1
       comp=Z,281nm,1.4s,mb6.3
KTD    Kalmit            87.49  16  eP     P       20 40 42.5  0.0
ARSA   Arzberg           87.49  21⇑iP     P       20 40 41.5 -1.1
       comp=Z,537nm,2.5s,mb6.3
GIVF   Givet             87.56  14  eP     P       20 40 42.0 -0.8
       comp=Z,522nm,1.5s,mb6.2
GIVF   Givet             87.56  14  eP     P       20 40 42.0 -0.8
GIVF                                 pmax  pmax
       comp=Z,261nm,1.5s,mb6.2
RUP    Ruppelstein       87.63  15  eP     P       20 40 43.0 -0.2
RUP    Ruppelstein       87.63  15  eP     P       20 40 43.3 +0.1
MOA    Molln             87.68  20⇑iP     P       20 40 41.6 -1.8
       comp=Z,251nm,2.1s,mb6.1
SWS    Schriesheim       87.78  16   P     P       20 40 46.6 +2.7
SWS    Schriesheim       87.78  16⇑eP     P       20 40 45.5 +1.6
TEIG   Tepich            87.83 297  eP     P       20 40 42.2 -2.6
       comp=Z,135nm,1.6s,mb5.9
SIND   Sindeldorf        87.86  17   P     P       20 40 46.6 +2.3
SIND   Sindeldorf        87.86  17⇑eP     P       20 40 45.3 +1.0
HGH    Gray Hill         87.88   8  eP     P       20 40 45.6 +1.3
HGH                                  AMb   AMB     20 40 48.0
       comp=Z,104nm,1.8s,mb5.8
ANTO   Ankara            87.89  36   P     P       20 40 47.2 +2.6
ABH    Alteburg          87.91  15  eP     P       20 40 44.2 -0.3
ABH    Alteburg          87.91  15  eP     P       20 40 43.7 -0.8
TOD    Tromm             87.92  16  eP     P       20 40 43.0 -1.6
TOD                                        pP      20 40 47.2 -0.6
TOD    Tromm             87.92  16  eP     P       20 40 43.6 -0.9
BZS    Buzias            88.02  26 ⇑P      P       20 40 46.3 +1.2
BZS    Buzias            88.02  26   P     P       20 40 47.0 +1.9
BR131  Keskin Array S    88.18  36   PFAKE         20 41 00.0  +14
BR131                                LR    LR
       comp=Z,5µm,20.0s,MS5.9
BRTR   Keskin Array B    88.18  36   P     P       20 40 42.5 -3.5
       comp=Z,4.3nm,0.8s,mb4.7,baz=180,slow=2.5,SNR=16
BRTR                                 PP    PP      20 44 16.6 +1.1
       comp=Z,7.0nm,1.2s,baz=190,slow=8.8,SNR=3.3
KAHT   Ahir Dag          88.18  40  i P    P       20 40 50.2 +4.1
SOP    Sopron            88.19  22   P     P       20 40 46.3 +0.4
SOP    Sopron            88.19  22  ePcP   PcP     20 40 46.6 -1.5
SOP                                 i pP   pP      20 40 53.8 +4.7
MCH1   Michaelchurch     88.21   8  eP     P       20 40 47.2 +1.4
MCH1                                 AMb   AMB     20 40 50.4
       comp=Z,82nm,2.3s,mb5.6
DWPF   Disney            88.25 307   PFAKE         20 41 00.0  +13
DWPF                                 LR    LR
       comp=Z,3µm,22.0s,MS5.6
HTR    Trewern Hill      88.26   8  eP     P       20 40 47.8 +1.7
HTR                                  AMb   AMB     20 40 49.7
       comp=Z,7.2nm,1.9s,mb4.6
HAE    Alders End        88.30   9  eP     P       20 40 47.5 +1.2
HAE                                  AMb   AMB     20 40 50.9
       comp=Z,129nm,1.8s,mb5.9
GZT    Gaziantep         88.33  40  i P    P       20 40 49.1 +2.3
HGN    Heimansgroeve     88.41  14  eP     P       20 40 47.7 +0.8
       comp=Z,60nm,0.7s,mb5.9
HGN    Heimansgroeve     88.41  14  eS             20 51 13.8
HGN                                 eSS    SS      20 57 14.8 -8.8
TNS    Taunus Mts        88.42  16  eP     P       20 40 46.3 -0.6
GEC2   GERESS Array S    88.43  19  eP     P       20 40 45.4 -1.6
GEC2                                 pmax  pmax
       comp=Z,63nm,1.4s,mb5.7
GEC2   GERESS Array S    88.43  19  eP     P       20 40 45.4 -1.6
       comp=Z,63nm,1.4s,mb5.7
GERES  GERESS Array B    88.43  19   P     P       20 40 45.5 -1.5
       comp=Z,5.1nm,1.0s,mb4.7,baz=225,slow=1.9,SNR=16
WET    Wettzell          88.48  19  eP     P       20 40 45.8 -1.5
WET                                  pmax  pmax
       comp=Z,199nm,1.4s,mb6.2
WET    Wettzell          88.48  19  eP     P       20 40 45.8 -1.5
       comp=Z,199nm,1.4s,mb6.2
GRA1   Grafenberg Arr    88.57  18  eP     P       20 40 46.6 -1.1
       comp=Z,290nm,1.3s,mb6.5
GRA1                                e              20 40 54.4
GRA1                                 LR    LR
       comp=Z,9µm,18.7s,MS6.2
GRF    Grafenberg Arr    88.57  18  eP     P       20 40 46.6 -1.1
GRF                                 e              20 40 54.4
GRF                                  pmax  pmax
       comp=Z,290nm,1.3s,mb6.5
GRF                                  MLR   MLR
       comp=Z,9µm,18.7s,MS6.2
GRF    Grafenberg Arr    88.57  18  eP     P       20 40 46.6 -1.1
GRF                                 e              20 40 54.4
GRF                                  pmax  pmax
       comp=Z,290nm,1.3s,mb6.5
GRF                                  MLR   MLR
       comp=Z,9µm,18.7s,MS6.2
GRF    Grafenberg Arr    88.57  18  eP     P       20 40 46.6 -1.1
       comp=Z,290nm,1.3s,mb6.5
GRF                                 e              20 40 54.4
GRF                                  LR    LR
       comp=Z,9µm,18.7s,MS6.2
BUC1   Bucharest         88.58  29   P     P       20 40 56.0 +8.1
SSP1   Stoney Pound      88.61   8  eP     P       20 40 49.5 +1.7
VKA    Vienna            88.64  21  eP     P       20 40 45.0 -3.0
VKA                                 i      pP      20 40 49.4 -1.9
KHC    Kasperske Hory    88.66  19  eP     P       20 40 46.7 -1.4
KHC                                 epP    pP      20 40 54.8 +3.5
KHC                                 eSKS   SKS     20 51 23.4 +3.3
KHC                                  AMS   AMS     21 16 40.0
       comp=Z,18µm,22.8s
ELDT   Eldivan           88.67  36  i P    P       20 40 50.4 +2.0
HLM1   Long Mynd         88.73   8  eP     P       20 40 49.7 +1.3
HLM1                                 AMb   AMB     20 40 53.0
       comp=Z,125nm,1.5s,mb6.0
BUD    Budapest          88.78  23⇑ePcP   PcP     20 40 49.9 -0.7
ZST    Bratislava        88.81  22  eP     P       20 40 50.5 +1.6
ZST                                 e              20 40 56.4
ZST                                 eS     S       20 52 04.8  +31
ZST                                 eSS    SS      20 57 20.9 -8.5
SRO2   Moca              88.82  23  eP     P       20 40 49.3 +0.4
SRO    Srobarova         88.84  23  eP     P       20 40 51.2 +2.2
SRO                                 esP    sP      20 40 56.5 +3.2
YRE    Yr Eifl           89.02   7  eP     P       20 40 51.9 +2.1
SBD1   Bryn Du           89.07   8  eP     P       20 40 51.1 +1.1
SBD1                                 AMb   AMB     20 40 54.0
       comp=Z,120nm,1.7s,mb6.0
DCN    Croghan           89.12   5  eP     P       20 40 48.2 -2.0
DCN    Croghan           89.12   5  eP     P       20 40 58.0 +7.8
DLF    Lyons Farm        89.14   6  eP     P       20 40 48.5 -1.8
DLF    Lyons Farm        89.14   6  eP     P       20 40 58.1 +7.8
BHD    Baghdad           89.18  47  eP     P       20 40 56.0 +5.0
BHD    Baghdad           89.18  47  eS     S       20 51 24.0  -14
YLL    Llanberis         89.20   7  eP     P       20 40 52.2 +1.6
SNX    Sinaia            89.23  28 ⇑P      P       20 40 51.8 +0.9
SNX    Sinaia            89.23  28   P     P       20 40 54.0 +3.1
YRC    Rhoscolyn         89.27   7  eP     P       20 40 52.7 +1.8
KWE    Weaver Farm       89.35   9  eP     P       20 40 53.3 +2.1
NKC    Novy Kostel       89.38  18  eP     P       20 40 52.6 +1.1
NKC                                 epP    pP      20 40 58.5 +3.8
NKC                                  AMS   AMS     21 16 20.0
       comp=Z,10µm,23.1s
KRUC   Moravsky          89.38  21   P     P       20 40 52.8 +1.3
```

WCB1	**Church Bay**	**89.40**	**7**	*e*P	**P**	**20 40 53.6**	**+2.1**
DRGR		**89.41**	**26**	P	**P**	**20 40 54.0**	**+2.2**
PSZ	**Piszkesteto**	**89.44**	**23**	*e*P	**P**	**20 40 49.1**	**-2.7**
PSZ				pmax	pmax		
	comp=Z,230nm,1.4s,mb6.3						
PSZ	**Piszkesteto**	**89.44**	**23**	⇓P	**P**	**20 40 54.1**	**+2.3**
	comp=Z,6.1nm,1.4s,mb4.7						
PSZ	**Piszkesteto**	**89.44**	**23**	⇑*e*PcP	PcP	20 40 49.3	-4.2
WME	**Myndd Eilian**	**89.44**	**7**	*e*P	**P**	**20 40 54.0**	**+2.2**
BALT	**Daday**	**89.47**	**35**	*i* P	**P**	**20 40 49.9**	**-2.2**
MALT	**Malatya**	**89.50**	**40**	*e*P	**P**	**20 40 50.9**	**-1.5**
MALT				pmax	pmax		
	comp=Z,150nm,1.6s,mb6.1						
MALT	**Malatya**	**89.50**	**40**	⇑P	**P**	**20 40 54.5**	**+2.1**
	comp=Z,3.4nm,1.6s						
MLR	**Muntele Rosu**	**89.50**	**28**	P	**P**	**20 40 50.3**	**-1.9**
	comp=Z,11nm,0.8s,mb5.2,baz=216,slow=5.6,SNR=15						
MLR	**Muntele Rosu**	**89.50**	**28**	P	**P**	**20 40 52.1**	**-0.1**
MLR	**Muntele Rosu**	**89.50**	**28**	⇑*i*P	**P**	**20 40 50.2**	**-2.0**
MOX	**Moxa**	**89.55**	**17**	*e*P	**P**	**20 40 53.7**	**+1.4**
MOX				pmax	pmax		
	comp=Z,200nm,2.2s,mb6.1						
MOX				MLR	MLR		
	comp=Z,9µm,22.0s,MS6.2						
MOX	**Moxa**	**89.55**	**17**	*e*P	**P**	**20 40 53.7**	**+1.4**
	comp=Z,200nm,2.2s,mb6.1						
MOX				LR	LR		
	comp=Z,9µm,22.0s,MS6.2						
MOX	**Moxa**	**89.55**	**17**	*i* P	**P**	**20 40 53.7**	**+1.4**
	comp=Z,logA/T=2.0,mb6.1						
MOX				S	S	20 51 25.0	-16
MOX				L		21 17 45.0	
JAVC	**Velka Javorina**	**89.58**	**22**	P	**P**	**20 40 54.0**	**+1.5**
VYHS	**Vyhne**	**89.61**	**23**	*e*P	**P**	**20 40 51.1**	**-1.5**
VYHS				*e*		20 40 59.2	
KBI1	**Birley Grange**	**89.62**	**9**	*e*P	**P**	**20 40 54.4**	**+1.9**
HARR	**Harsova**	**89.63**	**30**	⇑*i*P	**P**	**20 40 54.4**	**+1.6**
VRAC	**Vranov**	**89.66**	**21**	P	**P**	**20 40 50.7**	**-2.2**
	comp=Z,4.6nm,0.9s,mb4.8,baz=159,slow=2.7,SNR=10						
PRU	**Pruhonice**	**89.70**	**19**	*e*P	**P**	**20 40 53.7**	**+0.7**
PRU				*e*pP	pP	20 41 00.3	+4.1
PRU				*e*SKS	SKS	20 51 33.4	+6.9
PRU				AMS	AMS	21 17 20.0	
	comp=Z,20µm,21.7s						
DMUB	**Kingscourt**	**89.70**	**6**	*e*P	**P**	**20 41 00.4**	**+7.5**
WTSB	**Winterswijk**	**89.72**	**14**	*e*P	**P**	**20 40 54.7**	**+1.6**
	comp=Z,138nm,1.7s,mb6.0						
WTSB				*e*x	x	20 41 00.6	
LHO	**Holmfirth**	**89.86**	**9**	*e*P	**P**	**20 40 55.0**	**+1.3**
ELZG	**Elazig**	**89.93**	**40**	*i* P	**P**	**20 40 54.0**	**-0.4**
BOYT	**Boyabat**	**90.10**	**36**	*i* P	**P**	**20 40 55.6**	**+0.5**
CFR	**Carcaliu**	**90.11**	**30**	⇓P	**P**	**20 40 56.3**	**+1.3**
CFR	**Carcaliu**	**90.11**	**30**	⇑*i*P	**P**	**20 40 55.7**	**+0.7**
VRI	**Vrincioaia**	**90.12**	**29**	P	**P**	**20 41 02.7**	**+7.6**
VRI	**Vrincioaia**	**90.12**	**29**	⇑*i*P	**P**	**20 40 54.5**	**-0.6**
KECS	**Kecovo**	**90.12**	**24**	*e*P	**P**	**20 40 54.5**	**-0.5**
KECS				*e*		20 41 02.3	
WIM	**Isle of Man**	**90.15**	**7**	*e*P	**P**	**20 40 56.2**	**+1.2**
PVCC	**Panska Ves**	**90.20**	**19**	*e*P	**P**	**20 40 56.6**	**+1.3**
PVCC				*e*pP	pP	20 41 02.9	+4.4
HPK	**Haverah Park**	**90.30**	**9**	*e*P	**P**	**20 40 57.8**	**+2.2**
BRG	**Berggiesshubel**	**90.35**	**19**	*e*P	**P**	**20 40 56.6**	**+0.6**
BRG				*i*		20 41 04.1	
BRG				*e*		20 44 27.0	
BRG				pmax	pmax		
	comp=Z,190nm,1.7s,mb6.2						
BRG				MLR	MLR		
	comp=N,9µm,22.8s,MS6.3						
BRG				MLR	MLR		
	comp=E,11µm,22.8s,MS6.3						
BRG				MLR	MLR		
	comp=Z,10µm,22.8s,MS6.2						
BRG	**Berggiesshubel**	**90.35**	**19**	*e*P	**P**	**20 40 56.6**	**+0.6**
	comp=Z,190nm,1.7s,mb6.2						
BRG				*i*		20 41 04.1	
BRG				*i*		20 41 12.4	
BRG	**Berggiesshubel**	**90.35**	**19**	*e*PP	PP	20 44 27.0	-5.6
BRG				*i* S	S	20 51 34.0	-14
BRG				*i* SS	SS	20 57 11.0	-41
MORC	**Moravsky Berou**	**90.36**	**21**	*e*P	**P**	**20 40 56.0**	**-0.1**
MORC				pmax	pmax		
	comp=Z,300nm,1.6s,mb6.4						
MORC	**Moravsky Berou**	**90.36**	**21**	*e*P	**P**	**20 40 56.0**	**-0.1**
	comp=Z,298nm,1.6s,mb6.4						
CLZ	**Clausthal**	**90.37**	**16**	*e*P	**P**	**20 40 55.9**	**-0.2**
	comp=Z,251nm,1.6s,mb6.3						
CLL	**Collm**	**90.50**	**18**	*e*P	**P**	**20 40 52.0**	**-4.7**
CLL				*i*	pP	20 40 56.9	-3.0
CLL				*e*S	S	20 51 42.0	-7.5
CLL				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.8						
CLL				MLR	MLR		
	comp=Z,8µm,18.5s,MS6.2						
CLL	**Collm**	**90.50**	**18**	*e*P	**P**	**20 40 52.0**	**-4.7**
	comp=Z,68nm,1.3s,mb5.8						
CLL				*i*	pP	20 40 56.9	-3.0
CLL				*i*		20 41 03.6	
CLL				LR	LR		
	comp=Z,8µm,18.5s,MS6.2						
CLL	**Collm**	**90.50**	**18**	P	**P**	**20 40 56.9**	**+0.2**
	comp=Z,logA/T=1.7,mb5.8						
CLL				*i*		20 41 03.6	
CLL				*i*		20 41 13.2	
CLL				*e*PP	PP	20 44 30.0	-3.8
CLL				*e*S	S	20 51 42.0	-7.5
CLL				*e*PS	PS	20 53 00.0	-1.2
CLL				*e*SS	SS	20 57 41.0	-13
CLL	**Collm**	**90.50**	**18**	*e*S	S	20 51 42.0	-7.5
WIT	**Witteveen**	**90.50**	**14**	*e*P	**P**	**20 40 60.0**	**+3.3**
	comp=Z,166nm,2.5s,mb5.9						
WIT				*e*x	x	20 41 05.0	
DPC	**Dobruska-Polom**	**90.52**	**20**	*e*P	**P**	**20 40 56.4**	**-0.4**
DPC				*e*pP	pP	20 41 03.8	+3.8
DPC				*e*S	S	20 51 58.6	+9.0
DPC				AMS	AMS	21 17 10.0	
	comp=Z,21µm,23.4s						
MSL	**Mosul**	**90.57**	**44**	*e*P	**P**	**20 40 51.5**	**-5.9**
MSL				*e*pP	pP	20 40 59.0	-1.6
MSL				*e*sP	sP	20 41 07.0	+5.4
MSL				*e*PP	PP	20 44 14.0	-21
MSL				*e*sP		20 51 09.5	
MSL				*e*sS		20 51 41.5	
MSL				*e*PS	PS	20 52 23.0	-39
UPC	**Upice**	**90.57**	**20**	*e*P	**P**	**20 40 57.2**	**+0.2**
UPC				*e*pP	pP	20 41 04.7	+4.4
ARQ	**Araqi**	**90.59**	**62**	⇓P	**P**	**20 40 55.0**	**-2.7**
OKC	**Ostrava-Krasne**	**90.59**	**22**	*e*P	**P**	**20 40 57.3**	**+0.2**
OKC				*e*pP	pP	20 41 04.5	+4.2
OKC				AMS	AMS	21 15 00.0	
	comp=Z,16µm,27.1s						
BSY	**Bisya**	**90.70**	**62**	⇑P	**P**	**20 40 56.2**	**-2.1**
	SNR=7.7						
BEST	**Besiri**	**90.71**	**42**	*i* P	**P**	**20 40 58.5**	**+0.5**
CRVS	**Cervenica-Dubn**	**90.81**	**24**	*e*P	**P**	**20 41 03.8**	**+5.6**
CRVS	**Cervenica-Dubn**	**90.81**	**24**	*e*pP	pP	20 41 03.8	+2.4
RAC	**Raciborz**	**90.82**	**21**	*e*P	**P**	**20 40 58.1**	**-0.1**
RAC				*e**PP	pP	20 41 06.1	+4.7
RAC				*e*S	S	20 51 44.4	-7.9
RAC				MLR	MLR		
	comp=N,27µm,25.1s,MS6.6						
RAC				MLR	MLR		
	comp=E,13µm,24.0s,MS6.6						
RAC				MLR	MLR		
	comp=Z,13µm,19.7s,MS6.4						
NHSC	**New Hope**	**90.84**	**311**	PFAKE		20 41 10.0	+11
NHSC				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
HBF	**Harts Bluff**	**90.84**	**311**	P	**P**	**20 40 55.6**	**-3.1**
UZH	**Uzhgorod**	**90.85**	**25**	*d i*P	**P**	**20 40 59.0**	**+0.6**
UZH				*e*S	S	20 51 44.0	-8.6
UZH	**Uzhgorod**	**90.85**	**25**	*i* Pr		20 40 59.0	
NIE	**Niedzica**	**90.89**	**23**	*e*P	**P**	**20 40 59.7**	**+1.2**
KSP	**Ksiaz**	**90.95**	**20**	*e*P	**P**	**20 41 00.2**	**+1.4**
KSP				*e**PP	pP	20 41 06.5	+4.5
KSP				*e*		20 44 33.0	
KSP				*e*S	S	20 51 48.0	-5.4
KSP				*e*SP	SP	20 53 02.0	-3.0
KSP				MLR	MLR		
	comp=Z,57µm,23.7s,MS6.9						
KSP	**Ksiaz**	**90.95**	**20**	*e*P	**P**	**20 41 00.2**	**+1.4**
KSP				*e*pP	pP	20 41 06.5	+4.5
KSP				*e*PP	PP	20 44 33.0	-4.5
KSP				*e*S	S	20 51 48.0	-5.4
KSP				*e*SP	SP	20 53 02.0	-3.0
KSP				*e*SS	SS	20 57 43.0	-17
KSP				LR	LR		
	comp=Z,57µm,23.7s,MS6.9						
KSP	**Ksiaz**	**90.95**	**20**	*e*P	**P**	**20 41 00.6**	**+1.8**
KSP				*e*pP	pP	20 41 06.6	+4.6
KSP				*e*PP	PP	20 44 32.4	-5.1
KSP				*e*S	S	20 51 48.6	-4.9
KSP				*e*SS	SS	20 58 06.7	+6.4
KSP				MLR	MLR	21 17 29.2	
	comp=Z,47µm,24.0s,MS6.8						
BURAR	**Bucovina Array**	**91.01**	**27**	P	**P**	**20 41 01.4**	**+2.3**
ASHO	**Ashiyiah**	**91.10**	**60**	⇓P	**P**	**20 40 59.3**	**-0.8**
	SNR=13						
KOLS	**Kolonicke sedl**	**91.11**	**24**	*e*P	**P**	**20 41 00.6**	**+1.1**
KOLS				*e*		20 41 07.3	
HOQ	**Hoqain**	**91.31**	**62**	⇑P	**P**	**20 40 57.9**	**-3.2**
	SNR=6.9						
OJC	**Ojcow**	**91.43**	**22**	*e*P	**P**	**20 41 01.8**	**+0.8**
OJC				*i* pP	pP	20 41 07.9	+3.7
OJC				*e*PP	PP	20 44 37.5	-3.8
OJC				⇑*e*SKSa		20 51 31.1	
OJC				*e*S	S	20 52 01.1	+3.4
OJC				*e*SS	SS	20 58 06.2	-0.7
OJC				MLR	MLR	21 18 39.1	
	comp=Z,12µm,23.0s,MS6.3						
OJC	**Ojcow**	**91.43**	**22**	*e*PP	PP	20 44 37.5	-3.8
OJC				*e*SKSac		20 51 31.1	
OJC				*e*S	S	20 52 01.1	+3.4
OJC				*e*SS	SS	20 58 06.2	-0.7
ESK	**Eskdalemuir**	**91.45**	**8**	*e*P	**P**	**20 40 59.8**	**-1.1**
	comp=Z,48nm,1.0s,mb5.8						
ESK				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
ESK	**Eskdalemuir**	**91.45**	**8**	*e*P	**P**	**20 41 03.6**	**+2.6**
ESK				AMb	AMB	20 41 10.8	
	comp=Z,105nm,1.5s,mb6.0						
EKA	**Eskdalemuir Ar**	**91.47**	**8**	P	**P**	**20 41 00.2**	**-0.8**
	comp=Z,7.4nm,0.9s,mb5.0,baz=210,slow=6.7,SNR=9.9						
IAS	**Iasi**	**91.54**	**28**	P	**P**	**20 41 08.5**	**+6.9**
RUE	**Ruedersdorf**	**91.77**	**18**	*e*P	**P**	**20 41 02.3**	**-0.2**
	comp=Z,59nm,0.9s,mb5.9						
RUE				*e*		20 41 10.8	
KWP	**Kalwaria**	**91.85**	**24**	*e*P	**P**	**20 41 03.4**	**+0.5**
KWP				*e**PP	pP	20 41 10.2	+4.0
KWP				MLR	MLR		
	comp=Z,23µm,34.1s,MS6.4						
KWP	**Kalwaria**	**91.85**	**24**	*e*P	**P**	**20 41 03.4**	**+0.5**
KWP				*e*pP	pP	20 41 10.2	+4.0
KWP				*e*SS	SS	20 58 04.8	-8.1
KWP	**Kalwaria**	**91.85**	**24**	*e*P	**P**	**20 41 03.4**	**+0.4**
KWP				*e*pP	pP	20 41 10.2	+4.0
KWP				*e*SS	SS	20 58 04.8	-8.1
KWP				MLR	MLR	21 13 56.8	
	comp=Z,23µm,34.1s,MS6.4						
KIS	**Kishinev**	**91.87**	**29**	*e*P	**P**	**20 41 02.0**	**-1.1**
KIS				*i*		20 41 10.0	
KIS				*e*		20 44 50.0	
KIS				*e*		20 51 30.0	
KIS				*e*		20 52 12.0	
KIS				*e*PS	PS	20 53 18.0	+0.3
KIS				*e*SS	SS	20 58 10.0	-3.2
KIS				MLR	MLR		
	comp=Z,9µm,20.0s,MS6.2						
KIS				MLR	MLR		
	comp=N,6µm,19.0s,MS6.2						
KIS				MLR	MLR		
	comp=E,5µm,18.0s,MS6.2						
KIS				MLR	MLR		
	comp=Z,4µm,20.0s						
ERZM	**Erzurum**	**92.22**	**41**	*i* P	**P**	**20 41 04.3**	**-0.6**
OXX	**Oaxaca**	**92.23**	**289**	*e*P	**P**	**20 41 05.0**	**-0.4**
KMPD	**K-Podol'skiy**	**92.27**	**27**	P	**P**	**20 41 05.0**	**+0.1**
JSC	**Jenkinsville**	**92.30**	**311**	P	**P**	**20 41 02.4**	**-3.0**
JSC				*e*		20 41 12.5	
TVAN	**Van**	**92.34**	**43**	*i* P	**P**	**20 41 03.9**	**-1.5**
LVV	**L'vov**	**92.46**	**25**	*e*P	**P**	**20 41 04.1**	**-1.6**
LVV				*e*S		20 51 43.5	
LVV				*e*SS	SS	20 58 34.1	+12
LVV				pmax	pmax		
	comp=Z,250nm,1.6s,mb6.3						
LVV				MLR	MLR		
	comp=Z,6µm,19.4s,MS6.0						
LVV				MLR	MLR		
	comp=N,4µm,20.0s,MS6.0						
LVV				MLR	MLR		
	comp=E,4µm,19.8s,MS6.0						
LVV	**L'vov**	**92.46**	**25**	*e*P	**P**	**20 41 04.0**	**-1.7**
SIM	**Simferopol'**	**92.47**	**33**	⇓*e*P	**P**	**20 41 14.1**	**+8.2**
SIM				pmax	pmax		
	comp=Z,430nm,10.0s						
SIM				MLR	MLR		
	comp=Z,7µm,21.0s,MS6.1						
CBN	**Corbin**	**92.72**	**316**	PFAKE		20 41 20.0	+13
CBN				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
HRV	**Harvard--Oak R**	**92.76**	**323**	*e*P	**P**	**20 41 14.2**	**+6.9**
	comp=Z,56nm,1.3s,mb5.8						
HRV				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
PTCN	**Pitcairn Islan**	**92.90**	**236**	PFAKE		20 41 20.0	+12
PTCN				LR	LR		
	comp=Z,6µm,22.0s,MS6.0						
GOGA	**Godfrey**	**93.08**	**310**	*e*P	**P**	**20 41 07.6**	**-1.4**
GOGA				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.7						
GOGA				MLR	MLR		
	comp=Z,9µm,20.0s,MS6.2						
GOGA	**Godfrey**	**93.08**	**310**	*e*P	**P**	**20 41 07.6**	**-1.4**
	comp=Z,44nm,1.3s,mb5.7						
GOGA				LR	LR		
	comp=Z,9µm,20.0s,MS6.2						
SDMD	**Soldier's Deli**	**93.28**	**318**	*e*P	**P**	**20 41 12.8**	**+3.1**
GKP	**Gorka Klasztor**	**93.39**	**19**	*e*P	**P**	**20 41 09.3**	**-0.6**
GKP				*e*pP	pP	20 41 17.2	+4.1
GKP				*e*PP	PP	20 44 50.0	-6.9
GKP				*e*S	S	20 52 32.0	+17
GKP				*e*SS	SS	20 58 37.8	+2.5
GKP				MLR	MLR	21 17 28.1	
	comp=Z,13µm,26.5s,MS6.2						
GKP	**Gorka Klasztor**	**93.39**	**19**	*e*PP	PP	20 44 50.0	-6.9
GKP				*e*S	S	20 52 32.0	+17
GKP				*e*SS	SS	20 58 37.8	+2.5
WAR	**Warsaw**	**93.57**	**22**	*e*P	**P**	**20 41 10.2**	**-0.6**
WAR				*e*pP	pP	20 41 19.0	+5.0
WAR				*e*PP	PP	20 44 54.0	-4.3
WAR				*e*SKS	SKS	20 51 46.7	-2.0
WAR				*e*SS	SS	20 58 35.6	-2.2
WAR				MLR	MLR	21 14 45.0	
	comp=Z,21µm,34.3s,MS6.4						
BLA	**Blacksburg**	**93.78**	**314**	PFAKE		20 41 20.0	+7.9
BLA				LR	LR		
	comp=Z,7µm,19.0s,MS6.2						
ELN	**Prospectdale**	**93.99**	**314**	P	**P**	**20 41 15.5**	**+2.4**
SOC	**Sochi**	**94.06**	**37**	*e*P	**P**	**20 41 13.1**	**-0.2**
SOC				*e*PS	PS	20 53 41.4	-0.6
SOC				pmax	pmax		
	comp=Z,121nm,1.3s,mb6.2						
SOC				pmax	pmax		
	comp=N,32nm,1.2s						
SOC				pmax	pmax		
	comp=E,56nm,1.3s						
SOC				MLR	MLR		
	comp=N,4µm,17.0s,MS6.1						
SOC				MLR	MLR		
	comp=Z,6µm,17.0s,MS6.1						
SOC				MLR	MLR		
	comp=E,4µm,18.0s,MS6.1						
GNI	**Garni**	**94.21**	**42**	*e*P	**P**	**20 41 15.1**	**+1.1**
GNI				pmax	pmax		
	comp=Z,378nm,1.8s						
GNI				MLR	MLR		
	comp=Z,12µm,19.0s						
GNI	**Garni**	**94.21**	**42**	P	**P**	**20 41 16.1**	**+2.0**
	comp=Z,6.2nm,0.9s,mb5.0,slow=5.1						
GNI	**Garni**	**94.21**	**42**	*e*P	**P**	**20 41 15.1**	**+1.1**
	comp=Z,378nm,1.8s,mb6.5						
GNI				LR	LR		
	comp=Z,12µm,19.0s,MS6.4						
FWV	**Forest Hill**	**94.26**	**314**	P	**P**	**20 41 12.4**	**-1.9**
MUD	**Monsted U'grnd**	**94.43**	**14**	⇓*i*P	**P**	**20 41 24.1**	**+9.5**
MUD				pmax	pmax		
	comp=Z,100nm,1.4s,mb6.0						
MUD				MLR	MLR		
	comp=Z,4µm,24.0s,MS5.8						
MUD	**Monsted U'grnd**	**94.43**	**14**	⇓*i*P	**P**	**20 41 24.1**	**+9.5**
	comp=Z,101nm,1.4s,mb6.1						
MUD	**Monsted U'grnd**	**94.43**	**14**	*e*S	S	20 52 10.5	-13
	comp=Z,4µm,24.0s						
BSD	**Bornholm Skovb**	**94.45**	**17**	*e*P	**P**	**20 41 24.6**	**+10**
BSD				pmax	pmax		
	comp=Z,68nm,1.1s,mb6.0						
BSD	**Bornholm Skovb**	**94.45**	**17**	*i* P	**P**	**20 41 24.6**	**+10**
	comp=Z,68nm,1.1s,mb6.0						
SSPA	**Standing Stone**	**94.71**	**318**	PFAKE		20 41 30.0	+14
SSPA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
BINY	**Binghamton**	**94.79**	**320**	P	**P**	**20 41 17.1**	**+0.5**
	comp=Z,25nm,1.1s,mb5.6						
BINY				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
PPM	**Popocatepetl**	**94.86**	**290**	*e*P	**P**	**20 41 13.0**	**-4.5**
KIEV	**Kiev**	**95.03**	**27**	P	**P**	**20 41 17.0**	**-0.6**
AKASG	**Malin Array Be**	**95.05**	**27**	P	**P**	**20 41 17.0**	**-0.6**
	comp=Z,11nm,0.8s,mb5.3,baz=223,slow=4.3,SNR=28						
LRAL	**Lakeview Retre**	**95.09**	**307**	PFAKE		20 41 30.0	+12
LRAL				LR	LR		
	comp=Z,8µm,19.0s,MS6.2						
MCWV	**Mont Chateau**	**95.12**	**316**	PFAKE		20 41 30.0	+12
MCWV				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
ONI	**Oni**	**95.23**	**40**	P	**P**	**20 41 18.9**	**+0.2**
ONI				S	S	20 52 08.5	-22
TI2	**Plekhanov**	**95.32**	**41**	*e*P	**P**	**20 41 21.8**	**+2.7**
TI2				*i*		20 41 28.0	
TI2				*e*S		20 51 48.0	
TI2				MLR	MLR		
	comp=N,5µm,17.0s,MS6.2						
TI2				MLR	MLR		
	comp=E,6µm,17.0s,MS6.2						
TI2				MLR	MLR		
	comp=Z,8µm,17.0s,MS6.3						
SUW	**Suwalki**	**95.76**	**22**	*e*P	**P**	**20 41 21.0**	**+0.2**
SUW				*e*pP	pP	20 41 28.0	+4.0
SUW				*e*PP	PP	20 45 10.2	-4.6
SUW				*e*SKS	SKS	20 51 49.9	-11
SUW				*e*S	S	20 52 34.4	-0.6
SUW				*e*SS	SS	20 59 14.9	+6.5
SUW				MLR	MLR	21 16 04.2	
	comp=Z,22µm,33.9s,MS6.4						
KIV	**Kislovodsk**	**95.82**	**39**	P	**P**	**20 41 21.4**	**+0.1**
	comp=Z,339nm,1.5s,mb6.5,SNR=8.6						
KIV	**Kislovodsk**	**95.82**	**39**	*e*P	**P**	**20 41 21.5**	**+0.2**
KIV				*e*PPP	PPP	20 47 18.3	-2.2
KIV				*e*		20 51 54.4	
KIV				*e*SS	SS	20 59 06.2	-3.3
KIV				*e*SSS	SSS	21 02 51.9	-1.3
KIV				pmax	pmax		
	comp=Z,77nm,1.1s,mb6.0						
KIV				MLR	MLR		
	comp=N,6µm,16.0s						
KIV				MLR	MLR		
	comp=Z,9µm,16.0s,MS6.4						
KIV	**Kislovodsk**	**95.82**	**39**	⇑*e*P	**P**	**20 41 21.6**	**+0.3**
	comp=Z,10nm,1.5s,mb5.0						
KIV				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
GOF	**Gofitskoye**	**96.78**	**38**	*e*P	**P**	**20 41 26.0**	**+0.4**
GOF				*i*		20 41 34.0	
GOF				*i*		20 54 12.0	
GOF				pmax	pmax		
	comp=Z,130nm,1.3s,mb6.2						
GOF				pmax	pmax		
	comp=Z,2µm,3.0s						
GOF				pmax	pmax		
	comp=Z,2µm,7.0s						
GOF				MLR	MLR		
	comp=N,12µm,14.0s,MS6.5						
GOF				MLR	MLR		
	comp=E,4µm,14.0s,MS6.5						
GOF				MLR	MLR		
	comp=Z,7µm,14.0s,MS6.3						
ERPA	**Erie**	**96.87**	**318**	PFAKE		20 41 40.0	+14
ERPA				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
ACSO	**Alum Creek Sta**	**97.29**	**315**	PFAKE		20 41 40.0	+12
ACSO				LR	LR		
	comp=Z,6µm,21.0s,MS6.1						
KONO	**Kongsberg**	**97.50**	**13**	PFAKE		20 41 40.0	+11
KONO				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
OXF	**Oxford**	**97.58**	**307**	PFAKE		20 41 40.0	+11
OXF				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
WVT	**Waverly**	**97.58**	**309**	P	**P**	**20 41 26.6**	**-2.9**
	comp=Z,24nm,1.5s,mb5.5						
WVT				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
WCI	**Wyandotte Cave**	**97.95**	**312**	PFAKE		20 41 40.0	+8.9
WCI				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
NAO01	**NORSAR Array S**	**98.86**	**13**	PFAKE		20 41 50.0	+15
NAO01				LR	LR		
	comp=Z,7µm,21.0s,MS6.2						
AAM	**Ann Arbor**	**99.03**	**316**	PFAKE		20 41 50.0	+14
AAM				LR	LR		
	comp=Z,7µm,21.0s,MS6.1						
NWAO	**Narrogin (SRO)**	**99.04**	**142**	LR	LR	21 17 57.5	
	comp=Z,76nm,18.4s,MS4.2,baz=44,slow=30						
NWAO	**Narrogin (SRO)**	**99.04**	**142**	PFAKE		20 41 40.0	+3.9
NWAO				LR	LR		
	comp=Z,14µm,22.0s,MS6.4						
NOA	**NORSAR Array B**	**99.10**	**13**	P	**P**	**20 41 40.5**	**+4.8**
	comp=Z,1.8nm,0.8s,mb4.6,baz=33,slow=7.3,SNR=2.7						
NOA				PP	PP	20 45 43.2	+2.8
	comp=Z,2.2nm,0.8s,baz=204,slow=7.5,SNR=3.5						
NOA				LR	LR	21 25 26.8	
	comp=Z,4µm,19.6s,MS6.0,baz=200,slow=35						
NOA	**NORSAR Array B**	**99.10**	**13**	P	**P**	**20 41 40.5**	**+4.8**
NOA				PP	PP	20 45 43.2	+2.8
NOA				LR	LR	21 25 26.8	
HKT	**Hockley**	**99.17**	**300**	PFAKE		20 41 50.0	+13
HKT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
PALK	**Pallekele**	**99.98**	**88**	PFAKE		20 41 50.0	+9.1
PALK				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
SCHQ	**Schefferville**	**100.08**	**333**	LR	LR	21 22 24.3	
	comp=Z,3µm,19.1s,MS5.8,baz=145,slow=33						
SCHQ	**Schefferville**	**100.08**	**333**	PFAKE		20 41 50.0	+10
SCHQ				LR	LR		
	comp=Z,8µm,20.0s,MS6.2						
BORG	**Borgarnes**	**100.28**	**358**	PFAKE		20 41 50.0	+9.0
BORG				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
TAU	**Tasmania Unive**	**100.28**	**168**	PFAKE		20 41 50.0	+8.4
TAU				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
MIAR	**Mount Ida**	**100.33**	**305**	PFAKE		20 41 50.0	+8.0
MIAR				LR	LR		
	comp=Z,14µm,22.0s,MS6.4						
CCM	**Cathedral Cave**	**100.91**	**309**	PFAKE		20 41 50.0	+5.5
CCM				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
COCO	**West Island**	**101.06**	**114**	PFAKE		20 41 50.0	+4.3
COCO				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
OBN	**Obninsk**	**101.27**	**28**	*i* P	P	20 41 45.4	-0.3
OBN				LR	LR		
	comp=Z,4µm,18.0s,MS6.0						
MOS	**Moscow**	**102.14**	**28**	*e*P	Pdif	20 42 05.5	+16
MOS				MLR	MLR		
	comp=Z,6µm,21.4s,MS6.1						
JCT	**Junction City**	**102.29**	**299**	PFAKE		20 42 00.0	+9.1
JCT				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
FINES	**FINESS Array B**	**102.86**	**19**	PP	PP	20 46 04.0	-5.5
	comp=Z,3.5nm,1.0s,baz=243,slow=9.3,SNR=3.1						
MDRS	**Chennai**	**102.88**	**83**	*e*		20 46 16.0	
MDRS				*e*		20 47 58.0	
JFWS	**Jewell Farm**	**103.21**	**314**	PFAKE		20 42 00.0	+5.3
JFWS				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
HYB	**Hyderabad**	**103.92**	**78**	*i* P	Pdif	20 42 10.0	+12
HYB				*e*PP	PP	20 46 10.0	-8.1
HYB				*e*S	S	20 53 48.0	+3.6
HYB				*e*		20 54 08.0	
HYB				*e*PPS	PPS	20 56 18.0	-3.0
HYB				*e*SS	SS	21 01 08.0	+5.3

HYB				LR	LR	21 22 22.0	
	comp=Z,28nm,20.0s						
WMOK	**Wichita Mounta**	**103.95**	**303**	PFAKE		20 42 10.0	+12
WMOK				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
LTX	**Lajitas**	**104.45**	**296**	PFAKE		20 42 10.0	+10
LTX				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
TXAR	**Lajitas Array**	**104.45**	**296**	Pdiff	Pdif	20 42 08.3	+7.8
	comp=Z,0.1nm,0.4s,baz=106,slow=6.6,SNR=2.7						
TXAR				PP	PP	20 46 18.4	-3.6
	comp=Z,1.7nm,1.0s,baz=121,slow=7.3,SNR=4.6						
TXAR				PKKP	PKKP	20 58 15.6	+24
	comp=Z,2.2nm,0.8s,baz=297,slow=2.8,SNR=8.0						
SFJ	**Sondre**	**105.73**	**347**	PFAKE		20 46 30.0	
SFJ				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
TBI	**Tubuai**	**106.29**	**224**	*e*PP	PP	20 46 23.9	-12
TBI				*e*PS	PS	20 55 44.4	-6.0
TBI				*e*SS	SS	21 01 34.0	-1.3
TBI				*e*LQ		21 12 21.3	
TBI				*e*LR	LR	21 18 27.2	
	comp=Z,9µm,23.8s,baz=148						
CBKS	**Cedar Bluff**	**106.82**	**306**	PFAKE		20 46 30.0	
CBKS				LR	LR		
	comp=Z,10µm,20.0s,MS6.3						
EYMN	**Ely**	**106.87**	**317**	PFAKE		20 46 30.0	
EYMN				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
FRB	**Frobisher Bay**	**107.42**	**338**	PP	PP	20 46 39.9	-3.6
	comp=Z,5.1nm,1.0s,baz=69,slow=8.6,SNR=3.1						
ARCES	**ARCESS Array B**	**109.41**	**14**	PP	PP	20 46 53.4	-4.9
	comp=Z,17nm,1.2s,baz=202,slow=6.5,SNR=4.0						
ANMO	**Albuquerque**	**109.41**	**299**	PP	PP	20 46 59.4	+0.2
	comp=Z,1.2nm,0.7s,baz=288,slow=19,SNR=5.4						
ANMO				PKKP	PKKP	20 57 42.0	0.0
	comp=Z,1.8nm,0.5s,baz=297,slow=6.8,SNR=4.3						
ANMO	**Albuquerque**	**109.41**	**299**	PFAKE		20 46 40.0	
ANMO				LR	LR		
	comp=Z,5µm,19.0s,MS6.1						
MBWA	**Marble Bar**	**109.78**	**137**	PFAKE		20 46 40.0	
MBWA				LR	LR		
	comp=Z,9µm,19.0s,MS6.4						
SDCO	**Great Sand Dun**	**110.15**	**302**	PFAKE		20 46 40.0	+11
SDCO				LR	LR		
	comp=Z,10µm,21.0s,MS6.3						
ULM	**Lac du Bonnet**	**110.54**	**318**	PP	PP	20 47 07.3	+0.8
	comp=Z,8.2nm,1.1s,baz=131,slow=7.1,SNR=5.9						
ULM				PKKP	PKKP	20 57 41.0	+1.4
	comp=Z,2.7nm,0.9s,baz=354,slow=6.4,SNR=2.5						
ULM	**Lac du Bonnet**	**110.54**	**318**	PFAKE		20 46 40.0	+11
ULM				LR	LR		
	comp=Z,8µm,20.0s,MS6.3						
PPT	**Papeete**	**110.84**	**228**	*e*PP	PP	20 46 52.4	-17
PPT				*e*PS	PS	20 56 40.8	+5.8
PPT				*e*SS	SS	21 02 40.7	+4.1
PPT				*e*LQ		21 14 41.1	
PPT				*e*LR	LR	21 19 38.9	
	comp=Z,6µm,23.5s,baz=143						
TUC	**Tucson**	**111.22**	**295**	PFAKE		20 46 40.0	+9.3
TUC				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
WUAZ	**Wupatki**	**113.20**	**298**	PFAKE		20 46 40.0	+5.4
WUAZ				LR	LR		
	comp=Z,22µm,21.0s,MS6.7						
AAK	**Ala-Archa**	**113.74**	**54**	PFAKE		20 46 40.0	+4.5
AAK				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
FRU	**Bishkek**	**113.91**	**54**	*e*PKIKP	PKPdf	20 46 42.0	+6.2
FRU				*e*		20 47 30.0	
FRU				MLR	MLR		
	comp=Z,11µm,24.0s,MS6.4						
ASPA	**Alice Springs**	**114.54**	**150**	*e*PKP	PKPdf	20 46 43.7	+6.3
ASAR	**Alice Springs**	**114.54**	**150**	PKP	PKPdf	20 46 33.7	-3.7
	comp=Z,1.2nm,0.7s,baz=222,slow=0.7,SNR=5.6						
ASAR				PKKPbc		20 57 15.1	
	comp=Z,0.5nm,0.8s,baz=27,slow=2.0,SNR=5.8						
TMUT	**Trail Mountain**	**114.82**	**302**	P	PKPdf	20 46 38.6	+1.0
MSU	**Marysvale**	**115.14**	**300**	*e*PKIKP	PKPdf	20 46 35.7	-2.5
MVU	**Marysvale**	**115.17**	**300**	*e*PKiKP		20 46 35.5	
MVU				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
BW06	**Boulder Array**	**115.25**	**306**	PFAKE		20 46 50.0	+12
BW06				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
PDAR	**Pinedale Array**	**115.25**	**306**	PKP	PKPdf	20 46 37.0	-1.3
	comp=Z,0.6nm,0.7s,baz=108,slow=4.7,SNR=4.2						
PDAR				PP	PP	20 47 38.4	-2.4
	comp=Z,3.3nm,1.1s,baz=117,slow=6.6,SNR=4.0						
PDAR				PKKPab		20 57 14.9	
	comp=Z,0.5nm,0.8s,baz=180,slow=1.5,SNR=3.6						
DAU	**Daniels Canyon**	**115.35**	**303**	*e*P	PKPdf	20 46 45.2	+6.6
KBS	**Kingsbay**	**115.66**	**6**	PFAKE		20 46 50.0	+12
KBS				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
BRVK	**Borovoye**	**115.86**	**42**	PFAKE		20 46 50.0	+11
BRVK				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
BVAR	**Borovoye Array**	**115.90**	**42**	PKP	PKPdf	20 46 39.1	-0.3
	comp=Z,1.4nm,0.8s,baz=239,slow=43,SNR=6.1						
BVAR				PP	PP	20 47 31.6	-13
	comp=Z,2.9nm,0.9s,baz=233,slow=7.4,SNR=3.9						
FFC	**Flin Flon**	**115.95**	**320**	PFAKE		20 46 50.0	+11
FFC				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
PFO	**Pinyon Flat Ob**	**116.03**	**294**	PFAKE		20 46 50.0	+10
PFO				LR	LR		
	comp=Z,801nm,21.0s,MS5.3						
HWUT	**Hardware Ranch**	**116.09**	**304**	*e*PKPdf	PKPdf	20 46 34.8	-5.2
HWUT				*e*		20 46 45.6	
HWUT				LR	LR		
	comp=Z,8µm,19.0s,MS6.4						
AHID	**Auburn Hatcher**	**116.27**	**305**	PFAKE		20 46 50.0	+10
AHID				LR	LR		
	comp=Z,9µm,21.0s,MS6.3						
DUG	**Dugway**	**116.33**	**302**	*e*P	PKPdf	20 46 46.0	+5.5
DUG				LR	LR		
	comp=Z,11µm,20.0s,MS6.5						
MOOW	**Moose Ponds**	**116.46**	**306**	PKPdf	PKPdf	20 46 38.2	-2.5
QLMT	**Earthquake Lak**	**117.36**	**307**	*e*PKPdf	PKPdf	20 46 39.7	-2.7
BOZ	**Bozeman (W)**	**117.82**	**308**	PFAKE		20 46 50.0	+6.8
BOZ				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
WRA	**Warramunga Arr**	**118.04**	**149**	PKP	PKPdf	20 46 39.7	-4.6
	comp=Z,1.2nm,0.5s,baz=226,slow=1.8,SNR=16						
WRA				PP	PP	20 48 02.6	+1.8
	comp=Z,8.0nm,1.2s,baz=204,slow=6.4,SNR=6.8						
WRA				PKKPbc		20 56 58.1	
	comp=Z,0.7nm,0.9s,baz=37,slow=3.0,SNR=4.0						
DAC	**Darwin (Calif)**	**118.05**	**296**	PFAKE		20 46 50.0	+6.1
DAC				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
WRAB	**Tennant Creek**	**118.05**	**149**	*e*PKIKP	PKPdf	20 46 39.7	-4.6
WRAB				MLR	MLR		
	comp=Z,4µm,20.0s,MS6.1						
ELK	**Elko**	**118.24**	**302**	*e*PKIKP	PKPdf	20 46 40.3	-3.9
ELK				MLR	MLR		
	comp=Z,7µm,22.0s						
TPH	**Tonopah**	**118.53**	**298**	PFAKE		20 46 50.0	+5.1
TPH				LR	LR		
	comp=Z,8µm,22.0s,MS6.3						
MNV	**Mina**	**119.35**	**298**	PFAKE		20 46 50.0	+3.6
MNV				LR	LR		
	comp=Z,6µm,22.0s,MS6.2						
NVAR	**Mina Array Bea**	**119.46**	**298**	PKP	PKPdf	20 46 47.6	+1.1
	comp=Z,1.0nm,0.7s,baz=128,slow=2.4,SNR=7.4						
NVAR				PP	PP	20 48 09.2	-0.7
	comp=Z,3.5nm,1.1s,baz=119,slow=9.3,SNR=3.1						
NVAR				PKKPab		20 57 00.7	
	comp=Z,1.4nm,0.8s,baz=256,slow=2.8,SNR=8.8						
BMN	**Battle Mountai**	**119.49**	**301**	PFAKE		20 46 50.0	+3.4
BMN				LR	LR		
	comp=Z,5µm,21.0s,MS6.2						
KURK	**Kurchatov**	**119.67**	**47**	*e*PKIKP	PKPdf	20 46 44.3	-2.3
KURK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.8						
MSO	**Missoula**	**119.75**	**308**	PFAKE		20 46 50.0	+3.1
MSO				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
WALA	**Waterton Lakes**	**120.54**	**311**	*e*P	PKPdf	20 46 53.0	+4.5
CMB	**Columbia Colle**	**120.80**	**297**	PFAKE		20 47 00.0	+11
CMB				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
CM31	**Chiang Mai Arr**	**120.92**	**89**	*e*PKPdf	PKPdf	20 46 46.3	-3.7
CM31				LR	LR		
	comp=Z,7µm,20.0s,MS6.3						
CMAR	**Chiang Mai Arr**	**120.93**	**89**	PKP	PKPdf	20 46 45.8	-4.2
	comp=Z,2.6nm,0.9s,baz=240,slow=3.9,SNR=9.4						
CMAR				PP	PP	20 48 14.2	-5.8
	comp=Z,2.9nm,1.1s,baz=248,slow=5.9,SNR=4.1						
CMAR				PKKPab		20 57 01.4	
	comp=Z,0.5nm,0.8s,baz=44,slow=1.6,SNR=4.1						
SAO	**San Andreas Ge**	**121.07**	**295**	PFAKE		20 47 00.0	+10
SAO				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
RES	**Resolute Bay**	**121.21**	**342**	*e*PKIKP	PKPdf	20 46 44.9	-4.4
BMO	**Blue Mountains**	**121.22**	**305**	*e*P	PKPdf	20 46 49.3	-0.6
BMO				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
WVOR	**Wild Horse Val**	**121.24**	**302**	PKIKP	PKPdf	20 46 47.9	-2.2
WVOR				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.3						
EDM	**Edmonton**	**121.61**	**316**	*e*PKIKP	PKPdf	20 46 45.3	-5.2
CTA	**Charters Tower**	**122.06**	**161**	*e*PKP	PKPdf	20 46 58.5	+6.4
	comp=Z,6.1nm,0.7s						
CTA	**Charters Tower**	**122.06**	**161**	PKP	PKPdf	20 46 53.0	+0.9
	comp=Z,6.6nm,1.1s,baz=191,slow=5.2,SNR=3.7						
CTAO	**Charters Tower**	**122.06**	**161**	*e*PKIKP	PKPdf	20 46 52.9	+0.8
CTAO				MLR	MLR		
	comp=Z,7µm,19.0s,MS6.3						
OHCM	**Honcut**	**122.09**	**298**	*e*PKP	PKPdf	20 46 52.9	+1.2
MOD	**Modoc**	**122.20**	**301**	*e*PKPdf	PKPdf	20 46 47.7	-4.2
MOD				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
NEW	**Newport**	**122.27**	**309**	PKIKP	PKPdf	20 46 47.8	-4.0
NEW				MLR	MLR		
	comp=Z,6µm,21.0s						
NEW	**Newport**	**122.27**	**309**	PKP	PKPdf	20 46 47.8	-4.0
	comp=Z,2.3nm,0.7s,baz=78,slow=9.3,SNR=2.8						
WMQ	**Urumqi**	**123.05**	**57**	*e*PKP	PKPdf	20 46 51.0	-2.4
WMQ				PP	PP	20 48 35.0	+0.6
WMQ				SKS	SKS	20 54 02.0	+6.4
WMQ				SKKS		20 55 27.0	
WMQ				SS	SS	21 05 17.0	+1.3
WMQ				PP	PP		
	comp=Z,2µm,12.0s						
WMQ				LR	LR		
	comp=Z,13µm,24.0s,MS6.5						
HOPS	**Hopland**	**123.11**	**297**	PFAKE		20 47 00.0	+6.4
HOPS				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
WDC	**Whiskeytown Da**	**123.31**	**299**	PFAKE		20 47 00.0	+6.0
WDC				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
KAKA	**Kakadu**	**123.49**	**143**	*e*PKP	PKPdf	20 46 55.2	+0.2
	comp=Z,6.8nm,0.6s						
NVS	**Novosibirsk**	**123.64**	**43**	*e*PKIKP	PKPdf	20 46 51.0	-3.3
NVS				pmax	pmax		
	comp=N,21nm,1.9s						
NVS				pmax	pmax		
	comp=E,22nm,1.9s						
NVS				pmax	pmax		
	comp=Z,57nm,1.9s						
YBH	**Yreka Blue Hor**	**123.83**	**300**	PKIKP	PKPdf	20 46 54.9	-0.2
YBH				MLR	MLR		
	comp=Z,5µm,20.0s						
YBH	**Yreka Blue Hor**	**123.83**	**300**	PKP	PKPdf	20 46 54.9	-0.2
	comp=Z,2.5nm,1.1s,baz=140,slow=7.9,SNR=2.8						
ZAL	**Zalesovo**	**124.28**	**45**	PKP	PKPdf	20 46 54.4	-1.2
	comp=Z,1.9nm,0.7s,baz=190,slow=2.7,SNR=9.7						
ZAL				PP	PP	20 48 36.5	-6.0
	comp=Z,2.1nm,0.8s,baz=278,slow=7.1,SNR=2.5						
ZAL				PKKPbc		20 56 48.0	
	comp=Z,0.8nm,0.7s,baz=36,slow=5.2,SNR=4.7						
HUMO	**Hull Mountain**	**124.30**	**301**	PFAKE		20 47 00.0	+4.1
HUMO				LR	LR		
	comp=Z,6µm,22.0s,MS6.2						
YKA	**Yellowknife Ar**	**124.70**	**326**	PKP	PKPdf	20 46 50.4	-5.7
	comp=Z,3.6nm,0.8s,baz=100,slow=2.5,SNR=11						
YKA				PKKPbc		20 56 44.1	
	comp=Z,0.8nm,0.9s,baz=291,slow=3.9,SNR=5.7						
COR	**Corvallis**	**125.17**	**303**	PFAKE		20 47 00.0	+2.5
COR				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
KMI	**Kunming**	**127.23**	**84**	PKP	PKPdf	20 46 56.3	-5.6
KMI				PP	PP	20 48 56.8	-5.3
KMI				PPP	PPP	20 51 39.8	-6.6
KMI				SKS	SKS	20 54 05.5	-3.1
KMI				SKKS		20 55 47.5	
KMI				PP	PP		
	comp=Z,460nm,8.0s						
KMI				LR	LR		
	comp=Z,14µm,29.6s,MS6.5						
KMI	**Kunming**	**127.23**	**84**	PKIKP	PKPdf	20 46 56.2	-5.7
KMI						20 54 05.5	
KMI				MLR	MLR		
	comp=Z,14µm,29.6s,MS6.5						
KMI	**Kunming**	**127.23**	**84**	PKP	PKPdf	20 46 56.2	-5.7
KMI				PP	PP	20 48 56.7	-5.4
KMI				PKS	PKS	20 50 25.5	-8.9
KMI				PPP	PPP	20 51 39.8	-6.6
KMI				SKS	SKS	20 54 05.5	-3.1
KMI				SKKS		20 55 47.5	
KMI				PS	PS	20 58 56.3	-7.1
KMI				SS	SS	21 05 59.4	-9.0
KMI				SSS	SSS	21 10 42.0	-10
KMI				LR	LR		
	comp=Z,14µm,29.6s,MS6.5						
GTA	**Gaotai**	**130.29**	**66**	PKP	PKPdf	20 47 06.3	-1.2
GTA				PP	PP	20 49 26.5	+4.3
GTA				PKS	PKS	20 50 40.3	+0.6
GTA				SKS	SKS	20 54 12.8	-3.6
GTA				SKKS		20 56 14.5	
GTA				SS	SS	21 06 52.9	+7.2
GTA				PP	PP		
	comp=Z,398nm,10.3s						
GTA				LR	LR		
	comp=Z,11µm,25.5s,MS6.5						
DLBC	**Dease Lake**	**131.79**	**320**	PKP	PKPdf	20 47 06.6	-3.2
	comp=Z,3.5nm,0.9s,baz=299,slow=5.4,SNR=3.8						
DLBC	**Dease Lake**	**131.79**	**320**	*e*PKPdf	PKPdf	20 47 06.2	-3.5
LZH	**Lanzhou**	**132.33**	**71**	⇓PKP	PKPdf	20 47 09.8	-1.7
LZH				XPKP		20 47 14.3	
LZH				PP	PP	20 49 36.5	+1.3
LZH				PKS	PKS	20 50 44.5	+1.0
LZH				SKS	SKS	20 54 19.8	-1.7
LZH				SKKS		20 56 28.1	
LZH				SS	SS	21 07 14.3	+3.1
LZH				PP	PP		
	comp=Z,2µm,8.1s						
LZH				LR	LR		
	comp=N,7µm,18.2s						
LZH				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
LZH	**Lanzhou**	**132.33**	**71**	⇓PKIKP	PKPdf	20 47 09.7	-1.8
LZH						20 47 12.9	
LZH						20 47 14.2	
LZH						20 49 36.5	
LZH						20 54 19.7	
LZH				SS	SS	21 07 14.3	+3.1
LZH				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.4						
LZH	**Lanzhou**	**132.33**	**71**	⇓PKP	PKPdf	20 47 09.7	-1.8
LZH				pPKP		20 47 12.9	
LZH				sPKP		20 47 14.2	
LZH				PP	PP	20 49 36.5	+1.3
LZH				PKS	PKS	20 50 44.5	+1.0
LZH				SKS	SKS	20 54 19.7	-1.8
LZH				SKKS		20 56 28.1	
LZH				SS	SS	21 07 14.3	+3.1
LZH				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
PMG	**Port Moresby**	**132.46**	**158**	*e*PKIKP	PKPdf	20 47 07.7	-4.6
PMG				MLR	MLR		
	comp=Z,9µm,21.0s						
INK	**Inuvik**	**132.70**	**333**	*e*PKIKP	PKPdf	20 47 05.8	-5.5
INK	**Inuvik**	**132.70**	**333**	PKP	PKPdf	20 47 06.7	-4.6
	comp=Z,9.2nm,1.0s,baz=84,slow=5.3,SNR=12						
MOY	**Mondy**	**133.53**	**50**	*e*PKIKP	PKPdf	20 47 10.7	-2.5
MOY				pmax	pmax		
	comp=Z,124nm,1.6s						
SIT	**Sitka**	**134.61**	**318**	PFAKE		20 47 20.0	+4.9
SIT				LR	LR		
	comp=Z,7µm,19.0s,MS6.4						
ZAK	**Zakamensk**	**134.85**	**52**	*e*PKIKP	PKPdf	20 47 09.0	-6.7
ZAK				*e*		20 49 47.7	
ZAK				pmax	pmax		
	comp=Z,12nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s						
HNR	**Honiara**	**134.89**	**175**	PFAKE		20 47 20.0	+3.2
HNR				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
TLY	**Talaya**	**135.18**	**50**	*i* PKIKP	PKPdf	20 47 16.8	+0.5
TLY				*e*PS	PS	21 00 08.9	-1.3
TLY				*e*PPS	PPS	21 01 53.7	-0.8
TLY				*e*SS	SS	21 07 46.1	+1.3
TLY				pmax	pmax		
	comp=Z,36nm,2.1s						
TLY				MLR	MLR		
	comp=Z,9µm,20.0s,MS6.5						
TLY	**Talaya**	**135.18**	**50**	*e*PKPdf	PKPdf	20 47 14.3	-2.0
TLY				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
IRK	**Irkutsk**	**135.59**	**49**	*e*PKIKP	PKPdf	20 47 14.6	-2.4
IRK				pmax	pmax		
	comp=Z,81nm,2.0s						
XAN	**Xi’an**	**135.65**	**76**	PKP	PKPdf	20 47 15.4	-2.3
DAWY	**Dawson**	**135.84**	**328**	*e*PKPdf	PKPdf	20 47 13.8	-3.4
SONM	**Songino Array**	**136.65**	**56**	PKhKP		20 47 06.8	
	comp=Z,0.6nm,0.7s,baz=207,slow=3.2,SNR=3.4						
SONM				PKP	PKPdf	20 47 16.4	-2.5
	comp=Z,2.5nm,1.0s,baz=243,slow=2.8,SNR=6.0						
SONM				PP	PP	20 50 02.8	+1.0
	comp=Z,3.3nm,1.1s,baz=270,slow=4.3,SNR=2.9						
SONM	**Songino Array**	**136.65**	**56**	PKP	PKPdf	20 47 16.4	-2.5
SONM				PP	PP	20 50 02.8	+1.0
ULN	**Ulaanbaatar**	**137.10**	**56**	*e*PKIKP	PKPdf	20 47 15.7	-4.1
ULN				MLR	MLR		
	comp=Z,13µm,22.0s,MS6.6						
BTO	**Baotou**	**138.18**	**67**	*e*PKP	PKPdf	20 47 22.6	+0.5
ILAR	**Eielson Array**	**138.78**	**330**	PKP	PKPdf	20 47 17.7	-4.8
	comp=Z,5.0nm,0.9s,baz=51,slow=1.5,SNR=16						
COLA	**College**	**139.13**	**331**	*e*PKIKP	PKPdf	20 47 15.5	-7.7
COLA				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.2						
HHC	**Hu-ho-hao-te**	**139.38**	**67**	*e*PKP	PKPdf	20 47 23.1	-1.2
HHC				SKS	SKS	20 54 32.8	-1.0
HHC				LR	LR		
	comp=N,6µm,19.7s,MS6.5						
HHC				LR	LR		
	comp=E,6µm,20.3s,MS6.5						
HHC				LR	LR		
	comp=Z,9µm,22.3s,MS6.5						
DIV	**Divide**	**139.39**	**325**	*e*PKPdf	PKPdf	20 47 20.5	-3.2
TIXI	**Tiksi**	**139.82**	**16**	*i* PKIKP	PKPdf	20 47 17.3	-7.0
TIXI				pmax	pmax		
	comp=Z,22nm,2.1s						
TIXI	**Tiksi**	**139.82**	**16**	*i* PKP	PKPdf	20 47 24.7	+0.4
TIXI				LR	LR		
	comp=Z,8µm,22.0s,MS6.4						
SML	**Sawmill**	**140.38**	**326**	*e*PKIKP	PKPdf	20 47 20.9	-4.6
BOD	**Bodaibo**	**140.72**	**40**	*e*PKHKP		20 47 16.5	
BOD				pmax	pmax		
	comp=Z,25nm,1.3s						
POHA	**Pohakuloa**	**140.75**	**257**	PFAKE		20 47 30.0	+2.6
POHA				LR	LR		
	comp=Z,46µm,19.0s,MS7.2						
IMA	**Indian Mountai**	**140.82**	**334**	*e*PKIKP	PKPdf	20 47 20.1	-6.0
FIB	**Fire Island**	**141.42**	**326**	PFAKE		20 47 40.0	+13
FIB				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
SPU	**Mount Spurr**	**142.27**	**326**	*e*PKPpre		20 47 21.5	
TATO	**Taipei**	**142.38**	**95**	PFAKE		20 47 40.0	+10
TATO				LR	LR		
	comp=Z,7µm,20.0s,MS6.4						
TIA	**Tai’an**	**142.71**	**75**	PKP	PKPdf	20 47 30.0	-0.2
TIA				LR	LR		
	comp=N,4µm,17.0s,MS6.4						
TIA				LR	LR		
	comp=E,4µm,18.0s,MS6.4						
BJI	**Beijing**	**142.72**	**69**	PKP	PKPdf	20 47 29.9	-0.2
BJI				PP	PP		
	comp=Z,200nm,21.5s						
BJI				LR	LR		
	comp=N,9µm,22.2s,MS6.6						
BJI				LR	LR		
	comp=E,6µm,22.2s,MS6.6						
BJI				LR	LR		
	comp=Z,14µm,23.5s,MS6.7						
RSO	**Redoubt South**	**142.85**	**325**	*e*PKPdf	PKPdf	20 47 28.7	-1.0
NJ2	**Nanjing**	**142.95**	**83**	*e*PKP	PKPdf	20 47 24.4	-6.4
NJ2				APKP		20 47 34.0	
NJ2				PP	PP	20 50 36.0	-5.0
NJ2				PP	PP		
	comp=Z,504nm,10.2s						
NJ2				LR	LR		
	comp=Z,8µm,25.4s,MS6.4						
KDAK	**Kodiak Island**	**143.68**	**321**	PFAKE		20 47 40.0	+13
KDAK				LR	LR		
	comp=Z,1µm,19.0s,MS5.8						
SSE	**Sheshan**	**144.53**	**85**	PKP	PKPdf	20 47 31.3	-2.3
SSE				PP	PP	20 50 52.1	+1.6
SSE				SS	SS	21 09 37.5	+2.5
SSE				PP	PP		
	comp=Z,503nm,5.2s						
SSE				LR	LR		
	comp=N,7µm,21.6s,MS6.4						
SSE				LR	LR		
	comp=E,4µm,21.6s,MS6.4						
SSE				LR	LR		
	comp=Z,7µm,20.1s,MS6.5						
TNA	**Tin City**	**145.76**	**339**	*e*PKPdf	PKPdf	20 47 29.6	-5.0
YAK	**Yakutsk**	**146.27**	**28**	*e*PKP2	PKPab	20 47 34.9	-1.6
YAK				pmax	pmax		
	comp=Z,39nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,109nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,1.4s						
YAK				pmax	pmax		
	comp=E,13nm,0.9s						
YAK	**Yakutsk**	**146.27**	**28**	*e*PKPdf	PKPdf	20 47 31.5	-4.1
YAK				*i* P		20 47 35.8	
YAK				LR	LR		
	comp=Z,8µm,22.0s,MS6.5						
CLNS	**Chul’man**	**146.64**	**39**	*i* PKP2	PKPab	20 47 35.4	-2.7
CLNS				*e*		20 50 57.9	
CLNS				*e*PPS	PPS	21 03 38.0	-3.3
CLNS				*e*SS	SS	21 10 00.1	+2.1
CLNS				pmax	pmax		
	comp=Z,145nm,1.2s						
CLNS				pmax	pmax		
	comp=N,31nm,0.9s						
CLNS				pmax	pmax		
	comp=E,54nm,1.2s						
CLNS				pmax	pmax		
	comp=N,20nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,14nm,1.0s						
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,12µm,27.0s,MS6.6						
CLNS				MLR	MLR		
	comp=N,7µm,22.0s,MS6.4						
CLNS				MLR	MLR		
	comp=E,1µm,24.0s,MS6.4						
DL2	**Dalian**	**146.72**	**72**	PKP	PKPdf	20 47 36.5	-0.6
DL2				PP	PP		
	comp=Z,410nm,9.8s						
DL2				LR	LR		
	comp=N,2µm,20.4s,MS6.2						
DL2				LR	LR		
	comp=E,3µm,21.2s,MS6.2						
DL2				LR	LR		
	comp=Z,5µm,19.4s,MS6.3						
BILL	**Bilibino**	**147.67**	**358**	*e*PKP2	PKPab	20 47 36.6	-5.2
BILL				*e*		20 54 43.3	
BILL				*e*SS	SS	21 10 06.6	-2.7
BILL				pmax	pmax		
	comp=Z,64nm,1.4s						
BILL	**Bilibino**	**147.67**	**358**	*e*PKPdf	PKPdf	20 47 35.8	-1.9
BILL				LR	LR		
	comp=Z,7µm,22.0s,MS6.4						
SNY	**Shenyang**	**148.47**	**67**	⇑PKP	PKPdf	20 47 41.8	+2.0
SNY				LR	LR		
	comp=N,8µm,26.5s						
SNY				LR	LR		
	comp=Z,5µm,31.9s						

JOW	**Kunigami**	**148.69**	**97**	PKPbc	PKPdf	20 47 41.6	+1.0
	comp=Z,12nm,0.6s,baz=180,slow=3.0,SNR=2.4						
CN2	**Changchun**	**149.85**	**63**	*e*PKP	PKPdf	20 47 40.8	-1.2
CN2				*e*PKP2	PKPab	20 47 52.8	+1.4
CN2				PP	PP	20 51 22.9	+1.8
CN2				*e*SS	SS	21 10 33.4	-0.7
CN2				PP	PP		
	comp=Z,670nm,10.0s						
CN2				LR	LR		
	comp=N,10µm,19.0s,MS6.7						
CN2				LR	LR		
	comp=E,6µm,19.0s,MS6.7						
CN2				LR	LR		
	comp=Z,8µm,21.0s,MS6.5						
INCN	**Inchon**	**150.43**	**76**	*e*PKPbc	PKPdf	20 47 43.3	+0.2
INCN				LR	LR		
	comp=Z,7µm,19.0s,MS6.5						
KS15	**Wonju Array Si**	**151.41**	**76**	*e*PKPbc	PKPdf	20 47 47.5	+3.0
SEY	**Seymchan**	**151.96**	**11**	*e*PKIKP	PKPdf	20 47 47.0	+2.5
SEY				*e*		20 47 53.1	
SEY				*e*		21 10 55.1	
SEY				*e*		21 16 38.9	
GUMO	**Guam**	**152.22**	**138**	PFAKE		20 47 50.0	+3.7
GUMO				LR	LR		
	comp=Z,4µm,21.0s,MS6.2						
KLR	**Kul'dur**	**153.20**	**50**	*e*PKIKP	PKPdf	20 47 44.0	-2.7
KLR				*e*		20 55 17.0	
VLA	**Vladivostok**	**154.58**	**64**	*i* PKIKP	PKPdf	20 47 58.0	+9.2
VLA				MLR	MLR		
	comp=Z,4µm,19.0s,MS6.2						
VLA				MLR	MLR		
	comp=N,3µm,18.0s,MS6.3						
VLA				MLR	MLR		
	comp=E,3µm,18.0s,MS6.3						
MA2	**Magadan**	**154.78**	**15**	*e*PKIKP	PKPdf	20 47 46.5	-2.0
MA2				*e*SSS	SSS	21 17 17.0	-5.5
MA2				pmax	pmax		
	comp=Z,3µm,32.0s						
MA2	**Magadan**	**154.78**	**15**	*e*PKPdf	PKPdf	20 47 46.5	-1.9
MA2				LR	LR		
	comp=Z,9µm,21.0s,MS6.5						
MAJO	**Matsushiro**	**159.52**	**80**	PFAKE		20 48 00.0	+4.7
MAJO				LR	LR		
	comp=Z,6µm,20.0s,MS6.4						
MAT	**Matsushiro**	**159.52**	**80**	PKP	PKPdf	20 47 57.4	+2.1
YSS	**Yuzh-Sakhalins**	**160.87**	**48**	*i* PKIKP	PKPdf	20 47 56.0	-0.3
YSS				*e*PPP	PPP	20 56 11.0	+3.2
YSS				*e*SS	SS	21 12 35.0	+2.7
YSS	**Yuzh-Sakhalins**	**160.87**	**48**	PFAKE		20 48 00.0	+3.7
YSS				LR	LR		
	comp=Z,7µm,21.0s						
SMY	**Shemya**	**161.50**	**339**	PFAKE		20 48 00.0	+3.2
SMY				LR	LR		
	comp=Z,12µm,21.0s						
PET	**Petropavlovsk**	**162.42**	**10**	*i* PKIKP	PKPdf	20 47 58.2	+0.5
PET				*e*		21 06 03.3	
PET				*e*SS	SS	21 12 52.3	+3.6
PET				pmax	pmax		
	comp=Z,300nm,13.2s						
PET				pmax	pmax		
	comp=Z,122nm,1.6s						
PET				pmax	pmax		
	comp=Z,500nm,36.2s						
PET				MLR	MLR		
	comp=Z,4µm,20.0s						
PET	**Petropavlovsk**	**162.42**	**10**	PFAKE		20 48 10.0	+12
PET				LR	LR		
	comp=Z,4µm,20.0s						
ERM	**Erimo**	**162.96**	**62**	PFAKE		20 48 10.0	+11
ERM				LR	LR		
	comp=Z,46nm,22.0s						
WAKE	**Wake Island**	**163.33**	**190**	PFAKE		20 48 10.0	+10
WAKE				LR	LR		
	comp=Z,204µm,19.0s						
YUK	**Yuzh-Kuril'sk**	**164.14**	**53**	*e*PKP2	PKPab	20 48 57.0	+4.5
YUK				*e*		20 52 43.0	
YUK				pmax	pmax		
	comp=Z,1µm,2.0s						

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*IDC **16** 20:28:12.7±6.6, 17.44N×100.11W, mb3.8/5, mb1 4.0/6, mb1mx3.8/21, mbtmp3.6/6, Error ellipse: s-maj=112.8km s-min=81.4km az=176.0*

*NEIC **16** 20:28:28.4, 17.86N×101.53W, h38^{km}, MD4.2(MEX), After MEX.*

*MEX **16** 20:28:28.4±0.8, 17.86N×101.53W, h38^{km}±9^{km}, MD4.2*

ISC 16 20:28:25.8±0.5, **17.89N**±0.05×**101.52W**±0.03, **h47**^{km}±7^{km}, **n27**, σ**1^{s}02**/48, **mb3.7**/5, **1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.28**	**169**	⇓*i*P	**P**	**20 28 33.9**	**-0.6**
ZIIG				*i* S	**S**	**20 28 40.1**	**-0.6**
CAIG	**El Cayaco**	**1.46**	**125**	*i* P	**P**	**20 28 50.1**	**-0.1**
CAIG				*i* S	**S**	**20 29 08.0**	**-0.4**
ACX	**Acapulco**	**1.84**	**123**	*i* P	**P**	**20 28 56.0**	**+0.4**
ACX				*i* S	**S**	**20 29 18.0**	**+0.3**
PLIG	**Platanillo**	**1.98**	**75**	*i* P	**P**	**20 28 58.7**	**+1.1**
PLIG				*i* S	**S**	**20 29 21.7**	**+0.4**
CRX	**Cerrillo**	**2.31**	**49**	*e*P	**P**	**20 29 06.0**	**+3.8**
COLM	**Colima**	**2.43**	**302**	*e*P	**P**	**20 29 04.7**	**+0.8**
COLM				*i* S	**S**	**20 29 32.8**	**+0.2**
IIZ	**Mezontepec**	**2.52**	**59**	*e*P	**P**	**20 29 05.0**	**-0.3**
YAIG	**Yautepec**	**2.52**	**67**	*e*P	**P**	**20 29 06.0**	**+0.7**
YAIG				*i* S	**S**	**20 29 35.1**	**+0.1**
UNM	**Universidad Na**	**2.64**	**57**	*e*P	**P**	**20 29 07.3**	**+0.3**
UNM				*e*S	**S**	**20 29 36.4**	**-1.7**
UNM				*i* S	**S**	**20 29 36.9**	**-1.1**
UNM				*i* S	**S**	**20 29 38.9**	**+0.9**
UNM	**Universidad Na**	**2.64**	**57**	*e*P	**P**	**20 29 07.3**	**+0.3**
UNM				*e*P		20 29 10.0	
UNM				*e*S	**S**	**20 29 36.4**	**-1.7**
UNM				*i* S	**S**	**20 29 38.9**	**+0.9**
PBVM	**Pinon**	**2.78**	**56**	*e*P	**P**	**20 29 14.4**	**+5.4**
PBVM				*i* S	**S**	**20 29 40.9**	**-0.5**
SFJM	**Santa Fe**	**2.96**	**331**	*e*P	**P**	**20 29 12.0**	**+0.5**
SFJM				*i* S	**S**	**20 29 46.0**	**0.0**
PPM	**Popocatepetl**	**2.99**	**66**	*e*P	**P**	**20 29 12.5**	**+0.6**
PPM				*i* S	**S**	**20 29 46.8**	**+0.1**
PPM				*i* S	**S**	**20 29 51.0**	**+4.3**
PPM	**Popocatepetl**	**2.99**	**66**	*e*P	**P**	**20 29 12.5**	**+0.6**
PPM				*e*P		20 29 12.9	
PPM				*i* S	**S**	**20 29 46.8**	**+0.1**
PPM				*i* S	**S**	**20 29 51.0**	**+4.3**
IIB	**San Bernardino**	**3.20**	**70**	*e*P	**P**	**20 29 14.5**	**-0.4**
IIB				*i* S	**S**	**20 29 50.0**	**-2.1**
CJM	**Chamela**	**3.70**	**296**	*i* P	**P**	**20 29 27.1**	**+5.1**
CJM				*i* S	**S**	**20 30 03.8**	**-1.1**
VHO	**Vista Hermosa**	**4.64**	**99**	*i* P	**P**	**20 29 38.0**	**+2.8**
VHO				*i* S	**S**	**20 30 27.3**	**-1.3**
OXX	**Oaxaca**	**4.65**	**99**	*i* P	**P**	**20 29 36.0**	**+0.6**
OXX				*i* S	**S**	**20 30 33.0**	**+4.3**
HUIG	**Huatulco**	**5.60**	**111**	*i* S	**S**	**20 30 52.5**	**+0.1**
TXAR	**Lajitas Array**	**11.56**	**351**	Pn	**P**	**20 31 11.2**	**+0.2**
	baz=180,slow=11,SNR=2.4						
NVAR	**Mina Array Bea**	**25.17**	**328**	P	**P**	**20 33 49.2**	**+0.8**
	1.7nm,0.7s,mb3.7,baz=146,slow=11,SNR=11						
PDAR	**Pinedale Array**	**25.72**	**346**	P	**P**	**20 33 52.8**	**-0.7**
	1.2nm,1.1s,mb3.3,baz=139,slow=16,SNR=5.0						
ALLY	**Alegheny Colle**	**29.92**	**33**	*e*P	**P**	**20 34 33.5**	**+1.9**
ULM	**Lac du Bonnet**	**32.60**	**7**	P	**P**	**20 34 47.8**	**-7.2**
	1.4nm,0.7s,mb4.0,baz=166,slow=4.2,SNR=2.9						
YKA	**Yellowknife Ar**	**45.49**	**352**	P	**P**	**20 36 39.2**	**-2.8**
	0.4nm,0.8s,mb3.3,baz=159,slow=7.4,SNR=5.8						
YKA	**Yellowknife Ar**	**45.49**	**352**	P	**P**	**20 36 39.2**	**-2.8**
INK	**Inuvik**	**54.29**	**346**	P	**P**	**20 37 46.3**	**-3.0**
	0.9nm,0.5s,mb4.0,baz=147,slow=14,SNR=7.2						

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*NEIC **16** 20:41:48.2±0.3, 51.63N×16.05E, h5^{km}, ML3.5(SZGRF), ML3.4(VIE), ML3.4(FUR), ML3.1(CLL), ML2.8(BRG), Error ellipse: s-maj=3.7km s-min=3.1km az=112.0*

*LDG **16** 20:41:49.4±0.2, 51.65N×16.16E, h1^{km}, Ml3.7/6, Error ellipse: s-maj=5.6km s-min=2.7km az=13.0, Suspected Mining induced.*

*CSEM **16** 20:41:49.9±0.1, 51.51N×16.03E, h2^{km}, ML3.6/10, Error ellipse: s-maj=2.6km s-min=1.8km az=23.0*

*BGR **16** 20:41:49.2±0.6, 51.48N×16.07E, h1^{km}, ML3.5/9, Error ellipse: s-maj=6.7km s-min=5.6km az=167.0*

*WAR **16** 20:41:50.3, 51.51N×16.00E, h1^{km}, ML3.3, Mining Induced*

*PRU **16** 20:41:50.0, 51.49N×16.00E*

*IPEC **16** 20:41:50.6±0.1, 51.49N×16.02E, h13^{km}±1^{km}, ML2.6/3, Error ellipse: s-maj=0.9km s-min=0.5km az=26.0*

*IDC **16** 20:41:50.8±1.8, 51.52N×15.86E, h15^{km}±15^{km}, mb1 3.6/9, mb1mx3.5/23, mbtmp3.6/9, ML3.5/9, Error ellipse: s-maj=10.6km s-min=7.6km az=74.0*

ISC 16 20:41:48.1±0.4, **51.44N**±0.02×**15.96E**±0.02, **n90**, σ**1^{s}30**/173, **7C-3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**160**	*e*PG	**Pg**	**20 42 03.0**	**+2.2**
KSP				*e*SG	**Sg**	**20 42 10.0**	**+0.8**
KSP	**Ksiaz**	**0.63**	**160**	*e*Pg	**Pg**	**20 42 03.0**	**+2.2**
KSP				*e*Pn	**Pn**	**20 42 04.5**	**+0.6**
KSP				*e*		20 42 06.2	
KSP				*e*Sg	**Sg**	**20 42 10.3**	**+1.0**
KSP	**Ksiaz**	**0.63**	**160**	*e*Pg	**Pg**	**20 42 02.9**	**+2.1**
KSP				*e*Sg	**Sg**	**20 42 12.4**	**+3.2**
UPC	**Upice**	**0.93**	**178**	*e*PG	**Pg**	**20 42 08.6**	**+1.8**
DPC	**Dobruska-Polom**	**1.11**	**168**	*e*PG	**Pg**	**20 42 11.6**	**+1.2**
DPC				*e*SG	**Sg**	**20 42 26.9**	**+1.6**
	66nm,0.2s						
DPC	**Dobruska-Polom**	**1.11**	**168**	*e*Pg	**Pg**	**20 42 11.6**	**+1.2**
DPC				*e*Sg	**Sg**	**20 42 26.7**	**+1.4**
PVCC	**Panska Ves**	**1.27**	**224**	*e*PG	**Pg**	**20 42 14.9**	**+1.5**
PVCC	**Panska Ves**	**1.27**	**224**	*e*Pn	**Pn**	**20 42 15.3**	**+2.3**
PVCC				*e*Sg	**Sg**	**20 42 33.1**	**+2.9**
BRG	**Berggiesshubel**	**1.39**	**247**	*e*Pg	**Pg**	**20 42 15.8**	**0.0**
BRG				*e*Sg	**Sg**	**20 42 36.4**	**+2.1**
BRG	**Berggiesshubel**	**1.39**	**247**	*e*Pn	**Pn**	**20 42 15.7**	**+0.9**
BRG				*i* Pg	**Pg**	**20 42 16.9**	**+1.1**
BRG				*i* Sg	**Sg**	**20 42 36.3**	**+2.0**
BRG	**Berggiesshubel**	**1.39**	**247**	*e*Pn	**Pn**	**20 42 16.4**	**+1.6**
BRG	**Berggiesshubel**	**1.39**	**247**	*i* Pg	**Pg**	**20 42 16.9**	**+1.1**
BRG				*e*Sg	**Sg**	**20 42 35.8**	**+1.5**
RUE	**Ruedersdorf**	**1.70**	**309**	*e*Pg	**Pg**	**20 42 21.8**	**-0.3**
RUE				*e*Sg	**Sg**	**20 42 44.4**	**-0.4**
PRU	**Pruhonice**	**1.71**	**212**	*e*PN	**Pn**	**20 42 20.7**	**+1.3**
PRU				*e*PG	**Pg**	**20 42 22.3**	**+0.1**
PRU				*e*SG	**Sg**	**20 42 46.0**	**+1.0**
PRU	**Pruhonice**	**1.71**	**212**	*e*Pg	**Pg**	**20 42 22.3**	**+0.1**
PRU				*e*Sg	**Sg**	**20 42 46.0**	**+1.0**
CLL	**Collm**	**1.85**	**267**	*e*Pn	**Pn**	**20 42 21.9**	**+0.4**
CLL				*e*Sg	**Sg**	**20 42 50.5**	**+0.6**
CLL	**Collm**	**1.85**	**267**	*i* Pn	**Pn**	**20 42 21.7**	**+0.2**
CLL				*i* Pg	**Pg**	**20 42 24.8**	**-0.4**
CLL				*i* Sg	**Sg**	**20 42 49.7**	**-0.2**
CLL	**Collm**	**1.85**	**267**	*i* PN	**Pn**	**20 42 21.7**	**+0.2**
	logA/T=1.9						
CLL				*i* PG	**Pg**	**20 42 24.8**	**-0.4**
CLL				*i*		20 42 28.4	
CLL				*e*		20 42 40.0	
CLL				*i* SG	**Sg**	**20 42 49.7**	**-0.2**
CLL	**Collm**	**1.85**	**267**	*i* Pg	**Pg**	**20 42 24.8**	**-0.4**
CLL				*e*Sg	**Sg**	**20 42 49.9**	**0.0**
MORC	**Moravsky Berou**	**1.95**	**148**	*e*Pn	**Pn**	**20 42 23.7**	**+0.9**
MORC				*e*Sg	**Sg**	**20 42 52.5**	**-0.5**
	52nm,0.3s						
RAC	**Raciborz**	**1.97**	**133**	*e*P	**Pn**	**20 42 26.0**	**+3.0**
RAC				*e*S	**Sn**	**20 42 52.0**	**+3.2**
RAC	**Raciborz**	**1.97**	**133**	*e*Pg	**Pg**	**20 42 26.3**	**-1.1**
RAC				*e*Sg	**Sg**	**20 42 51.6**	**-2.0**
GKP	**Gorka Klasztor**	**2.00**	**23**	*e*Pn	**Pn**	**20 42 29.5**	**+6.1**
GKP				*e*Pg	**Pg**	**20 42 31.5**	**+3.6**
GKP				*e*Sn	**Sn**	**20 42 54.8**	**+5.3**
GKP				*e*Sg	**Sg**	**20 42 58.7**	**+4.2**
GKP	**Gorka Klasztor**	**2.00**	**23**	*e*Pn	**Pn**	**20 42 29.5**	**+6.1**
GKP				*e*Pg	**Pg**	**20 42 31.5**	**+3.6**
GKP				*e*Sn	**Sn**	**20 42 54.8**	**+5.3**
GKP				*e*Sg	**Sg**	**20 42 58.7**	**+4.2**
OKC	**Ostrava-Krasne**	**2.13**	**138**	*e*PN	**Pn**	**20 42 25.8**	**+0.5**
OKC				*e*PG	**Pg**	**20 42 29.6**	**-1.0**
OKC				*e*SG	**Sg**	**20 42 57.0**	**-1.9**
OKC	**Ostrava-Krasne**	**2.13**	**138**	*e*Pg	**Pg**	**20 42 29.6**	**-1.0**
OKC				Sg	**Sg**	**20 42 57.0**	**-1.9**
VRAC	**Vranov**	**2.17**	**169**	Pn	**Pn**	**20 42 27.3**	**+1.3**
	4.0nm,0.3s,baz=336,slow=15,SNR=44						
VRAC				Lg		20 43 01.1	
	6.1nm,0.3s,baz=74,slow=21,SNR=3.7						
VRAC	**Vranov**	**2.17**	**169**	Pn	**Pn**	**20 42 27.3**	**+1.3**
VRAC				*e*Sg	**Sg**	**20 43 00.5**	**0.0**
	32nm,0.3s						
KRUC	**Moravsky**	**2.40**	**173**	*e*Pn	**Pn**	**20 42 31.1**	**+1.9**
KRUC	**Moravsky**	**2.40**	**173**	*e*Pg	**Pg**	**20 42 34.9**	**-1.1**
KRUC				*e*Sg	**Sg**	**20 43 08.2**	**+0.3**
	28nm,0.4s						
TANN	**Tannenbergstha**	**2.44**	**246**	*e*Pn	**Pn**	**20 42 31.5**	**+1.7**
TANN				*e*Sg	**Sg**	**20 43 09.2**	**-0.1**
WERD	**Werda**	**2.51**	**248**	*e*Pn	**Pn**	**20 42 31.8**	**+1.0**
WERD				*e*Sg	**Sg**	**20 43 10.4**	**-1.4**
NKC	**Novy Kostel**	**2.53**	**243**	*e*PN	**Pn**	**20 42 32.4**	**+1.3**
NKC				*e*SG	**Sg**	**20 43 12.3**	**-0.1**
NKC	**Novy Kostel**	**2.53**	**243**	*e*Pn	**Pn**	**20 42 32.2**	**+1.1**
NKC				*e*Sg	**Sg**	**20 43 12.1**	**-0.3**
NEUB	**Neuenburg**	**2.63**	**267**	*e*Sg	**Sg**	**20 43 16.0**	**+0.2**
OJC	**Ojcow**	**2.73**	**115**	*i* Pg	**Pg**	**20 42 42.2**	**-0.3**
OJC				*i* Sg	**Sg**	**20 43 17.8**	**-1.1**
OJC	**Ojcow**	**2.73**	**115**	*e*PN	**Pn**	**20 42 32.0**	**-1.9**
OJC				*i* PG	**Pg**	**20 42 42.2**	**-0.3**
OJC				*i* SG	**Sg**	**20 43 17.8**	**-1.1**
OJC	**Ojcow**	**2.73**	**115**	*e*Pg	**Pg**	**20 42 40.8**	**-1.7**
OJC				*e*Sg	**Sg**	**20 43 16.2**	**-2.7**
KHC	**Kasperske Hory**	**2.77**	**214**	*e*PN	**Pn**	**20 42 35.4**	**+0.9**
KHC				*e*PG	**Pg**	**20 42 42.0**	**-1.4**
KHC				*e*SG	**Sg**	**20 43 19.8**	**-0.5**
KHC	**Kasperske Hory**	**2.77**	**214**	*e*Pg	**Pg**	**20 42 42.0**	**-1.4**
KHC				*e*Sg	**Sg**	**20 43 19.8**	**-0.5**
MOX	**Moxa**	**2.85**	**255**	*e*Pn	**Pn**	**20 42 36.2**	**+0.5**
MOX				*e*Sg	**Sg**	**20 43 21.3**	**-1.8**
MOX	**Moxa**	**2.85**	**255**	*e*Pn	**Pn**	**20 42 36.0**	**+0.3**
MOX				*e*Pg	**Pg**	**20 42 44.1**	**-1.0**
MOX				*e*Sg	**Sg**	**20 43 23.2**	**+0.1**
MOX	**Moxa**	**2.85**	**255**	*i* P	**Pn**	**20 42 36.0**	**+0.3**
MOX				Pg	**Pg**	**20 42 44.0**	**-1.1**
MOX				Sg	**Sg**	**20 43 23.0**	**-0.1**
MOX	**Moxa**	**2.85**	**255**	*e*Pg	**Pg**	**20 42 44.1**	**-1.0**
MOX				Sg	**Sg**	**20 43 21.3**	**-1.8**
NOTT	**Nottersdorf**	**2.94**	**238**	*e*Pn	**Pn**	**20 42 37.9**	**+1.0**
NOTT				*e*Sg	**Sg**	**20 43 24.7**	**-1.2**
GEC2	**GERESS Array S**	**2.97**	**210**	*e*Pn	**Pn**	**20 42 39.0**	**+1.5**
GEC2				*e*Sg	**Sg**	**20 43 25.8**	**-1.4**
GEC2	**GERESS Array S**	**2.97**	**210**	*e*Pn	**Pn**	**20 42 39.0**	**+1.5**
GEC2				*e*Sg	**Sg**	**20 43 25.8**	**-1.3**
GERES	**GERESS Array B**	**2.97**	**210**	Pn	**Pn**	**20 42 38.4**	**+1.0**
	5.6nm,0.3s,baz=29,slow=13,SNR=137						
GERES				Pg	**Pg**	**20 42 45.5**	**-2.0**
	10nm,0.3s,baz=29,slow=18,SNR=36						
GERES				Lg		20 43 25.7	
	11nm,0.3s,baz=29,slow=26,SNR=9.0						
GERES	**GERESS Array B**	**2.97**	**210**	Pg	**Pg**	**20 42 45.5**	**-2.0**
WET	**Wettzell**	**3.03**	**222**	*e*Pn	**Pn**	**20 42 39.5**	**+1.3**
WET				*e*Sg	**Sg**	**20 43 26.9**	**-2.0**
WET	**Wettzell**	**3.03**	**222**	*e*Pn	**Pn**	**20 42 39.6**	**+1.4**
WET				*e*Sg	**Sg**	**20 43 26.9**	**-2.1**
WET	**Wettzell**	**3.03**	**222**	Pn	**Pn**	**20 42 39.5**	**+1.3**
WET				Sg	**Sg**	**20 43 26.9**	**-2.1**
SMOL	**Smolenice**	**3.08**	**161**	*e*SG	**Sg**	**20 43 30.7**	**+0.1**
ZST	**Bratislava**	**3.33**	**167**	*e*SG	**Sg**	**20 43 37.3**	**-1.7**
ZST	**Bratislava**	**3.33**	**167**	*e*Sg	**Sg**	**20 43 37.3**	**-1.7**
NIE	**Niedzica**	**3.44**	**124**	*e*P	**Pn**	**20 42 53.2**	**+9.1**
NIE				*e*S	**Sg**	**20 43 39.2**	**-3.6**
GRA1	**Grafenberg Arr**	**3.49**	**242**	*e*Pn	**Pn**	**20 42 45.6**	**+0.8**
GRA1				*e*Sg	**Sg**	**20 43 42.9**	**-1.3**
GRA1	**Grafenberg Arr**	**3.49**	**242**	Pn	**Pn**	**20 42 45.6**	**+0.8**
GRA1				Sg	**Sg**	**20 43 42.9**	**-1.3**
GRF	**Grafenberg Arr**	**3.49**	**242**	*e*Pn	**Pn**	**20 42 45.6**	**+0.8**
GRF				*e*Sg	**Sg**	**20 43 42.9**	**-1.3**
CLZ	**Clausthal**	**3.50**	**279**	*e*Pn	**Pn**	**20 42 45.6**	**+0.7**
BSD	**Bornholm Skovb**	**3.73**	**351**	*i* P	**Pn**	**20 42 45.5**	**-2.7**
BSD				*i*		20 42 49.2	
BSD				*e*S	**Sn**	**20 43 26.1**	**-7.5**
BSD				*i* S	**Sn**	**20 43 28.2**	**-5.4**
MOA	**Molln**	**3.76**	**198**	⇑*i*PN	**Pn**	**20 42 49.6**	**+1.0**
MOA				*i* SG	**Sg**	**20 43 53.8**	**+0.6**
	21nm,0.4s						
ARSA	**Arzberg**	**4.20**	**184**	⇑*i*PN	**Pn**	**20 42 56.0**	**+1.1**
ARSA				*i* SG	**Sg**	**20 44 03.7**	**-4.3**
	38nm,0.8s						
KBA	**Koelnbreinsper**	**4.69**	**202**	⇑*i*PN	**Pn**	**20 43 03.0**	**+1.2**
KBA				*i* SG	**Sg**	**20 44 24.0**	**-0.2**
	22nm,0.6s						
KOLS	**Kolonicke sedl**	**4.77**	**119**	*e*PN	**Pn**	**20 43 02.0**	**-1.0**
KOLS				*e*SG	**Sg**	**20 44 22.1**	**-4.9**
WATA	**Walderalm**	**5.00**	**217**	⇓*i*Pn	**Pn**	**20 43 06.8**	**+0.5**
	10nm,0.6s						
WATA				*i* Sg	**Sg**	**20 44 31.6**	**-3.1**
	10nm,0.6s						
WTTA	**Wattenberg**	**5.04**	**216**	⇑*i*Pn	**Pn**	**20 43 07.9**	**+1.1**
	20nm,0.7s						
WTTA				*i* Sg	**Sg**	**20 44 32.7**	**-3.3**
	20nm,0.7s						
MOTA	**Moosalm**	**5.18**	**220**	⇑*i*Pn	**Pn**	**20 43 09.1**	**+0.4**
	4.7nm,0.6s						
MOTA				*i* Sg	**Sg**	**20 44 35.0**	**-5.5**
	4.7nm,0.6s						
SQTA	**Sankt Quirin**	**5.24**	**218**	⇑*i*Pn	**Pn**	**20 43 10.9**	**+1.3**
	6.3nm,0.4s						
SQTA				*i* Sg	**Sg**	**20 44 37.8**	**-4.8**
	6.3nm,0.4s						
PKSM	**Moragy**	**5.52**	**160**	⇑*i*P	**Pn**	**20 43 14.1**	**+0.5**
DAVA	**Damuels**	**5.75**	**226**	⇓*i*PN	**Pn**	**20 43 16.5**	**-0.2**
DAVA				*i* SG	**Sg**	**20 44 56.8**	**-2.6**
	21nm,0.8s						
DAVA	**Damuels**	**5.75**	**226**	⇓*i*Pn	**Pn**	**20 43 16.5**	**-0.2**
	21nm,0.8s						
DAVA				*i* Sg	**Sg**	**20 44 56.8**	**-2.6**
DAVOX	**Davos**	**6.13**	**223**	Pn	**Pn**	**20 43 20.9**	**-1.3**
	0.5nm,0.3s,baz=7.1,slow=16,SNR=4.3						
CDF	**Champ du Feu**	**6.37**	**245**	*e*Pn	**Pn**	**20 43 24.8**	**-0.8**
CDF				*e*Sg	**Sg**	**20 45 15.0**	**-5.2**
	39nm,1.0s						
HINF	**Hinteralfeld**	**6.93**	**242**	*e*Pn	**Pn**	**20 43 31.9**	**-1.6**
HINF				*e*Sg	**Sg**	**20 45 33.0**	**-6.0**
	13nm,0.7s						
HAU	**Haudompre**	**7.11**	**245**	*e*Pn	**Pn**	**20 43 34.9**	**-1.1**
HAU				*e*Sg	**Sg**	**20 45 39.0**	**-5.9**
	21nm,0.7s						
RFYF	**Reffroy**	**7.31**	**251**	*e*Pn	**Pn**	**20 43 37.4**	**-1.4**
BAIF	**Baives**	**7.58**	**264**	*e*Sg	**Sg**	**20 45 51.6**	**-8.9**
	8.4nm,0.8s						
MEZF	**Maizieres J'vi**	**7.62**	**252**	*e*Pn	**Pn**	**20 43 41.5**	**-1.6**
SFTF	**Sexfontaines**	**7.77**	**250**	*e*Pn	**Pn**	**20 43 43.7**	**-1.5**
CABF	**La Chapelle**	**8.08**	**237**	*e*Pn	**P**	**20 43 49.1**	**-0.5**
CABF				*e*Sg	**Sg**	**20 46 08.9**	**-8.4**
	41nm,1.2s						
AKASG	**Malin Array Be**	**8.39**	**90**	Pn	**P**	**20 43 49.1**	**-4.8**
	4.0nm,0.3s,baz=280,slow=12,SNR=12						
AKASG				Sn	**Sn**	**20 45 19.5**	**-11**
	1.4nm,0.3s,baz=274,slow=22,SNR=4.5						
HFS	**Hagfors**	**8.81**	**353**	Pn	**P**	**20 43 53.0**	**-6.7**
	0.1nm,0.3s,baz=166,slow=15,SNR=13						
HFS				Sn	**Sn**	**20 45 28.6**	**-12**
	0.1nm,0.3s,baz=180,slow=27,SNR=4.3						
HFS	**Hagfors**	**8.81**	**353**	Sn	**Sn**	**20 45 28.6**	**-12**
NOA	**NORSAR Array B**	**9.97**	**347**	Pn	**P**	**20 44 09.5**	**-6.1**
	0.3nm,0.3s,baz=168,slow=13,SNR=2.5						
NOA				Sn	**Sn**	**20 45 54.3**	**-15**
	0.1nm,0.3s,baz=166,slow=6.9,SNR=3.2						
FINES	**FINESS Array B**	**11.47**	**25**	Pn	**P**	**20 44 29.9**	**-6.2**
	0.6nm,0.3s,baz=208,slow=11,SNR=22						
FINES				Sn	**S**	**20 46 29.5**	**-17**
	0.3nm,0.3s,baz=188,slow=20,SNR=3.2						
FINES	**FINESS Array B**	**11.47**	**25**	Sn	**S**	**20 46 29.5**	**-17**
EKA	**Eskdalemuir Ar**	**12.05**	**296**	Pn	**P**	**20 44 39.7**	**-4.3**
	0.2nm,0.3s,baz=98,slow=14,SNR=4.5						
KAF	**Kangasniemi**	**12.09**	**24**	*e*p	**P**	**20 44 38.2**	**-6.3**
ARCES	**ARCESS Array B**	**18.71**	**10**	Pn	**P**	**20 46 03.9**	**-5.9**
	0.4nm,0.3s,baz=188,slow=13,SNR=9.4						

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*IDC **16** 20:48:57.0±10.0, 16.30N×61.18W, mb4.0/5, mb1 4.3/6, mb1mx3.8/23, mbtmp4.1/6, ML5.6/1, Error ellipse: s-maj=237.5km s-min=60.7km az=175.0*

*NEIC **16** 20:48:57.5, 15.86N×61.25W, h35^{km}, MD3.6(TRN), After TRN.*

ISC 16 20:48:59.0±0.5, **15.88N**±0.04×**61.50W**±0.09, **h28**^{km}±5^{km}, **n22**, σ**0^{s}97**/26, **mb4.0**/5, **8C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOG	**Dongo Capester**	**0.19**	**323**	⇑*i*P	**Pb**	**20 49 03.9**	**-1.0**
SCG	**Saint Claude**	**0.23**	**310**	⇑*i*P	**Pb**	**20 49 04.1**	**-1.2**
BCG	**Bois Riant Cap**	**0.23**	**330**	⇓*i*P	**Pb**	**20 49 04.6**	**-0.8**
BBL	**Barber's Block**	**0.35**	**175**	⇑*i*P	**Pb**	**20 49 06.2**	**-0.9**
BBL	**Barber's Block**	**0.35**	**175**	⇑*i*P	**Pb**	**20 49 07.2**	**+0.2**
SEG	**Port Louis**	**0.52**	**359**	⇑*i*P	**Pb**	**20 49 09.9**	**+0.3**
MDN	**Morne-Daniel**	**0.57**	**170**	⇑*i*P	**Pb**	**20 49 11.0**	**+0.6**
MDN				*e*S	**Sb**	**20 49 19.0**	**+0.7**
DEG	**La Desirade**	**0.60**	**45**	⇑*i*P	**Pb**	**20 49 11.3**	**+0.4**
DBCT	**Belle View Cho**	**0.62**	**166**	*e*P	**Pb**	**20 49 12.0**	**+0.7**
DSHT	**Scott's Head**	**0.68**	**170**	*e*P	**Pb**	**20 49 12.7**	**+0.5**
DSHT				*e*S	**Sb**	**20 49 21.3**	**+0.1**
BPA	**Boggy Peak**	**1.21**	**344**	*e*P	**Pn**	**20 49 20.6**	**+0.3**
BPA				*e*S	**Sn**	**20 49 36.9**	**+1.0**
CPB	**Codrington**	**1.78**	**350**	⇑*i*P	**Pn**	**20 49 28.7**	**+0.3**
CPB				*e*S	**Sn**	**20 49 50.7**	**+0.4**
SKI	**Saint Kitts**	**1.87**	**321**	*e*S	**Sn**	**20 49 57.6**	**+4.9**
BSK	**Brimstone Hill**	**1.94**	**319**	*e*P	**Pn**	**20 49 32.5**	**+1.6**
STMA	**St. Maarten, A**	**2.64**	**325**	*e*S	**Sn**	**20 50 14.1**	**+1.8**
SJG	**San Juan**	**4.97**	**297**	Pn	**Pn**	**20 50 14.0**	**+0.1**
	4.8nm,0.3s,baz=162,slow=20,SNR=3.0						
SJG	**San Juan**	**4.97**	**297**	Pn	**Pn**	**20 50 14.0**	**+0.1**
ULM	**Lac du Bonnet**	**44.08**	**329**	P	**P**	**20 57 04.9**	**-1.5**
	3.2nm,0.7s,mb4.2,baz=110,slow=7.1,SNR=6.9						
PDAR	**Pinedale Array**	**48.88**	**313**	P	**P**	**20 57 44.5**	**+0.1**
	1.4nm,0.6s,mb4.2,baz=118,slow=10,SNR=12						
YKA	**Yellowknife Ar**	**59.40**	**334**	P	**P**	**20 58 59.5**	**-1.7**
	2.0nm,0.8s,mb4.2,baz=107,slow=7.3,SNR=25						
INK	**Inuvik**	**68.72**	**338**	P	**P**	**20 59 59.8**	**-2.2**
	1.4nm,0.7s,mb4.0,baz=101,slow=5.2,SNR=4.3						
ILAR	**Eielson Array**	**73.81**	**334**	P	**P**	**21 00 32.0**	**-0.5**
	0.6nm,0.7s,mb3.6,baz=83,slow=4.6,SNR=5.3						

CASC 16 20:59:50.6±1.5, **13.39N**×**90.02W**, **h33**^{km}±4^{km}, **MD3.9, ML3.6, 4C-8D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.59**	**41**	⇓*i*P	P	21 00 03.1	+0.7
SBLS				*e*S	S	21 00 12.0	+1.1
RTR	**El Retiro**	**0.62**	**36**	⇓*e*P	P	21 00 03.5	+0.7
SNJE	**San Jose**	**0.62**	**40**	⇓*i*P	P	21 00 03.5	+0.6
SNJE				*e*S	S	21 00 12.8	+1.0
RBDL	**Robledal**	**0.79**	**24**	⇑*e*P	P	21 00 05.7	+0.4
BOQS	**Boqueron**	**0.80**	**65**	⇓*i*P	P	21 00 05.5	+0.1
BOQS				*e*S	S	21 00 18.2	+2.0
SNET	**Serv Nac Est T**	**0.82**	**69**	*e*P	P	21 00 06.6	+0.9
SNET				*e*S	S	21 00 17.5	+0.7
SNET				*i*		21 00 19.9	
	comp=Z,1µm,0.3s						
IXG	**Ixpaco**	**0.89**	**332**	⇓*e*P	P	21 00 06.0	-0.6
IXG				*e*S	S	21 00 18.8	+0.4
IXG				AML	AML	21 00 19.4	
	comp=E,9µm,0.5s						
LFU	**La Fuente**	**0.95**	**68**	⇓*e*P	P	21 00 07.8	+0.2
LFRS	**El Faro**	**0.96**	**76**	*e*P	P	21 00 07.3	-0.4
LFRS				*e*S	S	21 00 21.8	+1.4
LBRS	**Las Brisas**	**1.01**	**70**	⇑*e*P	P	21 00 08.8	+0.4
LBRS				*e*S	S	21 00 22.5	+0.9
LCBS	**La Ceiba**	**1.05**	**75**	⇑*e*P	P	21 00 08.8	-0.2
LCBS				*e*S	S	21 00 22.4	-0.2
SNVI	**San Vicente**	**1.17**	**79**	*e*P	P	21 00 10.7	0.0
SNVI				*e*S	S	21 00 26.1	+0.3
MTO2	**Montecristo 2**	**1.19**	**32**	⇓*i*P	P	21 00 10.6	-0.4
NBG	**Las Nubes**	**1.23**	**345**	⇓*e*P	P	21 00 12.0	+0.5
NBG				*e*S	S	21 00 29.6	+2.3
NBG				AML	AML	21 00 34.4	
	comp=E,1µm,0.4s						
TP2	**Tecpan 2**	**1.69**	**325**	⇑*e*P	P	21 00 18.5	+0.3
TP2				*e*S	S	21 00 40.7	+1.8
TP2				AML	AML	21 00 47.5	
	comp=E,244nm,0.4s						
VSM	**San Miguel**	**1.70**	**89**	*e*P	P	21 00 19.3	+1.0
BLLM	**Bellamira**	**1.74**	**88**	*e*P	P	21 00 17.9	-0.9
CNCH	**Conchagua**	**2.13**	**93**	*e*S	S	21 00 50.9	+0.8

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*IDC **16** 21:10:28.2±3.1, 43.25N×105.17W, mb2.7/1, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=58.6km s-min=9.3km az=154.0*

*NEIC **16** 21:10:30.8±0.9, 43.58N×105.08W, ML3.3, Error ellipse: s-maj=12.4km s-min=8.6km az=121.0, Suspected Mining* *explosion.*

NEIC 75 km [45 miles] WSW of Newcastle.

ISC 16 21:10:26.6±0.6,**43.48N**±0.05×**104.79W**±0.07,**n17,** σ**0^{s}60**/18,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHWY	**Pilot Hill**	**2.23**	**193**	*e*P	**Pg**	**21 11 11.7**	**+0.5**
LAO	**LASA Array**	**3.36**	**343**	*e*P	**Pn**	**21 11 22.2**	**+0.7**
PDAR	**Pinedale Array**	**3.56**	**260**	Pn	**Pn**	**21 11 24.1**	**-0.1**
	2.6nm,0.3s,baz=69,slow=15,SNR=11						
PDAR				Lg		21 12 09.4	
	7.8nm,0.3s,baz=71,slow=32,SNR=9.3						
BW06	**Boulder Array**	**3.56**	**260**	*e*Pn	**Pn**	**21 11 14.8**	**-9.4**
ISCO	**Idaho Springs**	**3.73**	**190**	*e*Pn	**Pb**	**21 11 33.1**	**-0.1**
LKWY	**Lake**	**4.19**	**287**	*e*P	**Pn**	**21 11 32.8**	**-0.4**
LOHW	**Long Hollow**	**4.23**	**274**	*e*Pn	**Pn**	**21 11 28.4**	**-5.3**
MOOW	**Moose Ponds**	**4.33**	**276**	*e*Pn	**Pn**	**21 11 34.6**	**-0.5**
IMW	**Indian Meadow**	**4.48**	**277**	*e*Pn	**Pn**	**21 11 36.5**	**-0.7**
YMR	**Madison River**	**4.60**	**287**	*e*Pn	**Pn**	**21 11 39.1**	**0.0**
BOZ	**Bozeman (W)**	**5.34**	**296**	*e*Pn	**Pn**	**21 11 50.4**	**+0.9**
	6.8nm,0.6s						
DAU	**Daniels Canyon**	**5.71**	**240**	*e*P	**Pn**	**21 11 55.6**	**+0.8**
HVU	**Hansel Valley**	**6.13**	**257**	*e*P	**Pn**	**21 11 59.7**	**-0.9**
SRU	**San Rafael**	**6.14**	**227**	*e*P	**Pn**	**21 12 00.5**	**-0.2**
ULM	**Lac du Bonnet**	**9.12**	**39**	Pn	**P**	**21 12 43.0**	**+0.6**
	0.8nm,0.3s,baz=233,slow=14,SNR=3.2						
ULM				Sn	**Sn**	**21 14 26.0**	**-1.0**
	0.4nm,0.3s,baz=233,slow=2.8,SNR=4.6						
CPCT	**Cooper Cave**	**17.56**	**110**	*e*P	**P**	**21 14 34.1**	**-0.2**
YKA	**Yellowknife Ar**	**19.90**	**347**	P	**P**	**21 15 02.8**	**+0.6**
	0.2nm,0.4s,baz=159,slow=12,SNR=5.4						

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*NEIC **16** 21:14:14.5,43.18S×172.06E,h12^{km},ML3.9(WEL),After WEL.*

NEIC Felt at Christchurch.

WEL 16 21:14:14.5±0.1,**43.18S**×**172.05E,h11**^{km}±1^{km},**ML3.9**/10,**5C-3D,Error ellipse: s-maj=0.6km s-min=0.5km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTZ	**Lake Taylor**	**0.42**	**22**	⇑P	Pg	21 14 23.0	-0.2
LTZ				S	Sg	21 14 29.0	+0.1
LTZ	**Lake Taylor**	**0.42**	**22**	⇑P*	Pb	21 14 23.0	-0.5
LTZ				S*	Sb	21 14 29.0	-0.6
CRLZ	**Canterbury Las**	**0.58**	**134**	P	Pb	21 14 25.7	-0.4
CRLZ	**Canterbury Las**	**0.58**	**134**	P*	Pb	21 14 25.6	-0.5
CRLZ				S*	Sb	21 14 34.2	+0.2
MQZ	**McQueen’s Vall**	**0.69**	**141**	⇓P	Pb	21 14 27.5	-0.6
MQZ				S	Sb	21 14 36.8	-0.5
MQZ	**McQueen’s Vall**	**0.69**	**141**	⇓P*	Pb	21 14 27.5	-0.5
MQZ				S*	Sb	21 14 36.8	-0.5
RPZ	**Rata Peaks**	**0.91**	**233**	⇑P	Pb	21 14 31.2	-0.6
RPZ	**Rata Peaks**	**0.91**	**233**	⇑P*	Pb	21 14 31.2	-0.6
RPZ				S*	Sb	21 14 43.4	-0.2
WVZ	**Waitaha Valley**	**0.97**	**275**	P	Pb	21 14 32.4	-0.5
WVZ				S	Sb	21 14 46.4	+0.9
WVZ	**Waitaha Valley**	**0.97**	**275**	⇓P*	Pb	21 14 32.6	-0.3
WVZ				S*	Sb	21 14 46.4	+0.9
KHZ	**Kahutara**	**1.33**	**56**	*e*P	Pb	21 14 37.5	-1.5
KHZ	**Kahutara**	**1.33**	**56**	PN	Pn	21 14 37.5	-1.6
DSZ	**Denniston Nort**	**1.44**	**353**	*e*PN	Pn	21 14 41.1	+0.4
THZ	**Tophouse**	**1.54**	**24**	P	Pn	21 14 41.1	-1.1
THZ	**Tophouse**	**1.54**	**24**	PN	Pn	21 14 41.0	-1.2
FOZ	**Fox Glacier**	**1.77**	**256**	PN	Pn	21 14 43.6	-1.8
FOZ				*e*SN	Sn	21 15 03.7	-4.3
LBZ	**Lake Benmore**	**1.82**	**228**	P	Pn	21 14 43.7	-2.4
LBZ	**Lake Benmore**	**1.82**	**228**	*e*PN	Pn	21 14 43.8	-2.3
ODZ	**Otahua Downs**	**2.13**	**208**	P	Pn	21 14 47.6	-2.9
ODZ	**Otahua Downs**	**2.13**	**208**	⇑PN	Pn	21 14 47.6	-2.9
ODZ				SN	Sn	21 15 11.9	-5.3
NNZ	**Nelson**	**2.19**	**27**	*e*PN	Pn	21 14 51.3	-0.1
QRZ	**Quartz Range**	**2.37**	**9**	PN	Pn	21 14 53.0	-1.1
JCZ	**Jackson Bay**	**2.56**	**248**	*e*PN	Pn	21 14 53.0	-3.6
WKZ	**Wanaka**	**2.74**	**232**	P	Pn	21 14 56.0	-3.3
WKZ	**Wanaka**	**2.74**	**232**	PN	Pn	21 14 56.1	-3.3
WKZ				*e*SN	Sn	21 15 28.2	-4.7
EAZ	**Earnscleugh**	**2.85**	**223**	P	Pn	21 14 57.3	-3.6
EAZ	**Earnscleugh**	**2.85**	**223**	PN	Pn	21 14 57.3	-3.6
EAZ				SN	Sn	21 15 28.9	-6.6
CAW	**Cannon Point**	**3.05**	**48**	*e*PN	Pn	21 15 00.4	-3.3
MTW	**Mount Morrison**	**3.26**	**53**	*e*PN	Pn	21 15 04.1	-2.6
TUZ	**Tuapeka**	**3.27**	**211**	P	Pn	21 15 03.4	-3.5
TUZ	**Tuapeka**	**3.27**	**211**	PN	Pn	21 15 03.4	-3.5
MLZ	**Mavora Lakes**	**3.53**	**231**	*e*PN	Pn	21 15 06.9	-3.7

IGQ 16 21:29:55.5,0.22N×**79.79W,h17**^{km}±3^{km},**mb4.0,1C,Error ellipse: s-maj=4.4km s-min=2.7km az=42.2,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAGD	**Magdalena**	**0.29**	**176**	⇑P	Pb	21 30 00.7	-1.2
JAMA	**Jama**	**0.63**	**221**	P	Pb	21 30 07.8	+0.1
PINO	**Pino**	**1.24**	**108**	P	Pb	21 30 18.0	-0.1
TERV	**Terraza Guagua**	**1.25**	**108**	P	Pb	21 30 20.7	+2.5
JUA2	**San Juan 2**	**1.26**	**110**	P	Pb	21 30 19.0	+0.6
YANA	**Yana**	**1.27**	**105**	P	Pb	21 30 18.4	-0.1
LORE	**San Lorenzo**	**1.43**	**42**	P	Pn	21 30 22.7	+1.9
COTA	**Cotacachi**	**1.46**	**85**	P	Pn	21 30 22.6	+1.2
HOJA	**Cerro de Hojas**	**1.47**	**211**	P	Pn	21 30 17.1	-4.3
NAS1	**Nasa**	**1.56**	**123**	P	Pn	21 30 26.2	+3.3
VC1	**Cotopaxi 1**	**1.63**	**122**	P	Pn	21 30 27.9	+4.1
TAMB	**Tambo**	**1.69**	**123**	P	Pn	21 30 28.3	+3.7
ANTI	**Antisana**	**1.76**	**112**	P	Pn	21 30 28.5	+2.8
CAYR	**Refugio Cayamb**	**1.80**	**96**	P	Pn	21 30 29.0	+2.8
CAYA	**Cayambe**	**1.81**	**95**	P	Pn	21 30 28.5	+2.1
ELAGU	**Cayambe Volc**	**1.82**	**98**	P	Pn	21 30 31.5	+5.1
PISA	**Pisayambo**	**1.90**	**132**	P	Pn	21 30 30.2	+2.6
ECEN	**Cerro Negro**	**1.92**	**72**	P	Pn	21 30 29.4	+1.5
IGUA	**Igualata**	**2.05**	**146**	P	Pn	21 30 31.6	+1.8
ULBA	**Ulba**	**2.16**	**140**	P	Pn	21 30 34.3	+3.0
ARRY	**Arrayan**	**2.17**	**142**	P	Pn	21 30 32.4	+0.8
ARRY				S	Sn	21 31 01.2	+2.9

DJA 16 21:49:40.0±0.7,**9.10S**×**116.19E,h2**^{km},**MD4.8**/2,**ML3.8**/1,**1C-6D,Error ellipse: s-maj=10.6km s-min=7.3km az=118.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	**0.61**	**353**	⇓*e*Pg	Pg	21 49 56.2	+4.0
	120nm,0.2s						
KEDI				⇓*e*Sg	Sg	21 50 06.6	+6.2
RATI	**Rata**	**0.75**	**300**	⇓*e*Pg	Pg	21 49 58.7	+3.7
	229nm,0.2s						
RATI				⇓*e*Sg	Sg	21 50 13.2	+8.2
KELI	**Kelakatan**	**1.89**	**297**	⇑*e*Pn	Pn	21 50 10.6	-3.1
SRDI	**Scrawed**	**2.12**	**287**	⇓*e*Pn	Pn	21 50 13.7	-3.1
	56nm,0.2s						
SRDI				⇓*e*Sn	Sn	21 50 39.0	-5.1

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*NEIC **16** 21:50:32.9±8.6,1.49S×119.75E,h7^{km}±56^{km},mb4.7/16, Error ellipse: s-maj=18.8km s-min=9.3km az=64.0*

*IDC **16** 21:50:32.0±0.7,1.59S×119.68E,mb4.5/11,mb1 4.6/11, mb1mx4.3/19,mbtmp4.5/11,Error ellipse: s-maj=47.4km s-min=13.5km az=58.0*

*BJI **16** 21:50:33.6,1.04S×120.30E,h6^{km},mb4.7*

*MOS **16** 21:50:34.6±1.1,1.59S×119.64E,h33^{km},mb4.9/12,Error ellipse: s-maj=29.0km s-min=10.3km az=117.8*

ISC 16 21:50:33.8±5.8,**1.47S**±0.08×**119.8E**±0.1,**h26**^{km}±44^{km},**n56,**σ**1^{s}08**/56,**mb4.6**/35,**MS5.0**/3,**1C-2D,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**16.76**	**132**	*e*P	**P**	**21 54 29.7**	**+1.0**
	13nm,0.6s						
FITZ	**Fitzroy Crossi**	**17.49**	**161**	*e*P	**P**	**21 54 37.6**	**-0.2**
	10.0nm,0.8s						
MBWA	**Marble Bar**	**19.57**	**180**	*e*P	**P**	**21 55 02.8**	**-0.2**
	21nm,1.1s						
WRA	**Warramunga Arr**	**23.21**	**143**	P	**P**	**21 55 40.0**	**0.0**
	21nm,0.8s,mb4.6,baz=322,slow=11,SNR=280						
WRAB	**Tennant Creek**	**23.21**	**143**	*c i*P	**P**	**21 55 40.4**	**+0.4**
WRAB	**Tennant Creek**	**23.21**	**143**	*e*P	**P**	**21 55 39.9**	**-0.1**
	52nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**25.95**	**149**	P	**P**	**21 56 06.8**	**+0.6**
	7.1nm,0.6s,mb4.3,baz=347,slow=15,SNR=40						
CMAR	**Chiang Mai Arr**	**28.53**	**315**	P	**P**	**21 56 29.1**	**-0.6**
	2.1nm,0.7s,mb4.0,baz=140,slow=7.2,SNR=6.1						
NWAO	**Narrogin (SRO)**	**31.39**	**184**	P	**P**	**21 56 53.4**	**-1.7**
	11nm,0.8s,mb4.8,baz=61,slow=11,SNR=5.5						
CTA	**Charters Tower**	**31.78**	**127**	P	**P**	**21 56 59.0**	**+0.4**
	6.4nm,0.9s,mb4.4,baz=284,slow=12,SNR=3.6						
SSE	**Sheshan**	**32.41**	**2**	*e*P	**P**	**21 57 02.9**	**-1.1**
SSE				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.0						
SSE	**Sheshan**	**32.41**	**2**	*e*P	**P**	**21 57 02.9**	**-1.1**
	comp=Z,16nm,0.7s,mb5.0						
ENH	**Enshi**	**33.06**	**343**	*e*P	**P**	**21 57 08.3**	**-1.4**
CD2	**Chengdu**	**35.64**	**336**	P	**P**	**21 57 32.4**	**+0.5**
STKA	**Stephens Creek**	**36.56**	**148**	*e*P	**P**	**21 57 38.8**	**-0.8**
	comp=Z,9.6nm,1.2s,mb4.5						
STKA	**Stephens Creek**	**36.56**	**148**	P	**P**	**21 57 39.1**	**-0.5**
	comp=Z,4.5nm,0.7s,mb4.4,baz=328,slow=7.5,SNR=13						
LZH	**Lanzhou**	**40.22**	**340**	*e*P	**P**	**21 58 03.9**	**-6.2**
LZH				*PP	pP	21 58 12.3	-5.6
LZH				*SP	sP	21 58 16.1	-5.0
LZH				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.8						
LZH				MLR	MLR		
	comp=Z,490nm,17.5s,MS4.4						
LZH	**Lanzhou**	**40.22**	**340**	*e*P	**P**	**21 58 03.9**	**-6.2**
	comp=Z,26nm,1.4s,mb4.8						
LZH				pP	pP	21 58 12.3	-5.6
LZH				sP	sP	21 58 16.1	-5.0
LZH				LR	LR		
	comp=Z,490nm,17.5s,MS4.4						
LSA	**Lhasa**	**41.36**	**321**	P	**P**	**21 58 21.6**	**+2.1**
LSA	**Lhasa**	**41.36**	**321**	*e*P	**P**	**21 58 21.3**	**+1.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.4						
LSA	**Lhasa**	**41.36**	**321**	*e*P	**P**	**21 58 21.3**	**+1.7**
	comp=Z,6.8nm,0.7s,mb4.4						
BJT	**Baijiatuau**	**41.42**	**356**	*e*P	**P**	**21 58 22.9**	**+3.0**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJT	**Baijiatuau**	**41.42**	**356**	*e*P	**P**	**21 58 22.9**	**+3.0**
	comp=Z,5.9nm,0.8s,mb4.3						
BJI	**Beijing**	**41.44**	**356**	*e*P	**P**	**21 58 25.8**	**+5.7**
BJI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.5						
BJI				MLR	MLR		
	comp=Z,3µm,20.4s,MS5.1						
BJI	**Beijing**	**41.44**	**356**	*e*P	**P**	**21 58 25.8**	**+5.7**
	comp=Z,12nm,1.0s,mb4.5						
BJI				LR	LR		
	comp=Z,3µm,20.4s,MS5.1						
JIRN	**Jiri**	**43.41**	**314**	*e*P	**P**	**21 58 36.5**	**+0.1**
	comp=Z,28nm,1.0s,mb5.0						
PKI	**Pulchoki**	**43.91**	**314**	*e*P	**P**	**21 58 39.9**	**-0.6**
	comp=Z,8.2nm,0.6s,mb4.7						
KKN	**Kakani**	**44.13**	**314**	*e*P	**P**	**21 58 41.8**	**-0.5**
	comp=Z,19nm,0.9s,mb4.8						
DMN	**Daman**	**44.16**	**313**	*e*P	**P**	**21 58 42.6**	**+0.1**
	comp=Z,18nm,0.8s,mb4.8						
GTA	**Gaotai**	**44.63**	**338**	P	**P**	**21 58 46.8**	**+0.6**
GTA				AP	pP	21 58 49.8	-4.1
GTA				XP	sP	21 58 51.6	-5.5
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.0						
GKN	**Gorkha**	**44.72**	**314**	*e*P	**P**	**21 58 46.5**	**-0.6**
	comp=Z,31nm,0.9s,mb5.2						
HYB	**Hyderabad**	**44.79**	**297**	*i* P	**P**	**21 58 50.5**	**+2.8**
KOLN	**Koldanda**	**45.35**	**313**	*e*P	**P**	**21 58 51.8**	**-0.2**
	comp=Z,24nm,0.8s,mb5.1						
MDJ	**Mudanjiang**	**46.70**	**10**	*e*P	**P**	**21 59 01.9**	**-0.5**
	comp=Z,14nm,1.1s,mb4.8						
SONM	**Songino Array**	**50.48**	**348**	P	**P**	**21 59 32.7**	**+1.0**
	comp=Z,2.0nm,0.7s,mb4.2,baz=165,slow=7.3,SNR=12						
ZAK	**Zakamensk**	**53.56**	**347**	*e*P	**P**	**21 59 55.0**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.8s,mb3.4						
TLY	**Talaya**	**54.70**	**348**	*e*P	**P**	**22 00 02.9**	**-0.2**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
MOY	**Mondy**	**55.29**	**346**	*e*P	**P**	**22 00 08.1**	**+0.6**
BOD	**Bodaibo**	**59.28**	**356**	*e*P	**P**	**22 00 32.4**	**-3.2**
AAK	**Ala-Archa**	**59.90**	**323**	*e*P	**P**	**22 00 37.6**	**-2.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
AAK	**Ala-Archa**	**59.90**	**323**	*e*P	**P**	**22 00 37.6**	**-2.5**
	comp=Z,7.6nm,0.9s,mb4.7						
ZAL	**Zalesovo**	**62.38**	**337**	*i* P	**P**	**22 01 00.2**	**+3.5**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**62.38**	**337**	P	**P**	**22 00 56.8**	**+0.1**
	comp=Z,2.1nm,0.6s,mb4.5,baz=326,slow=5.6,SNR=10						
KURK	**Kurchatov**	**62.71**	**332**	*e*P	**P**	**22 00 58.9**	**0.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
KURK	**Kurchatov**	**62.71**	**332**	*e*P	**P**	**22 00 58.9**	**0.0**
	comp=Z,7.6nm,0.8s,mb4.9						
YAK	**Yakutsk**	**63.77**	**5**	⇓*e*P	**P**	**22 01 06.8**	**+1.1**
YAK				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
BVAR	**Borovoye Array**	**68.13**	**330**	P	**P**	**22 01 33.3**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.5,baz=135,slow=6.3,SNR=18						
BRVK	**Borovoye**	**68.21**	**330**	*e*P	**P**	**22 01 33.2**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BRVK	**Borovoye**	**68.21**	**330**	*e*P	**P**	**22 01 33.2**	**-1.0**
	comp=Z,7.3nm,1.0s,mb4.7						
TIXI	**Tiksi**	**73.22**	**3**	⇓*e*P	**P**	**22 02 02.6**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SVE	**Sverdlovsk**	**74.91**	**331**	*e*P	**P**	**22 02 18.5**	**+4.3**
BILL	**Bilibino**	**76.37**	**16**	*e*P	**P**	**22 02 21.9**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
BILL				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.5						
SOC	**Sochi**	**83.84**	**314**	*e*P	**P**	**22 03 02.4**	**-0.3**
SOC				*e*PPP	PPP	22 08 10.8	-1.8
SOC				*e*S	S	22 13 22.3	-0.6
SOC				*e*SSS	SSS	22 22 20.3	0.0
SOC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
SOC				pmax	pmax		
	comp=N,6.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.7s						
ASF	**Jabal al Asfar**	**84.78**	**302**	P	**P**	**22 03 08.3**	**+0.5**
	comp=E,6.0nm,1.0s,mb4.7,baz=331,slow=6.8,SNR=5.5						
EIL	**Elat**	**86.26**	**300**	P	**P**	**22 03 16.9**	**+1.7**
	comp=E,8.0nm,1.1s,mb4.9						
BRTR	**Keskin Array B**	**87.99**	**310**	P	**P**	**22 03 26.1**	**+2.8**
	comp=E,2.1nm,0.8s,mb4.4,baz=122,slow=5.5,SNR=9.3						

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*NEIC **16** 22:03:15.0,31.78S×68.37W,h0^{km},ML3.6(GUC),After GUC.*

GUC 16 22:03:15.0±0.7,**31.78S**×**68.37W,h0**^{km}±7^{km},**MD3.5, ML3.6,1C-3D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.35**	**312**	⇓*i*P	Pg	22 03 20.5	-1.5
ZON				*e*S	Sg	22 03 24.5	-2.2
JACH	**Jahuel**	**2.08**	**244**	*e*P	Pn	22 03 52.0	+0.5
JACH				*i* S	Sn	22 04 19.7	+1.1
PTCH	**Petorca**	**2.22**	**257**	*i* P	Pn	22 03 53.9	+0.3
PTCH				*i* S	Sn	22 04 23.3	+1.1
PTCH				AMP		22 04 27.4	
	comp=N,2µm,0.3s						
FCH	**Farellones**	**2.23**	**226**	⇑*i*P	Pn	22 03 54.4	+0.6
FCH				*i* S	Sn	22 04 24.5	+2.1
FCH				AMP		22 04 25.5	
	comp=N,172nm,1.0s						
PEL	**Peldehue**	**2.38**	**235**	*i* S	Sn	22 04 28.0	+1.9
CLCH	**Cerro Calan**	**2.43**	**228**	⇓*i*P	Pn	22 03 57.4	+0.8
CLCH				*i* S	Sn	22 04 29.9	+2.4
CLCH				AMP		22 04 31.7	
	comp=N,935nm,0.7s						
ROCH	**El Roble**	**2.53**	**241**	*e*P	Pn	22 03 58.9	+0.9
ROCH				*i* S	Sn	22 04 32.1	+2.2
LMEL	**Las Melosas**	**2.57**	**216**	⇓*i*P	Pn	22 03 59.3	+0.8
LMEL				*i* S	Sn	22 04 33.2	+2.2
LMEL				AMP		22 04 36.3	
	comp=N,125nm,0.4s						
CHCH	**Chadas Angostu**	**2.88**	**221**	*i* P	Pn	22 04 03.4	+0.4
CICH	**Cipreses**	**3.06**	**214**	*i* P	Pn	22 04 10.1	+4.6
CICH				*i* S	Sn	22 04 48.6	+5.3

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*IDC **16** 22:18:51.0±1.1,1.15N×67.19E,mb3.9/9,mb1 4.1/9, mb1mx3.9/20,mbtmp3.9/9,MS4.1/1,Ms1 4.3/1, ms1mx3.9/18,Error ellipse: s-maj=28.7km s-min=25.6km az=14.0*

*NEIC **16** 22:18:52.4±0.6,1.16N×67.20E,h10^{km},mb4.2/2,Error ellipse: s-maj=17.3km s-min=11.9km az=152.0*

ISC 16 22:18:50.4±0.8,**1.2N**±0.1×**67.2E**±0.1,**h10**^{km},**n16,** σ**0^{s}99**/15,**mb4.0**/11,**MS4.1**/1,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**14.77**	**65**	Pn	**P**	**22 22 21.0**	**-0.5**
	119nm,0.6s,SNR=10						
PALK	**Pallekele**	**14.77**	**65**	*e*P	**P**	**22 22 20.4**	**-1.1**
	30nm,1.1s						
CMAR	**Chiang Mai Arr**	**35.58**	**59**	P	**P**	**22 25 51.5**	**+1.3**
	0.7nm,1.0s,mb3.5,baz=252,slow=10,SNR=6.3						
CMAR				LR	LR	22 39 12.4	
	comp=Z,322nm,20.2s,MS4.1,baz=35,slow=34						
LSA	**Lhasa**	**36.40**	**37**	*e*P	**P**	**22 25 59.4**	**+2.3**
	2.9nm,0.8s,mb4.3						
GNI	**Garni**	**43.83**	**335**	P	**P**	**22 27 00.5**	**+2.0**
	3.4nm,0.8s,mb4.1,baz=8.1,slow=20,SNR=3.9						
BRTR	**Keskin Array B**	**49.04**	**326**	P	**P**	**22 27 39.6**	**0.0**
	0.8nm,0.7s,mb3.8,baz=147,slow=7.9,SNR=4.1						
BOSA	**Boshof**	**49.89**	**230**	*e*P	**P**	**22 27 46.2**	**-0.2**
	3.5nm,0.9s,mb4.4						
KURK	**Kurchatov**	**50.31**	**9**	*e*P	**P**	**22 27 48.6**	**-0.6**
BVAR	**Borovoye Array**	**51.74**	**2**	P	**P**	**22 27 59.1**	**-1.1**
	0.5nm,0.7s,mb3.5,baz=236,slow=5.3,SNR=3.7						
BRVK	**Borovoye**	**51.77**	**2**	*e*P	**P**	**22 27 59.3**	**-1.1**
TSUM	**Tsumeb**	**52.72**	**245**	P	**P**	**22 28 08.2**	**+0.2**
	2.0nm,1.3s,mb3.9,baz=18,slow=7.4,SNR=4.5						
ZAL	**Zalesovo**	**54.56**	**13**	P	**P**	**22 28 20.3**	**-0.7**
	1.8nm,0.9s,mb4.1,baz=290,slow=9.6,SNR=9.0						
SONM	**Songino Array**	**57.52**	**30**	P	**P**	**22 28 42.7**	**+0.3**
	0.6nm,0.7s,mb3.8,baz=217,slow=6.2,SNR=5.5						
WRA	**Warramunga Arr**	**69.00**	**112**	P	**P**	**22 29 58.4**	**-0.4**
	1.2nm,0.8s,mb3.9,baz=290,slow=5.7,SNR=8.4						
ARCES	**ARCESS Array B**	**73.64**	**346**	P	**P**	**22 30 25.2**	**-0.4**
	3.7nm,0.8s,mb4.3,baz=166,slow=5.0,SNR=3.6						
TXAR	**Lajitas Array**	**148.43**	**345**	PKPbc	PKPdf	22 38 40.5	+3.0
	3.2nm,1.0s,baz=45,slow=1.8,SNR=9.7						

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*NDI **16** 22:32:34.0±1.5,34.99N×72.61E,h15^{km},MD3.7, mb3.5(NEIC)*

NEIC 16 22:32:13.7±3.9,**34.48N**×**72.11E,h10**^{km},**mb3.5**/1,**1C, Error ellipse: s-maj=78.0km s-min=9.3km az=60.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.64**	**123**	*e*	Pn	22 33 17.0	+5.6
THN				*e*S	Sg	22 34 09.8	-5.2
SDNR	**Sundarnagar**	**5.05**	**125**	*e*P	Pn	22 33 35.8	+4.4
SDNR				*e*S	Sn	22 34 30.8	+0.3
SMLA	**Simla**	**5.41**	**127**	⇑*i*P	Px	22 33 54.5	
SMLA				*i*		22 35 22.6	
DDI	**Dehra Dun**	**6.52**	**128**	*e*S	Sn	22 35 19.5	+12
AAK	**Ala-Archa**	**8.35**	**12**	*e*P	P	22 34 15.4	-2.4
	1.7nm,0.6s						
KOLN	**Koldanda**	**11.90**	**121**	*e*P	P	22 35 04.9	-1.5
	3.9nm,0.4s						
KOLN				*e*S	S	22 37 08.5	-12
GKN	**Gorkha**	**12.51**	**118**	*e*P	P	22 35 11.7	-3.0
	5.0nm,0.3s						
GKN				*e*S	S	22 37 21.3	-14
DMN	**Daman**	**13.07**	**118**	*e*P	P	22 35 19.5	-2.7
	3.7nm,0.3s						
DMN				*e*S	S	22 37 35.1	-14
KKN	**Kakani**	**13.10**	**117**	*e*P	P	22 35 19.8	-2.7
	4.4nm,0.5s						
PKI	**Pulchoki**	**13.32**	**118**	*e*P	P	22 35 23.7	-1.7
	6.5nm,0.5s						
JIRN	**Jiri**	**13.84**	**116**	*e*P	P	22 35 29.3	-3.1
	7.4nm,0.3s						
BRVK	**Borovoye**	**18.62**	**357**	P	P	22 36 30.9	-2.3
	4.0nm,1.3s						

IDC 16 22:38:07.9±13.0,**0.91S**×**133.21E,mb3.8**/2,**mb1 3.8**/3,**mb1mx3.6**/15,**mbtmp3.6**/3,**ML3.5**/1,**Error ellipse: s-maj=192.2km s-min=115.4km az=158.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.95**	**177**	P	P	22 42 31.4	-1.6
	0.1nm,0.3s,baz=355,slow=12,SNR=14						
ASAR	**Alice Springs**	**22.63**	**178**	P	P	22 43 11.7	-0.3
	1.0nm,0.4s,baz=356,slow=11,SNR=21						
STKA	**Stephens Creek**	**31.80**	**166**	P	P	22 44 33.0	-3.6
	1.1nm,0.5s,baz=6.3,slow=9.2,SNR=4.0						

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*CSEM **16** 22:39:30.2±0.8,39.11N×28.26W,h5^{km},ML2.3,Error ellipse: s-maj=8.2km s-min=5.9km az=80.0,After PDA*

*PDA **16** 22:39:30.2±0.8,39.11N×28.26W,h5^{km},MD3.2,ML2.3, Error ellipse: s-maj=8.2km s-min=5.9km az=80.0*

SVSA 16 22:39:30.2±0.8,**39.11N**×**28.26W,h5**^{km},**MD3.2,ML2.3, Error ellipse: s-maj=8.2km s-min=5.9km az=80.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosais**	**0.39**	**177**	*e*P	Pg	22 39 37.1	-1.0
ROSA				*e*S	Sg	22 39 42.3	-1.1
PMAN	**Manadas**	**0.50**	**164**	*e*rx	Pg	22 39 38.9	-1.3
PMAN	**Manadas**	**0.50**	**164**	*e*-	Pg	22 39 38.9	-1.3
PCED	**Cedros**	**0.59**	**215**	*i* P	Pg	22 39 40.1	-2.0
PCED				*e*S	Sg	22 39 47.9	-2.1
	44nm,0.2s						
PCED	**Cedros**	**0.59**	**215**	*e*S	Sg	22 39 47.9	-2.1
	44nm,0.2s						
PICO	**Pico**	**0.62**	**192**	*e*P	Pg	22 39 41.3	-1.4
PICO				*e*S	Sg	22 39 49.0	-2.1
CALA	**Caldeira**	**0.63**	**213**	*e*P	Pg	22 39 41.0	-1.9

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*IDC **16** 23:01:14.0±0.9,60.40S×25.80W,mb4.0/3,mb1 4.1/3, mb1mx3.7/13,mbtmp4.0/3,Error ellipse: s-maj=45.6km s-min=30.2km az=81.0*

*NEIC **16** 23:01:18.8±0.7,60.71S×23.64W,h30^{km},mb4.2/1,Error ellipse: s-maj=39.4km s-min=11.8km az=72.0*

ISC 16 23:01:15.2±1.4,**60.7S**±0.1×**23.0W**±0.7,**h10**^{km},**n16,** σ**0^{s}68**/8,**mb4.0**/4,**4C-3D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**11.64**	**155**	⇑*i*P	**P**	**23 04 03.4**	**-0.9**
VNA1	**Neumayer--Stat**	**11.64**	**155**	⇑*i*	Px	23 04 09.0	
VNA3	**Neumayer Olymp**	**11.86**	**159**	⇑*i*P	**P**	**23 04 06.3**	**-0.8**
VNA3	**Neumayer Olymp**	**11.86**	**159**	⇓*i*	Px	23 04 07.6	
VNA2	**Neumayer--Watz**	**12.04**	**155**	⇓*i*P	**P**	**23 04 10.3**	**+0.7**
VNA2	**Neumayer--Watz**	**12.04**	**155**	⇑*i*	Px	23 04 11.3	
SNAA	**Sanae**	**13.59**	**152**	⇓*i*P	**P**	**23 04 30.9**	**+0.9**
QSPA	**South Pole Qui**	**29.55**	**180**	*e*P	**P**	**23 07 21.1**	**-0.3**
	3.2nm,0.7s,mb4.2						
VNDA	**Vanda**	**42.01**	**182**	P	**P**	**23 09 07.9**	**+0.6**
	1.5nm,0.8s,mb3.7,baz=193,slow=5.0,SNR=2.8						
LPAZ	**La Paz**	**54.84**	**304**	P	**P**	**23 10 35.6**	**-12**
	0.4nm,0.3s,mb3.9,baz=339,slow=6.1,SNR=2.6						
DBIC	**Dimbokro**	**68.65**	**19**	P	**P**	**23 12 20.4**	**-0.1**
	2.9nm,0.9s,mb4.2,baz=174,slow=6.8,SNR=4.8						
FINES	**FINESS Array B**	**127.48**	**27**	PKP	PKPdf	23 20 18.9	-3.2
	2.1nm,0.8s,baz=194,slow=5.7,SNR=6.3						
FINES	**FINESS Array B**	**127.48**	**27**	PKP	PKPdf	23 20 18.9	-3.2
SONM	**Songino Array**	**148.60**	**91**	PKPbc	PKPdf	23 21 04.1	+3.7
	1.5nm,0.8s,baz=236,slow=2.2,SNR=9.2						
INK	**Inuvik**	**150.74**	**315**	PKPbc	PKPdf	23 21 04.2	+1.0
	2.7nm,0.7s,baz=114,slow=2.8,SNR=11						
ILAR	**Eielson Array**	**154.72**	**304**	PKPbc	PKPdf	23 21 13.6	+4.7
	0.8nm,0.8s,baz=90,slow=0.9,SNR=8.7						

OTT 16 23:19:27.3±0.1,**64.66N**×**110.67W,h1**^{km},**MN3.1**/17,**Blast, Ekati Mine, Nt Mining explosion.,Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKTN	**Ekati Mine**	**0.04**	**32**	PG	Pg	23 19 27.9	-0.2
LDGN	**Lac de Gras No**	**0.06**	**74**	PG	Pg	23 19 29.1	+0.5
DVKN	**Diavik Mine**	**0.22**	**135**	PG	Pg	23 19 31.4	-0.3
DVKN				Trac		23 19 35.9	
	comp=Z,224nm,0.1s						
ACKN	**Achilles Lake**	**0.34**	**345**	PG	Pg	23 19 33.5	-0.6
ACKN				SG	Sg	23 19 38.0	-0.7
ACKN				Trac		23 19 39.4	
	comp=Z,101nm,0.1s						
LGSN	**Lac de Gras So**	**0.40**	**145**	PG	Pg	23 19 34.6	-0.7
LGSN				SG	Sg	23 19 40.1	-0.5
LGSN				Trac		23 19 41.4	
	comp=Z,61nm,0.1s						
YMBN	**Yamba Lake**	**0.43**	**300**	PG	Pg	23 19 34.9	-0.9
YMBN				SG	Sg	23 19 40.6	-1.0
YMBN				Trac		23 19 42.6	
	comp=Z,90nm,0.1s						
YNEN	**Yamba Lake Nor**	**0.46**	**339**	PG	Pg	23 19 35.6	-0.8
YNEN				SG	Sg	23 19 41.8	-0.8
YNEN				Trac		23 19 43.4	
	comp=Z,61nm,0.1s						
GLWN	**Glow Worm Lake**	**0.58**	**83**	PG	Pg	23 19 37.9	-0.9
GLWN				SG	Sg	23 19 45.8	-0.7
GLWN				Trac		23 19 47.4	
	comp=Z,60nm,0.1s						
COWN	**Contwyoto Lake**	**0.65**	**340**	PG	Pg	23 19 39.1	-1.1
COWN				SG	Sg	23 19 47.8	-1.0
COWN				Trac		23 19 49.2	
	comp=Z,62nm,0.1s						
NODN	**Nodinka Narrow**	**0.71**	**191**	PG	Pg	23 19 40.2	-1.3
NODN				SG	Sg	23 19 49.5	-1.6
NODN				Trac		23 19 51.3	
	comp=Z,99nm,0.1s						
MLON	**Marlo Lake**	**0.77**	**154**	PG	Pg	23 19 41.4	-1.3
MLON				SG	Sg	23 19 50.8	-2.2
MLON				Trac		23 19 54.5	
	comp=Z,26nm,0.1s						
BOXN	**Box Lake**	**0.91**	**153**	PG	Pg	23 19 44.0	-1.4
BOXN				SG	Sg	23 19 56.0	-1.6
BOXN				Trac		23 19 58.1	
	comp=Z,28nm,0.1s						
CAMN	**Camsell Lake**	**0.94**	**186**	PG	Pg	23 19 44.4	-1.6
CAMN				SG	Sg	23 19 56.8	-1.8
CAMN				Trac		23 19 58.4	
	comp=Z,45nm,0.1s						
MGTN	**Margaret Lake**	**1.09**	**154**	PG	Pg	23 19 47.2	-1.7
MGTN				SG	Sg	23 20 01.4	-2.1
MGTN				Trac		23 20 02.1	
	comp=Z,195nm,0.1s						
LUPN	**Lupin Mine**	**1.11**	**347**	PG	Pg	23 19 47.4	-2.0
LUPN				SG	Sg	23 20 01.4	-2.9
LUPN				Trac		23 20 08.0	
	comp=Z,65nm,0.1s						
GBLN	**Grizzly Bear L**	**1.11**	**246**	PG	Pg	23 19 47.3	-2.2
GBLN				SG	Sg	23 20 01.9	-2.4
GBLN				Trac		23 20 08.2	
	comp=Z,249nm,0.1s						
SNPN	**Snap Lake**	**1.15**	**185**	PG	Pg	23 19 48.3	-2.0
SNPN				SG	Sg	23 20 03.6	-2.0
SNPN				Trac		23 20 05.2	
	comp=Z,456nm,0.1s						
IHLN	**Indian Hill La**	**1.36**	**184**	PG	Pg	23 19 51.7	-2.8
IHLN				SG	Sg	23 20 09.3	-3.5
IHLN				Trac		23 20 10.9	
	comp=Z,40nm,0.1s						
KNDN	**Kennady Lake**	**1.40**	**152**	PG	Pg	23 19 52.6	-2.7
KNDN				SG	Sg	23 20 09.9	-4.1
KNDN				Trac		23 20 13.8	
	comp=Z,74nm,0.2s						
DSMN	**Discovery Mine**	**2.06**	**225**	PN	Pn	23 20 01.6	-1.8
DSMN				SG	Sg	23 20 30.2	-5.8
DSMN				Trac		23 20 33.4	
	comp=Z,24nm,0.1s						
CTLN	**Castor Lake**	**2.33**	**267**	PN	Pn	23 20 06.2	-1.0
CTLN				SN	Sn	23 20 33.9	-3.0
CTLN				Trac		23 20 40.5	
	comp=Z,14nm,0.1s						
YKW3	**Yellowknife Ar**	**2.75**	**222**	PN	Pn	23 20 10.5	-2.8
YKW3				SN	Sn	23 20 42.2	-5.4
YKW3				SG	Sg	23 20 50.8	-8.0
YKW3				Trac		23 20 59.8	
	comp=Z,21nm,0.2s						
GALN	**Gameti Lake**	**2.94**	**262**	PN	Pn	23 20 13.7	-2.3
GALN				SN	Sn	23 20 48.6	-3.9
GALN				Trac		23 21 04.8	
	comp=Z,22nm,0.2s						
FNBB	**Fort Nelson**	**8.22**	**231**	PN	P	23 21 26.3	-4.2
FNBB				SN	Sn	23 22 53.3	-12
INK	**Inuvik**	**9.80**	**302**	PN	P	23 21 47.5	-4.7
INK				SN	Sn	23 23 30.1	-14
FCC	**Fort Churchill**	**9.82**	**119**	PN	P	23 21 47.2	-5.4
FCC				SN	Sn	23 23 29.1	-16
RES	**Resolute Bay**	**11.40**	**21**	PN	P	23 22 07.6	-6.5
RES				SN	S	23 24 09.8	-14

*IDC **16** 23:24:38.5±0.9, 15.83N×61.67W, mb4.0/5, mb1 4.2/5, mb1mx3.6/23, mbtmp4.0/5, Error ellipse: s-maj=12.2km s-min=10.6km az=122.0*

*NEIC **16** 23:24:40.0±0.6, 15.80N×61.83W, h10^{km}, mb4.4/1, Error ellipse: s-maj=20.2km s-min=4.6km az=57.0*

*TRN **16** 23:24:41.0, 15.86N×61.64W, h3^{km}, MD3.8, M3.2(FDF)*

ISC 16 23:24:40.1±0.8**, 15.84N**±0.03×**61.67W**±0.08**, h13**^{km}±4^{km}**, n21, σ1**$\overset{s}{.}$**06**/29**, mb4.0**/5**, 5C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCG	**Saint Claude**	**0.19**	**357**⇑	*e*P	**Pg**	**23 24 44.5**	**-0.1**
DOG	**Dongo Capester**	**0.20**	**14**	*e*P	**Pg**	**23 24 44.5**	**-0.3**
BCG	**Bois Riant Cap**	**0.25**	**11**	*e*P	**Pg**	**23 24 45.3**	**-0.4**
BBL	**Barber's Block**	**0.36**	**148**⇑	*i*P	**Pg**	**23 24 48.6**	**+0.8**
BBL				*e*S	**Sg**	**23 24 53.1**	**+0.2**
BBL	**Barber's Block**	**0.36**	**148**	*e*P	**Pg**	**23 24 47.0**	**-0.8**
BBL	**Barber's Block**	**0.36**	**148**⇑	*i*P	**Pg**	**23 24 48.6**	**+0.8**
BBL				*e*S	**Sg**	**23 24 53.1**	**+0.2**
MDN	**Morne-Daniel**	**0.58**	**153**⇑	*i*P	**Pb**	**23 24 52.4**	**+0.8**
MDN				*e*S	**Sb**	**23 25 00.4**	**+0.9**
SEG	**Port Louis**	**0.58**	**16**	*e*P	**Pb**	**23 24 51.1**	**-0.6**
SEG				*e*S	**Sb**	**23 24 60.0**	**+0.4**
DBCT	**Belle View Cho**	**0.65**	**151**	*e*P	**Pb**	**23 24 53.4**	**+0.7**
DBCT				*e*S	**Sb**	**23 25 01.5**	**+0.2**
DSHT	**Scott's Head**	**0.68**	**155**	*e*P	**Pb**	**23 24 54.1**	**+0.7**
DSHT				*e*S	**Sb**	**23 25 02.4**	**-0.1**
DEG	**La Desirade**	**0.75**	**51**⇑	*e*P	**Pb**	**23 24 52.8**	**-1.8**
BPA	**Boggy Peak**	**1.21**	**351**	*e*P	**Pb**	**23 25 03.5**	**+1.0**
BPA				*e*S	**Sb**	**23 25 19.4**	**+1.5**
CPB	**Codrington**	**1.80**	**355**	*e*P	**Pn**	**23 25 11.3**	**+0.2**
CPB				*e*S	**Sn**	**23 25 35.2**	**+1.2**
STMA	**St. Maarten, A**	**2.59**	**328**	*e*S	**Sb**	**23 25 59.5**	**+1.8**
PDAR	**Pinedale Array**	**48.79**	**313**	P	**P**	**23 33 25.5**	**-1.4**
	0.9nm,0.8s,mb3.9,baz=109,slow=8.8,SNR=9.3						
YKA	**Yellowknife Ar**	**59.37**	**334**	P	**P**	**23 34 41.7**	**-2.4**
	1.9nm,0.7s,mb4.2,baz=108,slow=7.4,SNR=25						
YKA	**Yellowknife Ar**	**59.37**	**334**	P	**P**	**23 34 41.7**	**-2.5**
INK	**Inuvik**	**68.70**	**338**	P	**P**	**23 35 43.3**	**-1.9**
	1.6nm,0.7s,mb4.1,baz=92,slow=5.6,SNR=5.5						
INK	**Inuvik**	**68.70**	**338**	*e*P	**P**	**23 35 42.9**	**-2.3**
	2.5nm,0.9s,mb4.1						
HFS	**Hagfors**	**69.11**	**31**	P	**P**	**23 35 47.7**	**-0.1**
	3.0nm,1.0s,mb4.2,baz=158,slow=24,SNR=2.6						
ILAR	**Eielson Array**	**73.77**	**334**	P	**P**	**23 36 14.1**	**-1.5**
	0.6nm,0.7s,mb3.7,baz=82,slow=4.8,SNR=8.2						

*NEIC **16** 23:31:37.3±0.7, 50.34N×19.15E, h5^{km}, MG2.5(WAR), Error ellipse: s-maj=10.7km s-min=5.6km az=186.0*

*PRU **16** 23:31:39.0, 50.19N×19.19E*

*IDC **16** 23:31:40.7±1.4, 50.31N×18.80E, mb1 3.3/2, mb1mx3.1/16, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=31.4km s-min=11.4km az=143.0*

WAR 16 23:31:37.1, 50.16N×19.30E, h0^{km}**, ML2.5, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.32**	**80**	*e*PG	Pg	23 31 44.0	+0.4
OJC				*e*SG	Sg	23 31 49.0	+1.1
OKC	**Ostrava-Krasne**	**0.81**	**247**	*e*PG	Pg	23 31 53.5	+0.2
OKC				*e*SG	Sg	23 32 04.7	+0.5
NIE	**Niedzica**	**0.99**	**138**	*e*PG	Pg	23 31 56.0	-0.9
NIE				*e*SG	Sg	23 32 11.0	+0.8
MORC	**Moravsky Berou**	**1.20**	**252**	*e*P	Pb	23 31 59.1	-1.3
MORC				*e*S	Sb	23 32 15.5	-0.7
VYHS	**Vyhne**	**1.70**	**191**	*i* Pn	Pn	23 32 08.0	-0.1
VYHS				*e*Sn	Sn	23 32 30.1	-0.8
VYHS	**Vyhne**	**1.70**	**191**	*i*	Pn	23 32 08.0	-0.1
VYHS	**Vyhne**	**1.70**	**191**	*e*SN	Sn	23 32 30.1	-0.8
KECS	**Kecovo**	**1.85**	**155**	*e*PN	Pn	23 32 13.4	+3.1
KECS				*e*SN	Sn	23 32 37.6	+2.9
CRVS	**Cervenica-Dubn**	**1.89**	**131**	*e*PN	Pn	23 32 14.0	+3.1
CRVS				*e*SN	Sn	23 32 39.6	+3.9
DPC	**Dobruska-Polom**	**1.92**	**277**	*e*PG	Pg	23 32 10.8	-4.7
DPC				*e*SG	Sg	23 32 36.6	-4.5
	21nm,0.4s						
VRAC	**Vranov**	**1.96**	**245**	Pn	Pn	23 32 11.5	-0.3
	2.5nm,0.3s,baz=52,slow=13,SNR=15						
VRAC				Lg		23 32 38.0	
	3.1nm,0.3s,baz=81,slow=15,SNR=3.9						
KSP	**Ksiaz**	**2.04**	**291**	*e*Pn	Pn	23 32 15.0	+2.0
KSP				*e*Pg	Pg	23 32 17.3	-0.5
KSP				*e*Sn	Sn	23 32 38.9	-0.6
KSP				*e*Sg	Sg	23 32 41.9	-3.0
KSP	**Ksiaz**	**2.04**	**291**	*e*PG	Pg	23 32 15.0	-2.8
KSP				*e*SG	Sg	23 32 42.0	-2.9
UPC	**Upice**	**2.14**	**281**	*e*SG	Sg	23 32 43.0	-5.2
KWP	**Kalwaria**	**2.27**	**102**	*e*P	Pn	23 32 18.5	+2.2
KOLS	**Kolonicke sedl**	**2.29**	**121**	*e*PG	Pg	23 32 24.3	+1.4
KOLS				*e*SN	Sn	23 32 47.5	+1.5
PRU	**Pruhonice**	**3.07**	**269**	*e*SG	Sg	23 33 12.3	-7.1
BRG	**Berggiesshubel**	**3.49**	**284**	*e*Pg	Pg	23 32 42.4	-4.4
BRG				*e*Sg	Sg	23 33 27.9	-5.5
KHC	**Kasperske Hory**	**3.86**	**257**	*e*PG	Pg	23 32 49.5	-4.7
KHC				*e*x	x	23 33 15.0	
KHC				*e*SG	Sg	23 33 40.5	-5.1
GERES	**GERESS Array B**	**3.88**	**252**	Pn	Pn	23 32 38.4	-0.9
	0.1nm,0.3s,baz=54,slow=17,SNR=4.1						
GERES				Pg	Pg	23 32 45.6	-9.0
	0.3nm,0.3s,baz=73,slow=18,SNR=10						
GERES				Lg		23 33 37.9	
	1.0nm,0.3s,baz=68,slow=29,SNR=7.0						
MOA	**Molln**	**4.04**	**237**	*i* SG	Sg	23 33 45.0	-6.7
	2.3nm,0.5s						
MOA	**Molln**	**4.04**	**237**	*i* P	Pn	23 32 48.7	+7.1
MOA				*i* Sg	Sg	23 33 45.0	-6.7
CLL	**Collm**	**4.16**	**288**	*e*SG	Sg	23 33 52.0	-3.7
AKASG	**Malin Array Be**	**6.36**	**81**	Pg	Pg	23 33 37.4	-6.7
	0.4nm,0.3s,baz=270,slow=14,SNR=5.0						
FINES	**FINESS Array B**	**11.92**	**16**	Pn	P	23 34 25.4	-5.8
	0.1nm,0.3s,baz=187,slow=11,SNR=3.4						

IDC 16 23:58:47.6±9.2**, 1.90S×153.48E, mb4.0**/3**, mb1 4.2**/4**, mb1mx3.9**/14**, mbtmp4.1**/4**, ML3.5**/1**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.4**/19**, Error ellipse: s-maj=146.5km s-min=101.7km az=22.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**9.75**	**220**	Pn	P	00 01 10.8	-1.4
	2.1nm,0.3s,baz=29,slow=13,SNR=7.7						
WRA	**Warramunga Arr**	**25.91**	**225**	P	P	00 04 20.7	-2.7
	1.6nm,0.3s,baz=52,slow=9.8,SNR=60						
ASAR	**Alice Springs**	**28.77**	**220**	P	P	00 04 46.8	-2.6
	0.5nm,0.3s,baz=55,slow=8.4,SNR=10						
STKA	**Stephens Creek**	**31.85**	**199**	P	P	00 05 16.1	-0.6
	1.0nm,0.5s,baz=37,slow=10,SNR=3.7						
JNU	**Nakatsue**	**40.85**	**330**	LR	LR	00 21 25.0	
	comp=Z,7.3nm,20.5s,baz=198,slow=33						

WEL 17 00:17:49.2±0.3**, 38.24S×176.28E, h152**^{km}±2^{km}**, ML3.7**/8**, Error ellipse: s-maj=3.1km s-min=2.7km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.65**	**92**	PN	P	00 18 11.5	-0.6
URZ				SN	S	00 18 28.9	-0.7
BKZ	**Black Stump Fm**	**0.94**	**170**	PN	P	00 18 13.9	0.0
BKZ				SN	S	00 18 32.0	-0.9
MGZ	**Maungaku**	**0.96**	**217**	PN	P	00 18 14.0	0.0
MWZ	**Matawai**	**0.98**	**96**	PN	P	00 18 14.4	+0.2
MWZ				SN	S	00 18 33.3	-0.2
NGZ	**Ngauruhoe**	**1.07**	**209**	PN	P	00 18 15.0	-0.1
TUVZ	**Tukino**	**1.14**	**205**	PN	P	00 18 15.6	-0.1
FWVZ	**Far West T-bar**	**1.16**	**209**	PN	P	00 18 15.7	-0.2
KNZ	**Kokohu**	**1.34**	**126**	SN	S	00 18 38.9	-0.7
PUZ	**Puketiti**	**1.57**	**84**	PN	P	00 18 19.4	-0.6
PUZ				SN	S	00 18 42.2	-1.6
TSZ	**Takapari Road**	**1.83**	**188**	PN	P	00 18 21.9	-1.0
BFZ	**Birch Farm**	**2.44**	**181**	PN	P	00 18 28.5	-1.8
BFZ				SN	S	00 18 59.0	-2.7
MRZ	**Mangatainoka R**	**2.48**	**192**	PN	P	00 18 28.4	-2.3
MRZ				SN	S	00 18 58.7	-3.8
KIW	**Kapiti Island**	**2.82**	**202**	PN	P	00 18 32.2	-2.9
KIW				SN	S	00 19 05.4	-4.9
MTW	**Mount Morrison**	**2.98**	**191**	PN	P	00 18 33.7	-3.4
MTW				SN	S	00 19 08.3	-5.4
CAW	**Cannon Point**	**3.01**	**198**	PN	P	00 18 34.2	-3.4
NNZ	**Nelson**	**3.72**	**216**	SN	S	00 19 25.7	-5.2
QRZ	**Quartz Range**	**3.88**	**227**	SN	S	00 19 28.7	-6.0
MQZ	**McQueen's Vall**	**6.11**	**206**	SN	S	00 20 16.2	-11

*TAP **17** 00:21:26.7, 24.41N×122.22E, h33^{km}, ML2.9*

JMA 17 00:21:26.6±0.2**, 24.16N×122.27E, h45**^{km}**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.74**	**66**	P	P	00 21 40.7	0.0
YOJ				*e*S	S	00 21 51.0	-0.1
IRIF	**Iriomote-Funau**	**1.34**	**82**	P	P	00 21 49.3	-0.1
IRIF				S	S	00 22 06.5	+0.2
JKRS	**Kuro-shima**	**1.59**	**87**	*e*S	S	00 22 11.8	-0.5
JIJ	**Ishigaki jima**	**1.72**	**83**	P	P	00 21 55.1	+0.4
JIJ				*e*S	S	00 22 15.3	-0.3

*TAP **17** 00:34:52.0, 24.70N×122.84E, h101^{km}±1^{km}, ML4.0*

JMA 17 00:34:51.3±0.3**, 24.87N×122.86E, h111**^{km}±3^{km}**, M3.5, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.43**	**161**	P	P	00 35 08.0	0.0
YOJ				S	S	00 35 20.5	0.0
IRIF	**Iriomote-Funau**	**0.95**	**124**	P	P	00 35 12.2	-0.2
IRIF				*e*S	S	00 35 28.8	+0.6
HATJ	**Hateruma jima**	**1.18**	**133**	P	P	00 35 14.8	-0.1
HATJ				*e*S	S	00 35 32.3	-0.3
JKRS	**Kuro-shima**	**1.22**	**121**	P	P	00 35 15.5	+0.1
JKRS				*e*S	S	00 35 33.6	+0.2
JIJ	**Ishigaki jima**	**1.27**	**113**	P	P	00 35 15.5	-0.4
JIJ				S	S	00 35 33.3	-1.1
JTJ	**Tarama**	**1.69**	**97**	P	P	00 35 21.1	+0.2
JTJ				S	S	00 35 42.7	-0.4
JMJ	**Miyako jima 2**	**2.21**	**91**	*e*S	S	00 35 54.9	0.0
JOGS	**Gusukube**	**2.32**	**92**	P	P	00 35 30.3	+1.2
JOGS				*e*S	S	00 35 58.4	+1.0
JKE	**Kume jima 2**	**3.83**	**67**	P	P	00 35 49.3	-0.2
JKE				*e*S	S	00 36 34.1	+0.2
JAGN	**Aguni-jima**	**4.31**	**66**	P	P	00 35 55.4	-0.6
JIH	**Iheya**	**5.08**	**64**	P	P	00 36 05.1	-1.3
JOW	**Kunigami**	**5.25**	**67**	P	P	00 36 06.9	-1.9
JOW				*e*S	S	00 37 04.6	-4.1
JTK	**Tokunoshima**	**6.19**	**61**	P	P	00 36 18.8	-2.7
JAM	**Amami Oshima**	**6.99**	**58**	P	P	00 36 29.3	-3.3

*IDC **17** 00:39:54.8±0.7, 13.46S×70.42W, mb4.1/12, mb1 4.3/14, mb1mx4.2/22, mbtmp4.1/14, ML4.0/1, MS3.3/3, Ms1 3.3/3, ms1mx2.7/29, Error ellipse: s-maj=30.9km s-min=11.8km az=54.0*

*NEIC **17** 00:40:00.6±0.8, 13.54S×70.36W, h44^{km}±8^{km}, mb4.4/7, Error ellipse: s-maj=9.9km s-min=6.8km az=45.0*

ISC 17 00:39:54.7±0.4**, 13.43S**±0.05×**70.42W**±0.05**, h10**^{km}**, n38, σ1**$\overset{s}{.}$**12**/36**, mb4.2**/16**, MS3.2**/1**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**3.19**	**199**	*e*P	**Pn**	**00 40 47.0**	**+1.1**
ARE				*i*		00 48 48.0	
LPAZ	**La Paz**	**3.61**	**142**	Pn	**Pn**	**00 40 53.6**	**+1.8**
	9.0nm,0.3s,baz=326,slow=13,SNR=64						
LPAZ				Pg	**Pg**	**00 40 59.3**	**-7.3**
	67nm,0.3s,baz=320,slow=16,SNR=167						
LPAZ				Lg		00 41 47.3	
	40nm,0.3s,baz=152,slow=20,SNR=3.5						
LPAZ				LR	LR	00 42 28.5	
	comp=Z,303nm,19.9s,baz=300,slow=43						
LPAZ	**La Paz**	**3.61**	**142**	Pn	**Pn**	**00 40 53.6**	**+1.8**
LPAZ				*e*Sn	**Sn**	**00 41 36.2**	**+1.3**
LPAZ				Lg		00 41 47.3	
NNA	**Nana**	**6.43**	**282**	*e*Pn	**Pn**	**00 41 35.2**	**+3.5**
	20nm,0.8s						
SAML	**Samuel**	**8.38**	**59**	*e*Pn	**P**	**00 41 59.5**	**+0.4**
	20µm,0.2s						
SAML				*e*Sn	**Sn**	**00 43 34.7**	**0.0**
SAML				*e*Sg	**Sg**	**00 44 15.1**	**-19**
LVC	**Limon Verde**	**9.25**	**171**	Pn	**P**	**00 42 09.3**	**-1.8**
	2.2nm,0.3s,baz=324,slow=9.6,SNR=45						
LVC	**Limon Verde**	**9.25**	**171**	*e*Pn	**P**	**00 42 08.7**	**-2.4**
OTAV	**Otavalo**	**15.73**	**329**	*e*P	**P**	**00 43 41.7**	**+3.4**
	7.3nm,1.1s						
OTAV				*e*		00 43 50.9	
CPUP	**Villa Florida**	**17.77**	**138**	P	**P**	**00 44 04.0**	**+0.1**
	0.0nm,0.3s,baz=226,slow=15,SNR=2.3						
ROSC	**El Rosal**	**18.57**	**348**	LR	LR	00 52 14.3	
	comp=Z,135nm,18.8s,baz=179,slow=40						
BDFB	**Brasilia**	**21.80**	**99**	P	**P**	**00 44 49.9**	**+1.0**
	2.6nm,0.8s,mb3.7,baz=276,slow=11,SNR=4.1						
BDFB				LR	LR	00 53 33.8	
	comp=Z,94nm,20.6s,MS3.2,baz=284,slow=38						
BAO	**Brasilia Array**	**21.82**	**99**	*e*P	**P**	**00 44 47.0**	**-2.2**
SDV	**Santo Domingo**	**22.17**	**359**	P	**P**	**00 44 54.0**	**+1.4**
	3.7nm,0.5s,mb4.1,baz=219,slow=14,SNR=4.1						
SDV	**Santo Domingo**	**22.17**	**359**	*e*P	**P**	**00 44 52.9**	**+0.3**
	9.9nm,0.9s,mb4.2						
PLCA	**Paso Flores**	**27.20**	**180**	P	**P**	**00 45 41.0**	**+0.4**
	0.9nm,0.4s,mb3.6,baz=1.1,slow=13,SNR=3.6						
PLCA	**Paso Flores**	**27.20**	**180**	P	**P**	**00 45 35.8**	**-4.7**
	3.9nm,0.9s,mb3.9						
PMSA	**Palmer Station**	**51.47**	**177**	P	**P**	**00 48 59.6**	**-2.5**
	186nm,1.4s						
TXAR	**Lajitas Array**	**53.26**	**323**	P	**P**	**00 49 15.8**	**-0.2**
	1.4nm,0.7s,mb4.0,baz=157,slow=9.5,SNR=12						
SDCO	**Great Sand Dun**	**60.62**	**328**	*e*P	**P**	**00 50 07.5**	**-0.7**
	4.0nm,0.9s,mb4.5						
PV01	**Paradox Valley**	**62.51**	**327**	*e*P	**P**	**00 50 20.2**	**-0.8**
MSU	**Marysvale**	**64.76**	**325**	*e*P	**P**	**00 50 36.2**	**+0.4**
DUG	**Dugway**	**66.29**	**326**	*e*P	**P**	**00 50 44.8**	**-0.7**
	6.7nm,0.9s,mb4.7						
DUG				*e*		00 50 53.1	
PDAR	**Pinedale Array**	**66.44**	**330**	P	**P**	**00 50 47.5**	**+1.1**
	0.4nm,0.6s,mb3.6,baz=144,slow=7.8,SNR=4.5						
ULM	**Lac du Bonnet**	**67.22**	**343**	P	**P**	**00 50 51.6**	**+0.3**
	0.9nm,0.5s,mb4.1,baz=141,slow=7.7,SNR=3.5						
DBIC	**Dimbokro**	**68.09**	**77**	P	**P**	**00 50 57.4**	**0.0**
	1.3nm,0.5s,mb4.2,baz=227,slow=8.7,SNR=2.9						
NVAR	**Mina Array Bea**	**68.30**	**321**	P	**P**	**00 50 58.8**	**+0.6**
	2.1nm,1.0s,mb4.1,baz=134,slow=6.6,SNR=8.1						
WVOR	**Wild Horse Val**	**71.04**	**324**	*e*P	**P**	**00 51 15.1**	**+0.1**
	15nm,1.6s,mb4.7						
BMO	**Blue Mountains**	**71.89**	**327**	*e*P	**P**	**00 51 19.8**	**-0.2**
	2.2nm,0.6s,mb4.3						
YBH	**Yreka Blue Hor**	**72.99**	**322**	P	**P**	**00 51 25.9**	**-0.7**
	1.2nm,0.7s,mb3.9,baz=112,slow=5.4,SNR=5.1						
NEW	**Newport**	**74.08**	**330**	P	**P**	**00 51 32.8**	**0.0**
	1.3nm,0.6s,mb4.0,baz=190,slow=14,SNR=2.9						
YKA	**Yellowknife Ar**	**83.13**	**341**	P	**P**	**00 52 20.9**	**-1.0**
	1.3nm,0.7s,mb4.1,baz=135,slow=5.3,SNR=22						
TSUM	**Tsumeb**	**83.83**	**108**	P	**P**	**00 52 25.6**	**-0.8**
	4.5nm,1.3s,mb4.4,baz=116,slow=12,SNR=2.7						
TSUM	**Tsumeb**	**83.83**	**108**	*e*P	**P**	**00 52 25.4**	**-1.0**
ZAL	**Zalesovo**	**135.11**	**21**	PKP	PKPdf	00 59 15.5	-2.0
	1.1nm,0.7s,baz=179,slow=5.2,SNR=3.2						
ZAL	**Zalesovo**	**135.11**	**21**	PKP	PKPdf	00 59 15.5	-2.0
SONM	**Songino Array**	**145.59**	**4**	PKPbc	PKPbc	00 59 34.0	+0.1
	2.7nm,0.8s,baz=324,slow=2.5,SNR=15						
ULN	**Ulaanbaatar**	**145.60**	**3**	*e*PKPdf	PKPdf	00 59 34.8	-1.6
CMAR	**Chiang Mai Arr**	**168.62**	**63**	PKP	PKPdf	01 00 05.5	+0.1
	0.7nm,0.4s,baz=236,slow=3.3,SNR=4.3						

*SNSN **17** 00:49:39.6, 19.14N×39.11E, Ml3.8*

*CSEM **17** 00:49:40.3±0.1, 19.17N×39.23E, h2^{km}, mb4.7/11, Error ellipse: s-maj=3.6km s-min=2.9km az=7.0*

*MOS **17** 00:49:41.2±0.9, 18.90N×39.10E, h10^{km}, mb4.6/9, Error ellipse: s-maj=30.3km s-min=10.5km az=84.4*

*IDC **17** 00:49:42.3±0.8, 19.09N×39.07E, mb3.9/22, mb1 4.1/24, mb1mx4.0/28, mbtmp4.0/24, ML3.3/2, MS4.0/11, Ms1 4.0/11, ms1mx3.7/26, Error ellipse: s-maj=20.6km s-min=15.5km az=94.0*

*BJI **17** 00:49:43.4, 19.00N×39.10E, h10^{km}, mb4.7, Ms5.1, Msz4.8*

*NEIC **17** 00:49:43.5±0.4, 19.03N×39.13E, h10^{km}, mb4.6/17, Error ellipse: s-maj=10.6km s-min=7.8km az=91.0*

ISC 17 00:49:42.0±0.3**, 19.08N**±0.04×**39.23E**±0.04**, h10**^{km}**, n95, σ1**$\overset{s}{.}$**16**/96**, mb4.3**/43**, MS4.0**/15**, 3C-2D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTHS	**Al Lith**	**1.63**	**43**	P	**Pn**	**00 50 09.4**	**-1.5**
BLJS	**Baljurashi**	**2.37**	**70**	P	**Pn**	**00 50 20.7**	**-0.9**
FRSS	**Farasan al Kab**	**3.60**	**130**	P	**Pn**	**00 50 38.3**	**-0.8**
TATS	**Tathlith**	**4.04**	**83**	P	**Pn**	**00 50 44.7**	**-0.6**
DJNS	**Zahran al Janu**	**4.32**	**108**	P	**Pn**	**00 50 49.6**	**+0.4**
YNBS	**Yanbu' al Bahr**	**5.36**	**348**	P	**Pn**	**00 50 59.1**	**-4.9**
UMJS	**Umm Lajj**	**6.38**	**344**	P	**Pn**	**00 51 14.7**	**-3.6**
KBRS	**Khaybar**	**6.67**	**0**	P	**Pn**	**00 51 19.0**	**-3.5**
SLAT	**Slait**	**7.02**	**244**	*e*S	**Sb**	**00 53 13.7**	**+4.9**
SLAT				AMS	AMS	00 54 11.1	
	comp=Z,2µm,16.2s						
JAWL	**J.Aulia**	**7.50**	**240**	*i* S	**Sb**	**00 53 24.3**	**+1.7**
JAWL	**J.Aulia**	**7.50**	**240**	*e*S	**Sb**	**00 53 24.0**	**+1.4**
JAWL				AMS	AMS	00 54 34.3	
	comp=Z,1µm,17.1s						
EIL	**Elat**	**11.24**	**341**	Pn	**P**	**00 52 22.2**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=137,slow=19,SNR=2.3						
EIL				LR	LR	00 56 01.7	
	comp=Z,441nm,20.2s,baz=139,slow=34						
EIL	**Elat**	**11.24**	**341**	P	**P**	**00 52 20.2**	**-5.6**
EIL				LR	LR	00 56 01.7	
ASF	**Jabal al Asfar**	**13.20**	**351**	Pn	**P**	**00 52 54.3**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=0.4,slow=5.7,SNR=5.5						
ASF				LR	LR	00 57 28.6	
	comp=Z,847nm,18.8s,baz=40,slow=35						
CSS	**Prodhromos**	**16.66**	**343**	*e*P	**P**	**00 53 37.9**	**+0.7**
	comp=Z,47nm,1.4s						
CSS	**Prodhromos**	**16.66**	**343**	*e*P	**P**	**00 53 37.9**	**+0.7**
	comp=Z,47nm,1.4s						
MALT	**Malatya**	**19.18**	**358**	*e*P	**P**	**00 54 09.5**	**+1.2**
MALT				pmax	pmax		
	comp=Z,47nm,1.4s						
MALT	**Malatya**	**19.18**	**358**	*e*P	**P**	**00 54 09.5**	**+1.2**
	comp=Z,38nm,1.4s						
KMBO	**Kilima Mbogo**	**20.18**	**186**	P	**P**	**00 54 17.3**	**-2.4**
	comp=Z,0.5nm,0.8s,baz=325,slow=14,SNR=1.8						
KMBO				LR	LR	01 02 01.0	
	comp=Z,850nm,18.8s,MS4.1,baz=95,slow=37						
KMBO	**Kilima Mbogo**	**20.18**	**186**	P	**P**	**00 54 17.3**	**-2.4**
KMBO				*e*P		00 54 23.7	
KMBO				LR	LR	01 02 01.0	
IDI	**Anoyia**	**20.53**	**325**	P	**P**	**00 54 21.4**	**-1.8**
	comp=Z,8.4nm,0.7s,baz=90,slow=12,SNR=3.4						
BRTR	**Keskin Array B**	**21.13**	**348**	P	**P**	**00 54 30.2**	**+0.9**
	comp=Z,6.5nm,0.7s,mb4.1,baz=165,slow=13,SNR=23						
MBAR	**Mbarara**	**21.26**	**204**	*e*P	**P**	**00 54 31.1**	**+0.3**
	comp=Z,53nm,1.8s,mb4.6						
MBAR	**Mbarara**	**21.26**	**204**	*e*P	**P**	**00 54 31.1**	**+0.3**
	comp=Z,53nm,1.8s,mb4.6						
GNI	**Garni**	**21.52**	**12**⇑	*e*P	**P**	**00 54 39.8**	**+6.5**
GNI				pmax	pmax		
	comp=Z,19nm,1.3s						
GNI	**Garni**	**21.52**	**12**	P	**P**	**00 54 38.2**	**+4.9**
	comp=Z,1.7nm,0.5s,mb3.7,baz=225,slow=8.4,SNR=3.9						
GNI				LR	LR	01 03 23.5	
	comp=Z,537nm,19.6s,MS4.0,baz=15,slow=38						
SOC	**Sochi**	**24.43**	**1**	*e*P	**P**	**00 55 02.4**	**+0.5**
SOC				*e*S	**S**	**00 59 15.2**	**-3.5**
SOC				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
SOC				pmax	pmax		
	comp=N,14nm,0.7s						
SOC				pmax	pmax		
	comp=E,21nm,0.7s						

KIV	Kislovodsk	24.97	6	*e*P	P	00 55 09.7	+2.7
KIV				*e*S	S	00 59 34.0	+6.2
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
KIV				MLR	MLR		
	comp=E,115nm,15.0s						
KIV				MLR	MLR		
	comp=Z,275nm,15.0s,MS3.9						
VAE	Valguarnera	28.38	315	LR	LR	01 06 47.0	
	comp=Z,144nm,19.1s,MS3.6,baz=305,slow=36						
MLR	Muntele Rosu	28.55	340	P	P	00 55 40.3	+0.4
	comp=Z,0.7nm,0.7s,mb3.5,baz=158,slow=21,SNR=3.1						
AKASG	Malin Array Be	32.54	348	P	P	00 56 14.2	-1.0
	comp=Z,1.2nm,0.7s,mb4.0,baz=171,slow=7.9,SNR=7.8						
PSZ	Piszkesteto	32.78	336	P	P	00 56 18.3	+1.0
	comp=Z,5.9nm,1.0s,mb4.5						
VYHS	Vyhne	33.66	335	*e*P	P	00 56 24.9	-0.1
ZST	Bratislava	34.14	333	*e*P	P	00 56 29.6	+0.5
MORC	Moravsky Berou	35.20	335	*e*P	P	00 56 36.9	-1.3
	comp=Z,16nm,1.5s,mb4.7						
MORC	Moravsky Berou	35.20	335	*e*P	P	00 56 36.9	-1.3
	comp=Z,16nm,1.5s,mb4.7						
VRAC	Vranov	35.22	334	P	P	00 56 37.8	-0.6
	comp=Z,1.6nm,0.4s,mb4.3,baz=326,slow=9.6,SNR=2.9						
OBN	Obninsk	36.03	357	⇑*i*P	P	00 56 46.1	+0.9
OBN				*e*S	S	01 02 24.1	+0.8
OBN				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,12.0s,MS3.8						
OBN	Obninsk	36.03	357	*e*P	P	00 56 43.8	-1.4
	comp=Z,80nm,1.7s,mb5.4						
GERES	GERESS Array B	36.13	331	P	P	00 56 45.1	-0.9
	comp=Z,1.5nm,1.0s,mb3.9,baz=146,slow=4.8,SNR=9.3						
GERES	GERESS Array B	36.13	331	P	P	00 56 45.2	-0.9
SUW	Suwalki	36.99	344	*e*P	P	00 56 53.5	+0.3
	comp=Z,34nm,1.3s,mb5.0						
SUW	Suwalki	36.99	344	*e*P	P	00 56 53.5	+0.2
	comp=Z,34nm,1.3s,mb5.0						
AAK	Ala-Archa	37.90	44	*c* *i*P	P	00 57 02.4	+1.4
AAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.3						
AAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS3.9						
AAK	Ala-Archa	37.90	44	*e*P	P	00 56 59.9	-1.1
	comp=Z,9.7nm,1.4s,mb4.3						
AAK	Ala-Archa	37.90	44	*e*P	P	00 56 59.9	-1.1
	comp=Z,9.7nm,1.4s,mb4.3						
BRVK	Borovoye	41.57	28	P	P	00 57 27.9	-3.4
BVAR	Borovoye Array	41.60	28	P	P	00 57 33.7	+2.2
	comp=Z,0.9nm,0.7s,mb3.5,baz=236,slow=5.3,SNR=6.8						
ESDC	Sonseca Array	42.37	308	P	P	00 57 37.5	-0.6
	comp=Z,1.3nm,0.8s,mb3.6,baz=103,slow=7.8,SNR=6.3						
ESLA	Sonseca Array	42.37	308	*e*P	P	00 57 37.3	-0.8
	comp=Z,6.9nm,1.4s,mb4.1						
ESLA	Sonseca Array	42.37	308	*e*P	P	00 57 37.3	-0.8
	comp=Z,6.9nm,1.4s,mb4.1						
FINES	FINESS Array B	43.32	351	P	P	00 57 45.1	-0.4
	comp=Z,1.4nm,0.8s,mb3.7,baz=141,slow=8.9,SNR=3.1						
FINES				LR	LR	01 15 48.0	
	comp=Z,114nm,18.3s,MS3.8,baz=132,slow=36						
TSUM	Tsumeb	43.57	210	P	P	00 57 47.9	-0.3
	comp=Z,1.4nm,0.8s,mb3.7,baz=20,slow=11,SNR=3.7						
TSUM	Tsumeb	43.57	210	P	P	00 57 47.9	-0.3
TSUM				*e*P		00 57 48.1	
TSUM	Tsumeb	43.57	210	*e*P	P	00 57 48.1	0.0
KURK	Kurchatov	44.32	35	*e*P	P	00 57 56.1	+2.3
KURK	Kurchatov	44.32	35	*e*P	P	00 57 54.8	+1.0
	comp=Z,24nm,1.6s,mb4.7						
KURK	Kurchatov	44.32	35	*e*P	P	00 57 54.8	+1.0
	comp=Z,24nm,1.6s,mb4.7						
DBIC	Dimbokro	44.58	260	P	P	00 57 55.5	-0.8
	comp=Z,2.7nm,0.9s,mb4.1,baz=46,slow=10,SNR=4.2						
DBIC				LR	LR	01 15 17.5	
	comp=Z,190nm,19.1s,MS4.0,baz=51,slow=35						
DBIC	Dimbokro	44.58	260	*e*P	P	00 57 54.6	-1.8
	comp=Z,11nm,1.2s,mb4.5						
DBIC				LR	LR	01 15 17.5	
DBIC	Dimbokro	44.58	260	*e*P	P	00 57 54.6	-1.8
	comp=Z,11nm,1.2s,mb4.5						
HFS	Hagfors	44.89	342	P	P	00 57 57.2	-1.1
	comp=Z,2.8nm,0.9s,mb4.1,baz=124,slow=10,SNR=3.7						
LBTB	Lobatse	45.80	197	P	P	00 58 07.2	+1.3
	comp=Z,2.9nm,0.9s,mb4.2,baz=0.6,slow=14,SNR=3.5						
LBTB	Lobatse	45.80	197	*e*P	P	00 58 07.0	+1.1
LBTB	Lobatse	45.80	197	*e*P	P	00 58 07.0	+1.1
NOA	NORSAR Array B	46.35	342	P	P	00 58 08.2	-1.6
	comp=Z,1.5nm,1.0s,mb3.9,baz=151,slow=7.7,SNR=3.0						
NOA				LR	LR	01 18 20.3	
	comp=Z,74nm,19.4s,MS3.6,baz=170,slow=37						
WMQ	Urumqi	47.30	47	*e*P	P	00 58 19.0	+1.4
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,114nm,25.0s,MS4.1						
WMQ				LR	LR		
	comp=E,234nm,24.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,238nm,24.0s,MS4.1						
EKA	Eskdalemuir Ar	48.26	329	P	P	00 58 24.8	-0.1
	comp=Z,1.2nm,0.9s,mb3.9,baz=138,slow=8.5,SNR=3.1						
NVS	Novosibirsk	48.81	32	*i* P	P	00 58 29.7	+0.6
ZAL	Zalesovo	49.19	34	*i* P	P	00 58 34.0	+1.9
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAL	Zalesovo	49.19	34	P	P	00 58 33.1	+1.0
	comp=Z,2.2nm,0.7s,mb4.3,baz=224,slow=8.4,SNR=19						
ZAL				LR	LR	01 22 30.6	
	comp=Z,319nm,20.8s,MS4.3,baz=245,slow=40						
BOSA	Boshof	49.30	196	*e*P	P	00 58 29.2	-4.1
	comp=Z,1.7nm,0.5s,mb4.3						
ARCES	ARCESS Array B	51.15	354	LR	LR	01 20 28.2	
	comp=Z,176nm,18.7s,MS4.1,baz=42,slow=36						
GTA	Gaotai	55.58	55	P	P	00 59 19.9	-0.2
GTA				AP	pP	00 59 24.5	+1.4
GTA				XP	sP	00 59 27.3	+3.0
GTA				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.6						
CMAR	Chiang Mai Arr	56.29	80	P	P	00 59 25.6	+0.2
	comp=Z,0.5nm,0.4s,mb3.9,baz=286,slow=6.6,SNR=3.8						
CMAR				LR	LR	01 23 39.8	
	comp=Z,58nm,22.0s,MS3.6,baz=290,slow=36						
LZH	Lanzhou	58.74	59	⇓P	P	00 59 44.5	+2.0
LZH				AP	pP	00 59 52.5	+6.9
LZH				XP	sP	00 59 56.1	+9.4
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb5.1						
SONM	Songino Array	60.83	45	P	P	00 59 56.9	+0.2
	comp=Z,1.4nm,0.7s,mb4.2,baz=262,slow=8.7,SNR=5.5						
ENH	Enshi	63.94	65	*e*P	P	01 00 17.7	-0.1
ENH	Enshi	63.94	65	*e*P	P	01 00 17.7	-0.1
BOD	Bodaibo	65.96	34	*e*P	P	01 00 28.9	-1.4
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
SUMG	Summit	68.25	342	*e*P	P	01 00 44.0	-0.6
	comp=Z,3.7nm,0.8s,mb4.5						
HIA	Hailar	69.66	44	P	P	01 00 53.2	-0.5
	comp=Z,5.7nm,1.0s,mb4.5						
HIA	Hailar	69.66	44	P	P	01 00 53.2	-0.4
	comp=Z,5.7nm,1.0s,mb4.5						
NJ2	Nanjing	71.56	62	*e*P	P	01 01 06.8	+1.3
NJ2				PP	PP	01 03 48.8	+2.5
NJ2				S	S	01 10 17.0	-6.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				LR	LR		
	comp=N,430nm,22.4s,MS5.0						
NJ2				LR	LR		
	comp=E,830nm,23.2s,MS5.0						
NJ2				LR	LR		
	comp=Z,570nm,21.9s,MS4.8						
TIXI	Tiksi	71.93	19	*e*P	P	01 01 06.0	-1.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
FRB	Frobisher Bay	80.64	335	P	P	01 01 54.5	-1.6
	comp=Z,1.4nm,0.7s,mb4.0,baz=80,slow=11,SNR=4.6						
RES	Resolute Bay	82.05	349	*e*P	P	01 02 04.1	+0.8
	comp=Z,8.9nm,1.6s,mb4.5						
SCHQ	Schefferville	83.47	326	P	P	01 02 11.2	+0.1
	comp=Z,1.2nm,0.7s,mb4.0,baz=72,slow=6.3,SNR=3.8						
BILL	Bilibino	85.02	18	⇓*i*P	P	01 02 19.5	+1.0
BILL				*e*		01 05 40.1	
BILL				*e*S	S	01 12 34.8	-11
BILL				*e*SS	SS	01 18 28.3	+5.9
BILL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
BILL				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
BILL	Bilibino	85.02	18	P	P	01 02 20.1	+1.6
	comp=Z,12nm,1.2s,mb4.9						
INK	Inuvik	92.70	357	P	P	01 02 56.2	+1.3
	comp=Z,6.3nm,1.4s,mb4.8						
FCC	Fort Churchill	93.48	338	P	P	01 02 58.7	-0.1
YKA	Yellowknife Ar	96.10	348	*i* P	P	01 03 10.7	0.0
YKA	Yellowknife Ar	96.10	348	P	P	01 03 10.7	0.0
	comp=Z,0.2nm,0.5s,mb3.8,baz=25,slow=4.8,SNR=5.3						
YKA	Yellowknife Ar	96.10	348	P	P	01 03 10.7	0.0

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*NEIC **17** 00:54:16.3±1.9, 5.79S×147.17E, h80^{km}±18^{km}, mb4.3/6, Error ellipse: s-maj=17.2km s-min=13.5km az=115.0*

*IDC **17** 00:54:18.2±2.3, 6.05S×147.26E, h102^{km}±22^{km}, mb3.6/5, mb1 3.9/8, mb1mx3.8/15, mbtmp4.1/8, Error ellipse: s-maj=36.1km s-min=11.8km az=115.0*

ISC 17 00:54:13.0±1.7**, 5.80S**±0.07×**147.3E**±0.1**, h67**^{km}±17^{km}**, n22,** σ0^{s}**87**/26**, mb4.0**/9**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.59	182	P	P	00 55 08.7	+1.2
	33nm,0.3s,baz=331,slow=6.1,SNR=76						
PMG				S	S	00 55 47.4	-1.6
	88nm,0.3s,baz=223,slow=22,SNR=16						
PMG	Port Moresby	3.59	182	P	P	00 55 08.8	+1.2
PMG				*e*Sn	S	00 55 36.3	-13
CTA	Charters Tower	14.24	184	*e*P	P	00 57 35.3	+2.5
	1.7nm,0.3s						
CTA	Charters Tower	14.24	184	P	P	00 57 32.5	-0.2
	0.8nm,0.3s,baz=8.7,slow=13,SNR=5.5						
CTA				S	S	01 00 09.2	-0.3
	0.1nm,0.3s,baz=124,slow=12,SNR=2.0						
CTAO	Charters Tower	14.24	184	*e*P	P	00 57 35.7	+2.9
	2.8nm,0.5s						
KAKA	Kakadu	16.17	244	*e*P	P	00 57 57.1	-0.4
	6.2nm,0.5s						
WRAB	Tennant Creek	18.86	221	*e*P	P	00 58 29.1	-1.3
	15nm,0.7s						
WRA	Warramunga Arr	18.87	221	P	P	00 58 29.1	-1.5
	1.0nm,0.3s,baz=42,slow=12,SNR=62						
WRA				S	S	01 01 56.0	+0.9
	0.1nm,0.3s,baz=35,slow=33,SNR=4.0						
WRA				PcP	PcP	01 02 53.7	-0.8
	0.1nm,0.3s,baz=27,slow=1.9,SNR=8.1						
ASAR	Alice Springs	21.94	215	P	P	00 59 02.5	0.0
	2.5nm,0.4s,mb3.9,baz=54,slow=8.6,SNR=41						
ASAR				S	S	01 02 55.9	+0.4
	0.6nm,0.7s,baz=30,slow=22,SNR=3.5						
ASPA	Alice Springs	21.95	215	*e*P	P	00 59 03.0	+0.5
ASPA				*e*S	S	01 03 00.3	+4.8
FITZ	Fitzroy Crossi	24.41	238	*e*P	P	00 59 27.1	+0.5
	8.8nm,0.6s,mb4.3						
STKA	Stephens Creek	26.49	191	P	P	00 59 46.4	+0.4
	2.0nm,0.6s,mb3.7,baz=357,slow=9.9,SNR=4.7						
STKA	Stephens Creek	26.49	191	*e*P	P	00 59 46.3	+0.3
HIA	Hailar	59.86	339	P	P	01 04 13.7	-0.3
	3.6nm,0.8s,mb4.5						
ULN	Ulaanbaatar	64.07	331	*e*P	P	01 04 42.5	+0.4
SONM	Songino Array	64.36	331	P	P	01 04 45.0	+0.9
	0.4nm,0.5s,mb3.5,baz=141,slow=5.7,SNR=2.9						
MAW	Mawson	82.54	203	P	P	01 06 25.9	-3.8
	38nm,1.0s,mb5.2						
MAW				*e*		01 06 39.0	
MCK	McKinley	83.93	24	P	P	01 06 36.7	0.0
	1.1nm,0.8s,mb3.7						
ILAR	Eielson Array	85.18	23	P	P	01 06 42.5	-0.4
	1.3nm,0.7s,mb4.0,baz=248,slow=4.8,SNR=18						
BVAR	Borovoye Array	86.77	324	P	P	01 06 50.5	-0.4
	0.2nm,0.6s,mb3.3,baz=106,slow=10,SNR=2.7						
DBIC	Dimbokro	152.29	273	PKPbc	PKPdf	01 14 03.7	+8.4
	1.3nm,0.7s,baz=319,slow=13,SNR=3.2						
BDFB	Brasilia	153.86	145	PKPbc	PKPdf	01 14 07.0	+10
	1.7nm,0.6s,baz=51,slow=4.1,SNR=3.5						

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*SOF **17** 01:09:10.9, 39.22N×24.33E, h10^{km}, MD3.1*

*ATH **17** 01:09:13.6, 39.28N×24.15E, h37^{km}±1^{km}, MD3.4/10, ML3.5*

*NEIC **17** 01:09:13.6, 39.28N×24.15E, h37^{km}, MD3.4(ATH), After ATH.*

*CSEM **17** 01:09:14.0±0.1, 39.28N×24.15E, h25^{km}, ML3.5, Error ellipse: s-maj=2.5km s-min=1.6km az=105.0*

ISC 17 01:09:12.4±1.1**, 39.29N**±0.02×**24.13E**±0.05**, h9**^{km}±8^{km}**, n23,** σ0^{s}**75**/30**, 2C-3D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.70	272	*e*PN	Pn	01 09 27.8	-0.4
NEO				*e*SN	Sn	01 09 38.7	-0.4
LIA	Limnos Island	1.02	53	*e*PN	Pn	01 09 33.1	+0.3
LIA				*e*SN	Sn	01 09 46.8	-0.5
LKR	Lokris	1.08	234	*e*PN	Pn	01 09 33.8	+0.2
LKR				*e*SN	Sn	01 09 49.5	+0.7
MPAR	Parnis Oros	1.17	195	⇓*i*PB	Pb	01 09 34.5	+0.1
PLG	Polygyros	1.21	335	*e*PN	Pn	01 09 35.7	+0.3
PLG				*e*SN	Sn	01 09 51.1	-0.9
PTL	Penteli	1.25	189	*e*PN	Pn	01 09 36.0	-0.1
ATH	Athens Observa	1.35	194	*e*PN	Pn	01 09 37.5	0.0
ATH				*e*SN	Sn	01 09 55.5	-0.1
MGER	Gerania Oros	1.46	208	⇓*i*PB	Pb	01 09 39.0	-0.4
NAIG	Nisos Aigina	1.60	198	*e*PN	Pn	01 09 40.5	-0.6
PRK	Paraskevi	1.67	91	*e*PB	Pb	01 09 42.4	-0.4
NVR	Nevrokopi	2.07	355	*e*PN	Pn	01 09 48.1	+0.3
RDO	Rodhopi	2.15	30	*e*PN	Pn	01 09 48.3	-0.6
MMB	Musomiste	2.32	353	P	Pn	01 09 51.0	-0.4
RZN	Rozhen	2.44	10	P	Pn	01 09 53.2	+0.1
APE	Apeiranthos	2.48	153	*e*PN	Pn	01 09 53.2	-0.4
KKB	Krupnik	2.70	343	P	Pn	01 09 57.0	+0.3
KKB				*e*S	Sn	01 10 28.0	-1.8
VLI	Veliai	2.73	200	*e*PN	Pn	01 09 57.0	-0.2
PGB	Panagyurishte	3.26	1	*e*Sg	Sg	01 11 00.0	-1.0
SKO	Skopje	3.37	324	*e*Pn	Pn	01 10 07.0	+0.7
VTS	Vitosha	3.38	348	P	Pn	01 10 07.5	+1.1
VTS				S	Sn	01 10 48.0	+1.0
MLR	Muntele Rosu	6.35	12	⇑P	Pn	01 10 51.2	+2.8
VRI	Vrincioaia	6.85	15	⇑P	Pn	01 10 56.9	+1.3
BURAR	Bucovina Array	8.36	5	⇓P	P	01 11 27.1	+10

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*CSEM **17** 01:17:22.3±0.8, 38.58N×28.53W, h10^{km}, ML1.8, Error ellipse: s-maj=3.4km s-min=1.9km az=162.0, After PDA*

*PDA **17** 01:17:22.3±0.8, 38.58N×28.53W, h10^{km}, MD3.0, ML1.8, Error ellipse: s-maj=3.4km s-min=1.9km az=162.0*

SVSA 17 01:17:22.3±0.8**, 38.58N**×**28.53W, h10**^{km}**, MD3.0, ML1.8, Error ellipse: s-maj=3.4km s-min=1.9km az=162.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOR	Horta	0.09	236	*e*P	Pg	01 17 24.3	-0.6
HOR				*e*S	Sg	01 17 26.4	-0.2
PICO	Pico	0.12	133	*i* P	Pg	01 17 24.8	-0.4
PICO				*e*S	Sg	01 17 27.2	0.0
PICO	Pico	0.12	133	*e*S	Sg	01 17 27.2	0.0
CALA	Caldeira	0.13	271	*e*P	Pg	01 17 25.1	-0.4
CALA				*e*S	Sg	01 17 27.6	0.0
ROSA	Rosais	0.27	58	*e*P	Pg	01 17 26.9	-1.0
ROSA				*e*S	Sg	01 17 31.0	-0.7
PMAN	Manadas	0.35	81	*e*P	Pg	01 17 28.1	-1.5
PMAN				*e*S	Sg	01 17 33.2	-1.2
	67nm,0.1s						
PMAN	Manadas	0.35	81	*e*P	Pg	01 17 28.1	-1.5
PMAN				*e*S	Sg	01 17 33.2	-1.2
	67nm,0.1s						

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*BJI **17** 01:19:16.5, 56.10S×27.40W, h102^{km}, mB5.3*

*NEIC **17** 01:19:16.6±0.2, 56.13S×27.42W, mb5.3/31, Error ellipse: s-maj=7.8km s-min=5.3km az=53.0*

*HRVD **17** 01:19:16.6±0.2, 56.10S×27.12W, h101^{km}±2^{km}, MW5.6/74, Centroid moment Tensor Solution. LP body waves: s60,c84;Mantle waves: s74,c146; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}0.52±.07; $M_{\theta\theta}$-0.65±.07; $M_{\phi\phi}$0.12±.06; $M_{r\theta}$-2.05±.05; $M_{\theta\phi}$2.09±.06; $M_{\phi r}$0.27±.04; Best double couple: $M_0$2.956×10^{17} NP1: ϕ_s175°, δ44°, λ172°. NP2: ϕ_s271°, δ85°, λ46°. Principal axes: T 2.66, Plg35°, Azm144°; N .591, Plg44°, Azm276°; P -3.251, Plg26°, Azm34°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **17** 01:19:17.4±0.5, 56.13S×27.50W, h109^{km}±3^{km}, mb4.8/16, mb1 4.8/17, mb1mx4.8/18, mbtmp5.1/17, MS4.5/13, Ms1 4.5/13, ms1mx4.2/19 Error ellipse: s-maj=14.5km s-min=11.0km az=48.0*

ISC 17 01:19:15.9±1.4**, 56.14S**±0.05×**27.4W**±0.1**, h107**^{km}±13^{km}**, h104**^{km}±2.2^{km}**:pP-P, n176,** σ1^{s}**14**/75**, mb5.1**/37**, 20C-10D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.52	286	Pn	P	01 20 36.6	-0.4
	3µm,0.4s						
VNA1	Neumayer--Stat	16.76	158	*e*	P	01 23 13.4	+8.4
VNA1	Neumayer--Stat	16.76	158	*e*		01 31 11.0	
VNA1	Neumayer--Stat	16.76	158	⇑*i*Pn	P	01 23 05.8	+0.8
VNA1				*e*		01 23 13.4	
VNA1				*e*		01 23 34.1	
VNA1				*e*		01 31 11.0	
VNA3	Neumayer Olymp	16.95	160	*e*	P	01 23 13.3	+6.0
VNA3	Neumayer Olymp	16.95	160	*e*	P	01 23 16.1	+8.8
VNA3	Neumayer Olymp	16.95	160	*e*		01 23 23.8	
VNA3	Neumayer Olymp	16.95	160	*e*S	S	01 26 06.0	-4.9
VNA3	Neumayer Olymp	16.95	160	*e*		01 31 10.6	
VNA3	Neumayer Olymp	16.95	160	*e*		01 31 21.8	
VNA3	Neumayer Olymp	16.95	160	⇑*i*Pn	P	01 23 07.8	+0.5
VNA3				*e*		01 23 13.3	
VNA3				*e*		01 23 16.1	
VNA3				*e*		01 23 23.8	
VNA3				*e*		01 23 29.8	
VNA3				*e*		01 23 34.6	
VNA3				*e*S	S	01 26 06.0	-4.9
VNA3				*e*		01 31 10.6	
VNA3				*e*		01 31 21.8	
VNA2	Neumayer--Watz	17.16	158	*e*	P	01 23 15.8	+5.9
VNA2	Neumayer--Watz	17.16	158	*e*	P	01 23 18.1	+8.2
VNA2	Neumayer--Watz	17.16	158	*e*		01 23 25.5	
VNA2	Neumayer--Watz	17.16	158	*e*S	S	01 26 13.6	-1.9
VNA2	Neumayer--Watz	17.16	158	*e*		01 31 11.6	
VNA2	Neumayer--Watz	17.16	158	*e*		01 31 22.6	
VNA2	Neumayer--Watz	17.16	158	⇑*i*Pn	P	01 23 09.5	-0.4
VNA2				*e*		01 23 15.8	
VNA2				*e*		01 23 18.1	
VNA2				*e*		01 23 25.5	
VNA2				*e*		01 23 31.3	
VNA2				*e*		01 23 36.2	
VNA2				*e*S	S	01 26 13.6	-1.9
VNA2				*e*		01 26 48.0	
VNA2				*e*		01 31 11.6	
VNA2				*e*		01 31 22.6	
SNAA	Sanae	18.71	156	*e*	P	01 23 35.6	+7.5
SNAA	Sanae	18.71	156	*e*		01 23 42.6	
SNAA	Sanae	18.71	156	*e*S	S	01 26 44.6	-5.2
SNAA	Sanae	18.71	156	*e*		01 31 14.5	
SNAA	Sanae	18.71	156	P	P	01 23 27.4	-0.8
	24nm,0.3s,baz=308,slow=10,SNR=783						
SNAA				S	S	01 26 45.4	-4.4
	0.5nm,0.3s,baz=342,slow=19,SNR=3.7						
SNAA				ScP		01 31 14.9	
	0.7nm,0.3s,baz=327,slow=3.0,SNR=15						
SNAA	Sanae	18.71	156	⇑*i*Pn	P	01 23 27.2	-0.9
SNAA				*e*		01 23 35.6	
SNAA				*e*		01 23 42.6	
SNAA				*e*		01 23 56.8	
SNAA				*e*S	S	01 26 44.6	-5.2
SNAA				*e*		01 31 14.5	
PMSA	Palmer Station	19.75	229	*e*P	P	01 23 41.2	+2.0
	122nm,0.7s						
TRIS	Tristan da Cun	21.62	34	⇓*e*P	P	01 23 59.9	+1.6
	558nm,1.4s,mb5.7						
USHA	Ushuaia	23.04	256	P	P	01 24 12.6	+0.7
	8.5nm,0.6s,mb4.2,baz=79,slow=8.7,SNR=6.3						
USHA				ScP		01 31 23.8	
	11nm,0.8s,baz=101,slow=5.9,SNR=4.4						
TRQA	Tornquist	29.24	294	*e*PKPdf	P	01 25 08.2	-1.4
	14nm,0.8s,mb4.6						
SYO	Syowa Base	31.60	141	⇓P	P	01 25 29.1	-0.9
SYO	Syowa Base	31.60	141	⇓P	P	01 25 30.8	+0.8
SYO	Syowa Base	31.60	141	⇑PnPn		01 26 33.7	
SYO	Syowa Base	31.60	141	⇓PP	PP	01 26 39.7	+1.8
SYO	Syowa Base	31.60	141	⇑PcP	PcP	01 28 18.2	-1.8
SYO	Syowa Base	31.60	141	⇓ScP		01 31 50.2	
PLCA	Paso Flores	31.89	280	P	P	01 25 30.7	-2.2
	2.8nm,1.0s,baz=147,slow=12,SNR=4.3						
PLCA				PcP	PcP	01 28 20.3	-0.7
	4.8nm,0.8s,baz=108,slow=3.3,SNR=3.6						
PLCA				ScP		01 31 50.4	
	5.6nm,0.7s,baz=105,slow=2.4,SNR=11						
PLCA				LR	LR	01 39 01.2	
	comp=Z,469nm,18.2s,baz=306,slow=37						
PLCA	Paso Flores	31.89	280	*e*P	P	01 25 30.4	-2.5
	5.5nm,0.8s,mb4.3						
QSPA	South Pole Qui	34.12	180	*e*P	P	01 25 52.6	+0.9
	98nm,0.7s,mb5.8						
CAM4	Nova Friburgo	35.55	335	*e*P	P	01 26 06.1	+1.7
CAM4				*i*	pP	01 26 32.0	+3.2
CPUP	Villa Florida	36.77	312	P	P	01 26 14.1	-0.6
	0.1nm,0.4s,baz=217,slow=12,SNR=2.3						
CPUP				ScP		01 32 08.1	
	0.0nm,0.4s,baz=229,slow=13,SNR=2.3						
MAW	Mawson	40.16	144	P	P	01 26 43.0	+0.6
	30nm,0.4s,mb5.5,baz=231,slow=8.9,SNR=25						
MAW				ScP		01 32 21.0	
	35nm,0.9s,baz=297,slow=4.2,SNR=4.0						
MAW				LR	LR	01 40 33.5	
	comp=Z,894nm,19.4s,baz=254,slow=32						
MAW	Mawson	40.16	144	⇑*i*P	P	01 26 42.6	+0.3
	66nm,0.6s,mb5.6						
SUR	Sutherland	40.78	75	P	P	01 26 48.8	+0.9
	11nm,0.9s,mb4.7,baz=252,slow=6.3,SNR=7.9						
SUR				ScP		01 32 26.0	
	8.4nm,0.8s,baz=230,slow=3.6,SNR=5.2						
SUR				LR	LR	01 41 06.5	
	comp=Z,522nm,18.1s,baz=217,slow=32						
SUR	Sutherland	40.78	75	*e*P	P	01 26 48.2	+0.3
	32nm,1.1s,mb5.1						
BDFB	Brasilia	43.38	330	P	P	01 27 10.3	+1.2
	15nm,0.8s,mb4.8,baz=145,slow=4.4,SNR=24						
BDFB				LR	LR	01 44 12.3	
	comp=Z,528nm,18.9s,baz=162,slow=34						
LVC	Limon Verde	45.23	300	⇑*e*P	P	01 27 24.8	+0.8
	105nm,0.9s,mb5.6						
LVC				*e*pP	pP	01 27 49.3	+0.3
LVC				*e*sP	sP	01 28 01.0	-0.3
LVC				*e*ScP		01 32 42.7	
LVC				*e*S	S	01 33 53.9	-1.3
BOSA	Boshof	46.11	76	*e*P	P	01 27 28.7	-2.2
	22nm,1.0s,mb4.8						
BOSA				*i* ScP		01 32 47.4	
VNDA	Vanda	46.48	183	P	P	01 27 34.2	+1.0
	29nm,0.6s,mb5.2,baz=185,slow=6.2,SNR=95						
VNDA				ScP		01 32 48.9	
	2.2nm,0.8s,baz=257,slow=2.0,SNR=4.1						
VNDA				LR	LR	01 45 21.4	
	comp=Z,324nm,19.9s,baz=179,slow=34						
VNDA	Vanda	46.48	183	⇑*i*P	P	01 27 34.1	+1.0
	231nm,1.4s,mb5.7						
LBTB	Lobatse	49.16	73	P	P	01 27 53.9	-0.7
	17nm,0.6s,mb5.1,baz=229,slow=8.5,SNR=54						
LBTB				ScP		01 33 00.0	
	7.7nm,0.8s,baz=201,slow=6.3,SNR=9.4						
LBTB				LR	LR	01 46 09.9	
	comp=Z,399nm,19.2s,baz=226,slow=33						
LBTB	Lobatse	49.16	73	*e*P	P	01 27 53.8	-0.8
	16nm,0.6s,mb5.1						
LBTB				*e*ScP		01 32 59.8	
TSUM	Tsumeb	49.84	61	⇓*e*P	P	01 27 59.2	-0.7
	16nm,0.6s,mb5.1						
LPAZ	La Paz	50.32	306	P	P	01 28 04.6	+0.9
	22nm,0.3s,mb5.5,baz=155,slow=6.0,SNR=74						
LPAZ				ScP		01 33 04.4	
	7.1nm,0.7s,baz=142,slow=2.7,SNR=7.7						
LPAZ				LR	LR	01 48 12.0	
	comp=Z,220nm,18.5s,baz=137,slow=34						
LPAZ	La Paz	50.32	306	⇑*e*P	P	01 28 04.5	+0.9
	25nm,0.4s,mb5.5						
LPAZ				*e*ScP		01 33 04.3	
RCBR	Riachuelo	50.62	349	⇑*e*P	P	01 28 04.8	-1.2
	22nm,1.0s,mb5.2						
ARE	Arequipa	51.74	302	⇑*i*P	P	01 28 15.0	+0.7
CASY	Casey	53.87	160	*e*P	P	01 28 28.9	-0.6
	129nm,1.4s,mb5.8						
SAML	Samuel	54.77	315	⇑*i*P	P	01 28 34.8	-2.0
	27nm,1.0s,mb5.2						

SAML				*e*ScP		01 33 22.6	
NNA	**Nana**	**58.18**	**299**	⇑*i*P	**P**	**01 28 60.0**	**-0.9**
	79nm,1.1s,mb5.7						
NNA				*e*pP	pP	01 29 25.2	-1.9
LSZ	**Lusaka**	**58.52**	**69**	⇓*e*P	**P**	**01 29 02.0**	**-1.3**
	28nm,0.9s,mb5.3						
LSZ				*e*pP	pP	01 29 27.2	-2.3
LSZ				*e*PcP	PcP	01 29 49.7	-2.6
DBIC	**Dimbokro**	**65.30**	**25**	P	**P**	**01 29 47.8**	**-0.8**
	39nm,0.6s,mb5.4,baz=169,slow=7.6,SNR=61						
DBIC				LR	LR	01 52 30.7	
	comp=Z,536nm,19.7s,baz=181,slow=30						
DBIC	**Dimbokro**	**65.30**	**25**	⇓*i*P	**P**	**01 29 47.4**	**-1.2**
	64nm,0.8s,mb5.5						
OTAV	**Otavalo**	**69.60**	**304**	⇑*i*P	**P**	**01 30 16.1**	**+0.6**
	51nm,1.2s,mb5.2						
OTAV				*e*pP	pP	01 30 41.6	-0.9
ROSC	**El Rosal**	**71.86**	**310**	P	**P**	**01 30 29.2**	**+0.2**
	5.5nm,0.6s,mb4.6,baz=90,slow=13,SNR=4.5						
MBAR	**Mbarara**	**72.30**	**63**	⇓*e*P	**P**	**01 30 32.7**	**+1.1**
	61nm,1.9s,mb5.1						
SDV	**Santo Domingo**	**73.98**	**315**	⇑*e*P	**P**	**01 30 41.2**	**-0.2**
	42nm,1.0s,mb5.1						
SDV				*e*pP	pP	01 31 07.9	-0.8
SDV				*e*sP	sP	01 31 18.3	-1.9
PAYG	**Puerto Ayora**	**74.64**	**293**	P	**P**	**01 30 43.0**	**-2.2**
	33nm,1.1s,mb5.0						
KMBO	**Kilima Mbogo**	**75.19**	**69**	P	**P**	**01 30 51.9**	**+3.6**
	1.1nm,0.8s,baz=236,slow=11,SNR=6.2						
KMBO				LR	LR	01 59 26.0	
	comp=Z,305nm,19.3s,baz=248,slow=32						
KMBO	**Kilima Mbogo**	**75.19**	**69**	*e*P	**P**	**01 30 48.0**	**-0.3**
	12nm,1.6s,mb4.4						
KMBO				LR	LR	01 59 26.0	
RPZ	**Rata Peaks**	**79.30**	**194**	P	**P**	**01 31 10.1**	**-0.4**
	14nm,0.5s,mb5.0,baz=101,slow=5.2,SNR=4.0						
RPZ				LR	LR	02 02 18.8	
	comp=Z,512nm,18.1s,baz=356,slow=33						
SJG	**San Juan**	**80.83**	**323**	*e*P	**P**	**01 31 20.6**	**+1.4**
	23nm,0.3s,mb5.5						
JTS	**JuntasAbangare**	**81.45**	**303**	*e*P	**P**	**01 31 20.9**	**-1.6**
	41nm,1.1s,mb5.2						
JTS				*e*pP	pP	01 31 49.8	-0.5
URZ	**Urewera**	**83.68**	**199**	P	**P**	**01 31 33.0**	**-0.3**
	13nm,1.0s,mb4.7,baz=154,slow=3.2,SNR=4.3						
URZ				LR	LR	02 02 47.0	
	comp=Z,276nm,20.5s,baz=136,slow=31						
NWAO	**Narrogin (SRO)**	**86.32**	**151**	P	**P**	**01 31 47.2**	**+0.7**
	11nm,0.6s,mb5.0,baz=206,slow=7.1,SNR=12						
TOO	**Toolangi**	**86.46**	**174**	*e*P	**P**	**01 31 47.4**	**+0.3**
	0.7nm,1.0s						
MUN	**Mundaring**	**86.92**	**150**	⇓*i*P	**P**	**01 31 50.1**	**+0.6**
	20nm,0.7s,mb5.2						
TBI	**Tubuai**	**86.93**	**231**	*e*S	S	01 42 14.0	-3.3
TBI				*e*LQ		01 55 42.6	
TBI				*e*LR	LR	01 59 38.6	
	878nm,33.8s						
KLBR	**Kellerberrin**	**87.72**	**151**	*e*P	**P**	**01 31 53.7**	**+0.3**
	766nm,1.2s						
TEIG	**Tepich**	**91.65**	**305**	⇑*e*P	**P**	**01 32 12.5**	**+0.5**
	12nm,0.4s,mb5.5						
TEIG				*e*pP	pP	01 32 38.0	-2.3
STKA	**Stephens Creek**	**91.84**	**171**	⇑*i*P	**P**	**01 32 12.8**	**+0.1**
	12nm,0.6s,mb5.3						
STKA	**Stephens Creek**	**91.84**	**171**	P	**P**	**01 32 13.0**	**+0.3**
	11nm,0.5s,mb5.3,baz=160,slow=4.4,SNR=26						
STKA				LR	LR	02 11 46.2	
	comp=Z,334nm,20.1s,baz=192,slow=34						
PPT	**Papeete**	**92.04**	**234**	*e*S	S	01 42 59.6	-4.3
PPT				*e*LR	LR	02 01 58.7	
	1µm,34.5s						
ESDC	**Sonseca Array**	**97.50**	**18**	P	**P**	**01 32 40.4**	**+2.1**
	1.4nm,0.5s,mb4.7,baz=174,slow=4.3,SNR=11						
MBWA	**Marble Bar**	**98.14**	**149**	*e*P	**P**	**01 32 43.7**	**+2.2**
	14nm,1.1s,mb5.4						
ASPA	**Alice Springs**	**98.94**	**163**	*e*P	**P**	**01 32 45.1**	**-0.1**
ASAR	**Alice Springs**	**98.95**	**163**	P	**P**	**01 32 44.6**	**-0.6**
	5.3nm,0.6s,mb5.3,baz=187,slow=3.8,SNR=72						
ASAR				PP	PP	01 36 44.8	-5.4
	4.0nm,0.7s,baz=186,slow=7.3,SNR=11						
ASAR				PKKPbc		01 49 10.7	
	0.4nm,0.5s,baz=9.6,slow=1.4,SNR=4.9						
ASAR				LR	LR	02 16 43.5	
	comp=Z,179nm,19.1s,baz=186,slow=35						
FITZ	**Fitzroy Crossi**	**102.64**	**154**	*e*P	Pdif	01 33 02.4	+0.6
	3.5nm,1.3s						
WRA	**Warramunga Arr**	**102.66**	**162**	P	Pdif	01 33 01.5	-0.4
	2.3nm,0.5s,baz=196,slow=4.5,SNR=43						
WRA				PP	PP	01 37 15.7	-3.2
	8.9nm,1.2s,baz=188,slow=6.0,SNR=9.6						
WRA				SKiKP		01 40 45.2	
	0.6nm,0.7s,baz=222,slow=1.4,SNR=4.9						
WRA				S		01 43 28.1	
	4.0nm,1.4s,baz=206,slow=5.3,SNR=4.1						
WRA				PKKPbc		01 48 60.0	
	0.4nm,0.6s,baz=354,slow=2.8,SNR=6.6						
WRA	**Warramunga Arr**	**102.66**	**162**	P	Pdif	01 33 01.5	-0.4
WRA				PP	PP	01 37 15.7	-3.2
WRA				S		01 43 28.1	
WRA				PKKPbc		01 48 60.0	
BRTR	**Keskin Array B**	**108.57**	**45**	PP	PP	01 38 04.5	+1.7
	1.1nm,0.9s,baz=170,slow=7.5,SNR=4.4						
GERES	**GERESS Array B**	**110.09**	**28**	PP	PP	01 38 09.5	-4.0
	2.4nm,1.0s,baz=194,slow=5.5,SNR=6.5						
ANMO	**Albuquerque**	**112.65**	**299**	PKKPbc		01 48 30.1	
	1.8nm,1.1s,baz=8.4,slow=5.9,SNR=3.4						
ANMO	**Albuquerque**	**112.65**	**299**	*e*PKPdf	PKPdf	01 37 38.1	-1.1
EKA	**Eskdalemuir Ar**	**112.86**	**15**	PKKPbc		01 48 27.2	
	0.5nm,0.4s,baz=357,slow=2.4,SNR=5.2						
SCHQ	**Schefferville**	**115.19**	**336**	PKP	PKPdf	01 37 43.5	-0.2
	0.8nm,0.5s,baz=232,slow=5.3,SNR=4.0						
SCHQ				SKP		01 41 08.0	
	2.3nm,0.9s,baz=149,slow=1.9,SNR=3.7						
SCHQ	**Schefferville**	**115.19**	**336**	PKP	PKPdf	01 37 43.5	-0.2
SCHQ				SKP		01 41 08.0	
AKASG	**Malin Array Be**	**116.34**	**36**	PKP	PKPdf	01 37 46.3	+0.3
	0.5nm,0.3s,baz=224,slow=2.2,SNR=4.6						
NLU	**North Lily Min**	**119.34**	**299**	*e*PKPdf	PKPdf	01 37 53.5	+1.4
DUG	**Dugway**	**119.89**	**298**	*e*PKPdf	PKPdf	01 37 54.2	+1.2
DUG				*e*SKPdf		01 41 17.1	
ULM	**Lac du Bonnet**	**120.22**	**316**	PKP	PKPdf	01 37 52.6	-0.9
	1.2nm,0.4s,baz=131,slow=2.1,SNR=2.8						
ULM				SKP		01 41 16.9	
	1.8nm,0.5s,baz=102,slow=1.2,SNR=4.2						
PDAR	**Pinedale Array**	**120.28**	**302**	PKP	PKPdf	01 37 53.9	+0.1
	0.5nm,0.3s,baz=122,slow=4.5,SNR=15						
PDAR				pPKP		01 38 23.2	
	0.4nm,0.5s,baz=153,slow=3.3,SNR=2.4						
PDAR				SKP		01 41 17.9	
	0.8nm,1.0s,baz=180,slow=3.0,SNR=3.8						
PDAR				PKKPbc		01 48 02.6	
	0.5nm,0.8s,SNR=4.6						
PDAR				PKKP	PKKP	01 48 34.8	+14
	0.2nm,0.6s,baz=63,slow=3.3,SNR=3.8						
HWUT	**Hardware Ranch**	**120.35**	**300**	*e*PKPdf	PKPdf	01 37 53.9	-0.1
HWUT				*e*SKP		01 41 11.6	
HFS	**Hagfors**	**120.42**	**22**	PKP	PKPdf	01 37 53.4	-0.3
	2.1nm,0.7s,baz=135,slow=4.2,SNR=9.7						
HFS				PKKPbc		01 48 00.5	
	13nm,1.2s,baz=76,slow=6.1,SNR=14						
BORG	**Borgarnes**	**120.65**	**3**	PKP	PKPdf	01 37 55.2	+1.2
	18nm,0.8s,baz=43,slow=11,SNR=2.6						
NB2	**NORSAR Subarra**	**120.73**	**21**	PKPdf	PKPdf	01 37 54.6	+0.3
	3.2nm,1.2s,baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**120.73**	**21**	PKPdf	PKPdf	01 37 54.6	+0.3
NB2				⇑PKPab		01 48 00.1	
NOA	**NORSAR Array B**	**120.73**	**21**	PKP	PKPdf	01 37 55.3	+1.0
	1.4nm,0.7s,baz=206,slow=2.0,SNR=4.6						
NOA				PKKPbc		01 48 00.5	
	2.0nm,0.7s,baz=26,slow=4.2,SNR=6.3						
NOA	**NORSAR Array B**	**120.73**	**21**	PKP	PKPdf	01 37 55.3	+1.0
NOA				PKKPbc		01 48 00.5	
NVAR	**Mina Array Bea**	**121.31**	**293**	PKP	PKPdf	01 37 58.2	+2.2
	2.2nm,0.6s,baz=126,slow=3.4,SNR=21						
NVAR				SKP		01 41 21.8	
	2.0nm,0.9s,baz=143,slow=4.2,SNR=5.5						
NVAR				PKKPbc		01 47 59.5	
	0.8nm,0.8s,baz=258,slow=5.7,SNR=4.3						
NVAR	**Mina Array Bea**	**121.31**	**293**	PKP	PKPdf	01 37 58.2	+2.2
NVAR				SKP		01 41 21.8	
NVAR				PKKPbc		01 47 59.5	
LOHW	**Long Hollow**	**121.42**	**302**	*e*PKPdf	PKPdf	01 37 56.6	+0.6
LOHW				*e*SKP		01 41 19.9	
TPAW	**Teton Pass**	**121.49**	**302**	*e*PKPdf	PKPdf	01 37 57.6	+1.4
TPAW				*e*SKP		01 41 21.1	
MOOW	**Moose Ponds**	**121.59**	**302**	*e*PKPdf	PKPdf	01 37 57.0	+0.7
MOOW				*e*SKP		01 41 19.9	
IMW	**Indian Meadow**	**121.79**	**302**	*e*PKPdf	PKPdf	01 37 58.0	+1.3
IMW				*e*pPKPdf		01 38 25.1	
IMW				*e*SKP		01 41 21.1	
CMB	**Columbia Colle**	**122.09**	**291**	*e*PKPdf	PKPdf	01 37 58.7	+1.2
QLMT	**Earthquake Lak**	**122.73**	**303**	*e*PKPdf	PKPdf	01 38 00.9	+2.4
QLMT				*e*SKP		01 41 24.4	
KOLN	**Koldanda**	**124.19**	**90**	*e*P	PKPdf	01 38 01.5	-0.3
	8.8nm,0.6s						
FINES	**FINESS Array B**	**124.52**	**28**	PKP	PKPdf	01 38 02.0	+0.6
	6.5nm,0.4s,baz=149,slow=1.8,SNR=109						
FINES				PP	PP	01 39 48.6	-5.0
	3.3nm,0.9s,baz=211,slow=11,SNR=4.2						
FINES				SKP		01 41 28.2	
	2.9nm,0.9s,baz=90,slow=1.9,SNR=3.7						
FINES				PKKPbc		01 47 44.5	
	2.3nm,1.1s,baz=45,slow=2.7,SNR=3.6						
FINES	**FINESS Array B**	**124.52**	**28**	PKP	PKPdf	01 38 02.0	+0.6
FINES				PP	PP	01 39 48.6	-5.0
FINES				SKP		01 41 28.2	
FINES				PKKPbc		01 47 44.5	
DMN	**Daman**	**124.91**	**92**	*e*P	PKPdf	01 38 02.3	-0.8
	18nm,1.0s						
GKN	**Gorkha**	**124.95**	**91**	*e*P	PKPdf	01 38 03.5	+0.3
	32nm,1.1s						
PKI	**Pulchoki**	**125.05**	**92**	*e*P	PKPdf	01 38 03.0	-0.4
	10nm,0.6s						
CHMT	**Chamberlain Mo**	**125.13**	**303**	*e*PKPdf	PKPdf	01 38 03.8	+0.8
CHMT				*e*pPKPdf		01 38 31.3	
CHMT				*e*SKP		01 41 29.5	
KAF	**Kangasniemi**	**125.14**	**28**	*e*pkp	PKPdf	01 38 02.4	-0.2
	5.5nm,0.3s,baz=221,slow=1.7						
CMAR	**Chiang Mai Arr**	**125.15**	**111**	PKP	PKPdf	01 38 04.8	+1.0
	20nm,1.2s,baz=235,slow=3.4,SNR=23						
MSO	**Missoula**	**125.39**	**303**	*e*PKPdf	PKPdf	01 38 04.1	+0.6
MSO				*e*SKP		01 41 30.1	
JIRN	**Jiri**	**125.55**	**93**	*e*P	PKPdf	01 38 05.1	+0.8
	13nm,0.6s						
BMO	**Blue Mountains**	**125.57**	**299**	*e*PKPdf	PKPdf	01 38 04.5	+0.6
YBH	**Yreka Blue Hor**	**126.03**	**293**	PKP	PKPdf	01 38 05.8	+1.0
	3.0nm,0.7s,baz=121,slow=3.6,SNR=9.0						
JOF	**Joensuu**	**127.14**	**29**	*e*pkp	PKPdf	01 38 06.8	+0.4
	5.1nm,0.5s						
NEW	**Newport**	**127.92**	**302**	SKPab		01 41 18.4	
	4.1nm,0.9s,baz=280,slow=1.3,SNR=4.5						
SUMG	**Summit**	**128.65**	**356**	*e*PKPdf	PKPdf	01 38 10.5	+1.4
KSH	**Kashi**	**128.71**	**75**	*e*PKP	PKPdf	01 38 13.3	+3.2
AAK	**Ala-Archa**	**130.12**	**71**	*e*PKPdf	PKPdf	01 38 12.4	-0.2
AAK				*e*SKP		01 41 24.5	
ARCES	**ARCESS Array B**	**131.07**	**22**	PKhKP		01 37 56.6	
	2.3nm,0.8s,baz=225,slow=1.7,SNR=3.8						
ARCES				PKP	PKPdf	01 38 14.7	+0.9
	5.0nm,0.5s,baz=200,slow=1.7,SNR=37						
ARCES				PP	PP	01 40 32.6	-4.0
	12nm,1.0s,baz=217,slow=6.1,SNR=6.8						
ARCES				SKPbc		01 41 27.3	
	2.4nm,0.7s,baz=315,slow=2.6,SNR=4.2						
KEV	**Kevo**	**131.56**	**22**	*e*pkp	PKPdf	01 38 15.6	+0.9
BVAR	**Borovoye Array**	**134.93**	**58**	PKhKP		01 38 13.7	
	0.3nm,0.4s,baz=243,slow=6.6,SNR=3.2						
BVAR				PKP	PKPdf	01 38 22.8	+1.3
	2.1nm,0.4s,baz=196,slow=2.9,SNR=22						
BVAR				SKPbc		01 41 40.9	
	5.8nm,0.8s,baz=243,slow=3.3,SNR=12						
BVAR				SKKPbc		01 50 44.9	
	0.7nm,0.5s,baz=73,slow=2.8,SNR=7.0						
GYA	**Guiyang**	**135.75**	**113**	⇑*i*PKP	PKPdf	01 38 25.5	+1.8
GYA				XPKP		01 39 02.9	
BBB	**Bella Bella**	**135.80**	**300**	SKPbc		01 41 43.0	
	23nm,0.9s,baz=101,slow=2.8,SNR=6.3						
YKA	**Yellowknife Ar**	**136.15**	**318**	PKhKP		01 38 14.0	
	0.3nm,0.5s,baz=123,slow=3.8,SNR=8.7						
YKA				PKP	PKPdf	01 38 24.2	+0.8
	2.1nm,0.4s,baz=127,slow=2.6,SNR=7.2						
YKA				pPKP		01 38 52.3	
	2.4nm,0.6s,baz=125,slow=2.3,SNR=3.2						
YKA				SKPbc		01 41 43.5	
	9.1nm,0.8s,baz=132,slow=3.6,SNR=22						
YKA				PKKP	PKKP	01 48 02.8	+14
	0.2nm,0.3s,baz=320,slow=2.1,SNR=5.3						
YKA				SKKPbc		01 50 42.8	
	0.8nm,1.0s,baz=302,slow=3.5,SNR=3.8						
YKA	**Yellowknife Ar**	**136.15**	**318**	PKP		01 38 14.0	
YKA				PKP	PKPdf	01 38 24.2	+0.8
YKA				pPKP		01 38 52.3	
YKA				SKPbc		01 41 43.5	
YKA				PKKP	PKKP	01 48 02.8	+14
YKA				SKKPbc		01 50 42.8	
YKW3	**Yellowknife Ar**	**136.19**	**318**	*e*PKPdf	PKPdf	01 38 22.6	-0.8
YKW3				*e*pPKPdf		01 38 51.8	
YKW3				*e*SKP		01 41 43.3	
RES	**Resolute Bay**	**137.89**	**339**	*e*PKPpre		01 38 20.2	
RES				*e*PKPdf	PKPdf	01 38 28.2	+1.9
RES				*e*SKP		01 41 49.2	
WMQ	**Urumqi**	**138.05**	**79**	*e*PKP	PKPdf	01 38 30.0	+2.6
WMQ				SKS	SKS	01 45 29.0	+3.7
WMQ				SKKS		01 48 03.0	
WMQ				SS	SS	01 59 24.0	+3.5
WMQ				PP	PP		
	comp=Z,58nm,10.0s						
WMQ				LR	LR		
	comp=N,187nm,30.0s						
WMQ				LR	LR		
	comp=E,165nm,30.0s						
WMQ				LR	LR		
	comp=Z,158nm,30.0s						
DLBC	**Dease Lake**	**140.27**	**307**	PKhKP		01 38 27.0	
	comp=Z,2.1nm,0.8s,baz=162,slow=7.2,SNR=3.4						
DLBC				SKPbc		01 41 56.1	
	comp=Z,7.9nm,0.8s,baz=91,slow=1.8,SNR=11						
LZH	**Lanzhou**	**141.72**	**101**	*e*PKP	PKPdf	01 38 36.5	+2.4
LZH				XPKP		01 39 15.3	
LZH				*e*PP	PP	01 41 46.5	+4.1
LZH				SKKS		01 48 22.4	
LZH				SS	SS	02 00 07.6	+3.9
LZH				PP	PP		
	comp=Z,395nm,7.8s						
LZH				LR	LR		
	comp=E,715nm,18.5s						
LZH				LR	LR		
	comp=Z,897nm,20.0s						
LZH	**Lanzhou**	**141.72**	**101**	*e*PKP	PKPdf	01 38 36.5	+2.4
LZH				pPKP		01 39 04.2	
LZH				sPKP		01 39 15.3	
LZH				*e*PP	PP	01 41 46.5	+4.1
LZH				SKKS		01 48 22.4	
LZH				SS	SS	02 00 07.6	+3.9
LZH				LR	LR		
	comp=Z,900nm,20.0s						
GTA	**Gaotai**	**141.84**	**93**	PKP	PKPdf	01 38 36.0	+1.8
GTA				XPKP		01 39 17.8	
GTA				PP	PP	01 41 45.3	+2.2
GTA				PPP	PPP	01 44 53.4	+0.5
GTA				SKS	SKS	01 45 34.8	+3.3
GTA				SKKS		01 48 24.8	
GTA				SS	SS	02 00 05.5	+0.3
GTA				PP	PP		
	comp=Z,136nm,8.7s						
GTA				LR	LR		
	comp=N,129nm,16.7s						
GTA				LR	LR		
	comp=E,121nm,19.8s						
GTA				LR	LR		
	comp=Z,112nm,21.7s						
ZAL	**Zalesovo**	**142.50**	**64**	PKhKP		01 38 31.9	
	comp=Z,2.6nm,0.4s,baz=189,slow=2.1,SNR=12						
ZAL				PKP	PKPdf	01 38 38.0	+3.1
	comp=Z,4.0nm,0.7s,baz=236,slow=2.2,SNR=13						
ZAL				SKPbc		01 42 01.9	
	comp=Z,2.4nm,0.7s,baz=280,slow=5.2,SNR=6.8						
ZAL				SKKPbc		01 50 16.7	
	comp=Z,0.8nm,0.9s,baz=284,slow=18,SNR=4.8						
ZAL	**Zalesovo**	**142.50**	**64**	PKP	PKPdf	01 38 31.9	-2.9
ZAL				PKP	PKPdf	01 38 38.0	+3.1
ZAL				SKPbc		01 42 01.9	
ZAL				SKKPbc		01 50 16.7	
XAN	**Xi’an**	**142.94**	**108**	PKP	PKPdf	01 38 33.8	-2.4
INK	**Inuvik**	**145.79**	**321**	PKP	PKPdf	01 38 40.0	-0.1
	comp=Z,28nm,0.8s,baz=112,slow=3.6,SNR=78						
INK				PKPbc	PKPbc	01 38 42.3	+1.3
	comp=Z,27nm,0.7s,baz=104,slow=3.2,SNR=81						
INK				pPKPbc		01 39 09.3	
	comp=Z,54nm,0.9s,baz=104,slow=4.8,SNR=7.0						
INK				SKPbc		01 42 08.9	
	comp=Z,16nm,0.8s,baz=90,slow=3.3,SNR=8.1						
INK				SKKPbc		01 50 04.2	
	comp=Z,0.8nm,0.9s,baz=234,slow=5.2,SNR=3.0						
INK	**Inuvik**	**145.79**	**321**	*e*PKPdf	PKPdf	01 38 41.8	+1.6
INK				*e*pPKPdf		01 39 08.0	
INK				*e*SKP		01 42 08.6	
JOW	**Kunigami**	**145.88**	**139**	PKPbc	PKPbc	01 38 44.4	+1.8
NJ2	**Nanjing**	**146.40**	**122**	*e*PKP	PKPdf	01 38 45.5	+3.2
NJ2				PKP2	PKPab	01 38 49.8	+2.8
NJ2				APKP		01 39 11.8	
NJ2				XPKP		01 39 22.9	
NJ2				PP	PP	01 42 13.0	+2.3
NJ2				PKS	PKS	01 42 19.0	+2.4
NJ2				SKS	SKS	01 45 42.0	+3.6
NJ2				PP	PP		
	comp=Z,420nm,11.4s						
NJ2				LR	LR		
	comp=N,690nm,30.4s						
NJ2				LR	LR		
	comp=E,2µm,37.8s						
NJ2				LR	LR		
	comp=Z,400nm,34.5s						
SSE	**Sheshan**	**146.69**	**126**	PKP	PKPdf	01 38 46.0	+3.2
SSE				PP	PP	01 42 11.8	-0.6
SSE				PP	PP		
	comp=Z,50nm,12.0s						
DAWY	**Dawson**	**146.75**	**312**	*e*PKPdf	PKPdf	01 38 44.6	+2.7
DAWY				*e*pPKPdf		01 39 10.7	
DAWY				*e*SKP		01 42 09.3	
BTO	**Baotou**	**148.34**	**101**	*e*PKP	PKPdf	01 38 50.1	+4.9
EYAK	**Cordova Ski Ar**	**148.39**	**304**	*e*PKPdf	PKPdf	01 38 47.3	+2.7
EYAK				*e*PKPbc	PKPdf	01 38 49.9	+5.3
DIV	**Divide**	**148.60**	**305**	*e*PKPbc	PKPdf	01 38 50.5	+5.6
TIA	**Tai’an**	**148.89**	**115**	*e*PKP	PKPdf	01 38 51.0	+4.8
THY	**Trims Highway**	**149.27**	**309**	*e*PKPbc	PKPdf	01 38 52.5	+6.6
HHC	**Hu-ho-hao-te**	**149.35**	**102**	*e*PKP	PKPdf	01 38 52.5	+5.7
SML	**Sawmill**	**149.98**	**305**	*e*PKPbc	PKPdf	01 38 53.1	+6.0
ILAR	**Eielson Array**	**150.08**	**312**	PKPbc	PKPdf	01 38 53.7	+6.6
	comp=Z,23nm,0.7s,baz=75,slow=0.5,SNR=72						
ILAR				pPKPbc		01 39 21.2	
	comp=Z,32nm,0.9s,baz=98,slow=0.6,SNR=6.3						
COLA	**College**	**150.50**	**312**	*e*PKPbc	PKPdf	01 38 54.1	+6.3
MCK	**McKinley**	**150.73**	**309**	*e*PKPbc	PKPdf	01 38 55.3	+7.2
MCK				*e*pPKPbc		01 39 23.5	
MCK				*e*sPKPbc		01 39 35.3	
KDAK	**Kodiak Island**	**150.74**	**296**	*e*PKPbc	PKPdf	01 38 55.4	+7.0
SONM	**Songino Array**	**150.86**	**87**	PKP	PKPdf	01 38 50.1	+1.2
	comp=Z,1.3nm,0.9s,baz=180,slow=2.5,SNR=7.1						
SONM				PKPbc	PKPdf	01 38 55.7	+6.9
	comp=Z,21nm,0.9s,baz=222,slow=3.5,SNR=69						
SONM				pPKPbc		01 39 24.8	
	comp=Z,10nm,1.0s,baz=225,slow=1.7,SNR=2.7						
ULN	**Ulaanbaatar**	**151.24**	**87**	*e*PKPbc	PKPdf	01 38 56.1	+6.6
BJT	**Baijiatuau**	**151.25**	**109**	*e*PKPdf	PKPdf	01 38 50.9	+1.2
BJT				*e*PKPbc	PKPdf	01 38 56.9	+7.2
BJI	**Beijing**	**151.26**	**109**	PKP	PKPdf	01 38 57.0	+7.3
BJI				PP	PP		
	comp=Z,26nm,0.9s						
TLY	**Talaya**	**151.33**	**78**	*e*PKPdf	PKPdf	01 38 50.6	+1.2
TLY				*e*PKPbc	PKPdf	01 38 56.8	+7.4
SPU	**Mount Spurr**	**151.53**	**303**	*e*PKPbc	PKPdf	01 38 56.5	+7.0
RSO	**Redoubt South**	**151.66**	**302**	*e*PKPbc	PKPdf	01 38 57.6	+7.9
IMA	**Indian Mountai**	**153.08**	**313**	*e*PKPbc	PKPdf	01 39 00.8	+9.2
CN2	**Changchun**	**158.79**	**114**	*e*PKP	PKPdf	01 39 00.6	+0.9
CN2				*e*APKP		01 39 27.8	
CN2				*e*PKP2	PKPab	01 39 36.9	-1.5
CN2				LR	LR		
	comp=Z,140nm,21.0s						

JMA 17 01:29:16.9,27.92N×128.92E,h45^{km}±1^{km},M3.5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.14**	**169**	P	P	01 29 24.2	0.0
JTK				*e*S	S	01 29 29.3	-0.1
JAM	**Amami Oshima**	**0.78**	**51**	P	P	01 29 31.6	0.0
JAM				*e*S	S	01 29 42.2	-0.1
JIH	**Iheya**	**1.22**	**224**	P	P	01 29 37.8	0.0
JIH				*e*S	S	01 29 53.4	-0.1
JOW	**Kunigami**	**1.23**	**208**	P	P	01 29 37.8	-0.1
JOW				*e*S	S	01 29 53.6	0.0
JAGN	**Aguni-jima**	**2.00**	**229**	P	P	01 29 48.8	-0.1
JAGN				*e*S	S	01 30 13.6	+0.9
JNN	**Nakanoshima**	**2.09**	**23**	P	P	01 29 50.1	-0.1
JNN				*e*S	S	01 30 15.1	0.0
JKE	**Kume jima 2**	**2.48**	**231**	P	P	01 29 55.7	0.0

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*TIF **17** 01:45:01.3,42.52N×43.57E,h9^{km}*

*MOS **17** 01:45:02.0±2.0,42.44N×43.36E,h12^{km},mb3.8/1,Error ellipse: s-maj=14.7km s-min=7.3km az=90.0*

ISC 17 01:45:00.5±0.7**,42.33N**±0.04×**43.34E**±0.07**,h12**^{km}**,n14,** σ**1^{s}57**/25**,Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.26**	**18**	P	**Pg**	**01 45 05.1**	**-1.1**
ONI				S	**Sg**	**01 45 07.2**	**-2.8**
ZEI	**Tsey**	**0.60**	**43**	*i* PG	**Pg**	**01 45 09.7**	**-3.1**
BCHG	**Becho**	**0.90**	**322**	P	**Pb**	**01 45 18.3**	**+0.7**
BCHG				S	**Sb**	**01 45 30.2**	**+1.0**
DUS	**Dusheti**	**1.04**	**103**	P	**Pb**	**01 45 20.2**	**+0.2**
DUS				S	**Sb**	**01 45 35.4**	**+2.0**
TI2	**Plekhanov**	**1.21**	**119**	*i* PG	**Pg**	**01 45 24.4**	**-0.3**
TI2				*i* S	**Sb**	**01 45 41.8**	**+3.5**
TI2				pmax	pmax		
	comp=Z,40nm,0.2s						
TI2				smax			
	comp=N,250nm,0.4s						
KUBR	**Kubataba**	**1.47**	**2**	*e*PG	**Pg**	**01 45 27.5**	**-2.4**
KUBR				*i* S	**Sb**	**01 45 46.6**	**+0.8**
SHAR	**Shatzhatmas**	**1.50**	**341**	*e*PG	**Pg**	**01 45 28.4**	**-2.0**
SHAR				*i* S	**Sb**	**01 45 47.2**	**+0.7**
STE	**Stepanavan**	**1.55**	**149**	*i* PG	**Pg**	**01 45 31.0**	**-0.5**
STE				*i* S	**Sb**	**01 45 54.0**	**+5.9**
KIV	**Kislovodsk**	**1.69**	**344**	P	**Pn**	**01 45 32.0**	**+1.8**
	comp=N,1µm,0.5s,SNR=41						
KIV	**Kislovodsk**	**1.69**	**344**	*e*PG	**Pg**	**01 45 31.5**	**-2.9**
KIV				*i* S	**Sn**	**01 45 52.9**	**+1.0**
PYA	**Pyatigorsk**	**1.71**	**353**	*e*PG	**Pg**	**01 45 31.5**	**-3.3**
PYA				*i* S	**Sn**	**01 45 52.5**	**+0.1**
NAGR	**Nagutskaya**	**2.16**	**349**	*e*PN	**Pn**	**01 45 38.0**	**+1.2**
NAGR				*e*S	**Sn**	**01 46 06.2**	**+2.5**
GOF	**Gofitskoye**	**2.74**	**355**	*e*PN	**Pg**	**01 45 54.5**	**-0.7**
GOF				*e*S	**Sb**	**01 46 24.5**	**+1.9**
GOF				smax			
	comp=N,900nm,1.0s						
SOC	**Sochi**	**2.94**	**296**	*e*PN	**Pg**	**01 45 58.0**	**-1.2**
SOC				*e*		01 46 33.2	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.2s						
SOC				pmax	pmax		
	comp=N,6.0nm,0.3s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.2s						
SOC				smax			
	comp=N,29nm,0.3s						

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*IDC **17** 01:50:15.1±0.9,6.46N×92.82E,mb3.9/10,mb1 4.1/11, mb1mx4.0/19,mbtmp3.9/11,ML4.3/1,MS4.3/1,Ms1 4.3/1, ms1mx3.1/16,Error ellipse: s-maj=45.0km s-min=18.0km az=52.0*

*NEIC **17** 01:50:19.8±0.5,6.45N×92.88E,h30^{km},mb4.3/5,Error ellipse: s-maj=13.0km s-min=9.2km az=56.0*

ISC 17 01:50:17.9±0.7**,6.26N**±0.09×**92.7E**±0.1**,h33**^{km}**,n28,** σ**1^{s}10**/26**,mb4.2**/19**,MS4.3**/1**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**11.98**	**276**	Pn	**P**	**01 53 12.1**	**+2.7**
	113nm,0.4s,SNR=11						
PALK	**Pallekele**	**11.98**	**276**	*e*P	**P**	**01 53 09.8**	**+0.4**
	15nm,0.8s						
PALK				*e*S	**S**	**01 55 12.2**	**-11**
CM31	**Chiang Mai Arr**	**13.55**	**26**	*e*P	**P**	**01 53 31.9**	**+1.5**
	12nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.55**	**26**	Pn	**P**	**01 53 27.1**	**-3.4**
	0.5nm,0.3s,baz=208,slow=13,SNR=5.4						
KMI	**Kunming**	**21.07**	**26**	P	**P**	**01 55 03.5**	**+1.8**
	18nm,0.8s,mb4.5						
JIRN	**Jiri**	**22.17**	**344**	*e*P	**P**	**01 55 13.4**	**+0.7**

	11nm,0.8s,mb4.4						
PKI	Pulchoki	22.31	343	eP	P	01 55 14.6	+0.5
	22nm,0.8s,mb4.6						
DMN	Daman	22.43	342	eP	P	01 55 16.9	+1.6
	16nm,0.8s,mb4.5						
KKN	Kakani	22.55	343	eP	P	01 55 14.9	-1.7
	13nm,0.8s,mb4.4						
GKN	Gorkha	22.95	341	eP	P	01 55 21.7	+1.2
	12nm,0.5s,mb4.5						
LSA	Lhasa	23.36	357	eP	P	01 55 23.3	-1.2
	6.8nm,1.0s,mb4.0						
AAK	Ala-Archa	39.66	339	eP	P	01 57 47.9	-0.5
	3.9nm,0.8s,mb4.2						
SONM	Songino Array	43.04	13	P	P	01 58 14.4	-1.9
	0.4nm,0.4s,mb3.5,baz=196,slow=10,SNR=3.0						
SONM	Songino Array	43.04	13	P	P	01 58 14.4	-1.9
ZAL	Zalesovo	47.97	354	P	P	01 58 54.7	-0.7
	1.7nm,0.4s,mb4.4,baz=323,slow=7.3,SNR=4.1						
ZAL	Zalesovo	47.97	354	P	P	01 58 54.7	-0.7
WRA	Warramunga Arr	48.51	123	P	P	01 59 00.1	+0.1
	0.9nm,0.5s,mb4.1,baz=304,slow=8.9,SNR=19						
WRA				PcP	PcP	02 00 26.7	+0.7
	0.4nm,0.7s,baz=305,slow=3.3,SNR=4.7						
WRAB	Tennant Creek	48.51	123	eP	P	01 58 59.9	-0.2
	12nm,1.2s,mb4.8						
ASAR	Alice Springs	50.00	128	P	P	01 59 11.8	+0.4
	2.0nm,0.8s,mb4.2,baz=306,slow=7.8,SNR=14						
BVAR	Borovoye Array	50.08	343	P	P	01 59 10.4	-1.3
	0.7nm,0.7s,mb3.8,baz=124,slow=5.3,SNR=4.1						
PMG	Port Moresby	56.43	106	LR	LR	02 24 22.2	
	comp=Z,242nm,18.5s,MS4.3,baz=3.7,slow=36						
BRTR	Keskin Array B	62.43	312	P	P	02 00 40.2	0.0
	0.4nm,0.7s,mb3.7,baz=90,slow=4.3,SNR=2.9						
FINES	FINESS Array B	73.48	333	P	P	02 01 48.2	-0.6
	1.3nm,0.8s,mb3.9,baz=98,slow=14,SNR=2.7						
ARCES	ARCESS Array B	76.30	341	P	P	02 02 04.1	-0.7
	5.4nm,0.9s,mb4.5,baz=97,slow=7.3,SNR=3.3						
GERES	GERESS Array B	78.09	318	P	P	02 02 16.3	+1.1
	0.4nm,0.5s,mb3.6,baz=76,slow=5.5,SNR=4.5						
NOA	NORSAR Array B	80.44	331	P	P	02 02 27.3	-0.4
	1.7nm,0.9s,mb4.0,baz=85,slow=12,SNR=2.8						
PDAR	Pinedale Array	127.17	21	PKP	PKPdf	02 09 21.9	+2.4
	0.3nm,0.5s,baz=315,slow=2.1,SNR=4.1						
BDFB	Brasilia	140.41	253	PKP	PKPdf	02 09 49.3	+4.5
	2.7nm,1.0s,baz=120,slow=8.2,SNR=2.8						

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*NEIC **17** 01:57:00.1, 61.31N×149.83W, h37^{km}, mb4.2/1, ML4.1(PMR), ML3.8(AEIC), After AEIC.*

NEIC Felt [III] at Anchorage, Chugiak, Eagle River and Wasilla; [II] at Palmer. Also felt at Girdwood.

*IDC **17** 01:57:02.8±2.2, 61.47N×149.94W, h73^{km}±18^{km}, mb3.6/14, mb1 3.8/18, mb1mx3.7/25, mbtmp3.9/18, MS3.3/1, Ms1 3.3/1, ms1mx2.7/24, Error ellipse: s-maj=18.0km s-min=11.7km az=50.0*

ISC 17 01:56:58.8±0.2**, 61.34N**±0.02×**149.86W**±0.04**, h50**^{km}±3^{km}**, n84, σ0**^{s}**86**/93**, mb3.9**/15**, 1C, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIB	Fire Island	0.23	222	P	P	01 57 07.0	-0.3
RC01	Rabbit Creek A	0.26	167	P	P	01 57 07.0	-0.6
RC01				S	S	01 57 12.1	-1.7
PWA	Palmer West	0.31	358	P	P	01 57 07.5	-0.6
PMR	Palmer	0.43	54	P	P	01 57 08.8	-0.5
PMR				S	S	01 57 16.3	-0.5
VOGL	Vogel Lake	0.44	219	P	P	01 57 09.9	+0.5
GHO	Glory Hole Cre	0.62	45	P	P	01 57 11.6	0.0
KNK	Knik Glacier	0.68	83	P	P	01 57 12.5	+0.2
SLKM	Skilak Lake	0.85	192	P	P	01 57 14.4	-0.3
SML	Sawmill	0.87	56	P	P	01 57 14.9	+0.1
SML				S	S	01 57 27.4	+0.6
PWL	Port Wells	0.88	122	P	P	01 57 15.2	+0.2
NKA	Nikishka	0.90	229	P	P	01 57 16.6	+1.3
STLK	Strandline Lak	0.96	280	P	P	01 57 16.5	+0.3
CGLM	Capps Glacier	1.04	269	P	P	01 57 17.3	0.0
SPU	Mount Spurr	1.07	263	P	P	01 57 17.4	-0.4
CUT	Chulitna	1.09	350	P	P	01 57 18.1	+0.2
CRP	Crater Peak	1.11	267	P	P	01 57 18.6	+0.3
CKN	Chakachatna No	1.13	265	P	P	01 57 18.7	+0.2
CKT	Bend	1.14	264	P	P	01 57 18.6	-0.1
CKT				S	S	01 57 34.6	+1.0
CKL	Chakachamna La	1.21	264	P	P	01 57 19.7	+0.1
BGL	Barrier Glacie	1.23	268	P	P	01 57 20.1	+0.2
SEW	Seward	1.26	171	P	P	01 57 19.6	-0.7
SCM	Sheep Creek Mo	1.31	67	P	P	01 57 21.9	+0.8
GLI	Glacier Island	1.42	108	P	P	01 57 22.8	+0.1
RDT	Redoubt	1.46	239	P	P	01 57 23.1	-0.2
RDT				S	S	01 57 43.1	+1.6
DFR	Drift River	1.57	243	P	P	01 57 24.7	-0.1
LTI	Latouche	1.63	142	P	P	01 57 24.7	-1.0
RDN	Redoubt North	1.64	241	P	P	01 57 25.7	-0.2
BRLK	Bradley Lake	1.66	198	P	P	01 57 25.9	-0.1
RSO	Redoubt South	1.67	239	⇑iP	P	01 57 26.1	-0.1
NCT	North Crescent	1.69	244	P	P	01 57 26.5	0.0
FID	Port Fidalgo	1.75	108	P	P	01 57 26.8	-0.5
HIN	Hinchinbrook I	1.89	118	P	P	01 57 28.9	-0.4
ILIM	Iliamna	1.98	232	P	P	01 57 30.6	+0.1
DIV	Divide	1.99	94	P	P	01 57 31.0	+0.4
INE	Iliamna NE	2.03	232	P	P	01 57 31.4	+0.1
ILW	Iliamna West	2.06	233	P	P	01 57 32.0	+0.3
TRF	Thorofare Moun	2.13	355	P	P	01 57 33.5	+0.8
EYAK	Cordova Ski Ar	2.16	110	P	P	01 57 32.6	-0.5
KTH	Kantishna Hill	2.28	348	P	P	01 57 35.6	+0.8
OPT	Oil Point	2.38	226	P	P	01 57 36.8	+0.6
MCK	McKinley	2.44	10	ePn	P	01 57 38.6	+1.5
SVW2	Sparrevohn	2.78	268	P	P	01 57 41.6	-0.4
THY	Trims Highway	2.83	41	ePn	P	01 57 44.8	+2.1
GLB	Gilahina Butte	2.91	85	P	P	01 57 43.3	-0.5
MCNL	McNeil River	3.11	228	P	P	01 57 46.2	-0.4
TT01	Tatalina	3.29	301	P	P	01 57 48.8	-0.5
MENT	Mentasta	3.30	58	P	P	01 57 49.3	0.0
CCB	Clear Creek Bu	3.45	15	P	P	01 57 51.6	+0.2
BALM	Baldy	3.65	91	P	P	01 57 53.4	-0.9
COLA	College	3.66	14	eP	P	01 57 55.1	+0.6
IL1	Eielson Array	3.70	20	P	P	01 57 55.5	+0.5
ILAR	Eielson Array	3.70	20	P	P	01 57 55.4	+0.4
	3.4nm,0.3s,baz=204,slow=14,SNR=72						
ILAR				S	S	01 58 38.6	+0.9
	6.8nm,0.3s,baz=214,slow=21,SNR=5.3						
MDM	Murphy Dome	3.71	11	P	P	01 57 55.0	-0.1
KDAK	Kodiak Island	3.83	202	ePn	P	01 57 56.9	+0.2
BCA3	Beaver Creek A	4.16	62	P	P	01 58 01.2	-0.2
IM3	Indian Mountai	4.97	341	P	P	01 58 11.9	-1.0
IMA	Indian Mountai	5.04	342	eP	P	01 58 14.4	+0.5
DAWY	Dawson	5.54	56	P	P	01 58 19.7	-1.0
TNA	Tin City	9.11	305	ePn	P	01 59 09.1	-1.4
TNA				eS	S	02 00 47.5	-5.2
INK	Inuvik	9.83	38	P	P	01 59 19.1	-0.9
	0.1nm,0.3s,baz=237,slow=13,SNR=4.7						
INK				S	S	02 01 09.3	-0.8
	0.7nm,0.3s,baz=335,slow=19,SNR=5.8						
INK				LR	LR	02 03 46.1	
	comp=Z,169nm,20.7s,baz=301,slow=41						
INK	Inuvik	9.83	38	Pn	P	01 59 18.9	-1.2
INK				eS	S	02 01 10.7	+0.6
DLBC	Dease Lake	10.37	97	P	P	01 59 30.6	+3.2
	0.2nm,0.3s,baz=275,slow=11,SNR=4.3						
YKA	Yellowknife Ar	16.52	71	P	P	02 00 49.1	+1.1
	0.2nm,0.3s,baz=276,slow=10,SNR=15						
YKA				ScP		02 09 04.7	
	0.0nm,0.3s,baz=283,slow=2.9,SNR=3.7						
YKA	Yellowknife Ar	16.52	71	P	P	02 00 49.1	+1.1
YKA				ScP		02 09 04.7	
FX1	Attu Island--F	21.52	264	P	P	02 01 44.8	-0.3
	10nm,0.6s,mb4.4,baz=143,slow=23,SNR=3.0						
NEW	Newport	22.66	110	P	P	02 01 58.2	+1.9
	1.5nm,0.6s,mb3.6,baz=318,slow=7.4,SNR=3.8						
NEW	Newport	22.66	110	P	P	02 01 58.2	+1.9
YBH	Yreka Blue Hor	25.57	128	P	P	02 02 26.4	+2.0
	1.5nm,0.7s,mb3.6,baz=330,slow=6.6,SNR=5.0						
FCC	Fort Churchill	27.25	70	eP	P	02 02 37.9	-1.8
	3.6nm,0.7s,mb4.0						
IMW	Indian Meadow	28.78	109	eP	P	02 02 54.7	+1.1
NVAR	Mina Array Bea	30.12	125	P	P	02 03 06.8	+1.1
	1.4nm,0.6s,mb3.8,baz=328,slow=8.6,SNR=13						
NVAR				PcP	PcP	02 06 05.5	-0.8
	0.4nm,0.7s,baz=354,slow=1.7,SNR=4.2						
PDAR	Pinedale Array	30.29	109	P	P	02 03 07.3	+0.2
	1.2nm,0.7s,mb3.8,baz=318,slow=5.4,SNR=14						
ULM	Lac du Bonnet	31.38	86	P	P	02 03 16.4	-0.2
	4.2nm,0.6s,mb4.4,baz=303,slow=8.6,SNR=11						
MSU	Marysvale	32.58	117	eP	P	02 03 28.6	+1.3
PV01	Paradox Valley	34.47	113	eP	P	02 03 43.6	+0.1
SCHQ	Schefferville	41.54	60	P	P	02 04 41.6	-0.7
	0.6nm,0.6s,mb3.4,baz=310,slow=4.3,SNR=4.3						
TXAR	Lajitas Array	44.08	115	P	P	02 05 03.9	+0.5
	0.4nm,0.6s,mb3.3,baz=329,slow=7.3,SNR=4.5						
SONM	Songino Array	55.24	307	P	P	02 06 28.4	-0.2
	1.0nm,0.7s,mb3.9,baz=39,slow=7.9,SNR=4.2						
ZAL	Zalesovo	57.20	325	P	P	02 06 41.3	-1.3
	0.7nm,0.4s,mb4.0,baz=148,slow=24,SNR=2.7						
FINES	FINESS Array B	57.50	2	P	P	02 06 42.0	-2.5
	0.8nm,0.6s,mb3.9,baz=3.4,slow=9.9,SNR=9.9						
BVAR	Borovoye Array	61.58	334	P	P	02 07 10.4	-2.4
	1.1nm,0.8s,mb4.0,baz=27,slow=6.4,SNR=5.0						
AKASG	Malin Array Be	68.31	1	P	P	02 07 54.2	-1.8
	0.8nm,0.4s,mb4.1,baz=359,slow=6.1,SNR=7.2						
GERES	GERESS Array B	69.38	12	P	P	02 08 01.5	-1.1
	0.4nm,0.7s,mb3.4,SNR=4.5						
GERES	GERESS Array B	69.38	12	P	P	02 08 01.5	-1.1

IDC 17 01:58:35.4±18.0**, 16.97N×147.30E, h118**^{km}±170^{km}**, mb3.4**/6**, mb1 3.6**/6**, mb1mx3.4**/21**, mbtmp3.7**/6**, Error ellipse: s-maj=46.3km s-min=28.5km az=81.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	38.83	200	P	P	02 05 48.5	-2.1
	0.7nm,0.4s,baz=24,slow=9.2,SNR=14						
ASAR	Alice Springs	42.46	198	P	P	02 06 19.7	-0.8
	0.3nm,0.7s,baz=25,slow=13,SNR=4.1						
BVAR	Borovoye Array	68.77	321	P	P	02 09 26.3	-2.2
	0.7nm,0.5s,baz=104,slow=7.0,SNR=6.2						
INK	Inuvik	70.36	23	P	P	02 09 35.8	-2.1
	0.6nm,0.8s,baz=139,slow=6.0,SNR=2.7						
NVAR	Mina Array Bea	82.99	52	P	P	02 10 48.7	-0.2
	0.4nm,0.6s,baz=273,slow=7.0,SNR=3.7						
FINES	FINESS Array B	89.08	336	P	P	02 11 17.7	-0.4
	1.4nm,0.9s,baz=63,slow=4.3,SNR=3.7						
LVC	Limon Verde	145.53	105	PKPbc	PKPbc	02 17 59.7	-1.3
	0.8nm,0.5s,baz=152,slow=12,SNR=2.4						

MAN 17 02:20:19.1, 7.15N×126.73E, h64^{km}**, mb3.9, ML2.7, MS2.3, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.51	247	eP	P	02 20 33.3	+1.7
MATI				eS	S	02 20 42.1	+1.4
BIPH	Bislig	1.09	340	⇓eP	P	02 20 40.4	+1.7
BIPH				eS	S	02 20 54.7	+1.4
KCP	Kidapawan	1.63	265	⇓iP	P	02 20 47.0	+0.8
KCP				i S	S	02 21 07.2	+0.9
BUKP	Musuan	1.81	294	eP	P	02 20 49.0	+0.5
PAGZ	Pagadian	3.39	282	eP	P	02 21 10.5	-0.4

IGQ 17 02:27:29.0, 1.09S×81.55W, h12^{km}±10^{km}**, mb4.2, 1C-1D, Error ellipse: s-maj=10.8km s-min=3.9km az=176.3, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	1.00	88	⇓P	Pb	02 27 45.5	-2.2
SALI	Salinas	1.22	153	P	Pb	02 27 51.7	+0.1
SALI				S	Sb	02 28 09.2	+2.1
IGUA	Igualata	2.93	98	P	Pn	02 28 16.6	+0.2
IGUA				S	Sn	02 28 51.8	-0.1
JUA2	San Juan 2	3.07	74	P	Pn	02 28 19.4	+1.1
TERV	Terraza Guagua	3.08	73	P	Pn	02 28 19.4	+1.0
PINO	Pino	3.08	73	P	Pn	02 28 18.9	+0.5
NAS1	Nasa	3.10	82	P	Pn	02 28 20.9	+2.2
NAS1				S	Sn	02 28 56.0	-0.1
ARRY	Arrayan	3.12	98	P	Pn	02 28 19.1	+0.2
ARRY				S	Sn	02 28 53.0	-3.5
RETU	Refugio	3.12	97	P	Pn	02 28 20.1	+1.1
YANA	Yana	3.13	72	P	Pn	02 28 19.7	+0.6
ULBA	Ulba	3.16	97	P	Pn	02 28 20.6	+1.1
ULBA				S	Sn	02 28 55.2	-2.3
PISA	Pisayambo	3.16	89	P	Pn	02 28 21.3	+1.7
VC1	Cotopaxi 1	3.17	82	P	Pn	02 28 22.2	+2.5
VC1				S	Sn	02 29 01.4	+3.4
TAMB	Tambo	3.20	83	P	Pn	02 28 22.0	+1.8
ANTI	Antisana	3.44	79	P	Pn	02 28 25.6	+2.0
ANTI				S	Sn	02 29 05.8	+1.0
COTA	Cotacachi	3.51	66	P	Pn	02 28 26.1	+1.6
CAYR	Refugio Cayamb	3.71	73	⇑P	Pn	02 28 29.9	+2.6
ELAGU	Cayambe Volc	3.71	73	P	Pn	02 28 30.6	+3.2
ELAGU				S	Sn	02 29 17.2	+5.8
CAYA	Cayambe	3.74	72	P	Pn	02 28 29.9	+2.1
CAYA				S	Sn	02 29 12.8	+0.6
ECEN	Cerro Negro	4.05	62	P	Pn	02 28 35.4	+3.2
ECEN				S	Sn	02 29 19.8	-0.2

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*IGQ **17** 02:34:25.6, 1.11S×81.31W, h10^{km}±4^{km}, mb4.8, Error ellipse: s-maj=5.5km s-min=3.8km az=177.8*

*BJI **17** 02:34:29.0, 1.10S×81.00W, h10^{km}, mB4.6, Ms5.1, Msz4.8*

*NEIC **17** 02:34:29.0±0.4, 1.12S×81.02W, h10^{km}, mb4.5/14, MD4.8(IGQ), Error ellipse: s-maj=10.7km s-min=7.5km az=57.0*

NEIC Felt strongly at Bahia de Caraquez.

*IDC **17** 02:34:37.1±3.4, 0.96S×80.74W, h64^{km}±32^{km}, mb3.7/13, mb1 3.8/17, mb1mx3.7/26, mbtmp4.0/17, ML3.8/3, MS3.9/2, Ms1 3.8/2, ms1mx3.0/18, Error ellipse: s-maj=26.8km s-min=12.4km az=64.0*

ISC 17 02:34:28.0±1.4**, 1.18S**±0.05×**81.26W**±0.03**, h14**^{km}±9^{km}**, n72, σ1**^{s}**32**/72**, mb4.2**/21**, MS4.3**/3**, 6C, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.72	80	⇑P	Pb	02 34 39.9	-1.9
SALI	Salinas	1.03	165	P	Pb	02 34 46.6	-0.5
IGUA	Igualata	2.63	97	⇑P	Pn	02 35 10.9	0.0
IGUA				S	Sn	02 35 43.5	+0.5
CUSU	Cusua	2.79	95	P	Pn	02 35 14.0	+0.9
JUIV	Juive	2.80	95	P	Pn	02 35 13.4	+0.1
ARRY	Arrayan	2.82	97	P	Pn	02 35 13.4	-0.1
ARRY				S	Sn	02 35 47.2	-0.5
JUA2	San Juan 2	2.82	70	P	Pn	02 35 13.4	-0.2
NAS1	Nasa	2.83	79	P	Pn	02 35 13.9	+0.2
TERV	Terraza Guagua	2.83	69	P	Pn	02 35 13.4	-0.4
PINO	Pino	2.84	69	⇑P	Pn	02 35 12.9	-0.9
PATA	Patacocha	2.84	97	P	Pn	02 35 15.0	+1.1
PATA				S	Sn	02 35 50.7	+2.5
RUN2	Runtun	2.85	95	P	Pn	02 35 14.9	+0.9
RUN2				S	Sn	02 35 50.6	+2.1
ULBA	Ulba	2.86	95	P	Pn	02 35 14.4	+0.3
PISA	Pisayambo	2.87	88	P	Pn	02 35 14.6	+0.2
YANA	Yana	2.88	69	P	Pn	02 35 13.5	-1.0
VC1	Cotopaxi 1	2.90	79	P	Pn	02 35 15.2	+0.4
TAMB	Tambo	2.93	81	P	Pn	02 35 15.5	+0.4
OTAV	Otavalo	3.14	63	ePn	Pn	02 35 16.6	-1.5
OTAV				eSn	Sn	02 35 54.9	-0.8
ANTI	Antisana	3.18	77	⇑P	Pn	02 35 19.2	+0.6
COTA	Cotacachi	3.28	63	⇑P	Pn	02 35 19.7	-0.4
LORE	San Lorenzo	3.44	44	P	Pn	02 35 21.9	-0.5
CAYR	Refugio Cayamb	3.46	70	P	Pn	02 35 24.3	+1.7
ELAGU	Cayambe Volc	3.46	71	P	Pn	02 35 24.4	+1.7
CAYA	Cayambe	3.50	69	⇑P	Pn	02 35 24.1	+0.9
CAYA				S	Sn	02 36 09.0	+4.2
CONE	Cono NE Rev Vo	3.78	73	P	Pn	02 35 30.4	+3.3
ECEN	Cerro Negro	3.84	59	P	Pn	02 35 27.8	-0.3
PAYG	Puerto Ayora	9.04	273	eP	P	02 36 43.4	+2.2
	229nm,1.5s						
ROSC	El Rosal	9.16	49	P	P	02 36 39.7	-3.0
	0.2nm,0.3s,baz=90,slow=19,SNR=1.4						
NNA	Nana	11.60	158	eP	P	02 37 14.1	-2.2
	15nm,0.6s						
NNA				eS	S	02 39 17.6	-8.9
JTS	JuntasAbangare	11.97	342	P	P	02 37 24.1	+2.7
	0.2nm,0.3s,baz=79,slow=18,SNR=2.1						
SDV	Santo Domingo	14.56	46	P	P	02 37 55.8	-0.1
	0.4nm,0.3s,baz=214,slow=18,SNR=2.5						
SDV	Santo Domingo	14.56	46	P	P	02 37 55.9	+0.1
	98nm,1.6s						
SAML	Samuel	19.57	114	eP	P	02 38 51.4	-7.2
	10.0nm,0.6s						
LPAZ	La Paz	19.82	140	P	P	02 39 00.9	-0.4
	0.2nm,0.3s,baz=324,slow=12,SNR=3.3						
LPAZ	La Paz	19.82	140	eP	P	02 38 59.3	-2.0
	4.1nm,0.7s						
TEIG	Tepich	22.36	342	eP	P	02 39 28.1	+0.7
	22nm,1.2s,mb4.5						
SJG	San Juan	24.26	37	P	P	02 39 44.5	-1.5
	12nm,0.6s,mb4.5,baz=238,slow=6.8,SNR=7.7						
SJG	San Juan	24.26	37	eP	P	02 39 44.0	-2.0
	17nm,0.7s,mb4.6						
LVC	Limon Verde	24.45	151	P	P	02 39 49.6	+1.7
	1.5nm,0.7s,mb3.6,baz=40,slow=7.9,SNR=3.6						
BDFB	Brasilia	35.80	115	P	P	02 41 27.4	-1.8
	1.9nm,0.8s,mb4.0,baz=245,slow=3.5,SNR=2.0						
TXAR	Lajitas Array	37.15	327	P	P	02 41 42.6	+2.2
	1.4nm,1.1s,mb3.7,baz=146,slow=9.0,SNR=4.9						
MNTX	Cornudas Mount	39.91	327	eP	P	02 42 03.6	+0.1
	9.5nm,1.2s,mb4.4						
PLCA	Paso Flores	40.55	167	P	P	02 42 12.8	+4.2
	2.7nm,1.0s,mb3.8,baz=344,slow=12,SNR=5.1						
PLCA	Paso Flores	40.55	167	eP	P	02 42 07.4	-1.2
	9.1nm,1.3s,mb4.2						
ANMO	Albuquerque	42.99	329	P	P	02 42 31.6	+2.8
	2.6nm,0.8s,mb4.0,baz=146,slow=9.2,SNR=6.6						
ANMO	Albuquerque	42.99	329	eP	P	02 42 28.2	-0.6
	3.8nm,1.0s,mb4.1						
SDCO	Great Sand Dun	44.75	332	eP	P	02 42 44.4	+1.4
	16nm,1.6s,mb4.6						
PV01	Paradox Valley	46.53	330	P	P	02 42 56.5	-0.6
PV10	Paradox Valley	46.95	330	P	P	02 42 55.4	-5.1
JLU	Jordanelle	49.86	330	eP	P	02 43 15.0	-8.0
HWUT	Hardware Ranch	50.67	331	eP	P	02 43 30.1	+0.9
	4.2nm,1.2s,mb4.2						
NVAR	Mina Array Bea	52.12	323	P	P	02 43 42.3	+2.1
	1.0nm,0.8s,mb3.8,baz=134,slow=9.1,SNR=7.3						
ULM	Lac du Bonnet	52.74	348	P	P	02 43 43.5	-1.2
	1.3nm,0.4s,mb4.2,baz=162,slow=7.5,SNR=3.4						
ULM				LR	LR	03 04 14.9	
	comp=Z,83nm,19.9s,MS3.8,baz=2.0,slow=34						
USHA	Ushuaia	54.50	171	P	P	02 43 57.9	+0.4
	2.9nm,0.7s,mb4.3,baz=304,slow=18,SNR=2.6						
SCHQ	Schefferville	57.08	10	P	P	02 44 13.9	-2.2
	1.3nm,1.1s,mb3.9,baz=245,slow=7.4,SNR=2.1						
SCHQ				LR	LR	03 09 43.0	
	comp=Z,125nm,18.1s,MS4.1,baz=177,slow=37						
FCC	Fort Churchill	60.62	352	eP	P	02 44 38.6	-2.1
	9.7nm,1.3s,mb4.8						
YKA	Yellowknife Ar	68.31	344	P	P	02 45 30.9	+0.3
	0.8nm,0.6s,mb3.9,baz=138,slow=6.5,SNR=16						
YKA	Yellowknife Ar	68.31	344	P	P	02 45 30.9	+0.3
DLBC	Dease Lake	70.78	335	P	P	02 45 45.1	-0.8
DBIC	Dimbokro	76.64	83	P	P	02 46 18.8	-2.1
	1.2nm,0.5s,mb4.1,baz=278,slow=5.9,SNR=5.2						
DBIC	Dimbokro	76.64	83	eP	P	02 46 18.5	-2.4
	14nm,1.3s,mb4.7						
INK	Inuvik	77.97	343	eP	P	02 46 27.5	+0.4
	13nm,1.4s,mb4.7						
SUMG	Summit	78.38	12	P	P	02 46 26.9	-2.4
	9.3nm,1.1s,mb4.6						
ILAR	Eielson Array	80.89	337	P	P	02 46 43.9	+0.9
	1.1nm,0.9s,mb3.8,baz=142,slow=3.3,SNR=5.7						
COLA	College	81.31	337	eP	P	02 46 42.5	-2.7
	7.3nm,1.1s,mb4.5						
CN2	Changchun	131.36	334	ePKP	PKPdf	02 53 37.0	-7.0
WMQ	Urumqi	136.42	12	ePKP	PKPdf	02 53 52.0	-1.3
WRA	Warramunga Arr	139.28	237	PKhKP		02 53 53.6	
	0.5nm,0.9s,baz=111,slow=1.8,SNR=3.2						
GTA	Gaotai	141.94	359	PKP	PKPdf	02 53 59.1	-4.4
SSE	Sheshan	143.44	327	ePKP	PKPdf	02 54 03.3	-3.0
NJ2	Nanjing	143.91	330	ePKP	PKPdf	02 54 04.0	-3.1
LZH	Lanzhou	144.95	353	ePKP	PKPdf	02 54 05.1	-3.7
LZH				LR	LR		
	comp=N,287nm,18.0s						
LZH				LR	LR		
	comp=Z,398nm,20.2s,MS5.2						

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*IDC **17** 02:38:52.0±0.7, 6.57N×82.46W, mb4.1/14, mb1 4.3/17, mb1mx4.2/25, mbtmp4.2/17, ML4.4/2, MS3.9/6, Ms1 3.9/6, ms1mx3.5/21, Error ellipse: s-maj=29.3km s-min=13.3km az=55.0*

*BJI **17** 02:38:53.7, 6.70N×82.40W, h10^{km}, mB4.4, Ms5.1, Msz4.8*

*NEIC **17** 02:38:53.8±0.3, 6.67N×82.43W, h10^{km}, mb4.5/24, Error ellipse: s-maj=9.6km s-min=5.2km az=58.0*

ISC 17 02:38:51.5±1.1**, 6.60N**±0.03×**82.38W**±0.03**, h8**^{km}±7^{km}**, n120, σ1**^{s}**17**/128**, mb4.3**/32**, MS4.2**/4**, 15C-9D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTP1	Petroterminal	1.59	358	eP	Pn	02 39 20.1	-0.1
DVD	David	1.83	358	⇑eP	Pn	02 39 23.0	-0.5
DVD				eS	Sn	02 39 46.5	-0.5
ACR	Cerro Adams	2.19	339	⇑eP	Pn	02 39 27.0	-1.6
ACR				eS	Sn	02 40 01.3	+5.3
ACR	Cerro Adams	2.19	339	⇑eP	Pn	02 39 27.0	-1.6
AZU	Azuero	2.40	60	⇓eP	Pn	02 39 31.1	-0.6
AZU2	Pedas	2.51	68	eS	Sn	02 40 05.1	+0.7
CNI	Changuinola	2.80	357	⇑eP	Pn	02 39 38.5	+1.0
BUS	Buena Vista	3.24	335	⇑eP	Pn	02 39 43.5	-0.1
BUS				eS	Sn	02 40 23.6	+0.9
LIO	Limon	3.44	349	eP	Pn	02 39 45.7	-0.8
URSC	Urasca	3.50	337	eP	Pn	02 39 47.2	-0.1
URSC				eS	Sn	02 40 29.6	+0.2
LCR2	La Lucha 2	3.51	333	⇑iP	Pn	02 39 47.2	-0.3
LCR2	La Lucha 2	3.51	333	⇑iP	Pn	02 39 47.3	-0.2
LCR2				eS	Sn	02 40 31.0	+1.3
ICR	Volcan Irazu	3.65	337	⇑eP	Pn	02 39 49.7	+0.2
ICR				eS	Sn	02 40 37.5	+4.2
ICR	Volcan Irazu	3.65	337	⇑eP	Pn	02 39 49.6	+0.1
ICR				eS	Sn	02 40 33.5	+0.3
LAJ	Bijagual	3.67	332	eP	Pn	02 39 49.9	+0.1
LAJ	Bijagual	3.67	332	⇓eP	Pn	02 39 49.8	0.0
UPA	Univ. de Panam	3.68	50	⇓iP	Pn	02 39 51.0	+1.1
UPA				eS	Sn	02 40 34.5	+0.5
SJS	Escuela Geolog	3.71	334	⇓eP	Pn	02 39 50.2	-0.1
SJS				eS	Sn	02 40 34.1	-0.6
SJS	Escuela Geolog	3.71	334	⇓eP	Pn	02 39 50.2	-0.1
SJS				eS	Sn	02 40 34.2	-0.5
PRS1	Puriscal	3.87	331	eP	Pn	02 39 50.7	-1.8
PRS1	Puriscal	3.87	331	⇑eP	Pn	02 39 51.0	-1.6
PRS1				eS	Sn	02 40 36.6	-2.1
CGA2	Cerro Gallo 2	3.97	329	eP	Pn	02 39 53.1	-0.9
CGA2	Cerro Gallo 2	3.97	329	⇓eP	Pn	02 39 53.3	-0.8
CGA2				eS	Sn	02 40 40.8	-0.6
VPS2	Volcan Poas 2	4.01	333	eP	Pn	02 39 55.0	+0.4
VPS2	Volcan Poas 2	4.01	333	eP	Pn	02 39 55.0	+0.4
TRTC	Tortuguero	4.16	342	eP	Pn	02 39 56.7	0.0
TRTC	Tortuguero	4.16	342	eP	Pn	02 39 56.5	-0.2
JCR	Jicaral	4.21	320	eP	Pn	02 39 55.6	-1.8
JCR	Jicaral	4.21	320	⇓eP	Pn	02 39 55.9	-1.6
FORC	Fortuna	4.46	330	eP	Pn	02 40 01.3	+0.3
FORC	Fortuna	4.46	330	eP	Pn	02 40 01.2	+0.2
JTS	JuntasAbangare	4.46	325	Pn	Pn	02 39 59.6	-1.4
	81nm,0.3s,baz=283,slow=21,SNR=250						
JTS				Sn	Sn	02 40 52.1	-1.7
	22nm,0.3s,baz=169,slow=23,SNR=5.2						
JTS				LR	LR	02 41 56.4	
	comp=Z,2µm,18.6s,baz=176,slow=42						
JTS	JuntasAbangare	4.46	325	ePn	Pn	02 39 59.4	-1.7
VCR	Vista de Mar	4.76	318	eP	Pn	02 40 04.0	-1.1
VCR	Vista de Mar	4.76	318	eP	Pn	02 40 03.3	-1.9
OTAV	Otavalo	7.44	148	ePn	Pn	02 40 39.7	-3.3
	14nm,0.8s						
ROSC	El Rosal	8.20	102	Pn	P	02 41 01.4	+7.9
	2.3nm,0.3s,baz=270,slow=19,SNR=4.1						
ROSC				LR	LR	02 44 29.6	
	comp=Z,438nm,18.5s,baz=180,slow=41						
CNCH	Conchagua	8.54	321	eP	P	02 40 58.8	+0.6
BLLM	Bellamira	8.91	320	eP	P	02 41 05.0	+1.4
VSM	San Miguel	8.93	320	eP	P	02 41 03.2	-0.5
SNVI	San Vicente	9.43	318	eP	P	02 41 12.1	+1.4
LCBS	La Ceiba	9.55	318	⇑eP	P	02 41 13.0	+0.5
LFRS	El Faro	9.59	317	eP	P	02 41 13.4	+0.4
BOQS	Boqueron	9.82	317	⇑eP	P	02 41 17.4	+1.3
SBLS	San Blas	10.12	316	⇑eP	P	02 41 22.3	+1.9
SNJE	San Jose	10.13	316	⇓iP	P	02 41 22.3	+1.9
RTR	El Retiro	10.18	316	⇓eP	P	02 41 23.3	+2.2
RBDL	Robledal	10.36	317	eP	P	02 41 24.5	+0.9
PAYG	Puerto Ayora	10.70	228	eP	P	02 41 26.8	-1.4
SDV	Santo Domingo	11.86	78	Pn	P	02 41 44.3	+0.2
	0.7nm,0.3s,baz=264,slow=6.8,SNR=12						
SDV				Sn	S	02 43 48.6	-9.0
	0.5nm,0.3s,baz=73,slow=17,SNR=3.0						
SDV	Santo Domingo	11.86	78	eP	P	02 41 43.9	-0.1

TEIG	Tepich	14.70	338	P	P	02 42 21.5	-0.3
	6.0nm,0.8s						
NNA	Nana	19.27	163	P	P	02 43 18.8	-0.6
	27nm,1.1s						
NNA				e		02 43 26.1	
SJG	San Juan	19.53	53	P	P	02 43 22.9	+0.6
	2.2nm,0.3s,baz=266,slow=5.8,SNR=9.8						
SJG				LR	LR	02 50 30.9	
	comp=Z,220nm,20.7s,baz=92,slow=36						
SJG	San Juan	19.53	53	eP	P	02 43 22.5	+0.2
	30nm,0.8s						
DWPF	Disney	21.41	2	eP	P	02 43 40.3	-1.8
	26nm,1.0s,mb4.5						
SAML	Samuel	24.59	129	eP	P	02 44 11.4	-2.1
	13nm,1.0s,mb4.4						
LPAZ	La Paz	26.76	148	P	P	02 44 35.1	+1.4
	1.6nm,0.6s,mb3.7,baz=342,slow=6.4,SNR=3.4						
LPAZ				LR	LR	02 55 18.7	
	comp=Z,488nm,21.6s,MS4.0,baz=156,slow=37						
LPAZ	La Paz	26.76	148	eP	P	02 44 34.8	+1.0
	3.7nm,0.9s,mb3.9						
JSC	Jenkinsville	27.57	2	eP	P	02 44 40.2	-0.8
PLAL	Pickwick Lake	28.73	350	eP	P	02 44 55.2	+3.7
	0.6nm,1.0s,mb3.3						
MIAR	Mount Ida	29.67	341	eP	P	02 44 58.6	-1.4
	8.7nm,1.2s,mb4.4						
TXAR	Lajitas Array	30.24	321	P	P	02 45 04.6	-0.5
	0.6nm,0.8s,mb3.4,baz=129,slow=8.0,SNR=4.3						
TXAR				LR	LR	02 58 34.1	
	comp=Z,164nm,18.1s,MS3.7,baz=150,slow=39						
LVC	Limon Verde	31.89	156	P	P	02 45 19.5	-0.1
	1.5nm,0.7s,mb3.9,baz=298,slow=12,SNR=2.9						
LVC	Limon Verde	31.89	156	eP	P	02 45 21.6	+1.9
	6.2nm,1.1s,mb4.3						
MNTX	Cornudas Mount	32.95	322	eP	P	02 45 28.4	-0.3
	4.0nm,0.9s,mb4.3						
ACSO	Alum Creek Sta	33.49	359	eP	P	02 45 31.3	-2.1
	17nm,1.0s,mb4.9						
ACSO				e		02 45 38.7	
KSU1	Kansas State U	34.81	340	P	P	02 45 42.9	-2.0
ANMO	Albuquerque	35.89	325	P	P	02 45 55.0	+0.9
	8.7nm,0.8s,mb4.7,baz=142,slow=8.0,SNR=33						
ANMO	Albuquerque	35.89	325	eP	P	02 45 55.0	+1.0
	13nm,1.0s,mb4.8						
SDCO	Great Sand Dun	37.45	329	eP	P	02 46 07.9	+0.7
	8.4nm,1.0s,mb4.5						
SADO	Sadowa	38.13	4	P	P	02 46 16.0	+3.2
	4.8nm,0.9s,mb4.2,baz=154,slow=1.4,SNR=2.3						
WUAZ	Wupatki	39.20	321	eP	P	02 46 24.1	+2.2
	73nm,0.6s						
PV01	Paradox Valley	39.36	327	eP	P	02 46 23.0	-0.2
PV10	Paradox Valley	39.79	327	eP	P	02 46 27.7	+1.0
BDFB	Brasilia	40.58	123	P	P	02 46 34.3	+0.8
	3.6nm,0.8s,mb4.0,baz=290,slow=7.7,SNR=4.0						
CPUP	Villa Florida	40.77	144	P	P	02 46 29.0	-5.9
	0.1nm,0.4s,baz=227,slow=13,SNR=2.3						
SRU	San Rafael	41.13	326	eP	P	02 46 38.8	+1.1
TMUT	Trail Mountain	41.64	326	eP	P	02 46 41.8	-0.2
MSU	Marysvale	41.66	324	eP	P	02 46 43.8	+1.7
MVU	Marysvale	41.67	324	eP	P	02 46 43.7	+1.5
	4.9nm,0.9s,mb4.1						
DAU	Daniels Canyon	42.44	327	eP	P	02 46 50.1	+1.6
JLU	Jordanelle	42.68	327	eP	P	02 46 51.7	+1.3
TCUT	Toone Canyon	43.02	327	eP	P	02 46 54.7	+1.4
PDAR	Pinedale Array	43.28	331	P	P	02 46 55.7	+0.4
	2.0nm,1.1s,mb3.8,baz=133,slow=10.0,SNR=6.3						
PDAR				LR	LR	03 05 48.8	
	comp=Z,135nm,19.4s,MS3.9,baz=296,slow=37						
HWUT	Hardware Ranch	43.45	328	eP	P	02 46 57.0	+0.3
	16nm,0.8s,mb4.8						
SNOW	Snow King Moun	44.38	330	eP	P	02 47 02.6	-1.7
TPAW	Teton Pass	44.50	330	eP	P	02 47 04.5	-0.7
MOOW	Moose Ponds	44.59	331	eP	P	02 47 06.0	+0.1
IMW	Indian Meadow	44.79	331	eP	P	02 47 06.1	-1.5
ULM	Lac du Bonnet	44.95	348	P	P	02 47 06.0	-2.7
	3.1nm,0.8s,mb4.2,baz=171,slow=9.5,SNR=6.2						
NVAR	Mina Array Bea	45.37	320	P	P	02 47 13.5	+1.3
	4.0nm,0.7s,mb4.3,baz=123,slow=7.8,SNR=28						
NVAR	Mina Array Bea	45.37	320	P	P	02 47 13.5	+1.3
QLMT	Earthquake Lak	45.72	331	eP	P	02 47 16.6	+1.7
BMN	Battle Mountai	45.88	323	eP	P	02 47 17.1	+0.8
	17nm,1.0s,mb4.9						
MCMT	McKenzie Canyo	46.41	330	eP	P	02 47 21.3	+0.9
WVOR	Wild Horse Val	47.95	324	eP	P	02 47 32.6	0.0
	11nm,1.0s,mb4.8						
PLCA	Paso Flores	48.34	168	P	P	02 47 34.4	-1.2
	0.8nm,0.5s,mb4.0,baz=327,slow=8.6,SNR=3.6						
SCHQ	Schefferville	49.69	12	P	P	02 47 45.4	-0.4
	1.9nm,0.9s,mb4.1,baz=286,slow=16,SNR=2.7						
SCHQ	Schefferville	49.69	12	eP	P	02 47 45.2	-0.6
	3.6nm,1.0s,mb4.4						
WALA	Waterton Lakes	49.98	333	eP	P	02 47 44.7	-3.5
	4.6nm,0.8s,mb4.6						
YBH	Yreka Blue Hor	50.02	321	P	P	02 47 47.3	-1.2
	1.7nm,1.0s,mb4.0,baz=23,slow=7.5,SNR=3.3						
YKA	Yellowknife Ar	60.57	343	P	P	02 49 02.9	-1.7
	1.7nm,0.8s,mb4.3,baz=138,slow=6.8,SNR=26						
YKA	Yellowknife Ar	60.57	343	P	P	02 49 02.9	-1.8
DLBC	Dease Lake	63.31	334	eP	P	02 49 23.1	+0.1
RES	Resolute Bay	68.42	356	eP	P	02 49 53.6	-2.0
	2.5nm,1.1s,mb4.2						
INK	Inuvik	70.26	342	eP	P	02 50 06.5	-0.4
	4.4nm,0.9s,mb4.4						
SUMG	Summit	71.07	13	P	P	02 50 11.8	+0.1
	5.8nm,0.9s,mb4.5						
ILAR	Eielson Array	73.36	336	P	P	02 50 25.3	-0.1
	2.7nm,0.8s,mb4.3,baz=109,slow=4.0,SNR=23						
MCK	McKinley	73.85	335	P	P	02 50 28.6	+0.3
	3.3nm,0.9s,mb4.3						
IMA	Indian Mountai	76.46	337	eP	P	02 50 43.0	-0.1
	21nm,1.0s,mb5.0						
ESLA	Sonseca Array	76.91	51	P	P	02 50 48.3	+2.1
	1.4nm,1.0s,mb3.9						
VNA3	Neumayer Olymp	90.72	162	⇑iP	P	02 51 56.9	+1.2
VNA2	Neumayer--Watz	91.33	161	⇑iP	P	02 51 57.1	-1.5
CN2	Changchun	123.88	336	ePKP	PKPdf	02 57 47.8	-5.6
SSE	Sheshan	136.26	330	ePKP	PKPdf	02 58 15.3	-1.9
NJ2	Nanjing	136.56	333	ePKP	PKPdf	02 58 11.3	-6.3
LZH	Lanzhou	137.14	353	ePKP	PKPdf	02 58 16.5	-2.1
LZH				XPKP		02 58 21.3	
LZH				LR	LR		
	comp=N,231nm,18.0s						
LZH				LR	LR		
	comp=Z,347nm,20.3s,MS5.1						
ASAR	Alice Springs	141.25	240	PKhKP		02 58 22.8	
	comp=Z,0.6nm,0.8s,baz=110,slow=3.3,SNR=4.0						
WRA	Warramunga Arr	141.99	246	PKP	PKPdf	02 58 27.5	-0.4
	comp=Z,1.1nm,1.0s,baz=108,slow=4.6,SNR=5.0						

IGQ 17 02:54:16.4, 0.60S×81.37W, h12km±11km, mb4.4, 6C-4D, Error ellipse: s-maj=10.8km s-min=5.3km az=177.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.93	118	⇑P	Pb	02 54 32.2	-1.8
SALI	Salinas	1.62	167	P	Pn	02 54 47.3	+2.4
JUA2	San Juan 2	2.79	82	⇑P	Pn	02 55 02.7	+1.0
JUA2				S	Sn	02 55 34.0	-1.6
PINO	Pino	2.79	81	⇑P	Pn	02 55 02.4	+0.6
TERV	Terraza Guagua	2.79	81	⇓P	Pn	02 55 02.8	+1.0
YANA	Yana	2.84	80	⇑P	Pn	02 55 02.9	+0.5
YANA				S	Sn	02 55 36.2	-0.6
IGUA	Igualata	2.87	108	⇓P	Pn	02 55 04.1	+1.3
IGUA				S	Sn	02 55 38.8	+1.3
NAS1	Nasa	2.89	91	⇑P	Pn	02 55 05.0	+1.9
NAS1				S	Sn	02 55 41.3	+3.2
VC1	Cotopaxi 1	2.96	91	⇑P	Pn	02 55 06.2	+2.0
VC1				S	Sn	02 55 43.7	+3.7
TAMB	Tambo	3.00	92	⇓P	Pn	02 55 06.7	+2.0
PISA	Pisayambo	3.02	99	P	Pn	02 55 07.3	+2.4
ARRY	Arrayan	3.05	107	P	Pn	02 55 06.5	+1.2
ULBA	Ulba	3.08	106	P	Pn	02 55 07.7	+1.9
ULBA				S	Sn	02 55 42.4	-0.5
COTA	Cotacachi	3.17	73	P	Pn	02 55 08.6	+1.5
ANTI	Antisana	3.21	87	P	Pn	02 55 09.7	+2.1
CAYR	Refugio Cayamb	3.42	80	P	Pn	02 55 13.7	+3.0
CAYR				S	Sn	02 55 53.7	+2.3
CAYA	Cayambe	3.44	79	⇓P	Pn	02 55 13.7	+2.7
CAYA				S	Sn	02 55 54.1	+1.9
ECEN	Cerro Negro	3.68	67	P	Pn	02 55 17.4	+3.0

WEL 17 02:58:51.2±0.3, 35.70S×177.97E, h150km±6km, ML4.2/4, Error ellipse: s-maj=7.4km s-min=3.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.88	172	PN	P	02 59 25.1	-0.2
MXZ				SN	S	02 59 51.3	-0.2
PUZ	Puketiti	2.38	175	PN	P	02 59 31.0	-0.4
PUZ				SN	S	03 00 00.2	-2.0
URZ	Urewera	2.65	195	ePN	P	02 59 34.8	0.0
URZ				SN	S	03 00 08.7	+0.5
MWZ	Matawai	2.66	188	PN	P	02 59 34.7	-0.2
MWZ				SN	S	03 00 07.7	-0.6
KNZ	Kokohu	3.32	184	ePN	P	02 59 44.3	+0.8
KNZ				SN	S	03 00 21.6	-2.0
BKZ	Black Stump Fm	3.66	198	PN	P	02 59 47.8	-0.1
BFZ	Birch Farm	5.16	195	ePN	P	03 00 04.4	-3.2
BFZ				SN	S	03 01 02.6	-4.0
MRZ	Mangatainoka R	5.30	200	ePN	P	03 00 06.0	-3.5
MRZ				SN	S	03 01 04.5	-5.6
KIW	Kapiti Island	5.69	204	ePN	P	03 00 11.4	-3.2
MTW	Mount Morrison	5.79	199	ePN	P	03 00 12.5	-3.4
THZ	Tophouse	7.23	212	ePN	P	03 00 31.8	-3.7
THZ				SN	S	03 01 52.9	-3.6
MQZ	McQueen's Vall	8.98	206	SN	S	03 02 28.2	-10

MOS 17 03:12:41.7±0.8, 10.77S×76.21W, h82km, mb5.5/17, Error ellipse: s-maj=31.6km s-min=8.0km az=117.0

GUC 17 03:12:45.8±0.0, 11.02S×76.08W, h124km, mb5.4(NEIC), MW5.5(NEIC), MW5.4(HRVD)

BJI 17 03:12:46.8, 10.90S×76.10W, h126km, mB5.3

HRVD 17 03:12:46.8±0.2, 10.89S×76.30W, h124km±1km, MW5.4/70, Centroid moment Tensor Solution. LP body waves: s50,c82;Mantle waves: s70,c130; Half duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44±.03; $M_{\theta\theta}$-0.52±.03; $M_{\phi\phi}$0.96±.04; $M_{r\theta}$-0.67±.02; $M_{\theta\phi}$-1.24±.03; $M_{\phi r}$-0.03±.03; Best double couple: $M_0$1.634×10^{17} NP1: ϕ_s12°, δ63°, λ-15°. NP2: ϕ_s109°, δ76°, λ-153°. Principal axes: T 1.711, Plg9°, Azm239°; N -.154, Plg60°, Azm134°; P -1.557, Plg29°, Azm333°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC 17 03:12:46.9±0.2, 10.93S×76.10W, mb5.3/70, MW5.4 Error ellipse: s-maj=7.0km s-min=3.8km az=49.0, Moment Tensor Solution. s4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.31; $M_{\theta\theta}$-1.45; $M_{\phi\phi}$1.76; $M_{r\theta}$-0.69; $M_{\theta\phi}$-0.12; $M_{\phi r}$0.05; Best double couple: $M_0$1.8×10^{17} NP1: ϕ_s40°, δ71°, λ-17°. NP2: ϕ_s136°, δ74°, λ-160°. Principal axes: T 1.76, Plg2°, Azm267°; N .01, Plg65°, Azm173°; P -1.78, Plg25°, Azm359°;

NEIC Felt [III] at Lima.

IDC 17 03:12:47.3±0.5, 10.91S×76.14W, h126km±3km, mb4.5/21, mb1 4.6/24, mb1mx4.6/26, mbtmp4.9/24, MS4.2/8, Ms1 4.2/8, ms1mx3.8/25 Error ellipse: s-maj=15.3km s-min=9.2km az=71.0

ISC 17 03:12:45.0±0.2, 10.95S±0.04×76.17W±0.05, h125km, h125km±1.5km: pP-P, n274, σ1s04/226, mb5.2/88, 4C-9D, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	1.22	212	Pn	P	03 13 07.5	-2.5
	72µm,0.5s						
NNA	Nana	1.22	212	ePn	P	03 13 07.3	-2.7
NNA				eSn	S	03 13 24.5	-4.3
ARE	Arequipa	7.12	141	eP	P	03 14 27.0	-0.9
ARE				i		03 14 32.4	
LPAZ	La Paz	9.45	125	eP	P	03 14 58.4	-0.7
LPAZ	La Paz	9.45	125	P	P	03 14 58.5	-0.5
	1.6nm,0.3s,baz=312,slow=11,SNR=25						
OTAV	Otavalo	11.34	348	eP	P	03 15 23.6	-0.7
SAML	Samuel	12.95	82	⇑iP	P	03 15 42.1	-3.3
LVC	Limon Verde	13.52	150	P	P	03 15 52.6	-0.1
	0.8nm,0.3s,baz=318,slow=8.3,SNR=12						
LVC				LR	LR	03 21 59.3	
	comp=Z,234nm,21.3s,baz=321,slow=41						
LVC	Limon Verde	13.52	150	eP	P	03 15 49.8	-2.9
	101nm,1.0s						
LVC				e		03 16 00.2	
ROSC	El Rosal	15.81	7	P	P	03 16 23.1	+1.2
	5.6nm,0.3s,baz=90,slow=0.4,SNR=54						
ROSC				LR	LR	03 22 13.1	
	comp=Z,775nm,18.1s,baz=78,slow=36						
PAYG	Puerto Ayora	17.34	305	eP	P	03 16 39.3	-1.7
	358nm,1.6s						
SDV	Santo Domingo	20.46	16	P	P	03 17 15.6	+0.9
	104nm,0.9s,baz=224,slow=9.7,SNR=79						
SDV				sP		03 17 52.9	
	65nm,0.8s,baz=211,slow=8.7,SNR=2.9						
SDV				S	S	03 20 56.0	+4.4
	27nm,0.9s,baz=310,slow=14,SNR=2.5						
SDV	Santo Domingo	20.46	16	eP	P	03 17 15.1	+0.4
	190nm,1.0s						
SDV				eS	S	03 20 54.0	+2.3
ACR	Cerro Adams	20.68	340	eP	P	03 17 18.0	+1.1
BUS	Buena Vista	21.72	339	eP	P	03 17 29.2	+1.9
LCR2	La Lucha 2	21.98	339	eP	P	03 17 31.7	+1.9
LAJ	Bijagual	22.14	339	eP	P	03 17 34.2	+2.9
ICR	Volcan Irazu	22.14	340	eP	P	03 17 31.8	+0.4
PRS1	Puriscal	22.32	338	eP	P	03 17 35.1	+2.1
JCR	Jicaral	22.49	336	eP	P	03 17 38.3	+3.5
TRTC	Tortuguero	22.66	340	eP	P	03 17 39.1	+2.6
JTS	JuntasAbangare	22.84	337	P	P	03 17 40.5	+2.3
	18nm,0.7s,mb4.5,baz=156,slow=3.9,SNR=17						
JTS	JuntasAbangare	22.84	337	eP	P	03 17 38.8	+0.6
	569nm,1.9s,mb5.6						
FCH	Farellones	22.92	167	eP	P	03 17 40.1	+1.3
CLCH	Cerro Calan	22.93	168	eP	P	03 17 40.9	+1.9
CPUP	Villa Florida	23.46	133	P	P	03 17 44.7	+0.5
	0.1nm,0.4s,baz=223,slow=13,SNR=2.7						
BDFB	Brasilia	27.79	103	P	P	03 18 23.9	-0.7
	5.1nm,0.9s,baz=278,slow=6.1,SNR=6.7						
BDFB				pP	pP	03 18 52.6	+1.3
	16nm,1.1s,baz=280,slow=11,SNR=4.8						
BDFB				LR	LR	03 30 48.8	
	comp=Z,923nm,21.3s,baz=140,slow=39						
BAO	Brasilia Array	27.81	103	eP	P	03 18 25.1	+0.3
PLCA	Paso Flores	30.08	171	P	P	03 18 44.1	-0.7
	2.8nm,0.6s,baz=343,slow=12,SNR=13						
PLCA				pP	pP	03 19 11.9	0.0
	3.7nm,0.8s,baz=344,slow=11,SNR=4.2						
PLCA				PcP	PcP	03 21 44.6	+1.1
	2.0nm,0.7s,baz=353,slow=3.8,SNR=3.3						
PLCA	Paso Flores	30.08	171	eP	P	03 18 43.3	-1.5
	52nm,1.7s,mb4.9						
PLCA				e	pP	03 19 11.0	-0.8
SJG	San Juan	30.52	19	P	P	03 18 48.6	-0.4
	22nm,0.6s,mb5.1,baz=162,slow=5.5,SNR=11						
SJG	San Juan	30.52	19	eP	P	03 18 47.8	-1.2
	37nm,0.7s,mb5.2						
HUIG	Huatulco	33.08	323	eP	P	03 19 12.1	+0.9
TEIG	Tepich	33.19	339	eP	P	03 19 11.3	-0.8
	82nm,1.0s,mb5.5						
TUIG	Tuzandepetl	33.97	328	i P	P	03 19 19.2	+0.5
VHO	Vista Hermosa	34.47	324	i P	P	03 19 24.7	+1.6
OXX	Oaxaca	34.47	324	i P	P	03 19 25.0	+1.9
IIB	San Bernardino	36.90	323	eP	P	03 19 44.0	+0.5
PPM	Popocatepetl	37.14	323	eP	P	03 19 48.0	+2.4
UNM	Universidad Na	37.67	323	eP	P	03 19 53.0	+3.0
DWPF	Disney	39.16	353	eP	P	03 20 01.8	-0.5
	70nm,1.2s,mb5.4						
RCBR	Riachuelo	40.14	86	P	P	03 20 08.2	-2.2
	13nm,1.0s,mb4.7						
SFJM	Santa Fe	40.92	320	i P	P	03 20 19.0	+2.2
HBF	Harts Bluff	43.82	355	P	P	03 20 41.6	+1.2
HBF	Harts Bluff	43.82	355	eP	P	03 20 39.4	-1.0
CSU	Charleston Sou	43.85	355	eP	P	03 20 41.2	+0.7
BBSR	BB Station	44.45	14	P	P	03 20 45.0	-0.4
	30nm,1.2s,mb4.9						
GOGA	Godfrey	44.66	351	P	P	03 20 46.9	-0.2
GOGA				pmax	pmax		
	comp=Z,130nm,1.5s,mb5.4						
GOGA	Godfrey	44.66	351	eP	P	03 20 46.2	-0.8
	comp=Z,126nm,1.6s,mb5.4						
JSC	Jenkinsville	45.24	354	P	P	03 20 51.7	0.0
JSC	Jenkinsville	45.24	354	eP	P	03 20 50.8	-0.9
NATX	Nacogdoches	46.01	338	eP	P	03 20 58.4	+0.6
	comp=Z,445nm,1.3s,mb6.0						
NATX				e	pP	03 21 28.2	+1.6
JCT	Junction City	47.04	332	P	P	03 21 06.8	+0.9
JCT				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.2						
JCT	Junction City	47.04	332	eP	P	03 21 06.1	+0.2
	comp=Z,59nm,1.1s,mb5.2						
UALR	University of	47.99	342	eP	P	03 21 12.1	-1.2
	comp=Z,165nm,1.4s,mb5.7						
TXAR	Lajitas Array	48.03	327	P	P	03 21 14.0	+0.3
	comp=Z,13nm,0.7s,mb4.9,baz=146,slow=9.0,SNR=104						
TXAR				PcP	PcP	03 22 41.4	+1.3
	comp=Z,0.9nm,0.4s,baz=134,slow=6.8,SNR=3.7						
TXAR	Lajitas Array	48.03	327	P	P	03 21 14.0	+0.3
TXAR				PcP	PcP	03 22 41.4	+1.3
WVT	Waverly	48.10	347	eP	P	03 21 10.9	-3.2
	comp=Z,100nm,1.5s,mb5.4						
ELN	Prospectdale	48.11	355	eP	P	03 21 14.0	-0.2
MIAR	Mount Ida	48.16	341	P	P	03 21 14.6	0.0
MIAR				pmax	pmax		
	comp=Z,170nm,1.3s,mb5.7						
MIAR	Mount Ida	48.16	341	eP	P	03 21 13.9	-0.7
	comp=Z,175nm,1.3s,mb5.7						
FWV	Forest Hill	48.47	355	eP	P	03 21 16.3	-0.6
WCI	Wyandotte Cave	49.83	350	P	P	03 21 25.8	-1.6
WCI				e	pP	03 21 54.3	-2.2
WCI				pmax	pmax		
	comp=Z,190nm,1.8s,mb5.7						
WCI	Wyandotte Cave	49.83	350	eP	P	03 21 25.3	-2.0
	comp=Z,78nm,1.2s,mb5.5						
WCI				epP	pP	03 21 52.8	-3.7
USIN	University of	49.83	348	eP	P	03 21 25.5	-1.9
	comp=Z,103nm,1.2s,mb5.6						
FVM	French Village	50.47	345	P	P	03 21 31.5	-0.8
FVM				pmax	pmax		
	comp=Z,120nm,1.3s,mb5.7						
FVM	French Village	50.47	345	eP	P	03 21 31.3	-1.0
	comp=Z,134nm,1.3s,mb5.7						
FVM				epP	pP	03 22 01.0	-0.4
CCM	Cathedral Cave	50.75	345	eP	P	03 21 33.0	-1.3
	comp=Z,62nm,1.3s,mb5.5						
BLO	Bloomington	50.78	350	P	P	03 21 33.3	-1.3
BLO				e	pP	03 22 02.1	-1.8
BLO				pmax	pmax		
	comp=Z,310nm,1.5s,mb6.1						
BLO	Bloomington	50.78	350	eP	P	03 21 32.0	-2.6
	comp=Z,255nm,1.4s,mb6.1						
BLO				epP	pP	03 21 59.6	-4.3
MNTX	Cornudas Mount	50.80	328	eP	P	03 21 33.6	-1.2
	comp=Z,243nm,1.6s,mb6.0						
SLM	Saint Louis	51.05	346	eP	P	03 21 35.5	-1.1
SLM				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.6						
SLM	Saint Louis	51.05	346	eP	P	03 21 35.5	-1.2
	comp=Z,139nm,1.4s,mb5.8						
SLM				epP	pP	03 22 01.2	-4.6
AMTX	Amarillo	51.59	333	eP	P	03 21 39.3	-1.5
	comp=Z,85nm,1.2s,mb5.7						
BINY	Binghamton	52.89	0	eP	P	03 21 49.9	-0.4
	comp=Z,116nm,1.2s,mb5.8						
ERPA	Erie	52.92	356	⇓eP	P	03 21 49.2	-1.4
	comp=Z,97nm,1.3s,mb5.7						
ERPA				epP	pP	03 22 14.2	-5.8
ERPA				esP	sP	03 22 32.2	-1.6
KSU1	Kansas State U	53.31	340	eP	P	03 21 49.4	-4.1
KSU1				esP	sP	03 22 36.8	+0.1
ANMO	Albuquerque	53.92	329	d iP	P	03 21 58.1	+0.1
ANMO	Albuquerque	53.92	329	P	P	03 21 58.1	+0.2
	comp=Z,66nm,1.1s,mb5.6						
ANMO				pP	pP	03 22 29.1	+1.6
	comp=Z,6.7nm,1.0s,baz=127,slow=11,SNR=1.5						
ANMO	Albuquerque	53.92	329	eP	P	03 21 57.8	-0.2
	comp=Z,151nm,1.3s,mb5.9						
CBKS	Cedar Bluff	54.17	337	P	P	03 21 59.4	-0.3
CBKS				pmax	pmax		
	comp=Z,180nm,1.3s,mb5.9						
CBKS	Cedar Bluff	54.17	337	eP	P	03 21 59.0	-0.7
	comp=Z,119nm,1.0s,mb5.9						
CBKS				epP	pP	03 22 28.3	-1.0
CBKS				esP	sP	03 22 40.4	-2.7
TUC	Tucson	54.27	324	P	P	03 22 00.6	0.0
TUC				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.4						
TUC	Tucson	54.27	324	eP	P	03 22 00.3	-0.2
	comp=Z,48nm,1.1s,mb5.4						
MIV	Mineville/With	54.81	2	eP	P	03 22 04.0	-0.4
SADO	Sadowa	55.52	357	P	P	03 22 07.7	-1.8
	comp=Z,26nm,0.9s,mb5.2,baz=203,slow=6.2,SNR=16						
SDCO	Great Sand Dun	55.69	332	eP	P	03 22 10.5	-0.3
	comp=Z,208nm,1.2s,mb6.0						
SDCO				epP	pP	03 22 40.9	+0.4
SDCO				esP	sP	03 22 56.1	+1.8
MSNY	Massena	55.70	1	eP	P	03 22 10.4	-0.4
MSNY				epP	pP	03 22 35.2	-5.3
ISCO	Idaho Springs	57.41	333	eP	P	03 22 22.6	-0.4
	comp=Z,55nm,1.1s,mb5.5						
PV01	Paradox Valley	57.46	330	eP	P	03 22 23.3	0.0
PV10	Paradox Valley	57.88	330	eP	P	03 22 25.4	-0.9
BAR	Barrett	58.10	320	eP	P	03 22 27.1	-0.8
PHWY	Pilot Hill	58.58	334	eP	P	03 22 30.9	-0.3
PFO	Pinyon Flat Ob	58.58	321	P	P	03 22 31.5	+0.3
PFO				pmax	pmax		
	comp=Z,110nm,1.7s,mb5.6						
PFO	Pinyon Flat Ob	58.58	321	eP	P	03 22 31.6	+0.3
	comp=Z,77nm,1.3s,mb5.6						
LDFC	Landfair	58.77	323	eP	P	03 22 33.4	+0.9
NEN	Nelson	59.01	324	eP	P	03 22 33.8	-0.3
SRU	San Rafael	59.19	329	P	P	03 22 35.2	-0.1
SRU	San Rafael	59.19	329	eP	P	03 22 34.9	-0.5
MSU	Marysvale	59.59	328	P	P	03 22 38.5	+0.4
MSU	Marysvale	59.59	328	eP	P	03 22 38.2	+0.1
MVU	Marysvale	59.60	328	eP	P	03 22 38.3	+0.1
	comp=Z,126nm,1.5s,mb5.7						
MVU				epP	pP	03 23 01.6	-6.7
TMUT	Trail Mountain	59.67	329	eP	P	03 22 38.5	-0.1
ARUT	Antelope Range	59.73	326	P	P	03 22 39.8	+0.7
ARUT	Antelope Range	59.73	326	eP	P	03 22 39.5	+0.4
MWC	Mount Wilson	59.99	320	P	P	03 22 41.4	+0.5
MWC	Mount Wilson	59.99	320	eP	P	03 22 41.0	+0.1
MPU	Maple Canyon	60.43	329	eP	P	03 22 42.9	-1.0
NLU	North Lily Min	60.61	329	eP	P	03 22 44.8	-0.3
JLU	Jordanelle	60.78	330	eP	P	03 22 46.0	-0.2
JLU				epP	pP	03 23 17.4	+0.9
NOQ	North Oquirrh	61.16	329	eP	P	03 22 48.6	-0.1
TCUT	Toone Canyon	61.16	330	eP	P	03 22 48.2	-0.5
DUG	Dugway	61.17	329	P	P	03 22 49.2	+0.4
DUG				pmax	pmax		
	comp=Z,130nm,1.4s,mb5.8						
DUG	Dugway	61.17	329	eP	P	03 22 48.8	0.0
	comp=Z,132nm,1.3s,mb5.8						
DUG				epP	pP	03 23 20.2	+1.2
TRCR	Troy Canyon	61.32	325	eP	P	03 22 50.1	+0.3
PDAR	Pinedale Array	61.56	333	P	P	03 22 50.5	-0.9
	comp=Z,5.3nm,0.5s,mb4.8,baz=143,slow=7.4,SNR=64						
PDAR				pP	pP	03 23 22.0	+0.3
	comp=Z,2.1nm,0.7s,baz=127,slow=7.5,SNR=2.2						
PDAR				LR	LR	03 50 03.8	
	comp=Z,100nm,21.7s,baz=294,slow=36						
HWUT	Hardware Ranch	61.61	330	eP	P	03 22 51.1	-0.7
	comp=Z,41nm,0.9s,mb5.5						
HWUT				epP	pP	03 23 22.4	+0.4
SPUT	South Promonto	61.81	330	eP	P	03 22 52.6	-0.5
TPH	Tonopah	62.06	324	P	P	03 22 55.1	+0.3
TPH				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.5						
TPH	Tonopah	62.06	324	eP	P	03 22 55.0	+0.2
	comp=Z,40nm,1.0s,mb5.4						
AHID	Auburn Hatcher	62.27	332	eP	P	03 22 55.5	-0.7
	comp=Z,63nm,1.3s,mb5.5						
HVU	Hansel Valley	62.33	330	P	P	03 22 56.0	-0.6
HVU	Hansel Valley	62.33	330	eP	P	03 22 55.8	-0.7
HVU				epP	pP	03 23 27.8	+0.9
SNOW	Snow King Moun	62.65	332	eP	P	03 22 58.3	-0.4
LOHW	Long Hollow	62.70	332	eP	P	03 22 58.1	-0.9
WUWY	Wally Ulrich	62.71	332	eP	P	03 22 58.4	-0.6
TPAW	Teton Pass	62.77	332	eP	P	03 22 58.8	-0.6
TPAW				ePP	PP	03 25 19.9	-0.6
MNV	Mina	62.84	324	P	P	03 23 00.3	+0.3
MNV				pmax	pmax		
	comp=Z,47nm,1.3s,mb5.3						
MNV	Mina	62.84	324	eP	P	03 22 59.1	-0.9
	comp=Z,45nm,1.2s,mb5.3						
MOOW	Moose Ponds	62.87	332	eP	P	03 22 59.2	-0.9
NVAR	Mina Array Bea	62.92	324	P	P	03 23 00.9	+0.4
	comp=Z,14nm,0.9s,mb4.9,baz=131,slow=7.5,SNR=78						
NVAR				pP	pP	03 23 33.5	+2.6
	comp=Z,4.0nm,0.8s,baz=138,slow=8.3,SNR=3.2						
TAOE	Nuku Hiva Isla	62.95	266	eLR	LR	03 41 33.0	

IMW	Indian Meadow	63.08	332	eP	P	03 23 01.0	-0.5
IMW				ePcP	PcP	03 23 36.5	-1.3
ULM	Lac du Bonnet	63.33	346	P	P	03 23 01.6	-1.4
	comp=Z,49nm,1.0s,mb5.4,baz=158,slow=6.6,SNR=57						
ULM				pP	pP	03 23 32.1	-1.4
	comp=Z,17nm,0.8s,baz=149,slow=8.0,SNR=5.3						
ULM	Lac du Bonnet	63.33	346	eP	P	03 23 01.3	-1.7
	comp=Z,97nm,1.0s,mb5.7						
ULM				epP	pP	03 23 31.3	-2.1
LKWY	Lake	63.36	333	P	P	03 23 04.4	+1.1
LKWY				pmax	pmax		
	comp=Z,80nm,1.5s,mb5.4						
LKWY	Lake	63.36	333	eP	P	03 23 04.0	+0.7
	comp=Z,60nm,1.4s,mb5.3						
LAO	LASA Array	63.37	337	eP	P	03 23 02.4	-1.0
	comp=Z,71nm,1.4s,mb5.4						
YFT	Old Faithful	63.46	333	eP	P	03 23 04.5	+0.6
YNR	Norris Junctio	63.60	333	eP	P	03 23 03.9	-1.0
BMN	Battle Mountai	63.68	326	P	P	03 23 06.1	+0.6
BMN				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
BMN	Battle Mountai	63.68	326	eP	P	03 23 05.8	+0.3
	comp=Z,27nm,1.0s,mb5.0						
YMR	Madison River	63.69	333	eP	P	03 23 05.8	+0.3
CMB	Columbia Colle	63.89	322	P	P	03 23 06.8	-0.1
CMB				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.9						
CMB	Columbia Colle	63.89	322	eP	P	03 23 05.6	-1.3
	comp=Z,40nm,1.3s,mb5.1						
DGMT	Dagmar	64.15	340	eP	P	03 23 08.1	-0.3
	comp=Z,110nm,1.2s,mb5.6						
DGMT				ePcP	PcP	03 23 42.2	+0.1
WCN	Washoe City	64.35	324	P	P	03 23 10.8	+0.9
WCN				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.2						
WCN	Washoe City	64.35	324	eP	P	03 23 10.2	+0.3
	comp=Z,66nm,1.3s,mb5.3						
PAHR	Pah Rah Range	64.40	324	eP	P	03 23 10.9	+0.7
	comp=Z,27nm,0.9s,mb5.1						
HLID	Hailey	64.46	330	eP	P	03 23 10.4	-0.1
	comp=Z,16nm,0.8s,mb4.9						
WVOR	Wild Horse Val	65.83	327	P	P	03 23 19.5	+0.1
WVOR				pmax	pmax		
	comp=Z,93nm,1.8s,mb5.3						
WVOR	Wild Horse Val	65.83	327	eP	P	03 23 18.7	-0.6
	comp=Z,33nm,1.3s,mb5.0						
WVOR				esP	sP	03 24 01.5	-2.2
SCHQ	Schefferville	66.00	6	P	P	03 23 19.4	-0.8
	comp=Z,14nm,1.0s,mb4.8,baz=188,slow=4.5,SNR=18						
SCHQ	Schefferville	66.00	6	eP	P	03 23 19.2	-1.0
	comp=Z,51nm,1.2s,mb5.2						
SCHQ				epP	pP	03 23 42.5	-8.3
CHMT	Chamberlain Mo	66.44	333	eP	P	03 23 22.2	-0.9
LTIM	Timbered Crate	66.58	324	P	P	03 23 24.2	+0.1
BMO	Blue Mountains	66.83	329	eP	P	03 23 24.6	-1.0
	comp=Z,30nm,1.4s,mb4.9						
YBH	Yreka Blue Hor	67.64	324	P	P	03 23 29.5	-1.2
YBH				pmax	pmax		
	comp=Z,21nm,1.0s						
YBH	Yreka Blue Hor	67.64	324	eP	P	03 23 29.4	-1.4
	comp=Z,14nm,0.7s,mb4.9						
KHMM	Horse Mountain	67.69	323	eP	P	03 23 31.8	+0.7
VIPM	Ingram Point	68.30	327	P	P	03 23 35.5	+0.8
HUMO	Hull Mountain	68.33	325	eP	P	03 23 34.1	-0.9
	comp=Z,15nm,1.1s,mb4.7						
WALA	Waterton Lakes	68.36	334	eP	P	03 23 34.7	-0.4
	comp=Z,26nm,0.9s,mb5.1						
FRIS	Frissel Point	68.90	326	P	P	03 23 38.8	+0.4
FFC	Flin Flon	68.95	344	P	P	03 23 37.7	-0.9
	comp=Z,93nm,1.2s,mb5.5,SNR=12						
NEW	Newport	69.19	332	P	P	03 23 40.0	-0.2
	comp=Z,15nm,1.0s,mb4.8,baz=143,slow=5.8,SNR=20						
OD2	Odessa Site #2	69.32	331	P	P	03 23 41.5	+0.5
TBI	Tubuai	70.49	249	eS	S	03 32 40.9	-9.1
TBI				eLR	LR	03 44 43.2	
	comp=Z,252nm,35.0s						
FCC	Fort Churchill	70.98	350⇓	eP	P	03 23 49.9	-0.9
FCC				e	pP	03 24 21.0	-0.8
FCC				pmax	pmax		
	comp=Z,67nm,1.2s,mb5.3						
FCC	Fort Churchill	70.98	350⇓	eP	P	03 23 49.9	-0.9
	comp=Z,66nm,1.2s,mb5.3						
PPT	Papeete	71.08	255	eS	S	03 32 47.4	-9.4
PPT				eLR	LR	03 45 08.6	
	comp=Z,149nm,22.5s						
JCW	Jim Creek	71.44	330	P	P	03 23 53.6	-0.1
OSR	Olympics--Salm	72.02	328	P	P	03 23 58.4	+1.2
SNB	Saturna Island	72.45	330	P	P	03 24 00.9	+1.3
DBIC	Dimbokro	73.10	80	P	P	03 24 04.6	+0.4
	comp=Z,6.2nm,0.9s,mb4.4,baz=192,slow=8.0,SNR=8.2						
DBIC				pP	pP	03 24 33.1	-2.3
	comp=Z,22nm,0.9s,baz=240,slow=7.0,SNR=8.8						
DBIC				sP	sP	03 24 45.9	-3.1
	comp=Z,6.0nm,0.7s,baz=248,slow=8.1,SNR=2.3						
DBIC				LR	LR	03 54 03.4	
	comp=Z,284nm,19.8s,baz=230,slow=34						
DBIC	Dimbokro	73.10	80	eP	P	03 24 04.0	-0.2
	comp=Z,16nm,1.1s,mb4.8						
DBIC				epP	pP	03 24 32.5	-2.9
SNAA	Sanae	74.45	162	eP	P	03 24 11.1	+0.3
	comp=Z,288nm,1.3s,mb5.8						
FRB	Frobisher Bay	74.70	4	P	P	03 24 12.3	-0.1
	comp=Z,26nm,1.0s,mb4.9,baz=194,slow=6.4,SNR=30						
YKA	Yellowknife Ar	79.05	343	P	P	03 24 36.4	-0.2
	comp=Z,16nm,0.9s,mb4.8,baz=137,slow=6.0,SNR=168						
YKA				pP	pP	03 25 09.1	+0.9
	comp=Z,3.9nm,0.7s,baz=137,slow=5.7,SNR=4.0						
YKA				sP	sP	03 25 21.2	-0.8
	comp=Z,2.7nm,0.9s,baz=134,slow=5.8,SNR=1.7						
YKA	Yellowknife Ar	79.05	343	P	P	03 24 36.4	-0.2
YKA				pP	pP	03 25 09.1	+0.9
YKA				sP	sP	03 25 21.2	-0.8
YKW3	Yellowknife Ar	79.10	343	eP	P	03 24 36.5	-0.4
QSPA	South Pole Qui	79.18	180⇓	iP	P	03 24 39.2	+2.2
	comp=Z,11nm,0.7s,mb4.8						
PTEO	Sao Teotonio	79.35	48	eP	P	03 24 41.5	+2.7
	comp=Z,39nm,1.4s,mb5.0						
PTEO				epP	pP	03 25 12.5	+2.1
PLOU	Loures	79.56	47	eP	P	03 24 39.8	-0.1
	comp=Z,42nm,1.1s,mb5.2						
PBEJ	Beja	80.16	48	eP	P	03 24 42.5	-0.6
	comp=Z,11nm,1.3s,mb4.5						
PALC	Alcoutim	80.24	49	eP	P	03 24 40.6	-2.9
	comp=Z,27nm,1.8s,mb4.8						
PALC				epP	pP	03 25 11.9	-3.4
EVO	Evora	80.25	48	eP	P	03 24 44.5	+0.9
	comp=Z,40nm,1.1s,mb4.9						
EVO				epP	pP	03 25 16.2	+0.9
EVO				eR			
	comp=Z,190nm,21.5s						
PCBR	Castelo Branco	81.12	47	eP	P	03 24 48.4	+0.2
	comp=Z,18nm,1.3s,mb4.8						
PCBR				epP	pP	03 25 16.8	-3.2
PVIS	Viseu	81.16	46	eP	P	03 24 46.3	-2.1
	comp=Z,43nm,1.9s,mb5.0						
PVIS				epP	pP	03 25 13.0	-7.1
MTE	Manteigas	81.29	46	eP	P	03 24 45.6	-3.4
	comp=Z,16nm,1.9s,mb4.5						
PVRL	Vila Real	81.50	45	eP	P	03 24 50.1	0.0
	comp=Z,26nm,1.9s,mb4.7						
DLBC	Dease Lake	81.71	335	LR	LR	04 03 24.0	
	comp=Z,156nm,20.6s,baz=296,slow=37						
DLBC	Dease Lake	81.71	335	eP	P	03 24 52.0	+1.1
DLBC				epP	pP	03 25 22.1	-0.5
PBRG	Braganca	82.38	45	eP	P	03 24 53.8	-0.8
	comp=Z,7.4nm,1.2s,mb4.4						
PBRG				epP	pP	03 25 25.4	-1.1
ESDC	Sonseca Array	83.59	48	P	P	03 25 03.3	+2.5
	comp=Z,4.7nm,0.7s,mb4.4,baz=261,slow=5.3,SNR=22						
ESDC				pP	pP	03 25 34.5	+1.6
	comp=Z,4.0nm,0.8s,baz=258,slow=5.1,SNR=4.8						
ESLA	Sonseca Array	83.59	48	eP	P	03 25 02.4	+1.6
	comp=Z,9.2nm,1.3s,mb4.5						
ESLA				epP	pP	03 25 32.3	-0.6
VNDA	Vanda	85.92	191	P	P	03 25 13.2	+1.7
	comp=Z,1.3nm,0.7s,baz=100,slow=4.8,SNR=6.3						
VNDA				LR	LR	03 56 04.1	
	comp=Z,233nm,19.6s,baz=122,slow=30						
VNDA	Vanda	85.92	191	eP	P	03 25 13.3	+1.7
	comp=Z,20nm,1.5s,mb4.8						
RES	Resolute Bay	86.26	355	eP	P	03 25 13.5	+0.2
	comp=Z,28nm,1.3s,mb5.0						
RES				epP	pP	03 25 45.3	-0.1
HON	Honolulu	86.45	292	P	P	03 25 14.8	-0.5
SUMG	Summit	86.90	11⇓	iP	P	03 25 18.1	+1.7
	comp=Z,80nm,1.0s,mb5.6						
SUMG				epP	pP	03 25 49.1	+0.4
SUMG				esP	sP	03 26 01.2	-1.0
MFF	Saint Martin d	88.47	42	eP	P	03 25 25.0	+0.5
	comp=Z,4.6nm,0.5s,mb4.5						
MFF				epP	pP	03 26 00.9	+4.1
GRR	Gorron	88.55	40	eP	P	03 25 25.1	+0.3
GRR				epP	pP	03 26 01.0	+3.8
LFF	La Frestale	88.56	44	eP	P	03 25 25.5	+0.5
	comp=Z,4.4nm,0.4s,mb4.6						
INK	Inuvik	88.75	342	P	P	03 25 25.8	+0.5
	comp=Z,14nm,0.9s,mb5.0,baz=115,slow=5.0,SNR=40						
INK				pP	pP	03 25 58.0	+0.4
	comp=Z,8.3nm,0.9s,baz=134,slow=4.7,SNR=4.4						
INK	Inuvik	88.75	342	eP	P	03 25 25.5	+0.2
	comp=Z,49nm,1.3s,mb5.4						
INK				epP	pP	03 25 55.0	-2.7
INK				esP	sP	03 26 09.2	-2.1
FLN	La Foliniere	88.91	40	eP	P	03 25 26.9	+0.4
FLN				epP	pP	03 26 03.0	+4.2
FLN				eR			
	comp=Z,201nm,18.8s						
RJF	Les Rejaudoux	89.19	44	eP	P	03 25 28.4	+0.5
RJF				eR			
	comp=Z,184nm,19.5s						
CAF	Calviac	89.46	44	eP	P	03 25 29.6	+0.4
	comp=Z,6.8nm,0.7s,mb4.5						
TCF	Toulx Ste Croi	89.94	43	eP	P	03 25 31.5	+0.1
TSUM	Tsumeb	89.95	109	eP	P	03 25 32.1	+0.1
	comp=Z,15nm,1.2s,mb5.0						
TSUM				epP	pP	03 26 05.3	+0.8
TSUM				esP	sP	03 26 18.0	-0.1
BGF	Bois d'Agland	90.43	43	eP	P	03 25 34.3	+0.6
	comp=Z,8.0nm,0.7s,mb4.7						
BGF				epP	pP	03 26 07.0	+0.8
SSF	Saint Saulge	91.00	42	eP	P	03 25 36.2	-0.2
SML	Sawmill	91.33	333	P	P	03 25 37.5	0.0
SML	Sawmill	91.33	333	eP	P	03 25 36.6	-0.9
ILAR	Eielson Array	91.81	336	P	P	03 25 40.0	+0.3
	comp=Z,3.5nm,1.1s,mb4.5,baz=152,slow=3.9,SNR=18						
ILAR				pP	pP	03 26 12.8	+0.6
	comp=Z,1.5nm,0.9s,baz=151,slow=2.5,SNR=3.8						
ILAR				PP	PP	03 29 19.3	-3.1
	comp=Z,2.0nm,0.9s,baz=110,slow=6.9,SNR=8.4						
ORIF	Oris-en-Rattie	92.08	45	eP	P	03 25 42.7	+1.3
	comp=Z,5.7nm,0.7s,mb4.6						
ORIF				eR			
	comp=Z,172nm,19.5s						
COLA	College	92.23	336⇑	eP	P	03 25 42.6	+1.0
COLA	College	92.23	336	eP	P	03 25 41.9	+0.3
	comp=Z,38nm,1.3s,mb5.5						
MCK	McKinley	92.26	335	eP	P	03 25 41.6	-0.2
	comp=Z,26nm,1.7s,mb5.2						
GIVF	Givet	92.60	40	eP	P	03 25 43.1	-0.5
LPL	La Plagne	92.81	44	eP	P	03 25 46.2	+1.5
LPL				epP	pP	03 26 19.2	+2.0
SPU	Mount Spurr	92.81	332	eP	P	03 25 44.1	-0.2
LPG	La Plagne	92.81	44	eP	P	03 25 46.5	+1.8
SBF	Sospel	92.94	46	eP	P	03 25 45.8	+0.5
HINF	Hinteralfeld	93.39	42	eP	P	03 25 47.9	+0.6
MAW	Mawson	96.31	165	LR	LR	04 07 17.8	
	comp=Z,249nm,18.9s,baz=241,slow=34						
GERES	GERESS Array B	98.06	42	P	P	03 26 10.0	+1.6
	comp=Z,1.3nm,1.0s,mb4.4,baz=284,slow=5.5,SNR=4.5						
NOA	NORSAR Array B	98.23	29	pP	pP	03 26 43.6	+2.1
	comp=Z,2.4nm,0.9s,baz=259,slow=4.0,SNR=4.2						
STKA	Stephens Creek	124.14	219	PKP	PKPdf	03 31 31.2	+1.8
	comp=Z,1.4nm,0.6s,baz=312,slow=14,SNR=2.4						
STKA				pPKP		03 32 05.6	
	comp=Z,1.7nm,0.7s,baz=320,slow=7.4,SNR=3.0						
BRVK	Borovoye	130.13	26⇑	ePKP	PKPdf	03 31 43.0	+2.6
NVS	Novosibirsk	133.29	16	i PKIKP	PKPdf	03 31 47.9	+1.6
ZAL	Zalesovo	134.52	16	PKP	PKPdf	03 31 51.1	+2.5
	comp=Z,3.7nm,0.8s,baz=178,slow=1.6,SNR=20						
ZAL				pPKP		03 32 26.8	
	comp=Z,3.6nm,0.6s,baz=150,slow=1.0,SNR=6.3						
ZAL				sPKP		03 32 37.4	
	comp=Z,1.9nm,0.9s,baz=189,slow=1.5,SNR=3.8						
ASAR	Alice Springs	134.74	220	PKP	PKPdf	03 31 52.2	+2.4
	comp=Z,3.0nm,0.7s,baz=126,slow=2.1,SNR=24						
ASAR				pPKP		03 32 25.1	
	comp=Z,1.4nm,0.6s,baz=125,slow=2.0,SNR=4.1						
ASAR				sPKP		03 32 37.1	
	comp=Z,1.8nm,0.8s,baz=118,slow=1.9,SNR=4.5						
KURK	Kurchatov	135.28	23d	iPKIKP	PKPdf	03 31 52.5	+2.4
KURK	Kurchatov	135.28	23	ePKPdf	PKPdf	03 31 52.2	+2.1
WRA	Warramunga Arr	137.05	225	PKP	PKPdf	03 31 55.9	+1.8
	comp=Z,12nm,1.2s,baz=138,slow=1.4,SNR=18						
WRA				pPKP		03 32 30.7	
	comp=Z,1.7nm,0.9s,baz=146,slow=1.4,SNR=2.0						
AAK	Ala-Archa	139.39	34⇓	iPKIKP	PKPdf	03 32 01.3	+3.5
AAK	Ala-Archa	139.39	34⇓	ePKP	PKPdf	03 32 01.3	+3.5
ZAK	Zakamensk	140.68	1	ePKHKP		03 31 55.4	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CN2	Changchun	142.30	334	ePKP	PKPdf	03 32 06.6	+3.7
KSH	Kashi	142.30	36	i PKP	PKPdf	03 31 59.8	-3.3
ULN	Ulaanbaatar	143.10	356	PKIKP	PKPdf	03 32 03.8	-0.4
ULN	Ulaanbaatar	143.10	356	ePKPdf	PKPdf	03 32 03.0	-1.1
SONM	Songino Array	143.17	357	PKhKP		03 32 03.1	
	comp=Z,1.7nm,0.6s,slow=2.5,SNR=9.6						
SONM				PKP	PKPdf	03 32 07.3	+3.0
	comp=Z,3.3nm,0.8s,baz=333,slow=2.8,SNR=11						
SONM				pPKP		03 32 40.5	
	comp=Z,1.2nm,0.6s,baz=351,slow=2.3,SNR=2.7						
SONM				PP	PP	03 35 15.7	-3.4
	comp=Z,3.4nm,1.1s,baz=338,slow=6.7,SNR=5.9						
FITZ	Fitzroy Crossi	143.99	217	eP	PKPbc	03 32 06.1	+0.3
	comp=Z,5.9nm,0.6s						
WMQ	Urumqi	144.40	20	PKP	PKPdf	03 32 09.0	+2.5
WMQ				PP	PP	03 35 31.0	+4.4
WMQ				PP	PP		
	comp=Z,64nm,14.0s						
MBWA	Marble Bar	144.47	206	ePKPdf	PKPdf	03 32 07.8	+0.4
JASL	Jaisalmer	145.18	58	eP	PKPdf	03 32 08.4	-0.1
SMLA	Simla	148.18	47	i	PKPdf	03 32 33.0	+20
SMLA				i		03 33 00.4	
	comp=Z,41nm,0.3s						
KHET	Khetri	148.69	53	eP	PKPdf	03 32 15.4	+1.1
KHET				AMb	AMB	03 32 23.3	
	comp=Z,26nm,1.5s						
KHET				e		03 32 50.0	
KLP	Kalpa	148.72	45	eP	PKPdf	03 32 18.0	+3.8
KLP				AMb	AMB	03 32 23.4	
	comp=Z,45nm,1.5s						
KLP				e		03 32 59.9	
BJI	Beijing	149.03	341	PKP	PKPdf	03 32 16.9	+2.5
BJI				PP	PP	03 35 55.1	+1.6
BJI				SS	SS	03 54 59.1	+6.2
BJI				PP	PP		
	comp=Z,181nm,8.5s						
BJI				LR	LR		
	comp=Z,106nm,28.2s						
BJI	Beijing	149.03	341	PKP	PKPdf	03 32 16.9	+2.5
BJI				pPKP		03 32 57.7	
BJI				PP	PP	03 35 55.1	+1.6
BJI				SS	SS	03 54 59.1	+6.2
BJT	Baijiatuau	149.05	341	ePKPdf	PKPdf	03 32 16.7	+2.2
BJT				ePKPbc	PKPdf	03 32 20.4	+6.0
DDI	Dehra Dun	149.26	47	e	PKPdf	03 32 22.1	+7.0
DDI				e		03 32 53.2	
AYAN	Aya Nagar	149.53	51	eP	PKPdf	03 32 18.2	+2.7
AYAN				AMb	AMB	03 32 26.2	
	comp=Z,23nm,1.2s						
SONA	Sohna	149.60	52	eP	PKPdf	03 32 18.3	+2.7
SONA				e		03 32 24.1	
JOSI	Joshimath	150.20	46	eP	PKPdf	03 32 16.8	+0.3
JOSI				AMb	AMB	03 32 20.8	
	comp=Z,242nm,0.9s						
AGRA	Agra	150.76	53	eP	PKPdf	03 32 20.9	+3.4
AGRA				AMb	AMB	03 32 22.1	
	comp=Z,27nm,0.3s						
GTA	Gaotai	151.43	7	PKP	PKPdf	03 32 21.3	+3.2
GTA				PKP2	PKPab	03 32 38.6	+3.2
GTA				APKP		03 32 57.6	
GTA				XPKP		03 33 07.1	
GTA				PP	PP	03 36 09.8	+2.3
GTA				SS	SS	03 55 22.4	+3.1
GTA				LR	LR		
	comp=N,108nm,20.9s						
GTA				LR	LR		
	comp=E,115nm,21.7s						
GTA				LR	LR		
	comp=Z,130nm,23.2s						
SSE	Sheshan	154.29	324	ePKP	PKPdf	03 32 25.0	+2.7
SSE				PP	PP	03 36 23.3	-0.8
SSE				PP	PP		
	comp=Z,37nm,12.0s						
SSE				LR	LR		
	comp=N,30nm,31.6s						
SSE				LR	LR		
	comp=E,62nm,31.7s						
SSE				LR	LR		
	comp=Z,48nm,23.9s						
HYB	Hyderabad	154.69	72	eP	PKPab	03 32 50.0	+0.3
HYB	Hyderabad	154.69	72	i PKP	PKPdf	03 32 26.0	+2.8
HYB				ePKPAB	PKPab	03 32 50.0	+0.3
HYB				epPKPAB		03 33 23.5	
KOLN	Koldanda	154.69	46	eP	PKPab	03 32 49.7	+0.2
	comp=Z,32nm,1.2s						
NJ2	Nanjing	154.83	329	ePKP	PKPdf	03 32 25.8	+2.8
NJ2				PKP2	PKPab	03 32 52.3	+2.4
NJ2				PP	PP		
	comp=Z,220nm,11.4s						
NJ2				LR	LR		
	comp=N,550nm,27.1s						
NJ2				LR	LR		
	comp=E,1µm,27.0s						
NJ2				LR	LR		
	comp=Z,330nm,26.2s						
GKN	Gorkha	155.26	44	eP	PKPab	03 32 52.8	+0.9
	comp=Z,37nm,1.1s						
DMN	Daman	155.83	44	eP	PKPab	03 32 52.8	-1.6
	comp=Z,87nm,1.2s						
KKN	Kakani	155.84	44	eP	PKPab	03 32 55.1	+0.7
	comp=Z,28nm,0.9s						
PKI	Pulchoki	156.06	44	eP	PKPab	03 32 54.2	-1.2
	comp=Z,29nm,1.0s						
GUN	Gumba	156.16	42	eP	PKPab	03 32 57.2	+1.4
	comp=Z,92nm,1.3s						
JIRN	Jiri	156.53	42	eP	PKPab	03 32 57.1	-0.3
	comp=Z,68nm,1.6s						
GYA	Guiyang	164.34	351⇑	iPKP	PKPdf	03 32 34.1	+0.1
CMAR	Chiang Mai Arr	171.17	32	PKPab	PKPab	03 34 01.6	+0.2
	comp=Z,75nm,0.3s,baz=299,slow=18,SNR=2.0						
CMAR				pPKPab		03 34 34.2	
	comp=Z,68nm,0.3s,baz=315,slow=8.1,SNR=2.6						

MAN 17 03:21:51.6, 6.72N×126.71E, h17^{km}, mb4.0, ML2.8, MS2.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.51	297	eP	Pb	03 22 02.4	+0.7
MATI				eS	Sb	03 22 10.5	+2.0
KCP	Kidapawan	1.64	280⇓	eP	Pn	03 22 19.3	-0.7
KCP				i S	Sn	03 22 41.1	+0.3
BUKP	Musuan	2.00	305	eP	Pn	03 22 24.8	-0.4
BUKP				eS	Sn	03 22 50.3	+0.3

TRN 17 03:41:34.6, 10.51N×62.46W, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	1.01	101	eP	Pb	03 41 58.8	+4.1
TPP				eS	Sg	03 42 13.4	+5.2
TRN	Trinidad (W)	1.05	82	eP	Pb	03 41 54.9	-0.4
TRN				eS	Sb	03 42 09.2	-0.2
TPR	Prospect	1.78	68	eP	Pn	03 42 06.2	-0.6
TPR				eS	Sn	03 42 31.5	+0.9
GRW	Mount Saint Ca	1.82	25	eP	Pn	03 42 07.2	-0.1
GRW				eS	Sn	03 42 31.2	-0.2
BOT	Bacolet	1.83	69	eP	Pn	03 42 08.4	+0.8
BOT				eS	Sn	03 42 32.9	+1.1

OTT 17 04:18:31.5±0.3, 71.20N×72.65W, h18^{km}, MN2.5/2, Baffin Island Seismic Zone, Nunavut. 170km northwest from Clyde River, Nu, Baffin Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINU	Pond Inlet	2.24	315	PN	Pn	04 19 07.3	-1.1
PINU				SN	Sn	04 19 34.9	-0.9
TULEG	Thule	5.47	9	PN	Pn	04 19 53.8	-0.4
TULEG				SN	Sn	04 20 51.2	-6.2
RES	Resolute Bay	7.38	308	SN	Sn	04 21 35.3	-10
RES				LG		04 22 16.9	
RES				Trac		04 22 30.8	
	comp=Z,0.6nm,0.5s						
FRB	Frobisher Bay	7.65	166	PN	Pn	04 20 21.0	-3.8
FRB				SN	Sn	04 21 42.1	-10
FRB				LG		04 22 20.2	
FRB				Trac		04 22 27.3	
	comp=Z,1.9nm,0.2s						
YRTN	Rankin Inlet	11.28	231	SN	S	04 23 08.2	-13
YRTN				LG		04 24 11.8	
YRTN				Trac		04 24 21.2	
	comp=Z,0.6nm,0.2s						

IDC 17 04:25:01.0±1.1, 5.18N×78.47W, mb3.7/3, mb1 4.0/5, mb1mx3.6/20, mbtmp3.7/5, ML2.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.7/18, Error ellipse: s-maj=32.0km s-min=23.9km az=36.0

NEIC 17 04:25:05.2±0.7, 5.15N×78.37W, h35^{km}, mb4.0/4, Error ellipse: s-maj=13.6km s-min=11.9km az=68.0

ISC 17 04:25:03.3±0.8, 5.18N±0.08×78.37W±0.09, h33^{km}, n13, σ1^{s}08/12, mb3.6/3, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	4.04	94	Pn	Pn	04 26 05.8	+1.3
	2.8nm,0.3s,baz=90,slow=15,SNR=9.2						
ROSC				Sn	Sn	04 26 57.7	+6.3
	2.1nm,0.3s,baz=90,slow=22,SNR=6.3						
OTAV	Otavalo	4.91	181	ePn	Pn	04 26 16.0	-0.8
JTS	JuntasAbangare	8.26	308	LR	LR	04 30 12.1	
	comp=Z,134nm,18.3s,baz=137,slow=38						
SDV	Santo Domingo	8.52	64	Pn	P	04 27 07.0	-0.2
	0.4nm,0.3s,baz=275,slow=12,SNR=11						
SDV				Sn	Sn	04 28 39.0	-4.4
	1.0nm,0.3s,baz=272,slow=21,SNR=6.5						
SJG	San Juan	17.55	42	P	P	04 29 06.4	-0.7
	16nm,0.9s						
TEIG	Tepich	17.79	328	P	P	04 29 09.5	-0.7
	0.8nm,0.6s						
SAML	Samuel	20.65	133	eP	P	04 29 40.0	-2.9
	6.2nm,1.1s						
TXAR	Lajitas Array	33.90	318	P	P	04 31 46.4	+1.0
	0.2nm,0.8s,mb3.1,baz=126,slow=11,SNR=3.6						
PLCA	Paso Flores	46.25	172	P	P	04 33 28.9	+1.5
	2.3nm,0.8s,mb4.2,baz=360,slow=10,SNR=6.2						
PLCA	Paso Flores	46.25	172	eP	P	04 33 28.7	+1.3
	2.7nm,0.7s,mb4.3						
YKA	Yellowknife Ar	63.10	342	P	P	04 35 29.8	+0.1
	0.3nm,0.6s,mb3.6,baz=134,slow=6.0,SNR=8.8						
ASAR	Alice Springs	143.89	236	PKP	PKPdf	04 44 36.3	+0.2
	1.6nm,0.6s,baz=124,slow=3.6,SNR=15						
WRA	Warramunga Arr	144.96	242	PKP	PKPdf	04 44 39.5	+1.4
	1.6nm,0.8s,baz=114,slow=3.1,SNR=10.0						

IDC 17 04:31:33.8±10.0, 24.13S×179.92E, h460^{km}±98^{km}, mb3.0/5, mb1 3.2/6, mb1mx3.1/14, mbtmp4.0/6, Error ellipse: s-maj=81.5km s-min=25.9km az=45.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.29	189	P	P	04 34 37.1	-1.3
	0.8nm,0.3s,baz=8.5,slow=2.9,SNR=4.7						
URZ				S	S	04 37 04.4	-2.8
	0.3nm,0.3s,baz=106,slow=16,SNR=3.1						
RPZ	Rata Peaks	20.86	198	P	P	04 35 41.7	-1.4
	6.1nm,0.5s,baz=36,slow=15,SNR=2.7						
STKA	Stephens Creek	34.57	248	P	P	04 37 42.3	-1.6
	1.8nm,1.0s,baz=107,slow=11,SNR=3.7						
ASAR	Alice Springs	41.93	261	P	P	04 38 43.3	-1.0
	0.3nm,0.4s,baz=97,slow=7.8,SNR=5.2						
WRA	Warramunga Arr	42.32	266	P	P	04 38 46.6	-0.8
	0.6nm,0.5s,baz=106,slow=7.7,SNR=4.8						
VNDA	Vanda	54.15	185	P	P	04 40 15.1	-0.9
	0.9nm,0.6s,baz=45,slow=10.0,SNR=5.3						
BRTR	Keskin Array B	147.66	307	PKPbc	PKPdf	04 50 24.8	+2.8
	0.3nm,0.3s,baz=76,slow=5.9,SNR=3.0						

*NEIC **17** 04:46:33.2, 15.77N×61.43W, h31^{km}, MD3.6(TRN), After TRN.*

TRN 17 04:46:35.4, 15.83N×61.54W, h3^{km}, MD3.6, M2.8(FDF), **3C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBL	**Barber's Block**	**0.30**	**168**	⇑*i*P	Pg	04 46 41.2	-0.3
BBL				*e*S	Sg	04 46 46.4	+0.8
MDN	**Morne-Daniel**	**0.52**	**165**	⇑*i*P	Pg	04 46 44.8	-1.0
MDN				*e*S	Sg	04 46 52.6	-0.2
DBCT	**Belle View Cho**	**0.58**	**161**	*e*P	Pg	04 46 46.3	-0.7
DSHT	**Scott's Head**	**0.63**	**165**	*e*P	Pg	04 46 46.6	-1.3
DSHT				*e*S	Sg	04 46 55.0	-1.3
BPA	**Boggy Peak**	**1.25**	**346**	⇑*i*P	Pb	04 46 56.9	-2.4
BPA				*e*S	Sb	04 47 13.4	-2.3
NVBH	**Bath Hotel, Ne**	**1.65**	**321**	*e*P	Pn	04 47 05.0	-0.5
NVBH				*e*S	Sb	04 47 28.3	+1.0
CPB	**Codrington**	**1.83**	**351**	*e*P	Pn	04 47 04.9	-3.1
CPB				*e*S	Sn	04 47 28.5	-3.4
CPB	**Codrington**	**1.83**	**351**	*e*P	Pn	04 47 05.3	-2.7
CPB				*e*S	Sn	04 47 28.5	-3.4
CPB				*e*S	Sn	04 47 28.5	-3.4

IDC 17 04:59:56.9±3.6**, 30.69S×138.09E, mb1 3.2**/3**, mb1mx3.1**/10**, mbtmp2.9**/3**, ML2.8**/3**, Error ellipse: s-maj=71.3km s-min=16.6km az=39.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.22**	**112**	Pn	Pn	05 00 48.4	-1.4
	0.6nm,0.3s,baz=289,slow=18,SNR=9.6						
STKA				Pg	Pg	05 00 57.2	-4.0
	1.4nm,0.3s,baz=297,slow=13,SNR=19						
STKA				Sn	Sn	05 01 27.3	-2.1
	1.5nm,0.3s,baz=268,slow=15,SNR=4.0						
STKA				Lg		05 01 38.5	
	4.0nm,0.3s,baz=190,slow=22,SNR=7.8						
ASAR	**Alice Springs**	**7.93**	**331**	Pn	Pn	05 01 53.5	-2.7
	0.1nm,0.3s,baz=151,slow=12,SNR=5.7						
ASAR				Sn	Sn	05 03 23.3	-4.4
	0.2nm,0.3s,baz=151,slow=22,SNR=4.0						
WRA	**Warramunga Arr**	**11.23**	**342**	Pn	P	05 02 38.9	-2.9
	0.1nm,0.3s,baz=163,slow=12,SNR=5.3						
WRA				Sn	S	05 04 40.6	-8.6
	0.1nm,0.3s,baz=162,slow=24,SNR=3.1						

IDC 17 05:27:03.7±14.0**, 27.52S×174.63W, mb4.1**/4**, mb1 4.2**/5**, mb1mx4.0**/15**, mbtmp4.1**/5**, ML3.5**/1**, Error ellipse: s-maj=257.0km s-min=48.2km az=92.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.75**	**211**	Pn	P	05 30 05.9	-3.2
	0.3nm,0.3s,baz=147,slow=6.5,SNR=2.6						
URZ				Sn	S	05 32 27.3	-5.7
	1.1nm,0.3s,baz=181,slow=17,SNR=7.3						
CTA	**Charters Tower**	**36.43**	**273**	P	P	05 34 10.7	-1.5
	2.2nm,0.4s,baz=106,slow=10,SNR=4.7						
STKA	**Stephens Creek**	**38.08**	**253**	P	P	05 34 25.8	-0.1
	6.0nm,1.3s,baz=102,slow=14,SNR=2.8						
ASAR	**Alice Springs**	**46.31**	**263**	P	P	05 35 30.9	-2.3
	0.9nm,0.7s,baz=114,slow=7.6,SNR=7.1						
WRA	**Warramunga Arr**	**47.05**	**268**	P	P	05 35 36.6	-2.5
	2.5nm,0.7s,baz=107,slow=7.6,SNR=14						

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*BGS **17** 05:31:11.6, 2.14N×97.11E, h33^{km}, mb5.9*

*MOS **17** 05:31:25.1±0.8, 4.77N×95.17E, h33^{km}, mb6.1/110, MS5.3/47, Error ellipse: s-maj=7.1km s-min=3.3km az=126.4*

*GUC **17** 05:31:26.4±0.0, 4.72N×95.21E, h34^{km}, mb6.0(NEIC), MS5.5(NEIC), MW5.7(NEIC)*

*BJI **17** 05:31:26.3, 4.61N×95.06E, h56^{km}, mB5.8, mb6.0, Ms5.5, Msz5.4*

*NEIC **17** 05:31:28.1±0.1, 4.70N×95.16E, mb5.9/154, ME5.5, MS5.4/94, MW5.7, Error ellipse: s-maj=3.9km s-min=2.7km az=33.0 Broadband fault plane solution: P waves. NP1: ϕ_s5°, δ35°, λ115°. NP2: ϕ_s155°, δ59°, λ74°. Principal axes: T Plg71°, Azm27°; N Plg0°, Azm0°; P Plg12°, Azm257°; Moment Tensor Solution. s21 Moment tensor: Scale 10^{17} Nm; M_{rr}3.48; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-3.45; $M_{r\theta}$1.40; $M_{\theta\phi}$0.76; $M_{\phi r}$-0.84; Best double couple: $M_0 3.9\times10^{17}$ NP1: ϕ_s4°, δ39°, λ117°. NP2: ϕ_s151°, δ56°, λ70°. Principal axes: T 4.01, Plg71°, Azm13°; N -.22, Plg16°, Azm162°; P -3.79, Plg9°, Azm255°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Banda Aceh.

*HRVD **17** 05:31:28.1±0.2, 4.37N×95.05E, h50^{km}, MW5.7/73, Centroid moment Tensor Solution. LP body waves: s69, c141; Mantle waves: s73, c153; Half duration: $1\overset{s}{.}7$ Moment tensor: Scale 10^{17}Nm; M_{rr}2.78±.06; $M_{\theta\theta}$-1.77±.05; $M_{\phi\phi}$-1.01±.05; $M_{r\theta}$1.44±.04; $M_{\theta\phi}$1.83±.04; $M_{\phi r}$-1.61±.05; Best double couple: $M_0 3.716\times10^{17}$ NP1: ϕ_s302°, δ28°, λ78°. NP2: ϕ_s135°, δ63°, λ96°. Principal axes: T 3.492, Plg71°, Azm59°; N .447, Plg5°, Azm312°; P -3.939, Plg18°, Azm221°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **17** 05:31:29.1±1.2, 4.77N×95.30E, h54^{km}±9^{km}, mb5.4/28, mb1 5.4/29, mb1mx5.4/30, mbtmp5.6/29, MS5.1/15, Ms1 5.1/15, ms1mx4.8/24 Error ellipse: s-maj=14.6km s-min=7.6km az=47.0*

ISC 17 05:31:27.5±0.6**, 4.68N**±0.03×**95.19E**±0.02**, h56**^{km}±4^{km}**, h52**^{km}±1.3^{km}**: pP-P, n937,** $\sigma 0\overset{s}{.}96$/826**, mb5.9**/236**, MS5.3**/143**, 301C-35D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.82**	**91**	P	**P**	**05 32 53.8**	**+0.6**
SNG	**Songkhla**	**5.95**	**65**	P	**P**	**05 32 56.0**	**+1.0**
	2µm,1.0s						
NNT	**Nongplab**	**9.05**	**29**	P	**P**	**05 33 40.5**	**+2.5**
NST	**Nakhon Sawan**	**11.96**	**24**	⇓P	**P**	**05 34 19.8**	**+2.2**
	368nm,0.6s						
KKTK	**Khon Kaen**	**13.80**	**32**	⇓P	**P**	**05 34 45.6**	**+3.6**
	2µm,0.5s						
CM31	**Chiang Mai Arr**	**14.18**	**15**	*e*P	**P**	**05 34 50.2**	**+3.2**
	806nm,0.7s						
CMAR	**Chiang Mai Arr**	**14.18**	**15**	P	**P**	**05 34 48.1**	**+1.2**
	0.9nm,0.3s,baz=203,slow=11,SNR=93						
CMAR				LR	LR	05 40 15.1	
	comp=Z,8µm,20.6s,baz=195,slow=37						
CHTO	**Chiang Mai**	**14.52**	**14**	Pn	**P**	**05 34 52.5**	**+1.1**
CHTO				Pn	**P**	**05 34 57.6**	**+6.2**
PALK	**Pallekele**	**14.63**	**281**	Pn	**P**	**05 34 52.0**	**-0.9**
	723nm,1.2s,SNR=75						
PALK	**Pallekele**	**14.63**	**281**	⇓*e*P	**P**	**05 34 50.9**	**-2.1**
	260nm,1.3s						
PALK				*e*S	**S**	**05 37 17.4**	**-17**
CHRT	**Chiangrai**	**15.75**	**16**	⇑P	**P**	**05 35 09.0**	**+1.7**
	2µm,0.9s						
COCO	**West Island**	**16.84**	**174**	⇓*e*P	**P**	**05 35 19.0**	**-2.0**
	510nm,1.1s						
MDRS	**Chennai**	**16.94**	**300**	⇑*e*P	**P**	**05 35 22.0**	**-0.2**
MDRS				*e*		05 38 11.0	
VIS	**Vishakhapatnam**	**17.40**	**319**	*e*P	**P**	**05 35 27.6**	**-0.4**
VIS				*e*		05 35 45.8	
	comp=Z,780nm,1.4s						
VIS				*e*		05 38 29.6	
BWNR	**Bhubaneshwar**	**18.01**	**330**	*e*P	**P**	**05 35 32.9**	**-2.6**
BWNR				*e*		05 35 37.5	
	comp=Z,796nm,1.3s						
BWNR				*e*		05 38 42.4	
AGT	**Agartala**	**19.46**	**349**	⇑*i*P	**P**	**05 35 50.0**	**-2.5**
AGT				*i*		05 36 31.0	
IMP	**Imphal**	**20.02**	**357**	*e*P	**P**	**05 35 55.0**	**-3.4**
QIZ	**Qiongzhong**	**20.20**	**44**	⇑P	**P**	**05 36 01.4**	**+1.1**
QIZ				XP		05 36 16.8	
QIZ				S	**S**	**05 39 48.5**	**+10**
QIZ				XS		05 40 04.4	
QIZ				PCP	PcP	05 40 13.0	+0.2
QIZ				AMB	AMB		
	comp=Z,134nm,1.3s						
QIZ				LR	LR		
	comp=N,6µm,18.1s,MS5.1						
QIZ				LR	LR		
	comp=E,5µm,17.1s,MS5.1						
QIZ				LR	LR		
	comp=Z,8µm,19.3s,MS5.1						
QIZ	**Qiongzhong**	**20.20**	**44**	*e*P	**P**	**05 36 01.1**	**+0.8**
	comp=Z,388nm,1.2s						
HYB	**Hyderabad**	**20.63**	**309**	⇑*e*P	**P**	**05 36 05.5**	**+0.7**
HYB				pmax	pmax		
	comp=Z,290nm,1.0s						
HYB	**Hyderabad**	**20.63**	**309**	⇑*e*P	**P**	**05 36 05.5**	**+0.7**
	comp=Z,290nm,1.0s						
HYB	**Hyderabad**	**20.63**	**309**	⇑*i*P	**P**	**05 36 05.5**	**+0.7**
	comp=Z,290nm,1.0s						
HYB				*e*		05 39 44.0	
HYB				*e*S	**S**	**05 39 52.0**	**+4.8**
KKM	**Kota Kinabalu**	**20.98**	**85**	P	**P**	**05 36 08.7**	**+0.3**
SHL	**Shillong**	**21.01**	**352**	*i* P	**P**	**05 36 04.5**	**-4.1**
SHL				*e*		05 39 48.5	
BOK	**Bokaro**	**21.01**	**336**	*i* P	**P**	**05 36 05.0**	**-3.6**
BOK				*i* S	**S**	**05 40 01.0**	**+6.6**
BLSP	**Bilaspur**	**21.46**	**325**	*i* P	**P**	**05 36 13.8**	**+0.6**
BLSP				*i* S	**S**	**05 40 08.4**	**+5.5**
KMI	**Kunming**	**21.58**	**19**	P	**P**	**05 36 16.3**	**+2.0**
KMI				AP		05 36 29.3	
KMI				PP	PP	05 36 42.6	+2.4
KMI				PPP	PPP	05 36 52.5	+2.1
KMI				S	**S**	**05 40 07.3**	**+2.3**
KMI				SS	SS	05 40 45.8	+1.7
KMI				SSS	SSS	05 41 00.8	+1.1
KMI				SCP		05 43 48.5	
KMI				PCS		05 43 54.3	
KMI				AMB	AMB		
	comp=Z,524nm,1.2s,mb5.8						
KMI				AMB	AMB		
	comp=Z,2µm,3.1s						
KMI				LR	LR		
	comp=N,9µm,14.5s,MS5.4						
KMI				LR	LR		
	comp=E,5µm,13.8s,MS5.4						
KMI				LR	LR		
	comp=Z,12µm,14.5s,MS5.4						
KMI	**Kunming**	**21.58**	**19**	P	**P**	**05 36 16.2**	**+1.9**
KMI				*PP		05 36 29.2	
KMI						05 36 42.6	
KMI				S	**S**	**05 40 07.2**	**+2.2**
KMI				SS	SS	05 40 45.8	+1.7
KMI				SSS	SSS	05 41 00.8	+1.1
KMI				pmax	pmax		
	comp=Z,524nm,1.2s,mb5.8						
KMI				MLR	MLR		
	comp=Z,12µm,14.5s,MS5.4						
KMI	**Kunming**	**21.58**	**19**	P	**P**	**05 36 16.2**	**+1.9**
	comp=Z,524nm,1.2s,mb5.8						
KMI				pP		05 36 29.2	
KMI				PP	PP	05 36 42.6	+2.4
KMI				PPP	PPP	05 36 52.5	+2.1
KMI				S	**S**	**05 40 07.2**	**+2.2**
KMI				SS	SS	05 40 45.8	+1.7
KMI				SSS	SSS	05 41 00.8	+1.1
KMI				ScP		05 43 48.5	
KMI				PcS		05 43 54.3	
KMI				LR	LR		
	comp=Z,12µm,14.5s,MS5.4						
MNGI	**Mangalore**	**21.71**	**294**	*i* P	**P**	**05 36 17.9**	**+2.2**
	comp=Z,218nm,1.5s,mb5.4						
MNGI				*i* S	**S**	**05 40 16.2**	**+8.7**
MNCY	**Minicoy**	**22.29**	**280**	⇓*i*P	**P**	**05 36 25.0**	**+3.6**
MNCY				*i*		05 38 15.0	
TSM	**Tawau**	**22.62**	**90**	P	**P**	**05 36 24.3**	**-0.5**
NGP	**Nagpur**	**22.66**	**318**	*e*P	**P**	**05 36 26.6**	**+1.5**
NGP				*e*S	**S**	**05 40 31.9**	**+7.2**
LATR	**Latur**	**22.75**	**308**	*e*P	**P**	**05 36 28.0**	**+2.0**
LATR				*e*		05 40 12.3	
GTK	**Gangtok**	**23.38**	**345**	*e*	**P**	**05 36 27.0**	**-5.0**
GOA	**Goa**	**23.59**	**299**	*e*P	**P**	**05 36 43.5**	**+9.4**
GOA				*e*S	**S**	**05 40 58.6**	**+18**
PPR	**Puerto Princes**	**23.89**	**76**	⇑*i*P	**P**	**05 36 38.2**	**+1.1**
KAD	**Karad**	**24.10**	**303**	*e*P	**P**	**05 36 40.8**	**+1.8**
KAD				*e*S	**S**	**05 40 55.5**	**+5.7**
GYA	**Guiyang**	**24.28**	**26**	⇑*i*P	**P**	**05 36 41.6**	**+0.8**
GYA				AP		05 36 52.5	
GYA				S	**S**	**05 41 00.5**	**+7.7**
GYA				AMB	AMB		
	comp=Z,160nm,0.7s,mb5.6						
GYA				AMB	AMB		
	comp=Z,2µm,7.5s						
GYA				LR	LR		
	comp=N,7µm,15.7s,MS5.3						
GYA				LR	LR		
	comp=E,5µm,18.9s,MS5.3						
GYA				LR	LR		
	comp=Z,8µm,21.0s,MS5.2						
JIRN	**Jiri**	**24.41**	**340**	*e*P	**P**	**05 36 40.4**	**-1.6**
	comp=Z,546nm,0.6s,mb6.1						
PKI	**Pulchoki**	**24.60**	**339**	*e*P	**P**	**05 36 42.4**	**-1.5**
	comp=Z,218nm,0.6s,mb5.9						
DMN	**Daman**	**24.74**	**338**	*e*P	**P**	**05 36 44.0**	**-1.3**
	comp=Z,251nm,0.7s,mb5.8						
GUN	**Gumba**	**24.74**	**340**	*e*P	**P**	**05 36 43.7**	**-1.6**
	comp=Z,641nm,0.6s,mb6.3						
KKN	**Kakani**	**24.84**	**339**	*e*P	**P**	**05 36 44.8**	**-1.4**
	comp=Z,1µm,1.3s,mb6.2						
ENPP	**El Nido**	**24.85**	**73**	*e*P	**P**	**05 36 48.6**	**+2.1**
POO	**Poona**	**24.98**	**305**	⇑*i*P	**P**	**05 36 49.0**	**+1.4**
	comp=Z,240nm,1.0s,mb5.7						
POO				*i*		05 41 26.0	
LSA	**Lhasa**	**25.18**	**352**	P	**P**	**05 36 49.8**	**+0.4**
LSA				AP	pP	05 37 02.3	-0.8
LSA				XP	sP	05 37 08.6	-1.4
LSA				PCP	PcP	05 40 20.3	-2.6
LSA				S	**S**	**05 41 07.5**	**-0.4**
LSA				XS		05 41 35.3	
LSA				SCP		05 43 54.6	
LSA				PCS		05 44 00.9	
LSA				SCS	ScS	05 47 44.3	+1.3
LSA				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.1						
LSA				AMB	AMB		
	comp=Z,1µm,6.5s						
LSA				LR	LR		
	comp=N,3µm,24.9s,MS4.9						
LSA				LR	LR		
	comp=E,3µm,23.2s,MS4.9						
LSA				LR	LR		
	comp=Z,7µm,23.6s,MS5.1						
LSA	**Lhasa**	**25.18**	**352**	⇑*e*P	**P**	**05 36 49.0**	**-0.4**
LSA				*e*		05 40 24.1	
LSA				*e*S	**S**	**05 41 11.8**	**+3.9**
LSA				pmax	pmax		
	comp=Z,325nm,0.7s,mb6.0						
LSA	**Lhasa**	**25.18**	**352**	⇑*e*P	**P**	**05 36 49.0**	**-0.4**
	comp=Z,325nm,0.7s,mb6.0						
LSA				*e*PcP	PcP	05 40 24.1	+1.2
LSA				*e*S	**S**	**05 41 11.8**	**+4.0**
LSA				*e*ScP		05 43 58.6	
BHPL	**Bhopal**	**25.19**	**319**	*e*P	**P**	**05 36 50.7**	**+1.1**
BHPL				*e*		05 36 54.6	
	comp=Z,309nm,1.3s						
BHPL				*e*		05 41 37.1	
GKN	**Gorkha**	**25.27**	**338**	*e*P	**P**	**05 36 49.3**	**-1.0**
	comp=Z,342nm,0.5s,mb6.1						
HKC	**Hong Kong**	**25.39**	**45**	P	**P**	**05 36 54.0**	**+2.5**
HKC				S	**S**	**05 41 12.0**	**+0.5**
KOLN	**Koldanda**	**25.48**	**336**	*e*P	**P**	**05 36 52.3**	**+0.1**
	comp=Z,711nm,0.6s,mb6.4						
DGAR	**Diego Garcia**	**25.67**	**242**	*e*P	**P**	**05 36 55.3**	**+1.2**
DGAR				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.1						
DGAR	**Diego Garcia**	**25.67**	**242**	⇑*e*P	**P**	**05 36 54.4**	**+0.2**
	comp=Z,437nm,1.1s,mb5.9						
DGAR				LR	LR		
	comp=Z,2µm,22.0s,MS4.6						
BOM	**Bombay**	**26.01**	**305**	*e*P	**P**	**05 36 58.8**	**+1.6**
	comp=Z,1µm,1.5s,mb6.3						
BOM				*e*S	**S**	**05 41 28.5**	**+6.7**
JHNI	**Jhansi**	**26.12**	**324**	⇑*i*P	**P**	**05 36 56.0**	**-2.2**
LUBP	**Lubang**	**26.30**	**68**	*e*P	**P**	**05 36 59.9**	**-0.1**
SCZP	**Santa Cruz**	**26.68**	**64**	*e*P	**P**	**05 37 03.7**	**+0.3**
TGY	**Tagaytay City**	**27.05**	**68**	P	**P**	**05 37 07.0**	**+0.2**
	comp=Z,291nm,0.4s,mb6.2,baz=229,slow=13,SNR=12						
TGY				LR	LR	05 48 20.9	
	comp=Z,4µm,19.3s,MS5.0,baz=90,slow=38						
CD2	**Chengdu**	**27.31**	**16**	⇑*i*P	**P**	**05 37 08.1**	**-1.0**
BCPH	**Baguio City Da**	**27.50**	**63**	⇑*i*P	**P**	**05 37 11.6**	**+0.6**
OTRP	**Odiongan**	**27.59**	**72**	*e*P	**P**	**05 37 12.3**	**+0.5**
RCP	**Roxas**	**28.11**	**74**	⇓*e*P	**P**	**05 37 16.9**	**+0.4**
LGTI	**Lohaghat**	**28.41**	**332**	*e*	**P**	**05 37 19.3**	**+0.3**
PTH	**Pithoragarh**	**28.50**	**332**	*e*P	**P**	**05 37 20.0**	**+0.1**
PTH				*e*S	**S**	**05 42 03.0**	**+0.9**
APYP	**Conner**	**28.66**	**61**	*e*P	**P**	**05 37 22.0**	**+0.6**
ENH	**Enshi**	**28.81**	**26**	⇑*i*P	**P**	**05 37 21.3**	**-1.3**
	comp=Z,187nm,0.8s,mb5.9						
CVP	**Callao Caves**	**29.10**	**61**	⇑*i*P	**P**	**05 37 25.5**	**+0.2**
	comp=Z,24µm,1.0s						
AYAN	**Aya Nagar**	**29.23**	**326**	⇓*e*P	**P**	**05 37 26.6**	**+0.2**
NDI	**New Delhi**	**29.34**	**326**	⇑*i*P	**P**	**05 37 25.0**	**-2.3**
	comp=Z,129nm,0.8s,mb5.7						
NDI				*e*		05 42 22.5	
BHGR	**Bahadurgarh**	**29.50**	**326**	*e*P	**P**	**05 37 27.5**	**-1.2**
KHET	**Khetri**	**29.68**	**324**	*e*P	**P**	**05 37 30.0**	**-0.4**
BUKP	**Musuan**	**29.86**	**82**	*e*P	**P**	**05 37 32.1**	**0.0**
PVCP	**Virac**	**29.91**	**71**	*e*P	**P**	**05 37 32.5**	**-0.1**
QZH	**Quanzhou**	**30.19**	**46**	⇑*i*P	**P**	**05 37 35.6**	**+0.7**
QZH				S	**S**	**05 42 33.5**	**+4.6**
QZH				AMB	AMB		
	comp=Z,650nm,1.1s,mb6.3						
QZH				AMB	AMB		
	comp=Z,2µm,5.6s						
QZH				LR	LR		
	comp=N,5µm,17.8s,MS5.5						
QZH				LR	LR		
	comp=E,10µm,20.6s,MS5.5						
QZH				LR	LR		
	comp=Z,12µm,25.0s,MS5.4						
DDI	**Dehra Dun**	**30.20**	**330**	*e*P	**P**	**05 37 34.1**	**-0.8**
DDI				*e*S	**S**	**05 42 30.0**	**+1.1**
DAV	**Davao City (W)**	**30.32**	**84**	*e*P	**P**	**05 37 40.0**	**+3.8**
KLP	**Kalpa**	**31.09**	**331**	*e*P	**P**	**05 37 42.5**	**-0.4**
KLP				*e*		05 37 43.6	
	comp=Z,108nm,0.6s						
KLP				*e*		05 42 40.2	
SMLA	**Simla**	**31.30**	**329**	⇓*i*P	**P**	**05 37 57.8**	**+13**
	comp=Z,210nm,0.8s,mb6.0						
SMLA				*i* S	**S**	**05 43 05.1**	**+19**
WHN	**Wuhan**	**31.44**	**33**	⇑P	**P**	**05 37 46.0**	**+0.1**
WHN				S	**S**	**05 42 50.0**	**+1.6**
WHN				AMB	AMB		
	comp=Z,423nm,1.4s,mb6.1						
WHN				LR	LR		
	comp=Z,14µm,13.7s,MS5.8						
SDNR	**Sundarnagar**	**31.69**	**329**	*e*P	**P**	**05 37 47.8**	**-0.3**
SDNR				*e*S	**S**	**05 42 52.2**	**-0.2**
XAN	**Xi'an**	**31.88**	**22**	P	**P**	**05 37 48.8**	**-0.9**
XAN				AP	pP	05 38 03.8	-0.2
XAN				PP	PP	05 38 51.3	-5.4
XAN				S	**S**	**05 42 52.6**	**-2.7**
XAN				XS		05 43 20.1	
XAN				AMB	AMB		
	comp=Z,1µm,0.7s,mb6.8						
XAN				AMB	AMB		
	comp=Z,548nm,11.9s						
XAN				LR	LR		
	comp=N,3µm,18.1s,MS5.2						
XAN				LR	LR		
	comp=E,4µm,18.9s,MS5.2						
XAN				LR	LR		
	comp=Z,9µm,16.5s,MS5.5						
BHK	**Bhakra**	**31.91**	**329**	*e*P	**P**	**05 37 48.9**	**-1.1**
BHK				*e*		05 42 53.3	
JASL	**Jaisalmer**	**32.04**	**316**	*e*P	**P**	**05 37 51.9**	**+0.7**
JASL				*e*		05 37 54.7	
	comp=Z,302nm,1.2s						
LZH	**Lanzhou**	**32.26**	**13**	⇑P	**P**	**05 37 51.8**	**-1.2**
LZH				AP	pP	05 38 03.3	-4.0
LZH				XP	sP	05 38 09.4	-4.8
LZH				PP	PP	05 39 01.3	-0.2
LZH				S	**S**	**05 43 02.0**	**+0.8**
LZH				XS		05 43 21.9	
LZH				SS	SS	05 44 55.8	-2.6
LZH				AMB	AMB		
	comp=Z,187nm,1.5s,mb5.7						
LZH				AMB	AMB		
	comp=Z,484nm,5.7s						
LZH				LR	LR		
	comp=N,5µm,14.1s						
LZH				LR	LR		
	comp=Z,8µm,17.0s,MS5.5						
LZH	**Lanzhou**	**32.26**	**13**	⇑P	**P**	**05 37 51.8**	**-1.2**
LZH				*PP	pP	05 38 03.2	-4.1
LZH				*SP	sP	05 38 09.4	-4.8
LZH						05 39 01.2	
LZH				S	**S**	**05 43 02.0**	**+0.8**
LZH				*SS		05 43 21.9	
LZH				SS	SS	05 44 55.7	-2.7
LZH				pmax	pmax		
	comp=Z,187nm,1.5s,mb5.7						
LZH				MLR	MLR		
	comp=Z,8µm,17.0s,MS5.5						
LZH	**Lanzhou**	**32.26**	**13**	⇑P	**P**	**05 37 51.8**	**-1.2**
	comp=Z,187nm,1.5s,mb5.7						
LZH				pP	pP	05 38 03.2	-4.1
LZH				sP	sP	05 38 09.4	-4.8
LZH				PP	PP	05 39 01.2	-0.3
LZH				S	**S**	**05 43 02.0**	**+0.8**
LZH				sS		05 43 21.9	
LZH				SS	SS	05 44 55.7	-2.7
LZH				LR	LR		
	comp=Z,8µm,17.0s,MS5.5						
TATO	**Taipei**	**32.33**	**49**	*e*P	**P**	**05 37 52.0**	**-1.7**
	comp=Z,211nm,0.9s,mb6.0						
TATO				LR	LR		
	comp=Z,4µm,21.0s,MS5.1						
DLH	**Dalhousie**	**33.03**	**329**	*e*PN	**P**	**05 37 58.0**	**-1.8**
THN	**Thein Dam**	**33.08**	**329**	*e*P	**P**	**05 37 57.2**	**-2.9**
THN				*e*		05 43 11.7	
GTA	**Gaotai**	**34.83**	**6**	⇑*i*P	**P**	**05 38 14.4**	**-0.7**
GTA				AP	pP	05 38 25.3	-4.2
GTA				XP	sP	05 38 31.0	-5.5
GTA				PP	PP	05 39 31.1	-2.8
GTA				PPP	PPP	05 39 51.5	-0.6
GTA				PCP	PcP	05 40 47.9	+0.4
GTA				S	**S**	**05 43 38.3**	**-2.7**
GTA				SCP		05 44 28.6	
GTA				SCS	ScS	05 48 29.6	+0.7
GTA				AMB	AMB		
	comp=Z,349nm,0.8s,mb6.3						
GTA				AMB	AMB		
	comp=Z,1µm,6.5s						
GTA				LR	LR		
	comp=N,2µm,20.9s,MS4.9						
GTA				LR	LR		
	comp=E,2µm,23.6s,MS4.9						
GTA				LR	LR		
	comp=Z,3µm,29.3s						
NJ2	**Nanjing**	**35.12**	**36**	*e*P	**P**	**05 38 18.1**	**+0.5**
NJ2				AP	pP	05 38 30.8	-1.3
NJ2				XP	sP	05 38 36.3	-2.8
NJ2				PP	PP	05 39 38.9	+1.2
NJ2				S	**S**	**05 43 47.0**	**+1.5**
NJ2				XS		05 44 08.0	
NJ2				AMB	AMB		
	comp=Z,560nm,1.0s,mb6.5						
NJ2				AMB	AMB		
	comp=Z,610nm,8.0s						
NJ2				LR	LR		
	comp=N,7µm,18.4s						
NJ2				LR	LR		
	comp=E,12µm,13.1s						
NJ2				LR	LR		
	comp=Z,13µm,13.6s,MS5.8						
MBWA	**Marble Bar**	**35.20**	**138**	⇑*i*P	**P**	**05 38 17.2**	**-1.2**
	comp=Z,77nm,1.2s,mb5.5						
MBWA				*e*PcP	PcP	05 40 48.9	+0.1
MBWA				*e*ScP		05 44 29.9	
MBWA				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
SSE	**Sheshan**	**35.89**	**40**	P	**P**	**05 38 23.3**	**-1.0**
SSE				AP	pP	05 38 34.5	-4.2
SSE				XP	sP	05 38 40.1	-5.6
SSE				PP	PP	05 39 50.4	+3.4
SSE				S	**S**	**05 44 00.1**	**+2.6**
SSE				XS		05 44 20.1	
SSE				AMB	AMB		
	comp=Z,85nm,1.4s,mb5.5						
SSE				AMB	AMB		
	comp=Z,278nm,3.6s						
SSE				LR	LR		
	comp=N,4µm,19.0s,MS5.2						

SSE				LR	LR		
	comp=E,2µm,18.9s,MS5.2						
SSE				LR	LR		
	comp=Z,4µm,16.8s,MS5.3						
SSE	**Sheshan**	**35.89**	**40**	P	**P**	**05 38 23.3**	**-1.0**
	comp=Z,85nm,1.4s,mb5.5						
SSE				pP	pP	05 38 34.5	-4.2
SSE				sP	sP	05 38 40.1	-5.6
SSE				PP	PP	05 39 50.4	+3.4
SSE				S	**S**	**05 44 00.1**	**+2.6**
SSE				sS		05 44 20.1	
SSE				SS	SS	05 46 54.6	+33
SSE				LR	LR		
	comp=Z,4µm,16.8s,MS5.3						
TIA	**Tai'an**	**37.31**	**30**	*e*P	**P**	**05 38 35.6**	**-0.5**
TIA				S	**S**	**05 44 16.0**	**-3.1**
TIA				AMB	AMB		
	comp=Z,110nm,1.1s,mb5.6						
TIA				LR	LR		
	comp=N,2µm,16.0s,MS5.4						
TIA				LR	LR		
	comp=E,4µm,16.0s,MS5.4						
FITZ	**Fitzroy Crossi**	**37.61**	**128**	⇑*i*P	**P**	**05 38 37.8**	**-1.0**
	comp=E,122nm,0.8s,mb5.7						
FITZ				*e*PCP	PcP	05 40 56.3	+0.3
BTO	**Baotou**	**38.18**	**18**	*e*P	**P**	**05 38 43.1**	**-0.2**
BTO				S	**S**	**05 44 33.8**	**+1.6**
BTO				AMB	AMB		
	comp=Z,93nm,0.7s,mb5.6						
JOW	**Kunigami**	**38.51**	**52**	LR	LR	05 54 31.9	
	comp=Z,4µm,21.8s,MS5.2,baz=274,slow=36						
KSH	**Kashi**	**38.79**	**336**	⇑P	**P**	**05 38 49.0**	**+0.6**
KSH				*e*PP	PP	05 40 22.4	+0.7
KSH				*e*PCP	PcP	05 41 01.0	+1.5
KSH				*e*S	**S**	**05 44 42.6**	**+1.0**
KSH				*e*PCS		05 44 51.1	
KSH				*e*PS		05 45 00.4	
KSH				*e*SS	SS	05 47 26.9	+0.5
KSH				AMB	AMB		
	comp=Z,2µm,1.8s,mb6.5						
KSH				AMB	AMB		
	comp=Z,5µm,5.8s						
KSH				LR	LR		
	comp=N,2µm,21.7s,MS5.2						
KSH				LR	LR		
	comp=E,3µm,20.6s,MS5.2						
WBK	**Wadi Bani Khal**	**39.28**	**300**	⇓P	**P**	**05 38 54.8**	**+2.2**
	SNR=6.7						
WMQ	**Urumqi**	**39.54**	**351**	⇑*i*P	**P**	**05 38 54.5**	**0.0**
WMQ				PP	PP	05 40 29.0	-0.8
WMQ				S	**S**	**05 44 56.0**	**+3.2**
WMQ				SS	SS	05 47 42.0	-0.6
WMQ				AMB	AMB		
	comp=Z,264nm,1.0s,mb5.9						
WMQ				AMB	AMB		
	comp=Z,232nm,8.0s						
WMQ				LR	LR		
	comp=N,1µm,18.0s,MS5.3						
WMQ				LR	LR		
	comp=E,4µm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,2µm,18.0s,MS4.9						
JMDO	**Jabal Madar**	**39.94**	**300**	⇓P	**P**	**05 39 00.2**	**+2.1**
	SNR=7.9						
BJT	**Baijiatuau**	**39.95**	**25**	⇑*i*P	**P**	**05 38 59.6**	**+1.6**
BJT				pmax	pmax		
	comp=Z,658nm,0.7s						
BJT	**Baijiatuau**	**39.95**	**25**	⇑*i*P	**P**	**05 38 59.6**	**+1.6**
	comp=Z,658nm,0.7s,mb6.5						
BJI	**Beijing**	**39.97**	**25**	P	**P**	**05 38 59.9**	**+1.7**
BJI				AP	pP	05 39 11.8	-1.0
BJI				XP	sP	05 39 17.8	-1.7
BJI				S	**S**	**05 44 53.4**	**-5.9**
BJI				AMB	AMB		
	comp=Z,915nm,0.9s,mb6.5						
BJI				AMB	AMB		
	comp=Z,2µm,3.9s						
BJI				LR	LR		
	comp=N,4µm,19.3s,MS5.3						
BJI				LR	LR		
	comp=E,2µm,18.0s,MS5.3						
BJI				LR	LR		
	comp=Z,5µm,24.4s						
BJI	**Beijing**	**39.97**	**25**	P	**P**	**05 38 59.9**	**+1.7**
BJI				*PP	pP	05 39 11.8	-1.0
BJI				*SP	sP	05 39 17.7	-1.8
BJI				S	**S**	**05 44 53.4**	**-5.9**
BJI				pmax	pmax		
	comp=Z,915nm,0.9s,mb6.5						
BJI				MLR	MLR		
	comp=Z,5µm,24.4s,MS5.3						
BJI	**Beijing**	**39.97**	**25**	P	**P**	**05 38 59.9**	**+1.7**
	comp=Z,915nm,0.9s,mb6.5						
BJI				pP	pP	05 39 11.8	-1.0
BJI				sP	sP	05 39 17.7	-1.8
BJI				PP	PP	05 40 42.2	+7.7
BJI				S	**S**	**05 44 53.4**	**-5.9**
BJI				SS	SS	05 48 14.2	+22
BJI				LR	LR		
	comp=Z,5µm,24.4s,MS5.3						
SMDO	**Samad**	**40.23**	**301**	⇑P	**P**	**05 39 02.8**	**+2.3**
	SNR=13						
BIDO	**Bidbid**	**40.34**	**301**	⇑P	**P**	**05 39 03.7**	**+2.3**
	SNR=12						
KAKA	**Kakadu**	**40.85**	**115**	⇑*i*P	**P**	**05 39 04.4**	**-1.3**
	comp=Z,70nm,0.7s,mb5.4						
KAKA				*e*PCP	PcP	05 41 06.8	+0.5
BSY	**Bisya**	**40.85**	**300**	⇑P	**P**	**05 39 08.0**	**+2.4**
	SNR=13						
SHAO	**Shalim**	**40.88**	**292**	⇑P	**P**	**05 39 07.9**	**+2.0**
ULHL	**Ulahol**	**41.04**	**338**	P	**P**	**05 39 08.1**	**+1.2**
	SNR=73						
HOQ	**Hoqain**	**41.05**	**301**	⇓P	**P**	**05 39 09.5**	**+2.2**
KZA	**Kyzart**	**41.26**	**337**	P	**P**	**05 39 10.7**	**+1.9**
	SNR=27						
MUN	**Mundaring**	**41.59**	**153**	*e*P	**P**	**05 39 13.0**	**+1.3**
	comp=Z,44nm,1.2s,mb5.0						
MUN	**Mundaring**	**41.59**	**153**	*e*P	**P**	**05 39 13.0**	**+1.3**
MUN				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.0						
ARQ	**Araqi**	**41.65**	**300**	P	**P**	**05 39 14.7**	**+2.5**
	SNR=6.2						
DL2	**Dalian**	**41.67**	**32**	P	**P**	**05 39 13.4**	**+1.2**
DL2				AP	pP	05 39 24.1	-2.8
DL2				XP	sP	05 39 29.8	-3.8
DL2				S	**S**	**05 45 29.0**	**+4.4**
DL2				XS		05 45 47.8	
DL2				AMB	AMB		
	comp=Z,470nm,0.8s,mb6.2						
DL2				AMB	AMB		
	comp=Z,410nm,4.7s						
DL2				LR	LR		
	comp=N,2µm,15.3s,MS5.2						
DL2				LR	LR		
	comp=E,1µm,15.5s,MS5.2						
DL2				LR	LR		
	comp=Z,2µm,20.4s,MS5.0						
UCH	**Uchtor**	**41.68**	**337**	P	**P**	**05 39 13.9**	**+1.6**
	SNR=796						
TKM2	**Tokmak 2**	**41.86**	**338**	P	**P**	**05 39 14.9**	**+1.1**
	SNR=36						
KBK	**Karagaybulak**	**41.88**	**338**	P	**P**	**05 39 15.4**	**+1.6**
	SNR=29						
AML	**Almayashu**	**41.92**	**336**	P	**P**	**05 39 16.2**	**+1.9**
	SNR=47						
KLBR	**Kellerberrin**	**42.00**	**151**	*e*P	**P**	**05 39 14.8**	**-0.2**
	comp=Z,1µm,1.3s,mb6.3						
AAK	**Ala-Archa**	**42.03**	**337**	P	**P**	**05 39 16.6**	**+1.4**
	SNR=475						
AAK	**Ala-Archa**	**42.03**	**337**	⇑*i*P	**P**	**05 39 15.4**	**+0.3**
AAK				*e*		05 41 09.1	
AAK				*e*S	**S**	**05 45 32.1**	**+2.2**
AAK				pmax	pmax		
	comp=Z,1µm,1.1s,mb6.4						
AAK				MLR	MLR		
	comp=Z,390nm,21.0s,MS4.3						
AAK	**Ala-Archa**	**42.03**	**337**	⇑*i*P	**P**	**05 39 15.4**	**+0.3**
	comp=Z,1µm,1.1s,mb6.4						
AAK				*e*PcP	PcP	05 41 09.1	-0.9
AAK				*e*S	**S**	**05 45 32.1**	**+2.3**
AAK				LR	LR		
	comp=Z,390nm,21.0s,MS4.3						
RBK	**Rabkut**	**42.08**	**291**	⇑P	**P**	**05 39 17.5**	**+1.6**
	SNR=8.0						
FRU	**Bishkek**	**42.15**	**337**	⇑*i*P	**P**	**05 39 17.5**	**+1.4**
FRU				*i* S	**S**	**05 45 35.0**	**+3.4**
FRU				pmax	pmax		
	comp=Z,2µm,1.9s,mb6.4						
FRU				pmax	pmax		
	comp=Z,3µm,3.0s						
FRU				MLR	MLR		
	comp=E,2µm,20.0s						
FRU				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.0						
CHMS	**Chumysh**	**42.24**	**338**	P	**P**	**05 39 18.0**	**+1.1**
	SNR=9.1						
EKS2	**Erkin-Say**	**42.34**	**336**	P	**P**	**05 39 19.2**	**+1.5**
	SNR=290						
ASHO	**Ashiyiah**	**42.52**	**302**	⇓P	**P**	**05 39 21.4**	**+2.0**
	SNR=6.0						
USP	**Ospenovka**	**42.57**	**338**	P	**P**	**05 39 20.4**	**+0.9**
	SNR=1054						
WHFO	**Wadi Hawf**	**42.57**	**291**	⇓P	**P**	**05 39 20.9**	**+1.0**
	SNR=32						
NWAO	**Narrogin (SRO)**	**42.85**	**152**	*e*P	**P**	**05 39 21.9**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,227nm,1.5s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
NWAO	**Narrogin (SRO)**	**42.85**	**152**	*e*P	**P**	**05 39 21.9**	**-0.1**
	comp=Z,227nm,1.5s,mb5.7						
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
ABTO	**Aybut**	**42.89**	**290**	⇑P	**P**	**05 39 24.1**	**+1.6**
	SNR=13						
MKAR	**Makanchi Array**	**43.41**	**347**	*i* P	**P**	**05 39 26.0**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,158nm,0.8s						
MKAR	**Makanchi Array**	**43.41**	**347**	*i* P	**P**	**05 39 26.1**	**-0.3**
INCN	**Inchon**	**43.49**	**37**	⇑*i*P	**P**	**05 39 26.6**	**-0.6**
	comp=Z,197nm,0.8s,mb5.9						
INCN				*e*	pP	05 39 39.9	-1.9
INCN				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
SONM	**Songino Array**	**44.06**	**11**	P	**P**	**05 39 30.9**	**-0.7**
	comp=Z,31nm,0.7s,mb5.2,baz=193,slow=8.2,SNR=110						
SONM				PcP	PcP	05 41 16.7	0.0
	comp=Z,64nm,0.8s,baz=185,slow=3.6,SNR=14						
SONM				ScP		05 45 03.4	
	comp=Z,6.6nm,0.9s,baz=207,slow=2.8,SNR=5.3						
ULN	**Ulaanbaatar**	**44.22**	**11**	⇑*i*P	**P**	**05 39 31.8**	**-1.1**
ULN				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.1						
ULN				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.3						
ULN	**Ulaanbaatar**	**44.22**	**11**	⇑*i*P	**P**	**05 39 31.8**	**-1.1**
	comp=Z,27nm,0.7s,mb5.1						
ULN				*e*ScP		05 45 01.5	
ULN				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
KS15	**Wonju Array Si**	**44.22**	**38**	⇑*i*P	**P**	**05 39 32.6**	**-0.5**
SNY	**Shenyang**	**44.83**	**30**	⇑P	**P**	**05 39 37.8**	**-0.1**
SNY				AP	pP	05 39 50.3	-2.3
SNY				S	**S**	**05 46 10.8**	**+0.2**
SNY				AMB	AMB		
	comp=Z,390nm,0.7s,mb6.3						
SNY				LR	LR		
	comp=N,2µm,19.2s						
SNY				LR	LR		
	comp=E,2µm,24.6s						
SNY				LR	LR		
	comp=Z,3µm,20.4s,MS5.3						
WRA	**Warramunga Arr**	**45.60**	**124**	P	**P**	**05 39 44.3**	**0.0**
WRA				S	**S**	**05 46 19.3**	**-2.6**
WRA	**Warramunga Arr**	**45.60**	**124**	P	**P**	**05 39 44.3**	**0.0**
	comp=Z,408nm,1.0s,mb6.3,baz=302,slow=9.0,SNR=1050						
WRA				ScP		05 45 11.0	
	comp=Z,6.8nm,1.2s,baz=304,slow=3.5,SNR=5.0						
WRA				S	**S**	**05 46 19.3**	**-2.6**
	comp=Z,5.0nm,0.9s,baz=293,slow=16,SNR=8.4						
WRAB	**Tennant Creek**	**45.61**	**124**	⇑*i*P	**P**	**05 39 44.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,756nm,0.9s,mb6.6						
WRAB				MLR	MLR		
	comp=Z,931nm,22.0s,MS4.7						
WRAB	**Tennant Creek**	**45.61**	**124**	⇑*i*P	**P**	**05 39 44.2**	**-0.1**
	comp=Z,756nm,0.9s,mb6.6						
WRAB				LR	LR		
	comp=Z,931nm,22.0s,MS4.7						
ZAK	**Zakamensk**	**46.05**	**7**	⇓*i*P	**P**	**05 39 46.0**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
MOY	**Mondy**	**47.08**	**5**	*e*P	**P**	**05 39 54.7**	**-0.8**
MOY				*e*		05 41 27.0	
MOY				pmax	pmax		
	comp=Z,79nm,2.5s,mb5.2						
ASPA	**Alice Springs**	**47.10**	**128**	⇑*i*P	**P**	**05 39 55.9**	**-0.2**
ASPA				*e*S	**S**	**05 46 42.6**	**-0.6**
ASAR	**Alice Springs**	**47.10**	**128**	P	**P**	**05 39 56.0**	**-0.2**
	comp=Z,40nm,0.6s,mb5.5,baz=304,slow=7.7,SNR=343						
ASAR				PcP	PcP	05 41 27.9	+0.2
	comp=Z,24nm,0.7s,baz=307,slow=3.5,SNR=5.8						
ASAR				S	**S**	**05 46 42.8**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=285,slow=14,SNR=4.1						
ASAR				LR	LR	06 03 16.5	
	comp=Z,1µm,19.5s,MS4.9,baz=299,slow=40						
CN2	**Changchun**	**47.22**	**30**	*e*P	**P**	**05 39 56.6**	**-0.1**
CN2				*e*AP	pP	05 40 06.3	-5.2
CN2				PCP	PcP	05 41 26.8	-0.9
CN2				PP	PP	05 41 47.5	-0.1
CN2				*e*S	**S**	**05 46 45.8**	**+1.3**
CN2				AMB	AMB		
	comp=Z,360nm,0.7s,mb6.4						
CN2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=N,2µm,14.0s,MS5.5						
CN2				LR	LR		
	comp=E,3µm,14.0s,MS5.5						
CN2				LR	LR		
	comp=Z,3µm,15.0s,MS5.4						
TLY	**Talaya**	**47.37**	**7**	P	**P**	**05 39 57.3**	**-0.5**
	comp=Z,278nm,0.9s,mb6.2,SNR=14						
TLY	**Talaya**	**47.37**	**7**	⇑*i*P	**P**	**05 39 57.4**	**-0.4**
TLY				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.5						
TLY				MLR	MLR		
	comp=Z,590nm,21.0s,MS4.5						
TLY	**Talaya**	**47.37**	**7**	⇑*i*P	**P**	**05 39 57.4**	**-0.4**
	comp=Z,58nm,1.0s,mb5.5						
TLY				*e*ScP		05 45 17.1	
TLY				LR	LR		
	comp=Z,590nm,21.0s,MS4.5						
KURK	**Kurchatov**	**47.94**	**346**	⇑*i*P	**P**	**05 40 01.7**	**-0.6**
KURK				*e*S	**S**	**05 46 55.9**	**+1.3**
KURK				pmax	pmax		
	comp=Z,268nm,0.9s,mb6.3						
KURK				MLR	MLR		
	comp=Z,349nm,20.0s,MS4.3						
KURK	**Kurchatov**	**47.94**	**346**	⇑*i*P	**P**	**05 40 01.6**	**-0.6**
	comp=Z,268nm,0.9s,mb6.3						
KURK				*e*ScP		05 45 18.1	
KURK				*e*S	**S**	**05 46 55.9**	**+1.2**
KURK				LR	LR		
	comp=Z,349nm,20.0s,MS4.3						
IRK	**Irkutsk**	**48.00**	**8**	*e*P	**P**	**05 40 01.7**	**-1.1**
IRK				*e*	pP	05 40 15.5	-2.0
IRK				pmax	pmax		
	comp=Z,113nm,2.2s,mb5.5						
HIA	**Hailar**	**49.07**	**21**	⇑*i*P	**P**	**05 40 10.9**	**-0.2**
HIA				*e*		05 41 33.3	
HIA				pmax	pmax		
	comp=Z,504nm,1.1s						
HIA	**Hailar**	**49.07**	**21**	⇑*i*P	**P**	**05 40 10.9**	**-0.2**
	comp=Z,504nm,1.1s,mb6.5						
HIA				*e*PcP	PcP	05 41 33.3	-1.0
GUMO	**Guam**	**49.76**	**76**	P	**P**	**05 40 16.4**	**-0.4**
GUMO				pmax	pmax		
	comp=Z,348nm,1.1s,mb6.3						
GUMO				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.2						
GUMO	**Guam**	**49.76**	**76**	P	**P**	**05 40 16.4**	**-0.5**
	comp=Z,348nm,1.1s,mb6.3						
GUMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.2						
ZAL	**Zalesovo**	**49.83**	**352**	P	**P**	**05 40 16.5**	**-0.3**
	comp=Z,82nm,0.6s,mb6.0,baz=301,slow=6.8,SNR=350						
ZAL				PcP	PcP	05 41 36.1	-0.9
	comp=Z,28nm,0.6s,baz=324,slow=7.0,SNR=2.8						
ZAL				S	**S**	**05 47 20.9**	**-0.1**
	comp=Z,12nm,1.0s,baz=186,slow=21,SNR=15						
MDJ	**Mudanjiang**	**49.91**	**32**	P	**P**	**05 40 17.9**	**+0.3**
MDJ				AP	pP	05 40 27.0	-5.4
MDJ				PP	PP	05 42 12.4	-1.1
MDJ				PCS		05 45 35.8	
MDJ				S	**S**	**05 47 25.3**	**+3.1**
MDJ				AMB	AMB		
	comp=Z,254nm,0.9s,mb6.2						
MDJ				AMB	AMB		
	comp=Z,648nm,6.2s						
MDJ				LR	LR		
	comp=N,2µm,21.0s,MS5.3						
MDJ				LR	LR		
	comp=E,2µm,18.4s,MS5.3						
MDJ				LR	LR		
	comp=Z,4µm,20.1s,MS5.4						
MDJ	**Mudanjiang**	**49.91**	**32**	⇑*i*P	**P**	**05 40 17.8**	**+0.2**
	comp=Z,730nm,1.3s,mb6.5						
LBOS		**50.03**	**284**	⇑*e*P	**P**	**05 40 20.4**	**+1.6**
VLA	**Vladivostok**	**50.19**	**35**	*i* P	**P**	**05 40 19.0**	**-0.7**
VLA				*e*	pP	05 40 33.0	-1.6
VLA				*e*		05 47 33.0	
VLA				pmax	pmax		
	comp=Z,1µm,3.0s						
VLA				pmax	pmax		
	comp=E,1µm,3.6s						
VLA				MLR	MLR		
	comp=Z,5µm,13.0s,MS5.7						
VLA				MLR	MLR		
	comp=E,3µm,15.0s,MS5.5						
VLA				MLR	MLR		
	comp=N,3µm,16.0s,MS5.5						
JHJ	**Hachijo jima 2**	**50.23**	**50**	LR	LR	06 04 00.8	
	comp=N,1µm,18.1s,MS5.0,baz=130,slow=39						
MAJO	**Matsushiro**	**50.59**	**45**	⇑*e*P	**P**	**05 40 22.1**	**-0.8**
MAJO				*e*		05 41 39.6	
MAJO				pmax	pmax		
	comp=Z,93nm,0.9s,mb5.7						
MAJO				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.2						
MAJO	**Matsushiro**	**50.59**	**45**	⇑*e*P	**P**	**05 40 22.1**	**-0.8**
	comp=Z,93nm,0.9s,mb5.7						
MAJO				*e*PcP	PcP	05 41 39.6	-0.5
MAJO				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
MAT	**Matsushiro**	**50.59**	**45**	*e*P	**P**	**05 40 22.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,190nm,1.3s,mb5.9						
MAT				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
MAT	**Matsushiro**	**50.59**	**45**	*e*P	**P**	**05 40 22.0**	**-0.9**
	comp=Z,190nm,1.3s,mb5.9						
MAT				*e*S		05 47 59.0	
MAT				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
MAT	**Matsushiro**	**50.59**	**45**	P	**P**	**05 40 22.1**	**-0.8**
MAT				S	**S**	**05 47 25.0**	**-6.7**
DHBB	**Dhamar BB**	**50.93**	**285**	⇑*e*P	**P**	**05 40 27.4**	**+1.7**
NVS	**Novosibirsk**	**50.94**	**351**	*i* P	**P**	**05 40 23.1**	**-2.1**
NVS				*i*	pP	05 40 39.9	-0.2
NVS				*i* S	**S**	**05 47 29.3**	**-7.0**
NVS				*e*		05 50 07.7	
NVS				pmax	pmax		
	comp=Z,212nm,1.3s,mb5.9						
NVS				pmax	pmax		
	comp=N,146nm,0.9s						
NVS				pmax	pmax		
	comp=E,96nm,0.9s						
NVS				smax			
	comp=N,192nm,1.6s						
NVS				smax			
	comp=E,40nm,1.4s						
BVAR	**Borovoye Array**	**52.33**	**341**	P	**P**	**05 40 35.0**	**-0.7**
	comp=E,331nm,0.7s,mb6.4,baz=143,slow=7.4,SNR=1075						
BVAR				PcP	PcP	05 41 46.3	0.0
	comp=E,29nm,0.6s,baz=135,slow=6.1,SNR=1.7						
BVAR				S	**S**	**05 47 55.4**	**+0.1**
	comp=E,8.3nm,0.8s,baz=139,slow=16,SNR=8.0						
BRVK	**Borovoye**	**52.39**	**341**	⇑*i*P	**P**	**05 40 35.2**	**-1.0**
BRVK				*e*S	**S**	**05 47 55.9**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,372nm,0.6s,mb6.5						
BRVK				MLR	MLR		
	comp=Z,322nm,22.0s,MS4.3						
BRVK	**Borovoye**	**52.39**	**341**	⇑*i*P	**P**	**05 40 35.2**	**-1.0**
	comp=Z,372nm,0.6s,mb6.5						
BRVK				*e*S	**S**	**05 47 55.9**	**-0.4**
BRVK				LR	LR		
	comp=Z,322nm,22.0s,MS4.3						
PMG	**Port Moresby**	**53.65**	**105**	⇑*i*P	**P**	**05 40 44.8**	**-1.3**
PMG				pmax	pmax		
	comp=Z,88nm,0.8s						
PMG				MLR	MLR		
	comp=Z,1µm,21.0s						
PMG	**Port Moresby**	**53.65**	**105**	P	**P**	**05 40 45.3**	**-0.8**
	comp=Z,57nm,0.7s,mb5.6,baz=321,slow=5.2,SNR=15						
PMG				PcP	PcP	05 41 51.9	+0.2
	comp=Z,37nm,0.9s,baz=62,slow=2.1,SNR=2.0						
PMG	**Port Moresby**	**53.65**	**105**	⇑*i*P	**P**	**05 40 44.8**	**-1.3**
	comp=Z,88nm,0.8s,mb5.7						
PMG				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
KLR	**Kul'dur**	**54.13**	**29**	⇓*i*P	**P**	**05 40 46.0**	**-3.1**
KLR				*e*	pP	05 41 01.8	-2.4
KLR				*e*S	**S**	**05 48 17.5**	**-2.3**
KLR				*e*		05 50 27.5	
KLR				pmax	pmax		
	comp=N,230nm,1.8s						
KLR				pmax	pmax		
	comp=E,390nm,1.8s						
KLR				pmax	pmax		
	comp=Z,490nm,1.8s,mb6.1						
KLR				MLR	MLR		
	comp=N,2µm,13.0s						
KLR				MLR	MLR		
	comp=Z,4µm,13.0s,MS5.6						
BOD	**Bodaibo**	**55.02**	**12**	*e*P	**P**	**05 40 53.7**	**-1.7**
BOD				pmax	pmax		
	comp=Z,96nm,1.1s,mb5.7						
BHD	**Baghdad**	**55.11**	**308**	*i* P	**P**	**05 40 54.0**	**-2.5**
BHD				*i* PcP	pP	05 41 08.0	-3.7
BHD				*e*S	**S**	**05 48 31.0**	**-2.3**
CTA	**Charters Tower**	**55.88**	**118**	P	**P**	**05 41 01.6**	**-0.6**
	comp=Z,80nm,1.0s,mb5.7,baz=290,slow=8.8,SNR=56						
CTAO	**Charters Tower**	**55.88**	**118**	⇑*i*P	**P**	**05 41 01.3**	**-0.8**
CTAO				pmax	pmax		
	comp=Z,392nm,1.5s,mb6.2						
CTAO				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.3						
CTAO	**Charters Tower**	**55.88**	**118**	⇑*i*P	**P**	**05 41 01.3**	**-0.8**
	comp=Z,392nm,1.5s,mb6.2						
CTAO				LR	LR		
	comp=Z,3µm,22.0s,MS5.3						
CLNS	**Chul'man**	**57.08**	**19**	*c* *i*P	**P**	**05 41 09.8**	**-0.5**
CLNS				*e**PP	pP	05 41 17.5	-8.0
CLNS				*e*		05 42 01.9	
CLNS				*e*S	**S**	**05 48 56.4**	**-2.6**
CLNS				*e*		05 50 47.3	
CLNS				*e*SS	SS	05 52 52.8	+3.1
CLNS				*e*SSS	SSS	05 54 59.8	-5.8
CLNS				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.7						
CLNS				pmax	pmax		
	comp=N,32nm,0.7s						
CLNS				pmax	pmax		
	comp=E,23nm,0.7s						
CLNS				pmax	pmax		
	comp=N,38nm,1.4s						
CLNS				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
CLNS				pmax	pmax		
	comp=E,19nm,1.0s						
CLNS				smax			
	comp=E,52nm,13.1s						
CLNS				smax			
	comp=Z,186nm,11.9s						
CLNS				smax			
	comp=N,239nm,12.4s						
CLNS				MLR	MLR		
	comp=N,4µm,17.0s,MS5.6						
CLNS				MLR	MLR		
	comp=Z,7µm,17.0s,MS5.8						
CLNS				MLR	MLR		
	comp=E,800nm,16.0s,MS5.6						
HKR	**Hakkari**	**57.13**	**312**	*i* P	**P**	**05 41 09.7**	**-1.2**
MSL	**Mosul**	**57.15**	**311**	*e*P	**P**	**05 41 09.0**	**-2.0**
STKA	**Stephens Creek**	**57.17**	**133**	⇑*i*P	**P**	**05 41 10.4**	**-0.9**

```
            comp=E,21nm,0.7s,mb5.3
STKA  Stephens Creek   57.17 133   P       P      05 41 10.5 -0.8
            comp=E,28nm,1.0s,mb5.3,baz=310,slow=7.3,SNR=40
ASAJ  Asahikawa        57.18  39   P       P      05 41 11.2  0.0
            comp=E,83nm,0.9s,mb5.8,baz=258,slow=11,SNR=30
ASAJ                               LR      LR     06 05 53.9
            comp=E,1µm,21.0s,MS5.1,baz=174,slow=36
GNI   Garni            57.41 315  i P      P      05 41 12.1 -0.8
GNI   Garni            57.41 315⇑eP       P      05 41 11.5 -1.4
GNI                               e               05 43 20.1
GNI                                pmax    pmax
            comp=Z,253nm,1.1s
GNI                                MLR     MLR
            comp=Z,448nm,20.0s
GNI   Garni            57.41 315   P       P      05 41 12.4 -0.4
            comp=Z,78nm,0.9s,mb5.8,baz=305,slow=1.1,SNR=7.5
GNI   Garni            57.41 315⇑eP       P      05 41 11.4 -1.4
            comp=Z,253nm,1.1s,mb6.2
GNI                               ePP      PP     05 43 20.1 -2.1
GNI                                LR      LR
            comp=Z,448nm,20.0s,MS4.6
MTA   Mtatsminda       58.02 317   P       P      05 41 16.3 -0.8
TI2   Plekhanov        58.07 317α iP       P      05 41 17.8 +0.4
TI2                               eS       S      05 49 12.0 -0.2
TI2                               e               05 51 01.0
TI2                                pmax    pmax
            comp=Z,430nm,1.0s,mb6.4
TI2                                pmax    pmax
            comp=Z,2µm,1.6s,mb6.8
KMBO  Kilima Mbogo     58.16 266  eP       P      05 41 19.3 +0.8
KMBO                               pmax    pmax
            comp=Z,65nm,1.1s
KMBO                               MLR     MLR
            comp=Z,3µm,22.0s
KMBO  Kilima Mbogo     58.16 266   P       P      05 41 19.6 +1.2
            comp=Z,24nm,0.9s,mb5.2,baz=59,slow=9.3,SNR=58
KMBO                               LR      LR     06 01 58.4
            comp=Z,2µm,21.7s,MS5.3,baz=90,slow=31
KMBO  Kilima Mbogo     58.16 266  eP       P      05 41 19.3 +0.9
            comp=Z,65nm,1.1s,mb5.6
KMBO                               LR      LR
            comp=Z,3µm,22.0s,MS5.3
DUS   Dusheti          58.25 318   P       P      05 41 17.7 -1.0
YSS   Yuzh-Sakhalins   58.69  36α iP       P      05 41 21.0 -0.6
YSS                               e        pP     05 41 33.0 -3.9
YSS                               e        pP     05 41 37.0 +0.1
YSS                               e               05 42 10.0
YSS                               e               05 49 46.0
YSS                               e               05 55 41.0
YSS                                pmax    pmax
            comp=Z,370nm,1.0s,mb6.4
YSS                                pmax    pmax
            comp=Z,1µm,5.0s
YSS                                MLR     MLR
            comp=N,2µm,18.0s
YSS                                MLR     MLR
            comp=Z,2µm,18.0s,MS5.2
YSS   Yuzh-Sakhalins   58.69  36⇑iP       P      05 41 21.2 -0.5
            comp=Z,354nm,1.0s,mb6.3
YSS                               e        pP     05 41 33.8 -3.1
YSS                                LR      LR
            comp=Z,2µm,22.0s,MS5.2
SVE   Sverdlovsk       58.73 339⇑iP       P      05 41 21.0 -0.8
SVE                               e               05 42 05.5
SVE                               e               05 43 31.0
SVE                                pmax    pmax
            comp=Z,100nm,1.4s,mb5.7
YUK   Yuzh-Kuril'sk    59.22  40⇑iP       P      05 41 27.0 +1.6
YUK                                pmax    pmax
            comp=Z,3µm,1.0s
YUK                                pmax    pmax
            comp=Z,820nm,1.0s,mb6.7
ONI   Oni              59.30 318   P       P      05 41 25.6 -0.4
VRT   Varto            59.31 313  i P      P      05 41 26.0 -0.1
EZM   Erzurum          59.71 314  i P      P      05 41 28.9 +0.1
BINT  Bingol           59.98 313  i P      P      05 41 30.1 -0.5
KIV   Kislovodsk       60.38 319   P       P      05 41 32.3 -1.0
            comp=Z,1µm,0.9s,SNR=36
KIV   Kislovodsk       60.38 319c iP       P      05 41 32.3 -1.0
KIV                                pmax    pmax
            comp=Z,225nm,0.9s,mb6.2
KIV   Kislovodsk       60.38 319⇑iP       P      05 41 32.1 -1.2
            comp=Z,458nm,1.2s,mb6.4
KIV                               e        pP     05 41 49.0 +0.3
KIV                                LR      LR
            comp=Z,17µm,22.0s,MS6.2
GOF   Gofitskoye       60.62 320⇑iP       P      05 41 33.0 -1.9
GOF                               i        pP     05 41 51.0 +0.7
GOF                               eS       S      05 50 03.0 +18
GOF                                pmax    pmax
            comp=Z,160nm,1.2s,mb6.0
GOF                                smax
            comp=E,2µm,7.0s
URFA  Urfa             60.76 311  i P      P      05 41 35.8 -0.2
EZC   Erzincan         60.77 313  i P      P      05 41 38.0 +2.0
PTK   Pertek           60.79 312  i P      P      05 41 35.4 -0.8
ASF   Jabal al Asfar   60.84 304   P       P      05 41 37.3 +0.7
            comp=E,24nm,1.0s,mb5.3,baz=3.3,slow=3.3,SNR=16
GUMT  Gumushane        61.26 314  i P      P      05 41 39.2 -0.1
MALT  Malatya          61.32 311  i P      P      05 41 39.3 -0.5
MALT  Malatya          61.32 311⇑iP       P      05 41 39.4 -0.4
MALT                               pmax    pmax
            comp=Z,170nm,1.3s,mb6.0
MALT  Malatya          61.32 311⇑iP       P      05 41 39.4 -0.4
            comp=Z,170nm,1.3s,mb6.0
MYA   Malataya         61.33 311   P       P      05 41 39.7 -0.2
GAZ   Gaziantep        61.90 310  i P      P      05 41 44.1 +0.4
EIL   Elat             61.93 301⇑iP       P      05 41 43.9 -0.1
            comp=Z,124nm,1.1s,mb6.0
SOKR  Solikamsk        62.13 339c iP       P      05 41 44.0 -0.9
SOKR                               S       S      05 50 14.6 +10
SOKR                               pmax    pmax
            comp=Z,330nm,1.0s,mb6.4
SOKR                               MLR     MLR
            comp=Z,850nm,18.0s,MS5.0
SOC   Sochi            62.21 317  eP       P      05 41 43.2 -2.5
SOC                               eS       S      05 50 00.3 -5.0
SOC                                pmax    pmax
            comp=Z,313nm,1.3s,mb6.3
SOC                                pmax    pmax
            comp=N,90nm,1.1s
SOC                                pmax    pmax
            comp=E,33nm,1.0s
SOC                                MLR     MLR
            comp=Z,630nm,20.0s,MS4.8
SOC                                MLR     MLR
            comp=N,1µm,22.0s
SOC                                MLR     MLR
            comp=E,294nm,15.0s
HTY   Hatay            62.44 308   P       P      05 41 47.2 -0.1
YAK   Yakutsk          62.69  17c iP       P      05 41 46.9 -1.7
YAK                               e*PP     pP     05 42 00.5 -3.6
YAK                               e               05 42 25.9
YAK                               e               05 44 05.5
YAK                               eS       S      05 50 08.7 -2.5
YAK                               e*SS            05 50 28.6
YAK                               e               05 51 31.2
YAK                                pmax    pmax
            comp=Z,138nm,0.9s,mb6.1
YAK                                pmax    pmax
            comp=N,57nm,1.1s
YAK                                pmax    pmax
            comp=E,41nm,1.1s
YAK                                pmax    pmax
            comp=Z,14nm,1.0s,mb5.0
YAK                                pmax    pmax
            comp=N,15nm,1.2s
YAK                                pmax    pmax
            comp=E,9.0nm,1.0s
YAK                                smax
            comp=E,21nm,1.2s
YAK                                smax
            comp=Z,6.0nm,0.9s
YAK                                smax
            comp=N,37nm,1.6s
YAK                                MLR     MLR
            comp=Z,4µm,17.0s,MS5.6
YAK                                MLR     MLR
            comp=N,2µm,18.0s,MS5.5
YAK                                MLR     MLR
            comp=E,2µm,17.0s,MS5.5
YAK   Yakutsk          62.69  17⇑iP       P      05 41 46.6 -2.1
            comp=E,295nm,0.8s,mb6.5
YAK                                LR      LR
            comp=Z,6µm,19.0s,MS5.8
TOO   Toolangi         62.83 137  eP       P      05 41 50.6 +0.7
            comp=Z,1.4nm,0.9s
TOO   Toolangi         62.83 137  eP       P      05 41 50.6 +0.7
TOO                                pmax    pmax
            comp=Z,1.0nm,0.9s
CEYT  Ceyhan           62.98 309  i P      P      05 41 51.0 +0.1
TOKT  Tokat            63.33 313  i P      P      05 41 52.6 -0.6
NIG   Nigde            64.14 310   P       P      05 41 58.5  0.0
ARMA  Armidale         64.21 127⇑iP       P      05 42 00.2 +1.1
CSS   Prodhromos       64.38 307⇑eP       P      05 41 59.2 -0.9
            comp=Z,160nm,1.0s,mb6.0
CNB   Canberra Magne   64.51 133⇑iP       P      05 42 00.5 -0.4
            comp=Z,638nm,1.2s,mb6.5
MBAR  Mbarara          64.59 267  eP       P      05 42 02.4 +0.5
            comp=Z,78nm,1.3s,mb5.6
MBAR                               LR      LR
            comp=Z,761nm,22.0s,MS4.8
KAMT  Kaman            65.15 311  i P      P      05 42 04.2 -0.8
BRTR  Keskin Array B   65.30 312   P       P      05 42 04.8 -1.2
            comp=Z,72nm,0.7s,mb5.8,baz=134,slow=7.4,SNR=331
BRTR                               PKP2bc         06 10 51.0
            comp=Z,1.2nm,0.9s,baz=198,slow=3.9,SNR=6.8
BRTR  Keskin Array B   65.30 312   P       P      05 42 04.8 -1.2
BRTR                            ⇑e                06 10 51.0
BR131 Keskin Array S   65.30 312   PFAKE          05 42 20.0  +14
BR131                              LR      LR
            comp=Z,701nm,21.0s,MS4.8
TOS   Tosya            65.37 313  i P      P      05 42 05.6 -0.9
CANT  Cankiri          65.55 313  i P      P      05 42 07.3 -0.3
BZK   Bozkurt          65.65 314  i P      P      05 42 08.0 -0.2
KONT  Konya--Tatoy     65.83 310   P       P      05 42 08.9 -0.5
ANTO  Ankara           65.97 312  i P      P      05 42 09.2 -1.1
HNR   Honiara          66.04 102   PFAKE          05 42 20.0 +8.9
HNR                                LR      LR
            comp=Z,4µm,21.0s,MS5.6
SAFT  Safranbolu       66.40 313  i P      P      05 42 12.5 -0.5
KIZT  Kizilcal         66.41 310  i P      P      05 42 11.9 -1.2
SIM   Simferopol'      66.45 317c iP       P      05 42 13.1 -0.2
SIM                               e*PP     pP     05 42 30.8 +2.0
SIM                               eS       S      05 50 58.6 +0.8
SIM                                pmax    pmax
            comp=Z,158nm,0.9s,mb6.0
SIM                                smax
            comp=Z,700nm,20.0s
TAU   Tasmania Unive   66.77 141   P       P      05 42 14.4 -0.8
            comp=Z,34nm,0.9s,mb5.4
TAU                                LR      LR
            comp=Z,327nm,19.0s,MS4.6
ISP   Isparta          67.23 309⇑iP       P      05 42 16.9 -1.4
ISP                                pmax    pmax
            comp=Z,334nm,1.4s,mb6.2
ISP   Isparta          67.23 309⇑iP       P      05 42 16.9 -1.4
            comp=Z,334nm,1.4s,mb6.2
MDU   Mudurnu          67.29 312   P       P      05 42 17.4 -1.2
ESKT  Eskisehir        67.34 311   P       P      05 42 17.5 -1.4
ELL   Elmali           67.47 308  i P      P      05 42 19.5 -0.3
ALT   Altintas         67.80 310  i P      P      05 42 21.0 -0.8
SKR   Severo-Kuril's   68.25  37  eP       P      05 42 21.5 -2.9
SKR                               e        pP     05 42 33.0 -7.0
SKR                               e               05 42 45.0
SKR                               ePPP     PPP    05 46 34.0 -0.9
SKR                               eS       S      05 51 18.0 -1.2
SKR                                pmax    pmax
            comp=Z,300nm,0.9s,mb6.3
SKR                                pmax    pmax
            comp=Z,2µm,4.0s
SKR                                smax
            comp=E,2µm,10.0s
SKR                                MLR     MLR
            comp=N,2µm,20.0s,MS5.6
SKR                                MLR     MLR
            comp=E,3µm,20.0s,MS5.6
SKR                                MLR     MLR
            comp=Z,2µm,20.0s,MS5.4
MOS   Moscow           68.33 329α iP       P      05 42 24.0 -0.8
MOS                               i        pP     05 42 38.0 -2.5
MOS                               e               05 42 49.8
MOS                               e               05 44 53.2
MOS                               i S      S      05 51 17.4 -2.7
MOS                               e               05 51 42.6
MOS                               eSS      SS     05 55 39.4 -6.3
MOS                                pmax    pmax
            comp=Z,381nm,0.7s,mb6.5
MOS                                MLR     MLR
            comp=Z,2µm,22.0s,MS5.2
HRT   Hereke           68.52 312  eP       P      05 42 24.9 -1.3
OBN   Obninsk          68.62 328   P       P      05 42 25.0 -1.6
            comp=Z,2µm,0.7s,SNR=19
OBN   Obninsk          68.62 328c iP       P      05 42 25.4 -1.2
OBN                               e*PP     pP     05 42 40.1 -2.2
OBN                               eS       S      05 51 19.8 -3.8
OBN                                pmax    pmax
            comp=Z,497nm,1.2s,mb6.3
OBN                                MLR     MLR
            comp=Z,500nm,18.0s,MS4.8
OBN   Obninsk          68.62 328⇑iP       P      05 42 25.4 -1.2
            comp=Z,273nm,0.8s,mb6.2
OBN                               e        pP     05 42 39.5 -2.7
OBN                                LR      LR
            comp=Z,173nm,22.0s,MS4.2
YLV   Yalova           68.68 312   P       P      05 42 25.6 -1.6
ORLT  Orhaneli         68.92 311  eP       P      05 42 26.6 -2.2
MA2   Magadan          69.12  27c iP       P      05 42 29.1 -0.5
MA2                               e*PP     pP     05 42 47.5 +2.2
MA2                               ePPP     PPP    05 46 43.6 +0.2
MA2                               i S      S      05 51 27.3 -2.1
MA2                               e               05 52 23.8
MA2                                pmax    pmax
            comp=Z,200nm,1.3s,mb5.9
MA2                                pmax    pmax
            comp=E,50nm,1.2s
MA2                                pmax    pmax
            comp=N,30nm,1.3s
MA2   Magadan          69.12  27⇑iP       P      05 42 29.0 -0.6
            comp=N,143nm,0.9s,mb5.9
MA2                               ePP      PP     05 44 54.4  -11
MA2                                LR      LR
            comp=Z,2µm,21.0s,MS5.3
LSZ   Lusaka           69.22 252  eP       P      05 42 31.4 +0.4
LSZ                                pmax    pmax
            comp=Z,79nm,1.2s,mb5.5
LSZ                                MLR     MLR
            comp=Z,3µm,20.0s,MS5.6
LSZ   Lusaka           69.22 252  eP       P      05 42 31.4 +0.4
            comp=Z,79nm,1.2s,mb5.5
LSZ                                LR      LR
            comp=Z,3µm,20.0s,MS5.6
AKS   Akhisar          69.51 310   P       P      05 42 31.9 -0.5
BALB  Balikesir        69.61 311   P       P      05 42 30.8 -2.2
BNT   Bandirma         69.72 311   P       P      05 42 32.8 -0.8
MRMT  Marmara Adasi    70.01 311  eP       P      05 42 33.6 -1.8
TLCR                   70.13 316  ⇑P       P      05 42 35.1 -0.9
TLCR                   70.13 316  ⇓P       P      05 42 35.4 -0.6
PSN   Preselentsi      70.23 315  i P      P      05 42 36.5 -0.1
TIRR  Tirgusor         70.24 316  ⇓P       P      05 42 36.4 -0.3
PET   Petropavlovsk    70.52  35⇑iP       P      05 42 37.4 -0.8
PET                               e               05 45 17.2
PET                               eS       S      05 51 47.0 +1.1
PET                               ePPS     PPS    05 52 24.2  -11
PET                               eSS      SS     05 56 14.9 -4.8
PET                               eSSS     SSS    05 59 30.3 +4.7
PET                                pmax    pmax
            comp=Z,185nm,1.2s,mb5.9
PET                                pmax    pmax
            comp=Z,600nm,17.8s
PET                                pmax    pmax
            comp=Z,800nm,16.8s
PET                                pmax    pmax
            comp=Z,300nm,21.8s
PET                                smax
            comp=E,200nm,12.2s
PET                                MLR     MLR
            comp=Z,2µm,20.0s,MS5.3
PET                                MLR     MLR
            comp=Z,2µm,16.0s
PET   Petropavlovsk    70.52  35⇑eP       P      05 42 36.5 -1.8
            comp=Z,248nm,1.1s,mb6.0
PET                                LR      LR
            comp=Z,2µm,20.0s,MS5.4
KIS   Kishinev         70.57 318α iP       P      05 42 36.0 -2.7
KIS                               e*PP     pP     05 42 51.0 -3.4
KIS                               i               05 43 06.0
KIS                               e               05 52 12.0
KIS                               e               05 52 34.0
KIS                                pmax    pmax
            comp=Z,500nm,1.2s,mb6.3
KIS                                pmax    pmax
            comp=Z,800nm,10.0s
CFR   Carcaliu         70.60 316  ⇑P       P      05 42 38.2 -0.7
CFR   Carcaliu         70.60 316  ⇑P       P      05 42 38.5 -0.4
HARR  Harsova          70.63 316  ⇑P       P      05 42 38.5 -0.6
HARR  Harsova          70.63 316  ⇓P       P      05 42 38.5 -0.6
PRD   Provadia         70.68 314  i P      P      05 42 39.0 -0.4
SANT  Santorini        70.94 307  eP       P      05 42 40.2 -0.9
            comp=Z,348nm,1.3s,mb6.1
JMB   Yambol           71.12 313  i P      P      05 42 42.3 +0.2
ALN   Alexandroupoli   71.22 312  eP       P      05 42 42.2 -0.5
IDI   Anoyia           71.24 306   P       P      05 42 43.2 +0.3
            comp=Z,70nm,0.6s,mb5.8,baz=86,slow=7.2,SNR=54
AKASG Malin Array Be   71.29 322   P       P      05 42 41.5 -1.5
            comp=Z,84nm,0.5s,mb5.9,baz=88,slow=5.0,SNR=393
SEY   Seymchan         71.39  24  eP       P      05 42 44.0 +0.7
SEY                               e*PP     pP     05 42 57.3 -1.8
SEY                               e        pP     05 43 02.8 +3.7
SEY                                               05 45 20.5
SEY                               eS       S      05 51 58.3 +2.5
SEY                                *SS            05 52 19.3
SEY                                               05 52 42.1
SEY                                SS      SS     05 56 34.4 +1.3
SEY                                pmax    pmax
            comp=N,70nm,1.1s
SEY                                pmax    pmax
            comp=Z,110nm,1.1s,mb5.7
SEY                                pmax    pmax
            comp=E,30nm,0.7s
SEY                                smax
            comp=N,110nm,4.6s
SEY                                smax
            comp=E,90nm,6.1s
SEY                                MLR     MLR
            comp=Z,11µm,20.0s,MS6.1
SEY                                MLR     MLR
            comp=N,3µm,22.0s,MS5.7
SEY                                MLR     MLR
            comp=E,4µm,21.0s,MS5.7
IAS   Iasi             71.45 318   P       P      05 42 43.4 -0.6
CASY  Casey            71.66 174   PFAKE          05 43 00.0  +15
CASY                               LR      LR
            comp=Z,3µm,20.0s,MS5.5
ISR   Istrita          71.68 316   P       P      05 42 46.5 +1.1
VRI   Vrincioaia       71.72 317  ⇓P       P      05 42 45.9 +0.4
SZH   Strazhica        71.74 314  i P      P      05 42 45.5 -0.3
LOS   Limnos           71.78 310  eP       P      05 42 45.4 -0.7
DIM   Dimitrovgrad     71.81 313  i P      P      05 42 46.0 -0.2
KDZ   Kurdzhali        71.82 312   P       P      05 42 45.5 -0.8
BUC1  Bucharest        71.89 315   P       P      05 42 47.0 +0.4
PVL   Pavlikeni        72.16 314  i P      P      05 42 49.0 +0.7
MLR   Muntele Rosu     72.17 316  ⇓P       P      05 42 48.4 +0.1
MLR   Muntele Rosu     72.17 316  ⇑P       P      05 42 48.6 +0.3
PLD   Plovdiv          72.42 313   P       P      05 42 49.5 -0.3
SNX   Sinaia           72.44 316  ⇑P       P      05 42 49.8 -0.1
SNX   Sinaia           72.44 316  ⇑P       P      05 42 49.7 -0.2
OUR   Ouranopolis      72.68 311  eP       P      05 42 50.3 -1.1
MTUR  Matau            72.73 316  ⇑P       P      05 42 50.9 -0.7
PAIG  Paliouri         72.84 310  eP       P      05 42 51.6 -0.8
PGB   Panagyurishte    72.89 313  i P      P      05 42 52.0 -0.6
MMB   Musomiste        73.06 312  i P      P      05 42 52.2 -1.4
SRS   Serrai           73.09 311  eP       P      05 42 52.6 -1.2
BURAR Bucovina Array   73.10 318  ⇑P       P      05 42 54.2 +0.5
BURAR Bucovina Array   73.10 318  ⇓P       P      05 42 54.5 +0.8
XOR   Xorichti         73.14 310  eP       P      05 42 52.2 -1.9
SOH   Sokhos           73.22 311  eP       P      05 42 53.7 -0.9
THE   Thessaloniki     73.49 311  eP       P      05 42 54.9 -1.3
PUL   Pulkovo          73.49 331⇓eP       P      05 42 54.8 -1.0
PUL                               i        pP     05 43 09.7 -1.8
PUL                               eS       S      05 52 16.3 -3.4
PUL                                pmax    pmax
            comp=Z,577nm,1.3s,mb6.3
PUL                                pmax    pmax
            comp=N,148nm,0.5s
PUL                                pmax    pmax
            comp=E,808nm,1.3s
PUL                                pmax    pmax
            comp=Z,950nm,1.4s,mb6.5
PUL                                pmax    pmax
            comp=N,163nm,0.5s
PUL                                pmax    pmax
            comp=E,946nm,1.3s
PUL                                smax
            comp=N,326nm,8.1s
PUL                                smax
            comp=Z,210nm,7.6s
PUL                                smax
            comp=E,400nm,9.1s
PUL                                smax
            comp=N,446nm,1.9s
PUL                                smax
            comp=E,644nm,1.7s
PUL                                MLR     MLR
            comp=Z,1µm,18.0s,MS5.2
PUL                                MLR     MLR
            comp=N,2µm,28.0s
PUL                                MLR     MLR
            comp=E,1µm,22.0s
PUL   Pulkovo          73.49 331⇑iP       P      05 42 55.7 -0.1
KKB   Krupnik          73.58 312  i P      P      05 42 55.5 -1.1
VTS   Vitosha          73.60 313  ⇑P       P      05 42 56.2 -0.5
VTS   Vitosha          73.60 313  i P      P      05 42 56.0 -0.7
KNT   Kendrikon        73.61 311  eP       P      05 42 55.6 -1.3
LBTB  Lobatse          73.66 242⇓eP       P      05 42 57.9 +0.4
LBTB                               pmax    pmax
            comp=Z,90nm,1.2s,mb5.6
LBTB                               MLR     MLR
            comp=Z,4µm,22.0s,MS5.7
LBTB  Lobatse          73.66 242⇓eP       P      05 42 57.9 +0.4
            comp=Z,90nm,1.2s,mb5.6
LBTB                               LR      LR
            comp=Z,4µm,22.0s,MS5.7
AGG   Agios Georgios   73.76 309  eP       P      05 42 55.9 -1.9
LIT   Litokhoron       73.77 310  eP       P      05 42 56.5 -1.3
VAY   Valandovo        73.88 312  i P      P      05 42 57.1 -1.3
GRG   Griva            73.96 311  eP       P      05 42 57.2 -1.6
IDID  Didziasalis      73.99 326  i P      P      05 42 58.4 -0.3
IDID                               AMPb    AMB    05 43 01.2
            comp=Z,76nm,1.4s,mb5.5
JOF   Joensuu          74.16 335  ep       P      05 42 59.3 -0.3
            comp=Z,170nm,0.8s,mb6.0
JOF   Joensuu          74.16 335  eP       P      05 42 59.3 -0.3
JOF                                pmax    pmax
            comp=Z,170nm,0.8s,mb6.0
IIGN  Ignalina         74.28 326  i P      P      05 43 00.2 -0.3
IIGN                               AMPb    AMB    05 43 02.9
            comp=Z,69nm,1.1s,mb5.5
IIGN                              epP      pP     05 43 13.4 -2.8
IIGN                              esP      sP     05 43 19.0 -3.4
LVV   L'vov            74.32 320  i P      P      05 43 00.5 -0.3
LVV                               e               05 45 50.5
LVV                               eS       S      05 52 34.9 +5.8
LVV                               e               05 53 14.3
LVV                               eSS      SS     05 57 22.1 +3.9
LVV                               e               06 00 31.5
LVV                                MLR     MLR
            comp=Z,180nm,18.0s,MS4.4
LVV                                MLR     MLR
            comp=N,300nm,19.0s,MS4.7
LVV                                MLR     MLR
            comp=E,50nm,16.0s,MS4.7
IZAR  Zarasai          74.37 327  i P      P      05 43 00.6 -0.4
IZAR                               AMPb    AMB    05 43 02.7
            comp=Z,56nm,0.9s,mb5.5
IZAR                              esP      sP     05 43 19.5 -3.4
ISAL  Salakas          74.39 327  i P      P      05 43 00.7 -0.4
ISAL                               AMPb    AMB    05 43 02.9
            comp=Z,57nm,1.2s,mb5.4
ISAL                              epP      pP     05 43 14.8 -2.1
ISAL                              esP      sP     05 43 19.8 -3.2
NOUC  Port Laguerre    74.41 114  eP       P      05 43 02.3 +0.5
NOUC  Port Laguerre    74.41 114  eP       P      05 43 02.3 +0.5
DZM   Mont Dzumac      74.53 114  eP       P      05 43 02.9 +0.4
DZM   Mont Dzumac      74.53 114  eP       P      05 43 02.9 +0.4
BARS  Barje            74.64 313⇑iP       P      05 43 01.5 -1.2
BOLS  Boljevac         74.69 314⇓iP       P      05 43 02.0 -1.1
FNA   Florina          74.70 311  eP       P      05 43 01.1 -2.1
BOSA  Boshof           74.80 239  eP       P      05 43 04.1 +0.1
BOSA                               pmax    pmax
            comp=Z,72nm,1.3s,mb5.4
BOSA                               MLR     MLR
            comp=Z,2µm,22.0s,MS5.3
BOSA  Boshof           74.80 239  eP       P      05 43 04.1 +0.1
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      comp=Z,72nm,1.3s,mb5.5
BOSA                              LR       LR
      comp=Z,2µm,22.0s,MS5.3
SKO   Skopje            74.81 312⇑iP       P       05 43 02.0 -1.8
SKO                              i         pP      05 43 21.8 +2.2
SKO                               pmax     pmax
      comp=Z,28nm,0.9s,mb5.2
SKO   Skopje            74.81 312⇑iP       P       05 43 02.0 -1.8
      comp=Z,0.0nm,0.9s
SKO                              i         pP      05 43 21.8 +2.2
      comp=Z,0.0nm,0.8s
LVZ   Lovozero          74.90 340  P       P       05 43 03.3 -0.4
      comp=Z,2µm,0.6s,SNR=74
LVZ   Lovozero          74.90 340⇓eP       P       05 43 02.5 -1.2
LVZ                              i         pP      05 43 16.5 -3.1
LVZ                              eS        S       05 52 33.6 -1.6
LVZ                              i                 05 53 00.1
LVZ                               pmax     pmax
      comp=Z,153nm,0.6s,mb6.1
LVZ                               pmax     pmax
      comp=N,31nm,1.1s
LVZ                               pmax     pmax
      comp=E,46nm,0.6s
LVZ                               pmax     pmax
      comp=Z,172nm,0.6s,mb6.2
LVZ                               smax
      comp=N,143nm,8.8s
LVZ                               smax
      comp=Z,204nm,6.5s
LVZ                               smax
      comp=E,138nm,6.7s
LVZ                               smax
      comp=N,375nm,2.6s
LVZ                               smax
      comp=Z,1µm,4.9s
LVZ                               smax
      comp=E,1µm,6.1s
LVZ                               MLR      MLR
      comp=Z,1µm,16.0s,MS5.2
LVZ                               MLR      MLR
      comp=N,881nm,20.0s,MS5.3
LVZ                               MLR      MLR
      comp=E,1µm,20.0s,MS5.3
KWP   Kalwaria          75.12 320 eP       P       05 43 05.9 +0.5
KWP                               MLR      MLR     06 11 58.9
      comp=E,600nm,33.4s,MS4.7
APA   Apatity           75.18 340⇓iP       P       05 43 04.7 -0.7
APA                              i                 05 43 14.0
APA                               pmax     pmax
      comp=Z,200nm,0.7s,mb6.2
BZS   Buzias            75.19 316 ⇓P       P       05 43 05.3 -0.6
UZH   Uzhgorod          75.22 319 eP       P       05 43 07.0 +1.0
UZH                              i S       S       05 52 43.0 +3.9
SVIS  Svilajnac         75.28 314⇑iP       P       05 43 05.5 -0.9
KOLS  Kolonicke sedl    75.28 319 i P      P       05 43 06.9 +0.6
KOLS                              e        pP      05 43 17.8 -4.3
IGT   Igoumenitsa       75.36 310 eP       P       05 43 05.6 -1.3
GRUS  Gruza             75.58 314⇓iP       P       05 43 07.6 -0.6
MAW   Mawson            75.64 192  LR      LR      06 10 21.0
      comp=Z,1µm,18.8s,MS5.2,baz=21,slow=31
SUW   Suwalki           75.69 325⇑eP       P       05 43 07.9 -0.6
      comp=Z,700nm,0.9s,mb6.6
SUW                              epP       pP      05 43 16.9 -7.4
SUW                              ePcP      PcP     05 43 22.3 +0.9
SUW                               MLR      MLR     06 15 31.2
      comp=Z,700nm,29.3s,MS4.8
CRVS  Cervenica-Dubn    75.80 319 eP       P       05 43 09.9 +0.6
BEO   Belgrade          75.89 315⇓iP       P       05 43 09.3 -0.6
QSH   Qafa e Shtames    75.89 312 ep       P       05 43 10.0  0.0
PVY   Plav              75.97 313⇑iP       P       05 43 09.2 -1.2
FINES FINESS Array B    76.00 332 i P      P       05 43 09.6 -0.6
FINES                             pmax     pmax
      comp=Z,82nm,0.7s
FINES FINESS Array B    76.00 332  P       P       05 43 09.6 -0.6
      comp=Z,82nm,0.7s,mb5.8,baz=98,slow=6.1,SNR=458
FINES                             LR       LR      06 20 32.0
      comp=Z,623nm,19.5s,MS4.9,baz=103,slow=39
IVA   Berane            76.05 313⇑iP       P       05 43 10.0 -0.8
KAF   Kangasniemi       76.09 333 ep       P       05 43 10.3 -0.3
      comp=Z,88nm,0.7s,mb5.8,baz=104,slow=5.3
KAF   Kangasniemi       76.09 333 eP       P       05 43 10.3 -0.3
KAF                               pmax     pmax
      comp=Z,88nm,0.7s,mb5.8
DIVS  Divcibare         76.13 314⇓iP       P       05 43 10.6 -0.6
KECS  Kecovo            76.38 319 i P      P       05 43 12.6  0.0
KECS                              e        pP      05 43 27.4 -1.0
ULC   Ulcinj            76.43 312⇑iP       P       05 43 12.4 -0.6
PLE   Pljevlja          76.47 313⇑iP       P       05 43 13.2  0.0
TTG   Podgorica         76.47 312⇑iP       P       05 43 11.9 -1.3
NIE   Niedzica          76.63 320⇑eP       P       05 43 13.1 -0.9
WAR   Warsaw            76.63 323 eP       P       05 43 14.0 +0.1
WAR                              ePcP      PcP     05 43 29.7 +4.2
WAR                              ePP       PP      05 46 08.1 -0.1
WAR   Warsaw            76.63 323 eP       P       05 43 14.0 +0.1
WAR                              ePcP      PcP     05 43 29.7 +4.2
WAR                              ePP       PP      05 46 08.1 -0.1
PSZ   Piszkesteto       76.69 318⇑iP       P       05 43 14.2 -0.1
PSZ                               pmax     pmax
      comp=Z,124nm,0.8s,mb5.9
PSZ   Piszkesteto       76.69 318⇑iP       P       05 43 14.2 -0.1
      comp=Z,124nm,0.8s,mb5.9
PSZ   Piszkesteto       76.69 318⇑i        P       05 43 14.5 +0.2
NKY   Niksic            76.70 313⇑iP       P       05 43 13.9 -0.6
BUM   Brajici-Budva     76.72 312⇑iP       P       05 43 13.5 -1.2
UPM   Unac-Piva         76.81 313⇑iP       P       05 43 14.3 -0.8
HCY   Herceg Novi       77.03 312⇑iP       P       05 43 15.2 -1.1
BRY   Bratogost         77.04 313⇑iP       P       05 43 15.5 -0.9
OJC   Ojcow             77.08 320⇑iP       P       05 43 16.4 -0.1
OJC                              ePcP      PcP     05 43 29.7 +2.2
BUD   Budapest          77.22 318⇑e        P       05 43 17.2 -0.1
PKSM  Moragy            77.33 316 ⇑P       P       05 43 17.6 -0.3
LIKS  Likavka           77.36 319 eP       P       05 43 18.4 +0.3
VYHS  Vyhne             77.47 319 i P      P       05 43 18.7  0.0
VYHS                              e                05 53 02.1
SRO2  Moca              77.67 318 eP       P       05 43 20.2 +0.4
SRO   Srobarova         77.73 318 i P      P       05 43 20.5 +0.4
SRO                               e                05 43 27.1
DRV   Dumont d'Urvil    78.04 163  P       P       05 43 21.0 -0.4
DRV                                S       S       05 53 08.0 -1.4
OKC   Ostrava-Krasne    78.08 320⇑iP       P       05 43 22.5 +0.5
OKC                              epP       pP      05 43 37.3 -0.6
RAC   Raciborz          78.08 320 eP       P       05 43 23.0 +1.0
TIP   Timpagrande       78.09 309⇑iP       P       05 43 22.2  0.0
KEV   Kevo              78.17 341 ep       P       05 43 22.1  0.0
      comp=Z,115nm,0.7s,mb5.9
KEV   Kevo              78.17 341 eP       P       05 43 22.1  0.0
KEV                               pmax     pmax
      comp=Z,115nm,0.7s,mb5.9
GRI   Girifalco         78.33 309 eP       P       05 43 24.5 +0.9
ORI   Oriolo Calabro    78.38 310 eP       P       05 43 24.5 +0.6
MORC  Moravsky Berou    78.46 320  P       P       05 43 24.6 +0.5
MORC                              pmax     pmax
      comp=Z,180nm,1.1s,mb5.9
MORC  Moravsky Berou    78.46 320⇑eP       P       05 43 24.1 -0.1
      comp=Z,487nm,1.6s,mb6.2
MORC                              e        pP      05 43 39.8 -0.2
SOI   Samo              78.57 308 eP       P       05 43 25.2 +0.2
ZST   Bratislava        78.58 318 i P      P       05 43 25.4 +0.6
ZST                               e        pP      05 43 40.6 -0.1
ZST                               e                05 53 16.4
ARCES ARCESS Array B    78.60 340  P       P       05 43 24.6 +0.1
      comp=Z,67nm,0.5s,mb5.8,baz=92,slow=5.2,SNR=332
ARCES                             LR       LR      06 21 37.6
      comp=Z,1µm,21.1s,MS5.1,baz=279,slow=38
ARCES ARCESS Array B    78.60 340  P       P       05 43 24.6 +0.1
ARCES                             LR       LR      06 21 37.6
ARE0  ARCESS Array S    78.60 340⇑iP       P       05 43 24.5 +0.1
ARE0                              e        pP      05 43 41.4 +1.0
BILL  Bilibino          78.66  21⇑iP       P       05 43 23.3 -1.5
BILL                              pmax     pmax
      comp=Z,131nm,1.2s,mb5.7
BILL                              MLR      MLR
      comp=Z,3µm,20.0s,MS5.6
BILL  Bilibino          78.66  21⇑iP       P       05 43 23.2 -1.6
      comp=Z,131nm,1.2s,mb5.7
BILL                              LR       LR
      comp=Z,3µm,20.0s,MS5.6
MTTG  Motta San Giov    78.85 308 eP       P       05 43 27.3 +0.8
SOP   Sopron            78.90 318 e        P       05 43 26.7 +0.2
VRAC  Vranov            79.03 319 ⇓P       P       05 43 27.5 +0.3
FX1   Attu Island--F    79.03  37  LR      LR      06 17 00.7
      comp=Z,37nm,20.7s,baz=267,slow=35
FX1   Attu Island--F    79.03  37 eP       P       05 43 27.4 +0.3
GKP   Gorka Klasztor    79.06 323 eP       P       05 43 27.2 -0.1
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GKP                               LR       LR
      comp=Z,700nm,34.8s,MS4.8
GKP   Gorka Klasztor    79.06 323 eP       P       05 43 27.2 -0.1
GKP                               MLR      MLR     06 16 06.8
      comp=Z,700nm,34.8s,MS4.8
VKA   Vienna            79.11 318⇑iP       P       05 43 28.1 +0.4
VKA                              i         pP      05 43 47.7 +4.1
AGST  Augusta-Monte     79.19 307 eP       P       05 43 28.2 -0.2
KTK1  Kautokeino        79.23 340⇑iP       P       05 43 28.7 +0.7
      comp=Z,378nm,1.3s,mb6.2
KTK1  Kautokeino        79.23 340⇑iP       P       05 43 28.7 +0.7
KTK1                              AMb      AMB     05 43 31.0
      comp=Z,378nm,1.3s,mb6.2
SGO   Sicignano         79.28 310 eP       P       05 43 28.8  0.0
DPC   Dobruska-Polom    79.31 320⇑iP       P       05 43 29.5 +0.8
DPC                              epP       pP      05 43 42.8 -1.8
DPC                               AMS      AMS     06 28 50.0
      comp=Z,700nm,24.5s
KSP   Ksiaz             79.37 321⇑eP       P       05 43 29.3 +0.2
KSP                              e*PP      pP      05 43 44.3 -0.7
KSP                              eS        S       05 53 24.0 +0.1
KSP   Ksiaz             79.37 321⇑eP       P       05 43 29.7 +0.6
      comp=Z,500nm,1.5s,mb6.2
KSP                              ePcP      PcP     05 43 38.4 +1.1
KSP                               MLR      MLR     06 14 12.7
      comp=Z,1µm,27.4s,MS5.0
SUR   Sutherland        79.40 236 eP       P       05 43 31.0 +1.4
      comp=Z,210nm,1.6s,mb5.8
SUR                               LR       LR
      comp=Z,342nm,21.0s,MS4.7
UPC   Upice             79.52 320⇑iP       P       05 43 30.3 +0.4
UPC                              epP       pP      05 43 44.6 -1.2
ARSA  Arzberg           79.56 317⇑iP       P       05 43 30.6 +0.4
      comp=Z,568nm,1.8s,mb6.2
SMY   Shemya            79.58  37 eP       P       05 43 30.2 +0.1
SMY                               pmax     pmax
      comp=Z,531nm,0.8s,mb6.5
SMY                               MLR      MLR
      comp=Z,3µm,19.0s,MS5.7
SMY   Shemya            79.58  37 eP       P       05 43 30.2 +0.1
      comp=Z,531nm,0.8s,mb6.5
SMY                               LR       LR
      comp=Z,3µm,19.0s,MS5.7
BOJS  Bojanci           79.62 315⇑iP       P       05 43 30.6 +0.1
BOJS                              e        pP      05 43 45.6 -0.8
MNO   Monte Soro        79.64 308 eP       P       05 43 32.1 +1.3
PERS  Pernice           79.79 316⇑iP       P       05 43 31.9 +0.5
PERS                              e        pP      05 43 46.7 -0.7
TSUM  Tsumeb            79.88 250 eP       P       05 43 34.0 +1.5
      comp=Z,31nm,1.0s,mb5.2
TSUM                              LR       LR
      comp=Z,2µm,20.0s,MS5.4
CSLB  Castelbuono       80.14 308 eP       P       05 43 33.7 +0.2
LJU   Ljubljana         80.16 316⇑iP       P       05 43 33.9 +0.5
LJU                              i PcP     PcP     05 43 40.8  0.0
LJU                              e         pP      05 43 48.8 -0.5
OBKA  Obir              80.18 316⇑iP       P       05 43 34.0 +0.5
      comp=Z,486nm,1.9s,mb6.1
RFI   Roccamonfina      80.32 311 eP       P       05 43 34.9 +0.5
PRU   Pruhonice         80.42 320⇑iP       P       05 43 35.0 +0.3
PRU                              epP       pP      05 43 49.1 -1.5
PRU                               AMS      AMS     06 24 50.0
      comp=Z,500nm,20.2s
PVCC  Panska Ves        80.44 320⇑iP       P       05 43 35.3 +0.5
PVCC                             epP       pP      05 43 49.8 -0.9
MOA   Molln             80.45 318⇑iP       P       05 43 34.8 -0.1
      comp=Z,166nm,1.7s,mb5.7
SDI   San Donato        80.47 311 eP       P       05 43 34.5 -0.6
JAVS  Javornik          80.48 316⇑eP       P       05 43 34.8 -0.3
VOY   Vojsko            80.60 316 eP       P       05 43 35.7 -0.1
VOY                              e         pP      05 43 50.8 -0.9
BSD   Bornholm Skovb    80.61 325⇑iP       P       05 43 34.9 -0.7
BSD                              i         pP      05 43 53.2 +1.6
BSD                               pmax     pmax
      comp=Z,71nm,0.7s,mb5.7
BSD   Bornholm Skovb    80.61 325⇑iP       P       05 43 34.9 -0.7
      comp=Z,71nm,0.7s,mb5.7
BSD                              i         pP      05 43 53.2 +1.6
PTQR  Pietraquaria      80.78 312 eP       P       05 43 36.6 -0.2
AQU   L'Aquila          80.79 312  P       P       05 43 37.0 +0.2
AQU                               pmax     pmax
      comp=Z,300nm,1.2s,mb6.1
AQU   L'Aquila          80.79 312 eP       P       05 43 37.0 +0.2
BRG   Berggiesshubel    80.86 321⇑iP       P       05 43 37.5 +0.5
BRG                              i         pP      05 43 53.2 +0.2
BRG                              eS        S       05 53 40.0 +0.5
BRG                               pmax     pmax
      comp=Z,216nm,1.6s,mb5.8
BRG                               MLR      MLR
      comp=N,780nm,21.4s,MS5.2
BRG                               MLR      MLR
      comp=E,660nm,21.4s,MS5.2
BRG                               MLR      MLR
      comp=Z,790nm,21.4s,MS5.0
BRG   Berggiesshubel    80.86 321⇑iP       P       05 43 37.5 +0.5
      comp=Z,216nm,1.6s,mb5.8
BRG                              i         pP      05 43 53.2 +0.2
BRG                              eS        S       05 53 40.0 +0.5
BRG                               LR       LR
      comp=Z,790nm,21.4s,MS5.0
TRO   Tromso            80.86 340 eP       P       05 43 35.2 -1.4
TRO                               AMb      AMB     05 43 37.5
      comp=Z,202nm,1.2s,mb5.9
GEC2  GERESS Array S    80.89 319 eP       P       05 43 37.8 +0.6
GEC2                              pmax     pmax
      comp=Z,399nm,1.5s,mb6.1
GEC2  GERESS Array S    80.89 319 eP       P       05 43 37.8 +0.6
      comp=Z,399nm,1.5s,mb6.1
GERES GERESS Array B    80.89 319  P       P       05 43 37.7 +0.5
      comp=Z,75nm,0.9s,mb5.6,baz=90,slow=5.3,SNR=321
KHC   Kasperske Hory    80.99 319⇑iP       P       05 43 37.8 +0.1
KHC                              epP       pP      05 43 50.3 -3.4
PTCC  Patocco-Chiusa    81.00 316 eP       P       05 43 37.9 +0.1
NRCA  Norcia            81.02 312 eP       P       05 43 38.0  0.0
KBA   Koelnbreinsper    81.03 317⇑iP       P       05 43 37.8 -0.2
      comp=Z,201nm,1.9s,mb5.7
KBA   Koelnbreinsper    81.03 317⇑iP       P       05 43 37.8 -0.2
KBA                               pmax     pmax
      comp=Z,201nm,1.9s,mb5.7
GMNA  Gemona            81.07 316 eP       P       05 43 38.4 +0.2
RUE   Ruedersdorf       81.07 322⇑iP       P       05 43 38.1  0.0
      comp=Z,266nm,1.0s,mb6.1
RUE                              e         pP      05 43 52.7 -1.3
SNTG  Esanatoglia       81.16 313 eP       P       05 43 39.0 +0.2
ARV   Arcevia           81.17 313 eP       P       05 43 39.4 +0.6
FSSB  Fossombrone       81.30 313 eP       P       05 43 40.0 +0.6
MNS   Montasola         81.33 312 eP       P       05 43 38.8 -0.8
FVI   Forni Avoltri     81.40 316 eP       P       05 43 40.0 +0.1
WET   Wettzell          81.45 319 eP       P       05 43 40.6 +0.5
WET                               pmax     pmax
      comp=Z,155nm,1.4s,mb5.7
WET   Wettzell          81.45 319 eP       P       05 43 40.6 +0.5
      comp=Z,155nm,1.4s,mb5.7
CLL   Collm             81.48 321⇑iP       P       05 43 40.1 -0.1
CLL                              i         pP      05 43 55.1 -1.1
CLL                              eS        S       05 53 46.0 +0.2
CLL                               pmax     pmax
      comp=Z,106nm,1.3s,mb5.6
CLL   Collm             81.48 321⇑iP       P       05 43 40.1 -0.1
      comp=Z,106nm,1.3s,mb5.6
CLL                              i         pP      05 43 55.1 -1.1
CLL                              eS        S       05 53 46.0 +0.2
CLL   Collm             81.48 321 ⇑P       P       05 43 40.1 -0.1
      comp=Z,logA/T=1.9,mb5.6
CLL                              i *PP     pP      05 43 55.1 -1.1
CLL                              i *SP     sP      05 43 59.6 -2.8
CLL                              i                 05 47 12.7
CLL                              eS        S       05 53 46.0 +0.2
CLL                              eSCS      ScS     05 54 05.0 +3.8
HFS   Hagfors           81.72 330  P       P       05 43 41.3  0.0
      comp=Z,14nm,0.4s,mb5.3,baz=116,slow=5.1,SNR=10
NKC   Novy Kostel       81.78 320⇑iP       P       05 43 42.1 +0.3
NKC                              epP       pP      05 43 57.2 -0.6
CRE   Caprese Michel    81.89 313 eP       P       05 43 42.7 +0.1
SFI   Santa Sofia       81.98 314 eP       P       05 43 44.3 +1.3
MOR8  Moi Rana          82.00 336⇑iP       P       05 43 41.9 -0.8
      comp=Z,238nm,1.8s,mb5.8
MOR8  Moi Rana          82.00 336⇑iP       P       05 43 41.9 -0.8
MOR8                              AMb      AMB     05 43 44.3
      comp=Z,238nm,1.8s,mb5.8
MOR8                             epP       pP      05 43 56.2 -2.4
MOR8                             esP       sP      05 44 01.0 -3.8
PGD   Poggio Sodo       82.07 313 eP       P       05 43 44.8 +1.4
COP   Copenhagen        82.07 325 eP       P       05 43 43.5 +0.3
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COP                               pmax     pmax
      comp=Z,64nm,1.0s,mb5.5
COP   Copenhagen        82.07 325 i P      P       05 43 43.5 +0.3
      comp=Z,64nm,1.0s,mb5.5
CTI   Castel Tesino     82.17 316 eP       P       05 43 44.5 +0.6
VMG   Vicchio           82.20 314 eP       P       05 43 45.2 +1.1
WTTA  Wattenberg        82.20 317⇑iP       P       05 43 43.9 -0.2
      comp=Z,359nm,1.7s,mb6.0
WTTA  Wattenberg        82.20 317⇑iP       P       05 43 43.9 -0.2
WTTA                              pmax     pmax
      comp=Z,359nm,1.7s,mb6.0
WATA  Walderalm         82.25 317⇑iP       P       05 43 43.8 -0.5
      comp=Z,259nm,1.9s,mb5.8
WATA  Walderalm         82.25 317⇑iP       P       05 43 43.8 -0.5
WATA                              pmax     pmax
      comp=Z,259nm,1.9s,mb5.8
MOX   Moxa              82.32 320 eP       P       05 43 44.7 +0.1
MOX                              e         pP      05 44 00.0 -0.6
MOX                               pmax     pmax
      comp=Z,169nm,1.8s,mb5.7
MOX                               MLR      MLR
      comp=Z,400nm,19.0s,MS4.8
MOX   Moxa              82.32 320 eP       P       05 43 44.7 +0.1
      comp=Z,169nm,1.8s,mb5.7
MOX                              e         pP      05 44 00.0 -0.6
MOX                               LR       LR
      comp=Z,400nm,19.0s,MS4.8
MOX   Moxa              82.32 320 i P      P       05 43 44.7 +0.1
      comp=Z,logA/T=2.0,mb5.7
MOX                               pP       pP      05 44 00.0 -0.6
MOX                               L                06 28 04.0
SEI   Scarperia         82.33 314 eP       P       05 43 46.1 +1.3
FUR   Furstenfeldbru    82.47 318 eP       P       05 43 45.4  0.0
FUR                               pmax     pmax
      comp=Z,127nm,1.2s,mb5.7
FUR   Furstenfeldbru    82.47 318 eP       P       05 43 45.4  0.0
      comp=Z,127nm,1.2s,mb5.7
SQTA  Sankt Quirin      82.50 317⇑iP       P       05 43 45.4 -0.2
      comp=Z,40nm,0.8s,mb5.4
SQTA  Sankt Quirin      82.50 317⇑iP       P       05 43 45.4 -0.2
SQTA                              pmax     pmax
      comp=Z,40nm,0.8s,mb5.4
GRA1  Grafenberg Arr    82.55 319 eP       P       05 43 46.6 +0.8
      comp=Z,213nm,1.4s,mb6.0
GRA1                             e         pP      05 44 05.6 +3.8
GRA1                              LR       LR
      comp=Z,600nm,19.8s,MS5.0
GRF   Grafenberg Arr    82.55 319 eP       P       05 43 46.6 +0.8
GRF                              e         pP      05 44 05.6 +3.8
GRF                               pmax     pmax
      comp=Z,213nm,1.4s,mb6.0
GRF                               MLR      MLR
      comp=Z,600nm,19.8s,MS5.0
GRF   Grafenberg Arr    82.55 319 eP       P       05 43 46.6 +0.8
      comp=Z,213nm,1.4s,mb6.0
GRF                              e         pP      05 44 05.6 +3.8
GRF                               LR       LR
      comp=Z,600nm,19.8s,MS5.0
LOF   Lofoten           82.56 338 eP       P       05 43 47.5 +2.0
MOTA  Moosalm           82.57 317⇑iP       P       05 43 45.6 -0.3
      comp=Z,105nm,1.5s,mb5.7
MOTA  Moosalm           82.57 317⇑iP       P       05 43 45.6 -0.3
MOTA                              pmax     pmax
      comp=Z,105nm,1.5s,mb5.7
STOK  Stokkvaagen       82.59 336 eP       P       05 43 45.9 +0.2
STOK                             esP       sP      05 44 05.3 -2.5
ZCCA  Zocca             82.61 314 eP       P       05 43 48.0 +1.8
SYO   Syowa Base        82.68 197 ⇑P       P       05 43 48.7 +2.6
SYO   Syowa Base        82.68 197 ⇓pP      pP      05 43 58.7 -3.4
NSS   Namsos            82.88 334⇑iP       P       05 43 45.1 -2.0
      comp=Z,372nm,1.1s,mb6.3
NSS   Namsos            82.88 334⇑iP       P       05 43 45.1 -2.0
NSS                               AMb      AMB     05 43 48.3
      comp=Z,372nm,1.1s,mb6.3
BDI   Bagni Di Lucca    82.88 314 eP       P       05 43 46.9 -0.7
GSCL  Gusciola          82.89 314 eP       P       05 43 48.9 +1.3
PII   Pisa              82.93 313 eP       P       05 43 46.7 -1.1
NB2   NORSAR Subarra    83.01 331  P       P       05 43 47.3 -0.6
      comp=Z,180nm,1.2s,mb6.0,baz=92,slow=5.6
NB2   NORSAR Subarra    83.01 331  P       P       05 43 47.3 -0.6
NB2                               pmax     pmax
      comp=Z,180nm,1.2s,mb6.0
NB2   NORSAR Subarra    83.01 331  P       P       05 43 47.3 -0.6
      baz=92,slow=5.6
NOA   NORSAR Array B    83.01 331  P       P       05 43 47.4 -0.5
      comp=Z,29nm,0.8s,mb5.3,baz=95,slow=4.9,SNR=43
NOA                               PP       PP      05 46 57.7 -3.2
      comp=Z,9.2nm,0.8s,baz=90,slow=7.6,SNR=5.6
NOA                               LR       LR      06 26 52.2
      comp=Z,493nm,18.9s,MS4.9,baz=55,slow=40
NOA   NORSAR Array B    83.01 331  P       P       05 43 47.4 -0.5
NOA                               PP       PP      05 46 57.6 -3.2
NOA                               LR       LR      06 26 52.2
ERBM  Eremo             83.02 314 eP       P       05 43 49.7 +1.4
SARO  Sassorosso        83.02 314  P       P       05 43 47.8 -0.5
VLC   Villacollemand    83.03 314⇑iP       P       05 43 47.7 -0.7
      comp=Z,62nm,0.9s,mb5.6
BRMO  Bormio            83.06 316 eP       P       05 43 49.2 +0.7
RPZ   Rata Peaks        83.07 135  P       P       05 43 48.4 -0.2
      comp=Z,26nm,0.8s,mb5.3,baz=239,slow=2.6,SNR=4.8
VALM                    83.13 314  P       P       05 43 49.0 +0.2
HSP   Hornsund          83.14 347 eP       P       05 43 47.4 -0.9
CLZ   Clausthal         83.14 322 eP       P       05 43 49.2 +0.5
      comp=Z,100nm,1.1s,mb5.8
NAO01 NORSAR Array S    83.16 331⇑iP       P       05 43 48.2 -0.5
      comp=Z,128nm,1.2s,mb5.8
NAO01                            e         pP      05 44 03.1 -1.6
HDH   Heidenheim        83.19 318⇑eP       P       05 43 48.9 -0.2
OSL   Oslo              83.20 330 eP       P       05 43 48.8  0.0
VINC  Vinca             83.20 314  P       P       05 43 48.7 -0.5
BSEG  Bad Segeberg      83.22 324 eP       P       05 43 49.8 +0.7
BSEG                              pmax     pmax
      comp=Z,159nm,1.1s,mb6.0
UBR   Uberruh           83.25 317⇑eP       P       05 43 49.3 -0.1
BACM                    83.26 314  P       P       05 43 49.5  0.0
GRAM                    83.26 314  P       P       05 43 50.5 +1.0
DAVA  Damuels           83.40 317⇑iP       P       05 43 50.5 +0.3
      comp=Z,294nm,1.7s,mb6.0
CODM                    83.42 314  P       P       05 43 50.6 +0.3
SIND  Sindeldorf        83.59 319⇑eP       P       05 43 51.6 +0.5
BOB   Bobbio (Coli)     83.70 314 eP       P       05 43 52.5 +0.7
BUCH  Bad Urach         83.76 318⇑eP       P       05 43 52.1 +0.1
VSL   Villasalto        83.81 309⇑iP       P       05 43 52.0 -0.5
      comp=Z,141nm,1.2s,mb6.0
VSL                              e         pP      05 44 08.8 +0.2
STU   Stuttgart         83.86 318⇑iP       P       05 43 52.6 +0.1
STU                               pmax     pmax
      comp=Z,58nm,0.9s,mb5.7
STU   Stuttgart         83.86 318⇑iP       P       05 43 52.6 +0.1
      comp=Z,58nm,0.9s,mb5.7
GUT   Gutenstein        83.92 318⇑eP       P       05 43 52.8  0.0
MUD   Monsted U'grnd    83.92 326⇓iP       P       05 43 53.5 +0.9
MUD                              i         pP      05 44 12.4 +3.8
MUD                               pmax     pmax
      comp=Z,110nm,1.2s,mb5.9
MUD   Monsted U'grnd    83.92 326⇓iP       P       05 43 53.5 +0.9
      comp=Z,106nm,1.2s,mb5.8
MUD                              i         pP      05 44 12.4 +3.8
THZ   Tophouse          83.98 133 ePN      P       05 43 52.9 -0.3
THZ                               pP       pP      05 44 04.2 -5.1
THZ   Tophouse          83.98 133 ePN      P       05 43 52.9 -0.3
THZ                               pP       pP      05 44 04.2 -5.1
PGF   Pioggiola         84.05 312⇑iP       P       05 43 53.8 +0.2
      comp=Z,239nm,1.4s,mb5.8
PGF   Pioggiola         84.05 312⇑iP       P       05 43 53.8 +0.2
PGF                               pmax     pmax
      comp=Z,120nm,1.4s,mb5.8
DOMB  Dombas            84.07 332 eP       P       05 43 53.3 +0.1
      comp=Z,163nm,1.2s,mb6.0
DOMB  Dombas            84.07 332 eP       P       05 43 53.3 +0.1
DOMB                              AMb      AMB     05 43 55.8
      comp=Z,163nm,1.2s,mb6.0
TOD   Tromm             84.12 319 eP       P       05 43 54.0 +0.3
TOD   Tromm             84.12 319⇑eP       P       05 43 54.1 +0.4
LBG   Lerchenberg       84.13 318⇑eP       P       05 43 54.0 +0.2
SPAK  Spaichingen       84.14 318 eP       P       05 43 54.3 +0.4
SPAK  Spaichingen       84.14 318⇑eP       P       05 43 54.2 +0.3
VAI   Varese            84.17 315 eP       P       05 43 53.5 -0.6
SWS   Schriesheim       84.19 319⇑eP       P       05 43 54.4 +0.3
TNS   Taunus Mts        84.34 320 eP       P       05 43 55.5 +0.7
TNS                               pmax     pmax
      comp=Z,76nm,1.0s,mb5.8
TNS   Taunus Mts        84.34 320 eP       P       05 43 55.5 +0.7
      comp=Z,76nm,1.0s,mb5.8
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PCP   Pian Castagno    84.35 314  P      P        05 43 54.4 -0.6
BFO   Black Forest     84.44 318  eP     P        05 43 55.3 -0.1
BFO                               pmax   pmax
      comp=Z,51nm,0.9s,mb5.7
BFO   Black Forest     84.44 318  eP     P        05 43 55.3 -0.1
      comp=Z,51nm,0.9s,mb5.7
BFO                               e      pP       05 44 14.6 +3.1
FIN   Finale Ligure    84.60 314  eP     P        05 43 56.4 +0.1
FELD  Feldberg         84.67 318⇑eP     P        05 43 56.6 +0.1
MCGN  Macugnaga        84.72 316  eP     P        05 43 57.1 +0.3
KIZ   Kirchzarten      84.72 318⇑eP     P        05 43 56.8  0.0
ORO   Oropa            84.73 315  eP     P        05 43 56.0 -0.9
ORX   Oropa            84.73 315  P      P        05 43 55.7 -1.2
LANF  Langenberg       84.78 319  eP     P        05 43 57.5 +0.5
MOL   Molde            84.79 332⇑iP     P        05 43 58.1 +1.3
      comp=Z,268nm,1.4s,mb6.2
MOL   Molde            84.79 332⇑iP     P        05 43 58.1 +1.3
MOL                               AMb    AMB      05 44 00.6
      comp=Z,268nm,1.4s,mb6.2
MOL                               epP    pP       05 44 12.6 -0.3
MOL                               esP    sP       05 44 17.7 -1.2
IMI   Imperia          84.84 314  eP     P        05 43 57.9 +0.4
ROB   Roburent         84.84 314  P      P        05 43 57.3 -0.2
TRAV                   84.90 315  P      P        05 43 56.5 -1.2
KIWB  Kanaga Island    84.91  38  eP     P        05 43 57.5 -0.1
MONE  Monesi           84.93 314  P      P        05 43 58.6 +0.7
ABH   Alteburg         84.93 320⇑eP     P        05 43 58.5 +0.7
LIBD  Limburg          84.93 318  eP     P        05 43 58.2 +0.4
LIBD  Limburg          84.93 318  eP     P        05 43 58.3 +0.5
NEGI  Negi             84.97 313  P      P        05 43 58.0 -0.2
BBS   Basel-Blauen     85.01 317  eP     P        05 43 58.3 +0.1
BBS   Basel-Blauen     85.01 317⇑eP     P        05 43 58.1 -0.1
SAOF  Saorge           85.08 314  eP     P        05 43 59.2 +0.5
WLS   Welschbruch      85.09 318  eP     P        05 43 58.6  0.0
CDF   Champ du Feu     85.14 318⇑iP     P        05 43 58.7 -0.2
      comp=Z,70nm,1.0s,mb5.5
CDF   Champ du Feu     85.14 318⇑iP     P        05 43 58.7 -0.2
CDF                               pmax   pmax
      comp=Z,35nm,1.0s,mb5.4
ENR   Entracque        85.17 314  P      P        05 43 58.0 -1.1
SBF   Sospel           85.17 314⇑iP     P        05 43 59.3 +0.2
      comp=Z,203nm,0.8s,mb6.0
SBF   Sospel           85.17 314⇑iP     P        05 43 59.3 +0.2
SBF                               pmax   pmax
      comp=Z,102nm,0.8s,mb6.0
AUTN  L'Aution         85.17 314  eP     P        05 43 59.9 +0.8
REVF  Revere           85.22 313  eP     P        05 43 59.7 +0.3
ECH   Echery           85.23 318  eP     P        05 43 59.1 -0.2
STV2  Anna di Valdie   85.23 314  P      P        05 43 58.5 -1.0
STV   Sta Anna Valdi   85.23 314  P      P        05 43 59.4  0.0
RUP   Ruppelstein      85.25 319  eP     P        05 43 59.9 +0.5
RUP   Ruppelstein      85.25 319⇑eP     P        05 44 00.1 +0.7
RSP   Reno Superiore   85.25 315  P      P        05 43 58.5 -1.0
MOF   Molkenrain       85.25 318  eP     P        05 43 59.3 -0.1
BHB   Bricherasio      85.26 314  P      P        05 43 58.0 -1.5
TOUF  Mont Tournerai   85.30 314  eP     P        05 43 59.1 -0.6
LSD   Ceresole Reale   85.31 315  P      P        05 44 00.3 +0.5
WTSB  Winterswijk      85.35 322⇑iP     P        05 44 00.5 +0.6
      comp=Z,128nm,1.0s,mb6.0
WTSB                              ex     x        05 44 15.3
BLS5  Blasjo           85.36 329⇑iP     P        05 44 01.4 +1.7
      comp=Z,136nm,1.3s,mb5.9
BLS5  Blasjo           85.36 329⇑iP     P        05 44 01.4 +1.7
BLS5                              AMb    AMB      05 44 03.7
      comp=Z,136nm,1.3s,mb5.9
BLS5                              epP    pP       05 44 16.1 +0.3
BLS5                              esP    sP       05 44 21.3 -0.5
MVIF  Mont Vial        85.37 314  eP     P        05 44 00.7 +0.6
PZZ   Prazzo           85.38 314  P      P        05 43 58.8 -1.4
FENE  Fenestrelle      85.39 315  P      P        05 44 00.0 -0.2
WIT   Witteveen        85.41 323⇑iP     P        05 44 01.2 +1.2
      comp=Z,461nm,1.5s,mb6.4
WIT                               ex     x        05 44 19.9
HINF  Hinteralfeld     85.44 317⇑iP     P        05 43 59.9 -0.5
MGZ   Maungaku         85.45 130  PN     P        05 44 01.2 +0.6
MGZ                               pP     pP       05 44 15.9 -0.8
MGZ   Maungaku         85.45 130  PN     P        05 44 01.2 +0.6
MGZ                               pP     pP       05 44 15.9 -0.8
LOMF  Lomont           85.48 317  eP     P        05 44 00.5  0.0
CNZ   Chateau          85.49 130  ePN    P        05 44 01.4 +0.5
CNZ   Chateau          85.49 130  ePN    P        05 44 01.4 +0.5
NGZ   Ngauruhoe        85.53 130  PN     P        05 44 01.9 +0.9
NGZ                               pP     pP       05 44 15.0 -2.1
NGZ   Ngauruhoe        85.53 130  PN     P        05 44 01.9 +0.9
NGZ                               pP     pP       05 44 15.0 -2.1
SURF  Saint Ours       85.59 314  eP     P        05 44 02.0 +0.8
RRL   Cesana Torines   85.59 315  P      P        05 44 00.8 -0.4
LPG   La Plagne        85.60 315⇑iP     P        05 44 01.8 +0.6
      comp=Z,104nm,0.7s,mb5.8
LPG   La Plagne        85.60 315⇑iP     P        05 44 01.8 +0.6
LPG                               pmax   pmax
      comp=Z,52nm,0.7s,mb5.9
LPL   La Plagne        85.61 315⇑iP     P        05 44 01.8 +0.6
      comp=Z,137nm,0.8s,mb5.9
LPL   La Plagne        85.61 315⇑iP     P        05 44 01.8 +0.6
LPL                               pmax   pmax
      comp=Z,69nm,0.8s,mb5.9
MBDF  Montbardon       85.61 314⇑iP     P        05 44 00.9 -0.4
      comp=Z,56nm,0.9s,mb5.5
MBDF  Montbardon       85.61 314⇑iP     P        05 44 00.9 -0.4
MBDF                              pmax   pmax
      comp=Z,28nm,0.9s,mb5.5
OG01  Vacheresse       85.61 316⇑eP     P        05 43 57.8 -3.4
BNI   Bardonecchia     85.67 315  P      P        05 44 01.6 +0.1
BNI                               pmax   pmax
      comp=Z,98nm,1.2s,mb5.9
BNI   Bardonecchia     85.67 315  eP     P        05 43 59.4 -2.1
      comp=Z,108nm,1.2s,mb6.0
FRF   La Foret Royal   85.75 313⇑iP     P        05 44 02.3 +0.3
      comp=Z,222nm,1.1s,mb6.0
FRF   La Foret Royal   85.75 313⇑iP     P        05 44 02.3 +0.3
FRF                               pmax   pmax
      comp=Z,111nm,1.1s,mb6.0
HAU   Haudompre        85.78 318⇑iP     P        05 44 01.9 -0.1
      comp=Z,180nm,1.0s,mb6.0
HAU                               eR
      comp=Z,431nm,23.0s
HAU   Haudompre        85.78 318⇑iP     P        05 44 01.9 -0.1
HAU                               pmax   pmax
      comp=Z,90nm,1.0s,mb6.0
HAU                               MLR    MLR
      comp=Z,430nm,23.0s,MS4.8
WLF   Walferdange      85.84 319⇑iP     P        05 44 02.4 +0.1
WLF                               e      pP       05 44 18.5 +0.1
WLF                               pmax   pmax
      comp=Z,78nm,1.1s,mb5.8
WLF   Walferdange      85.84 319⇑iP     P        05 44 02.4 +0.1
      comp=Z,78nm,1.1s,mb5.8
WLF                               e      pP       05 44 18.5 +0.1
LMR   La Mourre        85.86 313⇑iP     P        05 44 02.7 +0.2
      comp=Z,288nm,1.5s,mb6.0
LMR   La Mourre        85.86 313⇑iP     P        05 44 02.7 +0.2
LMR                               pmax   pmax
      comp=Z,144nm,1.5s,mb6.0
HGN   Heimansgroeve    85.94 320⇑iP     P        05 44 02.9 +0.2
      comp=Z,53nm,1.4s,mb5.6
HGN   Heimansgroeve    85.94 320  eS     S        05 54 24.6 -5.7
THEF  They Montfort    86.01 318  eP     P        05 44 03.1  0.0
CABF  La Chapelle      86.01 316⇑iP     P        05 44 03.7 +0.5
      comp=Z,158nm,1.0s,mb5.9
CABF  La Chapelle      86.01 316⇑iP     P        05 44 03.7 +0.5
CABF                              pmax   pmax
      comp=Z,79nm,1.0s,mb5.9
GDM   Grand'Maison     86.06 315⇑eP     P        05 44 03.9 +0.5
OG25  Le Caire         86.13 314⇑eP     P        05 44 04.3 +0.5
TAVF  Tavernes         86.17 313  eP     P        05 44 05.0 +1.0
ORIF  Oris-en-Rattie   86.24 315⇑iP     P        05 44 04.4 +0.1
      comp=Z,99nm,1.0s,mb5.7
ORIF                              eR
      comp=Z,677nm,22.2s
GRN   Grenoble         86.32 315⇑eP     P        05 44 05.9 +1.2
VILF  Villemus         86.41 314  eP     P        05 44 06.2 +1.0
PUYF  Puyloubier       86.44 313  eP     P        05 44 06.2 +0.9
BERF  Bertagne         86.45 313  eP     P        05 44 06.4 +1.0
OG05  Jujurieux        86.48 316⇑eP     P        05 44 05.7 +0.2
SMRF  Simiane la Rot   86.50 314⇑iP     P        05 44 06.6 +0.9
      comp=Z,29nm,0.8s,mb5.3
URZ   Urewera          86.55 129  P      P        05 44 05.9 -0.2
      comp=Z,45nm,1.0s,mb5.7,baz=282,slow=1.3,SNR=13
MEZF  Maizieres J'vi   86.62 318⇑iP     P        05 44 06.3 +0.2
      comp=Z,94nm,1.1s,mb5.6
TREF  Trevaresse       86.66 313  eP     P        05 44 07.1 +0.7
GIVF  Givet            86.68 320⇑iP     P        05 44 06.6 +0.3
      comp=Z,72nm,1.1s,mb5.5
GIVF  Givet            86.68 320⇑iP     P        05 44 06.6 +0.3
GIVF                              pmax   pmax
      comp=Z,36nm,1.1s,mb5.5
PRAF  Pradon           86.81 314  eP     P        05 44 05.0 -2.1
BAIF  Baives           87.08 320⇑iP     P        05 44 08.9 +0.6
      comp=Z,149nm,1.0s,mb5.9
BAIF  Baives           87.08 320⇑iP     P        05 44 08.9 +0.6
BAIF                              pmax   pmax
      comp=Z,74nm,1.0s,mb5.9
VIVF  Saint-Julien-l   87.10 315⇑iP     P        05 44 08.8 +0.3
      comp=Z,112nm,1.1s,mb5.7
VIVF  Saint-Julien-l   87.10 315⇑iP     P        05 44 08.8 +0.3
VIVF                              pmax   pmax
      comp=Z,56nm,1.1s,mb5.7
SMF   Signal de Mont   87.56 316⇑iP     P        05 44 10.8 +0.1
      comp=Z,140nm,0.9s,mb5.9
SMF   Signal de Mont   87.56 316⇑iP     P        05 44 10.8 +0.1
SMF                               pmax   pmax
      comp=Z,70nm,0.9s,mb5.9
LASF  Ste Croix        87.73 314⇑iP     P        05 44 12.2 +0.6
      comp=Z,262nm,1.7s,mb5.9
COLF  Collangettes     87.74 315⇑eP     P        05 44 12.3 +0.7
SSF   Saint Saulge     87.75 317⇑iP     P        05 44 11.9 +0.3
SSF                               pmax   pmax
      comp=Z,74nm,1.3s,mb5.8
SSF   Saint Saulge     87.75 317⇑iP     P        05 44 11.9 +0.3
      comp=Z,74nm,1.3s,mb5.8
PLDF  La Plantade      87.76 316  eP     P        05 44 12.3 +0.6
AVF   Avril sur Loir   87.88 317⇑iP     P        05 44 12.3 +0.1
      comp=Z,177nm,1.3s,mb5.8
AVF   Avril sur Loir   87.88 317⇑iP     P        05 44 12.3 +0.1
AVF                               pmax   pmax
      comp=Z,88nm,1.3s,mb5.8
LBL   Lubilhac         88.08 315  eP     P        05 44 14.0 +0.8
AGO   Saint Agoulin    88.09 316  eP     P        05 44 14.0 +0.7
PYM   Petit Puy Mans   88.20 316  eP     P        05 44 14.7 +0.9
BGF   Bois d'Agland    88.25 316⇑iP     P        05 44 14.6 +0.6
      comp=Z,240nm,1.3s,mb6.0
BGF   Bois d'Agland    88.25 316⇑iP     P        05 44 14.6 +0.6
BGF                               pmax   pmax
      comp=Z,120nm,1.3s,mb6.0
HYF   Humbligny        88.33 317⇑iP     P        05 44 15.1 +0.7
TNA   Tin City         88.63  24⇑iP     P        05 44 15.6 +0.2
      comp=Z,56nm,0.9s,mb5.9
TNA                               LR     LR
      comp=Z,723nm,20.0s,MS5.1
TCF   Toulx Ste Croi   88.71 316⇑iP     P        05 44 16.6 +0.4
      comp=Z,65nm,1.1s,mb5.6
TCF   Toulx Ste Croi   88.71 316⇑iP     P        05 44 16.6 +0.4
TCF                               pmax   pmax
      comp=Z,32nm,1.1s,mb5.6
CAF   Calviac          88.94 315⇑iP     P        05 44 18.1 +0.8
      comp=Z,135nm,1.4s,mb5.8
CAF   Calviac          88.94 315⇑iP     P        05 44 18.1 +0.8
CAF                               pmax   pmax
      comp=Z,68nm,1.4s,mb5.8
MTLF  Montolieu        88.98 313⇑iP     P        05 44 18.2 +0.6
      comp=Z,167nm,1.4s,mb5.9
MTLF  Montolieu        88.98 313⇑iP     P        05 44 18.2 +0.6
MTLF                              pmax   pmax
      comp=Z,84nm,1.4s,mb5.9
RJF   Les Rejaudoux    89.29 315⇑iP     P        05 44 19.7 +0.7
      comp=Z,227nm,1.5s,mb6.0
RJF                               eR
      comp=Z,507nm,22.0s
RJF   Les Rejaudoux    89.29 315⇑iP     P        05 44 19.7 +0.7
RJF                               pmax   pmax
      comp=Z,114nm,1.5s,mb6.0
RJF                               MLR    MLR
      comp=Z,510nm,22.0s,MS4.9
LMK   Market Rasen     89.56 323  eP     P        05 44 20.7 +0.7
VNDA  Vanda            89.61 168  eP     P        05 44 20.1 +0.3
VNDA                              e      pP       05 44 31.7 -4.4
VNDA                              pmax   pmax
      comp=Z,61nm,1.6s
VNDA                              MLR    MLR
      comp=Z,2µm,19.0s
VNDA  Vanda            89.61 168  P      P        05 44 20.2 +0.4
      comp=Z,20nm,1.4s,mb5.3,baz=329,slow=3.9,SNR=5.8
VNDA                              LR     LR       06 23 10.2
      comp=Z,2µm,18.2s,MS5.5,baz=288,slow=35
VNDA  Vanda            89.61 168  eP     P        05 44 20.1 +0.3
      comp=Z,60nm,1.6s,mb5.7
VNDA                              e      pP       05 44 31.7 -4.4
VNDA                              LR     LR
      comp=Z,2µm,19.0s,MS5.5
EMIR  Miracle          89.63 312  P      P        05 44 21.1 +0.4
      comp=Z,33nm,0.8s,mb5.7
LFF   La Frestale      89.87 315⇑iP     P        05 44 22.7 +1.0
      comp=Z,353nm,1.7s,mb6.1
LFF   La Frestale      89.87 315⇑iP     P        05 44 22.7 +1.0
LFF                               pmax   pmax
      comp=Z,177nm,1.7s,mb6.1
NIKO  Nikolski         89.89  37  eP     P        05 44 21.1 -0.5
EPOB  Poblet           90.02 311  P      P        05 44 22.3 -0.2
      comp=Z,29nm,0.8s,mb5.7
LDF   La Druitiere     90.03 319⇑iP     P        05 44 22.8 +0.4
      comp=Z,206nm,1.1s,mb6.0
LDF   La Druitiere     90.03 319⇑iP     P        05 44 22.8 +0.4
LDF                               pmax   pmax
      comp=Z,103nm,1.1s,mb6.1
LCP   Cassop           90.06 325⇑eP     P        05 44 23.3 +1.0
FLN   La Foliniere     90.25 319⇑iP     P        05 44 23.9 +0.5
      comp=Z,173nm,1.0s,mb6.0
FLN                               eR
      comp=Z,850nm,22.2s
FLN   La Foliniere     90.25 319⇑iP     P        05 44 23.9 +0.5
FLN                               pmax   pmax
      comp=Z,86nm,1.0s,mb6.0
FLN                               MLR    MLR
      comp=Z,850nm,22.3s,MS5.1
HPK   Haverah Park     90.25 324⇑eP     P        05 44 23.8 +0.6
MFF   Saint Martin d   90.30 317⇑iP     P        05 44 24.2 +0.5
      comp=Z,276nm,1.4s,mb6.1
MFF   Saint Martin d   90.30 317⇑iP     P        05 44 24.2 +0.5
MFF                               pmax   pmax
      comp=Z,138nm,1.4s,mb6.1
KBI1  Birley Grange    90.30 323⇑eP     P        05 44 23.9 +0.4
KBI1                              AMb    AMB      05 44 24.9
      comp=Z,128nm,1.1s,mb6.2
EPF   Esparros         90.38 313⇑iP     P        05 44 25.5 +1.3
LHO   Holmfirth        90.45 324⇑eP     P        05 44 24.8 +0.6
EBR   Ebro Roquetas    90.52 311  ePCP   PcP      05 44 26.0 -0.2
KWE   Weaver Farm      90.52 323⇑eP     P        05 44 25.0 +0.4
KWE                               AMb    AMB      05 44 27.7
      comp=Z,165nm,1.5s,mb6.1
GRR   Gorron           90.55 318⇑iP     P        05 44 25.3 +0.5
      comp=Z,231nm,1.4s,mb6.0
GRR   Gorron           90.55 318⇑iP     P        05 44 25.3 +0.5
GRR                               pmax   pmax
      comp=Z,115nm,1.4s,mb6.0
EBIE  Bielsa           90.56 313  P      P        05 44 25.8 +0.8
      comp=Z,21nm,1.4s,mb5.3
ERTA  Horta de San J   90.63 311  P      P        05 44 23.2 -2.1
      comp=Z,40nm,1.1s,mb5.7
LCHF  La Chataignera   90.69 317⇑eP     P        05 44 26.4 +0.9
EDI   Edinburgh        90.84 326  P      P        05 44 26.6 +0.6
EDI                               AMb    AMB      05 44 29.2
      comp=Z,97nm,1.6s,mb5.9
EDI   Edinburgh        90.84 326⇑eP     P        05 44 26.6 +0.6
EDI                               eP              05 44 26.6
EDI                               AMb    AMB      05 44 29.2
      comp=Z,97nm,1.6s,mb5.9
ESK   Eskdalemuir      90.95 326⇑eP     P        05 44 27.2 +0.7
ESK                               e      pP       05 44 42.1 -0.8
ESK                               pmax   pmax
      comp=Z,86nm,1.0s,mb6.0
ESK   Eskdalemuir      90.95 326⇑eP     P        05 44 27.2 +0.7
      comp=Z,86nm,1.0s,mb6.0
ESK                               e      pP       05 44 42.1 -0.7
ESK   Eskdalemuir      90.95 326⇑eP     P        05 44 26.5  0.0
ESK                               AMb    AMB      05 44 29.6
      comp=Z,95nm,1.6s,mb5.9
EAU   Auchinoon        91.00 326  eP     P        05 44 26.9 +0.1
EAU                               AMb    AMB      05 44 29.2
      comp=Z,170nm,1.9s,mb6.0
ETSF  Etsaut           91.05 313⇑iP     P        05 44 28.3 +1.0
      comp=Z,72nm,1.2s,mb5.6
ETSF  Etsaut           91.05 313⇑iP     P        05 44 28.3 +1.0
ETSF                              pmax   pmax
      comp=Z,36nm,1.2s,mb5.6
ESAC  San Caprasio     91.13 312  P      P        05 44 27.8 +0.1
      comp=Z,20nm,0.9s,mb5.5
BWH   Wardlaw          91.23 325  eP     P        05 44 28.4 +0.6
LRYF  La Roche-sur-Y   91.26 317⇑eP     P        05 44 28.8 +0.6
EMOS  Mosqueruela      91.31 310  P      P        05 44 28.2 -0.3
      comp=Z,40nm,1.0s,mb5.7
EAB   Aberfoyle        91.43 327  eP     P        05 44 29.3 +0.6
EAB                               AMb    AMB      05 44 32.8
      comp=Z,69nm,1.5s,mb5.8
SJPF  Ste Jean         91.51 313⇑iP     P        05 44 30.5 +1.1
      comp=Z,86nm,1.1s,mb5.7
SJPF  Ste Jean         91.51 313⇑iP     P        05 44 30.5 +1.1
SJPF                              pmax   pmax
      comp=Z,43nm,1.1s,mb5.7
SGMF  Saint Gilles     91.69 319⇑iP     P        05 44 30.5 +0.4
      comp=Z,200nm,1.3s,mb6.0
SGMF  Saint Gilles     91.69 319⇑iP     P        05 44 30.5 +0.4
SGMF                              pmax   pmax
      comp=Z,100nm,1.3s,mb6.0
EALK  Alkurruntz       91.70 313  P      pP       05 44 45.0 -1.6
HEX   Exmoor           92.03 321  eP     P        05 44 31.9 +0.3
HSA   Swansea          92.12 322⇑eP     P        05 44 32.5 +0.5
HSA                               AMb    AMB      05 44 36.4
      comp=Z,47nm,1.7s,mb5.5
QUIF  Quistinic        92.14 318⇑iP     P        05 44 32.4 +0.2
      comp=Z,80nm,1.0s,mb5.7
QUIF  Quistinic        92.14 318⇑iP     P        05 44 32.4 +0.2
QUIF                              pmax   pmax
      comp=Z,40nm,1.0s,mb5.7
ROSF  Rostrenen        92.15 319⇑iP     P        05 44 32.7 +0.5
      comp=Z,170nm,1.3s,mb5.9
ROSF  Rostrenen        92.15 319⇑iP     P        05 44 32.7 +0.5
ROSF                              pmax   pmax
      comp=Z,85nm,1.3s,mb5.9
ETOB  Tobarra          92.36 309  P      P        05 44 32.4 -1.0
      comp=Z,20nm,1.0s,mb5.4
HPE   Pembroke         92.47 322  eP     P        05 44 34.0 +0.4
EVIA  Vianos           93.10 309  P      P        05 44 37.2 +0.4
EVIA                              pmax   pmax
      comp=Z,29nm,1.1s,mb5.6
EVIA  Vianos           93.10 309  P      P        05 44 37.2 +0.4
      comp=Z,29nm,1.1s,mb5.6
DLF   Lyons Farm       93.25 324  eP     P        05 44 38.0 +0.9
DLF   Lyons Farm       93.25 324  eP     sP       05 44 56.6 -2.6
DMUB  Kingscourt       93.34 325  eP     sP       05 44 57.0 -2.6
EBER  Berja            93.66 307  P      P        05 44 39.4  0.0
      comp=Z,37nm,1.4s,mb5.6
EQES  Quesada          93.66 308  P      P        05 44 38.8 -0.6
      comp=Z,12nm,0.7s,mb5.4
DCN   Croghan          93.67 324  eP     P        05 44 40.2 +1.1
DCN   Croghan          93.67 324  eP     sP       05 44 58.8 -2.3
ESDC  Sonseca Array    94.06 310  P      P        05 44 41.9 +0.8
      comp=Z,5.2nm,0.7s,mb5.0,baz=62,slow=4.2,SNR=19
ESDC                              PKKPbc          06 01 44.3
      comp=Z,0.5nm,0.5s,baz=272,slow=2.9,SNR=6.8
ESDC  Sonseca Array    94.06 310  P      P        05 44 42.0 +0.9
      comp=Z,17nm,1.8s,mb5.2
ESLA  Sonseca Array    94.06 310  eP     P        05 44 41.5 +0.3
      comp=Z,23nm,1.5s,mb5.4
ESLA                              e      pP       05 44 56.9 -0.5
ESLA                              LR     LR
      comp=Z,3µm,19.0s,MS5.8
IMA   Indian Mountai   94.16  22  P      P        05 44 42.5 +1.5
IMA                               pmax   pmax
      comp=Z,450nm,1.0s,mb6.8
IMA   Indian Mountai   94.16  22  eP     P        05 44 42.3 +1.3
      comp=Z,63nm,0.8s,mb6.1
EADA  Adamuz           94.78 309  P      P        05 44 44.6 +0.2
      comp=Z,16nm,1.0s,mb5.4
SPU   Mount Spurr      96.66  27  eP     P        05 44 52.0 -0.4
SPU                               e      pP       05 45 10.5 +1.7
SPU                               ePP    PP       05 48 48.0 -2.1
COLA  College          96.87  23  P      P        05 44 53.5 +0.2
COLA                              pmax   pmax
      comp=Z,11nm,1.0s,mb5.2
COLA                              MLR    MLR
      comp=Z,1µm,21.0s,MS5.4
COLA  College          96.87  23  P      P        05 44 53.5 +0.1
      comp=Z,11nm,1.0s,mb5.2
COLA                              LR     LR
      comp=Z,1µm,21.0s,MS5.4
MCK   McKinley         96.95  24⇑iP     P        05 44 53.6 -0.1
MCK                               pmax   pmax
      comp=Z,42nm,1.3s,mb5.7
MCK                               MLR    MLR
      comp=Z,852nm,19.0s,MS5.2
MCK   McKinley         96.95  24⇑iP     P        05 44 53.6 -0.2
      comp=Z,42nm,1.3s,mb5.7
MCK                               LR     LR
      comp=Z,852nm,19.0s,MS5.2
ILAR  Eielson Array    97.29  22  P      P        05 44 53.9 -1.3
      comp=Z,4.6nm,0.8s,mb5.0,baz=296,slow=5.0,SNR=39
ILAR                              PP     PP       05 48 52.1 -2.9
      comp=Z,3.1nm,0.8s,baz=303,slow=4.7,SNR=5.4
ILAR                              PKKPbc          06 01 41.1
      comp=Z,0.3nm,0.6s,baz=153,slow=2.0,SNR=3.9
ILAR                              LR     LR       06 31 32.9
      comp=Z,906nm,21.8s,MS5.2,baz=320,slow=37
EVO   Evora            97.36 310  eP     P        05 44 54.5 -1.7
      comp=Z,73nm,1.5s,mb5.6
EVO                               eR
      comp=Z,582nm,22.8s
SUMG  Summit           97.47 347  eP     P        05 44 56.6 +0.7
      comp=Z,45nm,1.1s,mb5.8
SUMG                              ePP    PP       05 48 44.8  -11
FIB   Fire Island      97.50  26  PFAKE           05 45 10.0  +14
FIB                               LR     LR
      comp=Z,2µm,21.0s,MS5.6
KDAK  Kodiak Island    97.68  30  PFAKE           05 45 10.0  +13
KDAK                              LR     LR
      comp=Z,468nm,22.0s,MS4.9
SLKM  Skilak Lake      97.75  27  eP     P        05 44 56.8 -0.6
PMR   Palmer           97.78  26  eP     P        05 44 57.8 +0.3
PMR                               pmax   pmax
      comp=Z,57nm,1.4s,mb5.9
PMR   Palmer           97.78  26  eP     P        05 44 57.8 +0.3
      comp=Z,57nm,1.4s,mb5.9
SML   Sawmill          98.03  25  eP     P        05 44 59.0 +0.3
DBIC  Dimbokro         99.40 278  P      P        05 45 07.0 +1.0
DBIC                              pmax   pmax
      comp=Z,14nm,1.1s
DBIC                              MLR    MLR
      comp=Z,837nm,20.0s
DBIC  Dimbokro         99.40 278  P      P        05 45 07.3 +1.3
      comp=Z,3.3nm,0.7s,mb5.0,baz=136,slow=7.6,SNR=8.2
DBIC                              LR     LR       06 29 18.4
      comp=Z,763nm,19.2s,MS5.2,baz=66,slow=35
DBIC  Dimbokro         99.40 278  P      P        05 45 07.0 +1.0
      comp=Z,14nm,1.1s,mb5.4
DBIC                              LR     LR
      comp=Z,837nm,20.0s,MS5.2
DIV   Divide           99.44  25  PFAKE           05 45 20.0  +15
DIV                               LR     LR
      comp=Z,4µm,21.0s,MS5.9
INK   Inuvik           99.75  16  eP     P        05 45 06.1 -0.2
INK                               e      pP       05 45 22.5 -0.2
INK                               pmax   pmax
      comp=Z,48nm,1.2s
INK   Inuvik           99.75  16  P      P        05 45 06.2 -0.1
      comp=Z,9.1nm,0.6s,mb5.3,baz=331,slow=4.5,SNR=54
INK                               LR     LR       06 35 20.6
      comp=Z,2µm,21.3s,MS5.5,baz=297,slow=38
INK   Inuvik           99.75  16  eP     P        05 45 06.1 -0.3
      comp=Z,48nm,1.2s,mb5.8
INK                               e      pP       05 45 22.5 -0.1
RES   Resolute Bay    100.53   3  eP     P        05 45 10.0 +0.3
RES                               pmax   pmax
      comp=Z,39nm,1.0s
RES   Resolute Bay    100.53   3  eP     P        05 45 10.0 +0.3
      comp=Z,39nm,1.0s
RES                               e               05 45 23.9
SIT   Sitka           106.17  26  PFAKE           05 50 00.0
SIT                               LR     LR
      comp=Z,2µm,19.0s,MS5.7
YKA   Yellowknife Ar  109.26  14  P      Pdif     05 45 48.7 +0.2
YKA                                               06 00 59.6
YKA   Yellowknife Ar  109.26  14  Pdiff  Pdif     05 45 48.7 +0.2
      comp=Z,0.7nm,0.7s,baz=330,slow=4.7,SNR=16
YKA                               PKiKP           05 49 52.7
      comp=Z,0.7nm,0.6s,baz=349,slow=1.6,SNR=9.1
YKA                               PKKPbc          06 00 59.6
      comp=Z,0.2nm,0.6s,baz=153,slow=3.3,SNR=6.0
EDM   Edmonton        117.50  19  ePKIKP PKPdf    05 50 08.2 +1.2
SCHQ  Schefferville   118.84 348  PKP    PKPdf    05 50 11.1 +1.5
      comp=Z,8.3nm,0.7s,baz=23,slow=3.1,SNR=40
SCHQ  Schefferville   118.84 348  ePKPdf PKPdf    05 50 10.9 +1.3
SCHQ                              LR     LR
      comp=Z,1µm,22.0s,MS5.4
FMW   Mount Fremont   119.18  28  P      PKPdf    05 50 12.1 +1.6
EBG   Ellensburg      119.71  27  P      PKPdf    05 50 13.6 +2.1
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COR	**Corvallis**	**120.05**	**31**	PFAKE		05 50 30.0	+18
COR				LR	LR		
	comp=Z,337nm,22.0s,MS4.9						
OD2	**Odessa Site #2**	**120.18**	**26**	P	PKPdf	05 50 14.0	+1.6
BSMT	**Bassoo Peak**	**121.44**	**23**	P	PKPdf	05 50 16.7	+1.8
LNOR	**Lincton Mounta**	**121.53**	**27**	PKIKP	PKPdf	05 50 16.7	+1.7
HUMO	**Hull Mountain**	**121.61**	**32**	*e*PKPdf	PKPdf	05 50 17.4	+2.2
YBH	**Yreka Blue Hor**	**122.34**	**33**	PKIKP	PKPdf	05 50 17.8	+1.1
YBH				MLR	MLR		
	comp=Z,1µm,21.0s						
YBH	**Yreka Blue Hor**	**122.34**	**33**	PKP	PKPdf	05 50 17.8	+1.0
	comp=Z,2.5nm,0.9s,baz=342,slow=3.0,SNR=3.7						
BMO	**Blue Mountains**	**122.75**	**27**	*e*PKIKP	PKPdf	05 50 17.8	+0.4
CHMT	**Chamberlain Mo**	**122.81**	**23**	*e*PKPdf	PKPdf	05 50 18.6	+1.1
WDC	**Whiskeytown Da**	**123.23**	**34**	PFAKE		05 50 30.0	+12
WDC				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
LTIM	**Timbered Crate**	**123.39**	**33**	P	PKPdf	05 50 21.1	+2.3
WVOR	**Wild Horse Val**	**123.95**	**30**	*e*PKIKP	PKPdf	05 50 21.9	+2.0
WVOR				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.5						
HOPS	**Hopland**	**124.00**	**36**	PFAKE		05 50 30.0	+10
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
ULM	**Lac du Bonnet**	**124.46**	**9**	PKP	PKPdf	05 50 21.4	+0.8
	comp=Z,18nm,0.9s,baz=6.1,slow=3.6,SNR=30						
ULM	**Lac du Bonnet**	**124.46**	**9**	*e*PKPdf	PKPdf	05 50 21.2	+0.6
ULM				*e*		05 50 37.1	
ULM				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
OHCM	**Honcut**	**124.67**	**34**	*e*PKPdf	PKPdf	05 50 22.8	+1.5
MCMT	**McKenzie Canyo**	**124.69**	**24**	*e*PKPdf	PKPdf	05 50 23.2	+1.9
QLMT	**Earthquake Lak**	**125.25**	**23**	*e*PKPdf	PKPdf	05 50 24.7	+2.4
YMR	**Madison River**	**125.56**	**23**	*e*PKPdf	PKPdf	05 50 25.5	+2.6
YNR	**Norris Junctio**	**125.64**	**22**	*e*PKPdf	PKPdf	05 50 26.0	+3.0
WCN	**Washoe City**	**125.65**	**33**	*e*PKIKP	PKPdf	05 50 25.4	+2.2
YFT	**Old Faithful**	**125.80**	**23**	*e*PKPdf	PKPdf	05 50 27.3	+3.9
LKWY	**Lake**	**125.87**	**22**	*e*PKIKP	PKPdf	05 50 26.8	+3.3
LKWY				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.7						
BMN	**Battle Mountai**	**126.16**	**30**	PFAKE		05 50 40.0	+16
BMN				LR	LR		
	comp=Z,871nm,22.0s,MS5.4						
CMB	**Columbia Colle**	**126.19**	**35**	PFAKE		05 50 40.0	+16
CMB				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
IMW	**Indian Meadow**	**126.22**	**23**	*e*PKPdf	PKPdf	05 50 25.8	+1.6
MOOW	**Moose Ponds**	**126.42**	**23**	*e*PKPdf	PKPdf	05 50 26.2	+1.7
SAO	**San Andreas Ge**	**126.44**	**37**	PFAKE		05 50 40.0	+15
SAO				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
TPAW	**Teton Pass**	**126.56**	**24**	*e*PKPdf	PKPdf	05 50 27.1	+2.2
LOHW	**Long Hollow**	**126.59**	**23**	*e*PKPdf	PKPdf	05 50 27.0	+2.1
SNOW	**Snow King Moun**	**126.66**	**23**	*e*PKPdf	PKPdf	05 50 27.4	+2.3
PQI	**Presque Isle**	**126.75**	**346**	PFAKE		05 50 40.0	+15
PQI				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
LRV	**Little Rabbit**	**126.93**	**37**	*e*PKPdf	PKPdf	05 50 26.8	+1.0
AHID	**Auburn Hatcher**	**127.11**	**24**	*e*PKPdf	PKPdf	05 50 27.9	+1.9
AHID				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
MNV	**Mina**	**127.14**	**33**	*e*PKIKP	PKPdf	05 50 28.2	+2.1
MNV				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.6						
HVU	**Hansel Valley**	**127.20**	**26**	*e*PKIKP	PKPdf	05 50 28.1	+1.9
MTUM	**Tungsten Hills**	**127.69**	**34**	*e*PKPdf	PKPdf	05 50 29.4	+2.1
PDAR	**Pinedale Array**	**127.72**	**23**	PKP	PKPdf	05 50 28.7	+1.6
	comp=Z,33nm,1.2s,baz=102,slow=0.9,SNR=60						
PDAR				SKP		05 54 00.3	
	comp=Z,1.0nm,0.8s,slow=1.5,SNR=2.6						
BGU	**Big Grassy Mou**	**127.78**	**27**	*e*PKPdf	PKPdf	05 50 28.8	+1.5
HWUT	**Hardware Ranch**	**127.87**	**25**	*e*PKPdf	PKPdf	05 50 28.9	+1.4
HWUT				*e*PP	PP	05 52 25.6	-8.7
HWUT				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
TPH	**Tonopah**	**127.90**	**32**	PFAKE		05 50 40.0	+12
TPH				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
TCUT	**Toone Canyon**	**128.34**	**26**	*e*PKPdf	PKPdf	05 50 29.5	+1.2
NOQ	**North Oquirrh**	**128.41**	**26**	*e*PKPdf	PKPdf	05 50 30.4	+1.9
EMMW	**East Machias**	**128.43**	**344**	PFAKE		05 50 40.0	+12
EMMW				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
DUG	**Dugway**	**128.46**	**27**	*e*PKIKP	PKPdf	05 50 30.8	+2.2
DUG				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.5						
DUG	**Dugway**	**128.46**	**27**	*e*PKPdf	PKPdf	05 50 30.8	+2.2
DUG				*e*PP	PP	05 52 27.1	-12
DUG				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
JLU	**Jordanelle**	**128.74**	**26**	*e*PKPdf	PKPdf	05 50 30.8	+1.6
NLU	**North Lily Min**	**128.99**	**27**	*e*PKPdf	PKPdf	05 50 31.6	+1.9
DAC	**Darwin (Calif)**	**129.01**	**34**	*e*PKIKP	PKPdf	05 50 32.2	+2.4
DAC				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.5						
WVL	**Waterville**	**129.12**	**346**	PFAKE		05 50 40.0	+10
WVL				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
MPU	**Maple Canyon**	**129.14**	**27**	*e*PKPdf	PKPdf	05 50 31.6	+1.6
TMUT	**Trail Mountain**	**129.92**	**27**	*e*PKPdf	PKPdf	05 50 34.1	+2.7
ARUT	**Antelope Range**	**130.07**	**30**	*e*PKIKP	PKPdf	05 50 34.5	+2.8
MVU	**Marysvale**	**130.10**	**28**	*e*PKPdf	PKPdf	05 50 34.4	+2.6
MVU				*e*SKP		05 53 52.4	
MVU				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
MWC	**Mount Wilson**	**130.19**	**36**	*e*PKIKP	PKPdf	05 50 27.4	-4.7
MWC				*e*		05 50 34.3	
SRU	**San Rafael**	**130.37**	**26**	*e*PKIKP	PKPdf	05 50 34.2	+1.9
MIV	**Mineville/With**	**130.42**	**349**	*e*PKPdf	PKPdf	05 50 32.1	-0.1
PHWY	**Pilot Hill**	**130.50**	**20**	*e*PKPpre		05 50 28.9	
PHWY				*e*PKPdf	PKPdf	05 50 34.6	+2.2
NEN	**Nelson**	**130.98**	**33**	*e*PKPdf	PKPdf	05 50 35.4	+1.9
NEN				*e*PP	PP	05 52 51.1	-4.2
NEN				*e*SKP		05 53 54.8	
RCBR	**Riachuelo**	**131.29**	**266**	PFAKE		05 50 50.0	+15
RCBR				LR	LR		
	comp=Z,960nm,20.0s,MS5.5						
HRV	**Harvard--Oak R**	**131.52**	**347**	PFAKE		05 50 50.0	+16
HRV				LR	LR		
	comp=Z,877nm,20.0s,MS5.5						
PFO	**Pinyon Flat Ob**	**131.57**	**36**	PFAKE		05 50 50.0	+15
PFO				LR	LR		
	comp=Z,473nm,22.0s,MS5.2						
WES	**Weston**	**131.58**	**347**	PFAKE		05 50 50.0	+16
WES				LR	LR		
	comp=Z,994nm,19.0s,MS5.5						
PV10	**Paradox Valley**	**131.63**	**26**	*e*PKPdf	PKPdf	05 50 36.4	+1.7
PV10				*e*SKP		05 53 57.5	
ISCO	**Idaho Springs**	**131.77**	**22**	*e*PKIKP	PKPdf	05 50 37.2	+2.3
PV01	**Paradox Valley**	**132.03**	**25**	*e*PKPdf	PKPdf	05 50 37.0	+1.5
PV01				*e*SKP		05 53 58.5	
BAR	**Barrett**	**132.10**	**37**	*e*PKPdf	PKPdf	05 50 38.9	+3.1
BAR				*e*SKP		05 53 58.8	
GENY	**Geneseo**	**132.35**	**353**	*e*PKPdf	PKPdf	05 50 35.9	0.0
GENY				*e*PP	PP	05 52 57.2	-6.1
GENY				*e*SKP		05 53 59.3	
JFWS	**Jewell Farm**	**132.37**	**5**	PFAKE		05 50 50.0	+14
JFWS				LR	LR		
	comp=Z,820nm,20.0s,MS5.4						
BINY	**Binghamton**	**132.66**	**351**	*e*PKPdf	PKPdf	05 50 38.1	+1.6
ERPA	**Erie**	**133.22**	**355**	*e*PKPdf	PKPdf	05 50 39.1	+1.5
ERPA				*e*		05 50 53.9	
ERPA				*e*PP	PP	05 53 06.4	-2.3
ERPA				*e*SKP		05 54 03.4	
ERPA				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
SDCO	**Great Sand Dun**	**133.61**	**23**	*e*PKPpre		05 50 31.9	
SDCO				*e*PKPdf	PKPdf	05 50 39.9	+1.4
SDCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
CBKS	**Cedar Bluff**	**134.57**	**16**	PFAKE		05 50 50.0	+10
CBKS				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
MVL	**Millersville**	**134.86**	**351**	*e*PKPdf	PKPdf	05 50 42.5	+1.8
MVL				*e*SKP		05 54 07.8	
KSU1	**Kansas State U**	**135.09**	**13**	*e*PKPdf	PKPdf	05 50 41.6	+0.5
ACSO	**Alum Creek Sta**	**135.28**	**358**	*e*PKPdf	PKPdf	05 50 41.3	-0.2
ACSO				*e*PP	PP	05 53 18.5	-3.3
ACSO				*e*SKP		05 54 08.4	
ACSO				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
CAM4	**Nova Friburgo**	**135.53**	**243**	(P)	PKPdf	05 50 46.6	+4.3
ANMO	**Albuquerque**	**135.63**	**26**	*e*PKHKP		05 50 29.8	
ANMO				*e*		05 50 44.6	
ANMO				MLR	MLR		
	comp=Z,950nm,20.0s						
ANMO	**Albuquerque**	**135.63**	**26**	*e*PKPpre		05 50 29.8	
ANMO				*e*PKPdf	PKPdf	05 50 44.5	+2.3
ANMO				*e*SKP		05 54 10.8	
ANMO				LR	LR		
	comp=Z,950nm,20.0s,MS5.5						
TUC	**Tucson**	**135.70**	**32**	*e*PKHKP		05 50 35.4	
TUC				*e*		05 50 44.9	
TUC				*e*		05 53 19.8	
TUC				MLR	MLR		
	comp=Z,825nm,21.0s,MS5.4						
TUC	**Tucson**	**135.70**	**32**	*e*PKPpre		05 50 35.4	
TUC				*e*PKPdf	PKPdf	05 50 44.9	+2.5
TUC				*e*PP	PP	05 53 19.8	-4.7
TUC				*e*SKP		05 54 11.3	
TUC				LR	LR		
	comp=Z,825nm,21.0s,MS5.4						
BLO	**Bloomington**	**136.34**	**2**	*e*PKPdf	PKPdf	05 50 44.5	+1.1
BLO				*e*		05 51 01.6	
BLO				*e*SKP		05 54 13.3	
FVM	**French Village**	**137.24**	**7**	*e*PKPdf	PKPdf	05 50 45.4	+0.2
FVM				*e*PP	PP	05 53 22.5	-11
FVM				*e*SKPbc		05 54 14.6	
WCI	**Wyandotte Cave**	**137.29**	**2**	*e*PKHKP		05 50 32.8	
WCI				*e*		05 50 46.6	
WCI				*e*		05 53 26.2	
WCI				MLR	MLR		
	comp=Z,228nm,21.0s,MS4.9						
WCI	**Wyandotte Cave**	**137.29**	**2**	*e*PKPpre		05 50 32.8	
WCI				*e*PKPdf	PKPdf	05 50 46.6	+1.4
WCI				*e*PP	PP	05 53 26.1	-8.0
WCI				*e*SKPbc		05 54 15.9	
WCI				LR	LR		
	comp=Z,228nm,21.0s,MS4.9						
AMTX	**Amarillo**	**137.56**	**21**	*e*PKPpre		05 50 37.6	
AMTX				*e*PKPdf	PKPdf	05 50 48.0	+2.2
AMTX				*e*PP	PP	05 53 24.5	-12
FWV	**Forest Hill**	**137.79**	**355**	*e*PKPdf	PKPdf	05 50 46.8	+0.7
BLA	**Blacksburg**	**138.12**	**355**	*e*PKIKP	PKPdf	05 50 48.1	+1.3
BLA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
ELN	**Prospectdale**	**138.14**	**355**	*e*PKPpre		05 50 40.9	
ELN				*e*PKPdf	PKPdf	05 50 48.3	+1.5
ELN				*e*PP	PP	05 53 33.8	-6.1
BBSR	**BB Station**	**138.49**	**334**	PFAKE		05 51 00.0	+12
BBSR				LR	LR		
	comp=Z,789nm,22.0s,MS5.4						
MNTX	**Cornudas Mount**	**138.86**	**27**	*e*PKPpre		05 50 38.6	
MNTX				*e*PKPdf	PKPdf	05 50 50.8	+2.5
MNTX				*e*PP	PP	05 53 36.3	-8.1
MNTX				*e*SKP		05 54 19.0	
MNTX				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
UTMT	**University of**	**139.02**	**5**	PKPdf	PKPdf	05 50 48.2	-0.2
UTMT				*e*SKPdf		05 54 21.8	
GLAT	**Glass**	**139.05**	**6**	*e*PKPdf	PKPdf	05 50 49.0	+0.6
GLAT				*e*SKP		05 54 21.2	
HALT	**Halls**	**139.40**	**6**	*e*PKPdf	PKPdf	05 50 50.1	+1.0
HALT				*e*PP	PP	05 53 36.2	-11
HALT				*e*SKP		05 54 22.6	
HBAR	**Harrisburg**	**139.60**	**7**	*e*PKPdf	PKPdf	05 50 51.6	+2.2
CPCT	**Cooper Cave**	**140.08**	**360**	*e*PKPpre		05 50 42.2	
CPCT				*e*PKPdf	PKPdf	05 50 51.3	+0.9
CPCT				*e*PP	PP	05 53 43.7	-7.9
CPCT				*e*SKPdf		05 54 23.1	
MIAR	**Mount Ida**	**140.12**	**11**	*e*PKHKP		05 50 43.2	
MIAR				*e*		05 50 51.0	
MIAR				MLR	MLR		
	comp=Z,817nm,19.0s,MS5.5						
MIAR	**Mount Ida**	**140.12**	**11**	*e*PKPpre		05 50 43.2	
MIAR				*e*PKPdf	PKPdf	05 50 51.0	+0.6
MIAR				*e*SKPdf		05 54 24.1	
MIAR				LR	LR		
	comp=Z,817nm,19.0s,MS5.5						
UALR	**University of**	**140.12**	**10**	*e*PKPpre		05 50 42.6	
OXF	**Oxford**	**140.78**	**6**	*e*PKHKP		05 50 45.3	
TXAR	**Lajitas Array**	**141.64**	**27**	PKhKP		05 50 48.7	
	comp=Z,2.8nm,0.6s,baz=246,slow=0.8,SNR=43						
TXAR				PKP	PKPdf	05 50 54.2	+0.9
	comp=Z,6.0nm,0.6s,baz=151,slow=0.2,SNR=28						
TXAR				PP	PP	05 53 58.7	-2.5
	comp=Z,6.0nm,0.8s,baz=326,slow=4.5,SNR=7.2						
TXAR				SKPbc		05 54 28.5	
	comp=Z,11nm,1.1s,baz=27,slow=2.0,SNR=3.7						
TXAR	**Lajitas Array**	**141.64**	**27**	PKP	PKPdf	05 50 48.7	-4.6
TXAR				PKP	PKPdf	05 50 54.2	+0.9
TXAR				PP	PP	05 53 58.7	-2.5
TXAR				SKPbc		05 54 28.5	
PLCA	**Paso Flores**	**141.88**	**198**	PKhKP		05 50 50.2	
	comp=Z,1.8nm,0.7s,baz=125,slow=1.7,SNR=9.6						
PLCA				PKP	PKPdf	05 50 55.2	+1.9
	comp=Z,3.0nm,0.7s,baz=4.5,slow=4.4,SNR=7.2						
PLCA				SKP		05 54 26.5	
	comp=Z,3.1nm,0.9s,baz=145,slow=6.8,SNR=4.0						
PLCA				SKPbc		05 54 29.4	
	comp=Z,3.1nm,0.9s,baz=147,slow=6.9,SNR=4.0						
PLCA	**Paso Flores**	**141.88**	**198**	*e*PKPdf	PKPdf	05 50 50.2	-3.1
PLCA				PKP	PKPdf	05 50 55.2	+1.9
PLCA				SKP		05 54 26.5	
PLCA				SKPbc		05 54 29.4	
GOGA	**Godfrey**	**142.10**	**358**	*e*PKHKP		05 50 49.4	
GOGA				*e*		05 53 56.2	
GOGA				MLR	MLR		
	comp=Z,967nm,21.0s,MS5.5						
GOGA	**Godfrey**	**142.10**	**358**	*e*PKPpre		05 50 49.4	
GOGA				*e*PP	PP	05 53 56.2	-7.6
GOGA				*e*SKP		05 54 27.4	
GOGA				LR	LR		
	comp=Z,967nm,21.0s,MS5.5						
JCT	**Junction City**	**142.21**	**21**	*e*PKHKP		05 50 49.8	
JCT				*e*		05 53 57.8	
JCT				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.6						
JCT	**Junction City**	**142.21**	**21**	*e*PKPpre		05 50 49.8	
JCT				*e*PP	PP	05 53 57.8	-6.8
JCT				*e*SKP		05 54 27.5	
JCT				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
BAO	**Brasilia Array**	**142.22**	**251**	P	PKPdf	05 50 52.1	-2.5
BAO				*i*		05 50 57.1	
BAO				*i*		05 51 06.5	
BDFB	**Brasilia**	**142.24**	**250**	PKhKP		05 50 52.4	
	comp=Z,7.3nm,0.8s,baz=200,slow=7.5,SNR=7.1						
BDFB				PKP	PKPdf	05 50 57.4	+2.7
	comp=Z,11nm,0.7s,baz=130,slow=2.6,SNR=15						
LRAL	**Lakeview Retre**	**142.44**	**3**	*e*PKPpre		05 50 50.1	
NATX	**Nacogdoches**	**142.57**	**14**	*e*PKPdf	PKPdf	05 50 52.0	-2.8
NATX				*e*SKP		05 54 27.5	
NATX				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
CPUP	**Villa Florida**	**146.02**	**228**	PKPbc	PKPbc	05 51 02.9	+0.8
	comp=Z,0.0nm,0.4s,baz=227,slow=13,SNR=2.9						
DWPF	**Disney**	**147.24**	**354**	PKPbc	PKPdf	05 51 07.2	+4.3
DWPF	**Disney**	**147.24**	**354**	*e*PKPdf	PKPdf	05 51 06.2	+3.3
DWPF				*e*		05 51 22.8	
DWPF				LR	LR		
	comp=Z,290nm,20.0s,MS5.1						
FCH	**Farellones**	**148.44**	**204**	*e*P	PKPdf	05 51 05.9	+1.2
CLCH	**Cerro Calan**	**148.48**	**203**	*e*P	PKPdf	05 51 09.9	+5.1
DEG	**La Desirade**	**148.58**	**312**	*e*P	PKPdf	05 51 10.7	+5.3
CJM	**Chamela**	**148.80**	**39**	*i* P	PKPdf	05 51 11.5	+5.9
SFJM	**Santa Fe**	**149.25**	**35**	*i* P	PKPdf	05 51 10.0	+3.6
BBL	**Barber's Block**	**149.38**	**311**	*e*P	PKPdf	05 51 13.6	+6.9
COLM	**Colima**	**149.88**	**38**	*e*P	PKPdf	05 51 15.8	+8.4
SJG	**San Juan**	**150.81**	**321**	PKPdf	PKPdf	05 51 10.5	+1.7
SJG				PKPbc	PKPdf	05 51 16.0	+7.1
SJG	**San Juan**	**150.81**	**321**	PKP	PKPdf	05 51 10.9	+2.1
	comp=Z,14nm,0.7s,baz=62,slow=4.8,SNR=6.6						
SJG				PKPbc	PKPdf	05 51 16.2	+7.3
	comp=Z,64nm,0.7s,baz=61,slow=4.8,SNR=26						
SJG	**San Juan**	**150.81**	**321**	*e*PKPdf	PKPdf	05 51 10.1	+1.3
SJG				*e*PKPbc	PKPdf	05 51 15.9	+7.1
SJG				LR	LR		
	comp=Z,585nm,20.0s,MS5.4						
TPR	**Prospect**	**151.35**	**304**	*e*P	PKPdf	05 51 20.2	+10
GRW	**Mount Saint Ca**	**151.54**	**306**	*e*P	PKPdf	05 51 19.6	+10
TRN	**Trinidad (W)**	**152.16**	**303**	*e*P	PKPdf	05 51 21.7	+11
UNM	**Universidad Na**	**152.27**	**30**	*i* P	PKPdf	05 51 15.0	+4.0
TPP	**Pointe-a-Pierr**	**152.37**	**303**	*e*P	PKPdf	05 51 23.0	+12
ZIIG	**Zihuatanejo**	**152.42**	**36**	*i* P	PKPdf	05 51 13.5	+2.2
YAIG	**Yautepec**	**152.72**	**31**	*i* P	PKPdf	05 51 20.3	+8.7
PPM	**Popocatepetl**	**152.76**	**30**	*i* P	PKPdf	05 51 10.0	-1.7
IIB	**San Bernardino**	**152.99**	**29**	*i* P	PKPdf	05 51 16.0	+4.0
CAIG	**El Cayaco**	**153.56**	**35**	*i* P	PKPdf	05 51 15.5	+2.7
TEIG	**Tepich**	**155.02**	**8**	*e*PKPdf	PKPdf	05 51 16.9	+2.2
TEIG				*e*PKPbc	PKPdf	05 51 25.3	+11
TEIG				*e*PKPab	PKPab	05 51 39.9	-1.8
TEIG				*e*PP	PP	05 55 14.8	-3.9
TEIG				LR	LR		
	comp=Z,418nm,22.0s,MS5.2						
OXX	**Oaxaca**	**155.38**	**28**	*i* P	PKPdf	05 51 19.0	+3.7
VHO	**Vista Hermosa**	**155.39**	**28**	*e*P	PKPab	05 51 43.6	+0.3
LVC	**Limon Verde**	**156.45**	**219**	PKP	PKPdf	05 51 19.4	+2.9
	comp=Z,5.6nm,1.0s,baz=16,slow=1.6,SNR=6.4						
LVC				PKPab	PKPab	05 51 47.3	-0.5
	comp=Z,12nm,0.8s,baz=331,slow=3.6,SNR=7.6						
LVC	**Limon Verde**	**156.45**	**219**	*e*PKPdf	PKPdf	05 51 19.0	+2.5
LVC				LR	LR		
	comp=Z,910nm,21.0s,MS5.6						
SAML	**Samuel**	**158.11**	**258**	*e*PKPdf	PKPdf	05 51 20.9	+2.0
SAML				LR	LR		
	comp=Z,986nm,22.0s,MS5.6						
LPAZ	**La Paz**	**159.97**	**234**	PKP	PKPdf	05 51 24.4	+3.4
	comp=Z,9.7nm,0.8s,baz=58,slow=2.5,SNR=36						
LPAZ				PKPab	PKPab	05 52 04.8	+1.7
	comp=Z,4.4nm,0.9s,baz=360,slow=11,SNR=4.7						
LPAZ	**La Paz**	**159.97**	**234**	*e*PKPdf	PKPdf	05 51 24.0	+3.0
LPAZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
SDV	**Santo Domingo**	**160.47**	**314**	PKP	PKPdf	05 51 23.5	+1.9
	comp=Z,113nm,1.5s,baz=151,slow=0.4,SNR=18						
SDV				PKPab	PKPab	05 52 05.2	-0.2
	comp=Z,14nm,0.8s,baz=40,slow=5.1,SNR=5.5						
SDV	**Santo Domingo**	**160.47**	**314**	*e*PKPdf	PKPdf	05 51 23.1	+1.6
SDV				*e*PKPab	PKPab	05 52 04.9	-0.4
SDV				*e*PP	PP	05 55 43.1	-5.4
SDV				LR	LR		
	comp=Z,629nm,20.0s						
ARE	**Arequipa**	**162.45**	**227**	*e*P	PKPdf	05 51 27.0	+3.5
JTS	**JuntasAbangare**	**165.13**	**1**	PFAKE		05 51 40.0	+14
JTS				LR	LR		
	comp=Z,222nm,20.0s						
ROSC	**El Rosal**	**165.88**	**312**	PKP	PKPdf	05 51 29.8	+2.8
	comp=Z,52nm,1.2s,baz=89,slow=2.1,SNR=32						
ROSC				PKPab	PKPab	05 52 29.3	+0.4
	comp=Z,15nm,0.9s,baz=270,slow=0.9,SNR=2.2						
NNA	**Nana**	**169.28**	**227**	PFAKE		05 51 40.0	+11
NNA				LR	LR		
	comp=Z,256nm,22.0s						
OTAV	**Otavalo**	**171.98**	**307**	*e*PKPdf	PKPdf	05 51 33.2	+2.5
OTAV				*e*		05 51 49.3	
OTAV				*e*PKPab	PKPab	05 52 56.4	+0.6
OTAV				*e*		05 53 12.9	
OTAV				LR	LR		
	comp=Z,846nm,20.0s						
PAYG	**Puerto Ayora**	**173.24**	**54**	PFAKE		05 51 40.0	+8.6
PAYG				LR	LR		
	comp=Z,952nm,19.0s						

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*NEIC **17** 05:43:36.5,32.50S×71.65W,h41^{km},MD3.8(GUC),After GUC.*

GUC 17 05:43:36.5±0.9**,32.50S×71.65W,h41**^{km}±2^{km}**,MD3.8,ML2.9,3C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.19**	**102**	⇑*i*P	P	05 43 44.0	+0.3
PACH				*i* S	S	05 43 49.2	+0.4
IHA	**Instituto Hidr**	**0.53**	**179**	⇓*i*P	P	05 43 47.7	0.0
IHA				*i* S	S	05 43 55.6	0.0
PTCH	**Petorca**	**0.66**	**69**	⇑*i*P	P	05 43 54.8	+5.4
PTCH				*i* S	S	05 44 04.4	+5.6
PTCH				AMP		05 44 04.8	
	comp=E,2µm,0.1s						
JACH	**Jahuel**	**0.92**	**102**	⇑*i*P	P	05 43 53.9	+0.8
JACH				*i* S	S	05 44 06.7	+1.5
ILCH	**Illapel**	**0.95**	**26**	*e*P	P	05 43 54.3	+0.8
ILCH				*i* S	S	05 44 07.4	+1.2
ILCH				AMP		05 44 07.8	
	comp=E,384nm,0.2s						
PUEX	**Pudahuel**	**1.21**	**142**	*e*P	P	05 43 58.1	+1.0
PUEX				*i* S	S	05 44 14.5	+1.9
PUEX				AMP		05 44 15.5	
	comp=N,636nm,0.4s						
RCDM	**Rinconada Maip**	**1.22**	**144**	*e*P	P	05 43 58.2	+0.9
RCDM				*i* S	S	05 44 14.3	+1.4
RCDM				AMP		05 44 15.7	
	comp=N,649nm,0.1s						
STL	**Santa Lucia**	**1.27**	**138**	*i* P	P	05 43 58.6	+0.6
STL				*i* S	S	05 44 15.6	+1.4
CLCH	**Cerro Calan**	**1.30**	**134**	⇓*i*P	P	05 43 59.6	+1.1
CLCH				*i* S	S	05 44 16.6	+1.6
CLCH				AMP		05 44 19.5	
	comp=E,191nm,0.4s						
TACH	**Talagante**	**1.30**	**153**	*e*P	P	05 43 59.7	+1.1
TACH				*i* S	S	05 44 17.4	+2.3
FCH	**Farellones**	**1.42**	**126**	⇓*i*P	P	05 44 01.4	+1.2
FCH				*i* S	S	05 44 20.0	+2.1
FCH				AMP		05 44 20.6	
	comp=E,256nm,0.4s						
PCH	**Pirque**	**1.47**	**140**	*e*P	P	05 44 01.5	+0.5
LMEL	**Las Melosas**	**1.81**	**138**	*e*P	P	05 44 07.5	+1.6
LMEL				*i* S	S	05 44 30.6	+2.8
LMEL				AMP		05 44 35.6	
	comp=N,192nm,0.1s						

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*IDC **17** 05:47:24.2±16.0,28.83S×179.02W,h169^{km}±154^{km},mb3.7/3,mb1 3.9/4,mb1mx3.7/13,mbtmp4.3/4,ML4.6/1,Error ellipse: s-maj=148.6km s-min=75.6km az=8.0*

ISC 17 05:47:42.5±3.0**,30.3S**±0.1×**179.4W**±0.5**,h350**^{km}**,n12,**σ1^{s}47/13**,mb3.4**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**7.44**	**194**	*e*PN	**P**	**05 49 33.3**	**+2.5**
URZ	**Urewera**	**8.40**	**199**	P	**P**	**05 49 43.0**	**+0.9**
	4.7nm,0.3s,baz=252,slow=7.4,SNR=44						
URZ				S	**S**	**05 51 17.6**	**+1.1**
	2.7nm,0.3s,baz=91,slow=22,SNR=11						
URZ	**Urewera**	**8.40**	**199**	*e*PN	**P**	**05 49 41.3**	**-0.9**
URZ				SN	**S**	**05 51 15.9**	**-0.5**
KNZ	**Kokohu**	**8.98**	**195**	*e*PN	**P**	**05 49 50.0**	**+0.9**
BKZ	**Black Stump Fm**	**9.42**	**200**	*e*PN	**P**	**05 49 52.3**	**-2.1**
MRZ	**Mangatainoka R**	**11.07**	**200**	*e*PN	**P**	**05 50 13.1**	**-1.1**
TUWZ	**Tuamarina**	**12.29**	**204**	*e*PN	**P**	**05 50 25.1**	**-3.7**
THZ	**Tophouse**	**12.96**	**206**	*e*PN	**P**	**05 50 32.2**	**-4.6**
STKA	**Stephens Creek**	**33.28**	**257**	P	**P**	**05 53 52.4**	**+2.5**
	1.5nm,0.4s,mb3.6,baz=92,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**41.87**	**268**	P	**P**	**05 55 00.8**	**-0.3**
	0.6nm,0.4s,mb3.1,baz=106,slow=7.2,SNR=7.0						
WRA	**Warramunga Arr**	**42.85**	**273**	P	**P**	**05 55 08.3**	**-0.7**
	3.4nm,0.6s,mb3.6,baz=111,slow=7.5,SNR=31						
FINES	**FINESS Array B**	**144.66**	**339**	PKP	PKPdf	06 06 37.4	+0.5
	6.2nm,1.0s,baz=60,slow=4.2,SNR=26						

IDC 17 06:04:60.0±32.0**,17.08S×178.76E,mb4.0**/4**,mb1 4.1**/4**,mb1mx3.8**/14**,mbtmp4.0**/4**,Error ellipse: s-maj=567.7km s-min=141.5km az=71.0,Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.93**	**259**	P	P	06 11 18.8	-2.2
	2.9nm,0.9s,baz=53,slow=19,SNR=2.4						
STKA	**Stephens Creek**	**36.70**	**239**	P	P	06 12 09.2	-1.4
	1.9nm,0.8s,baz=100,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**42.13**	**259**	P	P	06 12 54.2	-1.8
	0.6nm,0.8s,baz=94,slow=7.7,SNR=5.6						
ASAR	**Alice Springs**	**42.43**	**253**	P	P	06 12 56.6	-1.7
	2.1nm,0.7s,baz=87,slow=8.0,SNR=22						

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*BJI **17** 06:12:09.9,6.39S×150.94E,h36^{km},mB5.5,mb5.3,Ms5.1,Msz4.9*

*MOS **17** 06:12:15.3±1.0,5.64S×150.33E,h33^{km},mb5.3/15,MS5.0/5,Error ellipse: s-maj=20.6km s-min=11.6km az=88.0*

*NEIC **17** 06:12:16.5±0.1,5.81S×150.48E,mb5.3/44,MS5.4/3,Error ellipse: s-maj=5.9km s-min=4.4km az=100.0*

NEIC Felt at Kimbe.

*IDC **17** 06:12:16.8±0.4,5.80S×150.28E,h36^{km}±3^{km},mb4.9/21,mb1 5.0/23,mb1mx5.0/23,mbtmp5.2/23,ML4.8/2,MS4.9/18,* *Ms1 4.9/18,ms1mx4.8/20,Error ellipse: s-maj=13.2km s-min=8.2km az=116.0*

HRVD ***17*** *06:12:16.5±0.2,6.15S×150.45E,h45^{km},MW5.5/67, Centroid moment Tensor Solution. LP body waves: s66,c127;Mantle waves: s67,c132; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.99±.05; $M_{\theta\theta}$-2.26±.03; $M_{\phi\phi}$0.26±.04; $M_{r\theta}$0.33±.04; $M_{\theta\phi}$-0.48±.03; $M_{\phi r}$0.01±.04; Best double couple: $M_0$2.195×10^{17} NP1: ϕ_s258°,δ41°,λ88°. NP2:ϕ_s81°,δ49°,λ92°. Principal axes: T 2.016, Plg85°, Azm10°; N .355, Plg2°, Azm260°; P -2.374, Plg4°, Azm170°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 17 06:12:15.3±0.2**,5.80S**±0.03×**150.37E**±0.03**,h38^{km}, h38^{km}**±1.2^{km}**:pP-P,n287,**σ**1^{s}11**/206**,mb5.3**/91**,MS5.0**/37**, 34C-12D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.79**	**221**	d *i*P	**P**	**06 13 28.5**	**+1.5**
PMG	**Port Moresby**	**4.79**	**221**	Pn	**P**	**06 13 28.8**	**+1.9**
	364nm,0.3s,baz=47,slow=6.3,SNR=296						
PMG				Sn	**S**	**06 14 21.9**	**-0.1**
	396nm,0.3s,baz=28,slow=19,SNR=11						
PMG				LR	LR	06 15 27.5	
	comp=Z,19µm,21.4s,baz=26,slow=40						
PMG	**Port Moresby**	**4.79**	**221**	*e*Pn	**P**	**06 13 28.7**	**+1.8**
PMG				*e*Sn	**S**	**06 14 21.4**	**-0.5**
HNR	**Honiara**	**10.15**	**111**	*e*Pn	**P**	**06 14 50.9**	**+9.1**
HNR				*e*Sn	**S**	**06 16 36.9**	**+1.4**
CTA	**Charters Tower**	**14.75**	**195**	⇑*i*P	**P**	**06 15 44.4**	**+1.1**
	64nm,1.2s						
CTA				*e*pP		06 15 59.5	
CTA				*e*S	**S**	**06 18 44.0**	**+18**
CTA	**Charters Tower**	**14.75**	**195**	Pn	**P**	**06 15 43.1**	**-0.2**
	2.0nm,0.3s,baz=19,slow=14,SNR=38						
CTA				Sn	**S**	**06 18 42.6**	**+16**
	baz=351,slow=11,SNR=6.7						
CTA				LR	LR	06 21 12.2	
	comp=Z,4µm,18.5s,baz=15,slow=36						
CTAO	**Charters Tower**	**14.75**	**195**	*e*P	**P**	**06 15 43.3**	**0.0**
	294nm,1.2s						
CTAO				*e*pP		06 15 58.7	
CTAO				*e*S	**S**	**06 18 42.8**	**+17**
KAKA	**Kakadu**	**18.97**	**248**	⇓*i*P	**P**	**06 16 34.7**	**-1.7**
	347nm,0.6s						
KAKA				*e*S	**S**	**06 20 02.6**	**-0.3**
GUMO	**Guam**	**20.02**	**344**	*e*P	**P**	**06 16 51.0**	**+3.1**
	3µm,1.6s						
GUMO				*e*pP		06 17 03.4	
WRAB	**Tennant Creek**	**20.97**	**227**	*c i*P	**P**	**06 16 57.3**	**-0.4**
WRAB	**Tennant Creek**	**20.97**	**227**	*e*P	**P**	**06 16 57.2**	**-0.5**
	2µm,1.1s						
WRAB				*e*pP		06 17 06.9	
WRAB				*e*S	**S**	**06 20 45.4**	**+1.1**
WRA	**Warramunga Arr**	**20.99**	**227**	P	**P**	**06 16 57.6**	**-0.3**
	168nm,0.5s,baz=50,slow=10,SNR=900						
WRA				pP		06 17 07.0	
	565nm,0.9s,baz=54,slow=11,SNR=32						
WRA				S	**S**	**06 20 46.3**	**+1.7**
	52nm,1.1s,baz=52,slow=20,SNR=15						
WRA				PcP	PcP	06 21 03.7	-0.7
	15nm,0.7s,baz=43,slow=2.3,SNR=8.1						
NOUC	**Port Laguerre**	**22.36**	**138**	*e*P	**P**	**06 17 11.4**	**-0.1**
NOUC	**Port Laguerre**	**22.36**	**138**	*e*P	**P**	**06 17 11.4**	**-0.2**
DZM	**Mont Dzumac**	**22.43**	**138**	*e*P	**P**	**06 17 12.1**	**-0.2**
ASAR	**Alice Springs**	**23.80**	**220**	P	**P**	**06 17 26.8**	**+1.0**
	93nm,0.8s,mb5.3,baz=58,slow=8.2,SNR=740						
ASAR				pP		06 17 36.0	
	14nm,0.6s,baz=154,slow=17,SNR=13						
ASAR				PcP	PcP	06 21 10.2	0.0
	17nm,0.7s,baz=47,slow=2.8,SNR=6.9						
ASAR				pPcP		06 21 21.5	
	17nm,0.8s,baz=59,slow=2.1,SNR=6.6						
ASAR				S	**S**	**06 21 43.6**	**+7.9**
	35nm,1.1s,baz=41,slow=13,SNR=3.0						
ASAR				LR	LR	06 28 05.3	
	comp=Z,2µm,18.3s,MS4.6,baz=58,slow=40						
ASPA	**Alice Springs**	**23.81**	**220**	⇑*i*P	**P**	**06 17 26.8**	**+1.0**
ASPA				*e*PCP	PcP	06 21 10.0	-0.1
ASPA				*e*S	**S**	**06 21 35.7**	**0.0**
ASPA				*e*PCS		06 24 47.3	
FITZ	**Fitzroy Crossi**	**27.06**	**241**	⇑*i*P	**P**	**06 17 56.2**	**-0.3**
	459nm,0.8s,mb6.1						
FITZ				*e*S	**S**	**06 22 31.6**	**+1.6**
STKA	**Stephens Creek**	**27.21**	**196**	⇑*i*P	**P**	**06 17 56.2**	**-1.6**
	77nm,0.9s,mb5.2						
STKA				*e*S	**S**	**06 22 28.4**	**-3.9**
STKA	**Stephens Creek**	**27.21**	**196**	P	**P**	**06 17 56.2**	**-1.6**
	16nm,0.8s,mb4.6,baz=0.3,slow=7.9,SNR=23						
STKA				pP	pP	06 18 06.2	-1.9
	63nm,0.6s,baz=17,slow=11,SNR=15						
STKA				LR	LR	06 29 24.8	
	comp=Z,3µm,18.2s,MS5.0,baz=296,slow=38						
RIV	**Riverview**	**27.90**	**179**	*e*P	pP	06 18 13.1	-1.4
CNB	**Canberra Magne**	**29.38**	**182**	*e*P	**P**	**06 18 16.8**	**-0.5**
	173nm,1.0s,mb5.7						
CNB				*e*pP	pP	06 18 26.5	-1.3
TOO	**Toolangi**	**31.93**	**187**	*e*P	**P**	**06 18 48.4**	**+8.6**
	3.1nm,1.0s						
TOO				*e*PCP	PcP	06 21 27.4	-2.2
MBWA	**Marble Bar**	**33.38**	**240**	*e*P	**P**	**06 18 51.5**	**-1.0**
	452nm,1.1s,mb6.3						
MBWA				*e*pP	pP	06 19 01.9	-1.2
CBIJ	**Chichi jima**	**33.65**	**347**	P	**P**	**06 18 54.0**	**-0.8**
	70nm,0.6s,mb5.8,baz=121,slow=20,SNR=5.1						
CBIJ				LR	LR	06 32 09.6	
	comp=Z,791nm,18.8s,MS4.5,baz=146,slow=36						
TGY	**Tagaytay City**	**35.27**	**304**	P	**P**	**06 19 11.2**	**+2.4**
	229nm,0.3s,baz=124,slow=7.3,SNR=4.5						
TGY				LR	LR	06 30 51.5	
	comp=Z,1µm,21.8s,MS4.6,baz=177,slow=32						
TAU	**Tasmania Unive**	**37.05**	**184**	*e*P	**P**	**06 19 24.2**	**+0.6**
	363nm,1.4s,mb6.0						
TAU				*e*pP	pP	06 19 33.5	-0.8
AFI	**Afiamalu**	**38.11**	**105**	*e*P	**P**	**06 19 28.4**	**-4.3**
	206nm,0.9s,mb5.9						
AFI				*e*pP	pP	06 19 42.7	-0.7
JOW	**Kunigami**	**38.86**	**328**	LR	LR	06 32 23.0	
	comp=Z,2µm,21.9s,MS4.9,baz=279,slow=31						
KLBR	**Kellerberrin**	**39.87**	**226**	⇑*i*P	**P**	**06 19 46.3**	**-0.8**
	759nm,0.7s						
KLBR				*e*pP	pP	06 19 57.0	-0.9
JHJ	**Hachijo jima 2**	**39.99**	**346**	LR	LR	06 34 07.1	
	comp=Z,1µm,21.1s,MS4.8,baz=153,slow=33						
URZ	**Urewera**	**40.41**	**147**	P	**P**	**06 19 51.2**	**-0.4**
	14nm,0.6s,mb4.9,baz=303,slow=3.0,SNR=18						
URZ				pP	pP	06 20 01.5	-0.9
	27nm,0.9s,baz=355,slow=5.6,SNR=5.0						
URZ				LR	LR	06 33 58.9	
	comp=Z,3µm,21.5s,MS5.2,baz=277,slow=32						
NWAO	**Narrogin (SRO)**	**40.97**	**225**	P	**P**	**06 19 55.7**	**-0.6**
	25nm,0.8s,mb4.9,baz=58,slow=8.6,SNR=11						
NWAO				pP	pP	06 20 05.7	-1.4
	81nm,0.8s,baz=55,slow=8.2,SNR=16						
NWAO				LR	LR	06 37 13.6	
	comp=Z,13nm,19.3s,baz=50,slow=37						
NWAO	**Narrogin (SRO)**	**40.97**	**225**	*e*P	**P**	**06 19 55.6**	**-0.7**
	139nm,1.1s,mb5.5						
NWAO				*e*pP	pP	06 20 06.2	-0.9
NWAO				*e*PP	PP	06 21 29.4	-4.4
MUN	**Mundaring**	**41.19**	**226**	⇑*i*P	**P**	**06 19 57.9**	**-0.1**
	40nm,0.8s,mb5.1						
MUN				*e*pP	pP	06 20 08.5	-0.4
RPZ	**Rata Peaks**	**41.92**	**157**	P	**P**	**06 20 03.5**	**-0.5**
	35nm,0.8s,mb5.0,baz=316,slow=3.8,SNR=6.3						
RPZ				LR	LR	06 35 18.6	
	comp=Z,3µm,19.3s,MS5.2,baz=312,slow=33						
QZH	**Quanzhou**	**43.47**	**316**	P	**P**	**06 20 18.9**	**+2.0**
QZH				AMB	AMB		
	comp=Z,190nm,0.6s,mb6.0						
QZH				AMB	AMB		
	comp=Z,1µm,3.8s						
QZH				LR	LR		
	comp=N,4µm,28.1s						
QZH				LR	LR		
	comp=E,2µm,17.5s						
QZH				LR	LR		
	comp=Z,4µm,31.4s,MS5.2						
MAJO	**Matsushiro**	**43.64**	**346**	*e*P	**P**	**06 20 18.3**	**+0.2**
	comp=Z,31nm,0.7s,mb5.1						
MAJO				*e*pP	pP	06 20 35.1	+6.1
MAT	**Matsushiro**	**43.64**	**346**	*e*P	**P**	**06 20 18.0**	**-0.1**
	comp=Z,27nm,1.0s,mb4.9						
MAT				*e*S	Sx	06 26 27.0	
MAT	**Matsushiro**	**43.64**	**346**	P	**P**	**06 20 18.1**	**0.0**
SSE	**Sheshan**	**46.09**	**325**	P	**P**	**06 20 39.6**	**+1.8**
SSE				AP	pP	06 20 50.6	+1.9
SSE				S	**S**	**06 27 25.4**	**+5.4**
SSE				XS		06 27 45.9	
SSE				AMB	AMB		
	comp=Z,31nm,1.1s,mb5.2						
SSE				AMB	AMB		
	comp=Z,305nm,7.4s						
SSE				LR	LR		
	comp=N,1µm,23.5s,MS4.9						
SSE				LR	LR		
	comp=E,1µm,23.5s,MS4.9						
SSE				LR	LR		
	comp=Z,2µm,24.1s,MS4.9						
SSE	**Sheshan**	**46.09**	**325**	P	**P**	**06 20 39.6**	**+1.8**
	comp=Z,31nm,1.1s,mb5.2						
SSE				pP	pP	06 20 50.6	+1.9
SSE				S	**S**	**06 27 25.4**	**+5.4**
SSE				sS		06 27 45.9	
SSE				SS	SS	06 30 52.1	+15
SSE				LR	LR		
	comp=Z,2µm,24.1s,MS4.9						
GZH	**Guangzhou**	**46.19**	**310**	P	**P**	**06 20 41.8**	**+3.1**
GZH				S	**S**	**06 27 17.9**	**-3.6**
GZH				LR	LR		
	comp=N,660nm,20.2s,MS5.0						
GZH				LR	LR		
	comp=E,2µm,21.0s,MS5.0						
GZH				LR	LR		
	comp=Z,3µm,19.9s,MS5.2						
QIZ	**Qiongzhong**	**46.93**	**303**	*e*P	**P**	**06 20 46.3**	**+1.8**
QIZ				S	**S**	**06 27 38.3**	**+6.2**
QIZ				XS		06 27 55.8	
QIZ				SS	SS	06 31 05.4	+14
QIZ				AMB	AMB		
	comp=Z,38nm,1.5s,mb5.1						
QIZ				LR	LR		
	comp=N,536nm,24.0s,MS4.7						
QIZ				LR	LR		
	comp=E,789nm,25.2s,MS4.7						
QIZ	**Qiongzhong**	**46.93**	**303**	*e*P	**P**	**06 20 46.2**	**+1.7**
	comp=E,65nm,1.2s,mb5.4						
QIZ				*e*pP	pP	06 21 00.3	+4.9
KS15	**Wonju Array Si**	**47.86**	**336**	*e*P	**P**	**06 20 53.2**	**+1.6**
NJ2	**Nanjing**	**48.15**	**323**	*e*P	**P**	**06 20 56.8**	**+2.9**
NJ2				AP	pP	06 21 06.9	+2.0
NJ2				XP	sP	06 21 10.5	+1.0
NJ2				S	**S**	**06 27 59.0**	**+10**
NJ2				XS		06 28 10.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,560nm,5.9s						
NJ2				LR	LR		
	comp=N,6µm,26.0s						
NJ2				LR	LR		
	comp=E,3µm,19.7s						
NJ2				LR	LR		
	comp=Z,4µm,24.5s,MS5.3						
WHN	**Wuhan**	**49.95**	**318**	P	**P**	**06 21 09.3**	**+1.5**
WHN				AP	pP	06 21 20.3	+1.5
WHN				LR	LR		
	comp=Z,5µm,17.9s,MS5.5						
ASAJ	**Asahikawa**	**50.18**	**353**	P	**P**	**06 21 09.5**	**+0.1**
	comp=Z,21nm,0.7s,mb5.3,baz=190,slow=6.3,SNR=15						
ASAJ				LR	LR	06 41 34.6	
	comp=Z,1µm,21.1s,MS4.9,baz=176,slow=35						
RAR	**Rarotonga**	**50.61**	**113**	LR	LR	06 37 59.4	
	comp=Z,1µm,21.2s,MS4.8,baz=166,slow=30						
DL2	**Dalian**	**51.84**	**332**	P	**P**	**06 21 25.3**	**+3.3**
DL2				*e*S	**S**	**06 28 44.8**	**+4.5**
DL2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
DL2				LR	LR		
	comp=N,750nm,20.2s						
DL2				LR	LR		
	comp=Z,750nm,19.4s,MS4.7						
TIA	**Tai'an**	**52.13**	**326**	*e*P	**P**	**06 21 25.1**	**+0.9**
YSS	**Yuzh-Sakhalins**	**52.96**	**353**	*e*P	**P**	**06 21 30.0**	**-0.3**
YSS				*e*		06 21 44.2	
YSS				MLR	MLR		
	comp=Z,600nm,20.0s,MS4.6						
YSS	**Yuzh-Sakhalins**	**52.96**	**353**	*e*P	**P**	**06 21 29.4**	**-0.9**
	comp=Z,32nm,1.1s,mb5.2						
YSS				*e*pP	pP	06 21 44.8	+3.5
ENH	**Enshi**	**53.10**	**315**	*e*P	**P**	**06 21 31.7**	**+0.1**
	comp=Z,40nm,0.8s,mb5.4						
GYA	**Guiyang**	**53.11**	**309**	⇑*i*P	**P**	**06 21 33.3**	**+1.6**
GYA				AP	pP	06 21 44.3	+1.5
GYA				XP	sP	06 21 51.6	+4.3
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
GYA				AMB	AMB		
	comp=Z,260nm,5.4s						
GYA				LR	LR		
	comp=N,740nm,22.4s,MS5.0						
GYA				LR	LR		
	comp=E,1µm,22.4s,MS5.0						
GYA				LR	LR		
	comp=Z,1µm,23.0s,MS4.9						
COCO	**West Island**	**53.18**	**259**	*e*P	**P**	**06 21 33.2**	**+0.8**
	comp=Z,989nm,1.2s						
COCO				*e*pP	pP	06 21 44.1	+0.7
SNY	**Shenyang**	**53.34**	**335**	⇓P	**P**	**06 21 33.1**	**-0.1**
SNY				AMB	AMB		
	comp=Z,20nm,2.2s,mb4.7						
SNY				LR	LR		
	comp=N,640nm,18.0s,MS4.8						
SNY				LR	LR		
	comp=E,500nm,17.4s,MS4.8						
SNY				LR	LR		
	comp=Z,910nm,19.2s,MS4.8						
MDJ	**Mudanjiang**	**53.55**	**342**	P	**P**	**06 21 36.5**	**+1.8**
MDJ				AP	pP	06 21 45.8	0.0
MDJ				XP	sP	06 21 50.4	+0.1
MDJ				PCP	PcP	06 22 41.4	+0.3
MDJ				PP	PP	06 23 37.8	+0.8
MDJ				SCP		06 26 37.0	
MDJ				PCS		06 26 40.8	
MDJ				S	**S**	**06 29 10.0**	**+6.5**
MDJ				AMB	AMB		
	comp=Z,29nm,1.0s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,214nm,4.4s						
MDJ				LR	LR		
	comp=N,839nm,27.5s,MS4.7						
MDJ				LR	LR		
	comp=E,372nm,26.9s,MS4.7						
MDJ				LR	LR		
	comp=Z,1µm,25.0s,MS4.8						
MDJ	**Mudanjiang**	**53.55**	**342**	*e*P	**P**	**06 21 35.2**	**+0.5**
	comp=Z,90nm,1.3s,mb5.5						
MDJ				*e*pP	pP	06 21 47.4	+1.5
MDJ				*e*sP	sP	06 21 53.0	+2.7
CN2	**Changchun**	**54.26**	**338**	*e*P	**P**	**06 21 40.8**	**+0.8**
CN2				*e*AP	pP	06 21 52.3	+1.2
CN2				*e*S	**S**	**06 29 16.5**	**+3.3**
CN2				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
CN2				AMB	AMB		
	comp=Z,290nm,3.0s						
CN2				LR	LR		
	comp=N,500nm,19.0s,MS4.8						
CN2				LR	LR		
	comp=E,700nm,19.0s,MS4.8						
CN2				LR	LR		
	comp=Z,800nm,21.0s,MS4.8						
NANT	**Nan**	**54.70**	**298**	P	**P**	**06 21 41.0**	**-2.5**
BJT	**Baijiatuau**	**55.42**	**328**	*e*P	**P**	**06 21 49.0**	**+0.6**
	comp=Z,48nm,1.1s,mb5.4						
BJI	**Beijing**	**55.43**	**328**	P	**P**	**06 21 49.3**	**+0.8**
BJI				AP	pP	06 21 59.0	-0.7
BJI				XP	sP	06 22 04.9	+0.8
BJI				S	**S**	**06 29 27.1**	**-1.7**
BJI				XS		06 29 48.3	
BJI				AMB	AMB		
	comp=Z,29nm,1.4s,mb5.1						
BJI				AMB	AMB		
	comp=Z,560nm,6.1s						
BJI				LR	LR		
	comp=N,812nm,21.7s,MS4.9						
BJI				LR	LR		
	comp=E,718nm,21.7s,MS4.9						
BJI				LR	LR		
	comp=Z,1µm,24.7s,MS4.8						
BJI	**Beijing**	**55.43**	**328**	P	**P**	**06 21 49.3**	**+0.8**
	comp=Z,29nm,1.4s,mb5.1						
BJI				pP	pP	06 21 59.0	-0.7
BJI				sP	sP	06 22 04.9	+0.8
BJI				S	**S**	**06 29 27.1**	**-1.7**
BJI				sS		06 29 48.2	
BJI				LR	LR		
	comp=Z,1µm,24.7s,MS4.8						
KMI	**Kunming**	**55.57**	**306**	P	**P**	**06 21 51.9**	**+2.2**
KMI				AP	pP	06 22 02.8	+1.9
KMI				S	**S**	**06 29 36.4**	**+5.5**
KMI				SS	SS	06 33 20.5	+4.5
KMI				AMB	AMB		
	comp=Z,27nm,1.1s,mb5.2						
KMI				AMB	AMB		
	comp=Z,367nm,13.5s						
KMI				LR	LR		
	comp=N,644nm,21.9s,MS4.8						
KMI				LR	LR		
	comp=E,537nm,21.9s,MS4.8						
KMI				LR	LR		
	comp=Z,1µm,28.9s						
KMI	**Kunming**	**55.57**	**306**	P	**P**	**06 21 51.9**	**+2.2**
	comp=Z,27nm,1.1s,mb5.2						
KMI				pP	pP	06 22 02.7	+1.8
KMI				S	**S**	**06 29 36.4**	**+5.5**
KMI				SS	SS	06 33 20.5	+4.5
KMI				LR	LR		
	comp=Z,1µm,28.9s,MS4.8						
XAN	**Xi'an**	**55.71**	**318**	P	**P**	**06 21 49.8**	**-0.8**
XAN				AP	pP	06 22 01.9	+0.1
XAN				AMB	AMB		
	comp=Z,41nm,0.8s,mb5.5						
CHRT	**Chiangrai**	**55.90**	**299**	⇑P	**P**	**06 21 53.0**	**+0.9**
	comp=Z,140nm,0.7s,mb6.1						
CM31	**Chiang Mai Arr**	**56.13**	**297**	*e*P	**P**	**06 21 54.4**	**+0.5**
	comp=Z,31nm,1.1s,mb5.2						
CMAR	**Chiang Mai Arr**	**56.13**	**297**	P	**P**	**06 21 52.7**	**-1.1**
	comp=Z,9.6nm,0.8s,mb4.9,baz=117,slow=5.3,SNR=30						
CMAR				LR	LR	06 43 14.3	
	comp=Z,474nm,20.8s,MS4.6,baz=116,slow=33						
CMAR				PKPPKP		06 51 35.2	
	comp=Z,0.9nm,0.3s,baz=319,slow=5.1,SNR=4.7						
CMAR				PKP2bc		06 52 06.2	
	comp=Z,1.5nm,0.5s,baz=290,slow=4.0,SNR=7.9						
CMAR	**Chiang Mai Arr**	**56.13**	**297**	P	**P**	**06 21 52.7**	**-1.1**
CMAR				LR	LR	06 43 14.3	
CMAR				P'P'		06 51 35.2	
CMAR				⇑*e*		06 52 06.2	
KLR	**Kul'dur**	**57.16**	**346**	*e*P	**P**	**06 21 51.0**	**-10**
HHC	**Hu-ho-hao-te**	**58.48**	**326**	*e*P	**P**	**06 22 11.4**	**+1.2**
HHC				AP	pP	06 22 21.8	+0.4
HHC				XP	sP	06 22 25.6	-0.2
HHC				PP	PP	06 24 23.0	+1.6
HHC				SCP		06 26 57.3	
HHC				S	**S**	**06 30 09.5**	**+0.4**
HHC				SCS	ScS	06 31 55.0	+1.9
HHC				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
HHC				AMB	AMB		
	comp=Z,460nm,14.7s						
HHC				LR	LR		
	comp=N,965nm,23.5s,MS5.0						
HHC				LR	LR		
	comp=E,814nm,21.2s,MS5.0						
HHC				LR	LR		
	comp=Z,1µm,20.6s,MS5.0						
PET	**Petropavlovsk**	**59.02**	**6**	*e*P	**P**	**06 22 12.4**	**-1.3**
PET				*e*S	**S**	**06 30 15.9**	**-0.1**
PET				*e*SS	SS	06 34 09.8	-2.0
PET				*e*SSS	SSS	06 36 36.5	-1.2
PET				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
PET				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.8						
BTO	**Baotou**	**59.19**	**325**	*e*P	**P**	**06 22 15.4**	**+0.3**
PPT	**Papeete**	**59.74**	**107**	*e*P	**P**	**06 22 20.1**	**+0.9**
	comp=Z,23nm,0.8s,mb5.3						
PPT	**Papeete**	**59.74**	**107**	P	**P**	**06 22 21.0**	**+1.8**
	comp=Z,22nm,0.8s,mb5.2,baz=56,slow=2.9,SNR=4.7						
PAE	**Paea**	**59.74**	**107**	*e*P	**P**	**06 22 20.0**	**+0.8**
	comp=Z,137nm,1.3s,mb5.8						
TIAR	**Tiarei**	**59.96**	**107**	*e*P	**P**	**06 22 21.8**	**+1.1**
	comp=Z,246nm,1.0s,mb6.2						
TVO	**Taravao**	**60.06**	**107**	*e*P	**P**	**06 22 22.5**	**+1.1**
	comp=Z,149nm,1.0s,mb6.0						
LZH	**Lanzhou**	**60.29**	**317**	⇓P	**P**	**06 22 24.8**	**+2.1**
LZH				AP	pP	06 22 35.4	+1.5
LZH				XP	sP	06 22 40.3	+1.9
LZH				PP	PP	06 24 39.5	+1.8
LZH				*e*S	**S**	**06 30 36.5**	**+4.0**
LZH				XS		06 30 54.8	
LZH				AMB	AMB		
	comp=Z,69nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,237nm,5.3s						
LZH				LR	LR		
	comp=N,1µm,15.0s						
LZH				LR	LR		
	comp=Z,2µm,17.8s,MS5.3						
LZH	**Lanzhou**	**60.29**	**317**	⇓P	**P**	**06 22 24.7**	**+2.0**
	comp=Z,69nm,1.5s,mb5.5						
LZH				pP	pP	06 22 35.4	+1.5
LZH				sP	sP	06 22 40.2	+1.8
LZH				PP	PP	06 24 39.5	+1.8
LZH				*e*S	**S**	**06 30 36.5**	**+4.0**
LZH				sS		06 30 54.7	
LZH				SS	SS	06 34 36.6	+5.2
LZH				LR	LR		
	comp=Z,2µm,17.8s,MS5.3						
TBI	**Tubuai**	**60.37**	**113**	*e*P	**P**	**06 22 24.0**	**+0.6**
	comp=Z,281nm,1.1s,mb6.2						
TBI				*e*LQ		06 38 02.3	
TBI				*e*LR	LR	06 40 28.9	
	comp=Z,1µm,31.8s						
HIA	**Hailar**	**60.99**	**338**	*e*P	**P**	**06 22 27.6**	**+0.3**
	comp=Z,104nm,0.8s,mb6.0						
HIA				*e*pP	pP	06 22 39.9	+1.4
MEH	**Mehetia**	**61.20**	**107**	*e*P	**P**	**06 22 29.7**	**+0.6**
	comp=Z,84nm,0.9s,mb5.9						
MEH				*e*pP	pP	06 22 40.3	0.0
	comp=Z,92nm,1.2s						
PMOR	**Pomariorio Ree**	**61.24**	**104**	*e*P	**P**	**06 22 30.6**	**+1.2**
	comp=Z,229nm,0.9s,mb6.3						
PMOR				*e*pP	pP	06 22 41.1	+0.5
	comp=Z,389nm,1.0s						
FX1	**Attu Island--F**	**61.58**	**15**	P	**P**	**06 22 31.3**	**+0.1**
	comp=Z,33nm,0.5s,mb5.7,baz=359,slow=6.7,SNR=9.0						
FX1				LR		06 48 09.5	
	comp=Z,38nm,19.3s,baz=228,slow=35						
FX1	**Attu Island--F**	**61.58**	**15**	*e*P	**P**	**06 22 30.5**	**-0.7**
GTA	**Gaotai**	**64.77**	**319**	P	**P**	**06 22 52.3**	**-0.2**
GTA				AP	pP	06 23 02.3	-1.6
GTA				XP	sP	06 23 06.8	-1.3
GTA				PCP	PcP	06 23 25.1	-0.6
GTA				PP	PP	06 25 19.3	+2.2
GTA				SCP		06 27 23.9	
GTA				S	**S**	**06 31 29.6**	**+0.8**
GTA				SCS	ScS	06 32 41.1	+0.9
GTA				SS	SS	06 35 47.4	+5.3
GTA				AMB	AMB		
	comp=Z,17nm,0.9s,mb5.1						
GTA				AMB	AMB		
	comp=Z,348nm,7.2s						
GTA				LR	LR		
	comp=N,460nm,18.2s						
GTA				LR	LR		
	comp=E,465nm,24.3s						
GTA				LR	LR		
	comp=Z,796nm,26.2s						
MA2	**Magadan**	**65.17**	**0**	*c i*P	**P**	**06 22 53.1**	**-1.6**
MA2				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
MA2	**Magadan**	**65.17**	**0**	*e*P	**P**	**06 22 53.4**	**-1.3**
	comp=Z,29nm,1.1s,mb5.2						
MA2				*e*pP	pP	06 23 08.6	+2.5
ULN	**Ulaanbaatar**	**65.59**	**330**	*e*P	**P**	**06 22 58.1**	**+0.5**
	comp=Z,17nm,0.7s,mb5.2						
CLNS	**Chul'man**	**65.81**	**345**	*e*P	**P**	**06 22 58.7**	**-0.1**
CLNS				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
CLNS				pmax	pmax		
	comp=E,13nm,1.0s						
SONM	**Songino Array**	**65.91**	**329**	P	**P**	**06 22 59.7**	**+0.1**
	comp=E,21nm,0.5s,mb5.4,baz=151,slow=6.2,SNR=63						

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SONM                                pP       pP       06 23 10.6 -0.4
      comp=E,7.7nm,0.6s,baz=135,slow=5.2,SNR=6.1
SONM                                PKP2bc            06 51 38.9
      comp=E,5.8nm,0.9s,baz=296,slow=3.2,SNR=14
SONM                                tx       tx       06 51 51.1
      comp=E,2.6nm,0.9s,baz=322,slow=3.9,SNR=5.2
SONM  Songino Array      65.91 329  P        P        06 22 59.7 +0.1
SONM                                pP       pP       06 23 10.6 -0.4
SONM                               ⇑e                 06 51 38.9
CASY  Casey              66.36 196 eP        P        06 23 00.9 -1.3
      comp=E,37nm,1.0s,mb5.4
LSA   Lhasa              66.83 306  P        P        06 23 07.1 +1.4
LSA   Lhasa              66.83 306 eP        P        06 23 05.2 -0.6
      comp=E,15nm,0.8s,mb5.1
SEY   Seymchan           68.56   1 eP        P        06 23 15.6 -0.4
SEY                                e                  06 23 41.3
SEY                                e                  06 25 46.1
SEY                                eS        S        06 32 15.8 +1.6
SEY                                                   06 33 10.2
SEY                                 SS       SS       06 36 38.0 -2.2
SEY                                 pmax     pmax
      comp=Z,30nm,1.1s,mb5.1
SEY                                 smax
      comp=N,880nm,18.4s
SEY                                 smax
      comp=E,420nm,20.1s
ZAK   Zakamensk          69.11 330⇓iP        P        06 23 19.5 -0.1
ZAK                                 pmax     pmax
      comp=Z,12nm,1.1s,mb4.7
ZAK                                 pmax     pmax
      comp=Z,14nm,1.4s,mb4.7
YAK   Yakutsk            69.50 350 eP        P        06 23 20.7 -1.1
YAK                                 pmax     pmax
      comp=Z,26nm,1.1s,mb5.1
YAK                                 pmax     pmax
      comp=N,10.0nm,1.2s
YAK   Yakutsk            69.50 350 eP        P        06 23 21.9 +0.2
      comp=N,127nm,1.3s,mb5.7
TLY   Talaya             69.75 331 eP        P        06 23 24.0 +0.5
TLY                                 pmax     pmax
      comp=Z,12nm,1.3s,mb4.7
TLY   Talaya             69.75 331 eP        P        06 23 23.8 +0.3
      comp=Z,15nm,1.3s,mb4.8
TLY                                epP       pP       06 23 36.7 +1.8
IRK   Irkutsk            69.82 332 eP        P        06 23 23.5 -0.4
IRK                                e                  06 32 35.2
IRK                                 pmax     pmax
      comp=Z,26nm,1.4s,mb5.0
BOD   Bodaibo            69.88 340 eP        P        06 23 23.3 -0.9
BOD                                 pmax     pmax
      comp=Z,11nm,0.8s,mb4.8
JIRN  Jiri               70.25 302 eP        P        06 23 27.2 +0.3
      comp=Z,17nm,0.6s,mb5.2
GUN   Gumba              70.58 302 eP        P        06 23 28.4 -0.6
      comp=Z,49nm,0.6s,mb5.6
PALK  Pallekele          70.71 280 eP        P        06 23 29.1 -0.9
      comp=Z,13nm,0.7s,mb5.0
PKI   Pulchoki           70.88 302 eP        P        06 23 30.5 -0.3
      comp=Z,53nm,1.2s,mb5.3
MOY   Mondy              71.04 330 eP        P        06 23 32.2 +0.8
MOY                                 pmax     pmax
      comp=Z,42nm,2.6s,mb4.9
KKN   Kakani             71.05 302 eP        P        06 23 30.4 -1.4
      comp=Z,34nm,0.9s,mb5.3
DMN   Daman              71.15 302 eP        P        06 23 31.5 -0.9
      comp=Z,56nm,0.9s,mb5.5
GKN   Gorkha             71.66 302 eP        P        06 23 35.1 -0.3
      comp=Z,41nm,0.7s,mb5.5
VNDA  Vanda              71.93 177  P        P        06 23 36.4 +0.2
      comp=Z,22nm,0.9s,mb5.1,baz=328,slow=6.4,SNR=54
VNDA                                pP       pP       06 23 46.2 -1.5
      comp=Z,24nm,0.8s,baz=340,slow=6.1,SNR=15
VNDA  Vanda              71.93 177 eP        P        06 23 36.2 -0.1
      comp=Z,38nm,0.9s,mb5.3
VNDA                               epP       pP       06 23 46.7 -1.0
KOLN  Koldanda           72.47 301 eP        P        06 23 39.6 -0.6
      comp=Z,20nm,0.7s,mb5.2
RKT   Rikitea            73.65 112 eP        P        06 23 48.0 +0.6
      comp=Z,97nm,0.9s,mb5.7
RKT                                epP       pP       06 23 58.7 -0.1
      comp=Z,152nm,1.0s
BILL  Bilibino           74.52   6⇑eP        P        06 23 50.7 -0.8
BILL                                pmax     pmax
      comp=Z,33nm,1.3s,mb5.1
BILL  Bilibino           74.52   6 eP        P        06 23 50.8 -0.7
      comp=Z,40nm,1.1s,mb5.3
HYB   Hyderabad          74.54 290⇓eP        P        06 23 52.0 -0.6
      comp=Z,40nm,1.0s,mb5.3
HYB   Hyderabad          74.54 290⇓iP        P        06 23 52.0 -0.6
      comp=Z,40nm,1.0s,mb5.3
HYB                                e         pP       06 24 03.5 -0.6
TRD   Trivandrum         74.56 280 eP        P        06 23 50.8 -2.0
TRD                                 AMb      AMB      06 23 54.2
      comp=Z,32nm,0.7s,mb5.4
WMQ   Urumqi             74.85 318 eP        P        06 23 55.0 +1.1
WMQ                                 XP       sP       06 24 14.0 +4.4
WMQ                                 PP       PP       06 26 46.0 +2.3
WMQ                                 S        S        06 33 28.0 +1.1
WMQ                                 SS       SS       06 38 20.0 +2.5
WMQ                                 AMB      AMB
      comp=Z,12nm,0.8s,mb4.9
WMQ                                 AMB      AMB
      comp=Z,145nm,12.0s
WMQ                                 LR       LR
      comp=N,487nm,23.0s,MS4.9
WMQ                                 LR       LR
      comp=E,456nm,22.0s,MS4.9
WMQ                                 LR       LR
      comp=Z,474nm,23.0s,MS4.7
JOSI  Joshimath          76.63 303 e         P        06 23 56.1 -8.2
BHPL  Bhopal             76.76 295 eP        P        06 24 05.5 +0.3
BHPL                               i                  06 24 09.1
      comp=Z,26nm,0.3s
DGAR  Diego Garcia       77.33 264 eP        P        06 24 07.5 -1.1
      comp=Z,103nm,0.8s,mb5.8
KLP   Kalpa              77.96 304 eP        P        06 24 11.5 -0.2
NDI   New Delhi          78.15 301 eP        P        06 24 10.5 -2.3
AYAN  Aya Nagar          78.18 301 eP        P        06 24 10.4 -2.5
KAD   Karad              78.62 289 eP        P        06 24 15.4 -0.2
KAD                                i                  06 24 17.4
      comp=Z,39nm,1.6s
SDNR  Sundarnagar        79.01 304 eP        P        06 24 18.2 +0.7
POO   Poona              79.14 290 eP        P        06 24 17.0 -1.4
KHET  Khetri             79.22 300 eP        P        06 24 16.9 -1.9
SLKM  Skilak Lake        80.60  26 eP        P        06 24 23.8 -1.6
ZAL   Zalesovo           80.66 327 i P       P        06 24 25.0 -0.9
ZAL                                 pmax     pmax
      comp=Z,7.0nm,0.6s
ZAL   Zalesovo           80.66 327  P        P        06 24 25.0 -0.8
      comp=Z,6.8nm,0.6s,mb4.8,baz=355,slow=5.3,SNR=23
ZAL                                 PKKPbc            06 43 06.5
      comp=Z,1.2nm,0.5s,baz=258,slow=5.8,SNR=5.9
ZAL                                 LR       LR       07 00 24.5
      comp=Z,1µm,20.2s,MS5.2,baz=356,slow=36
ZAL   Zalesovo           80.66 327  P        P        06 24 25.0 -0.8
ZAL                                 PKKPbc            06 43 06.5
ZAL                                 LR       LR       07 00 24.5
KSH   Kashi              81.76 311 eP        P        06 24 33.5 +1.6
KSH                                eAP       pP       06 24 44.0 +0.5
KSH                                eXP       sP       06 24 48.3 +0.7
KSH                                ePP       PP       06 27 37.3 -3.9
KSH                                eS        S        06 34 42.3 +1.7
KSH                                eXS                06 35 00.8
KSH                                 AMB      AMB
      comp=Z,140nm,1.3s,mb5.7
KSH                                 AMB      AMB
      comp=Z,230nm,4.2s
KSH                                 LR       LR
      comp=N,3µm,32.0s
KSH                                 LR       LR
      comp=E,620nm,23.6s
NVS   Novosibirsk        81.85 327 i P       P        06 24 30.5 -1.6
SML   Sawmill            82.04  25 eP        P        06 24 31.9 -1.0
IMA   Indian Mountai     82.21  20 eP        P        06 24 33.3 -0.4
      comp=E,34nm,1.0s,mb5.2
MCK   McKinley           82.72  23 eP        P        06 24 34.5 -1.9
      comp=E,15nm,0.9s,mb5.0
TKM2  Tokmak 2           82.89 314  P        P        06 24 37.9 +0.2
      SNR=16
KZA   Kyzart             82.93 314  P        P        06 24 39.2 +1.3
      SNR=13
KURK  Kurchatov          83.08 323c iP       P        06 24 37.6 -0.8
KURK  Kurchatov          83.08 323 eP        P        06 24 37.3 -1.1
      comp=E,35nm,1.1s,mb5.3
JASL  Jaisalmer          83.27 298 eP        P        06 24 39.5 -0.4
UCH   Uchtor             83.49 314  P        P        06 24 41.9 +1.2
      SNR=17
CHMS  Chumysh            83.51 314  P        P        06 24 40.7 -0.1
      SNR=6.6
AAK   Ala-Archa          83.60 314  P        P        06 24 41.1 -0.2
      SNR=7.0
AAK   Ala-Archa          83.60 314d iP       P        06 24 41.1 -0.2
AAK                                 pmax     pmax
      comp=Z,6.0nm,0.8s,mb4.8
AAK   Ala-Archa          83.60 314 eP        P        06 24 39.8 -1.5
      comp=Z,11nm,0.7s,mb5.1
COLA  College            83.68  22 i P       P        06 24 39.2 -2.0
COLA  College            83.68  22 eP        P        06 24 39.1 -2.0
      comp=Z,18nm,1.0s,mb5.2
MAW   Mawson             83.72 203 eP        P        06 24 41.5 +0.2
      comp=Z,27nm,1.2s,mb5.3
MAW   Mawson             83.72 203  P        P        06 24 41.7 +0.4
      comp=Z,26nm,0.8s,mb5.4,baz=108,slow=7.2,SNR=9.9
MAW                                 LR       LR       07 00 32.2
      comp=Z,802nm,19.4s,MS5.1,baz=74,slow=35
USP   Ospenovka          83.75 315  P        P        06 24 42.1  0.0
      SNR=8.1
THY   Trims Highway      83.83  24 eP        P        06 24 32.9 -9.1
ILAR  Eielson Array      84.00  23  P        P        06 24 40.8 -2.0
      comp=Z,8.4nm,0.7s,mb5.0,baz=254,slow=5.1,SNR=72
ILAR                                PKKPbc            06 42 56.5
      comp=Z,1.2nm,1.0s,baz=32,slow=1.9,SNR=5.1
ILAR                                tx       tx       06 43 09.2
      comp=Z,1.0nm,0.9s,baz=324,slow=2.8,SNR=4.9
ILAR                                LR       LR       06 57 42.2
      comp=Z,745nm,21.2s,MS5.0,baz=250,slow=32
ILAR  Eielson Array      84.00  23  P        P        06 24 40.8 -2.0
ILAR                                PKKPbc            06 42 56.5
ILAR                                LR       LR       06 57 42.2
AML   Almayashu          84.06 313  P        P        06 24 44.7 +1.0
      SNR=25
EKS2  Erkin-Say          84.12 314  P        P        06 24 44.1 +0.2
      SNR=8.0
QSPA  South Pole Qui     84.16 180⇑iP        P        06 24 44.2 +0.9
      comp=Z,112nm,0.7s,mb6.1
DAWY  Dawson             86.69  24 eP        P        06 24 56.4 +0.3
BRVK  Borovoye           88.67 324 eP        P        06 25 02.7 -3.1
      comp=Z,4.9nm,0.8s,mb4.9
DLBC  Dease Lake         89.48  31  P        P        06 25 10.1 +0.4
      comp=Z,4.9nm,0.9s,mb4.8,baz=217,slow=5.4,SNR=6.6
DLBC                                LR       LR       06 57 42.3
      comp=Z,1µm,21.5s,MS5.2,baz=340,slow=30
INK   Inuvik             90.25  21  P        P        06 25 11.9 -1.1
      comp=Z,7.2nm,0.9s,mb5.0,baz=234,slow=5.8,SNR=24
INK                                 PKKP     PKKP     06 42 40.0  +10
      comp=Z,1.6nm,0.8s,baz=68,slow=4.8,SNR=6.2
INK                                 tx       tx       06 42 53.6
      comp=Z,5.3nm,1.1s,baz=96,slow=5.7,SNR=6.3
INK   Inuvik             90.25  21 eP        P        06 25 11.3 -1.7
      comp=Z,12nm,1.0s,mb5.2
YBH   Yreka Blue Hor     91.52  48  P        P        06 25 20.0 +0.4
      comp=Z,2.2nm,0.6s,mb4.7,baz=249,slow=2.3,SNR=6.9
SYO   Syowa Base         91.92 200 ⇓P        P        06 25 20.3 -0.4
SYO   Syowa Base         91.92 200 ⇓pP       pP       06 25 31.9 -0.6
SYO   Syowa Base         91.92 200 ⇓PKiKP             06 30 09.8
MTUM  Tungsten Hills     94.33  53 eP        P        06 25 31.1 -1.3
MWC   Mount Wilson       94.52  56 eP        P        06 25 34.3 +0.9
BMO   Blue Mountains     95.70  46 eP        P        06 25 37.0 -1.5
      comp=Z,2.4nm,0.8s,mb4.7
NEW   Newport            95.96  42  P        P        06 25 39.6  0.0
      comp=Z,1.0nm,0.5s,mb4.5,baz=275,slow=8.2,SNR=3.2
YKW3  Yellowknife Ar     97.43  28 eP        P        06 25 45.1 -0.9
YKA   Yellowknife Ar     97.44  28 i P       P        06 25 45.3 -0.7
YKA                                 pmax     pmax
      comp=Z,2.0nm,0.5s
YKA   Yellowknife Ar     97.44  28  P        P        06 25 45.0 -1.0
      comp=Z,1.6nm,0.5s,mb4.7,baz=271,slow=4.7,SNR=42
YKA                                 PKiKP             06 30 20.7
      comp=Z,0.4nm,0.6s,baz=287,slow=1.4,SNR=9.5
YKA                                 PKKPbc            06 42 22.4
      comp=Z,1.2nm,0.8s,baz=91,slow=3.0,SNR=12
YKA                                 tx       tx       06 42 34.1
      comp=Z,3.0nm,1.0s,baz=86,slow=3.0,SNR=12
YKA                                 LR       LR       07 05 51.7
      comp=Z,643nm,21.3s,MS5.1,baz=280,slow=33
EDM   Edmonton           98.38  37 eP        P        06 25 54.1 +3.7
SNAA  Sanae             100.70 188⇑iP        P        06 26 00.3 -0.3
SNAA  Sanae             100.70 188⇑iP        P        06 26 00.3 -0.3
PDAR  Pinedale Array    101.31  48  P        P        06 26 03.2 -0.8
      comp=Z,1.0nm,0.7s,baz=236,slow=2.5,SNR=8.3
PDAR                                sP                06 26 21.9
      comp=Z,2.0nm,0.7s,baz=251,slow=2.5,SNR=7.9
PDAR                                PKiKP             06 30 29.4
      comp=Z,0.7nm,0.7s,baz=165,slow=1.1,SNR=4.6
PDAR                                PKKPbc            06 42 13.1
      comp=Z,0.6nm,0.5s,baz=101,slow=4.6,SNR=6.0
PDAR                                tx       tx       06 42 24.2
      comp=Z,0.9nm,0.9s,baz=90,slow=7.4,SNR=3.7
PV10  Paradox Valley    101.88  52 ePdif     P        06 26 07.4 +0.7
VNA3  Neumayer Olymp    101.98 186⇑iP        P        06 26 09.6 +3.3
VNA3  Neumayer Olymp    101.98 186⇑iP        P        06 26 09.6 +3.3
VNA3  Neumayer Olymp    101.98 186⇑iP        P        06 26 11.5 +5.2
VNA3  Neumayer Olymp    101.98 186⇑iP        P        06 26 11.5 +5.2
VNA2  Neumayer--Watz    102.00 187⇑iP        Pdif     06 26 06.3 -0.2
VNA2  Neumayer--Watz    102.00 187⇑iP        Pdif     06 26 06.3 -0.2
VNA2  Neumayer--Watz    102.00 187⇑iP        Pdif     06 26 13.4 +6.9
VNA2  Neumayer--Watz    102.00 187⇑iP        Pdif     06 26 13.4 +6.9
ANMO  Albuquerque       104.09  56  PKiKP             06 30 34.5
      comp=Z,1.3nm,0.8s,baz=235,slow=4.2,SNR=5.8
TXAR  Lajitas Array     106.73  61  Pdiff    Pdif     06 26 29.7 +1.4
      comp=Z,0.2nm,0.7s,baz=320,slow=9.8,SNR=3.1
TXAR                                PKiKP             06 30 39.5
      comp=Z,1.4nm,0.8s,baz=181,slow=2.3,SNR=10
TXAR                                PKKPbc            06 41 57.3
      comp=Z,0.7nm,0.7s,baz=112,slow=5.4,SNR=6.3
TXAR                                PKKP     PKKP     06 42 10.7 +8.9
      comp=Z,0.9nm,0.6s,baz=119,slow=5.3,SNR=8.4
TXAR                                tx       tx       06 42 24.4
      comp=Z,1.8nm,0.9s,baz=117,slow=5.6,SNR=6.3
ARCES ARCESS Array B    107.10 342  Pdiff    Pdif     06 26 31.4 +2.5
      comp=Z,6.6nm,1.0s,baz=59,slow=5.3,SNR=4.2
ARCES                               PKiKP             06 30 38.3
      comp=Z,6.8nm,1.1s,baz=57,slow=0.4,SNR=9.9
ARCES                               PKKPbc            06 41 53.6
      comp=Z,8.1nm,1.0s,baz=271,slow=2.0,SNR=6.0
OBN   Obninsk           108.23 326  P        Pdif     06 26 32.8 -1.4
OBN                                 pmax     pmax
      comp=Z,7.0nm,0.6s
OBN                                 MLR      MLR
      comp=Z,800nm,20.0s,MS5.3
ULM   Lac du Bonnet     109.53  39  PKiKP             06 30 42.8
      comp=Z,1.9nm,0.5s,baz=231,slow=4.1,SNR=4.6
JCT   Junction City     110.00  60 ePKPdf    PKPdf    06 30 45.1 +2.0
MALT  Malatya           110.76 309 ePKPdf    PKPdf    06 30 45.2 +0.8
FINES FINESS Array B    110.94 335  Pdiff    Pdif     06 26 48.7 +2.7
      comp=Z,0.8nm,0.5s,baz=56,slow=5.0,SNR=7.1
FINES                               PKiKP             06 30 44.7
      comp=Z,0.6nm,0.4s,baz=63,slow=3.1,SNR=9.9
FINES FINESS Array B    110.94 335  Pdif     Pdif     06 26 48.7 +2.7
FINES                               PKPdf    PKPdf    06 30 44.7 +0.5
KMBO  Kilima Mbogo      112.87 266  PKiKP             06 30 49.9
      comp=Z,1.5nm,0.6s,baz=66,slow=8.6,SNR=7.1
KMBO  Kilima Mbogo      112.87 266 ePKPdf    PKPdf    06 30 50.9 +1.8
KMBO                               epPKPdf            06 31 02.5
AKASG Malin Array Be    113.88 323  PKiKP             06 30 50.8
      comp=Z,1.9nm,0.5s,baz=58,slow=2.2,SNR=15
BRTR  Keskin Array B    114.15 311  PKP      PKPdf    06 30 52.0 +0.9
      comp=Z,1.9nm,0.9s,baz=45,slow=1.7,SNR=7.9
EIL   Elat              114.91 300 ePKPdf    PKPdf    06 30 53.7 +0.9
UALR  University of     115.63  54 ePKPdf    PKPdf    06 30 55.4 +1.3
NB2   NORSAR Subarra    117.00 339  PKPdf    PKPdf    06 30 57.1 +1.1
      comp=Z,1.2nm,0.6s,baz=44,slow=2.2
NB2   NORSAR Subarra    117.00 339  PKPdf    PKPdf    06 30 57.1 +1.1
NOA   NORSAR Array B    117.00 339  PKP      PKPdf    06 30 57.0 +1.0
      comp=Z,0.4nm,0.6s,baz=76,slow=4.5,SNR=3.2
BOSA  Boshof            117.08 234 ePKPdf    PKPdf    06 30 57.9 +0.9
MLR   Muntele Rosu      117.84 319  PKP      PKPdf    06 30 59.7 +1.7
      comp=Z,4.2nm,0.7s,baz=234,slow=2.2,SNR=7.0
LBTB  Lobatse           118.20 238 ePKPdf    PKPdf    06 31 00.3 +1.1
SUR   Sutherland        118.86 228 ePKPdf    PKPdf    06 31 00.7 +0.3
LSZ   Lusaka            119.02 249 ePKPdf    PKPdf    06 31 02.3 +1.2
LSZ                                epPKPdf            06 31 14.2
BLO   Bloomington       119.05  48 ePKPdf    PKPdf    06 31 01.0 +0.4
WCI   Wyandotte Cave    119.51  49 ePKPdf    PKPdf    06 31 01.8 +0.3
LRAL  Lakeview Retre    120.34  55 ePKPdf    PKPdf    06 31 03.8 +0.5
PLCA  Paso Flores       120.40 145  PKP      PKPdf    06 31 04.9 +1.7
      comp=Z,14nm,0.8s,baz=229,slow=2.3,SNR=36
PLCA                                pPKP              06 31 16.6
      comp=Z,11nm,0.9s,baz=208,slow=3.3,SNR=11
PLCA  Paso Flores       120.40 145 ePKPdf    PKPdf    06 31 04.5 +1.4
PLCA                               epPKPdf            06 31 16.2
PLCA                               ePP       PP       06 32 28.3 -5.6
ACSO  Alum Creek Sta    121.28  46 ePKPdf    PKPdf    06 31 05.5 +0.6
ACSO                               epPKPdf            06 31 18.0
CPCT  Cooper Cave       121.68  52 ePKPdf    PKPdf    06 31 05.9 +0.2
DIVS  Divcibare         122.28 320⇑iP        PKPdf    06 31 08.1 +1.4
BRG   Berggiesshubel    122.31 329 ePKIKP    PKPdf    06 31 08.4 +1.8
BRG                                 pmax     pmax
      comp=Z,16nm,1.6s
CLL   Collm             122.53 330 ePKIKP    PKPdf    06 31 08.0 +1.0
CLL                                 pmax     pmax
      comp=Z,5.0nm,0.7s
CLL   Collm             122.53 330 ePKIKP    PKPdf    06 31 08.0 +1.0
      comp=Z,logA/T=0.9
SCHQ  Schefferville     122.71  25  PKP      PKPdf    06 31 07.8 +0.5
      comp=Z,2.2nm,0.7s,baz=272,slow=4.7,SNR=12
SCHQ                                PKKPbc            06 41 01.1
      comp=Z,2.2nm,0.6s,baz=67,slow=5.3,SNR=5.0
SCHQ  Schefferville     122.71  25  PKP      PKPdf    06 31 07.8 +0.5
SCHQ                                PKKPbc            06 41 01.1
GOGA  Godfrey           123.10  54 ePKPdf    PKPdf    06 31 09.9 +1.3
KHC   Kasperske Hory    123.51 327 ePKPdf    PKPdf    06 31 10.7 +1.7
GERES GERESS Array B    123.61 327  PKP      PKPdf    06 31 10.0 +0.8
      comp=Z,3.4nm,0.6s,baz=74,slow=1.6,SNR=33
MOX   Moxa              123.62 330 ePKIKP    PKPdf    06 31 10.9 +1.7
MOX                                 MLR      MLR
      comp=Z,600nm,21.0s,MS5.2
MOX   Moxa              123.62 330 ePKP      PKPdf    06 31 10.9 +1.7
MOX                                e                  06 31 30.9
MOX                                 LR       LR
      comp=Z,600nm,21.0s,MS5.2
MOX   Moxa              123.62 330 i P       PKPdf    06 31 10.9 +1.7
MOX                                 pPKP              06 31 31.0
MOX                                 L                 07 25 58.0
FWV   Forest Hill       123.81  48 ePKPdf    PKPdf    06 31 10.2 +0.3
MOA   Molln             123.86 326⇑iP        PKPdf    06 31 11.1 +1.4
      comp=Z,5.1nm,1.0s
GRA1  Grafenberg Arr    124.41 329 ePKP      PKPdf    06 31 12.4 +1.7
GRA1                                LR       LR
      comp=Z,900nm,21.6s,MS5.4
GRF   Grafenberg Arr    124.41 329 ePKIKP    PKPdf    06 31 12.4 +1.7
GRF                                 MLR      MLR
      comp=Z,900nm,21.6s,MS5.4
JSC   Jenkinsville      124.59  52 ePKPdf    PKPdf    06 31 12.7 +1.2
KBA   Koelnbreinsper    124.81 325⇑iP        PKPdf    06 31 11.7 +0.2
      comp=Z,6.1nm,0.9s
JTS   JuntasAbangare    125.09  82 ePKPdf    PKPdf    06 31 14.1 +1.2
COW   Cow Castle Cre    125.32  53 ePKPdf    PKPdf    06 31 14.8 +1.9
WTTA  Wattenberg        125.65 326⇑iP        PKPdf    06 31 15.2 +2.1
      comp=Z,20nm,1.0s
MOTA  Moosalm           125.90 327⇑iP        PKPdf    06 31 15.5 +1.9
      comp=Z,3.2nm,0.9s
SQTA  Sankt Quirin      125.92 327⇑iP        PKPdf    06 31 15.6 +2.0
      comp=Z,9.0nm,1.1s
SDMD  Soldier’s Deli    125.95  45 ePKPdf    PKPdf    06 31 14.6 +0.7
CBN   Corbin            126.08  46 ePKPdf    PKPdf    06 31 15.1 +0.8
DAVA  Damuels           126.59 327⇑iP        PKPdf    06 31 17.2 +2.2
      comp=Z,14nm,1.3s
TSUM  Tsumeb            127.29 241 ePKPdf    PKPdf    06 31 18.8 +1.8
TSUM                               epPKPdf            06 31 30.5
HINF  Hinteralfeld      127.83 330 ePKP1     PKPdf    06 31 18.1 +0.7
HAU   Haudompre         127.96 330 ePKP1     PKPdf    06 31 18.7 +1.1
CABF  La Chapelle       129.02 329 ePKP1     PKPdf    06 31 21.6 +1.9
      comp=Z,19nm,0.8s
LPL   La Plagne         129.40 327 ePKP1     PKPdf    06 31 22.0 +1.6
LPG   La Plagne         129.40 327 ePKP1     PKPdf    06 31 22.1 +1.7
      comp=Z,8.9nm,0.8s
NNA   Nana              129.84 111 ePKPdf    PKPdf    06 31 23.3 +1.2
MBDF  Montbardon        129.89 327 ePKP1     PKPdf    06 31 22.9 +1.5
SSF   Saint Saulge      130.01 331 ePKP1     PKPdf    06 31 22.9 +1.4
SMF   Signal de Mont    130.13 330 ePKP1     PKPdf    06 31 24.3 +2.5
      comp=Z,36nm,1.2s
OTAV  Otavalo           130.96  95 ePKPdf    PKPdf    06 31 25.7 +1.5
GRR   Gorron            131.01 335 ePKP1     PKPdf    06 31 25.1 +1.7
TCF   Toulx Ste Croi    131.19 331 ePKP1     PKPdf    06 31 25.8 +2.0
      comp=Z,9.3nm,0.8s
SGMF  Saint Gilles      131.82 336 ePKP1     PKPdf    06 31 26.2 +1.3
      comp=Z,5.4nm,0.4s
RJF   Les Rejaudoux     132.23 330 ePKP1     PKPdf    06 31 27.9 +2.1
LVC   Limon Verde       132.32 128  PKhKP             06 31 23.6
      comp=Z,9.6nm,1.1s,baz=240,slow=4.8,SNR=3.6
LVC                                 PKP      PKPdf    06 31 29.2 +2.6
      comp=Z,10nm,1.1s,baz=240,slow=2.8,SNR=7.3
LVC                                 pPKP              06 31 41.1
      comp=Z,6.0nm,0.9s,baz=292,slow=7.4,SNR=3.8
LVC   Limon Verde       132.32 128  PKP      PKPdf    06 31 23.6 -3.0
LVC                                 PKP      PKPdf    06 31 29.2 +2.6
LVC                                 pPKP              06 31 41.1
ETSF  Etsaut            135.00 330 ePKP1     PKPdf    06 31 33.2 +2.2
ROSC  El Rosal          135.49  89  PKP      PKPdf    06 31 35.0 +2.3
      comp=Z,14nm,0.5s,baz=88,slow=2.0,SNR=24
ROSC                                pPKP              06 31 46.6
      comp=Z,15nm,0.6s,baz=270,slow=23,SNR=6.1
LPAZ  La Paz            136.04 121  PKhKP             06 31 24.1
      comp=Z,1.5nm,0.8s,baz=223,slow=1.5,SNR=6.3
LPAZ                                PKP      PKPdf    06 31 36.5 +2.9
      comp=Z,8.8nm,0.6s,baz=14,slow=1.4,SNR=17
LPAZ                                pPKP              06 31 47.8
      comp=Z,8.8nm,1.0s,baz=79,slow=14,SNR=3.5
LPAZ  La Paz            136.04 121 ePKPpre            06 31 21.0
LPAZ                                PKP               06 31 24.1
LPAZ                               ePKPdf    PKPdf    06 31 35.6 +2.1
LPAZ                                PKP      PKPdf    06 31 36.5 +2.9
LPAZ                                pPKP              06 31 47.8
LPAZ                               eSKP               06 35 07.5
CPUP  Villa Florida     138.27 141  PKP      PKPdf    06 31 39.1 +1.7
      comp=Z,0.0nm,0.3s,baz=221,slow=14,SNR=2.0
CPUP                                pPKP              06 31 50.9
      comp=Z,0.0nm,0.4s,baz=223,slow=14,SNR=2.1
CPUP  Villa Florida     138.27 141  PKP      PKPdf    06 31 39.1 +1.7
CPUP                                pPKP              06 31 50.9
SDV   Santo Domingo     139.23  83 ePKPpre            06 31 31.2
SDV                                ePKPdf    PKPdf    06 31 41.1 +1.6
SDV                                eSKP               06 35 14.2
SJG   San Juan          142.33  68 ePKPpre            06 31 40.6
SJG                                ePKPdf    PKPdf    06 31 47.1 +2.2
SAML  Samuel            143.48 113 ePKPpre            06 31 44.4
GRW   Mount Saint Ca    147.76  76 eP        PKPdf    06 31 57.6 +3.3
TPP   Pointe-a-Pierr    148.19  80 eP        PKPdf    06 31 59.4 +4.4
TRN   Trinidad (W)      148.20  79 eP        PKPdf    06 32 00.5 +5.4
TBH   Brigand Hill      148.55  79 eP        PKPdf    06 32 01.7 +6.1
TPR   Prospect          148.75  78⇑iP        PKPdf    06 32 02.8 +6.9
BOT   Bacolet           148.81  78 eP        PKPdf    06 32 02.9 +7.0
CAM4  Nova Friburgo     149.28 156 eP        PKPdf    06 31 55.6 -0.9
CAM4                               i                  06 31 59.4
CAM4                               i                  06 32 02.8
CAM4                               i                  06 32 10.5
BDFB  Brasilia          151.97 140  PKP      PKPdf    06 32 03.0 +2.2
      comp=Z,34nm,0.8s,baz=213,slow=1.5,SNR=59
BDFB                                PKPbc    PKPdf    06 32 09.1 +8.3
      comp=Z,60nm,0.6s,baz=251,slow=0.9,SNR=81
BDFB                                PKPab    PKPab    06 32 20.3 +1.2
      comp=Z,65nm,0.6s,baz=212,slow=5.3,SNR=18
BAO   Brasilia Array    151.99 140 ⇑P        PKPdf    06 32 03.1 +2.3
BAO                                i                  06 32 08.9
BAO                                i                  06 32 20.1
BAO                                i                  06 32 31.8
DBIC  Dimbokro          155.36 273  PKP      PKPdf    06 32 06.4 +0.9
      comp=Z,13nm,0.9s,baz=133,slow=3.6,SNR=15
DBIC                                PKPbc    PKPdf    06 32 15.9  +10
      comp=Z,19nm,0.8s,baz=51,slow=2.9,SNR=26
DBIC                                PKPab    PKPab    06 32 31.7 -1.7
      comp=Z,16nm,0.7s,baz=143,slow=5.6,SNR=3.8
DBIC                                pPKPab            06 32 44.7
      comp=Z,21nm,0.8s,baz=99,slow=4.8,SNR=4.6
DBIC  Dimbokro          155.36 273 ePKPdf    PKPdf    06 32 06.3 +0.8
DBIC                               ePKPbc    PKPdf    06 32 15.9  +10
DBIC                               ePKPab    PKPab    06 32 31.4 -2.0
```

DJA 17 06:18:32.9±5.0,7.11S×115.98E,h15km,MD5.3/5,2C-2D,
Error ellipse: s-maj=166.1km s-min=18.1km az=26.0,
Bali Sea

```
Code  Station Name          Δ°   AZ°    Phase ID           Time      Res
                                      Op        ISC      h  m  s    ISC
KEDI  Kedomdong           1.37 175⇑eP        Pn       06 18 57.7 +0.1
      95nm,0.5s
RATI  Rata                1.66 195⇓eP        Pn       06 19 02.0 +0.2
      300nm,0.4s
KELI  Kelakatan           1.84 233⇑eP        Pn       06 19 04.2 -0.1
      87nm,1.0s
SRDI  Scrawed             2.27 233⇓eP        Pn       06 19 11.0 +0.5
      59nm,0.2s
```

*BJI **17** 06:20:22.6, 34.30S×178.10W, h37^{km}, mB5.4, mb5.3, Ms5.4, Msz5.0*

*NEIC **17** 06:20:22.7±0.2, 34.27S×178.05W, mb5.2/29, MS4.8/18, Error ellipse: s-maj=8.1km s-min=4.0km az=129.0*

*IDC **17** 06:20:22.6±0.4, 33.98S×178.11W, h33^{km}±2^{km}, mb4.6/19, mb1 4.7/21, mb1mx4.6/24, mbtmp4.8/21, ML4.7/2, MS4.3/2, Ms1 4.3/2, ms1mx3.1/21, Error ellipse: s-maj=15.6km s-min=10.7km az=179.0*

*HRVD **17** 06:20:22.7±0.6, 33.91S×177.50W, h15^{km}±2^{km}, MW5.0/46, Centroid moment Tensor Solution. LP body waves: s9,c10;Mantle waves: s46,c66; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.21±.45; $M_{\theta\theta}$-1.21±.28; $M_{\phi\phi}$3.42±.34; $M_{r\theta}$1.02±.69; $M_{\theta\phi}$2.08±.22; $M_{\phi r}$-1.83±.79; Best double couple: $M_0$4.173×10^{16} NP1:ϕ_s236°,δ48°, λ-31°. NP2:ϕ_s348°,δ68°,λ-133°. Principal axes: T 4.503, Plg12°, Azm108°; N -.661, Plg39°, Azm8°; P -3.842, Plg48°, Azm212°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **17** 06:20:24.1±1.5, 33.93S×178.49W, h33^{km}, mb5.3/5 Error ellipse: s-maj=38.2km s-min=19.7km az=7.6*

ISC 17 06:20:22.0±0.9**, 34.42S**±0.05×**178.16W**±0.06**, h44^{km}**±8^{km}**, h39^{km}**±1.3^{km}**:pP-P, n265, σ1^{s}28**/235**, mb5.0**/42**, MS4.7**/23**, 8C-10D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.24	221	eP	P	06 21 27.4	+1.5
MXZ	Matakaoa Point	4.24	221	PN	P	06 21 27.4	+1.5
MXZ				SN	S	06 22 21.3	+6.5
MXZ				SN	S	06 22 22.2	+7.4
MXZ	Matakaoa Point	4.24	221	PN	P	06 21 27.4	+1.5
MXZ				SN	S	06 22 21.3	+6.5
MXZ				SN	S	06 22 22.2	+7.4
WIZ	White Island	4.88	229	SN	S	06 22 35.8	+5.1
WIZ	White Island	4.88	229	SN	S	06 22 35.8	+5.1
MWZ	Matawai	5.23	220	eP	P	06 21 40.7	+1.0
MWZ				S	S	06 22 45.6	+6.1
MWZ	Matawai	5.23	220	PN	P	06 21 40.7	+1.0
MWZ				SN	S	06 22 45.7	+6.1
MWZ				SN	S	06 22 45.7	+6.2
MWZ	Matawai	5.23	220	PN	P	06 21 40.7	+1.0
MWZ				SN	S	06 22 45.7	+6.1
MWZ				SN	S	06 22 45.7	+6.2
URZ	Urewera	5.40	224	Pn	P	06 21 43.5	+1.4
	10.0nm,0.3s,baz=48,slow=4.4,SNR=49						
URZ				Sn	S	06 22 51.3	+7.3
	128nm,0.3s,baz=135,slow=20,SNR=18						
URZ	Urewera	5.40	224	eP	P	06 21 43.5	+1.3
URZ	Urewera	5.40	224	ePN	P	06 21 43.2	+1.1
URZ				SN	S	06 22 50.8	+6.8
URZ	Urewera	5.40	224	ePN	P	06 21 43.2	+1.1
URZ				SN	S	06 22 50.8	+6.8
KUZ	Kuaotunu	5.50	243	eP	P	06 21 47.4	+3.9
KUZ	Kuaotunu	5.50	243	ePN	P	06 21 47.4	+4.0
KUZ	Kuaotunu	5.50	243	ePN	P	06 21 47.4	+4.0
EDRZ	Edgecumbe	5.52	227	SN	S	06 22 54.2	+7.3
EDRZ	Edgecumbe	5.52	227	SN	S	06 22 54.2	+7.3
KNZ	Kokohu	5.68	215	eP	P	06 21 46.0	0.0
KNZ	Kokohu	5.68	215	ePN	P	06 21 45.9	0.0
KNZ				SN	S	06 22 51.9	+1.1
KNZ	Kokohu	5.68	215	ePN	P	06 21 45.9	0.0
KNZ				SN	S	06 22 51.9	+1.1
BKZ	Black Stump Fm	6.39	221	ePN	P	06 21 56.4	+0.4
BKZ				SN	S	06 23 12.6	+4.2
BKZ	Black Stump Fm	6.39	221	ePN	P	06 21 56.4	+0.4
BKZ				SN	S	06 23 12.6	+4.2
MGZ	Maungaku	6.81	226	eP	P	06 22 06.8	+4.8
MGZ	Maungaku	6.81	226	PN	P	06 22 06.2	+4.2
MGZ	Maungaku	6.81	226	PN	P	06 22 06.2	+4.2
PWZ	Pawanui	6.86	214	ePN	P	06 22 01.6	-1.0
PWZ				SN	S	06 23 22.8	+2.6
PWZ				SN	S	06 23 23.7	+3.5
PWZ	Pawanui	6.86	214	ePN	P	06 22 01.6	-1.0
PWZ				SN	S	06 23 22.8	+2.6
PWZ				SN	S	06 23 23.7	+3.5
NGZ	Ngauruhoe	6.89	225	eP	P	06 22 05.0	+1.9
NGZ	Ngauruhoe	6.89	225	ePN	P	06 22 04.8	+1.7
NGZ	Ngauruhoe	6.89	225	ePN	P	06 22 04.8	+1.7
CNZ	Chateau	6.94	225	eP	P	06 22 02.8	-0.9
CNZ	Chateau	6.94	225	ePN	P	06 22 03.6	-0.2
CNZ	Chateau	6.94	225	ePN	P	06 22 03.6	-0.2
WPVZ	Whakapapa	6.94	225	SN	S	06 23 26.1	+3.8
WPVZ	Whakapapa	6.94	225	SN	S	06 23 26.1	+3.8
MOVZ	Moawhango	6.96	223	eP	P	06 22 04.2	+0.1
MOVZ				S	S	06 23 24.7	+1.9
MOVZ	Moawhango	6.96	223	ePN	P	06 22 04.1	+0.1
MOVZ				SN	S	06 23 24.6	+1.8
MOVZ	Moawhango	6.96	223	ePN	P	06 22 04.1	+0.1
MOVZ				SN	S	06 23 24.6	+1.8
FWVZ	Far West T-bar	6.97	224	eP	P	06 22 08.3	+4.1
FWVZ				S	S	06 23 26.8	+3.7
FWVZ	Far West T-bar	6.97	224	ePN	P	06 22 07.6	+3.3
FWVZ				SN	S	06 23 26.8	+3.7
FWVZ	Far West T-bar	6.97	224	ePN	P	06 22 07.6	+3.3
FWVZ				SN	S	06 23 26.8	+3.7
TSZ	Takapari Road	7.32	218	eP	P	06 22 10.8	+1.8
TSZ	Takapari Road	7.32	218	ePN	P	06 22 10.8	+1.8
TSZ	Takapari Road	7.32	218	ePN	P	06 22 10.8	+1.8
WAZ	Wanganui	7.63	224	SN	S	06 23 43.0	+3.6
WAZ	Wanganui	7.63	224	SN	S	06 23 43.0	+3.6
BFZ	Birch Farm	7.66	214	eP	P	06 22 11.5	-2.2
BFZ	Birch Farm	7.66	214	ePN	P	06 22 11.8	-2.0
BFZ	Birch Farm	7.66	214	ePN	P	06 22 11.8	-2.0
MRZ	Mangatainoka R	7.96	217	eP	P	06 22 16.3	-1.6
MRZ	Mangatainoka R	7.96	217	ePN	P	06 22 16.2	-1.7
MRZ				SN	S	06 23 42.0	-5.7
MRZ	Mangatainoka R	7.96	217	ePN	P	06 22 16.2	-1.7
MRZ				SN	S	06 23 42.0	-5.7
MTW	Mount Morrison	8.38	215	SN	S	06 23 57.9	-0.3
MTW	Mount Morrison	8.38	215	SN	S	06 23 57.9	-0.3
KIW	Kapiti Island	8.45	218	eP	P	06 22 23.4	-1.3
KIW	Kapiti Island	8.45	218	ePN	P	06 22 23.4	-1.3
KIW				SN	S	06 23 59.2	-0.6
KIW	Kapiti Island	8.45	218	ePN	P	06 22 23.4	-1.3
KIW				SN	S	06 23 59.2	-0.6
CAW	Cannon Point	8.56	217	ePN	P	06 22 26.6	+0.5
CAW				SN	S	06 24 01.2	-1.1
CAW	Cannon Point	8.56	217	ePN	P	06 22 26.6	+0.5
CAW				SN	S	06 24 01.2	-1.1
PAWZ	Paruwai Farm	8.60	214	ePN	P	06 22 25.6	-1.1
PAWZ				SN	S	06 24 02.7	-0.7
MSWZ	Moikau Station	8.70	215	SN	S	06 24 05.3	-0.8
MSWZ	Moikau Station	8.70	215	SN	S	06 24 05.3	-0.8
MRW	Makara Radio	8.83	218	SN	S	06 24 09.0	-0.2
MRW	Makara Radio	8.83	218	SN	S	06 24 09.0	-0.2
NNZ	Nelson	9.52	222	eP	P	06 22 40.0	+0.6
NNZ	Nelson	9.52	222	ePN	P	06 22 39.9	+0.5
NNZ				SN	S	06 24 24.8	-1.4
NNZ	Nelson	9.52	222	ePN	P	06 22 39.9	+0.5
NNZ				SN	S	06 24 24.8	-1.4
BSWZ	Blackbirch Sta	9.61	218	eP	P	06 22 39.2	-1.4
BSWZ	Blackbirch Sta	9.61	218	ePN	P	06 22 39.0	-1.6
BSWZ				SN	S	06 24 26.0	-2.3
BSWZ	Blackbirch Sta	9.61	218	ePN	P	06 22 39.0	-1.6
BSWZ				SN	S	06 24 26.0	-2.3
QRZ	Quartz Range	9.76	226	ePN	P	06 22 44.6	+1.9
QRZ				SN	S	06 24 30.0	-2.1
QRZ	Quartz Range	9.76	226	ePN	P	06 22 44.6	+1.9
QRZ				SN	S	06 24 30.0	-2.1
THZ	Tophouse	10.16	221	eP	P	06 22 49.6	+1.5
THZ	Tophouse	10.16	221	ePN	P	06 22 48.4	+0.3
THZ				SN	S	06 24 39.3	-2.4
THZ	Tophouse	10.16	221	ePN	P	06 22 48.4	+0.3
THZ				SN	S	06 24 39.3	-2.4
KHZ	Kahutara	10.29	217	eP	P	06 22 51.3	+1.3
KHZ				S	S	06 24 40.5	-4.6
KHZ	Kahutara	10.29	217	ePN	P	06 22 51.3	+1.3
KHZ				SN	S	06 24 40.5	-4.6
KHZ	Kahutara	10.29	217	ePN	P	06 22 51.3	+1.3
KHZ				SN	S	06 24 40.5	-4.6
DSZ	Denniston Nort	10.76	224	SN	S	06 24 51.9	-4.6
DSZ	Denniston Nort	10.76	224	SN	S	06 24 51.9	-4.6
LTZ	Lake Taylor	11.20	219	eP	P	06 23 03.1	+0.7
LTZ	Lake Taylor	11.20	219	ePN	P	06 23 02.8	+0.5
LTZ				SN	S	06 25 01.1	-6.1
LTZ	Lake Taylor	11.20	219	ePN	P	06 23 02.8	+0.5
LTZ				SN	S	06 25 01.1	-6.1
CRLZ	Canterbury Las	11.61	215	SN	S	06 25 12.6	-4.4
CRLZ	Canterbury Las	11.61	215	SN	S	06 25 12.6	-4.4
MQZ	McQueen's Vall	11.69	215	eP	P	06 23 06.7	-2.3
MQZ				S	S	06 25 11.9	-7.2
MQZ	McQueen's Vall	11.69	215	ePN	P	06 23 06.7	-2.3
MQZ				SN	S	06 25 12.1	-7.0
MQZ	McQueen's Vall	11.69	215	ePN	P	06 23 06.7	-2.3
MQZ				SN	S	06 25 12.1	-7.0
WVZ	Waitaha Valley	12.23	222	SN	S	06 25 25.3	-6.6
WVZ	Waitaha Valley	12.23	222	SN	S	06 25 25.3	-6.6
RPZ	Rata Peaks	12.49	219	Pn	P	06 23 19.4	-0.3
	8.1nm,0.3s,baz=51,slow=6.4,SNR=10						
RPZ				Sn	S	06 25 31.8	-6.5
	11nm,0.3s,baz=295,slow=12,SNR=11						
RPZ	Rata Peaks	12.49	219	SN	S	06 25 32.2	-6.2
RPZ	Rata Peaks	12.49	219	SN	S	06 25 32.2	-6.2
LBZ	Lake Benmore	13.41	219	eP	P	06 23 30.3	-1.5
LBZ	Lake Benmore	13.41	219	ePN	P	06 23 30.1	-1.7
LBZ				SN	S	06 25 52.6	-7.7
LBZ	Lake Benmore	13.41	219	ePN	P	06 23 30.1	-1.7
LBZ				SN	S	06 25 52.6	-7.7
ODZ	Otahua Downs	13.65	216	eP	P	06 23 33.8	-1.1
ODZ	Otahua Downs	13.65	216	ePN	P	06 23 33.7	-1.2
ODZ				SN	S	06 26 00.6	-5.4
ODZ	Otahua Downs	13.65	216	ePN	P	06 23 33.7	-1.2
ODZ				SN	S	06 26 00.6	-5.4
TUZ	Tuapeka	14.80	215	SN	S	06 26 27.2	-6.1
TUZ	Tuapeka	14.80	215	SN	S	06 26 27.2	-6.1
DZM	Mont Dzumac	18.28	308	eP	P	06 24 34.6	+0.4
NOUC	Port Laguerre	18.36	308	eP	P	06 24 33.8	-1.3
AFI	Afiamalu	21.23	17	P	P	06 25 03.0	-3.3
	182nm,1.1s,mb5.3						
CNB	Canberra Magne	26.60	259	eP	P	06 26 02.1	+4.0
	240nm,1.1s,mb5.6						
TAU	Tasmania Unive	28.09	242	P	P	06 26 13.4	+1.8
TAU				pmax	pmax		
	comp=Z,58nm,1.3s,mb5.0						
TAU	Tasmania Unive	28.09	242	P	P	06 26 13.4	+1.7
	comp=Z,58nm,1.3s,mb5.0						
PPT	Papeete	30.54	64	P	P	06 26 29.8	-3.8
	comp=Z,12nm,0.5s,mb5.0,baz=193,slow=14,SNR=3.3						
STKA	Stephens Creek	33.64	263	eP	P	06 27 02.3	+1.8
	comp=Z,6.5nm,0.9s,mb4.6						
STKA				ePCP	PcP	06 29 39.7	-0.4
STKA	Stephens Creek	33.64	263	P	P	06 27 02.4	+1.9
	comp=Z,7.2nm,0.9s,mb4.6,baz=81,slow=13,SNR=2.7						
STKA				PcP	PcP	06 29 39.5	-0.5
	comp=Z,8.8nm,0.7s,baz=0.6,slow=6.6,SNR=5.6						
STKA				pPcP		06 29 50.6	
	comp=Z,13nm,1.0s,baz=101,slow=1.5,SNR=7.1						
CTA	Charters Tower	34.51	285	eP	P	06 27 08.1	-0.1
	comp=Z,12nm,0.6s,mb5.0						
CTA	Charters Tower	34.51	285	eP	P	06 27 08.1	-0.1
CTA				pmax	pmax		
	comp=Z,12nm,0.6s						
CTA	Charters Tower	34.51	285	P	P	06 27 08.8	+0.6
	comp=Z,22nm,0.9s,mb5.1,baz=107,slow=11,SNR=15						
CTA				LR	LR	06 39 23.6	
	comp=Z,436nm,19.4s,MS4.2,baz=278,slow=33						
CTAO	Charters Tower	34.51	285	eP	P	06 27 08.1	-0.1
	comp=Z,20nm,0.7s,mb5.2						
CTAO				LR	LR		
	comp=Z,540nm,19.0s,MS4.3						
PMG	Port Moresby	40.35	300	P	P	06 28 01.3	+4.1
	comp=Z,10nm,0.7s,mb4.7,baz=299,slow=22,SNR=2.6						
PMG				LR	LR	06 41 34.0	
	comp=Z,350nm,20.1s,MS4.2,baz=191,slow=32						
ASAR	Alice Springs	42.91	271	P	P	06 28 18.4	+0.2
	comp=Z,14nm,0.7s,mb4.8,baz=109,slow=8.1,SNR=31						
ASAR				pP	pP	06 28 29.4	-0.9
	comp=Z,19nm,0.8s,baz=113,slow=7.3,SNR=10						
ASAR				PcP	PcP	06 30 08.1	-0.9
	comp=Z,6.3nm,0.7s,baz=113,slow=3.7,SNR=5.2						
ASAR				pPcP		06 30 19.9	
	comp=Z,6.0nm,0.6s,baz=126,slow=4.0,SNR=5.8						
ASAR				S	S	06 34 41.2	+1.7
	comp=Z,1.6nm,1.0s,baz=95,slow=11,SNR=4.2						
ASPA	Alice Springs	42.91	271	eP	P	06 28 18.7	+0.5
ASPA				eS	S	06 34 42.6	+3.0
VNDA	Vanda	44.09	186	P	P	06 28 31.8	+4.7
	comp=Z,1.6nm,0.8s,baz=29,slow=8.7,SNR=3.3						
VNDA	Vanda	44.09	186	eP	P	06 28 31.7	+4.6
	comp=Z,6.4nm,1.0s,mb4.3						
VNDA				LR	LR		
	comp=Z,955nm,21.0s,MS4.7						
WRAB	Tennant Creek	44.25	276	eP	P	06 28 28.8	-0.3
	comp=Z,64nm,0.9s,mb5.3						
WRAB				LR	LR		
	comp=Z,290nm,20.0s,MS4.2						
WRA	Warramunga Arr	44.26	276	P	P	06 28 29.1	0.0
	comp=Z,39nm,1.1s,mb5.0,baz=117,slow=7.9,SNR=53						
WRA				pP	pP	06 28 39.7	-1.6
	comp=Z,22nm,0.6s,baz=118,slow=7.5,SNR=13						
WRA				S	S	06 34 57.2	-2.0
	comp=Z,2.6nm,1.0s,baz=116,slow=15,SNR=4.8						
KAKA	Kakadu	49.61	283	eP	P	06 29 09.5	-1.7
	comp=Z,14nm,0.6s,mb5.2						
CASY	Casey	51.55	209	P	P	06 29 27.1	+1.8
	comp=Z,20nm,0.7s,mb5.2						
FITZ	Fitzroy Crossi	52.33	273	eP	P	06 29 31.2	-0.5
	comp=Z,22nm,0.7s,mb5.2						
NWAO	Narrogin (SRO)	52.94	252	P	P	06 29 36.4	+0.2
	comp=Z,8.2nm,0.6s,mb4.8,baz=114,slow=8.2,SNR=7.9						
NWAO				pP	pP	06 29 46.3	-2.3
	comp=Z,16nm,0.9s,baz=135,slow=2.6,SNR=4.3						
NWAO	Narrogin (SRO)	52.94	252	eP	P	06 29 36.2	0.0
	comp=Z,19nm,0.9s,mb5.0						
KLBR	Kellerberrin	53.01	254	⇑iP	P	06 29 36.8	+0.1
	comp=Z,555nm,0.9s						
MUN	Mundaring	54.09	253	eP	P	06 29 45.1	+0.4
	comp=Z,15nm,0.7s,mb5.0						
QSPA	South Pole Qui	55.70	180	⇓iP	P	06 29 59.9	+4.2
	comp=Z,42nm,0.8s,mb5.5						
QSPA				LR	LR		
	comp=Z,657nm,20.0s,MS4.7						
MBWA	Marble Bar	55.74	266	eP	P	06 29 56.1	-0.7
	comp=Z,14nm,1.1s,mb4.9						
GUMO	Guam	59.28	317	PFAKE		06 30 30.0	+8.2
GUMO				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
CBIJ	Chichi jima	71.79	323	P	P	06 31 40.4	-1.5
	comp=Z,42nm,0.6s,mb5.5,baz=284,slow=17,SNR=2.8						
USHA	Ushuaia	72.69	145	P	P	06 31 49.7	+3.0
	comp=Z,12nm,0.9s,mb4.8,baz=282,slow=2.0,SNR=2.8						
SYO	Syowa Base	73.18	193	⇓P	P	06 31 51.5	+2.2
SYO	Syowa Base	73.18	193	⇓PcP	PcP	06 32 06.1	+0.1
SNAA	Sanae	74.15	178	⇓iP	P	06 31 57.5	+2.6
SNAA	Sanae	74.15	178	P	P	06 31 56.9	+2.0
	comp=Z,6.5nm,1.1s,mb4.5,baz=188,slow=6.4,SNR=8.0						
VNA3	Neumayer Olymp	74.31	176	⇓iPdif	P	06 31 58.3	+2.4
VNA3				e	pP	06 32 10.0	+1.2
VNA2	Neumayer--Watz	74.74	177	⇓iP	P	06 32 01.3	+2.9
VNA2	Neumayer--Watz	74.74	177	e	P	06 32 12.9	+15
PLCA	Paso Flores	79.88	133	P	P	06 32 29.0	+1.4
	comp=Z,4.3nm,0.8s,mb4.5,baz=215,slow=6.5,SNR=4.2						
PLCA	Paso Flores	79.88	133	P	P	06 32 29.0	+1.4
PLCA				LR	LR		
	comp=Z,676nm,19.0s,MS5.0						
MAJO	Matsushiro	81.47	326	P	P	06 32 31.4	-4.7
	comp=Z,27nm,1.4s,mb5.0						
ASAJ	Asahikawa	85.94	333	P	P	06 32 59.0	+0.5
	comp=Z,18nm,1.0s,mb5.3,baz=154,slow=7.6,SNR=4.7						
SSE	Sheshan	86.65	311	eP	P	06 33 03.6	+1.4
SSE				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,37nm,2.6s,mb5.2						
SSE	Sheshan	86.65	311	eP	P	06 33 03.6	+1.4
	comp=Z,9.0nm,0.6s,mb5.2						
KS15	Wonju Array Si	87.33	320	eP	P	06 33 05.5	+0.1
YSS	Yuzh-Sakhalins	88.30	334	d iP	P	06 33 10.2	+0.4
YSS	Yuzh-Sakhalins	88.30	334	eP	P	06 33 10.0	+0.2
	comp=Z,17nm,0.6s,mb5.5						
NJ2	Nanjing	88.76	311	eP	P	06 33 12.9	+0.6
NJ2				AP	pP	06 33 27.8	+2.2
NJ2				XP	sP	06 33 32.9	+2.7
NJ2				PP	PP	06 36 46.0	+2.0
NJ2				S	S	06 43 57.0	+3.0
NJ2				XS		06 44 19.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,630nm,6.1s						
NJ2				LR	LR		
	comp=Z,510nm,26.4s,MS4.8						
CMB	Columbia Colle	89.84	42	eP	P	06 33 16.5	-0.8
	comp=Z,29nm,1.2s,mb5.5						
CMB				e	pP	06 33 28.1	-2.5
OHCM	Honcut	90.18	40	eP	P	06 33 17.6	-1.3
MTUM	Tungsten Hills	90.38	43	eP	P	06 33 19.5	-0.3
WHN	Wuhan	90.66	307	P	P	06 33 21.5	+0.2
LDFC	Landfair	90.84	47	eP	P	06 33 22.5	+0.4
KBO	Bosley Butte	90.87	37	eP	P	06 33 20.1	-1.9
YBH	Yreka Blue Hor	91.28	38	P	P	06 33 23.0	-1.0
	comp=Z,8.5nm,1.1s,mb5.0,baz=199,slow=5.7,SNR=10						
NEN	Nelson	91.39	47	eP	P	06 33 24.0	-0.6
NEN				e	pP	06 33 36.3	-1.6
TPH	Tonopah	91.64	44	eP	P	06 33 25.0	-0.7
	comp=Z,20nm,1.0s,mb5.4						
TUC	Tucson	91.72	51	eP	P	06 33 26.4	+0.1
	comp=Z,12nm,1.1s,mb5.1						
TUC				e	pP	06 33 38.0	-1.6
MDJ	Mudanjiang	91.86	326	P	P	06 33 26.8	+0.3
MDJ				AMB	AMB		
	comp=Z,17nm,1.3s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,60nm,3.4s						
MDJ	Mudanjiang	91.86	326	eP	P	06 33 26.3	-0.2
	comp=Z,22nm,1.1s,mb5.4						
MDJ				e		06 33 36.5	
LVC	Limon Verde	92.11	119	P	P	06 33 30.2	+2.0
	comp=Z,3.4nm,0.8s,mb4.7,baz=291,slow=6.4,SNR=4.2						
TIA	Tai'an	92.60	313	⇑P	P	06 33 30.8	+0.6
CN2	Changchun	93.26	323	eP	P	06 33 36.0	+3.0
CN2				eS	S	06 44 38.0	+4.1
CN2				LR	LR		
	comp=Z,240nm,17.0s,MS4.7						
ENH	Enshi	93.75	304	eP	P	06 33 35.9	+0.3
	comp=Z,39nm,1.0s,mb5.8						
ENH				e	pP	06 33 47.5	-1.4
WVOR	Wild Horse Val	93.89	40	eP	P	06 33 34.8	-1.0
	comp=Z,13nm,1.1s,mb5.3						
WVOR				e	pP	06 33 46.3	-2.9
CMAR	Chiang Mai Arr	94.59	289	i P	P	06 33 40.8	+1.2
CMAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMAR	Chiang Mai Arr	94.59	289	P	P	06 33 40.7	+1.1
	comp=Z,5.1nm,1.0s,mb4.9,baz=145,slow=3.2,SNR=14						
CMAR				PP	PP	06 37 30.4	+0.1
	comp=Z,1.2nm,0.3s,baz=134,slow=8.0,SNR=5.7						
TXAR	Lajitas Array	94.66	58	P	P	06 33 38.6	-1.1
	comp=Z,1.4nm,0.9s,mb4.4,baz=190,slow=7.6,SNR=6.4						
TXAR				PKKPbc		06 50 40.5	
	comp=Z,0.6nm,0.8s,baz=108,slow=4.0,SNR=4.9						
TXAR	Lajitas Array	94.66	58	P	P	06 33 38.6	-1.1
TXAR				PKKPbc		06 50 40.5	
BJT	Baijiatuau	95.67	315	eP	P	06 33 43.8	-0.2
	comp=Z,13nm,0.9s,mb5.4						
BJT				e	pP	06 33 56.0	-1.4
BJI	Beijing	95.68	315	P	P	06 33 43.5	-0.6
BJI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb5.2						
BJI	Beijing	95.68	315	P	P	06 33 43.5	-0.6
	comp=Z,8.0nm,0.8s,mb5.2						
ANMO	Albuquerque	96.18	52	i P	P	06 33 45.9	-0.6
ANMO	Albuquerque	96.18	52	P	P	06 33 45.7	-0.7
	comp=Z,2.0nm,1.0s,mb4.5,baz=195,slow=6.2,SNR=6.3						
ANMO	Albuquerque	96.18	52	eP	P	06 33 45.8	-0.7
	comp=Z,2.9nm,1.1s,mb4.6						
ANMO				LR	LR		
	comp=Z,905nm,22.0s,MS5.2						
LPAZ	La Paz	96.61	115	PFAKE		06 34 00.0	+11
LPAZ				LR	LR		
	comp=Z,533nm,20.0s,MS5.0						
MA2	Magadan	97.12	345	PFAKE		06 34 00.0	+10
MA2				LR	LR		
	comp=Z,123nm,19.0s,MS4.4						
SDCO	Great Sand Dun	98.50	50	P	P	06 33 55.9	-1.1
	comp=Z,5.6nm,1.4s,mb4.9						
MCMT	McKenzie Canyo	98.61	41	eP	P	06 33 56.5	-0.7
PDAR	Pinedale Array	99.13	44	P	P	06 33 59.4	-0.2
	comp=Z,0.4nm,0.8s,mb4.0,baz=231,slow=5.8,SNR=3.5						
PDAR				PKKPbc		06 50 26.8	
	comp=Z,0.5nm,0.9s,baz=45,slow=4.2,SNR=4.4						
LZH	Lanzhou	100.99	306	eP	P	06 34 09.0	+0.7
LZH				AP		06 34 22.8	
LZH				XP		06 34 28.1	
LZH				ePP	PP	06 38 20.5	+0.7
LZH				SKS	SKS	06 44 43.1	+0.8
LZH				eS	S	06 45 40.5	+1.0
LZH				XS		06 46 02.8	
LZH				eSS	SS	06 52 43.5	+0.6
LZH				AMB	AMB		
	comp=Z,25nm,1.5s						
LZH				LR	LR		
	comp=N,445nm,15.2s						
LZH				LR	LR		
	comp=Z,729nm,18.3s,MS5.2						
LZH	Lanzhou	100.99	306	eP	P	06 34 09.0	+0.7
	comp=Z,25nm,1.5s						
LZH				pP		06 34 22.7	
LZH				sP		06 34 28.1	
LZH				ePP	PP	06 38 20.5	+0.7
LZH				SKS	SKS	06 44 43.1	+0.8
LZH				eS	S	06 45 40.5	+1.0
LZH				sS		06 46 02.8	
LZH				eSS	SS	06 52 43.5	+0.6
LZH				LR	LR		
	comp=Z,730nm,18.3s,MS5.2						
COLA	College	101.78	13	PFAKE		06 34 20.0	+8.9
COLA				LR	LR		
	comp=Z,265nm,19.0s,MS4.8						
BILL	Bilibino	102.82	354	PFAKE		06 34 30.0	+14
BILL				LR	LR		
	comp=Z,296nm,19.0s,MS4.8						
PALK	Pallekele	103.25	270	PFAKE		06 34 30.0	+11
PALK				LR	LR		
	comp=Z,60nm,22.0s,MS4.1						
LSA	Lhasa	106.62	295	PFAKE		06 39 00.0	
LSA				LR	LR		
	comp=Z,193nm,19.0s,MS4.7						
INK	Inuvik	107.68	16	PKiKP		06 38 43.3	
	comp=Z,0.6nm,0.8s,baz=252,slow=9.7,SNR=4.3						
INK				pPKiKP		06 38 55.0	
	comp=Z,0.8nm,0.9s,baz=340,slow=15,SNR=1.9						
YKA	Yellowknife Ar	109.12	26	PKiKP		06 38 44.8	
	comp=Z,0.8nm,1.1s,baz=238,slow=1.4,SNR=5.0						
YKA				pPKiKP		06 38 57.1	
	comp=Z,0.3nm,0.7s,baz=253,slow=1.5,SNR=4.4						
YKA				PKKPbc		06 49 55.8	
	comp=Z,1.0nm,0.9s,baz=39,slow=3.3,SNR=17						
YKA	Yellowknife Ar	109.12	26	PKPdf		06 38 44.8	
YKA				PKKPbc		06 49 55.9	
SDV	Santo Domingo	109.41	92	PFAKE		06 39 00.0	
SDV				LR	LR		
	comp=Z,629nm,20.0s,MS5.2						
LBTB	Lobatse	116.73	204	PFAKE		06 39 20.0	+18
LBTB				LR	LR		
	comp=Z,560nm,20.0s,MS5.2						
ZAL	Zalesovo	120.91	317	PKP	PKPdf	06 39 10.4	+1.1
	comp=Z,0.7nm,0.3s,baz=201,slow=3.7,SNR=3.8						
RES	Resolute Bay	121.11	18	ePKPdf	PKPdf	06 39 07.3	-2.0
RES				e		06 39 19.7	
KSH	Kashi	122.10	299	ePKP	PKPdf	06 39 15.0	+3.0
KSH				eXPKP		06 39 30.5	
KSH				ePKS	PKS	06 42 50.1	+2.3
KSH				ePPP	PPP	06 43 30.0	+2.3
KSH				eSKS	SKS	06 46 23.5	+16
KSH				eSKKS		06 47 42.4	
KSH				eSS	SS	06 57 26.0	+2.0
KSH				PP	PP		
	comp=Z,110nm,5.8s						
KURK	Kurchatov	123.68	312	i PKIKP	PKPdf	06 39 15.3	+0.6
KURK	Kurchatov	123.68	312	ePKPdf	PKPdf	06 39 15.1	+0.3
KURK				LR	LR		
	comp=Z,56nm,19.0s,MS4.2						
TSUM	Tsumeb	124.61	198	PKP	PKPdf	06 39 19.7	+2.4
	comp=Z,1.4nm,0.7s,baz=148,slow=5.3,SNR=6.8						
TSUM				pPKP		06 39 32.0	
	comp=Z,1.8nm,0.6s,baz=156,slow=4.0,SNR=5.0						
TSUM	Tsumeb	124.61	198	ePKPdf	PKPdf	06 39 20.4	+3.1
BVAR	Borovoye Array	129.13	314	PKP	PKPdf	06 39 25.6	+0.5
	comp=Z,1.2nm,0.5s,baz=45,slow=4.1,SNR=7.1						
SCHQ	Schefferville	129.27	44	PKP	PKPdf	06 39 25.3	0.0
	comp=Z,5.2nm,1.1s,baz=332,slow=4.7,SNR=3.2						
KMBO	Kilima Mbogo	131.50	231	PKP	PKPdf	06 39 35.2	+4.6
	comp=Z,1.6nm,0.9s,baz=252,slow=23,SNR=4.2						
KMBO	Kilima Mbogo	131.50	231	PKP	PKPdf	06 39 35.2	+4.6
KMBO				LR	LR		
	comp=Z,199nm,20.0s,MS4.8						
SVE	Sverdlovsk	134.87	318	ePKIKP	PKPdf	06 39 52.5	+17

SVE				pmax	pmax		
	comp=Z,40nm,1.8s						
ARCES	ARCESS Array B	142.47	347	PKhKP		06 39 41.7	
	comp=Z,6.3nm,0.9s,baz=27,slow=5.4,SNR=5.8						
BHD	Baghdad	144.84	280	*e*PKP	PKPdf	06 39 54.0	-0.2
GNI	Garni	145.64	292	*i* PKP2	PKPab	06 39 58.1	0.0
GNI				MLR	MLR		
	comp=Z,100nm,17.0s						
GNI	Garni	145.64	292	PKPbc	PKPbc	06 39 58.0	+1.9
	baz=177,slow=5.1						
GNI	Garni	145.64	292	*e*PKPdf	PKPdf	06 39 58.2	+2.8
TI2	Plekhanov	145.72	295	*i* PKIKP	PKPdf	06 39 59.6	+4.1
TI2				pmax	pmax		
	comp=Z,40nm,0.8s						
JOF	Joensuu	146.07	336	*e*p	PKPdf	06 39 56.5	+1.1
	comp=Z,34nm,0.9s						
JOF	Joensuu	146.07	336	*e*PKIKP	PKPdf	06 39 56.5	+1.1
JOF				pmax	pmax		
	comp=Z,34nm,0.9s						
TVAN	Van	146.53	289	*i* P	PKPdf	06 40 01.2	+4.2
GOF	Gofitskoye	146.91	301	⇑*i*PKP2	PKPab	06 40 02.0	-0.9
GOF				pmax	pmax		
	comp=Z,70nm,1.5s						
KIV	Kislovodsk	147.23	299	*i* PKIKP	PKPdf	06 40 00.3	+2.4
KIV				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.6						
KIV	Kislovodsk	147.23	299	*e*PKPdf	PKPdf	06 40 00.3	+2.4
MOS	Moscow	147.49	322	*e*PKIKP	PKPdf	06 40 01.4	+3.4
MOS				pmax	pmax		
	comp=Z,79nm,1.3s						
BEST	Besiri	148.13	288	*i* P	PKPdf	06 40 05.3	+5.7
ERZM	Erzurum	148.21	292	*i* P	PKPdf	06 40 06.2	+6.5
KAF	Kangasniemi	148.26	338	*e*p	PKPdf	06 40 03.0	+4.0
	comp=Z,14nm,0.8s,baz=42,slow=2.6						
KAF	Kangasniemi	148.26	338	*e*PKIKP	PKPdf	06 40 03.0	+4.0
KAF				pmax	pmax		
	comp=Z,15nm,0.8s						
OBN	Obninsk	148.31	321	*d i*PKIKP	PKPdf	06 40 03.3	+4.0
OBN				*e*		06 47 11.6	
OBN				pmax	pmax		
	comp=Z,47nm,1.4s						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.9						
FINES	FINESS Array B	148.84	338	*i* PKIKP	PKPdf	06 40 04.9	+4.9
FINES				pmax	pmax		
	comp=Z,14nm,0.8s						
FINES	FINESS Array B	148.84	338	PKPbc	PKPdf	06 40 04.1	+4.1
	comp=Z,14nm,0.8s,baz=90,slow=5.7,SNR=37						
FINES				pPKPbc		06 40 15.0	
	comp=Z,42nm,1.1s,baz=49,slow=3.8,SNR=6.6						
ELZG	Elazig	149.98	289	*i* P	PKPdf	06 40 10.8	+8.2
MALT	Malatya	150.41	288	*e*PKPbc	PKPdf	06 40 11.0	+7.8
ASF	Jabal al Asfar	150.69	276	PKPbc	PKPdf	06 40 12.9	+9.1
	comp=Z,22nm,0.8s,baz=8.2,slow=2.8,SNR=22						
ASF				pPKPbc		06 40 22.2	
	comp=Z,65nm,1.2s,baz=352,slow=2.2,SNR=7.4						
GZT	Gaziantep	151.01	286	*i* P	PKPdf	06 40 12.9	+8.8
KAHT	Ahir Dag	151.58	287	*i* P	PKPdf	06 40 14.2	+9.2
EIL	Elat	151.61	270	PKPbc	PKPdf	06 40 14.7	+9.4
	comp=Z,29nm,0.8s,baz=168,slow=0.2,SNR=16						
EIL				pPKPbc		06 40 25.3	
	comp=Z,38nm,0.8s,baz=34,slow=2.1,SNR=10.0						
EIL	Elat	151.61	270	*e*PKPbc	PKPdf	06 40 14.7	+9.5
EIL				*e*		06 40 25.0	
DBIC	Dimbokro	151.70	166	PKPbc	PKPdf	06 40 14.8	+8.9
	comp=Z,13nm,0.9s,baz=157,slow=2.4,SNR=11						
DBIC				pPKPbc		06 40 24.6	
	comp=Z,16nm,0.8s,baz=166,slow=4.7,SNR=9.3						
DBIC	Dimbokro	151.70	166	*e*PKPbc	PKPdf	06 40 14.4	+8.5
DBIC				*e*		06 40 24.4	
COBT	Iskenderun	151.98	284	*i* P	PKPdf	06 40 10.6	+5.0
NB2	NORSAR Subarra	152.69	350	PKP	PKPdf	06 40 14.0	+8.2
	comp=Z,17nm,1.4s,baz=17,slow=2.6						
NB2	NORSAR Subarra	152.69	350	⇑PKPab	PKPdf	06 40 14.0	+8.2
NOA	NORSAR Array B	152.69	350	PKPbc	PKPdf	06 40 13.9	+8.1
	comp=Z,5.2nm,0.8s,baz=14,slow=4.1,SNR=11						
NOA				pPKPbc		06 40 23.7	
	comp=Z,5.0nm,0.7s,baz=14,slow=4.1,SNR=8.0						
BOYT	Boyabat	153.11	295	*i* P	PKPdf	06 40 17.7	+11
HFS	Hagfors	153.14	347	PKPbc	PKPdf	06 40 14.4	+8.0
	comp=Z,6.8nm,0.8s,baz=108,slow=4.7,SNR=7.1						
HFS				pPKPbc		06 40 25.9	
	comp=Z,7.2nm,0.7s,baz=90,slow=4.4,SNR=6.3						
BRTR	Keskin Array B	154.16	291	PKPbc	PKPdf	06 40 18.9	+10
	comp=Z,2.4nm,0.7s,baz=153,slow=2.8,SNR=12						
BRTR				pPKPbc		06 40 28.8	
	comp=Z,6.0nm,1.0s,baz=154,slow=5.3,SNR=9.0						
AKASG	Malin Array Be	154.30	318	PKPbc	PKPdf	06 40 17.8	+9.4
	comp=Z,4.1nm,0.7s,baz=55,slow=2.3,SNR=11						
AKASG				PKPab	PKPab	06 40 29.6	-3.6
	comp=Z,7.1nm,0.6s,baz=53,slow=3.2,SNR=19						
HENT	Hendek	156.18	294	*i* P	PKPab	06 40 36.5	-5.0
CFR	Carcaliu	157.22	306	⇓P	PKPab	06 40 45.6	-0.2
VRI	Vrincioaia	157.90	309	⇑P	PKPab	06 40 48.6	-0.2
BURAR	Bucovina Array	158.09	314	⇑P	PKPab	06 40 49.0	-0.5
KWP	Kalwaria	158.40	321	*e*PKPab	PKPab	06 40 49.5	-1.3
MLR	Muntele Rosu	158.55	308	PKPab	PKPab	06 40 51.2	-0.3
	comp=Z,11nm,0.9s,baz=44,slow=3.8,SNR=14						
MLR	Muntele Rosu	158.55	308	⇑P	PKPab	06 40 51.0	-0.6
DRGR		159.98	314	⇓P	PKPab	06 40 57.4	-0.3
OKC	Ostrava-Krasne	160.48	327	*e*PKPab	PKPab	06 40 58.3	-1.4
DPC	Dobruska-Polom	160.88	331	*e*PKPab	PKPab	06 41 00.2	-1.2
UPC	Upice	160.88	331	*e*PKPab	PKPab	06 40 58.1	-3.3
IDI	Anoyia	161.06	279	PKPab	PKPab	06 41 03.1	+0.4
	comp=Z,9.8nm,0.8s,baz=3.5,slow=8.5,SNR=3.6						
IDI				pPKPab		06 41 13.3	
	comp=Z,13nm,0.8s,baz=324,slow=2.4,SNR=3.7						
CLL	Collm	161.28	338	*i* PKP2	PKPab	06 41 01.3	-1.9
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
CLL	Collm	161.28	338	⇑*i*PKP2	PKPab	06 41 01.3	-1.9
CLL				*i* *PPKP2		06 41 11.4	
BRG	Berggiesshubel	161.35	335	*e*PKP2	PKPab	06 41 01.9	-1.6
BRG				pmax	pmax		
	comp=Z,12nm,1.1s						
VRAC	Vranov	161.56	328	PKPab	PKPab	06 41 02.6	-1.8
	comp=Z,1.6nm,0.4s,baz=344,slow=10,SNR=4.0						
PRU	Pruhonice	161.86	333	*e*PKPab	PKPab	06 41 03.5	-2.3
MOX	Moxa	162.29	339	*e*PKIKP	PKPdf	06 40 12.4	-5.4
MOX	Moxa	162.29	339	*i* P	PKPdf	06 40 12.4	-5.4
MOX				PKP2	PKPab	06 41 04.0	-3.6
NKC	Novy Kostel	162.39	337	*e*PKPab	PKPab	06 41 06.6	-1.4
KHC	Kasperske Hory	162.93	333	*e*PKPab	PKPab	06 41 07.4	-3.0
GERES	GERESS Array B	163.11	332	PKPab	PKPab	06 41 09.3	-1.9
	comp=Z,1.3nm,0.7s,baz=34,slow=4.8,SNR=22						
GERES				pPKPab		06 41 20.7	
	comp=Z,1.5nm,0.9s,baz=63,slow=3.0,SNR=6.1						
GRF	Grafenberg Arr	163.25	338	*e*PKP2	PKPab	06 41 10.5	-1.3
GRF				pmax	pmax		
	comp=Z,12nm,1.1s						

IDC 17 06:20:25.8±5.8**, 5.84S**×**149.41E, h97**^{km}±42^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.7**/12**, mbtmp4.1**/4**, Error ellipse: s-maj=98.3km s-min=31.6km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.19	212	P	P	06 21 25.7	-3.0
	7.5nm,0.3s,baz=40,slow=10,SNR=11						
PMG				S	S	06 22 17.1	+0.3
	4.9nm,0.3s,baz=25,slow=19,SNR=4.3						
WRA	Warramunga Arr	20.28	225	P	P	06 24 53.8	-2.1
	6.3nm,0.4s,baz=50,slow=10.0,SNR=13						
ASAR	Alice Springs	23.17	219	P	P	06 25 23.6	-1.0
	4.5nm,0.9s,baz=50,slow=8.7,SNR=8.8						
SONM	Songino Array	65.46	330	P	P	06 30 58.9	-1.7
	0.8nm,0.4s,baz=156,slow=5.4,SNR=3.0						

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*MOS **17** 07:06:29.9±0.6, 45.65N×26.60E, h116^{km}, mb4.0/1, Error ellipse: s-maj=12.7km s-min=6.8km az=80.9*
*BUC **17** 07:06:30.9±0.7, 45.57N×26.56E, h113^{km}±8^{km}, MD4.1/4, Error ellipse: s-maj=6.2km s-min=4.7km az=24.0*
*CSEM **17** 07:06:30.6±0.1, 45.60N×26.51E, h107^{km}±1^{km}, MD4.1/4, Error ellipse: s-maj=1.6km s-min=1.4km az=111.0*
*NEIC **17** 07:06:31.9, 45.57N×26.59E, h100^{km}, After BUC.*
*SOF **17** 07:06:33.5, 45.46N×26.44E, h75^{km}, MD2.9*
ISC 17 07:06:30.6±0.5**, 45.60N**±0.03×**26.61E**±0.03**, h113**^{km}±4^{km}**, n61, σ0^{s}97**/93**, 17C-12D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRI	Vrincioaia	0.28	17	⇑P	P	07 06 47.1	+0.4
VRI				S	S	07 06 58.3	-0.5
VRI	Vrincioaia	0.28	17	P	P	07 06 47.5	+0.8
VRI	Vrincioaia	0.28	17	⇑*i*P	P	07 06 47.3	+0.6
VRI				*i* S	S	07 06 58.3	-0.5
BRD	Bordesti	0.30	100	P	S	07 06 57.8	-1.1
BRD	Bordesti	0.30	100	⇓*i*P	P	07 06 48.5	+1.7
BRD				*i* S	S	07 07 01.4	+2.5
MLR	Muntele Rosu	0.48	257	⇓P	P	07 06 48.2	+0.4
MLR				S	S	07 07 00.1	-0.6
MLR	Muntele Rosu	0.48	257	⇑P	P	07 06 48.2	+0.4
MLR				S	S	07 07 00.1	-0.6
MLR	Muntele Rosu	0.48	257	⇑*i*P	P	07 06 48.2	+0.4
MLR				*i* S	S	07 07 00.1	-0.6
ISR	Istrita	0.49	186	⇑P	P	07 06 48.6	+0.8
ISR				S	S	07 06 58.9	-1.8
ISR	Istrita	0.49	186	P	P	07 06 48.6	+0.8
ISR	Istrita	0.49	186	⇓*i*P	P	07 06 48.8	+1.0
ISR				*i* S	S	07 07 02.0	+1.3
ISR	Istrita	0.49	186	P	P	07 06 48.6	+0.8
ISR				*i* S	S	07 07 02.0	+1.3
SECR		0.69	214	⇑*i*P	P	07 06 50.1	+0.9
SECR				*i* S	S	07 07 03.8	+0.5
FULR		0.73	190	⇓*i*P	P	07 06 50.4	+0.8
FULR				*i* S	S	07 07 04.7	+0.8
OZUR		0.76	311	⇑*i*P	P	07 06 49.7	-0.2
OZUR		0.76	311	S	S	07 06 59.1	-5.3
SNX	Sinaia	0.81	253	⇑P	P	07 06 51.0	+0.6
SNX				S	S	07 07 03.0	-2.3
SNX	Sinaia	0.81	253	P	P	07 06 51.1	+0.7
SNX	Sinaia	0.81	253	⇑*i*P	P	07 06 51.1	+0.7
SNX				*i* S	S	07 07 04.9	-0.4
SULR		0.96	195	⇓*i*P	P	07 06 52.5	+0.6
SULR		0.96	195	S	S	07 07 08.4	+0.6
AMRR		1.12	153	⇓*i*P	P	07 06 54.3	+0.7
AMRR				*i* S	S	07 07 11.0	+0.2
CFR	Carcaliu	1.15	111	⇓P	P	07 06 54.2	+0.2
CFR				S	S	07 07 10.5	-1.0
CFR	Carcaliu	1.15	111	P	P	07 06 54.3	+0.3
CFR	Carcaliu	1.15	111	⇓*i*P	P	07 06 54.3	+0.3
CFR				*i* S	S	07 07 10.5	-1.0
MTUR	Matau	1.16	251	P	P	07 06 54.5	+0.5
MTUR	Matau	1.16	251	⇑*i*P	P	07 06 54.3	+0.3
MTUR				*i* S	S	07 07 11.6	0.0
BUC	Bucharest	1.25	197	*i* S	S	07 07 14.1	+0.7
HARR	Harsova	1.30	134	P	P	07 06 56.3	+0.5
HARR	Harsova	1.30	134	⇓*i*P	P	07 06 56.3	+0.6
HARR				*i* S	S	07 07 13.9	-0.8
BUC1	Bucharest	1.32	199	P	S	07 07 14.0	-1.0
BUC1	Bucharest	1.32	199	⇑*i*P	P	07 06 55.7	-0.2
BUC1				*i* S	S	07 07 14.1	-0.9
TLCR		1.61	104	⇑*i*P	P	07 07 00.0	+0.7
TLCR				*i* S	S	07 07 21.1	+0.2
TIRR	Tirgusor	1.71	131	⇑P	P	07 07 01.4	+0.8
TIRR				S	S	07 07 22.5	-0.6
TIRR	Tirgusor	1.71	131	P	P	07 07 01.1	+0.5
TIRR	Tirgusor	1.71	131	⇓*i*P	P	07 07 01.2	+0.6
TIRR				*i* S	S	07 07 22.5	-0.6
TIRR	Tirgusor	1.71	131	P	P	07 07 01.1	+0.5
IAS	Iasi	1.72	22	⇑*i*P	P	07 07 01.1	+0.4
IAS				S	S	07 07 22.4	-0.9
KIS	Kishinev	2.07	47	*e*P	P	07 07 03.0	-2.1
KIS				*e*S	S	07 07 29.0	-2.0
KIS				smax			
	comp=N,90nm,0.7s						
KIS				smax			
	comp=E,460nm,0.7s						
KIS	Kishinev	2.07	47	*e*P	P	07 07 03.0	-2.1
KIS				*e*S	S	07 07 29.0	-2.0
	comp=E,490nm,0.7s						
ZIMR		2.14	205	*i* S	S	07 07 30.7	-2.0
PSN	Preselentsi	2.22	149	*i* P	P	07 07 08.5	+1.3
PSN				S	S	07 07 33.5	-1.1
BURAR	Bucovina Array	2.23	335	P	P	07 07 08.6	+1.3
BURAR	Bucovina Array	2.23	335	⇓*i*P	P	07 07 08.6	+1.4
BURAR				*i* S	S	07 07 35.1	+0.3
CRAR	CRAIOVA	2.37	238	⇑*i*P	P	07 07 08.1	-1.0
CRAR				*i* S	S	07 07 36.0	-2.1
SZH	Strazhica	2.39	192	*i* P	P	07 07 09.0	-0.3
SZH				S	S	07 07 34.5	-4.0
PRD	Provadia	2.47	167	*i* P	P	07 07 11.3	+0.9
PVL	Pavlikeni	2.56	201	*i* P	P	07 07 13.0	+1.4
PVL				S	S	07 07 42.0	-0.5
DRGR		2.96	295	⇑*i*P	P	07 07 16.7	-0.4
DRGR				*i* S	S	07 07 53.5	+1.3
JMB	Yambol	3.14	180	*i* P	P	07 07 18.7	-0.7
BZS	Buzias	3.51	272	⇓*i*P	P	07 07 23.2	-1.3
BZS				*i* S	S	07 08 05.1	-0.3
PGB	Panagyurishte	3.52	211	*i* P	P	07 07 24.5	-0.2
BOLS	Boljevac	3.76	244	*i* Pg	Px	07 07 57.8	
BOLS				Sg	S	07 08 04.8	-6.7
BOLS	Boljevac	3.76	244	Sg	S	07 08 04.8	-6.8
VTS	Vitosha	3.88	220	P	P	07 07 29.0	-0.5
SVIS	Svilajnac	4.04	253	⇑*i*Pg	Px	07 08 01.3	
SVIS				Sg	S	07 08 12.6	-5.9
KKB	Krupnik	4.53	216	P	P	07 07 40.0	+1.7
MMB	Musomiste	4.53	209	P	P	07 07 38.0	-0.3
PSZ	Piszkesteto	5.17	299	P	P	07 07 46.2	-0.7
GNI	Garni	14.36	106	*e*P	P	07 09 49.0	-0.4
GNI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GNI	Garni	14.36	106	*e*P	P	07 09 49.0	-0.4
	comp=Z,5.6nm,0.9s						

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*NEIC **17** 07:15:01.2, 35.02S×70.60W, h4^{km}, ML2.7(GUC), After GUC.*
GUC 17 07:15:01.2±0.7**, 35.02S**×**70.60W, h4**^{km}±2^{km}**, MD3.7, ML2.7, 1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.53	320	⇓*i*P	Pg	07 15 12.2	+0.4
SFDO				*i* S	Sg	07 15 20.3	+1.3
CACH	El Canelo	0.90	360	*e*P	Pb	07 15 17.9	-1.2
CACH				*i* S	Sb	07 15 30.9	-0.4
LNCH	Linares	1.16	225	*e*P	Pb	07 15 22.4	-1.1
LNCH				*i* S	Sb	07 15 39.0	+0.3
LNCH				AMP		07 15 40.4	
	comp=E,496nm,0.6s						
LMEL	Las Melosas	1.22	16	*e*P	Pb	07 15 23.5	-0.9
LMEL				*i* S	Sb	07 15 40.4	0.0
LMEL				AMP		07 15 41.5	
	comp=N,182nm,0.1s						
TACH	Talagante	1.40	348	*e*P	Pb	07 15 26.3	-1.2
TACH				*i* S	Sb	07 15 45.7	+0.2
PCH	Pirque	1.40	3	*e*P	Pb	07 15 26.9	-0.7
PCH				*i* S	Sb	07 15 46.4	+0.7
CLCH	Cerro Calan	1.62	2	*e*P	Pn	07 15 30.5	-0.3
CLCH				*i* S	Sb	07 15 52.3	+0.2
CLCH				AMP		07 15 55.1	
	comp=E,243nm,0.4s						
FCH	Farellones	1.71	9	*e*P	Pn	07 15 32.2	+0.2
FCH				*i* S	Sn	07 15 55.4	+0.8
FCH				AMP		07 15 56.5	
	comp=E,128nm,0.3s						
LCCH	Las Cruces	1.74	332	*e*P	Pn	07 15 32.8	+0.4
LCCH				*i* S	Sn	07 15 56.1	+0.8
JACH	Jahuel	2.33	0	*e*P	Pn	07 15 41.8	+0.8
JACH				*i* S	Sn	07 16 12.1	+1.6

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*IDC **17** 07:19:02.0±2.6, 13.69N×88.52W, mb3.3/4, mb1 3.7/6, mb1mx3.5/21, mbtmp3.4/6, ML3.6/2, Error ellipse: s-maj=112.4km s-min=21.0km az=44.0*
*CASC **17** 07:19:09.2±8.1, 13.13N×88.90W, h34^{km}±999^{km}, MD4.3, ML3.6*
ISC 17 07:19:06.8±1.2**, 13.1N**±0.1×**89.0W**±0.1**, h82**^{km}±14^{km}**, n25, σ0^{s}95**/35**, mb3.4**/4**, 1C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.91	103	*e*P	P	07 19 38.5	+0.4
TEL3	Telica 3	2.14	105	*e*P	P	07 19 40.7	-0.6
TEL3				*e*S	S	07 20 07.5	+0.7
LEON	Leon	2.14	109	*e*P	P	07 19 40.2	-1.1
LEON				*e*S	S	07 20 06.3	-0.5
TELN	Telica	2.14	104	*e*P	P	07 19 40.2	-1.1
TELN				*e*S	S	07 20 07.3	+0.4
CNGN	Cerro Negro	2.29	105	*e*P	P	07 19 43.7	+0.2
MIRN	Miramar	2.30	107	⇑*e*P	P	07 19 42.5	-1.1
MOMJ	Momotombo	2.47	106	*e*P	P	07 19 44.4	-1.5
QUIN	Quiabu	2.48	90	*e*P	P	07 19 46.4	+0.3
COPN	Copaltepe	2.50	112	⇓*e*P	P	07 19 46.2	-0.2
COPN				*e*S	S	07 20 15.9	+0.1
APYN	Apoyeque	2.70	109	*e*P	P	07 19 49.2	0.0
APYN				*e*S	S	07 20 21.5	+0.7
XAVN	Gruta Xavier	2.75	110	*e*P	P	07 19 50.1	+0.2
XAVN				*e*S	S	07 20 23.2	+1.1
MGAN	Managua	2.82	110	*e*P	P	07 19 50.4	-0.5
MGAN				*e*S	S	07 20 23.4	-0.5
MGAN				*i*		07 20 34.2	
	comp=E,344nm,0.5s						
WILN	Americas 2	2.87	109	*e*S	S	07 20 24.6	-0.5
APON	Apoyo	3.07	113	*e*P	P	07 19 55.1	+0.7
APON				*e*S	S	07 20 31.7	+1.6
SSNN	San Juan del S	3.55	121	*e*P	P	07 20 02.4	+1.4
JTS	JuntasAbangare	4.83	125	Pn	P	07 20 17.2	-1.5
	comp=E,2.5nm,0.3s,baz=310,slow=19,SNR=14						
JTS				Sn	S	07 21 12.1	-1.8
	comp=E,1.5nm,0.3s,baz=191,slow=16,SNR=2.0						
JTS				Lg		07 21 30.0	
	comp=E,3.7nm,0.3s,baz=128,slow=18,SNR=11						
PRS1	Puriscal	5.53	124	*e*P	P	07 20 28.5	+0.3
LAJ	Bijagual	5.75	124	*e*P	P	07 20 27.3	-3.9
LCR2	La Lucha 2	5.91	124	*e*P	P	07 20 34.9	+1.4
LCR2				*e*S	S	07 21 41.2	+0.7
BUS	Buena Vista	6.22	124	*e*P	P	07 20 38.8	+1.1
SDV	Santo Domingo	18.48	101	P	P	07 23 17.3	-1.5
	comp=E,0.2nm,0.3s,baz=138,slow=21,SNR=3.2						
TXAR	Lajitas Array	21.13	322	P	P	07 23 48.0	+1.2
	comp=E,0.9nm,0.5s,mb3.4,baz=145,slow=11,SNR=18						
PDAR	Pinedale Array	34.49	333	P	P	07 25 50.1	+1.1
	comp=E,0.3nm,0.7s,mb3.2,baz=142,slow=10,SNR=2.6						
YKA	Yellowknife Ar	52.58	345	P	P	07 28 13.1	-0.9
	comp=E,0.2nm,0.5s,mb3.4,baz=148,slow=6.8,SNR=7.7						
INK	Inuvik	62.13	343	P	P	07 29 20.9	-0.4
	comp=E,0.3nm,0.7s,mb3.4,baz=117,slow=4.5,SNR=3.0						

IDC 17 07:25:01.2±1.3**, 15.51N**×**93.19E, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.6**/19**, mbtmp3.8**/5**, ML3.9**/1**, MS2.7**/1**, Ms1 2.9**/1**, ms1mx2.3**/25**, Error ellipse: s-maj=36.0km s-min=22.6km az=46.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.24	61	Pn	Pn	07 26 36.1	-0.7
	0.7nm,0.3s,baz=246,slow=15,SNR=19						
CMAR				Sn	Sn	07 27 49.6	-0.1
	0.7nm,0.3s,baz=252,slow=26,SNR=3.2						
CMAR				LR	LR	07 29 43.5	
	comp=Z,72nm,21.0s,baz=0.2,slow=45						
ZAL	Zalesovo	38.90	352	P	P	07 32 26.9	-3.2
	0.7nm,0.6s,baz=295,slow=8.8,SNR=3.2						
GNI	Garni	48.63	310	P	P	07 33 48.4	-0.5
	2.2nm,0.5s,baz=214,slow=9.1,SNR=2.9						
WRA	Warramunga Arr	53.65	130	P	P	07 34 24.4	-2.7
	0.5nm,0.5s,baz=312,slow=7.9,SNR=8.3						
ASAR	Alice Springs	55.68	134	P	P	07 34 39.2	-2.7
	0.3nm,0.5s,baz=307,slow=6.6,SNR=6.1						

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*NEIC **17** 07:44:15.5, 31.69S×70.79W, h78^{km}, MD3.6(GUC), After GUC.*
GUC 17 07:44:15.5±0.8**, 31.69S**×**70.79W, h78**^{km}±13^{km}**, MD3.6, ML3.2, 2C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	1.00	171	⇑*i*P	P	07 44 35.0	+0.3
JACH				*i* S	S	07 44 49.2	+0.2
PACH	Papudo	1.01	213	⇓*i*P	P	07 44 35.4	+0.6
PACH				*i* S	S	07 44 49.6	+0.4
ROCH	El Roble	1.29	188	*e*P	P	07 44 38.2	-0.2
ROCH				*i* S	S	07 44 56.0	+0.4
IHA	Instituto Hidr	1.51	208	*e*P	P	07 44 40.7	-0.8
FCH	Farellones	1.68	166	⇓*i*P	P	07 44 44.3	+0.7
FCH				*i* S	S	07 45 06.1	+1.6
FCH				AMP		07 45 08.8	
	comp=E,302nm,0.1s						
CLCH	Cerro Calan	1.71	173	⇑*i*P	P	07 44 44.2	+0.1
CLCH				*i* S	S	07 45 06.0	+0.9
CLCH				AMP		07 45 14.5	
	comp=E,259nm,0.4s						
STL	Santa Lucia	1.74	176	*e*P	P	07 44 44.4	0.0
STL				*i* S	S	07 45 06.1	+0.3
STL				AMP		07 45 09.9	
	comp=N,102nm,0.3s						
RCDM	Rinconada Maip	1.79	181	*e*P	P	07 44 44.9	-0.2
RCDM				*i* S	S	07 45 07.4	+0.5
RCDM				AMP		07 45 11.6	
	comp=E,1µm,0.2s						
ZON	Zonda	1.80	86	⇓*i*P	P	07 44 46.0	+0.7
ZON				*e*S	S	07 45 09.0	+1.8
LCCH	Las Cruces	1.90	200	*e*P	P	07 44 45.9	-0.6
LCCH				*i* S	S	07 45 09.4	+0.1
PCH	Pirque	1.94	173	*e*P	P	07 44 47.4	+0.3
PCH				*i* S	S	07 45 11.4	+1.1
TACH	Talagante	1.96	184	*e*P	P	07 44 47.0	-0.4
LMEL	Las Melosas	2.20	167	*e*P	P	07 44 51.4	+0.6
LMEL				*i* S	S	07 45 19.1	+2.1
LMEL				AMP		07 45 24.0	
	comp=N,326nm,0.2s						
SFDO	San Fernando	2.92	184	⇓*i*P	P	07 44 59.7	-1.1
SFDO				*i* S	S	07 45 34.3	-0.5

IDC 17 07:52:41.2±3.2**, 6.56N**×**89.48E, mb3.7**/3**, mb1 4.0**/4**, mb1mx3.7**/18**, mbtmp3.8**/4**, ML4.4**/1**, Error ellipse: s-maj=99.1km s-min=32.6km az=66.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.00	37	Pn	P	07 56 14.6	-1.8
	0.6nm,0.3s,baz=230,slow=14,SNR=11						
ZAL	Zalesovo	47.39	356	P	P	08 01 16.9	-2.0
	1.3nm,0.3s,baz=247,slow=13,SNR=3.2						
WRA	Warramunga Arr	51.38	122	P	P	08 01 47.2	-3.0
	0.2nm,0.6s,baz=288,slow=9.4,SNR=3.4						
ASAR	Alice Springs	52.75	126	P	P	08 01 59.0	-1.4
	0.5nm,0.7s,baz=295,slow=7.5,SNR=4.5						

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*NEIC **17** 07:54:54.8±0.8, 21.09S×67.40W, h179^{km}±9^{km}, mb4.9/5, Error ellipse: s-maj=15.9km s-min=10.0km az=95.0*
*IDC **17** 07:54:54.5±0.9, 21.13S×67.40W, h173^{km}±12^{km}, mb3.8/5, mb1 3.7/9, mb1mx3.5/19, mbtmp4.1/9, Error ellipse: s-maj=24.6km s-min=10.9km az=101.0*
ISC 17 07:54:52.7±0.9**, 21.05S**±0.07×**67.3W**±0.2**, h168**^{km}±13^{km}**, n20, σ0^{s}78**/23**, mb4.2**/8**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.18	224	P	P	07 55 32.3	+0.8
	14nm,0.3s,baz=41,slow=8.6,SNR=123						
LVC				S	S	07 56 00.5	-0.8
	6.4nm,0.3s,baz=298,slow=21,SNR=6.0						
LPAZ	La Paz	4.81	350	P	P	07 56 08.6	+3.8
	4.8nm,0.3s,baz=150,slow=6.6,SNR=109						
LPAZ				S	S	07 57 04.8	+4.3
	1.3nm,0.3s,baz=285,slow=15,SNR=4.9						
LPAZ	La Paz	4.81	350	*e*Pn	P	07 56 08.2	+3.4
LPAZ				*e*Sn	S	07 56 59.7	-0.8
LPAZ				S	S	07 57 04.8	+4.3
ARE	Arequipa	6.08	318	*e*P	P	07 56 22.0	+0.6
ARE				*e*S	S	07 57 25.0	-5.4
SAML	Samuel	12.66	19	*e*P	P	07 57 47.1	-0.7
	4.4nm,0.9s						
BDFB	Brasilia	19.04	77	P	P	07 59 04.0	-0.2
	0.8nm,0.3s,baz=254,slow=9.7,SNR=9.3						
PLCA	Paso Flores	19.82	187	P	P	07 59 12.2	+0.2
	0.1nm,0.3s,baz=23,slow=14,SNR=7.4						
OTAV	Otavalo	23.82	331	P	P	07 59 47.0	-4.6
	1.7nm,0.8s,mb3.6						
RCBR	Riachuelo	33.94	68	*e*P	P	08 01 14.4	-7.7
	60nm,1.6s,mb5.1						
PMSA	Palmer Station	43.75	178	P	P	08 02 47.1	+4.5
	291nm,1.5s						
SNAA	Sanae	62.20	161	P	P	08 04 57.5	-0.7
	2.2nm,1.1s,mb3.9,baz=311,slow=13,SNR=4.3						
SNAA	Sanae	62.20	161	*e*P	P	08 04 56.6	-1.5
	36nm,0.7s,mb5.3						
DBIC	Dimbokro	67.13	73	P	P	08 05 30.9	+0.1

	5.0nm,1.2s,mb4.2,baz=231,slow=6.5,SNR=2.8						
DBIC	Dimbokro	67.13	73	P	P	08 05 30.9	+0.1
SUR	Sutherland	77.47	120	P	P	08 06 32.4	+1.1
	2.4nm,0.6s,mb4.0,baz=102,slow=12,SNR=3.4						
TSUM	Tsumeb	78.69	106	P	P	08 06 38.6	+0.4
	3.4nm,0.8s,mb4.0,baz=218,slow=5.2,SNR=12						
ESLA	Sonseca Array	84.44	44	P	P	08 07 07.6	-0.1
	10nm,1.4s,mb4.4						
YKA	Yellowknife Ar	91.29	340	P	P	08 07 39.3	-0.4
	0.6nm,0.6s,mb3.8,baz=133,slow=4.6,SNR=23						
ASAR	Alice Springs	131.00	206	PKP	PKPdf	08 13 45.0	0.0
	0.3nm,0.5s,baz=130,slow=1.7,SNR=8.0						
WRA	Warramunga Arr	134.10	209	PKP	PKPdf	08 13 51.2	+0.3
	0.4nm,0.6s,baz=159,slow=1.9,SNR=8.8						

DJA 17 08:00:18.3±1.0, 9.09S×112.45E, h2^{km}, ML4.3/3, 6C, Error ellipse: s-maj=44.0km s-min=22.2km az=162.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	Scrawed	1.78	70	⇑ePn	Pn	08 00 46.9	-3.4
	226nm,0.2s						
SRDI				⇑iSn	Sn	08 01 07.9	-5.9
KELI	Kelakatan	2.20	67	⇑ePn	Pn	08 00 53.3	-3.0
	107nm,0.2s						
KELI				⇑eSn	Sn	08 01 19.6	-4.8
RATI	Rata	3.07	83	⇑ePn	Pn	08 01 05.7	-3.0
	128nm,0.2s						
RATI				⇑eSn	Sn	08 01 39.9	-6.6

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*NEIC **17** 08:07:15.2, 16.15N×97.97W, h11^{km}, MD3.9(MEX), After MEX.*

MEX 17 08:07:14.0±1.1, 16.09N×97.96W, h5^{km}±9^{km}, MD3.9, 1C, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.34	331	⇑iP	Pg	08 07 20.3	-0.6
PNIG				i S	Sg	08 07 24.6	-0.9
VHO	Vista Hermosa	1.52	50	i P	Pn	08 07 38.5	-3.5
VHO				i S	Sb	08 07 56.3	-5.7
VHO	Vista Hermosa	1.52	50	i P	Pn	08 07 38.5	-3.5
VHO				i S	Sb	08 07 56.8	-5.1
OXX	Oaxaca	1.54	50	i P	Pn	08 07 39.5	-2.7
OXX				i S	Sb	08 07 57.0	-5.3
OXX	Oaxaca	1.54	50	i P	Pn	08 07 39.0	-3.2
OXX				i S	Sb	08 07 57.0	-5.3
HUIG	Huatulco	1.81	100	i P	Pn	08 07 43.1	-2.9
HUIG				i S	Sn	08 08 03.0	-6.6
HUIG	Huatulco	1.81	100	i P	Pn	08 07 42.2	-3.8
HUIG				i S	Sn	08 08 03.0	-6.5
ACX	Acapulco	2.03	293	i P	Pn	08 07 46.5	-2.8
ACX				i S	Sn	08 08 15.0	-0.4
CAIG	El Cayaco	2.41	294	eP	Pn	08 07 50.9	-3.9
CAIG				i S	Sn	08 08 17.9	-7.1
CAIG	El Cayaco	2.41	294	eP	Pn	08 07 50.9	-3.9
CAIG				i S	Sn	08 08 19.0	-6.0
PLIG	Platanillo	2.73	327	eP	Pn	08 07 55.1	-4.1
PLIG				i S	Sn	08 08 27.6	-5.3
IIB	San Bernardino	2.88	353	eP	Pn	08 08 02.0	+0.6
IIB				i S	Sn	08 08 31.0	-5.9
IISM	Ciudad Serdan	2.93	11	eP	Pn	08 08 03.0	+0.8
YAIG	Yautepec	2.95	339	eP	Pn	08 07 58.5	-3.9
YAIG				i S	Sn	08 08 32.8	-5.9
PPM	Popocatepetl	3.03	348	eP	Pn	08 08 00.0	-3.5
PPM				i S	Sn	08 08 34.6	-6.0
PPM	Popocatepetl	3.03	348	eP	Pn	08 08 00.0	-3.5
PPM				eP		08 08 00.3	
PPM				i S	Sn	08 08 34.6	-6.0
PPM				i S	Sn	08 08 40.0	-0.6
UNM	Universidad Na	3.43	340	eP	Pn	08 08 05.0	-4.2
UNM				i S	Sn	08 08 45.0	-5.7
UNM	Universidad Na	3.43	340	eP	Pn	08 08 05.0	-4.2
UNM				eP		08 08 15.6	
UNM				i S	Sn	08 08 45.0	-5.7
UNM				i S	Sn	08 08 45.5	-5.1
ZIIG	Zihuatanejo	3.68	295	i S	Sn	08 08 56.8	-0.4

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*IGQ **17** 08:12:11.6, 1.01S×81.42W, h12^{km}±8^{km}, mb4.8, Error ellipse: s-maj=8.8km s-min=4.5km az=2.0*

*BJI **17** 08:12:17.1, 1.20S×81.00W, h10^{km}, mB4.8, Ms5.1, Msz4.9*

*NEIC **17** 08:12:17.2±0.4, 1.20S×80.99W, h10^{km}, mb4.6/22, MD4.7(IGQ), Error ellipse: s-maj=11.0km s-min=7.4km az=50.0*

NEIC Felt at Portoviejo.

*IDC **17** 08:12:22.9±3.0, 1.08S×81.06W, h49^{km}±29^{km}, mb3.8/13, mb1 4.0/17, mb1mx3.9/25, mbtmp4.1/17, ML3.7/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/21, Error ellipse: s-maj=27.9km s-min=13.0km az=61.0*

ISC 17 08:12:16.1±0.3, 1.15S±0.05×81.19W±0.02, h10^{km}, n83, σ1^{s}29/82, mb4.3/28, MS3.0/2, 10C-3D, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.65	81	⇑P	Pb	08 12 26.7	-2.3
SALI	Salinas	1.05	169	⇓P	Pb	08 12 35.3	-0.6
IGUA	Igualata	2.57	98	P	Pn	08 12 58.5	0.0
IGUA				S	Sn	08 13 31.8	+1.6
CUSU	Cusua	2.72	96	P	Pn	08 13 01.1	+0.4
JUIV	Juive	2.73	96	P	Pn	08 13 01.1	+0.2
JUA2	San Juan 2	2.74	70	⇑P	Pn	08 12 59.7	-1.3
JUA2				S	Sn	08 13 35.0	+0.4
ARRY	Arrayan	2.75	97	⇑P	Pn	08 13 00.8	-0.4
TERV	Terraza Guagua	2.76	69	⇓P	Pn	08 13 00.1	-1.2
PINO	Pino	2.76	69	⇑P	Pn	08 12 59.5	-1.8
PATA	Patacocha	2.77	97	P	Pn	08 13 01.9	+0.5
RUN2	Runtun	2.79	96	P	Pn	08 13 02.3	+0.7
RUN2				S	Sn	08 13 37.4	+1.8
ULBA	Ulba	2.79	96	P	Pn	08 13 01.8	+0.1
PISA	Pisayambo	2.80	88	⇓P	Pn	08 13 01.8	-0.1
YANA	Yana	2.81	69	⇑P	Pn	08 13 00.1	-1.9
VC1	Cotopaxi 1	2.83	80	P	Pn	08 13 02.1	-0.1
TAMB	Tambo	2.85	81	⇑P	Pn	08 13 02.4	-0.2
OTAV	Otavalo	3.06	63	ePn	Pn	08 13 03.8	-1.7
OTAV				eSn	Sn	08 13 38.0	-4.6
ANTI	Antisana	3.10	77	⇑P	Pn	08 13 06.3	+0.1
COTA	Cotacachi	3.21	63	⇑P	Pn	08 13 06.5	-1.1
CAYR	Refugio Cayamb	3.38	70	P	Pn	08 13 11.1	+1.0
CAYR				S	Sn	08 13 52.9	+2.1
ELAGU	Cayambe Volc	3.39	71	P	Pn	08 13 11.2	+1.0
CAYA	Cayambe	3.42	69	⇑P	Pn	08 13 11.4	+0.8
CAYA				S	Sn	08 13 53.0	+1.4
CONE	Cono NE Rev Vo	3.70	73	P	Pn	08 13 15.7	+1.0
ECEN	Cerro Negro	3.77	59	P	Pn	08 13 14.2	-1.3
ROSC	El Rosal	9.08	49	P	P	08 14 28.3	-2.0
	0.3nm,0.3s,baz=89,slow=23,SNR=2.7						
ROSC				LR	LR	08 17 16.5	
	comp=Z,142nm,18.3s,baz=180,slow=33						
PAYG	Puerto Ayora	9.11	273	ePn	P	08 14 30.6	-0.1
PAYG				eS	Sn	08 16 15.1	+0.8
NNA	Nana	11.60	158	eP	P	08 15 00.3	-4.6
NNA				eS	S	08 17 03.2	-12
JTS	JuntasAbangare	11.97	342	P	P	08 15 11.5	+1.6
	0.2nm,0.3s,baz=186,slow=22,SNR=1.9						
JTS	JuntasAbangare	11.97	342	eP	P	08 15 12.0	+2.1
SDV	Santo Domingo	14.49	46	P	P	08 15 45.3	+1.8
	0.3nm,0.3s,baz=252,slow=10,SNR=9.4						
SDV				LR	LR	08 21 04.7	
	comp=Z,198nm,19.3s,baz=244,slow=36						
SDV	Santo Domingo	14.49	46	eP	P	08 15 44.5	+1.0
	20nm,0.9s						
SAML	Samuel	19.52	114	eP	P	08 16 40.7	-6.0
	54nm,1.5s						
LPAZ	La Paz	19.80	140	P	P	08 16 48.7	-1.0
	0.3nm,0.3s,baz=340,slow=10,SNR=13						
LPAZ	La Paz	19.80	140	eP	P	08 16 46.7	-3.0
	27nm,1.4s						
TEIG	Tepich	22.35	342	eP	P	08 17 13.7	-2.2
	16nm,1.1s,mb4.4						
TEIG				e		08 17 29.5	
SJG	San Juan	24.19	37	P	P	08 17 33.6	-0.4
	11nm,0.5s,mb4.5,baz=264,slow=10,SNR=5.1						
SJG	San Juan	24.19	37	P	P	08 17 32.3	-1.7
	22nm,0.9s,mb4.6						
LVC	Limon Verde	24.45	152	P	P	08 17 38.6	+2.2
	5.5nm,1.2s,mb3.9,baz=334,slow=14,SNR=2.5						
LVC				LR	LR	08 27 59.4	
	comp=Z,110nm,20.6s,MS3.3,baz=61,slow=38						
LVC	Limon Verde	24.45	152	eP	P	08 17 37.3	+0.9
	22nm,1.5s,mb4.4						
BDFB	Brasilia	35.75	116	P	P	08 19 18.3	+0.8
	1.0nm,0.4s,mb4.1,baz=259,slow=3.8,SNR=3.2						
BDFB				LR	LR	08 35 33.9	
	comp=Z,14nm,21.6s,MS2.7,baz=184,slow=39						
JCT	Junction City	36.11	332	eP	P	08 19 20.2	-0.2
	13nm,0.9s,mb4.9						
TXAR	Lajitas Array	37.16	326	P	P	08 19 29.9	+0.8
	1.1nm,0.8s,mb3.8,baz=135,slow=5.1,SNR=11						
TXAR				PcP	PcP	08 21 49.6	-0.2
	0.5nm,0.7s,baz=162,slow=7.9,SNR=4.2						
MNTX	Cornudas Mount	39.92	327	eP	P	08 19 52.1	-0.1
	9.5nm,0.9s,mb4.5						
PLCA	Paso Flores	40.56	168	P	P	08 19 56.8	-0.6
	4.0nm,1.1s,mb4.0,baz=354,slow=9.4,SNR=5.0						
PLCA	Paso Flores	40.56	168	eP	P	08 19 56.8	-0.7
	20nm,1.5s,mb4.5						
AMTX	Amarillo	40.66	334	eP	P	08 20 01.1	+2.8
	12nm,0.9s,mb4.5						
ACSO	Alum Creek Sta	41.22	358	eP	P	08 19 59.8	-3.0
	13nm,1.1s,mb4.5						
KSU1	Kansas State U	42.49	342	eP	P	08 20 13.6	+0.3
ANMO	Albuquerque	43.00	329	P	P	08 20 18.2	+0.6
	3.1nm,0.8s,mb4.1,baz=179,slow=9.4,SNR=5.9						
ANMO	Albuquerque	43.00	329	eP	P	08 20 19.1	+1.5
	7.8nm,0.9s,mb4.4						
TUC	Tucson	43.48	323	P	P	08 20 19.4	-2.2
	3.4nm,0.9s,mb4.1						
SDCO	Great Sand Dun	44.76	332	eP	P	08 20 32.9	+1.2
	6.3nm,0.9s,mb4.5						
PV01	Paradox Valley	46.54	330	P	P	08 20 49.0	+3.1
PV10	Paradox Valley	46.96	330	P	P	08 20 49.8	+0.6
MSU	Marysvale	48.70	327	eP	P	08 21 09.5	+6.7
DAU	Daniels Canyon	49.62	330	eP	P	08 21 14.6	+4.7
PDAR	Pinedale Array	50.63	333	P	P	08 21 17.1	-0.5
	1.0nm,1.2s,mb3.6,baz=124,slow=9.8,SNR=2.7						
HWUT	Hardware Ranch	50.68	331	eP	P	08 21 19.9	+2.0
	5.2nm,1.1s,mb4.4						
ULM	Lac du Bonnet	52.73	348	P	P	08 21 32.0	-1.2
	3.1nm,0.7s,mb4.3,baz=110,slow=4.4,SNR=4.2						
WVOR	Wild Horse Val	54.95	327	eP	P	08 21 51.3	+1.5
	8.7nm,1.1s,mb4.7						
YBH	Yreka Blue Hor	56.83	324	P	P	08 22 02.1	-1.2
	2.0nm,0.8s,mb4.2,baz=99,slow=9.6,SNR=6.2						
SCHQ	Schefferville	57.03	10	P	P	08 22 02.6	-1.9
	1.0nm,0.8s,mb3.9,baz=257,slow=13,SNR=2.8						
FCC	Fort Churchill	60.60	352	eP	P	08 22 26.5	-2.7
	5.0nm,0.9s,mb4.6						
YKA	Yellowknife Ar	68.30	344	P	P	08 23 17.6	-1.7
	1.2nm,0.8s,mb4.0,baz=136,slow=6.0,SNR=20						
YKA	Yellowknife Ar	68.30	344	P	P	08 23 17.6	-1.7
DLBC	Dease Lake	70.78	335	P	P	08 23 37.2	+2.7
RES	Resolute Bay	76.18	356	P	P	08 24 05.5	-0.3
	2.4nm,1.1s,mb4.0						
DBIC	Dimbokro	76.56	83	P	P	08 24 07.9	-1.2
	7.5nm,1.0s,mb4.6,baz=257,slow=6.9,SNR=5.8						
DBIC	Dimbokro	76.56	83	eP	P	08 24 09.6	+0.4
	17nm,1.1s,mb4.9						
INK	Inuvik	77.96	342	eP	P	08 24 16.3	+0.5
	10nm,1.2s,mb4.6						
SUMG	Summit	78.33	12	eP	P	08 24 17.3	-0.4
	14nm,1.4s,mb4.7						
ILAR	Eielson Array	80.89	337	P	P	08 24 31.7	0.0
	0.9nm,0.8s,mb3.8,baz=143,slow=3.5,SNR=8.5						
MCK	McKinley	81.34	335	eP	P	08 24 35.1	+1.1
	6.7nm,1.2s,mb4.5						
TSUM	Tsumeb	97.91	109	P	P	08 25 53.3	-0.9
	3.7nm,1.0s,mb4.9						
CN2	Changchun	131.36	334	ePKP	PKPdf	08 31 27.0	-5.3
WMQ	Urumqi	136.37	12	ePKP	PKPdf	08 31 41.3	-0.3
ASAR	Alice Springs	137.91	232	PKP	PKPdf	08 31 43.2	-1.8
	0.6nm,0.9s,baz=225,slow=20,SNR=3.7						
WRA	Warramunga Arr	139.35	237	PKP	PKPdf	08 31 45.2	-2.5
	0.7nm,0.8s,baz=340,slow=11,SNR=6.6						
GTA	Gaotai	141.91	359	PKP	PKPdf	08 31 44.8	-7.0
SSE	Sheshan	143.45	327	ePKP	PKPdf	08 31 53.3	-1.4
NJ2	Nanjing	143.91	330	ePKP	PKPdf	08 31 49.0	-6.4
LZH	Lanzhou	144.93	353	⇑PKP	PKPdf	08 31 57.0	-0.1
LZH				APKP		08 32 00.5	
LZH				XPKP		08 32 01.6	
LZH				LR	LR		
	comp=N,237nm,18.0s						
LZH				LR	LR		
	comp=Z,316nm,20.1s						
ENH	Enshi	149.31	342	ePKPbc	PKPdf	08 32 07.4	+2.9

MEX 17 08:13:42.7±0.8, 17.83N×101.10W, h18^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.41	238	i P	Pb	08 13 49.8	-1.4
ZIIG				i S	Sb	08 13 55.6	-1.3
CAIG	El Cayaco	1.11	134	i P	Pb	08 13 59.1	-3.9
CAIG				i S	Sb	08 14 12.9	-4.2
ACX	Acapulco	1.48	130	eP	Pn	08 14 06.0	-2.7
ACX				i S	Sn	08 14 23.0	-4.6

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*IDC **17** 08:36:07.5±1.0, 41.55N×79.39E, mb3.7/6, mb1 3.8/7, mb1mx3.7/20, mbtmp3.7/7, ML3.1/1, Error ellipse: s-maj=32.2km s-min=15.0km az=53.0*

*MOS **17** 08:36:09.9±1.5, 41.59N×79.28E, h33^{km}, mb3.9/3, Error ellipse: s-maj=22.2km s-min=11.9km az=105.7*

*NEIC **17** 08:36:11.2±0.5, 41.58N×79.33E, h30^{km}, mb3.7/1, Error ellipse: s-maj=13.3km s-min=7.1km az=67.0*

*BJI **17** 08:36:12.2, 41.61N×79.59E, h10^{km}, mb3.8, ML4.0*

*NNC **17** 08:36:13.9±10.0, 42.03N×78.99E, h19^{km}±34^{km}, mpv3.7, Error ellipse: s-maj=83.7km s-min=22.7km az=149.0*

ISC 17 08:36:07.7±0.4, 41.56N±0.04×79.47E±0.07, h10^{km}, n41, σ1^{s}18/48, mb3.6/5, 5C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	2.50	287	P	Pn	08 36 50.5	+1.2
	SNR=230						
AAA	Alma-Ata	2.53	313	ePN	Pn	08 36 46.7	-2.9
AAA				eS	Sn	08 37 17.5	-3.3
AAA				smax			
	comp=E,2.0nm,0.4s						
TKM2	Tokmak 2	3.18	297	P	Pn	08 36 59.7	+0.8
	SNR=86						
KZA	Kyzart	3.20	281	P	Pn	08 37 00.4	+1.3
	SNR=15						
KSH	Kashi	3.36	234	⇓P	Pn	08 37 09.3	+7.9
KSH				S	Sn	08 37 55.8	+14
KSH				Smax			
	comp=N,240nm,0.7s						
KSH				Smax			
	comp=E,260nm,0.8s						
UCH	Uchtor	3.76	282	P	Pn	08 37 15.2	+8.1
	SNR=8.6						
CHMS	Chumysh	3.79	294	P	Pn	08 37 19.8	+12
	SNR=8.2						
AAK	Ala-Archa	3.85	288	P	Pn	08 37 12.7	+4.2
	SNR=17						
AAK	Ala-Archa	3.85	288	⇓Pn	Pn	08 37 09.7	+1.2
	comp=E,47nm,0.5s						
AAK				⇓Lg		08 38 00.9	
	comp=E,209nm,0.7s						
AAK	Ala-Archa	3.85	288	ePn	Pn	08 37 07.9	-0.6
AAK				eS	Sn	08 38 01.6	+7.3
USP	Ospenovka	4.06	297	P	Pn	08 37 11.1	-0.2
	SNR=7.2						
AML	Almayashu	4.35	279	P	Pn	08 37 24.8	+9.2
	SNR=80						
EKS2	Erkin-Say	4.38	286	P	Pn	08 37 26.4	+11
	SNR=46						
MK31	Makanchi Array	5.61	20	⇑Pn	Pn	08 37 34.3	+1.0
	comp=E,4.9nm,0.4s,baz=203,slow=13,SNR=237						
MK31				⇑Sn	Sn	08 38 38.7	+0.1
	comp=E,19nm,0.5s,baz=259,slow=28						
MK31				⇑Lg		08 39 03.1	
	comp=E,40nm,0.7s,baz=249,slow=33,SNR=3.7						
MKAR	Makanchi Array	5.61	20	PN	Pn	08 37 34.3	+1.0
MKAR						08 39 02.6	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR				smax			
	comp=E,28nm,0.7s						
WMQ	Urumqi	6.47	67	eP	Pn	08 37 50.6	+5.2
WMQ				S	Sn	08 39 03.4	+3.4
WMQ				Smax			
	comp=N,56nm,1.0s						
WMQ				Smax			
	comp=E,84nm,1.0s						
KURK	Kurchatov	9.18	357	⇑Pn	P	08 38 21.4	-1.8
	comp=E,0.7nm,0.9s,baz=191,slow=8.9,SNR=4.4						
KURK				⇑Lg		08 40 52.2	
	comp=E,26nm,1.0s						
KURK	Kurchatov	9.18	357	ePn	P	08 38 19.4	-3.8
KURK				eSn	Sn	08 40 13.3	+5.7
BVAR	Borovoye Array	13.01	335	Pn	P	08 39 12.1	-3.1
	comp=E,0.1nm,0.3s,baz=358,slow=40,SNR=2.6						
BVAR				Sn	S	08 41 32.5	-8.5
	comp=E,0.1nm,0.3s,baz=146,slow=16,SNR=2.7						
BVAR				Lg		08 43 01.8	
	comp=E,0.3nm,0.3s,baz=145,slow=23,SNR=5.4						
BRVK	Borovoye	13.07	335	P	P	08 39 21.5	+5.5
CHKZ	Chkalovo	13.50	337	P	P	08 39 28.6	+6.9
KOLN	Koldanda	14.17	165	eP	P	08 39 30.3	-0.3
	comp=E,5.0nm,0.5s						
GKN	Gorkha	14.17	161	eP	P	08 39 31.6	+0.9
	comp=E,6.5nm,0.4s						
KKN	Kakani	14.54	159	eP	P	08 39 35.8	+0.3
	comp=E,8.3nm,0.5s						
DMN	Daman	14.67	160	eP	P	08 39 35.8	-1.3
	comp=E,15nm,0.9s						
PKI	Pulchoki	14.78	159	eP	P	08 39 37.9	-0.8
	comp=E,4.9nm,0.2s						
JIRN	Jiri	14.92	156	eP	P	08 39 40.8	+0.3
	comp=E,8.6nm,0.5s						
GTA	Gaotai	15.63	91	P	P	08 39 57.8	+8.2
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s						
ZAK	Zakamensk	18.69	54	eP	P	08 40 20.4	-7.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.8s						
TLY	Talaya	19.36	50	i P	P	08 40 27.8	-8.2
SONM	Songino Array	20.08	63	P	P	08 40 42.7	-1.3
	comp=Z,4.2nm,0.6s,baz=272,slow=12,SNR=11						
ULN	Ulaanbaatar	20.52	63	i P	P	08 40 49.4	+0.7
ULN	Ulaanbaatar	20.52	63	eP	P	08 40 49.5	+0.8
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	34.52	282	P	P	08 42 56.9	-1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	34.52	282	P	P	08 42 56.9	-1.1
	comp=Z,1.0nm,0.6s,mb3.9,baz=90,slow=8.6,SNR=5.3						
NOA	NORSAR Array B	44.55	320	P	P	08 44 18.6	-2.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	44.55	320	P	P	08 44 18.6	-2.4
	comp=Z,1.0nm,0.9s,mb3.6,baz=89,slow=7.1,SNR=2.4						
ILAR	Eielson Array	67.97	20	P	P	08 47 07.1	-1.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	67.97	20	P	P	08 47 07.0	-1.3
	comp=Z,0.5nm,1.0s,mb3.5,baz=300,slow=5.4,SNR=5.6						
WRA	Warramunga Arr	79.50	129	P	P	08 48 16.9	+0.6
	comp=Z,0.3nm,0.4s,mb3.6,baz=332,slow=5.3,SNR=12						
ASAR	Alice Springs	82.16	131	P	P	08 48 31.2	+1.0
	comp=Z,0.6nm,0.9s,mb3.5,baz=321,slow=5.8,SNR=4.8						

IDC 17 08:45:46.3±1.0, 14.11N×94.10E, mb3.9/5, mb1 4.1/6, mb1mx3.8/18, mbtmp3.8/6, ML3.5/1, MS2.8/1, Ms1 3.0/1, ms1mx2.6/24, Error ellipse: s-maj=36.1km s-min=20.7km az=43.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	6.35	46	Pn	Pn	08 47 21.4	-2.1
	0.3nm,0.3s,baz=243,slow=14,SNR=3.6						
CMAR				Sn	Sn	08 48 34.8	-3.0
	0.4nm,0.3s,baz=243,slow=28,SNR=4.9						
CMAR				LR	LR	08 50 27.8	
	comp=Z,77nm,18.7s,baz=167,slow=44						
WRA	Warramunga Arr	52.08	130	P	P	08 54 58.4	-2.2
	2.3nm,0.7s,baz=312,slow=7.9,SNR=19						
ASAR	Alice Springs	54.08	134	P	P	08 55 13.1	-2.2
	1.0nm,0.6s,baz=310,slow=6.7,SNR=25						
BRTR	Keskin Array B	58.46	308	P	P	08 55 43.4	-3.1
	1.4nm,0.9s,baz=135,slow=7.0,SNR=4.9						
GERES	GERESS Array B	73.21	317	P	P	08 57 20.1	-1.0
	0.8nm,0.7s,baz=90,slow=4.0,SNR=5.7						
NOA	NORSAR Array B	74.33	330	P	P	08 57 26.0	-1.3
	0.8nm,0.8s,baz=102,slow=7.9,SNR=2.3						

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*TRN **17** 09:03:18.1, 15.71N×61.48W, h3^{km}, M3.6(FDF)*

*IDC **17** 09:03:19.4±1.9, 15.79N×61.02W, h37^{km}±23^{km}, mb3.1/3, mb1 3.7/5, mb1mx3.5/15, mbtmp3.6/5, ML4.6/2, Error ellipse: s-maj=42.4km s-min=17.6km az=89.0*

ISC 17 09:03:17.4±0.8, 15.71N±0.03×61.50W±0.09, h15^{km}±6^{km}, h13^{km}±.6^{km}:pP-P, n26, σ1^{s}02/28, mb3.9/7, 6C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBL	Barber's Block	0.19	172	⇓iP	Pg	09 03 21.3	-0.6
BBL	Barber's Block	0.19	172	⇓iP	Pg	09 03 22.4	+0.4
MGG	Marie-Galante	0.27	40	⇑eP	Pg	09 03 23.3	-0.1
DOG	Dongo Capester	0.34	340	⇑iP	Pb	09 03 24.9	+0.3
SCG	Saint Claude	0.36	331	⇑iP	Pb	09 03 25.2	+0.2
BCG	Bois Riant Cap	0.39	342	⇑eP	Pb	09 03 25.6	+0.2
MDN	Morne-Daniel	0.40	166	eP	Pb	09 03 26.0	+0.3
DBCT	Belle View Cho	0.46	162	eP	Pb	09 03 27.2	+0.5
DBCT				eS	Sb	09 03 33.9	+0.8
SEG	Port Louis	0.69	359	⇑eP	Pb	09 03 30.5	0.0
DEG	La Desirade	0.73	35	⇑eP	Pb	09 03 30.3	-1.0
CPB	Codrington	1.94	351	eP	Pn	09 03 51.1	+0.7
SABT	Saba	2.53	319	eP	Pn	09 04 06.3	+7.6
SABT				eS	Sn	09 04 38.1	+8.6
GRHS	Sauteurs	3.47	182	eS	Sn	09 04 52.4	-1.0
SJG	San Juan	5.05	299	ePn	Pn	09 04 32.7	-1.9
SDV	Santo Domingo	11.21	234	eP	P	09 05 56.0	-4.3
OTAV	Otavalo	22.73	229	P	P	09 08 21.1	+0.7
SAML	Samuel	24.56	184	eP	P	09 08 36.8	-1.4
	7.4nm,1.1s,mb4.1						
TXAR	Lajitas Array	41.02	297	P	P	09 11 03.9	+2.0
	0.7nm,1.0s,mb3.2,baz=128,slow=10,SNR=2.7						
TXAR				PcP	PcP	09 13 05.7	+3.2
	0.6nm,0.9s,baz=117,slow=6.0,SNR=2.8						
TXAR	Lajitas Array	41.02	297	P	P	09 11 03.9	+2.0
TXAR				PcP	PcP	09 13 05.7	+3.2
ULM	Lac du Bonnet	44.22	329	tx	P	09 11 32.1	+4.4
	3.7nm,0.7s,mb4.2,baz=134,slow=9.7,SNR=5.5						
ULM				tx	pP	09 11 36.3	+4.1
	3.7nm,0.7s,baz=126,slow=9.6,SNR=8.4						
PDAR	Pinedale Array	49.00	313	P	P	09 12 04.0	-1.5
	0.3nm,0.6s,mb3.5,baz=117,slow=10,SNR=2.7						
PDAR				tx	pP	09 12 08.2	-1.8
	1.5nm,0.9s,baz=112,slow=7.0,SNR=11						
FCC	Fort Churchill	49.26	338	eP	P	09 12 08.0	+0.6
	1.4nm,0.7s,mb4.1						
LOHW	Long Hollow	49.99	314	P	P	09 12 13.3	+0.2
NEW	Newport	55.70	318	eP	P	09 12 56.9	+1.3
	6.2nm,0.9s,mb4.6						
YKA	Yellowknife Ar	59.55	334	P	P	09 13 19.4	-3.1
	0.3nm,0.6s,mb3.5,baz=106,slow=7.4,SNR=5.1						
YKA				tx	pP	09 13 23.0	-4.0
	1.9nm,0.7s,baz=107,slow=7.3,SNR=20						
YKA	Yellowknife Ar	59.55	334	P	P	09 13 19.4	-3.1

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*NEIC **17** 09:03:21.3, 15.53N×61.78W, h22^{km}, mb4.2/10, MD4.5(TRN), After TRN.*

NEIC Felt on Dominica.

*TRN **17** 09:03:22.1, 15.74N×61.35W, h10^{km}, MD4.5*

ISC 17 09:03:22.6±1.1, 15.65N±0.03×61.82W±0.06, h5^{km}±9^{km}, h14^{km}±.4^{km}:pP-P, n37, σ1^{s}33/50, mb4.1/15, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBL	Barber's Block	0.36	109	eP	Pg	09 03 29.6	-0.2
BBL				eS	Sg	09 03 33.3	-1.3
MDN	Morne-Daniel	0.52	128	eP	Pg	09 03 33.5	+0.4
MDN				eS	Sg	09 03 39.5	-0.6
DBCT	Belle View Cho	0.59	129	eP	Pg	09 03 34.1	-0.4
DSHT	Scott's Head	0.61	135	eP	Pg	09 03 36.6	+1.8
DSHT				eS	Sg	09 03 43.6	+0.7
BPA	Boggy Peak	1.39	358	eP	Pn	09 03 50.3	+1.5
BPA				eS	Sb	09 04 07.9	+1.2

BPA	Boggy Peak	1.39	358	eP	Pn	09 03 50.3	+1.5
BPA				eS	Sb	09 04 08.1	+1.3
NVRH	Round Hill, Ne	1.70	334	eP	Pn	09 03 58.3	+5.0
NVRH				eS	Sn	09 04 22.0	+6.4
SKI	Saint Kitts	1.90	332	eP	Pn	09 04 01.7	+5.7
SKI				eS	Sn	09 04 29.0	+8.5
BSK	Brimstone Hill	1.96	330	eP	Pn	09 04 01.9	+5.0
BSK				eS	Sn	09 04 32.2	+10
CPB	Codrington	1.98	360	eP	Pn	09 03 56.6	-0.7
CPB				eS	Sn	09 04 23.4	+0.6
STAT	Sint Eustatius	2.15	329	eP	Pn	09 04 08.1	+8.4
STAT				eS	Sn	09 04 30.6	+3.6
GRHS	Sauteurs	3.41	177	eP	Pn	09 04 18.6	+1.1
GRW	Mount Saint Ca	3.47	177	eP	Pn	09 04 13.0	-5.4
GRW				eS	Sn	09 05 02.8	+2.4
SJG	San Juan	4.82	301	Pn	Pn	09 04 37.1	-0.5
	2.9nm,0.3s,baz=348,slow=22,SNR=2.1						
SJG				Sn	Sn	09 05 35.5	+0.9
	22nm,0.3s,baz=29,slow=17,SNR=7.4						
SJG	San Juan	4.82	301	Sn	Sn	09 05 35.5	+0.9
TRN	Trinidad (W)	4.98	175	eP	Pn	09 04 40.8	+0.8
TPP	Pointe-a-Pierr	5.31	176	eP	Pn	09 04 45.6	+1.1
SDV	Santo Domingo	10.92	233	Pn	P	09 06 02.4	-0.4
	0.4nm,0.3s,baz=48,slow=14,SNR=4.8						
SDV				Sn	S	09 08 06.5	0.0
	0.2nm,0.3s,baz=336,slow=15,SNR=2.3						
SDV	Santo Domingo	10.92	233	Sn	S	09 08 06.5	0.0
SCHQ	Schefferville	39.30	355	tx	P	09 10 50.5	-3.6
	1.2nm,0.9s,mb3.6,baz=210,slow=9.0,SNR=2.1						
TXAR	Lajitas Array	40.78	297	tx	P	09 11 08.4	+1.9
	1.1nm,1.0s,mb3.5,baz=108,slow=7.9,SNR=4.7						
TXAR				tx	pP	09 11 12.3	+4.2
	0.5nm,0.7s,baz=108,slow=7.9,SNR=4.1						
CPUP	Villa Florida	41.95	174	tx	P	09 11 14.2	-2.2
	0.0nm,0.5s,baz=228,slow=14,SNR=2.2						
MNTX	Cornudas Mount	42.68	300	eP	P	09 11 20.0	-2.2
	1.9nm,0.6s,mb4.0						
ANMO	Albuquerque	44.28	304	P	P	09 11 33.2	-2.0
	1.7nm,0.9s,mb3.8						
SDCO	Great Sand Dun	44.30	308	eP	P	09 11 34.8	-0.5
	6.3nm,1.4s,mb4.2						
PDAR	Pinedale Array	48.82	314	tx	P	09 12 11.1	+0.1
	3.4nm,0.7s,mb4.5,baz=108,slow=9.4,SNR=12						
PDAR				tx	pP	09 12 15.5	+3.1
	4.5nm,0.9s,baz=114,slow=9.3,SNR=24						
HWUT	Hardware Ranch	49.90	312	P	P	09 12 20.0	+0.8
	5.1nm,1.2s,mb4.4						
QLMT	Earthquake Lak	50.77	316	P	P	09 12 24.8	-0.9
HLID	Hailey	52.45	313	eP	P	09 12 38.1	-0.4
	2.3nm,1.1s,mb4.0						
EDM	Edmonton	54.93	325	eP	P	09 12 54.3	-2.4
PLCA	Paso Flores	56.67	188	tx	P	09 13 07.1	-2.4
	1.4nm,0.9s,mb4.0,baz=26,slow=7.5,SNR=3.4						
SUMG	Summit	58.53	8	P	P	09 13 23.1	+1.0
	8.6nm,1.1s,mb4.7						
YKA	Yellowknife Ar	59.48	335	tx	P	09 13 26.7	-2.1
	1.9nm,0.7s,mb4.2,baz=106,slow=7.3,SNR=20						
YKA				tx	pP	09 13 30.8	+0.5
	1.9nm,0.7s,baz=106,slow=7.3,SNR=17						
NOA	NORSAR Array B	68.22	30	tx	P	09 14 28.4	+2.2
	2.8nm,0.8s,mb4.3,baz=262,slow=6.2,SNR=4.8						
INK	Inuvik	68.82	338	eP	P	09 14 24.8	-4.9
	2.8nm,0.8s,mb4.2						
GERES	GERESS Array B	68.88	43	tx	P	09 14 31.3	+0.9
	0.5nm,0.7s,mb3.6,baz=236,slow=4.8,SNR=4.9						
FINES	FINESS Array B	75.40	30	tx	P	09 15 07.4	-1.5
	2.0nm,0.8s,mb4.1,baz=315,slow=5.4,SNR=4.1						

TRN 17 09:28:53.7, 15.73N×61.52W, h2^{km}, MD4.2, M3.3(FDF)

IDC 17 09:29:01.8±6.3, 15.88N×60.58W, h23^{km}±42^{km}, mb3.5/5, mb1 3.9/6, mb1mx3.6/20, mbtmp3.7/6, ML6.1/1, MS3.0/2, Ms1 3.0/2, ms1mx2.4/32, Error ellipse: s-maj=33.6km s-min=13.2km az=67.0

ISC 17 09:29:02.4±1.1, **15.68N**±0.05×**61.4W**±0.3, **h28**^{km}±5^{km}, **n16, σ0^{s}89**/20, **mb3.6**/5, **1C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBL	Barber's Block	0.18	209	eP	Pb	09 29 07.3	-0.9
MDN	Morne-Daniel	0.36	182	eP	Pb	09 29 11.1	+0.6
MDN				eS	Sb	09 29 16.0	-0.1
DBCT	Belle View Cho	0.41	175	eP	Pb	09 29 11.4	+0.1
DBCT				eS	Sb	09 29 17.6	+0.2
BPA	Boggy Peak	1.43	341	eP	Pn	09 29 26.5	-0.3
BPA				eS	Sn	09 29 45.6	+0.7
CPB	Codrington	1.99	348	⇑iP	Pn	09 29 34.5	-0.4
CPB				eS	Sn	09 29 59.0	-0.2
GRHS	Sauteurs	3.45	184	eP	Pn	09 29 56.4	+0.8
GRW	Mount Saint Ca	3.51	184	eP	Pn	09 29 57.9	+1.4
GRW				eS	Sn	09 30 36.6	-1.0
SJG	San Juan	5.16	299	Pn	Pn	09 30 27.4	+7.5
	9.7nm,0.3s,baz=243,slow=21,SNR=3.8						
SJG				Sn	Sn	09 31 32.2	+13
	1.4nm,0.3s,baz=287,slow=19,SNR=2.7						
SDV	Santo Domingo	11.28	234	LR	LR	09 36 40.4	
	comp=Z,66nm,20.7s,baz=278,slow=38						
ROSC	El Rosal	16.66	231	LR	LR	09 40 47.3	
	comp=Z,60nm,18.1s,baz=180,slow=41						
TXAR	Lajitas Array	41.13	297	P	P	09 36 50.0	+4.1
	0.2nm,0.7s,mb2.9,baz=117,slow=6.0,SNR=2.6						
CPUP	Villa Florida	41.95	175	P	P	09 36 52.1	-0.6
	0.0nm,0.5s,baz=220,slow=13,SNR=2.5						
ULM	Lac du Bonnet	44.30	329	P	P	09 37 13.4	+1.9
	1.0nm,0.4s,mb3.9,baz=131,slow=9.8,SNR=3.0						
PDAR	Pinedale Array	49.10	313	P	P	09 37 49.3	-0.1
	1.3nm,0.8s,mb4.0,baz=104,slow=7.3,SNR=11						
YKA	Yellowknife Ar	59.62	334	P	P	09 39 04.0	-2.0
	0.8nm,0.6s,mb3.9,baz=105,slow=7.5,SNR=14						
ILAR	Eielson Array	74.03	334	P	P	09 40 37.0	-0.1
	0.3nm,0.5s,mb3.5,baz=80,slow=5.5,SNR=4.1						

IDC 17 10:00:49.3±1.1, **19.12S**×**64.41W, mb3.7**/5, **mb1 4.1**/7, **mb1mx4.0**/16, **mbtmp3.8**/7, **ML4.2**/2, **MS3.1**/2, **Ms1 3.1**/2, **ms1mx2.9**/21, **Error ellipse: s-maj=30.9km s-min=20.9km az=83.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	4.53	308	Pn	Pn	10 01 59.8	-0.9
	6.0nm,0.3s,baz=121,slow=11,SNR=86						
LPAZ				Sn	Sn	10 02 52.2	-2.5
	29nm,0.3s,baz=358,slow=21,SNR=6.6						
LVC	Limon Verde	5.46	230	Pn	Pn	10 02 13.0	-0.8
	1.1nm,0.3s,baz=42,slow=8.2,SNR=14						
LVC				Sn	Sn	10 03 19.6	+1.4
	0.3nm,0.3s,baz=80,slow=23,SNR=3.2						
CPUP	Villa Florida	9.71	139	Pn	P	10 03 09.8	-3.5
	0.0nm,0.3s,baz=232,slow=13,SNR=2.2						
BDFB	Brasilia	16.03	80	LR	LR	10 11 49.4	
	comp=Z,93nm,21.4s,baz=259,slow=41						
PLCA	Paso Flores	22.18	192	P	P	10 05 45.9	-2.7
	2.2nm,0.6s,baz=22,slow=10,SNR=6.7						
SDV	Santo Domingo	28.49	347	LR	LR	10 18 19.3	
	comp=Z,37nm,21.4s,baz=216,slow=37						
TXAR	Lajitas Array	61.27	321	P	P	10 11 06.5	-2.4
	0.2nm,0.6s,baz=144,slow=7.8,SNR=3.2						
SCHQ	Schefferville	73.68	359	P	P	10 12 25.0	-1.5
	1.8nm,0.8s,baz=274,slow=3.1,SNR=2.4						
PDAR	Pinedale Array	74.28	327	P	P	10 12 27.8	-2.4
	0.5nm,0.6s,baz=119,slow=8.3,SNR=5.7						
YKA	Yellowknife Ar	90.42	339	P	P	10 13 52.7	-0.9
	0.5nm,0.8s,baz=123,slow=4.4,SNR=11						
WRA	Warramunga Arr	137.05	206	PKP	PKPdf	10 20 16.6	-0.2
	0.3nm,0.9s,baz=169,slow=1.8,SNR=3.6						

IGQ 17 10:11:39.8, 1.07S×**81.42W, h12**^{km}±8^{km}**, mb4.3, 2C-5D, Error ellipse: s-maj=8.8km s-min=4.8km az=180.0, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.87	89	⇑P	Pb	10 11 54.7	-1.6
SALI	Salinas	1.19	159	P	Pb	10 12 02.6	+0.8
IGUA	Igualata	2.81	99	P	Pn	10 12 26.5	+1.1
JUA2	San Juan 2	2.94	73	⇓P	Pn	10 12 28.5	+1.2
TERV	Terraza Guagua	2.95	72	P	Pn	10 12 28.3	+0.9
PINO	Pino	2.95	72	P	Pn	10 12 28.0	+0.6
ARRY	Arrayan	2.99	98	⇓P	Pn	10 12 29.1	+1.1
ARRY				S	Sn	10 13 03.5	-0.7
YANA	Yana	3.00	72	P	Pn	10 12 28.6	+0.5
PISA	Pisayambo	3.03	90	P	Pn	10 12 30.2	+1.6
ULBA	Ulba	3.03	97	⇓P	Pn	10 12 30.5	+1.9
ULBA				S	Sn	10 13 06.5	+1.3
VC1	Cotopaxi 1	3.04	82	P	Pn	10 12 31.1	+2.4
TAMB	Tambo	3.07	83	P	Pn	10 12 31.4	+2.2
ANTI	Antisana	3.31	79	P	Pn	10 12 34.2	+1.7
COTA	Cotacachi	3.38	66	⇑P	Pn	10 12 34.9	+1.3
CAYR	Refugio Cayamb	3.58	73	⇓P	Pn	10 12 39.1	+2.8
CAYR				S	Sn	10 13 22.0	+3.1
ELAGU	Cayambe Volc	3.58	73	P	Pn	10 12 39.1	+2.7
CAYA	Cayambe	3.61	72	⇓P	Pn	10 12 39.4	+2.6
ECEN	Cerro Negro	3.92	61	P	Pn	10 12 43.2	+1.9

IGIL 17 10:17:18.8, 38.00N×9.90W, h12^{km}, ML3.0

NEIC 17 10:17:19.0, 38.26N×9.75W, MN2.8(MDD), After MDD.

INMG 17 10:17:19.1±1.5, 38.06N×9.90W, h17^{km}±6^{km}, ML2.5, Error ellipse: s-maj=8.9km s-min=3.8km az=80.0

CSEM 17 10:17:21.3±0.4, 38.35N×9.65W, h72^{km}±3^{km}, ML3.6/2, Error ellipse: s-maj=8.8km s-min=3.3km az=64.0

MDD 17 10:17:18.8±1.4, **38.05N**×**10.04W, h42**^{km}±40^{km}**, mb4.2**/9, **Error ellipse: s-maj=13.7km s-min=7.0km az=68.0, PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIS	Lisbon	0.96	46	eP	P	10 17 35.2	-0.8
LIS				eS	S	10 17 46.9	-1.8
LIS				eS	S	10 17 46.9	-1.8
LIS				AML	AML	10 17 50.0	
	comp=N,282nm,0.3s						
PLOU	Loures	1.08	40	eP	P	10 17 37.4	-0.3
PLOU				eS	S	10 17 50.7	-1.0
	comp=N,79nm,0.2s						
PLOU	Loures	1.08	40	P	P	10 17 37.4	-0.3
PLOU				S	S	10 17 50.1	-1.6
PLOU	Loures	1.08	40	eP	P	10 17 37.4	-0.3
PLOU				eS	S	10 17 50.7	-1.0
	comp=N,79nm,0.2s						
PTEO	Sao Teotonio	1.16	116	eP	P	10 17 37.9	-0.8
PTEO				eS	S	10 17 51.5	-2.1
	comp=N,56nm,0.3s						
MOE	Montemor	1.41	70	eP	P	10 17 41.1	-1.3
MOE				eS	S	10 17 57.8	-2.2
ALMR	Almeirim	1.59	46	eP	P	10 17 44.4	-0.6
ALMR				eS	S	10 18 03.2	-1.3
ALMR				eS	S	10 18 03.2	-1.2
ALMR				AML	AML	10 18 04.6	
	comp=N,211nm,0.4s						
PBEJ	Beja	1.71	90	ePn	P	10 17 44.9	-1.8
PBEJ				eSn	S	10 18 04.7	-2.9
	comp=N,17nm,0.1s						
PBEJ	Beja	1.71	90	ePn	P	10 17 44.9	-1.8
PBEJ				eSn	S	10 18 04.7	-2.9
	comp=N,17nm,0.1s						
PALC	Alcoutim	2.11	105	eSn	S	10 18 14.6	-3.0
	comp=N,15nm,0.1s						
PALC	Alcoutim	2.11	105	eSn	S	10 18 14.6	-3.0
	comp=N,15nm,0.1s						
EMIN	Mina Concepcio	2.68	95	P	P	10 17 59.2	-1.2
	comp=N,2.0nm,0.3s,SNR=25						
EMIN				S	S	10 18 28.8	-3.2
	comp=N,5.1nm,0.2s,SNR=10						
EMIN	Mina Concepcio	2.68	95	P	P	10 17 59.2	-1.3
	comp=N,2.0nm,0.3s,SNR=25						
EMIN				S	S	10 18 28.8	-3.1
	comp=N,5.1nm,0.2s,SNR=10						
PCBR	Castelo Branco	2.68	47	eSn	S	10 18 28.4	-3.5
	comp=N,11nm,0.1s						
PCBR	Castelo Branco	2.68	47	Sn	S	10 18 28.5	-3.4
MTE	Manteigas	3.04	39	eSn	S	10 18 37.1	-4.0
	comp=N,15nm,0.2s						
MTE	Manteigas	3.04	39	Sn	S	10 18 37.3	-3.8
PVIS	Viseu	3.13	31	ePn	P	10 18 05.3	-1.7
PVIS				eSn	S	10 18 39.6	-3.9
	comp=N,24nm,0.1s						
PVIS	Viseu	3.13	31	Pn	P	10 18 05.3	-1.7
PVIS				Sn	S	10 18 39.5	-4.0
PVRL	Vila Real	3.68	28	eSn	S	10 18 51.9	-5.5
	comp=N,13nm,0.1s						
PVRL	Vila Real	3.68	28	Sn	S	10 18 51.8	-5.6
ELOB	Lobios	4.10	21	P	P	10 18 18.2	-2.4
	comp=N,1.5nm,0.1s,SNR=7.9						
ELOB				S	S	10 19 01.2	-6.8
	comp=N,6.0nm,0.1s,SNR=12						
ELOB	Lobios	4.10	21	P	P	10 18 18.2	-2.4
	comp=N,1.5nm,0.1s,SNR=7.9						
ELOB				S	S	10 19 01.2	-6.8
	comp=N,6.0nm,0.1s,SNR=12						
EZAM	Zamans	4.22	14	P	P	10 18 20.0	-2.3
	comp=N,3.8nm,0.1s,SNR=7.9						
EZAM				S	S	10 19 04.7	-6.3
	comp=N,2.7nm,0.1s,SNR=7.9						
EADA	Adamuz	4.31	87	P	P	10 18 21.6	-2.0
	comp=N,2.3nm,0.1s,SNR=10						
EADA				S	S	10 19 07.8	-5.4
	comp=N,5.5nm,0.1s,SNR=4.9						
EADA	Adamuz	4.31	87	P	P	10 18 21.6	-2.0
	comp=N,2.3nm,0.1s,SNR=10						
EADA				S	S	10 19 07.8	-5.4
	comp=N,5.5nm,0.1s,SNR=4.9						
PBRG	Braganca	4.52	33	ePn	P	10 18 24.1	-2.5
PBRG				eSn	S	10 19 12.2	-6.4
	comp=N,11nm,0.1s						
PBRG	Braganca	4.52	33	Pn	P	10 18 24.2	-2.4
PBRG				Sn	S	10 19 12.2	-6.4
ECAL	Calabor	4.64	32	P	P	10 18 25.9	-2.3
	comp=N,1.9nm,0.1s,SNR=12						
ECAL				S	S	10 19 14.5	-7.0
	comp=N,3.7nm,0.1s,SNR=5.0						
ECAL	Calabor	4.64	32	P	P	10 18 25.9	-2.3
	comp=N,1.9nm,0.1s,SNR=12						
ECAL				S	S	10 19 14.5	-7.0
	comp=N,3.7nm,0.1s,SNR=5.0						
EBAN	Banos Encina	4.93	87	S	S	10 19 20.6	-8.4
	comp=N,3.4nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	4.96	9	P	P	10 18 29.3	-3.4
	comp=N,4.7nm,0.1s,SNR=5.7						
EMAZ				S	S	10 19 20.8	-8.7
	comp=N,6.6nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	4.96	9	P	P	10 18 29.3	-3.4
	comp=N,4.7nm,0.1s,SNR=5.7						
EMAZ				S	S	10 19 20.8	-8.7
	comp=N,6.6nm,0.1s,SNR=7.9						
EINC	Incio	5.04	23	P	P	10 18 31.1	-2.8
	comp=N,1.1nm,0.2s,SNR=5.5						
EINC				S	S	10 19 23.3	-8.3
	comp=N,2.1nm,0.1s						
EINC	Incio	5.04	23	P	P	10 18 31.1	-2.8
	comp=N,1.1nm,0.2s,SNR=5.5						
EINC				S	S	10 19 23.3	-8.3
	comp=N,2.1nm,0.1s						
EPON	Pontenova	5.71	22	P	P	10 18 39.8	-3.4
	comp=N,2.1nm,0.2s,SNR=7.9						
EPON				S	S	10 19 39.4	-8.9
	comp=N,1.4nm,0.2s,SNR=7.9						
EPON	Pontenova	5.71	22	P	P	10 18 39.8	-3.4
	comp=N,2.1nm,0.2s,SNR=7.9						
EPON				S	S	10 19 39.4	-8.9
	comp=N,1.4nm,0.2s,SNR=7.9						
EARI	Arriondas	6.40	33	P	P	10 18 50.5	-2.4
	comp=N,0.7nm,0.2s,SNR=7.9						
EARI				S	S	10 19 57.3	-8.2
	comp=N,1.7nm,0.2s,SNR=6.3						
EARI	Arriondas	6.40	33	P	P	10 18 50.5	-2.4
	comp=N,0.7nm,0.2s,SNR=7.9						
EARI				S	S	10 19 57.3	-8.2
	comp=N,1.7nm,0.2s,SNR=6.3						

NEIC 17 10:26:13.1, 45.05S×167.07E, h12^{km}, ML3.8(WEL), After WEL.

WEL 17 10:26:13.2±0.3, **45.02S**×**167.07E, h12**^{km}**, ML3.6**/6, **2C-1D, Error ellipse: s-maj=3.4km s-min=1.4km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.46	173	⇓P*	Pb	10 26 22.1	-0.6
DCZ				S*	Sb	10 26 28.4	-0.7
DCZ				S*	Sb	10 26 28.5	-0.6
MSZ	Milford Sound	0.70	60	P*	Pb	10 26 26.2	-0.7
MSZ				S*	Sb	10 26 35.2	-1.0
MLZ	Mavora Lakes	0.84	113	P	Pb	10 26 28.3	-1.0
MLZ				S	Sb	10 26 39.7	-0.6
MLZ	Mavora Lakes	0.84	113	P*	Pb	10 26 28.3	-1.0
MLZ				S*	Sb	10 26 39.7	-0.7
WHZ	Wether Hill Ro	1.07	145	⇑P	Pb	10 26 32.0	-1.1
WHZ	Wether Hill Ro	1.07	145	⇑P*	Pb	10 26 32.0	-1.1
WKZ	Wanaka	1.40	83	eP	Pn	10 26 38.3	-0.3
WKZ	Wanaka	1.40	83	PN	Pn	10 26 38.3	-0.3
JCZ	Jackson Bay	1.54	52	PN	Pn	10 26 40.9	+0.3
EAZ	Earnscleugh	1.60	98	P	Pn	10 26 40.9	-0.6
EAZ	Earnscleugh	1.60	98	PN	Pn	10 26 40.9	-0.6
EAZ				SN	Sn	10 27 00.5	-1.6
TUZ	Tuapeka	2.03	118	eP	Pn	10 26 46.4	-1.2
TUZ	Tuapeka	2.03	118	PN	Pn	10 26 46.4	-1.3
TUZ				SN	Sn	10 27 10.7	-2.4
LBZ	Lake Benmore	2.31	75	eP	Pn	10 26 49.7	-2.0
LBZ	Lake Benmore	2.31	75	PN	Pn	10 26 49.7	-1.9
FOZ	Fox Glacier	2.38	53	ePN	Pn	10 26 50.1	-2.5
ODZ	Otahua Downs	2.53	92	eP	Pn	10 26 52.7	-2.2
ODZ	Otahua Downs	2.53	92	PN	Pn	10 26 52.7	-2.2
ODZ				SN	Sn	10 27 21.9	-4.0
QRZ	Quartz Range	5.80	46	ePN	Pn	10 27 36.6	-4.5

CSEM 17 10:33:56.5, 36.38N×55.35E, h10^{km}, ML3.6, After TEH

TEH 17 10:33:56.5, 36.38N×55.35E, h10^{km}, Mn3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IANJ	Anjiloo	1.48	232	Pn	Pn	10 34 23.1	-0.2
ISHM	Shahmirzad	1.76	252	Pn	Pn	10 34 26.2	-1.1
ILAS	Lasjerd	2.18	244	Pn	Pn	10 34 32.3	-1.0
ISHV	Shirvan	2.21	58	Pn	Pn	10 34 32.7	-1.0
IFIR	Firoozkooh	2.23	251	Pn	Pn	10 34 33.2	-0.8
IFIR	Firoozkooh	2.23	251	Lg		10 35 06.2	
ISFR	Esferayen	2.23	72	Pn	Pn	10 34 33.4	-0.7
IKRD	Kardeh	2.58	80	Pn	Pn	10 34 50.6	+11
IKRD	Kardeh	2.58	80	Pn	Pn	10 34 50.6	+11
IQHU	Quchan	2.66	74	Pn	Pn	10 34 42.3	+2.1
IQHU	Quchan	2.66	74	Sn	Sn	10 35 12.4	-0.4
IDMV	Damavand	2.81	254	Pn	Pn	10 34 43.2	+0.9
IPAY	Payeh	2.94	88	Pn	Pn	10 34 45.4	+1.1
IPAY	Payeh	2.94	88	Pn	Pn	10 34 45.4	+1.1
IVRN	Varamin	3.25	246	Lg		10 35 37.4	
IVRN	Varamin	3.25	246	Pn	Pn	10 34 47.7	-0.9
IMYA	Miamay	3.84	89	Pn	Pn	10 34 57.4	+0.4
IRAZ	Razeghan	4.50	259	Lg		10 36 17.0	

CASC 17 10:43:12.2±1.8, **12.59N**×**87.90W, h62**^{km}±41^{km}**, MD3.8, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.68	5	⇓eP	P	10 43 27.1	+0.6
CNCH				eS	S	10 43 39.5	+2.4
BLLM	Bellamira	0.91	339	eP	P	10 43 29.2	0.0
BLLM				eS	S	10 43 42.5	+0.5
VSM	San Miguel	0.91	336	eP	P	10 43 30.0	+0.7
VSM				eS	S	10 43 43.9	+1.8
TEL3	Telica 3	1.03	91	eP	P	10 43 30.7	-0.2
TEL3				eS	S	10 43 45.3	+0.4
CNGN	Cerro Negro	1.18	94	eP	P	10 43 32.7	-0.2
CAHU	Cacacuatique	1.21	345	eP	P	10 43 34.1	+0.8
COPN	Copaltepe	1.34	108	eP	P	10 43 34.4	-0.9
LCBS	La Ceiba	1.49	315	⇓eP	P	10 43 37.0	-0.3
LCBS				eS	S	10 43 55.5	-0.4
LFRS	El Faro	1.53	312	eP	P	10 43 37.3	-0.6
LFRS				eS	S	10 43 56.2	-0.5
APYN	Apoyeque	1.56	103	eP	P	10 43 37.9	-0.3
APYN				eS	S	10 43 57.5	0.0
LBRS	Las Brisas	1.59	316	eP	P	10 43 38.7	-0.1
LBRS				eS	S	10 43 58.9	+0.6
TICN	Ticuantepe	1.72	109	eS	S	10 44 00.6	-0.8
BOQS	Boqueron	1.76	310	eP	P	10 43 40.7	-0.3
BOQS				eS	S	10 44 02.6	+0.3
APON	Apoyo	1.91	110	eP	P	10 43 43.0	-0.2
SBLS	San Blas	2.09	307	eP	P	10 43 45.4	-0.2
SBLS				eS	S	10 44 11.8	+1.5
SNJE	San Jose	2.09	308	eP	P	10 43 45.7	+0.1
SNJE				eS	S	10 44 11.2	+0.8
RTR	El Retiro	2.14	307	eP	P	10 43 46.1	-0.2
RTR				eS	S	10 44 12.7	+1.0
JCR	Jicaral	3.86	135	eP	P	10 44 10.4	-0.2
PRS1	Puriscal	4.37	126	eP	P	10 44 20.1	+2.4
LCR2	La Lucha 2	4.76	126	eP	P	10 44 24.7	+1.5

IDC 17 10:44:58.0±2.6, **1.24N**×**98.62E, mb3.7**/5, **mb1 3.9**/6, **mb1mx3.7**/18, **mbtmp3.7**/6, **ML4.3**/1, **Error ellipse: s-maj=125.3km s-min=21.3km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	17.11	1	P	P	10 48 59.3	-1.0
	0.4nm,0.3s,baz=198,slow=14,SNR=5.0						
WRA	Warramunga Arr	40.86	123	P	P	10 52 41.1	-2.3
	0.8nm,0.6s,baz=300,slow=9.0,SNR=10.0						
ASAR	Alice Springs	42.29	128	P	P	10 52 53.5	-1.8
	0.5nm,0.7s,baz=304,slow=7.0,SNR=6.1						
STKA	Stephens Creek	52.34	133	P	P	10 54 12.7	-1.3
	2.6nm,1.0s,baz=306,slow=8.7,SNR=4.8						
ZAL	Zalesovo	53.75	350	P	P	10 54 21.8	-2.3
	0.8nm,0.8s,baz=350,slow=8.8,SNR=4.9						
BVAR	Borovoye Array	56.69	340	P	P	10 54 42.9	-2.6
	0.5nm,0.6s,baz=129,slow=9.2,SNR=2.1						

IDC 17 10:57:51.2±12.0, 2.55N×95.96E, h64^{km}±108^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.9/19, mbtmp4.1/12, ML4.3/1, MS3.4/1, Ms1 3.6/1, ms1mx2.9/25, Error ellipse: s-maj=78.8km s-min=14.5km az=56.0

BJI 17 10:57:57.9, 2.77N×96.09E, h137^{km}, mB5.0, mb4.5

NEIC 17 10:57:59.4±2.1, 2.78N×96.31E, h133^{km}±21^{km}, mb4.5/18, Error ellipse: s-maj=13.5km s-min=7.2km az=56.0

ISC 17 10:57:57.8±2.9, **2.74N**±0.09×**96.3E**±0.1, **h137**^{km}±27^{km}, **h157**^{km}±2.7^{km}**:pP-P, n46, σ0^{s}90**/45, **mb4.4**/34, **1C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	15.84	9	P	P	11 01 30.5	-4.0
	9.3nm,0.8s						
CMAR	Chiang Mai Arr	15.84	9	P	P	11 01 33.5	-1.0
	0.5nm,0.3s,baz=198,slow=11,SNR=29						
CMAR				LR	LR	11 08 51.5	
	comp=Z,133nm,19.1s,baz=200,slow=41						
PALK	Pallekele	16.14	287	P	P	11 01 41.0	+2.8
	4.7nm,0.8s						
GYA	Guiyang	25.61	22	⇑iP	P	11 03 16.9	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
JIRN	Jiri	26.59	340	eP	P	11 03 25.0	-0.2
	comp=Z,36nm,0.6s,mb5.2						
PKI	Pulchoki	26.79	338	eP	P	11 03 27.7	+0.7
GUN	Gumba	26.93	339	eP	P	11 03 27.7	-0.6
	comp=Z,28nm,0.7s,mb5.0						
DMN	Daman	26.93	338	eP	P	11 03 29.0	+0.6
	comp=Z,22nm,0.8s,mb4.8						
KKN	Kakani	27.03	338	eP	P	11 03 28.3	-1.0
	comp=Z,30nm,0.8s,mb5.0						
LSA	Lhasa	27.25	350	P	P	11 03 31.4	+0.1
LSA	Lhasa	27.25	350	eP	P	11 03 30.1	-1.2
	comp=Z,24nm,1.1s,mb4.7						
LSA				e		11 03 45.8	
GKN	Gorkha	27.47	337	eP	P	11 03 31.9	-1.4
	comp=Z,23nm,0.6s,mb5.0						
KOLN	Koldanda	27.68	335	eP	P	11 03 34.1	-1.1
	comp=Z,19nm,0.9s,mb4.8						
LZH	Lanzhou	33.92	11	⇓P	P	11 04 29.4	-0.4
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.8						
GTA	Gaotai	36.65	5	P	P	11 04 52.6	-0.2
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
HHC	Hu-ho-hao-te	40.38	18	eP	P	11 05 25.3	+1.5
HHC				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.4						
HHC				AMB	AMB		
	comp=Z,89nm,4.9s						
BJT	Baijiatuau	41.27	23	eP	P	11 05 32.5	+1.4
	comp=Z,18nm,0.7s,mb4.8						
BJT				epP	pP	11 06 08.1	+6.3
BJI	Beijing	41.29	23	P	P	11 05 32.8	+1.6
BJI				AP	pP	11 06 08.1	+6.1

BJI				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.0						
BJI				AMB	AMB		
	comp=Z,113nm,4.3s						
BJI	Beijing	41.29	23	P	P	11 05 32.8	+1.6
	comp=Z,26nm,0.7s,mb5.0						
BJI				pP	pP	11 06 08.1	+6.1
WMQ	Urumqi	41.61	351	eP	P	11 05 34.6	+0.7
WRA	Warramunga Arr	43.64	123	P	P	11 05 50.7	0.0
	comp=Z,1.5nm,0.6s,mb3.8,baz=300,slow=9.3,SNR=17						
WRAB	Tennant Creek	43.65	123	eP	P	11 05 50.4	-0.3
	comp=Z,14nm,1.3s,mb4.4						
ASAR	Alice Springs	45.06	128	P	P	11 06 01.9	-0.1
	comp=Z,0.9nm,0.6s,mb3.6,baz=300,slow=8.0,SNR=13						
KS15	Wonju Array Si	45.11	36	eP	P	11 06 01.9	-0.3
SONM	Songino Array	45.77	10	P	P	11 06 08.3	+1.1
	comp=Z,5.8nm,0.6s,mb4.4,baz=191,slow=9.8,SNR=7.9						
ULN	Ulaanbaatar	45.91	10	P	P	11 06 08.2	-0.1
	comp=Z,2.0nm,0.5s,mb4.0						
ULN				epP	pP	11 06 43.2	+3.6
TLY	Talaya	49.16	6	eP	P	11 06 33.2	-0.4
	comp=Z,3.3nm,0.8s,mb4.0						
TLY				epP	pP	11 07 09.6	+4.4
KURK	Kurchatov	50.08	345	P	P	11 06 35.4	-5.2
	comp=Z,4.0nm,0.7s,mb4.2						
HIA	Hailar	50.51	20	eP	P	11 06 44.6	+0.8
	comp=Z,9.0nm,1.2s,mb4.3						
ZAL	Zalesovo	51.90	351	P	P	11 06 54.3	0.0
	comp=Z,4.1nm,0.5s,mb4.3,baz=310,slow=6.1,SNR=20						
CTA	Charters Tower	54.03	117	P	P	11 07 10.8	+0.4
	comp=Z,2.8nm,0.8s,mb4.1,baz=287,slow=12,SNR=3.6						
CTAO	Charters Tower	54.03	117	P	P	11 07 09.6	-0.9
	comp=Z,14nm,1.2s,mb4.6						
BVAR	Borovoye Array	54.50	341	P	P	11 07 12.6	-0.9
	comp=Z,1.1nm,0.5s,mb3.8,baz=138,slow=8.6,SNR=11						
BRVK	Borovoye	54.56	341	eP	P	11 07 12.3	-1.7
	comp=Z,4.1nm,0.8s,mb4.2						
BRVK				epP	pP	11 07 46.5	+0.4
STKA	Stephens Creek	55.08	132	P	P	11 07 18.0	0.0
	comp=Z,2.8nm,1.0s,mb4.0,baz=276,slow=13,SNR=5.1						
STKA	Stephens Creek	55.08	132	eP	P	11 07 17.6	-0.4
YAK	Yakutsk	64.22	17	eP	P	11 08 19.5	-0.6
	comp=Z,31nm,0.9s,mb5.1						
TAU	Tasmania Unive	64.59	141	eP	P	11 08 22.2	-0.6
	comp=Z,22nm,1.1s,mb4.9						
LSZ	Lusaka	69.66	253	P	P	11 09 01.7	+6.7
	comp=Z,3.6nm,1.2s,mb4.0						
MA2	Magadan	70.36	26	eP	P	11 08 59.2	+0.6
	comp=Z,7.8nm,1.1s,mb4.3						
AKASG	Malin Array Be	73.48	322	P	P	11 09 16.5	-0.6
	comp=Z,0.2nm,0.3s,mb3.4,baz=86,slow=5.3,SNR=3.4						
FINES	FINESS Array B	78.21	332	P	P	11 09 43.5	0.0
	comp=Z,1.5nm,0.7s,mb3.8,baz=63,slow=4.3,SNR=5.0						
FINES	FINESS Array B	78.21	332	P	P	11 09 43.5	0.0
ARCES	ARCESS Array B	80.78	340	P	P	11 09 58.0	+0.9
	comp=Z,1.2nm,0.6s,mb3.7,baz=56,slow=4.4,SNR=4.9						
GERES	GERESS Array B	83.05	319	P	P	11 10 10.3	+1.0
	comp=Z,0.4nm,0.6s,mb3.4,baz=108,slow=3.1,SNR=4.1						
TXAR	Lajitas Array	142.83	30	PKP	PKPdf	11 17 17.7	+2.1
	comp=Z,0.1nm,0.4s,baz=269,slow=0.9,SNR=6.4						

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*IDC **17** 10:58:17.4±1.0, 2.40N×95.79E, mb4.3/12, mb1 4.4/13, mb1mx4.3/20, mbtmp4.3/13, ML4.3/1, Error ellipse: s-maj=52.0km s-min=16.0km az=52.0*

ISC 17 10:58:20.8±0.8, 2.4N±0.1×95.9E±0.2, h33^{km}, n14, σ0^{s}54/13, mb4.2/12, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.21	10	Pn	P	11 02 08.4	+0.6
	0.4nm,0.3s,baz=196,slow=11,SNR=9.0						
WRA	Warramunga Arr	43.80	122	P	P	11 06 25.2	-0.4
	2.7nm,0.8s,mb4.0,baz=301,slow=9.2,SNR=5.5						
ASAR	Alice Springs	45.18	127	P	P	11 06 36.8	+0.1
	1.2nm,0.6s,mb3.9,baz=300,slow=7.9,SNR=6.8						
SONM	Songino Array	46.14	10	P	P	11 06 43.5	-0.5
	4.7nm,0.5s,mb4.7,baz=188,slow=9.1,SNR=7.2						
ZAL	Zalesovo	52.15	352	P	P	11 07 29.8	-0.3
	5.4nm,0.5s,mb4.7,baz=291,slow=4.1,SNR=12						
CTA	Charters Tower	54.23	117	P	P	11 07 45.9	-0.1
	3.4nm,0.8s,mb4.3,baz=278,slow=4.6,SNR=2.2						
BVAR	Borovoye Array	54.67	341	P	P	11 07 47.7	-1.1
	1.8nm,0.6s,mb4.3,baz=149,slow=8.6,SNR=5.8						
STKA	Stephens Creek	55.15	132	P	P	11 07 53.0	+0.4
	3.1nm,1.0s,mb4.3,baz=290,slow=10,SNR=4.1						
AKASG	Malin Array Be	73.49	322	P	P	11 09 51.4	-0.5
	0.3nm,0.3s,mb3.7,baz=89,slow=5.0,SNR=4.5						
FINES	FINESS Array B	78.31	333	P	P	11 10 19.0	-0.1
	1.2nm,0.6s,mb4.0,baz=90,slow=5.7,SNR=4.1						
ARCES	ARCESS Array B	80.94	340	P	P	11 10 33.7	+0.6
	3.3nm,1.0s,mb4.2,baz=96,slow=8.2,SNR=2.7						
GERES	GERESS Array B	83.03	319	P	P	11 10 44.6	+0.3
	0.3nm,0.7s,mb3.5,baz=190,slow=8.1,SNR=3.4						
HFS	Hagfors	84.01	330	P	P	11 10 49.9	+0.9
	12nm,1.3s,mb4.9,baz=97,slow=12,SNR=2.7						
TXAR	Lajitas Array	143.29	29	PKP	PKPdf	11 17 53.2	+0.9
	0.3nm,0.7s,baz=225,slow=1.3,SNR=2.9						

IGQ 17 11:03:01.5, 1.16S×81.20W, h3^{km}±18^{km}, mb4.1, 2C-3D, Error ellipse: s-maj=42.9km s-min=7.9km az=171.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	Igualata	2.58	97	P	Pn	11 03 46.2	+1.4
IGUA				S	Sn	11 04 19.0	+1.9
JUA2	San Juan 2	2.75	70	⇑P	Pn	11 03 48.5	+1.1
JUA2				S	Sn	11 04 23.1	+1.4
ARRY	Arrayan	2.76	97	⇓P	Pn	11 03 48.9	+1.4
TERV	Terraza Guagua	2.77	69	P	Pn	11 03 48.7	+1.1
PINO	Pino	2.77	69	⇓P	Pn	11 03 48.6	+0.9
PINO				S	Sn	11 04 24.6	+2.5
ULBA	Ulba	2.80	96	P	Pn	11 03 50.6	+2.5
PISA	Pisayambo	2.81	88	P	Pn	11 03 50.8	+2.7
YANA	Yana	2.82	68	P	Pn	11 03 48.8	+0.5
VC1	Cotopaxi 1	2.84	80	P	Pn	11 03 51.4	+2.8
ANTI	Antisana	3.11	77	⇑P	Pn	11 03 54.8	+2.3
CAYR	Refugio Cayamb	3.40	70	⇓P	Pn	11 03 59.4	+2.9
CAYA	Cayambe	3.43	69	P	Pn	11 03 59.7	+2.7
ECEN	Cerro Negro	3.78	59	P	Pn	11 04 04.5	+2.6

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*IDC **17** 11:10:01.6±0.9, 2.43N×95.84E, mb4.2/12, mb1 4.3/13, mb1mx4.2/21, mbtmp4.2/13, ML4.4/1, MS3.2/1, Ms1 3.4/1, ms1mx2.7/22, Error ellipse: s-maj=49.1km s-min=17.1km az=53.0*

*NEIC **17** 11:10:06.3±0.5, 2.53N×95.95E, h30^{km}, mb4.6/6, Error ellipse: s-maj=21.2km s-min=9.8km az=57.0*

*BJI **17** 11:10:10.2, 3.27N×95.81E, h34^{km}, mB4.9, mb4.6*

ISC 17 11:10:04.9±0.7, 2.5N±0.1×95.9E±0.1, h33^{km}, n27, σ0^{s}84/26, mb4.3/20, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	15.91	288	P	P	11 13 53.7	+5.7
CMAR	Chiang Mai Arr	16.14	10	Pn	P	11 13 52.5	+1.6
	0.5nm,0.3s,baz=199,slow=11,SNR=10						
CMAR				LR	LR	11 19 50.0	
	comp=Z,78nm,20.4s,baz=215,slow=36						
CMAR	Chiang Mai Arr	16.14	10	Pn	P	11 13 52.5	+1.6
CMAR				LR	LR	11 19 50.0	
LSA	Lhasa	27.44	351	eP	P	11 15 49.4	-0.6
	21nm,1.2s,mb4.5						
GTA	Gaotai	36.91	5	P	P	11 17 11.8	-0.7
GTA				AP	pP	11 17 18.9	-3.4
GTA				XP	sP	11 17 21.6	-4.9
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.6						
HHC	Hu-ho-hao-te	40.71	18	eP	P	11 17 44.3	+0.2
HHC				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.4						
HHC				AMB	AMB		
	comp=Z,97nm,3.0s						
BJT	Baijiatuau	41.62	24	eP	P	11 17 51.8	+0.1
	comp=Z,23nm,0.8s,mb4.8						
BJI	Beijing	41.64	24	P	P	11 17 52.1	+0.3
BJI				AMB	AMB		
	comp=Z,22nm,0.7s,mb4.9						
BJI	Beijing	41.64	24	P	P	11 17 52.1	+0.3
	comp=Z,22nm,0.7s,mb4.9						
WRA	Warramunga Arr	43.78	122	P	P	11 18 09.8	+0.2
	comp=Z,1.1nm,1.2s,mb3.5,baz=324,slow=12,SNR=7.8						
AAK	Ala-Archa	44.33	337	P	P	11 18 13.7	0.0
	comp=Z,2.7nm,1.0s,mb3.9						
ASAR	Alice Springs	45.17	127	P	P	11 18 20.9	+0.2
	comp=Z,0.7nm,0.6s,mb3.7,baz=298,slow=7.9,SNR=10						
SONM	Songino Array	46.06	10	P	P	11 18 27.3	-0.2
	comp=Z,3.5nm,0.6s,mb4.5,baz=189,slow=8.8,SNR=6.1						
ULN	Ulaanbaatar	46.21	10	eP	P	11 18 28.0	-0.6
	comp=Z,4.3nm,0.9s,mb4.4						
KURK	Kurchatov	50.23	346	eP	P	11 18 58.1	-1.7
	comp=Z,4.8nm,1.0s,mb4.5						
ZAL	Zalesovo	52.09	352	P	P	11 19 13.6	-0.2
	comp=Z,3.8nm,0.5s,mb4.6,baz=321,slow=5.7,SNR=13						
BVAR	Borovoye Array	54.63	341	P	P	11 19 31.7	-0.9
	comp=Z,1.0nm,0.6s,mb4.1,baz=133,slow=8.4,SNR=8.3						
STKA	Stephens Creek	55.15	132	P	P	11 19 35.9	-0.8
	comp=Z,2.7nm,0.9s,mb4.3,baz=297,slow=9.2,SNR=4.2						
STKA	Stephens Creek	55.15	132	P	P	11 19 35.9	-0.8
FINES	FINESS Array B	78.28	333	P	P	11 22 03.0	+0.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=121,slow=11,SNR=4.0						
ARCES	ARCESS Array B	80.90	340	P	P	11 22 17.4	+0.3
	comp=Z,7.7nm,1.0s,mb4.6,baz=113,slow=6.9,SNR=3.3						
GERES	GERESS Array B	83.02	319	P	P	11 22 30.8	+2.5
	comp=Z,1.0nm,0.9s,mb3.8,baz=90,slow=4.9,SNR=3.1						
HFS	Hagfors	83.98	330	P	P	11 22 34.0	+1.0
	comp=Z,8.5nm,1.2s,mb4.7,baz=111,slow=12,SNR=3.6						
DAVOX	Davos	85.50	317	P	P	11 22 40.2	-0.7
	comp=Z,1.3nm,0.4s,mb4.4,baz=42,slow=21,SNR=2.3						
DAVOX	Davos	85.50	317	P	P	11 22 40.2	-0.7
EKA	Eskdalemuir Ar	93.14	326	P	P	11 23 17.4	+0.5
	comp=Z,0.3nm,0.4s,mb4.1,baz=319,slow=28,SNR=2.7						
TXAR	Lajitas Array	143.20	29	PKP	PKPdf	11 29 38.8	+2.5
	comp=Z,0.2nm,0.6s,baz=225,slow=1.3,SNR=3.3						

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*IDC **17** 11:10:39.4±0.7, 13.60N×92.83E, mb4.1/14, mb1 4.2/15, mb1mx4.1/22, mbtmp4.0/15, ML3.5/1, Error ellipse: s-maj=31.5km s-min=13.4km az=58.0*

*NEIC **17** 11:10:43.7±0.5, 13.73N×92.82E, h30^{km}, mb4.3/7, Error ellipse: s-maj=15.1km s-min=6.9km az=57.0*

ISC 17 11:10:42.2±0.5, 13.73N±0.06×92.90E±0.07, h33^{km}, n33, σ0^{s}98/31, mb4.2/18, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	7.47	50	P	P	11 12 36.5	+5.0
CMAR	Chiang Mai Arr	7.47	50	Pn	Pn	11 12 32.2	+0.5
	0.2nm,0.3s,baz=241,slow=14,SNR=12						
CMAR				Sn	Sn	11 13 55.4	-0.9
	0.4nm,0.3s,baz=240,slow=28,SNR=5.5						
JIRN	Jiri	15.21	337	eP	P	11 14 15.6	-0.7
PKI	Pulchoki	15.44	334	eP	P	11 14 18.9	-0.5
	19nm,0.5s						
GUN	Gumba	15.55	336	eP	P	11 14 19.5	-1.3
	5.7nm,0.3s						
DMN	Daman	15.61	333	eP	P	11 14 20.0	-1.5
	24nm,0.6s						
LSA	Lhasa	15.97	354	P	P	11 14 26.6	+0.4
	7.9nm,0.8s						
GKN	Gorkha	16.15	333	eP	P	11 14 27.4	-1.0
	13nm,0.3s						
KOLN	Koldanda	16.44	330	eP	P	11 14 30.3	-1.8
	26nm,0.6s						
ENH	Enshi	22.48	40	eP	P	11 15 40.5	+0.5
	14nm,0.8s,mb4.4						
SONM	Songino Array	35.81	16	P	P	11 17 41.9	+1.4
	2.4nm,1.1s,mb4.0,baz=203,slow=11,SNR=2.2						
KURK	Kurchatov	38.67	345	eP	P	11 18 05.2	+0.8
	4.2nm,1.1s,mb4.1						
ZAL	Zalesovo	40.62	353	P	P	11 18 22.0	+1.5
	1.0nm,0.7s,mb3.5,baz=314,slow=7.4,SNR=5.9						
ZAL	Zalesovo	40.62	353	P	P	11 18 22.0	+1.5
BVAR	Borovoye Array	43.09	340	P	P	11 18 42.5	+1.7
	1.1nm,1.1s,mb3.5,baz=121,slow=8.4,SNR=2.8						
NWAO	Narrogin (SRO)	51.90	154	P	P	11 19 49.5	-0.5
	5.5nm,0.8s,mb4.6,baz=75,slow=22,SNR=4.3						
NWAO	Narrogin (SRO)	51.90	154	P	P	11 19 49.5	-0.5
WRA	Warramunga Arr	52.74	129	P	P	11 19 56.0	-0.4
	2.2nm,0.5s,mb4.3,baz=300,slow=9.9,SNR=19						
WRA				PcP	PcP	11 21 05.8	0.0
	1.1nm,0.5s,baz=319,slow=3.0,SNR=13						
WRAB	Tennant Creek	52.75	129	eP	P	11 19 55.4	-1.0
	7.7nm,0.7s,mb4.7						
ASAR	Alice Springs	54.67	132	P	P	11 20 10.1	-0.5
	1.3nm,0.4s,mb4.3,baz=308,slow=6.9,SNR=33						
ASAR				PcP	PcP	11 21 13.0	-0.1
	0.8nm,0.7s,baz=316,slow=3.8,SNR=4.5						
KMBO	Kilima Mbogo	57.07	260	eP	P	11 20 32.1	+4.0
	2.5nm,1.0s,mb4.2						
BRTR	Keskin Array B	57.78	308	P	P	11 20 32.3	-0.4
	0.9nm,0.6s,mb4.0,baz=116,slow=8.6,SNR=3.2						
CTA	Charters Tower	62.31	122	P	P	11 21 03.4	-0.6
	5.0nm,1.0s,mb4.6,baz=332,slow=20,SNR=2.2						
CTAO	Charters Tower	62.31	122	P	P	11 21 03.5	-0.5
	22nm,1.4s,mb5.1						
STKA	Stephens Creek	65.05	135	P	P	11 21 21.8	0.0
	2.3nm,0.8s,mb4.3,baz=309,slow=9.4,SNR=5.0						
FINES	FINESS Array B	67.01	331	P	P	11 21 33.8	+0.1
	0.8nm,0.7s,mb3.9,baz=183,slow=32,SNR=3.1						
ARCES	ARCESS Array B	69.38	340	P	P	11 21 49.8	+1.4
	3.2nm,0.8s,mb4.3,baz=96,slow=8.2,SNR=3.4						
GERES	GERESS Array B	72.70	317	P	P	11 22 10.3	+1.7
	0.4nm,0.5s,mb3.6,baz=90,slow=6.7,SNR=5.0						
HFS	Hagfors	72.83	329	P	P	11 22 09.4	+0.2
	2.2nm,1.0s,mb4.0,baz=90,slow=8.6,SNR=2.8						
ILAR	Eielson Array	89.80	22	P	P	11 23 39.1	+0.7
	0.4nm,0.6s,mb3.9,baz=300,slow=4.2,SNR=10						
TXAR	Lajitas Array	134.29	20	PKP	PKPdf	11 30 01.5	+3.9
	0.2nm,0.5s,baz=45,slow=1.3,SNR=4.5						
TXAR	Lajitas Array	134.29	20	PKP	PKPdf	11 30 01.5	+3.9
PLCA	Paso Flores	149.45	205	PKPbc	PKPdf	11 30 30.6	+6.8
	0.6nm,0.8s,baz=301,slow=5.0,SNR=3.2						

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*MOS **17** 11:18:46.9±1.1, 5.10N×92.39E, h33^{km}, mb4.8/13, Error ellipse: s-maj=14.1km s-min=7.9km az=103.2*

*BJI **17** 11:18:46.5, 4.66N×92.28E, h52^{km}, mB5.0, mb4.6, Ms4.7, Msz4.2*

*NEIC **17** 11:18:48.2±0.4, 5.12N×92.34E, h30^{km}, mb4.8/16, Error ellipse: s-maj=8.6km s-min=7.3km az=52.0*

*IDC **17** 11:18:50.2±6.9, 5.13N×92.42E, h45^{km}±67^{km}, mb4.0/16, mb1 4.1/17, mb1mx4.0/24, mbtmp4.2/17, ML3.6/1, MS4.1/12, Ms1 4.1/12, ms1mx3.9/24, Error ellipse: s-maj=29.6km s-min=12.7km az=49.0*

ISC 17 11:18:46.4±0.4, 5.09N±0.05×92.36E±0.04, h30^{km}, (h33^{km}±1.4^{km}:pP-P), n108, σ1^{s}29/117, mb4.6/43, MS4.2/17, 2D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	Port Blair	6.54	3	eP	Pn	11 20 21.7	-1.4
PBA				e	Sn	11 21 29.6	-7.9
SNG	Songkhla	8.47	75	P	P	11 20 49.0	-1.1
	90nm,1.0s						
PALK	Pallekele	11.79	281	Pn	P	11 21 32.7	-3.1
	592nm,0.5s,SNR=28						
PALK	Pallekele	11.79	281	ePn	P	11 21 31.7	-4.1
PALK				eSn	S	11 23 27.3	-20
CM31	Chiang Mai Arr	14.76	25	eP	P	11 22 14.0	-1.1
	19nm,0.9s						
CMAR	Chiang Mai Arr	14.76	25	P	P	11 22 14.3	-0.8
	0.1nm,0.3s,baz=217,slow=14,SNR=20						
CMAR				LR	LR	11 28 55.3	
	comp=Z,284nm,18.7s,baz=190,slow=41						
KKTK	Khon Kaen	15.18	42	P	P	11 22 21.0	+0.4
	309nm,1.0s						
VIS	Vishakhapatnam	15.35	326	eP	P	11 22 19.8	-3.1
VIS				eS	S	11 24 54.9	-17
TRD	Trivandrum	15.67	283	eP	P	11 22 24.0	-2.9
TRD				e		11 22 25.2	
	comp=Z,12nm,0.4s						
NANT	Nan	15.88	30	P	P	11 22 26.0	-3.6
CHRT	Chiangrai	16.38	26	⇓P	P	11 22 36.0	0.0
	comp=Z,105nm,1.1s						
BWNR	Bhubaneshwar	16.41	338	eP	P	11 22 33.2	-3.1
BWNR				eS	S	11 25 22.0	-15
HYB	Hyderabad	18.24	313	eP	P	11 22 57.0	-2.4
HYB				eS	S	11 26 19.0	+0.3
HYB	Hyderabad	18.24	313	i P	P	11 22 57.0	-2.4
HYB				eS	S	11 26 19.0	+0.3
AGT	Agartala	18.72	357	i P	P	11 23 03.0	-2.1
BLSP	Bilaspur	19.62	331	eP	P	11 23 13.8	-1.9
BLSP				e		11 23 29.8	
	comp=Z,63nm,0.9s						
BLSP				eS	S	11 26 40.4	-9.3
LATR	Latur	20.34	312	e	P	11 23 26.6	+3.4
LATR				eS	S	11 26 56.6	-7.9
KAD	Karad	21.55	306	eP	P	11 23 34.8	-0.7
KAD				e		11 23 37.5	
	comp=Z,42nm,1.6s						
QIZ	Qiongzhong	21.97	49	P	P	11 23 40.9	+1.1
QIZ				S	S	11 27 43.8	+8.3
QIZ				LR	LR		
	comp=N,2µm,14.0s,MS4.6						
QIZ				LR	LR		
	comp=E,483nm,13.7s,MS4.6						
QIZ				LR	LR		
	comp=Z,612nm,15.3s,MS4.1						
QIZ	Qiongzhong	21.97	49	eP	P	11 23 40.3	+0.5
	comp=Z,333nm,1.9s,mb5.4						
QIZ				e		11 23 49.8	
QIZ				e		11 23 55.1	
KMI	Kunming	22.27	26	P	P	11 23 43.4	+0.6
KMI				AMB	AMB		
	comp=Z,24nm,0.9s,mb4.6						
KMI	Kunming	22.27	26	P	P	11 23 43.4	+0.6
	comp=Z,24nm,0.9s,mb4.6						
POO	Poona	22.48	308	eP	P	11 23 45.0	+0.2
POO				i S	S	11 27 44.0	-0.8
BHPL	Bhopal	23.10	323	eP	P	11 23 50.2	-0.8
BHPL				e		11 23 54.3	
	comp=Z,31nm,0.9s						
JIRN	Jiri	23.20	346	eP	P	11 23 53.8	+1.9
	comp=Z,97nm,0.8s,mb5.3						
PKI	Pulchoki	23.32	344	eP	P	11 23 54.8	+1.7
DMN	Daman	23.44	344	eP	P	11 23 56.2	+2.0
GUN	Gumba	23.52	346	eP	P	11 23 56.5	+1.5
	comp=Z,240nm,1.3s,mb5.5						
KKN	Kakani	23.56	344	eP	P	11 23 56.9	+1.5
GKN	Gorkha	23.95	343	eP	P	11 24 00.4	+1.3
KOLN	Koldanda	24.05	341	eP	P	11 24 01.3	+1.1
	comp=Z,183nm,1.4s,mb5.3						
LSA	Lhasa	24.51	357	P	P	11 24 06.8	+2.2
LSA	Lhasa	24.51	357	eP	P	11 24 05.7	+1.1
LSA				e		11 24 14.2	
LSA				e		11 24 23.0	
LSA				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.0						
LSA	Lhasa	24.51	357	eP	P	11 24 05.7	+1.1
	comp=Z,38nm,0.7s,mb5.0						
LSA				e		11 24 14.2	
LSA				e		11 24 23.0	
LSA				e		11 24 29.3	
LSA				eS	S	11 28 37.9	+18
GYA	Guiyang	25.27	31	⇓iP	P	11 24 13.5	+1.6
GYA				AP	pP	11 24 22.8	+2.2
GYA				PP	PP	11 24 51.9	+1.4
GYA				S	S	11 28 40.0	+7.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GYA				AMB	AMB		
	comp=Z,110nm,3.2s						
GYA				LR	LR		
	comp=N,900nm,11.7s,MS4.6						
GYA				LR	LR		
	comp=E,780nm,15.6s,MS4.6						
GYA				LR	LR		
	comp=Z,450nm,10.5s						
PTH	Pithoragarh	26.91	336	eP	P	11 24 29.0	+2.0
PTH				e		11 29 42.0	
NDI	New Delhi	27.52	330	eP	P	11 24 31.5	-1.0
CD2	Chengdu	27.84	21	P	P	11 24 35.1	-0.3
ENH	Enshi	29.80	31	P	P	11 24 52.6	-0.5
	comp=Z,7.5nm,0.8s,mb4.5						
LZH	Lanzhou	32.61	17	eP	P	11 25 17.1	-0.6
LZH				AMB	AMB		
	comp=Z,26nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,105nm,4.5s						
LZH				LR	LR		
	comp=N,219nm,13.4s						
LZH				LR	LR		
	comp=Z,295nm,17.0s,MS4.0						
LZH	Lanzhou	32.61	17	eP	P	11 25 17.1	-0.6
	comp=Z,26nm,1.3s,mb5.0						
LZH				pP	pP	11 25 25.6	-1.0
LZH				sP	sP	11 25 28.7	-1.7
LZH				LR	LR		
	comp=Z,290nm,17.0s,MS4.0						
XAN	Xi’an	32.66	26	P	P	11 25 17.1	-1.0
XAN				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.9						
GTA	Gaotai	34.83	10	P	P	11 25 37.5	+0.6
GTA				S	S	11 30 58.3	-6.5
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,95nm,5.7s						
GTA				LR	LR		
	comp=N,210nm,20.2s						
GTA				LR	LR		
	comp=E,207nm,14.1s						
GTA				LR	LR		
	comp=Z,156nm,17.9s,MS3.8						
KSH	Kashi	37.34	339	eP	P	11 25 59.0	+0.9
KSH				eAP	pP	11 26 09.8	+2.8
KSH				eXP	sP	11 26 14.3	+3.5
KSH				ePP	PP	11 27 30.0	+4.0
KSH				eS	S	11 31 45.0	+1.6
KSH				ePS		11 31 55.0	
KSH				eXS		11 32 05.6	
KSH				eSS	SS	11 34 23.0	+7.1
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
KSH				AMB	AMB		
	comp=Z,40nm,2.6s,mb4.8						
KSH				LR	LR		
	comp=N,320nm,6.8s						
KSH				LR	LR		
	comp=E,550nm,6.4s						
WMQ	Urumqi	38.80	355	eP	P	11 26 08.0	-2.3
WMQ				PP	PP	11 27 42.0	-1.0
WMQ				S	S	11 32 03.0	-2.4
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.5						
WMQ				LR	LR		
	comp=N,175nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=E,204nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,148nm,20.0s,MS3.8						
ULHL	Ulahol	39.69	341	P	P	11 26 18.2	+0.6
	SNR=5.6						
KZA	Kyzart	39.87	340	P	P	11 26 20.4	+1.2
	SNR=9.8						
UCH	Uchtor	40.25	339	P	P	11 26 23.5	+1.2
	SNR=13						
AML	Almayashu	40.46	338	P	P	11 26 25.2	+1.2
	SNR=22						
KBK	Karagaybulak	40.48	340	P	P	11 26 25.9	+1.6
	SNR=6.7						
TKM2	Tokmak 2	40.50	341	P	P	11 26 25.1	+0.7
	SNR=11						
AAK	Ala-Archa	40.62	340	P	P	11 26 26.3	+1.0
	SNR=8.8						
AAK	Ala-Archa	40.62	340	eP	P	11 26 25.0	-0.3
AAK				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.5						
AAK	Ala-Archa	40.62	340	eP	P	11 26 25.0	-0.3
	comp=Z,16nm,1.2s,mb4.5						
FRU	Bishkek	40.75	340	eP	P	11 26 27.0	+0.6
EKS2	Erkin-Say	40.89	339	P	P	11 26 28.7	+1.1
	SNR=8.0						
USP	Ospenovka	41.17	340	P	P	11 26 30.5	+0.6
	SNR=9.8						
SONM	Songino Array	44.26	14	P	P	11 26 54.8	-0.2
	comp=Z,3.2nm,0.9s,mb4.0,baz=153,slow=2.8,SNR=4.8						
ULN	Ulaanbaatar	44.45	14	eP	P	11 26 54.2	-2.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
ULN	Ulaanbaatar	44.45	14	eP	P	11 26 54.2	-2.4
	comp=Z,3.9nm,0.9s,mb4.1						
NWAO	Narrogin (SRO)	44.57	150	P	P	11 26 58.0	+0.2
	comp=Z,5.6nm,0.8s,mb4.5,baz=265,slow=23,SNR=2.5						
ZAK	Zakamensk	46.06	10	eP	P	11 27 05.5	-3.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
KURK	Kurchatov	46.91	348	eP	P	11 27 15.1	-1.0

KURK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
KURK	**Kurchatov**	**46.91**	**348**	*e*P	**P**	**11 27 15.1**	**-0.9**
	comp=Z,18nm,1.1s,mb4.9						
TLY	**Talaya**	**47.38**	**10**	*e*P	**P**	**11 27 20.0**	**+0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TLY	**Talaya**	**47.38**	**10**	*e*P	**P**	**11 27 20.0**	**+0.2**
	comp=Z,5.0nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**48.18**	**122**	P	**P**	**11 27 26.5**	**+0.1**
	comp=Z,1.7nm,0.7s,mb4.2,baz=299,slow=9.1,SNR=16						
WRAB	**Tennant Creek**	**48.19**	**122**	*e*P	**P**	**11 27 25.5**	**-1.0**
WRAB				*e*		11 27 41.7	
WRAB				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**48.19**	**122**	*e*P	**P**	**11 27 25.5**	**-0.9**
	comp=Z,16nm,0.9s,mb5.0						
WRAB				*e*		11 27 41.7	
CN2	**Changchun**	**48.31**	**32**	*e*P	**P**	**11 27 29.8**	**+2.7**
CN2				*e*AP	pP	11 27 40.0	+3.7
CN2				*e*S	**S**	**11 34 27.8**	**+3.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CN2				AMB	AMB		
	comp=Z,220nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s,MS4.8						
CN2				LR	LR		
	comp=E,400nm,11.0s,MS4.8						
CN2				LR	LR		
	comp=Z,360nm,12.0s,MS4.6						
ZAL	**Zalesovo**	**49.09**	**354**	P	**P**	**11 27 33.4**	**+0.4**
	comp=Z,3.5nm,0.5s,mb4.7,baz=311,slow=5.8,SNR=21						
ZAL				LR	LR	11 50 41.8	
	comp=Z,257nm,20.1s,MS4.2,baz=283,slow=39						
ASAR	**Alice Springs**	**49.58**	**127**	P	**P**	**11 27 37.0**	**-0.1**
	comp=Z,1.0nm,0.8s,mb3.9,baz=318,slow=8.4,SNR=8.2						
ASAR				LR	LR	11 48 56.9	
	comp=Z,82nm,19.3s,MS3.7,baz=119,slow=36						
HIA	**Hailar**	**49.76**	**23**	*e*P	**P**	**11 27 38.0**	**-0.2**
HIA				pmax	pmax		
	comp=Z,12nm,1.0s						
HIA	**Hailar**	**49.76**	**23**	*e*P	**P**	**11 27 38.0**	**-0.2**
	comp=Z,12nm,1.0s,mb4.9						
BVAR	**Borovoye Array**	**51.08**	**343**	P	**P**	**11 27 47.5**	**-0.7**
	comp=Z,5.8nm,0.8s,mb4.6,baz=143,slow=7.4,SNR=26						
BRVK	**Borovoye**	**51.14**	**343**	*e*P	**P**	**11 27 46.7**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BRVK	**Borovoye**	**51.14**	**343**	*e*P	**P**	**11 27 46.7**	**-1.9**
	comp=Z,7.3nm,0.8s,mb4.7						
JHJ	**Hachijo jima 2**	**52.16**	**51**	LR	LR	11 50 23.2	
	comp=Z,213nm,19.6s,MS4.2,baz=195,slow=36						
GNI	**Garni**	**55.16**	**316**	P	**P**	**11 28 20.2**	**+1.5**
	comp=Z,1.7nm,0.4s,mb4.4,baz=174,slow=14,SNR=2.4						
KLR	**Kul'dur**	**55.17**	**30**	*e*P	**P**	**11 28 21.9**	**+3.3**
BOD	**Bodaibo**	**55.26**	**14**	*e*P	**P**	**11 28 18.7**	**-0.4**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
KMBO	**Kilima Mbogo**	**55.39**	**265**	P	**P**	**11 28 20.0**	**-0.7**
KMBO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KMBO	**Kilima Mbogo**	**55.39**	**265**	P	**P**	**11 28 20.9**	**+0.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=36,slow=17,SNR=3.3						
KMBO				LR	LR	11 47 11.4	
	comp=Z,183nm,21.3s,MS4.1,baz=92,slow=31						
KMBO	**Kilima Mbogo**	**55.39**	**265**	P	**P**	**11 28 20.0**	**-0.7**
	comp=Z,3.2nm,1.0s,mb4.3						
PMG	**Port Moresby**	**56.48**	**105**	P	**P**	**11 28 27.7**	**-0.8**
PMG	**Port Moresby**	**56.48**	**105**	P	**P**	**11 28 27.6**	**-0.8**
	comp=Z,3.7nm,0.7s,mb4.5,baz=215,slow=15,SNR=2.2						
SVE	**Sverdlovsk**	**57.36**	**340**	*e*P	**P**	**11 28 33.0**	**-1.2**
SVE				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.4						
ASF	**Jabal al Asfar**	**58.29**	**305**	LR	LR	11 52 22.3	
	comp=Z,103nm,18.5s,MS4.0,baz=350,slow=34						
CTA	**Charters Tower**	**58.56**	**117**	LR	LR	11 54 47.2	
	comp=Z,175nm,20.2s,MS4.2,baz=63,slow=37						
MALT	**Malatya**	**58.96**	**312**	P	**P**	**11 28 39.2**	**-6.4**
STKA	**Stephens Creek**	**59.53**	**132**	P	**P**	**11 28 48.8**	**-0.9**
	comp=Z,1.4nm,0.6s,mb4.2,baz=328,slow=2.3,SNR=5.0						
STKA	**Stephens Creek**	**59.53**	**132**	P	**P**	**11 28 49.2**	**-0.4**
BRTR	**Keskin Array B**	**62.94**	**312**	P	**P**	**11 29 11.7**	**-0.9**
	comp=Z,1.1nm,0.8s,mb4.0,baz=129,slow=7.8,SNR=4.9						
AKASG	**Malin Array Be**	**69.26**	**323**	P	**P**	**11 29 50.7**	**-2.0**
	comp=Z,0.2nm,0.3s,mb3.5,baz=94,slow=3.4,SNR=5.1						
MLR	**Muntele Rosu**	**69.94**	**317**	P	**P**	**11 29 57.7**	**+0.7**
	comp=Z,4.6nm,0.7s,mb4.5,baz=150,slow=4.0,SNR=9.5						
TIXI	**Tiksi**	**70.30**	**12**	*e*P	**P**	**11 29 58.5**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LBTB	**Lobatse**	**71.37**	**242**	LR	LR	11 57 11.6	
	comp=Z,137nm,18.9s,MS4.2,baz=90,slow=32						
BOSA	**Boshof**	**72.62**	**238**	*e*P	**P**	**11 30 16.1**	**+2.6**
BOSA				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
BOSA	**Boshof**	**72.62**	**238**	*e*Pn	**P**	**11 30 16.1**	**+2.6**
	comp=Z,10nm,1.2s,mb4.6						
FINES	**FINESS Array B**	**74.35**	**333**	P	**P**	**11 30 22.1**	**-0.7**
	comp=Z,1.5nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=4.3						
FINES				LR	LR	12 05 38.8	
	comp=Z,197nm,18.8s,MS4.4,baz=143,slow=38						
GERES	**GERESS Array B**	**78.72**	**319**	P	**P**	**11 30 48.4**	**+0.7**
	comp=Z,2.2nm,0.8s,mb4.1,baz=104,slow=5.5,SNR=14						
BRG	**Berggiesshubel**	**78.76**	**321**	*e*P	**P**	**11 30 48.5**	**+0.7**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BRG	**Berggiesshubel**	**78.76**	**321**	*e*P	**P**	**11 30 48.5**	**+0.7**
	comp=Z,2.0nm,0.9s,mb4.0						
KHC	**Kasperske Hory**	**78.83**	**319**	*e*P	**P**	**11 30 48.0**	**-0.2**
DAVOX	**Davos**	**81.17**	**316**	P	**P**	**11 31 01.8**	**+1.0**
	comp=Z,3.3nm,0.7s,mb4.4,baz=65,slow=3.6,SNR=3.9						
NOA	**NORSAR Array B**	**81.28**	**331**	LR	LR	12 10 37.9	
	comp=Z,140nm,19.7s,MS4.3,baz=295,slow=38						
VNDA	**Vanda**	**90.58**	**168**	LR	LR	12 07 35.4	
	comp=Z,185nm,18.5s,MS4.5,baz=309,slow=32						
DBIC	**Dimbokro**	**96.56**	**277**	LR	LR	12 10 35.7	
	comp=Z,81nm,21.1s,MS4.2,baz=66,slow=32						

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*MOS **17** 11:39:25.0±1.2,8.06N×94.21E,h33^{km},mb4.9/19,Error ellipse: s-maj=15.1km s-min=7.9km az=96.6*

*BJI **17** 11:39:25.3,7.92N×94.25E,h40^{km},mB4.9,mb4.5,Ms4.6, Msz4.2*

*NEIC **17** 11:39:26.7±0.5,8.11N×94.27E,h30^{km},mb4.7/22,Error ellipse: s-maj=10.5km s-min=9.6km az=66.0*

*IDC **17** 11:39:31.9±4.8,8.27N×94.39E,h74^{km}±43^{km},mb3.8/13, mb1 4.0/14,mb1mx3.9/20,mbtmp4.1/14,ML4.0/1,MS4.0/7, Ms1 4.1/7,ms1mx3.7/20,Error ellipse: s-maj=29.5km s-min=13.9km az=57.0*

ISC 17 11:39:24.4±1.7,**8.08N**±0.06×**94.27E**±0.06,**h28**^{km}±12^{km}, **h31**^{km}±3.9^{km}**:pP-P,n94,**σ1^{s}**21**/94,**mb4.5**/47,**MS4.2**/16, **2C-3D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**11.27**	**23**	*e*P	**P**	**11 42 04.8**	**-2.0**
	12nm,1.0s						
CMAR	**Chiang Mai Arr**	**11.27**	**23**	P	**P**	**11 42 07.0**	**+0.1**
	0.3nm,0.3s,baz=212,slow=14,SNR=34						
CMAR				LR	LR	11 46 39.0	
	comp=Z,446nm,18.8s,baz=220,slow=39						
PALK	**Pallekele**	**13.47**	**267**	P	**P**	**11 42 37.7**	**+1.4**
	11nm,1.1s						
HYB	**Hyderabad**	**17.90**	**303**	*i* P	**P**	**11 43 35.0**	**+1.7**
KMI	**Kunming**	**18.78**	**25**	P	**P**	**11 43 45.3**	**+1.3**
KMI				PP	PP	11 44 04.8	+4.7
KMI				S	**S**	**11 47 13.3**	**+4.3**
KMI				AMB	AMB		
	comp=Z,11nm,1.2s						
KMI				AMB	AMB		
	comp=Z,50nm,3.3s						
KMI				LR	LR		
	comp=N,412nm,13.2s						
KMI				LR	LR		
	comp=E,589nm,16.7s						
KMI				LR	LR		
	comp=Z,394nm,15.8s						
KMI	**Kunming**	**18.78**	**25**	P	**P**	**11 43 45.2**	**+1.2**
KMI				S	**S**	**11 47 13.3**	**+4.3**
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
KMI	**Kunming**	**18.78**	**25**	P	**P**	**11 43 45.2**	**+1.2**
	comp=Z,11nm,1.2s						
KMI				pP		11 43 51.6	
KMI				sP		11 43 56.1	
KMI				PP	PP	11 44 04.7	+4.6
KMI				S	**S**	**11 47 13.3**	**+4.3**
KMI				sS		11 47 23.7	
KMI				sSS		11 47 25.1	
JIRN	**Jiri**	**20.92**	**340**	*e*P	**P**	**11 44 07.1**	**-0.3**
	comp=Z,110nm,1.2s						
PKI	**Pulchoki**	**21.12**	**338**	*e*P	**P**	**11 44 08.9**	**-0.5**
	comp=Z,88nm,1.3s,mb4.9						
DMN	**Daman**	**21.27**	**337**	*e*P	**P**	**11 44 10.1**	**-0.8**
	comp=Z,57nm,1.0s,mb4.8						
KKN	**Kakani**	**21.37**	**338**	*e*P	**P**	**11 44 11.0**	**-0.9**
	comp=Z,68nm,1.1s,mb4.9						
LSA	**Lhasa**	**21.70**	**353**	P	**P**	**11 44 15.6**	**+0.3**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
LSA	**Lhasa**	**21.70**	**353**	*e*P	**P**	**11 44 13.8**	**-1.5**
LSA				pmax	pmax		
	comp=Z,44nm,1.3s,mb4.7						
LSA	**Lhasa**	**21.70**	**353**	*e*P	**P**	**11 44 13.8**	**-1.5**
	comp=Z,44nm,1.3s,mb4.7						
GYA	**Guiyang**	**21.74**	**31**	⇓*i*P	**P**	**11 44 17.0**	**+1.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
GYA				AMB	AMB		
	comp=Z,170nm,3.9s						
GYA				LR	LR		
	comp=N,870nm,13.2s,MS4.5						
GYA				LR	LR		
	comp=E,1μm,13.5s,MS4.5						
GYA				LR	LR		
	comp=Z,580nm,11.4s,MS4.2						
GKN	**Gorkha**	**21.80**	**337**	*e*P	**P**	**11 44 15.5**	**-0.8**
	comp=Z,42nm,0.8s,mb4.9						
KOLN	**Koldanda**	**22.03**	**334**	*e*P	**P**	**11 44 17.9**	**-0.7**
	comp=Z,224nm,1.6s,mb5.3						
CD2	**Chengdu**	**24.38**	**20**	P	**P**	**11 44 44.3**	**+2.7**
PTH	**Pithoragarh**	**25.11**	**330**	*e*P	**P**	**11 44 49.1**	**+0.5**
NDI	**New Delhi**	**26.04**	**324**	*e*	**P**	**11 45 01.5**	**+4.2**
ENH	**Enshi**	**26.28**	**31**	*e*P	**P**	**11 44 58.0**	**-1.4**
	comp=Z,28nm,1.3s,mb4.6						
DDI	**Dehra Dun**	**26.84**	**328**	*e*	**P**	**11 45 05.1**	**+0.5**
XAN	**Xi'an**	**29.15**	**26**	P	**P**	**11 45 24.8**	**-0.7**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.3						
WHN	**Wuhan**	**29.20**	**37**	*e*P	**P**	**11 45 25.0**	**-1.0**
LZH	**Lanzhou**	**29.21**	**16**	*e*P	**P**	**11 45 27.5**	**+1.4**
LZH				*e*PP	PP	11 46 22.4	+1.4
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,87nm,5.3s						
LZH				LR	LR		
	comp=N,512nm,13.2s						
LZH				LR	LR		
	comp=Z,817nm,17.0s,MS4.4						
LZH	**Lanzhou**	**29.21**	**16**	*e*P	**P**	**11 45 27.5**	**+1.4**
LZH				*PP	pP	11 45 36.5	+2.3
LZH				*SP	sP	11 45 40.6	+2.8
LZH				*e*		11 46 22.4	
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb4.8						
LZH	**Lanzhou**	**29.21**	**16**	*e*P	**P**	**11 45 27.5**	**+1.4**
	comp=Z,28nm,1.5s,mb4.8						
LZH				pP	pP	11 45 36.5	+2.3
LZH				sP	sP	11 45 40.6	+2.8
LZH				*e*PP	PP	11 46 22.4	+1.4
GTA	**Gaotai**	**31.59**	**8**	P	**P**	**11 45 50.1**	**+3.1**
GTA				AP	pP	11 46 01.6	+6.4
GTA				XP	sP	11 46 08.4	+10
GTA				PP	PP	11 46 55.0	+3.2
GTA				S	**S**	**11 50 53.9**	**+1.0**
GTA				SCS	ScS	11 56 12.8	-2.8
GTA				AMB	AMB		
	comp=Z,5.0nm,1.7s,mb4.1						
GTA				AMB	AMB		
	comp=Z,118nm,6.1s						
GTA				LR	LR		
	comp=N,247nm,16.7s,MS4.0						
GTA				LR	LR		
	comp=E,149nm,16.7s,MS4.0						
GTA				LR	LR		
	comp=Z,242nm,18.3s,MS3.9						
NJ2	**Nanjing**	**33.03**	**40**	*e*P	**P**	**11 45 56.8**	**-2.9**
NJ2				PP	PP	11 47 10.4	-0.2
NJ2				S	**S**	**11 51 17.0**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,670nm,5.4s						
NJ2				LR	LR		
	comp=N,540nm,14.9s,MS4.4						
NJ2				LR	LR		
	comp=E,410nm,17.6s,MS4.4						
NJ2				LR	LR		
	comp=Z,440nm,19.5s,MS4.2						
KSH	**Kashi**	**35.34**	**335**	*e*P	**P**	**11 46 20.1**	**+0.6**
KSH				*e*PP	PP	11 47 39.3	+0.1
KSH				*e*S	**S**	**11 51 51.1**	**-0.1**
KSH				*e*PS		11 52 00.0	
KSH				*e*XS		11 52 16.0	
KSH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
KSH				AMB	AMB		
	comp=Z,80nm,3.5s						
KSH				LR	LR		
	comp=N,260nm,6.0s						
KSH				LR	LR		
	comp=E,460nm,6.3s						
WMQ	**Urumqi**	**36.06**	**352**	P	**P**	**11 46 25.0**	**-0.6**
WMQ				S	**S**	**11 52 01.0**	**-1.3**
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,146nm,20.0s,MS3.9						
WMQ				LR	LR		
	comp=E,184nm,21.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,114nm,20.0s,MS3.6						
HHC	**Hu-ho-hao-te**	**36.08**	**23**	*e*P	**P**	**11 46 31.5**	**+5.8**
HHC				AP	pP	11 46 41.4	+7.4
HHC				XP	sP	11 46 44.8	+7.3
HHC				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
HHC				AMB	AMB		
	comp=Z,161nm,8.3s						
HHC				LR	LR		
	comp=N,310nm,20.4s,MS4.3						
HHC				LR	LR		
	comp=E,377nm,20.4s,MS4.3						
HHC				LR	LR		
	comp=Z,617nm,18.0s,MS4.4						
JOW	**Kunigami**	**37.23**	**56**	LR	LR	12 04 15.1	
	comp=Z,200nm,19.1s,MS3.9,baz=340,slow=40						
BJT	**Baijiatuau**	**37.34**	**28**	*e*P	**P**	**11 46 37.8**	**+1.4**
BJT				pmax	pmax		
	comp=Z,43nm,1.5s						
BJT	**Baijiatuau**	**37.34**	**28**	*e*P	**P**	**11 46 37.8**	**+1.4**
	comp=Z,43nm,1.5s,mb5.0						
BJI	**Beijing**	**37.36**	**28**	P	**P**	**11 46 38.4**	**+1.9**
BJI				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.2						
BJI				LR	LR		
	comp=Z,180nm,20.7s,MS3.9						
BJI	**Beijing**	**37.36**	**28**	P	**P**	**11 46 38.4**	**+1.9**
	comp=Z,5.0nm,1.2s,mb4.2						
AAK	**Ala-Archa**	**38.56**	**336**	*i* P	**P**	**11 46 46.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
AAK	**Ala-Archa**	**38.56**	**336**	*e*P	**P**	**11 46 45.7**	**-1.0**
	comp=Z,7.9nm,1.1s,mb4.4						
SONM	**Songino Array**	**40.93**	**12**	P	**P**	**11 47 07.2**	**+1.1**
	comp=Z,1.2nm,0.4s,mb3.8,baz=169,slow=6.3,SNR=4.4						
ULN	**Ulaanbaatar**	**41.11**	**13**	*e*P	**P**	**11 47 08.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
ULN	**Ulaanbaatar**	**41.11**	**13**	*e*P	**P**	**11 47 08.5**	**+1.0**
	comp=Z,3.5nm,1.1s,mb3.9						
ZAK	**Zakamensk**	**42.83**	**8**	*e*P	**P**	**11 47 22.1**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.6						
KURK	**Kurchatov**	**44.44**	**346**	*d* *i*P	**P**	**11 47 35.4**	**+0.7**
KURK	**Kurchatov**	**44.44**	**346**	*e*P	**P**	**11 47 34.2**	**-0.5**
	comp=Z,20nm,1.3s,mb4.7						
CN2	**Changchun**	**44.79**	**32**	*e*P	**P**	**11 47 38.4**	**+0.8**
NWAO	**Narrogin (SRO)**	**46.27**	**153**	P	**P**	**11 47 49.1**	**-0.4**
NWAO				pmax	pmax		
	comp=Z,37nm,1.3s						
NWAO	**Narrogin (SRO)**	**46.27**	**153**	P	**P**	**11 47 52.4**	**+2.8**
	comp=Z,31nm,1.2s,mb5.1,baz=61,slow=5.8,SNR=2.4						
NWAO	**Narrogin (SRO)**	**46.27**	**153**	P	**P**	**11 47 49.1**	**-0.4**
	comp=Z,37nm,1.3s,mb5.2						
HIA	**Hailar**	**46.28**	**23**	*e*P	**P**	**11 47 49.9**	**+0.5**
HIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HIA	**Hailar**	**46.28**	**23**	*e*P	**P**	**11 47 49.9**	**+0.5**
	comp=Z,8.3nm,1.1s,mb4.6						
ZAL	**Zalesovo**	**46.36**	**352**	P	**P**	**11 47 49.4**	**-0.5**
	comp=Z,2.2nm,0.5s,mb4.3,baz=303,slow=11,SNR=12						
NVS	**Novosibirsk**	**47.46**	**351**	*i* P	**P**	**11 47 57.6**	**-1.0**
NVS				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
NVS				pmax	pmax		
	comp=N,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.4s						
WRA	**Warramunga Arr**	**48.28**	**126**	P	**P**	**11 48 04.8**	**-0.7**
	comp=E,0.5nm,0.6s,mb3.7,baz=305,slow=8.7,SNR=11						
WRA				PcP	PcP	11 49 32.9	+0.4
	comp=E,1.0nm,1.1s,baz=306,slow=3.3,SNR=4.5						
WRAB	**Tennant Creek**	**48.28**	**126**	*e*P	**P**	**11 48 04.8**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.9						
WRAB	**Tennant Creek**	**48.28**	**126**	*e*P	**P**	**11 48 04.8**	**-0.7**
	comp=Z,16nm,1.2s,mb4.9						
BVAR	**Borovoye Array**	**48.83**	**341**	P	**P**	**11 48 09.1**	**-0.2**
	comp=Z,2.1nm,0.9s,mb4.1,baz=143,slow=7.4,SNR=8.5						
BRVK	**Borovoye**	**48.90**	**341**	*e*P	**P**	**11 48 08.7**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BRVK	**Borovoye**	**48.90**	**341**	*e*P	**P**	**11 48 08.7**	**-1.0**
	comp=Z,4.8nm,1.0s,mb4.5						
ASAR	**Alice Springs**	**49.95**	**130**	P	**P**	**11 48 17.9**	**-0.4**
	comp=Z,1.3nm,0.8s,mb4.0,baz=305,slow=5.5,SNR=7.2						
ASAR				LR	LR	12 10 06.8	
	comp=Z,110nm,19.2s,MS3.9,baz=124,slow=37						
BOD	**Bodaibo**	**51.92**	**13**	*e*P	**P**	**11 48 32.1**	**-0.7**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0						
KMBO	**Kilima Mbogo**	**57.57**	**264**	*e*P	**P**	**11 49 16.7**	**+2.1**
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KMBO	**Kilima Mbogo**	**57.57**	**264**	P	**P**	**11 49 17.0**	**+2.4**
	comp=Z,6.6nm,1.1s,mb4.6,baz=45,slow=10,SNR=7.6						
KMBO	**Kilima Mbogo**	**57.57**	**264**	*e*P	**P**	**11 49 16.7**	**+2.2**
	comp=Z,6.5nm,1.0s,mb4.6						
CTA	**Charters Tower**	**58.30**	**119**	LR	LR	12 18 01.1	
	comp=Z,94nm,18.9s,MS3.9,baz=39,slow=40						
MALT	**Malatya**	**58.42**	**310**	P	**P**	**11 49 18.1**	**-2.1**
MALT				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
MALT	**Malatya**	**58.42**	**310**	P	**P**	**11 49 18.1**	**-2.1**
	comp=Z,4.8nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**60.16**	**134**	LR	LR	12 16 09.3	
	comp=Z,140nm,19.9s,MS4.1,baz=278,slow=36						
BRTR	**Keskin Array B**	**62.39**	**311**	P	**P**	**11 49 45.4**	**-1.9**
	comp=Z,2.4nm,0.9s,mb4.3,baz=127,slow=6.2,SNR=4.7						
OBN	**Obninsk**	**65.27**	**328**	⇑*e*P	**P**	**11 50 04.1**	**-1.7**
OBN				pmax	pmax		
	comp=Z,39nm,1.8s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.4						
OBN	**Obninsk**	**65.27**	**328**	P	**P**	**11 50 07.3**	**+1.5**
	comp=Z,43nm,1.5s,mb5.3						
MA2	**Magadan**	**66.52**	**28**	*e*P	**P**	**11 50 13.2**	**-0.6**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
MA2	**Magadan**	**66.52**	**28**	*e*P	**P**	**11 50 13.2**	**-0.5**
	comp=Z,7.6nm,1.0s,mb4.7						
TIXI	**Tiksi**	**67.00**	**11**	*e*P	**P**	**11 50 11.7**	**-5.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,130nm,16.0s,MS4.2						
AKASG	**Malin Array Be**	**68.07**	**322**	P	**P**	**11 50 22.1**	**-1.6**
	comp=Z,0.3nm,0.3s,mb3.8,baz=86,slow=5.0,SNR=3.8						
FINES	**FINESS Array B**	**72.59**	**332**	P	**P**	**11 50 49.1**	**-1.8**
	comp=Z,4.3nm,1.0s,mb4.3,baz=90,slow=3.8,SNR=4.3						
ARCES	**ARCESS Array B**	**75.11**	**340**	P	**P**	**11 51 05.1**	**-0.3**
	comp=Z,3.7nm,0.9s,mb4.3,baz=101,slow=4.6,SNR=3.6						
ARCES				LR	LR	12 26 02.3	
	comp=Z,204nm,21.8s,MS4.4,baz=17,slow=37						
BILL	**Bilibino**	**75.85**	**22**	*e*P	**P**	**11 51 05.9**	**-3.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.1						
BILL				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
BRG	**Berggiesshubel**	**77.67**	**320**	*e*P	**P**	**11 51 21.9**	**+1.8**
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
BRG	**Berggiesshubel**	**77.67**	**320**	*e*P	**P**	**11 51 21.9**	**+1.8**
	comp=Z,8.5nm,1.3s,mb4.5						
GERES	**GERESS Array B**	**77.76**	**318**	P	**P**	**11 51 20.6**	**-0.1**
	comp=Z,4.3nm,0.9s,mb4.4,baz=79,slow=6.8,SNR=12						
MOX	**Moxa**	**79.14**	**320**	*e*P	**P**	**11 51 28.0**	**-0.2**
MOX				pP	pP	11 51 34.0	-3.0
GRA1	**Grafenberg Arr**	**79.39**	**319**	*e*P	**P**	**11 51 30.9**	**+1.3**
	comp=Z,9.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**79.39**	**319**	*e*P	**P**	**11 51 30.9**	**+1.3**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**79.39**	**319**	*e*P	**P**	**11 51 30.9**	**+1.3**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
GRF	**Grafenberg Arr**	**79.39**	**319**	*e*P	**P**	**11 51 30.9**	**+1.3**
	comp=Z,9.0nm,1.1s,mb4.6						
NOA	**NORSAR Array B**	**79.61**	**331**	P	**P**	**11 51 31.3**	**+0.8**
	comp=Z,2.4nm,0.9s,mb4.1,baz=96,slow=5.6,SNR=3.1						
NOA				LR	LR	12 35 31.4	
	comp=Z,142nm,18.4s,MS4.3,baz=295,slow=42						
LPG	**La Plagne**	**82.56**	**315**	*e*P	**P**	**11 51 50.8**	**+4.5**
	comp=Z,56nm,1.5s,mb5.1						
LPG	**La Plagne**	**82.56**	**315**	*e*P	**P**	**11 51 50.8**	**+4.5**
LPG				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.1						
SYO	**Syowa Base**	**85.64**	**197**	⇓P	**P**	**11 52 05.2**	**+3.8**
SYO	**Syowa Base**	**85.64**	**197**	⇑PcP	PcP	11 52 08.1	+3.4
PDAR	**Pinedale Array**	**124.93**	**21**	PKP	PKPdf	11 58 23.9	-3.3
	comp=Z,0.6nm,0.9s,slow=4.4,SNR=3.7						
PLCA	**Paso Flores**	**144.79**	**200**	PKP	PKPdf	11 59 01.2	-2.7
	comp=Z,4.5nm,1.0s,baz=143,slow=7.9,SNR=4.2						
CPUP	**Villa Florida**	**147.49**	**233**	PKPbc	PKPdf	11 59 07.8	-1.2
	comp=Z,0.0nm,0.3s,baz=222,slow=14,SNR=2.0						

IGQ 17 12:01:18.1,1.69S×81.39W,h12^{km}**±12**^{km}**,mb4.0,3C, Error ellipse: s-maj=14.8km s-min=10.4km az=16.4,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**1.06**	**53**	⇑P	Pb	12 01 35.2	-2.6
IGUA	**Igualata**	**2.76**	**86**	P	Pn	12 02 04.5	+1.6
IGUA				S	Sn	12 02 36.3	-0.3
ARRY	**Arrayan**	**2.94**	**87**	P	Pn	12 02 07.1	+1.6
ARRY				S	Sn	12 02 38.1	-3.0
ULBA	**Ulba**	**2.99**	**86**	P	Pn	12 02 08.8	+2.4
PISA	**Pisayambo**	**3.07**	**78**	⇑P	Pn	12 02 11.6	+4.2
JUA2	**San Juan 2**	**3.15**	**62**	P	Pn	12 02 09.1	+0.6
VC1	**Cotopaxi 1**	**3.17**	**71**	P	Pn	12 02 12.9	+4.1
VC1				S	Sn	12 02 49.2	+2.4
TERV	**Terraza Guagua**	**3.17**	**62**	P	Pn	12 02 11.1	+2.4
PINO	**Pino**	**3.17**	**61**	P	Pn	12 02 10.2	+1.4
TAMB	**Tambo**	**3.18**	**72**	P	Pn	12 02 09.8	+0.8
YANA	**Yana**	**3.22**	**61**	P	Pn	12 02 10.7	+1.2
YANA				S	Sn	12 02 44.1	-4.1
ANTI	**Antisana**	**3.46**	**69**	⇑P	Pn	12 02 14.8	+1.9
ANTI				S	Sn	12 02 53.7	-0.5
COTA	**Cotacachi**	**3.66**	**57**	P	Pn	12 02 17.0	+1.3
CAYR	**Refugio Cayamb**	**3.79**	**63**	P	Pn	12 02 21.0	+3.5
CAYA	**Cayambe**	**3.83**	**63**	P	Pn	12 02 21.2	+3.1
CAYA				S	Sn	12 03 06.4	+2.9
ECEN	**Cerro Negro**	**4.23**	**54**	P	Pn	12 02 25.9	+2.0

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*CSEM **17** 12:18:44.7±1.3,61.34N×35.01E,h15^{km},ML4.3,Error ellipse: s-maj=28.1km s-min=13.1km az=115.0*

*IDC **17** 12:18:49.7±1.5,61.56N×34.27E,mb2.9/1,mb1 3.4/5, mb1mx3.2/20,mbtmp3.3/5,ML3.1/4,Error ellipse: s-maj=19.4km s-min=10.9km az=164.0*

*NAO **17** 12:18:51.7±3.5,61.87N×33.93E,ML2.8*

HEL 17 12:18:44.8±0.4**, 61.46N×34.99E, ML4.3, ML2.8**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

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Code   Station Name        Δ°  AZ°    Phase ID           Time     Res
                                      Op      ISC      h  m  s    ISC
JOF    Joensuu            2.26 312   ePG      Pg      12 19 25.7 -4.2
JOF                                  eS       Sn      12 19 50.9 -2.0
JOF    Joensuu            2.26 312    Pg      Pg      12 19 25.7 -4.2
JOF                                   S       Sn      12 19 50.8 -2.1
VJF    Virojoki           3.74 259   eP       Pn      12 19 43.7 -1.2
VJF                                  eS       Sn      12 20 26.5 -3.9
FIA0   FINESS Array S     4.28 274    Pn      Pn      12 19 50.6 -2.0
       baz=101,slow=14
FIA0                                  Pg      Pg      12 20 01.4 -8.9
       baz=89,slow=16
FIA0                                  Lg              12 20 50.6
       baz=72,slow=28
FIA0   FINESS Array S     4.28 274   eP       Pn      12 19 50.9 -1.8
FIA0                                 eSB      Sb      12 20 52.3 -1.1
FIA0                                  MSG             12 20 57.9
       comp=Z,1µm,0.4s
FIA0   FINESS Array S     4.28 274    P       Pn      12 19 50.8 -1.9
FIA0   FINESS Array S     4.28 274    Pg      Pg      12 20 01.4 -8.8
       SNR=90
FINES  FINESS Array B     4.28 274    Pn      Pn      12 19 50.6 -2.1
       comp=Z,0.7nm,0.3s,baz=99,slow=15,SNR=31
FINES                                 Sn      Sn      12 20 38.5 -5.6
       comp=Z,1.0nm,0.3s,baz=88,slow=23,SNR=3.4
FINES                                 Lg              12 20 54.3
       comp=Z,2.5nm,0.3s,baz=81,slow=27,SNR=11
KEF    Keuruu             4.85 283   eP       Pn      12 19 59.7 -1.1
KU4    Oulanka            5.47 336   eP       Pn      12 20 07.4 -2.1
KU4                                  eS       Sn      12 21 08.0 -6.0
ARA0   ARCESS Array S     9.00 338    Pn      P       12 20 54.0 -4.9
       baz=153,slow=11
ARA0                                  Sn      Sn      12 22 28.2  -14
       baz=153,slow=28
ARA0                                  Lg              12 23 15.8
       baz=150,slow=37
ARA0   ARCESS Array S     9.00 338   eP       P       12 20 54.0 -4.9
ARA0                                 eS       Sn      12 22 28.2  -14
ARA0                                 e                12 23 15.8
ARA0   ARCESS Array S     9.00 338    Pn      P       12 20 54.0 -5.0
       SNR=50
ARA0                                  Sn      Sn      12 22 28.2  -14
       SNR=50
ARCES  ARCESS Array B     9.00 338    Pn      P       12 20 54.1 -4.8
       comp=Z,0.2nm,0.3s,baz=147,slow=16,SNR=19
ARCES                                 Lg              12 23 22.6
       comp=Z,0.7nm,0.3s,baz=155,slow=32,SNR=5.7
HFS    Hagfors           10.48 272    Pn      P       12 21 13.0 -6.2
       baz=84,slow=16
HFS                                   Sn      S       12 23 05.3  -13
       baz=94,slow=28
HFS                                   Lg              12 24 03.5
       baz=71,slow=28
HFS    Hagfors           10.48 272   eP       P       12 21 13.0 -6.2
HFS                                  eS       S       12 23 05.3  -13
HFS                                  eSG              12 24 03.5
HFS    Hagfors           10.48 272    Pn      P       12 21 12.5 -6.7
       comp=Z,0.1nm,0.3s,baz=72,slow=14,SNR=8.1
HFS                                   Sn      S       12 23 00.3  -18
       comp=Z,0.0nm,0.3s,baz=70,slow=29,SNR=3.2
HFS                                   Lg              12 24 08.8
       comp=Z,0.1nm,0.3s,baz=68,slow=26,SNR=2.5
HFS    Hagfors           10.48 272    Pn      P       12 21 13.0 -6.2
       SNR=50
HFS                                   Sn      S       12 23 05.3  -13
       SNR=50
NOA    NORSAR Array B    11.44 278    Pn      P       12 21 24.6 -7.7
       comp=Z,0.2nm,0.3s,baz=4.4,slow=16,SNR=2.3
NOA                                   Sn      S       12 23 24.7  -17
       comp=Z,0.1nm,0.3s,baz=342,slow=17,SNR=2.3
NOA                                   Lg              12 24 36.3
       comp=Z,0.3nm,0.3s,baz=87,slow=19,SNR=3.2
BVAR   Borovoye Array    20.69  98    P       P       12 23 34.8 +6.1
       comp=Z,0.5nm,0.7s,baz=315,slow=12,SNR=3.3
```

MOS ***17*** *12:29:51.4±1.3, 2.67S×68.07E, h10^{km}, mb4.8/7, Error ellipse: s-maj=20.4km s-min=12.0km az=92.1*

BJI ***17*** *12:29:54.4, 2.51S×68.40E, h19^{km}, mB5.2, mb4.7, Ms4.7, Msz4.2*

IDC ***17*** *12:29:54.4±0.6, 2.35S×68.55E, mb4.3/18, mb1 4.4/18, mb1mx4.3/26, mbtmp4.3/18, MS4.0/13, Ms1 4.0/13, ms1mx3.9/20, Error ellipse: s-maj=19.2km s-min=14.1km az=33.0*

NEIC ***17*** *12:29:55.8±0.3, 2.44S×68.54E, h10^{km}, mb4.8/27, Error ellipse: s-maj=8.9km s-min=7.8km az=125.0*

ISC 17 12:29:54.0±0.3**, 2.44S**±0.05×**68.47E**±0.06**, h10**^{km}**, (h19**^{km}±4.2^{km}**:pP-P), n109,** σ**1**^{s}**17**/111**, mb4.7**/54**, MS4.1**/22**, 4C-1D, Carlsberg Ridge**

```
Code   Station Name        Δ°  AZ°    Phase ID           Time     Res
                                      Op      ISC      h  m  s    ISC
DGAR   Diego Garcia       6.34 141   i P      Pn      12 31 27.6 -2.3
DGAR   Diego Garcia       6.34 141   ePn      Pn      12 31 27.4 -2.5
       247nm,0.4s
DGAR                                 ePg      Pn      12 31 34.2 +4.3
DGAR                                 eSn      Sn      12 32 22.3  -21
PALK   Pallekele         15.56  52    Pn      P       12 33 34.9 -0.5
       82nm,1.4s,SNR=17
PALK   Pallekele         15.56  52   eP       P       12 33 32.5 -2.9
       24nm,1.1s
PALK                                 eS       S       12 36 12.2  -16
HYB    Hyderabad         22.09  26   eP       P       12 34 51.0 -0.2
HYB    Hyderabad         22.09  26   i P      P       12 34 51.0 -0.2
HYB                                  eS       S       12 38 56.0 +6.3
KMBO   Kilima Mbogo      31.23 272    P       P       12 36 18.5 +2.3
       1.0nm,0.4s,mb4.0,baz=63,slow=11,SNR=12
KMBO                                  LR      LR      12 46 15.1
       comp=Z,118nm,20.1s,MS3.5,baz=88,slow=31
KMBO   Kilima Mbogo      31.23 272   eP       P       12 36 17.9 +1.7
       9.1nm,1.1s,mb4.5
KOLN   Koldanda          33.38  25   eP       P       12 36 35.1 +0.2
       44nm,1.5s,mb5.2
DMN    Daman             33.90  27   eP       P       12 36 39.0 -0.4
       30nm,1.0s,mb5.2
PKI    Pulchoki          34.00  28   eP       P       12 36 40.3  0.0
GKN    Gorkha            34.03  26   eP       P       12 36 40.7 +0.2
       55nm,1.1s,mb5.4
KKN    Kakani            34.13  27   eP       P       12 36 41.5 +0.1
       22nm,0.9s,mb5.1
JIRN   Jiri              34.45  29   eP       P       12 36 44.6 +0.5
       23nm,1.2s,mb5.0
CM31   Chiang Mai Arr    36.48  54   eP       P       12 37 02.4 +0.9
       10nm,1.0s,mb4.7
CMAR   Chiang Mai Arr    36.48  54   i P      P       12 37 04.5 +3.0
CMAR                                  pmax    pmax
       comp=Z,3.0nm,1.1s
CMAR   Chiang Mai Arr    36.48  54    P       P       12 37 01.6 +0.1
       comp=Z,3.4nm,1.1s,mb4.2,baz=247,slow=10,SNR=12
CMAR                                  PcP     PcP     12 39 26.0 +0.3
       comp=Z,0.8nm,0.8s,baz=243,slow=4.0,SNR=3.6
CMAR                                  LR      LR      12 50 22.7
       comp=Z,58nm,18.3s,MS3.4,baz=225,slow=34
CMAR   Chiang Mai Arr    36.48  54    P       P       12 37 01.6 +0.1
CMAR                                  PcP     PcP     12 39 26.0 +0.3
CMAR                                  LR      LR      12 50 22.7
LSA    Lhasa             38.62  33    P       P       12 37 21.6 +2.2
LSA    Lhasa             38.62  33   eP       P       12 37 20.8 +1.4
       comp=Z,10nm,1.2s,mb4.4
LSZ    Lusaka            41.70 250   eP       P       12 37 44.3 -0.8
       comp=Z,14nm,1.2s,mb4.5
KMI    Kunming           43.06  48    P       P       12 37 57.3 +1.2
KMI                                   S       S       12 44 23.1 +1.5
KMI                                   SS      SS      12 47 28.6 +1.2
KMI                                   AMB     AMB
       comp=Z,9.0nm,1.3s,mb4.3
KMI                                   AMB     AMB
       comp=Z,87nm,5.9s
KMI                                   LR      LR
       comp=N,103nm,9.0s
KMI                                   LR      LR
       comp=E,147nm,10.7s
KMI                                   LR      LR
       comp=Z,124nm,17.8s
KMI    Kunming           43.06  48    P       P       12 37 57.3 +1.2
       comp=Z,9.0nm,1.3s,mb4.3
KMI                                   S       S       12 44 23.1 +1.5
KMI                                   SS      SS      12 47 28.6 +1.2
KMI                                   LR      LR
       comp=Z,120nm,17.8s,MS3.8
KZA    Kyzart            44.73   7    P       P       12 38 10.9 +1.5
       SNR=29
UCH    Uchtor            44.79   6    P       P       12 38 11.4 +1.5
       SNR=8.2
ULHL   Ulahol            45.03   8    P       P       12 38 12.9 +1.1
       SNR=7.8
EKS2   Erkin-Say         45.15   6    P       P       12 38 14.2 +1.5
       SNR=18
AAK    Ala-Archa         45.19   6    P       P       12 38 14.7 +1.6
       SNR=5.5
AAK    Ala-Archa         45.19   6   i P      P       12 38 13.7 +0.6
AAK                                   pmax    pmax
       comp=Z,7.0nm,1.2s,mb4.4
AAK                                   MLR     MLR
       comp=Z,100nm,22.0s,MS3.7
AAK    Ala-Archa         45.19   6   eP       P       12 38 12.6 -0.4
       comp=Z,27nm,1.5s,mb4.8
KBK    Karagaybulak      45.26   7    P       P       12 38 15.1 +1.5
       SNR=14
FRU    Bishkek           45.40   6   eP       P       12 38 16.0 +1.3
TKM2   Tokmak 2          45.60   7    P       P       12 38 16.9 +0.6
       SNR=21
USP    Ospenovka         45.82   6    P       P       12 38 18.5 +0.5
       SNR=5.8
LBTB   Lobatse           46.99 238    P       P       12 38 27.1 -0.5
       comp=Z,1.2nm,0.4s,mb4.2,baz=140,slow=21,SNR=3.6
LBTB                                  LR      LR      12 54 56.5
       comp=Z,117nm,19.2s,MS3.9,baz=79,slow=32
LBTB   Lobatse           46.99 238    P       P       12 38 28.8 +1.3
       comp=Z,4.5nm,0.9s,mb4.4
GNI    Garni             47.62 335   i P      P       12 38 28.9 -3.5
GNI                                   pmax    pmax
       comp=Z,29nm,2.0s
GNI    Garni             47.62 335    P       P       12 38 32.7 +0.4
       comp=Z,2.4nm,0.5s,mb4.5,baz=48,slow=2.0,SNR=4.4
GNI    Garni             47.62 335   eP       P       12 38 32.6 +0.3
       comp=Z,16nm,1.1s,mb5.0
BOSA   Boshof            48.67 233   eP       P       12 38 40.4 -0.3
       comp=Z,8.8nm,0.9s,mb4.8
MALT   Malatya           49.13 329   eP       P       12 38 46.0 +2.0
       comp=Z,12nm,1.2s,mb4.8
WMQ    Urumqi            49.18  18   eP       P       12 38 44.0 -0.3
WMQ                                   XP      sP      12 38 51.0 +2.5
WMQ                                   PP      PP      12 40 38.0 -0.5
WMQ                                   S       S       12 45 48.0 -0.6
WMQ                                   SS      SS      12 49 15.0 -0.8
WMQ                                   AMB     AMB
       comp=Z,11nm,1.0s,mb4.8
WMQ                                   LR      LR
       comp=N,169nm,22.0s,MS4.1
WMQ                                   LR      LR
       comp=E,165nm,23.0s,MS4.1
WMQ                                   LR      LR
       comp=Z,172nm,22.0s,MS4.0
LZH    Lanzhou           50.57  37   eP       P       12 38 54.5 -0.6
LZH                                   AP      pP      12 38 57.8 -0.4
LZH                                  ePP      PP      12 40 51.5 -0.4
LZH                                   AMB     AMB
       comp=Z,27nm,1.4s,mb5.0
LZH                                   AMB     AMB
       comp=Z,93nm,5.6s
LZH                                   LR      LR
       comp=N,527nm,15.2s
LZH                                   LR      LR
       comp=Z,836nm,17.9s,MS4.8
LZH    Lanzhou           50.57  37   eP       P       12 38 54.5 -0.6
       comp=Z,27nm,1.4s,mb5.0
LZH                                   pP      pP      12 38 57.8 -0.4
LZH                                   sP      sP      12 38 59.2 -0.1
LZH                                  ePP      PP      12 40 51.5 -0.4
LZH                                   LR      LR
       comp=Z,840nm,17.9s,MS4.8
GTA    Gaotai            50.63  31    P       P       12 38 55.3 -0.2
GTA                                   AP      pP      12 38 59.1 +0.6
GTA                                   XP      sP      12 39 02.3 +2.6
GTA                                   PCP     PcP     12 40 13.4 +0.1
GTA                                   PP      PP      12 40 51.3 -1.1
GTA                                   S       S       12 46 04.3 -4.5
GTA                                   AMB     AMB
       comp=Z,6.0nm,1.1s,mb4.4
GTA                                   AMB     AMB
       comp=Z,146nm,4.6s
GTA                                   LR      LR
       comp=N,144nm,23.2s,MS4.2
GTA                                   LR      LR
       comp=E,168nm,19.0s,MS4.2
GTA                                   LR      LR
       comp=Z,177nm,20.5s,MS4.1
ENH    Enshi             50.88  47    P       P       12 38 58.6 +1.1
       comp=Z,14nm,1.2s,mb4.8
KIV    Kislovodsk        51.64 336   i P      P       12 39 01.9 -1.2
TSUM   Tsumeb            52.45 248    P       P       12 39 11.2 +1.7
       comp=Z,1.9nm,0.9s,mb4.0,baz=72,slow=6.2,SNR=5.3
TSUM   Tsumeb            52.45 248   eP       P       12 39 10.8 +1.3
       comp=Z,7.2nm,1.3s,mb4.4
XAN    Xi'an             52.57  43    P       P       12 39 09.0 -1.2
XAN                                   AP      pP      12 39 15.8 +2.5
XAN                                   AMB     AMB
       comp=Z,7.0nm,1.7s,mb4.3
SOC    Sochi             52.59 334   eP       P       12 39 03.0 -7.3
SOC                                  eS       S       12 46 28.9 -6.8
SOC                                  eSSS     SSS     12 51 51.8 -5.1
SOC                                   pmax    pmax
       comp=Z,35nm,0.6s,mb5.5
SOC                                   pmax    pmax
       comp=N,37nm,1.0s
SOC                                   pmax    pmax
       comp=E,63nm,1.2s
SOC                                   MLR     MLR
       comp=Z,423nm,17.0s,MS4.5
SOC                                   MLR     MLR
       comp=N,387nm,16.0s
SOC                                   MLR     MLR
       comp=E,90nm,7.0s
BRTR   Keskin Array B    52.73 326    P       P       12 39 11.2 -0.2
       comp=E,2.0nm,0.8s,mb4.1,baz=144,slow=11,SNR=10
KURK   Kurchatov         53.66   8c iP      P       12 39 17.1 -0.9
KURK   Kurchatov         53.66   8  eP      P       12 39 16.5 -1.5
       comp=E,18nm,1.1s,mb4.9
NWAO   Narrogin (SRO)    54.78 129    P       P       12 39 27.0 +0.5
       comp=E,9.1nm,0.8s,mb4.9,baz=311,slow=9.3,SNR=3.9
NWAO   Narrogin (SRO)    54.78 129    P       P       12 39 27.0 +0.5
BVAR   Borovoye Array    55.28   1    P       P       12 39 27.5 -2.4
       comp=E,0.8nm,0.8s,mb3.8,baz=180,slow=8.6,SNR=4.3
ZAL    Zalesovo          57.80  11    P       P       12 39 46.6 -1.3
       comp=E,3.5nm,1.1s,mb4.3,baz=264,slow=9.2,SNR=14
ZAL                                   LR      LR      13 05 05.3
       comp=E,173nm,19.8s,MS4.2,baz=14,slow=37
ZAL    Zalesovo          57.80  11    P       P       12 39 46.6 -1.3
ZAL                                   LR      LR      13 05 05.3
HHC    Hu-ho-hao-te      58.27  38   eP       P       12 39 55.3 +4.0
HHC                                   AP      pP      12 39 59.8 +5.4
HHC                                   XP      sP      12 40 02.1 +6.5
HHC                                   PCP     PcP     12 40 41.8 -0.6
HHC                                   SCP             12 44 39.0
HHC                                   AMB     AMB
       comp=Z,6.0nm,0.5s,mb4.9
HHC                                   AMB     AMB
       comp=Z,140nm,5.4s
HHC                                   LR      LR
       comp=N,139nm,14.4s
HHC                                   LR      LR
       comp=E,365nm,20.4s
HHC                                   LR      LR
       comp=Z,260nm,20.4s
NVS    Novosibirsk       58.37  10   eP       P       12 39 49.4 -2.4
NVS                                   pmax    pmax
       comp=Z,16nm,2.0s,mb4.7
NVS                                   pmax    pmax
       comp=N,13nm,2.1s
NJ2    Nanjing           58.76  50   eP       P       12 39 55.5 +0.6
NJ2                                   AP      pP      12 40 05.8 +7.8
NJ2                                   XP      sP      12 40 09.5  +10
NJ2                                   PP      PP      12 42 08.1 +1.4
NJ2                                   S       S       12 47 59.0 +0.9
NJ2                                   AMB     AMB
       comp=Z,40nm,1.2s,mb5.3
NJ2                                   LR      LR
       comp=N,730nm,20.0s,MS4.9
NJ2                                   LR      LR
       comp=E,560nm,21.9s,MS4.9
NJ2                                   LR      LR
       comp=Z,440nm,22.4s,MS4.5
SONM   Songino Array     60.01  29    P       P       12 40 03.1 -0.3
       comp=Z,7.5nm,0.8s,mb4.8,baz=225,slow=7.0,SNR=14
SSE    Sheshan           60.17  52   eP       P       12 40 03.6 -1.0
SSE                                   AP      pP      12 40 12.3 +4.6
SSE                                   S       S       12 48 20.5 +4.1
SSE                                   AMB     AMB
       comp=Z,15nm,0.8s,mb5.1
SSE                                   AMB     AMB
       comp=Z,74nm,2.6s,mb5.2
SSE                                   LR      LR
       comp=N,60nm,27.2s,MS3.6
SSE                                   LR      LR
       comp=E,30nm,27.0s,MS3.6
SSE                                   LR      LR
       comp=Z,66nm,22.6s,MS3.7
SSE    Sheshan           60.17  52   eP       P       12 40 03.6 -1.0
       comp=Z,15nm,0.8s,mb5.1
SSE                                   pP      pP      12 40 12.3 +4.6
SSE                                   S       S       12 48 20.5 +4.1
SSE                                   sS              12 48 37.1
SSE                                   SS      SS      12 52 32.0  +17
SSE                                   LR      LR
       comp=Z,70nm,22.6s,MS3.7
ULN    Ulaanbaatar       60.35  29d iP      P       12 40 05.3 -0.3
ULN    Ulaanbaatar       60.35  29  eP      P       12 40 04.4 -1.3
       comp=Z,4.2nm,1.0s,mb4.4
ZAK    Zakamensk         60.48  25   eP       P       12 40 05.3 -1.2
ZAK                                   pmax    pmax
       comp=Z,2.0nm,1.1s,mb4.1
MOY    Mondy             60.55  23   eP       P       12 40 06.8 -0.1
MLR    Muntele Rosu      60.79 327    P       P       12 40 09.3 +0.6
       comp=Z,2.1nm,0.7s,mb4.4,baz=348,slow=2.3,SNR=4.0
TLY    Talaya            61.61  24   eP       P       12 40 14.4 +0.3
TLY                                   pmax    pmax
       comp=Z,14nm,1.8s,mb4.8
TLY    Talaya            61.61  24   eP       P       12 40 13.4 -0.8
       comp=Z,17nm,1.4s,mb5.0
AKASG  Malin Array Be    62.65 333   i P      P       12 40 19.5 -1.6
AKASG  Malin Array Be    62.65 333    P       P       12 40 18.7 -2.4
       comp=Z,0.3nm,0.3s,mb4.0,baz=135,slow=5.4,SNR=6.4
OBN    Obninsk           63.08 340   i P      P       12 40 22.6 -1.2
OBN                                  e*PP     PcP     12 41 00.5 -0.9
OBN                                  e                12 42 38.1
OBN                                  eS       S       12 48 56.6 +3.7
OBN                                   pmax    pmax
       comp=Z,7.0nm,1.4s,mb4.6
MAW    Mawson            65.16 182    LR      LR      13 01 43.6
       comp=Z,214nm,19.7s,MS4.3,baz=51,slow=29
WRA    Warramunga Arr    66.51 111    P       P       12 40 45.4 -1.3
       comp=Z,4.5nm,0.9s,mb4.5,baz=283,slow=6.3,SNR=29
WRAB   Tennant Creek     66.52 111   i P      P       12 40 48.5 +1.8
WRAB   Tennant Creek     66.52 111   eP       P       12 40 48.2 +1.4
       comp=Z,6.0nm,0.7s,mb4.7
ASAR   Alice Springs     66.57 115    P       P       12 40 46.2 -0.7
       comp=Z,3.4nm,0.7s,mb4.5,baz=284,slow=6.1,SNR=32
ASAR                                  LR      LR      13 03 53.4
       comp=Z,66nm,20.6s,MS3.8,baz=40,slow=31
HIA    Hailar            67.82  33    P       P       12 40 54.2 -0.3
       comp=Z,16nm,1.4s,mb4.8
CN2    Changchun         68.59  41   eP       P       12 40 59.5 +0.1
BOD    Bodaibo           70.19  24   eP       P       12 41 06.2 -2.7
DAVOX  Davos             70.90 322    P       P       12 41 12.3 -1.2
       comp=Z,2.7nm,0.7s,mb4.3,baz=33,slow=8.1,SNR=3.9
FINES  FINESS Array B    71.48 340    LR      LR      13 10 49.2
       comp=Z,193nm,18.3s,MS4.4,baz=172,slow=34
DBIC   Dimbokro          73.75 278    LR      LR      13 14 28.2
       comp=Z,62nm,20.3s,MS3.9,baz=45,slow=36
DBIC   Dimbokro          73.75 278    P       P       12 41 28.6 -2.4
       comp=Z,8.7nm,1.1s,mb4.6
STKA   Stephens Creek    74.40 122    P       P       12 41 34.2 -0.2
       comp=Z,3.0nm,0.8s,mb4.3,baz=263,slow=7.5,SNR=3.0
STKA                                  LR      LR      13 12 32.7
       comp=Z,118nm,20.8s,MS4.2,baz=26,slow=34
STKA   Stephens Creek    74.40 122   eP       P       12 41 32.8 -1.6
HFS    Hagfors           75.41 335    P       P       12 41 39.7 +0.1
       comp=Z,1.8nm,0.6s,mb4.2,baz=117,slow=6.6,SNR=4.8
NOA    NORSAR Array B    76.93 335    LR      LR      13 16 36.6
       comp=Z,116nm,18.3s,MS4.2,baz=290,slow=36
ARCES  ARCESS Array B    77.43 346    LR      LR      13 19 41.4
       comp=Z,232nm,18.8s,MS4.5,baz=199,slow=39
CTA    Charters Tower    77.70 110    LR      LR      13 10 51.4
       comp=Z,100nm,19.0s,MS4.2,baz=232,slow=32
CTAO   Charters Tower    77.70 110    P       P       12 41 56.0 +2.7
       comp=Z,8.9nm,0.9s,mb4.7
PMG    Port Moresby      78.45  99    P       P       12 41 58.7 +1.2
       comp=Z,7.6nm,0.7s,mb4.7,baz=314,slow=7.5,SNR=4.5
PMG                                   LR      LR      13 17 34.3
       comp=Z,80nm,18.1s,MS4.1,baz=12,slow=36
PMG    Port Moresby      78.45  99   eP       P       12 41 58.2 +0.7
       comp=Z,12nm,0.9s,mb4.8
YSS    Yuzh-Sakhalins    81.11  42   eP       P       12 42 10.0 -1.1
YSS                                  e                12 42 17.5
YSS    Yuzh-Sakhalins    81.11  42   eP       P       12 42 10.4 -0.7
       comp=Z,7.0nm,0.7s,mb4.7
VNA2   Neumayer--Watz    83.10 199⇑iP       P       12 42 20.8 -0.2
VNA2   Neumayer--Watz    83.10 199⇑i        P       12 42 26.4 +5.4
TIXI   Tiksi             83.32  16   eP       P       12 42 21.0 -1.1
TIXI                                  pmax    pmax
       comp=Z,11nm,1.2s,mb4.8
TIXI                                  MLR     MLR
       comp=Z,106nm,17.0s,MS4.3
VNA1   Neumayer--Stat    83.33 199⇑iP       P       12 42 26.5 +4.3
QSPA   South Pole Qui    87.56 180    P       P       12 42 44.2 +1.2
       comp=Z,4.2nm,0.9s,mb4.7
MA2    Magadan           88.18  30    P       P       12 42 45.8 -0.5
       comp=Z,4.0nm,0.8s,mb4.7
VNDA   Vanda             88.37 167    P       P       12 42 47.5 +0.5
       comp=Z,17nm,1.6s,mb5.0
YKA    Yellowknife Ar   120.04   2    PKP     PKPdf   12 48 46.0 -1.9
       comp=Z,0.2nm,0.8s,baz=343,slow=2.1,SNR=4.8
YKA                                   PP      PP      12 50 11.3 -2.3
       comp=Z,0.4nm,1.1s,baz=356,slow=6.8,SNR=4.0
YKA    Yellowknife Ar   120.04   2    PKP     PKPdf   12 48 46.0 -1.9
YKA                                   PP      PP      12 50 11.3 -2.3
PDAR   Pinedale Array   139.81 358    PKP     PKPdf   12 49 24.9 -0.9
       comp=Z,0.2nm,0.8s,baz=56,slow=6.5,SNR=2.6
TXAR   Lajitas Array    152.22 345    PKPbc   PKPdf   12 49 53.1 +6.2
       comp=Z,0.5nm,0.8s,baz=90,slow=2.5,SNR=6.0
TXAR                                  PKPab   PKPab   12 50 01.1 -1.7
       comp=Z,1.1nm,0.7s,baz=117,slow=2.8,SNR=8.9
```

TIR ***17*** *12:33:33.0, 41.65N×20.38E, h5^{km}*

CSEM ***17*** *12:33:33.5±0.4, 41.61N×20.39E, h0^{km}±2^{km}, MD2.7, Error ellipse: s-maj=3.6km s-min=2.8km az=121.0*

PDG ***17*** *12:33:35.1±0.4, 41.62N×20.31E, h10^{km}±1^{km}*

NEIC ***17*** *12:33:35.1, 41.62N×20.31E, h10^{km}, MD2.7(PDG), After PDG.*

ISC 17 12:33:33.9±0.6**, 41.61N**±0.03×**20.40E**±0.04**, h10**^{km}**, n14,** σ**1**^{s}**47**/28**, 4C, Albania**

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Code   Station Name        Δ°  AZ°    Phase ID           Time     Res
                                      Op      ISC      h  m  s    ISC
QSH    Qafa e Shtames     0.38 257   i Pg     Pg      12 33 40.8 -0.9
QSH                                  i Sg     Sg      12 33 47.8 +0.9
OHR    Ohrid              0.58 149   i Pg     Pg      12 33 45.3 -0.3
OHR                                  i Sg     Sg      12 33 54.8 +1.4
SKO    Skopje             0.86  65   i Pg     Pg      12 33 50.2 -0.9
SKO                                  i                12 33 52.2
SKO                                  i Sg     Sg      12 34 03.0 +0.3
SKO                                   Lg              12 34 04.5
       comp=Z,0.1nm,0.4s
SKO    Skopje             0.86  65   i Pg     Pg      12 33 50.2 -0.9
SKO                                  i Sg     Sg      12 34 03.0 +0.3
ULC    Ulcinj             0.93 293   ePg      Pg      12 33 51.3 -1.3
ULC                                  eSg      Sg      12 34 04.8 -0.2
PVY    Plav               1.04 342⇑iPg      Pg      12 33 52.8 -1.9
PVY                                  eSg      Sg      12 34 09.4 +0.8
TTG    Podgorica          1.18 314   ePg      Pg      12 33 55.2 -2.4
TTG                                  eSg      Sg      12 34 13.4 +0.1
BUM    Brajici-Budva      1.32 302⇑iPg      Pg      12 33 58.0 -2.3
BUM                                  eSg      Sg      12 34 18.6 +0.8
IVA    Berane             1.32 344   ePg      Pg      12 33 58.3 -1.9
IVA                                  eSg      Sg      12 34 19.2 +1.3
NKY    Niksic             1.59 320   ePg      Pg      12 34 03.6 -2.1
NKY                                  eSg      Sg      12 34 27.8 +0.8
HCY    Herceg Novi        1.65 301   ePn      Pn      12 34 03.6 +0.5
HCY                                  eSn      Sn      12 34 28.5 +4.1
PLE    Pljevlja           1.88 337⇑iPn      Pn      12 34 09.7 +3.3
PLE                                  eSn      Sn      12 34 36.3 +6.0
BRY    Bratogost          1.89 314   ePn      Pn      12 34 09.1 +2.5
BRY                                  eSn      Sn      12 34 36.2 +5.6
UPM    Unac-Piva          1.94 326⇑iPn      Pn      12 34 10.2 +2.9
UPM                                  eSn      Sn      12 34 37.5 +5.6
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IGQ 17 12:43:36.7, 1.05S×81.78W, h12^{km}±19^{km}**, mb4.3, 2C-6D, Error ellipse: s-maj=18.7km s-min=6.0km az=176.8, Off**

coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	1.24	90	⇑P	Pb	12 43 56.7	-2.8
SALI	Salinas	1.38	145	P	Pn	12 44 05.2	+3.3
SALI				S	Sb	12 44 22.1	+2.8
IGUA	Igualata	3.17	98	⇓P	Pn	12 44 28.5	+1.0
IGUA				S	Sn	12 45 06.2	+0.5
JUA2	San Juan 2	3.28	75	⇓P	Pn	12 44 30.6	+1.5
JUA2				S	Sn	12 45 08.1	-0.3
TERV	Terraza Guagua	3.29	75	P	Pn	12 44 30.5	+1.3
PINO	Pino	3.30	74	⇑P	Pn	12 44 30.5	+1.3
PINO				S	Sn	12 45 07.9	-0.8
NAS1	Nasa	3.33	83	P	Pn	12 44 31.6	+1.9
JUIV	Juive	3.34	96	P	Pn	12 44 31.7	+1.9
YANA	Yana	3.34	74	⇓P	Pn	12 44 30.7	+0.8
YANA				S	Sn	12 45 11.1	+1.1
ARRY	Arrayan	3.36	98	P	Pn	12 44 30.7	+0.6
RETU	Refugio	3.36	97	P	Pn	12 44 32.1	+2.0
PISA	Pisayambo	3.40	90	P	Pn	12 44 31.9	+1.3
ULBA	Ulba	3.40	97	P	Pn	12 44 32.0	+1.3
VC1	Cotopaxi 1	3.40	83	⇓P	Pn	12 44 33.1	+2.3
VC1				S	Sn	12 45 17.0	+5.5
TAMB	Tambo	3.43	84	P	Pn	12 44 33.6	+2.4
ANTI	Antisana	3.67	81	⇓P	Pn	12 44 36.6	+2.0
ANTI				S	Sn	12 45 18.4	+0.2
COTA	Cotacachi	3.71	68	P	Pn	12 44 36.4	+1.3
CAYR	Refugio Cayamb	3.92	74	P	Pn	12 44 41.5	+3.4
ELAGU	Cayambe Volc	3.93	75	P	Pn	12 44 41.4	+3.2
CAYA	Cayambe	3.95	74	⇓P	Pn	12 44 41.7	+3.2
ECEN	Cerro Negro	4.24	64	P	Pn	12 44 44.6	+2.0
ECEN				S	Sn	12 45 36.8	+4.1

IDC 17 13:11:15.4±19.0**,23.80S**×**179.80W,mb3.9**/3**,mb1 4.1**/4**, mb1mx3.9**/13**,mbtmp4.0**/4**,ML4.2**/1**,Error ellipse: s-maj=360.2km s-min=60.3km az=68.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.66	190	Pn	P	13 14 44.8	-1.2
	1.0nm,0.3s,baz=337,slow=15,SNR=8.6						
URZ				Sn	S	13 17 04.0	-26
	1.0nm,0.3s,baz=84,slow=22,SNR=14						
STKA	Stephens Creek	34.93	248	P	P	13 18 07.5	-3.5
	1.5nm,0.6s,baz=104,slow=12,SNR=7.1						
ASAR	Alice Springs	42.23	260	P	P	13 19 10.6	-1.6
	0.7nm,0.4s,baz=93,slow=9.4,SNR=42						
WRA	Warramunga Arr	42.60	266	P	P	13 19 14.5	-0.7
	0.5nm,0.4s,baz=102,slow=7.5,SNR=18						

IDC ***17*** *13:29:06.2±6.8, 12.21S×167.11E, h277^{km}±67^{km}, mb3.8/8, mb1 3.9/9, mb1mx3.7/18, mbtmp4.4/9, Error ellipse: s-maj=27.1km s-min=25.0km az=62.0*

ISC 17 13:29:02.0±0.7**,12.3S**±0.2×**167.2E**±0.1**,h250**^{km}**,n13, σ0**^{s}**.91**/11**,mb4.1**/9**,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	19.88	276	P	P	13 33 16.9	+1.0
	0.5nm,0.3s,baz=115,slow=7.2,SNR=4.2						
CTA	Charters Tower	21.55	246	P	P	13 33 34.5	+2.2
	2.4nm,0.5s,mb4.0,baz=82,slow=13,SNR=6.0						
RPZ	Rata Peaks	31.53	175	P	P	13 35 03.3	+0.3
	9.2nm,0.5s,mb4.5,baz=9.5,slow=12,SNR=5.1						
WRA	Warramunga Arr	32.44	252	P	P	13 35 09.9	-1.1
	0.7nm,0.5s,mb3.5,baz=84,slow=8.8,SNR=20						
ASAR	Alice Springs	33.56	246	P	P	13 35 19.8	-0.8
	0.7nm,0.5s,mb3.5,baz=68,slow=10,SNR=22						
ASPA	Alice Springs	33.56	246	*e*P	P	13 35 19.8	-0.8
KAKA	Kakadu	33.92	265	*e*P	P	13 35 23.5	-0.3
	8.1nm,1.1s,mb4.2						
YBH	Yreka Blue Hor	83.72	45	P	P	13 41 05.2	+0.9
	3.7nm,0.8s,mb4.2,baz=338,slow=1.0,SNR=10						
ILAR	Eielson Array	84.20	18	P	P	13 41 06.0	-0.2
	7.5nm,0.6s,mb4.6,baz=239,slow=5.2,SNR=173						
NEW	Newport	89.73	40	P	P	13 41 33.1	+0.1
	4.3nm,1.0s,mb4.2,baz=279,slow=6.8,SNR=4.7						
YKA	Yellowknife Ar	95.38	27	P	P	13 41 57.9	-0.8
	0.6nm,0.4s,mb4.1,baz=257,slow=4.8,SNR=19						
ARCES	ARCESS Array B	117.84	346	PKP	PKPdf	13 47 19.3	+1.1
	3.0nm,0.5s,baz=75,slow=2.2,SNR=15						
FINES	FINESS Array B	123.40	339	PKP	PKPdf	13 47 30.3	+1.1
	1.4nm,0.8s,baz=33,slow=2.5,SNR=9.0						

IDC ***17*** *13:32:31.4±3.2, 41.33N×79.38E, mb3.6/4, mb1 3.8/6, mb1mx3.5/22, mbtmp3.6/6, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.7/16, Error ellipse: s-maj=55.4km s-min=33.0km az=20.0*

NEIC ***17*** *13:32:34.8±0.5, 41.58N×79.33E, h10^{km}, mb4.5/1, Error ellipse: s-maj=12.6km s-min=6.1km az=68.0*

MOS ***17*** *13:32:36.2±1.9, 41.52N×79.24E, h33^{km}, mb4.4/2, Error ellipse: s-maj=21.2km s-min=11.6km az=98.2*

BJI ***17*** *13:32:38.3, 41.61N×79.72E, h10^{km}, ML3.9*

NNC ***17*** *13:32:40.1±5.0, 42.08N×79.24E, h8^{km}±14^{km}, mpv3.5, Error ellipse: s-maj=54.3km s-min=16.8km az=146.0*

ISC 17 13:32:33.9±0.4**,41.60N**±0.04×**79.43E**±0.04**,h10**^{km}**,n40, σ1**^{s}**.55**/49**,mb3.7**/4**,4C-7D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	2.46	286	P	Pn	13 33 17.7	+2.8
	SNR=131						
AAA	Alma-Ata	2.48	313	*e*PN	Pn	13 33 14.2	-0.9
AAA				*e*S	Sn	13 33 45.7	-0.1
AAA				smax			
	comp=E,2.0nm,0.3s						
TKM2	Tokmak 2	3.14	296	P	Pn	13 33 26.9	+2.5
	SNR=50						
KZA	Kyzart	3.16	280	P	Pn	13 33 28.0	+3.3
	SNR=13						
KSH	Kashi	3.35	233	⇓P	Pb	13 33 37.0	+3.9
KSH				S	Sb	13 34 20.8	+6.6
KSH				Smax			
	comp=N,110nm,0.5s						
KSH				Smax			
	comp=E,180nm,0.7s						
KBK	Karagaybulak	3.50	289	P	Pn	13 33 32.2	+2.7
	SNR=19						
UCH	Uchtor	3.72	281	P	Pb	13 33 40.8	+1.4
	SNR=6.8						
CHMS	Chumysh	3.74	294	P	Pg	13 33 47.2	-1.4
	SNR=7.0						
AAK	Ala-Archa	3.81	287	P	Pn	13 33 36.6	+2.5
	SNR=9.1						
AAK	Ala-Archa	3.81	287	⇓Pn	Pn	13 33 36.5	+2.5
	comp=E,3.3nm,0.5s						
AAK				⇓Pg	Pg	13 33 45.0	-5.1
	comp=E,32nm,0.6s						
AAK				⇓Lg		13 34 29.5	
	comp=E,112nm,0.6s						
AAK	Ala-Archa	3.81	287	*e*Pn	Pn	13 33 34.5	+0.5
AAK				*e*Sn	Sn	13 34 17.9	-1.6
AAK				*e*Sb	Sb	13 34 28.2	+0.6
USP	Ospenovka	4.01	296	P	Pg	13 33 50.2	-3.8
	SNR=14						
AML	Almayashu	4.32	279	P	Pb	13 33 52.8	+3.2
	SNR=18						
EKS2	Erkin-Say	4.33	286	P	Pg	13 33 57.3	-3.1
	SNR=14						
MK31	Makanchi Array	5.59	21	⇑Pn	Pn	13 34 00.3	+1.1
	comp=E,2.1nm,0.3s,baz=202,slow=13,SNR=266						
MK31				⇑Sn	Sn	13 35 04.3	0.0
	comp=E,14nm,0.7s,baz=210,slow=27,SNR=5.6						
MK31				⇓Lg		13 35 25.7	
	comp=E,26nm,0.7s,baz=213,slow=29						
MKAR	Makanchi Array	5.59	21	PN	Pn	13 34 00.3	+1.1
MKAR				*e*		13 35 04.2	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				smax			
	comp=E,9.0nm,0.7s						
WMQ	Urumqi	6.48	67	*e*P	Pn	13 34 14.5	+2.7
WMQ				S	Sn	13 35 27.3	+0.7
WMQ				Smax			
	comp=N,34nm,1.0s						
WMQ				Smax			
	comp=E,45nm,1.0s						
KURK	Kurchatov	9.14	357	⇑Pn	P	13 34 48.9	0.0
	comp=E,3.1nm,1.6s,baz=100,slow=16,SNR=3.8						
KURK				⇓Lg		13 37 19.1	
	comp=E,21nm,0.8s,baz=97,slow=9.6,SNR=13						
CEP	Cherat	9.78	220	P	P	13 34 58.6	+1.0
ZAL	Zalesovo	12.86	14	Pn	P	13 35 38.3	-1.1
	comp=E,0.4nm,0.3s,baz=270,slow=9.5,SNR=4.1						
ZAL				Sn	S	13 37 54.4	-9.3
	comp=E,0.3nm,0.3s,baz=328,slow=19,SNR=4.3						
ZAL				LR	LR	13 41 07.1	
	comp=E,77nm,18.1s,baz=291,slow=39						
ZAL	Zalesovo	12.86	14	Pn	P	13 35 38.3	-1.1
ZAL				Sn	S	13 37 54.4	-9.3
ZAL				LR	LR	13 41 07.2	
BVAR	Borovoye Array	12.96	335	Pn	P	13 35 38.4	-2.4
	comp=E,0.2nm,0.3s,baz=135,slow=14,SNR=4.9						
BVAR				Lg		13 39 17.2	
	comp=E,0.3nm,0.3s,baz=126,slow=25,SNR=4.0						
BRVK	Borovoye	13.02	335	⇑Pn	P	13 35 49.2	+7.6
	comp=E,2.7nm,0.9s						
BRVK				⇓Lg		13 39 14.9	
	comp=E,7.8nm,1.1s						
BRVK	Borovoye	13.02	335	*e*P	P	13 35 39.8	-1.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	13.02	335	*e*P	P	13 35 39.8	-1.8
	comp=Z,2.9nm,0.8s						
NVS	Novosibirsk	13.49	9	*e*P	P	13 35 52.7	+4.9
NVS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NVS				pmax	pmax		
	comp=N,8.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.5s						
KOLN	Koldanda	14.21	165	*e*P	P	13 35 55.3	-2.0
	comp=E,21nm,1.3s						
GKN	Gorkha	14.21	161	*e*P	P	13 35 56.6	-0.8
	comp=E,7.9nm,0.4s						
DMN	Daman	14.71	160	*e*P	P	13 36 03.3	-0.6
	comp=E,8.7nm,0.7s						
PKI	Pulchoki	14.83	159	*e*P	P	13 36 05.2	-0.2
	comp=E,3.2nm,0.4s						
JIRN	Jiri	14.97	156	*e*P	P	13 36 08.1	+0.9
	comp=E,7.4nm,0.4s						
ZAK	Zakamensk	18.69	54	*e*P	P	13 36 55.7	+1.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.7s						
SONM	Songino Array	20.09	63	P	P	13 37 10.3	-0.1
	comp=Z,1.0nm,0.4s,baz=267,slow=11,SNR=5.0						
KIV	Kislovodsk	26.93	287	*e*P	P	13 38 14.4	-2.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
KIV	Kislovodsk	26.93	287	*e*P	P	13 38 14.4	-2.6
	comp=Z,10nm,1.0s,mb4.3						
NOA	NORSAR Array B	44.50	320	P	P	13 40 45.7	-1.1
NOA	NORSAR Array B	44.50	320	P	P	13 40 45.6	-1.1
	comp=Z,0.3nm,0.6s,mb3.3,baz=90,slow=7.1,SNR=2.9						
INK	Inuvik	67.67	13	P	P	13 43 31.2	-1.5
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	67.67	13	P	P	13 43 31.2	-1.4
	comp=Z,0.7nm,0.7s,mb3.8,baz=356,slow=1.1,SNR=3.9						
ILAR	Eielson Array	67.94	20	P	P	13 43 32.3	-2.1
	comp=Z,0.3nm,0.7s,mb3.4,baz=318,slow=5.2,SNR=4.5						

IDC ***17*** *13:38:47.2±1.5, 13.70N×88.29W, h180^{km}±12^{km}, mb4.1/11, mb1 4.3/13, mb1mx3.9/23, mbtmp4.6/13, Error ellipse: s-maj=27.0km s-min=11.8km az=58.0*

BJI ***17*** *13:38:48.4, 13.60N×88.30W, h202^{km}*

NEIC ***17*** *13:38:48.5±0.8, 13.57N×88.32W, h202^{km}±8^{km}, mb4.5/28, Error ellipse: s-maj=10.7km s-min=5.3km az=60.0*

CASC ***17*** *13:38:50.0±10.0, 13.16N×88.70W, h150^{km}±46^{km}, MD4.4, ML3.8, mb4.5(NEIC)*

ISC 17 13:38:46.3±0.2**,13.61N**±0.05×**88.52W**±0.04**,h185**^{km}±2^{km}**, h190**^{km}±.9^{km}**:pP-P,n123,σ1**^{s}**.15**/141**,mb4.6**/32**,19C-4D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.30	127	⇑*i*P	P	13 39 11.2	-0.2
SNVI	San Vicente	0.31	271	⇑*e*P	P	13 39 11.2	-0.2
SNVI				⇓*i*P		13 39 11.5	
SNVI				*e*S	S	13 39 30.0	-0.6
BLLM	Bellamira	0.32	121	⇑*e*P	P	13 39 11.0	-0.4
BLLM				*e*S	S	13 39 28.9	-1.8
CAHU	Cacacuatique	0.34	61	⇑*e*P	P	13 39 11.7	+0.3
CAHU				*e*S	S	13 39 31.7	+0.9
LCBS	La Ceiba	0.45	276	⇑*i*P	P	13 39 11.3	-0.5
LCBS				*e*S	S	13 39 30.3	-1.1
LBRS	Las Brisas	0.53	285	⇑*e*P	P	13 39 12.1	0.0
LFRS	El Faro	0.53	272	⇑*e*P	P	13 39 11.7	-0.4
LFRS				*e*S	S	13 39 31.6	-0.4
LFU	La Fuente	0.59	284	*e*P	P	13 39 12.2	-0.2
SNET	Serv Nac Est T	0.70	277	*e*P	P	13 39 13.6	+0.8
PICS	Picacho	0.73	281	⇑*i*P	P	13 39 13.1	+0.1
PICS				*e*S	S	13 39 33.7	+0.1
CNCH	Conchagua	0.74	116	⇑*e*P	P	13 39 13.0	-0.1
CNCH				*e*S	S	13 39 33.3	-0.5
BOQS	Boqueron	0.75	280	⇑*e*P	P	13 39 12.8	-0.3
BOQS				*e*S	S	13 39 32.8	-1.1
SNJE	San Jose	1.09	284	⇑*e*P	P	13 39 15.5	+0.1
SBLS	San Blas	1.10	282	⇑*e*P	P	13 39 15.4	0.0
RTR	El Retiro	1.13	285	⇑*e*P	P	13 39 16.0	+0.3
RTR				*e*S	S	13 39 38.5	0.0
MTO2	Montecristo 2	1.14	314	⇑*i*P	P	13 39 16.4	+0.7
MTO2				*e*S	S	13 39 38.9	+0.3
RBDL	Robledal	1.24	294	⇓*i*P	P	13 39 17.1	+0.4
RBDL				*e*S	S	13 39 39.7	-0.4
CRIN	San Cristobal	1.69	122	*e*P	P	13 39 22.3	+1.4
TELN	Telica	1.92	121	*e*P	P	13 39 23.2	0.0
TELN				*e*S	S	13 39 53.3	+1.7
TEL3	Telica 3	1.93	122	*e*P	P	13 39 23.4	+0.1
LEON	Leon	1.98	127	⇑*e*P	P	13 39 23.9	+0.1
LEON				*e*S	S	13 39 50.8	-1.9
CNGN	Cerro Negro	2.09	122	*e*P	P	13 39 24.6	-0.4
CNGN				*e*S	S	13 39 54.5	-0.3
MIRN	Miramar	2.11	123	*e*P	P	13 39 25.5	+0.2
MOMJ	Momotombo	2.27	121	*e*P	P	13 39 27.3	+0.3
MOMJ				*e*S	S	13 39 57.8	-0.6
COPN	Copaltepe	2.35	127	*e*P	P	13 39 28.3	+0.2
COPN				*e*S	S	13 39 59.0	-1.2
APYN	Apoyeque	2.52	123	⇑*e*P	P	13 39 30.1	+0.1
XAVN	Gruta Xavier	2.58	124	⇓*e*P	P	13 39 32.4	+1.7
PYTN	Playitas	2.62	114	*e*P	P	13 39 31.3	+0.1
PYTN				*e*S	S	13 40 04.6	-1.2
MGAN	Managua	2.65	123	*e*P	P	13 39 33.7	+2.2
MGAN				*e*S	S	13 40 06.3	-0.1
MGAN				*i*		13 40 08.8	
	comp=N,577nm,0.3s						
WILN	Americas 2	2.69	122	*e*P	P	13 39 31.3	-0.7
WILN				*e*S	S	13 40 06.7	-0.6
TICN	Ticuantepe	2.72	125	*e*P	P	13 39 33.7	+1.3
TICN				*e*S	S	13 40 05.9	-2.1
APON	Apoyo	2.92	125	*e*P	P	13 39 37.5	+2.7
CONN	Concepcion	3.48	125	*e*P	P	13 39 43.0	+1.3
SSNN	San Juan del S	3.48	131	*e*P	P	13 39 41.9	+0.3
SSNN				*e*S	S	13 40 21.9	-2.5
MADN	Villa Maderas	3.64	127	*e*P	P	13 39 44.9	+1.2
VCR	Vista de Mar	4.47	140	*e*P	P	13 39 56.5	+2.3
VCR				*e*S	S	13 40 44.2	-2.5
JTS	JuntasAbangare	4.80	133	P	P	13 39 59.3	+0.8
	comp=N,15nm,0.3s,baz=347,slow=17,SNR=30						
JTS				S	S	13 40 51.1	-3.3
	comp=N,12nm,0.3s,baz=292,slow=21,SNR=5.4						
JTS	JuntasAbangare	4.80	133	*e*Pn	P	13 39 58.9	+0.5
JTS				*e*Sn	S	13 40 44.4	-10
JCR	Jicaral	5.01	138	*e*P	P	13 40 03.2	+2.0
CGA2	Cerro Gallo 2	5.34	132	*e*P	P	13 40 08.6	+3.2
CGA2				*e*S	S	13 41 07.8	+0.9
PRS1	Puriscal	5.47	131	*e*P	P	13 40 10.0	+2.8
PRS1				*e*S	S	13 41 09.6	-0.4
LAJ	Bijagual	5.69	130	⇓*e*P	P	13 40 09.8	-0.2
LAJ				*e*S	S	13 41 07.9	-7.2
LCR2	La Lucha 2	5.86	130	*e*P	P	13 40 14.6	+2.4
LCR2				*e*S	S	13 41 18.6	-0.5
URSC	Urasca	5.97	128	*e*P	P	13 40 16.0	+2.3
BUS	Buena Vista	6.16	130	*e*P	P	13 40 19.2	+3.0
BUS				*e*S	S	13 41 27.3	+1.1
TEIG	Tepich	6.59	2	*e*Pn	P	13 40 22.6	+0.7
	comp=N,12nm,0.6s						
ACR	Cerro Adams	7.20	133	⇑*e*P	P	13 40 32.1	+2.3
PAYG	Puerto Ayora	14.29	187	*e*P	P	13 41 60.0	-1.6
	comp=N,27nm,1.2s						
OTAV	Otavalo	16.61	142	P	P	13 42 28.5	-1.7
	comp=N,5.4nm,1.0s						
SDV	Santo Domingo	18.16	103	P	P	13 42 46.1	-1.3
	comp=N,1.5nm,0.3s,baz=324,slow=9.3,SNR=15						
SDV	Santo Domingo	18.16	103	*e*P	P	13 42 45.5	-1.9
	comp=N,15nm,0.8s						
JCT	Junction City	19.76	330	*e*P	P	13 43 03.0	-0.8
	comp=N,12nm,0.6s						
COW	Cow Castle Cre	20.93	19	*e*P	P	13 43 15.8	+0.1
TXAR	Lajitas Array	21.02	321	P	P	13 43 17.9	+1.4
	comp=N,9.4nm,0.5s,mb4.4,baz=138,slow=10,SNR=49						
TXAR	Lajitas Array	21.02	321	P	P	13 43 17.9	+1.4
MIAR	Mount Ida	21.34	348	*e*P	P	13 43 20.6	+1.0
	comp=N,28nm,0.8s,mb4.6						
UALR	University of	21.36	351	*e*P	P	13 43 20.7	+1.0
	comp=N,24nm,0.6s,mb4.7						
JSC	Jenkinsville	21.61	17	*e*P	P	13 43 24.0	+1.7
CPCT	Cooper Cave	22.05	9	*e*P	P	13 43 27.6	+1.1
WVT	Waverly	22.44	1	*e*P	P	13 43 30.7	+0.4
	comp=N,9.2nm,0.7s,mb4.3						
MNTX	Cornudas Mount	23.74	322	*e*P	P	13 43 42.8	-0.1
	comp=N,8.5nm,0.8s,mb4.3						
AMTX	Amarillo	24.30	333	*e*P	P	13 43 48.4	+0.3
	comp=N,27nm,0.9s,mb4.8						
WCI	Wyandotte Cave	24.60	4	*e*P	P	13 43 50.4	-0.6
	comp=N,21nm,0.5s,mb4.9						
KSU1	Kansas State U	26.38	346	*e*P	P	13 44 05.6	-1.8
ANMO	Albuquerque	26.73	326	P	P	13 44 12.6	+2.0
	comp=N,1.6nm,0.9s,mb3.6,baz=146,slow=6.0,SNR=7.3						
ANMO	Albuquerque	26.73	326	*e*P	P	13 44 09.9	-0.6
	comp=N,2.8nm,0.8s,mb3.9						
ACSO	Alum Creek Sta	26.97	9	*e*P	P	13 44 11.4	-1.3
	comp=N,29nm,0.7s,mb5.0						
NNA	Nana	27.94	155	*e*P	P	13 44 21.2	-0.5
	comp=N,109nm,0.9s,mb5.6						
SDCO	Great Sand Dun	28.40	331	*e*P	P	13 44 26.0	+0.3
	comp=N,10nm,1.1s,mb4.5						
PV01	Paradox Valley	30.23	328	P	P	13 44 43.2	+1.4
PV10	Paradox Valley	30.66	327	*e*P	P	13 44 45.3	-0.3
SRU	San Rafael	31.98	327	*e*P	P	13 44 57.5	+0.4
SADO	Sadowa	32.07	13	P	P	13 44 56.4	-1.4
	comp=N,17nm,0.5s,mb5.1,baz=209,slow=8.9,SNR=27						
SADO	Sadowa	32.07	13	P	P	13 44 56.4	-1.4
DAU	Daniels Canyon	33.32	328	*e*P	P	13 45 09.6	+1.0
SAML	Samuel	33.69	130	*e*P	P	13 45 08.4	-3.6
	comp=N,4.5nm,0.7s,mb4.3						
TCUT	Toone Canyon	33.91	328	*e*P	P	13 45 13.9	+0.3
PDAR	Pinedale Array	34.27	332	P	P	13 45 16.7	+0.1
	comp=N,2.0nm,0.6s,mb4.0,baz=127,slow=9.7,SNR=29						
HWUT	Hardware Ranch	34.35	329	*e*P	P	13 45 16.8	-0.5
	comp=N,12nm,0.7s,mb4.8						
BGU	Big Grassy Mou	34.62	326	*e*P	P	13 45 18.8	-0.9
AHID	Auburn Hatcher	34.99	330	*e*P	P	13 45 23.4	+0.6
	comp=N,18nm,0.7s,mb4.8						
SNOW	Snow King Moun	35.36	332	*e*P	P	13 45 26.8	+1.0
LOHW	Long Hollow	35.41	332	*e*P	P	13 45 26.6	+0.4
WUWY	Wally Ulrich	35.41	332	*e*P	P	13 45 26.7	+0.3
TPAW	Teton Pass	35.47	331	*e*P	P	13 45 27.5	+0.7
MOOW	Moose Ponds	35.58	332	*e*P	P	13 45 27.9	+0.2
IMW	Indian Meadow	35.78	332	*e*P	P	13 45 29.9	+0.5
YFT	Old Faithful	36.16	333	*e*P	P	13 45 34.5	+1.9
YMR	Madison River	36.39	333	*e*P	P	13 45 35.6	+1.1
QLMT	Earthquake Lak	36.73	332	*e*P	P	13 45 39.1	+1.8
ULM	Lac du Bonnet	37.03	352	P	P	13 45 38.3	-1.6
	comp=N,12nm,0.5s,mb4.8,baz=166,slow=8.9,SNR=33						
ULM	Lac du Bonnet	37.03	352	*e*P	P	13 45 37.6	-2.2
	comp=N,23nm,0.7s,mb4.9						
MCMT	McKenzie Canyo	37.38	331	*e*P	P	13 45 44.4	+1.6
WALA	Waterton Lakes	41.08	335	*e*P	P	13 46 13.8	+0.5
	comp=N,4.7nm,0.7s,mb4.2						
FFC	Flin Flon	42.36	348	P	P	13 46 23.9	+0.3
	comp=N,99nm,0.6s,mb5.6,SNR=12						
EDM	Edmonton	44.16	339	*e*P	P	13 46 37.5	-0.7
SCHQ	Schefferville	44.49	18	P	P	13 46 39.4	-1.3
	comp=N,7.7nm,0.6s,mb4.5,baz=219,slow=6.3,SNR=29						
SCHQ	Schefferville	44.49	18	*e*P	P	13 46 39.1	-1.6
	comp=N,12nm,0.6s,mb4.7						
FCC	Fort Churchill	45.27	356	*e*P	P	13 46 45.8	-1.1
	comp=N,16nm,0.5s,mb4.9						
YKA	Yellowknife Ar	52.23	345	P	P	13 47 38.8	-1.3
	comp=N,7.2nm,0.7s,mb4.4,baz=136,slow=8.2,SNR=203						
YKA				pP	pP	13 48 21.2	-0.6
	comp=N,0.9nm,0.7s,baz=141,slow=7.8,SNR=2.2						
YKW3	Yellowknife Ar	52.29	345	*e*P	P	13 47 39.0	-1.5
YKW3				*e*	pP	13 48 22.1	-0.2
DLBC	Dease Lake	54.42	335	P	P	13 47 56.0	-0.2
	comp=N,8.9nm,0.6s,mb4.7,baz=136,slow=6.6,SNR=46						
RCBR	Riachuelo	55.69	107	P	P	13 48 02.6	-3.3
	comp=N,40nm,1.4s,mb5.0						
RES	Resolute Bay	61.17	358	*e*P	P	13 48 40.8	-2.3
	comp=N,4.9nm,0.7s,mb4.5						
RES				*e*	pP	13 49 25.2	-1.0
INK	Inuvik	61.80	343	P	P	13 48 46.0	-1.3
	comp=N,2.8nm,0.6s,mb4.2,baz=150,slow=7.6,SNR=37						
INK	Inuvik	61.80	343	*e*P	P	13 48 45.8	-1.6
	comp=N,10nm,1.1s,mb4.6						
ILAR	Eielson Array	64.55	336	P	P	13 49 03.7	-1.7
	comp=N,1.9nm,0.5s,mb4.2,baz=163,slow=4.7,SNR=47						
MCK	McKinley	64.98	335	*e*P	P	13 49 06.4	-1.7
	comp=N,2.3nm,0.9s,mb4.0						
SUMG	Summit	65.74	15	*e*P	P	13 49 11.8	-1.1
	comp=N,6.0nm,0.9s,mb4.4						
ESK	Eskdalemuir	76.28	36	P	P	13 50 13.0	-3.0
	comp=N,3.8nm,0.7s,mb4.1						
ESLA	Sonseca Array	77.30	52	P	P	13 50 17.6	-4.5
	comp=N,2.3nm,1.0s,mb3.8						
ARCES	ARCESS Array B	85.44	19	P	P	13 51 03.1	-0.7
	comp=N,6.5nm,0.9s,mb4.3,baz=284,slow=5.0,SNR=4.0						
LBTB	Lobatse	117.31	111	*e*PKPdf	PKPdf	13 57 09.2	-1.0
WMQ	Urumqi	122.75	3	*e*PKP	PKPdf	13 57 17.5	-2.8
SSE	Sheshan	127.18	328	*e*PKP	PKPdf	13 57 25.5	-3.7
NJ2	Nanjing	127.57	330	*e*PKP	PKPdf	13 57 26.1	-3.9
LZH	Lanzhou	129.22	347	⇑PKP	PKPdf	13 57 31.6	-1.4
LZH				XPKP		13 58 45.3	
LZH	Lanzhou	129.22	347	⇑PKP	PKPdf	13 57 31.6	-1.4
LZH				pPKP		13 58 21.5	
LZH				sPKP		13 58 45.3	
STKA	Stephens Creek	130.79	240	PKP	PKPdf	13 57 37.8	+1.6
	comp=N,2.1nm,0.6s,baz=90,slow=5.7,SNR=9.1						
WRAB	Tennant Creek	138.56	255	*e*PKPdf	PKPdf	13 57 52.5	+1.7
WRA	Warramunga Arr	138.57	255	PKhKP		13 57 41.6	
	comp=N,0.2nm,0.4s,baz=88,slow=3.1,SNR=11						
WRA				PKP	PKPdf	13 57 52.9	+2.0
	comp=N,7.2nm,0.7s,baz=88,slow=2.4,SNR=105						
WRA				SKPbc		14 01 10.7	
	comp=N,0.3nm,0.5s,baz=88,slow=3.2,SNR=36						
ASAR	Alice Springs	138.71	250	PKhKP		13 57 43.6	
	comp=N,0.5nm,0.5s,baz=100,slow=3.0,SNR=14						
ASAR				PKP	PKPdf	13 57 53.1	+2.1
	comp=N,4.3nm,0.9s,baz=92,slow=2.0,SNR=41						
ASAR				SKPbc		14 01 10.3	
	comp=N,0.7nm,1.2s,baz=107,slow=2.6,SNR=4.1						
CMAR	Chiang Mai Arr	147.30	347	PKPbc	PKPdf	13 58 08.9	+2.8
	comp=N,0.7nm,0.6s,baz=353,slow=4.0,SNR=5.3						

IDC ***17*** *13:55:35.5±1.3, 2.96N×84.29W, mb3.6/5, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, ML3.8/2, MS3.8/10, Ms1 3.8/10, ms1mx3.5/21, Error ellipse: s-maj=91.5km s-min=22.8km az=66.0*

NEIC ***17*** *13:55:38.6±0.6, 2.73N×84.40W, h30^{km}, mb4.1/3, Error ellipse: s-maj=14.0km s-min=10.5km az=51.0*

ISC 17 13:55:36.3±0.6**,2.73N**±0.06×**84.40W**±0.08**,h30**^{km}**,n28, σ1**^{s}**.23**/24**,mb3.7**/7**,MS3.8**/7**,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	6.44	113	*e*Pn	Pn	13 57 11.0	-0.7
	20nm,0.6s						
OTAV				*e*Sn	Sn	13 58 20.9	-4.0
PAYG	Puerto Ayora	6.79	240	*e*Pn	Pn	13 57 16.1	-0.5
	43nm,1.0s						
LCR2	La Lucha 2	6.98	3	*e*P	Pn	13 57 17.3	-1.9
URSC	Urasca	7.09	5	*e*P	Pn	13 57 21.9	+1.1
JCR	Jicaral	7.11	354	*e*P	Pn	13 57 21.3	+0.2
PRS1	Puriscal	7.21	1	*e*P	Pn	13 57 21.7	-0.8
JTS	JuntasAbangare	7.53	356	Pn	Pn	13 57 24.8	-2.3
	1.8nm,0.3s,baz=179,slow=6.3,SNR=9.8						
JTS				Sn	Sn	13 58 47.7	-4.6
	0.4nm,0.3s,baz=322,slow=19,SNR=2.1						
JTS				LR	LR	13 59 53.2	
	comp=Z,732nm,21.3s,baz=184,slow=35						
JTS	JuntasAbangare	7.53	356	Pn	Pn	13 57 24.8	-2.3
JTS				*e*Pn	Pn	13 57 26.8	-0.3

JTS				Sn	Sn	13 58 47.7	-4.6
JTS				LR	LR	13 59 53.2	
ROSC	El Rosal	10.26	78	LR	LR	14 02 03.1	
	comp=Z,293nm,18.1s,baz=180,slow=38						
SDV	Santo Domingo	14.99	65	Pn	P	13 59 12.2	+4.1
	0.3nm,0.3s,baz=274,slow=14,SNR=3.5						
SDV				LR	LR	14 04 38.4	
	comp=Z,306nm,20.5s,baz=234,slow=37						
SDV	Santo Domingo	14.99	65	P	P	13 59 09.7	+1.6
	16nm,1.2s						
SDV				LR	LR	14 04 38.4	
NNA	Nana	16.43	153	eP	P	13 59 25.3	-1.4
	13nm,1.0s						
SAML	Samuel	24.12	119	eP	P	14 00 52.2	+1.3
	19nm,1.5s,mb4.3						
LPAZ	La Paz	24.81	140	P	P	14 01 01.1	+3.6
	4.0nm,0.9s,mb3.9,baz=338,slow=8.7,SNR=8.3						
LPAZ				LR	LR	14 11 44.4	
	comp=Z,373nm,19.8s,MS3.9,baz=282,slow=39						
LVC	Limon Verde	29.38	150	LR	LR	14 12 09.5	
	comp=Z,186nm,21.9s,MS3.7,baz=302,slow=34						
TXAR	Lajitas Array	32.18	327	LR	LR	14 14 20.0	
	comp=Z,115nm,18.4s,MS3.6,baz=160,slow=35						
ANMO	Albuquerque	38.06	330	LR	LR	14 18 04.0	
	comp=Z,49nm,20.1s,MS3.3,slow=36						
SDCO	Great Sand Dun	39.87	334	eP	P	14 03 09.8	+0.7
	4.4nm,1.1s,mb4.1						
BDFB	Brasilia	40.35	118	LR	LR	14 19 04.7	
	comp=Z,169nm,20.8s,MS3.9,baz=299,slow=35						
PDAR	Pinedale Array	45.75	334	P	P	14 03 56.9	0.0
	0.5nm,0.9s,mb3.4,baz=152,slow=13,SNR=3.4						
PDAR				LR	LR	14 24 00.6	
	comp=Z,199nm,18.0s,MS4.1,baz=151,slow=37						
USHA	Ushuaia	58.86	169	LR	LR	14 25 17.6	
	comp=Z,281nm,20.1s,MS4.4,baz=174,slow=30						
YKA	Yellowknife Ar	63.73	345	P	P	14 06 06.7	-0.6
	0.1nm,0.4s,mb3.2,baz=140,slow=6.5,SNR=3.6						
YKA	Yellowknife Ar	63.73	345	P	P	14 06 06.7	-0.6
INK	Inuvik	73.33	343	P	P	14 07 07.8	+1.1
	0.5nm,0.6s,mb3.6,baz=148,slow=5.3,SNR=4.5						
INK	Inuvik	73.33	343	P	P	14 07 07.8	+1.1
ILAR	Eielson Array	76.09	337	P	P	14 07 24.6	+1.9
	0.4nm,0.8s,mb3.4,baz=127,slow=4.5,SNR=3.9						
ASAR	Alice Springs	137.53	237	PKP	PKPdf	14 15 03.5	+0.2
	0.3nm,0.8s,baz=99,slow=2.4,SNR=3.8						
WRA	Warramunga Arr	138.51	243	PKP	PKPdf	14 15 03.1	-2.1
	0.8nm,1.0s,baz=102,slow=2.3,SNR=5.5						

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*IDC **17** 14:06:48.0±3.3, 7.81N×82.21W, mb3.6/2, mb1 4.1/3, mb1mx3.6/18, mbtmp3.8/3, ML4.2/1, MS3.3/1, Ms1 3.2/1, ms1mx2.1/16, Error ellipse: s-maj=117.5km s-min=63.3km az=45.0*

*NEIC **17** 14:06:57.7, 8.26N×82.70W, h28^{km}, MD4.2(CASC), After CASC.*

NEIC Felt at David, Panama.

ISC 17 14:06:59.2±0.9**, 8.26N**±0.09×**82.65W**±0.09**, h47**^{km}±11^{km}**, n23, σ1§05**/25**, mb3.6**/2**, MS3.2**/1**, 2C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	Volcan	0.54	356	eP	P	14 07 10.3	-0.5
BRU2				eS	S	14 07 18.7	-0.3
ACR	Cerro Adams	0.65	308	⇑iP	P	14 07 10.9	-1.2
ACR				eS	S	14 07 20.1	-1.5
BUS	Buena Vista	1.69	320	⇑eP	P	14 07 26.8	0.0
LIO	Limon	1.78	348	eP	P	14 07 29.1	+1.0
URSC	Urasca	1.92	325	eP	P	14 07 30.5	+0.4
LCR2	La Lucha 2	1.99	318	eP	P	14 07 30.8	-0.3
ICR	Volcan Irazu	2.07	326	eP	P	14 07 32.8	+0.6
ICR				eS	S	14 08 02.2	+5.4
LAJ	Bijagual	2.16	318	eP	P	14 07 35.6	+2.2
SJS	Escuela Geolog	2.17	320	eP	P	14 07 33.2	-0.4
SJS				eS	S	14 08 00.3	+0.9
PRS1	Puriscal	2.37	316	eP	P	14 07 35.9	-0.6
VPS2	Volcan Poas 2	2.48	321	eP	P	14 07 39.3	+1.3
CGA2	Cerro Gallo 2	2.50	314	eP	P	14 07 39.0	+0.6
TRTC	Tortuguero	2.53	336	eP	P	14 07 39.2	+0.4
JCR	Jicaral	2.90	303	eP	P	14 07 44.2	+0.1
FORC	Fortuna	2.97	318	eP	P	14 07 43.2	-1.8
JTS	JuntasAbangare	3.04	312	Pn	P	14 07 45.4	-0.6
	17nm,0.3s,baz=114,slow=12,SNR=47						
JTS				Sn	S	14 08 22.4	+0.9
	26nm,0.3s,baz=5.2,slow=23,SNR=9.2						
VCR	Vista de Mar	3.48	302	eP	P	14 07 52.7	+0.5
OTAV	Otavalo	9.00	152	P	P	14 09 10.3	+1.1
ULM	Lac du Bonnet	43.28	348	LR	LR	14 34 45.9	
	comp=Z,32nm,19.5s,MS3.2,baz=77,slow=38						
YKA	Yellowknife Ar	58.92	343	P	P	14 16 52.1	-3.5
	0.3nm,0.8s,mb3.4,baz=133,slow=7.9,SNR=5.8						
ILAR	Eielson Array	71.74	336	P	P	14 18 15.9	-2.1
	0.7nm,0.6s,mb3.8,baz=109,slow=4.6,SNR=13						
ASAR	Alice Springs	141.81	242	PKP	PKPdf	14 26 20.4	-6.2
	0.3nm,0.7s,baz=122,slow=3.5,SNR=3.7						
WRA	Warramunga Arr	142.38	248	PKP	PKPdf	14 26 23.2	-4.5
	0.3nm,0.6s,baz=101,slow=2.6,SNR=6.7						

IDC 17 14:52:40.7±1.7**, 3.68N**×**94.03E, mb3.9**/6**, mb1 4.0**/7**, mb1mx3.8**/19**, mbtmp3.9**/7**, ML3.3**/1**, Error ellipse: s-maj=71.0km s-min=20.2km az=57.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.46	18	Pn	P	14 56 19.4	-2.5
	0.1nm,0.3s,baz=196,slow=10,SNR=4.3						
SONM	Songino Array	45.26	12	P	P	15 01 00.3	-1.5
	0.2nm,0.4s,baz=211,slow=8.4,SNR=3.5						
WRA	Warramunga Arr	46.03	122	P	P	15 01 06.2	-2.0
	1.9nm,0.6s,baz=299,slow=9.0,SNR=25						
ASAR	Alice Springs	47.41	127	P	P	15 01 17.3	-1.8
	0.7nm,0.4s,baz=294,slow=7.9,SNR=22						
ZAL	Zalesovo	50.67	353	P	P	15 01 42.0	-1.9
	1.1nm,0.3s,baz=127,slow=0.9,SNR=4.1						
BVAR	Borovoye Array	52.91	342	P	P	15 01 58.4	-2.4
	1.2nm,0.8s,baz=231,slow=38,SNR=5.0						
FINES	FINESS Array B	76.36	333	P	P	15 04 31.5	-1.8
	0.4nm,0.5s,baz=104,slow=5.7,SNR=4.8						

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*BJI **17** 14:59:43.6, 7.67S×129.65E, h129^{km}, mB5.2, mb4.8*

*NEIC **17** 14:59:50.4±1.6, 7.20S×129.12E, h129^{km}±17^{km}, mb4.4/20, Error ellipse: s-maj=12.0km s-min=9.0km az=61.0*

*IDC **17** 14:59:53.2±3.0, 7.17S×129.27E, h156^{km}±27^{km}, mb3.8/9, mb1 4.0/12, mb1mx4.0/16, mbtmp4.4/12, MS3.1/1, Ms1 3.1/1, ms1mx2.4/22, Error ellipse: s-maj=27.2km s-min=10.3km az=55.0*

ISC 17 14:59:50.9±1.5**, 7.27S**±0.05×**129.22E**±0.06**, h157**^{km}±15^{km}**, n45, σ1§13**/54**, mb4.3**/26**, 1C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.27	150	⇑iP	P	15 01 22.8	+0.7
	806nm,0.8s						
KAKA				eS	S	15 02 29.3	-3.7
FITZ	Fitzroy Crossi	11.32	198	eP	P	15 02 28.4	-0.5
	33nm,0.6s						
FITZ				eS	S	15 04 26.1	-6.8
WRAB	Tennant Creek	13.54	159	eP	P	15 02 56.1	-1.6
	58nm,0.6s						
WRAB				eS	S	15 05 16.0	-8.6
WRA	Warramunga Arr	13.54	159	P	P	15 02 56.3	-1.4
	7.8nm,0.3s,baz=332,slow=13,SNR=81						
WRA				S	S	15 05 16.6	-8.1
	12nm,0.3s,baz=331,slow=24,SNR=13						
MBWA	Marble Bar	16.58	213	eP	P	15 03 35.5	-0.2
	11nm,0.7s						
MBWA				eS	S	15 06 25.5	-8.2
ASPA	Alice Springs	16.91	165	eP	P	15 03 42.0	+2.3
ASPA				eS	S	15 06 39.7	-1.4
ASAR	Alice Springs	16.91	165	P	P	15 03 41.2	+1.5
	3.2nm,0.3s,baz=343,slow=8.9,SNR=196						
ASAR				S	S	15 06 38.4	-2.7
	2.2nm,0.3s,baz=348,slow=26,SNR=6.7						
PMG	Port Moresby	17.88	98	P	P	15 03 53.9	+2.8
	0.6nm,0.3s,baz=284,slow=5.3,SNR=4.9						
PMG				S	S	15 07 02.3	-0.1
	0.6nm,0.3s,baz=177,slow=24,SNR=3.8						
PMG				LR	LR	15 10 20.9	
	comp=Z,55nm,19.2s,baz=267,slow=35						
PMG	Port Moresby	17.88	98	eP	P	15 03 53.0	+1.9
	17nm,1.0s						
CTA	Charters Tower	20.86	129	eP	P	15 04 23.8	+2.0
	5.7nm,0.8s						
CTA	Charters Tower	20.86	129	P	P	15 04 24.3	+2.4
	6.1nm,0.6s,baz=294,slow=11,SNR=8.2						
CTA				S	S	15 08 08.8	+8.6
	1.6nm,0.5s,baz=186,slow=22,SNR=1.7						
CTAO	Charters Tower	20.86	129	eP	P	15 04 24.1	+2.2
	9.2nm,0.8s						
GUMO	Guam	25.90	37	eP	P	15 05 15.3	+5.0
	489nm,1.3s						
KLBR	Kellerberrin	26.46	202	eP	P	15 05 15.6	+0.3
	296nm,1.2s						
STKA	Stephens Creek	27.07	156	⇓iP	P	15 05 21.9	+1.1
	3.1nm,0.4s,mb4.3						
STKA	Stephens Creek	27.07	156	P	P	15 05 21.6	+0.8
	5.7nm,0.6s,mb4.4,baz=328,slow=7.3,SNR=18						
MUN	Mundaring	27.41	205	eP	P	15 05 25.2	+1.2
	4.1nm,0.4s,mb4.4						
NWAO	Narrogin (SRO)	27.85	202	P	P	15 05 28.6	+0.7
	9.8nm,0.8s,mb4.6,baz=34,slow=10,SNR=6.5						
NWAO	Narrogin (SRO)	27.85	202	eP	P	15 05 28.4	+0.5
	31nm,1.3s,mb4.9						
CM31	Chiang Mai Arr	39.32	311	eP	P	15 07 07.7	+1.3
	5.0nm,0.8s,mb4.2						
CMAR	Chiang Mai Arr	39.32	311	P	P	15 07 07.8	+1.4
	2.8nm,0.9s,mb3.9,baz=140,slow=7.5,SNR=23						
CMAR				PcP	PcP	15 09 13.3	+0.9
	2.1nm,1.1s,baz=184,slow=2.8,SNR=6.9						
CMAR				ScP		15 12 47.2	
	0.4nm,0.4s,baz=163,slow=2.7,SNR=4.9						
MAJO	Matsushiro	44.39	10	eP	P	15 07 45.2	-2.3
	7.6nm,0.8s,mb4.4						
BJT	Baijiatuau	48.57	347	eP	P	15 08 19.4	-0.9
	9.6nm,0.6s,mb4.6						
BJI	Beijing	48.59	347	P	P	15 08 19.9	-0.5
BJI				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.6						
BJI	Beijing	48.59	347	P	P	15 08 19.9	-0.5
	comp=Z,11nm,0.7s,mb4.6						
LSA	Lhasa	51.86	317	eP	P	15 08 46.0	+0.6
	comp=Z,3.4nm,0.6s,mb4.2						
GTA	Gaotai	53.84	332	P	P	15 08 59.8	0.0
GTA				AMB	AMB		
	comp=Z,2.0nm,1.0s,mb3.8						
JIRN	Jiri	54.18	312	eP	P	15 09 02.4	-0.1
	comp=Z,10nm,0.6s,mb4.8						
PKI	Pulchoki	54.72	311	eP	P	15 09 05.9	-0.5
	comp=Z,7.1nm,0.5s,mb4.7						
KKN	Kakani	54.93	311	eP	P	15 09 07.4	-0.5
	comp=Z,6.4nm,0.5s,mb4.6						
DMN	Daman	54.96	311	eP	P	15 09 07.4	-0.8
	comp=Z,5.8nm,0.6s,mb4.5						
GKN	Gorkha	55.52	311	eP	P	15 09 11.9	-0.3
	comp=Z,17nm,0.4s,mb5.2						
KOLN	Koldanda	56.18	310	eP	P	15 09 16.5	-0.4
	comp=Z,13nm,0.8s,mb4.8						
ULN	Ulaanbaatar	58.28	343	eP	P	15 09 31.5	+0.1
	comp=Z,2.7nm,0.7s,mb4.2						
SONM	Songino Array	58.45	342	P	P	15 09 32.4	-0.1
	comp=Z,1.2nm,0.6s,mb3.9,baz=156,slow=6.6,SNR=10						
WMQ	Urumqi	63.20	327	eP	P	15 10 05.5	+0.9
MA2	Magadan	68.81	12	eP	P	15 10 40.5	+0.5
	comp=Z,17nm,1.5s,mb4.5						
YAK	Yakutsk	69.09	0	eP	P	15 10 40.5	-1.2
	comp=Z,29nm,0.8s,mb5.1						
ZAL	Zalesovo	71.48	334	P	P	15 10 56.1	-0.1
	comp=Z,1.9nm,0.5s,mb4.1,baz=266,slow=1.2,SNR=7.2						
VNDA	Vanda	72.28	173	P	P	15 11 01.5	+1.0
	comp=Z,1.1nm,0.6s,mb3.7,baz=310,slow=8.4,SNR=7.0						
VNDA	Vanda	72.28	173	eP	P	15 11 01.7	+1.2
	comp=Z,1.3nm,0.6s,mb3.8						
KURK	Kurchatov	72.34	329	eP	P	15 11 00.2	-1.1
	comp=Z,2.3nm,0.7s,mb4.0						
BVAR	Borovoye Array	77.88	328	P	P	15 11 32.4	-0.3
	comp=Z,1.0nm,0.8s,mb3.5,baz=143,slow=7.2,SNR=5.6						
QSPA	South Pole Qui	82.71	180	eP	P	15 11 59.1	+1.3
	comp=Z,3.7nm,0.7s,mb4.2						
ILAR	Eielson Array	93.92	25	P	P	15 12 50.3	-1.1
	comp=Z,0.2nm,0.7s,mb3.4,baz=279,slow=4.3,SNR=5.0						

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*NNC **17** 15:01:19.6±2.9, 40.97N×78.63E, mpv3.3, Error ellipse: s-maj=27.0km s-min=7.9km az=159.0*

*BJI **17** 15:01:20.2, 40.94N×78.35E, h7^{km}, ML3.2*

ISC 17 15:01:20.1±2.5**, 40.83N**±0.08×**78.6E**±0.1**, h9**^{km}±16^{km}**, n14, σ1§22**/16**, 3C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	2.25	310	P	Pn	15 01 53.7	-4.3
	SNR=8.5						
KSH	Kashi	2.38	237	eP	Pn	15 02 00.8	+0.8
KSH				S	Sn	15 02 28.9	-0.7
KSH				Smax			
	comp=N,130nm,0.6s						
KSH				Smax			
	comp=E,90nm,0.6s						
KZA	Kyzart	2.79	298	P	Pn	15 02 03.3	-2.5
	SNR=119						
TKM2	Tokmak 2	3.05	314	P	Pn	15 02 07.4	-2.0
	SNR=36						
KBK	Karagaybulak	3.27	305	P	Pn	15 02 12.5	-0.1
	SNR=33						
UCH	Uchtor	3.35	296	P	Pn	15 02 13.8	+0.1
	SNR=25						
AAK	Ala-Archa	3.54	302	P	Pn	15 02 16.9	+0.4
	SNR=27						
AAK	Ala-Archa	3.54	302	⇑Pn	Pn	15 02 15.1	-1.3
	comp=E,16nm,0.5s						
AAK				⇓Sn	Sn	15 02 59.0	+0.1
	comp=E,47nm,0.6s						
CHMS	Chumysh	3.58	308	P	Pn	15 02 17.5	+0.5
	SNR=26						
AML	Almayashu	3.89	291	P	Pn	15 02 23.5	+2.1
	SNR=8.6						
USP	Ospenovka	3.89	310	P	Pn	15 02 21.5	+0.1
	SNR=12						
EKS2	Erkin-Say	4.03	299	P	Pn	15 02 26.0	+2.6
	SNR=32						
MK31	Makanchi Array	6.54	23	⇑Pn	Pn	15 02 58.1	-0.8
	comp=E,0.5nm,0.6s,baz=207,slow=14,SNR=22						
MK31				⇓Sn	Sn	15 04 14.9	+0.6
	comp=E,1.5nm,0.5s,baz=212,slow=26						
MK31				⇑Lg		15 04 43.8	
	comp=E,2.8nm,0.7s,baz=215,slow=28,SNR=3.7						
KURK	Kurchatov	9.89	0	Lg		15 06 27.5	
	comp=E,14nm,0.8s,baz=87,slow=17,SNR=3.4						

IDC 17 15:24:48.6±5.3**, 1.77N**×**121.95E, h509**^{km}±66^{km}**, mb2.7**/5**, mb1 2.8**/5**, mb1mx2.7**/17**, mbtmp3.6**/5**, Error ellipse: s-maj=160.2km s-min=18.1km az=67.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.77	151	P	P	15 29 28.9	-2.2
	0.5nm,0.6s,baz=336,slow=9.6,SNR=17						
ASAR	Alice Springs	27.83	156	P	P	15 29 56.5	-1.6
	0.4nm,0.6s,baz=333,slow=8.9,SNR=12						
ASAR				PcP	PcP	15 32 56.2	-2.1
	0.3nm,0.4s,baz=339,slow=2.3,SNR=9.6						
STKA	Stephens Creek	38.30	153	P	P	15 31 26.0	-0.2
	1.0nm,0.5s,baz=201,slow=24,SNR=2.7						
SONM	Songino Array	47.82	346	P	P	15 32 40.2	-0.8
	0.6nm,0.7s,baz=170,slow=6.2,SNR=4.7						
BVAR	Borovoye Array	66.43	329	P	P	15 34 46.1	-2.3
	0.2nm,0.4s,baz=127,slow=7.2,SNR=4.1						

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*BJI **17** 15:27:43.9, 23.20S×179.50E, h489^{km}, mB4.8, mb4.5*

*NEIC **17** 15:27:43.9±1.0, 23.24S×179.54E, h490^{km}±12^{km}, mb4.5/33, Error ellipse: s-maj=9.8km s-min=7.4km az=131.0*

*IDC **17** 15:27:52.4±1.8, 23.42S×179.33E, h582^{km}±19^{km}, mb4.0/19, mb1 4.1/20, mb1mx4.0/22, mbtmp4.9/20, Error ellipse: s-maj=15.7km s-min=9.9km az=161.0*

ISC 17 15:27:49.3±1.0**, 23.38S**±0.05×**179.32E**±0.06**, h560**^{km}±13^{km}**, n217, σ1§07**/145**, mb4.5**/49**, 8C-12D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	12.63	43	eP	P	15 30 26.3	-8.4
	186nm,1.1s						
AFI				eS	S	15 32 39.1	-8.3
OUZ	Omahuta	12.81	202	eP	P	15 30 38.8	+2.4
OUZ				pP		15 30 49.2	
OUZ	Omahuta	12.81	202	PN	P	15 30 38.8	+2.4
OUZ				pP		15 30 49.2	
OUZ	Omahuta	12.81	202	PN	P	15 30 38.8	+2.4
OUZ				pP		15 30 49.2	
KUZ	Kuaotunu	13.69	192	eP	P	15 30 45.5	+0.4
KUZ	Kuaotunu	13.69	192	PN	P	15 30 45.5	+0.4
KUZ	Kuaotunu	13.69	192	PN	P	15 30 45.5	+0.4
MTAZ	Motutapu	13.90	195	PN	P	15 30 51.4	+4.2
MTAZ	Motutapu	13.90	195	PN	P	15 30 51.4	+4.2
KAAZ	Kauri Point	13.98	196	PN	P	15 30 54.9	+6.9
WTAZ	Waiatarua	14.12	196	P	P	15 30 50.8	+1.4
WTAZ	Waiatarua	14.12	196	PN	P	15 30 50.8	+1.4
WTAZ	Waiatarua	14.12	196	PN	P	15 30 50.8	+1.4
MKAZ	Moumakai	14.15	194	PN	P	15 30 50.8	+1.1
MKAZ	Moumakai	14.15	194	PN	P	15 30 50.8	+1.1
URZ	Urewera	14.96	187	P	P	15 30 55.5	-2.2
	18nm,0.3s,baz=357,slow=1.4,SNR=58						
URZ				S	S	15 33 28.0	-1.5
	3.2nm,0.3s,baz=63,slow=23,SNR=12						
URZ	Urewera	14.96	187	eP	P	15 30 53.8	-3.9
URZ	Urewera	14.96	187	PN	P	15 30 53.8	-3.8
URZ	Urewera	14.96	187	PN	P	15 30 53.8	-3.8
MWZ	Matawai	14.99	185	eP	P	15 30 54.6	-3.4
MWZ	Matawai	14.99	185	PN	P	15 30 54.6	-3.4
MWZ				SN	S	15 33 32.0	+1.8
MWZ	Matawai	14.99	185	PN	P	15 30 54.6	-3.4
MWZ				SN	S	15 33 32.0	+1.8
MGZ	Maungaku	15.91	191	eP	P	15 31 08.0	+1.0
MGZ	Maungaku	15.91	191	PN	P	15 31 08.0	+1.0
MGZ	Maungaku	15.91	191	PN	P	15 31 08.0	+1.0
BKZ	Black Stump Fm	15.93	188	eP	P	15 31 04.0	-3.1
BKZ	Black Stump Fm	15.93	188	PN	P	15 31 04.0	-3.1
BKZ				SN	S	15 33 44.4	-2.4
BKZ	Black Stump Fm	15.93	188	PN	P	15 31 04.0	-3.1
BKZ				SN	S	15 33 44.4	-2.4
NGZ	Ngauruhoe	16.07	190	eP	P	15 31 08.6	+0.1
NGZ	Ngauruhoe	16.07	190	ePN	P	15 31 08.5	0.0
NGZ	Ngauruhoe	16.07	190	ePN	P	15 31 08.5	0.0
CNZ	Chateau	16.10	191	ePN	P	15 31 09.1	+0.3
CNZ	Chateau	16.10	191	ePN	P	15 31 09.1	+0.3
TUVZ	Tukino	16.15	190	eP	P	15 31 07.8	-1.5
TUVZ	Tukino	16.15	190	PN	P	15 31 09.9	+0.6
TUVZ	Tukino	16.15	190	PN	P	15 31 09.9	+0.6
VRZ	Vera Road	16.18	193	eP	P	15 31 10.8	+1.3
VRZ	Vera Road	16.18	193	PN	P	15 31 11.4	+1.9
VRZ	Vera Road	16.18	193	PN	P	15 31 11.4	+1.9
TSZ	Takapari Road	16.88	189	eP	P	15 31 14.5	-1.8
TSZ	Takapari Road	16.88	189	PN	P	15 31 14.5	-1.8
TSZ	Takapari Road	16.88	189	PN	P	15 31 14.5	-1.8
MRZ	Mangatainoka R	17.52	189	eP	P	15 31 19.6	-2.9
MRZ	Mangatainoka R	17.52	189	PN	P	15 31 19.6	-2.9
MRZ	Mangatainoka R	17.52	189	PN	P	15 31 19.6	-2.9
QRZ	Quartz Range	18.32	197	eP	P	15 31 31.0	+1.0
QRZ	Quartz Range	18.32	197	PN	P	15 31 31.0	+0.9
QRZ	Quartz Range	18.32	197	PN	P	15 31 31.0	+0.9
NNZ	Nelson	18.48	194	P	P	15 31 30.8	-0.8
NNZ	Nelson	18.48	194	PN	P	15 31 30.8	-0.7
NNZ				SN	S	15 34 31.7	+1.2
NNZ	Nelson	18.48	194	PN	P	15 31 30.8	-0.7
NNZ				SN	S	15 34 31.7	+1.2
THZ	Tophouse	19.11	195	eP	P	15 31 36.9	-0.6
THZ	Tophouse	19.11	195	PN	P	15 31 36.9	-0.5
THZ	Tophouse	19.11	195	PN	P	15 31 36.9	-0.5
LTZ	Lake Taylor	20.22	195	P	P	15 31 46.2	-1.6
LTZ	Lake Taylor	20.22	195	PN	P	15 31 46.2	-1.6
LTZ	Lake Taylor	20.22	195	PN	P	15 31 46.2	-1.6
RPZ	Rata Peaks	21.40	197	P	P	15 31 57.7	-1.0
	29nm,0.4s,mb5.2,baz=28,slow=2.3,SNR=24						
FOZ	Fox Glacier	21.65	199	PN	P	15 31 58.4	-2.5
FOZ	Fox Glacier	21.65	199	PN	P	15 31 58.4	-2.5
JCZ	Jackson Bay	22.40	200	eP	P	15 32 06.8	-0.9
JCZ	Jackson Bay	22.40	200	PN	P	15 32 06.8	-0.9
JCZ	Jackson Bay	22.40	200	PN	P	15 32 06.8	-0.9
CTA	Charters Tower	30.85	270	⇓iP	P	15 33 23.0	+1.1
	45nm,0.3s,mb5.5						
CTA	Charters Tower	30.85	270	P	P	15 33 22.9	+1.1
	56nm,0.4s,mb5.5,baz=95,slow=11,SNR=170						
CTA				PcP	PcP	15 36 01.9	+0.2
	6.1nm,0.8s,baz=281,slow=2.0,SNR=3.7						
CTAO	Charters Tower	30.85	270	⇓iP	P	15 33 22.8	+0.9
	64nm,0.4s,mb5.5						
TAU	Tasmania Unive	32.84	226	eP	P	15 33 39.3	+0.8
	14nm,0.9s,mb4.5						
PMG	Port Moresby	33.73	289	P	P	15 33 46.7	+0.5
	64nm,0.8s,mb5.2,baz=96,slow=5.1,SNR=45						
PMG	Port Moresby	33.73	289	eP	P	15 33 46.4	+0.2
	53nm,0.7s,mb5.2						
STKA	Stephens Creek	34.34	247	⇓iP	P	15 33 52.4	+1.3
	4.1nm,0.6s,mb4.1						
STKA	Stephens Creek	34.34	247	P	P	15 33 52.5	+1.3
	4.0nm,0.5s,mb4.2,baz=96,slow=9.0,SNR=21						
STKA				PcP	PcP	15 36 11.9	+0.5
	3.5nm,0.5s,baz=71,slow=7.2,SNR=6.6						
ASAR	Alice Springs	41.51	260	P	P	15 34 50.0	+0.4
	18nm,0.7s,mb4.7,baz=91,slow=7.7,SNR=348						
ASAR				PcP	PcP	15 36 34.0	-0.2
	2.8nm,0.5s,baz=110,slow=3.7,SNR=9.8						
ASAR				ScP		15 39 35.1	
	1.1nm,0.8s,baz=127,slow=4.2,SNR=5.1						
ASAR				S	S	15 40 24.8	-1.3
	1.1nm,0.7s,baz=98,slow=15,SNR=9.2						
ASPA	Alice Springs	41.51	260	⇓iP	P	15 34 49.9	+0.3
ASPA				eS	S	15 40 26.3	+0.2
WRAB	Tennant Creek	41.81	266	⇓eP	P	15 34 51.2	-0.9
	35nm,0.6s,mb5.1						
WRAB				eS	S	15 40 27.2	-3.2
WRA	Warramunga Arr	41.82	266	P	P	15 34 51.9	-0.2
	15nm,0.3s,mb5.0,baz=96,slow=8.3,SNR=838						
WRA				PcP	PcP	15 36 35.4	+0.1
	3.0nm,0.6s,baz=98,slow=3.3,SNR=7.1						
WRA				S	S	15 40 26.8	-3.8
	1.8nm,0.9s,baz=110,slow=13,SNR=8.3						
WRA				PKiKP		15 43 37.7	
	0.3nm,0.4s,baz=91,slow=0.3,SNR=9.4						
KAKA	Kakadu	45.64	275	⇓iP	P	15 35 21.2	-0.7
	13nm,0.2s,mb5.1						
POHA	Pohakuloa	49.39	32	eP	P	15 35 45.5	-4.7
	304nm,0.7s						
FITZ	Fitzroy Crossi	50.25	265	eP	P	15 35 56.4	-0.1
	22nm,0.6s,mb4.8						
KLBR	Kellerberrin	54.62	247	⇓iP	P	15 36 27.0	-0.5
	105nm,0.7s,mb5.2						
MBWA	Marble Bar	54.85	260	eP	P	15 36 28.4	-0.9
	17nm,0.5s,mb4.5						
VNDA	Vanda	54.85	185	PcP	PcP	15 37 22.1	-0.1
	1.0nm,0.5s,baz=344,slow=7.3,SNR=5.4						
VNDA	Vanda	54.85	185	eP	P	15 36 28.8	+0.3
	3.4nm,1.0s,mb3.5						
NWAO	Narrogin (SRO)	54.89	245	eP	P	15 36 28.8	-0.7
	3.9nm,0.7s,mb3.8						
MUN	Mundaring	55.87	246	⇓iP	P	15 36 36.0	-0.2
	7.9nm,0.6s,mb4.1						
CBIJ	Chichi jima	61.68	322	P	P	15 37 13.4	-1.7
	43nm,0.6s,mb5.1,baz=273,slow=23,SNR=2.6						
QSPA	South Pole Qui	66.71	180	eP	P	15 37 46.8	+0.8
	4.4nm,0.9s,mb4.0						
MAJO	Matsushiro	71.11	326	eP	P	15 38 12.2	-0.9
	8.6nm,0.9s,mb4.3						
ASAJ	Asahikawa	75.12	334	P	P	15 38 37.4	+1.8
	14nm,0.9s,mb4.4,baz=260,slow=12,SNR=8.7						
YSS	Yuzh-Sakhalins	77.40	335	eP	P	15 38 48.9	+0.9
	15nm,0.5s,mb4.7						
KS15	Wonju Array Si	77.46	320	P	P	15 38 48.4	-0.1
MAW	Mawson	78.02	201	eP	P	15 38 51.8	+1.0
	8.8nm,0.9s,mb4.1						
PET	Petropavlovsk	78.17	347	eP	P	15 38 50.7	-1.2
	9.9nm,0.5s,mb4.4						
MDJ	Mudanjiang	81.48	327	P	P	15 39 10.3	+1.0
MDJ				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,139nm,4.3s						
MDJ	Mudanjiang	81.48	327	eP	P	15 39 08.7	-0.7
	comp=Z,9.0nm,0.7s,mb4.3						
CN2	Changchun	83.10	324	eP	P	15 39 18.4	+0.9
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
CMB	Columbia Colle	83.25	44	eP	P	15 39 18.0	-0.4
	comp=Z,11nm,0.8s,mb4.4						
OHCM	Honcut	83.34	42	eP	P	15 39 18.9	0.0
MTUM	Tungsten Hills	84.02	45	eP	P	15 39 21.6	-0.5
YBH	Yreka Blue Hor	84.08	40	P	P	15 39 23.0	+0.7

	comp=Z,4.7nm,0.7s,mb4.1,baz=227,slow=2.4,SNR=13						
SNAA	Sanae	85.20	179	⇑*i*	P	15 39 27.0	-0.2
TPH	Tonopah	85.31	45	*e*P	P	15 39 28.6	+0.2
	comp=Z,10.0nm,1.0s,mb4.3						
VNA3	Neumayer Olymp	85.43	177	⇑*i*	P	15 39 29.5	+1.2
ENH	Enshi	85.63	305	*e*P	P	15 39 30.9	+0.7
	comp=Z,22nm,1.2s,mb4.7						
VNA2	Neumayer--Watz	85.84	178	⇑*i*	P	15 39 30.9	+0.6
MA2	Magadan	85.92	346	*e*P	P	15 39 30.3	-0.6
	comp=Z,15nm,0.9s,mb4.6						
VNA1	Neumayer--Stat	86.08	177		P	15 39 26.9	-4.5
BJT	Baijiatuau	86.21	317	*e*P	P	15 39 33.5	+0.8
	comp=Z,8.8nm,0.8s,mb4.4						
BJI	Beijing	86.22	317	P	P	15 39 33.8	+1.0
BJI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
WVOR	Wild Horse Val	86.92	41	*e*P	P	15 39 36.5	+0.5
	comp=Z,5.8nm,0.6s,mb4.4						
BBB	Bella Bella	88.11	29	P	P	15 39 41.5	+0.2
	comp=Z,6.6nm,0.6s,mb4.5,baz=186,slow=12,SNR=5.5						
CMAR	Chiang Mai Arr	88.76	291	P	P	15 39 46.8	+1.6
	comp=Z,3.3nm,1.0s,mb4.1,baz=127,slow=3.2,SNR=21						
PLCA	Paso Flores	89.08	134	P	P	15 39 47.2	+1.0
	comp=Z,1.0nm,0.5s,mb3.9,baz=214,slow=8.3,SNR=4.5						
PLCA	Paso Flores	89.08	134	*e*P	P	15 39 47.3	+1.2
	comp=Z,1.9nm,0.8s,mb4.0						
TMUT	Trail Mountain	89.93	47	*e*P	P	15 39 51.0	+0.8
HVU	Hansel Valley	90.19	44	*e*P	P	15 39 51.9	+0.6
SRU	San Rafael	90.30	47	*e*P	P	15 39 52.2	+0.4
TXAR	Lajitas Array	90.68	58	P	P	15 39 54.8	+0.9
	comp=Z,2.9nm,0.7s,mb4.3,baz=217,slow=6.3,SNR=18						
HWUT	Hardware Ranch	90.88	44	*e*P	P	15 39 54.1	-0.3
	comp=Z,5.5nm,0.8s,mb4.5						
PV10	Paradox Valley	90.94	48	*e*P	P	15 39 54.5	-0.3
ANMO	Albuquerque	91.13	52	P	P	15 39 56.0	+0.2
	comp=Z,1.7nm,0.5s,mb4.3,baz=201,slow=4.9,SNR=4.8						
ANMO	Albuquerque	91.13	52	*e*P	P	15 39 55.6	-0.1
	comp=Z,4.0nm,0.9s,mb4.3						
PV01	Paradox Valley	91.14	49	*e*P	P	15 39 55.5	-0.3
COLA	College	91.55	13	*e*P	P	15 39 54.3	-2.7
	comp=Z,2.8nm,0.8s,mb4.3						
BILL	Bilibino	91.65	355	*e*P	P	15 39 56.9	-0.5
	comp=Z,7.6nm,0.8s,mb4.8						
DLBC	Dease Lake	91.67	24	P	P	15 39 57.9	+0.3
	comp=Z,3.4nm,1.2s,mb4.3,baz=312,slow=25,SNR=2.6						
ILAR	Eielson Array	91.67	14	P	P	15 39 56.0	-1.5
	comp=Z,0.7nm,0.6s,mb3.9,baz=228,slow=5.0,SNR=12						
ILAR				pP	pP	15 42 02.0	+1.1
	comp=Z,0.9nm,0.9s,baz=231,slow=5.8,SNR=4.0						
LZH	Lanzhou	92.56	308	⇑P	P	15 40 03.8	+1.5
LZH				AP	pP	15 41 56.8	-9.0
LZH				XP	sP	15 42 46.5	-15
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb5.0						
PDAR	Pinedale Array	92.75	44	P	P	15 40 02.8	-0.2
	comp=Z,1.5nm,0.6s,mb4.2,baz=207,slow=2.6,SNR=17						
SDCO	Great Sand Dun	93.10	50	*e*P	P	15 40 04.6	-0.1
	comp=Z,3.1nm,0.8s,mb4.4						
WALA	Waterton Lakes	93.36	37	*e*P	P	15 40 04.3	-1.3
	comp=Z,1.5nm,0.7s,mb4.1						
YAK	Yakutsk	93.86	339	*e*P	P	15 40 06.5	-1.1
	comp=Z,10nm,0.9s,mb5.0						
SONM	Songino Array	96.30	320	P	P	15 40 19.0	+0.1
	comp=Z,0.6nm,0.7s,mb4.0,baz=90,slow=1.2,SNR=4.7						
SONM				PKKPbc		15 57 01.7	
	comp=Z,0.5nm,0.5s,baz=316,slow=3.9,SNR=4.0						
INK	Inuvik	97.70	16	P	P	15 40 23.6	-1.1
	comp=Z,1.0nm,0.6s,mb4.3,baz=225,slow=3.2,SNR=5.1						
INK	Inuvik	97.70	16	*e*P	P	15 40 23.5	-1.3
	comp=Z,1.4nm,0.6s,mb4.5						
YKA	Yellowknife Ar	100.16	26	P	P	15 40 34.4	-1.5
	comp=Z,0.2nm,0.7s,baz=244,slow=4.4,SNR=6.1						
YKA				PKKPbc		15 56 49.9	
	comp=Z,0.3nm,0.5s,baz=38,slow=2.3,SNR=7.3						
ZAL	Zalesovo	111.16	321	PKiKP		15 45 19.1	
	comp=Z,0.7nm,0.3s,baz=310,slow=1.7,SNR=3.6						
RES	Resolute Bay	111.24	17	*e*P	PKPdf	15 45 18.1	-0.5
BDFB	Brasilia	119.62	125	PKP	PKPdf	15 45 36.0	-0.2
	comp=Z,1.4nm,0.5s,baz=156,slow=4.6,SNR=3.2						
BVAR	Borovoye Array	119.64	319	PKP	PKPdf	15 45 35.9	+0.5
	comp=Z,4.6nm,0.4s,baz=121,slow=2.3,SNR=52						
SCHQ	Schefferville	122.46	39	PKP	PKPdf	15 45 39.9	-1.0
	comp=Z,2.4nm,0.9s,baz=62,slow=16,SNR=6.3						
KEV	Kevo	130.77	348	*e*pkp	PKPdf	15 45 52.9	-3.5
ARCES	ARCESS Array B	131.25	348	PKhKP		15 45 49.0	
	comp=Z,2.0nm,0.8s,slow=1.8,SNR=7.5						
ARCES				PKP	PKPdf	15 45 57.6	+0.2
	comp=Z,3.5nm,0.4s,baz=22,slow=1.6,SNR=26						
JOF	Joensuu	135.03	340	*e*pkp	PKPdf	15 46 01.6	-2.9
KMBO	Kilima Mbogo	135.80	242	PKP	PKPdf	15 46 09.4	+2.2
	comp=Z,2.2nm,1.0s,baz=54,slow=1.4,SNR=4.3						
KAF	Kangasniemi	137.15	342	*e*pkp	PKPdf	15 45 59.9	-8.5
FINES	FINESS Array B	137.75	341	PKhKP		15 45 58.5	
	comp=Z,0.9nm,0.4s,baz=54,slow=4.3,SNR=12						
FINES				PKP	PKPdf	15 46 09.7	+0.2
	comp=Z,2.1nm,0.3s,baz=95,slow=3.3,SNR=16						
NB2	NORSAR Subarra	141.47	351	PKP	PKPdf	15 46 12.0	-4.0
	comp=Z,2.9nm,0.6s,baz=14,slow=3.1						
NOA	NORSAR Array B	141.47	351	PKhKP		15 46 12.3	
	comp=Z,5.0nm,0.7s,baz=16,slow=4.6,SNR=15						
NAO01	NORSAR Array S	141.70	351	*e*P	PKPdf	15 46 12.7	-3.7
ELZG	Elazig	143.09	303	*i* P	PKPbc	15 46 20.6	+2.4
MALT	Malatya	143.56	303	*e*PKPdf	PKPdf	15 46 21.0	+0.7
AKASG	Malin Array Be	144.19	327	PKP	PKPdf	15 46 20.5	-0.5
	comp=Z,12nm,0.4s,baz=46,slow=4.1,SNR=130						
GZT	Gaziantep	144.43	302	*i* P	PKPdf	15 46 23.9	+2.0
KAHT	Ahir Dag	144.91	303	*i* P	PKPdf	15 46 25.4	+2.6
BOYT	Boyabat	145.29	310	*i* P	PKPdf	15 46 26.6	+3.4
COBT	Iskenderun	145.63	301	*i* P	PKPdf	15 46 27.7	+3.7
CTKT	Corum	145.64	309	*i* P	PKPdf	15 46 28.1	+4.3
ASF	Jabal al Asfar	145.76	293	PKPbc	PKPbc	15 46 28.5	+2.7
	comp=Z,7.2nm,0.6s,baz=341,slow=1.0,SNR=11						
BSD	Bornholm Skovb	146.24	344	*i* P	PKPdf	15 46 27.6	+3.2
	comp=Z,20nm,0.5s						
BALT	Daday	146.31	311	*i* P	PKPdf	15 46 28.1	+3.1
ELDT	Eldivan	146.66	309	*i* P	PKPdf	15 46 29.7	+4.1
BRTR	Keskin Array B	146.77	308	PKP	PKPdf	15 46 26.6	+0.8
	comp=Z,3.7nm,0.8s,baz=297,slow=2.8,SNR=16						
BRTR				PKPbc	PKPbc	15 46 29.9	+1.9
	comp=Z,9.1nm,0.7s,baz=145,slow=5.0,SNR=19						
BRTR				PKPab	PKPab	15 46 33.6	-0.5
	comp=Z,7.4nm,0.5s,baz=114,slow=3.8,SNR=30						
MEST	Erdemli	147.27	302	*i* P	PKPdf	15 46 31.0	+4.3
EIL	Elat	147.60	289	*e*PKPbc	PKPdf	15 46 32.6	+5.2
EIL				*e*PKPab	PKPab	15 46 37.9	+0.1
TLCR		147.62	319	⇓P	PKPdf	15 46 31.5	+4.5
EKA	Eskdalemuir Ar	148.03	3	PKPbc	PKPdf	15 46 32.0	+4.7
	comp=Z,5.4nm,0.6s,baz=350,slow=2.7,SNR=19						
CFR	Carcaliu	148.03	320	⇓P	PKPdf	15 46 33.2	+5.6
CSS	Prodhromos	148.28	299	*e*PKPbc	PKPdf	15 46 33.7	+5.3
VRI	Vrincioaia	148.45	322	⇓P	PKPdf	15 46 34.3	+6.0
KOLS	Kolonicke sedl	148.71	330	*e*PKP	PKPdf	15 46 35.6	+7.1
OJC	Ojcow	148.80	334	*e*PKP	PKPdf	15 46 35.1	+6.5
ESKT	Eskisehir	148.86	309	*i* P	PKPdf	15 46 35.0	+6.0
ISR	Istrita	149.00	321	⇑P	PKPdf	15 46 36.1	+7.0
MLR	Muntele Rosu	149.12	322	PKPbc	PKPdf	15 46 35.5	+6.2
	comp=Z,3.4nm,0.3s,baz=310,slow=4.7,SNR=19						
NIE	Niedzica	149.21	333	*e*PKP	PKPdf	15 46 35.2	+5.9
OKC	Ostrava-Krasne	149.74	336	*e*PKPbc	PKPdf	15 46 37.4	+7.2
UPC	Upice	149.95	339	*e*PKPbc	PKPdf	15 46 38.0	+7.5
DPC	Dobruska-Polom	149.98	338	*e*PKPbc	PKPdf	15 46 38.2	+7.7
MORC	Moravsky Berou	150.02	336	*e*PKPbc	PKPdf	15 46 37.7	+7.0
MORC				*e*PKPab	PKPab	15 46 46.0	-0.9
CLL	Collm	150.17	343	⇓*i*PKP1	PKPdf	15 46 38.1	+7.3
CLL				*i* PKP2	PKPab	15 46 46.5	-1.0
PVCC	Panska Ves	150.41	340	*e*PKPbc	PKPdf	15 46 39.1	+7.9
VYHS	Vyhne	150.54	333	*e*PKP	PKPdf	15 46 39.1	+7.7
VYHS				*e*		15 46 48.8	
VRAC	Vranov	150.76	337	PKPbc	PKPdf	15 46 39.1	+7.4
	comp=Z,6.2nm,0.8s,baz=342,slow=8.2,SNR=4.4						
VRAC				PKPab	PKPab	15 46 49.7	-0.3
	comp=Z,11nm,0.8s,baz=45,slow=4.8,SNR=8.1						
DNZL	Cakiroluk	150.84	306	*i* P	PKPdf	15 46 40.6	+8.4
PRU	Pruhonice	150.88	340	*e*PKPbc	PKPdf	15 46 39.8	+7.9
NKC	Novy Kostel	151.29	342	*e*PKPbc	PKPdf	15 46 40.5	+8.0
KHC	Kasperske Hory	151.94	340	*e*PKPbc	PKPdf	15 46 42.2	+8.8
KHC				PKPab	PKPab	15 46 54.5	-0.5
GERES	GERESS Array B	152.15	339	PKP	PKPdf	15 46 35.1	+1.4
	comp=Z,0.6nm,0.7s,SNR=4.7						
GERES				PKPbc	PKPdf	15 46 42.5	+8.8
	comp=Z,3.2nm,0.5s,baz=27,slow=2.3,SNR=30						
GERES				PKPab	PKPab	15 46 54.7	-1.2
	comp=Z,1.1nm,0.6s,baz=45,slow=3.8,SNR=5.6						
GERES				pPKPbc		15 48 54.2	
	comp=Z,1.3nm,0.9s,baz=27,slow=2.2,SNR=3.7						
MOA	Molln	152.82	338	⇑*i*P	PKPdf	15 46 43.9	+9.2
MOA				*i*		15 46 58.6	
GIVF	Givet	152.98	352	*e*PKP2	PKPab	15 46 57.4	-1.9
BAIF	Baives	153.09	353	*e*PKP2	PKPab	15 46 58.2	-1.6
	comp=Z,7.5nm,0.4s						
WTTA	Wattenberg	154.20	341	⇑*i*P	PKPdf	15 46 46.7	+10
WTTA				*i*		15 47 03.6	
CDF	Champ du Feu	154.23	348	*e*PKP2	PKPab	15 47 03.1	-1.5
	comp=Z,7.0nm,0.7s						
SQTA	Sankt Quirin	154.37	341	⇑*i*P	PKPdf	15 46 47.3	+11
MEZF	Maizieres J'vi	154.51	351	*e*PKP2	PKPab	15 47 04.5	-1.3
	comp=Z,17nm,0.5s						
FLN	La Foliniere	154.66	360	*e*PKP2	PKPab	15 47 04.0	-2.4
HAU	Haudompre	154.79	349	*e*PKP2	PKPab	15 47 05.5	-1.5
	comp=Z,13nm,0.6s						
LDF	La Druitiere	154.83	359	*e*PKP2	PKPab	15 47 04.7	-2.4
	comp=Z,10nm,0.6s						
HINF	Hinteralfeld	154.88	348	*e*PKP2	PKPab	15 47 05.7	-1.7
GRR	Gorron	155.04	0	*e*PKP2	PKPab	15 47 05.9	-2.1
	comp=Z,13nm,0.6s						
SGMF	Saint Gilles	155.13	3	*e*PKP2	PKPab	15 47 06.4	-2.0
	comp=Z,14nm,0.9s						
DAVOX	Davos	155.15	343	PKPbc	PKPdf	15 46 48.8	+11
	comp=Z,4.7nm,0.7s,baz=325,slow=7.6,SNR=5.0						
DAVOX				PKPab	PKPab	15 47 08.6	0.0
	comp=Z,6.4nm,0.5s,baz=137,slow=2.0,SNR=8.9						
QUIF	Quistinic	155.43	4	*e*PKP2	PKPab	15 47 07.6	-2.1
SSF	Saint Saulge	156.13	353	*e*PKP2	PKPab	15 47 11.3	-1.5
	comp=Z,19nm,0.7s						
CABF	La Chapelle	156.18	348	*e*PKP2	PKPab	15 47 12.0	-1.0
	comp=Z,7.1nm,0.6s						
AVF	Avril sur Loir	156.41	353	*e*PKP2	PKPab	15 47 12.3	-1.7
	comp=Z,12nm,1.0s						
SMF	Signal de Mont	156.50	352	*e*PKP2	PKPab	15 47 12.8	-1.6
	comp=Z,39nm,0.9s						
MFF	Saint Martin d	156.82	359	*e*PKP2	PKPab	15 47 14.0	-1.8
TCF	Toulx Ste Croi	157.02	355	*e*PKP2	PKPab	15 47 14.4	-2.2
	comp=Z,6.8nm,0.7s						
LPL	La Plagne	157.10	347	*e*PKP2	PKPab	15 47 15.1	-1.9
LPG	La Plagne	157.12	346	*e*PKP2	PKPab	15 47 15.1	-2.0
MBDF	Montbardon	157.84	346	*e*PKP2	PKPab	15 47 18.5	-1.7
ORIF	Oris-en-Rattie	157.85	348	*e*PKP2	PKPab	15 47 18.9	-1.3
	comp=Z,8.1nm,0.7s						
VIVF	Saint-Julien-l	158.13	350	*e*PKP2	PKPab	15 47 19.2	-2.2
SBF	Sospel	158.50	344	*e*PKP2	PKPab	15 47 21.8	-1.3
	comp=Z,50nm,0.8s						
DBIC	Dimbokro	162.91	166	PKP	PKPdf	15 46 48.8	+1.1
	comp=Z,2.3nm,0.6s,baz=139,slow=1.5,SNR=7.2						
ESDC	Sonseca Array	163.51	9	PKPab	PKPab	15 47 43.6	-1.3
	comp=Z,2.3nm,0.7s,baz=356,slow=6.2,SNR=6.4						

IGQ 17 15:28:07.3, 1.26S×81.51W, h8^{km}±5^{km}, mb4.2, 2D, Error ellipse: s-maj=9.2km s-min=3.5km az=32.6, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.99	78	⇓P	Pb	15 28 25.1	-1.1
HOJA				S	Sb	15 28 39.3	0.0
SALI	Salinas	1.06	151	P	Pb	15 28 27.6	0.0
IGUA	Igualata	2.88	95	P	Pn	15 28 55.0	+0.5
ARRY	Arrayan	3.07	95	P	Pn	15 28 57.5	+0.4
NAS1	Nasa	3.10	79	P	Pn	15 28 58.8	+1.2
ULBA	Ulba	3.11	94	P	Pn	15 28 59.2	+1.5
PISA	Pisayambo	3.13	86	P	Pn	15 29 00.2	+2.2
YANA	Yana	3.15	69	P	Pn	15 28 59.5	+1.2
VC1	Cotopaxi 1	3.17	79	P	Pn	15 29 01.4	+2.9
TAMB	Tambo	3.19	80	P	Pn	15 29 01.3	+2.4
ANTI	Antisana	3.44	77	⇓P	Pn	15 29 04.6	+2.1
CAYR	Refugio Cayamb	3.73	70	P	Pn	15 29 08.9	+2.4
ECEN	Cerro Negro	4.10	60	P	Pn	15 29 13.0	+1.2

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*BER **17** 15:33:01.4±3.3, 71.99N×0.99E, ML2.2(NAO)*

*IDC **17** 15:33:05.1±6.9, 71.58N×2.07E, mb3.3/1, mb1 3.6/5, mb1mx3.3/21, mbtmp3.5/5, ML3.2/4, Error ellipse: s-maj=85.8km s-min=28.9km az=144.0*

*NAO **17** 15:33:06.6±5.4, 72.20N×2.47E, ML2.2*

ISC 17 15:33:01.5±1.4, **72.02N**±0.10×**2.2E**±0.3, **h10**^{km}**, n9,** σ**1**^{s}**18**/11, **mb3.4**/1, **Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	7.16	24	Pn	Pn	15 34 48.2	-0.7
	baz=210,slow=16						
ARA0	ARCESS Array S	8.07	97	Pn	P	15 35 02.6	+1.0
	baz=303,slow=12						
ARA0				Sn	Sn	15 36 33.3	-0.5
	baz=303,slow=22						
ARCES	ARCESS Array B	8.07	97	Pn	P	15 35 01.9	+0.3
	0.2nm,0.3s,baz=291,slow=15,SNR=9.0						
ARCES				Sn	Sn	15 36 33.6	-0.1
	0.2nm,0.3s,baz=299,slow=19,SNR=2.7						
NOA	NORSAR Array B	11.58	158	Pn	P	15 35 46.9	-2.8
	0.2nm,0.3s,baz=298,slow=24,SNR=2.9						
HFS	Hagfors	12.78	153	Pn	P	15 36 05.4	-0.4
	baz=3.3,slow=14						
HFS	Hagfors	12.78	153	Pn	P	15 36 03.6	-2.2
	0.0nm,0.3s,baz=346,slow=12,SNR=6.1						
FIA0	FINESS Array S	14.06	127	Pn	P	15 36 23.7	+1.2
	baz=321,slow=11						
FINES	FINESS Array B	14.06	127	Pn	P	15 36 23.3	+0.8
	0.1nm,0.3s,baz=315,slow=12,SNR=5.1						
GERES	GERESS Array B	23.84	161	P	P	15 38 16.8	+1.6
	1.4nm,0.9s,mb3.4,slow=9.3,SNR=7.1						

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*STR **17** 15:37:19.9±0.3, 42.63N×0.82E, h5^{km}±1^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **17** 15:37:19.9±0.1, 42.64N×0.82E, h10^{km}, ML2.6/7, Error ellipse: s-maj=2.3km s-min=2.0km az=155.0*

*LDG **17** 15:37:20.1±0.2, 42.66N×0.81E, h11^{km}, Md2.4/2, Ml2.4/7, Error ellipse: s-maj=4.4km s-min=1.9km az=170.0*

MDD 17 15:37:19.8±0.2, **42.63N×0.83E, h11**^{km}**, mbLg1.9**/20, **1C, Error ellipse: s-maj=2.1km s-min=1.4km az=24.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MELF	Melles	0.25	348	Pg	Pg	15 37 25.4	+0.2
MELF				Sg	Sg	15 37 29.1	+0.3
MELF	Melles	0.25	348	P	Pg	15 37 25.4	+0.2
MELF				S	Sg	15 37 29.2	+0.4
SALF	Salau	0.30	63	P	Pg	15 37 25.8	-0.3
SALF				S	Sg	15 37 29.8	-0.4
CSOR	Sort	0.34	138	Pg	Pg	15 37 25.9	-0.9
CSOR				Lg		15 37 30.4	
	42nm,0.1s						
MLS	Moulis	0.38	30	Pg	Pg	15 37 27.4	-0.3
MLS				Sg	Sg	15 37 32.6	-0.4
MLS	Moulis	0.38	30	P	Pg	15 37 27.6	-0.2
MLS				S	Sg	15 37 32.6	-0.4
RESF	Ens	0.41	297	Pg	Pg	15 37 27.7	-0.4
RESF				Sg	Sg	15 37 33.2	-0.5
RESF	Ens	0.41	297	P	Pg	15 37 27.7	-0.4
RESF				S	Sg	15 37 33.2	-0.5
EBIE	Bielsa	0.51	277	⇑Pg	Pg	15 37 29.4	-0.8
	SNR=18						
EBIE				Lg		15 37 36.2	
	18nm,0.1s,SNR=47						
EBIE	Bielsa	0.51	277	Pg	Pg	15 37 29.4	-0.8
	SNR=18						
CORG	Organya	0.54	137	Pg	Pg	15 37 29.6	-1.1
CORG				Lg		15 37 36.8	
	11nm,0.1s						
PAND	Andorre	0.54	101	P	Pg	15 37 29.5	-1.2
PAND				S	Sg	15 37 36.1	-2.0
EPF	Esparros	0.54	318	*e*Pg	Pg	15 37 30.2	-0.6
EPF				*e*Sg	Sg	15 37 35.6	-2.5
	25nm,0.2s						
VIEF	Viey	0.65	294	P	Pb	15 37 32.0	-0.6
VIEF				S	Sb	15 37 40.2	-1.1
LABF	Labassere	0.70	307	Pg	Pg	15 37 33.2	-0.7
LABF				Sg	Sg	15 37 42.6	-0.6
LABF	Labassere	0.70	307	P	Pb	15 37 33.2	-0.3
LABF				S	Sb	15 37 42.4	-0.4
CAVN	Les Avellanes	0.75	184	Pg	Pg	15 37 34.1	-0.7
CAVN				Lg		15 37 44.8	
	10.0nm,0.1s						
CLLI	Llivia	0.86	99	Lg		15 37 46.4	
	1.5nm,0.1s						
EMIR	Miracle	0.88	144	Pg	Pg	15 37 36.1	-1.3
	2.4nm,0.1s,SNR=5.6						
EMIR				Lg		15 37 48.3	
	4.3nm,0.1s,SNR=6.2						
EMIR	Miracle	0.88	144	Pg	Pg	15 37 36.1	-1.4
	2.4nm,0.1s,SNR=5.6						
CARF	Carcanieres	0.94	84	P	Pb	15 37 37.6	-0.2
CARF				S	Sb	15 37 49.8	-0.2
CBRU	Bruguera	1.06	108	Lg		15 37 52.5	
	4.2nm,0.2s						
ETSF	Etsaut	1.06	285	*e*Pg	Pg	15 37 39.0	-2.0
ETSF				*e*Sg	Sg	15 37 52.1	-3.1
	21nm,0.2s						
ATE	Arette	1.22	293	S	Sb	15 37 57.7	-0.2
MTLF	Montolieu	1.24	54	*e*Pg	Pg	15 37 43.2	-1.5
MTLF				*e*Sg	Sg	15 37 58.6	-2.7
	15nm,0.4s						
EPOB	Poblet	1.29	172	Pg	Pg	15 37 43.4	-2.1
	1.0nm,0.1s,SNR=6.9						
EPOB				Lg		15 38 00.1	
	11nm,0.2s,SNR=8.5						
EPOB	Poblet	1.29	172	Pg	Pg	15 37 43.4	-2.2
	1.0nm,0.1s,SNR=6.9						
ESAC	San Caprasio	1.32	227	Pg	Pg	15 37 44.6	-1.6
	6.2nm,0.1s,SNR=18						
ESAC				Lg		15 38 02.8	
	15nm,0.5s,SNR=7.9						
ESAC	San Caprasio	1.32	227	Pg	Pg	15 37 44.6	-1.7
	6.2nm,0.1s,SNR=18						
CFON	Fontmartina	1.47	125	Pg	Pg	15 37 46.9	-2.4
CFON				Lg		15 38 06.1	
	30nm,0.2s						
EJON	La Jonquera	1.53	96	Lg		15 38 09.8	
	4.2nm,0.1s,SNR=7.9						
SJPF	Ste Jean	1.59	289	*e*Pn	Pn	15 37 46.3	-1.8
SJPF				*e*Pg	Pg	15 37 48.2	-3.3
SJPF				*e*Sg	Sg	15 38 08.9	-3.8
	16nm,0.4s						
ERTA	Horta de San J	1.71	193	Pg	Pg	15 37 51.9	-2.1
	0.5nm,0.1s,SNR=5.9						
ERTA				Lg		15 38 13.0	
	4.2nm,0.1s,SNR=7.9						
ERTA	Horta de San J	1.71	193	Pg	Pg	15 37 51.9	-2.1
	0.5nm,0.1s,SNR=5.9						
EALK	Alkurruntz	1.82	290	Pg	Pg	15 37 53.4	-2.7
	2.3nm,0.3s,SNR=7.9						
EALK				Lg		15 38 18.0	
	SNR=7.9						
LFF	La Frestale	2.31	358	*e*Pn	Pn	15 37 55.9	-2.5
LFF				*e*Sg	Sg	15 38 30.9	-6.0
	6.2nm,0.3s						
EMOS	Mosqueruela	2.46	204	Lg		15 38 36.2	
	2.0nm,0.2s,SNR=7.9						
CAF	Calviac	2.47	21	*e*Pn	Pn	15 37 58.2	-2.4
CAF				*e*Sn	Sn	15 38 27.0	-4.0
CAF				*e*Sg	Sg	15 38 36.2	-5.8
	3.2nm,0.3s						
LASF	Ste Croix	2.64	56	*e*Pn	Pn	15 38 01.0	-2.1
LASF				*e*Sg	Sg	15 38 41.4	-6.4
	1.4nm,0.3s						
RJF	Les Rejaudoux	2.72	10	*e*Pn	Pn	15 38 01.7	-2.6
RJF				*e*Sg	Sg	15 38 44.0	-6.5
	2.7nm,0.2s						
VIVF	Saint-Julien-l	3.57	50	*e*Pn	Pn	15 38 13.3	-3.0

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*IDC **17** 15:41:21.5±5.4, 5.54S×151.55E, h58^{km}±45^{km}, mb4.0/7, mb1 4.3/8, mb1mx4.0/14, mbtmp4.4/8, ML3.8/1, MS3.9/2, Ms1 3.9/2, ms1mx3.2/17, Error ellipse: s-maj=44.6km s-min=25.3km az=109.0*

*NEIC **17** 15:41:23.5±2.3, 5.52S×151.51E, h75^{km}±19^{km}, mb4.8/3, Error ellipse: s-maj=25.8km s-min=13.0km az=116.0*

ISC 17 15:41:22.3±3.7, **5.4S**±0.2×**151.2E**±0.3, **h68**^{km}±31^{km}**, n22,** σ**0**^{s}**81**/19, **mb4.3**/9, **1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.69	225	P	P	15 42 47.1	+1.0
	16nm,0.3s,baz=41,slow=4.3,SNR=82						
PMG				S	S	15 43 49.4	-1.4
	14nm,0.3s,baz=55,slow=8.1,SNR=3.8						
PMG	Port Moresby	5.69	225	*e*Pn	P	15 42 46.8	+0.7
PMG				S	S	15 43 49.4	-1.4
KAKA	Kakadu	19.93	247	*e*P	P	15 45 51.0	-0.4
	27nm,0.6s						
WRAB	Tennant Creek	21.89	227	*e*P	P	15 46 12.7	+1.5
	23nm,0.7s,mb4.6						
WRA	Warramunga Arr	21.91	227	P	P	15 46 11.2	-0.1
	10nm,0.5s,mb4.5,baz=52,slow=9.9,SNR=150						
WRA				PcP	PcP	15 50 08.3	-1.1
	0.8nm,0.7s,baz=48,slow=2.2,SNR=4.9						
ASAR	Alice Springs	24.69	221	P	P	15 46 38.4	-0.2
	4.5nm,0.5s,mb4.2,baz=56,slow=8.9,SNR=43						
ASPA	Alice Springs	24.69	221	*e*P	P	15 46 39.6	+1.1
FITZ	Fitzroy Crossi	28.02	241	⇑*i*P	P	15 47 09.0	-0.4
	44nm,0.6s,mb5.2						
CBIJ	Chichi jima	33.45	345	LR	LR	15 58 37.2	
	comp=Z,508nm,21.4s,baz=122,slow=31						
RPZ	Rata Peaks	41.99	158	LR	LR	16 03 44.5	
	comp=Z,70nm,20.6s,baz=219,slow=32						
MA2	Magadan	64.75	360	*e*P	P	15 51 55.6	0.0
SONM	Songino Array	65.99	329	P	P	15 52 04.6	+0.8
	1.3nm,0.6s,mb4.0,baz=148,slow=5.2,SNR=9.8						
ZAL	Zalesovo	80.78	327	P	P	15 53 29.7	-0.3
	1.3nm,0.4s,mb4.1,baz=355,slow=5.6,SNR=8.8						
ZAL	Zalesovo	80.78	327	P	P	15 53 29.7	-0.3
KURK	Kurchatov	83.26	322	*e*P	P	15 53 43.6	+0.7
ILAR	Eielson Array	83.28	22	P	P	15 53 41.0	-1.6
	1.9nm,0.7s,mb4.1,baz=249,slow=5.7,SNR=21						
BVAR	Borovoye Array	88.77	323	P	P	15 54 09.9	+0.1
	3.9nm,1.1s,mb4.3,baz=104,slow=6.1,SNR=11						
BRVK	Borovoye	88.84	323	P	P	15 54 09.8	-0.3
INK	Inuvik	89.55	21	P	P	15 54 12.6	-0.5
	0.5nm,0.6s,mb3.9,baz=206,slow=3.0,SNR=4.3						
GERES	GERESS Array B	123.72	328	PKP	PKPdf	16 00 13.8	+1.2
	1.0nm,0.6s,baz=78,slow=1.4,SNR=12						
BDFB	Brasilia	151.73	138	PKPbc	PKPdf	16 01 09.2	+5.6
	1.3nm,0.6s,baz=270,slow=3.0,SNR=3.1						
DBIC	Dimbokro	156.19	274	PKPab	PKPab	16 01 40.0	-0.4
	1.2nm,0.4s,baz=58,slow=5.1,SNR=5.3						

IDC 17 15:54:15.6±4.3, **0.17S×131.78E, mb3.8**/2, **mb1 4.1**/3, **mb1mx3.8**/15, **mbtmp3.8**/3, **ML4.0**/1, **Error ellipse: s-maj=320.0km s-min=31.9km az=94.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.47	177	*e*P	P	15 57 12.0	-5.4
	8.4nm,0.4s						
WRA	Warramunga Arr	19.81	173	P	P	15 58 47.7	-3.1
	0.5nm,0.3s,baz=352,slow=12,SNR=31						
ASAR	Alice Springs	23.45	175	P	P	15 59 27.0	-0.6
	1.5nm,0.4s,baz=358,slow=11,SNR=42						
ASPA	Alice Springs	23.45	175	*e*P	P	15 59 28.0	+0.4
ILAR	Eielson Array	86.45	25	P	P	16 06 59.9	-1.2
	0.4nm,0.7s,baz=264,slow=5.9,SNR=4.0						

IDC 17 16:16:02.9±1.6, **12.32N×95.23E, mb3.6**/4, **mb1 3.6**/5, **mb1mx3.5**/18, **mbtmp3.5**/5, **ML3.2**/1, **Error ellipse: s-maj=66.6km s-min=28.8km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.08	30	Pn	Pn	16 17 54.2	+3.9
	0.1nm,0.3s,baz=225,slow=15,SNR=6.6						
SONM	Songino Array	36.62	13	P	P	16 23 10.3	-2.4
	0.4nm,0.6s,baz=198,slow=3.9,SNR=5.0						
ZAL	Zalesovo	42.34	351	P	P	16 23 59.5	-0.7
	1.6nm,0.4s,baz=300,slow=2.4,SNR=6.6						
ASAR	Alice Springs	52.05	133	P	P	16 25 14.8	-2.1
	0.4nm,0.7s,baz=315,slow=6.7,SNR=5.2						
AKASG	Malin Array Be	65.40	320	P	P	16 26 46.9	-2.6
	0.6nm,0.4s,baz=263,slow=32,SNR=6.8						

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*NEIC **17** 16:17:46.1±0.6, 24.24S×67.04W, h166^{km}±5^{km}, mb4.3/21, Error ellipse: s-maj=9.7km s-min=6.5km az=78.0*

*IDC **17** 16:17:46.7±1.3, 24.21S×67.06W, h169^{km}±10^{km}, mb3.8/9, mb1 4.0/12, mb1mx3.9/17, mbtmp4.3/12, Error ellipse: s-maj=21.3km s-min=14.9km az=49.0*

*GUC **17** 16:17:47.5±0.7, 24.40S×67.36W, h164^{km}±12^{km}, ML4.8*

ISC 17 16:17:45.4±0.6, **24.30S**±0.04×**67.14W**±0.07, **h176**^{km}±5^{km},

n53,σ1^{s}24/54,mb4.2/25,3C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.69**	**325**	⇑iP	**P**	**16 18 21.4**	**+2.2**
SPCH				iS	**S**	**16 18 47.0**	**+1.6**
SPCH				AMP		16 18 48.9	
	comp=N,2μm,0.5s						
LVC	**Limon Verde**	**2.34**	**316**	P	**P**	**16 18 27.7**	**+1.3**
	comp=N,291nm,0.3s,baz=138,slow=5.7,SNR=2046						
LVC				S	**S**	**16 18 58.4**	**+0.3**
	comp=N,192nm,0.3s,baz=259,slow=23,SNR=24						
LVC	**Limon Verde**	**2.34**	**316**	P	**P**	**16 18 27.7**	**+1.3**
LVC				S	**S**	**16 18 58.4**	**+0.3**
CPN1	**Cerro Paranal**	**2.99**	**263**	⇑iP	**P**	**16 18 34.9**	**+0.6**
CPN1				iS	**S**	**16 19 10.6**	**-1.3**
CPN1				AMP		16 19 12.3	
	comp=E,4μm,0.4s						
ANCH	**Antofagasta**	**3.05**	**281**	iP	**P**	**16 18 35.5**	**+0.5**
ANCH				iS	**S**	**16 19 11.4**	**-1.9**
ANCH				AMP		16 19 14.3	
	comp=N,3μm,0.6s						
CPCH	**Copiapo**	**4.20**	**223**	⇑iP	**P**	**16 18 49.6**	**+0.1**
CPCH				iS	**S**	**16 19 37.9**	**-1.2**
LPAZ	**La Paz**	**8.03**	**353**	ePn	**P**	**16 19 39.9**	**0.0**
ARE	**Arequipa**	**8.80**	**332**	P	**P**	**16 19 48.0**	**-2.1**
TRQA	**Tornquist**	**14.40**	**163**	eP	**P**	**16 21 00.3**	**-1.8**
	comp=N,17nm,0.7s						
TRQA				e		16 21 05.7	
NNA	**Nana**	**15.32**	**321**	P	**P**	**16 21 08.7**	**-5.0**
	comp=N,9.6nm,0.9s						
SAML	**Samuel**	**15.73**	**15**	eP	**P**	**16 21 16.8**	**-2.0**
	comp=N,1.6nm,0.6s						
PLCA	**Paso Flores**	**16.63**	**189**	P	**P**	**16 21 30.6**	**+0.9**
	comp=N,0.2nm,0.3s,baz=5.2,slow=12,SNR=8.2						
BDFB	**Brasilia**	**19.92**	**68**	P	**P**	**16 22 04.8**	**-0.5**
	comp=N,4.2nm,0.3s,baz=248,slow=10,SNR=53						
BAO	**Brasilia Array**	**19.94**	**68**	eP	**P**	**16 22 04.5**	**-1.0**
BAO				i		16 22 06.9	
BAO				i		16 22 08.9	
SDV	**Santo Domingo**	**33.16**	**354**	P	**P**	**16 24 10.2**	**+2.9**
	comp=N,3.4nm,0.7s,mb4.2						
TEIG	**Tepich**	**48.81**	**333**	eP	**P**	**16 26 13.4**	**-1.4**
	comp=N,3.3nm,0.6s,mb4.1						
BBSR	**BB Station**	**56.40**	**2**	eP	**P**	**16 27 09.5**	**-1.3**
	comp=N,37nm,1.0s,mb5.2						
SNAA	**Sanae**	**59.11**	**161**	P	**P**	**16 27 29.7**	**+0.6**
	comp=N,1.5nm,0.7s,mb3.9,baz=301,slow=13,SNR=3.9						
JCT	**Junction City**	**62.83**	**328**	eP	**P**	**16 27 53.9**	**-0.8**
	comp=N,11nm,0.8s,mb4.7						
WVT	**Waverly**	**63.21**	**341**	eP	**P**	**16 27 55.0**	**-2.1**
	comp=N,14nm,0.9s,mb4.8						
MIAR	**Mount Ida**	**63.68**	**336**	eP	**P**	**16 27 58.6**	**-1.6**
	comp=N,7.0nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**63.85**	**325**	P	**P**	**16 28 00.3**	**-1.0**
	comp=N,0.8nm,0.5s,mb3.8,baz=154,slow=7.9,SNR=8.1						
QSPA	**South Pole Qui**	**65.90**	**180**	eP	**P**	**16 28 15.1**	**+1.3**
	comp=N,5.9nm,0.6s,mb4.6						
WMOK	**Wichita Mounta**	**65.95**	**332**	eP	**P**	**16 28 13.4**	**-1.4**
	comp=N,1.9nm,0.7s,mb4.0						
DBIC	**Dimbokro**	**68.02**	**71**	P	**P**	**16 28 26.6**	**-1.6**
	comp=N,4.3nm,1.0s,mb4.1,baz=205,slow=10,SNR=4.4						
KSU1	**Kansas State U**	**68.83**	**336**	eP	**P**	**16 28 31.2**	**-1.4**
ANMO	**Albuquerque**	**69.73**	**326**	P	**P**	**16 28 40.2**	**+2.0**
	comp=N,2.4nm,0.7s,mb4.0,baz=167,slow=5.9,SNR=7.2						
ANMO	**Albuquerque**	**69.73**	**326**	eP	**P**	**16 28 39.2**	**+1.0**
	comp=N,5.7nm,0.9s,mb4.3						
SDCO	**Great Sand Dun**	**71.48**	**329**	eP	**P**	**16 28 49.3**	**+0.7**
	comp=N,6.3nm,0.9s,mb4.3						
PV01	**Paradox Valley**	**73.27**	**327**	eP	**P**	**16 29 00.9**	**+1.6**
PV10	**Paradox Valley**	**73.69**	**327**	eP	**P**	**16 29 02.4**	**+0.7**
VNDA	**Vanda**	**74.38**	**190**	eP	**P**	**16 29 06.7**	**+1.8**
	comp=N,7.9nm,1.2s,mb4.3						
DAU	**Daniels Canyon**	**76.36**	**327**	eP	**P**	**16 29 18.1**	**+1.4**
PDAR	**Pinedale Array**	**77.34**	**329**	P	**P**	**16 29 22.8**	**+0.7**
	comp=N,1.1nm,0.5s,mb3.7,baz=132,slow=8.0,SNR=12						
HWUT	**Hardware Ranch**	**77.41**	**327**	eP	**P**	**16 29 23.4**	**+0.9**
	comp=N,5.9nm,0.7s,mb4.3						
TSUM	**Tsumeb**	**77.70**	**106**	eP	**P**	**16 29 24.5**	**0.0**
	comp=N,1.5nm,0.7s,mb3.7						
ULM	**Lac du Bonnet**	**78.47**	**342**	P	**P**	**16 29 27.9**	**-0.2**
	comp=N,4.0nm,0.7s,mb4.2,baz=146,slow=7.0,SNR=9.4						
SCHQ	**Schefferville**	**78.81**	**0**	P	**P**	**16 29 29.6**	**-0.3**
	comp=N,0.9nm,0.4s,mb3.7,baz=109,slow=18,SNR=8.7						
SCHQ	**Schefferville**	**78.81**	**0**	eP	**P**	**16 29 28.8**	**-1.0**
	comp=N,1.9nm,0.6s,mb3.9						
IMW	**Indian Meadow**	**78.85**	**329**	eP	**P**	**16 29 31.6**	**+1.3**
LKWY	**Lake**	**79.12**	**330**	eP	**P**	**16 29 30.7**	**-1.1**
	comp=N,5.8nm,0.7s,mb4.3						
MCMT	**McKenzie Canyo**	**80.45**	**329**	eP	**P**	**16 29 40.8**	**+1.9**
LBTB	**Lobatse**	**82.38**	**114**	eP	**P**	**16 29 50.1**	**+0.8**
	comp=N,2.9nm,0.9s,mb3.9						
YBH	**Yreka Blue Hor**	**83.41**	**322**	P	**P**	**16 29 54.3**	**+0.1**
	comp=N,1.3nm,0.8s,mb3.7,baz=30,slow=4.7,SNR=4.5						
WALA	**Waterton Lakes**	**84.10**	**331**	eP	**P**	**16 29 58.0**	**+0.6**
	comp=N,3.6nm,0.7s,mb4.2						
FCC	**Fort Churchill**	**85.72**	**346**	eP	**P**	**16 30 05.8**	**+0.6**
	comp=N,12nm,0.6s,mb4.8						
YKA	**Yellowknife Ar**	**94.36**	**340**	P	**P**	**16 30 46.0**	**+0.5**
	comp=N,1.4nm,0.5s,mb4.3,baz=131,slow=4.5,SNR=54						
YKA	**Yellowknife Ar**	**94.36**	**340**	P	**P**	**16 30 46.0**	**+0.5**
ASAR	**Alice Springs**	**128.13**	**205**	PKP	PKPdf	16 36 33.0	+1.8
	comp=N,1.7nm,0.5s,baz=135,slow=1.8,SNR=36						
WRA	**Warramunga Arr**	**131.30**	**207**	PKP	PKPdf	16 36 39.2	+1.9
	comp=N,2.1nm,0.6s,baz=162,slow=1.6,SNR=33						
WRA				SKPbc		16 39 47.6	
	comp=N,0.7nm,0.7s,baz=147,slow=3.5,SNR=5.1						
BVAR	**Borovoye Array**	**137.12**	**37**	PKP	PKPdf	16 36 49.9	+2.7
	comp=N,0.9nm,0.8s,baz=270,slow=4.4,SNR=4.4						
ZAL	**Zalesovo**	**143.72**	**28**	PKP	PKPdf	16 36 59.9	+1.0
	comp=N,2.9nm,0.8s,baz=146,slow=3.6,SNR=14						
SONM	**Songino Array**	**155.96**	**11**	PKPab	PKPab	16 37 48.5	+0.2
	comp=N,1.0nm,0.6s,baz=333,slow=5.5,SNR=6.0						

IDC 17 16:18:20.2±1.8**,11.95N×92.88E,h25^{km}±6^{km},mb3.7**/4**, mb1 3.8**/5**,mb1mx3.5**/18**,mbtmp3.7**/5**,ML3.3**/1**,Error ellipse: s-maj=64.1km s-min=18.8km az=72.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.72**	**41**	Pn	P	16 20 30.9	+3.0
	0.1nm,0.3s,baz=236,slow=15,SNR=8.6						
SONM	**Songino Array**	**37.52**	**15**	P	P	16 25 32.4	-1.6
	2.2nm,1.0s,baz=202,slow=6.7,SNR=8.9						
SONM				pP	pP	16 25 40.8	-0.6
	0.7nm,0.8s,baz=219,slow=7.9,SNR=3.4						
ZAL	**Zalesovo**	**42.37**	**353**	P	P	16 26 10.7	-3.3
	1.2nm,0.8s,baz=285,slow=5.3,SNR=6.7						
WRA	**Warramunga Arr**	**51.67**	**127**	P	P	16 27 25.6	-2.0
	1.3nm,0.7s,baz=305,slow=8.5,SNR=21						
WRA				pP	pP	16 27 32.9	-2.4
	1.5nm,0.6s,baz=304,slow=8.6,SNR=11						
ASAR	**Alice Springs**	**53.50**	**132**	P	P	16 27 38.5	-2.7
	0.6nm,0.8s,baz=310,slow=7.2,SNR=10						
ASAR				pP	pP	16 27 46.2	-2.7
	0.7nm,0.7s,baz=311,slow=7.1,SNR=5.2						
PLCA	**Paso Flores**	**147.84**	**204**	PKPbc	PKPdf	16 38 04.1	-0.9
	0.8nm,0.8s,baz=112,slow=6.4,SNR=3.8						

IDC 17 16:25:13.8±1.5**,13.26N×92.43E,mb3.6**/3**,mb1 3.8**/4**, mb1mx3.5**/18**,mbtmp3.5**/4**,ML3.2**/1**,Error ellipse: s-maj=51.7km s-min=29.5km az=47.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.12**	**50**	Pn	P	16 27 12.7	-3.0
	0.1nm,0.3s,baz=241,slow=15,SNR=7.4						
WRA	**Warramunga Arr**	**52.81**	**128**	P	P	16 34 30.5	-3.0
	0.6nm,0.5s,baz=299,slow=11,SNR=9.5						
ASAR	**Alice Springs**	**54.70**	**132**	P	P	16 34 45.7	-1.6
	0.3nm,0.5s,baz=308,slow=6.9,SNR=8.4						
GERES	**GERESS Array B**	**72.73**	**317**	P	P	16 36 44.2	-1.4
	0.1nm,0.3s,baz=90,slow=6.7,SNR=4.7						

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*IDC **17** 16:28:16.4±1.4,5.50N×94.65E,mb4.1/8,mb1 4.2/9, mb1mx4.1/19,mbtmp4.0/9,ML4.4/1,MS4.5/1,Ms1 4.5/1, ms1mx3.0/29,Error ellipse: s-maj=65.1km s-min=19.6km az=54.0*

ISC 17 16:28:18.6±1.0**,5.1N**±0.2×**94.2E**±0.2**,h33^{km},n16, σ0^{s}93**/15**,mb4.3**/14**,MS4.6**/1**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.02**	**19**	Pn	**P**	**16 31 38.8**	**+1.5**
	0.5nm,0.3s,baz=210,slow=14,SNR=17						
JIRN	**Jiri**	**23.68**	**342**	eP	**P**	**16 33 28.4**	**+0.1**
	7.0nm,0.3s,mb4.6						
PKI	**Pulchoki**	**23.85**	**340**	eP	**P**	**16 33 30.4**	**+0.5**
	10.0nm,0.6s,mb4.4						
DMN	**Daman**	**23.99**	**340**	eP	**P**	**16 33 31.1**	**-0.2**
	14nm,1.0s,mb4.3						
KKN	**Kakani**	**24.10**	**340**	eP	**P**	**16 33 31.9**	**-0.4**
	12nm,0.8s,mb4.3						
GKN	**Gorkha**	**24.52**	**339**	eP	**P**	**16 33 36.0**	**-0.4**
	6.3nm,0.3s,mb4.6						
KOLN	**Koldanda**	**24.69**	**337**	eP	**P**	**16 33 38.7**	**+0.6**
	16nm,0.6s,mb4.7						
SONM	**Songino Array**	**43.81**	**12**	P	**P**	**16 36 19.8**	**-3.3**
	1.4nm,0.7s,mb3.8,baz=192,slow=7.8,SNR=9.8						
WRA	**Warramunga Arr**	**46.63**	**124**	P	**P**	**16 36 45.9**	**-0.1**
	1.9nm,0.6s,mb4.2,baz=303,slow=9.8,SNR=14						
ASAR	**Alice Springs**	**48.12**	**128**	P	**P**	**16 36 57.8**	**+0.1**
	0.9nm,0.7s,mb3.9,baz=304,slow=6.8,SNR=9.8						
ZAL	**Zalesovo**	**49.27**	**353**	P	**P**	**16 37 05.7**	**-0.3**
	2.0nm,0.3s,mb4.6,baz=310,slow=4.5,SNR=7.0						
BVAR	**Borovoye Array**	**51.61**	**342**	P	**P**	**16 37 23.1**	**-0.8**
	0.8nm,0.3s,mb4.1,baz=135,slow=8.4,SNR=12						
CTA	**Charters Tower**	**56.91**	**118**	LR	LR	17 04 51.6	
	comp=Z,496nm,21.1s,MS4.6,baz=325,slow=39						
FINES	**FINESS Array B**	**75.17**	**333**	P	**P**	**16 39 58.9**	**-0.4**
	1.5nm,1.0s,mb3.9,baz=104,slow=7.9,SNR=4.3						
ARCES	**ARCESS Array B**	**77.87**	**340**	P	**P**	**16 40 14.1**	**-0.2**
	3.3nm,0.9s,mb4.2,baz=76,slow=5.0,SNR=5.3						
GERES	**GERESS Array B**	**79.93**	**319**	P	**P**	**16 40 27.9**	**+1.9**
	0.6nm,0.5s,mb3.8,baz=90,slow=6.9,SNR=4.5						

IGQ 17 16:32:11.4,1.63S×81.26W,h12^{km}±10^{km},mb4.3,3C-2D, Error ellipse: s-maj=12.1km s-min=6.5km az=174.5,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.61**	**154**	P	Pb	16 32 35.2	+12
HOJA	**Cerro de Hojas**	**0.92**	**51**	⇑P	Pb	16 32 27.1	-1.7
MAGD	**Magdalena**	**2.15**	**44**	P	Pn	16 32 49.0	+1.4
IGUA	**Igualata**	**2.63**	**87**	P	Pn	16 32 56.3	+1.9
IGUA				S	Sn	16 33 27.6	+1.2
CUSU	**Cusua**	**2.79**	**86**	P	Pn	16 32 57.0	+0.3
JUIV	**Juive**	**2.81**	**86**	P	Pn	16 32 60.0	+3.0
ARRY	**Arrayan**	**2.81**	**87**	⇓P	Pn	16 32 59.0	+2.0
ARRY				S	Sn	16 33 30.4	-0.7
RETU	**Refugio**	**2.82**	**86**	P	Pn	16 32 59.7	+2.5
ULBA	**Ulba**	**2.86**	**86**	P	Pn	16 32 60.0	+2.2
PISA	**Pisayambo**	**2.93**	**79**	P	Pn	16 33 01.6	+2.8
NAS1	**Nasa**	**2.96**	**70**	P	Pn	16 32 59.4	+0.3
JUA2	**San Juan 2**	**3.01**	**62**	P	Pn	16 33 02.0	+2.1
VC1	**Cotopaxi 1**	**3.02**	**71**	P	Pn	16 33 01.9	+1.9
TERV	**Terraza Guagua**	**3.03**	**61**	P	Pn	16 33 01.8	+1.6
PINO	**Pino**	**3.03**	**61**	P	Pn	16 33 00.1	-0.1
TAMB	**Tambo**	**3.04**	**72**	⇓P	Pn	16 33 01.5	+1.2
YANA	**Yana**	**3.08**	**61**	P	Pn	16 33 00.8	-0.1
ANTI	**Antisana**	**3.32**	**69**	⇑P	Pn	16 33 05.9	+1.7
ANTI				S	Sn	16 33 47.0	+3.0
COTA	**Cotacachi**	**3.52**	**56**	P	Pn	16 33 08.3	+1.3
COTA				S	Sn	16 33 51.4	+2.4
CAYR	**Refugio Cayamb**	**3.64**	**63**	P	Pn	16 33 12.6	+3.7
CAYR				S	Sn	16 33 54.0	+1.8
CAYA	**Cayambe**	**3.68**	**63**	P	Pn	16 33 12.4	+3.0
CAYA				S	Sn	16 33 54.4	+1.2
ECEN	**Cerro Negro**	**4.10**	**53**	⇑P	Pn	16 33 17.6	+2.3
ECEN				S	Sn	16 34 03.9	+0.2

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*BJI **17** 16:42:37.7,0.32N×126.12E,h15^{km},mB5.3,mb5.1,Ms4.6, Msz4.4*

*IDC **17** 16:42:43.1±0.4,0.99N×126.04E,mb5.0/26,mb1 5.0/27, mb1mx5.0/28,mbtmp5.0/27,ML5.1/1,MS4.4/8,Ms1 4.4/8, ms1mx4.0/22,Error ellipse: s-maj=17.8km s-min=9.5km az=58.0*

*NEIC **17** 16:42:44.7±0.2,0.97N×125.94E,h15^{km},mb5.2/54, MS4.3/18,Error ellipse: s-maj=7.2km s-min=4.4km az=70.0*

*DJA **17** 16:42:44.5±0.5,1.32N×126.03E,h31^{km}±7^{km},mb5.4/2, Error ellipse: s-maj=24.5km s-min=7.6km az=175.0*

*HRVD **17** 16:42:44.7±0.2,1.08N×125.96E,h32^{km},MW5.2/61, Centroid moment Tensor Solution. LP body waves: s54,c83;Mantle waves: s61,c98; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.68±.02; $M_{\theta\theta}$0.21±.02; $M_{\phi\phi}$-0.89±.02; $M_{r\theta}$-0.12±.03; $M_{\theta\phi}$-0.05±.02; $M_{\phi r}$-0.40±.03; Best double couple: M_0.898×10^{17} NP1:ϕ_s351°,δ32°,λ73°. NP2:ϕ_s191°,δ59°,λ101°. Principal axes: T .798, Plg74°, Azm129°; N .2, Plg9°, Azm6°; P -.998, Plg14°, Azm274°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **17** 16:42:45.9±1.5,0.95N×125.91E,h33^{km},mb5.4/20 Error ellipse: s-maj=23.0km s-min=8.7km az=108.8*

ISC 17 16:42:43.8±0.2**,0.95N**±0.03×**125.96E**±0.04**,h19^{km}, h19^{km}**±1.4^{km}**:pP-P,n249,σ1^{s}29**/234**,mb5.1**/99**,MS4.3**/40**, 11C-14D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	**Manado**	**1.22**	**294**	ePn	**Pn**	**16 43 04.0**	**-2.0**
AAI	**Ambon**	**5.12**	**154**	eP	**Pn**	**16 44 05.5**	**+4.0**
MATI	**Mati**	**5.97**	**3**	eP	**Pn**	**16 44 17.9**	**+4.4**
KCP	**Kidapawan**	**6.08**	**352**	⇓eP	**Pn**	**16 44 20.7**	**+5.6**
DAV	**Davao City (W)**	**6.09**	**356**	eP	**Pn**	**16 44 23.0**	**+7.7**
BUKP	**Musuan**	**6.95**	**353**	eP	**Pn**	**16 44 29.5**	**+2.3**
PAGZ	**Pagadian**	**7.32**	**340**	eP	**Pn**	**16 44 33.4**	**+0.9**
IPIL	**Ipil**	**7.59**	**334**	eP	**Pn**	**16 44 37.4**	**+1.2**
BUTP	**Butuan**	**7.98**	**358**	eP	**Pn**	**16 44 44.9**	**+3.2**
TSM	**Tawau**	**8.73**	**293**	P	**P**	**16 44 53.9**	**+1.8**
MSLP	**Maasin**	**9.19**	**353**	eP	**P**	**16 45 01.0**	**+2.4**
GUIM	**Jordan**	**10.18**	**341**	eP	**P**	**16 45 15.7**	**+3.4**
KKM	**Kota Kinabalu**	**10.96**	**298**	P	**P**	**16 45 26.1**	**+3.1**
CUYO	**Cuyo Island**	**10.99**	**334**	eP	**P**	**16 45 25.4**	**+2.0**
ENPP	**El Nido**	**12.08**	**328**	eP	**P**	**16 45 39.5**	**+1.3**
BUSP	**Coron**	**12.38**	**333**	eP	**P**	**16 45 42.5**	**+0.3**
SJMP	**San Jose**	**12.41**	**337**	eP	**P**	**16 45 45.8**	**+3.3**
KEDI	**Kedomdong**	**13.57**	**226**	eP	**P**	**16 46 02.9**	**+4.9**
LUBP	**Lubang**	**13.91**	**336**	eP	**P**	**16 46 09.8**	**+7.3**
TGY	**Tagaytay City**	**13.98**	**339**	Pn	**P**	**16 46 09.1**	**+5.6**
	8.9nm,0.3s,baz=218,slow=13,SNR=4.2						
TGY				LR	LR	16 52 06.4	
	comp=Z,1μm,19.9s,baz=316,slow=40						
TGY	**Tagaytay City**	**13.98**	**339**	Pn	**P**	**16 46 09.1**	**+5.6**
TGY				LR	LR	16 52 06.4	
RATI	**Rata**	**14.15**	**227**	eP	**P**	**16 46 09.0**	**+3.3**
	412nm,0.7s						
KELI	**Kelakatan**	**14.61**	**231**	⇓eP	**P**	**16 46 13.3**	**+1.5**
KAKA	**Kakadu**	**15.02**	**155**	⇓iP	**P**	**16 46 15.0**	**-2.0**
	93nm,0.6s						
YOMI	**Yo Moklole**	**15.03**	**104**	⇓eP	**P**	**16 46 16.7**	**-0.5**
SRDI	**Scrawed**	**15.05**	**231**	eP	**P**	**16 46 20.2**	**+2.8**
	219nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.93**	**181**	⇓iP	**P**	**16 47 06.5**	**+0.2**
	55nm,0.9s						
FITZ				eS		16 50 54.3	
WRAB	**Tennant Creek**	**22.32**	**159**	iP	**P**	**16 47 42.0**	**0.0**
WRAB	**Tennant Creek**	**22.32**	**159**	eP	**P**	**16 47 41.5**	**-0.5**
	338nm,0.9s,mb5.8						
WRAB				eS	**S**	**16 51 43.1**	**+1.5**
WRAB				LR	LR		
	comp=Z,380nm,22.0s,MS3.8						
WRA	**Warramunga Arr**	**22.33**	**159**	P	**P**	**16 47 41.7**	**-0.4**
	comp=Z,54nm,0.5s,mb5.2,baz=337,slow=11,SNR=225						
WRA				PcP	PcP	16 51 39.0	+0.6
	comp=Z,3.0nm,0.8s,baz=325,slow=2.4,SNR=5.0						
WRA				S	**S**	**16 51 45.1**	**+3.4**
	comp=Z,14nm,0.9s,baz=337,slow=16,SNR=9.5						
GUMO	**Guam**	**22.54**	**55**	P	**P**	**16 47 46.2**	**+1.8**
	comp=Z,304nm,1.3s,mb5.6						
MBWA	**Marble Bar**	**22.80**	**195**	eP	**P**	**16 47 47.6**	**+0.8**
	comp=Z,36nm,0.7s,mb4.9						
PMG	**Port Moresby**	**23.48**	**116**	P	**P**	**16 47 53.3**	**-0.2**
	comp=Z,24nm,0.7s,mb4.7,baz=283,slow=5.0,SNR=15						
PMG	**Port Moresby**	**23.48**	**116**	eP	**P**	**16 47 52.7**	**-0.9**
	comp=Z,56nm,1.0s,mb5.0						
PMG				LR	LR		
	comp=Z,1μm,21.0s,MS4.4						
QIZ	**Qiongzhong**	**23.93**	**320**	eP	**P**	**16 48 00.0**	**+2.1**
QIZ				S	**S**	**16 52 12.5**	**+2.3**
QIZ				XS		16 52 29.4	
QIZ				SS	SS	16 53 11.0	+10
QIZ				LR	LR		
	comp=N,722nm,22.9s						
QIZ				LR	LR		
	comp=Z,1μm,21.5s,MS4.3						
QIZ	**Qiongzhong**	**23.93**	**320**	eP	**P**	**16 47 58.7**	**+0.9**
	comp=Z,44nm,1.0s,mb4.8						
GZH	**Guangzhou**	**25.19**	**332**	P	**P**	**16 48 15.1**	**+5.1**
GZH				LR	LR		
	comp=N,850nm,18.7s,MS4.3						
GZH				LR	LR		
	comp=E,730nm,23.6s,MS4.3						
GZH				LR	LR		
	comp=Z,1μm,20.8s,MS4.4						
ASAR	**Alice Springs**	**25.66**	**163**	P	**P**	**16 48 14.3**	**-0.1**
	comp=Z,40nm,0.8s,mb5.0,baz=348,slow=6.9,SNR=168						
ASAR				PcP	PcP	16 51 44.8	-0.7
	comp=Z,7.0nm,0.7s,baz=354,slow=2.2,SNR=7.5						
ASAR				S	**S**	**16 52 41.3**	**+2.1**
	comp=Z,3.1nm,0.9s,baz=343,slow=15,SNR=3.9						
ASPA	**Alice Springs**	**25.66**	**163**	⇑iP	**P**	**16 48 14.1**	**-0.2**
ASPA				eS	**S**	**16 52 37.7**	**-1.5**
JOW	**Kunigami**	**25.83**	**5**	P	**P**	**16 48 17.1**	**+1.1**
	comp=Z,65nm,0.6s,mb5.3,baz=207,slow=9.2,SNR=11						
SNG	**Songkhla**	**26.01**	**284**	P	**P**	**16 48 18.0**	**+0.2**
	comp=Z,160nm,1.0s,mb5.5						
KKTK	**Khon Kaen**	**27.45**	**305**	P	**P**	**16 48 34.5**	**+3.6**
	comp=Z,370nm,0.9s,mb5.9						
NNT	**Nongplab**	**28.45**	**295**	P	**P**	**16 48 40.5**	**+0.5**
CTA	**Charters Tower**	**28.86**	**138**	eP	**P**	**16 48 46.2**	**+2.6**
	comp=Z,11nm,1.5s,mb4.4						
CTA	**Charters Tower**	**28.86**	**138**	P	**P**	**16 48 43.5**	**0.0**
	comp=Z,6.3nm,0.8s,mb4.4,baz=316,slow=14,SNR=5.1						
CTA				PcP	PcP	16 51 54.2	+1.1
	comp=Z,8.0nm,0.9s,baz=330,slow=8.1,SNR=3.5						
CTAO	**Charters Tower**	**28.86**	**138**	eP	**P**	**16 48 43.1**	**-0.4**
	comp=Z,91nm,1.7s,mb5.2						
CTAO				LR	LR		
	comp=Z,821nm,22.0s,MS4.3						
NST	**Nakhon Sawan**	**29.38**	**301**	P	**P**	**16 48 47.8**	**-0.6**
CBIJ	**Chichi jima**	**30.31**	**30**	P	**P**	**16 48 55.8**	**-0.8**
	comp=Z,382nm,1.3s,mb6.0,baz=30,slow=6.0,SNR=4.1						
SSE	**Sheshan**	**30.32**	**352**	eP	**P**	**16 48 55.8**	**-0.8**
SSE				S	**S**	**16 53 51.8**	**-2.8**
SSE				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,303nm,3.4s						
SSE				LR	LR		
	comp=N,511nm,19.9s,MS4.2						
SSE				LR	LR		
	comp=E,213nm,19.9s,MS4.2						
SSE				LR	LR		
	comp=Z,648nm,17.1s,MS4.3						
SSE	**Sheshan**	**30.32**	**352**	eP	**P**	**16 48 55.7**	**-0.9**
	comp=Z,18nm,0.7s,mb4.9						
SSE				pP	pP	16 49 11.8	+10
SSE				PP	PP	16 50 04.9	+8.9
SSE				S	**S**	**16 53 51.8**	**-2.8**
SSE				sS		16 54 19.9	
SSE				SS	SS	16 56 12.9	+39
SSE				LR	LR		
	comp=Z,650nm,17.1s,MS4.3						
NANT	**Nan**	**30.47**	**307**	P	**P**	**16 48 55.0**	**-3.0**
GYA	**Guiyang**	**31.43**	**325**	⇓iP	**P**	**16 49 06.3**	**-0.1**
GYA				AP	pP	16 49 11.4	-0.6
GYA				XP	sP	16 49 13.8	-0.6
GYA				PP	PP	16 50 10.8	+0.4
GYA				S	**S**	**16 54 16.9**	**+4.9**
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
GYA				AMB	AMB		
	comp=Z,150nm,3.0s						
GYA				LR	LR		
	comp=N,560nm,17.7s,MS4.4						
GYA				LR	LR		
	comp=E,420nm,18.8s,MS4.4						
GYA				LR	LR		
	comp=Z,640nm,17.0s,MS4.4						
NJ2	**Nanjing**	**31.66**	**348**	eP	**P**	**16 49 13.8**	**+5.5**
NJ2				PP	PP	16 50 19.3	+6.0
NJ2				S	**S**	**16 54 21.0**	**+5.5**
NJ2				XS		16 54 37.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,580nm,4.7s						
NJ2				LR	LR		
	comp=N,1μm,20.0s,MS4.5						
NJ2				LR	LR		
	comp=E,450nm,22.7s,MS4.5						
NJ2				LR	LR		
	comp=Z,580nm,21.5s,MS4.2						
CM31	**Chiang Mai Arr**	**31.71**	**305**	eP	**P**	**16 49 08.6**	**-0.4**
	comp=Z,6.9nm,0.8s,mb4.5						
CMAR	**Chiang Mai Arr**	**31.71**	**305**	iP	**P**	**16 49 09.2**	**+0.2**
CMAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**31.71**	**305**	P	**P**	**16 49 09.2**	**+0.2**
	comp=Z,5.6nm,1.0s,mb4.4,baz=130,slow=7.8,SNR=26						
CMAR				PcP	PcP	16 52 01.5	+1.0
	comp=Z,4.1nm,0.8s,baz=170,slow=1.6,SNR=11						
CMAR				S	**S**	**16 54 22.4**	**+6.0**
	comp=Z,28nm,0.4s,baz=230,slow=25,SNR=19						
KMI	**Kunming**	**32.87**	**319**	P	**P**	**16 49 16.3**	**-2.7**
KMI				S	**S**	**16 54 32.8**	**-1.7**
KMI				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.6						
KMI				LR	LR		
	comp=N,317nm,17.7s						
KMI				LR	LR		
	comp=E,644nm,23.0s						
KMI				LR	LR		
	comp=Z,927nm,23.7s						
KMI	**Kunming**	**32.87**	**319**	P	**P**	**16 49 16.3**	**-2.7**
	comp=Z,12nm,1.5s,mb4.6						
KMI				S	**S**	**16 54 32.7**	**-1.8**
KMI				LR	LR		
	comp=Z,930nm,23.7s,MS4.4						
ENH	**Enshi**	**33.10**	**333**	eP	**P**	**16 49 19.3**	**-1.6**
	comp=Z,35nm,0.9s,mb5.3						
ENH				LR	LR		
	comp=Z,1μm,19.0s,MS4.5						
MUN	**Mundaring**	**34.02**	**195**	eP	**P**	**16 49 29.3**	**+0.4**
	comp=Z,5.9nm,0.4s,mb4.9						
JHJ	**Hachijo jima 2**	**34.54**	**21**	LR	LR	17 02 20.0	
	comp=Z,242nm,20.9s,MS3.9,baz=318,slow=34						
NWAO	**Narrogin (SRO)**	**34.68**	**193**	P	**P**	**16 49 36.0**	**+1.4**
	comp=Z,11nm,0.6s,mb4.9,baz=30,slow=12,SNR=14						
NWAO	**Narrogin (SRO)**	**34.68**	**193**	eP	**P**	**16 49 34.1**	**-0.5**
	comp=Z,21nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**35.85**	**157**	⇑iP	**P**	**16 49 44.0**	**-0.5**
	comp=Z,35nm,0.8s,mb5.3						
STKA	**Stephens Creek**	**35.85**	**157**	P	**P**	**16 49 44.2**	**-0.3**
	comp=Z,42nm,0.7s,mb5.5,baz=326,slow=8.4,SNR=73						
KS15	**Wonju Array Si**	**36.36**	**3**	eP	**P**	**16 49 48.9**	**+0.1**
CD2	**Chengdu**	**36.48**	**327**	P	**P**	**16 49 48.8**	**-1.1**
CD2				AMB	AMB		
	comp=Z,28nm,0.8s,mb5.2						
XAN	**Xi'an**	**36.58**	**336**	P	**P**	**16 49 48.8**	**-1.9**
XAN				AP	pP	16 49 59.8	+3.5
XAN				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
MAJO	**Matsushiro**	**37.19**	**16**	eP	**P**	**16 49 54.4**	**-1.4**
	comp=Z,35nm,0.9s,mb5.2						
MAJO				LR	LR		
	comp=Z,454nm,20.0s,MS4.3						
MAT	**Matsushiro**	**37.19**	**16**	eP	**P**	**16 49 54.0**	**-1.8**
	comp=Z,206nm,2.0s,mb5.6						
MAT	**Matsushiro**	**37.19**	**16**	P	**P**	**16 49 54.3**	**-1.5**
DL2	**Dalian**	**37.98**	**355**	P	**P**	**16 50 03.5**	**+1.1**
DL2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
BJT	**Baijiatuau**	**39.90**	**348**	eP	**P**	**16 50 17.3**	**-1.1**
	comp=Z,48nm,1.0s,mb5.2						
BJI	**Beijing**	**39.92**	**348**	P	**P**	**16 50 16.8**	**-1.7**
BJI				AMB	AMB		
	comp=Z,24nm,1.1s,mb4.8						
BJI				AMB	AMB		
	comp=Z,296nm,4.5s						
BJI				LR	LR		
	comp=N,175nm,14.5s,MS4.2						
BJI				LR	LR		
	comp=E,176nm,15.0s,MS4.2						

BJI				LR	LR		
	comp=Z,170nm,29.8s						
BJI	**Beijing**	**39.92**	**348**	P	**P**	**16 50 16.8**	**-1.7**
	comp=Z,24nm,1.1s,mb4.8						
BJI				LR	LR		
	comp=Z,170nm,29.8s,MS3.7						
LZH	**Lanzhou**	**40.54**	**332**	*e*P	**P**	**16 50 20.5**	**-3.2**
LZH				AP	pP	16 50 26.1	-3.2
LZH				XP	sP	16 50 28.5	-3.2
LZH				PP	PP	16 51 57.5	-3.0
LZH				*e*S	**S**	**16 56 30.0**	**-1.7**
LZH				AMB	AMB		
	comp=Z,29nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,185nm,5.7s						
LZH				LR	LR		
	comp=N,865nm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,17.7s,MS4.8						
LZH	**Lanzhou**	**40.54**	**332**	*e*P	**P**	**16 50 20.5**	**-3.2**
	comp=Z,29nm,1.3s,mb4.8						
LZH				pP	pP	16 50 26.1	-3.2
LZH				sP	sP	16 50 28.5	-3.2
LZH				PP	PP	16 51 57.5	-3.0
LZH				*e*S	**S**	**16 56 30.0**	**-1.7**
LZH				sS		16 56 37.6	
LZH				*e*SS	SS	16 59 25.7	-0.6
LZH				LR	LR		
	comp=Z,1µm,17.7s,MS4.8						
SNY	**Shenyang**	**40.75**	**357**	⇓P	**P**	**16 50 25.3**	**-0.1**
SNY				AP	pP	16 50 30.3	-0.7
SNY				XP	sP	16 50 33.8	+0.5
SNY				S	**S**	**16 56 33.6**	**-1.2**
SNY				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.0						
SNY				LR	LR		
	comp=N,430nm,19.2s						
SNY				LR	LR		
	comp=Z,530nm,19.8s,MS4.4						
CN2	**Changchun**	**42.67**	**359**	*e*P	**P**	**16 50 42.9**	**+1.8**
CN2				*e*XP	sP	16 50 49.3	+0.2
CN2				*e*S	**S**	**16 57 06.3**	**+3.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
CN2				AMB	AMB		
	comp=Z,210nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,17.0s,MS4.5						
CN2				LR	LR		
	comp=E,400nm,17.0s,MS4.5						
CN2				LR	LR		
	comp=Z,400nm,21.0s,MS4.3						
MDJ	**Mudanjiang**	**43.60**	**4**	P	**P**	**16 50 49.4**	**+0.7**
MDJ				AP	pP	16 50 53.8	-0.5
MDJ				XP	sP	16 50 55.3	-1.3
MDJ				PP	PP	16 52 31.5	-0.6
MDJ				S	**S**	**16 57 19.4**	**+2.8**
MDJ				AMB	AMB		
	comp=Z,83nm,0.8s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,161nm,5.7s						
MDJ				LR	LR		
	comp=N,77nm,20.8s						
MDJ				LR	LR		
	comp=E,299nm,28.1s						
MDJ				LR	LR		
	comp=Z,248nm,22.0s,MS4.1						
MDJ	**Mudanjiang**	**43.60**	**4**	*e*P	**P**	**16 50 49.2**	**+0.5**
	comp=Z,91nm,1.0s,mb5.5						
MDJ				LR	LR		
	comp=Z,350nm,21.0s,MS4.2						
LSA	**Lhasa**	**43.75**	**314**	P	**P**	**16 50 53.5**	**+3.4**
LSA	**Lhasa**	**43.75**	**314**	*e*P	**P**	**16 50 50.9**	**+0.8**
	comp=Z,24nm,0.9s,mb4.9						
LSA				LR	LR		
	comp=Z,382nm,21.0s,MS4.3						
GTA	**Gaotai**	**45.11**	**331**	P	**P**	**16 51 00.3**	**-0.6**
GTA				AP	pP	16 51 05.3	-1.3
GTA				XP	sP	16 51 08.8	-0.1
GTA				PP	PP	16 52 42.5	-4.8
GTA				PPP	PPP	16 53 22.8	-5.4
GTA				S	**S**	**16 57 34.8**	**-3.8**
GTA				SCS	ScS	17 00 53.5	-1.1
GTA				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.8						
GTA				AMB	AMB		
	comp=Z,116nm,5.0s						
GTA				LR	LR		
	comp=N,317nm,19.9s,MS4.5						
GTA				LR	LR		
	comp=E,458nm,19.9s,MS4.5						
GTA				LR	LR		
	comp=Z,649nm,26.0s						
ASAJ	**Asahikawa**	**45.46**	**17**	P	**P**	**16 51 04.2**	**+0.6**
	comp=Z,24nm,0.9s,mb5.0,baz=242,slow=21,SNR=12						
PALK	**Pallekele**	**45.55**	**279**	*e*P	**P**	**16 51 03.6**	**-1.1**
	comp=Z,15nm,0.9s,mb4.9						
PALK				LR	LR		
	comp=Z,75nm,20.0s,MS3.6						
JIRN	**Jiri**	**46.43**	**308**	*e*P	**P**	**16 51 10.7**	**-0.8**
	comp=Z,60nm,0.8s,mb5.6						
PKI	**Pulchoki**	**47.00**	**308**	*e*P	**P**	**16 51 15.1**	**-0.9**
	comp=Z,29nm,0.7s,mb5.3						
KKN	**Kakani**	**47.20**	**308**	*e*P	**P**	**16 51 16.3**	**-1.3**
	comp=Z,63nm,1.0s,mb5.5						
DMN	**Daman**	**47.26**	**308**	*e*P	**P**	**16 51 16.9**	**-1.2**
	comp=Z,71nm,0.9s,mb5.6						
GKN	**Gorkha**	**47.81**	**308**	*e*P	**P**	**16 51 21.0**	**-1.4**
	comp=Z,64nm,0.8s,mb5.7						
YSS	**Yuzh-Sakhalins**	**48.11**	**15**	⇑*e*P	**P**	**16 51 23.3**	**-1.2**
YSS				*e*		16 51 39.8	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YSS	**Yuzh-Sakhalins**	**48.11**	**15**	*e*P	**P**	**16 51 23.6**	**-0.9**
	comp=Z,20nm,1.0s,mb5.1						
YSS				LR	LR		
	comp=Z,372nm,22.0s,MS4.3						
KLR	**Kul'dur**	**48.36**	**5**	*e*P	**P**	**16 51 27.8**	**+1.5**
HIA	**Hailar**	**48.43**	**355**	*e*P	**P**	**16 51 26.8**	**-0.1**
	comp=Z,33nm,0.9s,mb5.4						
KOLN	**Koldanda**	**48.52**	**307**	*e*P	**P**	**16 51 27.0**	**-0.9**
	comp=Z,125nm,0.7s,mb6.1						
TRD	**Trivandrum**	**49.36**	**280**	*e*P	**P**	**16 51 33.1**	**-1.4**
TRD				*e*		16 51 35.3	
	comp=Z,71nm,0.7s						
HYB	**Hyderabad**	**49.39**	**292**	⇓*e*P	**P**	**16 51 33.0**	**-1.7**
	comp=Z,110nm,1.0s,mb5.8						
HYB				*e*S	**S**	**16 58 36.0**	**-3.4**
HYB	**Hyderabad**	**49.39**	**292**	⇓*i*P	**P**	**16 51 33.0**	**-1.7**
	comp=Z,110nm,1.0s,mb5.8						
HYB				*e*S	**S**	**16 58 36.0**	**-3.4**
ULN	**Ulaanbaatar**	**49.53**	**343**	*i* P	**P**	**16 51 35.0**	**-0.4**
ULN	**Ulaanbaatar**	**49.53**	**343**	*e*P	**P**	**16 51 34.4**	**-1.0**
	comp=Z,7.9nm,0.5s,mb5.0						
ULN				*e*PcP	PcP	16 52 57.5	+0.1
ULN				LR	LR		
	comp=Z,374nm,22.0s,MS4.3						
SONM	**Songino Array**	**49.69**	**343**	P	**P**	**16 51 35.8**	**-0.8**
	comp=Z,12nm,0.9s,mb4.9,baz=155,slow=6.5,SNR=38						
SONM				PcP	PcP	16 52 58.1	0.0
	comp=Z,4.3nm,0.6s,baz=162,slow=4.0,SNR=5.3						
BHPL	**Bhopal**	**52.02**	**299**	*e*P	**P**	**16 51 54.2**	**-0.4**
BHPL				*e*		16 51 55.7	
	comp=Z,54nm,0.6s						
ZAK	**Zakamensk**	**52.90**	**342**	*e*P	**P**	**16 52 01.1**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KAD	**Karad**	**53.43**	**291**	*e*P	**P**	**16 52 02.8**	**-2.4**
KAD				*e*	pP	16 52 07.4	-3.5
	comp=Z,37nm,0.8s						
TLY	**Talaya**	**53.93**	**343**	*e*P	**P**	**16 52 10.2**	**+1.8**
TLY				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
TLY				MLR	MLR		
	comp=Z,310nm,20.0s,MS4.4						
TLY	**Talaya**	**53.93**	**343**	*e*P	**P**	**16 52 09.2**	**+0.8**
	comp=Z,15nm,0.8s,mb5.0						
DDI	**Dehra Dun**	**54.00**	**308**	*e*P	**P**	**16 52 06.8**	**-2.4**
POO	**Poona**	**54.00**	**292**	*e*P	**P**	**16 52 06.6**	**-2.8**
POO				*e*		16 52 09.3	
	comp=Z,52nm,1.0s						
DGAR	**Diego Garcia**	**54.01**	**260**	P	**P**	**16 52 09.2**	**-0.3**
	comp=Z,85nm,0.8s,mb5.7						
NDI	**New Delhi**	**54.04**	**305**	*e*P	**P**	**16 52 06.5**	**-3.1**
IRK	**Irkutsk**	**54.25**	**344**	*e*P	**P**	**16 52 04.7**	**-6.1**
IRK				pmax	pmax		
	comp=Z,19nm,2.8s,mb4.5						
WMQ	**Urumqi**	**54.58**	**327**	P	**P**	**16 52 13.0**	**-0.3**
WMQ				XP	pP	16 52 20.0	+0.9
WMQ				PP	PP	16 54 17.0	-0.3
WMQ				S	**S**	**16 59 50.0**	**-0.1**
WMQ				SS	SS	17 03 32.0	-0.6
WMQ				AMB	AMB		
	comp=Z,37nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,44nm,7.0s						
WMQ				LR	LR		
	comp=N,576nm,22.0s,MS4.7						
WMQ				LR	LR		
	comp=E,443nm,22.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,512nm,22.0s,MS4.5						
MOY	**Mondy**	**54.73**	**341**	*e*P	**P**	**16 52 15.3**	**+1.0**
MOY				pmax	pmax		
	comp=Z,25nm,1.7s,mb5.0						
SMLA	**Simla**	**55.02**	**308**	*i*	**P**	**16 52 30.5**	**+14**
SDNR	**Sundarnagar**	**55.32**	**308**	*e*P	**P**	**16 52 18.2**	**-0.7**
CLNS	**Chul'man**	**55.73**	**359**	*e*P	**P**	**16 52 21.5**	**0.0**
CLNS				*e**PP	pP	16 52 27.7	+0.4
CLNS				*e*		16 54 34.4	
CLNS				*e*S	**S**	**17 00 08.6**	**+3.3**
CLNS				*e**SS		17 00 29.3	
CLNS				*e*		17 02 10.1	
CLNS				*e*SS	SS	17 03 54.8	+4.0
CLNS				pmax	pmax		
	comp=N,21nm,0.8s						
CLNS				pmax	pmax		
	comp=E,12nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.5						
CLNS				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
CLNS				smax			
	comp=E,53nm,13.4s						
CLNS				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
CLNS				MLR	MLR		
	comp=N,200nm,16.0s						
THN	**Thein Dam**	**56.67**	**309**	*e*P	**P**	**16 52 26.2**	**-2.4**
BOD	**Bodaibo**	**57.50**	**352**	*e*P	**P**	**16 52 33.5**	**-0.6**
BOD				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
MKAR	**Makanchi Array**	**59.41**	**327**	P	**P**	**16 52 45.9**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KSH	**Kashi**	**59.49**	**317**	*e*P	**P**	**16 52 48.0**	**-0.3**
KSH				*e*AP	pP	16 52 55.0	+0.9
KSH				*e*XP	sP	16 52 58.0	+1.8
KSH				*e*PCP	PcP	16 53 36.0	+0.5
KSH				*e*PP	PP	16 55 02.0	+0.4
KSH				*e*S	**S**	**17 00 53.3**	**-1.7**
KSH				*e*PS	PS	17 01 13.0	+0.9
KSH				*e*SCS	ScS	17 02 32.3	-1.6
KSH				*e*SS	SS	17 04 52.0	+0.2
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.6						
KSH				AMB	AMB		
	comp=Z,220nm,4.6s						
KSH				LR	LR		
	comp=N,480nm,6.8s						
KSH				LR	LR		
	comp=E,500nm,5.9s						
YAK	**Yakutsk**	**61.00**	**2**	*c* *i*P	**P**	**16 52 57.4**	**-0.8**
YAK				*e**PP	pP	16 53 11.8	+7.7
YAK				*e*		16 53 37.3	
YAK				*e*		16 55 09.8	
YAK				*e*S	**S**	**17 01 13.9**	**-0.1**
YAK				*e**SS		17 01 39.0	
YAK				*e*		17 02 43.7	
YAK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
YAK				smax			
	comp=N,3.0nm,1.2s						
YAK				smax			
	comp=E,2.0nm,1.3s						
YAK	**Yakutsk**	**61.00**	**2**	*e*P	**P**	**16 52 57.1**	**-1.1**
	comp=E,127nm,0.9s,mb6.0						
YAK				LR	LR		
	comp=Z,259nm,19.0s,MS4.4						
URZ	**Urewera**	**61.08**	**136**	P	**P**	**16 52 57.6**	**-1.5**
	comp=Z,15nm,0.9s,mb5.1,baz=152,slow=22,SNR=5.3						
KZA	**Kyzart**	**61.16**	**319**	P	**P**	**16 52 59.3**	**-0.3**
	SNR=22						
TKM2	**Tokmak 2**	**61.34**	**320**	P	**P**	**16 53 01.3**	**+0.6**
	SNR=23						
MA2	**Magadan**	**61.57**	**14**	*c* *i*P	**P**	**16 53 02.1**	**-0.1**
MA2				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
MA2	**Magadan**	**61.57**	**14**	*e*P	**P**	**16 53 01.9**	**-0.2**
	comp=Z,22nm,0.9s,mb5.3						
KBK	**Karagaybulak**	**61.63**	**319**	P	**P**	**16 53 03.6**	**+0.8**
	SNR=11						
UCH	**Uchtor**	**61.72**	**319**	P	**P**	**16 53 04.7**	**+1.3**
	SNR=25						
AAK	**Ala-Archa**	**61.92**	**319**	P	**P**	**16 53 04.1**	**-0.7**
	SNR=11						
AAK	**Ala-Archa**	**61.92**	**319**	P	**P**	**16 53 04.0**	**-0.7**
AAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
AAK	**Ala-Archa**	**61.92**	**319**	*e*P	**P**	**16 53 02.6**	**-2.2**
	comp=Z,12nm,0.9s,mb5.0						
USP	**Ospenovka**	**62.21**	**320**	P	**P**	**16 53 06.9**	**+0.2**
	SNR=30						
AML	**Almayashu**	**62.22**	**318**	P	**P**	**16 53 07.8**	**+1.1**
	SNR=39						
EKS2	**Erkin-Say**	**62.40**	**319**	P	**P**	**16 53 08.7**	**+0.8**
	SNR=11						
ZAL	**Zalesovo**	**62.72**	**334**	P	**P**	**16 53 10.7**	**+0.8**
	comp=Z,4.7nm,0.8s,mb4.6,baz=359,slow=5.7,SNR=20						
KURK	**Kurchatov**	**63.68**	**329**	P	**P**	**16 53 14.4**	**-1.9**
KURK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
KURK	**Kurchatov**	**63.68**	**329**	*e*P	**P**	**16 53 14.2**	**-2.0**
	comp=Z,88nm,0.9s,mb5.8						
KURK				LR	LR		
	comp=Z,54nm,19.0s,MS3.8						
NVS	**Novosibirsk**	**64.01**	**334**	*i* P	**P**	**16 53 15.1**	**-3.3**
NVS				*e*		16 53 52.4	
NVS				pmax	pmax		
	comp=N,14nm,1.4s						
NVS				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.0						
NVS				pmax	pmax		
	comp=E,13nm,1.2s						
FX1	**Attu Island--F**	**64.87**	**29**	*e*P	**P**	**16 53 23.9**	**-0.1**
SEY	**Seymchan**	**64.90**	**13**	*e*P	**P**	**16 53 26.8**	**+2.8**
SEY				*SP	PcP	16 53 53.4	-3.7
SEY						16 55 49.6	
SEY				*e*PPP	PPP	16 57 20.8	-1.9
SEY				*e*S	**S**	**17 02 03.1**	**+0.3**
SEY				*SS		17 02 35.4	
SEY						17 03 07.5	
SEY				*e*SS	SS	17 06 11.9	-4.6
SEY				*e*SSS	SSS	17 09 01.5	-6.0
SEY				pmax	pmax		
	comp=N,10.0nm,1.1s						
SEY				pmax	pmax		
	comp=E,20nm,1.1s						
SEY				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
SEY				MLR	MLR		
	comp=Z,190nm,22.0s,MS4.2						
SEY				MLR	MLR		
	comp=N,510nm,19.0s,MS4.8						
SEY				MLR	MLR		
	comp=E,460nm,21.0s,MS4.8						
CASY	**Casey**	**67.98**	**187**	*e*P	**P**	**16 53 43.6**	**0.0**
	comp=E,22nm,0.9s,mb5.2						
BVA0	**Borovoye Array**	**69.23**	**328**	P	**P**	**16 53 50.1**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**69.23**	**328**	P	**P**	**16 53 50.3**	**-1.2**
	comp=Z,18nm,0.8s,mb5.1,baz=124,slow=9.2,SNR=47						
BVAR				PcP	PcP	16 54 14.2	-1.2
	comp=Z,5.6nm,0.8s,baz=135,slow=6.3,SNR=4.1						
BRVK	**Borovoye**	**69.31**	**328**	*e*P	**P**	**16 53 50.5**	**-1.4**
	comp=Z,28nm,0.9s,mb5.2						
TIXI	**Tiksi**	**70.62**	**1**	*e*P	**P**	**16 53 57.2**	**-2.5**
TIXI				*e*S	S	17 03 10.0	-1.2
TIXI				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
BILL	**Bilibino**	**72.42**	**15**	⇓*i*P	**P**	**16 54 09.7**	**-0.9**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
BILL				MLR	MLR		
	comp=Z,200nm,24.0s,MS4.3						
BILL	**Bilibino**	**72.42**	**15**	*e*P	**P**	**16 54 10.5**	**-0.1**
	comp=Z,4.6nm,0.9s,mb4.4						
BILL				LR	LR		
	comp=Z,303nm,22.0s,MS4.5						
SVE	**Sverdlovsk**	**75.92**	**329**	⇑*i*P	**P**	**16 54 30.0**	**-1.0**
SVE				pmax	pmax		
	comp=Z,108nm,1.0s,mb5.7						
SOKR	**Solikamsk**	**78.75**	**331**	⇑*i*P	**P**	**16 54 46.2**	**-0.4**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
VNDA	**Vanda**	**80.78**	**173**	P	**P**	**16 54 58.0**	**+0.8**
	comp=Z,12nm,0.7s,mb5.0,baz=304,slow=5.5,SNR=27						
VNDA	**Vanda**	**80.78**	**173**	*e*P	**P**	**16 54 57.2**	**0.0**
	comp=Z,19nm,0.9s,mb5.0						
VNDA				LR	LR		
	comp=Z,317nm,21.0s,MS4.6						
MAW	**Mawson**	**80.89**	**200**	P	**P**	**16 55 01.0**	**+3.0**
	comp=Z,4.8nm,0.6s,mb4.6,baz=78,slow=14,SNR=3.6						
MAW				LR	LR	17 25 48.4	
	comp=Z,254nm,20.6s,MS4.6,baz=188,slow=32						
MAW	**Mawson**	**80.89**	**200**	*e*P	**P**	**16 54 59.2**	**+1.3**
	comp=Z,11nm,0.8s,mb4.8						
GNI	**Garni**	**82.67**	**310**	*i* P	**P**	**16 55 09.1**	**+1.3**
GNI				pmax	pmax		
	comp=Z,19nm,1.5s						
GNI	**Garni**	**82.67**	**310**	P	**P**	**16 55 10.1**	**+2.4**
	comp=Z,6.1nm,0.7s,mb4.8,baz=338,slow=7.4,SNR=6.2						
GNI	**Garni**	**82.67**	**310**	*e*P	**P**	**16 55 07.4**	**-0.3**
	comp=Z,36nm,0.9s,mb5.4						
TI2	**Plekhanov**	**82.80**	**312**	*e*P	**P**	**16 55 08.8**	**+0.4**
SVW2	**Sparrevohn**	**83.60**	**29**	*e*P	**P**	**16 55 13.7**	**+1.7**
GOF	**Gofitskoye**	**84.33**	**315**	⇑*i*P	**P**	**16 55 20.0**	**+3.9**
GOF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
KIV	**Kislovodsk**	**84.49**	**314**	*e*P	**P**	**16 55 17.8**	**+0.8**
KIV				*e*		17 05 33.9	
KIV				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
KIV				pmax	pmax		
	comp=N,12nm,1.1s						
KIV	**Kislovodsk**	**84.49**	**314**	*e*P	**P**	**16 55 18.6**	**+1.6**
	comp=N,63nm,1.2s,mb5.6						
KIV				LR	LR		
	comp=Z,47nm,19.0s,MS3.9						
KDAK	**Kodiak Island**	**84.64**	**32**	*e*P	**P**	**16 55 18.3**	**+0.9**
	comp=Z,64nm,1.1s,mb5.7						
RSO	**Redoubt South**	**84.88**	**29**	*e*P	**P**	**16 55 18.2**	**-0.3**
PPT	**Papeete**	**85.00**	**108**	*e*S	S	17 06 00.1	+13
PPT				*e*SS	SS	17 11 19.2	-4.0
PPT				*e*LR	LR	17 22 31.3	
	comp=Z,335nm,26.0s						
BEST	**Besiri**	**85.22**	**308**	*i* P	**P**	**16 55 21.4**	**+0.6**
IMA	**Indian Mountai**	**85.22**	**24**	*e*P	**P**	**16 55 21.7**	**+1.6**
	comp=Z,1.9nm,0.6s,mb4.4						
ERZM	**Erzurum**	**85.24**	**310**	*i* P	**P**	**16 55 21.3**	**+0.5**
TBI	**Tubuai**	**85.39**	**113**	*e*S	S	17 06 00.2	+10
TBI				*e*SS	SS	17 11 44.1	+15
TBI				*e*LR	LR	17 22 23.3	
	comp=Z,291nm,25.0s						
SLKM	**Skilak Lake**	**86.13**	**30**	*e*P	**P**	**16 55 25.2**	**+0.5**
SOC	**Sochi**	**86.62**	**313**	*e*P	**P**	**16 55 25.2**	**-2.4**
SOC				*e*		16 58 57.6	
SOC				*e*S	S	17 05 45.0	-17
SOC				*e*SSS	SSS	17 15 12.0	-4.5
SOC				pmax	pmax		
	comp=N,13nm,0.9s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.9s						
SOC				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.4						
MCK	**McKinley**	**86.98**	**26**	*e*P	**P**	**16 55 28.6**	**-0.2**
	comp=Z,4.1nm,0.9s,mb4.7						
SML	**Sawmill**	**87.14**	**28**	*e*P	**P**	**16 55 28.4**	**-1.2**
MALT	**Malatya**	**87.48**	**308**	*e*P	**P**	**16 55 32.7**	**+0.8**
	comp=Z,22nm,1.0s,mb5.3						
COLA	**College**	**87.52**	**25**	*i* P	**P**	**16 55 30.5**	**-0.9**
ILAR	**Eielson Array**	**87.93**	**25**	P	**P**	**16 55 31.8**	**-1.6**
	comp=Z,5.1nm,1.1s,mb4.7,baz=256,slow=2.6,SNR=22						
ILAR				PP	PP	16 59 01.3	-0.8
	comp=Z,1.3nm,0.9s,baz=260,slow=6.8,SNR=4.9						
GZT	**Gaziantep**	**88.15**	**307**	*i* P	**P**	**16 55 36.3**	**+1.2**
THY	**Trims Highway**	**88.39**	**27**	*e*P	**P**	**16 55 35.9**	**+0.3**
KAHT	**Ahir Dag**	**88.70**	**307**	*i* P	**P**	**16 55 38.9**	**+1.2**
ASF	**Jabal al Asfar**	**88.71**	**302**	P	**P**	**16 55 39.3**	**+1.4**
	comp=Z,33nm,1.1s,mb5.6,baz=353,slow=1.6,SNR=18						
ASF				LR	LR	17 38 05.6	
	comp=Z,114nm,20.7s,MS4.3,baz=326,slow=37						
KMBO	**Kilima Mbogo**	**88.72**	**269**	P	**P**	**16 55 40.9**	**+2.4**
	comp=Z,14nm,0.8s,mb5.3,baz=43,slow=6.4,SNR=37						
KMBO				LR	LR	17 31 51.6	
	comp=Z,234nm,20.4s,MS4.6,baz=94,slow=33						
KMBO	**Kilima Mbogo**	**88.72**	**269**	*e*P	**P**	**16 55 40.2**	**+1.8**
	comp=Z,23nm,1.0s,mb5.5						
KMBO				LR	LR		
	comp=Z,261nm,21.0s,MS4.6						
OBN	**Obninsk**	**88.88**	**325**	⇑*i*P	**P**	**16 55 37.7**	**-0.4**
OBN				*e*		16 59 10.1	
OBN				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.4						
OBN				MLR	MLR		
	comp=Z,300nm,22.0s,MS4.7						
OBN	**Obninsk**	**88.88**	**325**	*e*P	**P**	**16 55 35.9**	**-2.3**
	comp=Z,21nm,0.7s,mb5.6						
SYO	**Syowa Base**	**89.57**	**201**	⇓X		16 55 38.1	
SYO	**Syowa Base**	**89.57**	**201**	⇓PcP	PcP	16 55 43.6	+0.9
BOYT	**Boyabat**	**90.17**	**311**	*i* P	**P**	**16 55 44.7**	**+0.1**
EIL	**Elat**	**90.41**	**300**	P	**P**	**16 55 47.0**	**+1.0**
	comp=Z,4.6nm,0.7s,mb4.9,baz=190,slow=2.9,SNR=6.7						
EIL				LR	LR	17 40 07.4	
	comp=Z,152nm,20.1s,MS4.4,baz=14,slow=38						
EIL	**Elat**	**90.41**	**300**	*e*P	**P**	**16 55 46.8**	**+0.8**
	comp=Z,6.4nm,0.7s,mb5.1						
QSPA	**South Pole Qui**	**90.87**	**180**	*e*P	**P**	**16 55 47.7**	**+0.8**
	comp=Z,11nm,0.9s,mb5.2						
BRTR	**Keskin Array B**	**91.19**	**310**	P	**P**	**16 55 48.9**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.9,baz=123,slow=4.6,SNR=14						
DAWY	**Dawson**	**91.20**	**26**	*e*P	**P**	**16 55 49.2**	**+0.4**
JOF	**Joensuu**	**91.29**	**333**	*e*p	**P**	**16 55 49.1**	**-0.1**
	comp=Z,7.7nm,0.6s,mb5.2						
JOF	**Joensuu**	**91.29**	**333**	*e*P	**P**	**16 55 49.1**	**-0.1**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.2						
BALT	**Daday**	**91.31**	**311**	*i* P	**P**	**16 55 52.6**	**+2.8**
CSS	**Prodhromos**	**91.62**	**305**	*e*P	**P**	**16 55 51.0**	**-0.4**
	comp=Z,28nm,1.0s,mb5.5						
KEV	**Kevo**	**92.22**	**340**	*e*p	**P**	**16 55 55.7**	**+2.4**
ARCES	**ARCESS Array B**	**92.78**	**340**	P	**P**	**16 55 56.4**	**+0.6**
	comp=Z,9.3nm,0.9s,mb5.2,baz=27,slow=5.4,SNR=6.4						
ARCES				LR	LR	17 43 08.3	
	comp=Z,323nm,20.8s,MS4.8,baz=200,slow=39						
ARCES	**ARCESS Array B**	**92.78**	**340**	P	**P**	**16 55 56.4**	**+0.5**
ARCES				LR	LR	17 43 08.3	
INK	**Inuvik**	**93.02**	**21**	*e*P	**P**	**16 55 56.0**	**-1.0**
	comp=Z,7.7nm,1.0s,mb5.1						
AKASG	**Malin Array Be**	**93.55**	**321**	*i* P	**P**	**16 56 00.8**	**+1.0**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**93.55**	**321**	P	**P**	**16 56 00.8**	**+0.9**
	comp=Z,3.3nm,0.8s,mb4.8,baz=67,slow=5.0,SNR=16						
KAF	**Kangasniemi**	**93.69**	**332**	*e*p	**P**	**16 56 00.2**	**0.0**
FINES	**FINESS Array B**	**93.90**	**332**	*i* P	**P**	**16 56 03.8**	**+2.6**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**93.90**	**332**	P	**P**	**16 56 01.0**	**-0.2**
	comp=Z,2.6nm,0.6s,mb4.9,baz=63,slow=4.3,SNR=8.0						
FINES				LR	LR	17 41 22.2	
	comp=Z,261nm,19.2s,MS4.7,baz=82,slow=38						
CFR	**Carcaliu**	**94.86**	**315**	⇓P	**P**	**16 56 08.9**	**+2.9**
MBAR	**Mbarara**	**95.23**	**269**	PFAKE		16 56 20.0	+12
MBAR				LR	LR		
	comp=Z,54nm,19.0s,MS4.0						
VRI	**Vrincioaia**	**95.76**	**316**	⇓P	**P**	**16 56 10.7**	**+0.6**
SART	**Tekirdag**	**96.05**	**311**	*i* P	**P**	**16 56 11.8**	**+0.1**
MLR	**Muntele Rosu**	**96.35**	**316**	P	**P**	**16 56 12.7**	**-0.2**
	comp=Z,4.9nm,1.0s,mb4.9,baz=188,slow=3.0,SNR=6.4						
MLR				PP	PP	17 00 08.6	-0.4

	comp=Z,4.4nm,1.1s,baz=207,slow=5.8,SNR=3.9						
MLR	**Muntele Rosu**	**96.35**	**316**	⇑P	**P**	**16 56 13.0**	**+0.2**
BURAR	**Bucovina Array**	**96.55**	**318**	⇑P	**P**	**16 56 14.4**	**+0.7**
LSZ	**Lusaka**	**97.75**	**255**	*e*P	**P**	**16 56 20.1**	**+0.3**
	comp=Z,6.0nm,0.8s,mb5.2						
LSZ				LR	LR		
	comp=Z,322nm,20.0s,MS4.8						
KWP	**Kalwaria**	**97.85**	**320**	P	**P**	**16 56 19.6**	**+0.1**
	comp=Z,18nm,0.9s,mb5.6						
HFS	**Hagfors**	**100.10**	**332**	P	P	16 56 35.9	+6.4
	comp=Z,1.5nm,0.5s,baz=108,slow=4.7,SNR=4.2						
NB2	**NORSAR Subarra**	**100.92**	**333**	P	P	16 56 33.2	+0.1
	comp=Z,3.8nm,1.0s,baz=65,slow=4.8						
NOA	**NORSAR Array B**	**100.92**	**333**	P	P	16 56 33.6	+0.5
	comp=Z,1.5nm,0.9s,baz=70,slow=4.4,SNR=3.7						
YKA	**Yellowknife Ar**	**102.33**	**24**	*i* P	Pdif	16 56 39.7	+0.3
YKA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YKA	**Yellowknife Ar**	**102.33**	**24**	P	Pdif	16 56 39.7	+0.2
	comp=Z,3.3nm,1.2s,baz=301,slow=4.8,SNR=12						
YKA				PP	PP	17 00 50.6	-3.8
	comp=Z,0.7nm,0.9s,baz=293,slow=7.1,SNR=5.4						
YKA				PKiKP		17 01 02.5	
	comp=Z,0.7nm,0.9s,baz=291,slow=2.0,SNR=6.3						
YKA				PKKPbc		17 12 41.2	
	comp=Z,1.5nm,1.0s,baz=98,slow=2.0,SNR=5.8						
YKA	**Yellowknife Ar**	**102.33**	**24**	P	Pdif	16 56 39.7	+0.2
YKA				PP	PP	17 00 50.6	-3.8
SNAA	**Sanae**	**102.34**	**195**	P	Pdif	16 56 41.7	+2.4
	comp=Z,77nm,1.0s						
GERES	**GERESS Array B**	**103.76**	**321**	PKKPbc		17 12 38.6	
	comp=Z,1.1nm,0.7s,baz=168,slow=25,SNR=6.8						
HWUT	**Hardware Ranch**	**113.06**	**43**	*e*PKPdf	PKPdf	17 01 22.8	-1.4
PDAR	**Pinedale Array**	**113.94**	**42**	PKiKP		17 01 26.3	
	comp=Z,0.7nm,0.8s,baz=346,slow=6.1,SNR=6.5						
PDAR				PKKPbc		17 12 06.5	
	comp=Z,1.9nm,1.1s,baz=102,slow=5.7,SNR=6.2						
PV10	**Paradox Valley**	**116.14**	**46**	*e*PKPdf	PKPdf	17 01 28.7	-1.7
ULM	**Lac du Bonnet**	**117.76**	**29**	PKP	PKPdf	17 01 29.6	-3.4
	comp=Z,2.4nm,0.7s,baz=333,slow=4.9,SNR=6.5						
ULM				PKKPbc		17 11 54.6	
	comp=Z,1.3nm,0.7s,baz=140,slow=3.0,SNR=3.8						
MNTX	**Cornudas Mount**	**121.59**	**51**	*e*PKPdf	PKPdf	17 01 39.1	-1.9
SCHQ	**Schefferville**	**123.42**	**9**	PKP	PKPdf	17 01 42.3	-1.6
	comp=Z,5.3nm,0.9s,baz=79,slow=1.9,SNR=8.8						
SCHQ				PKKPbc		17 11 34.0	
	comp=Z,1.8nm,0.8s,baz=332,slow=5.4,SNR=3.6						
TXAR	**Lajitas Array**	**123.89**	**53**	PKP	PKPdf	17 01 43.5	-2.1
	comp=Z,3.7nm,0.8s,baz=218,slow=1.1,SNR=26						
TXAR				PKKPbc		17 11 33.0	
	comp=Z,1.3nm,1.1s,baz=108,slow=7.9,SNR=3.5						
TXAR	**Lajitas Array**	**123.89**	**53**	PKP	PKPdf	17 01 43.5	-2.1
TXAR				PKKPbc		17 11 33.0	
KSU1	**Kansas State U**	**124.24**	**40**	*e*PKPdf	PKPdf	17 01 42.6	-3.4
JCT	**Junction City**	**126.44**	**50**	*e*PKPdf	PKPdf	17 01 48.6	-1.8
MIAR	**Mount Ida**	**128.85**	**42**	*e*PKPdf	PKPdf	17 01 52.5	-2.6
DBIC	**Dimbokro**	**130.34**	**280**	PKP	PKPdf	17 01 57.0	-1.4
	comp=Z,4.7nm,0.9s,baz=13,slow=3.8,SNR=6.8						
DBIC				SKPbc		17 05 19.1	
	comp=Z,5.1nm,0.8s,baz=104,slow=4.5,SNR=6.3						
DBIC	**Dimbokro**	**130.34**	**280**	*e*PKPdf	PKPdf	17 01 56.5	-1.9
PLCA	**Paso Flores**	**137.66**	**161**	PKhKP		17 01 58.6	
	comp=Z,1.4nm,0.8s,baz=133,slow=1.4,SNR=4.3						
PLCA				PKP	PKPdf	17 02 10.8	-0.4
	comp=Z,2.9nm,0.9s,baz=254,slow=3.9,SNR=5.1						
PLCA	**Paso Flores**	**137.66**	**161**	PKP	PKPdf	17 02 10.8	-0.4
TRQA	**Tornquist**	**142.35**	**170**	*e*PKPdf	PKPdf	17 02 13.2	-6.6
TLL	**Tololo Astrono**	**146.86**	**153**	*e*P	PKPbc	17 02 25.8	+0.5
JTS	**JuntasAbangare**	**147.28**	**69**	PKPbc	PKPdf	17 02 29.2	+0.3
	comp=Z,29nm,0.9s,baz=294,slow=5.2,SNR=12						
JTS	**JuntasAbangare**	**147.28**	**69**	*e*PKPdf	PKPdf	17 02 25.9	-3.0
JTS				*e*PKPbc	PKPdf	17 02 29.1	+0.2
LVC	**Limon Verde**	**154.06**	**147**	PKP	PKPdf	17 02 39.0	+0.1
	comp=Z,7.1nm,1.1s,baz=286,slow=2.9,SNR=6.8						
LVC				PKPbc	PKPdf	17 02 47.1	+8.2
	comp=Z,9.8nm,0.8s,baz=235,slow=2.3,SNR=14						
LVC	**Limon Verde**	**154.06**	**147**	*e*PKPdf	PKPdf	17 02 39.5	+0.6
LVC				*e*PKPbc	PKPdf	17 02 46.4	+7.5
ROSC	**El Rosal**	**158.93**	**74**	PKP	PKPdf	17 02 44.6	-0.9
	comp=Z,4.2nm,0.5s,baz=90,slow=22,SNR=3.3						
LPAZ	**La Paz**	**159.38**	**138**	*e*PKPdf	PKPdf	17 02 44.1	-1.8
SDV	**Santo Domingo**	**160.80**	**59**	PKP	PKPdf	17 02 46.3	-1.2
	comp=Z,13nm,0.8s,baz=45,slow=1.6,SNR=9.6						
SDV				PKPab	PKPab	17 03 28.9	+0.8
	comp=Z,7.7nm,0.9s,baz=12,slow=4.2,SNR=3.8						
SDV	**Santo Domingo**	**160.80**	**59**	*e*PKPdf	PKPdf	17 02 45.3	-2.1
SAML	**Samuel**	**167.92**	**131**	*e*PKPdf	PKPdf	17 02 51.7	-2.1
SAML				*e*PKPab	PKPab	17 03 57.8	-1.3

GUC 17 16:48:23.1±0.7**,33.18S**×**70.23W,h9**^{km}±2^{km}**,MD3.5, ML2.1,1C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.15**	**199**	⇑*i*P	Pg	16 48 27.5	+0.9
FCH				*i* S	Sg	16 48 30.1	+1.3
FCH				AMP		16 48 30.9	
	comp=E,789nm,0.2s						
CLCH	**Cerro Calan**	**0.33**	**230**	*i* P	Pg	16 48 30.5	+0.5
CLCH				*i* S	Sg	16 48 35.7	+1.2
CLCH				AMP		16 48 38.4	
	comp=E,597nm,0.6s						
PCH	**Pirque**	**0.50**	**208**	*e*P	Pg	16 48 33.6	+0.4
LMEL	**Las Melosas**	**0.67**	**178**	*e*P	Pb	16 48 36.6	+0.2
LMEL				*i* S	Sg	16 48 46.5	+1.1
LMEL				AMP		16 48 50.9	
	comp=N,120nm,0.1s						
TACH	**Talagante**	**0.76**	**231**	*e*P	Pb	16 48 37.5	-0.5
CACH	**El Canelo**	**0.98**	**198**	*e*P	Pb	16 48 41.7	-0.2
CICH	**Cipreses**	**1.15**	**188**	*e*P	Pb	16 48 44.4	-0.3
PACH	**Papudo**	**1.20**	**302**	*e*P	Pb	16 48 44.5	-1.1

KRSC 17 16:57:08.9±0.3**,54.34N**×**160.69E,h87**^{km}±5^{km}**,ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMR	**Tumrok**	**1.00**	**342**	*i* P	P	16 57 29.0	+0.4
TUMR				*e*S	S	16 57 43.7	+0.3
SPN	**Mys Shipunski**	**1.31**	**198**	*e*P	P	16 57 32.2	-0.3
SPN				*i* S	S	16 57 49.2	-0.9
NLC	**Nalytchevo**	**1.42**	**215**	*i* P	P	16 57 34.1	+0.2
NLC				*i* S	S	16 57 52.7	+0.2
KMNR	**Kamenistaya**	**1.44**	**350**	*e*P	P	16 57 35.0	+0.7
KMNR				*e*S	S	16 57 53.9	+0.9
SDLR	**Sedlovina**	**1.51**	**226**	*i* P	P	16 57 35.4	+0.3
SMAR	**Somma**	**1.56**	**227**	*i* P	P	16 57 36.4	+0.7
AVH	**Avacha**	**1.58**	**228**	*i* P	P	16 57 37.0	+1.0
AVH				*i* S	S	16 57 57.4	+1.3
UGLR	**Uglovaya**	**1.58**	**225**	*i* P	P	16 57 36.8	+0.7
KOK	**Koryaka**	**1.61**	**230**	*i* P	P	16 57 37.2	+0.8
KOK				*e*S	S	16 57 57.9	+1.3
GNL	**Ganaly**	**1.75**	**249**	*i* P	P	16 57 39.0	+0.8
GNL				*e*S	S	16 58 01.6	+1.9
KOZ	**Kozyrevsk**	**1.79**	**345**	*i* P	P	16 57 39.4	+0.7
KOZ				*e*S	S	16 58 01.5	+0.9
PET	**Petropavlovsk**	**1.79**	**223**	*i* P	P	16 57 39.3	+0.5
PET				*e*S	S	16 58 01.3	+0.5
ESO	**Esso**	**1.96**	**325**	*i* P	P	16 57 40.7	-0.3
ESO				*e*S	S	16 58 03.9	-0.7
ESO				Smax			
	70nm,1.0s						
KLY	**Klyuchi**	**1.98**	**359**	*e*P	P	16 57 42.0	+0.8
SRDR	**Sredinnyy**	**2.06**	**345**	*i* P	P	16 57 42.4	+0.1
SRDR				*e*S	S	16 58 06.8	-0.2
KRMR	**Karymshinskiy**	**2.15**	**226**	*e*P	P	16 57 45.5	+1.9
KRMR				*e*S	S	16 58 12.2	+2.9
KBTR	**Krutoberegovo**	**2.23**	**32**	*e*P	P	16 57 45.9	+1.1
KBTR				*e*S	S	16 58 13.2	+1.8
KBG	**Krutoberegovo**	**2.24**	**30**	*e*P	P	16 57 46.4	+1.5
KBG				*e*S	S	16 58 13.4	+1.9
KBG				Smax			
	300nm,0.6s						
KBG	**Krutoberegovo**	**2.24**	**30**	*e*P	P	16 57 46.2	+1.3
KBG				*e*S	S	16 58 14.0	+2.5
KBG				Smax			
	210nm,1.0s						
SVLR	**Shiveluch**	**2.26**	**7**	*e*P	P	16 57 45.6	+0.4
SVLR				*e*S	S	16 58 12.6	+0.5
RUS	**Russkaya**	**2.31**	**215**	*e*P	P	16 57 45.9	0.0
RUS				*e*S	S	16 58 13.1	-0.3
GRL	**Gorelyy**	**2.38**	**222**	*e*P	P	16 57 48.2	+1.4
GRL				*e*S	S	16 58 16.8	+1.8
APC	**Apacha**	**2.54**	**237**	*i* P	P	16 57 50.5	+1.5
APC				*e*S	S	16 58 20.8	+1.9
BKI	**Bering**	**3.18**	**72**	*e*S	S	16 58 30.7	-4.2

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*JMA **17** 16:59:53.3±0.2,25.99N×140.96E,h12^{km},M5.1*
JMA Felt I J1.
*BJI **17** 16:59:57.6,25.70N×141.10E,h127^{km},mB5.0,mb4.3*
*NEIC **17** 16:59:57.7±1.2,25.75N×141.10E,h127^{km}±11^{km}, mb4.5/29,Error ellipse: s-maj=8.5km s-min=5.1km az=98.0*
*IDC **17** 17:00:02.0±2.2,25.77N×141.23E,h163^{km}±19^{km}, mb4.2/20,mb1 4.3/22,mb1mx4.2/27,mbtmp4.6/22,Error ellipse: s-maj=14.0km s-min=8.1km az=101.0*
ISC 17 16:59:53.2±0.7**,25.71N**±0.04×**141.24E**±0.06**,h99**^{km}±5^{km}**, n86,σ1§10**/96**,mb4.5**/46**,1D,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.25**	**43**	P	**P**	**17 00 16.5**	**-0.3**
JHHJ				*e*S	**S**	**17 00 33.4**	**-1.1**
CBIJ	**Chichi jima**	**1.62**	**32**	P	**P**	**17 00 21.1**	**-0.2**
	673nm,0.3s,baz=232,slow=2.8,SNR=207						
CBIJ				S	**S**	**17 00 40.6**	**-1.6**
	1µm,0.3s,baz=303,slow=23,SNR=13						
CBIJ	**Chichi jima**	**1.62**	**32**	P	**P**	**17 00 21.2**	**-0.2**
CBIJ				*e*S	**S**	**17 00 40.7**	**-1.5**
NJJJ	**Nii jima 2**	**8.82**	**349**	P	**P**	**17 02 01.5**	**+2.0**
BSO3	**Boso 3**	**9.08**	**356**	P	**P**	**17 02 04.4**	**+1.5**
BSO4	**Boso 4**	**9.28**	**355**	P	**P**	**17 02 07.0**	**+1.4**
JOD2	**Odawara 2**	**9.70**	**350**	P	**P**	**17 02 13.1**	**+1.8**
JOD2				*e*S	**S**	**17 03 57.4**	**-1.6**
JHU	**Hanno**	**10.24**	**351**	P	**P**	**17 02 18.9**	**+0.2**
JHU				*e*S	**S**	**17 04 11.4**	**-0.8**
JRY	**Ryogami san**	**10.46**	**350**	P	**P**	**17 02 22.3**	**+0.7**
JYT	**Yasato**	**10.52**	**355**	P	**P**	**17 02 22.7**	**+0.4**
JYT				*e*S	**S**	**17 04 14.4**	**-4.4**
JAG	**Ashikaga**	**10.79**	**352**	P	**P**	**17 02 24.7**	**-1.2**
JHO	**Hitachi**	**10.88**	**357**	P	**P**	**17 02 26.2**	**-0.9**
JHO				*e*S	**S**	**17 04 20.0**	**-7.4**
MAJO	**Matsushiro**	**11.10**	**347**	*e*P	**P**	**17 02 32.2**	**+2.1**
MAT	**Matsushiro**	**11.10**	**347**	*e*P	**P**	**17 02 32.0**	**+1.9**
MAT				*e*S	**S**	**17 04 33.0**	**+0.3**
MAT	**Matsushiro**	**11.10**	**347**	P	**P**	**17 02 31.5**	**+1.4**
MAT				S	**S**	**17 04 32.8**	**+0.1**
JOW	**Kunigami**	**11.69**	**278**	P	**P**	**17 02 44.1**	**+6.2**
	2.5nm,0.3s,baz=126,slow=14,SNR=10						
TATO	**Taipei**	**17.87**	**272**	P	**P**	**17 03 53.9**	**-2.9**
	104nm,1.1s						
ASAJ	**Asahikawa**	**18.39**	**3**	P	**P**	**17 04 05.1**	**+2.3**
	1.3nm,0.3s,baz=182,slow=7.2,SNR=8.9						
YSS	**Yuzh-Sakhalins**	**21.23**	**3**	*e*P	**P**	**17 04 32.7**	**+0.1**
	14nm,1.0s,mb4.2						
CN2	**Changchun**	**22.15**	**329**	*e*P	**P**	**17 04 42.4**	**+0.7**
TGY	**Tagaytay City**	**22.27**	**243**	P	**P**	**17 04 46.8**	**+3.8**
	247nm,0.4s,baz=232,slow=16,SNR=3.6						
LZH	**Lanzhou**	**33.53**	**297**	*e*P	**P**	**17 06 24.3**	**-1.1**
LZH				AP	pP	17 06 55.3	+7.1
LZH				XP	sP	17 07 12.1	+12
LZH				AMB	AMB		
	comp=Z,24nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,107nm,4.5s						
LZH				LR	LR		
	comp=N,324nm,13.1s						
LZH				LR	LR		
	comp=Z,597nm,17.0s						
LZH	**Lanzhou**	**33.53**	**297**	*e*P	**P**	**17 06 24.2**	**-1.2**
	comp=Z,24nm,1.4s,mb4.8						
LZH				pP	pP	17 06 55.2	+7.0
LZH				sP	sP	17 07 12.1	+12
LZH				PP	PP	17 07 40.5	0.0
LZH				LR	LR		
	comp=Z,600nm,17.0s						
KMI	**Kunming**	**34.69**	**278**	P	**P**	**17 06 34.6**	**-0.8**
KMI				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.4						
KMI	**Kunming**	**34.69**	**278**	P	**P**	**17 06 34.6**	**-0.8**
	comp=Z,4.0nm,0.7s,mb4.4						
ULN	**Ulaanbaatar**	**34.76**	**318**	P	**P**	**17 06 34.5**	**-1.2**
	comp=Z,1.0nm,0.8s,mb3.7						
SONM	**Songino Array**	**35.14**	**318**	P	**P**	**17 06 40.1**	**+1.1**
	comp=Z,0.3nm,0.4s,mb3.5,baz=123,slow=8.0,SNR=5.4						
PMG	**Port Moresby**	**35.38**	**170**	P	**P**	**17 06 41.6**	**+0.2**
	comp=Z,3.6nm,0.4s,mb4.5,baz=353,slow=9.7,SNR=7.0						
PMG	**Port Moresby**	**35.38**	**170**	*e*P	**P**	**17 06 41.2**	**-0.2**
	comp=Z,6.3nm,0.7s,mb4.5						
YAK	**Yakutsk**	**37.13**	**351**	P	**P**	**17 06 51.6**	**-4.0**
	comp=Z,7.6nm,0.9s,mb4.6						
GTA	**Gaotai**	**37.16**	**302**	P	**P**	**17 06 56.9**	**+0.8**
GTA				AP	pP	17 07 27.3	+8.0
GTA				XP	sP	17 07 42.5	+11
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
KAKA	**Kakadu**	**39.14**	**194**	*e*P	**P**	**17 07 12.9**	**+0.1**
	comp=Z,7.9nm,1.1s,mb4.5						
CM31	**Chiang Mai Arr**	**39.72**	**268**	*e*P	**P**	**17 07 19.7**	**+2.2**
	comp=Z,2.1nm,0.6s,mb4.1						
CMAR	**Chiang Mai Arr**	**39.72**	**268**	P	**P**	**17 07 20.4**	**+2.8**
	comp=Z,0.7nm,0.4s,mb3.8,baz=68,slow=6.9,SNR=11						
BILL	**Bilibino**	**44.99**	**13**	*e*P	**P**	**17 07 59.8**	**-0.1**
	comp=Z,8.7nm,1.2s,mb4.4						
CTA	**Charters Tower**	**45.79**	**173**	⇓*i*P	**P**	**17 08 07.6**	**+0.7**
	comp=Z,8.7nm,0.6s,mb4.7						
CTA	**Charters Tower**	**45.79**	**173**	P	**P**	**17 08 08.4**	**+1.5**
	comp=Z,14nm,0.8s,mb4.7,baz=356,slow=9.6,SNR=15						
CTAO	**Charters Tower**	**45.79**	**173**	*e*P	**P**	**17 08 07.3**	**+0.5**
	comp=Z,15nm,0.8s,mb4.8						
WRAB	**Tennant Creek**	**45.86**	**189**	*e*P	**P**	**17 08 07.7**	**+0.2**
	comp=Z,44nm,0.5s,mb5.4						
WRA	**Warramunga Arr**	**45.87**	**189**	P	**P**	**17 08 07.7**	**+0.2**
	comp=Z,19nm,0.3s,mb5.2,baz=9.2,slow=8.7,SNR=454						
WRA				S	**S**	**17 14 41.2**	**-2.2**
	comp=Z,4.2nm,0.8s,baz=7.0,slow=14,SNR=17						
FITZ	**Fitzroy Crossi**	**46.12**	**201**	*e*P	**P**	**17 08 10.1**	**+0.6**
	comp=Z,5.0nm,0.4s,mb4.6						
WMQ	**Urumqi**	**46.70**	**307**	*e*P	**P**	**17 08 13.5**	**-0.3**
ASAR	**Alice Springs**	**49.60**	**189**	P	**P**	**17 08 36.1**	**-0.4**
	comp=Z,1.7nm,0.5s,mb4.2,baz=11,slow=9.3,SNR=63						
ASAR				S	**S**	**17 15 35.2**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=19,slow=19,SNR=6.7						
ASPA	**Alice Springs**	**49.60**	**189**	*e*P	**P**	**17 08 36.3**	**-0.2**
ASPA				*e*S	**S**	**17 15 35.6**	**-0.1**
ZAL	**Zalesovo**	**49.99**	**320**	P	**P**	**17 08 40.2**	**+1.1**
	comp=Z,0.9nm,0.3s,mb4.2,baz=12,slow=11,SNR=4.0						
ZAL	**Zalesovo**	**49.99**	**320**	P	**P**	**17 08 40.2**	**+1.1**
MBWA	**Marble Bar**	**51.05**	**206**	*e*P	**P**	**17 08 46.7**	**-1.0**
	comp=Z,11nm,1.0s,mb4.8						
KURK	**Kurchatov**	**53.35**	**315**	*e*P	**P**	**17 09 03.0**	**-1.4**
	comp=Z,1.8nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**57.27**	**180**	*e*P	**P**	**17 09 32.9**	**0.0**
	comp=Z,13nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**57.27**	**180**	P	**P**	**17 09 32.9**	**0.0**
	comp=Z,12nm,0.4s,mb5.2,baz=354,slow=7.1,SNR=73						
MCK	**McKinley**	**58.34**	**29**	*e*P	**P**	**17 09 38.9**	**-1.0**
	comp=Z,7.3nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**58.49**	**318**	P	**P**	**17 09 39.8**	**-1.3**
	comp=Z,2.6nm,0.4s,mb4.6,baz=94,slow=7.5,SNR=54						
BRVK	**Borovoye**	**58.55**	**318**	*e*P	**P**	**17 09 40.5**	**-1.0**
	comp=Z,1.5nm,0.5s,mb4.3						
ILAR	**Eielson Array**	**59.33**	**28**	P	**P**	**17 09 45.3**	**-1.4**
	comp=Z,9.2nm,0.8s,mb4.9,baz=262,slow=6.0,SNR=89						
PALK	**Pallekele**	**60.36**	**264**	*e*P	**P**	**17 09 49.2**	**-5.3**
	comp=Z,7.9nm,1.1s,mb4.7						
PALK				*e*		17 09 59.5	
INK	**Inuvik**	**64.64**	**24**	P	**P**	**17 10 21.4**	**-0.6**
	comp=Z,6.9nm,0.6s,mb4.7,baz=294,slow=6.1,SNR=48						
INK	**Inuvik**	**64.64**	**24**	*e*P	**P**	**17 10 20.8**	**-1.2**
	comp=Z,14nm,0.9s,mb4.8						
DLBC	**Dease Lake**	**67.83**	**35**	P	**P**	**17 10 42.8**	**+0.4**
	comp=Z,8.3nm,1.2s,mb4.4,baz=133,slow=5.7,SNR=6.5						
DLBC	**Dease Lake**	**67.83**	**35**	*e*P	**P**	**17 10 42.5**	**+0.1**
RES	**Resolute Bay**	**73.60**	**13**	*e*P	**P**	**17 11 16.6**	**-0.2**
	comp=Z,4.6nm,1.2s,mb4.1						
YKA	**Yellowknife Ar**	**73.76**	**28**	P	**P**	**17 11 17.6**	**-0.2**
	comp=Z,7.4nm,0.7s,mb4.5,baz=293,slow=5.9,SNR=130						
ARCES	**ARCESS Array B**	**74.56**	**341**	P	**P**	**17 11 22.1**	**-0.3**
	comp=Z,6.3nm,1.0s,mb4.3,baz=72,slow=6.7,SNR=6.4						
YBH	**Yreka Blue Hor**	**77.59**	**50**	P	**P**	**17 11 41.4**	**+1.4**
	comp=Z,2.3nm,0.5s,mb4.1,baz=9.7,slow=3.7,SNR=15						
KAF	**Kangasniemi**	**78.34**	**334**	*e*p	**P**	**17 11 42.0**	**-1.7**
	comp=Z,2.6nm,0.4s,mb4.3,baz=42,slow=5.1						
EDM	**Edmonton**	**78.43**	**36**	*e*P	**P**	**17 11 44.3**	**0.0**
FINES	**FINESS Array B**	**78.81**	**334**	P	**P**	**17 11 44.6**	**-1.6**
	comp=Z,2.9nm,0.4s,mb4.5,baz=68,slow=5.3,SNR=64						
WALA	**Waterton Lakes**	**80.05**	**40**	*e*P	**P**	**17 11 54.2**	**+1.0**
	comp=Z,13nm,0.7s,mb4.9						
CMB	**Columbia Colle**	**80.74**	**52**	*e*P	**P**	**17 11 57.6**	**+0.5**
	comp=Z,9.2nm,0.7s,mb4.7						
CHMT	**Chamberlain Mo**	**81.45**	**42**	*e*P	**P**	**17 12 00.5**	**-0.2**
AKASG	**Malin Array Be**	**83.22**	**324**	P	**P**	**17 12 08.5**	**-1.2**
	comp=Z,1.9nm,0.7s,mb4.1,baz=51,slow=5.3,SNR=7.5						
FFC	**Flin Flon**	**83.36**	**31**	*e*P	**P**	**17 12 10.7**	**+0.4**
	comp=Z,7.9nm,0.8s,mb4.6						
TRCR	**Troy Canyon**	**83.98**	**50**	*e*P	**P**	**17 12 14.6**	**+0.9**
FCC	**Fort Churchill**	**84.22**	**26**	*e*P	**P**	**17 12 13.6**	**-0.8**
	comp=Z,3.4nm,0.8s,mb4.2						
NB2	**NORSAR Subarra**	**84.57**	**338**	P	**P**	**17 12 14.8**	**-1.3**
	comp=Z,4.5nm,0.9s,mb4.4,baz=46,slow=4.5						
NB2	**NORSAR Subarra**	**84.57**	**338**	P	**P**	**17 12 14.8**	**-1.3**
	baz=46,slow=4.6						
NOA	**NORSAR Array B**	**84.57**	**338**	P	**P**	**17 12 15.4**	**-0.7**
	comp=Z,1.5nm,0.7s,mb4.0,baz=47,slow=4.7,SNR=6.6						
DUG	**Dugway**	**84.98**	**48**	*e*P	**P**	**17 12 19.2**	**+0.5**
	comp=Z,6.5nm,0.6s,mb4.7						
PDAR	**Pinedale Array**	**85.79**	**44**	P	**P**	**17 12 23.8**	**+1.1**
	comp=Z,2.8nm,0.7s,mb4.3,baz=295,slow=2.5,SNR=15						
MSU	**Marysvale**	**86.24**	**49**	*e*P	**P**	**17 12 26.2**	**+1.3**
MORC	**Moravsky Berou**	**89.77**	**327**	P	**P**	**17 12 40.6**	**-0.8**
	comp=Z,2.4nm,0.8s,mb4.4						
PSZ	**Piszkesteto**	**89.79**	**325**	*e*P	**P**	**17 12 37.9**	**-3.7**
	comp=Z,2.5nm,0.6s,mb4.5						
ANMO	**Albuquerque**	**92.02**	**50**	P	**P**	**17 12 52.9**	**+0.6**
	comp=Z,2.3nm,0.7s,mb4.5,baz=309,slow=2.3,SNR=5.0						
ANMO	**Albuquerque**	**92.02**	**50**	*e*P	**P**	**17 12 53.5**	**+1.2**
	comp=Z,4.2nm,1.0s,mb4.6						
TXAR	**Lajitas Array**	**97.11**	**53**	P	**P**	**17 13 16.2**	**+0.6**
	comp=Z,0.3nm,0.5s,mb4.0,baz=90,slow=1.3,SNR=4.8						
PLCA	**Paso Flores**	**149.68**	**128**	PKPbc	PKPdf	17 19 32.5	+6.0
	comp=Z,3.6nm,0.6s,baz=224,slow=4.3,SNR=15						
LPAZ	**La Paz**	**151.08**	**77**	*e*PKPdf	PKPdf	17 19 30.5	+1.3
LPAZ				*e*PKPbc	PKPdf	17 19 37.8	+8.5

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*HEL **17** 17:04:30.2±0.1,67.03N×20.74E,ML1.9,Explosion*
*IDC **17** 17:04:30.6±0.9,67.09N×21.16E,mb1 3.0/4, mb1mx2.9/19,mbtmp2.9/4,ML2.4/4,Error ellipse: s-maj=17.6km s-min=8.2km az=117.0*
ISC 17 17:04:28.6±0.5**,66.97N**±0.04×**20.78E**±0.09**,n15,σ1§15**/20**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIF	**Kilpisjarvi**	**2.05**	**0**	*e*P	**Pn**	**17 05 05.0**	**+0.4**
KIF				*e*S	**Sn**	**17 05 31.3**	**+0.1**
KTK1	**Kautokeino**	**2.25**	**23**	*e*P	**Pn**	**17 05 08.3**	**+0.7**
SGF	**Sodankyl**	**2.29**	**75**	*e*P	**Pn**	**17 05 08.5**	**+0.4**
SGF				*e*S	**Sn**	**17 05 37.7**	**+0.3**
MOR8	**Moi Rana**	**2.66**	**255**	*e*PG	**Pn**	**17 05 15.2**	**+1.8**
MOR8	**Moi Rana**	**2.66**	**255**	*e*	**Pn**	**17 05 15.2**	**+1.8**
OUL	**Oulu**	**2.82**	**130**	*e*SG	**Sg**	**17 05 58.1**	**-4.3**
OUL				MSG		17 06 01.5	
	comp=Z,3.4nm,0.2s						
LOF	**Lofoten**	**3.01**	**296**	*e*	**Sg**	**17 06 09.0**	**+0.1**
LOF	**Lofoten**	**3.01**	**296**	*e*	**Sg**	**17 06 09.0**	**+0.1**
ARCES	**ARCESS Array B**	**3.12**	**32**	Pn	**Pn**	**17 05 18.4**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=212,slow=14,SNR=37						
ARCES				Sn	**Sn**	**17 05 55.7**	**-2.9**
	comp=Z,0.7nm,0.3s,baz=216,slow=23,SNR=9.2						
STOK	**Stokkvaagen**	**3.16**	**262**	*e*PB	**Pb**	**17 05 24.2**	**-1.2**
STOK	**Stokkvaagen**	**3.16**	**262**	*e*	**Pb**	**17 05 24.2**	**-1.2**
MSF	**Maaselka**	**3.48**	**104**	*e*P	**Pn**	**17 05 26.3**	**+1.2**
FINES	**FINESS Array B**	**6.01**	**155**	Pn	**Pn**	**17 06 02.4**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=346,slow=14,SNR=5.6						
FINES				Sn	**Sn**	**17 07 10.1**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=338,slow=22,SNR=4.8						
NOA	**NORSAR Array B**	**7.28**	**220**	Pn	**Pn**	**17 06 19.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=90,slow=6.7,SNR=3.0						
NOA				Sn	**Sn**	**17 07 42.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=64,slow=18,SNR=2.6						
HFS	**Hagfors**	**7.55**	**208**	Pn	**Pn**	**17 06 21.3**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=230,slow=11,SNR=3.8						

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*MOS **17** 17:18:08.3±0.7,51.60N×16.16E,h10^{km},mb4.3/1,Error ellipse: s-maj=11.3km s-min=5.4km az=79.5*
*NEIC **17** 17:18:09.1±0.4,51.53N×16.23E,h5^{km},ML3.4(VIE), ML3.2(SZGRF),Error ellipse: s-maj=4.9km s-min=4.3km az=211.0*
*BGR **17** 17:18:09.3±0.8,51.50N×16.18E,h1^{km},ML3.2/6,Error ellipse: s-maj=13.3km s-min=5.6km az=177.0*
*WAR **17** 17:18:10.9,51.48N×16.11E,h1^{km},ML3.4,Mining Induced*
*IPEC **17** 17:18:10.0±0.3,51.49N×16.44E,ML2.7/3,Error ellipse: s-maj=3.9km s-min=2.1km az=88.0*
*PRU **17** 17:18:10.9,51.45N×16.10E,Felt In Harrachov*
*IDC **17** 17:18:11.4±0.8,51.43N×15.93E,mb3.7/2,mb1 3.8/7, mb1mx3.5/18,mbtmp3.6/7,ML3.2/5,MS3.2/1,Ms1 3.2/1, ms1mx2.8/22,Error ellipse: s-maj=15.1km s-min=7.8km az=120.0*
*CSEM **17** 17:18:11.1±0.1,51.45N×16.14E,h2^{km},ML3.7/4,Error ellipse: s-maj=2.6km s-min=1.3km az=22.0*
ISC 17 17:18:08.2±0.4**,51.44N**±0.02×**16.11E**±0.03**,n73, σ1§34**/132**,mb3.6**/2**,3C-3D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.61**	**169**	⇓*i*P	**Pg**	**17 18 22.7**	**+2.4**
KSP				*e*		17 18 35.0	
KSP	**Ksiaz**	**0.61**	**169**	⇓*i*Pg	**Pg**	**17 18 22.7**	**+2.4**
KSP				*i* Sg	**Sg**	**17 18 31.6**	**+3.2**
KSP				*e*		17 18 35.0	
KSP	**Ksiaz**	**0.61**	**169**	*e*PG	**Pg**	**17 18 23.0**	**+2.7**
KSP				*e*SG	**Sg**	**17 18 32.0**	**+3.6**
KSP	**Ksiaz**	**0.61**	**169**	⇓*i*Pg	**Pg**	**17 18 22.7**	**+2.4**
KSP				*i* Sg	**Sg**	**17 18 31.6**	**+3.2**
UPC	**Upice**	**0.94**	**184**	*e*PG	**Pg**	**17 18 28.6**	**+1.8**
DPC	**Dobruska-Polom**	**1.10**	**173**	*e*P	**Pg**	**17 18 31.5**	**+1.4**
DPC				*e*		17 18 46.6	
DPC				smax			
	comp=N,105nm,0.4s						
DPC	**Dobruska-Polom**	**1.10**	**173**	*e*PG	**Pg**	**17 18 31.5**	**+1.4**
DPC				*e*SG	**Sg**	**17 18 46.6**	**+1.9**
	comp=N,105nm,0.4s						
PVCC	**Panska Ves**	**1.33**	**228**	*e*PG	**Pg**	**17 18 36.2**	**+1.4**
BRG	**Berggiesshubel**	**1.48**	**248**	*e*Pg	**Pg**	**17 18 37.0**	**-0.7**
BRG				*e*Sg	**Sg**	**17 18 58.5**	**+1.1**
BRG	**Berggiesshubel**	**1.48**	**248**	*e*P	**Pn**	**17 18 37.0**	**+0.9**
BRG				*i*		17 18 58.8	
BRG	**Berggiesshubel**	**1.48**	**248**	*e*Pn	**Pn**	**17 18 37.0**	**+0.9**
BRG				*i* Pg	**Pg**	**17 18 38.6**	**+0.9**
BRG				*i* Sg	**Sg**	**17 18 58.8**	**+1.4**
BRG	**Berggiesshubel**	**1.48**	**248**	*i* Pg	**Pg**	**17 18 38.6**	**+0.9**
BRG				Sg	**Sg**	**17 18 58.5**	**+1.1**
PRU	**Pruhonice**	**1.76**	**215**	*e*P	**Pn**	**17 18 41.2**	**+1.0**
PRU				*e*		17 19 07.1	
PRU	**Pruhonice**	**1.76**	**215**	*e*PN	**Pn**	**17 18 41.2**	**+1.0**
PRU				*e*PG	**Pg**	**17 18 43.2**	**-0.1**
PRU				*e*SG	**Sg**	**17 19 07.1**	**+0.3**
PRU	**Pruhonice**	**1.76**	**215**	Pg	**Pg**	**17 18 43.2**	**-0.1**
PRU				Sg	**Sg**	**17 19 07.1**	**+0.3**
RUE	**Ruedersdorf**	**1.78**	**307**	*e*Pn	**Pn**	**17 18 39.9**	**-0.6**
RUE				*e*S	**Sn**	**17 19 07.2**	**+3.1**
RUE	**Ruedersdorf**	**1.78**	**307**	*e*Pn	**Pn**	**17 18 39.8**	**-0.6**
RUE				*e*S	**Sn**	**17 19 07.2**	**+3.1**
RAC	**Raciborz**	**1.90**	**135**	*e*Pg	**Pg**	**17 18 46.9**	**+0.9**
RAC				*e*Sg	**Sg**	**17 19 11.6**	**+0.4**
MORC	**Moravsky Berou**	**1.90**	**151**	*e*Pn	**Pn**	**17 18 43.2**	**+1.1**
MORC				*e*Sg	**Sg**	**17 19 07.8**	**-3.5**
	comp=N,28nm,0.3s,baz=338						
CLL	**Collm**	**1.95**	**267**	*e*Pn	**Pn**	**17 18 43.0**	**+0.1**
CLL				*e*Sg	**Sg**	**17 19 12.7**	**-0.5**
CLL	**Collm**	**1.95**	**267**	*i* P	**Pn**	**17 18 43.3**	**+0.4**
CLL				*i*		17 19 11.6	
CLL	**Collm**	**1.95**	**267**	*i* Pn	**Pn**	**17 18 43.3**	**+0.4**
CLL				*i* Pg	**Pg**	**17 18 47.3**	**+0.1**
CLL				*i* Sg	**Sg**	**17 19 11.6**	**-1.6**
CLL	**Collm**	**1.95**	**267**	*i* PN	**Pn**	**17 18 43.3**	**+0.4**
CLL				*i* PG	**Pg**	**17 18 47.3**	**+0.1**
CLL				*i*		17 18 50.6	
CLL				*i*		17 19 01.6	
CLL				*i* SG	**Sg**	**17 19 11.6**	**-1.6**
CLL	**Collm**	**1.95**	**267**	*i* Pg	**Pg**	**17 18 47.3**	**+0.1**
CLL				Sg	**Sg**	**17 19 12.7**	**-0.5**

GKP	**Gorka Klasztor**	**1.96**	**20**	eP	**Pn**	**17 18 38.2**	**-4.8**
GKP				e		17 18 58.1	
GKP	**Gorka Klasztor**	**1.96**	**20**	ePn	**Pn**	**17 18 38.2**	**-4.8**
GKP				ePg	**Pg**	**17 18 41.9**	**-5.4**
GKP				eSn	**Sn**	**17 18 58.1**	**-11**
GKP	**Gorka Klasztor**	**1.96**	**20**	ePn	**Pn**	**17 18 38.2**	**-4.8**
GKP				ePg	**Pg**	**17 18 41.9**	**-5.3**
GKP				eSn	**Sn**	**17 18 58.1**	**-11**
OKC	**Ostrava-Krasne**	**2.06**	**140**	eP	**Pn**	**17 18 44.9**	**+0.5**
OKC				e		17 19 15.3	
OKC	**Ostrava-Krasne**	**2.06**	**140**	ePN	**Pn**	**17 18 44.9**	**+0.5**
OKC				ePG	**Pg**	**17 18 49.1**	**-0.2**
OKC				eSG	**Sg**	**17 19 15.3**	**-1.5**
OKC	**Ostrava-Krasne**	**2.06**	**140**	Pg	**Pg**	**17 18 49.1**	**-0.2**
OKC				Sg	**Sg**	**17 19 15.3**	**-1.5**
VRAC	**Vranov**	**2.15**	**172**	P	**Pn**	**17 18 48.0**	**+2.2**
VRAC						17 19 19.1	
VRAC				pmax	pmax		
	comp=Z,6.0nm,0.3s						
VRAC				MLR	MLR		
	comp=Z,483nm,19.5s						
VRAC	**Vranov**	**2.15**	**172**	Pn	**Pn**	**17 18 48.0**	**+2.2**
	comp=Z,5.8nm,0.3s,baz=355,slow=15,SNR=16						
VRAC				Sn	**Sn**	**17 19 19.1**	**+5.5**
	comp=Z,6.4nm,0.3s,baz=268,slow=23,SNR=13						
VRAC				LR	LR	17 19 54.5	
	comp=Z,482nm,19.4s,baz=300,slow=48						
VRAC	**Vranov**	**2.15**	**172**	ePn	**Pn**	**17 18 47.7**	**+1.9**
VRAC				eSg	**Sg**	**17 19 18.3**	**-1.6**
	comp=Z,45nm,0.4s						
KRUC	**Moravsky**	**2.39**	**176**	ePn	**Pn**	**17 18 50.8**	**+1.7**
KRUC				eSg	**Sg**	**17 19 26.4**	**-1.2**
	comp=Z,51nm,0.5s						
TANN	**Tannenbergstha**	**2.53**	**247**	ePn	**Pn**	**17 18 53.0**	**+1.9**
WERD	**Werda**	**2.60**	**249**	ePn	**Pn**	**17 18 53.2**	**+1.0**
WERD				eSg	**Sg**	**17 19 32.9**	**-2.0**
NKC	**Novy Kostel**	**2.62**	**244**	eP	**Pn**	**17 18 53.8**	**+1.4**
NKC				e		17 19 34.9	
NKC				smax			
	comp=N,57nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**244**	ePN	**Pn**	**17 18 53.8**	**+1.4**
NKC				ePG	**Pg**	**17 19 00.2**	**-0.2**
NKC				eSG	**Sg**	**17 19 34.9**	**-0.4**
	comp=N,57nm,0.3s						
OJC	**Ojcow**	**2.64**	**116**	eP	**Pn**	**17 18 53.0**	**+0.3**
OJC				e		17 19 24.1	
OJC	**Ojcow**	**2.64**	**116**	ePN	**Pn**	**17 18 53.0**	**+0.3**
OJC				ePG	**Pg**	**17 19 01.0**	**+0.2**
OJC				eSN	**Sn**	**17 19 24.0**	**-1.9**
OJC				eSG	**Sg**	**17 19 38.0**	**+2.0**
OJC	**Ojcow**	**2.64**	**116**	ePg	**Pg**	**17 19 01.5**	**+0.7**
OJC				eSn	**Sn**	**17 19 24.1**	**-1.8**
OJC				eSg	**Sg**	**17 19 37.9**	**+1.9**
NEUB	**Neuenburg**	**2.73**	**267**	eSg	**Sg**	**17 19 38.3**	**-0.7**
KHC	**Kasperske Hory**	**2.83**	**216**	eP	**Pn**	**17 18 56.3**	**+0.9**
KHC				e		17 19 30.5	
KHC	**Kasperske Hory**	**2.83**	**216**	ePN	**Pn**	**17 18 56.3**	**+0.9**
KHC				ePG	**Pg**	**17 19 02.5**	**-2.1**
KHC				eSN	**Sn**	**17 19 30.5**	**-0.1**
KHC				eSG	**Sg**	**17 19 41.8**	**-0.4**
MOX	**Moxa**	**2.95**	**256**	ePn	**Pn**	**17 18 58.6**	**+1.5**
MOX				ePg	**Pg**	**17 19 05.5**	**-1.5**
MOX				eSg	**Sg**	**17 19 45.6**	**-0.7**
MOX	**Moxa**	**2.95**	**256**	i P	**Pn**	**17 18 58.6**	**+1.5**
MOX				Pg	**Pg**	**17 19 06.0**	**-1.0**
MOX				Sg	**Sg**	**17 19 46.0**	**-0.3**
MOX	**Moxa**	**2.95**	**256**	ePg	**Pg**	**17 19 05.5**	**-1.5**
MOX				Sg	**Sg**	**17 19 44.5**	**-1.8**
NOTT	**Nottersdorf**	**3.02**	**239**	ePn	**Pn**	**17 18 58.7**	**+0.6**
GEC2	**GERESS Array S**	**3.02**	**212**	ePn	**Pn**	**17 18 59.5**	**+1.3**
GEC2	**GERESS Array S**	**3.02**	**212**	ePn	**Pn**	**17 18 59.5**	**+1.3**
GERES	**GERESS Array B**	**3.02**	**212**	P	**Pn**	**17 18 59.6**	**+1.4**
GERES						17 19 33.9	
GERES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GERES				pmax	pmax		
	comp=Z,6.0nm,0.3s						
GERES	**GERESS Array B**	**3.02**	**212**	Pn	**Pn**	**17 18 59.6**	**+1.4**
	comp=Z,1.7nm,0.3s,baz=30,slow=12,SNR=51						
GERES				Pg	**Pg**	**17 19 06.2**	**-2.4**
	comp=Z,6.3nm,0.3s,baz=31,slow=17,SNR=46						
GERES				Sn	**Sn**	**17 19 33.9**	**-1.8**
	comp=Z,2.8nm,0.3s,baz=43,slow=24,SNR=7.3						
GERES				Lg		17 19 46.5	
	comp=Z,5.9nm,0.3s,baz=33,slow=27,SNR=12						
GERES	**GERESS Array B**	**3.02**	**212**	Pg	**Pg**	**17 19 06.2**	**-2.3**
WET	**Wettzell**	**3.10**	**223**	ePn	**Pn**	**17 19 00.1**	**+0.9**
WET	**Wettzell**	**3.10**	**223**	ePn	**Pn**	**17 19 00.1**	**+0.9**
VKA	**Vienna**	**3.18**	**178**	⇑iPG	**Pg**	**17 19 10.5**	**-1.1**
VKA				i SG	**Sg**	**17 19 53.8**	**-0.2**
NIE	**Niedzica**	**3.36**	**125**	eP	**Pg**	**17 19 12.7**	**-2.6**
NIE				eS	**Sg**	**17 19 58.5**	**-1.6**
VYHS	**Vyhne**	**3.43**	**148**	ePG	**Pg**	**17 19 14.7**	**-2.0**
VYHS				e		17 20 03.7	
GRA1	**Grafenberg Arr**	**3.58**	**243**	ePn	**Pn**	**17 19 07.0**	**+1.0**
GRA1				eSg	**Sg**	**17 20 04.9**	**-2.3**
GRA1	**Grafenberg Arr**	**3.58**	**243**	Pn	**Pn**	**17 19 07.0**	**+1.0**
GRA1				Sg	**Sg**	**17 20 04.9**	**-2.3**
GRF	**Grafenberg Arr**	**3.58**	**243**	ePn	**Pn**	**17 19 07.0**	**+0.9**
GRF				eSg	**Sg**	**17 20 04.9**	**-2.3**
BSD	**Bornholm Skovb**	**3.75**	**349**	i P	**Pn**	**17 19 07.3**	**-1.2**
BSD				i S	**Sn**	**17 19 47.4**	**-6.7**
BSD				i LG		17 19 49.8	
MOA	**Molln**	**3.79**	**199**	⇑iPN	**Pn**	**17 19 10.2**	**+1.1**
MOA				i SG	**Sg**	**17 20 13.8**	**-0.5**
	comp=Z,38nm,0.7s						
ARSA	**Arzberg**	**4.21**	**185**	⇑iPN	**Pn**	**17 19 16.3**	**+1.2**
ARSA				i SG	**Sg**	**17 20 26.3**	**-2.0**
	comp=Z,28nm,0.7s						
KWP	**Kalwaria**	**4.58**	**111**	ePg	**Pg**	**17 19 34.7**	**-4.9**
KWP				eSn	**Sn**	**17 20 14.3**	**-0.7**
AKASG	**Malin Array Be**	**8.29**	**90**	P	**P**	**17 20 11.5**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**8.29**	**90**	Pn	**P**	**17 20 11.4**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=279,slow=12,SNR=5.2						
FINES	**FINESS Array B**	**11.43**	**25**	Pn	**P**	**17 20 51.0**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=207,slow=8.5,SNR=4.1						
FINES				Sn	**S**	**17 22 54.3**	**-11**
	comp=Z,0.2nm,0.3s,baz=216,slow=16,SNR=4.1						
FINES	**FINESS Array B**	**11.43**	**25**	Sn	**S**	**17 22 54.3**	**-11**
ARCES	**ARCESS Array B**	**18.69**	**10**	P	**P**	**17 22 27.7**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=203,slow=9.2,SNR=6.3						
ZAL	**Zalesovo**	**40.23**	**59**	P	**P**	**17 25 51.8**	**+4.0**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**40.23**	**59**	P	**P**	**17 25 51.8**	**+4.0**
	comp=Z,1.5nm,0.6s,mb3.8,baz=355,slow=15,SNR=4.2						
YKA	**Yellowknife Ar**	**59.92**	**336**	P	**P**	**17 28 17.1**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.5,baz=29,slow=6.6,SNR=7.8						

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*IDC **17** 17:21:21.8±0.8, 23.17S×169.19E, mb4.5/13, mb1 4.6/14, mb1mx4.5/19, mbtmp4.6/14, ML3.7/1, MS3.9/10, Ms1 3.9/10, ms1mx3.7/18, Error ellipse: s-maj=25.3km s-min=21.0km az=52.0*

*NEIC **17** 17:21:22.9±0.3, 23.15S×169.23E, h10^{km}, mb4.9/23, Error ellipse: s-maj=8.6km s-min=7.4km az=215.0*

*HRVD **17** 17:21:22.9±0.5, 23.18S×169.39E, h18^{km}±1^{km}, MW4.9/45, Centroid moment Tensor Solution. LP body waves: s17,c19;Mantle waves: s45,c63; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.49±.27; $M_{\theta\theta}$1.87±.17; $M_{\phi\phi}$0.62±.16; $M_{r\theta}$-0.78±.37; $M_{\theta\phi}$-0.36±.10; $M_{\phi r}$-0.66±.45; Best double couple: $M_0$2.414×10^{16} NP1:ϕ_s296°,δ39°, λ-68°. NP2:ϕ_s89°,δ55°,λ-107°. Principal axes: T 2.051, Plg8°, Azm190°; N .727, Plg13°, Azm99°; P -2.777, Plg74°, Azm311°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **17** 17:21:23.9, 22.60S×168.96E, h10^{km}, mB5.4, mb4.8*

*MOS **17** 17:21:27.8±1.7, 23.10S×168.62E, h33^{km}, mb5.1/4, Error ellipse: s-maj=29.1km s-min=23.2km az=32.6*

ISC 17 17:21:22.2±3.4, **23.17S**±0.07×**169.24E**±0.07, **h16**^{km}±23^{km}, **h21**^{km}±2.8^{km}**:pP-P, n104,** σ**1**^{s}**03**/68, **mb4.8**/38, **MS3.8**/9, **3C-4D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.81**	**292**	eP	**Pn**	**17 22 07.7**	**+0.4**
DZM				eS	**Sn**	**17 22 42.6**	**+1.5**
DZM	**Mont Dzumac**	**2.81**	**292**	eP	**Pn**	**17 22 07.7**	**+0.4**
DZM				eS	**Sn**	**17 22 42.6**	**+1.5**
NOUC	**Port Laguerre**	**2.91**	**291**	eP	**Pn**	**17 22 09.2**	**+0.4**
NOUC				eS	**Sn**	**17 22 42.2**	**-1.7**
NOUC	**Port Laguerre**	**2.91**	**291**	eP	**Pn**	**17 22 09.2**	**+0.4**
NOUC				eS	**Sn**	**17 22 42.2**	**-1.7**
URZ	**Urewera**	**16.48**	**158**	Pn	**P**	**17 25 15.5**	**+1.1**
	0.3nm,0.3s,baz=62,slow=3.4,SNR=4.3						
URZ				LR	LR	17 30 42.5	
	comp=Z,739nm,18.9s,baz=243,slow=34						
RPZ	**Rata Peaks**	**20.55**	**176**	P	**P**	**17 26 00.7**	**-2.0**
	27nm,0.9s,baz=51,slow=6.5,SNR=3.0						
RPZ				LR	LR	17 33 16.2	
	comp=Z,685nm,18.9s,MS4.0,baz=351,slow=35						
CTA	**Charters Tower**	**21.58**	**274**	eP	**P**	**17 26 15.3**	**+2.0**
	5.7nm,0.9s,mb4.0						
CTA	**Charters Tower**	**21.58**	**274**	eP	**P**	**17 26 15.3**	**+2.0**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CTA	**Charters Tower**	**21.58**	**274**	P	**P**	**17 26 13.2**	**-0.1**
	comp=Z,6.1nm,0.8s,mb4.1,baz=97,slow=12,SNR=4.5						
CTA				LR	LR	17 33 28.8	
	comp=Z,122nm,20.2s,MS3.3,baz=263,slow=34						
CTAO	**Charters Tower**	**21.58**	**274**	P	**P**	**17 26 11.6**	**-1.7**
CTAO				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.5						
CTAO	**Charters Tower**	**21.58**	**274**	P	**P**	**17 26 11.6**	**-1.8**
	comp=Z,30nm,1.4s,mb4.5						
PMG	**Port Moresby**	**25.18**	**299**	P	**P**	**17 26 48.0**	**-0.6**
	comp=Z,22nm,1.2s,mb4.6,baz=146,slow=7.3,SNR=4.5						
PMG				LR	LR	17 34 17.9	
	comp=Z,202nm,19.8s,MS3.6,baz=128,slow=31						
PMG	**Port Moresby**	**25.18**	**299**	eP	**P**	**17 26 47.9**	**-0.7**
	comp=Z,17nm,1.0s,mb4.5						
PMG				LR	LR	17 34 17.9	
STKA	**Stephens Creek**	**25.95**	**244**	eP	**P**	**17 26 58.1**	**+2.4**
	comp=Z,5.9nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**25.95**	**244**	P	**P**	**17 26 56.4**	**+0.7**
	comp=Z,5.4nm,1.0s,mb4.0,baz=128,slow=19,SNR=5.9						
STKA				LR	LR	17 37 18.0	
	comp=Z,234nm,18.1s,MS3.8,baz=236,slow=37						
STKA	**Stephens Creek**	**25.95**	**244**	eP	**P**	**17 26 57.0**	**+1.3**
RAR	**Rarotonga**	**28.73**	**92**	P	**P**	**17 27 13.7**	**-7.5**
	comp=Z,17nm,0.4s,mb5.1,baz=25,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**32.38**	**262**	P	**P**	**17 27 53.0**	**-0.4**
	comp=Z,12nm,1.1s,mb4.6,baz=82,slow=9.0,SNR=43						
ASAR				PcP	PcP	17 30 39.9	-1.2
	comp=Z,1.5nm,0.8s,baz=87,slow=3.2,SNR=8.2						
ASAR				LR	LR	17 39 11.7	
	comp=Z,63nm,18.0s,MS3.4,baz=98,slow=33						
ASPA	**Alice Springs**	**32.38**	**262**	eP	**P**	**17 27 53.1**	**-0.3**
WRAB	**Tennant Creek**	**32.56**	**269**	eP	**P**	**17 27 53.7**	**-1.3**
	comp=Z,5.9nm,1.0s,mb4.5						
WRAB				ePcP	PcP	17 30 39.8	-1.8
WRA	**Warramunga Arr**	**32.57**	**269**	P	**P**	**17 27 53.7**	**-1.4**
	comp=Z,3.0nm,0.9s,mb4.2,baz=99,slow=8.2,SNR=31						
WRA				PcP	PcP	17 30 39.9	-1.7
	comp=Z,1.1nm,0.6s,baz=96,slow=2.7,SNR=10						
KAKA	**Kakadu**	**36.43**	**280**	eP	**P**	**17 28 27.6**	**-0.6**
	comp=Z,9.8nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**41.00**	**269**	⇓iP	**P**	**17 29 06.6**	**+0.3**
	comp=Z,17nm,0.9s,mb4.7						
MBWA	**Marble Bar**	**45.72**	**263**	eP	**P**	**17 29 43.7**	**-0.9**
	comp=Z,26nm,0.7s,mb5.3						
NWAO	**Narrogin (SRO)**	**46.52**	**246**	eP	**P**	**17 29 50.6**	**-0.2**
	comp=Z,5.1nm,0.7s,mb4.6						
VNDA	**Vanda**	**54.52**	**182**	LR	LR	17 52 06.1	
	comp=Z,128nm,18.1s,MS4.0,baz=323,slow=34						
MAJO	**Matsushiro**	**66.23**	**333**	eP	**P**	**17 32 10.8**	**-0.9**
	comp=Z,17nm,1.1s,mb5.0						
QSPA	**South Pole Qui**	**66.90**	**180**	eP	**P**	**17 32 15.3**	**0.0**
	comp=Z,21nm,1.6s,mb4.9						
KS15	**Wonju Array Si**	**71.76**	**326**	eP	**P**	**17 32 45.6**	**-0.2**
MAW	**Mawson**	**74.81**	**202**	P	**P**	**17 33 04.5**	**+1.4**
	comp=Z,6.0nm,0.2s,mb5.1,baz=33,slow=20,SNR=28						
MAW				LR	LR	18 01 11.2	
	comp=Z,115nm,18.2s,MS4.2,baz=240,slow=32						
MDJ	**Mudanjiang**	**76.57**	**332**	P	**P**	**17 33 12.9**	**-0.6**
MDJ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,179nm,5.8s						
MDJ	**Mudanjiang**	**76.57**	**332**	eP	**P**	**17 33 13.7**	**+0.2**
	comp=Z,25nm,1.1s,mb5.0						
CN2	**Changchun**	**77.81**	**329**	eP	**P**	**17 33 20.8**	**+0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
ENH	**Enshi**	**78.18**	**310**	eP	**P**	**17 33 22.5**	**-0.2**
	comp=Z,59nm,1.5s,mb5.3						
BJT	**Baijiatuau**	**79.98**	**321**	eP	**P**	**17 33 32.1**	**-0.2**
	comp=Z,6.0nm,0.8s,mb4.6						
BJI	**Beijing**	**79.99**	**321**	P	**P**	**17 33 32.4**	**+0.1**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
BJI	**Beijing**	**79.99**	**321**	P	**P**	**17 33 32.4**	**+0.1**
	comp=Z,8.0nm,0.9s,mb4.7						
CM31	**Chiang Mai Arr**	**80.13**	**295**	eP	**P**	**17 33 35.0**	**+1.5**
	comp=Z,12nm,0.9s,mb4.8						
CMAR	**Chiang Mai Arr**	**80.13**	**295**	P	**P**	**17 33 34.9**	**+1.4**
	comp=Z,5.8nm,0.8s,mb4.5,baz=135,slow=4.2,SNR=38						
KMI	**Kunming**	**80.36**	**303**	P	**P**	**17 33 35.8**	**+1.2**
KMI				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
KMI	**Kunming**	**80.36**	**303**	P	**P**	**17 33 35.7**	**+1.1**
	comp=Z,11nm,1.1s,mb4.7						
XAN	**Xi’an**	**80.77**	**313**	P	**P**	**17 33 37.1**	**+0.5**
XAN				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.7						
HHC	**Hu-ho-hao-te**	**83.20**	**320**	eP	**P**	**17 33 51.4**	**+2.3**
HHC				AP	pP	17 33 57.3	+3.0
HHC				XP	sP	17 34 02.3	+6.3
HHC				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,121nm,4.8s						
MA2	**Magadan**	**83.83**	**351**	P	**P**	**17 33 56.6**	**+4.7**
HIA	**Hailar**	**84.50**	**330**	P	**P**	**17 33 55.5**	**+0.1**
	comp=Z,7.8nm,1.2s,mb4.7						
SNAA	**Sanae**	**85.25**	**183**	⇑i	**P**	**17 33 59.3**	**+0.6**
SNAA	**Sanae**	**85.25**	**183**	P	**P**	**17 33 59.6**	**+0.9**
	comp=Z,1.9nm,0.9s,mb4.2,baz=267,slow=8.0,SNR=2.9						
SNAA				LR	LR	18 07 14.7	
	comp=Z,59nm,19.9s,MS4.0,baz=42,slow=32						
SNAA	**Sanae**	**85.25**	**183**	eP	**P**	**17 33 58.8**	**0.0**
	comp=Z,253nm,1.3s,mb6.2						
LZH	**Lanzhou**	**85.36**	**312**	⇓P	**P**	**17 33 59.0**	**-1.1**
LZH				AP	pP	17 34 07.3	+2.0
LZH				XP	sP	17 34 10.8	+3.8
LZH				AMB	AMB		
	comp=Z,32nm,1.4s,mb5.3						
LZH	**Lanzhou**	**85.36**	**312**	⇓P	**P**	**17 33 59.0**	**-1.1**
	comp=Z,32nm,1.4s,mb5.3						
LZH				pP	pP	17 34 07.2	+1.9
LZH				sP	sP	17 34 10.7	+3.7
VNA3	**Neumayer Olymp**	**85.84**	**180**	⇑i	**P**	**17 34 00.3**	**-1.4**
VNA2	**Neumayer--Watz**	**86.13**	**181**		**P**	**17 34 03.8**	**+0.7**
VNA1	**Neumayer--Stat**	**86.42**	**181**	⇑i	**P**	**17 34 00.1**	**-4.5**
CLNS	**Chul’man**	**88.00**	**337**	eP	**P**	**17 34 11.2**	**-1.3**
CLNS				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.4						
CLNS				pmax	pmax		
	comp=N,11nm,1.0s						
CLNS				pmax	pmax		
	comp=E,4.0nm,1.1s						
CMB	**Columbia Colle**	**89.77**	**48**	eP	**P**	**17 34 19.5**	**-1.8**
	comp=E,15nm,1.3s,mb5.2						
GTA	**Gaotai**	**89.82**	**314**	P	**P**	**17 34 22.3**	**+0.7**
GTA				AP	pP	17 34 28.0	+1.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.6						
ULN	**Ulaanbaatar**	**90.01**	**323**	eP	**P**	**17 34 23.2**	**+1.0**
	comp=Z,11nm,1.1s,mb5.1						
YBH	**Yreka Blue Hor**	**90.11**	**44**	P	**P**	**17 34 24.3**	**+1.4**
	comp=Z,0.7nm,0.3s,mb4.4,baz=126,slow=5.2,SNR=5.9						
SONM	**Songino Array**	**90.35**	**323**	P	**P**	**17 34 24.8**	**+1.0**
	comp=Z,3.2nm,0.9s,mb4.7,baz=124,slow=4.5,SNR=17						
BILL	**Bilibino**	**90.96**	**359**	eP	**P**	**17 34 25.8**	**-0.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
BILL	**Bilibino**	**90.96**	**359**	eP	**P**	**17 34 25.8**	**-0.4**
	comp=Z,5.6nm,1.1s,mb4.8						
TPH	**Tonopah**	**91.97**	**49**	P	**P**	**17 34 31.1**	**-0.4**
	comp=Z,14nm,1.2s,mb5.2						
ZAK	**Zakamensk**	**93.47**	**324**	⇓iP	**P**	**17 34 38.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.7						
COLA	**College**	**93.78**	**17**	eP	**P**	**17 34 39.2**	**+0.1**
	comp=Z,6.8nm,1.1s,mb5.0						
ILAR	**Eielson Array**	**93.97**	**17**	P	**P**	**17 34 38.4**	**-1.6**
	comp=Z,1.6nm,1.0s,mb4.4,baz=235,slow=6.1,SNR=7.4						
TXAR	**Lajitas Array**	**98.62**	**62**	LR	LR	18 13 49.6	
	comp=Z,61nm,18.6s,MS4.1,baz=5.0,slow=32						
FINES	**FINESS Array B**	**134.19**	**336**	PKP	PKPdf	17 40 40.2	-2.4
	comp=Z,1.4nm,0.9s,slow=21,SNR=3.0						
AKASG	**Malin Array Be**	**138.62**	**322**	PKP	PKPdf	17 40 48.2	-2.9
	comp=Z,0.9nm,0.7s,baz=54,slow=3.1,SNR=4.2						
BRTR	**Keskin Array B**	**139.13**	**304**	PKP	PKPdf	17 40 50.6	-1.8
	comp=Z,0.3nm,0.4s,baz=45,slow=4.1,SNR=2.7						
KOLS	**Kolonicke sedl**	**143.41**	**323**	ePKP	PKPdf	17 40 54.7	-4.8
KECS	**Kecovo**	**144.64**	**323**	ePKP	PKPdf	17 40 59.2	-2.5
OKC	**Ostrava-Krasne**	**145.06**	**327**	ePKP	PKPdf	17 40 59.3	-3.1
KSP	**Ksiaz**	**145.30**	**330**	ePKP	PKPdf	17 41 00.4	-2.4
BSEG	**Bad Segeberg**	**145.41**	**338**	ePKP2	PKPab	17 41 00.5	-0.8
VYHS	**Vyhne**	**145.53**	**325**	ePKP	PKPdf	17 41 00.8	-2.4
DPC	**Dobruska-Polom**	**145.62**	**329**	ePKP	PKPdf	17 41 01.6	-1.7
UPC	**Upice**	**145.66**	**329**	ePKP	PKPdf	17 41 01.5	-1.9
BRG	**Berggiesshubel**	**146.35**	**331**	ePKP2	PKPab	17 41 04.1	-0.9
BRG				pmax	pmax		
	comp=Z,13nm,0.9s						
BRG	**Berggiesshubel**	**146.35**	**331**	eP	PKPbc	17 41 04.1	+2.1
BRG				e		17 41 11.0	
CLL	**Collm**	**146.44**	**333**	i PKP2	PKPab	17 41 04.1	-1.2
CLL				pmax	pmax		
	comp=Z,24nm,1.0s						
ZST	**Bratislava**	**146.63**	**325**	ePKP	PKPdf	17 41 04.4	-0.7
PRU	**Pruhonice**	**146.71**	**330**	ePKP	PKPdf	17 41 04.4	-0.8
CLZ	**Clausthal**	**147.08**	**336**	ePKPbc	PKPdf	17 41 06.1	+0.4
NKC	**Novy Kostel**	**147.47**	**332**	ePKP	PKPdf	17 41 06.9	+0.5
MOX	**Moxa**	**147.51**	**333**	ePKP2	PKPab	17 41 07.1	-2.4
MOX				pmax	pmax		
	comp=Z,17nm,1.5s						
MOX	**Moxa**	**147.51**	**333**	i P	PKPdf	17 41 07.1	+0.6
	comp=Z,logA/T=1.1						
KHC	**Kasperske Hory**	**147.75**	**330**	ePKP	PKPdf	17 41 06.9	0.0
GEC2	**GERESS Array S**	**147.90**	**329**	ePKP2	PKPab	17 41 08.3	-2.8
GERES	**GERESS Array B**	**147.90**	**329**	PKPbc	PKPdf	17 41 08.3	+1.2
	comp=Z,5.3nm,0.9s,baz=45,slow=1.9,SNR=22						
GRA1	**Grafenberg Arr**	**148.40**	**332**	ePKPbc	PKPdf	17 41 09.0	+1.1
GRF	**Grafenberg Arr**	**148.40**	**332**	ePKIKP	PKPdf	17 41 09.0	+1.1
WLF	**Walferdange**	**150.40**	**337**	ePKPbc	PKPdf	17 41 13.8	+2.7
WLF				ePKPab	PKPab	17 41 21.5	+0.2
GIVF	**Givet**	**150.48**	**339**	ePKP1	PKPdf	17 41 13.6	+2.4
	comp=Z,34nm,0.9s						
BFO	**Black Forest**	**150.66**	**334**	ePKPbc	PKPdf	17 41 14.6	+3.1
BFO				ePKPab	PKPab	17 41 22.1	-0.4
BAIF	**Baives**	**150.71**	**340**	ePKP1	PKPdf	17 41 14.2	+2.7
	comp=Z,25nm,1.0s						
CDF	**Champ du Feu**	**151.02**	**335**	ePKP1	PKPdf	17 41 14.7	+2.7
	comp=Z,20nm,1.1s						
HINF	**Hinteralfeld**	**151.67**	**335**	ePKP1	PKPdf	17 41 16.0	+3.0
	comp=Z,7.4nm,0.8s						
HAU	**Haudompre**	**151.71**	**335**	ePKP1	PKPdf	17 41 16.2	+3.1
	comp=Z,22nm,1.0s						
MEZF	**Maizieres J’vi**	**151.77**	**337**	ePKP1	PKPdf	17 41 16.9	+3.7
	comp=Z,36nm,0.9s						
CABF	**La Chapelle**	**152.95**	**334**	ePKP1	PKPdf	17 41 19.4	+4.5
SSF	**Saint Saulge**	**153.55**	**338**	ePKP1	PKPdf	17 41 20.5	+4.8
	comp=Z,12nm,1.1s						
LPG	**La Plagne**	**153.56**	**332**	ePKP1	PKPdf	17 41 22.9	+7.1
	comp=Z,36nm,1.2s						
TCF	**Toulx Ste Croi**	**154.66**	**339**	ePKP1	PKPdf	17 41 22.5	+5.3
	comp=Z,24nm,1.2s						
LASF	**Ste Croix**	**155.93**	**334**	ePKP1	PKPdf	17 41 27.7	+8.7
	comp=Z,68nm,1.5s						

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*ATH **17** 17:55:46.6, 39.30N×24.15E, h47^{km}±31^{km}, MD3.3/13, ML3.5*

*NEIC **17** 17:55:46.6, 39.30N×24.15E, h47^{km}, MD3.3(ATH), After ATH.*

*THE **17** 17:55:48.0, 39.35N×24.18E, h16^{km}, ML3.3*

*CSEM **17** 17:55:47.6±0.1, 39.26N×24.25E, h40^{km}, ML3.3, Error ellipse: s-maj=2.5km s-min=1.7km az=97.0*

*SOF **17** 17:55:50.0, 39.79N×24.21E, h2^{km}, MD3.0*

ISC 17 17:55:46.7±0.5, **39.30N**±0.02×**24.20E**±0.04, **h26**^{km}±5^{km}, **n35,** σ**0**^{s}**90**/50, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.28**	**242**	ePg	**Pb**	**17 55 53.7**	**+0.3**
PAIG	**Paliouri**	**0.74**	**328**	ePg	**Pb**	**17 56 01.1**	**+0.3**
PAIG				eSg	**Sb**	**17 56 12.4**	**+1.8**
NEO	**Neokhori**	**0.75**	**271**	eP	**Pb**	**17 56 01.0**	**-0.1**
NEO				eS	**Sb**	**17 56 11.5**	**+0.6**
XOR	**Xorichti**	**0.78**	**275**	ePg	**Pb**	**17 56 01.5**	**0.0**
XOR				eSg	**Sb**	**17 56 13.9**	**+2.2**
LOS	**Limnos**	**0.93**	**47**	ePg	**Pb**	**17 56 05.1**	**+1.1**
LIA	**Limnos Island**	**0.97**	**52**	eP	**Pb**	**17 56 05.5**	**+0.8**
OUR	**Ouranopolis**	**1.04**	**351**	ePg	**Pn**	**17 56 06.3**	**+0.5**
LKR	**Lokris**	**1.14**	**235**	eP	**Pn**	**17 56 06.6**	**-0.5**
MPAR	**Parnis Oros**	**1.21**	**197**	eP	**Pn**	**17 56 08.5**	**+0.4**
PLG	**Polygyros**	**1.22**	**332**	eP	**Pn**	**17 56 07.5**	**-0.7**
PTL	**Penteli**	**1.28**	**192**	eP	**Pn**	**17 56 08.9**	**-0.3**
ATH	**Athens Observa**	**1.38**	**196**	eP	**Pn**	**17 56 11.0**	**+0.4**
ATH				eS	**Sn**	**17 56 27.0**	**-1.2**
AGG	**Agios Georgios**	**1.48**	**260**	ePb	**Pb**	**17 56 12.4**	**-0.9**
AGG				eSb	**Sb**	**17 56 33.8**	**+2.1**
MGER	**Gerania Oros**	**1.50**	**209**	eP	**Pn**	**17 56 12.0**	**-0.4**
LIT	**Litokhoron**	**1.54**	**302**	ePb	**Pb**	**17 56 12.9**	**-1.4**
LIT				eSb	**Sb**	**17 56 32.6**	**-0.8**
THE	**Thessaloniki**	**1.63**	**325**	ePb	**Pb**	**17 56 14.7**	**-1.2**
THE				eSb	**Sb**	**17 56 34.4**	**-1.7**
NAIG	**Nisos Aigina**	**1.64**	**200**	eP	**Pn**	**17 56 14.5**	**+0.2**
SOH	**Sokhos**	**1.65**	**337**	ePb	**Pb**	**17 56 15.6**	**-0.6**
SRS	**Serrai**	**1.87**	**346**	ePb	**Pb**	**17 56 18.1**	**-1.9**
SRS				eSb	**Sb**	**17 56 41.2**	**-1.9**
KNT	**Kendrikon**	**2.10**	**332**	ePn	**Pn**	**17 56 21.6**	**+0.6**
KNT				eSn	**Sn**	**17 56 46.9**	**+0.3**
RDO	**Rodhopi**	**2.11**	**29**	eP	**Pn**	**17 56 21.0**	**0.0**
ALN	**Alexandroupoli**	**2.13**	**41**	ePn	**Pn**	**17 56 21.3**	**-0.1**
ALN				eSn	**Sn**	**17 56 48.4**	**+1.0**
ALN	**Alexandroupoli**	**2.13**	**41**	ePn	**Pn**	**17 56 21.3**	**-0.1**
ALN				eSn	**Sn**	**17 56 48.3**	**+1.0**
GRG	**Griva**	**2.15**	**321**	ePn	**Pn**	**17 56 22.4**	**+0.7**
GRG				eSn	**Sn**	**17 56 48.7**	**+1.0**
MMB	**Musomiste**	**2.31**	**351**	i P	**Pn**	**17 56 23.5**	**-0.4**
RZN	**Rozhen**	**2.42**	**9**	i P	**Pn**	**17 56 26.0**	**+0.6**
RZN				Sg	**Sn**	**17 56 54.5**	**0.0**
APE	**Apeiranthos**	**2.47**	**154**	eP	**Pn**	**17 56 25.5**	**-0.7**
FNA	**Florina**	**2.62**	**305**	ePn	**Pn**	**17 56 29.0**	**+0.6**
KKB	**Krupnik**	**2.70**	**342**	i P	**Pn**	**17 56 29.0**	**-0.4**
KKB				Sg	**Sn**	**17 57 00.5**	**-1.1**
VLI	**Veliai**	**2.77**	**201**	eP	**Pn**	**17 56 29.5**	**-0.9**
ITM	**Ithomi**	**2.77**	**221**	eP	**Pn**	**17 56 31.0**	**+0.5**
PLD	**Plovdiv**	**2.83**	**8**	P	**Pn**	**17 56 32.0**	**+0.7**
DIM	**Dimitrovgrad**	**2.93**	**20**	P	**Pn**	**17 56 33.0**	**+0.3**
PGB	**Panagyurishte**	**3.24**	**360**	P	**Pn**	**17 56 37.0**	**-0.2**
VTS	**Vitosha**	**3.37**	**348**	i P	**Pn**	**17 56 40.0**	**+1.0**
VTS				S	**Sn**	**17 57 18.5**	**-0.1**

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*IDC **17** 18:09:40.3±1.1, 10.58S×66.24E, mb3.9/9, mb1 4.1/9, mb1mx4.0/17, mbtmp3.9/9, MS3.5/2, Ms1 3.6/2, ms1mx2.8/22, Error ellipse: s-maj=42.5km s-min=20.3km az=36.0*

*NEIC **17** 18:09:41.4±0.6, 10.60S×66.20E, h10^{km}, mb4.5/8, Error ellipse: s-maj=19.0km s-min=13.2km az=159.0*

ISC 17 18:09:39.8±0.7, **10.6S**±0.1×**66.2E**±0.1, **h10**^{km}**, n22,** σ**1**^{s}**07**/17, **mb4.1**/17, **MS3.5**/2, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**22.86**	**40**	P	**P**	**18 14 45.6**	**+0.9**
	5.2nm,1.0s,mb3.9						
LSZ	**Lusaka**	**37.31**	**259**	eP	**P**	**18 16 55.0**	**+0.7**
	11nm,1.4s,mb4.5						
LBTB	**Lobatse**	**41.07**	**244**	LR	LR	18 35 25.1	
	comp=Z,92nm,18.1s,MS3.7,baz=282,slow=38						
LBTB	**Lobatse**	**41.07**	**244**	P	**P**	**18 17 24.1**	**-1.3**
	10nm,1.3s,mb4.3						
CM31	**Chiang Mai Arr**	**43.31**	**48**	eP	**P**	**18 17 44.9**	**+1.0**
	2.5nm,0.7s,mb4.0						
CMAR	**Chiang Mai Arr**	**43.31**	**48**	P	**P**	**18 17 44.5**	**+0.6**
	1.2nm,0.8s,mb3.7,baz=241,slow=9.4,SNR=10						
CMAR				LR	LR	18 33 41.0	
	comp=Z,32nm,19.9s,MS3.2,baz=325,slow=33						
ENH	**Enshi**	**58.14**	**44**	eP	**P**	**18 19 34.5**	**-1.8**
	9.6nm,1.2s,mb4.7						
BRTR	**Keskin Array B**	**58.46**	**331**	P	**P**	**18 19 39.1**	**+0.7**

	1.4nm,1.0s,mb3.9,baz=149,slow=8.4,SNR=5.6						
KURK	**Kurchatov**	**61.98**	**9**	*e*P	**P**	**18 20 01.1**	**-1.3**
	5.5nm,1.1s,mb4.6						
BRVK	**Borovoye**	**63.47**	**3**	*e*P	**P**	**18 20 09.5**	**-2.7**
	2.5nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**65.49**	**111**	P	**P**	**18 20 25.6**	**-0.2**
	1.2nm,0.9s,mb3.9,baz=273,slow=5.8,SNR=14						
WRA	**Warramunga Arr**	**66.03**	**107**	P	**P**	**18 20 29.4**	**+0.1**
	2.8nm,1.0s,mb4.3,baz=278,slow=5.8,SNR=15						
ZAL	**Zalesovo**	**66.17**	**12**	P	**P**	**18 20 29.0**	**-0.7**
	0.8nm,0.6s,mb4.0,baz=282,slow=8.1,SNR=6.6						
SONM	**Songino Array**	**68.20**	**28**	P	**P**	**18 20 43.0**	**+0.4**
	1.0nm,0.8s,mb3.9,baz=229,slow=6.9,SNR=8.6						
AKASG	**Malin Array Be**	**68.97**	**336**	P	**P**	**18 20 46.9**	**-0.5**
	0.3nm,0.3s,mb3.6,baz=137,slow=5.0,SNR=5.6						
GERES	**GERESS Array B**	**75.02**	**327**	P	**P**	**18 21 24.0**	**+0.7**
	1.1nm,0.9s,mb3.8,baz=117,slow=3.0,SNR=4.8						
PMG	**Port Moresby**	**79.51**	**98**	P	**P**	**18 21 49.3**	**+0.3**
	19nm,1.4s,mb4.8						
ESDC	**Sonseca Array**	**81.86**	**313**	P	**P**	**18 22 03.1**	**+2.2**
	0.2nm,0.3s,mb3.5,baz=104,slow=6.1,SNR=4.7						
YKA	**Yellowknife Ar**	**128.16**	**0**	PKP	PKPdf	18 28 48.0	-1.3
	0.7nm,1.0s,baz=356,slow=2.1,SNR=4.8						
YKA	**Yellowknife Ar**	**128.16**	**0**	PKP	PKPdf	18 28 48.0	-1.3
PDAR	**Pinedale Array**	**147.72**	**354**	PKPbc	PKPdf	18 29 25.4	+0.2
	0.8nm,0.8s,baz=56,slow=5.3,SNR=7.0						
TXAR	**Lajitas Array**	**159.07**	**335**	PKPab	PKPab	18 30 17.3	-0.4
	0.2nm,0.5s,baz=39,slow=5.8,SNR=2.4						

IDC 17 18:20:03.5±4.5,10.38S×66.50E,mb3.8/4,mb1 4.1/4, mb1mx3.7/17,mbtmp3.8/4,Error ellipse: s-maj=118.3km s-min=42.6km az=65.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**42.97**	**48**	P	P	18 28 04.6	-1.9
	1.1nm,1.1s,baz=239,slow=11,SNR=6.4						
WRA	**Warramunga Arr**	**65.81**	**107**	P	P	18 30 51.2	-2.1
	1.0nm,1.1s,baz=274,slow=5.5,SNR=7.4						
ZAL	**Zalesovo**	**65.93**	**12**	P	P	18 30 51.2	-2.3
	0.5nm,0.3s,baz=298,slow=15,SNR=3.4						
SONM	**Songino Array**	**67.90**	**28**	P	P	18 31 04.3	-1.9
	0.6nm,0.8s,baz=217,slow=6.2,SNR=5.5						

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*NEIC **17** 18:46:54.6,18.29N×103.23W,h15^{km},MD4.0(MEX),After MEX.*

MEX 17 18:46:54.8±0.7,18.28N×103.19W,h16^{km}±16^{km},MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**1.77**	**112**	*i* P	Pn	18 47 21.6	-3.5
ZIIG				*i* S	Sn	18 47 44.1	-3.3
ZIIG	**Zihuatanejo**	**1.77**	**112**	*i* P	Pn	18 47 21.6	-3.5
ZIIG				*i* S	Sn	18 47 41.3	-6.1
CJM	**Chamela**	**2.13**	**305**	*i* P	Pn	18 47 26.9	-3.4
CJM				*i* S	Sn	18 47 50.1	-6.6
SFJM	**Santa Fe**	**2.20**	**4**	*i* P	Pn	18 47 27.0	-4.3
SFJM				*i* S	Sn	18 47 54.0	-4.3
CAIG	**El Cayaco**	**3.04**	**113**	*i* P	Pn	18 47 39.7	-3.6
CAIG				*i* S	Sn	18 48 16.4	-3.3
CAIG	**El Cayaco**	**3.04**	**113**	*i* P	Pn	18 47 39.7	-3.6
CAIG				*i* S	Sn	18 48 15.5	-4.2
ACX	**Acapulco**	**3.42**	**114**	*i* P	Pn	18 47 45.0	-3.7
PPM	**Popocatepetl**	**4.39**	**79**	*e*P	Pn	18 48 03.0	+0.5
IIB	**San Bernardino**	**4.64**	**81**	*e*P	Pn	18 48 03.0	-3.0

IDC 17 18:56:02.8±43.0,17.47S×171.21W,mb3.7/3,mb1 3.9/3, mb1mx3.7/15,mbtmp3.7/3,Error ellipse: s-maj=844.5km s-min=178.9km az=82.0,Low Confidence,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.88**	**242**	P	P	19 04 19.3	-1.8
	0.6nm,0.4s,baz=72,slow=6.4,SNR=3.4						
WRA	**Warramunga Arr**	**51.45**	**258**	P	P	19 05 10.0	-2.3
	0.2nm,0.6s,baz=97,slow=6.5,SNR=11						
ASAR	**Alice Springs**	**51.50**	**253**	P	P	19 05 10.8	-1.9
	1.3nm,0.6s,baz=89,slow=8.6,SNR=29						

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*NEIC **17** 19:11:29.9,30.26S×71.26W,h46^{km},MD3.8(GUC),After GUC.*

GUC 17 19:11:29.9±0.6,30.26S×71.26W,h46^{km}±1^{km},MD3.8, ML4.1,1C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.35**	**172**	⇓*i*P	P	19 11 39.3	0.0
OVCH				*i* S	S	19 11 46.4	+0.6
OVCH				AMP		19 11 47.0	
	comp=E,8µm,0.4s						
TLL	**Tololo Astrono**	**0.40**	**77**	⇑*i*P	P	19 11 40.7	+0.9
TLL				*i* S	S	19 11 48.5	+1.7
TLL				AMP		19 11 53.9	
	comp=N,8µm,0.5s						
ILCH	**Illapel**	**1.37**	**177**	*i* P	P	19 11 53.0	-0.1
ILCH				*i* S	S	19 12 11.2	+0.8
ILCH				AMP		19 12 15.9	
	comp=E,2µm,0.2s						
PTCH	**Petorca**	**2.02**	**172**	AMP		19 12 51.3	
	comp=N,4µm,0.2s						
PACH	**Papudo**	**2.28**	**184**	*i* P	P	19 12 05.3	-0.5
PACH				*i* S	S	19 12 32.8	0.0
JACH	**Jahuel**	**2.48**	**167**	*i* P	P	19 12 08.7	-0.1
ZON	**Zonda**	**2.56**	**121**	*e*P	P	19 12 10.0	+0.1
CLCH	**Cerro Calan**	**3.19**	**169**	AMP		19 13 10.9	
	comp=E,1µm,0.6s						
RCDM	**Rinconada Maip**	**3.24**	**173**	AMP		19 13 10.0	
	comp=E,547nm,0.7s						
ANTU	**Antumapu**	**3.34**	**171**	AMP		19 13 21.3	
	comp=N,522nm,0.7s						
TACH	**Talagante**	**3.40**	**175**	*i* P	P	19 12 21.1	-0.7
PCH	**Pirque**	**3.41**	**170**	*i* P	P	19 12 21.6	-0.4
LMEL	**Las Melosas**	**3.69**	**166**	AMP		19 13 19.9	
	comp=N,327nm,0.1s						
CHCH	**Chadas Angostu**	**3.70**	**172**	⇓*i*P	P	19 12 25.3	-0.8
CACH	**El Canelo**	**3.89**	**172**	*i* P	P	19 12 28.5	-0.2
CICH	**Cipreses**	**4.11**	**170**	*i* S	S	19 13 17.4	-1.8
SFDO	**San Fernando**	**4.35**	**177**	*i* P	P	19 12 34.2	-1.0
LVC	**Limon Verde**	**7.90**	**16**	*e*Pn	P	19 13 28.3	+3.5
PLCA	**Paso Flores**	**10.47**	**177**	P	P	19 13 59.1	-1.1
TRQA	**Tornquist**	**10.93**	**138**	*e*P	P	19 14 04.2	-2.2
	comp=N,18nm,1.1s						

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*TAP **17** 19:21:32.5,24.84N×122.42E,h111^{km}±1^{km},ML3.5*

JMA 17 19:21:32.3±0.4,25.02N×122.42E,h102^{km},M2.1,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.77**	**136**	P	P	19 21 50.7	-0.1
YOJ				S	S	19 22 05.0	+0.4
IRIF	**Iriomote-Funau**	**1.37**	**120**	P	P	19 21 56.9	-0.7
IRIF				S	S	19 22 15.7	-0.7
HATJ	**Hateruma jima**	**1.58**	**127**	P	P	19 22 00.5	+0.4
HATJ				S	S	19 22 21.1	+0.2
JKRS	**Kuro-shima**	**1.64**	**118**	P	P	19 22 00.7	-0.2
JKRS				S	S	19 22 22.1	0.0
JIJ	**Ishigaki jima**	**1.70**	**112**	P	P	19 22 01.4	-0.2
JIJ				S	S	19 22 22.3	-1.0
JTJ	**Tarama**	**2.11**	**100**	P	P	19 22 07.6	+0.7
JTJ				S	S	19 22 33.4	+0.8

IDC 17 19:24:18.1±4.2,7.97N×91.43E,mb3.4/2,mb1 3.5/3, mb1mx3.3/18,mbtmp3.3/3,ML3.5/1,Error ellipse: s-maj=107.3km s-min=35.6km az=75.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.73**	**34**	Pn	P	19 27 19.6	-3.7
	0.1nm,0.3s,baz=228,slow=15,SNR=6.0						
SONM	**Songino Array**	**41.71**	**15**	P	P	19 32 09.2	-1.2
	0.6nm,0.7s,baz=203,slow=9.4,SNR=6.4						
WRA	**Warramunga Arr**	**50.52**	**124**	P	P	19 33 18.3	-2.3
	0.1nm,0.5s,baz=304,slow=8.9,SNR=4.9						

IDC 17 19:24:42.0±45.0,14.80S×178.66E,mb4.3/3,mb1 4.5/3, mb1mx3.9/14,mbtmp4.3/3,Error ellipse: s-maj=812.1km s-min=143.0km az=73.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NOUC	**Port Laguerre**	**13.79**	**236**	*e*P	P	19 27 35.9	-25
STKA	**Stephens Creek**	**37.81**	**237**	P	P	19 31 59.5	-2.6
	2.6nm,0.8s,baz=73,slow=9.9,SNR=5.9						
WRA	**Warramunga Arr**	**42.52**	**257**	P	P	19 32 40.2	-1.0
	1.0nm,0.6s,baz=89,slow=8.2,SNR=26						
ASAR	**Alice Springs**	**43.02**	**251**	P	P	19 32 43.6	-1.7
	7.5nm,0.4s,baz=81,slow=8.8,SNR=194						

DJA 17 19:30:47.2±0.9,9.73S×114.83E,h12^{km}±35^{km},MD5.0/3, ML4.6/4,5C-3D,Error ellipse: s-maj=73.2km s-min=8.4km az=8.0,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**1.22**	**35**	⇑*e*Pn	Pn	19 31 07.1	-2.9
	1µm,0.2s						
RATI				⇓*e*Sn	Sn	19 31 21.8	-4.6
SRDI	**Scrawed**	**1.42**	**331**	⇓*e*Pn	Pn	19 31 10.4	-2.5
	2µm,0.2s						
SRDI				⇑*e*Sn	Sn	19 31 26.4	-5.1
KELI	**Kelakatan**	**1.54**	**347**	⇓*e*Pn	Pn	19 31 11.9	-2.8
	298nm,0.2s						
KELI				⇑*e*Sn	Sn	19 31 30.9	-3.8
KEDI	**Kedomdong**	**1.77**	**46**	⇑*e*Pn	Pn	19 31 15.2	-2.7
	233nm,0.1s						
KEDI	**Kedomdong**	**1.77**	**46**	*e*Pg	Pg	19 31 16.2	-6.4
KEDI				⇑*e*Sn	Sn	19 31 35.4	-5.0

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*NEIC **17** 19:35:03.1±3.4,56.81S×26.37W,h53^{km}±30^{km},mb4.6/7, Error ellipse: s-maj=25.4km s-min=11.4km az=55.0*

*IDC **17** 19:35:04.0±7.6,56.77S×26.04W,h60^{km}±67^{km},mb4.0/5, mb1 3.9/6,mb1mx3.6/14,mbtmp4.2/6,ML3.2/1,Error ellipse: s-maj=36.9km s-min=20.9km az=59.0*

ISC 17 19:35:02.8±2.8,56.8S±0.1×26.1W±0.3,h65^{km}±24^{km},n20, σ0^{s}93/15,mb4.4/11,1C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.40**	**289**	Pn	**P**	**19 36 36.8**	**+0.4**
	305nm,1.1s,SNR=54						
SNAA	**Sanae**	**17.84**	**156**	P	**P**	**19 39 07.6**	**0.0**
	0.1nm,0.3s,baz=324,slow=16,SNR=5.3						
TRQA	**Tornquist**	**30.16**	**293**	*e*P	**P**	**19 41 04.8**	**-3.7**
QSPA	**South Pole Qui**	**33.48**	**180**	⇑*i*P	**P**	**19 41 36.3**	**-0.8**
	13nm,0.5s,mb5.0						
BDFB	**Brasilia**	**44.29**	**329**	P	**P**	**19 43 08.3**	**+0.6**
	1.5nm,0.5s,mb4.0,baz=153,slow=3.0,SNR=3.1						
VNDA	**Vanda**	**45.88**	**182**	P	**P**	**19 43 19.1**	**-0.4**
	0.8nm,0.6s,mb3.6,baz=180,slow=6.1,SNR=6.5						
LVC	**Limon Verde**	**46.18**	**300**	P	**P**	**19 43 22.9**	**+0.3**
	4.4nm,0.3s,mb4.7,baz=134,slow=5.0,SNR=18						
LPAZ	**La Paz**	**51.28**	**305**	*e*P	**P**	**19 44 02.2**	**+0.1**
	10.0nm,0.6s,mb5.0						
SAML	**Samuel**	**55.74**	**314**	*e*P	**P**	**19 44 33.4**	**-1.6**
	6.7nm,1.1s,mb4.6						
DBIC	**Dimbokro**	**65.58**	**23**	P	**P**	**19 45 41.4**	**-0.4**
	3.3nm,0.9s,mb4.2,baz=174,slow=9.2,SNR=4.4						
DBIC	**Dimbokro**	**65.58**	**23**	P	**P**	**19 45 41.4**	**-0.4**
OTAV	**Otavalo**	**70.55**	**303**	*e*P	**P**	**19 46 13.6**	**+0.9**
	2.7nm,0.7s,mb4.2						
SDV	**Santo Domingo**	**74.94**	**314**	P	**P**	**19 46 37.9**	**-0.6**
	5.3nm,1.0s,mb4.2						
TEIG	**Tepich**	**92.61**	**304**	*e*P	**P**	**19 48 08.4**	**+0.2**
	3.5nm,0.6s,mb4.9						
ASAR	**Alice Springs**	**98.12**	**162**	P	**P**	**19 48 35.6**	**+2.5**
	0.4nm,0.9s,mb4.0,baz=186,slow=5.5,SNR=5.3						
FINES	**FINESS Array B**	**124.75**	**28**	PKP	PKPdf	19 53 56.0	+2.1
	1.7nm,1.0s,baz=236,slow=5.0,SNR=3.6						
YKA	**Yellowknife Ar**	**137.11**	**317**	PKP	PKPdf	19 54 18.0	+0.9
	0.7nm,0.4s,baz=130,slow=2.3,SNR=23						
INK	**Inuvik**	**146.74**	**320**	*e*PKPbc	PKPbc	19 54 36.2	+0.9
SONM	**Songino Array**	**150.17**	**87**	PKPbc	PKPdf	19 54 46.4	+6.6
	2.1nm,0.4s,baz=221,slow=3.5,SNR=37						
SONM				PKPab	PKPab	19 54 51.8	-1.6
	0.7nm,0.4s,baz=227,slow=3.7,SNR=5.8						
ILAR	**Eielson Array**	**151.04**	**310**	PKPbc	PKPdf	19 54 47.8	+7.2
	4.5nm,1.2s,baz=108,slow=0.8,SNR=11						
ILAR				PKPab	PKPab	19 54 56.4	-0.2
	1.5nm,0.9s,baz=146,slow=2.6,SNR=7.6						

CASC 17 19:36:09.6±0.9,13.59N×90.22W,h70^{km}±9^{km},MD3.5, ML3.5,5C-1D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.63**	**338**	⇑*e*P	P	19 36 23.9	+0.1
IXG				*e*S	S	19 36 35.1	+0.7
IXG				AML	AML	19 36 38.8	
	comp=E,4µm,0.4s						
SBLS	**San Blas**	**0.63**	**66**	⇑*e*P	P	19 36 24.3	+0.4
SBLS				*e*S	S	19 36 35.3	+0.9
RTR	**El Retiro**	**0.64**	**61**	*e*P	P	19 36 24.5	+0.5
RTR				*e*S	S	19 36 36.0	+1.4
SNJE	**San Jose**	**0.66**	**65**	⇑*e*P	P	19 36 24.6	+0.4
SNJE				*e*S	S	19 36 36.2	+1.2
RBDL	**Robledal**	**0.73**	**45**	⇓*e*P	P	19 36 25.2	+0.2
RBDL				*e*S	S	19 36 37.6	+1.0
BOQS	**Boqueron**	**0.92**	**81**	*e*P	P	19 36 27.8	+0.5
NBG	**Las Nubes**	**1.00**	**353**	*e*P	P	19 36 28.5	+0.1
NBG				⇑*e*P		19 36 28.6	
NBG				*e*S	S	19 36 43.3	+0.9
NBG				*e*S	S	19 36 43.5	+1.1
LFRS	**El Faro**	**1.12**	**88**	*e*P	P	19 36 29.8	-0.1
LFRS				*e*S	S	19 36 45.0	-0.1
LCBS	**La Ceiba**	**1.21**	**87**	*e*P	P	19 36 31.1	0.0
LCBS				*e*S	S	19 36 48.1	+1.0
SNVI	**San Vicente**	**1.34**	**89**	*e*P	P	19 36 32.8	-0.2
SNVI				*e*S	S	19 36 50.7	+0.4
TP2	**Tecpan 2**	**1.42**	**327**	⇑*e*P	P	19 36 34.3	+0.2
TP2				*e*S	S	19 36 54.3	+2.2
TP2				AML	AML	19 36 58.7	
	comp=E,226nm,0.3s						

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*NEIC **17** 19:45:42.9,36.06S×177.58E,h234^{km},After WEL.*

WEL 17 19:45:42.8±0.3,36.02S×177.57E,h228^{km}±4^{km},ML4.3/13, Error ellipse: s-maj=5.6km s-min=4.1km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.65**	**159**	P	P	19 46 20.5	-0.2
MXZ	**Matakaoa Point**	**1.65**	**159**	PN	P	19 46 20.3	-0.4
MXZ				SN	S	19 46 49.5	-0.4
PUZ	**Puketiti**	**2.12**	**165**	P	P	19 46 25.1	0.0
PUZ				S	S	19 46 56.7	-1.0
PUZ	**Puketiti**	**2.12**	**165**	PN	P	19 46 25.1	0.0
PUZ				SN	S	19 46 56.7	-1.0
URZ	**Urewera**	**2.27**	**189**	P	P	19 46 26.7	+0.2
URZ	**Urewera**	**2.27**	**189**	PN	P	19 46 26.7	+0.1
URZ				SN	S	19 46 59.9	-0.4
URZ				SN	S	19 47 00.1	-0.3
MWZ	**Matawai**	**2.31**	**181**	P	P	19 46 27.0	0.0
MWZ	**Matawai**	**2.31**	**181**	PN	P	19 46 27.0	0.0
MWZ				SN	S	19 47 00.7	-0.4
KNZ	**Kokohu**	**3.00**	**178**	P	P	19 46 33.8	-0.6
KNZ	**Kokohu**	**3.00**	**178**	PN	P	19 46 33.8	-0.6
KNZ				SN	S	19 47 13.6	-0.9
BKZ	**Black Stump Fm**	**3.26**	**195**	P	P	19 46 36.9	-0.5
BKZ				S	S	19 47 18.9	-0.8
BKZ	**Black Stump Fm**	**3.26**	**195**	PN	P	19 46 36.9	-0.5
BKZ				SN	S	19 47 18.1	-1.6
OTVZ	**Oturere**	**3.48**	**205**	PN	P	19 46 40.7	+0.6
NGZ	**Ngauruhoe**	**3.52**	**206**	P	P	19 46 41.1	+0.6
NGZ	**Ngauruhoe**	**3.52**	**206**	*e*PN	P	19 46 41.0	+0.5
CNZ	**Chateau**	**3.56**	**206**	*e*PN	P	19 46 42.0	+1.0
TUVZ	**Tukino**	**3.58**	**205**	P	P	19 46 41.6	+0.4
TUVZ	**Tukino**	**3.58**	**205**	PN	P	19 46 41.7	+0.4
TUVZ				SN	S	19 47 25.9	-0.6
MOVZ	**Moawhango**	**3.68**	**203**	P	P	19 46 41.6	-0.8
MOVZ	**Moawhango**	**3.68**	**203**	PN	P	19 46 41.6	-0.7
MOVZ				SN	S	19 47 26.9	-1.6
PWZ	**Pawanui**	**4.04**	**188**	P	P	19 46 45.3	-1.4
PWZ	**Pawanui**	**4.04**	**188**	PN	P	19 46 45.3	-1.4
PWZ				SN	S	19 47 31.3	-5.0
TSZ	**Takapari Road**	**4.23**	**197**	P	P	19 46 47.5	-1.5
TSZ	**Takapari Road**	**4.23**	**197**	PN	P	19 46 47.4	-1.6
TSZ				SN	S	19 47 38.1	-2.3
BFZ	**Birch Farm**	**4.77**	**192**	*e*P	P	19 46 53.6	-2.1
BFZ	**Birch Farm**	**4.77**	**192**	PN	P	19 46 53.6	-2.1
MRZ	**Mangatainoka R**	**4.89**	**198**	P	P	19 46 54.9	-2.3
MRZ				S	S	19 47 51.2	-3.9
MRZ	**Mangatainoka R**	**4.89**	**198**	PN	P	19 46 54.9	-2.3
MRZ				SN	S	19 47 51.2	-3.9
KIW	**Kapiti Island**	**5.27**	**203**	*e*P	P	19 46 59.3	-2.6
KIW	**Kapiti Island**	**5.27**	**203**	PN	P	19 46 59.3	-2.6
KIW				SN	S	19 47 58.9	-4.6
CAW	**Cannon Point**	**5.45**	**200**	P	P	19 47 01.3	-2.9
CAW	**Cannon Point**	**5.45**	**200**	*e*PN	P	19 47 00.7	-3.5
CAW				SN	S	19 48 03.1	-4.4
PAWZ	**Paruwai Farm**	**5.61**	**197**	*e*PN	P	19 47 03.0	-3.3
PAWZ				SN	S	19 48 05.9	-5.3
MRW	**Makara Radio**	**5.67**	**202**	P	P	19 47 04.5	-2.5
MRW	**Makara Radio**	**5.67**	**202**	*e*PN	P	19 47 03.9	-3.1
MRW				SN	S	19 48 08.5	-4.0
MSWZ	**Moikau Station**	**5.68**	**198**	P	P	19 47 03.5	-3.7
MSWZ	**Moikau Station**	**5.68**	**198**	*e*PN	P	19 47 03.8	-3.4
MSWZ				SN	S	19 48 07.7	-5.2
BHW	**Baring Head**	**5.78**	**201**	P	P	19 47 05.1	-3.3
BHW	**Baring Head**	**5.78**	**201**	PN	P	19 47 04.9	-3.5
TUWZ	**Tuamarina**	**6.10**	**207**	*e*PN	P	19 47 09.2	-3.3
TUWZ				SN	S	19 48 18.6	-3.8
NNZ	**Nelson**	**6.14**	**211**	*e*P	P	19 47 10.6	-2.4
NNZ	**Nelson**	**6.14**	**211**	*e*PN	P	19 47 10.3	-2.7
NNZ				SN	S	19 48 20.0	-3.3
QRZ	**Quartz Range**	**6.22**	**218**	*e*PN	P	19 47 11.8	-2.2
THZ	**Tophouse**	**6.79**	**211**	*e*PN	P	19 47 18.7	-2.6
THZ				SN	S	19 48 34.1	-4.2
KHZ	**Kahutara**	**7.11**	**205**	PN	P	19 47 21.8	-3.6
KHZ				SN	S	19 48 40.0	-5.6
MQZ	**McQueen’s Vall**	**8.56**	**205**	*e*PN	P	19 47 39.3	-4.7
MQZ				SN	S	19 49 10.5	-8.3
ODZ	**Otahua Downs**	**10.44**	**208**	*e*P	P	19 48 05.2	-2.8
ODZ	**Otahua Downs**	**10.44**	**208**	*e*PN	P	19 48 05.1	-3.0

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*NIED **17** 19:46:00,24.70N×125.40E,h50^{km},Mw4.0 Best double couple: $M_0$1.23×10^{15} NP1:ϕ_s257°,δ85°,λ-100°. NP2: ϕ_s140°,δ11°,λ-27°.*

*JMA **17** 19:46:24.5±0.1,24.74N×125.43E,h47^{km}±1^{km},M3.7*

JMA Felt I J1.

*IDC **17** 19:46:25.5±1.4,25.59N×125.25E,mb3.6/3,mb1 3.8/3, mb1mx3.4/20,mbtmp3.6/3,ML2.7/1,Error ellipse: s-maj=33.6km s-min=26.0km az=97.0*

ISC 17 19:46:24.7±0.7,24.9N±0.2×125.4E±0.1,h46^{km}±12^{km},n19, σ0^{s}87/25,mb3.0/1,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMJ	**Miyako jima 2**	**0.14**	**221**	P	**P**	**19 46 32.1**	**0.0**
JMJ				S	**S**	**19 46 37.6**	**+0.2**
JOGS	**Gusukube**	**0.16**	**176**	P	**P**	**19 46 31.8**	**-0.4**
JOGS				S	**S**	**19 46 37.0**	**-0.6**
JTJ	**Tarama**	**0.69**	**246**	P	**P**	**19 46 37.8**	**-0.3**
JTJ				S	**S**	**19 46 47.4**	**-0.6**
JIJ	**Ishigaki jima**	**1.27**	**244**	P	**P**	**19 46 45.9**	**-0.4**
JIJ				S	**S**	**19 47 02.8**	**+0.4**
JKRS	**Kuro-shima**	**1.43**	**242**	P	**P**	**19 46 48.1**	**-0.6**
JKRS				S	**S**	**19 47 08.1**	**+1.5**
IRIF	**Iriomote-Funau**	**1.62**	**249**	P	**P**	**19 46 50.8**	**-0.6**
IRIF				S	**S**	**19 47 13.5**	**+2.3**
HATJ	**Hateruma jima**	**1.68**	**240**	P	**P**	**19 46 52.3**	**0.0**
JKE	**Kume jima 2**	**1.88**	**42**	P	**P**	**19 46 56.6**	**+1.5**
YOJ	**Yonaguni jima**	**2.21**	**259**	P	**P**	**19 46 59.2**	**-0.6**
YOJ				S	**S**	**19 47 25.6**	**-0.5**
JAGN	**Aguni-jima**	**2.35**	**45**	P	**P**	**19 47 02.4**	**+0.6**
JJT2	**Tamagusuku 2**	**2.45**	**60**	P	**P**	**19 47 04.5**	**+1.3**
JIH	**Iheya**	**3.13**	**47**	P	**P**	**19 47 13.3**	**+0.4**
JOW	**Kunigami**	**3.22**	**53**	Pn	**P**	**19 47 14.1**	**0.0**
	1.8nm,0.3s,baz=232,slow=18,SNR=6.9						
JOW				Sn	**S**	**19 47 51.7**	**+0.1**
	5.9nm,0.3s,baz=148,slow=26,SNR=5.1						
JOW	**Kunigami**	**3.22**	**53**	P	**P**	**19 47 14.9**	**+0.8**
JTK	**Tokunoshima**	**4.28**	**47**	P	**P**	**19 47 28.2**	**-0.9**
JAM	**Amami Oshima**	**5.13**	**46**	P	**P**	**19 47 39.4**	**-1.6**
SONM	**Songino Array**	**27.37**	**332**	P	**P**	**19 52 06.7**	**-0.9**
	0.3nm,0.6s,mb3.0,baz=143,slow=7.2,SNR=4.2						
WRA	**Warramunga Arr**	**45.43**	**168**	P	pP	19 54 50.7	-3.0
	1.3nm,0.7s,baz=349,slow=8.2,SNR=7.6						
ASAR	**Alice Springs**	**48.99**	**170**	P	pP	19 55 20.0	-1.6
	0.4nm,0.6s,baz=353,slow=15,SNR=7.8						

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*BJI **17** 19:47:32.3,12.61N×57.15E,h10^{km},mB5.0,mb4.5*

*OMAN **17** 19:47:32.9,12.28N×58.48E,h30^{km},Error ellipse: s-maj=136.3km s-min=8.9km az=338.0*

*IDC **17** 19:47:38.0±0.7,12.76N×58.08E,mb4.1/17,mb1 4.2/17, mb1mx4.2/22,mbtmp4.1/17,MS3.7/5,Ms1 3.7/5, ms1mx3.3/23,Error ellipse: s-maj=19.5km s-min=16.8km az=28.0*

*NEIC **17** 19:47:39.4±0.4,12.83N×58.00E,h10^{km},mb4.5/25,Error ellipse: s-maj=10.4km s-min=8.0km az=192.0*

ISC 17 19:47:38.4±0.4,12.94N±0.05×58.00E±0.05,h10^{km},n72, σ1^{s}23/71,mb4.3/39,MS3.7/6,6C-8D,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAO	**Shalim**	**5.55**	**336**	⇑P	**Pn**	**19 49 02.9**	**-0.2**
RBK	**Rabkut**	**5.83**	**322**	⇑P	**Pn**	**19 49 08.3**	**+1.2**
ABTO	**Aybut**	**6.32**	**315**	⇑P	**Pn**	**19 49 15.0**	**+1.1**
WHFO	**Wadi Hawf**	**6.41**	**321**	⇓P	**Pn**	**19 49 17.1**	**+1.8**
JMDO	**Jabal Madar**	**9.38**	**1**	P	**P**	**19 49 56.2**	**-0.4**
	SNR=56						
WBK	**Wadi Bani Khal**	**9.66**	**5**	P	**P**	**19 49 59.1**	**-1.6**
	SNR=38						
BSY	**Bisya**	**9.78**	**356**	⇓P	**P**	**19 50 01.8**	**-0.5**
	SNR=7.0						
SMDO	**Samad**	**10.06**	**0**	⇓P	**P**	**19 50 05.1**	**-1.1**
	SNR=25						
ARQ	**Araqi**	**10.44**	**352**	⇑P	**P**	**19 50 11.5**	**+0.2**
	SNR=11						
BIDO	**Bidbid**	**10.53**	**1**	⇓P	**P**	**19 50 11.3**	**-1.2**
	SNR=14						
HOQ	**Hoqain**	**10.61**	**357**	⇓P	**P**	**19 50 13.1**	**-0.6**
	SNR=9.3						
ASHO	**Ashiyiah**	**11.83**	**351**	⇓P	**P**	**19 50 30.0**	**-0.2**
	SNR=5.5						
PALK	**Pallekele**	**23.04**	**102**	*e*P	**P**	**19 52 45.8**	**+0.7**
	12nm,1.1s,mb4.2						
KMBO	**Kilima Mbogo**	**24.88**	**237**	P	**P**	**19 53 03.6**	**+0.7**
	2.5nm,0.7s,mb3.9,baz=44,slow=14,SNR=9.2						
KMBO				LR	LR	20 01 52.8	
	comp=Z,88nm,21.9s,MS3.2,baz=86,slow=34						
KMBO	**Kilima Mbogo**	**24.88**	**237**	*e*P	**P**	**19 53 04.0**	**+1.0**
	6.3nm,1.0s,mb4.1						
EIL	**Elat**	**27.08**	**312**	LR	LR	20 04 18.5	
	comp=Z,149nm,20.4s,MS3.5,baz=117,slow=37						
ASF	**Jabal al Asfar**	**27.22**	**318**	P	**P**	**19 53 29.4**	**+4.8**
	3.0nm,0.9s,mb3.8,baz=340,slow=4.9,SNR=4.5						
ASF				LR	LR	20 04 45.5	
	comp=Z,112nm,20.0s,MS3.4,baz=156,slow=38						
GNI	**Garni**	**29.51**	**339**	P	**P**	**19 53 47.1**	**+2.0**
	1.6nm,0.4s,mb4.1,baz=95,slow=22,SNR=2.7						
GNI				LR	LR	20 07 13.6	
	comp=Z,156nm,19.5s,MS3.6,baz=342,slow=40						
GNI	**Garni**	**29.51**	**339**	P	**P**	**19 53 47.5**	**+2.4**
	8.7nm,0.8s,mb4.5						
MALT	**Malatya**	**30.68**	**329**	P	**P**	**19 53 57.3**	**+1.8**
	3.8nm,1.2s,mb4.1						
CSS	**Prodhromos**	**31.29**	**319**	P	**P**	**19 54 04.7**	**+3.8**
	10nm,0.9s,mb4.7						
AAK	**Ala-Archa**	**32.86**	**23**	*e*P	**P**	**19 54 14.7**	**+0.1**
	5.9nm,1.0s,mb4.5						
BRTR	**Keskin Array B**	**34.25**	**326**	P	**P**	**19 54 27.9**	**+1.2**
	0.4nm,0.5s,mb3.6,baz=182,slow=19,SNR=3.0						
IDI	**Anoyia**	**37.25**	**312**	P	**P**	**19 54 54.8**	**+2.7**
	14nm,0.9s,mb4.8,baz=114,slow=11,SNR=6.1						
CM31	**Chiang Mai Arr**	**39.73**	**77**	*e*P	**P**	**19 55 13.9**	**+0.9**
	1.4nm,0.6s,mb3.9						
CMAR	**Chiang Mai Arr**	**39.73**	**77**	P	**P**	**19 55 13.0**	**-0.1**
	1.5nm,0.8s,mb3.8,baz=277,slow=8.7,SNR=14						
CMAR				PcP	PcP	19 57 19.6	-0.5
	0.7nm,0.6s,baz=272,slow=4.1,SNR=5.5						
WMQ	**Urumqi**	**39.96**	**34**	P	**P**	**19 55 16.4**	**+1.7**

LSZ	Lusaka	40.70	227	*e*P	P	19 55 20.1	-0.9
	1.9nm,0.7s,mb3.8						
BVAR	Borovoye Array	41.19	11	P	P	19 55 26.0	+1.3
	0.2nm,0.4s,mb3.1,baz=191,slow=7.6,SNR=4.6						
BVAR				PcP	PcP	19 57 24.1	-0.4
	0.7nm,0.8s,SNR=3.0						
BRVK	Borovoye	41.20	11	P	P	19 55 25.8	+1.0
	2.5nm,0.8s,mb3.9						
KURK	Kurchatov	41.25	20	*e*P	P	19 55 26.2	+1.0
	6.3nm,0.9s,mb4.2						
KURK				*e*		19 55 33.5	
VRI	Vrincioaia	42.15	327	⇑P	P	19 55 35.4	+2.7
MLR	Muntele Rosu	42.32	326	⇓P	P	19 55 36.1	+2.0
BURAR	Bucovina Array	44.08	328	⇓P	P	19 55 50.0	+1.7
AKASG	Malin Array Be	44.35	334	P	P	19 55 50.5	0.0
	0.9nm,0.5s,mb3.7,baz=142,slow=7.1,SNR=7.2						
ZAL	Zalesovo	46.05	22	P	P	19 56 04.9	+0.9
	1.9nm,0.8s,mb4.1,baz=270,slow=7.9,SNR=11						
ZAL				LR	LR	20 17 38.8	
	comp=Z,196nm,19.3s,MS4.1,baz=286,slow=39						
LZH	Lanzhou	47.11	52	*e*P	P	19 56 13.3	+0.7
LZH	Lanzhou	47.11	52	*e*P	P	19 56 13.2	+0.6
	25nm,1.4s,mb5.0						
LZH				pP	pP	19 56 16.7	+1.0
LZH				sP	sP	19 56 17.8	+0.9
LZH				LR	LR		
	comp=Z,390nm,17.1s,MS4.4						
LBTB	Lobatse	49.21	220	*e*P	P	19 56 30.4	+1.3
	comp=Z,8.5nm,1.1s,mb4.7						
SUW	Suwalki	49.31	334	*e*P	P	19 56 30.2	+0.7
	comp=Z,39nm,1.2s,mb5.3						
SUW				*e*		19 56 37.6	
MORC	Moravsky Berou	49.44	326	*e*P	P	19 56 29.5	-1.0
	comp=Z,3.0nm,0.7s,mb4.4						
TSUM	Tsumeb	51.04	232	P	P	19 56 42.5	-0.7
	comp=Z,1.4nm,0.8s,mb4.0,baz=62,slow=8.9,SNR=3.8						
TSUM	Tsumeb	51.04	232	*e*P	P	19 56 42.3	-0.9
	comp=Z,4.3nm,1.0s,mb4.3						
GERES	GERESS Array B	51.10	324	P	P	19 56 42.1	-1.1
	comp=Z,0.4nm,0.7s,mb3.5,baz=100,slow=8.1,SNR=4.3						
KHC	Kasperske Hory	51.31	324	*e*P	P	19 56 43.5	-1.3
BRG	Berggiesshubel	51.97	326	P	P	19 56 48.4	-1.4
	comp=Z,2.1nm,1.0s,mb4.0						
CLL	Collm	52.70	326	*e*P	P	19 56 56.0	+0.7
CLL				*e*		19 57 03.0	
CLL	Collm	52.70	326	P	P	19 56 56.0	+0.7
CLL				*e*		19 57 03.0	
SONM	Songino Array	53.09	39	P	P	19 56 58.6	+0.4
	comp=Z,1.3nm,0.8s,mb3.9,baz=238,slow=7.1,SNR=10.0						
TLY	Talaya	53.24	34	P	P	19 57 01.2	+1.9
	comp=Z,3.1nm,1.0s,mb4.2						
ULN	Ulaanbaatar	53.51	39	*e*P	P	19 56 59.7	-1.6
	comp=Z,3.1nm,0.9s,mb4.2						
FINES	FINESS Array B	53.65	342	P	P	19 57 01.5	-0.7
	comp=Z,2.9nm,0.8s,mb4.3,baz=135,slow=8.4,SNR=12						
MBDF	Montbardon	53.76	316	*e*P	P	19 57 02.0	-1.1
LPG	La Plagne	54.03	317	*e*P	P	19 57 04.3	-0.8
	comp=Z,26nm,1.1s,mb4.8						
LPL	La Plagne	54.05	317	*e*P	P	19 57 04.5	-0.8
CDF	Champ du Feu	54.75	321	*e*P	P	19 57 09.3	-1.1
CABF	La Chapelle	54.85	318	*e*P	P	19 57 10.8	-0.3
	comp=Z,19nm,0.9s,mb4.8						
SMF	Signal de Mont	56.32	318	*e*P	P	19 57 20.4	-1.4
SSF	Saint Saulge	56.67	318	*e*P	P	19 57 22.1	-2.2
AVF	Avril sur Loir	56.69	318	*e*P	P	19 57 23.0	-1.4
GIVF	Givet	56.87	322	*e*P	P	19 57 25.0	-0.7
BGF	Bois d’Agland	56.95	317	*e*P	P	19 57 25.4	-0.9
	comp=Z,16nm,0.9s,mb4.8						
BAIF	Baives	57.23	322	*e*P	P	19 57 27.3	-0.9
	comp=Z,9.7nm,1.0s,mb4.5						
LDF	La Druitiere	59.46	319	*e*P	P	19 57 43.0	-0.8
	comp=Z,12nm,1.0s,mb4.6						
ARCES	ARCESS Array B	60.17	347	P	P	19 57 47.5	-0.9
	comp=Z,13nm,1.1s,mb4.8,baz=149,slow=7.1,SNR=8.5						
ESDC	Sonseca Array	60.32	308	P	P	19 57 48.9	-0.9
	comp=Z,0.4nm,0.7s,mb3.6,baz=56,slow=5.3,SNR=4.2						
DBIC	Dimbokro	62.13	271	P	P	19 58 03.5	+1.1
	comp=Z,19nm,1.4s,mb5.0						
CN2	Changchun	64.90	48	*e*P	P	19 58 21.0	+0.7
WRA	Warramunga Arr	81.88	113	P	P	19 59 58.1	-1.9
	comp=Z,3.5nm,0.6s,mb4.5,baz=297,slow=4.2,SNR=9.3						
WRAB	Tennant Creek	81.89	113	*e*P	P	19 59 57.2	-2.9
	comp=Z,13nm,0.7s,mb5.0						
ASAR	Alice Springs	82.59	116	P	P	20 00 02.4	-1.3
	comp=Z,4.3nm,0.6s,mb4.6,baz=290,slow=4.8,SNR=14						
SYO	Syowa Base	82.77	187	⇑P	P	20 00 06.4	+2.8

BJI ***17*** *19:50:56.7, 5.86S×150.51E, h27^{km}, mB5.3, mb4.6, Ms4.8, Msz4.3*

NEIC ***17*** *19:50:57.8±0.7, 5.94S×150.75E, mb4.7/14, Error ellipse: s-maj=21.1km s-min=8.7km az=101.0*

IDC ***17*** *19:51:03.0±2.3, 5.98S×150.31E, h62^{km}±18^{km}, mb4.0/12, mb1 4.2/14, mb1mx4.1/17, mbtmp4.4/14, MS3.7/5, Ms1 3.7/5, ms1mx3.5/18, Error ellipse: s-maj=22.0km s-min=12.3km az=112.0*

ISC 17 19:50:56.8±0.6, **5.92S**±0.06×**150.5E**±0.1, **h32^{km}, h32^{km}±.6^{km}:pP-P, n46,** σ**1^{s}21**/41, **mb4.5**/25, **MS3.8**/7, **1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.82	224	P	Pn	19 52 11.2	+2.0
	58nm,0.3s,baz=49,slow=6.0,SNR=210						
PMG				S	Sn	19 53 03.0	-1.6
	14nm,0.3s,baz=49,slow=19,SNR=3.9						
PMG	Port Moresby	4.82	224	*e*Pn	Pn	19 52 10.9	+1.7
PMG				*e*Sn	Sn	19 52 57.6	-7.0
CTA	Charters Tower	14.69	196	*e*P	P	19 54 27.0	+2.6
	7.5nm,0.8s						
CTA	Charters Tower	14.69	196	P	P	19 54 26.9	+2.5
	0.5nm,0.3s,baz=17,slow=16,SNR=4.3						
CTA				LR	LR	20 00 01.3	
	comp=Z,163nm,18.3s,baz=268,slow=37						
CTAO	Charters Tower	14.69	196	*e*P	P	19 54 24.4	-0.1
	32nm,1.2s						
KAKA	Kakadu	19.08	248	*e*P	P	19 55 18.2	-1.5
	16nm,0.4s						
WRAB	Tennant Creek	21.02	227	*e*P	P	19 55 39.4	-0.9
	122nm,0.7s,mb5.3						
WRAB				*e*pP		19 55 48.3	
WRA	Warramunga Arr	21.03	227	P	P	19 55 39.9	-0.5
	11nm,0.7s,mb4.3,baz=51,slow=10,SNR=82						
WRA				S	S	19 59 29.0	+1.0
	2.9nm,1.0s,baz=52,slow=20,SNR=6.5						
WRA				PcP	PcP	19 59 46.6	-0.2
	1.6nm,0.7s,baz=43,slow=2.3,SNR=5.0						
WRA				ScP		20 03 18.7	
	0.7nm,0.6s,baz=46,slow=2.6,SNR=6.0						
ASAR	Alice Springs	23.83	221	P	P	19 56 09.6	+1.4
	6.4nm,0.6s,mb4.2,baz=52,slow=8.3,SNR=100						
ASAR				PcP	PcP	19 59 52.4	-0.1
	3.6nm,1.0s,baz=49,slow=2.5,SNR=5.1						
ASAR				LR	LR	20 04 45.0	
	comp=Z,106nm,18.7s,MS3.3,baz=65,slow=35						
ASPA	Alice Springs	23.83	221	*e*P	P	19 56 08.6	+0.4
ASPA				*e*pP		19 56 17.5	
STKA	Stephens Creek	27.15	197	*e*P	P	19 56 39.3	0.0
	7.6nm,0.9s,mb4.2						
STKA				*e*	pP	19 56 48.2	-0.5
STKA	Stephens Creek	27.15	197	P	P	19 56 39.5	+0.2
	8.6nm,0.8s,mb4.3,baz=1.6,slow=11,SNR=11						
STKA				LR	LR	20 06 40.3	
	comp=Z,159nm,20.9s,MS3.6,baz=27,slow=35						
FITZ	Fitzroy Crossi	27.15	241	*e*P	P	19 56 38.4	-1.1
	11nm,0.4s,mb4.7						
FITZ				*e*pP	pP	19 56 48.3	-0.6
MBWA	Marble Bar	33.46	240	*e*P	P	19 57 34.0	-1.4
	43nm,0.9s,mb5.4						
MBWA				*e*pP	pP	19 57 43.8	-1.2
CBIJ	Chichi jima	33.80	347	LR	LR	20 09 47.9	
	comp=Z,184nm,19.3s,MS3.8,baz=131,slow=33						
JOW	Kunigami	39.05	327	P	P	19 58 23.7	+1.0
	17nm,0.9s,mb4.8,baz=123,slow=9.2,SNR=5.6						
KLBR	Kellerberrin	39.91	226	*e*P	pP	19 58 38.5	-0.9
	298nm,0.6s						
URZ	Urewera	40.23	147	LR	LR	20 12 50.1	
	comp=Z,176nm,20.4s,MS3.9,baz=194,slow=32						
NWAO	Narrogin (SRO)	41.01	225	P	pP	19 58 47.9	-0.6
	6.7nm,0.6s,baz=56,slow=11,SNR=5.7						
MUN	Mundaring	41.23	227	*e*P	pP	19 58 50.2	-0.1
	21nm,0.9s						
ASAJ	Asahikawa	50.31	353	P	P	19 59 53.6	+1.0
	5.1nm,0.8s,mb4.6,baz=197,slow=9.3,SNR=4.5						
ENH	Enshi	53.30	315	*e*P	P	20 00 15.1	-0.2
	11nm,1.1s,mb4.7						
MDJ	Mudanjiang	53.71	342	P	P	20 00 18.6	+0.5
	11nm,1.0s,mb4.7						
CN2	Changchun	54.43	338	*e*P	P	20 00 25.0	+1.6
BJT	Baijiatuau	55.60	328	*e*P	P	20 00 31.9	-0.1
	3.3nm,0.5s,mb4.6						
BJI	Beijing	55.61	328	P	P	20 00 32.5	+0.4
BJI				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
BJI				LR	LR		
	comp=Z,81nm,21.2s,MS3.8						
BJI	Beijing	55.61	328	P	P	20 00 32.5	+0.4
	comp=Z,5.0nm,0.8s,mb4.6						
KMI	Kunming	55.77	306	P	P	20 00 35.1	+1.7
KMI				XP	sP	20 00 52.0	+4.9
KMI				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.4						
KMI				LR	LR		
	comp=Z,56nm,31.2s,MS3.5						
KMI	Kunming	55.77	306	P	P	20 00 35.1	+1.7
	comp=Z,5.0nm,1.2s,mb4.4						
KMI				sP	sP	20 00 52.0	+4.9
CMAR	Chiang Mai Arr	56.33	297	P	P	20 00 36.8	-0.7
	comp=Z,1.0nm,0.9s,mb3.8,baz=119,slow=5.8,SNR=6.1						
LZH	Lanzhou	60.49	317	*e*P	P	20 01 07.8	+1.5
LZH				AP	pP	20 01 18.0	+1.7
LZH				XP	sP	20 01 21.8	+1.9
LZH				*e*PP	PP	20 03 23.9	+2.3
LZH				AMB	AMB		
	comp=Z,21nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,101nm,6.3s						
LZH				LR	LR		
	comp=N,365nm,15.0s						
LZH				LR	LR		
	comp=Z,593nm,17.8s,MS4.8						
LZH	Lanzhou	60.49	317	*e*P	P	20 01 07.8	+1.5
	comp=Z,21nm,1.5s,mb5.0						
LZH				pP	pP	20 01 18.0	+1.7
LZH				sP	sP	20 01 21.8	+1.9
LZH				*e*PP	PP	20 03 23.9	+2.3
HIA	Hailar	61.16	337	*e*P	P	20 01 10.9	+0.3
	comp=Z,7.3nm,0.6s,mb5.0						
HIA				*e*pP	pP	20 01 20.6	-0.1
SONM	Songino Array	66.09	329	P	P	20 01 42.8	-0.2
	comp=Z,1.7nm,0.5s,mb4.4,baz=141,slow=4.8,SNR=25						
LSA	Lhasa	67.03	306	P	P	20 01 49.5	+0.1
	comp=Z,1.5nm,0.5s,mb4.3						
VNDA	Vanda	71.81	177	P	P	20 02 17.3	-0.7
	comp=Z,1.9nm,1.1s,mb3.9,baz=338,slow=5.4,SNR=5.5						
WMQ	Urumqi	75.05	318	*e*P	P	20 02 38.6	+1.2
ZAL	Zalesovo	80.84	327	P	P	20 03 07.0	-2.0
	comp=Z,0.6nm,0.4s,mb3.9,baz=342,slow=11,SNR=3.9						
MCK	McKinley	82.76	23	P	P	20 03 16.6	-2.1
	comp=Z,1.8nm,0.8s,mb4.2						
KURK	Kurchatov	83.27	323	P	P	20 03 20.6	-1.1
	comp=Z,3.2nm,1.2s,mb4.2						
ILAR	Eielson Array	84.04	22	P	P	20 03 23.3	-2.0
	comp=Z,1.0nm,0.6s,mb4.1,baz=246,slow=4.9,SNR=18						
QSPA	South Pole Qui	84.05	180	⇑*i*P	P	20 03 26.7	+1.6
	comp=Z,7.6nm,0.8s,mb4.9						
BVAR	Borovoye Array	88.78	323	P	P	20 03 47.2	-1.6
	comp=Z,0.4nm,0.5s,mb4.0,baz=91,slow=6.6,SNR=3.5						
GERES	GERESS Array B	123.79	327	PKP	PKPdf	20 09 53.4	-3.8
	comp=Z,0.5nm,0.6s,baz=135,slow=1.9,SNR=5.1						
BDFB	Brasilia	151.78	140	PKP	PKPdf	20 10 45.4	-2.7
	comp=Z,8.9nm,0.6s,baz=214,slow=3.6,SNR=4.9						
BDFB				PKPbc	PKPdf	20 10 51.2	+3.1
	comp=Z,6.8nm,0.5s,baz=210,slow=1.9,SNR=10						
BDFB				PKPab	PKPab	20 11 01.3	+0.9
	comp=Z,5.6nm,0.4s,baz=195,slow=2.3,SNR=8.4						
DBIC	Dimbokro	155.53	273	PKP	PKPdf	20 10 50.8	-2.6
	comp=Z,3.4nm,1.1s,baz=149,slow=0.6,SNR=2.5						
DBIC				PKPbc	PKPdf	20 10 59.6	+6.3
	comp=Z,5.4nm,1.1s,baz=56,slow=3.1,SNR=5.2						
DBIC				PKPab	PKPab	20 11 14.6	-1.8
	comp=Z,2.1nm,0.6s,baz=101,slow=4.8,SNR=4.3						

IDC ***17*** *20:13:17.4±0.8, 13.07N×92.22E, mb3.8/11, mb1 4.0/12, mb1mx3.9/20, mbtmp3.8/12, ML4.0/1, Error ellipse: s-maj=48.9km s-min=15.1km az=56.0*

NEIC ***17*** *20:13:21.9±0.3, 13.09N×92.25E, h30^{km}, mb4.3/4, Error ellipse: s-maj=8.7km s-min=6.7km az=67.0*

ISC 17 20:13:19.8±0.5, **13.01N**±0.08×**92.19E**±0.09, **h30^{km}, n20,** σ**0^{s}52**/22, **mb3.9**/14, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.46	49	Pn	P	20 15 26.9	+3.5
	0.5nm,0.3s,baz=72,slow=22,SNR=6.2						
CMAR				Sn	Sn	20 16 52.8	-6.1
	0.5nm,0.3s,baz=239,slow=28,SNR=14						
PALK	Pallekele	12.66	244	*e*P	P	20 16 20.7	-0.2
PALK				*e*S	S	20 18 27.2	-15
LSA	Lhasa	16.64	357	*e*P	P	20 17 12.8	+0.2
	9.4nm,0.7s						
LSA				*e*		20 17 24.1	
ENH	Enshi	23.47	40	P	P	20 18 27.7	-0.2
	4.4nm,0.8s,mb3.9						
SONM	Songino Array	36.69	16	P	P	20 20 25.2	-0.7
	0.3nm,0.8s,mb3.2,baz=201,slow=12,SNR=2.8						
KURK	Kurchatov	39.20	346	*e*P	P	20 20 54.7	+7.8
ZAL	Zalesovo	41.24	353	P	P	20 21 03.7	0.0
	0.8nm,0.8s,mb3.4,baz=167,slow=7.3,SNR=4.9						
ZAL	Zalesovo	41.24	353	P	P	20 21 03.7	-0.1
BVAR	Borovoye Array	43.54	341	P	P	20 21 23.2	+0.8
	0.2nm,0.4s,mb3.2,baz=149,slow=8.4,SNR=2.9						
MDJ	Mudanjiang	44.80	38	P	P	20 21 32.0	-0.9
	19nm,1.4s,mb4.7						
NWAO	Narrogin (SRO)	51.56	153	P	P	20 22 26.1	+0.5
	3.0nm,0.5s,mb4.5,baz=48,slow=14,SNR=6.2						
WRA	Warramunga Arr	52.84	128	P	P	20 22 35.1	-0.2
	1.0nm,0.5s,mb4.0,baz=299,slow=9.9,SNR=37						
WRA				PcP	PcP	20 23 44.6	+0.3
	0.3nm,0.7s,baz=319,slow=3.3,SNR=5.2						
WRAB	Tennant Creek	52.85	128	*e*P	P	20 22 35.0	-0.3
	3.1nm,0.6s,mb4.4						
ASAR	Alice Springs	54.70	132	P	P	20 22 49.0	0.0
	1.2nm,0.4s,mb4.3,baz=308,slow=6.6,SNR=32						
BRTR	Keskin Array B	57.69	309	P	P	20 23 09.9	-0.2
	0.7nm,0.8s,mb3.8,baz=124,slow=8.9,SNR=3.5						
CTAO	Charters Tower	62.53	121	P	P	20 23 43.8	+0.3
STKA	Stephens Creek	65.04	135	P	P	20 23 59.9	0.0
	1.1nm,0.5s,mb4.2,baz=315,slow=7.1,SNR=5.0						
FINES	FINESS Array B	67.31	332	P	P	20 24 14.0	+0.2
	1.2nm,0.9s,mb3.9,baz=153,slow=4.3,SNR=2.3						
GERES	GERESS Array B	72.76	317	P	P	20 24 47.2	0.0
	0.7nm,0.8s,mb3.7,baz=108,slow=4.2,SNR=5.6						
NOA	NORSAR Array B	74.35	330	P	P	20 24 56.3	+0.1
	1.1nm,1.0s,mb3.8,baz=220,slow=8.7,SNR=2.8						

IDC ***17*** *20:21:52.0±5.7, 18.47S×168.77E, mb3.8/5, mb1 4.0/5, mb1mx3.9/12, mbtmp3.8/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/18, Error ellipse: s-maj=148.4km s-min=43.5km az=123.0*

ISC 17 20:21:51.4±3.0, **18.9S**±0.3×**169.4E**±0.5, **h33^{km}, n8,** σ**0^{s}78**/9, **mb3.8**/5, **MS3.2**/1, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.16	221	*e*P	P	20 22 53.6	-0.6
DZM				*e*S	S	20 23 43.2	+0.9
NOUC	Port Laguerre	4.27	222	*e*P	P	20 22 55.5	-0.2
NOUC				*e*S	S	20 23 45.1	0.0
CTA	Charters Tower	21.83	263	LR	LR	20 33 58.1	
	comp=Z,109nm,20.2s,MS3.2,baz=50,slow=34						
STKA	Stephens Creek	28.12	237	P	P	20 27 42.1	-0.4
	3.0nm,1.1s,mb3.8,baz=83,slow=8.1,SNR=3.5						
WRA	Warramunga Arr	33.02	262	P	P	20 28 24.8	-1.3
	0.6nm,0.9s,mb3.5,baz=87,slow=8.3,SNR=6.5						
ASAR	Alice Springs	33.33	256	P	P	20 28 28.4	-0.3
	1.3nm,0.5s,mb4.1,baz=83,slow=8.7,SNR=23						
CMAR	Chiang Mai Arr	78.50	294	P	P	20 33 53.0	+1.5
	0.4nm,0.9s,mb3.3,baz=121,slow=5.3,SNR=4.4						
SONM	Songino Array	87.06	323	P	P	20 34 35.3	+0.4
	1.1nm,1.1s,mb4.0,baz=134,slow=4.7,SNR=4.3						

MAN 17 20:28:21.8, 8.27N×123.23E, h36^{km}, mb4.1, ML2.9, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	0.33	21	*i* P	P	20 28 31.8	+1.7
DCPH				*i* S	S	20 28 38.2	+2.2
PAGZ	Pagadian	0.45	161	*e*P	P	20 28 33.7	+2.1
PAGZ				*e*S	S	20 28 40.5	+1.9
IPIL	Ipil	0.81	234	*e*P	P	20 28 38.8	+2.0
IPIL				*e*S	S	20 28 49.0	+1.2

MOS ***17*** *20:34:11.6±1.1, 82.98N×6.32W, h10^{km}, mb4.5/12, Error ellipse: s-maj=86.3km s-min=11.0km az=91.2*

BJI ***17*** *20:34:11.6, 82.90N×6.30W, h10^{km}, mb4.7*

IDC ***17*** *20:34:12.1±0.7, 83.00N×6.22W, mb3.7/12, mb1 4.0/13, mb1mx3.9/22, mbtmp3.8/13, ML3.7/1, MS3.8/10, Ms1 3.8/10, ms1mx3.5/29, Error ellipse: s-maj=26.0km s-min=13.6km az=26.0*

NEIC ***17*** *20:34:13.7±0.3, 82.94N×6.29W, h10^{km}, mb4.4/14, Error ellipse: s-maj=10.1km s-min=5.2km az=210.0*

ISC 17 20:34:11.9±0.3, **83.00N**±0.06×**6.2W**±0.4, **h10^{km}, n70,** σ**1^{s}08**/68, **mb4.2**/27, **MS3.6**/9, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAG	Danmarks Havn	6.61	206	*e*P	Pn	20 35 50.0	-1.6
DAG	Danmarks Havn	6.61	206	*i* P	Pn	20 35 50.0	-1.6
HSP	Hornsund	7.02	137	*e*P	Pn	20 35 55.9	-1.5
SUMG	Summit	12.15	230	*e*P	P	20 37 02.1	-5.7
SUMG				*e*S	S	20 39 06.5	-18
SCO	Scoresbysund	12.99	204	*i* P	P	20 37 21.0	+2.0
ARCES	ARCESS Array B	15.03	135	P	P	20 37 44.9	-0.7
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES				MLR	MLR		
	comp=Z,580nm,18.2s						
ARCES	ARCESS Array B	15.03	135	Pn	P	20 37 44.9	-0.7
	comp=Z,0.5nm,0.3s,baz=356,slow=13,SNR=9.8						
ARCES				LR	LR	20 43 12.2	
	comp=Z,580nm,18.2s,baz=19,slow=36						
ARE0	ARCESS Array S	15.03	135	*e*P	P	20 37 43.8	-1.9
RES	Resolute Bay	16.77	293	*e*P	P	20 38 01.1	-6.8
RES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RES	Resolute Bay	16.77	293	*e*P	P	20 38 01.1	-6.8
	comp=Z,9.0nm,0.8s						
RES				*e*S	S	20 40 60.0	-13
LVZ	Lovozero	17.49	125	*e*P	P	20 38 12.7	-4.2
NOA	NORSAR Array B	22.49	158	P	P	20 39 06.4	-5.9
NOA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NOA				MLR	MLR		
	comp=Z,180nm,21.6s						
NOA	NORSAR Array B	22.49	158	P	P	20 39 06.4	-5.9
	comp=Z,1.7nm,1.1s,mb3.4,baz=0.6,slow=9.8,SNR=3.4						
NOA				LR	LR	20 45 56.0	
	comp=Z,180nm,21.6s,MS3.5,slow=31						
FINES	FINESS Array B	23.04	139	P	P	20 39 16.9	-0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,346nm,20.0s						
FINES	FINESS Array B	23.04	139	P	P	20 39 16.9	-0.6
	comp=Z,1.4nm,0.8s,mb3.4,baz=18,slow=8.8,SNR=2.5						
FINES				LR	LR	20 48 09.9	
	comp=Z,346nm,20.0s,MS3.8,baz=0.8,slow=36						
FRB	Frobisher Bay	23.91	256	LR	LR	20 47 31.7	
	comp=Z,143nm,21.4s,MS3.4,baz=137,slow=34						
INK	Inuvik	26.67	319	*e*P	P	20 39 52.0	-0.1
INK				pmax	pmax		
	comp=Z,11nm,1.4s						
INK	Inuvik	26.67	319	P	P	20 39 52.4	+0.3
	comp=Z,2.3nm,0.8s,mb3.8,baz=32,slow=10,SNR=3.8						
INK				LR	LR	20 51 09.0	
	comp=Z,141nm,19.5s,MS3.5,baz=188,slow=38						
INK	Inuvik	26.67	319	*e*P	P	20 39 52.0	-0.1
	comp=Z,11nm,1.4s,mb4.2						
YKA	Yellowknife Ar	30.58	300	P	P	20 40 26.3	-1.0
YKA						20 43 24.7	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	30.58	300	P	P	20 40 26.3	-0.9
	comp=Z,0.8nm,0.9s,mb3.5,baz=34,slow=11,SNR=13						
YKA				PcP	PcP	20 43 24.7	-1.3
	comp=Z,0.3nm,0.6s,baz=14,slow=2.4,SNR=4.3						
ILAR	Eielson Array	31.14	328	P	P	20 40 31.7	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,104nm,20.0s						
ILAR	Eielson Array	31.14	328	P	P	20 40 31.6	-0.5
	comp=Z,0.9nm,0.9s,mb3.6,baz=9.6,slow=8.4,SNR=6.2						
ILAR				LR	LR	20 52 18.3	
	comp=Z,104nm,20.0s,MS3.5,baz=345,slow=35						
FCC	Fort Churchill	31.86	279	P	P	20 40 37.8	-0.8
FCC				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.1						
FCC	Fort Churchill	31.86	279	P	P	20 40 37.8	-0.9
	comp=Z,4.3nm,1.3s,mb4.1						
CLL	Collm	32.29	157	*e*P	P	20 40 47.0	+4.6
CLL	Collm	32.29	157	P	P	20 40 47.0	+4.6
SCHQ	Schefferville	32.41	250	LR	LR	20 55 50.7	
	comp=Z,42nm,18.5s,MS3.2,baz=257,slow=40						
BRG	Berggiesshubel	32.77	156	*e*P	P	20 40 47.1	+0.5
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
BRG	Berggiesshubel	32.77	156	P	P	20 40 47.1	+0.5
	comp=Z,7.8nm,1.3s,mb4.5						
YAK	Yakutsk	33.52	36	*e*P	P	20 40 53.0	0.0
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
YAK	Yakutsk	33.52	36	*e*P	P	20 40 53.2	+0.2
	comp=Z,35nm,0.9s,mb5.3						
MORC	Moravsky Berou	34.06	152	P	P	20 40 57.8	0.0
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
MORC	Moravsky Berou	34.06	152	P	P	20 40 57.8	0.0
	comp=Z,4.7nm,1.1s,mb4.3						
GERES	GERESS Array B	34.78	157	P	P	20 41 04.4	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	34.78	157	P	P	20 41 04.4	+0.3
	comp=Z,0.7nm,0.7s,mb3.7,slow=6.7,SNR=9.3						
CDF	Champ du Feu	34.95	164	*e*PKP1	P	20 41 13.2	+7.7
NVS	Novosibirsk	35.87	81	*e*P	P	20 41 10.9	-2.4
NVS				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
NVS				pmax	pmax		
	comp=N,12nm,1.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,2.2s						
BRVK	Borovoye	36.04	94	*e*P	P	20 41 15.1	+0.4
BRVK				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
BRVK	Borovoye	36.04	94	*e*P	P	20 41 15.1	+0.4
	comp=Z,18nm,1.7s,mb4.7						
BVAR	Borovoye Array	36.08	94	P	P	20 41 16.1	+1.0
	comp=Z,1.0nm,0.8s,mb3.8,baz=350,slow=9.0,SNR=9.0						
DLBC	Dease Lake	36.09	312	LR	LR	20 57 32.2	
	comp=Z,248nm,18.1s,MS4.0,baz=132,slow=39						
BGF	Bois d’Agland	36.69	170	*e*PKP1	P	20 41 22.2	+2.0
	comp=Z,39nm,1.2s,mb4.8						
ZAL	Zalesovo	36.95	80	P	P	20 41 23.1	+0.8
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAL				MLR	MLR		
	comp=Z,162nm,18.5s						
ZAL	Zalesovo	36.95	80	P	P	20 41 23.1	+0.8
	comp=Z,1.7nm,0.8s,mb3.9,baz=112,slow=9.9,SNR=14						
ZAL				LR	LR	20 59 53.5	
	comp=Z,162nm,18.5s,MS3.8,baz=24,slow=42						
RJF	Les Rejaudoux	37.91	171	*e*PKP1	P	20 41 31.8	+1.3
	comp=Z,21nm,0.9s,mb4.6						
KURK	Kurchatov	39.36	87	*e*P	P	20 41 41.6	-1.0
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
KURK	Kurchatov	39.36	87	*e*P	P	20 41 41.6	-1.0
	comp=Z,6.5nm,1.0s,mb4.3						
WALA	Waterton Lakes	43.71	295	*e*P	P	20 42 18.4	+0.3
	comp=Z,2.9nm,0.9s,mb4.0						
SONM	Songino Array	45.44	61	P	P	20 42 32.4	+0.3
	comp=Z,1.1nm,0.9s,mb3.7,baz=346,slow=7.7,SNR=9.4						
GNI	Garni	45.84	124	LR	LR	21 03 36.7	
	comp=Z,153nm,20.9s,MS3.9,baz=355,slow=38						
FRU	Bishkek	46.63	93	*e*P	P	20 42 44.0	+2.5
AAK	Ala-Archa	46.81	93	*e*P	P	20 42 42.7	-0.2
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
AAK	Ala-Archa	46.81	93	*e*P	P	20 42 42.7	-0.2

	comp=Z,4.2nm,0.9s,mb4.4						
MALT	Malatya	47.04	131	eP	P	20 42 45.4	+0.6
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MALT	Malatya	47.04	131	eP	P	20 42 45.4	+0.6
	comp=Z,3.0nm,0.9s,mb4.2						
WMQ	Urumqi	47.25	80	eP	P	20 42 48.5	+2.1
BW06	Boulder Array	49.42	289	eP	P	20 43 03.1	-0.1
	comp=Z,5.3nm,1.2s,mb4.5						
PDAR	Pinedale Array	49.42	289	P	P	20 43 04.0	+0.7
	comp=Z,3.8nm,1.2s,mb4.3,baz=18,slow=4.7,SNR=9.7						
CN2	Changchun	51.28	44	eP	P	20 43 17.0	-0.4
PV10	Paradox Valley	53.70	288	eP	P	20 43 35.6	+0.1
PV01	Paradox Valley	53.88	288	eP	P	20 43 36.7	-0.2
SDCO	Great Sand Dun	53.90	285	eP	P	20 43 37.6	+0.5
	comp=Z,2.9nm,1.0s,mb4.2						
LZH	Lanzhou	56.77	65	eP	P	20 43 58.5	+0.6
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb5.0						
LZH	Lanzhou	56.77	65	eP	P	20 43 58.5	+0.6
LZH				*PP	pP	20 44 01.8	+0.8
LZH				*SP	sP	20 44 03.2	+1.0
LZH				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.0						
LZH	Lanzhou	56.77	65	eP	P	20 43 58.5	+0.6
	comp=Z,25nm,1.5s,mb5.0						
LZH				pP	pP	20 44 01.8	+0.8
LZH				sP	sP	20 44 03.2	+1.0
TXAR	Lajitas Array	61.99	281	P	P	20 44 33.2	-0.8
	comp=Z,0.5nm,0.6s,mb3.9,baz=27,slow=4.0,SNR=3.7						
TXAR	Lajitas Array	61.99	281	P	P	20 44 33.2	-0.8
CMAR	Chiang Mai Arr	73.62	73	P	P	20 45 45.0	-1.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	73.62	73	P	P	20 45 45.0	-1.8
	comp=Z,1.6nm,0.9s,mb4.0,baz=343,slow=7.0,SNR=9.4						

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*IGQ **17** 20:42:51.4, 1.58S×81.63W, h15^{km}±7^{km}, mb5.3, Error ellipse: s-maj=10.8km s-min=4.8km az=160.9*

*IDC **17** 20:42:55.9±0.6, 1.59S×80.99W, mb4.4/24, mb1 4.5/28, mb1mx4.5/33, mbtmp4.4/28, ML3.5/4, MS4.9/21, Ms1 4.9/21, ms1mx4.7/30, Error ellipse: s-maj=26.8km s-min=12.0km az=60.0*

*BJI **17** 20:42:57.6, 1.80S×81.00W, h10^{km}, mB5.6, Ms5.5, Msz5.2*

*HRVD **17** 20:42:57.6±0.2, 1.80S×81.30W, h14^{km}, MW5.5/68, Centroid moment Tensor Solution. LP body waves: s56,c97;Mantle waves: s68,c132; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.48±.03; M$_{\theta\theta}$-0.01±.02; M$_{\phi\phi}$-1.48±.03; M$_{r\theta}$0.03±.06; M$_{\theta\phi}$-0.03±.02; M$_{\phi r}$-1.66±.06; Best double couple: M$_0$2.224×10^{17} NP1: ϕ_s3°,δ21°,λ93°. NP2:ϕ_s179°,δ69°,λ89°. Principal axes: T 2.225, Plg66°, Azm87°; N -.01, Plg1°, Azm180°; P -2.224, Plg24°, Azm270°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **17** 20:42:57.6±0.3, 1.77S×81.05W, h10^{km}, mb5.2/53, MS5.0/27, MD5.3(IGQ) Error ellipse: s-maj=10.2km s-min=5.7km az=57.0*

NEIC Felt strongly at Guayaquil, Portoviejo, Puerto Lopez and Salango.

*MOS **17** 20:43:01.2±1.8, 1.74S×81.97W, h33^{km}, mb5.8/4, Error ellipse: s-maj=55.2km s-min=25.5km az=100.0*

ISC 17 20:42:59.2±1.1**, 1.75S**±0.03×**81.17W**±0.03**, h30**^{km}±7^{km}**, n225, σ1^{s}36**/177**, mb4.9**/64**, MS5.0**/49**, 28C-6D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	Salinas	0.47	158	⇑P	Pb	20 43 08.5	-0.7
HOJA	Cerro de Hojas	0.93	42	⇑P	Pn	20 43 12.9	-3.5
MAGD	Magdalena	2.17	40	P	Pn	20 43 33.8	-0.4
IGUA	Igualata	2.54	84	⇑P	Pn	20 43 39.6	+0.2
CUSU	Cusua	2.70	84	⇑P	Pn	20 43 42.4	+0.7
JUIV	Juive	2.72	83	⇑P	Pn	20 43 42.5	+0.5
ARRY	Arrayan	2.72	85	⇑P	Pn	20 43 42.1	+0.1
RETU	Refugio	2.74	84	⇑P	Pn	20 43 43.8	+1.6
RETU				S	Sn	20 44 22.5	+7.9
RUN2	Runtun	2.77	83	P	Pn	20 43 45.0	+2.3
ULBA	Ulba	2.77	84	⇑P	Pn	20 43 43.4	+0.7
ULBA				S	Sn	20 44 20.8	+5.2
PISA	Pisayambo	2.86	76	⇑P	Pn	20 43 45.4	+1.4
NAS1	Nasa	2.91	68	⇑P	Pn	20 43 44.9	+0.2
VC1	Cotopaxi 1	2.97	68	⇑P	Pn	20 43 46.1	+0.6
JUA2	San Juan 2	2.98	59	⇑P	Pn	20 43 44.9	-0.8
TAMB	Tambo	2.99	70	⇑P	Pn	20 43 46.5	+0.7
TERV	Terraza Guagua	3.00	59	P	Pn	20 43 44.7	-1.3
PINO	Pino	3.01	58	⇑P	Pn	20 43 44.6	-1.4
GGP	Refugio Guagua	3.01	59	P	Pn	20 43 46.9	+0.8
YANA	Yana	3.06	58	⇑P	Pn	20 43 45.3	-1.4
JOR1	San Jorge 1	3.07	56	P	Pn	20 43 46.0	-0.9
ANTI	Antisana	3.27	67	⇑P	Pn	20 43 50.3	+0.5
OTAV	Otavalo	3.36	54	ePn	Pn	20 43 49.0	-2.0
OTAV				eSn	Sn	20 44 27.8	-2.5
COTA	Cotacachi	3.50	54	⇑P	Pn	20 43 52.1	-1.0
ELAGU	Cayambe Volc	3.61	62	P	Pn	20 43 55.5	+0.9
CAYR	Refugio Cayamb	3.61	61	⇑P	Pn	20 43 56.0	+1.4
CAYA	Cayambe	3.66	60	⇑P	Pn	20 43 55.7	+0.5
CONE	Cono NE Rev Vo	3.90	65	P	Pn	20 44 00.5	+1.8
ECEN	Cerro Negro	4.09	51	⇑P	Pn	20 44 00.1	-1.3
PAYG	Puerto Ayora	9.18	277	Pn	P	20 45 10.0	-2.8
PAYG	Puerto Ayora	9.18	277	ePn	P	20 45 09.8	-2.9
ROSC	El Rosal	9.47	46	Pn	P	20 45 18.4	+1.6
	1.9nm,0.3s,baz=88,slow=3.5,SNR=8.5						
ROSC				Sn	Sn	20 46 55.9	-7.4
	0.6nm,0.3s,baz=270,slow=21,SNR=1.7						
ROSC				LR	LR	20 48 42.9	
	comp=Z,5μm,19.5s,baz=90,slow=38						
NNA	Nana	11.04	157	Pn	P	20 45 36.5	-1.9
	364nm,0.9s,SNR=11						
NNA	Nana	11.04	157	ePn	P	20 45 33.6	-4.9
	211nm,1.2s						
NNA				eSn	S	20 47 33.0	-8.8
JTS	JuntasAbangare	12.54	343	Pn	P	20 45 57.8	-0.8
	0.4nm,0.3s,baz=324,slow=19,SNR=6.6						
JTS				LR	LR	20 49 19.0	
	comp=Z,3μm,19.7s,baz=169,slow=31						
SDV	Santo Domingo	14.89	45	Pn	P	20 46 29.7	0.0
	0.4nm,0.3s,baz=250,slow=9.7,SNR=13						
SDV	Santo Domingo	14.89	45	eP	P	20 46 28.9	-0.8
	72nm,0.9s						
ARE	Arequipa	17.45	147	eP	P	20 47 04.0	+1.7
LPAZ	La Paz	19.33	139	P	P	20 47 24.4	-0.8
	0.2nm,0.3s,baz=327,slow=12,SNR=27						
LPAZ				LR	LR	20 55 55.3	
	comp=Z,4μm,21.1s,baz=84,slow=40						
LPAZ	La Paz	19.33	139	eP	P	20 47 24.4	-0.7
	132nm,1.5s						
TEIG	Tepich	22.92	343	eP	P	20 48 03.1	+1.0
	42nm,1.4s,mb4.7						
LVC	Limon Verde	23.91	151	P	P	20 48 13.6	+1.9
	22nm,0.9s,mb4.6,baz=307,slow=8.3,SNR=25						
LVC	Limon Verde	23.91	151	eP	P	20 48 12.8	+1.1
	283nm,1.6s,mb5.5						
LVC				LR	LR		
	comp=Z,3μm,21.0s,MS4.8						
SJG	San Juan	24.66	36	P	P	20 48 16.9	-2.1
	comp=Z,31nm,0.9s,mb4.8,baz=177,slow=12,SNR=7.7						
SJG	San Juan	24.66	36	eP	P	20 48 16.1	-2.8
	comp=Z,85nm,1.1s,mb5.2						
DWPF	Disney	29.69	360	PFAKE		20 49 20.0	+15
DWPF				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
HKT	Hockley	34.49	337	P	P	20 49 49.2	+2.3
	comp=Z,100nm,2.0s,mb5.4						
BDFB	Brasilia	35.48	115	P	P	20 49 53.9	-1.5
	comp=Z,6.5nm,0.9s,mb4.5,baz=285,slow=11,SNR=6.0						
BDFB				LR	LR	21 04 24.0	
	comp=Z,3μm,19.9s,MS5.0,baz=74,slow=36						
BAO	Brasilia Array	35.49	115	eP	P	20 49 54.0	-1.6
JCT	Junction City	36.64	332	eP	P	20 50 05.7	+0.5
	comp=Z,48nm,1.2s,mb5.2						
TXAR	Lajitas Array	37.67	327	P	P	20 50 13.3	-0.5
	comp=Z,0.7nm,0.6s,baz=150,slow=10,SNR=5.1						
TXAR				PcP	PcP	20 52 30.0	-1.2
	comp=Z,1.8nm,0.9s,baz=124,slow=4.5,SNR=4.2						
TXAR				LR	LR	21 04 36.5	
	comp=Z,1μm,18.5s,MS4.7,baz=155,slow=35						
TXAR	Lajitas Array	37.67	327	P	P	20 50 13.3	-0.5
TXAR				PcP	PcP	20 52 30.0	-1.2
TXAR				LR	LR	21 04 36.5	
MIAR	Mount Ida	37.94	343	eP	P	20 50 16.9	+1.0
	comp=Z,37nm,1.5s,mb4.9						
MIAR				LR	LR		
	comp=Z,946nm,21.0s,MS4.6						
ELN	Prospectdale	38.78	1	eP	P	20 50 23.3	+0.2
LPA	La Plata	39.45	149	ceP	P	20 50 26.0	-2.7
LPA				ePCS		20 56 26.0	
LPA				eS	S	20 56 30.0	+1.7
LPA				esS		20 56 35.0	
PLCA	Paso Flores	39.98	167	P	P	20 50 32.3	-0.6
	comp=Z,14nm,1.0s,mb4.6,baz=342,slow=9.8,SNR=14						
PLCA	Paso Flores	39.98	167	eP	P	20 50 32.8	-0.2
	comp=Z,150nm,1.7s,mb5.5						
TRQA	Tornquist	40.20	156	eP	P	20 50 33.3	-1.5
	comp=Z,134nm,1.4s,mb5.5						
TRQA				LR	LR		
	comp=Z,2μm,20.0s,MS4.9						
MNTX	Cornudas Mount	40.43	327	eP	P	20 50 36.3	-0.4
	comp=Z,27nm,1.4s,mb4.8						
FVM	French Village	40.45	349	eP	P	20 50 35.7	-1.2
	comp=Z,56nm,1.5s,mb5.1						
CCM	Cathedral Cave	40.69	348	eP	P	20 50 37.0	-1.7
	comp=Z,112nm,1.8s,mb5.2						
AMTX	Amarillo	41.20	334	eP	P	20 50 45.1	+2.1
	comp=Z,17nm,1.0s,mb4.6						
ACSO	Alum Creek Sta	41.81	358	P	P	20 50 41.6	-6.4
	comp=Z,28nm,1.0s,mb4.8						
ACSO				LR	LR		
	comp=Z,2μm,20.0s,MS5.0						
SSPA	Standing Stone	42.29	4	eP	P	20 50 47.4	-4.6
	comp=Z,33nm,0.6s,mb5.1						
CAM4	Nova Friburgo	42.73	122	(P)	P	20 50 50.8	-5.0
KSU1	Kansas State U	43.06	342	eP	P	20 50 58.5	+0.3
ANMO	Albuquerque	43.52	329	d iP	P	20 51 01.4	-0.7
ANMO	Albuquerque	43.52	329	P	P	20 51 02.9	+0.8
	comp=Z,6.4nm,0.8s,mb4.4,baz=142,slow=11,SNR=9.3						
ANMO	Albuquerque	43.52	329	eP	P	20 51 01.8	-0.2
	comp=Z,16nm,1.1s,mb4.7						
ANMO				LR	LR		
	comp=Z,819nm,20.0s,MS4.6						
TUC	Tucson	43.97	323	eP	P	20 51 05.7	0.0
	comp=Z,8.1nm,1.1s,mb4.4						
SDCO	Great Sand Dun	45.29	333	eP	P	20 51 15.4	-0.9
	comp=Z,49nm,1.6s,mb5.1						
SDCO				LR	LR		
	comp=Z,1μm,20.0s,MS4.9						
RCBR	Riachuelo	45.34	96	P	P	20 51 15.3	-1.6
	comp=Z,70nm,1.5s,mb5.3						
ACCN	Adirondack Com	45.43	8	eP	P	20 51 15.6	-1.7
MIV	Mineville/With	46.13	8	P	P	20 51 24.5	+1.7
SADO	Sadowa	46.35	2	P	P	20 51 23.5	-1.0
	comp=Z,6.7nm,1.1s,mb4.5,baz=144,slow=20,SNR=4.1						
SADO				LR	LR	21 08 29.4	
	comp=Z,1μm,21.0s,MS4.8,baz=313,slow=33						
WUAZ	Wupatki	46.59	326	eP	P	20 51 26.3	-0.2
	comp=Z,639nm,1.2s						
PV01	Paradox Valley	47.07	330	P	P	20 51 32.3	+2.0
PV10	Paradox Valley	47.49	330	eP	P	20 51 33.1	-0.5
NEN	Nelson	48.71	323	eP	P	20 51 40.9	-2.3
SRU	San Rafael	48.80	330	eP	P	20 51 44.4	+0.7
MSU	Marysvale	49.21	328	eP	P	20 51 47.9	+1.0
MVU	Marysvale	49.22	328	eP	P	20 51 47.8	+0.7
	comp=Z,9.9nm,1.1s,mb4.8						
ARUT	Antelope Range	49.38	326	eP	P	20 51 50.0	+1.7
DAU	Daniels Canyon	50.15	330	eP	P	20 51 55.4	+1.2
JLU	Jordanelle	50.39	330	eP	P	20 51 57.5	+1.5
TCUT	Toone Canyon	50.76	331	eP	P	20 52 01.0	+2.2
DUG	Dugway	50.78	329	eP	P	20 52 00.1	+1.1
	comp=Z,75nm,2.0s,mb5.3						
DUG				LR	LR		
	comp=Z,2μm,19.0s,MS5.1						
PDAR	Pinedale Array	51.17	333	P	P	20 52 01.2	-0.6
	comp=Z,1.6nm,0.9s,mb4.0,baz=127,slow=7.4,SNR=10						
PDAR				LR	LR	21 16 20.2	
	comp=Z,481nm,18.3s,MS4.6,baz=148,slow=39						
HWUT	Hardware Ranch	51.21	331	eP	P	20 52 01.3	-0.8
	comp=Z,18nm,1.0s,mb5.0						
SPUT	South Promonto	51.42	330	eP	P	20 52 04.9	+1.1
BGU	Big Grassy Mou	51.43	329	eP	P	20 52 04.3	+0.4
TPH	Tonopah	51.75	324	eP	P	20 52 04.5	-1.8
	comp=Z,16nm,1.2s,mb4.8						
HVU	Hansel Valley	51.93	330	eP	P	20 52 09.3	+1.7
MTUM	Tungsten Hills	52.09	322	eP	P	20 52 10.6	+1.8
TPAW	Teton Pass	52.37	333	eP	P	20 52 11.2	+0.3
ELK	Elko	52.46	328	eP	P	20 52 09.2	-2.4
	comp=Z,33nm,1.5s,mb5.0						
ELK				LR	LR		
	comp=Z,2μm,19.0s,MS5.2						
OMM	Old Mammoth Mi	52.52	322	eP	P	20 52 11.5	-0.7
MNV	Mina	52.53	323	eP	P	20 52 12.3	+0.1
	comp=Z,47nm,1.6s,mb5.2						
MNV				LR	LR		
	comp=Z,435nm,21.0s,MS4.5						
NVAR	Mina Array Bea	52.62	323	P	P	20 52 13.1	+0.2
	comp=Z,3.3nm,0.8s,mb4.3,baz=135,slow=7.7,SNR=18						
NVAR				LR	LR	21 14 34.9	
	comp=Z,1μm,18.8s,MS5.0,baz=110,slow=36						
NVAR	Mina Array Bea	52.62	323	P	P	20 52 13.1	+0.2
NVAR				LR	LR	21 14 34.9	
IMW	Indian Meadow	52.68	333	eP	P	20 52 10.8	-2.4
LKWY	Lake	52.97	334	eP	P	20 52 17.6	+2.2
	comp=Z,11nm,1.0s,mb4.8						
YMR	Madison River	53.30	334	eP	P	20 52 19.4	+1.7
ULM	Lac du Bonnet	53.31	348	P	P	20 52 15.1	-2.7
	comp=Z,26nm,0.7s,mb5.3,baz=161,slow=7.1,SNR=15						
ULM	Lac du Bonnet	53.31	348	eP	P	20 52 14.2	-3.6
	comp=Z,69nm,1.0s,mb5.5						
BMN	Battle Mountai	53.33	326	eP	P	20 52 16.8	-1.3
	comp=Z,24nm,1.2s,mb5.0						
QLMT	Earthquake Lak	53.63	334	eP	P	20 52 19.1	-1.1
CMB	Columbia Colle	53.64	322	eP	P	20 52 22.5	+2.2
	comp=Z,10.0nm,1.1s,mb4.7						
USHA	Ushuaia	53.93	171	LR	LR	21 14 33.5	
	comp=Z,2μm,19.0s,MS5.2,baz=346,slow=35						
HLID	Hailey	54.06	331	eP	P	20 52 22.7	-0.7
	comp=Z,7.5nm,0.8s,mb4.7						
HLID				LR	LR		
	comp=Z,1μm,22.0s,MS5.0						
OHCM	Honcut	55.12	322	eP	P	20 52 32.6	+1.4
WVOR	Wild Horse Val	55.46	327	eP	P	20 52 33.6	-0.1
	comp=Z,60nm,1.5s,mb5.4						
HOPS	Hopland	55.89	321	P	P	20 52 38.4	+1.6
	comp=Z,21nm,1.2s,mb5.0						
RKT	Rikitea	56.27	243	eS	S	21 00 24.1	-1.7
RKT				eLQ		21 06 51.7	
RKT				eLR	LR	21 08 52.3	
	comp=Z,3μm,26.5s						
BMO	Blue Mountains	56.44	330	eP	P	20 52 40.5	-0.1
	comp=Z,9.6nm,1.3s,mb4.7						
YBH	Yreka Blue Hor	57.33	324	P	P	20 52 44.5	-2.5
	comp=Z,6.2nm,0.8s,mb4.7,baz=145,slow=3.9,SNR=12						
YBH	Yreka Blue Hor	57.33	324	eP	P	20 52 44.2	-2.8
	comp=Z,12nm,1.0s,mb4.9						
YBH				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
SCHQ	Schefferville	57.62	10	P	P	20 52 50.8	+1.9
	comp=Z,4.0nm,0.9s,mb4.4,baz=238,slow=3.7,SNR=5.3						
SCHQ				LR	LR	21 16 43.1	
	comp=Z,1μm,20.6s,MS4.9,baz=354,slow=35						
SCHQ	Schefferville	57.62	10	eP	P	20 52 50.4	+1.5
	comp=Z,65nm,1.8s,mb5.4						
SCHQ				LR	LR		
	comp=Z,2μm,22.0s,MS5.2						
WALA	Waterton Lakes	57.98	335	eP	P	20 52 51.2	-0.2
	comp=Z,26nm,1.4s,mb5.1						
NEW	Newport	58.80	333	P	P	20 52 58.7	+1.5
	comp=Z,4.0nm,0.8s,mb4.5,baz=124,slow=5.9,SNR=9.3						
NEW				LR	LR	21 18 04.8	
	comp=Z,803nm,18.6s,MS4.9,baz=37,slow=36						
NEW	Newport	58.80	333	eP	P	20 52 58.2	+1.0
	comp=Z,22nm,1.3s,mb5.0						
NEW				LR	LR		
	comp=Z,864nm,20.0s,MS4.9						
FFC	Flin Flon	58.85	346	P	P	20 52 56.7	-0.7
	comp=Z,63nm,1.8s,mb5.3,SNR=7.3						
FFC	Flin Flon	58.85	346	eP	P	20 52 56.4	-1.1
	comp=Z,45nm,1.5s,mb5.3						
TAOE	Nuku Hiva Isla	59.09	261	eS	S	21 01 00.2	-2.8
TAOE				eLR	LR	21 09 55.8	
EDM	Edmonton	61.02	339	eP	P	20 53 11.0	-1.4
FCC	Fort Churchill	61.19	352	eP	P	20 53 09.5	-3.9
	comp=Z,144nm,1.8s,mb5.8						
FRB	Frobisher Bay	66.00	6	P	P	20 53 46.6	+1.6
	comp=Z,6.9nm,0.9s,mb4.7,baz=175,slow=4.3,SNR=6.5						
BBB	Bella Bella	66.66	331	P	P	20 53 48.0	-1.2
	comp=Z,18nm,1.2s,mb5.0,baz=67,slow=8.8,SNR=3.0						
YKA	Yellowknife Ar	68.87	344	eP	P	20 54 00.4	-2.6
YKA	Yellowknife Ar	68.87	344	P	P	20 54 00.4	-2.6
	comp=Z,2.3nm,0.8s,mb4.2,baz=139,slow=6.2,SNR=17						
YKA				LR	LR	21 29 31.1	
	comp=Z,658nm,18.2s,MS4.9,baz=105,slow=41						
YKA	Yellowknife Ar	68.87	344	P	P	20 54 00.4	-2.6
YKA				LR	LR	21 29 31.1	
PPT	Papeete	68.90	252	eS	S	21 03 03.3	-1.3
PPT				eLR	LR	21 14 36.1	
	comp=Z,3μm,26.2s						
YKW3	Yellowknife Ar	68.93	344	eP	P	20 54 00.3	-3.1
TBI	Tubuai	69.41	246	eS	S	21 03 08.8	-1.8
TBI				eLR	LR	21 14 56.0	
	comp=Z,2μm,27.0s						
DLBC	Dease Lake	71.33	335	P	P	20 54 17.3	-0.7
	comp=Z,1.6nm,0.6s,mb4.2,baz=187,slow=12,SNR=4.3						
DLBC	Dease Lake	71.33	335	eP	P	20 54 18.7	+0.7
DBIC	Dimbokro	76.62	83	P	P	20 54 47.7	-1.9
	comp=Z,16nm,1.1s,mb4.9,baz=251,slow=5.2,SNR=8.4						
DBIC				LR	LR	21 26 42.3	
	comp=Z,1μm,18.1s,MS5.2,baz=224,slow=34						
DBIC	Dimbokro	76.62	83	eP	P	20 54 48.3	-1.2
	comp=Z,148nm,1.8s,mb5.6						
DBIC				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
RES	Resolute Bay	76.77	356	eP	P	20 54 49.5	+0.2
	comp=Z,32nm,1.7s,mb5.0						
DAWY	Dawson	78.22	338	eP	P	20 54 57.8	+0.4
INK	Inuvik	78.53	343	P	P	20 54 57.4	-1.6
	comp=Z,5.0nm,0.9s,mb4.4,baz=128,slow=7.6,SNR=6.1						
INK	Inuvik	78.53	343	eP	P	20 54 56.9	-2.2
	comp=Z,178nm,2.1s,mb5.6						
RAR	Rarotonga	78.75	249	LR	LR	21 24 38.1	
	comp=Z,2μm,18.2s,MS5.4,baz=82,slow=32						
SUMG	Summit	78.91	12	eP	P	20 54 59.0	-2.0
	comp=Z,175nm,1.9s,mb5.7						
BORG	Borgarnes	79.16	22	eP	P	20 55 04.8	+2.3
THY	Trims Highway	80.45	336	eP	P	20 55 13.4	+4.0
ESDC	Sonseca Array	81.28	50	P	P	20 55 13.2	-1.1
	comp=Z,0.3nm,0.5s,baz=270,slow=1.3,SNR=4.5						
ESLA	Sonseca Array	81.28	50	PFAKE		20 55 30.0	+16
ESLA				LR	LR		
	comp=Z,3μm,19.0s,MS5.7						
ILAR	Eielson Array	81.44	337	P	P	20 55 13.9	-0.7
	comp=Z,2.1nm,1.1s,mb4.0,baz=127,slow=3.5,SNR=8.9						
ILAR				LR	LR	21 33 02.9	
	comp=Z,638nm,19.2s,MS5.0,baz=325,slow=37						
COLA	College	81.86	337	eP	P	20 55 21.4	+4.6
	comp=Z,30nm,1.3s,mb5.1						
MCK	McKinley	81.89	335	eP	P	20 55 18.4	+1.4
	comp=Z,4.5nm,0.9s,mb4.4						
MCK				LR	LR		
	comp=Z,343nm,19.0s,MS4.7						
VNA3	Neumayer Olymp	82.46	162	⇑iP	P	20 55 20.8	+1.0
RSO	Redoubt South	82.52	332	eP	P	20 55 23.7	+3.3
VNA2	Neumayer--Watz	83.08	161	⇑iP	P	20 55 23.7	+0.6
VNA2	Neumayer--Watz	83.08	161	⇑i	pP	20 55 36.4	+3.7
SJPF	Ste Jean	83.85	46	eP	pP	20 55 35.3	-1.9
IMA	Indian Mountai	84.56	337	eP	P	20 55 31.3	+0.7
	comp=Z,380nm,2.0s						
EKA	Eskdalemuir Ar	84.62	34	P	P	20 55 35.4	+4.3
	comp=Z,1.4nm,0.8s,mb4.2,baz=259,slow=4.3,SNR=3.8						
SNAA	Sanae	84.68	162	i P	P	20 55 32.6	+1.5
SNAA	Sanae	84.68	162	P	P	20 55 32.5	+1.5
	comp=Z,3.9nm,1.1s,mb4.4,baz=246,slow=8.2,SNR=6.6						
SNAA				LR	LR	21 31 28.9	
	comp=Z,222nm,19.3s,MS4.6,baz=41,slow=34						
SNAA	Sanae	84.68	162	eP	P	20 55 32.3	+1.3
	comp=Z,863nm,1.6s						
GRR	Gorron	84.86	41	eP	pP	20 55 39.9	-2.3
EPF	Esparros	84.97	47	eP	pP	20 55 40.8	-2.1
	comp=Z,69nm,1.4s						
MFF	Saint Martin d	85.09	43	eP	pP	20 55 41.1	-2.3
FLN	La Foliniere	85.16	41	eP	pP	20 55 41.5	-2.2
LDF	La Druitiere	85.38	41	eP	pP	20 55 42.5	-2.2
	comp=Z,26nm,1.1s						
LFF	La Frestale	85.49	45	eP	pP	20 55 43.0	-2.4
DAG	Danmarks Havn	85.60	12	⇑eP	P	20 55 35.2	-0.4
DAG				pmax	pmax		
	comp=Z,88nm,2.0s,mb5.6						
DAG	Danmarks Havn	85.60	12	⇑iP	P	20 55 35.2	-0.4
	comp=Z,88nm,2.0s,mb5.6						
QSPA	South Pole Qui	88.31	180	P	P	20 55 49.0	+0.3
	comp=Z,133nm,1.9s,mb5.8						
NOA	NORSAR Array B	92.68	29	LR	LR	21 36 30.1	
	comp=Z,270nm,18.3s,MS4.7,baz=285,slow=35						
GRA1	Grafenberg Arr	92.87	41	eP	P	20 56 07.7	-2.8
	comp=Z,96nm,2.5s,mb5.8						
GRA1				LR	LR		
	comp=Z,700nm,21.2s,MS5.1						
GRF	Grafenberg Arr	92.87	41	eP	P	20 56 07.7	-2.8
GRF				pmax	pmax		
	comp=Z,96nm,2.5s,mb5.8						
GRF				MLR	MLR		
	comp=Z,700nm,21.2s,MS5.1						
GRF	Grafenberg Arr	92.87	41	eP	P	20 56 07.7	-2.8
	comp=Z,96nm,2.5s,mb5.8						
GRF				LR	LR		
	comp=Z,700nm,21.2s,MS5.1						
MOX	Moxa	93.11	40	eP	P	20 56 16.0	+4.4
MOX				SKS	SKS	21 06 51.0	+0.7
MOX				L		21 40 11.0	
VNDA	Vanda	93.96	191	P	P	20 56 15.7	+0.8
	comp=Z,2.1nm,0.9s,mb4.5,baz=149,slow=5.9,SNR=2.5						
VNDA				LR	LR	21 31 07.4	
	comp=Z,499nm,18.2s,MS5.0,baz=117,slow=31						
VNDA	Vanda	93.96	191	eP	P	20 56 16.1	+1.1
	comp=Z,27nm,1.7s,mb5.4						
VNDA				LR	LR		
	comp=Z,560nm,20.0s,MS5.0						
CLL	Collm	93.97	39	⇓iP	P	20 56 19.8	+4.3
CLL				eS	S	21 07 30.0	+9.4
CLL	Collm	93.97	39	⇓iP	P	20 56 19.8	+4.3
CLL				e		20 56 43.0	
CLL				eS	S	21 07 30.0	+9.4
CLL	Collm	93.97	39	⇓P	P	20 56 19.8	+4.3
	comp=Z,logA/T=1.7,mb5.9						
CLL				e		20 56 43.0	
CLL				eS	S	21 07 30.0	+9.4
CLL				ePS	PS	21 08 48.0	+3.7
GERES	GERESS Array B	94.52	41	P	P	20 56 22.2	+4.1
	comp=Z,0.4nm,0.5s,mb4.2,baz=270,slow=5.3,SNR=5.5						
BRG	Berggiesshubel	94.58	39	eP	P	20 56 25.1	+6.7
BRG				e		20 56 40.4	
BRG				i S	S	21 07 38.0	+12
BRG				ePS	PS	21 08 56.0	+4.9
BRG				eSS	SS	21 14 11.0	+18
BRG				pmax	pmax		
	comp=Z,37nm,2.3s,mb5.4						
BRG	Berggiesshubel	94.58	39	eP	P	20 56 25.1	+6.7
	comp=Z,36nm,2.3s,mb5.4						
BRG				e		20 56 40.4	
ARCES	ARCESS Array B	97.42	20	LR	LR	21 42 34.9	
	comp=Z,399nm,18.5s,MS4.9,baz=201,slow=37						
TSUM	Tsumeb	97.69	110	eP	P	20 56 34.1	+0.9
	comp=Z,25nm,1.5s,mb5.5						
TSUM				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
SYO	Syowa Base	98.97	162	⇓P	P	20 56 35.4	-2.4
SUR	Sutherland	99.17	123	LR	LR	21 34 58.9	
	comp=Z,344nm,21.1s,MS4.8,baz=77,slow=32						
SUR	Sutherland	99.17	123	PFAKE		20 56 50.0	+10
SUR				LR	LR		
	comp=Z,396nm,19.0s,MS4.9						
FINES	FINESS Array B	99.73	28	LR	LR	21 37 35.9	
	comp=Z,472nm,18.0s,MS5.0,baz=286,slow=33						
BILL	Bilibino	99.92	339	⇓eP	P	20 56 43.3	+1.1
BILL				pmax	pmax		
	comp=Z,11nm,1.9s,mb5.0						
BILL				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.8						
LBTB	Lobatse	104.41	116	PFAKE		20 57 10.0	+6.9
LBTB				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
OBN	Obninsk	106.98	32	P	Pdif	20 57 16.7	+3.0
OBN				e		21 01 55.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,500nm,21.0s,MS5.0						
OBN				MLR	MLR		
	comp=Z,200nm,24.0s						
LSZ	Lusaka	108.17	107	PFAKE		21 01 40.0	
LSZ				LR	LR		
	comp=Z,1μm,22.0s,MS5.4						
KMBO	Kilima Mbogo	118.36	92	PFAKE		21 02 00.0	+10
KMBO				LR	LR		

	comp=Z,1μm,22.0s,MS5.5						
ZAL	Zalesovo	126.71	10	i PKIKP	PKPdf	21 02 01.2	-3.9
ZAL	Zalesovo	126.71	10	PKP	PKPdf	21 02 00.3	-4.8
	comp=Z,1.2nm,0.8s,baz=196,slow=2.5,SNR=6.9						
MDJ	Mudanjiang	129.39	332	PKP	PKPdf	21 02 06.9	-3.7
MDJ				LR	LR		
	comp=N,153nm,21.2s,MS5.0						
MDJ				LR	LR		
	comp=E,266nm,21.2s,MS5.0						
MDJ				LR	LR		
	comp=Z,333nm,21.2s,MS5.0						
ZAK	Zakamensk	131.40	356	ePKIKP	PKPdf	21 02 10.1	-4.1
ZAK				e		21 04 28.5	
CN2	Changchun	131.91	334	ePKP	PKPdf	21 02 07.0	-8.4
CN2				PP	PP	21 04 36.8	+1.4
CN2				LR	LR		
	comp=N,700nm,16.0s,MS5.5						
CN2				LR	LR		
	comp=E,400nm,16.0s,MS5.5						
CN2				LR	LR		
	comp=Z,570nm,17.0s,MS5.3						
ULN	Ulaanbaatar	133.51	352	P	PKPdf	21 02 16.4	-1.8
SONM	Songino Array	133.63	353	PKP	PKPdf	21 02 14.2	-4.2
	comp=Z,0.8nm,0.7s,baz=332,slow=2.2,SNR=7.3						
SONM				PP	PP	21 04 45.5	-0.7
	comp=Z,0.8nm,1.0s,baz=333,slow=2.8,SNR=3.6						
AAK	Ala-Archa	133.83	25	i PKIKP	PKPdf	21 02 15.9	-3.1
AAK				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.8						
WMQ	Urumqi	136.95	12	ePKP	PKPdf	21 02 23.0	-1.6
WMQ				PP	PP	21 05 10.0	+3.3
WMQ				SKS	SKS	21 09 33.0	-1.0
WMQ				SKKS		21 12 01.0	
WMQ				SS	SS	21 23 14.0	+7.0
WMQ				LR	LR		
	comp=N,425nm,22.0s,MS5.2						
WMQ				LR	LR		
	comp=E,356nm,24.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,436nm,24.0s,MS5.1						
ASAR	Alice Springs	137.56	231	PKP	PKPdf	21 02 22.1	-4.2
	comp=Z,0.9nm,0.8s,baz=105,slow=2.8,SNR=4.7						
BJI	Beijing	138.76	340	PKP	PKPdf	21 02 24.8	-3.3
BJI				PP	PP	21 05 20.5	+1.9
BJI				SS	SS	21 23 32.5	+4.6
BJI				PP	PP		
	comp=Z,148nm,5.1s						
BJI				LR	LR		
	comp=N,417nm,19.2s,MS5.2						
BJI				LR	LR		
	comp=E,265nm,21.0s,MS5.2						
BJI				LR	LR		
	comp=Z,388nm,23.0s,MS5.1						
BJI	Beijing	138.76	340	PKP	PKPdf	21 02 24.7	-3.4
BJI				PP	PP	21 05 20.5	+1.9
BJI				SS	SS	21 23 32.5	+4.6
BJI				LR	LR		
	comp=Z,390nm,23.0s,MS5.1						
WRAB	Tennant Creek	139.04	236	i PKIKP	PKPdf	21 02 25.7	-3.4
WRA	Warramunga Arr	139.04	236	PKP	PKPdf	21 02 24.9	-4.3
	comp=Z,3.5nm,1.0s,baz=113,slow=2.0,SNR=7.6						
GTA	Gaotai	142.50	359	PKP	PKPdf	21 02 30.8	-4.0
GTA				APKP		21 02 34.8	
GTA				PPP	PPP	21 08 40.8	-10
GTA				SKS	SKS	21 09 35.1	-8.1
GTA				PP	PP		
	comp=Z,179nm,4.6s						
GTA				LR	LR		
	comp=N,312nm,18.3s,MS5.2						
GTA				LR	LR		
	comp=E,244nm,18.7s,MS5.2						
GTA				LR	LR		
	comp=Z,546nm,23.7s,MS5.2						
SSE	Sheshan	143.96	326	ePKP	PKPdf	21 02 34.3	-3.2
SSE				PP	PP	21 05 51.1	+0.9
SSE				SS	SS	21 24 34.8	+5.5
SSE				LR	LR		
	comp=N,215nm,22.6s,MS4.9						
SSE				LR	LR		
	comp=E,43nm,22.5s,MS4.9						
SSE				LR	LR		
	comp=Z,347nm,21.6s,MS5.1						
NJ2	Nanjing	144.44	330	ePKP	PKPdf	21 02 30.3	-8.1
NJ2				APKP		21 02 40.4	
NJ2				XPKP		21 02 44.1	
NJ2				PP	PP	21 05 50.0	-3.0
NJ2				PKS	PKS	21 06 04.0	-3.8
NJ2				LR	LR		
	comp=N,1μm,31.9s						
NJ2				LR	LR		
	comp=E,670nm,26.0s						
NJ2				LR	LR		
	comp=Z,1μm,32.0s,MS5.5						
DDI	Dehra Dun	145.42	33	e	PKPbc	21 02 37.4	+1.9
LZH	Lanzhou	145.52	353	⇑PKP	PKPdf	21 02 35.3	-4.8
LZH				APKP		21 02 38.5	
LZH				XPKP		21 02 39.8	
LZH				ePP	PP	21 05 58.6	-0.8
LZH				SKKS		21 12 46.8	
LZH				SS	SS	21 24 48.5	+2.2
LZH				PP	PP		
	comp=Z,232nm,7.6s						
LZH				LR	LR		
	comp=E,362nm,18.5s						
LZH				LR	LR		
	comp=Z,548nm,20.0s,MS5.3						
LZH	Lanzhou	145.52	353	⇑PKP	PKPdf	21 02 35.2	-4.9
LZH				pPKP		21 02 38.5	
LZH				sPKP		21 02 39.8	
LZH				ePP	PP	21 05 58.6	-0.8
LZH				SKKS		21 12 46.7	
LZH				SS	SS	21 24 48.5	+2.2
LZH				LR	LR		
	comp=Z,550nm,20.0s,MS5.3						
NDI	New Delhi	146.20	36	eP	PKPbc	21 02 36.0	-1.5
XAN	Xi’an	146.52	345	PKP	PKPdf	21 02 37.1	-4.8
XAN				APKP		21 02 43.3	
FITZ	Fitzroy Crossi	147.05	232	ePKP	PKPdf	21 02 40.1	-3.1
	comp=Z,32nm,1.5s						
WHN	Wuhan	147.80	334	PKP	PKPdf	21 02 43.0	-1.1
MBWA	Marble Bar	149.40	221	eP	PKPdf	21 02 46.3	-0.6
LSA	Lhasa	151.26	14	ePKPdf	PKPdf	21 02 46.5	-3.1
LSA				ePKPbc	PKPdf	21 02 51.9	+2.4
HYB	Hyderabad	154.71	51	eP	PKPdf	21 02 55.0	+0.3
HYB	Hyderabad	154.71	51	i PKP	PKPdf	21 02 55.0	+0.3
KMI	Kunming	156.46	351	PKP	PKPdf	21 02 52.8	-4.0
KMI				PP	PP	21 07 01.0	-0.9
KMI				LR	LR		
	comp=Z,201nm,25.5s,MS4.8						
KMI	Kunming	156.46	351	PKP	PKPdf	21 02 52.7	-4.1
KMI				PP	PP	21 07 01.0	-0.9
KMI				SS	SS	21 26 44.9	-2.6
KMI				LR	LR		
	comp=Z,200nm,25.5s,MS4.8						
CMAR	Chiang Mai Arr	163.40	360	PKP	PKPdf	21 03 01.4	-3.3
	comp=Z,0.6nm,0.9s,baz=320,slow=1.8,SNR=4.6						
CMAR				PKPab	PKPab	21 03 50.0	-2.9
	comp=Z,2.7nm,1.1s,baz=341,slow=4.0,SNR=6.6						

CSEM ***17*** *20:58:04.6±0.1, 47.12N×14.63E, h15^{km}, ML3.1/7, Error ellipse: s-maj=2.5km s-min=2.2km az=148.0*

NEIC ***17*** *20:58:05.7±0.5, 47.12N×14.53E, h10^{km}, ML2.9(VIE), ML2.6(SZGRF), Error ellipse: s-maj=5.8km s-min=4.6km az=142.0*

NEIC Felt [IV] at Judenburg.

PRU ***17*** *20:58:05.9, 47.19N×14.63E*

BGR ***17*** *20:58:06.2±0.3, 47.07N×14.73E, h10^{km}, ML2.6, Error ellipse: s-maj=6.7km s-min=5.6km az=92.0*

ISC 17 20:58:04.9±0.3, 47.10N±0.02×14.56E±0.03, h10^{km}, n53, σ1^{s}13/90, 11C-5D, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBKA	Obir	0.59	181	⇓iPG	Pg	20 58 17.5	+0.6
OBKA				i SG	Sg	20 58 25.2	+0.4
	41nm,0.1s						
OBKA	Obir	0.59	181	ePg	Pg	20 58 17.0	+0.1
OBKA				eSg	Sg	20 58 25.9	+1.1
OBKA	Obir	0.59	181	Pg	Pg	20 58 17.0	+0.1
OBKA				i Sg	Sg	20 58 25.2	+0.4
ARSA	Arzberg	0.67	77	⇑iPG	Pg	20 58 16.9	-1.6
ARSA				i SG	Sg	20 58 26.0	-1.5
	97nm,0.2s						
ARSA	Arzberg	0.67	77	ePg	Pg	20 58 16.9	-1.6
ARSA				eSg	Sg	20 58 25.3	-2.2
MOA	Molln	0.78	345	⇑iPG	Pg	20 58 19.9	-0.6
MOA				i SG	Sg	20 58 30.5	-0.5
	37nm,0.3s						
MOA	Molln	0.78	345	ePg	Pg	20 58 19.7	-0.9
MOA	Molln	0.78	345	Pg	Pg	20 58 19.7	-0.8
MOA				i Sg	Sg	20 58 30.5	-0.5
	37nm,0.3s						
KBA	Koelnbreinsper	0.83	269	⇑iPG	Pg	20 58 21.1	-0.5
KBA				i SG	Sg	20 58 33.2	+0.4
	23nm,0.2s						
KBA	Koelnbreinsper	0.83	269	ePg	Pg	20 58 21.1	-0.5
LSR	Lussari	0.95	229	⇑iPg	Pg	20 58 24.0	+0.1
LSR				i Sg	Sg	20 58 37.0	+0.5
PTCC	Patocco-Chiusa	1.08	231	ePg	Pg	20 58 26.5	-0.1
PTCC				eSg	Sg	20 58 41.8	+0.7
PTCC	Patocco-Chiusa	1.08	231	ePg	Pg	20 58 26.5	-0.1
PTCC				eSg	Sg	20 58 41.8	+0.7
PLRO	Paularo	1.12	241	⇑iPg	Pg	20 58 27.1	-0.2
PLRO				eSg	Sg	20 58 41.9	-0.3
DRE	Drenchia	1.12	215	⇑iPg	Pg	20 58 27.1	-0.3
DRE				i Sg	Sg	20 58 42.5	+0.1
VOY	Vojsko	1.16	204	ePg	Pg	20 58 27.9	-0.3
VOY				e		20 58 29.0	
VOY				eSg	Sg	20 58 43.2	-0.6
VOY	Vojsko	1.16	204	ePg	Pg	20 58 27.9	-0.3
VOY				eSg	Sg	20 58 43.2	-0.6
BGLD	Berchtesgaden	1.19	298	ePg	Pg	20 58 27.4	-1.3
ZOU	Zoufplan	1.22	244	⇓ePg	Pg	20 58 28.8	-0.5
ZOU				eSg	Sg	20 58 45.0	-0.6
GMNA	Gemona	1.23	228	ePg	Pg	20 58 30.8	+1.3
GMNA				eSg	Sg	20 58 48.5	+2.5
GMNA	Gemona	1.23	228	ePg	Pg	20 58 30.8	+1.3
GMNA				eSg	Sg	20 58 48.5	+2.5
BAD	Bernadia	1.25	227	ePg	Pg	20 58 29.6	-0.4
BAD				eSg	Sg	20 58 46.9	+0.2
COLI	Coloredo	1.27	221	⇑iPg	Pg	20 58 30.5	+0.3
COLI				i Sg	Sg	20 58 48.0	+0.9
FVI	Forni Avoltri	1.32	248	ePg	Pg	20 58 30.9	-0.4
FVI				eSg	Sg	20 58 49.0	-0.1
FVI	Forni Avoltri	1.32	248	ePg	Pg	20 58 31.0	-0.4
FVI				eSg	Sg	20 58 49.0	0.0
RJOB	Jochberg	1.36	299	ePg	Pg	20 58 32.0	-0.1
RJOB				eSg	Sg	20 58 50.9	+0.7
TRI	Trieste	1.50	202	ePg	Pg	20 58 34.9	+0.1
TRI				eSg	Sg	20 58 55.1	+0.3
TRI	Trieste	1.50	202	ePg	Pg	20 58 34.9	0.0
TRI				eSg	Sg	20 58 55.1	+0.3
MLNI	Malnisio	1.65	235	ePg	Pg	20 58 37.2	-0.7
MLNI				eSg	Sg	20 59 00.6	+0.7
MLNI	Malnisio	1.65	235	i Pg	Pg	20 58 33.6	-4.3
MLNI				i Sg	Sg	20 58 56.0	-3.8
VKA	Vienna	1.66	45	⇑iPG	Pg	20 58 37.0	-1.2
VKA				i SG	Sg	20 58 57.5	-2.9
GEC2	GERESS Array S	1.84	342	ePn	Pn	20 58 38.4	+1.5
GEC2				eSn	Sn	20 59 02.5	+2.0
GEC2	GERESS Array S	1.84	342	ePn	Pn	20 58 38.4	+1.5
GEC2				eSn	Sn	20 59 02.5	+2.1
SCE	Schlegeis	1.95	269	⇓iPg	Pg	20 58 41.4	-2.5
WTTA	Wattenberg	2.00	276	⇑iPG	Pg	20 58 42.7	-2.2
WTTA				i SG	Sg	20 59 11.7	0.0
	14nm,0.3s						
WTTA	Wattenberg	2.00	276	ePn	Pn	20 58 42.7	+3.5
ZST	Bratislava	2.04	57	ePN	Pn	20 58 41.9	+2.1
ZST				eSN	Sn	20 59 07.5	+2.0
WATA	Walderalm	2.05	278	⇑iPG	Pg	20 58 44.1	-1.8
WATA				i SG	Sg	20 59 13.3	+0.1
	5.1nm,0.2s						
KHC	Kasperske Hory	2.14	342	ePN	Pn	20 58 42.4	+1.2
KHC				eSG	Sn	20 59 09.0	+1.0
SQTA	Sankt Quirin	2.29	274	⇓iPG	Pg	20 58 48.3	-2.4
SQTA				i SG	Sg	20 59 20.6	-0.7
	18nm,0.3s						
WET	Wettzell	2.34	332	eSn	Sn	20 59 17.5	+4.4
MOTA	Moosalm	2.37	277	⇓iPG	Pg	20 58 50.6	-1.7
MOTA				i SG	Sg	20 59 23.7	-0.2
	16nm,0.6s						
VRAC	Vranov	2.59	31	eSg	Sn	20 59 20.8	+1.2
PRU	Pruhonice	2.89	360	ePG	Pg	20 58 56.9	-5.8
DAVA	Damuels	3.20	275	⇑iPN	Pn	20 58 56.1	-0.2
DAVA				i SN	Sn	20 59 35.8	+0.9
DAVA				i SG	Sg	20 59 51.1	-0.3
	9.7nm,0.6s						
GRA1	Grafenberg Arr	3.42	321	ePn	Pn	20 59 02.1	+2.7
GRF	Grafenberg Arr	3.42	321	ePn	Pn	20 59 02.1	+2.7
GRF	Grafenberg Arr	3.42	321	ePn	Pn	20 59 02.1	+2.7
OKC	Ostrava-Krasne	3.63	40	eSG	Sx	20 59 57.2	
BRG	Berggiesshubel	3.80	354	ePg	Pg	20 59 16.6	-4.2
BRG				eSg	Sn	21 00 02.1	+12
MOX	Moxa	4.05	332	ePn	Pn	20 59 09.3	+1.0
MOX				eSg	Sn	21 00 12.6	+16
CLL	Collm	4.33	347	eSg	Sx	21 00 21.0	
CLL	Collm	4.33	347	eSg	Sx	21 00 21.0	

IDC ***17*** *21:06:45.5±0.8, 7.39N×94.10E, mb4.0/15, mb1 4.2/16, mb1mx4.1/22, mbtmp4.0/16, ML4.1/1, Error ellipse: s-maj=34.1km s-min=18.2km az=49.0*

BJI ***17*** *21:06:49.1, 7.21N×94.08E, h48^{km}, mb4.2*

NEIC ***17*** *21:06:50.0±0.5, 7.47N×94.12E, h30^{km}, mb4.3/8, Error ellipse: s-maj=13.6km s-min=8.9km az=62.0*

ISC 17 21:06:51.6±3.7, 7.6N±0.1×94.3E±0.1, h53^{km}±31^{km}, n34, σ1^{s}06/33, mb4.2/27, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	11.68	22	eP	P	21 09 38.4	+0.2
CMAR	Chiang Mai Arr	11.68	22	Pn	P	21 09 38.7	+0.5
	0.4nm,0.3s,baz=212,slow=14,SNR=15						
JIRN	Jiri	21.35	340	eP	P	21 11 35.7	-0.8
	18nm,0.8s,mb4.5						
PKI	Pulchoki	21.55	338	eP	P	21 11 39.8	+1.4
	16nm,0.9s,mb4.5						
DMN	Daman	21.70	337	eP	P	21 11 39.6	-0.3
KKN	Kakani	21.79	338	eP	P	21 11 39.9	-1.0
	19nm,0.8s,mb4.5						
LSA	Lhasa	22.16	353	P	P	21 11 47.6	+3.2
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
LSA	Lhasa	22.16	353	eP	P	21 11 44.4	0.0
	comp=Z,14nm,0.7s,mb4.5						
GKN	Gorkha	22.23	337	eP	P	21 11 43.6	-1.6
	comp=Z,12nm,0.6s,mb4.5						
KOLN	Koldanda	22.45	335	eP	P	21 11 47.2	-0.1
	comp=Z,17nm,0.7s,mb4.6						
ENH	Enshi	26.66	30	P	P	21 12 27.8	+0.2
	comp=Z,11nm,1.3s,mb4.2						
GTA	Gaotai	32.03	8	P	P	21 13 15.9	+0.4
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
AAK	Ala-Archa	38.99	337	eP	P	21 14 12.9	-1.6
	comp=Z,2.0nm,0.9s,mb3.9						
SONM	Songino Array	41.37	12	P	P	21 14 35.3	+1.2
	comp=Z,1.4nm,0.8s,mb3.7,baz=194,slow=8.4,SNR=10						
SONM				PcP	PcP	21 16 33.4	+1.1
	comp=Z,0.6nm,0.9s,baz=213,slow=2.9,SNR=3.9						
ULN	Ulaanbaatar	41.55	13	eP	P	21 14 36.0	+0.5
	comp=Z,1.3nm,0.8s,mb3.6						
KURK	Kurchatov	44.88	346	eP	P	21 15 02.6	0.0
	comp=Z,7.3nm,0.9s,mb4.5						
ZAL	Zalesovo	46.81	352	P	P	21 15 18.5	+0.7
	comp=Z,2.8nm,0.4s,mb4.5,baz=299,slow=6.4,SNR=18						
ZAL	Zalesovo	46.81	352	P	P	21 15 18.5	+0.7
WRA	Warramunga Arr	48.00	125	P	P	21 15 24.9	-2.8
	comp=Z,0.5nm,0.6s,mb3.7,baz=304,slow=8.5,SNR=14						
WRAB	Tennant Creek	48.00	125	eP	P	21 15 27.2	-0.5
	comp=Z,5.4nm,1.0s,mb4.5						
BVAR	Borovoye Array	49.27	341	P	P	21 15 36.5	-0.6
	comp=Z,1.3nm,0.8s,mb4.0,baz=141,slow=9.5,SNR=8.5						
BVAR				PcP	PcP	21 17 00.3	+0.8
	comp=Z,0.5nm,0.8s,baz=135,slow=4.2,SNR=4.3						
ASAR	Alice Springs	49.65	130	P	P	21 15 40.5	+0.2
	comp=Z,0.6nm,0.7s,mb3.7,baz=301,slow=7.3,SNR=6.8						
KMBO	Kilima Mbogo	57.54	264	P	P	21 16 41.3	+2.7
	comp=Z,0.3nm,0.3s,mb3.7,baz=60,slow=14,SNR=2.5						
BRTR	Keskin Array B	62.70	311	P	P	21 17 12.2	-1.4
	comp=Z,0.6nm,0.6s,mb3.9,baz=121,slow=7.2,SNR=3.9						
AKASG	Malin Array Be	68.44	322	P	P	21 17 48.2	-1.8
	comp=Z,0.2nm,0.3s,mb3.6,baz=90,slow=4.7,SNR=4.4						
IDI	Anoyia	68.83	305	P	P	21 17 52.3	-0.4
	comp=Z,7.0nm,0.9s,mb4.6,baz=78,slow=9.3,SNR=3.6						
FINES	FINESS Array B	73.00	332	P	P	21 18 17.4	+0.1
	comp=Z,1.3nm,0.5s,mb4.1,baz=96,slow=5.7,SNR=13						
LBTB	Lobatse	74.25	241	P	P	21 18 27.7	+2.3
	comp=Z,1.9nm,0.8s,mb4.1,baz=72,slow=6.4,SNR=3.6						
ARCES	ARCESS Array B	75.55	340	P	P	21 18 32.4	+0.4
	comp=Z,2.9nm,0.8s,mb4.3,baz=111,slow=7.7,SNR=3.6						
GERES	GERESS Array B	78.11	318	P	P	21 18 47.5	+0.8
	comp=Z,1.3nm,0.9s,mb3.9,baz=90,slow=4.0,SNR=9.3						
NB2	NORSAR Subarra	80.02	331	P	P	21 18 56.9	+0.1
	comp=Z,1.2nm,0.6s,mb4.0,baz=98,slow=4.8						
NOA	NORSAR Array B	80.02	331	P	P	21 18 57.0	+0.2
	comp=Z,3.3nm,1.0s,mb4.2,baz=94,slow=5.3,SNR=5.5						
DAVOX	Davos	80.67	316	P	P	21 19 01.8	+1.2
	comp=Z,2.3nm,0.8s,mb4.2,baz=137,slow=18,SNR=2.3						
PLCA	Paso Flores	144.37	200	PKP	PKPdf	21 26 23.2	+1.0
	comp=Z,1.6nm,0.8s,baz=203,slow=7.7,SNR=5.2						

IGQ 17 21:13:23.9, 1.25S×81.10W, h11^{km}±5^{km}, mb4.1, 2C-1D, Error ellipse: s-maj=8.6km s-min=4.6km az=23.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.59	70	⇑P	Pb	21 13 35.3	-0.5
SALI	Salinas	0.94	173	P	Pb	21 13 42.9	+1.2
IGUA	Igualata	2.47	96	P	Pn	21 14 05.3	+0.5
IGUA				S	Sn	21 14 36.7	+1.4
RETU	Refugio	2.66	94	P	Pn	21 14 08.3	+0.7
NAS1	Nasa	2.69	77	P	Pn	21 14 09.5	+1.5
JUA2	San Juan 2	2.70	68	P	Pn	21 14 08.4	+0.3
ULBA	Ulba	2.70	94	P	Pn	21 14 08.8	+0.7
ULBA				S	Sn	21 14 42.6	+1.6
TERV	Terraza Guagua	2.71	67	P	Pn	21 14 08.6	+0.3
PINO	Pino	2.72	67	P	Pn	21 14 09.3	+0.9
PINO				S	Sn	21 14 44.7	+3.2
PISA	Pisayambo	2.72	86	P	Pn	21 14 11.1	+2.7
PISA				S	Sn	21 14 43.6	+2.0
VC1	Cotopaxi 1	2.76	77	P	Pn	21 14 10.6	+1.5
YANA	Yana	2.77	66	P	Pn	21 14 10.3	+1.2
YANA				S	Sn	21 14 46.8	+4.0
TAMB	Tambo	2.79	79	P	Pn	21 14 11.9	+2.5
ANTI	Antisana	3.04	75	P	Pn	21 14 15.1	+2.0
COTA	Cotacachi	3.18	60	P	Pn	21 14 16.9	+2.0
CAYR	Refugio Cayamb	3.34	68	⇑P	Pn	21 14 21.1	+3.9
CAYA	Cayambe	3.38	67	⇓P	Pn	21 14 21.0	+3.3
CAYA				S	Sn	21 15 06.3	+8.1
ECEN	Cerro Negro	3.75	57	P	Pn	21 14 24.4	+1.4

IDC ***17*** *21:22:05.9±1.1, 7.44N×94.06E, mb3.7/10, mb1 3.9/11, mb1mx3.8/20, mbtmp3.7/11, ML4.0/1, MS4.6/1, Ms1 4.6/1, ms1mx3.0/23, Error ellipse: s-maj=44.7km s-min=19.5km az=54.0*

NEIC ***17*** *21:22:10.7±0.6, 7.53N×94.22E, h30^{km}, mb4.6/3, Error ellipse: s-maj=17.0km s-min=9.4km az=66.0*

ISC 17 21:22:11.7±6.1, 7.7N±0.2×94.4E±0.2, h48^{km}±50^{km}, n21, σ0^{s}94/21, mb4.0/18, MS4.7/1, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	11.60	22	P	P	21 24 55.3	-2.0
	2.1nm,0.4s						
CMAR	Chiang Mai Arr	11.60	22	Pn	P	21 24 58.6	+1.3
	0.3nm,0.3s,baz=211,slow=14,SNR=8.5						
JIRN	Jiri	21.38	340	eP	P	21 27 02.9	+5.7
	24nm,0.8s,mb4.6						
DMN	Daman	21.73	337	eP	P	21 27 00.4	-0.3
	14nm,0.7s,mb4.5						
KKN	Kakani	21.83	338	eP	P	21 27 03.0	+1.3
	7.8nm,0.8s,mb4.2						
LSA	Lhasa	22.15	352	eP	P	21 27 05.8	+0.9
	4.1nm,0.6s,mb4.0						
GKN	Gorkha	22.27	337	eP	P	21 27 05.6	-0.4
	20nm,0.9s,mb4.5						
KOLN	Koldanda	22.49	334	eP	P	21 27 07.0	-1.2
	12nm,0.9s,mb4.3						
SONM	Songino Array	41.32	12	P	P	21 29 55.2	+1.0
	0.5nm,1.0s,mb3.1,baz=211,slow=8.4,SNR=3.0						
ZAL	Zalesovo	46.81	352	P	P	21 30 38.5	+0.2
	1.0nm,0.3s,mb4.2,baz=292,slow=8.5,SNR=5.4						
WRA	Warramunga Arr	47.89	126	P	P	21 30 47.6	+0.3
	0.7nm,0.8s,mb3.8,baz=301,slow=9.8,SNR=26						
WRAB	Tennant Creek	47.89	126	eP	P	21 30 47.4	+0.1
	8.7nm,1.2s,mb4.7						
BVAR	Borovoye Array	49.30	341	P	P	21 30 56.9	-0.9
	0.3nm,0.8s,mb3.4,baz=45,slow=4.1,SNR=2.5						
ASAR	Alice Springs	49.54	130	P	P	21 31 00.1	0.0
	0.3nm,0.3s,mb3.7,baz=301,slow=6.8,SNR=5.8						
ASAR				LR	LR	21 56 07.7	
	comp=Z,618nm,18.1s,MS4.7,baz=126,slow=41						
PMG	Port Moresby	55.18	107	P	P	21 31 41.8	-0.4
	8.7nm,0.8s,mb4.8						
STKA	Stephens Creek	59.73	134	P	P	21 32 08.9	-5.3
BRTR	Keskin Array B	62.80	311	P	P	21 32 37.0	+2.3
	0.4nm,0.4s,mb3.9,baz=130,slow=7.2,SNR=4.0						
FINES	FINESS Array B	73.05	332	P	P	21 33 37.1	-1.1
	0.7nm,0.6s,mb3.7,baz=100,slow=8.5,SNR=7.4						
GERES	GERESS Array B	78.19	318	P	P	21 34 07.4	-0.3
	0.2nm,0.5s,mb3.3,baz=60,slow=7.9,SNR=2.8						
HFS	Hagfors	78.80	330	P	P	21 34 10.5	-0.3
	2.5nm,0.8s,mb4.2,baz=135,slow=4.2,SNR=5.0						
NOA	NORSAR Array B	80.07	331	P	P	21 34 17.6	-0.1
	0.4nm,0.7s,mb3.5,baz=96,slow=17,SNR=2.6						

IDC ***17*** *21:31:10.0±1.3, 39.99S×174.68E, h42^{km}±13^{km}, mb4.1/7, mb1 4.4/9, mb1mx4.2/13, mbtmp4.4/9, ML4.5/2, MS4.3/2, Ms1 4.3/2, ms1mx3.1/17, Error ellipse: s-maj=21.9km s-min=9.2km az=135.0*

NEIC ***17*** *21:31:10.2, 39.90S×174.61E, h28^{km}, mb4.8/10, ML5.2(WEL), After WEL.*

NEIC Felt in the southern part of the North Island.

WEL ***17*** *21:31:10.2±0.1, 39.90S×174.60E, h28^{km}, ML5.2/39, Error ellipse: s-maj=0.6km s-min=0.4km az=90.0, reported intensity MM 6.*

WEL Felt from Waikato to Wellington, and from Nelson to Hawke’s Bay, maximum.

ISC 17 21:31:08.6±0.2, 39.95S±0.02×174.52E±0.03, h28^{km}, n178, σ1^{s}17/165, mb4.6/14, MS4.3/2, 43C-15D, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.40	62	⇑P	Pb	21 31 17.4	+0.1
WAZ				S	Sb	21 31 23.4	+0.1
WAZ	Wanganui	0.40	62	⇓P*	Pb	21 31 17.4	+0.1
WAZ				⇓P*	Pb	21 31 17.4	+0.1
WAZ				S*	Sb	21 31 23.4	+0.1
WAZ				S*	Sb	21 31 23.5	+0.1
RAEZ	Rainy Point	0.67	351	⇑P	Pb	21 31 22.7	+1.1
RAEZ	Rainy Point	0.67	351	⇑P*	Pb	21 31 22.7	+1.1
DFE	Dawson Falls	0.70	332	P*	Pb	21 31 23.6	+1.5
NEZ	North Egmont	0.75	334	P	Pb	21 31 24.2	+1.2
NEZ	North Egmont	0.75	334	⇓P*	Pb	21 31 24.2	+1.3
NRZ	Ngariki Road	0.76	323	⇓P	Pb	21 31 24.7	+1.6
NRZ	Ngariki Road	0.76	323	⇓PN	Pn	21 31 24.7	+1.3
VRZ	Vera Road	0.84	13	⇑P	Pb	21 31 24.7	+0.2
VRZ				S	Sb	21 31 36.1	+0.7
VRZ	Vera Road	0.84	13	⇑PN	Pn	21 31 24.7	+0.1
VRZ				⇑PN	Pn	21 31 24.7	+0.1
VRZ				SN	Sn	21 31 36.1	+0.1
VRZ				SN	Sn	21 31 36.4	+0.3
NWEZ	Newall Road	0.84	323	⇑P	Pb	21 31 26.1	+1.6
NWEZ	Newall Road	0.84	323	⇑PN	Pn	21 31 26.1	+1.5
PKE	Pukeiti	0.86	331	P	Pb	21 31 25.7	+0.9
PKE	Pukeiti	0.86	331	PN	Pn	21 31 25.7	+0.9
KIW	Kapiti Island	0.96	162	⇑P	Pn	21 31 27.4	+1.1
KIW	Kapiti Island	0.96	162	⇑PN	Pn	21 31 27.4	+1.1
DRZ	Dome Shelter	1.05	50	⇑P	Pn	21 31 27.3	-0.2
DRZ	Dome Shelter	1.05	50	⇑PN	Pn	21 31 27.3	-0.2
DRZ				⇑PN	Pn	21 31 27.3	-0.2
FWVZ	Far West T-bar	1.05	49	⇑P	Pn	21 31 27.3	-0.3
FWVZ				S	Sn	21 31 40.4	-1.0
FWVZ	Far West T-bar	1.05	49	⇑PN	Pn	21 31 27.3	-0.3
FWVZ				SN	Sn	21 31 40.4	-1.0
MRZ	Mangatainoka R	1.08	132	⇑P	Pn	21 31 29.2	+1.2
MRZ	Mangatainoka R	1.08	132	⇑PN	Pn	21 31 29.2	+1.2
WPVZ	Whakapapa	1.08	47	⇓PN	Pn	21 31 28.0	0.0
CNZ	Chateau	1.09	47	⇑P	Pn	21 31 28.0	-0.1
CNZ	Chateau	1.09	47	⇑PN	Pn	21 31 28.0	-0.1
MOVZ	Moawhango	1.09	61	⇑P	Pn	21 31 27.8	-0.4
MOVZ	Moawhango	1.09	61	⇑PN	Pn	21 31 27.8	-0.4

MOVZ				SN	Sn	21 31 40.9	-1.5
TUVZ	Tukino	1.10	53	⇑P	Pn	21 31 28.4	0.0
TUVZ	Tukino	1.10	53	⇓PN	Pn	21 31 28.4	0.0
TSZ	Takapari Road	1.11	96	⇑P	Pn	21 31 28.8	+0.4
TSZ	Takapari Road	1.11	96	⇑PN	Pn	21 31 28.8	+0.4
TSZ				⇑PN	Pn	21 31 28.9	+0.4
TWVZ	Taurewa	1.12	39	⇓P	Pn	21 31 28.4	-0.2
TWVZ	Taurewa	1.12	39	⇓PN	Pn	21 31 28.4	-0.2
NGZ	Ngauruhoe	1.13	48	⇑P	Pn	21 31 28.6	-0.2
NGZ	Ngauruhoe	1.13	48	PN	Pn	21 31 28.6	-0.2
WTVZ	West Tongariro	1.17	45	P	Pn	21 31 29.1	-0.2
WTVZ	West Tongariro	1.17	45	PN	Pn	21 31 29.1	-0.2
OTVZ	Oturere	1.18	49	PN	Pn	21 31 29.3	-0.1
MGZ	Maungaku	1.23	40	P	Pn	21 31 30.0	-0.1
MGZ	Maungaku	1.23	40	PN	Pn	21 31 30.0	-0.1
CAW	Cannon Point	1.23	161	⇑P	Pn	21 31 31.4	+1.2
CAW	Cannon Point	1.23	161	⇑PN	Pn	21 31 31.4	+1.3
MRW	Makara Radio	1.29	174	⇑P	Pn	21 31 32.1	+1.1
MRW	Makara Radio	1.29	174	⇑PN	Pn	21 31 32.1	+1.1
KATZ	Kakaramea	1.33	43	⇓P	Pn	21 31 31.4	-0.1
KATZ	Kakaramea	1.33	43	⇓PN	Pn	21 31 31.4	-0.1
WEL	Wellington	1.35	172	P	Pn	21 31 33.4	+1.5
WEL	Wellington	1.35	172	PN	Pn	21 31 33.3	+1.4
RITZ	Rihia Road	1.42	47	P	Pn	21 31 33.6	+0.8
RITZ	Rihia Road	1.42	47	PN	Pn	21 31 33.6	+0.8
MTW	Mount Morrison	1.42	149	⇑PN	Pn	21 31 34.1	+1.2
RATZ	Rangitukua	1.45	42	P	Pn	21 31 33.2	-0.1
RATZ	Rangitukua	1.45	42	PN	Pn	21 31 33.2	0.0
HIZ	Hauiti	1.45	10	⇓P	Pn	21 31 34.0	+0.6
HIZ	Hauiti	1.45	10	⇑PN	Pn	21 31 34.0	+0.7
BHW	Baring Head	1.48	170	P	Pn	21 31 35.0	+1.2
BHW	Baring Head	1.48	170	⇑PN	Pn	21 31 35.0	+1.2
BFZ	Birch Farm	1.51	120	⇓*e*P	Pn	21 31 34.8	+0.7
BFZ	Birch Farm	1.51	120	⇑PN	Pn	21 31 34.8	+0.7
NNZ	Nelson	1.54	214	PN	Pn	21 31 36.8	+2.2
TUWZ	Tuamarina	1.55	196	PN	Pn	21 31 35.4	+0.7
WATZ	Wairara	1.55	38	PN	Pn	21 31 34.9	+0.1
MSWZ	Moikau Station	1.57	160	PN	Pn	21 31 36.0	+1.0
PAWZ	Paruwai Farm	1.59	155	PN	Pn	21 31 36.1	+0.8
HATZ	Hinemaiaia	1.61	50	PN	Pn	21 31 35.3	-0.3
WHTZ	Whakaora	1.69	41	PN	Pn	21 31 37.9	+1.2
BKZ	Black Stump Fm	1.71	64	PN	Pn	21 31 36.8	-0.2
QRZ	Quartz Range	1.76	239	⇑P	Pn	21 31 39.3	+1.6
QRZ	Quartz Range	1.76	239	⇓PN	Pn	21 31 39.3	+1.6
PWZ	Pawanui	1.80	93	*e*PN	Pn	21 31 38.4	+0.1
CMWZ	Cape Campbell	1.81	187	P	Pn	21 31 41.8	+3.3
CMWZ	Cape Campbell	1.81	187	PN	Pn	21 31 41.8	+3.3
BSWZ	Blackbirch Sta	1.83	195	P	Pn	21 31 40.5	+1.7
BSWZ	Blackbirch Sta	1.83	195	*e*PN	Pn	21 31 40.2	+1.4
PATZ	Paeroa	2.06	41	PN	Pn	21 31 42.5	+0.4
THZ	Tophouse	2.19	214	P	Pn	21 31 46.5	+2.6
THZ	Tophouse	2.19	214	PN	Pn	21 31 46.3	+2.4
UTU	Utuhina	2.19	37	*e*PN	Pn	21 31 46.9	+3.0
TAZ	Tarawera	2.31	43	*e*PN	Pn	21 31 45.8	+0.2
TOZ	Tahuroa Road	2.34	19	P	Pn	21 31 45.5	-0.6
TOZ	Tahuroa Road	2.34	19	PN	Pn	21 31 45.5	-0.6
LIRZ	Lichensteins R	2.42	37	*e*PN	Pn	21 31 49.7	+2.5
EDRZ	Edgecumbe	2.52	44	PN	Pn	21 31 50.5	+1.9
MARZ	Manawahe	2.58	41	*e*PN	Pn	21 31 50.5	+1.1
KHZ	Kahutara	2.58	196	PN	Pn	21 31 50.7	+1.3
TGRZ	Tauranga	2.59	32	*e*PN	Pn	21 31 48.5	-1.2
KNZ	Kokohu	2.61	70	*e*PN	Pn	21 31 49.7	-0.1
URZ	Urewera	2.62	51	P	Pn	21 31 49.5	-0.6
	158nm,0.3s,baz=240,slow=7.9,SNR=164						
URZ				S	Sn	21 32 19.3	-2.1
	444nm,0.3s,baz=89,slow=17,SNR=12						
URZ	Urewera	2.62	51	PN	Pn	21 31 48.9	-1.2
MWZ	Matawai	2.84	56	PN	Pn	21 31 51.7	-1.4
MKAZ	Moumakai	2.88	10	PN	Pn	21 31 53.3	-0.4
MYRZ	Mayor Island	2.98	27	*e*PN	Pn	21 31 54.5	-0.7
WTAZ	Waiatarua	3.01	1	PN	Pn	21 31 55.0	-0.5
KAAZ	Kauri Point	3.12	3	*e*PN	Pn	21 31 55.2	-2.0
MTAZ	Motutapu	3.17	6	P	Pn	21 31 57.7	-0.1
MTAZ	Motutapu	3.17	6	PN	Pn	21 31 57.7	-0.1
LTZ	Lake Taylor	3.30	210	PN	Pn	21 32 01.1	+1.4
KUZ	Kuaotunu	3.33	17	*e*P	Pn	21 31 58.5	-1.6
KUZ	Kuaotunu	3.33	17	PN	Pn	21 31 58.4	-1.7
PUZ	Puketiti	3.46	58	PN	Pn	21 32 01.0	-1.0
MXZ	Matakaoa Point	3.79	52	PN	Pn	21 32 06.4	-0.3
CRLZ	Canterbury Las	3.90	201	*e*PN	Pn	21 32 07.1	-1.1
WCZ	Waipu Caves	4.00	358	P	Pn	21 32 08.7	-1.0
WCZ	Waipu Caves	4.00	358	PN	Pn	21 32 08.7	-0.9
MQZ	McQueen's Vall	4.01	200	*e*PN	Pn	21 32 07.9	-1.9
WVZ	Waitaha Valley	4.23	221	*e*PN	Pn	21 32 12.7	-0.2
RPZ	Rata Peaks	4.57	213	P	Pn	21 32 16.8	-0.9
	16nm,0.3s,baz=47,slow=3.7,SNR=40						
RPZ				S	Sn	21 33 08.7	-2.0
	36nm,0.3s,baz=241,slow=5.6,SNR=4.3						
RPZ	Rata Peaks	4.57	213	*e*PN	Pn	21 32 16.1	-1.6
OUZ	Omahuta	4.78	351	PN	Pn	21 32 19.5	-1.1
FOZ	Fox Glacier	5.11	223	PN	Pn	21 32 23.8	-1.6
LBZ	Lake Benmore	5.48	215	*e*P	Pn	21 32 28.4	-2.2
LBZ	Lake Benmore	5.48	215	*e*PN	Pn	21 32 28.1	-2.5
ODZ	Otahua Downs	5.85	208	*e*P	Pn	21 32 33.6	-2.1
ODZ	Otahua Downs	5.85	208	PN	Pn	21 32 33.5	-2.3
JCZ	Jackson Bay	5.95	224	P	Pn	21 32 36.0	-1.2
JCZ	Jackson Bay	5.95	224	PN	Pn	21 32 36.0	-1.3
WKZ	Wanaka	6.36	218	*e*P	Pn	21 32 39.8	-3.1
WKZ				S	Sn	21 33 50.6	-4.8
WKZ	Wanaka	6.36	218	*e*PN	Pn	21 32 39.3	-3.6
EAZ	Earnscleugh	6.53	214	*e*P	Pn	21 32 43.6	-1.8
EAZ	Earnscleugh	6.53	214	*e*PN	Pn	21 32 43.6	-1.9
MSZ	Milford Sound	6.80	224	*e*PN	Pn	21 32 47.3	-1.8
TUZ	Tuapeka	7.00	209	*e*P	Pn	21 32 49.1	-2.8
TUZ	Tuapeka	7.00	209	*e*PN	Pn	21 32 48.9	-3.1
MLZ	Mavora Lakes	7.14	219	*e*P	Pn	21 32 52.6	-1.4
MLZ	Mavora Lakes	7.14	219	*e*PN	Pn	21 32 54.4	+0.4
STKA	Stephens Creek	27.74	276	P	P	21 36 58.7	+1.9
	5.4nm,1.1s,mb4.1,baz=130,slow=13,SNR=4.1						
STKA	Stephens Creek	27.74	276	P	P	21 36 58.7	+1.9
RAR	Rarotonga	28.79	57	LR	LR	21 46 40.7	
	comp=Z,713nm,20.1s,MS4.3,baz=304,slow=32						
CTAO	Charters Tower	31.27	301	P	P	21 37 28.8	+0.4
	16nm,1.1s,mb4.8						
TBI	Tubuai	34.56	72	*e*LR	LR	21 47 15.7	
	234nm,22.5s						
ASAR	Alice Springs	37.79	283	P	P	21 38 23.1	-1.0
	4.3nm,0.8s,mb4.2,baz=120,slow=6.6,SNR=16						
ASPA	Alice Springs	37.79	283	*e*P	P	21 38 23.6	-0.6
VNDA	Vanda	38.06	184	P	P	21 38 26.7	+0.7
	5.0nm,1.2s,mb4.1,baz=43,slow=6.4,SNR=5.6						
VNDA	Vanda	38.06	184	*e*P	P	21 38 26.3	+0.3
	8.4nm,1.2s,mb4.3						
PPT	Papeete	38.20	65	*e*LR	LR	21 48 53.4	
	161nm,21.8s						
PMG	Port Moresby	38.97	314	P	P	21 38 34.5	+0.3
	4.0nm,0.5s,mb4.4,baz=247,slow=12,SNR=3.1						
PMG	Port Moresby	38.97	314	*e*P	P	21 38 34.6	+0.4
	15nm,0.9s,mb4.7						
WRAB	Tennant Creek	39.70	288	*e*P	P	21 38 39.2	-1.0
	8.5nm,0.7s,mb4.6						
WRA	Warramunga Arr	39.70	288	P	P	21 38 39.5	-0.8
	3.8nm,0.6s,mb4.3,baz=126,slow=8.1,SNR=21						
CASY	Casey	43.84	212	P	P	21 39 11.5	-2.0
	7.9nm,0.9s,mb4.4						
RKT	Rikitea	45.59	84	*e*LR	LR	21 52 23.5	
	183nm,29.5s						
NWAO	Narrogin (SRO)	45.94	260	*e*P	P	21 39 29.2	-1.6
	37nm,1.4s,mb5.1						
FITZ	Fitzroy Crossi	47.29	283	*e*P	P	21 39 40.3	-1.3
	8.2nm,0.4s,mb5.0						
MBWA	Marble Bar	49.97	275	*e*P	P	21 40 00.3	-2.0
	11nm,0.8s,mb4.9						
QSPA	South Pole Qui	50.18	180	⇑*i*P	P	21 40 04.6	+1.5
	20nm,0.8s,mb5.2						
TAOE	Nuku Hiva Isla	50.81	65	*e*LR	LR	21 54 44.2	
SNAA	Sanae	68.67	181	⇑*i*	P	21 42 08.2	-2.6
VNA3	Neumayer Olymp	69.08	179	⇑*i*	P	21 42 13.0	-0.3
VNA2	Neumayer--Watz	69.43	179	⇑*i*	P	21 42 15.7	+0.2
VNA2	Neumayer--Watz	69.43	179	⇑*i*	pP	21 42 21.8	-2.4
VNA2	Neumayer--Watz	69.43	179	⇑*i*	sP	21 42 28.7	+1.4
PLCA	Paso Flores	80.24	136	P	P	21 43 16.8	-1.2
	1.8nm,0.9s,mb4.0,baz=214,slow=8.7,SNR=5.1						
PLCA				LR	LR	22 09 50.9	
	comp=Z,175nm,20.9s,MS4.4,baz=72,slow=29						
PLCA	Paso Flores	80.24	136	*e*P	P	21 43 17.9	-0.1
	2.0nm,0.9s,mb4.0						
KS15	Wonju Array Si	88.11	325	*e*P	P	21 43 58.0	+0.3
CMAR	Chiang Mai Arr	91.12	293	P	P	21 44 11.8	-0.4
	2.7nm,0.7s,mb4.7,baz=142,slow=3.4,SNR=22						
YKA	Yellowknife Ar	116.71	29	PKP	PKPdf	21 49 46.7	-7.7
	0.3nm,0.5s,baz=259,slow=1.5,SNR=8.8						
YKA	Yellowknife Ar	116.71	29	PKP	PKPdf	21 49 46.7	-7.7
RES	Resolute Bay	128.21	20	*e*PKPdf	PKPdf	21 50 09.2	-7.1
KIV	Kislovodsk	144.36	293	*e*PKPdf	PKPdf	21 50 40.3	-6.2
ASF	Jabal al Asfar	145.14	271	PKPbc	PKPbc	21 50 43.8	+0.1
	3.1nm,0.9s,baz=294,slow=2.6,SNR=5.1						
EIL	Elat	145.51	265	PKPbc	PKPbc	21 50 45.4	+0.7
	5.8nm,1.0s,baz=119,slow=12,SNR=4.7						
ARCES	ARCESS Array B	146.15	341	PKPbc	PKPbc	21 50 43.3	-1.7
	11nm,0.7s,baz=56,slow=2.5,SNR=23						
DBIC	Dimbokro	146.86	181	PKPbc	PKPbc	21 50 48.4	0.0
	11nm,0.5s,baz=164,slow=5.6,SNR=28						
JOF	Joensuu	148.26	329	*e*pkp	PKPdf	21 50 48.0	-4.5
	3.7nm,0.6s						
BRTR	Keskin Array B	150.12	282	PKPbc	PKPdf	21 50 54.6	-1.6
	2.8nm,0.8s,baz=148,slow=5.2,SNR=14						
BRTR				PKPab	PKPab	21 51 00.8	-3.8
	4.8nm,1.0s,baz=146,slow=4.5,SNR=12						
KAF	Kangasniemi	150.66	330	*e*pkp	PKPdf	21 50 54.1	-2.2
	1.1nm,0.4s,baz=52,slow=2.2						
FINES	FINESS Array B	151.12	329	PKPbc	PKPdf	21 50 56.3	-0.7
	2.8nm,0.6s,baz=42,slow=3.6,SNR=12						
FINES				PKPab	PKPab	21 51 03.3	-4.7
	1.9nm,0.6s,baz=45,slow=5.4,SNR=8.8						
AKASG	Malin Array Be	153.57	306	PKPbc	PKPdf	21 51 01.4	+0.5
	0.2nm,0.3s,baz=59,slow=2.6,SNR=5.3						
AKASG				PKPab	PKPab	21 51 15.8	-2.8
	3.2nm,0.7s,baz=63,slow=4.4,SNR=13						
VRI	Vrincioaia	155.79	295	⇑P	PKPab	21 51 25.9	-2.3
MLR	Muntele Rosu	156.35	294	PKPab	PKPab	21 51 28.9	-1.8
	4.7nm,0.9s,baz=173,slow=2.3,SNR=8.7						
MLR	Muntele Rosu	156.35	294	⇑P	PKPab	21 51 28.0	-2.6
NOA	NORSAR Array B	156.50	339	PKPab	PKPab	21 51 28.2	-2.5
	1.3nm,0.8s,baz=32,slow=4.5,SNR=5.2						
HFS	Hagfors	156.51	336	PKPab	PKPab	21 51 28.2	-2.6
	1.8nm,0.7s,baz=68,slow=7.8,SNR=3.9						
BURAR	Bucovina Array	156.66	299	⇓P	PKPab	21 51 30.3	-1.6
VRAC	Vranov	161.77	308	PKPab	PKPab	21 51 52.8	-1.1
	1.2nm,0.6s,baz=52,slow=12,SNR=3.5						
CLL	Collm	162.85	318	*e*PKP2	PKPab	21 51 56.0	-2.4
GERES	GERESS Array B	163.70	309	PKPab	PKPab	21 52 01.0	-1.3
	2.2nm,0.9s,baz=56,slow=4.8,SNR=15						

IDC 17 21:51:07.6±6.7**, 14.52S**×**174.55W, mb4.0**/3**, mb1 4.4**/3**, mb1mx3.9**/15**, mbtmp4.0**/3**, Error ellipse: s-maj=309.9km s-min=32.8km az=140.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	48.97	256	P	P	21 59 55.7	-2.3
	0.5nm,0.3s,baz=91,slow=7.0,SNR=22						
ASAR	Alice Springs	49.34	251	P	P	21 59 59.2	-1.6
	6.1nm,0.4s,baz=87,slow=8.0,SNR=134						
ILAR	Eielson Array	81.81	12	P	P	22 03 28.1	-1.4
	0.3nm,0.6s,baz=222,slow=5.5,SNR=5.3						
GERES	GERESS Array B	145.11	350	PKPbc	PKPbc	22 10 45.9	-1.3
	0.5nm,0.7s,slow=3.9,SNR=4.7						

CSEM ***17*** *21:57:26.1±0.2, 37.01N×24.59W, h5^{km}, ML2.8, Error ellipse: s-maj=4.9km s-min=2.7km az=97.0, After PDA*

PDA ***17*** *21:57:26.1±0.6, 37.01N×24.59W, h5^{km}, MD2.6, ML2.8, Error ellipse: s-maj=3.8km s-min=2.4km az=84.0*

SVSA 17 21:57:26.1±0.6**, 37.01N**×**24.59W, h5**^{km}**, MD2.6, ML2.8, Error ellipse: s-maj=3.8km s-min=2.4km az=84.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.38	269	*i* P	Pg	21 57 32.8	-1.0
PSMN				*i* S	Sg	21 57 38.1	-0.9
MIRA	Miradouro	0.95	325	*e*P	Pb	21 57 41.5	-3.1
MIRA				*i* S	Sb	21 57 52.5	-4.8
FRA1	Furnas	0.95	320	*e*P	Pb	21 57 41.0	-3.7
FRA1				*i* S	Sb	21 57 52.5	-5.0
PCNG	Congro	0.99	320	*e*P	Pb	21 57 41.8	-3.6
PCNG				*e*S	Sb	21 57 53.6	-5.0
	100nm,0.2s						
VIF	Vila Franca	1.00	317	*e*P	Pb	21 57 42.0	-3.5
VIF				*i* S	Sb	21 57 53.9	-4.9
	150nm,0.2s						
PRCH	Ribeira Ch	1.01	315	*i* S	Sb	21 57 53.8	-5.3
	166nm,0.2s						
PFAD	Fenais da Ajud	1.01	325	*i* S	Sb	21 57 53.9	-5.3
MESC	Monte Escuro	1.04	319	*e*P	Pb	21 57 42.3	-3.9
MESC				*i* S	Sb	21 57 54.8	-5.1
LFA	Lagoa do Fogo	1.04	317	*i* P	Pb	21 57 42.4	-3.8
LFA				*e*S	Sb	21 57 54.9	-5.1
PMAT	Coroa da Mata	1.07	319	*e*S	Sb	21 57 55.6	-5.2
	40nm,0.2s						
CML	Cha da Macela	1.08	315	*i* P	Pb	21 57 42.7	-4.1
CML				*i* S	Sb	21 57 55.5	-5.5
PVER	Pico Vermelho	1.08	317	*e*P	Pb	21 57 42.9	-3.9
PVER				*e*S	Sb	21 57 55.6	-5.4
FAC	Faja de Cima	1.14	312	*e*P	Pb	21 57 44.0	-3.9
FAC				*i* S	Sb	21 57 57.0	-5.8
PSAN	Santo Antonio	1.23	313	*e*S	Sb	21 57 59.7	-5.9
PFET	Feteiras	1.25	310	*i* S	Sb	21 57 59.8	-6.3
SET2	Ginetes	1.28	311	*e*P	Pb	21 57 46.1	-4.2
SET4	Mosteiros	1.29	312	*e*S	Sb	21 58 00.5	-6.8
PFAV	Pico das Favas	2.60	311	*e*rx	Sn	21 58 33.7	-8.3
RIB2	Ribeirinha	2.63	310	*e*rx	Sn	21 58 34.7	-8.0
PVNV	Vila Nova	2.68	311	*e*rx	Sn	21 58 35.8	-8.1
PPAD	Pico dos Padre	2.72	309	*e*rx	Sn	21 58 36.3	-8.7
ASBA	Santa Barbara	2.76	309	*e*rx	Sn	21 58 38.5	-7.4

IDC 17 22:14:51.9±8.0**, 21.28S**×**178.62W, h575**^{km}±94^{km}**, mb2.8**/5**, mb1 3.2**/6**, mb1mx3.1**/15**, mbtmp3.8**/6**, Error ellipse: s-maj=43.9km s-min=27.0km az=36.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.32	191	P	P	22 18 21.1	-1.6
	0.9nm,0.3s,baz=114,slow=21,SNR=4.9						
ASAR	Alice Springs	43.78	258	P	P	22 22 08.2	-1.0
	1.7nm,0.8s,baz=96,slow=7.8,SNR=16						
WRA	Warramunga Arr	43.92	263	P	P	22 22 08.6	-1.7
	0.3nm,0.4s,baz=98,slow=7.6,SNR=16						
VNDA	Vanda	57.09	185	P	P	22 23 44.3	-1.2
	0.8nm,0.6s,baz=16,slow=7.1,SNR=3.8						
ILAR	Eielson Array	89.20	13	P	P	22 26 45.8	-1.7
	0.4nm,0.6s,baz=218,slow=4.7,SNR=6.2						
PDAR	Pinedale Array	89.93	43	P	P	22 26 51.8	+0.4
	0.3nm,0.6s,baz=233,slow=4.5,SNR=3.7						
AKASG	Malin Array Be	143.41	330	PKP	PKPdf	22 33 19.0	-1.9
	1.4nm,0.4s,baz=46,slow=3.6,SNR=10.0						
GERES	GERESS Array B	150.78	343	PKPbc	PKPdf	22 33 39.9	+7.0
	0.1nm,0.4s,slow=1.0,SNR=4.5						

CASC 17 22:29:51.3±2.0**, 7.31N**×**82.38W, h15**^{km}±14^{km}**, MD4.2, 3C-5D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.89	357	*e*P	Pb	22 30 09.2	+1.3
DVD	David	1.12	357	⇑*e*P	Pb	22 30 10.9	-1.0
ACR	Cerro Adams	1.54	330	⇑*e*P	Pn	22 30 16.5	-2.0
AZU	Azuero	2.15	77	*e*P	Pn	22 30 25.8	-1.3
BUS	Buena Vista	2.61	329	⇑*e*P	Pn	22 30 33.1	-0.7
BUS				*e*S	Sn	22 31 06.9	+1.4
URSC	Urasca	2.86	331	⇓*e*P	Pn	22 30 37.2	-0.1
LCR2	La Lucha 2	2.90	327	⇓*i*P	Pn	22 30 37.4	-0.4
ICR	Volcan Irazu	3.02	332	*e*P	Pn	22 30 39.4	-0.1
LAJ	Bijagual	3.06	326	*e*P	Pn	22 30 40.2	0.0
PRS1	Puriscal	3.27	324	⇓*e*P	Pn	22 30 41.3	-1.8
UPA	Univ. de Panam	3.27	59	⇓*e*P	Pn	22 30 43.7	+0.5
UPA				*e*S	Sn	22 31 20.3	-1.8
TRTC	Tortuguero	3.50	338	*e*P	Pn	22 30 46.1	-0.2
VCR	Vista de Mar	4.26	311	⇓*e*P	Pn	22 30 55.6	-1.6

NEIC ***17*** *22:41:42.1±0.7, 12.82N×91.52E, h30^{km}, mb4.0/4, Error ellipse: s-maj=15.2km s-min=13.8km az=126.0*

IDC ***17*** *22:41:42.4±1.0, 12.91N×91.70E, h22^{km}±5^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.7/19, mbtmp3.7/8, ML3.3/1, Error ellipse: s-maj=33.0km s-min=16.2km az=57.0*

ISC 17 22:41:40.9±0.7**, 12.9N**±0.1×**91.67E**±0.07**, h30**^{km}**, (h24**^{km}±.3^{km}**:pP-P), n14, σ0**^{s}**61**/16**, mb3.9**/10**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.93	51	Pn	P	22 43 51.5	+0.5
	0.1nm,0.3s,baz=237,slow=15,SNR=3.0						
PALK	Pallekele	12.15	244	*e*P	P	22 44 29.2	-5.9
PALK				*e*S	S	22 46 41.5	-9.1
HYB	Hyderabad	13.44	291	*i* P	P	22 44 57.5	+5.2
HYB				*e*		22 45 04.0	
HYB				*e*S	S	22 47 21.0	-0.6
LSA	Lhasa	16.74	358	*e*P	P	22 45 34.9	-0.2
	6.8nm,0.8s						
ENH	Enshi	23.89	41	P	P	22 46 52.1	-1.0
	5.1nm,0.7s,mb4.1						
SONM	Songino Array	36.95	17	P	P	22 48 49.1	-0.1
	0.8nm,1.1s,mb3.5,baz=203,slow=9.4,SNR=3.7						
SONM				pP	pP	22 48 56.3	-1.9
	0.6nm,0.7s,baz=210,slow=6.9,SNR=4.9						
KURK	Kurchatov	39.20	347	*e*P	P	22 49 08.3	+0.2
	2.2nm,0.9s,mb3.9						
ZAL	Zalesovo	41.31	354	P	P	22 49 25.4	-0.1
	0.5nm,0.5s,mb3.4,baz=315,slow=15,SNR=3.0						
WRA	Warramunga Arr	53.17	127	P	P	22 50 58.6	-0.2
	0.7nm,0.5s,mb3.9,baz=300,slow=10.0,SNR=17						
WRA				pP	pP	22 51 05.7	-2.4
	1.7nm,0.4s,baz=300,slow=10.0,SNR=14						
WRA				PcP	PcP	22 52 07.2	+0.6
	0.3nm,0.7s,baz=318,slow=3.2,SNR=2.5						
WRA				pPcP		22 52 14.5	
	0.1nm,0.4s,baz=319,slow=3.3,SNR=6.7						
WRAB	Tennant Creek	53.17	127	*e*P	P	22 50 58.4	-0.5
	5.8nm,0.6s,mb4.7						
ASAR	Alice Springs	55.00	131	P	P	22 51 12.4	+0.2
	0.9nm,0.7s,mb3.9,baz=306,slow=6.6,SNR=9.3						
ASAR				pP	pP	22 51 19.6	-1.8
	2.1nm,0.7s,baz=310,slow=6.8,SNR=10						
BRTR	Keskin Array B	57.37	309	P	P	22 51 29.1	0.0
	1.2nm,0.9s,mb3.9,baz=108,slow=7.8,SNR=6.1						
MLR	Muntele Rosu	63.93	314	P	P	22 52 15.2	+1.6
	2.5nm,0.9s,mb4.2,baz=113,slow=7.7,SNR=4.8						
GERES	GERESS Array B	72.51	317	P	P	22 53 07.3	+0.4
	0.5nm,0.8s,mb3.5,baz=79,slow=6.8,SNR=4.1						

IGQ 17 22:43:35.8, 1.50S×**81.46W, h5**^{km}±4^{km}**, mb4.5, 1C-2D, Error ellipse: s-maj=6.7km s-min=3.3km az=23.0, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALI	Salinas	0.83	146	⇑P	Pb	22 43 51.6	-0.7
HOJA	Cerro de Hojas	1.01	64	P	Pb	22 43 54.8	-0.6
HOJA				S	Sb	22 44 07.8	-1.0
IGUA	Igualata	2.82	90	P	Pn	22 44 23.1	+0.7
ARRY	Arrayan	3.00	90	P	Pn	22 44 25.3	+0.3
ULBA	Ulba	3.05	89	P	Pn	22 44 26.4	+0.7
NAS1	Nasa	3.10	74	P	Pn	22 44 28.6	+2.3
PISA	Pisayambo	3.10	82	P	Pn	22 44 28.0	+1.6
PISA				S	Sn	22 45 05.9	+1.6
JUA2	San Juan 2	3.12	66	P	Pn	22 44 29.5	+2.8
TERV	Terraza Guagua	3.14	65	P	Pn	22 44 32.9	+6.0
PINO	Pino	3.15	65	P	Pn	22 44 28.8	+1.9
VC1	Cotopaxi 1	3.17	75	P	Pn	22 44 29.9	+2.6
JOR1	San Jorge 1	3.19	62	P	Pn	22 44 26.3	-1.2
TAMB	Tambo	3.19	76	P	Pn	22 44 29.6	+2.0
YANA	Yana	3.19	65	P	Pn	22 44 28.1	+0.4
ANTI	Antisana	3.46	73	⇓P	Pn	22 44 33.7	+2.3
COTA	Cotacachi	3.61	60	P	Pn	22 44 34.1	+0.5
CAYR	Refugio Cayamb	3.76	67	⇓P	Pn	22 44 38.5	+2.7
CAYA	Cayambe	3.80	66	P	Pn	22 44 38.5	+2.2
ECEN	Cerro Negro	4.18	57	P	Pn	22 44 43.4	+1.8

PRE ***17*** *23:08:46.4±2.3, 26.99S×26.80E, h2^{km}, ML4.2*

NEIC ***17*** *23:08:47.0±0.5, 26.92S×26.55E, h5^{km}, mb4.9/4, Error ellipse: s-maj=16.1km s-min=9.2km az=100.0*

IDC ***17*** *23:08:46.0±1.0, 26.91S×26.70E, mb3.9/8, mb1 4.2/11, mb1mx4.0/24, mbtmp4.0/11, ML4.3/2, Error ellipse: s-maj=26.0km s-min=17.8km az=71.0*

ISC 17 23:08:44.2±2.1**, 26.97S**±0.03×**26.71E**±0.06**, h2**^{km}±14^{km}**, n30, σ1**^{s}**25**/39**, mb4.0**/13**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSR	Koster	1.13	9	*e*P	Pb	23 09 07.2	+1.1
KSR				*e*S	Sb	23 09 21.0	-0.1
KSR				*e*		23 09 26.5	
	comp=Z,6μm,0.4s						
SEK	Senekal	1.57	149	*e*P	Pn	23 09 14.1	+0.8
SEK				*e*S	Sb	23 09 33.3	-0.7
SEK				*e*		23 09 36.4	
	comp=Z,2μm,0.2s						
SLR	Silverton	1.87	49	*e*P	Pn	23 09 18.7	+1.2
SLR				*e*S	Sn	23 09 41.8	-0.3
SLR				*e*		23 09 44.5	
	comp=Z,3μm,0.4s						
BOSA	Boshof	2.08	218	*e*Pn	Pn	23 09 22.2	+1.6
BOSA				*e*Sn	Sn	23 09 48.6	+1.1
BOSA	Boshof	2.08	218	*e*P	Pn	23 09 22.5	+1.8
BOSA				*e*S	Sn	23 09 48.6	+1.1
LBTB	Lobatse	2.19	333	Pn	Pn	23 09 24.7	+2.5
	comp=Z,120nm,0.3s,baz=166,slow=13,SNR=570						
LBTB				Lg		23 09 54.0	
	comp=Z,311nm,0.3s,baz=66,slow=20,SNR=64						
LBTB				Rg		23 10 03.5	
	comp=Z,474nm,0.6s,baz=344,slow=13,SNR=26						
LBTB	Lobatse	2.19	333	*e*Pn	Pn	23 09 23.9	+1.8
LBTB				*e*Sn	Sn	23 09 52.3	+2.0
LBTB				Lg		23 09 54.0	
LBTB				Rg		23 10 03.5	
MSNA	Messina	5.50	34	*e*P	Pn	23 10 07.6	-1.6
SUR	Sutherland	7.44	222	Pn	Pn	23 10 36.0	-0.5
	comp=Z,5.2nm,0.3s,baz=61,slow=13,SNR=38						
SUR				Sn	Sn	23 11 57.1	-5.4
	comp=Z,6.5nm,0.3s,baz=126,slow=20,SNR=5.1						
SUR				Lg		23 12 36.1	
	comp=Z,11nm,0.3s,baz=319,slow=22,SNR=3.7						
SUR	Sutherland	7.44	222	Pn	Pn	23 10 36.0	-0.5
SUR				Sn	Sn	23 11 57.1	-5.4
SUR				Lg		23 12 36.1	
CVNA	Calvinia	7.55	232	*e*P	Pn	23 10 36.2	-1.9
TSUM	Tsumeb	11.41	311	Pn	P	23 11 28.7	-2.7
	comp=Z,2.2nm,0.3s,baz=140,slow=12,SNR=74						
TSUM				Sn	S	23 13 31.1	-10
	comp=Z,1.4nm,0.3s,baz=266,slow=17,SNR=5.5						
TSUM				Lg		23 14 45.3	
	comp=Z,1.2nm,0.3s,baz=297,slow=19,SNR=4.6						
TSUM	Tsumeb	11.41	311	*e*P	P	23 11 28.5	-3.0
TSUM				*e*S	S	23 13 27.5	-13
TSUM				Sn	S	23 13 31.1	-10
TSUM				Lg		23 14 45.3	
LSZ	Lusaka	11.72	7	*e*P	P	23 11 31.1	-4.4
LSZ				*e*S	S	23 13 36.8	-11
LSZ				*e*Lg		23 14 50.8	
KMBO	Kilima Mbogo	27.62	23	P	P	23 14 34.6	-0.7
	comp=Z,0.8nm,0.8s,mb3.4,baz=31,slow=21,SNR=2.2						
RCBR	Riachuelo	63.00	278	*e*P	P	23 19 11.9	-3.3
	comp=Z,16nm,1.0s,mb5.1						
RCBR				*e*		23 19 23.7	
CASY	Casey	63.17	153	P	P	23 19 17.7	+2.1
	comp=Z,22nm,1.2s,mb5.2						
QSPA	South Pole Qui	63.22	180	*e*P	P	23 19 15.1	-0.8
	comp=Z,5.2nm,1.0s,mb4.6						
BRTR	Keskin Array B	66.66	6	P	P	23 19 39.1	+0.4
	comp=Z,0.3nm,0.5s,mb3.6,baz=178,slow=8.1,SNR=3.3						
BDFB	Brasilia	69.67	262	P	P	23 19 58.0	+0.3
	comp=Z,2.6nm,0.7s,mb4.2,baz=162,slow=4.1,SNR=4.8						
MLR	Muntele Rosu	72.12	359	P	P	23 20 12.3	+0.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=307,slow=20,SNR=3.8						
ESDC	Sonseca Array	72.21	336	P	P	23 20 12.5	-0.2
	comp=Z,0.5nm,0.4s,mb3.8,baz=156,slow=5.9,SNR=6.3						
ESLA	Sonseca Array	72.21	336	P	P	23 20 12.2	-0.5
	comp=Z,0.4nm,0.7s,mb3.5						
GERES	GERESS Array B	76.36	351	P	P	23 20 35.3	-1.3
	comp=Z,0.3nm,0.7s,mb3.4,baz=250,slow=36,SNR=3.6						
AKASG	Malin Array Be	77.36	2	P	P	23 20 41.7	-0.3
	comp=Z,0.5nm,0.5s,mb3.7,baz=186,slow=5.2,SNR=5.1						
SAML	Samuel	85.91	262	*e*P	P	23 21 27.9	+0.3
	comp=Z,3.1nm,1.2s,mb4.4						
FINES	FINESS Array B	88.10	360	P	P	23 21 37.9	+0.7
	comp=Z,0.8nm,0.8s,mb4.0,baz=207,slow=4.3,SNR=5.1						
ELK	Elko	145.82	304	*e*PKPbc	PKPbc	23 28 28.0	+2.6
BMO	Blue Mountains	146.18	311	*e*PKPbc	PKPbc	23 28 28.0	+2.0
NVAR	Mina Array Bea	148.60	300	PKPbc	PKPdf	23 28 35.9	+4.7
	comp=Z,1.1nm,0.5s,baz=83,slow=5.2,SNR=9.7						

*IGQ **17** 23:40:23.4, 0.70S×81.45W, h4^{km}±6^{km}, mb4.6, Error ellipse: s-maj=8.1km s-min=5.4km az=6.9*
*IDC **17** 23:40:27.5±0.9, 0.80S×81.11W, mb3.9/10, mb1 4.1/12, mb1mx4.0/23, mbtmp4.0/12, ML2.2/1, MS3.2/2, Ms1 3.2/2, ms1mx2.5/24, Error ellipse: s-maj=62.5km s-min=15.9km az=59.0*
*BJI **17** 23:40:28.2, 0.90S×81.30W, h10^{km}, mB4.9, Ms4.8, Msz4.6*
*NEIC **17** 23:40:28.2±0.4, 0.94S×81.26W, h10^{km}, mb4.3/18, MD4.6(IGQ), Error ellipse: s-maj=11.7km s-min=7.3km az=51.0*
ISC 17 23:40:26.6±1.6, **0.89S**±0.05×**81.35W**±0.03, **h9**^{km}±11^{km}, **n66**, σ**1^{s}26**/67, **mb4.2**/22, **MS4.3**/2, **4C-5D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.82	101	⇑P	Pb	23 40 41.4	-1.3
SALI	Salinas	1.34	164	P	Pb	23 40 51.4	-0.2
IGUA	Igualata	2.78	102	P	Pn	23 41 12.9	+0.7
JUA2	San Juan 2	2.83	76	P	Pn	23 41 11.9	-1.0
TERV	Terraza Guagua	2.84	76	⇓P	Pn	23 41 11.7	-1.3
PINO	Pino	2.84	75	P	Pn	23 41 11.5	-1.6
YANA	Yana	2.88	75	⇓P	Pn	23 41 12.0	-1.7
NAS1	Nasa	2.88	85	P	Pn	23 41 14.1	+0.4
JUIV	Juive	2.94	100	P	Pn	23 41 16.4	+2.0
RETU	Refugio	2.96	101	P	Pn	23 41 17.7	+2.9
RETU				S	Sn	23 41 56.6	+5.8
VC1	Cotopaxi 1	2.96	85	⇑P	Pn	23 41 15.4	+0.6
ARRY	Arrayan	2.96	102	P	Pn	23 41 15.8	+1.0
ARRY				S	Sn	23 41 50.9	+0.1
PISA	Pisayambo	2.97	93	⇑P	Pn	23 41 16.0	+1.0
PISA				S	Sn	23 41 55.1	+4.0
TAMB	Tambo	2.99	86	P	Pn	23 41 16.0	+0.7
ULBA	Ulba	3.00	101	P	Pn	23 41 16.6	+1.3
OTAV	Otavalo	3.11	69	*e*Pn	Pn	23 41 14.6	-2.3
OTAV				*e*Sn	Sn	23 41 42.7	-12
ANTI	Antisana	3.22	82	⇑P	Pn	23 41 18.8	+0.3
COTA	Cotacachi	3.25	68	P	Pn	23 41 18.0	-0.9
CAYR	Refugio Cayamb	3.46	75	⇓P	Pn	23 41 22.9	+1.0
CAYR				S	Sn	23 42 03.7	+0.1
ELAGU	Cayambe Volc	3.47	76	P	Pn	23 41 22.7	+0.7
CAYA	Cayambe	3.49	74	⇓P	Pn	23 41 22.9	+0.6
CAYA				S	Sn	23 42 03.4	-1.0
ECEN	Cerro Negro	3.78	63	⇓P	Pn	23 41 25.0	-1.5
CONE	Cono NE Rev Vo	3.80	78	P	Pn	23 41 30.3	+3.6
PAYG	Puerto Ayora	8.94	271	*e*Pn	P	23 42 37.2	-1.7
ROSC	El Rosal	9.04	51	Pn	P	23 42 48.9	+8.4
	0.5nm,0.3s,baz=90,slow=18,SNR=4.0						
ROSC				LR	LR	23 46 17.0	
	comp=Z,68nm,19.3s,baz=359,slow=40						
JTS	JuntasAbangare	11.67	342	P	P	23 43 23.6	+7.0
	9.8nm,1.0s						
NNA	Nana	11.90	158	*e*P	P	23 43 16.6	-3.1
SDV	Santo Domingo	14.43	48	Pn	P	23 43 58.2	+4.8
	0.9nm,0.3s,baz=111,slow=20,SNR=16						
SDV	Santo Domingo	14.43	48	P	P	23 43 53.2	-0.2
	17nm,0.8s						
SAML	Samuel	19.78	114	*e*P	P	23 44 56.0	-4.3
	30nm,1.5s						
LPAZ	La Paz	20.10	140	P	P	23 45 04.4	+0.7
	2.2nm,0.8s,baz=349,slow=10,SNR=4.7						
LPAZ	La Paz	20.10	140	*e*P	P	23 45 03.6	-0.1
	11nm,1.3s						
TEIG	Tepich	22.05	342	*e*P	P	23 45 23.7	+0.1
	3.8nm,0.8s,mb3.9						
SJG	San Juan	24.09	38	P	P	23 45 45.2	+1.5
	20nm,1.0s,mb4.5						
LVC	Limon Verde	24.75	152	P	P	23 45 52.2	+2.1
	1.3nm,0.6s,mb3.6,baz=326,slow=8.7,SNR=3.3						
LVC	Limon Verde	24.75	152	*e*P	P	23 45 51.5	+1.4
	14nm,1.3s,mb4.3						
LVC				*e*		23 46 25.0	
BDFB	Brasilia	36.01	116	P	P	23 47 29.4	-1.0
	3.8nm,0.8s,mb4.4,baz=22,slow=5.4,SNR=3.0						
BDFB				LR	LR	00 03 55.6	
	comp=Z,75nm,20.4s,MS3.5,baz=172,slow=39						
TXAR	Lajitas Array	36.85	326	P	P	23 47 39.3	+2.0
	0.3nm,0.6s,mb3.3,baz=90,slow=9.0,SNR=3.0						
WVT	Waverly	37.32	351	P	P	23 47 39.8	-1.5
	2.2nm,0.7s,mb4.1						
WMOK	Wichita Mounta	39.02	337	*e*P	P	23 47 55.7	+0.2
	2.4nm,0.9s,mb3.9						
PLCA	Paso Flores	40.85	167	P	P	23 48 09.7	-0.8
	1.1nm,0.6s,mb3.7,baz=331,slow=10,SNR=3.7						
PLCA	Paso Flores	40.85	167	*e*P	P	23 48 09.9	-0.7
	7.1nm,1.4s,mb4.1						
TRQA	Tornquist	41.05	157	*e*P	P	23 48 09.4	-2.8
	5.0nm,1.1s,mb4.1						
KSU1	Kansas State U	42.19	342	*e*P	P	23 48 22.4	+0.8
ANMO	Albuquerque	42.70	329	P	P	23 48 27.9	+2.1
	4.2nm,0.7s,mb4.3,baz=152,slow=8.5,SNR=10						
ANMO	Albuquerque	42.70	329	*e*P	P	23 48 26.8	+1.0
	5.5nm,0.8s,mb4.3						
SDCO	Great Sand Dun	44.45	332	*e*P	P	23 48 41.6	+1.6
	4.6nm,0.8s,mb4.3						
RCBR	Riachuelo	45.62	97	*e*P	P	23 48 50.2	+0.5
	16nm,1.0s,mb4.9						
WUAZ	Wupatki	45.78	325	P	P	23 48 52.6	+2.0
	125nm,1.0s						
PV10	Paradox Valley	46.66	330	*e*P	P	23 48 57.2	-0.3
PDAR	Pinedale Array	50.32	333	P	P	23 49 26.6	+0.7
	1.3nm,1.1s,mb3.9,baz=158,slow=8.0,SNR=4.5						
HWUT	Hardware Ranch	50.37	331	*e*P	P	23 49 26.9	+0.5
	3.0nm,0.9s,mb4.3						
NVAR	Mina Array Bea	51.83	323	P	P	23 49 39.1	+1.7
	3.6nm,1.2s,mb4.2,baz=123,slow=6.6,SNR=4.2						
IMW	Indian Meadow	51.83	333	P	P	23 49 37.6	+0.2
ULM	Lac du Bonnet	52.44	348	P	P	23 49 40.6	-1.3
	2.4nm,0.6s,mb4.3,baz=150,slow=6.6,SNR=6.8						
HLID	Hailey	53.23	330	*e*P	P	23 49 46.8	-1.1
	1.7nm,0.9s,mb4.0						
NEW	Newport	57.95	333	*e*P	P	23 50 21.4	-0.4
	6.0nm,1.2s,mb4.5						
FCC	Fort Churchill	60.32	352	*e*P	P	23 50 36.4	-1.7
	5.0nm,1.0s,mb4.5						
YKA	Yellowknife Ar	68.00	344	P	P	23 51 27.3	-0.9
	0.1nm,0.3s,mb3.3,baz=138,slow=6.0,SNR=7.6						
RES	Resolute Bay	75.91	356	P	P	23 52 11.9	-3.2
	32nm,2.1s,mb4.9						
SUMG	Summit	78.11	12	P	P	23 52 26.7	-0.6
	5.2nm,1.1s,mb4.4						
CN2	Changchun	131.06	334	*e*PKP	PKPdf	23 59 36.0	-6.4
SONM	Songino Array	132.76	353	PKP	PKPdf	23 59 43.8	-1.7
	0.3nm,0.6s,baz=348,slow=2.6,SNR=3.7						
WMQ	Urumqi	136.15	11	*e*PKP	PKPdf	23 59 52.3	+0.5
WRA	Warramunga Arr	139.35	237	PKP	PKPdf	23 59 55.8	-2.5
	0.4nm,0.8s,baz=114,slow=1.6,SNR=4.1						
LZH	Lanzhou	144.65	353	*e*PKP	PKPdf	00 00 04.5	-2.7
LZH				APKP		00 00 08.1	
LZH				XPKP		00 00 09.3	
LZH				LR	LR		
	comp=N,224nm,18.0s						
LZH				LR	LR		
	comp=Z,335nm,20.3s,MS5.1						

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*IDC **17** 23:45:26.4±4.7, 30.44S×179.35W, h343^{km}±47^{km}, mb3.2/3, mb1 3.7/5, mb1mx3.5/14, mbtmp4.3/5, Error ellipse: s-maj=43.2km s-min=27.2km az=0.0*
*NEIC **17** 23:45:27.9±1.4, 30.66S×179.28W, h369^{km}±13^{km}, mb3.8/1, Error ellipse: s-maj=19.6km s-min=13.9km az=81.0*
ISC 17 23:45:23.2±0.9, **30.51S**±0.06×**178.8W**±0.2, **h376**^{km}±11^{km}, **n143**, σ**1^{s}42**/176, **mb3.4**/4, **1C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	7.45	198	*e*P	P	23 47 13.2	+1.0
MXZ				S	S	23 48 39.5	+1.4
MXZ	Matakaoa Point	7.45	198	PN	P	23 47 13.2	+1.0
MXZ				SN	S	23 48 39.1	+1.0
MXZ	Matakaoa Point	7.45	198	PN	P	23 47 13.2	+1.0
MXZ				SN	S	23 48 39.1	+1.0
PUZ	Puketiti	7.94	197	*e*P	P	23 47 19.1	+1.1
PUZ	Puketiti	7.94	197	*e*PN	P	23 47 18.8	+0.8
PUZ				SN	S	23 48 51.0	+2.7
PUZ	Puketiti	7.94	197	*e*PN	P	23 47 18.8	+0.8
PUZ				SN	S	23 48 51.0	+2.7
MARZ	Manawahe	8.36	206	*e*P	P	23 47 28.1	+5.2
MARZ	Manawahe	8.36	206	*e*PN	P	23 47 27.1	+4.2
MARZ	Manawahe	8.36	206	*e*PN	P	23 47 27.1	+4.2
MWZ	Matawai	8.39	200	*e*P	P	23 47 23.9	+0.7
MWZ	Matawai	8.39	200	*e*PN	P	23 47 23.8	+0.6
MWZ				SN	S	23 49 00.3	+2.5
MWZ	Matawai	8.39	200	*e*PN	P	23 47 23.8	+0.6
MWZ				SN	S	23 49 00.3	+2.5
EDRZ	Edgecumbe	8.45	205	*e*P	P	23 47 29.1	+5.2
EDRZ	Edgecumbe	8.45	205	PN	P	23 47 29.1	+5.2
EDRZ	Edgecumbe	8.45	205	PN	P	23 47 29.1	+5.2
URZ	Urewera	8.45	203	P	P	23 47 24.1	+0.2
	34nm,0.3s,baz=302,slow=2.2,SNR=88						
URZ				S	S	23 49 00.7	+1.6
	26nm,0.3s,baz=134,slow=19,SNR=14						
URZ	Urewera	8.45	203	*e*P	P	23 47 23.5	-0.4
URZ	Urewera	8.45	203	*e*PN	P	23 47 23.5	-0.4
URZ				SN	S	23 49 00.6	+1.4
URZ	Urewera	8.45	203	*e*PN	P	23 47 23.5	-0.4
URZ				SN	S	23 49 00.6	+1.4
LIRZ	Lichensteins R	8.49	207	PN	P	23 47 30.6	+6.2
LIRZ	Lichensteins R	8.49	207	PN	P	23 47 30.6	+6.2
TAZ	Tarawera	8.64	206	*e*P	P	23 47 32.0	+5.9
TAZ	Tarawera	8.64	206	PN	P	23 47 31.9	+5.7
TAZ	Tarawera	8.64	206	PN	P	23 47 31.9	+5.7
KNZ	Kokohu	8.99	198	*e*P	P	23 47 30.1	-0.1
KNZ	Kokohu	8.99	198	*e*PN	P	23 47 30.5	+0.3
KNZ	Kokohu	8.99	198	*e*PN	P	23 47 30.5	+0.3
BKZ	Black Stump Fm	9.48	203	*e*P	P	23 47 33.5	-2.5
BKZ				S	S	23 49 22.6	+1.6
BKZ	Black Stump Fm	9.48	203	*e*PN	P	23 47 33.9	-2.1
BKZ				SN	S	23 49 22.6	+1.6
BKZ	Black Stump Fm	9.48	203	*e*PN	P	23 47 33.9	-2.1
BKZ				SN	S	23 49 22.6	+1.6
HIZ	Hauiti	9.57	212	*e*P	P	23 47 42.8	+5.8
HIZ	Hauiti	9.57	212	PN	P	23 47 42.8	+5.8
HIZ	Hauiti	9.57	212	PN	P	23 47 42.8	+5.8
MGZ	Maungaku	9.68	207	*e*P	P	23 47 39.7	+1.3
MGZ	Maungaku	9.68	207	*e*PN	P	23 47 40.3	+1.9
MGZ	Maungaku	9.68	207	*e*PN	P	23 47 40.3	+1.9
OTVZ	Oturere	9.78	206	*e*PN	P	23 47 39.3	-0.2
OTVZ	Oturere	9.78	206	*e*PN	P	23 47 39.3	-0.2
TWVZ	Taurewa	9.79	208	*e*P	P	23 47 42.2	+2.6
TWVZ	Taurewa	9.79	208	*e*PN	P	23 47 41.6	+2.0
TWVZ	Taurewa	9.79	208	*e*PN	P	23 47 41.6	+2.0
NGZ	Ngauruhoe	9.81	207	*e*P	P	23 47 40.2	+0.3
NGZ	Ngauruhoe	9.81	207	*e*PN	P	23 47 42.4	+2.5
NGZ	Ngauruhoe	9.81	207	*e*PN	P	23 47 42.4	+2.5
CNZ	Chateau	9.85	207	*e*P	P	23 47 43.0	+2.6
CNZ	Chateau	9.85	207	*e*PN	P	23 47 43.0	+2.5
CNZ	Chateau	9.85	207	*e*PN	P	23 47 43.0	+2.5
WPVZ	Whakapapa	9.86	207	*e*PN	P	23 47 43.4	+2.9
WPVZ	Whakapapa	9.86	207	*e*PN	P	23 47 43.4	+2.9
TUVZ	Tukino	9.87	206	*e*P	P	23 47 40.5	-0.1
TUVZ	Tukino	9.87	206	*e*PN	P	23 47 41.4	+0.8
TUVZ	Tukino	9.87	206	*e*PN	P	23 47 41.4	+0.8
FWVZ	Far West T-bar	9.90	207	*e*P	P	23 47 42.0	+1.0
FWVZ	Far West T-bar	9.90	207	*e*PN	P	23 47 41.9	+0.9
FWVZ	Far West T-bar	9.90	207	*e*PN	P	23 47 41.9	+0.9
DRZ	Dome Shelter	9.91	206	*e*PN	P	23 47 44.1	+3.0
DRZ	Dome Shelter	9.91	206	*e*PN	P	23 47 44.1	+3.0
MOVZ	Moawhango	9.96	205	*e*P	P	23 47 41.4	-0.2
MOVZ	Moawhango	9.96	205	*e*PN	P	23 47 40.2	-1.4
MOVZ	Moawhango	9.96	205	*e*PN	P	23 47 40.2	-1.4
VRZ	Vera Road	10.11	210	*e*P	P	23 47 47.1	+3.6
VRZ	Vera Road	10.11	210	*e*PN	P	23 47 46.6	+3.1
VRZ	Vera Road	10.11	210	*e*PN	P	23 47 46.6	+3.1
PWZ	Pawanui	10.15	199	*e*P	P	23 47 42.7	-1.3
PWZ	Pawanui	10.15	199	*e*PN	P	23 47 42.7	-1.3
PWZ				SN	S	23 49 35.6	+0.2
PWZ	Pawanui	10.15	199	*e*PN	P	23 47 42.7	-1.3
PWZ				SN	S	23 49 35.6	+0.2
TSZ	Takapari Road	10.46	203	*e*P	P	23 47 45.9	-1.8
TSZ	Takapari Road	10.46	203	*e*PN	P	23 47 45.9	-1.7
BFZ	Birch Farm	10.93	200	*e*P	P	23 47 53.4	+0.1
BFZ	Birch Farm	10.93	200	*e*PN	P	23 47 53.4	+0.1
BFZ				SN	S	23 49 51.9	-0.2
BFZ	Birch Farm	10.93	200	*e*PN	P	23 47 53.4	+0.1
BFZ				SN	S	23 49 51.9	-0.2
MRZ	Mangatainoka R	11.13	203	*e*P	P	23 47 53.0	-2.6
MRZ	Mangatainoka R	11.13	203	*e*PN	P	23 47 53.0	-2.5
MRZ				SN	S	23 49 55.4	-0.9
MRZ	Mangatainoka R	11.13	203	*e*PN	P	23 47 53.0	-2.5
KIW	Kapiti Island	11.54	205	*e*P	P	23 47 59.2	-1.2
KIW	Kapiti Island	11.54	205	*e*PN	P	23 47 59.1	-1.2
KIW				SN	S	23 50 03.7	-1.4
KIW	Kapiti Island	11.54	205	*e*PN	P	23 47 59.1	-1.2
KIW				SN	S	23 50 03.7	-1.4
MTW	Mount Morrison	11.60	202	*e*P	P	23 47 59.4	-1.7
MTW	Mount Morrison	11.60	202	*e*PN	P	23 47 59.2	-1.8
MTW	Mount Morrison	11.60	202	*e*PN	P	23 47 59.2	-1.8
CAW	Cannon Point	11.70	204	*e*P	P	23 47 59.9	-2.3
CAW	Cannon Point	11.70	204	*e*PN	P	23 47 59.9	-2.4
CAW				SN	S	23 50 07.7	-0.8
CAW	Cannon Point	11.70	204	*e*PN	P	23 47 59.9	-2.4
CAW				SN	S	23 50 07.7	-0.8
PAWZ	Paruwai Farm	11.83	202	*e*PN	P	23 48 03.0	-0.7
PAWZ				SN	S	23 50 10.5	-0.7
PAWZ	Paruwai Farm	11.83	202	*e*PN	P	23 48 03.0	-0.7
PAWZ				SN	S	23 50 10.5	-0.7
MSWZ	Moikau Station	11.91	202	*e*P	P	23 48 03.3	-1.4
MSWZ	Moikau Station	11.91	202	*e*PN	P	23 48 03.1	-1.6
MSWZ	Moikau Station	11.91	202	*e*PN	P	23 48 03.1	-1.6
MRW	Makara Radio	11.94	205	*e*P	P	23 48 04.0	-1.0
MRW	Makara Radio	11.94	205	*e*PN	P	23 48 03.5	-1.5
MRW				SN	S	23 50 13.6	+0.1
MRW	Makara Radio	11.94	205	*e*PN	P	23 48 03.5	-1.5
MRW				SN	S	23 50 13.6	+0.1
BHW	Baring Head	12.04	204	*e*P	P	23 48 05.0	-1.1
BHW	Baring Head	12.04	204	*e*PN	P	23 48 04.9	-1.2
BHW	Baring Head	12.04	204	*e*PN	P	23 48 04.9	-1.2
TUWZ	Tuamarina	12.39	206	*e*PN	P	23 48 07.5	-2.8
TUWZ				SN	S	23 50 22.5	-0.6
TUWZ	Tuamarina	12.39	206	*e*PN	P	23 48 07.5	-2.8
TUWZ				SN	S	23 50 22.5	-0.6
NNZ	Nelson	12.44	209	*e*P	P	23 48 08.1	-2.7
NNZ	Nelson	12.44	209	*e*PN	P	23 48 08.1	-2.7
NNZ				SN	S	23 50 22.9	-1.1
NNZ	Nelson	12.44	209	*e*PN	P	23 48 08.1	-2.7
NNZ				SN	S	23 50 22.9	-1.1
QRZ	Quartz Range	12.49	212	*e*P	P	23 48 10.3	-1.1
QRZ	Quartz Range	12.49	212	*e*PN	P	23 48 10.2	-1.2
QRZ				SN	S	23 50 24.9	-0.2
QRZ	Quartz Range	12.49	212	*e*PN	P	23 48 10.2	-1.2
QRZ				SN	S	23 50 24.9	-0.2
BSWZ	Blackbirch Sta	12.66	206	*e*P	P	23 48 13.2	-0.2
BSWZ	Blackbirch Sta	12.66	206	*e*PN	P	23 48 12.4	-1.0
BSWZ	Blackbirch Sta	12.66	206	*e*PN	P	23 48 12.4	-1.0
THZ	Tophouse	13.09	209	*e*P	P	23 48 15.9	-2.4
THZ	Tophouse	13.09	209	*e*PN	P	23 48 15.9	-2.3
THZ				SN	S	23 50 35.4	-2.3
THZ	Tophouse	13.09	209	*e*PN	P	23 48 15.9	-2.3
THZ				SN	S	23 50 35.4	-2.3
KHZ	Kahutara	13.40	205	*e*P	P	23 48 20.8	-0.9
KHZ	Kahutara	13.40	205	PN	P	23 48 20.8	-0.9
KHZ				SN	S	23 50 44.5	+0.4
KHZ	Kahutara	13.40	205	PN	P	23 48 20.8	-0.9
KHZ				SN	S	23 50 44.5	+0.4
DSZ	Denniston Nort	13.55	212	*e*P	P	23 48 22.4	-1.1
DSZ	Denniston Nort	13.55	212	*e*PN	P	23 48 22.4	-1.0
DSZ				SN	S	23 50 46.2	-1.1
DSZ	Denniston Nort	13.55	212	*e*PN	P	23 48 22.4	-1.0
DSZ				SN	S	23 50 46.2	-1.1
LTZ	Lake Taylor	14.20	208	*e*PN	P	23 48 31.0	+0.5
LTZ				SN	S	23 51 01.2	+0.7
LTZ	Lake Taylor	14.20	208	*e*PN	P	23 48 31.0	+0.5
LTZ				SN	S	23 51 01.2	+0.7
MQZ	McQueen’s Vall	14.84	205	*e*P	P	23 48 38.3	+1.1
MQZ	McQueen’s Vall	14.84	205	*e*PN	P	23 48 38.4	+1.2
MQZ				SN	S	23 51 14.1	+1.1
MQZ	McQueen’s Vall	14.84	205	*e*PN	P	23 48 38.4	+1.2
MQZ				SN	S	23 51 14.1	+1.1
RPZ	Rata Peaks	15.47	209	P	P	23 48 45.1	+1.3
	2.0nm,0.3s,baz=325,slow=6.4,SNR=11						
RPZ				S	S	23 51 28.3	+3.1
	3.1nm,0.3s,baz=170,slow=22,SNR=14						
DZM	Mont Dzumac	15.69	299	*e*P	P	23 48 45.8	-0.5
ODZ	Otahua Downs	16.73	207	*e*P	P	23 49 02.8	+6.0
ODZ	Otahua Downs	16.73	207	*e*PN	P	23 49 00.5	+3.8
ODZ				SN	S	23 51 58.1	+8.9
ODZ	Otahua Downs	16.73	207	*e*PN	P	23 49 00.5	+3.8
ODZ				SN	S	23 51 58.1	+8.9
JCZ	Jackson Bay	16.77	213	*e*PN	P	23 48 59.3	+2.2
JCZ	Jackson Bay	16.77	213	*e*PN	P	23 48 59.3	+2.2
ASAR	Alice Springs	42.45	267	P	P	23 52 44.7	+0.5
	0.5nm,0.4s,mb3.0,baz=104,slow=6.9,SNR=7.8						
WB2	Warramunga Arr	43.43	273	*e*P	P	23 52 52.2	+0.1
WRAB	Tennant Creek	43.44	273	*e*P	P	23 52 52.8	+0.6
	3.9nm,0.7s,mb3.6						
WRA	Warramunga Arr	43.44	273	P	P	23 52 52.8	+0.6
	1.7nm,0.6s,mb3.3,baz=110,slow=7.7,SNR=19						
NVAR	Mina Array Bea	88.76	43	P	P	23 57 43.6	+7.5
	0.5nm,0.7s,mb3.5,baz=208,slow=7.0,SNR=3.9						
KEV	Kevo	138.08	347	*e*pkp	PKPdf	00 04 14.6	+12
	0.4nm,0.5s						
ARCES	ARCESS Array B	138.55	347	PKhKP		00 04 02.4	
	4.5nm,0.9s,baz=63,slow=2.0,SNR=7.5						
JOF	Joensuu	142.27	338	*e*pkp	PKPdf	00 04 11.7	+1.3
	0.8nm,0.4s						
KAF	Kangasniemi	144.42	340	*e*pkp	PKPdf	00 04 18.1	+4.0
	1.4nm,0.3s						
FINES	FINESS Array B	145.01	339	PKP	PKPdf	00 04 20.9	+5.7
	8.1nm,0.4s,baz=55,slow=4.6,SNR=151						
NB2	NORSAR Subarra	148.75	351	PKP	PKPdf	00 04 31.8	+10
	1.5nm,0.5s,baz=15,slow=2.6						
NB2	NORSAR Subarra	148.75	351	⇑PKPab	PKPdf	00 04 31.8	+10
NOA	NORSAR Array B	148.75	351	PKPbc	PKPdf	00 04 32.0	+11
	1.6nm,0.5s,baz=16,slow=4.2,SNR=7.6						
AKASG	Malin Array Be	150.98	322	PKPbc	PKPdf	00 04 37.4	+12
	1.6nm,0.5s,baz=48,slow=2.8,SNR=16						
BRTR	Keskin Array B	152.07	298	PKPbc	PKPdf	00 04 40.3	+13
	0.6nm,0.4s,baz=139,slow=4.0,SNR=7.7						
BRTR				PKPab	PKPab	00 04 50.4	+2.7
	0.3nm,0.5s,baz=90,slow=4.3,SNR=4.1						
KHC	Kasperske Hory	159.17	337	*e*P	PKPab	00 05 20.0	+2.4
GERES	GERESS Array B	159.37	336	PKPab	PKPab	00 05 21.5	+3.1
	0.3nm,0.6s,baz=18,slow=4.2,SNR=4.0						

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*IDC **17** 23:53:46.1±3.0, 17.96S×178.55W, h621^{km}±35^{km}, mb3.2/7, mb1 3.5/7, mb1mx3.3/16, mbtmp4.2/7, Error ellipse: s-maj=29.8km s-min=17.3km az=162.0*
ISC 17 23:53:44.4±3.7, **18.0S**±0.3×**178.6W**±0.2, **h619**^{km}±48^{km}, **n15**, σ**0^{s}46**/11, **mb3.9**/8, **3C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.28	261	P	P	23 59 34.6	+0.3
	5.4nm,0.8s,mb4.2,baz=80,slow=6.4,SNR=5.7						
STKA	Stephens Creek	38.46	241	P	P	00 00 17.8	+1.0
	6.1nm,0.9s,mb4.1,baz=56,slow=12,SNR=12						
WB2	Warramunga Arr	44.46	260	*e*P	P	00 01 03.6	-0.7
WRA	Warramunga Arr	44.47	260	P	P	00 01 04.2	-0.2
	2.4nm,0.4s,mb4.1,baz=95,slow=7.4,SNR=107						
WRA				PcP	PcP	00 02 33.7	-0.6
	0.5nm,0.4s,baz=94,slow=3.6,SNR=4.5						
ASAR	Alice Springs	44.62	254	P	P	00 01 05.5	0.0
	16nm,0.7s,mb4.6,baz=87,slow=8.7,SNR=182						
ASAR				PcP	PcP	00 02 34.2	-0.5
	1.0nm,0.5s,baz=100,slow=3.9,SNR=6.0						
ASAR				S	S	00 06 58.8	+0.2
	0.4nm,0.7s,baz=89,slow=17,SNR=5.5						
ASPA	Alice Springs	44.63	254	*e*P	P	00 01 05.5	-0.1
KAKA	Kakadu	47.43	269	⇑*i*P	P	00 01 26.7	-0.2
	4.5nm,0.4s,mb4.3						
VNDA	Vanda	60.35	185	P	P	00 02 56.2	-0.4
	0.6nm,0.7s,mb2.9,baz=27,slow=11,SNR=2.8						
TXAR	Lajitas Array	86.17	58	P	P	00 05 23.4	+0.5
	0.5nm,0.6s,mb3.3,baz=207,slow=5.6,SNR=3.7						
PDAR	Pinedale Array	87.51	43	P	P	00 05 28.8	-0.2
	0.3nm,0.7s,mb3.1,baz=236,slow=3.3,SNR=3.9						
BURAR	Bucovina Array	144.61	332	⇑P	PKPdf	00 12 14.2	+2.8
BRTR	Keskin Array B	144.73	315	PKP	PKPdf	00 12 13.7	+1.8
	0.9nm,0.7s,baz=117,slow=2.8,SNR=5.4						
CFR	Carcaliu	144.92	326	⇑P	PKPdf	00 12 14.0	+2.0
MLR	Muntele Rosu	145.82	329	⇓P	PKPdf	00 12 16.5	+2.9
GERES	GERESS Array B	147.65	345	PKPbc	PKPdf	00 12 21.8	+5.3
	0.9nm,0.5s,baz=6.8,slow=2.9,SNR=12						

IDC 18 00:10:03.9±3.6, **6.71N**×**93.43E**, **mb3.7**/4, **mb1 4.0**/5, **mb1mx3.7**/18, **mbtmp3.7**/5, **ML4.2**/1, **MS2.6**/1, **Ms1 2.8**/1, **ms1mx2.5**/30, **Error ellipse: s-maj=144.1km s-min=24.1km az=64.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.86	24	Pn	P	00 13 16.0	+5.2
	0.4nm,0.3s,baz=228,slow=14,SNR=24						
CMAR				LR	LR	00 18 32.3	
	comp=Z,26nm,20.5s,baz=264,slow=40						
SONM	Songino Array	42.45	13	P	P	00 18 00.6	-1.6
	0.3nm,0.5s,baz=187,slow=8.8,SNR=5.3						
SONM				PcP	PcP	00 19 53.0	-2.9
	0.3nm,0.5s,baz=188,slow=4.1,SNR=3.9						
ZAL	Zalesovo	47.61	353	P	P	00 18 41.6	-1.9
	1.2nm,0.8s,baz=303,slow=8.8,SNR=7.7						
WRA	Warramunga Arr	48.17	124	P	P	00 18 46.4	-2.0
	0.6nm,0.4s,baz=304,slow=9.0,SNR=16						
ASAR	Alice Springs	49.72	129	P	P	00 18 58.3	-1.9
	1.6nm,0.9s,baz=296,slow=7.1,SNR=9.1						

KRSC 18 00:32:32.5±0.4, **55.21N**×**161.03E**, **h111**^{km}±3^{km}, **ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMR	Tumrok	0.51	279	*i* P	P	00 32 50.5	+0.8
TUMR				*e*S	S	00 33 03.3	+0.7
KMNR	Kamenistaya	0.71	321	*e*P	P	00 32 51.8	+0.6
KMNR				*e*S	S	00 33 06.2	+0.9
KOZ	Kozyrevsk	1.07	323	*e*P	P	00 32 55.4	+0.5
KOZ				*e*S	S	00 33 12.0	+0.4
KLY	Klyuchi	1.13	349	*e*P	P	00 32 56.0	+0.5
KLY				*e*S	S	00 33 13.0	+0.3
SRDR	Sredinnyy	1.33	327	*i* P	P	00 32 58.0	+0.1
SRDR				*i* S	S	00 33 16.5	-0.5
SVLR	Shiveluch	1.38	4	*e*P	P	00 32 59.0	+0.7
SVLR				*e*S	S	00 33 18.5	+0.7
KBG	Krutoberegovo	1.41	41	*e*P	P	00 32 59.5	+0.7
KBG				*e*S	S	00 33 19.5	+0.9
KBG				Smax			
	740nm,1.0s						
KBG	Krutoberegovo	1.41	41	*e*P	P	00 32 59.6	+0.8
KBG				*e*S	S	00 33 19.7	+1.1
KBG				Smax			
	550nm,0.8s						
KBTR	Krutoberegovo	1.42	45	*e*P	P	00 32 59.6	+0.7
KBTR				*e*S	S	00 33 19.2	+0.4
ESO	Esso	1.50	299	*i* P	P	00 32 59.9	0.0
ESO				*i* S	S	00 33 19.9	-0.6
ESO				Smax			
	60nm,0.8s						
SPN	Mys Shipunski	2.20	196	*e*P	P	00 33 08.2	-0.4
SPN				*e*S	S	00 33 35.1	-0.7
NLC	Nalytchevo	2.27	207	*e*P	P	00 33 10.4	+0.8
NLC				*e*S	S	00 33 38.1	+0.6
SDLR	Sedlovina	2.31	214	*e*P	P	00 33 11.3	+1.1
SMAR	Somma	2.35	215	*e*P	P	00 33 11.9	+1.2
GNL	Ganaly	2.36	231	*i* P	P	00 33 11.8	+1.0
GNL				*i* S	S	00 33 40.1	+0.5
AVH	Avacha	2.37	216	*e*P	P	00 33 12.4	+1.5
AVH				*e*S	S	00 33 41.5	+1.7
KOK	Koryaka	2.38	217	*e*P	P	00 33 13.1	+2.0
UGLR	Uglovaya	2.39	214	*e*P	P	00 33 12.5	+1.3
PET	Petropavlovsk	2.60	214	*e*P	P	00 33 15.5	+1.4
PET				*e*S	S	00 33 46.9	+1.5
BKI	Bering	2.83	88	*e*S	S	00 33 47.7	-3.2
BKI				Smax			
	150nm,0.2s						
KRMR	Karymshinskiy	2.94	217	*e*S	S	00 33 55.3	+1.9
RUS	Russkaya	3.16	209	*e*P	P	00 33 21.5	-0.1
RUS				*e*S	S	00 33 57.8	-1.0
GRL	Gorelyy	3.19	215	*e*P	P	00 33 23.3	+1.3
GRL				*e*S	S	00 34 00.3	+0.8
APC	Apacha	3.23	226	*e*P	P	00 33 23.8	+1.2
KAMR	Kamenskoye	7.75	18	*e*P	P	00 34 24.1	+0.1

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*NEIC **18** 00:33:37.5, 30.21S×71.36W, h34^{km}, ML3.7(GUC), After GUC.*
GUC 18 00:33:37.5±0.9, **30.21S**×**71.36W**, **h34**^{km}±4^{km}, **MD3.5, ML3.7, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	0.48	85	*i* P	P	00 33 48.2	+0.5
TLL				*i* S	S	00 33 56.1	+1.1
TLL				AMP		00 33 56.9	

	comp=N,3µm,0.4s						
ILCH	**Illapel**	**1.43**	**174**	*i* P	P	00 34 02.3	+1.0
ILCH				*i* S	S	00 34 20.8	+1.7
ILCH				AMP		00 34 23.7	
	comp=E,728nm,0.2s						
PTCH	**Petorca**	**2.08**	**170**	⇑*i*P	P	00 34 35.0	+24
PTCH				*i* S	S	00 35 00.3	+25
PTCH				AMP		00 35 05.6	
	comp=E,2µm,0.3s						
PACH	**Papudo**	**2.32**	**182**	*i* P	P	00 34 14.7	+0.7
JACH	**Jahuel**	**2.54**	**165**	⇓*i*P	P	00 34 17.6	+0.3
JACH				*i* S	S	00 34 49.0	+1.5
FCH	**Farellones**	**3.23**	**164**	*i* P	P	00 34 27.8	+0.7
FCH				AMP		00 35 14.8	
	comp=E,168nm,0.2s						
CLCH	**Cerro Calan**	**3.25**	**168**	*i* P	P	00 34 28.0	+0.7
CLCH				AMP		00 35 14.8	
	comp=E,234nm,0.6s						
RCDM	**Rinconada Maip**	**3.30**	**172**	AMP		00 35 19.8	
	comp=E,144nm,0.4s						
TACH	**Talagante**	**3.45**	**174**	*i* S	S	00 35 10.2	-0.2
LMEL	**Las Melosas**	**3.75**	**165**	*i* P	P	00 34 34.5	0.0
LMEL				*i* S	S	00 35 18.7	+0.6
LMEL				AMP		00 35 28.7	
	comp=N,188nm,0.4s						

IDC 18 00:34:00.5±2.9,**2.37N**×**96.08E**,**mb3.6**/4,**mb1 3.8**/5, **mb1mx3.6**/18,**mbtmp3.6**/5,**ML4.4**/1,**Error ellipse: s-maj=101.5km s-min=27.9km az=60.0**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.23**	**10**	Pn	P	00 37 50.2	-1.5
	0.5nm,0.3s,baz=192,slow=12,SNR=6.2						
WRA	**Warramunga Arr**	**43.61**	**122**	P	P	00 42 06.8	-1.7
	0.6nm,0.6s,baz=300,slow=9.3,SNR=7.4						
SONM	**Songino Array**	**46.16**	**10**	P	P	00 42 26.8	-1.8
	0.4nm,0.4s,baz=190,slow=9.0,SNR=9.5						
ZAL	**Zalesovo**	**52.23**	**352**	P	P	00 43 13.5	-1.9
	0.4nm,0.3s,baz=257,slow=1.9,SNR=4.3						
BVAR	**Borovoye Array**	**54.78**	**341**	P	P	00 43 31.5	-2.8
	0.2nm,0.4s,baz=146,slow=10,SNR=3.2						

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*IDC **18** 00:39:43.5±1.9,28.42N×142.81E,mb4.0/6,mb1 4.1/6, mb1mx3.8/21,mbtmp4.0/6,Error ellipse: s-maj=64.8km s-min=16.9km az=87.0*

*NEIC **18** 00:39:49.6±1.9,28.34N×142.43E,h35^{km},mb4.4/3,Error ellipse: s-maj=84.2km s-min=10.2km az=75.0*

ISC 18 00:39:47.0±4.8,**28.4N**±0.1×**142.9E**±0.5,**h42**^{km}±34^{km},**n12**, σ**0**^{s}**62**/13,**mb4.0**/9,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.47**	**204**	Pn	**P**	**00 40 11.2**	**-0.3**
	17nm,0.3s,baz=292,slow=20,SNR=6.0						
CBIJ				Sn	**S**	**00 40 30.1**	**+0.4**
	57nm,0.3s,baz=284,slow=24,SNR=16						
SONM	**Songino Array**	**34.17**	**315**	P	**P**	**00 46 29.8**	**-0.5**
	0.3nm,0.5s,mb3.5,baz=120,slow=7.7,SNR=4.5						
WRAB	**Tennant Creek**	**48.79**	**191**	*e*P	**P**	**00 48 29.9**	**-0.2**
	2.7nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**48.80**	**191**	*e*P	**P**	**00 48 30.1**	**-0.1**
WRA	**Warramunga Arr**	**48.80**	**191**	P	**P**	**00 48 30.4**	**+0.2**
	1.4nm,0.5s,mb4.2,baz=13,slow=8.6,SNR=19						
ZAL	**Zalesovo**	**48.88**	**318**	P	**P**	**00 48 31.5**	**+1.2**
	0.6nm,0.3s,mb4.0,baz=356,slow=9.1,SNR=4.0						
KURK	**Kurchatov**	**52.47**	**314**	*e*P	**P**	**00 48 56.6**	**-1.0**
	5.4nm,1.0s,mb4.4						
ASAR	**Alice Springs**	**52.52**	**190**	P	**P**	**00 48 58.0**	**-0.4**
	0.1nm,0.3s,mb3.2,baz=4.8,slow=5.6,SNR=4.0						
BVAR	**Borovoye Array**	**57.46**	**317**	P	**P**	**00 49 33.6**	**-0.3**
	1.2nm,0.5s,mb4.2,baz=89,slow=8.0,SNR=16						
BRVK	**Borovoye**	**57.52**	**317**	*e*P	**P**	**00 49 34.1**	**-0.2**
	1.9nm,0.7s,mb4.2						
FINES	**FINESS Array B**	**77.00**	**334**	P	**P**	**00 51 37.9**	**+1.2**
	3.3nm,1.2s,mb4.1,baz=76,slow=5.7,SNR=3.6						
FINES				pP	pP	00 51 43.5	-5.8
	2.3nm,0.8s,baz=27,slow=4.3,SNR=2.9						
FINES	**FINESS Array B**	**77.00**	**334**	P	**P**	**00 51 37.9**	**+1.2**
FINES				pP	pP	00 51 43.5	-5.8

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*IDC **18** 00:47:09.7±5.5,56.45S×26.56W,h112^{km}±50^{km},mb4.0/8, mb1 4.0/9,mb1mx3.8/17,mbtmp4.3/9,MS3.5/1,Ms1 3.5/1, ms1mx2.3/16,Error ellipse: s-maj=20.6km s-min=17.0km az=41.0*

*NEIC **18** 00:47:10.8±2.1,56.46S×26.67W,h125^{km}±20^{km},mb4.3/5, Error ellipse: s-maj=13.1km s-min=9.3km az=224.0*

ISC 18 00:47:15.6±2.9,**56.60S**±0.09×**26.6W**±0.2,**h191**^{km}±29^{km}, **n36**,σ**0**^{s}**99**/26,**mb4.1**/12,**4C**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**16.36**	**160**	*e*	**P**	**00 50 55.9**	**+0.4**
VNA3	**Neumayer Olymp**	**16.36**	**160**	⇑*i*P	**P**	**00 50 54.8**	**-0.7**
VNA3				*e*		00 50 55.9	
VNA2	**Neumayer--Watz**	**16.55**	**158**	*e*	**P**	**00 50 58.8**	**+1.0**
VNA2	**Neumayer--Watz**	**16.55**	**158**	⇑*i*P	**P**	**00 50 57.5**	**-0.3**
VNA2				*e*		00 50 58.8	
SNAA	**Sanae**	**18.10**	**156**	⇑*i*P	**P**	**00 51 17.0**	**+2.0**
SNAA	**Sanae**	**18.10**	**156**	*e*	**P**	**00 51 18.5**	**+3.5**
SNAA	**Sanae**	**18.10**	**156**	P	**P**	**00 51 12.6**	**-2.4**
	0.2nm,0.3s,baz=322,slow=14,SNR=11						
SNAA				S	**S**	**00 54 26.2**	**-1.2**
	0.1nm,0.3s,baz=1.2,slow=19,SNR=4.6						
SNAA	**Sanae**	**18.10**	**156**	*e*P	**P**	**00 51 12.9**	**-2.1**
SNAA				S	**S**	**00 54 26.2**	**-1.2**
TRQA	**Tornquist**	**29.86**	**293**	*e*P	**P**	**00 53 04.3**	**-2.6**
	1.9nm,0.8s,mb3.9						
PLCA	**Paso Flores**	**32.44**	**280**	LR	LR	01 05 33.8	
	comp=Z,82nm,18.4s,baz=90,slow=34						
QSPA	**South Pole Qui**	**33.65**	**180**	⇑*i*P	**P**	**00 53 39.9**	**+0.6**
	4.0nm,0.8s,mb4.2						
BDFB	**Brasilia**	**44.02**	**330**	P	**P**	**00 55 05.5**	**-0.1**
	2.0nm,0.4s,mb4.1,baz=168,slow=5.4,SNR=5.1						
LVC	**Limon Verde**	**45.87**	**300**	P	**P**	**00 55 20.4**	**+0.1**
	2.7nm,0.4s,mb4.3,baz=162,slow=4.2,SNR=7.6						
LVC	**Limon Verde**	**45.87**	**300**	*e*P	**P**	**00 55 19.7**	**-0.6**
	3.4nm,0.6s,mb4.2						
VNDA	**Vanda**	**46.04**	**183**	P	**P**	**00 55 22.6**	**+1.8**
	2.0nm,0.6s,mb3.9,baz=187,slow=7.5,SNR=12						
LBTB	**Lobatse**	**48.84**	**72**	P	**P**	**00 55 42.8**	**-0.4**
	4.6nm,1.0s,mb4.1,baz=245,slow=9.8,SNR=7.0						
LBTB	**Lobatse**	**48.84**	**72**	*e*P	**P**	**00 55 43.4**	**+0.1**
TSUM	**Tsumeb**	**49.66**	**60**	P	**P**	**00 55 49.7**	**+0.2**
	1.9nm,0.6s,mb3.9,baz=202,slow=6.3,SNR=13						
LPAZ	**La Paz**	**50.98**	**305**	P	**P**	**00 55 59.5**	**0.0**
	7.7nm,0.7s,mb4.4,baz=153,slow=6.6,SNR=23						
LSZ	**Lusaka**	**58.26**	**68**	*e*P	**P**	**00 56 52.2**	**+0.1**
	27nm,1.7s,mb4.8						
DBIC	**Dimbokro**	**65.53**	**24**	P	**P**	**00 57 40.2**	**-0.3**
	1.1nm,0.4s,mb4.0,baz=169,slow=6.1,SNR=5.5						
DBIC	**Dimbokro**	**65.53**	**24**	P	**P**	**00 57 40.2**	**-0.3**
OTAV	**Otavalo**	**70.25**	**303**	*e*P	**P**	**00 58 10.7**	**+1.0**
	7.0nm,1.0s,mb4.3						
SDV	**Santo Domingo**	**74.64**	**315**	*e*P	**P**	**00 58 35.6**	**+0.1**
ASAR	**Alice Springs**	**98.36**	**162**	P	**P**	**01 00 37.1**	**+4.7**
	0.3nm,0.8s,mb3.8,baz=180,slow=4.2,SNR=5.5						
FINES	**FINESS Array B**	**124.71**	**28**	PKP	PKPdf	01 05 53.5	+2.3
	0.6nm,0.6s,baz=237,slow=1.1,SNR=8.0						
KAF	**Kangasniemi**	**125.34**	**27**	*e*p	PKPdf	01 05 54.1	+1.8
	0.2nm,0.3s						
ARCES	**ARCESS Array B**	**131.33**	**22**	PKP	PKPdf	01 06 05.3	+1.7
	2.9nm,0.8s,baz=236,slow=3.3,SNR=5.5						
ARCES	**ARCESS Array B**	**131.33**	**22**	PKP	PKPdf	01 06 05.3	+1.7
BVAR	**Borovoye Array**	**134.78**	**58**	PKP	PKPdf	01 06 15.2	+4.7
	0.2nm,0.4s,baz=128,slow=2.6,SNR=5.1						
YKA	**Yellowknife Ar**	**136.81**	**317**	PKP	PKPdf	01 06 16.2	+2.3
	0.5nm,0.3s,baz=126,slow=2.2,SNR=15						
INK	**Inuvik**	**146.45**	**320**	*e*PKPbc	PKPbc	01 06 34.6	+2.6
DAWY	**Dawson**	**147.42**	**311**	*e*PKPbc	PKPdf	01 06 37.6	+5.4
SONM	**Songino Array**	**150.41**	**87**	PKPbc	PKPdf	01 06 46.4	+8.9
	5.6nm,1.0s,baz=221,slow=3.2,SNR=35						
ILAR	**Eielson Array**	**150.74**	**311**	PKPbc	PKPdf	01 06 46.4	+8.9
	5.0nm,0.9s,baz=150,slow=1.6,SNR=30						
ULN	**Ulaanbaatar**	**150.79**	**87**	*e*PKPbc	PKPdf	01 06 46.9	+8.9

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*TIR **18** 00:54:43.4,41.66N×20.38E,h5^{km}*

*THE **18** 00:54:45.0,41.47N×20.09E,h9^{km}*

*PDG **18** 00:54:44.9±0.3,41.62N×20.36E,h10^{km}±1^{km}*

*CSEM **18** 00:54:44.9±0.1,41.66N×20.34E,h2^{km},MD2.7,Error ellipse: s-maj=2.7km s-min=1.6km az=37.0*

*NEIC **18** 00:54:44.9,41.62N×20.36E,h10^{km},MD2.7(PDG),After PDG.*

ISC 18 00:54:44.9±0.3,**41.64N**±0.03×**20.36E**±0.03,**h5**^{km},**n24**, σ**1**^{s}**46**/43,**6C-3D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSH	**Qafa e Shtames**	**0.36**	**252**	*i* Pg	**Pg**	**00 54 50.4**	**-1.8**
QSH				*i* Sg	**Sg**	**00 54 58.4**	**+1.3**
TIR	**Tirane**	**0.47**	**233**	*e*Pg	**Pg**	**00 54 54.4**	**0.0**
OHR	**Ohrid**	**0.62**	**148**	⇑*i*Pg	**Pg**	**00 54 55.5**	**-1.7**
OHR				⇑*i*Sg	**Sg**	**00 55 04.8**	**-0.7**
OHR				⇑*i*		00 55 05.0	
BCI	**Bajram Curri**	**0.76**	**343**	*e*Pg	**Pg**	**00 54 58.3**	**-1.9**
SKO	**Skopje**	**0.87**	**67**	*e*Pg	**Pg**	**00 55 00.5**	**-1.8**
SKO				*e*		00 55 02.0	
SKO				*i*		00 55 05.7	
SKO				*i* Sg	**Sg**	**00 55 13.0**	**-0.9**
SKO				Lg		00 55 15.0	
	comp=Z,0.1nm,0.4s						
SKO	**Skopje**	**0.87**	**67**	*e*Pg	**Pg**	**00 55 00.5**	**-1.8**
SKO				*i* Sg	**Sg**	**00 55 13.0**	**-0.9**
ULC	**Ulcinj**	**0.90**	**292**	⇑*i*Pg	**Pg**	**00 55 01.3**	**-1.5**
ULC				*e*Sg	**Sg**	**00 55 15.1**	**+0.4**
PVY	**Plav**	**1.00**	**343**	⇑*i*Pg	**Pg**	**00 55 03.0**	**-2.0**
PVY				*e*Sg	**Sg**	**00 55 19.3**	**+1.0**
FNA	**Florina**	**1.14**	**138**	*e*Pb	**Pb**	**00 55 08.0**	**+1.3**
FNA				*e*Sb	**Sb**	**00 55 23.6**	**+1.8**
TTG	**Podgorica**	**1.14**	**314**	⇓*i*Pg	**Pg**	**00 55 05.5**	**-2.2**
TTG				*e*Sg	**Sg**	**00 55 23.9**	**+1.0**
BUM	**Brajici-Budva**	**1.28**	**302**	⇓*i*Pg	**Pg**	**00 55 08.6**	**-1.9**
BUM				*e*Sg	**Sg**	**00 55 27.9**	**+0.4**
IVA	**Berane**	**1.28**	**344**	*e*Pg	**Pg**	**00 55 08.6**	**-2.0**
IVA				*e*Sg	**Sg**	**00 55 29.0**	**+1.4**
NKY	**Niksic**	**1.55**	**320**	*e*Pg	**Pg**	**00 55 13.8**	**-2.1**
NKY				*e*Sg	**Sg**	**00 55 38.3**	**+1.6**
HCY	**Herceg Novi**	**1.61**	**301**	⇓*i*Pn	**Pn**	**00 55 14.0**	**-0.1**
HCY				*e*Sn	**Sn**	**00 55 39.7**	**+4.2**
GRG	**Griva**	**1.68**	**113**	*e*Pb	**Pb**	**00 55 14.7**	**-1.3**
GRG				*e*Sb	**Sb**	**00 55 39.8**	**+2.5**
GRG	**Griva**	**1.68**	**113**	*e*Pb	**Pb**	**00 55 14.6**	**-1.3**
GRG				*e*Sb	**Sb**	**00 55 39.8**	**+2.5**
PLE	**Pljevlja**	**1.84**	**337**	⇑*i*Pn	**Pn**	**00 55 19.1**	**+1.7**
PLE				*e*Sn	**Sn**	**00 55 45.6**	**+4.3**
BRY	**Bratogost**	**1.85**	**314**	*e*Pn	**Pn**	**00 55 19.2**	**+1.6**
BRY				*e*Sn	**Sn**	**00 55 46.2**	**+4.5**
UPM	**Unac-Piva**	**1.90**	**326**	*e*Pn	**Pn**	**00 55 20.2**	**+1.9**
UPM				*e*Sn	**Sn**	**00 55 47.6**	**+4.7**
KNT	**Kendrikon**	**1.96**	**103**	*e*Pn	**Pn**	**00 55 20.2**	**+1.0**
KNT				*e*Sn	**Sn**	**00 55 47.9**	**+3.3**
LIT	**Litokhoron**	**2.23**	**133**	*e*Pn	**Pn**	**00 55 22.4**	**-0.5**
SOH	**Sokhos**	**2.40**	**109**	*e*Pn	**Pn**	**00 55 25.3**	**-0.1**
SRS	**Serrai**	**2.48**	**101**	*e*Pn	**Pn**	**00 55 28.3**	**+1.7**
PAIG	**Paliouri**	**3.04**	**123**	*e*Pn	**Pn**	**00 55 33.8**	**-0.9**
PAIG				*e*Sn	**Sn**	**00 56 12.7**	**+0.8**

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*NEIC **18** 01:01:02.1,34.98S×70.61W,h6^{km},mb3.6/1,ML3.7(GUC), After GUC.*

NEIC Felt [II] at Los Quenes.

GUC 18 01:01:02.1±0.8,**34.98S**×**70.61W**,**h6**^{km}±3^{km},**ML3.7**,**2D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFDO	**San Fernando**	**0.49**	**317**	⇓*i*P	Pg	01 01 12.3	+0.3
CACH	**El Canelo**	**0.86**	**0**	*e*P	Pb	01 01 18.2	-0.8
CACH				*i* S	Sb	01 01 30.5	-0.1
CHCH	**Chadas Angostu**	**1.04**	**358**	*e*P	Pb	01 01 21.9	-0.3
CHCH				*i* S	Sb	01 01 36.3	+0.4
LMEL	**Las Melosas**	**1.18**	**17**	*e*P	Pb	01 01 23.8	-0.7
LMEL				*i* S	Sb	01 01 40.6	+0.8
LNCH	**Linares**	**1.19**	**223**	*i* P	Pb	01 01 23.6	-1.0
LNCH				*i* S	Sb	01 01 39.9	-0.3
LNCH				AMP		01 01 40.8	
	comp=E,9µm,0.6s						
LNV	**Longovilo**	**1.22**	**327**	*e*P	Pb	01 01 24.8	-0.3
LNV				*i* S	Sb	01 01 41.8	+0.8
TACH	**Talagante**	**1.35**	**348**	*i* P	Pb	01 01 26.9	-0.5
TACH				*i* S	Sb	01 01 45.1	+0.3
PCH	**Pirque**	**1.36**	**3**	*e*P	Pb	01 01 26.8	-0.8
PCH				*i* S	Sb	01 01 45.4	+0.4
ANTU	**Antumapu**	**1.41**	**359**	*e*P	Pn	01 01 28.4	+0.1
ANTU				*i* S	Sb	01 01 47.5	+1.0
ANTU				AMP		01 01 51.7	
	comp=E,895nm,0.6s						
RCDM	**Rinconada Maip**	**1.49**	**354**	*e*P	Pn	01 01 29.6	0.0
RCDM				*i* S	Sb	01 01 50.0	+1.0
RCDM				AMP		01 01 58.3	
	comp=E,1µm,0.6s						
CLCH	**Cerro Calan**	**1.58**	**2**	*e*P	Pn	01 01 30.9	+0.1
CLCH				*i* S	Sb	01 01 52.5	+1.0
FCH	**Farellones**	**1.67**	**9**	*e*P	Pn	01 01 32.5	+0.4
FCH				*i* S	Sn	01 01 55.7	+1.7
FCH				AMP		01 02 13.3	
	comp=E,643nm,0.4s						
LCCH	**Las Cruces**	**1.70**	**332**	*e*P	Pn	01 01 32.4	-0.1
CCHI	**Chillan**	**2.01**	**216**	⇓*i*P	Pn	01 01 37.1	+0.1
CCHI				*i* S	Sn	01 02 03.5	+0.7
CCHI				AMP		01 02 07.7	
	comp=N,4µm,0.5s						
PLCA	**Paso Flores**	**5.75**	**180**	*e*Pn	Pn	01 02 30.2	+0.2
	comp=N,12nm,0.7s						
TRQA	**Tornquist**	**7.59**	**116**	*e*Pn	Pn	01 02 53.3	-2.7
	comp=N,8.1nm,0.8s						
TRQA				*e*Sg	Sg	01 04 57.0	-18
LPAZ	**La Paz**	**18.74**	**7**	*e*P	P	01 05 23.0	-0.9
	comp=N,4.0nm,1.0s						

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*CRAAG **18** 01:12:03.9,36.27N×2.47E,Ml2.5*

*CSEM **18** 01:12:07.0±0.1,36.43N×2.73E,h2^{km},mb3.2/5,Error ellipse: s-maj=4.9km s-min=2.8km az=41.0*

*MDD **18** 01:12:10.8±1.7,36.64N×2.75E,h19^{km}±18^{km},mb3.2/5, Error ellipse: s-maj=23.7km s-min=18.6km az=20.0, PRXIMO*

*NEIC **18** 01:12:12.6,36.79N×2.48E,MG3.2(MDD),After MDD.*

ISC 18 01:12:08.8±1.1,**36.72N**±0.10×**2.55E**±0.07,**h10**^{km},**n13**, σ**1**^{s}**45**/23,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.40**	**78**	P	**Pg**	**01 12 16.5**	**-0.5**
EMHD	**Djebel Mahouad**	**0.61**	**148**	P	**Pb**	**01 12 13.5**	**-7.6**
ABMS	**Boumerdes**	**0.75**	**87**	P	**Pb**	**01 12 21.7**	**-1.8**
EIBI	**Ibiza**	**2.49**	**338**	Pn	**Pn**	**01 12 51.6**	**+1.5**
	2.5nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**01 13 21.7**	**+0.8**
	3.0nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**2.49**	**338**	Pn	**Pn**	**01 12 51.6**	**+1.5**
	2.5nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**01 13 21.7**	**+0.8**
	SNR=7.9						
EBEN	**Beniarda**	**2.96**	**313**	Pn	**Pn**	**01 12 58.3**	**+1.6**
	0.2nm,0.1s,SNR=7.9						
EBEN				Sn	**Sn**	**01 13 31.6**	**-1.1**
	0.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**2.96**	**313**	Pn	**Pn**	**01 12 58.3**	**+1.5**
	0.2nm,0.1s,SNR=7.9						
EBEN				Sn	**Sn**	**01 13 31.6**	**-1.1**
	0.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.77**	**302**	Pn	**Pn**	**01 13 09.9**	**+1.6**
	0.4nm,0.1s,SNR=11						
ETOB				Sn	**Sn**	**01 13 52.1**	**-1.2**
	0.5nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.77**	**302**	Pn	**Pn**	**01 13 09.9**	**+1.6**
	0.4nm,0.1s,SNR=11						
ETOB				Sn	**Sn**	**01 13 52.2**	**-1.1**
	SNR=7.9						
EMOS	**Mosqueruela**	**4.34**	**328**	Pn	**Pn**	**01 13 17.8**	**+1.4**
	0.4nm,0.2s,SNR=7.8						
EMOS				Sn	**Sn**	**01 14 05.9**	**-1.8**
	0.4nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**4.34**	**328**	Pn	**Pn**	**01 13 17.8**	**+1.4**
	0.4nm,0.2s,SNR=7.8						
EMOS				Sn	**Sn**	**01 14 05.9**	**-1.8**
	0.4nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.61**	**285**	Pn	**Pn**	**01 13 21.5**	**+1.2**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**01 14 12.0**	**-2.5**
	0.2nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.61**	**285**	Pn	**Pn**	**01 13 21.5**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**01 14 12.0**	**-2.5**
	SNR=7.9						

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*NEIC **18** 01:18:50.0,37.55N×21.09E,h16^{km},MD3.5(ATH),After ATH.*

*CSEM **18** 01:18:50.0,37.55N×21.09E,h16^{km},MD3.5/6,After ATH*

ATH 18 01:18:50.0,**37.55N**×**21.10E**,**h16**^{km}±5^{km},**MD3.5**/7, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.58**	**30**	*e*PN	Pn	01 19 00.7	-2.7
ITM	**Ithomi**	**0.76**	**119**	*e*PN	Pn	01 19 04.5	-1.3
EVR	**Evrytania**	**1.47**	**22**	*e*PN	Pn	01 19 18.5	+2.4
VLI	**Veliai**	**1.69**	**119**	*e*PN	Pn	01 19 20.7	+1.6
LKR	**Lokris**	**1.86**	**53**	*e*PN	Pn	01 19 23.7	+2.1
KYTH	**Kithira**	**2.00**	**129**	*e*PN	Pn	01 19 25.2	+1.5
KEK	**Kerkira**	**2.39**	**335**	*e*PN	Pn	01 19 31.0	+1.8

JMA 18 01:23:40.6±0.3,**43.65N**×**147.32E**,**h22**^{km},**M3.6**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.18**	**257**	P	Pn	01 24 01.8	-0.2
NEM2				*e*S	Sb	01 24 17.3	+0.2
JRA	**Rausu**	**1.62**	**281**	*e*S	Sn	01 24 28.3	-0.3
JNK	**Nakash**	**1.89**	**269**	P	Pn	01 24 12.1	0.0
JNK				*e*S	Sn	01 24 35.1	-0.4
JAK	**Akkeshi**	**2.02**	**252**	P	Pn	01 24 13.9	-0.2
JAK				*e*S	Sn	01 24 38.3	-0.6
JTKR	**Abashiri--Toko**	**2.49**	**279**	P	Pn	01 24 21.0	+0.3
JTKR				*e*S	Sn	01 24 51.6	+0.8
JAR	**Ashorobuto**	**2.61**	**263**	P	Pn	01 24 23.1	+0.7
JAR				*e*S	Sn	01 24 54.8	+1.0
JOB	**Onbets**	**2.65**	**255**	P	Pn	01 24 23.2	+0.1
JOB				*e*S	Sn	01 24 54.4	-0.5
JCH	**Churui**	**3.08**	**252**	P	Pn	01 24 29.1	0.0
JCH				*e*S	Sn	01 25 04.7	-0.9

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*NEIC **18** 01:45:39.5,37.73S×177.26E,h70^{km},ML3.8(WEL),After WEL.*

WEL 18 01:45:39.3±0.1,**37.75S**×**177.25E**,**h75**^{km}±1^{km},**ML3.6**/9, **2C-1D**,**Error ellipse: s-maj=1.0km s-min=0.9km az=90.0**, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.23**	**348**	P	P	01 45 49.8	-0.8
WIZ	**White Island**	**0.23**	**348**	P*	P	01 45 50.0	-0.6
MARZ	**Manawahe**	**0.51**	**242**	P	P	01 45 52.7	0.0
MARZ	**Manawahe**	**0.51**	**242**	P*	P	01 45 52.7	0.0
URZ	**Urewera**	**0.52**	**192**	⇓P	P	01 45 52.5	-0.3
URZ	**Urewera**	**0.52**	**192**	P*	P	01 45 52.5	-0.3
URZ				S*	S	01 46 02.5	-0.4
URZ				S*	S	01 46 02.6	-0.3
EDRZ	**Edgecumbe**	**0.54**	**228**	P	P	01 45 53.1	+0.1
EDRZ	**Edgecumbe**	**0.54**	**228**	P*	P	01 45 52.9	-0.1
MWZ	**Matawai**	**0.62**	**159**	P	P	01 45 53.6	-0.3
MWZ	**Matawai**	**0.62**	**159**	P*	P	01 45 53.6	-0.3
MWZ				S*	S	01 46 04.6	-0.1
TAZ	**Tarawera**	**0.76**	**230**	*e*P	P	01 45 56.3	+0.9
TAZ	**Tarawera**	**0.76**	**230**	P*	P	01 45 55.9	+0.6
MXZ	**Matakaoa Point**	**0.86**	**78**	P	P	01 45 56.2	-0.3
MXZ	**Matakaoa Point**	**0.86**	**78**	P*	P	01 45 56.1	-0.5
MXZ				S*	S	01 46 09.9	+0.5
PUZ	**Puketiti**	**0.86**	**112**	⇑P	P	01 45 56.2	-0.3
PUZ	**Puketiti**	**0.86**	**112**	⇑PN	P	01 45 56.2	-0.3
PUZ				SN	S	01 46 09.2	-0.2
MYRZ	**Mayor Island**	**0.93**	**300**	P*	P	01 45 57.2	-0.1
KNZ	**Kokohu**	**1.31**	**165**	*e*P	P	01 46 01.5	-1.0
KNZ	**Kokohu**	**1.31**	**165**	PN	P	01 46 01.5	-1.0
KNZ				SN	S	01 46 18.7	-1.0
BKZ	**Black Stump Fm**	**1.53**	**203**	*e*P	P	01 46 05.1	-0.3
BKZ	**Black Stump Fm**	**1.53**	**203**	P*	P	01 46 05.0	-0.4
BKZ				S*	S	01 46 24.9	+0.3
KUZ	**Kuaotunu**	**1.58**	**309**	*e*P	P	01 46 04.9	-1.1
KUZ	**Kuaotunu**	**1.58**	**309**	PN	P	01 46 04.9	-1.0
MKAZ	**Moumakai**	**1.77**	**290**	PN	P	01 46 08.1	-0.5
MGZ	**Maungaku**	**1.83**	**227**	*e*P	P	01 46 09.9	+0.5
MGZ	**Maungaku**	**1.83**	**227**	PN	P	01 46 09.6	+0.2
OTVZ	**Oturere**	**1.88**	**221**	PN	P	01 46 10.4	+0.4
WTVZ	**West Tongariro**	**1.89**	**223**	*e*P	P	01 46 10.8	+0.7
WTVZ	**West Tongariro**	**1.89**	**223**	PN	P	01 46 10.7	+0.6
NGZ	**Ngauruhoe**	**1.92**	**222**	P	P	01 46 11.3	+0.7
NGZ	**Ngauruhoe**	**1.92**	**222**	PN	P	01 46 11.1	+0.6
TWVZ	**Taurewa**	**1.94**	**227**	P	P	01 46 11.7	+0.9
TWVZ	**Taurewa**	**1.94**	**227**	PN	P	01 46 11.7	+0.9
TUVZ	**Tukino**	**1.96**	**219**	P	P	01 46 11.4	+0.3
TUVZ	**Tukino**	**1.96**	**219**	PN	P	01 46 11.5	+0.3
CNZ	**Chateau**	**1.97**	**222**	PN	P	01 46 12.2	+1.0
MOVZ	**Moawhango**	**2.03**	**215**	P	P	01 46 11.4	-0.6
MOVZ	**Moawhango**	**2.03**	**215**	PN	P	01 46 11.5	-0.5
MOVZ				SN	S	01 46 35.7	-0.4
PWZ	**Pawanui**	**2.29**	**187**	PN	P	01 46 13.0	-2.8
PWZ				SN	S	01 46 39.9	-3.0
TSZ	**Takapari Road**	**2.52**	**203**	*e*P	P	01 46 16.1	-2.8
TSZ	**Takapari Road**	**2.52**	**203**	PN	P	01 46 16.1	-2.8
MRZ	**Mangatainoka R**	**3.18**	**204**	*e*P	P	01 46 24.3	-3.9
KIW	**Kapiti Island**	**3.60**	**210**	*e*P	P	01 46 29.9	-4.1
MTW	**Mount Morrison**	**3.66**	**201**	*e*P	P	01 46 30.0	-4.9
CAW	**Cannon Point**	**3.75**	**206**	*e*P	P	01 46 31.7	-4.5

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*TAP **18** 02:24:14.8,24.81N×122.00E,h9^{km},ML3.9*

TAP Felt I J, I J at Nioudou, I J at Nanau.

*JMA **18** 02:24:15.6±0.2,24.94N×121.97E,h47^{km},M3.4*

*IDC **18** 02:24:15.5±1.8,24.73N×121.60E,mb3.7/5,mb1 3.9/5, mb1mx3.6/21,mbtmp3.7/5,Error ellipse: s-maj=189.6km s-min=19.6km az=66.0*

ISC 18 02:24:15.0±0.4,**24.82N**±0.02×**122.06E**±0.02,**h2**^{km}±3^{km}, **n58**,σ**0**^{s}**95**/84,**mb3.7**/5,**7C-1D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.12**	**284**	⇓*i*P	**Pg**	**02 24 17.1**	**-0.3**
TWB1	**Santiao Chiao**	**0.20**	**340**	⇑*i*P	**Pg**	**02 24 19.5**	**+0.4**
TWB1				S	**Sg**	**02 24 22.4**	**+0.7**
TWC	**Suao**	**0.28**	**224**	⇑*i*P	**Pg**	**02 24 20.8**	**+0.2**
TWC				S	**Sg**	**02 24 24.2**	**-0.2**
ILA	**Ilan**	**0.29**	**260**	*e*P	**Pg**	**02 24 20.6**	**-0.2**
ILA				S	**Sg**	**02 24 24.5**	**-0.2**
NWF	**Wu-fen Shan**	**0.36**	**315**	⇑*i*P	**Pg**	**02 24 22.4**	**+0.2**
NWF				S	**Sg**	**02 24 27.4**	**+0.4**
TWE	**Neicheng**	**0.37**	**255**	⇑*i*P	**Pg**	**02 24 22.1**	**-0.3**
TWE				S	**Sg**	**02 24 26.7**	**-0.7**
TWA	**Mucha**	**0.47**	**291**	*i* P	**Pg**	**02 24 24.1**	**-0.2**
TWA				S	**Sg**	**02 24 29.9**	**-0.5**
ENA	**Nanau**	**0.48**	**217**	*e*P	**Pg**	**02 24 24.5**	**-0.1**
ENA				S	**Sg**	**02 24 31.3**	**+0.2**
ENTT	**Nioudou**	**0.49**	**249**	⇑*i*P	**Pg**	**02 24 24.1**	**-0.6**
ENTT				S	**Sg**	**02 24 32.5**	**+1.4**
TAP1	**Taipei**	**0.54**	**294**	*i* P	**Pg**	**02 24 25.7**	**-0.1**
TAP1				S	**Sg**	**02 24 32.9**	**0.0**
TAP	**Taipei**	**0.55**	**294**	*e*P	**Pg**	**02 24 25.6**	**-0.4**
TAP				S	**Sg**	**02 24 32.9**	**-0.5**
TWY	**Chenhua**	**0.62**	**317**	P	**Pg**	**02 24 27.6**	**+0.2**
TWS1	**Kuangyinshan**	**0.65**	**296**	⇑P	**Pg**	**02 24 28.3**	**+0.4**
NSK	**Sanguang**	**0.66**	**258**	⇑*i*P	**Pg**	**02 24 27.1**	**-1.0**
NSK				S	**Sg**	**02 24 34.9**	**-1.9**
NNS	**Nan Shan**	**0.73**	**239**	*e*P	**Pg**	**02 24 28.6**	**-1.0**
NNS				S	**Sg**	**02 24 38.8**	**-0.5**
PCYT	**Pengchaiyu**	**0.81**	**0**	P	**Pg**	**02 24 31.7**	**+0.6**
PCYT				S	**Sg**	**02 24 43.7**	**+1.7**
NCU	**National Centr**	**0.81**	**281**	*e*P	**Pg**	**02 24 31.0**	**-0.2**
NCU				S	**Sg**	**02 24 42.0**	**0.0**
TWD	**Chiawan**	**0.85**	**210**	P	**Pg**	**02 24 31.0**	**-0.9**
TWD				S	**Sg**	**02 24 42.7**	**-0.5**
YOJ	**Yonaguni jima**	**0.93**	**112**	P	**Pb**	**02 24 34.3**	**+0.8**
YOJ				S	**Sg**	**02 24 47.7**	**+1.7**
NSTT	**Nanjuang**	**0.98**	**259**	*e*P	**Pb**	**02 24 33.5**	**-0.9**
NSTT				S	**Sb**	**02 24 48.5**	**+0.8**
TWT	**Tachien**	**0.98**	**236**	*e*P	**Pb**	**02 24 33.7**	**-0.7**

TWT				S	Sb	02 24 47.5	-0.2
WHF	**Hehuan Shan**	0.99	228	*e*P	Pb	02 24 33.4	-1.1
WHF				S	Sb	02 24 47.0	-0.9
HSN	**Hsinchu**	0.99	269	*e*P	Pb	02 24 34.0	-0.6
HSN				S	Sb	02 24 47.7	-0.4
ESL	**Shilin**	1.15	210	*e*P	Pb	02 24 36.4	-0.9
ESL				S	Sb	02 24 52.9	+0.3
NSY	**Sanyi**	1.25	252	*e*P	Pb	02 24 39.2	+0.2
NSY				S	Sb	02 24 57.0	+1.5
TWQ1	**Liyutan**	1.26	249	*e*P	Pb	02 24 39.2	0.0
SMLT	**Sun Moon Lake**	1.41	229	*e*P	Pb	02 24 41.6	-0.2
SMLT				S	Sb	02 25 00.2	+0.1
TYC	**Yuchr**	1.43	231	*e*P	Pn	02 24 41.0	-1.0
TCU	**Taichung**	1.43	243	*e*P	Pn	02 24 42.1	0.0
EHY	**Hungye**	1.47	208	*e*P	Pn	02 24 42.2	-0.4
WNT	**Mingjian**	1.57	234	*e*P	Pn	02 24 45.2	+1.2
IRIF	**Iriomote-Funau**	1.59	107	P	Pn	02 24 43.4	-0.9
IRIF				S	Sb	02 25 04.7	-0.6
TWF1	**Yuli**	1.62	206	*e*P	Pn	02 24 44.2	-0.5
YUS	**Yu-Shan**	1.67	218	*e*P	Pn	02 24 46.1	+0.7
ALS	**Alishan**	1.73	222	*e*P	Pn	02 24 47.5	+1.1
CHN5	**Tsauling**	1.75	226	*e*P	Pn	02 24 46.7	0.0
HATJ	**Hateruma jima**	1.76	115	P	Pn	02 24 46.3	-0.4
JKRS	**Kuro-shima**	1.86	108	P	Pn	02 24 47.4	-0.8
JKRS				*e*S	Sn	02 25 11.8	-0.9
ELDTW	**Lidau**	1.88	211	*e*P	Pn	02 24 48.5	0.0
JIJ	**Ishigaki jima**	1.94	103	P	Pn	02 24 48.8	-0.6
JIJ				*e*S	Sn	02 25 13.6	-1.2
CHN4	**Tsaushan**	1.98	223	*e*P	Pn	02 24 52.2	+2.3
CHY	**Chiayi**	1.99	229	*e*P	Pn	02 24 52.0	+1.9
STYT	**Tauyuan**	2.03	216	*e*P	Pn	02 24 51.6	+0.9
WTP	**Ta-pu**	2.05	221	*e*P	Pn	02 24 52.8	+1.9
TWK	**Hsinying**	2.11	223	*e*P	Pn	02 24 53.2	+1.4
CHN1	**Nanshi**	2.15	221	*e*P	Pn	02 24 54.2	+1.9
SGST	**Jiashian**	2.19	218	*e*P	Pn	02 24 54.2	+1.2
SSD	**Sandimen**	2.44	213	*e*P	Pn	02 24 57.2	+0.7
TWM1	**Shoushan**	2.49	217	*e*P	Pn	02 24 57.6	+0.4
EAST	**Anshuo**	2.67	205	*e*P	Pn	02 25 02.1	+2.4
WDGT	**Dungji**	2.69	235	*e*P	Pn	02 25 00.0	-0.1
SCZT	**Fangliau**	2.77	209	*e*P	Pn	02 25 03.0	+1.7
LAY	**Lan-yu**	2.80	190	*e*P	Pn	02 25 00.9	-0.8
SONM	**Songino Array**	26.11	336	P	P	02 29 50.6	-1.4
	2.0nm,0.8s,mb3.7,baz=152,slow=8.2,SNR=11						
ZAL	**Zalesovo**	40.16	326	P	P	02 31 51.9	-2.2
	0.5nm,0.6s,mb3.4,baz=338,slow=17,SNR=3.8						
WRA	**Warramunga Arr**	46.06	164	P	P	02 32 39.9	-2.5
	1.6nm,0.6s,mb4.1,baz=346,slow=8.7,SNR=13						
BVAR	**Borovoye Array**	47.70	320	P	P	02 32 51.6	-3.3
	0.3nm,0.6s,mb3.5,baz=112,slow=7.8,SNR=3.5						
ASAR	**Alice Springs**	49.54	166	P	P	02 33 10.3	+0.8
	0.4nm,0.6s,mb3.6,baz=343,slow=9.4,SNR=4.0						

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*SSS **18** 02:28:55.9, 12.45N×87.90W, h126^{km}, MD3.5*
*INET **18** 02:28:57.7, 12.36N×87.77W, h8^{km}, MD3.4*
CASC 18 02:28:55.8±2.5**, 12.16N×87.87W, h19^{km}**±8^{km}**, MD3.6, 3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	**Leon**	0.99	75	*e*P	Pb	02 29 13.9	-0.2
LEON				*e*S	Sb	02 29 26.6	-0.1
MIRN	**Miramar**	1.17	76	⇓*e*P	Pb	02 29 16.6	-0.5
MIRN				*e*S	Sb	02 29 31.9	+0.1
CNGN	**Cerro Negro**	1.20	74	*e*P	Pb	02 29 17.3	-0.3
CNGN				*e*S	Sb	02 29 32.3	-0.3
COPN	**Copaltepe**	1.25	89	⇓*e*P	Pn	02 29 17.6	-0.9
COPN				*e*S	Sb	02 29 35.9	+1.7
BLLM	**Bellamira**	1.32	344	*e*P	Pn	02 29 20.9	+1.4
BLLM				*e*S	Sb	02 29 38.9	+2.6
MOMJ	**Momotombo**	1.32	79	*e*P	Pn	02 29 18.1	-1.4
MOMJ				*e*S	Sb	02 29 37.7	+1.3
APYN	**Apoyeque**	1.49	87	⇓*e*P	Pn	02 29 21.6	-0.2
APYN				*e*S	Sn	02 29 40.5	-0.4
MGAN	**Managua**	1.59	90	*e*P	Pn	02 29 22.9	-0.4
MGAN				*e*S	Sn	02 29 44.2	+0.8
TICN	**Ticuantepe**	1.61	94	*e*P	Pn	02 29 24.5	+1.0
TICN				*e*S	Sn	02 29 44.1	+0.2
WILN	**Americas 2**	1.65	90	*e*S	Sn	02 29 44.5	-0.4
LCBS	**La Ceiba**	1.83	324	*e*P	Pn	02 29 25.3	-1.4
LCBS				*e*S	Sn	02 29 48.6	-1.0
LFRS	**El Faro**	1.86	321	*e*P	Pn	02 29 25.7	-1.4
LFRS				*e*S	Sn	02 29 49.3	-1.0

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*NIED **18** 02:56:00, 31.60N×131.50E, h38^{km}, Mw4.2 Best double couple: M$_0$2.26×10^{15} NP1:φ$_s$288°, δ58°, λ-128°. NP2: φ$_s$163°, δ48°, λ-46°.*
*JMA **18** 02:56:00.6, 31.64N×131.48E, h39^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1:φ$_s$303°, δ50°, λ-123°. NP2:φ$_s$169°, δ50°, λ-57°. Principal axes: T Plg0°, Azm236°; N Plg25°, Azm326°; P Plg65°, Azm145°;*
JMA Felt II J1.
*IDC **18** 02:56:02.1±8.4, 31.65N×131.20E, h56^{km}±70^{km}, mb3.6/8, mb1 3.7/9, mb1mx3.6/23, mbtmp3.9/9, ML3.9/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/22 Error ellipse: s-maj=73.1km s-min=16.5km az=71.0*
ISC 18 02:55:59.3±0.8**, 31.58N**±0.04×**131.50E**±0.09**, h51^{km}**±5^{km}**, n18, σ0^{s}87**/23**, mb3.8**/8**, 2C-3D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	0.20	254	⇑P	P	02 56 07.6	-0.2
JNAR				S	S	02 56 12.9	-1.0
JTZ	**Takazaki**	0.47	312	⇓P	P	02 56 09.9	-0.5
JTZ				S	S	02 56 17.7	-0.7
JTSN	**Tsuno**	0.66	0	P	P	02 56 12.7	0.0
JTSN				S	S	02 56 22.0	-0.5
JSU	**Suzuyama**	0.90	265	⇑P	P	02 56 16.6	+0.7
JSU				S	S	02 56 28.6	+0.4
JZO	**Okuchi**	0.95	306	⇓P	P	02 56 17.1	+0.5
JZO				S	S	02 56 29.8	+0.4
JTN	**Tanegashima 3**	1.03	206	P	P	02 56 20.2	+2.5
JIU2	**Izumi 2**	1.12	329	⇓P	P	02 56 20.2	+1.2
JIU2				S	S	02 56 34.5	+0.9
JOW	**Kunigami**	5.51	212	P	P	02 57 20.8	0.0
	8.2nm,0.3s,baz=93,slow=15,SNR=17						
JOW				S	S	02 58 21.9	-1.8
CBIJ	**Chichi jima**	10.34	113	LR	LR	03 02 25.2	
	comp=Z,38nm,21.2s,baz=159,slow=36						
ASAJ	**Asahikawa**	15.26	32	LR	LR	03 05 23.1	
	comp=Z,87nm,21.0s,baz=36,slow=37						
SONM	**Songino Array**	25.07	318	P	P	03 01 20.1	-0.2
	0.5nm,0.6s,mb3.2,baz=120,slow=10.0,SNR=4.0						
BVAR	**Borovoye Array**	48.37	315	P	P	03 04 36.9	-0.8
	0.5nm,0.4s,mb3.9,baz=104,slow=8.6,SNR=4.4						
WRA	**Warramunga Arr**	51.30	177	P	P	03 05 01.1	+0.5
	1.6nm,0.9s,mb3.9,baz=354,slow=8.1,SNR=9.1						
ASAR	**Alice Springs**	54.98	177	P	P	03 05 28.7	+0.8
	0.8nm,0.6s,mb3.9,slow=5.4,SNR=11						
STKA	**Stephens Creek**	63.83	170	P	P	03 06 29.5	+0.7
	2.3nm,0.8s,mb4.3,baz=338,slow=8.3,SNR=4.0						
FINES	**FINESS Array B**	69.64	330	P	P	03 07 03.9	-1.0
	1.1nm,0.5s,mb4.1,baz=75,slow=6.2,SNR=17						
FINES				pP	pP	03 07 15.3	-4.1
	0.9nm,0.5s,baz=74,slow=5.0,SNR=2.4						
NOA	**NORSAR Array B**	75.77	334	P	P	03 07 39.9	-1.1
	1.0nm,1.0s,mb3.7,baz=53,slow=5.6,SNR=3.6						
NOA				pP	pP	03 07 51.6	-4.0
	2.2nm,1.0s,baz=50,slow=5.7,SNR=2.7						
BRTR	**Keskin Array B**	76.01	308	P	P	03 07 42.5	-0.3
	0.8nm,1.0s,mb3.6,baz=72,slow=4.6,SNR=3.7						

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*IDC **18** 03:30:13.9±1.3, 1.10N×126.57E, mb4.0/5, mb1 4.2/5, mb1mx4.0/15, mbtmp4.0/5, Error ellipse: s-maj=119.9km s-min=21.2km az=68.0*
*NEIC **18** 03:30:21.3±0.7, 0.93N×126.32E, h60^{km}, mb4.3/3, Error ellipse: s-maj=52.9km s-min=9.9km az=68.0*
ISC 18 03:30:17.0±0.8**, 0.9N**±0.2×**126.1E**±0.4**, h33^{km}, n11, σ1^{s}00**/11**, mb4.2**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	14.93	155	*e*P	P	03 33 46.7	-0.9
	8.8nm,0.9s						
FITZ	**Fitzroy Crossi**	18.92	181	*e*P	P	03 34 37.0	-0.9
	3.9nm,0.9s						
WRAB	**Tennant Creek**	22.25	159	*e*P	P	03 35 12.5	-0.1
	14nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	22.25	159	P	P	03 35 12.9	+0.2
	4.5nm,0.7s,mb4.0,baz=340,slow=11,SNR=68						
WB2	**Warramunga Arr**	22.25	159	*e*P	P	03 35 12.9	+0.2
ASAR	**Alice Springs**	25.59	163	P	P	03 35 45.3	+0.2
	2.6nm,0.4s,mb4.1,baz=345,slow=11,SNR=32						
ASPA	**Alice Springs**	25.59	163	*e*P	P	03 35 47.2	+2.1
STKA	**Stephens Creek**	35.77	157	P	P	03 37 14.7	-0.4
	3.6nm,0.7s,mb4.4,baz=324,slow=8.9,SNR=6.2						
SONM	**Songino Array**	49.76	343	P	P	03 39 08.4	0.0
	0.8nm,1.0s,mb3.7,baz=163,slow=6.8,SNR=5.2						
KURK	**Kurchatov**	63.78	328	*e*P	P	03 40 46.4	-1.7
	3.9nm,0.6s,mb4.6						
BRTR	**Keskin Array B**	91.34	310	P	P	03 43 22.8	+1.7
	0.5nm,0.8s,mb3.9,baz=90,slow=5.8,SNR=3.0						

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*IDC **18** 03:37:36.4±0.8, 0.42N×126.42E, mb4.3/9, mb1 4.4/9, mb1mx4.2/17, mbtmp4.3/9, Error ellipse: s-maj=75.8km s-min=16.8km az=70.0*
*NEIC **18** 03:37:44.0±0.5, 0.35N×126.43E, h60^{km}, mb4.4/6, Error ellipse: s-maj=39.8km s-min=8.0km az=71.0*
ISC 18 03:37:39.4±0.5**, 0.4N**±0.1×**126.3E**±0.3**, h33^{km}, n19, σ0^{s}93**/19**, mb4.4**/13**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	14.34	155	*e*P	P	03 41 00.8	-1.4
	6.1nm,0.6s						
FITZ	**Fitzroy Crossi**	18.37	182	*e*P	P	03 41 54.6	+1.0
	5.0nm,1.0s						
WRAB	**Tennant Creek**	21.65	159	*e*P	P	03 42 28.0	-1.1
	13nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	21.66	159	P	P	03 42 28.2	-0.9
	3.9nm,0.4s,mb4.2,baz=336,slow=11,SNR=54						
WB2	**Warramunga Arr**	21.66	159	*e*P	P	03 42 28.4	-0.8
ASPA	**Alice Springs**	25.00	163	*e*P	P	03 43 03.8	+1.9
ASAR	**Alice Springs**	25.00	163	P	P	03 43 03.0	+1.1
	3.0nm,0.4s,mb4.2,baz=342,slow=10,SNR=39						
ENH	**Enshi**	33.78	333	*e*P	P	03 44 20.1	-0.3
	3.0nm,0.4s,mb4.6						
STKA	**Stephens Creek**	35.18	157	*e*P	P	03 44 33.4	+0.9
	2.4nm,0.6s,mb4.3						
STKA	**Stephens Creek**	35.18	157	P	P	03 44 32.1	-0.3
	3.2nm,0.7s,mb4.4,baz=331,slow=16,SNR=6.2						
SONM	**Songino Array**	50.35	343	P	P	03 46 35.6	+0.4
	1.2nm,0.6s,mb4.1,baz=158,slow=7.6,SNR=11						
ZAL	**Zalesovo**	63.40	334	P	P	03 48 07.3	-0.6
	4.7nm,0.3s,mb5.1,baz=113,slow=1.8,SNR=5.9						
KURK	**Kurchatov**	64.36	329	*e*P	P	03 48 13.1	-1.1
	4.6nm,0.5s,mb4.8						
BVAR	**Borovoye Array**	69.92	328	P	P	03 48 49.5	+0.3
	2.4nm,0.8s,mb4.2,baz=108,slow=4.6,SNR=6.5						
CHKZ	**Chkalovo**	70.11	328	*e*P	P	03 48 49.5	-0.8
	2.2nm,0.8s,mb4.1						
ILAR	**Eielson Array**	88.28	25	P	P	03 50 29.1	+0.7
	0.3nm,0.5s,mb3.8,baz=260,slow=4.5,SNR=6.3						
INK	**Inuvik**	93.41	22	P	P	03 50 53.1	+0.9
	0.4nm,0.6s,mb4.1,baz=279,slow=5.4,SNR=3.8						
ARCES	**ARCESS Array B**	93.44	340	P	P	03 50 52.9	+0.5
	4.4nm,1.0s,mb4.8,baz=82,slow=6.4,SNR=4.7						
ARCES	**ARCESS Array B**	93.44	340	P	P	03 50 52.9	+0.5

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*NIED **18** 03:40:00, 31.60N×131.50E, h38^{km}, Mw3.9 Best double couple: M$_0$7.79×10^{14} NP1:φ$_s$291°, δ71°, λ-129°. NP2: φ$_s$179°, δ43°, λ-29°.*
*JMA **18** 03:40:06.8, 31.64N×131.47E, h38^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1:φ$_s$178°, δ45°, λ-46°. NP2:φ$_s$304°, δ60°, λ-125°. Principal axes: T Plg8°, Azm58°; N Plg30°, Azm323°; P Plg59°, Azm162°;*
JMA Felt II J1.
*IDC **18** 03:40:06.0±1.3, 31.77N×131.56E, h38^{km}±8^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/23, mbtmp3.8/7, ML3.9/1 Error ellipse: s-maj=62.7km s-min=18.0km az=76.0*
*NEIC **18** 03:40:07.2±1.0, 31.70N×131.31E, h46^{km}±12^{km}, Error ellipse: s-maj=17.1km s-min=9.3km az=112.0*
ISC 18 03:40:05.8±0.6**, 31.62N**±0.04×**131.52E**±0.07**, h50^{km}**±5^{km}**, h40^{km}**±1.3^{km}**:pP-P, n18, σ0^{s}91**/26**, mb3.7**/6**, 2C-4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNAR	**Kushima--Naru**	0.23	245	⇑P	P	03 40 13.7	-0.6
JNAR				S	S	03 40 19.2	-1.2
JTZ	**Takazaki**	0.46	307	⇓P	P	03 40 16.0	-0.6
JTZ				S	S	03 40 23.2	-1.1
JTSN	**Tsuno**	0.62	359	⇓P	P	03 40 18.8	+0.3
JTSN				S	S	03 40 28.3	+0.4
JSU	**Suzuyama**	0.91	263	⇑P	P	03 40 22.7	+0.2
JSU				S	S	03 40 35.0	+0.1
JZO	**Okuchi**	0.94	304	⇓P	P	03 40 23.2	+0.4
JZO				S	S	03 40 36.2	+0.8
JTN	**Tanegashima 3**	1.07	206	P	P	03 40 26.2	+1.5
JTN				S	S	03 40 41.2	+2.5
JIU2	**Izumi 2**	1.09	327	⇓P	P	03 40 26.2	+1.1
JIU2				S	S	03 40 40.1	+0.8
JOW	**Kunigami**	5.55	211	Pn	P	03 41 26.9	-1.0
	7.2nm,0.3s,baz=92,slow=9.9,SNR=15						
JOW				Sn	S	03 42 27.3	-4.0
	5.0nm,0.3s,baz=81,slow=30,SNR=5.7						
MAJO	**Matsushiro**	7.41	47	*e*Pn	P	03 41 53.7	-0.1
MAT	**Matsushiro**	7.41	47	*e*P	P	03 41 54.0	+0.2
	7.3nm,0.6s						
MAT	**Matsushiro**	7.41	47	P	P	03 41 54.0	+0.2
SONM	**Songino Array**	25.05	317	P	P	03 45 26.3	-0.4
	0.3nm,0.8s,mb2.9,baz=127,slow=7.2,SNR=2.8						
SONM				pP	pP	03 45 37.6	-1.6
	0.5nm,0.8s,baz=133,slow=9.0,SNR=5.9						
WRA	**Warramunga Arr**	51.34	177	P	P	03 49 07.2	-0.3
	0.7nm,0.5s,mb3.8,baz=354,slow=8.1,SNR=10						
ASAR	**Alice Springs**	55.02	177	P	P	03 49 35.4	+0.7
	1.1nm,1.1s,mb3.8,baz=8.1,slow=6.4,SNR=9.2						
STKA	**Stephens Creek**	63.87	170	P	P	03 50 36.0	+0.4
	1.7nm,0.5s,mb4.3,baz=349,slow=10,SNR=5.7						
STKA	**Stephens Creek**	63.87	170	P	P	03 50 36.0	+0.3
FINES	**FINESS Array B**	69.61	330	P	P	03 51 09.7	-1.6
	0.3nm,0.4s,mb3.5,baz=63,slow=6.2,SNR=3.8						
FINES				pP	pP	03 51 21.4	-4.1
	0.7nm,0.4s,baz=63,slow=6.2,SNR=6.1						
NOA	**NORSAR Array B**	75.74	334	P	P	03 51 46.7	-0.7
	0.5nm,0.6s,mb3.6,baz=69,slow=4.7,SNR=3.2						
NOA				pP	pP	03 51 58.2	-3.5
	0.8nm,0.8s,baz=91,slow=4.4,SNR=1.5						

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*BJI **18** 03:51:50.5, 3.55S×135.16E, h27^{km}, mB5.0, mb4.8, Ms4.6, Msz4.4*
*IDC **18** 03:51:55.3±0.8, 2.83S×134.45E, mb4.3/9, mb1 4.5/11, mb1mx4.4/15, mbtmp4.3/11, ML3.9/2, MS3.7/2, Ms1 3.7/2, ms1mx3.1/17, Error ellipse: s-maj=41.1km s-min=16.6km az=71.0*
*NEIC **18** 03:51:59.7±4.2, 2.89S×134.25E, h27^{km}±31^{km}, mb4.7/16, Error ellipse: s-maj=12.1km s-min=10.1km az=77.0*
ISC 18 03:51:57.8±0.4**, 2.98S**±0.05×**134.19E**±0.09**, h27^{km}, n38, σ1^{s}08**/38**, mb4.6**/21**, MS3.8**/3**, 2C-2D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	9.82	190	⇓*i*P	P	03 54 18.8	-1.8
	63nm,0.6s						
KAKA				*i* S	Sn	03 56 05.5	-5.5
PMG	**Port Moresby**	14.38	117	Pn	P	03 55 23.2	+1.4
	1.6nm,0.3s,baz=304,slow=6.7,SNR=3.6						
PMG	**Port Moresby**	14.38	117	Pn	P	03 55 21.2	-0.6
WRAB	**Tennant Creek**	16.85	179	*e*P	P	03 55 55.9	+2.3
	83nm,0.7s						
WB2	**Warramunga Arr**	16.86	179	*e*P	P	03 55 49.9	-3.8
WB2				*i*		03 55 56.4	
WRA	**Warramunga Arr**	16.86	180	Pn	P	03 55 50.0	-3.7
	0.6nm,0.3s,baz=0.3,slow=12,SNR=26						
FITZ	**Fitzroy Crossi**	17.21	209	*e*P	P	03 55 56.5	-1.6
	12nm,0.4s						
FITZ				*e*S	S	03 59 00.3	-6.7
ASAR	**Alice Springs**	20.57	181	P	P	03 56 38.1	+0.9
	170nm,0.8s,baz=6.0,slow=12,SNR=556						
ASAR				LR	LR	04 05 20.0	
	comp=Z,237nm,19.8s,MS3.6,baz=14,slow=39						
ASPA	**Alice Springs**	20.57	181	⇓*i*P	P	03 56 37.7	+0.4
CTA	**Charters Tower**	20.68	146	*e*P	P	03 56 39.3	+0.8
	9.6nm,0.6s						
CTA	**Charters Tower**	20.68	146	P	P	03 56 38.8	+0.3
	11nm,0.6s,baz=312,slow=17,SNR=7.9						
CTA				LR	LR	04 04 22.5	
	comp=Z,178nm,18.5s,MS3.5,baz=235,slow=36						
CTAO	**Charters Tower**	20.68	146	*e*P	P	03 56 39.0	+0.5
	17nm,0.8s						
MBWA	**Marble Bar**	22.91	217	*e*P	P	03 57 02.2	+1.4
	18nm,0.7s,mb4.6						
STKA	**Stephens Creek**	29.58	167	*e*P	P	03 58 01.9	-1.0
	3.7nm,0.8s,mb4.2						
STKA	**Stephens Creek**	29.58	167	P	P	03 58 02.0	-0.8
	5.5nm,0.8s,mb4.3,baz=320,slow=15,SNR=7.6						
KLBR	**Kellerberrin**	32.40	207	*e*P	P	03 58 28.5	+0.8
	39nm,0.5s,mb5.5						
CMAR	**Chiang Mai Arr**	40.72	303	P	P	03 59 39.1	+1.0
	1.7nm,0.7s,mb3.8,baz=114,slow=6.6,SNR=7.4						
BJT	**Baijiatuau**	45.87	341	*e*P	P	04 00 19.2	-0.5
	14nm,0.9s,mb4.9						
LZH	**Lanzhou**	48.10	327	⇑P	P	04 00 37.8	+0.4
LZH				AP	pP	04 00 46.1	+0.4
LZH				AMB	AMB		
	comp=Z,29nm,1.4s,mb5.1						
LZH				AMB	AMB		
	comp=Z,98nm,5.7s						
LZH				LR	LR		
	comp=N,259nm,13.3s						
LZH				LR	LR		
	comp=Z,346nm,17.1s,MS4.4						
LZH	**Lanzhou**	48.10	327	⇑P	P	04 00 37.8	+0.4
	comp=Z,29nm,1.4s,mb5.1						
LZH				sP	sP	04 00 39.8	-9.2
LZH				pP	pP	04 00 46.1	+0.4
LZH				LR	LR		
	comp=Z,350nm,17.1s,MS4.4						
GTA	**Gaotai**	52.71	327	P	P	04 01 13.1	+0.7
GTA				AP	pP	04 01 16.8	-4.0
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	55.93	338	*e*P	P	04 01 34.2	-1.6
	comp=Z,5.0nm,1.2s,mb4.4						
SONM	**Songino Array**	56.15	338	P	P	04 01 36.9	-0.5
	comp=Z,0.6nm,0.4s,mb4.0,baz=157,slow=7.6,SNR=8.0						
HYB	**Hyderabad**	58.48	292	*i* P	P	04 01 54.5	+0.2
WMQ	**Urumqi**	62.48	324	*e*P	P	04 02 21.9	+0.6
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
ZAL	**Zalesovo**	69.96	331	P	P	04 03 08.4	-0.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=343,slow=6.4,SNR=6.9						
AAK	**Ala-Archa**	70.31	317	*e*P	P	04 03 11.2	+0.2
	comp=Z,4.8nm,0.9s,mb4.4						
KURK	**Kurchatov**	71.39	326	*e*P	P	04 03 16.9	-0.6
	comp=Z,6.2nm,0.9s,mb4.5						
VNDA	**Vanda**	75.95	174	P	P	04 03 43.8	+0.2
	comp=Z,1.9nm,0.8s,mb4.1,baz=318,slow=4.6,SNR=5.0						
BVAR	**Borovoye Array**	76.99	326	P	P	04 03 50.3	+0.5
	comp=Z,3.6nm,0.8s,mb4.3,baz=117,slow=6.6,SNR=13						
BRVK	**Borovoye**	77.06	326	*e*P	P	04 03 50.1	0.0
	comp=Z,6.6nm,1.0s,mb4.5						
IMA	**Indian Mountai**	85.53	23	*e*P	P	04 04 36.1	+1.7
	comp=Z,16nm,1.1s,mb5.2						
MCK	**McKinley**	86.86	26	*e*P	P	04 04 41.0	0.0
	comp=Z,8.0nm,1.3s,mb4.8						
QSPA	**South Pole Qui**	86.97	180	*e*P	P	04 04 45.8	+4.6
	comp=Z,9.0nm,1.1s,mb4.9						
ILAR	**Eielson Array**	87.96	25	P	P	04 04 45.7	-0.5
	comp=Z,2.0nm,0.8s,mb4.4,baz=262,slow=4.3,SNR=18						
INK	**Inuvik**	93.60	22	P	P	04 05 10.4	-2.0
	comp=Z,2.0nm,1.0s,mb4.5,baz=283,slow=5.6,SNR=5.1						
YKA	**Yellowknife Ar**	102.32	26	P	Pdif	04 05 52.5	+0.5
	comp=Z,0.2nm,0.8s,baz=300,slow=5.0,SNR=4.0						
YKA	**Yellowknife Ar**	102.32	26	P	Pdif	04 05 52.5	+0.5

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*GUC **18** 04:22:48.4±0.8, 24.14S×67.12W, h220^{km}±17^{km}, ML3.9*
*NEIC **18** 04:22:50.2±0.8, 23.86S×66.82W, h202^{km}±9^{km}, mb3.3/1, Error ellipse: s-maj=17.9km s-min=11.8km az=91.0*
*IDC **18** 04:22:50.0±1.7, 23.86S×66.77W, h197^{km}±13^{km}, mb3.2/3, mb1 3.5/7, mb1mx3.4/16, mbtmp3.7/7, Error ellipse: s-maj=22.5km s-min=21.8km az=147.0*
ISC 18 04:22:50.3±0.9**, 23.98S**±0.06×**67.1W**±0.1**, h215^{km}**±8^{km}**, n17, σ1^{s}09**/22**, mb3.2**/3**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	1.48	316	*i* P	P	04 23 25.8	+0.2
SPCH				*i* S	S	04 23 54.2	+1.5
SPCH				AMP		04 23 55.7	
	comp=E,130nm,0.5s						
LVC	**Limon Verde**	2.16	309	⇑*i*P	P	04 23 32.1	+0.1
LVC				*i* S	S	04 24 05.5	+1.3
LVC				AMP		04 24 07.4	
	comp=E,193nm,0.6s						
LVC	**Limon Verde**	2.16	309	P	P	04 23 32.1	+0.1
	comp=E,38nm,0.3s,baz=129,slow=6.1,SNR=48						
LVC				S	S	04 24 05.1	+0.9
	comp=E,22nm,0.3s,baz=272,slow=20,SNR=18						
LVC	**Limon Verde**	2.16	309	*e*Pn	P	04 23 32.0	0.0
LVC				*e*Sn	S	04 24 04.4	+0.2
ANCH	**Antofagasta**	3.06	275	⇑*i*P	P	04 23 41.7	-0.2
ANCH				*i* S	S	04 24 21.6	-0.4
ANCH				AMP		04 24 25.3	
	comp=N,332nm,0.1s						
CPN1	**Cerro Paranal**	3.10	257	⇓*i*P	P	04 23 41.6	-0.8
CPN1				*i* S	S	04 24 21.1	-1.6
CPN1				AMP		04 24 21.7	
	comp=E,464nm,0.4s						
LPAZ	**La Paz**	7.71	352	P	P	04 24 40.3	-0.3
	comp=E,0.4nm,0.3s,baz=179,slow=5.5,SNR=8.6						
LPAZ				S	S	04 26 07.0	+0.1
	comp=E,0.1nm,0.3s,baz=238,slow=24,SNR=2.9						
TRQA	**Tornquist**	14.70	164	Pn	P	04 26 09.0	-0.2
SAML	**Samuel**	15.40	15	*e*P	P	04 26 15.4	-2.7
	comp=E,1.0nm,0.8s						
PLCA	**Paso Flores**	16.96	189	P	P	04 26 38.4	+2.0
	comp=E,0.1nm,0.3s,baz=357,slow=9.6,SNR=4.1						
BDFB	**Brasilia**	19.75	69	P	P	04 27 01.6	-3.9
	comp=E,0.6nm,0.3s,baz=247,slow=11,SNR=13						
TXAR	**Lajitas Array**	63.62	324	P	P	04 33 01.2	+0.6
	comp=E,0.1nm,0.3s,mb2.9,baz=149,slow=10,SNR=4.2						
PDAR	**Pinedale Array**	77.09	329	P	P	04 34 21.9	+0.5
	comp=E,0.3nm,0.6s,mb3.1,baz=141,slow=5.8,SNR=3.2						
YKA	**Yellowknife Ar**	94.08	340	P	P	04 35 45.2	+0.5
	comp=E,0.4nm,0.5s,mb3.7,baz=135,slow=4.6,SNR=15						
YKA	**Yellowknife Ar**	94.08	340	P	P	04 35 45.2	+0.5
WRA	**Warramunga Arr**	131.61	207	PKP	PKPdf	04 41 39.1	+0.9
	comp=E,0.2nm,0.4s,baz=158,slow=1.8,SNR=13						
ZAL	**Zalesovo**	143.41	28	PKP	PKPdf	04 41 58.3	-0.3
	comp=E,0.6nm,0.3s,baz=221,slow=5.3,SNR=3.1						

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*NEIC **18** 04:41:39.6, 35.00N×26.65E, h13^{km}, MD3.6(ATH), After ATH.*
*CSEM **18** 04:41:39.6, 35.00N×26.65E, h13^{km}, MD3.6/4, After ATH*
ATH 18 04:41:39.6, 35.00N×26.65E, h13^{km}, MD3.6/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	0.80	261	*e*PB	Pb	04 41 55.0	+0.2
NPS	**Neapolis**	0.89	287	*e*PB	Pb	04 41 56.0	-0.4
SANT	**Santorini**	1.68	325	*e*Pn	Pn	04 42 09.6	+0.7
SANT				*e*Sn	Sn	04 42 28.1	-2.3
VAM	**Vamos**	2.05	282	*e*PN	Pn	04 42 16.0	+1.8
APE	**Apeiranthos**	2.25	337	*e*PN	Pn	04 42 19.0	+1.8

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*CNRM **18** 04:50:24.4, 35.07N×2.77W, h16^{km}, MD4.0*
*CSEM **18** 04:50:25.7±0.1, 34.97N×2.97W, h25^{km}, MD4.0, Error ellipse: s-maj=2.1km s-min=1.5km az=123.0*
*MDD **18** 04:50:26.4±0.6, 34.93N×2.97W, h4^{km}±3^{km}, mb4.5/26, Error ellipse: s-maj=5.3km s-min=2.9km az=132.0, PRXIMO*
MDD EMS: II-III MELILLA.
*NEIC **18** 04:50:27.4, 34.99N×3.00W, h4^{km}, MG4.3(MDD), After MDD.*
NEIC Felt [II] at Melilla, Spain.
*SFS **18** 04:50:27.0, 34.97N×2.99W, h3^{km}*
*CRAAG **18** 04:50:28.2, 35.09N×2.91W, Mb4.1*
*LDG **18** 04:50:29.0±0.3, 34.98N×2.97W, h10^{km}, Md4.1/1, Ml3.5/4, Error ellipse: s-maj=5.6km s-min=3.1km az=176.0*
*INMG **18** 04:50:29.4±1.7, 35.09N×3.08W, h10^{km}±5^{km}, ML3.3, Error ellipse: s-maj=9.0km s-min=4.6km az=143.0*
ISC 18 04:50:24.7±0.3**, 35.05N**±0.02×**3.02W**±0.02**, h4^{km}, n157, σ1^{s}44**/276**, 6C-5D, Strait of Gibraltar**

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

ZAI	**Zaio**	**0.24**	**109**	P	**Pg**	**04 50 27.0**	**-2.5**
ZAI				S	**Sg**	**04 50 30.0**	**-2.7**
MELI	**Melilla**	**0.26**	**16**	⇑P	**Pg**	**04 50 33.1**	**+3.3**
MELI				S	**Sg**	**04 50 37.9**	**+4.7**
MELI	**Melilla**	**0.26**	**16**	*i* P	**Pg**	**04 50 33.2**	**+3.4**
MELI				*i* S	**Sg**	**04 50 37.9**	**+4.7**
EMEL	**Melilla**	**0.26**	**12**	P	**Pg**	**04 50 33.2**	**+3.3**
	3µm,0.3s,SNR=47						
EMEL				S	**Sg**	**04 50 37.6**	**+4.3**
	7µm,0.2s,SNR=15						
EMLI	**Melilla**	**0.26**	**13**	P	**Pg**	**04 50 33.2**	**+3.3**
	3µm,0.3s,SNR=47						
TAF	**Taforalt**	**0.55**	**115**	P	**Pg**	**04 50 37.0**	**+1.3**
TAF				S	**Sg**	**04 50 45.0**	**+2.0**
TOU	**Touzarine**	**0.61**	**262**	*i* P	**Pg**	**04 50 38.0**	**+1.1**
TOU				*i* S	**Sg**	**04 50 48.0**	**+3.0**
MPAL	**Palemas**	**0.78**	**283**	*i* P	**Pg**	**04 50 41.0**	**+0.8**
MPAL				*i* S	**Sg**	**04 50 54.0**	**+3.4**
EALB	**Alboran**	**0.89**	**359**	P	**Pb**	**04 50 44.1**	**+1.8**
EALB				S	**Sg**	**04 50 58.6**	**+4.2**
EALB	**Alboran**	**0.89**	**359**	P	**Pb**	**04 50 45.3**	**+3.0**
	298nm,0.3s,SNR=48						
EALB				S	**Sg**	**04 50 57.8**	**+3.4**
	4µm,0.7s,SNR=20						
EALB	**Alboran**	**0.89**	**359**	P	**Pb**	**04 50 44.1**	**+1.8**
EALB				S	**Sg**	**04 50 57.8**	**+3.5**
	4µm,0.7s,SNR=20						
OLHC	**Oulhaca**	**1.33**	**81**	P	**Pb**	**04 50 49.0**	**-0.8**
TZK	**Tazeka**	**1.36**	**225**	*i* P	**Pb**	**04 50 49.0**	**-1.3**
TZK				*i* S	**Sb**	**04 51 07.0**	**-0.8**
ODZI	**Dziouia**	**1.49**	**80**	P	**Pn**	**04 50 52.0**	**-0.3**
OTSS	**Djebel Tessala**	**1.84**	**82**	P	**Pn**	**04 51 02.0**	**+4.7**
EBER	**Berja**	**1.85**	**3**	P	**Pn**	**04 50 58.6**	**+1.1**
	17nm,0.3s,SNR=37						
EBER				S	**Sn**	**04 51 20.1**	**-1.4**
	585nm,0.4s,SNR=11						
EBER	**Berja**	**1.85**	**3**	P	**Pn**	**04 50 58.6**	**+1.1**
	17nm,0.3s,SNR=37						
EBER				S	**Sn**	**04 51 20.1**	**-1.4**
	585nm,0.4s,SNR=11						
TGT	**Taghat**	**1.94**	**240**	*i* P	**Pn**	**04 50 59.0**	**+0.2**
TGT				*i* S	**Sn**	**04 51 24.0**	**+0.1**
ENIJ	**Nijar**	**2.03**	**19**	P	**Pn**	**04 51 00.3**	**+0.2**
ENIJ				S	**Sn**	**04 51 28.0**	**+1.9**
ENIJ	**Nijar**	**2.03**	**19**	P	**Pn**	**04 51 00.2**	**+0.2**
	47nm,0.4s,SNR=34						
ENIJ				S	**Sn**	**04 51 24.7**	**-1.5**
	309nm,0.8s,SNR=5.7						
EMAL	**Malaga-Limoner**	**2.06**	**327**	P	**Pn**	**04 51 01.4**	**+0.9**
	5.8nm,0.2s,SNR=7.9						
EMAL				S	**Sn**	**04 51 26.4**	**-0.5**
	56nm,0.4s,SNR=7.9						
ERON	**Agron**	**2.07**	**342**	P	**Pn**	**04 51 01.2**	**+0.7**
ERON				S	**Sn**	**04 51 26.9**	**-0.2**
ERON	**Agron**	**2.07**	**342**	P	**Pn**	**04 51 01.2**	**+0.7**
	18nm,0.3s,SNR=16						
ERON				S	**Sn**	**04 51 25.5**	**-1.6**
	133nm,0.4s,SNR=8.8						
ERON	**Agron**	**2.07**	**342**	P	**Pn**	**04 51 01.2**	**+0.6**
	18nm,0.3s,SNR=16						
ERON				S	**Sn**	**04 51 26.9**	**-0.2**
EMIJ	**Mijas**	**2.08**	**317**	P	**Pn**	**04 51 01.2**	**+0.4**
EMIJ				S	**Sn**	**04 51 25.9**	**-1.5**
EMIJ	**Mijas**	**2.08**	**317**	P	**Pn**	**04 51 01.1**	**+0.4**
	36nm,0.3s,SNR=49						
EMIJ				S	**Sn**	**04 51 25.9**	**-1.5**
	539nm,0.4s,SNR=5.3						
USTO	**Oran**	**2.13**	**71**	P	**Pn**	**04 51 13.0**	**+12**
ECOG	**Cogollos-Vega**	**2.27**	**349**	P	**Pn**	**04 51 05.7**	**+2.3**
ECOG				S	**Sn**	**04 51 33.0**	**+0.8**
ECOG	**Cogollos-Vega**	**2.27**	**349**	P	**Pn**	**04 51 05.7**	**+2.2**
	21nm,0.3s,SNR=29						
ECOG				S	**Sn**	**04 51 29.6**	**-2.6**
	249nm,0.5s,SNR=14						
ECOG	**Cogollos-Vega**	**2.27**	**349**	P	**Pn**	**04 51 05.7**	**+2.2**
	21nm,0.3s,SNR=29						
ECOG				S	**Sn**	**04 51 33.0**	**+0.8**
REAL	**Reales**	**2.28**	**309**	*i* P	**Pn**	**04 51 05.0**	**+1.3**
ELOJ	**Sierra Loja**	**2.29**	**337**	P	**Pn**	**04 51 05.8**	**+2.1**
ELOJ				S	**Sn**	**04 51 38.0**	**+5.3**
ELOJ	**Sierra Loja**	**2.29**	**337**	P	**Pn**	**04 51 05.8**	**+2.1**
	45nm,0.4s,SNR=32						
ELOJ				S	**Sn**	**04 51 31.3**	**-1.4**
	134nm,0.5s,SNR=8.5						
ODJA	**Bouhanifia**	**2.37**	**82**	P	**Pn**	**04 51 09.0**	**+4.1**
EJIF	**Jimena Fronter**	**2.44**	**306**	P	**Pn**	**04 51 08.3**	**+2.5**
EJIF	**Jimena Fronter**	**2.44**	**306**	P	**Pn**	**04 51 08.0**	**+2.2**
	8.3nm,0.1s,SNR=4.0						
MIF	**Mishlifen**	**2.45**	**229**	*i* P	**Pn**	**04 51 04.0**	**-2.1**
MIF				*i* S	**Sn**	**04 51 34.0**	**-2.9**
CZD	**Col de Zad**	**2.62**	**220**	*i* P	**Pn**	**04 51 08.0**	**-0.5**
CZD				*i* S	**Sn**	**04 51 38.0**	**-3.1**
LIJA	**Lijar**	**2.68**	**314**	⇓P	**Pn**	**04 51 13.7**	**+4.4**
LIJA				S	**Sn**	**04 51 44.0**	**+1.4**
ELUQ	**Luque**	**2.70**	**338**	P	**Pn**	**04 51 12.6**	**+2.9**
ELUQ				S	**Sn**	**04 51 45.3**	**+2.1**
ELUQ	**Luque**	**2.70**	**338**	P	**Pn**	**04 51 12.5**	**+2.9**
	54nm,0.4s,SNR=25						
ELUQ				S	**Sn**	**04 51 45.3**	**+2.1**
	108nm,0.4s,SNR=7.7						
EQES	**Quesada**	**2.75**	**359**	P	**Pn**	**04 51 13.5**	**+3.1**
EQES				S	**Sn**	**04 51 47.3**	**+2.9**
EQES	**Quesada**	**2.75**	**359**	⇑P	**Pn**	**04 51 13.5**	**+3.1**
	45nm,0.6s,SNR=18						
EQES				S	**Sn**	**04 51 46.3**	**+1.9**
	474nm,0.5s,SNR=12						
CNIL	**Conil**	**2.80**	**299**	⇑P	**Pn**	**04 51 15.3**	**+4.2**
ESPR	**Espera**	**2.93**	**309**	P	**Pn**	**04 51 15.1**	**+2.1**
ESPR				S	**Sn**	**04 51 53.4**	**+4.3**
ESPR	**Espera**	**2.93**	**309**	P	**Pn**	**04 51 15.4**	**+2.4**
	19nm,0.3s,SNR=61						
ESPR				S	**Sn**	**04 51 51.9**	**+2.8**
	90nm,0.3s,SNR=6.0						
ESPR	**Espera**	**2.93**	**309**	P	**Pn**	**04 51 15.1**	**+2.2**
ESPR				S	**Sn**	**04 51 51.9**	**+2.9**
	90nm,0.3s,SNR=6.0						
GIBL	**Gibalbin**	**2.98**	**307**	⇑P	**Pn**	**04 51 16.9**	**+3.3**
CART	**Cartagena**	**3.01**	**32**	*e*Pn	**Pn**	**04 51 13.1**	**-1.0**
CART	**Cartagena**	**3.01**	**32**	⇓P	**Pn**	**04 51 13.2**	**-0.9**
CART	**Cartagena**	**3.01**	**32**	*i* P	**Pn**	**04 51 13.2**	**-0.9**
CART				*e*S	**Sn**	**04 51 45.2**	**-5.9**
EMUR	**La Murta**	**3.14**	**27**	P	**Pn**	**04 51 16.3**	**+0.5**
EMUR				S	**Sn**	**04 51 50.3**	**-3.9**
EMUR	**La Murta**	**3.14**	**27**	⇓P	**Pn**	**04 51 16.0**	**+0.2**
	37nm,0.4s,SNR=18						
EMUR				S	**Sn**	**04 51 50.1**	**-4.1**
	101nm,0.6s,SNR=9.0						
EMUR	**La Murta**	**3.14**	**27**	P	**Pn**	**04 51 16.0**	**+0.2**
	37nm,0.4s,SNR=18						
EMUR				S	**Sn**	**04 51 50.1**	**-4.1**
	101nm,0.6s,SNR=9.0						
EBAN	**Banos Encina**	**3.17**	**349**	P	**Pn**	**04 51 18.6**	**+2.3**
	1.9nm,0.5s,SNR=7.9						
EBAN				S	**Sn**	**04 51 55.4**	**+0.3**
	96nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**3.35**	**339**	P	**Pn**	**04 51 20.5**	**+1.5**
EADA				S	**Sn**	**04 51 59.2**	**-0.6**
EADA	**Adamuz**	**3.35**	**339**	⇑P	**Pn**	**04 51 20.7**	**+1.7**
	22nm,0.3s,SNR=18						
EADA				S	**Sn**	**04 51 58.3**	**-1.5**
	216nm,0.5s,SNR=8.3						
EADA	**Adamuz**	**3.35**	**339**	P	**Pn**	**04 51 20.5**	**+1.5**
EADA				S	**Sn**	**04 51 59.2**	**-0.6**
EANR	**’Ain N’Sour**	**3.48**	**74**	P	**Pn**	**04 51 37.1**	**+16**
ETRT	**Tiaret**	**3.55**	**83**	P	**Pn**	**04 51 40.0**	**+18**
EVIA	**Vianos**	**3.61**	**6**	P	**Pn**	**04 51 24.8**	**+2.2**
EVIA				S	**Sn**	**04 52 02.2**	**-4.0**
EVIA	**Vianos**	**3.61**	**6**	P	**Pn**	**04 51 24.9**	**+2.3**
	14nm,0.4s,SNR=11						
EVIA				S	**Sn**	**04 52 02.2**	**-4.0**
	55nm,0.5s,SNR=5.3						
EVIA	**Vianos**	**3.61**	**6**	P	**Pn**	**04 51 24.8**	**+2.3**
EVIA				S	**Sn**	**04 52 02.2**	**-3.9**
	55nm,0.5s,SNR=5.3						
ECHA	**Ech Chlef**	**3.74**	**72**	P	**Pg**	**04 51 47.0**	**+7.7**
ETOB	**Tobarra**	**3.78**	**18**	P	**Pn**	**04 51 26.9**	**+1.9**
ETOB				S	**Sn**	**04 52 09.5**	**-1.0**
ETOB	**Tobarra**	**3.78**	**18**	P	**Pn**	**04 51 26.9**	**+1.9**
	29nm,0.7s,SNR=37						
ETOB				S	**Sn**	**04 52 09.3**	**-1.2**
	40nm,0.4s,SNR=5.6						
ETOB	**Tobarra**	**3.78**	**18**	P	**Pn**	**04 51 26.9**	**+1.9**
	29nm,0.7s,SNR=37						
ETOB				S	**Sn**	**04 52 09.5**	**-1.0**
EBNR	**Beni Rached**	**3.91**	**70**	P	**Pg**	**04 51 50.2**	**+7.5**
EMIN	**Mina Concepcio**	**4.00**	**314**	⇓P	**Pn**	**04 51 28.8**	**+0.6**
	42nm,0.3s,SNR=18						
EMIN				S	**Sn**	**04 52 14.2**	**-2.0**
	26nm,0.4s,SNR=7.0						
EMIN	**Mina Concepcio**	**4.00**	**314**	P	**Pn**	**04 51 28.8**	**+0.6**
	42nm,0.3s,SNR=18						
EMIN				S	**Sn**	**04 52 14.2**	**-2.0**
	26nm,0.4s,SNR=7.0						
AVE	**Averroes**	**4.04**	**246**	P	**Pn**	**04 51 30.0**	**+1.3**
ERIP	**Rio Piedras**	**4.14**	**305**	P	**Pn**	**04 51 30.5**	**+0.4**
	16nm,0.1s,SNR=7.9						
ERIP				S	**Sn**	**04 52 16.8**	**-2.7**
	57nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**4.28**	**31**	P	**Pn**	**04 51 32.6**	**+0.5**
EBEN				S	**Sn**	**04 52 19.7**	**-3.6**
EBEN	**Beniarda**	**4.28**	**31**	P	**Pn**	**04 51 32.4**	**+0.3**
	7.3nm,0.6s,SNR=14						
EBEN				S	**Sn**	**04 52 19.9**	**-3.3**
	35nm,0.6s,SNR=7.8						
EBEN	**Beniarda**	**4.28**	**31**	P	**Pn**	**04 51 32.4**	**+0.3**
	7.3nm,0.6s,SNR=14						
EBEN				S	**Sn**	**04 52 19.9**	**-3.3**
	35nm,0.6s,SNR=7.8						
PALC	**Alcoutim**	**4.33**	**305**	*e*Pn	**Pn**	**04 51 33.3**	**+0.4**
PALC				*e*Sn	**Sn**	**04 52 21.7**	**-2.8**
	71nm,0.6s						
PALC	**Alcoutim**	**4.33**	**305**	Pn	**Pn**	**04 51 33.2**	**+0.3**
PALC				Sn	**Sn**	**04 52 21.1**	**-3.4**
ESDC	**Sonseca Array**	**4.68**	**351**	P	**Pn**	**04 51 39.1**	**+1.3**
ESDC				S	**Sn**	**04 52 31.8**	**-1.4**
ESDC	**Sonseca Array**	**4.68**	**351**	P	**Pn**	**04 51 39.2**	**+1.5**
	6.1nm,0.3s,baz=170,slow=12,SNR=82						
ESDC				S	**Sn**	**04 52 31.8**	**-1.4**
	35nm,0.3s,baz=174,slow=22,SNR=12						
ESDC	**Sonseca Array**	**4.68**	**351**	P	**Pn**	**04 51 39.1**	**+1.3**
ESDC				S	**Sn**	**04 52 31.8**	**-1.5**
	35nm,0.3s,SNR=12						
ESLA	**Sonseca Array**	**4.68**	**351**	*e*Pn	**Pn**	**04 51 39.2**	**+1.5**
ESLA				*e*Sb	**Sb**	**04 52 46.0**	**+1.7**
EBAD	**Badajoz**	**4.89**	**320**	P	**Pn**	**04 51 41.1**	**+0.3**
EBAD				S	**Sn**	**04 52 36.6**	**-2.0**
EBAD	**Badajoz**	**4.89**	**320**	⇓P	**Pn**	**04 51 41.1**	**+0.3**
	31nm,0.4s,SNR=18						
EBAD				S	**Sn**	**04 52 35.4**	**-3.2**
	115nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**4.89**	**320**	P	**Pn**	**04 51 41.1**	**+0.3**
	31nm,0.4s,SNR=18						
EBAD				S	**Sn**	**04 52 36.7**	**-1.9**
PBEJ	**Beja**	**4.91**	**309**	*e*Pn	**Pn**	**04 51 41.2**	**+0.2**
PBEJ				*e*Sn	**Sn**	**04 52 35.0**	**-4.0**
	26nm,0.6s						
PBEJ	**Beja**	**4.91**	**309**	Pn	**Pn**	**04 51 41.1**	**+0.1**
PBEJ				Sn	**Sn**	**04 52 34.7**	**-4.3**
PBEJ	**Beja**	**4.91**	**309**	*e*Pn	**Pn**	**04 51 41.2**	**+0.2**
PBEJ				*e*Sn	**Sn**	**04 52 35.0**	**-4.0**
	26nm,0.6s						
PTEO	**Sao Teotonio**	**5.24**	**300**	*e*Pn	**Pn**	**04 51 45.6**	**-0.1**
PTEO				*e*Sn	**Sn**	**04 52 43.8**	**-3.5**
	36nm,0.3s						
EIBI	**Ibiza**	**5.29**	**40**	P	**Pn**	**04 51 45.9**	**-0.5**
EIBI				S	**Sn**	**04 52 43.6**	**-5.0**
EIBI	**Ibiza**	**5.29**	**40**	P	**Pn**	**04 51 45.8**	**-0.6**
	26nm,0.6s,SNR=14						
EIBI				S	**Sn**	**04 52 43.8**	**-4.8**
	57nm,0.8s,SNR=7.2						
EIBI	**Ibiza**	**5.29**	**40**	P	**Pn**	**04 51 45.8**	**-0.5**
	26nm,0.6s,SNR=14						
EIBI				S	**Sn**	**04 52 43.6**	**-5.0**
EVO	**Evora**	**5.30**	**312**	*e*Pn	**Pn**	**04 51 47.8**	**+1.2**
EVO				*e*Sn	**Sn**	**04 52 46.6**	**-2.4**
	58nm,0.3s						
MOE	**Montemor**	**5.51**	**311**	*e*Pn	**Pn**	**04 51 49.3**	**-0.2**
MOE				*e*Sn	**Sn**	**04 52 49.8**	**-4.3**
EMOS	**Mosqueruela**	**5.68**	**20**	P	**Pn**	**04 51 51.8**	**-0.1**
EMOS				S	**Sn**	**04 52 51.0**	**-7.4**
EMOS	**Mosqueruela**	**5.68**	**20**	P	**Pn**	**04 51 53.2**	**+1.4**
	16nm,0.9s,SNR=8.6						
EMOS				S	**Sn**	**04 52 54.8**	**-3.5**
	14nm,0.8s,SNR=7.5						
EMOS	**Mosqueruela**	**5.68**	**20**	P	**Pn**	**04 51 51.8**	**-0.1**
CIA	**Chichaoua**	**5.93**	**236**	P	**Pn**	**04 51 54.0**	**-1.4**
CIA				S	**Sn**	**04 52 58.0**	**-6.7**
CIA	**Chichaoua**	**5.93**	**236**	*i* P	**Pn**	**04 51 54.0**	**-1.4**
PCBR	**Castelo Branco**	**5.95**	**325**	*e*Pn	**Pn**	**04 51 56.1**	**+0.3**
PCBR				*e*Sn	**Sn**	**04 53 00.5**	**-4.8**
	21nm,0.5s						
PCBR	**Castelo Branco**	**5.95**	**325**	Pn	**Pn**	**04 51 56.2**	**+0.4**
PCBR				Sn	**Sn**	**04 53 00.5**	**-4.8**
PLOU	**Loures**	**6.22**	**310**	*e*Pn	**Pn**	**04 51 59.7**	**+0.1**
PLOU				*e*Sn	**Sn**	**04 53 06.6**	**-5.5**
	30nm,0.5s						
PLOU	**Loures**	**6.22**	**310**	⇑Pn	**Pn**	**04 51 59.7**	**+0.1**
PLOU				Sn	**Sn**	**04 53 06.6**	**-5.5**
	15nm,0.5s						
MTE	**Manteigas**	**6.43**	**327**	*e*Pn	**Pn**	**04 52 02.7**	**+0.2**
MTE				*e*Sn	**Sn**	**04 53 11.2**	**-6.1**
	50nm,0.7s						
MTE	**Manteigas**	**6.43**	**327**	*e*Pn	**Pn**	**04 52 02.4**	**-0.2**
	12nm,0.4s						
MTE	**Manteigas**	**6.43**	**327**	Pn	**Pn**	**04 52 02.9**	**+0.4**
MTE				Sn	**Sn**	**04 53 11.1**	**-6.2**
ERTA	**Horta de San J**	**6.46**	**23**	P	**Pn**	**04 52 03.9**	**+0.9**
ERTA				S	**Sn**	**04 53 03.7**	**-14**
ERTA	**Horta de San J**	**6.46**	**23**	P	**Pn**	**04 52 03.8**	**+0.8**
	16nm,0.7s,SNR=11						
ERTA				S	**Sn**	**04 53 13.3**	**-4.8**
	2.9nm,0.5s,SNR=7.9						
ERTA	**Horta de San J**	**6.46**	**23**	P	**Pn**	**04 52 03.8**	**+0.8**
	16nm,0.7s,SNR=11						
PVIS	**Viseu**	**6.84**	**327**	*e*Pn	**Pn**	**04 52 08.5**	**+0.2**
PVIS				*e*Sn	**Sn**	**04 53 22.3**	**-5.3**
	24nm,0.5s						
PVIS	**Viseu**	**6.84**	**327**	Pn	**Pn**	**04 52 08.5**	**+0.2**
PVIS				Sn	**Sn**	**04 53 22.3**	**-5.3**
	12nm,0.5s						
EPOB	**Poblet**	**7.07**	**26**	P	**Pn**	**04 52 11.1**	**-0.5**
EPOB	**Poblet**	**7.07**	**26**	P	**Pn**	**04 52 10.9**	**-0.7**
	0.9nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**04 53 28.3**	**-4.9**
	5.1nm,0.5s,SNR=4.0						
EPOB	**Poblet**	**7.07**	**26**	P	**Pn**	**04 52 11.1**	**-0.4**
PVRL	**Vila Real**	**7.23**	**331**	*e*Pn	**Pn**	**04 52 13.4**	**-0.4**
PVRL				*e*Sn	**Sn**	**04 53 30.8**	**-6.5**
	35nm,0.6s						
PVRL	**Vila Real**	**7.23**	**331**	Pn	**Pn**	**04 52 13.8**	**0.0**
PVRL				Sn	**Sn**	**04 53 30.5**	**-6.8**
PBRG	**Braganca**	**7.35**	**338**	*e*Pn	**Pn**	**04 52 15.5**	**+0.1**
PBRG				*e*Sn	**Sn**	**04 53 33.9**	**-6.3**
	15nm,0.6s						
PBRG	**Braganca**	**7.35**	**338**	Pn	**Pn**	**04 52 15.6**	**+0.2**
PBRG				Sn	**Sn**	**04 53 33.1**	**-7.1**
ECAL	**Calabor**	**7.47**	**338**	P	**Pn**	**04 52 17.0**	**-0.1**
ECAL				S	**Sn**	**04 53 38.4**	**-4.9**
ECAL	**Calabor**	**7.47**	**338**	P	**Pn**	**04 52 17.2**	**0.0**
	12nm,0.4s,SNR=18						
ECAL				S	**Sn**	**04 53 37.3**	**-6.0**
	39nm,0.7s,SNR=7.5						
ECAL	**Calabor**	**7.47**	**338**	P	**Pn**	**04 52 17.2**	**+0.1**
	12nm,0.4s,SNR=18						
EMIR	**Miracle**	**7.72**	**26**	P	**Pn**	**04 52 21.9**	**+1.3**
	SNR=7.9						
EMIR				S	**Sn**	**04 53 43.1**	**-6.5**
	5.9nm,0.9s,SNR=4.0						
EMIR	**Miracle**	**7.72**	**26**	P	**Pn**	**04 52 21.9**	**+1.2**
	SNR=7.9						
ELOB	**Lobios**	**7.87**	**331**	P	**Pn**	**04 52 22.8**	**+0.1**
ELOB				S	**Sn**	**04 53 46.8**	**-6.5**
ELOB	**Lobios**	**7.87**	**331**	P	**Pn**	**04 52 22.8**	**+0.1**
	18nm,0.5s,SNR=26						
ELOB				S	**Sn**	**04 53 46.0**	**-7.2**
	22nm,0.5s,SNR=7.3						
ELOB	**Lobios**	**7.87**	**331**	P	**Pn**	**04 52 22.8**	**+0.1**
	18nm,0.5s,SNR=26						
ERUA	**La Rua**	**8.01**	**338**	P	**Pn**	**04 52 24.4**	**-0.3**
ERUA				S	**Sn**	**04 53 51.8**	**-4.9**
ERUA	**La Rua**	**8.01**	**338**	P	**Pn**	**04 52 24.4**	**-0.3**
	7.8nm,0.4s,SNR=12						
ERUA				S	**Sn**	**04 53 50.0**	**-6.7**
	14nm,0.5s,SNR=5.7						
EBIE	**Bielsa**	**8.02**	**17**	P	**P**	**04 52 23.6**	**-1.2**
EBIE	**Bielsa**	**8.02**	**17**	P	**P**	**04 52 25.9**	**+1.2**
	10.0nm,1.0s,SNR=4.0						
EBIE				S	**Sn**	**04 53 54.0**	**-2.9**
	1.3nm,0.5s,SNR=4.0						
EBIE	**Bielsa**	**8.02**	**17**	P	**P**	**04 52 23.6**	**-1.1**
EBIE				S	**Sn**	**04 53 54.0**	**-2.8**
	1.3nm,0.5s,SNR=4.0						
ETSF	**Etsaut**	**8.07**	**13**	*e*Pn	**P**	**04 52 25.1**	**-0.4**
ETSF				*e*Sn	**Sn**	**04 53 50.0**	**-8.2**
	2.2nm,0.5s						
SJPF	**Ste Jean**	**8.17**	**9**	*e*Pn	**P**	**04 52 26.8**	**-0.1**
SJPF				*e*Sn	**Sn**	**04 53 51.9**	**-8.9**
	5.3nm,0.6s						
ELAN	**Lanestosa**	**8.18**	**358**	P	**P**	**04 52 26.1**	**-0.9**
ELAN				S	**Sn**	**04 54 00.4**	**-0.5**
ELAN	**Lanestosa**	**8.18**	**358**	P	**P**	**04 52 26.1**	**-0.9**
	2.6nm,0.5s,SNR=5.6						
ELAN				S	**Sn**	**04 53 57.9**	**-3.0**
	9.5nm,0.6s,SNR=4.0						
ELAN	**Lanestosa**	**8.18**	**358**	P	**P**	**04 52 26.1**	**-0.9**
	2.6nm,0.5s,SNR=5.6						
ELAN				S	**Sn**	**04 54 00.4**	**-0.5**
EALK	**Alkurruntz**	**8.24**	**8**	P	**P**	**04 52 27.8**	**-0.1**
EALK				S	**Sn**	**04 53 56.5**	**-6.1**
EALK	**Alkurruntz**	**8.24**	**8**	P	**P**	**04 52 29.8**	**+1.9**
	4.3nm,0.3s,SNR=4.0						
EALK				S	**Sn**	**04 53 55.9**	**-6.7**
	4.1nm,0.5s,SNR=7.9						
EALK	**Alkurruntz**	**8.24**	**8**	P	**P**	**04 52 27.8**	**-0.1**
EINC	**Incio**	**8.32**	**337**	P	**P**	**04 52 28.8**	**-0.1**
EINC				S	**Sn**	**04 53 59.2**	**-5.1**
EINC	**Incio**	**8.32**	**337**	P	**P**	**04 52 28.8**	**-0.1**
	13nm,0.8s,SNR=11						
EINC				S	**Sn**	**04 53 56.8**	**-7.5**
	8.2nm,0.5s,SNR=4.5						
EINC	**Incio**	**8.32**	**337**	P	**P**	**04 52 28.8**	**-0.1**
EZAM	**Zamans**	**8.36**	**330**	P	**P**	**04 52 29.5**	**-0.1**
EZAM				S	**Sn**	**04 54 00.3**	**-5.3**
EZAM	**Zamans**	**8.36**	**330**	P	**P**	**04 52 28.3**	**-1.3**
	24nm,1.0s,SNR=4.0						
EZAM				S	**Sn**	**04 54 01.0**	**-4.5**
	10.0nm,0.4s,SNR=4.0						
EPF	**Esparros**	**8.39**	**17**	*e*Pn	**P**	**04 52 28.7**	**-1.2**
EPF				*e*Sn	**Sn**	**04 53 57.1**	**-9.0**
	3.8nm,0.5s						
EARI	**Arriondas**	**8.41**	**349**	P	**P**	**04 52 30.1**	**-0.1**
	4.9nm,0.5s,SNR=16						
EARI				S	**Sn**	**04 53 59.1**	**-7.7**
	11nm,0.8s,SNR=7.9						
EARI	**Arriondas**	**8.41**	**349**	P	**P**	**04 52 30.1**	**-0.2**
EPON	**Pontenova**	**8.87**	**340**	P	**P**	**04 52 36.5**	**0.0**
EPON				S	**Sn**	**04 54 11.1**	**-7.0**
EPON	**Pontenova**	**8.87**	**340**	P	**P**	**04 52 36.5**	**0.0**
	2.5nm,0.3s,SNR=9.5						
EPON				S	**Sn**	**04 54 09.2**	**-8.8**
	3.1nm,0.3s,SNR=5.7						
EPON	**Pontenova**	**8.87**	**340**	P	**P**	**04 52 36.5**	**0.0**
STS	**Santiago**	**8.93**	**333**	P	**P**	**04 52 36.7**	**-0.7**
STS				S	**Sn**	**04 54 11.8**	**-7.9**
STS	**Santiago**	**8.93**	**333**	P	**P**	**04 52 38.0**	**+0.5**
	6.8nm,0.6s,SNR=4.0						
STS				S	**Sn**	**04 54 11.8**	**-7.9**
	9.6nm,0.7s,SNR=4.0						
STS	**Santiago**	**8.93**	**333**	P	**P**	**04 52 36.7**	**-0.7**
CAF	**Calviac**	**10.61**	**20**	*e*Pn	**P**	**04 52 58.7**	**-1.8**
LMR	**La Mourre**	**11.09**	**39**	*e*Pn	**P**	**04 53 04.8**	**-2.3**
PGF	**Pioggiola**	**11.99**	**48**	*e*Pn	**P**	**04 53 17.4**	**-1.9**
QUIF	**Quistinic**	**12.86**	**360**	*e*Pn	**P**	**04 53 29.0**	**-1.9**
ROSF	**Rostrenen**	**13.28**	**359**	*e*Pn	**P**	**04 53 34.7**	**-1.8**

DJA 18 04:54:21.3±1.4**, 6.77S**×**116.09E, h240**^{km}**, MD4.5**/3**, ML3.7**/2**, Error ellipse: s-maj=62.5km s-min=23.3km az=2.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	**1.70**	**179**	*e*Pn	P	04 55 00.3	-0.3
RATI	**Rata**	**2.02**	**196**	*e*Pn	P	04 55 04.2	+0.8
KELI	**Kelakatan**	**2.14**	**228**	*e*Pn	P	04 55 06.0	+1.4
	25nm,0.4s						
SRDI	**Scrawed**	**2.57**	**229**	*e*Pn	P	04 55 08.3	-0.7
	60nm,0.2s						
SRDI				*e*Sn	S	04 55 44.6	-1.4

IDC 18 05:02:15.3±6.3**, 6.41S**×**149.95E, h62**^{km}±58^{km}**, mb3.2**/3**, mb1 3.6**/4**, mb1mx3.4**/13**, mbtmp3.6**/4**, ML2.7**/1**, Error ellipse: s-maj=127.6km s-min=37.4km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.06**	**223**	P	P	05 03 16.6	+0.1
	3.2nm,0.3s,baz=52,slow=11,SNR=7.3						
PMG				S	S	05 04 01.5	-1.8
	3.3nm,0.3s,baz=1.0,slow=17,SNR=3.8						
WRA	**Warramunga Arr**	**20.27**	**227**	P	P	05 06 46.3	-2.0
	1.2nm,0.7s,baz=52,slow=10,SNR=13						
ASAR	**Alice Springs**	**23.08**	**220**	P	P	05 07 15.1	-1.3
	0.7nm,0.6s,baz=56,slow=8.4,SNR=5.5						
ILAR	**Eielson Array**	**84.71**	**23**	P	P	05 14 42.4	-1.0
	0.7nm,0.7s,baz=249,slow=4.9,SNR=7.0						

WEL 18 05:07:38.5±0.1**, 40.94S**×**176.08E, h32**^{km}±1^{km}**, ML3.6**/15**, 4C-1D, Error ellipse: s-maj=1.6km s-min=1.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BFZ	**Birch Farm**	**0.29**	**26**	⇓P*	Pb	05 07 45.8	-0.1
BFZ				S*	Sb	05 07 51.2	+0.2
MRZ	**Mangatainoka R**	**0.47**	**306**	⇑P*	Pb	05 07 48.0	-0.5
MRZ				S*	Sb	05 07 55.0	-0.4
MTW	**Mount Morrison**	**0.49**	**243**	⇑P*	Pb	05 07 48.9	+0.1
MTW				S*	Sb	05 07 56.6	+0.6
PAWZ	**Paruwai Farm**	**0.66**	**228**	P*	Pb	05 07 51.3	-0.3
PAWZ				S*	Sb	05 08 01.1	+0.4
CAW	**Cannon Point**	**0.79**	**257**	⇑P*	Pb	05 07 53.2	-0.4
CAW				S*	Sb	05 08 04.0	0.0
MSWZ	**Moikau Station**	**0.79**	**233**	P*	Pb	05 07 52.8	-0.8
MSWZ				S*	Sb	05 08 04.0	-0.1
TSZ	**Takapari Road**	**0.88**	**354**	P*	Pb	05 07 54.9	-0.3
TSZ				S*	Sb	05 08 07.0	+0.3
KIW	**Kapiti Island**	**0.89**	**275**	⇑P*	Pb	05 07 55.0	-0.4
KIW				S*	Sb	05 08 06.9	-0.1
BHW	**Baring Head**	**1.03**	**242**	P*	Pb	05 07 56.1	-1.5
BHW				S*	Sb	05 08 09.5	-1.3
WEL	**Wellington**	**1.05**	**250**	P*	Pb	05 07 56.8	-1.2
MRW	**Makara Radio**	**1.08**	**254**	P*	Pb	05 07 57.2	-1.3
MRW				*e*S*	Sb	05 08 11.0	-1.5
PWZ	**Pawanui**	**1.09**	**34**	P*	Pb	05 07 56.9	-1.7
PWZ				*e*S*	Sb	05 08 10.8	-1.7
WAZ	**Wanganui**	**1.45**	**324**	PN	Pn	05 08 04.7	+1.9
WAZ				SN	Sn	05 08 25.1	+4.3
MOVZ	**Moawhango**	**1.55**	**351**	PN	Pn	05 08 04.8	+0.6
MOVZ				SN	Sn	05 08 23.4	0.0
TUWZ	**Tuamarina**	**1.69**	**252**	PN	Pn	05 08 05.2	-1.0
TUVZ	**Tukino**	**1.70**	**349**	PN	Pn	05 08 07.8	+1.4
DRZ	**Dome Shelter**	**1.71**	**346**	PN	Pn	05 08 09.6	+3.1
FWVZ	**Far West T-bar**	**1.73**	**346**	PN	Pn	05 08 08.5	+1.7
WPVZ	**Whakapapa**	**1.78**	**346**	PN	Pn	05 08 08.8	+1.3
CNZ	**Chateau**	**1.78**	**347**	PN	Pn	05 08 08.9	+1.3
NGZ	**Ngauruhoe**	**1.80**	**348**	PN	Pn	05 08 09.1	+1.3

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*CASC **18** 05:48:21.9*±*3.1, 7.06N*×*82.48W, h17*^{km}*, MD4.7, MW5.5, mb4.4(NEIC)*

*IDC **18** 05:48:24.5*±*1.0, 7.72N*×*82.21W, mb4.0/8, mb1 4.2/11, mb1mx4.0/21, mbtmp4.0/11, ML2.4/2, MS3.8/11, Ms1 3.8/11, ms1mx3.6/22, Error ellipse: s-maj=35.3km s-min=17.5km az=44.0*

*NEIC **18** 05:48:27.1*±*2.2, 7.65N*×*82.26W, h16*^{km}±*13*^{km}*, mb4.4/17, MD4.6(CASC), Error ellipse: s-maj=13.4km s-min=5.3km az=216.0*

ISC 18 05:48:22.5±0.5**, 7.23N**±0.06×**82.43W**±0.04**, h10**^{km}**, n88, σ1**^{s}**10**/85**, mb4.3**/23**, MS3.8**/8**, 14C-3D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	**Petroterminal**	**0.97**	**360**	⇑*e*P	**Pb**	**05 48 42.3**	**+1.3**
DVD	**David**	**1.20**	**359**	⇑*e*P	**Pb**	**05 48 44.1**	**-0.8**
BRU2	**Volcan**	**1.58**	**350**	*e*P	**Pn**	**05 48 49.5**	**-1.3**
BRU2	**Volcan**	**1.58**	**350**	⇑*e*P	**Pn**	**05 48 49.6**	**-1.2**
BRU2				*e*S	**Sb**	**05 49 17.5**	**+6.2**
ACR	**Cerro Adams**	**1.60**	**333**	⇑*e*P	**Pn**	**05 48 49.4**	**-1.6**

ACR	Cerro Adams	1.60	333	⇑eP	Pn	05 48 49.5	-1.5
ACR				eS	Sb	05 49 13.0	+1.2
CNI	Changuinola	2.18	358	eP	Pn	05 48 59.8	+0.5
AZU	Azuero	2.21	75	eP	Pn	05 49 00.9	+1.2
AZU	Azuero	2.21	75	⇑eP	Pn	05 48 59.4	-0.3
AZU2	Pedas	2.40	83	⇑iP	Pn	05 49 00.9	-1.6
AZU2				eS	Sn	05 49 33.7	+1.5
BUS	Buena Vista	2.66	330	⇑eP	Pn	05 49 06.1	-0.2
BUS	Buena Vista	2.66	330	⇑eP	Pn	05 49 06.0	-0.3
LIO	Limon	2.83	348	eP	Pn	05 49 09.6	+1.1
URSC	Urasca	2.92	333	eP	Pn	05 49 10.1	+0.2
URSC	Urasca	2.92	333	eP	Pn	05 49 10.0	+0.2
LCR2	La Lucha 2	2.95	328	⇑eP	Pn	05 49 09.8	-0.5
LCR2	La Lucha 2	2.95	328	⇑eP	Pn	05 49 09.9	-0.3
ICR	Volcan Irazu	3.07	333	eP	Pn	05 49 12.2	+0.1
ICR	Volcan Irazu	3.07	333	⇑eP	Pn	05 49 12.1	+0.1
LAJ	Bijagual	3.11	328	eP	Pn	05 49 13.2	+0.6
LAJ	Bijagual	3.11	328	eP	Pn	05 49 13.2	+0.6
SJS	Escuela Geolog	3.14	329	⇓eP	Pn	05 49 12.1	-0.9
SJS				eS	Sn	05 49 52.8	+1.9
SJS	Escuela Geolog	3.14	329	⇓eP	Pn	05 49 11.8	-1.2
PRS1	Puriscal	3.31	326	⇑eP	Pn	05 49 13.9	-1.6
UPA	Univ. de Panam	3.35	58	eP	Pn	05 49 16.2	+0.2
CGA2	Cerro Gallo 2	3.43	324	eP	Pn	05 49 16.7	-0.4
CGA2	Cerro Gallo 2	3.43	324	eP	Pn	05 49 16.5	-0.6
VPS2	Volcan Poas 2	3.45	329	eP	Pn	05 49 18.0	+0.7
VPS2	Volcan Poas 2	3.45	329	⇓eP	Pn	05 49 18.0	+0.6
TRTC	Tortuguero	3.56	339	eP	Pn	05 49 19.1	+0.1
TRTC	Tortuguero	3.56	339	eP	Pn	05 49 19.2	+0.1
JCR	Jicaral	3.72	315	eP	Pn	05 49 20.7	-0.5
JCR	Jicaral	3.72	315	⇑eP	Pn	05 49 20.9	-0.4
FORC	Fortuna	3.91	326	eP	Pn	05 49 24.8	+0.8
FORC	Fortuna	3.91	326	eP	Pn	05 49 24.6	+0.6
JTS	JuntasAbangare	3.94	321	Pn	Pn	05 49 22.3	-2.0
	18nm,0.3s,baz=93,slow=18,SNR=68						
JTS				Sn	Sn	05 50 07.1	-4.0
	10nm,0.3s,baz=313,slow=21,SNR=4.7						
JTS				LR	LR	05 50 59.5	
	comp=Z,3µm,21.4s,baz=164,slow=42						
JTS	JuntasAbangare	3.94	321	ePn	Pn	05 49 21.8	-2.6
VCR	Vista de Mar	4.28	313	eP	Pn	05 49 28.6	-0.6
VCR	Vista de Mar	4.28	313	eP	Pn	05 49 28.4	-0.8
OTAV	Otavalo	7.99	150	ePn	Pn	05 50 22.1	+0.6
	2.8nm,0.4s						
ROSC	El Rosal	8.39	106	Pn	P	05 50 28.0	+1.0
	0.5nm,0.3s,baz=272,slow=22,SNR=3.4						
ROSC				LR	LR	05 53 13.3	
	comp=Z,747nm,20.1s,baz=360,slow=35						
ROSC	El Rosal	8.39	106	Pn	P	05 50 28.0	+1.0
ROSC				LR	LR	05 53 13.3	
SDV	Santo Domingo	11.79	81	Pn	P	05 51 11.1	-2.8
	0.1nm,0.3s,baz=340,slow=10,SNR=3.3						
SDV	Santo Domingo	11.79	81	ePn	P	05 51 11.4	-2.5
	9.8nm,0.9s						
SJG	San Juan	19.20	54	LR	LR	05 59 53.1	
	comp=Z,358nm,20.2s,baz=269,slow=37						
NNA	Nana	19.88	164	eP	P	05 53 02.5	+5.5
	10nm,0.9s						
HKT	Hockley	25.88	333	eP	P	05 53 55.2	-1.2
	20nm,1.7s,mb4.4						
WVT	Waverly	29.19	351	eP	P	05 54 24.2	-2.2
	2.8nm,0.6s,mb4.2						
TXAR	Lajitas Array	29.73	320	P	P	05 54 32.2	+0.9
	0.5nm,0.7s,mb3.4,baz=132,slow=7.1,SNR=5.7						
TXAR				LR	LR	06 08 10.2	
	comp=Z,139nm,18.5s,MS3.6,baz=95,slow=40						
TXAR	Lajitas Array	29.73	320	P	P	05 54 32.2	+0.9
TXAR				LR	LR	06 08 10.2	
MNTX	Cornudas Mount	32.43	322	eP	P	05 54 54.5	-0.5
	6.1nm,1.3s,mb4.3						
LVC	Limon Verde	32.47	156	LR	LR	06 09 47.0	
	comp=Z,278nm,18.1s,MS4.0,baz=330,slow=39						
ANMO	Albuquerque	35.35	325	eP	P	05 55 20.4	+0.1
	3.9nm,1.0s,mb4.3						
TUC	Tucson	36.31	317	eP	P	05 55 30.1	+1.7
	16nm,1.6s,mb4.7						
SDCO	Great Sand Dun	36.89	329	eP	P	05 55 33.0	-0.2
	7.9nm,1.3s,mb4.4						
ISCO	Idaho Springs	38.53	331	eP	P	05 55 46.8	-0.1
	8.2nm,1.4s,mb4.3						
WUAZ	Wupatki	38.69	321	eP	P	05 55 49.5	+1.1
	57nm,0.7s,mb5.4						
PV10	Paradox Valley	39.24	326	eP	P	05 55 52.5	-0.4
LDFC	Landfair	40.85	317	eP	P	05 56 08.4	+2.1
BDFB	Brasilia	40.96	124	LR	LR	06 13 30.4	
	comp=Z,327nm,20.2s,MS4.2,baz=299,slow=37						
NEN	Nelson	41.01	318	eP	P	05 56 09.0	+1.6
MSU	Marysvale	41.13	324	eP	P	05 56 09.6	+1.2
PDAR	Pinedale Array	42.71	330	P	P	05 56 21.1	-0.4
	2.1nm,1.1s,mb3.8,baz=135,slow=8.4,SNR=9.7						
PDAR				PcP	PcP	05 58 14.8	+1.0
	0.2nm,0.5s,baz=131,slow=9.6,SNR=2.9						
PDAR				LR	LR	06 17 18.0	
	comp=Z,30nm,20.0s,MS3.2,baz=93,slow=41						
BW06	Boulder Array	42.71	330	eP	P	05 56 20.3	-1.1
	6.4nm,1.3s,mb4.2						
HWUT	Hardware Ranch	42.90	328	eP	P	05 56 22.9	-0.1
	8.4nm,1.2s,mb4.3						
LOHW	Long Hollow	43.85	330	eP	P	05 56 30.6	-0.1
TPAW	Teton Pass	43.93	330	eP	P	05 56 31.3	0.0
MOOW	Moose Ponds	44.02	330	eP	P	05 56 31.4	-0.7
ULM	Lac du Bonnet	44.33	348	P	P	05 56 31.3	-3.2
	6.6nm,1.1s,mb4.3,baz=170,slow=8.6,SNR=8.1						
ULM				LR	LR	06 17 40.4	
	comp=Z,34nm,18.3s,MS3.3,baz=345,slow=40						
ULM	Lac du Bonnet	44.33	348	eP	P	05 56 31.1	-3.5
	5.5nm,0.7s,mb4.4						
MNV	Mina	44.77	319	eP	P	05 56 39.8	+1.5
	22nm,1.5s,mb4.8						
NVAR	Mina Array Bea	44.87	319	P	P	05 56 40.4	+1.5
	4.0nm,0.7s,mb4.4,baz=119,slow=7.8,SNR=31						
NVAR				LR	LR	06 19 25.7	
	comp=Z,141nm,20.8s,MS3.9,baz=55,slow=42						
BMN	Battle Mountai	45.36	322	eP	P	05 56 44.1	+1.2
	28nm,1.3s,mb4.9						
HLID	Hailey	45.77	327	eP	P	05 56 46.3	+0.2
	2.7nm,1.1s,mb4.1						
MCMT	McKenzie Canyo	45.84	330	eP	P	05 56 47.1	+0.5
BOZ	Bozeman (W)	45.85	332	eP	P	05 56 45.8	-0.9
	3.7nm,1.1s,mb4.2						
WVOR	Wild Horse Val	47.42	324	eP	P	05 56 59.5	+0.4
	33nm,1.3s,mb5.1						
PLCA	Paso Flores	48.96	168	P	P	05 57 15.4	+4.3
	1.9nm,0.6s,mb4.3,baz=340,slow=10,SNR=8.0						
PLCA	Paso Flores	48.96	168	eP	P	05 57 15.4	+4.3
	2.6nm,0.8s,mb4.3						
SCHQ	Schefferville	49.09	12	LR	LR	06 18 09.1	
	comp=Z,63nm,18.2s,MS3.6,baz=237,slow=37						
YKA	Yellowknife Ar	59.96	343	P	P	05 58 29.1	-2.1
	0.8nm,0.6s,mb3.9,baz=136,slow=7.4,SNR=22						
YKA	Yellowknife Ar	59.96	343	P	P	05 58 29.1	-2.1
ILAR	Eielson Array	72.77	336	P	P	05 59 51.2	-1.4
	0.8nm,0.7s,mb3.8,baz=135,slow=3.8,SNR=2.1						
ESDC	Sonseca Array	76.55	51	P	P	06 00 14.8	-0.2
	1.0nm,0.6s,mb3.9,baz=270,slow=4.2,SNR=4.4						
FINES	FINESS Array B	92.39	27	LR	LR	06 36 58.1	
	comp=Z,124nm,20.4s,MS4.3,baz=170,slow=32						
ASAR	Alice Springs	141.51	241	PKhKP		06 07 55.0	
	1.4nm,1.1s,baz=118,slow=2.7,SNR=5.5						
ASAR				PKP	PKPdf	06 07 58.6	+0.7
	0.8nm,0.7s,baz=110,slow=2.2,SNR=5.7						
ASAR	Alice Springs	141.51	241	PKP	PKPdf	06 07 58.6	+0.7
WRA	Warramunga Arr	142.19	247	PKhKP		06 07 54.3	
	0.9nm,0.8s,baz=100,slow=2.7,SNR=8.0						

MOS ***18*** *05:53:51.5±1.1, 13.33N×91.63E, h33^{km}, mb4.7/12, Error ellipse: s-maj=17.5km s-min=8.2km az=106.6*
NEIC ***18*** *05:53:52.0±0.4, 13.32N×91.57E, mb4.6/18, Error ellipse: s-maj=13.8km s-min=7.0km az=59.0*
IDC ***18*** *05:53:52.2±0.7, 13.29N×91.61E, h23^{km}±3^{km}, mb4.0/11, mb1 4.1/12, mb1mx4.0/18, mbtmp4.0/12, ML3.9/1, Error ellipse: s-maj=22.1km s-min=14.0km az=57.0*
BJI ***18*** *05:53:53.1, 12.97N×91.18E, h50^{km}, mb4.4, Ms4.0, Msz3.9*
ISC 18 05:53:49.9±0.4, **13.27N**±0.06×**91.57E**±0.05, **h24^{km}, h24^{km}±.8^{km}:pP-P, n75, σ1^{s}.25**/72, **mb4.3**/31, **MS3.9**/1, **3C-2D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.77	53	Pn	P	05 55 58.0	-0.4
	0.4nm,0.3s,baz=243,slow=14,SNR=6.8						
BWNR	Bhubaneshwar	8.90	322	e	P	05 55 50.0	-10
BWNR				eS	Sn	05 57 28.0	-13
VIS	Vishakhapatnam	9.09	300	eP	P	05 56 00.3	-2.6
VIS				eS	Sn	05 57 35.4	-10
VIS				e		05 57 49.2	
	comp=E,120nm,0.3s						
VIS				e		05 57 49.8	
	comp=N,144nm,0.5s						
MDRS	Chennai	11.03	270	e	P	05 56 35.2	+5.6
BLSP	Bilaspur	12.58	316	eP	P	05 56 48.9	-1.6
BLSP				eS	S	05 58 55.9	-15
BLSP				e		05 59 45.9	
	comp=N,30nm,0.6s						
BLSP				e		05 59 46.0	
	comp=E,30nm,0.5s						
HYB	Hyderabad	13.21	290	eP	P	05 56 54.0	-4.8
HYB				eS	S	05 59 26.0	0.0
HYB	Hyderabad	13.21	290	i P	P	05 56 58.5	-0.3
HYB				eS	S	05 59 26.0	0.0
JIRN	Jiri	15.17	341	eP	P	05 57 21.2	-3.4
	comp=E,22nm,0.4s						
PKI	Pulchoki	15.35	339	eP	P	05 57 24.9	-2.0
DMN	Daman	15.49	338	eP	P	05 57 27.0	-1.8
GUN	Gumba	15.50	341	eP	P	05 57 27.2	-1.7
	comp=E,17nm,0.6s						
KKN	Kakani	15.59	339	eP	P	05 57 28.5	-1.6
GKN	Gorkha	16.02	337	eP	P	05 57 34.5	-1.1
KOLN	Koldanda	16.23	334	eP	P	05 57 37.0	-1.3
	comp=E,68nm,0.6s						
LSA	Lhasa	16.35	359	eP	P	05 57 41.3	+1.5
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
LSA	Lhasa	16.35	359	eP	P	05 57 41.3	+1.5
	comp=Z,18nm,0.8s						
BHPL	Bhopal	16.68	308	eP	P	05 57 46.0	+2.1
BHPL				e		05 57 49.8	
	comp=Z,16nm,0.9s						
BHPL				eS	S	06 00 48.0	+0.4
BHPL				eS	S	06 00 48.3	+0.6
KAD	Karad	17.24	286	eP	P	05 57 53.7	+2.7
KAD				e		05 57 59.8	
	comp=Z,16nm,1.8s						
KAD				e		06 00 47.1	
PTH	Pithoragarh	19.32	329	eP	P	05 58 16.8	+0.5
NDI	New Delhi	20.33	321	eP	P	05 58 30.0	+2.6
ENH	Enshi	23.67	42	eP	P	05 59 02.2	+1.5
	comp=Z,13nm,0.8s,mb4.4						
LZH	Lanzhou	25.26	24	⇑P	P	05 59 23.8	+7.8
LZH				AP	pP	05 59 30.1	+7.2
LZH				XP	sP	05 59 33.8	+7.7
LZH				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.5						
LZH				LR	LR		
	comp=N,197nm,13.0s						
LZH				LR	LR		
	comp=Z,294nm,17.1s,MS3.9						
LZH	Lanzhou	25.26	24	⇑P	P	05 59 23.7	+7.7
LZH				*SP	sP	05 59 33.8	+7.7
LZH				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5						
LZH				MLR	MLR		
	comp=Z,290nm,17.1s,MS3.9						
LZH	Lanzhou	25.26	24	⇑P	P	05 59 23.7	+7.7
	comp=Z,21nm,1.2s,mb4.5						
LZH				pP	pP	05 59 30.1	+7.2
LZH				sP	sP	05 59 33.8	+7.7
LZH				LR	LR		
	comp=Z,290nm,17.1s,MS3.9						
XAN	Xi'an	26.00	34	P	P	05 59 25.8	+2.9
GTA	Gaotai	27.04	14	eP	P	05 59 33.1	+0.7
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.9						
AAK	Ala-Archa	32.78	336	eP	P	06 00 23.7	+0.3
AAK				e*PP	pP	06 00 31.4	+0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AAK	Ala-Archa	32.78	336	eP	P	06 00 23.7	+0.3
	comp=Z,2.1nm,0.7s,mb4.2						
AAK				epP	pP	06 00 31.4	+0.9
MKAR	Makanchi Array	34.32	349	i P	P	06 00 36.5	-0.2
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SONM	Songino Array	36.61	17	P	P	06 00 56.6	+0.4
	comp=Z,3.5nm,1.0s,mb4.2,baz=207,slow=6.4,SNR=6.5						
SONM				pP	pP	06 01 04.1	+0.7
	comp=Z,5.9nm,1.0s,baz=207,slow=8.3,SNR=15						
ULN	Ulaanbaatar	36.83	17	P	P	06 01 00.0	+2.0
ULN				e*PP	pP	06 01 05.6	+0.5
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
ULN	Ulaanbaatar	36.83	17	P	P	06 00 60.0	+1.9
	comp=Z,3.6nm,1.0s,mb4.2						
ULN				epP	pP	06 01 05.6	+0.5
ZAK	Zakamensk	38.23	12	eP	P	06 01 11.1	+1.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
KURK	Kurchatov	38.80	347	eP	P	06 01 14.9	+0.3
KURK				e*PP	pP	06 01 22.7	+1.0
KURK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
KURK	Kurchatov	38.80	347	eP	P	06 01 14.9	+0.3
	comp=Z,11nm,0.9s,mb4.6						
KURK				epP	pP	06 01 22.7	+1.0
ZAL	Zalesovo	40.92	354	P	P	06 01 33.0	+0.9
	comp=Z,1.7nm,0.8s,mb3.7,baz=318,slow=9.8,SNR=6.2						
ZAL				pP	pP	06 01 40.4	+1.2
	comp=Z,2.8nm,0.6s,baz=292,slow=7.4,SNR=8.6						
BVA0	Borovoye Array	43.10	341	P	P	06 01 49.6	-0.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
BVAR	Borovoye Array	43.10	341	P	P	06 01 50.5	+0.6
	comp=Z,2.4nm,0.9s,mb3.9,baz=153,slow=6.6,SNR=9.1						
CHKZ	Chkalovo	43.59	342	eP	P	06 01 54.1	+0.2
CHKZ				e*PP	pP	06 02 02.1	+1.1
CHKZ				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.2						
CHKZ	Chkalovo	43.59	342	eP	P	06 01 54.1	+0.2
	comp=Z,29nm,0.6s,mb5.2						
CHKZ				epP	pP	06 02 02.0	+1.0
FITZ	Fitzroy Crossi	45.84	132	⇓iP	P	06 02 11.7	-0.7
	comp=Z,18nm,0.9s,mb5.0						
BOD	Bodaibo	47.60	16	eP	P	06 02 25.6	-0.2
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KAKA	Kakadu	48.04	121	eP	P	06 02 28.3	-1.5
	comp=Z,3.4nm,0.4s,mb4.7						
NWAO	Narrogin (SRO)	52.07	152	P	P	06 03 00.7	+0.4
	comp=Z,24nm,0.5s,mb5.4,baz=317,slow=7.4,SNR=24						
WRA	Warramunga Arr	53.48	127	P	P	06 03 10.2	-0.8
	comp=Z,2.5nm,0.8s,mb4.2,baz=301,slow=9.9,SNR=48						
WRA				PcP	PcP	06 04 17.3	-0.5
	comp=Z,0.8nm,0.5s,baz=316,slow=3.1,SNR=6.4						
WRAB	Tennant Creek	53.49	127	eP	P	06 03 10.2	-0.8
WRAB				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
WRAB	Tennant Creek	53.49	127	eP	P	06 03 10.2	-0.8
	comp=Z,25nm,1.4s,mb5.0						
WB2	Warramunga Arr	53.49	127	⇓iP	P	06 03 10.2	-0.9
ASAR	Alice Springs	55.33	131	P	P	06 03 23.9	-0.6
	comp=Z,2.7nm,0.5s,mb4.5,baz=310,slow=6.8,SNR=45						
BRTR	Keskin Array B	57.05	309	P	P	06 03 36.1	-0.5
	comp=Z,0.7nm,0.5s,mb4.0,baz=117,slow=8.0,SNR=4.3						
BRTR				pP	pP	06 03 43.5	-0.5
	comp=Z,2.4nm,0.7s,baz=128,slow=7.5,SNR=9.4						
AKASG	Malin Array Be	62.39	321	P	P	06 04 12.6	-0.6
	comp=Z,0.4nm,0.3s,mb4.0,baz=81,slow=5.1,SNR=3.6						
AKASG				pP	pP	06 04 20.0	-0.6
	comp=Z,6.3nm,1.0s,baz=86,slow=5.0,SNR=3.6						
JOF	Joensuu	64.92	334	ep	P	06 04 28.2	-1.3
	comp=Z,4.4nm,0.5s,mb4.7						
LVV	L'vov	65.50	319	eP	P	06 04 29.6	-3.9
FINES	FINESS Array B	66.79	332	P	P	06 04 41.1	-0.4
	comp=Z,1.4nm,0.7s,mb4.1,baz=90,slow=5.7,SNR=9.4						
FINES				pP	pP	06 04 48.9	-0.1
	comp=Z,3.2nm,0.6s,baz=99,slow=7.2,SNR=6.9						
KAF	Kangasniemi	66.87	332	ep	P	06 04 42.7	+0.7
	comp=Z,0.5nm,0.4s,mb3.9						
KAF	Kangasniemi	66.87	332	eP	P	06 04 42.7	+0.7
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
ARCES	ARCESS Array B	69.36	340	pP	pP	06 05 05.1	+0.2
	comp=Z,2.6nm,0.6s,baz=72,slow=7.7,SNR=2.0						
MORC	Moravsky Berou	69.67	318	eP	P	06 05 00.6	+0.9
MORC				e*PP	pP	06 05 08.0	+0.9
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
MORC	Moravsky Berou	69.67	318	eP	P	06 05 00.6	+0.9
	comp=Z,6.3nm,1.0s,mb4.5						
MORC				epP	pP	06 05 08.0	+0.8
BRG	Berggiesshubel	72.02	319	eP	pP	06 05 22.4	+1.1
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BRG	Berggiesshubel	72.02	319	eP	pP	06 05 22.4	+1.1
	comp=Z,4.0nm,0.7s						
GERES	GERESS Array B	72.16	317	P	P	06 05 16.8	+2.1
	comp=Z,1.6nm,0.5s,mb4.2,baz=90,slow=5.3,SNR=5.4						
GERES				pP	pP	06 05 23.0	+0.9
	comp=Z,2.5nm,0.8s,baz=90,slow=4.0,SNR=10						
GRA1	Grafenberg Arr	73.77	318	eP	pP	06 05 33.3	+1.7
	comp=Z,4.0nm,0.8s						
GRF	Grafenberg Arr	73.77	318	eP	pP	06 05 33.3	+1.7
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	Grafenberg Arr	73.77	318	eP	pP	06 05 33.3	+1.7
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	Grafenberg Arr	73.77	318	eP	pP	06 05 33.3	+1.7
	comp=Z,4.0nm,0.8s						
NB2	NORSAR Subarra	73.82	330	P	P	06 05 23.9	-0.3
	comp=Z,4.0nm,0.7s,mb4.5,baz=91,slow=5.6						
NB2	NORSAR Subarra	73.82	330	P	P	06 05 23.9	-0.3
NB2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
NOA	NORSAR Array B	73.82	330	P	P	06 05 24.1	-0.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=96,slow=4.0,SNR=2.9						
NOA				pP	pP	06 05 31.8	+0.1
	comp=Z,2.0nm,0.6s,baz=91,slow=5.8,SNR=4.1						
LBTB	Lobatse	74.70	239	P	P	06 05 32.2	+2.2
	comp=Z,4.0nm,0.8s,mb4.4,baz=86,slow=7.4,SNR=5.4						
LPG	La Plagne	77.06	314	eP	P	06 05 43.7	+0.8
	comp=Z,8.2nm,0.6s,mb4.5						
LPG	La Plagne	77.06	314	eP	P	06 05 43.7	+0.8
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ILAR	Eielson Array	90.70	21	pP	pP	06 06 59.3	-0.1
	comp=Z,0.6nm,0.7s,baz=300,slow=4.8,SNR=5.4						
NVAR	Mina Array Bea	121.46	27	pPKP		06 12 53.0	
	comp=Z,0.5nm,0.8s,baz=14,slow=0.7,SNR=3.1						
PLCA	Paso Flores	148.48	207	PKPbc	PKPdf	06 13 38.1	+2.3
	comp=Z,1.3nm,0.6s,baz=248,slow=2.7,SNR=6.9						

HLW ***18*** *06:19:30.0, 34.66N×25.75E, h33^{km}, Mb4.6*
MOS ***18*** *06:19:32.8±1.2, 34.34N×25.61E, h33^{km}, mb4.3/27, Error ellipse: s-maj=7.1km s-min=4.4km az=105.9*
CSEM ***18*** *06:19:32.1±0.1, 34.25N×25.72E, h40^{km}, mb4.3/16, Error ellipse: s-maj=2.2km s-min=1.1km az=40.0*
ATH ***18*** *06:19:33.1, 34.31N×25.65E, h38^{km}±7^{km}, MD4.3/17*
ISK ***18*** *06:19:34.8, 34.46N×25.68E, h71^{km}, ML4.3*
ZUR_RM ***18*** *06:19:34, 34.45N×25.64E, h27^{km}, Mw4.4/14, Moment Tensor Solution. s14 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-0.17; M$_{\theta\theta}$-1.85; M$_{\phi\phi}$2.03; M$_{r\theta}$0.37; M$_{\theta\phi}$4.05; M$_{\phi r}$1.22; Best double couple: M$_0$4.66×10^{15} NP1:ϕ_s347°, δ84°, λ167°. NP2:ϕ_s78°, δ77°, λ6°. Principal axes: T 4.881, Plg14°, Azm302°; N -.445, Plg75°, Azm141°; P -4.436, Plg5°, Azm33°;*
BJI ***18*** *06:19:34.8, 34.50N×25.60E, h41^{km}, mb4.2*
NEIC ***18*** *06:19:34.8, 34.45N×25.64E, h41^{km}, mb4.1/25, MD4.2(ATH), After ATH.*
IDC ***18*** *06:19:35.6±2.2, 34.52N×25.73E, h34^{km}±13^{km}, mb3.8/13, mb1 4.0/19, mb1mx3.9/27, mbtmp4.0/19, ML4.2/6, MS3.4/2, Ms1 3.4/2, ms1mx2.7/25, Error ellipse: s-maj=21.2km s-min=14.2km az=10.0*
NIC ***18*** *06:19:41.3±0.2, 35.62N×26.21E, h25^{km}, mb4.7, ML4.3, MW3.7*
ISC 18 06:19:32.3±0.3, **34.23N**±0.02×**25.70E**±0.03, **h38^{km}**±3^{km}, **n248, σ1^{s}.16**/268, **mb4.1**/35, **2C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.65	359	ePN	P	06 19 44.7	-0.3
NPS	Neapolis	1.04	356	ePN	P	06 19 51.3	+0.8
NPS				eSN	S	06 20 05.0	+1.0
NPS	Neapolis	1.04	356	eP	P	06 19 51.5	+1.0
IDI	Anoyia	1.25	328	Pg	P	06 19 55.0	+1.4
	54nm,0.3s,baz=141,slow=16,SNR=127						
IDI				Lg		06 20 10.5	
	204nm,0.3s,baz=229,slow=20,SNR=17						
GVD	Gavdhos	1.47	295	ePn	P	06 19 58.4	+1.7
GVD	Gavdhos	1.47	295	ePn	P	06 19 58.4	+1.7
VAM	Vamos	1.71	314	ePB	P	06 20 02.1	+2.0
KARP	Karpathos	1.78	42	eP	P	06 20 03.5	+2.3
KARP	Karpathos	1.78	42	ePB	P	06 20 03.8	+2.6
SANT	Santorini	2.15	355	ePn	P	06 20 06.7	+0.3
SANT				eSn	S	06 20 42.0	+10
SANT	Santorini	2.15	355	ePn	P	06 20 06.7	+0.3
ARG	Arkhangelos	2.81	44	eP	P	06 20 18.6	+2.8
ARG	Arkhangelos	2.81	44	ePN	P	06 20 16.7	+0.9
APE	Apeiranthos	2.84	357	ePN	P	06 20 16.0	-0.3
APE				eSN	S	06 20 45.8	-3.8
APE	Apeiranthos	2.84	357	eP	P	06 20 16.4	+0.1
APE				eSn	S	06 20 45.8	-3.8
KYTH	Kithira	2.99	314	ePN	P	06 20 19.0	+0.5
BODT	Bodrum	3.12	24	ePN	P	06 20 21.2	+1.0
BDRM	Kayabasi	3.17	26	i P	P	06 20 21.5	+0.6
BDRM				i S	S	06 20 51.7	-6.2
HMAT	Matruh	3.34	159	⇓P	P	06 20 25.9	+2.6
VLI	Veliai	3.36	319	ePN	P	06 20 23.3	-0.4
VLI	Veliai	3.36	319	eP	P	06 20 23.0	-0.7
DALT	Dalyan (Mudla)	3.49	42	ePN	P	06 20 26.1	+0.6
MLSB	Milas	3.50	28	ePN	P	06 20 26.4	+0.8
YER	Yerkesik	3.58	35	PN	P	06 20 28.0	+1.2
SMG	Samos	3.59	14	ePN	P	06 20 26.8	-0.2
FETY	Fethiye	3.66	48	ePN	P	06 20 29.2	+1.3
KSL	Kastellorizon	3.71	58	eP	P	06 20 30.0	+1.3
KSL	Kastellorizon	3.71	58	ePN	P	06 20 30.5	+1.8
AYDN	Tasoluk	3.85	27	i P	P	06 20 31.5	+0.8
AYDN				i S	S	06 21 11.5	-3.9
DABA	Dabaa	3.88	145	P	P	06 20 32.5	+1.5
NAIG	Nisos Aigina	3.96	334	eP	P	06 20 35.0	+2.9
NAIG	Nisos Aigina	3.96	334	ePN	P	06 20 32.0	-0.1
PTL	Penteli	4.09	339	eP	P	06 20 30.0	-4.1
PTL	Penteli	4.09	339	ePN	P	06 20 33.5	-0.6
MPAR	Parnis Oros	4.23	338	ePN	P	06 20 36.5	+0.5
MPAR	Parnis Oros	4.23	338	eP	P	06 20 35.0	-1.0
MGER	Gerania Oros	4.24	333	ePN	P	06 20 37.0	+0.8
ITM	Ithomi	4.26	315	ePN	P	06 20 35.6	-0.8
BLCB	Balcova	4.29	14	ePN	P	06 20 36.7	-0.2
DNZL	Cakiroluk	4.39	37	i P	P	06 20 38.8	+0.5
DNZL				i S	S	06 21 19.3	-10
DENT	Denizli	4.44	37	ePN	P	06 20 39.4	+0.5
LKR	Lokris	4.92	335	ePN	P	06 20 47.1	+1.3
AKS	Akhisar	4.94	19	PN	P	06 20 46.0	-0.1
SWA1		4.95	180	⇓P	P	06 20 48.7	+2.5
SWA1				S	S	06 21 43.8	+0.8
SWA2		4.97	182	P	P	06 20 48.7	+2.2
PRK	Paraskevi	5.03	5	ePN	P	06 20 45.5	-1.8
PRK	Paraskevi	5.03	5	eP	P	06 20 46.0	-1.3
HBRG	Burj al 'Arab	5.05	135	P	P	06 20 48.1	+0.5
HBRG				S	S	06 21 44.5	-1.0
BCK	Bucak	5.12	49	ePN	P	06 20 48.7	+0.2
KHL	Karahalli	5.12	36	ePN	P	06 20 48.7	+0.1
RLS	Riolos of Patr	5.13	319	ePN	P	06 20 48.6	-0.2
ISP	Isparta	5.31	46	eP	P	06 20 52.8	+1.6
PPCY	Paphos	5.52	81	P	P	06 20 55.0	+0.8
AKMC	Akamas	5.52	80	P	P	06 20 54.2	0.0
EVR	Evrytania	5.63	327	ePN	P	06 20 56.2	+0.5
ALFC	Alevga	5.76	79	P	P	06 20 57.3	-0.2
	28nm,0.2s						
ALFC				S	S	06 21 56.7	-6.5
SZAC	Souni-Zanaja	5.95	83	P	P	06 20 59.8	-0.4
	23nm,0.3s						
SZAC				S	S	06 22 04.1	-4.0
ALT	Altintas	5.98	35	ePN	P	06 20 59.8	-0.8
LEF	Lefka	5.99	79	ePN	P	06 21 01.5	+0.8
CSS	Prodhromos	6.33	81	P	P	06 21 06.2	+0.6
	9.0nm,0.3s						
CSS				S	S	06 22 12.7	-4.9
SQR		6.36	131	P	P	06 21 06.3	+0.3
FYM	Al Fayyum	6.40	133	P	P	06 21 06.2	-0.4
AYT	Al 'Ayyat	6.46	133	P	P	06 21 08.1	+0.6
AYT				S	S	06 22 17.9	-2.9
LFK	Lefkose	6.53	79	ePN	P	06 21 10.2	+1.8
ESKT	Eskisehir	6.70	36	ePN	P	06 21 09.4	-1.4
HSAF	As Saff	6.77	131	P	P	06 21 12.1	+0.3
KIZT	Kizilcal	6.80	45	ePN	P	06 21 10.9	-1.3

HHAG	Hagoal	6.90	126	P	P	06 21 12.8	-0.7
PHNC	Paralimni	6.91	81	P	P	06 21 15.0	+1.3
KEK	Kerkira	7.23	321	*e*P	P	06 21 15.5	-2.7
AMAG	Maghara	7.28	117	P	P	06 21 17.0	-1.8
MEST	Erdemli	7.28	69	*i* P	P	06 21 19.3	+0.4
MEST				*i* S	S	06 22 30.8	-10
HFRF	Wahat Farafira	7.40	162	⇑P	P	06 21 21.8	+1.2
SUZ		7.46	124	P	P	06 21 20.5	-0.9
RZN	Rozhen	7.49	354	*i* P	P	06 21 21.5	-0.3
MMB	Musomiste	7.51	349	*e*P	P	06 21 22.0	-0.1
ZAF		7.63	128	P	P	06 21 23.6	-0.2
ZAF		7.63	128	P	P	06 21 23.5	-0.3
KKB	Krupnik	7.90	346	*i* P	P	06 21 34.0	+6.5
PLD	Plovdiv	7.91	355	*e*P	P	06 21 34.0	+6.5
HAF	Haifa	7.92	98	Pn	P	06 21 25.5	-2.2
OFRI	‘Ofer	7.92	99	Pn	P	06 21 26.9	-0.9
KZIT	Kziot	8.05	112	Pn	P	06 21 28.6	-0.9
KZIT				Sn	S	06 22 51.7	-8.6
SLTI	Sal’it	8.07	102	Pn	P	06 21 28.2	-1.6
SLTI				Sn	S	06 22 53.5	-7.3
RTMM	Retamin	8.21	110	Pn	P	06 21 31.3	-0.5
HNKL	Nakhl	8.22	119	P	P	06 21 30.5	-1.5
HNKL				S	S	06 22 58.7	-6.0
JMB	Yambol	8.26	5	*e*P	P	06 21 35.0	+2.6
MMLI	Mount Malkishu	8.33	100	Pn	P	06 21 32.1	-1.3
KSDI	Kefar Szold	8.36	94	Pn	P	06 21 32.9	-0.9
BRTR	Keskin Array B	8.39	47	P	P	06 21 33.3	-1.0
BRTR						06 23 03.1	
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	Keskin Array B	8.39	47	Pn	P	06 21 33.2	-1.0
	comp=Z,0.7nm,0.3s,baz=215,slow=13,SNR=12						
BRTR				Sn	S	06 23 03.0	-5.7
	comp=Z,0.7nm,0.3s,baz=219,slow=26,SNR=6.1						
BRTR	Keskin Array B	8.39	47	Pn	P	06 21 33.2	-1.1
SKO	Skopje	8.43	338	*e*P	P	06 21 42.0	+7.2
SKO				*i*		06 21 48.0	
ASUT		8.47	142	P	P	06 21 35.5	+0.2
GRB	Gharib	8.48	133	P	P	06 21 35.0	-0.5
GRB	Gharib	8.48	133	P	P	06 21 35.0	-0.6
KSHT	Keshet	8.52	96	Pn	P	06 21 35.4	-0.7
DRGI	Dragot	8.56	105	Pn	P	06 21 35.7	-0.9
VTS	Vitosha	8.58	348	*e*P	P	06 21 46.0	+9.1
CEYT	Ceyhan	8.64	68	*e*PN	P	06 21 36.6	-1.1
MZDA	Masada	8.64	107	Pn	P	06 21 36.7	-1.0
TIP	Timpagrande	8.72	307	*e*Pn	P	06 21 36.0	-2.8
TIP	Timpagrande	8.72	307	*e*Pn	P	06 21 36.0	-2.8
HTY	Hatay	8.75	75	*e*PN	P	06 21 38.2	-1.1
ZFRI	Zfri	8.81	112	Pn	P	06 21 39.3	-0.8
MBH	Mount Berech	8.98	117	Pn	P	06 21 42.8	+0.3
TR2		9.00	128	P	P	06 21 41.6	-1.0
PRD	Provadia	9.06	8	*e*P	P	06 21 42.0	-1.5
EIL	Elat	9.07	118	Pn	P	06 21 43.8	+0.1
	comp=Z,9.9nm,0.3s,baz=304,slow=12,SNR=54						
EIL				Sn	S	06 23 20.0	-5.7
	comp=Z,25nm,0.3s,baz=28,slow=33,SNR=8.9						
EIL	Elat	9.07	118	*e*Pn	P	06 21 43.6	-0.1
	comp=Z,24nm,0.4s						
EIL				*e*Sn	S	06 23 15.7	-10
EIL	Elat	9.07	118	Pn	P	06 21 43.3	-0.4
HKAT	Jabal Katrina	9.08	127	P	P	06 21 42.8	-1.0
HBST	Basata	9.17	121	P	P	06 21 43.8	-1.3
HBST				S	S	06 23 21.7	-6.4
HDK1	Dakhla	9.23	159	P	P	06 21 47.0	+1.1
HDHB	Dhahab	9.38	123	P	P	06 21 47.0	-1.0
TR1		9.40	129	P	P	06 21 47.0	-1.3
SHRM		9.59	129	P	P	06 21 50.3	-0.7
ASF	Jabal al Asfar	9.60	99	Pn	P	06 21 49.9	-1.1
	comp=Z,1.8nm,0.3s,baz=175,slow=6.3,SNR=13						
ASF				Sn	S	06 23 33.1	-5.7
	comp=Z,5.3nm,0.3s,baz=46,slow=22,SNR=6.0						
GTR	Jabal at Tayr	9.65	153	P	P	06 21 53.0	+1.2
VAE	Valguarnera	9.72	293	Pn	P	06 21 52.6	-0.1
	comp=Z,2.6nm,0.3s,baz=90,slow=10,SNR=3.0						
HHRG	Al Ghardaqah	9.72	134	P	P	06 21 52.2	-0.6
HDK2	Wahat Dakhilah	10.27	163	P	P	06 22 00.8	+0.6
HSFG		10.42	135	P	P	06 22 01.7	-0.6
MALT	Malatya	11.05	65	*e*P	P	06 22 09.9	-0.9
MALT				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MALT	Malatya	11.05	65	*e*Pn	P	06 22 09.8	-1.0
	comp=Z,3.6nm,0.5s						
MLR	Muntele Rosu	11.25	1	LR	LR	06 26 46.4	
	comp=Z,135nm,19.0s,baz=15,slow=39						
VOY	Vojsko	14.83	326	*e*Pn	P	06 23 01.4	+0.4
PGF	Pioggiola	15.49	307	*e*P	P	06 23 08.7	-0.8
GNI	Garni	16.27	63	*e*P	P	06 23 21.1	+1.6
GNI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GNI	Garni	16.27	63	LR	LR	06 31 07.2	
	comp=Z,169nm,18.6s,baz=186,slow=43						
GNI	Garni	16.27	63	P	P	06 23 19.2	-0.3
	comp=Z,4.6nm,0.5s						
GNI	Garni	16.27	63	P	P	06 23 19.2	-0.3
	comp=Z,4.6nm,0.5s						
KIV	Kislovodsk	16.35	49	*e*P	P	06 23 21.3	+0.9
KIV				pmax	pmax		
	comp=Z,33nm,0.6s						
KIV	Kislovodsk	16.35	49	*e*P	P	06 23 21.3	+0.9
	comp=Z,32nm,0.6s						
KIV	Kislovodsk	16.35	49	*e*P	P	06 23 21.3	+0.9
	comp=Z,32nm,0.6s						
MORC	Moravsky Berou	16.66	341	P	P	06 23 23.6	-0.7
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MORC	Moravsky Berou	16.66	341	P	P	06 23 23.6	-0.8
	comp=Z,1.6nm,0.7s						
MORC	Moravsky Berou	16.66	341	P	P	06 23 23.6	-0.7
	comp=Z,1.6nm,0.7s						
AKASG	Malin Array Be	16.66	8	P	P	06 23 23.2	-1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	16.66	8	Pn	P	06 23 23.2	-1.1
	comp=Z,2.8nm,0.3s,baz=199,slow=11,SNR=26						
SBF	Sospel	17.11	310	*e*P	P	06 23 23.3	-6.7
GERES	GERESS Array B	17.11	332	Pn	P	06 23 29.4	-0.6
	comp=Z,0.1nm,0.3s,baz=139,slow=10,SNR=6.5						
GOF	Gofitskoye	17.14	46	⇑*i*P	P	06 23 35.0	+4.6
GOF				pmax	pmax		
	comp=Z,30nm,1.2s						
KHC	Kasperske Hory	17.39	333	*e*P	P	06 23 30.5	-3.0
KHC				*e*		06 23 42.0	
FRF	La Foret Royal	17.49	308	*e*P	P	06 23 30.0	-4.7
MBDF	Montbardon	17.95	311	*e*P	P	06 23 38.3	-2.1
	comp=Z,15nm,0.7s						
MBDF	Montbardon	17.95	311	*e*P	P	06 23 38.3	-2.1
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPG	La Plagne	18.35	313	*e*P	P	06 23 43.1	-2.4
	comp=Z,8.8nm,0.6s						
LPG	La Plagne	18.35	313	*e*P	P	06 23 43.1	-2.4
LPG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SMRF	Simiane la Rot	18.37	308	*e*P	P	06 23 44.4	-1.3
LPL	La Plagne	18.37	314	*e*P	P	06 23 43.5	-2.2
	comp=Z,9.8nm,0.8s						
LPL	La Plagne	18.37	314	*e*P	P	06 23 43.5	-2.2
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CABF	La Chapelle	19.33	316	*e*P	P	06 23 55.5	-1.5
	comp=Z,28nm,1.0s						
CABF	La Chapelle	19.33	316	*e*P	P	06 23 55.5	-1.5
CABF				pmax	pmax		
	comp=Z,14nm,1.0s						
CLL	Collm	19.40	335	*e**PP		06 24 04.0	
HINF	Hinteralfeld	19.59	320	*e*P	P	06 23 59.0	-0.9
	comp=Z,10nm,0.8s						
HINF	Hinteralfeld	19.59	320	*e*P	P	06 23 59.0	-0.9
HINF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CDF	Champ du Feu	19.74	321	*e*P	P	06 23 59.9	-1.5
	comp=Z,13nm,0.7s						
CDF	Champ du Feu	19.74	321	*e*P	P	06 23 59.9	-1.5
CDF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SUW	Suwalki	19.86	356	*e*P	P	06 23 58.7	-4.0
SUW				pmax	pmax		
	comp=Z,53nm,0.8s						
SUW	Suwalki	19.86	356	*e*P	P	06 23 58.7	-4.0
	comp=Z,53nm,0.8s						
HAU	Haudompre	19.98	319	*e*P	P	06 24 02.8	-1.2
	comp=Z,16nm,0.7s						
HAU	Haudompre	19.98	319	*e*P	P	06 24 02.8	-1.2
HAU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MTLF	Montolieu	20.39	303	*e*P	P	06 24 07.3	-1.1
SMF	Signal de Mont	20.68	313	*e*P	P	06 24 10.0	-1.3
MEZF	Maizieres J’vi	20.97	319	*e*P	P	06 24 13.9	-0.4
AVF	Avril sur Loir	21.04	313	*e*P	P	06 24 14.0	-1.0
	comp=Z,14nm,1.0s,mb4.0						
AVF	Avril sur Loir	21.04	313	*e*P	P	06 24 14.0	-1.0
AVF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
CAF	Calviac	21.05	308	*e*P	P	06 24 15.7	+0.5
SSF	Saint Saulge	21.08	314	*e*P	P	06 24 14.9	-0.5
TCF	Toulx Ste Croi	21.51	311	*e*P	P	06 24 20.0	+0.2
RJF	Les Rejaudoux	21.55	308	*e*P	P	06 24 18.9	-1.3
	comp=Z,18nm,0.8s,mb4.2						
RJF	Les Rejaudoux	21.55	308	*e*P	P	06 24 18.9	-1.3
RJF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
MEM	Membach	21.79	325	P	P	06 24 22.0	-0.5
	comp=Z,18nm,1.0s,mb4.5						
LFF	La Frestale	21.93	307	*e*P	P	06 24 24.8	+0.8
GIVF	Givet	22.05	322	*e*P	P	06 24 25.0	-0.1
DOU	Dourbes	22.16	322	P	P	06 24 25.9	-0.3
	comp=Z,9.4nm,1.2s,mb4.1						
OBN	Obninsk	22.22	17	*e*P	P	06 24 27.0	+0.3
OBN				*e*		06 24 54.9	
OBN				*i* S	S	06 28 25.3	+1.3
OBN				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb3.9						
ETSF	Etsaut	22.22	301	*e*P	P	06 24 27.9	+1.1
BAIF	Baives	22.34	322	*e*P	P	06 24 27.9	-0.1
	comp=Z,26nm,0.6s,mb4.5						
BAIF	Baives	22.34	322	*e*P	P	06 24 27.9	-0.1
BAIF				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.5						
SJPF	Ste Jean	22.74	301	*e*P	P	06 24 33.4	+1.4
	comp=Z,14nm,0.9s,mb4.1						
SJPF	Ste Jean	22.74	301	*e*P	P	06 24 33.4	+1.4
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
MFF	Saint Martin d	23.12	310	*e*P	P	06 24 37.3	+1.6
	comp=Z,18nm,0.8s,mb4.2						
MFF	Saint Martin d	23.12	310	*e*P	P	06 24 37.3	+1.6
MFF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
LDF	La Druitiere	23.96	315	*e*P	P	06 24 44.1	+0.4
FLN	La Foliniere	24.25	315	*e*P	P	06 24 45.9	-0.7
	comp=Z,12nm,0.7s,mb4.1						
FLN	La Foliniere	24.25	315	*e*P	P	06 24 45.9	-0.7
FLN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
ESDC	Sonseca Array	24.26	292	P	P	06 24 48.0	+1.2
	comp=Z,0.8nm,0.4s,mb3.5,baz=76,slow=9.3,SNR=7.9						
GRR	Gorron	24.30	314	*e*P	P	06 24 47.2	+0.1
	comp=Z,6.6nm,0.5s,mb4.0						
GRR	Gorron	24.30	314	*e*P	P	06 24 47.2	+0.1
GRR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
SGMF	Saint Gilles	25.28	312	*e*P	P	06 24 57.3	+0.8
QUIF	Quistinic	25.53	311	*e*P	P	06 24 58.6	-0.2
	comp=Z,15nm,0.7s,mb4.3						
QUIF	Quistinic	25.53	311	*e*P	P	06 24 58.6	-0.2
QUIF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
ROSF	Rostrenen	25.75	312	*e*P	P	06 25 00.7	-0.2
HFS	Hagfors	27.09	347	P	P	06 25 12.0	-1.1
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	Hagfors	27.09	347	P	P	06 25 12.0	-1.1
	comp=Z,2.3nm,0.7s,mb3.8,baz=170,slow=16,SNR=3.8						
FINES	FINESS Array B	27.23	0	P	P	06 25 12.0	-2.5
FINES						06 28 36.6	
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	27.23	0	P	P	06 25 12.0	-2.4
	comp=Z,1.2nm,0.5s,mb3.7,baz=164,slow=11,SNR=13						
FINES				PcP	PcP	06 28 36.6	+2.5
	comp=Z,1.2nm,0.8s,baz=180,slow=1.4,SNR=3.9						
FINES	FINESS Array B	27.23	0	P	P	06 25 12.0	-2.4
FINES				PcP	PcP	06 28 36.6	+2.5
KAF	Kangasniemi	27.91	1	*e*p	P	06 25 13.4	-7.2
	comp=Z,0.6nm,0.3s,mb3.7						
KAF	Kangasniemi	27.91	1	*e*P	P	06 25 13.4	-7.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
JOF	Joensuu	28.93	5	*e*p	P	06 25 26.9	-2.8
	comp=Z,0.9nm,0.3s,mb4.0						
JOF	Joensuu	28.93	5	*e*P	P	06 25 26.9	-2.8
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
EKA	Eskdalemuir Ar	29.06	325	P	P	06 25 31.2	+0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKA	Eskdalemuir Ar	29.06	325	P	P	06 25 31.2	+0.3
	comp=Z,1.4nm,0.5s,mb4.0,baz=115,slow=12,SNR=6.6						
ARCES	ARCESS Array B	35.36	360	P	P	06 26 23.4	-2.4
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	ARCESS Array B	35.36	360	P	P	06 26 23.4	-2.4
	comp=Z,2.9nm,0.6s,mb4.4,baz=172,slow=8.6,SNR=12						
ARCES	ARCESS Array B	35.36	360	P	P	06 26 23.4	-2.4
KEV	Kevo	35.59	1	*e*p	P	06 26 27.2	-0.5
	comp=Z,0.7nm,0.4s,mb3.9						
KEV	Kevo	35.59	1	*e*P	P	06 26 27.2	-0.5
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
BVAR	Borovoye Array	36.67	45	P	P	06 26 37.7	+0.7
	comp=Z,1.3nm,0.7s,mb3.9,baz=292,slow=8.0,SNR=6.6						
CHKZ	Chkalovo	36.95	44	P	P	06 26 39.9	+0.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
CHKZ	Chkalovo	36.95	44	*e*P	P	06 26 39.9	+0.5
	comp=Z,5.2nm,0.5s,mb4.6						
CHKZ	Chkalovo	36.95	44	*e*P	P	06 26 39.9	+0.5
	comp=Z,5.2nm,0.5s,mb4.6						
AAK	Ala-Archa	38.68	63	⇓*i*P	P	06 26 55.1	+1.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
AAK	Ala-Archa	38.68	63	*e*P	P	06 26 54.8	+0.9
	comp=Z,2.5nm,0.6s,mb4.1						
AAK	Ala-Archa	38.68	63	*e*P	P	06 26 54.8	+0.9
	comp=Z,2.5nm,0.6s,mb4.1						
DBIC	Dimbokro	39.35	233	P	P	06 27 04.6	+4.9
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DBIC	Dimbokro	39.35	233	P	P	06 27 04.5	+4.8
	comp=Z,1.8nm,0.8s,mb3.9,baz=7.1,slow=10,SNR=3.2						
KURK	Kurchatov	41.43	50	*i* P	P	06 27 17.8	+1.2
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
KURK	Kurchatov	41.43	50	*e*P	P	06 27 17.1	+0.6
	comp=Z,4.4nm,0.6s,mb4.3						
KURK	Kurchatov	41.43	50	*e*P	P	06 27 17.1	+0.5
	comp=Z,4.4nm,0.6s,mb4.3						
MKAR	Makanchi Array	43.92	56	*e*P	P	06 27 38.1	+1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL	Zalesovo	45.32	46	P	P	06 27 48.8	+0.8
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAL	Zalesovo	45.32	46	P	P	06 27 48.8	+0.7
	comp=Z,2.0nm,0.3s,mb4.4,baz=206,slow=9.2,SNR=10						
KOLN	Koldanda	49.48	81	*e*P	P	06 28 23.1	+2.1
GKN	Gorkha	50.24	80	*e*P	P	06 28 29.2	+2.4
DMN	Daman	50.78	80	*e*P	P	06 28 32.5	+1.6
KKN	Kakani	50.85	80	*e*P	P	06 28 33.5	+2.1
PKI	Pulchoki	51.04	80	*e*P	P	06 28 33.8	+1.0
GUN	Gumba	51.29	80	*e*P	P	06 28 36.7	+2.0
JIRN	Jiri	51.64	80	*e*P	P	06 28 38.6	+1.2
ZAK	Zakamensk	57.03	48	*e*P	P	06 29 17.5	+1.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
GTA	Gaotai	58.01	61	*e*P	P	06 29 25.9	+2.3
GTA				AP	pP	06 29 34.4	-0.5
GTA				XP	sP	06 29 37.4	-1.9
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.3						
SONM	Songino Array	59.73	50	P	P	06 29 36.4	+1.0
	comp=Z,1.1nm,0.5s,mb4.1,baz=287,slow=8.3,SNR=12						
ULN	Ulaanbaatar	60.14	50	P	P	06 29 38.8	+0.6
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
ULN	Ulaanbaatar	60.14	50	P	P	06 29 38.8	+0.5
	comp=Z,2.8nm,0.9s,mb4.3						
ULN	Ulaanbaatar	60.14	50	P	P	06 29 38.8	+0.6
	comp=Z,2.8nm,0.9s,mb4.3						
BOD	Bodaibo	60.91	38	*e*P	P	06 29 42.8	-0.5
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
SCHQ	Schefferville	64.19	320	P	P	06 30 04.5	-0.4
	comp=Z,0.8nm,0.4s,mb4.1,baz=64,slow=9.5,SNR=9.0						
INK	Inuvik	76.60	352	P	P	06 31 20.6	+0.7
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	76.60	352	P	P	06 31 20.6	+0.7
	comp=Z,0.6nm,0.6s,mb3.7,baz=21,slow=9.8,SNR=7.1						
SSE	Sheshan	77.30	61	P	P	06 31 24.6	-0.1
	comp=Z,25nm,0.9s,mb5.1						
YKA	Yellowknife Ar	78.47	342	P	P	06 31 31.3	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	78.47	342	P	P	06 31 31.3	+0.9
	comp=Z,0.7nm,0.5s,mb3.9,baz=32,slow=5.4,SNR=18						
YKA	Yellowknife Ar	78.47	342	P	P	06 31 31.3	+0.9
ILAR	Eielson Array	81.16	357	P	P	06 31 47.2	+2.4
	comp=Z,0.4nm,0.9s,mb3.4,baz=331,slow=4.3,SNR=3.2						

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*NEIC **18** 06:23:43.8, 35.00S×70.57W, h3km, ML3.3(GUC), After GUC.*

GUC 18 06:23:43.8±1.0**, 35.00S×70.57W, h3km**±3km**, MD4.1, ML3.3, 3C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.53	316	⇓*i*P	Pg	06 23 54.6	+0.2
SFDO				*i* S	Sg	06 24 02.9	+1.4
CACH	El Canelo	0.88	358	*e*P	Pb	06 24 00.4	-1.0
CACH				*i* S	Sg	06 24 13.3	+0.1
CHCH	Chadas Angostu	1.07	356	⇑*i*P	Pb	06 24 04.1	-0.5
CHCH				*i* S	Sb	06 24 19.2	+0.5
LMEL	Las Melosas	1.19	15	*e*P	Pb	06 24 06.0	-0.7
LMEL				*i* S	Sb	06 24 22.7	+0.5
LMEL				AMP		06 24 24.1	
	comp=N,762nm,0.3s						
LNCH	Linares	1.20	225	*e*P	Pb	06 24 05.9	-0.9
LNCH				*i* S	Sb	06 24 22.3	-0.2
LNCH				AMP		06 24 23.2	
	comp=E,865nm,0.4s						
PCH	Pirque	1.38	2	⇓*i*P	Pb	06 24 09.4	-0.4
PCH				*i* S	Sb	06 24 28.2	+0.5
TACH	Talagante	1.38	347	*e*P	Pb	06 24 09.1	-0.8
TACH				*i* S	Sb	06 24 28.0	+0.2
ANTU	Antumapu	1.43	358	*e*P	Pn	06 24 10.5	-0.2
ANTU				*i* S	Sb	06 24 30.0	+0.8
ANTU				AMP		06 24 32.7	
	comp=E,638nm,0.3s						
RCDM	Rinconada Maip	1.52	352	*e*P	Pn	06 24 11.2	-0.8
RCDM				*i* S	Sb	06 24 32.1	+0.2
RCDM				AMP		06 24 34.5	
	comp=E,958nm,0.1s						
CLCH	Cerro Calan	1.60	1	⇑*i*P	Pn	06 24 13.1	-0.1
CLCH				*i* S	Sb	06 24 35.3	+1.1
CLCH				AMP		06 24 37.5	
	comp=E,1μm,0.4s						
FCH	Farellones	1.68	8	⇑*i*P	Pn	06 24 14.8	+0.5
FCH				*e*S	Sb	06 24 37.8	+1.1
FCH				AMP		06 24 41.1	
	comp=N,508nm,0.2s						
CCHI	Chillan	2.02	217	*e*P	Pn	06 24 18.5	-0.7
CCHI				*i* S	Sn	06 24 46.0	+0.9
CCHI				AMP		06 24 50.5	
	comp=E,343nm,0.4s						

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*NEIC **18** 06:28:52.5, 34.99S×70.57W, h4km, ML2.9(GUC), After GUC.*

GUC 18 06:28:52.5±0.8**, 34.99S×70.57W, h4km**±3km**, MD3.8, ML2.9, 1C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.53	316	⇑*i*P	Pg	06 29 03.4	+0.4
SFDO				*i* S	Sg	06 29 11.5	+1.4
CHCH	Chadas Angostu	1.06	356	*e*P	Pb	06 29 12.2	-0.8
CHCH				*i* S	Sb	06 29 27.4	+0.3
LMEL	Las Melosas	1.18	15	*e*P	Pb	06 29 14.7	-0.4
LMEL				*i* S	Sb	06 29 31.3	+0.7
LMEL				AMP		06 29 34.4	
	comp=N,157nm,0.1s						
LNCH	Linares	1.20	224	⇓*i*P	Pb	06 29 14.7	-0.7
LNCH				*i* S	Sb	06 29 31.0	-0.1
LNCH				AMP		06 29 31.9	
	comp=E,818nm,0.7s						
PCH	Pirque	1.37	2	*e*P	Pb	06 29 17.8	-0.5
PCH				*i* S	Sb	06 29 37.1	+1.0
TACH	Talagante	1.37	347	*e*P	Pb	06 29 17.2	-1.2
TACH				*i* S	Sb	06 29 35.7	-0.4
ANTU	Antumapu	1.42	358	*e*P	Pn	06 29 18.9	-0.3
ANTU				*i* S	Sb	06 29 38.5	+0.9
FCH	Farellones	1.68	8	*e*P	Pn	06 29 23.6	+0.7
FCH				*i* S	Sb	06 29 46.7	+1.6
FCH				AMP		06 29 47.5	
	comp=E,88nm,0.2s						
LCCH	Las Cruces	1.73	331	*e*P	Pn	06 29 23.8	+0.3
LCCH				*i* S	Sn	06 29 47.1	+0.8
CCHI	Chillan	2.02	217	*e*P	Pn	06 29 27.1	-0.6
CCHI				*i* S	Sn	06 29 54.5	+0.7
CCHI				AMP		06 29 58.8	
	comp=E,546nm,0.3s						

IDC 18 06:34:19.8±5.9**, 16.22S×72.28W, h91km**±59km**, mb3.2**/2**, mb1 3.5**/4**, mb1mx3.2**/18**, mbtmp3.6**/4**, ML4.1**/2**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.3**/10**, Error ellipse: s-maj=51.9km s-min=21.5km az=111.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.99	92	P	P	06 35 20.5	+0.4
	3.1nm,0.3s,baz=271,slow=13,SNR=63						
LPAZ				S	S	06 36 06.0	+0.1
	0.2nm,0.3s,baz=71,slow=25,SNR=3.9						
LVC	Limon Verde	7.11	154	P	P	06 36 01.4	-1.6
	1.4nm,0.3s,baz=338,slow=9.2,SNR=20						
LVC				S	S	06 37 18.8	-4.0
	1.7nm,0.3s,baz=192,slow=23,SNR=6.1						
PLCA	Paso Flores	24.47	177	P	P	06 39 32.1	+0.6
	0.8nm,0.8s,baz=349,slow=8.4,SNR=4.1						
JTS	JuntasAbangare	29.17	334	LR	LR	06 52 12.0	
	comp=Z,340nm,19.7s,baz=113,slow=37						
YKA	Yellowknife Ar	85.19	342	P	P	06 46 44.7	-2.1
	0.1nm,0.7s,baz=133,slow=5.0,SNR=6.6						

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*IDC **18** 06:44:22.3±1.3, 3.67S×144.69E, mb3.9/5, mb1 4.1/6, mb1mx4.0/13, mbtmp3.9/6, ML3.5/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/19, Error ellipse: s-maj=58.3km s-min=23.7km az=101.0*

*NEIC **18** 06:44:24.5±0.8, 3.68S×144.53E, h10km, mb4.2/3, Error ellipse: s-maj=21.7km s-min=8.8km az=103.0*

ISC 18 06:44:26.0±1.2**, 3.74S**±0.09×**144.5E**±0.2**, h33km, n23, σ0.s65**/20**, mb4.2**/9**, MS3.7**/2**, 2C-1D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	14.91	233	⇑*i*P	P	06 47 54.8	-1.5
	34nm,1.9s						
CTA	Charters Tower	16.34	174	LR	LR	06 53 59.3	
	comp=Z,79nm,20.2s,baz=225,slow=35						
WRAB	Tennant Creek	18.91	211	*e*P	P	06 48 47.7	+1.0
	15nm,1.2s						
WB2	Warramunga Arr	18.91	211	*e*P	P	06 48 46.9	+0.1
WRA	Warramunga Arr	18.92	211	P	P	06 48 45.9	-1.0
	0.1nm,0.3s,baz=36,slow=9.9,SNR=18						
ASAR	Alice Springs	22.31	206	P	P	06 49 23.2	+1.0
	1.6nm,0.9s,mb3.5,baz=36,slow=8.1,SNR=10.0						
ASAR				LR	LR	06 59 21.5	
	comp=Z,89nm,18.1s,MS3.2,baz=68,slow=40						
FITZ	Fitzroy Crossi	23.36	231	*e*P	P	06 49 32.7	0.0
	7.6nm,1.0s,mb4.1						
NANT	Nan	48.60	299	P	P	06 53 14.0	+5.1
CHRT	Chiangrai	49.82	300	⇑P	P	06 53 18.0	-0.2
	121nm,0.8s						
CHG	Chiang Mai	50.15	298	⇓P	P	06 53 25.4	+4.7
	13nm,0.6s,mb5.1						
SONM	Songino Array	61.25	332	P	P	06 54 39.8	-0.5

	0.4nm,0.7s,mb3.6,baz=156,slow=5.9,SNR=3.4						
JIRN	Jiri	64.23	303	*e*P	P	06 55 00.8	+0.4
GUN	Gumba	64.57	303	*e*P	P	06 55 03.1	+0.5
PKI	Pulchoki	64.86	303	*e*P	P	06 55 04.9	+0.4
	3.5nm,0.5s,mb4.7						
KKN	Kakani	65.04	303	*e*P	P	06 55 05.6	0.0
DMN	Daman	65.12	303	*e*P	P	06 55 06.5	+0.3
GKN	Gorkha	65.64	303	*e*P	P	06 55 09.4	-0.1
KOLN	Koldanda	66.44	302	*e*P	P	06 55 14.7	+0.1
	10nm,0.8s,mb4.9						
ZAL	Zalesovo	75.81	328	P	P	06 56 11.1	+0.6
	0.9nm,0.3s,mb4.2,baz=64,slow=9.1,SNR=3.8						
BVAR	Borovoye Array	83.50	324	P	P	06 56 51.8	-0.1
	3.1nm,1.0s,mb4.4,baz=104,slow=6.1,SNR=9.7						
ILAR	Eielson Array	84.40	24	P	P	06 56 55.0	-1.1
	0.6nm,0.8s,mb3.8,baz=252,slow=4.5,SNR=5.5						
INK	Inuvik	90.47	22	LR	LR	07 35 47.8	
	comp=Z,87nm,19.3s,MS4.2,baz=172,slow=34						
PLCA	Paso Flores	125.34	148	PKP	PKPdf	07 03 26.4	+2.3
	1.0nm,0.8s,baz=256,slow=2.9,SNR=4.7						

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*IDC **18** 06:50:11.3±1.3, 12.13N×86.36W, mb3.6/5, mb1 4.0/6, mb1mx3.7/19, mbtmp3.7/6, ML3.2/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/22, Error ellipse: s-maj=104.2km s-min=12.4km az=56.0*

*CASC **18** 06:50:15.1±2.5, 11.53N×86.94W, h2^{km}±10^{km}, MD4.2, ML4.1, mb3.9(NEIC)*

*NEIC **18** 06:50:17.3±1.6, 11.93N×86.29W, h54^{km}±19^{km}, mb3.9/5, Error ellipse: s-maj=31.2km s-min=11.7km az=224.0*

ISC 18 06:50:17.6±0.5**, 11.67N**±0.07×**86.76W**±0.07**, h78**^{km}±5^{km}**, n51, σ1^{s}11**/53**, mb3.8**/9**, 11C-11D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	Copaltepe	0.53	18	⇑*i*P	P	06 50 30.6	-0.8
COPN				*e*S	S	06 50 43.1	+1.3
TICN	Ticuantepe	0.63	55	⇑*e*P	P	06 50 32.2	-0.3
XAVN	Gruta Xavier	0.63	42	⇓*e*P	P	06 50 32.0	-0.5
MASN	Masaya	0.67	62	⇓*e*P	P	06 50 32.7	-0.2
APYN	Apoyeque	0.69	36	⇑*e*P	P	06 50 32.8	-0.2
MGAN	Managua	0.69	47	*e*P	P	06 50 31.9	-1.2
MGAN				*i*		06 50 48.2	
	comp=E,6μm,0.5s						
APON	Apoyo	0.72	70	⇑*e*P	P	06 50 32.9	-0.6
WILN	Americas 2	0.74	49	⇓*e*P	P	06 50 33.6	0.0
LEON	Leon	0.75	350	⇓*i*P	P	06 50 32.9	-0.9
LEON				*e*S	S	06 50 45.4	-0.4
MOMJ	Momotombo	0.76	16	⇓*e*P	P	06 50 33.8	-0.1
MIRN	Miramar	0.76	3	⇑*e*P	P	06 50 33.5	-0.5
CNGN	Cerro Negro	0.82	4	⇑*e*P	P	06 50 34.4	-0.3
TEL3	Telica 3	0.90	355	⇑*e*P	P	06 50 35.3	-0.1
TELN	Telica	0.93	356	⇓*e*P	P	06 50 36.4	+0.6
SSNN	San Juan del S	0.97	113	⇓*e*P	P	06 50 34.7	-1.6
SSNN				*e*S	S	06 50 51.1	+0.7
CRIN	San Cristobal	1.06	344	⇓*e*P	P	06 50 37.1	-0.3
CRIN				*e*S	S	06 50 54.2	+1.9
PYTN	Playitas	1.10	39	⇑*e*P	P	06 50 38.7	+0.8
CONN	Concepcion	1.11	96	⇑*e*P	P	06 50 36.8	-1.4
MADN	Villa Maderas	1.23	102	⇓*e*P	P	06 50 38.5	-1.1
QUIN	Quiabu	1.48	13	⇑*e*P	P	06 50 44.1	+1.1
SOMN	Somoto	1.74	5	⇑*e*P	P	06 50 49.1	+2.6
VCR	Vista de Mar	1.90	144	*e*P	P	06 50 50.1	+1.6
CNCH	Conchagua	1.91	327	⇓*e*P	P	06 50 47.6	-1.1
JTS	JuntasAbangare	2.24	128	Pn	P	06 50 50.2	-3.2
	comp=E,6.0nm,0.3s,baz=326,slow=16,SNR=34						
JTS				Pg	P	06 50 53.5	+0.1
	comp=E,15nm,0.3s,baz=320,slow=13,SNR=42						
JTS				Lg		06 51 24.3	
	comp=E,8.5nm,0.3s,baz=246,slow=19,SNR=4.6						
BLLM	Bellamira	2.27	321	⇓*e*P	P	06 50 52.7	-1.1
VSM	San Miguel	2.29	320	*e*P	P	06 50 55.0	+1.0
FORC	Fortuna	2.37	120	*e*P	P	06 50 56.7	+1.5
CAHU	Cacacuatique	2.52	326	*e*P	P	06 50 56.6	-0.7
SNVI	San Vicente	2.80	314	*e*P	P	06 51 00.5	-0.7
LCBS	La Ceiba	2.93	312	*e*P	P	06 51 02.9	-0.1
LFRS	El Faro	2.97	311	*e*S	S	06 51 38.5	+0.4
LAJ	Bijagual	3.15	125	*e*P	P	06 51 04.0	-2.1
SJS	Escuela Geolog	3.17	123	*e*P	P	06 51 09.1	+2.7
LCR2	La Lucha 2	3.32	125	*e*P	P	06 51 10.0	+1.6
ICR	Volcan Irazu	3.33	120	*e*P	P	06 51 12.6	+4.0
URSC	Urasca	3.45	122	*e*P	P	06 51 11.4	+1.2
ROSC	El Rosal	14.04	118	LR	LR	06 58 30.3	
	comp=E,79nm,20.9s,baz=150,slow=36						
SDV	Santo Domingo	16.11	98	P	P	06 53 55.0	-5.7
	comp=E,3.8nm,0.9s						
TXAR	Lajitas Array	23.60	321	P	P	06 55 23.9	+1.8
	comp=E,2.2nm,0.6s,mb3.7,baz=143,slow=9.4,SNR=19						
WMOK	Wichita Mounta	25.43	336	*e*P	P	06 55 41.2	+1.5
	comp=E,8.6nm,1.0s,mb4.1						
AMTX	Amarillo	26.80	332	P	P	06 55 52.2	-0.1
	comp=E,3.0nm,0.5s,mb4.1						
SDCO	Great Sand Dun	30.92	330	*e*P	P	06 56 29.8	+0.6
	comp=E,1.0nm,0.7s,mb3.6						
SAML	Samuel	31.13	130	*e*P	P	06 56 29.3	-2.0
	comp=E,1.3nm,0.6s,mb3.8						
PV10	Paradox Valley	33.20	327	*e*P	P	06 56 49.1	+0.1
PDAR	Pinedale Array	36.77	332	P	P	06 57 19.8	+0.3
	comp=E,0.4nm,0.7s,mb3.5,baz=129,slow=9.5,SNR=4.1						
NVAR	Mina Array Bea	38.73	319	PcP	PcP	06 59 49.0	+2.3
	comp=E,0.9nm,0.7s,baz=135,slow=3.8,SNR=5.3						
ULM	Lac du Bonnet	39.19	351	P	P	06 57 38.9	-0.5
	comp=E,2.7nm,0.9s,mb4.1,baz=175,slow=5.2,SNR=4.6						
YKA	Yellowknife Ar	54.53	345	P	P	06 59 37.8	-1.8
	comp=E,0.5nm,0.7s,mb3.6,baz=140,slow=7.4,SNR=16						
YKA				PcP	PcP	07 00 41.8	-0.1
	comp=E,0.3nm,0.8s,baz=144,slow=4.1,SNR=7.2						
YKA	Yellowknife Ar	54.53	345	P	P	06 59 37.9	-1.8
YKA				PcP	PcP	07 00 41.8	-0.1
ILAR	Eielson Array	67.00	336	P	P	07 01 03.4	-0.7
	comp=E,0.3nm,0.8s,mb3.2,baz=141,slow=4.4,SNR=5.7						
CMAR	Chiang Mai Arr	149.54	349	PKPbc	PKPdf	07 10 02.1	+7.9
	comp=E,0.6nm,0.4s,baz=344,slow=4.6,SNR=4.9						

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*MOS **18** 06:54:45.6±1.0, 51.70N×16.24E, h10^{km}, mb3.8/1, Error ellipse: s-maj=37.6km s-min=12.1km az=80.8*

*BGR **18** 06:54:46.9±0.6, 51.64N×16.11E, h1^{km}, ML3.3/9, Error ellipse: s-maj=10.0km s-min=4.4km az=164.0*

*IPEC **18** 06:54:46.5±0.4, 51.69N×16.14E, ML2.6/3, Error ellipse: s-maj=2.3km s-min=1.5km az=8.0*

*NEIC **18** 06:54:47.5±0.4, 51.64N×16.04E, h5^{km}, ML3.4(VIE), ML3.3(SZGRF), ML3.3(FUR), ML3.0(BRG), Error ellipse: s-maj=5.4km s-min=3.9km az=207.0*

*PRU **18** 06:54:48.6, 51.58N×16.02E*

*IDC **18** 06:54:48.7±0.8, 51.58N×15.90E, mb1 3.7/7, mb1mx3.5/21, mbtmp3.6/7, ML3.3/7, Error ellipse: s-maj=11.7km s-min=7.6km az=114.0*

*WAR **18** 06:54:49.0, 51.58N×15.99E, h1^{km}, ML3.4, Mining Induced*

*CSEM **18** 06:54:49.4±0.1, 51.56N×16.01E, h2^{km}, ML3.7/3, Error ellipse: s-maj=2.2km s-min=1.2km az=17.0*

ISC 18 06:54:46.1±0.4**, 51.55N**±0.02×**16.04E**±0.02**, n78, σ1^{s}23**/144**, 3C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	167	⇓*i*Pg	Pg	06 55 03.0	+2.3
KSP				*e*		06 55 05.1	
KSP				*e*Sg	Sg	06 55 13.1	+2.7
KSP	Ksiaz	0.73	167	*e*PG	Pg	06 55 03.0	+2.3
KSP				*e*SG	Sg	06 55 13.0	+2.6
KSP	Ksiaz	0.73	167	⇓*i*Pg	Pg	06 55 03.0	+2.3
KSP				*e*Sg	Sg	06 55 13.1	+2.7
UPC	Upice	1.05	181	*e*PG	Pg	06 55 08.8	+1.7
DPC	Dobruska-Polom	1.22	172	*e*P	Pg	06 55 11.7	+1.2
DPC				*e*		06 55 28.3	
DPC				smax			
	comp=N,269nm,0.7s						
DPC	Dobruska-Polom	1.22	172	*e*PG	Pg	06 55 11.7	+1.2
DPC				*e*SG	Sg	06 55 28.3	+1.6
	comp=N,269nm,0.7s						
DPC	Dobruska-Polom	1.22	172	Pg	Pg	06 55 11.7	+1.2
DPC				*e*Sg	Sg	06 55 28.5	+1.8
PVCC	Panska Ves	1.39	223	*e*PG	Pg	06 55 14.3	+0.5
PVCC	Panska Ves	1.39	223	*e*Pn	Pn	06 55 14.8	+2.0
PVCC				*e*Sg	Sg	06 55 34.8	+2.5
BRG	Berggiesshubel	1.49	244	*e*Pg	Pg	06 55 15.0	-0.9
BRG				*e*Sg	Sg	06 55 36.0	+0.4
BRG	Berggiesshubel	1.49	244	*e*P	Pn	06 55 14.9	+0.7
BRG				*i*		06 55 35.8	
BRG	Berggiesshubel	1.49	244	*e*Pn	Pn	06 55 14.9	+0.7
BRG				*i* Pg	Pg	06 55 15.9	+0.1
BRG				*i* Sg	Sg	06 55 35.8	+0.2
BRG	Berggiesshubel	1.49	244	*i* Pg	Pg	06 55 15.9	+0.1
BRG				Sg	Sg	06 55 36.0	+0.4
RUE	Ruedersdorf	1.68	304	*e*Pn	Pn	06 55 16.9	-0.1
RUE	Ruedersdorf	1.68	304	*e*Pn	Pn	06 55 16.9	0.0
PRU	Pruhonice	1.83	212	*e*P	Pn	06 55 20.4	+1.2
PRU				*e*		06 55 47.3	
PRU	Pruhonice	1.83	212	*e*PN	Pn	06 55 20.4	+1.2
PRU				*e*PG	Pg	06 55 22.4	-0.4
PRU				*e*SG	Sg	06 55 47.3	+0.1
PRU	Pruhonice	1.83	212	Pg	Pg	06 55 22.4	-0.4
PRU				Sg	Sg	06 55 47.3	+0.1
CLL	Collm	1.92	264	*e*Pn	Pn	06 55 20.6	+0.2
CLL				*e*Sg	Sg	06 55 49.4	-0.6
CLL	Collm	1.92	264	*i* P	Pn	06 55 20.6	+0.2
CLL				*i*		06 55 49.6	
CLL	Collm	1.92	264	*i* Pn	Pn	06 55 20.6	+0.2
CLL				*i* Pg	Pg	06 55 24.1	-0.4
CLL				*i* Sg	Sg	06 55 49.6	-0.4
CLL	Collm	1.92	264	*i* PN	Pn	06 55 20.6	+0.2
	comp=N,logA/T=2.1						
CLL				*i* PG	Pg	06 55 24.1	-0.4
CLL				*i*		06 55 27.6	
CLL				*i* SG	Sg	06 55 49.6	-0.4
CLL	Collm	1.92	264	*i* Pg	Pg	06 55 24.1	-0.4
CLL				Sg	Sg	06 55 49.4	-0.6
MORC	Moravsky Berou	2.02	151	*e*Pn	Pn	06 55 22.8	+1.0
MORC				*e*Sg	Sg	06 55 52.9	-0.5
MORC	Moravsky Berou	2.02	151	*e*Pn	Pn	06 55 22.8	+1.0
MORC				*e*Sg	Sg	06 55 52.9	-0.5
OKC	Ostrava-Krasne	2.18	141	*e*P	Pn	06 55 24.9	+0.8
OKC				*e*		06 55 59.2	
OKC	Ostrava-Krasne	2.18	141	*e*PN	Pn	06 55 24.9	+0.8
OKC				*e*PG	Pg	06 55 29.1	-0.5
OKC				*e*SG	Sg	06 55 59.2	+0.5
OKC	Ostrava-Krasne	2.18	141	*e*Pn	Pn	06 55 25.1	+1.0
OKC	Ostrava-Krasne	2.18	141	Pg	Pg	06 55 29.1	-0.5
OKC				Sg	Sg	06 55 59.2	+0.5
VRAC	Vranov	2.28	171	Pn	Pn	06 55 27.4	+1.9
	comp=N,5.0nm,0.3s,baz=331,slow=16,SNR=20						
VRAC				Lg		06 56 01.5	
	comp=N,7.1nm,0.3s,baz=83,slow=18,SNR=14						
VRAC	Vranov	2.28	171	*e*Pn	Pn	06 55 27.1	+1.6
VRAC				*e*Sg	Sg	06 56 01.2	-0.7
	comp=N,24nm,0.2s						
KRUC	Moravsky	2.51	175	*e*Pn	Pn	06 55 30.3	+1.5
KRUC				*e*Sg	Sg	06 56 08.9	-0.7
	comp=N,16nm,0.2s						
TANN	Tannenbergstha	2.54	245	*e*Pn	Pn	06 55 30.5	+1.3
TANN				*e*Sg	Sg	06 56 09.4	-1.1
WERD	Werda	2.61	246	*e*Pn	Pn	06 55 30.8	+0.6
WERD				*e*Sg	Sg	06 56 11.4	-1.5
NKC	Novy Kostel	2.63	241	*e*P	Pn	06 55 31.6	+1.0
NKC				*e*		06 56 13.4	
NKC				smax			
	comp=N,77nm,0.2s						
NKC	Novy Kostel	2.63	241	*e*PN	Pn	06 55 31.6	+1.0
NKC				*e*PG	Pg	06 55 38.3	-0.4
NKC				*e*SG	Sg	06 56 13.4	-0.4
	comp=N,77nm,0.2s						
NEUB	Neuenburg	2.70	264	*e*Pn	Pn	06 55 32.3	+0.7
NEUB				*e*Sg	Sg	06 56 15.2	-0.7
OJC	Ojcow	2.73	118	*e*P	Pn	06 55 31.3	-0.7
OJC				*e*		06 56 03.6	
OJC	Ojcow	2.73	118	*e*PN	Pn	06 55 31.0	-1.0
OJC				*i* PG	Pg	06 55 41.2	+0.6
OJC				*e*SN	Sn	06 56 04.2	-2.0
OJC				*i* SG	Sg	06 56 16.8	-0.2
OJC	Ojcow	2.73	118	*e*Pn	Pn	06 55 31.3	-0.7
OJC				*i* Pg	Pg	06 55 41.2	+0.6
OJC				*e*Sn	Sn	06 56 03.6	-2.6
OJC				*i* Sg	Sg	06 56 16.8	-0.2
OJC	Ojcow	2.73	118	*i* Pg	Pg	06 55 41.2	+0.6
OJC				*e*Sn	Sn	06 56 03.6	-2.6
OJC				*i* Sg	Sg	06 56 16.8	-0.2
KHC	Kasperske Hory	2.90	214	*e*P	Pn	06 55 34.9	+0.6
KHC				*e*		06 56 09.5	
KHC	Kasperske Hory	2.90	214	*e*PN	Pn	06 55 34.9	+0.6
KHC				*e*PG	Pg	06 55 41.3	-2.6
KHC				*e*SN	Sn	06 56 09.5	-0.9
KHC				*e*SG	Sg	06 56 20.1	-2.4
MOX	Moxa	2.94	254	*e*Pn	Pn	06 55 35.1	+0.2
MOX				*e*Sg	Sg	06 56 22.3	-1.6
MOX	Moxa	2.94	254	*e*P	Pn	06 55 35.0	+0.1
MOX				*e*		06 56 22.3	
MOX	Moxa	2.94	254	*e*Pn	Pn	06 55 35.0	+0.1
MOX				*e*Pg	Pg	06 55 43.4	-1.4
MOX				*e*Sg	Sg	06 56 22.3	-1.6
MOX	Moxa	2.94	254	*i* P	Pn	06 55 35.0	+0.1
MOX				Pg	Pg	06 55 43.0	-1.8
MOX				Sg	Sg	06 56 22.0	-1.9
MOX	Moxa	2.94	254	*e*Pg	Pg	06 55 43.4	-1.4
MOX				Sg	Sg	06 56 22.3	-1.6
NOTT	Nottersdorf	3.04	237	*e*Pn	Pn	06 55 37.2	+0.7
NOTT				*e*Sg	Sg	06 56 26.9	-0.5
GEC2	GERESS Array S	3.10	210	*e*Pn	Pn	06 55 38.5	+1.2
GEC2	GERESS Array S	3.10	210	*e*Pn	Pn	06 55 38.5	+1.2
GERES	GERESS Array B	3.10	210	Pn	Pn	06 55 38.6	+1.3
	comp=N,2.7nm,0.3s,baz=28,slow=13,SNR=62						
GERES				Pg	Pg	06 55 44.8	-3.3
	comp=N,8.6nm,0.3s,baz=30,slow=16,SNR=51						
GERES				Lg		06 56 26.8	
	comp=N,8.0nm,0.3s,baz=27,slow=24,SNR=6.7						
WET	Wettzell	3.15	221	*e*Pn	Pn	06 55 39.0	+1.0
WET	Wettzell	3.15	221	*e*Pn	Pn	06 55 39.0	+1.0
SMOL	Smolenice	3.17	163	*e*SG	Sg	06 56 31.9	+0.1
LIKS	Likavka	3.19	141	*e*SG	Sg	06 56 31.9	-0.3
VKA	Vienna	3.30	177	⇓*i*PG	Pg	06 55 51.9	-0.1
VKA				*i* SG	Sg	06 56 35.8	-0.1
ZST	Bratislava	3.43	168	*e*SG	Sg	06 56 36.6	-3.8
NIE	Niedzica	3.46	126	*e*PN	Pn	06 55 42.0	-0.5
NIE				*e*PN	Pg	06 55 52.0	-3.3
NIE				*e*S	Sg	06 56 40.0	-1.5
VYHS	Vyhne	3.55	148	*i* PN	Pn	06 55 44.4	+0.7
VYHS				*e*SG	Sg	06 56 44.4	-0.1
GRA1	Grafenberg Arr	3.59	241	*e*Pn	Pn	06 55 44.5	+0.2
GRA1				*e*Sg	Sg	06 56 43.1	-2.6
GRA1	Grafenberg Arr	3.59	241	Pn	Pn	06 55 44.5	+0.2
GRA1				Sg	Sg	06 56 43.1	-2.6
GRF	Grafenberg Arr	3.59	241	*e*Pn	Pn	06 55 44.5	+0.3
GRF				*e*Sg	Sg	06 56 43.1	-2.7
BSD	Bornholm Skovb	3.63	350	⇓*i*P	Pn	06 55 43.7	-1.1
BSD				*i* S	Sn	06 56 21.7	-7.3
BSD				*i* S	Sn	06 56 24.3	-4.7
HROE	Hohe Rhon--Fla	3.85	257	⇓*i*Pn	Pn	06 55 48.0	+0.1
MOA	Molln	3.88	198	⇑*i*PN	Pn	06 55 49.4	+1.0
MOA				*i* SG	Sg	06 56 52.9	-2.5
	comp=N,15nm,0.4s						
ARSA	Arzberg	4.32	185	⇑*i*PN	Pn	06 55 55.4	+0.8
ARSA				*i* SG	Sg	06 57 05.9	-4.1
	comp=N,17nm,0.5s						
CRVS	Cervenica-Dubn	4.38	125	*e*PN	Pn	06 55 56.6	+1.2
CRVS				*e*PG	Pg	06 56 11.8	-1.7
CRVS				*e*SG	Sg	06 57 09.7	-2.1
KOLS	Kolonicke sedl	4.78	121	*e*PN	Pn	06 56 01.8	+0.6
KOLS				*e*SG	Sg	06 57 22.7	-2.6
KBA	Koelnbreinsper	4.81	203	⇑*i*PN	Pn	06 56 02.7	+1.1
KBA				*i* SG	Sg	06 57 22.9	-3.5
	comp=N,12nm,0.5s						
VISS	Visnje	5.81	188	*e*Pn	Pn	06 56 16.2	+0.5
BOJS	Bojanci	6.08	185	*e*Pn	Pn	06 56 20.2	+0.7
DAVOX	Davos	6.26	223	Pn	Pn	06 56 22.8	+0.9
	comp=N,0.6nm,0.3s,baz=18,slow=14,SNR=3.7						
AKASG	Malin Array Be	8.34	91	P	P	06 56 48.3	-2.9
AKASG						06 58 20.9	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	8.34	91	Pn	P	06 56 48.3	-2.9
	comp=Z,1.1nm,0.3s,baz=278,slow=12,SNR=7.2						
AKASG				Sn	Sn	06 58 20.9	-6.3
	comp=Z,1.2nm,0.3s,baz=273,slow=23,SNR=5.2						
HFS	Hagfors	8.70	352	Pn	P	06 56 52.3	-3.9
	comp=Z,0.1nm,0.3s,baz=169,slow=15,SNR=5.9						
FINES	FINESS Array B	11.34	25	Pn	P	06 57 27.9	-4.4
	comp=Z,0.3nm,0.3s,baz=215,slow=11,SNR=7.4						
ARCES	ARCESS Array B	18.59	10	Pn	P	06 59 01.0	-5.3
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=4.1						

IDC 18 06:59:15.5±4.7**, 22.68S**×**148.48E, mb1 3.4**/4**, mb1mx3.3**/10**, mbtmp3.2**/4**, ML3.2**/4**, Error ellipse: s-maj=47.7km s-min=25.2km az=75.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	3.30	321	Pn	Pn	07 00 10.2	+0.7
	2.0nm,0.3s,baz=129,slow=16,SNR=22						
CTA				Lg		07 00 59.8	
	3.4nm,0.3s,baz=232,slow=22,SNR=12						
STKA	Stephens Creek	11.02	212	Pn	P	07 01 52.4	-5.1
	0.3nm,0.3s,baz=33,slow=12,SNR=6.7						
ASAR	Alice Springs	13.44	263	Pn	P	07 02 29.1	-1.0
	0.1nm,0.3s,baz=91,slow=13,SNR=5.1						
ASAR				Lg		07 06 24.2	
	0.1nm,0.3s,baz=84,slow=27,SNR=4.8						
WRA	Warramunga Arr	13.45	279	Pn	P	07 02 26.8	-3.5
	0.1nm,0.3s,baz=100,slow=12,SNR=7.9						
WRA				Lg		07 06 21.5	
	0.1nm,0.3s,baz=100,slow=27,SNR=5.3						

IDC 18 07:03:54.7±13.0**, 6.71S**×**147.23E, h115**^{km}±143^{km}**, mb3.1**/2**, mb1 3.4**/4**, mb1mx3.3**/13**, mbtmp3.6**/4**, ML3.1**/2**, Error ellipse: s-maj=280.8km s-min=33.4km az=134.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.68	181	P	P	07 04 36.8	-0.7
	5.9nm,0.3s,baz=328,slow=7.9,SNR=12						
WRA	Warramunga Arr	18.16	222	P	P	07 07 57.3	-3.4
	0.2nm,0.3s,baz=41,slow=12,SNR=6.9						
ASAR	Alice Springs	21.17	216	P	P	07 08 31.6	-0.8
	1.1nm,0.7s,baz=58,slow=7.2,SNR=8.0						
ILAR	Eielson Array	86.04	23	P	P	07 16 22.1	-1.1
	0.3nm,0.5s,baz=250,slow=4.7,SNR=8.8						

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*GUC **18** 07:12:06.4±0.8, 34.99S×70.57W, h4^{km}±3^{km}, MD4.3, ML4.1*

*NEIC **18** 07:12:06.4, 34.99S×70.57W, h4^{km}, mb4.1/5, ML4.1(GUC), After GUC.*

ISC 18 07:12:05.3±0.4**, 35.03S**±0.02×**70.46W**±0.06**, h4**^{km}**, n27, σ0^{s}95**/39**, mb4.1**/4**, 5C-7D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.62	312	⇓*i*P	Pg	07 12 16.9	-0.7
CACH	El Canelo	0.92	353	⇓*i*P	Pb	07 12 22.9	-0.5
CHCH	Chadas Angostu	1.11	352	*e*P	Pb	07 12 26.3	-0.4
CHCH				*i* S	Sb	07 12 41.8	+0.5
LMEL	Las Melosas	1.20	10	⇓*i*P	Pb	07 12 28.4	+0.2
LMEL				*i* S	Sb	07 12 45.0	+1.1
LMEL				AMP		07 12 46.3	
	comp=N,4μm,0.2s						
LNCH	Linares	1.24	229	*i* P	Pb	07 12 28.3	-0.6
LNCH				*i* S	Sb	07 12 44.7	-0.4
LNCH				AMP		07 12 45.8	
	comp=E,8μm,0.7s						
PCH	Pirque	1.41	358	*e*P	Pn	07 12 31.6	-0.2
PCH				*i* S	Sb	07 12 50.2	+0.2
TACH	Talagante	1.43	344	⇓*i*P	Pn	07 12 31.5	-0.6
TACH				*i* S	Sb	07 12 50.2	-0.5
ANTU	Antumapu	1.47	354	*e*P	Pn	07 12 32.7	+0.1
ANTU				*i* S	Sb	07 12 52.1	+0.5
RCDM	Rinconada Maip	1.56	349	*e*P	Pn	07 12 33.7	-0.4
RCDM				*i* S	Sb	07 12 53.9	-0.6
RCDM				AMP		07 12 56.7	
	comp=E,5μm,0.2s						
FCH	Farellones	1.71	5	⇑*i*P	Pn	07 12 37.1	+1.0
FCH				*i* S	Sn	07 13 00.0	+1.5
FCH				AMP		07 13 02.0	
	comp=E,3μm,0.4s						
LCCH	Las Cruces	1.80	329	⇓*i*P	Pn	07 12 37.2	-0.2
LCCH				*i* S	Sn	07 12 60.0	-1.1
CCHI	Chillan	2.05	220	⇓*i*P	Pn	07 12 41.6	+0.6
CCHI				*i* S	Sn	07 13 08.6	+1.3
CCHI				AMP		07 13 12.6	
	comp=E,5μm,0.7s						
IHA	Instituto Hidr	2.23	334	*e*P	Pn	07 12 44.2	+0.7
IHA				*i* S	Sn	07 13 12.5	+0.6
JACH	Jahuel	2.35	357	*i* P	Pn	07 12 47.1	+1.9
ZON	Zonda	3.78	24	*e*P	Pn	07 13 10.0	+4.3
ZON				*e*S	Sg	07 14 10.0	-1.2
PLCA	Paso Flores	5.69	181	*e*Pn	Pn	07 13 35.1	+2.4
	comp=E,33nm,1.0s						
TRQA	Tornquist	7.46	116	*e*Pn	Pn	07 13 57.1	-0.5
	comp=E,12nm,0.8s						
TRQA				*e*Sg	Sn	07 16 01.1	+37
LPAZ	La Paz	18.78	7	*e*P	P	07 16 29.1	+1.3
	comp=E,7.7nm,1.0s						
SAML	Samuel	26.80	16	P	P	07 17 47.8	-0.7
	comp=E,1.7nm,0.9s,mb3.6						
VNA3	Neumayer Olymp	47.91	158	⇑*i*	P	07 20 46.5	+0.4
VNA1	Neumayer--Stat	48.22	157	⇑*i*	P	07 20 45.2	-3.3
VNA2	Neumayer--Watz	48.56	157	⇑*i*	P	07 20 50.5	-0.6
SNAA	Sanae	50.14	158	⇑*i*	P	07 21 02.2	-1.1
SNAA	Sanae	50.14	158	P	P	07 21 02.9	-0.4
QSPA	South Pole Qui	55.21	180	⇓*i*P	P	07 21 41.1	+0.1
	comp=E,5.5nm,0.9s,mb4.6						
WVT	Waverly	72.62	345	*e*P	P	07 23 34.3	-1.6
	comp=E,4.6nm,0.8s,mb4.5						
MNTX	Cornudas Mount	74.05	330	*e*P	P	07 23 42.6	-1.6
	comp=E,0.8nm,0.6s,mb3.8						

IDC 18 07:13:44.2±1.6**, 10.16S**×**161.17E, mb4.2**/5**, mb1 4.4**/6**, mb1mx4.2**/15**, mbtmp4.1**/6**, ML3.8**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.4**/24**, Error ellipse: s-maj=62.8km s-min=26.0km az=140.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	13.83	272	LR	LR	07 21 16.4	
	comp=Z,122nm,19.4s,baz=266,slow=33						
CTA	Charters Tower	17.45	234	P	P	07 17 53.8	+3.0
	0.2nm,0.3s,baz=65,slow=11,SNR=3.8						
WRA	Warramunga Arr	27.64	246	P	P	07 19 34.4	-1.4
	2.0nm,0.7s,baz=75,slow=9.3,SNR=21						
ASAR	Alice Springs	29.27	239	P	P	07 19 47.9	-2.7
	0.9nm,0.8s,baz=68,slow=9.5,SNR=7.1						
SONM	Songino Array	75.34	325	P	P	07 25 29.9	-1.4
	3.7nm,0.6s,baz=141,slow=5.3,SNR=32						
SONM				pP	pP	07 25 44.4	+13
	1.5nm,0.7s,baz=137,slow=5.0,SNR=7.0						
NVAR	Mina Array Bea	88.92	51	P	P	07 26 42.0	-0.2
	0.8nm,0.8s,baz=246,slow=5.1,SNR=4.8						
YKA	Yellowknife Ar	96.27	28	P	P	07 27 13.2	-2.3
	0.4nm,0.6s,baz=259,slow=4.7,SNR=14						

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*NIED **18** 07:23:00, 36.10N×140.10E, h80^{km}, Mw3.7 Best double couple: $M_0$4.66×10^{14} NP1:ϕ_s7°, δ59°, λ61°. NP2:ϕ_s234°, δ41°, λ129°.*

*JMA **18** 07:23:18.7±0.1, 36.13N×140.09E, h65^{km}±1^{km}, M3.2*

JMA Felt I J1.

ISC 18 07:23:18.0±1.3**, 36.11N**±0.07×**140.07E**±0.08**, h69**^{km}±10^{km}**, n8, σ0^{s}61**/14**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.16	39	⇑P	P	07 23 28.6	+0.2
JYT				S	S	07 23 35.7	-0.3
JAG	Ashikaga	0.59	303	⇓P	P	07 23 32.2	+0.3
JAG				S	S	07 23 42.0	0.0
JKT	Katashina	0.94	315	⇓P	P	07 23 36.0	+0.1
JKT				S	S	07 23 49.6	+0.4
JRY	Ryogami san	0.95	265	⇓P	P	07 23 36.6	+0.5
JRY				*e*S	S	07 23 49.9	+0.3
JOD2	Odawara 2	1.16	224	⇓P	P	07 23 39.1	+0.2
JOD2				S	S	07 23 53.9	-0.5
JFK	Kawauchi	1.41	27	P	P	07 23 42.1	-0.3
JFT	Otama	1.43	9	P	P	07 23 42.3	-0.2
MAT	Matsushiro	1.57	287	P	P	07 23 44.9	+0.5
MAT				S	S	07 24 00.9	-3.0

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*IDC **18** 07:32:07.5±0.6, 10.06S×150.79E, mb4.7/11, mb1 4.8/14, mb1mx4.8/16, mbtmp4.6/14, ML3.9/3, MS4.1/10, Ms1 4.1/10, ms1mx3.9/16, Error ellipse: s-maj=17.5km s-min=15.9km*

az=166.0

*BJI **18** 07:32:12.7, 10.10S×150.70E, h35^{km}, mB5.0, mb4.6, Ms4.7, Msz4.6*

*HRVD **18** 07:32:12.7±0.4, 10.09S×150.76E, h12^{km}, MW4.9/45, Centroid moment Tensor Solution. LP body waves: s27,c41;Mantle waves: s45,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.62±.13; M$_{\theta\theta}$2.10±.11; M$_{\phi\phi}$0.51±.13; M$_{r\theta}$-0.38±.44; M$_{\theta\phi}$1.45±.10; M$_{\phi r}$0.24±.49; Best double couple: M$_0$2.83×10^{16} NP1:ϕ$_s$230°,δ44°, λ-104°. NP2:ϕ$_s$69°,δ48°,λ-77°. Principal axes: T 2.966, Plg2°, Azm150°; N -.281, Plg10°, Azm240°; P -2.694, Plg80°, Azm47°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 07:32:12.7±0.3, 10.11S×150.73E, h35^{km}, mb4.9/17 Error ellipse: s-maj=8.3km s-min=5.4km az=126.0*

ISC 18 07:32:12.2±2.1, 10.19S±0.07×150.65E±0.08, h42^{km}±18^{km}, n68, σ0^{s}83/58, mb4.8/29, MS4.1/10, 2C-2D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.52**	**282**	Pn	**P**	**07 33 06.0**	**+0.1**
	22nm,0.3s,baz=93,slow=4.9,SNR=42						
PMG				Pg	**P**	**07 33 14.5**	**+8.7**
	41nm,0.3s,baz=97,slow=14,SNR=38						
PMG				Lg		07 34 03.0	
	38nm,0.3s,baz=154,slow=23,SNR=3.2						
PMG	**Port Moresby**	**3.52**	**282**	*e*Pn	**P**	**07 33 05.6**	**-0.2**
PMG				*e*Sn	S	07 34 07.8	+21
CTA	**Charters Tower**	**10.72**	**203**	*e*P	**P**	**07 34 45.6**	**-0.6**
	9.8nm,0.8s						
CTA	**Charters Tower**	**10.72**	**203**	Pn	**P**	**07 34 45.0**	**-1.2**
	0.7nm,0.3s,baz=40,slow=13,SNR=7.6						
CTA				Sn	**S**	**07 36 38.4**	**-7.4**
	1.2nm,0.3s,baz=80,slow=8.5,SNR=4.6						
CTA				LR	LR	07 38 20.1	
	comp=Z,826nm,18.7s,baz=23,slow=34						
CTAO	**Charters Tower**	**10.72**	**203**	*e*Pn	**P**	**07 34 44.7**	**-1.5**
KAKA	**Kakadu**	**18.02**	**260**	*e*P	**P**	**07 36 22.0**	**+0.7**
	86nm,1.0s						
WRAB	**Tennant Creek**	**18.46**	**236**	*e*P	**P**	**07 36 24.8**	**-2.0**
	45nm,0.9s						
WB2	**Warramunga Arr**	**18.47**	**236**	⇓*i*P	**P**	**07 36 27.4**	**+0.5**
WRA	**Warramunga Arr**	**18.48**	**236**	P	**P**	**07 36 27.3**	**+0.3**
	0.7nm,0.3s,baz=60,slow=12,SNR=33						
WRA				S	**S**	**07 39 46.6**	**-1.7**
	0.3nm,0.3s,baz=44,slow=20,SNR=6.5						
ASAR	**Alice Springs**	**20.85**	**228**	P	**P**	**07 36 53.6**	**+0.7**
	44nm,1.0s,baz=64,slow=10,SNR=118						
ASAR				S	**S**	**07 40 46.4**	**+8.1**
	0.4nm,0.5s,baz=281,slow=21,SNR=4.1						
ASAR				LR	LR	07 44 37.7	
	comp=Z,228nm,20.4s,MS3.5,baz=230,slow=36						
ASPA	**Alice Springs**	**20.86**	**228**	*e*P	**P**	**07 36 54.5**	**+1.5**
STKA	**Stephens Creek**	**23.15**	**200**	*e*P	**P**	**07 37 17.2**	**+1.3**
	26nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**23.15**	**200**	P	**P**	**07 37 16.6**	**+0.7**
	37nm,1.1s,mb4.7,baz=18,slow=9.4,SNR=20						
STKA				LR	LR	07 46 57.0	
	comp=Z,369nm,18.4s,MS3.9,baz=213,slow=38						
STKA	**Stephens Creek**	**23.15**	**200**	*e*P	**P**	**07 37 16.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**25.47**	**249**	*e*P	**P**	**07 37 38.8**	**+0.5**
	27nm,0.7s,mb4.9						
MBWA	**Marble Bar**	**31.64**	**246**	*e*P	**P**	**07 38 33.7**	**-0.2**
	12nm,1.0s,mb4.7						
URZ	**Urewera**	**36.67**	**144**	LR	LR	07 52 44.7	
	comp=Z,230nm,19.0s,MS4.0,baz=23,slow=34						
RPZ	**Rata Peaks**	**37.81**	**156**	LR	LR	07 52 41.0	
	comp=Z,415nm,18.4s,MS4.3,baz=29,slow=33						
CBIJ	**Chichi jima**	**37.96**	**348**	LR	LR	07 52 32.0	
	comp=Z,577nm,21.1s,MS4.4,baz=116,slow=32						
WHN	**Wuhan**	**53.44**	**321**	*e*P	**P**	**07 41 31.5**	**+1.0**
PPT	**Papeete**	**58.30**	**104**	*e*S	**S**	**07 50 12.4**	**+9.3**
PPT				*e*LR	LR	07 59 26.1	
	248nm,24.0s						
CMAR	**Chiang Mai Arr**	**58.41**	**299**	P	**P**	**07 42 06.8**	**+0.5**
	5.3nm,0.9s,mb4.6,baz=109,slow=4.3,SNR=10						
CMAR				LR	LR	08 08 52.3	
	comp=Z,48nm,18.3s,MS3.6,baz=120,slow=38						
TBI	**Tubuai**	**58.46**	**111**	*e*S	**S**	**07 50 14.5**	**+9.4**
TBI				*e*LR	LR	07 59 26.1	
	363nm,31.5s						
XAN	**Xi’an**	**59.19**	**320**	P	**P**	**07 42 11.8**	**+0.2**
XAN				AMB	AMB		
	comp=Z,4.0nm,1.7s,mb4.2						
HHC	**Hu-ho-hao-te**	**62.27**	**327**	*e*P	**P**	**07 42 32.3**	**-0.1**
HHC				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,131nm,8.2s						
LZH	**Lanzhou**	**63.72**	**319**	⇑P	**P**	**07 42 47.5**	**+5.4**
LZH				AP	pP	07 42 56.0	+1.7
LZH				XP	sP	07 42 59.1	0.0
LZH				AMB	AMB		
	comp=Z,36nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,104nm,5.4s						
LZH				LR	LR		
	comp=N,227nm,13.1s						
LZH				LR	LR		
	comp=Z,329nm,17.3s,MS4.6						
LZH	**Lanzhou**	**63.72**	**319**	⇑P	**P**	**07 42 47.5**	**+5.4**
	comp=Z,36nm,1.4s,mb5.2						
LZH				pP	pP	07 42 56.0	+1.7
LZH				sP	sP	07 42 59.1	0.0
LZH				LR	LR		
	comp=Z,330nm,17.3s,MS4.6						
VNDA	**Vanda**	**67.57**	**177**	P	**P**	**07 43 06.0**	**0.0**
	comp=Z,4.9nm,0.7s,mb4.6,baz=331,slow=8.5,SNR=14						
VNDA				LR	LR	08 09 07.3	
	comp=Z,97nm,20.2s,MS4.0,baz=344,slow=33						
VNDA	**Vanda**	**67.57**	**177**	*e*P	**P**	**07 43 05.6**	**-0.4**
	comp=Z,5.1nm,0.8s,mb4.6						
GTA	**Gaotai**	**68.25**	**320**	P	**P**	**07 43 11.8**	**+0.9**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb4.2						
ULN	**Ulaanbaatar**	**69.50**	**330**	*e*P	**P**	**07 43 17.3**	**-1.1**
	comp=Z,24nm,1.8s,mb4.8						
SONM	**Songino Array**	**69.80**	**330**	P	**P**	**07 43 19.8**	**-0.5**
	comp=Z,3.7nm,0.9s,mb4.3,baz=154,slow=5.5,SNR=23						
JIRN	**Jiri**	**72.82**	**303**	*e*P	**P**	**07 43 39.4**	**+0.6**
GUN	**Gumba**	**73.17**	**303**	*e*P	**P**	**07 43 41.6**	**+0.7**
	comp=Z,13nm,0.6s,mb5.0						
PKI	**Pulchoki**	**73.43**	**303**	*e*P	**P**	**07 43 42.8**	**+0.4**
KKN	**Kakani**	**73.62**	**303**	*e*P	**P**	**07 43 43.0**	**-0.5**
DMN	**Daman**	**73.70**	**303**	*e*P	**P**	**07 43 44.6**	**+0.6**
	comp=Z,34nm,0.9s,mb5.3						
GKN	**Gorkha**	**74.22**	**303**	*e*P	**P**	**07 43 47.3**	**+0.3**
KOLN	**Koldanda**	**75.00**	**302**	*e*P	**P**	**07 43 51.3**	**-0.2**
	comp=Z,39nm,0.9s,mb5.3						
WMQ	**Urumqi**	**78.30**	**319**	*e*P	**P**	**07 44 10.3**	**+0.6**
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
BILL	**Bilibino**	**78.82**	**6**	*e*P	**P**	**07 44 12.1**	**0.0**
	comp=Z,14nm,1.1s,mb4.8						
QSPA	**South Pole Qui**	**79.81**	**180**	⇓*i*P	**P**	**07 44 18.3**	**+1.1**
	comp=Z,13nm,0.6s,mb5.0						
MAW	**Mawson**	**79.81**	**203**	LR	LR	08 14 45.9	
	comp=Z,187nm,18.3s,MS4.5,baz=233,slow=32						
ZAL	**Zalesovo**	**84.46**	**327**	P	**P**	**07 44 41.6**	**-0.1**
	comp=Z,3.0nm,0.3s,mb4.9,baz=43,slow=1.6,SNR=9.2						
ZAL				LR	LR	08 22 43.1	
	comp=Z,138nm,18.2s,MS4.4,baz=180,slow=36						
IMA	**Indian Mountai**	**86.21**	**20**	*e*P	**P**	**07 44 50.5**	**+0.4**
	comp=Z,12nm,0.7s,mb5.2						
MCK	**McKinley**	**86.62**	**23**	*e*P	**P**	**07 44 51.4**	**-0.8**
	comp=Z,9.1nm,1.2s,mb4.9						
KURK	**Kurchatov**	**86.70**	**323**	*e*P	**P**	**07 44 51.9**	**-0.9**
	comp=Z,4.0nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**86.83**	**314**	*e*P	**P**	**07 44 53.0**	**-0.7**
	comp=Z,2.8nm,0.9s,mb4.5						
COLA	**College**	**87.61**	**22**	*e*P	**P**	**07 44 55.7**	**-1.2**
	comp=Z,4.8nm,0.8s,mb4.8						
ILAR	**Eielson Array**	**87.92**	**22**	P	**P**	**07 44 56.9**	**-1.5**
	comp=Z,3.8nm,0.8s,mb4.7,baz=252,slow=4.8,SNR=28						
DAWY	**Dawson**	**90.54**	**24**	*e*P	**P**	**07 45 11.7**	**+0.9**
BVAR	**Borovoye Array**	**92.26**	**323**	P	**P**	**07 45 17.7**	**-1.3**
	comp=Z,0.8nm,0.7s,mb4.2,baz=124,slow=5.3,SNR=5.6						
YBH	**Yreka Blue Hor**	**94.21**	**49**	P	**P**	**07 45 28.1**	**-0.1**
	comp=Z,3.1nm,1.0s,mb4.7,baz=214,slow=4.1,SNR=5.9						
NVAR	**Mina Array Bea**	**97.06**	**52**	P	**P**	**07 45 42.4**	**+1.2**
	comp=Z,3.4nm,1.1s,mb4.7,baz=243,slow=5.4,SNR=13						
NVAR	**Mina Array Bea**	**97.06**	**52**	P	**P**	**07 45 42.4**	**+1.2**
BMO	**Blue Mountains**	**98.54**	**46**	*e*P	**P**	**07 45 47.2**	**-0.6**
	comp=Z,6.5nm,1.6s,mb4.9						
NEW	**Newport**	**98.99**	**43**	P	**P**	**07 45 49.9**	**+0.1**
	comp=Z,3.8nm,1.1s,mb4.8,baz=258,slow=5.5,SNR=4.1						
NEW	**Newport**	**98.99**	**43**	*e*P	**P**	**07 45 48.7**	**-1.0**
	comp=Z,5.2nm,1.3s,mb4.9						
YKA	**Yellowknife Ar**	**101.16**	**28**	P	P	07 45 59.3	+0.1
	comp=Z,0.2nm,0.8s,baz=270,slow=4.9,SNR=4.0						
YKA				PKKPbc		08 02 09.5	
	comp=Z,0.3nm,0.7s,baz=83,slow=3.0,SNR=6.3						
YKA	**Yellowknife Ar**	**101.16**	**28**	P	P	07 45 59.3	+0.1
YKA				PKKPbc		08 02 09.6	
GERES	**GERESS Array B**	**127.38**	**325**	PKP	PKPdf	07 51 13.2	+0.4
	comp=Z,1.2nm,0.9s,baz=45,slow=1.9,SNR=5.9						
LPAZ	**La Paz**	**133.48**	**124**	PKP	PKPdf	07 51 28.1	+2.9
	comp=Z,1.8nm,0.9s,baz=349,slow=4.7,SNR=6.6						
LPAZ	**La Paz**	**133.48**	**124**	*e*PKPdf	PKPdf	07 51 27.6	+2.4
SDV	**Santo Domingo**	**139.29**	**88**	PKP	PKPdf	07 51 37.7	+1.8
	comp=Z,9.8nm,0.9s,baz=29,slow=1.4,SNR=6.1						
SDV	**Santo Domingo**	**139.29**	**88**	*e*PKPdf	PKPdf	07 51 37.5	+1.5
SAML	**Samuel**	**141.34**	**118**	*e*PKPdf	PKPdf	07 51 39.8	+0.1
BDFB	**Brasilia**	**148.38**	**144**	PKPbc	PKPdf	07 51 56.9	+5.4
	comp=Z,14nm,0.8s,baz=210,slow=2.4,SNR=21						
DBIC	**Dimbokro**	**155.52**	**264**	PKPab	PKPab	07 52 30.5	0.0
	comp=Z,3.7nm,0.9s,baz=144,slow=3.0,SNR=3.1						

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*NNC **18** 07:32:32.2±164.0, 36.70N×73.95E, mpv4.0, Error ellipse: s-maj=3314.9km s-min=1213.7km az=79.0*

*IDC **18** 07:32:32.3±21.0, 36.42N×71.08E, h264^{km}±217^{km}, mb3.2/7, mb1 3.4/7, mb1mx3.1/20, mbtmp3.8/7, Error ellipse: s-maj=101.3km s-min=33.0km az=68.0*

ISC 18 07:32:25.8±1.5, 36.62N±0.07×71.3E±0.2, h208^{km}±16^{km}, n19, σ0^{s}69/21, mb3.4/7, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.80**	**18**	P	**P**	**07 33 51.6**	**+0.2**
	SNR=64						
UCH	**Uchtor**	**6.12**	**23**	P	**P**	**07 33 56.0**	**+0.5**
	SNR=24						
KZA	**Kyzart**	**6.24**	**28**	P	**P**	**07 33 57.5**	**+0.5**
	SNR=7.1						
EKS2	**Erkin-Say**	**6.33**	**17**	P	**P**	**07 33 58.1**	**0.0**
	SNR=7.6						
AAK	**Ala-Archa**	**6.49**	**21**	P	**P**	**07 34 00.6**	**+0.4**
	SNR=20						
AAK	**Ala-Archa**	**6.49**	**21**	⇑P	**P**	**07 34 00.5**	**+0.3**
	6.6nm,0.4s						
AAK				⇑S	**S**	**07 35 11.5**	**-2.3**
	26nm,0.6s						
ULHL	**Ulahol**	**6.79**	**33**	P	**P**	**07 34 04.2**	**+0.2**
	SNR=12						
CHMS	**Chumysh**	**6.90**	**21**	P	**P**	**07 34 05.7**	**+0.2**
	SNR=5.8						
SDNR	**Sundarnagar**	**6.92**	**136**	*e*P	**P**	**07 34 04.2**	**-1.6**
SDNR				*e*S	**S**	**07 35 24.6**	**+0.7**
USP	**Ospenovka**	**7.08**	**19**	P	**P**	**07 34 07.8**	**-0.1**
	SNR=8.0						
TKM2	**Tokmak 2**	**7.10**	**26**	P	**P**	**07 34 08.7**	**+0.5**
	SNR=13						
MK31	**Makanchi Array**	**13.04**	**35**	⇓P	**P**	**07 35 24.7**	**+0.3**
	0.5nm,0.3s,baz=201,slow=11,SNR=26						
AKASG	**Malin Array Be**	**33.08**	**309**	P	**P**	**07 38 43.0**	**-0.6**
	0.8nm,0.5s,mb3.5,baz=80,slow=6.6,SNR=4.2						
FINES	**FINESS Array B**	**37.54**	**326**	P	**P**	**07 39 21.0**	**-0.1**
	1.0nm,0.8s,mb3.4,baz=117,slow=8.5,SNR=5.9						
ARCES	**ARCESS Array B**	**41.14**	**337**	P	**P**	**07 39 51.4**	**+0.7**
	2.8nm,0.8s,mb3.7,baz=106,slow=8.8,SNR=8.1						
NOA	**NORSAR Array B**	**44.45**	**323**	P	**P**	**07 40 17.1**	**-0.2**
	1.4nm,0.8s,mb3.4,baz=67,slow=19,SNR=3.4						
INK	**Inuvik**	**73.75**	**9**	P	**P**	**07 43 38.2**	**+0.1**
	2.4nm,1.3s,mb3.7,baz=331,slow=7.2,SNR=5.0						
YKA	**Yellowknife Ar**	**81.12**	**3**	P	**P**	**07 44 19.0**	**+0.4**
	0.4nm,0.5s,mb3.3,baz=350,slow=5.4,SNR=23						
WRA	**Warramunga Arr**	**81.82**	**122**	P	**P**	**07 44 22.5**	**-0.5**
	0.3nm,0.8s,mb3.0,baz=315,slow=4.7,SNR=2.9						

IDC 18 07:36:12.2±3.2, 2.54S×140.77E, mb3.9/2, mb1 4.1/3, mb1mx3.9/12, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=132.5km s-min=29.6km az=91.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.40**	**200**	P	P	07 40 27.7	-2.9
	0.6nm,0.3s,baz=21,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**22.03**	**197**	P	P	07 41 08.0	-2.2
	1.2nm,0.6s,baz=29,slow=10,SNR=5.2						
BVAR	**Borovoye Array**	**80.36**	**325**	P	P	07 48 25.4	-1.4
	1.4nm,0.5s,baz=115,slow=7.2,SNR=14						
DBIC	**Dimbokro**	**145.50**	**278**	PKPbc	PKPbc	07 55 53.5	-0.5
	2.1nm,0.6s,baz=128,slow=3.7,SNR=6.0						

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*NEIC **18** 07:40:01.9, 17.08N×94.95W, h128^{km}, mb4.3/9, MD4.4(MEX), After MEX.*

*MEX **18** 07:40:02.4±1.5, 17.07N×94.94W, h124^{km}±14^{km}, MD4.4*

*IDC **18** 07:40:03.3±1.2, 17.31N×94.47W, h128^{km}±9^{km}, mb3.6/8, mb1 3.7/10, mb1mx3.5/22, mbtmp4.0/10, MS3.8/1, Ms1 3.9/1, ms1mx2.6/17, Error ellipse: s-maj=34.2km s-min=14.9km az=57.0*

ISC 18 07:39:59.9±0.3, 17.09N±0.04×94.94W±0.02, h129^{km}±4^{km}, n59, σ1^{s}23/81, mb3.9/9, 7C-3D, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**1.06**	**28**	⇓*i*P	**P**	**07 40 24.4**	**+0.9**
TUIG				*i* S	**S**	**07 40 41.4**	**0.0**
EVV	**El Vigia**	**1.41**	**344**	*e*P	**P**	**07 40 28.0**	**+0.7**
EVV				*i* S	**S**	**07 40 47.5**	**-0.8**
OXX	**Oaxaca**	**1.71**	**270**	*i* P	**P**	**07 40 32.5**	**+1.8**
OXX				*i* S	**S**	**07 40 56.0**	**+1.9**
OXX	**Oaxaca**	**1.71**	**270**	*i* P	**P**	**07 40 32.0**	**+1.3**
OXX				*i* S	**S**	**07 40 54.0**	**-0.1**
VHO	**Vista Hermosa**	**1.71**	**270**	*i* P	**P**	**07 40 32.6**	**+1.8**
VHO				*i* S	**S**	**07 40 55.9**	**+1.5**
VHO	**Vista Hermosa**	**1.71**	**270**	⇑*i*P	**P**	**07 40 32.1**	**+1.3**
VHO				*i* S	**S**	**07 40 55.1**	**+0.7**
HUIG	**Huatulco**	**1.73**	**221**	⇑*i*P	**P**	**07 40 29.6**	**-1.3**
HUIG				*i* S	**S**	**07 40 52.8**	**-1.9**
HUIG	**Huatulco**	**1.73**	**221**	⇑*i*P	**P**	**07 40 29.6**	**-1.3**
HUIG				*i* S	**S**	**07 40 53.1**	**-1.5**
SCX	**San Cristobal**	**2.24**	**99**	*i* P	**P**	**07 40 38.0**	**+0.7**
SCX				*i* S	**S**	**07 41 06.5**	**+0.8**
SCX	**San Cristobal**	**2.24**	**99**	*i* P	**P**	**07 40 38.0**	**+0.7**
SCX				*i* S	**S**	**07 41 06.0**	**+0.3**
CCIG	**Comitan**	**2.81**	**106**	⇑*i*P	**P**	**07 40 45.6**	**+0.9**
CCIG				*i* S	**S**	**07 41 17.2**	**-1.6**
CCIG	**Comitan**	**2.81**	**106**	⇑*i*P	**P**	**07 40 45.6**	**+0.9**
CCIG				*i* S	**S**	**07 41 18.3**	**-0.5**
LVIG	**Laguna Verde**	**2.97**	**332**	⇓*i*P	**P**	**07 40 46.0**	**-0.9**
LVIG				*i* S	**S**	**07 41 19.4**	**-3.2**
LVIG	**Laguna Verde**	**2.97**	**332**	⇓*i*P	**P**	**07 40 46.1**	**-0.8**
LVIG				*i* S	**S**	**07 41 19.2**	**-3.4**
IISM	**Ciudad Serdan**	**2.99**	**309**	*i* P	**P**	**07 40 48.5**	**+1.4**
IISM				*i* S	**S**	**07 41 22.0**	**-1.1**
PNIG	**Pinotepa**	**3.13**	**258**	*i* P	**P**	**07 40 48.1**	**-0.9**
PNIG				*i* S	**S**	**07 41 25.7**	**-0.8**
IIB	**San Bernardino**	**3.73**	**300**	*e*P	**P**	**07 41 00.0**	**+2.9**
IIB				*i* S	**S**	**07 41 39.5**	**-1.3**
PPM	**Popocatepetl**	**4.02**	**300**	*e*P	**P**	**07 41 05.0**	**+4.2**
PPM				*i* S	**S**	**07 41 46.0**	**-1.6**
YAIG	**Yautepec**	**4.30**	**295**	*i* P	**P**	**07 41 06.5**	**+1.9**
YAIG				*i* S	**S**	**07 41 56.0**	**+1.6**
YAIG	**Yautepec**	**4.30**	**295**	*i* P	**P**	**07 41 05.5**	**+0.9**
YAIG				*i* S	**S**	**07 41 53.3**	**-1.1**
PLIG	**Platanillo**	**4.54**	**287**	*i* P	**P**	**07 41 09.4**	**+1.6**
PLIG				*i* S	**S**	**07 41 59.1**	**-0.8**
UNM	**Universidad Na**	**4.60**	**300**	*e*P	**P**	**07 41 10.0**	**+1.3**
ACX	**Acapulco**	**4.77**	**268**	*i* P	**P**	**07 41 09.5**	**-1.4**
ACX				*i* S	**S**	**07 42 03.0**	**-2.5**
CAIG	**El Cayaco**	**5.09**	**270**	⇑*i*P	**P**	**07 41 15.2**	**-0.1**
CAIG	**El Cayaco**	**5.09**	**270**	⇑*i*P	**P**	**07 41 15.3**	**0.0**
CAIG				*i* S	**S**	**07 42 14.6**	**+1.2**
ZIIG	**Zihuatanejo**	**6.25**	**276**	*i* P	**P**	**07 41 31.8**	**+1.0**
ZIIG				*i* S	**S**	**07 42 42.0**	**+0.5**
ZIIG	**Zihuatanejo**	**6.25**	**276**	*i* P	**P**	**07 41 31.8**	**+1.0**
ZIIG				*i* S	**S**	**07 42 40.1**	**-1.4**
MOIG	**Morelia**	**6.46**	**294**	*e*P	**P**	**07 41 34.2**	**+0.4**
MOIG				*i* S	**S**	**07 42 46.6**	**-0.1**
TEIG	**Tepich**	**7.04**	**63**	*e*Pn	**P**	**07 41 39.7**	**-2.0**
	73nm,0.5s						
TEIG				*e*Sn	**S**	**07 42 52.8**	**-7.9**
JTS	**JuntasAbangare**	**11.82**	**124**	P	**P**	**07 42 46.3**	**+1.0**
	1.9nm,0.3s,baz=318,slow=19,SNR=9.8						
JTS				S	**S**	**07 44 53.0**	**-2.1**
	0.2nm,0.3s,baz=248,slow=23,SNR=2.1						
HKT	**Hockley**	**12.82**	**357**	*e*Pn	**P**	**07 43 07.3**	**+8.9**
	4.1nm,0.9s						
JCT	**Junction City**	**14.05**	**342**	*e*P	**P**	**07 43 17.6**	**+3.5**
	5.0nm,0.6s						
TXAR	**Lajitas Array**	**14.58**	**328**	P	**P**	**07 43 25.0**	**+4.0**
	0.2nm,0.3s,baz=146,slow=12,SNR=10						
LRAL	**Lakeview Retre**	**17.42**	**23**	*e*P	**P**	**07 43 56.2**	**0.0**
	21nm,0.6s						
UALR	**University of**	**17.76**	**7**	*e*P	**P**	**07 44 01.0**	**+0.6**
	21nm,0.6s						
WMOK	**Wichita Mounta**	**17.91**	**350**	*e*P	**P**	**07 44 02.4**	**+0.3**
	4.7nm,0.8s						
AMTX	**Amarillo**	**18.71**	**342**	*e*P	**P**	**07 44 11.5**	**+0.6**
	11nm,0.5s						
WVT	**Waverly**	**19.98**	**17**	*e*P	**P**	**07 44 23.4**	**-0.8**
	4.9nm,0.5s						
ANMO	**Albuquerque**	**20.55**	**332**	P	**P**	**07 44 34.2**	**+4.3**
	1.9nm,0.5s,baz=141,slow=11,SNR=11						
ANMO				pP		07 44 56.5	
	1.4nm,0.7s,baz=164,slow=11,SNR=3.3						
ANMO	**Albuquerque**	**20.55**	**332**	*e*P	**P**	**07 44 34.9**	**+5.0**
ANMO				pP		07 44 56.5	
CCM	**Cathedral Cave**	**21.14**	**8**	*e*P	**P**	**07 44 35.5**	**-0.3**
	7.8nm,0.5s,mb4.3						
WCI	**Wyandotte Cave**	**22.38**	**18**	*e*P	**P**	**07 44 47.8**	**-0.2**
	20nm,0.6s,mb4.7						
PV10	**Paradox Valley**	**24.54**	**333**	*e*P	**P**	**07 45 13.6**	**+4.8**
PDAR	**Pinedale Array**	**28.46**	**337**	pP	pP	07 46 14.4	+2.0
	1.1nm,0.9s,baz=144,slow=7.8,SNR=7.4						
NVAR	**Mina Array Bea**	**29.50**	**321**	pP	pP	07 46 25.7	+3.8
	1.0nm,0.7s,baz=132,slow=9.2,SNR=4.3						
NVAR				sP	sP	07 46 39.5	+2.7
	1.5nm,0.9s,baz=136,slow=8.4,SNR=4.3						
SADO	**Sadowa**	**30.62**	**22**	P	**P**	**07 46 01.2**	**-2.7**
	5.5nm,0.9s,mb4.3,baz=260,slow=14,SNR=4.7						
ULM	**Lac du Bonnet**	**33.08**	**359**	P	**P**	**07 46 24.4**	**-0.8**
	2.6nm,0.8s,mb4.0,baz=175,slow=12,SNR=4.9						
ULM	**Lac du Bonnet**	**33.08**	**359**	P	**P**	**07 46 24.4**	**-0.8**
SCHQ	**Schefferville**	**43.42**	**23**	P	**P**	**07 47 49.2**	**-2.0**
	1.9nm,0.9s,mb3.7,baz=233,slow=14,SNR=3.4						
LVC	**Limon Verde**	**46.97**	**146**	P	**P**	**07 48 21.2**	**+1.4**
	0.9nm,0.7s,mb3.5,baz=299,slow=7.8,SNR=5.5						
LVC	**Limon Verde**	**46.97**	**146**	P	**P**	**07 48 21.2**	**+1.4**
YKA	**Yellowknife Ar**	**47.40**	**348**	P	**P**	**07 48 23.3**	**+0.7**
	0.3nm,0.4s,mb3.2,baz=153,slow=7.3,SNR=15						
YKA				pP	pP	07 48 52.4	0.0
	3.6nm,1.1s,baz=151,slow=7.6,SNR=8.3						
YKA	**Yellowknife Ar**	**47.40**	**348**	P	**P**	**07 48 23.3**	**+0.7**
YKA				pP	pP	07 48 52.4	0.0
DLBC	**Dease Lake**	**48.69**	**336**	pP	pP	07 49 04.7	+2.0
	7.4nm,1.4s,baz=133,slow=4.2,SNR=3.6						
INK	**Inuvik**	**56.69**	**344**	P	**P**	**07 49 32.4**	**+0.6**
	3.3nm,1.2s,mb4.0,baz=263,slow=6.7,SNR=5.7						
INK				pP	pP	07 50 02.2	-0.4
	2.2nm,0.7s,baz=146,slow=8.4,SNR=4.7						
ILAR	**Eielson Array**	**58.90**	**337**	pP	pP	07 50 18.4	+0.1
	0.7nm,0.8s,baz=113,slow=8.0,SNR=7.3						
ILAR				LR	LR	08 19 23.7	
	comp=Z,78nm,21.6s,baz=172,slow=40						
ESDC	**Sonseca Array**	**80.03**	**52**	P	**P**	**07 51 57.2**	**+0.6**
	1.0nm,0.6s,mb3.6,baz=300,slow=4.9,SNR=9.0						
WRA	**Warramunga Arr**	**133.31**	**259**	PKP	PKPdf	07 59 04.0	+2.6
	0.4nm,0.5s,baz=85,slow=2.4,SNR=11						
ASAR	**Alice Springs**	**133.92**	**253**	PKP	PKPdf	07 59 05.2	+2.8
	0.2nm,0.6s,baz=68,slow=2.3,SNR=4.9						

IDC 18 07:46:22.3±3.4, 4.92N×76.19W, h146^{km}±57^{km}, mb3.2/3, mb1 3.6/4, mb1mx3.1/20, mbtmp3.6/4, Error ellipse: s-maj=81.0km s-min=32.2km az=128.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**1.85**	**92**	P	P	07 46 54.1	-1.6
	17nm,0.3s,baz=271,slow=0.5,SNR=75						
ROSC				S	S	07 47 22.5	+1.0
	12nm,0.3s,baz=90,slow=20,SNR=6.3						
SDV	**Santo Domingo**	**6.77**	**54**	P	P	07 47 59.5	-0.8
	0.9nm,0.3s,baz=291,slow=18,SNR=20						
SDV				S	S	07 49 15.8	-0.7
	2.1nm,0.3s,baz=265,slow=21,SNR=7.5						
NVAR	**Mina Array Bea**	**50.71**	**317**	P	P	07 55 08.4	-0.8
	0.5nm,0.8s,baz=127,slow=7.7,SNR=4.6						
YKA	**Yellowknife Ar**	**64.03**	**341**	P	P	07 56 39.5	-2.9
	0.9nm,0.8s,baz=134,slow=6.3,SNR=19						
ILAR	**Eielson Array**	**77.40**	**336**	P	P	07 58 01.4	-1.1
	0.3nm,0.6s,baz=118,slow=4.5,SNR=7.3						

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*NIED **18** 08:10:00, 38.90N×139.60E, h170^{km}, Mw3.8 Best double couple: M$_0$6×10^{14} NP1:ϕ$_s$357°,δ69°,λ-79°. NP2:ϕ$_s$148°, δ23°,λ-117°.*

*IDC **18** 08:10:07.3±3.3, 38.80N×139.53E, h151^{km}±30^{km}, mb3.5/10, mb1 3.6/11, mb1mx3.4/24, mbtmp3.9/11, Error ellipse: s-maj=24.2km s-min=16.6km az=87.0*

*JMA **18** 08:10:09.9±0.1, 38.85N×139.62E, h168^{km}±1^{km}, M3.6*

*NEIC **18** 08:10:10.3±1.0, 38.80N×139.50E, h181^{km}±12^{km}, mb3.9/2, Error ellipse: s-maj=17.7km s-min=15.3km az=61.0*

ISC 18 08:10:08.2±0.4, 38.87N±0.06×139.59E±0.09, h177^{km}±3^{km}, n29, σ0^{s}62/37, mb3.7/13, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYA	**Atsumi**	**0.30**	**160**	P	**P**	**08 10 32.7**	**+0.3**
JTB	**Tobi-shima**	**0.32**	**356**	P	**P**	**08 10 33.0**	**+0.6**
JTB				S	**S**	**08 10 50.5**	**-0.5**
JAW	**Awa shima**	**0.49**	**212**	P	**P**	**08 10 33.2**	**+0.2**
JYK	**Kaneyama**	**0.60**	**86**	P	**P**	**08 10 33.8**	**+0.3**
JYK				S	**S**	**08 10 52.0**	**-1.0**
JYS	**Shirataka**	**0.75**	**150**	P	**P**	**08 10 34.8**	**+0.5**
JOU	**Okura**	**0.99**	**121**	P	**P**	**08 10 36.3**	**+0.6**
JNS	**Sasagawa**	**1.07**	**191**	P	**P**	**08 10 36.9**	**+0.5**
JNS				*e*S	**S**	**08 10 57.3**	**-0.9**
JMK	**Ichinoseki**	**1.28**	**86**	P	**P**	**08 10 38.3**	**+0.1**
JSD	**Sado**	**1.33**	**232**	P	**P**	**08 10 39.4**	**+0.6**
JSD				S	**S**	**08 11 01.1**	**-1.2**
JMM	**Marumori**	**1.38**	**136**	P	**P**	**08 10 39.1**	**-0.1**
JOM	**Ohasama**	**1.46**	**65**	P	**P**	**08 10 40.4**	**+0.5**
JOM				*e*S	**S**	**08 11 04.0**	**-0.3**
JANG	**Nango**	**2.11**	**44**	P	**P**	**08 10 47.3**	**+0.6**
MAJO	**Matsushiro**	**2.57**	**206**	*e*Pn	**P**	**08 10 52.7**	**+0.5**
MAT	**Matsushiro**	**2.57**	**206**	*e*P	**P**	**08 10 53.0**	**+0.9**
MAT				*e*S	**S**	**08 11 26.0**	**+0.1**
MAT	**Matsushiro**	**2.57**	**206**	P	**P**	**08 10 52.8**	**+0.7**
MAT				S	**S**	**08 11 26.4**	**+0.5**
ASAJ	**Asahikawa**	**5.70**	**22**	P	**P**	**08 11 30.8**	**-1.4**
	7.1nm,0.3s,baz=246,slow=11,SNR=24						
ASAJ				S	**S**	**08 12 31.4**	**-5.8**
	0.6nm,0.3s,baz=230,slow=31,SNR=1.5						
SONM	**Songino Array**	**25.58**	**301**	P	**P**	**08 15 22.7**	**+0.4**
	0.6nm,0.6s,mb3.4,baz=101,slow=9.4,SNR=6.9						
KURK	**Kurchatov**	**43.67**	**306**	*e*P	**P**	**08 17 56.6**	**0.0**
	2.5nm,0.4s,mb4.2						
BVAR	**Borovoye Array**	**48.27**	**311**	P	**P**	**08 18 33.0**	**+0.2**
	1.0nm,0.5s,mb3.7,baz=63,slow=9.9,SNR=5.8						
INK	**Inuvik**	**53.42**	**28**	P	**P**	**08 19 11.9**	**+0.6**
	0.6nm,0.5s,mb3.5,baz=316,slow=12,SNR=9.4						
WRA	**Warramunga Arr**	**58.71**	**186**	P	**P**	**08 19 48.5**	**-1.1**
	0.4nm,0.3s,mb3.7,baz=346,slow=7.9,SNR=5.7						
ARCES	**ARCESS Array B**	**61.77**	**339**	P	**P**	**08 20 09.5**	**-0.2**
	1.2nm,0.6s,mb3.9,baz=67,slow=9.2,SNR=7.0						
ASAR	**Alice Springs**	**62.44**	**186**	P	**P**	**08 20 13.7**	**-1.1**
	0.3nm,0.4s,mb3.5,baz=2.7,slow=7.7,SNR=6.6						
YKA	**Yellowknife Ar**	**62.95**	**30**	P	**P**	**08 20 17.5**	**0.0**
	0.2nm,0.6s,mb3.1,baz=305,slow=6.8,SNR=7.2						
JOF	**Joensuu**	**63.66**	**331**	*e*p	**P**	**08 20 17.9**	**-4.2**
	0.4nm,0.3s,mb3.7						
KAF	**Kangasniemi**	**66.01**	**332**	*e*p	**P**	**08 20 36.9**	**-0.4**
	0.3nm,0.3s,mb3.6						
FINES	**FINESS Array B**	**66.51**	**331**	P	**P**	**08 20 40.4**	**-0.1**
	2.1nm,0.8s,mb4.0,baz=32,slow=8.3,SNR=7.2						
NOA	**NORSAR Array B**	**71.93**	**336**	P	**P**	**08 21 14.0**	**+0.6**
	0.6nm,0.5s,mb3.6,baz=45,slow=4.7,SNR=3.4						
AKASG	**Malin Array Be**	**71.96**	**321**	P	**P**	**08 21 13.7**	**-0.1**
	0.7nm,0.3s,mb3.8,baz=45,slow=6.1,SNR=9.5						

IDC 18 08:15:44.3±2.1, 4.37S×149.43E, h542^{km}±29^{km}, mb2.6/4,

mb1 2.9/6, mb1mx2.8/15, mbtmp3.6/6, Error ellipse: s-maj=95.4km s-min=24.9km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.49	204	P	P	08 17 18.6	0.0
	3.0nm,0.3s,baz=6.3,slow=9.2,SNR=10						
PMG				S	S	08 18 34.4	+0.9
	0.2nm,0.3s,baz=26,slow=17,SNR=3.7						
CTA	Charters Tower	15.93	191	P	P	08 19 02.1	-0.7
	0.3nm,0.3s,baz=358,slow=14,SNR=3.8						
WRA	Warramunga Arr	21.35	222	P	P	08 19 53.5	-0.7
	0.3nm,0.5s,baz=45,slow=9.4,SNR=2.8						
ASAR	Alice Springs	24.34	217	P	P	08 20 19.4	-1.9
	0.3nm,0.6s,baz=41,slow=8.3,SNR=5.4						
ILAR	Eielson Array	83.04	23	P	P	08 27 12.1	-1.5
	0.3nm,0.6s,baz=249,slow=4.6,SNR=6.3						
INK	Inuvik	89.26	21	P	P	08 27 42.5	-0.6
	1.0nm,1.1s,baz=244,slow=7.4,SNR=2.2						

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*IDC **18** 08:27:27.8±1.0, 7.47S×129.85E, mb4.1/5, mb1 4.4/7, mb1mx4.3/13, mbtmp4.2/7, ML4.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.7/13, Error ellipse: s-maj=95.1km s-min=19.7km az=64.0*

*NEIC **18** 08:27:30.2±0.5, 7.52S×129.88E, h20^{km}, mb4.2/3, Error ellipse: s-maj=18.9km s-min=7.3km az=73.0*

ISC 18 08:27:30.3±0.6**, 7.80S**±0.06×**129.4E**±0.1**, h33^{km}, n19, $\sigma 1^{s}41$**/24**, mb4.0**/6**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	5.70	149	eP	P	08 28 58.3	+3.5
	37nm,0.2s						
KAKA				eS	S	08 30 00.6	+0.5
FITZ	Fitzroy Crossi	10.89	199	⇑iP	P	08 30 11.3	+4.4
FITZ				eS	S	08 32 09.2	+0.6
WRAB	Tennant Creek	12.97	159	ePn	P	08 30 34.4	-0.5
	38nm,0.8s						
WRAB				eSn	S	08 32 48.2	-11
WRA	Warramunga Arr	12.97	159	Pn	P	08 30 34.8	-0.2
	7.6nm,0.3s,baz=334,slow=14,SNR=93						
WRA				Sn	S	08 32 51.3	-7.7
	4.0nm,0.3s,baz=339,slow=22,SNR=9.0						
WB2	Warramunga Arr	12.97	159	eP	P	08 30 34.5	-0.6
WB2				eS	S	08 32 53.0	-6.2
MBWA	Marble Bar	16.26	214	eP	P	08 31 23.4	+5.6
	8.0nm,0.4s						
ASPA	Alice Springs	16.35	165	eP	P	08 31 20.0	+1.0
ASPA				eS	S	08 34 16.5	-2.2
ASAR	Alice Springs	16.35	165	Pn	P	08 31 20.6	+1.7
	2.4nm,0.3s,baz=342,slow=9.2,SNR=83						
ASAR				Sn	S	08 34 14.9	-3.8
	1.2nm,0.3s,baz=349,slow=23,SNR=5.9						
ASAR				LR	LR	08 37 49.2	
	comp=Z,44nm,19.3s,baz=45,slow=38						
CTA	Charters Tower	20.36	129	P	P	08 32 08.1	+1.3
	5.5nm,1.0s,baz=313,slow=14,SNR=3.8						
CTA	Charters Tower	20.36	129	P	P	08 32 08.1	+1.3
STKA	Stephens Creek	26.50	156	P	P	08 33 08.8	+2.1
	1.8nm,0.4s,mb4.0,baz=330,slow=8.1,SNR=7.0						
CMAR	Chiang Mai Arr	39.83	311	P	P	08 35 04.2	+1.9
	0.8nm,0.4s,mb3.8,baz=145,slow=8.1,SNR=5.3						
SONM	Songino Array	59.02	342	P	P	08 37 28.4	-0.9
	0.5nm,0.4s,mb3.9,baz=162,slow=7.1,SNR=11						
ZAL	Zalesovo	72.05	334	P	P	08 38 52.0	-0.8
	1.8nm,0.4s,mb4.3,baz=334,slow=8.0,SNR=4.4						
ZAL	Zalesovo	72.05	334	P	P	08 38 52.0	-0.8
KURK	Kurchatov	72.91	329	eP	P	08 38 57.0	-1.0
	2.2nm,0.6s,mb4.3						
CHKZ	Chkalovo	78.65	329	eP	P	08 39 29.4	-1.1
	0.6nm,0.3s,mb4.0						
LVC	Limon Verde	144.84	150	PKP	PKPdf	08 47 08.1	+3.4
	2.4nm,0.4s,baz=191,slow=1.6,SNR=7.4						
LPAZ	La Paz	150.42	144	PKPbc	PKPdf	08 47 23.0	+9.0
	1.5nm,0.4s,baz=358,slow=3.1,SNR=16						

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*IDC **18** 08:37:58.8±1.6, 3.81S×137.17E, mb3.9/3, mb1 4.2/5, mb1mx4.1/11, mbtmp3.9/5, ML3.8/2, MS3.6/1, Ms1 3.6/1, ms1mx3.0/12, Error ellipse: s-maj=85.9km s-min=31.8km az=89.0*

*NEIC **18** 08:37:59.5±1.1, 4.10S×136.69E, h10^{km}, Error ellipse: s-maj=54.5km s-min=12.6km az=95.0*

ISC 18 08:38:00.8±2.8**, 4.13S**±0.07×**135.5E**±0.3**, h6^{km}**±19^{km}**, n9, $\sigma 1^{s}21$**/13**, mb3.9**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	9.03	199	eP	P	08 40 15.5	+0.7
	11nm,0.3s						
KAKA				eS	Sn	08 41 57.8	-0.2
WRAB	Tennant Creek	15.75	184	eP	P	08 41 45.0	-0.1
WB2	Warramunga Arr	15.76	184	eP	P	08 41 44.2	-1.0
WB2				i		08 41 51.9	
WB2				eS	S	08 44 38.9	-1.7
WRA	Warramunga Arr	15.76	184	Pn	P	08 41 43.4	-1.9
	0.3nm,0.3s,baz=4.8,slow=13,SNR=6.0						
WRA				Sn	S	08 44 32.0	-8.6
	0.2nm,0.3s,baz=4.1,slow=22,SNR=4.7						
ASAR	Alice Springs	19.48	184	P	P	08 42 33.1	+1.6
	1.1nm,0.3s,baz=7.8,slow=11,SNR=88						
ASAR				S	S	08 46 07.5	+1.8
	0.1nm,0.3s,baz=3.7,slow=28,SNR=3.1						
ASAR				LR	LR	08 50 36.3	
	comp=Z,170nm,18.4s,baz=14,slow=38						
ASPA	Alice Springs	19.48	184	eP	P	08 42 33.0	+1.5
SONM	Songino Array	57.68	337	P	P	08 47 53.9	-0.7
	0.3nm,0.5s,mb3.6,baz=148,slow=7.4,SNR=3.7						
ZAL	Zalesovo	71.56	331	P	P	08 49 25.1	+0.3
	1.2nm,0.3s,mb4.3,baz=66,slow=7.6,SNR=4.5						
ILAR	Eielson Array	88.47	25	P	P	08 50 48.0	-7.2
	0.7nm,1.0s,mb3.9,baz=252,slow=4.7,SNR=5.6						

IDC 18 08:45:55.4±22.0**, 7.46S**×**75.12W, h538^{km}**±317^{km}**, mb3.1**/2**, mb1 3.0**/3**, mb1mx2.6**/19**, mbtmp3.8**/3**, Error ellipse: s-maj=617.2km s-min=30.4km az=84.0, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	11.12	143	P	P	08 48 25.4	-0.2
	0.1nm,0.3s,baz=314,slow=12,SNR=3.4						
USHA	Ushuaia	47.55	175	P	P	08 53 41.8	-1.7
	9.1nm,0.8s,baz=334,slow=9.9,SNR=2.9						
YKA	Yellowknife Ar	76.05	342	P	P	08 56 47.3	-1.1
	0.1nm,0.7s,baz=136,slow=5.6,SNR=4.4						
ASAR	Alice Springs	138.04	222	PKP	PKPdf	09 04 18.9	-0.7
	0.6nm,0.7s,baz=130,slow=1.7,SNR=5.7						
WRA	Warramunga Arr	140.23	226	PKP	PKPdf	09 04 22.7	-0.9
	0.3nm,0.5s,baz=120,slow=2.2,SNR=6.1						

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*NEIC **18** 08:49:31.4±1.8, 51.51N×16.12E, h5^{km}, ML2.5(SZGRF), Error ellipse: s-maj=19.9km s-min=6.5km az=203.0*

*WAR **18** 08:49:32.2, 51.50N×16.10E, h1^{km}, ML2.7, Mining Induced*

*PRU **18** 08:49:32.6, 51.45N×16.11E*

*CSEM **18** 08:49:32.8±0.3, 51.45N×16.11E, h0^{km}±1^{km}, ML3.2/2, Error ellipse: s-maj=6.6km s-min=2.1km az=4.0*

ISC 18 08:49:30.1±0.9**, 51.48N**±0.05×**16.10E**±0.04**, n16, $\sigma 1^{s}13$**/32**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	169	ePG	Pg	08 49 44.0	+1.0
KSP				eSG	Sg	08 49 53.0	+1.3
UPC	Upice	0.97	183	ePG	Pg	08 49 50.5	+0.9
DPC	Dobruska-Polom	1.14	173	ePG	Pg	08 49 53.3	+0.5
DPC				eSG	Sg	08 50 08.0	0.0
	15nm,0.3s						
PVCC	Panska Ves	1.36	226	ePG	Pg	08 49 57.8	+0.6
BRG	Berggiesshubel	1.49	247	i Pg	Pg	08 50 00.1	+0.3
BRG				i Sg	Sg	08 50 20.2	+0.5
PRU	Pruhonice	1.79	214	ePN	Pn	08 50 04.1	+1.6
PRU				ePG	Pg	08 50 06.0	+0.1
PRU				eSG	Sg	08 50 29.8	0.0
PRU	Pruhonice	1.79	214	Pg	Pg	08 50 06.0	+0.1
PRU				Sg	Sg	08 50 29.8	0.0
MORC	Moravsky Berou	1.94	151	ePn	Pn	08 50 04.9	+0.3
MORC				eSn	Sn	08 50 30.7	+0.7
MORC	Moravsky Berou	1.94	151	ePn	Pn	08 50 04.9	+0.3
MORC				eSn	Sn	08 50 30.7	+0.7
CLL	Collm	1.95	266	ePG	Pg	08 50 08.0	-1.0
CLL				i SG	Sg	08 50 34.6	-0.4
OKC	Ostrava-Krasne	2.10	141	ePG	Pg	08 50 11.9	-0.1
OKC				eSG	Sg	08 50 37.8	-2.1
NKC	Novy Kostel	2.63	243	ePN	Pn	08 50 16.0	+1.5
NKC				ePG	Pg	08 50 21.7	-0.9
NKC				eSG	Sg	08 50 55.9	-1.8
	13nm,0.2s						
OJC	Ojcow	2.66	117	ePG	Pg	08 50 23.0	-0.2
OJC				eSG	Sg	08 50 56.0	-2.7
KHC	Kasperske Hory	2.85	216	ePN	Pn	08 50 18.2	+0.5
KHC				ePG	Pg	08 50 24.1	-3.0
KHC				ex	x	08 50 51.0	
KHC				eSG	Sg	08 51 02.2	-2.9
KHC	Kasperske Hory	2.85	216	Pg	Pg	08 50 24.1	-3.0
KHC				Sg	Sg	08 51 02.2	-2.9
GEC2	GERESS Array S	3.06	211	ePn	Pn	08 50 21.3	+0.7

IDC 18 09:08:27.1±4.1**, 23.59S**×**177.26W, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.7**/14**, mbtmp3.5**/3**, Error ellipse: s-maj=403.7km s-min=36.5km az=163.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.56	260	P	P	09 16 42.4	-0.4
	0.6nm,0.8s,baz=102,slow=8.3,SNR=5.4						
WRA	Warramunga Arr	44.94	265	P	P	09 16 42.8	-3.0
	0.5nm,0.8s,baz=106,slow=7.6,SNR=3.2						
TXAR	Lajitas Array	88.14	57	P	P	09 21 20.2	-1.2
	0.1nm,0.4s,baz=207,slow=6.0,SNR=3.6						

IDC 18 09:19:23.4±1.9**, 1.33S**×**149.05E, mb3.9**/3**, mb1 4.1**/4**, mb1mx3.9**/14**, mbtmp3.9**/4**, ML3.7**/1**, Error ellipse: s-maj=110.2km s-min=31.4km az=118.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	18.84	188	P	P	09 23 45.3	-2.0
	0.2nm,0.3s,baz=14,slow=12,SNR=3.6						
WB2	Warramunga Arr	23.43	217	eP	P	09 24 34.4	-0.9
WRA	Warramunga Arr	23.43	217	P	P	09 24 34.7	-0.7
	2.5nm,0.6s,baz=41,slow=10,SNR=18						
ASAR	Alice Springs	26.62	212	P	P	09 25 03.6	-2.0
	2.2nm,0.6s,baz=44,slow=8.0,SNR=21						
YKA	Yellowknife Ar	94.11	28	P	P	09 32 43.6	-1.3
	0.1nm,0.5s,baz=270,slow=5.2,SNR=4.3						

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*IDC **18** 09:55:16.2±2.6, 5.03N×93.74E, h36^{km}±8^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.6/5, ML4.2/1, Error ellipse: s-maj=92.0km s-min=19.4km az=66.0*

*NEIC **18** 09:55:17.9±1.2, 5.16N×93.88E, mb4.0/3, Error ellipse: s-maj=37.1km s-min=12.3km az=68.0*

ISC 18 09:55:14.6±1.4**, 5.1N**±0.1×**93.8E**±0.3**, h36^{km}, (h38^{km}**±3.9^{km}**:pP-P), n8, $\sigma 0^{s}63$**/8**, mb3.8**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.20	20	Pn	P	09 58 35.0	-0.4
	0.4nm,0.3s,baz=218,slow=14,SNR=8.7						
LSA	Lhasa	24.59	354	eP	P	10 00 33.1	+0.2
	3.8nm,0.7s,mb4.0						
LSA				epP		10 00 45.6	
SONM	Songino Array	43.93	12	P	P	10 03 21.1	+1.3
	0.3nm,0.6s,mb3.2,baz=198,slow=8.3,SNR=4.4						
SONM				pP	pP	10 03 30.2	0.0
	1.1nm,0.6s,baz=192,slow=7.9,SNR=10						
WRA	Warramunga Arr	46.99	123	P	P	10 03 43.9	-0.6
	1.3nm,0.6s,mb4.0,baz=302,slow=9.2,SNR=17						
WRAB	Tennant Creek	46.99	123	eP	P	10 03 44.8	+0.3
	1.6nm,0.5s,mb4.2						
WRAB				epP	pP	10 03 57.2	+2.3
ASAR	Alice Springs	48.45	128	P	P	10 03 56.0	+0.1
	0.5nm,0.8s,mb3.6,baz=297,slow=8.1,SNR=4.8						
ASAR				pP	pP	10 04 05.7	-0.6
	0.9nm,0.9s,baz=303,slow=7.9,SNR=4.9						
ZAL	Zalesovo	49.24	353	P	P	10 04 00.6	-0.9
	0.8nm,0.7s,mb3.9,baz=308,slow=8.7,SNR=3.6						
ZAL				pP	pP	10 04 13.0	+1.0
	1.5nm,0.5s,baz=336,slow=6.3,SNR=4.4						
CHKZ	Chkalovo	51.99	343	eP	P	10 04 22.5	0.0
	0.7nm,0.8s,mb3.6						

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*MOS **18** 10:06:14.8±0.9, 51.22N×178.83W, h33^{km}, mb5.2/89, Error ellipse: s-maj=7.5km s-min=4.8km az=90.0*

*IDC **18** 10:06:16.2±3.0, 51.25N×178.92W, h32^{km}±21^{km}, mb4.4/32, mb1 4.6/33, mb1mx4.6/35, mbtmp4.6/33, ML4.1/1, MS4.2/14, Ms1 4.2/14, ms1mx4.0/32, Error ellipse: s-maj=16.8km s-min=10.5km az=176.0*

*BJI **18** 10:06:17.6, 51.20N×178.90W, h43^{km}, mB5.2, mb4.9, Ms4.7, Msz4.4*

*HRVD **18** 10:06:17.6±0.6, 51.10N×178.67W, h33^{km}±1^{km}, MW5.0/44, Centroid moment Tensor Solution. LP body waves: s34,c49;Mantle waves: s44,c65; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.70±.19; $M_{\theta\theta}$-2.48±.14; $M_{\phi\phi}$-0.21±.13; $M_{r\theta}$2.24±.20; $M_{\theta\phi}$-1.01±.09; $M_{\phi r}$0.81±.16; Best double couple: $M_0$3.664×10^{16} NP1:ϕ_s248°,δ25°,λ89°. NP2:ϕ_s70°,δ65°,λ91°. Principal axes: T 3.582, Plg70°, Azm341°; N .17, Plg0°, Azm250°; P -3.746, Plg20°, Azm159°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 10:06:17.6±0.4, 51.24N×178.90W, h44^{km}±3^{km}, mb5.0/117, MS4.3/3, ML5.2(AEIC) Error ellipse: s-maj=5.3km s-min=2.4km az=187.0*

ISC 18 10:06:16.9±0.6**, 51.20N**±0.05×**178.87W**±0.03**, h52^{km}**±4^{km}**, h44^{km}**±4.5^{km}**:pP-P, n425, $\sigma 0^{s}98$**/440**, mb4.9**/162**, MS4.3**/29**, 40C-7D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	1.17	61	P	P	10 06 36.9	-0.3
KIWB	Kanaga Island	1.26	58	P	P	10 06 38.2	-0.4
KIKV	Kanaga Island	1.26	57	P	P	10 06 38.4	-0.2
KIKV				S	S	10 06 56.1	+1.4
ADAG	Mount Adagdak	1.62	60	P	P	10 06 43.6	0.0
ETKA	Kagalaska Isla	1.68	66	P	P	10 06 44.5	+0.1
ETKA				S	S	10 07 07.6	+2.8
GSTD	Great Sitkin T	1.90	62	P	P	10 06 48.2	+0.6
GSTD				S	S	10 07 11.7	+1.3
GSMY	Great Sitkin M	1.95	63	P	P	10 06 48.5	+0.3
GSTR	Great Sitkin T	1.97	62	P	P	10 06 49.1	+0.6
GSIG	Igitkin Island	2.00	66	P	P	10 06 49.5	+0.6
GSIG				S	S	10 07 14.0	+1.2
ATKA	Atka Island	3.08	69	P	P	10 07 04.0	-0.3
ATKA				S	S	10 07 40.6	+0.5
SMY	Shemya	4.61	292	eP	P	10 07 24.9	-1.0
SMY				eS	S	10 08 25.9	+7.2
SMY	Shemya	4.61	292	P	P	10 07 23.0	-2.8
FX1	Attu Island--F	5.20	292	P	P	10 07 33.5	-0.6
FX1						10 08 38.7	
FX1				pmax	pmax		
	comp=Z,23nm,0.3s						
FX1				MLR	MLR		
	comp=Z,119nm,20.1s						
FX1	Attu Island--F	5.20	292	Pn	P	10 07 33.5	-0.5
	comp=Z,22nm,0.3s,baz=94,slow=3.7,SNR=15						
FX1				Sn	S	10 08 38.7	+5.3
	comp=Z,14nm,0.3s,baz=282,slow=20,SNR=3.4						
FX1				LR	LR	10 09 27.1	
	comp=Z,119nm,20.1s,baz=123,slow=37						
FX1	Attu Island--F	5.20	292	eP	P	10 07 30.6	-3.5
NIKO	Nikolski	6.42	70	P	P	10 07 49.6	-1.6
SPIA	Saint Paul Isl	7.83	37	P	P	10 08 08.3	-2.5
UNV	Unalaska Valle	8.00	66	P	P	10 08 10.2	-2.9
PET	Petropavlovsk	13.92	286	eP	P	10 09 39.0	+6.2
PET				eS	S	10 12 12.4	+5.8
PET				pmax	pmax		
	comp=Z,23nm,1.3s						
PET				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s						
PET				MLR	MLR		
	comp=N,400nm,14.0s						
PET				MLR	MLR		
	comp=E,600nm,16.0s						
TNA	Tin City	15.46	17	eP	P	10 09 51.4	-1.3
SVW2	Sparrevohn	16.23	43	eP	P	10 10 05.0	+2.5
KDAK	Kodiak Island	16.56	56	eP	P	10 10 02.8	-3.9
	comp=E,24nm,0.4s						
RSO	Redoubt South	17.24	47	eP	P	10 10 16.4	+1.2
SPU	Mount Spurr	17.82	46	eP	P	10 10 22.4	-0.1
BILL	Bilibino	18.39	342	eP	P	10 10 28.9	-0.5
BILL				pmax	pmax		
	comp=Z,66nm,1.3s						
BILL	Bilibino	18.39	342	eP	P	10 10 28.9	-0.5
	comp=Z,66nm,1.4s						
SLKM	Skilak Lake	18.44	49	eP	P	10 10 28.7	-1.4
PWA	Palmer West	18.97	45	eP	P	10 10 36.8	+0.5
PWA				pmax	pmax		
	comp=Z,34nm,0.9s						
PWA	Palmer West	18.97	45	eP	P	10 10 36.8	+0.5
	comp=Z,34nm,0.9s						
MA2	Magadan	19.02	308	eP	P	10 10 34.5	-2.4
MA2				pmax	pmax		
	comp=Z,11nm,1.7s						
PMR	Palmer	19.29	46	eP	P	10 10 41.8	+2.0
PMR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PMR	Palmer	19.29	46	eP	P	10 10 41.8	+2.0
	comp=Z,3.1nm,0.3s						
SEY	Seymchan	19.35	318	eP	P	10 10 42.2	+1.7
IMA	Indian Mountai	19.63	31	eP	P	10 10 43.1	-0.4
IMA				pmax	pmax		
	comp=Z,400nm,1.0s						
IMA	Indian Mountai	19.63	31	eP	P	10 10 43.5	0.0
	comp=Z,83nm,1.0s						
SML	Sawmill	19.72	46	eP	P	10 10 42.6	-1.9
MCK	McKinley	20.17	40	eP	P	10 10 45.9	-3.3
MCK				pmax	pmax		
	comp=Z,15nm,0.8s						
MCK	McKinley	20.17	40	eP	P	10 10 45.9	-3.4
	comp=Z,15nm,0.8s						
DIV	Divide	20.71	49	eP	P	10 10 54.1	-0.8
	comp=Z,58nm,0.6s						
COLA	College	21.08	38	eP	P	10 10 58.7	+0.1
COLA				pmax	pmax		
	comp=Z,48nm,1.0s,mb4.8						
COLA	College	21.08	38	eP	P	10 10 58.7	+0.1
	comp=Z,48nm,1.0s,mb4.8						
THY	Trims Highway	21.37	42	eP	P	10 11 01.2	-0.3
ILAR	Eielson Array	21.41	38	P	P	10 11 00.3	-1.6
ILAR						10 15 02.0	
ILAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ILAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
ILAR	Eielson Array	21.41	38	P	P	10 11 00.3	-1.6
	comp=N,5.7nm,0.9s,mb3.9,baz=232,slow=8.0,SNR=54						
ILAR				PcP	PcP	10 15 01.9	-2.6
	comp=N,0.5nm,0.3s,baz=271,slow=3.1,SNR=6.6						
ILAR				ScP		10 18 38.5	
	comp=N,0.6nm,0.8s,baz=294,slow=3.8,SNR=3.9						
DAWY	Dawson	24.27	43	eP	P	10 11 28.8	-1.0
YSS	Yuzh-Sakhalins	25.29	275	⇓iP	P	10 11 40.0	+0.2
YSS				eS	S	10 16 04.0	+4.6
YSS				eSS	SS	10 16 56.0	-7.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
YSS				pmax	pmax		
	comp=N,30nm,1.1s						
YSS				pmax	pmax		
	comp=E,40nm,1.1s						
YSS				MLR	MLR		
	comp=E,300nm,20.0s						
YSS				MLR	MLR		
	comp=Z,400nm,20.0s,MS3.9						
YSS	Yuzh-Sakhalins	25.29	275	eP	P	10 11 40.2	+0.4
	comp=Z,43nm,1.0s,mb4.9						
ASAJ	Asahikawa	26.66	270	P	P	10 11 53.1	+0.6
ASAJ				pmax	pmax		
	comp=Z,38nm,1.2s						
ASAJ				MLR	MLR		
	comp=Z,365nm,21.4s						
ASAJ	Asahikawa	26.66	270	P	P	10 11 53.1	+0.6
	comp=Z,38nm,1.2s,mb4.8,baz=0.2,slow=7.3,SNR=7.0						
ASAJ				LR	LR	10 20 27.3	
	comp=Z,364nm,21.4s,MS3.9,baz=76,slow=32						
INK	Inuvik	27.63	35	eP	P	10 11 59.4	-1.8
INK				pmax	pmax		
	comp=Z,15nm,1.0s						
INK	Inuvik	27.63	35	P	P	10 12 00.2	-0.9
	comp=Z,4.9nm,0.5s,mb4.4,baz=243,slow=9.3,SNR=41						
INK				LR	LR	10 24 09.6	
	comp=Z,640nm,20.6s,MS4.2,baz=240,slow=39						
INK	Inuvik	27.63	35	eP	P	10 11 59.4	-1.7
	comp=Z,15nm,1.0s,mb4.6						
TIXI	Tiksi	30.77	331	eP	P	10 12 29.4	+0.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.1						
BBB	Bella Bella	30.96	68	P	P	10 12 30.9	0.0
	comp=Z,8.8nm,0.8s,mb4.6,baz=281,slow=19,SNR=3.2						
KLR	Kul'dur	31.19	286	eP	P	10 12 28.8	-4.2
MDJ	Mudanjiang	34.56	280	P	P	10 13 01.1	-1.1
MDJ				AP	pP	10 13 14.0	-1.7
MDJ				XP	sP	10 13 19.4	-2.9
MDJ				S	S	10 18 29.3	+2.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,187nm,5.3s						
MDJ				LR	LR		
	comp=N,196nm,20.8s,MS4.1						
MDJ				LR	LR		
	comp=E,301nm,20.5s,MS4.1						
MDJ				LR	LR		
	comp=Z,429nm,20.8s,MS4.2						
OCWA	Octopus Mounta	35.02	74	eP	P	10 13 06.9	+0.8
	comp=Z,25nm,0.8s,mb5.2						
YKW3	Yellowknife Ar	35.37	46	eP	P	10 13 07.5	-1.5
YKA	Yellowknife Ar	35.39	46	P	P	10 13 07.8	-1.3
YKA						10 15 38.3	
YKA				pmax	pmax		
	comp=Z,11nm,0.9s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA				MLR	MLR		
	comp=Z,307nm,18.0s						
YKA	Yellowknife Ar	35.39	46	P	P	10 13 07.8	-1.4
	comp=Z,11nm,0.9s,mb4.8,baz=282,slow=8.4,SNR=108						
YKA				PcP	PcP	10 15 38.3	-0.2
	comp=Z,2.3nm,0.9s,baz=290,slow=2.9,SNR=7.8						
YKA				ScP		10 19 20.4	
	comp=Z,0.3nm,0.8s,baz=288,slow=3.0,SNR=4.0						
YKA				LR	LR	10 28 55.7	
	comp=Z,307nm,18.0s,MS4.1,baz=280,slow=38						
YKA	Yellowknife Ar	35.39	46	P	P	10 13 07.8	-1.3
YKA				PcP	PcP	10 15 38.3	-0.2
YKA				ScP		10 19 20.4	
YKA				LR	LR	10 28 55.7	
JCW	Jim Creek	36.17	72	P	P	10 13 16.9	+1.0
HTW	Haystack Looko	36.44	72	P	P	10 13 19.2	+1.0
FMW	Mount Fremont	36.91	74	P	P	10 13 23.3	+1.2
COR	Corvallis	37.06	78	eP	P	10 13 24.9	+1.4
NLW	Nelson Butte	37.17	71	P	P	10 13 25.4	+1.1
ETW	Entiat	37.40	72	P	P	10 13 27.1	+0.9
TBM	Table Mountain	37.44	73	P	P	10 13 27.5	+0.9
CN2	Changchun	37.54	281	eP	P	10 13 25.0	-2.4
CN2				eAP	pP	10 13 39.0	-2.0
CN2				eS	S	10 19 08.8	-3.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				LR	LR		
	comp=N,300nm,19.0s,MS4.3						
CN2				LR	LR		
	comp=E,400nm,19.0s,MS4.3						
CN2				LR	LR		
	comp=Z,380nm,21.0s,MS4.2						
EBG	Ellensburg	37.58	73	P	P	10 13 29.1	+1.3
VFP	Flag Point	37.82	76	P	P	10 13 31.1	+1.3
BOD	Bodaibo	38.05	307	eP	P	10 13 30.3	-1.2
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
CROR	Criterion Ridg	38.28	76	P	P	10 13 34.7	+1.1
HIA	Hailar	38.31	292	eP	P	10 13 32.6	-1.2
HIA				pmax	pmax		
	comp=Z,20nm,1.1s						
HIA	Hailar	38.31	292	eP	P	10 13 32.6	-1.2
	comp=Z,20nm,1.1s,mb4.8						

RSW	**Rattlesnake Hi**	**38.42**	**73**	P	**P**	**10 13 36.0**	**+1.2**
EDM	**Edmonton**	**38.94**	**61**	*e*P	**P**	**10 13 38.1**	**-0.9**
YBH	**Yreka Blue Hor**	**38.95**	**81**	P	**P**	**10 13 41.5**	**+2.3**
YBH				pmax	pmax		
	comp=Z,13nm,1.0s						
YBH	**Yreka Blue Hor**	**38.95**	**81**	P	**P**	**10 13 40.7**	**+1.5**
	comp=Z,6.1nm,0.9s,mb4.3,baz=285,slow=4.6,SNR=12						
YBH	**Yreka Blue Hor**	**38.95**	**81**	*e*P	**P**	**10 13 40.7**	**+1.5**
	comp=Z,13nm,1.0s,mb4.6						
YPT	**Yellepit**	**38.97**	**73**	P	**P**	**10 13 40.4**	**+1.1**
NEW	**Newport**	**38.99**	**69**	P	**P**	**10 13 40.0**	**+0.5**
	comp=Z,32nm,0.9s,mb5.0,baz=307,slow=6.2,SNR=45						
NEW				LR	LR	10 28 22.6	
	comp=Z,201nm,21.8s,MS3.9,baz=274,slow=34						
NEW	**Newport**	**38.99**	**69**	*e*P	**P**	**10 13 39.4**	**-0.1**
	comp=Z,40nm,1.0s,mb5.1						
WDC	**Whiskeytown Da**	**39.71**	**83**	*e*P	**P**	**10 13 46.5**	**+1.0**
WDC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
WDC	**Whiskeytown Da**	**39.71**	**83**	*e*P	**P**	**10 13 46.5**	**+0.9**
	comp=Z,7.5nm,0.9s,mb4.4						
MOD	**Modoc**	**40.35**	**80**	*e*P	**P**	**10 13 51.5**	**+0.6**
	comp=Z,16nm,1.4s,mb4.6						
WALA	**Waterton Lakes**	**40.48**	**67**	*e*P	**P**	**10 13 51.7**	**-0.1**
	comp=Z,36nm,1.1s,mb5.0						
BMO	**Blue Mountains**	**40.59**	**74**	*e*P	**P**	**10 13 52.8**	**+0.1**
	comp=Z,13nm,0.9s,mb4.6						
WVOR	**Wild Horse Val**	**41.08**	**78**	*e*P	**P**	**10 13 57.4**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.7						
WVOR	**Wild Horse Val**	**41.08**	**78**	*e*P	**P**	**10 13 57.4**	**+0.6**
	comp=Z,17nm,0.9s,mb4.7						
OHCM	**Honcut**	**41.09**	**84**	*e*P	**P**	**10 13 56.5**	**-0.4**
MSO	**Missoula**	**41.57**	**70**	*e*P	**P**	**10 14 00.5**	**-0.2**
	comp=Z,34nm,1.3s,mb4.8						
CHMT	**Chamberlain Mo**	**41.93**	**69**	*e*P	**P**	**10 14 03.3**	**-0.3**
CMB	**Columbia Colle**	**42.56**	**84**	*e*P	**P**	**10 14 09.4**	**+0.5**
CMB				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
CMB	**Columbia Colle**	**42.56**	**84**	*e*P	**P**	**10 14 09.4**	**+0.5**
	comp=Z,8.6nm,1.1s,mb4.4						
HLID	**Hailey**	**43.03**	**74**	*e*P	**P**	**10 14 13.3**	**+0.5**
	comp=Z,26nm,0.9s,mb5.0						
LRV	**Little Rabbit**	**43.16**	**87**	*e*P	**P**	**10 14 13.6**	**-0.3**
MCMT	**McKenzie Canyo**	**43.28**	**72**	*e*P	**P**	**10 14 14.0**	**-0.7**
BOZ	**Bozeman (W)**	**43.56**	**70**	*e*P	**P**	**10 14 17.2**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.2						
BOZ	**Bozeman (W)**	**43.56**	**70**	*e*P	**P**	**10 14 17.2**	**+0.2**
	comp=Z,61nm,1.3s,mb5.2						
NVAR	**Mina Array Bea**	**43.62**	**83**	P	**P**	**10 14 17.9**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.2,baz=303,slow=6.8,SNR=10						
MNV	**Mina**	**43.71**	**82**	*e*P	**P**	**10 14 18.8**	**+0.5**
MNV				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
MNV	**Mina**	**43.71**	**82**	*e*P	**P**	**10 14 18.8**	**+0.4**
	comp=Z,11nm,1.2s,mb4.5						
MTUM	**Tungsten Hills**	**44.12**	**84**	*e*P	**P**	**10 14 22.4**	**+0.8**
QLMT	**Earthquake Lak**	**44.12**	**71**	*e*P	**P**	**10 14 21.8**	**+0.2**
ELK	**Elko**	**44.14**	**78**	*e*P	**P**	**10 14 22.2**	**+0.5**
ELK				pmax	pmax		
	comp=Z,13nm,1.0s						
ELK	**Elko**	**44.14**	**78**	*e*P	**P**	**10 14 22.1**	**+0.4**
	comp=Z,13nm,1.0s,mb4.6						
TPH	**Tonopah**	**44.51**	**82**	*e*P	**P**	**10 14 25.3**	**+0.5**
TPH				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.8						
TPH	**Tonopah**	**44.51**	**82**	*e*P	**P**	**10 14 25.3**	**+0.6**
	comp=Z,19nm,1.1s,mb4.8						
YFT	**Old Faithful**	**44.68**	**71**	*e*P	**P**	**10 14 27.7**	**+1.6**
LKWY	**Lake**	**44.88**	**70**	*e*P	**P**	**10 14 28.9**	**+1.3**
LKWY				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
LKWY	**Lake**	**44.88**	**70**	*e*P	**P**	**10 14 28.9**	**+1.3**
	comp=Z,11nm,0.7s,mb4.8						
IMW	**Indian Meadow**	**44.93**	**72**	*e*P	**P**	**10 14 28.5**	**+0.5**
HVU	**Hansel Valley**	**45.04**	**75**	*e*P	**P**	**10 14 29.5**	**+0.6**
MOOW	**Moose Ponds**	**45.13**	**72**	*e*P	**P**	**10 14 29.6**	**-0.1**
TPAW	**Teton Pass**	**45.16**	**72**	*e*P	**P**	**10 14 30.2**	**+0.4**
WUWY	**Wally Ulrich**	**45.25**	**72**	*e*P	**P**	**10 14 31.2**	**+0.6**
SNOW	**Snow King Moun**	**45.29**	**72**	*e*P	**P**	**10 14 31.6**	**+0.7**
LOHW	**Long Hollow**	**45.30**	**72**	*e*P	**P**	**10 14 31.0**	**+0.1**
TRCR	**Troy Canyon**	**45.36**	**81**	*e*P	**P**	**10 14 30.7**	**-0.8**
BJI	**Beijing**	**45.37**	**282**	P	**P**	**10 14 32.3**	**+0.7**
BJI				S	**S**	**10 21 07.5**	**-0.6**
BJI				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.6						
BJI				LR	LR		
	comp=N,314nm,21.0s,MS4.4						
BJI				LR	LR		
	comp=E,357nm,21.0s,MS4.4						
BJI				LR	LR		
	comp=Z,254nm,22.3s,MS4.1						
BJI	**Beijing**	**45.37**	**282**	P	**P**	**10 14 32.2**	**+0.6**
BJI				S	**S**	**10 21 07.5**	**-0.6**
BJI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
BJI				MLR	MLR		
	comp=Z,250nm,22.3s,MS4.1						
BJI	**Beijing**	**45.37**	**282**	P	**P**	**10 14 32.2**	**+0.6**
	comp=Z,11nm,1.1s,mb4.6						
BJI				S	**S**	**10 21 07.5**	**-0.6**
BJI				LR	LR		
	comp=Z,250nm,22.3s,MS4.1						
BJT	**Baijiatuau**	**45.38**	**282**	*e*P	**P**	**10 14 31.9**	**+0.2**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJT	**Baijiatuau**	**45.38**	**282**	*e*P	**P**	**10 14 31.9**	**+0.2**
	comp=Z,4.4nm,0.6s,mb4.5						
BGU	**Big Grassy Mou**	**45.39**	**76**	*e*P	**P**	**10 14 31.9**	**+0.1**
AHID	**Auburn Hatcher**	**45.48**	**73**	*e*P	**P**	**10 14 32.3**	**-0.1**
	comp=Z,23nm,1.1s,mb4.9						
IRK	**Irkutsk**	**45.50**	**303**	*e*P	**P**	**10 14 27.1**	**-5.3**
IRK				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.3						
HWUT	**Hardware Ranch**	**45.88**	**75**	*e*P	**P**	**10 14 35.7**	**+0.1**
	comp=Z,13nm,1.0s,mb4.8						
DUG	**Dugway**	**45.95**	**77**	*e*P	**P**	**10 14 36.2**	**0.0**
DUG				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
DUG	**Dugway**	**45.95**	**77**	*e*P	**P**	**10 14 36.2**	**0.0**
	comp=Z,43nm,1.1s,mb5.3						
NOQ	**North Oquirrh**	**46.10**	**76**	*e*P	**P**	**10 14 37.7**	**+0.2**
FCC	**Fort Churchill**	**46.12**	**46**	*e*P	**P**	**10 14 35.3**	**-2.0**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
FCC	**Fort Churchill**	**46.12**	**46**	*e*P	**P**	**10 14 35.3**	**-1.9**
	comp=Z,3.2nm,0.4s,mb4.6						
TLY	**Talaya**	**46.12**	**303**	⇓*i*P	**P**	**10 14 37.5**	**+0.1**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
LAO	**LASA Array**	**46.14**	**66**	*e*P	**P**	**10 14 37.3**	**-0.3**
	comp=Z,60nm,1.0s,mb5.5						
ULN	**Ulaanbaatar**	**46.30**	**296**	⇑*i*P	**P**	**10 14 39.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	**46.30**	**296**	⇑*i*P	**P**	**10 14 39.1**	**+0.2**
	comp=Z,17nm,1.0s,mb4.9						
DGMT	**Dagmar**	**46.31**	**63**	*e*P	**P**	**10 14 37.9**	**-1.0**
	comp=Z,22nm,1.0s,mb5.0						
BW06	**Boulder Array**	**46.41**	**72**	*e*P	**P**	**10 14 39.7**	**0.0**
	comp=Z,38nm,0.8s,mb5.4						
PDAR	**Pinedale Array**	**46.41**	**72**	P	**P**	**10 14 40.0**	**+0.3**
	comp=Z,46nm,0.9s,mb5.4,baz=302,slow=3.3,SNR=204						
PDAR				LR	LR	10 31 34.2	
	comp=Z,250nm,18.0s,MS4.2,baz=310,slow=33						
JLU	**Jordanelle**	**46.54**	**76**	*e*P	**P**	**10 14 41.2**	**+0.3**
NLU	**North Lily Min**	**46.55**	**77**	*e*P	**P**	**10 14 41.0**	**+0.1**
SONM	**Songino Array**	**46.69**	**297**	P	**P**	**10 14 42.4**	**+0.5**
	comp=Z,8.1nm,0.8s,mb4.7,baz=59,slow=6.7,SNR=65						
DAU	**Daniels Canyon**	**46.77**	**76**	*e*P	**P**	**10 14 43.3**	**+0.6**
ZAK	**Zakamensk**	**47.01**	**301**	*e*P	**P**	**10 14 44.5**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,54nm,1.2s,mb5.3						
ARUT	**Antelope Range**	**47.04**	**80**	*e*P	**P**	**10 14 44.7**	**-0.1**
MVU	**Marysvale**	**47.35**	**78**	*e*P	**P**	**10 14 47.6**	**+0.4**
	comp=Z,10nm,1.0s,mb4.7						
MSU	**Marysvale**	**47.37**	**78**	*e*P	**P**	**10 14 48.0**	**+0.6**
TMUT	**Trail Mountain**	**47.48**	**77**	*e*P	**P**	**10 14 48.9**	**+0.6**
NEN	**Nelson**	**47.52**	**83**	*e*P	**P**	**10 14 49.5**	**+0.9**
MOY	**Mondy**	**47.53**	**304**	*e*P	**P**	**10 14 48.4**	**0.0**
MOY				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.9						
HHC	**Hu-ho-hao-te**	**47.70**	**286**	*e*P	**P**	**10 14 50.3**	**+0.4**
HHC				AP	pP	10 14 59.5	-4.3
HHC				XP	sP	10 15 03.8	-6.0
HHC				PCP	PcP	10 16 19.6	+0.6
HHC				PP	PP	10 16 42.5	+1.3
HHC				SCP		10 20 09.9	
HHC				PCS		10 20 17.6	
HHC				XS		10 22 00.8	
HHC				SCS	ScS	10 24 37.1	+1.2
HHC				AMB	AMB		
	comp=Z,19nm,1.5s,mb4.9						
HHC				AMB	AMB		
	comp=Z,93nm,5.3s						
HHC				LR	LR		
	comp=N,352nm,16.6s,MS4.6						
HHC				LR	LR		
	comp=E,509nm,21.4s,MS4.6						
HHC				LR	LR		
	comp=Z,339nm,23.8s,MS4.2						
LDFC	**Landfair**	**47.72**	**84**	*e*P	**P**	**10 14 49.5**	**-0.7**
SSE	**Sheshan**	**47.95**	**269**	P	**P**	**10 14 51.4**	**-0.7**
SSE				XP	sP	10 15 10.8	-1.1
SSE				PCP	PcP	10 16 19.3	-0.8
SSE				S	**S**	**10 21 45.4**	**+0.6**
SSE				AMB	AMB		
	comp=Z,34nm,1.0s,mb5.3						
SSE				AMB	AMB		
	comp=Z,639nm,4.0s						
SSE				LR	LR		
	comp=N,73nm,25.0s,MS3.6						
SSE				LR	LR		
	comp=E,38nm,25.0s,MS3.6						
SSE				LR	LR		
	comp=Z,115nm,21.2s,MS3.8						
SSE	**Sheshan**	**47.95**	**269**	P	**P**	**10 14 51.4**	**-0.7**
	comp=Z,34nm,1.0s,mb5.3						
SSE				sP	sP	10 15 10.7	-1.2
SSE				PcP	PcP	10 16 19.3	-0.8
SSE				S	**S**	**10 21 45.4**	**+0.6**
SSE				sS		10 22 08.7	
SSE				LR	LR		
	comp=Z,120nm,21.2s,MS3.8						
SRU	**San Rafael**	**48.02**	**77**	*e*P	**P**	**10 14 52.6**	**+0.2**
NJ2	**Nanjing**	**48.77**	**272**	*e*P	**P**	**10 15 01.4**	**+3.0**
NJ2				AP	pP	10 15 12.0	-0.2
NJ2				XP	sP	10 15 16.5	-1.8
NJ2				PP	PP	10 16 53.0	+1.2
NJ2				S	**S**	**10 21 59.0**	**+2.6**
NJ2				XS		10 22 18.0	
NJ2				AMB	AMB		
	comp=Z,860nm,5.0s						
NJ2				LR	LR		
	comp=N,1µm,14.6s						
NJ2				LR	LR		
	comp=E,820nm,22.8s						
NJ2				LR	LR		
	comp=Z,2µm,14.2s,MS5.2						
PV10	**Paradox Valley**	**49.38**	**76**	*e*P	**P**	**10 15 02.9**	**-0.1**
PHWY	**Pilot Hill**	**49.73**	**71**	*e*P	**P**	**10 15 04.7**	**-1.0**
WUAZ	**Wupatki**	**49.76**	**81**	*e*P	**P**	**10 15 05.8**	**-0.1**
	comp=Z,102nm,0.7s,mb6.0						
PV01	**Paradox Valley**	**49.82**	**76**	*e*P	**P**	**10 15 06.1**	**-0.3**
ULM	**Lac du Bonnet**	**49.82**	**57**	P	**P**	**10 15 05.2**	**-1.0**
	comp=Z,3.5nm,0.8s,mb4.5,baz=301,slow=9.2,SNR=8.4						
ISCO	**Idaho Springs**	**50.57**	**73**	*e*P	**P**	**10 15 11.9**	**-0.2**
ISCO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
ISCO	**Idaho Springs**	**50.57**	**73**	*e*P	**P**	**10 15 11.9**	**-0.2**
	comp=Z,14nm,1.0s,mb4.9						
SDCO	**Great Sand Dun**	**51.94**	**75**	*e*P	**P**	**10 15 22.2**	**-0.2**
	comp=Z,24nm,1.0s,mb5.1						
TUC	**Tucson**	**52.25**	**84**	*e*P	**P**	**10 15 24.2**	**-0.6**
TUC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
TUC	**Tucson**	**52.25**	**84**	*e*P	**P**	**10 15 24.2**	**-0.6**
	comp=Z,10nm,1.1s,mb4.7						
WHN	**Wuhan**	**52.62**	**274**	*e*P	**P**	**10 15 25.5**	**-2.1**
ANMO	**Albuquerque**	**53.17**	**78**	P	**P**	**10 15 31.9**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,11nm,1.2s						
ANMO	**Albuquerque**	**53.17**	**78**	P	**P**	**10 15 30.9**	**-0.7**
	comp=Z,5.1nm,0.9s,mb4.4,baz=312,slow=7.3,SNR=13						
ANMO	**Albuquerque**	**53.17**	**78**	*e*P	**P**	**10 15 31.1**	**-0.6**
	comp=Z,11nm,1.2s,mb4.7						
FRB	**Frobisher Bay**	**53.20**	**31**	P	**P**	**10 15 29.7**	**-1.8**
FRB				pmax	pmax		
	comp=Z,9.0nm,0.4s						
FRB				MLR	MLR		
	comp=Z,135nm,21.4s						
FRB	**Frobisher Bay**	**53.20**	**31**	P	**P**	**10 15 29.7**	**-1.8**
	comp=Z,8.5nm,0.4s,mb5.0,baz=322,slow=7.7,SNR=45						
FRB				LR	LR	10 37 41.4	
	comp=Z,135nm,21.4s,MS4.0,baz=306,slow=36						
EYMN	**Ely**	**53.51**	**57**	*e*P	**P**	**10 15 32.6**	**-1.3**
	comp=Z,17nm,1.1s,mb4.9						
ZAL	**Zalesovo**	**54.14**	**314**	P	**P**	**10 15 38.0**	**-0.5**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAL				MLR	MLR		
	comp=Z,398nm,18.1s						
ZAL	**Zalesovo**	**54.14**	**314**	P	**P**	**10 15 38.0**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=322,slow=19,SNR=2.3						
ZAL				LR	LR	10 41 04.1	
	comp=Z,398nm,18.1s,MS4.5,baz=68,slow=39						
CBKS	**Cedar Bluff**	**54.70**	**70**	*e*P	**P**	**10 15 41.9**	**-0.9**
CBKS				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
CBKS	**Cedar Bluff**	**54.70**	**70**	*e*P	**P**	**10 15 41.9**	**-1.0**
	comp=Z,40nm,0.8s,mb5.5						
LZH	**Lanzhou**	**55.39**	**286**	⇑P	**P**	**10 15 47.6**	**-0.3**
LZH				AP	pP	10 16 02.0	-0.1
LZH				XP	sP	10 16 08.1	+0.1
LZH				PP	PP	10 17 53.0	-0.4
LZH				*e*S	**S**	**10 23 25.3**	**-1.4**
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,167nm,6.4s						
LZH				LR	LR		
	comp=N,702nm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.5s,MS5.0						
LZH	**Lanzhou**	**55.39**	**286**	⇑P	**P**	**10 15 47.6**	**-0.3**
LZH				*PP	pP	10 16 02.0	-0.1
LZH						10 17 53.0	
LZH				*e*S	**S**	**10 23 25.2**	**-1.5**
LZH				*SS		10 23 49.6	
LZH				SS	SS	10 27 09.7	-2.0
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.2						
LZH				MLR	MLR		
	comp=Z,1µm,17.5s,MS5.0						
LZH	**Lanzhou**	**55.39**	**286**	⇑P	**P**	**10 15 47.6**	**-0.3**
	comp=Z,42nm,1.5s,mb5.2						
LZH				pP	pP	10 16 02.0	-0.1
LZH				sP	sP	10 16 08.1	+0.1
LZH				PP	PP	10 17 53.0	-0.4
LZH				*e*S	**S**	**10 23 25.2**	**-1.5**
LZH				sS		10 23 49.6	
LZH				SS	SS	10 27 09.7	-2.0
LZH				LR	LR		
	comp=Z,1µm,17.5s,MS5.0						
GTA	**Gaotai**	**55.59**	**292**	P	**P**	**10 15 49.1**	**-0.2**
GTA				AP	pP	10 16 00.9	-2.6
GTA				XP	sP	10 16 07.1	-2.3
GTA				PP	PP	10 17 55.1	-0.1
GTA				PPP	PPP	10 19 06.5	-3.8
GTA				S	**S**	**10 23 25.3**	**-4.1**
GTA				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.9						
GTA				AMB	AMB		
	comp=Z,109nm,7.6s						
GTA				LR	LR		
	comp=N,286nm,18.3s,MS4.5						
GTA				LR	LR		
	comp=E,199nm,17.5s,MS4.5						
GTA				LR	LR		
	comp=Z,360nm,15.6s,MS4.6						
ENH	**Enshi**	**55.85**	**277**	*e*P	**P**	**10 15 50.2**	**-1.1**
	comp=Z,7.1nm,0.9s,mb4.7						
MNTX	**Cornudas Mount**	**56.02**	**80**	*e*P	**P**	**10 15 51.7**	**-0.8**
	comp=Z,13nm,1.0s,mb4.9						
AMTX	**Amarillo**	**56.14**	**75**	*e*P	**P**	**10 15 52.5**	**-0.8**
	comp=Z,18nm,1.0s,mb5.1						
KSU1	**Kansas State U**	**56.35**	**68**	*e*P	**P**	**10 15 52.8**	**-1.9**
KEV	**Kevo**	**57.88**	**350**	*e*p	**P**	**10 16 02.2**	**-3.0**
	comp=Z,0.7nm,0.3s,mb4.2						
KEV	**Kevo**	**57.88**	**350**	*e*P	**P**	**10 16 02.2**	**-3.0**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
WMOK	**Wichita Mounta**	**57.99**	**73**	*e*P	**P**	**10 16 05.3**	**-1.1**
WMOK				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
WMOK	**Wichita Mounta**	**57.99**	**73**	*e*P	**P**	**10 16 05.3**	**-1.1**
	comp=Z,16nm,1.0s,mb5.0						
ARCES	**ARCESS Array B**	**58.26**	**350**	P	**P**	**10 16 06.6**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,11nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,274nm,18.4s						
ARCES	**ARCESS Array B**	**58.26**	**350**	P	**P**	**10 16 06.6**	**-1.2**
	comp=Z,11nm,0.9s,mb4.9,baz=19,slow=7.2,SNR=35						
ARCES				LR	LR	10 44 02.4	
	comp=Z,274nm,18.4s,MS4.4,baz=198,slow=39						
LTX	**Lajitas**	**58.73**	**81**	*e*P	**P**	**10 16 10.7**	**-0.9**
LTX				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
LTX	**Lajitas**	**58.73**	**81**	*e*P	**P**	**10 16 10.7**	**-0.9**
	comp=Z,8.7nm,1.0s,mb4.7						
TXAR	**Lajitas Array**	**58.73**	**81**	P	**P**	**10 16 10.3**	**-1.2**
	comp=Z,4.9nm,0.9s,mb4.5,baz=293,slow=4.3,SNR=18						
TXAR				LR	LR	10 38 41.9	
	comp=Z,125nm,20.8s,MS4.0,baz=345,slow=33						
TXAR	**Lajitas Array**	**58.73**	**81**	P	**P**	**10 16 10.3**	**-1.3**
TXAR				LR	LR	10 38 41.9	
KURK	**Kurchatov**	**59.11**	**314**	P	**P**	**10 16 13.3**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
WMQ	**Urumqi**	**59.40**	**303**	P	**P**	**10 16 16.0**	**0.0**
WMQ				PP	PP	10 18 29.0	-0.4
WMQ				S	**S**	**10 24 18.0**	**-1.3**
WMQ				AMB	AMB		
	comp=Z,17nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,45nm,8.0s						
WMQ				LR	LR		
	comp=N,356nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=E,287nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,402nm,22.0s,MS4.5						
MKAR	**Makanchi Array**	**60.11**	**308**	*i* P	**P**	**10 16 19.3**	**-1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CCM	**Cathedral Cave**	**60.15**	**65**	*e*P	**P**	**10 16 18.6**	**-2.7**
CCM				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.1						
CCM	**Cathedral Cave**	**60.15**	**65**	*e*P	**P**	**10 16 18.6**	**-2.7**
	comp=Z,27nm,1.4s,mb5.1						
SCHQ	**Schefferville**	**60.17**	**38**	P	**P**	**10 16 19.8**	**-1.4**
	comp=Z,14nm,1.0s,mb4.9,baz=314,slow=6.9,SNR=12						
GYA	**Guiyang**	**60.30**	**276**	P	**P**	**10 16 27.8**	**+5.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
GYA				AMB	AMB		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=N,240nm,17.9s,MS4.5						
GYA				LR	LR		
	comp=E,230nm,18.2s,MS4.5						
GYA				LR	LR		
	comp=Z,260nm,17.2s,MS4.4						
JCT	**Junction City**	**60.31**	**77**	P	**P**	**10 16 20.7**	**-1.8**
JCT				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
JCT	**Junction City**	**60.31**	**77**	P	**P**	**10 16 20.7**	**-1.8**
	comp=Z,16nm,0.9s,mb5.1						
SLM	**Saint Louis**	**60.33**	**64**	*e*P	**P**	**10 16 20.7**	**-1.8**
CHKZ	**Chkalovo**	**60.42**	**320**	P	**P**	**10 16 21.3**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.8						
FVM	**French Village**	**60.67**	**65**	*e*P	**P**	**10 16 23.2**	**-1.6**
FVM				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3						
FVM	**French Village**	**60.67**	**65**	*e*P	**P**	**10 16 23.2**	**-1.7**
	comp=Z,24nm,1.0s,mb5.3						
BVA0	**Borovoye Array**	**61.00**	**320**	*i* P	**P**	**10 16 25.7**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb4.0						
BVAR	**Borovoye Array**	**61.00**	**320**	P	**P**	**10 16 25.7**	**-1.1**
	comp=Z,3.2nm,0.8s,mb4.5,baz=56,slow=7.0,SNR=16						
BVAR				PcP	PcP	10 17 08.9	-0.5
	comp=Z,1.3nm,0.4s,baz=79,slow=4.1,SNR=7.6						
MIAR	**Mount Ida**	**61.23**	**70**	*e*P	**P**	**10 16 27.0**	**-1.7**
MIAR				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
MIAR	**Mount Ida**	**61.23**	**70**	*e*P	**P**	**10 16 27.0**	**-1.6**
	comp=Z,21nm,1.0s,mb5.2						
SADO	**Sadowa**	**61.98**	**53**	P	**P**	**10 16 32.4**	**-1.1**
	comp=Z,15nm,1.1s,mb5.0,baz=332,slow=12,SNR=3.5						
BLO	**Bloomington**	**62.03**	**62**	*e*P	**P**	**10 16 32.6**	**-1.4**
BLO				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.7						
BLO	**Bloomington**	**62.03**	**62**	*e*P	**P**	**10 16 32.6**	**-1.4**
	comp=Z,66nm,1.0s,mb5.7						
USIN	**University of**	**62.24**	**63**	*e*P	**P**	**10 16 33.9**	**-1.5**
	comp=Z,128nm,1.0s,mb6.0						
WCI	**Wyandotte Cave**	**62.83**	**62**	*e*P	**P**	**10 16 38.0**	**-1.3**
WCI				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.7						
WCI	**Wyandotte Cave**	**62.83**	**62**	*e*P	**P**	**10 16 38.0**	**-1.3**
	comp=Z,55nm,0.9s,mb5.7						
WVT	**Waverly**	**63.45**	**65**	*e*P	**P**	**10 16 41.4**	**-2.0**
WVT				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.3						
WVT	**Waverly**	**63.45**	**65**	*e*P	**P**	**10 16 41.4**	**-2.1**
	comp=Z,24nm,1.0s,mb5.3						
OXF	**Oxford**	**63.69**	**67**	*e*P	**P**	**10 16 43.6**	**-1.4**
OXF				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.8						
OXF	**Oxford**	**63.69**	**67**	*e*P	**P**	**10 16 43.6**	**-1.3**
	comp=Z,104nm,1.0s,mb5.8						
ALLY	**Alegheny Colle**	**63.70**	**56**	*e*P	**P**	**10 16 43.9**	**-1.0**
JOF	**Joensuu**	**63.76**	**345**	*e*p	**P**	**10 16 43.5**	**-1.4**
	comp=Z,2.0nm,0.3s,mb4.6						
JOF	**Joensuu**	**63.76**	**345**	*e*P	**P**	**10 16 43.5**	**-1.4**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
KAF	**Kangasniemi**	**65.28**	**347**	*e*p	**P**	**10 16 53.6**	**-1.1**
	comp=Z,1.6nm,0.3s,mb4.5,baz=14,slow=5.8						
KAF	**Kangasniemi**	**65.28**	**347**	*e*P	**P**	**10 16 53.6**	**-1.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.6						
MCWV	**Mont Chateau**	**65.30**	**57**	*e*P	**P**	**10 16 53.3**	**-2.0**
	comp=Z,8.5nm,0.8s,mb4.8						
BINY	**Binghamton**	**65.42**	**53**	*e*P	**P**	**10 16 54.3**	**-1.8**
	comp=Z,22nm,0.9s,mb5.2						
SSPA	**Standing Stone**	**65.61**	**55**	*e*P	**P**	**10 16 55.7**	**-1.6**
	comp=Z,15nm,0.9s,mb5.0						
CPCT	**Cooper Cave**	**65.81**	**63**	*e*P	**P**	**10 16 56.7**	**-1.9**
FINES	**FINESS Array B**	**65.95**	**347**	P	**P**	**10 16 57.5**	**-1.5**
	comp=Z,2.5nm,0.4s,mb4.6,baz=8.1,slow=7.6,SNR=46						
FINES				LR	LR	10 51 34.3	
	comp=Z,176nm,18.7s,MS4.3,baz=225,slow=41						
LRAL	**Lakeview Retre**	**66.14**	**67**	*e*P	**P**	**10 16 58.9**	**-2.0**
	comp=Z,7.4nm,0.7s,mb4.8						
TKM2	**Tokmak 2**	**66.19**	**309**	P	**P**	**10 17 01.6**	**+0.7**
	SNR=13						
ULHL	**Ulahol**	**66.38**	**308**	P	**P**	**10 17 03.0**	**+0.8**
	SNR=5.7						
USP	**Ospenovka**	**66.46**	**310**	P	**P**	**10 17 03.1**	**+0.5**
	SNR=22						
ELN	**Prospectdale**	**66.59**	**59**	*e*P	**P**	**10 17 02.6**	**-0.9**
AAK	**Ala-Archa**	**66.94**	**310**	P	**P**	**10 17 06.6**	**+1.0**
	SNR=11						
AAK	**Ala-Archa**	**66.94**	**310**	*e*P	**P**	**10 17 04.5**	**-1.2**
AAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**66.94**	**310**	*e*P	**P**	**10 17 04.5**	**-1.2**
	comp=Z,11nm,0.9s,mb4.9						
KZA	**Kyzart**	**67.00**	**309**	P	**P**	**10 17 07.2**	**+1.2**
	SNR=5.9						
UCH	**Uchtor**	**67.24**	**309**	P	**P**	**10 17 09.3**	**+1.8**
	SNR=7.7						
EKS2	**Erkin-Say**	**67.27**	**310**	P	**P**	**10 17 08.8**	**+1.1**
	SNR=8.6						
LSA	**Lhasa**	**67.46**	**290**	P	**P**	**10 17 10.6**	**+1.5**
LSA	**Lhasa**	**67.46**	**290**	*e*P	**P**	**10 17 09.5**	**+0.4**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
LSA	**Lhasa**	**67.46**	**290**	*e*P	**P**	**10 17 09.5**	**+0.4**
	comp=Z,10nm,0.8s,mb4.9						
AML	**Almayashu**	**67.71**	**310**	P	**P**	**10 17 11.9**	**+1.4**
	SNR=17						

NB2	**NORSAR Subarra**	**67.82**	**355**	P	**P**	**10 17 09.6**	**-1.2**
	comp=Z,3.0nm,0.9s,mb4.3,baz=6.0,slow=6.5						
NB2	**NORSAR Subarra**	**67.82**	**355**	P	**P**	**10 17 09.6**	**-1.2**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
NOA	**NORSAR Array B**	**67.82**	**355**	P	**P**	**10 17 09.2**	**-1.6**
NOA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NOA	**NORSAR Array B**	**67.82**	**355**	P	**P**	**10 17 09.2**	**-1.6**
	comp=Z,4.9nm,0.9s,mb4.5,baz=6.9,slow=6.3,SNR=7.8						
JSC	**Jenkinsville**	**68.48**	**62**	eP	**P**	**10 17 14.6**	**-0.8**
KSH	**Kashi**	**68.57**	**307**	eP	**P**	**10 17 17.0**	**+1.1**
KSH				eS	S	10 26 11.0	-2.0
KSH				eSCS	ScS	10 27 08.0	+0.4
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
KSH				AMB	AMB		
	comp=Z,200nm,4.1s						
KSH				LR	LR		
	comp=N,350nm,6.4s						
KSH				LR	LR		
	comp=E,360nm,5.4s						
OBN	**Obninsk**	**70.02**	**339**	⇓iP	**P**	**10 17 23.7**	**-0.8**
OBN				e		10 17 52.5	
OBN				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
OBN				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.6						
CMAR	**Chiang Mai Arr**	**70.99**	**276**	i P	**P**	**10 17 30.9**	**0.0**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**70.99**	**276**	P	**P**	**10 17 30.3**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.1,baz=29,slow=6.4,SNR=9.8						
CMAR				LR	LR	10 51 09.9	
	comp=Z,92nm,18.7s,MS4.1,baz=49,slow=38						
GUN	**Gumba**	**71.88**	**292**	eP	**P**	**10 17 36.8**	**+0.6**
	comp=Z,32nm,0.3s,mb5.7						
JIRN	**Jiri**	**71.89**	**292**	eP	**P**	**10 17 36.7**	**+0.5**
	comp=Z,32nm,0.5s,mb5.6						
KKN	**Kakani**	**72.32**	**292**	eP	**P**	**10 17 39.4**	**+0.6**
PKI	**Pulchoki**	**72.41**	**292**	eP	**P**	**10 17 40.5**	**+1.2**
GKN	**Gorkha**	**72.53**	**293**	eP	**P**	**10 17 41.1**	**+1.1**
DMN	**Daman**	**72.56**	**292**	eP	**P**	**10 17 41.5**	**+1.4**
KOLN	**Koldanda**	**73.31**	**293**	eP	**P**	**10 17 45.6**	**+1.0**
	comp=Z,98nm,1.2s,mb5.6						
EKA	**Eskdalemuir Ar**	**73.78**	**3**	P	**P**	**10 17 46.0**	**-0.7**
EKA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**73.78**	**3**	P	**P**	**10 17 46.0**	**-0.7**
	comp=Z,7.6nm,1.0s,mb4.6,baz=349,slow=4.2,SNR=6.0						
DDI	**Dehra Dun**	**74.49**	**299**	e	**P**	**10 17 51.1**	**-0.3**
AKASG	**Malin Array Be**	**75.70**	**342**	P	**P**	**10 17 56.8**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,30nm,1.0s						
AKASG	**Malin Array Be**	**75.70**	**342**	P	**P**	**10 17 56.8**	**-1.1**
	comp=Z,30nm,1.0s,mb5.2,baz=18,slow=5.7,SNR=42						
NDI	**New Delhi**	**76.22**	**299**	eP	**P**	**10 17 51.0**	**-10**
CTA	**Charters Tower**	**77.31**	**213**	LR	LR	10 47 10.9	
	comp=Z,140nm,19.1s,MS4.3,baz=46,slow=32						
CLL	**Collm**	**77.37**	**352**	i P	**P**	**10 18 06.4**	**-0.9**
CLL				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
CLL	**Collm**	**77.37**	**352**	i P	**P**	**10 18 06.4**	**-0.9**
	comp=Z,11nm,1.1s,mb4.7						
CLL				i		10 18 41.6	
CLL	**Collm**	**77.37**	**352**	P	**P**	**10 18 06.4**	**-0.9**
	comp=Z,logA/T=1.0,mb4.7						
GOF	**Gofitskoye**	**77.50**	**331**	⇓iP	**P**	**10 18 08.0**	**-0.1**
GOF				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.4						
OJC	**Ojcow**	**77.71**	**348**	eP	**P**	**10 18 09.1**	**-0.1**
BRG	**Berggiesshubel**	**77.72**	**352**	eP	**P**	**10 18 09.2**	**0.0**
BRG				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
BRG	**Berggiesshubel**	**77.72**	**352**	eP	**P**	**10 18 09.2**	**0.0**
	comp=Z,13nm,1.4s,mb4.7						
KWP	**Kalwaria**	**77.87**	**346**	eP	**P**	**10 18 09.7**	**-0.4**
KWP				e		10 18 10.9	
KWP	**Kalwaria**	**77.87**	**346**	eP	**P**	**10 18 09.7**	**-0.4**
KWP				e		10 18 10.9	
UPC	**Upice**	**77.88**	**350**	eP	**P**	**10 18 09.7**	**-0.4**
DPC	**Dobruska-Polom**	**78.00**	**350**	eP	**P**	**10 18 10.5**	**-0.3**
MOX	**Moxa**	**78.14**	**353**	eP	**P**	**10 18 11.3**	**-0.2**
MOX				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
MOX	**Moxa**	**78.14**	**353**	eP	**P**	**10 18 11.3**	**-0.2**
	comp=Z,16nm,1.2s,mb4.8						
MOX	**Moxa**	**78.14**	**353**	i P	**P**	**10 18 11.3**	**-0.2**
	comp=Z,logA/T=1.1,mb4.8						
OKC	**Ostrava-Krasne**	**78.30**	**349**	eP	**P**	**10 18 12.5**	**+0.1**
HGN	**Heimansgroeve**	**78.33**	**357**	⇑iP	**P**	**10 18 12.5**	**0.0**
	comp=Z,5.5nm,1.0s,mb4.4						
NKC	**Novy Kostel**	**78.49**	**353**	eP	**P**	**10 18 13.7**	**+0.3**
PRU	**Pruhonice**	**78.54**	**351**	eP	**P**	**10 18 13.6**	**-0.1**
KIV	**Kislovodsk**	**78.60**	**331**	d iP	**P**	**10 18 14.8**	**+0.6**
KIV				e		10 18 23.0	
KIV				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
KIV	**Kislovodsk**	**78.60**	**331**	eP	**P**	**10 18 14.8**	**+0.6**
	comp=Z,22nm,1.0s,mb5.0						
KOLS	**Kolonicke sedl**	**78.62**	**346**	i P	**P**	**10 18 14.6**	**+0.4**
CRVS	**Cervenica-Dubn**	**78.77**	**346**	i P	**P**	**10 18 15.6**	**+0.6**
VRAC	**Vranov**	**79.00**	**350**	P	**P**	**10 18 16.1**	**-0.2**
VRAC				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VRAC	**Vranov**	**79.00**	**350**	P	**P**	**10 18 16.1**	**-0.2**
	comp=Z,3.9nm,0.4s,mb4.7,baz=10,slow=6.3,SNR=7.5						
GIVF	**Givet**	**79.03**	**358**	⇑iP	**P**	**10 18 16.4**	**0.0**
	comp=Z,50nm,1.2s,mb5.0						
GIVF	**Givet**	**79.03**	**358**	⇑iP	**P**	**10 18 16.4**	**0.0**
GIVF				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
BAIF	**Baives**	**79.08**	**358**	⇑iP	**P**	**10 18 16.9**	**+0.2**
	comp=Z,56nm,1.1s,mb5.1						
BAIF	**Baives**	**79.08**	**358**	⇑iP	**P**	**10 18 16.9**	**+0.2**
BAIF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
GRA1	**Grafenberg Arr**	**79.12**	**353**	eP	**P**	**10 18 17.3**	**+0.4**
	comp=Z,20nm,1.1s,mb5.0						
GRF	**Grafenberg Arr**	**79.12**	**353**	eP	**P**	**10 18 17.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
GRF	**Grafenberg Arr**	**79.12**	**353**	eP	**P**	**10 18 17.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
GRF	**Grafenberg Arr**	**79.12**	**353**	eP	**P**	**10 18 17.3**	**+0.4**
	comp=Z,20nm,1.1s,mb5.0						
IAS	**Iasi**	**79.38**	**342**	P	**P**	**10 18 18.7**	**+0.3**
BURAR	**Bucovina Array**	**79.41**	**344**	P	**P**	**10 18 19.6**	**+1.0**
KHC	**Kasperske Hory**	**79.48**	**352**	eP	**P**	**10 18 18.9**	**0.0**
VYHS	**Vyhne**	**79.53**	**348**	i P	**P**	**10 18 19.6**	**+0.4**
GERES	**GERESS Array B**	**79.75**	**352**	P	**P**	**10 18 20.2**	**-0.2**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	**GERESS Array B**	**79.75**	**352**	P	**P**	**10 18 20.2**	**-0.2**
	comp=Z,1.8nm,0.7s,mb4.1,slow=2.7,SNR=14						
SOC	**Sochi**	**79.83**	**333**	eP	**P**	**10 18 20.3**	**-0.6**
SOC				e		10 21 21.1	
SOC				ePPP	PPP	10 23 08.8	-6.3
SOC				eS	S	10 28 17.4	-1.1
SOC				e		10 28 42.0	
SOC				eSS	SS	10 33 28.7	-2.6
SOC				eSSS	SSS	10 36 58.6	+6.4
SOC				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
SOC				pmax	pmax		
	comp=N,26nm,0.8s						
SOC				pmax	pmax		
	comp=E,26nm,0.9s						
TI2	**Plekhanov**	**79.95**	**328**	⇓iP	**P**	**10 18 21.4**	**-0.1**
TI2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4						
ZST	**Bratislava**	**80.04**	**349**	eP	**P**	**10 18 23.2**	**+1.3**
FLN	**La Foliniere**	**80.41**	**1**	eP	**P**	**10 18 23.5**	**-0.3**
	comp=Z,57nm,1.1s,mb5.1						
FLN				eR			
	comp=Z,178nm,20.5s						
FLN	**La Foliniere**	**80.41**	**1**	eP	**P**	**10 18 23.5**	**-0.3**
FLN				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
FLN				MLR	MLR		
	comp=Z,180nm,20.5s,MS4.4						
LDF	**La Druitiere**	**80.58**	**1**	⇑iP	**P**	**10 18 24.3**	**-0.5**
	comp=Z,65nm,1.1s,mb5.2						
LDF	**La Druitiere**	**80.58**	**1**	⇑iP	**P**	**10 18 24.3**	**-0.5**
LDF				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
MEZF	**Maizieres J’vi**	**80.62**	**357**	eP	**P**	**10 18 25.2**	**+0.2**
	comp=Z,77nm,1.1s,mb5.2						
CDF	**Champ du Feu**	**80.63**	**356**	eP	**P**	**10 18 24.9**	**-0.1**
	comp=Z,13nm,0.9s,mb4.6						
CDF	**Champ du Feu**	**80.63**	**356**	eP	**P**	**10 18 24.9**	**-0.1**
CDF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
ROSF	**Rostrenen**	**80.77**	**3**	⇑iP	**P**	**10 18 25.8**	**0.0**
	comp=Z,57nm,1.1s,mb5.1						
ROSF	**Rostrenen**	**80.77**	**3**	⇑iP	**P**	**10 18 25.8**	**0.0**
ROSF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
GRR	**Gorron**	**80.78**	**1**	⇑iP	**P**	**10 18 25.7**	**-0.1**
	comp=Z,64nm,1.1s,mb5.2						
GRR	**Gorron**	**80.78**	**1**	⇑iP	**P**	**10 18 25.7**	**-0.1**
GRR				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
SGMF	**Saint Gilles**	**80.88**	**2**	⇑iP	**P**	**10 18 26.4**	**+0.1**
	comp=Z,29nm,0.8s,mb4.9						
SGMF	**Saint Gilles**	**80.88**	**2**	⇑iP	**P**	**10 18 26.4**	**+0.1**
SGMF				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
HAU	**Haudompre**	**81.07**	**356**	eP	**P**	**10 18 27.3**	**-0.1**
	comp=Z,28nm,1.1s,mb4.8						
HAU				eR			
	comp=Z,183nm,18.2s						
HAU	**Haudompre**	**81.07**	**356**	eP	**P**	**10 18 27.3**	**-0.1**
HAU				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
HAU				MLR	MLR		
	comp=Z,180nm,18.3s,MS4.5						
ARSA	**Arzberg**	**81.15**	**350**	⇑iP	**P**	**10 18 28.6**	**+0.8**
	comp=Z,12nm,1.1s,mb4.7						
QUIF	**Quistinic**	**81.19**	**3**	eP	**P**	**10 18 28.1**	**+0.1**
CFR	**Carcaliu**	**81.20**	**341**	P	**P**	**10 18 28.9**	**+0.8**
HINF	**Hinteralfeld**	**81.24**	**356**	eP	**P**	**10 18 27.9**	**-0.4**
MLR	**Muntele Rosu**	**81.33**	**343**	P	**P**	**10 18 30.7**	**+1.9**
MLR	**Muntele Rosu**	**81.33**	**343**	P	**P**	**10 18 30.4**	**+1.6**
	comp=Z,45nm,1.2s,mb5.3,baz=147,slow=2.5,SNR=26						
GNI	**Garni**	**81.37**	**328**	eP	**P**	**10 18 30.1**	**+1.0**
GNI				pmax	pmax		
	comp=Z,39nm,1.6s						
GNI	**Garni**	**81.37**	**328**	P	**P**	**10 18 30.4**	**+1.3**
	comp=Z,2.1nm,0.4s,mb4.4,baz=188,slow=3.4,SNR=4.5						
GNI				LR	LR	10 59 35.4	
	comp=Z,312nm,18.5s,MS4.7,baz=210,slow=39						
GNI	**Garni**	**81.37**	**328**	eP	**P**	**10 18 30.1**	**+1.0**
	comp=Z,39nm,1.6s,mb5.1						
MOTA	**Moosalm**	**81.46**	**353**	⇑iP	**P**	**10 18 30.1**	**+0.7**
	comp=Z,8.7nm,1.2s,mb4.6						
MOTA	**Moosalm**	**81.46**	**353**	⇑iP	**P**	**10 18 30.1**	**+0.7**
MOTA				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
KBA	**Koelnbreinsper**	**81.54**	**352**	⇑iP	**P**	**10 18 30.9**	**+1.1**
	comp=Z,49nm,1.1s,mb5.3						
KBA	**Koelnbreinsper**	**81.54**	**352**	⇑iP	**P**	**10 18 30.9**	**+1.1**
KBA				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.3						
SNX	**Sinaia**	**81.54**	**343**	P	**P**	**10 18 31.7**	**+1.8**
SQTA	**Sankt Quirin**	**81.58**	**353**	⇑iP	**P**	**10 18 30.6**	**+0.6**
	comp=Z,16nm,1.2s,mb4.8						
SQTA	**Sankt Quirin**	**81.58**	**353**	⇑iP	**P**	**10 18 30.6**	**+0.6**
SQTA				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
MTUR	**Matau**	**81.75**	**343**	P	**P**	**10 18 32.9**	**+1.9**
PERS	**Pernice**	**81.80**	**350**	i P	**P**	**10 18 31.9**	**+0.7**
WRAB	**Tennant Creek**	**81.84**	**224**	eP	**P**	**10 18 30.6**	**-1.3**
WRA	**Warramunga Arr**	**81.85**	**224**	P	**P**	**10 18 31.0**	**-1.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**81.85**	**224**	P	**P**	**10 18 31.0**	**-1.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=31,slow=5.9,SNR=16						
BZS	**Buzias**	**81.95**	**346**	P	**P**	**10 18 32.3**	**+0.3**
OBKA	**Obir**	**81.99**	**351**	⇑iP	**P**	**10 18 32.7**	**+0.5**
	comp=Z,16nm,0.8s,mb5.0						
SSF	**Saint Saulge**	**82.10**	**358**	eP	**P**	**10 18 32.8**	**+0.1**
SSF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
SSF	**Saint Saulge**	**82.10**	**358**	eP	**P**	**10 18 32.8**	**+0.1**
	comp=Z,20nm,1.1s,mb5.0						
DAVOX	**Davos**	**82.11**	**354**	P	**P**	**10 18 33.2**	**+0.4**
	comp=Z,10nm,1.0s,mb4.7,baz=313,slow=4.3,SNR=6.7						
ROBS	**Robic**	**82.35**	**351**	eP	**P**	**10 18 33.4**	**-0.7**
AVF	**Avril sur Loir**	**82.37**	**358**	⇑iP	**P**	**10 18 34.3**	**+0.2**
	comp=Z,28nm,1.0s,mb4.8						
AVF	**Avril sur Loir**	**82.37**	**358**	⇑iP	**P**	**10 18 34.3**	**+0.2**
AVF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CABF	**La Chapelle**	**82.48**	**357**	eP	**P**	**10 18 35.1**	**+0.4**
	comp=Z,78nm,1.4s,mb5.2						
CABF	**La Chapelle**	**82.48**	**357**	eP	**P**	**10 18 35.1**	**+0.4**
CABF				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.1						
SMF	**Signal de Mont**	**82.51**	**358**	⇑iP	**P**	**10 18 35.0**	**+0.2**
	comp=Z,39nm,0.9s,mb5.1						
SMF	**Signal de Mont**	**82.51**	**358**	⇑iP	**P**	**10 18 35.0**	**+0.2**
SMF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
MFF	**Saint Martin d**	**82.57**	**1**	⇑iP	**P**	**10 18 35.4**	**+0.2**
	comp=Z,34nm,1.0s,mb5.0						
MFF	**Saint Martin d**	**82.57**	**1**	⇑iP	**P**	**10 18 35.4**	**+0.2**
MFF				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
BGF	**Bois d’Agland**	**82.61**	**359**	⇑iP	**P**	**10 18 35.6**	**+0.2**
	comp=Z,20nm,0.9s,mb4.9						
BGF	**Bois d’Agland**	**82.61**	**359**	⇑iP	**P**	**10 18 35.6**	**+0.2**
BGF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VISS	**Visnje**	**82.65**	**350**	eP	**P**	**10 18 37.1**	**+1.5**
TCF	**Toulx Ste Croi**	**82.89**	**359**	⇑iP	**P**	**10 18 36.8**	**0.0**
	comp=Z,20nm,1.0s,mb4.8						
TCF	**Toulx Ste Croi**	**82.89**	**359**	⇑iP	**P**	**10 18 36.8**	**0.0**
TCF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
BOJS	**Bojanci**	**82.91**	**350**	eP	**P**	**10 18 37.3**	**+0.4**
LPL	**La Plagne**	**83.54**	**356**	eP	**P**	**10 18 40.4**	**+0.4**
LPG	**La Plagne**	**83.56**	**356**	eP	**P**	**10 18 40.9**	**+0.8**
DIVS	**Divcibare**	**83.68**	**346**	⇓iP	**P**	**10 18 41.0**	**+0.3**
RJF	**Les Rejaudoux**	**83.88**	**360**	eP	**P**	**10 18 42.1**	**+0.4**
	comp=Z,49nm,1.2s,mb5.2						
RJF				eR			
	comp=Z,208nm,22.8s						
RJF	**Les Rejaudoux**	**83.88**	**360**	eP	**P**	**10 18 42.1**	**+0.4**
RJF				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.2						
RJF				MLR	MLR		
	comp=Z,210nm,22.8s,MS4.5						
BNI	**Bardonecchia**	**84.01**	**356**	P	**P**	**10 18 44.5**	**+2.1**
BNI				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.1						
BNI	**Bardonecchia**	**84.01**	**356**	eP	**P**	**10 18 42.2**	**-0.1**
	comp=Z,18nm,1.1s,mb5.1						
BOB	**Bobbio (Coli)**	**84.14**	**354**	eP	**P**	**10 18 44.2**	**+1.1**
ORIF	**Oris-en-Rattie**	**84.17**	**357**	⇑iP	**P**	**10 18 44.3**	**+1.1**
	comp=Z,40nm,1.2s,mb5.1						
ORIF				eR			
	comp=Z,189nm,21.2s						
HYB	**Hyderabad**	**84.23**	**291**	i P	**P**	**10 18 44.5**	**+0.4**
LFF	**La Frestale**	**84.24**	**0**	eP	**P**	**10 18 44.1**	**+0.6**
	comp=Z,105nm,1.1s,mb5.6						
LFF	**La Frestale**	**84.24**	**0**	eP	**P**	**10 18 44.1**	**+0.6**
LFF				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.6						
CAF	**Calviac**	**84.25**	**359**	⇑iP	**P**	**10 18 44.3**	**+0.7**
	comp=Z,40nm,1.1s,mb5.2						
CAF	**Calviac**	**84.25**	**359**	⇑iP	**P**	**10 18 44.3**	**+0.7**
CAF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
VIVF	**Saint-Julien-l**	**84.28**	**357**	eP	**P**	**10 18 44.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**84.32**	**232**	eP	**P**	**10 18 44.5**	**0.0**
	comp=Z,8.4nm,0.9s,mb4.9						
MBDF	**Montbardon**	**84.33**	**356**	eP	**P**	**10 18 45.2**	**+1.2**
	comp=Z,25nm,0.9s,mb5.0						
MBDF	**Montbardon**	**84.33**	**356**	eP	**P**	**10 18 45.2**	**+1.2**
MBDF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
MALT	**Malatya**	**85.06**	**331**	eP	**P**	**10 18 48.5**	**+0.7**
MALT				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.2						
MALT	**Malatya**	**85.06**	**331**	eP	**P**	**10 18 48.5**	**+0.7**
	comp=Z,23nm,1.1s,mb5.2						
LASF	**Ste Croix**	**85.08**	**358**	⇑iP	**P**	**10 18 48.6**	**+0.9**
	comp=Z,88nm,1.4s,mb5.4						
BRTR	**Keskin Array B**	**85.09**	**335**	P	**P**	**10 18 48.1**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRTR	**Keskin Array B**	**85.09**	**335**	P	**P**	**10 18 48.0**	**+0.1**
	comp=Z,9.8nm,0.8s,mb5.0,baz=45,slow=3.5,SNR=41						
SMRF	**Simiane la Rot**	**85.13**	**357**	eP	**P**	**10 18 49.3**	**+1.3**
	comp=Z,40nm,1.1s,mb5.2						
SBF	**Sospel**	**85.16**	**355**	eP	**P**	**10 18 48.5**	**+0.4**
	comp=Z,94nm,0.9s,mb5.6						
SBF	**Sospel**	**85.16**	**355**	eP	**P**	**10 18 48.5**	**+0.4**
SBF				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.6						
ASAR	**Alice Springs**	**85.32**	**222**	P	**P**	**10 18 49.4**	**0.0**
	comp=Z,4.0nm,1.2s,mb4.4,baz=25,slow=5.2,SNR=12						
SNTG	**Esanatoglia**	**85.37**	**351**	eP	**P**	**10 18 50.1**	**+0.9**
FRF	**La Foret Royal**	**85.50**	**356**	eP	**P**	**10 18 50.1**	**+0.3**
	comp=Z,113nm,1.3s,mb5.5						
FRF	**La Foret Royal**	**85.50**	**356**	eP	**P**	**10 18 50.1**	**+0.3**
FRF				pmax	pmax		
	comp=Z,57nm,1.3s,mb5.5						
GRFL	**Gerfalco**	**85.64**	**353**	eP	**P**	**10 18 50.7**	**+0.2**
LMR	**La Mourre**	**85.73**	**356**	eP	**P**	**10 18 51.4**	**+0.4**
	comp=Z,54nm,1.1s,mb5.4						
LMR	**La Mourre**	**85.73**	**356**	eP	**P**	**10 18 51.4**	**+0.4**
LMR				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.4						
NRCA	**Norcia**	**85.77**	**351**	eP	**P**	**10 18 52.6**	**+1.4**
MTLF	**Montolieu**	**85.83**	**359**	eP	**P**	**10 18 52.3**	**+0.8**
	comp=Z,98nm,1.4s,mb5.5						
MTLF	**Montolieu**	**85.83**	**359**	eP	**P**	**10 18 52.3**	**+0.8**
MTLF				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.5						
SJPF	**Ste Jean**	**86.05**	**2**	eP	**P**	**10 18 53.4**	**+0.9**
	comp=Z,13nm,0.8s,mb4.9						
SJPF	**Ste Jean**	**86.05**	**2**	eP	**P**	**10 18 53.4**	**+0.9**
SJPF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
EPF	**Esparros**	**86.15**	**1**	eP	**P**	**10 18 53.0**	**0.0**
	comp=Z,21nm,1.1s,mb5.0						
EPF	**Esparros**	**86.15**	**1**	eP	**P**	**10 18 53.0**	**0.0**
EPF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
ETSF	**Etsaut**	**86.27**	**1**	eP	**P**	**10 18 54.6**	**+1.0**
	comp=Z,39nm,1.1s,mb5.2						
ETSF	**Etsaut**	**86.27**	**1**	eP	**P**	**10 18 54.6**	**+1.0**
ETSF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.2						
PGF	**Pioggiola**	**86.38**	**354**	eP	**P**	**10 18 54.6**	**+0.4**
	comp=Z,147nm,1.3s,mb5.8						
PGF	**Pioggiola**	**86.38**	**354**	eP	**P**	**10 18 54.6**	**+0.4**
PGF				pmax	pmax		
	comp=Z,74nm,1.3s,mb5.8						
PTQR	**Pietraquaria**	**86.54**	**351**	eP	**P**	**10 18 56.1**	**+1.2**
ESDC	**Sonseca Array**	**89.39**	**4**	P	**P**	**10 19 08.4**	**-0.3**
	comp=Z,1.6nm,0.5s,mb4.6,baz=357,slow=4.3,SNR=13						
SJG	**San Juan**	**89.48**	**61**	eP	**P**	**10 19 12.1**	**+2.5**
SJG				pmax	pmax		
	comp=Z,16nm,0.3s						
SJG	**San Juan**	**89.48**	**61**	P	**P**	**10 19 10.9**	**+1.3**
	comp=Z,18nm,0.2s,mb6.0,baz=331,slow=13,SNR=5.4						
SJG	**San Juan**	**89.48**	**61**	P	**P**	**10 19 11.3**	**+1.8**
	comp=Z,16nm,0.3s,mb5.8						
STKA	**Stephens Creek**	**89.75**	**213**	P	**P**	**10 19 10.1**	**-0.5**
	comp=Z,6.1nm,1.1s,mb4.8,baz=355,slow=12,SNR=3.8						
RPZ	**Rata Peaks**	**94.94**	**187**	LR	LR	10 54 39.9	
	comp=Z,364nm,21.1s,MS4.8,baz=20,slow=31						
DBIC	**Dimbokro**	**122.13**	**7**	PKIKP	PKPdf	10 25 06.6	+0.5
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.3s						
DBIC	**Dimbokro**	**122.13**	**7**	PKP	PKPdf	10 25 06.6	+0.5
	comp=Z,1.5nm,0.3s,baz=325,slow=2.1,SNR=13						
DBIC	**Dimbokro**	**122.13**	**7**	PKP	PKPdf	10 25 06.6	+0.5
PLCA	**Paso Flores**	**130.96**	**107**	PKIKP	PKPdf	10 25 22.9	+0.6
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	**Paso Flores**	**130.96**	**107**	PKP	PKPdf	10 25 22.9	+0.5
	comp=Z,2.1nm,0.9s,baz=269,slow=4.6,SNR=4.7						

IGQ 18 10:15:46.2,1.52S×81.40W,h6^{km}±6^{km},mb4.0,2C-1D,
Error ellipse: s-maj=10.8km s-min=3.2km az=12.7,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.78**	**148**	P	Pb	10 16 00.8	-0.9
SALI				S	Sg	10 16 10.9	-1.3
HOJA	**Cerro de Hojas**	**0.97**	**61**	⇓P	Pb	10 16 04.2	-0.9
HOJA				S	Sb	10 16 17.5	-0.4
IGUA	**Igualata**	**2.76**	**89**	P	Pn	10 16 32.5	+0.7
PISA	**Pisayambo**	**3.05**	**81**	P	Pn	10 16 38.4	+2.5
JUA2	**San Juan 2**	**3.08**	**65**	P	Pn	10 16 36.5	+0.1
TERV	**Terraza Guagua**	**3.10**	**64**	P	Pn	10 16 37.8	+1.1
PINO	**Pino**	**3.10**	**64**	P	Pn	10 16 39.0	+2.3
VC1	**Cotopaxi 1**	**3.12**	**74**	P	Pn	10 16 39.9	+3.0
TAMB	**Tambo**	**3.14**	**75**	⇑P	Pn	10 16 39.3	+2.1
YANA	**Yana**	**3.15**	**64**	P	Pn	10 16 37.6	+0.2
CAYR	**Refugio Cayamb**	**3.72**	**66**	P	Pn	10 16 48.6	+3.2
ECEN	**Cerro Negro**	**4.15**	**56**	⇑P	Pn	10 16 53.6	+2.2

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*NEIC **18** 10:16:44.2,37.46S×176.86E,h167^{km},After WEL.*
WEL 18 10:16:44.3±0.3**,37.46S×176.85E,h167^{km}±3^{km},ML4.3**/14,
3C,Error ellipse: s-maj=1.9km s-min=1.7km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.28**	**104**	PN	P	10 17 07.1	-0.2
MYRZ	**Mayor Island**	**0.52**	**290**	PN	P	10 17 07.6	-0.5
TGRZ	**Tauranga**	**0.54**	**240**	P	P	10 17 07.7	-0.5
TGRZ				S	S	10 17 26.0	-0.6
TGRZ	**Tauranga**	**0.54**	**240**	PN	P	10 17 07.7	-0.6
TGRZ				SN	S	10 17 26.0	-0.6
MARZ	**Manawahe**	**0.55**	**195**	P	P	10 17 07.9	-0.4
MARZ	**Manawahe**	**0.55**	**195**	PN	P	10 17 07.9	-0.4
EDRZ	**Edgecumbe**	**0.65**	**188**	P	P	10 17 08.7	-0.1
EDRZ	**Edgecumbe**	**0.65**	**188**	PN	P	10 17 08.7	-0.1
LIRZ	**Lichensteins R**	**0.66**	**214**	P	P	10 17 08.5	-0.3
LIRZ	**Lichensteins R**	**0.66**	**214**	PN	P	10 17 08.5	-0.3
TAZ	**Tarawera**	**0.82**	**199**	P	P	10 17 10.0	+0.3
TAZ	**Tarawera**	**0.82**	**199**	PN	P	10 17 10.0	+0.3
URZ	**Urewera**	**0.83**	**166**	P	P	10 17 09.3	-0.5
URZ	**Urewera**	**0.83**	**166**	⇑PN	P	10 17 09.3	-0.5
URZ				SN	S	10 17 28.2	-1.2
MWZ	**Matawai**	**1.03**	**149**	P	P	10 17 10.8	-0.3
MWZ	**Matawai**	**1.03**	**149**	⇑PN	P	10 17 10.8	-0.3
PATZ	**Paeroa**	**1.03**	**207**	P	P	10 17 11.5	+0.3
PATZ	**Paeroa**	**1.03**	**207**	PN	P	10 17 11.5	+0.3
KUZ	**Kuaotunu**	**1.15**	**308**	P	P	10 17 11.5	-0.7
KUZ	**Kuaotunu**	**1.15**	**308**	PN	P	10 17 11.5	-0.7
MXZ	**Matakaoa Point**	**1.16**	**96**	P	P	10 17 12.6	+0.2
MXZ	**Matakaoa Point**	**1.16**	**96**	PN	P	10 17 12.6	+0.2
PUZ	**Puketiti**	**1.27**	**119**	PN	P	10 17 12.9	-0.5
MTAZ	**Motutapu**	**1.69**	**293**	P	P	10 17 17.3	-0.2
MTAZ	**Motutapu**	**1.69**	**293**	PN	P	10 17 17.3	-0.2
KNZ	**Kokohu**	**1.69**	**158**	P	P	10 17 17.1	-0.4
KNZ	**Kokohu**	**1.69**	**158**	PN	P	10 17 17.1	-0.4
BKZ	**Black Stump Fm**	**1.73**	**189**	P	P	10 17 17.1	-0.8
BKZ	**Black Stump Fm**	**1.73**	**189**	PN	P	10 17 17.0	-1.0
BKZ				SN	S	10 17 42.6	-1.3
KAAZ	**Kauri Point**	**1.83**	**290**	P	P	10 17 18.9	-0.1
KAAZ	**Kauri Point**	**1.83**	**290**	PN	P	10 17 18.9	-0.1
MGZ	**Maungaku**	**1.85**	**213**	P	P	10 17 19.4	+0.1
MGZ	**Maungaku**	**1.85**	**213**	PN	P	10 17 19.4	+0.2
WTAZ	**Waiatarua**	**1.89**	**285**	P	P	10 17 19.3	-0.4
WTAZ	**Waiatarua**	**1.89**	**285**	PN	P	10 17 19.3	-0.3
HIZ	**Hauiti**	**1.90**	**236**	P	P	10 17 19.9	+0.2
HIZ	**Hauiti**	**1.90**	**236**	PN	P	10 17 19.9	+0.2
WTVZ	**West Tongariro**	**1.93**	**211**	P	P	10 17 19.8	-0.3
WTVZ	**West Tongariro**	**1.93**	**211**	PN	P	10 17 19.8	-0.2
OTVZ	**Oturere**	**1.94**	**208**	PN	P	10 17 20.2	0.0
NGZ	**Ngauruhoe**	**1.98**	**209**	P	P	10 17 20.4	-0.2
NGZ	**Ngauruhoe**	**1.98**	**209**	PN	P	10 17 20.4	-0.2
CNZ	**Chateau**	**2.02**	**210**	P	P	10 17 21.1	0.0
CNZ	**Chateau**	**2.02**	**210**	PN	P	10 17 21.1	0.0
WPVZ	**Whakapapa**	**2.02**	**210**	P	P	10 17 21.1	0.0
WPVZ	**Whakapapa**	**2.02**	**210**	PN	P	10 17 21.1	-0.1
TUVZ	**Tukino**	**2.04**	**207**	P	P	10 17 21.0	-0.3
TUVZ	**Tukino**	**2.04**	**207**	⇑PN	P	10 17 21.0	-0.3
FWVZ	**Far West T-bar**	**2.06**	**209**	PN	P	10 17 21.5	-0.1
DRZ	**Dome Shelter**	**2.08**	**209**	P	P	10 17 21.7	-0.1
DRZ	**Dome Shelter**	**2.08**	**209**	PN	P	10 17 21.7	0.0
MOVZ	**Moawhango**	**2.13**	**204**	P	P	10 17 21.2	-1.2

MOVZ	**Moawhango**	2.13	204	PN	P	10 17 21.2	-1.2
VRZ	**Vera Road**	2.34	224	*e*P	P	10 17 25.0	+0.1
VRZ	**Vera Road**	2.34	224	PN	P	10 17 25.0	+0.1
WCZ	**Waipu Caves**	2.52	306	P	P	10 17 26.4	-0.7
WCZ	**Waipu Caves**	2.52	306	PN	P	10 17 26.4	-0.7
PWZ	**Pawanui**	2.57	180	P	P	10 17 26.3	-1.4
PWZ	**Pawanui**	2.57	180	PN	P	10 17 26.3	-1.4
TSZ	**Takapari Road**	2.69	195	*e*P	P	10 17 27.2	-2.0
WAZ	**Wanganui**	2.72	212	*e*P	P	10 17 28.5	-1.0
BFZ	**Birch Farm**	3.25	188	P	P	10 17 33.6	-2.6
MRZ	**Mangatainoka R**	3.35	197	P	P	10 17 34.4	-3.1
KIW	**Kapiti Island**	3.72	203	P	P	10 17 38.6	-3.6
MTW	**Mount Morrison**	3.84	195	P	P	10 17 40.0	-3.8
CAW	**Cannon Point**	3.90	200	P	P	10 17 40.8	-3.7
MRW	**Makara Radio**	4.12	203	P	P	10 17 43.5	-3.8
MSWZ	**Moikau Station**	4.14	197	P	P	10 17 43.6	-4.0
WEL	**Wellington**	4.15	202	P	P	10 17 44.1	-3.6
BHW	**Baring Head**	4.23	201	P	P	10 17 44.7	-4.1
NNZ	**Nelson**	4.62	215	*e*P	P	10 17 49.9	-4.0
QRZ	**Quartz Range**	4.75	224	*e*P	P	10 17 51.3	-4.3
BSWZ	**Blackbirch Sta**	4.83	207	P	P	10 17 53.1	-3.5
THZ	**Tophouse**	5.27	214	*e*P	P	10 17 58.1	-4.3
KHZ	**Kahutara**	5.57	206	*e*P	P	10 18 01.4	-4.9
LTZ	**Lake Taylor**	6.37	212	*e*P	P	10 18 12.0	-4.9
MQZ	**McQueen's Vall**	7.01	206	*e*P	P	10 18 19.4	-6.1

IGQ 18 10:23:30.1, 1.87S×81.59W, h12^{km}±13^{km}, mb4.1, 1C-3D, Error ellipse: s-maj=16.6km s-min=10.0km az=4.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	0.67	118	P	Pb	10 23 50.1	+6.8
HOJA	**Cerro de Hojas**	1.32	52	⇑P	Pb	10 23 51.8	-2.6
IGUA	**Igualata**	2.97	83	P	Pn	10 24 19.2	+1.1
ARRY	**Arrayan**	3.15	83	P	Pn	10 24 22.0	+1.4
ARRY				S	Sn	10 24 57.3	-1.2
ULBA	**Ulba**	3.20	83	P	Pn	10 24 23.5	+2.2
PISA	**Pisayambo**	3.30	76	P	Pn	10 24 24.1	+1.4
JUA2	**San Juan 2**	3.41	61	P	Pn	10 24 25.4	+1.2
VC1	**Cotopaxi 1**	3.41	69	P	Pn	10 24 26.7	+2.5
TAMB	**Tambo**	3.42	70	⇓P	Pn	10 24 25.7	+1.2
TERV	**Terraza Guagua**	3.42	61	P	Pn	10 24 25.4	+1.0
TERV				S	Sn	10 25 05.2	-0.2
PINO	**Pino**	3.43	60	⇓P	Pn	10 24 24.8	+0.3
YANA	**Yana**	3.48	60	⇓P	Pn	10 24 25.8	+0.5
ANTI	**Antisana**	3.70	68	P	Pn	10 24 31.0	+2.6
COTA	**Cotacachi**	3.92	56	P	Pn	10 24 33.9	+2.4
CAYR	**Refugio Cayamb**	4.04	62	P	Pn	10 24 36.3	+3.1
CAYR				S	Sn	10 25 23.6	+2.6
CAYA	**Cayambe**	4.08	62	P	Pn	10 24 36.6	+2.8
ECEN	**Cerro Negro**	4.50	53	P	Pn	10 24 41.9	+2.2
ECEN				S	Sn	10 25 31.7	-0.9

IDC 18 10:27:00.8±3.4**, 22.36S×177.68W, mb4.0**/6**, mb1 4.3**/6**, mb1mx4.2**/15**, mbtmp4.0**/6**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.8**/22**, Error ellipse: s-maj=286.7km s-min=23.0km az=159.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	44.41	259	P	P	10 35 13.7	-1.6
	2.3nm,0.9s,baz=87,slow=8.3,SNR=15						
ASAR				LR	LR	10 53 45.2	
	comp=Z,116nm,18.9s,baz=144,slow=36						
WRA	**Warramunga Arr**	44.67	264	P	P	10 35 15.4	-2.0
	1.6nm,0.8s,baz=100,slow=8.1,SNR=9.5						
NVAR	**Mina Array Bea**	82.17	43	P	P	10 39 23.9	-1.1
	0.7nm,0.9s,baz=206,slow=6.3,SNR=4.7						
TXAR	**Lajitas Array**	87.80	57	P	P	10 39 52.1	-1.4
	0.9nm,0.9s,baz=211,slow=7.3,SNR=11						
ANMO	**Albuquerque**	88.33	51	P	P	10 39 55.0	-0.8
	0.8nm,0.9s,baz=217,slow=1.1,SNR=4.1						
PDAR	**Pinedale Array**	90.10	43	P	P	10 40 03.0	-1.1
	1.4nm,1.1s,baz=225,slow=2.1,SNR=6.5						
FINES	**FINESS Array B**	137.63	343	PKP	PKPdf	10 46 26.2	-2.1
	5.1nm,0.9s,baz=12,slow=5.5,SNR=5.7						

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*GUC **18** 10:32:21.8±0.9, 34.65S×69.81W, h1^{km}±9^{km}, MD4.4, ML3.3*

*NEIC **18** 10:32:21.8, 34.65S×69.81W, h1^{km}, ML3.3(GUC), After GUC.*

*IDC **18** 10:32:30.5±4.6, 34.60S×70.57W, h76^{km}±41^{km}, mb1 3.4/2, mb1mx3.4/14, mbtmp3.5/2, ML3.4/2, Error ellipse: s-maj=181.0km s-min=35.4km az=98.0*

ISC 18 10:32:20.2±0.9**, 34.72S**±0.04×**69.73W**±0.06**, h1^{km}, n18, σ0^{s}78**/29**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACH	**El Canelo**	0.94	309	⇓*i*P	**Pb**	**10 32 38.3**	**-0.6**
CACH				*i* S	**Sg**	**10 32 51.2**	**-0.2**
LMEL	**Las Melosas**	0.95	335	⇑*i*P	**Pb**	**10 32 38.8**	**-0.3**
LMEL				*i* S	**Sg**	**10 32 52.0**	**+0.2**
LMEL				AMP		10 32 54.2	
	comp=E,2μm,0.7s						
SFDO	**San Fernando**	1.06	275	⇑*i*P	**Pb**	**10 32 40.7**	**-0.4**
SFDO				*i* S	**Sb**	**10 32 55.5**	**+0.1**
CHCH	**Chadas Angostu**	1.09	315	*e*P	**Pb**	**10 32 41.0**	**-0.6**
CHCH				*i* S	**Sb**	**10 32 55.5**	**-0.6**
PCH	**Pirque**	1.27	329	*e*P	**Pb**	**10 32 44.5**	**-0.2**
PCH				*i* S	**Sb**	**10 33 00.7**	**-0.6**
ANTU	**Antumapu**	1.37	326	*e*P	**Pb**	**10 32 46.3**	**0.0**
ANTU				*i* S	**Sb**	**10 33 05.0**	**+0.9**
TACH	**Talagante**	1.46	316	*e*P	**Pn**	**10 32 47.1**	**-0.6**
TACH				*i* S	**Sb**	**10 33 06.0**	**-0.7**
FCH	**Farellones**	1.46	341	⇑*i*P	**Pn**	**10 32 48.0**	**+0.2**
FCH				*i* S	**Sb**	**10 33 07.2**	**+0.4**
FCH				AMP		10 33 11.1	
	comp=N,506nm,0.5s						
CLCH	**Cerro Calan**	1.48	333	*e*P	**Pn**	**10 32 48.2**	**+0.2**
CLCH				*i* S	**Sb**	**10 33 07.4**	**+0.1**
CLCH				AMP		10 33 12.7	
	comp=E,1μm,0.6s						
RCDM	**Rinconada Maip**	1.52	324	*e*P	**Pn**	**10 32 48.8**	**+0.3**
RCDM				*i* S	**Sb**	**10 33 09.1**	**+0.7**
RCDM				AMP		10 33 12.5	
	comp=E,903nm,0.5s						
CCHI	**Chillan**	2.68	225	*e*P	**Pn**	**10 33 07.3**	**+2.1**
ZON	**Zonda**	3.28	16	*e*P	**Pn**	**10 33 14.0**	**+0.2**
ZON				*e*S	**Sn**	**10 34 04.0**	**+10**
PLCA	**Paso Flores**	6.04	186	P	**Pn**	**10 33 58.5**	**+5.6**
	comp=E,0.2nm,0.3s,slow=16,SNR=7.1						
PLCA				Lg		10 35 29.9	
	comp=E,1.4nm,0.3s,baz=109,slow=18,SNR=5.0						
PLCA	**Paso Flores**	6.04	186	P	**Pn**	**10 33 58.5**	**+5.6**
PLCA				Lg		10 35 29.9	
TRQA	**Tornquist**	7.08	120	*e*Pn	**Pn**	**10 34 04.5**	**-3.0**
	comp=E,39nm,1.0s						
TRQA				*e*Pg	**Pg**	**10 34 33.7**	**-7.9**
TRQA				*e*Sg	**Sg**	**10 36 04.7**	**-11**
LPAZ	**La Paz**	18.41	5	P	**P**	**10 36 39.8**	**+1.4**
	comp=E,0.1nm,0.3s,baz=174,slow=10,SNR=3.8						
WRA	**Warramunga Arr**	121.02	207	PKP	PKPdf	10 51 14.2	-2.9
	comp=E,0.4nm,0.5s,baz=164,slow=1.6,SNR=10						
BVAR	**Borovoye Array**	146.47	45	PKPbc	PKPbc	10 52 02.7	+0.4
	comp=E,0.8nm,0.5s,baz=270,slow=2.9,SNR=5.2						

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*IDC **18** 10:33:33.7±0.5, 51.25N×179.02W, mb4.8/31, mb1 4.9/32, mb1mx4.9/34, mbtmp4.8/32, ML3.9/1, MS4.3/21, Ms1 4.3/21, ms1mx4.1/34, Error ellipse: s-maj=15.4km s-min=9.5km az=160.0*

*MOS **18** 10:33:37.6±0.9, 51.25N×178.87W, h33^{km}, mb5.3/98, Error ellipse: s-maj=7.3km s-min=4.2km az=88.6*

*BJI **18** 10:33:37.8, 51.45N×179.10W, h33^{km}, mB5.2, mb5.0, Ms4.8, Msz4.4*

*NEIC **18** 10:33:40.1±0.4, 51.19N×178.88W, h46^{km}±3^{km}, mb5.2/141, MS4.4/17, ML5.2(AEIC), Error ellipse: s-maj=4.7km s-min=2.2km az=185.0*

*HRVD **18** 10:33:40.1±0.5, 51.06N×178.71W, h33^{km}±1^{km}, MW5.0/47, Centroid moment Tensor Solution. LP body waves: s33,c47;Mantle waves: s47,c72; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.11±.19; M$_{\theta\theta}$-2.92±.15; M$_{\phi\phi}$-0.19±.13; M$_{r\theta}$2.26±.20; M$_{\theta\phi}$-1.08±.10; M$_{\phi r}$1.21±.17; Best double couple: M$_0$4.103×10^{16} NP1:φ$_s$257°, δ26°, λ101°. NP2:φ$_s$65°, δ64°, λ85°. Principal axes: T 4.027, Plg70°, Azm324°; N .152, Plg5°, Azm67°; P -4.18, Plg19°, Azm159°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 18 10:33:39.2±0.6**, 51.20N**±0.04×**178.82W**±0.03**, h50^{km}±4^{km}, h51^{km}±3.4^{km}:pP-P, n530, σ0^{s}98**/530**, mb5.1**/184**, MS4.4**/49**, 24C-8D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	1.14	60	P	**P**	**10 33 59.2**	**+0.1**
KIWB	**Kanaga Island**	1.23	57	P	**P**	**10 34 00.7**	**+0.3**
KIKV	**Kanaga Island**	1.23	56	P	**P**	**10 34 00.8**	**+0.4**
ADAG	**Mount Adagdak**	1.59	60	P	**P**	**10 34 06.0**	**+0.5**
ETKA	**Kagalaska Isla**	1.65	65	P	**P**	**10 34 06.5**	**+0.2**
ETKA				S	**S**	**10 34 31.0**	**+4.6**
GSTD	**Great Sitkin T**	1.88	62	P	**P**	**10 34 10.7**	**+1.2**
GSTD				S	**S**	**10 34 34.7**	**+2.7**
GSMY	**Great Sitkin M**	1.92	63	P	**P**	**10 34 11.1**	**+1.0**
GSTR	**Great Sitkin T**	1.94	61	P	**P**	**10 34 11.5**	**+1.1**
GSIG	**Igitkin Island**	1.97	65	P	**P**	**10 34 11.8**	**+1.0**
ATKA	**Atka Island**	3.05	69	P	**P**	**10 34 26.7**	**+0.5**
ATKA				S	**S**	**10 35 05.2**	**+3.6**
SMY	**Shemya**	4.64	292	P	**P**	**10 34 48.1**	**-0.5**
SMY				S	**S**	**10 35 43.1**	**+1.3**
FX1	**Attu Island--F**	5.23	292	Pn	**P**	**10 34 54.5**	**-2.3**
	16nm,0.3s,baz=194,slow=6.8,SNR=15						
FX1				Sn	**S**	**10 36 04.2**	**+7.6**
	11nm,0.3s,baz=290,slow=22,SNR=5.7						
FX1				LR	LR	10 36 38.8	
	comp=Z,69nm,19.0s,baz=334,slow=36						
FX1	**Attu Island--F**	5.23	292	*e*Pn	**P**	**10 34 55.1**	**-1.7**
NIKO	**Nikolski**	6.39	70	P	**P**	**10 35 11.5**	**-1.7**
NIKO				S	**S**	**10 36 25.1**	**-0.6**
OKFG	**Magazine Ridge**	7.05	67	P	**P**	**10 35 21.7**	**-0.6**
OKFG				S	**S**	**10 36 40.8**	**-1.1**
SPIA	**Saint Paul Isl**	7.82	37	P	**P**	**10 35 30.7**	**-2.2**
SPIA				S	**S**	**10 36 59.3**	**-1.7**
MSW	**Makushin Switc**	7.82	65	P	**P**	**10 35 31.1**	**-1.9**
MSW				S	**S**	**10 36 58.1**	**-3.1**
UNV	**Unalaska Valle**	7.97	66	P	**P**	**10 35 31.7**	**-3.3**
UNV				S	**S**	**10 37 01.6**	**-3.1**
PET	**Petropavlovsk**	13.95	286	*e*P	**P**	**10 37 03.0**	**+7.4**
PET				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PET				pmax	pmax		
	comp=Z,24nm,1.3s						
PET				MLR	MLR		
	comp=N,400nm,16.0s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
PET				MLR	MLR		
	comp=E,700nm,17.0s						
PET	**Petropavlovsk**	13.95	286	P	**P**	**10 36 52.2**	**-3.4**
	comp=E,46nm,1.3s						
TNA	**Tin City**	15.45	17	*e*P	**P**	**10 37 14.8**	**-0.3**
	comp=E,28nm,1.1s						
SVW2	**Sparrevohn**	16.21	43	*e*P	**P**	**10 37 26.8**	**+2.1**
KDAK	**Kodiak Island**	16.53	56	*e*P	**P**	**10 37 25.8**	**-2.9**
	comp=E,39nm,0.6s						
RSO	**Redoubt South**	17.22	47	*e*P	**P**	**10 37 38.8**	**+1.4**
SPU	**Mount Spurr**	17.80	46	*e*P	**P**	**10 37 46.0**	**+1.4**
BILL	**Bilibino**	18.40	342	*e*P	**P**	**10 37 52.4**	**+0.4**
BILL				pmax	pmax		
	comp=Z,38nm,1.0s						
BILL	**Bilibino**	18.40	342	*e*P	**P**	**10 37 52.4**	**+0.4**
	comp=Z,38nm,0.9s						
SLKM	**Skilak Lake**	18.42	49	*e*P	**P**	**10 37 50.8**	**-1.4**
FIB	**Fire Island**	18.65	47	P	**P**	**10 37 54.7**	**-0.3**
MA2	**Magadan**	19.05	308	*e*P	**P**	**10 38 00.0**	**+0.3**
MA2				pmax	pmax		
	comp=Z,25nm,1.4s						
MA2	**Magadan**	19.05	308	*e*P	**P**	**10 38 00.0**	**+0.3**
	comp=Z,25nm,1.4s						
PMR	**Palmer**	19.26	46	*e*P	**P**	**10 38 03.9**	**+1.9**
PMR				pmax	pmax		
	comp=Z,14nm,0.7s						
PMR	**Palmer**	19.26	46	*e*P	**P**	**10 38 03.9**	**+1.9**
	comp=Z,14nm,0.7s						
SEY	**Seymchan**	19.37	318	*e*P	**P**	**10 38 05.1**	**+1.9**
SEY				pmax	pmax		
	comp=Z,80nm,1.3s						
SEY				pmax	pmax		
	comp=N,30nm,1.0s						
SEY				pmax	pmax		
	comp=E,50nm,1.0s						
IMA	**Indian Mountai**	19.61	31	*e*P	**P**	**10 38 05.9**	**+0.1**
IMA				pmax	pmax		
	comp=Z,114nm,0.9s						
IMA	**Indian Mountai**	19.61	31	*e*P	**P**	**10 38 05.9**	**+0.1**
	comp=Z,114nm,0.9s						
SML	**Sawmill**	19.69	46	P	**P**	**10 38 06.3**	**-0.4**
SML	**Sawmill**	19.69	46	*e*P	**P**	**10 38 04.9**	**-1.8**
MCK	**McKinley**	20.15	40	P	**P**	**10 38 10.1**	**-1.4**
MCK				pmax	pmax		
	comp=Z,15nm,0.7s						
MCK	**McKinley**	20.15	40	*e*P	**P**	**10 38 09.1**	**-2.5**
	comp=Z,15nm,0.7s						
EYAK	**Cordova Ski Ar**	20.57	50	*e*P	**P**	**10 38 15.0**	**-0.8**
DIV	**Divide**	20.68	49	*e*P	**P**	**10 38 16.1**	**-1.0**
	comp=Z,84nm,0.6s						
COLA	**College**	21.06	38	*e*P	**P**	**10 38 21.2**	**+0.3**
COLA				pmax	pmax		
	comp=Z,50nm,0.9s,mb4.8						
COLA	**College**	21.06	38	*e*P	**P**	**10 38 21.2**	**+0.3**
	comp=Z,50nm,0.9s,mb4.8						
THY	**Trims Highway**	21.35	42	*e*P	**P**	**10 38 23.4**	**-0.4**
ILAR	**Eielson Array**	21.39	38	P	**P**	**10 38 22.5**	**-1.7**
ILAR				S	**S**	**10 42 24.7**	**+11**
ILAR				pmax	pmax		
	comp=Z,29nm,1.3s						
ILAR				pmax	pmax		
	comp=N,1.0nm,0.7s						
ILAR	**Eielson Array**	21.39	38	P	**P**	**10 38 22.4**	**-1.8**
	comp=N,29nm,1.3s,mb4.5,baz=242,slow=8.7,SNR=67						
ILAR				S	**S**	**10 42 24.7**	**+11**
	comp=N,1.5nm,0.7s,baz=225,slow=15,SNR=4.8						
ILAR				ScP		10 46 04.9	
	comp=N,0.7nm,0.7s,baz=281,slow=3.4,SNR=3.4						
DAWY	**Dawson**	24.25	43	*e*P	**P**	**10 38 51.5**	**-0.6**
YSS	**Yuzh-Sakhalins**	25.32	276	⇓*i*P	**P**	**10 39 03.2**	**+0.6**
YSS				*e*		10 39 21.0	
YSS				*e*S	**S**	**10 43 30.0**	**+7.3**
YSS				*e*		10 43 47.0	
YSS				pmax	pmax		
	comp=N,40nm,1.1s						
YSS				pmax	pmax		
	comp=E,60nm,1.1s						
YSS				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.1						
YSS				MLR	MLR		
	comp=Z,600nm,22.0s,MS4.1						
YSS	**Yuzh-Sakhalins**	25.32	276	*e*P	**P**	**10 39 02.9**	**+0.3**
	comp=Z,74nm,1.0s,mb5.2						
ASAJ	**Asahikawa**	26.69	270	P	**P**	**10 39 14.3**	**-1.0**
ASAJ				pmax	pmax		
	comp=Z,38nm,1.1s						
ASAJ				MLR	MLR		
	comp=Z,361nm,19.2s						
ASAJ	**Asahikawa**	26.69	270	P	**P**	**10 39 14.3**	**-1.0**
	comp=Z,38nm,1.1s,mb4.8,baz=20,slow=7.7,SNR=10						
ASAJ				LR	LR	10 49 44.9	
	comp=Z,361nm,19.2s,MS3.9,baz=257,slow=37						
INK	**Inuvik**	27.61	35	P	**P**	**10 39 22.7**	**-0.8**
INK						10 42 39.6	
INK				pmax	pmax		
	comp=Z,15nm,1.0s						
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK				MLR	MLR		
	comp=Z,463nm,21.7s						
INK	**Inuvik**	27.61	35	P	**P**	**10 39 22.7**	**-0.8**
	comp=Z,14nm,1.0s,mb4.6,baz=242,slow=8.5,SNR=33						
INK				PcP	PcP	10 42 39.5	-0.7
	comp=Z,5.3nm,0.9s,baz=208,slow=6.4,SNR=3.2						
INK				LR	LR	10 51 25.3	
	comp=Z,463nm,21.7s,MS4.0,baz=111,slow=39						
INK	**Inuvik**	27.61	35	*e*P	**P**	**10 39 22.1**	**-1.4**
	comp=Z,20nm,1.0s,mb4.7						
DLBC	**Dease Lake**	28.47	56	P	**P**	**10 39 31.6**	**+0.4**
	comp=Z,2.3nm,1.0s,baz=262,slow=19,SNR=4.5						
DLBC				LR	LR	10 50 25.2	
	comp=Z,606nm,19.5s,MS4.2,baz=268,slow=35						
TIXI	**Tiksi**	30.79	331	*e*P	**P**	**10 39 53.1**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,1μm,16.0s,MS4.6						
BBB	**Bella Bella**	30.93	68	P	**P**	**10 39 53.8**	**+0.6**
	comp=Z,32nm,0.9s,mb5.2,baz=294,slow=8.3,SNR=6.8						
KLR	**Kul'dur**	31.22	286	*e*P	**P**	**10 39 51.6**	**-4.2**
KLR				MLR	MLR		
	comp=E,900nm,19.0s						
MAJO	**Matsushiro**	33.75	261	PFAKE		10 40 30.0	+12
MAJO				LR	LR		
	comp=Z,480nm,20.0s,MS4.2						
MDJ	**Mudanjiang**	34.59	280	P	**P**	**10 40 23.3**	**-1.7**
MDJ				AP	pP	10 40 36.3	-1.8
MDJ				XP	sP	10 40 42.4	-2.0
MDJ				PP	PP	10 41 41.6	-1.0
MDJ				PCP	PcP	10 42 57.4	-1.6
MDJ				S	**S**	**10 45 49.8**	**0.0**
MDJ				XS		10 46 10.5	
MDJ				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,173nm,4.8s						
MDJ				LR	LR		
	comp=N,182nm,14.2s						
MDJ				LR	LR		
	comp=E,262nm,19.8s						
MDJ				LR	LR		
	comp=Z,393nm,18.4s,MS4.2						
MDJ	**Mudanjiang**	34.59	280	*e*P	**P**	**10 40 22.9**	**-2.1**
	comp=Z,12nm,0.9s,mb4.8						
MDJ				LR	LR		
	comp=Z,471nm,19.0s,MS4.2						
OCWA	**Octopus Mounta**	34.99	74	*e*P	**P**	**10 40 29.8**	**+1.4**
	comp=Z,52nm,0.9s,mb5.5						
YKW3	**Yellowknife Ar**	35.35	46	*e*P	**P**	**10 40 29.9**	**-1.4**
YKA	**Yellowknife Ar**	35.37	46	P	**P**	**10 40 30.4**	**-1.1**
YKA						10 43 00.8	
YKA				pmax	pmax		
	comp=Z,17nm,0.9s						
YKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA				pmax	pmax		
	comp=N,1.0nm,0.8s						
YKA				MLR	MLR		
	comp=Z,664nm,18.8s						
YKA	**Yellowknife Ar**	35.37	46	P	**P**	**10 40 30.4**	**-1.1**
	comp=Z,17nm,0.8s,mb5.0,baz=282,slow=8.3,SNR=166						
YKA				PcP	PcP	10 43 00.8	-0.2
	comp=Z,3.7nm,0.9s,baz=289,slow=2.6,SNR=8.5						
YKA				ScP		10 46 45.8	
	comp=Z,0.8nm,0.8s,baz=287,slow=3.2,SNR=5.2						
YKA				LR	LR	10 54 55.9	
	comp=Z,664nm,18.8s,MS4.4,baz=280,slow=36						
TBM	**Table Mountain**	37.41	73	P	**P**	**10 40 50.0**	**+1.1**
SSOR	**Sweet Springs**	37.41	77	P	**P**	**10 40 51.0**	**+2.1**
WTV	**Waterville**	37.55	72	P	**P**	**10 40 50.7**	**+0.7**
EBG	**Ellensburg**	37.55	73	P	**P**	**10 40 51.4**	**+1.4**
CN2	**Changchun**	37.57	281	*e*P	**P**	**10 40 48.9**	**-1.3**
CN2				*e*AP	pP	10 41 03.0	-0.4
CN2				*e*S	**S**	**10 46 32.3**	**-3.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CN2				LR	LR		
	comp=N,500nm,18.0s,MS4.5						
CN2				LR	LR		
	comp=E,500nm,18.0s,MS4.5						
CN2				LR	LR		
	comp=Z,490nm,21.0s,MS4.3						
VFP	**Flag Point**	37.79	76	P	**P**	**10 40 53.5**	**+1.4**
CBIJ	**Chichi jima**	37.99	246	LR	LR	10 53 00.9	
	comp=Z,540nm,20.4s,MS4.3,baz=104,slow=31						
BOD	**Bodaibo**	38.08	307	*e*P	**P**	**10 40 51.7**	**-2.6**
BOD				*e*		10 46 47.1	
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
CROR	**Criterion Ridg**	38.25	76	P	**P**	**10 40 57.3**	**+1.4**
HIA	**Hailar**	38.34	292	P	**P**	**10 40 55.6**	**-1.0**
HIA				pmax	pmax		
	comp=Z,27nm,1.1s						
HIA	**Hailar**	38.34	292	*e*P	**P**	**10 40 55.1**	**-1.5**
	comp=Z,28nm,1.1s,mb4.9						
OD2	**Odessa Site #2**	38.43	71	P	**P**	**10 40 57.9**	**+0.5**
EDM	**Edmonton**	38.91	61	P	**P**	**10 41 00.9**	**-0.4**
EDM	**Edmonton**	38.91	61	*e*P	**P**	**10 41 00.5**	**-0.8**
YBH	**Yreka Blue Hor**	38.92	82	P	**P**	**10 41 03.9**	**+2.4**
YBH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YBH	**Yreka Blue Hor**	38.92	82	P	**P**	**10 41 03.6**	**+2.1**
	comp=Z,9.5nm,0.9s,mb4.5,baz=281,slow=4.7,SNR=20						
YBH	**Yreka Blue Hor**	38.92	82	*e*P	**P**	**10 41 02.6**	**+1.1**
	comp=Z,10.0nm,0.9s,mb4.5						
NEW	**Newport**	38.96	69	P	**P**	**10 41 02.5**	**+0.8**
NEW				pmax	pmax		
	comp=Z,46nm,0.9s						
NEW	**Newport**	38.96	69	P	**P**	**10 41 02.5**	**+0.7**
	comp=Z,46nm,0.9s,mb5.2,baz=298,slow=7.0,SNR=65						
NEW	**Newport**	38.96	69	*e*P	**P**	**10 41 01.9**	**+0.2**
	comp=Z,57nm,0.9s,mb5.3						
WDC	**Whiskeytown Da**	39.67	83	P	**P**	**10 41 09.5**	**+1.8**
WDC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
WDC	**Whiskeytown Da**	39.67	83	*e*P	**P**	**10 41 08.5**	**+0.7**
	comp=Z,12nm,0.9s,mb4.6						
LASM	**Arnica Sink**	39.70	81	P	**P**	**10 41 10.1**	**+2.1**
SNY	**Shenyang**	39.79	280	⇑P	**P**	**10 41 08.8**	**+0.1**
SNY				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
SNY				LR	LR		
	comp=N,590nm,18.3s						
SNY				LR	LR		
	comp=Z,550nm,23.0s,MS4.3						
RES	**Resolute Bay**	39.91	24	P	**P**	**10 41 09.2**	**-0.2**
RES				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
RES	**Resolute Bay**	39.91	24	*e*P	**P**	**10 41 08.3**	**-1.1**
	comp=Z,5.4nm,1.0s,mb4.2						
LTIM	**Timbered Crate**	39.99	81	P	**P**	**10 41 12.2**	**+1.8**
MOD	**Modoc**	40.32	80	*e*P	**P**	**10 41 13.8**	**+0.8**
	comp=Z,14nm,0.8s,mb4.8						
WALA	**Waterton Lakes**	40.45	67	*e*P	**P**	**10 41 13.8**	**-0.3**
	comp=Z,52nm,1.1s,mb5.2						
BMO	**Blue Mountains**	40.55	74	*e*P	**P**	**10 41 15.5**	**+0.5**
	comp=Z,30nm,1.0s,mb4.9						
WVOR	**Wild Horse Val**	41.05	78	P	**P**	**10 41 20.2**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.9						
WVOR	**Wild Horse Val**	41.05	78	*e*P	**P**	**10 41 19.6**	**+0.5**
	comp=Z,28nm,0.9s,mb4.9						
OHCM	**Honcut**	41.06	84	*e*P	**P**	**10 41 19.7**	**+0.5**
MSO	**Missoula**	41.54	70	*e*P	**P**	**10 41 22.7**	**-0.2**
	comp=Z,44nm,1.2s,mb5.0						
CHMT	**Chamberlain Mo**	41.90	69	*e*P	**P**	**10 41 25.7**	**-0.2**
WCN	**Washoe City**	42.16	83	P	**P**	**10 41 29.8**	**+1.6**
WCN				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.7						
WCN	**Washoe City**	42.16	83	*e*P	**P**	**10 41 28.9**	**+0.7**
	comp=Z,22nm,1.2s,mb4.7						
CMB	**Columbia Colle**	42.52	85	P	**P**	**10 41 32.2**	**+1.0**
CMB				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6						
CMB	**Columbia Colle**	42.52	85	*e*P	**P**	**10 41 30.7**	**-0.5**
	comp=Z,17nm,1.3s,mb4.6						
HLID	**Hailey**	43.00	74	*e*P	**P**	**10 41 35.6**	**+0.6**
	comp=Z,43nm,0.9s,mb5.2						
MCMT	**McKenzie Canyo**	43.25	72	*e*P	**P**	**10 41 37.0**	**0.0**
BOZ	**Bozeman (W)**	43.53	70	*e*P	**P**	**10 41 39.6**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.2						
BOZ	**Bozeman (W)**	43.53	70	*e*P	**P**	**10 41 39.6**	**+0.3**
	comp=Z,58nm,1.1s,mb5.2						
NVAR	**Mina Array Bea**	43.59	83	P	**P**	**10 41 40.9**	**+1.0**
	comp=Z,5.1nm,0.8s,mb4.3,baz=305,slow=6.3,SNR=17						
MNV	**Mina**	43.68	82	P	**P**	**10 41 41.5**	**+0.9**
MNV				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
MNV	**Mina**	43.68	82	*e*P	**P**	**10 41 40.7**	**+0.1**
	comp=Z,16nm,1.2s,mb4.6						
MTUM	**Tungsten Hills**	44.08	84	*e*P	**P**	**10 41 44.3**	**+0.4**
QLMT	**Earthquake Lak**	44.09	71	*e*P	**P**	**10 41 43.9**	**+0.1**
YMR	**Madison River**	44.46	71	*e*P	**P**	**10 41 47.2**	**+0.5**
TPH	**Tonopah**	44.48	82	P	**P**	**10 41 48.8**	**+1.8**
TPH				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
TPH	**Tonopah**	44.48	82	*e*P	**P**	**10 41 47.3**	**+0.3**
	comp=Z,15nm,0.9s,mb4.7						
YFT	**Old Faithful**	44.65	71	*e*P	**P**	**10 41 49.5**	**+1.2**

LKWY	**Lake**	**44.85**	**70**	*e*P	**P**	**10 41 52.0**	**+2.1**
LKWY				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.0						
LKWY	**Lake**	**44.85**	**70**	*e*P	**P**	**10 41 51.1**	**+1.2**
	comp=Z,22nm,0.8s,mb5.0						
IMW	**Indian Meadow**	**44.90**	**72**	*e*P	**P**	**10 41 51.1**	**+0.8**
HVU	**Hansel Valley**	**45.01**	**75**	P	**P**	**10 41 52.6**	**+1.4**
HVU	**Hansel Valley**	**45.01**	**75**	*e*P	**P**	**10 41 51.6**	**+0.4**
MOOW	**Moose Ponds**	**45.10**	**72**	*e*P	**P**	**10 41 52.1**	**+0.2**
TPAW	**Teton Pass**	**45.13**	**72**	*e*P	**P**	**10 41 53.0**	**+0.8**
WUWY	**Wally Ulrich**	**45.22**	**72**	*e*P	**P**	**10 41 53.0**	**+0.1**
SNOW	**Snow King Moun**	**45.26**	**72**	*e*P	**P**	**10 41 52.2**	**-1.0**
LOHW	**Long Hollow**	**45.26**	**72**	*e*P	**P**	**10 41 53.5**	**+0.3**
TRCR	**Troy Canyon**	**45.33**	**81**	*e*P	**P**	**10 41 54.3**	**+0.5**
BGU	**Big Grassy Mou**	**45.35**	**76**	*e*P	**P**	**10 41 54.5**	**+0.5**
BJI	**Beijing**	**45.40**	**282**	P	**P**	**10 41 54.1**	**-0.3**
BJI				S	**S**	**10 48 29.4**	**-1.8**
BJI				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
BJI				AMB	AMB		
	comp=Z,161nm,4.1s						
BJI				LR	LR		
	comp=N,224nm,20.8s,MS4.3						
BJI				LR	LR		
	comp=E,345nm,20.9s,MS4.3						
BJI				LR	LR		
	comp=Z,260nm,20.4s,MS4.2						
BJI	**Beijing**	**45.40**	**282**	P	**P**	**10 41 54.1**	**-0.3**
BJI				*PP	pP	10 42 09.8	+2.1
BJI				S	**S**	**10 48 29.4**	**-1.8**
BJI				SS	SS	10 51 54.0	+7.5
BJI				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.8						
BJI				MLR	MLR		
	comp=Z,260nm,20.4s,MS4.2						
BJI	**Beijing**	**45.40**	**282**	P	**P**	**10 41 54.1**	**-0.3**
	comp=Z,16nm,1.0s,mb4.8						
BJI				pP	pP	10 42 09.8	+2.1
BJI				sP	sP	10 42 16.9	+3.3
BJI				S	**S**	**10 48 29.4**	**-1.8**
BJI				SS	SS	10 51 54.0	+7.5
BJI				LR	LR		
	comp=Z,260nm,20.4s,MS4.2						
BJT	**Baijiatuau**	**45.42**	**282**	P	**P**	**10 41 54.5**	**0.0**
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJT	**Baijiatuau**	**45.42**	**282**	*e*P	**P**	**10 41 53.5**	**-1.0**
	comp=Z,14nm,0.9s,mb4.8						
AHID	**Auburn Hatcher**	**45.45**	**73**	*e*P	**P**	**10 41 55.3**	**+0.6**
	comp=Z,24nm,0.9s,mb5.0						
SPUT	**South Promonto**	**45.48**	**75**	*e*P	**P**	**10 41 54.8**	**-0.2**
HWUT	**Hardware Ranch**	**45.84**	**75**	*e*P	**P**	**10 41 58.0**	**+0.1**
	comp=Z,21nm,1.0s,mb5.0						
DUG	**Dugway**	**45.92**	**77**	P	**P**	**10 41 59.3**	**+0.8**
DUG				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
DUG	**Dugway**	**45.92**	**77**	*e*P	**P**	**10 41 58.5**	**0.0**
	comp=Z,55nm,1.1s,mb5.4						
NOQ	**North Oquirrh**	**46.07**	**76**	*e*P	**P**	**10 41 60.0**	**+0.3**
FCC	**Fort Churchill**	**46.09**	**46**	P	**P**	**10 41 58.7**	**-0.9**
FCC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
FCC	**Fort Churchill**	**46.09**	**46**	*e*P	**P**	**10 41 57.6**	**-2.0**
	comp=Z,8.6nm,0.9s,mb4.7						
LAO	**LASA Array**	**46.11**	**66**	*e*P	**P**	**10 41 59.8**	**0.0**
	comp=Z,79nm,0.9s,mb5.7						
TLY	**Talaya**	**46.15**	**303**	P	**P**	**10 42 00.2**	**+0.1**
	comp=Z,49nm,1.1s,mb5.3,SNR=11						
TLY	**Talaya**	**46.15**	**303**	*e*P	**P**	**10 42 00.4**	**+0.3**
TLY				*e*		10 43 45.5	
TLY				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
TLY				MLR	MLR		
	comp=Z,401nm,22.0s,MS4.3						
TCUT	**Toone Canyon**	**46.23**	**75**	*e*P	**P**	**10 42 01.4**	**+0.5**
DGMT	**Dagmar**	**46.28**	**63**	*e*P	**P**	**10 42 00.1**	**-1.0**
	comp=Z,42nm,1.1s,mb5.3						
ULN	**Ulaanbaatar**	**46.33**	**296**	P	**P**	**10 42 01.7**	**+0.1**
ULN				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.2						
ULN	**Ulaanbaatar**	**46.33**	**296**	*e*P	**P**	**10 42 01.1**	**-0.5**
	comp=Z,33nm,1.1s,mb5.2						
ULN				LR	LR		
	comp=Z,674nm,19.0s,MS4.6						
BW06	**Boulder Array**	**46.38**	**72**	⇑*i*P	**P**	**10 42 02.6**	**+0.6**
	comp=Z,57nm,0.8s,mb5.5						
PDAR	**Pinedale Array**	**46.38**	**72**	P	**P**	**10 42 02.6**	**+0.6**
	comp=Z,64nm,0.8s,mb5.6,baz=302,slow=3.5,SNR=368						
PDAR				LR	LR	11 01 38.5	
	comp=Z,277nm,18.4s,MS4.2,baz=148,slow=36						
JLU	**Jordanelle**	**46.51**	**76**	*e*P	**P**	**10 42 03.3**	**+0.2**
NLU	**North Lily Min**	**46.52**	**77**	*e*P	**P**	**10 42 03.3**	**+0.1**
JOW	**Kunigami**	**46.52**	**259**	LR	LR	10 59 02.5	
	comp=Z,142nm,21.2s,MS3.9,baz=285,slow=33						
SONM	**Songino Array**	**46.72**	**297**	P	**P**	**10 42 04.8**	**+0.2**
	comp=Z,15nm,1.0s,mb4.9,baz=50,slow=9.6,SNR=80						
DAU	**Daniels Canyon**	**46.74**	**76**	P	**P**	**10 42 06.3**	**+1.3**
DAU	**Daniels Canyon**	**46.74**	**76**	*e*P	**P**	**10 42 05.8**	**+0.9**
MPU	**Maple Canyon**	**46.75**	**76**	*e*P	**P**	**10 42 05.2**	**+0.1**
ARUT	**Antelope Range**	**47.01**	**80**	P	**P**	**10 42 08.6**	**+1.5**
ARUT	**Antelope Range**	**47.01**	**80**	*e*P	**P**	**10 42 07.6**	**+0.5**
ZAK	**Zakamensk**	**47.04**	**301**	⇑*i*P	**P**	**10 42 06.7**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,76nm,1.2s,mb5.5						
MVU	**Marysvale**	**47.32**	**78**	*e*P	**P**	**10 42 09.8**	**+0.3**
	comp=Z,17nm,1.0s,mb4.9						
MSU	**Marysvale**	**47.34**	**78**	P	**P**	**10 42 10.4**	**+0.7**
MSU	**Marysvale**	**47.34**	**78**	*e*P	**P**	**10 42 10.1**	**+0.4**
TMUT	**Trail Mountain**	**47.45**	**77**	*e*P	**P**	**10 42 11.6**	**+1.0**
NEN	**Nelson**	**47.48**	**83**	*e*P	**P**	**10 42 10.7**	**-0.2**
GUMO	**Guam**	**47.59**	**231**	P	**P**	**10 42 20.0**	**+8.1**
GUMO				MLR	MLR		
	comp=Z,837nm,22.0s,MS4.7						
GUMO	**Guam**	**47.59**	**231**	PFAKE		10 42 20.0	+8.1
GUMO				LR	LR		
	comp=Z,837nm,22.0s,MS4.7						
LDFC	**Landfair**	**47.68**	**84**	*e*P	**P**	**10 42 11.0**	**-1.4**
HHC	**Hu-ho-hao-te**	**47.73**	**286**	*e*P	**P**	**10 42 13.1**	**+0.4**
HHC				AP	pP	10 42 18.1	-8.0
HHC				AMB	AMB		
	comp=Z,21nm,1.4s,mb5.0						
HHC				AMB	AMB		
	comp=Z,166nm,4.9s						
HHC				LR	LR		
	comp=N,331nm,20.2s,MS4.7						
HHC				LR	LR		
	comp=E,693nm,21.4s,MS4.7						
HHC				LR	LR		
	comp=Z,402nm,21.4s,MS4.4						
SSE	**Sheshan**	**47.98**	**269**	P	**P**	**10 42 14.8**	**0.0**
SSE				PCP	PcP	10 43 42.4	-0.3
SSE				S	**S**	**10 49 08.1**	**+0.1**
SSE				AMB	AMB		
	comp=Z,25nm,0.6s,mb5.4						
SSE				AMB	AMB		
	comp=Z,324nm,4.3s						
SSE				LR	LR		
	comp=N,68nm,24.7s,MS3.6						
SSE				LR	LR		
	comp=E,46nm,24.7s,MS3.6						
SSE				LR	LR		
	comp=Z,124nm,20.7s,MS3.9						
SSE	**Sheshan**	**47.98**	**269**	P	**P**	**10 42 14.8**	**0.0**
	comp=Z,25nm,0.6s,mb5.4						
SSE				sP	sP	10 42 37.5	+3.5
SSE				PcP	PcP	10 43 42.4	-0.3
SSE				S	**S**	**10 49 08.1**	**+0.1**
SSE				sS		10 49 34.6	
SSE				LR	LR		
	comp=Z,120nm,20.7s,MS3.9						
SRU	**San Rafael**	**47.98**	**77**	P	**P**	**10 42 15.6**	**+0.9**
SRU	**San Rafael**	**47.98**	**77**	*e*P	**P**	**10 42 14.8**	**+0.1**
PV10	**Paradox Valley**	**49.35**	**76**	*e*P	**P**	**10 42 25.3**	**0.0**
PHWY	**Pilot Hill**	**49.70**	**71**	*e*P	**P**	**10 42 27.4**	**-0.6**
PV01	**Paradox Valley**	**49.79**	**76**	*e*P	**P**	**10 42 28.5**	**-0.1**
ULM	**Lac du Bonnet**	**49.79**	**57**	P	**P**	**10 42 27.4**	**-1.1**
	comp=Z,4.3nm,0.9s,mb4.5,baz=299,slow=5.4,SNR=6.4						
ISCO	**Idaho Springs**	**50.54**	**73**	P	**P**	**10 42 34.9**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
ISCO	**Idaho Springs**	**50.54**	**73**	*e*P	**P**	**10 42 34.5**	**+0.1**
	comp=Z,23nm,1.0s,mb5.1						
SDCO	**Great Sand Dun**	**51.90**	**75**	*e*P	**P**	**10 42 44.4**	**-0.3**
	comp=Z,32nm,1.0s,mb5.2						
TUC	**Tucson**	**52.21**	**84**	P	**P**	**10 42 47.0**	**-0.1**
TUC				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
TUC	**Tucson**	**52.21**	**84**	*e*P	**P**	**10 42 46.4**	**-0.7**
	comp=Z,8.4nm,0.9s,mb4.7						
WHN	**Wuhan**	**52.66**	**274**	P	**P**	**10 42 48.5**	**-1.9**
ANMO	**Albuquerque**	**53.14**	**78**	P	**P**	**10 42 54.4**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANMO	**Albuquerque**	**53.14**	**78**	P	**P**	**10 42 54.0**	**+0.1**
	comp=Z,8.5nm,1.0s,mb4.6,baz=314,slow=8.2,SNR=14						
ANMO	**Albuquerque**	**53.14**	**78**	*e*P	**P**	**10 42 53.6**	**-0.3**
	comp=Z,10nm,1.0s,mb4.7						
ANMO				LR	LR		
	comp=Z,383nm,20.0s,MS4.5						
FRB	**Frobisher Bay**	**53.19**	**31**	P	**P**	**10 42 52.8**	**-1.1**
FRB				pmax	pmax		
	comp=Z,33nm,0.9s						
FRB	**Frobisher Bay**	**53.19**	**31**	P	**P**	**10 42 52.8**	**-1.1**
	comp=Z,33nm,0.9s,mb5.2,baz=316,slow=7.7,SNR=33						
SUMG	**Summit**	**53.48**	**14**	*e*P	**P**	**10 42 54.4**	**-1.5**
	comp=Z,26nm,0.9s,mb5.2						
XAN	**Xi’an**	**53.68**	**281**	P	**P**	**10 42 57.3**	**-0.7**
XAN				AP	pP	10 43 04.6	-7.0
XAN				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
ZAL	**Zalesovo**	**54.16**	**314**	P	**P**	**10 43 00.2**	**-1.0**
ZAL						10 44 05.4	
ZAL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ZAL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAL				MLR	MLR		
	comp=Z,376nm,19.2s						
ZAL	**Zalesovo**	**54.16**	**314**	P	**P**	**10 43 00.2**	**-1.0**
	comp=Z,3.1nm,1.1s,mb4.1,baz=19,slow=8.6,SNR=5.6						
ZAL				PcP	PcP	10 44 05.4	+0.2
	comp=Z,6.7nm,1.0s,baz=69,slow=4.4,SNR=17						
ZAL				LR	LR	11 08 17.7	
	comp=Z,376nm,19.2s,MS4.5,baz=67,slow=39						
CBKS	**Cedar Bluff**	**54.67**	**70**	P	**P**	**10 43 05.1**	**0.0**
CBKS				pmax	pmax		
	comp=Z,62nm,0.8s,mb5.7						
CBKS	**Cedar Bluff**	**54.67**	**70**	*e*P	**P**	**10 43 04.6**	**-0.5**
	comp=Z,62nm,0.8s,mb5.7						
LZH	**Lanzhou**	**55.42**	**286**	⇑P	**P**	**10 43 10.4**	**-0.2**
LZH				PP	PP	10 45 16.3	+0.1
LZH				*e*S	**S**	**10 50 47.5**	**-2.4**
LZH				SS	SS	10 54 31.8	-3.1
LZH				AMB	AMB		
	comp=Z,49nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,206nm,6.5s						
LZH				LR	LR		
	comp=N,879nm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.1s,MS5.1						
LZH	**Lanzhou**	**55.42**	**286**	⇑P	**P**	**10 43 10.4**	**-0.2**
LZH				*PP	pP	10 43 26.2	+1.8
LZH						10 45 16.3	
LZH				*e*S	**S**	**10 50 47.5**	**-2.4**
LZH				*SS		10 51 14.5	
LZH				SS	SS	10 54 31.7	-3.2
LZH				pmax	pmax		
	comp=Z,49nm,1.5s,mb5.3						
LZH				MLR	MLR		
	comp=Z,1µm,17.1s,MS5.1						
LZH	**Lanzhou**	**55.42**	**286**	⇑P	**P**	**10 43 10.4**	**-0.2**
	comp=Z,49nm,1.5s,mb5.3						
LZH				pP	pP	10 43 26.2	+1.8
LZH				sP	sP	10 43 33.0	+2.9
LZH				PP	PP	10 45 16.3	+0.1
LZH				*e*S	**S**	**10 50 47.5**	**-2.4**
LZH				sS		10 51 14.5	
LZH				SS	SS	10 54 31.7	-3.2
LZH				LR	LR		
	comp=Z,1µm,17.1s,MS5.1						
GTA	**Gaotai**	**55.62**	**292**	P	**P**	**10 43 11.8**	**-0.2**
GTA				AP	pP	10 43 26.8	+1.0
GTA				PCP	PcP	10 44 14.4	+3.4
GTA				PP	PP	10 45 13.1	-4.9
GTA				SCP		10 48 04.3	
GTA				S	**S**	**10 50 48.1**	**-4.4**
GTA				AMB	AMB		
	comp=Z,22nm,1.2s,mb5.1						
GTA				AMB	AMB		
	comp=Z,194nm,12.3s						
GTA				LR	LR		
	comp=N,292nm,18.2s,MS4.6						
GTA				LR	LR		
	comp=E,281nm,16.0s,MS4.6						
GTA				LR	LR		
	comp=Z,374nm,16.4s,MS4.6						
ENH	**Enshi**	**55.89**	**277**	*e*P	**P**	**10 43 11.8**	**-2.2**
	comp=Z,17nm,1.1s,mb5.0						
MNTX	**Cornudas Mount**	**55.99**	**80**	*e*P	**P**	**10 43 13.8**	**-1.0**
	comp=Z,20nm,1.0s,mb5.1						
AMTX	**Amarillo**	**56.11**	**75**	*e*P	**P**	**10 43 15.1**	**-0.5**
	comp=Z,25nm,0.9s,mb5.2						
KSU1	**Kansas State U**	**56.32**	**68**	*e*P	**P**	**10 43 15.5**	**-1.5**
KEV	**Kevo**	**57.89**	**350**	*e*pkp	**P**	**10 43 29.3**	**+1.5**
WMOK	**Wichita Mounta**	**57.96**	**73**	P	**P**	**10 43 28.0**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
WMOK	**Wichita Mounta**	**57.96**	**73**	*e*P	**P**	**10 43 27.6**	**-1.1**
	comp=Z,22nm,0.9s,mb5.2						
WMOK				LR	LR		
	comp=Z,380nm,19.0s,MS4.5						
ARCES	**ARCESS Array B**	**58.27**	**350**	P	**P**	**10 43 27.9**	**-2.5**
ARCES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARCES	**ARCESS Array B**	**58.27**	**350**	P	**P**	**10 43 27.9**	**-2.5**
	comp=Z,10nm,0.9s,mb4.9,baz=22,slow=7.1,SNR=9.1						
LTX	**Lajitas**	**58.69**	**81**	P	**P**	**10 43 33.1**	**-0.8**
LTX				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
LTX	**Lajitas**	**58.69**	**81**	*e*P	**P**	**10 43 32.6**	**-1.2**
	comp=Z,12nm,1.0s,mb4.9						
TXAR	**Lajitas Array**	**58.69**	**81**	P	**P**	**10 43 32.9**	**-1.0**
	comp=Z,7.6nm,0.8s,mb4.8,baz=306,slow=3.3,SNR=29						
TXAR				LR	LR	11 09 29.6	
	comp=Z,140nm,18.8s,MS4.1,baz=340,slow=37						
CD2	**Chengdu**	**59.00**	**282**	*e*P	**P**	**10 43 35.0**	**-1.0**
CD2				AMB	AMB		
	comp=Z,17nm,1.0s,mb5.0						
KURK	**Kurchatov**	**59.14**	**314**	*d i*P	**P**	**10 43 36.2**	**-0.4**
KURK	**Kurchatov**	**59.14**	**314**	*e*P	**P**	**10 43 34.6**	**-2.1**
	comp=Z,20nm,1.1s,mb5.1						
KURK				LR	LR		
	comp=Z,172nm,20.0s,MS4.2						
WMQ	**Urumqi**	**59.43**	**303**	P	**P**	**10 43 38.5**	**-0.3**
WMQ				PP	PP	10 45 52.0	-0.2
WMQ				S	**S**	**10 51 41.0**	**-1.4**
WMQ				SS	SS	10 55 38.0	-1.4
WMQ				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,52nm,8.0s						
WMQ				LR	LR		
	comp=N,348nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=E,325nm,22.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,423nm,22.0s,MS4.5						
CCM	**Cathedral Cave**	**60.12**	**65**	P	**P**	**10 43 41.9**	**-1.7**
CCM				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.3						
CCM	**Cathedral Cave**	**60.12**	**65**	*e*P	**P**	**10 43 41.1**	**-2.5**
	comp=Z,46nm,1.4s,mb5.3						
SCHQ	**Schefferville**	**60.15**	**38**	P	**P**	**10 43 41.0**	**-2.5**
	comp=Z,15nm,0.9s,mb5.0,baz=321,slow=7.4,SNR=16						
SCHQ				LR	LR	11 11 32.6	
	comp=Z,376nm,20.2s,MS4.5,baz=319,slow=38						
SCHQ	**Schefferville**	**60.15**	**38**	*e*P	**P**	**10 43 41.2**	**-2.4**
	comp=Z,25nm,1.0s,mb5.2						
SCHQ				LR	LR		
	comp=Z,588nm,19.0s,MS4.7						
JCT	**Junction City**	**60.28**	**77**	P	**P**	**10 43 43.7**	**-1.1**
JCT				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
JCT	**Junction City**	**60.28**	**77**	*e*P	**P**	**10 43 42.7**	**-2.1**
	comp=Z,21nm,0.9s,mb5.2						
SLM	**Saint Louis**	**60.30**	**64**	P	**P**	**10 43 43.5**	**-1.3**
SLM				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.4						
SLM	**Saint Louis**	**60.30**	**64**	*e*P	**P**	**10 43 42.7**	**-2.1**
	comp=Z,29nm,0.8s,mb5.4						
GYA	**Guiyang**	**60.33**	**276**	⇑*i*P	**P**	**10 43 43.8**	**-1.4**
GYA				AP	pP	10 43 59.1	+0.1
GYA				S	**S**	**10 51 59.0**	**+4.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
GYA				AMB	AMB		
	comp=Z,150nm,4.4s						
GYA				LR	LR		
	comp=N,210nm,18.4s,MS4.5						
GYA				LR	LR		
	comp=E,270nm,17.1s,MS4.5						
GYA				LR	LR		
	comp=Z,310nm,16.8s,MS4.5						
FVM	**French Village**	**60.64**	**65**	P	**P**	**10 43 45.9**	**-1.3**
FVM				pmax	pmax		
	comp=Z,77nm,1.4s,mb5.6						
FVM	**French Village**	**60.64**	**65**	*e*P	**P**	**10 43 45.1**	**-2.1**
	comp=Z,77nm,1.4s,mb5.6						
BVAR	**Borovoye Array**	**61.02**	**320**	P	**P**	**10 43 47.2**	**-2.3**
	comp=Z,3.8nm,0.8s,mb4.6,baz=45,slow=8.4,SNR=19						
BVAR				PcP	PcP	10 44 31.4	-0.7
	comp=Z,3.0nm,0.7s,baz=63,slow=3.3,SNR=6.8						
MIAR	**Mount Ida**	**61.20**	**70**	P	**P**	**10 43 50.7**	**-0.3**
MIAR				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.4						
MIAR	**Mount Ida**	**61.20**	**70**	*e*P	**P**	**10 43 49.9**	**-1.1**
	comp=Z,31nm,0.9s,mb5.4						
AAM	**Ann Arbor**	**61.37**	**57**	*e*P	**P**	**10 43 51.0**	**-1.0**
AAM				*e*	pP	10 44 06.7	+0.8
AAM				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.6						
AAM	**Ann Arbor**	**61.37**	**57**	*e*P	**P**	**10 43 51.0**	**-1.0**
	comp=Z,46nm,1.0s,mb5.6						
AAM				*e*	pP	10 44 06.7	+0.8
SVE	**Sverdlovsk**	**61.74**	**327**	*e*P	pP	10 44 10.0	+1.8
UALR	**University of**	**61.76**	**69**	*e*P	**P**	**10 43 52.7**	**-2.0**
	comp=Z,16nm,0.9s,mb5.1						
BLO	**Bloomington**	**62.01**	**62**	P	**P**	**10 43 55.6**	**-0.7**
BLO				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.9						
BLO	**Bloomington**	**62.01**	**62**	*e*P	**P**	**10 43 55.0**	**-1.3**
	comp=Z,99nm,0.9s,mb5.9						
USIN	**University of**	**62.22**	**63**	*e*P	**P**	**10 43 56.6**	**-1.2**
	comp=Z,182nm,0.9s,mb6.2						
UTMT	**University of**	**62.68**	**65**	*e*P	**P**	**10 43 59.8**	**-1.1**
	comp=Z,151nm,1.0s,mb6.1						
HALT	**Halls**	**62.71**	**66**	*e*P	**P**	**10 43 59.5**	**-1.6**
WCI	**Wyandotte Cave**	**62.80**	**62**	P	**P**	**10 44 00.2**	**-1.4**
WCI				pmax	pmax		
	comp=Z,92nm,0.9s,mb5.9						
WCI	**Wyandotte Cave**	**62.80**	**62**	*e*P	**P**	**10 44 00.1**	**-1.6**
	comp=Z,92nm,0.9s,mb5.9						
MET	**Memphis--Engin**	**62.92**	**67**	P	**P**	**10 44 02.3**	**-0.2**
BORG	**Borgarnes**	**63.08**	**11**	LR	LR	11 09 54.5	
	comp=Z,333nm,18.6s,MS4.5,baz=334,slow=35						
HKT	**Hockley**	**63.08**	**75**	P	**P**	**10 44 03.7**	**+0.1**
HKT				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.2						
HKT	**Hockley**	**63.08**	**75**	*e*P	**P**	**10 44 02.8**	**-0.8**
	comp=Z,24nm,1.4s,mb5.1						
ACSO	**Alum Creek Sta**	**63.19**	**59**	*e*P	**P**	**10 44 02.9**	**-1.4**
	comp=Z,66nm,1.6s,mb5.5						
ACSO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
ERPA	**Erie**	**63.42**	**55**	*e*P	**P**	**10 44 04.8**	**-0.9**
	comp=Z,50nm,0.9s,mb5.6						
WVT	**Waverly**	**63.42**	**65**	P	**P**	**10 44 04.8**	**-1.0**
WVT				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.4						
WVT	**Waverly**	**63.42**	**65**	*e*P	**P**	**10 44 04.1**	**-1.7**
	comp=Z,36nm,0.9s,mb5.5						
OXF	**Oxford**	**63.66**	**67**	P	**P**	**10 44 07.0**	**-0.3**
OXF				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.9						
OXF	**Oxford**	**63.66**	**67**	*e*P	**P**	**10 44 06.1**	**-1.2**
	comp=Z,127nm,1.0s,mb5.9						
ALLY	**Alegheny Colle**	**63.67**	**56**	*e*P	**P**	**10 44 06.2**	**-1.1**
JOF	**Joensuu**	**63.77**	**345**	*e*P	**P**	**10 44 05.1**	**-2.4**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
MCWV	**Mont Chateau**	**65.27**	**57**	*e*P	**P**	**10 44 16.5**	**-1.1**
	comp=Z,20nm,0.9s,mb5.1						
KAF	**Kangasniemi**	**65.28**	**347**	*e*pkp	**P**	**10 44 15.6**	**-1.7**
BINY	**Binghamton**	**65.40**	**53**	*e*P	**P**	**10 44 17.2**	**-1.2**
	comp=Z,49nm,1.0s,mb5.5						
SSPA	**Standing Stone**	**65.58**	**55**	*e*P	**P**	**10 44 18.2**	**-1.4**
	comp=Z,24nm,0.8s,mb5.3						
CPCT	**Cooper Cave**	**65.78**	**63**	*e*P	**P**	**10 44 19.5**	**-1.4**
FINES	**FINESS Array B**	**65.96**	**347**	P	**P**	**10 44 19.6**	**-2.0**
FINES				pmax	pmax		
	comp=Z,13nm,1.0s						
FINES				MLR	MLR		
	comp=Z,189nm,19.6s						
FINES	**FINESS Array B**	**65.96**	**347**	P	**P**	**10 44 19.6**	**-2.0**
	comp=Z,13nm,1.0s,mb4.9,baz=13,slow=5.6,SNR=21						
FINES				LR	LR	11 13 16.3	
	comp=Z,188nm,19.6s,MS4.3,baz=272,slow=36						
LRAL	**Lakeview Retre**	**66.11**	**67**	*e*P	**P**	**10 44 21.4**	**-1.8**
	comp=Z,10nm,0.7s,mb5.0						
TKM2	**Tokmak 2**	**66.22**	**309**	P	**P**	**10 44 24.1**	**+0.5**
	SNR=21						
FWV	**Forest Hill**	**66.27**	**59**	*e*P	**P**	**10 44 23.6**	**-0.5**
ULHL	**Ulahol**	**66.41**	**308**	P	**P**	**10 44 25.9**	**+1.1**
	SNR=13						
USP	**Ospenovka**	**66.49**	**310**	P	**P**	**10 44 26.4**	**+1.0**
	SNR=28						
CHMS	**Chumysh**	**66.57**	**310**	P	**P**	**10 44 26.8**	**+0.9**
	SNR=7.9						
BLA	**Blacksburg**	**66.75**	**59**	P	**P**	**10 44 27.4**	**+0.3**
BLA				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
BLA	**Blacksburg**	**66.75**	**59**	*e*P	**P**	**10 44 26.3**	**-0.8**
	comp=Z,13nm,0.8s,mb5.0						
AAK	**Ala-Archa**	**66.97**	**310**	P	**P**	**10 44 29.5**	**+1.1**
	SNR=18						
AAK	**Ala-Archa**	**66.97**	**310**	*i* P	**P**	**10 44 27.5**	**-0.9**
AAK				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
AAK	**Ala-Archa**	**66.97**	**310**	*e*P	**P**	**10 44 26.6**	**-1.8**
	comp=Z,19nm,1.0s,mb5.1						
KZA	**Kyzart**	**67.02**	**309**	P	**P**	**10 44 29.6**	**+0.9**
	SNR=14						
SDMD	**Soldier’s Deli**	**67.03**	**55**	*e*P	**P**	**10 44 27.4**	**-1.4**
PMG	**Port Moresby**	**67.15**	**217**	LR	LR	11 10 29.5	
	comp=Z,211nm,19.2s,MS4.4,baz=75,slow=33						
PMG	**Port Moresby**	**67.15**	**217**	PFAKE		10 44 40.0	+10
PMG				LR	LR		
	comp=Z,313nm,20.0s,MS4.5						
UCH	**Uchtor**	**67.27**	**310**	P	**P**	**10 44 31.2**	**+0.9**
	SNR=8.0						
EKS2	**Erkin-Say**	**67.30**	**310**	P	**P**	**10 44 31.0**	**+0.6**
	SNR=22						
LSA	**Lhasa**	**67.49**	**290**	P	**P**	**10 44 33.4**	**+1.6**
LSA	**Lhasa**	**67.49**	**290**	*e*P	**P**	**10 44 32.8**	**+0.9**
LSA				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
LSA	**Lhasa**	**67.49**	**290**	*e*P	**P**	**10 44 32.8**	**+1.0**
	comp=Z,23nm,1.1s,mb5.1						
AML	**Almayashu**	**67.74**	**310**	P	**P**	**10 44 35.0**	**+1.8**
	SNR=25						
NB2	**NORSAR Subarra**	**67.83**	**355**	P	**P**	**10 44 32.5**	**-0.9**
	comp=Z,3.7nm,0.8s,mb4.5,baz=7.0,slow=6.2						
NB2	**NORSAR Subarra**	**67.83**	**355**	P	**P**	**10 44 32.5**	**-0.9**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
NOA	**NORSAR Array B**	**67.83**	**355**	P	**P**	**10 44 32.5**	**-0.9**
NOA						10 44 58.3	
NOA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,134nm,18.6s						
NOA	**NORSAR Array B**	**67.83**	**355**	P	**P**	**10 44 32.5**	**-0.9**
	comp=Z,6.4nm,0.8s,mb4.7,baz=7.0,slow=6.3,SNR=14						
NOA				PcP	PcP	10 44 58.3	-1.5
	comp=Z,4.7nm,0.9s,baz=2.6,slow=3.0,SNR=5.0						
NOA				LR	LR	11 15 20.3	
	comp=Z,134nm,18.6s,MS4.2,slow=37						
GOGA	**Godfrey**	**67.86**	**64**	P	**P**	**10 44 33.3**	**-0.8**
GOGA				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.5						
GOGA	**Godfrey**	**67.86**	**64**	*e*P	**P**	**10 44 32.9**	**-1.2**
	comp=Z,47nm,1.0s,mb5.5						
JSC	**Jenkinsville**	**68.45**	**62**	P	**P**	**10 44 37.7**	**-0.1**
JSC	**Jenkinsville**	**68.45**	**62**	*e*P	**P**	**10 44 37.1**	**-0.7**

KSH	**Kashi**	**68.60**	**307**	*e*P	**P**	**10 44 40.1**	**+1.5**
KSH				*e*PCS		10 49 11.0	
KSH				*e*S	S	10 53 35.0	-1.0
KSH				*e*PS	PS	10 54 10.3	+2.3
KSH				*e*SCS	ScS	10 54 31.0	+0.5
KSH				*e*SS	SS	10 58 02.8	+0.3
KSH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
KSH				AMB	AMB		
	comp=Z,120nm,5.0s						
KSH				LR	LR		
	comp=N,230nm,5.3s						
KSH				LR	LR		
	comp=E,300nm,5.4s						
MOS	**Moscow**	**69.22**	**339**	*e*P	**P**	**10 44 40.7**	**-1.4**
MOS				*e*	pP	10 44 51.7	-4.6
MOS				pmax	pmax		
	comp=Z,78nm,1.0s,mb5.6						
COW	**Cow Castle Cre**	**69.43**	**62**	*e*P	**P**	**10 44 43.7**	**-0.2**
NHSC	**New Hope**	**69.93**	**62**	*e*P	**P**	**10 44 47.0**	**+0.1**
	comp=Z,201nm,1.1s,mb6.0						
OBN	**Obninsk**	**70.03**	**339**	⇓*i*P	**P**	**10 44 46.2**	**-0.9**
OBN				*i*		10 45 08.6	
OBN				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.5						
OBN				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.6						
CMAR	**Chiang Mai Arr**	**71.02**	**276**	P	**P**	**10 44 53.5**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,87nm,18.1s						
CMAR	**Chiang Mai Arr**	**71.02**	**276**	P	**P**	**10 44 53.5**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.4,baz=28,slow=6.9,SNR=20						
CMAR				LR	LR	11 19 54.0	
	comp=Z,87nm,18.1s,MS4.1,baz=40,slow=39						
GUN	**Gumba**	**71.91**	**292**	*e*P	**P**	**10 44 59.5**	**+0.6**
	comp=Z,150nm,0.9s,mb5.9						
JIRN	**Jiri**	**71.92**	**292**	*e*P	**P**	**10 44 59.7**	**+0.8**
	comp=Z,109nm,1.0s,mb5.7						
KKN	**Kakani**	**72.35**	**292**	*e*P	**P**	**10 45 01.0**	**-0.5**
	comp=Z,61nm,0.9s,mb5.5						
PKI	**Pulchoki**	**72.44**	**292**	*e*P	**P**	**10 45 02.4**	**+0.4**
	comp=Z,166nm,1.4s,mb5.8						
GKN	**Gorkha**	**72.57**	**293**	*e*P	**P**	**10 45 03.0**	**+0.3**
	comp=Z,156nm,1.1s,mb5.8						
DMN	**Daman**	**72.59**	**292**	*e*P	**P**	**10 45 03.3**	**+0.4**
	comp=Z,164nm,1.4s,mb5.8						
KOLN	**Koldanda**	**73.34**	**294**	*e*P	**P**	**10 45 07.6**	**+0.3**
	comp=Z,91nm,1.0s,mb5.6						
SUW	**Suwalki**	**73.55**	**347**	*e*P	**P**	**10 45 07.2**	**-0.7**
EKA	**Eskdalemuir Ar**	**73.78**	**3**	P	**P**	**10 45 09.1**	**-0.1**
EKA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**73.78**	**3**	P	**P**	**10 45 09.1**	**-0.1**
	comp=Z,10.0nm,1.0s,mb4.7,baz=8.1,slow=5.9,SNR=7.4						
SDNR	**Sundarnagar**	**74.21**	**301**	*e*P	**P**	**10 45 13.4**	**+1.2**
SMLA	**Simla**	**74.39**	**300**	⇓*i*	**P**	**10 45 27.7**	**+14**
BSEG	**Bad Segeberg**	**74.96**	**354**	*e*P	**P**	**10 45 16.3**	**+0.2**
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**10 45 19.2**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,33nm,0.9s						
AKASG	**Malin Array Be**	**75.72**	**342**	P	**P**	**10 45 19.2**	**-1.3**
	comp=Z,33nm,0.8s,mb5.3,baz=18,slow=5.7,SNR=78						
NDI	**New Delhi**	**76.25**	**299**	⇑*i*P	**P**	**10 45 22.0**	**-2.0**
KAKA	**Kakadu**	**76.41**	**229**	*e*P	**P**	**10 45 24.0**	**-1.1**
	comp=Z,7.8nm,0.9s,mb4.6						
CLZ	**Clausthal**	**77.04**	**354**	*e*P	**P**	**10 45 28.1**	**+0.1**
	comp=Z,34nm,1.0s,mb5.2						
WTSB	**Winterswijk**	**77.10**	**356**	*e*P	**P**	**10 45 28.6**	**+0.2**
	comp=Z,24nm,0.6s,mb5.3						
CTA	**Charters Tower**	**77.32**	**213**	LR	LR	11 16 20.9	
	comp=Z,140nm,18.4s,MS4.3,baz=50,slow=33						
CTAO	**Charters Tower**	**77.32**	**213**	PFAKE		10 45 40.0	+10
CTAO				LR	LR		
	comp=Z,188nm,19.0s,MS4.4						
CLL	**Collm**	**77.38**	**352**	*i* P	**P**	**10 45 29.3**	**-0.6**
CLL				*e*	pP	10 45 44.0	-0.2
CLL				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
CLL	**Collm**	**77.38**	**352**	*i* P	**P**	**10 45 29.3**	**-0.6**
	comp=Z,17nm,1.1s,mb4.9						
CLL				*e*	pP	10 45 44.0	-0.2
CLL	**Collm**	**77.38**	**352**	P	**P**	**10 45 29.3**	**-0.6**
	comp=Z,logA/T=1.2,mb4.9						
CLL				e*SP	sP	10 45 44.0	-5.6
GOF	**Gofitskoye**	**77.52**	**331**	⇑*i*P	**P**	**10 45 31.0**	**+0.2**
GOF				pmax	pmax		
	comp=Z,200nm,1.1s,mb6.0						
OJC	**Ojcow**	**77.72**	**348**	*e*P	**P**	**10 45 31.9**	**+0.1**
BRG	**Berggiesshubel**	**77.73**	**352**	*e*P	**P**	**10 45 31.3**	**-0.5**
BRG				*i*	pP	10 45 42.0	-4.1
BRG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BRG	**Berggiesshubel**	**77.73**	**352**	*e*P	**P**	**10 45 31.3**	**-0.5**
	comp=Z,10.0nm,0.8s,mb4.8						
BRG				*i*	pP	10 45 42.0	-4.1
KWP	**Kalwaria**	**77.88**	**346**	*e*P	**P**	**10 45 33.2**	**+0.5**
UPC	**Upice**	**77.89**	**350**	*e*P	**P**	**10 45 32.6**	**-0.1**
DPC	**Dobruska-Polom**	**78.01**	**350**	*e*P	**P**	**10 45 33.3**	**0.0**
MOX	**Moxa**	**78.15**	**353**	*e*P	**P**	**10 45 33.8**	**-0.3**
MOX				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
MOX	**Moxa**	**78.15**	**353**	*e*P	**P**	**10 45 33.8**	**-0.3**
	comp=Z,15nm,1.1s,mb4.8						
MOX	**Moxa**	**78.15**	**353**	*i* P	**P**	**10 45 33.8**	**-0.3**
	comp=Z,logA/T=1.1,mb4.8						
OKC	**Ostrava-Krasne**	**78.31**	**349**	*e*P	**P**	**10 45 34.8**	**-0.2**
HGN	**Heimansgroeve**	**78.33**	**357**	*e*P	**P**	**10 45 35.2**	**+0.1**
	comp=Z,42nm,0.9s,mb5.4						
NIE	**Niedzica**	**78.44**	**347**	*e*P	**P**	**10 45 35.1**	**-0.6**
MORC	**Moravsky Berou**	**78.44**	**349**	P	**P**	**10 45 35.9**	**+0.2**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
MORC	**Moravsky Berou**	**78.44**	**349**	*e*P	**P**	**10 45 34.9**	**-0.8**
	comp=Z,6.3nm,1.1s,mb4.5						
NKC	**Novy Kostel**	**78.49**	**353**	*e*P	**P**	**10 45 35.8**	**-0.2**
PRU	**Pruhonice**	**78.55**	**351**	*e*P	**P**	**10 45 36.2**	**-0.1**
KIV	**Kislovodsk**	**78.62**	**331**	*c i*P	**P**	**10 45 36.9**	**+0.1**
KIV				*e*		10 45 44.8	
KIV				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
KIV	**Kislovodsk**	**78.62**	**331**	*e*P	**P**	**10 45 36.9**	**+0.1**
	comp=Z,27nm,0.9s,mb5.2						
KIV				LR	LR		
	comp=Z,71nm,20.0s,MS4.0						
KOLS	**Kolonicke sedl**	**78.63**	**346**	*i* P	**P**	**10 45 37.4**	**+0.6**
TNS	**Taunus Mts**	**78.77**	**355**	*e*P	**P**	**10 45 37.5**	**0.0**
CRVS	**Cervenica-Dubn**	**78.78**	**347**	*i* P	**P**	**10 45 37.9**	**+0.3**
GIVF	**Givet**	**79.03**	**358**	*e*P	**P**	**10 45 38.9**	**-0.1**
	comp=Z,59nm,1.1s,mb5.1						
GIVF	**Givet**	**79.03**	**358**	*e*P	**P**	**10 45 38.9**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
BAIF	**Baives**	**79.09**	**358**	*e*P	**P**	**10 45 39.6**	**+0.3**
	comp=Z,68nm,1.0s,mb5.2						
BAIF	**Baives**	**79.09**	**358**	*e*P	**P**	**10 45 39.6**	**+0.3**
BAIF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
GRA1	**Grafenberg Arr**	**79.12**	**353**	*e*P	**P**	**10 45 39.7**	**+0.2**
	comp=Z,36nm,1.0s,mb5.3						
GRF	**Grafenberg Arr**	**79.12**	**353**	*e*P	**P**	**10 45 39.7**	**+0.2**
GRF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
GRF	**Grafenberg Arr**	**79.12**	**353**	*e*P	**P**	**10 45 39.7**	**+0.2**
GRF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
GRF	**Grafenberg Arr**	**79.12**	**353**	*e*P	**P**	**10 45 39.7**	**+0.2**
	comp=Z,36nm,1.0s,mb5.3						
ABH	**Alteburg**	**79.15**	**356**	*e*P	**P**	**10 45 39.1**	**-0.5**
KECS	**Kecovo**	**79.33**	**347**	*i* P	**P**	**10 45 41.0**	**+0.4**
RUP	**Ruppelstein**	**79.35**	**356**	*e*P	**P**	**10 45 40.7**	**0.0**
TOD	**Tromm**	**79.36**	**355**	*e*P	**P**	**10 45 40.2**	**-0.6**
IAS	**Iasi**	**79.39**	**342**	P	**P**	**10 45 41.2**	**+0.2**
KHC	**Kasperske Hory**	**79.49**	**352**	*e*P	**P**	**10 45 41.6**	**+0.1**
WET	**Wettzell**	**79.54**	**352**	*e*P	**P**	**10 45 41.8**	**+0.1**
WET				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
WET	**Wettzell**	**79.54**	**352**	*e*P	**P**	**10 45 41.8**	**+0.1**
	comp=Z,9.0nm,1.1s,mb4.6						
VYHS	**Vyhne**	**79.54**	**348**	*i* P	**P**	**10 45 42.2**	**+0.4**
GEC2	**GERESS Array S**	**79.76**	**352**	*e*P	**P**	**10 45 42.7**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
GEC2	**GERESS Array S**	**79.76**	**352**	*e*P	**P**	**10 45 42.7**	**-0.2**
	comp=Z,10.0nm,1.1s,mb4.7						
GERES	**GERESS Array B**	**79.76**	**352**	P	**P**	**10 45 42.5**	**-0.4**
GERES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GERES	**GERESS Array B**	**79.76**	**352**	P	**P**	**10 45 42.5**	**-0.4**
	comp=Z,4.6nm,0.9s,mb4.4,baz=27,slow=3.0,SNR=26						
SOC	**Sochi**	**79.85**	**333**	*e*P	**P**	**10 45 42.9**	**-0.6**
SOC				*e*	pP	10 45 57.0	-0.9
SOC				*e*		10 48 45.2	
SOC				*e*PPP	PPP	10 50 31.1	-6.6
SOC				*e*S	S	10 55 41.0	-0.4
SOC				*e*		10 56 08.4	
SOC				*e*SS	SS	11 00 53.8	-0.4
SOC				*e*SSS	SSS	11 04 19.8	+4.6
SOC				pmax	pmax		
	comp=N,21nm,1.0s						
SOC				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
SOC				pmax	pmax		
	comp=E,18nm,0.8s						
PSZ	**Piszkesteto**	**79.97**	**347**	P	**P**	**10 45 45.2**	**+1.1**
TI2	**Plekhanov**	**79.97**	**328**	*i* P	**P**	**10 45 44.2**	**0.0**
TI2				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.6						
ZST	**Bratislava**	**80.05**	**349**	*i* P	**P**	**10 45 45.5**	**+1.0**
SIM	**Simferopol’**	**80.08**	**337**	P	**P**	**10 45 46.1**	**+1.4**
SIM				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
SIM				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.8						
FLN	**La Foliniere**	**80.41**	**1**	*e*P	**P**	**10 45 46.1**	**-0.3**
	comp=Z,102nm,1.1s,mb5.4						
FLN				*e*R			
	comp=Z,199nm,17.0s						
FLN	**La Foliniere**	**80.41**	**1**	*e*P	**P**	**10 45 46.1**	**-0.3**
FLN				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.4						
FLN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.5						
LDF	**La Druitiere**	**80.58**	**1**	*e*P	**P**	**10 45 47.0**	**-0.3**
	comp=Z,65nm,1.0s,mb5.2						
LDF	**La Druitiere**	**80.58**	**1**	*e*P	**P**	**10 45 47.0**	**-0.3**
LDF				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
WLS	**Welschbruch**	**80.63**	**356**	*e*P	**P**	**10 45 47.1**	**-0.5**
CDF	**Champ du Feu**	**80.63**	**356**	*e*P	**P**	**10 45 47.6**	**0.0**
	comp=Z,24nm,1.1s,mb4.8						
CDF	**Champ du Feu**	**80.63**	**356**	*e*P	**P**	**10 45 47.6**	**0.0**
CDF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
BFO	**Black Forest**	**80.66**	**355**	*e*P	**P**	**10 45 47.6**	**-0.2**
BFO				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
BFO	**Black Forest**	**80.66**	**355**	*e*P	**P**	**10 45 47.6**	**-0.2**
	comp=Z,14nm,1.2s,mb4.8						
ROSF	**Rostrenen**	**80.77**	**3**	*e*P	**P**	**10 45 48.4**	**+0.1**
	comp=Z,55nm,1.1s,mb5.1						
ROSF	**Rostrenen**	**80.77**	**3**	*e*P	**P**	**10 45 48.4**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
GRR	**Gorron**	**80.78**	**1**	*e*P	**P**	**10 45 48.3**	**-0.1**
	comp=Z,71nm,0.9s,mb5.3						
GRR	**Gorron**	**80.78**	**1**	*e*P	**P**	**10 45 48.3**	**-0.1**
GRR				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
ECH	**Echery**	**80.83**	**356**	*e*P	**P**	**10 45 48.5**	**-0.2**
SPAK	**Spaichingen**	**80.87**	**355**	*e*P	**P**	**10 45 48.7**	**-0.1**
THEF	**They Montfort**	**80.87**	**357**	*e*P	**P**	**10 45 48.7**	**-0.1**
SGMF	**Saint Gilles**	**80.88**	**3**	*e*P	**P**	**10 45 48.9**	**0.0**
	comp=Z,80nm,1.0s,mb5.3						
SGMF	**Saint Gilles**	**80.88**	**3**	*e*P	**P**	**10 45 48.9**	**0.0**
SGMF				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
HAU	**Haudompre**	**81.08**	**356**	*e*P	**P**	**10 45 49.9**	**0.0**
	comp=Z,31nm,1.0s,mb4.9						
HAU				*e*R			
	comp=Z,207nm,17.0s						
HAU	**Haudompre**	**81.08**	**356**	*e*P	**P**	**10 45 49.9**	**0.0**
HAU				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
HAU				MLR	MLR		
	comp=Z,210nm,17.0s,MS4.6						
FELD	**Feldberg**	**81.13**	**355**	*e*P	**P**	**10 45 49.7**	**-0.5**
ARSA	**Arzberg**	**81.16**	**350**	⇑*i*P	**P**	**10 45 50.8**	**+0.4**
	comp=Z,14nm,1.0s,mb4.9						
QUIF	**Quistinic**	**81.19**	**3**	*e*P	**P**	**10 45 51.8**	**+1.2**
	comp=Z,101nm,1.3s,mb5.3						
QUIF	**Quistinic**	**81.19**	**3**	*e*P	**P**	**10 45 51.8**	**+1.2**
QUIF				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3						
MOF	**Molkenrain**	**81.20**	**356**	*e*P	**P**	**10 45 49.7**	**-0.9**
CFR	**Carcaliu**	**81.21**	**341**	P	**P**	**10 45 51.3**	**+0.6**
HINF	**Hinteralfeld**	**81.25**	**356**	*e*P	**P**	**10 45 50.6**	**-0.2**
	comp=Z,18nm,0.9s,mb4.7						
HINF	**Hinteralfeld**	**81.25**	**356**	*e*P	**P**	**10 45 50.6**	**-0.2**
HINF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MLR	**Muntele Rosu**	**81.34**	**343**	P	**P**	**10 45 52.7**	**+1.3**
MLR	**Muntele Rosu**	**81.34**	**343**	LR	LR	11 23 48.0	
	comp=Z,238nm,20.4s,MS4.5,baz=5.2,slow=37						
GNI	**Garni**	**81.39**	**328**	P	**P**	**10 45 53.3**	**+1.5**
GNI				pmax	pmax		
	comp=Z,20nm,1.1s						
GNI	**Garni**	**81.39**	**328**	P	**P**	**10 45 52.3**	**+0.5**
	comp=Z,3.2nm,0.5s,mb4.5,baz=239,slow=4.0,SNR=6.6						
GNI				LR	LR	11 26 58.2	
	comp=Z,330nm,18.4s,MS4.7,baz=25,slow=39						
GNI	**Garni**	**81.39**	**328**	*e*P	**P**	**10 45 52.2**	**+0.5**
	comp=Z,20nm,1.1s,mb5.0						
WATA	**Walderalm**	**81.44**	**353**	⇑*i*P	**P**	**10 45 52.1**	**+0.2**
	comp=Z,24nm,1.1s,mb5.0						
WATA	**Walderalm**	**81.44**	**353**	⇑*i*P	**P**	**10 45 52.1**	**+0.2**
WATA				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
MOTA	**Moosalm**	**81.47**	**353**	⇑*i*P	**P**	**10 45 52.4**	**+0.4**
	comp=Z,12nm,1.2s,mb4.7						
MOTA	**Moosalm**	**81.47**	**353**	⇑*i*P	**P**	**10 45 52.4**	**+0.4**
MOTA				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
KBA	**Koelnbreinsper**	**81.55**	**352**	⇑*i*P	**P**	**10 45 53.4**	**+1.0**
	comp=Z,63nm,0.9s,mb5.5						
KBA	**Koelnbreinsper**	**81.55**	**352**	⇑*i*P	**P**	**10 45 53.4**	**+1.0**
KBA				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.5						
SNX	**Sinaia**	**81.55**	**343**	P	**P**	**10 45 54.7**	**+2.2**
SQTA	**Sankt Quirin**	**81.58**	**353**	⇑*i*P	**P**	**10 45 53.0**	**+0.4**
	comp=Z,19nm,1.1s,mb5.0						
SQTA	**Sankt Quirin**	**81.58**	**353**	⇑*i*P	**P**	**10 45 53.0**	**+0.4**
SQTA				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
DAVA	**Damuels**	**81.61**	**354**	⇑*i*P	**P**	**10 45 53.0**	**+0.3**
	comp=Z,10nm,0.9s,mb4.8						
HARR	**Harsova**	**81.72**	**341**	P	**P**	**10 45 54.0**	**+0.6**
WRAB	**Tennant Creek**	**81.86**	**224**	⇓*i*P	**P**	**10 45 54.0**	**-0.6**
WRAB	**Tennant Creek**	**81.86**	**224**	*e*P	**P**	**10 45 52.5**	**-2.1**
WRAB				LR	LR		
	comp=Z,80nm,20.0s,MS4.1						
WB2	**Warramunga Arr**	**81.87**	**224**	*e*P	**P**	**10 45 53.2**	**-1.4**
WRA	**Warramunga Arr**	**81.87**	**224**	P	**P**	**10 45 53.3**	**-1.3**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	**81.87**	**224**	P	**P**	**10 45 53.3**	**-1.3**
	comp=Z,2.5nm,0.9s,mb4.1,baz=39,slow=5.7,SNR=14						
HYF	**Humbligny**	**81.91**	**359**	*e*P	**P**	**10 45 54.7**	**+0.4**
BZS	**Buzias**	**81.96**	**346**	P	**P**	**10 45 55.4**	**+0.8**
OBKA	**Obir**	**81.99**	**351**	⇓*i*P	**P**	**10 45 54.4**	**-0.3**
	comp=Z,19nm,0.9s,mb5.0						
SSF	**Saint Saulge**	**82.10**	**358**	*e*P	**P**	**10 45 55.5**	**+0.2**
SSF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.1						
SSF	**Saint Saulge**	**82.10**	**358**	*e*P	**P**	**10 45 55.5**	**+0.2**
	comp=Z,27nm,1.1s,mb5.1						
AVF	**Avril sur Loir**	**82.38**	**358**	*e*P	**P**	**10 45 56.8**	**+0.1**
	comp=Z,52nm,1.0s,mb5.1						
AVF	**Avril sur Loir**	**82.38**	**358**	*e*P	**P**	**10 45 56.8**	**+0.1**
AVF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
CABF	**La Chapelle**	**82.48**	**357**	*e*P	**P**	**10 45 57.8**	**+0.6**
	comp=Z,77nm,1.2s,mb5.2						
CABF	**La Chapelle**	**82.48**	**357**	*e*P	**P**	**10 45 57.8**	**+0.6**
CABF				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.2						
LCHF	**La Chataignera**	**82.50**	**1**	*e*P	**P**	**10 45 57.9**	**+0.6**
SMF	**Signal de Mont**	**82.51**	**358**	*e*P	**P**	**10 45 57.6**	**+0.2**
	comp=Z,78nm,1.0s,mb5.4						
SMF	**Signal de Mont**	**82.51**	**358**	*e*P	**P**	**10 45 57.6**	**+0.2**
SMF				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
MFF	**Saint Martin d**	**82.57**	**1**	*e*P	**P**	**10 45 58.1**	**+0.4**
	comp=Z,54nm,0.9s,mb5.3						
MFF	**Saint Martin d**	**82.57**	**1**	*e*P	**P**	**10 45 58.1**	**+0.4**
MFF				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
BGF	**Bois d’Agland**	**82.61**	**359**	*e*P	**P**	**10 45 58.2**	**+0.3**
	comp=Z,35nm,1.0s,mb5.0						
BGF	**Bois d’Agland**	**82.61**	**359**	*e*P	**P**	**10 45 58.2**	**+0.3**
BGF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
JAVS	**Javornik**	**82.65**	**351**	*e*P	**P**	**10 45 57.7**	**-0.4**
TCF	**Toulx Ste Croi**	**82.89**	**359**	*e*P	**P**	**10 45 59.5**	**+0.2**
	comp=Z,26nm,0.9s,mb5.0						
TCF	**Toulx Ste Croi**	**82.89**	**359**	*e*P	**P**	**10 45 59.5**	**+0.2**
TCF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
BOJS	**Bojanci**	**82.91**	**350**	*e*P	**P**	**10 45 59.3**	**-0.1**
MCGN	**Macugnaga**	**83.05**	**355**	*e*P	**P**	**10 46 01.3**	**+1.2**
AGO	**Saint Agoulin**	**83.12**	**359**	*e*P	**P**	**10 46 00.1**	**-0.4**
PLDF	**La Plantade**	**83.19**	**358**	*e*P	**P**	**10 46 01.5**	**+0.7**
PRD	**Provadia**	**83.26**	**341**	*i* P	**P**	**10 46 02.0**	**+0.7**
PYM	**Petit Puy Mans**	**83.42**	**359**	*e*P	**P**	**10 46 02.2**	**+0.2**
RKT	**Rikitea**	**83.44**	**140**	*e*LR	LR	11 11 50.3	
	comp=Z,318nm,27.0s,baz=331						
LPL	**La Plagne**	**83.55**	**356**	*e*P	**P**	**10 46 03.0**	**+0.4**
LPG	**La Plagne**	**83.56**	**356**	*e*P	**P**	**10 46 03.3**	**+0.6**
	comp=Z,48nm,1.4s,mb5.1						
LPG	**La Plagne**	**83.56**	**356**	*e*P	**P**	**10 46 03.3**	**+0.6**
LPG				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.1						
BOLS	**Boljevac**	**83.65**	**345**	⇑*i*P	**P**	**10 46 02.3**	**-0.9**
DIVS	**Divcibare**	**83.69**	**346**	⇓*i*P	**P**	**10 46 03.7**	**+0.3**
GRUS	**Gruza**	**83.79**	**346**	⇓*i*P	**P**	**10 46 04.3**	**+0.4**
RJF	**Les Rejaudoux**	**83.88**	**360**	*e*P	**P**	**10 46 04.7**	**+0.4**
	comp=Z,73nm,1.2s,mb5.4						
RJF				*e*R			
	comp=Z,270nm,20.0s						
RJF	**Les Rejaudoux**	**83.88**	**360**	*e*P	**P**	**10 46 04.7**	**+0.4**
RJF				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.4						
RJF				MLR	MLR		
	comp=Z,270nm,20.0s,MS4.6						
LBL	**Lubilhac**	**83.94**	**359**	*e*P	**P**	**10 46 05.3**	**+0.8**
BNI	**Bardonecchia**	**84.01**	**356**	*e*P	**P**	**10 46 05.1**	**+0.2**
BNI				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.4						
BNI	**Bardonecchia**	**84.01**	**356**	*e*P	**P**	**10 46 05.1**	**+0.2**
	comp=Z,38nm,1.1s,mb5.4						
BOB	**Bobbio (Coli)**	**84.15**	**354**	*e*P	**P**	**10 46 06.7**	**+1.1**
ORIF	**Oris-en-Rattie**	**84.18**	**357**	*e*P	**P**	**10 46 07.0**	**+1.2**
	comp=Z,41nm,1.0s,mb5.2						
ORIF				*e*R			
	comp=Z,181nm,21.0s						
LFF	**La Frestale**	**84.24**	**0**	*e*P	**P**	**10 46 06.8**	**+0.7**
	comp=Z,169nm,1.2s,mb5.8						
LFF	**La Frestale**	**84.24**	**0**	*e*P	**P**	**10 46 06.8**	**+0.7**
LFF				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.8						
CAF	**Calviac**	**84.25**	**359**	*e*P	**P**	**10 46 07.0**	**+0.8**
	comp=Z,73nm,1.1s,mb5.4						
CAF	**Calviac**	**84.25**	**359**	*e*P	**P**	**10 46 07.0**	**+0.8**
CAF				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.4						
HYB	**Hyderabad**	**84.27**	**291**	*e*P	**P**	**10 46 07.0**	**+0.2**
HYB	**Hyderabad**	**84.27**	**291**	*i* P	**P**	**10 46 07.0**	**+0.2**
VIVF	**Saint-Julien-l**	**84.28**	**358**	*e*P	**P**	**10 46 07.1**	**+0.8**
	comp=Z,46nm,1.2s,mb5.2						
VIVF	**Saint-Julien-l**	**84.28**	**358**	*e*P	**P**	**10 46 07.1**	**+0.8**
VIVF				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.2						
MBDF	**Montbardon**	**84.33**	**356**	*e*P	**P**	**10 46 07.8**	**+1.2**
	comp=Z,31nm,0.9s,mb5.2						
MBDF	**Montbardon**	**84.33**	**356**	*e*P	**P**	**10 46 07.8**	**+1.2**
MBDF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**84.34**	**232**	*e*P	**P**	**10 46 07.2**	**0.0**
	comp=Z,17nm,1.0s,mb5.1						
PGB	**Panagyurishte**	**84.51**	**343**	*e*P	**P**	**10 46 09.0**	**+1.5**
VTS	**Vitosha**	**84.64**	**344**	*i* P	**P**	**10 46 08.5**	**+0.3**
OG25	**Le Caire**	**84.72**	**356**	*e*P	**P**	**10 46 09.5**	**+1.0**
VMG	**Vicchio**	**84.80**	**353**	*e*P	**P**	**10 46 11.0**	**+2.1**
SFI	**Santa Sofia**	**84.83**	**352**	*e*P	**P**	**10 46 10.6**	**+1.6**
PGD	**Poggio Sodo**	**84.87**	**352**	*e*P	**P**	**10 46 10.9**	**+1.7**
AUTN	**L’Aution**	**85.03**	**355**	*e*P	**P**	**10 46 10.6**	**+0.5**
SAOF	**Saorge**	**85.04**	**355**	*e*P	**P**	**10 46 10.5**	**+0.4**
MALT	**Malatya**	**85.08**	**331**	P	**P**	**10 46 11.4**	**+1.0**
MALT				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.4						
MALT	**Malatya**	**85.08**	**331**	*e*P	**P**	**10 46 11.0**	**+0.6**
	comp=Z,32nm,1.1s,mb5.4						
LASF	**Ste Croix**	**85.08**	**358**	*e*P	**P**	**10 46 11.1**	**+0.8**
	comp=Z,20nm,0.9s,mb4.9						
BRTR	**Keskin Array B**	**85.11**	**335**	P	**P**	**10 46 10.9**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,19nm,0.9s						
BRTR	**Keskin Array B**	**85.11**	**335**	P	**P**	**10 46 10.8**	**+0.3**
	comp=Z,19nm,0.9s,mb5.2,baz=45,slow=3.5,SNR=69						
SMRF	**Simiane la Rot**	**85.13**	**357**	*e*P	**P**	**10 46 12.0**	**+1.5**
	comp=Z,46nm,0.9s,mb5.3						
MVIF	**Mont Vial**	**85.14**	**356**	*e*P	**P**	**10 46 09.0**	**-1.6**
SBF	**Sospel**	**85.16**	**355**	*e*P	**P**	**10 46 11.0**	**+0.3**
	comp=Z,136nm,1.0s,mb5.8						
SBF	**Sospel**	**85.16**	**355**	*e*P	**P**	**10 46 11.0**	**+0.3**
SBF				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.7						
RZN	**Rozhen**	**85.24**	**343**	*e*P	**P**	**10 46 12.0**	**+0.8**
REVF	**Revere**	**85.29**	**356**	*e*P	**P**	**10 46 11.4**	**+0.1**
ASAR	**Alice Springs**	**85.34**	**223**	P	**P**	**10 46 12.1**	**0.0**
	comp=Z,3.1nm,0.9s,mb4.4,baz=28,slow=4.7,SNR=16						
ASAR				LR	LR	11 19 33.1	
	comp=Z,119nm,19.4s,MS4.3,baz=23,slow=32						
KKB	**Krupnik**	**85.37**	**344**	*e*P	**P**	**10 46 07.0**	**-4.8**
SNTG	**Esanatoglia**	**85.37**	**351**	*e*P	**P**	**10 46 12.8**	**+1.0**
MSL	**Mosul**	**85.43**	**327**	*e*	**P**	**10 46 13.0**	**+0.8**
FRF	**La Foret Royal**	**85.50**	**356**	*e*P	**P**	**10 46 12.8**	**+0.4**
	comp=Z,54nm,1.0s,mb5.4						
FRF	**La Foret Royal**	**85.50**	**356**	*e*P	**P**	**10 46 12.8**	**+0.4**
FRF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.4						
MMB	**Musomiste**	**85.52**	**343**	*e*P	**P**	**10 46 12.0**	**-0.5**
GRFL	**Gerfalco**	**85.65**	**353**	*e*P	**P**	**10 46 13.4**	**+0.2**
LMR	**La Mourre**	**85.73**	**356**	*e*P	**P**	**10 46 14.1**	**+0.6**
	comp=Z,68nm,1.1s,mb5.5						
LMR	**La Mourre**	**85.73**	**356**	*e*P	**P**	**10 46 14.1**	**+0.6**
LMR				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.5						
NRCA	**Norcia**	**85.78**	**351**	*e*P	**P**	**10 46 14.7**	**+1.0**
MTLF	**Montolieu**	**85.84**	**359**	*e*P	**P**	**10 46 14.9**	**+0.9**
	comp=Z,54nm,1.0s,mb5.4						
MTLF	**Montolieu**	**85.84**	**359**	*e*P	**P**	**10 46 14.9**	**+0.9**
MTLF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.4						
SJPF	**Ste Jean**	**86.05**	**2**	*e*P	**P**	**10 46 15.6**	**+0.5**
	comp=Z,7.8nm,0.7s,mb4.8						
SJPF	**Ste Jean**	**86.05**	**2**	*e*P	**P**	**10 46 15.6**	**+0.5**
SJPF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
EPF	**Esparros**	**86.15**	**1**	*e*P	**P**	**10 46 16.5**	**+0.9**
	comp=Z,19nm,0.9s,mb5.0						
EPF	**Esparros**	**86.15**	**1**	*e*P	**P**	**10 46 16.5**	**+0.9**
EPF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
AQU	**L’Aquila**	**86.22**	**351**	*e*P	**P**	**10 46 16.7**	**+0.8**
AQU				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.5						
AQU	**L’Aquila**	**86.22**	**351**	*e*P	**P**	**10 46 16.7**	**+0.7**
	comp=Z,23nm,0.8s,mb5.5						
ETSF	**Etsaut**	**86.27**	**1**	*e*P	**P**	**10 46 17.3**	**+1.1**
	comp=Z,31nm,1.0s,mb5.2						
ETSF	**Etsaut**	**86.27**	**1**	*e*P	**P**	**10 46 17.3**	**+1.1**
ETSF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.2						
PGF	**Pioggiola**	**86.39**	**354**	*e*P	**P**	**10 46 17.2**	**+0.5**
	comp=Z,182nm,1.1s,mb5.9						
PGF	**Pioggiola**	**86.39**	**354**	*e*P	**P**	**10 46 17.2**	**+0.5**
PGF				pmax	pmax		
	comp=Z,91nm,1.1s,mb5.9						
PTQR	**Pietraquaria**	**86.55**	**351**	*e*P	**P**	**10 46 18.2**	**+0.7**
ESDC	**Sonseca Array**	**89.39**	**4**	P	**P**	**10 46 31.3**	**0.0**
	comp=Z,11nm,1.0s,mb5.2,baz=356,slow=4.3,SNR=24						
SJG	**San Juan**	**89.45**	**61**	P	**P**	**10 46 33.4**	**+1.4**
SJG				pmax	pmax		
	comp=Z,11nm,0.3s						

SJG				MLR	MLR		
	comp=Z,240nm,18.7s						
SJG	**San Juan**	**89.45**	**61**	P	**P**	**10 46 33.4**	**+1.4**
	comp=Z,11nm,0.3s,mb5.6,baz=351,slow=22,SNR=4.9						
SJG				LR	LR	11 30 00.0	
	comp=Z,240nm,18.7s,MS4.7,baz=297,slow=38						
SJG	**San Juan**	**89.45**	**61**	*e*P	**P**	**10 46 33.3**	**+1.3**
STKA	**Stephens Creek**	**89.77**	**213**	*e*P	**P**	**10 46 33.2**	**0.0**
	comp=Z,8.0nm,0.9s,mb5.0						
STKA	**Stephens Creek**	**89.77**	**213**	P	**P**	**10 46 33.8**	**+0.6**
	comp=Z,9.2nm,0.9s,mb5.1,baz=339,slow=5.0,SNR=8.9						
STKA				LR	LR	11 24 14.6	
	comp=Z,319nm,18.3s,MS4.8,baz=26,slow=34						
SDV	**Santo Domingo**	**94.29**	**70**	PFAKE		10 47 10.0	+16
SDV				LR	LR		
	comp=Z,126nm,21.0s,MS4.4						
DBIC	**Dimbokro**	**122.13**	**7**	PKIKP	PKPdf	10 52 29.5	+0.9
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DBIC	**Dimbokro**	**122.13**	**7**	PKP	PKPdf	10 52 29.5	+0.8
	comp=Z,3.7nm,1.1s,baz=275,slow=6.1,SNR=5.2						
PLCA	**Paso Flores**	**130.93**	**107**	PKIKP	PKPdf	10 52 45.9	+1.1
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PLCA	**Paso Flores**	**130.93**	**107**	PKP	PKPdf	10 52 45.9	+1.0
	comp=Z,4.9nm,0.9s,baz=325,slow=2.0,SNR=10						
TSUM	**Tsumeb**	**145.54**	**332**	PKPbc	PKPbc	10 53 13.8	+1.4
	comp=Z,28nm,1.0s,baz=359,slow=5.4,SNR=31						
TSUM	**Tsumeb**	**145.54**	**332**	*e*PKP	PKPdf	10 53 13.7	+2.0
MAW	**Mawson**	**146.33**	**217**	PKP2	PKPab	10 53 14.3	-1.6
MAW				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAW	**Mawson**	**146.33**	**217**	PKPbc	PKPbc	10 53 14.3	+1.5
	comp=Z,6.2nm,0.9s,baz=131,slow=1.0,SNR=4.4						
LBTB	**Lobatse**	**147.85**	**315**	*e*PKP2	PKPab	10 53 20.4	-2.7
LBTB	**Lobatse**	**147.85**	**315**	PKPbc	PKPdf	10 53 20.5	+5.0
	comp=Z,22nm,0.9s,baz=54,slow=1.3,SNR=14						
VNA3	**Neumayer Olymp**	**159.29**	**170**	⇑*i*PKPdf	PKPdf	10 53 30.2	+0.1
VNA3				*e*		10 54 09.0	
SNAA	**Sanae**	**159.38**	**176**	⇑*i*P	PKPdf	10 53 29.7	-0.5
VNA2	**Neumayer--Watz**	**159.82**	**172**	⇑*i*PKPdf	PKPdf	10 53 31.8	+1.1
VNA2				*e*		10 54 11.4	

NEIC 18 10:35:46.1,51.17N×178.84W,h8^{km},ML3.8(AEIC),After AEIC.,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIRH	**Kanaga Island**	**1.31**	**55**	P	Pb	10 36 08.0	-2.6
KIRH				S	Sb	10 36 25.5	-1.9
KINC	**Kanaga Island**	**1.31**	**54**	P	Pb	10 36 08.8	-1.8
KINC				S	Sb	10 36 26.9	-0.5
GSTD	**Great Sitkin T**	**1.90**	**61**	P	Pn	10 36 17.8	-1.3
GSTD				S	Sn	10 36 40.8	-2.7
GSIG	**Igitkin Island**	**1.99**	**65**	P	Pn	10 36 18.2	-2.3
GSIG				S	Sn	10 36 44.0	-1.8
ATKA	**Atka Island**	**3.07**	**68**	P	Pn	10 36 32.8	-3.0

IDC 18 10:52:51.0±1.5,1.60N×127.75E,mb3.5/4,mb1 3.7/4, mb1mx3.6/15,mbtmp3.5/4,Error ellipse: s-maj=134.3km s-min=23.5km az=72.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.37**	**164**	P	P	10 57 52.5	+0.1
	0.8nm,0.5s,baz=343,slow=11,SNR=21						
ASAR	**Alice Springs**	**25.82**	**167**	P	P	10 58 24.1	-1.7
	0.3nm,0.6s,baz=350,slow=8.2,SNR=5.9						
STKA	**Stephens Creek**	**35.79**	**160**	P	P	10 59 50.4	-3.7
	1.2nm,0.5s,baz=334,slow=4.3,SNR=4.5						
SONM	**Songino Array**	**49.62**	**341**	P	P	11 01 44.5	-1.7
	0.5nm,1.2s,baz=145,slow=8.6,SNR=2.4						

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*HEL **18** 11:00:47.4±0.2,64.68N×30.79E,ML2.3,ML2.6(NAO), Explosion*

*NAO **18** 11:00:48.0±1.6,64.75N×30.38E,ML2.6*

*IDC **18** 11:00:48.5±2.4,64.59N×31.13E,h9^{km}±15^{km},mb1 3.3/4, mb1mx3.1/20,mbtmp3.3/4,ML3.0/4,Error ellipse: s-maj=36.2km s-min=9.6km az=106.0*

*BER **18** 11:00:49.1±3.8,64.73N×30.51E,ML2.6(NAO), Suspected explosion*

*CSEM **18** 11:00:49.6±0.2,64.58N×30.61E,h15^{km},ML2.3,Error ellipse: s-maj=4.3km s-min=2.6km az=107.0*

ISC 18 11:00:45.7±0.6,64.67N±0.03×30.7E±0.1,n30,σ1^{s}14/61, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KJN	**Kajaani**	**1.44**	**247**	*e*P	**Pn**	**11 01 13.1**	**+0.1**
KJN				*e*S	**Sb**	**11 01 31.3**	**-0.5**
KU4	**Oulanka**	**1.76**	**345**	*e*P	**Pn**	**11 01 18.8**	**+1.0**
KU4				*e*S	**Sn**	**11 01 41.3**	**+0.1**
JOF	**Joensuu**	**1.78**	**171**	*e*P	**Pn**	**11 01 18.8**	**+0.8**
JOF				*e*S	**Sn**	**11 01 41.3**	**-0.4**
JOF	**Joensuu**	**1.78**	**171**	P	**Pn**	**11 01 18.7**	**+0.7**
JOF				S	**Sn**	**11 01 41.3**	**-0.4**
OUL	**Oulu**	**2.10**	**284**	*e*P	**Pn**	**11 01 24.4**	**+1.8**
OUL				*e*S	**Sn**	**11 01 50.1**	**+0.3**
OUL	**Oulu**	**2.10**	**284**	P	**Pn**	**11 01 24.4**	**+1.8**
OUL				S	**Sn**	**11 01 50.0**	**+0.2**
SUF	**Sumiainen**	**2.83**	**228**	*e*P	**Pn**	**11 01 34.3**	**+1.3**
SUF				*e*S	**Sn**	**11 02 08.2**	**0.0**
SUF				*e*SB	**Sb**	**11 02 13.1**	**+0.9**
SUF				MSG		11 02 15.1	
	comp=Z,6.1nm,0.3s						
SUF	**Sumiainen**	**2.83**	**228**	P	**Pn**	**11 01 34.2**	**+1.2**
SUF				S	**Sn**	**11 02 08.2**	**0.0**
APA0	**Apatity Array**	**3.09**	**16**	Pn	**Pn**	**11 01 37.6**	**+0.9**
	baz=192,slow=16						
APA0				Pg	**Pg**	**11 01 42.1**	**-5.2**
	baz=199,slow=18						
APA0				Sn	**Sn**	**11 02 13.0**	**-1.8**
	baz=183,slow=28						
APA0				Lg		11 02 22.9	
	baz=195,slow=28						
APA0	**Apatity Array**	**3.09**	**16**	*e*P	**Pn**	**11 01 37.6**	**+0.9**
APA0				*e*PG	**Pg**	**11 01 42.1**	**-5.2**
APA0				*e*S	**Sn**	**11 02 13.0**	**-1.8**
APA0				*e*SG	**Sg**	**11 02 22.9**	**-5.6**
APA0	**Apatity Array**	**3.09**	**16**	Pn	**Pn**	**11 01 37.6**	**+0.9**
	SNR=1.6						
APA0				Sn	**Sn**	**11 02 13.0**	**-1.8**
	SNR=5.8						
KAF	**Kangasniemi**	**3.25**	**220**	*e*P	**Pn**	**11 01 40.1**	**+1.1**
KAF				*e*S	**Sn**	**11 02 17.6**	**-1.3**
KAF	**Kangasniemi**	**3.25**	**220**	P	**Pn**	**11 01 40.0**	**+1.0**
KAF				S	**Sn**	**11 02 17.6**	**-1.3**
SGF	**Sodankyl**	**3.27**	**330**	*e*S	**Sn**	**11 02 20.1**	**+0.8**
KEF	**Keuruu**	**3.64**	**229**	*e*P	**Pn**	**11 01 45.7**	**+1.2**
KEF				*e*S	**Sn**	**11 02 28.9**	**+0.1**
FIA0	**FINESS Array S**	**3.87**	**215**	Pn	**Pn**	**11 01 48.1**	**+0.3**
	baz=38,slow=12						
FIA0				Pg	**Pg**	**11 01 57.5**	**-5.5**
	baz=37,slow=16						
FIA0				Sn	**Sn**	**11 02 33.9**	**-0.7**
	baz=46,slow=22						
FIA0				Lg		11 02 46.0	
	baz=41,slow=28						
FIA0	**FINESS Array S**	**3.87**	**215**	*e*P	**Pn**	**11 01 47.6**	**-0.2**
FIA0				*e*S	**Sn**	**11 02 32.6**	**-2.0**
FIA0				*e*SG	**Sg**	**11 02 47.0**	**-7.5**
FIA0				MSG		11 02 50.1	
	comp=Z,8.9nm,0.3s						
FIA0	**FINESS Array S**	**3.87**	**215**	P	**Pn**	**11 01 47.5**	**-0.3**
FIA0	**FINESS Array S**	**3.87**	**215**	Pn	**Pn**	**11 01 48.1**	**+0.3**
FIA0	**FINESS Array S**	**3.87**	**215**	Pg	**Pg**	**11 01 57.5**	**-5.5**
	SNR=0.1						
FIA0				S	**Sn**	**11 02 32.6**	**-2.0**
FINES	**FINESS Array B**	**3.87**	**215**	Pn	**Pn**	**11 01 47.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=37,slow=14,SNR=8.3						
FINES				Pg	**Pg**	**11 01 55.7**	**-7.3**
	comp=Z,1.0nm,0.3s,baz=34,slow=15,SNR=14						
FINES				Sn	**Sn**	**11 02 34.0**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=44,slow=23,SNR=5.9						
FINES				Lg		11 02 46.3	
	comp=Z,2.4nm,0.3s,baz=39,slow=29,SNR=15						
VAF	**Ylistaro**	**3.92**	**249**	*e*P	**Pn**	**11 01 50.1**	**+1.6**
VAF				*e*S	**Sn**	**11 02 35.0**	**-0.9**
VAF	**Ylistaro**	**3.92**	**249**	P	**Pn**	**11 01 50.0**	**+1.5**
VAF				S	**Sn**	**11 02 35.0**	**-0.9**
ARA0	**ARCESS Array S**	**5.29**	**340**	Pn	**Pn**	**11 02 06.8**	**-1.1**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**11 03 05.7**	**-4.8**
	baz=155,slow=28						
ARA0				Lg		11 03 27.5	
	baz=159,slow=28						
ARA0	**ARCESS Array S**	**5.29**	**340**	*e*P	**Pn**	**11 02 06.8**	**-1.1**
ARA0				*e*S	**Sn**	**11 03 05.7**	**-4.8**
ARA0				*e*SG		11 03 27.5	
ARCES	**ARCESS Array B**	**5.29**	**340**	Pn	**Pn**	**11 02 07.2**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=155,slow=13,SNR=23						
ARCES				Sn	**Sn**	**11 03 05.5**	**-5.0**
	comp=Z,1.0nm,0.3s,baz=146,slow=18,SNR=8.1						
HFS	**Hagfors**	**9.10**	**248**	Pn	**P**	**11 02 58.5**	**-2.8**
	baz=52,slow=10						
HFS				Lg		11 05 28.2	
	baz=53,slow=28						
HFS	**Hagfors**	**9.10**	**248**	*e*P	**P**	**11 02 58.5**	**-2.8**
HFS				*e*SG		11 05 28.2	
HFS	**Hagfors**	**9.10**	**248**	Pn	**P**	**11 02 58.5**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=54,slow=12,SNR=9.9						
HFS				Sn	**Sn**	**11 04 35.5**	**-10**
	comp=Z,0.1nm,0.3s,baz=73,slow=24,SNR=4.2						
HFS				Lg		11 05 29.1	
	comp=Z,0.1nm,0.3s,baz=65,slow=30,SNR=2.5						
NOA	**NORSAR Array B**	**9.61**	**257**	Pn	**P**	**11 03 05.8**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=84,slow=4.9,SNR=2.9						

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*NEIC **18** 11:08:05.7,16.01N×97.18W,h55^{km},mb3.9/1, MD4.3(MEX),After MEX.*

MEX 18 11:08:06.3±0.8,16.00N×97.17W,h30^{km}±12^{km},MD4.3, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**1.00**	**293**	*i*P	Pn	11 08 22.0	-2.4
PNIG				*i*S	Sn	11 08 34.6	-2.9
HUIG	**Huatulco**	**1.05**	**102**	*e*P	Pn	11 08 23.0	-2.1
HUIG				*e*S	Sn	11 08 36.2	-2.7
VHO	**Vista Hermosa**	**1.15**	**21**	*e*P	Pn	11 08 23.8	-2.8
VHO				*e*S	Sn	11 08 37.3	-4.1
OXX	**Oaxaca**	**1.16**	**22**	*i*P	Pn	11 08 24.0	-2.8
OXX				*i*S	Sn	11 08 39.0	-2.7
ACX	**Acapulco**	**2.77**	**289**	*i*P	Pn	11 08 46.0	-3.7
ACX				*i*S	Sn	11 09 20.0	-2.5
IISM	**Ciudad Serdan**	**2.98**	**356**	*e*P	Pn	11 08 50.0	-2.7
IISM				*i*S	Sn	11 09 24.0	-3.9
CAIG	**El Cayaco**	**3.15**	**290**	*i*P	Pn	11 08 51.0	-4.0
CAIG				*i*S	Sn	11 09 25.4	-6.7
CAIG	**El Cayaco**	**3.15**	**290**	*i*P	Pn	11 08 51.0	-4.0
CAIG				*i*S	Sn	11 09 25.7	-6.3
IIB	**San Bernardino**	**3.16**	**339**	*i*P	Pn	11 08 54.0	-1.2
IIB				*i*S	Sn	11 09 30.0	-2.3
PLIG	**Platanillo**	**3.26**	**317**	*e*P	Pn	11 08 53.2	-3.4
PLIG				*i*S	Sn	11 09 30.1	-4.9
TUIG	**Tuzandepetl**	**3.32**	**52**	*e*P	Pn	11 08 54.4	-3.2
TUIG				*i*S	Sn	11 09 32.8	-3.6
PPM	**Popocatepetl**	**3.35**	**336**	*i*P	Pn	11 08 55.0	-3.0
PPM				*i*S	Sn	11 09 36.0	-1.3
PPM	**Popocatepetl**	**3.35**	**336**	*i*P	Pn	11 08 55.0	-3.0
PPM				*e*P		11 08 56.6	
PPM				*i*S	Sn	11 09 35.7	-1.6
PPM				*i*S	Sn	11 09 40.0	+2.7
YAIG	**Yautepec**	**3.38**	**328**	*i*P	Pn	11 08 54.0	-4.3
YAIG				*i*S	Sn	11 09 34.0	-3.8
LVIG	**Laguna Verde**	**3.78**	**11**	*e*P	Pn	11 09 01.4	-2.6
LVIG				*i*S	Sn	11 09 41.2	-6.8
LVIG	**Laguna Verde**	**3.78**	**11**	*e*P	Pn	11 09 01.4	-2.6
LVIG				*i*S	Sn	11 09 43.0	-4.9
UNM	**Universidad Na**	**3.83**	**330**	*e*P	Pn	11 09 05.0	+0.3
UNM				*i*S	Sn	11 09 53.0	+3.8
UNM	**Universidad Na**	**3.83**	**330**	*e*P	Pn	11 09 05.0	+0.3
UNM				*e*P		11 09 16.3	
UNM				*i*S	Sn	11 09 50.1	+0.8
UNM				*i*S	Sn	11 09 53.0	+3.8
ZIIG	**Zihuatanejo**	**4.41**	**292**	*i*S	Sn	11 09 59.8	-4.3
CCIG	**Comitan**	**4.85**	**86**	*i*P	Pn	11 09 16.2	-3.0
CCIG				*i*S	Sn	11 10 11.7	-3.4
CCIG	**Comitan**	**4.85**	**86**	*i*P	Pn	11 09 16.2	-3.0
CCIG				*i*S	Sn	11 10 11.1	-4.0
MOIG	**Morelia**	**5.29**	**314**	*e*P	Pn	11 09 26.9	+1.4
MOIG				*i*S	Sn	11 10 22.1	-4.1
COLM	**Colima**	**6.97**	**298**	*i*S	Sn	11 11 06.8	-1.5
TEIG	**Tepich**	**9.45**	**62**	*e*Pn	P	11 10 19.0	-4.6
	7.0nm,0.4s						
MIAR	**Mount Ida**	**18.75**	**9**	*e*P	P	11 12 23.6	-1.7
	8.6nm,0.9s						

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*IDC **18** 11:46:52.2±0.5,4.94N×96.21E,mb4.3/16,mb1 4.4/17, mb1mx4.3/23,mbtmp4.3/17,ML3.5/1,MS3.5/2,Ms1 3.6/2, ms1mx3.1/24,Error ellipse: s-maj=26.7km s-min=13.6km az=51.0*

*BJI **18** 11:46:56.8,4.90N×96.30E,h30^{km},mb4.3*

*NEIC **18** 11:46:56.8±0.3,4.92N×96.30E,h30^{km},mb4.5/6,Error ellipse: s-maj=14.5km s-min=5.7km az=54.0*

ISC 18 11:46:55.3±0.4,4.78N±0.08×96.2E±0.1,h33^{km},n43, σ1^{s}04/37,mb4.4/29,MS3.8/1,3C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**13.86**	**11**	*e*Pn	**P**	**11 50 23.1**	**+11**
CMAR	**Chiang Mai Arr**	**13.86**	**11**	Pn	**P**	**11 50 14.7**	**+2.8**
	0.1nm,0.3s,baz=194,slow=16,SNR=5.4						
CMAR				LR	LR	11 56 02.8	
	comp=Z,109nm,20.1s,baz=190,slow=40						
HYB	**Hyderabad**	**21.35**	**307**	*e*P	**P**	**11 51 43.0**	**+1.1**
HYB	**Hyderabad**	**21.35**	**307**	*i*P	**P**	**11 51 43.0**	**+1.1**
JIRN	**Jiri**	**24.67**	**338**	*e*P	**P**	**11 52 15.5**	**+0.9**
	25nm,0.7s,mb4.9						
PKI	**Pulchoki**	**24.88**	**337**	*e*P	**P**	**11 52 16.0**	**-0.6**
	6.8nm,0.5s,mb4.4						
GUN	**Gumba**	**25.01**	**338**	*e*P	**P**	**11 52 18.6**	**+0.8**
	20nm,0.5s,mb4.9						
DMN	**Daman**	**25.04**	**336**	*e*P	**P**	**11 52 18.4**	**+0.3**
	12nm,0.7s,mb4.5						
KKN	**Kakani**	**25.13**	**337**	*e*P	**P**	**11 52 19.1**	**+0.1**
	13nm,0.6s,mb4.6						
LSA	**Lhasa**	**25.24**	**350**	*e*P	**P**	**11 52 21.8**	**+1.8**
LSA	**Lhasa**	**25.24**	**350**	*e*P	**P**	**11 52 21.0**	**+1.0**
	8.9nm,0.4s,mb4.7						
GKN	**Gorkha**	**25.58**	**336**	*e*P	**P**	**11 52 23.3**	**+0.1**
	16nm,0.5s,mb4.8						
KOLN	**Koldanda**	**25.81**	**334**	*e*P	**P**	**11 52 25.6**	**+0.2**
	32nm,0.6s,mb5.0						
GTA	**Gaotai**	**34.63**	**5**	P	**P**	**11 53 44.5**	**+0.9**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**42.34**	**336**	*e*P	**P**	**11 54 47.4**	**-0.5**
	comp=Z,2.7nm,0.8s,mb3.9						
NWAO	**Narrogin (SRO)**	**42.49**	**153**	P	**P**	**11 54 50.9**	**+1.6**
	comp=Z,3.6nm,0.8s,mb4.1,slow=13,SNR=2.4						
SONM	**Songino Array**	**43.79**	**10**	P	**P**	**11 55 00.1**	**+0.5**
	comp=Z,2.3nm,0.5s,mb4.2,baz=189,slow=8.9,SNR=30						
SONM				PcP	PcP	11 56 46.5	+0.1
	comp=Z,1.2nm,0.6s,baz=192,slow=3.3,SNR=10						
WRA	**Warramunga Arr**	**44.84**	**124**	P	**P**	**11 55 08.4**	**0.0**
	comp=Z,3.7nm,0.6s,mb4.4,baz=302,slow=9.1,SNR=34						
WRA				PcP	PcP	11 56 50.5	+0.2
	comp=Z,0.9nm,0.6s,baz=310,slow=2.9,SNR=5.9						
WRAB	**Tennant Creek**	**44.84**	**124**	*e*P	**P**	**11 55 07.9**	**-0.5**
	comp=Z,10nm,0.9s,mb4.7						
WB2	**Warramunga Arr**	**44.84**	**124**	⇑*i*P	**P**	**11 55 08.4**	**-0.1**
ASPA	**Alice Springs**	**46.39**	**129**	⇑*i*P	**P**	**11 55 20.9**	**+0.2**
ASAR	**Alice Springs**	**46.39**	**129**	P	**P**	**11 55 20.7**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.5,baz=300,slow=7.8,SNR=43						
ASAR				PcP	PcP	11 56 55.9	+0.1
	comp=Z,1.0nm,0.6s,baz=304,slow=3.2,SNR=4.4						
KURK	**Kurchatov**	**48.10**	**345**	*e*P	**P**	**11 55 32.3**	**-1.5**
	comp=Z,1.0nm,0.4s,mb4.2						
ZAL	**Zalesovo**	**49.88**	**351**	P	**P**	**11 55 46.9**	**-0.6**
	comp=Z,2.3nm,0.4s,mb4.5,baz=348,slow=5.2,SNR=5.8						
BVAR	**Borovoye Array**	**52.56**	**341**	P	**P**	**11 56 05.7**	**-2.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=153,slow=9.9,SNR=10.0						
CHKZ	**Chkalovo**	**53.03**	**341**	*e*P	**P**	**11 56 09.2**	**-2.0**
	comp=Z,3.4nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**56.52**	**133**	P	**P**	**11 56 36.8**	**-0.1**
	comp=Z,4.3nm,0.8s,mb4.6,baz=308,slow=9.3,SNR=10						
KMBO	**Kilima Mbogo**	**59.16**	**266**	P	**P**	**11 56 57.1**	**+1.4**
	comp=Z,1.8nm,0.8s,mb4.2,baz=238,slow=23,SNR=5.7						
EIL	**Elat**	**62.73**	**301**	LR	LR	12 26 31.9	
	comp=Z,63nm,18.3s,MS3.8,baz=235,slow=38						
BRTR	**Keskin Array B**	**65.98**	**311**	P	**P**	**11 57 39.2**	**-1.5**
	comp=Z,2.3nm,0.6s,mb4.4,baz=133,slow=7.4,SNR=15						
MLR	**Muntele Rosu**	**72.79**	**316**	P	**P**	**11 58 21.9**	**-0.5**
	comp=Z,3.6nm,0.8s,mb4.4,baz=133,slow=1.4,SNR=6.0						
LBTB	**Lobatse**	**74.58**	**243**	P	**P**	**11 58 35.6**	**+2.3**
	comp=Z,3.5nm,0.8s,mb4.3,baz=141,slow=10.0,SNR=5.2						
FINES	**FINESS Array B**	**76.38**	**332**	P	**P**	**11 58 42.0**	**-0.8**
	comp=Z,1.8nm,1.0s,mb4.0,baz=117,slow=4.3,SNR=6.6						
ARCES	**ARCESS Array B**	**78.85**	**340**	P	**P**	**11 58 55.5**	**-0.8**
	comp=Z,5.4nm,1.0s,mb4.4,baz=97,slow=6.1,SNR=7.8						
GERES	**GERESS Array B**	**81.47**	**319**	P	**P**	**11 59 10.9**	**+0.1**
	comp=Z,1.1nm,0.5s,mb4.0,baz=121,slow=5.3,SNR=9.0						
HFS	**Hagfors**	**82.13**	**330**	P	**P**	**11 59 13.1**	**-0.8**
	comp=Z,1.0nm,0.4s,mb4.1,baz=104,slow=6.1,SNR=5.8						
SYO	**Syowa Base**	**83.07**	**198**	⇑pP	**P**	**11 59 17.1**	**-1.5**
DAVOX	**Davos**	**84.01**	**316**	P	**P**	**11 59 24.3**	**+0.5**
	comp=Z,4.2nm,0.5s,mb4.9,baz=124,slow=3.8,SNR=12						
YKA	**Yellowknife Ar**	**108.92**	**15**	PP	PP	12 05 43.1	-10
	comp=Z,0.3nm,1.1s,baz=330,slow=5.7,SNR=3.6						
NVAR	**Mina Array Bea**	**126.44**	**34**	PKP	PKPdf	12 05 58.0	+2.5
	comp=Z,0.8nm,0.7s,baz=273,slow=4.2,SNR=7.4						
PDAR	**Pinedale Array**	**127.24**	**24**	PKP	PKPdf	12 05 58.6	+1.7
	comp=Z,0.4nm,0.5s,baz=137,slow=2.3,SNR=7.0						
TXAR	**Lajitas Array**	**141.09**	**28**	PKhKP		12 06 17.8	
	comp=Z,0.2nm,0.5s,baz=185,slow=1.7,SNR=4.1						
TXAR				PKP	PKPdf	12 06 24.9	+1.8
	comp=Z,0.3nm,0.4s,baz=225,slow=2.6,SNR=6.7						
TXAR	**Lajitas Array**	**141.09**	**28**	PKP	PKPdf	12 06 24.9	+1.8

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*IDC **18** 12:09:54.9±3.6,5.08N×94.49E,mb3.9/4,mb1 4.2/5, mb1mx3.8/19,mbtmp3.9/5,ML4.1/1,MS2.8/1,Ms1 3.0/1, ms1mx2.4/22,Error ellipse: s-maj=90.3km s-min=68.5km az=132.0*

*NEIC **18** 12:09:58.4±1.6,5.00N×94.60E,h30^{km},mb4.3/3,Error ellipse: s-maj=47.3km s-min=28.2km az=59.0*

ISC 18 12:09:49.6±4.3,4.0N±0.5×94.3E±0.3,h33^{km},n15, σ0^{s}61/14,mb4.2/9,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.12**	**17**	Pn	**P**	**12 13 22.9**	**+0.3**
	0.3nm,0.3s,baz=210,slow=12,SNR=25						
CMAR				LR	LR	12 19 29.7	
	comp=Z,34nm,19.6s,baz=232,slow=41						
JIRN	**Jiri**	**24.80**	**343**	*e*P	**P**	**12 15 09.3**	**-0.8**
PKI	**Pulchoki**	**24.96**	**341**	*e*P	**P**	**12 15 11.6**	**-0.1**
DMN	**Daman**	**25.09**	**341**	*e*P	**P**	**12 15 13.6**	**+0.7**
	15nm,0.8s,mb4.6						
GUN	**Gumba**	**25.13**	**342**	*e*P	**P**	**12 15 12.6**	**-0.7**
KKN	**Kakani**	**25.20**	**341**	*e*P	**P**	**12 15 14.0**	**0.0**
	13nm,0.7s,mb4.5						
GKN	**Gorkha**	**25.61**	**340**	*e*P	**P**	**12 15 17.6**	**-0.2**
KOLN	**Koldanda**	**25.77**	**338**	*e*P	**P**	**12 15 19.9**	**+0.6**
	9.9nm,0.7s,mb4.5						
SONM	**Songino Array**	**44.94**	**12**	P	**P**	**12 18 02.4**	**-0.8**
	1.3nm,0.8s,mb3.8,baz=189,slow=8.8,SNR=15						
SONM				PcP	PcP	12 19 49.1	+4.5
	0.5nm,0.5s,baz=197,slow=4.0,SNR=5.1						
KURK	**Kurchatov**	**48.42**	**347**	P	**P**	**12 18 31.0**	**+0.4**
	2.2nm,0.8s,mb4.2						
ZAL	**Zalesovo**	**50.42**	**353**	P	**P**	**12 18 46.8**	**+0.9**
	1.1nm,0.5s,mb4.1,baz=301,slow=6.8,SNR=6.9						
BVAR	**Borovoye Array**	**52.72**	**342**	P	**P**	**12 19 02.3**	**-0.9**
	0.4nm,0.5s,mb3.6,baz=166,slow=12,SNR=3.4						
CHKZ	**Chkalovo**	**53.22**	**343**	*e*P	**P**	**12 19 07.5**	**+0.6**
	4.6nm,0.6s,mb4.6						
CHKZ				*e*pP	pP	12 19 21.7	+4.8
GERES	**GERESS Array B**	**80.83**	**319**	P	**P**	**12 22 07.5**	**+5.9**
	0.6nm,0.4s,mb3.8,baz=90,slow=6.9,SNR=4.8						
TXAR	**Lajitas Array**	**142.69**	**26**	PKP	PKPdf	12 29 27.1	+6.9
	0.1nm,0.4s,baz=252,slow=2.9,SNR=3.6						

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*BJI **18** 12:12:30.0,7.40S×128.40E,h128^{km},mb4.9*

*NEIC **18** 12:12:31.6±1.3,7.45S×128.35E,h129^{km}±12^{km},mb4.4/11, Error ellipse: s-maj=12.0km s-min=7.3km az=65.0*

*IDC **18** 12:12:33.8±4.2,7.41S×128.48E,h148^{km}±39^{km},mb4.0/11, mb1 4.1/14,mb1mx4.0/18,mbtmp4.5/14,Error ellipse: s-maj=23.5km s-min=11.9km az=62.0*

ISC 18 12:12:28.8±1.5,7.47S±0.06×128.5E±0.1,h121^{km}±15^{km}, n40,σ1^{s}12/41,mb4.3/19,2C-3D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.48**	**144**	⇑*i*P	**P**	**12 14 05.3**	**+2.4**
	483nm,0.4s						
KAKA				*e*S	**S**	**12 15 14.1**	**-1.9**
FITZ	**Fitzroy Crossi**	**10.94**	**195**	*e*P	**P**	**12 15 02.9**	**+0.1**
	10nm,0.5s						
FITZ				*e*S	**S**	**12 16 56.5**	**-6.9**
WRAB	**Tennant Creek**	**13.62**	**156**	*e*Pn	**P**	**12 15 36.9**	**-1.1**
	22nm,0.5s						
WRAB				*e*Sn	**S**	**12 17 59.5**	**-7.1**
WRA	**Warramunga Arr**	**13.62**	**156**	P	**P**	**12 15 36.6**	**-1.4**
	4.6nm,0.3s,baz=248,slow=5.2,SNR=173						
WRA				S	**S**	**12 17 58.7**	**-8.1**
	6.2nm,0.3s,baz=326,slow=25,SNR=9.4						
WB2	**Warramunga Arr**	**13.63**	**156**	*e*P	**P**	**12 15 37.1**	**-1.0**
WB2				*e*S	**S**	**12 17 58.0**	**-8.8**
ASAR	**Alice Springs**	**16.91**	**163**	P	**P**	**12 16 21.9**	**+2.4**
	2.3nm,0.3s,baz=343,slow=10,SNR=114						
ASAR				S	**S**	**12 19 21.2**	**-0.9**
	2.8nm,0.3s,baz=343,slow=26,SNR=7.6						
ASPA	**Alice Springs**	**16.91**	**163**	*e*P	**P**	**12 16 22.3**	**+2.8**
ASPA				*e*S	**S**	**12 19 21.1**	**-1.0**
PMG	**Port Moresby**	**18.53**	**97**	P	**P**	**12 16 40.4**	**+1.9**
	0.6nm,0.3s,baz=273,slow=7.6,SNR=8.8						
PMG	**Port Moresby**	**18.53**	**97**	*e*P	**P**	**12 16 41.7**	**+3.2**
	19nm,0.8s						
CTA	**Charters Tower**	**21.27**	**128**	P	**P**	**12 17 09.5**	**+2.6**
	3.3nm,0.9s,mb3.7,baz=303,slow=16,SNR=3.6						
KLBR	**Kellerberrin**	**26.02**	**201**	*e*P	**P**	**12 17 53.4**	**+1.0**
	471nm,1.9s						
STKA	**Stephens Creek**	**27.17**	**155**	*e*P	**P**	**12 18 03.6**	**+0.7**
	8.1nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**27.17**	**155**	P	**P**	**12 18 03.7**	**+0.8**
	11nm,0.6s,mb4.6,baz=326,slow=8.9,SNR=30						
STKA	**Stephens Creek**	**27.17**	**155**	*e*P	**P**	**12 18 03.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**27.41**	**201**	P	**P**	**12 18 05.9**	**+0.7**
	8.8nm,0.6s,mb4.4,baz=28,slow=9.6,SNR=13						
NWAO	**Narrogin (SRO)**	**27.41**	**201**	*e*P	**P**	**12 18 05.2**	**0.0**
	4.7nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**38.93**	**312**	P	**P**	**12 19 45.4**	**+0.8**
	1.9nm,0.9s,mb3.9,baz=143,slow=7.2,SNR=13						
CMAR				PcP	PcP	12 21 53.6	+0.2
	0.9nm,0.6s,baz=188,slow=3.5,SNR=5.6						
ENH	**Enshi**	**41.74**	**335**	*e*P	**P**	**12 20 07.2**	**-0.5**
	4.3nm,0.7s,mb4.3						
LZH	**Lanzhou**	**49.15**	**333**	⇓P	**P**	**12 21 06.8**	**+0.5**
LZH				AMB	AMB		
	comp=Z,29nm,1.3s,mb5.0						
LZH	**Lanzhou**	**49.15**	**333**	⇓P	**P**	**12 21 06.7**	**+0.4**
	comp=Z,29nm,1.3s,mb5.0						
LZH				pP	tx	12 21 14.5	
LZH				sP	tx	12 21 18.0	
RPZ	**Rata Peaks**	**51.77**	**141**	P	**P**	**12 21 27.2**	**+1.0**
	comp=Z,6.9nm,0.6s,mb4.9,baz=312,slow=1.9,SNR=5.6						
URZ	**Urewera**	**53.41**	**133**	P	**P**	**12 21 38.2**	**-0.3**
	comp=Z,2.0nm,0.4s,mb4.5,baz=278,slow=7.1,SNR=3.8						
GTA	**Gaotai**	**53.69**	**332**	⇓*i*P	**P**	**12 21 40.8**	**+0.4**
GTA				AMB	AMB		
	comp=Z,11nm,0.6s,mb5.1						
ULN	**Ulaanbaatar**	**58.27**	**343**	*e*P	**P**	**12 22 12.2**	**-0.8**
	comp=Z,5.6nm,1.1s,mb4.5						
SONM	**Songino Array**	**58.44**	**343**	P	**P**	**12 22 13.7**	**-0.5**
	comp=Z,4.8nm,1.0s,mb4.5,baz=168,slow=7.2,SNR=22						
AAK	**Ala-Archa**	**69.96**	**321**	*e*P	**P**	**12 23 28.1**	**-1.0**
	comp=Z,2.5nm,1.0s,mb4.0						
ZAL	**Zalesovo**	**71.36**	**334**	P	**P**	**12 23 36.6**	**-0.7**
	comp=Z,2.1nm,0.5s,mb4.2,baz=328,slow=5.7,SNR=10.0						
KURK	**Kurchatov**	**72.16**	**329**	*e*P	**P**	**12 23 41.1**	**-1.0**
	comp=Z,13nm,1.3s,mb4.6						
VNDA	**Vanda**	**72.17**	**173**	P	**P**	**12 23 41.6**	**-0.1**
	comp=Z,3.5nm,1.0s,mb4.1,baz=328,slow=14,SNR=7.1						
MAW	**Mawson**	**73.98**	**201**	P	**P**	**12 23 53.7**	**+1.2**
	comp=Z,2.0nm,0.7s,mb4.0,baz=45,slow=8.6,SNR=3.6						
BVAR	**Borovoye Array**	**77.69**	**328**	P	**P**	**12 24 12.8**	**-0.7**
	comp=Z,1.5nm,0.6s,mb3.9,baz=135,slow=6.3,SNR=11						
CHKZ	**Chkalovo**	**77.90**	**329**	*e*P	**P**	**12 24 13.8**	**-0.9**
	comp=Z,1.4nm,0.5s,mb4.0						
QSPA	**South Pole Qui**	**82.51**	**180**	*e*P	**P**	**12 24 39.1**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.3						
SYO	**Syowa Base**	**82.70**	**201**	⇑P	**P**	**12 24 40.2**	**+0.3**
YKA	**Yellowknife Ar**	**108.81**	**26**	PKiKP		12 30 44.2	
	comp=Z,0.2nm,0.6s,baz=304,slow=1.9,SNR=6.1						
YKA	**Yellowknife Ar**	**108.81**	**26**	PKPdf		12 30 44.2	

TXAR	Lajitas Array	126.42	59	PKP	PKPdf	12 31 19.8	+1.7
	comp=Z,0.2nm,0.3s,baz=201,slow=3.4,SNR=7.6						
LVC	Limon Verde	145.57	151	ePKPdf	PKPdf	12 31 56.6	+3.1
LPAZ	La Paz	151.21	145	PKPbc	PKPdf	12 32 11.7	+9.1
	comp=Z,1.8nm,0.4s,baz=47,slow=2.2,SNR=5.9						
LPAZ				PKPab	PKPab	12 32 20.6	+1.2
	comp=Z,3.0nm,0.5s,baz=194,slow=3.3,SNR=10						
LPAZ	La Paz	151.21	145	ePKPbc	PKPdf	12 32 11.8	+9.2
LPAZ				ePKPab	PKPab	12 32 20.4	+1.1

IDC 18 12:39:40.7±1.2**,38.95N**×**110.69E,mb3.5**/4**,mb1 3.8**/5**, mb1mx3.6**/20**,mbtmp3.5**/5**,ML3.4**/1**,MS3.2**/1**,Ms1 3.2**/1**, ms1mx2.9**/22**,Error ellipse: s-maj=48.3km s-min=20.7km az=86.0,Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.41	342	Pn	P	12 41 57.5	-3.2
	0.1nm,0.3s,baz=156,slow=13,SNR=20						
SONM				Lg		12 44 40.8	
	0.1nm,0.3s,baz=151,slow=31,SNR=5.8						
CMAR	Chiang Mai Arr	22.83	210	P	P	12 44 45.2	-1.4
	1.8nm,0.8s,baz=12,slow=9.4,SNR=13						
ZAL	Zalesovo	23.12	319	LR	LR	12 54 21.1	
	comp=Z,61nm,18.4s,baz=82,slow=38						
WRA	Warramunga Arr	62.63	155	P	P	12 50 06.9	-2.5
	0.7nm,0.9s,baz=348,slow=6.5,SNR=4.8						
ASAR	Alice Springs	65.97	157	P	P	12 50 29.1	-2.0
	0.4nm,0.8s,baz=350,slow=5.8,SNR=4.4						
YKA	Yellowknife Ar	72.55	20	P	P	12 51 09.1	-1.7
	0.1nm,0.6s,baz=328,slow=5.3,SNR=5.6						

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*IDC **18** 12:41:11.4±1.4,38.08S×176.40E,h264^{km}±15^{km},mb3.1/2, mb1 3.4/3,mb1mx3.2/11,mbtmp3.9/3,Error ellipse: s-maj=52.8km s-min=21.1km az=122.0*

*NEIC **18** 12:41:14.1,37.82S×176.40E,h257^{km},After WEL.*

*WEL **18** 12:41:14.5±0.3,37.81S×176.39E,h253^{km}±2^{km},ML4.4/14, Error ellipse: s-maj=2.5km s-min=2.3km az=90.0*

ISC 18 12:41:11.4±0.6**,37.93S**±0.06×**176.43E**±0.10**,h282**^{km}±5^{km}**, n129,**σ**0**^{s}**94**/141**,mb3.4**/3**,13C-1D,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIRZ	Lichensteins R	0.09	202	P	P	12 41 46.8	-0.7
LIRZ	Lichensteins R	0.09	202	PN	P	12 41 46.8	-0.6
MARZ	Manawahe	0.21	107	P	P	12 41 47.1	-0.5
MARZ	Manawahe	0.21	107	PN	P	12 41 47.1	-0.5
EDRZ	Edgecumbe	0.31	126	P	P	12 41 47.5	-0.3
EDRZ	Edgecumbe	0.31	126	PN	P	12 41 47.5	-0.3
UTU	Utuhina	0.31	216	P	P	12 41 47.7	-0.1
UTU	Utuhina	0.31	216	PN	P	12 41 47.7	-0.1
TAZ	Tarawera	0.31	168	P	P	12 41 47.7	-0.1
TAZ	Tarawera	0.31	168	PN	P	12 41 47.7	-0.1
PATZ	Paeroa	0.47	196	P	P	12 41 48.2	+0.1
PATZ	Paeroa	0.47	196	PN	P	12 41 48.2	+0.1
URZ	Urewera	0.64	122	P	P	12 41 48.0	-0.6
	86nm,0.3s,baz=288,slow=1.6,SNR=929						
URZ				S	S	12 42 14.1	-3.5
	70nm,0.3s,baz=184,slow=22,SNR=29						
URZ	Urewera	0.64	122	P	P	12 41 48.0	-0.6
URZ	Urewera	0.64	122	⇑PN	P	12 41 48.0	-0.5
URZ				SN	S	12 42 14.2	-3.4
MWZ	Matawai	0.96	116	P	P	12 41 50.0	+0.2
MWZ				S	S	12 42 18.0	-1.8
MWZ	Matawai	0.96	116	⇑PN	P	12 41 50.0	+0.2
MWZ				SN	S	12 42 18.0	-1.8
HATZ	Hinemaiaia	1.00	195	PN	P	12 41 50.3	+0.3
RITZ	Rihia Road	1.14	203	P	P	12 41 51.7	+0.9
RITZ	Rihia Road	1.14	203	PN	P	12 41 51.7	+0.9
KATZ	Kakaramea	1.20	208	P	P	12 41 51.7	+0.6
KATZ	Kakaramea	1.20	208	PN	P	12 41 51.7	+0.6
BKZ	Black Stump Fm	1.24	178	P	P	12 41 52.2	+0.8
BKZ				S	S	12 42 21.2	-1.4
BKZ	Black Stump Fm	1.24	178	⇑PN	P	12 41 52.2	+0.9
BKZ				SN	S	12 42 21.2	-1.4
MGZ	Maungaku	1.28	213	P	P	12 41 52.3	+0.7
MGZ	Maungaku	1.28	213	⇑PN	P	12 41 52.3	+0.7
WTVZ	West Tongariro	1.36	209	P	P	12 41 52.6	+0.5
WTVZ	West Tongariro	1.36	209	PN	P	12 41 52.6	+0.5
HIZ	Hauiti	1.37	244	P	P	12 41 52.3	+0.1
HIZ	Hauiti	1.37	244	⇑PN	P	12 41 52.3	+0.2
OTVZ	Oturere	1.37	205	PN	P	12 41 53.0	+0.8
NGZ	Ngauruhoe	1.41	207	P	P	12 41 53.0	+0.6
NGZ	Ngauruhoe	1.41	207	PN	P	12 41 53.0	+0.6
CNZ	Chateau	1.45	208	P	P	12 41 53.3	+0.6
CNZ	Chateau	1.45	208	PN	P	12 41 53.3	+0.6
WPVZ	Whakapapa	1.45	208	PN	P	12 41 53.5	+0.8
PUZ	Puketiti	1.46	96	P	P	12 41 53.1	+0.4
PUZ				S	S	12 42 18.3	-6.7
PUZ	Puketiti	1.46	96	⇑PN	P	12 41 53.1	+0.4
PUZ				SN	S	12 42 18.3	-6.7
KNZ	Kokohu	1.47	139	P	P	12 41 54.0	+1.2
KNZ				S	S	12 42 24.2	-1.0
KNZ	Kokohu	1.47	139	⇑PN	P	12 41 54.0	+1.2
KNZ				SN	S	12 42 24.2	-0.9
TUVZ	Tukino	1.47	204	P	P	12 41 53.7	+0.9
TUVZ	Tukino	1.47	204	⇑PN	P	12 41 53.7	+0.8
FWVZ	Far West T-bar	1.49	207	P	P	12 41 53.6	+0.6
FWVZ	Far West T-bar	1.49	207	PN	P	12 41 53.6	+0.6
DRZ	Dome Shelter	1.51	206	P	P	12 41 54.6	+1.5
DRZ	Dome Shelter	1.51	206	PN	P	12 41 54.6	+1.5
MXZ	Matakaoa Point	1.54	77	P	P	12 41 53.2	-0.1
MXZ	Matakaoa Point	1.54	77	PN	P	12 41 53.2	-0.1
MXZ				SN	S	12 42 23.0	-2.9
MOVZ	Moawhango	1.57	199	PN	P	12 41 54.0	+0.5
MOVZ				eSN	S	12 42 25.0	-1.4
VRZ	Vera Road	1.77	227	eP	P	12 41 55.4	+0.4
VRZ	Vera Road	1.77	227	PN	P	12 41 55.4	+0.4
RAEZ	Rainy Point	2.09	229	P	P	12 41 58.5	+0.9
RAEZ	Rainy Point	2.09	229	PN	P	12 41 58.5	+0.9
PWZ	Pawanui	2.13	171	P	P	12 41 59.5	+1.6
PWZ	Pawanui	2.13	171	⇑PN	P	12 41 59.5	+1.6
WAZ	Wanganui	2.15	211	P	P	12 41 58.7	+0.6
WAZ	Wanganui	2.15	211	⇑PN	P	12 41 58.7	+0.6
TSZ	Takapari Road	2.16	189	P	P	12 41 59.2	+1.0
TSZ	Takapari Road	2.16	189	⇑PN	P	12 41 59.2	+1.0
NEZ	North Egmont	2.27	233	P	P	12 42 00.2	+1.0
NEZ	North Egmont	2.27	233	PN	P	12 42 00.2	+1.0
PKE	Pukeiti	2.29	236	PN	P	12 42 00.3	+0.9
NRZ	Ngariki Road	2.41	233	P	P	12 42 01.4	+0.9
NRZ	Ngariki Road	2.41	233	PN	P	12 42 01.4	+0.9
NWEZ	Newall Road	2.42	235	P	P	12 42 01.5	+0.9
NWEZ	Newall Road	2.42	235	PN	P	12 42 01.5	+1.0
WCZ	Waipu Caves	2.59	319	P	P	12 42 00.3	-1.9
WCZ	Waipu Caves	2.59	319	⇓PN	P	12 42 00.3	-1.9
BFZ	Birch Farm	2.75	183	P	P	12 42 04.9	+1.1
BFZ	Birch Farm	2.75	183	⇑PN	P	12 42 04.9	+1.1
MRZ	Mangatainoka R	2.81	193	P	P	12 42 05.0	+0.6
MRZ	Mangatainoka R	2.81	193	⇑PN	P	12 42 05.0	+0.6
KIW	Kapiti Island	3.16	201	P	P	12 42 08.3	+0.3
KIW	Kapiti Island	3.16	201	PN	P	12 42 08.3	+0.3
MTW	Mount Morrison	3.31	192	P	P	12 42 09.9	+0.4
MTW	Mount Morrison	3.31	192	PN	P	12 42 09.9	+0.3
CAW	Cannon Point	3.35	198	P	P	12 42 10.3	+0.3
CAW	Cannon Point	3.35	198	PN	P	12 42 10.3	+0.3
PAWZ	Paruwai Farm	3.54	192	PN	P	12 42 12.4	+0.4
MRW	Makara Radio	3.56	201	P	P	12 42 12.5	+0.2
MRW	Makara Radio	3.56	201	PN	P	12 42 12.5	+0.2
WEL	Wellington	3.59	200	PN	P	12 42 13.0	+0.4
MSWZ	Moikau Station	3.60	194	P	P	12 42 13.0	+0.3
MSWZ	Moikau Station	3.60	194	PN	P	12 42 13.0	+0.2
BHW	Baring Head	3.68	199	P	P	12 42 13.6	0.0
BHW	Baring Head	3.68	199	PN	P	12 42 13.6	0.0
TUWZ	Tuamarina	3.99	208	PN	P	12 42 16.9	-0.1
NNZ	Nelson	4.04	215	PN	P	12 42 16.8	-0.8
CMWZ	Cape Campbell	4.18	203	P	P	12 42 20.5	+1.3
CMWZ	Cape Campbell	4.18	203	PN	P	12 42 20.5	+1.3
QRZ	Quartz Range	4.18	225	eP	P	12 42 17.6	-1.7
QRZ	Quartz Range	4.18	225	PN	P	12 42 17.6	-1.6
BSWZ	Blackbirch Sta	4.26	207	P	P	12 42 20.5	+0.3
BSWZ	Blackbirch Sta	4.26	207	PN	P	12 42 20.5	+0.4
THZ	Tophouse	4.69	214	eP	P	12 42 24.2	-0.9
THZ	Tophouse	4.69	214	PN	P	12 42 24.2	-0.9
KHZ	Kahutara	5.00	205	P	P	12 42 29.2	+0.5
KHZ	Kahutara	5.00	205	PN	P	12 42 29.2	+0.4
DSZ	Denniston Nort	5.22	222	eP	P	12 42 29.7	-1.6
DSZ	Denniston Nort	5.22	222	PN	P	12 42 29.7	-1.6
LTZ	Lake Taylor	5.80	212	P	P	12 42 37.7	-0.6
LTZ	Lake Taylor	5.80	212	PN	P	12 42 37.7	-0.6
CRLZ	Canterbury Las	6.34	206	eP	P	12 42 44.4	-0.6
CRLZ	Canterbury Las	6.34	206	PN	P	12 42 44.4	-0.6
MQZ	McQueen's Vall	6.45	205	P	P	12 42 45.5	-0.8
MQZ	McQueen's Vall	6.45	205	PN	P	12 42 45.5	-0.7
WVZ	Waitaha Valley	6.73	218	eP	P	12 42 48.4	-1.3
WVZ	Waitaha Valley	6.73	218	PN	P	12 42 48.4	-1.3
RPZ	Rata Peaks	7.07	213	P	P	12 42 52.6	-1.4
	2.8nm,0.3s,baz=31,slow=2.9,SNR=38						
RPZ				S	S	12 44 10.5	-4.1
	7.3nm,0.3s,baz=123,slow=21,SNR=23						
RPZ	Rata Peaks	7.07	213	P	P	12 42 52.7	-1.3
RPZ	Rata Peaks	7.07	213	PN	P	12 42 52.7	-1.3
FOZ	Fox Glacier	7.61	220	PN	P	12 42 58.3	-2.3
LBZ	Lake Benmore	7.99	214	eP	P	12 43 04.3	-1.1
LBZ	Lake Benmore	7.99	214	PN	P	12 43 04.3	-1.1
ODZ	Otahua Downs	8.33	210	eP	P	12 43 09.9	+0.2
ODZ	Otahua Downs	8.33	210	PN	P	12 43 09.9	+0.3
JCZ	Jackson Bay	8.44	221	eP	P	12 43 09.4	-1.7
JCZ	Jackson Bay	8.44	221	PN	P	12 43 09.4	-1.7
WKZ	Wanaka	8.86	217	eP	P	12 43 14.9	-1.4
WKZ	Wanaka	8.86	217	PN	P	12 43 14.9	-1.4
EAZ	Earnscleugh	9.04	214	eP	P	12 43 17.5	-1.0
EAZ	Earnscleugh	9.04	214	PN	P	12 43 17.5	-1.0
TUZ	Tuapeka	9.48	210	eP	P	12 43 24.7	+0.7
TUZ	Tuapeka	9.48	210	PN	P	12 43 24.7	+0.7
ASAR	Alice Springs	38.86	279	P	P	12 48 11.8	+0.5
	0.5nm,0.3s,mb3.4,baz=121,slow=7.9,SNR=15						
WB2	Warramunga Arr	40.56	284	eP	P	12 48 25.0	-0.2
WRA	Warramunga Arr	40.57	284	P	P	12 48 25.3	0.0
	0.5nm,0.3s,mb3.1,baz=125,slow=7.9,SNR=7.6						
FITZ	Fitzroy Crossi	48.35	280	eP	P	12 49 27.5	+0.6
	2.3nm,0.8s,mb3.6						
ARCES	ARCESS Array B	144.69	343	PKP	PKPdf	13 00 13.4	+0.2
	3.6nm,0.9s,baz=45,slow=1.3,SNR=3.8						

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*NEIC **18** 12:56:05.7±1.0,5.01N×76.30W,h114^{km}±11^{km},mb4.5/2, Error ellipse: s-maj=15.5km s-min=11.0km az=109.0*

*IDC **18** 12:56:08.4±2.5,5.15N×76.10W,h137^{km}±29^{km},mb3.2/4, mb1 3.6/5,mb1mx3.2/19,mbtmp3.7/5,Error ellipse: s-maj=38.4km s-min=18.0km az=87.0*

ISC 18 12:56:07.9±1.5**,5.1N**±0.1×**76.0W**±0.2**,h156**^{km}±16^{km}**,n11,** σ**0**^{s}**60**/11**,mb3.4**/4**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	1.71	98	P	P	12 56 39.7	-0.7
	20nm,0.3s,baz=270,slow=4.8,SNR=35						
ROSC				S	S	12 57 06.1	+0.6
	29nm,0.3s,baz=270,slow=23,SNR=12						
OTAV	Otavalo	5.40	207	ePn	P	12 57 21.4	-6.1
	74nm,0.9s						
SDV	Santo Domingo	6.55	55	P	P	12 57 42.7	-0.1
	2.8nm,0.3s,baz=250,slow=12,SNR=23						
SDV				S	S	12 58 56.7	+0.1
	5.9nm,0.3s,baz=74,slow=18,SNR=8.3						
SAML	Samuel	18.93	137	eP	P	13 00 18.6	-0.7
	5.7nm,0.7s						
PLCA	Paso Flores	45.88	174	P	P	13 04 17.2	+0.9
	1.2nm,0.6s,mb3.7,baz=359,slow=8.3,SNR=4.6						
PDAR	Pinedale Array	47.85	327	P	P	13 04 32.6	+0.9
	0.2nm,0.6s,mb2.9,baz=131,slow=9.6,SNR=2.8						
NVAR	Mina Array Bea	50.70	317	P	P	13 04 53.0	-0.6
	0.3nm,0.5s,mb3.2,baz=141,slow=6.4,SNR=5.0						
YKA	Yellowknife Ar	63.92	341	P	P	13 06 25.8	-0.2
	0.5nm,0.5s,mb3.6,baz=134,slow=6.3,SNR=18						
YKA	Yellowknife Ar	63.92	341	P	P	13 06 25.8	-0.3
ASAR	Alice Springs	145.76	234	PKPbc	PKPbc	13 15 31.2	+1.8
	1.2nm,0.6s,baz=120,slow=3.7,SNR=15						
WRA	Warramunga Arr	146.98	241	PKPbc	PKPbc	13 15 35.3	+2.9
	1.3nm,0.9s,baz=115,slow=3.6,SNR=6.9						

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*NEIC **18** 12:59:16.2,17.76N×103.19W,h27^{km},MD3.8(MEX),After MEX.*

MEX 18 12:59:15.9±1.4**,17.81N**×**103.13W,h8**^{km}±27^{km}**,MD3.8, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLM	Colima	1.46	339	iP	Pn	12 59 38.5	-4.2
COLM				iS	Sb	12 59 56.9	-4.6
ZIIG	Zihuatanejo	1.60	97	iP	Pn	12 59 40.5	-4.2
ZIIG				iS	Sb	13 00 01.3	-4.3
MOIG	Morelia	2.61	44	iP	Pn	12 59 55.5	-3.6
MOIG				iS	Sn	13 00 25.2	-6.2
SFJM	Santa Fe	2.66	2	iP	Pn	12 59 58.0	-1.8
SFJM				iS	Sn	13 00 28.2	-4.4
ACX	Acapulco	3.21	107	eP	Pn	13 00 05.0	-2.7
PPM	Popocatepetl	4.46	73	eP	Pn	13 00 24.0	-1.3
IIB	San Bernardino	4.69	75	eP	Pn	13 00 28.0	-0.6

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*IDC **18** 13:17:04.5±1.2,29.24N×130.09E,mb3.5/4,mb1 3.6/5, mb1mx3.5/22,mbtmp3.5/5,ML3.2/1,Error ellipse: s-maj=39.8km s-min=22.4km az=98.0*

*JMA **18** 13:17:09.3,29.19N×130.17E,h45^{km}±4^{km},M3.3*

ISC 18 13:17:09.5±0.6**,29.20N**±0.05×**130.1E**±0.1**,h49**^{km}±8^{km}**, n14,**σ**0**^{s}**69**/21**,mb3.3**/4**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.68	340	P	P	13 17 22.9	0.0
JNN				eS	S	13 17 32.7	-0.1
JZK	Kikaishima	0.89	189	P	P	13 17 25.7	-0.2
JAM	Amami Oshima	0.91	211	P	P	13 17 25.9	-0.2
JAM				S	S	13 17 38.2	-0.3
JKC	Kuchinoerabu	1.26	2	P	P	13 17 31.3	+0.3
JTN	Tanegashima 3	1.62	27	P	P	13 17 36.0	-0.2
JTN				eS	S	13 17 56.9	+0.8
JTK	Tokunoshima	1.75	217	P	P	13 17 38.6	+0.6
JTK				S	S	13 18 01.1	+1.9
JTSR	Tashiro 2	2.08	19	P	P	13 17 42.3	-0.3
JOW	Kunigami	2.88	215	Pn	P	13 17 51.4	-2.6
	5.7nm,0.3s,baz=102,slow=21,SNR=6.5						
JOW				Sn	S	13 18 27.2	-0.4
	16nm,0.3s,baz=127,slow=27,SNR=7.5						
JOW	Kunigami	2.88	215	P	P	13 17 53.1	-0.9
JOW				eS	S	13 18 27.8	+0.2
JIH	Iheya	2.88	222	P	P	13 17 53.5	-0.6
JIH				eS	S	13 18 28.1	+0.3
SONM	Songino Array	26.12	322	P	P	13 22 39.6	-1.0
	0.7nm,0.6s,mb3.4,baz=139,slow=8.9,SNR=7.3						
ASAR	Alice Springs	52.69	176	P	P	13 26 21.2	-0.1
	0.2nm,0.6s,mb3.2,baz=7.2,slow=15,SNR=6.3						
YKA	Yellowknife Ar	75.13	26	P	P	13 28 47.9	+0.2
	0.2nm,0.6s,mb3.2,baz=301,slow=5.4,SNR=6.9						
BRTR	Keskin Array B	76.55	308	P	P	13 28 56.9	+0.6
	0.6nm,0.9s,mb3.5,baz=56,slow=5.2,SNR=2.7						

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*ISK **18** 13:21:47.5,38.82N×39.00E,h5^{km},MD4.0*

*CSEM **18** 13:21:47.5,38.82N×39.00E,h5^{km},MD4.0,After ISK*

ISC 18 13:21:48.4±0.4**,38.80N**±0.04×**39.00E**±0.04**,h5**^{km}**,n21,** σ**0**^{s}**89**/29**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.30	183	iP	Pg	13 21 54.4	-0.2
ELZG				iS	Sg	13 21 57.8	-0.8
PTK	Pertek	0.32	73	iPG	Pg	13 21 54.3	-0.6
PTK				iSG	Sg	13 21 59.3	+0.2
MYA	Malataya	0.65	224	iPG	Pg	13 22 00.6	-0.9
MYA				iSG	Sg	13 22 10.3	0.0
EZC	Erzincan	1.14	33	iPG	Pg	13 22 06.5	-4.7
BINT	Bingol	1.16	86	PN	Pn	13 22 09.4	-1.9
DIY	Diyarbakir	1.32	133	PN	Pn	13 22 13.2	-0.3
URFA	Urfa	1.36	186	PN	Pn	13 22 14.6	+0.4
GUMT	Gumushane	1.70	12	PN	Pn	13 22 19.1	+0.1
GZT	Gaziantep	1.83	219	iP	Pn	13 22 21.7	+0.8
GZT				iS	Sn	13 22 49.1	+4.4
SVST	Sivas	1.86	302	iP	Pn	13 22 22.9	+1.6
SVST				iS	Sn	13 22 50.3	+4.8
VRT	Varto	2.00	80	ePN	Pn	13 22 23.5	+0.3
BEST	Besiri	2.00	116	iP	Pn	13 22 23.6	+0.3
BEST				iS	Sn	13 22 50.7	+1.7
KAHT	Ahir Dag	2.04	236	iP	Pn	13 22 25.5	+1.6
KAHT				iS	Sn	13 22 56.9	+6.9
BTMT	Batman	2.04	106	ePN	Pn	13 22 22.7	-1.2
EZM	Erzurum	2.14	58	ePN	Pn	13 22 25.4	+0.2
ERZM	Erzurum	2.14	58	iP	Pn	13 22 26.0	+0.7
ERZM				iS	Sn	13 22 59.2	+6.7
GAZ	Gaziantep	2.15	222	ePN	Pn	13 22 25.9	+0.4
TOKT	Tokat	2.43	309	ePN	Pn	13 22 29.3	-0.2
BNN	Bunyan	2.46	272	ePN	Pn	13 22 29.9	0.0
YOZ	Yozgat	2.98	288	ePN	Pn	13 22 36.2	-1.1
CORM	Corum	3.65	294	ePN	Pn	13 22 45.7	-1.1

IDC 18 13:29:09.0±2.0**,48.99S**×**121.57E,mb3.9**/3**,mb1 4.2**/3**, mb1mx3.9**/10**,mbtmp3.9**/3**,Error ellipse: s-maj=73.5km s-min=48.8km az=114.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	27.08	25	P	P	13 34 53.4	-1.7
	0.8nm,0.6s,baz=185,slow=9.7,SNR=15						
ASAR				PcP	PcP	13 38 13.6	-3.1
	0.3nm,0.5s,baz=197,slow=2.2,SNR=6.6						
WRA	Warramunga Arr	30.74	24	P	P	13 35 25.6	-2.5
	3.7nm,1.3s,baz=197,slow=8.3,SNR=9.8						
CMAR	Chiang Mai Arr	70.10	337	P	P	13 40 22.9	-2.1
	0.5nm,0.5s,baz=191,slow=4.6,SNR=4.1						
PDAR	Pinedale Array	144.43	80	PKP	PKPdf	13 48 45.5	-2.7
	0.5nm,0.8s,baz=180,slow=1.5,SNR=4.9						
YKA	Yellowknife Ar	146.78	45	PKPbc	PKPbc	13 48 51.6	+0.3
	0.9nm,0.7s,baz=274,slow=2.7,SNR=18						

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*IDC **18** 13:31:21.2±0.9,48.92S×121.56E,mb4.2/6,mb1 4.4/7, mb1mx4.2/12,mbtmp4.2/7,ML2.6/1,MS4.3/7,Ms1 4.3/7, ms1mx4.0/11,Error ellipse: s-maj=45.5km s-min=20.7km az=109.0*

*NEIC **18** 13:31:22.8±0.5,48.96S×121.71E,h10^{km},mb4.5/4,Error ellipse: s-maj=21.8km s-min=9.1km az=102.0*

ISC 18 13:31:21.1±0.7**,48.92S**±0.09×**121.7E**±0.3**,h10**^{km}**,n25,** σ**0**^{s}**79**/14**,mb4.3**/9**,MS4.3**/7**,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.32	347	Pn	P	13 35 13.3	+1.4
	1.1nm,0.3s,baz=180,slow=14,SNR=11						
NWAO	Narrogin (SRO)	16.32	347	P	P	13 35 13.2	+1.3
	14nm,1.0s						
STKA	Stephens Creek	22.70	49	P	P	13 36 25.2	+1.1
	7.4nm,1.1s,mb4.0,baz=185,slow=11,SNR=3.2						
STKA	Stephens Creek	22.70	49	P	P	13 36 25.2	+1.1
ASPA	Alice Springs	27.00	25	eP	P	13 37 04.7	-0.3
ASAR	Alice Springs	27.00	25	P	P	13 37 05.0	0.0
	2.5nm,0.6s,mb3.9,baz=180,slow=9.9,SNR=32						
ASAR				PcP	PcP	13 40 25.5	-1.5
	0.9nm,0.8s,baz=195,slow=2.4,SNR=17						
WRA	Warramunga Arr	30.66	24	P	P	13 37 37.2	-0.7
	8.4nm,1.3s,mb4.4,baz=197,slow=8.1,SNR=14						
WRA				PcP	PcP	13 40 34.5	-1.6
	0.7nm,0.6s,baz=216,slow=2.5,SNR=9.1						
WB2	Warramunga Arr	30.66	24	eP	P	13 37 37.2	-0.7
WRAB	Tennant Creek	30.67	24	eP	P	13 37 37.3	-0.7
	10nm,1.1s,mb4.6						
VNDA	Vanda	32.52	165	LR	LR	13 50 07.1	
	comp=Z,568nm,18.1s,MS4.3,baz=321,slow=35						
RPZ	Rata Peaks	34.02	100	LR	LR	13 48 14.3	
	comp=Z,184nm,19.7s,MS3.8,baz=223,slow=30						
MAW	Mawson	34.38	215	LR	LR	13 48 54.3	
	comp=Z,300nm,18.1s,MS4.1,baz=57,slow=31						
CTA	Charters Tower	34.89	43	LR	LR	13 52 19.6	
	comp=Z,566nm,18.0s,MS4.4,baz=212,slow=36						
KAKA	Kakadu	37.20	18	eP	P	13 38 34.3	0.0
	5.7nm,0.7s,mb4.5						
QSPA	South Pole Qui	41.20	180	eP	P	13 39 06.8	-0.1
	14nm,1.1s,mb4.5						
PMG	Port Moresby	44.81	37	LR	LR	13 58 01.8	
	comp=Z,281nm,18.3s,MS4.2,baz=203,slow=36						
SNAA	Sanae	53.50	199	P	P	13 40 42.6	-0.6
	1.8nm,1.0s,mb4.0,baz=90,slow=11,SNR=3.2						
CMAR	Chiang Mai Arr	70.06	337	P	P	13 42 34.6	-0.7
	1.3nm,0.6s,mb4.1,baz=185,slow=5.8,SNR=6.9						
USHA	Ushuaia	76.27	174	LR	LR	14 14 09.2	
	comp=Z,431nm,18.8s,MS4.8,baz=205,slow=34						
PLCA	Paso Flores	90.08	171	P	P	13 44 23.5	+1.4
	3.3nm,1.2s,mb4.5,baz=212,slow=12,SNR=3.2						
PLCA				LR	LR	14 20 58.4	
	comp=Z,128nm,19.1s,MS4.4,baz=191,slow=33						
ILAR	Eielson Array	133.34	36	PKP	PKPdf	13 50 37.2	-2.3
	0.6nm,0.9s,baz=274,slow=3.4,SNR=8.5						
INK	Inuvik	139.51	34	PKP	PKPdf	13 50 51.0	+0.2
	6.1nm,1.4s,baz=118,slow=1.5,SNR=5.5						
INK	Inuvik	139.51	34	PKP	PKPdf	13 50 51.0	+0.2
PDAR	Pinedale Array	144.37	80	PKP	PKPdf	13 50 57.7	-2.1
	1.0nm,0.8s,baz=180,slow=3.0,SNR=8.4						
YKA	Yellowknife Ar	146.70	45	PKPbc	PKPbc	13 51 03.3	+1.7
	2.3nm,0.8s,baz=270,slow=2.4,SNR=26						

IDC 18 13:39:20.1±4.5**,48.91S**×**122.28E,mb3.7**/2**,mb1 3.9**/2**, mb1mx3.6**/10**,mbtmp3.7**/2**,Error ellipse: s-maj=258.3km s-min=68.2km az=103.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.81	24	P	P	13 45 01.8	-2.0
	2.0nm,0.9s,baz=194,slow=8.6,SNR=31						
WRA	Warramunga Arr	30.48	23	P	P	13 45 34.8	-2.1
	0.2nm,0.5s,baz=193,slow=8.2,SNR=4.7						
YKA	Yellowknife Ar	146.40	45	PKPbc	PKPbc	13 59 00.9	-0.6
	0.3nm,0.5s,baz=262,slow=3.6,SNR=9.5						

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*NEIC **18** 13:52:14.9±0.7,5.20N×73.62W,h160^{km}±6^{km},mb3.8/2, Error ellipse: s-maj=14.9km s-min=10.7km az=114.0*

*IDC **18** 13:52:14.5±0.9,5.26N×73.62W,h152^{km}±5^{km},mb3.4/7, mb1 3.7/8,mb1mx3.4/20,mbtmp3.9/8,Error ellipse: s-maj=31.3km s-min=11.9km az=134.0*

ISC 18 13:52:13.7±0.7**,5.23N**±0.09×**73.6W**±0.1**,h162**^{km}±6^{km}**,n14,** σ**0**^{s}**91**/14**,mb3.5**/7**,Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	0.85	244	P	P	13 52 39.7	+1.0
	287nm,0.3s,baz=90,slow=20,SNR=362						
ROSC				S	S	13 52 57.3	-0.7
	156nm,0.3s,baz=270,slow=23,SNR=9.3						
SDV	Santo Domingo	4.65	39	P	P	13 53 24.4	+0.9
	30nm,0.3s,baz=248,slow=8.8,SNR=135						
SDV				S	S	13 54 16.9	-0.6
	40nm,0.3s,baz=69,slow=23,SNR=18						
OTAV	Otavalo	6.96	225	ePn	P	13 53 54.4	+0.3
	3.9nm,0.5s						
SAML	Samuel	17.48	144	P	P	13 56 08.1	-0.9
	2.3nm,0.8s						
ULM	Lac du Bonnet	48.63	341	P	P	14 00 41.4	-1.4
	0.8nm,0.3s,mb3.8,baz=137,slow=6.4,SNR=3.2						
PDAR	Pinedale Array	49.11	325	P	P	14 00 46.6	0.0
	0.4nm,0.8s,mb3.1,baz=127,slow=7.4,SNR=3.8						
SCHQ	Schefferville	49.75	5	P	P	14 00 51.7	+0.3
	1.8nm,1.0s,mb3.7,baz=208,slow=13,SNR=5.7						
NVAR	Mina Array Bea	52.29	316	P	P	14 01 10.8	0.0
	0.3nm,0.4s,mb3.2,baz=104,slow=7.4,SNR=3.3						
YKA	Yellowknife Ar	64.60	340	P	P	14 02 34.5	-1.2
	2.1nm,0.6s,mb4.1,baz=135,slow=6.4,SNR=54						
YKA				pP	pP	14 03 11.7	-2.6
	0.4nm,0.5s,baz=134,slow=6.6,SNR=4.5						
YKA	Yellowknife Ar	64.60	340	P	P	14 02 34.5	-1.2
YKA				pP	pP	14 03 11.7	-2.6
ILAR	Eielson Array	78.21	335	P	P	14 03 57.0	+0.5
	0.3nm,0.7s,mb3.0,baz=103,slow=4.8,SNR=6.1						
NOA	NORSAR Array B	82.92	29	P	P	14 04 23.4	+2.0
	1.3nm,0.8s,mb3.7,baz=265,slow=4.9,SNR=2.4						
ASAR	Alice Springs	147.81	233	PKPbc	PKPdf	14 11 40.9	+3.9
	0.3nm,0.3s,baz=133,slow=3.6,SNR=13						
WRA	Warramunga Arr	149.17	239	PKPbc	PKPdf	14 11 44.3	+5.0
	0.5nm,0.4s,baz=109,slow=2.9,SNR=6.9						

IDC 18 13:59:05.8±36.0**,10.73N**×**92.12E,mb3.4**/2**,mb1 3.5**/3**, mb1mx3.3**/18**,mbtmp3.3**/3**,ML3.4**/1**,Error ellipse: s-maj=806.6km s-min=47.6km az=101.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.13	40	Pn	P	14 01 32.5	-3.2
	0.1nm,0.3s,baz=237,slow=16,SNR=4.6						
WRA	Warramunga Arr	51.55	126	P	P	14 08 13.8	-2.2
	0.4nm,0.4s,baz=304,slow=9.0,SNR=22						
ASAR	Alice Springs	53.27	130	P	P	14 08 26.9	-2.1

	0.1nm,0.4s,baz=302,slow=7.0,SNR=6.7						

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*NEIC **18** 14:05:01.8,32.29S×71.41W,h50^{km},MD4.0(GUC),After GUC.*
GUC 18 14:05:01.8±0.5**,32.29S×71.41W,h50^{km}±3^{km},MD4.0, ML3.1,2C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.25**	**186**	⇑*i*P	P	14 05 10.9	+0.4
PACH				*i* S	S	14 05 17.6	+0.8
ROCH	**El Roble**	**0.76**	**154**	*e*P	P	14 05 17.2	+0.8
ROCH				*i* S	S	14 05 28.4	+1.3
JACH	**Jahuel**	**0.79**	**120**	⇑*i*P	P	14 05 17.6	+0.8
JACH				*i* S	S	14 05 29.2	+1.3
LCCH	**Las Cruces**	**1.19**	**187**	*e*P	P	14 05 22.5	+0.1
RCDM	**Rinconada Maip**	**1.30**	**157**	*e*P	P	14 05 24.3	+0.2
RCDM				*i* S	S	14 05 41.0	+0.4
RCDM				AMP		14 05 48.6	
	comp=E,643nm,0.1s						
FCH	**Farellones**	**1.40**	**138**	*e*P	P	14 05 26.1	+0.6
FCH				*i* S	S	14 05 44.8	+1.8
FCH				AMP		14 05 45.7	
	comp=E,453nm,0.3s						
TACH	**Talagante**	**1.42**	**164**	*e*P	P	14 05 26.0	+0.3
PCH	**Pirque**	**1.53**	**151**	*e*P	P	14 05 27.3	+0.1
TLL	**Tololo Astrono**	**2.17**	**14**	*e*P	P	14 05 36.4	+0.1
TLL				*i* S	S	14 06 03.2	+1.1
TLL				AMP		14 06 15.2	
	comp=N,174nm,0.6s						
ZON	**Zonda**	**2.43**	**73**	*e*P	P	14 05 44.0	+4.0

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*CSEM **18** 14:10:10.4±0.4,60.89N×29.10E,h15^{km},ML3.0/1,Error ellipse: s-maj=8.5km s-min=5.1km az=136.0*
*HEL **18** 14:10:11.2±0.3,60.96N×29.04E,ML2.1,ML3.0(NAO), Explosion*
*NAO **18** 14:10:12.2±3.0,61.05N×28.89E,ML3.0*
*IDC **18** 14:10:12.2±1.8,60.89N×28.90E,mb1 3.3/3, mb1mx3.1/19,mbtmp3.3/3,ML3.3/3,Error ellipse: s-maj=15.7km s-min=10.8km az=159.0*
*BER **18** 14:10:13.1±5.3,61.05N×28.91E,ML3.0(NAO)*
ISC 18 14:10:09.6±0.9**,60.99N**±0.04×**28.98E**±0.09**,n23,**σ1^{s}**21**/44**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.83**	**238**	*e*P	**Pg**	**14 10 26.5**	**+0.2**
VJF				*e*S	**Sg**	**14 10 37.1**	**-0.3**
FIA0	**FINESS Array S**	**1.48**	**289**	*e*P	**Pn**	**14 10 37.8**	**+0.3**
FIA0				*e*S	**Sb**	**14 10 57.4**	**+0.5**
FIA0	**FINESS Array S**	**1.48**	**289**	Pn	**Pn**	**14 10 38.0**	**+0.5**
	baz=113,slow=18						
FIA0				Lg		14 10 58.9	
	baz=108,slow=28						
FIA0				Rg		14 11 06.0	
	baz=118,slow=37						
FIA0	**FINESS Array S**	**1.48**	**289**	Pn	**Pn**	**14 10 38.0**	**+0.5**
	SNR=140						
FIA0				S	**Sb**	**14 10 57.3**	**+0.4**
FINES	**FINESS Array B**	**1.48**	**289**	Pg	**Pg**	**14 10 38.0**	**-1.1**
	5.1nm,0.3s,baz=112,slow=16,SNR=114						
FINES				Lg		14 10 58.7	
	6.7nm,0.3s,baz=112,slow=31,SNR=24						
FINES				Rg		14 11 05.7	
	31nm,0.7s,baz=109,slow=34,SNR=31						
PVF	**Pernaja**	**1.59**	**255**	*e*P	**Pn**	**14 10 39.5**	**+0.3**
PVF				*e*S	**Sb**	**14 11 00.5**	**+0.2**
PVF	**Pernaja**	**1.59**	**255**	P	**Pn**	**14 10 39.5**	**+0.3**
PVF				S	**Sb**	**14 11 00.5**	**+0.2**
KAF	**Kangasniemi**	**1.70**	**313**	*e*P	**Pn**	**14 10 41.6**	**+0.7**
KAF				*e*S	**Sb**	**14 11 04.0**	**+0.5**
KAF	**Kangasniemi**	**1.70**	**313**	P	**Pn**	**14 10 41.5**	**+0.7**
KAF				S	**Sb**	**14 11 04.0**	**+0.5**
SUF	**Sumiainen**	**2.19**	**324**	*e*P	**Pn**	**14 10 50.3**	**+2.5**
SUF				*e*SG	**Sg**	**14 11 20.5**	**-2.2**
SUF				MSG		14 11 22.3	
	comp=Z,8.5nm,0.3s						
SUF	**Sumiainen**	**2.19**	**324**	P	**Pn**	**14 10 50.3**	**+2.5**
SUF				Sg	**Sg**	**14 11 20.4**	**-2.2**
	comp=Z,8.5nm,0.3s						
JOF	**Joensuu**	**2.23**	**29**	*e*P	**Pn**	**14 10 48.9**	**+0.6**
JOF				*e*S	**Sn**	**14 11 16.7**	**-0.2**
JOF	**Joensuu**	**2.23**	**29**	P	**Pn**	**14 10 48.8**	**+0.5**
JOF				S	**Sn**	**14 11 16.6**	**-0.3**
KEF	**Keuruu**	**2.29**	**303**	*e*P	**Pn**	**14 10 51.6**	**+2.4**
KEF				*e*S	**Sn**	**14 11 19.5**	**+0.9**
KEF	**Keuruu**	**2.29**	**303**	P	**Pn**	**14 10 51.6**	**+2.4**
KEF				S	**Sn**	**14 11 19.4**	**+0.8**
KJN	**Kajaani**	**3.16**	**350**	*e*P	**Pn**	**14 11 02.8**	**+1.2**
KJN				*e*S	**Sn**	**14 11 41.2**	**+0.6**
HFS	**Hagfors**	**7.58**	**270**	Pn	**Pn**	**14 12 02.6**	**-1.5**
	baz=80,slow=16						
HFS				Sn	**Sn**	**14 13 23.0**	**-8.8**
	baz=93,slow=18						
HFS	**Hagfors**	**7.58**	**270**	*e*P	**Pn**	**14 12 02.6**	**-1.5**
HFS				*e*S	**Sn**	**14 13 23.0**	**-8.8**
HFS	**Hagfors**	**7.58**	**270**	Pn	**Pn**	**14 12 02.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=79,slow=15,SNR=7.2						
HFS				Sn	**Sn**	**14 13 22.9**	**-8.9**
	comp=Z,0.1nm,0.3s,baz=84,slow=29,SNR=4.2						
HFS				Lg		14 14 03.4	
	comp=Z,0.1nm,0.3s,baz=100,slow=25,SNR=3.6						
NOA	**NORSAR Array B**	**8.63**	**278**	Pn	**P**	**14 12 15.9**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=39,slow=11,SNR=2.8						
NOA				Sn	**Sn**	**14 13 45.3**	**-13**
	comp=Z,0.2nm,0.3s,baz=246,slow=12,SNR=2.4						
ARA0	**ARCESS Array S**	**8.70**	**352**	Pn	**P**	**14 12 18.2**	**-1.5**
	baz=172,slow=12						
ARA0				Sn	**Sn**	**14 13 52.7**	**-7.0**
	baz=168,slow=28						
ARA0				Lg		14 14 35.7	
	baz=150,slow=37						
ARA0	**ARCESS Array S**	**8.70**	**352**	*e*P	**P**	**14 12 18.2**	**-1.5**
ARA0				*e*S	**Sn**	**14 13 52.7**	**-7.0**
ARA0				*e*SG	Sg	14 14 35.7	-24
ARCES	**ARCESS Array B**	**8.70**	**352**	Pn	**P**	**14 12 18.0**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=171,slow=12,SNR=26						
ARCES				Sn	**Sn**	**14 13 52.5**	**-7.2**
	comp=Z,0.2nm,0.3s,baz=178,slow=23,SNR=4.0						

IDC 18 14:44:11.4±1.3**,6.23N×75.48W,mb3.6**/1**,mb1 3.9**/1**, mb1mx3.2**/18**,mbtmp3.6**/1**,Error ellipse: s-maj=79.3km s-min=28.3km az=59.0,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**1.78**	**140**	Pn	Pn	14 44 43.9	+0.2
	7.7nm,0.3s,baz=270,slow=19,SNR=6.4						
YKA	**Yellowknife Ar**	**63.03**	**341**	P	P	14 54 40.0	-2.4
	0.3nm,0.4s,baz=134,slow=6.6,SNR=10						
ASAR	**Alice Springs**	**146.86**	**235**	PKPbc	PKPbc	15 03 55.7	-0.4
	0.8nm,1.2s,baz=114,slow=3.5,SNR=4.0						
WRA	**Warramunga Arr**	**147.99**	**242**	PKPbc	PKPdf	15 03 59.4	+0.9
	0.2nm,0.4s,baz=104,slow=3.2,SNR=8.7						

IDC 18 15:06:48.9±8.3**,5.22S×150.96E,h90^{km}**±57^{km}**,mb2.9**/3**, mb1 3.1**/4**,mb1mx3.1**/13**,mbtmp3.3**/4**,ML2.2**/1**,Error ellipse: s-maj=107.0km s-min=35.4km az=104.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.61**	**222**	P	P	15 08 09.6	-1.8
	0.5nm,0.3s,baz=60,slow=8.1,SNR=3.3						
PMG				S	S	15 09 14.3	-0.9
	0.6nm,0.3s,baz=198,slow=4.6,SNR=2.5						
WRA	**Warramunga Arr**	**21.81**	**226**	P	P	15 11 33.8	-1.2
	0.5nm,0.7s,baz=53,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**24.63**	**220**	P	P	15 12 01.0	-1.4
	0.6nm,0.5s,baz=50,slow=9.1,SNR=13						
SONM	**Songino Array**	**65.71**	**329**	P	P	15 17 24.3	-1.9
	0.2nm,0.4s,baz=154,slow=4.9,SNR=4.2						

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*IDC **18** 15:25:34.2±3.3,23.68S×177.16W,h22^{km}±20^{km},mb4.9/23, mb1 5.0/24,mb1mx5.0/24,mbtmp5.0/24,ML4.1/1,MS4.6/19, Ms1 4.6/19,ms1mx4.5/23,Error ellipse: s-maj=18.5km s-min=11.1km az=152.0*
*BJI **18** 15:25:37.2,23.08S×177.07W,h49^{km},mB5.6,mb4.9, Ms5.0,Msz4.7*
*NEIC **18** 15:25:39.0±1.1,23.67S×177.30W,h64^{km}±9^{km},mb5.4/56, Error ellipse: s-maj=5.9km s-min=4.1km az=146.0*
*HRVD **18** 15:25:39.0±0.2,23.78S×177.02W,h12^{km},MW5.2/70, Centroid moment Tensor Solution. LP body waves: s42,c64;Mantle waves: s70,c132; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.69±.01; $M_{\theta\theta}$-0.03±.01; $M_{\phi\phi}$0.71±.01; $M_{r\theta}$0.10±.04; $M_{\theta\phi}$0.00±.01; $M_{\phi r}$0.33±.04; Best double couple: M_0.782×10^{17} NP1: ϕ_s352°,δ33°,λ-103°. NP2:ϕ_s187°,δ58°,λ-82°. Principal axes: T.79, Plg13°, Azm272°; N -.017, Plg7°, Azm3°; P -.773, Plg76°, Azm121°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ORF **18** 15:25:47.7,21.03S×179.76E,h30^{km},mb6.2*
*MOS **18** 15:25:51.1±3.2,21.90S×178.49W,h101^{km},mb5.3/4, Error ellipse: s-maj=28.0km s-min=14.9km az=123.6*
ISC 18 15:25:34.2±0.2**,23.68S**±0.05×**177.20W**±0.04**,h33^{km}, n377,**σ0^{s}**93**/162**,mb5.3**/76**,MS4.6**/33**,18C-19D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.99**	**29**	*e*Pn	**P**	**15 28 10.5**	**-1.7**
	186nm,1.2s						
NOUC	**Port Laguerre**	**15.29**	**273**	*e*P	**P**	**15 29 09.3**	**0.0**
NOUC	**Port Laguerre**	**15.29**	**273**	*e*P	**P**	**15 29 09.3**	**0.0**
URZ	**Urewera**	**15.33**	**197**	Pn	**P**	**15 29 10.3**	**+0.6**
	0.8nm,0.3s,baz=359,slow=8.5,SNR=6.7						
URZ				LR	LR	15 34 13.2	
	comp=Z,3µm,19.4s,baz=221,slow=34						
RPZ	**Rata Peaks**	**22.20**	**203**	P	**P**	**15 30 30.4**	**+1.3**
	12nm,0.8s,mb4.3,baz=33,slow=15,SNR=4.2						
RPZ				LR	LR	15 38 39.7	
	comp=Z,1µm,18.1s,MS4.4,baz=262,slow=35						
TBI	**Tubuai**	**25.43**	**95**	*e*P	**P**	**15 30 58.7**	**-1.9**
	290nm,1.3s,mb5.6						
TBI				*e*pP	Px	15 31 34.4	
	454nm,1.3s						
PAE	**Paea**	**26.50**	**82**	*e*P	**P**	**15 31 09.2**	**-1.5**
	99nm,1.1s,mb5.2						
PPT	**Papeete**	**26.53**	**82**	*e*P	**P**	**15 31 09.6**	**-1.4**
	67nm,1.2s,mb5.0						
PPT	**Papeete**	**26.53**	**82**	P	**P**	**15 31 10.2**	**-0.8**
	82nm,1.1s,mb5.2,baz=205,slow=4.5,SNR=4.0						
TIAR	**Tiarei**	**26.74**	**82**	*e*P	**P**	**15 31 11.5**	**-1.4**
	422nm,1.3s,mb5.8						
TVO	**Taravao**	**26.76**	**83**	*e*P	**P**	**15 31 11.5**	**-1.6**
	319nm,1.5s,mb5.6						
MEH	**Mehetia**	**27.81**	**84**	*e*P	**P**	**15 31 21.0**	**-1.7**
	47nm,1.1s,mb5.0						
ARMA	**Armidale**	**28.50**	**250**	*e*P	**P**	**15 31 30.0**	**+1.3**
PMOR	**Pomariorio Ree**	**28.92**	**78**	*e*P	**P**	**15 31 31.1**	**-1.5**
	66nm,1.3s,mb5.2						
CTA	**Charters Tower**	**34.04**	**269**	*e*P	**P**	**15 32 17.6**	**+0.1**
	44nm,1.0s,mb5.3						
CTA				*i* S	**S**	**15 37 44.7**	**+4.9**
CTA	**Charters Tower**	**34.04**	**269**	P	**P**	**15 32 17.8**	**+0.3**
	43nm,0.8s,mb5.4,baz=96,slow=11,SNR=26						
CTA				LR	LR	15 43 52.3	
	comp=Z,1µm,21.9s,MS4.5,baz=94,slow=32						
CTAO	**Charters Tower**	**34.04**	**269**	*e*P	**P**	**15 32 17.3**	**-0.2**
	104nm,1.1s,mb5.7						
PMG	**Port Moresby**	**36.87**	**287**	*c i*P	**P**	**15 32 41.2**	**-0.4**
PMG	**Port Moresby**	**36.87**	**287**	P	**P**	**15 32 42.7**	**+1.1**
	78nm,1.0s,mb5.5,baz=98,slow=5.7,SNR=29						
PMG				LR	LR	15 44 56.2	
	comp=Z,900nm,20.9s,MS4.5,baz=111,slow=32						
PMG	**Port Moresby**	**36.87**	**287**	*e*P	**P**	**15 32 41.2**	**-0.4**
	145nm,1.1s,mb5.7						
STKA	**Stephens Creek**	**37.19**	**248**	*e*P	**P**	**15 32 45.0**	**+0.9**
	14nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**37.19**	**248**	P	**P**	**15 32 44.6**	**+0.5**
	21nm,1.2s,mb4.8,baz=75,slow=8.4,SNR=10						
STKA				LR	LR	15 46 34.9	
	comp=Z,2µm,18.1s,MS4.9,baz=167,slow=34						
RKT	**Rikitea**	**38.66**	**98**	*e*P	**P**	**15 32 55.8**	**-0.7**
	92nm,1.3s,mb5.4						
ASAR	**Alice Springs**	**44.60**	**260**	P	**P**	**15 33 44.8**	**-0.5**
	36nm,0.9s,mb5.2,baz=94,slow=7.8,SNR=100						
ASAR				S	**S**	**15 40 21.4**	**+2.9**
	0.5nm,1.0s,baz=83,slow=15,SNR=2.9						
ASAR				LR	LR	15 51 24.1	
	comp=Z,1µm,18.8s,MS4.8,baz=100,slow=35						
ASPA	**Alice Springs**	**44.60**	**260**	*e*P	**P**	**15 33 44.6**	**-0.7**
WRAB	**Tennant Creek**	**44.97**	**265**	*i* P	**P**	**15 33 46.4**	**-1.9**
WRAB	**Tennant Creek**	**44.97**	**265**	*e*P	**P**	**15 33 46.0**	**-2.4**
	47nm,1.0s,mb5.3						
WRA	**Warramunga Arr**	**44.98**	**265**	P	**P**	**15 33 47.0**	**-1.4**
	24nm,1.0s,mb5.0,baz=100,slow=7.8,SNR=74						
WRA				S	**S**	**15 40 27.3**	**+3.4**
	2.5nm,1.2s,baz=104,slow=14,SNR=5.2						
KAKA	**Kakadu**	**48.85**	**274**	*e*P	**P**	**15 34 16.8**	**-2.0**
	12nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	**53.40**	**264**	⇑*i*P	**P**	**15 34 52.6**	**-0.6**
	33nm,1.1s,mb5.2						
VNDA	**Vanda**	**54.83**	**185**	P	**P**	**15 35 01.0**	**-2.0**
	14nm,1.1s,mb4.9,baz=3.6,slow=8.0,SNR=7.6						
VNDA				LR	LR	15 53 47.0	
	comp=Z,138nm,20.0s,MS4.0,baz=24,slow=31						
VNDA	**Vanda**	**54.83**	**185**	*e*P	**P**	**15 35 02.8**	**-0.1**
	147nm,2.2s,mb5.6						
KLBR	**Kellerberrin**	**57.44**	**247**	*e*P	**P**	**15 35 20.1**	**-2.2**
	1µm,1.6s						
CASY	**Casey**	**61.43**	**206**	*e*P	**P**	**15 35 46.5**	**-2.8**
QSPA	**South Pole Qui**	**66.41**	**180**	⇓*i*P	**P**	**15 36 21.4**	**-0.1**
	47nm,1.0s,mb5.5						
MAT	**Matsushiro**	**73.20**	**324**	*e*P	**P**	**15 37 04.0**	**+0.2**
MAT				LR	LR		
	comp=Z,350nm,20.0s,MS4.6						
MAT	**Matsushiro**	**73.20**	**324**	P	**P**	**15 37 03.7**	**-0.1**
FX1	**Attu Island--F**	**76.69**	**354**	LR	LR	16 11 47.6	
	comp=Z,12nm,18.2s,MS3.2,baz=0.3,slow=36						
MAW	**Mawson**	**78.84**	**200**	*e*P	**P**	**15 37 34.8**	**-0.3**
	comp=Z,30nm,0.9s,mb5.2						
MAW	**Mawson**	**78.84**	**200**	P	**P**	**15 37 35.2**	**+0.1**
	comp=Z,38nm,1.0s,mb5.3,baz=119,slow=5.7,SNR=21						
MAW				LR	LR	16 10 29.5	
	comp=Z,292nm,18.9s,MS4.6,baz=317,slow=34						
YSS	**Yuzh-Sakhalins**	**79.05**	**333**	*e*P	**P**	**15 37 36.0**	**-0.7**
YSS				*e*		15 37 38.0	
YSS				MLR	MLR		
	comp=Z,500nm,22.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**79.05**	**333**	*e*P	**P**	**15 37 35.4**	**-1.3**
	comp=Z,28nm,1.4s,mb5.0						
LRV	**Little Rabbit**	**79.89**	**43**	*e*P	**P**	**15 37 41.7**	**+0.3**
SSE	**Sheshan**	**80.29**	**310**	P	**P**	**15 37 42.0**	**-1.7**
SSE				S	S	15 47 34.8	-11
SSE				AMB	AMB		
	comp=Z,85nm,0.7s,mb5.8						
SSE				AMB	AMB		
	comp=Z,158nm,3.9s						
SSE				LR	LR		
	comp=N,103nm,28.5s,MS4.2						
SSE				LR	LR		
	comp=E,108nm,28.5s,MS4.2						
SSE				LR	LR		
	comp=Z,45nm,19.3s						
SSE	**Sheshan**	**80.29**	**310**	P	**P**	**15 37 42.0**	**-1.7**
	comp=Z,85nm,0.7s,mb5.8						
SSE				S	S	15 47 34.8	-11
SSE				ScS	ScS	15 47 53.1	-10
SSE				sS		15 48 39.4	
SSE				SS	SS	15 52 49.4	-10
SSE				LR	LR		
	comp=Z,50nm,19.3s,MS3.9						
PFO	**Pinyon Flat Ob**	**81.15**	**47**	*e*P	**P**	**15 37 47.6**	**-0.5**
	comp=Z,37nm,1.4s,mb5.1						
CMB	**Columbia Colle**	**81.30**	**42**	*e*P	**P**	**15 37 48.9**	**+0.1**
	comp=Z,46nm,1.4s,mb5.2						
CMB				*e*PcP	PcP	15 37 54.8	-0.5
OHCM	**Honcut**	**81.47**	**40**	*e*P	**P**	**15 37 49.4**	**-0.3**
WDC	**Whiskeytown Da**	**81.65**	**39**	*e*P	**P**	**15 37 51.0**	**+0.3**
	comp=Z,51nm,1.4s,mb5.3						
OMM	**Old Mammoth Mi**	**81.90**	**43**	*e*P	**P**	**15 37 52.8**	**+0.8**
OMM				*e*PcP	PcP	15 37 58.2	+0.2
MTUM	**Tungsten Hills**	**82.01**	**43**	*e*P	**P**	**15 37 53.1**	**+0.6**
MTUM				*e*PcP	PcP	15 37 58.4	0.0
YBH	**Yreka Blue Hor**	**82.31**	**38**	P	**P**	**15 37 54.9**	**+0.9**
	comp=Z,11nm,1.1s,mb4.7,baz=187,slow=2.0,SNR=16						
YBH	**Yreka Blue Hor**	**82.31**	**38**	*e*P	**P**	**15 37 55.1**	**+1.1**
	comp=Z,130nm,2.1s,mb5.5						
NJ2	**Nanjing**	**82.47**	**310**	*e*P	**P**	**15 37 55.9**	**+0.9**
NJ2				AP	pP	15 38 07.4	+2.0
NJ2				XP	sP	15 38 11.1	+2.1
NJ2				PP	PP	15 41 05.9	-0.3
NJ2				S	S	15 48 11.0	+3.2
NJ2				XS		15 48 27.0	
NJ2				AMB	AMB		
	comp=Z,560nm,5.0s						
NJ2				LR	LR		
	comp=N,990nm,24.4s,MS5.3						
NJ2				LR	LR		
	comp=E,1µm,24.5s,MS5.3						
NJ2				LR	LR		
	comp=Z,1µm,24.2s,MS5.1						
WCN	**Washoe City**	**82.48**	**41**	*e*P	**P**	**15 37 55.7**	**+0.8**
	comp=Z,37nm,1.2s,mb5.2						
HUMO	**Hull Mountain**	**82.75**	**37**	*e*P	**P**	**15 37 57.3**	**+1.1**
	comp=Z,138nm,1.9s,mb5.7						
NVAR	**Mina Array Bea**	**82.83**	**43**	P	**P**	**15 37 57.2**	**+0.5**
	comp=Z,11nm,1.0s,mb4.8,baz=202,slow=5.8,SNR=54						
NVAR				LR	LR	16 05 21.9	
	comp=Z,232nm,20.5s,MS4.5,baz=205,slow=29						
NVAR	**Mina Array Bea**	**82.83**	**43**	P	**P**	**15 37 57.2**	**+0.5**
NVAR				LR	LR	16 05 21.9	
LDFC	**Landfair**	**82.90**	**47**	*e*P	**P**	**15 37 58.0**	**+0.8**
MNV	**Mina**	**82.92**	**43**	*e*P	**P**	**15 37 57.8**	**+0.6**
	comp=Z,50nm,1.5s,mb5.3						
TPH	**Tonopah**	**83.29**	**43**	*e*P	**P**	**15 37 59.8**	**+0.7**
	comp=Z,54nm,1.4s,mb5.4						
NEN	**Nelson**	**83.41**	**47**	*e*P	**P**	**15 38 00.1**	**+0.4**
MDJ	**Mudanjiang**	**83.53**	**325**	P	**P**	**15 37 59.8**	**-0.3**
MDJ				PP	PP	15 41 11.3	-3.2
MDJ				S	S	15 48 08.8	-9.4
MDJ				SS	SS	15 53 37.8	-10
MDJ				AMB	AMB		
	comp=Z,16nm,1.4s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,133nm,5.8s						
MDJ				LR	LR		
	comp=N,328nm,17.2s,MS4.8						
MDJ				LR	LR		
	comp=E,194nm,18.9s,MS4.8						
MDJ				LR	LR		
	comp=Z,382nm,19.8s,MS4.8						
MDJ	**Mudanjiang**	**83.53**	**325**	*e*P	**P**	**15 37 59.0**	**-1.1**
	comp=Z,12nm,1.0s,mb5.0						
MOD	**Modoc**	**83.79**	**39**	*e*P	**P**	**15 38 01.6**	**+0.1**
	comp=Z,52nm,1.3s,mb5.5						
SYO	**Syowa Base**	**83.80**	**193**	⇓P	**P**	**15 38 00.4**	**-0.5**
SYO	**Syowa Base**	**83.80**	**193**	⇓PcP	PcP	15 38 06.9	+1.5
TUC	**Tucson**	**84.36**	**51**	*e*P	**P**	**15 38 05.7**	**+1.0**
	comp=Z,50nm,1.2s,mb5.5						
TRCR	**Troy Canyon**	**84.49**	**44**	*e*P	**P**	**15 38 05.3**	**+0.1**
BMN	**Battle Mountai**	**84.71**	**42**	*e*P	**P**	**15 38 06.8**	**+0.7**
	comp=Z,45nm,1.2s,mb5.5						
SNAA	**Sanae**	**84.83**	**178**	⇓*i*P	**P**	**15 38 05.3**	**-0.8**
SNAA	**Sanae**	**84.83**	**178**	*d i*P	**P**	**15 38 05.0**	**-1.1**
VNA3	**Neumayer Olymp**	**84.94**	**176**	⇓*i*P	**P**	**15 38 07.5**	**+0.9**
VNA3	**Neumayer Olymp**	**84.94**	**176**	⇑*i*	**P**	**15 38 15.4**	**+8.8**
WVOR	**Wild Horse Val**	**85.09**	**39**	*e*P	**P**	**15 38 08.4**	**+0.4**
	comp=Z,16nm,0.9s,mb5.1						
CN2	**Changchun**	**85.26**	**322**	*e*P	**P**	**15 38 08.8**	**0.0**
CN2				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
CN2				LR	LR		
	comp=Z,280nm,18.0s,MS4.7						
VNA2	**Neumayer--Watz**	**85.39**	**177**	⇓*i*P	**P**	**15 38 10.7**	**+1.9**
ARUT	**Antelope Range**	**85.56**	**45**	*e*P	**P**	**15 38 11.0**	**+0.6**
MAIT	**Maitri**	**85.60**	**183**	*e*P	**P**	**15 38 09.3**	**-0.6**
VNA1	**Neumayer--Stat**	**85.61**	**176**	⇑*i*P	**P**	**15 38 12.5**	**+2.6**
KLR	**Kul’dur**	**85.63**	**329**	*e*P	**P**	**15 38 07.8**	**-2.7**
WUAZ	**Wupatki**	**85.68**	**48**	*e*P	**P**	**15 38 11.8**	**+0.7**
	comp=Z,677nm,1.4s						
ELK	**Elko**	**86.11**	**42**	*e*P	**P**	**15 38 12.9**	**-0.2**
	comp=Z,20nm,1.4s,mb5.2						
RSO	**Redoubt South**	**86.17**	**12**	*e*P	**P**	**15 38 12.3**	**-0.5**
PGC	**Sidney**	**86.52**	**32**	*e*P	**P**	**15 38 15.3**	**+0.4**
	comp=Z,256nm,1.7s,mb6.2						
PLCA	**Paso Flores**	**86.56**	**133**	P	**P**	**15 38 16.2**	**+0.9**
	comp=Z,17nm,1.1s,mb5.2,baz=232,slow=6.3,SNR=20						
PLCA				LR	LR	16 07 26.4	
	comp=Z,274nm,21.2s,MS4.6,baz=244,slow=29						
PLCA	**Paso Flores**	**86.56**	**133**	*e*P	**P**	**15 38 15.7**	**+0.5**
	comp=Z,75nm,1.6s,mb5.7						
SLKM	**Skilak Lake**	**86.72**	**13**	*e*P	**P**	**15 38 15.1**	**-0.5**
MVU	**Marysvale**	**86.76**	**45**	*e*P	**P**	**15 38 17.5**	**+1.2**
	comp=Z,17nm,1.2s,mb5.1						
MSU	**Marysvale**	**86.78**	**45**	*e*P	**P**	**15 38 17.5**	**+1.1**
BBB	**Bella Bella**	**86.85**	**28**	P	**P**	**15 38 17.7**	**+1.3**
	comp=Z,19nm,0.9s,mb5.3,baz=235,slow=22,SNR=4.0						
SPU	**Mount Spurr**	**86.97**	**12**	*e*P	**P**	**15 38 15.8**	**-1.0**
MA2	**Magadan**	**87.03**	**344**	*e*P	**P**	**15 38 15.0**	**-2.1**
MA2				*e*		15 48 26.7	
MA2				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
MA2				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.9						
MA2	**Magadan**	**87.03**	**344**	*e*P	**P**	**15 38 16.9**	**-0.2**
	comp=Z,25nm,1.4s,mb5.2						
BMO	**Blue Mountains**	**87.34**	**38**	*e*P	**P**	**15 38 18.5**	**-0.4**
	comp=Z,108nm,2.2s,mb5.7						
EYAK	**Cordova Ski Ar**	**87.75**	**15**	*e*P	**P**	**15 38 20.4**	**-0.1**
TMUT	**Trail Mountain**	**87.85**	**45**	*e*P	**P**	**15 38 22.6**	**+1.1**
PMR	**Palmer**	**87.93**	**13**	*e*P	**P**	**15 38 21.1**	**-0.3**
	comp=Z,154nm,1.5s,mb6.0						
MNTX	**Cornudas Mount**	**87.99**	**54**	*e*P	**P**	**15 38 22.6**	**+0.2**
	comp=Z,61nm,1.3s,mb5.7						
LTX	**Lajitas**	**88.15**	**57**	*e*P	**P**	**15 38 23.4**	**+0.2**
	comp=Z,152nm,1.8s,mb5.9						
TXAR	**Lajitas Array**	**88.15**	**57**	P	**P**	**15 38 24.4**	**+1.2**
	comp=Z,15nm,1.0s,mb5.2,baz=217,slow=6.3,SNR=89						
TXAR				LR	LR	16 11 53.6	
	comp=Z,302nm,19.6s,MS4.7,baz=210,slow=32						
SRU	**San Rafael**	**88.19**	**46**	*e*P	**P**	**15 38 23.2**	**0.0**
HLID	**Hailey**	**88.25**	**40**	*e*P	**P**	**15 38 23.6**	**+0.2**
	comp=Z,9.1nm,1.1s,mb4.9						
DIV	**Divide**	**88.25**	**15**	*e*P	**P**	**15 38 22.9**	**0.0**
SML	**Sawmill**	**88.29**	**13**	*e*P	**P**	**15 38 22.4**	**-0.7**
DAU	**Daniels Canyon**	**88.42**	**44**	*e*P	**P**	**15 38 24.4**	**+0.1**
ENH	**Enshi**	**88.43**	**304**	*e*P	**P**	**15 38 23.6**	**-0.9**
	comp=Z,58nm,1.5s,mb5.6						
BJI	**Beijing**	**88.66**	**315**	P	pP	15 38 38.5	+2.5
TCUT	**Toone Canyon**	**88.71**	**44**	*e*P	**P**	**15 38 25.6**	**0.0**
PV10	**Paradox Valley**	**88.79**	**47**	*e*P	**P**	**15 38 25.8**	**-0.3**
ANMO	**Albuquerque**	**88.81**	**51**	*d i*P	**P**	**15 38 26.8**	**+0.5**
ANMO	**Albuquerque**	**88.81**	**51**	P	**P**	**15 38 27.0**	**+0.7**
	comp=Z,16nm,1.1s,mb5.2,baz=226,slow=5.1,SNR=27						
ANMO				LR	LR	16 09 46.2	
	comp=Z,386nm,18.4s,MS4.9,slow=30						
ANMO	**Albuquerque**	**88.81**	**51**	*e*P	**P**	**15 38 27.0**	**+0.7**
	comp=Z,34nm,1.3s,mb5.5						
PV01	**Paradox Valley**	**88.97**	**47**	*e*P	**P**	**15 38 26.9**	**0.0**
TNA	**Tin City**	**89.24**	**4**	*e*P	**P**	**15 38 27.2**	**-0.4**
	comp=Z,18nm,1.1s,mb5.3						
NEW	**Newport**	**89.51**	**35**	P	**P**	**15 38 29.6**	**+0.3**
	comp=Z,1.7nm,0.5s,mb4.6,baz=251,slow=6.7,SNR=7.6						
NEW				LR	LR	16 12 18.9	
	comp=Z,147nm,21.9s,MS4.4,baz=240,slow=31						
SEY	**Seymchan**	**89.62**	**347**	*e*P	**P**	**15 38 30.9**	**+1.5**
SEY				*e*		15 44 03.2	
SEY				pmax	pmax		
	comp=N,40nm,1.5s						
SEY				pmax	pmax		
	comp=Z,90nm,1.5s,mb5.9						
AHID	**Auburn Hatcher**	**89.81**	**42**	*e*P	**P**	**15 38 31.3**	**+0.5**
	comp=Z,6.7nm,0.5s,mb5.2						
MCMT	**McKenzie Canyo**	**89.89**	**40**	*e*P	**P**	**15 38 31.6**	**+0.5**
MCK	**McKinley**	**89.90**	**12**	*e*P	**P**	**15 38 30.3**	**-0.4**
THY	**Trims Highway**	**90.27**	**14**	*e*P	**P**	**15 38 32.1**	**-0.3**
TPAW	**Teton Pass**	**90.29**	**42**	*e*P	**P**	**15 38 33.9**	**+0.9**
MENT	**Mentasta**	**90.31**	**15**	*e*P	**P**	**15 38 33.0**	**+0.4**
SNOW	**Snow King Moun**	**90.40**	**42**	*e*P	**P**	**15 38 33.9**	**+0.4**
MSO	**Missoula**	**90.40**	**38**	*e*P	**P**	**15 38 32.7**	**-0.7**
	comp=Z,12nm,1.3s,mb5.1						
WUWY	**Wally Ulrich**	**90.45**	**42**	*e*P	**P**	**15 38 33.8**	**0.0**
IMW	**Indian Meadow**	**90.52**	**41**	*e*P	**P**	**15 38 34.8**	**+0.7**
MOOW	**Moose Ponds**	**90.56**	**42**	*e*P	**P**	**15 38 34.6**	**+0.3**
LOHW	**Long Hollow**	**90.57**	**42**	*e*P	**P**	**15 38 34.4**	**0.0**
DLBC	**Dease Lake**	**90.68**	**23**	P	**P**	**15 38 35.6**	**+1.2**
	comp=Z,20nm,1.0s,mb5.4,baz=218,slow=6.1,SNR=12						
DLBC				LR	LR	16 11 25.2	
	comp=Z,290nm,21.3s,MS4.7,baz=186,slow=30						
QLMT	**Earthquake Lak**	**90.73**	**40**	*e*P	**P**	**15 38 36.0**	**+0.9**
PDAR	**Pinedale Array**	**90.76**	**43**	P	**P**	**15 38 35.0**	**-0.3**
	comp=Z,8.8nm,0.9s,mb5.1,baz=214,slow=3.2,SNR=47						
PDAR				LR	LR	16 11 35.1	
	comp=Z,138nm,18.9s,MS4.4,baz=275,slow=30						
CHMT	**Chamberlain Mo**	**90.84**	**38**	*e*P	**P**	**15 38 35.4**	**-0.2**

SDCO	Great Sand Dun	90.87	49	eP	P	15 38 36.0	+0.1
	comp=Z,38nm,1.7s,mb5.4						
BOZ	Bozeman (W)	91.07	40	eP	P	15 38 36.7	+0.1
	comp=Z,32nm,1.1s,mb5.6						
COLA	College	91.14	12	⇑iP	P	15 38 36.2	-0.3
COLA	College	91.14	12	eP	P	15 38 36.0	-0.5
	comp=Z,96nm,1.4s,mb5.9						
LKWY	Lake	91.21	41	eP	P	15 38 39.1	+1.8
	comp=Z,18nm,1.0s,mb5.4						
ILAR	Eielson Array	91.24	12	P	P	15 38 35.9	-1.0
	comp=Z,12nm,1.0s,mb5.2,baz=227,slow=5.5,SNR=29						
ILAR				LR	LR	16 10 11.5	
	comp=Z,325nm,21.7s,MS4.7,baz=199,slow=29						
IMA	Indian Mountai	91.24	9	eP	P	15 38 37.3	+0.4
	comp=Z,17nm,0.9s,mb5.4						
KMI	Kunming	91.44	297	eP	P	15 38 41.6	+2.8
KMI				LR	LR		
	comp=Z,368nm,30.0s,MS4.6						
JCT	Junction City	91.65	57	eP	P	15 38 39.4	-0.3
	comp=Z,46nm,1.3s,mb5.7						
CMAR	Chiang Mai Arr	91.86	289	i P	P	15 38 41.7	+0.8
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMAR	Chiang Mai Arr	91.86	289	P	P	15 38 41.6	+0.8
	comp=Z,4.4nm,0.9s,mb4.8,baz=134,slow=3.0,SNR=23						
AMTX	Amarillo	92.23	53	eP	P	15 38 41.8	-0.4
	comp=Z,60nm,1.6s,mb5.7						
BILL	Bilibino	92.26	354	eP	P	15 38 41.3	-0.3
BILL				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.2						
BILL	Bilibino	92.26	354	eP	P	15 38 40.9	-0.6
	comp=Z,11nm,1.0s,mb5.1						
DAWY	Dawson	92.30	16	eP	P	15 38 42.2	+0.4
PHWY	Pilot Hill	92.64	46	eP	P	15 38 43.4	-0.6
TRQA	Tornquist	93.63	134	eP	P	15 38 48.5	-0.1
	comp=Z,7.2nm,1.0s,mb5.1						
WMOK	Wichita Mounta	94.30	54	eP	P	15 38 50.9	-0.7
	comp=Z,14nm,1.6s,mb5.2						
EDM	Edmonton	94.36	33	eP	P	15 38 51.0	-0.5
HKT	Hockley	94.53	59	eP	P	15 38 52.4	-0.4
	comp=Z,42nm,1.8s,mb5.6						
LZH	Lanzhou	95.27	307	⇑P	P	15 38 56.0	-0.1
LZH				PP	PP	15 42 50.0	+1.4
LZH				eS	S	15 49 54.8	-11
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,163nm,6.5s						
LZH	Lanzhou	95.27	307	⇑P	P	15 38 56.0	-0.1
	comp=Z,29nm,1.5s,mb5.5						
LZH				PP	PP	15 42 50.0	+1.4
LZH				SKS	SKS	15 49 16.5	-11
LZH				eS	S	15 49 54.8	-11
LZH				sS		15 51 54.9	
YAK	Yakutsk	95.32	338	eP	P	15 38 52.5	-3.2
	comp=Z,12nm,0.6s,mb5.5						
JTS	JuntasAbangare	96.10	81	LR	LR	16 16 12.5	
	comp=Z,167nm,18.1s,MS4.6,baz=237,slow=32						
LVC	Limon Verde	96.50	118	LR	LR	16 11 59.9	
	comp=Z,291nm,22.0s,MS4.7,baz=218,slow=29						
LVC	Limon Verde	96.50	118	eP	P	15 39 03.3	+1.4
	comp=Z,24nm,1.8s,mb5.3						
INK	Inuvik	97.13	15	P	P	15 39 03.8	0.0
	comp=Z,2.2nm,0.9s,mb4.6,baz=197,slow=6.1,SNR=3.5						
INK				LR	LR	16 22 56.3	
	comp=Z,252nm,18.2s,MS4.7,baz=288,slow=35						
INK	Inuvik	97.13	15	eP	P	15 39 03.5	-0.3
	comp=Z,14nm,1.3s,mb5.2						
ULN	Ulaanbaatar	98.24	319	eP	P	15 39 10.0	+0.8
SONM	Songino Array	98.62	319	P	P	15 39 11.3	+0.4
	comp=Z,0.9nm,1.1s,baz=146,slow=5.2,SNR=3.5						
SONM				PP	PP	15 43 09.9	-4.5
	comp=Z,1.2nm,1.1s,baz=127,slow=6.2,SNR=3.7						
SONM				PKKPbc		15 55 41.4	
	comp=Z,0.4nm,1.1s,baz=252,slow=3.2,SNR=3.6						
YKA	Yellowknife Ar	99.08	25	P	P	15 39 12.6	0.0
	comp=Z,2.8nm,0.9s,mb4.8,baz=239,slow=4.1,SNR=15						
YKA				PP	PP	15 43 10.6	-6.7
	comp=Z,0.7nm,1.0s,baz=237,slow=7.1,SNR=4.0						
YKA				PKKPbc		15 55 37.9	
	comp=Z,0.4nm,0.6s,baz=40,slow=2.6,SNR=8.2						
LPAZ	La Paz	100.16	113	P	P	15 39 20.1	+1.5
	comp=Z,1.1nm,0.6s,baz=215,slow=4.7,SNR=5.9						
LPAZ	La Paz	100.16	113	ePdif	P	15 39 19.4	+0.7
	comp=Z,6.5nm,1.2s						
TLY	Talaya	101.84	321	i P	P	15 39 24.6	-0.8
TIXI	Tiksi	101.99	345	eP	P	15 39 26.6	+0.9
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TIXI				MLR	MLR		
	comp=Z,120nm,17.0s,MS4.5						
WMQ	Urumqi	109.55	310	ePDIF	Pdif	15 39 58.0	-1.5
WMQ				LR	LR		
	comp=N,131nm,24.0s,MS4.6						
WMQ				LR	LR		
	comp=E,158nm,23.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,175nm,24.0s,MS4.5						
NVS	Novosibirsk	114.45	321	⇑iPKIKP	PKPdf	15 44 09.5	-1.1
KURK	Kurchatov	116.81	316	d iPKIKP	PKPdf	15 44 14.5	-0.7
KURK	Kurchatov	116.81	316	ePKPdf	PKPdf	15 44 14.5	-0.7
KSH	Kashi	117.28	304	ePKP	PKPdf	15 44 18.3	+1.9
FRU	Bishkek	118.75	307	ePKIKP	PKPdf	15 44 19.0	-0.2
AAK	Ala-Archa	118.82	307	⇑iPKIKP	PKPdf	15 44 19.0	-0.3
AAK	Ala-Archa	118.82	307	ePKPdf	PKPdf	15 44 18.5	-0.8
CHKZ	Chkalovo	121.80	320	ePKPdf	PKPdf	15 44 24.1	-0.7
BVAR	Borovoye Array	121.96	319	PKP	PKPdf	15 44 25.0	-0.1
	comp=Z,5.8nm,0.8s,baz=90,slow=3.0,SNR=23						
BOSA	Boshof	123.69	204	ePKPdf	PKPdf	15 44 29.5	+0.4
DAG	Danmarks Havn	125.81	6	⇓ePKIKP	PKPdf	15 44 32.0	0.0
DAG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DAG	Danmarks Havn	125.81	6	⇓iP	PKPdf	15 44 32.0	0.0
	comp=Z,0.7nm,0.5s						
SUMG	Summit	126.05	14	ePKPdf	PKPdf	15 44 33.6	+1.1
LBTB	Lobatse	126.79	206	ePKPdf	PKPdf	15 44 34.0	-1.2
SVE	Sverdlovsk	127.00	324	⇑iPKIKP	PKPdf	15 44 34.7	-0.1
SVE				pmax	pmax		
	comp=Z,80nm,2.0s						
SOKR	Solikamsk	128.18	328	⇑iPKIKP	PKPdf	15 44 37.0	+0.1
SOKR				pmax	pmax		
	comp=Z,30nm,1.1s						
ARCES	ARCESS Array B	132.17	349	PKP	PKPdf	15 44 44.9	+0.6
	comp=Z,6.9nm,0.7s,baz=27,slow=2.7,SNR=7.5						
LSZ	Lusaka	134.01	215	ePKPdf	PKPdf	15 44 49.4	+0.2
JOF	Joensuu	136.37	342	epkp	PKPdf	15 44 48.6	-3.6
KAF	Kangasniemi	138.40	344	epkp	PKPdf	15 44 53.7	-2.2
KMBO	Kilima Mbogo	138.42	238	PKP	PKPdf	15 44 59.1	+1.7
	comp=Z,1.4nm,0.8s,baz=222,slow=21,SNR=6.3						
KMBO	Kilima Mbogo	138.42	238	ePKPdf	PKPdf	15 44 58.1	+0.8
FINES	FINESS Array B	139.02	343	i PKHKP		15 44 50.7	
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	FINESS Array B	139.02	343	PKhKP		15 44 49.9	
	comp=Z,2.3nm,1.0s,baz=90,slow=1.9,SNR=4.3						
FINES				PKP	PKPdf	15 44 59.0	+1.9
	comp=Z,6.8nm,0.9s,baz=27,slow=4.3,SNR=11						
FINES	FINESS Array B	139.02	343	PKP		15 44 49.9	
FINES				PKP	PKPdf	15 44 59.0	+1.9
MOS	Moscow	139.02	330	ePKIKP	PKPdf	15 44 57.9	+0.7
OBN	Obninsk	139.88	330	⇑iPKIKP	PKPdf	15 44 59.5	+0.7
OBN				pmax	pmax		
	comp=Z,64nm,1.7s						
OBN	Obninsk	139.88	330	i PKP	PKPdf	15 44 59.5	+0.7
OBN				LR	LR		
	comp=Z,100nm,17.0s,MS4.6						
TI2	Plekhanov	140.82	308	ePKIKP	PKPdf	15 45 02.2	+1.3
GOF	Gofitskoye	141.06	313	ePKHKP		15 44 54.5	
GNI	Garni	141.19	305	c iPKIKP	PKPdf	15 45 03.2	+1.6
GNI	Garni	141.19	305	PKP	PKPdf	15 45 03.4	+1.8
	comp=Z,2.3nm,0.5s,baz=1.2,slow=6.2,SNR=5.7						
KIV	Kislovodsk	141.65	312	i PKIKP	PKPdf	15 45 03.4	+1.1
KIV				pmax	pmax		
	comp=Z,28nm,2.0s						
KIV	Kislovodsk	141.65	312	ePKP	PKPdf	15 45 03.4	+1.1
NB2	NORSAR Subarra	142.21	353	PKP	PKPdf	15 44 59.4	-3.3
	comp=Z,1.7nm,0.7s,baz=18,slow=3.8						
NB2	NORSAR Subarra	142.21	353	⇑PKPab	PKPdf	15 44 59.4	-3.3
NOA	NORSAR Array B	142.21	353	PKhKP		15 44 59.4	
	comp=Z,4.5nm,0.9s,baz=17,slow=2.6,SNR=7.5						
NOA	NORSAR Array B	142.21	353	PKP	PKPdf	15 44 59.4	-3.2
HFS	Hagfors	142.78	351	PKhKP		15 44 59.5	
	comp=Z,6.3nm,0.9s,baz=63,slow=3.3,SNR=4.8						
HFS				PKP	PKPdf	15 45 05.5	+1.8
	comp=Z,10nm,1.0s,baz=135,slow=4.2,SNR=4.5						
MBAR	Mbarara	143.68	232	ePKPdf	PKPdf	15 45 04.7	-1.9
ERZM	Erzurum	143.76	306	i P	PKPbc	15 45 05.9	+1.0
EZM	Erzurum	143.77	306	eP	Px	15 46 09.4	
VRT	Varto	143.83	304	eP	Px	15 46 05.0	
MNK	Minsk	143.99	335	⇓ePKHKP		15 45 03.0	
EZC	Erzincan	144.96	306	eP	Px	15 46 07.8	
PTK	Pertek	145.50	305	eP	Px	15 46 11.1	
ELZG	Elazig	145.91	304	i P	PKPdf	15 45 11.8	+2.0
SUW	Suwalki	146.06	338	ePKP	PKPdf	15 45 11.1	+1.6
AKASG	Malin Array Be	146.13	329	PKPbc	PKPbc	15 45 10.8	-0.1
	comp=Z,10nm,0.7s,baz=39,slow=3.6,SNR=40						
URFA	Urfa	146.30	302	eP	Px	15 46 14.4	
MALT	Malatya	146.38	304	PKIKP	PKPdf	15 45 14.7	+4.1
SIM	Simferopol’	146.86	318	i PKIKP	PKPdf	15 45 14.4	+3.2
SIM				pmax	pmax		
	comp=Z,20nm,1.4s						
SIM				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.9						
MUD	Monsted U’grnd	146.93	354	⇓iPKHKP		15 45 13.9	
MUD				pmax	pmax		
	comp=Z,71nm,1.0s						
MUD	Monsted U’grnd	146.93	354	⇓iP	PKPdf	15 45 13.9	+3.0
	comp=Z,71nm,1.0s						
MUD				i		15 45 25.2	
COP	Copenhagen	147.25	350	ePKP2	PKPab	15 45 15.5	-2.1
COP				pmax	pmax		
	comp=Z,56nm,0.8s						
COP	Copenhagen	147.25	350	i P	PKPdf	15 45 15.5	+4.0
	comp=Z,56nm,0.8s						
GZT	Gaziantep	147.29	303	i P	PKPdf	15 45 15.2	+3.0
BSD	Bornholm Skovb	147.34	347	⇓iPKHKP		15 45 14.7	
BSD				pmax	pmax		
	comp=Z,86nm,1.1s						
BSD	Bornholm Skovb	147.34	347	⇓iP	PKPdf	15 45 14.7	+3.1
	comp=Z,86nm,1.1s						
GAZ	Gaziantep	147.61	303	eP	Px	15 46 16.6	
BOYT	Boyabat	147.92	311	i P	PKPdf	15 45 12.2	-0.8
EKA	Eskdalemuir Ar	148.08	6	PKPbc	PKPdf	15 45 16.8	+4.0
	comp=Z,22nm,0.9s,baz=323,slow=2.4,SNR=28						
ESK	Eskdalemuir	148.09	6	ePKPbc	PKPdf	15 45 16.4	+3.6
WAR	Warsaw	148.25	339	ePKP	PKPdf	15 45 18.4	+5.2
CTKT	Corum	148.31	310	i P	PKPdf	15 45 18.9	+5.2
GKP	Gorka Klasztor	148.49	343	ePKHKP		15 45 17.2	
GKP	Gorka Klasztor	148.49	343	ePKP	PKPdf	15 45 17.2	+3.7
COBT	Iskenderun	148.52	302	i P	PKPdf	15 45 19.3	+5.2
CORM	Corum	148.59	309	eP	Px	15 46 16.8	
TOS	Tosya	148.68	311	eP	Px	15 46 16.6	
ASF	Jabal al Asfar	148.81	293	PKPbc	PKPdf	15 45 20.0	+5.3
	comp=Z,16nm,0.9s,baz=336,slow=1.6,SNR=18						
BALT	Daday	148.91	312	i P	PKPdf	15 45 13.5	-1.1
LVV	L’vov	149.07	333	ePKIKP	PKPdf	15 45 18.8	+4.2
CANT	Cankiri	149.13	311	eP	Px	15 46 16.6	
BSEG	Bad Segeberg	149.26	351	ePKPdf	PKPdf	15 45 16.5	+1.8
BSEG				ePKPbc	PKPdf	15 45 21.1	+6.4
IAS	Iasi	149.30	326	PKIKP	PKPdf	15 45 21.0	+6.0
ELDT	Eldivan	149.31	310	i P	PKPdf	15 45 21.0	+5.7
NIG	Nigde	149.32	305	eP	Px	15 46 08.9	
DCN	Croghan	149.41	12	eP	PKPdf	15 45 20.9	+5.9
BRTR	Keskin Array B	149.46	309	PKP	PKPdf	15 45 15.8	+0.2
	comp=Z,4.7nm,0.9s,baz=180,slow=2.5,SNR=14						
BRTR				PKPbc	PKPdf	15 45 21.1	+5.6
	comp=Z,5.0nm,0.9s,baz=132,slow=3.3,SNR=20						
SAFT	Safranbolu	149.51	312	eP	Px	15 46 18.9	
KAMT	Kaman	149.54	308	eP	Px	15 46 15.0	
KWP	Kalwaria	149.76	334	ePKP	PKPdf	15 45 22.2	+6.5
ANTO	Ankara	150.01	310	eP	Px	15 46 05.6	
ANTO	Ankara	150.01	310	PKIKP	PKPdf	15 45 23.1	+6.7
LOD	Lodumlu	150.02	310	eP	Px	15 46 22.2	
RUE	Ruedersdorf	150.04	347	ePKPbc	PKPdf	15 45 21.1	+5.1
RUE				ePKPab	PKPab	15 45 27.7	-1.4
MEST	Erdemli	150.13	303	i P	PKPdf	15 45 21.9	+5.2
BURAR	Bucovina Array	150.17	329	P	PKPdf	15 45 23.1	+6.7
BURAR	Bucovina Array	150.17	329	⇓P	PKPdf	15 45 23.8	+7.4
CFR	Carcaliu	150.27	322	PKIKP	PKPdf	15 45 22.7	+6.1
CFR	Carcaliu	150.27	322	⇓P	PKPdf	15 45 23.4	+6.8
OJC	Ojcow	150.37	338	ePKP	PKPdf	15 45 22.9	+6.3
KOLS	Kolonicke sedl	150.48	334	i PKP	PKPdf	15 45 24.6	+7.8
KOLS				e		15 45 32.4	
TIRR	Tirgusor	150.55	321	PKIKP	PKPdf	15 45 23.4	+6.3
VRI	Vrincioaia	150.60	325	PKIKP	PKPdf	15 45 23.7	+6.6
VRI	Vrincioaia	150.60	325	⇑P	PKPdf	15 45 24.1	+7.0
HARR	Harsova	150.68	322	PKIKP	PKPdf	15 45 24.2	+6.9
HARR	Harsova	150.68	322	⇑P	PKPdf	15 45 24.8	+7.5
EIL	Elat	150.72	289	PKPbc	PKPdf	15 45 25.0	+7.2
	comp=Z,20nm,1.0s,baz=15,slow=3.1,SNR=28						
EIL	Elat	150.72	289	ePKPdf	PKPdf	15 45 17.4	-0.4
EIL				ePKPbc	PKPdf	15 45 24.4	+6.6
EIL	Elat	150.72	289	PKPbc	PKPdf	15 45 25.0	+7.2
WIT	Witteveen	150.76	355	eP	PKPdf	15 45 24.8	+7.7
CRVS	Cervenica-Dubn	150.83	334	i PKP	PKPdf	15 45 25.0	+7.7
CRVS				i		15 45 30.0	
MDU	Mudurnu	150.85	312	eP	Px	15 46 23.3	
NIE	Niedzica	150.85	336	ePKP	PKPdf	15 45 23.8	+6.4
HENT	Hendek	150.91	313	i P	PKPdf	15 45 24.3	+6.6
KSP	Ksiaz	150.93	342	ePKPdf	PKPdf	15 45 18.9	+1.5
KSP				ePKPdf	PKPdf	15 45 24.8	+7.4
KSP				ePKPab	PKPab	15 45 30.0	-2.8
KSP				LR	LR		
	comp=Z,400nm,22.6s,MS5.2						
KSP	Ksiaz	150.93	342	ePKP	PKPdf	15 45 25.0	+7.6
KSP				e		15 45 30.5	
RAC	Raciborz	151.03	339	ePKPdf	PKPdf	15 45 24.9	+7.3
KIZT	Kizilcal	151.05	308	eP	Px	15 46 23.3	
PSN	Preselentsi	151.13	320	eP	PKPdf	15 45 26.0	+8.0
CSS	Prodhromos	151.21	300	ePKPbc	PKPdf	15 45 24.1	+5.8
OKC	Ostrava-Krasne	151.26	339	ePKPbc	PKPdf	15 45 25.2	+7.3
OKC				ePKPab	PKPab	15 45 30.6	-3.6
MLR	Muntele Rosu	151.26	325	PKHKP		15 45 25.4	
MLR	Muntele Rosu	151.26	325	PKP	PKPdf	15 45 18.7	+0.6
	comp=Z,6.2nm,1.0s,baz=211,slow=5.5,SNR=5.2						
MLR				PKPbc	PKPdf	15 45 25.3	+7.2
	comp=Z,32nm,1.1s,baz=12,slow=3.0,SNR=26						
MLR	Muntele Rosu	151.26	325	⇓P	PKPdf	15 45 25.6	+7.5
CLZ	Clausthal	151.28	350	ePKPdf	PKPdf	15 45 19.5	+1.6
CLZ				ePKPbc	PKPdf	15 45 26.1	+8.2
UPC	Upice	151.31	342	ePKPbc	PKPdf	15 45 25.7	+7.7
UPC				ePKPab	PKPab	15 45 31.5	-2.9
CLL	Collm	151.31	347	ePKIKP	PKPdf	15 45 16.0	-2.0
CLL				i		15 45 25.5	
CLL				i		15 45 40.1	
CLL	Collm	151.31	347	ePKIKP	PKPdf	15 45 19.0	+1.0
CLL				i PKP1	PKPdf	15 45 25.5	+7.5
CLL				i PKP2	PKPab	15 45 31.2	-3.2
CLL				i		15 45 40.1	
DPC	Dobruska-Polom	151.37	342	ePKPdf	PKPdf	15 45 19.5	+1.4
DPC				ePKPbc	PKPdf	15 45 25.9	+7.8
MORC	Moravsky Berou	151.50	340	PKHKP		15 45 26.6	
MORC	Moravsky Berou	151.50	340	ePKPdf	PKPdf	15 45 18.9	+0.6
MORC				ePKPbc	PKPdf	15 45 25.4	+7.1
MORC				ePKPab	PKPab	15 45 32.0	-3.3
BRG	Berggiesshubel	151.51	345	ePKIKP	PKPdf	15 45 19.8	+1.5
BRG				i		15 45 25.9	
BRG				i		15 45 30.8	
BRG				pmax	pmax		
	comp=Z,75nm,1.1s						
ESKT	Eskisehir	151.52	310	eP	Px	15 46 18.9	
LEF	Lefka	151.52	300	eP	Px	15 46 22.2	
KECS	Kecovo	151.56	335	ePKP	PKPdf	15 45 26.8	+8.4
WTSB	Winterswijk	151.59	355	eP	PKPdf	15 45 25.5	+7.1
	comp=Z,138nm,3.0s						
LIKS	Likavka	151.60	337	ePKP	PKPdf	15 45 26.6	+8.1
PRD	Provadia	151.88	320	eP	PKPdf	15 45 26.0	+6.9
MTUR	Matau	151.90	325	PKHKP		15 45 27.8	
VYHS	Vyhne	152.16	337	ePKP	PKPdf	15 45 27.3	+8.0
VYHS				i		15 45 33.8	
PRU	Pruhonice	152.18	344	ePKPbc	PKPdf	15 45 25.7	+6.4
PRU				ex	x	15 45 32.0	
VRAC	Vranov	152.21	340	PKIKP	PKPdf	15 45 28.6	+9.2
MOX	Moxa	152.22	348	ePKIKP	PKPdf	15 45 20.5	+1.2
MOX				e		15 45 27.7	
MOX				pmax	pmax		
	comp=Z,160nm,2.0s						
MOX	Moxa	152.22	348	i P	PKPdf	15 45 20.5	+1.2
MOX				PP2		15 45 28.0	
PSZ	Piszkesteto	152.25	335	PKIKP	PKPdf	15 45 26.8	+7.3
PSZ	Piszkesteto	152.25	335	ePKPdf	PKPdf	15 45 19.6	+0.2
PSZ				ePKPbc	PKPdf	15 45 26.0	+6.6
PSZ	Piszkesteto	152.25	335	⇑epPKP/A		15 45 20.7	
NKC	Novy Kostel	152.44	347	ePKPbc	PKPdf	15 45 28.0	+8.3
SMOL	Smolenice	152.64	339	ePKP	PKPdf	15 45 28.9	+8.9
SZH	Strazhica	152.69	321	eP	PKPdf	15 45 29.0	+8.7
JMB	Yambol	152.80	319	eP	PKPdf	15 45 29.5	+9.1
HGN	Heimansgroeve	152.85	356	eP	PKPdf	15 45 28.7	+8.5
	comp=Z,52nm,1.7s						
ZST	Bratislava	153.02	339	ePKP	PKPdf	15 45 29.7	+9.2
TNS	Taunus Mts	153.14	352	ePKIKP	PKPdf	15 45 30.3	+10
TNS	Taunus Mts	153.14	352	ePKPdf	PKPdf	15 45 22.3	+1.7
TNS				ePKPbc	PKPdf	15 45 30.3	+10
GRA1	Grafenberg Arr	153.21	348	ePKPbc	PKPdf	15 45 31.2	+10
GRF	Grafenberg Arr	153.21	348	ePKIKP	PKPdf	15 45 31.2	+10
KHC	Kasperske Hory	153.21	344	ePKIKP	PKPdf	15 45 21.4	+0.6
KHC				MLR	MLR		
	comp=Z,300nm,17.7s,MS5.2						
KHC	Kasperske Hory	153.21	344	ePKPdf	PKPdf	15 45 21.4	+0.6
KHC				ePKPbc	PKPdf	15 45 27.1	+6.3
KHC				AMS	AMS	16 55 20.0	
	comp=Z,300nm,17.7s						
BZS	Buzias	153.32	330	P	PKPdf	15 45 22.4	+1.3
BZS	Buzias	153.32	330	⇑P	PKPdf	15 45 21.9	+0.9
WET	Wettzell	153.37	345	ePKIKP	PKPdf	15 45 21.8	+0.8
GEC2	GERESS Array S	153.45	344	ePKIKP	PKPdf	15 45 22.0	+0.9
GERES	GERESS Array B	153.45	344	PKP	PKPdf	15 45 22.3	+1.2
	comp=Z,5.5nm,1.1s,SNR=16						
GERES				PKPbc	PKPdf	15 45 30.0	+8.9
	comp=Z,3.8nm,0.8s,baz=90,slow=1.3,SNR=17						
GIVF	Givet	153.58	357	ePKIKP	PKPdf	15 45 22.7	+1.4
	comp=Z,86nm,1.2s						
ABH	Alteburg	153.58	353	PKP	PKPdf	15 45 30.9	+10
BAIF	Baives	153.64	358	ePKIKP	PKPdf	15 45 23.0	+1.7
DIM	Dimitrovgrad	153.67	320	i P	PKPdf	15 45 31.5	+10
TOD	Tromm	153.69	351	PKP	PKPdf	15 45 28.7	+7.3
RUP	Ruppelstein	153.81	354	PKP	PKPdf	15 45 29.0	+7.4
WLF	Walferdange	153.93	355	ePKPdf	PKPdf	15 45 22.0	+0.3
WLF				ePKPbc	PKPdf	15 45 30.9	+9.1
PGB	Panagyurishte	154.15	322	eP	PKPdf	15 45 32.0	+10
RZN	Rozhen	154.38	320	i P	PKPdf	15 45 32.0	+9.4
LANF	Langenberg	154.44	352	PKP	PKPdf	15 45 32.8	+10
LANF	Langenberg	154.44	352	PKP	PKPdf	15 45 24.5	+2.0
FUR	Furstenfeldbru	154.65	347	ePKIKP	PKPdf	15 45 24.4	+1.6
VTS	Vitosha	154.66	323	i P	PKPdf	15 45 31.0	+8.0
FLN	La Foliniere	154.83	5	ePKIKP	PKPdf	15 45 24.4	+1.4
FLN				eR			
	comp=Z,288nm,21.8s						
MMB	Musomiste	155.02	321	i P	PKPdf	15 45 33.0	+10
LDF	La Druitiere	155.03	5	ePKIKP	PKPdf	15 45 25.3	+2.1
	comp=Z,14nm,0.9s						
WLS	Welschbruch	155.05	353	PKP	PKPdf	15 45 33.9	+11
WLS	Welschbruch	155.05	353	PKP	PKPdf	15 45 24.5	+1.2
CDF	Champ du Feu	155.06	353	ePKIKP	PKPdf	15 45 24.7	+1.4
MEZF	Maizieres J’vi	155.16	356	ePKIKP	PKPdf	15 45 25.1	+1.7
KKB	Krupnik	155.21	322	eP	PKPdf	15 45 34.0	+10
ECH	Echery	155.27	353	PKP	PKPdf	15 45 33.4	+10
ECH	Echery	155.27	353	PKP	PKPdf	15 45 27.5	+3.9
QUIF	Quistinic	155.35	10	ePKIKP	PKPdf	15 45 24.3	+0.6
	comp=Z,34nm,1.1s						
FELD	Feldberg	155.50	352	PKP	PKPdf	15 45 25.2	+1.3
HAU	Haudompre	155.56	354	ePKIKP	PKPdf	15 45 25.3	+1.4
HAU				eR			
	comp=Z,217nm,21.5s						
MOF	Molkenrain	155.63	353	PKP	PKPdf	15 45 25.2	+1.2
HINF	Hinteralfeld	155.70	353	ePKIKP	PKPdf	15 45 25.6	+1.5
LJU	Ljubljana	155.75	340	ePKPdf	PKPdf	15 45 25.6	+1.3
LJU				e		15 45 35.2	
VISS	Visnje	155.87	339	ePKPdf	PKPdf	15 45 25.9	+1.5
BOJS	Bojanci	155.99	338	ePKPdf	PKPdf	15 45 26.1	+1.5
JAVS	Javornik	156.03	340	ePKPdf	PKPdf	15 45 25.7	+1.1
JAVS				e		15 45 54.4	
JAVS				i		15 45 58.8	
SKO	Skopje	156.05	324	ePKP	PKPdf	15 45 41.0	+16
LOMF	Lomont	156.16	353	PKP	PKPdf	15 45 34.1	+9.3
LOMF	Lomont	156.16	353	PKP	PKPdf	15 45 28.7	+3.9
DAVOX	Davos	156.26	348	PKP	PKPdf	15 45 26.7	+1.8
	comp=Z,4.1nm,0.9s,baz=0.4,slow=22,SNR=7.9						
SSF	Saint Saulge	156.66	359	ePKIKP	PKPdf	15 45 27.1	+1.6
	comp=Z,78nm,1.6s						
AVF	Avril sur Loir	156.93	359	ePKIKP	PKPdf	15 45 27.1	+1.2
	comp=Z,42nm,1.6s						
CABF	La Chapelle	156.97	354	ePKIKP	PKPdf	15 45 27.8	+1.9
	comp=Z,28nm,1.0s						
MFF	Saint Martin d	157.00	5	ePKIKP	PKPdf	15 45 27.5	+1.5
SMF	Signal de Mont	157.07	358	ePKIKP	PKPdf	15 45 27.2	+1.1
BGF	Bois d’Agland	157.17	360	ePKIKP	PKPdf	15 45 27.8	+1.6
TCF	Toulx Ste Croi	157.44	1	ePKIKP	PKPdf	15 45 28.0	+1.4
	comp=Z,77nm,1.6s						
LPL	La Plagne	157.98	353	ePKIKP	PKPdf	15 45 29.3	+2.0
LPG	La Plagne	158.00	353	ePKIKP	PKPdf	15 45 29.8	+2.5
ORIF	Oris-en-Rattie	158.66	354	ePKIKP	PKPdf	15 45 28.3	+0.2
	comp=Z,82nm,1.7s						
ORIF				eR			
	comp=Z,159nm,19.2s						
MBDF	Montbardon	158.75	352	ePKIKP	PKPdf	15 45 29.9	+1.7
	comp=Z,53nm,1.5s						
DBIC	Dimbokro	161.56	155	PKP	PKPdf	15 45 32.8	+0.7
	comp=Z,3.9nm,1.0s,baz=332,slow=8.9,SNR=3.5						
DBIC				PKPab	PKPab	15 46 18.3	-1.0
	comp=Z,9.4nm,1.0s,baz=146,slow=4.6,SNR=5.9						
DBIC	Dimbokro	161.56	155	PKP	PKPdf	15 45 32.8	+0.7
DBIC				PKPab	PKPab	15 46 18.3	-1.0
EVO	Evora	162.56	29	ePKIKP	PKPdf	15 45 32.8	+0.4
	comp=Z,164nm,1.8s						
EVO				eR			
	comp=Z,225nm,20.0s						
ESDC	Sonseca Array	163.06	18	PKP	PKPdf	15 45 34.8	+1.9
	comp=Z,0.3nm,0.3s,slow=2.6,SNR=5.1						
ESDC				PKPab	PKPab	15 46 24.4	-0.6
	comp=Z,3.3nm,0.7s,baz=332,slow=3.6,SNR=16						

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*BJI **18** 15:32:23.2, 56.76N×161.02W, h180^{km}*
*NEIC **18** 15:32:25.2±0.2, 56.43N×161.22W, h181^{km}±2^{km}, mb4.1/6, Error ellipse: s-maj=6.3km s-min=2.2km az=140.0*
*IDC **18** 15:32:26.6±0.8, 56.55N×161.35W, h193^{km}±6^{km}, mb3.8/15, mb1 4.0/19, mb1mx3.9/25, mbtmp4.3/19, Error ellipse: s-maj=18.2km s-min=11.0km az=0.0*
ISC 18 15:32:24.4±0.2, **56.42N**±0.04×**161.17W**±0.06, **h186**^{km}±2^{km}, **h190**^{km}±1.3^{km}**:pP-P, n127,** σ**0**^{s}**97**/132, **mb4.0**/19, **1D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLHA	Black Hill	0.88	215	P	P	15 32 52.6	+0.6
BLHA				S	S	15 33 14.0	+0.6
PS1A	Pavlof South-1	1.05	198	P	P	15 32 53.5	+0.3
PS1A				S	S	15 33 15.5	0.0
PN6	Pavlof North-6	1.06	204	P	P	15 32 54.1	+0.8
PN6				S	S	15 33 16.7	+1.1
PVV	Pavlof Volcano	1.11	199	P	P	15 32 53.9	+0.2
SDPT	Sand Point	1.14	160	P	P	15 32 53.0	-1.0
SDPT				S	S	15 33 15.0	-1.9
HAG	Hague Volcano	1.18	201	P	P	15 32 54.5	+0.2
HAG				S	S	15 33 17.1	-0.4
DOL	Dolgoi Island	1.33	197	P	P	15 32 55.3	-0.4
DOL				S	S	15 33 18.6	-1.2
DTNA	Dutton South F	1.41	206	P	P	15 32 56.6	+0.2
DT1	Dutton Round H	1.46	206	P	P	15 32 56.8	0.0
DT1				S	S	15 33 22.4	+0.6
BALA	Baldy Mountain	1.53	217	P	P	15 32 58.1	+0.6
ANPB	Aniakchak Plen	1.64	75	P	P	15 32 58.7	+0.1
ANPB				S	S	15 33 24.5	-0.4
FALS	False Pass	2.02	220	P	P	15 33 02.5	+0.1
WTUG	Tugumak	2.41	230	P	P	15 33 06.4	-0.4
WESN	West Dahl Nort	2.69	228	P	P	15 33 10.2	+0.2
WFAR	Faris Peak	2.79	229	P	P	15 33 11.5	+0.2
WESS	West Dahl Sout	2.81	228	P	P	15 33 12.2	+0.7
AKA	Akutan	3.49	231	P	P	15 33 19.6	-0.3
AKUT	Akutan	3.49	231	eP	P	15 33 19.8	-0.1
AKGG	Akutan Green G	3.54	233	P	P	15 33 20.8	+0.2
AKLV	Akutan Long Va	3.55	232	P	P	15 33 20.5	-0.2
LVA	Lava Point	3.58	233	P	P	15 33 21.4	+0.3
CAHL	Cahill	3.59	60	P	P	15 33 21.6	+0.5
MGLS	Mageik LS	3.64	58	P	P	15 33 22.9	+1.1
KAIC	Katmai Ikaglui	3.90	55	P	P	15 33 26.3	+1.2
KAWH	Katmai	3.97	58	P	P	15 33 26.6	+0.6
MTBL	Makushin Table	4.00	234	P	P	15 33 25.9	-0.4
KAHC	Katmai Hardscr	4.00	54	P	P	15 33 27.2	+0.8
MSW	Makushin Switc	4.08	234	P	P	15 33 26.8	-0.5
KAPH	Katmai Pasha	4.28	57	P	P	15 33 30.4	+0.5
MCNL	McNeil River	4.59	50	P	P	15 33 34.4	+0.5
KDAK	Kodiak Island	4.88	70	P	P	15 33 36.1	-1.5
OKFG	Magazine Ridge	4.92	235	P	P	15 33 37.1	-1.0
SYI	Shuyak Island	5.22	61	P	P	15 33 41.9	-0.1
ILW	Iliamna West	5.60	46	P	P	15 33 47.6	+0.7
NIKO	Nikolski	5.63	235	P	P	15 33 46.7	-0.7
NCT	North Crescent	5.99	43	P	P	15 33 53.0	+0.9

RSO	**Redoubt South**	6.00	44	*e*P	P	15 33 52.8	+0.7
RDN	**Redoubt North**	6.02	44	P	P	15 33 53.6	+1.1
DFR	**Drift River**	6.10	43	P	P	15 33 54.5	+1.0
CNPM	**China Poot**	6.13	55	P	P	15 33 53.4	-0.6
RDT	**Redoubt**	6.20	44	P	P	15 33 55.8	+1.0
BRLK	**Bradley Lake**	6.40	54	P	P	15 33 57.0	-0.5
SPU	**Mount Spurr**	6.72	41	P	P	15 34 02.6	+0.9
NKA	**Nikishka**	6.76	46	P	P	15 34 04.5	+2.3
TT01	**Tatalina**	7.01	20	P	P	15 34 06.4	+0.9
STLK	**Strandline Lak**	7.01	40	P	P	15 34 06.5	+0.9
SLKM	**Skilak Lake**	7.05	50	P	P	15 34 05.5	-0.5
SEW	**Seward**	7.20	54	P	P	15 34 07.1	-0.9
VOGL	**Vogel Lake**	7.23	46	P	P	15 34 09.0	+0.6
FIB	**Fire Island**	7.43	46	P	P	15 34 10.7	-0.3
RC01	**Rabbit Creek A**	7.56	47	P	P	15 34 11.7	-1.1
PWA	**Palmer West**	7.83	43	P	P	15 34 16.8	+0.5
LTI	**Latouche**	7.91	57	P	P	15 34 15.9	-1.4
PMR	**Palmer**	8.09	45	P	P	15 34 19.2	-0.4
CUT	**Chulitna**	8.17	38	P	P	15 34 20.5	-0.2
KNK	**Knik Glacier**	8.26	47	P	P	15 34 21.0	-0.9
GHO	**Glory Hole Cre**	8.27	45	P	P	15 34 21.7	-0.3
MID	**Middleton Isla**	8.45	63	P	P	15 34 22.3	-2.1
SML	**Sawmill**	8.52	45	P	P	15 34 24.2	-1.1
HIN	**Hinchinbrook I**	8.67	57	P	P	15 34 26.6	-0.6
ATKA	**Atka Island**	8.70	246	P	P	15 34 27.4	-0.3
KTH	**Kantishna Hill**	8.80	31	P	P	15 34 30.1	+1.2
FID	**Port Fidalgo**	8.81	54	P	P	15 34 26.9	-2.2
JPK	**Jack Peak**	8.88	52	P	P	15 34 28.6	-1.4
TRF	**Thorofare Moun**	8.91	33	P	P	15 34 30.6	+0.3
SCM	**Sheep Creek Mo**	8.94	47	P	P	15 34 29.7	-1.1
VLZ	**Valdez**	9.03	52	P	P	15 34 30.5	-1.5
EYAK	**Cordova Ski Ar**	9.07	56	P	P	15 34 31.2	-1.3
DIV	**Divide**	9.28	53	P	P	15 34 34.0	-1.2
RAGM	**Ragged Mountai**	9.52	59	P	P	15 34 37.1	-1.1
MCK	**McKinley**	9.53	35	*e*P	P	15 34 36.6	-1.7
GSTD	**Great Sitkin T**	9.79	250	P	P	15 34 41.6	-0.1
IM3	**Indian Mountai**	10.23	17	P	P	15 34 48.6	+1.2
GLB	**Gilahina Butte**	10.27	54	P	P	15 34 47.2	-0.8
PAX	**Paxson**	10.28	44	P	P	15 34 48.5	+0.5
IMA	**Indian Mountai**	10.32	17	*e*P	P	15 34 48.7	+0.2
THY	**Trims Highway**	10.42	41	*e*P	P	15 34 49.7	-0.2
COLA	**College**	10.68	32	*e*P	P	15 34 50.1	-3.2
BALM	**Baldy**	10.81	57	P	P	15 34 54.3	-0.6
IL1	**Eielson Array**	10.90	34	P	P	15 34 59.2	+3.2
ILAR	**Eielson Array**	10.90	34	P	P	15 34 53.1	-3.0
	0.5nm,0.3s,baz=229,slow=12,SNR=59						
ILAR				S	S	15 36 49.5	-5.7
	0.2nm,0.3s,baz=194,slow=7.4,SNR=2.3						
YAH	**Yahtse**	10.92	61	P	P	15 34 56.3	-0.1
MENT	**Mentasta**	10.95	46	P	P	15 34 57.4	+0.6
PCA	**Pinnacle**	11.60	63	P	P	15 35 05.9	+0.8
BCA3	**Beaver Creek A**	11.79	48	P	P	15 35 08.7	+1.1
PNL	**Peninsula**	11.97	65	P	P	15 35 09.4	-0.4
DAWY	**Dawson**	13.19	46	P	P	15 35 25.5	+0.2
BM3	**Burnt Mountain**	13.45	28	P	P	15 35 30.3	+1.8
WHY	**Whitehorse**	14.32	62	P	P	15 35 40.8	+1.5
FX1	**Attu Island--F**	15.23	267	P	P	15 35 53.1	+2.4
	4.6nm,0.3s,baz=278,slow=21,SNR=6.0						
DLBC	**Dease Lake**	16.82	70	P	P	15 36 11.4	+1.3
	0.6nm,0.3s,baz=269,slow=13,SNR=13						
INK	**Inuvik**	17.29	35	P	P	15 36 12.4	-3.1
	1.2nm,0.3s,baz=234,slow=10,SNR=38						
INK				ScP		15 44 02.4	
	0.3nm,0.3s,baz=233,slow=8.8,SNR=4.1						
INK	**Inuvik**	17.29	35	*e*P	P	15 36 11.2	-4.3
	7.2nm,0.8s						
BILL	**Bilibino**	18.82	321	*e*P	P	15 36 31.1	-0.6
	7.3nm,1.3s						
YKW3	**Yellowknife Ar**	23.96	56	*e*P	P	15 37 21.4	-0.9
YKA	**Yellowknife Ar**	23.98	56	P	P	15 37 22.4	+0.1
	9.0nm,0.5s,mb4.6,baz=275,slow=9.1,SNR=107						
YKA				PcP	PcP	15 40 58.9	-1.6
	0.5nm,0.4s,baz=287,slow=2.0,SNR=6.3						
YKA				ScP		15 44 18.9	
	0.8nm,0.5s,baz=287,slow=2.8,SNR=11						
YKA	**Yellowknife Ar**	23.98	56	P	P	15 37 22.4	+0.1
YKA				PcP	PcP	15 40 58.9	-1.6
YKA				ScP		15 44 18.9	
FFC	**Flin Flon**	32.62	68	P	P	15 38 39.4	-0.6
NVAR	**Mina Array Bea**	33.44	104	P	P	15 38 48.9	+1.7
	1.2nm,0.5s,mb3.9,baz=302,slow=7.1,SNR=4.3						
NVAR				PcP	PcP	15 41 24.2	0.0
	0.8nm,0.5s,baz=342,slow=1.2,SNR=5.0						
NVAR	**Mina Array Bea**	33.44	104	P	P	15 38 48.9	+1.7
NVAR				PcP	PcP	15 41 24.2	0.0
FCC	**Fort Churchill**	34.68	58	*e*P	P	15 38 56.8	-0.8
	6.5nm,0.9s,mb4.3						
BW06	**Boulder Array**	35.26	90	P	P	15 39 03.8	+1.2
	2.2nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	35.26	90	P	P	15 39 04.0	+1.4
	2.1nm,0.5s,mb4.0,baz=327,slow=2.8,SNR=18						
SRU	**San Rafael**	37.21	96	*e*P	P	15 39 20.8	+1.8
ULM	**Lac du Bonnet**	38.14	71	P	P	15 39 27.4	+0.7
	1.9nm,0.8s,mb3.8,baz=310,slow=9.1,SNR=3.5						
SDCO	**Great Sand Dun**	40.96	93	*e*P	P	15 39 51.4	+1.4
EYMN	**Ely**	41.82	71	*e*P	P	15 39 57.1	+0.3
FRB	**Frobisher Bay**	42.83	41	P	P	15 40 04.1	-0.7
	7.1nm,0.5s,mb4.5,baz=332,slow=13,SNR=8.7						
MNTX	**Cornudas Mount**	45.49	99	*e*P	P	15 40 27.2	+0.7
	2.0nm,0.5s,mb4.0						
CN2	**Changchun**	46.49	287	*e*P	P	15 40 34.8	+0.8
WMOK	**Wichita Mounta**	46.87	90	*e*P	P	15 40 37.1	-0.1
	3.2nm,0.5s,mb4.2						
TXAR	**Lajitas Array**	48.25	99	P	P	15 40 49.0	+1.0
	2.1nm,0.7s,mb3.9,baz=290,slow=5.5,SNR=6.7						
TXAR				PcP	PcP	15 42 11.7	-0.7
	1.2nm,0.8s,baz=286,slow=2.5,SNR=3.7						
TXAR	**Lajitas Array**	48.25	99	P	P	15 40 49.0	+1.0
TXAR				PcP	PcP	15 42 11.7	-0.7
SCHQ	**Schefferville**	49.17	50	P	P	15 40 53.6	-1.0
	0.7nm,0.4s,mb3.6,baz=343,slow=14,SNR=6.5						
SONM	**Songino Array**	53.24	303	P	P	15 41 24.3	-0.9
	3.0nm,0.7s,mb4.1,baz=37,slow=6.2,SNR=30						
SONM				pP	pP	15 42 07.3	0.0
	1.2nm,0.7s,baz=44,slow=7.7,SNR=5.3						
FINES	**FINESS Array B**	62.34	356	P	P	15 42 26.6	-1.9
	1.0nm,0.8s,mb3.7,slow=7.6,SNR=5.9						
NOA	**NORSAR Array B**	62.73	4	pP	pP	15 43 14.1	-0.5
	1.4nm,0.9s,baz=351,slow=6.8,SNR=3.6						
BVAR	**Borovoye Array**	63.01	328	P	P	15 42 32.3	-0.7
	1.3nm,0.6s,mb4.0,baz=31,slow=8.6,SNR=10						
BVAR				pP	pP	15 43 16.0	-0.5
	1.9nm,0.8s,baz=45,slow=8.4,SNR=4.5						
WMQ	**Urumqi**	64.62	312	*e*P	P	15 42 45.0	+1.5
EKA	**Eskdalemuir Ar**	67.18	13	P	P	15 42 58.5	-1.0
	1.8nm,0.8s,mb4.0,baz=342,slow=5.3,SNR=4.6						
EKA				pP	pP	15 43 43.3	-0.2
	2.6nm,0.8s,baz=329,slow=4.9,SNR=2.4						
AKASG	**Malin Array Be**	72.90	353	pP	pP	15 44 17.4	-1.2
	0.8nm,0.5s,baz=11,slow=5.9,SNR=2.7						
GERES	**GERESS Array B**	75.02	4	pP	pP	15 44 31.5	+0.3
	0.2nm,0.5s,baz=153,slow=6.0,SNR=2.3						
CMAR	**Chiang Mai Arr**	80.15	288	P	P	15 44 13.9	-1.0
	0.7nm,0.6s,mb3.5,baz=22,slow=6.9,SNR=4.9						
CMAR				pP	pP	15 45 01.2	+0.8
	2.7nm,0.9s,baz=10,slow=6.9,SNR=6.7						
CTA	**Charters Tower**	88.08	228	P	P	15 44 55.0	+0.4
	10nm,0.9s,mb4.7,baz=288,slow=4.0,SNR=5.5						
WRA	**Warramunga Arr**	93.25	238	P	P	15 45 17.5	-1.1
	0.8nm,0.7s,mb4.0,baz=32,slow=5.9,SNR=10						
ASAR	**Alice Springs**	96.66	237	P	P	15 45 33.3	-0.7
	0.3nm,0.5s,mb3.9,baz=22,slow=4.8,SNR=8.3						
QSPA	**South Pole Qui**	146.20	180	⇓*i*P	PKPdf	15 51 42.3	+3.1

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*PGC **18** 15:41:35.7, 62.91N×143.64W, h10^{km}, ML3.0/3, Eastern Alaska.*

NEIC 18 15:41:34.8, 62.89N×143.67W, h1^{km}, ML2.9(AEIC)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MENT	**Mentasta**	0.06	334	P	Pg	15 41 37.5	+1.6
DOT	**Dot Lake**	0.78	347	P	Pg	15 41 50.5	0.0
DOT				S	Sg	15 42 00.8	-0.1
PAX	**Paxson**	0.83	276	P	Pg	15 41 50.1	-1.2
PAX				S	Sg	15 42 01.5	-0.9
BCA3	**Beaver Creek A**	0.88	78	P	Pg	15 41 51.2	-1.1
BCA3				S	Sg	15 42 06.3	+2.2
THY	**Trims Highway**	1.08	300	P	Pb	15 41 55.3	-0.8
TZL	**Tazlina**	1.18	225	P	Pb	15 41 56.8	-0.9
DDM	**Donnelly Dome**	1.34	313	P	Pb	15 42 00.3	-0.1
GLB	**Gilahina Butte**	1.45	183	P	Pn	15 42 00.7	-1.7
GLB				S	Sb	15 42 22.0	+0.7
BALM	**Baldy**	1.96	161	P	Pn	15 42 09.5	-0.1
SCM	**Sheep Creek Mo**	2.01	240	P	Pn	15 42 09.7	-0.6
SCM				S	Sn	15 42 37.2	+0.8
DIV	**Divide**	2.03	210	P	Pn	15 42 09.4	-1.1
DIV				S	Sn	15 42 35.8	-1.0
HDA	**Harding Lake**	2.11	318	P	Pn	15 42 11.1	-0.7
VLZ	**Valdez**	2.17	217	P	Pn	15 42 11.8	-0.7
CTGM	**Chitina Glacie**	2.22	149	P	Pn	15 42 12.6	-0.8
DAWY	**Dawson**	2.25	56	P	Pn	15 42 12.9	-0.9
DAWY				S	Sn	15 42 42.5	-0.1
DAWY	**Dawson**	2.25	56	Pn	Pn	15 42 11.9	-1.8
DAWY				Pg	Pg	15 42 16.0	-3.8
DAWY				Sg	Sg	15 42 44.9	-4.9
DAWY				Trac		15 42 48.1	
	comp=Z,74nm,0.1s						
JPK	**Jack Peak**	2.30	218	P	Pn	15 42 13.6	-0.9
IL1	**Eielson Array**	2.37	324	P	Pn	15 42 14.0	-1.4
RND	**Reindeer**	2.41	285	P	Pn	15 42 16.0	0.0
SML	**Sawmill**	2.43	246	P	Pn	15 42 16.4	+0.1
SML				S	Sn	15 42 47.2	+0.1
MCK	**McKinley**	2.52	292	P	Pn	15 42 17.6	0.0
FID	**Port Fidalgo**	2.53	213	P	Pn	15 42 18.3	+0.6
CCB	**Clear Creek Bu**	2.55	316	P	Pn	15 42 17.2	-0.8
EYAK	**Cordova Ski Ar**	2.55	204	P	Pn	15 42 18.1	+0.1
GLI	**Glacier Island**	2.59	220	P	Pn	15 42 18.0	-0.6
GLM	**Gilmore Dome**	2.67	324	P	Pn	15 42 18.8	-0.9
KNK	**Knik Glacier**	2.69	239	P	Pn	15 42 21.0	+1.0
YAH	**Yahtse**	2.70	159	P	Pn	15 42 20.1	0.0
GHO	**Glory Hole Cre**	2.70	248	P	Pn	15 42 20.5	+0.4
COLA	**College**	2.72	319	P	Pn	15 42 20.4	-0.1
HIN	**Hinchinbrook I**	2.84	210	P	Pn	15 42 22.1	-0.2
PMR	**Palmer**	2.87	245	P	Pn	15 42 22.3	-0.3
MDM	**Murphy Dome**	2.90	318	P	Pn	15 42 22.7	-0.2
BWN	**Browne**	2.90	299	P	Pn	15 42 23.4	+0.3
TRF	**Thorofare Moun**	3.06	284	P	Pn	15 42 25.1	-0.2
CUT	**Chulitna**	3.09	264	P	Pn	15 42 25.2	-0.5
PCA	**Pinnacle**	3.24	148	P	Pn	15 42 27.3	-0.6
KTH	**Kantishna Hill**	3.35	285	P	Pn	15 42 28.8	-0.6
RC01	**Rabbit Creek A**	3.39	240	P	Pn	15 42 29.0	-0.9
LTI	**Latouche**	3.49	217	P	Pn	15 42 30.8	-0.7
HYT	**Haines Junctio**	3.58	123	Pn	Pn	15 42 30.0	-2.7
HYT				Pg	Pg	15 42 39.4	-6.9
HYT				Sg	Sg	15 43 27.8	-6.2
HYT				Trac		15 43 33.7	
	comp=Z,17nm,0.4s						
BM3	**Burnt Mountain**	4.57	355	P	Pn	15 42 44.8	-1.9
WHY	**Whitehorse**	4.73	114	P	Pn	15 42 46.7	-2.3
WHY	**Whitehorse**	4.73	114	Pn	Pn	15 42 46.1	-2.9
WHY				Pg	Pg	15 43 00.5	-8.8
WHY				Sn	Sn	15 43 39.2	-6.2
WHY				Sg	Sg	15 44 02.0	-10
WHY				Trac		15 44 09.6	
	comp=Z,5.0nm,0.2s						
INK	**Inuvik**	6.87	33	Pn	Pn	15 43 15.1	-4.1
INK				Trac		15 45 19.4	
	comp=Z,4.0nm,0.7s						
DLBC	**Dease Lake**	8.04	118	Trac		15 45 54.7	
	comp=Z,1.0nm,0.3s						
DLBC	**Dease Lake**	8.04	118	Sg	Sg	15 45 50.0	-13
FNBB	**Fort Nelson**	10.81	102	Pn	P	15 44 08.2	-5.4

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*IDC **18** 15:47:45.4±5.0, 17.76S×178.76W, h548^{km}±62^{km}, mb3.4/11, mb1 3.7/11, mb1mx3.5/18, mbtmp4.3/11, Error ellipse: s-maj=29.8km s-min=19.1km az=174.0*

*NEIC **18** 15:47:46.3±4.1, 17.74S×178.81W, h560^{km}±50^{km}, mb4.2/5, Error ellipse: s-maj=22.9km s-min=17.7km az=190.0*

ISC 18 15:47:44.5±0.6**, 17.7S**±0.1×**178.8W**±0.1**, h550^{km}, n21, σ0^{s}84**/18**, mb3.9**/13**, 3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	20.75	189	P	P	15 51 47.3	-1.1
	2.8nm,0.3s,baz=162,slow=15,SNR=10						
ARMA	**Armidale**	29.68	239	*e*P	P	15 53 08.9	+1.3
PMG	**Port Moresby**	34.03	280	P	P	15 53 45.5	+1.0
	16nm,1.1s,mb4.5,baz=66,slow=3.8,SNR=4.4						
PMG	**Port Moresby**	34.03	280	*e*P	P	15 53 45.5	+1.0
	12nm,0.9s,mb4.4						
STKA	**Stephens Creek**	38.36	241	⇓*i*P	P	15 54 21.1	+1.1
	4.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	38.36	241	P	P	15 54 21.1	+1.2
	4.9nm,0.6s,mb4.2,baz=108,slow=9.9,SNR=13						
WRAB	**Tennant Creek**	44.26	259	*e*P	P	15 55 06.3	-0.8
	5.3nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	44.27	259	P	P	15 55 06.6	-0.6
	3.0nm,0.8s,mb3.9,baz=94,slow=7.0,SNR=60						
ASAR	**Alice Springs**	44.45	254	P	P	15 55 08.4	-0.1
	22nm,0.6s,mb4.9,baz=88,slow=8.0,SNR=505						
ASAR				PcP	PcP	15 56 39.8	-0.7
	0.8nm,0.5s,baz=104,slow=4.1,SNR=5.3						
ASPA	**Alice Springs**	44.45	254	⇓*i*P	P	15 55 08.4	-0.2
KAKA	**Kakadu**	47.18	269	⇓*i*P	P	15 55 29.0	-0.6
	4.7nm,0.6s,mb4.2						
QSPA	**South Pole Qui**	72.32	180	*e*P	P	15 58 15.7	+0.2
	5.9nm,0.8s,mb4.1						
YBH	**Yreka Blue Hor**	78.65	39	P	P	15 58 51.4	+0.5
	0.4nm,0.4s,mb3.1,baz=85,slow=1.5,SNR=3.8						
NVAR	**Mina Array Bea**	79.58	44	P	P	15 58 56.4	+0.5
	1.5nm,0.8s,mb3.4,baz=227,slow=8.9,SNR=10						
ILAR	**Eielson Array**	85.81	13	P	P	15 59 25.0	-1.4
	0.6nm,0.5s,mb3.5,baz=223,slow=4.9,SNR=13						
TXAR	**Lajitas Array**	86.25	58	P	P	15 59 30.6	+1.2
	1.4nm,0.9s,mb3.6,baz=217,slow=6.3,SNR=6.5						
PDAR	**Pinedale Array**	87.50	44	P	P	15 59 35.0	0.0
	0.7nm,0.6s,mb3.5,baz=237,slow=2.8,SNR=7.2						
YKA	**Yellowknife Ar**	94.34	25	P	P	16 00 05.0	-0.9
	0.4nm,0.9s,mb3.6,baz=250,slow=4.4,SNR=7.6						
BRTR	**Keskin Array B**	144.38	315	PKP	PKPdf	16 06 20.4	+2.4
	0.2nm,0.5s,baz=18,slow=4.6,SNR=3.5						
CLL	**Collm**	145.21	347	*e*PKP1	PKPbc	16 06 22.0	+1.9
GERES	**GERESS Array B**	147.34	345	PKPbc	PKPdf	16 06 26.7	+4.0
	0.3nm,0.5s,slow=1.3,SNR=4.1						

IDC 18 16:07:27.8±12.0**, 10.34N×90.88E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/17**, mbtmp3.7**/3**, Error ellipse: s-maj=396.4km s-min=31.3km az=74.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	39.60	16	P	P	16 15 01.0	-1.7
	0.4nm,0.6s,baz=211,slow=7.0,SNR=3.8						
WRA	**Warramunga Arr**	52.31	125	P	P	16 16 41.3	-2.5
	1.0nm,0.5s,baz=300,slow=10.0,SNR=34						
ASAR	**Alice Springs**	53.96	129	P	P	16 16 54.2	-1.8
	0.8nm,0.7s,baz=304,slow=7.0,SNR=6.2						

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*MOS **18** 16:11:19.9±1.4, 49.95N×18.46E, h10^{km}, mb3.8/1, Error ellipse: s-maj=8.3km s-min=7.2km az=108.3*

*IPEC **18** 16:11:19.1±0.4, 49.87N×18.62E, h3^{km}±1^{km}, ML2.4/3, Error ellipse: s-maj=2.6km s-min=1.9km az=68.0*

*NEIC **18** 16:11:20.3±0.5, 49.83N×18.45E, h5^{km}, ML3.4(FUR), ML3.3(SZGRF), ML3.2(CLL), ML2.7(VIE), Error ellipse: s-maj=6.3km s-min=4.5km az=216.0*

*IDC **18** 16:11:20.9±1.0, 49.70N×18.52E, mb1 3.4/5, mb1mx3.2/20, mbtmp3.3/5, ML2.9/5, Error ellipse: s-maj=20.4km s-min=8.2km az=154.0*

*CSEM **18** 16:11:20.4±0.1, 49.83N×18.50E, h2^{km}, ML3.4/3, Error ellipse: s-maj=3.3km s-min=2.4km az=35.0*

*PRU **18** 16:11:21.7, 49.85N×18.38E*

*BGR **18** 16:11:21.5±0.9, 49.76N×18.34E, h1^{km}, ML3.3/5, Error ellipse: s-maj=13.3km s-min=10.0km az=29.0*

ISC 18 16:11:18.6±0.3**, 49.90N**±0.02×**18.41E**±0.02**, n60, σ1^{s}42**/100**, 1C-1D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	0.18	250	*e*PG	Pg	16 11 25.4	+3.2
OKC				*e*SG	Sg	16 11 29.0	+4.5
	711nm,0.5s						
RAC	**Raciborz**	0.23	324	*e*Pg	Pg	16 11 27.2	+4.0
RAC				*e*Sg	Sg	16 11 32.2	+5.9
MORC	**Moravsky Berou**	0.57	258	*e*Pg	Pg	16 11 32.0	+1.9
MORC				*e*Sg	Sg	16 11 41.1	+3.4
MORC	**Moravsky Berou**	0.57	258	*e*Pg	Pg	16 11 32.0	+2.0
MORC				*e*Sg	Sg	16 11 40.9	+3.2
	89nm,0.3s						
OJC	**Ojcow**	0.95	70	*e*Pg	Pg	16 11 37.7	0.0
OJC				*e*Sg	Sg	16 11 50.3	-0.1
LIKS	**Likavka**	0.96	151	*i* Pg	Pg	16 11 39.2	+1.3
LIKS				*i* Sg	Sg	16 11 54.2	+3.4
JAVC	**Velka Javorina**	1.15	205	*e*Pg	Pg	16 11 42.8	+1.3
VRAC	**Vranov**	1.32	244	Pg	Pg	16 11 45.5	+0.6
	39nm,0.3s,baz=68,slow=14,SNR=151						
VRAC				Lg		16 12 04.1	
	12nm,0.3s,baz=330,slow=14,SNR=12						
VRAC	**Vranov**	1.32	244	*e*Pn	Pn	16 11 45.4	+1.1
VRAC	**Vranov**	1.32	244	Pg	Pg	16 11 45.5	+0.5
VRAC				*e*Sg	Sg	16 12 04.2	+1.7
	39nm,0.3s						
NIE	**Niedzica**	1.33	110	*e*Pg	Pg	16 11 43.0	-2.2
NIE				*e*Sg	Sg	16 12 01.3	-1.6
DPC	**Dobruska-Polom**	1.42	289	*e*P	Pg	16 11 47.3	+0.4
DPC				*e*		16 12 07.6	
DPC				smax			
	comp=N,36nm,0.2s						
DPC	**Dobruska-Polom**	1.42	289	*e*PG	Pg	16 11 47.3	+0.4
DPC				*e*SG	Sg	16 12 07.6	+1.9
	comp=N,36nm,0.2s						
VYHS	**Vyhne**	1.43	168	*i* PG	Pg	16 11 46.4	-0.9
VYHS				*i* SG	Sg	16 12 05.2	-1.2
SMOL	**Smolenice**	1.53	205	*i* P	Pg	16 11 48.6	-0.5
SMOL				*i*		16 12 09.4	
SMOL	**Smolenice**	1.53	205	*i* Pg	Pg	16 11 48.6	-0.5
SMOL				*e*Sn	Sn	16 12 05.2	-2.9
SMOL				*i* Sg	Sg	16 12 09.4	-0.1
SMOL	**Smolenice**	1.53	205	*i*	Sg	16 12 09.4	-0.1
KRUC	**Moravsky**	1.56	238	*e*Pn	Pn	16 11 49.3	+1.6
KRUC				*e*Sg	Sg	16 12 10.9	+0.5
	comp=N,40nm,0.3s						
KSP	**Ksiaz**	1.65	306	*e*P	Pn	16 11 50.4	+1.4
KSP				*e*		16 12 12.7	
KSP	**Ksiaz**	1.65	306	*e*Pn	Pn	16 11 50.4	+1.4
KSP				*e*Pg	Pg	16 11 52.4	+0.8
KSP				*e*Sg	Sg	16 12 12.7	-0.9
KSP				*e*Sg	Sg	16 12 15.1	+1.5
KSP	**Ksiaz**	1.65	306	*e*Pg	Pg	16 11 52.4	+0.8
UPC	**Upice**	1.65	293	*e*PG	Pg	16 11 50.4	-1.3
UPC				*e*SG	Sg	16 12 13.4	-0.3
ZST	**Bratislava**	1.91	207	*i* PN	Pn	16 11 53.8	+1.1
ZST				*i* SN	Sn	16 12 18.3	+0.5
KECS	**Kecovo**	1.97	135	*e*PG	Pg	16 11 56.6	-1.3
KECS				*e*SN	Sn	16 12 19.1	-0.2
PSZ	**Piszkesteto**	2.21	153	*e*Pn	Pn	16 11 56.7	-0.4
PSZ				*e*Pg	Pg	16 12 01.9	-0.9
PSZ	**Piszkesteto**	2.21	153	*e*Pn	Pn	16 11 57.4	+0.3
PSZ	**Piszkesteto**	2.21	153	*e*Pn	Pn	16 11 56.7	-0.4
PSZ	**Piszkesteto**	2.21	153	*e*P	Pn	16 11 57.3	+0.2
PSZ	**Piszkesteto**	2.21	153	*e*Pg	Pg	16 12 01.9	-0.9
CRVS	**Cervenica-Dubn**	2.23	115	*e*P	Pn	16 12 01.1	+3.7
CRVS				*e*		16 12 29.3	
CRVS	**Cervenica-Dubn**	2.23	115	*e*Pn	Pn	16 12 01.1	+3.7
CRVS				*i* Pg	Pg	16 12 04.1	+0.9
CRVS				*e*Sn	Sn	16 12 29.3	+3.3
CRVS				*e*Sg	Sg	16 12 36.4	+3.5
CRVS	**Cervenica-Dubn**	2.23	115	*e*SN	Sn	16 12 29.3	+3.3
CRVS				*e*		16 12 36.4	
CRVS	**Cervenica-Dubn**	2.23	115	*i* Pg	Pg	16 12 04.1	+0.9
PRU	**Pruhonice**	2.50	274	*e*PG	Pg	16 12 05.5	-3.0
PRU				*e*SG	Sg	16 12 39.5	-2.3
PKSG		2.51	180	*e*P	Pn	16 12 01.9	+0.6
KOLS	**Kolonicke sedl**	2.70	109	*e*PN	Pn	16 12 06.2	+2.1
KOLS				*i*		16 12 12.1	
KOLS	**Kolonicke sedl**	2.70	109	*i* Pg	Pg	16 12 12.1	-0.5
BRG	**Berggiesshubel**	3.02	291	*e*Pg	Pg	16 12 16.8	-2.0
BRG				*e*Sg	Sg	16 12 58.6	-0.5
BRG	**Berggiesshubel**	3.02	291	*i* Pg	Pg	16 12 16.5	-2.4
BRG				*i* Sg	Sg	16 12 59.0	-0.1
PKS8	**Sarbogard**	3.03	176	*e*P	Pn	16 12 08.9	+0.2
KHC	**Kasperske Hory**	3.24	258	*e*PN	Pn	16 12 12.0	+0.3
KHC				*e*PG	Pg	16 12 19.2	-4.1
KHC				*e*SG	Sg	16 13 04.4	-2.0
KHC	**Kasperske Hory**	3.24	258	Pg	Pg	16 12 19.2	-4.1
KHC				Sg	Sg	16 13 04.4	-2.0
GEC2	**GERESS Array S**	3.25	253	*e*Pn	Pn	16 12 13.3	+1.4
GEC2				*e*Sg	Sg	16 13 02.1	-4.7
GEC2	**GERESS Array S**	3.25	253	*e*Pn	Pn	16 12 13.3	+1.4
GEC2				*e*Sg	Sg	16 13 02.1	-4.7
GERES	**GERESS Array B**	3.25	253	Pn	Pn	16 12 12.5	+0.6
	comp=N,0.6nm,0.3s,baz=62,slow=14,SNR=13						
GERES				Pg	Pg	16 12 21.5	-2.0
	comp=N,7.9nm,0.3s,baz=68,slow=16,SNR=40						
GERES				Lg		16 13 04.3	
	comp=N,3.9nm,0.3s,baz=68,slow=28,SNR=4.8						
GERES	**GERESS Array B**	3.25	253	Pg	Pg	16 12 21.5	-2.0
ARSA	**Arzberg**	3.27	217	⇑*i*PN	Pn	16 12 11.9	-0.3
ARSA				*i* SG	Sg	16 13 03.7	-3.8
	comp=N,6.2nm,0.5s						
MOA	**Molln**	3.42	235	⇓*i*PN	Pn	16 12 14.7	+0.5
MOA				*i* SG	Sg	16 13 09.6	-2.8
	comp=N,12nm,0.6s						
LVV	**L'vov**	3.64	89	*e*P	Pg	16 12 31.8	+0.5
WET	**Wettzell**	3.68	260	*e*Pn	Pn	16 12 17.7	-0.3
WET	**Wettzell**	3.68	260	*e*Pn	Pn	16 12 17.7	-0.3
CLL	**Collm**	3.72	294	*e*Pn	Pn	16 12 19.0	+0.4
CLL				*e*Pg	Pg	16 12 31.0	-1.9
CLL				*i* Sg	Sg	16 13 25.8	+3.3
CLL	**Collm**	3.72	294	*e*PN	Pn	16 12 19.0	+0.4
CLL				*e*PG	Pg	16 12 31.0	-1.9
CLL				*e*		16 13 19.0	
CLL				*i* SG	Sg	16 13 25.8	+3.3
CLL	**Collm**	3.72	294	Pn	Pn	16 12 19.3	+0.7
CLL				Sg	Sg	16 13 19.6	-2.9
TANN	**Tannenbergstha**	3.86	280	*e*Pn	Pn	16 12 21.0	+0.5
TANN				*e*Sg	Sg	16 13 22.7	-4.3
MOX	**Moxa**	4.42	282	*e*P	Pg	16 12 44.7	-2.1
DAVOX	**Davos**	6.48	244	Pn	Pn	16 12 58.9	+1.2
	comp=N,0.5nm,0.3s,baz=63,slow=16,SNR=3.9						
AKASG	**Malin Array Be**	6.98	79	Pn	Pn	16 13 01.1	-3.5
	comp=N,0.5nm,0.3s,baz=260,slow=14,SNR=4.5						
AKASG				Lg		16 15 02.6	
	comp=N,0.3nm,0.3s,baz=270,slow=29,SNR=4.6						
HFS	**Hagfors**	10.60	347	Pn	P	16 13 51.7	-3.1
	comp=N,0.0nm,0.3s,baz=153,slow=13,SNR=3.1						
FINES	**FINESS Array B**	12.34	17	Pn	P	16 14 14.1	-4.4
	comp=N,0.2nm,0.3s,baz=203,slow=12,SNR=8.2						

MAN 18 16:23:36.4, 15.25N×120.22E, h3^{km}, mb3.5, ML2.2, MS1.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	0.60	330	*e*P	Pg	16 23 48.1	-0.3
SCZP				*e*S	Sg	16 24 01.0	+4.5
PCPH	**Palayan**	0.90	70	⇑*e*P	Pb	16 23 53.6	-0.6
PCPH				*e*S	Sg	16 24 05.3	-1.0
BALP	**Baler**	1.39	69	*e*P	Pb	16 24 02.1	-0.6
LUBP	**Lubang**	1.51	179	*e*P	Pn	16 24 03.8	-0.6

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*IDC **18** 16:23:55.5±1.5, 4.32N×94.63E, mb3.8/7, mb1 4.0/8, mb1mx3.8/19, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=70.1km s-min=20.7km az=53.0*

*NEIC **18** 16:23:59.6±0.7, 4.20N×94.55E, h30^{km}, mb4.1/3, Error ellipse: s-maj=21.9km s-min=10.7km az=68.0*

ISC 18 16:23:57.8±0.9**, 4.2N**±0.1×**94.6E**±0.2**, h30^{km}, n12, σ0^{s}81**/12**, mb3.9**/10**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	14.79	17	*e*Pn	P	16 27 25.9	-1.0
	1.1nm,0.5s						
CMAR	**Chiang Mai Arr**	14.79	17	Pn	P	16 27 28.9	+1.9
	0.1nm,0.3s,baz=211,slow=11,SNR=24						
LSA	**Lhasa**	25.55	353	*e*P	P	16 29 26.6	+0.7
	2.9nm,0.6s,mb4.0						
SONM	**Songino Array**	44.63	11	P	P	16 32 08.5	-1.0
	0.3nm,0.5s,mb3.4,baz=198,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	45.87	123	P	P	16 32 20.0	+0.3
	2.6nm,0.7s,mb4.2,baz=300,slow=9.2,SNR=22						
WRAB	**Tennant Creek**	45.88	123	*e*P	P	16 32 19.5	-0.2
	2.9nm,0.6s,mb4.4						
ASAR	**Alice Springs**	47.31	128	P	P	16 32 31.1	0.0
	0.8nm,0.9s,mb3.7,baz=296,slow=7.4,SNR=7.1						
ZAL	**Zalesovo**	50.20	353	P	P	16 32 52.7	-0.2
	0.8nm,0.8s,mb3.8,baz=232,slow=6.4,SNR=5.2						
BVAR	**Borovoye Array**	52.57	342	P	P	16 33 10.4	-0.5
	0.6nm,0.8s,mb3.6,baz=153,slow=9.9,SNR=4.5						
CHKZ	**Chkalovo**	53.06	342	*e*P	P	16 33 13.9	-0.6

	1.1nm,0.6s,mb4.0						
FINES	FINESS Array B	76.12	333	P	P	16 35 44.1	-0.3
	2.2nm,1.0s,mb4.0,baz=124,slow=6.9,SNR=3.5						
GERES	GERESS Array B	80.82	319	P	P	16 36 11.4	+1.1
	0.5nm,0.6s,mb3.7,baz=72,slow=4.2,SNR=5.8						

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*NEIC **18** 16:29:48.5, 37.32N×20.59E, h22^{km}, MD3.5(ATH), After ATH.*

*CSEM **18** 16:29:48.5, 37.32N×20.59E, h22^{km}, MD3.5/3, After ATH*

ATH 18 16:29:50.9, 37.44N×20.79E, h24^{km}±4^{km}, MD3.5/3, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.75	348	*e*PN	Pn	16 30 05.5	-0.5
RLS	Riolos of Patr	0.82	41	*e*PN	Pn	16 30 07.0	+0.1
ITM	Ithomi	0.94	106	*e*PN	Pn	16 30 09.1	+0.4
EVR	Evrytania	1.68	28	*e*PN	Pn	16 30 21.5	+2.3
EVR	Evrytania	1.68	28	*e*Pn	Pn	16 30 23.0	+3.8
LKR	Lokris	2.12	55	*e*PN	Pn	16 30 26.7	+1.1

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*JMA **18** 16:43:34.2±0.3, 24.85N×121.98E, h103^{km}, M2.6*

TAP 18 16:43:33.7, 24.88N×121.90E, h105^{km}±1^{km}, ML3.7, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.09	112	P	P	16 43 55.1	-0.7
YOJ				*e*S	S	16 44 11.1	-1.3
IRIF	Iriomote-Funau	1.75	108	P	P	16 44 02.9	-0.8
IRIF				*e*S	S	16 44 24.6	-1.6
HATJ	Hateruma jima	1.92	115	*e*S	S	16 44 29.1	-0.8
JKRS	Kuro-shima	2.02	108	P	P	16 44 06.9	-0.3
JKRS				*e*S	S	16 44 31.0	-1.2
JIJ	Ishigaki jima	2.10	104	P	P	16 44 07.4	-0.9
JIJ				*e*S	S	16 44 32.0	-2.2
JTJ	Tarama	2.56	95	P	P	16 44 14.4	-0.1
JTJ				*e*S	S	16 44 43.7	-1.4

IDC 18 16:47:12.8±3.4, 10.65N×91.73E, mb3.9/4, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, ML3.1/1, Error ellipse: s-maj=98.1km s-min=26.7km az=81.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.44	41	Pn	P	16 49 43.1	-3.8
	0.1nm,0.3s,baz=238,slow=14,SNR=4.5						
SONM	Songino Array	39.07	16	P	P	16 54 41.8	-1.4
	0.3nm,1.0s,baz=207,slow=9.7,SNR=2.4						
WRA	Warramunga Arr	51.80	126	P	P	16 56 22.1	-2.9
	1.4nm,0.3s,baz=299,slow=10,SNR=9.0						
ASAR	Alice Springs	53.51	130	P	P	16 56 35.1	-2.5
	0.7nm,0.4s,baz=307,slow=8.0,SNR=23						
STKA	Stephens Creek	63.73	134	P	P	16 57 47.8	-1.2
	2.7nm,1.0s,baz=296,slow=8.9,SNR=3.9						

IDC 18 17:10:28.7±2.9, 13.35N×92.92E, mb3.2/3, mb1 3.5/4, mb1mx3.4/18, mbtmp3.3/4, ML3.7/1, Error ellipse: s-maj=76.9km s-min=27.7km az=80.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.70	48	Pn	Pn	17 12 22.1	-2.8
	0.3nm,0.3s,baz=237,slow=15,SNR=19						
SONM	Songino Array	36.17	15	P	P	17 17 32.7	-2.1
	0.2nm,0.6s,baz=180,slow=7.2,SNR=3.8						
WRA	Warramunga Arr	52.49	128	P	P	17 19 43.7	-2.4
	0.2nm,0.8s,baz=299,slow=12,SNR=4.7						
ASAR	Alice Springs	54.40	132	P	P	17 19 58.3	-1.8
	0.2nm,0.5s,baz=310,slow=7.1,SNR=8.2						

IGQ 18 17:28:37.5, 0.55S×81.29W, h12^{km}±13^{km}, mb4.1, 4C-5D, Error ellipse: s-maj=16.7km s-min=6.0km az=164.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	Cerro de Hojas	0.90	124	⇑P	Pb	17 28 53.1	-1.4
JUA2	San Juan 2	2.71	83	⇓P	Pn	17 29 23.0	+1.3
PINO	Pino	2.71	82	⇓P	Pn	17 29 22.7	+0.9
TERV	Terraza Guagua	2.71	82	P	Pn	17 29 22.7	+1.0
TERV				S	Sn	17 29 55.7	+0.9
YANA	Yana	2.75	81	⇑P	Pn	17 29 22.9	+0.5
IGUA	Igualata	2.81	109	P	Pn	17 29 24.4	+1.2
IGUA				S	Sn	17 29 57.8	+0.5
NAS1	Nasa	2.81	92	⇑P	Pn	17 29 25.3	+2.0
NAS1				S	Sn	17 29 59.2	+1.8
VC1	Cotopaxi 1	2.89	92	P	Pn	17 29 26.7	+2.4
TAMB	Tambo	2.92	93	⇓P	Pn	17 29 27.0	+2.2
PISA	Pisayambo	2.95	100	P	Pn	17 29 26.8	+1.7
JUIV	Juive	2.96	107	P	Pn	17 29 28.4	+3.2
ARRY	Arrayan	2.99	109	⇓P	Pn	17 29 27.2	+1.5
ARRY				S	Sn	17 30 02.5	+0.7
ULBA	Ulba	3.02	107	P	Pn	17 29 27.9	+1.8
ULBA				S	Sn	17 30 05.0	+2.5
COTA	Cotacachi	3.08	73	P	Pn	17 29 28.5	+1.5
ANTI	Antisana	3.13	88	P	Pn	17 29 30.9	+3.1
CAYR	Refugio Cayamb	3.33	80	⇑P	Pn	17 29 34.1	+3.5
CAYR				S	Sn	17 30 12.6	+2.2
CAYA	Cayambe	3.36	79	P	Pn	17 29 33.7	+2.8
ECEN	Cerro Negro	3.59	68	⇓P	Pn	17 29 38.7	+4.5

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*IDC **18** 17:28:48.0±0.6, 18.83N×67.32W, mb3.9/11, mb1 4.2/12, mb1mx3.9/22, mbtmp4.0/12, ML4.3/1, MS3.2/1, Ms1 3.2/1, ms1mx1.7/28, Error ellipse: s-maj=23.7km s-min=11.4km az=40.0*

*NEIC **18** 17:28:53.6±0.5, 18.78N×67.12W, h40^{km}±7^{km}, mb4.2/5, MD4.3(RSPR), Error ellipse: s-maj=7.9km s-min=6.7km az=217.0*

NEIC Felt in western Puerto Rico.

*RSPR **18** 17:28:53.8, 18.82N×67.22W, h22^{km}±13^{km}, MD4.3/16, MD4.3/16*

ISC 18 17:28:51.8±0.3, 18.85N±0.03×67.20W±0.04, h33^{km}, n54, σ1^{s}04/59, mb4.0/16, 9C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	0.39	167	⇑*e*P	P	17 29 00.6	-0.2
AGPR				*e*S	S	17 29 07.1	+0.1
IDE	Isla Desecheo	0.53	210	⇓*i*P	P	17 29 04.8	+2.1
MPR	Mayaguez	0.64	174	*e*S	S	17 29 13.2	0.0
MPR	Mayaguez	0.64	174	⇑*i*P	P	17 29 04.2	-0.1
MPR	Mayaguez	0.64	174	⇑*i*P	P	17 29 04.2	-0.1
MPR				*e*S	S	17 29 13.2	0.0
LRS	Lares	0.65	148	⇑*i*P	P	17 29 04.5	+0.1
AOPR	Arecibo Observ	0.66	139	*e*S	S	17 29 13.2	-0.7
AOPR	Arecibo Observ	0.66	139	⇑*i*P	P	17 29 04.7	0.0
AOPR	Arecibo Observ	0.66	139	⇑*i*P	P	17 29 04.7	0.0
AOPR				*e*S	S	17 29 13.2	-0.7
LSP	Las Mesas	0.68	170	⇑*i*P	P	17 29 05.0	+0.1
MGP	Maguayo	0.84	173	⇓*i*P	P	17 29 07.4	+0.2
PORP	Portuguez	0.96	146	⇑*i*P	P	17 29 09.2	+0.3
CELP	Cerrillos	0.97	142	⇑*i*P	P	17 29 09.6	+0.5
OBIP	Obispado Ponce	0.98	145	⇑*e*P	P	17 29 09.7	+0.4
OBIP				*e*S	S	17 29 21.5	-0.7
CSB	Colonia Sabana	1.14	119	⇓*i*P	P	17 29 12.0	+0.6
SJG	San Juan	1.24	126	⇑*i*P	P	17 29 13.5	+0.7
SJG				*e*S	S	17 29 28.2	-0.5
SJG	San Juan	1.24	126	Pg	P	17 29 13.8	+1.0
	250nm,0.3s,baz=310,slow=9.4,SNR=133						
SJG				Lg		17 29 30.8	
	605nm,0.3s,baz=38,slow=12,SNR=12						
CBYP	Canovanas	1.40	114	⇑*e*P	P	17 29 15.3	0.0
CBYP				*e*S	S	17 29 33.7	+0.9
CPD	Cerro la Pandu	1.46	123	⇑*e*P	P	17 29 16.5	+0.4
CPD				*e*S	S	17 29 33.9	-0.5
HUMP	Col San Antoni	1.46	118	⇑*e*P	P	17 29 16.5	+0.3
HUMP				*e*S	S	17 29 34.7	+0.3
MTP	Monte Pirata	1.73	115	⇑*e*P	P	17 29 20.1	+0.1
MTP				*e*S	S	17 29 41.4	+0.2
CDVI	St. Croix	2.56	115	⇑*e*P	P	17 29 33.3	+1.5
CDVI	St. Croix	2.56	115	*e*S	S	17 30 00.9	-1.2
SDV	Santo Domingo	10.45	199	Pn	P	17 31 22.0	-0.5
	2.4nm,0.3s,baz=26,slow=5.8,SNR=8.7						
SDV				Sn	S	17 33 15.4	-4.1
	1.0nm,0.3s,baz=329,slow=16,SNR=3.1						
JTS	JuntasAbangare	19.15	246	LR	LR	17 40 02.0	
	comp=Z,72nm,20.3s,baz=25,slow=35						
JSC	Jenkinsville	19.82	324	*e*P	P	17 33 24.5	+1.9
OTAV	Otavalo	21.54	212	*e*P	P	17 33 42.5	+2.2
BLA	Blacksburg	21.66	330	*e*P	P	17 33 43.7	+2.3
	13nm,0.5s,mb4.6						
ELN	Prospectdale	21.82	330	P	P	17 33 44.5	+1.5
FWV	Forest Hill	22.14	330	P	P	17 33 47.9	+1.8
LRAL	Lakeview Retre	22.67	312	*e*P	P	17 33 52.8	+1.3
SAML	Samuel	27.90	171	*e*P	P	17 34 39.3	-1.9
	3.1nm,0.5s,mb4.2						
WMOK	Wichita Mounta	32.16	306	*e*P	P	17 35 17.2	-1.5
	2.8nm,0.6s,mb4.3						
TXAR	Lajitas Array	34.76	294	P	P	17 35 40.3	-1.0
	0.8nm,0.6s,mb3.9,baz=110,slow=9.4,SNR=9.6						
SCHQ	Schefferville	35.92	0	P	P	17 35 50.5	-0.3
	1.7nm,0.6s,mb4.2,baz=193,slow=4.7,SNR=6.8						
SDCO	Great Sand Dun	38.28	308	*e*P	P	17 36 10.6	-0.3
	4.3nm,1.1s,mb4.1						
ULM	Lac du Bonnet	38.77	331	P	P	17 36 13.8	-1.0
	0.8nm,0.4s,mb3.8,baz=106,slow=6.0,SNR=2.9						
ULM				PcP	PcP	17 38 24.5	-2.0
	1.1nm,0.6s,baz=83,slow=7.7,SNR=2.9						
ULM	Lac du Bonnet	38.77	331	P	P	17 36 13.8	-1.0
ULM				PcP	PcP	17 38 24.5	-2.0
PDAR	Pinedale Array	42.89	313	P	P	17 36 49.3	+0.4
	0.2nm,0.6s,mb3.1,baz=84,slow=8.2,SNR=3.2						
PDAR				PcP	PcP	17 38 39.2	-0.7
	1.3nm,0.6s,baz=114,slow=5.5,SNR=13						
FCC	Fort Churchill	44.42	340	*e*P	P	17 37 00.1	-1.0
FFC	Flin Flon	44.53	332	*e*P	P	17 37 00.6	-1.4
	0.9nm,0.6s,mb3.8						
NVAR	Mina Array Bea	48.25	305	P	P	17 37 31.9	+0.3
	1.0nm,0.5s,mb4.2,baz=91,slow=9.1,SNR=5.6						
NVAR	Mina Array Bea	48.25	305	P	P	17 37 31.9	+0.3
YKA	Yellowknife Ar	54.41	335	P	P	17 38 15.9	-1.8
	1.2nm,0.6s,mb4.0,baz=112,slow=7.6,SNR=20						
YKA	Yellowknife Ar	54.41	335	P	P	17 38 15.9	-1.8
PLCA	Paso Flores	59.35	183	P	P	17 38 51.1	-2.0
	1.6nm,1.0s,mb4.0,baz=348,slow=9.3,SNR=3.5						
INK	Inuvik	63.93	338	P	P	17 39 21.6	-1.8
	1.6nm,0.7s,mb4.1,baz=98,slow=7.3,SNR=8.2						
ILAR	Eielson Array	68.73	333	P	P	17 39 52.5	-1.5
	0.8nm,0.6s,mb3.8,baz=88,slow=4.1,SNR=7.6						
ARCES	ARCESS Array B	73.45	22	P	P	17 40 22.0	-0.3
	1.8nm,0.7s,mb4.1,baz=297,slow=5.4,SNR=4.0						
FINES	FINESS Array B	75.19	30	P	P	17 40 32.8	+0.4
	0.8nm,0.6s,mb3.8,baz=225,slow=8.1,SNR=4.4						
CTA	Charters Tower	148.46	262	PKPbc	PKPdf	17 48 36.5	+4.3
	3.8nm,0.8s,baz=100,slow=8.7,SNR=6.5						
STKA	Stephens Creek	151.02	238	PKPbc	PKPdf	17 48 43.4	+7.5
	3.0nm,0.8s,baz=11,slow=5.2,SNR=3.9						
WRA	Warramunga Arr	159.65	263	PKP	PKPdf	17 48 49.0	+1.3
	1.0nm,0.7s,baz=69,slow=1.2,SNR=13						
WRA				PKPab	PKPab	17 49 26.9	-1.7
	0.4nm,0.8s,baz=85,slow=4.1,SNR=8.1						
ASAR	Alice Springs	159.76	253	PKP	PKPdf	17 48 48.9	+1.2
	0.4nm,0.7s,baz=118,slow=1.5,SNR=6.0						
ASAR				PKPab	PKPab	17 49 27.2	-1.8
	1.1nm,0.6s,baz=100,slow=4.4,SNR=13						

IGQ 18 17:36:22.8, 1.56S×81.37W, h14^{km}±6^{km}, mb4.1, 2C, Error ellipse: s-maj=7.6km s-min=4.0km az=3.9, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	Salinas	0.73	148	P	Pb	17 36 36.3	-0.4
SALI				S	Sb	17 36 46.5	+0.2
HOJA	Cerro de Hojas	0.97	58	⇑P	Pb	17 36 40.2	-0.7
HOJA				S	Sb	17 36 53.6	+0.3
IGUA	Igualata	2.73	89	⇑P	Pn	17 37 07.9	+0.8
ARRY	Arrayan	2.92	89	P	Pn	17 37 10.2	+0.5
ARRY				S	Sn	17 37 45.5	+0.6
ULBA	Ulba	2.96	88	P	Pn	17 37 12.6	+2.2
PISA	Pisayambo	3.03	81	P	Pn	17 37 13.0	+1.7
NAS1	Nasa	3.04	72	P	Pn	17 37 13.3	+1.8
PINO	Pino	3.10	63	P	Pn	17 37 12.9	+0.7
VC1	Cotopaxi 1	3.11	73	P	Pn	17 37 15.7	+3.3
TAMB	Tambo	3.12	74	P	Pn	17 37 15.0	+2.3
YANA	Yana	3.15	63	P	Pn	17 37 13.3	+0.3
CAYR	Refugio Cayamb	3.71	65	P	Pn	17 37 24.5	+3.5
CAYA	Cayambe	3.75	64	P	Pn	17 37 23.4	+1.9
ECEN	Cerro Negro	4.14	55	P	Pn	17 37 29.3	+2.1

IDC 18 17:51:47.4±1.6, 51.51S×14.44E, mb3.8/2, mb1 4.0/2, mb1mx3.5/15, mbtmp3.8/2, MS3.6/2, Ms1 3.6/2, ms1mx2.7/19, Error ellipse: s-maj=125.6km s-min=45.7km az=16.0, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSUM	Tsumeb	32.33	6	LR	LR	18 09 29.8	
	comp=Z,71nm,21.8s,baz=317,slow=33						
VNDA	Vanda	49.66	171	LR	LR	18 19 33.5	
	comp=Z,107nm,21.6s,baz=159,slow=34						
LPAZ	La Paz	72.83	265	P	P	18 03 18.7	-1.0
	0.7nm,0.5s,baz=162,slow=6.4,SNR=3.0						
ASAR	Alice Springs	88.30	127	P	P	18 04 40.9	-1.0
	0.5nm,0.8s,baz=209,slow=4.9,SNR=5.4						
YKA	Yellowknife Ar	150.95	312	PKPbc	PKPdf	18 11 40.3	+3.8
	1.8nm,1.1s,baz=89,slow=2.4,SNR=10						

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*BJI **18** 18:07:00.5, 4.70N×94.40E, h30^{km}, mb4.5*

*NEIC **18** 18:07:02.6±0.6, 4.67N×94.40E, h30^{km}, mb4.3/7, Error ellipse: s-maj=18.6km s-min=10.0km az=59.0*

*IDC **18** 18:07:06.3±1.1, 4.97N×94.78E, h51^{km}±6^{km}, mb4.0/9, mb1 4.2/10, mb1mx4.0/18, mbtmp4.2/10, MS2.8/1, Ms1 3.0/1, ms1mx2.9/17, Error ellipse: s-maj=43.9km s-min=16.4km az=49.0*

ISC 18 18:07:04.3±0.6, 4.84N±0.09×94.7E±0.1, h51^{km}, h51^{km}±.6^{km}:pP-P, n40, σ1^{s}07/39, mb4.4/25, 2C-1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	14.15	17	Pn	P	18 10 25.3	+1.6
	6.1nm,0.6s						
CMAR	Chiang Mai Arr	14.15	17	P	P	18 10 25.1	+1.4
	0.5nm,0.3s,baz=210,slow=11,SNR=37						
CMAR				LR	LR	18 15 35.8	
	comp=Z,39nm,20.7s,baz=28,slow=36						
JIRN	Jiri	24.11	341	*e*P	P	18 12 17.0	+0.6
	18nm,0.6s,mb4.7						
PKI	Pulchoki	24.29	340	*e*P	P	18 12 18.7	+0.5
	9.2nm,0.6s,mb4.4						
DMN	Daman	24.43	339	*e*P	P	18 12 19.3	-0.3
	9.2nm,0.8s,mb4.3						
KKN	Kakani	24.54	339	*e*P	P	18 12 19.8	-0.8
	5.1nm,0.4s,mb4.4						
LSA	Lhasa	24.96	353	P	P	18 12 25.4	+0.8
GKN	Gorkha	24.96	338	*e*P	P	18 12 24.3	-0.4
	7.3nm,0.3s,mb4.7						
KOLN	Koldanda	25.15	336	*e*P	P	18 12 26.5	+0.1
	17nm,0.6s,mb4.8						
XAN	Xi'an	31.90	23	P	P	18 13 24.9	-2.3
XAN				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.5						
GTA	Gaotai	34.72	7	P	P	18 13 48.8	-2.7
GTA				XP	sP	18 14 01.8	-10
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
UCH	Uchtor	41.36	337	P	P	18 14 48.0	+1.1
	SNR=5.2						
KBK	Karagaybulak	41.56	338	P	P	18 14 49.6	+1.0
	SNR=9.0						
AML	Almayashu	41.60	336	P	P	18 14 50.0	+1.1
	SNR=9.5						
AAK	Ala-Archa	41.71	337	*e*P	P	18 14 49.9	0.0
	comp=Z,2.1nm,0.8s,mb3.8						
EKS2	Erkin-Say	42.01	337	P	P	18 14 53.3	+0.9
	SNR=5.2						
USP	Ospenovka	42.25	338	P	P	18 14 54.7	+0.4
	SNR=7.6						
SONM	Songino Array	43.99	11	P	P	18 15 06.9	-1.5
	comp=Z,3.7nm,1.1s,mb4.0,baz=190,slow=8.1,SNR=23						
SONM				PcP	PcP	18 16 53.6	-0.3
	comp=Z,0.9nm,0.6s,baz=187,slow=3.7,SNR=9.1						
WRA	Warramunga Arr	46.06	124	P	P	18 15 25.6	+0.3
	comp=Z,3.7nm,0.7s,mb4.4,baz=304,slow=9.2,SNR=50						
WRAB	Tennant Creek	46.07	124	*e*P	P	18 15 25.8	+0.5
	comp=Z,5.4nm,0.6s,mb4.7						
ASAR	Alice Springs	47.55	128	P	P	18 15 37.2	+0.3
	comp=Z,1.8nm,0.5s,mb4.4,baz=300,slow=7.9,SNR=64						
KURK	Kurchatov	47.68	346	*e*P	P	18 15 36.8	-0.8
	comp=Z,2.3nm,0.6s,mb4.4						
ZAL	Zalesovo	49.61	352	P	P	18 15 52.0	-0.5
	comp=Z,3.7nm,0.4s,mb4.8,baz=310,slow=4.6,SNR=13						
ZAL	Zalesovo	49.61	352	P	P	18 15 52.0	-0.5
BVAR	Borovoye Array	52.03	342	P	P	18 16 09.8	-1.1
	comp=Z,3.0nm,0.6s,mb4.4,baz=142,slow=9.1,SNR=29						
BVAR				pP	pP	18 16 23.8	-1.0
	comp=Z,2.2nm,0.7s,baz=149,slow=8.6,SNR=6.9						
CHKZ	Chkalovo	52.52	342	*e*P	P	18 16 13.6	-0.9
	comp=Z,9.4nm,0.6s,mb4.9						
BRTR	Keskin Array B	64.86	312	P	P	18 17 39.9	-0.7
	comp=Z,1.0nm,0.5s,mb4.1,baz=133,slow=7.0,SNR=5.8						
AKASG	Malin Array Be	70.89	322	P	P	18 18 16.4	-1.5
	comp=Z,1.4nm,0.5s,mb4.2,baz=85,slow=5.5,SNR=9.0						
VRI	Vrincioaia	71.30	317	⇑P	P	18 18 21.4	+1.0
MLR	Muntele Rosu	71.75	316	⇑P	P	18 18 24.1	+0.9
BURAR	Bucovina Array	72.69	318	⇓P	P	18 18 29.6	+0.9
JOF	Joensuu	73.83	335	*e*p	P	18 18 33.1	-1.9
	comp=Z,0.5nm,0.3s,mb3.9						
FINES	FINESS Array B	75.66	332	P	P	18 18 44.9	-0.7
	comp=Z,20nm,1.4s,mb4.9,baz=108,slow=6.1,SNR=14						
FINES				pP	pP	18 18 59.8	-0.5
	comp=Z,0.9nm,0.5s,baz=95,slow=4.2,SNR=11						
FINES	FINESS Array B	75.66	332	P	P	18 18 44.9	-0.7
FINES				pP	pP	18 18 59.8	-0.5
KAF	Kangasniemi	75.75	333	*e*p	P	18 18 42.7	-3.4
	comp=Z,0.9nm,0.5s,mb4.0						
KAF	Kangasniemi	75.75	333	*e*p	pP	18 19 00.1	-0.7
	comp=Z,1.4nm,0.5s						
KEV	Kevo	77.88	341	*e*p	P	18 18 53.2	-4.7
	comp=Z,0.2nm,0.3s,mb3.5						
ARCES	ARCESS Array B	78.30	340	P	P	18 19 00.5	+0.3
	comp=Z,2.2nm,0.6s,mb4.3,baz=45,slow=5.1,SNR=12						
ARCES				pP	pP	18 19 15.0	0.0
	comp=Z,1.6nm,0.8s,baz=106,slow=6.6,SNR=4.5						
ARCES	ARCESS Array B	78.30	340	P	P	18 19 00.5	+0.3
ARCES				pP	pP	18 19 15.0	0.0
GERES	GERESS Array B	80.47	319	P	P	18 19 13.8	+1.4
	comp=Z,1.8nm,0.6s,mb4.2,baz=104,slow=5.5,SNR=14						

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*IDC **18** 18:44:41.5±0.8, 4.65N×77.32W, h35^{km}±6^{km}, mb4.0/16, mb1 4.3/18, mb1mx4.1/24, mbtmp4.3/18, ML4.1/2, MS3.7/6, Ms1 3.7/6, ms1mx3.3/28, Error ellipse: s-maj=22.1km s-min=12.6km az=59.0*

*NEIC **18** 18:44:45.5±1.2, 4.64N×77.35W, h74^{km}±10^{km}, mb4.4/13, Error ellipse: s-maj=9.6km s-min=6.8km az=57.0*

ISC 18 18:44:37.3±3.4, 4.57N±0.06×77.36W±0.06, h20^{km}±24^{km}, n53, σ0^{s}68/48, mb4.3/28, MS3.8/3, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	3.04	85	Pn	Pn	18 45 31.2	+5.9
	135nm,0.3s,baz=90,slow=3.2,SNR=102						
ROSC				LR	LR	18 46 31.1	
	comp=Z,327nm,20.9s,baz=180,slow=37						
OTAV	Otavalo	4.44	194	*e*Pn	Pn	18 45 45.1	-0.2
SDV	Santo Domingo	7.94	57	Pn	Pn	18 46 35.6	+1.1
	16nm,0.3s,baz=265,slow=11,SNR=51						
SDV				Sn	Sn	18 48 05.1	+0.5
	4.9nm,0.3s,baz=73,slow=23,SNR=4.1						
SDV				LR	LR	18 50 11.0	
	comp=Z,857nm,19.1s,baz=246,slow=42						
SDV	Santo Domingo	7.94	57	*e*Pn	Pn	18 46 35.0	+0.5
	67nm,0.6s						
SDV				*e*Sn	Sn	18 48 04.2	-0.5
JTS	JuntasAbangare	9.43	307	LR	LR	18 50 24.0	
	comp=Z,524nm,18.4s,baz=64,slow=36						
SAML	Samuel	19.50	134	*e*P	P	18 49 04.9	-1.4
	13nm,0.6s						
ARE	Arequipa	21.69	165	*e*P	P	18 49 33.0	+3.9
LPAZ	La Paz	22.65	156	P	P	18 49 38.6	-0.1
	3.5nm,0.7s,mb3.9,baz=337,slow=10,SNR=6.0						
LPAZ				ScP		18 57 06.8	
	2.1nm,0.9s,baz=265,slow=10,SNR=4.2						
LPAZ	La Paz	22.65	156	*e*P	P	18 49 38.2	-0.6
	5.8nm,0.7s,mb4.1						
LVC	Limon Verde	28.25	163	P	P	18 50 33.7	+2.3
	8.7nm,0.9s,mb4.4,baz=14,slow=6.2,SNR=8.8						
LVC				pP	pP	18 50 42.6	+5.1
	22nm,0.8s,baz=338,slow=5.6,SNR=19						
LVC				LR	LR	19 02 48.8	
	comp=Z,198nm,21.4s,MS3.7,baz=201,slow=38						
LVC	Limon Verde	28.25	163	*e*P	P	18 50 32.3	+0.9
	21nm,0.8s,mb4.8						
LVC				*e*pP	pP	18 50 42.5	+5.1
TXAR	Lajitas Array	35.02	318	P	P	18 51 31.8	+1.0
	0.1nm,0.2s,mb3.3,baz=113,slow=6.9,SNR=3.2						
TXAR				PcP	PcP	18 54 03.6	+0.7
	0.2nm,0.4s,baz=146,slow=4.5,SNR=6.0						
BDFB	Brasilia	35.32	125	P	P	18 51 32.9	-0.6
	12nm,0.7s,mb4.9,baz=292,slow=9.2,SNR=14						
BDFB				LR	LR	19 06 48.3	
	comp=Z,357nm,18.4s,MS4.2,baz=300,slow=38						
SADO	Sadowa	40.06	358	LR	LR	19 09 06.8	
	comp=Z,82nm,19.5s,MS3.6,baz=220,slow=37						
PLCA	Paso Flores	45.52	173	P	P	18 52 58.3	+1.0
	1.4nm,0.8s,mb4.0,baz=3.4,slow=9.7,SNR=3.8						
PDAR	Pinedale Array	47.56	328	P	P	18 53 14.2	+0.6
	0.7nm,0.9s,mb3.7,baz=126,slow=11,SNR=5.1						
PDAR				pP	pP	18 53 23.5	+3.8
	0.8nm,0.7s,baz=112,slow=12,SNR=5.9						
HWUT	Hardware Ranch	47.88	325	*e*P	P	18 53 15.8	-0.2
	2.4nm,0.9s,mb4.2						
ULM	Lac du Bonnet	48.12	344	P	P	18 53 16.3	-1.4
	3.1nm,0.8s,mb4.4,baz=132,slow=6.2,SNR=6.9						
TPAW	Teton Pass	48.80	328	P	P	18 53 23.3	+0.2
MOOW	Moose Ponds	48.87	328	*e*P	P	18 53 23.7	+0.1
IMW	Indian Meadow	49.07	328	*e*P	P	18 53 24.6	-0.5
NVAR	Mina Array Bea	50.17	318	P	P	18 53 33.4	-0.3
	1.8nm,0.3s,mb4.5,baz=120,slow=12,SNR=6.4						
NVAR				PcP	PcP	18 54 53.5	+0.4
	1.3nm,0.7s,baz=135,slow=4.2,SNR=3.6						
SCHQ	Schefferville	50.83	8	P	P	18 53 39.0	+0.5
	5.6nm,0.8s,mb4.5,baz=185,slow=9.6,SNR=12						
YKA	Yellowknife Ar	63.98	342	P	P	18 55 09.8	-1.6
	1.1nm,0.6s,mb4.1,baz=135,slow=6.1,SNR=32						
DLBC	Dease Lake	67.33	333	P	P	18 55 33.1	+0.2
	1.4nm,0.6s,mb4.2,baz=61,slow=24,SNR=3.1						
EVO	Evora	71.04	51	*e*P	P	18 55 55.2	-0.9
	14nm,0.8s,mb4.6						
EVO				*e*R			
	88nm,18.8s						
DBIC	Dimbokro	72.13	84	P	P	18 56 02.3	-0.8
	14nm,0.8s,mb4.9,baz=265,slow=6.6,SNR=20						
INK	Inuvik	73.74	341	P	P	18 56 11.4	-0.1
	1.5nm,0.6s,mb4.1,baz=112,slow=6.7,SNR=11						
ESDC	Sonseca Array	74.33	50	P	P	18 56 15.6	+0.1
	2.8nm,0.5s,mb4.5,baz=258,slow=6.1,SNR=20						
ROSF	Rostrenen	76.03	41	*e*P	P	18 56 25.2	+0.1
SJPF	Ste Jean	76.77	47	*e*P	P	18 56 29.9	+0.6
	20nm,0.9s,mb4.8						
ILAR	Eielson Array	77.23	336	P	P	18 56 31.1	-0.3
	0.9nm,0.6s,mb3.9,baz=115,slow=4.1,SNR=18						
GRR	Gorron	77.64	42	*e*P	P	18 56 33.8	-0.2
	12nm,0.8s,mb4.6						
MFF	Saint Martin d	77.91	43	*e*P	P	18 56 35.6	+0.1
	3.7nm,0.4s,mb4.3						
FLN	La Foliniere	77.93	41	*e*P	P	18 56 35.7	+0.1
LDF	La Druitiere	78.15	41	*e*P	P	18 56 36.8	0.0
	9.5nm,0.8s,mb4.5						
RJF	Les Rejaudoux	78.94	45	*e*P	P	18 56 41.1	-0.1
TCF	Toulx Ste Croi	79.50	44	*e*P	P	18 56 44.0	-0.2
BGF	Bois d'Agland	79.96	44	*e*P	P	18 56 46.6	-0.1
AVF	Avril sur Loir	80.33	43	*e*P	P	18 56 48.2	-0.4
	8.7nm,1.0s,mb4.4						
SMF	Signal de Mont	80.65	44	*e*P	P	18 56 50.0	-0.3
	12nm,0.9s,mb4.5						
GIVF	Givet	81.50	40	*e*P	P	18 56 54.9	+0.2
MEZF	Maizieres J'vi	81.57	42	*e*P	P	18 56 55.1	0.0
	17nm,0.8s,mb4.7						
ORIF	Oris-en-Rattie	82.01	45	*e*P	P	18 56 58.5	+1.1
	6.1nm,0.6s,mb4.4						
HINF	Hinteralfeld	82.75	43	*e*P	P	18 57 00.8	-0.4
	5.7nm,0.7s,mb4.4						
CDF	Champ du Feu	83.04	42	*e*P	P	18 57 02.7	-0.1
	3.0nm,0.5s,mb4.2						
CLL	Collm	86.69	39	P	P	18 57 22.0	+1.0
GERES	GERESS Array B	87.29	41	P	P	18 57 24.9	+0.9
	2.0nm,0.8s,mb4.4,baz=270,slow=4.0,SNR=9.7						

SONM	**Songino Array**	**127.71**	**357**	PKP	PKPdf	19 03 43.1	-2.8
	1.4nm,1.0s,baz=322,slow=2.1,SNR=8.9						
SONM				pPKP		19 03 55.0	
	0.8nm,0.8s,baz=326,slow=2.6,SNR=7.0						
ASAR	**Alice Springs**	**144.38**	**235**	PKP	PKPdf	19 04 12.3	-4.8
	2.2nm,0.7s,baz=120,slow=3.9,SNR=33						
WRAB	**Tennant Creek**	**145.56**	**241**	*e*PKPbc	PKPbc	19 04 16.4	+0.6
WRA	**Warramunga Arr**	**145.56**	**241**	PKPbc	PKPbc	19 04 16.6	+0.9
	2.4nm,0.8s,baz=109,slow=2.9,SNR=24						
CMAR	**Chiang Mai Arr**	**156.83**	**9**	PKP	PKPdf	19 04 34.2	-1.8
	0.1nm,0.4s,baz=302,slow=1.5,SNR=4.6						
CMAR				PKPab	PKPab	19 05 03.4	-0.7
	0.7nm,0.7s,baz=329,slow=5.3,SNR=4.5						

NEIC 18 18:51:38.1,53.49N×163.24W,h9^{km},ML3.1(AEIC)**,After AEIC.,Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**1.27**	**322**	P	Pb	18 51 60.0	-1.7
SSLS	**Shishaldin Sou**	**1.31**	**340**	P	Pb	18 52 00.8	-1.6
WESS	**West Dahl Sout**	**1.32**	**319**	P	Pb	18 52 00.5	-2.2
WESS				S	Sb	18 52 18.5	-1.1
WESN	**West Dahl Nort**	**1.34**	**324**	P	Pb	18 52 01.1	-1.9
FALS	**False Pass**	**1.38**	**356**	P	Pn	18 52 01.2	-2.3
FALS				S	Sb	18 52 18.7	-2.4
WFAR	**Faris Peak**	**1.39**	**320**	P	Pn	18 52 01.4	-2.3
AKA	**Akutan**	**1.64**	**294**	P	Pn	18 52 04.7	-2.6
AKUT	**Akutan**	**1.64**	**294**	P	Pn	18 52 05.3	-1.9
AKLV	**Akutan Long Va**	**1.75**	**294**	P	Pn	18 52 06.5	-2.3
DTNA	**Dutton South F**	**1.76**	**19**	P	Pn	18 52 07.1	-1.9
AKGG	**Akutan Green G**	**1.78**	**295**	P	Pn	18 52 07.3	-2.1
LVA	**Lava Point**	**1.79**	**293**	P	Pn	18 52 07.0	-2.4
UNV	**Unalaska Valle**	**1.98**	**282**	P	Pn	18 52 09.2	-2.9
UNV				S	Sn	18 52 35.3	-1.8
HAG	**Hague Volcano**	**1.99**	**23**	P	Pn	18 52 10.5	-1.9
MNAT	**Makushin Natee**	**2.09**	**282**	P	Pn	18 52 11.3	-2.4
MTBL	**Makushin Table**	**2.10**	**285**	P	Pn	18 52 11.8	-2.1
MSW	**Makushin Switc**	**2.15**	**283**	P	Pn	18 52 12.5	-2.1
MSW				S	Sn	18 52 39.0	-2.6
OKFG	**Magazine Ridge**	**2.80**	**270**	P	Pn	18 52 21.5	-2.3

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*CSEM **18** 18:53:58.4±0.6,37.18N×24.97W,ML2.5,Error ellipse: s-maj=36.0km s-min=10.0km az=67.0,After PDA*

*PDA **18** 18:53:58.4±1.2,37.18N×24.97W,MD2.5,ML2.5,Error ellipse: s-maj=12.3km s-min=2.6km az=87.0*

SVSA 18 18:53:58.4±1.2**,37.18N×24.97W,MD2.5,ML2.5,Error ellipse: s-maj=12.3km s-min=2.6km az=87.0,Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	**Pico do Norte,**	**0.19**	**204**	*i* P	Pg	18 54 02.5	+0.3
PSMN				*i* S	Sg	18 54 05.2	+0.4
BART	**Pico Bartolome**	**0.62**	**345**	*e*P	Pg	18 54 09.5	-1.3
BART				*e*S	Sg	18 54 17.9	-1.1
	77nm,0.2s						
FRA1	**Furnas**	**0.64**	**331**	*e*P	Pg	18 54 10.8	-0.5
FRA1				*i* S	Sg	18 54 20.3	+0.5
MIRA	**Miradouro**	**0.66**	**338**	*e*P	Pg	18 54 11.2	-0.3
MIRA				*i* S	Sg	18 54 20.4	+0.2
VIF	**Vila Franca**	**0.68**	**327**	*i* S	Sg	18 54 19.4	-1.6
	138nm,0.2s						
PCNG	**Congro**	**0.68**	**330**	*i* S	Sg	18 54 21.1	+0.1
	76nm,0.2s						
PRCH	**Ribeira Ch**	**0.68**	**324**	*i* S	Sg	18 54 19.2	-2.0
	101nm,0.2s						
PFAD	**Fenais da Ajud**	**0.72**	**337**	*i* S	Sg	18 54 21.8	-0.5
LFA	**Lagoa do Fogo**	**0.72**	**325**	*e*P	Pg	18 54 11.0	-1.8
MESC	**Monte Escuro**	**0.72**	**328**	*e*P	Pg	18 54 10.7	-2.1
MESC				*i* S	Sg	18 54 20.7	-1.8
CML	**Cha da Macela**	**0.75**	**322**	*i* S	Sg	18 54 20.4	-3.0
FAC	**Faja de Cima**	**0.81**	**318**	*i* S	Sg	18 54 21.9	-3.3
PSET	**Sete Cidades**	**0.88**	**317**	*e*S	Sg	18 54 23.9	-3.8
	103nm,0.3s						
PSAN	**Santo Antonio**	**0.90**	**318**	*e*S	Sg	18 54 24.4	-4.1
PFET	**Feteiras**	**0.91**	**315**	*e*S	Sg	18 54 24.2	-4.6
SET2	**Ginetes**	**0.94**	**315**	*e*S	Sg	18 54 24.5	-5.3

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*MOS **18** 19:33:43.5±0.9,5.55N×94.43E,h33^{km},mb6.0/103, MS5.0/33,Error ellipse: s-maj=6.9km s-min=3.3km az=125.8*

*CSEM **18** 19:33:43.6,5.78N×94.71E,h33^{km},mb5.9*

*BJI **18** 19:33:44.2,5.38N×94.36E,h50^{km},mB5.6,mb5.7,Ms5.4, Msz5.3*

*NEIC **18** 19:33:46.4±0.1,5.45N×94.42E,mb5.8/131,ME5.5, MS4.9/12,MW5.6,Error ellipse: s-maj=3.6km s-min=2.5km az=214.0,Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}1.74; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-1.61; $M_{r\theta}$1.51; $M_{\theta\phi}$0.57; $M_{\phi r}$-1.29; Best double couple: $M_0$2.7×10^{17} NP1: ϕ_s358°,δ25°,λ126°. NP2:ϕ_s140°,δ70°,λ75°. Principal axes: T 2.76, Plg62°, Azm26°; N -.21, Plg14°, Azm145°; P -2.55, Plg23°, Azm242°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

*IDC **18** 19:33:46.6±0.5,5.45N×94.49E,h49^{km}±3^{km},mb5.1/37, mb1 5.1/38,mb1mx5.1/38,mbtmp5.3/38,MS5.1/20, Ms1 5.1/20,ms1mx4.9/24 Error ellipse: s-maj=12.6km s-min=6.8km az=46.0*

*HRVD **18** 19:33:46.4±0.2,5.31N×94.35E,h36^{km},MW5.6/70, Centroid moment Tensor Solution. LP body waves: s65,c129;Mantle waves: s70,c171; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.11±.04; $M_{\theta\theta}$-0.86±.03; $M_{\phi\phi}$-1.24±.04; $M_{r\theta}$1.81±.04; $M_{\theta\phi}$1.36±.03; $M_{\phi r}$-1.56±.05; Best double couple: $M_0$3.296×10^{17} NP1: ϕ_s327°,δ22°,λ103°. NP2:ϕ_s133°,δ68°,λ85°. Principal axes: T 3.153, Plg66°, Azm33°; N .291, Plg5°, Azm135°; P -3.439, Plg23°, Azm227°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 18 19:33:44.8±0.1**,5.42N**±0.02×**94.44E**±0.02**,h48^{km}, h48^{km}**±1.0^{km}**:pP-P,n865,**σ**0^{s}98**/793**,mb5.7**/204**,MS5.2**/74**, 220C-22D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKT	**Phuket**	**4.56**	**54**	P	**P**	**19 34 57.0**	**+3.9**
SNG	**Songkhla**	**6.38**	**74**	P	**P**	**19 35 18.5**	**0.0**
	2μm,1.0s						
IPM	**Ipoh**	**6.61**	**97**	P	**P**	**19 35 22.6**	**+0.8**
NNT	**Nongplab**	**8.83**	**36**	P	**P**	**19 35 55.0**	**+2.5**
KGM	**Kluang**	**9.48**	**111**	P	**P**	**19 36 01.9**	**+0.4**
NST	**Nakhon Sawan**	**11.62**	**28**	⇓P	**P**	**19 36 32.0**	**+1.3**
	133nm,0.7s						
BDT	**Bhumibol Dam**	**12.57**	**20**	P	**P**	**19 36 45.0**	**+1.6**
	58nm,0.6s						
KKTK	**Khon Kaen**	**13.61**	**36**	⇑P	**P**	**19 37 00.0**	**+2.8**
KKTK				SG	rx	19 37 06.0	
CM31	**Chiang Mai Arr**	**13.68**	**18**	*e*Pn	**P**	**19 36 58.5**	**+0.4**
	290nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.68**	**18**	P	**P**	**19 36 59.2**	**+1.1**
	4.2nm,0.3s,baz=207,slow=14,SNR=427						
CMAR				LR	LR	19 42 03.2	
	comp=Z,5μm,21.0s,baz=195,slow=36						
CMAR				ScP		19 45 51.1	
	0.1nm,0.3s,baz=240,slow=3.3,SNR=7.0						
CHG	**Chiang Mai**	**14.01**	**18**	⇑P	**P**	**19 37 04.1**	**+1.6**
NANT	**Nan**	**14.63**	**24**	⇑P	**P**	**19 37 11.5**	**+0.9**
	556nm,1.0s						
CHRT	**Chiangrai**	**15.27**	**19**	⇑P	**P**	**19 37 20.5**	**+1.6**
	1μm,1.2s						
MDRS	**Chennai**	**15.93**	**299**	*e*P	**P**	**19 37 29.0**	**+1.6**
MDRS				*e*		19 37 49.2	
	comp=Z,240nm,1.6s						
MDRS				*e*		19 40 06.8	
VIS	**Vishakhapatnam**	**16.35**	**319**	*e*P	**P**	**19 37 32.4**	**-0.3**
VIS				*e*		19 37 55.1	
	comp=Z,393nm,1.5s						
VIS				*e*		19 40 20.1	
BWNR	**Bhubaneshwar**	**17.00**	**331**	*e*P	**P**	**19 37 38.5**	**-2.3**
BWNR				*e*		19 37 46.9	
	comp=Z,558nm,1.6s						
BWNR				*e*		19 40 34.2	
TRD	**Trivandrum**	**17.62**	**281**	*e*P	**P**	**19 37 47.7**	**-1.0**
COCO	**West Island**	**17.66**	**172**	*e*P	**P**	**19 37 48.0**	**-1.1**
	comp=Z,2μm,1.4s						
COCO				*e*		19 38 04.2	
CAL	**Calcutta**	**18.01**	**341**	*e*	**P**	**19 37 43.6**	**-10**
	comp=Z,440nm,0.2s						
CAL				*e*S	**S**	**19 41 10.8**	**+1.1**
IMP	**Imphal**	**19.25**	**359**	*e*P	**P**	**19 38 07.0**	**-1.1**
HYB	**Hyderabad**	**19.59**	**309**	⇑*e*P	**P**	**19 38 11.5**	**-0.3**
HYB				*e*S	**S**	**19 41 46.0**	**+1.1**
HYB				pmax	pmax		
	comp=Z,243nm,1.2s						
HYB	**Hyderabad**	**19.59**	**309**	⇑*e*P	**P**	**19 38 11.5**	**-0.3**
	comp=Z,243nm,1.2s						
HYB				*e*S	**S**	**19 41 46.0**	**+1.1**
HYB	**Hyderabad**	**19.59**	**309**	⇑*i*P	**P**	**19 38 11.5**	**-0.3**
	comp=Z,243nm,1.2s						
HYB				*e*		19 41 35.0	
HYB				*e*S	**S**	**19 41 46.0**	**+1.1**
HYB				LR	LR	19 46 38.0	
	comp=Z,4.9nm,20.0s						
SHL	**Shillong**	**20.18**	**353**	*e*P	**P**	**19 38 15.0**	**-3.1**
SHL				*e*		19 41 53.0	
QIZ	**Qiongzhong**	**20.20**	**47**	P	**P**	**19 38 17.6**	**-0.8**
QIZ				XP		19 38 33.0	
QIZ				PP	PP	19 38 37.3	-1.9
QIZ				S	**S**	**19 41 57.0**	**-0.5**
QIZ				SS	SS	19 42 25.5	-2.7
QIZ				PCP	PcP	19 42 28.0	-3.1
QIZ				AMB	AMB		
	comp=Z,305nm,1.5s						
QIZ				LR	LR		
	comp=N,8μm,18.5s,MS5.3						
QIZ				LR	LR		
	comp=E,10μm,16.7s,MS5.3						
QIZ				LR	LR		
	comp=Z,11μm,19.0s,MS5.2						
QIZ	**Qiongzhong**	**20.20**	**47**	*e*P	**P**	**19 38 18.6**	**+0.2**
	comp=Z,363nm,1.1s						
QIZ				*e*		19 38 33.6	
BLSP	**Bilaspur**	**20.44**	**326**	*e*P	**P**	**19 38 20.2**	**-0.6**
BLSP				*e*		19 38 25.5	
	comp=Z,996nm,1.4s						
BLSP				*e*		19 41 59.5	
MNGI	**Mangalore**	**20.75**	**292**	*e*P	**P**	**19 38 27.3**	**+3.3**
MNGI				*e*		19 42 04.5	
KMI	**Kunming**	**21.14**	**21**	⇑P	**P**	**19 38 30.0**	**+2.0**
KMI				AP		19 38 41.0	
KMI				PP	PP	19 38 52.3	+0.2
KMI				S	**S**	**19 42 17.0**	**+1.6**
KMI				LR	LR		
	comp=N,3μm,16.0s,MS5.0						
KMI				LR	LR		
	comp=E,4μm,15.0s,MS5.0						
KMI				LR	LR		
	comp=Z,5μm,24.0s						
KMI	**Kunming**	**21.14**	**21**	⇑P	**P**	**19 38 30.0**	**+2.0**
KMI				*PP		19 38 41.0	
KMI						19 38 52.2	
KMI				S	**S**	**19 42 17.0**	**+1.6**
KMI				SS	SS	19 42 44.0	-6.8
KMI				pmax	pmax		
	comp=Z,1.0nm,1.4s						
KMI				MLR	MLR		
	comp=Z,5μm,24.0s,MS4.8						
KMI	**Kunming**	**21.14**	**21**	⇑P	**P**	**19 38 30.0**	**+2.0**
	comp=Z,0.9nm,1.4s						
KMI				pP		19 38 41.0	
KMI				PP	PP	19 38 52.2	+0.1
KMI				S	**S**	**19 42 17.0**	**+1.6**
KMI				SS	SS	19 42 44.0	-6.8
KMI				LR	LR		
	comp=Z,5μm,24.0s,MS4.8						
MNCY	**Minicoy**	**21.44**	**279**	⇓*i*P	**P**	**19 38 31.0**	**-0.1**
MNCY				*i*		19 40 52.0	
NGP	**Nagpur**	**21.62**	**318**	*e*P	**P**	**19 38 33.3**	**+0.5**
NGP				*e*S	**S**	**19 42 33.6**	**+9.4**
KKM	**Kota Kinabalu**	**21.67**	**87**	P	**P**	**19 38 33.8**	**+0.5**
LATR	**Latur**	**21.71**	**308**	*e*P	**P**	**19 38 35.3**	**+1.6**
LATR				*e*P		19 38 35.3	
LATR				*e*		19 42 26.0	
GOA	**Goa**	**22.59**	**298**	*e*P	**P**	**19 38 46.1**	**+3.6**
	comp=Z,385nm,1.1s,mb5.7						
GOA				*e*S	**S**	**19 42 55.8**	**+14**
KAD	**Karad**	**23.07**	**302**	*e*P	**P**	**19 38 49.0**	**+1.7**
KAD				*e*S	**S**	**19 42 57.0**	**+6.2**
TSM	**Tawau**	**23.37**	**92**	P	**P**	**19 38 50.8**	**+0.6**
BATP	**Bataraza**	**23.42**	**80**	*e*P	**P**	**19 38 51.8**	**+1.2**
JIRN	**Jiri**	**23.47**	**341**	*e*P	**P**	**19 38 50.4**	**-0.6**
PKI	**Pulchoki**	**23.64**	**340**	*e*P	**P**	**19 38 52.3**	**-0.4**
DMN	**Daman**	**23.79**	**339**	*e*P	**P**	**19 38 53.9**	**-0.1**
	comp=Z,754nm,0.9s,mb6.1						
KKN	**Kakani**	**23.89**	**340**	*e*P	**P**	**19 38 54.7**	**-0.3**
	comp=Z,640nm,1.0s,mb6.0						
POO	**Poona**	**23.95**	**305**	*e*P	**P**	**19 38 57.1**	**+1.4**
POO				*i*		19 43 18.0	
GYA	**Guiyang**	**23.95**	**28**	⇑*i*P	**P**	**19 38 56.9**	**+1.2**
GYA				AP		19 39 05.8	
GYA				XP		19 39 09.6	
GYA				PP	PP	19 39 26.5	-4.2
GYA				S	**S**	**19 43 07.8**	**+1.8**
GYA				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.1						
GYA				AMB	AMB		
	comp=Z,2μm,6.6s						
GYA				LR	LR		
	comp=N,7μm,23.6s,MS5.2						
GYA				LR	LR		
	comp=E,5μm,21.2s,MS5.2						
GYA				LR	LR		
	comp=Z,10μm,22.1s,MS5.2						
BHPL	**Bhopal**	**24.15**	**319**	*e*P	**P**	**19 38 59.3**	**+1.7**
BHPL				*e*		19 39 17.3	
	comp=Z,262nm,1.5s						
BHPL				*e*		19 43 25.6	
GKN	**Gorkha**	**24.31**	**339**	*e*P	**P**	**19 38 59.0**	**-0.2**
LSA	**Lhasa**	**24.35**	**353**	P	**P**	**19 38 59.3**	**-0.2**
LSA				AP		19 39 11.9	
LSA				XP		19 39 17.5	
LSA				S	**S**	**19 43 15.5**	**+2.8**
LSA				AMB	AMB		
	comp=Z,100nm,1.6s,mb5.0						
LSA				AMB	AMB		
	comp=Z,1μm,5.4s						
LSA				LR	LR		
	comp=N,3μm,29.1s,MS4.7						
LSA				LR	LR		
	comp=E,3μm,27.8s,MS4.7						
LSA				LR	LR		
	comp=Z,6μm,30.2s,MS4.9						
LSA	**Lhasa**	**24.35**	**353**	*e*P	**P**	**19 38 59.5**	**0.0**
LSA				pmax	pmax		
	comp=Z,324nm,0.9s,mb5.8						
LSA	**Lhasa**	**24.35**	**353**	*e*P	**P**	**19 38 59.5**	**0.0**
	comp=Z,324nm,0.9s,mb5.8						
PPR	**Puerto Princes**	**24.45**	**78**	⇓*e*P	**P**	**19 39 01.8**	**+1.1**
KOLN	**Koldanda**	**24.50**	**336**	*e*P	**P**	**19 39 01.4**	**+0.4**
	comp=Z,4μm,1.7s,mb6.5						
BOM	**Bombay**	**24.98**	**304**	*e*P	**P**	**19 39 08.1**	**+2.3**
BOM				*e*S	**S**	**19 43 30.2**	**+6.7**
JHNI	**Jhansi**	**25.09**	**324**	⇑*i*P	**P**	**19 39 05.0**	**-1.7**
ENPP	**El Nido**	**25.37**	**75**	*e*P	**P**	**19 39 09.4**	**0.0**
DGAR	**Diego Garcia**	**25.38**	**240**	*d* *i*P	**P**	**19 39 11.1**	**+1.6**
DGAR	**Diego Garcia**	**25.38**	**240**	*e*P	**P**	**19 39 07.7**	**-1.8**
	comp=Z,448nm,1.4s,mb5.8						
HKC	**Hong Kong**	**25.41**	**47**	⇑*i*P	**P**	**19 39 12.0**	**+2.3**
BUSP	**Coron**	**26.27**	**74**	*e*P	**P**	**19 39 17.9**	**0.0**
LUBP	**Lubang**	**26.73**	**70**	*e*P	**P**	**19 39 22.2**	**+0.2**
CD2	**Chengdu**	**26.82**	**18**	⇑*i*P	**P**	**19 39 21.8**	**-1.0**
CD2				AMB	AMB		
	comp=Z,402nm,1.2s,mb5.8						
CUYO	**Cuyo Island**	**26.84**	**77**	*e*P	**P**	**19 39 23.1**	**0.0**
SCZP	**Santa Cruz**	**27.03**	**66**	*e*P	**P**	**19 39 24.1**	**-0.7**
SJMP	**San Jose**	**27.25**	**73**	*e*P	**P**	**19 39 27.2**	**+0.4**
LGTI	**Lohaghat**	**27.41**	**332**	⇓*i*P	**P**	**19 39 28.5**	**+0.4**
TGY	**Tagaytay City**	**27.47**	**70**	P	**P**	**19 39 29.6**	**+0.8**
	comp=Z,857nm,1.0s,mb6.2,baz=178,slow=2.4,SNR=26						
TGY				LR	LR	19 49 28.0	
	comp=Z,4μm,21.2s,MS4.9,baz=94,slow=34						
PTH	**Pithoragarh**	**27.51**	**332**	*e*P	**P**	**19 39 28.3**	**-0.7**
PTH				*e*		19 44 34.2	
AAP	**Anini-y**	**27.68**	**78**	*e*P	**P**	**19 39 28.0**	**-2.7**
BCPH	**Baguio City Da**	**27.84**	**65**	⇑*i*P	**P**	**19 39 32.4**	**+0.2**
LQP	**Lukban**	**28.04**	**70**	⇑*e*P	**P**	**19 39 34.5**	**+0.6**
IPIL	**Ipil**	**28.04**	**84**	*e*P	**P**	**19 39 33.2**	**-0.7**
OTRP	**Odiongan**	**28.09**	**74**	*e*P	**P**	**19 39 35.0**	**+0.6**
BOAC	**Boac**	**28.16**	**72**	*e*P	**P**	**19 39 34.4**	**-0.6**
AJM	**Ajmer**	**28.21**	**320**	*e*P	**P**	**19 39 34.0**	**-1.4**
NDI	**New Delhi**	**28.32**	**327**	*e*P	**P**	**19 39 33.5**	**-2.8**
NDI				*e*		19 44 16.0	
GUIM	**Jordan**	**28.33**	**78**	*e*P	**P**	**19 39 37.3**	**+0.7**
ABRA	**Dolores**	**28.41**	**62**	*e*P	**P**	**19 39 37.9**	**+0.7**
ENH	**Enshi**	**28.49**	**28**	*e*P	**P**	**19 39 36.6**	**-1.2**
	comp=Z,151nm,0.9s,mb5.6						
ENH				LR	LR		
	comp=Z,11μm,19.0s,MS5.5						
BALP	**Baler**	**28.54**	**67**	*e*P	**P**	**19 39 39.3**	**+0.9**
SNPH	**Sibulan**	**28.81**	**81**	*e*P	**P**	**19 39 42.0**	**+1.1**
PAGZ	**Pagadian**	**28.84**	**84**	*e*P	**P**	**19 39 42.0**	**+0.9**
DCPH	**Dipolog City**	**28.86**	**82**	⇓*e*P	**P**	**19 39 42.2**	**+1.0**
AUQP	**San Andres**	**28.91**	**72**	*e*P	**P**	**19 39 42.6**	**+0.8**
APYP	**Conner**	**28.96**	**62**	*e*P	**P**	**19 39 42.2**	**+0.1**
CAUP	**Cauayan**	**29.15**	**65**	*e*P	**P**	**19 39 44.9**	**+1.0**
DDI	**Dehra Dun**	**29.18**	**330**	*e*P	**P**	**19 39 42.2**	**-1.8**
DDI				*e*		19 44 18.0	
TBP	**Tagbilaran**	**29.46**	**80**	*e*P	**P**	**19 39 46.8**	**+0.2**
QZH	**Quanzhou**	**30.22**	**48**	⇑*i*P	**P**	**19 39 54.0**	**+0.7**
QZH				S	**S**	**19 44 57.0**	**+8.9**
QZH				AMB	AMB		
	comp=Z,400nm,1.2s,mb6.0						
QZH				LR	LR		
	comp=N,6μm,15.5s,MS5.6						
QZH				LR	LR		
	comp=E,7μm,11.8s,MS5.6						
QZH				LR	LR		
	comp=Z,16μm,18.1s						
SMLA	**Simla**	**30.28**	**330**	⇑*i*	**P**	**19 40 06.9**	**+13**
	comp=Z,50nm,0.4s,mb5.6						
MSLP	**Maasin**	**30.48**	**79**	*e*P	**P**	**19 39 55.8**	**0.0**
BUKP	**Musuan**	**30.51**	**84**	*e*P	**P**	**19 39 56.7**	**+0.8**
BBP	**Basco**	**30.61**	**58**	*e*P	**P**	**19 39 55.3**	**-1.5**
CNP	**Catarman**	**30.65**	**75**	*e*P	**P**	**19 39 57.5**	**+0.3**
SDNR	**Sundarnagar**	**30.68**	**330**	*e*P	**P**	**19 39 57.2**	**-0.1**
BHK	**Bhakra**	**30.90**	**329**	*e*	**P**	**19 40 15.0**	**+16**
DAV	**Davao City (W)**	**30.99**	**85**	*e*P	**P**	**19 40 02.0**	**+1.8**
BUTP	**Butuan**	**31.12**	**82**	*e*P	**P**	**19 39 59.8**	**-1.6**
WHN	**Wuhan**	**31.23**	**35**	⇑P	**P**	**19 40 02.5**	**+0.3**
WHN				LR	LR		
	comp=Z,18μm,16.2s,MS5.8						
XAN	**Xi’an**	**31.48**	**23**	P	**P**	**19 40 03.1**	**-1.3**
XAN				AP	pP	19 40 13.5	-3.4
XAN				PP	PP	19 41 11.8	+2.4
XAN				S	**S**	**19 45 05.3**	**-2.6**
XAN				AMB	AMB		
	comp=Z,179nm,1.1s,mb5.8						
XAN				AMB	AMB		
	comp=Z,338nm,4.9s						
XAN				LR	LR		
	comp=N,4μm,17.1s,MS5.4						
XAN				LR	LR		
	comp=E,7μm,19.2s,MS5.4						
XAN				LR	LR		
	comp=Z,5μm,19.2s,MS5.2						
LZH	**Lanzhou**	**31.72**	**15**	⇑*i*P	**P**	**19 40 05.4**	**-1.0**
LZH				AP	pP	19 40 15.1	-3.9
LZH				PP	PP	19 41 10.4	-2.0
LZH				PCP	PcP	19 42 57.5	+0.2
LZH				S	**S**	**19 45 11.0**	**-0.5**
LZH				SCP		19 46 37.5	
LZH				PCS		19 46 41.0	
LZH				SS	SS	19 47 01.3	-2.5
LZH				SCS	ScS	19 50 33.0	+1.0
LZH				AMB	AMB		
	comp=Z,175nm,1.5s,mb5.7						
LZH				AMB	AMB		
	comp=Z,664nm,6.2s						
LZH				LR	LR		
	comp=N,4μm,13.1s						
LZH				LR	LR		
	comp=Z,8μm,16.6s,MS5.5						
LZH	**Lanzhou**	**31.72**	**15**	⇑*i*P	**P**	**19 40 05.4**	**-1.0**
LZH				*PP	pP	19 40 15.1	-3.9
LZH				*SP	sP	19 40 18.9	-6.1
LZH						19 41 10.4	
LZH						19 42 57.5	
LZH				S	**S**	**19 45 11.0**	**-0.5**
LZH				*SS		19 45 26.5	
LZH				SS	SS	19 47 01.2	-2.6
LZH						19 50 33.0	
LZH				pmax	pmax		
	comp=Z,175nm,1.5s,mb5.7						
LZH				MLR	MLR		
	comp=Z,8μm,16.6s,MS5.5						
LZH	**Lanzhou**	**31.72**	**15**	⇑*i*P	**P**	**19 40 05.4**	**-1.0**
	comp=Z,175nm,1.5s,mb5.7						
LZH				pP	pP	19 40 15.1	-3.9
LZH				sP	sP	19 40 18.9	-6.1
LZH				PP	PP	19 41 10.4	-2.0
LZH				PcP	PcP	19 42 57.5	+0.2
LZH				S	**S**	**19 45 11.0**	**-0.5**
LZH				sS		19 45 26.5	
LZH				ScP		19 46 37.5	
LZH				PcS		19 46 41.0	
LZH				SS	SS	19 47 01.2	-2.6
LZH				ScS	ScS	19 50 33.0	+1.0
LZH				LR	LR		
	comp=Z,8μm,16.6s,MS5.5						
DLH	**Dalhousie**	**32.02**	**330**	*e*P	**P**	**19 40 10.0**	**+0.9**
THN	**Thein Dam**	**32.06**	**329**	*e*P	**P**	**19 40 07.0**	**-2.5**
THN				*e*		19 46 37.4	
GTA	**Gaotai**	**34.18**	**7**	⇑*i*P	**P**	**19 40 27.3**	**-0.4**
GTA				AP	pP	19 40 40.8	+0.4
GTA				XP	sP	19 40 45.9	-0.5
GTA				PP	PP	19 41 39.4	-4.0
GTA				PCP	PcP	19 43 05.0	+1.0
GTA				S	**S**	**19 45 45.3**	**-4.5**
GTA				XS		19 46 08.5	
GTA				SCP		19 46 45.4	
GTA				SCS	ScS	19 50 45.1	+0.5
GTA				AMB	AMB		
	comp=Z,204nm,1.2s,mb5.9						
GTA				AMB	AMB		
	comp=Z,1μm,8.0s						
GTA				LR	LR		
	comp=N,3μm,23.7s						
GTA				LR	LR		
	comp=E,2μm,31.7s						
GTA				LR	LR		
	comp=Z,3μm,23.7s,MS5.0						
NJ2	**Nanjing**	**34.97**	**38**	*e*P	**P**	**19 40 35.1**	**+0.5**
NJ2				AP	pP	19 40 47.6	+0.3
NJ2				XP	sP	19 40 50.6	-2.7
NJ2				PP	PP	19 41 52.5	-1.2
NJ2				S	**S**	**19 45 53.0**	**-9.1**
SSE	**Sheshan**	**35.81**	**41**	P	**P**	**19 40 42.3**	**+0.6**
SSE				XP	sP	19 40 55.4	-5.1
SSE				PP	PP	19 42 01.9	-1.9
SSE				S	**S**	**19 46 12.3**	**-2.8**
SSE				AMB	AMB		
	comp=Z,78nm,1.2s,mb5.5						
SSE				AMB	AMB		
	comp=Z,890nm,4.8s						
SSE				LR	LR		
	comp=N,2μm,19.6s,MS5.2						
SSE				LR	LR		
	comp=E,3μm,19.6s,MS5.2						
SSE				LR	LR		
	comp=Z,4μm,20.4s,MS5.2						
SSE	**Sheshan**	**35.81**	**41**	P	**P**	**19 40 42.2**	**+0.5**
	comp=Z,78nm,1.2s,mb5.5						
SSE				sP	sP	19 40 55.4	-5.1
SSE				PP	PP	19 42 01.9	-1.9
SSE				S	**S**	**19 46 12.3**	**-2.8**
SSE				sS		19 46 27.2	
SSE				ScP		19 46 57.5	
SSE				LR	LR		
	comp=Z,4μm,20.4s,MS5.2						
MBWA	**Marble Bar**	**36.24**	**138**	*e*P	**P**	**19 40 43.3**	**-2.2**
	comp=Z,77nm,1.2s,mb5.5						
MBWA				LR	LR		
	comp=Z,2μm,22.0s,MS4.9						
TIA	**Tai’an**	**37.05**	**31**	*e*P	**P**	**19 40 52.3**	**+0.2**
TIA				AMB	AMB		
	comp=Z,293nm,1.7s,mb5.8						
BTO	**Baotou**	**37.72**	**20**	*e*P	**P**	**19 40 57.3**	**-0.3**
BTO				AMB	AMB		
	comp=Z,83nm,0.8s,mb5.5						
BTO				LR	LR		
	comp=N,381nm,6.7s						

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BTO                                 LR      LR
       comp=E,3µm,13.9s
KSH    Kashi             37.82 336 ⇑P       P       19 40 58.9 +0.4
KSH                                eAP      pP      19 41 08.0 -3.3
KSH                                eXP      sP      19 41 13.0 -4.2
KSH                                eS       S       19 46 46.0 +0.4
KSH                                 AMB     AMB
       comp=Z,40nm,1.0s,mb5.1
KSH                                 AMB     AMB
       comp=Z,680nm,3.8s
KSH                                 LR      LR
       comp=N,3µm,19.2s,MS5.2
KSH                                 LR      LR
       comp=E,2µm,16.8s,MS5.2
WBK    Wadi Bani Khal    38.27 300 ⇑P       P       19 41 03.7 +1.3
JOW    Kunigami          38.63  53  P       P       19 41 06.7 +1.3
       comp=E,116nm,0.9s,mb5.6,baz=240,slow=5.9,SNR=10
JOW                                 LR      LR      19 56 41.0
       comp=E,5µm,21.6s,MS5.3,baz=51,slow=36
FITZ   Fitzroy Crossi    38.65 128⇑iP       P       19 41 04.5 -1.1
       comp=E,83nm,0.8s,mb5.5
FITZ                               ePCP     PcP     19 43 17.3 -0.3
FITZ                               eS       S       19 46 54.9 -3.6
WMQ    Urumqi            38.70 352⇑iP       P       19 41 06.3 +0.5
WMQ                                 PP      PP      19 42 42.0 +3.4
WMQ                                 AMB     AMB
       comp=Z,342nm,10.1s
WMQ                                 LR      LR
       comp=N,3µm,18.0s,MS5.3
WMQ                                 LR      LR
       comp=E,4µm,20.0s,MS5.3
WMQ                                 LR      LR
       comp=Z,3µm,18.0s,MS5.2
JMDO   Jabal Madar       38.94 299 ⇑P       P       19 41 10.0 +2.0
SMDO   Samad             39.22 300 ⇓P       P       19 41 12.8 +2.5
BIDO   Bidbid            39.32 301 ⇓P       P       19 41 13.9 +2.8
       SNR=12
BJT    Baijiatuau        39.61  26 eP       P       19 41 14.5 +1.1
BJT                                 pmax    pmax
       comp=Z,423nm,1.2s
BJT    Baijiatuau        39.61  26 eP       P       19 41 14.5 +1.2
       comp=Z,423nm,1.2s,mb6.0
BJI    Beijing           39.63  26  P       P       19 41 14.9 +1.4
BJI                                 XP      sP      19 41 27.8 -4.4
BJI                                 PP      PP      19 42 53.9 +5.1
BJI                                 S       S       19 47 16.3 +3.2
BJI                                 LR      LR
       comp=N,4µm,17.6s,MS5.3
BJI                                 LR      LR
       comp=E,2µm,17.6s,MS5.3
BJI                                 LR      LR
       comp=Z,5µm,22.9s
BJI    Beijing           39.63  26  P       P       19 41 14.9 +1.4
BJI                                 *SP     sP      19 41 27.7 -4.5
BJI                                                 19 42 53.9
BJI                                 S       S       19 47 16.3 +3.2
BJI                                 pmax    pmax
       comp=Z,310nm,1.2s,mb5.9
BJI                                 MLR     MLR
       comp=Z,5µm,22.9s,MS5.3
BJI    Beijing           39.63  26  P       P       19 41 14.9 +1.4
       comp=Z,310nm,1.2s,mb5.9
BJI                                 sP      sP      19 41 27.7 -4.5
BJI                                 PP      PP      19 42 53.9 +5.1
BJI                                 S       S       19 47 16.3 +3.2
BJI                                 SS      SS      19 50 17.8  +15
BJI                                 LR      LR
       comp=Z,5µm,22.9s,MS5.3
SHAO   Shalim            39.92 292 ⇑P       P       19 41 17.3 +1.2
HOQ    Hoqain            40.04 301 ⇑P       P       19 41 19.2 +2.0
ULHL   Ulahol            40.08 339  P       P       19 41 14.9 -2.4
       SNR=11
KZA    Kyzart            40.30 338  P       P       19 41 20.0 +0.9
       SNR=48
ARQ    Araqi             40.64 300  P       P       19 41 24.7 +2.6
       SNR=12
UCH    Uchtor            40.71 337  P       P       19 41 23.2 +0.8
       SNR=62
TKM2   Tokmak 2          40.90 339  P       P       19 41 24.4 +0.4
       SNR=55
KBK    Karagaybulak      40.91 338  P       P       19 41 25.2 +1.1
       SNR=110
AML    Almayashu         40.95 336  P       P       19 41 25.4 +1.0
       SNR=119
AAK    Ala-Archa         41.06 337  P       P       19 41 26.2 +0.9
       SNR=63
AAK    Ala-Archa         41.06 337 eP       P       19 41 24.8 -0.5
AAK                                e        pP      19 41 41.3 +3.1
AAK                                 pmax    pmax
       comp=Z,230nm,1.2s,mb5.7
AAK                                 MLR     MLR
       comp=Z,669nm,20.0s,MS4.5
AAK    Ala-Archa         41.06 337 eP       P       19 41 24.8 -0.5
       comp=Z,230nm,1.2s,mb5.7
AAK                                e        pP      19 41 41.3 +3.0
AAK                                 LR      LR
       comp=Z,669nm,20.0s,MS4.5
RBK    Rabkut            41.12 290 ⇓P       P       19 41 26.9 +0.8
FRU    Bishkek           41.19 338⇑iP       P       19 41 27.0 +0.6
FRU                                i        pP      19 41 42.0 +2.8
FRU                                e                19 47 42.0
FRU                                 pmax    pmax
       comp=Z,400nm,2.1s,mb5.7
FRU                                 pmax    pmax
       comp=Z,2µm,4.0s
FRU                                 MLR     MLR
       comp=Z,2µm,19.0s,MS5.1
CHMS   Chumysh           41.28 338  P       P       19 41 27.0 -0.1
       SNR=37
EKS2   Erkin-Say         41.36 337  P       P       19 41 28.7 +0.9
       SNR=44
DL2    Dalian            41.43  33  P       P       19 41 29.8 +1.4
DL2                                 AMB     AMB
       comp=Z,200nm,1.1s,mb5.7
DL2                                 LR      LR
       comp=N,2µm,18.9s,MS5.1
DL2                                 LR      LR
       comp=E,1µm,16.6s,MS5.1
DL2                                 LR      LR
       comp=Z,2µm,18.4s,MS5.1
ASHO   Ashiyiah          41.50 302  P       P       19 41 31.8 +2.5
       SNR=5.5
USP    Ospenovka         41.60 338  P       P       19 41 29.9 +0.1
       SNR=72
WHFO   Wadi Hawf         41.61 291  P       P       19 41 31.5 +1.3
       SNR=23
BANOM  Banah             41.76 303 ⇑P       P       19 41 33.4 +2.1
KAKA   Kakadu            41.84 116⇑iP       P       19 41 30.5 -1.6
       comp=Z,36nm,0.6s,mb5.2
KAKA                               eSCP             19 47 12.3
KAKA                               eS       S       19 47 42.5 -3.7
KAKA                               eSCS     ScS     19 51 30.2 +1.7
ABTO   Aybut             41.94 290 ⇑P       P       19 41 33.9 +1.0
MKAR   Makanchi Array    42.53 348 i P      P       19 41 37.5 +0.1
MKAR                                pmax    pmax
       comp=Z,140nm,0.7s
KLBR   Kellerberrin      43.00 150 eP       P       19 41 41.0 -0.5
       comp=Z,288nm,0.9s,mb6.0
INCN   Inchon            43.35  38 eP       P       19 41 43.4 -0.8
       comp=Z,96nm,1.1s,mb5.4
SONM   Songino Array     43.48  12  P       P       19 41 44.7 -0.4
       comp=Z,85nm,0.9s,mb5.5,baz=199,slow=4.8,SNR=456
SONM                                PcP     PcP     19 43 32.1 -1.0
       comp=Z,16nm,0.6s,baz=192,slow=3.8,SNR=9.0
SONM                                ScP             19 47 21.1
       comp=Z,11nm,0.9s,baz=214,slow=4.5,SNR=11
ULN    Ulaanbaatar       43.64  12 eP       P       19 41 45.6 -0.8
ULN                                e                19 43 33.2
ULN                                 pmax    pmax
       comp=Z,149nm,1.4s,mb5.5
ULN                                 MLR     MLR
       comp=Z,3µm,20.0s,MS5.2
ULN    Ulaanbaatar       43.64  12 eP       P       19 41 45.6 -0.8
       comp=Z,149nm,1.4s,mb5.5
ULN                                e                19 43 33.2
ULN                                eScP             19 47 21.5
ULN                                 LR      LR
       comp=Z,3µm,20.0s,MS5.2
NWAO   Narrogin (SRO)    43.85 152 eP       P       19 41 48.3  0.0
NWAO                                pmax    pmax
       comp=Z,61nm,1.3s
NWAO                                MLR     MLR
       comp=Z,1µm,20.0s
NWAO   Narrogin (SRO)    43.85 152  P       P       19 41 48.5 +0.2
       comp=Z,15nm,0.8s,mb4.8,baz=316,slow=12,SNR=4.4
NWAO                                pP      pP      19 42 00.7 -0.6
       comp=Z,35nm,1.1s,baz=331,slow=11,SNR=4.8
NWAO                                LR      LR      19 59 34.1
       comp=Z,2.9nm,19.2s,baz=144,slow=35
NWAO   Narrogin (SRO)    43.85 152 eP       P       19 41 48.3  0.0
       comp=Z,61nm,1.3s,mb5.2
NWAO                                LR      LR
       comp=Z,1µm,20.0s,MS4.8
KS15   Wonju Array Si    44.10  39 eP       P       19 41 49.0 -1.3
SNY    Shenyang          44.58  31 ⇑P       P       19 41 53.3 -0.7
SNY                                 AP      pP      19 42 04.6 -2.4
SNY                                 XP      sP      19 42 10.8 -1.9
SNY                                 AMB     AMB
       comp=Z,150nm,1.8s,mb5.5
SNY                                 AMB     AMB
       comp=Z,650nm,4.9s
SNY                                 LR      LR
       comp=N,3µm,16.7s,MS5.4
SNY                                 LR      LR
       comp=E,3µm,16.5s,MS5.4
SNY                                 LR      LR
       comp=Z,4µm,19.4s,MS5.4
ZAK    Zakamensk         45.42   8⇓iP       P       19 41 59.7 -0.9
ZAK                                e                19 43 37.9
ZAK                                 pmax    pmax
       comp=Z,210nm,1.3s,mb5.8
MOY    Mondy             46.41   6 eP       P       19 42 08.2 -0.3
MOY                                 pmax    pmax
       comp=Z,102nm,2.5s,mb5.3
WRA    Warramunga Arr    46.63 124  P       P       19 42 10.2 -0.4
WRA                                 *PP     pP      19 42 22.8 -0.7
WRA                                 S       S       19 48 55.1 -0.3
WRA    Warramunga Arr    46.63 124  P       P       19 42 10.2 -0.4
       comp=Z,106nm,0.8s,mb5.8,baz=302,slow=9.0,SNR=420
WRA                                 pP      pP      19 42 22.8 -0.8
       comp=Z,191nm,1.0s,baz=302,slow=9.1,SNR=15
WRA                                 ScP             19 47 34.9
       comp=Z,3.2nm,0.7s,baz=316,slow=3.2,SNR=6.5
WRA                                 S       S       19 48 55.1 -0.3
       comp=Z,15nm,1.0s,baz=298,slow=16,SNR=9.6
WRA                                 P4KPbc          20 19 54.2
       comp=Z,0.3nm,0.6s,baz=315,slow=3.5,SNR=7.3
WRAB   Tennant Creek     46.63 124 eP       P       19 42 10.2 -0.4
WRAB                               e*PP     pP      19 42 23.7 +0.1
WRAB                                pmax    pmax
       comp=Z,417nm,1.0s,mb6.3
WRAB   Tennant Creek     46.63 124 eP       P       19 42 10.2 -0.4
       comp=Z,417nm,1.0s,mb6.3
WRAB                               epP      pP      19 42 23.6 +0.1
TLY    Talaya            46.73   8  P       P       19 42 11.9 +0.9
       comp=Z,416nm,1.1s,mb6.3,SNR=52
TLY    Talaya            46.73   8c iP      P       19 42 10.2 -0.8
TLY                                e        pP      19 42 24.2 +0.2
TLY                                e                19 43 37.9
TLY                                eS       S       19 48 52.8 -3.7
TLY                                eSS      SS      19 52 16.4 +0.5
TLY                                 pmax    pmax
       comp=Z,117nm,1.3s,mb5.7
TLY                                 MLR     MLR
       comp=Z,3µm,20.0s,MS5.2
TLY    Talaya            46.73   8 eP       P       19 42 11.1 +0.1
       comp=Z,117nm,1.3s,mb5.7
TLY                                epP      pP      19 42 24.7 +0.8
TLY                                ePcP     PcP     19 43 44.2  0.0
TLY                                eScP             19 47 34.9
TLY                                 LR      LR
       comp=Z,782nm,21.0s,MS4.6
CN2    Changchun         46.95  31 eP       P       19 42 17.3 +4.5
CN2                                eAP      pP      19 42 24.8 -1.0
CN2                                 PCP     PcP     19 43 44.5 -0.6
CN2                                 PP      PP      19 44 02.0 -1.2
CN2                                eS       S       19 49 00.0 +0.4
CN2                                 SS      SS      19 52 18.0 -1.7
CN2                                 AMB     AMB
       comp=Z,110nm,1.2s,mb5.7
CN2                                 LR      LR
       comp=N,3µm,16.0s,MS5.5
CN2                                 LR      LR
       comp=E,2µm,16.0s,MS5.5
CN2                                 LR      LR
       comp=Z,3µm,17.0s,MS5.3
KURK   Kurchatov         47.05 346 eP       P       19 42 13.6 +0.2
KURK                                pmax    pmax
       comp=Z,882nm,1.4s,mb6.5
KURK                                MLR     MLR
       comp=Z,416nm,21.0s,MS4.4
KURK   Kurchatov         47.05 346 eP       P       19 42 13.6 +0.2
       comp=Z,882nm,1.4s,mb6.5
KURK                                LR      LR
       comp=Z,416nm,21.0s,MS4.4
IRK    Irkutsk           47.37   8 eP       P       19 42 15.5 -0.5
IRK                                e                19 43 59.2
IRK                                 pmax    pmax
       comp=Z,266nm,2.2s,mb5.8
ASPA   Alice Springs     48.14 129 eP       P       19 42 22.0 -0.4
ASPA                               esP      sP      19 42 35.0 -6.0
ASPA                               ePCS             19 47 42.5
ASPA                               eS       S       19 49 15.0 -1.7
ASPA                               eSCS     ScS     19 52 09.5 +1.2
ASPA   Alice Springs     48.14 129 eP       P       19 42 22.0 -0.4
ASPA                               e*SP     sP      19 42 35.0 -6.0
ASPA                               eS       S       19 49 15.0 -1.7
ASPA                               e                19 52 09.5
ASAR   Alice Springs     48.14 129  P       P       19 42 21.9 -0.5
       comp=Z,24nm,0.5s,mb5.4,baz=300,slow=8.1,SNR=462
ASAR                                pP      pP      19 42 35.0 -0.4
       comp=Z,49nm,0.5s,baz=300,slow=7.3,SNR=17
ASAR                                S       S       19 49 16.8  0.0
       comp=Z,13nm,1.0s,baz=295,slow=13,SNR=12
ASAR                                LR      LR      20 06 46.4
       comp=Z,837nm,19.5s,MS4.7,baz=174,slow=41
ASAR                                PKPPKP          20 13 31.8
       comp=Z,0.5nm,0.8s,baz=105,slow=2.6,SNR=4.0
ASAR                                P4KPbc          20 20 01.9
       comp=Z,0.2nm,0.6s,baz=300,slow=4.5,SNR=5.3
HIA    Hailar            48.66  22 eP       P       19 42 25.5 -0.5
HIA                                e                19 43 50.2
HIA                                 pmax    pmax
       comp=Z,118nm,1.1s
HIA    Hailar            48.66  22 eP       P       19 42 25.4 -0.6
       comp=Z,118nm,1.1s,mb5.8
HIA                                ePcP     PcP     19 43 50.2 -1.0
ZAL    Zalesovo          49.00 352  P       P       19 42 28.7 +0.1
ZAL                                 *PP     pP      19 42 41.8 +0.2
ZAL                                 S       S       19 49 28.5 +0.2
ZAL    Zalesovo          49.00 352  P       P       19 42 28.7 +0.1
       comp=Z,94nm,0.5s,mb6.1,baz=299,slow=6.6,SNR=418
ZAL                                 pP      pP      19 42 41.8 +0.2
       comp=Z,140nm,1.2s,baz=278,slow=4.8,SNR=5.4
ZAL                                 ScP             19 47 43.4
       comp=Z,5.1nm,1.0s,baz=340,slow=6.8,SNR=4.6
ZAL                                 S       S       19 49 28.5 +0.1
       comp=Z,3.9nm,0.8s,baz=224,slow=24,SNR=13
ZAL                                 LR      LR      20 07 35.7
       comp=Z,1µm,21.6s,MS4.9,baz=294,slow=41
MDJ    Mudanjiang        49.68  33  P       P       19 42 34.3 +0.3
MDJ                                 AP      pP      19 42 43.1 -3.9
MDJ                                 PP      PP      19 44 31.3 +2.0
MDJ                                 SCS     ScS     19 52 21.8 +3.6
MDJ                                 AMB     AMB
       comp=Z,168nm,1.7s,mb5.8
MDJ                                 AMB     AMB
       comp=Z,663nm,5.0s
MDJ                                 LR      LR
       comp=N,3µm,18.4s,MS5.3
MDJ                                 LR      LR
       comp=E,1µm,18.9s,MS5.3
MDJ                                 LR      LR
       comp=Z,3µm,17.2s,MS5.4
MDJ    Mudanjiang        49.68  33 eP       P       19 42 33.7 -0.3
       comp=Z,528nm,1.6s,mb6.3
MDJ                                epP      pP      19 42 47.6 +0.6
VLA    Vladivostok       50.01  36⇓iP       P       19 42 37.0 +0.5
VLA                                e        pP      19 42 49.0 -0.6
VLA                                i                19 44 32.0
VLA                                eSS      SS      19 53 11.0 -1.5
VLA                                 pmax    pmax
       comp=N,1µm,7.0s
VLA                                 pmax    pmax
       comp=Z,1µm,7.0s
VLA                                 pmax    pmax
       comp=E,1µm,5.6s
VLA                                 pmax    pmax
       comp=E,500nm,10.0s
VLA                                 pmax    pmax
       comp=N,500nm,11.0s
VLA                                 pmax    pmax
       comp=E,600nm,10.0s
VLA                                 MLR     MLR
       comp=N,3µm,16.0s,MS5.6
VLA                                 MLR     MLR
       comp=Z,6µm,16.0s,MS5.7
VLA                                 MLR     MLR
       comp=E,4µm,15.0s,MS5.6
NVS    Novosibirsk       50.10 352⇑iP       P       19 42 35.6 -1.4
NVS                                i *PP    pP      19 42 47.6 -2.5
NVS                                i S      S       19 49 42.4 -1.2
NVS                                 pmax    pmax
       comp=Z,288nm,1.2s,mb6.2
NVS                                 pmax    pmax
       comp=N,380nm,1.7s
NVS                                 pmax    pmax
       comp=E,180nm,1.5s
NVS                                 smax
       comp=N,173nm,1.8s
NVS                                 smax
       comp=E,284nm,1.8s
CBIJ   Chichi jima       50.25  59  P       P       19 42 37.2 -1.4
       comp=E,174nm,0.8s,mb6.2,baz=239,slow=5.8,SNR=8.4
CBIJ                                LR      LR      20 01 10.7
       comp=E,1µm,20.8s,MS4.8,baz=296,slow=33
MAJO   Matsushiro        50.60  46 eP       P       19 42 39.7 -1.5
MAJO                                pmax    pmax
       comp=Z,324nm,1.8s,mb6.0
MAJO   Matsushiro        50.60  46 eP       P       19 42 39.7 -1.5
       comp=Z,324nm,1.8s,mb6.0
MAT    Matsushiro        50.60  46 eP       P       19 42 40.0 -1.2
MAT                                eS       S       19 50 08.0  +17
MAT                                 pmax    pmax
       comp=Z,646nm,2.2s,mb6.2
MAT                                 MLR     MLR
       comp=Z,4µm,22.0s,MS5.3
MAT    Matsushiro        50.60  46 eP       P       19 42 40.0 -1.2
       comp=Z,646nm,2.2s,mb6.2
MAT                                eS       S       19 50 08.0  +17
MAT                                 LR      LR
       comp=Z,4µm,22.0s,MS5.3
MAT    Matsushiro        50.60  46  P       P       19 42 40.3 -0.9
MAT                                 S       S       19 50 08.0  +17
BVA0   Borovoye Array    51.39 342 i P      P       19 42 46.1 -0.8
BVA0                                pmax    pmax
       comp=Z,24nm,1.0s,mb5.1
BVAR   Borovoye Array    51.39 342  P       P       19 42 46.0 -0.8
       comp=Z,38nm,0.6s,mb5.5,baz=143,slow=8.8,SNR=359
BVAR                                pP      pP      19 42 60.0  0.0
       comp=Z,67nm,0.7s,baz=150,slow=12,SNR=13
BVAR                                S       S       19 50 02.0 +0.6
       comp=Z,3.7nm,0.8s,baz=156,slow=18,SNR=5.7
CHKZ   Chkalovo          51.88 342  P       P       19 42 50.2 -0.3
CHKZ                                pmax    pmax
       comp=Z,314nm,1.1s,mb6.2
KLR    Kul'dur           53.84  29⇓iP       P       19 43 02.0 -3.2
KLR                                e        pP      19 43 15.7 -2.7
KLR                                e                19 44 17.5
KLR                                 MLR     MLR
       comp=N,1µm,13.5s,MS5.5
KLR                                 MLR     MLR
       comp=E,3µm,13.5s,MS5.5
KLR                                 MLR     MLR
       comp=Z,4µm,13.5s,MS5.7
BHD    Baghdad           54.08 308 i P      P       19 43 04.0 -3.2
BHD                                epP      pP      19 43 16.5 -3.9
BHD                                eS       S       19 50 35.0 -3.3
BOD    Bodaibo           54.45  13⇑iP       P       19 43 08.8 -0.7
BOD                                e                19 50 41.8
BOD                                 pmax    pmax
       comp=Z,217nm,1.2s,mb6.0
PMG    Port Moresby      54.56 106 eP       P       19 43 09.7 -1.2
PMG                                e                19 44 14.3
PMG                                 pmax    pmax
       comp=Z,196nm,1.3s
PMG                                 MLR     MLR
       comp=Z,582nm,19.0s
PMG    Port Moresby      54.56 106  P       P       19 43 10.1 -0.8
       comp=Z,48nm,0.7s,mb5.7,baz=316,slow=6.3,SNR=21
PMG    Port Moresby      54.56 106 eP       P       19 43 09.7 -1.2
       comp=Z,196nm,1.3s,mb6.0
PMG                                ePcP     PcP     19 44 14.3 +0.7
PMG                                eScP             19 48 07.7
PMG                                 LR      LR
       comp=Z,582nm,19.0s,MS4.7
MSL    Mosul             56.10 311 epP      P       19 43 20.0 -1.8
MSL                                eS       S       19 51 02.0 -3.4
GNI    Garni             56.37 315 eP       P       19 43 22.5 -1.1
GNI                                e*PP     pP      19 43 36.1 -0.9
GNI                                 pmax    pmax
       comp=Z,187nm,1.4s
GNI    Garni             56.37 315  P       P       19 43 23.5 -0.2
       comp=Z,60nm,1.2s,mb5.5,baz=47,slow=2.5,SNR=26
GNI    Garni             56.37 315 eP       P       19 43 22.5 -1.1
       comp=Z,187nm,1.4s,mb5.9
GNI                                epP      pP      19 43 36.1 -0.9
CLNS   Chul'man          56.62  19 eP       P       19 43 24.5 -0.7
CLNS                               e                19 44 19.1
CLNS                               e                19 45 28.6
CLNS                               eS       S       19 51 14.6 +2.6
CLNS                                pmax    pmax
       comp=Z,99nm,1.2s,mb5.7
CLNS                                pmax    pmax
       comp=N,74nm,1.4s
CLNS                                pmax    pmax
       comp=E,45nm,1.2s
CLNS                                pmax    pmax
       comp=Z,12nm,1.0s,mb4.9
CLNS                                pmax    pmax
       comp=N,15nm,1.1s
CLNS                                pmax    pmax
       comp=E,16nm,1.3s
CLNS                                smax
       comp=N,204nm,12.2s
CLNS                                smax
       comp=Z,171nm,12.9s
CLNS                                smax
       comp=E,47nm,13.2s
CLNS                                MLR     MLR
       comp=Z,4µm,21.0s,MS5.5
CLNS                                MLR     MLR
       comp=N,2µm,17.0s,MS5.4
CLNS                                MLR     MLR
       comp=E,450nm,16.0s,MS5.4
CTA    Charters Tower    56.87 118 eP       P       19 43 26.2 -1.3
       comp=E,42nm,1.4s,mb5.3
CTA    Charters Tower    56.87 118 eP       P       19 43 26.2 -1.3
CTA                                 pmax    pmax
       comp=Z,42nm,1.4s
CTA    Charters Tower    56.87 118  LR      LR      20 08 48.7
       comp=Z,2µm,21.4s,MS5.2,baz=287,slow=37
CTAO   Charters Tower    56.87 118 eP       P       19 43 26.4 -1.1
CTAO                               e*PP     pP      19 43 39.2 -1.7
CTAO                                pmax    pmax
       comp=Z,156nm,1.4s,mb5.8
CTAO                                MLR     MLR
       comp=Z,2µm,22.0s,MS5.2
CTAO   Charters Tower    56.87 118 eP       P       19 43 26.4 -1.2
       comp=Z,156nm,1.4s,mb5.8
CTAO                               epP      pP      19 43 39.2 -1.7
CTAO                                LR      LR
       comp=Z,2µm,22.0s,MS5.2
MTA    Mtatsminda        56.98 317  P       P       19 43 26.9 -1.1
TI2    Plekhanov         57.02 317αiP       P       19 43 27.4 -0.9
TI2                                i S      S       19 51 17.6 +0.1
TI2                                                 19 53 17.6
TI2                                 pmax    pmax
       comp=Z,110nm,0.8s,mb5.9
TI2                                 MLR     MLR
       comp=N,2µm,15.0s,MS5.4
TI2                                 MLR     MLR
       comp=E,2µm,15.0s,MS5.4
TI2                                 MLR     MLR
       comp=Z,1µm,15.0s,MS5.0
ASAJ   Asahikawa         57.08  40  P       P       19 43 28.3 -0.3
       comp=Z,23nm,0.9s,mb5.2,baz=253,slow=12,SNR=12
KMBO   Kilima Mbogo      57.49 265 i P      P       19 43 34.2 +2.3
KMBO                                pmax    pmax
       comp=Z,8.0nm,1.0s
KMBO   Kilima Mbogo      57.49 265  P       P       19 43 33.1 +1.2
       comp=Z,7.9nm,1.0s,mb4.7,baz=58,slow=8.9,SNR=11
KMBO                                LR      LR      20 04 08.4
       comp=Z,3µm,21.7s,MS5.3,baz=93,slow=32
KMBO   Kilima Mbogo      57.49 265 eP       P       19 43 32.8 +0.9
       comp=Z,47nm,1.3s,mb5.4
SVE    Sverdlovsk        57.78 339⇑iP       P       19 43 33.6 +0.2
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SVE                                e                  19 44 31.8
SVE                                e                  19 45 49.8
SVE                                e                  19 51 28.0
SVE                                 pmax     pmax
      comp=Z,600nm,2.5s,mb6.2
STKA  Stephens Creek    58.22 133⇑iP       P        19 43 36.1 -0.7
      comp=Z,38nm,1.1s,mb5.3
STKA  Stephens Creek    58.22 133   P       P        19 43 36.2 -0.6
      comp=Z,40nm,1.0s,mb5.4,baz=308,slow=7.2,SNR=32
STKA                                LR       LR       20 09 25.9
      comp=Z,983nm,21.7s,MS4.9,baz=300,slow=37
STKA  Stephens Creek    58.22 133  eP       P        19 43 35.9 -0.9
ONI   Oni               58.26 318   P       P        19 43 36.2 -0.7
YSS   Yuzh-Sakhalins    58.53  37⇑iP       P        19 43 38.0 -0.8
YSS                                i        pP       19 43 51.0 -1.2
YSS                                 S       S        19 51 34.0 -3.2
YSS                                 pmax     pmax
      comp=N,70nm,1.3s
YSS                                 pmax     pmax
      comp=Z,300nm,1.3s,mb6.2
YSS                                 pmax     pmax
      comp=E,370nm,2.0s
YSS                                 pmax     pmax
      comp=Z,110nm,1.1s,mb5.8
YSS                                 MLR      MLR
      comp=N,2µm,20.0s,MS5.3
YSS                                 MLR      MLR
      comp=E,2µm,20.0s,MS5.3
YSS                                 MLR      MLR
      comp=Z,2µm,20.0s,MS5.3
YUK   Yuzh-Kuril'sk     59.15  41  eP       P        19 43 41.0 -2.1
YUK                                 pmax     pmax
      comp=Z,2µm,2.0s
YUK                                 MLR      MLR
      comp=Z,3µm,21.0s,MS5.4
YUK                                 MLR      MLR
      comp=N,3µm,22.0s,MS5.5
YUK                                 MLR      MLR
      comp=E,3µm,20.0s,MS5.5
KIV   Kislovodsk        59.34 319   P       P        19 43 43.3 -1.1
      comp=E,495nm,0.9s,mb6.5,SNR=19
KIV   Kislovodsk        59.34 319c iP       P        19 43 42.7 -1.7
KIV                                e        pP       19 43 56.2 -1.6
KIV                                i S      S        19 51 44.4 -3.2
KIV                                eSS      SS       19 55 41.1 -3.3
KIV                                 pmax     pmax
      comp=Z,164nm,1.7s,mb5.8
KIV                                 MLR      MLR
      comp=Z,600nm,24.0s,MS4.6
KIV   Kislovodsk        59.34 319  eP       P        19 43 42.7 -1.7
      comp=Z,129nm,1.2s,mb5.8
KIV                                epP      pP       19 43 56.2 -1.6
GOF   Gofitskoye        59.58 320⇓iP       P        19 43 44.0 -2.0
GOF                                i        pP       19 43 57.5 -2.0
GOF                                eS       S        19 51 49.0 -1.7
GOF                                 pmax     pmax
      comp=Z,60nm,1.2s,mb5.5
GOF                                 smax
      comp=N,2µm,6.0s
ASF   Jabal al Asfar    59.81 304   P       P        19 43 48.7 +0.8
      comp=N,18nm,1.0s,mb5.0,baz=335,slow=6.7,SNR=25
GZT   Gaziantep         60.65 310  i P      P        19 43 53.4 -0.1
EIL   Elat              60.91 301   P       P        19 43 55.6 +0.2
      comp=N,12nm,0.6s,mb5.2,baz=90,slow=5.8,SNR=31
EIL   Elat              60.91 301  eP       P        19 43 55.2 -0.2
      comp=N,90nm,1.3s,mb5.7
HWQ   Hawqa             61.09 306  eP       P        19 43 57.1 +0.6
SOC   Sochi             61.16 317  i P      P        19 43 54.5 -2.4
SOC                                e                  19 44 37.2
SOC                                e                  19 46 09.0
SOC                                eS       S        19 52 10.7 -0.4
SOC                                eSS      SS       19 56 13.3 +0.3
SOC                                 pmax     pmax
      comp=Z,90nm,1.3s,mb5.7
SOC                                 pmax     pmax
      comp=N,39nm,1.0s
SOC                                 pmax     pmax
      comp=E,25nm,0.8s
SOKR  Solikamsk         61.18 339c iP       P        19 43 55.9 -0.9
SOKR                                S       S        19 52 11.1  0.0
SOKR                                SS      SS       19 56 16.9 +3.9
SOKR                                pmax     pmax
      comp=Z,100nm,1.0s,mb5.9
SOKR                                MLR      MLR
      comp=Z,2µm,21.0s,MS5.2
BHL   Bhannes           61.24 306  eP       P        19 43 58.0 +0.5
MATL  Matirih           61.40 305  eP       P        19 43 59.3 +0.7
YAK   Yakutsk           62.21  18  eP       P        19 44 01.5 -2.2
YAK                                 pmax     pmax
      comp=Z,288nm,1.3s,mb6.2
YAK   Yakutsk           62.21  18  eP       P        19 44 01.5 -2.1
      comp=Z,288nm,1.3s,mb6.2
CSS   Prodhromos        63.35 306 ⇑P        P        19 44 10.9 -0.7
      comp=Z,2.3nm,1.3s
CSS   Prodhromos        63.35 306⇑eP       P        19 44 10.9 -0.7
MAMC  Mammari           63.48 307 ⇑P        P        19 44 12.3 -0.2
MAMC  Mammari           63.48 307⇑eP       P        19 44 12.3 -0.2
SZAC  Souni-Zanaja      63.66 306 ⇑P        P        19 44 13.5 -0.2
SZAC  Souni-Zanaja      63.66 306⇑eP       P        19 44 13.5 -0.2
BOYT  Boyabat           63.80 314  i P      P        19 44 13.4 -1.1
TOO   Toolangi          63.88 137  eP       P        19 44 15.6 +0.5
      comp=Z,3.0nm,1.1s
TOO   Toolangi          63.88 137  eP       P        19 44 15.6 +0.5
TOO                                 pmax     pmax
      comp=Z,3.0nm,1.1s
MBAR  Mbarara           63.89 267  eP       P        19 44 17.3 +1.7
MBAR                               e*PP     pP       19 44 33.9 +4.8
MBAR                                pmax     pmax
      comp=Z,48nm,1.2s,mb5.4
MBAR  Mbarara           63.89 267  eP       P        19 44 17.3 +1.7
      comp=Z,48nm,1.2s,mb5.4
MBAR                               epP      pP       19 44 33.9 +4.7
ALFC  Alevga            63.98 306 ⇑P        P        19 44 15.0 -0.7
      comp=Z,1.9nm,0.8s
ALFC  Alevga            63.98 306⇑eP       P        19 44 15.0 -0.7
BRTR  Keskin Array B    64.26 312   P       P        19 44 15.9 -1.5
      comp=Z,33nm,1.0s,mb5.3,baz=121,slow=7.2,SNR=113
BRTR                                PKP2bc            20 13 12.0
      comp=Z,0.4nm,0.6s,baz=207,slow=2.8,SNR=3.7
BRTR  Keskin Array B    64.26 312   P       P        19 44 15.9 -1.5
BRTR                              ⇑e                  20 13 12.0
VOR   Voronezh          64.75 326⇑iP       P        19 44 18.0 -2.5
VOR                                 pmax     pmax
      comp=Z,300nm,2.0s,mb6.0
ANTO  Ankara            64.92 312 ⇑P        P        19 44 20.4 -1.4
BALT  Daday             64.93 314  i P      P        19 44 20.3 -1.5
SIM   Simferopol'       65.41 317ceP       P        19 44 24.4 -0.5
SIM                                eS       S        19 53 02.0 -2.0
SIM                                 pmax     pmax
      comp=Z,57nm,1.0s,mb5.6
SIM                                 MLR      MLR
      comp=Z,600nm,20.0s,MS4.8
CNB   Canberra Magne    65.55 133  eP       P        19 44 25.8 -0.1
      comp=Z,2µm,1.5s
ISP   Isparta           66.19 309 ⇑P        P        19 44 29.0 -0.9
ISP   Isparta           66.19 309  eP       P        19 44 28.0 -1.9
ESKT  Eskisehir         66.30 311  i P      P        19 44 29.4 -1.2
HENT  Hendek            66.56 312  i P      P        19 44 30.9 -1.4
HNR   Honiara           66.92 103  eP       P        19 44 33.9 -1.0
HNR                                 pmax     pmax
      comp=Z,218nm,0.9s,mb6.2
HNR   Honiara           66.92 103  eP       P        19 44 33.9 -1.0
      comp=Z,218nm,0.9s,mb6.2
MOS   Moscow            67.32 329αiP       P        19 44 35.7 -1.0
MOS                                i        pP       19 44 49.3 -1.1
MOS                                e                  19 45 09.6
MOS                                eS       S        19 53 24.2 -2.8
MOS                                ePS      PS       19 53 55.1 -1.7
MOS                                 pmax     pmax
      comp=Z,800nm,1.7s,mb6.5
MOS                                 pmax     pmax
      comp=Z,436nm,1.4s,mb6.3
OBN   Obninsk           67.60 328   P       P        19 44 37.5 -1.0
      comp=Z,886nm,0.9s,SNR=26
OBN   Obninsk           67.60 328c iP       P        19 44 37.0 -1.5
OBN                                i        pP       19 44 50.8 -1.4
OBN                                i                  19 45 04.9
OBN                                i                  19 47 06.8
OBN                                i S      S        19 53 27.4 -3.0
OBN                                eSS      SS       19 57 54.8 +1.6
OBN                                 pmax     pmax
      comp=Z,398nm,1.6s,mb6.2
OBN                                 MLR      MLR
      comp=Z,700nm,23.0s,MS4.8
OBN   Obninsk           67.60 328  eP       P        19 44 36.7 -1.8
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      comp=Z,318nm,1.3s,mb6.2
OBN                                epP      pP       19 44 50.6 -1.6
OBN                                 LR       LR
      comp=Z,280nm,22.0s,MS4.4
MANT  Manisa            67.83 309  i P      P        19 44 40.1 -0.1
SKR   Severo-Kuril's    68.10  37  eP       P        19 44 38.2 -3.5
SKR                                e        pP       19 44 54.5 -0.9
SKR                                 pmax     pmax
      comp=N,70nm,1.0s
SKR                                 pmax     pmax
      comp=Z,220nm,1.0s,mb6.1
SKR                                 pmax     pmax
      comp=E,240nm,1.5s
AYDN  Tasoluk           68.20 308  i P      P        19 44 41.0 -1.6
LSZ   Lusaka            68.76 251  eP       P        19 44 46.8 +0.5
LSZ                                 pmax     pmax
      comp=Z,56nm,1.3s,mb5.3
LSZ   Lusaka            68.76 251  eP       P        19 44 46.8 +0.5
      comp=Z,56nm,1.3s,mb5.3
MA2   Magadan           68.79  27  eP       P        19 44 44.8 -1.0
MA2                                 pmax     pmax
      comp=Z,164nm,1.3s,mb5.8
MA2   Magadan           68.79  27  eP       P        19 44 44.8 -1.0
      comp=Z,164nm,1.3s,mb5.8
TLCR                    69.09 316 ⇑P        P        19 44 46.5 -1.4
TIRR  Tirgusor          69.20 316   P       P        19 44 47.9 -0.7
CFR   Carcaliu          69.55 316   P       P        19 44 50.1 -0.7
TIXI  Tiksi             69.56  11⇑iP       P        19 44 48.6 -1.8
TIXI                                pmax     pmax
      comp=Z,426nm,1.6s,mb6.1
TIXI                                pmax     pmax
      comp=N,91nm,1.7s
TIXI                                pmax     pmax
      comp=E,81nm,1.7s
TIXI                                pmax     pmax
      comp=Z,614nm,1.4s,mb6.3
TIXI                                MLR      MLR
      comp=Z,3µm,19.0s,MS5.6
HARR  Harsova           69.58 316   P       P        19 44 50.2 -0.8
PRD   Provadia          69.64 314  i P      P        19 44 48.5 -2.8
SANT  Santorini         69.90 307  eP       P        19 44 51.5 -1.5
      comp=Z,126nm,1.3s,mb5.7
APE   Apeiranthos       69.95 307  i P      P        19 44 52.3 -1.0
JMB   Yambol            70.08 313  i P      P        19 44 54.0  0.0
ALN   Alexandroupoli    70.18 311  eP       P        19 44 53.5 -1.2
IDI   Anoyia            70.21 305   P       P        19 44 54.8 -0.2
      comp=Z,33nm,0.7s,mb5.3,baz=98,slow=6.9,SNR=23
AKASG Malin Array Be    70.25 322   P       P        19 44 53.0 -1.9
      comp=Z,20nm,0.6s,mb5.2,baz=87,slow=4.9,SNR=152
PET   Petropavlovsk     70.34  35  eP       P        19 44 53.7 -1.7
PET                                e        pP       19 45 10.7 +1.6
PET                                e                  19 47 38.1
PET                                ePPP     PPP      19 49 16.6 +2.8
PET                                eS       S        19 54 02.8  0.0
PET                                 pmax     pmax
      comp=Z,58nm,1.2s,mb5.4
PET                                 pmax     pmax
      comp=Z,200nm,11.7s
PET                                 MLR      MLR
      comp=Z,2µm,20.0s,MS5.3
PET   Petropavlovsk     70.34  35  eP       P        19 44 53.9 -1.5
      comp=Z,59nm,1.2s,mb5.4
PET                                 LR       LR
      comp=Z,2µm,21.0s,MS5.4
IAS   Iasi              70.41 318   P       P        19 44 55.2 -0.7
VRI   Vrincioaia        70.67 317   P       P        19 44 57.6  0.0
SZH   Strazhica         70.70 314  eP       P        19 44 57.5 -0.3
LOS   Limnos            70.74 310  eP       P        19 44 56.9 -1.1
DIM   Dimitrovgrad      70.76 313  i P      P        19 44 58.0 -0.2
KDZ   Kurdzhali         70.78 312  eP       P        19 44 59.0 +0.7
BUC1  Bucharest         70.84 315   P       P        19 44 58.9 +0.3
SEY   Seymchan          71.02  24  eP       P        19 45 00.3 +0.9
SEY                                                   19 45 21.8
SEY                                eS       S        19 54 15.3 +4.8
SEY                                eSS      SS       19 58 39.4 -6.9
SEY                                 pmax     pmax
      comp=Z,60nm,1.2s,mb5.4
SEY                                 pmax     pmax
      comp=E,30nm,0.9s
SEY                                 smax
      comp=N,1µm,24.9s
SEY                                 smax
      comp=E,700nm,22.5s
SEY                                 MLR      MLR
      comp=Z,7µm,19.0s,MS5.9
SEY                                 MLR      MLR
      comp=N,4µm,17.0s,MS5.9
SEY                                 MLR      MLR
      comp=E,5µm,18.0s,MS5.9
PVL   Pavlikeni         71.12 314  eP       P        19 45 01.0 +0.7
MLR   Muntele Rosu      71.13 316   P       P        19 45 00.4 +0.1
MLR   Muntele Rosu      71.13 316   P       P        19 45 00.2 -0.1
      comp=E,102nm,1.1s,mb5.7,baz=83,slow=1.6,SNR=96
RZN   Rozhen            71.30 312  i P      P        19 45 01.0 -0.4
PLD   Plovdiv           71.38 313  i P      P        19 44 58.5 -3.4
MTUR  Matau             71.69 316   P       P        19 45 03.4 -0.2
PGB   Panagyurishte     71.85 313  i P      P        19 45 04.0 -0.6
MMB   Musomiste         72.02 312  i P      P        19 45 04.5 -1.2
SRS   Serrai            72.05 311  eP       P        19 45 05.4 -0.4
BURAR Bucovina Array    72.06 318   P       P        19 45 06.0 +0.2
MNK   Minsk             72.13 326⇑eP       P        19 45 02.0 -4.1
SOH   Sokhos            72.18 311  eP       P        19 45 05.2 -1.5
THE   Thessaloniki      72.45 311  eP       P        19 45 06.9 -1.3
CASY  Casey             72.47 173  eP       P        19 45 05.2 -2.8
CASY  Casey             72.47 173  eP       P        19 45 07.6 -0.4
      comp=E,74nm,1.3s,mb5.5
PUL   Pulkovo           72.49 331⇑eP       P        19 45 07.5 -0.6
PUL                                i                  19 47 51.5
PUL                                eS       S        19 54 25.2 -2.3
PUL                                 pmax     pmax
      comp=Z,150nm,0.8s,mb6.0
PUL                                 pmax     pmax
      comp=N,134nm,1.1s
PUL                                 pmax     pmax
      comp=E,280nm,1.3s
PUL                                 pmax     pmax
      comp=Z,226nm,0.9s,mb6.1
PUL                                 pmax     pmax
      comp=N,177nm,1.1s
PUL                                 pmax     pmax
      comp=E,617nm,1.8s
PUL                                 smax
      comp=Z,65nm,6.4s
PUL                                 smax
      comp=N,228nm,9.1s
PUL                                 smax
      comp=E,69nm,6.0s
PUL                                 smax
      comp=N,513nm,1.4s
PUL                                 smax
      comp=E,303nm,1.6s
PUL                                 MLR      MLR
      comp=Z,1µm,21.0s,MS5.1
PUL                                 MLR      MLR
      comp=N,752nm,19.0s,MS5.2
PUL                                 MLR      MLR
      comp=E,1µm,19.0s,MS5.2
PUL   Pulkovo           72.49 331  i P      P        19 45 07.7 -0.4
KKB   Krupnik           72.54 312  i P      P        19 45 07.5 -1.3
VTS   Vitosha           72.55 313   P       P        19 45 08.4 -0.5
VTS   Vitosha           72.55 313  i P      P        19 45 08.0 -0.9
KNT   Kendrikon         72.57 311  eP       P        19 45 07.1 -1.9
AGG   Agios Georgios    72.72 309  eP       P        19 45 07.5 -2.4
LIT   Litokhoron        72.73 310  eP       P        19 45 08.6 -1.4
VAY   Valandovo         72.84 311⇑iP       P        19 45 09.2 -1.4
GRG   Griva             72.91 311  eP       P        19 45 09.2 -1.9
JOF   Joensuu           73.18 335  ep       P        19 45 11.2 -0.9
      comp=E,2.2nm,0.4s
JOF   Joensuu           73.18 335  eP       P        19 45 11.2 -0.9
JOF                                 pmax     pmax
      comp=Z,2.0nm,0.4s
LVV   L'vov             73.28 320  eP       P        19 45 10.2 -2.8
LVV                                e                  19 47 53.0
LVV                                ePPP     PPP      19 49 38.6 -3.7
LVV                                eS       S        19 54 32.2 -4.4
LVV                                eSS      SS       19 59 20.4 -1.0
LBTB  Lobatse           73.35 242  eP       P        19 45 14.9 +1.0
LBTB                                pmax     pmax
      comp=Z,48nm,1.0s,mb5.4
LBTB                                MLR      MLR
      comp=Z,3µm,20.0s,MS5.6
LBTB  Lobatse           73.35 242  eP       P        19 45 14.9 +0.9
      comp=Z,48nm,1.0s,mb5.4
LBTB                                LR       LR
      comp=Z,3µm,20.0s,MS5.6
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BARS  Barje             73.59 313⇑iP       P        19 45 13.5 -1.5
BOLS  Boljevac          73.64 314⇑iP       P        19 45 14.4 -0.9
SKO   Skopje            73.77 312⇑iP       P        19 45 14.4 -1.6
SKO                                 pmax     pmax
      comp=Z,27nm,1.0s,mb5.1
SKO   Skopje            73.77 312⇑iP       P        19 45 14.4 -1.6
      comp=Z,0.0nm,1.0s
LVZ   Lovozero          73.95 340  eP       P        19 45 15.1 -1.4
LVZ                                i        pP       19 45 29.2 -1.1
LVZ                                i                  19 48 03.8
LVZ                                i PPP    PPP      19 49 51.7 +3.1
LVZ                                eS       S        19 54 42.9 -0.8
LVZ                                 pmax     pmax
      comp=Z,29nm,1.0s,mb5.2
LVZ                                 pmax     pmax
      comp=N,13nm,1.2s
LVZ                                 pmax     pmax
      comp=E,18nm,1.5s
LVZ                                 smax
      comp=Z,51nm,5.1s
LVZ                                 smax
      comp=N,184nm,6.9s
LVZ                                 smax
      comp=E,39nm,6.2s
LVZ                                 smax
      comp=N,1µm,3.6s
LVZ                                 smax
      comp=Z,1µm,3.8s
LVZ                                 smax
      comp=E,604nm,3.9s
LVZ                                 MLR      MLR
      comp=N,971nm,21.0s,MS5.2
LVZ                                 MLR      MLR
      comp=Z,1µm,21.0s,MS5.2
LVZ                                 MLR      MLR
      comp=E,617nm,19.0s,MS5.2
LVZ   Lovozero          73.95 340  i P      P        19 45 15.6 -0.9
KWP   Kalwaria          74.08 320  eP       P        19 45 17.6 -0.1
KWP                                e*PP     pP       19 45 28.4 -3.1
KWP                                e        pP       19 45 32.7 +1.2
KWP                                eS       S        19 54 44.5 -1.1
KWP                                 pmax     pmax
      comp=Z,600nm,1.7s,mb6.2
KWP                                 MLR      MLR
      comp=Z,600nm,25.4s,MS4.8
KWP   Kalwaria          74.08 320  eP       P        19 45 17.6 -0.1
      comp=Z,600nm,1.7s,mb6.2
KWP                                epP      pP       19 45 28.4 -3.1
KWP                                ePcP     PcP      19 45 32.7 -0.2
KWP                                eS       S        19 54 44.5 -1.1
KWP                                 MLR      MLR      20 19 54.9
      comp=Z,600nm,25.4s,MS4.8
BZS   Buzias            74.14 316 ⇑P        P        19 45 18.0 -0.1
BZS   Buzias            74.14 316   P       P        19 45 17.9 -0.3
APA   Apatity           74.23 340⇑iP       P        19 45 18.3 +0.1
APA                                i        pP       19 45 29.7 -2.3
APA                                i        pP       19 45 35.9 +3.9
APA                                 pmax     pmax
      comp=Z,50nm,1.2s,mb5.3
APA                                 MLR      MLR
      comp=Z,2µm,20.0s,MS5.3
SVIS  Svilajnac         74.23 314⇑iP       P        19 45 17.5 -1.1
KOLS  Kolonicke sedl    74.24 319  i P      P        19 45 19.0 +0.4
KOLS                               i                  19 45 23.9
IGT   Igoumenitsa       74.32 309  eP       P        19 45 17.2 -2.0
GRUS  Gruza             74.54 314⇓iP       P        19 45 19.7 -0.8
BOSA  Boshof            74.56 238  eP       P        19 45 21.3 +0.4
BOSA                               e*PP     pP       19 45 35.6 +0.9
BOSA                                pmax     pmax
      comp=Z,104nm,1.2s,mb5.6
BOSA  Boshof            74.56 238  eP       P        19 45 21.3 +0.4
      comp=Z,104nm,1.2s,mb5.6
BOSA                               epP      pP       19 45 35.6 +0.9
SUW   Suwalki           74.66 325  eP       P        19 45 20.2 -0.7
SUW                                ePcP     PcP      19 45 33.7 -1.6
SUW                                eS       S        19 54 47.9 -4.0
SUW                                 MLR      MLR      20 23 45.5
      comp=Z,700nm,22.0s,MS4.9
CRVS  Cervenica-Dubn    74.76 319  i P      P        19 45 22.1 +0.5
BEO   Belgrade          74.85 315⇑iP       P        19 45 21.6 -0.6
PVY   Plav              74.92 313⇑iP       P        19 45 21.3 -1.3
FINES FINESS Array B    75.01 332   P       P        19 45 21.9 -0.9
      comp=Z,26nm,0.9s,mb5.1,baz=97,slow=6.0,SNR=61
FINES                               LR       LR       20 22 27.8
      comp=Z,1µm,20.9s,MS5.1,baz=104,slow=39
IVA   Berane            75.01 313⇑iP       P        19 45 22.2 -1.0
DIVS  Divcibare         75.08 314⇓iP       P        19 45 22.9 -0.6
KAF   Kangasniemi       75.10 333  ep       P        19 45 22.5 -0.8
      comp=Z,2.6nm,0.4s,baz=106,slow=5.3
KAF   Kangasniemi       75.10 333  eP       P        19 45 22.5 -0.8
KAF                                 pmax     pmax
      comp=Z,3.0nm,0.4s,mb4.6
KECS  Kecovo            75.34 319  i P      P        19 45 24.9  0.0
NOUC  Port Laguerre     75.38 114  eP       P        19 45 26.4 +0.6
NOUC  Port Laguerre     75.38 114  eP       P        19 45 26.4 +0.6
ULC   Ulcinj            75.39 312⇑iP       P        19 45 24.4 -1.0
PLE   Pljevlja          75.43 313⇑iP       P        19 45 25.5 -0.1
TTG   Podgorica         75.43 312⇑iP       P        19 45 24.3 -1.3
DZM   Mont Dzumac       75.50 114⇑iP       P        19 45 27.6 +1.2
NIE   Niedzica          75.59 320⇑iP       P        19 45 25.3 -1.0
PSZ   Piszkesteto       75.65 318 ⇑P        P        19 45 26.7  0.0
PSZ   Piszkesteto       75.65 318   P       P        19 45 26.6 -0.1
PSZ   Piszkesteto       75.65 318⇑iP       P        19 45 26.5 -0.2
NKY   Niksic            75.66 313⇑iP       P        19 45 25.6 -1.3
BUM   Brajici-Budva     75.68 312⇑iP       P        19 45 25.8 -1.2
UPM   Unac-Piva         75.76 313⇑iP       P        19 45 26.7 -0.8
HCY   Herceg Novi       75.99 312⇑iP       P        19 45 27.5 -1.3
BRY   Bratogost         76.00 313⇑iP       P        19 45 27.7 -1.1
OJC   Ojcow             76.04 320⇑iP       P        19 45 29.0 +0.1
MAW   Mawson            76.21 192  eP       P        19 45 31.3 +1.8
      comp=Z,19nm,1.4s,mb4.8
MAW   Mawson            76.21 192  eP       P        19 45 31.3 +1.8
MAW                                 pmax     pmax
      comp=Z,19nm,1.4s
MAW   Mawson            76.21 192   P       P        19 45 29.5  0.0
      comp=Z,4.6nm,0.6s,mb4.6,baz=332,slow=14,SNR=4.7
MAW                                 LR       LR       20 13 43.2
      comp=Z,2µm,20.4s,MS5.3,baz=13,slow=31
VYHS  Vyhne             76.42 318  i P      P        19 45 30.9 -0.2
SRO2  Moca              76.63 318  i P      P        19 45 33.8 +1.5
SRO1  Iza               76.74 318  i P      P        19 45 33.6 +0.7
OKC   Ostrava-Krasne    77.04 320⇑iP       P        19 45 34.7 +0.1
OKC                                epP      pP       19 45 48.8 +0.4
OKC                                 AMS      AMS      20 24 20.0
      comp=Z,400nm,16.6s
RAC   Raciborz          77.04 320  eP       P        19 45 35.0 +0.4
TIP   Timpagrande       77.05 309  eP       P        19 45 34.6 -0.3
KEV   Kevo              77.23 341  ep       P        19 45 35.1 -0.1
      comp=Z,1.7nm,0.5s
KEV   Kevo              77.23 341  eP       P        19 45 35.1 -0.1
KEV                                 pmax     pmax
      comp=Z,2.0nm,0.5s
GRI   Girifalco         77.29 308  eP       P        19 45 36.7 +0.5
ORI   Oriolo Calabro    77.34 310  eP       P        19 45 36.9 +0.4
SMOL  Smolenice         77.36 318  eP       P        19 45 37.2 +0.9
MORC  Moravsky Berou    77.42 320 ⇑P        P        19 45 36.9 +0.2
MORC  Moravsky Berou    77.42 320  eP       P        19 45 36.4 -0.2
      comp=Z,127nm,1.2s,mb5.7
MORC                               epP      pP       19 45 51.0 +0.5
ZST   Bratislava        77.54 318  i P      P        19 45 38.0 +0.6
ARCES ARCESS Array B    77.66 340   P       P        19 45 37.0 -0.6
      comp=Z,19nm,0.9s,mb5.0,baz=91,slow=5.5,SNR=45
ARCES                               pP       pP       19 45 51.9 +0.4
      comp=Z,47nm,1.1s,baz=100,slow=6.6,SNR=6.8
ARCES                               LR       LR       20 22 26.7
      comp=Z,1µm,21.6s,MS5.2,baz=114,slow=38
ARE0  ARCESS Array S    77.66 340  eP       P        19 45 36.9 -0.7
ARE0                               epP      pP       19 45 51.0 -0.5
SCLL  Scilla            77.81 308  eP       P        19 45 39.6 +0.5
SOP   Sopron            77.85 317  eP       P        19 45 39.3 +0.2
VRAC  Vranov            77.99 319   P       P        19 45 39.6 -0.1
      comp=Z,17nm,0.8s,mb5.0,baz=88,slow=8.2,SNR=25
VRAC  Vranov            77.99 319   P       P        19 45 40.2 +0.4
GKP   Gorka Klasztor    78.03 323  eP       P        19 45 39.5 -0.4
GKP                                eS       S        19 55 26.5 -2.1
GKP                                 pmax     pmax
      comp=Z,400nm,1.7s,mb6.1
GKP                                 MLR      MLR
      comp=Z,600nm,23.2s,MS4.8
GKP   Gorka Klasztor    78.03 323  eP       P        19 45 39.5 -0.4
      comp=Z,0.4nm,1.7s
GKP                                eS       S        19 55 26.5 -2.1
GKP                                 LR       LR
      comp=Z,600nm,23.2s,MS4.8
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GKP   Gorka Klasztor   78.03 323  eP     P      19 45 39.5 -0.4
      comp=Z,400nm,1.7s,mb6.1
GKP                               eS     S      19 55 26.5 -2.1
GKP                                MLR   MLR    20 25 48.8
      comp=Z,600nm,23.2s,MS4.8
VKA   Vienna           78.07 318⇑iP     P      19 45 40.4 +0.2
FG4   Candela          78.11 311  eP     P      19 45 41.1 +0.4
MRLC  Muro Lucano      78.11 310  eP     P      19 45 40.6 -0.1
BILL  Bilibino         78.24  21c iP     P      19 45 39.8 -1.0
BILL                               pmax  pmax
      comp=Z,131nm,1.7s,mb5.6
BILL                               MLR   MLR
      comp=Z,5µm,20.0s,MS5.8
BILL  Bilibino         78.24  21  eP     P      19 45 39.6 -1.2
      comp=Z,222nm,1.6s,mb5.8
SGO   Sicignano        78.24 310  eP     P      19 45 41.0 -0.4
DPC   Dobruska-Polom   78.27 320⇑iP     P      19 45 42.1 +0.8
DPC                               epP    pP     19 45 54.3 -0.9
DPC                                AMS   AMS    20 25 00.0
      comp=Z,500nm,20.0s
KSP   Ksiaz            78.33 321⇑eP     P      19 45 41.9 +0.3
KSP                               epP    pP     19 45 55.6 +0.1
KSP                               eS     S      19 55 25.5 -6.5
KSP                               eSSS   SSS    20 04 06.0 +9.3
KSP   Ksiaz            78.33 321  eP     P      19 45 42.2 +0.5
      comp=Z,700nm,1.7s,mb6.3
KSP                               e      pP     19 45 56.2 +0.7
KSP                                MLR   MLR    20 25 32.0
      comp=Z,800nm,22.4s,MS5.0
UPC   Upice            78.48 320⇑iP     P      19 45 42.8 +0.3
UPC                               epP    pP     19 45 57.3 +1.0
ARSA  Arzberg          78.52 317⇑iP     P      19 45 43.0 +0.3
      comp=Z,631nm,2.0s,mb6.2
BOJS  Bojanci          78.58 315  eP     P      19 45 43.0 -0.1
BOJS                              e      pP     19 45 57.1 +0.1
VAE   Valguarnera      78.81 307   P     P      19 45 45.6 +1.0
      comp=Z,26nm,1.0s,mb5.1,baz=69,slow=4.4,SNR=5.0
VISS  Visnje           78.89 315  eP     P      19 45 44.8  0.0
VISS                              e      pP     19 45 58.9 +0.2
FX1   Attu Island--F   78.89  37   P     P      19 45 44.4 -0.2
      comp=Z,41nm,0.8s,mb5.4,baz=339,slow=2.0,SNR=8.0
DRV   Dumont d'Urvil   78.96 163   P     pP     19 45 59.0 +0.3
DRV                                S     S      19 55 39.0 +0.7
LJU   Ljubljana        79.12 316  eP     P      19 45 46.3 +0.2
LJU                               e      pP     19 46 00.6 +0.6
OBKA  Obir             79.13 316⇑iP     P      19 45 46.5 +0.4
      comp=Z,663nm,2.1s,mb6.2
SUR   Sutherland       79.20 236  eP     P      19 45 48.8 +2.0
      comp=Z,170nm,1.4s,mb5.8
SUR                               epP    pP     19 46 00.8 +0.1
PRU   Pruhonice        79.37 320⇑iP     P      19 45 47.5 +0.1
PRU                               epP    pP     19 45 58.2 -3.1
PRU                                AMS   AMS    20 25 50.0
      comp=Z,600nm,24.9s
PVCC  Panska Ves       79.40 320⇑iP     P      19 45 48.1 +0.6
PVCC                              epP    pP     19 46 01.5 +0.1
MOA   Molln            79.41 318⇑iP     P      19 45 47.3 -0.3
      comp=Z,182nm,1.8s,mb5.7
SDI   San Donato       79.42 311  eP     P      19 45 46.8 -1.0
JAVS  Javornik         79.43 316  eP     P      19 45 47.3 -0.5
JAVS                              e      pP     19 46 00.7 -1.0
TSUM  Tsumeb           79.44 249  eP     P      19 45 48.4  0.0
      comp=Z,11nm,0.9s,mb4.8
VOY   Vojsko           79.56 316⇑eP     P      19 45 48.2 -0.3
BSD   Bornholm Skovb   79.58 325⇑iP     P      19 45 47.6 -0.8
BSD                                pmax  pmax
      comp=Z,55nm,0.7s,mb5.6
BSD   Bornholm Skovb   79.58 325⇑iP     P      19 45 47.6 -0.8
      comp=Z,55nm,0.7s,mb5.6
TRI   Trieste          79.63 315  eP     P      19 45 48.5 -0.4
PTQR  Pietraquaria     79.74 312  eP     P      19 45 49.5  0.0
AQU   L'Aquila         79.75 312   P     P      19 45 50.1 +0.5
BRG   Berggiesshubel   79.82 321⇑iP     P      19 45 50.1 +0.3
BRG                               i      pP     19 46 05.1 +1.4
BRG                               eS     S      19 55 48.0 +0.3
BRG                                pmax  pmax
      comp=Z,244nm,1.7s,mb5.9
BRG                                MLR   MLR
      comp=N,890nm,20.0s,MS5.2
BRG                                MLR   MLR
      comp=E,470nm,20.0s,MS5.2
BRG                                MLR   MLR
      comp=Z,530nm,20.0s,MS4.9
BRG   Berggiesshubel   79.82 321⇑iP     P      19 45 50.1 +0.3
      comp=Z,244nm,1.7s,mb5.9
BRG                               i      pP     19 46 05.1 +1.4
BRG                               e             19 49 08.7
BRG                               eS     S      19 55 48.0 +0.3
BRG                                LR    LR
      comp=Z,530nm,20.0s,MS4.9
GEC2  GERESS Array S   79.84 319  eP     P      19 45 50.4 +0.5
GEC2                               pmax  pmax
      comp=Z,194nm,1.2s,mb5.9
GEC2  GERESS Array S   79.84 319  eP     P      19 45 50.4 +0.5
      comp=Z,194nm,1.2s,mb5.9
GERES GERESS Array B   79.84 319   P     P      19 45 50.3 +0.3
      comp=Z,57nm,0.7s,mb5.6,baz=90,slow=5.3,SNR=307
GERES                              pP    pP     19 46 04.5 +0.7
      comp=Z,34nm,0.9s,baz=90,slow=6.7,SNR=7.0
KHC   Kasperske Hory   79.94 319⇑iP     P      19 45 50.5  0.0
KHC                               epP    pP     19 46 04.7 +0.3
KHC                                AMS   AMS    20 25 50.0
      comp=Z,600nm,21.1s
PTCC  Patocco-Chiusa   79.95 316  eP     P      19 45 50.5  0.0
NRCA  Norcia           79.98 312  eP     P      19 45 50.5 -0.3
KBA   Koelnbreinsper   79.99 317⇑iP     P      19 45 50.4 -0.3
      comp=Z,417nm,3.2s
KBA   Koelnbreinsper   79.99 317⇑iP     P      19 45 50.4 -0.3
KBA                                pmax  pmax
      comp=Z,417nm,3.2s
GMNA  Gemona           80.03 316  eP     P      19 45 51.0 +0.1
RUE   Ruedersdorf      80.03 322  eP     P      19 45 50.8 -0.1
      comp=Z,174nm,0.9s,mb6.0
SNTG  Esanatoglia      80.12 313  eP     P      19 45 51.5 -0.1
ARV   Arcevia          80.13 313  eP     P      19 45 52.0 +0.4
FSSB  Fossombrone      80.25 313  eP     P      19 45 52.7 +0.5
MNS   Montasola        80.28 312  eP     P      19 45 51.6 -0.8
FVI   Forni Avoltri    80.36 316  eP     P      19 45 52.6 -0.1
WET   Wettzell         80.40 319  eP     P      19 45 53.3 +0.4
WET                                pmax  pmax
      comp=Z,115nm,1.1s,mb5.7
WET   Wettzell         80.40 319  eP     P      19 45 53.3 +0.4
      comp=Z,115nm,1.1s,mb5.7
CLL   Collm            80.44 321⇑iP     P      19 45 52.8 -0.2
CLL                               i *PP  pP     19 46 07.1 +0.1
CLL                               eS     S      19 55 51.0 -3.1
CLL                                pmax  pmax
      comp=Z,95nm,1.3s,mb5.6
CLL                                MLR   MLR
      comp=Z,700nm,17.5s,MS5.1
CLL   Collm            80.44 321⇑iP     P      19 45 52.8 -0.2
      comp=Z,95nm,1.3s,mb5.6
CLL                               i pP   pP     19 46 07.1 +0.1
CLL                               eS     S      19 55 51.0 -3.1
CLL                                LR    LR
      comp=Z,700nm,17.5s,MS5.1
CLL   Collm            80.44 321 ⇑P     P      19 45 52.8 -0.2
      comp=Z,logA/T=1.9,mb5.6
CLL                               i *PP  pP     19 46 07.1 +0.1
CLL                               i      pP     19 46 11.1 +4.1
CLL                               e             19 46 19.0
CLL                               eS     S      19 55 51.0 -3.1
RSM   Repubblica di    80.50 313  eP     P      19 45 54.3 +0.8
HFS   Hagfors          80.71 330   P     P      19 45 53.6 -0.8
      comp=Z,21nm,0.9s,mb5.0,baz=112,slow=8.0,SNR=23
NKC   Novy Kostel      80.73 320⇑iP     P      19 45 55.0 +0.4
NKC                               epP    pP     19 46 06.9 -1.7
CRE   Caprese Michel   80.85 313  eP     P      19 45 55.4  0.0
SFI   Santa Sofia      80.93 313  eP     P      19 45 56.8 +1.0
PGD   Poggio Sodo      81.02 313  eP     P      19 45 57.0 +0.7
CTI   Castel Tesino    81.12 316  eP     P      19 45 57.1 +0.3
VMG   Vicchio          81.15 314  eP     P      19 45 58.4 +1.4
WTTA  Wattenberg       81.16 317⇑iP     P      19 45 56.7 -0.2
      comp=Z,413nm,1.8s,mb6.1
WTTA  Wattenberg       81.16 317⇑iP     P      19 45 56.7 -0.2
WTTA                               pmax  pmax
      comp=Z,413nm,1.8s,mb6.1
WATA  Walderalm        81.20 317⇓iP     P      19 45 56.7 -0.5
      comp=Z,123nm,1.4s,mb5.6
WATA  Walderalm        81.20 317⇓iP     P      19 45 56.7 -0.5
WATA                               pmax  pmax
      comp=Z,123nm,1.4s,mb5.6
MOX   Moxa             81.28 320  eP     P      19 45 57.7 +0.2
MOX                               e      pP     19 46 11.9 +0.4
MOX                                pmax  pmax
      comp=Z,146nm,1.6s,mb5.7
MOX                                MLR   MLR
      comp=Z,500nm,22.0s,MS4.8
MOX   Moxa             81.28 320  eP     P      19 45 57.7 +0.2
      comp=Z,146nm,1.6s,mb5.7
MOX                               e      pP     19 46 11.9 +0.4
MOX                                LR    LR
      comp=Z,500nm,22.0s,MS4.8
MOX   Moxa             81.28 320  i P    P      19 45 57.7 +0.2
      comp=Z,logA/T=2.0,mb5.7
MOX                                pP    pP     19 46 12.0 +0.5
MOX                                L            20 28 28.0
FUR   Furstenfeldbru   81.43 318  eP     P      19 45 58.3  0.0
SQTA  Sankt Quirin     81.45 317⇑iP     P      19 45 58.2 -0.3
      comp=Z,62nm,1.0s,mb5.5
SQTA  Sankt Quirin     81.45 317⇑iP     P      19 45 58.2 -0.3
SQTA                               pmax  pmax
      comp=Z,62nm,1.0s,mb5.5
GRA1  Grafenberg Arr   81.50 319  eP     P      19 45 59.4 +0.7
      comp=Z,241nm,1.4s,mb5.9
GRA1                              epP    pP     19 46 13.6 +0.9
GRF   Grafenberg Arr   81.50 319  eP     P      19 45 59.4 +0.7
GRF                               e*PP   pP     19 46 13.6 +0.9
GRF                                pmax  pmax
      comp=Z,241nm,1.4s,mb5.9
GRF   Grafenberg Arr   81.50 319  eP     P      19 45 59.4 +0.7
GRF                               e*PP   pP     19 46 13.6 +0.9
GRF                                pmax  pmax
      comp=Z,241nm,1.4s,mb5.9
GRF   Grafenberg Arr   81.50 319  eP     P      19 45 59.4 +0.7
      comp=Z,241nm,1.4s,mb5.9
GRF                               epP    pP     19 46 13.6 +0.9
MOTA  Moosalm          81.53 317⇑iP     P      19 45 58.5 -0.3
      comp=Z,57nm,1.1s,mb5.4
MOTA  Moosalm          81.53 317⇑iP     P      19 45 58.5 -0.3
MOTA                               pmax  pmax
      comp=Z,57nm,1.1s,mb5.4
GRFL  Gerfalco         81.55 313  eP     P      19 45 58.6 -0.5
ZCCA  Zocca            81.56 314  eP     P      19 46 00.8 +1.7
BDI   Bagni Di Lucca   81.84 314  eP     P      19 45 59.9 -0.6
GSCL  Gusciola         81.84 314  eP     P      19 46 01.6 +1.1
SAL   Salo             81.90 315  eP     P      19 46 01.8 +1.0
ERBM  Eremo            81.97 314  eP     P      19 46 02.6 +1.4
SARO  Sassorosso       81.98 314   P     P      19 46 00.2 -1.0
VLC   Villacollemand   81.99 314  eP     P      19 46 00.7 -0.6
      comp=Z,93nm,1.4s,mb5.5
NB2   NORSAR Subarra   82.00 331   P     P      19 46 00.3 -0.7
      comp=Z,44nm,1.2s,mb5.3,baz=95,slow=5.3
NB2   NORSAR Subarra   82.00 331   P     P      19 46 00.3 -0.7
NB2                                pmax  pmax
      comp=Z,44nm,1.2s,mb5.3
NB2   NORSAR Subarra   82.00 331   P     P      19 46 00.3 -0.7
      baz=95,slow=5.6
NOA   NORSAR Array B   82.00 331   P     P      19 45 59.9 -1.1
      comp=Z,13nm,1.0s,mb4.8,baz=94,slow=5.5,SNR=10
NOA                                LR    LR     20 25 39.9
      comp=Z,880nm,21.3s,MS5.1,baz=85,slow=38
NOA   NORSAR Array B   82.00 331   P     P      19 45 59.9 -1.1
NOA                                LR    LR     20 25 39.9
BRMO  Bormio           82.01 316  eP     P      19 46 02.0 +0.6
VALM                   82.09 314   P     P      19 46 00.6 -1.2
FUORN Ofenpass         82.09 316⇑iP     P      19 46 02.4 +0.6
CLZ   Clausthal        82.10 321  eP     P      19 46 02.0 +0.3
      comp=Z,162nm,1.4s,mb5.8
HDH   Heidenheim       82.15 318⇑eP     P      19 46 01.7 -0.3
VINC  Vinca            82.16 314   P     P      19 46 01.5 -0.7
UBR   Uberruh          82.20 317⇑eP     P      19 46 02.2 -0.1
BACM                   82.21 314   P     P      19 46 01.5 -1.0
GRAM                   82.22 314   P     P      19 46 01.9 -0.6
BERNI Berninapass      82.25 316⇑iP     P      19 46 03.5 +0.9
DAVOX Davos            82.36 316   P     P      19 46 03.9 +0.8
      comp=Z,86nm,0.7s,mb5.8,baz=107,slow=3.7,SNR=116
DAVOX Davos            82.36 316⇑iP     P      19 46 03.8 +0.7
DAVA  Damuels          82.36 317⇓iP     P      19 46 03.4 +0.3
      comp=Z,382nm,1.8s,mb6.0
CODM                   82.37 314   P     P      19 46 02.5 -0.8
SIND  Sindeldorf       82.55 319⇑eP     P      19 46 04.4 +0.3
LIENZ Alp Oberkamor    82.62 317⇑eP     P      19 46 04.3 -0.2
VDL   Val di Lei       82.64 316⇑iP     P      19 46 04.8 +0.2
BOB   Bobbio (Coli)    82.66 314  eP     P      19 46 05.5 +0.8
PLONS Plons            82.70 317⇑iP     P      19 46 05.1 +0.2
BUCH  Bad Urach        82.72 318⇑eP     P      19 46 05.0 +0.1
STU   Stuttgart        82.82 318  eP     P      19 46 05.1 -0.4
STU                                pmax  pmax
      comp=Z,106nm,1.3s,mb5.7
STU   Stuttgart        82.82 318  eP     P      19 46 05.1 -0.3
      comp=Z,106nm,1.3s,mb5.7
GUT   Gutenstein       82.88 318⇑eP     P      19 46 05.7 -0.1
MUD   Monsted U'grnd   82.90 326  i P    P      19 46 06.4 +0.7
MUD                               i      pP     19 46 22.4 +2.7
MUD                                pmax  pmax
      comp=Z,60nm,1.2s,mb5.5
MUD   Monsted U'grnd   82.90 326  i P    P      19 46 06.4 +0.7
      comp=Z,60nm,1.2s,mb5.5
MUD                               i      pP     19 46 22.4 +2.7
MUGIO Muggio           82.94 315⇑iP     P      19 46 05.4 -0.7
LLS   Linth-Limmern    82.95 316⇑eP     P      19 46 06.2  0.0
WEIN  Weingarten       82.97 317⇑eP     P      19 46 06.2  0.0
GENL  Genova Univers   83.00 314   P     P      19 46 05.6 -0.9
PGF   Pioggiola        83.01 312  eP     P      19 46 06.7 +0.1
      comp=Z,362nm,1.6s,mb5.9
PGF   Pioggiola        83.01 312  eP     P      19 46 06.7 +0.1
PGF                                pmax  pmax
      comp=Z,181nm,1.6s,mb5.8
WILA  Wila             83.02 317⇑eP     P      19 46 06.5  0.0
STEIN Stein am Rhein   83.04 317⇑iP     P      19 46 06.5 -0.1
TOD   Tromm            83.08 319  eP     P      19 46 06.7  0.0
TOD   Tromm            83.08 319⇑eP     P      19 46 07.0 +0.3
LBG   Lerchenberg      83.09 318⇑eP     P      19 46 06.7 -0.1
SPAK  Spaichingen      83.10 318⇑eP     P      19 46 07.2 +0.3
VAI   Varese           83.13 315  eP     P      19 46 06.5 -0.6
SWS   Schriesheim      83.14 319⇑eP     P      19 46 07.1  0.0
SYO   Syowa Base       83.17 197 ⇓PcP   PcP    19 46 10.1 -1.6
SYO   Syowa Base       83.17 197 ⇓pP    pP     19 46 23.0 +2.2
TRULL Truellikon       83.17 317⇑iP     P      19 46 06.5 -0.8
TRULL Truellikon       83.17 317⇑iP     P      19 46 06.6 -0.7
FUSIO Fusio            83.19 316⇑iP     P      19 46 07.3 -0.1
MUO   Muotathal        83.21 317⇑iP     P      19 46 08.0 +0.5
MUO   Muotathal        83.21 317⇑iP     P      19 46 08.1 +0.6
ZUR   Zurich           83.24 317⇑eP     P      19 46 07.5 -0.1
FLACH Flaach           83.25 317⇑iP     P      19 46 07.7  0.0
KBS   Kingsbay         83.27 349  eP     P      19 46 06.8 -0.4
KBS                                pmax  pmax
      comp=Z,59nm,1.0s,mb5.6
KBS   Kingsbay         83.27 349  eP     P      19 46 06.8 -0.4
      comp=Z,59nm,1.0s,mb5.6
SLE   Schleitheim      83.30 317⇑iP     P      19 46 07.7 -0.2
TNS   Taunus Mts       83.30 320  eP     P      19 46 08.4 +0.5
PCP   Pian Castagno    83.31 314   P     P      19 46 07.4 -0.6
BFO   Black Forest     83.40 318  eP     P      19 46 08.3 -0.1
BFO                                pmax  pmax
      comp=Z,69nm,1.1s,mb5.6
BFO   Black Forest     83.40 318  eP     P      19 46 08.3 -0.1
      comp=Z,69nm,1.1s,mb5.6
HASLI Hasliberg        83.54 316⇑iP     P      19 46 09.4 +0.2
KTD   Kalmit           83.55 319  eP     P      19 46 09.3 +0.1
FIN   Finale Ligure    83.55 314  eP     P      19 46 09.4 +0.1
SULZ  Sulz-Cheisache   83.56 317⇑eP     P      19 46 08.9 -0.3
FELD  Feldberg         83.62 317⇑eP     P      19 46 09.6  0.0
MCGN  Macugnaga        83.67 316  eP     P      19 46 10.5 +0.6
KIZ   Kirchzarten      83.68 318⇑eP     P      19 46 09.8 -0.1
ORX   Oropa            83.68 315   P     P      19 46 08.5 -1.4
MMK   Mattmark         83.69 316⇑eP     P      19 46 09.8 -0.1
LANF  Langenberg       83.74 319  eP     P      19 46 10.4 +0.3
IMI   Imperia          83.79 313  eP     P      19 46 10.9 +0.4
ROB   Roburent         83.80 314   P     P      19 46 10.2 -0.3
BALST Balsthal         83.84 317⇑iP     P      19 46 10.7  0.0
TRAV                   83.85 315   P     P      19 46 08.8 -2.0
MONE  Monesi           83.88 314   P     P      19 46 10.1 -0.9
ABH   Alteburg         83.89 319⇑eP     P      19 46 11.4 +0.5
LIBD  Limburg          83.89 318⇑eP     P      19 46 11.4 +0.5
WIMIS Wimmis           83.91 316⇑iP     P      19 46 11.3 +0.3
LKBD  Leukerbad        83.91 316⇑iP     P      19 46 11.6 +0.5
NEGI  Negi             83.93 313   P     P      19 46 09.8 -1.4
BBS   Basel-Blauen     83.97 317⇑eP     P      19 46 11.4 +0.1
SAOF  Saorge           84.03 314  eP     P      19 46 11.1 -0.6
WLS   Welschbruch      84.05 318  eP     P      19 46 11.6 -0.1
DIX   Grande Dixence   84.07 316⇑eP     P      19 46 12.9 +1.0
CDF   Champ du Feu     84.10 318⇑iP     P      19 46 11.8 -0.2
      comp=Z,118nm,1.2s,mb5.6
CDF   Champ du Feu     84.10 318⇑iP     P      19 46 11.8 -0.2
CDF                                pmax  pmax
      comp=Z,59nm,1.2s,mb5.6
RPZ   Rata Peaks       84.12 135   P     P      19 46 12.7 +0.6
      comp=Z,36nm,1.2s,mb5.4,baz=274,slow=4.0,SNR=7.3
RPZ                                LR    LR     20 20 33.6
      comp=Z,2µm,21.9s,MS5.3,baz=238,slow=33
RPZ   Rata Peaks       84.12 135   P     P      19 46 12.7 +0.6
RPZ                                LR    LR     20 20 33.6
ENR   Entracque        84.12 314   P     P      19 46 11.8 -0.4
SBF   Sospel           84.12 313  eP     P      19 46 12.3 +0.1
      comp=Z,212nm,1.0s,mb5.9
SBF   Sospel           84.12 313  eP     P      19 46 12.3 +0.1
SBF                                pmax  pmax
      comp=Z,106nm,1.0s,mb5.9
AUTN  L'Aution         84.12 314  eP     P      19 46 13.0 +0.8
REVF  Revere           84.17 313  eP     P      19 46 12.6 +0.1
ECH   Echery           84.18 318  eP     P      19 46 12.3 -0.1
STV2  Anna di Valdie   84.19 314   P     P      19 46 11.4 -1.1
STV   Sta Anna Valdi   84.19 314   P     P      19 46 11.2 -1.3
RSP   Reno Superiore   84.21 315   P     P      19 46 11.6 -1.0
RUP   Ruppelstein      84.21 319⇑eP     P      19 46 13.0 +0.5
MOF   Molkenrain       84.21 317  eP     P      19 46 11.8 -0.7
BHB   Bricherasio      84.21 314   P     P      19 46 11.0 -1.6
TOUF  Mont Tournerai   84.25 314  eP     P      19 46 13.5 +0.7
LSD   Ceresole Reale   84.27 315   P     P      19 46 13.1 +0.2
GRYON Gryon            84.27 316⇑iP     P      19 46 13.4 +0.5
WTSB  Winterswijk      84.31 322⇑iP     P      19 46 12.7 -0.2
      comp=Z,93nm,1.3s,mb5.8
MVIF  Mont Vial        84.32 313  eP     P      19 46 13.8 +0.6
PZZ   Prazzo           84.34 314   P     P      19 46 11.7 -1.6
FENE  Fenestrelle      84.35 315   P     P      19 46 11.8 -1.5
WIT   Witteveen        84.37 322  ex     x      19 46 13.4
SALAN Lac Salanfe      84.37 316⇑iP     P      19 46 14.0 +0.6
AIGLE Aigle            84.38 316⇑eP     P      19 46 13.3 -0.1
HINF  Hinteralfeld     84.40 317⇑iP     P      19 46 12.9 -0.6
EMV   Vieux Emosson    84.43 316⇑eP     P      19 46 14.0 +0.3
LOMF  Lomont           84.43 317  eP     P      19 46 13.7  0.0
SURF  Saint Ours       84.55 314  eP     P      19 46 15.2 +0.9
RRL   Cesana Torines   84.55 315   P     P      19 46 13.9 -0.4
LPG   La Plagne        84.55 315⇑iP     P      19 46 14.9 +0.6
      comp=Z,156nm,1.0s,mb5.8
LPG   La Plagne        84.55 315⇑iP     P      19 46 14.9 +0.6
LPG                                pmax  pmax
      comp=Z,78nm,1.0s,mb5.8
LPL   La Plagne        84.56 315⇑iP     P      19 46 14.8 +0.4
      comp=Z,216nm,1.0s,mb5.9
LPL   La Plagne        84.56 315⇑iP     P      19 46 14.8 +0.4
LPL                                pmax  pmax
      comp=Z,108nm,1.0s,mb5.9
MBDF  Montbardon       84.57 314⇑iP     P      19 46 14.0 -0.4
      comp=Z,59nm,1.0s,mb5.4
MBDF  Montbardon       84.57 314⇑iP     P      19 46 14.0 -0.4
MBDF                               pmax  pmax
      comp=Z,30nm,1.0s,mb5.4
BNI   Bardonecchia     84.62 315  eP     P      19 46 14.6 -0.1
BNI                                pmax  pmax
      comp=Z,79nm,1.2s,mb5.7
BNI   Bardonecchia     84.62 315  eP     P      19 46 14.6  0.0
      comp=Z,79nm,1.2s,mb5.7
RSL   Roselend         84.63 315  eP     P      19 46 14.8 +0.1
FRF   La Foret Royal   84.70 313⇑iP     P      19 46 15.4 +0.3
      comp=Z,448nm,1.3s,mb6.2
FRF   La Foret Royal   84.70 313⇑iP     P      19 46 15.4 +0.3
FRF                                pmax  pmax
      comp=Z,224nm,1.3s,mb6.1
HAU   Haudompre        84.73 318⇑iP     P      19 46 15.0 -0.1
      comp=Z,164nm,0.9s,mb5.9
HAU                               eR
      comp=Z,376nm,23.0s
HAU   Haudompre        84.73 318⇑iP     P      19 46 15.0 -0.1
HAU                                pmax  pmax
      comp=Z,82nm,0.9s,mb5.9
HAU                                MLR   MLR
      comp=Z,380nm,23.0s,MS4.7
KIWB  Kanaga Island    84.79  39  eP     P      19 46 14.6 -0.7
KIWB                              epP    pP     19 46 29.2 -0.1
WLF   Walferdange      84.80 319  eP     P      19 46 16.0 +0.6
WLF                               e*PP   pP     19 46 30.3 +0.8
WLF                                pmax  pmax
      comp=Z,208nm,1.6s,mb6.0
WLF   Walferdange      84.80 319  eP     P      19 46 16.0 +0.5
      comp=Z,208nm,1.6s,mb6.0
WLF                               epP    pP     19 46 30.3 +0.8
LMR   La Mourre        84.81 313⇑iP     P      19 46 15.9 +0.2
      comp=Z,161nm,1.3s,mb5.7
LMR   La Mourre        84.81 313⇑iP     P      19 46 15.9 +0.2
LMR                                pmax  pmax
      comp=Z,81nm,1.3s,mb5.7
CAEH  'Ain El Ouahch   84.86 306   P     P      19 46 18.0 +1.9
HGN   Heimansgroeve    84.90 320⇑iP     P      19 46 15.3 -0.6
      comp=Z,62nm,1.7s,mb5.5
THEF  They Montfort    84.97 318  eP     P      19 46 16.1 -0.2
CABF  La Chapelle      84.97 316⇑iP     P      19 46 16.7 +0.3
      comp=Z,164nm,1.1s,mb5.8
CABF  La Chapelle      84.97 316⇑iP     P      19 46 16.7 +0.3
CABF                               pmax  pmax
      comp=Z,82nm,1.1s,mb5.8
CKFL  Kef-Lekhel       84.99 306   P     P      19 46 18.5 +1.8
GDM   Grand'Maison     85.01 315  eP     P      19 46 16.9 +0.3
OG25  Le Caire         85.08 314  eP     P      19 46 17.5 +0.5
TAVF  Tavernes         85.13 313  eP     P      19 46 15.8 -1.4
CASM  Ain Smara        85.18 306   P     P      19 46 20.0 +2.3
ORIF  Oris-en-Rattie   85.19 315⇑iP     P      19 46 17.6 +0.1
      comp=Z,162nm,1.3s,mb5.7
ORIF                              eR
      comp=Z,743nm,23.0s
STOF  St-Etienne Org   85.22 314  eP     P      19 46 18.9 +1.2
CTEI  Djebel Teioual   85.26 306   P     P      19 46 20.5 +2.4
GRN   Grenoble         85.27 315  eP     P      19 46 18.6 +0.7
PUYF  Puyloubier       85.39 313  eP     P      19 46 18.2 -0.3
SMRF  Simiane la Rot   85.46 314⇑iP     P      19 46 19.7 +0.9
      comp=Z,376nm,1.6s,mb6.0
MEZF  Maizieres J'vi   85.58 318⇑iP     P      19 46 19.3  0.0
      comp=Z,270nm,1.6s,mb5.9
GELF  Grande-Etoile    85.60 313  eP     P      19 46 20.6 +1.1
TREF  Trevaresse       85.62 313  eP     P      19 46 20.8 +1.2
GIVF  Givet            85.64 320  eP     P      19 46 19.6 +0.1
      comp=Z,52nm,0.9s,mb5.5
GIVF  Givet            85.64 320  eP     P      19 46 19.6 +0.1
GIVF                               pmax  pmax
      comp=Z,26nm,0.9s,mb5.5
DFRA  Djebel Bou Aff   85.66 306   P     P      19 46 22.5 +2.5
CMER  Merouana         85.69 305   P     P      19 46 21.0 +0.8
CKHR  Kef el Ahmar     85.98 306   P     P      19 46 23.5 +1.9
BAIF  Baives           86.03 320⇑iP     P      19 46 22.0 +0.5
      comp=Z,178nm,1.2s,mb5.9
BAIF  Baives           86.03 320⇑iP     P      19 46 22.0 +0.5
BAIF                               pmax  pmax
      comp=Z,89nm,1.2s,mb5.9
VIVF  Saint-Julien-l   86.05 315⇑iP     P      19 46 22.0 +0.3
      comp=Z,156nm,1.2s,mb5.8
VIVF  Saint-Julien-l   86.05 315⇑iP     P      19 46 22.0 +0.3
VIVF                               pmax  pmax
      comp=Z,78nm,1.2s,mb5.8
SET   Setif            86.06 306   P     P      19 46 22.5 +0.5
SMF   Signal de Mont   86.51 316⇑iP     P      19 46 23.8 -0.1
      comp=Z,128nm,0.9s,mb5.8
SMF   Signal de Mont   86.51 316⇑iP     P      19 46 23.8 -0.1
SMF                                pmax  pmax
      comp=Z,64nm,0.9s,mb5.8
LASF  Ste Croix        86.69 314⇑iP     P      19 46 25.5 +0.6
      comp=Z,285nm,1.6s,mb6.0
COLF  Collangettes     86.70 315  eP     P      19 46 25.5 +0.6
SSF   Saint Saulge     86.71 317⇑iP     P      19 46 25.0 +0.1
SSF                                pmax  pmax
      comp=Z,93nm,1.4s,mb5.8
SSF   Saint Saulge     86.71 317⇑iP     P      19 46 25.0 +0.1
      comp=Z,93nm,1.4s,mb5.8
PLDF  La Plantade      86.71 316  eP     P      19 46 25.7 +0.8
AVF   Avril sur Loir   86.84 317⇑iP     P      19 46 25.4 -0.1
      comp=Z,147nm,1.2s,mb5.8
AVF   Avril sur Loir   86.84 317⇑iP     P      19 46 25.4 -0.1
AVF                                pmax  pmax
      comp=Z,73nm,1.2s,mb5.8
LBL   Lubilhac         87.03 315  eP     P      19 46 27.4 +0.9
AGO   Saint Agoulin    87.05 316  eP     P      19 46 27.1 +0.5
PYM   Petit Puy Mans   87.16 316  eP     P      19 46 27.8 +0.7
BGF   Bois d'Agland    87.20 316  eP     P      19 46 27.8 +0.5
      comp=Z,329nm,1.5s,mb6.0
BGF   Bois d'Agland    87.20 316  eP     P      19 46 27.8 +0.5
BGF                                pmax  pmax
      comp=Z,165nm,1.5s,mb6.0
HYF   Humbligny        87.28 317⇑iP     P      19 46 28.3 +0.6
URZ   Urewera          87.58 129   P     P      19 46 29.2 -0.2
      comp=Z,82nm,1.2s,mb5.8,baz=115,slow=1.2,SNR=9.6
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URZ				LR	LR	20 28 09.1	
	comp=Z,862nm,19.2s,MS5.2,baz=288,slow=37						
TCF	**Toulx Ste Croi**	**87.67**	**316**	⇑*i*P	**P**	**19 46 30.0**	**+0.5**
	comp=Z,155nm,1.5s,mb5.7						
TCF	**Toulx Ste Croi**	**87.67**	**316**	⇑*i*P	**P**	**19 46 30.0**	**+0.5**
TCF				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.7						
CAF	**Calviac**	**87.89**	**315**	⇑*i*P	**P**	**19 46 31.3**	**+0.6**
	comp=Z,181nm,1.5s,mb5.8						
CAF	**Calviac**	**87.89**	**315**	⇑*i*P	**P**	**19 46 31.3**	**+0.6**
CAF				pmax	pmax		
	comp=Z,91nm,1.5s,mb5.8						
ABA	**Alger-Bouzarea**	**87.92**	**307**	P	**P**	**19 46 30.0**	**-1.0**
MTLF	**Montolieu**	**87.94**	**313**	⇑*i*P	**P**	**19 46 31.4**	**+0.5**
	comp=Z,174nm,1.4s,mb5.8						
MTLF	**Montolieu**	**87.94**	**313**	⇑*i*P	**P**	**19 46 31.4**	**+0.5**
MTLF				pmax	pmax		
	comp=Z,87nm,1.4s,mb5.8						
EMHD	**Djebel Mahouad**	**88.04**	**306**	P	**P**	**19 46 34.0**	**+2.4**
RJF	**Les Rejaudoux**	**88.24**	**315**	*e*P	**P**	**19 46 33.2**	**+0.9**
	comp=Z,192nm,1.3s,mb5.9						
RJF				*e*R			
	comp=Z,398nm,22.8s						
RJF	**Les Rejaudoux**	**88.24**	**315**	*e*P	**P**	**19 46 33.2**	**+0.9**
RJF				pmax	pmax		
	comp=Z,96nm,1.3s,mb5.9						
RJF				MLR	MLR		
	comp=Z,400nm,22.8s,MS4.8						
TNA	**Tin City**	**88.26**	**24**	*e*P	**P**	**19 46 31.9**	**0.0**
	comp=Z,28nm,1.1s,mb5.4						
LFF	**La Frestale**	**88.83**	**315**	⇑*i*P	**P**	**19 46 35.9**	**+0.8**
	comp=Z,182nm,1.4s,mb5.9						
LFF	**La Frestale**	**88.83**	**315**	⇑*i*P	**P**	**19 46 35.9**	**+0.8**
LFF				pmax	pmax		
	comp=Z,91nm,1.4s,mb5.9						
LDF	**La Druitiere**	**88.99**	**319**	⇑*i*P	**P**	**19 46 36.0**	**+0.2**
	comp=Z,216nm,1.3s,mb6.0						
LDF	**La Druitiere**	**88.99**	**319**	⇑*i*P	**P**	**19 46 36.0**	**+0.2**
LDF				pmax	pmax		
	comp=Z,108nm,1.3s,mb6.0						
EBNR	**Beni Rached**	**89.17**	**306**	P	**P**	**19 46 39.0**	**+2.0**
FLN	**La Foliniere**	**89.21**	**319**	*e*P	**P**	**19 46 36.7**	**-0.1**
	comp=Z,116nm,1.0s,mb5.9						
FLN				*e*R			
	comp=Z,302nm,21.8s						
FLN	**La Foliniere**	**89.21**	**319**	*e*P	**P**	**19 46 36.7**	**-0.1**
FLN				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.9						
FLN				MLR	MLR		
	comp=Z,300nm,21.8s,MS4.7						
MFF	**Saint Martin d**	**89.25**	**317**	⇑*i*P	**P**	**19 46 37.4**	**+0.3**
	comp=Z,202nm,1.3s,mb6.0						
MFF	**Saint Martin d**	**89.25**	**317**	⇑*i*P	**P**	**19 46 37.4**	**+0.3**
MFF				pmax	pmax		
	comp=Z,101nm,1.3s,mb6.0						
ECHA	**Ech Chlef**	**89.32**	**306**	P	**P**	**19 46 40.0**	**+2.3**
RESF	**Ens**	**89.36**	**313**	*e*P	**P**	**19 46 38.9**	**+1.2**
ETRT	**Tiaret**	**89.45**	**305**	P	**P**	**19 46 41.0**	**+2.7**
EBR	**Ebro Roquetas**	**89.48**	**311**	*i* P	**P**	**19 46 39.7**	**+1.4**
GRR	**Gorron**	**89.50**	**318**	⇑*i*P	**P**	**19 46 38.6**	**+0.4**
	comp=Z,137nm,1.2s,mb5.8						
GRR	**Gorron**	**89.50**	**318**	⇑*i*P	**P**	**19 46 38.6**	**+0.4**
GRR				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.9						
EANR	**'Ain N'Sour**	**89.56**	**306**	P	**P**	**19 46 40.5**	**+1.7**
ERTA	**Horta de San J**	**89.58**	**311**	P	**P**	**19 46 39.8**	**+1.0**
	comp=Z,30nm,1.0s,mb5.6						
VIEF	**Viey**	**89.58**	**313**	*e*P	**P**	**19 46 40.0**	**+1.3**
LCHF	**La Chataignera**	**89.65**	**317**	*e*P	**P**	**19 46 39.5**	**+0.6**
EKA	**Eskdalemuir Ar**	**89.90**	**326**	P	**P**	**19 46 40.5**	**+0.7**
	comp=Z,16nm,0.8s,mb5.4,baz=99,slow=5.4,SNR=28						
DAG	**Danmarks Havn**	**89.92**	**348**	⇓*e*P	**P**	**19 46 38.7**	**-0.9**
DAG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.8						
DAG	**Danmarks Havn**	**89.92**	**348**	⇓*i*P	**P**	**19 46 38.7**	**-0.9**
	comp=Z,6.3nm,1.1s,mb4.9						
ETSF	**Etsaut**	**90.01**	**313**	⇑*i*P	**P**	**19 46 41.8**	**+1.1**
	comp=Z,39nm,0.9s,mb5.4						
ETSF	**Etsaut**	**90.01**	**313**	⇑*i*P	**P**	**19 46 41.8**	**+1.1**
ETSF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.4						
ESAC	**San Caprasio**	**90.09**	**312**	P	**P**	**19 46 41.8**	**+0.7**
	comp=Z,566nm,3.3s						
EMOS	**Mosqueruela**	**90.26**	**310**	P	**P**	**19 46 43.3**	**+1.3**
	comp=Z,682nm,4.6s						
LARF	**Larrau**	**90.30**	**313**	*e*P	**P**	**19 46 43.4**	**+1.3**
SJPF	**Ste Jean**	**90.46**	**313**	⇑*i*P	**P**	**19 46 43.8**	**+0.9**
	comp=Z,119nm,1.3s,mb5.8						
SJPF	**Ste Jean**	**90.46**	**313**	⇑*i*P	**P**	**19 46 43.8**	**+0.9**
SJPF				pmax	pmax		
	comp=Z,59nm,1.3s,mb5.8						
VNDA	**Vanda**	**90.48**	**168**	*e*P	**P**	**19 46 43.6**	**+1.4**
VNDA				pmax	pmax		
	comp=Z,86nm,1.7s						
VNDA	**Vanda**	**90.48**	**168**	P	**P**	**19 46 43.2**	**+1.0**
	comp=Z,9.5nm,1.2s,mb5.0,baz=19,slow=8.2,SNR=4.4						
VNDA				LR	LR	20 23 36.7	
	comp=Z,2µm,19.1s,MS5.5,baz=295,slow=33						
VNDA	**Vanda**	**90.48**	**168**	*e*P	**P**	**19 46 43.5**	**+1.3**
	comp=Z,86nm,1.7s,mb5.8						
SGMF	**Saint Gilles**	**90.64**	**318**	⇑*i*P	**P**	**19 46 43.9**	**+0.3**
	comp=Z,210nm,1.4s,mb6.0						
SGMF	**Saint Gilles**	**90.64**	**318**	⇑*i*P	**P**	**19 46 43.9**	**+0.3**
SGMF				pmax	pmax		
	comp=Z,105nm,1.4s,mb6.0						
EALK	**Alkurruntz**	**90.65**	**313**	P	**P**	**19 46 42.6**	**-1.1**
	comp=Z,15nm,1.0s,mb5.3						
CART	**Cartagena**	**91.03**	**308**	*e*P	**P**	**19 46 46.4**	**+0.7**
	comp=Z,274nm,2.1s,mb6.2						
CART				*e*pP	pP	19 47 00.9	+1.0
QUIF	**Quistinic**	**91.10**	**318**	⇑*i*P	**P**	**19 46 45.8**	**+0.1**
	comp=Z,194nm,1.4s,mb5.9						
QUIF	**Quistinic**	**91.10**	**318**	⇑*i*P	**P**	**19 46 45.8**	**+0.1**
QUIF				pmax	pmax		
	comp=Z,97nm,1.4s,mb5.9						
ROSF	**Rostrenen**	**91.10**	**319**	⇑*i*P	**P**	**19 46 46.1**	**+0.4**
	comp=Z,182nm,1.3s,mb5.9						
ROSF	**Rostrenen**	**91.10**	**319**	⇑*i*P	**P**	**19 46 46.1**	**+0.4**
ROSF				pmax	pmax		
	comp=Z,91nm,1.3s,mb6.0						
EMUR	**La Murta**	**91.19**	**308**	P	**P**	**19 46 47.4**	**+1.0**
	comp=Z,8.7nm,0.9s,mb5.1						
ETOB	**Tobarra**	**91.32**	**309**	P	**P**	**19 46 46.9**	**-0.1**
	comp=Z,14nm,0.9s,mb5.3						
ELAN	**Lanestosa**	**92.04**	**314**	P	**P**	**19 46 49.8**	**-0.3**
	comp=Z,15nm,0.9s,mb5.3						
EVIA	**Vianos**	**92.06**	**309**	P	**P**	**19 46 50.9**	**+0.5**
EVIA				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.5						
EVIA	**Vianos**	**92.06**	**309**	P	**P**	**19 46 50.9**	**+0.6**
	comp=Z,34nm,1.2s,mb5.5						
ENIJ	**Nijar**	**92.07**	**307**	P	**P**	**19 46 51.1**	**+0.6**
ENIJ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.1						
ENIJ	**Nijar**	**92.07**	**307**	P	**P**	**19 46 51.1**	**+0.6**
	comp=Z,8.4nm,0.8s,mb5.1						
EBER	**Berja**	**92.62**	**307**	P	**P**	**19 46 53.6**	**+0.6**
EQES	**Quesada**	**92.63**	**308**	P	**P**	**19 46 52.3**	**-0.7**
	comp=Z,6.0nm,0.7s,mb5.1						
MAIT	**Maitri**	**92.68**	**199**	*e*P	**P**	**19 46 55.7**	**+3.2**
GUD	**Guadarrama**	**93.00**	**311**	P	**P**	**19 46 55.7**	**+1.1**
ESDC	**Sonseca Array**	**93.02**	**310**	P	**P**	**19 46 55.5**	**+0.8**
	comp=Z,4.5nm,0.7s,mb5.0,baz=60,slow=4.8,SNR=26						
ESDC				pP	pP	19 47 09.9	+0.9
	comp=Z,5.3nm,0.8s,baz=58,slow=4.5,SNR=7.0						
ESDC				PKKPbc		20 04 05.9	
	comp=Z,0.4nm,0.5s,baz=266,slow=1.3,SNR=4.1						
ESLA	**Sonseca Array**	**93.02**	**310**	*e*P	**P**	**19 46 55.4**	**+0.7**
	comp=Z,21nm,1.5s,mb5.3						
ESLA				*e*pP	pP	19 47 09.4	+0.4
EBAN	**Banos Encina**	**93.13**	**309**	P	**P**	**19 46 55.8**	**+0.5**
EARI	**Arriondas**	**93.31**	**314**	P	**P**	**19 46 56.0**	**0.0**
	comp=Z,16nm,1.0s,mb5.4						
SCO	**Scoresbysund**	**93.46**	**342**	*i* P	**P**	**19 46 57.0**	**+1.0**
SCO				*e*		19 50 43.0	
SCO				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.7						
SCO	**Scoresbysund**	**93.46**	**342**	*i* P	**P**	**19 46 57.0**	**+1.0**
	comp=Z,2.6nm,1.0s,mb4.6						
SCO				*e*		19 50 43.0	
EADA	**Adamuz**	**93.74**	**309**	P	**P**	**19 46 58.1**	**+0.1**
	comp=Z,12nm,1.0s,mb5.3						
IMA	**Indian Mountai**	**93.76**	**22**	*e*P	**P**	**19 46 58.9**	**+1.4**
IMA				pmax	pmax		
	comp=Z,85nm,1.2s,mb6.0						
IMA	**Indian Mountai**	**93.76**	**22**	*e*P	**P**	**19 46 58.9**	**+1.4**
	comp=Z,85nm,1.2s,mb6.0						
SVW2	**Sparrevohn**	**94.77**	**27**	*e*P	**P**	**19 47 02.8**	**+0.6**
ERUA	**La Rua**	**94.88**	**313**	P	**P**	**19 47 03.7**	**+0.6**
EVO	**Evora**	**96.33**	**310**	*e*P	**P**	**19 47 11.9**	**+2.1**
	comp=Z,45nm,1.4s,mb5.4						
EVO				*e*R			
	comp=Z,818nm,22.2s						
MCK	**McKinley**	**96.57**	**24**	*e*P	**P**	**19 47 09.8**	**-0.5**
MCK				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.6						
MCK	**McKinley**	**96.57**	**24**	*e*P	**P**	**19 47 09.8**	**-0.5**
	comp=Z,37nm,1.4s,mb5.6						
SUMG	**Summit**	**96.58**	**347**	*e*P	**P**	**19 47 10.8**	**+0.6**
	comp=Z,20nm,1.0s,mb5.5						
SUMG				*e*PP	PP	19 51 05.9	-1.6
ILAR	**Eielson Array**	**96.89**	**22**	P	**P**	**19 47 10.8**	**-0.9**
	comp=Z,2.0nm,0.5s,mb4.8,baz=302,slow=3.1,SNR=43						
ILAR				PP	PP	19 51 07.2	-2.7
	comp=Z,4.2nm,1.1s,baz=305,slow=7.0,SNR=6.6						
ILAR				LR	LR	20 35 44.3	
	comp=Z,1µm,21.9s,MS5.3,baz=317,slow=38						
PWA	**Palmer West**	**97.09**	**26**	*e*P	**P**	**19 47 13.0**	**+0.3**
PWA				pmax	pmax		
	comp=Z,70nm,1.2s,mb6.0						
PWA	**Palmer West**	**97.09**	**26**	*e*P	**P**	**19 47 13.0**	**+0.3**
	comp=Z,70nm,1.2s,mb6.0						
SNAA	**Sanae**	**97.41**	**198**	LR	LR	20 26 20.4	
	comp=Z,355nm,20.3s,MS4.8,baz=46,slow=32						
PMR	**Palmer**	**97.44**	**26**	*e*P	**P**	**19 47 14.6**	**+0.3**
PMR				pmax	pmax		
	comp=Z,97nm,1.7s,mb6.0						
PMR	**Palmer**	**97.44**	**26**	*e*P	**P**	**19 47 14.6**	**+0.3**
	comp=Z,97nm,1.7s,mb6.0						
SML	**Sawmill**	**97.68**	**25**	*e*P	**P**	**19 47 16.1**	**+0.7**
SML				*e**PP	pP	19 47 29.7	0.0
DBIC	**Dimbokro**	**98.57**	**278**	P	**P**	**19 47 21.1**	**+0.6**
	comp=Z,1.7nm,0.7s,mb4.7,baz=63,slow=9.0,SNR=3.1						
DBIC				LR	LR	20 29 49.5	
	comp=Z,538nm,20.5s,MS5.0,baz=65,slow=34						
DIV	**Divide**	**99.09**	**25**	*e*Pdif	**P**	**19 47 22.8**	**+1.0**
	comp=Z,117nm,1.5s,mb6.2						
DIV				*e*pP	pP	19 47 35.8	-0.2
INK	**Inuvik**	**99.25**	**16**	*e*P	**P**	**19 47 21.7**	**-0.6**
INK				*e**PP	pP	19 47 36.4	-0.2
INK				pmax	pmax		
	comp=Z,72nm,1.5s						
INK	**Inuvik**	**99.25**	**16**	P	**P**	**19 47 22.3**	**0.0**
	comp=Z,10nm,0.8s,mb5.4,baz=310,slow=4.9,SNR=25						
INK				pP	pP	19 47 36.7	+0.1
	comp=Z,133nm,1.6s,baz=294,slow=8.3,SNR=5.8						
INK				LR	LR	20 39 27.1	
	comp=Z,1µm,20.8s,MS5.5,baz=283,slow=40						
INK	**Inuvik**	**99.25**	**16**	*e*Pdif	**P**	**19 47 21.7**	**-0.6**
	comp=Z,72nm,1.5s,mb6.0						
INK				*e*pP	pP	19 47 36.4	-0.2
RES	**Resolute Bay**	**99.82**	**3**	*e*P	**P**	**19 47 25.5**	**+0.6**
RES				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.7						
RES	**Resolute Bay**	**99.82**	**3**	*e*Pdif	**P**	**19 47 25.4**	**+0.6**
	comp=Z,31nm,1.1s,mb5.7						
DAWY	**Dawson**	**100.02**	**21**	*e*Pdif	P	19 47 26.3	+0.4
YKW3	**Yellowknife Ar**	**108.66**	**14**	*e*PKP		19 52 08.9	
YKW3				*e*PP	PP	19 52 31.6	-7.6
YKA	**Yellowknife Ar**	**108.72**	**14**	P	Pdif	19 48 05.1	+0.6
YKA						19 52 32.5	
YKA	**Yellowknife Ar**	**108.72**	**14**	Pdiff	Pdif	19 48 05.1	+0.7
	comp=Z,0.9nm,0.7s,baz=327,slow=4.1,SNR=18						
YKA				pPdiff		19 48 18.8	
	comp=Z,1.0nm,0.9s,baz=330,slow=4.5,SNR=3.1						
YKA				PKiKP		19 52 09.8	
	comp=Z,1.3nm,0.9s,baz=330,slow=3.7,SNR=8.3						
YKA				PP	PP	19 52 32.5	-7.2
	comp=Z,4.9nm,0.9s,baz=336,slow=7.9,SNR=15						
YKA				PKKPbc		20 03 18.4	
	comp=Z,0.8nm,0.8s,baz=152,slow=3.1,SNR=9.2						
YKA	**Yellowknife Ar**	**108.72**	**14**	Pdif	Pdif	19 48 05.1	+0.7
YKA				PKPdf		19 52 09.8	
YKA				PP	PP	19 52 32.5	-7.2
YKA				PKKPbc		20 03 18.4	
TBI	**Tubuai**	**116.07**	**113**	*e*PP	PP	19 53 21.7	-12
TBI				*e*LR	LR	20 27 27.0	
	comp=Z,1µm,23.5s						
PPT	**Papeete**	**116.37**	**107**	*e*PP	PP	19 53 23.3	-12
PPT				*e*LR	LR	20 27 31.0	
	comp=Z,659nm,24.2s						
EDM	**Edmonton**	**117.04**	**18**	*e*PKIKP	PKPdf	19 52 26.1	+1.6
FFC	**Flin Flon**	**118.52**	**11**	*e*PKIKP	PKPdf	19 52 28.5	+1.2
FFC				*e*		19 53 42.5	
GSM	**Grass Mountain**	**118.61**	**27**	PKIKP	PKPdf	19 52 29.7	+2.0
EPH	**Ephrata**	**119.48**	**26**	P	PKPdf	19 52 31.1	+1.7
NEW	**Newport**	**119.80**	**24**	*e*PKIKP	PKPdf	19 52 31.5	+1.5
NEW	**Newport**	**119.80**	**24**	PKP	PKPdf	19 52 31.9	+1.9
	comp=Z,6.0nm,0.8s,baz=37,slow=0.3,SNR=8.6						
HUMO	**Hull Mountain**	**121.37**	**32**	*e*PKPdf	PKPdf	19 52 35.0	+1.8
YBH	**Yreka Blue Hor**	**122.12**	**32**	PKP	PKPdf	19 52 36.3	+1.7
	comp=Z,3.3nm,0.9s,baz=131,slow=3.0,SNR=6.1						
MSO	**Missoula**	**122.22**	**23**	*e*PKPdf	PKPdf	19 52 35.7	+1.0
MSO				*e*PP	PP	19 54 10.4	-4.5
CHMT	**Chamberlain Mo**	**122.41**	**22**	*e*PKPdf	PKPdf	19 52 36.1	+1.0
CHMT				*e*PP	PP	19 54 12.0	-4.2
BMO	**Blue Mountains**	**122.42**	**26**	*e*PKIKP	PKPdf	19 52 36.0	+0.8
LTIM	**Timbered Crate**	**123.16**	**32**	P	PKPdf	19 52 39.0	+2.2
MOD	**Modoc**	**123.25**	**31**	*e*PKPdf	PKPdf	19 52 39.1	+2.2
LBCM	**Butte Creek Ri**	**123.47**	**32**	P	PKPdf	19 52 39.5	+2.2
WVOR	**Wild Horse Val**	**123.67**	**29**	*e*PKIKP	PKPdf	19 52 39.4	+1.7
ULM	**Lac du Bonnet**	**123.84**	**8**	PKP	PKPdf	19 52 39.0	+1.2
	comp=Z,14nm,0.9s,baz=341,slow=3.6,SNR=24						
ULM	**Lac du Bonnet**	**123.84**	**8**	*e*PKPdf	PKPdf	19 52 38.5	+0.7
ULM				*e*PP	PP	19 54 16.8	-9.3
DGMT	**Dagmar**	**123.90**	**15**	*e*PKPdf	PKPdf	19 52 39.6	+1.7
BOZ	**Bozeman (W)**	**124.08**	**22**	*e*PKIKP	PKPdf	19 52 39.8	+1.4
MCMT	**McKenzie Canyo**	**124.31**	**23**	*e*PKPdf	PKPdf	19 52 41.3	+2.5
NSHM	**Saint Helena R**	**124.41**	**35**	*e*PKPdf	PKPdf	19 52 40.8	+1.6
OHCM	**Honcut**	**124.47**	**34**	*e*PKPdf	PKPdf	19 52 40.6	+1.3
HLID	**Hailey**	**124.71**	**25**	*e*PKPdf	PKPdf	19 52 41.4	+1.7
QLMT	**Earthquake Lak**	**124.85**	**22**	*e*PKPdf	PKPdf	19 52 41.9	+2.0
LAO	**LASA Array**	**124.97**	**17**	*e*PKPdf	PKPdf	19 52 41.8	+1.7
YMR	**Madison River**	**125.16**	**22**	*e*PKPdf	PKPdf	19 52 43.0	+2.5
YNR	**Norris Junctio**	**125.23**	**22**	*e*PKPdf	PKPdf	19 52 43.7	+3.1
YFT	**Old Faithful**	**125.40**	**22**	*e*PKPdf	PKPdf	19 52 44.7	+3.7
LKWY	**Lake**	**125.46**	**22**	*e*PKIKP	PKPdf	19 52 43.6	+2.5
TAOE	**Nuku Hiva Isla**	**125.76**	**97**	*e*LR	LR	20 32 12.5	
IMW	**Indian Meadow**	**125.83**	**22**	*e*PKPdf	PKPdf	19 52 44.0	+2.2
CMB	**Columbia Colle**	**126.00**	**34**	*e*PKIKP	PKPdf	19 52 43.4	+1.1
CMB				*e*		19 54 35.6	
MOOW	**Moose Ponds**	**126.03**	**22**	*e*PKPdf	PKPdf	19 52 44.0	+1.8
MOOW				*e*PP	PP	19 54 36.4	-4.3
TPAW	**Teton Pass**	**126.17**	**23**	*e*PKPdf	PKPdf	19 52 44.9	+2.5
LOHW	**Long Hollow**	**126.20**	**22**	*e*PKPdf	PKPdf	19 52 44.4	+1.9
WUWY	**Wally Ulrich**	**126.21**	**23**	*e*PKPdf	PKPdf	19 52 44.6	+2.0
SNOW	**Snow King Moun**	**126.27**	**23**	*e*PKPdf	PKPdf	19 52 44.9	+2.3
ELK	**Elko**	**126.59**	**28**	*e*PKIKP	PKPdf	19 52 45.4	+2.0
EYMN	**Ely**	**126.60**	**5**	*e*PKPdf	PKPdf	19 52 44.9	+1.7
EYMN				*e*PP	PP	19 54 36.9	-7.0
AHID	**Auburn Hatcher**	**126.72**	**23**	*e*PKPdf	PKPdf	19 52 45.3	+1.7
NVAR	**Mina Array Bea**	**126.84**	**32**	PKP	PKPdf	19 52 46.3	+2.4
	comp=Z,16nm,0.9s,baz=334,slow=0.6,SNR=61						
MNV	**Mina**	**126.91**	**32**	*e*PKIKP	PKPdf	19 52 46.1	+2.0
BW06	**Boulder Array**	**127.32**	**22**	*e*PKPdf	PKPdf	19 52 46.0	+1.3
PDAR	**Pinedale Array**	**127.32**	**22**	PKP	PKPdf	19 52 46.0	+1.3
	comp=Z,16nm,0.8s,baz=54,slow=0.9,SNR=88						
BGU	**Big Grassy Mou**	**127.45**	**26**	*e*PKPdf	PKPdf	19 52 47.2	+2.1
MTUM	**Tungsten Hills**	**127.49**	**33**	*e*PKPdf	PKPdf	19 52 47.5	+2.3
HWUT	**Hardware Ranch**	**127.51**	**24**	*e*PKPdf	PKPdf	19 52 46.6	+1.4
TPH	**Tonopah**	**127.67**	**32**	*e*PKIKP	PKPdf	19 52 47.8	+2.3
NOQ	**North Oquirrh**	**128.07**	**26**	*e*PKPdf	PKPdf	19 52 48.1	+1.9
DUG	**Dugway**	**128.14**	**26**	*e*PKIKP	PKPdf	19 52 48.6	+2.2
TRCR	**Troy Canyon**	**128.29**	**30**	*e*PKPdf	PKPdf	19 52 49.3	+2.6
JLU	**Jordanelle**	**128.40**	**25**	*e*PKPdf	PKPdf	19 52 48.8	+2.0
DAU	**Daniels Canyon**	**128.63**	**25**	*e*PKIKP	PKPdf	19 52 49.1	+1.8
NLU	**North Lily Min**	**128.66**	**26**	*e*PKPdf	PKPdf	19 52 49.1	+1.8
MPU	**Maple Canyon**	**128.80**	**26**	*e*PKPdf	PKPdf	19 52 49.5	+1.8
DAC	**Darwin (Calif)**	**128.80**	**33**	*e*PKIKP	PKPdf	19 52 49.5	+1.7
RKT	**Rikitea**	**129.27**	**115**	*e*LR	LR	20 33 52.5	
	comp=Z,654nm,35.8s						
MIV	**Mineville/With**	**129.55**	**349**	*e*PKPdf	PKPdf	19 52 50.6	+1.7
TMUT	**Trail Mountain**	**129.58**	**26**	*e*PKPdf	PKPdf	19 52 51.5	+2.3
ARUT	**Antelope Range**	**129.78**	**29**	*e*PKIKP	PKPdf	19 52 52.3	+2.7
MVU	**Marysvale**	**129.78**	**27**	*e*PKPdf	PKPdf	19 52 51.9	+2.3
MVU				*e*PP	PP	19 55 01.6	-3.7
MSU	**Marysvale**	**129.79**	**27**	*e*PKIKP	PKPdf	19 52 52.2	+2.6
MSU				*e*		19 55 01.6	
SRU	**San Rafael**	**130.03**	**25**	*e*PKIKP	PKPdf	19 52 51.5	+1.5
PHWY	**Pilot Hill**	**130.06**	**20**	*e*PKPdf	PKPdf	19 52 51.3	+1.3
PHWY				*e*SKPab		19 56 10.6	
PHWY				*e*SKPdf		19 56 26.7	
NEN	**Nelson**	**130.75**	**32**	*e*PKPdf	PKPdf	19 52 54.2	+2.7
NEN				*e*SKPbc		19 56 14.1	
PV10	**Paradox Valley**	**131.27**	**25**	*e*PKPdf	PKPdf	19 52 54.7	+2.4
PV10				*e*SKPbc		19 56 16.7	
ISCO	**Idaho Springs**	**131.35**	**21**	*e*PKPdf	PKPdf	19 52 54.1	+1.6
ISCO				*e*PP	PP	19 55 12.5	-3.1
ISCO				*e*SKPbc		19 56 16.3	
PFO	**Pinyon Flat Ob**	**131.39**	**35**	*e*PKPdf	PKPdf	19 52 55.5	+2.7
PFO				*e*SKPbc		19 56 16.6	
PV01	**Paradox Valley**	**131.67**	**24**	*e*PKPdf	PKPdf	19 52 55.0	+1.9
PV01				*e*SKPbc		19 56 17.4	
BAR	**Barrett**	**131.94**	**36**	*e*PKPdf	PKPdf	19 52 56.5	+2.7
BAR				*e*SKPbc		19 56 18.2	
WUAZ	**Wupatki**	**132.59**	**29**	*e*PKPdf	PKPdf	19 52 57.5	+2.5
WUAZ				*e*SKPbc		19 56 21.7	
SDCO	**Great Sand Dun**	**133.21**	**22**	*e*PKPdf	PKPdf	19 52 57.8	+1.7
SDCO				*e*SKPbc		19 56 22.4	
KSU1	**Kansas State U**	**134.53**	**12**	*e*PKPdf	PKPdf	19 52 59.5	+1.0
ANMO	**Albuquerque**	**135.27**	**25**	*e*PKPdf	PKPdf	19 53 02.7	+2.7
ANMO				*e*SKPbc		19 56 29.8	
TUC	**Tucson**	**135.46**	**31**	*e*PKPdf	PKPdf	19 53 02.2	+1.9
TUC				*e*SKPbc		19 56 30.1	
MNTX	**Cornudas Mount**	**138.53**	**26**	*e*PKPdf	PKPdf	19 53 08.0	+2.0
WVT	**Waverly**	**138.61**	**3**	*e*PKPdf	PKPdf	19 53 07.8	+1.8
WVT				*e*SKPbc		19 56 38.2	
CPCT	**Cooper Cave**	**139.33**	**359**	*e*PKPdf	PKPdf	19 53 08.5	+1.2
CPCT				*e*SKPdf		19 56 40.3	
UALR	**University of**	**139.51**	**9**	*e*PKPdf	PKPdf	19 53 10.7	+3.0
MIAR	**Mount Ida**	**139.53**	**10**	*e*PKPdf	PKPdf	19 53 09.6	+1.9
MIAR				*e*SKPdf		19 56 41.1	
TRQA	**Tornquist**	**141.07**	**210**	*e*PKPdf	PKPdf	19 53 10.9	+0.4
LTX	**Lajitas**	**141.31**	**26**	*e*PKIKP	PKPdf	19 53 12.7	+1.6
TXAR	**Lajitas Array**	**141.31**	**26**	PKhKP		19 53 06.0	
	comp=Z,2.7nm,0.6s,baz=297,slow=2.8,SNR=17						
TXAR				PKP	PKPdf	19 53 11.4	+0.3
	comp=Z,6.6nm,0.6s,baz=58,slow=1.0,SNR=20						
TXAR				PP	PP	19 56 11.8	-5.7
	comp=Z,4.4nm,1.0s,baz=333,slow=2.8,SNR=6.0						
LRAL	**Lakeview Retre**	**141.73**	**2**	*e*PKPdf	PKPdf	19 53 13.2	+1.5
BAO	**Brasilia Array**	**141.76**	**252**	P	PKPdf	19 53 09.0	-3.2
JCT	**Junction City**	**141.78**	**20**	*e*PKPpre		19 53 07.4	
JCT				*e*PKPdf	PKPdf	19 53 13.6	+1.7
JCT				*e*PP	PP	19 56 16.4	-3.9
JCT				*e*SKPdf		19 56 46.3	
BDFB	**Brasilia**	**141.78**	**252**	PKhKP		19 53 10.3	
	comp=Z,4.4nm,0.8s,baz=118,slow=1.6,SNR=2.4						
BDFB				PKP	PKPdf	19 53 14.2	+1.9
	comp=Z,3.9nm,0.7s,baz=115,slow=4.4,SNR=5.8						
PLCA	**Paso Flores**	**142.35**	**199**	*e*PKIKP	PKPdf	19 53 10.8	-1.8
PLCA	**Paso Flores**	**142.35**	**199**	PKhKP		19 53 10.8	
	comp=Z,2.1nm,0.6s,baz=284,slow=3.8,SNR=6.2						
PLCA				PKP	PKPdf	19 53 13.3	+0.8
	comp=Z,2.1nm,0.6s,baz=196,slow=5.1,SNR=6.2						
HKT	**Hockley**	**143.47**	**15**	*e*PKPdf	PKPdf	19 53 12.7	-2.0
HKT				*e*PP	PP	19 56 26.4	-4.2
HKT				*e*SKPbc		19 56 52.6	
CPUP	**Villa Florida**	**145.96**	**229**	PKPab	PKPab	19 53 21.5	-1.2
DWPF	**Disney**	**146.43**	**353**	*e*PKPbc	PKPbc	19 53 23.3	+2.0
CJM	**Chamela**	**148.68**	**37**	*i* P	PKPdf	19 53 29.4	+5.6
COLM	**Colima**	**149.72**	**36**	*i* P	PKPdf	19 53 27.3	+1.8
SJG	**San Juan**	**149.78**	**321**	PKPdf	PKPdf	19 53 27.4	+1.8
SJG	**San Juan**	**149.78**	**321**	*e*PKPdf	PKPdf	19 53 27.1	+1.5
SJG				*e*PKPbc	PKPdf	19 53 32.1	+6.5
GRW	**Mount Saint Ca**	**150.51**	**306**	*e*P	PKPdf	19 53 35.2	+8.3
MOIG	**Morelia**	**150.69**	**31**	*e*Pg	PKPdf	19 53 27.8	+0.8
TRN	**Trinidad (W)**	**151.13**	**304**	*e*P	PKPdf	19 53 35.4	+7.6
TLL	**Tololo Astrono**	**151.73**	**208**	*i* P	PKPdf	19 53 36.7	+8.4
YAIG	**Yautepec**	**152.44**	**29**	*e*P	PKPdf	19 53 36.8	+7.2
PPM	**Popocatepetl**	**152.47**	**28**	*i* PKIKP	PKPdf	19 53 32.1	+2.5
LVIG	**Laguna Verde**	**152.82**	**23**	*e*P	PKPdf	19 53 37.9	+7.7
CAIG	**El Cayaco**	**153.36**	**33**	*e*P	PKPdf	19 53 32.5	+1.6
LVC	**Limon Verde**	**156.53**	**222**	*e*PKPdf	PKPdf	19 53 38.3	+3.3
SAML	**Samuel**	**157.53**	**260**	*e*PKPdf	PKPdf	19 53 38.5	+1.9
SDV	**Santo Domingo**	**159.42**	**314**	*e*PKPdf	PKPdf	19 53 40.9	+2.0
SDV				*e*PKPab	PKPab	19 54 18.9	-0.3
LPAZ	**La Paz**	**159.79**	**236**	*e*PKIKP	PKPdf	19 53 42.1	+2.9
LPAZ	**La Paz**	**159.79**	**236**	PKP	PKPdf	19 53 42.1	+2.9
	comp=Z,4.2nm,0.9s,baz=66,slow=2.8,SNR=18						
LPAZ				PKPab	PKPab	19 54 21.6	+1.0
	comp=Z,5.8nm,0.8s,baz=27,slow=7.1,SNR=5.6						
ROSC	**El Rosal**	**164.84**	**312**	PKP	PKPdf	19 53 47.4	+3.1
	comp=Z,18nm,1.0s,baz=270,slow=23,SNR=14						
OTAV	**Otavalo**	**170.95**	**308**	*e*PKPdf	PKPdf	19 53 51.3	+2.8
OTAV				*e*PKPab	PKPab	19 55 10.4	+0.9

OTT 18 19:50:14.2±0.2**,52.91N**×**66.87W,MN2.8**/4**,Blast,**
Labrador City, Nl Mining explosion.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**1.93**	**1**	PN	Pn	19 50 48.5	0.0
SCHQ				SG	Sg	19 51 14.1	-4.3
SCHQ				Trac		19 51 16.8	
	comp=Z,13nm,0.1s						
MNQ	**Manicouagan**	**2.66**	**207**	PN	Pn	19 50 58.4	-0.7
MNQ				SG	Sg	19 51 30.9	-12
MNQ				Trac		19 51 37.4	
	comp=Z,13nm,0.1s						
ICQ	**Pointe Anglais**	**3.40**	**184**	PN	Pn	19 51 08.0	-1.6
ICQ				SN	Sn	19 51 49.3	-2.0
ICQ				Trac		19 52 05.9	
	comp=Z,14nm,0.3s						
CNQ	**Baie Comeau**	**3.69**	**192**	PN	Pn	19 51 12.3	-1.4
GSQ	**Grosses Roches**	**4.01**	**182**	PN	Pn	19 51 16.0	-2.3
GSQ				SN	Sn	19 52 03.8	-2.9
LG4Q	**La Grande 4**	**4.40**	**282**	PN	Pn	19 51 20.6	-3.2
LG4Q				PG	Pg	19 51 31.1	-11
LG4Q				Trac		19 52 48.0	
	comp=Z,8.2nm,0.3s						
LMQ	**La Malbaie**	**5.81**	**204**	PN	Pn	19 51 40.7	-3.0
DRLN	**Deer Lake**	**6.94**	**118**	PN	Pn	19 51 55.4	-4.3
MALO	**McAlpine Lake**	**8.55**	**255**	PN	P	19 52 15.4	-6.8
MALO				SN	Sn	19 53 49.0	-12
VIMO	**Victor Mine**	**10.21**	**276**	PN	P	19 52 35.1	-10
SILO	**Sutton Inlier**	**10.81**	**286**	PN	P	19 52 31.7	-22

IDC ***18*** *19:58:31.9*±*10.0,19.84S*×*176.08W,h219*^{km}±*105*^{km}*,*
mb3.8/11,mb1 4.0/12,mb1mx3.8/19,mbtmp4.3/12,Error
ellipse: s-maj=39.1km s-min=20.1km az=8.0
NEIC ***18*** *19:58:38.3*±*4.6,19.94S*×*176.12W,h282*^{km}±*45*^{km}*,mb4.3/7,*
Error ellipse: s-maj=21.5km s-min=16.6km az=195.0
ISC 18 19:58:35.9±5.6**,19.9S**±0.2×**176.2W**±0.1**,h270**^{km}±53^{km}**,**
n23,σ0^{s}**93**/23**,mb4.0**/16**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
NOUC	**Port Laguerre**	**16.52**	**259**	*e*P	**P**	**20 02 15.2**	**+1.4**
NOUC	**Port Laguerre**	**16.52**	**259**	*e*P	**P**	**20 02 15.2**	**+1.4**
URZ	**Urewera**	**19.18**	**196**	P	**P**	**20 02 39.9**	**-1.2**
	3.2nm,0.3s,baz=42,slow=4.2,SNR=6.6						
RPZ	**Rata Peaks**	**26.02**	**201**	P	**P**	**20 03 46.5**	**+0.4**
	8.2nm,1.0s,mb4.1,baz=108,slow=15,SNR=2.2						
CTA	**Charters Tower**	**35.27**	**263**	P	**P**	**20 05 07.5**	**+0.4**
	11nm,0.3s,mb4.8,baz=88,slow=11,SNR=34						
CTAO	**Charters Tower**	**35.27**	**263**	*e*P	**P**	**20 05 07.1**	**0.0**
	12nm,0.4s,mb4.8						
PMG	**Port Moresby**	**36.91**	**281**	P	**P**	**20 05 21.0**	**+0.1**
	13nm,0.8s,mb4.4,baz=111,slow=8.8,SNR=5.0						
PMG	**Port Moresby**	**36.91**	**281**	*e*P	**P**	**20 05 21.1**	**+0.2**
STKA	**Stephens Creek**	**39.59**	**244**	*e*P	**P**	**20 05 43.9**	**+1.0**
	2.2nm,1.0s,mb3.4						
STKA	**Stephens Creek**	**39.59**	**244**	P	**P**	**20 05 42.8**	**0.0**
	2.0nm,0.8s,mb3.5,baz=80,slow=9.8,SNR=5.0						
ASAR	**Alice Springs**	**46.33**	**256**	P	**P**	**20 06 36.4**	**-0.7**
	6.8nm,0.5s,mb4.2,baz=89,slow=8.3,SNR=207						
ASPA	**Alice Springs**	**46.33**	**256**	*e*P	**P**	**20 06 37.2**	**+0.2**
WRAB	**Tennant Creek**	**46.38**	**261**	*e*P	**P**	**20 06 36.5**	**-1.0**
	5.3nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**46.39**	**261**	P	**P**	**20 06 36.9**	**-0.6**
	3.0nm,0.4s,mb4.0,baz=95,slow=7.4,SNR=97						
KAKA	**Kakadu**	**49.69**	**270**	*e*P	**P**	**20 07 02.1**	**-0.8**
	5.1nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**54.82**	**262**	*e*P	**P**	**20 07 40.8**	**+0.5**
	2.3nm,0.7s,mb3.7						
MBWA	**Marble Bar**	**59.66**	**257**	P	**P**	**20 08 13.1**	**-1.1**
	6.1nm,0.6s,mb4.3						
QSPA	**South Pole Qui**	**70.14**	**180**	*e*P	**P**	**20 09 21.3**	**+1.1**
	4.2nm,0.7s,mb4.3						

NVAR	Mina Array Bea	79.43	43	P	P	20 10 14.2	+0.4
	0.4nm,0.5s,mb3.4,baz=230,slow=7.0,SNR=3.3						
TXAR	Lajitas Array	85.30	57	P	P	20 10 44.6	+0.6
	0.5nm,0.8s,mb3.4,baz=217,slow=6.3,SNR=4.2						
ILAR	Eielson Array	87.39	12	P	P	20 10 53.1	-0.1
	0.4nm,0.6s,mb3.5,baz=225,slow=4.7,SNR=7.4						
CMAR	Chiang Mai Arr	91.56	289	P	P	20 11 15.8	+2.1
	0.5nm,0.5s,mb3.7,baz=96,slow=3.1,SNR=4.6						
YKA	Yellowknife Ar	95.28	24	P	P	20 11 28.0	-1.8
	0.1nm,0.3s,mb3.4,baz=216,slow=7.4,SNR=3.7						

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*NIED **18** 20:18:00,23.20N×121.80E,h53^{km},Mw5.5 Best double couple: M$_0$1.74×10^{17} NP1:φ$_s$67°,δ85°,λ-173°. NP2: φ$_s$336°,δ83°,λ-5°.*

*BJI **18** 20:18:16.6,23.39N×121.66E,h10^{km},mB5.4,mb5.4, ML5.6,Ms5.7,Msz5.4*

*NEIC **18** 20:18:17.9±2.2,23.21N×121.56E,h17^{km}±13^{km}, mb5.6/104,MS5.2/18,ML5.9(TAP),Error ellipse: s-maj=5.6km s-min=4.8km az=57.0*

NEIC Recorded [5 TAP] in T'ai-tung; [4 TAP] in Hua-lien; [3 TAP] in Nan-t'ou; [2 TAP] in Chang-hua, Chia-i, I-lan, Kao-hsiung, T'ai-chung, T'ai-nan and Yun-lin; [1 TAP] in Hsin-chu, Miao-li, P'eng-hu, P'ing-tung and T'ao-yuan Counties.

*HRVD **18** 20:18:17.9±0.2,23.28N×121.63E,h15^{km},MW5.4/66, Centroid moment Tensor Solution. LP body waves: s46,c80;Mantle waves: s66,c141; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.25±.03; M$_{θθ}$1.00±.03; M$_{φφ}$-1.25±.03; M$_{rθ}$-0.07±.07; M$_{θφ}$-0.81±.02; M$_{φr}$0.72±.09; Best double couple: M$_0$1.543×10^{17} NP1:φ$_s$244°,δ64°, λ-178°. NP2:φ$_s$154°,δ89°,λ-26°. Principal axes: T 1.347, Plg17°, Azm202°; N .392, Plg64°, Azm331°; P -1.739, Plg19°, Azm106°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **18** 20:18:18.6±0.5,23.35N×121.72E,h20^{km}±3^{km},mb4.7/25, mb1 4.8/27,mb1mx4.8/31,mbtmp4.9/27,ML4.6/2,MS4.9/20, Ms1 5.0/20,ms1mx4.7/35 Error ellipse: s-maj=14.2km s-min=10.5km az=65.0*

*TAP **18** 20:18:18.8,23.34N×121.67E,h15^{km},ML5.6*

TAP Felt III J at Yuli, IV J at Hungye, V J at Chenggung, III J at Shilin, II J at Lidau, III J at Hualien, I J at Chiawan, II J at Pinlang, II J at Taitung, II J at Alishan, II J at Tauyuan, II J at Hehuanshan, III J at Ryuetan, I J at Yuchr, II J at Tsauling, II J at Dapu, I J at Taimali, II J at Tsaushan, II J at Tachien, I J at Jiashian, II J at Mingjian, II J at Nanshi, II J at Nanau, II J at Gukeng, II J at Dungshan, II J at Nanshan, II J at Chiayi, II J at Taichung, II J at Shinhua, II J at Shoushan, II J at Lanyu, II J at Liyutan, I J at Sanyi, II J at Szhu, I J at Jiali, II J at Dacheng, I J.

*MOS **18** 20:18:19.3±1.1,23.32N×121.71E,h33^{km},mb5.8/87, MS5.3/35,Error ellipse: s-maj=8.0km s-min=3.8km az=118.0*

*JMA **18** 20:18:19.2±0.1,23.23N×121.78E,h56^{km},M5.6*

ISC 18 20:18:17.8±0.3**,23.27N**±0.01×**121.76E**±0.01**,h25**^{km}±2^{km}**, h23**^{km}±1.0^{km}**:pP-P,n679,**σ1^s**14**/726**,mb5.4**/157**,MS5.2**/64**, 66C-59D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHKT	Chengkung	0.40	245	⇓iP	Pb	20 18 26.3	-0.1
CHKT				S	Sb	20 18 32.3	+0.1
TWF1	Yuli	0.43	281	⇑iP	Pb	20 18 26.3	-0.6
TWF1				S	Sb	20 18 31.7	-1.4
EHY	Hungye	0.47	300	⇑iP	Pb	20 18 26.4	-1.0
ESL	Shilin	0.62	331	⇓iP	Pb	20 18 29.0	-0.9
ESL				S	Sb	20 18 36.5	-1.7
ELDTW	Lidau	0.69	263	⇓iP	Pb	20 18 30.6	-0.5
ELDTW				S	Sb	20 18 38.9	-1.3
HWA	Hwalien	0.72	349	⇓iP	Pb	20 18 31.3	-0.3
TTN	Taitung	0.76	228	⇓P	Pb	20 18 32.6	+0.2
YUS	Yu-Shan	0.77	286	⇓P	Pb	20 18 32.5	-0.1
TWG	Pinlang	0.78	235	⇓iP	Pb	20 18 32.5	-0.1
TWG				S	Sb	20 18 43.2	+0.5
TWD	Chiawan	0.82	349	⇓iP	Pb	20 18 32.6	-0.7
TWD				S	Sb	20 18 43.0	-0.9
ALS	Alishan	0.91	285	⇓iP	Pb	20 18 34.9	+0.1
ALS				S	Sb	20 18 46.0	-0.5
STYT	Tauyuan	0.93	264	⇓iP	Pb	20 18 34.9	-0.3
WHF	Hehuan Shan	0.98	333	⇑iP	Pb	20 18 35.5	-0.6
SMLT	Sun Moon Lake	1.00	308	⇑iP	Pb	20 18 35.9	-0.4
SMLT				S	Sb	20 18 48.5	-0.5
ECL	Taimali	1.00	228	⇓iP	Pb	20 18 35.4	-0.9
TYC	Yuchr	1.04	307	⇑iP	Pn	20 18 36.6	-0.4
CHN5	Tsauling	1.04	288	⇓iP	Pn	20 18 37.5	+0.5
WTP	Ta-pu	1.05	269	⇓iP	Pn	20 18 37.6	+0.4
CHN4	Tsaushan	1.07	274	⇓iP	Pn	20 18 38.1	+0.6
SGST	Jiashian	1.10	260	⇓iP	Pn	20 18 38.4	+0.6
SGST				S	Sb	20 18 52.1	+0.1
TWT	Tachien	1.11	331	⇑iP	Pn	20 18 38.2	+0.2
CHN1	Nanshi	1.14	266	⇓iP	Pn	20 18 39.1	+0.8
ENA	Nanau	1.15	359	⇓iP	Pn	20 18 37.9	-0.6
WNT	Mingjian	1.16	302	⇑iP	Pn	20 18 39.7	+1.0
WNT				S	Sb	20 18 54.1	+0.5
SSD	Sandimen	1.16	243	⇓iP	Pn	20 18 38.3	-0.4
TWK	Hsinying	1.17	270	⇓iP	Pn	20 18 39.6	+0.8
TWK				S	Sb	20 18 55.9	+1.9
WGK	Gukeng	1.17	291	iP	Pn	20 18 39.9	+1.0
CHN2	Minshiung	1.21	283	⇓iP	Pn	20 18 40.6	+1.2
TAW	Tawu	1.21	221	⇓iP	Pn	20 18 38.7	-0.7
NNS	Nan Shan	1.22	343	⇓P	Pn	20 18 39.1	-0.4
NNS				S	Sn	20 18 54.4	-0.9
EAST	Anshuo	1.22	224	⇓iP	Pn	20 18 39.0	-0.6
LAY	Lan-yu	1.24	189	⇓iP	Pn	20 18 39.2	-0.6
CHY	Chiayi	1.25	281	eP	Pn	20 18 40.5	+0.5
SGLT	Jiouru	1.29	245	⇑P	Pn	20 18 42.4	+1.9
CHN3	Shinhua	1.30	262	⇓iP	Pn	20 18 43.0	+2.4
TWM1	Shoushan	1.31	250	⇓iP	Pn	20 18 43.1	+2.3
TCU	Taichung	1.32	311	eP	Pn	20 18 41.6	+0.7
TWC	Suao	1.33	3	⇓iP	Pn	20 18 41.1	0.0
ENTT	Nioudou	1.37	353	⇓P	Pn	20 18 41.5	-0.2
SCZT	Fangliau	1.38	230	eP	Pn	20 18 42.0	+0.2
TWQ1	Liyutan	1.40	320	⇑iP	Pn	20 18 43.8	+1.6
TWQ1				S	Sn	20 19 01.7	+1.8
CHN8	Yiju	1.43	273	⇓iP	Pn	20 18 43.6	+1.1
CHN8				S	Sn	20 19 01.9	+1.4
SCLT	Jiali	1.44	266	eP	Pn	20 18 44.1	+1.4
SCLT				S	Sn	20 19 03.3	+2.2
NSK	Sanguang	1.45	345	⇓iP	Pn	20 18 43.0	+0.2
WSF	Szhu	1.46	285	⇑P	Pn	20 18 44.0	+1.1
WSF				S	Sn	20 19 02.5	+1.1
NSY	Sanyi	1.46	321	⇑iP	Pn	20 18 44.9	+1.9
WTCT	Ta-ch'eng	1.48	294	eP	Pn	20 18 44.4	+1.1
WTCT				S	Sn	20 19 01.6	-0.4
ILA	Ilan	1.49	360	eP	Pn	20 18 43.9	+0.5
KAU	Kaohsiung	1.51	243	eP	Pn	20 18 46.6	+2.9
NSTT	Nanjuang	1.52	333	⇓iP	Pn	20 18 45.5	+1.6
EGS		1.57	6	P	Pn	20 18 45.2	+0.6
HEN	Hengchun	1.57	217	⇓iP	Pn	20 18 45.0	+0.4
TWP	Hsiaoliuchiu	1.58	235	eP	Pn	20 18 48.2	+3.5
TWK1	Hengchun	1.59	214	eP	Pn	20 18 44.7	-0.1
TWK1				S	Sn	20 19 07.0	+2.3
YOJ	Yonaguni jima	1.65	44	P	Pn	20 18 46.8	+1.2
YOJ				S	Sn	20 19 06.9	+0.7
HSN	Hsinchu	1.69	335	eP	Pn	20 18 48.1	+1.9
HSN				S	Sn	20 19 10.7	+3.5
TWA	Mucha	1.71	355	P	Pn	20 18 47.2	+0.7
TATO	Taipei	1.71	352	Pn	Pn	20 18 47.3	+0.7
TATO	Taipei	1.71	352	ePn	Pn	20 18 46.8	+0.2
TWB1	Santiao Chiao	1.74	7	eP	Pn	20 18 47.6	+0.6
TWB1				S	Sn	20 19 08.3	-0.2
NCU	National Centr	1.77	343	eP	Pn	20 18 48.7	+1.3
TAP1	Taipei	1.77	353	eP	Pn	20 18 47.3	-0.1
TAP	Taipei	1.77	353	eP	Pn	20 18 47.6	+0.2
NWF	Wu-fen Shan	1.79	1	eP	Pn	20 18 48.8	+1.1
NWF				S	Sn	20 19 11.2	+1.3
TWS1	Kuangyinshan	1.85	350	eP	Pn	20 18 49.2	+0.7
TWS1				S	Sn	20 19 11.6	+0.4
WDGT	Dungji	1.93	270	⇓iP	Pn	20 18 49.9	+0.2
WDGT				S	Sn	20 19 12.1	-1.3
TWY	Chenhua	2.00	356	eP	Pn	20 18 51.5	+0.8
HATJ	Hateruma jima	2.03	67	P	Pn	20 18 51.8	+0.6
HATJ				S	Sn	20 19 16.2	+0.2
PNG	Penghu	2.05	279	⇓iP	Pn	20 18 51.6	+0.2
PNG				S	Sn	20 19 15.3	-1.0
IRIF	Iriomote-Funau	2.09	59	P	Pn	20 18 52.9	+0.9
IRIF				S	Sn	20 19 18.4	+0.9
JKRS	Kuro-shima	2.27	65	P	Pn	20 18 55.4	+0.8
JKRS				S	Sn	20 19 22.4	+0.3
PCYT	Pengchaiyu	2.36	7	eP	Pn	20 18 54.9	-1.0
JIJ	Ishigaki jima	2.44	63	P	Pn	20 18 57.4	+0.4
JIJ				S	Sn	20 19 25.5	-0.8
BBP	Basco	2.82	176	eP	Pn	20 19 01.7	-0.8
BBP				eS	Sn	20 19 34.7	-1.3
JTJ	Tarama	3.02	63	P	Pn	20 19 06.0	+0.8
JTJ				S	Sn	20 19 40.4	-0.6
KNM	Kinmen	3.25	291	eP	Pn	20 19 09.1	+0.6
QZH	Quanzhou	3.34	301	⇑iP	Pn	20 19 08.9	-0.9
QZH				S	Sn	20 19 46.0	-3.1
QZH				Smax			
	comp=N,43µm,0.9s						
QZH				Smax			
	comp=E,31µm,0.9s						
QZH				LR	LR		
	comp=N,117µm,11.1s						
QZH				LR	LR		
	comp=E,103µm,12.7s						
QZH				LR	LR		
	comp=Z,74µm,13.4s						
JMJ	Miyako jima 2	3.58	64	P	Pn	20 19 13.6	+0.4
JMJ				S	Sn	20 19 55.4	+0.3
JOGS	Gusukube	3.65	65	P	Pn	20 19 14.7	+0.5
JOGS				S	Sn	20 19 57.4	+0.5
SGCP	Mt. Cagua	5.01	177	eP	Pn	20 19 32.9	-0.6
SGCP				eS	Sn	20 20 28.8	-2.6
APYP	Conner	5.40	185	eP	Pn	20 19 39.4	+0.3
JKE	Kume jima 2	5.49	55	P	Pn	20 19 38.2	-2.0
JKE				S	Sn	20 20 38.7	-4.6
CVP	Callao Caves	5.54	179	⇑eP	Pn	20 19 40.8	-0.1
ABRA	Dolores	5.68	190	eP	Pn	20 19 43.6	+0.7
JAGN	Aguni-jima	5.97	55	P	Pn	20 19 45.1	-1.9
JAGN				eS	Sn	20 20 50.7	-4.7
NAH1	Naha	6.13	60	P	Pn	20 19 50.0	+0.7
NAH1				eS	Sn	20 21 01.0	+1.6
JJT2	Tamagusuku 2	6.15	61	P	Pn	20 19 49.7	+0.2
PALP	Palanan	6.21	174	eP	Pn	20 19 49.8	-0.6
CAUP	Cauayan	6.29	179	eP	Pn	20 19 53.3	+1.7
JIH	Iheya	6.76	55	P	Pn	20 19 55.4	-2.7
JIH				S	Sn	20 21 10.1	-5.0
JOW	Kunigami	6.89	58	Pn	Pn	20 19 56.6	-3.4
	comp=Z,24nm,0.3s,baz=213,slow=9.8,SNR=46						
JOW				Sn	Sn	20 21 14.8	-3.5
	comp=Z,9.6nm,0.3s,baz=112,slow=19,SNR=3.2						
JOW	Kunigami	6.89	58	P	Pn	20 19 56.4	-3.6
JOW				S	Sn	20 21 11.9	-6.5
BCPH	Baguio City Da	6.94	189	⇑eP	Pn	20 20 00.5	-0.2
HKC	Hong Kong	7.07	264	Pn	Pn	20 19 56.0	-6.5
HKC				Sn	Sn	20 21 15.0	-7.8
BOLP	Bolinao	7.07	195	eP	Pn	20 20 03.6	+1.1
BALP	Baler	7.49	181	eP	Pn	20 20 08.7	+0.3
SCZP	Santa Cruz	7.66	193	eP	Pn	20 20 10.7	0.0
PCPH	Palayan	7.70	185	⇓eP	Pn	20 20 11.2	0.0
GZH	Guangzhou	7.75	270	P	Pn	20 20 06.4	-5.5
GZH				Smax			
	comp=N,4µm,1.3s						
GZH				Smax			
	comp=E,2µm,1.6s						
GZH				LR	LR		
	comp=N,14µm,6.7s						
GZH				LR	LR		
	comp=E,22µm,13.4s						
GZH				LR	LR		
	comp=Z,30µm,12.7s						
SSE	Sheshan	7.81	356	P	Pn	20 20 08.9	-3.9
SSE				S	Sn	20 21 37.8	-3.6
SSE				Smax			
	comp=N,577nm,1.3s						
SSE				Smax			
	comp=E,806nm,1.2s						
SSE				LR	LR		
	comp=Z,8µm,9.4s						
SSE	Sheshan	7.81	356	Pn	Pn	20 20 08.9	-3.9
	comp=Z,577nm,1.3s						
SSE				Sn	Sn	20 21 37.7	-3.7
JTK	Tokunoshima	7.90	54	P	Pn	20 20 09.4	-4.7
JTK				eS	Sn	20 21 34.8	-8.7
POLP	Polilio Island	8.50	179	eP	P	20 20 22.3	-0.2
JAM	Amami Oshima	8.72	52	P	P	20 20 21.1	-4.4
JAM				eS	Sn	20 21 55.6	-8.5
JMZ	Minamidaito 2	8.98	72	P	P	20 20 23.2	-5.9
JMZ				eS	Sn	20 21 57.8	-13
LQP	Lukban	9.11	181	⇑eP	P	20 20 31.1	+0.2
NJ2	Nanjing	9.12	344	eP	P	20 20 27.5	-3.5
NJ2				AP		20 20 34.1	
NJ2				XP		20 20 37.3	
NJ2				S	Sn	20 22 12.0	-1.9
NJ2				XS		20 22 18.0	
NJ2				AMB	AMB		
	comp=Z,2µm,6.5s						
NJ2				Smax			
	comp=N,780nm,1.2s						
NJ2				Smax			
	comp=E,890nm,1.0s						
NJ2				LR	LR		
	comp=N,13µm,11.3s						
NJ2				LR	LR		
	comp=E,11µm,7.4s						
NJ2				LR	LR		
	comp=Z,17µm,9.4s						
TGY	Tagaytay City	9.15	185	Pn	P	20 20 33.5	+2.0
	baz=121,slow=5.1,SNR=27						
GQP	Guinayangan	9.34	176	eP	Sn	20 22 12.2	-7.1
LUBP	Lubang	9.59	189	eP	P	20 20 38.9	+1.3
BOAC	Boac	9.76	180	eP	P	20 20 39.6	-0.3
WHN	Wuhan	9.80	319	eP	P	20 20 38.3	-2.2
WHN				S	Sn	20 22 30.0	-0.8
WHN				LR	LR		
	comp=Z,61µm,11.1s						
PVCP	Virac	9.89	166	eP	P	20 20 39.5	-2.2
AUQP	San Andres	9.93	175	eP	P	20 20 45.9	+3.6
SJMP	San Jose	10.77	183	eP	P	20 20 54.7	+0.9
OTRP	Odiongan	10.85	179	eP	P	20 20 54.1	-0.8
CNP	Catarman	11.05	165	eP	P	20 20 58.0	+0.4
BUSP	Coron	11.30	188	eP	P	20 21 00.3	-0.8
QIZ	Qiongzhong	11.89	251	P	P	20 21 08.4	-0.6
QIZ				S	S	20 23 20.4	-1.5
QIZ				LR	LR		
	comp=N,9µm,13.3s						
QIZ				LR	LR		
	comp=E,12µm,14.1s						
QIZ				LR	LR		
	comp=Z,16µm,14.1s						
QIZ	Qiongzhong	11.89	251	Pn	P	20 21 03.1	-5.9
	comp=Z,374nm,1.1s						
ENPP	El Nido	12.20	191	eP	P	20 21 11.5	-1.7
CUYO	Cuyo Island	12.37	183	eP	P	20 21 15.5	0.0
GUIM	Jordan	12.60	176	eP	P	20 21 18.1	-0.5
ENH	Enshi	12.99	305	Pn	P	20 21 21.3	-2.3
	comp=Z,90nm,0.3s						
MSLP	Maasin	13.40	167	eP	P	20 21 29.9	+0.9
TIA	Tai'an	13.51	344	eP	P	20 21 34.0	+3.5
TIA				LR	LR		
	comp=N,11µm,14.0s						
TIA				LR	LR		
	comp=E,24µm,15.0s						
TBP	Tagbilaran	13.65	171	eP	P	20 21 26.8	-5.7
PPR	Puerto Princes	13.73	193	⇑iP	P	20 21 33.9	+0.4
GYA	Guiyang	14.06	286	⇓iP	P	20 21 37.3	-0.6
GYA				AP		20 21 42.0	
GYA				S	S	20 24 17.0	+2.9
GYA				AMB	AMB		
	comp=Z,40nm,1.2s						
GYA				AMB	AMB		
	comp=Z,180nm,2.8s						
GYA				LR	LR		
	comp=N,10µm,8.7s						
GYA				LR	LR		
	comp=E,28µm,9.6s						
GYA				LR	LR		
	comp=Z,34µm,10.5s						
BUTP	Butuan	14.70	165	eP	P	20 21 50.2	+4.0
INCN	Inchon	14.77	15	ePn	P	20 21 47.0	0.0
	comp=Z,277nm,1.1s						
BATP	Bataraza	14.88	195	eP	P	20 21 49.4	+0.8
KS15	Wonju Array Si	15.07	19	ePn	P	20 21 52.3	+1.3
IPIL	Ipil	15.41	177	eP	P	20 21 53.5	-2.1
PAGZ	Pagadian	15.41	174	eP	P	20 21 56.5	+0.9
XAN	Xi'an	15.54	316	P	P	20 21 56.6	-0.5
XAN				AP		20 21 59.9	
XAN				AMB	AMB		
	comp=Z,91nm,4.8s						
XAN				LR	LR		
	comp=N,29µm,16.8s						
XAN				LR	LR		
	comp=E,24µm,15.4s						
XAN				LR	LR		
	comp=Z,20µm,12.9s						
BUKP	Musuan	15.63	168	eP	P	20 21 59.1	+0.7
TIY	Taiyuan	16.47	333	⇑P	P	20 22 05.0	-3.9
TIY				LR	LR		
	comp=N,23µm,14.0s						
BJT	Baijiatuau	17.35	345	eP	P	20 22 20.0	0.0
BJT				pmax	pmax		
	comp=Z,181nm,1.2s						
BJT	Baijiatuau	17.35	345	eP	P	20 22 20.0	0.0
	comp=Z,182nm,1.2s						
BJI	Beijing	17.37	346	P	P	20 22 21.1	+0.8
BJI				AP		20 22 27.0	
BJI				AMB	AMB		
	comp=Z,2µm,4.8s						
BJI				LR	LR		
	comp=N,13µm,12.7s						
BJI				LR	LR		
	comp=E,11µm,12.7s						
BJI				LR	LR		
	comp=Z,4µm,12.7s						
BJI	Beijing	17.37	346	P	P	20 22 21.1	+0.8
BJI				pmax	pmax		
	comp=Z,26nm,1.3s						
BJI	Beijing	17.37	346	P	P	20 22 21.1	+0.8
	comp=Z,26nm,1.3s						
BJI				pP		20 22 27.0	
BJI				S	S	20 25 43.0	+12
KMI	Kunming	17.45	280	eP	P	20 22 23.0	+1.7
KMI				S	S	20 25 40.0	+7.1
KMI				AMB	AMB		
	comp=Z,701nm,6.0s						
KMI				LR	LR		
	comp=N,7µm,12.0s						
KMI				LR	LR		
	comp=E,7µm,14.0s						
KMI				LR	LR		
	comp=Z,8µm,14.0s						
KMI	Kunming	17.45	280	eP	P	20 22 23.0	+1.7
KMI				sP		20 22 36.0	
KMI				PP	PP	20 22 50.0	+14
KMI				S	S	20 25 40.0	+7.1
KMI				SS	SS	20 26 01.0	+6.1
CD2	Chengdu	17.73	299	P	P	20 22 24.3	-0.5
CD2				S	S	20 25 38.0	-1.2
CD2				AMB	AMB		
	comp=Z,190nm,1.0s						
KKM	Kota Kinabalu	17.94	198	P	P	20 22 29.3	+1.8
SNY	Shenyang	18.57	4	⇑P	P	20 22 38.6	+3.5
SNY				S	S	20 26 05.5	+7.4
SNY				AMB	AMB		
	comp=Z,1µm,13.2s						
SNY				LR	LR		
	comp=N,7µm,16.8s						
SNY				LR	LR		
	comp=E,28µm,15.1s						
SNY				LR	LR		
	comp=Z,8µm,16.2s						
JHJ	Hachijo jima 2	18.65	54	LR	LR	20 30 44.7	
	comp=Z,2µm,18.1s,baz=102,slow=40						
CBIJ	Chichi jima	18.87	74	P	P	20 22 39.0	+0.2
	comp=Z,9.3nm,0.3s,baz=250,slow=9.2,SNR=7.8						
CBIJ				LR	LR	20 29 04.4	
	comp=Z,3µm,19.3s,baz=237,slow=34						
KKTK	Khon Kaen	19.10	252	PG	P	20 22 42.5	+0.9
KKTK				SG	rx	20 22 53.0	
TSM	Tawau	19.24	192	P	P	20 22 42.7	-0.5
MAJO	Matsushiro	19.41	43	eP	P	20 22 44.0	-1.1
MAJO				pmax	pmax		
	comp=Z,61nm,1.0s						
MAJO	Matsushiro	19.41	43	eP	P	20 22 44.0	-1.0
	comp=Z,61nm,1.0s						
MAT	Matsushiro	19.41	43	eP	P	20 22 47.0	+1.9
MAT				pmax	pmax		
	comp=Z,67nm,1.2s						
MAT	Matsushiro	19.41	43	eP	P	20 22 47.0	+1.9
	comp=Z,67nm,1.2s						
MAT				S	S	20 26 31.0	+14
MAT	Matsushiro	19.41	43	P	P	20 22 47.2	+2.1
MAT				eS	S	20 26 19.6	+2.5
BTO	Baotou	19.91	333	eP	P	20 22 50.3	-0.3
BTO				AMB	AMB		
	comp=Z,86nm,1.3s						
LZH	Lanzhou	20.09	314	⇑P	P	20 22 52.0	-0.5
LZH				AP		20 22 57.8	
LZH				XP		20 23 01.0	
LZH				PP	PP	20 23 11.5	-0.7
LZH				S	S	20 26 31.1	-0.5
LZH				XS		20 26 39.3	
LZH				SS	SS	20 26 59.4	-1.2
LZH				AMB	AMB		
	comp=Z,439nm,1.0s						
LZH				AMB	AMB		
	comp=Z,3µm,5.6s						
LZH				LR	LR		
	comp=N,17µm,9.8s						
LZH				LR	LR		
	comp=Z,19µm,11.2s,MS5.7						
LZH	Lanzhou	20.09	314	⇑P	P	20 22 52.0	-0.5
LZH				*SP		20 23 01.0	
LZH						20 23 11.5	
LZH				S	S	20 26 31.1	-0.5
LZH				*SS		20 26 39.3	
LZH				SS	SS	20 26 59.4	-1.2
LZH				pmax	pmax		
	comp=Z,439nm,1.0s						
LZH	Lanzhou	20.09	314	⇑P	P	20 22 52.0	-0.5
	comp=Z,439nm,1.0s						
LZH				pP		20 22 57.8	
LZH				sP		20 23 01.0	
LZH				PP	PP	20 23 11.5	-0.7
LZH				S	S	20 26 31.1	-0.5
LZH				sS		20 26 39.3	
LZH				SS	SS	20 26 59.4	-1.2
NANT	Nan	20.15	261	⇑P	P	20 22 51.0	-2.2
	comp=Z,256nm,1.0s						
CN2	Changchun	20.70	8	eP	P	20 22 57.8	-1.0
CN2				XP		20 23 06.3	
CN2				eS	S	20 26 44.3	+0.5
CN2				AMB	AMB		
	comp=Z,780nm,8.0s						
CN2				LR	LR		
	comp=N,8µm,16.0s,MS5.5						
CN2				LR	LR		
	comp=E,17µm,16.0s,MS5.5						
CN2				LR	LR		
	comp=Z,10µm,16.0s,MS5.3						
CHRT	Chiangrai	20.71	265	⇑P	P	20 23 00.0	+0.9
	comp=Z,776nm,1.1s						
VLA	Vladivostok	21.50	21	eP	P	20 23 07.0	+0.1
VLA				i		20 23 27.0	
VLA				i		20 23 39.0	
VLA				i S	S	20 27 15.0	+16
VLA				i		20 27 38.0	
VLA				pmax	pmax		
	comp=Z,500nm,6.0s						
VLA				pmax	pmax		
	comp=E,500nm,7.0s						
VLA				pmax	pmax		
	comp=N,500nm,4.0s						
VLA				pmax	pmax		
	comp=N,1µm,9.0s						
VLA				pmax	pmax		
	comp=N,800nm,5.0s						
VLA				pmax	pmax		
	comp=E,600nm,6.0s						
NST	Nakhon Sawan	21.73	254	P	P	20 23 11.0	+1.6
	comp=E,67nm,1.0s,mb5.0						
CHG	Chiang Mai	21.74	263	⇑P	P	20 23 10.6	+1.1
CM31	Chiang Mai Arr	21.84	262	P	P	20 23 07.0	-3.5
	comp=E,279nm,1.4s,mb5.5						
CMAR	Chiang Mai Arr	21.84	262	P	P	20 23 11.6	+1.1
	comp=E,38nm,1.1s,mb4.7,baz=66,slow=7.0,SNR=52						
CMAR				PcP	PcP	20 27 09.7	-0.7
	comp=E,1.8nm,0.6s,baz=32,slow=1.1,SNR=6.8						
CMAR				LR	LR	20 32 06.6	
	comp=E,2µm,18.0s,MS4.6,baz=75,slow=38						
BDT	Bhumibol Dam	22.16	258	P	P	20 23 15.0	+1.3

	comp=E,16nm,1.0s,mb4.4						
MDJ	**Mudanjiang**	**22.24**	**15**	P	**P**	**20 23 15.1**	**+0.8**
MDJ				AP		20 23 20.8	
MDJ				XP		20 23 23.5	
MDJ				S	**S**	**20 27 20.8**	**+8.1**
MDJ				AMB	AMB		
	comp=Z,455nm,6.8s						
MDJ				LR	LR		
	comp=N,8µm,16.6s,MS5.5						
MDJ				LR	LR		
	comp=E,13µm,15.7s,MS5.5						
MDJ				LR	LR		
	comp=Z,6µm,15.7s,MS5.1						
MDJ	**Mudanjiang**	**22.24**	**15**	*e*P	**P**	**20 23 15.1**	**+0.8**
	comp=Z,64nm,1.1s,mb5.0						
GUMO	**Guam**	**23.91**	**110**	*e*P	**P**	**20 23 31.8**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,1µm,1.1s,mb6.2						
GUMO	**Guam**	**23.91**	**110**	*e*P	**P**	**20 23 31.8**	**+0.9**
	comp=Z,1µm,1.1s,mb6.2						
GTA	**Gaotai**	**24.60**	**316**	P	**P**	**20 23 37.8**	**+0.4**
GTA				AP		20 23 48.5	
GTA				XP		20 23 51.3	
GTA				PP	PP	20 24 17.1	+3.4
GTA				PPP	PPP	20 24 27.3	+3.0
GTA				PCP	PcP	20 27 13.8	-2.2
GTA				S	**S**	**20 27 57.3**	**+3.2**
GTA				AMB	AMB		
	comp=Z,1µm,5.7s						
GTA				LR	LR		
	comp=N,13µm,17.5s,MS5.6						
GTA				LR	LR		
	comp=E,9µm,15.2s,MS5.6						
GTA				LR	LR		
	comp=Z,10µm,15.3s,MS5.4						
SNG	**Songkhla**	**25.86**	**235**	P	**P**	**20 23 50.0**	**+0.4**
HIA	**Hailar**	**25.99**	**357**	*e*P	**P**	**20 23 49.0**	**-1.4**
HIA				pmax	pmax		
	comp=Z,100nm,1.2s						
HIA				MLR	MLR		
	comp=Z,5µm,19.0s						
HIA	**Hailar**	**25.99**	**357**	*e*P	**P**	**20 23 49.0**	**-1.4**
	comp=Z,100nm,1.2s,mb5.2						
HIA				LR	LR		
	comp=Z,5µm,19.0s,MS5.0						
ASAJ	**Asahikawa**	**26.93**	**34**	P	**P**	**20 23 57.8**	**-1.3**
	comp=Z,35nm,1.2s,mb4.8,baz=248,slow=11,SNR=11						
ASAJ				LR	LR	20 34 07.8	
	comp=Z,4µm,21.9s,MS4.9,baz=243,slow=35						
KLR	**Kul'dur**	**27.08**	**14**	*e*P	**P**	**20 23 56.7**	**-3.7**
KLR				*e*		20 24 09.2	
KLR				*e*S	**S**	**20 28 34.0**	**-1.1**
KLR				MLR	MLR		
	comp=E,25µm,16.0s						
ULN	**Ulaanbaatar**	**27.20**	**338**	*e*P	**P**	**20 24 00.2**	**-1.3**
ULN				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.1						
ULN	**Ulaanbaatar**	**27.20**	**338**	*e*P	**P**	**20 24 00.2**	**-1.3**
	comp=Z,55nm,0.9s,mb5.1						
IPM	**Ipoh**	**27.32**	**230**	P	**P**	**20 24 03.3**	**+0.5**
SONM	**Songino Array**	**27.41**	**337**	P	**P**	**20 24 02.3**	**-1.1**
	comp=Z,7.5nm,0.8s,baz=157,slow=9.4,SNR=37						
KGM	**Kluang**	**27.68**	**223**	P	**P**	**20 24 06.3**	**+0.2**
LSA	**Lhasa**	**28.08**	**290**	P	**P**	**20 24 11.1**	**+1.4**
LSA				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.5						
LSA				LR	LR		
	comp=N,5µm,17.0s,MS5.3						
LSA				LR	LR		
	comp=E,4µm,15.8s,MS5.3						
LSA				LR	LR		
	comp=Z,6µm,13.4s,MS5.3						
LSA	**Lhasa**	**28.08**	**290**	P	**P**	**20 24 09.0**	**-0.7**
LSA				pmax	pmax		
	comp=Z,46nm,0.6s,mb5.3						
LSA				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.0						
LSA	**Lhasa**	**28.08**	**290**	P	**P**	**20 24 09.0**	**-0.7**
	comp=Z,46nm,0.6s,mb5.3						
LSA				LR	LR		
	comp=Z,4µm,22.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**29.03**	**30**	*e*P	**P**	**20 24 19.2**	**+1.1**
YSS				*e*		20 24 33.0	
YSS				*e*		20 25 28.0	
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
YSS				pmax	pmax		
	comp=N,40nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.0						
YSS				MLR	MLR		
	comp=N,1µm,14.0s,MS4.9						
YSS				MLR	MLR		
	comp=E,2µm,14.0s,MS4.9						
ZAK	**Zakamensk**	**30.66**	**337**	*e*P	**P**	**20 24 29.9**	**-2.6**
ZAK				*e*		20 27 36.7	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
TLY	**Talaya**	**31.61**	**338**	P	**P**	**20 24 40.5**	**-0.4**
	comp=Z,156nm,1.0s,mb5.8,SNR=22						
TLY	**Talaya**	**31.61**	**338**	*e*P	**P**	**20 24 39.8**	**-1.1**
TLY				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
TLY				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.1						
TLY	**Talaya**	**31.61**	**338**	*e*P	**P**	**20 24 38.7**	**-2.1**
	comp=Z,95nm,1.5s,mb5.4						
IRK	**Irkutsk**	**31.88**	**340**	*e*P	**P**	**20 24 41.9**	**-1.3**
IRK				*e*		20 26 09.7	
IRK				*e*		20 35 09.8	
IRK				pmax	pmax		
	comp=Z,57nm,1.5s,mb5.2						
MOY	**Mondy**	**32.55**	**336**	*e*P	**P**	**20 24 47.7**	**-1.4**
MOY				pmax	pmax		
	comp=Z,59nm,2.0s,mb5.2						
WMQ	**Urumqi**	**34.67**	**315**	P	**P**	**20 25 08.0**	**+0.5**
WMQ				XP	sP	20 25 17.0	-1.1
WMQ				PP	PP	20 26 25.0	+0.5
WMQ				S	**S**	**20 30 36.0**	**+1.3**
WMQ				SS	SS	20 32 48.0	+0.4
WMQ				AMB	AMB		
	comp=Z,84nm,1.2s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,98nm,8.0s						
WMQ				LR	LR		
	comp=N,6µm,16.0s,MS5.5						
WMQ				LR	LR		
	comp=E,3µm,16.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,3µm,16.0s,MS5.1						
BOD	**Bodaibo**	**34.97**	**353**	*e*P	**P**	**20 25 08.2**	**-1.7**
BOD				*e*		20 25 13.5	
BOD				*e*		20 26 35.5	
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
VIS	**Vishakhapatnam**	**36.34**	**269**	*e*P	**P**	**20 25 21.4**	**-0.6**
VIS				*e*		20 25 37.2	
	comp=Z,138nm,1.3s						
KAKA	**Kakadu**	**37.26**	**163**	⇓*i*P	**P**	**20 25 27.5**	**-2.1**
	comp=Z,26nm,0.6s,mb5.2						
LGTI	**Lohaghat**	**37.56**	**288**	*e*	**P**	**20 25 39.0**	**+7.0**
SKR	**Severo-Kuril's**	**38.18**	**36**	*e*P	**P**	**20 25 33.9**	**-3.2**
SKR				pmax	pmax		
	comp=N,80nm,1.0s						
SKR				pmax	pmax		
	comp=E,130nm,1.0s						
SKR				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.6						
YAK	**Yakutsk**	**39.12**	**6**	*e*P	**P**	**20 25 42.7**	**-2.1**
YAK				*i* *PP	pP	20 25 53.8	+1.6
YAK				*e*S	**S**	**20 31 47.9**	**+5.3**
YAK				*i*		20 35 47.4	
YAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				smax			
	comp=N,8.0nm,1.2s						
YAK				smax			
	comp=E,3.0nm,1.1s						
YAK				MLR	MLR		
	comp=N,1µm,15.0s,MS5.1						
YAK				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,1µm,14.0s,MS5.1						
YAK	**Yakutsk**	**39.12**	**6**	*e*P	**P**	**20 25 43.5**	**-1.3**
	comp=E,30nm,0.8s,mb5.1						
MKAR	**Makanchi Array**	**39.36**	**316**	*i* P	**P**	**20 25 46.5**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,742nm,1.6s						
DDI	**Dehra Dun**	**39.45**	**290**	*e*P	**P**	**20 25 48.8**	**+0.9**
DDI				*e*S	**S**	**20 31 44.8**	**-3.2**
NGP	**Nagpur**	**39.50**	**275**	*e*P	**P**	**20 25 48.6**	**+0.3**
NGP				*e*S	**S**	**20 31 48.5**	**-0.2**
SMLA	**Simla**	**40.21**	**291**	⇓*i*	**P**	**20 26 09.2**	**+15**
	comp=Z,13nm,0.3s,mb5.1						
SMLA				*i*		20 32 08.3	
NDI	**New Delhi**	**40.23**	**287**	*e*P	**P**	**20 25 53.0**	**-1.3**
SDNR	**Sundarnagar**	**40.38**	**292**	*e*P	**P**	**20 25 55.2**	**-0.3**
BHPL	**Bhopal**	**40.61**	**279**	*e*P	**P**	**20 25 56.6**	**-0.9**
BHPL				*e*		20 26 13.8	
	comp=Z,79nm,1.5s						
PET	**Petropavlovsk**	**40.77**	**34**	*e*P	**P**	**20 26 00.8**	**+2.3**
PET				*e*S	**S**	**20 32 08.5**	**+1.1**
PET				pmax	pmax		
	comp=N,41nm,0.8s						
PET				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.1						
PET				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.0						
PET	**Petropavlovsk**	**40.77**	**34**	*e*P	**P**	**20 25 59.2**	**+0.7**
	comp=Z,73nm,0.9s,mb5.3						
HYB	**Hyderabad**	**40.82**	**270**	*e*P	**P**	**20 26 00.0**	**+0.8**
HYB				*e*S	**S**	**20 32 16.0**	**+7.5**
HYB				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.2						
HYB	**Hyderabad**	**40.82**	**270**	*e*P	**P**	**20 26 00.0**	**+0.8**
	comp=Z,60nm,1.0s,mb5.2						
HYB				*e*S	**S**	**20 32 16.0**	**+7.5**
HYB	**Hyderabad**	**40.82**	**270**	*i* P	**P**	**20 26 00.0**	**+0.8**
	comp=Z,60nm,1.0s,mb5.2						
HYB				*e*S	**S**	**20 32 12.0**	**+3.5**
BHK	**Bhakra**	**40.85**	**292**	*e*	**P**	**20 26 06.1**	**+6.7**
PMG	**Port Moresby**	**40.90**	**140**	P	**P**	**20 26 01.4**	**+1.5**
	comp=Z,51nm,1.1s,mb5.1,baz=19,slow=6.2,SNR=11						
PMG				LR	LR	20 39 53.3	
	comp=Z,909nm,20.7s,MS4.6,baz=160,slow=32						
FITZ	**Fitzroy Crossi**	**41.29**	**174**	*e*P	**P**	**20 26 00.9**	**-2.2**
	comp=Z,19nm,0.6s,mb4.9						
ZAL	**Zalesovo**	**41.30**	**327**	P	**P**	**20 26 01.9**	**-0.9**
	comp=Z,9.0nm,0.8s,mb4.5,baz=355,slow=8.6,SNR=26						
ZAL				LR	LR	20 45 21.8	
	comp=Z,3µm,18.0s,MS5.2,baz=345,slow=39						
THN	**Thein Dam**	**41.46**	**293**	*e*P	**P**	**20 26 03.9**	**-0.4**
THN				*e*		20 28 06.4	
MA2	**Magadan**	**41.63**	**22**	*e*P	**P**	**20 26 06.6**	**+1.2**
MA2				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.2						
MA2	**Magadan**	**41.63**	**22**	*e*P	**P**	**20 26 06.6**	**+1.2**
	comp=Z,68nm,1.0s,mb5.2						
KSH	**Kashi**	**41.84**	**304**	⇑P	**P**	**20 26 10.0**	**+2.6**
KSH				*e*AP	pP	20 26 16.1	+1.2
KSH				*e*XP	sP	20 26 19.3	+1.3
KSH				*e*PP	PP	20 27 46.6	-0.8
KSH				*e*PCP	PcP	20 28 06.5	+2.7
KSH				*e*PPP	PPP	20 28 22.0	+3.2
KSH				*e*SCP		20 31 54.0	
KSH				*e*PCS		20 31 56.3	
KSH				*e*S	**S**	**20 32 26.1**	**+2.6**
KSH				*e*PS		20 32 36.4	
KSH				*e*SCS	ScS	20 36 09.3	+2.7
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.4						
KSH				LR	LR		
	comp=N,9µm,14.2s						
KSH				LR	LR		
	comp=E,3µm,8.5s						
NVS	**Novosibirsk**	**42.56**	**328**	⇑*i*P	**P**	**20 26 12.4**	**-0.7**
NVS				*i*		20 27 53.2	
NVS				*i* S	**S**	**20 32 25.3**	**-8.5**
NVS				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.2						
NVS				pmax	pmax		
	comp=N,86nm,1.9s						
NVS				pmax	pmax		
	comp=E,72nm,1.4s						
NVS				smax			
	comp=N,15nm,1.8s						
NVS				smax			
	comp=E,30nm,2.0s						
AJM	**Ajmer**	**42.68**	**284**	⇑*i*P	**P**	**20 26 14.0**	**-0.5**
TKM2	**Tokmak 2**	**42.74**	**309**	P	**P**	**20 26 15.8**	**+1.1**
	SNR=31						
KZA	**Kyzart**	**42.82**	**307**	P	**P**	**20 26 17.3**	**+1.9**
	SNR=29						
COCO	**West Island**	**42.86**	**217**	*e*P	**P**	**20 26 08.6**	**-7.6**
	comp=E,183nm,1.0s,mb5.8						
KURK	**Kurchatov**	**43.13**	**321**	*c* *i*P	**P**	**20 26 16.7**	**-1.1**
KURK				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.3						
KURK	**Kurchatov**	**43.13**	**321**	*e*P	**P**	**20 26 16.2**	**-1.5**
	comp=Z,250nm,1.4s,mb5.8						
KBK	**Karagaybulak**	**43.16**	**308**	P	**P**	**20 26 19.5**	**+1.4**
	SNR=23						
CHMS	**Chumysh**	**43.36**	**309**	P	**P**	**20 26 20.3**	**+0.5**
	SNR=21						
UCH	**Uchtor**	**43.39**	**307**	P	**P**	**20 26 21.9**	**+1.9**
	SNR=35						
FRU	**Bishkek**	**43.43**	**308**	*e*P	**P**	**20 26 22.0**	**+1.6**
FRU				pmax	pmax		
	comp=Z,210nm,1.6s,mb5.6						
FRU				MLR	MLR		
	comp=E,7µm,14.0s						
FRU				MLR	MLR		
	comp=Z,5µm,14.0s,MS5.6						
AAK	**Ala-Archa**	**43.48**	**308**	P	**P**	**20 26 21.7**	**+0.9**
	SNR=15						
AAK	**Ala-Archa**	**43.48**	**308**	*e*P	**P**	**20 26 19.6**	**-1.2**
AAK				*e*		20 28 13.4	
AAK				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.2						
AAK	**Ala-Archa**	**43.48**	**308**	*e*P	**P**	**20 26 19.6**	**-1.2**
	comp=Z,56nm,1.3s,mb5.1						
AAK				*e*PcP	PcP	20 28 13.3	+4.2
USP	**Ospenovka**	**43.60**	**309**	P	**P**	**20 26 22.2**	**+0.5**
	SNR=21						
AML	**Almayashu**	**43.97**	**307**	P	**P**	**20 26 26.3**	**+1.5**
	SNR=25						
EKS2	**Erkin-Say**	**44.00**	**308**	P	**P**	**20 26 25.8**	**+0.8**
	SNR=18						
SEY	**Seymchan**	**44.66**	**19**	*e*P	**P**	**20 26 33.7**	**+3.7**
SEY						20 28 14.3	
SEY				*e*		20 28 18.3	
SEY				*e*S	**S**	**20 33 08.2**	**+4.0**
SEY				pmax	pmax		
	comp=N,30nm,0.9s						
SEY				pmax	pmax		
	comp=E,20nm,0.9s						
SEY				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.4						
SEY				smax			
	comp=N,2µm,18.2s						
SEY				smax			
	comp=E,800nm,15.8s						
SEY				MLR	MLR		
	comp=Z,8µm,17.0s,MS5.7						
SEY				MLR	MLR		
	comp=N,4µm,16.0s,MS5.6						
SEY				MLR	MLR		
	comp=E,5µm,18.0s,MS5.6						
WRAB	**Tennant Creek**	**44.66**	**163**	*c* *i*P	**P**	**20 26 29.3**	**-1.4**
WRAB	**Tennant Creek**	**44.66**	**163**	*e*P	**P**	**20 26 28.8**	**-1.8**
	comp=E,42nm,1.0s,mb5.2						
WRAB				LR	LR		
	comp=Z,325nm,21.0s,MS4.2						
WRA	**Warramunga Arr**	**44.67**	**163**	P	**P**	**20 26 29.1**	**-1.6**
	comp=Z,7.9nm,0.7s,mb4.7,baz=345,slow=8.6,SNR=38						
POO	**Poona**	**44.85**	**273**	⇓*i*P	**P**	**20 26 31.0**	**-1.2**
	comp=Z,205nm,1.2s,mb5.8						
POO				*e*P		20 26 31.8	
POO				*e*		20 26 46.6	
	comp=Z,175nm,1.6s						
KAD	**Karad**	**44.86**	**272**	*e*P	**P**	**20 26 32.5**	**+0.1**
KAD				*e*	pP	20 26 41.5	+1.7
	comp=Z,82nm,1.2s						
ASAR	**Alice Springs**	**48.12**	**165**	P	**P**	**20 26 57.0**	**-1.0**
	comp=Z,12nm,1.1s,mb4.8,baz=342,slow=6.3,SNR=40						
ASPA	**Alice Springs**	**48.12**	**165**	*e*P	**P**	**20 26 57.0**	**-1.0**
TIXI	**Tiksi**	**48.57**	**3**	⇓*i*P	**P**	**20 26 59.4**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,4µm,13.0s,MS5.6						
FX1	**Attu Island--F**	**48.69**	**39**	LR	LR	20 45 35.8	
	comp=Z,49nm,20.0s,baz=275,slow=34						
FX1	**Attu Island--F**	**48.69**	**39**	*e*P	**P**	**20 27 02.9**	**+1.0**
BVA0	**Borovoye Array**	**48.71**	**321**	P	**P**	**20 27 01.0**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
CHKZ	**Chkalovo**	**48.78**	**322**	*e*P	**P**	**20 27 00.9**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
CHKZ	**Chkalovo**	**48.78**	**322**	*e*P	**P**	**20 27 00.9**	**-1.6**
	comp=Z,7.2nm,1.1s,mb4.6						
CTA	**Charters Tower**	**49.27**	**149**	⇓*i*P	**P**	**20 27 08.4**	**+1.5**
	comp=Z,15nm,0.9s,mb5.0						
CTA	**Charters Tower**	**49.27**	**149**	⇓*i*P	**P**	**20 27 08.4**	**+1.5**
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
CTA	**Charters Tower**	**49.27**	**149**	P	**P**	**20 27 08.4**	**+1.5**
	comp=Z,33nm,1.3s,mb5.2,baz=318,slow=7.9,SNR=8.6						
CTAO	**Charters Tower**	**49.27**	**149**	*e*P	**P**	**20 27 07.6**	**+0.7**
	comp=Z,37nm,1.1s,mb5.3						
CTAO				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
BILL	**Bilibino**	**52.36**	**19**	*e*P	**P**	**20 27 29.2**	**-0.5**
BILL				pmax	pmax		
	comp=Z,81nm,1.0s,mb5.6						
BILL	**Bilibino**	**52.36**	**19**	*e*P	**P**	**20 27 29.2**	**-0.5**
	comp=Z,80nm,1.0s,mb5.6						
KLBR	**Kellerberrin**	**54.69**	**184**	*e*P	**P**	**20 27 45.4**	**-1.9**
	comp=Z,207nm,0.7s,mb6.3						
SVE	**Sverdlovsk**	**55.09**	**324**	⇓*e*P	**P**	**20 27 48.6**	**-1.3**
SVE				*e*		20 28 07.0	
SVE				pmax	pmax		
	comp=Z,60nm,1.8s,mb5.3						
NWAO	**Narrogin (SRO)**	**56.05**	**185**	*e*P	**P**	**20 27 54.8**	**-2.4**
NWAO				pmax	pmax		
	comp=Z,54nm,1.1s						
NWAO	**Narrogin (SRO)**	**56.05**	**185**	P	**P**	**20 27 55.3**	**-1.9**
	comp=Z,8.9nm,0.6s,mb5.0,baz=29,slow=6.9,SNR=8.0						
NWAO	**Narrogin (SRO)**	**56.05**	**185**	*e*P	**P**	**20 27 54.8**	**-2.3**
	comp=Z,54nm,1.1s,mb5.5						
WBK	**Wadi Bani Khal**	**57.40**	**283**	⇓P	**P**	**20 28 06.6**	**-0.4**
SOKR	**Solikamsk**	**57.57**	**327**	⇑*i*P	**P**	**20 28 08.7**	**+1.0**
SOKR				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.7						
SOKR				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.3						
STKA	**Stephens Creek**	**58.03**	**160**	⇑*i*P	**P**	**20 28 10.3**	**-0.9**
	comp=Z,28nm,0.8s,mb5.3						
STKA	**Stephens Creek**	**58.03**	**160**	P	**P**	**20 28 10.2**	**-1.0**
	comp=Z,8.5nm,0.6s,mb4.9,baz=339,slow=8.5,SNR=13						
STKA	**Stephens Creek**	**58.03**	**160**	*e*P	**P**	**20 28 09.8**	**-1.4**
SMDO	**Samad**	**58.12**	**283**	⇓P	**P**	**20 28 12.0**	**0.0**
JMDO	**Jabal Madar**	**58.24**	**283**	⇑P	**P**	**20 28 13.1**	**+0.3**
HOQ	**Hoqain**	**58.66**	**284**	⇓P	**P**	**20 28 18.3**	**+2.6**
	SNR=5.9						
HOQ				P		20 28 23.4	
	SNR=5.9						
BANOM	**Banah**	**59.02**	**287**	⇑P	**P**	**20 28 18.1**	**-0.1**
ARQ	**Araqi**	**59.42**	**284**	⇓P	**P**	**20 28 21.1**	**+0.1**
ASHO	**Ashiyiah**	**59.51**	**286**	⇓P	**P**	**20 28 21.5**	**-0.1**
TNA	**Tin City**	**60.91**	**27**	*e*P	**P**	**20 28 31.2**	**+0.5**
	comp=Z,52nm,1.1s,mb5.6						
RBK	**Rabkut**	**63.10**	**278**	P	**P**	**20 28 45.4**	**-0.5**
	SNR=13						
RBK				P		20 28 45.4	
	SNR=13						
WHFO	**Wadi Hawf**	**63.37**	**279**	P	**P**	**20 28 46.5**	**-1.1**
	SNR=17						
WHFO				P		20 28 46.5	
	SNR=17						
CNB	**Canberra Magne**	**63.87**	**155**	*e*P	**P**	**20 28 50.0**	**-0.8**
	comp=Z,442nm,1.0s,mb6.5						
ABTO	**Aybut**	**63.97**	**279**	⇑P	**P**	**20 28 49.6**	**-2.1**
PECR	**Pechory**	**64.18**	**323**	*e*P	**P**	**20 28 50.0**	**-2.5**
PECR				pmax	pmax		
	comp=Z,2µm,1.4s						
PECR				pmax	pmax		
	comp=Z,1µm,6.0s						
PECR				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.5						
PECR				MLR	MLR		
	comp=N,2µm,11.0s						
TOO	**Toolangi**	**64.51**	**159**	*e*P	**P**	**20 28 55.0**	**+0.1**
	comp=N,2.4nm,1.0s						
TOO	**Toolangi**	**64.51**	**159**	*e*P	**P**	**20 28 55.0**	**+0.1**
TOO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
DUS	**Dusheti**	**65.44**	**307**	P	**P**	**20 29 01.8**	**+1.0**
TI2	**Plekhanov**	**65.47**	**307**	*e*P	**P**	**20 29 01.4**	**+0.4**
TI2				*i*	pP	20 29 07.4	-1.4
TI2				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.5						
GNI	**Garni**	**65.75**	**305**	*c* *i*P	**P**	**20 29 03.1**	**+0.2**
GNI				*i* *PP	pP	20 29 27.1	+16
GNI				pmax	pmax		
	comp=Z,191nm,1.9s						
GNI	**Garni**	**65.75**	**305**	P	**P**	**20 29 02.6**	**-0.3**
	comp=Z,7.4nm,0.7s,mb4.8,baz=207,slow=2.8,SNR=8.7						
GNI				LR	LR	21 01 14.8	
	comp=Z,1µm,19.6s,MS5.1,baz=249,slow=39						
GNI	**Garni**	**65.75**	**305**	*e*P	**P**	**20 29 02.8**	**-0.1**
	comp=Z,191nm,1.4s,mb5.9						
GOF	**Gofitskoye**	**66.14**	**311**	⇑*i*P	**P**	**20 29 09.0**	**+3.7**
GOF				pmax	pmax		
	comp=Z,140nm,1.7s,mb5.7						
GOF				pmax	pmax		
	comp=Z,500nm,2.0s,mb6.2						
GOF				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.7						
ONI	**Oni**	**66.27**	**308**	P	**P**	**20 29 06.5**	**+0.4**
KIV	**Kislovodsk**	**66.57**	**309**	P	**P**	**20 29 08.6**	**+0.5**
	comp=Z,886nm,1.3s,SNR=13						
KIV	**Kislovodsk**	**66.57**	**309**	*c* *i*P	**P**	**20 29 07.8**	**-0.3**
KIV				*i*	pP	20 29 13.7	-2.2
KIV				*e*		20 29 34.0	
KIV				*i* S	S	20 38 01.7	+5.7
KIV				pmax	pmax		
	comp=Z,77nm,1.7s,mb5.5						
KIV				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3						
KIV	**Kislovodsk**	**66.57**	**309**	*e*P	**P**	**20 29 06.0**	**-2.1**
	comp=Z,364nm,1.4s,mb6.2						
KIV				LR	LR		
	comp=Z,236nm,19.0s,MS4.4						
IMA	**Indian Mountai**	**66.78**	**26**	*e*P	**P**	**20 29 11.2**	**+2.2**
IMA				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.5						
IMA	**Indian Mountai**	**66.78**	**26**	*e*P	**P**	**20 29 11.2**	**+2.2**
	comp=Z,49nm,1.1s,mb5.5						
VANB	**Van**	**67.09**	**304**	*e*P	**P**	**20 29 10.6**	**-0.9**
BHD	**Baghdad**	**67.49**	**298**	*e*P	**P**	**20 29 09.0**	**-5.1**
BHD				*i* pP	pP	20 29 18.5	-3.4
VOR	**Voronezh**	**67.56**	**318**	*e*P	**P**	**20 29 14.0**	**-0.2**
VOR				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.3						
MSL	**Mosul**	**67.82**	**301**	*e*P	**P**	**20 29 16.5**	**+0.4**
MOS	**Moscow**	**67.84**	**323**	*e*P	**P**	**20 29 15.4**	**-0.5**
MOS				*i*	pP	20 29 21.8	-1.9
MOS				*e*		20 29 42.2	
MOS				*e*		20 31 45.5	
MOS				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.7						
MOS				MLR	MLR		
	comp=E,1µm,17.5s						
MOS				MLR	MLR		
	comp=Z,2µm,17.5s,MS5.3						
RSO	**Redoubt South**	**67.85**	**32**	*e*P	**P**	**20 29 16.5**	**+0.7**
SPU	**Mount Spurr**	**68.08**	**31**	*e*P	**P**	**20 29 17.9**	**+0.6**
APA	**Apatity**	**68.11**	**336**	⇑*i*P	**P**	**20 29 19.4**	**+2.0**
APA				*e*S	S	20 38 20.0	+6.0
APA				pmax	pmax		
	comp=Z,150nm,1.5s,mb5.8						
APA				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.8						
ERZM	**Erzurum**	**68.34**	**305**	*i* P	**P**	**20 29 21.7**	**+2.4**
KDAK	**Kodiak Island**	**68.34**	**35**	*e*P	**P**	**20 29 19.8**	**+0.8**
	comp=Z,244nm,1.3s,mb6.1						
EZM	**Erzurum**	**68.34**	**305**	*e*P	**P**	**20 29 20.3**	**+1.0**

VRT	Varto	68.39	304	eP	P	20 29 19.5	-0.2
OBN	Obninsk	68.54	322	P	P	20 29 19.8	-0.5
	comp=Z,695nm,1.4s,mb6.4,SNR=12						
OBN	Obninsk	68.54	322	eP	P	20 29 18.7	-1.6
OBN				e	pP	20 29 26.3	-1.8
OBN				i *PP	pP	20 29 35.5	+7.5
OBN				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
OBN				pmax	pmax		
	comp=Z,262nm,1.5s,mb5.9						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.3						
OBN	Obninsk	68.54	322	eP	P	20 29 18.2	-2.1
	comp=Z,297nm,1.4s,mb6.0						
OBN				LR	LR		
	comp=Z,312nm,20.0s,MS4.5						
BTMT	Batman	68.63	303	eP	P	20 29 16.3	-4.8
SOC	Sochi	68.75	309	eP	P	20 29 18.2	-3.6
SOC				e		20 31 59.6	
SOC				ePPP	PPP	20 33 35.8	+2.2
SOC				eS	S	20 38 16.0	-6.1
SOC				e		20 39 07.6	
SOC				pmax	pmax		
	comp=Z,108nm,1.3s,mb5.6						
SOC				pmax	pmax		
	comp=N,51nm,1.4s						
SOC				pmax	pmax		
	comp=E,46nm,1.0s						
SOC				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.5						
SOC				MLR	MLR		
	comp=N,710nm,16.0s,MS5.2						
SOC				MLR	MLR		
	comp=E,704nm,14.0s,MS5.2						
BEST	Besiri	68.87	303	i P	P	20 29 22.8	+0.2
FIB	Fire Island	68.98	31	eP	P	20 29 23.4	+0.5
PWA	Palmer West	69.04	31	eP	P	20 29 23.4	+0.2
PWA				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.6						
PWA	Palmer West	69.04	31	eP	P	20 29 23.4	+0.2
	comp=Z,69nm,0.8s,mb5.6						
SLKM	Skilak Lake	69.08	32	eP	P	20 29 22.7	-0.8
RAYN	Ar Rayn	69.12	287	P	P	20 29 23.9	-0.5
	comp=Z,298nm,1.2s,mb6.1,SNR=15						
COLA	College	69.36	27	eP	P	20 29 25.4	+0.3
COLA				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.3						
COLA	College	69.36	27	eP	P	20 29 25.4	+0.3
	comp=Z,35nm,0.8s,mb5.3						
GUMT	Gumushane	69.62	306	eP	P	20 29 24.5	-2.6
DIY	Diyarbakir	69.67	303	eP	P	20 29 27.7	+0.2
SML	Sawmill	69.73	30	eP	P	20 29 27.5	+0.1
JOF	Joensuu	69.76	331	ep	P	20 29 26.2	-1.4
	comp=Z,26nm,0.5s,mb5.4						
JOF	Joensuu	69.76	331	eP	P	20 29 26.2	-1.4
JOF				pmax	pmax		
	comp=Z,26nm,0.5s,mb5.4						
ILAR	Eielson Array	69.78	27	P	P	20 29 27.3	-0.4
	comp=Z,6.6nm,0.6s,mb4.7,baz=282,slow=5.9,SNR=32						
ILAR				LR	LR	21 02 32.5	
	comp=Z,503nm,18.1s,MS4.8,baz=85,slow=38						
KEV	Kevo	70.02	338	ep	P	20 29 28.3	-0.8
	comp=Z,15nm,0.9s,mb4.9						
KEV	Kevo	70.02	338	eP	P	20 29 28.3	-0.8
KEV				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
PTK	Pertek	70.06	305	eP	P	20 29 30.3	+0.5
ELZG	Elazig	70.47	304	i P	P	20 29 37.0	+4.6
THY	Trims Highway	70.56	28	eP	P	20 29 33.0	+0.5
ARCES	ARCESS Array B	70.58	338	P	P	20 29 31.8	-0.7
	comp=Z,7.7nm,0.7s,mb4.8,baz=68,slow=6.5,SNR=9.4						
ARCES				LR	LR	21 03 40.1	
	comp=Z,853nm,19.8s,MS5.0,baz=47,slow=39						
PUL	Pulkovo	70.91	328	⇑eP	P	20 29 40.2	+5.6
PUL				pmax	pmax		
	comp=N,46nm,0.7s						
PUL				pmax	pmax		
	comp=Z,91nm,0.7s,mb5.8						
PUL				pmax	pmax		
	comp=E,87nm,0.8s						
PUL				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.7						
PUL				MLR	MLR		
	comp=N,1µm,15.0s,MS5.5						
PUL				MLR	MLR		
	comp=E,2µm,15.0s,MS5.5						
MYA	Malataya	70.94	304	eP	P	20 29 33.5	-1.7
MALT	Malatya	70.94	304	eP	P	20 29 35.3	+0.1
KBS	Kingsbay	71.03	349	eP	P	20 29 35.0	-0.2
DIV	Divide	71.08	31	eP	P	20 29 36.0	+0.4
	comp=E,249nm,1.0s,mb6.1						
EYAK	Cordova Ski Ar	71.23	31	eP	P	20 29 37.1	+0.6
KTK1	Kautokeino	71.50	338	eP	P	20 29 44.1	+6.0
	comp=E,111nm,1.4s,mb5.6						
KTK1	Kautokeino	71.50	338	eP	P	20 29 41.0	+3.0
KTK1				AMb	AMB	20 29 50.9	
	comp=Z,111nm,1.4s,mb5.6						
TOKT	Tokat	71.83	307	eP	P	20 29 31.5	-9.0
GZT	Gaziantep	71.85	303	i P	P	20 29 39.9	-0.8
GAZ	Gaziantep	72.17	303	eP	P	20 29 39.8	-2.8
KAF	Kangasniemi	72.20	331	ep	P	20 29 40.8	-1.6
	comp=Z,14nm,0.6s,mb5.1						
KAF	Kangasniemi	72.20	331	eP	P	20 29 40.8	-1.6
KAF				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
KAHT	Ahir Dag	72.31	304	i P	P	20 29 46.3	+2.9
SIM	Simferopol’	72.33	312	deP	P	20 29 43.7	+0.3
SIM				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.7						
SIM				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.2						
FINES	FINESS Array B	72.50	330	P	P	20 29 42.7	-1.4
	comp=Z,5.9nm,0.6s,mb4.7,baz=73,slow=5.9,SNR=30						
FINES				pP	pP	20 29 49.9	-2.1
	comp=Z,31nm,0.6s,baz=68,slow=6.4,SNR=28						
FINES				LR	LR	21 03 55.1	
	comp=Z,2µm,18.3s,MS5.3,baz=252,slow=38						
FINES	FINESS Array B	72.50	330	P	P	20 29 42.7	-1.4
FINES				pP	pP	20 29 49.9	-2.0
FINES				LR	LR	21 03 55.1	
BOYT	Boyabat	72.73	308	i P	P	20 29 43.7	-2.2
CTKT	Corum	73.03	307	i P	P	20 29 48.5	+0.8
COBT	Iskenderun	73.09	303	i P	P	20 29 48.5	+0.4
BALT	Daday	73.79	309	i P	P	20 29 50.4	-1.6
ASF	Jabal al Asfar	73.86	298	LR	LR	21 07 35.9	
	comp=Z,574nm,18.1s,MS4.9,baz=132,slow=40						
INK	Inuvik	73.87	22	P	P	20 29 51.0	-0.9
	comp=Z,19nm,0.9s,mb5.0,baz=274,slow=3.2,SNR=14						
INK				LR	LR	21 05 11.8	
	comp=Z,1µm,19.8s,MS5.1,baz=285,slow=38						
AKASG	Malin Array Be	73.90	319	P	P	20 29 50.5	-2.0
	comp=Z,3.2nm,0.5s,mb4.5,baz=63,slow=5.0,SNR=26						
AKASG				pP	pP	20 29 58.2	-2.1
	comp=Z,20nm,0.8s,baz=56,slow=6.4,SNR=14						
IDID	Didziasalis	73.96	324	eP	P	20 29 52.1	-0.6
IDID				AMPb	AMB	20 30 03.2	
	comp=Z,63nm,1.1s,mb5.5						
ELDT	Eldivan	74.07	308	i P	P	20 29 51.4	-2.3
IZAR	Zarasai	74.09	324	eP	P	20 29 52.1	-1.3
IZAR				AMPb	AMB	20 30 04.5	
	comp=Z,62nm,1.2s,mb5.4						
BRTR	Keskin Array B	74.14	307	P	P	20 29 53.5	-0.6
	comp=Z,6.8nm,0.5s,mb4.8,baz=113,slow=4.1,SNR=30						
BRTR				pP	pP	20 30 00.8	-1.1
	comp=Z,49nm,1.0s,baz=94,slow=2.1,SNR=34						
ISAL	Salakas	74.21	324	eP	P	20 29 53.4	-0.7
ISAL				AMPb	AMB	20 30 05.2	
	comp=Z,43nm,1.2s,mb5.3						
IIGN	Ignalina	74.23	324	eP	P	20 29 53.6	-0.7
IIGN				AMPb	AMB	20 30 05.4	
	comp=Z,43nm,1.4s,mb5.2						
MOR8	Moi Rana	75.66	336	eP	P	20 30 05.3	+3.0
	comp=Z,82nm,1.6s,mb5.4						
MOR8	Moi Rana	75.66	336	eP	P	20 30 05.3	+3.0
MOR8				AMb	AMB	20 30 12.1	
	comp=Z,82nm,1.6s,mb5.4						
CSS	Prodhromos	75.83	302	P	P	20 30 03.4	-0.5
	comp=Z,1.7nm,0.9s						
MAMC	Mammari	75.85	302	P	P	20 30 03.9	-0.1
TLCR		75.86	313	⇑P	P	20 30 03.3	-0.5
IAS	Iasi	76.03	316	P	P	20 30 09.6	+4.8
SZAC	Souni-Zanaja	76.24	302	P	P	20 30 07.5	+1.3
CFR	Carcaliu	76.31	313	P	P	20 30 06.0	-0.4
CFR	Carcaliu	76.31	313	⇑P	P	20 30 05.9	-0.5
CFR	Carcaliu	76.31	313	⇓iP	P	20 30 05.4	-1.0
ALFC	Alevga	76.34	303	P	P	20 30 04.8	-1.9
	comp=Z,1.9nm,1.1s						
SUW	Suwalki	76.34	323	eP	P	20 30 05.7	-0.7
SUW				ePcP	PcP	20 30 13.2	-5.3
SUW				MLR	MLR	21 05 05.5	
	comp=Z,1µm,19.7s,MS5.2						
TIRR	Tirgusor	76.36	313	P	P	20 30 06.6	-0.1
HARR	Harsova	76.61	313	⇑P	P	20 30 08.0	-0.1
HARR	Harsova	76.61	313	⇓iP	P	20 30 07.8	-0.3
PSN	Preselentsi	76.78	312	eP	P	20 30 12.0	+3.0
VRI	Vrincioaia	77.02	314	⇑P	P	20 30 10.8	+0.5
VRI	Vrincioaia	77.02	314	⇑iP	P	20 30 11.1	+0.8
ISP	Isparta	77.05	306	P	P	20 30 17.4	+6.7
NSS	Namsos	77.32	335	eP	P	20 30 12.1	+0.5
NSS				epP	pP	20 30 16.1	-3.4
LVV	L’vov	77.34	319	eP	P	20 30 12.0	0.0
LVV				MLR	MLR		
	comp=Z,800nm,16.0s,MS5.1						
LVV				MLR	MLR		
	comp=E,1µm,15.0s,MS5.4						
LVV				MLR	MLR		
	comp=N,800nm,13.0s,MS5.4						
DAG	Danmarks Havn	77.35	351	⇑eP	P	20 30 13.0	+1.4
DAG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
DAG	Danmarks Havn	77.35	351	⇑iP	P	20 30 13.0	+1.4
	comp=Z,5.0nm,1.0s,mb4.4						
BURAR	Bucovina Array	77.39	316	⇑P	P	20 30 12.3	0.0
BURAR	Bucovina Array	77.39	316	⇑P	P	20 30 12.4	+0.1
SIT	Sitka	77.48	33	eP	P	20 30 15.9	+3.3
SIT				pmax	pmax		
	comp=Z,139nm,1.1s,mb5.8						
SIT	Sitka	77.48	33	eP	P	20 30 15.9	+3.3
	comp=Z,139nm,1.1s,mb5.8						
MLR	Muntele Rosu	77.66	314	LR	LR	21 07 46.9	
	comp=Z,803nm,18.1s,MS5.1,baz=54,slow=38						
MLR	Muntele Rosu	77.66	314	⇑P	P	20 30 14.3	+0.4
MLR	Muntele Rosu	77.66	314	⇓iP	P	20 30 13.9	0.0
BUC1	Bucharest	78.01	313	P	P	20 30 17.2	+1.4
WAR	Warsaw	78.20	322	eP	P	20 30 14.5	-2.2
WAR				ePcP	PcP	20 30 24.3	-2.3
WAR				MLR	MLR	21 05 18.4	
	comp=Z,2µm,17.6s,MS5.6						
KWP	Kalwaria	78.21	319	eP	P	20 30 16.7	0.0
KWP				ePcP	PcP	20 30 22.0	-4.6
KWP				MLR	MLR	21 06 21.9	
	comp=Z,2µm,19.8s,MS5.4						
JMB	Yambol	78.30	311	eP	P	20 30 24.0	+6.6
SZH	Strazhica	78.46	312	eP	P	20 30 19.0	+0.7
KOLS	Kolonicke sedl	78.73	318	i P	P	20 30 19.4	-0.3
KOLS				i sP	sP	20 30 27.7	-2.6
DIM	Dimitrovgrad	79.17	311	eP	P	20 30 26.0	+3.8
ALN	Alexandroupoli	79.23	310	eP	P	20 30 28.5	+6.0
CRVS	Cervenica-Dubn	79.24	319	i P	P	20 30 21.9	-0.5
CRVS				i	pP	20 30 29.8	-0.6
NB2	NORSAR Subarra	79.28	332	P	P	20 30 20.6	-1.8
	comp=Z,40nm,0.8s,mb5.4,baz=59,slow=5.6						
NB2	NORSAR Subarra	79.28	332	P	P	20 30 20.6	-1.8
NB2				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
NB2	NORSAR Subarra	79.28	332	P	P	20 30 20.6	-1.8
	baz=59,slow=5.9						
NOA	NORSAR Array B	79.28	332	P	P	20 30 21.1	-1.3
	comp=Z,8.7nm,0.8s,mb4.7,baz=65,slow=4.9,SNR=16						
NOA				pP	pP	20 30 28.0	-2.3
	comp=Z,30nm,0.8s,baz=60,slow=5.6,SNR=28						
NOA				LR	LR	21 07 46.3	
	comp=Z,2µm,18.5s,MS5.4,baz=65,slow=38						
NOA	NORSAR Array B	79.28	332	P	P	20 30 21.1	-1.3
NOA				pP	pP	20 30 28.0	-2.3
NOA				LR	LR	21 07 46.3	
DLBC	Dease Lake	79.46	31	P	P	20 30 24.5	+1.1
	comp=Z,8.5nm,0.7s,mb4.8,baz=240,slow=3.0,SNR=7.8						
DLBC				pP	pP	20 30 29.6	-1.8
	comp=Z,22nm,1.0s,baz=302,slow=7.8,SNR=21						
DLBC				LR	LR	21 05 55.8	
	comp=Z,553nm,20.5s,MS4.9,baz=309,slow=36						
CRAR	CRAIOVA	79.50	314	⇓P	P	20 30 31.1	+7.1
NAO01	NORSAR Array S	79.51	332	eP	P	20 30 21.3	-2.3
	comp=Z,19nm,0.9s,mb5.0						
DOMB	Dombas	79.67	334	eP	P	20 30 26.3	+1.8
	comp=Z,82nm,1.1s,mb5.6						
DOMB	Dombas	79.67	334	eP	P	20 30 26.3	+1.8
DOMB				AMb	AMB	20 30 32.1	
	comp=Z,82nm,1.1s,mb5.6						
OJC	Ojcow	79.71	320	eP	P	20 30 24.6	-0.3
PLD	Plovdiv	79.73	311	eP	P	20 30 27.0	+1.8
NIE	Niedzica	79.73	319	eP	P	20 30 23.6	-1.5
RZN	Rozhen	79.87	311	i P	P	20 30 27.0	+1.0
GKP	Gorka Klasztor	79.89	324	eP	P	20 30 26.3	+0.5
GKP				ePcP	PcP	20 30 33.0	-0.8
GKP				MLR	MLR	21 05 36.7	
	comp=Z,2µm,17.9s,MS5.5						
PGB	Panagyurishte	79.93	312	i P	P	20 30 28.0	+1.7
KECS	Kecovo	80.00	319	i P	P	20 30 27.6	+1.1
KECS				i pP	pP	20 30 34.7	+0.2
MOL	Molde	80.01	335	eP	P	20 30 28.6	+2.4
	comp=Z,266nm,1.6s,mb5.9						
MOL	Molde	80.01	335	eP	P	20 30 28.6	+2.4
MOL				AMb	AMB	20 30 38.0	
	comp=Z,266nm,1.6s,mb5.9						
URZ	Urewera	80.25	139	P	P	20 30 29.3	+1.2
	comp=Z,17nm,1.2s,mb4.8,baz=314,slow=8.2,SNR=2.0						
BSD	Bornholm Skovb	80.30	326	eP	P	20 30 31.0	+3.0
BSD				i	pP	20 30 37.3	+1.3
BSD				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
BSD				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.3						
BSD	Bornholm Skovb	80.30	326	i P	P	20 30 31.0	+3.0
	comp=Z,50nm,0.9s,mb5.4						
BSD				i	pP	20 30 37.3	+1.3
	comp=Z,1µm,16.0s						
BZS	Buzias	80.44	316	P	P	20 30 33.8	+4.9
BZS	Buzias	80.44	316	⇓P	P	20 30 28.6	-0.3
BZS	Buzias	80.44	316	⇓P	P	20 30 28.6	-0.3
RPZ	Rata Peaks	80.54	146	P	P	20 30 30.7	+1.1
	comp=Z,13nm,1.0s,mb4.8,baz=330,slow=8.1,SNR=3.2						
VTS	Vitosha	80.57	312	⇑P	P	20 30 30.4	+0.7
VTS	Vitosha	80.57	312	i P	P	20 30 30.0	+0.3
PSZ	Piszkesteto	80.59	318	P	P	20 30 30.8	+1.1
PSZ	Piszkesteto	80.59	318	⇑epP	pP	20 30 37.1	-0.5
MMB	Musomiste	80.60	311	i P	P	20 30 31.0	+1.1
OKC	Ostrava-Krasne	80.84	320	eP	P	20 30 28.1	-2.8
OKC				AMS	AMS	21 05 30.0	
	comp=Z,2µm,15.6s						
SRS	Serrai	80.87	311	eP	P	20 30 29.8	-1.5
OUR	Ouranopolis	80.90	310	eP	P	20 30 30.9	-0.6
BOLS	Boljevac	80.92	314	⇑iP	P	20 30 30.8	-0.8
KKB	Krupnik	80.93	312	i P	P	20 30 31.5	-0.1
VYHS	Vyhne	81.00	319	i P	P	20 30 32.1	+0.3
VYHS				esP	sP	20 30 40.0	-2.4
SOH	Sokhos	81.15	311	eP	P	20 30 39.4	+6.6
PAIG	Paliouri	81.27	310	eP	P	20 30 39.7	+6.3
KNT	Kendrikon	81.34	311	eP	P	20 30 33.1	-0.6
BARS	Barje	81.41	313	⇑iP	P	20 30 33.4	-0.7
KSP	Ksiaz	81.47	322	eP	P	20 30 34.0	-0.2
KSP				e*PP	pP	20 30 41.5	-0.7
KSP				MLR	MLR		
	comp=Z,2µm,18.1s,MS5.6						
KSP	Ksiaz	81.47	322	eP	P	20 30 34.4	+0.2
KSP				ePcP	PcP	20 30 37.9	-2.8
KSP				MLR	MLR	21 05 55.2	
	comp=Z,2µm,18.9s,MS5.5						
SRO	Srobarova	81.60	318	e	P	20 30 44.3	+9.3
DPC	Dobruska-Polom	81.67	321	eP	P	20 30 35.3	0.0
DPC				AMS	AMS	21 06 20.0	
	comp=Z,2µm,16.5s						
GRUS	Gruza	81.72	314	⇑iP	P	20 30 35.1	-0.6
GRG	Griva	81.76	311	eP	P	20 30 42.6	+6.6
UPC	Upice	81.78	322	eP	P	20 30 36.0	+0.2
VRAC	Vranov	81.98	320	P	P	20 30 37.9	+1.0
SKO	Skopje	82.02	312	i P	P	20 30 36.8	-0.5
SKO				i	pP	20 30 44.2	-1.0
SKO				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
SKO	Skopje	82.02	312	i P	P	20 30 36.8	-0.5
	comp=Z,0.0nm,0.8s						
SKO				⇑i	pP	20 30 44.2	-1.0
	comp=Z,0.2nm,1.0s						
LIT	Litokhoron	82.04	310	eP	P	20 30 38.2	+0.7
DIVS	Divcibare	82.11	315	⇓i(P)	P	20 30 37.0	-0.7
ZST	Bratislava	82.17	319	eP	P	20 30 43.9	+6.0
ZST				i pP	pP	20 30 46.4	+0.5
ZST	Bratislava	82.17	319	epP	pP	20 30 43.9	-2.0
ZST				i sP	sP	20 30 46.4	-2.1
MUD	Monsted U’grnd	82.49	329	eP	P	20 30 46.3	+6.9
MUD				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.5						
MUD				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.5						
MUD	Monsted U’grnd	82.49	329	i P	P	20 30 46.3	+6.9
	comp=Z,83nm,1.2s,mb5.5						
	comp=Z,2µm,17.0s						
FNA	Florina	82.54	311	eP	P	20 30 38.6	-1.4
AGG	Agios Georgios	82.59	309	eP	P	20 30 43.7	+3.4
PVCC	Panska Ves	82.59	322	eP	P	20 30 40.8	+0.8
BRG	Berggiesshubel	82.78	323	eP	P	20 30 40.5	-0.5
BRG				i	pP	20 30 48.3	-0.7
BRG				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.6						
BRG				MLR	MLR		
	comp=N,1µm,16.1s,MS5.7						
BRG				MLR	MLR		
	comp=E,2µm,16.1s,MS5.7						
BRG				MLR	MLR		
	comp=Z,2µm,16.1s,MS5.5						
BRG	Berggiesshubel	82.78	323	eP	P	20 30 40.5	-0.5
	comp=Z,96nm,1.4s,mb5.6						
BRG				i	pP	20 30 48.3	-0.7
BRG				LR	LR		
	comp=Z,2µm,16.1s,MS5.5						
PRU	Pruhonice	82.86	322	eP	P	20 30 41.4	0.0
PRU				AMS	AMS	21 06 50.0	
	comp=Z,2µm,14.2s						
SCO	Scoresbysund	83.06	348	i P	P	20 30 48.3	+6.2
SCO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
SCO	Scoresbysund	83.06	348	i P	P	20 30 48.3	+6.2
	comp=Z,4.4nm,0.9s,mb4.5						
CLL	Collm	83.10	323	eP	P	20 30 42.0	-0.7
CLL				i	pP	20 30 49.5	-1.1
CLL				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
CLL				MLR	MLR		
	comp=Z,2µm,18.7s,MS5.5						
CLL	Collm	83.10	323	eP	P	20 30 42.0	-0.7
	comp=Z,20nm,0.9s,mb5.2						
CLL				i	pP	20 30 49.5	-1.1
CLL				LR	LR		
	comp=Z,2µm,18.7s,MS5.5						
CLL	Collm	83.10	323	P	P	20 30 42.0	-0.7
CLL				i		20 30 45.7	
CLL				i *SP	sP	20 30 49.5	-3.7
CLL				ePP	PP	20 33 58.0	+2.3
ARSA	Arzberg	83.55	319	⇑iP	P	20 30 45.4	+0.4
	comp=Z,69nm,1.3s,mb5.6						
YKA	Yellowknife Ar	83.60	23	P	P	20 30 45.5	+0.5
	comp=Z,3.5nm,0.6s,mb4.7,baz=314,slow=4.8,SNR=36						
YKA				PKKPbc		20 49 04.9	
	comp=Z,0.3nm,0.4s,baz=129,slow=2.4,SNR=4.5						
YKA				LR	LR	21 10 59.7	
	comp=Z,628nm,19.6s,MS5.0,baz=325,slow=38						
YKA	Yellowknife Ar	83.60	23	P	P	20 30 45.5	+0.5
YKA				PKKPbc		20 49 05.0	
YKA				LR	LR	21 10 59.7	
IGT	Igoumenitsa	83.79	310	eP	P	20 30 52.5	+6.0
KHC	Kasperske Hory	83.81	321	eP	P	20 30 46.1	-0.3
KHC				e	pP	20 30 55.0	+0.6
KHC				MLR	MLR		
	comp=Z,2µm,15.6s,MS5.5						
KHC	Kasperske Hory	83.81	321	eP	P	20 30 46.1	-0.3
KHC				pP	pP	20 30 55.0	+0.6
KHC				AMS	AMS	21 07 20.0	
	comp=Z,2µm,15.6s						
GERES	GERESS Array B	83.88	321	P	P	20 30 46.5	-0.2
	comp=Z,8.6nm,0.8s,mb5.0,baz=56,slow=4.8,SNR=29						
NKC	Novy Kostel	83.93	322	eP	P	20 30 46.7	-0.2
NKC				AMS	AMS	21 12 30.0	
	comp=Z,2µm,13.5s						
MOA	Molln	84.02	320	⇑iP	P	20 30 47.5	+0.1
	comp=Z,112nm,1.5s,mb5.8						
PERS	Pernice	84.08	318	eP	P	20 30 47.9	+0.1
PERS				e	pP	20 30 54.5	-1.2
MOX	Moxa	84.19	323	eP	P	20 30 47.9	-0.3
MOX				pmax	pmax		
	comp=Z,146nm,1.7s,mb5.8						
MOX				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.3						
MOX	Moxa	84.19	323	eP	P	20 30 47.9	-0.3
	comp=Z,146nm,1.7s,mb5.8						
MOX				LR	LR		
	comp=Z,1µm,18.0s,MS5.3						
MOX	Moxa	84.19	323	i P	P	20 30 47.9	-0.3
	comp=Z,logA/T=1.9,mb5.8						
MOX				L		21 09 24.0	
OBKA	Obir	84.48	318	⇑iP	P	20 30 49.6	-0.2
	comp=Z,56nm,0.9s,mb5.7						
BOJS	Bojanci	84.52	317	eP	P	20 30 50.4	+0.4
BOJS				e	pP	20 30 57.3	-0.7
LJU	Ljubljana	84.71	318	eP	P	20 30 50.4	-0.6
LJU				e		20 30 55.9	
GRA1	Grafenberg Arr	84.88	322	eP	P	20 30 51.7	0.0
	comp=Z,153nm,1.5s,mb5.9						
GRA1				LR	LR		
	comp=Z,2µm,18.6s,MS5.4						
GRF	Grafenberg Arr	84.88	322	eP	P	20 30 51.7	0.0
GRF				pmax	pmax		
	comp=Z,153nm,1.5s,mb5.9						
GRF				MLR	MLR		
	comp=Z,2µm,18.6s,MS5.4						
GRF	Grafenberg Arr	84.88	322	eP	P	20 30 51.7	0.0
GRF				pmax	pmax		
	comp=Z,153nm,1.5s,mb5.9						
GRF				MLR	MLR		
	comp=Z,2µm,18.6s,MS5.4						
GRF	Grafenberg Arr	84.88	322	eP	P	20 30 51.7	0.0
	comp=Z,153nm,1.5s,mb5.9						
GRF				LR	LR		
	comp=Z,2µm,18.6s,MS5.4						
KBA	Koelnbreinsper	84.94	319	⇓iP	P	20 30 51.9	-0.1
	comp=Z,80nm,1.3s,mb5.7						
KBA	Koelnbreinsper	84.94	319	⇓iP	P	20 30 51.9	-0.1
KBA				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.7						
JAVS	Javornik	85.07	318	eP	P	20 30 51.9	-0.8
JAVS				e	pP	20 30 59.0	-1.7
VOY	Vojsko	85.11	318	eP	P	20 30 52.2	-0.7
VOY				e	pP	20 30 59.9	-1.0
PTCC	Patocco-Chiusa	85.26	319	eP	P	20 30 53.9	+0.3
TRI	Trieste	85.34	318	eP	P	20 30 59.0	+4.9
KMBO	Kilima Mbogo	85.39	267	P	P	20 30 56.5	+1.4
	comp=Z,5.1nm,0.8s,mb4.7,baz=54,slow=5.7,SNR=11						
FVI	Forni Avoltri	85.51	319	eP	P	20 30 55.0	+0.1
WATA	Walderalm	85.86	320	⇑iP	P	20 30 55.8	-0.8
	comp=Z,90nm,1.5s,mb5.8						
WATA	Walderalm	85.86	320	⇑iP	P	20 30 55.8	-0.8
WATA				pmax	pmax		
	comp=Z,90nm,1.5s,mb5.8						
WTTA	Wattenberg	85.86	320	⇑iP	P	20 30 56.7	+0.1
	comp=Z,64nm,1.0s,mb5.8						
WTTA	Wattenberg	85.86	320	⇑iP	P	20 30 56.7	+0.1
WTTA				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.8						
WTSB	Winterswijk	86.07	326	eP	P	20 31 02.0	+4.4
MOTA	Moosalm	86.14	320	⇑iP	P	20 30 58.5	+0.5
	comp=Z,28nm,1.5s,mb5.3						
MOTA	Moosalm	86.14	320	⇑iP	P	20 30 58.5	+0.5
MOTA				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.3						
SQTA	Sankt Quirin	86.14	320	⇑iP	P	20 30 58.7	+0.7
	comp=Z,80nm,1.5s,mb5.7						
SQTA	Sankt Quirin	86.14	320	⇑iP	P	20 30 58.7	+0.7
SQTA				pmax	pmax		
	comp=Z,80nm,1.5s,mb5.7						
ORI	Oriolo Calabro	86.25	312	eP	P	20 30 59.7	+1.0
TOD	Tromm	86.27	323	eP	P	20 30 59.6	+1.0
FG4	Candela	86.38	313	eP	P	20 31 04.1	+4.7
CTI	Castel Tesino	86.46	319	eP	P	20 31 04.5	+4.9
FG5	Orsara di Pugl	86.48	314	eP	P	20 31 04.9	+5.1
MRLC	Muro Lucano	86.58	313	eP	P	20 31 05.7	+5.4
ABH	Alteburg	86.81	324	eP	P	20 31 02.4	+1.2
GRI	Girifalco	86.83	311	eP	P	20 31 03.1	+1.5
DAVA	Damuels	86.88	321	⇑iP	P	20 31 01.8	+0.2
	comp=Z,34nm,1.3s,mb5.4						
CII	Carovilli	86.91	314	eP	P	20 31 06.3	+4.4
ARV	Arcevia	86.93	316	eP	P	20 31 07.5	+5.5
FSSB	Fossombrone	86.94	317	eP	P	20 31 06.0	+4.0
BRMO	Bormio	87.01	320	eP	P	20 31 03.5	+1.2

RSM	Repubblica di	87.03	317	eP	P	20 31 09.4	+7.0
SNTG	Esanatoglia	87.05	316	eP	P	20 31 03.9	+1.4
NRCA	Norcia	87.14	316	eP	P	20 31 04.0	+1.0
LANF	Langenberg	87.16	323	eP	P	20 31 04.8	+1.9
RUP	Ruppelstein	87.18	324	eP	P	20 31 03.7	+0.7
HGN	Heimansgroeve	87.19	325	eP	P	20 31 08.5	+5.5
	comp=Z,22nm,1.1s,mb5.3						
AQU	L'Aquila	87.19	315	eP	P	20 31 05.1	+1.8
SDI	San Donato	87.24	315	eP	P	20 31 08.9	+5.4
PTQR	Pietraquaria	87.35	315	eP	P	20 31 04.3	+0.2
SAL	Salo	87.36	319	eP	pP	20 31 10.9	-1.1
SFI	Santa Sofia	87.42	317	eP	pP	20 31 11.0	-1.3
CRE	Caprese Michel	87.49	317	eP	P	20 31 10.4	+5.7
PGD	Poggio Sodo	87.51	317	eP	P	20 31 06.2	+1.4
VMG	Vicchio	87.58	317	eP	P	20 31 07.2	+2.2
FELD	Feldberg	87.64	322	eP	P	20 31 07.4	+2.1
WLS	Welschbruch	87.72	323	eP	P	20 31 07.6	+1.9
ZCCA	Zocca	87.73	318	eP	P	20 31 09.1	+3.3
BORG	Borgarnes	87.74	345	LR	LR	21 12 00.2	
	comp=Z,1µm,18.2s,MS5.3,baz=172,slow=37						
CDF	Champ du Feu	87.76	323	eP	P	20 31 05.6	-0.3
	comp=Z,336nm,1.6s,mb6.0						
CDF	Champ du Feu	87.76	323	eP	P	20 31 05.6	-0.3
CDF				pmax	pmax		
	comp=Z,168nm,1.6s,mb6.0						
GSCL	Gusciola	87.97	318	eP	pP	20 31 14.8	-0.2
ERBM	Eremo	88.04	318	eP	P	20 31 11.5	+4.2
GIVF	Givet	88.15	325	eP	P	20 31 07.3	-0.4
	comp=Z,161nm,1.3s,mb5.8						
GIVF	Givet	88.15	325	eP	P	20 31 07.3	-0.4
GIVF				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.8						
SARO	Sassorosso	88.17	318	P	P	20 31 05.4	-2.5
VALM		88.18	318	P	P	20 31 06.9	-1.1
GRAM		88.22	318	P	P	20 31 07.0	-1.2
RAR	Rarotonga	88.27	114	LR	LR	21 02 05.7	
	comp=Z,388nm,21.0s,MS4.8,baz=286,slow=30						
VAI	Varese	88.28	320	eP	P	20 31 10.7	+2.3
BACM		88.33	318	P	P	20 31 06.7	-1.9
HINF	Hinteralfeld	88.33	322	eP	P	20 31 08.0	-0.6
	comp=Z,17nm,0.8s,mb5.0						
HINF	Hinteralfeld	88.33	322	eP	P	20 31 08.0	-0.6
HINF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
PII	Pisa	88.33	317	eP	P	20 31 14.5	+5.8
GRFL	Gerfalco	88.35	317	eP	pP	20 31 15.2	-1.6
VINC	Vinca	88.35	318	P	P	20 31 07.0	-1.8
CODM		88.40	318	P	P	20 31 08.3	-0.7
BOB	Bobbio (Coli)	88.45	319	eP	P	20 31 14.5	+5.2
BAIF	Baives	88.50	325	eP	P	20 31 08.9	-0.4
	comp=Z,191nm,1.5s,mb5.8						
BAIF	Baives	88.50	325	eP	P	20 31 08.9	-0.4
BAIF				pmax	pmax		
	comp=Z,96nm,1.5s,mb5.8						
HAU	Haudompre	88.51	323	eP	P	20 31 08.8	-0.6
	comp=Z,36nm,0.9s,mb5.4						
HAU				eR			
	comp=Z,2µm,17.0s						
HAU	Haudompre	88.51	323	eP	P	20 31 08.8	-0.6
HAU				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.4						
HAU				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.6						
THEF	They Montfort	88.58	323	eP	P	20 31 10.0	+0.2
LOMF	Lomont	88.60	322	eP	P	20 31 10.9	+1.0
MCGN	Macugnaga	88.69	320	eP	P	20 31 10.5	+0.2
ORX	Oropa	88.87	320	P	P	20 31 10.0	-1.3
MEZF	Maizieres J'vi	88.94	324	eP	P	20 31 11.3	-0.2
	comp=Z,172nm,1.3s,mb5.9						
TRAV		89.07	320	P	P	20 31 10.5	-1.7
PCP	Pian Castagno	89.12	319	P	P	20 31 12.1	-0.3
CABF	La Chapelle	89.43	322	eP	P	20 31 13.3	-0.6
	comp=Z,51nm,1.2s,mb5.4						
CABF	La Chapelle	89.43	322	eP	P	20 31 13.3	-0.6
CABF				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.4						
LSD	Ceresole Reale	89.45	320	P	P	20 31 13.9	-0.1
FIN	Finale Ligure	89.50	319	P	P	20 31 13.6	-0.7
GSM	Grass Mountain	89.54	38	P	P	20 31 17.9	+3.6
RSP	Reno Superiore	89.56	320	P	P	20 31 13.6	-0.9
RSL	Roselend	89.63	321	eP	P	20 31 19.7	+4.9
ROB	Roburent	89.66	319	P	P	20 31 14.0	-1.0
LPG	La Plagne	89.67	320	eP	P	20 31 15.1	+0.1
	comp=Z,114nm,0.9s,mb5.9						
LPG	La Plagne	89.67	320	eP	P	20 31 15.1	+0.1
LPG				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.9						
LPL	La Plagne	89.67	320	eP	P	20 31 15.0	0.0
	comp=Z,100nm,1.1s,mb5.8						
LPL	La Plagne	89.67	320	eP	P	20 31 15.0	0.0
LPL				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.8						
BHB	Bricherasio	89.72	320	P	P	20 31 14.0	-1.3
FENE	Fenestrelle	89.74	320	P	P	20 31 14.9	-0.5
FMW	Mount Fremont	89.76	38	P	P	20 31 18.7	+3.3
NLW	Nelson Butte	89.84	36	P	pP	20 31 23.2	-0.6
MONE	Monesi	89.84	319	P	P	20 31 14.9	-1.0
IMI	Imperia	89.86	319	P	P	20 31 15.5	-0.4
PGF	Pioggiola	89.90	317	eP	P	20 31 15.0	-1.2
	comp=Z,112nm,0.8s,mb5.9						
PGF	Pioggiola	89.90	317	eP	P	20 31 15.0	-1.2
PGF				pmax	pmax		
	comp=Z,56nm,0.8s,mb6.0						
RRL	Cesana Torines	89.97	320	P	P	20 31 15.5	-0.9
ENR	Entracque	89.97	319	P	P	20 31 14.9	-1.5
NEGI	Negi	90.00	319	P	P	20 31 15.7	-0.9
PZZ	Prazzo	90.01	319	P	P	20 31 15.3	-1.3
STV2	Anna di Valdie	90.01	319	P	P	20 31 15.6	-1.0
STV	Sta Anna Valdi	90.02	319	P	P	20 31 14.9	-1.8
MBDF	Montbardon	90.08	320	eP	P	20 31 16.1	-0.8
	comp=Z,18nm,0.7s,mb5.2						
MBDF	Montbardon	90.08	320	eP	P	20 31 16.1	-0.8
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.2						
AUTN	L'Aution	90.09	319	eP	P	20 31 22.0	+5.0
SBF	Sospel	90.16	319	eP	P	20 31 16.6	-0.7
	comp=Z,101nm,0.9s,mb5.9						
SBF	Sospel	90.16	319	eP	P	20 31 16.6	-0.7
SBF				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.8						
ORIF	Oris-en-Rattie	90.50	320	eP	P	20 31 18.6	-0.3
	comp=Z,52nm,0.9s,mb5.6						
ORIF				eR			
	comp=Z,1µm,20.8s						
SSF	Saint Saulge	90.63	323	eP	P	20 31 18.8	-0.6
SSF				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.7						
SSF	Saint Saulge	90.63	323	eP	P	20 31 18.8	-0.6
	comp=Z,47nm,1.2s,mb5.7						
SMF	Signal de Mont	90.68	322	eP	P	20 31 19.2	-0.5
	comp=Z,133nm,0.9s,mb6.0						
SMF	Signal de Mont	90.68	322	eP	P	20 31 19.2	-0.5
SMF				pmax	pmax		
	comp=Z,66nm,0.9s,mb6.0						
FRF	La Foret Royal	90.80	319	eP	P	20 31 19.5	-0.8
	comp=Z,135nm,1.4s,mb5.8						
FRF	La Foret Royal	90.80	319	eP	P	20 31 19.5	-0.8
FRF				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.8						
AVF	Avril sur Loir	90.87	323	eP	P	20 31 20.0	-0.5
	comp=Z,181nm,1.2s,mb6.0						
HYF	Humbligny	90.98	323	eP	P	20 31 21.0	0.0
LMR	La Mourre	91.01	319	eP	P	20 31 19.9	-1.4
	comp=Z,201nm,1.4s,mb6.0						
LMR	La Mourre	91.01	319	eP	P	20 31 19.9	-1.4
LMR				pmax	pmax		
	comp=Z,100nm,1.4s,mb6.0						
MBAR	Mbarara	91.17	270	P	P	20 31 20.6	-2.1
MBAR				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.2						
MBAR	Mbarara	91.17	270	P	P	20 31 20.6	-2.1
	comp=Z,14nm,1.1s,mb5.2						
SMRF	Simiane la Rot	91.21	320	eP	P	20 31 21.8	-0.4
VIVF	Saint-Julien-l	91.24	321	eP	P	20 31 21.7	-0.6
	comp=Z,42nm,0.9s,mb5.5						
VIVF	Saint-Julien-l	91.24	321	eP	P	20 31 21.7	-0.6
VIVF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.5						
CROR	Criterion Ridg	91.27	39	P	pP	20 31 28.6	-1.8
BGF	Bois d'Agland	91.29	323	eP	P	20 31 22.0	-0.5
	comp=Z,105nm,1.3s,mb5.7						
BGF	Bois d'Agland	91.29	323	eP	P	20 31 22.0	-0.5
BGF				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.7						
AGO	Saint Agoulin	91.43	322	eP	P	20 31 26.4	+3.3
HUMO	Hull Mountain	91.43	42	eP	P	20 31 25.7	+2.5
	comp=Z,15nm,1.2s,mb5.2						
NEW	Newport	91.45	35	eP	P	20 31 25.8	+2.7
	comp=Z,23nm,1.0s,mb5.5						
NEW				LR	LR		
	comp=Z,645nm,21.0s,MS5.0						
LDF	La Druitiere	91.64	326	eP	P	20 31 23.2	-0.8
	comp=Z,114nm,1.6s,mb5.7						
LDF	La Druitiere	91.64	326	eP	P	20 31 23.2	-0.8
LDF				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.7						
PYM	Petit Puy Mans	91.68	322	eP	P	20 31 26.0	+1.7
FLN	La Foliniere	91.72	326	eP	P	20 31 23.4	-1.0
FLN				eR			
	comp=Z,1µm,18.2s						
TCF	Toulx Ste Croi	91.80	323	eP	P	20 31 24.7	-0.1
	comp=Z,170nm,1.4s,mb5.9						
TCF	Toulx Ste Croi	91.80	323	eP	P	20 31 24.7	-0.1
TCF				pmax	pmax		
	comp=Z,85nm,1.4s,mb5.9						
LBL	Lubilhac	91.85	322	eP	P	20 31 27.1	+2.0
GRR	Gorron	92.15	326	eP	P	20 31 25.5	-0.9
	comp=Z,85nm,1.4s,mb5.6						
GRR	Gorron	92.15	326	eP	P	20 31 25.5	-0.9
GRR				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.6						
LASF	Ste Croix	92.17	320	eP	P	20 31 26.4	-0.2
	comp=Z,210nm,1.9s,mb5.8						
LHEM	Herd Peak	92.43	42	P	P	20 31 29.7	+1.9
CAF	Calviac	92.70	322	eP	P	20 31 29.4	+0.4
	comp=Z,150nm,1.3s,mb6.0						
CAF	Calviac	92.70	322	eP	P	20 31 29.4	+0.4
CAF				pmax	pmax		
	comp=Z,75nm,1.3s,mb6.0						
RJF	Les Rejaudoux	92.78	322	eP	P	20 31 28.6	-0.8
	comp=Z,295nm,1.2s,mb6.3						
RJF				eR			
	comp=Z,1µm,20.8s						
RJF	Les Rejaudoux	92.78	322	eP	P	20 31 28.6	-0.8
RJF				pmax	pmax		
	comp=Z,147nm,1.2s,mb6.3						
RJF				MLR	MLR		
	comp=Z,1µm,20.8s,MS5.4						
FRB	Frobisher Bay	92.90	5	LR	LR	21 17 29.2	
	comp=Z,940nm,19.0s,MS5.3,baz=342,slow=38						
MFF	Saint Martin d	92.90	324	eP	P	20 31 29.7	-0.2
	comp=Z,120nm,1.5s,mb5.8						
MFF	Saint Martin d	92.90	324	eP	P	20 31 29.7	-0.2
MFF				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.8						
SGMF	Saint Gilles	93.11	326	eP	P	20 31 29.9	-0.9
	comp=Z,42nm,1.0s,mb5.5						
SGMF	Saint Gilles	93.11	326	eP	P	20 31 29.9	-0.9
SGMF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.5						
ROSF	Rostrenen	93.42	327	eP	P	20 31 31.2	-1.0
	comp=Z,21nm,0.8s,mb5.3						
ROSF	Rostrenen	93.42	327	eP	P	20 31 31.2	-1.0
ROSF				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.3						
LBCM	Butte Creek Ri	93.42	43	P	P	20 31 34.0	+1.5
LFF	La Frestale	93.44	322	eP	P	20 31 32.7	+0.3
	comp=Z,182nm,1.5s,mb6.0						
LFF	La Frestale	93.44	322	eP	P	20 31 32.7	+0.3
LFF				pmax	pmax		
	comp=Z,91nm,1.5s,mb6.0						
BMO	Blue Mountains	93.45	38	eP	P	20 31 32.1	-0.3
	comp=Z,12nm,1.0s,mb5.3						
BMO				LR	LR		
	comp=Z,846nm,19.0s,MS5.2						
MOD	Modoc	93.45	41	eP	P	20 31 30.6	-1.9
	comp=Z,20nm,1.2s,mb5.4						
MTLF	Montolieu	93.56	321	eP	P	20 31 32.7	-0.3
	comp=Z,136nm,1.8s,mb5.8						
MTLF	Montolieu	93.56	321	eP	P	20 31 32.7	-0.3
MTLF				pmax	pmax		
	comp=Z,68nm,1.8s,mb5.8						
QUIF	Quistinic	93.64	326	eP	P	20 31 31.9	-1.3
	comp=Z,33nm,1.0s,mb5.4						
QUIF	Quistinic	93.64	326	eP	P	20 31 31.9	-1.3
QUIF				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.4						
FFC	Flin Flon	93.75	24	P	P	20 31 34.5	+0.9
FFC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
FFC				MLR	MLR		
	comp=Z,188nm,21.0s,MS4.5						
FFC	Flin Flon	93.75	24	P	P	20 31 34.5	+0.9
	comp=Z,10nm,0.9s,mb5.2						
FFC				LR	LR		
	comp=Z,188nm,21.0s,MS4.5						
MSO	Missoula	94.03	35	eP	P	20 31 33.6	-1.4
	comp=Z,5.7nm,1.0s,mb5.0						
WVOR	Wild Horse Val	94.14	40	eP	P	20 31 35.6	-0.1
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
WVOR	Wild Horse Val	94.14	40	eP	P	20 31 35.6	-0.1
	comp=Z,11nm,1.1s,mb5.2						
ETSF	Etsaut	95.44	321	eP	P	20 31 40.6	-1.1
	comp=Z,38nm,1.3s,mb5.3						
ETSF	Etsaut	95.44	321	eP	P	20 31 40.6	-1.1
ETSF				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.4						
SJPF	Ste Jean	95.69	322	eP	P	20 31 43.2	+0.4
	comp=Z,100nm,1.7s,mb5.7						
SJPF	Ste Jean	95.69	322	eP	P	20 31 43.2	+0.4
SJPF				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.7						
HLID	Hailey	95.88	37	eP	P	20 31 43.6	0.0
	comp=Z,5.1nm,0.8s,mb5.0						
HLID				LR	LR		
	comp=Z,783nm,20.0s,MS5.2						
BOZ	Bozeman (W)	96.01	34	eP	P	20 31 44.9	+0.7
	comp=Z,32nm,1.4s,mb5.6						
BOZ				LR	LR		
	comp=Z,908nm,19.0s,MS5.3						
NVAR	Mina Array Bea	96.73	43	P	P	20 31 49.1	+1.5
	comp=Z,1.2nm,0.6s,mb4.5,baz=283,slow=4.4,SNR=5.4						
ULM	Lac du Bonnet	99.58	23	LR	LR	21 21 33.0	
	comp=Z,643nm,19.8s,MS5.1,baz=338,slow=38						
PV10	Paradox Valley	102.36	39	P	Pdif	20 32 13.0	0.0
EVO	Evora	102.57	322	eP	Pdif	20 32 13.6	-0.3
	comp=Z,75nm,1.6s						
EVO				eR			
	comp=Z,1µm,19.0s						
SYO	Syowa Base	108.74	202	⇓Pdiff	Pdif	20 32 39.2	-1.1
SYO	Syowa Base	108.74	202	⇑PP	PP	20 37 11.3	-4.1
TXAR	Lajitas Array	111.84	42	PKiKP		20 36 52.0	
	comp=Z,0.5nm,0.8s,baz=333,slow=2.0,SNR=2.7						
TXAR				PP	PP	20 37 37.1	-1.2
	comp=Z,1.3nm,0.9s,baz=297,slow=5.6,SNR=4.9						
SDV	Santo Domingo	145.82	22	ePKPdf	PKPdf	20 37 56.7	-3.2
ROSC	El Rosal	147.93	31	PKPbc	PKPdf	20 38 04.7	+1.3
	comp=Z,22nm,1.0s,baz=297,slow=2.0,SNR=6.5						
RCBR	Riachuelo	152.36	305	ePKPbc	PKPdf	20 38 11.6	+1.4
RCBR				ePKPab	PKPab	20 38 21.9	-3.0
TRQA	Tornquist	164.92	169	ePKPdf	PKPdf	20 38 20.8	-3.5
TRQA				ePKPab	PKPab	20 39 16.6	-1.5
SAML	Samuel	164.99	19	ePKPdf	PKPdf	20 38 19.9	-5.2
BAO	Brasilia Array	167.71	306	P	PKPdf	20 38 26.0	-1.0
BAO				e		20 38 29.5	
BAO				e		20 38 46.0	
BAO				e		20 39 35.1	
LPAZ	La Paz	168.39	55	ePKIKP	PKPdf	20 38 24.0	-3.4
LPAZ	La Paz	168.39	55	PKP	PKPdf	20 38 26.0	-1.4
	comp=Z,3.3nm,1.1s,baz=29,slow=2.2,SNR=7.1						
LPAZ				PKPab	PKPab	20 39 32.7	-1.2
	comp=Z,2.0nm,0.9s,baz=346,slow=4.2,SNR=2.0						
LVC	Limon Verde	170.14	88	ePKPdf	PKPdf	20 38 25.7	-2.6

JMA ***18*** *20:25:06.8±0.2,23.27N×121.90E,h81km,M3.1*

TAP 18 20:25:03.7,23.32N×121.69E,h12km±1km,ML4.2, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.66	47	P	Pn	20 25 33.4	+0.5
YOJ				S	Sn	20 25 53.2	-1.0
IRIF	Iriomote-Funau	2.12	61	P	Pn	20 25 39.0	-0.5
IRIF				eS	Sn	20 26 03.4	-2.6
JKRS	Kuro-shima	2.31	66	P	Pn	20 25 41.5	-0.7
JIJ	Ishigaki jima	2.47	65	P	Pn	20 25 43.8	-0.7
JIJ				S	Sn	20 26 11.4	-3.5
JTJ	Tarama	3.05	64	P	Pn	20 25 51.9	-0.9
JTJ				eS	Sn	20 26 26.6	-3.0

CSEM ***18*** *20:37:18.7±0.2,34.38N×32.03E,h30km,Mw3.1,Error ellipse: s-maj=6.0km s-min=1.7km az=103.0*

HLW ***18*** *20:37:19.1,34.45N×31.58E,h33km,Mb3.4*

NEIC ***18*** *20:37:20.6,34.41N×32.02E,h25km,ML3.3(NIC),After NIC.*

NIC ***18*** *20:37:20.6±0.2,34.41N×32.02E,h25km,ML3.3,MW3.1*

GII ***18*** *20:37:24.0±0.5,34.33N×32.26E,h25km±30km,ML2.3/4*

ISC 18 20:37:19.7±0.8,**34.37N**±0.08×**32.08E**±0.08,**h49**km±49km, **n28,σ0**ˢ**82**/39,**3C-1D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPCY	Paphos	0.56	23	⇑iP	P	20 37 30.7	-0.9
AKMC	Akamas	0.68	18	⇑eP	P	20 37 32.8	-0.4
SZAC	Souni-Zanaja	0.77	60	⇓eP	P	20 37 34.2	-0.1
	31nm,0.2s						
SZAC				S	S	20 37 45.3	+0.2
ALFC	Alevga	0.89	29	⇑iP	P	20 37 35.7	-0.3
	33nm,0.2s						
ALFC				S	S	20 37 47.7	-0.5
LEF	Lefka	1.00	42	i PG	P	20 37 38.0	+0.5
LEF				i SG	S	20 37 48.9	-2.0
CSS	Prodhromos	1.19	60	P	P	20 37 40.2	0.0
	8.6nm,0.3s						
CSS				S	S	20 37 55.6	+0.1
CSS	Prodhromos	1.19	60	i Pg	P	20 37 39.8	-0.4
CSS	Prodhromos	1.19	60	P	P	20 37 40.2	0.0
	8.6nm,0.3s						
CSS				S	S	20 37 55.6	+0.1
MAMC	Mammari	1.23	49	P	P	20 37 41.3	+0.5
OFRI	'Ofer	2.99	125	Pn	P	20 38 06.5	+0.6
KSDI	Kefar Szold	3.21	111	Pn	P	20 38 08.7	-0.2
SLTI	Sal'it	3.27	130	Pn	P	20 38 10.2	+0.5
SLTI				Sn	S	20 38 46.5	-1.2
MMLI	Mount Malkishu	3.40	124	Pn	P	20 38 12.9	+1.4
KSHT	Keshet	3.41	113	Pn	P	20 38 12.1	+0.4
AMAG	Maghara	3.84	165	P	P	20 38 18.7	+0.9
AMAG				S	S	20 39 02.1	0.0
DRGI	Dragot	3.93	134	Pn	P	20 38 19.8	+0.8
KZIT	Kziot	3.97	150	Pn	P	20 38 20.4	+0.8
KZIT				Sn	S	20 39 05.0	-0.5
RTMM	Retamin	3.98	146	Pn	P	20 38 20.7	+1.0
MASH	Mash'abbe Sade	4.07	145	Pn	P	20 38 21.9	+0.8
MKRJ	Makawir	4.11	132	Pn	P	20 38 22.8	+1.2
MZDA	Masada	4.12	137	Pn	P	20 38 22.3	+0.6
MZDA				Sn	S	20 39 08.4	-0.9
SUZ		4.56	172	P	P	20 38 28.5	+0.4
SUZ				S	S	20 39 18.4	-2.0
GLL	Jalalah	4.79	184	P	P	20 38 30.1	-1.1
ZAF		5.09	175	P	P	20 38 35.4	-0.1
ZAF		5.09	175	P	P	20 38 35.3	-0.1
HKAT	Jabal Katrina	6.06	164	P	P	20 38 49.3	+0.5
HKAT				S	S	20 39 56.1	-1.7
TR2		6.13	166	P	P	20 38 49.5	-0.4
TR1		6.55	165	P	P	20 38 55.9	+0.2

NIED ***18*** *21:19:00,23.20N×121.80E,h8km,Mw4.0 Best double couple: M₀1.26×10¹⁵ NP1:φs20°,δ67°,λ143°. NP2:φs126°, δ57°,λ28°.*

NEIC ***18*** *21:19:28.2±0.3,23.32N×121.81E,mb4.2/9,ML4.8(TAP), Error ellipse: s-maj=9.2km s-min=7.6km az=65.0*

NEIC Recorded [3 TAP] in T'ai-tung and [2 TAP] in Hua-lien Counties.

IDC ***18*** *21:19:28.2±0.9,23.31N×121.79E,h21km±5km,mb3.8/18, mb1 4.0/19,mb1mx3.9/25,mbtmp3.9/19,ML3.9/1,MS3.3/1, Ms1 3.5/1,ms1mx2.8/29,Error ellipse: s-maj=20.8km s-min=14.9km az=67.0*

TAP ***18*** *21:19:28.6,23.35N×121.67E,h14km,ML4.6*

TAP Felt II J at Yuli, II J at Hungye, III J at Chenggung, I J at Shilin, I J at Lidau, I J at Hualien, I J at Alishan, I J at Hehuanshan, I J at Ryuetan, I J at Tsauling, I J at Tachien, I J at Mingjian, I J at Gukeng, I J at Lanyu.

JMA ***18*** *21:19:29.0±0.2,23.20N×121.78E,h55km,M3.9*

BJI ***18*** *21:19:32.2,23.65N×121.62E,h22km,mB4.8,mb3.9, ML4.4,Ms4.2,Msz3.9*

ISC 18 21:19:27.3±0.4,**23.27N**±0.02×**121.78E**±0.02,**h21**km±3km, **h23**km±.3km**:pP-P,n108,σ1**ˢ**10**/155,**mb4.0**/28,**MS3.7**/2, **21C-8D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.42	246	⇓iP	Pb	21 19 36.0	+0.1
CHKT				S	Sb	21 19 41.5	-0.3
TWF1	Yuli	0.46	281	⇑iP	Pb	21 19 35.8	-0.7
EHY	Hungye	0.48	299	⇑iP	Pb	21 19 36.1	-1.0
EHY				S	Sb	21 19 41.6	-2.1
ESL	Shilin	0.63	329	⇑iP	Pb	21 19 38.8	-0.7
ESL				S	Sb	21 19 45.9	-1.9
ELDTW	Lidau	0.71	264	⇑iP	Pb	21 19 40.3	-0.5
ELDTW				S	Sb	21 19 48.7	-1.4
HWA	Hwalien	0.72	347	P	Pb	21 19 40.7	-0.4
HWA				S	Sb	21 19 51.3	+0.8
TTN	Taitung	0.78	229	eP	Pb	21 19 42.2	+0.2
TTN				S	Sb	21 19 53.4	+1.2
TWG	Pinlang	0.79	236	⇓iP	Pb	21 19 42.2	-0.1
TWG				S	Sb	21 19 51.9	-0.6
YUS	Yu-Shan	0.80	286	⇑iP	Pb	21 19 42.2	-0.1
YUS				S	Sb	21 19 51.6	-1.0
TWD	Chiawan	0.82	348	⇓iP	Pb	21 19 42.4	-0.5
TWD				S	Sb	21 19 53.4	0.0
ALS	Alishan	0.93	285	⇑iP	Pb	21 19 44.7	+0.1
ALS				S	Sb	21 19 56.2	-0.2
STYT	Tauyuan	0.95	264	⇑iP	Pb	21 19 44.7	-0.2
STYT				S	Sb	21 19 56.5	-0.5
WHF	Hehuan Shan	0.99	332	⇓iP	Pb	21 19 45.1	-0.5
WHF				S	Sb	21 19 56.7	-1.6
SMLT	Sun Moon Lake	1.01	307	⇑iP	Pb	21 19 45.5	-0.5
SMLT				S	Sb	21 19 57.5	-1.5
ECL	Taimali	1.02	229	⇓iP	Pb	21 19 45.2	-0.9
TYC	Yuchr	1.06	307	⇑iP	Pb	21 19 46.2	-0.6
TYC				S	Sb	21 20 00.0	-0.2
CHN5	Tsauling	1.07	288	⇑iP	Pb	21 19 47.3	+0.4
WTP	Ta-pu	1.08	269	⇑iP	Pb	21 19 47.3	+0.2
WTP				S	Sb	21 20 01.2	+0.5
CHN4	Tsaushan	1.10	274	⇑iP	Pb	21 19 47.8	+0.3
CHN4				S	Sb	21 20 02.8	+1.5
SGST	Jiashian	1.12	261	⇑iP	Pb	21 19 48.3	+0.4
SGST				S	Sb	21 20 02.5	+0.5
TWT	Tachien	1.13	331	eP	Pb	21 19 47.8	-0.1
TWT				S	Sb	21 20 00.3	-1.9
ENA	Nanau	1.15	358	⇓iP	Pb	21 19 47.6	-0.7
CHN1	Nanshi	1.16	266	⇑iP	Pn	21 19 49.0	+0.6
CHN1				S	Sb	21 20 04.2	+1.1
WNT	Mingjian	1.18	301	⇑iP	Pn	21 19 49.3	+0.6
WNT				S	Sb	21 20 04.4	+0.8
SSD	Sandimen	1.18	244	P	Pn	21 19 48.1	-0.8
TWK	Hsinying	1.19	270	⇑P	Pn	21 19 49.3	+0.3
TWK				S	Sb	21 20 05.1	+1.1
WGK	Gukeng	1.20	291	⇑P	Pn	21 19 49.5	+0.5
WGK				S	Sb	21 20 05.4	+1.2
TAW	Tawu	1.22	222	eP	Pn	21 19 48.2	-1.2
NNS	Nan Shan	1.22	342	⇑iP	Pn	21 19 49.1	-0.3
NNS				S	Sb	21 20 04.1	-0.9
CHN2	Minshiung	1.23	283	eP	Pn	21 19 50.3	+0.7
CHN2				S	Sb	21 20 06.4	+1.2
EAST	Anshuo	1.23	225	eP	Pn	21 19 48.6	-1.0
LAY	Lan-yu	1.24	190	eP	Pn	21 19 48.9	-0.8
LAY				S	Sb	21 20 04.6	-0.9
CHY	Chiayi	1.27	281	eP	Pn	21 19 50.6	+0.5
CHY				S	Sb	21 20 07.2	+0.8
SGLT	Jiouru	1.31	246	eP	Pn	21 19 51.9	+1.2
CHN3	Shinhua	1.32	262	eP	Pn	21 19 52.8	+2.0
CHN3				S	Sb	21 20 11.9	+4.1
TWM1	Shoushan	1.33	251	eP	Pn	21 19 52.9	+1.9
TWC	Suao	1.33	3	eP	Pn	21 19 50.6	-0.4
TCU	Taichung	1.34	311	eP	Pn	21 19 51.5	+0.4
TCU				S	Sb	21 20 08.3	0.0
ENTT	Nioudou	1.38	352	eP	Pn	21 19 51.3	-0.4
SCZT	Fangliau	1.40	230	⇑P	Pn	21 19 52.1	+0.3
TWQ1	Liyutan	1.42	319	⇑iP	Pn	21 19 53.5	+1.3
TWQ1				S	Sn	21 20 11.6	+1.2
CHN8	Yiju	1.45	273	P	Pn	21 19 53.1	+0.5
CHN8				S	Sn	21 20 12.2	+1.0
NSK	Sanguang	1.45	345	⇓P	Pn	21 19 52.6	-0.1

SCLT	Jiali	1.47	267	eP	Pn	21 19 54.1	+1.3
SCLT				S	Sn	21 20 13.7	+2.1
NSY	Sanyi	1.48	321	eP	Pn	21 19 54.5	+1.5
NSY				S	Sn	21 20 14.1	+2.2
WSF	Szhu	1.48	285	eP	Pn	21 19 53.9	+0.8
WSF				S	Sn	21 20 12.2	+0.3
ILA	Ilan	1.49	359	eP	Pn	21 19 55.8	+2.6
WTCT	Ta-ch'eng	1.50	294	eP	Pn	21 19 54.1	+0.8
WTCT				S	Sn	21 20 13.2	+0.7
KAU	Kaohsiung	1.53	243	eP	Pn	21 19 55.9	+2.1
NSTT	Nanjuang	1.53	332	⇑P	Pn	21 19 54.9	+1.0
NSTT				S	Sn	21 20 13.0	-0.3
EGS		1.57	5	eP	Pn	21 19 55.0	+0.6
HEN	Hengchun	1.59	218	eP	Pn	21 19 55.2	+0.6
TWK1	Hengchun	1.60	215	eP	Pn	21 19 54.4	-0.4
TWP	Hsiaoliuchiu	1.60	235	eP	Pn	21 19 57.5	+2.7
YOJ	Yonaguni jima	1.63	43	P	Pn	21 19 56.9	+1.6
YOJ				S	Sn	21 20 17.1	+1.2
HSN	Hsinchu	1.70	334	eP	Pn	21 19 57.5	+1.3
TWA	Mucha	1.71	354	eP	Pn	21 19 56.3	-0.1
TATO	Taipei	1.72	351	ePn	Pn	21 19 56.4	-0.1
TWB1	Santiao Chiao	1.74	6	eP	Pn	21 19 57.4	+0.5
TAP1	Taipei	1.78	352	eP	Pn	21 19 56.7	-0.7
NCU	National Centr	1.78	342	eP	Pn	21 19 56.4	-1.0
TAP	Taipei	1.78	352	eP	Pn	21 19 58.9	+1.5
NWF	Wu-fen Shan	1.79	360	eP	Pn	21 19 58.5	+0.9
NWF				S	Sn	21 20 23.2	+3.2
TWS1	Kuangyinshan	1.85	350	eP	Pn	21 19 58.3	-0.2
WDGT	Dungji	1.95	270	eP	Pn	21 19 59.6	-0.3
HATJ	Hateruma jima	2.01	67	P	Pn	21 20 01.7	+1.0
HATJ				S	Sn	21 20 26.5	+1.0
PNG	Penghu	2.07	279	eP	Pn	21 20 01.3	-0.2
PNG				S	Sn	21 20 24.4	-2.5
IRIF	Iriomote-Funau	2.08	59	P	Pn	21 20 02.9	+1.3
IRIF				S	Sn	21 20 28.4	+1.3
JKRS	Kuro-shima	2.26	64	P	Pn	21 20 05.5	+1.3
JKRS				S	Sn	21 20 33.2	+1.5
JIJ	Ishigaki jima	2.42	63	P	Pn	21 20 07.4	+0.9
JIJ				S	Sn	21 20 35.4	-0.5
JTJ	Tarama	3.00	62	P	Pn	21 20 15.5	+0.7
JTJ				S	Sn	21 20 51.0	+0.5
KNM	Kinmen	3.27	291	eP	Pn	21 20 18.4	-0.3
QZH	Quanzhou	3.36	300	⇓P	Pn	21 20 18.8	-1.1
QZH				S	Sn	21 20 55.8	-3.8
QZH				Smax			
	comp=N,770nm,0.7s						
QZH				Smax			
	comp=E,670nm,0.7s						
JMJ	Miyako jima 2	3.56	64	P	Pn	21 20 24.1	+1.4
JMJ				S	Sn	21 21 04.7	0.0
JOW	Kunigami	6.87	58	Pn	Pn	21 21 07.0	-2.6
	comp=E,4.8nm,0.3s,baz=159,slow=18,SNR=8.8						
JOW				Sn	Sn	21 22 23.9	-4.1
	comp=E,1.2nm,0.3s,baz=114,slow=19,SNR=1.9						
NJ2	Nanjing	9.12	344	eP	P	21 21 42.3	+1.3
NJ2				AP		21 21 48.4	
NJ2				S	Sn	21 23 24.0	-0.1
NJ2				Smax			
	comp=N,280nm,1.0s						
NJ2				Smax			
	comp=E,450nm,0.8s						
NJ2				LR	LR		
	comp=N,1μm,13.9s						
NJ2				LR	LR		
	comp=E,820nm,10.6s						
NJ2				LR	LR		
	comp=Z,2μm,10.7s						
GYA	Guiyang	14.09	286	P	P	21 22 51.3	+3.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s						
LZH	Lanzhou	20.11	313	eP	P	21 24 11.5	+8.8
LZH				pP		21 24 17.0	
LZH				sP		21 24 20.5	
LZH				ePP	PP	21 24 30.4	+8.0
LZH				LR	LR		
	comp=Z,800nm,12.1s,MS4.3						
CMAR	Chiang Mai Arr	21.86	262	P	P	21 24 21.1	+0.4
	comp=Z,1.1nm,0.6s,mb3.5,baz=62,slow=8.0,SNR=9.7						
CMAR				LR	LR	21 32 52.1	
	comp=Z,84nm,19.7s,MS3.1,baz=152,slow=37						
GTA	Gaotai	24.62	316	P	P	21 24 48.9	+1.3
GTA				AP		21 24 55.3	
GTA				XP		21 24 59.3	
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb3.6						
ULN	Ulaanbaatar	27.21	338	eP	P	21 25 09.6	-2.0
	comp=Z,3.6nm,1.0s,mb3.9						
SONM	Songino Array	27.42	337	P	P	21 25 12.1	-1.5
	comp=Z,1.0nm,0.6s,mb3.5,baz=154,slow=9.8,SNR=7.1						
LSA	Lhasa	28.10	290	eP	P	21 25 23.8	+3.9
	comp=Z,1.9nm,0.6s,mb3.9						
ZAL	Zalesovo	41.31	327	P	P	21 27 11.5	-1.5
	comp=Z,0.9nm,0.5s,mb3.7,baz=332,slow=9.7,SNR=3.5						
ZAL				pP	pP	21 27 18.1	-1.0
	comp=Z,1.8nm,0.9s,baz=3.6,slow=9.9,SNR=4.7						
KURK	Kurchatov	43.14	321	eP	P	21 27 26.7	-1.3
	comp=Z,2.3nm,0.6s,mb4.1						
AAK	Ala-Archa	43.50	308	P	P	21 27 30.8	-0.2
	comp=Z,1.9nm,0.9s,mb3.8						
WRA	Warramunga Arr	44.66	163	P	P	21 27 38.8	-1.9
	comp=Z,0.9nm,0.7s,mb3.7,baz=342,slow=9.0,SNR=11						
ASAR	Alice Springs	48.12	165	P	P	21 28 07.0	-1.0
	comp=Z,0.4nm,0.3s,mb3.9,baz=338,slow=7.2,SNR=8.3						
BVAR	Borovoye Array	48.73	321	P	P	21 28 10.7	-1.6
	comp=Z,1.8nm,0.8s,mb4.1,baz=108,slow=8.0,SNR=5.8						
CHKZ	Chkalovo	48.79	322	eP	P	21 28 10.5	-2.3
	comp=Z,6.7nm,1.0s,mb4.6						
STKA	Stephens Creek	58.02	160	P	P	21 29 20.1	-1.2
	comp=Z,2.2nm,0.6s,mb4.3,baz=315,slow=23,SNR=7.3						
JOF	Joensuu	69.77	331	ep	P	21 30 35.5	-2.3
	comp=Z,0.5nm,0.3s,mb3.9						
ILAR	Eielson Array	69.77	27	P	P	21 30 37.0	-0.7
	comp=Z,0.9nm,1.0s,mb3.6,baz=297,slow=9.7,SNR=5.2						
KEV	Kevo	70.03	338	ep	P	21 30 34.1	-5.1
	comp=Z,5.8nm,0.9s,mb4.5						
ARCES	ARCESS Array B	70.59	338	P	P	21 30 41.6	-1.1
	comp=Z,3.9nm,0.8s,mb4.4,baz=90,slow=9.0,SNR=2.5						
MALT	Malatya	70.96	304	eP	P	21 30 44.8	-0.6
	comp=Z,6.7nm,1.1s,mb4.5						
KAF	Kangasniemi	72.22	331	ep	P	21 30 50.1	-2.4
	comp=Z,0.3nm,0.3s,mb3.7						
FINES	FINESS Array B	72.51	330	P	P	21 30 52.6	-1.6
	comp=Z,0.9nm,0.5s,mb4.0,baz=48,slow=7.2,SNR=10						
INK	Inuvik	73.86	22	P	P	21 31 01.4	-0.6
	comp=Z,2.5nm,1.1s,mb4.1,baz=288,slow=8.8,SNR=4.1						
INK	Inuvik	73.86	22	P	P	21 31 01.4	-0.6
ASF	Jabal al Asfar	73.88	298	P	P	21 31 01.9	-0.9
	comp=Z,0.6nm,0.5s,mb3.8,baz=273,slow=7.1,SNR=3.9						
AKASG	Malin Array Be	73.92	319	P	P	21 31 00.8	-1.8
	comp=Z,0.3nm,0.4s,mb3.5,baz=59,slow=6.0,SNR=4.1						
BRTR	Keskin Array B	74.16	307	P	P	21 31 03.4	-0.9
	comp=Z,1.4nm,0.5s,mb4.1,baz=124,slow=4.7,SNR=7.9						
BRTR				pP	pP	21 31 10.4	-0.4
	comp=Z,2.8nm,1.1s,baz=129,slow=7.9,SNR=5.4						
MLR	Muntele Rosu	77.68	314	P	P	21 31 23.4	-0.6
	comp=Z,2.1nm,0.7s,mb4.2,baz=345,slow=7.8,SNR=3.6						
NB2	NORSAR Subarra	79.29	332	P	P	21 31 30.3	-2.2
	comp=Z,6.4nm,1.2s,mb4.4,baz=56,slow=5.8						
NOA	NORSAR Array B	79.29	332	P	P	21 31 31.0	-1.5
	comp=Z,1.0nm,0.7s,mb3.9,baz=58,slow=5.9,SNR=3.7						
YKA	Yellowknife Ar	83.60	23	P	P	21 31 55.1	+0.1
	comp=Z,0.3nm,0.4s,mb3.8,baz=313,slow=4.6,SNR=7.6						
GERES	GERESS Array B	83.90	321	P	P	21 31 56.1	-0.8
	comp=Z,0.7nm,0.7s,mb3.9,baz=56,slow=4.8,SNR=4.2						
GERES				pP	pP	21 32 03.5	+0.1
	comp=Z,1.7nm,0.9s,baz=63,slow=3.0,SNR=4.4						

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*BJI **18** 21:20:39.6, 36.07N×71.09E, h109^{km}*

*MOS **18** 21:20:48.7±0.8, 36.69N×71.58E, h116^{km}, mb4.1/7, Error ellipse: s-maj=21.5km s-min=11.3km az=98.3*

*NEIC **18** 21:20:49.8±2.1, 36.69N×71.57E, h110^{km}±18^{km}, mb3.6/7, Error ellipse: s-maj=19.1km s-min=10.7km az=214.0*

*IDC **18** 21:20:49.5±7.5, 36.59N×71.62E, h110^{km}±66^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.3/21, mbtmp3.9/8, Error ellipse: s-maj=37.9km s-min=27.4km az=17.0*

*NNC **18** 21:20:50.9±11.0, 37.37N×70.49E, mpv4.0, Error ellipse: s-maj=183.5km s-min=82.8km az=131.0*

ISC 18 21:20:45.6±1.2**, 36.45N**±0.04×**71.4E**±0.1**, h96**^{km}±14^{km}**, n52,** σ1^{s}**02**/61**, mb3.8**/8**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	4.75	49	eP	P	21 21 58.8	+2.5
KSH				S	S	21 22 50.9	+0.4
KSH				Smax			
	comp=N,70nm,0.3s						
KSH				Smax			
	comp=E,100nm,0.5s						
THN	Thein Dam	5.38	137	eP	P	21 22 05.7	+0.9
THN				eS	S	21 23 03.5	-2.6
DLH	Dalhousie	5.44	135	e		21 22 38.0	
DLH				e	S	21 23 08.0	+0.5
AML	Almayashu	5.95	17	P	P	21 22 13.2	+0.6
	SNR=44						
UCH	Uchtor	6.26	22	P	P	21 22 17.4	+0.5
	SNR=8.3						
KZA	Kyzart	6.37	27	P	P	21 22 19.1	+0.6
	SNR=5.6						
EKS2	Erkin-Say	6.47	16	P	P	21 22 20.1	+0.2
	SNR=16						
AAK	Ala-Archa	6.62	20	P	P	21 22 22.6	+0.6
	SNR=20						
AAK	Ala-Archa	6.62	20	⇓P	P	21 22 22.5	+0.4
	comp=E,6.5nm,0.5s						
AAK				⇑S	S	21 23 33.8	-2.9
	comp=E,13nm,0.6s						
AAK	Ala-Archa	6.62	20	ePN	P	21 22 21.3	-0.7
AAK				pmax	pmax		
	comp=Z,11nm,0.4s						
AAK	Ala-Archa	6.62	20	ePn	P	21 22 21.3	-0.7
	comp=Z,11nm,0.4s						
AAK				eSn	S	21 23 31.0	-5.6
KBK	Karagaybulak	6.78	23	P	P	21 22 24.8	+0.5
	SNR=5.8						
SDNR	Sundarnagar	6.78	135	e		21 22 57.2	
SDNR				eS	S	21 23 34.6	-5.9
CHMS	Chumysh	7.04	21	P	P	21 22 27.1	-0.6
	SNR=9.3						
SMLA	Simla	7.17	136	eP	P	21 22 42.8	+13
SMLA				eS	S	21 23 57.5	+7.5
USP	Ospenovka	7.22	18	P	P	21 22 30.4	+0.2
	SNR=10						
TKM2	Tokmak 2	7.23	25	P	P	21 22 30.6	+0.2
	SNR=10						
KLP	Kalpa	7.53	129	eP	P	21 22 34.9	+0.5
KLP				eS	S	21 23 51.6	-7.1
KLP				AML	AML	21 23 57.3	
	comp=E,121nm,0.5s						
KLP				AML	AML	21 23 58.2	
	comp=N,114nm,0.5s						
DDI	Dehra Dun	8.28	136	e	P	21 22 44.1	-0.5
DDI				e		21 24 08.2	
JOSI	Joshimath	9.01	128	eP	P	21 22 45.3	-9.2
JOSI				eS	S	21 24 18.2	-17
JOSI				eS	S	21 24 19.6	-15
KHET	Khetri	9.16	155	eS	S	21 24 32.0	-6.5
KHET				e		21 24 32.4	
	comp=E,21nm,0.2s						
KHET				AML	AML	21 24 32.6	
	comp=N,16nm,0.5s						
AYAN	Aya Nagar	9.31	147	eS	S	21 24 33.4	-8.9
KUDL	Kundal	9.34	151	eP	P	21 22 58.2	-0.7
KUDL				eS	S	21 24 34.1	-8.9
MK31	Makanchi Array	13.15	35	P	P	21 23 56.1	+6.5
	comp=N,2.4nm,1.2s,baz=214,slow=9.3,SNR=9.3						
KURK	Kurchatov	15.18	18	eP	P	21 24 13.9	-1.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	15.18	18	eP	P	21 24 13.9	-1.8
	comp=Z,1.7nm,0.8s						
BVA0	Borovoye Array	16.59	358	⇑P	P	21 24 31.6	-1.7
	comp=Z,1.1nm,1.6s,baz=163,slow=12,SNR=6.8						
BVAR	Borovoye Array	16.59	358	P	P	21 24 32.1	-1.2
	comp=Z,0.3nm,0.3s,baz=174,slow=15,SNR=6.4						
CHKZ	Chkalovo	17.23	358	⇓P	P	21 24 40.3	-1.1
CHKZ	Chkalovo	17.23	358	eP	P	21 24 40.6	-0.7
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CHKZ	Chkalovo	17.23	358	eP	P	21 24 40.6	-0.7
	comp=Z,0.7nm,0.5s						
LSA	Lhasa	17.87	106	eP	P	21 24 50.4	+1.0
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LSA	Lhasa	17.87	106	eP	P	21 24 50.4	+1.0
	comp=Z,2.0nm,0.8s						
ZAL	Zalesovo	19.82	24	P	P	21 25 09.7	-1.0
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	19.82	24	P	P	21 25 09.7	-1.0
	comp=Z,1.0nm,0.3s,baz=264,slow=8.1,SNR=11						
GNI	Garni	21.20	288	eP	P	21 25 28.1	+3.2
GNI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GNI	Garni	21.20	288	P	P	21 25 28.7	+3.8
	comp=Z,2.4nm,0.5s,mb3.8,baz=182,slow=5.6,SNR=4.6						
GNI	Garni	21.20	288	eP	P	21 25 28.1	+3.3
	comp=Z,2.9nm,0.6s,mb3.8						
JOF	Joensuu	36.06	330	ep	P	21 27 39.4	+0.1
	comp=Z,1.0nm,0.3s,mb4.2						
JOF	Joensuu	36.06	330	eP	P	21 27 39.4	+0.1
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
FINES	FINESS Array B	37.69	326	P	P	21 27 53.7	+0.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	37.69	326	P	P	21 27 53.7	+0.8
	comp=Z,0.8nm,0.3s,mb4.0,baz=120,slow=8.5,SNR=15						
FINES	FINESS Array B	37.69	326	P	P	21 27 53.7	+0.8
KAF	Kangasniemi	37.83	327	ep	P	21 27 53.2	-0.8
	comp=Z,0.2nm,0.3s,mb3.4						
ARCES	ARCESS Array B	41.30	338	P	P	21 28 23.5	+0.8
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARCES	ARCESS Array B	41.30	338	P	P	21 28 23.5	+0.8
	comp=Z,5.7nm,1.1s,mb4.3,baz=119,slow=9.4,SNR=8.1						
NB2	NORSAR Subarra	44.60	323	P	P	21 28 49.6	+0.1
	comp=Z,1.6nm,0.6s,mb3.9,baz=95,slow=7.9						
NB2	NORSAR Subarra	44.60	323	P	P	21 28 49.6	+0.1
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
NOA	NORSAR Array B	44.60	323	P	P	21 28 49.9	+0.4
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	44.60	323	P	P	21 28 49.9	+0.4
	comp=Z,2.0nm,0.7s,mb4.0,baz=96,slow=7.8,SNR=7.6						
YKA	Yellowknife Ar	81.28	3	P	P	21 32 52.7	+0.7
	comp=Z,0.2nm,0.5s,mb3.2,baz=350,slow=5.3,SNR=5.9						
WRA	Warramunga Arr	81.71	122	P	P	21 32 55.3	+0.2
	comp=Z,0.2nm,0.5s,mb3.2,baz=326,slow=4.9,SNR=5.2						

IDC 18 21:24:42.9±3.5**, 19.49S**×**177.66E, mb4.0**/3**, mb1 4.4**/3**, mb1mx3.9**/14**, mbtmp4.0**/3**, Error ellipse: s-maj=253.1km s-min=29.9km az=156.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	40.70	262	P	P	21 32 25.2	-1.9
	1.1nm,0.6s,baz=97,slow=7.4,SNR=29						
ASAR	Alice Springs	40.79	256	P	P	21 32 26.4	-1.3
	4.6nm,0.5s,baz=89,slow=9.0,SNR=83						
NVAR	Mina Array Bea	83.15	45	P	P	21 37 11.2	-1.0
	0.4nm,0.7s,baz=203,slow=6.9,SNR=3.1						

NEIC 18 22:08:37.7, 38.39N×**118.21W, h10**^{km}**, ML3.5**(REN)**, After REN., California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNV	Mina	0.07	44	eP	Pg	22 08 39.5	-0.4
TPH	Tonopah	0.84	111	eP	Pb	22 08 53.5	-0.4
OMM	Old Mammoth Mi	0.98	219	eP	Pb	22 08 56.3	0.0
MTUM	Tungsten Hills	1.07	195	eP	Pb	22 08 57.9	+0.1
WCN	Washoe City	1.51	308	eP	Pn	22 09 04.6	-0.4
PAHR	Pah Rah Range	1.60	326	eP	Pn	22 09 05.3	-1.0
CMB	Columbia Colle	1.75	259	eP	Pn	22 09 07.5	-0.9
TRCR	Troy Canyon	2.06	90	ePn	Pn	22 09 12.2	-0.6
DAC	Darwin (Calif)	2.16	167	ePn	Pn	22 09 13.7	-0.5
BMN	Battle Mountai	2.18	20	ePn	Pn	22 09 13.1	-1.5
OHCM	Honcut	2.73	291	ePn	Pn	22 09 21.2	-1.1
LRV	Little Rabbit	2.97	230	ePn	Pn	22 09 23.9	-1.9
SAO	San Andreas Ge	3.04	239	ePn	Pn	22 09 25.7	-1.1
NSHM	Saint Helena R	3.45	274	ePn	Pn	22 09 32.0	-0.7
NEN	Nelson	3.84	134	Pn	Pn	22 09 36.8	-1.3
MOD	Modoc	3.86	336	ePn	Pn	22 09 36.6	-1.9
WDC	Whiskeytown Da	4.00	305	ePn	Pn	22 09 38.8	-1.7
PFO	Pinyon Flat Ob	4.97	163	ePn	Pn	22 09 52.5	-1.8
NLU	North Lily Min	5.02	70	ePn	Pn	22 09 52.7	-2.2
SPUT	South Promonto	5.31	55	ePn	Pn	22 09 56.5	-2.4
HVU	Hansel Valley	5.37	49	ePn	Pn	22 09 58.1	-1.8
TMUT	Trail Mountain	5.54	78	Pn	Pn	22 10 00.8	-1.5
JLU	Jordanelle	5.68	65	Pn	Pn	22 10 04.8	+0.6
HLID	Hailey	5.92	28	ePn	Pn	22 10 05.1	-2.5
HWUT	Hardware Ranch	6.03	56	Pn	Pn	22 10 07.3	-1.8
WUAZ	Wupatki	6.18	116	Pn	Pn	22 10 08.6	-2.7
MCMT	McKenzie Canyo	7.59	30	Pn	Pn	22 10 29.1	-2.0
MOOW	Moose Ponds	7.78	44	Pn	Pn	22 10 30.6	-3.1

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*IDC **18** 22:08:57.0±1.0, 23.36N×121.92E, mb3.6/6, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, MS3.4/2, Ms1 3.5/2, ms1mx2.8/26, Error ellipse: s-maj=33.2km s-min=20.2km az=68.0*

*TAP **18** 22:08:59.3, 23.31N×121.73E, h12^{km}±1^{km}, ML4.4*

*NIED **18** 22:09:00, 23.20N×121.80E, h35^{km}, Mw4.1 Best double couple: $M_0$1.56×10^{15} NP1:ϕ_s37°,δ87°,λ176°. NP2:ϕ_s128°, δ86°,λ3°.*

*BJI **18** 22:09:00.9, 23.30N×121.90E, h24^{km}, mb4.2, ML4.4, Ms4.3, Msz3.8*

*NEIC **18** 22:09:00.9±0.6, 23.34N×121.92E, mb4.2/2, Error ellipse: s-maj=13.9km s-min=10.7km az=76.0*

*JMA **18** 22:09:01.1±0.3, 23.24N×121.76E, h63^{km}, M3.5*

ISC 18 22:09:00.9±1.1**, 23.27N**±0.09×**121.73E**±0.05**, h39**^{km}±13^{km}**, n25,** σ0^{s}**80**/29**, mb3.6**/9**, MS3.6**/3**, 1C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	1.67	44	P	P	22 09 28.8	+0.6
YOJ				eS	S	22 09 48.9	+0.3
TATO	Taipei	1.71	353	ePn	P	22 09 28.7	-0.1
HATJ	Hateruma jima	2.06	67	P	P	22 09 33.8	+0.1
HATJ				eS	S	22 09 58.7	+0.3
IRIF	Iriomote-Funau	2.12	60	P	P	22 09 35.0	+0.4
IRIF				eS	S	22 10 00.5	+0.6
JKRS	Kuro-shima	2.30	65	P	P	22 09 37.7	+0.5
JKRS				eS	S	22 10 05.5	+0.9
JIJ	Ishigaki jima	2.47	63	P	P	22 09 39.1	-0.5
JIJ				eS	S	22 10 08.0	-0.7
JTJ	Tarama	3.04	63	P	P	22 09 47.8	0.0
JTJ				eS	S	22 10 23.0	-0.4
QZH	Quanzhou	3.31	301	⇑iP	P	22 09 50.9	-0.7
QZH				Smax			
	comp=N,1μm,0.8s						
QZH				Smax			
	comp=E,940nm,1.0s						
JMJ	Miyako jima 2	3.60	64	P	P	22 09 56.3	+0.5
JMJ				eS	S	22 10 37.3	-0.4
JKE	Kume jima 2	5.51	55	P	P	22 10 20.5	-2.2
JOW	Kunigami	6.92	58	Pn	P	22 10 38.5	-3.8
LZH	Lanzhou	20.07	314	eP	P	22 13 42.6	+8.9
	comp=E,23nm,1.3s						
LZH				pP		22 13 49.2	
LZH				sP		22 13 51.9	
LZH				ePP	PP	22 14 02.1	+8.4
LZH				LR	LR		
	comp=Z,640nm,11.8s,MS4.2						
CMAR	Chiang Mai Arr	21.81	262	P	P	22 13 54.2	+2.6
	comp=Z,0.5nm,0.8s,mb3.0,baz=58,slow=8.5,SNR=3.9						
CMAR				LR	LR	22 21 45.5	
	comp=Z,48nm,19.8s,MS2.9,baz=51,slow=35						
GTA	Gaotai	24.59	316	P	P	22 14 26.4	+7.8
GTA				AP		22 14 31.8	
GTA				XP		22 14 34.3	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.5s,mb3.6						
SONM	Songino Array	27.40	337	P	P	22 14 45.0	+0.2
	comp=Z,0.4nm,1.0s,mb2.9,baz=117,slow=9.7,SNR=2.2						
PMG	Port Moresby	40.91	140	LR	LR	22 32 57.8	
	comp=Z,85nm,18.1s,MS3.6,baz=72,slow=35						
WRA	Warramunga Arr	44.68	163	P	P	22 17 11.2	-0.9
	comp=Z,0.4nm,0.6s,mb3.5,baz=345,slow=8.6,SNR=8.7						
ASAR	Alice Springs	48.13	165	P	P	22 17 39.1	-0.1
	comp=Z,0.3nm,0.4s,mb3.7,baz=337,slow=7.2,SNR=5.2						
CHKZ	Chkalovo	48.76	322	P	P	22 17 44.0	+0.2
	comp=Z,1.4nm,0.8s,mb4.0						
STKA	Stephens Creek	58.03	160	P	P	22 18 52.9	+0.4
	comp=Z,1.8nm,0.8s,mb4.1,baz=10,slow=21,SNR=3.8						
STKA	Stephens Creek	58.03	160	P	P	22 18 52.9	+0.4
KAF	Kangasniemi	72.19	331	ep	P	22 20 28.4	+5.1
	comp=Z,0.3nm,0.4s,mb3.6						
FINES	FINESS Array B	72.48	330	P	P	22 20 24.2	-0.8
	comp=Z,4.2nm,1.2s,mb4.2,baz=123,slow=28,SNR=3.2						
FINES				pP	pP	22 20 31.6	-5.1
	comp=Z,8.0nm,1.2s,baz=56,slow=5.0,SNR=2.4						
YKA	Yellowknife Ar	83.62	23	pP	pP	22 21 33.0	-5.0
	comp=Z,0.3nm,0.5s,baz=314,slow=5.1,SNR=4.3						
GERES	GERESS Array B	83.86	321	pP	pP	22 21 35.2	-4.4
	comp=Z,0.7nm,0.8s,baz=63,slow=4.4,SNR=2.3						

IDC 18 22:45:27.4±6.8**, 12.96N**×**92.58E, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.3**/18**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=141.5km s-min=47.5km az=104.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	8.21	47	Pn	P	22 47 27.6	-3.1
	0.1nm,0.3s,baz=237,slow=15,SNR=5.2						
WRA	Warramunga Arr	52.51	128	P	P	22 54 42.7	-2.2
	0.4nm,0.7s,baz=306,slow=8.2,SNR=6.8						
ASAR	Alice Springs	54.39	132	P	P	22 54 56.5	-2.1
	0.2nm,0.5s,baz=308,slow=6.8,SNR=4.8						

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*NEIC **18** 22:45:40.5, 41.42S×172.87E, h107^{km}, After WEL.*

WEL 18 22:45:40.6±0.2**, 41.42S**×**172.86E, h105**^{km}±1^{km}**, ML3.9**/10**, 5C-9D, Error ellipse: s-maj=1.5km s-min=1.3km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.34	175	P	P	22 45 56.3	+0.2
THZ				S	S	22 46 06.5	-1.1
THZ	Tophouse	0.34	175	⇑PN	P	22 45 56.3	+0.3
THZ				SN	S	22 46 06.5	-1.2
THZ				SN	S	22 46 06.6	-1.0
NNZ	Nelson	0.44	63	P	P	22 45 56.9	+0.3
NNZ				S	S	22 46 08.5	-0.1
NNZ	Nelson	0.44	63	⇓PN	P	22 45 56.9	+0.3
NNZ				SN	S	22 46 08.5	-0.1
QRZ	Quartz Range	0.65	337	P	P	22 45 58.3	+0.2
QRZ				S	S	22 46 10.5	-0.8
QRZ	Quartz Range	0.65	337	⇓PN	P	22 45 58.3	+0.2
QRZ				SN	S	22 46 10.5	-0.8
TUWZ	Tuamarina	0.81	91	PN	P	22 46 00.1	+0.3
TUWZ				SN	S	22 46 14.1	+0.1
BSWZ	Blackbirch Sta	0.81	111	P	P	22 46 00.2	+0.4
BSWZ	Blackbirch Sta	0.81	111	PN	P	22 46 00.1	+0.3
BSWZ				eSN	S	22 46 14.7	+0.7
DSZ	Denniston Nort	0.86	247	P	P	22 45 59.7	-0.5
DSZ	Denniston Nort	0.86	247	⇑PN	P	22 45 59.6	-0.6
DSZ				SN	S	22 46 12.9	-1.9
KHZ	Kahutara	1.12	153	P	P	22 46 02.8	-0.2
KHZ				S	S	22 46 18.9	-0.9
KHZ	Kahutara	1.12	153	⇑PN	P	22 46 02.8	-0.1
KHZ				SN	S	22 46 18.9	-0.9
MRW	Makara Radio	1.40	83	P	P	22 46 05.7	-0.6
MRW	Makara Radio	1.40	83	⇓PN	P	22 46 05.7	-0.6
MRW				SN	S	22 46 24.7	-0.8
LTZ	Lake Taylor	1.43	198	P	P	22 46 06.2	-0.5
LTZ	Lake Taylor	1.43	198	⇑PN	P	22 46 06.2	-0.5
LTZ				eSN	S	22 46 24.3	-1.9
WEL	Wellington	1.44	85	P	P	22 46 06.2	-0.6
WEL	Wellington	1.44	85	PN	P	22 46 06.1	-0.7
WEL				SN	S	22 46 25.5	-0.9
BHW	Baring Head	1.51	90	P	P	22 46 06.5	-1.2
BHW	Baring Head	1.51	90	⇓PN	P	22 46 06.5	-1.2
BHW				SN	S	22 46 26.4	-1.5
KIW	Kapiti Island	1.65	71	P	P	22 46 08.8	-0.5
KIW	Kapiti Island	1.65	71	⇓PN	P	22 46 08.8	-0.5
KIW				SN	S	22 46 30.1	-0.6
CAW	Cannon Point	1.69	80	P	P	22 46 08.9	-1.0
CAW	Cannon Point	1.69	80	⇓PN	P	22 46 08.8	-1.1

CAW				SN	S	22 46 30.7	-1.1
MSWZ	**Moikau Station**	1.80	91	P	P	22 46 09.7	-1.5
MSWZ	**Moikau Station**	1.80	91	PN	P	22 46 09.7	-1.5
MSWZ				SN	S	22 46 32.3	-1.7
PAWZ	**Paruwai Farm**	1.93	90	⇓PN	P	22 46 11.2	-1.7
PAWZ				SN	S	22 46 34.8	-2.2
MTW	**Mount Morrison**	2.01	83	P	P	22 46 12.2	-1.7
MTW	**Mount Morrison**	2.01	83	⇓PN	P	22 46 12.2	-1.7
MTW				SN	S	22 46 37.3	-1.5
CRLZ	**Canterbury Las**	2.16	185	SN	S	22 46 38.8	-3.6
MRZ	**Mangatainoka R**	2.19	71	*e*P	P	22 46 14.7	-1.7
MRZ	**Mangatainoka R**	2.19	71	⇓PN	P	22 46 14.7	-1.8
MRZ				SN	S	22 46 42.4	-0.8
NRZ	**Ngariki Road**	2.24	22	P	P	22 46 17.7	+0.6
NRZ	**Ngariki Road**	2.24	22	PN	P	22 46 17.8	+0.8
NWEZ	**Newall Road**	2.28	20	P	P	22 46 18.2	+0.6
NWEZ	**Newall Road**	2.28	20	PN	P	22 46 18.1	+0.4
WVZ	**Waitaha Valley**	2.29	223	*e*P	P	22 46 16.1	-1.6
WVZ	**Waitaha Valley**	2.29	223	PN	P	22 46 16.1	-1.6
WVZ				SN	S	22 46 41.6	-3.8
MQZ	**McQueen's Vall**	2.29	184	*e*P	P	22 46 15.5	-2.2
MQZ	**McQueen's Vall**	2.29	184	PN	P	22 46 15.5	-2.2
MQZ				SN	S	22 46 40.6	-5.0
WAZ	**Wanganui**	2.32	45	P	P	22 46 18.9	+0.7
WAZ	**Wanganui**	2.32	45	PN	P	22 46 18.7	+0.5
NEZ	**North Egmont**	2.35	24	P	P	22 46 18.9	+0.4
NEZ	**North Egmont**	2.35	24	PN	P	22 46 18.5	0.0
PKE	**Pukeiti**	2.39	22	⇑PN	P	22 46 19.4	+0.3
PKE				*e*SN	S	22 46 47.5	-0.4
RAEZ	**Rainy Point**	2.43	29	P	P	22 46 20.3	+0.6
RAEZ	**Rainy Point**	2.43	29	PN	P	22 46 20.2	+0.5
RPZ	**Rata Peaks**	2.65	210	*e*P	P	22 46 20.3	-2.4
RPZ	**Rata Peaks**	2.65	210	PN	P	22 46 20.0	-2.7
RPZ				*e*SN	S	22 46 50.3	-4.0
BFZ	**Birch Farm**	2.67	75	*e*P	P	22 46 20.3	-2.6
BFZ	**Birch Farm**	2.67	75	PN	P	22 46 20.2	-2.7
BFZ				SN	S	22 46 51.5	-3.1
VRZ	**Vera Road**	2.71	33	*e*P	P	22 46 23.7	+0.1
VRZ	**Vera Road**	2.71	33	PN	P	22 46 23.7	+0.1
TSZ	**Takapari Road**	2.72	61	*e*P	P	22 46 21.5	-2.1
TSZ	**Takapari Road**	2.72	61	PN	P	22 46 21.5	-2.2
FWVZ	**Far West T-bar**	2.98	44	*e*PN	P	22 46 26.4	-0.8
WPVZ	**Whakapapa**	3.02	44	PN	P	22 46 26.7	-1.0
TUVZ	**Tukino**	3.03	46	PN	P	22 46 26.9	-1.0
TWVZ	**Taurewa**	3.07	41	*e*PN	P	22 46 27.5	-0.8
FOZ	**Fox Glacier**	3.18	227	PN	P	22 46 26.0	-3.8
KATZ	**Kakaramea**	3.27	43	P	P	22 46 31.3	+0.2
KATZ	**Kakaramea**	3.27	43	PN	P	22 46 31.3	+0.2
HIZ	**Hauiti**	3.28	28	*e*P	P	22 46 30.5	-0.8
HIZ	**Hauiti**	3.28	28	PN	P	22 46 29.9	-1.4
RATZ	**Rangitukua**	3.39	42	P	P	22 46 33.9	+1.2
RATZ	**Rangitukua**	3.39	42	PN	P	22 46 33.9	+1.2
LBZ	**Lake Benmore**	3.56	213	PN	P	22 46 31.4	-3.6
ODZ	**Otahua Downs**	3.97	203	*e*P	P	22 46 37.6	-3.0
ODZ	**Otahua Downs**	3.97	203	PN	P	22 46 37.4	-3.2
JCZ	**Jackson Bay**	4.02	227	*e*P	P	22 46 38.4	-2.9
JCZ	**Jackson Bay**	4.02	227	PN	P	22 46 38.2	-3.1
WKZ	**Wanaka**	4.42	218	*e*P	P	22 46 42.8	-3.9
WKZ	**Wanaka**	4.42	218	PN	P	22 46 42.8	-4.0
TUZ	**Tuapeka**	5.10	206	*e*P	P	22 46 53.3	-2.7
TUZ	**Tuapeka**	5.10	206	*e*PN	P	22 46 52.6	-3.4

IGQ 18 22:47:22.1, 2.61S×78.18W, h12^{km}±5^{km}, mb4.0, 2C-3D, Error ellipse: s-maj=7.7km s-min=3.9km az=163.9, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PATA	**Patacocha**	1.13	347	P	Pb	22 47 43.5	+0.4
PATA				S	Sb	22 47 59.5	+1.9
ARRY	**Arrayan**	1.13	346	⇑P	Pb	22 47 42.7	-0.4
ARRY				S	Sb	22 47 58.4	+0.7
ULBA	**Ulba**	1.18	349	P	Pb	22 47 43.7	-0.2
CUSU	**Cusua**	1.20	346	P	Pb	22 47 44.4	+0.1
CUSU				S	Sb	22 48 01.4	+1.8
IGUA	**Igualata**	1.20	338	P	Pb	22 47 45.7	+1.3
IGUA				S	Sb	22 48 02.5	+2.7
RUN2	**Runtun**	1.21	349	P	Pb	22 47 44.3	-0.1
JUIV	**Juive**	1.21	347	P	Pb	22 47 44.4	-0.2
PISA	**Pisayambo**	1.56	353	⇓P	Pn	22 47 50.7	+0.9
PISA				S	Sb	22 48 12.6	+2.6
TAMB	**Tambo**	1.92	354	P	Pn	22 47 56.4	+1.4
TAMB				S	Sn	22 48 23.9	+4.7
VC1	**Cotopaxi 1**	1.97	354	P	Pn	22 47 57.5	+1.7
NAS1	**Nasa**	1.99	352	P	Pn	22 47 58.0	+1.9
NAS1				S	Sn	22 48 26.5	+5.5
ANTI	**Antisana**	2.15	1	⇑P	Pn	22 47 59.3	+1.0
ANTI				S	Sn	22 48 27.9	+2.8
JUA2	**San Juan 2**	2.42	350	P	Pn	22 48 06.6	+4.4
TERV	**Terraza Guagua**	2.46	350	P	Pn	22 48 06.2	+3.5
PINO	**Pino**	2.48	350	P	Pn	22 48 07.2	+4.2
YANA	**Yana**	2.51	351	P	Pn	22 48 07.4	+3.9
YANA				S	Sn	22 48 41.9	+7.7
LAV3	**Lava3-Reventad**	2.56	12	P	Pn	22 48 06.6	+2.4
ELAGU	**Cayambe Volc**	2.58	4	P	Pn	22 48 06.9	+2.4
CONE	**Cono NE Rev Vo**	2.58	12	⇓P	Pn	22 48 06.0	+1.5
CAYR	**Refugio Cayamb**	2.62	4	⇓P	Pn	22 48 07.5	+2.5
CAYR				S	Sn	22 48 42.8	+5.8
CAYA	**Cayambe**	2.67	4	P	Pn	22 48 08.4	+2.5
CAYA				S	Sn	22 48 44.1	+5.7
HOJA	**Cerro de Hojas**	2.83	303	P	Pn	22 48 10.7	+2.7
COTA	**Cotacachi**	2.93	357	P	Pn	22 48 14.4	+4.8

IDC 18 23:18:36.4±2.1, 49.74N×114.92W, h23^{km}±15^{km}, mb3.0/1, mb1 3.6/4, mb1mx3.3/22, mbtmp3.3/4, ML3.7/3, Error ellipse: s-maj=15.4km s-min=9.4km az=114.0, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEW	**Newport**	2.07	225	Pn	Pn	23 19 10.4	0.0
	7.0nm,0.3s,baz=48,slow=14,SNR=16						
NEW				Sn	Sn	23 19 37.2	+1.4
	12nm,0.3s,baz=9.1,slow=18,SNR=8.1						
NEW				Lg		23 19 41.2	
	17nm,0.3s,baz=148,slow=20,SNR=13						
PDAR	**Pinedale Array**	7.90	150	Pn	Pn	23 20 32.1	-0.7
	0.1nm,0.3s,baz=333,slow=16,SNR=3.0						
PDAR				Lg		23 22 41.1	
	0.0nm,0.3s,baz=349,slow=34,SNR=3.7						
YKA	**Yellowknife Ar**	12.79	1	Pn	P	23 21 32.1	-7.4
	0.7nm,0.3s,baz=181,slow=13,SNR=23						
YKA				Sn	S	23 23 47.5	-15
	0.3nm,0.3s,baz=174,slow=23,SNR=7.0						
YKA				Lg		23 25 09.3	
	0.1nm,0.3s,baz=174,slow=28,SNR=6.3						
ILAR	**Eielson Array**	22.57	324	P	P	23 23 35.9	+0.1
	0.7nm,0.9s,baz=124,slow=9.8,SNR=6.2						

IDC 18 23:40:35.5±1.7, 30.29S×177.57W, mb3.8/3, mb1 4.0/4, mb1mx3.8/16, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=54.9km s-min=36.2km az=146.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	9.08	208	Pn	P	23 42 47.4	-3.4
	0.8nm,0.3s,baz=43,slow=10.0,SNR=8.6						
URZ				Sn	Sn	23 44 47.4	+12
	1.1nm,0.3s,baz=128,slow=19,SNR=6.9						
CTA	**Charters Tower**	34.15	279	P	P	23 47 22.7	-1.7
	1.8nm,0.4s,baz=104,slow=13,SNR=5.9						
ASAR	**Alice Springs**	43.48	267	P	P	23 48 40.9	-1.4
	0.6nm,0.7s,baz=104,slow=6.9,SNR=6.5						
ASAR				PcP	PcP	23 50 29.4	-1.6
	0.3nm,0.7s,baz=112,slow=4.5,SNR=4.0						
WRA	**Warramunga Arr**	44.46	272	P	P	23 48 47.9	-2.3
	0.4nm,0.4s,baz=112,slow=8.2,SNR=29						
FINES	**FINESS Array B**	145.17	340	PKPbc	PKPbc	00 00 12.1	-2.4
	1.2nm,0.4s,baz=63,slow=3.1,SNR=30						
AKASG	**Malin Array Be**	151.44	323	PKPbc	PKPdf	00 00 31.0	+4.6
	2.3nm,0.6s,baz=44,slow=2.7,SNR=14						
BRTR	**Keskin Array B**	152.87	299	PKPbc	PKPdf	00 00 34.9	+6.0
	0.7nm,0.7s,baz=56,slow=5.2,SNR=4.5						

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*BJI **19** 00:04:41.3, 6.00S×122.49E, h34^{km}, mB6.7, mb6.1, Ms6.6, Msz6.3*

*NEIC **19** 00:04:43.6±0.1, 5.56S×122.13E, h10^{km}, mb6.3/71, ME6.3, MS6.3/96, MW6.5, Error ellipse: s-maj=4.2km s-min=3.2km az=56.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{18}Nm; M_{rr}4.06; $M_{\theta\theta}$-0.88; $M_{\phi\phi}$-3.18; $M_{r\theta}$4.14; $M_{\theta\phi}$-2.84; $M_{\phi r}$3.30; Best double couple: $M_0$7×10^{18} NP1: ϕ_s196°, δ23°, λ60°. NP2: ϕ_s48°, δ70°, λ102°. Principal axes: T 6.68, Plg63°, Azm337°; N .7, Plg11°, Azm224°; P -7.38, Plg24°, Azm129°; Depth from synthetics of broadband displacement seismograms. Energy computed from MT mechanism.*

NEIC Felt [V] on Pulau Buton and [IV] at Makassar.

*HRVD **19** 00:04:43.6±0.1, 5.52S×122.23E, h12^{km}, MW6.4/82, Centroid moment Tensor Solution. LP body waves: s77, c164; Mantle waves: s82, c351; Half duration: 4^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}4.28±.03; $M_{\theta\theta}$1.23±.03; $M_{\phi\phi}$-5.52±.03; $M_{r\theta}$0.97±.09; $M_{\theta\phi}$-2.84±.03; $M_{\phi r}$-0.36±.08; Best double couple: $M_0$5.637×10^{18} NP1: ϕ_s41°, δ49°, λ121°. NP2: ϕ_s179°, δ49°, λ59°. Principal axes: T 4.718, Plg67°, Azm20°; N 1.828, Plg23°, Azm200°; P -6.556, Plg0°, Azm290°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*DJA **19** 00:04:43.3±0.3, 5.99S×122.34E, h33^{km}, mb6.9/5 Error ellipse: s-maj=13.9km s-min=7.5km az=153.0*

*MOS **19** 00:04:45.9±1.3, 5.52S×122.16E, h33^{km}, mb6.5/57, MS6.2/42, Error ellipse: s-maj=7.4km s-min=4.8km az=114.0*

*IDC **19** 00:04:47.6±1.4, 5.59S×122.23E, h33^{km}±9^{km}, mb5.6/27, mb1 5.6/28, mb1mx5.6/28, mbtmp5.8/28, ML4.0/1, MS6.1/16, Ms1 6.1/16, ms1mx5.9/22, Error ellipse: s-maj=12.3km s-min=6.9km az=62.0*

ISC 19 00:04:42.4±0.1, 5.60S±0.02×122.14E±0.02, h14^{km}, h14^{km}±1.5^{km}:pP-P, n1000, σ1^{s}10/597, mb6.2/131, MS6.3/149, 130C-36D, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	**Palu**	5.20	334	*e*P	Pg	00 06 16.0	-10
KEDI	**Kedomdong**	6.63	244	*e*P	Pn	00 06 21.8	-0.1
KEDI				pmax	pmax		
	comp=Z,1μm,0.6s						
KEDI	**Kedomdong**	6.63	244	*e*P	Pn	00 06 21.8	-0.1
	comp=Z,1μm,0.6s						
KEDI				⇑*i*pP		00 06 22.7	
KEDI	**Kedomdong**	6.63	244	⇑*i*pP		00 06 22.7	
RATI	**Rata**	7.25	244	⇑*e*P	Pn	00 06 30.3	-0.3
	comp=Z,5μm,0.3s						
RATI				⇑*i*pP		00 06 31.4	
RATI	**Rata**	7.25	244	⇑*i*pP		00 06 31.4	
KELI	**Kelakatan**	8.02	251	⇑*e*P	P	00 06 41.1	-0.3
	comp=Z,3μm,1.0s						
SRDI	**Scrawed**	8.43	250	⇑*e*P	P	00 06 46.9	-0.2
SRDI				pmax	pmax		
	comp=Z,792nm,0.5s						
SRDI	**Scrawed**	8.43	250	⇑*e*P	P	00 06 46.9	-0.2
	comp=Z,792nm,0.5s						
SRDI				⇓*i*pP		00 06 47.8	
SRDI	**Scrawed**	8.43	250	⇓*i*pP		00 06 47.8	
TSM	**Tawau**	10.71	336	P	P	00 07 17.0	-1.7
KAKA	**Kakadu**	12.38	126	⇓*i*P	P	00 07 37.0	-4.3
	comp=Z,1μm,0.7s						
KCP	**Kidapawan**	12.87	13	*e*P	P	00 07 53.4	+5.5
FITZ	**Fitzroy Crossi**	12.89	165	⇓*i*P	P	00 07 44.2	-3.8
	comp=Z,626nm,0.7s						
FITZ				*e*S	Sx	00 10 00.1	
KKM	**Kota Kinabalu**	12.99	333	P	P	00 07 51.4	+2.0
DAV	**Davao City (W)**	13.05	15	P	P	00 07 50.0	-0.2
MATI	**Mati**	13.12	18	*e*P	P	00 07 58.3	+7.1
IPIL	**Ipil**	13.31	2	*e*P	P	00 07 51.8	-1.8
PAGZ	**Pagadian**	13.42	5	*e*P	P	00 07 55.8	+0.7
BUKP	**Musuan**	13.71	12	*e*P	P	00 07 58.6	-0.4
CGP	**Cagayan de Oro**	14.19	10	*e*P	P	00 08 06.4	+1.0
BUTP	**Butuan**	14.88	14	*e*P	P	00 08 16.2	+1.8
BATP	**Bataraza**	14.94	343	*e*P	P	00 08 16.3	+1.1
TBP	**Tagbilaran**	15.29	6	⇑*e*P	P	00 08 21.2	+1.4
MBWA	**Marble Bar**	15.64	188	*e*P	P	00 08 20.8	-3.4
	comp=Z,646nm,1.1s						
SCPH	**Surigao**	15.64	12	⇓*e*P	P	00 08 24.9	+0.6
MSLP	**Maasin**	15.87	10	*e*P	P	00 08 27.8	+0.6
LLP	**Lapu-Lapu**	15.92	7	⇑*e*P	P	00 08 29.0	+1.1
GUIM	**Jordan**	16.13	2	*e*P	P	00 08 31.8	+1.2
CUYO	**Cuyo Island**	16.38	356	*e*P	P	00 08 33.7	-0.1
ENPP	**El Nido**	16.91	351	*e*P	P	00 08 41.1	+0.5
RCP	**Roxas**	17.06	2	⇑*e*P	P	00 08 43.0	+0.6
BUSP	**Coron**	17.59	354	*e*P	P	00 08 50.5	+1.4
OTRP	**Odiongan**	17.85	360	*e*P	P	00 08 53.0	+0.8
MMPH	**Masbate**	17.90	5	*e*P	P	00 08 51.0	-1.9
SJMP	**San Jose**	17.97	357	*e*P	P	00 08 55.3	+1.6
CNP	**Catarman**	18.17	8	*e*P	P	00 08 56.2	0.0
WRA	**Warramunga Arr**	18.55	141	P	P	00 08 56.4	-4.5
	comp=Z,0.5nm,0.3s,baz=322,slow=9.9,SNR=68						
WRA				S	S	00 12 24.7	+0.4
	comp=Z,0.7nm,0.3s,baz=317,slow=21,SNR=3.1						
WRA				P3KPbc		00 43 40.6	
	comp=Z,0.2nm,0.3s,baz=138,slow=4.0,SNR=9.7						
WRAB	**Tennant Creek**	18.55	141	⇓*e*P	P	00 08 57.0	-3.9
WRAB				pmax	pmax		
	comp=Z,3μm,1.1s						
WRAB	**Tennant Creek**	18.55	141	⇓*e*P	P	00 08 57.0	-3.9
	comp=Z,3μm,1.1s						
YOMI	**Yo Moklole**	18.61	82	⇓*e*P	P	00 08 58.2	-3.4
	comp=Z,3μm,1.8s						
BOAC	**Boac**	18.94	359	*e*P	P	00 09 07.8	+2.2
PVCP	**Virac**	19.18	6	*e*P	P	00 09 07.6	-0.8
LUBP	**Lubang**	19.30	354	*e*P	P	00 09 10.0	+0.1
GQP	**Guinayangan**	19.38	1	⇑*e*P	P	00 09 09.9	-0.9
LQP	**Lukban**	19.59	358	⇑*e*P	P	00 09 13.2	0.0
TGY	**Tagaytay City**	19.61	357	⇑*e*P	P	00 09 14.3	+0.9
TGY	**Tagaytay City**	19.61	357	P	P	00 09 14.1	+0.7
	comp=Z,133nm,0.3s,baz=246,slow=9.4,SNR=66						
TGY				S	S	00 13 03.7	+15
	comp=Z,46nm,0.3s,baz=212,slow=9.7,SNR=1.7						
POLP	**Polilio Island**	20.20	359	*e*P	P	00 09 19.8	0.0
KGM	**Kluang**	20.26	291	P	P	00 09 21.3	+0.8
PCPH	**Palayan**	21.05	357	⇑*e*P	P	00 09 26.8	-1.8
BALP	**Baler**	21.21	359	*e*P	P	00 09 27.9	-2.3
ASPA	**Alice Springs**	21.23	149	⇓*i*P	P	00 09 29.9	-0.5
ASPA				*e*S	S	00 13 27.4	+6.3
ASAR	**Alice Springs**	21.24	149	P	P	00 09 29.9	-0.5
	comp=Z,385nm,1.1s,mb5.7,baz=321,slow=8.7,SNR=310						
ASAR				S	S	00 13 26.1	+5.0
	comp=Z,23nm,0.9s,baz=352,slow=26,SNR=2.8						
ASAR				LR	LR	00 19 28.6	
	comp=Z,65μm,18.7s,MS6.0,baz=320,slow=42						
ASAR				P3KPbc		00 43 28.6	
	comp=Z,1.9nm,0.9s,baz=144,slow=3.5,SNR=6.6						
SCZP	**Santa Cruz**	21.35	354	*e*P	P	00 09 30.0	-1.6
BCPH	**Baguio City Da**	21.89	356	⇑*i*P	P	00 09 35.0	-2.1
BOLP	**Bolinao**	21.95	354	*e*P	P	00 09 36.1	-1.6
CAUP	**Cauayan**	22.40	359	*e*P	P	00 09 42.2	+0.1
PALP	**Palanan**	22.52	1	*e*P	P	00 09 43.7	+0.3
ABRA	**Dolores**	23.14	357	*e*P	P	00 09 46.7	-2.8
CVP	**Callao Caves**	23.16	359	⇑*e*P	P	00 09 49.0	-0.7
APYP	**Conner**	23.33	358	*e*P	P	00 09 50.6	-0.7
IPM	**Ipoh**	23.38	295	P	P	00 09 53.4	+1.5
SGCP	**Mt. Cagua**	23.69	360	*e*P	P	00 09 52.9	-1.9
SNG	**Songkhla**	24.95	300	P	P	00 10 08.0	+1.0
	comp=Z,1μm,1.0s,mb6.4						
PMG	**Port Moresby**	25.09	100	⇓*e*P	P	00 10 06.7	-1.7
PMG				pmax	pmax		
	comp=Z,972nm,1.0s						
PMG				MLR	MLR		
	comp=Z,66μm,19.0s						
PMG	**Port Moresby**	25.09	100	P	P	00 10 08.6	+0.2
	comp=Z,401nm,0.8s,mb6.0,baz=293,slow=5.1,SNR=129						
PMG				S	S	00 14 30.9	+1.3
	comp=Z,18nm,1.0s,baz=270,slow=20,SNR=1.5						
PMG				LR	LR	00 22 19.7	
	comp=Z,78μm,18.6s,MS6.2,baz=94,slow=42						
PMG	**Port Moresby**	25.09	100	⇓*e*P	P	00 10 06.7	-1.7
	comp=Z,972nm,1.0s,mb6.3						
PMG				LR	LR		
	comp=Z,66μm,19.0s,MS6.2						
COCO	**West Island**	25.83	254	*e*P	P	00 10 15.3	0.0
	comp=Z,915nm,1.2s,mb6.2						
COCO				LR	LR		
	comp=Z,17μm,20.0s,MS5.6						
BBP	**Basco**	25.88	360	*e*P	P	00 10 15.1	-0.7
KLBR	**Kellerberrin**	26.18	188	⇑*i*P	P	00 10 17.6	-0.8
	comp=Z,9μm,1.1s,mb7.2						
UBT	**Ubonrachathani**	26.77	321	P	P	00 10 24.0	0.0
MUN	**Mundaring**	26.82	191	⇑*i*P	P	00 10 24.0	-0.3
	comp=Z,339nm,1.0s,mb5.8						
MUN				*e*S	S	00 15 10.4	+12
MUN	**Mundaring**	26.82	191	⇑*i*P	P	00 10 24.0	-0.3
MUN				pmax	pmax		
	comp=Z,339nm,1.0s,mb5.8						
QIZ	**Qiongzhong**	27.31	334	P	P	00 10 28.3	-0.6
QIZ				S	S	00 15 10.8	+4.6
QIZ				SS	SS	00 16 32.1	+9.5
QIZ				AMB	AMB		
	comp=Z,8μm,9.2s						
QIZ				LR	LR		
	comp=N,48μm,22.9s,MS6.3						
QIZ				LR	LR		
	comp=E,69μm,21.2s,MS6.3						
QIZ				LR	LR		
	comp=Z,45μm,18.9s,MS6.1						
QIZ	**Qiongzhong**	27.31	334	⇑*i*P	P	00 10 28.1	-0.8
	comp=Z,2μm,1.7s,mb6.2						
CTA	**Charters Tower**	27.51	124	*e*P	P	00 10 29.0	-1.7
	comp=Z,172nm,1.2s,mb5.6						
CTA				*i* S	S	00 15 10.2	+0.8
CTA	**Charters Tower**	27.51	124	*e*P	P	00 10 29.0	-1.7
CTA				*i* S	S	00 15 10.2	+0.8
CTA				pmax	pmax		
	comp=Z,172nm,1.2s						
CTA	**Charters Tower**	27.51	124	P	P	00 10 29.4	-1.4
	comp=Z,92nm,0.9s,mb5.4,baz=302,slow=10,SNR=38						
CTA				LR	LR	00 22 48.2	
	comp=Z,65μm,18.4s,MS6.2,baz=79,slow=39						
CTAO	**Charters Tower**	27.51	124	*e*P	P	00 10 29.8	-0.9
	comp=Z,364nm,1.2s,mb5.9						
CTAO				LR	LR		
	comp=Z,69μm,21.0s,MS6.2						
NWAO	**Narrogin (SRO)**	27.57	189	P	P	00 10 31.1	0.0
	comp=Z,332nm,1.1s,mb5.9,baz=12,slow=12,SNR=50						
NWAO				LR	LR	00 22 04.9	
	comp=Z,209nm,18.2s,baz=350,slow=38						
NWAO	**Narrogin (SRO)**	27.57	189	*e*P	P	00 10 30.9	-0.2
	comp=Z,367nm,1.1s,mb5.9						
NWAO				LR	LR		
	comp=Z,26μm,19.0s,MS5.8						
NNT	**Nongplab**	28.68	309	⇑P	P	00 10 42.0	+0.7
	comp=Z,2μm,1.2s,mb6.7						
HKC	**Hong Kong**	28.81	345	⇑*i*P	P	00 10 42.0	-0.4
HKC				S	S	00 15 34.0	+3.7
GUMO	**Guam**	29.55	50	*e*P	P	00 10 47.7	-1.5
	comp=Z,1μm,1.4s,mb6.4						
GUMO				LR	LR		
	comp=Z,31μm,19.0s,MS6.0						
GZH	**Guangzhou**	29.78	344	P	P	00 10 54.4	+3.2
GZH				S	S	00 15 53.9	+8.1
GZH				LR	LR		
	comp=N,35μm,16.8s,MS6.3						
GZH				LR	LR		
	comp=E,50μm,14.9s,MS6.3						
GZH				LR	LR		
	comp=Z,62μm,16.2s,MS6.3						
NST	**Nakhon Sawan**	30.36	314	⇓P	P	00 10 56.9	+0.6
	comp=Z,167nm,1.0s,mb5.7						
TATO	**Taipei**	30.40	359	*e*P	P	00 10 54.1	-2.5
	comp=Z,1μm,2.0s,mb6.3						
TATO				LR	LR		
	comp=Z,44μm,19.0s,MS6.1						
QZH	**Quanzhou**	30.56	354	⇑*i*P	P	00 10 57.1	-0.9
QZH				S	S	00 16 00.0	+2.0
QZH				AMB	AMB		
	comp=Z,470nm,1.3s,mb6.2						
QZH				AMB	AMB		
	comp=Z,11μm,10.9s						
QZH				LR	LR		
	comp=N,19μm,12.1s,MS6.3						
QZH				LR	LR		
	comp=E,36μm,12.8s,MS6.3						
QZH				LR	LR		
	comp=Z,86μm,17.2s,MS6.5						
STKA	**Stephens Creek**	31.86	148	⇓*i*P	P	00 11 08.6	-0.8
	comp=Z,158nm,0.9s,mb5.8						
STKA				*e*S	S	00 16 12.3	-6.0
STKA	**Stephens Creek**	31.86	148	P	P	00 11 08.7	-0.7
	comp=Z,121nm,0.9s,mb5.7,baz=321,slow=7.7,SNR=62						
STKA				S	S	00 16 16.9	-1.5
	comp=Z,60nm,1.1s,baz=210,slow=20,SNR=1.6						
STKA				LR	LR	00 25 29.9	
	comp=Z,85μm,18.4s,MS6.5,baz=209,slow=39						
NANT	**Nan**	32.16	319	⇑P	P	00 11 13.0	+0.8
JOW	**Kunigami**	32.78	10	P	P	00 11 17.8	+0.2
	comp=Z,218nm,0.9s,mb6.1,baz=201,slow=5.9,SNR=23						
CM31	**Chiang Mai Arr**	33.09	317	⇑*e*P	P	00 11 20.7	+0.5
	comp=Z,146nm,0.8s,mb6.0						
CM31				LR	LR		
	comp=Z,69μm,19.0s,MS6.4						
CMAR	**Chiang Mai Arr**	33.09	317	P	P	00 11 20.9	+0.6
	comp=Z,130nm,0.8s,mb5.9,baz=141,slow=6.9,SNR=478						
CMAR				PcP	PcP	00 14 05.0	+1.4
	comp=Z,44nm,0.9s,baz=170,slow=2.9,SNR=7.7						
CMAR				PKiKP		00 21 30.1	
	comp=Z,2.4nm,0.7s,baz=287,slow=1.0,SNR=5.4						
CMAR				LR	LR	00 28 19.4	
	comp=Z,61μm,18.2s,MS6.3,baz=145,slow=43						
CMAR				P3KPbc		00 42 48.4	
	comp=Z,1.6nm,0.9s,baz=306,slow=5.4,SNR=4.8						
CHG	**Chiang Mai**	33.33	317	⇑P	P	00 11 21.8	-0.6
	comp=Z,150nm,0.9s,mb5.9						
CHG				S	S	00 16 48.4	+7.0
CHRT	**Chiangrai**	33.53	320	⇑P	P	00 11 24.0	-0.1
	comp=Z,2μm,0.5s						
GYA	**Guiyang**	35.22	336	⇑*i*P	P	00 11 38.3	-0.3
GYA				PP	PP	00 13 04.1	+6.4
GYA				S	S	00 17 11.4	+0.7
GYA				AMB	AMB		
	comp=Z,130nm,1.7s,mb5.6						
GYA				AMB	AMB		
	comp=Z,7μm,9.3s						
GYA				LR	LR		
	comp=N,19μm,20.9s,MS6.1						
GYA				LR	LR		
	comp=E,30μm,17.9s,MS6.1						
GYA				LR	LR		
	comp=Z,45μm,18.9s,MS6.2						
KMI	**Kunming**	35.90	329	⇑P	P	00 11 45.6	+1.3
KMI				XP	sP	00 11 56.8	+6.6
KMI				PP	PP	00 13 06.0	+0.2
KMI				AMB	AMB		
	comp=Z,2μm,5.0s						
KMI				LR	LR		
	comp=N,11μm,15.0s,MS6.2						
KMI				LR	LR		
	comp=E,28μm,16.0s,MS6.2						
KMI				LR	LR		
	comp=Z,31μm,17.0s,MS6.1						
KMI	**Kunming**	35.90	329	⇑P	P	00 11 45.6	+1.3
KMI				*SP	sP	00 11 56.7	+6.5
KMI						00 13 06.0	
KMI				PPP	PPP	00 13 29.0	+3.4
KMI				S	S	00 17 23.0	+1.9
KMI				MLR	MLR		
	comp=Z,31μm,17.0s,MS6.1						
KMI	**Kunming**	35.90	329	⇑P	P	00 11 45.6	+1.3
	comp=Z,0.1nm,1.0s						
KMI				sP	sP	00 11 56.7	+6.5
KMI				PP	PP	00 13 06.0	+0.2
KMI				PPP	PPP	00 13 29.0	+3.4
KMI				S	S	00 17 23.0	+1.9
KMI				sS		00 17 33.0	
KMI				LR	LR		
	comp=Z,31μm,17.0s						
SSE	**Sheshan**	36.50	359	P	P	00 11 49.8	+0.5
SSE				PP	PP	00 13 14.8	+1.3
SSE				AMB	AMB		
	comp=Z,172nm,1.1s,mb5.8						
SSE				AMB	AMB		
	comp=Z,6μm,6.7s						
SSE				LR	LR		
	comp=N,6μm,17.4s,MS6.2						
SSE				LR	LR		
	comp=E,38μm,17.0s,MS6.2						
SSE				LR	LR		
	comp=Z,25μm,15.6s,MS6.1						
SSE	**Sheshan**	36.50	359	P	P	00 11 49.7	+0.4
	comp=Z,172nm,1.1s,mb5.8						
SSE				sP	sP	00 11 54.1	-1.2
SSE				PP	PP	00 13 14.8	+1.3
SSE				S	S	00 17 35.8	+5.5
SSE				sS		00 17 41.0	
SSE				PcS		00 17 58.9	
SSE				SS	SS	00 20 18.1	+22

SSE				LR	LR		
	comp=Z,25µm,15.6s,MS6.1						
WHN	**Wuhan**	**36.70**	**349**	⇑P	**P**	**00 11 51.8**	**+0.7**
WHN				AMB	AMB		
	comp=Z,15µm,10.6s						
WHN				LR	LR		
	comp=Z,80µm,16.6s,MS6.6						
ARMA	**Armidale**	**37.14**	**135**	*e*P	**P**	**00 11 55.6**	**+0.9**
ARMA				*e*S	**S**	**00 17 41.1**	**+1.0**
NJ2	**Nanjing**	**37.57**	**355**	*e*P	**P**	**00 11 59.0**	**+0.7**
NJ2				AP	pP	00 12 09.3	+6.8
NJ2				XP	sP	00 12 12.5	+8.2
NJ2				PP	PP	00 13 29.3	+2.4
NJ2				PPP	PPP	00 13 49.6	+1.6
NJ2				PCP	PcP	00 14 17.6	+0.9
NJ2				AMB	AMB		
	comp=Z,460nm,1.1s,mb6.1						
NJ2				AMB	AMB		
	comp=Z,2µm,10.7s						
NJ2				LR	LR		
	comp=N,69µm,15.5s,MS6.6						
NJ2				LR	LR		
	comp=E,52µm,18.2s,MS6.6						
NJ2				LR	LR		
	comp=Z,66µm,16.8s,MS6.5						
HNR	**Honiara**	**37.66**	**98**	PFAKE		00 12 10.0	+11
HNR				LR	LR		
	comp=Z,35µm,22.0s,MS6.1						
ENH	**Enshi**	**37.67**	**342**	⇑*e*P	**P**	**00 11 58.8**	**-0.4**
	comp=Z,330nm,1.1s,mb6.0						
CBIJ	**Chichi jima**	**37.85**	**30**	P	**P**	**00 11 59.4**	**-1.3**
	comp=Z,2µm,0.9s,mb6.8,baz=213,slow=3.3,SNR=44						
CBIJ				LR	LR	00 27 59.4	
	comp=Z,22µm,18.6s,MS6.0,baz=45,slow=37						
TOO	**Toolangi**	**38.29**	**149**	*e*P	**P**	**00 12 05.5**	**+1.2**
	comp=Z,12nm,1.1s						
TOO				*i* S	**S**	**00 18 02.2**	**+4.7**
CNB	**Canberra Magne**	**38.78**	**143**	*e*P	**P**	**00 12 08.4**	**0.0**
	comp=Z,8µm,1.8s,mb7.2						
RIV	**Riverview**	**38.90**	**140**	*e*P	**P**	**00 12 11.1**	**+1.6**
IMP	**Imphal**	**40.81**	**319**	*e*P	**P**	**00 12 26.0**	**+0.7**
XAN	**Xi’an**	**41.36**	**343**	P	**P**	**00 12 29.3**	**-0.4**
XAN				PP	PP	00 14 05.8	-2.7
XAN				S	**S**	**00 18 37.1**	**-6.5**
XAN				AMB	AMB		
	comp=Z,272nm,1.1s,mb5.8						
XAN				AMB	AMB		
	comp=Z,6µm,9.3s						
XAN				LR	LR		
	comp=N,20µm,22.1s,MS6.4						
XAN				LR	LR		
	comp=E,59µm,22.7s,MS6.4						
XAN				LR	LR		
	comp=Z,42µm,19.7s,MS6.3						
TIA	**Tai’an**	**41.86**	**354**	P	**P**	**00 12 33.1**	**-0.8**
TIA				S	**S**	**00 18 51.6**	**+0.6**
TIA				AMB	AMB		
	comp=Z,167nm,1.5s,mb5.5						
TIA				AMB	AMB		
	comp=Z,7µm,5.0s						
TIA				LR	LR		
	comp=N,7µm,13.2s,MS6.4						
TIA				LR	LR		
	comp=E,14µm,22.1s						
TIA				LR	LR		
	comp=N,13µm,14.0s						
TIA				LR	LR		
	comp=E,39µm,19.0s,MS6.4						
JHJ	**Hachijo jima 2**	**41.99**	**22**	LR	LR	00 28 44.9	
	comp=E,31µm,21.8s,MS6.1,baz=42,slow=34						
AGT	**Agartala**	**42.03**	**315**	⇓*i*P	**P**	**00 12 36.0**	**+0.6**
AGT				*i*		00 14 18.0	
INCN	**Inchon**	**43.07**	**5**	*e*P	**P**	**00 12 43.8**	**0.0**
	comp=E,223nm,1.1s,mb5.8						
INCN				LR	LR		
	comp=Z,30µm,20.0s,MS6.2						
KS15	**Wonju Array Si**	**43.16**	**7**	*e*P	**P**	**00 12 45.0**	**+0.6**
CAL	**Calcutta**	**43.31**	**311**	*e*S	**S**	**00 19 14.9**	**+2.4**
TAU	**Tasmania Unive**	**43.32**	**153**	*e*P	**P**	**00 12 46.1**	**+0.4**
TAU				pmax	pmax		
	comp=Z,504nm,1.1s,mb6.2						
TAU				MLR	MLR		
	comp=Z,20µm,22.0s,MS6.0						
TAU	**Tasmania Unive**	**43.32**	**153**	*e*P	**P**	**00 12 46.1**	**+0.4**
	comp=Z,504nm,1.1s,mb6.2						
TAU				LR	LR		
	comp=Z,20µm,22.0s,MS6.0						
BWNR	**Bhubaneshwar**	**44.01**	**307**	*e*P	**P**	**00 12 52.3**	**+0.7**
BWNR				*e*		00 12 59.2	
	comp=Z,1µm,1.3s						
BWNR				*e*S	**S**	**00 19 23.3**	**+0.6**
BWNR				*i*		00 38 59.2	
	comp=Z,31µm,20.1s						
DL2	**Dalian**	**44.28**	**359**	*i* PR		00 12 53.8	
DL2				PP	PP	00 14 39.4	+1.0
DL2				AMB	AMB		
	comp=Z,470nm,0.9s,mb6.2						
DL2				AMB	AMB		
	comp=Z,5µm,8.1s						
DL2				LR	LR		
	comp=E,17µm,18.2s						
DL2				LR	LR		
	comp=Z,14µm,17.2s,MS5.9						
MAJO	**Matsushiro**	**44.54**	**19**	⇑*i*P	**P**	**00 12 54.4**	**-1.3**
MAJO				*e*		00 14 40.1	
MAJO				pmax	pmax		
	comp=Z,620nm,1.6s,mb6.2						
MAJO				MLR	MLR		
	comp=Z,49µm,22.0s,MS6.4						
MAJO	**Matsushiro**	**44.54**	**19**	⇑*i*P	**P**	**00 12 54.4**	**-1.4**
	comp=Z,620nm,1.6s,mb6.2						
MAJO				*e*PcP	PcP	00 14 40.1	+0.7
MAJO				LR	LR		
	comp=Z,49µm,22.0s,MS6.4						
MAT	**Matsushiro**	**44.54**	**19**	*e*P	**P**	**00 12 54.0**	**-1.7**
MAT				pmax	pmax		
	comp=Z,1µm,2.1s,mb6.4						
MAT	**Matsushiro**	**44.54**	**19**	*e*P	**P**	**00 12 54.0**	**-1.7**
	comp=Z,1µm,2.1s,mb6.4						
MAT				*e*S	S	00 19 09.0	-21
MAT	**Matsushiro**	**44.54**	**19**	P	**P**	**00 12 54.0**	**-1.7**
MAT				S	**S**	**00 19 15.8**	**-14**
VIS	**Vishakhapatnam**	**44.77**	**302**	*e*P	**P**	**00 12 58.9**	**+1.1**
VIS				*e*		00 13 06.7	
	comp=Z,3µm,1.7s						
VIS				*e*S	**S**	**00 19 33.0**	**-0.8**
VIS				*e*S	**S**	**00 19 34.5**	**+0.7**
VIS				*i*		00 36 13.3	
	comp=Z,26µm,16.5s						
LZH	**Lanzhou**	**44.88**	**339**	⇑*i*P	**P**	**00 12 58.5**	**0.0**
LZH				PP	PP	00 14 45.6	+1.2
LZH				AMB	AMB		
	comp=Z,587nm,1.3s,mb6.2						
LZH				AMB	AMB		
	comp=Z,5µm,6.4s						
LZH				LR	LR		
	comp=N,35µm,15.4s						
LZH				LR	LR		
	comp=Z,48µm,17.1s,MS6.5						
LZH	**Lanzhou**	**44.88**	**339**	⇑*i*P	**P**	**00 12 58.5**	**0.0**
LZH						00 14 45.6	
LZH				S	**S**	**00 19 36.0**	**+0.9**
LZH				*SS		00 19 43.5	
LZH				SS	SS	00 22 49.6	+1.6
LZH				pmax	pmax		
	comp=Z,587nm,1.3s,mb6.2						
LZH				MLR	MLR		
	comp=Z,48µm,17.1s,MS6.5						
LZH	**Lanzhou**	**44.88**	**339**	⇑*i*P	**P**	**00 12 58.5**	**0.0**
	comp=Z,587nm,1.3s,mb6.2						
LZH				pP	pP	00 13 01.8	-0.8
LZH				sP	sP	00 13 03.2	-1.2
LZH				PP	PP	00 14 45.6	+1.2
LZH				S	**S**	**00 19 36.0**	**+0.9**
LZH				sS		00 19 43.5	
LZH				SS	SS	00 22 49.6	+1.6
LZH				LR	LR		
	comp=Z,48µm,17.1s,MS6.5						
MDRS	**Chennai**	**45.56**	**294**	*e*P	**P**	**00 13 03.5**	**-0.6**
MDRS				*e*		00 13 11.5	
	comp=Z,2µm,1.8s						
MDRS				*i* PP	PP	00 14 48.0	-3.4
MDRS				*e*S	**S**	**00 19 44.8**	**-0.3**
MDRS				*i*		00 34 41.4	
	comp=Z,43µm,18.8s						
NOUC	**Port Laguerre**	**45.70**	**115**	*e*P	**P**	**00 13 05.1**	**0.0**
NOUC	**Port Laguerre**	**45.70**	**115**	*e*P	**P**	**00 13 05.1**	**0.0**
BJT	**Baijiatuau**	**45.73**	**354**	⇑*i*P	**P**	**00 13 04.9**	**-0.2**
BJT				pmax	pmax		
	comp=Z,1µm,1.0s						
BJT	**Baijiatuau**	**45.73**	**354**	⇑*i*P	**P**	**00 13 04.9**	**-0.2**
	comp=Z,1µm,1.0s,mb6.7						
BJI	**Beijing**	**45.75**	**354**	P	**P**	**00 13 05.3**	**0.0**
BJI				PP	PP	00 14 48.3	-4.7
BJI				AMB	AMB		
	comp=Z,1µm,1.0s,mb6.7						
BJI				AMB	AMB		
	comp=Z,11µm,4.4s						
BJI				LR	LR		
	comp=N,9µm,22.7s,MS6.1						
BJI				LR	LR		
	comp=E,24µm,22.7s,MS6.1						
BJI				LR	LR		
	comp=Z,21µm,27.8s						
BJI	**Beijing**	**45.75**	**354**	P	**P**	**00 13 05.3**	**0.0**
BJI						00 14 48.2	
BJI				S	**S**	**00 19 45.8**	**-1.6**
BJI				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.7						
BJI				MLR	MLR		
	comp=Z,21µm,27.8s,MS5.9						
BJI	**Beijing**	**45.75**	**354**	P	**P**	**00 13 05.3**	**0.0**
	comp=Z,1µm,1.0s,mb6.7						
BJI				PP	PP	00 14 48.2	-4.8
BJI				S	**S**	**00 19 45.8**	**-1.6**
BJI				SS	SS	00 23 15.2	+12
BJI				LR	LR		
	comp=Z,21µm,27.8s,MS5.9						
DZM	**Mont Dzumac**	**45.82**	**115**	⇑*e*P	**P**	**00 13 02.9**	**-3.1**
DZM	**Mont Dzumac**	**45.82**	**115**	⇑*e*P	**P**	**00 13 02.9**	**-3.1**
BOK	**Bokaro**	**45.87**	**311**	*e*P	**P**	**00 13 07.1**	**+0.7**
BOK				*e*P		00 13 07.3	
BOK				*e*		00 13 15.4	
	comp=Z,559nm,1.6s						
BOK				*e*S	**S**	**00 19 50.2**	**+0.9**
BOK				*i*		00 34 51.5	
	comp=Z,16µm,25.7s						
LSA	**Lhasa**	**46.01**	**321**	P	**P**	**00 13 09.3**	**+1.8**
LSA				AP	pP	00 13 20.3	+8.6
LSA				PP	PP	00 14 57.9	+2.2
LSA				PCS		00 18 36.3	
LSA				S	**S**	**00 19 52.9**	**+1.6**
LSA				SCS	ScS	00 23 01.3	+0.8
LSA				AMB	AMB		
	comp=Z,460nm,1.0s,mb6.4						
LSA				AMB	AMB		
	comp=Z,8µm,7.6s						
LSA				LR	LR		
	comp=N,10µm,17.6s						
LSA				LR	LR		
	comp=E,52µm,26.5s						
LSA				LR	LR		
	comp=Z,28µm,26.5s						
LSA	**Lhasa**	**46.01**	**321**	⇑*i*P	**P**	**00 13 08.8**	**+1.3**
LSA				pmax	pmax		
	comp=Z,729nm,1.0s,mb6.6						
LSA	**Lhasa**	**46.01**	**321**	⇑*i*P	**P**	**00 13 08.8**	**+1.3**
	comp=Z,729nm,1.0s,mb6.6						
TRD	**Trivandrum**	**47.18**	**287**	*e*P	**P**	**00 13 16.8**	**-0.1**
TRD				*e*		00 13 24.5	
	comp=Z,1µm,1.4s						
TRD				*i*		00 34 43.0	
	comp=Z,40µm,16.7s						
SNY	**Shenyang**	**47.22**	**1**	⇑P	**P**	**00 13 16.3**	**-0.6**
SNY				AP	pP	00 13 21.8	+0.7
SNY				PP	PP	00 15 08.0	+0.5
SNY				S	**S**	**00 20 10.0**	**+1.6**
SNY				SS	SS	00 23 26.8	-2.4
SNY				AMB	AMB		
	comp=Z,7µm,8.4s						
SNY				LR	LR		
	comp=N,13µm,21.1s,MS6.6						
SNY				LR	LR		
	comp=E,65µm,20.5s,MS6.6						
SNY				LR	LR		
	comp=Z,18µm,16.2s,MS6.1						
HHC	**Hu-ho-hao-te**	**47.23**	**349**	⇑*i*P	**P**	**00 13 17.0**	**0.0**
HHC				AP	pP	00 13 21.9	+0.7
HHC				PCP	PcP	00 14 47.1	-1.6
HHC				PP	PP	00 15 06.3	-1.3
HHC				AMB	AMB		
	comp=Z,317nm,1.1s,mb6.2						
HHC				AMB	AMB		
	comp=Z,7µm,5.7s						
HHC				LR	LR		
	comp=N,15µm,22.8s,MS6.4						
HHC				LR	LR		
	comp=E,40µm,20.4s,MS6.4						
HHC				LR	LR		
	comp=Z,30µm,16.8s,MS6.3						
BTO	**Baotou**	**47.31**	**347**	*e*P	**P**	**00 13 17.0**	**-0.6**
BTO				S	**S**	**00 20 12.6**	**+2.9**
BTO				AMB	AMB		
	comp=Z,245nm,1.4s,mb5.9						
BLSP	**Bilaspur**	**47.89**	**307**	*i* P	**P**	**00 13 22.5**	**+0.1**
BLSP				*e*		00 13 30.4	
	comp=Z,1µm,1.5s						
BLSP				*e*		00 13 30.4	
	comp=Z,1µm,1.6s						
BLSP				*e*S	**S**	**00 20 18.3**	**+0.2**
BLSP				*e*S	**S**	**00 20 19.3**	**+1.2**
BLSP				*i*		00 35 40.2	
	comp=Z,26µm,22.4s						
JIRN	**Jiri**	**47.94**	**315**	*e*P	**P**	**00 13 21.5**	**-1.2**
	comp=Z,2µm,1.3s,mb7.1						
PKI	**Pulchoki**	**48.43**	**315**	*e*P	**P**	**00 13 25.6**	**-1.0**
	comp=Z,1µm,1.2s,mb6.8						
KKN	**Kakani**	**48.66**	**315**	*e*P	**P**	**00 13 26.4**	**-1.9**
	comp=Z,1µm,1.1s,mb6.8						
DMN	**Daman**	**48.67**	**315**	*e*P	**P**	**00 13 26.9**	**-1.5**
	comp=Z,1µm,1.0s,mb6.9						
HYB	**Hyderabad**	**48.74**	**299**	⇑*e*P	**P**	**00 13 28.5**	**-0.5**
HYB				*e*S	**S**	**00 20 28.0**	**-2.2**
HYB				pmax	pmax		
	comp=Z,630nm,1.0s,mb6.6						
HYB	**Hyderabad**	**48.74**	**299**	⇑*e*P	**P**	**00 13 28.5**	**-0.5**
	comp=Z,630nm,1.0s,mb6.6						
HYB				*e*S	**S**	**00 20 28.0**	**-2.2**
HYB	**Hyderabad**	**48.74**	**299**	⇑*i*P	**P**	**00 13 28.5**	**-0.5**
	comp=Z,630nm,1.0s,mb6.6						
HYB				*e*PcP	PcP	00 14 52.0	-2.4
HYB				*e*PP	PP	00 15 20.0	-2.2
HYB				*e*S	**S**	**00 20 18.0**	**-12**
HYB				LR	LR	00 33 54.0	
	comp=Z,56nm,24.0s						
GKN	**Gorkha**	**49.24**	**315**	*e*P	**P**	**00 13 31.0**	**-1.8**
	comp=Z,1µm,1.1s,mb6.9						
CN2	**Changchun**	**49.26**	**3**	*e*P	**P**	**00 13 31.1**	**-1.6**
CN2				PCP	PcP	00 14 56.0	0.0
CN2				*e*S	**S**	**00 20 37.0**	**-0.2**
CN2				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.8						
CN2				AMB	AMB		
	comp=Z,7µm,8.0s						
CN2				LR	LR		
	comp=N,10µm,19.0s,MS6.5						
CN2				LR	LR		
	comp=E,47µm,19.0s,MS6.5						
CN2				LR	LR		
	comp=Z,14µm,21.0s,MS5.9						
VLA	**Vladivostok**	**49.29**	**9**	⇓*i*P	**P**	**00 13 33.0**	**0.0**
VLA				*i*		00 15 25.0	
VLA				*i* S	**S**	**00 20 45.0**	**+7.4**
VLA				pmax	pmax		
	comp=N,3µm,9.0s						
VLA				pmax	pmax		
	comp=E,2µm,9.0s						
VLA				pmax	pmax		
	comp=Z,8µm,9.0s						
VLA				pmax	pmax		
	comp=N,3µm,9.0s						
VLA				pmax	pmax		
	comp=Z,6µm,9.0s						
VLA				pmax	pmax		
	comp=E,2µm,10.0s						
VLA				smax			
	comp=E,8µm,10.0s						
VLA				smax			
	comp=N,4µm,17.0s						
VLA				MLR	MLR		
	comp=N,12µm,17.0s,MS6.0						
VLA				MLR	MLR		
	comp=Z,18µm,17.0s,MS6.2						
VLA				MLR	MLR		
	comp=E,5µm,14.0s,MS6.0						
GTA	**Gaotai**	**49.31**	**337**	⇑*i*P	**P**	**00 13 33.9**	**+0.7**
GTA				PP	PP	00 15 25.9	-1.7
GTA				PPP	PPP	00 16 21.1	-0.6
GTA				AMB	AMB		
	comp=Z,439nm,1.1s,mb6.4						
GTA				AMB	AMB		
	comp=Z,10µm,8.8s						
GTA				LR	LR		
	comp=N,20µm,17.5s,MS6.4						
GTA				LR	LR		
	comp=E,26µm,17.9s,MS6.4						
GTA				LR	LR		
	comp=Z,22µm,19.5s,MS6.2						
DGAR	**Diego Garcia**	**49.38**	**265**	⇑*e*P	**P**	**00 13 33.7**	**-0.3**
DGAR				pmax	pmax		
	comp=Z,3µm,1.7s,mb7.0						
DGAR				MLR	MLR		
	comp=Z,10µm,20.0s,MS5.8						
DGAR	**Diego Garcia**	**49.38**	**265**	⇑*e*P	**P**	**00 13 33.7**	**-0.3**
	comp=Z,3µm,1.7s,mb7.0						
DGAR				LR	LR		
	comp=Z,10µm,20.0s,MS5.8						
VLK	**Valmikinagar**	**49.38**	**313**	*i* P	**P**	**00 13 32.0**	**-1.9**
VLK				*i*	pP	00 13 35.0	-3.2
KOLN	**Koldanda**	**49.84**	**314**	*e*P	**P**	**00 13 36.3**	**-1.1**
	comp=Z,2µm,1.1s,mb7.0						
NGP	**Nagpur**	**49.93**	**304**	⇑*i*P	**P**	**00 13 38.0**	**-0.2**
NGP				*e*P		00 13 38.1	
	comp=Z,2µm,1.6s						
NGP				*e*S	**S**	**00 20 46.1**	**-0.6**
NGP				*e*S	**S**	**00 20 47.7**	**+1.0**
WAKE	**Wake Island**	**50.32**	**59**	PFAKE		00 13 50.0	+8.9
WAKE				LR	LR		
	comp=Z,32µm,20.0s,MS6.3						
MDJ	**Mudanjiang**	**50.44**	**7**	P	**P**	**00 13 41.8**	**+0.1**
MDJ				PCP	PcP	00 14 55.9	-4.3
MDJ				PP	PP	00 15 38.3	-0.1
MDJ				AMB	AMB		
	comp=Z,304nm,1.1s,mb6.2						
MDJ				AMB	AMB		
	comp=Z,6µm,5.3s						
MDJ				LR	LR		
	comp=N,14µm,22.8s,MS6.2						
MDJ				LR	LR		
	comp=E,21µm,18.7s,MS6.2						
MDJ				LR	LR		
	comp=Z,20µm,24.9s						
MDJ	**Mudanjiang**	**50.44**	**7**	⇑*i*P	**P**	**00 13 41.5**	**-0.2**
	comp=Z,391nm,1.0s,mb6.4						
MNGI	**Mangalore**	**50.48**	**292**	*e*P	**P**	**00 13 42.6**	**+0.1**
MNGI				*e*S	**S**	**00 20 56.3**	**+1.9**
MNCY	**Minicoy**	**50.87**	**285**	⇓*i*P	**P**	**00 13 44.0**	**-1.4**
MNCY				*i*		00 17 05.0	
LATR	**Latur**	**50.88**	**299**	*e*P	**P**	**00 13 45.7**	**+0.3**
BHPL	**Bhopal**	**52.23**	**305**	*e*P	**P**	**00 13 54.8**	**-0.8**
BHPL				*e*		00 14 03.0	
	comp=Z,842nm,1.6s						
BHPL				*e*		00 14 03.0	
	comp=Z,844nm,1.6s						
BHPL				*i*		00 36 52.3	
	comp=Z,27µm,22.5s						
GOA	**Goa**	**52.23**	**294**	*e*S	**S**	**00 21 19.5**	**+1.0**
JHNI	**Jhansi**	**52.40**	**308**	⇑*i*P	**P**	**00 13 55.0**	**-1.9**
JHNI				*e*		00 14 42.0	
KAD	**Karad**	**52.55**	**297**	*e*P	**P**	**00 13 57.0**	**-1.1**
KAD				*e*		00 14 04.0	
	comp=Z,956nm,1.6s						
KAD				*e*		00 21 10.5	
KAD				*e*S	**S**	**00 21 22.6**	**-0.1**
KAD				*i*		00 33 51.7	
	comp=Z,10µm,21.4s						
LGTI	**Lohaghat**	**53.22**	**313**	*e*P	**P**	**00 14 03.0**	**+0.1**
POO	**Poona**	**53.29**	**298**	*e*P	**P**	**00 14 03.0**	**-0.5**
POO				*e*		00 14 09.7	
	comp=Z,593nm,1.2s						
POO				*i*		00 14 10.0	
	comp=Z,584nm,1.5s						
POO				*e*S	**S**	**00 21 32.3**	**-0.6**
POO				*e*		00 38 35.6	
	comp=Z,35µm,18.9s						
PTH	**Pithoragarh**	**53.29**	**313**	*e*	**P**	**00 14 07.0**	**+3.6**
PTH				*e*S	**S**	**00 21 34.2**	**+1.4**
YUK	**Yuzh-Kuril’sk**	**53.84**	**21**	*i* P	**P**	**00 14 07.0**	**-0.2**
YUK				*e*		00 15 12.0	
YUK				*e*		00 16 11.0	
YUK				*e*PPP	PPP	00 17 17.0	-1.8
YUK				*e*S	**S**	**00 21 42.0**	**+2.0**
YUK				*e*PS	PS	00 21 55.0	+2.9
YUK				*e*		00 23 58.0	
YUK				*e*SS	SS	00 25 15.0	-5.6
YUK				pmax	pmax		
	comp=E,3µm,4.0s						
YUK				pmax	pmax		
	comp=Z,8µm,4.0s						
YUK				pmax	pmax		
	comp=N,7µm,3.5s						
YUK				pmax	pmax		
	comp=Z,880nm,1.0s,mb6.6						
YUK				pmax	pmax		
	comp=N,3µm,3.0s						
YUK				pmax	pmax		
	comp=E,4µm,3.0s						
YUK				smax			
	comp=N,2µm,7.0s						
YUK				smax			
	comp=E,6µm,9.5s						
BOM	**Bombay**	**54.34**	**298**	*e*P	**P**	**00 14 10.7**	**-0.5**
	comp=E,4µm,2.5s,mb6.9						
BOM				*e*S	**S**	**00 21 47.4**	**+0.3**
HIA	**Hailar**	**54.68**	**358**	⇑*i*P	**P**	**00 14 12.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,639nm,1.0s						
HIA	**Hailar**	**54.68**	**358**	⇑*i*P	**P**	**00 14 12.9**	**-0.4**
	comp=Z,639nm,1.0s,mb6.6						
ULN	**Ulaanbaatar**	**54.87**	**348**	⇑*i*P	**P**	**00 14 14.9**	**+0.1**
ULN				*e*S	**S**	**00 21 56.4**	**+2.6**
ULN				pmax	pmax		
	comp=Z,678nm,1.0s,mb6.6						
ULN				MLR	MLR		
	comp=Z,24µm,19.0s,MS6.3						
ULN	**Ulaanbaatar**	**54.87**	**348**	⇑*i*P	**P**	**00 14 14.9**	**+0.2**
	comp=Z,678nm,1.0s,mb6.6						
ULN				*e*S	**S**	**00 21 56.4**	**+2.6**
ULN				LR	LR		
	comp=Z,24µm,19.0s,MS6.3						
SONM	**Songino Array**	**54.99**	**347**	P	**P**	**00 14 15.6**	**0.0**
	comp=Z,397nm,0.9s,mb6.4,baz=164,slow=5.7,SNR=1378						
SONM				S	**S**	**00 21 58.1**	**+2.8**
	comp=Z,1.6nm,0.9s,baz=256,slow=5.9,SNR=2.6						
SONM				PKPPKP		00 44 25.0	
	comp=Z,5.4nm,1.1s,baz=329,slow=1.2,SNR=8.6						
SONM				P4KPbc		00 51 37.0	
	comp=Z,0.4nm,0.7s,baz=166,slow=5.1,SNR=4.4						
NDI	**New Delhi**	**55.05**	**311**	*e*P	**P**	**00 14 13.0**	**-3.3**
NDI				*e*		00 21 54.5	
KLR	**Kul’dur**	**55.24**	**8**	⇓*i*P	**P**	**00 14 13.0**	**-4.5**
KLR				*e*S	**S**	**00 22 00.0**	**+1.3**
KLR				pmax	pmax		
	comp=N,440nm,3.2s						
KLR				pmax	pmax		
	comp=E,530nm,3.2s						
KLR				pmax	pmax		
	comp=Z,1µm,3.2s						
KLR				pmax	pmax		
	comp=N,6µm,11.0s						
KLR				pmax	pmax		
	comp=Z,12µm,11.0s						
DDI	**Dehra Dun**	**55.28**	**313**	*e*P	**P**	**00 14 16.0**	**-2.0**
DDI				*e*		00 21 14.9	
YSS	**Yuzh-Sakhalins**	**55.42**	**17**	α*i*P	**P**	**00 14 17.3**	**-1.5**
YSS				*e*		00 16 23.4	
YSS				*e*S	**S**	**00 22 00.0**	**-1.2**
YSS				pmax	pmax		
	comp=N,160nm,1.0s						
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,190nm,1.0s,mb6.1						
YSS				pmax	pmax		
	comp=N,3µm,7.0s						
YSS				pmax	pmax		

	comp=E,2µm,7.0s						
YSS				pmax	pmax		
	comp=Z,5µm,7.0s						
YSS				MLR	MLR		
	comp=N,13µm,18.0s,MS6.1						
YSS				MLR	MLR		
	comp=Z,13µm,18.0s,MS6.0						
YSS				MLR	MLR		
	comp=E,7µm,17.0s,MS6.1						
YSS	Yuzh-Sakhalins	55.42	17	*e*P	P	00 14 17.5	-1.3
	comp=E,206nm,1.0s,mb6.1						
YSS				LR	LR		
	comp=Z,16µm,19.0s,MS6.1						
JCZ	Jackson Bay	55.95	141	*e*P	P	00 14 22.8	+0.2
JCZ	Jackson Bay	55.95	141	P*	P	00 14 22.7	+0.1
JCZ				pP	pP	00 14 25.8	-1.1
JCZ	Jackson Bay	55.95	141	P*	P	00 14 22.7	+0.1
JCZ				pP	pP	00 14 25.8	-1.1
AJM	Ajmer	55.96	307	*e*P	P	00 14 22.3	-0.6
AJM				*e*		00 14 29.1	
	comp=Z,589nm,1.8s						
AJM				*e*S	S	00 22 08.6	-0.1
BHV	Bhavnagar	56.01	301	*e*P	P	00 14 22.0	-1.3
MLZ	Mavora Lakes	56.22	142	*e*P	P	00 14 23.9	-0.6
MLZ	Mavora Lakes	56.22	142	P*	P	00 14 23.9	-0.6
MLZ				pP	pP	00 14 27.8	-1.0
MLZ	Mavora Lakes	56.22	142	P*	P	00 14 23.9	-0.6
MLZ				pP	pP	00 14 27.8	-1.0
SMLA	Simla	56.36	313⇑	*i*P	P	00 14 39.6	+14
	comp=Z,23nm,0.5s,mb5.5						
SMLA				*i* S	S	00 22 28.8	+15
WHZ	Wether Hill Ro	56.36	143	*e*P	P	00 14 25.8	+0.2
WHZ	Wether Hill Ro	56.36	143	P*	P	00 14 25.7	+0.1
WHZ	Wether Hill Ro	56.36	143	P*	P	00 14 25.7	+0.1
WKZ	Wanaka	56.48	141	*e*P	P	00 14 25.9	-0.5
WKZ	Wanaka	56.48	141	P*	P	00 14 25.9	-0.5
WKZ	Wanaka	56.48	141	P*	P	00 14 25.9	-0.5
WCZ	Waipu Caves	56.52	130	*e*P	P	00 14 28.0	+1.2
WCZ	Waipu Caves	56.52	130	P*	P	00 14 28.0	+1.2
WCZ	Waipu Caves	56.52	130	P*	P	00 14 28.0	+1.2
SDNR	Sundarnagar	56.70	314	*e*P	P	00 14 28.6	+0.4
SDNR				*e*S	S	00 22 21.4	+3.0
WVZ	Waitaha Valley	56.75	139	P	P	00 14 28.0	-0.4
WVZ	Waitaha Valley	56.75	139	P*	P	00 14 28.1	-0.3
WVZ	Waitaha Valley	56.75	139	P*	P	00 14 28.1	-0.3
DSZ	Denniston Nort	56.88	137	*e*P	P	00 14 28.5	-0.8
DSZ	Denniston Nort	56.88	137	P*	P	00 14 28.5	-0.9
DSZ	Denniston Nort	56.88	137	P*	P	00 14 28.5	-0.9
QRZ	Quartz Range	57.00	136	*e*P	P	00 14 30.2	0.0
QRZ	Quartz Range	57.00	136	P*	P	00 14 30.2	0.0
QRZ				pP	pP	00 14 31.9	-2.6
QRZ	Quartz Range	57.00	136	P*	P	00 14 30.2	0.0
QRZ				pP	pP	00 14 31.9	-2.6
BHK	Bhakra	57.06	313	*e*P	P	00 14 29.7	-1.1
BHK				*e*S	S	00 22 24.1	+1.0
RPZ	Rata Peaks	57.25	139	P	P	00 14 31.3	-0.6
	comp=Z,201nm,0.8s,mb6.2,baz=290,slow=2.9,SNR=29						
RPZ				LR	LR	00 41 54.5	
	comp=Z,59µm,19.5s,MS6.7,baz=199,slow=39						
RPZ	Rata Peaks	57.25	139	*e*P	P	00 14 31.1	-0.8
RPZ	Rata Peaks	57.25	139	P*	P	00 14 31.1	-0.8
RPZ				pP	pP	00 14 33.8	-2.4
RPZ	Rata Peaks	57.25	139	P*	P	00 14 31.1	-0.8
RPZ				pP	pP	00 14 33.8	-2.4
ODZ	Otahua Downs	57.60	141	P	P	00 14 34.5	+0.2
ODZ	Otahua Downs	57.60	141	P*	P	00 14 34.5	+0.1
ODZ	Otahua Downs	57.60	141	P*	P	00 14 34.5	+0.1
THZ	Tophouse	57.64	137	*e*P	P	00 14 33.9	-0.8
THZ	Tophouse	57.64	137	P*	P	00 14 33.9	-0.7
THZ				pP	pP	00 14 36.7	-2.2
THZ	Tophouse	57.64	137	P*	P	00 14 33.9	-0.7
THZ				pP	pP	00 14 36.7	-2.2
NNZ	Nelson	57.74	136	*e*P	P	00 14 35.3	-0.1
DLH	Dalhousie	57.98	314	*e*	P	00 14 41.0	+3.8
ZAK	Zakamensk	58.09	346⇓	*i*P	P	00 14 37.4	-0.3
ZAK				pmax	pmax		
	comp=Z,184nm,1.1s,mb6.0						
THN	Thein Dam	58.10	314	*e*P	P	00 14 36.8	-1.2
WMQ	Urumqi	58.18	331⇑	*i*P	P	00 14 38.5	+0.1
WMQ				PP	PP	00 16 49.0	-0.1
WMQ				AMB	AMB		
	comp=Z,466nm,1.0s,mb6.5						
WMQ				AMB	AMB		
	comp=Z,3µm,8.0s						
WMQ				LR	LR		
	comp=N,28µm,22.0s,MS6.4						
WMQ				LR	LR		
	comp=E,22µm,22.0s,MS6.4						
WMQ				LR	LR		
	comp=Z,24µm,22.0s,MS6.3						
MQZ	McQueen's Vall	58.28	139	P	P	00 14 40.6	+1.5
MQZ	McQueen's Vall	58.28	139	P*	P	00 14 40.6	+1.5
MQZ	McQueen's Vall	58.28	139	P*	P	00 14 40.6	+1.5
KHZ	Kahutara	58.34	137	*e*P	P	00 14 38.5	-1.0
KHZ	Kahutara	58.34	137	P*	P	00 14 38.5	-1.0
KHZ	Kahutara	58.34	137	P*	P	00 14 38.5	-1.0
BHJ	Bhuj	58.71	301	*e*P	P	00 14 40.8	-1.6
BHJ				*e*		00 14 49.2	
	comp=Z,897nm,1.3s						
BHJ				*e*S	S	00 22 44.9	+0.1
MRZ	Mangatainoka R	59.08	135	*e*P	P	00 14 43.5	-1.2
MRZ	Mangatainoka R	59.08	135	P*	P	00 14 43.3	-1.4
MRZ	Mangatainoka R	59.08	135	P*	P	00 14 43.3	-1.4
TLY	Talaya	59.22	347	P	P	00 14 45.7	+0.2
	comp=Z,2µm,1.1s,mb7.1						
TLY	Talaya	59.22	347*c*	*i*P	P	00 14 45.4	-0.1
TLY				*e*		00 15 04.2	
TLY				*e*		00 15 26.6	
TLY				*e*S	S	00 22 44.7	-6.4
TLY				*e*PS	PS	00 23 01.1	-6.1
TLY				pmax	pmax		
	comp=Z,496nm,1.1s,mb6.5						
TLY				MLR	MLR		
	comp=Z,11µm,17.0s,MS6.1						
TLY	Talaya	59.22	347⇑	*i*P	P	00 14 45.6	+0.1
	comp=Z,531nm,1.1s,mb6.5						
TLY				LR	LR		
	comp=Z,4µm,20.0s,MS5.5						
URZ	Urewera	59.37	131	LR	LR	00 39 48.8	
	comp=Z,38µm,20.6s,MS6.5,baz=294,slow=35						
BFZ	Birch Farm	59.55	134	*e*P	P	00 14 47.9	-0.1
BFZ	Birch Farm	59.55	134	P*	P	00 14 47.9	-0.1
BFZ	Birch Farm	59.55	134	P*	P	00 14 47.9	-0.1
IRK	Irkutsk	59.60	347⇑	*i*P	P	00 14 47.4	-0.8
IRK				*e*S	S	00 22 59.4	+3.3
IRK				pmax	pmax		
	comp=Z,930nm,3.4s						
MWZ	Matawai	59.70	131	*e*P	P	00 14 48.3	-0.8
MWZ	Matawai	59.70	131	P*	P	00 14 48.4	-0.7
MWZ	Matawai	59.70	131	P*	P	00 14 48.4	-0.7
MOY	Mondy	59.85	345	*e*P	P	00 14 50.1	+0.2
MOY				pmax	pmax		
	comp=Z,2µm,3.4s						
PUZ	Puketiti	60.17	131	*e*P	P	00 14 51.4	-0.9
PUZ	Puketiti	60.17	131	P*	P	00 14 51.4	-0.9
PUZ	Puketiti	60.17	131	P*	P	00 14 51.4	-0.9
CASY	Casey	61.11	185	*e*P	P	00 14 57.6	-0.7
CASY				*i* S	S	00 23 14.9	-0.3
KSH	Kashi	61.85	321	*e*P	P	00 15 04.4	+0.7
KSH				*e*AP	pP	00 15 11.1	+3.1
KSH				*e*XP	sP	00 15 13.8	+4.2
KSH				*e*PCP	PcP	00 15 45.0	+0.6
KSH				*e*PP	PP	00 17 23.5	+1.3
KSH				AMB	AMB		
	comp=Z,6µm,3.0s						
KSH				AMB	AMB		
	comp=Z,4µm,4.2s						
KSH				LR	LR		
	comp=N,15µm,15.0s,MS6.4						
KSH				LR	LR		
	comp=E,12µm,13.9s,MS6.4						
DRV	Dumont d'Urvil	62.21	172	P	P	00 15 07.0	+1.3
DRV				S	S	00 23 33.0	+3.9
DRV				L		00 30 00.0	
DRV				R		00 35 00.0	
CLNS	Chul'man	62.27	2	*e*P	P	00 15 05.9	-0.3
CLNS				*e**PP	pP	00 15 13.2	+2.6
CLNS				*e*		00 15 44.4	
CLNS				*e*		00 17 20.3	
CLNS				*e*S	S	00 23 27.8	-2.2
CLNS				*e*		00 24 46.7	
CLNS				pmax	pmax		
	comp=Z,220nm,0.8s,mb6.3						
CLNS				pmax	pmax		
	comp=N,184nm,1.2s						
CLNS				pmax	pmax		
	comp=E,69nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.4						
CLNS				pmax	pmax		
	comp=N,69nm,0.9s						
CLNS				pmax	pmax		
	comp=E,77nm,1.1s						
CLNS				smax			
	comp=N,2µm,12.1s						
CLNS				smax			
	comp=Z,1µm,11.7s						
CLNS				smax			
	comp=E,872nm,10.3s						
MKAR	Makanchi Array	62.96	330	*i* P	P	00 15 10.6	-0.3
MKAR				pmax	pmax		
	comp=Z,392nm,0.8s						
SKR	Severo-Kuril's	63.24	23	*e*P	P	00 15 09.9	-2.8
SKR				*e*		00 15 21.0	
SKR				*e*		00 15 43.0	
SKR				*e*S	S	00 23 42.0	-0.3
SKR				*e*PS	PS	00 24 11.0	+8.5
SKR				*e*SS	SS	00 27 43.0	-7.7
SKR				pmax	pmax		
	comp=E,5µm,4.0s						
SKR				pmax	pmax		
	comp=Z,8µm,4.0s						
SKR				pmax	pmax		
	comp=N,4µm,5.0s						
SKR				pmax	pmax		
	comp=E,400nm,1.5s						
SKR				pmax	pmax		
	comp=Z,720nm,1.5s,mb6.6						
SKR				pmax	pmax		
	comp=N,160nm,1.0s						
SKR				smax			
	comp=E,6µm,10.0s						
SKR				smax			
	comp=N,6µm,14.0s						
SKR				MLR	MLR		
	comp=N,5µm,16.0s,MS5.8						
SKR				MLR	MLR		
	comp=E,2µm,16.0s,MS5.8						
SKR				MLR	MLR		
	comp=Z,11µm,16.0s,MS6.1						
ULHL	Ulahol	63.30	323	P	P	00 15 13.5	+0.3
	SNR=19						
AAA	Alma-Ata	63.51	325*c*	*i*P	P	00 15 15.0	+0.4
AAA				*i* S	S	00 23 45.0	-0.8
AAA				pmax	pmax		
	comp=Z,10µm,9.0s						
AAA				smax			
	comp=E,10µm,12.0s						
AAA				MLR	MLR		
	comp=Z,10µm,22.0s,MS6.0						
AAA	Alma-Ata	63.51	325⇑	*i*P	P	00 15 14.0	-0.6
BOD	Bodaibo	63.55	355⇓	*i*P	P	00 15 14.3	-0.4
BOD				pmax	pmax		
	comp=Z,649nm,1.3s,mb6.5						
KZA	Kyzart	63.79	323	P	P	00 15 17.4	+0.9
	SNR=139						
TKM2	Tokmak 2	64.08	324	P	P	00 15 18.6	+0.2
	SNR=211						
MIR	Mirnyy	64.10	193α	*e*P	P	00 15 18.0	-0.1
MIR				*e*		00 17 38.0	
MIR				*e*PPP	PPP	00 19 19.0	+5.8
MIR				*e*S	S	00 23 54.0	+1.2
MIR				pmax	pmax		
	comp=Z,400nm,1.2s,mb6.3						
MIR				pmax	pmax		
	comp=Z,700nm,2.0s,mb6.3						
MIR				MLR	MLR		
	comp=N,7µm,17.0s,MS6.0						
MIR				MLR	MLR		
	comp=E,5µm,17.0s,MS6.0						
MIR				MLR	MLR		
	comp=Z,16µm,17.0s,MS6.3						
KBK	Karagaybulak	64.31	323	P	P	00 15 20.4	+0.4
	SNR=258						
UCH	Uchtor	64.32	322	P	P	00 15 20.7	+0.7
	SNR=100						
AAK	Ala-Archa	64.57	323	P	P	00 15 22.1	+0.5
	SNR=259						
AAK	Ala-Archa	64.57	323	*i* P	P	00 15 21.2	-0.4
AAK				pmax	pmax		
	comp=Z,251nm,1.1s,mb6.2						
AAK				MLR	MLR		
	comp=Z,25µm,26.0s,MS6.3						
AAK	Ala-Archa	64.57	323⇑	*i*P	P	00 15 20.9	-0.7
	comp=Z,244nm,1.0s,mb6.2						
AAK				LR	LR		
	comp=Z,4µm,22.0s,MS5.6						
FRU	Bishkek	64.61	323	*i* P	P	00 15 21.5	-0.4
FRU				*i*		00 17 41.0	
FRU				*i*		00 24 00.0	
FRU				pmax	pmax		
	comp=Z,870nm,2.5s,mb6.3						
FRU				pmax	pmax		
	comp=Z,6µm,4.4s						
FRU				MLR	MLR		
	comp=N,24µm,22.0s						
FRU				MLR	MLR		
	comp=Z,20µm,22.0s,MS6.2						
CHMS	Chumysh	64.63	323	P	P	00 15 21.8	-0.2
	SNR=103						
AML	Almayashu	64.77	322	P	P	00 15 24.1	+1.2
	SNR=8.3						
USP	Ospenovka	64.93	323	P	P	00 15 23.7	-0.2
	SNR=317						
EKS2	Erkin-Say	65.02	323	P	P	00 15 24.9	+0.4
	SNR=273						
AFI	Afiamalu	65.48	103	PFAKE		00 15 40.0	+12
AFI				LR	LR		
	comp=Z,11µm,22.0s,MS6.0						
PET	Petropavlovsk	66.05	23⇑	*i*P	P	00 15 31.0	+0.1
PET				*e*		00 15 59.8	
PET				*e*		00 18 01.6	
PET				*e*S	S	00 24 19.4	+2.4
PET				*e*PPS	PPS	00 24 48.7	-1.9
PET				*e*		00 25 20.3	
PET				pmax	pmax		
	comp=Z,190nm,1.0s,mb6.1						
PET				pmax	pmax		
	comp=Z,8µm,5.5s						
PET				pmax	pmax		
	comp=Z,5µm,11.2s						
PET				pmax	pmax		
	comp=Z,69nm,3.9s						
PET				smax			
	comp=E,5µm,9.7s						
PET				smax			
	comp=E,6µm,9.4s						
PET				MLR	MLR		
	comp=Z,13µm,19.0s,MS6.2						
PET	Petropavlovsk	66.05	23	*e*P	P	00 15 30.2	-0.7
	comp=Z,209nm,1.1s,mb6.1						
PET				LR	LR		
	comp=Z,12µm,19.0s,MS6.1						
ZAL	Zalesovo	67.06	337	P	P	00 15 36.8	-0.6
	comp=Z,284nm,0.9s,mb6.3,baz=344,slow=5.8,SNR=775						
ZAL				S	S	00 24 29.5	+0.3
	comp=Z,1.2nm,1.0s,baz=112,slow=19,SNR=3.0						
ZAL				PKPPKP		00 44 04.3	
	comp=Z,3.5nm,0.9s,baz=142,slow=2.9,SNR=15						
KURK	Kurchatov	67.42	332	P	P	00 15 39.2	-0.5
KURK				pmax	pmax		
	comp=Z,860nm,1.0s,mb6.7						
KURK	Kurchatov	67.42	332⇑	*i*P	P	00 15 39.3	-0.4
	comp=Z,860nm,1.0s,mb6.7						
KURK				*e*S	S	00 24 36.9	+3.4
KURK				LR	LR		
	comp=Z,6µm,21.0s,MS5.8						
YAK	Yakutsk	67.69	4*c*	*i*P	P	00 15 40.7	-0.5
YAK				*e**PP	pP	00 15 50.9	+5.4
YAK				*e*		00 16 07.8	
YAK				*e*		00 18 09.5	
YAK				*e*PPP	PPP	00 19 46.9	-2.5
YAK				*e*S	S	00 24 36.3	-0.2
YAK				*e*		00 25 36.2	
YAK				*e*SS	SS	00 28 56.7	-2.5
YAK				pmax	pmax		
	comp=E,54nm,0.9s						
YAK				pmax	pmax		
	comp=Z,574nm,0.9s,mb6.6						
YAK				pmax	pmax		
	comp=N,204nm,1.0s						
YAK				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.4						
YAK				pmax	pmax		
	comp=N,23nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,0.9s						
YAK				smax			
	comp=N,6.0nm,1.2s						
YAK				smax			
	comp=E,9.0nm,1.3s						
YAK				MLR	MLR		
	comp=N,6µm,18.0s,MS5.9						
YAK				MLR	MLR		
	comp=E,3µm,17.0s,MS5.9						
YAK				MLR	MLR		
	comp=Z,6µm,17.0s,MS5.8						
YAK	Yakutsk	67.69	4	*e*P	P	00 15 40.0	-1.2
	comp=Z,928nm,0.9s,mb6.8						
YAK				LR	LR		
	comp=Z,11µm,19.0s,MS6.1						
WBK	Wadi Bani Khal	67.78	297	P	P	00 15 42.6	+0.1
	SNR=36						
NVS	Novosibirsk	68.35	337⇑	*i*P	P	00 15 43.6	-1.8
NVS				*e*PPP	PPP	00 20 01.9	+6.1
NVS				*e*S	S	00 24 40.1	-4.5
NVS				*e*		00 25 25.4	
NVS				pmax	pmax		
	comp=Z,480nm,1.3s,mb6.4						
NVS				pmax	pmax		
	comp=N,341nm,1.5s						
NVS				pmax	pmax		
	comp=E,290nm,1.4s						
NVS				smax			
	comp=N,195nm,2.1s						
NVS				smax			
	comp=E,300nm,2.0s						
JMDO	Jabal Madar	68.49	297	P	P	00 15 46.8	-0.1
	SNR=58						
SMDO	Samad	68.73	297	⇑P	P	00 15 48.4	+0.1
BIDO	Bidbid	68.79	298	P	P	00 15 48.7	+0.1
	SNR=137						
MA2	Magadan	68.83	15*c*	*i*P	P	00 15 48.5	+0.2
MA2				pmax	pmax		
	comp=Z,306nm,1.0s,mb6.2						
MA2				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.9						
MA2	Magadan	68.83	15⇑	*i*P	P	00 15 48.6	+0.3
	comp=Z,363nm,1.1s,mb6.2						
MA2				LR	LR		
	comp=Z,12µm,21.0s,MS6.1						
BSY	Bisya	69.39	297	P	P	00 15 52.5	0.0
	SNR=57						
HOQ	Hoqain	69.52	298	P	P	00 15 53.4	+0.2
	SNR=52						
ARQ	Araqi	70.15	297	P	P	00 15 56.6	-0.4
	SNR=55						
RBK	Rabkut	70.86	291	P	P	00 16 01.0	-0.4
	SNR=37						
ASHO	Ashiyiah	70.92	298	P	P	00 16 01.3	-0.4
	SNR=72						
BANOM	Banah	71.05	300	P	P	00 16 03.1	+0.6
	SNR=21						
WHFO	Wadi Hawf	71.36	291	⇑P	P	00 16 03.7	-0.7
	SNR=160						
ABTO	Aybut	71.68	290	⇑P	P	00 16 05.8	-0.6
SEY	Seymchan	72.11	14	*e*P	P	00 16 08.5	+0.3
SEY						00 16 22.5	
SEY				*e*PPP	PPP	00 20 33.8	+1.5
SEY				*e*S	S	00 25 28.8	+0.3
SEY						00 26 06.9	
SEY				*e*SSS	SSS	00 33 16.6	-0.2
SEY				pmax	pmax		
	comp=Z,400nm,0.9s,mb6.3						
SEY				pmax	pmax		
	comp=E,110nm,1.0s						
SEY				smax			
	comp=N,4µm,7.9s						
SEY				smax			
	comp=E,10µm,9.0s						
FX1	Attu Island--F	72.41	30	*e*P	P	00 16 10.9	+0.8
SMY	Shemya	72.78	30	*e*P	P	00 16 12.9	+0.6
SMY				pmax	pmax		
	comp=Z,644nm,1.0s,mb6.5						
SMY				MLR	MLR		
	comp=Z,20µm,22.0s,MS6.4						
SMY	Shemya	72.78	30	*e*P	P	00 16 12.9	+0.6
	comp=Z,644nm,1.0s,mb6.5						
SMY				LR	LR		
	comp=Z,20µm,22.0s,MS6.4						
BVA0	Borovoye Array	72.85	330	*i* P	P	00 16 12.4	-0.3
BVA0				pmax	pmax		
	comp=Z,169nm,1.6s,mb5.7						
BVAR	Borovoye Array	72.85	330	P	P	00 16 12.5	-0.2
	comp=Z,127nm,0.9s,mb5.9,baz=143,slow=7.4,SNR=574						
BVAR				S	S	00 25 35.8	-1.1
	comp=Z,1.0nm,0.8s,baz=117,slow=9.7,SNR=2.0						
BVAR				PKPPKP		00 43 58.2	
	comp=Z,1.7nm,1.0s,baz=243,slow=3.3,SNR=5.1						
CHKZ	Chkalovo	73.11	331	P	P	00 16 14.2	0.0
CHKZ				pmax	pmax		
	comp=Z,834nm,1.5s,mb6.5						
MAW	Mawson	73.47	200⇑	*i*P	P	00 16 16.8	+0.8
	comp=Z,195nm,1.5s,mb5.8						
MAW				*e*S	S	00 25 42.7	-1.0
MAW	Mawson	73.47	200⇑	*i*P	P	00 16 16.8	+0.8
MAW				*e*S	S	00 25 42.7	-1.0
MAW				pmax	pmax		
	comp=Z,195nm,1.5s						
MAW	Mawson	73.47	200	P	P	00 16 16.9	+0.9
	comp=Z,184nm,1.2s,mb5.9,baz=52,slow=8.4,SNR=25						
MAW				S	S	00 25 43.0	-0.7
	comp=Z,11nm,1.0s,baz=294,slow=18,SNR=2.3						
MAW				LR	LR	00 43 30.7	
	comp=Z,11µm,21.4s,MS6.1,baz=57,slow=32						
VNDA	Vanda	74.86	172⇑	*i*P	P	00 16 24.4	+0.5
VNDA				pmax	pmax		
	comp=Z,70nm,0.9s						
VNDA				MLR	MLR		
	comp=Z,20µm,19.0s						
VNDA	Vanda	74.86	172	P	P	00 16 24.6	+0.6
	comp=Z,27nm,0.8s,mb5.2,baz=296,slow=7.5,SNR=30						
VNDA				LR	LR	00 49 12.3	
	comp=Z,21µm,18.7s,MS6.5,baz=330,slow=36						
VNDA	Vanda	74.86	172⇑	*i*P	P	00 16 24.4	+0.5
	comp=Z,70nm,0.9s,mb5.6						
VNDA				LR	LR		
	comp=Z,20µm,19.0s,MS6.4						
MUKL	Al Mukalla	75.16	286	*e*P	P	00 16 26.1	-0.7
RAR	Rarotonga	76.91	110	LR	LR	00 47 54.2	
	comp=Z,7µm,21.7s,MS5.9,baz=267,slow=34						
RAR	Rarotonga	76.91	110	PFAKE		00 16 50.0	+13
RAR				LR	LR		
	comp=Z,19µm,20.0s,MS6.4						
KIWB	Kanaga Island	76.94	34	*e*P	P	00 16 36.9	+0.8
TIXI	Tiksi	77.22	2⇑	*i*P	P	00 16 36.3	-1.1
TIXI				*e*		00 19 26.6	
TIXI				*e*S	S	00 26 21.1	-4.0
TIXI				pmax	pmax		
	comp=Z,318nm,1.2s,mb6.1						
TIXI				pmax	pmax		
	comp=N,96nm,1.4s						
TIXI				pmax	pmax		
	comp=E,39nm,1.4s						
TIXI				pmax	pmax		
	comp=Z,4µm,3.8s						
TIXI	Tiksi	77.22	2⇑	*i*P	P	00 16 36.2	-1.2
TIXI				LR	LR		
	comp=Z,19µm,20.0s,MS6.4						
GSTR	Great Sitkin T	77.65	34	*e*P	P	00 16 41.0	+0.9
DHBB	Dhamar BB	79.61	286	*e*P	P	00 16 54.2	+2.6
SVE	Sverdlovsk	79.62	331⇑	*i*P	P	00 16 51.5	+0.7
SVE				pmax	pmax		
	comp=Z,1µm,2.1s,mb6.5						
BILL	Bilibino	79.70	15*c*	*i*P	P	00 16 50.8	-0.1
BILL				*e*		00 16 57.4	
BILL				*e*		00 20 01.1	
BILL				*i* S	S	00 26 57.9	+6.4
BILL				pmax	pmax		
	comp=Z,193nm,2.5s,mb5.6						
BILL				MLR	MLR		
	comp=Z,15µm,23.0s,MS6.3						
BILL	Bilibino	79.70	15	*e*P	P	00 16 50.5	-0.4
	comp=Z,104nm,1.1s,mb5.7						
BILL				LR	LR		

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       comp=Z,13µm,20.0s,MS6.3
RAYN  Ar Rayn           80.06 295   P       P       00 16 53.3  -0.5
       comp=Z,1µm,1.7s,mb6.5
NIKO  Nikolski          82.05  35   P       P       00 17 02.9  -0.7
SYO   Syowa Base        82.13 201  ⇓P       P       00 17 04.7  +1.0
SYO   Syowa Base        82.13 201  ⇑PcP     PcP     00 17 14.1  +4.3
HON   Honolulu          82.63  68  eP       P       00 17 08.3  +1.0
KIP   Kipapa            82.63  68   P       P       00 17 09.9  +2.6
KIP                                 pmax    pmax
       comp=Z,300nm,1.1s,mb6.2
KIP   Kipapa            82.63  68  eP       P       00 17 08.0  +0.7
       comp=Z,304nm,1.1s,mb6.2
KIP                                 LR      LR
       comp=Z,14µm,21.0s,MS6.3
SOKR  Solikamsk         82.65 332c iP       P       00 17 06.7  +0.1
SOKR                                S       S       00 27 21.5  -0.7
SOKR                                pmax    pmax
       comp=Z,350nm,1.3s,mb6.2
MAK   Makhachkala       82.66 314d iP       P       00 17 08.0  +1.0
MAK                                i                00 17 20.0
MAK                                e                00 20 21.0
MAK                                ePPP     PPP     00 22 10.0  -1.5
MAK                                e                00 27 20.5
MAK                                i S      S       00 27 26.0  +3.4
MAK                                 pmax    pmax
       comp=N,2µm,7.0s
MAK                                 pmax    pmax
       comp=E,2µm,7.0s
MAK                                 pmax    pmax
       comp=Z,16µm,7.0s
MAK                                 smax
       comp=N,16µm,8.0s
MAK                                 smax
       comp=E,20µm,8.0s
MAK                                 smax
       comp=Z,8µm,8.0s
BHD   Baghdad           82.88 304  i P      P       00 17 07.0  -1.4
BHD                                eS       S       00 27 23.0  -2.1
UNV   Unalaska Valle    83.66  34  eP       P       00 17 12.2  +0.3
       comp=Z,2µm,1.7s,mb7.0
UNV                                 LR      LR
       comp=Z,30µm,21.0s,MS6.7
GNI   Garni             84.02 311   P       P       00 17 15.3  +1.2
GNI   Garni             84.02 311c iP       P       00 17 15.2  +1.1
GNI                                 pmax    pmax
       comp=Z,248nm,2.5s
GNI                                 MLR     MLR
       comp=Z,9µm,24.0s
GNI   Garni             84.02 311   P       P       00 17 16.1  +2.0
       comp=Z,22nm,0.9s,mb5.3,baz=187,slow=4.0,SNR=11
GNI                                 S       S       00 27 38.6  +2.2
       comp=Z,0.6nm,0.3s,baz=220,slow=7.9,SNR=2.0
GNI   Garni             84.02 311  eP       P       00 17 13.3  -0.8
       comp=Z,167nm,1.1s,mb6.1
GNI                                 LR      LR
       comp=Z,9µm,20.0s,MS6.2
HKL   Haleakala         84.15  69  eP       P       00 17 16.8  +1.6
HKR   Hakkari           84.25 309   P       P       00 17 16.3  +1.0
TI2   Plekhanov         84.36 313α iP       P       00 17 17.8  +2.1
TI2                                i S      S       00 27 45.6  +5.9
TI2                                 pmax    pmax
       comp=Z,170nm,0.8s,mb6.2
TI2                                 smax
       comp=N,6µm,3.0s
TI2                                 smax
       comp=E,11µm,3.0s
KIH   Kanekii           84.44  70⇑ eP       P       00 17 19.7  +3.0
DUS   Dusheti           84.47 313   P       P       00 17 17.1  +0.8
MSL   Mosul             84.51 307  eP       P       00 17 16.5  -0.2
MSL                                i pP     pP      00 17 22.5  +1.4
MSL   Mosul             84.51 307  eSKS     SKS     00 27 40.0  -2.2
MSL                                eS       S       00 28 06.5   +25
MSL                                esS              00 28 37.5
MSL                                ePS      PS      00 29 07.0   +29
MSL                                ePPS     PPS     00 29 34.0   +32
SWH   Southwest Rift    84.58  70⇑ eP       P       00 17 19.7  +2.3
POHA  Pohakuloa         84.69  70   PFAKE           00 17 30.0   +12
POHA                                LR      LR
       comp=Z,137µm,21.0s,MS7.3
VANT  Van               84.69 309  eP       P       00 17 20.2  +2.7
TVAN  Van               84.70 309  i P      P       00 17 19.2  +1.6
VANB  Van               84.72 309   P       P       00 17 18.9  +1.2
PLL   Puu Ulaula        84.73  70⇑ eP       P       00 17 20.7  +2.6
MLH   Mauna Loa         84.79  70⇑ eP       P       00 17 20.8  +2.4
KMBO  Kilima Mbogo      84.80 269  i P      P       00 17 20.4  +1.8
KMBO                                pmax    pmax
       comp=Z,19nm,0.7s
KMBO  Kilima Mbogo      84.80 269   P       P       00 17 20.4  +1.7
       comp=Z,19nm,0.7s,mb5.3,baz=65,slow=6.6,SNR=37
KMBO                                S       S       00 27 40.6  -4.2
       comp=Z,0.3nm,0.4s,baz=52,slow=23,SNR=3.0
KMBO                                LR      LR      00 50 31.4
       comp=Z,21µm,21.3s,MS6.5,baz=99,slow=32
KMBO  Kilima Mbogo      84.80 269⇑ iP       P       00 17 20.2  +1.6
       comp=Z,551nm,1.8s,mb6.4
KMBO                               ePP      PP      00 20 34.3  -2.4
KMBO                               eS       S       00 27 49.9  +5.2
KMBO                                LR      LR
       comp=Z,21µm,21.0s,MS6.5
CPK   Cone Peak         84.83  70⇑ eP       P       00 17 20.7  +2.1
KKU   Keanakolu         84.89  70⇑ eP       P       00 17 21.3  +2.4
ONI   Oni               85.48 313   P       P       00 17 22.8  +1.5
ONI                                 S       S       00 27 54.2  +3.5
BTMT  Batman            86.12 309   P       P       00 17 25.6  +1.0
BEST  Besiri            86.23 308  i P      P       00 17 26.3  +1.1
VRT   Varto             86.25 310   P       P       00 17 27.2  +2.0
GOF   Gofitskoye        86.28 316⇓ iP       P       00 17 26.0  +0.8
GOF                                i                00 17 43.5
GOF                                i                00 20 53.0
GOF                                e                00 22 40.0
GOF                                i S      S       00 28 02.0  +3.7
GOF                                i                00 29 03.0
GOF                                 pmax    pmax
       comp=Z,180nm,1.4s,mb6.1
GOF                                 pmax    pmax
       comp=Z,300nm,1.2s,mb6.4
GOF                                 pmax    pmax
       comp=Z,9µm,4.0s
GOF                                 pmax    pmax
       comp=Z,6µm,12.0s
GOF                                 smax
       comp=N,11µm,6.0s
KIV   Kislovodsk        86.30 315   P       P       00 17 26.8  +1.4
       comp=N,523nm,1.9s,mb6.4,SNR=18
KIV   Kislovodsk        86.30 315c iP       P       00 17 25.7  +0.3
KIV                                e        pP      00 17 30.7  +0.9
KIV                                e                00 20 52.9
KIV                                i S      S       00 28 01.9  +3.3
KIV                                 pmax    pmax
       comp=Z,241nm,2.5s,mb6.0
KIV                                 MLR     MLR
       comp=Z,9µm,22.0s,MS6.1
KIV   Kislovodsk        86.30 315  eP       P       00 17 25.2  -0.2
       comp=Z,156nm,1.1s,mb6.2
KIV                                 LR      LR
       comp=Z,2µm,21.0s,MS5.5
TBI   Tubuai            86.35 113  eP       P       00 17 29.1  +3.0
       comp=Z,448nm,1.4s,mb6.5
TBI                                ePP      PP      00 20 50.1  +0.9
TBI                                eS       S       00 28 01.5  +2.0
TBI                                eSS      SS      00 33 45.4  +2.8
TBI                                eLQ              00 41 23.9
TBI                                eLR      LR      00 45 13.2
       comp=Z,47µm,26.2s
ERZM  Erzurum           86.51 310  i P      P       00 17 28.4  +1.9
EZM   Erzurum           86.52 310  eP       P       00 17 28.4  +1.9
BCA   Borcka            86.60 312  eP       P       00 17 28.5  +1.6
PAE   Paea              86.69 107  eP       P       00 17 31.1  +3.2
       comp=Z,300nm,1.4s,mb6.3
PPT   Papeete           86.70 107  eP       P       00 17 31.5  +3.6
       comp=Z,162nm,1.4s,mb6.1
PPT   Papeete           86.70 107  ePP      PP      00 20 51.0  -1.5
PPT                                eS       S       00 28 03.6  +0.6
PPT                                eSS      SS      00 33 46.3  -1.5
PPT                                eLR      LR      00 45 41.5
       comp=Z,76µm,32.2s
PPT   Papeete           86.70 107   P       P       00 17 27.5  -0.5
       comp=Z,41nm,0.6s,mb5.9,baz=191,slow=16,SNR=2.3
TNA   Tin City          86.91  23  eP       P       00 17 28.2  +0.4
       comp=Z,28nm,1.1s,mb5.4
TIAR  Tiarei            86.92 107  eP       P       00 17 32.5  +3.5
       comp=Z,516nm,1.4s,mb6.6
TVO   Taravao           87.00 107  eP       P       00 17 32.9  +3.6
       comp=Z,514nm,1.3s,mb6.6
BINT  Bingol            87.01 309  eP       P       00 17 29.8  +0.8
DIY   Diyarbakir        87.05 308  eP       P       00 17 30.2  +1.1
EZC   Erzincan          87.66 310  eP       P       00 17 34.9  +2.8
PTK   Pertek            87.85 309   P       P       00 17 33.8  +0.7
GUMT  Gumushane         88.03 311  eP       P       00 17 35.1  +1.3
PECR  Pechory           88.04 327  i P      P       00 17 32.6  -0.8
PECR                               e                00 21 00.0
PECR                               eS       S       00 28 12.4  -2.3
PECR                                pmax    pmax
       comp=Z,4µm,2.8s,mb7.2
PECR                                pmax    pmax
       comp=Z,6µm,8.0s
PECR                                smax
       comp=E,22µm,13.0s
PECR                                smax
       comp=N,13µm,6.0s
URFA  Urfa              88.08 308   P       P       00 17 34.9  +0.8
ELZG  Elazig            88.11 309  i P      P       00 17 35.1  +0.9
MEH   Mehetia           88.11 108  eP       P       00 17 37.9  +3.2
       comp=N,334nm,1.2s,mb6.4
SOC   Sochi             88.35 314  i P      P       00 17 33.7  -1.6
SOC                                eS       S       00 28 00.8   -17
SOC                                e                00 28 16.2
SOC                                ePS      PS      00 29 20.5  -4.7
SOC                                eSS      SS      00 34 15.0  +3.8
SOC                                 pmax    pmax
       comp=Z,82nm,0.7s,mb6.1
SOC                                 pmax    pmax
       comp=N,12nm,0.8s
SOC                                 pmax    pmax
       comp=E,26nm,0.6s
SOC   Sochi             88.35 314⇑ iP       P       00 17 34.7  -0.6
MALT  Malatya           88.52 309   P       P       00 17 36.5  +0.3
MALT  Malatya           88.52 309   P       P       00 17 36.3  +0.1
MALT                                pmax    pmax
       comp=Z,85nm,0.9s,mb6.1
MALT  Malatya           88.52 309  eP       P       00 17 36.3  +0.1
       comp=Z,84nm,0.8s,mb6.1
MYA   Malataya          88.52 309  eP       P       00 17 37.3  +1.1
PMOR  Pomariorio Ree    88.54 105  eP       P       00 17 40.2  +3.4
       comp=Z,284nm,1.4s,mb6.4
ASF   Jabal al Asfar    88.93 302   P       P       00 17 39.6  +1.3
       comp=Z,26nm,1.2s,mb5.4,baz=340,slow=1.6,SNR=21
ASF                                 S       S       00 28 15.5  -8.1
       comp=Z,2.1nm,1.1s,baz=149,slow=12,SNR=2.1
ASF                                 PKKPbc          00 35 19.7
       comp=Z,9.9nm,1.1s,baz=187,slow=1.7,SNR=8.8
GZT   Gaziantep         89.06 307  i P      P       00 17 39.3  +0.5
GAZ   Gaziantep         89.31 307  eP       P       00 17 40.5  +0.5
KAHT  Ahir Dag          89.64 308  i P      P       00 17 42.2  +0.7
HWQ   Hawqa             89.98 304  eP       P       00 17 44.5  +1.2
VOR   Voronezh          89.99 322⇑ iP       P       00 17 41.0  -1.8
VOR                                 pmax    pmax
       comp=Z,100nm,2.0s,mb5.8
COBT  Iskenderun        89.99 307  i P      P       00 17 32.9   -10
HTY   Hatay             90.04 306  eP       P       00 17 38.4  -5.1
BHL   Bhannes           90.18 304  eP       P       00 17 44.6  +0.5
TOKT  Tokat             90.23 310  eP       P       00 17 39.6  -4.6
EIL   Elat              90.30 300  eP       P       00 17 44.5  -0.3
       comp=Z,48nm,0.9s,mb5.8
CEYT  Ceyhan            90.45 307  eP       P       00 17 43.0  -2.3
BNN   Bunyan            90.59 309  eP       P       00 17 45.0  -0.9
KVT   Kavak             90.70 311  eP       P       00 17 46.3  -0.1
YOZ   Yozgat            91.08 310  eP       P       00 17 46.3  -1.9
NVL   N'lazarevskaya    91.32 198⇑ eP       P       00 17 49.0  +0.5
NVL                                eS       SKS     00 28 20.0  -4.4
NVL                                 pmax    pmax
       comp=Z,2µm,5.0s
NVL                                 MLR     MLR
       comp=Z,12µm,16.0s,MS6.4
MBAR  Mbarara           91.33 269  eP       P       00 17 49.5  -0.4
MBAR                                pmax    pmax
       comp=Z,86nm,1.1s,mb6.0
MBAR  Mbarara           91.33 269  eP       P       00 17 49.5  -0.5
       comp=Z,86nm,1.1s,mb6.0
AVNT  Avonos            91.35 309  i P      P       00 17 49.5  +0.1
NIG   Nigde             91.47 308  eP       P       00 17 45.0  -5.0
MOS   Moscow            91.50 326α iP       P       00 17 49.5  -0.2
MOS                                e                00 21 25.4
MOS                                e                00 28 22.7
MOS                                i S      S       00 28 50.1  +3.9
MOS                                i PS     PS      00 30 01.2  -0.5
MOS                                eSS      SS      00 34 47.2  -8.8
MOS                                eSSS     SSS     00 38 30.0  -3.5
MOS                                 pmax    pmax
       comp=Z,258nm,2.0s,mb6.2
MOS                                 pmax    pmax
       comp=Z,7µm,4.0s
BOYT  Boyabat           91.59 311  i P      P       00 17 50.9  +0.4
CTKT  Corum             91.59 310  i P      P       00 17 49.7  -0.8
CORM  Corum             91.67 310  eP       P       00 17 51.6  +0.7
MEST  Erdemli           91.69 306  i P      P       00 17 50.7  -0.4
BYBT  Boyabat           91.70 311  eP       P       00 17 50.4  -0.6
OBN   Obninsk           92.02 325   P       P       00 17 51.2  -0.9
       comp=Z,551nm,1.3s,mb6.7,SNR=18
OBN   Obninsk           92.02 325α iP       P       00 17 51.4  -0.7
OBN                                i                00 18 00.3
OBN                                e                00 21 34.6
OBN                                i                00 28 54.9
OBN                                i PS     PS      00 30 08.2  +0.3
OBN                                eSS      SS      00 35 05.3  +2.0
OBN                                 pmax    pmax
       comp=Z,112nm,1.2s,mb6.1
OBN                                 pmax    pmax
       comp=Z,2µm,3.6s
OBN                                 MLR     MLR
       comp=Z,16µm,24.0s,MS6.4
OBN   Obninsk           92.02 325  eP       P       00 17 50.5  -1.5
       comp=Z,332nm,1.5s,mb6.5
OBN                                 LR      LR
       comp=Z,4µm,22.0s,MS5.8
KDAK  Kodiak Island     92.18  32  eP       P       00 17 51.8  -1.0
       comp=Z,192nm,1.4s,mb6.2
KDAK                                LR      LR
       comp=Z,3µm,21.0s,MS5.7
CSS   Prodhromos        92.19 305  eP       P       00 17 47.8  -5.6
CSS   Prodhromos        92.19 305  eP       P       00 17 51.8  -1.6
       comp=Z,67nm,1.0s,mb5.9
TOS   Tosya             92.21 311  eP       P       00 17 52.1  -1.2
KAMT  Kaman             92.30 309  eP       P       00 17 52.6  -1.1
LSZ   Lusaka            92.34 254  eP       P       00 17 54.9  +0.5
LSZ                                 pmax    pmax
       comp=Z,378nm,1.5s,mb6.5
LSZ                                 MLR     MLR
       comp=Z,25µm,20.0s,MS6.7
LSZ   Lusaka            92.34 254  eP       P       00 17 54.9  +0.5
       comp=Z,378nm,1.5s,mb6.5
LSZ                                 LR      LR
       comp=Z,25µm,20.0s,MS6.7
BRTR  Keskin Array B    92.38 309   P       P       00 17 53.8  -0.3
       comp=Z,18nm,0.7s,mb5.5,baz=127,slow=5.5,SNR=58
BRTR                                PP      PP      00 21 35.0  -2.7
       comp=Z,22nm,1.2s,baz=112,slow=6.7,SNR=3.8
BRTR                                PKKPbc          00 35 13.3
       comp=Z,1.0nm,0.8s,baz=166,slow=5.1,SNR=3.9
BRTR                                PKPPKP          00 43 28.9
       comp=Z,0.5nm,0.9s,baz=153,slow=2.8,SNR=4.1
RSO   Redoubt South     92.42  30  eP       P       00 17 53.2  -0.6
CANT  Cankiri           92.48 310  eP       P       00 17 48.6  -6.0
SIM   Simferopol'       92.51 315⇑ eP       P       00 17 55.1  +0.5
SIM                                e                00 21 37.3
SIM                                e                00 28 22.0
SIM                                 pmax    pmax
       comp=Z,1µm,13.5s
ELDT  Eldivan           92.61 310  i P      P       00 17 55.5  +0.3
IMA   Indian Mountai    92.72  24  eP       P       00 17 55.3  +0.3
IMA                                 pmax    pmax
       comp=Z,516nm,1.2s,mb6.8
IMA   Indian Mountai    92.72  24  eP       P       00 17 55.3  +0.3
       comp=Z,516nm,1.2s,mb6.8
BALT  Daday             92.74 311  i P      P       00 17 54.6  -1.1
SPU   Mount Spurr       92.84  29  eP       P       00 17 55.0  -0.7
ANTO  Ankara            93.05 310  eP       P       00 17 55.5  -1.7
LOD   Lodumlu           93.07 310  eP       P       00 17 53.3  -4.0
KONT  Konya--Tatoy      93.23 308  eP       P       00 17 54.5  -3.6
SAFT  Safranbolu        93.24 311  eP       P       00 17 56.0  -2.1
BOSA  Boshof            93.36 241  eP       P       00 17 58.4  -0.5
BOSA                                pmax    pmax
       comp=Z,517nm,1.8s,mb6.7
BOSA                                MLR     MLR
       comp=Z,17µm,20.0s,MS6.5
BOSA  Boshof            93.36 241  eP       P       00 17 58.4  -0.5
       comp=Z,517nm,1.8s,mb6.7
BOSA                                LR      LR
       comp=Z,17µm,20.0s,MS6.5
LBTB  Lobatse           93.56 245  eP       P       00 18 00.0  +0.1
LBTB                                pmax    pmax
       comp=Z,246nm,1.6s,mb6.4
LBTB                                MLR     MLR
       comp=Z,13µm,21.0s,MS6.4
LBTB  Lobatse           93.56 245   P       P       00 18 01.0  +1.1
       comp=Z,33nm,1.1s,mb5.7,baz=121,slow=4.6,SNR=16
LBTB                                PKKPbc          00 35 09.0
       comp=Z,3.1nm,0.9s,baz=117,slow=2.3,SNR=3.6
LBTB  Lobatse           93.56 245  eP       P       00 17 60.0  +0.1
       comp=Z,246nm,1.6s,mb6.4
LBTB                                LR      LR
       comp=Z,13µm,21.0s,MS6.4
SLKM  Skilak Lake       93.67  30  eP       P       00 17 59.1  -0.4
KIZT  Kizilcal          93.67 309  eP       P       00 18 00.4  +0.3
FIB   Fire Island       93.75  29   PFAKE           00 18 10.0   +10
FIB                                 LR      LR
       comp=Z,4µm,20.0s,MS5.8
LVZ   Lovozero          94.20 338⇓ eP       P       00 18 01.2  -0.6
LVZ                                i                00 21 52.1
LVZ                                eS       S       00 29 13.1  +3.6
LVZ                                ePS      PS      00 30 36.5  +4.9
LVZ                                i SS     SS      00 35 37.9  +3.4
LVZ                                 pmax    pmax
       comp=Z,78nm,1.1s,mb6.0
LVZ                                 pmax    pmax
       comp=E,20nm,1.3s
LVZ                                 smax
       comp=N,5µm,18.7s
LVZ                                 smax
       comp=E,2µm,11.6s
LVZ   Lovozero          94.20 338  i P      P       00 18 00.6  -1.2
MDU   Mudurnu           94.30 310  eP       P       00 18 03.9  +1.0
MCK   McKinley          94.50  27  eP       P       00 18 03.0  -0.3
MCK                                 pmax    pmax
       comp=Z,55nm,1.1s,mb5.9
MCK   McKinley          94.50  27  eP       P       00 18 03.0  -0.4
       comp=Z,55nm,1.1s,mb5.9
ESKT  Eskisehir         94.52 309  eP       P       00 18 04.2  +0.2
HENT  Hendek            94.56 310  i P      P       00 18 02.9  -1.2
BCK   Bucak             94.60 307  eP       P       00 17 59.2  -5.1
APA   Apatity           94.65 337⇑ iP       P       00 18 04.5  +0.6
APA                                i                00 21 57.0
APA                                e                00 28 42.0
APA                                i S      S       00 29 19.0  +5.7
APA                                i PS     PS      00 30 40.0  +3.4
APA                                i PPS    PPS     00 31 11.0  -1.9
APA                                 pmax    pmax
       comp=Z,39nm,1.0s,mb5.8
APA                                 pmax    pmax
       comp=Z,2µm,15.0s
SML   Sawmill           94.67  28  eP       P       00 18 04.5  +0.4
ISP   Isparta           94.68 307  eP       P       00 17 59.2  -5.6
ISP   Isparta           94.68 307⇑ iP       P       00 18 03.5  -1.3
COLA  College           95.03  25   P       P       00 18 05.4  -0.3
COLA                                pmax    pmax
       comp=Z,29nm,1.1s,mb5.6
COLA  College           95.03  25  eP       P       00 18 04.6  -1.2
       comp=Z,29nm,1.1s,mb5.6
COLA                                LR      LR
       comp=Z,7µm,22.0s,MS6.1
ALT   Altintas          95.06 309  eP       P       00 18 01.5  -4.9
SNAA  Sanae             95.08 195  e        P       00 18 11.0  +5.2
SNAA  Sanae             95.08 195  e        P       00 18 12.1  +6.3
SNAA  Sanae             95.08 195⇑ iP       P       00 18 07.4  +1.6
SNAA                               e                00 21 52.3
SNAA  Sanae             95.08 195   P       P       00 18 07.4  +1.6
       comp=Z,35nm,1.1s,mb5.7,baz=112,slow=4.4,SNR=40
SNAA                                PP      PP      00 21 57.3  -0.3
       comp=Z,7.1nm,1.0s,baz=161,slow=7.1,SNR=4.3
SNAA                                PKKPbc          00 35 00.6
       comp=Z,5.0nm,1.0s,baz=266,slow=2.2,SNR=6.4
SNAA                                LR      LR      00 56 59.9
       comp=Z,7µm,21.4s,MS6.1,baz=115,slow=33
SNAA  Sanae             95.08 195⇑ iP       P       00 18 07.4  +1.6
SNAA                               e        pP      00 18 11.0  +0.7
SNAA                               e        pP      00 18 12.1  +1.8
SNAA                               e                00 21 52.3
ELL   Elmali            95.10 306  eP       P       00 18 08.6  +1.9
JOF   Joensuu           95.32 333  ep       P       00 18 01.2  -5.9
       comp=Z,17nm,0.9s,mb5.5
JOF   Joensuu           95.32 333  eP       P       00 18 01.2  -5.9
JOF                                 pmax    pmax
       comp=Z,17nm,0.9s,mb5.5
ILAR  Eielson Array     95.44  25   P       P       00 18 06.5  -1.1
       comp=Z,21nm,1.1s,mb5.5,baz=259,slow=3.5,SNR=57
ILAR                                PP      PP      00 21 56.7  -3.9
       comp=Z,9.1nm,1.0s,baz=255,slow=5.9,SNR=4.4
ILAR                                PKKPbc          00 35 01.9
       comp=Z,4.4nm,0.8s,baz=135,slow=1.3,SNR=12
ILAR                                PKPPKP          00 43 10.9
       comp=Z,1.8nm,1.2s,baz=73,slow=3.5,SNR=4.3
ILAR                                LR      LR      01 00 40.2
       comp=Z,9µm,21.9s,MS6.2,baz=112,slow=35
ILAR  Eielson Array     95.44  25   P       P       00 18 06.5  -1.1
ILAR                                PP      PP      00 21 56.7  -3.9
ILAR                                PKKPbc          00 35 01.9
ILAR                                P'P'            00 43 10.9
ILAR                                LR      LR      01 00 40.2
HRT   Hereke            95.49 310  eP       P       00 18 05.1  -3.3
YLV   Yalova            95.70 310  eP       P       00 18 02.7  -6.7
PUL   Pulkovo           95.72 329  eP       P       00 18 07.7  -1.3
PUL                                e                00 22 08.5
PUL                                i PPP    PPP     00 24 01.9  -6.0
PUL                                eS       S       00 29 24.2  +1.7
PUL                                 pmax    pmax
       comp=Z,984nm,12.1s
PUL                                 pmax    pmax
       comp=N,71nm,7.3s
PUL                                 pmax    pmax
       comp=E,279nm,9.4s
PUL                                 smax
       comp=Z,2µm,21.1s
PUL                                 smax
       comp=N,5µm,19.5s
PUL                                 smax
       comp=E,2µm,18.6s
FETY  Fethiye           95.75 306  eP       P       00 18 07.4  -2.3
DIV   Divide            95.88  29  eP       P       00 18 10.1  +0.5
       comp=E,431nm,1.2s,mb6.8
DIV                                 LR      LR
       comp=Z,24µm,21.0s,MS6.7
EYAK  Cordova Ski Ar    95.88  30  eP       P       00 18 09.7   0.0
THY   Trims Highway     95.92  27  eP       P       00 18 10.1  +0.3
DALT  Dalyan (Mudla)    96.12 306  eP       P       00 18 02.7  -8.7
AKASG Malin Array Be    96.14 320  i P      P       00 18 09.9  -1.2
AKASG                               pmax    pmax
       comp=Z,15nm,0.6s
AKASG Malin Array Be    96.14 320   P       P       00 18 09.9  -1.3
       comp=Z,15nm,0.6s,mb5.6,baz=71,slow=4.4,SNR=52
AKASG                               PP      PP      00 22 02.7  -3.8
       comp=Z,12nm,1.1s,baz=75,slow=7.1,SNR=3.1
AKASG                               PKiKP           00 22 50.1
       comp=Z,7.7nm,0.9s,baz=53,slow=2.0,SNR=3.6
AKASG                               PKKPbc          00 35 01.1
       comp=Z,0.9nm,0.6s,baz=264,slow=3.7,SNR=4.8
SUR   Sutherland        96.53 237   P       P       00 18 15.5  +2.2
       comp=Z,50nm,1.1s,mb5.9,baz=75,slow=3.2,SNR=6.5
SUR                                 PKKPbc          00 34 58.6
       comp=Z,18nm,1.0s,baz=197,slow=4.5,SNR=3.3
SUR   Sutherland        96.53 237  eP       P       00 18 14.2  +0.8
       comp=Z,198nm,1.5s,mb6.3
SUR                                 LR      LR
       comp=Z,4µm,20.0s,MS5.9
TIRR  Tirgusor          96.55 314   P       P       00 18 15.0  +1.9
VNA2  Neumayer--Watz    96.70 195  e        P       00 18 18.5  +5.3
VNA2  Neumayer--Watz    96.70 195  e        P       00 18 19.9  +6.7
VNA2  Neumayer--Watz    96.70 195⇑ iP       P       00 18 15.0  +1.8
VNA2                               e        pP      00 18 18.5  +0.8
VNA2                               e        pP      00 18 19.9  +2.2
VNA2                               e                00 22 06.2
TAOE  Nuku Hiva Isla    96.73 100  eLR      LR      00 49 40.9
CFR   Carcaliu          96.76 315   P       P       00 18 14.1   0.0
CFR   Carcaliu          96.76 315  ⇓P       P       00 18 20.7  +6.7
CFR   Carcaliu          96.76 315⇓ iP       P       00 18 13.9  -0.2
BNT   Bandirma          96.80 310  eP       P       00 18 12.2  -2.2
BALB  Balikesir         96.81 309  eP       P       00 18 12.2  -2.3
AKS   Akhisar           96.84 308  eP       P       00 18 07.4  -7.2
HARR  Harsova           96.89 314   P       P       00 18 14.8  +0.1
HARR  Harsova           96.89 314  ⇑P       P       00 18 20.1  +5.4
HARR  Harsova           96.89 314⇓ iP       P       00 18 14.5  -0.2
MNK   Minsk             97.03 324⇓ eP       P       00 18 12.0  -3.0
VNA3  Neumayer Olymp    97.06 194  e        P       00 18 19.9  +5.1
VNA3  Neumayer Olymp    97.06 194  e        P       00 18 21.1  +6.3
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VNA3	**Neumayer Olymp**	**97.06**	**194**	⇑*i*P	**P**	**00 18 16.3**	**+1.5**
VNA3				*e*	pP	00 18 19.9	+0.6
VNA3				*e*	pP	00 18 21.1	+1.8
VNA3				*e*		00 22 10.5	
VNA1	**Neumayer--Stat**	**97.10**	**195**	*e*	**P**	**00 18 18.8**	**+3.8**
VNA1	**Neumayer--Stat**	**97.10**	**195**	*e*	**P**	**00 18 20.1**	**+5.1**
VNA1	**Neumayer--Stat**	**97.10**	**195**	⇑*i*P	**P**	**00 18 15.3**	**+0.3**
VNA1				*e*	pP	00 18 18.8	-0.7
VNA1				*e*	pP	00 18 20.1	+0.6
VNA1				*e*		00 22 05.2	
BODT	**Bodrum**	**97.19**	**307**	*e*P	**P**	**00 18 12.2**	**-4.0**
PRD	**Provadia**	**97.25**	**313**	*i* P	**P**	**00 18 18.0**	**+1.7**
BLCB	**Balcova**	**97.44**	**308**	*e*P	**P**	**00 18 14.2**	**-3.1**
ARCES	**ARCESS Array B**	**97.54**	**339**	P	**P**	**00 18 16.1**	**-0.8**
	comp=Z,33nm,1.0s,mb5.8,baz=72,slow=3.8,SNR=19						
ARCES				PKiKP		00 22 53.0	
	comp=Z,8.2nm,1.0s,baz=90,slow=2.4,SNR=5.5						
ARE0	**ARCESS Array S**	**97.54**	**339**	*e*P	**P**	**00 18 15.1**	**-1.9**
KAF	**Kangasniemi**	**97.65**	**332**	*e*p	**P**	**00 18 13.8**	**-3.8**
	comp=Z,13nm,0.9s,mb5.5						
KAF	**Kangasniemi**	**97.65**	**332**	*e*P	**P**	**00 18 13.8**	**-3.8**
KAF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.5						
VRI	**Vrincioaia**	**97.75**	**315**	⇑P	**P**	**00 18 18.5**	**0.0**
VRI	**Vrincioaia**	**97.75**	**315**	⇓*i*P	**P**	**00 18 18.8**	**+0.3**
FINES	**FINESS Array B**	**97.79**	**331**	P	**P**	**00 18 17.6**	**-0.6**
	comp=Z,3.3nm,0.9s,baz=297,slow=4.3,SNR=6.7						
FINES				PKiKP		00 22 53.6	
	comp=Z,16nm,1.1s,baz=90,slow=5.7,SNR=5.3						
JMB	**Yambol**	**97.84**	**312**	*e*P	**P**	**00 18 20.0**	**+1.0**
MLR	**Muntele Rosu**	**98.31**	**315**	P	**P**	**00 18 20.9**	**-0.1**
	comp=Z,11nm,0.7s,mb5.5,baz=150,slow=6.3,SNR=8.7						
MLR				PP	PP	00 22 22.3	-1.3
	comp=Z,82nm,1.3s,baz=69,slow=3.9,SNR=4.1						
MLR	**Muntele Rosu**	**98.31**	**315**	⇑P	**P**	**00 18 21.3**	**+0.3**
MLR	**Muntele Rosu**	**98.31**	**315**	⇓*i*P	**P**	**00 18 21.0**	**0.0**
APE	**Apeiranthos**	**98.61**	**307**	*e*P	**P**	**00 18 18.1**	**-4.6**
SANT	**Santorini**	**98.67**	**306**	*e*P	**P**	**00 18 21.1**	**-1.7**
	comp=Z,53nm,1.1s,mb6.0						
DAWY	**Dawson**	**98.72**	**26**	*e*P	**P**	**00 18 22.0**	**-0.4**
BURAR	**Bucovina Array**	**98.77**	**317**	⇓P	**P**	**00 18 23.6**	**+0.5**
IDI	**Anoyia**	**99.12**	**305**	P	**P**	**00 18 24.8**	**-0.1**
	comp=Z,8.6nm,0.8s,mb5.4,baz=78,slow=6.8,SNR=7.0						
IDI				PP	PP	00 22 29.0	-0.7
	comp=Z,14nm,0.9s,baz=9.9,slow=22,SNR=3.7						
RZN	**Rozhen**	**99.24**	**311**	*i* P	**P**	**00 18 25.0**	**-0.3**
KBS	**Kingsbay**	**99.30**	**349**	*e*P	**P**	**00 18 25.5**	**+0.7**
KBS				AMS	AMS	01 05 02.5	
	comp=Z,5µm,19.1s,MS6.1						
LVV	**L'vov**	**99.48**	**319**	*e*P	**P**	**00 18 31.0**	**+4.8**
LVV				*e*S	S	00 29 49.2	-5.4
LVV				*e*PS	PS	00 31 31.4	+3.1
LVV				*e*SS	SS	00 36 40.6	-8.3
RKT	**Rikitea**	**99.59**	**114**	*e*P	**P**	**00 18 31.0**	**+3.6**
	comp=Z,46nm,1.2s,mb5.8						
RKT	**Rikitea**	**99.59**	**114**	*e*PP	PP	00 22 19.9	-14
RKT				*e*SKSac		00 29 04.7	
RKT				*e*PS	PS	00 31 35.4	+5.4
RKT				*e*SS	SS	00 36 46.7	-4.3
RKT				*e*LR	LR	00 51 07.3	
	comp=Z,26µm,31.0s						
SUW	**Suwalki**	**99.77**	**324**	*e*P	**P**	**00 18 27.0**	**-0.5**
SUW				*e*PS	PS	00 31 30.2	-0.9
SUW	**Suwalki**	**99.77**	**324**	*e*P	**P**	**00 18 27.0**	**-0.5**
SUW				*e*SKS	SKS	00 29 11.8	+1.7
SUW				*e*PS	PS	00 31 30.2	-0.9
SUW	**Suwalki**	**99.77**	**324**	*e*P	**P**	**00 18 27.0**	**-0.4**
SUW				*e*SKS	SKS	00 29 11.8	+1.7
SUW				*e*PS	PS	00 31 30.1	-0.9
SUW				MLR	MLR	01 00 03.7	
	comp=Z,19µm,37.7s,MS6.3						
TRO	**Tromso**	**99.81**	**340**	*e*P	**P**	**00 18 25.5**	**-1.8**
TRO				LR	LR		
	comp=Z,9911µm,24.8s						
TRO	**Tromso**	**99.81**	**340**	*e*P	**P**	**00 18 25.5**	**-1.8**
TRO				*e*PP	PP	00 22 26.0	-8.5
TRO				*e*SKSa		00 29 03.5	
TRO				*e*SS	SS	00 36 54.7	+1.6
TRO				AMS	AMS	01 08 58.8	
	comp=Z,10µm,24.8s,MS6.2						
MMB	**Musomiste**	**99.98**	**311**	*e*P	**P**	**00 18 28.0**	**-0.7**
VTS	**Vitosha**	**100.34**	**312**	*e*P	P	00 18 29.0	-1.3
KWP	**Kalwaria**	**100.35**	**319**	*e*P	P	00 18 30.3	+0.1
KWP				*e*SKS	SKS	00 29 06.8	-6.2
KWP				*e*PS	PS	00 31 47.4	+10
KWP				MLR	MLR	01 02 04.6	
	comp=Z,20µm,33.4s,MS6.4						
KKB	**Krupnik**	**100.45**	**311**	*i* P	P	00 18 32.0	+1.1
INK	**Inuvik**	**100.47**	**21**	P	P	00 18 30.4	+0.1
	comp=Z,24nm,1.1s,baz=283,slow=6.7,SNR=25						
INK				PKKPbc		00 34 47.4	
	comp=Z,7.9nm,1.1s,baz=113,slow=1.0,SNR=5.7						
INK	**Inuvik**	**100.47**	**21**	*e*Pdif	P	00 18 29.9	-0.4
	comp=Z,0.4nm,1.6s						
KOLS	**Kolonicke sedl**	**100.68**	**319**	*i* P	P	00 18 33.4	+1.7
KOLS	**Kolonicke sedl**	**100.68**	**319**	PDIF	P	00 18 33.4	+1.7
BOLS	**Boljevac**	**101.20**	**313**	⇑*i*P	P	00 18 26.3	-7.9
CRVS	**Cervenica-Dubn**	**101.22**	**319**	*e*P	P	00 18 36.1	+2.0
CRVS				*e*		00 22 40.4	
CRVS				*e*PS	PS	00 31 45.6	-1.0
CRVS	**Cervenica-Dubn**	**101.22**	**319**	PDIF	P	00 18 36.1	+2.0
CRVS				*e*PP	PP	00 22 40.4	-5.6
CRVS				*e*PS	PS	00 31 45.6	-1.0
BZS	**Buzias**	**101.34**	**315**	⇓P	P	00 18 35.6	+0.8
SIT	**Sitka**	**101.49**	**33**	PFAKE		00 18 50.0	+15
SIT				LR	LR		
	comp=Z,7µm,19.0s,MS6.2						
SKO	**Skopje**	**101.68**	**312**	*e*P	P	00 18 36.5	+0.1
SKO				⇓*i*PP	PP	00 22 49.7	+0.3
SKO				*i* PPP	PPP	00 25 05.0	+4.3
TSUM	**Tsumeb**	**101.81**	**249**	Pdif	P	00 18 37.5	0.0
	comp=Z,46nm,1.4s						
TSUM				LR	LR		
	comp=Z,14µm,20.0s,MS6.5						
NIE	**Niedzica**	**101.92**	**319**	*e*P	P	00 18 35.9	-1.4
NIE				*e*PP	PP	00 22 48.8	-2.1
GRUS	**Gruza**	**102.09**	**314**	⇓*i*P	PP	00 22 47.8	-4.5
OJC	**Ojcow**	**102.18**	**320**	*e*P	Pdif	00 18 38.4	-0.1
OJC				*e*		00 29 17.5	
OJC	**Ojcow**	**102.18**	**320**	*e*P	Pdif	00 18 38.4	-0.1
OJC				*e*		00 28 15.1	
OJC				⇑*e*SKSa		00 29 17.5	
OJC				MLR	MLR	01 09 57.6	
	comp=Z,15µm,23.4s,MS6.4						
OHR	**Ohrid**	**102.20**	**311**	*i* P		00 22 52.7	
OHR				*i* PP	PP	00 23 15.6	+22
PSZ	**Piszkesteto**	**102.34**	**318**	*e*P	Pdif	00 18 38.5	-0.7
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PSZ	**Piszkesteto**	**102.34**	**318**	*e*Pdif	Pdif	00 18 38.5	-0.7
	comp=Z,9.9nm,1.0s						
PSZ				⇑P		00 18 44.0	
PSZ	**Piszkesteto**	**102.34**	**318**	⇑*e*P	Pdif	00 18 41.0	+1.8
VYHS	**Vyhne**	**102.99**	**318**	*e*P	Pdif	00 18 45.2	+3.1
VYHS				*e*PS	PS	00 32 01.7	-3.6
VYHS	**Vyhne**	**102.99**	**318**	*e*P	Pdif	00 18 45.2	+3.1
VYHS				*e*PP	PP	00 22 50.6	-8.7
VYHS				*e*PS	PS	00 32 01.7	-3.6
VYHS				*i*		00 34 41.0	
VYHS	**Vyhne**	**102.99**	**318**	PDIF	Pdif	00 18 45.2	+3.1
VYHS				*e*PP	PP	00 22 50.6	-8.7
VYHS				*e*PS	PS	00 32 01.7	-3.6
VYHS				*i*		00 34 41.0	
RAC	**Raciborz**	**103.22**	**320**	*e*P	Pdif	00 18 45.3	+2.3
RAC				MLR	MLR		
	comp=Z,14µm,24.1s,MS6.4						
RAC	**Raciborz**	**103.22**	**320**	*e*P	Pdif	00 18 45.3	+2.3
RAC				LMN		00 59 33.4	
RAC				MLR	MLR	01 06 56.9	
RAC				LME		01 11 33.8	
	comp=Z,14µm,21.8s						
OKC	**Ostrava-Krasne**	**103.28**	**320**	*e*PDIF	Pdif	00 18 43.6	+0.3
OKC				*e*SP	SP	00 32 05.5	-1.0
OKC				AMS	AMS	01 10 50.0	
	comp=Z,8µm,20.4s						
GKP	**Gorka Klasztor**	**103.37**	**323**	*e*P	Pdif	00 18 42.1	-1.5
GKP				*e*SKS	SKS	00 29 20.1	-7.2
GKP				LR	LR		
	comp=Z,16µm,32.0s,MS6.3						
GKP	**Gorka Klasztor**	**103.37**	**323**	*e*P	Pdif	00 18 42.0	-1.6
GKP				*e*SKS	SKS	00 29 20.1	-7.2
GKP				MLR	MLR	01 02 01.3	
	comp=Z,16µm,32.0s,MS6.3						
PTCN	**Pitcairn Islan**	**103.57**	**117**	PFAKE		00 19 00.0	+15
PTCN				LR	LR		
	comp=Z,9µm,22.0s,MS6.2						
NSS	**Namsos**	**103.64**	**335**	*e*		00 23 02.8	
NSS				AMS	AMS	01 11 57.9	
	comp=Z,14µm,26.0s,MS6.4						
MORC	**Moravsky Berou**	**103.67**	**320**	*e*P	Pdif	00 18 43.4	-1.7
MORC				pmax	pmax		
	comp=Z,242nm,2.7s						
MORC	**Moravsky Berou**	**103.67**	**320**	*e*Pdif	Pdif	00 18 43.4	-1.7
	comp=Z,242nm,2.7s						
HFS	**Hagfors**	**103.98**	**331**	Pdiff	Pdif	00 18 45.9	-0.3
	comp=Z,17nm,1.1s,baz=304,slow=5.3,SNR=7.0						
HFS				PKiKP		00 23 06.1	
	comp=Z,18nm,1.0s,slow=3.0,SNR=3.7						
DLBC	**Dease Lake**	**104.05**	**31**	Pdiff	Pdif	00 18 48.5	+2.0
	comp=Z,10nm,1.4s,baz=225,slow=13,SNR=2.7						
DLBC				PKiKP		00 23 06.3	
	comp=Z,9.7nm,1.0s,baz=255,slow=2.1,SNR=5.6						
DLBC				PKKPbc		00 34 37.4	
	comp=Z,3.5nm,0.8s,baz=174,slow=5.5,SNR=4.7						
ZST	**Bratislava**	**104.17**	**318**	*e*P	Pdif	00 18 52.1	+4.8
ZST				*e*PP	PP	00 22 57.3	-11
ZST				*e*PS	PS	00 32 05.4	-12
ZST	**Bratislava**	**104.17**	**318**	*e*sPDIF		00 18 52.1	
ZST				*e*		00 22 57.3	
ZST				*e*		00 32 05.4	
KSP	**Ksiaz**	**104.32**	**321**	*e*P	Pdif	00 18 48.5	+0.6
KSP				*e*S	S	00 30 39.5	+4.6
KSP				*e**SP		00 32 18.5	
KSP				*e*SS	SS	00 38 01.0	+5.5
KSP	**Ksiaz**	**104.32**	**321**	*e*Pdif	Pdif	00 18 48.5	+0.6
KSP				*e*		00 18 54.0	
KSP				*e*PP	PP	00 22 56.5	-12
KSP				*e*Sdif		00 30 39.5	
KSP				*e*sP		00 32 18.5	
KSP				*e*SS	SS	00 38 01.0	+5.5
KSP				*e*		00 43 24.0	
KSP				LR	LR		
	comp=Z,36µm,29.5s,MS6.7						
KSP	**Ksiaz**	**104.32**	**321**	*e*P	Pdif	00 18 48.8	+0.9
KSP				*e*SKS	SKS	00 29 23.8	-7.9
KSP				*e*SP	SP	00 32 20.2	+3.3
KSP				MLR	MLR	01 05 07.8	
	comp=Z,31µm,29.5s,MS6.7						
VRAC	**Vranov**	**104.35**	**319**	Pdiff	Pdif	00 18 48.5	+0.5
	comp=Z,1.7nm,0.9s,baz=48,slow=12,SNR=3.6						
VRAC				PP	PP	00 23 11.9	+2.6
	comp=Z,25nm,1.1s,baz=56,slow=7.6,SNR=5.2						
STON	**Ston**	**104.37**	**313**	*i* P		00 23 06.5	
DPC	**Dobruska-Polom**	**104.37**	**320**	*e*Pdif	Pdif	00 18 48.9	+0.8
DPC				*e*PP	PP	00 23 11.6	+2.2
DPC				*e*SP	SP	00 32 19.5	+2.1
DPC				LR	LR		
	comp=Z,13µm,23.5s,MS6.4						
DPC	**Dobruska-Polom**	**104.37**	**320**	*e*PDIF	Pdif	00 18 48.9	+0.8
DPC				*e*PP	PP	00 23 11.6	+2.2
DPC				*e*SP	SP	00 32 19.5	+2.1
DPC				AMS	AMS	01 07 20.0	
	comp=Z,13µm,23.5s						
BSD	**Bornholm Skovb**	**104.40**	**325**	*i* P	Pdif	00 18 49.2	+1.1
BSD				*i*		00 23 14.7	
BSD				*i*		00 30 41.1	
BSD				*i*		00 32 20.0	
BSD				pmax	pmax		
	comp=Z,58nm,1.0s						
BSD				MLR	MLR		
	comp=Z,11µm,18.0s,MS6.4						
BSD	**Bornholm Skovb**	**104.40**	**325**	*i* P	Pdif	00 18 49.2	+1.1
	comp=Z,58nm,1.0s						
BSD				*i*		00 23 14.7	
BSD				*i* S	tx	00 29 34.3	
BSD				*i*		00 30 41.1	
BSD				*i*		00 32 20.0	
	comp=Z,11µm,18.0s						
UPC	**Upice**	**104.54**	**321**	*e*PDIF	Pdif	00 18 36.9	-12
UPC				*e*PP	PP	00 23 18.0	+7.2
NB2	**NORSAR Subarra**	**104.93**	**332**	P	Pdif	00 18 48.9	-1.4
	comp=Z,24nm,1.7s,baz=75,slow=4.5						
NB2	**NORSAR Subarra**	**104.93**	**332**	P	Pdif	00 18 48.9	-1.4
NB2				pmax	pmax		
	comp=Z,24nm,1.7s						
NB2	**NORSAR Subarra**	**104.93**	**332**	P	Pdif	00 18 48.9	-1.4
	baz=75,slow=4.6						
NOA	**NORSAR Array B**	**104.93**	**332**	Pdiff	Pdif	00 18 49.6	-0.7
	comp=Z,4.1nm,1.0s,baz=80,slow=4.4,SNR=3.6						
NOA				PP	PP	00 23 11.6	-2.0
	comp=Z,14nm,1.1s,baz=78,slow=7.3,SNR=5.1						
NOA	**NORSAR Array B**	**104.93**	**332**	Pdif	Pdif	00 18 49.6	-0.7
NOA				PP	PP	00 23 11.6	-2.0
SISC	**Sisak**	**105.02**	**315**	*i* P	Pdif	00 18 50.6	-0.5
NAO01	**NORSAR Array S**	**105.14**	**332**	PFAKE		00 23 20.0	
NAO01				LR	LR		
	comp=Z,14µm,20.0s,MS6.5						
ARSA	**Arzberg**	**105.36**	**317**	⇑*i*P	Pdif	00 18 58.2	+5.7
	comp=Z,9.3nm,1.6s						
ARSA				*i*		00 23 19.7	
	comp=Z,38nm,1.3s						
TIP	**Timpagrande**	**105.44**	**309**	PKP		00 23 05.3	
PVCC	**Panska Ves**	**105.45**	**321**	*e*PDIF	Pdif	00 18 58.2	+5.3
PRU	**Pruhonice**	**105.56**	**320**	*e*P	Pdif	00 18 47.9	-5.5
PRU				*e*SP	SP	00 32 34.3	+5.0
PRU				MLR	MLR		
	comp=Z,12µm,24.7s,MS6.3						
PRU	**Pruhonice**	**105.56**	**320**	*e*PDIF	Pdif	00 18 47.9	-5.5
PRU				*e*PP	PP	00 23 05.5	-13
PRU				*e*SP	SP	00 32 34.3	+5.0
PRU				AMS	AMS	01 07 50.0	
	comp=Z,12µm,24.7s						
PRA	**Prague**	**105.62**	**320**	PP	PP	00 23 06.0	-13
PRA				SP	SP	00 32 38.0	+8.1
PRA				AMS	AMS	01 18 00.0	
COP	**Copenhagen**	**105.66**	**326**	*e*P	Pdif	00 18 59.6	+5.9
COP				*i* S		00 30 53.0	
COP				*i*		00 32 33.6	
COP				*i*		00 33 30.4	
COP				MLR	MLR		
	comp=Z,5µm,20.0s,MS6.0						
COP	**Copenhagen**	**105.66**	**326**	*i* P	Pdif	00 18 59.6	+5.9
COP				*i*		00 23 27.9	
COP				*i* S		00 30 53.0	
COP				*i*		00 32 33.6	
COP				*i*		00 33 30.4	
	comp=Z,5µm,20.0s						
BRG	**Berggiesshubel**	**105.78**	**321**	*e*P	Pdif	00 18 55.1	+0.8
BRG				pmax	pmax		
	comp=Z,32nm,1.4s						
BRG				MLR	MLR		
	comp=N,14µm,25.9s,MS6.5						
BRG				MLR	MLR		
	comp=E,13µm,25.9s,MS6.5						
BRG				MLR	MLR		
	comp=Z,15µm,25.9s,MS6.4						
BRG	**Berggiesshubel**	**105.78**	**321**	*e*P	Pdif	00 18 55.1	+0.8
	comp=Z,32nm,1.4s						
BRG				*e*PP	tx	00 22 45.1	
BRG				*i* SKS	tx	00 29 16.0	
BRG				*i* S	tx	00 30 31.0	
BRG				*i* PS	PS	00 31 52.0	-41
BRG				*e*PKKP	PKKP	00 34 32.8	-3.5
BRG				*i* SS	SS	00 37 23.0	-53
BRG				LR	LR		
	comp=Z,15µm,25.9s,MS6.4						
DAG	**Danmarks Havn**	**105.78**	**351**	⇓*e*P	Pdif	00 18 53.2	-0.6
DAG				pmax	pmax		
	comp=Z,30nm,1.0s						
DAG				MLR	MLR		
	comp=N,6µm,20.0s,MS6.4						
DAG				MLR	MLR		
	comp=Z,12µm,20.0s,MS6.4						
DAG				MLR	MLR		
	comp=E,10µm,22.0s,MS6.4						
DAG	**Danmarks Havn**	**105.78**	**351**	⇓*i*P	Pdif	00 18 53.2	-0.6
	comp=E,30nm,1.0s						
	comp=Z,12µm,20.0s						
DAG	**Danmarks Havn**	**105.78**	**351**	*i* P	PKKP	00 34 28.0	-7.8
PDKS	**Podkum**	**105.89**	**316**	*e*Pdiff	Pdif	00 18 55.1	+0.2
SOI	**Samo**	**106.09**	**308**	*e*P		00 23 10.4	
KONO	**Kongsberg**	**106.10**	**331**	PFAKE		00 23 20.0	
KONO				LR	LR		
	comp=Z,12µm,20.0s,MS6.5						
LJU	**Ljubljana**	**106.22**	**316**	*e*P	Pdif	00 18 56.1	-0.3
LJU				*e*		00 23 21.9	
LJU				*e*		00 29 39.1	
LJU				*e*SP	SP	00 32 39.8	+3.8
LJU				*e*SS	SS	00 38 13.2	-8.9
LJU	**Ljubljana**	**106.22**	**316**	*e*Pdiff	Pdif	00 18 56.1	-0.2
LJU				*e*		00 23 09.7	
LJU				*e*PP	PP	00 23 21.9	-1.4
LJU				*e*		00 25 28.9	
LJU				*e*		00 26 20.9	
LJU				*e*		00 27 15.6	
LJU				*e*SKSac		00 29 39.0	
LJU				*e*SP	SP	00 32 39.8	+3.8
LJU				*e*		00 33 47.1	
LJU				*e*		00 34 35.0	
LJU				*e*SS	SS	00 38 13.2	-8.9
CLL	**Collm**	**106.28**	**322**	*e*P	Pdif	00 18 59.0	+2.5
CLL				*e*		00 29 36.0	
CLL				MLR	MLR		
	comp=Z,13µm,20.9s,MS6.5						
CLL	**Collm**	**106.28**	**322**	*e*Pdif	Pdif	00 18 59.0	+2.5
CLL				*e*		00 19 20.0	
CLL				*e*SKS	SKS	00 29 36.0	-4.5
CLL				*e*S		00 30 42.0	
CLL				PKKP	PKKP	00 34 30.9	-4.5
CLL				LR	LR		
	comp=Z,13µm,20.9s,MS6.5						
CLL	**Collm**	**106.28**	**322**	*e*PDIF	Pdif	00 18 59.0	+2.5
CLL				*e*		00 19 20.0	
CLL				*e*		00 19 30.0	
CLL				*e*		00 22 11.0	
CLL				*e*PP	PP	00 23 23.0	-0.6
CLL				*i*		00 23 37.5	
CLL				*e*PPP	PPP	00 25 30.0	-10
CLL				*e*		00 27 38.0	
CLL				*e*		00 29 36.0	
CLL				*e*		00 30 42.0	
CLL				*e*PS	PS	00 32 41.0	+2.9
CLL				*e*PPS	PPS	00 33 39.0	+1.9
CLL				*i* PKKP	PKKP	00 34 30.9	-4.5
CLL				*i*		00 34 38.6	
CLL				*e*SS	SS	00 38 12.0	-11
GERES	**GERESS Array B**	**106.30**	**319**	Pdiff	Pdif	00 18 58.8	+2.2
	comp=Z,0.9nm,0.8s,baz=39,slow=6.3,SNR=3.4						
GERES				PKiKP		00 23 10.6	
	comp=Z,5.6nm,0.7s,baz=90,slow=1.3,SNR=8.3						
GERES				PKKPbc		00 34 31.9	
	comp=Z,4.9nm,1.1s,baz=225,slow=1.9,SNR=6.1						
KHC	**Kasperske Hory**	**106.33**	**320**	*e*P	Pdif	00 18 58.1	+1.3
KHC				*e*SP	SP	00 32 39.3	+2.2
KHC				MLR	MLR		
	comp=Z,10µm,19.7s,MS6.4						
KHC	**Kasperske Hory**	**106.33**	**320**	*e*PDIF	Pdif	00 18 58.1	+1.3
KHC				*e*x	x	00 19 33.0	
KHC				*e*x	x	00 22 06.0	
KHC				*e*PP	PP	00 23 16.1	-8.0
KHC				*e*SP	SP	00 32 39.3	+2.2
KHC				*e*PKKP	PKKP	00 34 25.5	-10
KHC				AMS	AMS	01 13 40.0	
	comp=Z,10µm,19.7s						
NKC	**Novy Kostel**	**106.84**	**321**	*e*P	Pdif	00 19 04.5	+5.5
NKC				*e*SP	SP	00 32 44.9	+2.8
NKC				MLR	MLR		
	comp=Z,10µm,19.7s,MS6.4						
NKC	**Novy Kostel**	**106.84**	**321**	*e*PDIF	Pdif	00 19 04.5	+5.5
NKC				*e*PKP		00 23 12.4	
NKC				*e*SP	SP	00 32 44.9	+2.8
NKC				AMS	AMS	01 15 10.0	
	comp=Z,10µm,19.7s						
PTCC	**Patocco-Chiusa**	**106.96**	**317**	*e*P		00 23 07.5	
GMNA	**Gemona**	**107.07**	**317**	*e*P		00 23 10.3	
MUD	**Monsted U'grnd**	**107.23**	**328**	*i* P	PP	00 23 23.3	-7.6
MUD				*i*		00 29 29.1	
MUD				*i* S		00 31 07.7	
MUD				*i*		00 32 52.4	
MUD				*i*		00 33 53.2	
	comp=Z,9µm,21.0s						
MOX	**Moxa**	**107.27**	**321**	*e*P	Pdif	00 19 07.2	+6.3
MOX				*e*		00 23 31.3	
MOX				MLR	MLR		
	comp=Z,5µm,21.0s,MS6.1						
MOX	**Moxa**	**107.27**	**321**	*i* P	Pdif	00 19 07.2	+6.3
MOX				PP	PP	00 23 31.0	-0.3
MOX				PS	PS	00 32 56.0	+7.9
MOX				PS	PS	00 33 00.0	+12
MOX				PPS	PPS	00 34 00.0	+11
MOX				PKKP	PKKP	00 34 28.0	-5.6
MOX				PKKP	PKKP	00 34 36.0	+2.4
MOX				PKKP	PKKP	00 34 48.0	+14
MOX				SS	SS	00 38 20.0	-16
MOX				L		01 15 25.0	
JMIC	**Jan Mayen**	**107.70**	**345**	*e*		00 23 05.3	
JMIC				AMS	AMS	01 13 19.1	
	comp=Z,6µm,19.7s,MS6.2						
GRA1	**Grafenberg Arr**	**107.73**	**320**	*e*Pdif	Pdif	00 19 08.4	+5.5
GRA1				*e*PP	PP	00 23 34.2	-0.3
GRA1				*e*SP	SP	00 32 58.1	+7.1
GRA1				*e*PKKP	PKKP	00 34 27.8	-5.0
GRA1				LR	LR		
	comp=Z,12µm,21.7s,MS6.4						
GRF	**Grafenberg Arr**	**107.73**	**320**	*e*P	Pdif	00 19 08.4	+5.5
GRF				*e*		00 23 34.2	
GRF				*e*SP	SP	00 32 58.1	+7.1
RES	**Resolute Bay**	**107.73**	**10**	*e*P	Pdif	00 19 02.6	+0.2
RES				pmax	pmax		
	comp=Z,31nm,1.2s						
RES	**Resolute Bay**	**107.73**	**10**	*e*Pdif	Pdif	00 19 02.6	+0.2
	comp=Z,31nm,1.2s						
BER	**Bergen**	**107.88**	**332**	*e*		00 23 04.1	
BER				AMS	AMS	01 13 34.8	
	comp=Z,14µm,15.7s,MS6.6						
MNS	**Montasola**	**108.10**	**313**	*e*P		00 23 11.2	
CTI	**Castel Tesino**	**108.19**	**317**	*e*P		00 23 13.0	
SFI	**Santa Sofia**	**108.45**	**314**	*e*P		00 23 10.6	
BRMO	**Bormio**	**108.97**	**317**	*e*P		00 23 14.8	
ZCCA	**Zocca**	**108.98**	**315**	*e*P		00 23 14.5	
DAVOX	**Davos**	**109.24**	**318**	PKKPbc		00 34 26.1	
	comp=Z,4.4nm,0.9s,baz=258,slow=14,SNR=4.2						
PMSA	**Palmer Station**	**109.66**	**177**	PFAKE		00 23 30.0	
PMSA				LR	LR		
	comp=Z,12µm,20.0s,MS6.5						
YKW3	**Yellowknife Ar**	**109.80**	**24**	*e*Pdif	Pdif	00 19 12.7	+1.0
YKA	**Yellowknife Ar**	**109.83**	**24**	P	Pdif	00 19 13.1	+1.2
YKA						00 34 18.1	
YKA	**Yellowknife Ar**	**109.83**	**24**	Pdiff	Pdif	00 19 13.0	+1.2
	comp=Z,3.5nm,1.1s,baz=302,slow=4.4,SNR=15						
YKA				PKiKP		00 23 14.7	
	comp=Z,5.1nm,0.8s,baz=310,slow=2.5,SNR=4.1						
YKA				PKKPbc		00 34 18.0	
	comp=Z,3.6nm,0.9s,baz=105,slow=3.5,SNR=14						
YKA	**Yellowknife Ar**	**109.83**	**24**	Pdif	Pdif	00 19 13.1	+1.2
YKA				PKPdf		00 23 14.7	
YKA				PKKPbc		00 34 18.1	
VAI	**Varese**	**110.19**	**317**	*e*PKIKP	PKPdf	00 23 15.7	-1.7
PGC	**Sidney**	**110.20**	**40**	*e*PKP	PKPdf	00 23 17.5	+0.2
FELD	**Feldberg**	**110.22**	**319**	*e*P	PKPdf	00 23 14.8	-2.6
CDF	**Champ du Feu**	**110.56**	**320**	*e*PKIKP	PKPdf	00 23 15.6	-2.4
	comp=Z,54nm,1.4s						
ECH	**Echery**	**110.68**	**320**	*e*P	PKPdf	00 23 16.9	-1.4
MCGN	**Macugnaga**	**110.70**	**317**	*e*P	PKPdf	00 23 18.2	-0.2
HGN	**Heimansgroeve**	**110.73**	**322**	*e*Pdif		00 23 18.0	
HGN				*e*PKP	PP	00 23 59.9	+3.3
PGF	**Pioggiola**	**110.75**	**313**	*e*PKIKP	PKPdf	00 23 17.3	-1.3
	comp=Z,100nm,1.4s						
MOF	**Molkenrain**	**110.80**	**319**	*e*P	PKPdf	00 23 16.5	-2.0
HINF	**Hinteralfeld**	**110.99**	**319**	*e*PKIKP	PKPdf	00 23 17.0	-1.9
	comp=Z,34nm,0.9s						
LOMF	**Lomont**	**111.13**	**319**	*e*P	PKPdf	00 23 17.4	-1.7
KBO	**Bosley Butte**	**111.18**	**47**	*e*PKP	PKPdf	00 23 18.2	-1.2
SCO	**Scoresbysund**	**111.24**	**348**	*i* P	Pdif	00 19 19.0	+1.1
SCO				*e*		00 23 13.3	
SCO				*i* S	tx	00 33 36.4	
SCO	**Scoresbysund**	**111.24**	**348**	*i* P	Pdif	00 19 19.0	+1.1
	comp=Z,2.2nm,0.9s						
SCO				*e*		00 23 13.3	
HAU	**Haudompre**	**111.26**	**320**	*e*PKIKP	PKPdf	00 23 17.9	-1.5
	comp=Z,73nm,1.2s						
HAU				*e*R			
	comp=Z,12µm,21.8s						
COR	**Corvallis**	**111.31**	**44**	*e*PKIKP	PKPdf	00 23 19.8	+0.3
COR				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.9						
THEF	**They Montfort**	**111.43**	**320**	*e*P	PKPdf	00 23 17.8	-1.9
SAOF	**Saorge**	**111.47**	**315**	*e*P	PKPdf	00 23 19.6	-0.2
AUTN	**L'Aution**	**111.56**	**315**	*e*P	PKPdf	00 23 18.6	-1.4

SBF	**Sospel**	**111.58**	**315**	*e*PKIKP	PKPdf	00 23 19.6	-0.4
	comp=Z,63nm,0.8s						
GIVF	**Givet**	**111.61**	**322**	*e*PKIKP	PKPdf	00 23 18.8	-1.1
LPG	**La Plagne**	**111.66**	**317**	*e*PKIKP	PKPdf	00 23 19.2	-0.9
	comp=Z,25nm,0.9s						
LPL	**La Plagne**	**111.66**	**317**	*e*PKIKP	PKPdf	00 23 19.0	-1.2
	comp=Z,66nm,1.3s						
TOUF	**Mont Tournerai**	**111.68**	**315**	*e*P	PKPdf	00 23 18.4	-1.8
MVIF	**Mont Vial**	**111.77**	**315**	*e*P	PKPdf	00 23 19.2	-1.2
CABF	**La Chapelle**	**111.81**	**318**	*e*PKIKP	PKPdf	00 23 19.2	-1.2
	comp=Z,48nm,0.8s						
BNI	**Bardonecchia**	**111.82**	**316**	*e*PKIKP	PKPdf	00 23 19.0	-1.5
MBDF	**Montbardon**	**111.83**	**316**	*e*PKIKP	PKPdf	00 23 19.0	-1.5
	comp=Z,26nm,0.9s						
MEZF	**Maizieres J'vi**	**111.95**	**320**	*e*PKIKP	PKPdf	00 23 18.4	-2.2
BAIF	**Baives**	**112.00**	**322**	*e*PKIKP	PKPdf	00 23 19.7	-1.0
	comp=Z,36nm,0.9s						
HUMO	**Hull Mountain**	**112.02**	**46**	*e*PKP	PKPdf	00 23 19.9	-1.0
HUMO				LR	LR		
	comp=Z,10µm,21.0s,MS6.4						
SUMG	**Summit**	**112.04**	**354**	*e*Pdif	Pdif	00 19 19.3	-2.1
FRF	**La Foret Royal**	**112.21**	**315**	*e*PKIKP	PKPdf	00 23 19.9	-1.4
	comp=Z,41nm,1.0s						
LMR	**La Mourre**	**112.36**	**315**	*e*PKIKP	PKPdf	00 23 20.0	-1.6
	comp=Z,66nm,1.1s						
YBH	**Yreka Blue Hor**	**112.39**	**47**	*e*PKIKP	PKPdf	00 23 20.6	-1.1
YBH				MLR	MLR		
	comp=Z,9µm,21.0s						
ORIF	**Oris-en-Rattie**	**112.40**	**316**	*e*PKIKP	PKPdf	00 23 20.2	-1.4
	comp=Z,19nm,0.8s						
ORIF				*e*R			
	comp=Z,17µm,21.2s						
HOPS	**Hopland**	**112.70**	**50**	PFAKE		00 23 30.0	+7.6
HOPS				LR	LR		
	comp=Z,10µm,21.0s,MS6.4						
WDC	**Whiskeytown Da**	**112.77**	**48**	*e*PKIKP	PKPdf	00 23 20.9	-1.6
WDC				MLR	MLR		
	comp=Z,13µm,22.0s,MS6.5						
SMRF	**Simiane la Rot**	**112.86**	**316**	*e*PKIKP	PKPdf	00 23 21.5	-1.1
	comp=Z,31nm,0.7s						
NSHM	**Saint Helena R**	**113.16**	**50**	*e*PKP	PKPdf	00 23 20.4	-3.0
VIVF	**Saint-Julien-l**	**113.24**	**317**	*e*PKIKP	PKPdf	00 23 21.9	-1.5
	comp=Z,95nm,1.5s						
SMF	**Signal de Mont**	**113.29**	**319**	*e*PKIKP	PKPdf	00 23 21.7	-1.7
	comp=Z,75nm,1.4s						
SSF	**Saint Saulge**	**113.38**	**319**	*e*PKIKP	PKPdf	00 23 22.2	-1.4
	comp=Z,96nm,1.1s						
AVF	**Avril sur Loir**	**113.56**	**319**	*e*PKIKP	PKPdf	00 23 22.1	-1.9
	comp=Z,36nm,1.0s						
PLDF	**La Plantade**	**113.63**	**318**	*e*P	PKPdf	00 23 23.4	-0.7
OHCM	**Honcut**	**113.84**	**49**	*e*PKP	PKPdf	00 23 23.1	-1.6
HYF	**Humbligny**	**113.88**	**320**	*e*PKIKP	PKPdf	00 23 23.5	-1.1
AGO	**Saint Agoulin**	**113.93**	**318**	*e*P	PKPdf	00 23 23.1	-1.6
BGF	**Bois d'Agland**	**113.97**	**319**	*e*PKIKP	PKPdf	00 23 23.5	-1.3
	comp=Z,69nm,0.8s						
LASF	**Ste Croix**	**114.02**	**316**	*e*PKIKP	PKPdf	00 23 23.4	-1.5
	comp=Z,110nm,1.4s						
EKA	**Eskdalemuir Ar**	**114.09**	**329**	PKKPbc		00 34 15.2	
	comp=Z,5.9nm,1.0s,baz=248,slow=4.5,SNR=3.8						
MOD	**Modoc**	**114.10**	**46**	*e*PKP	PKPdf	00 23 24.3	-0.9
MOD				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
LBL	**Lubilhac**	**114.10**	**317**	*e*P	PKPdf	00 23 23.9	-1.2
PYM	**Petit Puy Mans**	**114.11**	**318**	*e*P	PKPdf	00 23 21.8	-3.2
ESK	**Eskdalemuir**	**114.12**	**329**	PFAKE		00 23 30.0	+5.2
ESK				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
NEW	**Newport**	**114.34**	**39**	*e*PKIKP	PKPdf	00 23 23.1	-2.3
SAO	**San Andreas Ge**	**114.42**	**52**	*e*PKIKP	PKPdf	00 23 23.6	-2.2
SAO				MLR	MLR		
	comp=Z,8µm,21.0s,MS6.3						
TCF	**Toulx Ste Croi**	**114.47**	**319**	*e*PKIKP	PKPdf	00 23 24.4	-1.3
	comp=Z,87nm,1.2s						
EDM	**Edmonton**	**114.62**	**33**	*e*PKKPab		00 34 08.9	
LRV	**Little Rabbit**	**114.82**	**52**	*e*PKP	PKPdf	00 23 26.1	-0.5
CMB	**Columbia Colle**	**114.97**	**51**	PKIKP	PKPdf	00 23 21.1	-5.7
CMB	**Columbia Colle**	**114.97**	**51**	*e*PKP	PKPdf	00 23 25.2	-1.6
CMB				LR	LR		
	comp=Z,13µm,22.0s,MS6.5						
CAF	**Calviac**	**115.00**	**317**	*e*PKIKP	PKPdf	00 23 25.7	-1.0
	comp=Z,88nm,1.1s						
WVOR	**Wild Horse Val**	**115.15**	**46**	*e*PKIKP	PKPdf	00 23 25.8	-1.3
WCN	**Washoe City**	**115.15**	**49**	*e*PKIKP	PKPdf	00 23 26.5	-0.7
LDF	**La Druitiere**	**115.16**	**322**	*e*PKIKP	PKPdf	00 23 25.3	-1.7
	comp=Z,71nm,1.2s						
RJF	**Les Rejaudoux**	**115.24**	**318**	*e*PKIKP	PKPdf	00 23 26.1	-1.1
	comp=Z,127nm,1.2s						
RJF				*e*R			
	comp=Z,10µm,22.5s						
FLN	**La Foliniere**	**115.32**	**322**	*e*PKIKP	PKPdf	00 23 25.6	-1.7
	comp=Z,57nm,1.1s						
FLN				*e*R			
	comp=Z,13µm,22.0s						
PAHR	**Pah Rah Range**	**115.33**	**49**	*e*PKP	PKPdf	00 23 26.5	-1.0
BMO	**Blue Mountains**	**115.34**	**43**	Pdif	Pdif	00 19 34.9	-1.7
BMO				PKKPbc		00 33 59.8	
MTLF	**Montolieu**	**115.37**	**316**	*e*PKIKP	PKPdf	00 23 25.9	-1.7
	comp=Z,55nm,1.1s						
BORG	**Borgarnes**	**115.51**	**344**	PFAKE		00 23 40.0	+13
BORG				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
GRR	**Gorron**	**115.69**	**322**	*e*PKIKP	PKPdf	00 23 26.6	-1.5
	comp=Z,82nm,1.2s						
LFF	**La Frestale**	**115.88**	**318**	*e*PKIKP	PKPdf	00 23 27.4	-1.1
	comp=Z,82nm,1.0s						
MFF	**Saint Martin d**	**115.90**	**320**	*e*PKIKP	PKPdf	00 23 26.5	-2.0
	comp=Z,45nm,0.8s						
WALA	**Waterton Lakes**	**116.02**	**37**	*e*PKP	PKPdf	00 23 26.8	-1.9
OMM	**Old Mammoth Mi**	**116.14**	**51**	*e*PKP	PKPdf	00 23 27.5	-1.7
EMIR	**Miracle**	**116.28**	**314**	PKP	PKPdf	00 23 28.4	-1.0
NVAR	**Mina Array Bea**	**116.47**	**50**	Pdiff	Pdif	00 19 45.2	+3.6
	comp=Z,1.8nm,1.1s,baz=260,slow=2.9,SNR=7.7						
NVAR				PKP	PKPdf	00 23 29.9	+0.1
	comp=Z,15nm,0.9s,baz=270,slow=1.8,SNR=32						
NVAR				PP	PP	00 24 34.7	-3.3
	comp=Z,44nm,1.1s,baz=276,slow=5.4,SNR=13						
NVAR				PKKPbc		00 33 58.5	
	comp=Z,5.8nm,0.8s,baz=114,slow=4.5,SNR=17						
ABA	**Alger-Bouzarea**	**116.51**	**308**	P	PKPdf	00 23 27.0	-3.0
MTUM	**Tungsten Hills**	**116.53**	**51**	*e*PKP	PKPdf	00 23 28.8	-1.2
MNV	**Mina**	**116.58**	**50**	*e*PKP	PKPdf	00 23 28.8	-1.3
EMHD	**Djebel Mahouad**	**116.72**	**308**	P	PKPdf	00 23 30.0	-0.4
BMN	**Battle Mountai**	**116.73**	**47**	*e*PKP	PKPdf	00 23 28.8	-1.5
BMN				LR	LR		
	comp=Z,12µm,22.0s,MS6.5						
EPOB	**Poblet**	**116.77**	**314**	PKP	PKPdf	00 23 29.9	-0.4
SGMF	**Saint Gilles**	**116.79**	**322**	*e*PKIKP	PKPdf	00 23 27.9	-2.3
RESF	**Ens**	**116.85**	**315**	*e*P	PKPdf	00 23 29.9	-0.5
MSO	**Missoula**	**116.86**	**40**	*e*PKP	PKPdf	00 23 28.4	-1.9
ISA	**Isabella**	**117.00**	**53**	PFAKE		00 23 40.0	+9.1
ISA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
EBIE	**Bielsa**	**117.02**	**315**	PKP	PKPdf	00 23 28.9	-1.8
VIEF	**Viey**	**117.04**	**316**	*e*P	PKPdf	00 23 31.9	+1.1
ROSF	**Rostrenen**	**117.20**	**322**	*e*PKIKP	PKPdf	00 23 29.3	-1.7
EIBI	**Ibiza**	**117.24**	**311**	PKP	PKPdf	00 23 32.3	+1.1
CHMT	**Chamberlain Mo**	**117.27**	**39**	*e*PKP	PKPdf	00 23 29.1	-2.0
CHMT				*e*PKKPbc		00 33 54.8	
REYF	**Montagne du Re**	**117.27**	**316**	*e*P	PKPdf	00 23 30.2	-1.0
QUIF	**Quistinic**	**117.30**	**322**	*e*PKIKP	PKPdf	00 23 29.2	-2.0
EBR	**Ebro Roquetas**	**117.35**	**313**	*e*PKPDF	PKPdf	00 23 30.6	-0.8
TPH	**Tonopah**	**117.38**	**50**	*e*PKP	PKPdf	00 23 30.4	-1.2
TPH				LR	LR		
	comp=Z,8µm,21.0s,MS6.3						
ERTA	**Horta de San J**	**117.42**	**314**	PKP	PKPdf	00 23 31.5	-0.1
ETSF	**Etsaut**	**117.44**	**316**	*e*PKIKP	PKPdf	00 23 30.8	-0.8
	comp=Z,67nm,1.1s						
DAC	**Darwin (Calif)**	**117.55**	**52**	*e*PKP	PKPdf	00 23 31.8	-0.2
DAC				LR	LR		
	comp=Z,8µm,21.0s,MS6.3						
MWC	**Mount Wilson**	**117.66**	**54**	*e*PKP	PKPdf	00 23 31.3	-0.9
LARF	**Larrau**	**117.69**	**316**	*e*P	PKPdf	00 23 31.4	-0.6
HLID	**Hailey**	**117.73**	**43**	*e*PKP	PKPdf	00 23 31.4	-0.7
ESAC	**San Caprasio**	**117.76**	**315**	PKP	PKPdf	00 23 31.8	-0.4
EBNR	**Beni Rached**	**117.81**	**308**	P	PKPdf	00 23 32.0	-0.4
SJPF	**Ste Jean**	**117.83**	**316**	*e*PKIKP	PKPdf	00 23 30.3	-2.0
	comp=Z,67nm,1.2s						
ECHA	**Ech Chlef**	**117.97**	**308**	P	PKPdf	00 23 32.5	-0.3
EALK	**Alkurruntz**	**117.99**	**316**	PKP	PKPdf	00 23 30.6	-2.0
ELK	**Elko**	**118.08**	**46**⇑	*e*PKPdf	PKPdf	00 23 32.1	-0.8
ELK				*e*PP	PP	00 24 45.6	-3.6
ELK				*e*PKKPbc		00 33 52.0	
EMOS	**Mosqueruela**	**118.19**	**313**	PKP	PKPdf	00 23 33.0	-0.1
ETRT	**Tiaret**	**118.21**	**307**	P	PKPdf	00 23 33.5	+0.2
EANR	**'Ain N'Sour**	**118.23**	**308**	P	PKPdf	00 23 33.0	-0.3
MCMT	**McKenzie Canyo**	**118.33**	**41**	*e*PKP	PKPdf	00 23 32.1	-1.2
SFJ	**Sondre**	**118.50**	**357**	PFAKE		00 23 40.0	+6.9
SFJ				LR	LR		
	comp=Z,6µm,19.0s,MS6.3						
EBEN	**Beniarda**	**118.50**	**311**	PKP	PKPdf	00 23 33.2	-0.6
TRCR	**Troy Canyon**	**118.54**	**49**	*e*PKKPab		00 33 52.7	
BOZ	**Bozeman (W)**	**118.80**	**40**	*e*PKP	PKPdf	00 23 33.0	-1.1
PFO	**Pinyon Flat Ob**	**119.10**	**55**	*e*PKP	PKPdf	00 23 33.9	-1.1
PFO				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
BAR	**Barrett**	**119.13**	**56**	*e*PKP	PKPdf	00 23 34.4	-0.7
USHA	**Ushuaia**	**119.14**	**173**	PKP	PKPdf	00 23 32.5	-2.0
	comp=Z,69nm,1.4s,baz=285,slow=2.0,SNR=3.0						
QLMT	**Earthquake Lak**	**119.26**	**41**	*e*PKP	PKPdf	00 23 34.4	-0.6
QLMT				*e*PKKPbc		00 33 47.6	
ELAN	**Lanestosa**	**119.30**	**317**	PKP	PKPdf	00 23 32.3	-2.8
CART	**Cartagena**	**119.41**	**310**	*e*PKP	PKPdf	00 23 33.8	-1.7
HVU	**Hansel Valley**	**119.49**	**45**	*e*PKP	PKPdf	00 23 34.3	-1.2
ETOB	**Tobarra**	**119.51**	**312**	PKP	PKPdf	00 23 34.6	-1.1
EMUR	**La Murta**	**119.52**	**311**	PKP	PKPdf	00 23 34.5	-1.1
FFC	**Flin Flon**	**119.57**	**28**	*e*PKP	PKPdf	00 23 33.3	-2.0
BGU	**Big Grassy Mou**	**119.61**	**46**	*e*PKP	PKPdf	00 23 34.7	-1.1
YMR	**Madison River**	**119.62**	**41**	*e*PKPdf	PKPdf	00 23 35.5	-0.3
YMR				*e*PKKPbc		00 33 48.4	
YNR	**Norris Junctio**	**119.79**	**41**	*e*PKPdf	PKPdf	00 23 35.4	-0.6
YFT	**Old Faithful**	**119.80**	**41**	*e*PKPdf	PKPdf	00 23 35.0	-1.0
YFT				PKKPbc		00 33 45.7	
NEN	**Nelson**	**119.87**	**52**	*e*PKP	PKPdf	00 23 35.5	-0.9
SPUT	**South Promonto**	**119.89**	**45**	*e*PKPdf	PKPdf	00 23 35.1	-1.1
IMW	**Indian Meadow**	**119.95**	**42**	*e*PKPdf	PKPdf	00 23 35.2	-1.1
IMW				PKKPbc		00 33 46.5	
TRIS	**Tristan da Cun**	**119.95**	**221**	PFAKE		00 23 50.0	+13
TRIS				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
GCMT	**Greycliff**	**119.99**	**39**	*e*PKPdf	PKPdf	00 23 35.1	-1.3
DUG	**Dugway**	**120.01**	**46**	*e*PKPdf	PKPdf	00 23 35.2	-1.4
DUG				*e*PKKPbc		00 33 44.7	
DUG				LR	LR		
	comp=Z,71µm,20.0s,MS7.3						
LKWY	**Lake**	**120.04**	**41**	*e*PKPdf	PKPdf	00 23 36.1	-0.4
LKWY				*e*PKKPbc		00 33 44.6	
FCC	**Fort Churchill**	**120.08**	**21**	*e*PKPdf	PKPdf	00 23 33.6	-2.6
TPAW	**Teton Pass**	**120.10**	**42**⇑	*e*PKPdf	PKPdf	00 23 35.9	-0.7
TPAW				*e*PP	PP	00 24 59.1	-3.2
TPAW				*e*PKKPbc		00 33 44.7	
MOOW	**Moose Ponds**	**120.14**	**42**	*e*PKP	PKPdf	00 23 35.2	-1.5
EVIA	**Vianos**	**120.22**	**312**	PKP	PKPdf	00 23 36.4	-0.6
WUWY	**Wally Ulrich**	**120.22**	**42**	*e*PKP	PKPdf	00 23 35.8	-1.2
WUWY				*e*PKKPbc		00 33 44.5	
SNOW	**Snow King Moun**	**120.25**	**42**	*e*PKPdf	PKPdf	00 23 36.5	-0.5
AHID	**Auburn Hatcher**	**120.28**	**43**	*e*PKP	PKPdf	00 23 35.7	-1.4
AHID				*e*PKKPbc		00 33 41.5	
LOHW	**Long Hollow**	**120.29**	**42**	*e*PKPdf	PKPdf	00 23 36.3	-0.8
ARUT	**Antelope Range**	**120.33**	**49**	*e*PKPdf	PKPdf	00 23 36.7	-0.5
ARUT				*e*PKKPbc		00 33 42.3	
NOQ	**North Oquirrh**	**120.35**	**46**	*e*PKPdf	PKPdf	00 23 36.3	-0.9
HWUT	**Hardware Ranch**	**120.40**	**44**	*e*PKP	PKPdf	00 23 35.8	-1.5
HWUT				*e*PKKPbc		00 33 42.6	
EARI	**Arriondas**	**120.47**	**318**	PKP	PKPdf	00 23 33.2	-4.2
ENIJ	**Nijar**	**120.52**	**310**	PKP	PKPdf	00 23 36.4	-1.3
NLU	**North Lily Min**	**120.62**	**46**	*e*PKPdf	PKPdf	00 23 37.0	-0.9
NLU				*e*PKKPbc		00 33 43.6	
TCUT	**Toone Canyon**	**120.69**	**45**	*e*PKPdf	PKPdf	00 23 36.8	-1.2
GUD	**Guadarrama**	**120.74**	**314**	PKP	PKPdf	00 23 36.4	-1.7
JLU	**Jordanelle**	**120.84**	**46**	*e*PKPdf	PKPdf	00 23 36.8	-1.5
JLU				*e*PKKPbc		00 33 42.2	
EQES	**Quesada**	**120.91**	**311**	PKP	PKPdf	00 23 37.0	-1.5
MPU	**Maple Canyon**	**120.92**	**46**	*e*PKPdf	PKPdf	00 23 37.4	-1.1
ESDC	**Sonseca Array**	**120.95**	**313**	PKP	PKPdf	00 23 37.5	-1.0
	comp=Z,8.3nm,0.7s,baz=30,slow=2.5,SNR=31						
ESDC				PP	PP	00 25 10.9	+2.6
	comp=Z,8.6nm,0.9s,baz=69,slow=6.5,SNR=4.4						
ESDC				PKKPbc		00 33 42.4	
	comp=Z,7.0nm,1.2s,baz=278,slow=4.0,SNR=7.2						
ESDC	**Sonseca Array**	**120.95**	**313**	PKP	PKPdf	00 23 37.5	-1.0
ESLA	**Sonseca Array**	**120.95**	**313**	*e*PKPdf	PKPdf	00 23 37.0	-1.6
ESLA				LR	LR		
	comp=Z,36µm,21.0s,MS7.0						
MVU	**Marysvale**	**121.02**	**48**	*e*PKP	PKPdf	00 23 38.3	-0.4
MVU				LR	LR		
	comp=Z,7µm,21.0s,MS6.3						
MSU	**Marysvale**	**121.04**	**48**	*e*PKPdf	PKPdf	00 23 38.2	-0.5
MSU				*e*PKKPab		00 33 41.8	
DAU	**Daniels Canyon**	**121.05**	**46**	*e*PKPdf	PKPdf	00 23 37.4	-1.3
DAU				*e*PKKPab		00 33 40.8	
EBER	**Berja**	**121.06**	**310**	PKP	PKPdf	00 23 37.6	-1.2
PDAR	**Pinedale Array**	**121.33**	**43**	PKP	PKPdf	00 23 35.8	-3.4
	comp=Z,18nm,0.9s,baz=225,slow=2.1,SNR=39						
PDAR				PKKPbc		00 33 39.8	
	comp=Z,5.8nm,0.9s,baz=119,slow=5.3,SNR=13						
PDAR				SKKPbc		00 37 33.6	
	comp=Z,3.7nm,1.1s,baz=124,slow=5.3,SNR=3.9						
EBAN	**Banos Encina**	**121.33**	**312**	PKP	PKPdf	00 23 38.1	-1.2
ECOG	**Cogollos-Vega**	**121.45**	**311**	PKP	PKPdf	00 23 37.5	-2.1
FRB	**Frobisher Bay**	**121.45**	**6**	SKKPbc		00 37 33.4	
	comp=Z,14nm,1.2s,baz=163,slow=6.0,SNR=5.1						
TMUT	**Trail Mountain**	**121.48**	**47**	*e*PKPdf	PKPdf	00 23 39.0	-0.5
TMUT				*e*PKKPab		00 33 39.0	
LAO	**LASA Array**	**121.71**	**37**	*e*PKPdf	PKPdf	00 23 38.9	-0.9
ERON	**Agron**	**121.72**	**310**	PKP	PKPdf	00 23 38.2	-1.9
EPON	**Pontenova**	**121.75**	**318**	PKP	PKPdf	00 23 35.4	-4.5
ELUQ	**Luque**	**121.89**	**311**	PKP	PKPdf	00 23 39.4	-1.0
EADA	**Adamuz**	**121.92**	**312**	PKP	PKPdf	00 23 39.4	-1.0
ELOJ	**Sierra Loja**	**121.94**	**311**	PKP	PKPdf	00 23 37.2	-3.3
DGMT	**Dagmar**	**121.99**	**35**	*e*PKPdf	PKPdf	00 23 38.6	-1.7
SRU	**San Rafael**	**122.05**	**47**	*e*PKP	PKPdf	00 23 39.4	-1.2
SRU				*e*PKKPab		00 33 34.8	
ECAL	**Calabor**	**122.05**	**317**	PKP	PKPdf	00 23 39.3	-1.3
PBRG	**Braganca**	**122.10**	**317**	*e*PKPdf	PKPdf	00 23 40.1	-0.5
PBRG				*i* PP	PP	00 25 16.3	-0.1
ERUA	**La Rua**	**122.14**	**317**	PKP	PKPdf	00 23 37.2	-3.4
EINC	**Incio**	**122.16**	**318**	PKP	PKPdf	00 23 37.4	-3.3
EMIJ	**Mijas**	**122.60**	**310**	PKP	PKPdf	00 23 40.9	-0.8
WUAZ	**Wupatki**	**122.61**	**51**	*e*PKPdf	PKPdf	00 23 41.2	-0.5
WUAZ				LR	LR		
	comp=Z,71µm,20.0s,MS7.3						
STS	**Santiago**	**122.86**	**318**	PKP	PKPdf	00 23 35.1	-6.9
ELOB	**Lobios**	**122.98**	**317**	PKP	PKPdf	00 23 37.1	-5.1
PVRL	**Vila Real**	**122.99**	**316**	*e*PKPdf	PKPdf	00 23 41.8	-0.5
EMAZ	**Mazaricos**	**123.12**	**319**	PKP	PKPdf	00 23 37.5	-5.0
MTE	**Manteigas**	**123.22**	**315**	*e*Pdif	Pdif	00 20 13.9	+2.6
MTE				*e*PKPdf	PKPdf	00 23 42.2	-0.6
MTE				*e*PP	PP	00 25 20.8	-3.4
MTE				*e*LQ		01 01 06.2	
MTE				*e*LR	LR	01 05 20.1	
	comp=Z,6µm,20.0s						
MTE	**Manteigas**	**123.22**	**315**	*e*PKPdf	PKPdf	00 23 41.0	-1.9
ESPR	**Espera**	**123.32**	**311**	PKP	PKPdf	00 23 41.0	-2.1
PVIS	**Viseu**	**123.34**	**316**	*e*PKPdf	PKPdf	00 23 42.0	-1.0
PV10	**Paradox Valley**	**123.39**	**47**	*e*PKPdf	PKPdf	00 23 42.5	-0.7
PCBR	**Castelo Branco**	**123.40**	**315**	*e*PKPdf	PKPdf	00 23 42.6	-0.6
EBAD	**Badajoz**	**123.49**	**313**	PKP	PKPdf	00 23 40.7	-2.7
EMIN	**Mina Concepcio**	**123.61**	**312**	PKP	PKPdf	00 23 43.0	-0.6
PV01	**Paradox Valley**	**123.83**	**47**	*e*PKPdf	PKPdf	00 23 43.0	-1.1
PV01				*e*PKKPbc		00 33 29.2	
TUC	**Tucson**	**124.04**	**55**	*e*PKPdf	PKPdf	00 23 43.5	-1.2
TUC				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
EVO	**Evora**	**124.30**	**313**⇑	*i*PKIKP	PKPdf	00 23 43.9	-1.1
	comp=Z,159nm,1.2s						
EVO				*e*R			
	comp=Z,13µm,22.5s						
PALC	**Alcoutim**	**124.31**	**312**	*e*PKPdf	PKPdf	00 23 44.7	-0.4
PBEJ	**Beja**	**124.39**	**313**	*e*PKPdf	PKPdf	00 23 44.7	-0.5
PBEJ				*i* PP	PP	00 25 32.7	+0.7
MOE	**Montemor**	**124.54**	**314**	*e*PKPdf	PKPdf	00 23 44.1	-1.4
PHWY	**Pilot Hill**	**124.71**	**43**	*e*PKPdf	PKPdf	00 23 43.7	-2.0
PLOU	**Loures**	**124.97**	**314**	*e*PKPdf	PKPdf	00 23 45.7	-0.6
PTEO	**Sao Teotonio**	**125.20**	**313**	*e*PKPdf	PKPdf	00 23 47.0	+0.2
ISCO	**Idaho Springs**	**125.27**	**44**	*e*PKPdf	PKPdf	00 23 45.3	-1.5
ULM	**Lac du Bonnet**	**125.29**	**29**	PKP	PKPdf	00 23 44.5	-2.1
	comp=Z,39nm,1.0s,baz=309,slow=3.4,SNR=32						
ULM	**Lac du Bonnet**	**125.29**	**29**	*e*PKPdf	PKPdf	00 23 44.0	-2.7
ULM				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
SDCO	**Great Sand Dun**	**126.21**	**47**	*e*PKPdf	PKPdf	00 23 47.1	-1.5
ANMO	**Albuquerque**	**126.58**	**50**	PKP	PKPdf	00 23 49.1	-0.3
	comp=Z,81nm,1.1s,baz=219,slow=2.3,SNR=58						
ANMO				PP	PP	00 25 48.3	+1.9
	comp=Z,17nm,1.2s,baz=336,slow=7.9,SNR=3.1						
ANMO	**Albuquerque**	**126.58**	**50**	*e*PKPdf	PKPdf	00 23 48.8	-0.7
ANMO				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
DBIC	**Dimbokro**	**127.31**	**274**	PKP	PKPdf	00 23 49.5	-1.9
	comp=Z,24nm,0.9s,baz=73,slow=1.9,SNR=13						
DBIC				PP	PP	00 25 48.2	-3.3
	comp=Z,8.7nm,1.0s,baz=107,slow=9.4,SNR=3.7						
DBIC	**Dimbokro**	**127.31**	**274**	*e*PKPdf	PKPdf	00 23 49.2	-2.2
DBIC				LR	LR		
	comp=Z,9µm,21.0s,MS6.4						
MNTX	**Cornudas Mount**	**128.58**	**54**	*e*PKP		00 23 35.9	
MNTX				*e*PKPdf	PKPdf	00 23 52.1	-1.4
EYMN	**Ely**	**128.97**	**29**	*e*PKPdf	PKPdf	00 23 51.5	-2.3
EYMN				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
CBKS	**Cedar Bluff**	**129.75**	**43**	*e*PKPdf	PKPdf	00 23 54.1	-1.4
AMTX	**Amarillo**	**130.21**	**48**	*e*PKPdf	PKPdf	00 23 54.9	-1.6
SCHQ	**Schefferville**	**130.38**	**7**	PKP	PKPdf	00 23 54.0	-2.3
	comp=Z,26nm,0.9s,baz=15,slow=3.6,SNR=23						
SCHQ				SKKPbc		00 36 48.5	
	comp=Z,14nm,1.2s,baz=103,slow=3.9,SNR=4.4						
SCHQ	**Schefferville**	**130.38**	**7**	*e*PKPdf	PKPdf	00 23 54.1	-2.1
SCHQ				LR	LR		
	comp=Z,8µm,21.0s,MS6.4						
LTX	**Lajitas**	**130.78**	**56**	*e*PKPdf	PKPdf	00 23 56.5	-1.3
TXAR	**Lajitas Array**	**130.78**	**56**	PKhKP		00 23 43.1	
	comp=Z,1.6nm,0.9s,baz=228,slow=2.2,SNR=4.3						
TXAR				PKP	PKPdf	00 23 57.4	-0.4
	comp=Z,22nm,1.1s,baz=249,slow=1.7,SNR=23						
TXAR	**Lajitas Array**	**130.78**	**56**	PKP	PKPdf	00 23 57.4	-0.4
KSU1	**Kansas State U**	**131.68**	**41**	*e*PKPdf	PKPdf	00 23 57.1	-2.1
CJM	**Chamela**	**132.09**	**69**	*e*P	PKPdf	00 24 01.3	+0.8
WMOK	**Wichita Mounta**	**132.41**	**47**	*e*PKP		00 23 44.8	
PLCA	**Paso Flores**	**132.44**	**167**	PKhKP		00 23 53.0	
	comp=Z,3.1nm,1.1s,baz=169,slow=5.6,SNR=3.2						
PLCA				PKP	PKPdf	00 23 59.9	-0.8
	comp=Z,23nm,1.1s,baz=211,slow=2.4,SNR=13						
PLCA	**Paso Flores**	**132.44**	**167**	*e*PKPdf	PKPdf	00 23 58.0	-2.6
CFTV	**Fuerteventura**	**132.76**	**304**	PKP	PKPdf	00 23 58.0	-3.6
JFWS	**Jewell Farm**	**133.10**	**33**	*e*PKP		00 23 50.9	
COLM	**Colima**	**133.41**	**69**	*e*P	PKPdf	00 24 01.6	-1.3
JCT	**Junction City**	**133.48**	**53**	*e*PKPdf	PKPdf	00 24 01.1	-1.6
EOSO	**Osorio**	**134.09**	**304**	PKP	PKPdf	00 24 01.6	-2.4
CCM	**Cathedral Cave**	**135.69**	**38**	*e*PKP		00 23 50.6	
ZIIG	**Zihuatanejo**	**135.77**	**71**	*e*P	PKPdf	00 24 04.4	-2.9
SLM	**Saint Louis**	**135.94**	**37**	*e*PKPdf	PKPdf	00 24 05.5	-1.6
MIAR	**Mount Ida**	**136.21**	**44**	*e*PKP		00 23 55.5	
MIAR				*e*PKPdf	PKPdf	00 24 05.9	-1.8
FVM	**French Village**	**136.24**	**38**	*e*PKP		00 23 52.1	
FVM				*e*PKPdf	PKPdf	00 24 05.8	-1.8
TRQA	**Tornquist**	**136.40**	**175**	*e*PKP		00 23 54.0	
HKT	**Hockley**	**136.81**	**51**	*e*PKP		00 23 56.7	
NATX	**Nacogdoches**	**136.86**	**48**	*e*PKP		00 23 57.9	
AAM	**Ann Arbor**	**136.87**	**28**	*e*PKP		00 23 52.4	
UALR	**University of**	**136.92**	**43**	*e*PKP		00 23 57.5	
UALR				*e*PKPdf	PKPdf	00 24 07.8	-1.1
PLIG	**Platanillo**	**137.45**	**69**	*e*P	PKPdf	00 24 08.3	-2.0
HBAR	**Harrisburg**	**137.59**	**41**	*e*PKP		00 23 59.5	
BLO	**Bloomington**	**137.72**	**34**	*e*PKP		00 23 57.4	
GNAR	**Gosnell**	**137.75**	**40**	*e*PKP		00 23 58.7	
USIN	**University of**	**137.90**	**36**	*e*PKP		00 23 57.0	
USIN				*e*PKPdf	PKPdf	00 24 09.2	-1.5
GLAT	**Glass**	**138.03**	**39**	*e*PKPdf	PKPdf	00 24 08.9	-2.2
MSNY	**Massena**	**138.04**	**18**	PKP	PKPdf	00 24 03.4	-7.4
PPM	**Popocatepetl**	**138.11**	**68**	*e*P	PKPdf	00 24 13.1	+1.5
PQI	**Presque Isle**	**138.16**	**10**	PFAKE		00 24 20.0	+9.1
PQI				LR	LR		
	comp=Z,26µm,22.0s,MS6.9						
HALT	**Halls**	**138.22**	**40**	*e*PKPdf	PKPdf	00 24 09.3	-2.1
UTMT	**University of**	**138.25**	**39**	*e*PKP		00 23 58.6	
MET	**Memphis--Engin**	**138.32**	**41**	PKP		00 24 01.0	
WCI	**Wyandotte Cave**	**138.51**	**34**	*e*PKP		00 23 58.7	
ERPA	**Erie**	**138.66**	**25**	*e*PKP		00 24 00.2	
ACSO	**Alum Creek Sta**	**138.79**	**30**	*e*PKP		00 23 59.4	
ALLY	**Alegheny Colle**	**138.97**	**26**	*e*PKP		00 23 58.8	
GENY	**Geneseo**	**138.99**	**23**	*e*PKP		00 23 57.7	
WVT	**Waverly**	**139.02**	**38**	*e*PKP		00 23 59.5	
OXF	**Oxford**	**139.04**	**41**	*e*PKP		00 23 59.0	
MIV	**Mineville/With**	**139.28**	**17**	*e*PKP		00 24 00.4	
CLCH	**Cerro Calan**	**139.40**	**164**⇑	*i*P	PKPdf	00 24 11.6	-2.0
FCH	**Farellones**	**139.53**	**164**⇑	*i*P	PKPdf	00 24 09.8	-4.0
WVL	**Waterville**	**139.84**	**13**	PFAKE		00 24 20.0	+6.0
WVL				LR	LR		
	comp=Z,23µm,21.0s,MS6.9						
ACCN	**Adirondack Com**	**139.87**	**18**	*e*PKP		00 24 01.2	
HNH	**Hanover**	**139.98**	**16**	*e*PKP		00 24 03.9	
EMMW	**East Machias**	**140.15**	**11**	*e*PKP		00 24 04.4	
EMMW				LR	LR		
	comp=Z,27µm,20.0s,MS7.0						
BINY	**Binghamton**	**140.15**	**21**	*e*PKP		00 24 03.5	
VHO	**Vista Hermosa**	**140.31**	**70**	*e*P	PKPdf	00 24 13.1	-2.5
MCWV	**Mont Chateau**	**140.72**	**27**	*e*PKP		00 24 06.4	
SSPA	**Standing Stone**	**140.76**	**24**	*e*PKP		00 24 05.0	
SSPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
HUIG	**Huatulco**	**141.15**	**72**	*e*P	PKPdf	00 24 13.3	-3.9
HRV	**Harvard--Oak R**	**141.29**	**16**	PKP		00 24 04.7	
HRV				LR	LR		
	comp=Z,8µm,22.0s,MS6.4						
CPCT	**Cooper Cave**	**141.46**	**36**	*e*PKP		00 24 08.3	
WES	**Weston**	**141.47**	**16**	PKP	PKPdf	00 24 09.9	-7.2
WES				LR	LR		
	comp=Z,7µm,22.0s,MS6.4						
LRAL	**Lakeview Retre**	**141.53**	**41**	*e*PKP		00 24 08.4	
BRYW	**Bryant College**	**141.84**	**17**	PKP		00 24 02.0	
FWV	**Forest Hill**	**141.91**	**30**	*e*PKP		00 24 09.9	
MVL	**Millersville**	**141.92**	**23**	*e*PKP		00 24 07.8	
PAL	**Palisades**	**141.93**	**20**	*e*PKP		00 24 09.9	
BRNJ	**Basking Ridge**	**141.99**	**21**	*e*PKP	PKPdf	00 24 13.1	-4.8
CPNY	**Central Park**	**142.11**	**20**	PKP	PKPdf	00 24 12.1	-6.1
ELN	**Prospectdale**	**142.21**	**30**	*e*PKP	PKPdf	00 24 10.6	-7.8
SDMD	**Soldier's Deli**	**142.23**	**24**	*e*PKP	PKPdf	00 24 09.4	-9.0
TUIG	**Tuzandepetl**	**142.23**	**68**	*e*P	PKPdf	00 24 13.6	-5.4
TLL	**Tololo Astrono**	**142.33**	**161**	*i* P	PKPdf	00 24 13.4	-5.5
BLA	**Blacksburg**	**142.39**	**30**	*e*PKP	PKPdf	00 24 11.5	-7.3
BLA				LR	LR		
	comp=Z,9µm,20.0s,MS6.5						
CBN	**Corbin**	**143.02**	**26**	*e*PKP	PKPdf	00 24 13.8	-6.0
GOGA	**Godfrey**	**143.50**	**37**	PFAKE		00 24 30.0	+14
GOGA				LR	LR		
	comp=Z,7µm,20.0s,MS6.5						
JSC	**Jenkinsville**	**144.17**	**34**	*e*PKP	PKPdf	00 24 18.1	-3.8
COW	**Cow Castle Cre**	**145.15**	**35**	*e*PKPdf	PKPdf	00 24 22.4	-1.2
NHSC	**New Hope**	**145.64**	**34**⇑	*i*PKPdf	PKPdf	00 24 23.2	-1.3
NHSC				LR	LR		
	comp=Z,10µm,21.0s,MS6.6						
HBF	**Harts Bluff**	**145.66**	**35**	*e*PKPdf	PKPdf	00 24 23.1	-1.5
TWB	**Tillmans-White**	**145.68**	**34**	*e*PKPdf	PKPdf	00 24 23.8	-0.8
RGRS	**Roger Stewart**	**145.78**	**35**	*e*PKP	PKPdf	00 24 24.4	-0.4
CSU	**Charleston Sou**	**145.79**	**34**	*e*PKP	PKPdf	00 24 23.9	-0.9
PAYG	**Puerto Ayora**	**147.03**	**100**	*e*PKPbc	PKPdf	00 24 28.1	+0.7
PAYG				LR	LR		
	comp=Z,5µm,20.0s,MS6.3						
TEIG	**Tepich**	**147.07**	**61**	*e*PKPdf	PKPdf	00 24 26.1	-1.2
TEIG				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
RBDL	**Robledal**	**147.56**	**73**	*e*P	PKPdf	00 24 28.4	+0.2
RTR	**El Retiro**	**147.64**	**73**	*e*P	PKPdf	00 24 31.5	+3.1
SBLS	**San Blas**	**147.68**	**73**	*e*P	PKPdf	00 24 29.2	+0.8
SNJE	**San Jose**	**147.69**	**73**	*e*P	PKPdf	00 24 31.4	+3.0
MTO2	**Montecristo 2**	**147.81**	**72**	*e*P	PKPdf	00 24 31.5	+3.0
BOQS	**Boqueron**	**148.03**	**73**	*e*P	PKPdf	00 24 29.3	+0.4
LBRS	**Las Brisas**	**148.25**	**73**	*e*P	PKPdf	00 24 32.4	+3.1
CPUP	**Villa Florida**	**148.25**	**181**	PKPdf	PKPdf	00 24 28.2	-0.9
CPUP				PKPdf	PKPdf	00 24 31.6	+2.5
LFRS	**El Faro**	**148.25**	**73**	*e*P	PKPdf	00 24 32.3	+3.0
LCBS	**La Ceiba**	**148.33**	**73**	*e*P	PKPdf	00 24 28.9	-0.5
DWPF	**Disney**	**148.35**	**42**	PKPdf	PKPdf	00 24 29.2	+0.1
DWPF	**Disney**	**148.35**	**42**	*e*PKPdf	PKPdf	00 24 28.0	-1.2
DWPF				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
CAM4	**Nova Friburgo**	**148.44**	**208**	*e*P	PKPdf	00 24 29.6	+0.2
CAM4				*i*		00 24 33.2	
CAM4				*i*		00 24 38.8	
CAM4				*i*		00 24 47.4	
SNVI	**San Vicente**	**148.47**	**73**	*e*P	PKPdf	00 24 32.7	+3.1
VSM	**San Miguel**	**149.04**	**73**	*e*P	PKPdf	00 24 34.6	+4.0
BLLM	**Bellamira**	**149.08**	**73**	*e*P	PKPdf	00 24 31.1	+0.5
CNCH	**Conchagua**	**149.49**	**73**	*e*P	PKPdf	00 24 33.0	+1.7
LVC	**Limon Verde**	**149.95**	**159**	PKP	PKPdf	00 24 31.6	-0.3
	comp=Z,47nm,1.0s,baz=307,slow=0.5,SNR=14						
LVC				PKPbc	PKPdf	00 24 37.1	+5.3
	comp=Z,180nm,1.2s,baz=257,slow=2.8,SNR=45						

LVC	Limon Verde	149.95	159	ePKPdf	PKPdf	00 24 31.4	-0.4
LVC				ePKPbc	PKPdf	00 24 36.4	+4.5
LVC				LR	LR		
	comp=Z,9µm,22.0s,MS6.5						
LEON	Leon	150.56	75	eP	PKPdf	00 24 37.4	+4.5
MIRN	Miramar	150.73	75	eP	PKPdf	00 24 37.7	+4.5
COPN	Copaltepe	150.89	75	eP	PKPdf	00 24 37.2	+3.7
MOMJ	Momotombo	150.90	75	⇓eP	PKPdf	00 24 38.3	+4.8
TICN	Ticuantepe	151.26	75	eP	PKPdf	00 24 37.4	+3.4
WILN	Americas 2	151.28	75	eP	PKPdf	00 24 38.3	+4.2
PYTN	Playitas	151.34	74	eP	PKPdf	00 24 38.7	+4.6
APON	Apoyo	151.44	75	eP	PKPdf	00 24 39.8	+5.5
SSNN	San Juan del S	151.76	77	eP	PKPdf	00 24 39.1	+4.4
CONN	Concepcion	151.93	76	eP	PKPdf	00 24 39.1	+4.1
MADN	Villa Maderas	152.05	76	⇑eP	PKPdf	00 24 40.9	+5.7
BBSR	BB Station	152.61	13	PFAKE		00 24 50.0	+14
BBSR				LR	LR		
	comp=Z,6µm,21.0s,MS6.4						
JTS	JuntasAbangare	152.78	78	ePKPdf	PKPdf	00 24 34.5	-1.7
JTS				ePKPbc	PKPdf	00 24 41.7	+5.5
SJS	Escuela Geolog	153.70	79	eP	PKPdf	00 24 42.9	+5.4
NNA	Nana	154.28	133	ePKPdf	PKPdf	00 24 37.1	-1.2
NNA				LR	LR		
	comp=Z,1µm,21.0s,MS5.8						
RCBR	Riachuelo	155.31	243	ePKPab	PKPab	00 25 04.3	+0.4
LPAZ	La Paz	156.00	155	PKPdf	PKPdf	00 24 41.2	+0.8
LPAZ	La Paz	156.00	155	PKP	PKPdf	00 24 41.1	+0.6
	comp=Z,19nm,1.1s,baz=227,slow=1.8,SNR=17						
LPAZ	La Paz	156.00	155	PKP	PKPdf	00 24 41.1	+0.6
LPAZ				LR	LR		
	comp=Z,5µm,20.0s,MS6.4						
BAO	Brasilia Array	156.75	205	P	PKPdf	00 24 40.5	-1.0
BAO				e		00 25 10.1	
BAO				i		00 25 19.2	
BAO				e		00 28 44.5	
BDFB	Brasilia	156.75	205	PKP	PKPdf	00 24 40.9	-0.6
	comp=Z,18nm,1.0s,baz=42,slow=0.9,SNR=20						
BDFB				PKPab	PKPab	00 25 11.2	+1.2
	comp=Z,85nm,1.2s,baz=104,slow=2.5,SNR=9.3						
BDFB				PP	PP	00 28 50.0	+0.8
	comp=Z,38nm,1.2s,baz=132,slow=5.9,SNR=3.0						
OTAV	Otavalo	158.77	104	ePKPdf	PKPdf	00 24 43.6	-0.6
OTAV				LR	LR		
	comp=Z,7µm,21.0s,MS6.5						
ROSC	El Rosal	163.58	92	PKP	PKPdf	00 24 49.1	-0.1
	comp=Z,60nm,1.1s,baz=89,slow=1.5,SNR=29						
ROSC				PKPab	PKPab	00 25 41.9	+2.2
	comp=Z,34nm,0.8s,baz=270,slow=5.5,SNR=3.7						
SAML	Samuel	164.60	160	ePKPdf	PKPdf	00 24 48.7	-1.5
SAML				ePKPab	PKPab	00 25 43.5	-0.6
SAML				LR	LR		
	comp=Z,10µm,22.0s						
SJG	San Juan	165.16	32	PKPdf	PKPdf	00 24 48.5	-2.0
SJG	San Juan	165.16	32	PKP	PKPdf	00 24 48.4	-2.1
	comp=Z,40nm,0.9s,baz=48,slow=2.3,SNR=9.0						
SJG				PKPab	PKPab	00 25 46.8	+0.4
	comp=Z,30nm,1.0s,baz=14,slow=13,SNR=2.5						
SJG	San Juan	165.16	32	ePKPdf	PKPdf	00 24 47.9	-2.7
SJG				LR	LR		
	comp=Z,6µm,20.0s						
SDV	Santo Domingo	166.92	75	PKP	PKPdf	00 24 50.1	-1.9
	comp=Z,51nm,1.2s,baz=290,slow=4.3,SNR=26						
SDV				PKPab	PKPab	00 25 55.7	+1.5
	comp=Z,93nm,1.0s,baz=299,slow=2.2,SNR=11						
SDV				PP	PP	00 29 43.3	+0.2
	comp=Z,15nm,1.0s,baz=338,slow=4.9,SNR=3.4						
SDV	Santo Domingo	166.92	75	ePKPdf	PKPdf	00 24 49.9	-2.2
SDV				ePKPab	PKPab	00 25 54.8	+0.7
SDV				LR	LR		
	comp=Z,7µm,22.0s						
CPB	Codrington	167.42	18	eP	PKPdf	00 24 52.0	-0.3
BPA	Boggy Peak	167.97	19	eP	PKPdf	00 24 51.4	-1.3
GRHS	Sauteurs	172.44	29	eP	PKPdf	00 24 53.3	-2.0
TRN	Trinidad (W)	173.88	35	eP	PKPdf	00 24 55.7	-0.2

BJI ***19*** *00:09:11.7, 5.70S×122.10E, h10^{km}, mB6.0, mb5.3, Ms6.3, Msz6.1*

NEIC ***19*** *00:09:11.7±0.3, 5.67S×122.09E, h10^{km}, mb5.4/19, Error ellipse: s-maj=14.5km s-min=7.5km az=69.0*

IDC ***19*** *00:09:11.3±0.8, 5.49S×122.24E, mb5.2/12, mb1 5.3/13, mb1mx5.1/20, mbtmp5.2/13, ML3.9/1, Error ellipse: s-maj=30.9km s-min=16.4km az=63.0*

MOS ***19*** *00:09:12.9±1.3, 5.64S×122.26E, h33^{km}, mb5.7/18, Error ellipse: s-maj=19.0km s-min=8.7km az=111.0*

ISC 19 00:09:10.4±2.1**, 5.62S**±0.06×**122.18E**±0.10**, h13**^{km}±12^{km}**, h13**^{km}±1.2^{km}**:pP-P, n85,** σ1^{s}**11**/82**, mb5.3**/38**, MS6.0**/6**, 5C-1D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.51	141	P	P	00 13 26.6	-2.0
	0.4nm,0.3s,baz=318,slow=12,SNR=3.5						
ASAR	Alice Springs	21.20	149	P	P	00 14 01.2	+3.0
	83nm,0.9s,mb5.0,baz=325,slow=12,SNR=4.7						
PMG	Port Moresby	25.04	100	P	P	00 14 36.6	+0.5
	39nm,0.8s,mb5.0,baz=269,slow=7.5,SNR=6.2						
CMAR	Chiang Mai Arr	33.13	317	P	P	00 15 49.1	+0.3
	16nm,0.9s,mb5.0,baz=145,slow=6.5,SNR=5.5						
KMI	Kunming	35.94	329	eP	P	00 16 15.6	+2.8
SSE	Sheshan	36.52	359	P	P	00 16 18.8	+1.1
SSE				AMB	AMB		
	comp=Z,24nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,1µm,4.3s						
SSE	Sheshan	36.52	359	P	P	00 16 18.8	+1.1
	comp=Z,24nm,0.6s,mb5.2						
WHN	Wuhan	36.73	349	⇓P	P	00 16 20.1	+0.6
NJ2	Nanjing	37.59	355	eP	P	00 16 29.5	+2.8
NJ2				AP	pP	00 16 34.0	+3.5
NJ2				XP	sP	00 16 36.5	+4.5
NJ2				PP	PP	00 17 59.3	+4.0
NJ2				S	S	00 22 20.0	+4.6
NJ2				XS		00 22 28.0	
NJ2				AMB	AMB		
	comp=Z,120nm,1.5s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,240nm,4.6s						
CBIJ	Chichi jima	37.85	30	P	P	00 16 28.4	-0.5
	comp=Z,217nm,0.9s,mb5.9,baz=180,slow=7.1,SNR=4.6						
TAU	Tasmania Unive	43.28	153	eP	P	00 17 14.8	+1.2
DL2	Dalian	44.30	359	eP	P	00 17 22.0	0.0
DL2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
MAT	Matsushiro	44.55	18	eP	P	00 17 23.0	-1.0
MAT				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.2						
MAT	Matsushiro	44.55	18	eP	P	00 17 23.0	-1.0
	comp=Z,61nm,1.5s,mb5.2						
MAT	Matsushiro	44.55	18	P	P	00 17 22.1	-1.9
LZH	Lanzhou	44.91	339	eP	P	00 17 27.5	+0.6
LZH				AP	pP	00 17 30.8	+0.1
LZH				PP	PP	00 19 13.5	+0.6
LZH				eS	S	00 24 05.6	+1.7
LZH				XS		00 24 13.5	
LZH				AMB	AMB		
	comp=Z,67nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,321nm,6.3s						
LZH				LR	LR		
	comp=N,2µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,17.5s,MS5.2						
LZH	Lanzhou	44.91	339	eP	P	00 17 27.5	+0.6
LZH						00 19 13.5	
LZH				eS	S	00 24 05.6	+1.7
LZH				*SS		00 24 13.5	
LZH				pmax	pmax		
	comp=Z,67nm,1.5s,mb5.2						
LZH				MLR	MLR		
	comp=Z,2µm,17.5s,MS5.2						
LZH	Lanzhou	44.91	339	eP	P	00 17 27.5	+0.6
	comp=Z,67nm,1.5s,mb5.2						
LZH				pP	pP	00 17 30.7	0.0
LZH				sP	sP	00 17 32.1	-0.2
LZH				PP	PP	00 19 13.5	+0.6
LZH				eS	S	00 24 05.6	+1.7
LZH				sS		00 24 13.5	
LZH				LR	LR		
	comp=Z,2µm,17.5s,MS5.2						
BJT	Baijiatuau	45.75	354	eP	P	00 17 33.2	-0.3
BJT				pmax	pmax		
	comp=Z,117nm,1.0s						
BJT	Baijiatuau	45.75	354	eP	P	00 17 33.2	-0.3
	comp=Z,118nm,1.0s,mb5.8						
BJI	Beijing	45.77	354	P	P	00 17 33.3	-0.3
BJI				AMB	AMB		
	comp=Z,105nm,0.9s,mb5.8						
BJI				LR	LR		
	comp=N,8µm,16.4s,MS6.1						
BJI				LR	LR		
	comp=E,16µm,16.4s,MS6.1						
BJI				LR	LR		
	comp=Z,13µm,23.5s						
BJI	Beijing	45.77	354	P	P	00 17 33.3	-0.3
	comp=Z,105nm,0.9s,mb5.8						
BJI				LR	LR		
	comp=Z,13µm,23.5s,MS5.8						
LSA	Lhasa	46.05	321	eP	P	00 17 37.4	+1.4
LSA				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
LSA	Lhasa	46.05	321	eP	P	00 17 37.4	+1.4
	comp=Z,40nm,0.8s,mb5.4						
HHC	Hu-ho-hao-te	47.26	349	eP	P	00 17 44.9	-0.5
HHC				AP	pP	00 17 49.1	-0.1
HHC				XP	sP	00 17 52.8	+2.1
HHC				PP	PP	00 19 38.3	+2.3
HHC				S	S	00 24 45.1	+7.8
HHC				XS		00 24 48.8	
HHC				SCS	ScS	00 27 36.6	-0.2
HHC				AMB	AMB		
	comp=Z,40nm,1.6s,mb5.1						
HHC				LR	LR		
	comp=N,17µm,22.8s,MS6.3						
HHC				LR	LR		
	comp=E,29µm,19.2s,MS6.3						
HHC				LR	LR		
	comp=Z,21µm,21.6s,MS6.1						
HYB	Hyderabad	48.79	299	i P	P	00 17 57.5	-0.1
GTA	Gaotai	49.34	337	P	P	00 18 02.0	+0.4
GTA				AP	pP	00 18 05.3	-0.2
GTA				PP	PP	00 19 55.9	-0.3
GTA				PPP	PPP	00 20 47.8	-2.4
GTA				SCP		00 23 19.4	
GTA				S	S	00 25 05.8	-0.9
GTA				AMB	AMB		
	comp=Z,34nm,1.1s,mb5.3						
GTA				AMB	AMB		
	comp=Z,2µm,12.0s						
GTA				LR	LR		
	comp=N,17µm,18.6s,MS6.3						
GTA				LR	LR		
	comp=E,26µm,18.3s,MS6.3						
GTA				LR	LR		
	comp=Z,22µm,19.8s,MS6.2						
MDJ	Mudanjiang	50.45	7	P	P	00 18 10.3	+0.3
MDJ				AMB	AMB		
	comp=Z,45nm,1.1s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,2µm,9.2s						
MDJ	Mudanjiang	50.45	7	eP	P	00 18 09.5	-0.5
	comp=Z,48nm,1.1s,mb5.4						
ASAJ	Asahikawa	52.82	18	P	P	00 18 27.4	-0.5
	comp=Z,18nm,0.5s,mb5.3,baz=244,slow=10,SNR=6.0						
HIA	Hailar	54.70	358	eP	P	00 18 41.4	-0.3
HIA				pmax	pmax		
	comp=Z,64nm,1.1s						
HIA	Hailar	54.70	358	eP	P	00 18 41.4	-0.2
	comp=Z,64nm,1.1s,mb5.6						
ULN	Ulaanbaatar	54.90	348	eP	P	00 18 42.5	-0.7
ULN				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.6						
ULN	Ulaanbaatar	54.90	348	eP	P	00 18 42.5	-0.7
	comp=Z,64nm,1.0s,mb5.6						
SONM	Songino Array	55.01	347	P	P	00 18 43.8	-0.2
	comp=Z,25nm,1.0s,mb5.2,baz=166,slow=5.5,SNR=12						
YSS	Yuzh-Sakhalins	55.43	17	P	P	00 18 44.0	-3.0
RPZ	Rata Peaks	57.20	139	P	P	00 19 00.2	+0.4
	comp=Z,47nm,0.9s,mb5.5,baz=349,slow=3.5,SNR=3.8						
ZAK	Zakamensk	58.12	346	eP	P	00 19 02.2	-3.9
WMQ	Urumqi	58.22	331	eP	P	00 19 07.0	+0.1
WMQ				PP	PP	00 21 18.0	+0.4
WMQ				S	S	00 27 07.0	+0.4
WMQ				AMB	AMB		
	comp=Z,75nm,1.1s,mb5.6						
WMQ				LR	LR		
	comp=N,17µm,20.0s,MS6.3						
WMQ				LR	LR		
	comp=E,22µm,22.0s,MS6.3						
WMQ				LR	LR		
	comp=Z,17µm,20.0s,MS6.2						
TLY	Talaya	59.24	347	eP	P	00 19 13.7	-0.2
TLY				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.5						
TLY	Talaya	59.24	347	eP	P	00 19 13.7	-0.3
	comp=Z,51nm,1.1s,mb5.5						
CASY	Casey	61.10	185	P	P	00 19 24.5	-1.9
	comp=Z,9.9nm,0.6s,mb5.1						
KSH	Kashi	61.89	321	eP	P	00 19 32.0	-0.2
KSH				eAP	pP	00 19 37.1	+1.0
KSH				eXP	sP	00 19 40.8	+3.3
KSH				ePCP	PcP	00 20 12.3	-0.5
KSH				ePP	PP	00 21 48.3	-2.5
KSH				ePPP	tx	00 22 47.0	
KSH				eSCP		00 24 12.0	
KSH				ePCS		00 24 18.8	
KSH				eS	S	00 27 52.8	-1.1
KSH				ePS	PS	00 28 09.4	-2.5
KSH				eSCS	ScS	00 29 18.5	-1.6
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.9						
KSH				AMB	AMB		
	comp=Z,650nm,3.6s						
KSH				LR	LR		
	comp=N,6µm,15.6s,MS5.9						
KSH				LR	LR		
	comp=E,3µm,14.2s,MS5.9						
MKAR	Makanchi Array	63.00	330	eP	P	00 19 39.2	-0.2
MKAR				pmax	pmax		
	comp=Z,66nm,1.1s						
BOD	Bodaibo	63.58	355	eP	P	00 19 42.1	-0.9
AAK	Ala-Archa	64.61	323	eP	P	00 19 49.2	-0.9
AAK				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
AAK	Ala-Archa	64.61	323	eP	P	00 19 49.2	-0.8
	comp=Z,31nm,0.9s,mb5.3						
ZAL	Zalesovo	67.10	337	P	P	00 20 04.9	-0.9
	comp=Z,29nm,1.0s,mb5.3,baz=357,slow=5.8,SNR=5.4						
KURK	Kurchatov	67.46	332	eP	P	00 20 07.4	-0.7
KURK				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.7						
KURK	Kurchatov	67.46	332	eP	P	00 20 07.4	-0.7
	comp=Z,76nm,0.9s,mb5.7						
YAK	Yakutsk	67.70	4	eP	P	00 20 08.5	-1.0
YAK				pmax	pmax		
	comp=Z,79nm,0.8s,mb5.8						
YAK	Yakutsk	67.70	4	eP	P	00 20 08.5	-1.0
	comp=Z,79nm,0.8s,mb5.8						
MA2	Magadan	68.84	15	eP	P	00 20 16.4	-0.2
MA2				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
MA2	Magadan	68.84	15	eP	P	00 20 16.4	-0.2
	comp=Z,24nm,0.9s,mb5.1						
BVA0	Borovoye Array	72.88	330	i P	P	00 20 40.7	-0.4
BVA0				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
BVAR	Borovoye Array	72.88	330	P	P	00 20 41.3	+0.2
	comp=Z,16nm,0.8s,mb5.0,baz=162,slow=9.4,SNR=3.8						
CHKZ	Chkalovo	73.15	331	P	P	00 20 43.0	+0.4
CHKZ				pmax	pmax		
	comp=Z,97nm,1.4s,mb5.5						
MAW	Mawson	73.47	200	eP	P	00 20 41.7	-2.5
MAW				pmax	pmax		
	comp=Z,19nm,1.0s						
MAW	Mawson	73.47	200	P	P	00 20 43.9	-0.3
	comp=Z,19nm,1.0s,mb5.0						
VNDA	Vanda	74.83	172	eP	P	00 20 52.7	+0.7
VNDA				pmax	pmax		
	comp=Z,36nm,1.4s						
VNDA	Vanda	74.83	172	P	P	00 20 53.0	+1.0
	comp=Z,4.9nm,0.7s,mb4.5,baz=314,slow=6.5,SNR=2.7						
VNDA	Vanda	74.83	172	eP	P	00 20 52.7	+0.7
	comp=Z,36nm,1.4s,mb5.1						
SVE	Sverdlovsk	79.66	331	i P	P	00 21 21.0	+1.8
SYO	Syowa Base	82.12	201	⇑P	P	00 21 32.7	+0.8
SYO	Syowa Base	82.12	201	⇑pP	pP	00 21 35.9	0.0
KMBO	Kilima Mbogo	84.84	269	P	P	00 21 45.4	-1.6
MALT	Malatya	88.56	309	P	P	00 22 04.6	0.0
MALT				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
MALT	Malatya	88.56	309	P	P	00 22 04.6	0.0
	comp=Z,15nm,1.0s,mb5.3						
LSZ	Lusaka	92.37	254	P	P	00 22 21.8	-1.0
LSZ				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.4						
LSZ	Lusaka	92.37	254	P	P	00 22 21.8	-1.0
	comp=Z,22nm,1.2s,mb5.4						
SNAA	Sanae	95.07	195	⇑iP	P	00 22 41.5	+7.5
ILAR	Eielson Array	95.44	25	P	P	00 22 38.5	+2.7
	comp=Z,16nm,1.3s,mb5.3,baz=253,slow=5.8,SNR=4.2						
AKASG	Malin Array Be	96.19	320	P	P	00 22 41.9	+2.4
	comp=Z,2.9nm,0.7s,mb4.8,baz=71,slow=4.1,SNR=4.0						
VNA2	Neumayer--Watz	96.69	195	⇑iP	P	00 22 48.3	+6.9
VNA3	Neumayer Olymp	97.05	194	⇑iP	P	00 22 51.0	+8.0
MRLC	Muro Lucano	106.29	311	eP	Pdif	00 23 23.2	-1.8
PTQR	Pietraquaria	107.68	312	eP	Pdif	00 23 30.9	-0.2
SNTG	Esanatoglia	107.82	314	eP	Pdif	00 23 27.3	-4.4
PGD	Poggio Sodo	108.59	314	eP	Pdif	00 23 35.7	+0.6
ERBM	Eremo	109.41	315	eP	Pdif	00 23 37.4	-1.2
COW	Cow Castle Cre	145.14	35	ePKPdf	PKPdf	00 28 50.2	-1.5
NHSC	New Hope	145.63	34	ePKPdf	PKPdf	00 28 51.9	-0.7
HBF	Harts Bluff	145.65	35	ePKPdf	PKPdf	00 28 51.2	-1.4
TWB	Tillmans-White	145.67	34	ePKPdf	PKPdf	00 28 52.1	-0.5
LVC	Limon Verde	149.91	159	PKPbc	PKPdf	00 29 05.1	+5.3
	comp=Z,8.4nm,0.8s,baz=268,slow=5.1,SNR=3.0						

IDC 19 00:15:52.7±2.4**, 4.77S**×**124.24E, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.8**/15**, mbtmp3.8**/3**, ML3.4**/1**, Error ellipse: s-maj=248.4km s-min=26.1km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.01	148	P	P	00 20 05.2	-1.0
	0.1nm,0.3s,baz=320,slow=13,SNR=4.1						
ASAR	Alice Springs	20.98	155	P	P	00 20 37.8	-2.3
	1.1nm,0.5s,baz=334,slow=12,SNR=4.5						
SONM	Songino Array	54.68	345	P	P	00 25 23.5	-2.4
	0.7nm,0.5s,baz=162,slow=7.6,SNR=9.6						

IDC 19 00:20:23.1±1.5**, 6.02S**×**121.29E, mb3.9**/5**, mb1 4.0**/6**, mb1mx3.9**/17**, mbtmp3.9**/6**, ML3.9**/1**, Error ellipse: s-maj=72.8km s-min=21.0km az=53.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.77	139	P	P	00 24 42.1	-4.0
	0.4nm,0.3s,baz=316,slow=12,SNR=8.2						
ASAR	Alice Springs	21.33	147	P	P	00 25 12.3	-1.9
	0.9nm,0.5s,baz=339,slow=13,SNR=4.7						
PMG	Port Moresby	25.85	99	P	P	00 25 58.0	-0.4
	5.2nm,0.7s,baz=277,slow=4.1,SNR=3.3						
SONM	Songino Array	55.21	348	P	P	00 29 57.6	-2.6
	1.1nm,0.6s,baz=166,slow=7.7,SNR=8.3						
ZAL	Zalesovo	67.12	338	P	P	00 31 18.3	-2.5
	1.5nm,0.9s,slow=8.4,SNR=3.8						
BVAR	Borovoye Array	72.79	331	P	P	00 31 53.8	-1.5
	2.2nm,1.1s,baz=117,slow=6.6,SNR=4.2						

IDC 19 00:25:35.9±1.4**, 5.45S**×**122.57E, mb3.9**/4**, mb1 4.2**/5**, mb1mx3.9**/16**, mbtmp4.0**/5**, ML3.7**/1**, Error ellipse: s-maj=146.8km s-min=22.2km az=62.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	12.12	127	eP	P	00 28 30.7	-2.3
	9.4nm,0.8s						
FITZ	Fitzroy Crossi	12.93	167	eP	P	00 28 41.1	-2.6
	5.7nm,0.7s						
WRA	Warramunga Arr	18.40	143	P	P	00 29 51.0	-3.4
	0.3nm,0.3s,baz=318,slow=12,SNR=23						
ASAR	Alice Springs	21.15	150	P	P	00 30 23.9	-1.1
	4.1nm,0.7s,baz=330,slow=12,SNR=19						
SONM	Songino Array	54.94	347	P	P	00 35 09.6	-1.3
	1.7nm,0.6s,baz=164,slow=8.6,SNR=12						
ZAL	Zalesovo	67.09	337	P	P	00 36 30.6	-2.7
	1.1nm,0.8s,baz=345,slow=4.7,SNR=4.5						
BVAR	Borovoye Array	72.93	330	P	P	00 37 06.4	-2.5
	0.6nm,0.7s,baz=162,slow=4.6,SNR=2.9						

IDC 19 00:25:40.8±1.2**, 5.51S**×**122.21E, mb4.2**/6**, mb1 4.3**/7**, mb1mx4.1**/17**, mbtmp4.2**/7**, ML3.7**/1**, Error ellipse: s-maj=58.5km s-min=19.6km az=52.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.57	142	P	P	00 29 54.0	-7.5
	0.3nm,0.3s,baz=314,slow=13,SNR=25						
ASPA	Alice Springs	21.28	149	eP	P	00 30 27.9	-3.4
ASAR	Alice Springs	21.28	149	P	P	00 30 28.8	-2.5
	9.2nm,0.6s,baz=331,slow=12,SNR=43						
PMG	Port Moresby	25.03	100	P	P	00 31 07.4	-0.9
	2.6nm,0.4s,baz=272,slow=6.2,SNR=5.1						
STKA	Stephens Creek	31.89	148	P	P	00 32 08.0	-2.2
	2.0nm,0.9s,baz=329,slow=10,SNR=3.8						
CMAR	Chiang Mai Arr	33.07	317	P	P	00 32 18.6	-2.0
	1.1nm,0.4s,baz=144,slow=7.4,SNR=7.0						
SONM	Songino Array	54.91	347	P	P	00 35 13.9	-1.8
	2.2nm,0.8s,baz=164,slow=8.5,SNR=12						
BVAR	Borovoye Array	72.80	330	P	P	00 37 10.4	-2.7
	0.9nm,0.6s,baz=143,slow=7.4,SNR=4.7						

IDC 19 00:33:22.9±3.0**, 5.78S**×**122.39E, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.4**/15**, mbtmp3.4**/3**, ML3.4**/1**, Error ellipse: s-maj=218.7km s-min=28.2km az=64.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.26	142	P	P	00 37 38.4	-1.2
	0.1nm,0.3s,baz=315,slow=12,SNR=6.9						
ASAR	Alice Springs	20.96	149	P	P	00 38 07.4	-2.8
	0.9nm,1.1s,baz=324,slow=12,SNR=4.0						
SONM	Songino Array	55.21	347	P	P	00 42 57.7	-2.3
	0.3nm,0.6s,baz=166,slow=7.3,SNR=5.1						

IDC 19 00:34:08.0±2.5**, 4.74S**×**124.12E, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.5**/15**, mbtmp3.4**/3**, ML2.7**/1**, Error ellipse: s-maj=258.5km s-min=26.4km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.09	147	P	P	00 38 21.0	-1.6
	0.0nm,0.3s,baz=322,slow=12,SNR=2.8						
ASAR	Alice Springs	21.05	154	P	P	00 38 54.0	-2.2
	0.5nm,0.7s,baz=325,slow=11,SNR=2.3						
SONM	Songino Array	54.62	345	P	P	00 43 38.4	-2.3
	0.4nm,0.6s,baz=167,slow=8.2,SNR=3.5						

IDC 19 00:48:16.4±2.6**, 5.17S**×**123.11E, mb3.1**/2**, mb1 3.4**/3**, mb1mx3.3**/15**, mbtmp3.2**/3**, ML3.0**/1**, Error ellipse: s-maj=216.3km s-min=27.0km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.30	144	P	P	00 52 29.9	-3.8
	0.1nm,0.3s,baz=315,slow=12,SNR=6.0						
ASAR	Alice Springs	21.13	152	P	P	00 53 04.6	-0.8
	0.3nm,0.7s,baz=330,slow=12,SNR=4.6						
SONM	Songino Array	54.79	346	P	P	00 57 48.1	-2.3
	0.3nm,0.5s,baz=162,slow=9.1,SNR=3.4						

CSEM ***19*** *00:48:52.6±0.2, 34.95N×2.84W, h10^{km}±1^{km}, MD2.8, Error ellipse: s-maj=4.9km s-min=3.4km az=128.0*

CNRM ***19*** *00:48:52.5, 35.05N×2.66W, h15^{km}, MD2.8*

MDD 19 00:48:54.1±0.8**, 34.91N**×**2.80W, h7**^{km}±4^{km}**, mbLg1.9**/7**, Error ellipse: s-maj=8.2km s-min=5.2km az=140.0, PRXIMO, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAI	Zaio	0.08	36	P	Pg	00 48 55.5	-0.6
ZAI				S	Sg	00 48 58.0	+0.6
ZAI	Zaio	0.08	36	i P	Pg	00 48 55.5	-0.6
TAF	Taforalt	0.33	106	S	Sg	00 49 12.0	+6.7
EMLI	Melilla	0.41	343	P	Pg	00 49 01.5	-0.9
	349nm,0.8s,SNR=8.5						
EMLI				S	Sg	00 49 07.0	-0.9
	194nm,0.5s,SNR=4.0						

EMEL	**Melilla**	**0.41**	**342**	P	Pg	00 49 01.5	-0.8
	349nm,0.8s,SNR=8.5						
EMEL				S	Sg	00 49 07.0	-0.9
	194nm,0.5s,SNR=4.0						
TOU	**Touzarine**	**0.78**	**274**	*e*P	Pb	00 49 08.0	-1.6
TOU				*i* S	Sb	00 49 20.5	+0.3
EALB	**Alboran**	**1.05**	**350**	P	Pb	00 49 13.6	-0.5
	5.4nm,0.1s,SNR=7.9						
EALB				S	Sb	00 49 26.4	-1.4
	28nm,0.2s,SNR=4.0						
EALB	**Alboran**	**1.05**	**350**	P	Pb	00 49 13.6	-0.5
	5.4nm,0.1s,SNR=7.9						
EALB				S	Sb	00 49 26.4	-1.4
	28nm,0.2s,SNR=4.0						
TZK	**Tazeka**	**1.40**	**235**	*i* P	Pn	00 49 19.0	-1.1
TZK				*i* S	Sb	00 49 37.5	-0.6
EBER	**Berja**	**1.99**	**358**	P	Pn	00 49 27.9	-0.6
	0.9nm,0.1s,SNR=6.9						
EBER				S	Sn	00 49 51.5	-2.4
	3.2nm,0.4s,SNR=4.6						
EBER	**Berja**	**1.99**	**358**	P	Pn	00 49 27.9	-0.6
	0.9nm,0.1s,SNR=6.9						
EBER				S	Sn	00 49 51.5	-2.4
	3.2nm,0.4s,SNR=4.6						
ENIJ	**Nijar**	**2.12**	**13**	P	Pn	00 49 28.5	-1.9
	3.0nm,0.2s,SNR=7.9						
ENIJ				S	Sn	00 49 53.9	-3.3
	3.2nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.30**	**316**	P	Pn	00 49 30.0	-3.0
	9.3nm,0.8s,SNR=6.2						
EMIJ				S	Sn	00 49 54.6	-7.3
	4.7nm,0.4s,SNR=7.9						
EQES	**Quesada**	**2.90**	**356**	P	Pn	00 49 41.1	-0.4
	1.9nm,0.4s,SNR=6.3						
EQES				S	Sn	00 50 15.8	-1.2
	3.5nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**3.55**	**337**	P	Pn	00 49 48.6	-2.2
	0.2nm,0.3s,SNR=5.2						
EADA	**Adamuz**	**3.55**	**337**	P	Pn	00 49 48.6	-2.2
	0.2nm,0.3s,SNR=5.2						
ETOB	**Tobarra**	**3.86**	**15**	P	Pn	00 49 54.2	-1.0
	3.7nm,0.7s,SNR=5.8						
ETOB				S	Sn	00 50 37.1	-4.3
	2.0nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	**3.86**	**15**	P	Pn	00 49 54.2	-1.0
	3.7nm,0.7s,SNR=5.8						
ETOB				S	Sn	00 50 37.1	-4.3
	2.0nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.23**	**314**	P	Pn	00 49 57.2	-3.3
	0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	00 50 41.8	-8.9
	SNR=4.0						
EBAD	**Badajoz**	**5.12**	**320**	P	Pn	00 50 09.8	-3.2
	1.4nm,0.1s,SNR=7.9						

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*NEIC **19** 00:52:16.2, 37.92N×21.10E, h2^{km}, MD3.4(ATH), After ATH.*

*CSEM **19** 00:52:16.2, 37.92N×21.10E, h2^{km}, MD3.5/3, After ATH*

ATH 19 00:52:16.5, 37.91N×21.14E, h2^{km}, MD3.4/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.30**	**60**	*e*PG	Pg	00 52 21.7	-0.7
VLS	**Valsamata**	**0.51**	**302**	*e*PG	Pg	00 52 25.6	-1.1
VLS				*e*SG	Sg	00 52 34.3	+0.8
ITM	**Ithomi**	**0.96**	**139**	*e*PG	Pg	00 52 34.9	-0.8
EVR	**Evrytania**	**1.13**	**27**	*e*PB	Pb	00 52 38.5	0.0
LKR	**Lokris**	**1.64**	**63**	*e*PN	Pn	00 52 46.4	-0.1
VLI	**Veliai**	**1.86**	**129**	*e*PB	Pb	00 52 52.5	+1.6
VLI	**Veliai**	**1.86**	**129**	*e*Pn	Pn	00 52 53.9	+4.2

IDC 19 00:52:48.6±2.6**, 5.08S×123.36E, mb3.2**/2**, mb1 3.4**/3**, mb1mx3.4**/15**, mbtmp3.3**/3**, ML3.2**/1**, Error ellipse: s-maj=212.8km s-min=28.3km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.23**	**145**	P	P	00 57 03.1	-1.9
	0.1nm,0.3s,baz=317,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**21.09**	**152**	P	P	00 57 35.0	-2.1
	0.3nm,0.5s,baz=337,slow=14,SNR=3.0						
SONM	**Songino Array**	**54.76**	**346**	P	P	01 02 20.1	-2.3
	0.3nm,0.5s,baz=163,slow=8.1,SNR=3.8						

IDC 19 00:59:59.2±3.8**, 30.32S×138.39E, mb1 3.1**/3**, mb1mx3.1**/10**, mbtmp2.9**/3**, ML2.8**/3**, Error ellipse: s-maj=86.9km s-min=16.9km az=43.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.16**	**120**	Pn	Pn	01 00 50.3	-0.8
	0.7nm,0.3s,baz=324,slow=19,SNR=3.7						
STKA				Sn	Sn	01 01 25.6	-4.4
	1.5nm,0.3s,baz=271,slow=11,SNR=3.9						
STKA				Lg		01 01 39.1	
	5.0nm,0.3s,baz=198,slow=20,SNR=7.9						
ASAR	**Alice Springs**	**7.74**	**328**	Pn	Pn	01 01 53.8	-2.1
	0.1nm,0.3s,baz=152,slow=12,SNR=6.3						
ASAR				Sn	Sn	01 03 22.6	-2.7
	0.2nm,0.3s,baz=153,slow=22,SNR=4.3						
WRA	**Warramunga Arr**	**10.97**	**340**	Pn	P	01 02 37.8	-2.7
	0.1nm,0.3s,baz=159,slow=12,SNR=8.6						
WRA				Sn	S	01 04 39.3	-5.8
	0.1nm,0.3s,baz=161,slow=23,SNR=2.8						

IDC 19 01:00:42.5±1.6**, 5.76S×122.39E, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.8**/15**, mbtmp3.8**/5**, ML3.6**/1**, Error ellipse: s-maj=118.1km s-min=28.9km az=60.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.26**	**142**	P	P	01 04 52.3	-6.9
	0.2nm,0.3s,baz=322,slow=13,SNR=4.5						
ASAR	**Alice Springs**	**20.97**	**149**	P	P	01 05 27.6	-2.2
	1.7nm,0.6s,baz=339,slow=14,SNR=5.1						
CMAR	**Chiang Mai Arr**	**33.38**	**317**	P	P	01 07 22.8	-2.2
	0.8nm,0.6s,baz=144,slow=6.1,SNR=4.3						
SONM	**Songino Array**	**55.20**	**347**	P	P	01 10 17.7	-1.7
	1.0nm,0.6s,baz=167,slow=8.2,SNR=10						
ZAL	**Zalesovo**	**67.31**	**337**	P	P	01 11 38.8	-2.4
	0.5nm,0.7s,baz=340,slow=14,SNR=4.0						

IDC 19 01:20:00.4±1.5**, 5.35S×122.72E, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.7**/15**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=154.4km s-min=23.0km az=62.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.39**	**143**	P	P	01 24 15.9	-2.9
	0.2nm,0.3s,baz=317,slow=12,SNR=14						
ASAR	**Alice Springs**	**21.16**	**150**	P	P	01 24 48.3	-1.4
	1.0nm,0.9s,baz=332,slow=12,SNR=6.3						
SONM	**Songino Array**	**54.87**	**347**	P	P	01 29 33.4	-1.5
	0.3nm,0.4s,baz=164,slow=7.8,SNR=8.1						
ZAL	**Zalesovo**	**67.06**	**337**	P	P	01 30 55.0	-2.5
	0.6nm,0.7s,baz=1.6,slow=2.3,SNR=6.3						
BVAR	**Borovoye Array**	**72.92**	**330**	P	P	01 31 31.0	-2.3
	0.6nm,0.7s,baz=143,slow=7.4,SNR=4.6						

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*TAP **19** 02:24:26.1, 24.02N×122.37E, h28^{km}, ML3.3*

JMA 19 02:24:25.6±0.2**, 24.92N×122.35E, h42^{km}, M2.8, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.76**	**127**	P	P	02 24 39.9	0.0
YOJ				S	S	02 24 50.3	0.0
IRIF	**Iriomote-Funau**	**1.38**	**115**	P	P	02 24 48.9	0.0
IRIF				S	S	02 25 05.8	-0.4
HATJ	**Hateruma jima**	**1.58**	**123**	P	P	02 24 52.0	+0.3
HATJ				S	S	02 25 10.9	-0.2
JKRS	**Kuro-shima**	**1.66**	**114**	P	P	02 24 53.4	+0.7
JKRS				S	S	02 25 13.0	+0.1
JIJ	**Ishigaki jima**	**1.72**	**108**	P	P	02 24 54.0	+0.3
JIJ				S	S	02 25 14.2	-0.4

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*BJI **19** 02:37:50.6, 3.75N×94.98E, h30^{km}, mB4.9, mb4.5, Ms4.7, Msz4.7*

*IDC **19** 02:37:55.8±0.7, 4.76N×95.02E, mb4.5/15, mb1 4.6/16, mb1mx4.5/23, mbtmp4.5/16, ML4.7/1, MS4.8/1, Ms1 4.8/1, ms1mx3.2/22, Error ellipse: s-maj=30.4km s-min=16.9km az=43.0*

*MOS **19** 02:37:58.4±0.7, 4.69N×95.14E, h33^{km}, mb4.6/5, Error ellipse: s-maj=27.9km s-min=10.2km az=115.3*

*NEIC **19** 02:38:00.2±0.4, 4.71N×95.04E, h30^{km}, mb4.7/6, Error ellipse: s-maj=10.7km s-min=7.7km az=62.0*

ISC 19 02:37:58.8±0.5**, 4.66N**±0.07×**95.10E**±0.08**, h33^{km}, n68, σ1$\overset{s}{.}$00**/64**, mb4.5**/32**, MS4.7**/2**, 2C-5D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**14.22**	**15**	P	**P**	**02 41 20.5**	**+0.5**
	4.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**14.22**	**15**	Pn	**P**	**02 41 27.2**	**+7.2**
	1.2nm,0.3s,baz=207,slow=11,SNR=40						
MDRS	**Chennai**	**16.88**	**301**	*e*	**P**	**02 42 10.0**	**+16**
GYA	**Guiyang**	**24.34**	**26**	P	**P**	**02 43 18.4**	**+3.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
JIRN	**Jiri**	**24.40**	**341**	*e*P	**P**	**02 43 15.8**	**+0.3**
	comp=Z,15nm,0.5s,mb4.7						
PKI	**Pulchoki**	**24.59**	**339**	*e*P	**P**	**02 43 16.2**	**-1.1**
	comp=Z,5.8nm,0.3s,mb4.5						
DMN	**Daman**	**24.73**	**338**	*e*P	**P**	**02 43 17.4**	**-1.3**
	comp=Z,5.4nm,0.5s,mb4.3						
KKN	**Kakani**	**24.83**	**339**	*e*P	**P**	**02 43 19.7**	**0.0**
	comp=Z,15nm,0.7s,mb4.6						
LSA	**Lhasa**	**25.19**	**352**	*e*P	**P**	**02 43 22.3**	**-0.8**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
LSA	**Lhasa**	**25.19**	**352**	*e*P	**P**	**02 43 22.3**	**-0.7**
	comp=Z,8.2nm,0.8s,mb4.3						
GKN	**Gorkha**	**25.26**	**338**	*e*P	**P**	**02 43 24.1**	**+0.3**
	comp=Z,12nm,0.3s,mb4.9						
KOLN	**Koldanda**	**25.46**	**336**	*e*P	**P**	**02 43 26.0**	**+0.3**
	comp=Z,28nm,0.7s,mb4.9						
ENH	**Enshi**	**28.87**	**26**	P	**P**	**02 43 56.6**	**-0.1**
GTA	**Gaotai**	**34.86**	**6**	P	**P**	**02 44 47.8**	**-1.3**
GTA				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
HHC	**Hu-ho-hao-te**	**38.95**	**20**	*e*P	**P**	**02 45 23.3**	**-0.2**
HHC				AP	pP	02 45 32.5	-0.7
HHC				XP	sP	02 45 37.3	-0.2
HHC				PP	PP	02 46 59.3	+2.4
HHC				PCP	PcP	02 47 30.1	-4.1
HHC				S	**S**	**02 51 24.1**	**+4.5**
HHC				XS		02 51 40.8	
HHC				SS	SS	02 54 15.3	+11
HHC				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.3						
HHC				AMB	AMB		
	comp=Z,162nm,8.3s						
HHC				LR	LR		
	comp=N,354nm,21.4s,MS4.5						
HHC				LR	LR		
	comp=E,674nm,21.4s,MS4.5						
HHC				LR	LR		
	comp=Z,908nm,21.4s,MS4.6						
UCH	**Uchtor**	**41.66**	**337**	P	**P**	**02 45 47.6**	**+1.7**
	SNR=18						
TKM2	**Tokmak 2**	**41.85**	**338**	P	**P**	**02 45 48.7**	**+1.2**
	SNR=8.6						
KBK	**Karagaybulak**	**41.86**	**338**	P	**P**	**02 45 49.4**	**+1.8**
	SNR=19						
AML	**Almayashu**	**41.91**	**336**	P	**P**	**02 45 49.6**	**+1.7**
	SNR=17						
AAK	**Ala-Archa**	**42.02**	**337**	P	**P**	**02 45 51.3**	**+2.4**
	SNR=10						
AAK	**Ala-Archa**	**42.02**	**337**	*e*P	**P**	**02 45 47.6**	**-1.2**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
AAK	**Ala-Archa**	**42.02**	**337**	*e*P	**P**	**02 45 47.6**	**-1.2**
	comp=Z,7.7nm,0.7s,mb4.4						
CHMS	**Chumysh**	**42.23**	**338**	P	**P**	**02 45 51.4**	**+0.8**
	SNR=5.5						
EKS2	**Erkin-Say**	**42.32**	**337**	P	**P**	**02 45 52.8**	**+1.4**
	SNR=10						
USP	**Ospenovka**	**42.55**	**338**	P	**P**	**02 45 54.1**	**+0.9**
	SNR=30						
MKAR	**Makanchi Array**	**43.41**	**347**	*i* P	**P**	**02 45 59.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM	**Songino Array**	**44.10**	**11**	P	**P**	**02 46 04.6**	**-1.1**
	comp=Z,1.5nm,0.8s,mb3.8,baz=193,slow=8.8,SNR=13						
SONM				PcP	PcP	02 47 50.7	-0.3
	comp=Z,0.7nm,0.4s,baz=203,slow=4.1,SNR=7.2						
ULN	**Ulaanbaatar**	**44.25**	**12**	P	**P**	**02 46 06.9**	**0.0**
WRA	**Warramunga Arr**	**45.66**	**124**	P	**P**	**02 46 19.6**	**+1.0**
	comp=Z,12nm,0.6s,mb5.0,baz=302,slow=9.2,SNR=82						
WRAB	**Tennant Creek**	**45.66**	**124**	*e*P	**P**	**02 46 17.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
WRAB	**Tennant Creek**	**45.66**	**124**	*e*P	**P**	**02 46 17.9**	**-0.8**
	comp=Z,18nm,0.6s,mb5.2						
ASAR	**Alice Springs**	**47.16**	**128**	P	**P**	**02 46 31.6**	**+1.3**
	comp=Z,2.3nm,0.7s,mb4.2,baz=299,slow=7.9,SNR=16						
CN2	**Changchun**	**47.28**	**30**	*e*P	**P**	**02 46 30.1**	**-0.9**
KURK	**Kurchatov**	**47.94**	**346**	*i* P	**P**	**02 46 35.9**	**-0.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.3						
KURK	**Kurchatov**	**47.94**	**346**	P	**P**	**02 46 34.7**	**-1.4**
ZAL	**Zalesovo**	**49.84**	**352**	P	**P**	**02 46 49.8**	**-1.0**
	comp=Z,4.6nm,0.6s,mb4.7,baz=320,slow=5.5,SNR=27						
BVA0	**Borovoye Array**	**52.32**	**341**	*i* P	**P**	**02 47 08.5**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BVAR	**Borovoye Array**	**52.32**	**341**	P	**P**	**02 47 08.6**	**-0.8**
	comp=Z,14nm,0.9s,mb4.9,baz=141,slow=8.3,SNR=56						
CHKZ	**Chkalovo**	**52.81**	**342**	*e*P	**P**	**02 47 12.1**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.5						
CHKZ	**Chkalovo**	**52.81**	**342**	*e*P	**P**	**02 47 12.1**	**-1.0**
	comp=Z,37nm,0.6s,mb5.5						
CTA	**Charters Tower**	**55.94**	**118**	LR	LR	03 10 21.1	
	comp=Z,856nm,21.9s,MS4.8,baz=214,slow=35						
KMBO	**Kilima Mbogo**	**58.08**	**266**	P	**P**	**02 47 50.5**	**-1.3**
	comp=Z,0.7nm,0.5s,mb4.0,baz=217,slow=10,SNR=2.9						
BRTR	**Keskin Array B**	**65.25**	**312**	P	**P**	**02 48 39.0**	**-0.7**
	comp=Z,2.8nm,0.6s,mb4.5,baz=131,slow=7.3,SNR=23						
LSZ	**Lusaka**	**69.14**	**252**	P	**P**	**02 49 04.4**	**0.0**
TIRR	**Tirgusor**	**70.20**	**316**	⇓P	**P**	**02 49 10.4**	**0.0**
CFR	**Carcaliu**	**70.56**	**316**	⇓P	**P**	**02 49 12.6**	**0.0**
IDI	**Anoyia**	**71.19**	**306**	P	**P**	**02 49 16.8**	**+0.2**
	comp=Z,5.7nm,0.6s,mb4.7,baz=65,slow=6.1,SNR=7.7						
AKASG	**Malin Array Be**	**71.26**	**322**	P	**P**	**02 49 14.5**	**-2.2**
	comp=Z,5.0nm,0.8s,mb4.5,baz=88,slow=5.2,SNR=14						
VRI	**Vrincioaia**	**71.67**	**317**	⇓P	**P**	**02 49 20.2**	**+0.9**
MLR	**Muntele Rosu**	**72.13**	**316**	P	**P**	**02 49 22.3**	**+0.4**
	comp=Z,3.5nm,0.6s,mb4.5,baz=228,slow=1.8,SNR=11						
MLR	**Muntele Rosu**	**72.13**	**316**	⇓P	**P**	**02 49 22.9**	**+0.9**
BURAR	**Bucovina Array**	**73.06**	**318**	⇑P	**P**	**02 49 28.3**	**+0.8**
JOF	**Joensuu**	**74.14**	**335**	*e*p	**P**	**02 49 32.5**	**-1.0**
	comp=Z,4.7nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**75.98**	**332**	P	**P**	**02 49 43.6**	**-0.5**
	comp=Z,2.7nm,0.4s,mb4.5,baz=98,slow=5.3,SNR=41						
KAF	**Kangasniemi**	**76.07**	**333**	*e*p	**P**	**02 49 43.6**	**-1.0**
	comp=Z,4.4nm,0.5s,mb4.6,baz=103,slow=5.2						
KAF	**Kangasniemi**	**76.07**	**333**	*e*P	**P**	**02 49 43.6**	**-1.0**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
OJC	**Ojcow**	**77.04**	**320**	*e*P	**P**	**02 49 51.2**	**+0.9**
MORC	**Moravsky Berou**	**78.42**	**320**	P	**P**	**02 49 58.0**	**0.0**
ARCES	**ARCESS Array B**	**78.59**	**340**	P	**P**	**02 49 58.6**	**+0.1**
	comp=Z,1.8nm,0.4s,mb4.3,baz=100,slow=6.7,SNR=37						
GERES	**GERESS Array B**	**80.85**	**319**	P	**P**	**02 50 12.5**	**+1.4**
	comp=Z,1.8nm,0.5s,mb4.2,baz=134,slow=5.7,SNR=9.4						
HFS	**Hagfors**	**81.70**	**330**	P	**P**	**02 50 15.4**	**+0.1**
	comp=Z,1.3nm,0.3s,mb4.3,baz=114,slow=4.7,SNR=25						
SYO	**Syowa Base**	**82.64**	**197**	⇑P	**P**	**02 50 18.2**	**-1.7**
SYO	**Syowa Base**	**82.64**	**197**	⇓PcP	PcP	02 50 23.5	-1.8
DAVOX	**Davos**	**83.36**	**316**	P	**P**	**02 50 25.3**	**+1.2**
	comp=Z,4.3nm,0.3s,mb4.9,baz=101,slow=3.1,SNR=19						
IMA	**Indian Mountai**	**94.22**	**22**	*e*P	**P**	**02 51 16.3**	**+0.9**
NVAR	**Mina Array Bea**	**127.13**	**33**	PKP	PKPdf	02 57 02.4	+1.9
	comp=Z,0.3nm,0.6s,baz=330,slow=3.8,SNR=3.6						
PDAR	**Pinedale Array**	**127.77**	**23**	PKP	PKPdf	02 57 02.8	+1.3
	comp=Z,0.5nm,0.9s,baz=56,slow=5.3,SNR=4.7						
TXAR	**Lajitas Array**	**141.70**	**27**	PKhKP		02 57 25.9	
	comp=Z,0.2nm,0.7s,baz=258,slow=1.6,SNR=5.6						
TXAR				PKP	PKPdf	02 57 29.8	+2.0
	comp=Z,0.4nm,0.5s,baz=90,slow=2.7,SNR=6.5						

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*NEIC **19** 02:46:09.9±1.7, 27.25N×103.93E, h3^{km}±11^{km}, mb4.3/4, Error ellipse: s-maj=13.4km s-min=8.9km az=85.0*

*IDC **19** 02:46:09.3±0.8, 27.28N×103.89E, mb3.8/10, mb1 3.9/11, mb1mx3.8/20, mbtmp3.7/11, ML4.0/1, Error ellipse: s-maj=31.9km s-min=18.0km az=71.0*

*BJI **19** 02:46:10.9, 27.25N×103.85E, h11^{km}, mB4.9, mb4.7, ML4.2, Ms4.0, Msz3.8*

ISC 19 02:46:08.2±0.4**, 27.08N**±0.04×**103.83E**±0.05**, h10^{km}, n24, σ1$\overset{s}{.}$29**/30**, mb4.0**/13**, 1C, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.19**	**207**	P	**Pn**	**02 46 51.0**	**+5.8**
KMI				SG	**Sg**	**02 47 21.0**	**0.0**
KMI				LR	LR		
	comp=N,575nm,6.0s						
KMI				LR	LR		
	comp=E,564nm,5.0s						
KMI				LR	LR		
	comp=Z,852nm,8.0s						
KMI	**Kunming**	**2.19**	**207**	Pn	**Pn**	**02 46 51.0**	**+5.8**
KMI				Pg	**Pg**	**02 46 53.0**	**+1.1**
KMI				Sg	**Sg**	**02 47 21.0**	**0.0**
GYA	**Guiyang**	**2.61**	**103**	PG	**Pg**	**02 46 58.1**	**-2.2**
GYA				SG	**Sg**	**02 47 35.1**	**0.0**
GYA				Smax			
	comp=N,1µm,1.0s						
GYA				Smax			
	comp=E,1µm,1.2s						
CD2	**Chengdu**	**3.81**	**359**	⇑*i*PG	**Pg**	**02 47 19.3**	**-5.1**
CD2				S	**Sn**	**02 47 55.4**	**+1.7**
CD2				Smax			
	comp=N,753nm,0.8s						
CD2				Smax			
	comp=E,1µm,0.8s						
ENH	**Enshi**	**5.90**	**56**	*e*P	**Pn**	**02 47 40.5**	**+2.7**
	comp=E,76nm,0.6s						
XAN	**Xi’an**	**8.20**	**31**	P	**P**	**02 48 09.5**	**-0.7**
XAN				S	**Sn**	**02 49 37.5**	**-6.4**
XAN				Smax			
	comp=N,114nm,1.2s						
XAN				Smax			
	comp=E,144nm,1.2s						
CMAR	**Chiang Mai Arr**	**9.70**	**209**	Pn	**P**	**02 48 34.9**	**+4.0**
	comp=E,0.4nm,0.3s,baz=21,slow=13,SNR=5.3						
SONM	**Songino Array**	**20.81**	**5**	P	**P**	**02 50 51.4**	**-0.8**
	comp=E,2.0nm,1.0s,baz=186,slow=11,SNR=9.6						
CN2	**Changchun**	**24.14**	**41**	*e*P	**P**	**02 51 27.1**	**+1.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
CN2	**Changchun**	**24.14**	**41**	*e*P	**P**	**02 51 27.1**	**+1.8**
	comp=Z,10.0nm,0.6s,mb4.4						
HIA	**Hailar**	**25.33**	**25**	*e*P	**P**	**02 51 36.5**	**-0.1**
	comp=Z,3.9nm,0.6s,mb4.1						
ZAL	**Zalesovo**	**30.28**	**338**	P	**P**	**02 52 21.8**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.6,baz=337,slow=8.5,SNR=4.3						
KURK	**Kurchatov**	**30.41**	**328**	P	**P**	**02 52 22.4**	**-0.4**
CHKZ	**Chkalovo**	**36.12**	**326**	*e*P	**P**	**02 53 10.8**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.7						
WRAB	**Tennant Creek**	**55.31**	**144**	*e*P	**P**	**02 55 43.3**	**-1.3**
	comp=Z,3.0nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**55.31**	**144**	P	**P**	**02 55 45.5**	**+0.9**
	comp=Z,1.0nm,0.7s,mb4.0,baz=334,slow=8.4,SNR=11						
ASF	**Jabal al Asfar**	**57.58**	**292**	P	**P**	**02 56 01.1**	**+0.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=159,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**58.22**	**147**	P	**P**	**02 56 06.5**	**+1.3**
	comp=Z,1.0nm,0.9s,mb3.9,baz=329,slow=6.7,SNR=7.1						
FINES	**FINESS Array B**	**60.79**	**327**	P	**P**	**02 56 20.3**	**-2.1**
	comp=Z,2.0nm,0.9s,mb4.2,baz=106,slow=10,SNR=4.2						
ARCES	**ARCESS Array B**	**60.83**	**337**	P	**P**	**02 56 20.9**	**-1.7**
	comp=Z,0.8nm,0.6s,mb4.0,baz=89,slow=7.7,SNR=6.9						
ILAR	**Eielson Array**	**73.56**	**25**	P	**P**	**02 57 42.2**	**-0.6**
	comp=Z,0.3nm,0.7s,mb3.3,baz=287,slow=4.8,SNR=4.4						
INK	**Inuvik**	**76.02**	**19**	P	**P**	**02 57 56.6**	**-0.2**
	comp=Z,1.4nm,1.1s,mb3.8,baz=343,slow=6.9,SNR=3.8						
YKA	**Yellowknife Ar**	**85.59**	**17**	P	**P**	**02 58 50.0**	**+2.5**
	comp=Z,0.5nm,0.9s,mb3.7,baz=328,slow=4.8,SNR=6.3						
YKA	**Yellowknife Ar**	**85.59**	**17**	P	**P**	**02 58 50.0**	**+2.4**

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*NIED **19** 02:51:00, 30.80N×141.90E, h5^{km}, Mw4.7 Best double couple: M$_0$1.3×10^{16} NP1:φ$_s$26°, δ79°, λ104°. NP2:φ$_s$153°, δ18°, λ39°.*

*BJI **19** 02:51:09.6, 30.74N×141.68E, h17^{km}, mB4.9, mb4.6, Ms4.5, Msz4.5*

*IDC **19** 02:51:09.6±0.5, 30.71N×141.73E, mb4.3/23, mb1 4.4/26, mb1mx4.4/31, mbtmp4.3/26, ML4.1/3, MS4.1/2, Ms1 4.1/2, ms1mx3.1/32, Error ellipse: s-maj=18.3km s-min=12.1km az=85.0*

*NEIC **19** 02:51:11.9±3.4, 30.68N×141.58E, h14^{km}±20^{km}, mb4.5/16, MW4.7(NIED), Error ellipse: s-maj=7.5km s-min=5.6km az=101.0*

*JMA **19** 02:51:11.7±0.2, 30.79N×141.94E, h53^{km}, M4.6*

*MOS **19** 02:51:12.8±1.0, 30.70N×141.60E, h33^{km}, mb4.8/34, Error ellipse: s-maj=15.1km s-min=6.6km az=110.3*

ISC 19 02:51:09.9±1.5**, 30.71N**±0.03×**141.63E**±0.05**, h13^{km}**±9^{km}**, n118, σ1$\overset{s}{.}$01**/132**, mb4.4**/51**, MS4.3**/7**, 4C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.85**	**328**	P	**Pn**	**02 51 57.4**	**+1.3**
JHJ2				*e*S	**Sn**	**02 52 31.0**	**+0.4**
JHJ	**Hachijo jima 2**	**2.87**	**327**	Pn	**Pn**	**02 51 57.3**	**+0.9**
	50nm,0.3s,baz=215,slow=23,SNR=10						
JHJ				Sn	**Sn**	**02 52 29.9**	**-1.2**
	77nm,0.3s,baz=73,slow=19,SNR=3.5						
JHJ				LR	LR	02 53 06.8	
	comp=Z,2µm,19.3s,baz=86,slow=40						
CBIJ	**Chichi jima**	**3.63**	**172**	Pn	**Pn**	**02 52 07.9**	**+0.7**
	16nm,0.3s,baz=274,slow=19,SNR=11						
CBIJ				Sn	**Sn**	**02 52 49.5**	**-0.8**
	64nm,0.3s,baz=298,slow=21,SNR=7.6						
CBIJ	**Chichi jima**	**3.63**	**172**	P	**Pn**	**02 52 07.9**	**+0.7**
CBIJ				*e*S	**Sn**	**02 52 48.4**	**-2.0**
BSO1	**Boso 1**	**3.97**	**352**	P	**Pn**	**02 52 11.2**	**-0.8**
BSO1				*e*S	**Sn**	**02 52 56.5**	**-2.5**
JKO	**Kozu shima**	**4.06**	**329**	P	**Pn**	**02 52 14.5**	**+1.2**
BSO3	**Boso 3**	**4.19**	**347**	P	**Pn**	**02 52 15.1**	**0.0**
BSO3				*e*S	**Sn**	**02 53 05.9**	**+1.4**
JOD2	**Odawara 2**	**5.02**	**336**	P	**Pn**	**02 52 26.6**	**-0.3**
JRY	**Ryogami san**	**5.77**	**337**	P	**Pn**	**02 52 37.6**	**+0.2**
JRY				*e*S	**Sn**	**02 53 43.6**	**-0.6**
MAJO	**Matsushiro**	**6.48**	**335**	*e*P	**Pn**	**02 52 48.3**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,44nm,0.4s						
MAJO	**Matsushiro**	**6.48**	**335**	*e*P	**Pn**	**02 52 48.3**	**+0.8**
	comp=Z,44nm,0.4s						
MAT	**Matsushiro**	**6.48**	**335**	*e*P	**Pn**	**02 52 48.0**	**+0.5**
MAT				*e*S	**Sn**	**02 54 01.0**	**-1.1**
MAT				pmax	pmax		
	comp=Z,56nm,1.0s						
MAT	**Matsushiro**	**6.48**	**335**	*e*P	**Pn**	**02 52 48.0**	**+0.5**
	comp=Z,56nm,1.0s						
MAT				*e*S	**Sn**	**02 54 01.0**	**-1.1**
MAT	**Matsushiro**	**6.48**	**335**	P	**Pn**	**02 52 48.4**	**+0.9**
MAT				S	**Sn**	**02 54 00.6**	**-1.5**
JMK	**Ichinoseki**	**8.23**	**358**	P	**P**	**02 53 09.4**	**-2.6**
JMK				*e*S	**Sn**	**02 54 35.2**	**-11**
ASAJ	**Asahikawa**	**13.41**	**3**	P	**P**	**02 54 18.6**	**-3.9**
ASAJ						02 56 47.9	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ	**Asahikawa**	**13.41**	**3**	Pn	**P**	**02 54 18.6**	**-3.9**
	comp=Z,2.9nm,0.3s,baz=257,slow=9.9,SNR=8.4						
ASAJ				Sn	**S**	**02 56 47.9**	**-4.5**
	comp=Z,1.2nm,0.3s,baz=132,slow=28,SNR=5.1						
YSS	**Yuzh-Sakhalins**	**16.25**	**3**	⇑*e*P	**P**	**02 54 58.0**	**-1.5**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**16.25**	**3**	*e*P	**P**	**02 54 58.0**	**-1.4**
	comp=Z,17nm,0.6s						
SSE	**Sheshan**	**17.55**	**277**	P	**P**	**02 55 15.3**	**-0.7**
SSE				AMB	AMB		
	comp=Z,20nm,0.6s						
SSE				AMB	AMB		
	comp=Z,334nm,4.1s						
SSE	**Sheshan**	**17.55**	**277**	P	**P**	**02 55 15.3**	**-0.7**
	comp=Z,20nm,0.6s						
CN2	**Changchun**	**18.31**	**320**	*e*P	**P**	**02 55 24.6**	**-0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**19.49**	**280**	*e*P	**P**	**02 55 40.3**	**+0.8**

NJ2				AP		02 55 48.6	
NJ2				XP		02 55 53.3	
NJ2				PP	PP	02 55 58.5	+1.2
NJ2				PPP	PPP	02 56 07.5	+1.2
NJ2				S	S	02 59 15.0	+1.8
NJ2				XS		02 59 28.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.9s						
NJ2				AMB	AMB		
	comp=Z,400nm,4.0s						
NJ2				LR	LR		
	comp=E,400nm,15.2s						
NJ2				LR	LR		
	comp=Z,1µm,16.2s						
KLR	Kul'dur	19.96	341	eP	P	02 55 40.0	-4.7
BJI	Beijing	22.68	301	P	P	02 56 11.6	-0.8
BJI				AMB	AMB		
	comp=Z,15nm,1.4s,mb4.2						
BJI	Beijing	22.68	301	P	P	02 56 11.6	-0.8
	comp=Z,15nm,1.4s,mb4.2						
HIA	Hailar	24.84	324	eP	P	02 56 33.2	-0.1
HIA				pmax	pmax		
	comp=Z,53nm,1.1s						
HIA	Hailar	24.84	324	eP	P	02 56 33.2	-0.1
	comp=Z,53nm,1.1s,mb5.0						
HHC	Hu-ho-hao-te	26.29	301	eP	P	02 56 48.0	+1.0
HHC				AP	pP	02 56 52.1	+1.5
HHC				XP	sP	02 56 55.6	+3.3
HHC				PP	PP	02 57 30.1	+0.6
HHC				PCP	PcP	03 00 14.0	+0.2
HHC				S	S	03 01 21.8	+4.7
HHC				XS		03 01 32.5	
HHC				SCS	ScS	03 07 44.3	+3.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
HHC				AMB	AMB		
	comp=Z,109nm,4.4s						
HHC				LR	LR		
	comp=N,428nm,14.2s,MS4.3						
HHC				LR	LR		
	comp=E,490nm,16.6s,MS4.3						
HHC				LR	LR		
	comp=Z,956nm,15.4s,MS4.5						
ENH	Enshi	27.65	277	eP	P	02 56 58.1	-1.4
XAN	Xi'an	27.76	286	P	P	02 56 59.8	-0.6
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
ULN	Ulaanbaatar	31.44	313	i P	P	02 57 34.7	+1.6
ULN	Ulaanbaatar	31.44	313	eP	P	02 57 33.9	+0.7
	comp=Z,10.0nm,1.0s,mb4.6						
SONM	Songino Array	31.85	313	P	P	02 57 37.4	+0.7
	comp=Z,3.3nm,0.8s,mb4.2,baz=121,slow=7.4,SNR=25						
YAK	Yakutsk	32.29	349	i P	P	02 57 36.5	-3.9
YAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
YAK	Yakutsk	32.29	349	P	P	02 57 39.6	-0.8
BOD	Bodaibo	33.11	333	eP	P	02 57 46.4	-1.2
BOD				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
ZAK	Zakamensk	34.64	316	eP	P	02 58 01.3	+0.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
IRK	Irkutsk	34.75	319	eP	P	02 58 02.1	+0.3
IRK				e		02 59 13.9	
IRK				pmax	pmax		
	comp=Z,27nm,2.4s,mb4.8						
TLY	Talaya	34.89	318	eP	P	02 58 03.5	+0.5
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TLY	Talaya	34.89	318	eP	P	02 58 03.5	+0.5
	comp=Z,8.0nm,1.0s,mb4.6						
GTA	Gaotai	35.05	296	P	P	02 58 04.3	-0.3
GTA				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,216nm,9.9s						
GTA				LR	LR		
	comp=N,454nm,18.7s,MS4.4						
GTA				LR	LR		
	comp=E,515nm,20.6s,MS4.4						
GTA				LR	LR		
	comp=Z,1µm,19.9s,MS4.6						
MOY	Mondy	36.43	317	eP	P	02 58 15.9	-0.2
MOY				pmax	pmax		
	comp=Z,25nm,2.6s,mb4.7						
BILL	Bilibino	40.07	14	eP	P	02 58 45.2	-1.2
BILL				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.0						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.0						
TIXI	Tiksi	41.58	354	eP	P	02 58 58.8	+0.2
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
TIXI				MLR	MLR		
	comp=Z,190nm,17.0s,MS4.0						
KAKA	Kakadu	44.06	193	⇑iP	P	02 59 19.5	-0.1
	comp=Z,4.8nm,0.8s,mb4.3						
ZAL	Zalesovo	46.50	317	P	P	02 59 39.3	+0.8
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZAL	Zalesovo	46.50	317	P	P	02 59 39.3	+0.8
	comp=Z,1.3nm,0.7s,mb4.0,baz=14,slow=9.5,SNR=8.2						
NVS	Novosibirsk	47.50	318	⇑iP	P	02 59 45.4	-1.0
MKAR	Makanchi Array	47.86	307	i P	P	02 59 49.6	+0.2
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	50.15	312	i P	P	03 00 06.4	-0.6
KURK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
KURK	Kurchatov	50.15	312	eP	P	03 00 05.8	-1.2
	comp=Z,24nm,1.0s,mb5.2						
CTA	Charters Tower	50.70	174	P	P	03 00 11.2	-0.3
CTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CTA	Charters Tower	50.70	174	P	P	03 00 11.2	-0.4
	comp=Z,5.9nm,0.9s,mb4.5,baz=228,slow=15,SNR=2.9						
WRAB	Tennant Creek	50.83	189	i P	P	03 00 11.8	-0.7
WRAB	Tennant Creek	50.83	189	eP	P	03 00 11.2	-1.3
	comp=Z,9.6nm,0.8s,mb4.8						
WRA	Warramunga Arr	50.84	189	i P	P	03 00 11.6	-1.0
WRA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
WRA	Warramunga Arr	50.84	189	P	P	03 00 12.1	-0.5
	comp=Z,4.1nm,0.4s,mb4.7,baz=6.1,slow=7.7,SNR=85						
AAK	Ala-Archa	53.85	303	i P	P	03 00 33.7	-1.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
AAK	Ala-Archa	53.85	303	eP	P	03 00 33.9	-1.0
MCK	McKinley	53.87	31	P	P	03 00 35.4	+0.7
MCK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MCK	McKinley	53.87	31	P	P	03 00 35.4	+0.8
	comp=Z,1.6nm,0.8s,mb4.0						
COLA	College	54.40	30	P	P	03 00 38.9	+0.3
ASAR	Alice Springs	54.57	189	P	P	03 00 39.5	-0.9
	comp=Z,2.4nm,0.6s,mb4.4,baz=358,slow=5.0,SNR=38						
ASPA	Alice Springs	54.57	189	eP	P	03 00 39.9	-0.5
ILAR	Eielson Array	54.81	30	P	P	03 00 40.0	-1.6
	comp=Z,0.8nm,0.7s,mb3.9,baz=267,slow=5.9,SNR=8.8						
CHKZ	Chkalovo	54.89	317	eP	P	03 00 41.1	-1.3
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
CHKZ	Chkalovo	54.89	317	eP	P	03 00 41.0	-1.3
	comp=Z,4.5nm,0.8s,mb4.5						
BVA0	Borovoye Array	55.09	316	P	P	03 00 43.0	-0.8
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
BVAR	Borovoye Array	55.09	316	P	P	03 00 44.0	+0.2
	comp=Z,2.5nm,0.6s,mb4.4,baz=102,slow=7.8,SNR=14						
NDI	New Delhi	55.29	285	eP	P	03 00 44.0	-1.6
DAWY	Dawson	58.08	31	P	P	03 01 05.3	+0.4
INK	Inuvik	59.97	25	P	P	03 01 16.8	-1.3
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	59.97	25	P	P	03 01 16.8	-1.2
	comp=Z,2.6nm,1.0s,mb4.2,baz=320,slow=3.3,SNR=8.7						
STKA	Stephens Creek	62.24	180	P	P	03 01 33.2	-0.7
	comp=Z,3.1nm,1.0s,mb4.4,baz=241,slow=3.4,SNR=3.0						
NWAO	Narrogin (SRO)	67.37	202	P	P	03 02 06.5	-0.7
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NWAO	Narrogin (SRO)	67.37	202	P	P	03 02 06.5	-0.6
	comp=Z,7.6nm,0.8s,mb4.8,baz=66,slow=4.1,SNR=3.8						
YKA	Yellowknife Ar	69.22	29	i P	P	03 02 17.9	-0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	69.22	29	P	P	03 02 17.1	-1.0
	comp=Z,0.8nm,0.9s,mb3.7,baz=293,slow=6.2,SNR=4.6						
ARCES	ARCESS Array B	69.98	340	P	P	03 02 22.9	+0.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,184nm,20.1s						
ARCES	ARCESS Array B	69.98	340	P	P	03 02 22.9	+0.1
	comp=Z,3.0nm,0.9s,mb4.2,baz=60,slow=6.1,SNR=5.4						
ARCES				LR	LR	03 35 41.0	
	comp=Z,184nm,20.1s,MS4.3,baz=19,slow=38						
JOF	Joensuu	71.65	333	ep	P	03 02 32.4	-0.5
	comp=Z,4.4nm,0.6s,mb4.6						
JOF	Joensuu	71.65	333	eP	P	03 02 32.4	-0.5
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
OBN	Obninsk	73.30	325	eP	P	03 02 41.9	-0.8
OBN				e		03 02 52.7	
OBN				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
KAF	Kangasniemi	74.03	334	ep	P	03 02 46.3	-0.5
	comp=Z,7.3nm,0.6s,mb4.8,baz=51,slow=5.5						
KAF	Kangasniemi	74.03	334	eP	P	03 02 46.3	-0.5
KAF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
YBH	Yreka Blue Hor	74.14	51	P	P	03 02 48.1	+0.3
	comp=Z,0.3nm,0.4s,mb3.6,baz=180,slow=6.1,SNR=1.4						
GOF	Gofitskoye	74.50	313	eP	P	03 02 53.5	+3.6
GOF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
FINES	FINESS Array B	74.51	333	P	P	03 02 49.9	+0.3
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FINES	FINESS Array B	74.51	333	P	P	03 02 49.9	+0.3
	comp=Z,3.1nm,0.4s,mb4.6,baz=62,slow=6.2,SNR=59						
FINES	FINESS Array B	74.51	333	P	P	03 02 49.9	+0.3
NEW	Newport	74.59	43	eP	P	03 02 51.2	+0.9
NEW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NEW	Newport	74.59	43	P	P	03 02 49.8	-0.5
	comp=Z,0.9nm,0.6s,mb3.9,baz=22,slow=11,SNR=1.9						
NEW	Newport	74.59	43	eP	P	03 02 51.2	+0.9
	comp=Z,1.7nm,0.6s,mb4.2						
KIV	Kislovodsk	75.24	312	⇑iP	P	03 02 55.9	+1.7
KIV				e		03 03 07.8	
KIV				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
GNI	Garni	75.69	308	i P	P	03 02 59.0	+2.2
GNI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HLID	Hailey	78.59	46	eP	P	03 03 14.4	+1.6
NVAR	Mina Array Bea	78.68	52	P	P	03 03 14.3	+0.8
	comp=Z,1.5nm,0.8s,mb4.0,baz=291,slow=3.7,SNR=7.3						
BOZ	Bozeman (W)	79.16	43	P	P	03 03 17.4	+1.5
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
BOZ	Bozeman (W)	79.16	43	P	P	03 03 17.4	+1.5
	comp=Z,8.4nm,1.2s,mb4.5						
AKASG	Malin Array Be	79.43	323	P	P	03 03 17.2	-0.1
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	79.43	323	P	P	03 03 17.1	-0.1
	comp=Z,4.0nm,0.8s,mb4.4,baz=44,slow=5.7,SNR=11						
HFS	Hagfors	79.93	336	P	P	03 03 19.7	-0.1
HFS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HFS	Hagfors	79.93	336	P	P	03 03 19.7	0.0
	comp=Z,4.2nm,0.7s,mb4.5,baz=108,slow=4.7,SNR=14						
NB2	NORSAR Subarra	80.09	338	P	P	03 03 21.2	+0.6
	comp=Z,2.3nm,0.6s,mb4.3,baz=41,slow=5.3						
NB2	NORSAR Subarra	80.09	338	P	P	03 03 21.2	+0.6
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NOA	NORSAR Array B	80.09	338	P	P	03 03 20.8	+0.2
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	80.09	338	P	P	03 03 20.8	+0.1
	comp=Z,3.3nm,0.7s,mb4.4,baz=41,slow=5.2,SNR=9.1						
BW06	Boulder Array	82.00	45	P	P	03 03 32.4	+1.4
PDAR	Pinedale Array	82.00	45	P	P	03 03 32.1	+1.1
	comp=Z,0.8nm,0.9s,mb3.6,baz=333,slow=2.0,SNR=3.4						
BRTR	Keskin Array B	83.21	312	P	P	03 03 38.6	+1.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	83.21	312	P	P	03 03 38.6	+1.3
	comp=Z,3.4nm,0.8s,mb4.4,baz=110,slow=4.5,SNR=21						
RAYN	Ar Rayn	83.26	293	P	P	03 03 39.6	+1.6
	comp=Z,115nm,0.8s,SNR=24						
KWP	Kalwaria	83.39	325	eP	P	03 03 38.8	+0.8
KWP				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
KWP	Kalwaria	83.39	325	eP	P	03 03 38.8	+0.7
	comp=Z,11nm,0.9s,mb4.9						
PV10	Paradox Valley	84.84	48	eP	P	03 03 46.9	+1.3
ASF	Jabal al Asfar	85.21	305	P	P	03 03 48.7	+1.1
	comp=Z,3.3nm,0.8s,mb4.5,baz=168,slow=2.0,SNR=8.3						
TXAR	Lajitas Array	93.82	53	P	P	03 04 29.1	+0.7
	comp=Z,1.7nm,0.8s,mb4.5,baz=289,slow=2.8,SNR=12						

DJA 19 02:55:12.9±1.7**, 10.56S**×**116.07E, h89**^{km}±23^{km}**, MD4.7**/4**, ML3.8**/4**, 5C-1D, Error ellipse: s-maj=56.1km s-min=18.3km az=154.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	1.91	344	⇑iPn	P	02 55 43.6	-0.7
	82nm,0.4s						
KEDI	Kedomdong	2.06	1	⇓iPn	P	02 55 46.3	-0.2
	130nm,0.3s						
KEDI	Kedomdong	2.06	1	⇑iP	P	02 55 46.7	+0.2
KEDI				⇑iSn	S	02 56 10.2	-1.1
KELI	Kelakatan	2.81	326	⇑iPn	P	02 55 56.8	0.0
	22nm,0.4s						
SRDI	Scrawed	2.81	317	⇑iPn	P	02 55 55.7	-1.2
	25nm,0.2s						

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*NEIC **19** 03:03:32.7±2.4, 42.18N×130.07W, h10^{km}, mb3.5/2, Error ellipse: s-maj=28.5km s-min=10.9km az=81.0*

*IDC **19** 03:04:03.8±2.6, 43.56N×127.13W, mb2.8/2, mb1 3.2/5, mb1mx3.1/22, mbtmp2.8/5, ML3.3/3, Error ellipse: s-maj=52.1km s-min=18.6km az=50.0*

ISC 19 03:04:02.9±1.6**, 43.45N**±0.08×**127.4W**±0.2**, h10**^{km}**, n40,** σ**0**^{s}**72**/40**, mb3.0**/2**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.30	104	eP	Pn	03 04 39.4	-2.1
MPOR	Mary's Peak	2.96	68	P	Pn	03 04 49.4	-1.5
KMOR	Kings Mountain	3.53	51	P	Pn	03 04 58.3	-0.7
BROR	Big Rock Looko	3.66	75	P	Pn	03 05 00.7	0.0
IRO	Indian Ridge	3.75	80	P	Pn	03 05 02.2	0.0
SSOR	Sweet Springs	3.81	67	P	Pn	03 05 03.0	+0.1
NLO	Nicolai Mounta	3.84	45	P	Pn	03 05 03.2	-0.2
YBH	Yreka Blue Hor	3.85	115	Pn	Pn	03 05 03.6	+0.1
	0.3nm,0.3s,baz=303,slow=6.0,SNR=6.7						
FRIS	Frissel Point	3.89	77	P	Pn	03 05 04.4	+0.3
GT2	Goat Mountain	4.04	63	P	Pn	03 05 07.0	+0.7
HUOR	Husband	4.06	79	P	Pn	03 05 06.9	+0.4
PGO	Gresham	4.06	59	P	Pn	03 05 07.2	+0.7
BKCOR	Black Crater	4.19	76	P	Pn	03 05 08.7	+0.3
BMW	Boistfort Moun	4.22	43	P	Pn	03 05 07.6	-1.2
RVW	Rose Valley	4.26	49	P	Pn	03 05 09.1	-0.2
BPO	Bald Peter	4.27	72	P	Pn	03 05 10.2	+0.7
VLMM	Larch Mountain	4.35	60	P	Pn	03 05 11.0	+0.3
LVP	Lakeview Peak	4.40	52	P	Pn	03 05 11.4	+0.1
VLL	Laurance Lake	4.55	62	P	Pn	03 05 14.1	+0.7
ERK	Elk Rock	4.58	50	P	Pn	03 05 14.0	+0.2
VFP	Flag Point	4.63	64	P	Pn	03 05 15.2	+0.6
KOSW	Kosmos	4.75	49	P	Pn	03 05 16.7	+0.4
OCWA	Octopus Mounta	4.85	26	P	Pn	03 05 16.7	-1.0
ASR	Mount Adams--S	4.92	55	P	Pn	03 05 19.0	+0.3
LON	Longmire	5.14	48	P	Pn	03 05 21.8	0.0
REMR	Mount Rainier-	5.16	47	P	Pn	03 05 22.3	+0.1
WPW	White Pass	5.25	50	P	Pn	03 05 23.5	+0.1
FMW	Mount Fremont	5.32	47	P	Pn	03 05 24.4	0.0
GSM	Grass Mountain	5.44	44	P	Pn	03 05 25.9	-0.1
PGC	Sidney	5.87	26	P	Pn	03 05 27.6	-4.5
TBM	Table Mountain	6.05	50	P	Pn	03 05 35.1	+0.4
ETW	Entiat	6.46	48	P	Pn	03 05 40.4	0.0
BMO	Blue Mountains	7.38	76	eP	Pn	03 05 50.9	-2.5
NVAR	Mina Array Bea	8.50	123	Pn	P	03 06 09.2	+0.2
	0.1nm,0.3s,baz=293,slow=14,SNR=2.3						
PDAR	Pinedale Array	13.04	87	Pn	P	03 07 12.2	+1.3
	0.1nm,0.3s,baz=291,slow=15,SNR=3.4						
SDCO	Great Sand Dun	17.55	102	P	P	03 07 57.4	-12
YKA	Yellowknife Ar	20.49	17	P	P	03 08 43.0	-0.4
	0.2nm,0.6s,baz=207,slow=12,SNR=4.7						
MNTX	Cornudas Mount	20.95	117	P	P	03 08 29.6	-19
	2.6nm,1.4s						
WMOK	Wichita Mounta	23.75	102	P	P	03 09 01.6	-14
	0.6nm,0.6s,mb3.2						
ILAR	Eielson Array	24.02	339	P	P	03 09 18.9	+0.6
	0.3nm,0.8s,mb2.8,baz=153,slow=8.1,SNR=5.6						

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*IDC **19** 03:23:32.8±0.5, 5.03N×94.41E, mb4.7/24, mb1 4.8/25, mb1mx4.8/28, mbtmp4.7/25, ML4.8/1, MS3.6/1, Ms1 3.8/1, ms1mx3.0/28, Error ellipse: s-maj=24.9km s-min=12.1km az=38.0*

*MOS **19** 03:23:36.0±0.9, 5.04N×94.45E, h33^{km}, mb5.1/29, Error ellipse: s-maj=10.4km s-min=5.7km az=113.1*

*BJI **19** 03:23:36.4, 4.92N×94.48E, h45^{km}, mB4.7, mb5.1, Ms4.5, Msz4.2*

*NEIC **19** 03:23:38.6±0.2, 5.04N×94.44E, mb5.0/32, Error ellipse: s-maj=6.5km s-min=5.1km az=223.0*

ISC 19 03:23:36.6±0.3**, 4.95N**±0.04×**94.43E**±0.04**, h40**^{km}**, h40**^{km}±2.4^{km}**:pP-P, n184,** σ**0**^{s}**90**/178**, mb4.9**/82**, MS4.3**/4**, 29C-10D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.54	70	P	P	03 25 15.0	+2.2
	284nm,1.0s						
NNT	Nongplab	9.23	34	P	P	03 25 52.5	+2.4
BDT	Bhumibol Dam	13.02	20	P	P	03 26 44.0	+2.4
KKTK	Khon Kaen	14.00	35	P	P	03 27 03.0	+8.4
	864nm,0.7s						
CM31	Chiang Mai Arr	14.13	18	eP	P	03 26 56.9	+0.6
	41nm,0.6s						
CMAR	Chiang Mai Arr	14.13	18	Pn	P	03 26 58.2	+1.9
	1.5nm,0.3s,baz=216,slow=14,SNR=38						
CMAR				LR	LR	03 32 35.8	
	comp=Z,252nm,20.1s,baz=135,slow=39						
CMAR				ScP		03 35 46.6	
	0.5nm,0.3s,baz=243,slow=2.0,SNR=4.7						
CHG	Chiang Mai	14.47	17	P	P	03 27 02.0	+1.3
NANT	Nan	15.07	23	P	P	03 27 11.0	+2.5
CHRT	Chiangrai	15.72	19	⇑P	P	03 27 18.0	+1.0
	266nm,0.9s						
VIS	Vishakhapatnam	16.71	320	eP	P	03 27 29.0	-0.4
VIS				AMb	AMB	03 27 33.7	
	comp=Z,44nm,1.3s						
HYB	Hyderabad	19.88	310	eP	P	03 28 09.0	+1.6
HYB				eS	S	03 31 44.0	+0.1
HYB	Hyderabad	19.88	310	i P	P	03 28 08.0	+0.6
HYB				eS	S	03 31 44.0	+0.1
BOK	Bokaro	20.47	337	eP	P	03 28 13.1	-0.5
BOK				AMb	AMB	03 28 14.3	
	comp=Z,95nm,0.5s						
BOK				eS	S	03 31 57.5	+2.0
QIZ	Qiongzhong	20.55	46	P	P	03 28 12.4	-2.0
BLSP	Bilaspur	20.82	326	eP	P	03 28 17.4	+0.2
KMI	Kunming	21.59	21	⇑P	P	03 28 26.3	+1.3
KMI				XP		03 28 38.3	
KMI	Kunming	21.59	21	⇑P	P	03 28 26.2	+1.2
	comp=Z,0.1nm,1.3s						
KMI				sP		03 28 38.2	
JIRN	Jiri	23.91	342	eP	P	03 28 47.2	-0.6
	comp=Z,151nm,0.8s,mb5.5						
PKI	Pulchoki	24.08	340	eP	P	03 28 49.2	-0.3
	comp=Z,43nm,0.7s,mb5.0						
DMN	Daman	24.22	339	eP	P	03 28 50.6	-0.3
	comp=Z,51nm,0.8s,mb5.0						
KKN	Kakani	24.33	340	eP	P	03 28 51.1	-0.8
	comp=Z,86nm,1.0s,mb5.1						
GYA	Guiyang	24.38	27	⇓iP	P	03 28 53.4	+1.0
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,120nm,3.7s						
BHPL	Bhopal	24.50	320	eP	P	03 28 55.0	+1.4
BHPL				AMb	AMB	03 28 56.2	
	comp=Z,38nm,0.7s,mb5.0						
GKN	Gorkha	24.75	339	eP	P	03 28 56.1	+0.1
	comp=Z,125nm,0.9s,mb5.4						
LSA	Lhasa	24.81	353	P	P	03 28 56.3	-0.3
LSA	Lhasa	24.81	353	eP	P	03 28 56.1	-0.5
LSA				pmax	pmax		
	comp=Z,55nm,0.6s,mb5.3						
LSA	Lhasa	24.81	353	eP	P	03 28 56.1	-0.5
	comp=Z,55nm,0.6s,mb5.3						
KOLN	Koldanda	24.93	337	eP	P	03 28 57.8	+0.1
	comp=Z,151nm,1.0s,mb5.5						
CD2	Chengdu	27.28	18	⇑iP	P	03 29 18.0	-1.5
CD2				AMB	AMB		
	comp=Z,33nm,1.0s,mb4.8						
TGY	Tagaytay City	27.65	69	P	P	03 29 23.4	+0.3
	comp=Z,87nm,0.3s,mb5.8,baz=302,slow=11,SNR=4.9						
ENH	Enshi	28.92	28	eP	P	03 29 32.6	-1.7
	comp=Z,28nm,0.6s,mb5.2						
WHN	Wuhan	31.63	34	P	P	03 29 58.3	0.0
XAN	Xi'an	31.93	23	P	P	03 29 59.3	-1.5
XAN				AMB	AMB		
	comp=Z,76nm,0.7s,mb5.6						
LZH	Lanzhou	32.18	14	⇑P	P	03 30 01.6	-1.4
LZH				AP	pP	03 30 16.5	+2.4
LZH				XP	sP	03 30 22.1	+2.9
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.9						
LZH	Lanzhou	32.18	14	⇑P	P	03 30 01.6	-1.4
LZH				*PP	pP	03 30 16.5	+2.4
LZH				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.9						
LZH	Lanzhou	32.18	14	⇑P	P	03 30 01.6	-1.4
	comp=Z,26nm,1.2s,mb4.9						
LZH				pP	pP	03 30 16.5	+2.4
LZH				sP	sP	03 30 22.1	+2.9
GTA	Gaotai	34.65	7	P	P	03 30 23.8	-0.6
GTA				AP	pP	03 30 32.5	-2.9
GTA				AMB	AMB		
	comp=Z,35nm,0.9s,mb5.3						
NJ2	Nanjing	35.36	37	eP	P	03 30 30.4	-0.1
NJ2				AP	pP	03 30 40.4	-1.2
NJ2				XP	sP	03 30 44.4	-2.3
NJ2				S	S	03 36 01.0	-0.3
NJ2				XS		03 36 16.0	
NJ2				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
NJ2				LR	LR		
	comp=N,990nm,15.3s,MS4.8						
NJ2				LR	LR		
	comp=E,940nm,18.4s,MS4.8						
SSE	Sheshan	36.18	41	P	P	03 30 36.8	-0.6
SSE				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,101nm,3.4s						
SSE	Sheshan	36.18	41	P	P	03 30 36.7	-0.7
	comp=Z,22nm,0.7s,mb5.2						
FITZ	Fitzroy Crossi	38.37	127	⇑iP	P	03 30 55.8	-0.1
	comp=Z,21nm,0.6s,mb5.0						
HHC	Hu-ho-hao-te	38.92	21	⇑P	P	03 31 00.4	+0.2
HHC				AP	pP	03 31 09.9	-1.5
HHC				XP	sP	03 31 14.6	-1.8
HHC				PP	PP	03 32 36.6	+3.0
HHC				PCP	PcP	03 33 11.1	+0.1
HHC				SCP		03 36 53.3	
HHC				S	S	03 36 56.8	+1.2
HHC				XS		03 37 14.6	
HHC				SS	SS	03 39 44.3	+4.2
HHC				SCS	ScS	03 41 04.0	-0.4
HHC				AMB	AMB		
	comp=Z,15nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,193nm,10.7s						
HHC				LR	LR		
	comp=N,339nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=E,273nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=Z,332nm,21.4s,MS4.1						
WMQ	Urumqi	39.17	352	⇑iP	P	03 31 03.0	+0.7
WMQ				AMB	AMB		

	comp=Z,54nm,1.0s,mb5.2						
BJT	Baijiatuau	40.04	26	eP	P	03 31 09.7	+0.1
BJT				pmax	pmax		
	comp=Z,34nm,0.9s						
BJT	Baijiatuau	40.04	26	eP	P	03 31 09.7	+0.1
	comp=Z,34nm,0.9s,mb5.1						
BJI	Beijing	40.06	26	P	P	03 31 10.4	+0.7
BJI				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.8						
BJI	Beijing	40.06	26	P	P	03 31 10.4	+0.7
	comp=Z,21nm,1.1s,mb4.8						
KZA	Kyzart	40.73	338	P	P	03 31 15.9	+0.7
	SNR=5.7						
UCH	Uchtor	41.14	337	P	P	03 31 19.4	+0.8
	SNR=13						
TKM2	Tokmak 2	41.34	339	P	P	03 31 20.8	+0.6
	SNR=7.4						
AML	Almayashu	41.38	337	P	P	03 31 21.5	+1.0
	SNR=30						
AAK	Ala-Archa	41.49	338	i P	P	03 31 21.0	-0.5
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
AAK	Ala-Archa	41.49	338	eP	P	03 31 20.7	-0.8
	comp=Z,5.7nm,0.6s,mb4.4						
FRU	Bishkek	41.62	338	eP	pP	03 31 40.0	+6.2
EKS2	Erkin-Say	41.79	337	P	P	03 31 24.9	+0.9
	SNR=6.8						
USP	Ospenovka	42.04	338	P	P	03 31 26.3	+0.3
	SNR=14						
MKAR	Makanchi Array	42.99	348	i P	P	03 31 33.6	-0.2
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SONM	Songino Array	43.95	12	P	P	03 31 41.0	-0.5
	comp=Z,12nm,0.7s,mb4.7,baz=193,slow=8.1,SNR=124						
SONM				PcP	PcP	03 33 27.4	0.0
	comp=Z,3.2nm,0.7s,baz=197,slow=3.9,SNR=5.7						
ULN	Ulaanbaatar	44.11	12	i P	P	03 31 41.8	-1.0
ULN	Ulaanbaatar	44.11	12	eP	P	03 31 41.5	-1.3
	comp=Z,7.8nm,0.6s,mb4.6						
SNY	Shenyang	44.99	31	⇓P	P	03 31 49.8	-0.1
SNY				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
ZAK	Zakamensk	45.89	8	⇑iP	P	03 31 56.4	-0.6
ZAK				e		03 32 02.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
WRA	Warramunga Arr	46.38	124	P	P	03 32 01.9	+0.7
	comp=Z,38nm,0.6s,mb5.5,baz=302,slow=9.1,SNR=362						
WRAB	Tennant Creek	46.38	123	c iP	P	03 32 02.1	+0.8
WRAB	Tennant Creek	46.38	123	eP	P	03 32 01.7	+0.4
	comp=Z,66nm,0.7s,mb5.7						
TLY	Talaya	47.21	8	d iP	P	03 32 07.8	+0.5
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
CN2	Changchun	47.37	30	eP	P	03 32 07.5	-1.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
KURK	Kurchatov	47.50	346	i P	P	03 32 09.8	+0.1
KURK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
KURK	Kurchatov	47.50	346	eP	P	03 32 09.4	-0.2
	comp=Z,19nm,0.8s,mb5.2						
ASPA	Alice Springs	47.86	128	⇑iP	P	03 32 13.3	+0.4
ASAR	Alice Springs	47.86	128	P	P	03 32 13.3	+0.5
	comp=Z,10nm,0.7s,mb5.0,baz=299,slow=7.8,SNR=175						
ASAR				PcP	PcP	03 33 41.6	+0.2
	comp=Z,4.0nm,0.7s,baz=312,slow=4.0,SNR=5.2						
HIA	Hailar	49.10	22	eP	P	03 32 21.1	-1.0
HIA				pmax	pmax		
	comp=Z,14nm,1.1s						
HIA	Hailar	49.10	22	eP	P	03 32 21.1	-1.0
	comp=Z,14nm,1.1s,mb4.9						
ZAL	Zalesovo	49.47	353	P	P	03 32 25.0	+0.1
	comp=Z,18nm,0.6s,mb5.3,baz=300,slow=5.8,SNR=84						
NVS	Novosibirsk	50.56	352	⇑iP	P	03 32 31.7	-1.5
NVS				i	pP	03 32 42.9	-1.7
NVS				pmax	pmax		
	comp=N,13nm,0.8s						
NVS				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
NVS				pmax	pmax		
	comp=E,8.0nm,0.6s						
RAYN	Ar Rayn	50.59	296	P	P	03 32 34.6	+0.8
	comp=E,50nm,0.7s,mb5.6,SNR=8.5						
BVA0	Borovoye Array	51.84	342	i P	P	03 32 41.9	-0.9
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BVAR	Borovoye Array	51.84	342	P	P	03 32 42.0	-0.8
	comp=Z,12nm,0.7s,mb5.0,baz=143,slow=9.5,SNR=63						
BVAR				PcP	PcP	03 33 55.7	+0.2
	comp=Z,4.2nm,0.7s,baz=162,slow=4.7,SNR=3.9						
CHKZ	Chkalovo	52.33	342	eP	P	03 32 45.7	-0.8
KLR	Kul'dur	54.26	29	eP	P	03 32 56.8	-4.1
PMG	Port Moresby	54.45	105	P	P	03 33 02.4	-0.3
	comp=Z,13nm,0.9s,mb4.8,baz=209,slow=13,SNR=3.2						
BOD	Bodaibo	54.92	13	⇓iP	P	03 33 04.2	-1.4
BOD				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
GNI	Garni	56.69	316	i P	P	03 33 17.8	-0.8
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GNI	Garni	56.69	316	P	P	03 33 18.0	-0.6
	comp=Z,8.1nm,1.0s,mb4.7,baz=180,slow=9.1,SNR=3.7						
TI2	Plekhanov	57.36	317	eP	P	03 33 23.4	+0.1
KMBO	Kilima Mbogo	57.43	266	eP	P	03 33 25.2	+1.0
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMBO	Kilima Mbogo	57.43	266	P	P	03 33 25.5	+1.3
	comp=Z,2.3nm,0.9s,mb4.2,baz=58,slow=10,SNR=6.9						
KMBO	Kilima Mbogo	57.43	266	eP	P	03 33 25.2	+1.0
	comp=Z,4.9nm,1.1s,mb4.5						
STKA	Stephens Creek	57.91	133	P	P	03 33 27.2	-0.1
	comp=Z,8.4nm,1.1s,mb4.7,baz=298,slow=2.2,SNR=5.1						
SVE	Sverdlovsk	58.21	339	eP	P	03 33 28.0	-1.1
SVE				e	pP	03 33 41.0	+0.3
SVE				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
YSS	Yuzh-Sakhalins	58.92	37	eP	P	03 33 33.1	-1.1
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
YSS	Yuzh-Sakhalins	58.92	37	eP	P	03 33 33.1	-1.1
	comp=Z,30nm,0.9s,mb5.3						
KIV	Kislovodsk	59.68	319	c iP	P	03 33 37.5	-2.0
KIV				pmax	pmax		
	comp=Z,30nm,1.7s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.0						
ASF	Jabal al Asfar	60.06	304	P	P	03 33 42.4	+0.1
	comp=Z,1.1nm,0.5s,mb4.1,baz=315,slow=11,SNR=3.9						
EIL	Elat	61.14	301	eP	P	03 33 49.0	-0.6
	comp=Z,5.2nm,0.8s,mb4.7						
SOC	Sochi	61.50	318	eP	P	03 33 47.1	-4.7
SOC				e		03 34 32.3	
SOC				e		03 36 03.2	
SOC				eS	S	03 42 07.9	-0.9
SOC				e		03 43 34.6	
SOC				eSS	SS	03 46 11.7	+0.1
SOC				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2						
SOC				pmax	pmax		
	comp=N,17nm,0.7s						
SOC				pmax	pmax		
	comp=E,15nm,0.8s						
YAK	Yakutsk	62.67	18	eP	P	03 33 56.9	-2.5
YAK				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.3						
YAK	Yakutsk	62.67	18	eP	P	03 33 56.9	-2.5
	comp=Z,15nm,0.6s,mb5.3						
BRTR	Keskin Array B	64.56	312	P	P	03 34 10.9	-1.2
	comp=Z,4.2nm,0.7s,mb4.6,baz=128,slow=7.2,SNR=28						
OBN	Obninsk	68.00	328	α iP	P	03 34 32.4	-1.3
OBN				i	pP	03 34 45.1	-0.5
OBN						03 37 05.0	
OBN				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.2						
OBN	Obninsk	68.00	328	eP	P	03 34 32.0	-1.7
	comp=Z,47nm,1.2s,mb5.4						
SKR	Severo-Kuril's	68.49	37	eP	P	03 34 32.5	-4.3
SKR				e		03 34 38.5	
SKR				pmax	pmax		
	comp=E,20nm,0.5s						
SKR				pmax	pmax		
	comp=Z,70nm,0.5s,mb6.0						
LSZ	Lusaka	68.59	252	eP	P	03 34 38.5	+0.5
MA2	Magadan	69.22	27	eP	P	03 34 40.0	-1.2
MA2				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
MA2	Magadan	69.22	27	eP	P	03 34 40.0	-1.2
	comp=Z,20nm,1.1s,mb5.0						
TIRR	Tirgusor	69.52	316	⇓P	P	03 34 42.7	-0.6
CFR	Carcaliu	69.89	316	P	P	03 34 45.1	-0.4
CFR	Carcaliu	69.89	316	⇑P	P	03 34 45.3	-0.2
HARR	Harsova	69.91	316	⇓P	P	03 34 45.5	-0.1
TIXI	Tiksi	70.03	11	⇑iP	P	03 34 44.4	-1.5
TIXI				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.4						
IDI	Anoyia	70.47	306	P	P	03 34 48.6	-0.7
	comp=Z,4.2nm,0.5s,mb4.6,baz=74,slow=19,SNR=5.4						
AKASG	Malin Array Be	70.62	322	P	P	03 34 48.2	-1.6
	comp=Z,2.3nm,0.6s,mb4.3,baz=88,slow=5.0,SNR=13						
VRI	Vrincioaia	71.01	317	⇓P	P	03 34 52.7	+0.4
MLR	Muntele Rosu	71.46	316	P	P	03 34 55.6	+0.6
	comp=Z,12nm,0.9s,mb4.8,baz=160,slow=3.6,SNR=21						
MLR	Muntele Rosu	71.46	316	⇑P	P	03 34 55.5	+0.5
BURAR	Bucovina Array	72.40	318	⇓P	P	03 35 01.2	+0.7
LBTB	Lobatse	73.12	242	eP	P	03 35 05.8	+0.5
JOF	Joensuu	73.60	335	ep	P	03 35 05.5	-1.8
	comp=Z,7.6nm,0.7s,mb4.7						
KWP	Kalwaria	74.44	320	eP	P	03 35 12.5	+0.1
KOLS	Kolonicke sedl	74.59	319	i P	P	03 35 14.3	+1.0
KOLS				i pP	pP	03 35 26.7	+1.5
SUW	Suwalki	75.04	325	eP	P	03 35 14.8	-1.0
SUW	Suwalki	75.04	325	eP	P	03 35 14.8	-0.9
CRVS	Cervenica-Dubn	75.11	319	i P	P	03 35 17.5	+1.2
FINES	FINESS Array B	75.42	333	P	P	03 35 17.3	-0.5
	comp=Z,8.3nm,0.4s,mb5.0,baz=98,slow=5.7,SNR=132						
KAF	Kangasniemi	75.51	333	ep	P	03 35 16.9	-1.4
	comp=Z,9.6nm,0.6s,mb4.9,baz=105,slow=5.4						
KAF	Kangasniemi	75.51	333	eP	P	03 35 16.9	-1.4
KAF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
NIE	Niedzica	75.94	320	eP	P	03 35 20.8	-0.2
OJC	Ojcow	76.39	320	eP	P	03 35 23.8	+0.2
VYHS	Vyhne	76.77	319	eP	P	03 35 26.0	+0.2
OKC	Ostrava-Krasne	77.39	320	eP	P	03 35 29.7	+0.5
OKC				epP	pP	03 35 40.4	-0.8
ZST	Bratislava	77.88	318	i P	P	03 35 32.8	+0.9
ARCES	ARCESS Array B	78.10	340	P	P	03 35 32.9	+0.2
	comp=Z,3.3nm,0.7s,mb4.4,baz=92,slow=6.4,SNR=16						
GKP	Gorka Klasztor	78.39	323	eP	P	03 35 34.7	0.0
DPC	Dobruska-Polom	78.62	320	eP	P	03 35 36.6	+0.7
DPC				epP	pP	03 35 47.8	-0.2
BILL	Bilibino	78.69	21	eP	P	03 35 35.3	-0.7
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.5						
KSP	Ksiaz	78.69	321	eP	P	03 35 35.8	-0.5
UPC	Upice	78.83	320	eP	P	03 35 37.8	+0.7
ARSA	Arzberg	78.85	317	⇑iP	P	03 35 37.9	+0.6
	comp=Z,9.7nm,1.3s,mb4.6						
VISS	Visnje	79.21	316	eP	P	03 35 39.2	-0.1
PRU	Pruhonice	79.72	320	eP	P	03 35 42.4	+0.4
PRU				epP	pP	03 35 53.6	-0.4
MOA	Molln	79.75	318	⇑iP	P	03 35 42.3	+0.2
	comp=Z,3.1nm,0.8s,mb4.3						
BRG	Berggiesshubel	80.17	321	i P	P	03 35 45.0	+0.6
BRG				pmax	pmax		
	comp=Z,32nm,1.9s,mb4.9						
BRG	Berggiesshubel	80.17	321	i P	P	03 35 45.0	+0.6
	comp=Z,32nm,1.9s,mb4.9						
GERES	GERESS Array B	80.19	319	P	P	03 35 45.1	+0.6
	comp=Z,6.0nm,0.7s,mb4.7,baz=90,slow=5.3,SNR=34						
KHC	Kasperske Hory	80.29	319	eP	P	03 35 45.2	+0.2
KHC				epP	pP	03 35 58.8	+1.7
CLL	Collm	80.80	321	eP	P	03 35 48.0	+0.3
CLL				e		03 36 04.0	
CLL	Collm	80.80	321	P	P	03 35 48.0	+0.3
CLL				e*SP	sP	03 36 04.0	-0.1
NKC	Novy Kostel	81.09	320	eP	P	03 35 49.4	+0.2
NKC				epP	pP	03 36 01.8	+0.5
HFS	Hagfors	81.11	330	P	P	03 35 49.0	-0.2
	comp=Z,6.0nm,0.4s,mb4.8,baz=108,slow=4.7,SNR=62						
WTTA	Wattenberg	81.50	317	⇑iP	P	03 35 51.4	0.0
	comp=Z,8.2nm,0.7s,mb4.8						
WTTA	Wattenberg	81.50	317	⇑iP	P	03 35 51.4	0.0
WTTA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
WATA	Walderalm	81.54	317	⇑iP	P	03 35 51.2	-0.4
	comp=Z,5.4nm,1.0s,mb4.4						
WATA	Walderalm	81.54	317	⇑iP	P	03 35 51.2	-0.4
WATA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
MOX	Moxa	81.64	320	i P	P	03 35 52.7	+0.6
GRA1	Grafenberg Arr	81.85	319	eP	P	03 35 54.0	+0.8
	comp=Z,10.0nm,0.9s,mb4.8						
GRF	Grafenberg Arr	81.85	319	eP	P	03 35 54.0	+0.8
GRF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GRF	Grafenberg Arr	81.85	319	eP	P	03 35 54.0	+0.8
GRF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
GRF	Grafenberg Arr	81.85	319	eP	P	03 35 54.0	+0.8
	comp=Z,10.0nm,0.9s,mb4.8						
MOTA	Moosalm	81.86	317	⇓iP	P	03 35 53.3	0.0
	comp=Z,3.7nm,0.9s,mb4.3						
MOTA	Moosalm	81.86	317	⇓iP	P	03 35 53.3	0.0
MOTA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
NB2	NORSAR Subarra	82.41	331	P	P	03 35 55.3	-0.5
	comp=Z,5.2nm,0.8s,mb4.5,baz=94,slow=5.8						
NB2	NORSAR Subarra	82.41	331	P	P	03 35 55.3	-0.5
NB2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
NOA	NORSAR Array B	82.41	331	P	P	03 35 55.6	-0.2
	comp=Z,3.3nm,0.6s,mb4.4,baz=94,slow=5.4,SNR=8.8						
DAVOX	Davos	82.69	316	P	P	03 35 58.5	+0.9
	comp=Z,17nm,0.7s,mb5.2,baz=108,slow=13						
DAVA	Damuels	82.69	317	⇑iP	P	03 35 58.2	+0.6
	comp=Z,15nm,1.1s,mb4.9						
LPG	La Plagne	84.88	315	⇑iP	P	03 36 09.5	+0.8
	comp=Z,18nm,0.9s,mb4.9						
LPG	La Plagne	84.88	315	⇑iP	P	03 36 09.5	+0.8
LPG				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
URZ	Urewera	87.30	129	P	P	03 36 20.5	-0.3
	comp=Z,4.5nm,0.6s,mb4.9,baz=358,slow=18,SNR=3.1						
EKA	Eskdalemuir Ar	90.28	326	P	P	03 36 35.4	+1.0
	comp=Z,5.9nm,0.6s,mb5.1,baz=95,slow=5.4,SNR=17						
ESDC	Sonseca Array	93.31	310	P	P	03 36 49.9	+1.1
	comp=Z,1.2nm,0.6s,mb4.5,baz=61,slow=4.2,SNR=7.9						
IMA	Indian Mountai	94.21	22	eP	P	03 36 52.8	+0.6
IMA				e*PP	pP	03 37 05.9	+1.4
IMA				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.5						
IMA	Indian Mountai	94.21	22	eP	P	03 36 52.8	+0.6
	comp=Z,15nm,0.7s,mb5.5						
IMA				epP	pP	03 37 05.9	+1.4
ILAR	Eielson Array	97.33	22	P	P	03 37 06.5	0.0
	comp=Z,0.6nm,0.6s,mb4.2,baz=328,slow=5.2,SNR=10						
YKA	Yellowknife Ar	109.19	14	Pdiff	Pdif	03 38 01.5	+2.3
	comp=Z,0.2nm,0.7s,baz=324,slow=4.0,SNR=4.8						
SCHQ	Schefferville	118.43	348	PKP	PKPdf	03 42 21.9	+1.9
	comp=Z,1.4nm,0.5s,baz=69,slow=3.8,SNR=11						
ULM	Lac du Bonnet	124.31	8	PKP	PKPdf	03 42 32.8	+1.3
	comp=Z,2.1nm,0.6s,baz=297,slow=4.5,SNR=5.4						
NVAR	Mina Array Bea	127.25	32	PKP	PKPdf	03 42 40.9	+3.4
	comp=Z,1.5nm,0.7s,baz=345,slow=1.9,SNR=15						
PDAR	Pinedale Array	127.76	22	PKP	PKPdf	03 42 40.5	+2.1
	comp=Z,2.1nm,0.9s,baz=66,slow=1.4,SNR=13						
DUG	Dugway	128.57	27	ePKPdf	PKPdf	03 42 41.9	+1.9
MSU	Marysvale	130.22	27	ePKPdf	PKPdf	03 42 45.7	+2.5
ANMO	Albuquerque	135.71	25	PKP	PKPdf	03 42 57.4	+3.9
	comp=Z,2.2nm,0.8s,baz=52,slow=0.9,SNR=8.6						
BDFB	Brasilia	141.62	251	PKP	PKPdf	03 43 09.3	+4.5
	comp=Z,2.0nm,0.7s,baz=178,slow=1.8,SNR=3.6						
TXAR	Lajitas Array	141.74	26	PKhKP		03 43 00.8	
	comp=Z,0.7nm,0.7s,baz=240,slow=1.3,SNR=8.9						
TXAR				PKP	PKPdf	03 43 07.8	+3.1
	comp=Z,1.0nm,0.5s,baz=186,slow=0.5,SNR=6.5						
LPAZ	La Paz	159.51	235	PKP	PKPdf	03 43 33.0	+1.4
	comp=Z,1.4nm,0.8s,baz=113,slow=5.5,SNR=5.3						

IDC 19 03:33:37.4±4.4**, 19.61S**×**177.82W, mb3.9**/2**, mb1 4.1**/2**, mb1mx3.7**/14**, mbtmp3.9**/2**, Error ellipse: s-maj=283.6km s-min=51.8km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.90	256	P	P	03 41 53.6	-2.1
	1.1nm,0.4s,baz=92,slow=8.2,SNR=13						
WRA	Warramunga Arr	44.90	261	P	P	03 41 54.4	-1.5
	0.4nm,0.2s,baz=97,slow=7.5,SNR=13						
ARCES	ARCESS Array B	128.08	350	PKP	PKPdf	03 52 44.5	-2.4
	3.1nm,0.9s,baz=45,slow=1.7,SNR=5.0						

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*IDC **19** 03:42:28.3±0.7, 15.34S×173.27W, mb4.4/12, mb1 4.7/12, mb1mx4.5/20, mbtmp4.4/12, MS3.6/1, Ms1 3.6/1, ms1mx2.9/23, Error ellipse: s-maj=39.1km s-min=15.0km az=134.0*

*NEIC **19** 03:42:33.8±0.4, 15.25S×173.41W, h35^{km}, mb4.6/5, Error ellipse: s-maj=23.7km s-min=9.1km az=137.0*

ISC 19 03:42:31.9±0.5**, 15.2S**±0.2×**173.5W**±0.1**, h33**^{km}**, n42, σ0^{s}71**/29**, mb4.3**/16**, MS3.6**/1**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.11	54	eP	P	03 42 56.1	-9.3
URZ	Urewera	24.45	198	P	P	03 47 48.8	-0.1
	4.3nm,0.4s,mb4.2,baz=220,slow=22,SNR=3.6						
RPZ	Rata Peaks	31.36	202	P	P	03 48 48.6	-3.2
	3.0nm,0.6s,mb4.3,baz=7.1,slow=16,SNR=2.2						
PMG	Port Moresby	38.78	274	LR	LR	04 03 23.7	
	comp=Z,90nm,20.2s,MS3.6,baz=35,slow=32						
STKA	Stephens Creek	44.04	240	⇑iP	P	03 50 39.1	+0.6
	6.6nm,0.9s,mb4.4						
STKA	Stephens Creek	44.04	240	P	P	03 50 39.0	+0.5
	14nm,1.0s,mb4.6,baz=75,slow=8.4,SNR=12						
WRAB	Tennant Creek	49.76	257	eP	P	03 51 23.5	-0.1
	4.3nm,0.8s,mb4.5						
WRA	Warramunga Arr	49.77	257	P	P	03 51 23.9	+0.3
	2.5nm,0.6s,mb4.4,baz=92,slow=6.9,SNR=58						
ASAR	Alice Springs	50.06	252	P	P	03 51 26.2	+0.4
	4.5nm,0.4s,mb4.8,baz=88,slow=8.1,SNR=135						
ASPA	Alice Springs	50.06	252	eP	P	03 51 26.1	+0.2
YBH	Yreka Blue Hor	73.49	37	P	P	03 54 02.4	-0.8
	1.7nm,0.8s,mb4.0,baz=262,slow=0.7,SNR=4.8						
NVAR	Mina Array Bea	74.24	42	P	P	03 54 07.2	-0.4
	0.7nm,0.9s,mb3.6,baz=236,slow=9.8,SNR=3.7						
HLID	Hailey	79.53	39	eP	P	03 54 37.1	0.0
	3.7nm,1.1s,mb4.2						
MNTX	Cornudas Mount	80.19	53	P	P	03 54 42.6	+1.7
TXAR	Lajitas Array	80.59	56	P	P	03 54 43.4	+0.3
	1.1nm,1.0s,mb3.7,baz=217,slow=6.3,SNR=7.5						
ANMO	Albuquerque	80.75	50	P	P	03 54 44.4	+0.5
MCK	McKinley	80.91	11	eP	P	03 54 43.0	-1.1
	9.1nm,0.9s,mb4.7						
MCMT	McKenzie Canyo	81.15	39	eP	P	03 54 46.2	+0.4
CHMT	Chamberlain Mo	82.01	37	eP	P	03 54 49.5	-0.7
QLMT	Earthquake Lak	82.02	39	eP	P	03 54 50.8	+0.6
COLA	College	82.15	11	eP	P	03 54 50.0	-0.4
	18nm,0.9s,mb5.0						
BW06	Boulder Array	82.17	42	eP	P	03 54 51.0	0.0
PDAR	Pinedale Array	82.17	42	P	P	03 54 51.0	-0.1
	1.4nm,1.1s,mb3.8,baz=207,slow=3.3,SNR=7.1						
ILAR	Eielson Array	82.23	11	P	P	03 54 51.0	+0.1
	2.7nm,0.9s,mb4.2,baz=217,slow=5.6,SNR=16						
SDCO	Great Sand Dun	82.65	48	eP	P	03 54 54.3	+0.6
DAWY	Dawson	83.22	14	eP	P	03 54 56.1	+0.2
EDM	Edmonton	85.35	32	eP	P	03 55 06.5	-0.4
INK	Inuvik	88.06	14	P	P	03 55 19.9	+0.1
	6.5nm,1.2s,mb4.7,baz=278,slow=6.6,SNR=9.5						
INK	Inuvik	88.06	14	eP	P	03 55 17.6	-2.2
YKA	Yellowknife Ar	89.93	23	P	P	03 55 29.0	+0.3
	1.6nm,0.8s,mb4.4,baz=237,slow=4.3,SNR=27						
AKASG	Malin Array Be	140.06	337	PKP	PKPdf	04 01 58.6	+1.5
	0.1nm,0.3s,baz=1.6,slow=2.4,SNR=4.0						
PRU	Pruhonice	144.64	351	ePKP	PKPdf	04 02 07.1	+2.0
VYHS	Vyhne	145.23	346	ePKP	PKPdf	04 02 09.0	+2.8
GRA1	Grafenberg Arr	145.34	355	ePKP	PKPdf	04 02 09.2	+2.9
KMBO	Kilima Mbogo	145.52	245	PKPbc	PKPbc	04 02 11.5	+3.1
	1.6nm,0.8s,baz=63,slow=9.7,SNR=3.9						
MLR	Muntele Rosu	145.59	335	PKPbc	PKPbc	04 02 10.4	+2.8
	7.3nm,1.1s,baz=60,slow=2.9,SNR=6.6						
KHC	Kasperske Hory	145.62	352	ePKP	PKPdf	04 02 09.4	+2.6
GERES	GERESS Array B	145.88	351	PKPbc	PKPbc	04 02 08.4	+0.2
	1.5nm,0.9s,slow=1.3,SNR=6.1						
BRTR	Keskin Array B	145.88	321	PKPbc	PKPbc	04 02 11.8	+3.3
	8.0nm,0.8s,baz=107,slow=2.5,SNR=41						
ZST	Bratislava	145.90	347	ePKP	PKPdf	04 02 10.9	+3.6
DAVOX	Davos	148.34	356	PKPbc	PKPdf	04 02 18.3	+6.9
	baz=337,slow=7.4						
ESDC	Sonseca Array	153.92	19	PKPab	PKPab	04 02 42.9	-0.8
	1.5nm,0.9s,baz=358,slow=5.3,SNR=4.9						

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*MAN **19** 04:29:42.5, 7.15N×126.95E, h25^{km}, mb4.4, ML3.3, MS3.1*

*IDC **19** 04:30:14.1±8.3, 3.54N×127.91E, mb3.7/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, Error ellipse: s-maj=221.4km s-min=133.7km az=79.0*

ISC 19 04:29:39.4±2.1**, 7.17N**±0.09×**127.06E**±0.07**, h2**^{km}±12^{km}**, n8, σ0^{s}77**/10**, mb3.6**/3**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.82	254	eP	Pg	04 29 56.5	+0.8
MATI				eS	Sg	04 30 06.2	-0.5
KCP	Kidapawan	1.96	265	eP	Pn	04 30 14.0	+0.1
KCP				i S	Sn	04 30 39.7	+0.4
BUKP	Musuan	2.10	290	eP	Pn	04 30 15.6	-0.4
BUTP	Butuan	2.28	322	eP	Pn	04 30 17.9	-0.7
SCPH	Surigao	3.02	329	⇓eP	Pn	04 30 29.8	+0.6
WRA	Warramunga Arr	27.88	165	P	P	04 35 32.2	-0.6
	0.3nm,0.4s,mb3.2,baz=348,slow=9.8,SNR=5.5						
ASAR	Alice Springs	31.37	168	P	P	04 36 03.4	-0.5
	0.5nm,0.4s,mb3.7,baz=347,slow=7.5,SNR=13						
STKA	Stephens Creek	41.23	161	P	P	04 37 30.8	+3.3
	3.1nm,0.9s,mb4.0,baz=314,slow=10,SNR=5.1						

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*NEIC **19** 05:14:18.5±0.6, 21.18S×68.43W, h124^{km}±7^{km}, mb3.8/2, Error ellipse: s-maj=13.2km s-min=8.9km az=83.0*

*IDC **19** 05:14:18.9±0.8, 21.21S×68.40W, h125^{km}±9^{km}, mb3.8/3, mb1 3.8/4, mb1mx3.5/14, mbtmp4.1/4, MS3.7/1, Ms1 3.6/1, ms1mx2.2/23, Error ellipse: s-maj=32.3km s-min=10.8km az=101.0*

ISC 19 05:14:17.5±0.7**, 21.20S**±0.05×**68.5W**±0.1**, h137**^{km}±9^{km}**, n14, σ1^{s}17**/16**, mb3.7**/2**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.45	195	P	P	05 14 46.7	+0.7
	241nm,0.3s,baz=16,slow=9.5,SNR=3273						
LVC				S	S	05 15 07.8	0.0
	65nm,0.3s,baz=107,slow=23,SNR=19						
LVC	Limon Verde	1.45	195	P	P	05 14 46.7	+0.7
LVC				S	S	05 15 07.8	0.0
LPAZ	La Paz	4.90	4	P	P	05 15 32.1	+1.7
	1.9nm,0.3s,baz=192,slow=9.3,SNR=51						
LPAZ				S	S	05 16 27.8	+1.2
	baz=248,slow=19,SNR=1.5						
LPAZ	La Paz	4.90	4	eP	P	05 15 31.1	+0.7
LPAZ				S	S	05 16 27.8	+1.2
ARE	Arequipa	5.50	329	eP	P	05 15 38.0	-0.4
ARE				eS	S	05 16 39.0	-2.0
SAML	Samuel	13.22	24	eP	P	05 17 17.8	-3.0
	5.1nm,1.1s						
TRQA	Tornquist	17.72	163	eP	P	05 18 16.1	-0.8
	2.7nm,0.7s						
PLCA	Paso Flores	19.55	185	LR	LR	05 26 55.4	
	comp=Z,212nm,21.0s,baz=184,slow=39						
BDFB	Brasilia	20.20	78	P	P	05 18 43.0	-0.5
	6.4nm,0.4s,baz=256,slow=9.4,SNR=38						
BAO	Brasilia Array	20.23	78	eP	P	05 18 43.1	-0.6
BAO				i		05 18 46.6	
ULM	Lac du Bonnet	75.15	342	P	P	05 25 47.0	+0.8
	1.6nm,0.4s,mb4.0,baz=135,slow=1.4,SNR=4.6						
YKA	Yellowknife Ar	91.04	340	P	P	05 27 08.5	+1.5
	0.3nm,0.8s,mb3.4,baz=134,slow=4.3,SNR=9.1						
ASAR	Alice Springs	130.35	207	PKP	PKPdf	05 33 15.4	+3.0
	0.4nm,0.5s,baz=128,slow=1.9,SNR=6.5						
WRA	Warramunga Arr	133.40	210	PKP	PKPdf	05 33 21.1	+2.9
	0.4nm,0.5s,baz=157,slow=1.6,SNR=12						

IDC 19 05:34:32.7±16.0**, 1.35S**×**117.90E, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/16**, mbtmp4.1**/3**, 2C-1D, Error ellipse: s-maj=280.1km s-min=233.4km az=169.0, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.30	156⇓	*i*P	P	05 38 54.4	+4.4
	15nm,0.2s						
KAKA	Kakadu	18.30	129⇑	*i*P	P	05 38 50.8	+0.8
	30nm,0.9s						
WRA	Warramunga Arr	24.50	140	P	P	05 39 52.4	-2.7
	1.2nm,0.3s,baz=316,slow=10.0,SNR=34						
ASPA	Alice Springs	27.07	146⇑	*i*P	P	05 40 17.7	-1.4
ASAR	Alice Springs	27.07	146	P	P	05 40 17.4	-1.7
	0.9nm,0.3s,baz=322,slow=8.7,SNR=32						
STKA	Stephens Creek	37.71	146	P	P	05 41 51.7	-0.3
	1.8nm,0.4s,baz=323,slow=10,SNR=5.5						

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*NEIC **19** 05:38:35.3±0.9, 19.27N×144.97E, h573^{km}±12^{km}, mb3.8/2, Error ellipse: s-maj=22.8km s-min=10.8km az=93.0*

*IDC **19** 05:38:35.9±10.0, 19.26N×144.98E, h580^{km}±139^{km}, mb2.9/8, mb1 3.1/8, mb1mx2.9/22, mbtmp3.8/8, Error ellipse: s-maj=38.7km s-min=18.6km az=77.0*

ISC 19 05:38:34.5±1.4**, 19.3N**±0.1×**145.0E**±0.3**, h582**^{km}±21^{km}**, n11, σ**$0\overset{s}{.}$**49**/11**, mb3.5**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	5.64	181	*e*P	P	05 40 12.1	-0.1
	125nm,1.0s						
WRAB	Tennant Creek	40.31	196	*e*P	P	05 45 24.4	+0.4
	3.7nm,0.5s,mb4.2						
WRA	Warramunga Arr	40.33	196	P	P	05 45 24.4	+0.4
	1.5nm,0.5s,mb3.8,baz=20,slow=8.4,SNR=8.5						
SONM	Songino Array	42.27	321	P	P	05 45 39.7	+0.5
	0.6nm,0.7s,mb3.3,baz=142,slow=6.3,SNR=3.6						
ASAR	Alice Springs	44.01	195	P	P	05 45 52.5	-0.5
	0.9nm,0.5s,mb3.6,baz=12,slow=6.1,SNR=7.2						
STKA	Stephens Creek	50.95	184	P	P	05 46 44.9	-0.3
	1.2nm,0.4s,mb3.7,baz=11,slow=10,SNR=3.1						
KURK	Kurchatov	60.39	318	*e*P	P	05 47 49.4	-0.6
	1.0nm,0.5s,mb3.3						
ILAR	Eielson Array	63.46	26	P	P	05 48 08.8	-0.8
	0.5nm,0.5s,mb3.1,baz=242,slow=6.3,SNR=5.5						
BVAR	Borovoye Array	65.60	320	P	P	05 48 23.0	-0.1
	1.1nm,0.5s,mb3.6,baz=100,slow=7.8,SNR=9.8						
INK	Inuvik	69.14	23	P	P	05 48 44.5	+0.2
	1.7nm,1.2s,mb3.3,baz=275,slow=7.2,SNR=6.4						
YKA	Yellowknife Ar	77.82	28	P	P	05 49 34.1	+0.8
	0.2nm,0.4s,mb2.9,baz=293,slow=5.5,SNR=5.3						

IDC 19 05:40:18.3±1.3**, 5.28S×122.51E, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.9**/16**, mbtmp3.9**/5**, ML3.9**/1**, MS2.7**/2**, Ms1 2.9**/2**, ms1mx2.3**/21**, Error ellipse: s-maj=146.3km s-min=21.6km az=62.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.57	143	P	P	05 44 35.7	-3.2
	0.4nm,0.3s,baz=317,slow=12,SNR=17						
ASAR	Alice Springs	21.32	150	P	P	05 45 07.8	-1.4
	2.0nm,0.8s,baz=324,slow=10,SNR=10						
ASAR				PcP	PcP	05 49 11.9	-2.1
	0.3nm,0.5s,baz=353,slow=1.6,SNR=5.3						
ASAR				LR	LR	05 55 49.9	
	comp=Z,7.9nm,18.4s,baz=348,slow=44						
CMAR	Chiang Mai Arr	33.11	316	LR	LR	06 01 53.3	
	comp=Z,32nm,18.4s,baz=180,slow=39						
SONM	Songino Array	54.76	347	P	P	05 49 50.3	-1.7
	1.4nm,0.7s,baz=166,slow=7.8,SNR=11						
ZAL	Zalesovo	66.92	337	P	P	05 51 12.2	-2.4
	1.1nm,0.8s,baz=343,slow=9.1,SNR=5.3						
BVAR	Borovoye Array	72.75	330	P	P	05 51 47.8	-2.5
	1.1nm,0.8s,baz=127,slow=7.2,SNR=5.2						

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*NEIC **19** 05:49:35.2±4.8, 10.17S×160.24E, h19^{km}±27^{km}, mb4.5/6, Error ellipse: s-maj=25.5km s-min=9.5km az=120.0*

*IDC **19** 05:49:56.7±10.0, 10.50S×160.03E, h211^{km}±98^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.8/14, mbtmp4.2/8, MS3.7/5, Ms1 3.8/5, ms1mx3.4/16, Error ellipse: s-maj=38.8km s-min=35.6km az=92.0*

ISC 19 05:49:34.9±3.3**, 10.2S**±0.1×**160.2E**±0.2**, h29**^{km}±20^{km}**, n18, σ**$0\overset{s}{.}$**57**/18**, mb4.1**/11**, MS3.7**/4**, 1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.84	342	*e*P	Pb	05 49 50.2	-0.6
HNR				*e*S	Sb	05 50 02.3	+0.5
PMG	Port Moresby	12.89	273	LR	LR	05 57 16.3	
	comp=Z,506nm,20.6s,baz=290,slow=34						
CTA	Charters Tower	16.64	232	*e*P	P	05 53 33.6	+5.6
	22nm,1.2s						
CTA	Charters Tower	16.64	232	P	P	05 53 32.8	+4.8
	1.2nm,0.3s,baz=62,slow=13,SNR=23						
CTAO	Charters Tower	16.64	232	*e*P	P	05 53 28.7	+0.7
	52nm,1.1s						
WRAB	Tennant Creek	26.73	246	*e*P	P	05 55 14.3	+0.2
	17nm,1.0s,mb4.5						
WRA	Warramunga Arr	26.74	246	P	P	05 55 14.5	+0.2
	6.1nm,0.8s,mb4.2,baz=74,slow=9.7,SNR=38						
WRA				PcP	PcP	05 58 33.1	-4.5
	0.2nm,0.7s,baz=65,slow=3.8,SNR=2.9						
KAKA	Kakadu	27.32	262	*e*P	P	05 55 19.6	0.0
	4.1nm,0.8s,mb4.0						
STKA	Stephens Creek	27.58	216	P	P	05 55 22.7	+0.9
	4.9nm,0.4s,mb4.5,baz=24,slow=10.0,SNR=9.3						
STKA				LR	LR	06 07 08.4	
	comp=Z,139nm,18.3s,MS3.6,baz=209,slow=38						
STKA	Stephens Creek	27.58	216	*e*P	P	05 55 22.4	+0.5
ASAR	Alice Springs	28.42	239	P	P	05 55 28.8	-0.7
	2.1nm,0.8s,mb3.8,baz=64,slow=9.8,SNR=16						
ASAR				LR	LR	06 06 49.8	
	comp=Z,88nm,19.4s,MS3.4,baz=63,slow=36						
FITZ	Fitzroy Crossi	34.37	253⇓	*i*P	P	05 56 21.3	-0.6
	4.6nm,0.5s,mb4.7						
NWAO	Narrogin (SRO)	45.48	234	*e*P	P	05 57 53.8	0.0
	5.8nm,1.0s,mb4.4						
CMAR	Chiang Mai Arr	66.82	295	P	P	06 00 27.1	+0.3
	0.8nm,0.4s,mb4.1,baz=120,slow=5.3,SNR=5.4						
CMAR				LR	LR	06 25 35.6	
	comp=Z,47nm,21.6s,MS3.7,baz=105,slow=32						
SONM	Songino Array	74.87	326	P	P	06 01 14.8	0.0
	0.9nm,0.8s,mb3.8,baz=142,slow=5.0,SNR=5.6						
NVAR	Mina Array Bea	89.70	51	P	P	06 02 33.0	+0.9
	0.3nm,0.8s,mb3.7,baz=231,slow=5.8,SNR=2.2						
YKA	Yellowknife Ar	96.78	28	P	P	06 03 02.9	-1.0
	0.1nm,0.5s,mb3.5,baz=266,slow=4.6,SNR=4.2						
YKA				LR	LR	06 42 07.6	
	comp=Z,80nm,18.8s,MS4.2,baz=295,slow=32						
YKA	Yellowknife Ar	96.78	28	P	P	06 03 02.9	-1.0
YKA				LR	LR	06 42 07.7	

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*BJI **19** 05:56:27.3, 52.50N×174.90E, h104^{km}, mB5.4, mb4.9*

*MOS **19** 05:56:28.3±1.0, 52.71N×174.85E, h109^{km}, mb4.6/48, Error ellipse: s-maj=12.3km s-min=6.3km az=95.3*

*NEIC **19** 05:56:28.3±0.5, 52.50N×174.90E, h104^{km}±3^{km}, mb4.6/44, Error ellipse: s-maj=7.8km s-min=3.5km az=181.0*

*IDC **19** 05:56:29.6±0.8, 52.74N×174.91E, h106^{km}±6^{km}, mb4.2/31, mb1 4.3/31, mb1mx4.3/35, mbtmp4.5/31, MS3.5/2, Ms1 3.5/2, ms1mx2.9/26, Error ellipse: s-maj=13.7km s-min=9.0km az=167.0*

ISC 19 05:56:27.6±0.5**, 52.58N**±0.07×**174.92E**±0.05**, h107**^{km}±3^{km}**, h120**^{km}±4.2^{km}**:pP-P, n204, σ**$1\overset{s}{.}$**01**/209**, mb4.5**/84**, 4C-12D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	Shemya	0.52	287	P	P	05 56 45.2	+0.7
SMY				S	S	05 56 56.5	-0.6
FX1	Attu Island--F	1.11	286	P	P	05 56 51.3	+1.2
FX1				S	S	05 57 07.4	+0.4
FX1				pmax	pmax		
	comp=Z,285nm,0.3s						
FX1	Attu Island--F	1.11	286	P	P	05 56 51.3	+1.2
	comp=Z,285nm,0.3s,baz=244,slow=6.0,SNR=443						
FX1				S	S	05 57 07.4	+0.4
	baz=130,slow=17						
FX1	Attu Island--F	1.11	286	P	P	05 56 51.2	+1.1
FX1				S	S	05 57 07.4	+0.4
KIMD	Kanaga Island	4.90	97	P	P	05 57 39.9	-0.4
GSTD	Great Sitkin T	5.50	92	P	P	05 57 47.0	-1.6
ATKA	Atka Island	6.67	89	P	P	05 58 01.5	-3.1
ATKA				S	S	05 59 13.8	-5.9
MA2	Magadan	15.13	307	Pn	P	05 59 57.4	+1.0
MA2				*e*P		06 00 00.4	
TNA	Tin City	15.63	27	*e*Pn	P	06 00 04.3	+1.7
	comp=Z,19nm,0.9s						
TNA				*e*		06 00 28.8	
BILL	Bilibino	16.06	348	*e*P	P	06 00 08.8	+0.8
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL	Bilibino	16.06	348	*e*P	P	06 00 09.1	+1.1
	comp=Z,6.0nm,0.7s						
RSO	Redoubt South	19.32	53	*e*P	P	06 00 46.6	+0.1
IMA	Indian Mountai	20.64	37	*e*P	P	06 01 00.5	+0.4
IMA				pmax	pmax		
	comp=Z,164nm,0.8s						
IMA	Indian Mountai	20.64	37	*e*P	P	06 01 00.5	+0.4
	comp=Z,164nm,0.8s						
FIB	Fire Island	20.69	52	P	P	06 01 01.6	+1.1
YSS	Yuzh-Sakhalins	21.41	268⇓	*i*P	P	06 01 11.3	+3.4
SML	Sawmill	21.66	50	*e*P	P	06 01 10.1	-0.1
SML				*e*		06 01 38.6	
MCK	McKinley	21.76	45	*e*P	P	06 01 10.9	-0.3
MCK				*e*		06 01 38.5	
MCK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.3						
MCK	McKinley	21.76	45	*e*P	P	06 01 10.8	-0.3
	comp=Z,17nm,1.0s,mb4.3						
MCK				*e*		06 01 38.5	
COLA	College	22.50	42	*e*P	P	06 01 18.9	+0.6
COLA				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.0						
COLA	College	22.50	42	*e*P	P	06 01 18.9	+0.6
	comp=Z,66nm,0.8s,mb5.0						
EYAK	Cordova Ski Ar	22.78	54	*e*P	P	06 01 21.3	+0.3
ILAR	Eielson Array	22.88	43	P	P	06 01 21.3	-0.6
ILAR				S	S	06 05 22.8	+3.2
ILAR				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ILAR	Eielson Array	22.88	43	P	P	06 01 21.2	-0.7
	comp=Z,7.8nm,0.4s,mb4.4,baz=256,slow=7.3,SNR=118						
ILAR				S	S	06 05 22.8	+3.2
	comp=Z,0.2nm,0.6s,baz=211,slow=19,SNR=4.8						
ASAJ	Asahikawa	22.93	261	P	P	06 01 25.5	+2.8
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ASAJ	Asahikawa	22.93	261	P	P	06 01 25.5	+2.8
	comp=Z,8.9nm,0.8s,mb4.2,baz=104,slow=5.9,SNR=4.9						
THY	Trims Highway	23.09	47	*e*P	P	06 01 24.4	+0.5
YAK	Yakutsk	25.68	309	*e*P	P	06 01 47.4	-1.3
YAK				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.7						
YAK	Yakutsk	25.68	309	*e*P	P	06 01 47.4	-1.3
	comp=Z,23nm,0.7s,mb4.7						
DAWY	Dawson	25.98	46	*e*P	P	06 01 51.5	+0.1
DAWY				*e*pP	pP	06 02 19.0	+4.4
TIXI	Tiksi	27.68	331	*e*P	P	06 02 04.4	-2.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
INK	Inuvik	28.78	37	*e*P	P	06 02 16.0	-0.8
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK	Inuvik	28.78	37	P	P	06 02 16.4	-0.4
	comp=Z,2.2nm,0.3s,mb4.2,baz=263,slow=6.3,SNR=47						
INK	Inuvik	28.78	37	*e*P	P	06 02 16.0	-0.8
	comp=Z,6.3nm,0.9s,mb4.2						
MDJ	Mudanjiang	30.58	273	P	P	06 02 29.6	-3.5
MDJ				AP	pP	06 02 55.8	-1.2
MDJ				XP	sP	06 03 10.1	+0.7
MDJ				S	S	06 07 20.4	-5.4
MDJ				PCS		06 09 09.8	
MDJ				SCS	ScS	06 12 53.6	-2.0
MDJ				AMB	AMB		
	comp=Z,26nm,2.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,169nm,3.6s						
MDJ				LR	LR		
	comp=N,69nm,20.8s						
MDJ				LR	LR		
	comp=E,53nm,23.4s						
MDJ				LR	LR		
	comp=Z,52nm,21.4s						
DLBC	Dease Lake	30.95	57	P	P	06 02 37.3	+1.2
	comp=Z,4.6nm,0.8s,mb4.3,baz=304,slow=12,SNR=12						
CN2	Changchun	33.54	275	*e*P	P	06 02 57.5	-1.3
BOD	Bodaibo	34.11	303⇑	*i*P	P	06 03 02.1	-1.4
BOD				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.0						
YKW3	Yellowknife Ar	37.19	46⇓	*e*P	P	06 03 29.5	0.0
YKW3				*e*pP	pP	06 03 58.0	+3.9
YKW3				*e*sP	sP	06 04 10.6	+3.9
YKA	Yellowknife Ar	37.21	46	P	P	06 03 29.7	+0.1
	comp=Z,3.2nm,0.5s,mb4.5,baz=287,slow=7.9,SNR=64						
YKA				PcP	PcP	06 05 47.2	-0.6
	comp=Z,0.6nm,0.5s,baz=296,slow=3.5,SNR=6.1						
YKA				LR	LR	06 18 51.0	
	comp=Z,60nm,20.0s,baz=245,slow=36						
YKA	Yellowknife Ar	37.21	46	P	P	06 03 29.8	+0.1
YKA				PcP	PcP	06 05 47.2	-0.6
YKA				LR	LR	06 18 51.0	
CMW	Cultus Mountai	39.13	70	P	P	06 03 47.4	+1.6
TBM	Table Mountain	40.66	71	P	P	06 03 59.3	+0.9
EBG	Ellensburg	40.82	71	P	P	06 04 00.8	+1.1
EPH	Ephrata	41.14	70	P	P	06 04 02.7	+0.4
OD2	Odessa Site #2	41.63	70	P	P	06 04 06.5	+0.2
WRD	Warden	41.70	71	P	P	06 04 06.6	-0.2
REDWA	Red Mountain	41.80	71	P	P	06 04 08.7	+1.0
NEW	Newport	42.06	68	P	P	06 04 10.3	+0.6
NEW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEW				MLR	MLR		
	comp=Z,77nm,19.9s						
NEW	Newport	42.06	68	P	P	06 04 10.2	+0.5
	comp=Z,7.4nm,0.8s,mb4.5,baz=295,slow=7.7,SNR=14						
NEW				LR	LR	06 22 18.2	
	comp=Z,77nm,19.9s,baz=237,slow=37						
TLY	Talaya	42.11	298	*e*P	P	06 04 09.9	-0.2
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TLY	Talaya	42.11	298	*e*P	P	06 04 09.9	-0.2
	comp=Z,3.3nm,0.9s,mb4.1						
ULN	Ulaanbaatar	42.23	292*c*	*i*P	P	06 04 12.2	+1.1
ULN				*i* *PP	pP	06 04 52.1	+16
YBH	Yreka Blue Hor	42.51	79	P	P	06 04 13.8	+0.3
YBH				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YBH	Yreka Blue Hor	42.51	79	P	P	06 04 13.8	+0.3
	comp=Z,1.2nm,0.7s,mb3.7,baz=346,slow=8.3,SNR=3.5						
SONM	Songino Array	42.62	292	P	P	06 04 15.2	+0.9
	comp=Z,6.6nm,0.5s,mb4.7,baz=62,slow=7.8,SNR=62						
SONM				ScP		06 09 45.6	
	comp=Z,0.9nm,1.0s,baz=90,slow=2.5,SNR=5.7						
ZAK	Zakamensk	42.98	297	*e*P	P	06 04 15.0	-2.2
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
WALA	Waterton Lakes	43.42	65	*e*P	P	06 04 21.2	+0.3
	comp=Z,21nm,0.9s,mb4.9						
BSMT	Bassoo Peak	43.60	67	P	P	06 04 22.9	+0.6
BMO	Blue Mountains	43.86	72	*e*P	P	06 04 24.5	0.0
	comp=Z,15nm,1.6s,mb4.5						
SSE	Sheshan	44.21	263	P	P	06 04 24.9	-2.6
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,336nm,4.8s						
SSE	Sheshan	44.21	263	P	P	06 04 24.9	-2.6
	comp=Z,27nm,0.7s,mb5.1						
NJ2	Nanjing	44.96	266	*e*P	P	06 04 35.8	+2.4
NJ2				AP	pP	06 04 54.3	-4.2
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,402nm,4.2s						
NJ2				LR	LR		
	comp=N,406nm,15.2s						
NJ2				LR	LR		
	comp=E,782nm,16.0s						
NJ2				LR	LR		
	comp=Z,1µm,14.8s						
CHMT	Chamberlain Mo	44.99	67	*e*P	P	06 04 32.9	-0.6
HLID	Hailey	46.30	72	*e*P	P	06 04 43.1	-0.8
MCMT	McKenzie Canyo	46.44	69	*e*P	P	06 04 44.5	-0.5
NVAR	Mina Array Bea	47.20	80	P	P	06 04 51.8	+0.8
	comp=Z,0.9nm,0.7s,mb3.6,baz=298,slow=6.2,SNR=7.6						
QLMT	Earthquake Lak	47.24	68	*e*P	P	06 04 51.2	-0.1
FCC	Fort Churchill	47.88	45⇓	*e*P	P	06 04 55.2	-0.8
FCC				*e**PP	pP	06 05 22.9	+1.6
FCC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
FCC	Fort Churchill	47.88	45⇓	*e*P	P	06 04 55.2	-0.8
	comp=Z,5.7nm,0.7s,mb4.5						
FCC				*e*pP	pP	06 05 22.9	+1.6
BW06	Boulder Array	49.58	69	*e*P	P	06 05 08.4	-0.9
	comp=Z,1.6nm,0.5s,mb4.2						
BW06				*e*pP	pP	06 05 34.6	-0.2
PDAR	Pinedale Array	49.58	69	P	P	06 05 09.2	-0.2
	comp=Z,2.6nm,0.4s,mb4.5,baz=324,slow=3.0,SNR=32						
ZAL	Zalesovo	50.35	310	P	P	06 05 13.9	-1.2
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	Zalesovo	50.35	310	P	P	06 05 13.9	-1.1
	comp=Z,1.4nm,0.5s,mb4.2,baz=89,slow=8.9,SNR=7.5						
NVS	Novosibirsk	50.52	311⇓	*i*P	P	06 05 14.5	-1.8
LZH	Lanzhou	51.33	281	*e*P	P	06 05 19.5	-3.2
LZH				AP	pP	06 05 49.0	+0.7
LZH				XP	sP	06 06 03.1	+2.9
LZH				PP	PP	06 07 19.3	-2.0
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb5.0						
LZH	Lanzhou	51.33	281	*e*P	P	06 05 19.5	-3.2
LZH				*PP	pP	06 05 49.0	+0.7
LZH						06 07 19.3	
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
LZH	Lanzhou	51.33	281	*e*P	P	06 05 19.5	-3.2
	comp=Z,21nm,1.3s,mb5.0						
LZH				pP	pP	06 05 49.0	+0.7
LZH				sP	sP	06 06 03.1	+2.9
LZH				PP	PP	06 07 19.3	-2.0
GTA	Gaotai	51.51	287	P	P	06 05 24.6	+0.6
GTA				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.0						
ULM	Lac du Bonnet	52.20	54	P	P	06 05 28.4	-0.7
	comp=Z,2.6nm,0.3s,mb4.8,baz=308,slow=7.3,SNR=16						
SUMG	Summit	52.99	12	*e*P	P	06 05 34.1	-0.6
	comp=Z,7.1nm,0.4s,mb5.0						
KURK	Kurchatov	55.32	310*d*	*i*P	P	06 05 50.9	-1.1
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
KURK	Kurchatov	55.32	310⇓	*i*P	P	06 05 51.0	-1.0
	comp=Z,23nm,0.8s,mb5.3						
WMQ	Urumqi	55.39	299	*e*P	P	06 05 53.4	+0.8
ARCES	ARCESS Array B	56.16	348	P	P	06 05 55.7	-2.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ARCES	ARCESS Array B	56.16	348	P	P	06 05 55.7	-2.0
	comp=Z,3.4nm,0.6s,mb4.5,baz=33,slow=6.1,SNR=20						
ARCES	ARCESS Array B	56.16	348	P	P	06 05 55.7	-2.0
MKAR	Makanchi Array	56.20	304	*i* P	P	06 05 56.8	-1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CHKZ	Chkalovo	56.84	316	*e*P	P	06 06 00.9	-1.8
CHKZ				*i*		06 06 55.8	
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
CHKZ	Chkalovo	56.84	316	*e*P	P	06 06 00.9	-1.8
	comp=Z,3.3nm,0.6s,mb4.5						
CHKZ				*i* PcP	PcP	06 06 55.8	-1.2
BVA0	Borovoye Array	57.39	316	*i* P	P	06 06 05.7	-1.0
BVAR	Borovoye Array	57.39	316	P	P	06 06 05.7	-0.9
	comp=Z,5.1nm,0.3s,mb5.0,baz=52,slow=7.1,SNR=60						
BVAR				PcP	PcP	06 06 57.9	-1.2
	comp=Z,1.4nm,0.5s,baz=71,slow=2.9,SNR=4.1						
MNTX	Cornudas Mount	59.52	77	*e*P	P	06 06 20.2	-1.5
	comp=Z,1.6nm,0.6s,mb4.2						
WMOK	Wichita Mounta	61.19	70	*e*P	P	06 06 32.5	-0.6
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WMOK	Wichita Mounta	61.19	70	*e*P	P	06 06 32.5	-0.6
	comp=Z,2.2nm,0.6s,mb4.4						
JOF	Joensuu	61.34	342	*e*p	P	06 06 31.5	-2.2
	comp=Z,5.9nm,0.6s,mb4.8						
JOF	Joensuu	61.34	342	*e*P	P	06 06 31.5	-2.2
JOF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
SCHQ	Schefferville	61.37	35	P	P	06 06 33.1	-0.9
	comp=Z,14nm,0.6s,mb5.2,baz=339,slow=6.9,SNR=66						
SCHQ	Schefferville	61.37	35⇓	*i*P	P	06 06 32.9	-1.1
	comp=Z,10nm,0.6s,mb5.0						
TXAR	Lajitas Array	62.24	77	P	P	06 06 39.8	-0.3
	comp=Z,1.5nm,0.4s,mb4.4,baz=307,slow=5.3,SNR=42						
TXAR				PcP	PcP	06 07 18.9	+0.2
	comp=Z,0.2nm,0.5s,baz=292,slow=4.0,SNR=4.0						
KAF	Kangasniemi	62.98	344	*e*p	P	06 06 42.2	-2.4
	comp=Z,3.9nm,0.5s,mb4.6,baz=17,slow=6.0						
KAF	Kangasniemi	62.98	344	*e*P	P	06 06 42.2	-2.4
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
AAK	Ala-Archa	63.06	305	*i* P	P	06 06 44.1	-1.3
AAK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
AAK	Ala-Archa	63.06	305⇓	*i*P	P	06 06 44.1	-1.3
	comp=Z,4.9nm,0.5s,mb4.7						
FINES	FINESS Array B	63.65	344	P	P	06 06 47.5	-1.3
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	63.65	344	P	P	06 06 47.5	-1.4
	comp=Z,4.1nm,0.7s,mb4.4,baz=26,slow=7.5,SNR=23						
FINES	FINESS Array B	63.65	344	P	P	06 06 47.5	-1.4
ERPA	Erie	65.72	52	*e*P	P	06 07 01.9	-0.6
	comp=Z,15nm,0.6s,mb5.0						
NB2	NORSAR Subarra	65.98	351	P	P	06 07 03.0	-0.9
	comp=Z,10nm,0.6s,mb4.8,baz=11,slow=6.5						
NB2	NORSAR Subarra	65.98	351	P	P	06 07 03.0	-0.9
NB2				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
NB2	NORSAR Subarra	65.98	351	P	P	06 07 03.0	-0.9
	baz=10,slow=6.5						
NOA	NORSAR Array B	65.98	351	P	P	06 07 03.0	-0.9
NOA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NOA	NORSAR Array B	65.98	351	P	P	06 07 03.0	-0.9
	comp=Z,8.0nm,0.6s,mb4.8,baz=11,slow=6.4,SNR=32						
NOA	NORSAR Array B	65.98	351	P	P	06 07 03.0	-0.9
OXF	Oxford	66.61	64	*e*P	P	06 07 07.4	-0.9
OXF				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
OXF	Oxford	66.61	64	*e*P	P	06 07 07.4	-0.9
	comp=Z,21nm,1.0s,mb4.9						
HFS	Hagfors	66.63	350	P	P	06 07 06.3	-1.7
HFS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HFS	Hagfors	66.63	350	P	P	06 07 06.3	-1.7
	comp=Z,6.0nm,0.5s,mb4.7,baz=34,slow=5.3,SNR=47						
OBN	Obninsk	67.27	336	*e*P	P	06 07 11.9	-0.2
OBN				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.9						
GUN	Gumba	67.80	287	*e*P	P	06 07 16.5	+0.6
	comp=Z,26nm,0.4s,mb5.4						
JIRN	Jiri	67.80	287	*e*P	P	06 07 16.5	+0.6
	comp=Z,19nm,0.6s,mb5.1						
KKN	Kakani	68.24	287	*e*P	P	06 07 18.9	+0.3
	comp=Z,8.9nm,0.5s,mb4.9						
PKI	Pulchoki	68.33	287	*e*P	P	06 07 19.4	+0.3
	comp=Z,16nm,0.5s,mb5.1						
GKN	Gorkha	68.45	288	*e*P	P	06 07 19.7	-0.2
	comp=Z,5.1nm,0.3s,mb4.8						
DMN	Daman	68.47	287	*e*P	P	06 07 20.2	+0.2
	comp=Z,6.6nm,0.5s,mb4.7						
KOLN	Koldanda	69.23	289	*e*P	P	06 07 24.5	-0.2
	comp=Z,5.4nm,0.6s,mb4.5						
SDMD	Soldier's Deli	69.33	52	P	P	06 07 24.0	-1.1
EKA	Eskdalemuir Ar	72.44	359	P	P	06 07 43.4	0.0
EKA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
EKA	Eskdalemuir Ar	72.44	359	P	P	06 07 43.4	0.0
	comp=Z,8.7nm,0.6s,mb4.8,baz=6.3,slow=5.4,SNR=35						
AKASG	Malin Array Be	73.09	338	P	P	06 07 47.1	-0.1
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.4s						
AKASG	Malin Array Be	73.09	338	P	P	06 07 47.0	-0.1
	comp=Z,8.4nm,0.3s,mb5.0,baz=22,slow=6.3,SNR=30						
GOF	Gofitskoye	74.33	327	*e*P	P	06 07 56.0	+1.4
KWP	Kalwaria	75.47	342	*e*P	P	06 08 02.0	+1.1
KOLS	Kolonicke sedl	76.22	342	*i* P	P	06 08 05.9	+0.7
KOLS				*e*		06 08 12.3	
CTA	Charters Tower	76.54	208	P	P	06 08 08.5	+0.9
CTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CTA	Charters Tower	76.54	208	P	P	06 08 08.5	+1.0
	comp=Z,4.6nm,0.8s,mb4.2,baz=49,slow=9.3,SNR=3.1						
CTA	Charters Tower	76.54	208	P	P	06 08 08.5	+1.0
SOC	Sochi	76.73	328	*e*P	P	06 08 05.0	-3.2

SOC				*e*	pP	06 08 30.2	-5.5
SOC				*e*		06 11 02.2	
SOC				*e*PPP	PPP	06 12 48.3	-3.3
SOC				*e*S	S	06 17 37.8	-7.0
SOC				*e*		06 18 12.2	
SOC				*e*SSS	SSS	06 26 02.4	0.0
SOC				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
SOC				pmax	pmax		
	comp=N,5.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,17nm,0.8s						
VRAC	Vranov	76.83	346	P	P	06 08 09.4	+0.8
VRAC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VRAC	Vranov	76.83	346	P	P	06 08 09.4	+0.8
	comp=Z,6.5nm,1.0s,mb4.3,baz=18,slow=7.8,SNR=4.7						
BURAR	Bucovina Array	76.89	339	⇑P	P	06 08 10.0	+1.1
KHC	Kasperske Hory	77.43	348	*e*P	P	06 08 12.5	+0.6
BAIF	Baives	77.43	354	*e*P	P	06 08 12.0	+0.1
	comp=Z,14nm,0.8s,mb4.5						
BAIF	Baives	77.43	354	*e*P	P	06 08 12.0	+0.1
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
GERES	GERESS Array B	77.70	347	P	P	06 08 13.5	+0.1
GERES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GERES	GERESS Array B	77.70	347	P	P	06 08 13.5	+0.1
	comp=Z,1.7nm,0.9s,mb3.8,baz=31,slow=7.8,SNR=5.3						
TLCR		78.35	336	⇑P	P	06 08 17.2	+0.1
CFR	Carcaliu	78.52	337	⇓P	P	06 08 18.9	+0.9
MLR	Muntele Rosu	78.74	338	P	P	06 08 20.8	+1.6
MLR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MLR	Muntele Rosu	78.74	338	P	P	06 08 20.8	+1.6
	comp=Z,6.2nm,0.7s,mb4.6,baz=126,slow=7.1,SNR=10						
MLR	Muntele Rosu	78.74	338	⇓P	P	06 08 20.6	+1.4
CDF	Champ du Feu	78.83	352	*e*P	P	06 08 19.5	-0.1
MEZF	Maizieres J'vi	78.93	353	*e*P	P	06 08 20.3	+0.2
FLN	La Foliniere	78.96	357	*e*P	P	06 08 20.2	-0.1
LDF	La Druitiere	79.11	357	*e*P	P	06 08 20.7	-0.5
TIRR	Tirgusor	79.13	336	⇓P	P	06 08 22.1	+0.8
HAU	Haudompre	79.32	352	*e*P	P	06 08 22.6	+0.3
	comp=Z,4.6nm,0.5s,mb4.3						
HAU	Haudompre	79.32	352	*e*P	P	06 08 22.6	+0.3
HAU				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
GRR	Gorron	79.34	357	*e*P	P	06 08 22.4	0.0
	comp=Z,9.8nm,0.5s,mb4.6						
GRR	Gorron	79.34	357	*e*P	P	06 08 22.4	0.0
GRR				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
ROSF	Rostrenen	79.45	359	*e*P	P	06 08 23.1	+0.1
	comp=Z,52nm,1.1s,mb5.0						
ROSF	Rostrenen	79.45	359	*e*P	P	06 08 23.1	+0.1
ROSF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.0						
HINF	Hinteralfeld	79.46	352	*e*P	P	06 08 22.7	-0.4
SGMF	Saint Gilles	79.52	358	*e*P	P	06 08 23.4	0.0
	comp=Z,19nm,0.7s,mb4.7						
SGMF	Saint Gilles	79.52	358	*e*P	P	06 08 23.4	0.0
SGMF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
DAVOX	Davos	80.19	350	P	P	06 08 27.3	+0.3
	comp=Z,3.7nm,0.7s,mb4.3,baz=10,slow=7.3,SNR=7.5						
WRAB	Tennant Creek	80.35	218	*e*P	P	06 08 25.5	-2.9
WRA	Warramunga Arr	80.37	218	P	P	06 08 29.0	+0.5
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	Warramunga Arr	80.37	218	P	P	06 08 29.0	+0.5
	comp=Z,2.9nm,0.6s,mb4.3,baz=30,slow=6.3,SNR=26						
SSF	Saint Saulge	80.47	354	*e*P	P	06 08 28.5	+0.1
SSF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
SSF	Saint Saulge	80.47	354	*e*P	P	06 08 28.5	+0.1
	comp=Z,3.3nm,0.6s,mb4.3						
CABF	La Chapelle	80.72	352	*e*P	P	06 08 30.0	+0.2
	comp=Z,11nm,0.9s,mb4.4						
CABF	La Chapelle	80.72	352	*e*P	P	06 08 30.0	+0.2
CABF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
AVF	Avril sur Loir	80.74	354	*e*P	P	06 08 29.9	0.0
	comp=Z,3.2nm,0.4s,mb4.2						
AVF	Avril sur Loir	80.74	354	*e*P	P	06 08 29.9	0.0
AVF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
SMF	Signal de Mont	80.86	354	*e*P	P	06 08 30.5	0.0
	comp=Z,6.1nm,0.5s,mb4.4						
SMF	Signal de Mont	80.86	354	*e*P	P	06 08 30.5	0.0
SMF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
TCF	Toulx Ste Croi	81.31	355	*e*P	P	06 08 33.1	+0.2
	comp=Z,3.2nm,0.5s,mb4.1						
TCF	Toulx Ste Croi	81.31	355	*e*P	P	06 08 33.1	+0.2
TCF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
LPG	La Plagne	81.77	352	*e*P	P	06 08 36.0	+0.7
	comp=Z,8.6nm,0.8s,mb4.3						
LPG	La Plagne	81.77	352	*e*P	P	06 08 36.0	+0.7
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
BRTR	Keskin Array B	82.12	331	P	P	06 08 38.2	+0.9
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRTR	Keskin Array B	82.12	331	P	P	06 08 38.1	+0.9
	comp=Z,4.8nm,0.7s,mb4.5,baz=56,slow=3.3,SNR=31						
ORIF	Oris-en-Rattie	82.42	352	*e*P	P	06 08 39.8	+1.1
	comp=Z,10nm,0.8s,mb4.4						
ORIF	Oris-en-Rattie	82.42	352	*e*P	P	06 08 39.8	+1.1
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MBDF	Montbardon	82.54	352	*e*P	P	06 08 40.3	+1.0
	comp=Z,7.3nm,0.6s,mb4.4						
MBDF	Montbardon	82.54	352	*e*P	P	06 08 40.3	+1.0
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
VIVF	Saint-Julien-l	82.58	353	*e*P	P	06 08 40.2	+0.7
SBF	Sospel	83.33	351	*e*P	P	06 08 43.6	+0.3
SMRF	Simiane la Rot	83.38	352	*e*P	P	06 08 44.8	+1.2
	comp=Z,46nm,1.4s,mb4.8						
FRF	La Foret Royal	83.70	351	*e*P	P	06 08 45.8	+0.7
	comp=Z,43nm,1.2s,mb4.8						
FRF	La Foret Royal	83.70	351	*e*P	P	06 08 45.8	+0.7
FRF				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.9						
ASAR	Alice Springs	83.92	217	P	P	06 08 48.0	+1.3
	comp=Z,0.7nm,0.5s,mb3.8,baz=20,slow=5.1,SNR=11						
MTLF	Montolieu	84.25	355	*e*P	P	06 08 48.8	+1.0
	comp=Z,7.1nm,0.6s,mb4.4						
MTLF	Montolieu	84.25	355	*e*P	P	06 08 48.8	+1.0
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
SJPF	Ste Jean	84.63	357	*e*P	P	06 08 51.0	+1.3
	comp=Z,5.6nm,0.6s,mb4.4						
SJPF	Ste Jean	84.63	357	*e*P	P	06 08 51.0	+1.3
SJPF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ETSF	Etsaut	84.82	357	*e*P	P	06 08 51.8	+1.1
	comp=Z,11nm,0.7s,mb4.6						
ETSF	Etsaut	84.82	357	*e*P	P	06 08 51.8	+1.1
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ASF	Jabal al Asfar	87.99	325	P	P	06 09 07.1	+0.7
	comp=Z,2.5nm,0.8s,mb4.3,baz=276,slow=5.1,SNR=3.9						
ESDC	Sonseca Array	88.11	359	P	P	06 09 06.5	-0.3
	comp=Z,0.6nm,0.6s,mb3.8,baz=358,slow=4.4,SNR=5.2						
DBIC	Dimbokro	120.98	360	PKIKP	PKPdf	06 15 08.0	+0.4
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DBIC	Dimbokro	120.98	360	PKP	PKPdf	06 15 08.0	+0.3
	comp=Z,2.3nm,0.9s,baz=141,slow=4.0,SNR=4.1						
BOSA	Boshof	147.19	305	*e*PKP2	PKPab	06 16 00.2	-1.8

IDC 19 06:11:53.2±1.1**, 44.47N**×**146.45E, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.6**/22**, mbtmp3.7**/6**, Error ellipse: s-maj=59.6km s-min=25.3km az=86.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	FINESS Array B	64.00	333	P	P	06 22 28.7	-1.5
	1.8nm,0.9s,baz=45,slow=12,SNR=3.6						
WRA	Warramunga Arr	65.05	193	P	P	06 22 35.3	-2.4
	0.5nm,0.7s,baz=13,slow=6.9,SNR=3.9						
NOA	NORSAR Array B	68.75	338	P	P	06 22 58.0	-2.3
	4.7nm,1.1s,baz=42,slow=5.1,SNR=2.6						
ASAR	Alice Springs	68.77	192	P	P	06 22 59.1	-2.1
	0.5nm,1.0s,baz=11,slow=5.3,SNR=4.2						
HFS	Hagfors	68.83	337	P	P	06 22 58.4	-2.4
	2.6nm,0.8s,baz=169,slow=7.3,SNR=4.3						
TXAR	Lajitas Array	82.66	56	P	P	06 24 18.9	-1.0
	0.1nm,0.5s,baz=288,slow=3.0,SNR=3.5						

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*IGQ **19** 06:15:35.6, 1.57S×81.42W, h14^{km}±8^{km}, mb4.6, Error ellipse: s-maj=9.7km s-min=4.0km az=176.2*

*IDC **19** 06:15:37.1±0.9, 1.61S×81.24W, mb3.6/8, mb1 3.8/11, mb1mx3.7/23, mbtmp3.6/11, ML3.0/3, Error ellipse: s-maj=46.6km s-min=17.2km az=64.0*

*NEIC **19** 06:15:46.0±3.4, 1.50S×80.88W, h73^{km}±33^{km}, mb3.7/1, Error ellipse: s-maj=37.1km s-min=8.7km az=65.0*

ISC 19 06:15:36.9±1.5**, 1.61S**±0.06×**81.36W**±0.04**, h9**^{km}±10^{km}**, n39,** σ1^{s}08/44**, mb3.6**/8**, 2C-5D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	Salinas	0.68	147	⇓P	Pb	06 15 49.9	-0.7
HOJA	Cerro de Hojas	0.98	56	⇑P	Pb	06 15 54.1	-1.6
IGUA	Igualata	2.72	88	P	Pn	06 16 21.6	-0.1
IGUA				S	Sn	06 16 56.9	+1.8
CUSU	Cusua	2.88	87	P	Pn	06 16 24.7	+0.7
JUIV	Juive	2.90	86	⇓P	Pn	06 16 24.0	-0.3
ARRY	Arrayan	2.91	88	⇑P	Pn	06 16 23.5	-0.8
ARRY				S	Sn	06 16 58.1	-1.7
RETU	Refugio	2.92	87	P	Pn	06 16 24.7	+0.2
RETU				S	Sn	06 17 01.6	+1.5
ULBA	Ulba	2.96	87	P	Pn	06 16 24.8	-0.2
PISA	Pisayambo	3.02	80	P	Pn	06 16 26.6	+0.6
NAS1	Nasa	3.04	71	P	Pn	06 16 26.1	-0.1
JUA2	San Juan 2	3.08	63	P	Pn	06 16 26.5	-0.3
TERV	Terraza Guagua	3.10	63	⇓P	Pn	06 16 26.9	-0.2
TERV				S	Sn	06 17 03.3	-1.3
PINO	Pino	3.10	62	P	Pn	06 16 26.6	-0.6
VC1	Cotopaxi 1	3.11	72	⇓P	Pn	06 16 28.6	+1.5
TAMB	Tambo	3.12	73	⇓P	Pn	06 16 28.5	+1.1
YANA	Yana	3.15	62	P	Pn	06 16 27.0	-0.9
YANA				S	Sn	06 17 05.6	-0.5
ANTI	Antisana	3.40	70	P	Pn	06 16 32.4	+1.1
OTAV	Otavalo	3.44	58	*e*P	Pn	06 16 30.5	-1.3
COTA	Cotacachi	3.58	57	P	Pn	06 16 33.7	-0.2
ELAGU	Cayambe Volc	3.72	65	P	Pn	06 16 37.6	+1.8
CAYR	Refugio Cayamb	3.72	64	P	Pn	06 16 37.8	+2.0
CAYA	Cayambe	3.76	64	P	Pn	06 16 37.5	+1.0
CONE	Cono NE Rev Vo	4.02	68	P	Pn	06 16 44.0	+3.9
ECEN	Cerro Negro	4.16	55	P	Pn	06 16 41.9	-0.2
ROSC	El Rosal	9.52	48	Pn	P	06 17 56.0	-1.4
	0.4nm,0.3s,baz=272,slow=3.8,SNR=4.6						
SDV	Santo Domingo	14.93	46	Pn	P	06 19 14.5	+4.2
	0.2nm,0.3s,baz=260,slow=9.9,SNR=5.0						
SAML	Samuel	19.50	113	*e*P	P	06 20 02.4	-5.0
	5.6nm,1.0s						
LPAZ	La Paz	19.56	139	P	P	06 20 05.7	-2.4
	0.1nm,0.3s,baz=328,slow=7.8,SNR=5.1						
LPAZ	La Paz	19.56	139	*e*P	P	06 20 06.2	-1.9
LVC	Limon Verde	24.13	151	P	P	06 20 55.1	+0.7
	1.3nm,0.6s,mb3.6,baz=337,slow=12,SNR=3.0						
TXAR	Lajitas Array	37.44	327	P	P	06 22 53.7	+1.1
	0.2nm,0.7s,mb3.1,baz=135,slow=6.4,SNR=2.8						
PLCA	Paso Flores	40.16	167	P	P	06 23 14.9	-0.2
	1.1nm,0.7s,mb3.7,baz=347,slow=7.4,SNR=3.5						
ANMO	Albuquerque	43.30	329	P	P	06 23 42.7	+1.6
	0.4nm,0.4s,mb3.5,baz=135,slow=7.1,SNR=3.4						
ANMO	Albuquerque	43.30	329	P	P	06 23 42.7	+1.6
PDAR	Pinedale Array	50.96	333	P	P	06 24 41.4	+0.4
	0.5nm,1.0s,mb3.4,baz=90,slow=9.9,SNR=2.8						
NVAR	Mina Array Bea	52.39	323	P	P	06 24 51.9	-0.1
	0.4nm,0.7s,mb3.5,baz=137,slow=7.9,SNR=4.1						
ULM	Lac du Bonnet	53.14	348	P	P	06 24 56.2	-1.1
	3.7nm,0.7s,mb4.5,baz=161,slow=8.0,SNR=3.8						
YKA	Yellowknife Ar	68.69	344	P	P	06 26 41.5	-1.3
	1.0nm,1.1s,mb3.7,baz=136,slow=5.9,SNR=7.0						
YKA	Yellowknife Ar	68.69	344	P	P	06 26 41.5	-1.3

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*IDC **19** 06:15:55.0±1.8, 28.46N×142.65E, mb3.9/8, mb1 4.0/8, mb1mx3.8/21, mbtmp3.9/8, Error ellipse: s-maj=68.1km s-min=15.4km az=85.0*

*NEIC **19** 06:15:56.6±1.4, 28.41N×142.61E, h10^{km}, mb4.4/3, Error ellipse: s-maj=63.9km s-min=10.5km az=77.0*

ISC 19 06:15:55.7±4.8**, 28.50N**±0.06×**142.8E**±0.3**, h21**^{km}±32^{km}**, n14,** σ0^{s}**74**/15**, mb4.0**/11**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.50	202	Pn	Pn	06 16 22.6	+0.8
	24nm,0.3s,baz=343,slow=18,SNR=7.0						
CBIJ				Sn	Sn	06 16 41.1	+0.1
	46nm,0.3s,baz=97,slow=23,SNR=7.6						
MAT	Matsushiro	8.90	335	*e*P	P	06 18 06.0	-0.3
	6.3nm,0.5s						
MAT	Matsushiro	8.90	335	P	P	06 18 05.9	-0.4
SONM	Songino Array	34.10	314	P	P	06 22 40.3	-0.6
	0.6nm,0.5s,mb3.8,baz=116,slow=11,SNR=5.6						
ZAL	Zalesovo	48.81	318	P	P	06 24 41.0	-0.2
	0.7nm,0.4s,mb4.0,baz=354,slow=10,SNR=3.0						
WRAB	Tennant Creek	48.84	191	*e*P	P	06 24 40.9	-1.0
	4.4nm,0.8s,mb4.5						
WRA	Warramunga Arr	48.85	191	P	P	06 24 41.9	-0.1
	1.2nm,0.5s,mb4.2,baz=12,slow=8.5,SNR=23						
KURK	Kurchatov	52.40	314	*e*P	P	06 25 08.5	-0.2
	3.2nm,0.7s,mb4.4						
ASAR	Alice Springs	52.57	190	P	P	06 25 09.7	-0.6
	0.2nm,0.4s,mb3.4,baz=7.7,slow=5.7,SNR=6.5						
CHKZ	Chkalovo	57.20	318	*e*P	P	06 25 43.7	+0.2
	2.4nm,0.7s,mb4.3						
BVAR	Borovoye Array	57.39	317	P	P	06 25 44.4	-0.5
	1.8nm,0.5s,mb4.3,baz=92,slow=8.2,SNR=16						
FINES	FINESS Array B	76.93	334	P	P	06 27 48.8	+0.8
	2.4nm,1.0s,mb4.1,baz=63,slow=6.2,SNR=4.8						
NOA	NORSAR Array B	82.51	338	P	P	06 28 18.7	+0.8
	0.6nm,0.8s,mb3.7,baz=230,slow=6.8,SNR=3.1						
BRTR	Keskin Array B	85.45	313	P	P	06 28 36.5	+3.3
	0.7nm,0.8s,mb3.8,baz=66,slow=3.4,SNR=3.3						

DJA 19 06:33:26.7±0.8**, 9.43S**×**112.54E, h30**^{km}**, MD4.7**/4**, ML4.3**/4**, 7C-3D, Error ellipse: s-maj=25.0km s-min=16.4km az=158.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.84	59	⇑*i*Pn	Pn	06 33 54.9	-1.9
	291nm,0.2s						
SRDI				⇓*i*Sn	Sn	06 34 14.8	-4.5
KELI	Kelakatan	2.27	58	⇑*i*Pn	Pn	06 34 02.1	-0.9
	76nm,0.3s						
KELI	Kelakatan	2.27	58	⇑*i*P	Pn	06 34 02.7	-0.3
KELI				⇑*i*Sn	Sn	06 34 27.0	-3.3
RATI	Rata	3.04	77	⇑*i*Pn	Pn	06 34 13.2	-0.7
	143nm,0.2s						
RATI				⇓*i*Sn	Sn	06 34 44.9	-4.7
KEDI	Kedomdong	3.65	75	⇑*i*Pn	Pn	06 34 20.4	-2.2
	70nm,0.2s						
KEDI	Kedomdong	3.65	75	⇑*i*P	Pn	06 34 20.6	-2.0
KEDI				⇓*i*Sn	Sn	06 35 00.9	-4.3

IDC 19 06:38:47.1±1.6**, 5.40N**×**94.43E, mb3.7**/5**, mb1 3.9**/6**, mb1mx3.7**/19**, mbtmp3.7**/6**, Error ellipse: s-maj=56.7km s-min=28.9km az=60.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.71	18	Pn	P	06 42 02.6	-2.8
	baz=206,slow=13,SNR=2.8						
SONM	Songino Array	43.51	12	P	P	06 46 52.4	-1.7
	0.6nm,0.8s,baz=188,slow=8.7,SNR=4.7						
ASAR	Alice Springs	48.14	128	P	P	06 47 29.3	-1.9
	0.2nm,0.3s,baz=298,slow=7.5,SNR=4.8						
ZAL	Zalesovo	49.02	352	P	P	06 47 35.5	-2.1
	1.3nm,0.3s,baz=302,slow=5.7,SNR=5.4						
BVAR	Borovoye Array	51.41	342	P	P	06 47 53.8	-2.0
	0.4nm,0.4s,baz=135,slow=8.2,SNR=6.4						
GERES	GERESS Array B	79.85	319	P	P	06 50 57.8	-1.4
	0.2nm,0.3s,baz=112,slow=5.3,SNR=2.3						

IDC 19 06:42:52.7±10.0**, 1.90S**×**127.77E, mb4.4**/2**, mb1 4.7**/3**, mb1mx4.0**/15**, mbtmp4.5**/3**, ML4.8**/1**, Error ellipse: s-maj=151.2km s-min=132.8km az=124.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	11.70	157	*e*P	P	06 45 52.4	+8.4
	8.4nm,0.3s						
FITZ	Fitzroy Crossi	16.23	187	*e*P	P	06 46 47.4	+3.5
	4.1nm,0.4s						
WRA	Warramunga Arr	19.05	161	P	P	06 47 16.2	-2.8
	2.8nm,0.3s,baz=340,slow=11,SNR=75						
ASAR	Alice Springs	22.44	165	P	P	06 47 52.5	-2.2
	5.4nm,0.8s,baz=348,slow=11,SNR=4.3						
STKA	Stephens Creek	32.54	158	P	P	06 49 26.5	-1.3
	2.9nm,0.8s,baz=326,slow=7.3,SNR=4.4						

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*IDC **19** 06:57:33.7±1.1, 22.58N×121.77E, mb3.6/7, mb1 3.8/7, mb1mx3.6/20, mbtmp3.6/7, MS2.9/1, Ms1 3.1/1, ms1mx2.3/22, Error ellipse: s-maj=41.6km s-min=20.1km az=65.0*

*TAP **19** 06:57:41.3, 22.66N×121.30E, h56^{km}, ML4.4*

TAP Felt I J at Taitung, II J at Taimali, III J at Chenggung, I J at Sandimen, II J at Lanyu, I J at Tauyuan, I J at Dapu.

*JMA **19** 06:57:42.6±0.2, 22.50N×121.51E, h76^{km}, M3.9*

ISC 19 06:57:41.6±0.3**, 22.65N**±0.02×**121.34E**±0.02**, h53**^{km}±4^{km}**, n71,** σ0^{s}**99**/117**, mb3.4**/7**, MS2.7**/1**, 2C-16D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTN	Taitung	0.20	300	⇓*i*P	P	06 57 50.2	+0.1
TTN				S	S	06 57 56.4	0.0
ECL	Taimali	0.36	261	⇓*i*P	P	06 57 50.1	-1.4
CHKT	Chengkung	0.44	4	⇑*i*P	P	06 57 52.1	-0.3
CHKT				S	S	06 57 59.9	-0.4
TAW	Tawu	0.50	234	P	P	06 57 52.1	-1.0
TAW				S	S	06 57 59.8	-1.6
EAST	Anshuo	0.53	239	⇓*i*P	P	06 57 52.6	-0.7
EAST				S	S	06 58 00.4	-1.4
ELDTW	Lidau	0.61	331	⇓*i*P	P	06 57 53.3	-1.0
ELDTW				S	S	06 58 01.4	-2.3
LAY	Lan-yu	0.64	162	*e*P	P	06 57 55.3	+0.5
LAY				S	S	06 58 05.0	+0.5
SSD	Sandimen	0.66	278	⇓*i*P	P	06 57 54.7	-0.2
SSD				S	S	06 58 03.9	-0.8
TWF1	Yuli	0.70	357	⇓*i*P	P	06 57 54.3	-1.1
TWF1				S	S	06 58 03.0	-2.7
SCZT	Fangliau	0.72	247	*e*P	P	06 57 56.2	+0.5
SCZT				S	S	06 58 06.3	+0.1
STYT	Tauyuan	0.73	314	⇓*i*P	P	06 57 56.2	+0.3
STYT				S	S	06 58 06.6	+0.1
SGLT	Jiouru	0.78	275	*e*P	P	06 57 57.2	+0.6
SGST	Jiashian	0.81	302	⇓*i*P	P	06 57 57.6	+0.6
SGST				S	S	06 58 08.8	+0.4
EHY	Hungye	0.85	359	⇓*i*P	P	06 57 56.5	-1.0
EHY				S	S	06 58 06.0	-3.2
HEN	Hengchun	0.85	221	*e*P	P	06 57 59.0	+1.5
TWM1	Shoushan	0.86	281	*e*P	P	06 57 58.9	+1.3
TWM1				S	S	06 58 12.3	+2.7
TWK1	Hengchun	0.86	215	*e*P	P	06 57 57.4	-0.3
WTP	Ta-pu	0.89	312	⇓*i*P	P	06 57 58.4	+0.4
WTP				S	S	06 58 10.9	+0.7
YUS	Yu-Shan	0.90	337	⇓*i*P	P	06 57 58.5	+0.3
YUS				S	S	06 58 10.0	-0.6
CHN1	Nanshi	0.91	306	*e*P	P	06 57 58.8	+0.4
CHN1				S	S	06 58 10.7	-0.1
TWP	Hsiaoliuchiu	0.95	251	*e*P	P	06 57 59.8	+0.9
TWP				S	S	06 58 14.8	+3.1
KAU	Kaohsiung	0.95	265	*e*P	P	06 57 60.0	+1.1
CHN4	Tsaushan	0.97	316	⇓*i*P	P	06 57 59.6	+0.4
CHN4				S	S	06 58 12.8	+0.5
ALS	Alishan	0.98	330	⇓*i*P	P	06 58 00.1	+0.8
ALS				S	S	06 58 13.2	+0.7
CHN3	Shinhua	0.99	295	*e*P	P	06 58 00.6	+1.2
CHN3				S	S	06 58 14.2	+1.6
TWK	Hsinying	0.99	308	P	P	06 57 59.7	+0.2
TWK				S	S	06 58 12.8	+0.1
CHN5	Tsauling	1.12	327	⇓*i*P	P	06 58 01.7	+0.5
CHN5				S	S	06 58 16.6	+0.9
ESL	Shilin	1.16	4	*e*P	P	06 58 00.4	-1.3
SCLT	Jiali	1.17	296	*e*P	P	06 58 01.4	-0.6
SCLT				S	S	06 58 16.9	-0.2
CHN2	Minshiung	1.18	318	*e*P	P	06 58 01.7	-0.3
CHN2				S	S	06 58 17.2	-0.1
CHY	Chiayi	1.19	315	*e*P	P	06 58 02.2	+0.1
CHY				S	S	06 58 16.4	-1.1
CHN8	Yiju	1.24	304	*e*P	P	06 58 02.5	-0.5
WGK	Gukeng	1.25	325	*e*P	P	06 58 03.2	+0.2
WGK				S	S	06 58 19.5	+0.4
SMLT	Sun Moon Lake	1.29	342	⇓*i*P	P	06 58 04.6	+1.0
SMLT				S	S	06 58 20.9	+0.8
TYC	Yuchr	1.32	341	⇓*i*P	P	06 58 05.0	+0.8
TYC				S	S	06 58 21.6	+0.7
HWA	Hwalien	1.34	11	*e*P	P	06 58 04.3	-0.1
WNT	Mingjian	1.36	334	*e*P	P	06 58 05.4	+0.7
WNT				S	S	06 58 22.6	+0.8
WSF	Szhu	1.42	314	*e*P	P	06 58 04.9	-0.6
TWD	Chiawan	1.44	10	*e*P	P	06 58 05.0	-0.8
TWD				S	S	06 58 19.9	-3.9
WHF	Hehuan Shan	1.48	358	*e*P	P	06 58 06.1	-0.3
WHF				S	S	06 58 24.3	-0.6
TWT	Tachien	1.60	355	*e*P	P	06 58 08.3	+0.3
TWT				S	S	06 58 25.9	-1.7
TCU	Taichung	1.60	338	*e*P	P	06 58 08.7	+0.6
TCU				S	S	06 58 28.2	+0.4
WDGT	Dungji	1.66	292	*e*P	P	06 58 07.0	-1.8
WDGT				S	S	06 58 25.1	-3.9
TWQ1	Liyutan	1.76	343	*e*P	P	06 58 11.2	+0.9
TWQ1				S	S	06 58 33.1	+1.5
NNS	Nan Shan	1.78	1	*e*P	P	06 58 10.8	+0.3
NNS				S	S	06 58 30.4	-1.5
ENA	Nanau	1.81	12	*e*P	P	06 58 11.2	+0.3
NSY	Sanyi	1.83	343	*e*P	P	06 58 12.4	+1.1
NSY				S	S	06 58 34.8	+1.6
PNG	Penghu	1.87	299	*e*P	P	06 58 09.4	-2.4
ENTT	Nioudou	1.99	6	*e*P	P	06 58 12.5	-0.9
NSTT	Nanjuang	1.99	351	*e*P	P	06 58 15.2	+1.7
TWC	Suao	2.00	14	*e*P	P	06 58 13.3	-0.3
TWC				S	S	06 58 37.1	-0.4
NSK	Sanguang	2.01	1	⇑*i*P	P	06 58 14.2	+0.5
NSK				S	S	06 58 36.4	-1.3
TWE	Neicheng	2.08	8	*e*P	P	06 58 14.6	-0.2
TWA	Mucha	2.33	6	*e*P	P	06 58 17.9	-0.4
YOJ	Yonaguni jima	2.37	40	P	P	06 58 20.5	+1.6
YOJ				*e*S	S	06 58 48.5	+1.8
NWF	Wu-fen Shan	2.44	10	*e*P	P	06 58 19.1	-0.8
HATJ	Hateruma jima	2.67	58	P	P	06 58 23.5	+0.4
HATJ				S	S	06 58 54.6	+0.3
IRIF	Iriomote-Funau	2.76	52	P	P	06 58 25.1	+0.6
IRIF				*e*S	S	06 58 57.9	+1.1
JKRS	Kuro-shima	2.92	57	P	P	06 58 27.4	+0.7
JKRS				*e*S	S	06 59 01.1	+0.4
JIJ	Ishigaki jima	3.09	56	P	P	06 58 29.2	+0.1
JIJ				*e*S	S	06 59 04.6	-0.4
KNM	Kinmen	3.19	304	*e*P	P	06 58 28.8	-1.7
KNM				S	S	06 59 04.0	-3.5
JTJ	Tarama	3.67	57	P	P	06 58 37.4	+0.2
JTJ				*e*S	S	06 59 19.4	-0.2
JMJ	Miyako jima 2	4.22	59	P	P	06 58 45.3	+0.3
JOGS	Gusukube	4.28	60	P	P	06 58 46.1	+0.2
CMAR	Chiang Mai Arr	21.37	263	P	P	07 02 27.1	+0.4
	0.8nm,0.4s,mb3.4,baz=68,slow=9.7,SNR=5.8						
CMAR				LR	LR	07 09 58.0	
	comp=Z,31nm,21.7s,MS2.7,baz=195,slow=34						
SONM	Songino Array	27.83	338	P	P	07 03 26.6	-1.4
	0.5nm,0.8s,mb3.2,baz=146,slow=10,SNR=3.9						
ZAL	Zalesovo	41.61	328	P	P	07 05 25.9	0.0
	0.6nm,0.7s,mb3.3,baz=303,slow=2.2,SNR=3.2						
WRA	Warramunga Arr	44.20	162	P	P	07 05 41.5	-6.0
	1.3nm,0.8s,mb3.7,baz=348,slow=8.6,SNR=2.8						
ASAR	Alice Springs	47.64	164	P	P	07 06 11.8	-2.8
	0.1nm,0.3s,mb3.3,baz=341,slow=7.0,SNR=3.9						
BVAR	Borovoye Array	48.95	322	P	P	07 06 23.5	-0.9
	0.3nm,0.6s,mb3.5,baz=108,slow=9.1,SNR=3.5						
NVAR	Mina Array Bea	97.45	43	P	P	07 11 08.9	-2.1
	0.1nm,0.3s,mb3.7,baz=297,slow=4.0,SNR=3.6						

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*NIED **19** 07:01:00, 33.50N×137.20E, h5^{km}, Mw3.9 Best double couple: M$_0$8.28×10^{14} NP1:ϕ_s301°, δ77°, λ-18°. NP2:ϕ_s35°, δ72°, λ-166°.*

*JMA **19** 07:01:46.7±0.1, 33.48N×137.18E, h44^{km}±2^{km}, M3.5*

ISC 19 07:01:47.1±1.3,33.51N±0.07×137.16E±0.05,h45^{km}±18^{km}, n12,σ0^{s}60/21,2C,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	**Tokai 1**	0.44	54	P	P	07 01 56.6	-0.8
TK01				S	S	07 02 04.8	+0.2
TK02	**Tokai 2**	0.66	48	P	P	07 02 00.3	+0.1
TK02				S	S	07 02 10.0	+0.2
TK03	**Tokai 3**	0.94	45	S	S	07 02 16.7	+0.1
JIE	**Ise**	0.96	337	⇑P	P	07 02 04.7	+0.3
JIE				S	S	07 02 16.9	-0.2
TK04	**Tokai 4**	1.06	34	P	P	07 02 05.8	+0.1
TK04				S	S	07 02 19.7	+0.1
JAA	**Atsumi**	1.12	359	P	P	07 02 06.8	+0.2
JAA				S	S	07 02 20.2	-1.0
JWZ	**Kozaga**	1.21	272	P	P	07 02 07.6	-0.3
JWZ				S	S	07 02 22.1	-1.3
TSUJ	**Tsu 2**	1.35	333	⇑P	P	07 02 10.6	+0.6
TSUJ				S	S	07 02 27.5	+0.5
JWM	**Minabe**	1.54	283	P	P	07 02 12.9	+0.2
JHE	**Heguri**	1.68	313	P	P	07 02 15.8	+1.2
JHE				S	S	07 02 35.6	+0.6
SHZ3	**Shizuoka 3**	1.78	29	P	P	07 02 15.8	-0.3
MAT	**Matsushiro**	3.15	16	P	P	07 02 36.0	+0.5
MAT				S	S	07 03 11.0	-1.2

IDC 19 07:06:31.3±7.5,6.27S×147.74E,h123^{km}±45^{km},mb3.3/2, mb1 3.5/5,mb1mx3.4/14,mbtmp3.8/5,Error ellipse: s-maj=81.6km s-min=62.6km az=95.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.17	190	P	P	07 07 21.4	+0.5
	15nm,0.3s,baz=11,slow=10,SNR=38						
PMG				S	S	07 07 57.7	-0.8
	10nm,0.3s,baz=155,slow=22,SNR=8.9						
CTA	**Charters Tower**	13.81	186	P	P	07 09 47.2	+4.2
	0.7nm,0.3s,baz=0.8,slow=14,SNR=14						
WRA	**Warramunga Arr**	18.82	223	P	P	07 10 40.3	-3.7
	0.2nm,0.3s,baz=46,slow=12,SNR=4.7						
ASAR	**Alice Springs**	21.83	216	P	P	07 11 13.9	-0.7
	0.6nm,0.4s,baz=53,slow=8.7,SNR=9.4						
STKA	**Stephens Creek**	26.12	192	P	P	07 11 54.5	-1.2
	1.3nm,0.6s,baz=349,slow=10,SNR=2.2						

BJI 19 07:08:40.0,5.10N×94.70E,h30^{km},mB4.6,mb4.6,Ms4.7, Msz4.6

MOS 19 07:08:42.4±1.3,5.09N×94.60E,h33^{km},mb4.7/10,Error ellipse: s-maj=19.6km s-min=8.8km az=100.4

NEIC 19 07:08:44.1±0.6,5.10N×94.66E,h30^{km},mb4.6/9,Error ellipse: s-maj=18.4km s-min=9.3km az=56.0

IDC 19 07:08:48.9±3.9,5.19N×94.72E,h70^{km}±31^{km},mb4.0/13, mb1 4.1/14,mb1mx4.0/22,mbtmp4.3/14,ML4.3/1,Error ellipse: s-maj=39.2km s-min=15.7km az=50.0

ISC 19 07:08:43.4±0.6,5.3N±0.1×94.9E±0.1,h33^{km},n49, σ1^{s}09/49,mb4.5/32,MS4.2/2,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	13.69	16	P	P	07 12 02.2	+4.6
	0.5nm,0.3s,baz=199,slow=13,SNR=4.7						
JIRN	**Jiri**	23.75	341	*e*P	P	07 13 55.0	+1.3
	8.5nm,0.3s,mb4.7						
GYA	**Guiyang**	23.88	27	⇑*i*P	P	07 13 58.3	+3.3
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
DMN	**Daman**	24.08	338	*e*P	P	07 13 59.0	+2.0
	comp=Z,4.2nm,0.4s,mb4.2						
KKN	**Kakani**	24.18	339	*e*P	P	07 13 58.7	+0.7
	comp=Z,9.2nm,0.7s,mb4.3						
LSA	**Lhasa**	24.55	352	P	P	07 14 04.0	+2.5
LSA	**Lhasa**	24.55	352	*e*P	P	07 14 03.6	+2.1
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
LSA	**Lhasa**	24.55	352	*e*P	P	07 14 03.6	+2.1
	comp=Z,10nm,0.6s,mb4.5						
GKN	**Gorkha**	24.61	338	*e*P	P	07 14 02.7	+0.6
	comp=Z,13nm,0.3s,mb4.9						
KOLN	**Koldanda**	24.82	336	*e*P	P	07 14 04.8	+0.7
	comp=Z,26nm,0.7s,mb4.9						
ENH	**Enshi**	28.42	27	P	P	07 14 36.8	-0.4
	comp=Z,2.7nm,0.4s,mb4.2						
XAN	**Xi'an**	31.45	23	P	P	07 15 03.6	-0.5
XAN				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.5						
NJ2	**Nanjing**	34.82	37	*e*P	P	07 15 28.1	-5.3
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,40nm,4.2s						
NJ2				LR	LR		
	comp=N,402nm,14.2s,MS4.7						
NJ2				LR	LR		
	comp=E,1µm,16.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,2µm,16.4s,MS5.0						
SSE	**Sheshan**	35.63	41	P	P	07 15 33.6	-6.7
	comp=Z,26nm,0.8s,mb5.2						
SSE				sP	sP	07 15 46.1	-8.2
SSE				S	S	07 21 03.6	-10
SSE				sS		07 21 19.3	
SSE				PcS		07 21 51.6	
SSE				LR	LR		
	comp=Z,90nm,16.8s,MS3.6						
BJT	**Baijiatuau**	39.55	26	P	P	07 16 12.2	-0.8
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJT	**Baijiatuau**	39.55	26	P	P	07 16 12.2	-0.7
	comp=Z,5.6nm,0.6s,mb4.5						
AAK	**Ala-Archa**	41.37	337	*i* P	P	07 16 29.4	+1.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
AAK	**Ala-Archa**	41.37	337	*e*P	P	07 16 28.9	+0.9
	comp=Z,2.7nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	42.77	347	*e*P	P	07 16 39.6	+0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	43.54	11	P	P	07 16 46.2	+0.5
	comp=Z,2.2nm,0.6s,mb4.0,baz=193,slow=8.0,SNR=25						
SONM				PcP	PcP	07 18 33.4	-0.3
	comp=Z,0.7nm,0.4s,baz=197,slow=3.9,SNR=9.6						
ULN	**Ulaanbaatar**	43.70	12	*i* P	P	07 16 44.3	-2.7
WRA	**Warramunga Arr**	46.18	124	P	P	07 17 07.7	+0.5
	comp=Z,6.4nm,0.7s,mb4.7,baz=303,slow=9.2,SNR=16						
WRAB	**Tennant Creek**	46.18	124	*e*P	P	07 17 07.6	+0.4
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	46.18	124	*e*P	P	07 17 07.6	+0.3
	comp=Z,8.8nm,0.6s,mb4.9						
TLY	**Talaya**	46.82	7	*i* P	P	07 17 10.5	-1.3
TLY				pmax	pmax		
	comp=Z,7.0nm,2.3s,mb4.2						
KURK	**Kurchatov**	47.30	346	*i* P	P	07 17 15.8	+0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
KURK	**Kurchatov**	47.30	346	*e*P	P	07 17 15.6	0.0
	comp=Z,4.8nm,0.5s,mb4.7						
ASPA	**Alice Springs**	47.70	129	*e*P	P	07 17 19.6	+0.5
ASAR	**Alice Springs**	47.70	129	P	P	07 17 19.4	+0.2
	comp=Z,1.3nm,0.6s,mb4.2,baz=306,slow=7.7,SNR=27						
ASAR				ScP		07 22 35.4	
	comp=Z,1.1nm,0.6s,baz=318,slow=2.9,SNR=4.5						
ZAL	**Zalesovo**	49.21	352	P	P	07 17 30.7	+0.4
	comp=Z,6.9nm,0.3s,mb5.1,baz=308,slow=5.7,SNR=39						
NVS	**Novosibirsk**	50.31	351	*e*P	P	07 17 36.6	-2.2
BVA0	**Borovoye Array**	51.67	341	*i* P	P	07 17 48.5	-0.6
BVAR	**Borovoye Array**	51.67	341	P	P	07 17 48.8	-0.3
	comp=Z,2.4nm,0.6s,mb4.3,baz=146,slow=11,SNR=21						
CHKZ	**Chkalovo**	52.16	342	P	P	07 17 52.6	-0.2
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
YSS	**Yuzh-Sakhalins**	58.39	37	*e*	P	07 18 41.0	+3.0
BRTR	**Keskin Array B**	64.69	312	P	P	07 19 18.6	-2.0
	comp=Z,0.8nm,0.6s,mb3.9,baz=117,slow=8.3,SNR=4.4						
OBN	**Obninsk**	67.96	328	*e*P	P	07 19 39.2	-1.8
OBN				pmax	pmax		
	comp=Z,23nm,1.9s,mb4.9						
TIXI	**Tiksi**	69.62	11	*e*P	P	07 19 49.6	-1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
FINES	**FINESS Array B**	75.34	332	P	P	07 20 24.3	-0.7
	comp=Z,1.3nm,0.8s,mb3.9,baz=110,slow=6.1,SNR=12						
ARCES	**ARCESS Array B**	77.95	340	P	P	07 20 39.4	-0.1
	comp=Z,3.7nm,0.7s,mb4.4,baz=104,slow=6.8,SNR=18						
GERES	**GERESS Array B**	80.25	319	P	P	07 20 52.5	+0.1
	comp=Z,1.8nm,0.6s,mb4.2,baz=110,slow=5.3,SNR=11						
KHC	**Kasperske Hory**	80.35	319	*i* P	P	07 20 56.8	+3.9
HFS	**Hagfors**	81.06	330	P	P	07 20 56.0	-0.4
	comp=Z,1.8nm,0.6s,mb4.2,baz=90,slow=5.9,SNR=5.8						
DAVOX	**Davos**	82.77	316	P	P	07 21 06.0	+0.5
	comp=Z,3.3nm,0.4s,mb4.7,baz=121,slow=5.3,SNR=11						
ILAR	**Eielson Array**	96.85	22	P	P	07 22 12.2	+0.3
	comp=Z,0.2nm,0.5s,mb3.8,baz=301,slow=4.4,SNR=4.9						
INK	**Inuvik**	99.26	16	P	P	07 22 22.9	+0.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	99.26	16	P	P	07 22 23.2	+0.4
	comp=Z,0.4nm,0.7s,mb4.0,baz=269,slow=7.3,SNR=5.0						
INK	**Inuvik**	99.26	16	P	P	07 22 22.9	+0.2
	comp=Z,0.7nm,0.7s,mb4.3						
TXAR	**Lajitas Array**	141.24	26	PKhKP		07 28 07.7	
	comp=Z,0.2nm,0.4s,baz=146,slow=0.7,SNR=4.1						
TXAR				PKP	PKPdf	07 28 13.1	+1.6
	comp=Z,0.2nm,0.5s,baz=5.8,slow=1.0,SNR=6.4						

IDC 19 07:12:28.8±0.8,4.44N×96.32E,mb4.2/13,mb1 4.3/14, mb1mx4.2/19,mbtmp4.2/14,ML4.3/1,MS4.0/10,Ms1 4.0/10, ms1mx3.9/20,Error ellipse: s-maj=41.8km s-min=15.6km az=51.0

NEIC 19 07:12:35.0±2.8,4.50N×96.41E,h38^{km}±25^{km},mb4.6/9, Error ellipse: s-maj=22.2km s-min=8.5km az=52.0

BJI 19 07:12:41.8,5.21N×96.92E,h37^{km},mB4.9,mb4.4,Ms4.3, Msz4.1

ISC 19 07:12:32.7±0.5,4.42N±0.08×96.40E±0.08,h33^{km},n46, σ1^{s}27/42,mb4.4/25,MS4.1/11,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	4.62	88	P	P	07 13 39.8	-2.1
CM31	**Chiang Mai Arr**	14.17	10	P	P	07 16 01.1	+7.8
CMAR	**Chiang Mai Arr**	14.17	10	Pn	P	07 15 51.5	-1.8
	0.4nm,0.3s,baz=202,slow=15,SNR=3.8						
CMAR				LR	LR	07 21 18.0	
	comp=Z,288nm,21.6s,baz=195,slow=37						
KKM	**Kota Kinabalu**	19.80	84	P	P	07 17 04.7	+1.4
HYB	**Hyderabad**	21.73	308	*e*P	P	07 17 25.5	+2.3
HYB	**Hyderabad**	21.73	308	*i* P	P	07 17 25.5	+2.3
GYA	**Guiyang**	24.02	23	P	P	07 17 47.6	+1.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
JIRN	**Jiri**	25.08	338	*e*P	P	07 17 58.3	+2.4
PKI	**Pulchoki**	25.30	337	*e*P	P	07 17 57.4	-0.6
DMN	**Daman**	25.45	336	*e*P	P	07 17 58.4	-1.0
LSA	**Lhasa**	25.63	349	P	P	07 18 04.3	+3.2
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
LSA	**Lhasa**	25.63	349	*e*P	P	07 18 02.2	+1.1
	comp=Z,7.6nm,0.5s,mb4.5						
GKN	**Gorkha**	25.99	336	*e*P	P	07 18 04.2	-0.3
	comp=Z,11nm,0.7s,mb4.5						
KOLN	**Koldanda**	26.23	334	*e*P	P	07 18 05.7	-1.0
	comp=Z,9.3nm,0.7s,mb4.5						
CD2	**Chengdu**	27.25	14	*e*P	P	07 18 18.3	+2.3
XAN	**Xi'an**	31.69	20	P	P	07 18 56.8	+1.2
XAN				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.4						
LZH	**Lanzhou**	32.25	11	*e*P	P	07 18 52.3	-8.2
	comp=Z,25nm,1.4s,mb4.8						
LZH				pP	pP	07 19 02.5	-7.7
LZH				sP	sP	07 19 05.6	-8.9
GTA	**Gaotai**	34.97	5	*e*P	P	07 19 23.5	-0.4
GTA				PP	PP	07 20 37.3	-5.2
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.3						
GTA				AMB	AMB		
	comp=Z,89nm,7.2s						
GTA				LR	LR		
	comp=N,166nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=E,189nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=Z,274nm,15.6s,MS4.1						
FITZ	**Fitzroy Crossi**	36.50	129	*e*P	P	07 19 36.7	-0.4
	comp=Z,10nm,0.5s,mb4.9						
KAKA	**Kakadu**	39.65	116	*e*P	P	07 19 58.7	-4.7
	comp=Z,5.0nm,0.8s,mb4.3						
BJT	**Baijiatuau**	39.68	24	*e*P	P	07 20 03.7	+0.3
	comp=Z,6.2nm,0.6s,mb4.5						
BJI	**Beijing**	39.70	24	P	P	07 20 04.1	+0.5
BJI				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.7						
BJI				LR	LR		
	comp=N,261nm,22.6s,MS4.1						
BJI				LR	LR		
	comp=E,122nm,22.6s,MS4.1						
BJI				LR	LR		
	comp=Z,204nm,24.2s,MS3.9						
BJI	**Beijing**	39.70	24	P	P	07 20 04.1	+0.5
	comp=Z,11nm,0.7s,mb4.7						
BJI				S	S	07 26 23.5	+19
BJI				LR	LR		
	comp=Z,200nm,24.2s,MS3.9						
SONM	**Songino Array**	44.10	10	P	P	07 20 38.9	-0.7
	comp=Z,2.4nm,0.6s,mb4.1,baz=192,slow=10.0,SNR=16						
WRA	**Warramunga Arr**	44.46	124	P	P	07 20 43.0	+0.1
	comp=Z,6.2nm,0.5s,mb4.6,baz=301,slow=9.2,SNR=16						
WRAB	**Tennant Creek**	44.46	124	*e*P	P	07 20 42.6	-0.2
	comp=Z,6.7nm,0.6s,mb4.5						
ASPA	**Alice Springs**	46.00	129	⇑*i*P	P	07 20 55.7	+0.6
ASAR	**Alice Springs**	46.00	129	P	P	07 20 55.5	+0.3
	comp=Z,6.0nm,0.6s,mb4.7,baz=302,slow=7.5,SNR=40						
ASAR				LR	LR	07 40 26.2	
	comp=Z,142nm,18.5s,MS4.0,baz=184,slow=36						
ZAL	**Zalesovo**	50.27	351	P	P	07 21 26.3	-1.6
	comp=Z,1.0nm,0.5s,mb4.1,baz=332,slow=1.5,SNR=4.9						
ZAL				LR	LR	07 44 29.2	
	comp=Z,88nm,19.7s,MS3.8,baz=185,slow=38						
ZAL	**Zalesovo**	50.27	351	P	P	07 21 26.3	-1.6
ZAL				LR	LR	07 44 29.1	
BVAR	**Borovoye Array**	52.97	341	P	P	07 21 45.7	-2.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=141,slow=9.5,SNR=5.2						
STKA	**Stephens Creek**	56.12	133	P	P	07 22 09.4	-2.0
	comp=Z,4.3nm,1.1s,mb4.4,baz=309,slow=6.5,SNR=2.8						
STKA				LR	LR	07 48 36.1	
	comp=Z,141nm,18.2s,MS4.1,baz=299,slow=39						
STKA	**Stephens Creek**	56.12	133	*e*P	P	07 22 12.0	+0.5
KMBO	**Kilima Mbogo**	59.35	266	P	P	07 22 38.6	+4.1
	comp=Z,2.7nm,0.9s,mb4.3,baz=57,slow=13,SNR=5.1						
KMBO				LR	LR	07 44 57.5	
	comp=Z,119nm,21.1s,MS4.0,baz=94,slow=33						
KMBO	**Kilima Mbogo**	59.35	266	P	P	07 22 36.2	+1.7
	comp=Z,1.9nm,0.7s,mb4.2						
BRTR	**Keskin Array B**	66.38	312	P	P	07 23 19.9	-0.8
	comp=Z,1.5nm,0.5s,mb4.3,baz=128,slow=8.3,SNR=9.0						
AKASG	**Malin Array Be**	72.24	322	P	P	07 23 56.8	+0.4
	comp=Z,0.4nm,0.4s,mb3.7,baz=92,slow=5.0,SNR=4.4						
MAW	**Mawson**	75.65	193	LR	LR	07 51 46.5	
	comp=Z,51nm,18.9s,MS3.9,baz=68,slow=31						
FINES	**FINESS Array B**	76.79	332	P	P	07 24 22.0	-0.6
	comp=Z,2.8nm,1.1s,mb4.1,baz=110,slow=5.1,SNR=3.2						
FINES				LR	LR	08 03 51.2	
	comp=Z,125nm,18.5s,MS4.3,baz=62,slow=40						
ARCES	**ARCESS Array B**	79.25	340	P	P	07 24 35.8	-0.2
	comp=Z,3.1nm,0.8s,mb4.3,baz=84,slow=5.7,SNR=10.0						
ARCES				LR	LR	08 02 26.9	
	comp=Z,231nm,18.3s,MS4.5,baz=185,slow=38						
GERES	**GERESS Array B**	81.88	319	P	P	07 24 48.3	-2.0
	comp=Z,0.3nm,0.5s,mb3.5,baz=135,slow=5.6,SNR=3.3						
NOA	**NORSAR Array B**	83.82	331	LR	LR	08 05 35.5	
	comp=Z,168nm,18.6s,MS4.5,baz=320,slow=38						
DAVOX	**Davos**	84.42	316	P	P	07 25 04.4	+1.1
	comp=Z,3.8nm,0.5s,mb4.8,baz=164,slow=5.4,SNR=10						
VNDA	**Vanda**	89.12	169	LR	LR	08 00 24.3	
	comp=Z,80nm,18.3s,MS4.2,baz=352,slow=32						
TXAR	**Lajitas Array**	141.31	29	PKP	PKPdf	07 32 07.8	+6.9
	comp=Z,0.3nm,0.7s,baz=315,slow=2.6,SNR=4.1						
BDFB	**Brasilia**	143.29	250	PKP	PKPdf	07 32 05.8	+1.1
	comp=Z,1.5nm,0.5s,baz=97,slow=5.4,SNR=4.1						

MOS 19 07:17:38.2±1.6,45.17N×146.88E,h167^{km},mb3.9/7,Error ellipse: s-maj=26.0km s-min=16.0km az=67.1

JMA 19 07:17:40.6±0.6,44.94N×146.90E,h153^{km},M3.4

IDC 19 07:17:41.9±2.4,45.37N×146.52E,h173^{km}±33^{km}, mb3.4/10,mb1 3.7/11,mb1mx3.4/24,mbtmp3.9/11,Error ellipse: s-maj=48.8km s-min=21.3km az=9.0

ISC 19 07:17:39.6±0.6,44.85N±0.08×146.7E±0.1,h187^{km}±7^{km}, n37,σ1^{s}23/44,mb3.7/10,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	1.01	217	*i* PN	P	07 18 07.1	-1.1
YUK				*i* S	S	07 18 29.8	-0.6
YUK				pmax	pmax		
	comp=Z,2µm,0.6s						
YUK				pmax	pmax		
	comp=Z,770nm,0.3s						
YUK				pmax	pmax		
	comp=N,170nm,0.6s						
YUK				pmax	pmax		
	comp=E,180nm,0.3s						
YUK				smax			
	comp=N,760nm,0.5s						
YUK				smax			
	comp=E,630nm,0.4s						
YUK				smax			
	comp=E,1µm,1.0s						
JRA	**Rausu**	1.45	232	P	P	07 18 11.9	-0.2
NEM2	**Nemuro 2**	1.64	205	P	P	07 18 13.2	-0.6
NEM2				*e*S	S	07 18 38.2	-2.0
JNK	**Nakash**	1.90	229	P	P	07 18 17.0	+0.5
JTKR	**Abashiri--Toko**	2.19	247	P	P	07 18 19.9	+0.3
JAK	**Akkeshi**	2.35	219	P	P	07 18 22.0	+0.5
JAK				*e*S	S	07 18 53.9	+0.2
JAR	**Ashorobuto**	2.62	235	P	P	07 18 26.5	+1.9
JSE	**Soyaes**	2.93	274	P	P	07 18 28.6	+0.4
JKK2	**Kamakawa 2**	3.00	252	P	P	07 18 30.6	+1.5
ASAJ	**Asahikawa**	3.03	257	PN	P	07 18 31.0	+1.6
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ	**Asahikawa**	3.03	257	P	P	07 18 31.0	+1.6
	comp=Z,10nm,0.3s,baz=84,slow=15,SNR=48						
JCH	**Churui**	3.29	228	P	P	07 18 33.9	+1.2
JCH				*e*S	S	07 19 13.3	-0.4
JFR	**Furan**	3.41	242	P	P	07 18 36.7	+2.5
JWK2	**Keihoku**	3.44	280	P	P	07 18 36.2	+1.7
YSS	**Yuzh-Sakhalins**	3.47	309	*e*PN	P	07 18 33.0	-1.9
YSS	**Yuzh-Sakhalins**	3.47	309	P	P	07 18 33.2	-1.7
	comp=Z,6.0nm,0.3s						
JNBK	**Urakawa-nobuka**	3.85	230	P	P	07 18 40.1	+0.4
JNBK				*e*S	S	07 19 24.6	-1.5
JKB	**Kayabe**	5.08	236	P	P	07 18 56.1	+0.6
JKB				*e*S	S	07 19 54.1	-0.2
JOT	**Ohata**	5.40	232	P	P	07 18 59.5	0.0
JOT				*e*S	S	07 19 59.1	-2.5
SKR	**Severo-Kuril's**	8.62	44	*e*PN	P	07 19 34.5	-7.2
ILAR	**Eielson Array**	40.80	37	P	P	07 25 02.5	-1.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	40.80	37	P	P	07 25 02.5	-1.1
	comp=Z,1.0nm,0.8s,mb3.5,baz=270,slow=7.3,SNR=11						
INK	**Inuvik**	45.62	31	P	P	07 25 41.1	-1.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK	**Inuvik**	45.62	31	P	P	07 25 41.0	-1.2
	comp=Z,1.4nm,0.3s,mb4.1,baz=299,slow=6.1,SNR=49						
YKA	**Yellowknife Ar**	55.07	34	P	P	07 26 52.9	-0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	55.07	34	P	P	07 26 52.9	-0.6
	comp=Z,0.6nm,0.6s,mb3.5,baz=300,slow=6.8,SNR=10.0						
ARCES	**ARCESS Array B**	58.11	339	P	P	07 27 13.4	-1.5
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	58.11	339	P	P	07 27 13.4	-1.5
	comp=Z,2.8nm,0.9s,mb4.1,baz=41,slow=8.3,SNR=2.4						
YBH	**Yreka Blue Hor**	62.57	57	P	P	07 27 46.2	+0.7
YBH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YBH	**Yreka Blue Hor**	62.57	57	P	P	07 27 46.2	+0.7
	comp=Z,1.5nm,1.0s,mb3.8,baz=337,slow=7.7,SNR=2.2						
FINES	**FINESS Array B**	63.75	333	P	P	07 27 50.8	-2.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	63.75	333	P	P	07 27 50.8	-2.0
	comp=Z,2.3nm,0.9s,mb4.0,baz=53,slow=9.5,SNR=7.4						
NVAR	**Mina Array Bea**	67.27	58	P	P	07 28 16.9	+1.3
	comp=Z,0.7nm,0.8s,mb3.5,baz=286,slow=6.6,SNR=4.2						
NOA	**NORSAR Array B**	68.46	338	P	P	07 28 21.3	-1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	68.46	338	P	P	07 28 21.3	-1.3
	comp=Z,0.5nm,0.6s,mb3.5,baz=27,slow=4.9,SNR=2.5						
PDAR	**Pinedale Array**	69.45	50	P	P	07 28 30.3	+1.4
	comp=Z,1.0nm,0.4s,mb3.9,baz=297,slow=2.0,SNR=15						
TXAR	**Lajitas Array**	82.31	56	P	P	07 29 42.9	+1.6
	comp=Z,0.2nm,0.5s,mb3.0,baz=280,slow=3.1,SNR=5.6						

CASC 19 07:23:12.9±1.6,9.88N×83.85W,h81^{km}±29^{km},MD3.9,1C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FORC	**Fortuna**	1.00	306	*i* P	P	07 23 32.3	+0.1
FORC				*i* S	S	07 23 47.3	+0.5
BRU2	**Volcan**	1.57	133	⇑*e*P	P	07 23 39.9	+0.2
BRU2				*e*S	S	07 23 59.9	+0.5
SSNN	**San Juan del S**	2.41	306	*e*P	P	07 23 50.8	-0.4
COPN	**Copaltepe**	3.53	311	*e*P	P	07 24 06.2	-0.5
COPN				*e*S	S	07 24 47.9	+0.4
MOMJ	**Momotombo**	3.65	314	*e*P	P	07 24 07.9	-0.4
MIRN	**Miramar**	3.79	312	*e*P	P	07 24 10.2	-0.2
LEON	**Leon**	3.91	310	*e*P	P	07 24 11.5	-0.4
LEON				*e*S	S	07 24 54.7	-2.2
CRIN	**San Cristobal**	4.21	312	*e*P	P	07 24 16.0	-0.1

NEIC 19 07:40:59.8±0.9,50.25N×18.77E,h5^{km},MG2.5(WAR), Error ellipse: s-maj=17.7km s-min=7.1km az=178.0

PRU 19 07:41:00.6,50.27N×18.73E

WAR 19 07:40:58.6,50.26N×18.86E,h0^{km},ML2.5,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	0.60	94	*e*PG	Pg	07 41 11.0	+0.4
OJC				*e*SG	Sg	07 41 20.0	+1.4
OKC	**Ostrava-Krasne**	0.63	228	*e*PG	Pg	07 41 10.7	-0.4
MORC	**Moravsky Berou**	0.98	241	*e*P	Pb	07 41 16.8	-1.3
NIE	**Niedzica**	1.26	131	*e*Pg	Pg	07 41 21.8	-2.0
NIE				*e*Sg	Sg	07 41 39.5	-1.1
DPC	**Dobruska-Polom**	1.63	274	*e*PG	Pg	07 41 28.1	-3.1
DPC				*e*SG	Sg	07 41 49.7	-3.2
	23nm,0.3s						
KSP	**Ksiaz**	1.74	291	*e*Pn	Pn	07 41 30.8	+0.6
KSP				*i* Pg	Pg	07 41 31.8	-1.5
KSP				*e*Sn	Sn	07 41 53.5	+0.1
KSP				*e*Sg	Sg	07 41 54.6	-1.9
KSP	**Ksiaz**	1.74	291	*e*(PN)	Pn	07 41 31.0	+0.8
KSP				*e*PG	Pg	07 41 32.0	-1.3
KSP				*e*SN	Sn	07 41 53.0	-0.4
KSP				*e*SG	Sg	07 41 55.0	-1.5
KSP	**Ksiaz**	1.74	291	*e*Pn	Pn	07 41 30.8	+0.5
KSP				*e*Pg	Pg	07 41 32.2	-1.1
KSP				*e*Sn	Sn	07 41 54.6	+1.2
VYHS	**Vyhne**	1.77	181	*e*PG	Pg	07 41 33.1	-0.8
VYHS				*e*SN	Sn	07 41 55.8	+1.7
UPC	**Upice**	1.84	279	*e*SG	Sg	07 41 56.2	-3.7
CRVS	**Cervenica-Dubn**	2.17	128	*e*PN	Pn	07 41 38.7	+2.3
CRVS				*e*SN	Sn	07 42 09.0	+4.7
KWP	**Kalwaria**	2.56	103	*e*Pg	Pg	07 41 50.3	+0.6
KWP	**Kalwaria**	2.56	103	*e*PG	Pg	07 41 50.0	+0.3
PRU	**Pruhonice**	2.79	266	*e*SG	Sg	07 42 24.9	-6.7
KHC	**Kasperske Hory**	3.61	254	*e*x	x	07 42 47.5	
KHC				*e*SG	Sg	07 42 53.4	-5.5
CLL	**Collm**	3.86	288	*e*P	Pn	07 41 52.0	-8.5
CLL	**Collm**	3.86	288	*i* SG	Sg	07 43 02.4	-4.8

DJA 19 07:47:14.7±1.0,8.61S×116.96E,h15^{km},MD4.6/3, ML3.8/3,1C-1D,Error ellipse: s-maj=55.8km s-min=19.9km az=8.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	0.85	278	*e*Pg	Pg	07 47 29.3	-2.5
	170nm,0.2s						
KEDI				*e*Sg	Sg	07 47 41.6	-1.7

RATI	Rata	1.42	265	⇓iPn	Pn	07 47 36.8	-3.3
	136nm,0.2s						
RATI				eSn	Sn	07 47 54.5	-4.0
SRDI	Scrawed	2.79	272	⇑ePn	Pn	07 47 58.0	-1.7
	28nm,0.2s						
SRDI				eSn	Sn	07 48 27.1	-6.3

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*IDC **19** 07:53:05.6±1.0, 4.88S×123.18E, mb4.1/5, mb1 4.3/6, mb1mx4.2/16, mbtmp4.1/6, ML3.9/1, MS3.7/6, Ms1 3.8/6, ms1mx3.4/18, Error ellipse: s-maj=135.7km s-min=19.4km az=56.0*

*NEIC **19** 07:53:07.3±0.7, 5.55S×122.21E, h10^{km}, mb4.5/4, Error ellipse: s-maj=45.7km s-min=10.8km az=53.0*

ISC 19 07:53:08.8±0.6**, 5.4S**±0.2×**122.5E**±0.2**, h33^{km}, n16, σ1^{s}02**/13**, mb4.3**/8**, MS3.6**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	12.22	127	eP	P	07 56 04.3	+0.8
	11nm,0.5s						
WRA	Warramunga Arr	18.48	142	P	P	07 57 23.3	-1.0
	0.4nm,0.3s,baz=318,slow=13,SNR=14						
WRAB	Tennant Creek	18.48	142	eP	P	07 57 21.8	-2.5
	12nm,0.6s						
ASPA	Alice Springs	21.22	150	eP	P	07 57 54.8	+0.7
ASAR	Alice Springs	21.22	150	P	P	07 57 54.3	+0.2
	9.8nm,0.7s,mb4.2,baz=341,slow=15,SNR=20						
ASAR				PcP	PcP	08 01 58.5	-0.5
	0.4nm,0.5s,baz=320,slow=1.5,SNR=7.3						
ASAR				LR	LR	08 06 37.4	
	comp=Z,148nm,18.2s,MS3.4,baz=320,slow=38						
PMG	Port Moresby	24.80	101	LR	LR	08 08 43.3	
	comp=Z,125nm,18.5s,MS3.4,baz=52,slow=39						
CTA	Charters Tower	27.33	124	LR	LR	08 10 39.4	
	comp=Z,158nm,19.2s,MS3.6,baz=131,slow=39						
STKA	Stephens Creek	31.83	148	P	P	07 59 33.6	+0.7
	4.5nm,1.0s,mb4.2,baz=348,slow=8.5,SNR=3.8						
STKA				LR	LR	08 14 17.9	
	comp=Z,155nm,18.0s,MS3.7,baz=21,slow=40						
STKA	Stephens Creek	31.83	148	eP	P	07 59 34.0	+1.1
STKA				LR	LR	08 14 17.9	
CMAR	Chiang Mai Arr	33.19	316	P	P	07 59 45.5	+0.6
	1.0nm,0.4s,mb4.1,baz=130,slow=7.0,SNR=4.4						
CMAR				PcP	PcP	08 02 28.9	+1.7
	1.5nm,0.4s,baz=135,slow=1.3,SNR=5.5						
CMAR				LR	LR	08 15 35.0	
	comp=Z,97nm,18.9s,MS3.5,baz=155,slow=40						
BJT	Baijiatuau	45.59	353	eP	P	08 01 28.5	+0.7
	8.1nm,0.8s,mb4.7						
AAK	Ala-Archa	64.63	323	eP	P	08 03 43.9	-1.6
	4.3nm,1.1s,mb4.4						
BVAR	Borovoye Array	72.86	330	P	P	08 04 35.4	-0.8
	2.5nm,0.7s,mb4.2,baz=135,slow=8.4,SNR=12						
VNDA	Vanda	74.98	172	LR	LR	08 34 55.8	
	comp=Z,98nm,18.2s,MS4.2,baz=343,slow=33						
QSPA	South Pole Qui	84.54	180	eP	P	08 05 40.0	+0.7
	2.7nm,0.8s,mb4.4						
BRTR	Keskin Array B	92.53	309	P	P	08 06 18.8	+0.4
	0.8nm,0.8s,mb4.2,baz=141,slow=5.2,SNR=3.6						

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*CSEM **19** 08:03:59.7±0.1, 79.25N×3.42E, h2^{km}, mb4.1/2, Error ellipse: s-maj=6.4km s-min=3.7km az=20.0*

*MOS **19** 08:04:00.4±2.3, 79.16N×2.86E, h10^{km}, mb4.1/3, Error ellipse: s-maj=64.0km s-min=14.9km az=92.5*

*NEIC **19** 08:04:03.2±0.6, 79.32N×3.81E, h10^{km}, mb4.0/2, Error ellipse: s-maj=18.3km s-min=10.2km az=212.0*

*IDC **19** 08:04:03.0±0.8, 79.17N×2.67E, mb3.6/8, mb1 3.9/11, mb1mx3.7/24, mbtmp3.7/11, ML3.5/3, MS3.1/4, Ms1 3.1/4, ms1mx2.8/26, Error ellipse: s-maj=28.2km s-min=14.4km az=37.0*

ISC 19 08:04:01.5±0.5**, 79.03N**±0.09×**3.3E**±0.3**, h10^{km}, n31, σ1^{s}46**/30**, mb3.6**/9**, MS3.3**/2**, 2D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.66	89	eP	Pn	08 04 29.6	-1.4
HSP	Hornsund	3.26	122	eP	Pn	08 04 53.6	-0.1
HSP				eS	Sn	08 05 30.3	-2.7
DAG	Danmarks Havn	5.12	255	⇓iP	Pn	08 05 17.1	-3.0
DAG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
DAG	Danmarks Havn	5.12	255	⇓iP	Pn	08 05 17.1	-3.0
	comp=Z,3.4nm,0.4s						
HOPEN	Hopen	5.23	108	eP	Pn	08 05 19.5	-2.2
HOPEN				eS	Sn	08 06 16.5	-6.4
SCO	Scoresbysund	10.70	231	eP	P	08 06 35.7	-1.9
SCO	Scoresbysund	10.70	231	i P	P	08 06 35.7	-1.9
ARCES	ARCESS Array B	11.14	137	Pn	P	08 06 45.1	+1.5
	comp=Z,0.4nm,0.3s,baz=348,slow=12,SNR=17						
ARCES				LR	LR	08 11 10.8	
	comp=Z,26nm,20.4s,baz=192,slow=38						
SUMG	Summit	11.78	259	eP	P	08 06 47.6	-4.8
	comp=Z,18nm,0.6s						
FINES	FINESS Array B	18.98	145	P	P	08 08 26.8	+1.8
	comp=Z,0.2nm,0.3s,slow=9.5,SNR=7.4						
FINES				LR	LR	08 15 56.2	
	comp=Z,60nm,18.4s,baz=276,slow=37						
HFS	Hagfors	19.26	164	P	P	08 08 30.0	+1.7
	comp=Z,0.1nm,0.3s,baz=350,slow=9.0,SNR=14						
RES	Resolute Bay	20.13	310	eP	P	08 08 31.7	-6.2
RES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
RES	Resolute Bay	20.13	310	eP	P	08 08 31.7	-6.2
	comp=Z,2.9nm,0.6s						
EKA	Eskdalemuir Ar	23.90	189	P	P	08 09 19.4	+3.8
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	23.90	189	P	P	08 09 19.4	+3.8
	comp=Z,0.8nm,0.6s,mb3.3,baz=350,slow=9.3,SNR=4.1						
FRB	Frobisher Bay	25.09	275	P	P	08 09 27.1	+0.1
FRB				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FRB	Frobisher Bay	25.09	275	P	P	08 09 27.1	0.0
	comp=Z,2.0nm,0.7s,mb3.7,baz=25,slow=13,SNR=8.1						
YKA	Yellowknife Ar	34.14	313	P	P	08 10 48.9	+0.9
	comp=Z,0.1nm,0.5s,mb3.0,baz=11,slow=8.4,SNR=7.7						
YKA				PcP	PcP	08 13 24.3	-1.0
	comp=Z,0.3nm,0.8s,baz=7.8,slow=2.8,SNR=6.2						
YKA	Yellowknife Ar	34.14	313	PcP	PcP	08 13 24.3	-1.0
BVAR	Borovoye Array	34.18	98	P	P	08 10 50.7	+2.2
	comp=Z,0.7nm,0.7s,mb3.7,baz=344,slow=11,SNR=4.2						
MLR	Muntele Rosu	34.72	152	LR	LR	08 25 26.0	
	comp=Z,40nm,21.5s,MS3.1,baz=288,slow=37						
TLY	Talaya	41.70	67	P	P	08 11 50.9	-0.3
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
TLY	Talaya	41.70	67	P	P	08 11 50.9	-0.3
	comp=Z,3.4nm,0.6s,mb4.2						
TLY	Talaya	41.70	67	P	P	08 11 50.9	-0.3
	comp=Z,3.0nm,0.6s,mb4.1						
ULM	Lac du Bonnet	42.87	291	P	P	08 11 59.9	-0.9
	comp=Z,1.9nm,0.8s,mb3.9,baz=354,slow=6.7,SNR=3.6						
ULM	Lac du Bonnet	42.87	291	P	P	08 11 59.9	-0.9
SONM	Songino Array	45.89	66	P	P	08 12 26.2	+1.1
	comp=Z,0.4nm,0.7s,mb3.5,baz=330,slow=9.4,SNR=4.2						
ASAJ	Asahikawa	54.81	35	LR	LR	08 40 35.3	
	comp=Z,38nm,18.2s,MS3.5,baz=181,slow=40						
NVAR	Mina Array Bea	58.09	308	P	P	08 13 56.7	-0.1
	comp=Z,0.6nm,0.8s,mb3.7,baz=39,slow=4.4,SNR=4.6						
NVAR	Mina Array Bea	58.09	308	P	P	08 13 56.7	-0.1
TXAR	Lajitas Array	64.56	292	P	P	08 14 40.6	+0.2
	comp=Z,0.4nm,0.8s,mb3.5,baz=45,slow=3.5,SNR=4.5						

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*NEIC **19** 08:18:17.3±2.0, 7.79S×127.59E, h174^{km}±20^{km}, mb4.3/6, Error ellipse: s-maj=14.1km s-min=8.1km az=59.0*

*IDC **19** 08:18:17.4±2.8, 7.69S×127.72E, h171^{km}±25^{km}, mb3.8/7, mb1 3.9/10, mb1mx3.9/15, mbtmp4.4/10, Error ellipse: s-maj=28.1km s-min=12.1km az=66.0*

ISC 19 08:18:13.3±1.6**, 7.82S**±0.07×**127.7E**±0.1**, h155^{km}**±17^{km}**, n28, σ1^{s}27**/30**, mb4.3**/12**, 2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.75	136	eP	P	08 19 49.8	-1.2
	134nm,0.3s						
KAKA				eS	S	08 20 59.5	-7.4
FITZ	Fitzroy Crossi	10.41	191	⇓iP	P	08 20 40.0	+0.4
	26nm,0.2s						
FITZ				eS	S	08 22 30.6	-3.5
WRAB	Tennant Creek	13.66	152	eP	P	08 21 20.6	-1.2
	13nm,0.5s						
WRAB				eS	S	08 23 39.7	-10
WRA	Warramunga Arr	13.67	153	P	P	08 21 20.9	-0.9
	2.5nm,0.3s,baz=325,slow=14,SNR=30						
MBWA	Marble Bar	15.32	209	eP	P	08 21 45.5	+2.8
	8.2nm,0.4s						
ASAR	Alice Springs	16.85	160	P	P	08 22 03.0	+1.6
	0.8nm,0.3s,baz=331,slow=10,SNR=72						
ASAR				ScP		08 29 59.6	
	0.2nm,0.3s,baz=346,slow=2.3,SNR=5.7						
ASPA	Alice Springs	16.85	160	⇓iP	P	08 22 02.9	+1.4
ASPA				eS	S	08 24 59.9	-2.3
PMG	Port Moresby	19.32	96	P	P	08 22 30.1	+1.3
	1.2nm,0.3s,baz=295,slow=11,SNR=5.4						
TGY	Tagaytay City	22.79	343	P	P	08 23 05.0	+1.6
	100nm,0.3s,baz=171,slow=10,SNR=4.7						
NWAO	Narrogin (SRO)	26.80	200	P	P	08 23 43.4	+2.5
	2.1nm,0.4s,mb4.1,baz=39,slow=11,SNR=5.3						
NWAO	Narrogin (SRO)	26.80	200	P	P	08 23 39.4	-1.5
STKA	Stephens Creek	27.22	153	eP	P	08 23 45.4	+0.6
	1.2nm,0.4s,mb3.9						
STKA	Stephens Creek	27.22	153	P	P	08 23 45.7	+0.9
	1.4nm,0.4s,mb3.9,baz=323,slow=11,SNR=8.5						
CMAR	Chiang Mai Arr	38.55	313	P	P	08 25 23.1	+0.4
	1.2nm,0.3s,mb4.0,baz=145,slow=6.9,SNR=7.0						
JIRN	Jiri	53.42	313	eP	P	08 27 18.9	-0.7
	3.7nm,0.3s,mb4.6						
GUN	Gumba	53.79	313	eP	P	08 27 22.0	-0.3
KKN	Kakani	54.16	313	eP	P	08 27 23.8	-1.1
	8.2nm,0.4s,mb4.8						
GKN	Gorkha	54.75	312	eP	P	08 27 28.7	-0.5
	20nm,0.3s,mb5.3						
KOLN	Koldanda	55.39	311	eP	P	08 27 33.0	-0.9
	13nm,0.5s,mb4.9						
SONM	Songino Array	58.52	343	P	P	08 27 55.2	-0.5
	0.7nm,0.4s,mb3.8,baz=160,slow=7.7,SNR=8.2						
ZAL	Zalesovo	71.32	335	P	P	08 29 16.9	-0.9
	3.4nm,0.8s,mb4.1,baz=343,slow=5.0,SNR=12						
ZAL	Zalesovo	71.32	335	P	P	08 29 16.9	-0.9
VNDA	Vanda	71.92	173	P	P	08 29 22.3	+1.3
	3.1nm,1.0s,mb4.0,baz=329,slow=5.9,SNR=4.8						
KURK	Kurchatov	72.04	330	eP	P	08 29 20.7	-1.4
	2.9nm,0.7s,mb4.1						
BVAR	Borovoye Array	77.55	329	P	P	08 29 53.8	+0.4
	1.5nm,0.6s,mb3.8,baz=127,slow=8.7,SNR=14						
QSPA	South Pole Qui	82.16	180	eP	P	08 30 19.3	+1.7
PDAR	Pinedale Array	119.10	45	PKP	PKPdf	08 36 45.0	+1.0
	0.4nm,0.4s,baz=45,slow=4.2,SNR=6.0						
LPAZ	La Paz	151.39	147	PKPbc	PKPdf	08 37 52.6	+9.5
	1.2nm,0.5s,baz=49,slow=15,SNR=6.8						
LPAZ				PKPab	PKPab	08 38 02.2	+1.6
	1.2nm,0.8s,baz=201,slow=2.6,SNR=8.3						

DJA 19 08:25:09.3±0.9**, 10.16S**×**117.29E, h15^{km}, MD4.9**/4**, ML4.0**/4**, 1C-2D, Error ellipse: s-maj=26.4km s-min=18.0km az=36.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	2.03	325	⇓iPn	Pn	08 25 41.0	-2.4
	169nm,0.2s						
KEDI				eSn	Sn	08 26 04.4	-4.2
RATI	Rata	2.25	309	⇑ePn	Pn	08 25 43.8	-2.8
	174nm,0.2s						
RATI				eSn	Sn	08 26 08.5	-5.7
KELI	Kelakatan	3.37	305	ePn	Pn	08 26 01.4	-1.2
	22nm,0.2s						
KELI				eSn	Sn	08 26 38.6	-4.1
SRDI	Scrawed	3.53	298	⇓iPn	Pn	08 26 01.2	-3.6
	27nm,0.1s						
SRDI				eSn	Sn	08 26 40.3	-6.4

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*CSEM **19** 08:25:09.2±0.1, 30.09N×51.86E, h16^{km}, ML3.5, Error ellipse: s-maj=3.9km s-min=1.7km az=61.0*

*THR **19** 08:25:09.1±0.8, 30.10N×51.86E, h15^{km}±15^{km}, ML3.5*

*TEH **19** 08:25:13.0, 30.10N×51.92E, h9^{km}, Mn3.3*

ISC 19 08:25:09.1±0.8**, 30.11N**±0.06×**51.81E**±0.09**, h9^{km}, n18, σ1^{s}24**/19**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHI	Shiraz	0.77	127	Pg	Sb	08 25 37.5	+3.0
IMOK	Mook	1.32	143	Pg	Pg	08 25 35.7	+0.2
ISRV	Sarvestan	1.34	122	Pg	Pg	08 25 31.3	-4.7
IBRJ	Borojen	1.72	344	Pn	Pn	08 25 43.4	+3.9
GHIR	Ghir-Karzin	2.08	150	ePG	Pg	08 25 46.9	-3.9
GHIR				AML	AML	08 26 27.2	
	comp=N,425nm,0.7s						
GHIR	Ghir-Karzin	2.08	150	ePg	Pg	08 25 46.8	-4.0
	SNR=93						
NASN	Na’in	2.82	17	ePN	Pn	08 25 56.0	+0.8
NASN				SN	Sn	08 26 30.2	+0.5
NASN	Na’in	2.82	17	ePn	Pn	08 25 56.0	+0.8
	SNR=54						
NASN				Sn	Sn	08 26 30.2	+0.5
	SNR=54						
SHGO	Shushtar	3.26	308	ePN	Pn	08 26 02.4	+0.9
SHGO				AML	AML	08 27 08.4	
	comp=N,76nm,0.8s						
IBAF	Bafgh	3.55	64	Pn	Pn	08 26 06.9	+1.2
ASAO	Ashtian	4.68	342	ePN	Pn	08 26 21.9	+0.2
ASAO				AML	AML	08 27 51.3	
	comp=N,19nm,0.7s						
BNDS	Bandar-Abbas	4.68	124	ePN	Pn	08 26 20.4	-1.3
BNDS				AML	AML	08 27 17.9	
	comp=N,61nm,0.4s						
DAMV	Damavand	5.51	1	ePN	Pn	08 26 32.8	-0.6
IRAZ	Razeghan	5.52	344	Sn	Sn	08 27 35.6	-2.3
IFIR	Firoozkooh	5.58	8	Pn	Pn	08 26 33.1	-1.3
IFIR	Firoozkooh	5.58	8	Lg		08 28 06.4	
SNGE	Sanandaj	6.24	324	ePN	Pn	08 26 43.2	-0.5
IDHR	Dehrash	6.48	316	Pn	Pn	08 26 48.6	+1.5

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*NEIC **19** 08:26:09.0±0.8, 23.76S×66.56W, h197^{km}±7^{km}, mb4.0/7, Error ellipse: s-maj=12.6km s-min=9.7km az=63.0*

*IDC **19** 08:26:09.6±1.6, 23.69S×66.62W, h202^{km}±10^{km}, mb3.5/7, mb1 3.7/10, mb1mx3.6/16, mbtmp4.0/10, Error ellipse: s-maj=25.1km s-min=16.8km az=0.0*

ISC 19 08:26:08.1±0.9**, 23.79S**±0.07×**66.57W**±0.10**, h205^{km}**±8^{km}**, n27, σ1^{s}04**/26**, mb3.7**/12**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.45	298	P	P	08 26 53.7	+1.5
	94nm,0.3s,baz=129,slow=6.9,SNR=915						
LVC				S	S	08 27 26.0	-0.3
	159nm,0.3s,baz=234,slow=22,SNR=17						
LVC	Limon Verde	2.45	298	eP	P	08 26 53.0	+0.8
LPAZ	La Paz	7.60	349	P	P	08 27 57.7	+0.8
	1.6nm,0.3s,baz=161,slow=6.8,SNR=38						
LPAZ				S	S	08 29 23.1	+1.1
	0.7nm,0.3s,baz=254,slow=23,SNR=7.1						
LPAZ	La Paz	7.60	349	eP	P	08 27 57.3	+0.3
	3.6nm,0.5s						
ARE	Arequipa	8.63	327	eP	P	08 28 08.0	-2.3
ARE				eS	S	08 29 41.0	-4.9
TRQA	Tornquist	14.76	166	eP	P	08 29 27.3	-0.8
SAML	Samuel	15.11	13	eP	P	08 29 31.1	-1.5
	6.7nm,0.8s						
BDFB	Brasilia	19.24	68	P	P	08 30 19.0	+0.2
	0.5nm,0.3s,baz=241,slow=10,SNR=8.4						
BAO	Brasilia Array	19.26	68	eP	P	08 30 19.8	+0.7
OTAV	Otavalo	26.52	333	P	P	08 31 30.1	+1.3
	1.6nm,0.7s,mb3.8						
TEIG	Tepich	48.59	332	eP	P	08 34 31.6	-1.3
	3.5nm,0.6s,mb3.9						
JCT	Junction City	62.67	328	eP	P	08 36 12.3	-1.0
	5.7nm,0.9s,mb4.2						
TXAR	Lajitas Array	63.73	324	P	P	08 36 19.5	-0.8
	0.5nm,0.7s,mb3.3,baz=155,slow=8.7,SNR=8.0						
QSPA	South Pole Qui	66.42	180	eP	P	08 36 37.7	+1.1
	3.3nm,0.5s,mb4.2						
ANMO	Albuquerque	69.59	326	P	P	08 36 56.7	-0.2
	2.2nm,0.8s,mb3.8,baz=129,slow=4.6,SNR=13						
DUG	Dugway	76.85	325	P	P	08 37 39.9	+0.9
PDAR	Pinedale Array	77.17	329	P	P	08 37 40.9	+0.2
	0.9nm,0.8s,mb3.5,baz=121,slow=7.5,SNR=7.3						
ULM	Lac du Bonnet	78.15	341	P	P	08 37 44.1	-1.7
	1.2nm,0.6s,mb3.7,baz=163,slow=9.4,SNR=3.6						
SCHQ	Schefferville	78.29	360	P	P	08 37 45.9	-0.7
	2.3nm,0.8s,mb3.9,baz=153,slow=4.5,SNR=4.6						
ELK	Elko	78.53	324	eP	P	08 37 48.5	+0.3
	0.9nm,0.7s,mb3.5						
NVAR	Mina Array Bea	78.62	321	P	P	08 37 49.9	+1.2
	0.3nm,0.6s,mb3.1,baz=145,slow=7.0,SNR=4.3						
MCMT	McKenzie Canyo	80.28	329	eP	P	08 37 58.9	+1.5
YKA	Yellowknife Ar	94.06	340	P	P	08 39 03.5	-0.1
	0.8nm,0.6s,mb3.9,baz=133,slow=4.3,SNR=24						
ASAR	Alice Springs	128.81	204	PKP	PKPdf	08 44 53.5	+1.6
	0.9nm,0.6s,baz=140,slow=2.0,SNR=13						
BVAR	Borovoye Array	136.39	37	PKP	PKPdf	08 45 07.7	+2.6
	0.6nm,0.6s,baz=288,slow=4.7,SNR=4.0						
ZAL	Zalesovo	143.02	28	PKP	PKPdf	08 45 16.5	-0.3
	1.1nm,0.6s,baz=180,slow=5.6,SNR=8.1						
SONM	Songino Array	155.35	11	PKP	PKPdf	08 45 39.3	+3.2
	0.4nm,1.0s,baz=180,slow=1.2,SNR=3.8						
SONM				PKPab	PKPab	08 46 05.0	-0.1
	0.9nm,0.6s,baz=326,slow=4.7,SNR=8.4						

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*NEIC **19** 08:33:13.8, 45.24S×167.36E, h66^{km}, ML3.8(WEL), After WEL.*

WEL 19 08:33:13.7±0.2**, 45.23S**×**167.31E, h61^{km}**±**2^{km}, ML3.6**/10**, 2C-3D, Error ellipse: s-maj=1.9km s-min=1.0km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.27	204	PN	P	08 33 23.4	-0.3
DCZ				SN	S	08 33 30.8	-0.4
MLZ	Mavora Lakes	0.62	101	⇑P	P	08 33 26.5	-0.6
MLZ				S	S	08 33 36.2	-0.9
MLZ	Mavora Lakes	0.62	101	⇑PN	P	08 33 26.4	-0.7
MLZ				SN	S	08 33 36.1	-0.9
MSZ	Milford Sound	0.71	38	PN	P	08 33 27.8	-0.4
MSZ				SN	S	08 33 38.9	-0.1
WHZ	Wether Hill Ro	0.80	146	⇓P	P	08 33 29.0	-0.3
WHZ				S	S	08 33 40.7	-0.3
WHZ	Wether Hill Ro	0.80	146	⇓PN	P	08 33 29.0	-0.3
WHZ				SN	S	08 33 40.7	-0.3
WKZ	Wanaka	1.27	72	P	P	08 33 35.4	-0.4
WKZ	Wanaka	1.27	72	PN	P	08 33 35.5	-0.3
WKZ				SN	S	08 33 50.9	-1.2
EAZ	Earnscleugh	1.41	91	P	P	08 33 37.2	-0.5
EAZ				S	S	08 33 53.7	-1.8
EAZ	Earnscleugh	1.41	91	PN	P	08 33 37.3	-0.5
EAZ				SN	S	08 33 53.7	-1.8
JCZ	Jackson Bay	1.55	42	eP	P	08 33 38.9	-0.7
JCZ	Jackson Bay	1.55	42	PN	P	08 33 38.9	-0.7
JCZ				SN	S	08 33 57.3	-1.5
TUZ	Tuapeka	1.78	115	eP	P	08 33 41.6	-1.2
TUZ	Tuapeka	1.78	115	PN	P	08 33 41.6	-1.2
LBZ	Lake Benmore	2.21	69	eP	P	08 33 46.7	-2.1
LBZ	Lake Benmore	2.21	69	PN	P	08 33 46.6	-2.2
LBZ				SN	S	08 34 11.4	-3.5
ODZ	Otahua Downs	2.37	87	P	P	08 33 49.0	-2.0
ODZ	Otahua Downs	2.37	87	⇓PN	P	08 33 49.0	-2.0
ODZ				SN	S	08 34 14.3	-4.5
FOZ	Fox Glacier	2.38	47	PN	P	08 33 50.3	-0.9
RPZ	Rata Peaks	3.08	62	PN	P	08 33 57.2	-3.8
WVZ	Waitaha Valley	3.27	50	ePN	P	08 34 00.5	-3.3
DSZ	Denniston Nort	4.77	45	PN	P	08 34 21.6	-3.2
DSZ				eSN	S	08 35 12.3	-7.1

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*PRU **19** 08:39:57.7, 50.21N×19.22E*

WAR 19 08:39:57.0, 50.16N×19.31E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.32	80	ePg	Pg	08 40 04.2	+0.8
OJC				eSg	Sg	08 40 08.9	+1.3
OKC	Ostrava-Krasne	0.82	247	ePG	Pg	08 40 13.0	-0.3
OKC				eSG	Sg	08 40 22.9	-1.3
NIE	Niedzica	0.99	139	ePG	Pg	08 40 16.0	-0.8
NIE				eSG	Sg	08 40 31.0	+1.0
DPC	Dobruska-Polom	1.93	277	ePG	Pg	08 40 30.4	-5.1
DPC				eSG	Sg	08 40 56.4	-4.7
	17nm,0.4s						
KSP	Ksiaz	2.04	291	ePG	Pg	08 40 35.0	-2.8
KSP				eSG	Sg	08 41 02.0	-3.0
UPC	Upice	2.14	281	eSG	Sg	08 41 03.8	-4.5
PRU	Pruhonice	3.08	269	eSG	Sg	08 41 31.8	-7.6
KHC	Kasperske Hory	3.87	257	ePN	Pn	08 40 58.0	-0.9
KHC				ePG	Pg	08 41 12.0	-2.2
KHC				eSN	Sn	08 41 43.5	-2.2
KHC				eSG	Sg	08 41 59.9	-5.8
CLL	Collm	4.17	288	i SG	Sg	08 42 11.0	-4.7

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*NIED **19** 08:45:00, 44.80N×146.20E, h210^{km}, Mw3.9 Best double couple: M$_0$7.45×10^{14} NP1:φ$_s$116°, δ86°, λ174°. NP2: φ$_s$207°, δ84°, λ4°.*

*SKHL **19** 08:45:43.1±1.9, 45.06N×146.42E, h187^{km}±10^{km}, mb4.6/3, msh5.0/1*

*MOS **19** 08:45:44.8±1.0, 44.96N×146.15E, h215^{km}, mb4.0/2, Error ellipse: s-maj=39.5km s-min=29.1km az=94.3*

*JMA **19** 08:45:46.5±0.2, 44.81N×146.21E, h205^{km}±2^{km}, M3.7*

*IDC **19** 08:45:47.3±2.0, 45.11N×146.04E, h211^{km}±21^{km}, mb3.1/8, mb1 3.4/9, mb1mx3.2/23, mbtmp3.7/9, Error ellipse: s-maj=26.7km s-min=20.7km az=147.0*

ISC 19 08:45:44.6±0.4**, 44.92N**±0.05×**146.30E**±0.06**, h203^{km}**±4^{km}**, n35, σ0^{s}96**/53**, mb3.3**/8**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril’sk	0.94	200	ePN	P	08 46 15.3	+0.9
YUK				i S	S	08 46 38.0	+0.5
YUK				pmax	pmax		
	comp=Z,140nm,0.3s						
YUK				smax			
	comp=N,1µm,1.0s						
YUK				smax			
	comp=E,2µm,0.8s						
YUK				smax			
	comp=N,620nm,0.6s						
YUK				smax			
	comp=E,930nm,0.6s						
YUK	Yuzh-Kuril’sk	0.94	200	eP	P	08 46 15.3	+0.9
YUK				AMB	AMB	08 46 16.7	
	comp=E,140nm,0.3s						
YUK				i S	S	08 46 38.0	+0.5
YUK				A		08 46 41.0	
	comp=E,1µm,1.0s						
YUK				A		08 46 41.0	
	comp=E,2µm,1.0s						
YUK				A		08 46 41.3	
	comp=E,620nm,0.6s						
YUK				A		08 46 41.3	
	comp=E,930nm,0.6s						
KUR	Kuril’sk	1.16	74	⇑iP	P	08 46 14.8	-1.2
KUR				AMB	AMB	08 46 15.2	
	comp=E,60nm,0.5s						
KUR				AMB	AMB	08 46 15.2	
	comp=E,150nm,0.5s						
KUR				i S	S	08 46 40.0	-0.3
KUR				A		08 46 40.8	
	comp=E,270nm,0.8s						
KUR				A		08 46 40.8	
	comp=E,320nm,0.8s						
JRA	Rausu	1.29	221	P	P	08 46 18.0	+0.9
JRA				eS	S	08 46 42.5	+0.3
NEM2	Nemuro 2	1.60	195	P	P	08 46 19.9	+0.1
NEM2				eS	S	08 46 44.5	-2.5
JNK	Nakash	1.75	221	P	P	08 46 22.1	+0.9
JNK				eS	S	08 46 49.9	+0.5
JTKR	Abashiri--Toko	1.96	242	P	P	08 46 24.0	+0.8
JTKR				eS	S	08 46 52.9	0.0
JAK	Akkeshi	2.24	212	P	P	08 46 26.3	0.0
JAK				eS	S	08 46 56.5	-1.9
JMP	Maruseppu	2.29	248	P	P	08 46 27.4	+0.6
JMP				eS	S	08 46 59.3	-0.1
JAR	Ashorobuto	2.44	229	P	P	08 46 29.5	+1.1
JAR				eS	S	08 47 02.0	-0.3
JSE	Soyaes	2.64	272	P	P	08 46 31.2	+0.5
JSE				eS	S	08 47 05.8	-0.5
JOB	Onbets	2.69	222	P	P	08 46 31.8	+0.5
JOB				eS	S	08 47 05.7	-1.6
JKK2	Kamakawa 2	2.75	249	P	P	08 46 32.7	+0.7
JKK2				eS	S	08 47 08.7	+0.1
ASAJ	Asahikawa	2.77	254	PN	P	08 46 33.2	+1.0
ASAJ				pmax	pmax		
	comp=Z,52nm,0.3s						
ASAJ	Asahikawa	2.77	254	P	P	08 46 33.2	+1.0

	comp=Z,52nm,0.3s,baz=84,slow=11,SNR=293						
JCH	Churui	3.13	224	P	P	08 46 36.2	-0.3
JCH				eS	S	08 47 12.9	-3.7
JWK2	Keihoku	3.14	279	P	P	08 46 37.9	+1.3
JFR	Furan	3.19	238	P	P	08 46 38.2	+1.0
JFR				eS	S	08 47 17.0	-0.9
YSS	Yuzh-Sakhalins	3.20	311	⇓iPN	P	08 46 37.0	-0.3
YSS				i S	S	08 47 17.4	-0.7
YSS				pmax	pmax		
	comp=N,40nm,0.6s						
YSS				pmax	pmax		
	comp=E,50nm,0.6s						
YSS				pmax	pmax		
	comp=Z,60nm,0.6s						
YSS				smax			
	comp=E,180nm,1.1s						
YSS				smax			
	comp=N,40nm,1.0s						
YSS	Yuzh-Sakhalins	3.20	311	i P	P	08 46 37.0	-0.3
YSS				AMB	AMB	08 46 37.5	
	comp=N,40nm,0.6s						
YSS				AMB	AMB	08 46 37.5	
	comp=N,50nm,0.6s						
YSS				AMB	AMB	08 46 37.5	
	comp=N,60nm,0.6s						
YSS				erx	rx	08 46 50.0	
YSS				i S	S	08 47 17.4	-0.7
YSS				A		08 47 19.4	
	comp=N,40nm,1.0s						
YSS				A		08 47 19.4	
	comp=N,180nm,1.0s						
JHR	Hokuryu	3.48	252	P	P	08 46 41.6	+0.8
JNBK	Urakawa-nobuka	3.69	226	P	P	08 46 42.1	-1.1
JNBK				eS	S	08 47 21.9	-6.6
JEW	Eniwo	4.07	241	P	P	08 46 48.5	+0.5
JSK	Shakotan	4.47	252	P	P	08 46 53.3	+0.2
UGL	Uglegorsk	5.07	327	eP	P	08 46 57.0	-3.7
SONM	Songino Array	27.47	290	P	P	08 51 13.5	-0.2
	comp=N,0.4nm,0.5s,mb3.3,baz=82,slow=9.5,SNR=4.2						
ILAR	Eielson Array	40.92	37	P	P	08 53 07.9	-0.3
	comp=N,0.4nm,0.9s,mb2.9,baz=255,slow=6.0,SNR=5.8						
YKA	Yellowknife Ar	55.17	34	P	P	08 54 57.5	-0.1
	comp=N,0.1nm,0.3s,mb2.8,baz=298,slow=6.8,SNR=4.7						
FINES	FINESS Array B	63.56	332	P	P	08 55 52.3	-2.7
FINES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FINES	FINESS Array B	63.56	332	P	P	08 55 52.3	-2.6
	comp=Z,2.6nm,1.1s,mb3.8,slow=5.7,SNR=3.5						
NVAR	Mina Array Bea	67.48	58	P	P	08 56 21.1	+0.8
	comp=Z,0.6nm,0.7s,mb3.3,baz=313,slow=4.2,SNR=4.1						
HFS	Hagfors	68.38	337	P	P	08 56 23.0	-2.5
HFS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HFS	Hagfors	68.38	337	P	P	08 56 23.0	-2.5
	comp=Z,4.4nm,1.0s,mb4.0,baz=27,slow=6.6,SNR=5.9						
ASAR	Alice Springs	69.18	192	P	P	08 56 31.6	+0.5
	comp=Z,0.2nm,0.6s,mb2.9,baz=9.7,slow=6.0,SNR=4.5						
PDAR	Pinedale Array	69.62	50	P	P	08 56 34.4	+1.0
	comp=Z,0.5nm,0.8s,mb3.2,baz=63,slow=0.7,SNR=5.0						

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*NEIC **19** 08:51:06.1, 32.62S×71.53W, h24^{km}, ML3.5(GUC), After GUC.*

GUC 19 08:51:06.1±0.8**, 32.62S×71.53W, h24^{km}±4^{km}, MD3.4, ML3.5, 11C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	Papudo	0.12	44	⇑iP	Pb	08 51 11.4	+0.7
IHA	Instituto Hidr	0.41	193	⇑iP	Pb	08 51 14.7	-0.1
IHA				i S	Sb	08 51 20.9	+0.2
ROCH	El Roble	0.56	128	⇑iP	Pb	08 51 17.4	+0.2
ROCH				i S	Sb	08 51 25.7	+0.9
PTCH	Petorca	0.62	55	i P	Pb	08 52 17.0	+59
PTCH				i S	Sb	08 52 26.1	+60
PTCH				AMP		08 52 27.0	
	comp=E,5μm,0.4s						
JACH	Jahuel	0.80	94	⇑iP	Pb	08 51 20.8	-0.4
JACH				i S	Sb	08 51 31.9	+0.3
LCCH	Las Cruces	0.85	182	⇑iP	Pb	08 51 21.4	-0.7
LCCH				i S	Sb	08 51 32.6	-0.5
PEL	Peldehue	0.88	126	⇑iP	Pb	08 51 22.6	-0.1
PEL				i S	Sb	08 51 34.3	+0.3
ILCH	Illapel	1.03	18	i P	Pb	08 51 24.3	-0.9
ILCH				AMP		08 51 41.2	
	comp=E,2μm,0.2s						
PUEX	Pudahuel	1.04	142	i P	Pb	08 51 25.8	+0.4
PUEX				i S	Sb	08 51 40.0	+1.4
PUEX				AMP		08 51 40.8	
	comp=N,4μm,0.5s						
RCDM	Rinconada Maip	1.06	145	⇑iP	Pn	08 51 24.8	-0.7
RCDM				i S	Sb	08 51 39.1	+0.1
RCDM				AMP		08 51 39.5	
	comp=E,6μm,0.2s						
STL	Santa Lucia	1.10	137	eP	Pn	08 51 25.6	-0.6
STL				AMP		08 51 40.7	
	comp=N,492nm,0.2s						
STL				i S	Sb	08 51 40.7	+0.3
CLCH	Cerro Calan	1.14	133	⇓iP	Pn	08 51 26.1	-0.6
CLCH				i S	Sb	08 51 41.6	+0.2
CLCH				AMP		08 51 49.2	
	comp=E,1μm,0.2s						
TACH	Talagante	1.14	154	⇑iP	Pn	08 51 26.3	-0.5
TACH				i S	Sb	08 51 41.2	-0.3
FSR	Penalolen	1.20	136	i P	Pn	08 51 27.2	-0.4
FSR				i S	Sb	08 51 43.1	0.0
FSR				AMP		08 51 51.4	
	comp=E,933nm,0.5s						
ANTU	Antumapu	1.21	142	⇑iP	Pn	08 51 27.3	-0.4
ANTU				i S	Sb	08 51 43.5	+0.1
ANTU				AMP		08 51 48.2	
	comp=E,2μm,0.6s						
FCH	Farellones	1.26	124	AMP		08 51 45.5	
	comp=E,1μm,0.2s						
PCH	Pirque	1.31	140	i P	Pn	08 51 29.1	-0.1
PCH				i S	Sn	08 51 46.7	+0.6
SJCH	San Jose de Ma	1.42	136	⇑iP	Pn	08 51 30.2	-0.5
SJCH				i S	Sn	08 51 49.2	+0.5
SJCH				AMP		08 51 51.5	
	comp=E,910nm,0.1s						
CHCH	Chadas Angostu	1.50	151	⇓iP	Pn	08 51 32.2	+0.3
CHCH				i S	Sn	08 51 51.6	+0.8
LMEL	Las Melosas	1.65	138	⇑iP	Pn	08 51 34.2	+0.2
LMEL				i S	Sn	08 51 55.8	+1.1
LMEL				AMP		08 52 00.8	
	comp=N,2μm,0.2s						
CACH	El Canelo	1.68	153	⇓iP	Pn	08 51 35.6	+1.2
CACH				i S	Sn	08 51 58.2	+2.7
SFDO	San Fernando	2.03	168	eP	Pn	08 51 40.5	+1.0
TLL	Tololo Astrono	2.53	14	AMP		08 52 27.7	
	comp=E,626nm,0.5s						

IDC 19 09:05:38.1±14.0**, 22.16S×177.12W, h271^{km}**±132^{km}**, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.4**/13**, mbtmp4.0**/4**, Error ellipse: s-maj=118.3km s-min=44.5km az=162.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.84	246	P	P	09 12 28.4	-2.3
	2.0nm,0.5s,baz=91,slow=9.2,SNR=9.3						
ASAR	Alice Springs	44.97	258	P	P	09 13 27.7	-0.7
	3.1nm,0.8s,baz=98,slow=7.2,SNR=35						
ASAR				PcP	PcP	09 15 03.3	-1.8
	0.4nm,0.6s,baz=105,slow=3.5,SNR=4.2						
WRA	Warramunga Arr	45.21	263	P	P	09 13 28.6	-1.8
	2.0nm,0.9s,baz=99,slow=7.8,SNR=7.1						
TXAR	Lajitas Array	87.26	57	P	P	09 17 54.7	-0.9
	0.5nm,0.9s,baz=252,slow=4.0,SNR=4.1						
BRTR	Keskin Array B	148.56	311	PKPbc	PKPdf	09 24 52.3	+3.4
	0.8nm,0.5s,baz=115,slow=3.0,SNR=4.2						

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*IDC **19** 09:23:48.1±1.3, 22.49S×65.93W, h253^{km}±11^{km}, mb3.4/7, mb1 3.6/10, mb1mx3.5/16, mbtmp3.9/10, Error ellipse: s-maj=21.0km s-min=17.9km az=167.0*

*NEIC **19** 09:23:49.1±0.8, 22.42S×65.95W, h259^{km}±7^{km}, mb3.9/2, Error ellipse: s-maj=12.7km s-min=10.6km az=162.0*

ISC 19 09:23:48.0±1.0**, 22.47S**±0.09×**65.9W**±0.1**, h264^{km}**±9^{km}**, n19, σ1^{s}06**/21**, mb3.6**/8**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.75	266	P	P	09 24 39.6	+0.5
	12nm,0.3s,baz=84,slow=7.0,SNR=159						
LVC				S	S	09 25 18.3	-0.6
	6.9nm,0.3s,baz=294,slow=22,SNR=35						
LVC	Limon Verde	2.75	266	P	P	09 24 39.6	+0.5
LVC				S	S	09 25 18.3	-0.6
LPAZ	La Paz	6.49	341	P	P	09 25 25.1	+2.0
	0.4nm,0.3s,baz=160,slow=9.5,SNR=8.4						
LPAZ				S	S	09 26 39.3	+1.8
	0.2nm,0.3s,baz=305,slow=17,SNR=9.9						
LPAZ	La Paz	6.49	341	eP	P	09 25 23.9	+0.8
	1.0nm,0.4s						
LPAZ				S	S	09 26 39.3	+1.8
ARE	Arequipa	7.94	318	eP	P	09 25 40.0	-1.3
ARE				eS	S	09 27 06.0	-4.2
SAML	Samuel	13.70	12	eP	P	09 26 52.5	-0.8
	2.5nm,0.9s						
BDFB	Brasilia	18.25	71	P	P	09 27 44.4	0.0
	0.5nm,0.3s,baz=246,slow=11,SNR=8.2						
BAO	Brasilia Array	18.27	71	P	P	09 27 45.0	+0.3
TXAR	Lajitas Array	63.02	323	P	P	09 33 48.4	-0.8
	1.0nm,1.1s,mb3.4,baz=150,slow=9.6,SNR=5.7						
DBIC	Dimbokro	66.40	72	P	P	09 34 09.5	-1.5
	2.9nm,0.7s,mb4.1,baz=275,slow=21,SNR=5.1						
QSPA	South Pole Qui	67.73	180	eP	P	09 34 19.4	+1.1
	2.8nm,0.4s,mb4.3						
ANMO	Albuquerque	68.84	325	P	P	09 34 26.4	+0.6
	0.7nm,0.6s,mb3.6,baz=132,slow=6.2,SNR=5.1						
PDAR	Pinedale Array	76.34	328	P	P	09 35 10.0	+0.3
	0.2nm,0.4s,mb3.1,baz=135,slow=4.2,SNR=4.3						
SCHQ	Schefferville	76.99	359	P	P	09 35 12.0	-1.0
	3.4nm,1.1s,mb4.0,baz=263,slow=17,SNR=3.9						
NVAR	Mina Array Bea	77.97	321	P	P	09 35 20.0	+1.3
	0.1nm,0.5s,mb2.8,baz=178,slow=7.0,SNR=4.0						
YKA	Yellowknife Ar	93.03	340	P	P	09 36 32.3	0.0
	0.9nm,0.6s,mb3.9,baz=130,slow=4.6,SNR=41						
ASAR	Alice Springs	130.25	204	PKP	PKPdf	09 42 28.7	+1.2
	0.9nm,0.8s,baz=133,slow=2.0,SNR=9.4						
WRA	Warramunga Arr	133.43	207	PKP	PKPdf	09 42 35.2	+1.7
	0.3nm,0.8s,baz=166,slow=1.6,SNR=4.6						
SONM	Songino Array	153.96	12	PKP	PKPdf	09 43 10.0	+2.7
	0.3nm,0.6s,baz=270,slow=2.5,SNR=3.6						
SONM				PKPbc	PKPdf	09 43 17.4	+10
	0.2nm,0.5s,baz=27,slow=2.8,SNR=4.3						

NEIC 19 10:17:20.7, 38.04N×118.59W, h8^{km}, ML3.6(REN)**, 1D, After REN., California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNV	Mina	0.52	41	⇓iP	Pg	10 17 30.7	-0.6
MNV				eS	Sg	10 17 37.5	-0.8
OMM	Old Mammoth Mi	0.53	218	eP	Pg	10 17 30.8	-0.5
MTUM	Tungsten Hills	0.68	178	eP	Pb	10 17 33.7	-0.7
TPH	Tonopah	1.08	88	eP	Pb	10 17 40.9	-0.4
CMB	Columbia Colle	1.42	270	eP	Pn	10 17 45.9	-1.0
WCN	Washoe City	1.56	325	eP	Pn	10 17 49.1	+0.2
PAHR	Pah Rah Range	1.78	340	eP	Pn	10 17 52.4	+0.4
TRCR	Troy Canyon	2.39	82	ePn	Pn	10 18 00.0	-0.8
LRV	Little Rabbit	2.52	231	Pn	Pn	10 18 00.1	-2.5
SAO	San Andreas Ge	2.61	242	Pn	Pn	10 18 01.8	-2.1
OHCM	Honcut	2.61	301	ePn	Pn	10 18 02.8	-1.1
OHCM				ePg	Pg	10 18 06.4	-6.4
BMN	Battle Mountai	2.62	24	ePn	Pn	10 18 02.7	-1.3
NSHM	Saint Helena R	3.20	280	ePn	Pn	10 18 10.6	-1.7
ELK	Elko	3.75	43	ePn	Pn	10 18 17.7	-2.4
NEN	Nelson	3.83	127	ePn	Pn	10 18 21.0	-0.4
WDC	Whiskeytown Da	3.98	311	ePn	Pn	10 18 19.3	-4.1
LDFC	Landfair	4.07	135	Pn	Pn	10 18 23.4	-1.3
MOD	Modoc	4.08	342	Pn	Pn	10 18 24.4	-0.4
WVOR	Wild Horse Val	4.39	360	ePn	Pn	10 18 28.0	-1.3
DUG	Dugway	4.98	63	Pn	Pn	10 18 35.8	-1.9
MVU	Marysvale	5.04	83	Pn	Pn	10 18 35.2	-3.3
WUAZ	Wupatki	6.31	111	Pn	Pn	10 18 55.8	-0.6
HLID	Hailey	6.36	29	Pn	Pn	10 18 54.9	-2.3

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*NEIC **19** 10:30:31.9±0.9, 2.93S×76.71W, h127^{km}±10^{km}, mb3.4/3, Error ellipse: s-maj=18.2km s-min=8.9km az=72.0*

*IDC **19** 10:30:36.2±5.1, 2.66S×76.56W, h155^{km}±46^{km}, mb3.2/6, mb1 3.4/8, mb1mx3.2/20, mbtmp3.7/8, Error ellipse: s-maj=41.6km s-min=21.8km az=40.0*

*IGQ **19** 10:30:42.7, 2.27S×77.58W, h112^{km}±10^{km}, mb4.2, Error ellipse: s-maj=9.3km s-min=4.4km az=34.2*

ISC 19 10:30:30.1±0.7**, 3.01S**±0.07×**76.83W**±0.09**, h129^{km}**±7^{km}**, n37, σ0^{s}92**/40**, mb3.5**/7**, 9C-2D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATA	Patacocha	2.19	313	P	P	10 31 06.5	-0.4
ARRY	Arrayan	2.20	312	⇑P	P	10 31 06.3	-0.8
ULBA	Ulba	2.21	314	⇑P	P	10 31 06.5	-0.6
RETU	Refugio	2.23	314	⇑P	P	10 31 07.0	-0.5
CUSU	Cusua	2.26	313	⇑P	P	10 31 07.4	-0.5
JUIV	Juive	2.27	314	P	P	10 31 07.2	-0.7
IGUA	Igualata	2.35	310	P	P	10 31 09.4	+0.4
PISA	Pisayambo	2.48	321	⇑P	P	10 31 10.2	-0.5
TAMB	Tambo	2.76	326	⇑P	P	10 31 14.4	0.0
VC1	Cotopaxi 1	2.82	326	⇑P	P	10 31 15.6	+0.4
VC1				S	S	10 31 37.1	-12
ANTI	Antisana	2.87	332	P	P	10 31 15.0	-0.8
NAS1	Nasa	2.87	325	⇑P	P	10 31 16.4	+0.6
CONE	Cono NE Rev Vo	3.03	344	⇓P	P	10 31 17.9	0.0
CONE				S	S	10 31 42.9	-11
CAYR	Refugio Cayamb	3.22	339	P	P	10 31 21.6	+1.1
CAYA	Cayambe	3.27	339	P	P	10 31 21.7	+0.6
JUA2	San Juan 2	3.29	327	P	P	10 31 21.6	+0.2
TERV	Terraza Guagua	3.32	328	⇓P	P	10 31 22.9	+1.0
PINO	Pino	3.34	328	⇑P	P	10 31 22.7	+0.7
YANA	Yana	3.35	329	P	P	10 31 22.7	+0.4
YANA				S	S	10 31 48.3	-14
OTAV	Otavalo	3.60	333	eP	P	10 31 26.9	+1.3
ECEN	Cerro Negro	3.97	343	P	P	10 31 31.1	+0.6
HOJA	Cerro de Hojas	4.19	298	P	P	10 31 30.8	-2.6
SALI	Salinas	4.24	281	P	P	10 31 33.4	-0.6
NNA	Nana	8.93	180	eP	P	10 32 38.3	+1.2
	22nm,0.3s						
SDV	Santo Domingo	13.33	28	P	P	10 33 34.7	-0.6
	0.7nm,0.3s,baz=209,slow=11,SNR=5.2						
SAML	Samuel	14.80	114	eP	P	10 33 52.3	-1.8
	0.3nm,0.4s						
LPAZ	La Paz	15.73	148	P	P	10 34 11.2	+5.3
	0.1nm,0.3s,baz=319,slow=11,SNR=4.3						
LPAZ	La Paz	15.73	148	P	P	10 34 08.1	+2.3
	2.2nm,0.9s						
TXAR	Lajitas Array	41.17	323	P	P	10 38 04.6	+1.1
	0.1nm,0.5s,mb2.7,baz=143,slow=9.0,SNR=2.3						
TXAR				PcP	PcP	10 40 02.2	+1.3
	0.6nm,1.0s,baz=158,slow=6.7,SNR=4.4						
TXAR	Lajitas Array	41.17	323	P	P	10 38 04.6	+1.1
TXAR				PcP	PcP	10 40 02.2	+1.3
ANMO	Albuquerque	46.89	326	P	P	10 38 50.9	+1.5
	0.6nm,0.6s,mb3.4,baz=129,slow=14,SNR=6.1						
PDAR	Pinedale Array	54.31	331	P	P	10 39 45.6	+0.1
	0.3nm,0.6s,mb3.2,baz=143,slow=9.0,SNR=3.0						
SCHQ	Schefferville	58.23	7	P	P	10 40 11.4	-1.7
	1.8nm,0.9s,mb3.9,baz=153,slow=6.8,SNR=4.2						
YKA	Yellowknife Ar	71.31	343	P	P	10 41 36.2	-1.2
	0.4nm,0.7s,mb3.3,baz=139,slow=5.9,SNR=12						
YKA	Yellowknife Ar	71.31	343	P	P	10 41 36.2	-1.2
DBIC	Dimbokro	72.48	82	P	P	10 41 45.0	-0.1
	2.2nm,0.6s,mb4.1,baz=238,slow=3.6,SNR=7.9						
INK	Inuvik	81.05	342	P	P	10 42 31.9	+0.1
	1.1nm,0.8s,mb3.5						

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*MDD **19** 10:33:46.5±1.4, 36.22N×1.39E, mb3.9/6, Error ellipse: s-maj=19.3km s-min=5.6km az=98.0, PRXIMO*

*CRAAG **19** 10:33:46.1, 36.20N×1.32E, Ml3.0*

*CSEM **19** 10:33:46.7±0.2, 36.20N×1.35E, h2^{km}, ML3.1/6, Error ellipse: s-maj=6.2km s-min=5.0km az=73.0*

ISC 19 10:33:45.9±0.6**, 36.30N**±0.04×**1.25E**±0.05**, h2^{km}, n17, σ1^{s}06**/29**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECHF	Ech Chlef	0.16	152	P	Pg	10 33 47.9	-1.2
ECHA	Ech Chlef	0.18	147	P	Pg	10 33 47.9	-1.5
EBNR	Beni Rached	0.23	92	P	Pg	10 33 51.2	+0.8
EANR	’Ain N’Sour	0.37	199	P	Pg	10 33 53.0	-0.2
ABA	Alger-Bouzarea	1.52	70	P	Pn	10 34 16.5	+2.3
EBEN	Beniarda	2.67	334	Pn	Pn	10 34 31.2	+0.5
	30nm,1.0s,SNR=7.9						
EBEN				Sn	Sn	10 35 04.1	+0.1
	60nm,1.4s,SNR=7.9						
EBEN	Beniarda	2.67	334	Pn	Pn	10 34 31.2	+0.6
	30nm,1.0s,SNR=7.9						
EBEN				Sn	Sn	10 35 04.1	+0.1
	60nm,1.4s,SNR=7.9						
EIBI	Ibiza	2.73	2	Pn	Pn	10 34 31.5	+0.1
	49nm,1.1s,SNR=7.9						
EIBI				Sn	Sn	10 35 04.0	-1.4
	13nm,0.2s,SNR=9.5						
EIBI	Ibiza	2.73	2	Pn	Pn	10 34 31.5	+0.1
	49nm,1.1s,SNR=7.9						
EIBI				Sn	Sn	10 35 04.0	-1.4
	13nm,0.2s,SNR=9.5						
ETOB	Tobarra	3.23	317	Pn	Pn	10 34 38.9	+0.3
	6.6nm,0.6s,SNR=7.9						
ETOB				Sn	Sn	10 35 17.0	-1.1
	2.3nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.23	317	Pn	Pn	10 34 38.9	+0.3
	6.6nm,0.6s,SNR=7.9						
ETOB				Sn	Sn	10 35 17.0	-1.2
	2.3nm,0.3s,SNR=7.9						
EBER	Berja	3.38	281	Pn	Pn	10 34 41.2	+0.5
	2.7nm,0.2s,SNR=5.6						
EBER				Sn	Sn	10 35 22.0	0.0
	32nm,1.6s						
EBER	Berja	3.38	281	Pn	Pn	10 34 41.2	+0.4
	2.7nm,0.2s,SNR=5.6						
EBER				Sn	Sn	10 35 22.0	-0.1
	32nm,1.6s						
EQES	Quesada	3.77	295	Pn	Pn	10 34 47.2	+0.9
	1.6nm,0.2s,SNR=4.6						
EQES				Sn	Sn	10 35 32.6	+0.8
	3.2nm,0.4s						
EQES	Quesada	3.77	295	Pn	Pn	10 34 47.2	+1.0
	1.6nm,0.2s,SNR=4.6						
EQES				Sn	Sn	10 35 32.6	+0.8
	3.2nm,0.4s						
EMOS	Mosqueruela	4.28	342	Pn	Pn	10 34 54.8	+1.3
	29nm,1.3s,SNR=7.9						
EMOS				Sn	Sn	10 35 42.7	-2.0
	2.6nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.28	342	Pn	Pn	10 34 54.8	+1.3
	29nm,1.3s,SNR=7.9						
EMOS				Sn	Sn	10 35 42.7	-2.0
	2.6nm,0.3s,SNR=7.9						

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*MOS **19** 11:01:34.0±1.0, 47.55N×154.01E, h9^{km}, mb4.5/11, Error ellipse: s-maj=19.0km s-min=14.6km az=100.6*

*IDC **19** 11:01:39.2±4.3, 47.15N×154.19E, h51^{km}±39^{km}, mb3.6/16, mb1 3.8/17, mb1mx3.7/26, mbtmp3.9/17, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/30, Error ellipse: s-maj=25.8km s-min=16.8km az=150.0*

*NEIC **19** 11:01:42.0±2.4, 47.26N×154.22E, h71^{km}±20^{km}, mb4.6/5, Error ellipse: s-maj=22.6km s-min=11.2km az=152.0*

ISC 19 11:01:38.5±1.8**, 47.2N**±0.1×**154.2E**±0.1**, h58^{km}**±14^{km}**, n49, σ1^{s}04**/49**, mb4.3**/25**, MS3.2**/1**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PET	Petropavlovsk	6.50	24	PN	P	11 03 14.4	+0.6
PET				pmax	pmax		
	comp=Z,165nm,1.6s						
PET	Petropavlovsk	6.50	24	P	P	11 03 14.4	+0.6
	comp=Z,165nm,1.6s						
YSS	Yuzh-Sakhalins	7.84	272	ePN	P	11 03 33.3	+0.9
ASAJ	Asahikawa	8.71	254	PN	P	11 03 43.1	-1.2
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	8.71	254	P	P	11 03 43.0	-1.2
	comp=Z,0.8nm,0.3s,baz=88,slow=16,SNR=5.6						
SONM	Songino Array	31.91	289	P	P	11 07 58.5	-1.8
	comp=Z,1.5nm,0.8s,mb3.9,baz=62,slow=5.3,SNR=9.6						
ILAR	Eielson Array	35.73	39	P	P	11 08 31.9	-1.2
	comp=Z,0.3nm,0.6s,mb3.4,baz=281,slow=7.3,SNR=10.0						
INK	Inuvik	40.87	33	P	P	11 09 16.1	+0.2
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	40.87	33	P	P	11 09 16.1	+0.2
	comp=Z,0.7nm,0.6s,mb3.5,baz=271,slow=5.5,SNR=9.6						
ZAL	Zalesovo	42.99	306	P	P	11 09 32.2	-1.1
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,31nm,19.6s						
ZAL	Zalesovo	42.99	306	P	P	11 09 32.2	-1.1
	comp=Z,1.0nm,0.5s,mb3.8,baz=59,slow=10,SNR=4.3						
ZAL				LR	LR	11 27 08.3	
	comp=Z,31nm,19.6s,MS3.2,baz=340,slow=36						
ZAL	Zalesovo	42.99	306	P	P	11 09 32.2	-1.1
ZAL				LR	LR	11 27 08.2	
KURK	Kurchatov	47.76	304	eP	P	11 10 09.5	-1.8
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KURK	Kurchatov	47.76	304	eP	P	11 10 09.4	-1.8
	comp=Z,3.4nm,0.7s,mb4.5						
KURK				epP	pP	11 10 20.2	-6.2
YKA	Yellowknife Ar	50.12	37	P	P	11 10 29.7	+0.4
	comp=Z,0.1nm,0.5s,baz=294,slow=7.3,SNR=3.0						
CHKZ	Chkalovo	50.73	310	eP	P	11 10 31.6	-2.5
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
CHKZ	Chkalovo	50.73	310	eP	P	11 10 31.6	-2.5
	comp=Z,4.0nm,0.6s,mb4.5						
LSA	Lhasa	51.01	274	eP	P	11 10 38.4	+1.8
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LSA	Lhasa	51.01	274	eP	P	11 10 38.4	+1.8
	comp=Z,6.0nm,0.7s,mb4.6						
CMAR	Chiang Mai Arr	53.22	257	P	P	11 10 52.3	-0.9
	comp=Z,0.4nm,0.3s,mb3.8,baz=197,slow=30,SNR=3.5						
JIRN	Jiri	55.67	275	eP	P	11 11 11.5	+0.5
	comp=Z,13nm,0.6s,mb5.2						
GUN	Gumba	55.72	275	eP	P	11 11 13.4	+2.0
	comp=Z,7.8nm,0.5s,mb5.0						
KKN	Kakani	56.21	276	eP	P	11 11 16.5	+1.6
	comp=Z,9.7nm,0.6s,mb5.0						
PKI	Pulchoki	56.26	275	eP	P	11 11 15.0	-0.2
	comp=Z,8.0nm,0.6s,mb5.0						
DMN	Daman	56.44	276	eP	P	11 11 17.0	+0.5
	comp=Z,13nm,0.7s,mb5.1						
GKN	Gorkha	56.51	276	eP	P	11 11 17.8	+0.8
	comp=Z,12nm,0.6s,mb5.1						
KOLN	Koldanda	57.36	277	eP	P	11 11 23.2	+0.1
	comp=Z,9.4nm,0.8s,mb4.9						
FINES	FINESS Array B	63.97	335	P	P	11 12 06.4	-0.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	63.97	335	P	P	11 12 06.4	-0.9
	comp=Z,1.2nm,0.4s,mb4.3,baz=34,slow=7.9,SNR=26						
NB2	NORSAR Subarra	68.06	342	P	P	11 12 33.3	0.0
	comp=Z,1.4nm,0.6s,mb4.2,baz=27,slow=6.2						
NB2	NORSAR Subarra	68.06	342	P	P	11 12 33.3	0.0
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
NOA	NORSAR Array B	68.06	342	P	P	11 12 33.6	+0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	68.06	342	P	P	11 12 33.6	+0.3
	comp=Z,2.1nm,0.7s,mb4.3,baz=26,slow=6.4,SNR=5.8						
HFS	Hagfors	68.31	340	P	P	11 12 35.0	+0.1
HFS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HFS	Hagfors	68.31	340	P	P	11 12 35.0	+0.1
	comp=Z,4.9nm,0.7s,mb4.7,baz=72,slow=4.7,SNR=19						
HFS	Hagfors	68.31	340	P	P	11 12 35.0	+0.1
AKASG	Malin Array Be	71.61	327	P	P	11 12 54.3	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	71.61	327	P	P	11 12 54.2	-0.9
	comp=Z,2.1nm,0.6s,mb4.2,baz=33,slow=6.2,SNR=7.0						
ASAR	Alice Springs	72.87	199	P	P	11 13 02.2	-0.8
	comp=Z,0.6nm,0.8s,mb3.6,baz=9.9,slow=5.8,SNR=6.4						
EKA	Eskdalemuir Ar	76.09	347	P	P	11 13 21.3	+0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	76.09	347	P	P	11 13 21.2	+0.3
	comp=Z,1.0nm,0.6s,mb3.9,baz=20,slow=5.6,SNR=4.1						
CLL	Collm	76.38	336	P	P	11 13 23.0	+0.3
TXAR	Lajitas Array	76.61	61	P	P	11 13 24.4	-0.1
	comp=Z,0.2nm,0.6s,mb3.3,baz=297,slow=3.1,SNR=4.9						
MLR	Muntele Rosu	77.14	326	P	P	11 13 27.6	+0.5
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						

MLR	**Muntele Rosu**	**77.14**	**326**	P	**P**	**11 13 27.6**	**+0.5**
	comp=Z,1.9nm,0.7s,mb4.2,baz=207,slow=7.5,SNR=4.8						
MLR	**Muntele Rosu**	**77.14**	**326**	P	**P**	**11 13 27.6**	**+0.5**
GERES	**GERESS Array B**	**78.39**	**335**	P	**P**	**11 13 34.6**	**+0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	**GERESS Array B**	**78.39**	**335**	P	**P**	**11 13 34.6**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.6,baz=45,slow=3.8,SNR=3.7						
BRTR	**Keskin Array B**	**78.59**	**317**	P	**P**	**11 13 36.5**	**+1.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=43,slow=2.9,SNR=3.0						

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*NEIC **19** 11:11:46.4,45.11S×167.37E,h91^{km},ML3.8(WEL),After WEL.*

WEL 19 11:11:47.0±0.4**,45.12S×167.39E,h87^{km}±2^{km},ML3.8**/5**, 4C-9D,Error ellipse: s-maj=3.1km s-min=1.5km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.39**	**205**	PN	P	11 12 00.0	-0.7
DCZ				SN	S	11 12 10.0	-1.1
MSZ	**Milford Sound**	**0.59**	**40**	⇑PN	P	11 12 02.2	-0.2
MSZ				SN	S	11 12 13.5	-0.3
MLZ	**Mavora Lakes**	**0.60**	**112**	P	P	11 12 02.0	-0.5
MLZ				S	S	11 12 13.5	-0.4
MLZ	**Mavora Lakes**	**0.60**	**112**	⇓PN	P	11 12 02.0	-0.5
MLZ				SN	S	11 12 13.5	-0.5
WHZ	**Wether Hill Ro**	**0.86**	**153**	P	P	11 12 04.7	-0.5
WHZ				S	S	11 12 17.8	-1.0
WHZ	**Wether Hill Ro**	**0.86**	**153**	⇓PN	P	11 12 04.7	-0.5
WHZ				SN	S	11 12 17.9	-0.9
WKZ	**Wanaka**	**1.19**	**76**	P	P	11 12 08.9	-0.2
WKZ				S	S	11 12 24.9	-0.8
WKZ	**Wanaka**	**1.19**	**76**	⇓PN	P	11 12 08.9	-0.2
WKZ				*e*SN	S	11 12 23.8	-1.9
EAZ	**Earnscleugh**	**1.36**	**95**	⇓PN	P	11 12 10.8	-0.5
EAZ				SN	S	11 12 28.0	-1.3
JCZ	**Jackson Bay**	**1.43**	**43**	⇑P	P	11 12 11.3	-0.9
JCZ	**Jackson Bay**	**1.43**	**43**	⇑PN	P	11 12 11.3	-0.9
JCZ				SN	S	11 12 29.3	-1.6
TUZ	**Tuapeka**	**1.78**	**119**	⇓P	P	11 12 16.0	-0.7
TUZ	**Tuapeka**	**1.78**	**119**	⇓PN	P	11 12 16.0	-0.8
TUZ				SN	S	11 12 36.5	-2.1
LBZ	**Lake Benmore**	**2.12**	**71**	*e*P	P	11 12 19.2	-2.1
LBZ	**Lake Benmore**	**2.12**	**71**	PN	P	11 12 19.2	-2.2
LBZ				SN	S	11 12 43.7	-3.0
FOZ	**Fox Glacier**	**2.27**	**47**	PN	P	11 12 22.0	-1.4
FOZ				*e*SN	S	11 12 49.7	-0.7
ODZ	**Otahua Downs**	**2.31**	**89**	⇑P	P	11 12 22.1	-1.8
ODZ	**Otahua Downs**	**2.31**	**89**	⇓PN	P	11 12 22.1	-1.8
ODZ				SN	S	11 12 47.0	-4.2
RPZ	**Rata Peaks**	**2.98**	**63**	⇓*e*P	P	11 12 29.7	-3.5
RPZ	**Rata Peaks**	**2.98**	**63**	⇓PN	P	11 12 29.8	-3.4
RPZ				SN	S	11 13 03.7	-4.2
WVZ	**Waitaha Valley**	**3.16**	**51**	PN	P	11 12 32.6	-3.2
MQZ	**McQueen's Vall**	**4.03**	**71**	*e*P	P	11 12 43.4	-4.3
MQZ	**McQueen's Vall**	**4.03**	**71**	*e*PN	P	11 12 43.5	-4.2
MQZ				SN	S	11 13 25.8	-8.2
LTZ	**Lake Taylor**	**4.23**	**58**	*e*P	P	11 12 45.9	-4.6
LTZ	**Lake Taylor**	**4.23**	**58**	PN	P	11 12 45.8	-4.7
DSZ	**Denniston Nort**	**4.66**	**45**	*e*P	P	11 12 52.6	-3.8
DSZ	**Denniston Nort**	**4.66**	**45**	PN	P	11 12 52.2	-4.2
THZ	**Tophouse**	**5.23**	**52**	PN	P	11 12 59.6	-4.7

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*IDC **19** 11:14:12.5±2.2,67.86N×30.64E,mb1 3.3/4, mb1mx3.1/20,mbtmp3.3/4,ML2.7/4,Error ellipse: s-maj=27.3km s-min=8.6km az=73.0*

HEL 19 11:13:33.4±0.2**,67.57N×30.52E,ML1.6,Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU4	**Oulanka**	**1.27**	**197**	*e*P	Pb	11 13 55.9	-2.0
KU4				*e*S	Sb	11 14 12.3	-2.4
SGF	**Sodankyl**	**1.54**	**267**	*e*P	Pn	11 14 01.0	-1.3
SGF				*e*S	Sb	11 14 20.7	-1.8
SGF				MSG		11 14 24.3	
	comp=Z,7.8nm,0.1s						
MSF	**Maaselka**	**1.77**	**200**	*e*P	Pn	11 14 04.8	-0.7
MSF				*e*S	Sn	11 14 27.6	-1.4
MSF				MSG		11 14 29.4	
	comp=Z,2.5nm,0.1s						
KEV	**Kevo**	**2.54**	**331**	*e*P	Pn	11 14 15.9	-0.7
ARCES	**ARCESS Array B**	**2.70**	**319**	Pn	Px	11 14 54.2	
	comp=Z,1.4nm,0.3s,baz=132,slow=34,SNR=13						
ARCES				Pg	Px	11 15 01.0	
	comp=Z,3.0nm,0.3s,baz=133,slow=16,SNR=19						
ARCES				Lg	rx	11 15 31.4	
	comp=Z,5.2nm,0.3s,baz=133,slow=30,SNR=12						
KTK1	**Kautokeino**	**3.07**	**301**	*e*P	Pn	11 14 22.9	-1.2
OUL	**Oulu**	**3.12**	**219**	*e*P	Pn	11 14 24.1	-0.7
KIF	**Kilpisjarvi**	**3.88**	**296**	*e*P	Pn	11 14 34.1	-1.5
FINES	**FINESS Array B**	**6.45**	**199**	Pn	Px	11 15 51.0	
	comp=Z,0.2nm,0.3s,baz=26,slow=13,SNR=9.2						
FINES				Pg	Px	11 16 03.9	
	comp=Z,0.1nm,0.3s,baz=18,slow=13,SNR=5.7						
FINES				Sn	Sx	11 17 04.3	
	comp=Z,0.2nm,0.3s,baz=26,slow=20,SNR=3.8						
FINES				Lg		11 17 34.5	
	comp=Z,0.8nm,0.3s,baz=28,slow=26,SNR=9.9						
HFS	**Hagfors**	**10.49**	**233**	Pn	Px	11 16 44.3	
	comp=Z,0.0nm,0.3s,baz=36,slow=13,SNR=4.0						
NOA	**NORSAR Array B**	**10.60**	**241**	Pn	Px	11 16 45.8	
	comp=Z,0.1nm,0.3s,baz=41,slow=13,SNR=2.8						

MAN 19 11:23:49.2,9.44N×126.94E,h15^{km},mb4.5,ML3.3,MS3.3, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.37**	**205**	⇓*e*P	Pn	11 24 12.6	-1.4
BIPH				*i* S	Sb	11 24 27.5	-3.7
BUTP	**Butuan**	**1.38**	**250**	*e*P	Pn	11 24 13.0	-1.1
BUTP				*e*S	Sb	11 24 35.8	+4.3
BUTP	**Butuan**	**1.38**	**250**	*e*P	Pn	11 24 13.0	-1.1
BUTP				*e*S	Sb	11 24 35.7	+4.2
SCPH	**Surigao**	**1.47**	**283**	⇓*e*P	Pn	11 24 14.1	-1.2
SCPH				*e*S	Sb	11 24 33.6	-0.4
MSLP	**Maasin**	**2.16**	**289**	*e*P	Pn	11 24 25.4	+0.1
MSLP	**Maasin**	**2.16**	**289**	*e*P	Pn	11 24 25.6	+0.4
BUKP	**Musuan**	**2.42**	**230**	*e*P	Pn	11 24 29.2	+0.4
BUKP	**Musuan**	**2.42**	**230**	*e*P	Pn	11 24 29.3	+0.4
PLP	**Palo**	**2.58**	**312**	*e*P	Pn	11 24 30.9	-0.3
PLP				*e*S	Sn	11 24 57.9	-4.6
TBP	**Tagbilaran**	**3.04**	**275**	*e*P	Pn	11 24 37.6	-0.2
TBP				*i* S	Sn	11 25 15.3	+1.0

IDC 19 11:39:10.8±1.9**,53.14S×140.60E,mb3.8**/4**,mb1 4.0**/4**, mb1mx3.9**/9**,mbtmp3.8**/4**,Error ellipse: s-maj=83.1km s-min=38.8km az=87.0,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**21.27**	**2**	P	P	11 43 59.2	-1.5
	4.5nm,1.0s,baz=178,slow=8.8,SNR=5.0						
ASAR	**Alice Springs**	**29.87**	**348**	P	P	11 45 19.3	-2.7
	0.8nm,0.7s,baz=168,slow=10,SNR=8.9						
WRA	**Warramunga Arr**	**33.49**	**349**	P	P	11 45 51.3	-2.5
	1.6nm,0.9s,baz=172,slow=7.6,SNR=9.1						
CMAR	**Chiang Mai Arr**	**79.86**	**320**	P	P	11 51 22.0	-0.6
	0.3nm,0.4s,baz=156,slow=1.0,SNR=4.7						
TXAR	**Lajitas Array**	**128.13**	**91**	PKP	PKPdf	11 58 18.3	-2.4
	1.6nm,1.4s,baz=90,slow=0.9,SNR=2.4						
YKA	**Yellowknife Ar**	**141.11**	**46**	PKP	PKPdf	11 58 41.9	-1.7
	0.9nm,1.2s,baz=252,slow=2.0,SNR=2.7						
GERES	**GERESS Array B**	**146.94**	**284**	PKPbc	PKPbc	11 58 52.9	-0.8
	0.5nm,0.7s,baz=143,slow=6.7,SNR=4.8						

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*IDC **19** 11:41:03.9±0.7,52.96S×140.68E,mb4.2/6,mb1 4.4/6, mb1mx4.3/10,mbtmp4.2/6,MS4.0/8,Ms1 4.0/8, ms1mx3.6/17,Error ellipse: s-maj=46.3km s-min=18.0km az=83.0*

*NEIC **19** 11:41:05.4±0.5,53.04S×140.50E,h10^{km},mb4.6/4,Error ellipse: s-maj=33.1km s-min=11.7km az=84.0*

ISC 19 11:41:04.3±0.7**,53.01S**±0.08×**140.3E**±0.5**,h10^{km},n49, σ1^{s}05**/14**,mb4.3**/9**,MS4.0**/8**,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOO	**Toolangi**	**15.86**	**15**	*e*P	**P**	**11 44 54.6**	**+5.5**
	1.3nm,1.4s						
STKA	**Stephens Creek**	**21.14**	**3**	*e*P	**P**	**11 45 51.1**	**-0.5**
	16nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**21.14**	**3**	P	**P**	**11 45 50.0**	**-1.6**
	6.5nm,0.7s,mb4.0,baz=173,slow=8.7,SNR=10.0						
STKA				LR	LR	11 52 52.3	
	comp=Z,585nm,18.8s,MS4.0,baz=96,slow=34						
RPZ	**Rata Peaks**	**22.31**	**78**	LR	LR	11 53 34.3	
	comp=Z,258nm,18.9s,MS3.7,baz=18,slow=34						
ARMA	**Armidale**	**24.05**	**25**	*e*P	**P**	**11 46 22.2**	**+1.9**
VNDA	**Vanda**	**25.85**	**169**	P	**P**	**11 46 36.1**	**-0.8**
	8.6nm,0.9s,mb4.3,baz=321,slow=8.2,SNR=7.7						
VNDA				LR	LR	11 56 06.2	
	comp=Z,429nm,18.4s,MS4.0,baz=350,slow=35						
VNDA	**Vanda**	**25.85**	**169**	*e*P	**P**	**11 46 36.1**	**-0.9**
	16nm,1.1s,mb4.5						
ASAR	**Alice Springs**	**29.70**	**348**	P	**P**	**11 47 11.6**	**-0.9**
	1.7nm,0.7s,mb3.9,baz=168,slow=9.8,SNR=18						
ASAR				PcP	PcP	11 50 14.7	-2.0
	1.3nm,0.7s,baz=163,slow=2.7,SNR=13						
ASAR				LR	LR	11 57 31.1	
	comp=Z,191nm,20.1s,MS3.7,baz=157,slow=33						
ASPA	**Alice Springs**	**29.70**	**348**	*e*P	**P**	**11 47 11.9**	**-0.6**
CTA	**Charters Tower**	**33.19**	**10**	LR	LR	12 00 47.8	
	comp=Z,388nm,18.2s,MS4.2,baz=224,slow=36						
CTAO	**Charters Tower**	**33.19**	**10**	P	**P**	**11 47 36.2**	**-6.9**
	6.9nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**33.32**	**350**	P	**P**	**11 47 43.3**	**-1.0**
	3.4nm,0.8s,mb4.4,baz=172,slow=7.5,SNR=24						
WRA				PcP	PcP	11 50 24.3	-2.2
	1.6nm,0.8s,baz=179,slow=2.4,SNR=12						
FITZ	**Fitzroy Crossi**	**36.66**	**336**	*e*P	**P**	**11 48 13.8**	**+0.9**
	5.6nm,0.9s,mb4.4						
QSPA	**South Pole Qui**	**37.10**	**180**	*e*P	**P**	**11 48 15.6**	**-0.4**
	9.3nm,0.8s,mb4.7						
MAW	**Mawson**	**38.14**	**217**	LR	LR	12 02 24.4	
	comp=Z,304nm,19.0s,MS4.1,baz=77,slow=33						
SNAA	**Sanae**	**52.92**	**194**	P	**P**	**11 50 22.9**	**+0.8**
	1.4nm,0.9s,mb3.9,baz=322,slow=1.5,SNR=3.0						
SNAA				LR	LR	12 12 24.4	
	comp=Z,188nm,20.7s,MS4.1,baz=222,slow=36						
CMAR	**Chiang Mai Arr**	**79.63**	**320**	P	**P**	**11 53 14.6**	**+1.3**
	1.5nm,0.5s,mb4.1,baz=180,slow=4.9,SNR=12						
CMAR				LR	LR	12 27 18.9	
	comp=Z,47nm,19.5s,MS3.8,baz=195,slow=35						
CHKZ	**Chkalovo**	**121.03**	**319**	*e*PKPdf	PKPdf	11 59 55.2	-4.2
NVAR	**Mina Array Bea**	**125.96**	**72**	PKP	PKPdf	12 00 07.5	-1.7
	0.8nm,0.7s,baz=227,slow=6.1,SNR=8.3						
TXAR	**Lajitas Array**	**128.33**	**91**	PKP	PKPdf	12 00 11.8	-2.2
	0.5nm,0.8s,baz=189,slow=4.6,SNR=6.3						
TXAR	**Lajitas Array**	**128.33**	**91**	PKP	PKPdf	12 00 11.8	-2.2
ILAR	**Eielson Array**	**130.05**	**32**	PKP	PKPdf	12 00 13.4	-2.9
	0.6nm,0.7s,baz=283,slow=2.8,SNR=8.1						
PDAR	**Pinedale Array**	**133.83**	**73**	PKhKP		12 00 16.9	
	0.2nm,0.6s,baz=54,slow=13,SNR=3.2						
YKA	**Yellowknife Ar**	**141.16**	**46**	PKhKP		12 00 29.6	
	0.2nm,0.6s,baz=233,slow=3.2,SNR=6.2						
SMOL	**Smolenice**	**144.39**	**286**	*e*		12 00 27.4	
FINES	**FINESS Array B**	**144.86**	**310**	PKPbc	PKPbc	12 00 40.8	+0.7
	4.8nm,0.7s,baz=90,slow=7.6,SNR=16						
WCI	**Wyandotte Cave**	**144.91**	**96**	*e*PKPdf	PKPdf	12 00 39.5	-4.5
KAF	**Kangasniemi**	**144.95**	**312**	*e*p	PKPbc	12 00 39.9	-0.5
	8.0nm,0.7s						
JSC	**Jenkinsville**	**145.22**	**106**	*e*PKPdf	PKPdf	12 00 40.6	-4.0
ULM	**Lac du Bonnet**	**145.79**	**72**	PKPbc	PKPbc	12 00 41.8	-1.0
	2.2nm,1.0s,baz=223,slow=2.8,SNR=3.8						
ARCES	**ARCESS Array B**	**146.61**	**325**	PKPbc	PKPbc	12 00 44.9	+0.7
	7.1nm,0.9s,baz=117,slow=2.7,SNR=7.5						
GERES	**GERESS Array B**	**146.72**	**285**	PKPbc	PKPbc	12 00 45.4	+0.3
	2.7nm,0.9s,baz=135,slow=1.9,SNR=13						
KHC	**Kasperske Hory**	**146.92**	**285**	*e*PKP	PKPdf	12 00 45.5	-1.5
CLL	**Collm**	**148.20**	**289**	*e*PKP2	PKPab	12 00 53.0	-1.4
FRF	**La Foret Royal**	**148.23**	**272**	*e*PKIKP	PKPdf	12 00 49.7	+0.4
	20nm,0.9s						
MBDF	**Montbardon**	**148.79**	**274**	*e*PKIKP	PKPdf	12 00 51.2	+1.0
	12nm,0.9s						
SMRF	**Simiane la Rot**	**149.11**	**272**	*e*PKIKP	PKPdf	12 00 51.2	+0.5
RES	**Resolute Bay**	**149.30**	**25**	*e*PKPbc	PKPdf	12 00 52.0	+1.8
ORIF	**Oris-en-Rattie**	**149.43**	**273**	*e*PKIKP	PKPdf	12 00 52.0	+0.8
CABF	**La Chapelle**	**150.17**	**276**	*e*PKIKP	PKPdf	12 00 53.4	+1.1
HINF	**Hinteralfeld**	**150.29**	**279**	*e*PKIKP	PKPdf	12 00 53.0	+0.6
HAU	**Haudompre**	**150.68**	**279**	*e*PKIKP	PKPdf	12 00 53.7	+0.7
NB2	**NORSAR Subarra**	**151.81**	**307**	PKP	PKPdf	12 00 58.4	+4.1
	4.6nm,1.0s,baz=78,slow=3.8						
NOA	**NORSAR Array B**	**151.81**	**307**	PKPbc	PKPdf	12 00 58.9	+4.6
	1.3nm,0.8s,baz=88,slow=3.9,SNR=4.2						
SSF	**Saint Saulge**	**151.94**	**275**	*e*PKIKP	PKPdf	12 00 54.9	0.0
	34nm,1.4s						
ESDC	**Sonseca Array**	**152.26**	**256**	PKPbc	PKPdf	12 01 00.5	+4.9
	1.5nm,0.8s,baz=104,slow=1.6,SNR=5.2						
TCF	**Toulx Ste Croi**	**152.35**	**273**	*e*PKIKP	PKPdf	12 00 55.9	+0.4
	17nm,1.0s						
BAIF	**Baives**	**152.83**	**282**	*e*PKIKP	PKPdf	12 00 56.4	+0.3
EVO	**Evora**	**153.82**	**249**	*e*PKP2	PKPab	12 01 19.7	+1.5
	52nm,1.6s						

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*ATH **19** 11:49:16.8,38.66N×20.68E,h5^{km}±3^{km},MD3.7/12*

*NEIC **19** 11:49:16.8,38.66N×20.68E,h5^{km},MD3.7(ATH),After ATH.*

*CSEM **19** 11:49:19.9±0.1,38.65N×20.48E,h25^{km},MD3.7,Error ellipse: s-maj=3.7km s-min=3.0km az=32.0*

*THE **19** 11:49:21.0,38.64N×20.50E,h20^{km},ML3.5*

ISC 19 11:49:17.0±0.7**,38.61N**±0.04×**20.53E**±0.05**,h5^{km},n29, σ1^{s}02**/35**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.43**	**174**	*e*PB	**Pb**	**11 49 26.5**	**-0.2**
IGT	**Igoumenitsa**	**0.94**	**350**	*e*Pg	**Pg**	**11 49 37.0**	**+1.4**
IGT	**Igoumenitsa**	**0.94**	**350**	*e*Pg	**Pg**	**11 49 37.0**	**+1.3**
EVR	**Evrytania**	**1.04**	**72**	*e*PG	**Pg**	**11 49 33.8**	**-4.0**
JAN	**Janina**	**1.08**	**13**	*e*PB	**Pb**	**11 49 35.8**	**-1.9**
KEK	**Kerkira**	**1.24**	**333**	*e*PB	**Pb**	**11 49 40.4**	**-0.2**
AGG	**Agios Georgios**	**1.46**	**73**	*e*Pb	**Pb**	**11 49 45.7**	**+1.4**
AGG				*e*Sb	**Sb**	**11 50 03.8**	**+0.6**
LSK	**Leskovik**	**1.54**	**2**	*i* Pn	**Pn**	**11 49 44.7**	**-0.6**
LSK				*i* Sn	**Sn**	**11 50 07.7**	**+1.8**
LSK	**Leskovik**	**1.54**	**2**	*e*Pn	**Pn**	**11 49 44.7**	**-0.6**
LSK				*i* Sn	**Sn**	**11 50 07.7**	**+1.8**
ITM	**Ithomi**	**1.80**	**142**	*e*PN	**Pn**	**11 49 50.4**	**+1.4**
LKR	**Lokris**	**1.93**	**88**	*e*PN	**Pn**	**11 49 50.9**	**+0.1**
KZN	**Kozani**	**1.95**	**29**	*e*PN	**Pn**	**11 49 51.9**	**+0.8**
LIT	**Litokhoron**	**2.13**	**45**	*e*Pn	**Pn**	**11 49 53.2**	**-0.4**
XOR	**Xorichti**	**2.21**	**69**	*e*Pn	**Pn**	**11 49 54.9**	**+0.2**
XOR				*e*Sn	**Sn**	**11 50 22.0**	**-0.7**
NEO	**Neokhori**	**2.21**	**71**	*e*PN	**Pn**	**11 49 54.8**	**0.0**
MGER	**Gerania Oros**	**2.23**	**105**	*e*PG	**Pg**	**11 49 56.0**	**-5.6**
FNA	**Florina**	**2.27**	**16**	*e*Pn	**Pn**	**11 49 55.3**	**-0.4**
NAIG	**Nisos Aigina**	**2.48**	**109**	*e*PB	**Pb**	**11 49 58.0**	**-3.7**
MPAR	**Parnis Oros**	**2.56**	**99**	*e*PN	**Pn**	**11 50 00.0**	**+0.2**
VLI	**Veliai**	**2.68**	**134**	*e*PG	**Pg**	**11 50 07.1**	**-3.4**
PAIG	**Paliouri**	**2.77**	**61**	*e*Pn	**Pn**	**11 50 02.4**	**-0.5**
PLG	**Polygyros**	**2.86**	**51**	*e*PB	**Pb**	**11 50 02.2**	**-6.0**
QSH	**Qafa e Shtames**	**2.95**	**351**	*i* Pn	**Pn**	**11 50 05.0**	**-0.4**
QSH				*i* Sn	**Sn**	**11 50 41.0**	**-0.6**
QSH	**Qafa e Shtames**	**2.95**	**351**	*e*Pn	**Pn**	**11 50 05.0**	**-0.4**
QSH				*i* Sn	**Sn**	**11 50 41.0**	**-0.6**
TIP	**Timpagrande**	**3.00**	**282**	*e*P	**Pn**	**11 50 06.7**	**+0.6**
SOH	**Sokhos**	**3.10**	**44**	*e*Pn	**Pn**	**11 50 08.1**	**+0.5**
KNT	**Kendrikon**	**3.13**	**35**	*e*Pn	**Pn**	**11 50 08.6**	**+0.6**
OUR	**Ouranopolis**	**3.18**	**56**	*e*Pn	**Pn**	**11 50 08.7**	**0.0**
SKO	**Skopje**	**3.43**	**11**	*e*	**Pn**	**11 50 10.0**	**-2.2**

IDC 19 12:11:11.0±2.3**,53.13S×140.24E,mb3.8**/3**,mb1 4.1**/3**, mb1mx3.9**/8**,mbtmp3.9**/3**,MS3.4**/4**,Ms1 3.4**/4**, ms1mx2.8**/17**,Error ellipse: s-maj=132.9km s-min=39.8km az=95.0,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**21.27**	**3**	P	P	12 15 59.5	-1.5
	3.6nm,0.8s,baz=155,slow=17,SNR=5.8						
STKA				LR	LR	12 22 11.2	
	comp=Z,114nm,21.2s,baz=24,slow=31						
VNDA	**Vanda**	**25.73**	**169**	LR	LR	12 26 38.3	
	comp=Z,89nm,18.9s,baz=18,slow=36						
ASAR	**Alice Springs**	**29.82**	**348**	P	P	12 17 19.4	-2.3
	0.8nm,0.7s,baz=169,slow=9.3,SNR=6.7						
ASAR				PcP	PcP	12 20 22.6	-2.8
	0.4nm,0.7s,baz=153,slow=2.3,SNR=4.6						
ASAR				LR	LR	12 27 02.1	
	comp=Z,52nm,21.9s,baz=130,slow=32						
CTA	**Charters Tower**	**33.31**	**10**	LR	LR	12 31 19.7	
	comp=Z,79nm,18.9s,baz=45,slow=36						
WRA	**Warramunga Arr**	**33.44**	**350**	P	P	12 17 51.0	-2.6
	2.1nm,0.8s,baz=173,slow=7.2,SNR=14						
WRA				PcP	PcP	12 20 32.1	-3.0
	0.7nm,1.0s,baz=179,slow=2.3,SNR=6.1						
FINES	**FINESS Array B**	**144.93**	**310**	PKP	PKPdf	12 30 48.5	-1.9
	1.6nm,0.8s,baz=127,slow=6.9,SNR=4.8						
GERES	**GERESS Array B**	**146.73**	**285**	PKPbc	PKPbc	12 30 53.6	+0.2
	0.4nm,0.7s,baz=180,slow=3.9,SNR=4.2						

KRSC 19 12:47:44.1±0.5**,52.13N×159.44E,h20^{km}**±**3^{km},ML3.9,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.65**	**298**	*i* P	Pb	12 47 57.3	+0.8
RUS				*i* S	Sb	12 48 06.6	+1.5
GRL	**Gorelyy**	**0.94**	**297**	*i* P	Pb	12 48 02.4	+0.9
GRL				*i* S	Sb	12 48 15.5	+2.0
PET	**Petropavlovsk**	**1.02**	**332**	*i* P	Pb	12 48 03.1	+0.2
PET				*i* S	Sb	12 48 16.9	+1.1
SPN	**Mys Shipunski**	**1.03**	**20**	*e*P	Pb	12 48 04.3	+1.1
SPN				*e*S	Sb	12 48 19.0	+2.7
NLC	**Nalytchevo**	**1.04**	**357**	*e*P	Pb	12 48 03.6	+0.3
NLC				*e*S	Sb	12 48 17.3	+0.7
KRMR	**Karymshinskiy**	**1.06**	**312**	*e*P	Pb	12 48 03.8	+0.1
KRMR				*e*S	Sb	12 48 18.1	+0.9
UGLR	**Uglovaya**	**1.14**	**341**	*i* P	Pb	12 48 05.4	+0.4
SDLR	**Sedlovina**	**1.20**	**344**	*i* P	Pn	12 48 05.7	-0.2
SDLR				*e*S	Sb	12 48 21.6	+0.5
SMAR	**Somma**	**1.20**	**341**	*e*P	Pn	12 48 06.6	+0.7
AVH	**Avacha**	**1.22**	**340**	*i* P	Pn	12 48 06.4	+0.2
AVH				*e*S	Sb	12 48 22.7	+1.2
KOK	**Koryaka**	**1.26**	**338**	*i* P	Pn	12 48 07.2	+0.4
KOK				*i* S	Sb	12 48 23.8	+0.9
APC	**Apacha**	**1.60**	**301**	*i* P	Pn	12 48 12.1	+0.4
APC				*i* S	Sn	12 48 32.8	+0.8
APC				Smax			
	400nm,0.8s						
PAU	**Pauzhetka**	**1.76**	**249**	*e*P	Pn	12 48 14.2	+0.2
PAU				*e*S	Sn	12 48 35.7	-0.3
PAU				Smax			
	400nm,0.5s						
GNL	**Ganaly**	**1.81**	**331**	*i* P	Pn	12 48 15.2	+0.5
GNL				*e*S	Sn	12 48 38.1	+0.8
SKR	**Severo-Kuril's**	**2.54**	**236**	*e*P	Pn	12 48 20.1	-5.0
SKR				*e*S	Sn	12 48 49.1	-6.6
ALID	**Alaid**	**2.74**	**244**	*e*P	Pn	12 48 27.9	-0.1
TUMR	**Tumrok**	**3.19**	**7**	*e*P	Pn	12 48 33.3	-1.0
TUMR				*e*S	Sn	12 49 10.3	-1.9
KMNR	**Kamenistaya**	**3.66**	**7**	*e*P	Pn	12 48 40.8	-0.3
ESO	**Esso**	**3.83**	**354**	*i* P	Pn	12 48 45.0	+1.6
KBTR	**Krutoberegovo**	**4.54**	**25**	*e*P	Pn	12 48 53.8	+0.2
KBTR				*e*S	Sn	12 49 45.0	-1.5

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*BJI **19** 13:02:50.3,3.80N×67.30E,h10^{km},mB4.9,mb4.7*

*IDC **19** 13:02:51.6±0.7,3.81N×67.39E,mb4.1/10,mb1 4.3/10, mb1mx4.0/20,mbtmp4.1/10,MS3.5/3,Ms1 3.5/3, ms1mx3.3/18,Error ellipse: s-maj=23.9km s-min=19.0km az=19.0*

*NEIC **19** 13:02:53.4±0.7,3.85N×67.34E,h10^{km},mb4.4/2,Error ellipse: s-maj=19.5km s-min=16.3km az=156.0*

ISC 19 13:02:51.8±0.7**,3.8N**±0.1×**67.28E**±0.09**,h10^{km},n22, σ1^{s}09**/19**,mb4.3**/15**,MS3.4**/3**,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRD	**Trivandrum**	**10.68**	**64**	*e*S	**P**	**13 05 28.9**	**+0.9**
HYB	**Hyderabad**	**17.44**	**39**	*i* P	**P**	**13 06 57.0**	**+0.1**
KMBO	**Kilima Mbogo**	**30.41**	**261**	LR	LR	13 20 12.7	
	comp=Z,55nm,18.2s,MS3.2,baz=89,slow=34						
CMAR	**Chiang Mai Arr**	**34.20**	**62**	P	**P**	**13 09 40.5**	**+0.6**
	1.1nm,0.7s,mb3.9,baz=252,slow=9.9,SNR=7.0						
CMAR				PcP	PcP	13 12 15.8	-1.0
	0.9nm,0.9s,baz=256,slow=4.7,SNR=4.1						
CMAR				LR	LR	13 23 35.8	
	comp=Z,40nm,18.4s,MS3.2,baz=225,slow=36						
LSA	**Lhasa**	**34.24**	**39**	P	**P**	**13 09 41.8**	**+1.7**
LSA	**Lhasa**	**34.24**	**39**	*e*P	**P**	**13 09 41.3**	**+1.2**
	5.4nm,0.7s,mb4.6						
GTA	**Gaotai**	**46.07**	**35**	*e*P	**P**	**13 11 13.8**	**-4.0**
GTA				AP	pP	13 11 17.9	-2.9
GTA				XP	sP	13 11 21.9	-0.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
BRTR	**Keskin Array B**	**46.92**	**324**	P	**P**	**13 11 23.4**	**-1.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=131,slow=9.5,SNR=7.0						
XAN	**Xi'an**	**48.98**	**47**	P	**P**	**13 11 40.3**	**-0.4**
XAN				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.9						
LBTB	**Lobatse**	**49.60**	**232**	P	**P**	**13 11 46.8**	**+1.2**
	comp=Z,2.4nm,0.9s,mb4.2,baz=74,slow=14,SNR=4.0						
CHKZ	**Chkalovo**	**49.75**	**3**	*e*P	**P**	**13 11 44.9**	**-1.4**
	comp=Z,3.9nm,1.2s,mb4.3						
ZAL	**Zalesovo**	**51.96**	**13**	LR	LR	13 35 06.8	
	comp=Z,86nm,19.8s,MS3.8,baz=136,slow=37						
TSUM	**Tsumeb**	**53.97**	**243**	P	**P**	**13 12 19.5**	**+1.0**
	comp=Z,1.6nm,0.7s,mb4.0,baz=18,slow=9.7,SNR=5.7						
HHC	**Hu-ho-hao-te**	**54.18**	**41**	*e*P	**P**	**13 12 21.1**	**+1.4**
HHC				AMB	AMB		
	comp=Z,9.0nm,0.4s,mb5.0						
HHC				AMB	AMB		
	comp=Z,94nm,6.0s						
SONM	**Songino Array**	**55.20**	**31**	P	**P**	**13 12 27.0**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.1,baz=220,slow=7.3,SNR=11						
FINES	**FINESS Array B**	**65.22**	**340**	P	**P**	**13 13 34.5**	**-1.0**
	comp=Z,1.7nm,0.9s,mb4.1,baz=158,slow=7.5,SNR=3.9						
FINES	**FINESS Array B**	**65.22**	**340**	P	**P**	**13 13 34.5**	**-1.0**
HFS	**Hagfors**	**69.27**	**334**	P	**P**	**13 14 01.0**	**+0.1**
	comp=Z,6.0nm,0.6s,mb4.7,baz=127,slow=7.2,SNR=9.4						
WRA	**Warramunga Arr**	**69.92**	**113**	P	**P**	**13 14 03.9**	**-1.7**
	comp=Z,3.0nm,0.6s,mb4.4,baz=294,slow=5.9,SNR=46						
ASAR	**Alice Springs**	**70.34**	**117**	P	**P**	**13 14 06.5**	**-1.7**
	comp=Z,1.1nm,0.7s,mb3.9,baz=295,slow=6.0,SNR=14						
ESDC	**Sonseca Array**	**73.15**	**310**	P	**P**	**13 14 25.4**	**+0.7**
	comp=Z,1.2nm,0.6s,mb4.0,baz=93,slow=5.9,SNR=6.5						
TXAR	**Lajitas Array**	**145.89**	**346**	PKPbc	PKPbc	13 22 32.5	+0.1
	comp=Z,3.1nm,0.9s,baz=62,slow=2.4,SNR=14						

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*IDC **19** 13:32:27.9±2.2,10.94N×90.62E,mb3.8/5,mb1 3.9/6, mb1mx3.7/19,mbtmp3.7/6,ML3.7/1,Error ellipse: s-maj=66.9km s-min=23.8km az=69.0*

*NEIC **19** 13:32:33.1±0.8,10.99N×90.78E,h30^{km},mb3.9/2,Error ellipse: s-maj=18.0km s-min=7.6km az=56.0*

ISC 19 13:32:31.9±0.9**,11.07N**±0.09×**90.98E**±0.09**,h30^{km},n14, σ0^{s}56**/15**,mb3.7**/5**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.64**	**45**	Pn	**P**	**13 35 06.1**	**+0.5**
	0.2nm,0.3s,baz=238,slow=15,SNR=15						
CMAR				Sn	**S**	**13 37 04.2**	**-0.5**
	0.2nm,0.3s,baz=58,slow=29,SNR=5.3						
JIRN	**Jiri**	**17.11**	**345**	*e*P	**P**	**13 36 30.8**	**+0.1**
	6.1nm,0.3s						
PKI	**Pulchoki**	**17.23**	**343**	*e*P	**P**	**13 36 32.2**	**-0.1**
	12nm,0.5s						
DMN	**Daman**	**17.36**	**342**	*e*P	**P**	**13 36 33.5**	**-0.3**
	13nm,0.5s						
GUN	**Gumba**	**17.43**	**345**	*e*P	**P**	**13 36 34.5**	**-0.2**
	20nm,0.7s						
KKN	**Kakani**	**17.48**	**343**	*e*P	**P**	**13 36 34.8**	**-0.5**
	5.1nm,0.4s						
GKN	**Gorkha**	**17.87**	**341**	*e*P	**P**	**13 36 40.2**	**0.0**
	12nm,0.3s						
KOLN	**Koldanda**	**18.01**	**338**	*e*P	**P**	**13 36 41.8**	**-0.1**
	3.8nm,0.3s						
LSA	**Lhasa**	**18.54**	**0**	*e*P	**P**	**13 36 49.4**	**+0.9**
	12nm,1.0s						
SONM	**Songino Array**	**38.87**	**17**	P	**P**	**13 39 57.5**	**+1.1**
	0.8nm,0.7s,mb3.6,baz=198,slow=8.7,SNR=7.1						
ZAL	**Zalesovo**	**43.04**	**355**	P	**P**	**13 40 29.5**	**-1.1**
	0.7nm,0.5s,mb3.6,baz=310,slow=6.8,SNR=5.7						
WRA	**Warramunga Arr**	**52.64**	**126**	P	**P**	**13 41 45.7**	**-0.3**
	0.7nm,0.6s,mb3.8,baz=306,slow=8.3,SNR=14						
ASAR	**Alice Springs**	**54.34**	**130**	P	**P**	**13 41 58.1**	**-0.3**
	0.2nm,0.5s,mb3.3,baz=319,slow=4.7,SNR=4.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INK	Inuvik	94.78	15	P	P	13 45 52.2	+0.7
	1.2nm,1.1s,mb4.2,baz=327,slow=7.8,SNR=3.7						

IDC 19 13:36:14.2±3.6, 20.36S×66.05E, mb3.6/6, mb1 3.8/6, mb1mx3.6/18, mbtmp3.6/6, MS3.4/1, Ms1 3.3/1, ms1mx2.6/17, Error ellipse: s-maj=107.7km s-min=31.6km az=56.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	47.27	182	LR	LR	14 00 38.0	
	comp=Z,38nm,19.3s,baz=245,slow=31						
CMAR	Chiang Mai Arr	50.28	42	P	P	13 45 12.8	-1.9
	0.8nm,0.7s,baz=238,slow=8.6,SNR=7.8						
ASAR	Alice Springs	62.46	107	P	P	13 46 39.9	-2.0
	0.4nm,0.7s,baz=265,slow=6.9,SNR=4.9						
WRA	Warramunga Arr	63.65	103	P	P	13 46 47.6	-2.2
	0.8nm,1.1s,baz=258,slow=7.7,SNR=4.4						
BVAR	Borovoye Array	73.17	3	P	P	13 47 46.4	-2.0
	0.5nm,0.9s,baz=162,slow=4.6,SNR=3.0						
ZAL	Zalesovo	75.73	11	P	P	13 48 01.7	-1.5
	0.4nm,0.6s,baz=307,slow=16,SNR=3.6						
SONM	Songino Array	76.92	27	P	P	13 48 08.1	-1.9
	0.5nm,1.0s,baz=225,slow=4.1,SNR=3.1						

IDC 19 13:41:19.8±5.9, 1.99N×92.76E, mb3.5/2, mb1 3.7/2, mb1mx3.4/16, mbtmp3.5/2, Error ellipse: s-maj=206.5km s-min=38.1km az=64.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.24	120	P	P	13 49 47.2	-1.8
	0.6nm,0.9s,baz=296,slow=8.7,SNR=7.2						
SONM	Songino Array	47.17	13	P	P	13 49 54.2	-1.8
	0.5nm,0.5s,baz=198,slow=8.2,SNR=5.9						
TXAR	Lajitas Array	145.11	26	PKPbc	PKPbc	14 00 58.7	-1.5
	0.4nm,0.8s,baz=315,slow=1.3,SNR=3.7						

IDC ***19*** *14:02:36.3±1.1, 18.60N×121.18E, mb3.5/8, mb1 3.8/9, mb1mx3.7/20, mbtmp3.6/9, Error ellipse: s-maj=35.7km s-min=26.0km az=62.0*

MAN ***19*** *14:02:39.2, 18.71N×120.86E, mb4.9, ML3.9, MS3.9*

NEIC ***19*** *14:02:40.1±0.6, 18.89N×121.09E, h15^{km}, mb3.8/1, Error ellipse: s-maj=19.1km s-min=10.5km az=79.0*

ISC 19 14:02:41.3±0.5, **18.78N**±0.05×**120.77E**±0.07, **h33^{km}, n26,** σ1§**30**/27, **mb3.5**/8, **1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	1.01	154	*e*P	P	14 02 57.3	-1.8
ABRA	Dolores	1.12	183	*e*P	P	14 02 58.1	-2.6
SGCP	Mt. Cagua	1.32	114	*e*P	P	14 03 03.2	-0.3
CVP	Callao Caves	1.46	137	⇑*i*P	P	14 03 04.9	-0.7
CVP				*i* S	S	14 03 24.0	+0.3
BBP	Basco	2.00	34	*e*P	P	14 03 14.4	+1.1
CAUP	Cauayan	2.08	151	*e*P	P	14 03 15.5	+1.1
PALP	Palanan	2.32	137	*e*P	P	14 03 20.4	+2.5
BCPH	Baguio City Da	2.39	184	*e*P	P	14 03 16.5	-2.3
BOLP	Bolinao	2.52	199	*e*P	P	14 03 21.5	+0.8
SCZP	Santa Cruz	3.10	196	*e*P	P	14 03 25.3	-3.6
BALP	Baler	3.12	166	*e*P	P	14 03 29.9	+0.7
TGY	Tagaytay City	4.65	178	Pn	Pn	14 03 51.3	+0.2
	baz=96,slow=16,SNR=2.6						
LUBP	Lubang	5.04	186	*e*P	P	14 03 56.9	+0.4
LUBP	Lubang	5.04	186	*e*P	P	14 03 58.4	+1.9
SJMP	San Jose	6.29	177	*e*P	P	14 04 15.3	+1.3
CMAR	Chiang Mai Arr	20.69	273	P	P	14 07 22.9	+1.7
	1.5nm,0.8s,baz=92,slow=8.4,SNR=12						
SNG	Songkhla	22.74	242	P	P	14 07 34.0	-7.9
SONM	Songino Array	31.27	341	P	P	14 08 58.6	-1.6
	0.2nm,0.3s,mb3.4,baz=153,slow=6.4,SNR=3.7						
SONM				PcP	PcP	14 11 55.4	+1.2
	0.4nm,0.9s,baz=162,slow=4.6,SNR=2.7						
WRA	Warramunga Arr	40.71	160	P	P	14 10 15.3	-5.4
	0.3nm,0.5s,mb3.2,baz=341,slow=9.0,SNR=5.4						
ASAR	Alice Springs	44.09	163	P	P	14 10 47.9	-0.4
	0.2nm,0.4s,mb3.2,baz=342,slow=6.5,SNR=3.3						
BVAR	Borovoye Array	51.69	324	P	P	14 11 48.0	+0.9
	0.7nm,0.6s,mb3.8,baz=120,slow=12,SNR=4.3						
CHKZ	Chkalovo	51.81	324	*e*P	P	14 11 48.2	+0.3
	0.7nm,0.6s,mb3.8						
ILAR	Eielson Array	74.19	26	P	P	14 14 14.3	-1.7
	0.3nm,0.7s,mb3.3,baz=280,slow=5.0,SNR=4.1						
FINES	FINESS Array B	75.92	330	P	P	14 14 25.6	-0.4
	2.6nm,1.1s,mb4.1,baz=56,slow=5.0,SNR=3.5						
YKA	Yellowknife Ar	88.08	22	P	P	14 15 29.3	+0.1
	0.3nm,0.6s,mb3.7,baz=310,slow=4.5,SNR=11						
YKA	Yellowknife Ar	88.08	22	P	P	14 15 29.3	+0.1

DJA ***19*** *14:04:29.3±1.4, 6.06S×100.81E, h30^{km}, mb5.5/4, Error ellipse: s-maj=46.8km s-min=32.8km az=31.0*

BJI ***19*** *14:04:39.4, 6.07S×101.50E, h53^{km}, mB5.6, mb5.2, Ms5.4, Msz5.2*

NEIC ***19*** *14:04:41.3±0.2, 5.64S×101.61E, mb5.5/43, MS4.7/7, MW5.4, Error ellipse: s-maj=8.1km s-min=4.5km az=217.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17} Nm; M_{rr}0.25; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$0.59; $M_{r\theta}$0.98; $M_{\theta\phi}$0.34; $M_{\phi r}$-1.00; Best double couple: $M_0$1.6×10^{17} NP1:ϕ_s239°, δ28°, λ13°. NP2:ϕ_s138°, δ84°, λ117°. Principal axes: T 1.51, Plg44°, Azm75°; N .22, Plg27°, Azm315°; P -1.73, Plg34°, Azm205°;*

IDC ***19*** *14:04:41.4±0.5, 5.68S×101.55E, h29^{km}±2^{km}, mb4.5/19, mb1 4.6/19, mb1mx4.5/21, mbtmp4.6/19, MS4.6/11, Ms1 4.6/11, ms1mx4.4/25 Error ellipse: s-maj=15.9km s-min=7.0km az=49.0*

HRVD ***19*** *14:04:41.3±0.4, 6.20S×101.23E, h21^{km}±1^{km}, MW5.1/56, Centroid moment Tensor Solution. LP body waves: s30,c42;Mantle waves: s56,c81; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.68±.21; $M_{\theta\theta}$-1.64±.12; $M_{\phi\phi}$-1.04±.18; $M_{r\theta}$3.83±.35; $M_{\theta\phi}$1.89±.11; $M_{\phi r}$-1.68±.33; Best double couple: $M_0$5.142×10^{16} NP1:ϕ_s328°, δ20°, λ120°. NP2:ϕ_s116°, δ73°, λ80°. Principal axes: T 4.964, Plg61°, Azm11°; N .357, Plg10°, Azm119°; P -5.321, Plg27°, Azm214°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***19*** *14:04:43.7±2.0, 5.07S×102.10E, h33^{km}, mb5.7/39, MS4.9/13 Error ellipse: s-maj=8.9km s-min=5.8km az=121.4*

CSEM ***19*** *14:05:23.2, 3.18S×101.96E, h300^{km}, mb5.5*

ISC 19 14:04:39.4±0.2, **5.63S**±0.04×**101.63E**±0.03, **h28^{km}, h28^{km}±.9^{km}:pP-P, n310,** σ1§**26**/273, **mb5.3**/96, **MS4.9**/38, **37C-11D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PENI	Pendagan	3.52	89	*e*P	Pn	14 05 35.6	+1.9
PASI	Pasiripis	4.07	105	*e*P	Pn	14 05 41.4	-0.1
PULI	Pulasari	4.38	99	*e*P	Pn	14 05 46.2	+0.4
KGM	Kluang	7.78	13	P	Pn	14 06 34.3	+0.5
COCO	West Island	8.05	216	Pn	P	14 06 29.7	-7.8
	3µm,0.9s,SNR=26						
COCO	West Island	8.05	216	*e*P	P	14 06 29.5	-8.0
	845nm,1.1s						
COCO				*e*Sn	Sn	14 08 02.9	-5.8
IPM	Ipoh	10.16	357	P	P	14 07 05.3	-1.5
SRDI	Scrawed	12.73	104	⇑*i*P	P	14 07 40.8	-0.8
SRDI				pmax	pmax		
	comp=Z,147nm,1.2s						
SRDI	Scrawed	12.73	104	⇑*i*P	P	14 07 40.8	-0.8
	comp=Z,293nm,1.2s						
KELI	Kelakatan	13.02	102	⇑*i*P	P	14 07 47.1	+1.7
	comp=Z,276nm,1.0s						
KELI	Kelakatan	13.02	102	⇑*e*P	P	14 07 46.8	+1.4
	comp=Z,276nm,1.0s						
RATI	Rata	14.13	103	⇑*i*P	P	14 07 57.6	-2.5
RATI	Rata	14.13	103	⇑*i*P	P	14 07 57.7	-2.4
KEDI	Kedomdong	14.65	102	⇑*i*P	P	14 08 04.4	-2.5
KEDI				pmax	pmax		
	comp=Z,36nm,0.7s						
KEDI	Kedomdong	14.65	102	⇑*i*P	P	14 08 04.4	-2.5
	comp=Z,36nm,0.7s						
KEDI	Kedomdong	14.65	102	⇑*i*pP		14 08 11.7	
KEDI	Kedomdong	14.65	102	⇑*e*P	P	14 08 04.6	-2.3
	comp=Z,72nm,0.7s						
KKM	Kota Kinabalu	18.62	52	P	P	14 08 58.5	+1.3
TSM	Tawau	18.98	59	P	P	14 09 02.6	+1.1
UBT	Ubonrachathani	21.02	9	P	P	14 09 22.5	-0.9
NST	Nakhon Sawan	21.22	356	P	P	14 09 22.0	-3.5
	comp=Z,75nm,1.0s,mb5.0						
BATP	Bataraza	21.57	48	*e*P	P	14 09 29.1	0.0
KKTK	Khon Kaen	21.86	3	P	P	14 09 31.0	-0.9
	comp=Z,1µm,0.7s						
MBWA	Marble Bar	23.37	133	*e*P	P	14 09 44.1	-2.7
	comp=Z,252nm,1.6s,mb5.4						
CM31	Chiang Mai Arr	24.09	354	*e*P	P	14 09 54.4	+0.6
	comp=Z,299nm,1.1s,mb5.6						
CM31				*e*pP		14 10 04.0	
CMAR	Chiang Mai Arr	24.09	354	P	P	14 09 54.0	+0.2
	comp=Z,52nm,1.0s,mb4.9,baz=185,slow=8.4,SNR=82						
CMAR				pP		14 10 04.0	
	comp=Z,120nm,1.0s,baz=182,slow=6.1,SNR=28						
CMAR				S	S	14 14 11.4	+5.0
	comp=Z,3.9nm,1.3s,baz=196,slow=6.6,SNR=2.6						
CMAR				LR	LR	14 20 48.4	
	comp=Z,1µm,18.9s,MS4.5,baz=180,slow=40						
NANT	Nan	24.30	358	⇑P	P	14 09 56.5	+0.6
ENPP	El Nido	24.36	47	*e*P	P	14 09 57.1	+0.5
CUYO	Cuyo Island	25.31	50	*e*P	P	14 10 06.5	+0.9
CHRT	Chiangrai	25.41	356	⇑P	P	14 10 07.0	+0.5
	comp=Z,763nm,1.0s,mb6.2						
BUSP	Coron	25.46	46	*e*P	P	14 10 07.6	+0.6
PAGZ	Pagadian	25.50	59	*e*P	P	14 10 07.1	-0.3
QIZ	Qiongzhong	25.81	18	⇑P	P	14 10 10.8	+0.6
QIZ				S	S	14 14 45.3	+10
QIZ				AMB	AMB		
	comp=Z,65nm,1.7s,mb4.9						
QIZ				AMB	AMB		
	comp=Z,757nm,5.3s						
QIZ				LR	LR		
	comp=N,4µm,13.8s,MS5.2						
QIZ				LR	LR		
	comp=E,4µm,15.7s,MS5.2						
QIZ				LR	LR		
	comp=Z,3µm,13.4s,MS5.0						
QIZ	Qiongzhong	25.81	18	*e*P	P	14 10 09.2	-1.0
	comp=Z,228nm,1.5s,mb5.5						
FITZ	Fitzroy Crossi	26.52	120	⇑*i*P	P	14 10 16.4	-0.4
	comp=Z,134nm,0.9s,mb5.5						
FITZ				*e*S	S	14 14 50.2	+3.0
LUBP	Lubang	26.68	44	*e*P	P	14 10 17.6	-0.7
BUKP	Musuan	26.95	60	*e*P	P	14 10 21.5	+0.7
DAV	Davao City (W)	27.02	62	*e*P	P	14 10 23.0	+1.5
OTRP	Odiongan	27.03	49	*e*P	P	14 10 20.8	-0.6
RCP	Roxas	27.07	51	⇓*e*P	P	14 10 22.7	+0.8
TGY	Tagaytay City	27.41	44	P	P	14 10 25.1	+0.2
	comp=Z,113nm,0.7s,mb5.5,baz=259,slow=7.6,SNR=6.6						
TGY				S	S	14 15 10.2	+8.4
	comp=Z,52nm,0.3s,baz=90,slow=20,SNR=2.5						
MATI	Mati	27.57	63	*e*P	P	14 10 23.7	-2.8
BOAC	Boac	27.62	46	*e*P	P	14 10 25.5	-1.3
MDRS	Chennai	28.22	311	⇑*e*P	P	14 10 40.0	+7.7
POLP	Polilio Island	28.54	45	*e*P	P	14 10 34.3	-0.9
BALP	Baler	29.00	43	*e*P	P	14 10 35.6	-3.7
VIS	Vishakhapatnam	29.41	322	*e*P	P	14 10 50.0	+7.0
VIS				*e*		14 10 54.2	
	comp=Z,85nm,0.7s						
MUN	Mundaring	29.55	154	*e*P	P	14 10 51.4	+7.3
	comp=Z,12nm,1.0s,mb4.6						
MUN	Mundaring	29.55	154	*e*P	P	14 10 51.4	+7.3
MUN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
CAUP	Cauayan	30.03	41	*e*P	P	14 10 48.0	-0.5
BWNR	Bhubaneshwar	30.10	329	*e*P	P	14 10 55.9	+6.8
BWNR				*e*		14 11 01.0	
	comp=Z,150nm,1.5s						
KMI	Kunming	30.59	2	⇑P	P	14 10 54.0	+0.6
KMI				AP	pP	14 11 03.6	+2.0
KMI				S	S	14 15 57.0	+4.6
KMI				SS	SS	14 17 36.0	+1.8
KMI				AMB	AMB		
	comp=Z,651nm,5.0s						
KMI				LR	LR		
	comp=Z,3µm,14.0s,MS5.2						
KMI	Kunming	30.59	2	⇑P	P	14 10 54.0	+0.6
KMI				*PP	pP	14 11 03.6	+2.0
KMI				*SP	sP	14 11 07.6	+2.4
KMI				MLR	MLR		
	comp=Z,3µm,14.0s,MS5.2						
KMI	Kunming	30.59	2	⇑P	P	14 10 54.0	+0.6
	comp=Z,0.1nm,1.4s						
KMI				pP	pP	14 11 03.6	+2.0
KMI				sP	sP	14 11 07.6	+2.4
KMI				S	S	14 15 57.0	+4.6
KMI				sS		14 16 10.0	
KMI				SS	SS	14 17 36.0	+1.8
KMI				LR	LR		
	comp=Z,3µm,14.0s						
GZH	Guangzhou	30.75	21	P	P	14 10 51.9	-3.0
GZH				LR	LR		
	comp=N,2µm,15.5s,MS5.2						
GZH				LR	LR		
	comp=E,4µm,16.3s,MS5.2						
GZH				LR	LR		
	comp=Z,3µm,17.7s,MS5.0						
NWAO	Narrogin (SRO)	30.80	154	P	P	14 10 54.4	-0.8
NWAO				e*PP	pP	14 11 02.7	-0.7
NWAO				pmax	pmax		
	comp=Z,27nm,1.2s						
NWAO	Narrogin (SRO)	30.80	154	P	P	14 10 55.1	0.0
	comp=Z,3.1nm,0.8s,mb4.2,baz=312,slow=16,SNR=3.0						
NWAO	Narrogin (SRO)	30.80	154	P	P	14 10 54.4	-0.8
	comp=Z,27nm,1.3s,mb4.9						
NWAO				*e*pP	pP	14 11 02.7	-0.7
CAL	Calcutta	30.88	336	*e*P	P	14 10 59.8	+3.9
CAL				*e*		14 15 29.6	
AGT	Agartala	31.04	341	*e*P	P	14 11 04.0	+6.7
KAKA	Kakadu	31.19	105	*e*P	P	14 10 57.0	-1.8
	comp=Z,32nm,0.9s,mb5.2						
GYA	Guiyang	32.27	8	⇑*i*P	P	14 11 08.6	+0.5
GYA				PP	PP	14 12 16.8	+1.0
GYA				S	S	14 16 18.3	-0.4
GYA				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.2						
GYA				AMB	AMB		
	comp=Z,360nm,4.5s						
GYA				LR	LR		
	comp=N,3µm,16.5s,MS5.2						
GYA				LR	LR		
	comp=E,3µm,14.7s,MS5.2						
GYA				LR	LR		
	comp=Z,4µm,16.8s,MS5.2						
HYB	Hyderabad	32.31	316	*e*P	P	14 11 15.0	+6.4
HYB	Hyderabad	32.31	316	*i* P	P	14 11 09.5	+0.9
HYB				*e*		14 11 15.0	
HYB				*e*		14 12 46.0	
MNGI	Mangalore	32.40	305	*i* P	P	14 11 15.1	+5.7
MNGI				*i* S	S	14 16 27.5	+6.6
SHL	Shillong	32.43	343	*e*	P	14 11 09.0	-0.5
BLSP	Bilaspur	33.56	326	*e*P	P	14 11 26.3	+7.0
BLSP				*e*		14 11 30.4	
	comp=Z,80nm,2.4s						
WRA	Warramunga Arr	34.83	117	P	P	14 11 30.0	-0.3
	comp=Z,20nm,0.9s,mb5.0,baz=289,slow=10,SNR=38						
WRA				pP	pP	14 11 38.2	-0.3
	comp=Z,35nm,0.8s,baz=287,slow=12,SNR=16						
WRA				S	S	14 17 01.4	+3.0
	comp=Z,1.8nm,1.2s,baz=292,slow=6.5,SNR=3.2						
ASPA	Alice Springs	35.86	123	*e*P	P	14 11 40.2	+1.2
ASAR	Alice Springs	35.86	123	P	P	14 11 38.9	-0.2
	comp=Z,6.7nm,0.8s,mb4.6,baz=294,slow=6.8,SNR=43						
ASAR				pP	pP	14 11 47.2	-0.1
	comp=Z,27nm,1.1s,baz=299,slow=6.6,SNR=13						
ASAR				S	S	14 17 17.6	+3.3
	comp=Z,1.5nm,1.0s,baz=291,slow=15,SNR=4.0						
JIRN	Jiri	36.30	336	*e*P	P	14 11 43.4	+0.6
	comp=Z,262nm,1.3s,mb6.0						
POO	Poona	36.43	312	*e*P	P	14 11 49.0	+5.1
ENH	Enshi	36.49	11	*e*P	P	14 11 43.8	-0.4
	comp=Z,186nm,1.4s,mb5.8						
PKI	Pulchoki	36.54	335	*e*P	P	14 11 44.6	-0.2
	comp=Z,288nm,1.8s,mb5.8						
LSA	Lhasa	36.55	345	P	P	14 11 45.6	+0.8
LSA				AP	pP	14 11 54.3	+1.2
LSA				PP	PP	14 13 09.0	-0.3
LSA				S	S	14 17 25.1	+0.3
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
LSA				AMB	AMB		
	comp=Z,260nm,8.1s						
LSA				LR	LR		
	comp=N,360nm,14.9s,MS4.7						
LSA				LR	LR		
	comp=E,820nm,14.9s,MS4.7						
LSA				LR	LR		
	comp=Z,1µm,14.3s,MS4.8						
LSA	Lhasa	36.55	345	*e*P	P	14 11 45.3	+0.5
LSA				pmax	pmax		
	comp=Z,220nm,1.7s,mb5.7						
LSA	Lhasa	36.55	345	*e*P	P	14 11 45.3	+0.6
	comp=Z,220nm,1.7s,mb5.7						
GUN	Gumba	36.65	336	*e*P	P	14 11 46.1	+0.4
	comp=Z,1µm,1.8s						
DMN	Daman	36.70	335	*e*P	P	14 11 45.6	-0.5
	comp=Z,181nm,1.7s,mb5.6						
KKN	Kakani	36.79	335	*e*P	P	14 11 46.5	-0.3
	comp=Z,389nm,1.8s,mb5.9						
BHPL	Bhopal	37.19	321	*e*P	P	14 11 58.1	+7.8
BHPL				*e*		14 12 01.5	
	comp=Z,68nm,1.5s						
GKN	Gorkha	37.25	335	*e*P	P	14 11 50.5	-0.2
	comp=Z,547nm,1.8s,mb6.1						
KOLN	Koldanda	37.50	333	*e*P	P	14 11 53.1	+0.3
	comp=Z,492nm,1.7s,mb6.1						
WHN	Wuhan	37.98	18	P	P	14 11 56.5	-0.3
WHN				S	S	14 17 53.0	+6.3
YOMI	Yo Moklole	38.93	87	⇓*i*P	P	14 12 01.2	-3.8
	comp=Z,140nm,1.4s,mb5.2						
XAN	Xi’an	40.06	9	P	P	14 12 13.8	-0.3
XAN				PP	PP	14 13 48.1	-1.8
XAN				S	S	14 18 19.6	+1.6
XAN				SS	SS	14 21 14.8	+5.1
XAN				AMB	AMB		
	comp=Z,90nm,1.7s,mb5.2						
XAN				AMB	AMB		
	comp=Z,429nm,8.2s						
XAN				LR	LR		
	comp=Z,6µm,12.2s,MS5.7						
LGTI	Lohaghat	40.48	331	*e*P	P	14 12 26.0	+8.4
NJ2	Nanjing	40.91	23	*e*P	P	14 12 22.9	+1.8
NJ2				AP	pP	14 12 32.8	+3.3
NJ2				XP	sP	14 12 37.1	+4.2
NJ2				PP	PP	14 14 01.4	+2.9
NJ2				S	S	14 18 34.0	+3.2
NJ2				XS		14 18 52.0	
NJ2				AMB	AMB		
	comp=Z,180nm,1.5s,mb5.5						
SSE	Sheshan	41.03	26	P	P	14 12 24.0	+1.9
SSE				AP	pP	14 12 32.8	+2.4
SSE				PCP	PcP	14 14 21.8	-0.5
SSE				S	S	14 18 37.9	+5.4
SSE				XS		14 18 52.8	
SSE				AMB	AMB		
	comp=Z,89nm,1.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,761nm,5.0s						
SSE				LR	LR		
	comp=N,651nm,19.2s,MS4.7						
SSE				LR	LR		
	comp=E,696nm,19.5s,MS4.7						
SSE				LR	LR		
	comp=Z,894nm,15.5s,MS4.7						
SSE	Sheshan	41.03	26	P	P	14 12 24.0	+1.9
	comp=Z,89nm,1.6s,mb5.2						
SSE				pP	pP	14 12 32.7	+2.3
SSE				PcP	PcP	14 14 21.7	-0.6
SSE				S	S	14 18 37.9	+5.4
SSE				sS		14 18 52.7	
SSE				SS	SS	14 21 43.8	+13
SSE				LR	LR		
	comp=Z,890nm,15.5s,MS4.7						
AJM	Ajmer	41.27	322	*i* P	P	14 12 32.0	+7.9
JOW	Kunigami	41.32	37	LR	LR	14 29 02.6	
	comp=Z,580nm,18.7s,MS4.5,baz=304,slow=35						
NDI	New Delhi	41.44	327	*i* P	P	14 12 31.5	+6.0
LZH	Lanzhou	41.55	3	⇑P	P	14 12 26.8	+0.4
LZH				*e*PP	PP	14 14 07.3	+1.8
LZH				*e*S	S	14 18 32.8	-7.5
LZH				SS	SS	14 21 45.6	+5.1
LZH				AMB	AMB		
	comp=Z,181nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,665nm,6.5s						
LZH				LR	LR		
	comp=N,4µm,14.5s						
LZH				LR	LR		
	comp=Z,5µm,17.6s,MS5.4						
LZH	Lanzhou	41.55	3	⇑P	P	14 12 26.8	+0.4
LZH				*PP	pP	14 12 35.2	+0.5
LZH				*SP	sP	14 12 38.8	+0.6
LZH				*e*		14 14 07.2	
LZH				*e*S	S	14 18 32.7	-7.6
LZH				pmax	pmax		
	comp=Z,181nm,1.5s,mb5.5						
LZH				MLR	MLR		
	comp=Z,5µm,17.6s,MS5.4						
LZH	Lanzhou	41.55	3	⇑P	P	14 12 26.8	+0.4
	comp=Z,181nm,1.5s,mb5.5						
LZH				pP	pP	14 12 35.2	+0.5
LZH				sP	sP	14 12 38.8	+0.6
LZH				*e*PP	PP	14 14 07.2	+1.7
LZH				*e*S	S	14 18 32.7	-7.6
LZH				sS		14 18 56.5	
LZH				SS	SS	14 21 45.6	+5.1
LZH				LR	LR		
	comp=Z,5µm,17.6s,MS5.4						
DDI	Dehra Dun	42.29	329	*e*	P	14 12 32.5	0.0
DDI				*e*		14 18 52.8	
SDNR	Sundarnagar	43.79	329	*e*P	P	14 12 49.6	+4.9
BHK	Bhakra	44.01	328	*e*P	P	14 12 53.6	+7.1
GTA	Gaotai	44.85	358	P	P	14 12 53.8	+0.6
GTA				AP	pP	14 13 02.5	+1.0
GTA				PP	PP	14 14 35.5	-3.4
GTA				S	S	14 19 27.9	-0.4
GTA				SS	SS	14 22 39.0	-2.0
GTA				AMB	AMB		
	comp=Z,24nm,1.7s,mb4.8						
GTA				AMB	AMB		
	comp=Z,714nm,8.4s						
GTA				LR	LR		
	comp=Z,3µm,16.8s,MS5.3						
THN	Thein Dam	45.18	329	*e*	P	14 12 54.0	-1.9
PMG	Port Moresby	45.27	98	P	P	14 12 57.0	+0.2
	comp=Z,15nm,0.8s,mb4.9,baz=259,slow=11,SNR=6.8						
PMG				S	S	14 19 36.3	+1.7
	comp=Z,24nm,1.2s,baz=108,slow=13,SNR=2.9						
PMG	Port Moresby	45.27	98	*e*P	P	14 12 57.0	+0.1
	comp=Z,69nm,1.0s,mb5.4						
PMG				*e*pP	pP	14 13 06.4	+1.2
PMG				LR	LR		
	comp=Z,555nm,20.0s,MS4.5						
STKA	Stephens Creek	45.56	130	*e*P	P	14 12 59.2	+0.3
	comp=Z,29nm,0.9s,mb5.2						
STKA	Stephens Creek	45.56	130	P	P	14 12 59.5	+0.6
	comp=Z,16nm,0.9s,mb4.9,baz=303,slow=8.2,SNR=12						
STKA				S	S	14 19 40.5	+1.9
	comp=Z,3.2nm,1.1s,baz=157,slow=16,SNR=1.8						
STKA				LR	LR	14 31 49.7	
	comp=Z,1µm,18.1s,MS4.9,baz=300,slow=36						
CTA	Charters Tower	45.65	113	*e*P	P	14 12 59.1	-0.6
	comp=Z,31nm,1.1s,mb5.2						
CTA	Charters Tower	45.65	113	*e*P	P	14 12 59.1	-0.6
CTA				pmax	pmax		
	comp=Z,31nm,1.1s						
CTA	Charters Tower	45.65	113	P	P	14 13 00.3	+0.5
	comp=Z,11nm,1.0s,mb4.7,baz=284,slow=12,SNR=4.2						
CTA				pP	pP	14 13 09.2	+1.1
	comp=Z,26nm,1.0s,baz=291,slow=9.9,SNR=8.1						
CTA				LR	LR	14 31 47.9	
	comp=Z,481nm,20.7s,MS4.4,baz=287,slow=36						
CTAO	Charters Tower	45.65	113	*e*P	P	14 12 60.0	+0.2
	comp=Z,93nm,1.1s,mb5.6						
CTAO				*e*pP	pP	14 13 08.6	+0.5
CTAO				LR	LR		
	comp=Z,801nm,19.0s,MS4.7						
BTO	Baotou	46.65	9	*e*P	P	14 13 07.8	+0.4
BTO				AMB	AMB		
	comp=Z,64nm,1.9s,mb5.2						
BTO				LR	LR		
	comp=N,428nm,3.8s						
BTO				LR	LR		
	comp=E,592nm,8.6s						
HHC	Hu-ho-hao-te	47.15	10	*e*P	P	14 13 12.4	+1.1
HHC				AP	pP	14 13 22.4	+2.6
HHC				PCP	PcP	14 14 40.4	-2.7
HHC				PP	PP	14 15 03.5	+1.8

HHC				SCP		14 18 30.3	
HHC				S	**S**	**14 20 07.8**	**+6.7**
HHC				XS		14 20 23.9	
HHC				AMB	AMB		
	comp=Z,44nm,1.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,917nm,7.8s						
HHC				LR	LR		
	comp=Z,4µm,15.0s,MS5.5						
BJT	**Baijiatuau**	**47.36**	**15**	*e*P	**P**	**14 13 13.4**	**+0.3**
BJT				pmax	pmax		
	comp=Z,137nm,1.4s						
BJT	**Baijiatuau**	**47.36**	**15**	*e*P	**P**	**14 13 13.4**	**+0.4**
	comp=Z,137nm,1.4s,mb5.7						
DL2	**Dalian**	**48.03**	**21**	*e*P	**P**	**14 13 18.4**	**+0.1**
DL2				S	**S**	**14 20 18.1**	**+4.5**
DL2				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.1						
DL2				LR	LR		
	comp=N,640nm,13.3s,MS5.1						
DL2				LR	LR		
	comp=E,1µm,13.5s,MS5.1						
DL2				LR	LR		
	comp=Z,1µm,13.3s,MS5.0						
KS15	**Wonju Array Si**	**49.35**	**28**	*e*P	**P**	**14 13 28.1**	**-0.4**
KSH	**Kashi**	**50.79**	**334**	⇑P	**P**	**14 13 39.3**	**-0.2**
KSH				*e*PCP	PcP	14 14 57.3	+1.0
KSH				*e*PP	PP	14 15 36.0	-0.5
KSH				*e*SCP		14 18 47.5	
KSH				*e*S	**S**	**14 20 49.8**	**-2.3**
KSH				*e*SCS	ScS	14 23 24.1	-1.0
KSH				*e*SS	SS	14 24 21.5	-2.8
KSH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.7						
KSH				AMB	AMB		
	comp=Z,170nm,5.4s						
KSH				LR	LR		
	comp=N,650nm,9.6s						
KSH				LR	LR		
	comp=E,1µm,12.5s						
WMQ	**Urumqi**	**50.81**	**347**	⇑*i*P	**P**	**14 13 40.0**	**+0.5**
WMQ				PP	PP	14 15 37.0	+0.4
WMQ				S	**S**	**14 20 54.0**	**+1.8**
WMQ				SS	SS	14 24 27.0	+2.5
WMQ				AMB	AMB		
	comp=Z,92nm,1.3s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,116nm,9.0s						
WMQ				LR	LR		
	comp=N,704nm,18.0s,MS4.9						
WMQ				LR	LR		
	comp=E,795nm,19.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,924nm,19.0s,MS4.8						
SNY	**Shenyang**	**51.31**	**21**	⇑P	**P**	**14 13 42.3**	**-1.1**
SNY				S	**S**	**14 21 07.1**	**+7.9**
SNY				AMB	AMB		
	comp=Z,30nm,1.7s,mb5.0						
SNY				AMB	AMB		
	comp=Z,540nm,5.3s						
SNY				LR	LR		
	comp=Z,4µm,14.5s,MS5.5						
JHJ	**Hachijo jima 2**	**52.86**	**41**	LR	LR	14 34 45.0	
	comp=Z,470nm,19.3s,MS4.5,baz=28,slow=34						
SONM	**Songino Array**	**53.41**	**4**	P	**P**	**14 13 59.5**	**+0.5**
	comp=Z,9.3nm,0.7s,mb4.8,baz=185,slow=6.7,SNR=65						
SONM				pP	pP	14 14 08.2	+0.7
	comp=Z,28nm,0.9s,baz=186,slow=5.4,SNR=16						
SONM				S	**S**	**14 21 32.0**	**+4.4**
	comp=Z,0.3nm,1.0s,baz=117,slow=3.2,SNR=2.4						
ULN	**Ulaanbaatar**	**53.48**	**5**	*e*P	**P**	**14 13 59.8**	**+0.3**
ULN				pmax	pmax		
	comp=Z,161nm,1.5s,mb5.7						
ULN				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.9						
ULN	**Ulaanbaatar**	**53.48**	**5**	*e*P	**P**	**14 13 59.8**	**+0.2**
	comp=Z,161nm,1.5s,mb5.7						
ULN				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
AAK	**Ala-Archa**	**54.00**	**335**	*e*P	**P**	**14 14 01.4**	**-1.9**
	comp=Z,154nm,2.2s,mb5.5						
AAK				*e*pP	pP	14 14 09.6	-2.2
AAK				LR	LR		
	comp=Z,186nm,21.0s,MS4.1						
FRU	**Bishkek**	**54.11**	**336**	*e*P	**P**	**14 14 03.0**	**-1.2**
FRU				*i*	pP	14 14 12.5	-0.2
FRU				pmax	pmax		
	comp=Z,210nm,2.2s,mb5.7						
MAJO	**Matsushiro**	**54.14**	**36**	*e*P	**P**	**14 14 02.4**	**-2.1**
MAJO				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.3						
MAJO	**Matsushiro**	**54.14**	**36**	*e*P	**P**	**14 14 02.4**	**-2.1**
	comp=Z,54nm,1.4s,mb5.3						
MAT	**Matsushiro**	**54.14**	**36**	*e*P	**P**	**14 14 02.0**	**-2.5**
MAT				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3						
MAT	**Matsushiro**	**54.14**	**36**	*e*P	**P**	**14 14 02.0**	**-2.5**
	comp=Z,50nm,1.3s,mb5.3						
MAT	**Matsushiro**	**54.14**	**36**	P	**P**	**14 14 01.4**	**-3.1**
ZAK	**Zakamensk**	**55.81**	**1**	⇓*i*P	**P**	**14 14 15.1**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,3.0nm,2.0s						
MDJ	**Mudanjiang**	**55.98**	**24**	P	**P**	**14 14 17.4**	**-0.3**
MDJ				PCP	PcP	14 15 15.5	-0.3
MDJ				PP	PP	14 16 22.8	-1.3
MDJ				PCS		14 19 16.8	
MDJ				S	**S**	**14 22 08.3**	**+6.0**
MDJ				AMB	AMB		
	comp=Z,25nm,1.6s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,309nm,4.2s						
MDJ				LR	LR		
	comp=N,688nm,16.7s,MS4.9						
MDJ				LR	LR		
	comp=E,521nm,15.9s,MS4.9						
MDJ				LR	LR		
	comp=Z,743nm,13.4s,MS5.0						
HIA	**Hailar**	**56.91**	**14**	*e*P	**P**	**14 14 23.4**	**-1.0**
HIA				pmax	pmax		
	comp=Z,42nm,1.5s						
HIA	**Hailar**	**56.91**	**14**	*e*P	**P**	**14 14 23.4**	**-1.0**
	comp=Z,42nm,1.5s,mb5.2						
MOY	**Mondy**	**57.08**	**360**	*e*P	**P**	**14 14 25.9**	**+0.3**
MOY				pmax	pmax		
	comp=Z,100nm,1.8s,mb5.5						
TLY	**Talaya**	**57.12**	**1**	P	**P**	**14 14 26.7**	**+0.9**
	comp=Z,154nm,1.3s,mb5.9,SNR=30						
TLY	**Talaya**	**57.12**	**1**	*e*P	**P**	**14 14 26.0**	**+0.2**
TLY				*e*		14 15 15.2	
TLY				*e*		14 16 31.4	
TLY				*e*S	**S**	**14 22 19.7**	**+2.5**
TLY				*e*PS	PS	14 22 31.1	-2.4
TLY				*e*		14 24 08.4	
TLY				pmax	pmax		
	comp=Z,89nm,2.0s,mb5.5						
TLY				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.4						
TLY	**Talaya**	**57.12**	**1**	*e*P	**P**	**14 14 26.2**	**+0.4**
	comp=Z,47nm,1.8s,mb5.2						
TLY				*e*pP	pP	14 14 33.8	-0.6
IRK	**Irkutsk**	**57.70**	**2**	*e*P	**P**	**14 14 29.6**	**-0.3**
IRK				pmax	pmax		
	comp=Z,143nm,2.0s,mb5.7						
KURK	**Kurchatov**	**59.53**	**343**	⇓*i*P	**P**	**14 14 41.7**	**-1.0**
KURK	**Kurchatov**	**59.53**	**343**	*e*P	**P**	**14 14 41.2**	**-1.5**
	comp=Z,56nm,1.4s,mb5.4						
KLR	**Kul'dur**	**60.61**	**22**	*e*P	**P**	**14 14 45.8**	**-4.3**
KLR				*e*S	**S**	**14 23 11.5**	**+8.8**
KLR				pmax	pmax		
	comp=E,50nm,1.8s						
KLR				pmax	pmax		
	comp=Z,67nm,1.8s,mb5.5						
ERM	**Erimo**	**60.65**	**35**	PFAKE		14 15 00.0	+10
ERM				LR	LR		
	comp=Z,6.0nm,22.0s						
ZAL	**Zalesovo**	**61.01**	**349**	P	**P**	**14 14 51.8**	**-1.0**
	comp=Z,12nm,1.1s,mb5.0,baz=293,slow=4.4,SNR=30						
ZAL				pP	pP	14 15 00.9	-0.5
	comp=Z,9.7nm,0.8s,baz=302,slow=4.4,SNR=9.6						
ZAL				S	**S**	**14 23 09.4**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=176,slow=18,SNR=4.7						
ASAJ	**Asahikawa**	**61.73**	**32**	P	**P**	**14 14 57.3**	**-0.5**
	comp=Z,11nm,0.7s,mb5.1,baz=203,slow=7.6,SNR=9.8						
NVS	**Novosibirsk**	**62.18**	**348**	⇑*i*P	**P**	**14 14 57.4**	**-3.2**
NVS				*i* S	**S**	**14 23 22.2**	**-0.3**
NVS				pmax	pmax		
	comp=Z,106nm,1.9s,mb5.7						
NVS				pmax	pmax		
	comp=N,92nm,1.8s						
NVS				smax			
	comp=E,54nm,1.9s						
YSS	**Yuzh-Sakhalins**	**63.73**	**30**	⇑*i*P	**P**	**14 15 10.0**	**-1.0**
YSS				*e*	pP	14 15 20.0	+0.3
YSS				*e*S	**S**	**14 23 42.0**	**-0.2**
YSS				*e*		14 24 50.0	
YSS				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=N,1µm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**63.73**	**30**	*e*P	**P**	**14 15 09.3**	**-1.7**
	comp=Z,48nm,1.0s,mb5.5						
BOD	**Bodaibo**	**64.03**	**7**	*e*P	**P**	**14 15 05.7**	**-7.1**
BOD				*e*		14 15 11.4	
BOD				*e*		14 15 19.8	
BOD				pmax	pmax		
	comp=Z,19nm,1.9s,mb4.8						
BOD				pmax	pmax		
	comp=Z,34nm,2.1s,mb5.0						
BVAR	**Borovoye Array**	**64.13**	**340**	P	**P**	**14 15 11.5**	**-2.0**
	comp=Z,2.5nm,0.6s,mb4.4,baz=141,slow=9.5,SNR=8.1						
BRVK	**Borovoye**	**64.20**	**340**	P	**P**	**14 15 12.5**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.2						
KMBO	**Kilima Mbogo**	**64.39**	**271**	P	**P**	**14 15 15.2**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=37,slow=22,SNR=4.2						
KMBO	**Kilima Mbogo**	**64.39**	**271**	*e*P	**P**	**14 15 14.7**	**-1.2**
	comp=Z,55nm,1.9s,mb5.3						
KMBO				LR	LR		
	comp=Z,377nm,20.0s,MS4.6						
CHKZ	**Chkalovo**	**64.59**	**340**	*e*P	**P**	**14 15 13.9**	**-2.6**
CHKZ				pmax	pmax		
	comp=Z,169nm,1.9s,mb5.8						
CHKZ	**Chkalovo**	**64.59**	**340**	*e*P	**P**	**14 15 13.9**	**-2.5**
	comp=Z,169nm,1.9s,mb5.8						
CLNS	**Chul'man**	**65.10**	**14**	*e*P	**P**	**14 15 17.9**	**-1.8**
CLNS				*e**PP	pP	14 15 24.8	-3.6
CLNS				*e*		14 15 55.0	
CLNS				*e*S	S	14 23 53.7	-5.1
CLNS				*e*SSS	SSS	14 30 49.3	-16
CLNS				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.8						
CLNS				pmax	pmax		
	comp=N,7.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,5.0nm,1.0s						
CLNS				smax			
	comp=N,313nm,12.0s						
CLNS				smax			
	comp=Z,132nm,11.3s						
CLNS				smax			
	comp=E,37nm,12.2s						
BHD	**Baghdad**	**66.56**	**310**	*e*P	**P**	**14 15 34.0**	**+4.5**
MAW	**Mawson**	**67.20**	**195**	LR	LR	14 39 02.3	
	comp=E,803nm,19.5s,MS5.0,baz=57,slow=31						
MSL	**Mosul**	**68.77**	**312**	*e*P	**P**	**14 15 46.5**	**+3.2**
GNI	**Garni**	**69.26**	**317**	*e*P	**P**	**14 15 47.5**	**+1.3**
GNI				pmax	pmax		
	comp=Z,100nm,2.1s						
GNI	**Garni**	**69.26**	**317**	P	**P**	**14 15 46.4**	**+0.1**
	comp=Z,2.3nm,0.6s,mb4.3,baz=12,slow=20,SNR=3.2						
GNI				LR	LR	14 46 35.6	
	comp=Z,227nm,21.9s,MS4.4,baz=321,slow=36						
GNI	**Garni**	**69.26**	**317**	*e*P	**P**	**14 15 47.5**	**+1.2**
	comp=Z,103nm,2.1s,mb5.4						
SVE	**Sverdlovsk**	**70.64**	**338**	⇑*e*P	**P**	**14 15 52.8**	**-1.5**
SVE				*e*		14 16 13.1	
SVE				*e*		14 18 36.0	
SVE				*e*PPP	PPP	14 20 08.0	-5.5
SVE				*e*S	S	14 25 04.0	-1.1
SVE				pmax	pmax		
	comp=Z,64nm,1.8s,mb5.2						
SVE				pmax	pmax		
	comp=Z,200nm,2.1s,mb5.7						
SVE				MLR	MLR		
	comp=N,600nm,18.0s,MS4.9						
SVE				MLR	MLR		
	comp=E,300nm,18.0s,MS4.9						
SVE				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.9						
YAK	**Yakutsk**	**70.85**	**14***c*	*i*P	**P**	**14 15 54.3**	**-1.2**
YAK				*e*		14 16 13.0	
YAK				*e**PP	pP	14 16 19.7	+15
YAK				*e*		14 18 31.3	
YAK				*e*PPP	PPP	14 20 17.9	+2.4
YAK				*e*S	S	14 25 06.7	-0.7
YAK				*e*		14 25 46.5	
YAK				*i* *SS		14 25 52.5	
YAK				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,15nm,1.2s						
YAK				pmax	pmax		
	comp=E,13nm,1.1s						
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				smax			
	comp=N,39nm,1.8s						
YAK				smax			
	comp=E,22nm,1.3s						
YAK	**Yakutsk**	**70.85**	**14**	*e*P	**P**	**14 15 54.1**	**-1.4**
	comp=E,63nm,1.0s,mb5.5						
MBAR	**Mbarara**	**70.93**	**271**	*e*P	**P**	**14 15 55.0**	**-1.8**
MBAR				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
MBAR	**Mbarara**	**70.93**	**271**	*e*P	**P**	**14 15 55.0**	**-1.8**
	comp=Z,19nm,1.4s,mb4.8						
ERZM	**Erzurum**	**71.50**	**315**	*i* P	**P**	**14 16 02.1**	**+2.3**
ASF	**Jabal al Asfar**	**72.03**	**306**	P	**P**	**14 16 03.6**	**+0.4**
	comp=Z,13nm,1.1s,mb4.8,baz=336,slow=3.2,SNR=11						
ASF				pP	pP	14 16 12.6	+0.7
	comp=Z,17nm,1.0s,baz=24,slow=3.4,SNR=8.9						
ASF				LR	LR	14 47 17.3	
	comp=Z,522nm,18.2s,MS4.8,baz=110,slow=36						
THZ	**Tophouse**	**72.32**	**132**	*e*PN	**P**	**14 16 06.7**	**+2.0**
THZ				pP	pP	14 16 13.0	-0.4
THZ	**Tophouse**	**72.32**	**132**	*e*PN	**P**	**14 16 06.7**	**+2.0**
THZ				pP	pP	14 16 13.0	-0.4
KIV	**Kislovodsk**	**72.34**	**320**	⇑*i*P	**P**	**14 16 03.4**	**-1.4**
KIV				*e*		14 18 52.8	
KIV				*i* S	S	14 25 24.0	-0.9
KIV				pmax	pmax		
	comp=Z,24nm,1.7s,mb4.8						
KIV	**Kislovodsk**	**72.34**	**320**	*e*P	**P**	**14 16 03.3**	**-1.5**
	comp=Z,62nm,1.4s,mb5.3						
LSZ	**Lusaka**	**72.59**	**256**	*e*P	**P**	**14 16 05.4**	**-1.4**
LSZ				pmax	pmax		
	comp=Z,56nm,1.9s,mb5.2						
LSZ	**Lusaka**	**72.59**	**256**	*e*P	**P**	**14 16 05.4**	**-1.4**
	comp=Z,56nm,1.9s,mb5.2						
GOF	**Gofitskoye**	**72.62**	**321**	*e*P	**P**	**14 16 09.0**	**+2.6**
GOF				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
ELZG	**Elazig**	**72.64**	**313**	*i* P	**P**	**14 16 10.6**	**+3.9**
EIL	**Elat**	**72.85**	**303**	*e*P	**P**	**14 16 08.8**	**+0.7**
	comp=Z,59nm,1.3s,mb5.4						
MALT	**Malatya**	**72.98**	**313**	P	**P**	**14 16 10.1**	**+1.4**
MALT				*e**PP	pP	14 16 17.1	-0.3
MALT				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.2						
MALT	**Malatya**	**72.98**	**313**	P	**P**	**14 16 10.1**	**+1.4**
	comp=Z,41nm,1.4s,mb5.2						
MALT				*e*pP	pP	14 16 17.1	-0.3
GZT	**Gaziantep**	**73.27**	**312**	*i* P	**P**	**14 16 09.6**	**-0.8**
KAHT	**Ahir Dag**	**73.88**	**312**	*i* P	**P**	**14 16 17.6**	**+3.7**
COBT	**Iskenderun**	**73.96**	**310**	*i* P	**P**	**14 16 11.8**	**-2.7**
SOKR	**Solikamsk**	**74.02**	**338**	*e*P	**P**	**14 16 14.0**	**-0.3**
SOKR				S	S	14 25 52.5	+9.0
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SOKR				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
SOC	**Sochi**	**74.13**	**318**	*e*P	**P**	**14 16 12.4**	**-2.8**
SOC				*e*		14 16 27.6	
SOC				*e*PPP	PPP	14 20 49.3	+1.8
SOC				*e*S	S	14 25 43.1	-2.0
SOC				*e*		14 26 19.8	
SOC				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
SOC				pmax	pmax		
	comp=N,19nm,1.1s						
SOC				pmax	pmax		
	comp=E,18nm,0.9s						
SOC				MLR	MLR		
	comp=Z,314nm,19.0s,MS4.6						
SOC				MLR	MLR		
	comp=N,234nm,17.0s,MS4.6						
SOC				MLR	MLR		
	comp=E,145nm,15.0s,MS4.6						
BFZ	**Birch Farm**	**74.69**	**131**	*e*PN	**P**	**14 16 20.1**	**+1.6**
BFZ				pP	pP	14 16 27.6	+0.3
BFZ	**Birch Farm**	**74.69**	**131**	*e*PN	**P**	**14 16 20.1**	**+1.6**
BFZ				pP	pP	14 16 27.6	+0.3
SYO	**Syowa Base**	**74.98**	**199**	⇓P	**P**	**14 16 18.6**	**-1.1**
SYO	**Syowa Base**	**74.98**	**199**	⇓pP	pP	14 16 27.9	-0.5
LBTB	**Lobatse**	**74.99**	**246**	pP	pP	14 16 29.1	-0.2
	comp=E,3.0nm,0.7s,baz=116,slow=7.5,SNR=3.8						
LBTB				LR	LR	14 43 09.7	
	comp=E,541nm,19.4s,MS4.9,baz=91,slow=31						
PET	**Petropavlovsk**	**75.55**	**32**	*e*P	**P**	**14 16 23.3**	**+0.1**
PET				*e*PS	PS	14 26 47.2	+6.0
PET				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.5						
PET				pmax	pmax		
	comp=Z,200nm,16.0s						
PET				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.7						
MA2	**Magadan**	**75.67**	**23**	*e*P	**P**	**14 16 24.0**	**+0.2**
MA2				*e**PP	pP	14 16 33.4	+0.8
MA2				pmax	pmax		
	comp=Z,168nm,1.6s,mb5.7						
MA2	**Magadan**	**75.67**	**23**	*e*P	**P**	**14 16 24.0**	**+0.2**
	comp=Z,168nm,1.6s,mb5.7						
MA2				*e*pP	pP	14 16 33.4	+0.8
CSS	**Prodhromos**	**75.72**	**308**	*e*P	**P**	**14 16 25.1**	**+0.6**
	comp=Z,117nm,1.5s,mb5.6						
BOYT	**Boyabat**	**76.62**	**315**	*i* P	**P**	**14 16 29.4**	**-0.1**
BRTR	**Keskin Array B**	**76.97**	**313**	P	**P**	**14 16 30.5**	**-1.0**
	comp=Z,5.5nm,0.8s,mb4.5,baz=128,slow=6.8,SNR=15						
ELDT	**Eldivan**	**77.36**	**313**	*i* P	**P**	**14 16 34.7**	**+1.0**
VOR	**Voronezh**	**77.87**	**326**	P	**P**	**14 16 44.0**	**+7.8**
VOR				pmax	pmax		
	comp=Z,150nm,1.5s,mb5.7						
VNDA	**Vanda**	**78.30**	**169**	*e*P	**P**	**14 16 37.9**	**-0.2**
VNDA				MLR	MLR		
	comp=Z,452nm,19.0s						
VNDA	**Vanda**	**78.30**	**169**	P	**P**	**14 16 37.4**	**-0.7**
	comp=Z,3.6nm,1.0s,mb4.3,baz=263,slow=5.0,SNR=3.9						
SIM	**Simferopol'**	**78.37**	**318**	P	**P**	**14 16 42.8**	**+3.7**
SIM				S		14 26 53.1	
SIM				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
SEY	**Seymchan**	**78.39**	**21**	*e*P	**P**	**14 16 40.2**	**+1.4**
SEY					pP	14 16 48.9	+1.3
SEY				*e*S	S	14 26 33.8	+2.6
SEY						14 27 07.9	
SEY				*e*SS	SS	14 31 30.8	-6.4
SEY				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.4						
SEY				pmax	pmax		
	comp=E,50nm,1.5s						
SEY				smax			
	comp=N,600nm,13.2s						
SEY				smax			
	comp=E,400nm,12.4s						
SEY				MLR	MLR		
	comp=Z,700nm,21.0s,MS5.0						
SEY				MLR	MLR		
	comp=N,400nm,12.0s						
ESKT	**Eskisehir**	**78.95**	**312**	*i* P	**P**	**14 16 41.4**	**-1.0**
TIXI	**Tiksi**	**79.18**	**8**	⇑*i*P	**P**	**14 16 41.9**	**-1.1**
TIXI				*e*S	S	14 26 39.8	+0.3
TIXI				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.4						
TIXI	**Tiksi**	**79.18**	**8**	⇑*i*P	**P**	**14 16 41.0**	**-2.0**
ULDT	**Uludag**	**80.39**	**312**	*i* P	**P**	**14 16 50.5**	**+0.3**
MOS	**Moscow**	**80.43**	**329**	*e*P	**P**	**14 16 51.3**	**+1.3**
MOS				*e*		14 19 54.5	
MOS				pmax	pmax		
	comp=Z,156nm,1.8s,mb5.6						
OBN	**Obninsk**	**80.72**	**328**α	*i*P	**P**	**14 16 59.2**	**+7.7**
OBN				*e*		14 17 04.5	
OBN				*e*		14 17 14.1	
OBN				*e*		14 27 00.3	
OBN				*e*PS	PS	14 27 54.2	+7.9
OBN				*e*SS	SS	14 32 13.1	+0.7
OBN				pmax	pmax		
	comp=Z,147nm,2.2s,mb5.5						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.6						
OBN	**Obninsk**	**80.72**	**328**	P	**P**	**14 16 53.2**	**+1.7**
	comp=Z,89nm,1.4s,mb5.5						
BTOK	**Tokmak**	**81.11**	**312**	*i* P	**P**	**14 16 53.8**	**-0.1**
PRD	**Provadia**	**82.46**	**315**	*e*P	**P**	**14 17 05.0**	**+4.2**
CFR	**Carcaliu**	**82.47**	**317**	⇑*i*P	pP	14 17 09.6	-0.1
IDI	**Anoyia**	**82.49**	**307**	pP	pP	14 17 09.8	-0.2
	comp=Z,24nm,1.2s,baz=97,slow=4.3,SNR=2.6						
KIS	**Kishinev**	**82.52**	**319**	*e*P	pP	14 17 08.0	-1.9
KIS				*e*		14 17 27.0	
AKASG	**Malin Array Be**	**83.34**	**322**	P	**P**	**14 17 02.4**	**-2.8**
	comp=Z,3.6nm,0.8s,mb4.4,baz=90,slow=4.7,SNR=11						
AKASG				PP	PP	14 20 24.4	+5.4
	comp=Z,0.3nm,0.3s,baz=100,slow=5.6,SNR=4.3						
VRI	**Vrincioaia**	**83.61**	**317**	⇑P	**P**	**14 17 10.7**	**+4.0**
VRI	**Vrincioaia**	**83.61**	**317**	⇓*i*P	**P**	**14 17 10.6**	**+3.9**
RZN	**Rozhen**	**84.02**	**313**	*i* P	**P**	**14 17 10.0**	**+1.1**
MLR	**Muntele Rosu**	**84.04**	**317**	⇓*i*P	**P**	**14 17 10.9**	**+2.0**
QSPA	**South Pole Qui**	**84.35**	**180**	*e*P	**P**	**14 17 09.8**	**+0.1**
	comp=Z,55nm,1.8s,mb5.4						
PGB	**Panagyurishte**	**84.61**	**314**	*e*P	**P**	**14 17 18.0**	**+6.1**
MMB	**Musomiste**	**84.72**	**313**	*e*P	**P**	**14 17 18.0**	**+5.6**
BURAR	**Bucovina Array**	**85.05**	**319**	⇑P	**P**	**14 17 15.2**	**+1.4**
KKB	**Krupnik**	**85.25**	**313**	*e*P	**P**	**14 17 19.5**	**+4.4**
VTS	**Vitosha**	**85.31**	**313**	*e*P	**P**	**14 17 19.0**	**+3.7**
BILL	**Bilibino**	**85.99**	**20**	*e*P	**P**	**14 17 18.0**	**-0.1**
BILL				*e*	pP	14 17 25.6	-1.4
BILL				*i* S	S	14 27 50.1	+1.6
BILL				pmax	pmax		
	comp=Z,32nm,2.0s,mb5.2						
BILL	**Bilibino**	**85.99**	**20**	*e*P	**P**	**14 17 17.9**	**-0.3**
	comp=Z,32nm,1.4s,mb5.4						
LVV	**L'vov**	**86.32**	**321**	*i* P	pP	14 17 28.0	-1.1
BZS	**Buzias**	**87.04**	**316**	⇓P	**P**	**14 17 26.7**	**+2.9**
APA	**Apatity**	**87.04**	**339**	⇓*e*P	**P**	**14 17 28.3**	**+5.0**
APA				*e*S	S	14 28 06.0	+7.4
KWP	**Kalwaria**	**87.12**	**320**	*e*P	**P**	**14 17 30.2**	**+6.1**
KWP				pmax	pmax		
	comp=Z,83nm,1.6s,mb5.7						
KOLS	**Kolonicke sedl**	**87.25**	**320**	*e*P	**P**	**14 17 26.0**	**+1.3**
KOLS				*e*	pP	14 17 33.3	-0.4
KOLS	**Kolonicke sedl**	**87.25**	**320**	*e*P	**P**	**14 17 26.0**	**+1.3**
KOLS				*e*		14 17 29.9	
KOLS				*e*	pP	14 17 33.3	-0.4
BEO	**Belgrade**	**87.70**	**315**	⇓*i*P	pP	14 17 36.2	+0.3
SUW	**Suwalki**	**87.77**	**325**	P	**P**	**14 17 28.7**	**+1.6**
SUW				pmax	pmax		
	comp=Z,242nm,1.7s,mb6.2						
SUW	**Suwalki**	**87.77**	**325**	P	**P**	**14 17 28.6**	**+1.6**
	comp=Z,242nm,1.7s,mb6.2						
DIVS	**Divcibare**	**87.90**	**314**	⇑*i*P	**P**	**14 17 31.4**	**+3.5**
FINES	**FINESS Array B**	**88.06**	**332**	P	**P**	**14 17 28.3**	**0.0**
	comp=Z,2.1nm,0.9s,mb4.4,baz=101,slow=7.1,SNR=4.0						
FINES				LR	LR	15 02 18.7	
	comp=Z,244nm,18.8s,MS4.6,baz=106,slow=39						
KAF	**Kangasniemi**	**88.14**	**333**	*e*p	**P**	**14 17 27.5**	**-1.2**
	comp=Z,7.3nm,0.8s,mb5.0						
KAF	**Kangasniemi**	**88.14**	**333**	*e*P	**P**	**14 17 27.5**	**-1.2**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
VYHS	**Vyhne**	**89.42**	**319**	*e*P	pP	14 17 41.8	-2.2
VYHS	**Vyhne**	**89.42**	**319**	*e*	pP	14 17 41.8	-2.2
OKC	**Ostrava-Krasne**	**90.07**	**320**	*e*P	**P**	**14 17 41.9**	**+3.8**

ARCES	ARCESS Array B	90.42	340	P	P	14 17 40.1	+0.8
	comp=Z,5.9nm,1.0s,mb4.9,baz=90,slow=4.9,SNR=5.5						
ARCES	ARCESS Array B	90.42	340	P	P	14 17 40.1	+0.8
MORC	Moravsky Berou	90.45	320	*e*P	P	14 17 41.9	+2.1
MORC				pmax	pmax		
	comp=Z,120nm,2.2s,mb5.8						
MORC	Moravsky Berou	90.45	320	*e*P	P	14 17 41.9	+2.1
	comp=Z,115nm,2.2s,mb5.8						
ZST	Bratislava	90.52	318	*e*P	pP	14 17 48.9	-0.2
ZST	Bratislava	90.52	318	*e*pP	pP	14 17 48.9	-0.2
DPC	Dobruska-Polom	91.30	320	*e*P	P	14 17 48.1	+4.4
BOJS	Bojanci	91.44	315	*e*P	pP	14 17 52.6	-0.8
UPC	Upice	91.52	320	*e*P	pP	14 17 53.5	-0.2
LJU	Ljubljana	92.00	316	*e*P	pP	14 17 56.4	+0.4
PRU	Pruhonice	92.40	320	*e*P	pP	14 17 57.4	-0.3
PVCC	Panska Ves	92.44	320	*e*P	pP	14 17 57.5	-0.4
GERES	GERESS Array B	92.83	319	P	P	14 17 50.5	-0.3
	comp=Z,1.1nm,0.9s,mb4.3,baz=90,slow=2.9,SNR=3.5						
GERES	GERESS Array B	92.83	319	P	P	14 17 50.5	-0.3
BRG	Berggiesshubel	92.87	321	*e*P	pP	14 17 57.5	-2.4
BRG				pmax	pmax		
	comp=Z,27nm,1.9s,mb5.3						
KHC	Kasperske Hory	92.94	319	*e*P	P	14 17 44.5	-6.8
CLL	Collm	93.50	321	*e*P	P	14 17 58.0	+4.2
CLL	Collm	93.50	321	P	P	14 17 58.0	+4.2
NOA	NORSAR Array B	95.09	331	LR	LR	15 07 01.0	
	comp=Z,248nm,18.9s,MS4.7,baz=45,slow=39						
ILAR	Eielson Array	104.14	24	PP	PP	14 22 57.9	-4.2
	comp=Z,0.9nm,1.1s,baz=278,slow=6.4,SNR=2.8						
YKA	Yellowknife Ar	117.33	18	PKP	PKPdf	14 23 24.1	-2.9
	comp=Z,0.5nm,0.9s,baz=329,slow=1.8,SNR=5.7						
YKA				PP	PP	14 24 31.2	-7.1
	comp=Z,0.3nm,1.0s,baz=320,slow=4.8,SNR=1.9						
YKA				PKKPab		14 33 57.4	
	comp=Z,1.3nm,1.3s,baz=138,slow=2.8,SNR=4.3						
YKA	Yellowknife Ar	117.33	18	PKP	PKPdf	14 23 24.1	-2.9
YKA				PP	PP	14 24 31.2	-7.1
YKA				PKKPab		14 33 57.4	
NEW	Newport	126.24	31	PKP	PKPdf	14 23 43.0	-1.7
	comp=Z,1.2nm,0.8s,baz=225,slow=4.3,SNR=2.9						
YBH	Yreka Blue Hor	126.69	41	PKP	PKPdf	14 23 41.2	-4.5
	comp=Z,0.7nm,0.7s,baz=225,slow=1.4,SNR=3.1						
BMO	Blue Mountains	128.26	35	PKIKP	PKPdf	14 23 53.4	+4.7
CHMT	Chamberlain Mo	129.10	30	P	PKPdf	14 23 47.1	-3.1
CMB	Columbia Colle	130.07	44	PKIKP	PKPdf	14 23 48.2	-4.1
HLID	Hailey	130.69	34	PKPdf	PKPdf	14 23 50.6	-2.7
MCMT	McKenzie Canyo	130.72	32	PKPdf	PKPdf	14 23 50.5	-2.8
NVAR	Mina Array Bea	131.28	42	PKP	PKPdf	14 23 52.5	-2.1
	comp=Z,0.8nm,0.6s,baz=28,slow=1.5,SNR=6.9						
NVAR				PP	PP	14 26 14.3	+2.0
	comp=Z,1.2nm,1.1s,baz=304,slow=3.3,SNR=3.9						
NVAR				SKPbc		14 27 17.1	
	comp=Z,4.2nm,1.1s,baz=270,slow=3.6,SNR=9.3						
NVAR	Mina Array Bea	131.28	42	PKP	PKPdf	14 23 52.5	-2.1
NVAR				PP	PP	14 26 14.3	+2.0
NVAR				SKPbc		14 27 17.1	
YMR	Madison River	131.81	31	*e*PKPdf	PKPdf	14 23 53.0	-2.4
LAO	LASA Array	132.57	26	PKPdf	PKPdf	14 23 55.7	-1.1
BGU	Big Grassy Mou	133.15	36	PKPdf	PKPdf	14 23 56.5	-1.5
ULM	Lac du Bonnet	133.17	15	PKP	PKPdf	14 23 55.9	-1.9
	comp=Z,1.9nm,0.8s,baz=80,slow=4.7,SNR=3.2						
DUG	Dugway	133.74	37	*e*PKIKP	PKPdf	14 23 58.1	-1.0
PDAR	Pinedale Array	133.86	32	PKP	PKPdf	14 23 56.9	-2.4
	comp=Z,0.4nm,0.7s,baz=342,slow=2.9,SNR=3.8						
MSU	Marysvale	135.17	38	PKIKP	PKPdf	14 24 03.5	+1.6
PV10	Paradox Valley	137.15	36	PKPdf	PKPdf	14 23 59.7	-5.7
WUAZ	Wupatki	137.50	41	*e*PKPdf	PKPdf	14 24 03.9	-2.3
ANMO	Albuquerque	140.97	38	*e*PKHKP		14 24 03.1	
AAM	Ann Arbor	143.19	7	PFAKE		14 24 20.0	+11
AAM				LR	LR		
	comp=Z,480nm,22.0s,MS5.2						
MNTX	Cornudas Mount	143.78	41	*e*PKPdf	PKPdf	14 24 13.6	-3.8
SSPA	Standing Stone	145.15	359	*e*PKPdf	PKPdf	14 24 15.3	-4.3
ACSO	Alum Creek Sta	145.31	6	*e*PKPdf	PKPdf	14 24 15.6	-4.3
WMOK	Wichita Mounta	145.44	30	*e*PKIKP	PKPdf	14 24 16.6	-3.7
CCM	Cathedral Cave	145.67	18	*e*PKIKP	PKPdf	14 24 16.4	-4.2
MVL	Millersville	145.74	357	*e*PKPdf	PKPdf	14 24 17.1	-3.5
BLO	Bloomington	145.81	11	*e*PKP2	PKPab	14 24 17.2	-1.7
FVM	French Village	145.98	17	*e*PKP2	PKPab	14 24 17.5	-2.1
MCWV	Mont Chateau	146.10	2	*e*PKPdf	PKPdf	14 24 18.6	-2.6
LTX	Lajitas	146.43	42	*e*PKP2	PKPab	14 24 20.9	-0.7
TXAR	Lajitas Array	146.43	42	PKPbc	PKPbc	14 24 20.6	+2.1
	comp=Z,5.9nm,0.7s,baz=318,slow=0.9,SNR=59						
TXAR				pPKPbc		14 24 29.9	
	comp=Z,21nm,1.0s,baz=288,slow=0.4,SNR=18						
USIN	University of	146.72	13	PKPbc	PKPbc	14 24 20.1	+1.2
WCI	Wyandotte Cave	146.76	11	*e*PKIKP	PKPdf	14 24 20.4	-2.0
GNAR	Gosnell	147.97	18	*e*PKPbc	PKPdf	14 24 25.4	+1.0
MIAR	Mount Ida	147.97	24	*e*PKP2	PKPab	14 24 24.0	-3.4
JCT	Junction City	148.10	37	*e*PKIKP	PKPdf	14 24 23.0	-1.8
UALR	University of	148.25	22	PKPdf	PKPdf	14 24 23.9	-1.0
WVT	Waverly	148.43	15	*e*PKIKP	PKPdf	14 24 25.1	-0.1
OXF	Oxford	149.50	18	PKIKP	PKPdf	14 24 27.0	0.0
OXF	Oxford	149.50	18	PKP2	PKPab	14 24 35.3	+1.6
CPCT	Cooper Cave	149.79	10	*e*PKPbc	PKPdf	14 24 28.3	+0.9
LVC	Limon Verde	150.44	198	*e*PKPbc	PKPdf	14 24 31.7	+2.9
HKT	Hockley	150.74	32	*e*PKIKP	PKPdf	14 24 32.2	+3.2
JSC	Jenkinsville	151.37	5	*e*PKIKP	PKPdf	14 24 32.7	+2.9
LPAZ	La Paz	155.98	205	*e*PKIKP	PKPdf	14 24 41.8	+5.2
LPAZ	La Paz	155.98	205	PKP	PKPdf	14 24 42.0	+5.4
	comp=Z,3.3nm,1.1s,baz=10,slow=2.6,SNR=8.6						

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*IDC **19** 14:05:33.2±1.4, 4.80N×94.10E, mb4.0/7, mb1 4.2/8, mb1mx4.0/19, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=52.2km s-min=26.9km az=54.0*

*NEIC **19** 14:05:37.2±1.1, 4.66N×93.96E, h30^{km}, mb4.2/3, Error ellipse: s-maj=27.0km s-min=20.4km az=87.0*

ISC 19 14:05:36.5±1.1**, 4.8N**±0.2×**94.1E**±0.2**, h33^{km}, n13,** σ**0^{s}77**/12**, mb4.0**/10**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	14.36	19	*e*P		14 09 03.9	
	5.5nm,0.8s						
CMAR	Chiang Mai Arr	14.36	19	Pn	P	14 08 59.7	+0.1
	0.3nm,0.3s,baz=211,slow=13,SNR=9.1						
LSA	Lhasa	24.93	354	*e*P	P	14 11 00.0	+1.8
	5.9nm,0.8s,mb4.2						
SONM	Songino Array	44.15	12	P	P	14 13 42.5	-1.2
	1.0nm,0.8s,mb3.6,baz=190,slow=9.7,SNR=8.5						
WRA	Warramunga Arr	46.54	123	P	P	14 14 03.3	+0.1
	3.4nm,0.6s,mb4.5,baz=300,slow=9.8,SNR=7.8						
KURK	Kurchatov	47.58	347	P	P	14 14 10.6	-0.3
	1.6nm,0.9s,mb4.0						
ZAL	Zalesovo	49.57	353	P	P	14 14 26.5	+0.2
	1.4nm,0.8s,mb4.1,baz=306,slow=7.0,SNR=9.7						
ZAL	Zalesovo	49.57	353	P	P	14 14 26.5	+0.2
BVAR	Borovoye Array	51.88	342	P	P	14 14 43.2	-0.6
	1.0nm,0.6s,mb3.9,baz=140,slow=12,SNR=5.4						
CHKZ	Chkalovo	52.38	343	*e*P	P	14 14 46.5	-1.0
	2.8nm,0.7s,mb4.3						
FINES	FINESS Array B	75.42	333	P	P	14 17 18.6	+0.1
	0.6nm,0.3s,mb3.9,baz=103,slow=5.2,SNR=14						
ARCES	ARCESS Array B	78.14	340	P	P	14 17 34.5	+0.8
	2.8nm,0.8s,mb4.2,baz=113,slow=6.9,SNR=2.9						
GERES	GERESS Array B	80.11	319	P	P	14 17 44.9	+0.1
	0.6nm,0.7s,mb3.6,baz=90,slow=6.7,SNR=6.2						

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*BJI **19** 14:23:49.5, 1.91N×95.34E, h47^{km}, mB5.3, mb4.9, Ms5.0, Msz5.0*

*NEIC **19** 14:23:51.8±0.3, 2.33N×95.29E, mb5.0/29, Error ellipse: s-maj=9.8km s-min=5.6km az=55.0*

*IDC **19** 14:23:52.0±0.5, 2.37N×95.21E, h25^{km}±2^{km}, mb4.3/20, mb1 4.4/21, mb1mx4.4/24, mbtmp4.4/21, ML4.7/1, MS4.3/8, Ms1 4.4/8, ms1mx3.9/30, Error ellipse: s-maj=26.0km s-min=9.6km az=45.0*

*HRVD **19** 14:23:51.8±0.4, 2.19N×95.17E, h12^{km}, MW4.9/56, Centroid moment Tensor Solution. LP body waves: s22,c28;Mantle waves: s56,c92; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.92±.11; M$_{\theta\theta}$-3.07±.08; M$_{\phi\phi}$2.15±.11; M$_{r\theta}$0.45±.27; M$_{\theta\phi}$0.63±.10; M$_{\phi r}$-0.14±.33; Best double couple: M$_0$2.715×10^{16} NP1:ϕ_s232°,δ83°,λ-2°. NP2:ϕ_s322°,δ88°,λ-173°. Principal axes: T 2.232, Plg4°, Azm96°; N .961, Plg82°, Azm335°; P -3.197, Plg6°, Azm187°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **19** 14:23:56.5±1.5, 3.07N×96.52E, h33^{km}, mb5.4/23 Error ellipse: s-maj=16.4km s-min=8.4km az=114.2*

ISC 19 14:23:50.1±0.3**, 2.32N**±0.05×**95.25E**±0.04**, h28^{km}, h28^{km}**±.6^{km}**:pP-P, n185,** σ**1^{s}07**/144**, mb4.9**/75**, MS4.8**/14**, 16C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	6.18	69	P	Pn	14 25 22.7	+0.7
SNG	Songkhla	7.20	48	P	Pn	14 25 36.0	-0.3
	340nm,0.9s						
KGM	Kluang	8.07	92	P	P	14 25 49.2	+0.8
KKTK	Khon Kaen	15.80	28	P	P	14 27 37.0	+4.5
	679nm,0.8s						
CM31	Chiang Mai Arr	16.44	12	*e*P	P	14 27 39.8	-0.9
	66nm,1.1s						
CMAR	Chiang Mai Arr	16.44	12	Pn	P	14 27 40.3	-0.4
	1.0nm,0.3s,baz=204,slow=11,SNR=68						
CMAR				LR	LR	14 34 05.3	
	comp=Z,2µm,18.4s,baz=195,slow=37						
NANT	Nan	17.23	18	P	P	14 27 51.0	+0.4
VIS	Vishakhapatnam	19.27	323	*e*P	P	14 28 13.6	-1.9
VIS				AMb	AMB	14 28 24.6	
	comp=Z,58nm,1.2s						
VIS				*e*		14 31 32.2	
BWNR	Bhubaneshwar	20.11	333	*e*P	P	14 28 24.5	-0.3
BWNR				*e*S	S	14 32 09.5	+5.7
KKM	Kota Kinabalu	21.23	79	P	P	14 28 38.7	+2.4
HYB	Hyderabad	22.23	314	*e*P	P	14 28 46.0	-0.3
HYB				pmax	pmax		
	comp=Z,233nm,1.6s,mb5.4						
HYB	Hyderabad	22.23	314	*e*P	P	14 28 46.0	-0.3
	comp=Z,233nm,1.6s,mb5.4						
HYB	Hyderabad	22.23	314	*i* P	P	14 28 46.0	-0.3
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*		14 28 54.5	
TSM	Tawau	22.67	84	P	P	14 28 53.2	+2.4
BLSP	Bilaspur	23.46	328	*e*P	P	14 28 59.4	+1.0
BLSP				*e*		14 29 01.1	
	comp=Z,42nm,0.7s						
BLSP				*e*S	S	14 33 13.8	+7.4
KMI	Kunming	23.79	17	⇑P	P	14 29 03.3	+1.7
KMI				PP		14 29 11.0	
KMI	Kunming	23.79	17	⇑P	P	14 29 03.0	+1.4
	comp=Z,0.1nm,1.2s						
KMI				pP		14 29 11.0	
GYA	Guiyang	26.38	24	P	P	14 29 26.1	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.2						
POO	Poona	26.45	309	*e*P	P	14 29 26.5	-0.3
POO				AMb	AMB	14 29 37.9	
	comp=Z,87nm,1.8s,mb5.0						
JIRN	Jiri	26.65	342	*e*P	P	14 29 29.2	+0.6
	comp=Z,117nm,1.1s,mb5.3						
PKI	Pulchoki	26.82	340	*e*P	P	14 29 29.7	-0.5
DMN	Daman	26.96	340	*e*P	P	14 29 32.2	+0.8
	comp=Z,57nm,1.0s,mb5.1						
GUN	Gumba	26.98	341	*e*P	P	14 29 31.9	+0.3
	comp=Z,196nm,1.3s,mb5.5						
BHPL	Bhopal	27.04	322	*e*P	P	14 29 32.8	+0.6
KKN	Kakani	27.06	340	*e*P	P	14 29 32.4	0.0
	comp=Z,46nm,0.9s,mb5.0						
GKN	Gorkha	27.48	339	*e*P	P	14 29 36.0	-0.2
	comp=Z,173nm,1.1s,mb5.5						
LSA	Lhasa	27.51	352	P	P	14 29 37.9	+1.5
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
LSA	Lhasa	27.51	352	*e*P	P	14 29 37.1	+0.7
	comp=Z,23nm,0.7s,mb4.9						
KOLN	Koldanda	27.65	337	*e*P	P	14 29 37.7	-0.1
	comp=Z,95nm,1.3s,mb5.3						
CD2	Chengdu	29.55	15	*e*P	P	14 29 54.3	-0.6
CD2				AMB	AMB		
	comp=Z,54nm,1.4s,mb5.1						
ENH	Enshi	30.90	24	*e*P	P	14 30 05.4	-1.4
	comp=Z,14nm,1.1s,mb4.7						
NDI	New Delhi	31.35	328	*e*P	P	14 30 10.0	-0.8
DDI	Dehra Dun	32.27	331	*e*	P	14 30 23.2	+4.4
XAN	Xi’an	34.04	21	P	P	14 30 33.3	-0.9
XAN				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
LZH	Lanzhou	34.53	12	*e*P	P	14 30 37.0	-1.3
LZH				AMB	AMB		
	comp=Z,32nm,1.4s,mb5.1						
LZH				AMB	AMB		
	comp=Z,105nm,5.7s						
LZH				LR	LR		
	comp=N,446nm,12.8s						
LZH				LR	LR		
	comp=Z,757nm,16.8s,MS4.5						
LZH	Lanzhou	34.53	12	*e*P	P	14 30 37.0	-1.3
	comp=Z,32nm,1.4s,mb5.1						
LZH				pP	pP	14 30 44.5	-2.1
LZH				sP	sP	14 30 47.6	-2.5
LZH				*e*PP	PP	14 31 31.2	-24
LZH				LR	LR		
	comp=Z,760nm,16.8s,MS4.5						
FITZ	Fitzroy Crossi	36.16	125	*e*P	P	14 30 52.2	-0.1
	comp=Z,14nm,0.8s,mb5.0						
NJ2	Nanjing	36.99	34	*e*P	P	14 30 55.3	-3.9
NJ2				AMB	AMB		
	comp=Z,180nm,1.2s,mb5.8						
NJ2				LR	LR		
	comp=N,782nm,17.2s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,18.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,3µm,17.4s,MS5.1						
GTA	Gaotai	37.15	6	P	P	14 30 59.6	-0.9
GTA				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.4						
MUN	Mundaring	39.48	151	*e*P	P	14 31 21.5	+1.4
	comp=Z,6.1nm,1.0s,mb4.3						
KAKA	Kakadu	39.83	113	⇑*i*P	P	14 31 22.6	-0.5
	comp=Z,24nm,1.0s,mb4.9						
KAKA				*e*	pP	14 31 32.0	+0.6
NWAO	Narrogin (SRO)	40.76	151	P	P	14 31 31.4	+0.8
	comp=Z,12nm,1.1s,mb4.4,baz=323,slow=10,SNR=2.4						
KSH	Kashi	40.97	337	*e*P	P	14 31 33.0	+0.7
KSH				AMB	AMB		
	comp=Z,50nm,4.9s						
HHC	Hu-ho-hao-te	41.09	19	*e*P	P	14 31 34.8	+1.6
HHC				AP	pP	14 31 44.8	+3.3
HHC				PP	PP	14 33 12.0	+1.0
HHC				PCP	PcP	14 33 32.6	-0.6
HHC				SCP		14 37 17.9	
HHC				S	S	14 37 48.8	+4.8
HHC				SS	SS	14 40 47.4	+4.9
HHC				AMB	AMB		
	comp=Z,23nm,1.6s,mb4.6						
HHC				LR	LR		
	comp=N,2µm,15.6s,MS5.2						
HHC				LR	LR		
	comp=E,2µm,18.1s,MS5.2						
HHC				LR	LR		
	comp=Z,2µm,17.4s,MS5.1						
WMQ	Urumqi	41.87	352	P	P	14 31 40.0	+0.4
WMQ				AMB	AMB		
	comp=Z,45nm,1.2s,mb5.0						
BJT	Baijiatuau	42.05	24	*e*P	P	14 31 42.7	+1.5
	comp=Z,21nm,0.9s,mb4.8						
ULHL	Ulahol	43.25	339	P	P	14 31 52.0	+1.1
	SNR=6.3						
KZA	Kyzart	43.46	338	P	P	14 31 54.1	+1.5
	SNR=7.6						
UCH	Uchtor	43.87	338	P	P	14 31 56.9	+1.0
	SNR=14						
TKM2	Tokmak 2	44.07	339	P	P	14 31 58.3	+0.7
	SNR=13						
KBK	Karagaybulak	44.07	338	P	P	14 31 59.0	+1.4
	SNR=13						
AML	Almayashu	44.10	337	P	P	14 31 58.8	+1.0
	SNR=16						
AAK	Ala-Archa	44.22	338	P	P	14 32 00.0	+1.2
AAK				pmax	pmax		
	comp=Z,114nm,1.8s,mb5.3						
AAK	Ala-Archa	44.22	338	*e*P	P	14 31 58.5	-0.3
	comp=Z,27nm,1.2s,mb4.8						
WRA	Warramunga Arr	44.27	122	P	P	14 31 59.9	+0.3
	comp=Z,25nm,1.1s,mb4.9,baz=300,slow=9.0,SNR=80						
WRA				pP	pP	14 32 08.5	+0.7
	comp=Z,5.5nm,0.6s,baz=299,slow=9.2,SNR=9.1						
FRU	Bishkek	44.35	338	*e*P	pP	14 32 09.0	+0.8
FRU				pmax	pmax		
	comp=Z,170nm,2.0s,mb5.4						
CHMS	Chumysh	44.44	338	P	pP	14 32 09.2	+0.3
	SNR=5.7						
EKS2	Erkin-Say	44.52	337	P	P	14 32 01.8	+0.5
	SNR=7.7						
USP	Ospenovka	44.77	338	P	P	14 32 03.6	+0.4
	SNR=14						
ASPA	Alice Springs	45.62	127	*e*P	P	14 32 07.1	-3.1
ASAR	Alice Springs	45.62	127	P	P	14 32 10.7	+0.5
	comp=Z,3.3nm,0.9s,mb4.3,baz=298,slow=6.8,SNR=26						
ASAR				pP	pP	14 32 19.2	+0.7
	comp=Z,3.6nm,0.8s,baz=298,slow=7.9,SNR=13						
ASAR				pPcP		14 33 57.1	
	comp=Z,4.0nm,1.0s,baz=287,slow=4.7,SNR=5.3						
ASAR				LR	LR	14 51 18.2	
	comp=Z,288nm,20.5s,MS4.2,baz=309,slow=36						
MKAR	Makanchi Array	45.71	348	*e*P	P	14 32 10.8	+0.2
MKAR				pmax	pmax		
	comp=Z,43nm,1.0s						
KS15	Wonju Array Si	46.04	37	P	P	14 32 12.4	-1.0
SONM	Songino Array	46.35	10	P	P	14 32 16.1	+0.4
	comp=Z,9.1nm,1.1s,mb4.6,baz=191,slow=8.8,SNR=37						
SONM				pPcP		14 33 59.7	
	comp=Z,1.2nm,0.6s,baz=198,slow=3.8,SNR=7.1						
ULN	Ulaanbaatar	46.50	11	*e*P	P	14 32 16.9	0.0
	comp=Z,2.0nm,0.7s,mb4.2						
ZAK	Zakamensk	48.37	7	⇑*i*P	P	14 32 31.9	+0.4
ZAK				*e*		14 34 06.7	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
CN2	Changchun	49.23	29	*e*P	P	14 32 37.8	-0.4
CN2				*e*AP	pP	14 32 47.8	+1.1
CN2				*e*S	S	14 39 44.1	+3.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				LR	LR		
	comp=N,1µm,13.0s,MS5.3						
CN2				LR	LR		
	comp=E,2µm,13.0s,MS5.3						
CN2				LR	LR		
	comp=Z,2µm,14.0s,MS5.2						
TLY	Talaya	49.69	7	*e*P	P	14 32 42.5	+0.9
TLY				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
TLY	Talaya	49.69	7	*e*P	P	14 32 42.8	+1.1
	comp=Z,13nm,1.1s,mb4.9						
KURK	Kurchatov	50.23	346	*i* P	P	14 32 45.2	-0.6
KURK				pmax	pmax		
	comp=Z,41nm,1.9s,mb5.1						
KURK	Kurchatov	50.23	346	*e*P	P	14 32 45.2	-0.6
	comp=Z,47nm,1.3s,mb5.4						
IRK	Irkutsk	50.32	7	*e*P	P	14 32 45.7	-0.7
IRK				pmax	pmax		
	comp=Z,54nm,2.1s,mb5.2						
HIA	Hailar	51.24	20	P	P	14 32 51.9	-1.6
HIA				pmax	pmax		
	comp=Z,20nm,1.3s						
HIA	Hailar	51.24	20	P	P	14 32 51.9	-1.6
	comp=Z,21nm,1.3s,mb4.9						
ZAL	Zalesovo	52.16	352	P	P	14 33 00.4	0.0
	comp=Z,5.0nm,0.5s,mb4.7,baz=289,slow=6.8,SNR=31						
RAYN	Ar Rayn	52.52	298	P	P	14 33 02.8	-0.7
	comp=Z,85nm,1.3s,mb5.5,SNR=7.6						
PMG	Port Moresby	53.01	104	*e*P	P	14 33 03.9	-3.3
PMG				pmax	pmax		
	comp=Z,21nm,1.0s						
PMG	Port Moresby	53.01	104	*e*P	P	14 33 03.9	-3.3
	comp=Z,20nm,1.0s,mb5.0						
NVS	Novosibirsk	53.27	351	⇑*i*P	P	14 33 06.0	-2.6
NVS				*e*		14 33 22.6	
NVS				*e*S	S	14 40 37.3	+0.9
NVS				pmax	pmax		
	comp=Z,47nm,1.7s,mb5.1						
NVS				pmax	pmax		
	comp=N,46nm,1.6s						
NVS				pmax	pmax		
	comp=E,24nm,1.6s						
NVS				smax			
	comp=N,15nm,1.8s						
BVA0	Borovoye Array	54.57	342	*i* P	P	14 33 17.0	-1.2
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.4						
BVAR	Borovoye Array	54.57	342	P	P	14 33 17.0	-1.2
	comp=Z,2.3nm,0.6s,mb4.4,baz=149,slow=8.6,SNR=19						
BVAR				pP	pP	14 33 24.7	-2.0
	comp=Z,6.5nm,0.9s,baz=139,slow=8.5,SNR=12						
CTA	Charters Tower	54.74	117	P	P	14 33 19.1	-0.8
	comp=Z,10nm,0.9s,mb4.8,baz=252,slow=6.4,SNR=5.4						
CTA				LR	LR	14 58 00.1	
	comp=Z,236nm,19.1s,MS4.3,baz=155,slow=37						
CTAO	Charters Tower	54.74	117	P	P	14 33 19.0	-0.9
CTAO				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
CTAO	Charters Tower	54.74	117	P	P	14 33 19.0	-0.9
	comp=Z,16nm,1.0s,mb5.0						
CHKZ	Chkalovo	55.06	342	P	P	14 33 20.8	-1.0
CHKZ				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.5						
CHKZ	Chkalovo	55.06	342	*e*P	P	14 33 20.8	-1.0
	comp=Z,37nm,1.2s,mb5.3						
STKA	Stephens Creek	55.55	132	⇑*i*P	P	14 33 25.5	-0.1
	comp=Z,12nm,1.0s,mb4.9						
STKA	Stephens Creek	55.55	132	P	P	14 33 25.8	+0.2
	comp=Z,8.2nm,0.9s,mb4.8,baz=296,slow=9.2,SNR=9.5						
STKA				pP	pP	14 33 34.4	+0.3
	comp=Z,22nm,1.1s,baz=311,slow=6.6,SNR=10						
STKA				LR	LR	14 58 20.5	
	comp=Z,445nm,21.5s,MS4.5,baz=226,slow=37						
KLR	Kul’dur	56.16	28	*e*P	P	14 33 27.0	-2.7
KLR				MLR	MLR		
	comp=Z,4µm,13.0s,MS5.7						
BOD	Bodaibo	57.29	12	*e*P	P	14 33 36.4	-1.3
BOD				*e*	pP	14 33 44.5	-1.8
BOD				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
BOD				pmax	pmax		
	comp=Z,19nm,1.8s,mb4.8						
KMBO	Kilima Mbogo	58.09	267	P	P	14 33 44.1	+0.2
	comp=Z,2.6nm,0.8s,mb4.3,baz=237,slow=22,SNR=3.6						
GNI	Garni	59.14	316	*i* P	P	14 33 57.7	+6.8
GNI				pmax	pmax		
	comp=Z,56nm,2.1s						
GNI	Garni	59.14	316	P	P	14 33 50.6	-0.3
	comp=Z,1.1nm,0.3s,mb4.3,baz=153,slow=2.3,SNR=3.3						
GNI				pP	pP	14 33 59.2	-0.3
	comp=Z,4.4nm,0.8s,baz=197,slow=9.9,SNR=2.2						
YSS	Yuzh-Sakhalins	60.55	35	P	P	14 34 01.7	+1.3
YSS				*e*		14 34 15.0	
SVE	Sverdlovsk	60.94	339	*e*P	P	14 34 08.0	+5.0
SVE				pmax	pmax		
	comp=Z,120nm,1.6s,mb5.8						
KIV	Kislovodsk	62.20	320	⇑*i*P	P	14 34 17.3	+5.7
KIV				*e*		14 34 59.0	
KIV				*e*		14 36 35.9	
KIV				pmax	pmax		
	comp=Z,37nm,1.8s,mb5.2						
ASF	Jabal al Asfar	62.23	305	P	P	14 34 12.2	+0.2
	comp=Z,1.2nm,0.4s,mb4.4,baz=308,slow=3.1,SNR=3.4						
ASF				pP	pP	14 34 20.6	-0.1
	comp=Z,1.0nm,0.3s,baz=278,slow=2.9,SNR=3.5						
MALT	Malatya	62.94	312	*e*P	P	14 34 16.1	-0.5
	comp=Z,31nm,1.4s,mb5.2						
MALT				*e*pP	pP	14 34 24.6	-0.7
SOC	Sochi	63.99	318	*e*P	P	14 34 26.8	+3.3
SOC				*e*		14 35 02.7	
SOC				*e*S	S	14 42 59.4	+3.2
SOC				*e*		14 44 19.8	
SOC				*e*SSS	SSS	14 50 10.2	+15
SOC				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2						
SOC				pmax	pmax		
	comp=N,13nm,1.0s						
SOC				pmax	pmax		
	comp=E,14nm,1.2s						
SOC				MLR	MLR		
	comp=Z,368nm,18.0s,MS4.6						
SOC				MLR	MLR		
	comp=N,115nm,12.0s						
SOC				MLR	MLR		
	comp=E,160nm,12.0s						
YAK	Yakutsk	64.91	17	*e*P	P	14 34 26.9	-2.2
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						

YAK				MLR	MLR		
	comp=Z,734nm,15.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,565nm,16.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,619nm,17.0s,MS5.0						
YAK	**Yakutsk**	**64.91**	**17**	*e*P	**P**	**14 34 28.1**	**-1.1**
	comp=E,6.2nm,0.6s,mb4.8						
BRTR	**Keskin Array B**	**66.92**	**312**	P	**P**	**14 34 40.5**	**-1.9**
	comp=E,1.3nm,0.7s,mb4.0,baz=127,slow=6.2,SNR=8.5						
BRTR				pP	pP	14 34 49.0	-2.1
	comp=E,3.4nm,0.9s,baz=135,slow=5.2,SNR=8.2						
SIM	**Simferopol’**	**68.23**	**318**	P	**P**	**14 34 56.0**	**+5.5**
SIM				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
MOS	**Moscow**	**70.38**	**330**	*e*P	**P**	**14 35 09.5**	**+6.0**
MOS				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.5						
OBN	**Obninsk**	**70.65**	**329**κ	*i*P	pP	14 35 12.1	-1.8
OBN				*e*		14 35 28.0	
OBN				*e*		14 35 35.1	
OBN				pmax	pmax		
	comp=Z,75nm,2.0s,mb5.3						
OBN	**Obninsk**	**70.65**	**329**	P	**P**	**14 35 10.5**	**+5.4**
	comp=Z,10nm,0.6s,mb4.9						
MA2	**Magadan**	**71.18**	**26**	*i* P	**P**	**14 35 07.3**	**-1.0**
MA2				pmax	pmax		
	comp=Z,26nm,1.9s,mb4.8						
TIXI	**Tiksi**	**72.44**	**11**	*e*P	**P**	**14 35 14.8**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
IDI	**Anoyia**	**72.67**	**306**	P	**P**	**14 35 17.9**	**+0.2**
	comp=Z,5.3nm,0.7s,mb4.6,baz=101,slow=11,SNR=5.6						
AKASG	**Malin Array Be**	**73.19**	**323**	P	**P**	**14 35 22.1**	**+1.8**
	comp=Z,1.2nm,0.7s,mb4.0,baz=144,slow=15,SNR=5.4						
MAW	**Mawson**	**73.37**	**192**	LR	LR	14 58 44.1	
	comp=Z,323nm,20.4s,MS4.6,baz=174,slow=28						
VRI	**Vrincioaia**	**73.48**	**317**	⇑P	pP	14 35 29.3	-1.6
VRI	**Vrincioaia**	**73.48**	**317**	⇑*i*P	pP	14 35 30.6	-0.3
MLR	**Muntele Rosu**	**73.92**	**317**	⇓P	**P**	**14 35 30.2**	**+5.5**
MLR	**Muntele Rosu**	**73.92**	**317**	P	**P**	**14 35 25.0**	**+0.3**
	comp=Z,3.7nm,0.9s,mb4.3,baz=101,slow=5.2,SNR=4.6						
MLR				pP	pP	14 35 33.2	-0.2
	comp=Z,34nm,1.3s,baz=16,slow=4.5,SNR=10						
MLR	**Muntele Rosu**	**73.92**	**317**	⇓*i*P	**P**	**14 35 24.7**	**0.0**
BURAR	**Bucovina Array**	**74.91**	**319**	⇑P	**P**	**14 35 35.8**	**+5.4**
BURAR	**Bucovina Array**	**74.91**	**319**	⇑P	**P**	**14 35 35.8**	**+5.4**
LVV	**L’vov**	**76.17**	**321**	*i* P	**P**	**14 35 45.6**	**+8.1**
LVV				*i*	pP	14 35 54.2	+7.9
BZS	**Buzias**	**76.92**	**316**	⇑P	pP	14 35 49.2	-1.4
KOLS	**Kolonicke sedl**	**77.11**	**320**	*e*P	**P**	**14 35 43.7**	**+0.9**
KOLS				*e*pP	pP	14 35 52.0	+0.4
CRVS	**Cervenica-Dubn**	**77.63**	**320**	*e*P	sP	14 35 58.2	+0.8
CRVS	**Cervenica-Dubn**	**77.63**	**320**	*e*sP	sP	14 35 58.2	+0.8
SUW	**Suwalki**	**77.64**	**325**	*e*P	**P**	**14 35 44.7**	**-0.9**
	comp=Z,76nm,1.3s,mb5.5						
FINES	**FINESS Array B**	**78.11**	**333**	*i* P	**P**	**14 35 46.8**	**-1.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**78.11**	**333**	P	**P**	**14 35 48.2**	**+0.2**
	comp=Z,5.0nm,1.1s,mb4.3,baz=243,slow=8.5,SNR=4.5						
FINES	**FINESS Array B**	**78.11**	**333**	P	**P**	**14 35 48.2**	**+0.2**
KECS	**Kecovo**	**78.19**	**319**	*e*P	pP	14 35 57.6	+0.1
KECS	**Kecovo**	**78.19**	**319**	*e*pP	pP	14 35 57.6	+0.1
PSZ	**Piszkesteto**	**78.48**	**318**	P	**P**	**14 35 49.4**	**-0.9**
	comp=Z,29nm,1.6s,mb5.0						
VYHS	**Vyhne**	**79.27**	**319**	*e*pP	pP	14 36 03.5	0.0
OKC	**Ostrava-Krasne**	**79.92**	**320**	*e*P	pP	14 36 05.3	-1.7
MORC	**Moravsky Berou**	**80.30**	**320**	*e*P	**P**	**14 35 57.9**	**-2.2**
	comp=Z,32nm,1.6s,mb5.0						
MORC				*e*pP	pP	14 36 09.3	+0.3
ZST	**Bratislava**	**80.38**	**318**	*e*P	**P**	**14 36 01.9**	**+1.3**
ZST				*e*pP	pP	14 36 09.5	+0.1
SYO	**Syowa Base**	**80.47**	**198**	⇑PcP	PcP	14 36 06.2	-1.8
SYO	**Syowa Base**	**80.47**	**198**	⇓pP	pP	14 36 08.9	-0.6
BILL	**Bilibino**	**80.82**	**21**	*e*P	**P**	**14 36 01.2**	**-1.3**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
ARCES	**ARCESS Array B**	**80.83**	**340**	P	**P**	**14 36 02.9**	**+0.3**
	comp=Z,4.9nm,1.0s,mb4.4,baz=101,slow=6.2,SNR=6.6						
ARCES				pP	pP	14 36 11.6	+0.1
	comp=Z,3.5nm,0.6s,baz=91,slow=4.7,SNR=4.0						
ARCES	**ARCESS Array B**	**80.83**	**340**	P	**P**	**14 36 02.9**	**+0.3**
ARCES				pP	pP	14 36 11.6	+0.1
FX1	**Attu Island--F**	**80.86**	**37**	LR	LR	15 12 33.2	
	comp=Z,15nm,18.8s,baz=282,slow=36						
DPC	**Dobruska-Polom**	**81.15**	**320**	*e*P	**P**	**14 36 09.6**	**+5.0**
KSP	**Ksiaz**	**81.23**	**321**	*e*P	pP	14 36 13.2	-0.7
BOJS	**Bojanci**	**81.34**	**316**	*e*P	pP	14 36 13.3	-1.2
UPC	**Upice**	**81.37**	**321**	*e*P	pP	14 36 14.4	-0.2
LJU	**Ljubljana**	**81.89**	**316**	*e*P	pP	14 36 17.4	-0.1
PRU	**Pruhonice**	**82.25**	**320**	*e*P	pP	14 36 18.7	-0.5
PVCC	**Panska Ves**	**82.29**	**321**	*e*P	pP	14 36 18.9	-0.5
PTQR	**Pietraquaria**	**82.40**	**312**	*e*P	**P**	**14 36 11.8**	**+0.5**
GERES	**GERESS Array B**	**82.69**	**319**	P	**P**	**14 36 13.2**	**+0.5**
	comp=Z,2.3nm,0.9s,mb4.2,baz=104,slow=5.5,SNR=16						
GERES				pP	pP	14 36 21.2	-0.3
	comp=Z,15nm,1.2s,baz=117,slow=3.0,SNR=11						
BRG	**Berggiesshubel**	**82.72**	**321**	*e*P	pP	14 36 21.9	+0.3
BRG				pmax	pmax		
	comp=Z,45nm,1.8s,mb5.2						
BRG				MLR	MLR		
	comp=N,220nm,20.2s,MS4.8						
BRG				MLR	MLR		
	comp=E,310nm,20.5s,MS4.8						
BRG				MLR	MLR		
	comp=Z,490nm,20.5s,MS4.9						
KHC	**Kasperske Hory**	**82.80**	**319**	*e*P	**P**	**14 36 18.8**	**+5.6**
ARV	**Arcevia**	**82.83**	**313**	*e*P	**P**	**14 36 13.8**	**+0.4**
CLL	**Collm**	**83.35**	**321**	*e*P	pP	14 36 25.0	+0.1
CLL	**Collm**	**83.35**	**321**	*e**PP	pP	14 36 25.0	+0.1
NKC	**Novy Kostel**	**83.62**	**320**	*e*P	**P**	**14 36 25.3**	**+7.9**
SFI	**Santa Sofia**	**83.64**	**314**	*e*P	**P**	**14 36 18.7**	**+1.0**
HFS	**Hagfors**	**83.79**	**330**	P	**P**	**14 36 18.7**	**+0.7**
	comp=Z,13nm,1.2s,mb4.9,slow=1.4,SNR=3.6						
MOX	**Moxa**	**84.17**	**321**	*e*P	pP	14 36 28.0	-1.1
GRA1	**Grafenberg Arr**	**84.37**	**320**	*e*P	**P**	**14 36 22.1**	**+0.9**
	comp=Z,29nm,1.4s,mb5.2						
GRA1				*e*pP	pP	14 36 30.3	+0.2
GRF	**Grafenberg Arr**	**84.37**	**320**	*e*P	**P**	**14 36 22.1**	**+0.9**
GRF				*e**PP	pP	14 36 30.3	+0.2
GRF				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.2						
GRF				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.2						
GRF	**Grafenberg Arr**	**84.37**	**320**	*e*P	**P**	**14 36 22.1**	**+0.9**
	comp=Z,29nm,1.4s,mb5.2						
GRF				*e*pP	pP	14 36 30.3	+0.2
DAVOX	**Davos**	**85.15**	**317**	P	**P**	**14 36 25.1**	**0.0**
	comp=Z,4.3nm,1.0s,mb4.5,baz=174,slow=7.9,SNR=3.2						
DAVOX				pP	pP	14 36 34.3	+0.2
	comp=Z,22nm,1.2s,baz=147,slow=2.3,SNR=8.5						
VNDA	**Vanda**	**87.30**	**168**	pP	pP	14 36 45.1	+1.1
	comp=Z,7.2nm,1.1s,baz=281,slow=4.1,SNR=5.1						
VNDA				LR	LR	15 14 12.3	
	comp=Z,344nm,18.3s,MS4.8,baz=301,slow=35						
VNDA	**Vanda**	**87.30**	**168**	*e*P	**P**	**14 36 32.2**	**-2.9**
	comp=Z,22nm,1.4s,mb5.2						
QSPA	**South Pole Qui**	**92.26**	**180**	P	**P**	**14 36 57.2**	**-1.0**
	comp=Z,9.0nm,1.4s,mb4.9						
QSPA				*e*	pP	14 37 07.5	+0.3
ESDC	**Sonseca Array**	**95.62**	**310**	pP	pP	14 37 23.8	+0.3
	comp=Z,0.9nm,0.8s,baz=56,slow=5.3,SNR=2.1						
VNA2	**Neumayer--Watz**	**96.31**	**199**	⇑*i*P	sP	14 37 31.5	+2.7
VNA1	**Neumayer--Stat**	**96.65**	**199**	⇑*i*P	sP	14 37 31.3	+1.0
VNA3	**Neumayer Olymp**	**96.97**	**198**	⇑*i*P	sP	14 37 30.1	-1.7
ILAR	**Eielson Array**	**99.43**	**23**	pP	pP	14 37 39.5	-0.7
	comp=Z,0.3nm,0.8s,baz=285,slow=4.1,SNR=2.0						
DBIC	**Dimbokro**	**99.76**	**277**	LR	LR	15 19 40.1	
	comp=Z,178nm,18.1s,MS4.6,baz=64,slow=34						
YKA	**Yellowknife Ar**	**111.52**	**14**	PP	PP	14 43 01.2	-6.1
	comp=Z,0.3nm,1.0s,baz=327,slow=5.8,SNR=4.3						
ULM	**Lac du Bonnet**	**126.77**	**9**	pPKP		14 43 01.4	
	comp=Z,2.0nm,0.7s,baz=333,slow=1.5,SNR=4.1						
ELK	**Elko**	**128.91**	**30**	PKPdf	PKPdf	14 42 59.5	-1.3
NVAR	**Mina Array Bea**	**128.98**	**34**	PKP	PKPdf	14 42 59.7	-1.3
	comp=Z,0.3nm,0.3s,baz=270,slow=1.8,SNR=4.5						
NVAR	**Mina Array Bea**	**128.98**	**34**	PKP	PKPdf	14 42 59.7	-1.3
PDAR	**Pinedale Array**	**129.84**	**24**	PKP	PKPdf	14 43 00.1	-2.4
	comp=Z,0.5nm,0.9s,baz=297,slow=3.3,SNR=3.8						
PDAR				pPKP		14 43 08.2	
	comp=Z,5.1nm,1.3s,SNR=7.5						
DUG	**Dugway**	**130.51**	**28**	*e*PKPdf	PKPdf	14 43 02.1	-1.7
PV10	**Paradox Valley**	**133.71**	**27**	*e*PKPdf	PKPdf	14 43 07.3	-2.5
MIAR	**Mount Ida**	**142.40**	**12**	PKPdf	PKPdf	14 43 18.7	-7.1
TXAR	**Lajitas Array**	**143.68**	**29**	PKP	PKPdf	14 43 23.4	-4.7
	comp=Z,0.5nm,0.6s,baz=243,slow=2.8,SNR=6.5						
TXAR				pPKP		14 43 32.9	
	comp=Z,2.9nm,1.2s,baz=257,slow=0.8,SNR=5.5						
TXAR	**Lajitas Array**	**143.68**	**29**	PKP	PKPdf	14 43 23.4	-4.7
TXAR				pPKP		14 43 32.9	
JCT	**Junction City**	**144.36**	**23**	*e*PKPdf	PKPdf	14 43 25.0	-4.3
HKT	**Hockley**	**146.21**	**17**	PKPbc	PKPbc	14 43 30.2	+1.5
HKT				*e*pPKPbc		14 43 40.0	
LPAZ	**La Paz**	**158.55**	**229**	PKP	PKPdf	14 43 55.2	+4.5
	comp=Z,1.1nm,0.9s,baz=20,slow=1.4,SNR=4.6						
LPAZ				PKPab	PKPab	14 44 32.5	+9.3
	comp=Z,4.8nm,1.2s,baz=47,slow=6.0,SNR=5.6						

IDC 19 14:34:08.4±1.3, 5.36S×122.81E, mb3.8/5, mb1 4.0/6, mb1mx3.9/16, mbtmp3.8/6, ML3.4/1, MS4.6/1, Ms1 4.6/1, ms1mx3.0/23, Error ellipse: s-maj=102.1km s-min=21.8km az=59.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.33**	**143**	P	P	14 38 23.2	-2.8
	0.1nm,0.3s,baz=316,slow=12,SNR=12						
ASPA	**Alice Springs**	**21.11**	**151**	*e*P	P	14 38 58.6	+1.5
ASAR	**Alice Springs**	**21.11**	**151**	P	P	14 38 55.6	-1.5
	2.1nm,0.7s,baz=327,slow=12,SNR=16						
CMAR	**Chiang Mai Arr**	**33.37**	**316**	P	P	14 40 49.1	-1.8
	0.8nm,0.6s,baz=143,slow=7.3,SNR=7.4						
SONM	**Songino Array**	**54.91**	**347**	P	P	14 43 42.3	-0.9
	1.1nm,0.6s,baz=163,slow=7.9,SNR=5.0						
SONM				pP	pP	14 43 46.9	+3.7
	1.1nm,0.6s,baz=162,slow=8.6,SNR=11						
RPZ	**Rata Peaks**	**57.00**	**140**	LR	LR	15 07 43.2	
	comp=Z,544nm,19.9s,baz=82,slow=35						
ZAL	**Zalesovo**	**67.11**	**337**	P	P	14 45 02.4	-3.5
	0.9nm,0.3s,baz=80,slow=6.1,SNR=2.9						
BVAR	**Borovoye Array**	**72.97**	**330**	P	P	14 45 43.8	+2.1
	0.5nm,0.4s,baz=93,slow=9.8,SNR=3.2						

BJI 19 14:36:42.9, 5.59S×122.41E, h8^{km}, mB5.5, mb4.8, Ms5.0, Msz5.0

IDC 19 14:36:42.9±0.8, 5.51S×122.49E, mb4.3/8, mb1 4.4/9, mb1mx4.2/18, mbtmp4.3/9, ML3.9/1, MS3.6/1, Ms1 3.8/1, ms1mx3.0/21, Error ellipse: s-maj=52.1km s-min=15.0km az=54.0

MOS 19 14:36:44.8±0.9, 5.70S×122.34E, h33^{km}, mb4.8/10, Error ellipse: s-maj=32.6km s-min=12.5km az=118.6

NEIC 19 14:36:44.1±0.4, 5.66S×122.23E, h10^{km}, mb4.8/9, Error ellipse: s-maj=20.6km s-min=7.5km az=59.0

ISC 19 14:36:46.1±3.7, 5.64S±0.08×122.4E±0.2, h40^{km}±35^{km}, n43, σ0^{s}85/41, mb4.5/23, MS3.5/1, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.19**	**126**	*e*P	**P**	**14 39 40.8**	**+0.7**
	21nm,0.8s						
WRA	**Warramunga Arr**	**18.39**	**142**	P	**P**	**14 40 58.5**	**-1.5**
	0.4nm,0.3s,baz=316,slow=12,SNR=12						
ASPA	**Alice Springs**	**21.10**	**149**	*e*S	**P**	**14 41 30.3**	**+0.7**
ASAR	**Alice Springs**	**21.10**	**149**	P	**P**	**14 41 30.1**	**+0.5**
	6.6nm,0.8s,mb4.0,baz=326,slow=11,SNR=13						
ASAR				PcP	PcP	14 45 35.9	+0.7
	0.4nm,0.8s,baz=313,slow=1.0,SNR=3.9						
PMG	**Port Moresby**	**24.88**	**100**	P	**P**	**14 42 06.1**	**-0.8**
	12nm,1.1s,mb4.3,baz=266,slow=15,SNR=2.1						
KLBR	**Kellerberrin**	**26.18**	**189**	*e*P	**P**	**14 42 18.1**	**-0.8**
	247nm,1.5s,mb5.5						
STKA	**Stephens Creek**	**31.72**	**148**	P	**P**	**14 43 08.3**	**-0.3**
	1.1nm,0.5s,mb4.0,baz=326,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**31.72**	**148**	P	**P**	**14 43 08.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**33.25**	**317**	P	**P**	**14 43 22.1**	**+0.1**
	1.7nm,0.6s,mb4.2,baz=132,slow=6.7,SNR=11						
CMAR				PcP	PcP	14 46 05.1	+1.2
	0.7nm,0.7s,baz=153,slow=2.0,SNR=4.3						
CMAR				LR	LR	14 57 23.3	
	comp=Z,85nm,18.7s,MS3.5,baz=141,slow=37						
SSE	**Sheshan**	**36.54**	**358**	P	**P**	**14 43 49.3**	**-0.7**
SSE				AMB	AMB		
	comp=Z,21nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,349nm,5.3s						
SSE	**Sheshan**	**36.54**	**358**	P	**P**	**14 43 49.2**	**-0.8**
	comp=Z,21nm,0.8s,mb5.0						
WHN	**Wuhan**	**36.78**	**348**	*e*P	**P**	**14 43 53.5**	**+1.5**
NJ2	**Nanjing**	**37.62**	**355**	*e*P	**P**	**14 43 59.3**	**+0.2**
NJ2				AP	pP	14 44 08.9	-1.4
NJ2				XP	sP	14 44 13.0	-2.3
NJ2				AMB	AMB		
	comp=Z,150nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,414nm,4.0s						
NJ2				LR	LR		
	comp=N,414nm,15.2s						
NJ2				LR	LR		
	comp=E,2μm,18.2s						
NJ2				LR	LR		
	comp=Z,2μm,15.4s						
BJT	**Baijiatuau**	**45.78**	**353**	*e*P	**P**	**14 45 06.3**	**+0.4**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BJT	**Baijiatuau**	**45.78**	**353**	*e*P	**P**	**14 45 06.3**	**+0.4**
	comp=Z,4.5nm,0.5s,mb4.7						
LSA	**Lhasa**	**46.16**	**321**	*e*P	**P**	**14 45 10.1**	**+1.1**
LSA	**Lhasa**	**46.16**	**321**	*e*P	**P**	**14 45 08.9**	**-0.1**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
LSA	**Lhasa**	**46.16**	**321**	*e*P	**P**	**14 45 08.9**	**-0.1**
	comp=Z,9.6nm,1.0s,mb4.7						
GTA	**Gaotai**	**49.42**	**337**	P	**P**	**14 45 34.8**	**+0.5**
GTA				AP	pP	14 45 39.6	-6.1
GTA				XP	sP	14 45 42.8	-7.7
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.3						
HIA	**Hailar**	**54.72**	**358**	*e*P	**P**	**14 46 14.4**	**+0.6**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HIA	**Hailar**	**54.72**	**358**	*e*P	**P**	**14 46 14.4**	**+0.5**
	comp=Z,5.6nm,0.9s,mb4.6						
SONM	**Songino Array**	**55.06**	**347**	P	**P**	**14 46 17.0**	**+0.7**
	comp=Z,6.5nm,0.8s,mb4.7,baz=170,slow=7.5,SNR=16						
RPZ	**Rata Peaks**	**57.09**	**140**	P	**P**	**14 46 32.0**	**+1.1**
	comp=Z,14nm,1.1s,mb4.9,baz=297,slow=8.7,SNR=4.0						
ZAK	**Zakamensk**	**58.18**	**346**	*e*P	**P**	**14 46 36.4**	**-2.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.9						
TLY	**Talaya**	**59.30**	**347**	*i* P	**P**	**14 46 46.2**	**0.0**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
TLY	**Talaya**	**59.30**	**347**	*e*P	**P**	**14 46 47.1**	**+0.9**
	comp=Z,9.1nm,1.2s,mb4.7						
BOD	**Bodaibo**	**63.60**	**355**	*e*P	**P**	**14 47 14.9**	**-0.2**
AAK	**Ala-Archa**	**64.72**	**323**	*i* P	**P**	**14 47 22.2**	**-0.5**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
ZAL	**Zalesovo**	**67.18**	**337**	*i* P	**P**	**14 47 40.0**	**+1.9**
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAL	**Zalesovo**	**67.18**	**337**	P	**P**	**14 47 38.0**	**-0.1**
	comp=Z,3.8nm,0.8s,mb4.5,baz=338,slow=5.0,SNR=15						
ZAL	**Zalesovo**	**67.18**	**337**	P	**P**	**14 47 38.0**	**-0.1**
KURK	**Kurchatov**	**67.55**	**332**	*i* P	**P**	**14 47 40.2**	**-0.3**
KURK	**Kurchatov**	**67.55**	**332**	*e*P	**P**	**14 47 40.0**	**-0.4**
	comp=Z,14nm,1.0s,mb4.9						
YAK	**Yakutsk**	**67.71**	**4**	*i* P	**P**	**14 47 45.6**	**+4.3**
YAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
NVS	**Novosibirsk**	**68.46**	**337**	*e*P	**P**	**14 47 44.6**	**-1.5**
MA2	**Magadan**	**68.81**	**15**	*i* P	**P**	**14 47 55.0**	**+6.8**
MA2				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
BVAR	**Borovoye Array**	**72.98**	**330**	P	**P**	**14 48 13.3**	**-0.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=117,slow=3.2,SNR=6.0						
CHKZ	**Chkalovo**	**73.24**	**331**	*e*P	**P**	**14 48 14.9**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
CHKZ	**Chkalovo**	**73.24**	**331**	*e*P	**P**	**14 48 14.9**	**0.0**
	comp=Z,5.6nm,1.1s,mb4.4						
TIXI	**Tiksi**	**77.25**	**2**	*e*P	**P**	**14 48 36.9**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
QSPA	**South Pole Qui**	**84.33**	**180**	*e*P	**P**	**14 49 15.8**	**+1.1**
	comp=Z,4.4nm,0.8s,mb4.6						
TXAR	**Lajitas Array**	**130.62**	**56**	PKP	PKPdf	14 56 00.3	+6.6
	comp=Z,0.2nm,0.5s,baz=270,slow=1.3,SNR=3.7						
LPAZ	**La Paz**	**155.88**	**155**	PKPab	PKPab	14 57 07.3	+1.2
	comp=Z,2.2nm,0.8s,baz=248,slow=5.4,SNR=7.7						

IDC 19 15:22:21.4±9.9, 5.39N×94.79E, mb3.6/2, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, ML3.9/1, Error ellipse: s-maj=250.7km s-min=46.6km az=83.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.61**	**17**	Pn	P	15 25 36.2	-2.2
	0.2nm,0.3s,baz=207,slow=15,SNR=5.2						
WRA	**Warramunga Arr**	**46.32**	**124**	P	P	15 30 48.8	-2.3
	0.3nm,0.5s,baz=306,slow=8.7,SNR=4.8						
ASAR	**Alice Springs**	**47.85**	**129**	P	P	15 31 01.5	-1.7
	0.9nm,0.8s,baz=297,slow=7.7,SNR=9.6						

NEIC 19 15:38:45.2, 16.89N×100.26W, h10^{km}, MD3.8(MEX), After MEX.

MEX 19 15:38:45.9±0.7, 16.93N×100.23W, h5^{km}±5^{km}, MD3.9, 2C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.12**	**344**	⇑*i*P	Pg	15 38 48.0	-0.5
CAIG				*e*S	Sg	15 38 50.1	-0.2
ACX	**Acapulco**	**0.31**	**101**	*i* P	Pg	15 38 51.5	-0.6
ACX				*e*S	Sg	15 38 56.0	-0.3
ZIIG	**Zihuatanejo**	**1.36**	**300**	⇑*e*P	Pb	15 39 09.8	-1.7
ZIIG				*e*S	Sb	15 39 27.2	-1.8
ZIIG	**Zihuatanejo**	**1.36**	**300**	*e*P	Pb	15 39 07.9	-3.5
ZIIG				*e*S	Sb	15 39 23.6	-5.3
PLIG	**Platanillo**	**1.61**	**25**	*e*P	Pn	15 39 11.8	-3.4
PLIG				*e*S	Sb	15 39 31.6	-4.8
YAIG	**Yautepec**	**2.22**	**30**	*e*P	Pn	15 39 20.9	-3.0
YAIG				*e*S	Sn	15 39 48.0	-4.1
YAIG	**Yautepec**	**2.22**	**30**	*e*P	Pn	15 39 20.9	-3.0
YAIG				*i* S	Sn	15 39 44.8	-7.2
PPM	**Popocatepetl**	**2.62**	**35**	*e*P	Pn	15 39 27.9	-1.7
PPM				*e*S	Sn	15 39 57.3	-4.9
PPM	**Popocatepetl**	**2.62**	**35**	*e*P	Pn	15 39 27.5	-2.1
PPM				*e*P		15 39 29.0	
PPM				*e*S	Sn	15 39 56.1	-6.0
PPM				*e*S	Sn	15 40 00.0	-2.1
IIB	**San Bernardino**	**2.71**	**41**	*e*P	Pn	15 39 29.5	-1.3
IIB				*e*S	Sn	15 40 00.5	-3.9
IIB	**San Bernardino**	**2.71**	**41**	*e*P	Pn	15 39 27.0	-3.8
IIB				*e*S	Sn	15 40 00.5	-3.9

DJA 19 15:45:05.0±0.9, 9.56S×113.91E, h15^{km}, MD5.0/4, ML4.0/3, 4C, Error ellipse: s-maj=19.2km s-min=11.3km az=38.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRDI	**Scrawed**	**1.10**	**12**	⇑*e*Pn	Pn	15 45 22.9	-2.9
	269nm,0.2s						
SRDI				*e*Sn	Sn	15 45 36.2	-4.4
KELI	**Kelakatan**	**1.45**	**23**	⇑*e*Pn	Pn	15 45 28.7	-2.2
	170nm,0.2s						
KELI				*e*Sn	Sn	15 45 45.9	-3.7
RATI	**Rata**	**1.80**	**63**	⇑*e*Pn	Pn	15 45 33.1	-2.8
RATI				*e*Sn	Sn	15 45 53.1	-5.5
KEDI	**Kedomdong**	**2.42**	**64**	⇑*e*Pn	Pn	15 45 42.0	-2.8
	35nm,0.2s						
KEDI				*e*Sn	Sn	15 46 09.1	-5.2

IDC 19 16:09:23.5±5.3, 4.84S×152.84E, h103^{km}±46^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.7/14, mbtmp4.0/5, Error ellipse: s-maj=48.4km s-min=28.5km az=123.0

ISC 19 16:09:23.4±4.5, 4.7S±0.3×152.6E±0.3, h108^{km}±37^{km}, n8, σ0^{s}88/9, mb4.1/6, 2D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.16**	**228**	P	**P**	**16 11 07.6**	**+0.6**
	0.9nm,0.3s,baz=31,slow=11,SNR=4.4						
PMG				S	**S**	**16 12 26.5**	**-0.8**
	12nm,0.3s,baz=121,slow=17,SNR=16						
KAKA	**Kakadu**	**21.45**	**247**	⇓*i*P	**P**	**16 14 04.0**	**-0.4**
	21nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**23.38**	**228**	P	**P**	**16 14 24.1**	**+0.7**
	5.7nm,0.7s,mb4.0,baz=52,slow=10.0,SNR=85						
ASAR	**Alice Springs**	**26.11**	**222**	P	**P**	**16 14 48.6**	**-0.6**
	1.3nm,0.4s,mb3.7,baz=57,slow=8.8,SNR=34						
ASPA	**Alice Springs**	**26.11**	**222**	*e*P	**P**	**16 14 50.7**	**+1.5**
FITZ	**Fitzroy Crossi**	**29.54**	**241**	⇓*i*P	**P**	**16 15 19.5**	**-0.8**
	3.5nm,0.3s,mb4.5						
CMAR	**Chiang Mai Arr**	**57.62**	**295**	P	**P**	**16 19 06.0**	**+1.0**
	1.6nm,0.7s,mb4.2,baz=120,slow=5.4,SNR=13						
ILAR	**Eielson Array**	**82.11**	**22**	P	**P**	**16 21 32.0**	**-1.1**
	0.7nm,0.7s,mb3.6,baz=248,slow=5.5,SNR=13						

JMA 19 16:27:27.6±0.3, 24.75N×121.88E, h45^{km}, M3.4

TAP 19 16:27:26.8, 24.38N×121.83E, h4^{km}, ML3.5, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.08**	**85**	P	Pb	16 27 46.5	-1.1
YOJ				S	Sb	16 28 00.1	-1.8
IRIF	**Iriomote-Funau**	**1.73**	**91**	P	Pn	16 27 55.7	-2.2
IRIF				S	Sn	16 28 17.2	-3.5
HATJ	**Hateruma jima**	**1.83**	**100**	P	Pn	16 27 58.4	-0.9
JKRS	**Kuro-shima**	**1.99**	**94**	P	Pn	16 28 00.0	-1.6
JKRS				S	Sn	16 28 24.1	-3.2
JIJ	**Ishigaki jima**	**2.11**	**90**	P	Pn	16 28 00.8	-2.5
JIJ				S	Sn	16 28 25.8	-4.4
JTJ	**Tarama**	**2.63**	**84**	P	Pn	16 28 08.9	-1.8
JTJ				S	Sn	16 28 39.1	-4.3

IGQ 19 16:31:25.8, 1.54S×81.55W, h10^{km}±5^{km}, mb4.4, 1C-6D, Error ellipse: s-maj=9.2km s-min=3.6km az=161.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.85**	**139**	P	Pb	16 31 42.3	0.0
SALI				S	Sb	16 31 52.8	-0.7
HOJA	**Cerro de Hojas**	**1.11**	**64**	⇓P	Pb	16 31 46.2	-0.5
MAGD	**Magdalena**	**2.30**	**51**	P	Pn	16 32 06.0	+1.7
IGUA	**Igualata**	**2.91**	**89**	⇓P	Pn	16 32 13.9	+0.8
JUIV	**Juive**	**3.09**	**88**	P	Pn	16 32 17.2	+1.6
ARRY	**Arrayan**	**3.10**	**89**	P	Pn	16 32 16.1	+0.4
ARRY				S	Sn	16 32 54.0	+0.8
RETU	**Refugio**	**3.11**	**88**	P	Pn	16 32 16.7	+0.9
ULBA	**Ulba**	**3.14**	**88**	P	Pn	16 32 17.5	+1.1
PISA	**Pisayambo**	**3.20**	**82**	P	Pn	16 32 18.9	+1.6
NAS1	**Nasa**	**3.20**	**74**	P	Pn	16 32 19.9	+2.6
JUA2	**San Juan 2**	**3.23**	**66**	P	Pn	16 32 18.9	+1.3
TERV	**Terraza Guagua**	**3.24**	**65**	⇑P	Pn	16 32 19.0	+1.2
PINO	**Pino**	**3.25**	**65**	⇓P	Pn	16 32 18.7	+0.8
VC1	**Cotopaxi 1**	**3.27**	**74**	P	Pn	16 32 20.6	+2.4
TAMB	**Tambo**	**3.29**	**75**	⇓P	Pn	16 32 20.8	+2.3
YANA	**Yana**	**3.30**	**65**	P	Pn	16 32 19.1	+0.6
ANTI	**Antisana**	**3.56**	**72**	P	Pn	16 32 24.1	+1.9
COTA	**Cotacachi**	**3.71**	**60**	⇓P	Pn	16 32 25.7	+1.2
CAYR	**Refugio Cayamb**	**3.87**	**67**	P	Pn	16 32 29.4	+2.8
ELAGU	**Cayambe Volc**	**3.87**	**67**	P	Pn	16 32 29.7	+3.1
CAYA	**Cayambe**	**3.90**	**66**	P	Pn	16 32 29.5	+2.3
ECEN	**Cerro Negro**	**4.28**	**57**	⇓P	Pn	16 32 33.6	+1.1

IDC 19 16:33:58.8±1.3, 13.88N×145.01E, mb3.9/5, mb1 4.1/5, mb1mx3.8/19, mbtmp3.9/5, Error ellipse: s-maj=40.3km s-min=27.6km az=87.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.21**	**198**	P	P	16 40 54.9	-2.2
	2.1nm,0.6s,baz=18,slow=9.2,SNR=36						
ASAR	**Alice Springs**	**38.87**	**196**	P	P	16 41 26.1	-1.7
	0.5nm,0.4s,baz=16,slow=10,SNR=23						
CMAR	**Chiang Mai Arr**	**44.39**	**282**	P	P	16 42 11.9	-1.3
	0.4nm,0.8s,baz=82,slow=6.4,SNR=3.8						
CMAR				PcP	PcP	16 43 54.8	-2.9
	0.3nm,0.5s,baz=73,slow=2.0,SNR=5.1						
STKA	**Stephens Creek**	**45.61**	**184**	P	P	16 42 20.8	-2.0

	1.6nm,0.3s,baz=18,slow=9.4,SNR=11						
NVAR	**Mina Array Bea**	**86.63**	**51**	P	P	16 46 44.9	-0.8
	0.7nm,0.7s,baz=264,slow=7.4,SNR=4.6						

IGQ 19 16:37:33.5,1.51S×81.45W,h10^{km}±6^{km},mb4.1,2C-3D, Error ellipse: s-maj=6.4km s-min=3.8km az=1.1,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	**Salinas**	**0.81**	**145**	⇑P	Pb	16 37 49.1	-0.2
SALI				S	Sb	16 37 58.7	-1.4
HOJA	**Cerro de Hojas**	**1.01**	**63**	⇓P	Pb	16 37 52.7	0.0
HOJA				S	Sb	16 38 05.4	-0.5
IGUA	**Igualata**	**2.81**	**90**	P	Pn	16 38 20.3	+0.9
ARRY	**Arrayan**	**3.00**	**90**	P	Pn	16 38 22.3	+0.3
ARRY				S	Sn	16 38 59.7	+1.3
ULBA	**Ulba**	**3.04**	**89**	P	Pn	16 38 25.0	+2.3
PISA	**Pisayambo**	**3.10**	**82**	P	Pn	16 38 24.8	+1.3
JUA2	**San Juan 2**	**3.12**	**66**	P	Pn	16 38 24.3	+0.5
TERV	**Terraza Guagua**	**3.14**	**65**	P	Pn	16 38 24.8	+0.7
PINO	**Pino**	**3.15**	**65**	P	Pn	16 38 25.0	+0.9
VC1	**Cotopaxi 1**	**3.17**	**74**	P	Pn	16 38 27.2	+2.7
TAMB	**Tambo**	**3.19**	**75**	P	Pn	16 38 27.1	+2.3
YANA	**Yana**	**3.20**	**64**	⇑P	Pn	16 38 25.7	+0.9
ANTI	**Antisana**	**3.46**	**72**	P	Pn	16 38 31.2	+2.6
COTA	**Cotacachi**	**3.61**	**60**	⇓P	Pn	16 38 32.1	+1.3
CAYR	**Refugio Cayamb**	**3.76**	**66**	⇓P	Pn	16 38 35.9	+3.0
CAYA	**Cayambe**	**3.80**	**66**	P	Pn	16 38 36.2	+2.7
ECEN	**Cerro Negro**	**4.18**	**56**	P	Pn	16 38 40.2	+1.3

OTT 19 16:58:28.8±0.2,52.80N×67.23W,MN3.0/7,Blast, Mount Wright, Qc Mining explosion.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**2.05**	**6**	PN	Pn	16 59 05.0	+0.2
SCHQ				SG	Sg	16 59 32.2	-4.7
SCHQ				Trac		16 59 34.2	
	comp=Z,30nm,0.2s						
MNQ	**Manicouagan**	**2.47**	**204**	PN	Pn	16 59 10.2	-0.6
MNQ				SN	Sn	16 59 41.1	-1.1
MNQ				Trac		16 59 45.1	
	comp=Z,39nm,0.2s						
SMQ	**Clarke City**	**2.60**	**173**	PN	Pn	16 59 12.1	-0.7
SMQ				Trac		16 59 48.4	
	comp=Z,13nm,0.1s						
ICQ	**Pointe Anglais**	**3.29**	**181**	PN	Pn	16 59 20.9	-1.6
ICQ				Trac		17 00 11.6	
	comp=Z,8.3nm,0.1s						
CNQ	**Baie Comeau**	**3.55**	**189**	PN	Pn	16 59 24.5	-1.8
CNQ				SN	Sn	17 00 07.2	-2.2
CNQ				Trac		17 00 21.1	
	comp=Z,9.7nm,0.2s						
GSQ	**Grosses Roches**	**3.90**	**179**	PN	Pn	16 59 30.2	-1.0
GSQ				Trac		17 00 33.6	
	comp=Z,13nm,0.3s						
LG4Q	**La Grande 4**	**4.21**	**284**	PN	Pn	16 59 33.5	-2.2
LG4Q				SN	Sn	17 00 20.3	-6.0
LG4Q				Trac		17 00 43.2	
	comp=Z,9.9nm,0.3s						
LMQ	**La Malbaie**	**5.62**	**202**	PN	Pn	16 59 52.3	-3.3
DRLN	**Deer Lake**	**7.08**	**116**	PN	Pn	17 00 11.7	-4.6
DRLN				SN	Sn	17 01 26.4	-12
LMN	**Caledonia Moun**	**7.13**	**166**	PN	Pn	17 00 12.5	-4.4
VLDQ	**Val d'Or**	**8.04**	**238**	PN	P	17 00 25.2	-4.3
VLDQ				SN	Sn	17 01 54.5	-7.7
MALO	**McAlpine Lake**	**8.32**	**255**	PN	P	17 00 28.3	-5.1
MALO				SN	Sn	17 01 57.8	-11
VIMO	**Victor Mine**	**10.01**	**277**	PN	P	17 00 51.3	-5.4
VIMO				SN	S	17 02 36.2	-15
SILO	**Sutton Inlier**	**10.63**	**286**	PN	P	17 00 58.8	-6.5

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*IDC **19** 17:02:00.9±1.0,4.57N×94.93E,mb3.9/10,mb1 4.1/11, mb1mx4.0/19,mbtmp3.9/11,ML4.2/1,Error ellipse: s-maj=50.7km s-min=18.0km az=49.0*

*NEIC **19** 17:02:05.2±0.7,4.44N×94.89E,h30^{km},mb4.2/5,Error ellipse: s-maj=20.3km s-min=11.4km az=57.0*

ISC 19 17:02:14.9±5.3,4.7N±0.2×95.3E±0.2,h127^{km}±45^{km},n29, σ0^{s}93/29,mb4.0/20,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.13**	**14**	Pn	**P**	**17 05 30.2**	**-0.2**
	0.3nm,0.3s,baz=210,slow=12,SNR=17						
JIRN	**Jiri**	**24.40**	**340**	*e*P	**P**	**17 07 23.2**	**+0.3**
	5.8nm,0.3s,mb4.3						
PKI	**Pulchoki**	**24.59**	**339**	*e*P	**P**	**17 07 25.0**	**+0.3**
	4.2nm,0.6s,mb4.0						
DMN	**Daman**	**24.74**	**338**	*e*P	**P**	**17 07 26.3**	**+0.2**
	4.7nm,0.7s,mb4.0						
KKN	**Kakani**	**24.84**	**339**	*e*P	**P**	**17 07 26.4**	**-0.6**
	3.3nm,0.6s,mb4.0						
LSA	**Lhasa**	**25.15**	**352**	P	**P**	**17 07 30.6**	**+0.6**
	3.2nm,0.6s,mb3.9						
GKN	**Gorkha**	**25.27**	**338**	*e*P	**P**	**17 07 29.7**	**-1.4**
	3.1nm,0.3s,mb4.3						
KOLN	**Koldanda**	**25.47**	**335**	*e*P	**P**	**17 07 32.6**	**-0.4**
	9.8nm,0.7s,mb4.4						
ENH	**Enshi**	**28.75**	**26**	P	**P**	**17 08 02.3**	**-0.5**
UCH	**Uchtor**	**41.67**	**337**	P	**P**	**17 09 53.9**	**+1.4**
	SNR=6.1						
KBK	**Karagaybulak**	**41.87**	**337**	P	**P**	**17 09 55.9**	**+1.8**
	SNR=11						
AML	**Almayashu**	**41.92**	**336**	P	**P**	**17 09 55.8**	**+1.2**
	SNR=7.8						
AAK	**Ala-Archa**	**42.02**	**337**	*e*P	**P**	**17 09 53.4**	**-2.0**
	2.7nm,0.7s,mb4.1						
EKS2	**Erkin-Say**	**42.33**	**336**	P	**P**	**17 09 59.3**	**+1.4**
	SNR=5.2						
USP	**Ospenovka**	**42.56**	**338**	P	**P**	**17 10 00.6**	**+0.8**
	SNR=10						
SONM	**Songino Array**	**44.02**	**11**	P	**P**	**17 10 11.2**	**-0.2**
	0.6nm,0.5s,mb3.6,baz=189,slow=9.4,SNR=8.1						
SONM				PcP	PcP	17 11 56.4	+1.1
	0.7nm,0.6s,baz=197,slow=3.8,SNR=10.0						
WRA	**Warramunga Arr**	**45.56**	**124**	P	**P**	**17 10 24.6**	**+0.4**
	1.3nm,0.5s,mb3.9,baz=300,slow=9.4,SNR=25						
ASAR	**Alice Springs**	**47.07**	**129**	P	**P**	**17 10 35.8**	**-0.2**
	0.5nm,0.5s,mb3.5,baz=298,slow=7.7,SNR=23						
KURK	**Kurchatov**	**47.92**	**346**	*e*P	**P**	**17 10 41.7**	**-0.5**
	1.9nm,0.7s,mb4.0						
ZAL	**Zalesovo**	**49.81**	**352**	P	**P**	**17 10 56.7**	**0.0**
	2.1nm,0.4s,mb4.4,baz=286,slow=4.4,SNR=12						
ZAL	**Zalesovo**	**49.81**	**352**	P	**P**	**17 10 56.7**	**0.0**
BVAR	**Borovoye Array**	**52.32**	**341**	P	**P**	**17 11 15.1**	**-0.6**
	2.0nm,0.6s,mb4.3,baz=138,slow=9.1,SNR=17						
CHKZ	**Chkalovo**	**52.80**	**342**	*e*P	**P**	**17 11 18.8**	**-0.4**
	8.2nm,0.7s,mb4.9						
BRTR	**Keskin Array B**	**65.33**	**312**	P	**P**	**17 12 44.6**	**-1.3**
	0.2nm,0.4s,mb3.3,baz=101,slow=7.3,SNR=2.8						
AKASG	**Malin Array Be**	**71.31**	**322**	P	**P**	**17 13 20.6**	**-2.0**
	0.8nm,0.6s,mb3.7,baz=92,slow=5.2,SNR=4.9						
FINES	**FINESS Array B**	**76.00**	**332**	P	**P**	**17 13 49.4**	**-0.1**
	1.5nm,0.7s,mb3.8,baz=91,slow=5.8,SNR=11						
FINES	**FINESS Array B**	**76.00**	**332**	P	**P**	**17 13 49.4**	**-0.1**
ARCES	**ARCESS Array B**	**78.59**	**340**	P	**P**	**17 14 04.2**	**+0.6**
	2.8nm,0.8s,mb4.1,baz=98,slow=6.8,SNR=15						
GERES	**GERESS Array B**	**80.91**	**319**	P	**P**	**17 14 17.4**	**+0.9**
	0.3nm,0.5s,mb3.4,baz=104,slow=5.5,SNR=5.1						

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*CSEM **19** 17:12:33.9±0.1,34.08N×48.33E,h18^{km},ML3.3,Error ellipse: s-maj=3.1km s-min=2.3km az=3.0*

*TEH **19** 17:12:36.0,33.83N×48.39E,h23^{km},Mn3.3*

ISC 19 17:12:33.2±0.6,33.93N±0.07×48.39E±0.05,h10^{km},n23, σ0^{s}87/25,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**0.77**	**289**	Pg	**Pg**	**17 12 47.4**	**-1.3**
IVIS	**Veys**	**1.41**	**296**	Pn	**Pn**	**17 12 58.6**	**-0.4**
SNGE	**Sanandaj**	**1.45**	**324**	*e*PG	**Pg**	**17 12 57.6**	**-4.6**
SNGE				AML	AML	17 13 21.0	
	comp=N,175nm,0.4s						
ASAO	**Ashtian**	**1.49**	**65**	*e*PG	**Pg**	**17 12 57.8**	**-5.1**
ASAO				*e*SG	**Sg**	**17 13 16.6**	**-6.2**
ASAO				AML	AML	17 13 19.3	
	comp=N,307nm,0.3s						
ASAO	**Ashtian**	**1.49**	**65**	*e*Pg	**Pg**	**17 12 57.8**	**-5.1**
	SNR=90						
ASAO				*e*Sg	**Sg**	**17 13 16.6**	**-6.2**
	comp=N,307nm,0.3s,SNR=90						
IDHR	**Dehrash**	**1.83**	**296**	Pn	**Pn**	**17 13 06.6**	**+1.5**
SHGR	**Shooshtar-Gavs**	**1.84**	**169**	*e*PG	**Pg**	**17 13 10.2**	**+0.1**
SHGR				AML	AML	17 13 40.4	
	comp=N,158nm,0.4s						
IRAZ	**Razeghan**	**1.94**	**40**	Pn	**Pn**	**17 13 05.4**	**-1.3**
IRAZ	**Razeghan**	**1.94**	**40**	Pn	**Pn**	**17 13 06.8**	**+0.1**
IQOM	**Qom**	**2.40**	**67**	Pn	**Pn**	**17 13 14.1**	**+1.0**
IQOM	**Qom**	**2.40**	**67**	Pn	**Pn**	**17 13 12.5**	**-0.6**
IQOM	**Qom**	**2.40**	**67**	Lg		17 13 44.4	
IMHD	**Mahdasht**	**2.57**	**46**	Pn	**Pn**	**17 13 16.7**	**+1.1**
IMHD	**Mahdasht**	**2.57**	**46**	Pn	**Pn**	**17 13 15.7**	**+0.1**
IVRN	**Varamin**	**2.96**	**68**	Sn	**Sn**	**17 13 55.7**	**-1.3**
IVRN	**Varamin**	**2.96**	**68**	Pn	**Pn**	**17 13 20.4**	**-0.7**
IVRN	**Varamin**	**2.96**	**68**	Pn	**Pn**	**17 13 21.6**	**+0.5**
IVRN				Sn	**Sn**	**17 13 55.7**	**-1.3**
IBRJ	**Borojen**	**3.24**	**131**	Pn	**Pn**	**17 13 24.2**	**-0.9**
IBRJ	**Borojen**	**3.24**	**131**	Pn	**Pn**	**17 13 24.2**	**-0.9**
IAFJ	**Afjeh**	**3.34**	**54**	Pn	**Pn**	**17 13 27.1**	**+0.5**
IDMV	**Damavand**	**3.42**	**60**	Pn	**Pn**	**17 13 28.1**	**+0.4**
NASN	**Na'in**	**3.86**	**106**	*e*PN	**Pn**	**17 13 34.8**	**+0.8**
IFIR	**Firoozkooh**	**3.98**	**63**	Pn	**Pn**	**17 13 36.1**	**+0.5**

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*IDC **19** 17:16:51.1±1.1,6.61N×126.75E,mb3.8/6,mb1 4.0/6, mb1mx3.8/18,mbtmp3.8/6,MS4.1/2,Ms1 4.1/2, ms1mx3.1/25,Error ellipse: s-maj=72.6km s-min=18.9km az=66.0*

*MAN **19** 17:17:03.9,6.76N×126.08E,h7^{km},mb4.5,ML3.3,MS3.3*

*NEIC **19** 17:17:07.3±0.5,6.48N×126.67E,h150^{km},mb4.4/7,Error ellipse: s-maj=22.4km s-min=8.2km az=72.0*

ISC 19 17:16:57.7±0.8,6.45N±0.06×126.49E±0.09,h65^{km}±8^{km}, n27,σ1^{s}05/28,mb4.0/11,1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.55**	**335**	*e*P	**P**	**17 17 09.9**	**-0.8**
MATI				*e*S	**S**	**17 17 19.5**	**-0.8**
KCP	**Kidapawan**	**1.50**	**292**	⇓*i*P	**P**	**17 17 22.9**	**-0.2**
KCP				*i* S	**S**	**17 17 41.0**	**-0.8**
BIPH	**Bislig**	**1.73**	**356**	⇓*i*P	**P**	**17 17 26.5**	**+0.4**
BIPH				*i* S	**S**	**17 17 47.2**	**+0.1**
BUKP	**Musuan**	**2.01**	**315**	*e*P	**P**	**17 17 30.3**	**+0.3**
BUTP	**Butuan**	**2.65**	**341**	*e*P	**P**	**17 17 41.9**	**+2.8**
PAGZ	**Pagadian**	**3.39**	**294**	*e*P	**P**	**17 17 50.9**	**+1.5**
SCPH	**Surigao**	**3.46**	**343**	⇑*e*P	**P**	**17 17 54.1**	**+3.7**
KAKA	**Kakadu**	**19.93**	**163**	*e*P	**P**	**17 21 26.8**	**-0.1**
	49nm,1.8s						
JOW	**Kunigami**	**20.34**	**5**	LR	LR	17 27 23.7	
	comp=Z,521nm,21.2s,baz=245,slow=31						
FITZ	**Fitzroy Crossi**	**24.41**	**182**	*e*P	**P**	**17 22 12.7**	**+1.3**
	15nm,1.7s,mb4.0						
WRA	**Warramunga Arr**	**27.34**	**164**	P	**P**	**17 22 38.5**	**-0.3**
	1.0nm,0.6s,mb3.6,baz=343,slow=10,SNR=16						
MBWA	**Marble Bar**	**28.23**	**193**	P	**P**	**17 22 45.3**	**-1.4**
	26nm,1.0s,mb4.7						
ENH	**Enshi**	**28.59**	**328**	P	**P**	**17 22 50.8**	**+0.9**
	9.8nm,1.2s,mb4.3						
CMAR	**Chiang Mai Arr**	**29.38**	**296**	P	**P**	**17 22 57.7**	**+0.7**
	0.5nm,0.8s,mb3.2,baz=106,slow=6.7,SNR=4.8						
ASAR	**Alice Springs**	**30.79**	**167**	P	**P**	**17 23 09.6**	**0.0**
	0.4nm,0.5s,mb3.5,baz=340,slow=6.1,SNR=16						
ASAR				PcP	PcP	17 26 06.0	+0.4
	0.3nm,0.5s,baz=345,slow=1.8,SNR=6.3						
ASPA	**Alice Springs**	**30.79**	**167**	*e*P	**P**	**17 23 10.3**	**+0.7**
KS15	**Wonju Array Si**	**30.88**	**2**	P	**P**	**17 23 03.0**	**-7.2**
KLBR	**Kellerberrin**	**38.73**	**192**	*e*P	**P**	**17 24 17.1**	**-0.1**
	483nm,1.7s						
NWAO	**Narrogin (SRO)**	**40.13**	**192**	*e*P	**P**	**17 24 29.3**	**+0.5**
	8.6nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**40.74**	**160**	P	**P**	**17 24 35.1**	**+1.2**
	0.9nm,0.5s,mb3.9,baz=343,slow=13,SNR=4.4						
STKA	**Stephens Creek**	**40.74**	**160**	*e*P	**P**	**17 24 32.8**	**-1.0**
SONM	**Songino Array**	**44.67**	**341**	P	**P**	**17 25 05.9**	**+0.2**
	0.3nm,0.7s,baz=108,slow=4.6,SNR=2.9						
KURK	**Kurchatov**	**59.34**	**327**	*e*P	**P**	**17 26 53.8**	**-1.5**
	1.4nm,0.5s,mb4.2						
CHKZ	**Chkalovo**	**65.08**	**327**	*e*P	**P**	**17 27 30.7**	**-2.8**
	1.7nm,1.0s,mb3.8						
POHA	**Pohakuloa**	**76.56**	**71**	P	**P**	**17 28 39.9**	**-3.4**
	2µm,0.9s						
ARCES	**ARCESS Array B**	**87.83**	**340**	P	**P**	**17 29 40.5**	**0.0**
	1.9nm,0.8s,mb4.2,baz=59,slow=7.1,SNR=4.5						
DLBC	**Dease Lake**	**91.55**	**31**	LR	LR	18 07 01.4	
	comp=Z,107nm,19.3s,baz=340,slow=33						

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*TEH **19** 17:25:43.0,34.04N×48.28E,h19^{km},Mn3.1*

*CSEM **19** 17:25:43.0,34.04N×48.28E,h19^{km},ML3.1,After TEH*

ISC 19 17:25:41.0±2.0,34.1N±0.1×48.40E±0.08,h5^{km}±19^{km},n10, σ0^{s}93/11,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKOM	**Komasi**	**0.74**	**278**	Pg	**Pg**	**17 25 55.0**	**-0.8**
IVIS	**Veys**	**1.36**	**290**	Pn	**Pn**	**17 26 05.9**	**-0.7**
IDHR	**Dehrash**	**1.78**	**291**	Pn	**Pn**	**17 26 13.9**	**+1.3**
IRAZ	**Razeghan**	**1.83**	**43**	Lg		17 26 43.0	
IRAZ	**Razeghan**	**1.83**	**43**	Pn	**Pn**	**17 26 13.6**	**+0.3**
IQOM	**Qom**	**2.33**	**70**	Pn	**Pn**	**17 26 21.8**	**+1.2**
IQOM				Sn	**Sn**	**17 26 50.4**	**+0.5**
IAFJ	**Afjeh**	**3.25**	**56**	Pn	**Pn**	**17 26 33.9**	**+0.3**
IBRJ	**Borojen**	**3.33**	**133**	Pn	**Pn**	**17 26 34.5**	**-0.2**
IBRJ	**Borojen**	**3.33**	**133**	Pn	**Pn**	**17 26 34.5**	**-0.2**
IFIR	**Firoozkooh**	**3.91**	**65**	Pn	**Pn**	**17 26 42.9**	**0.0**
IFIR				Sn	**Sn**	**17 27 27.6**	**-2.1**

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*NEIC **19** 17:38:32.9,34.05N×21.74E,h10^{km},mb4.2/1, MD4.1(ATH),After ATH.*

*ATH **19** 17:38:35.5,34.01N×21.73E,h39^{km},MD4.1/7*

*CSEM **19** 17:38:38.7±0.2,34.33N×21.90E,h15^{km},mb4.2/1,Error ellipse: s-maj=7.1km s-min=3.0km az=67.0*

*HLW **19** 17:38:39.3,34.43N×21.64E,h33^{km},Mb3.4*

*IDC **19** 17:38:40.9±2.4,34.86N×22.11E,mb3.5/4,mb1 3.6/8, mb1mx3.5/24,mbtmp3.5/8,ML3.5/3,Error ellipse: s-maj=53.9km s-min=22.8km az=6.0*

ISC 19 17:38:37.9±0.7,34.32N±0.04×21.93E±0.07,h10^{km},n31, σ1^{s}39/35,mb3.5/5,2C,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**1.85**	**73**	*e*Pn	**Pn**	**17 39 10.3**	**+0.2**
GVD	**Gavdhos**	**1.85**	**73**	*e*Pn	**Pn**	**17 39 10.3**	**+0.2**
KYTH	**Kithira**	**2.15**	**25**	*e*PN	**Pn**	**17 39 15.8**	**+1.4**
KYTH	**Kithira**	**2.15**	**25**	*e*Pn	**Pn**	**17 39 16.0**	**+1.6**
VAM	**Vamos**	**2.16**	**59**	*e*PN	**Pn**	**17 39 15.0**	**+0.6**
VLI	**Veliai**	**2.53**	**19**	*e*PN	**Pn**	**17 39 21.1**	**+1.4**
IDI	**Anoyia**	**2.62**	**68**	Pn	**Pn**	**17 39 21.2**	**+0.1**
	3.1nm,0.3s,baz=261,slow=18,SNR=20						
IDI				Sn	**Sn**	**17 39 54.2**	**+1.0**
	3.0nm,0.3s,baz=308,slow=20,SNR=4.7						
IDI	**Anoyia**	**2.62**	**68**	Pn	**Pn**	**17 39 21.1**	**+0.1**
ITM	**Ithomi**	**2.85**	**360**	*e*PN	**Pn**	**17 39 25.3**	**+1.0**
NPS	**Neapolis**	**3.17**	**72**	*e*PN	**Pn**	**17 39 29.4**	**+0.5**
SLUM		**3.95**	**135**	⇑P	**Pn**	**17 39 41.0**	**+1.1**
SLUM				S	**Sn**	**17 40 26.1**	**-0.7**
VLS	**Valsamata**	**4.00**	**345**	*e*PN	**Pn**	**17 39 39.8**	**-0.8**
PTL	**Penteli**	**4.04**	**22**	*e*Pn	**Pn**	**17 39 40.0**	**-1.1**
KARP	**Karpathos**	**4.47**	**73**	*e*PN	**Pn**	**17 39 46.3**	**-1.0**
ARG	**Arkhangelos**	**5.41**	**68**	*e*Pn	**Pn**	**17 39 58.9**	**-1.7**
HMAT	**Matruh**	**5.42**	**125**	P	**Pn**	**17 40 01.8**	**+1.1**
KEK	**Kerkira**	**5.64**	**343**	*e*Pn	**Pn**	**17 40 02.2**	**-1.7**
SWA2		**5.89**	**148**	⇑P	**Pn**	**17 40 07.7**	**+0.3**
SWA2				S	**Sn**	**17 41 11.7**	**-4.0**
SWA1		**5.98**	**146**	P	**Pn**	**17 40 08.9**	**+0.2**
SWA1				S	**Sn**	**17 41 14.4**	**-3.6**
CSS	**Prodhromos**	**9.42**	**83**	*e*Pn	**P**	**17 40 51.9**	**-4.8**
BRTR	**Keskin Array B**	**10.80**	**57**	Pn	**P**	**17 41 12.3**	**-3.3**
	baz=207,slow=6.4,SNR=3.5						
EIL	**Elat**	**11.98**	**109**	*e*P	**P**	**17 41 26.0**	**-5.8**
ASF	**Jabal al Asfar**	**12.71**	**96**	Pn	**P**	**17 41 43.6**	**+2.1**
	0.3nm,0.3s,baz=357,slow=14,SNR=2.2						
MALT	**Malatya**	**13.88**	**69**	*e*P	**P**	**17 41 52.9**	**-4.1**
	1.9nm,0.7s						
KHC	**Kasperske Hory**	**16.04**	**340**	*e*P	**P**	**17 42 32.0**	**+7.0**
KHC				x	x	17 42 52.5	
AKASG	**Malin Array Be**	**17.21**	**16**	Pn	**P**	**17 42 35.6**	**-4.3**
	0.5nm,0.3s,baz=212,slow=11,SNR=5.0						
ESDC	**Sonseca Array**	**21.32**	**292**	P	**P**	**17 43 29.5**	**+2.4**
	1.2nm,0.8s,mb3.3,baz=94,slow=12,SNR=3.5						
FINES	**FINESS Array B**	**27.27**	**4**	P	**P**	**17 44 21.6**	**-2.4**
	3.2nm,1.0s,mb3.8,baz=180,slow=11,SNR=3.4						
NAO01	**NORSAR Array S**	**27.48**	**348**	P	**P**	**17 44 16.6**	**-9.3**
	3.9nm,0.9s,mb3.9						
SONM	**Songino Array**	**62.06**	**49**	P	**P**	**17 48 58.9**	**-1.9**
	0.6nm,0.9s,mb3.7,baz=288,slow=9.1,SNR=3.5						
YKA	**Yellowknife Ar**	**77.40**	**341**	P	**P**	**17 50 35.1**	**+0.9**
	0.1nm,0.5s,mb3.0,baz=32,slow=5.7,SNR=3.9						

IDC 19 17:39:31.3±2.2,22.91S×177.51W,mb3.7/4,mb1 3.9/4, mb1mx3.8/14,mbtmp3.7/4,MS2.2/1,Ms1 2.2/1, ms1mx2.2/21,Error ellipse: s-maj=181.5km s-min=34.5km az=159.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.21**	**247**	P	P	17 46 44.1	-2.1
	2.4nm,1.1s,baz=90,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**44.46**	**259**	P	P	17 47 45.5	-0.7
	0.8nm,1.0s,baz=100,slow=8.3,SNR=5.5						
WRA	**Warramunga Arr**	**44.77**	**264**	P	P	17 47 46.0	-2.7
	0.9nm,0.9s,baz=103,slow=8.4,SNR=5.6						
NWAO	**Narrogin (SRO)**	**57.72**	**245**	LR	LR	18 09 59.6	
	comp=Z,2.3nm,20.9s,baz=157,slow=32						
TXAR	**Lajitas Array**	**87.97**	**57**	P	P	17 52 23.6	-1.2
	0.4nm,0.9s,baz=217,slow=6.3,SNR=3.6						

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*NEIC **19** 17:48:01.6±1.1,15.02S×177.81W,h366^{km}±11^{km},mb4.5/8, Error ellipse: s-maj=18.9km s-min=9.5km az=152.0*

*IDC **19** 17:48:06.1±2.4,15.13S×177.90W,h409^{km}±24^{km},mb3.4/8, mb1 3.6/8,mb1mx3.4/16,mbtmp4.1/8,Error ellipse: s-maj=30.2km s-min=13.3km az=152.0*

ISC 19 17:48:00.6±1.4,15.1S±0.2×177.9W±0.1,h364^{km}±17^{km}, n29,σ0^{s}90/25,mb4.1/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.08**	**80**	*e*Pn	**P**	**17 49 32.2**	**-1.2**
CTA	**Charters Tower**	**34.45**	**256**	P	**P**	**17 54 17.9**	**+1.0**
	4.0nm,0.5s,mb3.9,baz=84,slow=12,SNR=17						
CTAO	**Charters Tower**	**34.45**	**256**	*e*P	**P**	**17 54 17.9**	**+0.9**
	9.7nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**40.43**	**238**	*e*P	**P**	**17 55 07.3**	**+0.9**
	7.2nm,1.8s,mb3.6						
STKA	**Stephens Creek**	**40.43**	**238**	P	**P**	**17 55 07.2**	**+0.8**
	1.5nm,0.3s,mb3.7,baz=78,slow=11,SNR=8.5						
STKA	**Stephens Creek**	**40.43**	**238**	*e*P	**P**	**17 55 07.3**	**+0.9**
WRA	**Warramunga Arr**	**45.65**	**257**	P	**P**	**17 55 47.9**	**-0.4**
	1.9nm,0.5s,mb3.5,baz=86,slow=5.9,SNR=41						
WRA				PcP	PcP	17 57 19.8	-0.2
	1.0nm,0.6s,baz=85,slow=3.5,SNR=6.5						
WRA				S	**S**	**18 02 01.2**	**-1.7**
	0.5nm,0.7s,baz=94,slow=14,SNR=5.0						
ASAR	**Alice Springs**	**46.05**	**252**	P	**P**	**17 55 52.0**	**+0.7**
	46nm,0.4s,mb4.9,baz=89,slow=8.2,SNR=1134						
ASAR				PcP	PcP	17 57 20.1	-1.2
	1.4nm,0.4s,baz=103,slow=4.0,SNR=3.8						
ASAR				S	**S**	**18 02 06.3**	**-2.0**
	1.6nm,0.7s,baz=86,slow=15,SNR=27						
ASPA	**Alice Springs**	**46.05**	**252**	*e*P	**P**	**17 55 52.1**	**+0.8**
ASPA				*e*S	**S**	**18 02 06.8**	**-1.6**
KAKA	**Kakadu**	**48.15**	**266**	*e*P	**P**	**17 56 07.6**	**+0.1**
	30nm,1.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.98**	**258**	*e*P	**P**	**17 56 51.2**	**+0.5**
	4.3nm,0.8s,mb3.8						
MBWA	**Marble Bar**	**59.24**	**254**	*e*P	**P**	**17 57 26.2**	**-0.9**
	51nm,1.3s,mb4.8						
KLBR	**Kellerberrin**	**60.51**	**242**	*e*P	**P**	**17 57 34.7**	**-0.8**
	69nm,0.6s,mb5.3						
NWAO	**Narrogin (SRO)**	**60.95**	**241**	P	**P**	**17 57 37.6**	**-0.8**
	4.8nm,0.5s,mb4.2,baz=15,slow=17,SNR=7.6						
NWAO	**Narrogin (SRO)**	**60.95**	**241**	*e*P	**P**	**17 57 38.1**	**-0.3**
	6.6nm,0.7s,mb4.2						
VNDA	**Vanda**	**63.27**	**185**	P	**P**	**17 57 52.2**	**-0.7**
	3.0nm,0.9s,mb3.8,baz=74,slow=7.8,SNR=6.3						
VNDA	**Vanda**	**63.27**	**185**	P	**P**	**17 57 52.2**	**-0.7**
QSPA	**South Pole Qui**	**74.94**	**180**	*e*P	**P**	**17 59 04.4**	**+0.9**
	17nm,1.0s,mb4.7						
ILAR	**Eielson Array**	**83.06**	**13**	P	**P**	**17 59 46.3**	**-0.6**
	0.7nm,0.6s,mb3.7,baz=222,slow=5.3,SNR=12						
TXAR	**Lajitas Array**	**84.11**	**58**	P	**P**	**17 59 53.6**	**+0.6**
	0.3nm,0.7s,mb3.2,baz=217,slow=6.3,SNR=3.8						
MAW	**Mawson**	**86.64**	**200**	*e*P	**P**	**18 00 05.2**	**+0.8**
	12nm,0.8s,mb4.8						
CMAR	**Chiang Mai Arr**	**88.38**	**289**	P	**P**	**18 00 15.2**	**+1.4**
	0.4nm,0.7s,mb3.4,baz=84,slow=3.4,SNR=5.1						
BVAR	**Borovoye Array**	**114.95**	**322**	PKP	PKPdf	18 05 57.8	-0.7
	0.3nm,0.4s,baz=43,slow=1.9,SNR=4.1						
ARCES	**ARCESS Array B**	**123.64**	**350**	PKP	PKPdf	18 06 15.4	+0.5
	1.0nm,0.4s,baz=42,slow=1.4,SNR=13						
BRTR	**Keskin Array B**	**143.08**	**318**	PKP	PKPdf	18 06 51.4	-0.4
	4.7nm,1.1s,baz=90,slow=1.2,SNR=8.4						
ASF	**Jabal al Asfar**	**144.05**	**304**	PKP	PKPdf	18 06 54.4	+0.8
	1.2nm,0.5s,baz=224,slow=3.0,SNR=4.3						
GRA1	**Grafenberg Arr**	**144.70**	**350**	*e*PKP	PKPdf	18 06 54.9	+0.7
GRF	**Grafenberg Arr**	**144.70**	**350**	*e*PKP	PKPdf	18 06 54.9	+0.7
GERES	**GERESS Array B**	**145.01**	**347**	PKP	PKPdf	18 06 54.6	-0.2
	1.0nm,0.5s,baz=22,slow=3.4,SNR=14						

IDC 19 18:10:49.3±1.9,2.15N×101.55W,mb3.7/6,mb1 4.0/6, mb1mx3.8/16,mbtmp3.7/6,MS3.5/1,Ms1 3.5/1, ms1mx2.5/24,Error ellipse: s-maj=80.9km s-min=25.6km az=57.0,Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**27.11**	**356**	P	P	18 16 35.9	0.0
	0.5nm,0.9s,baz=172,slow=8.8,SNR=4.2						
TXAR				LR	LR	18 26 29.0	
	comp=Z,95nm,19.4s,baz=235,slow=35						
LPAZ	**La Paz**	**37.76**	**120**	P	P	18 18 08.1	-1.0
	0.6nm,0.6s,baz=287,slow=11,SNR=2.7						
PDAR	**Pinedale Array**	**41.07**	**351**	P	P	18 18 35.5	-0.8
	1.2nm,0.7s,baz=158,slow=6.6,SNR=11						
ULM	**Lac du Bonnet**	**48.17**	**5**	P	P	18 19 30.2	-3.0
	0.6nm,0.3s,baz=212,slow=9.5,SNR=3.6						
YKA	**Yellowknife Ar**	**60.99**	**353**	P	P	18 21 03.5	-3.1
	0.9nm,1.0s,baz=162,slow=6.4,SNR=9.4						
ILAR	**Eielson Array**	**70.44**	**341**	P	P	18 22 04.2	-3.0
	0.4nm,0.7s,baz=150,slow=6.1,SNR=5.7						
CMAR	**Chiang Mai Arr**	**151.25**	**316**	PKPbc	PKPdf	18 30 46.5	+5.0
	0.6nm,0.9s,baz=273,slow=0.9,SNR=4.3						

IDC 19 18:12:27.9±1.8,6.50S×68.21E,mb3.7/6,mb1 3.8/6, mb1mx3.6/17,mbtmp3.7/6,MS3.3/1,Ms1 3.3/1, ms1mx2.6/24,Error ellipse: s-maj=70.9km s-min=25.8km az=48.0,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**31.34**	**279**	LR	LR	18 29 22.6	
	comp=Z,57nm,20.8s,baz=84,slow=32						
ZAL	**Zalesovo**	**61.81**	**11**	P	P	18 22 48.0	-2.8
	0.6nm,0.3s,baz=268,slow=9.8,SNR=4.5						
SONM	**Songino Array**	**63.69**	**28**	P	P	18 23 01.5	-1.9
	0.5nm,0.6s,baz=218,slow=7.1,SNR=6.2						
ASAR	**Alice Springs**	**65.17**	**113**	P	P	18 23 11.2	-2.3
	0.3nm,0.6s,baz=276,slow=6.1,SNR=5.3						
WRA	**Warramunga Arr**	**65.39**	**109**	P	P	18 23 12.8	-2.1
	0.8nm,0.8s,baz=282,slow=6.3,SNR=6.4						
AKASG	**Malin Array Be**	**66.15**	**334**	P	P	18 23 16.6	-2.7
	0.5nm,0.5s,baz=136,slow=5.9,SNR=4.8						
FINES	**FINESS Array B**	**75.20**	**341**	P	P	18 24 12.1	-1.7
	1.0nm,0.8s,baz=170,slow=16,SNR=2.7						
YKA	**Yellowknife Ar**	**124.08**	**2**	PKP	PKPdf	18 31 27.6	-2.4
	0.1nm,0.6s,baz=334,slow=2.1,SNR=4.7						
NVAR	**Mina Array Bea**	**147.67**	**10**	PKPbc	PKPdf	18 32 15.6	+1.8
	0.6nm,0.7s,baz=243,slow=2.0,SNR=4.1						

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*IDC **19** 18:32:08.5±0.8,12.67N×92.17E,mb3.8/8,mb1 4.0/9, mb1mx3.8/19,mbtmp3.8/9,ML3.1/1,Error ellipse: s-maj=34.0km s-min=17.6km az=61.0*

*BJI **19** 18:32:11.9,12.19N×92.45E,h58^{km},mb4.3*

*NEIC **19** 18:32:13.0±0.8,12.76N×92.37E,h30^{km},mb3.9/3,Error ellipse: s-maj=18.3km s-min=13.3km az=76.0*

ISC 19 18:32:12.1±0.8,12.73N±0.08×92.6E±0.1,h30^{km},n17, σ0^{s}91/17,mb3.9/12,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**8.36**	**46**	P	**P**	**18 34 13.3**	**-1.0**

	2.1nm,0.6s						
CMAR	**Chiang Mai Arr**	**8.36**	**46**	Pn	**P**	**18 34 14.1**	**-0.2**
	0.1nm,0.3s,baz=239,slow=16,SNR=5.9						
LSA	**Lhasa**	**16.95**	**356**	*e*P	**P**	**18 36 12.3**	**+3.6**
LSA	**Lhasa**	**16.95**	**356**	*e*P	**P**	**18 36 09.4**	**+0.7**
	4.7nm,0.9s						
ENH	**Enshi**	**23.44**	**39**	*e*P	**P**	**18 37 19.2**	**-0.6**
	6.0nm,0.7s,mb4.1						
XAN	**Xi'an**	**25.91**	**32**	P	**P**	**18 37 43.9**	**+0.5**
XAN				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.2						
GTA	**Gaotai**	**27.34**	**12**	P	**P**	**18 37 57.8**	**+1.3**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**36.85**	**16**	P	**P**	**18 39 20.4**	**+0.8**
	comp=Z,1.5nm,0.7s,mb4.0,baz=200,slow=8.5,SNR=16						
KURK	**Kurchatov**	**39.56**	**346**	P	**P**	**18 39 38.6**	**-3.6**
	comp=Z,2.2nm,1.0s,mb3.8						
ZAL	**Zalesovo**	**41.57**	**353**	P	**P**	**18 39 58.8**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.6,baz=298,slow=2.2,SNR=8.2						
NWAO	**Narrogin (SRO)**	**51.13**	**153**	P	**P**	**18 41 15.2**	**+0.6**
	comp=Z,3.5nm,0.6s,mb4.5,baz=329,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**52.36**	**128**	P	**P**	**18 41 24.0**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.6,baz=305,slow=8.3,SNR=6.9						
WRA				PcP	PcP	18 42 35.2	+0.5
	comp=Z,0.7nm,0.5s,baz=316,slow=3.3,SNR=15						
ASAR	**Alice Springs**	**54.22**	**132**	P	**P**	**18 41 37.9**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=306,slow=6.7,SNR=8.2						
ASAR				PcP	PcP	18 42 42.5	+0.8
	comp=Z,0.7nm,0.7s,baz=310,slow=3.5,SNR=7.1						
BRTR	**Keskin Array B**	**58.17**	**309**	P	**P**	**18 42 01.2**	**-4.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=303,slow=36,SNR=3.1						
STKA	**Stephens Creek**	**64.56**	**135**	P	**P**	**18 42 48.4**	**-0.6**
GERES	**GERESS Array B**	**73.23**	**317**	P	**P**	**18 43 40.7**	**-1.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=90,slow=5.3,SNR=5.5						
ILAR	**Eielson Array**	**90.84**	**22**	P	**P**	**18 45 14.2**	**+0.5**
	comp=Z,0.2nm,0.8s,mb3.5,baz=307,slow=3.4,SNR=4.0						

KRSC 19 18:41:49.5±0.3, 54.06N×159.93E, h116^{km}±3^{km}, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLC	**Nalytchevo**	**0.96**	**202**	*e*P	P	18 42 11.5	+0.4
NLC				*e*S	S	18 42 27.3	+0.1
SPN	**Mys Shipunski**	**0.96**	**177**	*i* P	P	18 42 11.2	0.0
SPN				*i* S	S	18 42 26.9	-0.4
SDLR	**Sedlovina**	**1.00**	**219**	*i* P	P	18 42 12.2	+0.7
SDLR				*i* S	S	18 42 28.7	+0.7
SMAR	**Somma**	**1.04**	**221**	*i* P	P	18 42 12.8	+0.8
AVH	**Avacha**	**1.07**	**222**	*i* P	P	18 42 13.1	+0.9
AVH				*i* S	S	18 42 30.1	+0.9
UGLR	**Uglovaya**	**1.08**	**218**	*i* P	P	18 42 13.2	+0.9
UGLR				*i* S	S	18 42 30.3	+0.9
KOK	**Koryaka**	**1.09**	**226**	*i* P	P	18 42 13.4	+1.0
TUMR	**Tumrok**	**1.23**	**6**	*i* P	P	18 42 14.9	+0.9
TUMR				*i* S	S	18 42 33.6	+1.2
GNL	**Ganaly**	**1.23**	**254**	*i* P	P	18 42 14.9	+0.9
GNL				*e*S	S	18 42 33.3	+0.9
PET	**Petropavlovsk**	**1.29**	**217**	*i* P	P	18 42 15.3	+0.6
PET				*e*S	S	18 42 33.9	+0.4
KRMR	**Karymshinskiy**	**1.64**	**222**	*i* P	P	18 42 19.5	+0.8
KRMR				*i* S	S	18 42 41.5	+0.7
KMNR	**Kamenistaya**	**1.71**	**6**	*e*P	P	18 42 20.7	+1.1
RUS	**Russkaya**	**1.84**	**208**	*e*P	P	18 42 21.6	+0.4
RUS				*e*S	S	18 42 45.4	+0.3
GRL	**Gorelyy**	**1.88**	**217**	*i* P	P	18 42 23.1	+1.4
GRL				*i* S	S	18 42 48.1	+2.2
ESO	**Esso**	**2.00**	**340**	*e*P	P	18 42 23.3	+0.1
ESO				*e*S	S	18 42 48.0	-0.6
ESO				Smax			
	40nm,0.8s						
KOZ	**Kozyrevsk**	**2.00**	**359**	*i* P	P	18 42 24.1	+0.9
APC	**Apacha**	**2.01**	**237**	*i* P	P	18 42 24.5	+1.2
APC				*i* S	S	18 42 50.1	+1.3
SRDR	**Sredinnyy**	**2.27**	**357**	*i* P	P	18 42 27.2	+0.5
SVLR	**Shiveluch**	**2.63**	**16**	*e*P	P	18 42 33.0	+1.4
SVLR				*e*S	S	18 43 04.9	+1.5
KBG	**Krutoberegovo**	**2.72**	**35**	*e*P	P	18 42 33.7	+0.9
KBG				*e*S	S	18 43 05.7	+0.2
KBG				Smax			
	260nm,0.7s						
KBG	**Krutoberegovo**	**2.72**	**35**	*e*P	P	18 42 34.9	+2.1
KBG				*e*S	S	18 43 08.2	+2.7
KBTR	**Krutoberegovo**	**2.72**	**36**	*e*P	P	18 42 34.0	+1.2
KBTR				*e*S	S	18 43 06.5	+1.0
PAU	**Pauzhetka**	**3.21**	**217**	*e*P	P	18 42 42.0	+2.5

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*IDC **19** 18:48:46.9±1.4, 7.85N×94.18E, mb3.8/6, mb1 4.0/7, mb1mx3.7/18, mbtmp3.8/7, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/26, Error ellipse: s-maj=49.8km s-min=28.9km az=48.0*

ISC 19 18:48:50.3±1.1, 8.0N±0.2×94.3E±0.2, h33^{km}, n8, σ0^{s}.58/7, mb3.8/6, MS3.5/1, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.34**	**23**	Pn	**P**	**18 51 33.0**	**-0.1**
	0.1nm,0.3s,baz=212,slow=15,SNR=9.6						
ZAL	**Zalesovo**	**46.48**	**352**	P	**P**	**18 57 16.3**	**+0.2**
	1.1nm,0.5s,mb4.1,baz=306,slow=7.8,SNR=7.0						
WRA	**Warramunga Arr**	**48.15**	**126**	P	**P**	**18 57 29.6**	**-0.1**
	0.2nm,0.6s,mb3.3,baz=312,slow=8.3,SNR=4.8						
ASF	**Jabal al Asfar**	**58.33**	**303**	LR	LR	19 27 11.8	
	comp=Z,35nm,20.4s,MS3.5,baz=101,slow=40						
BRTR	**Keskin Array B**	**62.52**	**311**	P	**P**	**18 59 12.1**	**-1.1**
	0.9nm,1.0s,mb3.9,baz=101,slow=6.3,SNR=3.5						
FINES	**FINESS Array B**	**72.72**	**332**	P	**P**	**19 00 16.9**	**+0.2**
	1.5nm,0.9s,mb3.9,baz=79,slow=7.1,SNR=4.9						
ARCES	**ARCESS Array B**	**75.24**	**340**	P	**P**	**19 00 31.1**	**-0.1**
	3.3nm,0.9s,mb4.3,baz=100,slow=10,SNR=2.6						
GERES	**GERESS Array B**	**77.89**	**318**	P	**P**	**19 00 47.6**	**+1.0**
	0.7nm,0.9s,mb3.6,baz=101,slow=5.0,SNR=4.9						

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*BJI **19** 18:53:52.3, 7.11S×67.90E, h10^{km}, mB5.2, mb4.8, Ms5.0, Msz4.5*

*MOS **19** 18:53:58.6±0.9, 6.28S×68.26E, h10^{km}, mb5.0/18, Error ellipse: s-maj=14.7km s-min=11.2km az=73.0*

*IDC **19** 18:53:58.0±0.8, 6.51S×68.21E, mb4.3/15, mb1 4.4/15, mb1mx4.3/21, mbtmp4.3/15, MS3.8/9, Ms1 3.8/9, ms1mx3.6/23, Error ellipse: s-maj=28.6km s-min=15.1km az=36.0*

*NEIC **19** 18:53:59.9±0.3, 6.45S×68.36E, h10^{km}, mb4.9/24, Error ellipse: s-maj=9.0km s-min=7.6km az=184.0*

*HRVD **19** 18:53:59.9±0.6, 6.72S×68.50E, h12^{km}, MW4.7/40, Centroid moment Tensor Solution. LP body waves: s13,c15;Mantle waves: s40,c54; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.38±.08; M$_{\theta\theta}$0.66±.09; M$_{\phi\phi}$0.71±.07; M$_{r\theta}$-0.64±.29; M$_{\theta\phi}$-0.58±.07; M$_{\phi r}$-0.75±.33; Best double couple: M$_0$1.576×10^{16} NP1:φ$_s$114°,δ48°, λ-127°. NP2:φ$_s$342°,δ53°,λ-57°. Principal axes: T 1.279, Plg3°, Azm49°; N .592, Plg26°, Azm140°; P -1.872, Plg64°, Azm313°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 18:53:58.0±0.4, 6.42S±0.07×68.36E±0.06, h10^{km}, n90, σ1^{s}.06/74, mb4.6/43, MS3.9/10, 1C, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.18**	**104**	*e*Pn	**Pn**	**18 55 01.5**	**-1.9**
DGAR				*e*Sn	**Sn**	**18 55 46.1**	**-6.9**
MDRS	**Chennai**	**22.68**	**31**	*e*	**P**	**18 59 07.0**	**+5.8**
KMBO	**Kilima Mbogo**	**31.47**	**278**	P	**P**	**19 00 21.2**	**-1.2**
KMBO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KMBO	**Kilima Mbogo**	**31.47**	**278**	P	**P**	**19 00 20.7**	**-1.7**
	comp=Z,2.9nm,1.1s,mb4.0,baz=80,slow=18,SNR=2.5						
KMBO				LR	LR	19 10 32.0	
	comp=Z,175nm,19.1s,MS3.8,baz=96,slow=32						
KMBO	**Kilima Mbogo**	**31.47**	**278**	P	**P**	**19 00 21.2**	**-1.1**
	comp=Z,2.9nm,1.0s,mb4.1						
CMAR	**Chiang Mai Arr**	**39.00**	**50**	P	**P**	**19 01 28.4**	**+1.8**
	comp=Z,1.8nm,0.9s,mb3.8,baz=244,slow=9.6,SNR=16						
CMAR				PcP	PcP	19 03 38.4	+0.9
	comp=Z,2.4nm,1.0s,baz=249,slow=3.8,SNR=12						
CMAR				LR	LR	19 14 51.0	
	comp=Z,89nm,21.4s,MS3.6,baz=235,slow=32						
LSZ	**Lusaka**	**40.36**	**254**	*e*P	**P**	**19 01 39.3**	**+1.4**
LSZ				*e*		19 01 47.1	
LSZ				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.7						
LSZ	**Lusaka**	**40.36**	**254**	*e*P	**P**	**19 01 39.3**	**+1.4**
	comp=Z,25nm,1.5s,mb4.7						
LSZ				*e*		19 01 47.1	
LSA	**Lhasa**	**42.06**	**30**	*e*P	**P**	**19 01 54.9**	**+3.1**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.3						
LSA	**Lhasa**	**42.06**	**30**	*e*P	**P**	**19 01 54.9**	**+3.0**
	comp=Z,9.1nm,1.1s,mb4.3						
LBTB	**Lobatse**	**44.87**	**241**	P	**P**	**19 02 15.7**	**+0.9**
LBTB				pmax	pmax		
	comp=Z,27nm,1.6s,mb4.8						
LBTB	**Lobatse**	**44.87**	**241**	P	**P**	**19 02 15.7**	**+1.0**
	comp=Z,27nm,1.6s,mb4.8						
KSH	**Kashi**	**46.24**	**8**	*e*P	**P**	**19 02 27.5**	**+2.1**
KSH				*e*AP	pP	19 02 33.4	+5.0
KSH				*e*XP	sP	19 02 37.5	+7.9
KSH				AMB	AMB		
	comp=Z,70nm,2.1s,mb5.2						
BOSA	**Boshof**	**46.30**	**236**	P	**P**	**19 02 26.6**	**+0.6**
BOSA				*e*		19 02 33.6	
BOSA				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
BOSA	**Boshof**	**46.30**	**236**	P	**P**	**19 02 26.6**	**+0.6**
	comp=Z,12nm,1.0s,mb4.8						
BOSA				*e*		19 02 33.6	
QIZ	**Qiongzhong**	**48.06**	**57**	P	**P**	**19 02 39.6**	**-0.5**
	comp=Z,75nm,1.5s,mb5.5						
ASF	**Jabal al Asfar**	**48.69**	**324**	P	**P**	**19 02 45.1**	**+0.4**
	comp=Z,4.3nm,1.1s,mb4.4,baz=276,slow=4.0,SNR=3.5						
AAK	**Ala-Archa**	**49.13**	**6**	*e*P	**P**	**19 02 48.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
AAK	**Ala-Archa**	**49.13**	**6**	*e*P	**P**	**19 02 48.5**	**+0.5**
	comp=Z,10nm,1.3s,mb4.7						
CD2	**Chengdu**	**50.24**	**40**	P	**P**	**19 02 56.8**	**+0.1**
CD2				AMB	AMB		
	comp=Z,22nm,1.4s,mb5.0						
TSUM	**Tsumeb**	**50.93**	**251**	*e*P	**P**	**19 03 01.0**	**-1.0**
	comp=Z,6.9nm,1.3s,mb4.4						
GNI	**Garni**	**51.20**	**337**	*e*P	**P**	**19 03 04.2**	**+0.4**
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
GNI	**Garni**	**51.20**	**337**	P	**P**	**19 03 02.7**	**-1.0**
	comp=Z,2.8nm,0.8s,mb4.3,baz=312,slow=3.9,SNR=4.0						
GNI	**Garni**	**51.20**	**337**	*e*P	**P**	**19 03 04.2**	**+0.5**
	comp=Z,21nm,1.3s,mb4.9						
NWAO	**Narrogin (SRO)**	**52.43**	**127**	P	**P**	**19 03 10.9**	**-2.3**
NWAO				pmax	pmax		
	comp=Z,11nm,1.2s						
NWAO	**Narrogin (SRO)**	**52.43**	**127**	P	**P**	**19 03 10.9**	**-2.3**
	comp=Z,11nm,1.2s,mb4.7						
MALT	**Malatya**	**52.48**	**330**	P	**P**	**19 03 11.7**	**-1.8**
MALT				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
MALT	**Malatya**	**52.48**	**330**	P	**P**	**19 03 11.7**	**-1.8**
	comp=Z,3.8nm,1.0s,mb4.3						
WMQ	**Urumqi**	**52.98**	**17**	*e*P	**P**	**19 03 18.0**	**+0.9**
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
ENH	**Enshi**	**53.71**	**45**	*e*P	**P**	**19 03 22.1**	**-0.6**
	comp=Z,30nm,1.4s,mb5.0						
GTA	**Gaotai**	**54.09**	**30**	P	**P**	**19 03 25.6**	**+0.3**
GTA				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,208nm,5.7s						
GTA				LR	LR		
	comp=N,209nm,15.7s						
GTA				LR	LR		
	comp=E,125nm,21.8s						
GTA				LR	LR		
	comp=Z,192nm,19.1s,MS4.2						
XAN	**Xi'an**	**55.59**	**41**	P	**P**	**19 03 36.0**	**-0.4**
XAN				AP	pP	19 03 41.1	+1.6
XAN				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.6						
BRTR	**Keskin Array B**	**55.99**	**328**	P	**P**	**19 03 39.4**	**+0.2**
	comp=Z,1.9nm,0.9s,mb4.1,baz=141,slow=7.9,SNR=12						
KURK	**Kurchatov**	**57.59**	**8**	*e*P	**P**	**19 03 49.0**	**-1.4**
KURK				*e*		19 03 56.7	
KURK				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.8						
KURK	**Kurchatov**	**57.59**	**8**	*e*P	**P**	**19 03 49.0**	**-1.4**
	comp=Z,13nm,1.4s,mb4.8						
KURK				*e*		19 03 56.7	
BVAR	**Borovoye Array**	**59.24**	**1**	P	**P**	**19 04 01.5**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.9,baz=138,slow=18,SNR=6.7						
CHKZ	**Chkalovo**	**59.90**	**2**	*e*P	**P**	**19 04 05.3**	**-1.1**
CHKZ				*e*		19 04 13.3	
CHKZ				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.9						
CHKZ	**Chkalovo**	**59.90**	**2**	*e*P	**P**	**19 04 05.3**	**-1.1**
	comp=Z,16nm,1.4s,mb4.9						
CHKZ				*e*		19 04 13.3	
MAW	**Mawson**	**61.21**	**182**	LR	LR	19 25 38.0	
	comp=Z,81nm,18.3s,MS3.9,baz=248,slow=31						
HHC	**Hu-ho-hao-te**	**61.50**	**36**	*e*P	**P**	**19 04 18.3**	**+0.8**
HHC				AMB	AMB		
	comp=Z,14nm,0.5s,mb5.3						
HHC				AMB	AMB		
	comp=Z,155nm,5.6s						
ZAL	**Zalesovo**	**61.70**	**11**	P	**P**	**19 04 18.3**	**-0.4**
	comp=Z,1.0nm,0.8s,mb4.0,baz=274,slow=7.4,SNR=9.0						
ZAL				LR	LR	19 31 58.5	
	comp=Z,93nm,20.6s,MS3.9,baz=70,slow=37						
NVS	**Novosibirsk**	**62.29**	**10**	*e*P	**P**	**19 04 20.9**	**-1.7**
SONM	**Songino Array**	**63.56**	**28**	P	**P**	**19 04 31.9**	**+0.8**
	comp=Z,7.0nm,0.9s,mb4.7,baz=219,slow=5.8,SNR=45						
ULN	**Ulaanbaatar**	**63.88**	**28**	*e*P	**P**	**19 04 33.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,21nm,1.7s,mb4.9						
ULN	**Ulaanbaatar**	**63.88**	**28**	*e*P	**P**	**19 04 33.6**	**+0.4**
	comp=Z,21nm,1.7s,mb4.9						
ZAK	**Zakamensk**	**64.13**	**24**	*e*P	**P**	**19 04 35.1**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
ASAR	**Alice Springs**	**65.07**	**113**	P	**P**	**19 04 41.1**	**-0.3**
	comp=Z,3.3nm,0.9s,mb4.4,baz=267,slow=6.5,SNR=23						
ASAR				LR	LR	19 31 33.5	
	comp=Z,54nm,18.7s,MS3.8,baz=235,slow=35						
TLY	**Talaya**	**65.28**	**23**	*e*P	**P**	**19 04 43.5**	**+1.2**
TLY				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
TLY	**Talaya**	**65.28**	**23**	*e*P	**P**	**19 04 43.5**	**+1.3**
	comp=Z,16nm,1.5s,mb4.8						
WRA	**Warramunga Arr**	**65.28**	**109**	P	**P**	**19 04 43.5**	**+0.7**
	comp=Z,10nm,1.1s,mb4.8,baz=284,slow=6.2,SNR=39						
SYO	**Syowa Base**	**65.32**	**191**	⇑pP	pP	19 04 47.5	+2.1
AKASG	**Malin Array Be**	**66.14**	**334**	P	**P**	**19 04 46.6**	**-1.1**
	comp=Z,3.0nm,0.9s,mb4.3,baz=133,slow=4.9,SNR=12						
MOS	**Moscow**	**66.95**	**342**	*e*P	**P**	**19 04 52.0**	**-0.9**
VYHS	**Vyhne**	**69.74**	**327**	*e*P	**P**	**19 05 10.1**	**-0.2**
HIA	**Hailar**	**71.19**	**33**	*e*P	**P**	**19 05 19.8**	**+0.6**
HIA				pmax	pmax		
	comp=Z,13nm,1.2s						
HIA	**Hailar**	**71.19**	**33**	*e*P	**P**	**19 05 19.8**	**+0.6**
	comp=Z,13nm,1.2s,mb4.7						
CN2	**Changchun**	**71.68**	**40**	*e*P	**P**	**19 05 19.1**	**-3.1**
STKA	**Stephens Creek**	**72.41**	**121**	P	**P**	**19 05 26.8**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=332,slow=8.0,SNR=3.5						
STKA	**Stephens Creek**	**72.41**	**121**	P	**P**	**19 05 27.6**	**+0.9**
CLL	**Collm**	**74.44**	**328**	P	**P**	**19 05 38.0**	**-0.2**
FINES	**FINESS Array B**	**75.17**	**340**	P	**P**	**19 05 40.5**	**-1.8**
	comp=Z,6.6nm,1.1s,mb4.5,baz=252,slow=6.0,SNR=6.3						
CTA	**Charters Tower**	**76.48**	**109**	P	**P**	**19 05 51.2**	**+0.7**
	comp=Z,13nm,1.0s,mb4.8,baz=249,slow=7.9,SNR=5.0						
CTAO	**Charters Tower**	**76.48**	**109**	*e*P	**P**	**19 05 51.6**	**+1.1**
CTAO				*e*		19 06 03.8	
CTAO				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
CTAO	**Charters Tower**	**76.48**	**109**	*e*P	**P**	**19 05 51.6**	**+1.1**
	comp=Z,31nm,1.3s,mb5.1						
CTAO				*e*		19 06 03.8	
PMG	**Port Moresby**	**77.97**	**98**	LR	LR	19 34 56.7	
	comp=Z,55nm,20.1s,MS3.9,baz=104,slow=32						
SNAA	**Sanae**	**78.07**	**198**	LR	LR	19 31 54.6	
	comp=Z,65nm,19.7s,MS4.0,baz=222,slow=29						
NOA	**NORSAR Array B**	**80.48**	**336**	LR	LR	19 42 37.9	
	comp=Z,37nm,19.6s,MS3.7,baz=310,slow=36						
ESDC	**Sonseca Array**	**80.66**	**312**	P	**P**	**19 06 14.5**	**+1.6**
	comp=Z,2.0nm,1.0s,mb4.0,baz=124,slow=9.3,SNR=4.6						
ESLA	**Sonseca Array**	**80.66**	**312**	P	**P**	**19 06 13.0**	**+0.1**
	comp=Z,3.4nm,1.2s,mb4.2						
ARCES	**ARCESS Array B**	**81.24**	**346**	LR	LR	19 41 37.7	
	comp=Z,77nm,18.7s,MS4.1,baz=197,slow=35						
YAK	**Yakutsk**	**82.71**	**25**	P	**P**	**19 06 23.2**	**+0.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
YAK	**Yakutsk**	**82.71**	**25**	P	**P**	**19 06 23.2**	**+0.1**
	comp=Z,6.0nm,0.6s,mb4.8						
QSPA	**South Pole Qui**	**83.61**	**180**	P	**P**	**19 06 28.0**	**+0.6**
	comp=Z,20nm,1.7s,mb5.0						
YSS	**Yuzh-Sakhalins**	**84.13**	**42**	P	**P**	**19 06 31.4**	**+0.7**
YSS				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.1						
YSS	**Yuzh-Sakhalins**	**84.13**	**42**	P	**P**	**19 06 31.4**	**+0.6**
	comp=Z,21nm,1.2s,mb5.1						
MA2	**Magadan**	**91.65**	**30**	*e*P	**P**	**19 07 06.7**	**+0.2**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
MA2	**Magadan**	**91.65**	**30**	*e*P	**P**	**19 07 06.7**	**+0.1**
	comp=Z,5.8nm,0.9s,mb4.9						
BILL	**Bilibino**	**98.88**	**22**	P	**P**	**19 07 39.7**	**+0.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.8						
BILL	**Bilibino**	**98.88**	**22**	P	**P**	**19 07 39.7**	**+0.4**
	comp=Z,4.5nm,1.3s,mb4.8						
YKA	**Yellowknife Ar**	**124.00**	**2**	PKP	PKPdf	19 12 57.9	-1.8
	comp=Z,0.7nm,0.9s,baz=349,slow=2.3,SNR=10						
PDAR	**Pinedale Array**	**143.75**	**357**	PKP	PKPdf	19 13 35.7	-1.0
	comp=Z,0.5nm,0.7s,baz=180,slow=1.5,SNR=3.7						
HWUT	**Hardware Ranch**	**144.96**	**360**	*e*PKPdf	PKPdf	19 13 38.1	-0.8
HBAR	**Harrisburg**	**145.17**	**329**	*e*PKPdf	PKPdf	19 13 38.9	-0.6
OTAV	**Otavalo**	**146.32**	**261**	*e*PKPbc	PKPbc	19 13 44.1	+3.9
DUG	**Dugway**	**146.35**	**2**	*e*PKPbc	PKPbc	19 13 41.3	+1.8
MIAR	**Mount Ida**	**147.41**	**332**	*e*PKPdf	PKPdf	19 13 42.5	-0.8
MIAR				*e*PKPbc	PKPdf	19 13 45.8	+2.6
CMB	**Columbia Colle**	**147.54**	**13**	*e*PKPbc	PKPdf	19 13 45.8	+2.4
NVAR	**Mina Array Bea**	**147.57**	**10**	PKPbc	PKPdf	19 13 43.4	0.0
	comp=Z,1.7nm,0.7s,baz=7.6,slow=2.8,SNR=9.9						
MNV	**Mina**	**147.59**	**10**	*e*PKPbc	PKPdf	19 13 45.5	+2.1
TXAR	**Lajitas Array**	**156.00**	**343**	PKPab	PKPab	19 14 22.9	+0.2
	comp=Z,2.1nm,1.1s,baz=27,slow=2.8,SNR=8.7						

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*MEX **19** 19:04:53.2±1.0, 14.82N×95.09W, h20^{km}±31^{km}, MD4.2*

*IDC **19** 19:04:55.0±2.1, 15.84N×94.26W, mb3.9/10, mb1 4.2/11, mb1mx3.9/21, mbtmp3.9/11, ML3.4/1, MS3.7/6, Ms1 3.7/6, ms1mx3.2/22, Error ellipse: s-maj=72.9km s-min=22.6km az=44.0*

*NEIC **19** 19:05:03.9±1.4, 15.76N×94.47W, h73^{km}±12^{km}, mb4.0/12, Error ellipse: s-maj=18.7km s-min=7.7km az=223.0*

ISC 19 19:04:53.8±0.7, 15.07N±0.08×95.07W±0.04, h33^{km}, n44, σ1^{s}.44/48, mb4.0/17, MS3.8/5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.22**	**305**	*i* P	**P**	**19 05 13.8**	**-0.9**
HUIG				*i* S	**S**	**19 05 29.3**	**-1.0**
OXX	**Oaxaca**	**2.56**	**322**	*i* P	**P**	**19 05 35.0**	**+1.2**
OXX				*i* S	**S**	**19 06 06.0**	**+1.9**
SCX	**San Cristobal**	**2.87**	**54**	*e*P	**P**	**19 05 38.5**	**+0.2**
SCX				*i* S	**S**	**19 06 12.0**	**0.0**
CCIG	**Comitan**	**3.07**	**66**	*i* P	**P**	**19 05 39.4**	**-1.8**
CCIG				*i* S	**S**	**19 06 17.2**	**+0.1**
PNIG	**Pinotepa**	**3.23**	**295**	*e*P	**P**	**19 05 41.6**	**-1.8**
PNIG				*i* S	**S**	**19 06 16.9**	**-4.3**
IIB	**San Bernardino**	**4.99**	**321**	*e*P	**P**	**19 06 08.0**	**-0.3**
ACX	**Acapulco**	**5.00**	**292**	*e*P	**P**	**19 06 07.0**	**-1.5**
PPM	**Popocatepetl**	**5.24**	**320**	*e*P	**P**	**19 06 11.7**	**-0.2**
PPM				*e*P		19 06 12.0	
PPM				*i* S	**S**	**19 07 11.2**	**-0.7**
TEIG	**Tepich**	**8.26**	**51**	*e*Pn	**P**	**19 06 48.9**	**-5.2**
TEIG				*e*Sn	**Sn**	**19 08 18.1**	**-9.4**
JTS	**JuntasAbangare**	**10.95**	**115**	P	**P**	**19 07 35.9**	**+4.5**
LTX	**Lajitas**	**16.27**	**332**	*e*P	**P**	**19 08 41.5**	**+0.1**
	8.7nm,1.1s						
TXAR	**Lajitas Array**	**16.27**	**332**	Pn	**P**	**19 08 43.3**	**+1.8**
	0.0nm,0.3s,baz=151,slow=14,SNR=18						
TXAR				LR	LR	19 15 14.3	
	comp=Z,103nm,21.1s,baz=140,slow=39						
DWPF	**Disney**	**18.12**	**42**	P	**P**	**19 09 05.7**	**+0.9**
	336nm,1.8s						
MIAR	**Mount Ida**	**19.44**	**4**	*e*P	**P**	**19 09 16.8**	**-3.6**
	5.7nm,0.9s						
WMOK	**Wichita Mounta**	**19.87**	**351**	*e*P	**P**	**19 09 23.3**	**-1.7**
	5.6nm,1.2s						
WVT	**Waverly**	**21.95**	**16**	*e*P	**P**	**19 09 43.4**	**-3.0**
	4.5nm,0.9s,mb3.9						
ANMO	**Albuquerque**	**22.29**	**335**	P	**P**	**19 09 52.2**	**+2.4**
	1.2nm,0.8s,mb3.4,baz=162,slow=9.5,SNR=2.9						
ANMO				LR	LR	19 19 02.7	
	comp=Z,76nm,19.8s,MS3.1,slow=39						
ANMO	**Albuquerque**	**22.29**	**335**	P	**P**	**19 09 52.4**	**+2.7**
	1.3nm,0.8s,mb3.4						
KSU1	**Kansas State U**	**23.98**	**357**	*e*P	**P**	**19 10 02.5**	**-3.8**
SDCO	**Great Sand Dun**	**24.41**	**340**	*e*P	**P**	**19 10 12.6**	**+2.1**
	3.7nm,1.1s,mb3.7						
SDV	**Santo Domingo**	**24.66**	**102**	P	**P**	**19 10 13.2**	**+0.1**
WUAZ	**Wupatki**	**25.07**	**327**	*e*P	**P**	**19 10 19.8**	**+3.0**
	249nm,1.2s						
PV01	**Paradox Valley**	**25.89**	**335**	*e*P	**P**	**19 10 26.2**	**+1.6**
PDAR	**Pinedale Array**	**30.28**	**339**	P	**P**	**19 11 04.5**	**+0.3**
	0.2nm,0.5s,mb3.1,baz=153,slow=6.6,SNR=3.7						
NVAR	**Mina Array Bea**	**31.01**	**323**	P	**P**	**19 11 13.6**	**+2.9**
	0.4nm,0.5s,mb3.5,baz=135,slow=8.8,SNR=3.6						
NVAR	**Mina Array Bea**	**31.01**	**323**	P	**P**	**19 11 13.6**	**+2.9**
HLID	**Hailey**	**32.86**	**334**	*e*P	**P**	**19 11 27.8**	**+1.0**
	2.2nm,1.1s,mb4.0						
ULM	**Lac du Bonnet**	**35.10**	**359**	P	**P**	**19 11 43.8**	**-2.2**
	0.5nm,0.3s,mb3.9,baz=190,slow=5.9,SNR=3.5						
NEW	**Newport**	**37.77**	**336**	P	**P**	**19 12 10.8**	**+2.3**
	2.9nm,1.0s,mb4.0						
EDM	**Edmonton**	**40.71**	**343**	P	**P**	**19 12 33.8**	**+0.8**
FCC	**Fort Churchill**	**43.63**	**1**	*e*P	**P**	**19 12 55.5**	**-1.2**
	4.7nm,1.0s,mb4.2						
SCHQ	**Schefferville**	**45.32**	**23**	LR	LR	19 33 48.4	
	comp=Z,85nm,21.4s,MS3.6,baz=7.7,slow=39						
SCHQ	**Schefferville**	**45.32**	**23**	P	**P**	**19 13 06.8**	**-3.6**
	14nm,1.2s,mb4.7						
YKA	**Yellowknife Ar**	**49.34**	**348**	P	**P**	**19 13 41.3**	**-0.5**
	1.0nm,0.7s,mb4.0,baz=152,slow=7.3,SNR=25						
YKA				LR	LR	19 33 52.6	
	comp=Z,83nm,22.0s,MS3.7,baz=250,slow=36						
YKA	**Yellowknife Ar**	**49.34**	**348**	P	**P**	**19 13 41.3**	**-0.5**
YKA				LR	LR	19 33 52.6	
BDFB	**Brasilia**	**55.60**	**121**	P	**P**	**19 14 31.4**	**+2.3**
	2.8nm,0.8s,mb4.3,baz=70,slow=3.3,SNR=3.7						
INK	**Inuvik**	**58.60**	**344**	P	**P**	**19 14 48.9**	**-0.7**
	2.6nm,1.0s,mb4.2,baz=148,slow=6.1,SNR=7.4						
INK	**Inuvik**	**58.60**	**344**	*e*P	**P**	**19 14 48.4**	**-1.2**
	3.5nm,0.9s,mb4.4						
RES	**Resolute Bay**	**59.62**	**0**	*e*P	**P**	**19 14 54.6**	**-2.0**
	3.4nm,1.1s,mb4.3						
ILAR	**Eielson Array**	**60.70**	**337**	P	**P**	**19 15 04.7**	**+0.5**
	1.1nm,0.8s,mb4.0,baz=141,slow=4.6,SNR=12						
USHA	**Ushuaia**	**73.20**	**164**	LR	LR	19 41 46.8	
	comp=Z,242nm,19.8s,MS4.5,baz=184,slow=30						
ESDC	**Sonseca Array**	**81.38**	**51**	P	**P**	**19 17 08.1**	**-0.9**
	3.5nm,1.1s,mb4.2,baz=285,slow=4.6,SNR=6.4						
NOA	**NORSAR Array B**	**84.62**	**28**	P	**P**	**19 17 25.2**	**+0.2**
	1.6nm,0.9s,mb4.2,baz=324,slow=7.0,SNR=2.5						
NOA				LR	LR	19 59 32.3	
	comp=Z,48nm,18.7s,MS3.9,baz=195,slow=39						
CMAR	**Chiang Mai Arr**	**143.94**	**337**	PKP	PKPdf	19 24 33.4	+6.6
	0.3nm,0.9s,baz=333,slow=2.0,SNR=4.2						

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*NEIC **19** 19:10:45.3, 71.24N×7.14W, h0^{km}, ML2.5(BER), After BER.*

BER 19 19:10:45.3±1.0, 71.24N×7.14W, h0^{km}±999^{km}, MD2.3, ML2.5, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.45**	**237**	*e*P	Pg	19 10 53.2	-1.1
JNE				*e*S	Sg	19 10 58.8	-1.6
JNW	**Jan Mayen West**	**0.47**	**244**	*e*P	Pg	19 10 53.9	-0.8
JNW				*e*S	Sg	19 10 59.2	-1.7
JNW				AML	AML	19 11 00.3	
	comp=Z,230nm,0.3s						
JMI	**Jan Mayen**	**0.60**	**240**	*e*P	Pg	19 10 55.7	-1.6
JMI				*e*S	Sg	19 11 04.3	-1.1

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*THR **19** 19:12:54.4±1.0, 28.28N×55.99E, h14^{km}±11^{km}, ML3.3*

*CSEM **19** 19:12:55.2±0.1, 28.08N×55.98E, h60^{km}, ML4.5/1, Error*

ellipse: s-maj=7.0km s-min=2.6km az=82.0

*OMAN **19** 19:13:34.4,25.28N×56.66E,h30^{km},Error ellipse: s-maj=23.0km s-min=17.0km az=228.0*

ISC 19 19:12:52.5±0.6,**28.25N**±0.04×**56.3E**±0.1,**h10^{km},n17, σ1ˢ09**/21,**6C-4D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.85	185	ePG	Pg	19 13 11.3	+1.7
BNDS				AML	AML	19 13 28.8	
	comp=N,1µm,0.4s						
KRBR	**Kerman**	1.78	14	ePG	Pg	19 13 27.2	-0.8
KRBR				eSG	Sg	19 13 52.5	+0.8
KRBR				AML	AML	19 13 59.0	
	comp=N,412nm,0.4s						
KRBR	**Kerman**	1.78	14	ePg	Pg	19 13 27.2	-0.8
	SNR=90						
KRBR				eSg	Sg	19 13 52.5	+0.7
	comp=N,412nm,0.4s,SNR=90						
BANOM	**Banah**	2.32	179	⇑P	Pg	19 13 38.4	-0.5
	SNR=9.1						
BANOM				⇑S	Sg	19 14 19.7	+10
GHIR	**Ghir-Karzin**	2.88	271	ePN	Pn	19 13 38.8	-0.6
GHIR				AML	AML	19 14 51.7	
	comp=N,70nm,0.6s						
ASHO	**Ashiyiah**	3.56	183	P	Pn	19 13 51.0	+2.0
	SNR=20						
ASHO				⇓S	Sn	19 14 36.6	+5.0
ZHSF	**Zahedan**	4.19	70	ePN	Pn	19 14 03.2	+5.3
BIDO	**Bidbid**	5.00	160	⇓P	Pn	19 14 09.3	-0.2
NASN	**Na'in**	5.42	328	ePN	Pn	19 14 15.5	+0.2
SMDO	**Samad**	5.42	162	⇑P	Pn	19 14 13.6	-1.7
BSY	**Bisya**	5.55	171	⇓P	Pn	19 14 17.5	+0.3
BSYO	**Bisya**	5.57	171	P	Pn	19 14 17.5	0.0
JMDO	**Jabal Madar**	6.09	164	⇓P	Pn	19 14 23.5	-1.4
WBK	**Wadi Bani Khal**	6.13	156	⇑P	Pn	19 14 26.3	+0.9
WHFO	**Wadi Hawf**	10.54	193	⇑P	P	19 15 22.9	-3.9
RBK	**Rabkut**	10.87	190	⇑P	P	19 15 24.6	-6.6
ABTO	**Aybut**	11.19	195	P	P	19 15 31.6	-4.0
	SNR=11						

DJA 19 19:14:39.6±0.9,**8.66S×115.93E,h117^{km}**±6^{km},**MD4.6**/4, **ML4.3**/2,**2C-6D,Error ellipse: s-maj=37.9km s-min=12.5km az=1.0,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	0.24	46	⇓iPn	P	19 14 55.9	-0.2
	860nm,0.2s						
KEDI				⇓iSn	S	19 15 07.5	-1.0
RATI	**Rata**	0.40	260	⇓iPn	P	19 14 56.6	-0.2
	604nm,0.2s						
RATI				⇓iSn	S	19 15 09.0	-0.8
KELI	**Kelakatan**	1.49	287	⇑iPn	P	19 15 06.9	-0.3
	100nm,0.2s						
KELI				⇓iSn	S	19 15 26.7	-1.4
SRDI	**Scrawed**	1.78	276	⇑iPn	P	19 15 10.2	-0.4
	577nm,0.2s						
SRDI				⇓iSn	S	19 15 32.9	-1.2

IDC 19 19:34:14.6±9.3,**18.96S×174.63W,mb3.8**/4,**mb1 4.0**/4, **mb1mx3.7**/16,**mbtmp3.8**/4,**Error ellipse: s-maj=217.1km s-min=41.1km az=36.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	41.31	243	P	P	19 42 01.9	-1.7
	0.7nm,0.5s,baz=322,slow=12,SNR=2.8						
ASAR	**Alice Springs**	47.97	255	P	P	19 42 55.8	-1.5
	0.5nm,0.5s,baz=88,slow=7.8,SNR=14						
WRA	**Warramunga Arr**	47.97	260	P	P	19 42 55.2	-2.2
	0.3nm,0.3s,baz=98,slow=7.5,SNR=20						
VNDA	**Vanda**	59.73	186	P	P	19 44 20.6	-2.5
	1.1nm,0.3s,baz=21,slow=2.9,SNR=12						

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*NEIC **19** 19:44:11.7,36.09S×71.86W,h114^{km},After GUC.*

GUC 19 19:44:11.7±0.8,**36.09S×71.86W,h114^{km}**±4^{km},**ML4.1, 8C-3D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNCH	**Linares**	0.32	41	⇑iP	P	19 44 28.8	+0.7
LNCH				iS	S	19 44 40.7	+0.2
LNCH				AMP		19 44 42.0	
	comp=N,18µm,0.6s						
CCHI	**Chillan**	0.54	199	⇑iP	P	19 44 29.1	-0.3
CCHI				iS	S	19 44 42.2	-0.5
CCHI				AMP		19 44 43.0	
	comp=E,5µm,0.4s						
SFDO	**San Fernando**	1.63	25	⇓iP	P	19 44 40.6	-0.1
SFDO				iS	S	19 45 02.4	-0.1
CICH	**Cipreses**	2.12	34	eP	P	19 44 47.1	+0.1
CICH				iS	S	19 45 13.4	-0.1
LNV	**Longovilo**	2.16	10	⇑iP	P	19 44 48.7	+1.2
LNV				iS	S	19 45 14.1	-0.2
CACH	**El Canelo**	2.22	28	⇑iP	P	19 44 48.5	+0.2
CACH				iS	S	19 45 16.6	+0.7
CHCH	**Chadas Angostu**	2.37	25	⇑iP	P	19 44 50.0	-0.3
TACH	**Talagante**	2.55	18	⇓iP	P	19 44 52.3	-0.3
LCCH	**Las Cruces**	2.62	5	eP	P	19 44 53.2	-0.4
LCCH				iS	S	19 45 25.2	0.0
LMEL	**Las Melosas**	2.62	32	⇓iP	P	19 44 53.8	+0.1
LMEL				iS	S	19 45 25.8	+0.6
LMEL				AMP		19 45 28.7	
	comp=N,411nm,0.2s						
PCH	**Pirque**	2.70	25	iP	P	19 44 54.5	-0.2
PCH				iS	S	19 45 26.8	-0.3
RCDM	**Rinconada Maip**	2.74	19	⇑iP	P	19 44 54.9	-0.3
RCDM				iS	S	19 45 27.1	-0.9
RCDM				AMP		19 45 30.4	
	comp=E,436nm,0.1s						
CLCH	**Cerro Calan**	2.90	22	⇑iP	P	19 44 57.2	-0.2
CLCH				iS	S	19 45 31.5	-0.5
CLCH				AMP		19 45 33.4	
	comp=E,503nm,0.1s						
FCH	**Farellones**	3.04	26	iP	P	19 44 59.6	+0.3
FCH				iS	S	19 45 35.0	-0.4
FCH				AMP		19 45 37.6	
	comp=N,395nm,0.4s						
ROCH	**El Roble**	3.19	13	eP	P	19 45 01.7	+0.4
JACH	**Jahuel**	3.56	18	⇑iP	P	19 45 06.1	-0.2
JACH				iS	S	19 45 47.0	-0.8
PACH	**Papudo**	3.56	6	eP	P	19 45 06.0	-0.3
LVC	**Limon Verde**	13.67	12	eP	P	19 47 08.7	-13

IDC 19 19:53:02.6±2.9,**9.68N×91.98E,mb3.7**/3,**mb1 3.8**/4, **mb1mx3.5**/18,**mbtmp3.5**/4,**ML3.5**/1,**MS3.0**/1,**Ms1 3.2**/1, **ms1mx2.6**/24,**Error ellipse: s-maj=84.2km s-min=29.5km az=71.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	11.03	37	Pn	P	19 55 41.9	-3.0
	0.1nm,0.3s,baz=232,slow=15,SNR=3.7						
CMAR				LR	LR	20 00 02.1	
	comp=Z,71nm,18.6s,baz=235,slow=38						
SONM	**Songino Array**	39.93	15	P	P	20 00 38.5	-1.7
	0.6nm,0.5s,baz=206,slow=8.3,SNR=9.2						
ZAL	**Zalesovo**	44.51	354	P	P	20 01 15.8	-1.8
	0.5nm,0.3s,baz=311,slow=17,SNR=2.9						
WRA	**Warramunga Arr**	51.04	125	P	P	20 02 07.0	-2.1
	0.5nm,0.6s,baz=305,slow=8.5,SNR=12						

IDC 19 20:04:43.8±1.0,**12.66N×92.30E,mb3.5**/5,**mb1 3.6**/6, **mb1mx3.5**/18,**mbtmp3.4**/6,**ML2.5**/1,**Error ellipse: s-maj=33.8km s-min=21.8km az=61.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	8.61	47	Pn	P	20 06 48.7	-3.8
	0.0nm,0.3s,baz=238,slow=15,SNR=4.8						
CMAR				Sn	Sn	20 08 29.6	-1.9
	0.1nm,0.3s,baz=233,slow=18,SNR=3.0						
SONM	**Songino Array**	36.99	16	P	P	20 11 55.4	-1.3
	0.7nm,0.6s,baz=208,slow=6.8,SNR=9.3						
WRA	**Warramunga Arr**	52.55	127	P	P	20 13 59.0	-2.6
	0.4nm,0.6s,baz=305,slow=8.6,SNR=6.3						
WRA				PcP	PcP	20 15 10.2	-1.7
	0.4nm,0.5s,baz=313,slow=3.2,SNR=13						
ASAR	**Alice Springs**	54.39	132	P	P	20 14 12.4	-2.7
	0.2nm,0.4s,baz=307,slow=6.6,SNR=6.7						
ASAR				PcP	PcP	20 15 17.2	-1.6
	0.3nm,0.7s,baz=318,slow=3.9,SNR=4.7						
FINES	**FINESS Array B**	67.66	332	P	P	20 15 41.8	-2.8
	2.1nm,1.0s,baz=108,slow=4.4,SNR=3.6						
GERES	**GERESS Array B**	73.08	317	P	P	20 16 16.2	-1.6
	0.8nm,1.1s,baz=80,slow=6.0,SNR=2.6						

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*IDC **19** 20:14:46.4±2.8,27.55S×179.03W,h422^{km}±31^{km},mb3.6/7, mb1 3.8/8,mb1mx3.7/13,mbtmp4.3/8,Error ellipse: s-maj=37.1km s-min=14.4km az=165.0*

ISC 19 20:14:43.3±2.6,**27.5S**±0.2×**179.0W**±0.2,**h403^{km}**±32^{km}, **n21,σ1ˢ08**/16,**mb3.8**/7,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	10.76	192	ePN	P	20 17 10.9	-0.4
PUZ				SN	S	20 19 08.4	0.0
MWZ	**Matawai**	11.16	194	ePN	P	20 17 17.1	+1.2
URZ	**Urewera**	11.18	196	P	P	20 17 15.9	-0.3
	2.5nm,0.3s,baz=278,slow=0.8,SNR=15						
URZ				S	S	20 19 20.1	+2.7
	2.8nm,0.3s,baz=88,slow=22,SNR=18						
URZ	**Urewera**	11.18	196	ePN	P	20 17 14.6	-1.5
BKZ	**Black Stump Fm**	12.20	197	PN	P	20 17 26.2	-1.4
MRZ	**Mangatainoka R**	13.84	197	ePN	P	20 17 44.3	-1.4
CTA	**Charters Tower**	32.54	276	P	P	20 20 40.7	+0.3
	12nm,0.5s,mb4.5,baz=98,slow=11,SNR=24						
STKA	**Stephens Creek**	34.35	253	P	P	20 20 57.2	+1.6
	0.8nm,0.5s,mb3.3,baz=284,slow=23,SNR=5.2						
ASAR	**Alice Springs**	42.44	264	P	P	20 22 01.9	-0.2
	1.6nm,0.4s,mb3.7,baz=96,slow=7.6,SNR=70						
WRA	**Warramunga Arr**	43.16	270	P	P	20 22 07.4	-0.5
	2.4nm,0.3s,mb4.0,baz=103,slow=8.7,SNR=106						
WRA				S	S	20 28 02.8	-1.3
	0.2nm,0.9s,baz=104,slow=14,SNR=3.1						
NVAR	**Mina Array Bea**	86.76	43	P	P	20 26 44.2	+0.1
	2.6nm,0.9s,mb3.9,baz=213,slow=6.8,SNR=10						
PDAR	**Pinedale Array**	94.68	44	P	P	20 27 20.1	-0.7
	0.3nm,0.5s,mb3.6,baz=225,slow=2.1,SNR=3.7						
ILAR	**Eielson Array**	95.34	13	P	P	20 27 24.5	+1.3
	0.2nm,0.4s,mb3.5,baz=243,slow=10,SNR=6.4						
ARCES	**ARCESS Array B**	135.60	348	PKP	PKPdf	20 33 17.6	+2.0
	2.5nm,0.9s,baz=43,slow=1.7,SNR=7.2						
FINES	**FINESS Array B**	142.15	341	PKhKP		20 33 23.7	
	0.7nm,0.4s,baz=54,slow=4.4,SNR=23						
FINES				PKP	PKPdf	20 33 30.0	+2.4
	1.5nm,0.8s,baz=61,slow=2.9,SNR=4.7						
NB2	**NORSAR Subarra**	145.79	351	PKP	PKPdf	20 33 35.8	+2.1
	0.5nm,0.4s,baz=32,slow=3.5						
NOA	**NORSAR Array B**	145.79	351	PKPbc	PKPbc	20 33 35.2	+0.1
	1.2nm,0.7s,baz=340,slow=4.2,SNR=3.9						
HFS	**Hagfors**	146.26	349	PKPbc	PKPbc	20 33 36.8	+0.6
	3.6nm,0.6s,baz=63,slow=3.3,SNR=17						
AKASG	**Malin Array Be**	148.46	325	PKPbc	PKPdf	20 33 43.5	+5.1
	1.8nm,0.4s,baz=44,slow=3.8,SNR=20						
BRTR	**Keskin Array B**	150.37	303	PKPbc	PKPdf	20 33 49.0	+7.2
	0.9nm,0.6s,baz=132,slow=3.1,SNR=6.3						
BRTR				PKPab	PKPab	20 33 57.0	-1.0
	0.9nm,0.7s,baz=90,slow=6.2,SNR=5.6						
EKA	**Eskdalemuir Ar**	152.06	5	PKPbc	PKPdf	20 33 51.8	+8.0
	1.9nm,0.7s,baz=333,slow=2.2,SNR=5.4						

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*IDC **19** 20:24:55.5±0.7,42.83S×124.67E,mb4.3/7,mb1 4.4/9, mb1mx4.4/13,mbtmp4.3/9,ML3.6/2,MS3.9/9,Ms1 3.9/9, ms1mx3.8/17,Error ellipse: s-maj=27.8km s-min=18.5km az=88.0*

*BJI **19** 20:24:56.9,43.02S×124.50E,h15^{km},mb4.8*

*NEIC **19** 20:24:57.8±0.5,42.62S×124.59E,h10^{km},mb4.7/11,Error ellipse: s-maj=14.7km s-min=11.6km az=222.0*

ISC 19 20:24:55.7±0.5,**42.63S**±0.07×**124.5E**±0.1,**h10^{km},n46, σ1ˢ69**/31,**mb4.5**/15,**MS3.9**/8,**2D,South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	11.25	327	Pn	P	20 27 38.9	-0.7
	2.5nm,0.3s,baz=140,slow=11,SNR=24						
NWAO	**Narrogin (SRO)**	11.25	327	eP	P	20 27 38.5	-1.0
	27nm,1.1s						
NWAO				eS	S	20 29 41.1	-5.3
KLBR	**Kellerberrin**	12.25	332	eP	P	20 27 52.3	-0.8
	81nm,0.5s						
MUN	**Mundaring**	12.49	326	eP	P	20 27 54.8	-1.6
	5.9nm,0.6s						
TAU	**Tasmania Unive**	16.78	99	eP	P	20 28 53.1	+0.8
	160nm,1.5s						
STKA	**Stephens Creek**	17.32	57	eP	P	20 28 57.1	-2.0
	13nm,0.9s						
STKA	**Stephens Creek**	17.32	57	P	P	20 28 58.1	-1.1
	0.3nm,0.3s,baz=221,slow=12,SNR=6.3						
STKA				LR	LR	20 34 26.0	
	comp=Z,316nm,20.1s,baz=215,slow=33						
ASPA	**Alice Springs**	20.47	25	eP	P	20 29 39.3	+3.1
ASAR	**Alice Springs**	20.47	25	P	P	20 29 36.3	0.0
	2.5nm,0.9s,baz=204,slow=12,SNR=15						
ASAR				PcP	PcP	20 33 46.9	-1.1
	2.1nm,0.9s,baz=207,slow=2.0,SNR=7.7						
ASAR				LR	LR	20 36 48.6	
	comp=Z,173nm,19.7s,MS3.4,baz=194,slow=35						
MBWA	**Marble Bar**	21.78	348	P	P	20 29 47.0	-2.5
	40nm,1.3s,mb4.7						
WRA	**Warramunga Arr**	24.11	23	P	P	20 30 12.9	+0.5
	17nm,1.0s,mb4.4,baz=198,slow=9.6,SNR=49						
WRA				PcP	PcP	20 33 53.8	-1.5
	1.4nm,0.9s,baz=217,slow=2.0,SNR=5.0						
CTA	**Charters Tower**	29.02	46	LR	LR	20 42 35.2	
	comp=Z,149nm,18.2s,MS3.6,baz=184,slow=36						
RPZ	**Rata Peaks**	33.65	108	LR	LR	20 41 46.4	
	comp=Z,284nm,19.8s,MS4.0,baz=42,slow=30						
VNDA	**Vanda**	38.17	168	P	P	20 32 14.2	-2.4
	4.5nm,0.8s,mb4.2,baz=313,slow=9.0,SNR=7.5						
VNDA				LR	LR	20 45 47.4	
	comp=Z,238nm,20.2s,MS4.0,baz=335,slow=33						
VNDA	**Vanda**	38.17	168	eP	P	20 32 12.9	-3.6
	19nm,1.2s,mb4.7						
URZ	**Urewera**	39.77	102	P	P	20 32 28.5	-1.8
	8.0nm,1.0s,mb4.4,SNR=3.1						
URZ				LR	LR	20 47 16.3	
	comp=Z,267nm,18.3s,MS4.1,baz=265,slow=34						
MAW	**Mawson**	40.73	211	LR	LR	20 45 52.8	
	comp=Z,67nm,20.5s,MS3.5,baz=242,slow=31						
SYO	**Syowa Base**	49.21	208	⇓P	P	20 33 44.7	-0.8
SYO	**Syowa Base**	49.21	208	⇓pP	pP	20 33 49.7	+1.1
SNAA	**Sanae**	60.09	197	P	P	20 35 02.3	-2.5
	3.0nm,1.0s,mb4.3,baz=205,slow=17,SNR=3.0						
SNAA	**Sanae**	60.09	197	eP	P	20 35 03.0	-1.8
	256nm,1.2s						
CMAR	**Chiang Mai Arr**	65.18	333	P	P	20 35 40.1	+0.8
	1.4nm,0.9s,mb4.0,baz=176,slow=5.5,SNR=9.8						
CMAR				LR	LR	21 04 25.0	
	comp=Z,98nm,18.5s,MS4.0,baz=155,slow=36						
SUR	**Sutherland**	77.75	237	P	P	20 36 54.8	+0.4
	38nm,1.3s,mb5.2						
LSA	**Lhasa**	78.23	331	eP	P	20 37 00.6	+3.5
LSA	**Lhasa**	78.23	331	eP	P	20 36 58.5	+1.4
	9.6nm,1.0s,mb4.7						
LBTB	**Lobatse**	79.60	246	P	P	20 37 07.0	+2.4
	11nm,1.3s,mb4.6						
MAJO	**Matsushiro**	79.79	11	P	P	20 37 09.1	+3.6
BJT	**Baijiatuau**	82.61	354	P	P	20 37 20.2	0.0
	11nm,1.4s,mb4.7						
LSZ	**Lusaka**	84.33	255	eP	P	20 37 32.7	+3.3
	4.7nm,1.0s,mb4.6						
GTA	**Gaotai**	84.67	341	P	P	20 37 34.0	+3.4
GTA				AP	pP	20 37 46.8	+13
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.6						
CN2	**Changchun**	86.05	1	eP	P	20 37 41.1	+3.7
KMBO	**Kilima Mbogo**	87.19	271	LR	LR	21 08 36.7	
	comp=Z,92nm,19.1s,MS4.2,baz=94,slow=30						
ULN	**Ulaanbaatar**	91.42	348	P	P	20 38 05.0	+2.2
	comp=Z,1.7nm,0.9s,mb4.4						
SONM	**Songino Array**	91.49	348	P	P	20 38 06.2	+3.1
	comp=Z,3.5nm,1.2s,mb4.6,baz=188,slow=1.9,SNR=9.2						
TLY	**Talaya**	95.66	347	P	P	20 38 18.6	-3.6
	comp=Z,1.6nm,0.9s,mb4.5						
OTAV	**Otavalo**	133.04	148	ePKPdf	PKPdf	20 44 13.6	-1.5
MCMT	**McKenzie Canyo**	139.26	67	ePKPdf	PKPdf	20 44 25.8	+0.1
TXAR	**Lajitas Array**	139.37	93	PKP	PKPdf	20 44 23.4	-2.9
	comp=Z,1.7nm,1.1s,baz=225,slow=1.8,SNR=6.0						
YKA	**Yellowknife Ar**	140.69	39	PKhKP		20 44 21.0	
	comp=Z,1.1nm,0.9s,baz=290,slow=2.1,SNR=9.2						
EKA	**Eskdalemuir Ar**	144.22	309	PKP	PKPdf	20 44 32.0	-1.9
	comp=Z,10nm,1.1s,baz=153,slow=1.9,SNR=4.2						
WMOK	**Wichita Mounta**	145.64	89	ePKPdf	PKPdf	20 44 33.8	-3.3
DGMT	**Dagmar**	145.90	63	ePKPdf	PKPdf	20 44 36.0	-1.0
FFC	**Flin Flon**	147.63	52	ePKPdf	PKPdf	20 44 41.1	+1.4
KSU1	**Kansas State U**	148.95	82	ePKPdf	PKPdf	20 44 43.3	+0.9
FCC	**Fort Churchill**	151.25	42	ePKPbc	PKPdf	20 44 49.2	+3.9
ULM	**Lac du Bonnet**	151.46	60	PKP	PKPdf	20 44 44.9	-1.0
	comp=Z,2.9nm,1.0s,baz=324,slow=6.2,SNR=4.9						
ULM				PKPbc	PKPdf	20 44 50.2	+4.4
	comp=Z,7.2nm,1.1s,baz=260,slow=2.9,SNR=11						
ULM				PKPab	PKPab	20 44 58.0	-1.7
	comp=Z,6.1nm,1.1s,baz=294,slow=4.0,SNR=4.8						

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*NEIC **19** 20:41:21.6±0.3,19.26N×121.30E,h35^{km},mb4.6/19,Error ellipse: s-maj=7.7km s-min=7.2km az=60.0*

*MAN **19** 20:41:22.2,19.29N×121.13E,h20^{km},mb5.3,ML4.3, MS4.5*

*IDC **19** 20:41:22.8±2.4,19.30N×121.27E,h40^{km}±20^{km},mb3.9/16, mb1 4.1/17,mb1mx4.1/21,mbtmp4.2/17,ML4.1/1,MS3.8/6, Ms1 3.8/6,ms1mx3.3/31,Error ellipse: s-maj=25.1km s-min=12.3km az=71.0*

*BJI **19** 20:41:23.3,19.39N×120.99E,h35^{km},mB4.7,mb4.4, ML4.5,Ms4.2,Msz4.1*

ISC 19 20:41:23.3±0.5,**19.31N**±0.03×**121.15E**±0.05,**h58^{km}**±6^{km}, **n93,σ1ˢ04**/98,**mb4.4**/39,**MS3.8**/7,**3C-13D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	1.36	141	eP	P	20 41 45.7	-0.8
SGCP				eS	S	20 42 03.5	-0.2
BBP	**Basco**	1.36	34	eP	P	20 41 46.0	-0.7
BBP				eS	S	20 42 06.1	+2.2
APYP	**Conner**	1.44	177	eP	P	20 41 46.2	-1.5
APYP				eS	S	20 42 07.2	+1.5
ABRA	**Dolores**	1.70	194	eP	P	20 41 50.2	-1.0
CVP	**Callao Caves**	1.72	158	⇓iP	P	20 41 51.0	-0.5
CVP				iS	S	20 42 14.0	+1.7
CAUP	**Cauayan**	2.43	165	eP	P	20 42 03.4	+1.8
PALP	**Palanan**	2.54	151	eP	P	20 42 03.8	+0.8
BCPH	**Baguio City Da**	2.96	191	eP	P	20 42 10.1	+1.1
BCPH				eS	S	20 42 49.8	+6.3
BOLP	**Bolinao**	3.14	202	eP	P	20 42 11.1	-0.4
BALP	**Baler**	3.57	173	eP	P	20 42 17.6	0.0
SCZP	**Santa Cruz**	3.71	199	eP	P	20 42 18.4	-1.1
PCPH	**Palayan**	3.72	181	⇓eP	P	20 42 21.2	+1.4
PCPH				iS	S	20 43 09.6	+6.9
POLP	**Polilio Island**	4.61	170	eP	P	20 42 32.5	+0.3
LQP	**Lukban**	5.18	176	⇑eP	P	20 42 40.4	+0.3
TGY	**Tagaytay City**	5.18	182	⇑eP	P	20 42 40.5	+0.4
TGY	**Tagaytay City**	5.18	182	Pn	P	20 42 39.9	-0.2
	6.6nm,0.3s,baz=266,slow=13,SNR=3.5						
TGY				Sn	S	20 43 38.1	-1.1
	25nm,0.3s,baz=202,slow=16,SNR=1.9						
GQP	**Guinayangan**	5.51	167	⇓eP	P	20 42 44.6	-0.1
GQP				eS	S	20 43 45.0	-2.5
LUBP	**Lubang**	5.61	189	eP	P	20 42 49.3	+3.3
TATO	**Taipei**	5.65	3	ePn	P	20 42 43.2	-3.4
	65nm,0.8s						
QIZ	**Qiongzhong**	10.69	270	P	P	20 43 51.0	-5.2
QIZ				LR	LR		
	comp=E,503nm,19.9s						
QIZ				LR	LR		
	comp=Z,579nm,18.2s						
QIZ	**Qiongzhong**	10.69	270	eP	P	20 43 50.3	-5.9
	comp=Z,91nm,1.3s						
QIZ				eS	S	20 45 40.4	-15
GYA	**Guiyang**	15.12	301	P	P	20 44 53.8	-1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.3s						
ENH	**Enshi**	15.20	318	eP	P	20 44 53.9	-1.9
	comp=Z,25nm,1.2s						
ENH				e		20 45 00.7	
KMI	**Kunming**	18.00	292	P	P	20 45 31.6	+0.6
KMI				AP		20 45 38.0	
KMI				XP		20 45 41.4	
KMI				PP	PP	20 45 45.5	-0.9
KMI				S	S	20 48 37.0	-10
KMI				XS		20 48 53.1	
KMI				AMB	AMB		
	comp=Z,8.0nm,1.9s						
KMI				AMB	AMB		
	comp=Z,187nm,5.0s						
KMI				LR	LR		
	comp=N,216nm,14.7s						
KMI				LR	LR		
	comp=E,352nm,16.1s						
KMI				LR	LR		
	comp=Z,418nm,16.1s						
KMI	**Kunming**	18.00	292	P	P	20 45 31.6	+0.6
	comp=Z,8.0nm,1.9s						
KMI				pP		20 45 38.0	
KMI				sP		20 45 41.4	
KMI				PP	PP	20 45 45.5	-0.9
KMI				S	S	20 48 37.0	-10
KMI				sS		20 48 53.1	
XAN	**Xi'an**	18.27	326	P	P	20 45 34.1	-0.2
XAN				AP		20 45 40.1	
XAN				AMB	AMB		
	comp=Z,9.0nm,1.3s						
KS15	**Wonju Array Si**	19.00	17	eP	P	20 45 40.8	-2.1
NANT	**Nan**	19.34	272	P	P	20 45 46.0	-0.7
CD2	**Chengdu**	19.50	310	eP	P	20 45 47.3	-1.1
CD2				AMB	AMB		
	comp=Z,19nm,1.2s						
CHRT	**Chiangrai**	20.14	275	⇓P	P	20 45 55.0	-0.3
	comp=Z,129nm,0.9s						
CBIJ	**Chichi jima**	20.81	64	LR	LR	20 52 18.1	
	comp=Z,197nm,18.5s,MS3.5,baz=143,slow=32						
CHG	**Chiang Mai**	21.00	272	⇓P	P	20 46 03.9	-0.2
	comp=Z,15nm,0.8s						
CM31	**Chiang Mai Arr**	21.03	271	eP	P	20 46 04.7	+0.2
	comp=Z,15nm,0.9s,mb4.3						
CMAR	**Chiang Mai Arr**	21.03	271	P	P	20 46 04.5	+0.1
	comp=Z,5.2nm,0.8s,mb3.9,baz=77,slow=9.5,SNR=35						
CMAR				PcP	PcP	20 50 10.7	+0.9
	comp=Z,0.9nm,0.7s,baz=53,slow=0.8,SNR=5.5						
BJT	**Baijiatuau**	21.08	349	eP	P	20 46 05.0	+0.1
	comp=Z,21nm,0.8s,mb4.5						
LZH	**Lanzhou**	22.62	321	⇓P	P	20 46 21.6	+1.5
LZH				AP		20 46 29.1	
LZH				XP		20 46 32.0	
LZH				AMB	AMB		
	comp=Z,35nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,89nm,4.5s						
LZH				LR	LR		
	comp=N,336nm,10.5s						
LZH				LR	LR		
	comp=Z,576nm,12.5s,MS4.2						
LZH	**Lanzhou**	22.62	321	⇓P	P	20 46 21.6	+1.5
	comp=Z,35nm,1.3s,mb4.6						
LZH				pP		20 46 29.1	
LZH				sP		20 46 32.0	
LZH				PP	PP	20 46 40.1	-10
LZH				LR	LR		
	comp=Z,580nm,12.5s,MS4.2						
HHC	**Hu-ho-hao-te**	22.99	341	eP	P	20 46 25.1	+1.5
HHC				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.3						
HHC				AMB	AMB		
	comp=Z,179nm,4.7s						
CN2	**Changchun**	24.69	7	eP	P	20 46 41.3	+1.2
LSA	**Lhasa**	29.12	297	eP	P	20 47 22.4	+1.5
LSA	**Lhasa**	29.12	297	eP	P	20 47 21.7	+0.8
	comp=Z,4.7nm,0.8s,mb4.3						
ASAJ	**Asahikawa**	30.55	31	LR	LR	20 58 54.8	
	comp=Z,62nm,19.5s,MS3.3,baz=165,slow=34						
ULN	**Ulaanbaatar**	30.71	341	eP	P	20 47 34.7	-0.1
	comp=Z,2.2nm,0.7s,mb4.1						
SONM	**Songino Array**	30.89	340	P	P	20 47 36.5	+0.2
	comp=Z,1.8nm,0.8s,mb4.0,baz=162,slow=9.6,SNR=18						
JIRN	**Jiri**	33.04	291	eP	P	20 47 56.1	+0.7
	comp=Z,30nm,1.1s,mb5.1						
PKI	**Pulchoki**	33.72	291	eP	P	20 48 00.7	-0.5
	comp=Z,39nm,1.7s,mb5.1						
KKN	**Kakani**	33.85	291	eP	P	20 48 02.3	-0.1
	comp=Z,24nm,1.2s,mb5.0						
DMN	**Daman**	33.99	291	eP	P	20 48 03.3	-0.3
	comp=Z,16nm,1.0s,mb4.9						
GKN	**Gorkha**	34.44	292	eP	P	20 48 07.0	-0.5
	comp=Z,26nm,1.2s,mb5.0						

KOLN	Koldanda	35.33	291	eP	P	20 48 15.0	-0.1
	comp=Z,48nm,1.7s,mb5.2						
WRA	Warramunga Arr	41.09	161	P	P	20 49 00.6	-2.5
	comp=Z,1.7nm,0.4s,mb4.0,baz=343,slow=9.1,SNR=26						
WRA				PcP	PcP	20 51 03.4	+0.9
	comp=Z,0.5nm,0.6s,baz=340,slow=3.0,SNR=4.9						
WRA				ScP		20 54 49.5	
	comp=Z,0.7nm,0.9s,baz=337,slow=4.3,SNR=4.9						
ZAL	Zalesovo	44.38	330	P	P	20 49 30.0	+0.5
	comp=Z,2.5nm,0.8s,mb4.0,baz=358,slow=8.1,SNR=24						
ZAL				LR	LR	21 09 46.8	
	comp=Z,199nm,18.5s,MS4.1,baz=210,slow=38						
ZAL	Zalesovo	44.38	330	P	P	20 49 30.0	+0.5
ZAL				LR	LR	21 09 46.8	
ASAR	Alice Springs	44.48	163	P	P	20 49 29.4	-1.4
	comp=Z,1.5nm,0.5s,mb4.0,baz=340,slow=6.3,SNR=20						
ASAR				ScP		20 55 00.8	
	comp=Z,1.0nm,1.0s,baz=343,slow=1.8,SNR=5.5						
AAK	Ala-Archa	45.56	311	eP	P	20 49 39.9	+0.7
	comp=Z,1.6nm,0.8s,mb4.0						
CTA	Charters Tower	46.24	146	LR	LR	21 07 51.9	
	comp=Z,107nm,19.7s,MS3.8,baz=152,slow=34						
CHKZ	Chkalovo	51.59	324	eP	P	20 50 25.6	-0.1
	comp=Z,6.3nm,0.9s,mb4.5						
CHKZ				ePcP	PcP	20 51 37.6	-1.4
STKA	Stephens Creek	54.53	159	P	P	20 50 46.6	-1.1
	comp=Z,1.5nm,0.7s,mb4.2,baz=337,slow=9.4,SNR=7.8						
BILL	Bilibino	56.28	19	eP	P	20 50 58.5	-1.3
	comp=Z,2.4nm,0.6s,mb4.4						
GNI	Garni	67.59	306	LR	LR	21 24 52.9	
	comp=Z,57nm,20.6s,MS3.8,baz=27,slow=39						
KIV	Kislovodsk	68.67	311	eP	P	20 52 22.8	+0.2
	comp=Z,11nm,0.8s,mb4.8						
OBN	Obninsk	71.33	323	P	P	20 52 37.4	-1.1
	comp=Z,10.0nm,0.9s,mb4.8						
MALT	Malatya	72.72	305	eP	P	20 52 47.9	+0.7
	comp=Z,7.5nm,1.0s,mb4.6						
JOF	Joensuu	72.94	331	ep	P	20 52 47.1	-0.8
	comp=Z,2.0nm,0.6s,mb4.2						
KEV	Kevo	73.48	339	ep	P	20 52 50.6	-0.3
ILAR	Eielson Array	73.56	27	P	P	20 52 50.9	-0.6
	comp=Z,0.4nm,0.5s,mb3.6,baz=261,slow=4.9,SNR=11						
ARCES	ARCESS Array B	74.04	339	P	P	20 52 54.5	+0.3
	comp=Z,2.7nm,0.6s,mb4.3,baz=74,slow=8.8,SNR=12						
KAF	Kangasniemi	75.37	331	ep	P	20 53 01.2	-0.8
	comp=Z,3.3nm,0.8s,mb4.3						
FINES	FINESS Array B	75.64	330	P	P	20 53 03.8	+0.2
	comp=Z,2.6nm,0.8s,mb4.2,baz=64,slow=5.5,SNR=14						
BRTR	Keskin Array B	76.07	307	P	P	20 53 06.8	+0.3
	comp=Z,1.0nm,0.6s,mb3.9,baz=134,slow=2.7,SNR=7.5						
AKASG	Malin Array Be	76.50	319	P	P	20 53 08.2	-0.4
	comp=Z,1.9nm,0.6s,mb4.2,baz=60,slow=5.4,SNR=12						
INK	Inuvik	77.75	22	P	P	20 53 14.5	-0.7
	comp=Z,0.9nm,0.7s,mb3.8,baz=156,slow=3.5,SNR=4.1						
INK	Inuvik	77.75	22	eP	P	20 53 14.6	-0.7
	comp=Z,5.8nm,1.4s,mb4.3						
TLCR		78.16	314	⇓P	P	20 53 17.4	-0.6
CFR	Carcaliu	78.63	314	⇓P	P	20 53 21.3	+0.8
TIRR	Tirgusor	78.64	313	⇑P	P	20 53 20.6	0.0
HARR	Harsova	78.90	313	⇓P	P	20 53 23.0	+0.9
SUW	Suwalki	79.16	323	eP	P	20 53 21.3	-2.0
	comp=Z,27nm,1.1s,mb5.1						
VRI	Vrincioaia	79.39	315	⇓P	P	20 53 26.3	+1.6
BURAR	Bucovina Array	79.87	317	⇓P	P	20 53 28.6	+1.4
MLR	Muntele Rosu	80.02	315	⇓P	P	20 53 29.6	+1.5
NB2	NORSAR Subarra	82.51	333	P	P	20 53 40.2	-0.6
	comp=Z,7.6nm,1.2s,mb4.6,baz=60,slow=5.0						
NOA	NORSAR Array B	82.51	333	P	P	20 53 40.5	-0.2
	comp=Z,1.7nm,0.8s,mb4.1,baz=70,slow=4.8,SNR=4.7						
NOA				LR	LR	21 34 05.0	
	comp=Z,88nm,20.8s,MS4.1,baz=355,slow=38						
RES	Resolute Bay	83.46	9	P	P	20 53 41.3	-4.1
	comp=Z,8.4nm,1.1s,mb4.7						
KSP	Ksiaz	84.23	322	eP	P	20 53 50.9	+1.3
KMBO	Kilima Mbogo	84.61	267	P	P	20 53 54.0	+1.5
	comp=Z,0.9nm,0.5s,mb4.1,baz=46,slow=6.7,SNR=6.7						
KMBO	Kilima Mbogo	84.61	267	P	P	20 53 54.0	+1.5
GERES	GERESS Array B	86.58	321	P	P	20 54 02.3	+1.0
	comp=Z,0.8nm,0.8s,mb4.0,baz=53,slow=6.7,SNR=5.8						
SUMG	Summit	87.33	354	eP	P	20 54 03.9	-0.5
	comp=Z,9.8nm,0.7s,mb5.2						
YKA	Yellowknife Ar	87.46	23	P	P	20 54 06.4	+1.1
	comp=Z,2.9nm,0.8s,mb4.5,baz=313,slow=4.6,SNR=44						
YKA	Yellowknife Ar	87.46	23	P	P	20 54 06.4	+1.1
SDV	Santo Domingo	149.67	24	PKP	PKPdf	21 01 04.9	+2.4
	comp=Z,5.4nm,0.7s,baz=61,slow=2.8,SNR=4.2						
SDV				PKPbc	PKPdf	21 01 10.2	+7.7
	comp=Z,3.9nm,0.7s,baz=322,slow=3.0,SNR=5.8						
SDV	Santo Domingo	149.67	24	ePKPdf	PKPdf	21 01 03.2	+0.6
SDV				ePKPbc	PKPdf	21 01 09.3	+6.7

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*NEIC **19** 21:14:25.1±0.7, 51.52N×16.20E, h5^{km}, ML2.8(VIE), ML2.5(SZGRF), Error ellipse: s-maj=8.2km s-min=5.7km az=46.0*
*CSEM **19** 21:14:25.2±0.1, 51.51N×16.17E, ML2.9/3, Error ellipse: s-maj=2.1km s-min=1.8km az=172.0*
*PRU **19** 21:14:26.3, 51.45N×16.15E*
*IPEC **19** 21:14:26.5±0.4, 51.47N×16.17E, h10^{km}±2^{km}, ML1.8/2, Error ellipse: s-maj=2.8km s-min=0.9km az=26.0*
*IDC **19** 21:14:26.3±1.0, 51.45N×16.08E, mb1 3.4/5, mb1mx3.3/20, mbtmp3.2/5, ML2.7/5, Error ellipse: s-maj=18.7km s-min=8.5km az=104.0*
*WAR **19** 21:14:27.1, 51.45N×16.09E, h1^{km}, ML2.4, Mining Induced*
ISC 19 21:14:23.8±0.5, **51.48N**±0.03×**16.09E**±0.04, **n36**, σ**1^{s}40**/65, **1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	169	ePG	Pg	21 14 38.0	+1.2
KSP				eSG	Sg	21 14 47.0	+1.6
UPC	Upice	0.98	183	ePG	Pg	21 14 44.3	+1.1
UPC	Upice	0.98	183	ePg	Pg	21 14 44.6	+1.4
DPC	Dobruska-Polom	1.14	173	ePG	Pg	21 14 47.2	+0.7
DPC				eSG	Sg	21 15 01.7	-0.1
	9.4nm,0.2s						
PVCC	Panska Ves	1.36	226	ePG	Pg	21 14 51.5	+0.7
PVCC	Panska Ves	1.36	226	ePn	Pn	21 14 51.8	+1.9
PVCC				eSg	Sg	21 15 10.4	+1.5
BRG	Berggiesshubel	1.48	247	ePn	Pn	21 14 52.8	+1.0
BRG				i Pg	Pg	21 14 54.2	+0.8
BRG				i Sg	Sg	21 15 14.1	+0.9
BRG	Berggiesshubel	1.48	247	ePn	Pn	21 14 53.2	+1.4
BRG	Berggiesshubel	1.48	247	i Pg	Pg	21 14 54.2	+0.8
BRG				eSg	Sg	21 15 13.6	+0.4
PRU	Pruhonice	1.79	214	ePN	Pn	21 14 57.0	+0.8
PRU				ePG	Pg	21 14 59.0	-0.5
PRU				eSG	Sg	21 15 22.3	-1.1
PRU	Pruhonice	1.79	214	Pg	Pg	21 14 59.0	-0.5
PRU				Sg	Sg	21 15 22.3	-1.1
MORC	Moravsky Berou	1.94	151	ePn	Pn	21 14 59.1	+0.8
MORC				eSn	Sn	21 15 26.9	+3.2
MORC	Moravsky Berou	1.94	151	ePn	Pn	21 14 59.1	+0.8
MORC				eSg	Sg	21 15 26.2	-2.1
	5.0nm,0.2s						
MORC				eSn	Sn	21 15 26.9	+3.2
CLL	Collm	1.94	266	ePN	Pn	21 14 59.0	+0.6
CLL				ePG	Pg	21 15 02.0	-0.6
CLL				eSG	Sg	21 15 28.0	-0.5
OKC	Ostrava-Krasne	2.10	141	ePG	Pg	21 15 04.5	-1.2
OKC				eSG	Sg	21 15 31.8	-1.9
VRAC	Vranov	2.20	171	Pn	Pn	21 15 03.3	+1.3
	0.7nm,0.3s,baz=327,slow=19,SNR=11						
VRAC				Lg		21 15 34.9	
	1.5nm,0.3s,baz=82,slow=20,SNR=8.4						
VRAC	Vranov	2.20	171	ePn	Pn	21 15 03.2	+1.2
VRAC				eSg	Sg	21 15 34.3	-2.7
	4.7nm,0.2s						
KRUC	Moravsky	2.43	175	ePn	Pn	21 15 06.8	+1.5
NKC	Novy Kostel	2.63	243	ePN	Pn	21 15 09.6	+1.5
NKC				ePG	Pg	21 15 15.6	-0.6
NKC				eSG	Sg	21 15 51.2	0.0
NKC	Novy Kostel	2.63	243	Pg	Pg	21 15 15.6	-0.6
NKC				eSg	Sg	21 15 50.4	-0.8
KHC	Kasperske Hory	2.85	215	ePN	Pn	21 15 12.4	+1.0
KHC				ePG	Pg	21 15 18.2	-2.5
KHC				eSG	Sg	21 15 56.3	-2.4
KHC	Kasperske Hory	2.85	215	Pg	Pg	21 15 18.2	-2.5
KHC				Sg	Sg	21 15 56.3	-2.4
MOX	Moxa	2.95	255	ePg	Pg	21 15 21.8	-0.8
GEC2	GERESS Array S	3.05	211	ePn	Pn	21 15 16.1	+1.9
GEC2				eSg	Sg	21 16 04.5	-0.9
GERES	GERESS Array B	3.05	211	Pn	Pn	21 15 15.3	+1.1
	0.3nm,0.3s,baz=25,slow=12,SNR=16						
GERES				Pg	Pg	21 15 21.8	-2.9
	1.4nm,0.3s,baz=32,slow=17,SNR=40						
GERES				Sn	Sn	21 15 52.2	+0.2
	0.9nm,0.3s,baz=28,slow=27,SNR=5.8						
GERES				Lg		21 16 00.9	
	1.8nm,0.3s,baz=27,slow=27,SNR=7.8						
GERES	GERESS Array B	3.05	211	Pg	Pg	21 15 21.8	-2.9
WET	Wettzell	3.12	223	ePn	Pn	21 15 16.2	+1.1
WET	Wettzell	3.12	223	ePn	Pn	21 15 16.0	+0.9
GRA1	Grafenberg Arr	3.58	242	ePn	Pn	21 15 23.0	+1.2
GRA1				eSg	Sg	21 16 20.6	-2.5
GRF	Grafenberg Arr	3.58	242	ePn	Pn	21 15 23.0	+1.2
GRF				eSg	Sg	21 16 20.6	-2.5
BSD	Bornholm Skovb	3.71	349	i P	Pn	21 15 23.3	-0.2
BSD				i S	Sn	21 16 05.3	-3.3
MOA	Molln	3.82	199	⇑iPN	Pn	21 15 26.2	+1.0
MOA				i SG	Sg	21 16 29.1	-2.0
	2.0nm,0.3s						
NOA	NORSAR Array B	9.96	346	Pn	P	21 16 48.2	-2.8
	0.1nm,0.3s,baz=82,slow=3.4,SNR=3.6						
NOA	NORSAR Array B	9.96	346	Pn	P	21 16 48.2	-2.8
FINES	FINESS Array B	11.39	25	Pn	P	21 17 06.7	-4.0
	0.1nm,0.3s,baz=207,slow=13,SNR=3.6						
ARCES	ARCESS Array B	18.65	10	P	P	21 18 44.2	-0.5
	0.1nm,0.3s,baz=184,slow=12,SNR=2.5						

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*OMAN **19** 21:42:40.8, 33.66N×57.51E, h10^{km}, Error ellipse: s-maj=77.1km s-min=14.1km az=14.0*
*THR **19** 21:44:06.6±1.6, 27.04N×57.12E, h37^{km}±17^{km}, ML3.5*
*CSEM **19** 21:44:09.5±0.1, 27.21N×56.69E, h80^{km}, ML3.5, Error ellipse: s-maj=4.3km s-min=2.1km az=59.0*
ISC 19 21:44:08.7±0.7, **27.27N**±0.06×**57.2E**±0.1, **h48**^{km}±46^{km}, **n22**, σ**1^{s}10**/17, **6C-5D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.90	279	i PG	P	21 44 24.8	-0.3
BNDS				eSG	S	21 44 36.5	-0.8
BNDS				AML	AML	21 44 39.6	
	comp=N,2µm,0.4s						
BNDS	Bandar-Abbas	0.90	279	i Pg	P	21 44 24.8	-0.3
	SNR=106						
BNDS				eSg	S	21 44 36.5	-0.8
	comp=N,2µm,0.4s,SNR=106						
BANOM	Banah	1.55	210	⇑P	S	21 44 55.4	+2.0
	SNR=6.0						
KRBR	Kerman	2.73	353	ePN	P	21 44 53.7	+2.6
KRBR				AML	AML	21 45 39.3	
	comp=E,127nm,0.4s						
ASHO	Ashiyiah	2.76	202	P	P	21 44 53.0	+1.4
	SNR=20						
HOQ	Hoqain	3.67	178	⇑P	P	21 45 03.0	-1.5
	SNR=6.9						
BIDO	Bidbid	3.83	167	⇓P	P	21 45 05.4	-1.2
	SNR=16						
GHIR	Ghir-Karzin	3.84	286	ePN	P	21 45 05.6	-1.3
GHIR				AML	AML	21 45 56.2	
	comp=N,40nm,0.2s						
ZHSF	Zahedan	3.94	53	ePN	P	21 45 08.6	+0.4
ARQ	Araqi	3.96	189	⇓P	P	21 45 09.1	+0.6
	SNR=6.1						
SMDO	Samad	4.26	169	⇑P	P	21 45 12.0	-0.8
BSY	Bisya	4.50	180	⇓P	P	21 45 16.7	+0.6
BSYO	Bisya	4.52	179	P	P	21 45 16.7	+0.3
WBK	Wadi Bani Khal	4.92	160	⇓P	P	21 45 21.2	-0.8
	SNR=9.8						
JMDO	Jabal Madar	4.95	170	⇑P	P	21 45 22.3	-0.1
QRN	Al-Qurain	8.31	282	eS	Sx	21 47 31.3	
RDF	Al-Radifah	8.66	283	eP	Px	21 46 08.6	
RDF				eS	Sx	21 47 40.2	
NAY	Al-Naaiem	8.97	285	eP	Px	21 46 13.3	
NAY				eS	Sx	21 47 47.5	
RST	Umm Al-Ruwaisa	9.23	286	eP	Px	21 46 16.6	
WHFO	Wadi Hawf	9.82	199	⇑P	Px	21 46 27.0	
RBK	Rabkut	10.10	196	⇓P	Px	21 46 31.4	
ABTO	Aybut	10.49	201	⇑P	Px	21 46 35.2	

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*BJI **19** 22:00:30.0, 7.05S×67.54E, h10^{km}, mB5.1, mb4.7, Ms4.5, Msz4.2*
*MOS **19** 22:00:37.2±0.9, 6.36S×68.29E, h10^{km}, mb5.0/17, Error ellipse: s-maj=12.6km s-min=8.9km az=88.4*
*IDC **19** 22:00:37.0±0.7, 6.50S×68.24E, mb4.3/17, mb1 4.4/17, mb1mx4.4/20, mbtmp4.3/17, MS3.8/11, Ms1 3.9/11, ms1mx3.6/23, Error ellipse: s-maj=26.7km s-min=14.7km az=35.0*
*NEIC **19** 22:00:38.9±0.3, 6.41S×68.32E, h10^{km}, mb4.8/22, Error ellipse: s-maj=8.2km s-min=6.7km az=161.0*
ISC 19 22:00:36.9±0.5, **6.43S**±0.08×**68.33E**±0.06, **h10**^{km}, **(h19**^{km}±2.9^{km}**:pP-P)**, **n106**, σ**0^{s}96**/85, **mb4.6**/49, **MS3.9**/14, **4C, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	4.21	104	eP	Pn	22 01 37.9	-4.7
KMBO	Kilima Mbogo	31.45	278	P	P	22 07 01.7	+0.7
	0.3nm,0.2s,mb3.8,baz=117,slow=16,SNR=3.2						
KMBO				LR	LR	22 17 11.0	
	comp=Z,195nm,21.0s,MS3.8,baz=94,slow=32						
KOLN	Koldanda	37.06	23	eP	P	22 07 50.0	+0.9
	47nm,1.4s,mb5.1						
DMN	Daman	37.52	25	eP	P	22 07 54.1	+1.1
	44nm,1.1s,mb5.1						
PKI	Pulchoki	37.62	25	eP	P	22 07 54.9	+1.1
	58nm,1.7s,mb5.0						
GKN	Gorkha	37.68	24	eP	P	22 07 55.1	+0.8
	59nm,1.2s,mb5.2						
KKN	Kakani	37.75	25	eP	P	22 07 56.0	+1.0
	28nm,1.1s,mb4.9						
JIRN	Jiri	38.03	26	eP	P	22 07 58.6	+1.3
	43nm,1.5s,mb5.0						
CM31	Chiang Mai Arr	39.03	50	P	P	22 08 04.0	-1.8
	5.9nm,1.1s,mb4.2						
CMAR	Chiang Mai Arr	39.03	50	P	P	22 08 07.0	+1.2
	2.3nm,1.0s,mb3.9,baz=243,slow=9.4,SNR=15						
CMAR				PcP	PcP	22 10 16.9	+0.5
	2.4nm,0.9s,baz=240,slow=4.5,SNR=13						
CMAR				LR	LR	22 22 13.0	
	comp=Z,97nm,18.3s,MS3.7,baz=220,slow=33						
LSZ	Lusaka	40.33	254	eP	P	22 08 17.6	+1.0
LSZ				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
LSZ	Lusaka	40.33	254	eP	P	22 08 17.6	+1.1
	comp=Z,14nm,1.3s,mb4.5						
LSA	Lhasa	42.08	30	P	P	22 08 33.5	+2.6
LSA	Lhasa	42.08	30	eP	P	22 08 32.2	+1.3
LSA				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.5						
LSA	Lhasa	42.08	30	eP	P	22 08 32.2	+1.3
	comp=Z,15nm,1.3s,mb4.5						
LBTB	Lobatse	44.84	241	LR	LR	22 25 54.9	
	comp=Z,226nm,18.9s,MS4.1,baz=81,slow=34						
KMI	Kunming	45.87	46	P	P	22 09 07.0	+5.5
KMI				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.2						
KMI				LR	LR		
	comp=N,241nm,13.8s,MS4.3						
KMI				LR	LR		
	comp=E,141nm,15.3s,MS4.3						
KMI				LR	LR		
	comp=Z,173nm,33.8s						
KMI	Kunming	45.87	46	P	P	22 09 07.0	+5.5
	comp=Z,4.0nm,1.3s,mb4.2						
KMI				LR	LR		
	comp=Z,170nm,33.8s,MS3.8						
BOSA	Boshof	46.27	236	P	P	22 09 05.2	+0.5
BOSA				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
BOSA	Boshof	46.27	236	P	P	22 09 05.2	+0.6
	comp=Z,22nm,1.2s,mb5.0						
ASF	Jabal al Asfar	48.69	324	LR	LR	22 27 38.2	
	comp=Z,27nm,19.7s,MS3.2,baz=335,slow=33						
AAK	Ala-Archa	49.15	6	eP	P	22 09 26.3	-0.6
AAK				pmax	pmax		
	comp=Z,26nm,1.7s,mb5.0						
AAK	Ala-Archa	49.15	6	eP	P	22 09 26.3	-0.6
	comp=Z,26nm,1.7s,mb5.0						
FRU	Bishkek	49.36	6	eP	P	22 09 30.0	+1.4
GNI	Garni	51.20	337	P	P	22 09 42.3	-0.3
GNI				pmax	pmax		
	comp=Z,19nm,1.3s						
GNI	Garni	51.20	337	P	P	22 09 43.7	+1.1
	comp=Z,7.3nm,1.0s,mb4.6,baz=274,slow=3.7,SNR=7.3						
GNI	Garni	51.20	337	P	P	22 09 42.3	-0.3
	comp=Z,19nm,1.3s,mb4.9						
NWAO	Narrogin (SRO)	52.44	127	P	P	22 09 42.7	-9.4
NWAO				pmax	pmax		
	comp=Z,24nm,1.3s						
NWAO	Narrogin (SRO)	52.44	127	P	P	22 09 42.7	-9.4
	comp=Z,24nm,1.3s,mb5.0						
MALT	Malatya	52.48	330	P	P	22 09 53.7	+1.3
MALT				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
MALT	Malatya	52.48	330	P	P	22 09 53.7	+1.4
	comp=Z,8.0nm,1.3s,mb4.5						
WMQ	Urumqi	52.99	17	P	P	22 09 57.0	+0.9
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
ENH	Enshi	53.73	45	eP	P	22 10 00.8	-1.0
	comp=Z,24nm,1.3s,mb5.0						
LZH	Lanzhou	53.84	36	⇑P	P	22 10 02.5	+0.1
LZH				AP	pP	22 10 07.0	+1.5
LZH				XP	sP	22 10 10.3	+3.6
LZH				AMB	AMB		
	comp=Z,24nm,1.4s,mb4.9						
LZH				LR	LR		
	comp=N,196nm,13.1s						
LZH				LR	LR		
	comp=Z,297nm,17.0s,MS4.4						
LZH	Lanzhou	53.84	36	⇑P	P	22 10 02.5	+0.1
LZH				*PP	pP	22 10 07.0	+1.5
LZH				*SP	sP	22 10 10.2	+3.5
LZH						22 11 08.2	
LZH				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
LZH				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.4						
LZH	Lanzhou	53.84	36	⇑P	P	22 10 02.5	+0.1
	comp=Z,24nm,1.4s,mb4.9						
LZH				pP	pP	22 10 07.0	+1.5
LZH				sP	sP	22 10 10.2	+3.5
LZH				PP	PP	22 11 08.2	-57
LZH				LR	LR		
	comp=Z,300nm,17.0s,MS4.4						
GTA	Gaotai	54.11	30	P	P	22 10 03.9	-0.4
GTA				AP	pP	22 10 11.0	+3.6
GTA				XP	sP	22 10 16.0	+7.4
GTA				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
GTA				AMB	AMB		
	comp=Z,131nm,5.0s						
GTA				LR	LR		
	comp=N,177nm,21.8s,MS4.2						
GTA				LR	LR		
	comp=E,157nm,19.5s,MS4.2						
GTA				LR	LR		
	comp=Z,184nm,17.6s,MS4.2						
XAN	Xi’an	55.62	41	P	P	22 10 14.5	-1.0
XAN				AP	pP	22 10 20.1	+1.6
XAN				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.6						
BRTR	Keskin Array B	55.99	328	P	P	22 10 17.6	-0.5
	comp=Z,4.6nm,1.2s,mb4.4,baz=146,slow=8.9,SNR=12						
KURK	Kurchatov	57.60	8	eP	P	22 10 27.7	-1.7
KURK				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
KURK	Kurchatov	57.60	8	eP	P	22 10 27.7	-1.7
	comp=Z,11nm,1.3s,mb4.7						
BVAR	Borovoye Array	59.25	1	P	P	22 10 40.3	-0.5
	comp=Z,1.2nm,0.4s,mb4.2,baz=194,slow=5.9,SNR=6.8						
CHKZ	Chkalovo	59.91	2	eP	P	22 10 44.4	-1.0
CHKZ				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
CHKZ	Chkalovo	59.91	2	eP	P	22 10 44.4	-1.0
	comp=Z,21nm,1.4s,mb5.0						
MAW	Mawson	61.20	182	LR	LR	22 31 57.4	
	comp=Z,120nm,18.1s,MS4.1,baz=67,slow=31						
HHC	Hu-ho-hao-te	61.52	36	eP	P	22 10 55.1	-1.4
HHC				AMB	AMB		
	comp=Z,8.0nm,2.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,226nm,5.4s						
ZAL	Zalesovo	61.72	11	P	P	22 10 57.2	-0.4
	comp=Z,1.1nm,0.8s,mb4.0,baz=260,slow=6.2,SNR=9.4						
ZAL				LR	LR	22 38 25.7	
	comp=Z,105nm,18.4s,MS4.0,baz=312,slow=37						
ZAL	Zalesovo	61.72	11	P	P	22 10 57.2	-0.4
ZAL				LR	LR	22 38 25.7	
NVS	Novosibirsk	62.30	10	eP	P	22 10 59.6	-2.0
NVS				pmax	pmax		
	comp=Z,24nm,2.2s,mb4.9						
NVS				pmax	pmax		
	comp=N,13nm,2.0s						
SONM	Songino Array	63.58	28	P	P	22 11 10.8	+0.7
	comp=N,7.7nm,0.9s,mb4.7,baz=222,slow=5.7,SNR=53						
ZAK	Zakamensk	64.15	24	eP	P	22 11 11.5	-2.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
ASAR	Alice Springs	65.09	113	P	P	22 11 20.4	0.0
	comp=Z,3.5nm,0.9s,mb4.4,baz=278,slow=5.8,SNR=23						
ASAR				LR	LR	22 36 00.0	
	comp=Z,62nm,21.7s,MS3.8,baz=106,slow=33						
TLY	Talaya	65.30	23	eP	P	22 11 22.4	+1.2
TLY				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.7						
TLY	Talaya	65.30	23	eP	P	22 11 21.4	+0.1
	comp=Z,5.9nm,0.9s,mb4.6						
WRA	Warramunga Arr	65.30	109	P	P	22 11 22.1	+0.3
	comp=Z,9.4nm,1.1s,mb4.8,baz=284,slow=6.3,SNR=38						
SYO	Syowa Base	65.31	191	⇑PcP	PcP	22 11 52.9	-0.3
WB2	Warramunga Arr	65.31	109	eP	P	22 11 22.3	+0.4
IRK	Irkutsk	65.98	23	eP	P	22 11 26.1	+0.5
IRK				pmax	pmax		
	comp=Z,21nm,2.9s,mb4.7						
AKASG	Malin Array Be	66.14	334	P	P	22 11 25.3	-1.3
	comp=Z,4.4nm,0.9s,mb4.5,baz=138,slow=5.1,SNR=13						
OBN	Obninsk	66.77	341	P	P	22 11 30.0	-0.6
OBN				e		22 11 38.2	
MOS	Moscow	66.95	342	eP	P	22 11 30.7	-1.0
MOS				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.3						
KOLS	Kolonicke sedl	68.21	329	eP	P	22 11 40.5	+0.7
KOLS				esP	sP	22 11 46.7	+2.7
VYHS	Vyhne	69.74	327	eP	P	22 11 48.6	-0.6
BOJS	Bojanci	70.08	323	eP	P	22 11 51.1	-0.2
LJU	Ljubljana	70.79	323	eP	P	22 11 55.3	-0.3
HIA	Hailar	71.21	33	eP	P	22 11 58.4	+0.3
HIA				pmax	pmax		
	comp=Z,12nm,1.2s						
HIA	Hailar	71.21	33	eP	P	22 11 58.4	+0.3
	comp=Z,12nm,1.2s,mb4.7						
CN2	Changchun	71.70	40	eP	P	22 12 01.9	+0.7
STKA	Stephens Creek	72.43	121	P	P	22 12 04.7	-1.0
	comp=Z,2.7nm,0.8s,mb4.2,baz=274,slow=6.1,SNR=4.9						
STKA	Stephens Creek	72.43	121	eP	P	22 12 03.0	-2.7
GERES	GERESS Array B	72.75	326	P	P	22 12 06.4	-0.9
	comp=Z,0.4nm,0.8s,mb3.4,baz=297,slow=3.0,SNR=4.0						
NKC	Novy Kostel	74.17	326	eP	P	22 12 15.6	0.0
DBIC	Dimbokro	74.18	279	eP	P	22 12 15.2	-1.1
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DBIC	Dimbokro	74.18	279	P	P	22 12 15.6	-0.7
	comp=Z,4.3nm,1.2s,mb4.2,baz=129,slow=12,SNR=3.8						
DBIC				LR	LR	22 44 54.7	
	comp=Z,65nm,18.3s,MS4.0,baz=81,slow=36						
DBIC	Dimbokro	74.18	279	eP	P	22 12 15.2	-1.1
	comp=Z,6.3nm,1.0s,mb4.5						
DBIC				LR	LR	22 44 54.7	
CLL	Collm	74.44	328	P	P	22 12 18.0	+0.9
GRA1	Grafenberg Arr	74.58	326	eP	P	22 12 17.9	0.0
	comp=Z,12nm,1.3s,mb4.7						
GRF	Grafenberg Arr	74.58	326	eP	P	22 12 17.9	0.0
GRF				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
GRF	Grafenberg Arr	74.58	326	eP	P	22 12 17.9	0.0
GRF				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
GRF	Grafenberg Arr	74.58	326	eP	P	22 12 17.9	0.0
	comp=Z,12nm,1.3s,mb4.7						
MDJ	Mudanjiang	74.73	40	P	P	22 12 19.1	+0.2
	comp=Z,15nm,1.1s,mb4.8						
FINES	FINESS Array B	75.17	340	P	P	22 12 20.9	-0.1
	comp=Z,3.2nm,0.9s,mb4.2,baz=153,slow=4.3,SNR=6.0						
FINES				LR	LR	22 43 15.3	
	comp=Z,55nm,18.1s,MS3.9,baz=99,slow=34						
CTA	Charters Tower	76.50	109	P	P	22 12 30.4	+0.9
	comp=Z,7.5nm,0.8s,mb4.7,baz=270,slow=6.6,SNR=5.4						

CTAO	Charters Tower	76.50	109	*e*P	P	22 12 30.3	+0.8
CTAO				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
CTAO	Charters Tower	76.50	109	*e*P	P	22 12 30.3	+0.8
	comp=Z,14nm,1.0s,mb4.8						
NOA	NORSAR Array B	80.48	336	P	P	22 12 51.1	+0.8
	comp=Z,0.9nm,0.9s,mb3.7,baz=78,slow=5.2,SNR=3.1						
NOA				LR	LR	22 49 21.1	
	comp=Z,50nm,18.1s,MS3.9,baz=200,slow=36						
ESDC	Sonseca Array	80.65	312	P	P	22 12 52.0	+0.3
	comp=Z,2.2nm,1.0s,mb4.0,baz=89,slow=3.4,SNR=5.9						
ARCES	ARCESS Array B	81.24	346	LR	LR	22 51 14.9	
	comp=Z,73nm,19.3s,MS4.0,baz=196,slow=37						
TIXI	Tiksi	87.17	16	*e*P	P	22 13 24.0	-0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.9						
MA2	Magadan	91.67	30	*e*P	P	22 13 44.2	-1.3
	comp=Z,11nm,1.1s,mb5.1						
COLA	College	116.30	16	P	PKPdf	22 19 22.3	-1.2
YKA	Yellowknife Ar	124.01	2	PKP	PKPdf	22 19 36.6	-1.9
	comp=Z,0.5nm,0.7s,baz=343,slow=2.2,SNR=12						
PDAR	Pinedale Array	143.76	357	PKP	PKPdf	22 20 14.7	-0.9
	comp=Z,0.7nm,0.8s,baz=270,slow=1.5,SNR=4.6						
KSU1	Kansas State U	144.75	340	*e*PKPdf	PKPdf	22 20 14.8	-2.6
HWUT	Hardware Ranch	144.97	360	*e*PKPdf	PKPdf	22 20 16.9	-0.9
LRAL	Lakeview Retre	144.98	322	*e*PKPdf	PKPdf	22 20 16.1	-1.9
HBAR	Harrisburg	145.17	329	*e*PKPdf	PKPdf	22 20 16.9	-1.4
TCUT	Toone Canyon	145.46	360	*e*PKPdf	PKPdf	22 20 18.0	-0.6
CBKS	Cedar Bluff	146.00	343	*e*PKPdf	PKPdf	22 20 20.3	+0.7
OHCM	Honcut	146.06	14	*e*PKPdf	PKPdf	22 20 19.2	-0.5
OTAV	Otavalo	146.29	261	*e*PKPdf	PKPdf	22 20 21.1	+0.3
OTAV				*e*PKPbc	PKPbc	22 20 22.8	+3.8
DUG	Dugway	146.37	2	*e*PKPbc	PKPbc	22 20 21.3	+2.9
NVAR	Mina Array Bea	147.58	10	PKPbc	PKPdf	22 20 23.7	+1.5
	comp=Z,2.0nm,0.8s,baz=26,slow=2.2,SNR=12						
WMOK	Wichita Mounta	149.42	339	*e*PKPdf	PKPdf	22 20 24.4	-0.9
WMOK				*e*PKPbc	PKPdf	22 20 28.6	+3.2
TXAR	Lajitas Array	156.00	343	PKPab	PKPab	22 21 01.7	+0.1
	comp=Z,2.2nm,1.0s,baz=27,slow=2.8,SNR=11						
TXAR	Lajitas Array	156.00	343	PKPab	PKPab	22 21 01.7	+0.1

IDC 19 22:05:53.4±3.0**, 6.24S**×**68.88E, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/17**, mbtmp3.9**/4**, Error ellipse: s-maj=82.9km s-min=34.3km az=71.0, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	38.49	50	P	P	22 13 16.6	-2.6
	0.4nm,0.5s,baz=236,slow=10,SNR=4.6						
SONM	Songino Array	63.16	27	P	P	22 16 24.0	-1.4
	1.7nm,0.8s,baz=219,slow=6.9,SNR=14						
ASAR	Alice Springs	64.66	113	P	P	22 16 33.6	-2.2
	0.9nm,0.7s,baz=275,slow=6.0,SNR=11						
WRA	Warramunga Arr	64.85	109	P	P	22 16 35.1	-1.9
	1.9nm,0.8s,baz=283,slow=6.4,SNR=12						
NVAR	Mina Array Bea	147.30	10	PKPbc	PKPdf	22 25 38.1	-0.7
	0.5nm,0.7s,baz=270,slow=7.4,SNR=3.6						

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*NIED **19** 22:16:00, 45.50N×151.00E, h11^{km}, Mw4.1 Best double couple: M$_0$1.34×10^{15} NP1:ϕ_s257°, δ57°, λ103°. NP2:ϕ_s54°, δ35°, λ71°.*

IDC 19 22:16:28.3±1.2**, 45.24N**×**148.38E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/21**, mbtmp3.7**/4**, Error ellipse: s-maj=55.8km s-min=34.1km az=87.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	FINESS Array B	63.95	333	P	P	22 27 02.9	-1.9
	0.8nm,0.7s,baz=34,slow=6.9,SNR=4.7						
ASAR	Alice Springs	69.83	194	P	P	22 27 40.6	-2.0
	0.5nm,0.8s,baz=11,slow=6.0,SNR=5.6						
GERES	GERESS Array B	78.28	331	P	P	22 28 29.7	-1.4
	0.3nm,0.4s,baz=45,slow=5.7,SNR=4.8						
TXAR	Lajitas Array	81.09	57	P	P	22 28 45.6	-1.1
	0.3nm,0.6s,baz=300,slow=4.1,SNR=4.7						

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*NEIC **19** 22:27:29.1, 36.49N×25.69E, h3^{km}, MD3.4(ATH), After ATH.*

*CSEM **19** 22:27:29.1, 36.49N×25.69E, h3^{km}, MD3.3/5, After ATH*

ATH 19 22:27:29.0, 36.51N×**25.75E, h2**^{km}**, MD3.3**/8**, ML3.6, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANT	Santorini	0.27	239	*e*Pg	Pg	22 27 35.5	+1.0
SANT				*e*Sg	Sg	22 27 38.9	+0.8
APE	Apeiranthos	0.58	343	*e*PG	Pg	22 27 39.8	-0.9
NPS	Neapolis	1.25	185	*e*PN	Pn	22 27 53.9	+0.5
KARP	Karpathos	1.49	130	*e*PN	Pn	22 27 57.0	+0.1
VAM	Vamos	1.67	229	*e*PB	Pb	22 27 58.8	-1.4
PTL	Penteli	2.15	316	*e*PG	Pg	22 28 08.9	-3.0
PTL	Penteli	2.15	316	*e*Pg	Pg	22 28 09.9	-2.0
ATH	Athens Observa	2.18	313	*e*PG	Pg	22 28 10.0	-2.6
NAIG	Nisos Aigina	2.19	305	*e*PG	Pg	22 28 09.5	-3.3
MPAR	Parnis Oros	2.29	316	*e*PG	Pg	22 28 11.0	-3.8

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*MOS **19** 22:49:13.9±1.1, 45.38N×151.18E, h33^{km}, mb4.1/8, Error ellipse: s-maj=19.6km s-min=16.5km az=62.9*

*IDC **19** 22:49:40.7±3.1, 45.26N×148.47E, h216^{km}±28^{km}, mb3.3/10, mb1 3.6/11, mb1mx3.3/23, mbtmp3.9/11, Error ellipse: s-maj=28.7km s-min=16.9km az=89.0*

ISC 19 22:49:12.7±2.9**, 45.4N**±0.1×**151.1E**±0.1**, h20**^{km}±19^{km}**, n37, σ0**^{s}**89**/39**, mb4.1**/16**, 4C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.31	266	*e*PN	Pn	22 49 49.0	-1.5
KUR				*i* S	Sn	22 50 17.2	-1.4
KUR				pmax	pmax		
	comp=N,160nm,0.4s						
KUR				pmax	pmax		
	comp=E,80nm,0.4s						
KUR				pmax	pmax		
	comp=Z,300nm,0.4s						
KUR				smax			
	comp=N,680nm,0.5s						
KUR				smax			
	comp=E,200nm,0.5s						
YUK	Yuzh-Kuril'sk	4.01	252	*e*PN	Pn	22 50 14.5	-0.1
YUK				*e*S	Sn	22 51 02.5	+1.0
YUK				pmax	pmax		
	comp=Z,250nm,0.3s						
YUK				smax			
	comp=N,230nm,0.5s						
YUK				smax			
	comp=E,460nm,0.5s						
ASAJ	Asahikawa	6.22	261	PN	Pn	22 50 47.7	+1.9
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	6.22	261	P	Pn	22 50 47.7	+1.9
	comp=Z,1.6nm,0.3s,baz=148,slow=27,SNR=7.2						
SKR	Severo-Kuril's	6.23	31	*e*PN	Pn	22 50 46.0	0.0
YKA	Yellowknife Ar	52.81	36	P	P	22 58 41.2	+13
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	52.81	36	P	P	22 58 41.2	+13
	comp=Z,0.6nm,0.9s,mb3.5,baz=293,slow=6.8,SNR=4.5						
JIRN	Jiri	53.67	274	*e*P	P	22 58 35.7	+0.5
	comp=Z,5.1nm,0.5s,mb4.7						
KKN	Kakani	54.23	275	*e*P	P	22 58 39.8	+0.5
	comp=Z,6.0nm,0.6s,mb4.7						
PKI	Pulchoki	54.28	275	*e*P	P	22 58 39.5	-0.1
	comp=Z,4.9nm,0.7s,mb4.5						
DMN	Daman	54.47	275	*e*P	P	22 58 41.3	+0.3
	comp=Z,6.8nm,0.7s,mb4.7						
GKN	Gorkha	54.55	276	*e*P	P	22 58 41.5	-0.2
	comp=Z,5.7nm,0.6s,mb4.8						
KOLN	Koldanda	55.42	276	*e*P	P	22 58 47.9	-0.2
	comp=Z,9.3nm,0.8s,mb4.8						
ARCES	ARCESS Array B	58.65	340	P	P	22 59 10.6	+0.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	58.65	340	P	P	22 59 10.6	+0.2
	comp=Z,1.5nm,0.8s,mb4.1,baz=40,slow=7.0,SNR=2.9						
FINES	FINESS Array B	64.64	334	P	P	22 59 49.6	-1.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	64.64	334	P	P	22 59 49.6	-1.0
	comp=Z,1.1nm,0.7s,mb4.0,baz=35,slow=9.0,SNR=8.7						
WRA	Warramunga Arr	66.82	197	P	P	23 00 04.3	-1.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	66.82	197	P	P	23 00 04.3	-1.0
	comp=Z,0.7nm,0.8s,mb3.7,baz=16,slow=6.9,SNR=6.2						
NB2	NORSAR Subarra	69.03	340	P	P	23 00 18.0	-0.4
	comp=Z,0.8nm,0.6s,mb3.8,baz=29,slow=6.2						
NOA	NORSAR Array B	69.03	340	P	P	23 00 18.2	-0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	69.03	340	P	P	23 00 18.2	-0.2
	comp=Z,0.8nm,0.6s,mb3.8,baz=31,slow=5.9,SNR=3.6						
GOF	Gofitskoye	69.77	314	*e*P	P	23 00 25.0	+1.8
ASAR	Alice Springs	70.53	197	P	P	23 00 27.9	-0.2
	comp=Z,0.5nm,0.8s,mb3.5,baz=14,slow=7.0,SNR=5.6						
AKASG	Malin Array Be	71.87	325	P	P	23 00 35.0	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.87	325	P	P	23 00 35.0	-0.9
	comp=Z,0.5nm,0.4s,mb3.8,baz=37,slow=6.2,SNR=5.4						
BURAR	Bucovina Array	75.92	326	⇓P	P	23 01 00.3	+1.0
CFR	Carcaliu	76.67	322	⇑P	P	23 01 04.1	+0.6
TIRR	Tirgusor	77.12	322	⇑P	P	23 01 06.0	-0.1
HARR	Harsova	77.14	322	⇑P	P	23 01 07.0	+0.8
MLR	Muntele Rosu	77.34	324	P	P	23 01 06.7	-0.6
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MLR	Muntele Rosu	77.34	324	P	P	23 01 06.7	-0.6
	comp=Z,1.8nm,0.7s,mb4.1,baz=261,slow=7.1,SNR=3.7						
MLR	Muntele Rosu	77.34	324	⇑P	P	23 01 06.7	-0.6
KHC	Kasperske Hory	78.82	333	*e*P	P	23 01 13.5	-1.8
GERES	GERESS Array B	79.03	333	P	P	23 01 17.4	+0.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	79.03	333	P	P	23 01 17.4	+0.9
	comp=Z,0.7nm,0.5s,mb3.8,baz=34,slow=4.8,SNR=8.6						
TXAR	Lajitas Array	79.35	59	P	P	23 01 32.9	+14
	comp=Z,0.5nm,0.6s,mb3.6,baz=310,slow=4.2,SNR=7.1						

IDC 19 23:10:12.5±8.5**, 4.42S**×**152.20E, h162**^{km}±55^{km}**, mb2.9**/3**, mb1 3.1**/4**, mb1mx3.1**/14**, mbtmp3.4**/4**, Error ellipse: s-maj=111.9km s-min=29.9km az=101.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.04	225	P	P	23 11 53.3	-0.7
	1.1nm,0.3s,baz=45,slow=16,SNR=3.5						
PMG				S	S	23 13 12.7	-0.3
	0.9nm,0.3s,baz=164,slow=23,SNR=2.1						
WB2	Warramunga Arr	23.24	227	*e*P	P	23 15 04.9	-1.5
WRA	Warramunga Arr	23.25	227	P	P	23 15 05.4	-1.1
	0.5nm,0.3s,baz=52,slow=9.8,SNR=21						
ASAR	Alice Springs	26.03	221	P	P	23 15 31.2	-1.3
	0.2nm,0.4s,baz=53,slow=8.9,SNR=6.2						
SONM	Songino Array	65.69	328	P	P	23 20 39.7	-2.1
	0.2nm,0.6s,baz=143,slow=6.1,SNR=3.3						

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*IDC **19** 23:17:11.7±0.9, 1.42N×98.86E, mb4.1/9, mb1 4.2/10, mb1mx4.1/18, mbtmp4.1/10, ML4.5/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/24, Error ellipse: s-maj=51.6km s-min=15.7km az=55.0*

*NEIC **19** 23:17:15.5±0.4, 1.37N×98.81E, h30^{km}, mb4.6/7, Error ellipse: s-maj=17.0km s-min=8.0km az=57.0*

ISC 19 23:17:14.4±0.6**, 1.47N**±0.09×**98.96E**±0.09**, h33**^{km}**, n25, σ0**^{s}**99**/22**, mb4.2**/16**, MS3.7**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	3.72	34	P	P	23 18 09.8	-1.0
KGM	Kluang	4.39	83	P	P	23 18 19.7	-0.8
CMAR	Chiang Mai Arr	16.88	360	Pn	P	23 21 11.7	+1.8
	0.6nm,0.3s,baz=192,slow=13,SNR=14						
CMAR				LR	LR	23 29 09.4	
	comp=Z,86nm,18.4s,baz=190,slow=42						
WRA	Warramunga Arr	40.70	123	P	P	23 24 54.4	+0.6
	2.0nm,0.7s,mb3.8,baz=301,slow=9.0,SNR=27						
WRA				PcP	PcP	23 26 55.8	+0.2
	0.5nm,0.7s,baz=310,slow=3.1,SNR=4.4						
WB2	Warramunga Arr	40.71	123	*e*P	P	23 24 53.9	+0.1
ASAR	Alice Springs	42.17	129	P	P	23 25 06.0	+0.1
	0.9nm,0.6s,mb3.5,baz=301,slow=7.5,SNR=19						
ASAR				PcP	PcP	23 27 02.5	+2.1
	2.3nm,1.2s,baz=321,slow=1.8,SNR=4.8						
ASAR				LR	LR	23 45 34.1	
	comp=Z,68nm,18.0s,MS3.6,baz=200,slow=40						
AAK	Ala-Archa	46.47	335	*e*P	P	23 25 39.9	-0.4
	8.6nm,1.3s,mb4.5						
SONM	Songino Array	46.63	7	P	P	23 25 41.7	+0.3
	0.9nm,0.9s,mb3.7,baz=184,slow=9.1,SNR=8.2						
SONM				PcP	PcP	23 27 17.2	+1.8
	1.0nm,0.7s,baz=198,slow=5.0,SNR=5.3						
CTA	Charters Tower	51.06	117	LR	LR	23 48 56.1	
	comp=Z,57nm,19.0s,MS3.6,baz=45,slow=37						
KURK	Kurchatov	52.01	344	*e*P	P	23 26 22.2	-0.5
	6.0nm,1.2s,mb4.4						
STKA	Stephens Creek	52.24	133	*e*P	P	23 26 25.3	+0.5
	2.5nm,0.6s,mb4.3						
STKA	Stephens Creek	52.24	133	P	P	23 26 25.5	+0.7
	2.9nm,0.7s,mb4.3,baz=308,slow=6.5,SNR=9.8						
STKA				LR	LR	23 47 56.2	
	comp=Z,84nm,20.9s,MS3.8,baz=22,slow=35						
STKA	Stephens Creek	52.24	133	*e*P	P	23 26 25.0	+0.2
ZAL	Zalesovo	53.58	350	P	P	23 26 34.8	+0.3
	1.2nm,0.5s,mb4.0,baz=304,slow=7.5,SNR=6.4						
BVAR	Borovoye Array	56.59	340	P	P	23 26 56.1	-0.2
	1.2nm,0.5s,mb4.2,baz=143,slow=7.2,SNR=3.5						
CHKZ	Chkalovo	57.05	340	*e*P	P	23 26 57.6	-1.9
	9.1nm,1.4s,mb4.6						
KMBO	Kilima Mbogo	61.75	268	P	P	23 27 30.5	-2.0
	1.6nm,0.8s,mb4.2						
GNI	Garni	62.33	315	*e*P	P	23 27 42.9	+6.9
	10nm,1.3s,mb4.8						
KIV	Kislovodsk	65.26	319	*e*P	P	23 27 58.4	+3.3
	7.1nm,1.0s,mb4.7						
BRTR	Keskin Array B	70.24	312	P	P	23 28 26.9	+0.6
	0.8nm,1.0s,mb3.6,baz=143,slow=7.2,SNR=3.3						
MA2	Magadan	70.34	25	*e*P	P	23 28 26.7	+0.2
	2.9nm,0.6s,mb4.4						
FINES	FINESS Array B	80.58	332	P	P	23 29 24.6	-0.3
	1.9nm,0.9s,mb4.0,baz=233,slow=9.5,SNR=4.9						
ARCES	ARCESS Array B	82.88	340	P	P	23 29 38.0	+1.2
	3.4nm,0.9s,mb4.4,baz=2.7,slow=26,SNR=3.1						
ARCES				LR	LR	00 11 44.6	
	comp=Z,64nm,21.5s,MS4.0,baz=194,slow=40						
TXAR	Lajitas Array	142.50	33	PKP	PKPdf	23 36 46.9	+2.2
	0.2nm,0.6s,baz=252,slow=2.9,SNR=3.3						
BDFB	Brasilia	144.52	245	PKP	PKPdf	23 36 50.7	+2.2
	1.5nm,0.5s,baz=121,slow=5.9,SNR=3.1						

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*BJI **19** 23:24:00.9, 21.70S×68.40W, h110^{km}*

*NEIC **19** 23:24:00.9±0.3, 21.70S×68.44W, mb4.5/17, Error ellipse: s-maj=9.7km s-min=6.4km az=82.0*

*IDC **19** 23:24:01.0±0.6, 21.78S×68.48W, h112^{km}±5^{km}, mb3.7/10, mb1 3.9/11, mb1mx3.8/17, mbtmp4.1/11, MS3.4/1, Ms1 3.4/1, ms1mx2.8/21, Error ellipse: s-maj=20.3km s-min=10.8km az=91.0*

*GUC **19** 23:24:01.3±0.8, 21.82S×68.90W, h115^{km}±8^{km}, ML4.4*

ISC 19 23:23:59.0±0.6**, 21.73S**±0.05×**68.52W**±0.07**, h111**^{km}±6^{km}**, h111**^{km}±.8^{km}**:pP-P, n53, σ1**^{s}**25**/56**, mb4.2**/21**, 2C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	0.95	202	*e*P	P	23 24 21.7	+1.6
LVC				*i* S	S	23 24 37.5	+1.6
LVC				AMP		23 24 38.9	
	comp=N,5µm,0.4s						
LVC	Limon Verde	0.95	202	P	P	23 24 22.2	+2.1
	comp=N,241nm,0.3s,baz=19,slow=7.5,SNR=2658						
LVC				S	S	23 24 38.0	+2.1
	comp=N,896nm,0.3s,baz=184,slow=19,SNR=74						
LVC	Limon Verde	0.95	202	*e*Pg	P	23 24 21.8	+1.7
LVC				*e*Sg	S	23 24 35.4	-0.5
SPCH	San Pedro de A	1.21	166	⇑*i*P	P	23 24 26.6	+3.7
SPCH				*i* S	S	23 24 46.0	+5.1
SPCH				AMP		23 24 55.8	
	comp=E,5µm,0.5s						
ANCH	Antofagasta	2.62	222	*e*P	P	23 24 41.9	+1.1
ANCH				*i* S	S	23 25 10.1	-2.1
ANCH				AMP		23 25 19.7	
	comp=N,2µm,0.3s						
CPN1	Cerro Paranal	3.37	211	*e*P	P	23 24 51.0	+0.1
CPN1				*i* S	S	23 25 28.8	-1.5
CPN1				AMP		23 25 40.4	
	comp=E,2µm,0.7s						
LPAZ	La Paz	5.42	4	P	P	23 25 21.2	+2.5
	comp=E,6.6nm,0.3s,baz=211,slow=6.5,SNR=135						
LPAZ	La Paz	5.42	4	*e*Pn	P	23 25 20.8	+2.1
LPAZ				*e*Sn		23 25 35.5	
ARE	Arequipa	5.94	331	⇑*i*P	P	23 25 23.7	-2.1
ARE				*e*S	S	23 26 30.0	-3.1
NNA	Nana	12.53	319	P	P	23 26 54.7	+0.2
SAML	Samuel	13.70	23	*e*P	P	23 27 08.3	-1.4
	comp=E,3.7nm,0.9s						
TRQA	Tornquist	17.23	162	*e*P	P	23 27 52.8	-1.2
	comp=E,46nm,1.1s						
PLCA	Paso Flores	19.03	185	P	P	23 28 13.8	-0.8
	comp=E,0.4nm,0.3s,baz=7.5,slow=11,SNR=16						
PLCA				LR	LR	23 35 42.1	
	comp=E,104nm,18.6s,baz=194,slow=37						
BDFB	Brasilia	20.34	76	P	P	23 28 27.2	-1.3
	comp=E,1.9nm,0.4s,baz=259,slow=9.3,SNR=7.7						
BAO	Brasilia Array	20.36	76	P	P	23 28 28.1	-0.6
BAO				*e*		23 29 49.0	
OTAV	Otavalo	23.88	335	*e*P	P	23 29 05.8	+2.4
	comp=E,16nm,1.0s,mb4.3						
NHSC	New Hope	55.65	348	P	P	23 33 25.2	-0.7
	comp=E,71nm,1.2s						
NHSC				*e*pP	pP	23 33 51.7	-1.0
ELN	Prospectdale	59.76	349	*e*P	P	23 33 54.8	+0.2
ELN				*e*pP	pP	23 34 22.3	+0.5
WVT	Waverly	60.37	342	*e*P	P	23 33 56.7	-2.1
	comp=E,15nm,1.0s,mb5.0						
WVT				*e*pP	pP	23 34 24.7	-1.4
WVT				*e*sP	sP	23 34 36.7	-1.7
MIAR	Mount Ida	60.82	336	*e*P	P	23 34 01.0	-0.8
	comp=E,11nm,1.0s,mb4.8						
MIAR				*e*pP	pP	23 34 27.6	-1.5
TXAR	Lajitas Array	61.02	325	P	P	23 34 03.3	0.0
	comp=E,0.7nm,0.7s,mb3.8,baz=149,slow=8.5,SNR=8.3						
TXAR				pP	pP	23 34 30.4	-0.1
	comp=E,1.0nm,0.8s,baz=135,slow=7.1,SNR=7.3						
TXAR	Lajitas Array	61.02	325	P	P	23 34 03.3	0.0
TXAR				pP	pP	23 34 30.4	-0.1
SNAA	Sanae	61.95	161	P	P	23 34 08.3	-0.7
	comp=E,0.7nm,0.6s,mb3.9,baz=169,slow=23,SNR=6.0						
SNAA	Sanae	61.95	161	*e*P	P	23 34 09.2	+0.2
	comp=E,96nm,1.0s						
FVM	French Village	62.86	341	*e*P	P	23 34 14.3	-1.1
	comp=E,15nm,1.0s,mb4.9						
ACSO	Alum Creek Sta	63.09	348	P	P	23 34 15.6	-1.4
	comp=E,10.0nm,1.1s,mb4.7						
ACSO				*e*pP	pP	23 34 44.0	-0.4
ANMO	Albuquerque	66.89	327	P	P	23 34 42.7	+1.2
	comp=E,1.4nm,0.7s,mb3.9,baz=96,slow=7.3,SNR=5.1						
ANMO				pP	pP	23 35 09.5	+0.3
	comp=E,2.5nm,0.8s,baz=144,slow=5.6,SNR=4.8						
ANMO	Albuquerque	66.89	327	*e*P	P	23 34 42.1	+0.6
	comp=E,1.9nm,0.7s,mb4.0						
ANMO				*e*pP	pP	23 35 08.9	-0.3
DBIC	Dimbokro	68.45	73	P	P	23 34 51.5	0.0
	comp=E,4.7nm,0.8s,mb4.4,baz=185,slow=10,SNR=13						
DBIC	Dimbokro	68.45	73	*e*P	P	23 34 50.9	-0.6
	comp=E,10nm,1.1s,mb4.6						
SDCO	Great Sand Dun	68.62	329	*e*P	P	23 34 52.3	+0.1
	comp=E,4.2nm,0.9s,mb4.3						
SDCO				*e*		23 35 00.3	
SDCO				*e*pP	pP	23 35 19.9	-0.1
WUAZ	Wupatki	69.92	324	*e*P	P	23 35 02.1	+1.9
	comp=E,220nm,1.2s						
WUAZ				*e*pP	pP	23 35 29.8	+1.6
PV01	Paradox Valley	70.43	327	*e*P	P	23 34 55.4	-7.8
PV01				*e*pP	pP	23 35 31.6	+0.4
PV10	Paradox Valley	70.85	327	*e*P	P	23 35 06.2	+0.4
PV10				*e*pP	pP	23 35 32.9	-0.9
SRU	San Rafael	72.16	327	*e*P	P	23 35 14.3	+0.7
SRU				*e*pP	pP	23 35 42.9	+1.2
MSU	Marysvale	72.57	325	*e*P	P	23 35 17.4	+1.5
MSU				*e*pP	pP	23 35 45.5	+1.4
MSU				*e*sP	sP	23 35 57.9	+1.8
PDAR	Pinedale Array	74.48	330	P	P	23 35 28.0	+1.0
	comp=E,0.7nm,0.7s,mb3.5,baz=120,slow=5.6,SNR=6.0						
PDAR				pP	pP	23 35 56.8	+1.5
	comp=E,0.6nm,0.7s,baz=124,slow=5.7,SNR=3.1						
HWUT	Hardware Ranch	74.56	328	*e*P	P	23 35 28.5	+1.0
	comp=E,2.2nm,0.6s,mb4.1						
HWUT				*e*pP	pP	23 35 56.4	+0.6
ULM	Lac du Bonnet	75.64	342	P	P	23 35 32.5	-0.9
	comp=E,0.9nm,0.5s,mb3.7,baz=138,slow=5.6,SNR=3.2						
SCHQ	Schefferville	76.26	1	P	P	23 35 35.7	-1.1
	comp=E,1.3nm,0.8s,mb3.7,baz=178,slow=8.1,SNR=4.0						
SCHQ	Schefferville	76.26	1	P	P	23 35 35.5	-1.2
	comp=E,9.3nm,1.3s,mb4.3						
HLID	Hailey	77.42	328	*e*P	P	23 35 45.7	+2.1
	comp=E,7.1nm,1.0s,mb4.3						
HLID				*e*pP	pP	23 36 14.2	+2.2
TSUM	Tsumeb	79.63	107	*e*P	P	23 35 57.4	+1.3
	comp=E,5.6nm,0.9s,mb4.4						
BMO	Blue Mountains	79.80	327	*e*P	P	23 35 56.9	+0.4
	comp=E,5.1nm,1.0s,mb4.3						
YBH	Yreka Blue Hor	80.61	322	P	P	23 35 59.9	-1.0
	comp=E,0.9nm,0.7s,mb3.7,baz=130,slow=10,SNR=3.7						
WALA	Waterton Lakes	81.24	332	*e*P	P	23 36 04.3	+0.3
	comp=E,1.9nm,0.8s,mb4.0						
WALA				*e*pP	pP	23 36 32.0	-0.6
FCC	Fort Churchill	82.93	347	*e*P	P	23 36 12.8	+0.3
	comp=E,5.4nm,0.8s,mb4.4						
FCC				*e*pP	pP	23 36 42.6	+1.3
EDM	Edmonton	84.12	335	P	P	23 36 18.5	0.0
EDM				*e*pP	pP	23 36 48.3	+1.0
YKA	Yellowknife Ar	91.52	340	P	P	23 36 54.9	+1.1
	comp=E,1.3nm,0.5s,mb4.4,baz=134,slow=4.4,SNR=49						
YKA				pP	pP	23 37 24.6	+1.6
	comp=E,1.8nm,0.7s,baz=134,slow=4.5,SNR=8.7						
ZAL	Zalesovo	142.00	26	PKP	PKPdf	23 43 20.8	+3.2
	comp=E,0.7nm,0.8s,baz=180,slow=3.0,SNR=5.3						
ZAL	Zalesovo	142.00	26	PKP	PKPdf	23 43 20.8	+3.2
SONM	Songino Array	153.63	8	PKP	PKPdf	23 43 40.5	+4.1
	comp=E,0.6nm,0.8s,baz=357,slow=1.5,SNR=5.9						
SONM				PKPbc	PKPdf	23 43 47.7	+11
	comp=E,0.5nm,0.8s,baz=312,slow=2.2,SNR=4.5						
CN2	Changchun	155.12	335	*e*PKP	PKPdf	23 43 42.3	+3.8

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*IDC **19** 23:36:48.8±0.9, 4.47S×153.13E, mb4.0/6, mb1 4.2/7, mb1mx4.1/15, mbtmp4.0/7, ML3.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/17, Error ellipse: s-maj=47.3km s-min=20.7km az=116.0*

*NEIC **19** 23:36:57.9±2.3, 4.51S×152.95E, h69^{km}±20^{km}, mb4.4/8, Error ellipse: s-maj=22.5km s-min=12.4km az=112.0*

ISC 19 23:36:55.5±3.5**, 4.6S**±0.1×**153.1E**±0.2**, h69**^{km}±31^{km}**, n19, σ0**^{s}**69**/19**, mb4.1**/13**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.63	231	Pn	P	23 38 45.8	-0.4
	1.4nm,0.3s,baz=57,slow=1.5,SNR=4.7						
PMG				Sn	S	23 40 12.8	+0.8
	3.9nm,0.3s,baz=139,slow=16,SNR=5.9						
PMG				LR	LR	23 41 30.4	
	comp=Z,110nm,18.5s,baz=81,slow=37						
CTAO	Charters Tower	16.83	203	*e*P	P	23 40 48.2	+0.1
	39nm,1.6s						
KAKA	Kakadu	21.98	247	*e*P	P	23 41 44.1	-1.1
	7.5nm,0.4s,mb4.4						
WB2	Warramunga Arr	23.84	229	*e*P	P	23 42 04.3	+1.0
WB2				*e*S	S	23 46 18.9	+7.7
WRA	Warramunga Arr	23.85	229	P	P	23 42 04.4	+1.0
	5.0nm,0.6s,mb4.0,baz=56,slow=11,SNR=99						
ASAR	Alice Springs	26.55	222	P	P	23 42 29.1	+0.1
	1.4nm,0.4s,mb3.8,baz=54,slow=9.0,SNR=34						
STKA	Stephens Creek	29.25	200	P	P	23 42 52.9	-0.4
	2.8nm,0.9s,mb3.9,baz=353,slow=9.0,SNR=5.2						
STKA	Stephens Creek	29.25	200	*e*P	P	23 42 52.5	-0.9
FITZ	Fitzroy Crossi	30.06	241	*e*P	P	23 42 59.4	-1.2
	9.3nm,0.8s,mb4.5						
MBWA	Marble Bar	36.37	240	*e*P	P	23 43 54.5	-0.7
	6.2nm,0.6s,mb4.7						
MA2	Magadan	63.96	359	*e*P	P	23 47 23.0	-0.6
	2.4nm,0.6s,mb4.2						
SONM	Songino Array	66.29	328	P	P	23 47 39.4	+0.6
	0.3nm,0.5s,mb3.4,baz=140,slow=5.4,SNR=7.1						
BILL	Bilibino	73.02	5	P	P	23 48 20.1	+0.7
	2.2nm,0.6s,mb4.2						
ILAR	Eielson Array	81.81	22	P	P	23 49 08.1	-0.2
	0.4nm,0.7s,mb3.3,baz=256,slow=4.6,SNR=9.7						
KURK	Kurchatov	83.78	322	P	P	23 49 18.4	-0.1
	4.0nm,1.4s,mb4.1						

INK	Inuvik	88.11	21	P	P	23 49 40.0	+0.6
	2.9nm,1.4s,mb4.1,baz=218,slow=5.2,SNR=4.7						
CHKZ	Chkalovo	89.20	324	eP	P	23 49 44.9	+0.1
	1.8nm,0.9s,mb4.1						
GERES	GERESS Array B	124.02	329	PKP	PKPdf	23 55 49.4	+3.2
	0.2nm,0.5s,baz=117,slow=3.0,SNR=4.3						
BDFB	Brasilia	151.01	134	PKPbc	PKPdf	23 56 45.9	+10
	7.8nm,0.8s,baz=319,slow=1.9,SNR=14						

BJI **19** *23:45:13.5, 4.86N×94.33E, h48^{km}, mB5.0, mb4.9, Ms4.6, Msz4.2*

MOS **19** *23:45:14.1±0.9, 5.23N×94.33E, h33^{km}, mb5.1/36, Error ellipse: s-maj=10.3km s-min=5.7km az=112.7*

NEIC **19** *23:45:15.5±0.2, 5.23N×94.33E, h30^{km}, mb4.9/48, Error ellipse: s-maj=5.9km s-min=4.7km az=217.0*

HRVD **19** *23:45:15.5±1.1, 4.97N×94.37E, h34^{km}±1^{km}, MW4.8/23, Centroid moment Tensor Solution. LP body waves: s12,c15;Mantle waves: s23,c31; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.77±.21; $M_{\theta\theta}$-0.48±.11; $M_{\phi\phi}$-1.29±.15; $M_{r\theta}$0.34±.15; $M_{\theta\phi}$0.45±.09; $M_{\phi r}$0.03±.18; Best double couple: $M_0$1.659×10^{16} NP1:ϕ_s345°,δ44°, λ103°. NP2:ϕ_s147°,δ48°,λ78°. Principal axes: T 1.824, Plg81°, Azm349°; N -.327, Plg9°, Azm155°; P -1.494, Plg2°, Azm246°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC **19** *23:45:18.1±5.0, 5.22N×94.29E, h50^{km}±43^{km}, mb4.5/21, mb1 4.5/22, mb1mx4.5/26, mbtmp4.7/22, ML5.1/1, MS3.8/9, Ms1 3.8/9, ms1mx3.5/25 Error ellipse: s-maj=21.5km s-min=12.3km az=43.0*

ISC 19 23:45:14.1±0.3**, 5.19N**±0.04×**94.33E**±0.04**, h33^{km}, (h34^{km}±.9^{km}:pP-P), n183, σ0^{s}.98**/176**, mb4.9**/85**, MS4.0**/14**, 11C-6D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.55	72	P	P	23 46 54.0	+3.4
	400nm,1.0s						
NNT	Nongplab	9.09	36	P	P	23 47 28.6	+2.7
CM31	Chiang Mai Arr	13.94	18	eP	P	23 48 34.8	+3.2
	24nm,0.6s						
CMAR	Chiang Mai Arr	13.94	18	P	P	23 48 34.7	+3.1
	2.7nm,0.3s,baz=208,slow=14,SNR=47						
CMAR				LR	LR	23 53 37.4	
	comp=Z,131nm,19.4s,baz=200,slow=36						
CHG	Chiang Mai	14.27	18	P	P	23 48 40.8	+4.8
HYB	Hyderabad	19.65	309	eP	P	23 49 41.0	-2.1
HYB				eS	S	23 53 12.0	-5.5
HYB	Hyderabad	19.65	309	i P	P	23 49 41.0	-2.1
HYB				eS	S	23 53 12.0	-5.5
QIZ	Qiongzhong	20.45	46	eP	P	23 49 52.2	+0.6
	51nm,1.1s						
KMI	Kunming	21.40	21	P	P	23 50 02.8	+1.6
KMI				PP	PP	23 50 27.9	+2.4
KMI				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.1						
KMI				LR	LR		
	comp=N,228nm,4.7s						
KMI				LR	LR		
	comp=E,231nm,5.0s						
KMI	Kunming	21.40	21	P	P	23 50 02.8	+1.6
	comp=E,13nm,1.3s,mb4.1						
KMI				pP		23 50 10.2	
KMI				PP	PP	23 50 27.9	+2.4
KMI				S	S	23 53 45.5	-6.4
KMI				LR	LR		
	comp=Z,250nm,17.2s,MS3.7						
JIRN	Jiri	23.65	342	eP	P	23 50 23.4	-0.1
	comp=Z,51nm,0.9s,mb4.9						
PKI	Pulchoki	23.82	340	eP	P	23 50 25.3	+0.1
	comp=Z,21nm,0.6s,mb4.7						
DMN	Daman	23.96	339	eP	P	23 50 27.1	+0.6
	comp=Z,45nm,0.6s,mb5.1						
KKN	Kakani	24.07	340	eP	P	23 50 27.7	+0.1
	comp=Z,26nm,0.6s,mb4.8						
GYA	Guiyang	24.21	28	⇓iP	P	23 50 30.8	+1.8
GYA				AMB	AMB		
	comp=Z,70nm,0.6s,mb5.3						
GYA				AMB	AMB		
	comp=Z,140nm,4.8s						
GKN	Gorkha	24.49	339	eP	P	23 50 32.1	+0.4
	comp=Z,111nm,0.8s,mb5.3						
LSA	Lhasa	24.56	353	P	P	23 50 34.0	+1.6
LSA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
LSA	Lhasa	24.56	353	eP	P	23 50 32.8	+0.4
LSA				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.0						
LSA	Lhasa	24.56	353	eP	P	23 50 32.8	+0.4
	comp=Z,31nm,0.7s,mb4.9						
KOLN	Koldanda	24.67	337	eP	P	23 50 34.1	+0.7
	comp=Z,78nm,0.7s,mb5.3						
CD2	Chengdu	27.08	18	eP	P	23 50 55.0	-0.9
ENH	Enshi	28.75	28	eP	P	23 51 09.5	-1.4
	comp=Z,26nm,0.6s,mb5.1						
WHN	Wuhan	31.49	34	eP	P	23 51 36.0	+0.7
XAN	Xi'an	31.74	23	P	P	23 51 36.3	-1.2
XAN				AMB	AMB		
	comp=Z,49nm,0.7s,mb5.5						
LZH	Lanzhou	31.97	15	⇓P	P	23 51 37.5	-1.9
LZH				AMB	AMB		
	comp=Z,29nm,1.5s,mb4.9						
LZH				LR	LR		
	comp=N,223nm,13.9s						
LZH				LR	LR		
	comp=Z,289nm,17.6s,MS4.0						
LZH	Lanzhou	31.97	15	⇓P	P	23 51 37.5	-1.9
LZH				*PP	pP	23 51 47.2	-1.9
LZH				*SP	sP	23 51 51.3	-2.1
LZH				pmax	pmax		
	comp=Z,29nm,1.5s,mb4.9						
LZH				MLR	MLR		
	comp=Z,290nm,17.6s,MS4.0						
LZH	Lanzhou	31.97	15	⇓P	P	23 51 37.5	-1.9
	comp=Z,29nm,1.5s,mb4.9						
LZH				pP	pP	23 51 47.2	-1.9
LZH				sP	sP	23 51 51.3	-2.1
LZH				LR	LR		
	comp=Z,290nm,17.6s,MS4.0						
GTA	Gaotai	34.43	8	P	P	23 52 00.5	-0.1
GTA				AMB	AMB		
	comp=Z,22nm,0.9s,mb5.1						
NJ2	Nanjing	35.23	38	eP	P	23 52 08.3	+0.7
NJ2				AP	pP	23 52 17.9	+0.6
NJ2				PP	PP	23 53 29.3	+2.2
NJ2				PPP	PPP	23 53 49.0	+3.5
NJ2				S	S	23 57 41.0	+3.0
NJ2				AMB	AMB		
	comp=Z,190nm,1.0s,mb6.0						
NJ2				AMB	AMB		
	comp=Z,1µm,4.2s						
NJ2				LR	LR		
	comp=N,742nm,15.2s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,15.7s,MS4.8						
NJ2				LR	LR		
	comp=Z,973nm,16.0s,MS4.7						
SSE	Sheshan	36.06	41	P	P	23 52 12.6	-2.1
SSE				AMB	AMB		
	comp=Z,93nm,0.7s,mb5.8						
SSE				AMB	AMB		
	comp=Z,313nm,4.8s						
SSE	Sheshan	36.06	41	P	P	23 52 12.6	-2.1
	comp=Z,93nm,0.7s,mb5.8						
MBWA	Marble Bar	36.15	137	P	P	23 52 15.2	-0.2
	comp=Z,27nm,1.2s,mb5.0						
FITZ	Fitzroy Crossi	38.59	128	⇑iP	P	23 52 35.7	-0.3
	comp=Z,21nm,0.6s,mb5.0						
HHC	Hu-ho-hao-te	38.73	21	eP	P	23 52 37.6	+0.7
HHC				AP	pP	23 52 47.6	+1.0
HHC				PP	PP	23 54 10.1	+0.5
HHC				PCP	PcP	23 54 50.4	+1.6
HHC				S	S	23 58 30.3	-1.2
HHC				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,167nm,5.6s						
HHC				LR	LR		
	comp=E,322nm,5.4s						
HHC				LR	LR		
	comp=Z,179nm,21.6s,MS3.9						
JOW	Kunigami	38.87	53	P	P	23 52 40.1	+2.0
	comp=Z,23nm,0.4s,mb5.2,baz=173,slow=9.0,SNR=3.3						
WMQ	Urumqi	38.92	352	eP	P	23 52 39.5	+1.1
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.0						
BJT	Baijiatuau	39.87	26	P	P	23 52 46.1	-0.3
BJT				pmax	pmax		
	comp=Z,18nm,0.9s						
BJT	Baijiatuau	39.87	26	P	P	23 52 46.1	-0.3
	comp=Z,18nm,0.9s,mb4.8						
BJI	Beijing	39.89	26	P	P	23 52 47.9	+1.4
BJI				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.7						
BJI	Beijing	39.89	26	P	P	23 52 47.9	+1.4
	comp=Z,15nm,0.9s,mb4.7						
UCH	Uchtor	40.88	337	P	P	23 52 55.8	+1.0
	SNR=8.2						
KBK	Karagaybulak	41.09	338	P	P	23 52 57.8	+1.4
	SNR=14						
AML	Almayashu	41.12	337	P	P	23 52 58.0	+1.3
	SNR=14						
AAK	Ala-Archa	41.23	338	eP	P	23 52 58.1	+0.4
AAK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.6						
AAK	Ala-Archa	41.23	338	eP	P	23 52 58.1	+0.4
	comp=Z,18nm,1.1s,mb4.6						
EKS2	Erkin-Say	41.53	337	P	P	23 53 01.2	+1.1
	SNR=7.6						
USP	Ospenovka	41.78	338	P	P	23 53 02.6	+0.4
	SNR=13						
KAKA	Kakadu	41.84	115	⇓iP	P	23 53 02.3	-0.7
	comp=Z,8.7nm,0.5s,mb4.6						
MKAR	Makanchi Array	42.73	348	i P	P	23 53 10.1	+0.2
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SONM	Songino Array	43.73	12	P	P	23 53 18.1	0.0
	comp=Z,10nm,0.7s,mb4.7,baz=192,slow=8.1,SNR=120						
SONM				PcP	PcP	23 55 05.1	0.0
	comp=Z,3.5nm,0.6s,baz=196,slow=3.5,SNR=9.3						
ULN	Ulaanbaatar	43.90	12	eP	P	23 53 18.8	-0.6
ULN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
ULN	Ulaanbaatar	43.90	12	eP	P	23 53 18.8	-0.6
	comp=Z,7.9nm,0.6s,mb4.6						
ZAK	Zakamensk	45.66	8	eP	P	23 53 33.1	-0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
WRA	Warramunga Arr	46.59	124	P	P	23 53 41.6	+0.4
	comp=Z,23nm,0.6s,mb5.3,baz=302,slow=9.2,SNR=202						
WB2	Warramunga Arr	46.60	124	⇑iP	P	23 53 41.6	+0.4
TLY	Talaya	46.98	8	eP	P	23 53 44.2	+0.4
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TLY				MLR	MLR		
	comp=Z,74nm,14.0s,MS3.8						
TLY	Talaya	46.98	8	eP	P	23 53 44.0	+0.2
	comp=Z,4.9nm,0.8s,mb4.5						
CN2	Changchun	47.21	31	eP	P	23 53 45.5	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
KURK	Kurchatov	47.25	346	eP	P	23 53 46.2	+0.3
KURK				e		23 53 59.1	
KURK				e		23 55 17.2	
KURK				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
KURK	Kurchatov	47.25	346	P	P	23 53 46.3	+0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
KURK	Kurchatov	47.25	346	eP	P	23 53 46.2	+0.3
	comp=Z,23nm,0.8s,mb5.2						
KURK				e		23 53 59.1	
KURK				ePcP	PcP	23 55 17.2	0.0
ASPA	Alice Springs	48.08	128	⇑iP	P	23 53 53.0	+0.1
ASAR	Alice Springs	48.09	128	P	P	23 53 53.0	+0.1
	comp=Z,8.2nm,0.7s,mb4.9,baz=297,slow=7.7,SNR=93						
ASAR				LR	LR	00 13 47.4	
	comp=Z,58nm,21.4s,MS3.5,baz=142,slow=36						
HIA	Hailar	48.91	22	P	P	23 53 58.2	-0.7
HIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HIA	Hailar	48.91	22	P	P	23 53 58.2	-0.7
	comp=Z,7.9nm,0.9s,mb4.7						
ZAL	Zalesovo	49.22	353	P	P	23 54 01.6	+0.4
	comp=Z,8.9nm,0.7s,mb4.9,baz=298,slow=5.8,SNR=55						
ZAL				LR	LR	00 19 52.4	
	comp=Z,76nm,18.6s,MS3.7,baz=165,slow=42						
MDJ	Mudanjiang	49.93	33	P	P	23 54 04.0	-2.9
	comp=Z,192nm,2.0s,mb5.8						
NVS	Novosibirsk	50.31	352	⇑iP	P	23 54 08.1	-1.5
NVS				e		23 54 15.4	
NVS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
NVS				pmax	pmax		
	comp=N,13nm,1.0s						
RAYN	Ar Rayn	50.40	296	P	P	23 54 11.9	+1.2
	comp=N,48nm,0.5s,mb5.8,SNR=10						
CBIJ	Chichi jima	50.47	59	P	P	23 54 10.4	-0.7
	comp=N,148nm,1.0s,mb6.0,baz=302,slow=23,SNR=4.9						
MAJO	Matsushiro	50.84	46	P	P	23 54 14.4	+0.5
BVA0	Borovoye Array	51.58	342	P	P	23 54 18.4	-0.8
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BVAR	Borovoye Array	51.58	342	P	P	23 54 18.5	-0.7
	comp=Z,4.8nm,0.5s,mb4.7,baz=141,slow=9.2,SNR=18						
BVAR				PcP	PcP	23 55 33.1	+0.2
	comp=Z,2.9nm,0.7s,baz=153,slow=6.4,SNR=3.0						
CHKZ	Chkalovo	52.07	342	eP	P	23 54 22.5	-0.3
CHKZ				e		23 55 34.7	
CHKZ				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
CHKZ	Chkalovo	52.07	342	eP	P	23 54 22.5	-0.3
	comp=Z,21nm,0.6s,mb5.2						
CHKZ				ePcP	PcP	23 55 34.7	-0.1
KLR	Kul'dur	54.10	29	eP	P	23 54 36.0	-2.0
PMG	Port Moresby	54.61	105	eP	P	23 54 41.4	-0.8
PMG				e		23 54 54.2	
PMG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PMG	Port Moresby	54.61	105	P	P	23 54 41.5	-0.7
	comp=Z,17nm,0.8s,mb5.1,baz=188,slow=9.8,SNR=6.1						
PMG	Port Moresby	54.61	105	eP	P	23 54 41.4	-0.8
	comp=Z,8.9nm,0.6s,mb5.0						
PMG				e		23 54 54.2	
BOD	Bodaibo	54.70	13	⇓iP	P	23 54 41.3	-1.0
BOD				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
GNI	Garni	56.45	316	eP	P	23 54 53.3	-1.9
GNI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GNI	Garni	56.45	316	eP	P	23 54 53.3	-1.9
	comp=Z,5.7nm,0.7s,mb4.7						
CTA	Charters Tower	56.86	118	LR	LR	00 21 24.0	
	comp=Z,114nm,18.2s,MS4.0,baz=228,slow=38						
CTAO	Charters Tower	56.86	118	P	P	23 54 57.2	-1.2
CTAO				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
CTAO	Charters Tower	56.86	118	P	P	23 54 57.2	-1.2
	comp=Z,12nm,1.1s,mb4.9						
ASAJ	Asahikawa	57.33	40	P	P	23 55 01.9	+0.5
	comp=Z,9.4nm,0.8s,mb4.8,baz=243,slow=11,SNR=4.6						
KMBO	Kilima Mbogo	57.35	265	P	P	23 55 01.8	-0.2
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMBO	Kilima Mbogo	57.35	265	P	P	23 55 03.6	+1.6
	comp=Z,1.2nm,0.6s,mb4.1,baz=52,slow=12,SNR=4.9						
KMBO				LR	LR	00 15 25.4	
	comp=Z,106nm,20.0s,MS4.0,baz=97,slow=32						
KMBO	Kilima Mbogo	57.35	265	P	P	23 55 01.8	-0.2
	comp=Z,3.4nm,0.9s,mb4.4						
SVE	Sverdlovsk	57.95	339	⇑eP	P	23 55 04.5	-1.1
SVE				e	pP	23 55 15.5	-0.2
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
STKA	Stephens Creek	58.14	133	⇑iP	P	23 55 07.0	-0.2
	comp=Z,5.8nm,0.7s,mb4.7						
STKA	Stephens Creek	58.14	133	P	P	23 55 07.0	-0.2
	comp=Z,3.3nm,0.6s,mb4.6,baz=310,slow=7.8,SNR=10						
KIV	Kislovodsk	59.44	319	eP	P	23 55 14.7	-1.4
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
KIV	Kislovodsk	59.44	319	eP	P	23 55 14.7	-1.4
	comp=Z,10nm,0.8s,mb4.9						
MALT	Malatya	60.35	311	eP	P	23 55 20.9	-1.5
MALT				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
MALT	Malatya	60.35	311	eP	P	23 55 20.9	-1.5
	comp=Z,3.2nm,0.8s,mb4.4						
EIL	Elat	60.94	301	P	P	23 55 26.1	-0.4
	comp=Z,7.7nm,1.1s,mb4.8						
SOC	Sochi	61.26	317	eP	P	23 55 25.6	-2.9
SOC				e		23 56 06.9	
SOC				e		23 57 41.3	
SOC				ePPP	PPP	23 59 07.3	-6.6
SOC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
SOC				pmax	pmax		
	comp=N,2.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.5s						
YAK	Yakutsk	62.47	18	eP	P	23 55 34.0	-2.4
YAK				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.5						
YAK	Yakutsk	62.47	18	eP	P	23 55 34.0	-2.3
	comp=Z,61nm,1.4s,mb5.5						
BRTR	Keskin Array B	64.33	312	P	P	23 55 47.8	-1.2
	comp=Z,6.9nm,0.6s,mb4.8,baz=128,slow=7.3,SNR=49						
OBN	Obninsk	67.74	328	α iP	P	23 56 09.3	-1.1
OBN				e		23 56 24.9	
OBN						23 58 47.0	
OBN				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
OBN	Obninsk	67.74	328	eP	P	23 56 09.1	-1.3
	comp=Z,21nm,0.7s,mb5.3						
LSZ	Lusaka	68.58	251	eP	P	23 56 16.1	-0.1
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
LSZ	Lusaka	68.58	251	eP	P	23 56 16.1	-0.2
	comp=Z,7.9nm,1.2s,mb4.5						
MA2	Magadan	69.05	27	c iP	P	23 56 18.0	-0.4
MA2				pmax	pmax		
	comp=N,2.0nm,0.6s						
MA2				pmax	pmax		
	comp=E,2.0nm,0.6s						
MA2				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
MA2	Magadan	69.05	27	eP	P	23 56 17.6	-0.8
	comp=Z,17nm,0.8s,mb5.0						
TIRR	Tirgusor	69.28	316	P	P	23 56 19.5	-0.6
CFR	Carcaliu	69.64	316	P	P	23 56 22.0	-0.3
HARR	Harsova	69.67	316	P	P	23 56 22.2	-0.3
TIXI	Tiksi	69.81	11	eP	P	23 56 21.7	-1.2
TIXI				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,109nm,15.0s,MS4.2						
AKASG	Malin Array Be	70.37	322	P	P	23 56 25.1	-1.5
	comp=Z,4.0nm,0.6s,mb4.6,baz=88,slow=5.0,SNR=26						
VRI	Vrincioaia	70.77	317	P	P	23 56 29.3	+0.2
MLR	Muntele Rosu	71.22	316	P	P	23 56 32.2	+0.3
	comp=Z,14nm,0.8s,mb4.9,baz=155,slow=2.0,SNR=40						
LBTB	Lobatse	73.14	242	eP	P	23 56 44.7	+0.9
LBTB				e		23 56 57.7	
LBTB				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
LBTB	Lobatse	73.14	242	eP	P	23 56 44.7	+0.9
	comp=Z,15nm,1.1s,mb4.8						
LBTB				e		23 56 57.7	
JOF	Joensuu	73.34	335	ep	P	23 56 43.1	-1.0
	comp=Z,8.0nm,0.8s,mb4.7						
BOSA	Boshof	74.34	239	eP	P	23 56 51.3	+0.7
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BOSA	Boshof	74.34	239	eP	P	23 56 51.3	+0.7
	comp=Z,4.1nm,0.7s,mb4.5						
KOLS	Kolonicke sedl	74.34	319	eP	P	23 56 50.8	+0.6
SUW	Suwalki	74.78	325	eP	P	23 56 51.7	-1.0
SUW				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.5						
SUW	Suwalki	74.78	325	eP	P	23 56 51.7	-1.0
	comp=Z,62nm,1.0s,mb5.5						
FINES	FINESS Array B	75.16	333	P	P	23 56 54.2	-0.5
	comp=Z,6.3nm,0.5s,mb4.8,baz=97,slow=5.8,SNR=118						
FINES				LR	LR	00 33 03.4	
	comp=Z,75nm,18.4s,MS4.0,baz=320,slow=38						
KAF	Kangasniemi	75.25	333	ep	P	23 56 54.5	-0.7
	comp=Z,5.7nm,0.5s,mb4.8,baz=103,slow=5.3						
KAF	Kangasniemi	75.25	333	eP	P	23 56 54.5	-0.7
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
OJC	Ojcow	76.14	320	eP	P	23 57 00.6	+0.1
VYHS	Vyhne	76.53	319	eP	P	23 57 02.8	+0.1
OKC	Ostrava-Krasne	77.15	320	eP	P	23 57 06.4	+0.2
MORC	Moravsky Berou	77.53	320	eP	P	23 57 08.0	-0.3
MORC				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MORC	Moravsky Berou	77.53	320	eP	P	23 57 08.0	-0.4
	comp=Z,5.7nm,0.9s,mb4.5						
ZST	Bratislava	77.64	318	eP	P	23 57 09.3	+0.3
ARCES	ARCESS Array B	77.84	340	P	P	23 57 09.7	0.0
	comp=Z,4.3nm,0.9s,mb4.4,baz=105,slow=6.8,SNR=16						
ARCES				LR	LR	00 34 21.1	
	comp=Z,97nm,18.5s,MS4.2,baz=197,slow=38						
DPC	Dobruska-Polom	78.37	320	eP	P	23 57 13.5	+0.6
KSP	Ksiaz	78.44	321	eP	P	23 57 14.0	+0.7
BILL	Bilibino	78.50	21	P	P	23 57 12.8	-0.5
BILL				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
BILL	Bilibino	78.50	21	P	P	23 57 12.8	-0.5
	comp=Z,6.9nm,0.6s,mb4.8						
UPC	Upice	78.59	320	eP	P	23 57 15.0	+0.9
SUR	Sutherland	78.98	236	P	P	23 57 18.5	+1.9
	comp=Z,10nm,0.7s,mb4.9						
TSUM	Tsumeb	79.26	249	P	P	23 57 18.9	+0.5
	comp=Z,4.7nm,0.9s,mb4.4						
PRU	Pruhonice	79.48	320	eP	P	23 57 19.3	+0.3
PVCC	Panska Ves	79.50	320	eP	P	23 57 19.7	+0.6
BRG	Berggiesshubel	79.93	321	eP	P	23 57 22.0	+0.6
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BRG	Berggiesshubel	79.93	321	eP	P	23 57 22.0	+0.6
	comp=Z,6.0nm,0.8s,mb4.6						
GEC2	GERESS Array S	79.95	319	eP	P	23 57 22.1	+0.6
GEC2				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GEC2	GERESS Array S	79.95	319	eP	P	23 57 22.1	+0.6
	comp=Z,12nm,1.0s,mb4.8						
GERES	GERESS Array B	79.95	319	P	P	23 57 22.1	+0.5
	comp=Z,3.9nm,0.6s,mb4.5,baz=100,slow=5.0,SNR=47						
KHC	Kasperske Hory	80.05	319	eP	P	23 57 22.3	+0.2
WET	Wettzell	80.50	319	eP	P	23 57 25.0	+0.5
WET				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
WET	Wettzell	80.50	319	eP	P	23 57 25.0	+0.5
	comp=Z,7.0nm,1.1s,mb4.5						
CLL	Collm	80.55	321	eP	P	23 57 25.0	+0.3
CLL	Collm	80.55	321	P	P	23 57 25.0	+0.3
HFS	Hagfors	80.86	330	P	P	23 57 26.0	-0.2
	comp=Z,4.4nm,0.5s,mb4.7,baz=104,slow=6.1,SNR=52						
MOX	Moxa	81.39	320	eP	P	23 57 29.9	+0.8
MOX	Moxa	81.39	320	i P	P	23 57 29.9	+0.8
GRA1	Grafenberg Arr	81.61	319	eP	P	23 57 31.1	+0.8
	comp=Z,13nm,1.0s,mb4.8						
GRF	Grafenberg Arr	81.61	319	eP	P	23 57 31.1	+0.8
GRF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
GRF	Grafenberg Arr	81.61	319	eP	P	23 57 31.1	+0.8
GRF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
GRF	Grafenberg Arr	81.61	319	eP	P	23 57 31.1	+0.8
	comp=Z,13nm,1.0s,mb4.8						
NB2	NORSAR Subarra	82.15	331	P	P	23 57 32.0	-0.8
	comp=Z,3.2nm,0.7s,mb4.4,baz=95,slow=5.6						
NB2	NORSAR Subarra	82.15	331	P	P	23 57 32.0	-0.8
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NOA	NORSAR Array B	82.15	331	P	P	23 57 32.6	-0.2
	comp=Z,2.1nm,0.6s,mb4.2,baz=95,slow=5.4,SNR=8.6						
NOA				LR	LR	00 37 02.0	
	comp=Z,64nm,18.7s,MS4.0,baz=305,slow=38						
CLZ	Clausthal	82.21	321	eP	P	23 57 33.9	+0.5
	comp=Z,10.0nm,1.0s,mb4.7						
BSEG	Bad Segeberg	82.31	324	eP	P	23 57 34.6	+0.8
BFO	Black Forest	83.50	318	eP	P	23 57 40.1	+0.1
BFO				pmax	pmax		
	comp=Z,18nm,1.6s,mb4.8						
BFO	Black Forest	83.50	318	eP	P	23 57 40.1	+0.1
	comp=Z,18nm,1.6s,mb4.8						
LPG	La Plagne	84.64	315	⇑iP	P	23 57 46.7	+0.9
	comp=Z,14nm,0.8s,mb4.8						
LPG	La Plagne	84.64	315	⇑iP	P	23 57 46.7	+0.9
LPG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
EKA	Eskdalemuir Ar	90.03	325	P	P	23 58 12.4	+0.8
	comp=Z,4.9nm,0.8s,mb4.9,baz=96,slow=5.4,SNR=12						

VNDA	Vanda	90.28	168	P	P	23 58 13.4	+1.0
VNDA				pmax	pmax		
	comp=Z,25nm,1.5s						
VNDA	Vanda	90.28	168	P	P	23 58 13.4	+1.0
	comp=Z,25nm,1.5s,mb5.3						
ILAR	Eielson Array	97.14	22	P	P	23 58 43.1	-0.9
	comp=Z,0.4nm,0.7s,mb4.0,baz=280,slow=4.6,SNR=5.6						
DBIC	Dimbokro	98.49	278	LR	LR	00 39 38.2	
	comp=Z,58nm,19.2s,MS4.1,baz=79,slow=33						
INK	Inuvik	99.50	16	P	P	23 58 55.1	+0.5
	comp=Z,1.6nm,1.0s,mb4.4,baz=321,slow=4.6,SNR=11						
SCHQ	Schefferville	118.17	348	PKP	PKPdf	00 03 59.8	+2.0
	comp=Z,1.3nm,0.6s,baz=301,slow=5.9,SNR=7.9						
ULM	Lac du Bonnet	124.08	8	PKP	PKPdf	00 04 10.3	+0.9
	comp=Z,1.8nm,0.6s,baz=4.1,slow=2.9,SNR=6.4						
NVAR	Mina Array Bea	127.09	32	PKP	PKPdf	00 04 18.9	+3.3
	comp=Z,0.9nm,0.6s,baz=349,slow=1.6,SNR=8.0						
NVAR	Mina Array Bea	127.09	32	PKP	PKPdf	00 04 18.9	+3.3
SADO	Sadowa	129.93	354	PKP	PKPdf	00 04 22.9	+2.0
	comp=Z,8.8nm,1.1s,baz=308,slow=3.2,SNR=4.1						
ANMO	Albuquerque	135.53	25	PKP	PKPdf	00 04 35.2	+3.6
	comp=Z,0.6nm,0.7s,baz=303,slow=2.3,SNR=4.0						
TXAR	Lajitas Array	141.56	26	PKhKP		00 04 38.6	
	comp=Z,0.4nm,0.6s,baz=207,slow=0.9,SNR=6.7						
BDFB	Brasilia	141.60	251	PKP	PKPdf	00 04 45.8	+2.6
	comp=Z,2.3nm,0.7s,baz=136,slow=3.2,SNR=3.7						
JCT	Junction City	142.04	20	*e*PKPdf	PKPdf	00 04 39.2	-4.3
LPAZ	La Paz	159.56	236	PKPab	PKPab	00 05 50.8	+0.1
	comp=Z,1.5nm,0.8s,baz=59,slow=5.9,SNR=4.8						

*ISK **20** 00:26:11.9, 38.15N×26.79E, h7^{km}, MD3.4*
*ATH **20** 00:26:12.4, 38.11N×26.77E, h33^{km}±5^{km}, MD3.4/3*
*CSEM **20** 00:26:12.5±0.1, 38.14N×26.82E, h12^{km}, MD3.4, Error ellipse: s-maj=4.2km s-min=2.2km az=94.0*
ISC 20 00:26:12.2±1.0, **38.15N**±0.03×**26.76E**±0.06, **h6**^{km}±7^{km}, **n25**, σ**0^{s}63**/32, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.33	43	*i* PG	Pg	00 26 18.8	0.0
BLCB				*i* SG	Sg	00 26 22.9	-0.3
SMG	Samos	0.44	172	*e*PB	Pb	00 26 21.9	0.0
KDAG	Bornova	0.47	57	*i* P	Pg	00 26 21.8	0.0
KDAG				*i* S	Sg	00 26 28.2	+0.1
AYDN	Tasoluk	1.01	118	*i* P	Pb	00 26 32.2	+0.5
AYDN				*i* S	Sb	00 26 45.4	+0.4
AKS	Akhisar	1.10	48	*i* PN	Pn	00 26 33.0	-1.1
AKS				*i* SN	Sn	00 26 48.4	-1.3
AYVA	Ayvalik	1.16	357	*i* P	Pb	00 26 34.6	+0.4
AYVA				*i* S	Sb	00 26 51.5	+2.2
PRK	Paraskevi	1.16	341	*e*PN	Pn	00 26 34.5	-0.4
BODT	Bodrum	1.17	158	PN	Pn	00 26 34.0	-1.0
BODT				SN	Sn	00 26 51.3	0.0
MLSB	Milas	1.17	136	*i* PN	Pn	00 26 34.8	-0.2
BDRM	Kayabasi	1.21	153	*i* P	Pb	00 26 36.0	+0.9
BDRM				*i* S	Sb	00 26 51.6	+0.9
APE	Apeiranthos	1.45	223	*e*PN	Pn	00 26 38.9	-0.1
APE	Apeiranthos	1.45	223	*e*PN	Pn	00 26 38.1	-0.9
YER	Yerkesik	1.58	129	*e*PN	Pn	00 26 40.4	-0.4
BALB	Balikesir	1.73	30	*e*PN	Pn	00 26 43.7	+0.7
DENT	Denizli	1.84	102	*e*PN	Pn	00 26 44.2	-0.4
LIA	Limnos Island	2.14	325	*e*PN	Pn	00 26 48.7	-0.1
EDC	Edincik	2.36	21	*e*PN	Pn	00 26 52.4	+0.4
BNT	Bandirma	2.38	22	*e*PN	Pn	00 26 52.7	+0.3
ORLT	Orhaneli	2.52	41	*e*PN	Pn	00 26 54.2	-0.2
MRMT	Marmara Adasi	2.54	15	*e*PN	Pn	00 26 54.5	-0.1
MFT	Murefte	2.67	9	*e*PN	Pn	00 26 56.3	-0.1
RDO	Rodhopi	3.14	343	*e*PN	Pn	00 27 02.4	-0.8
YLV	Yalova	3.15	39	*e*PN	Pn	00 27 03.4	0.0
ISK	Istanbul-Kandi	3.41	31	*e*PN	Pn	00 27 07.0	0.0
HRT	Hereke	3.49	39	*e*PN	Pn	00 27 08.6	+0.4

*THR **20** 00:46:09.9±0.9, 36.56N×53.00E, h15^{km}±10^{km}, ML4.3*
*MOS **20** 00:46:10.1±1.1, 36.41N×53.02E, h33^{km}, mb4.4/11, Error ellipse: s-maj=14.2km s-min=7.8km az=129.1*
*IDC **20** 00:46:11.6±1.7, 36.38N×52.99E, h29^{km}±4^{km}, mb3.5/14, mb1 3.7/17, mb1mx3.6/26, mbtmp3.7/17, ML2.6/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/17, Error ellipse: s-maj=41.2km s-min=15.1km az=9.0*
*CSEM **20** 00:46:11.5±0.1, 36.55N×52.93E, h31^{km}, mb4.3/10, ML5.4/1, Error ellipse: s-maj=1.6km s-min=1.4km az=79.0*
*TEH **20** 00:46:13.2, 36.48N×52.94E, h9^{km}, Mn4.6*
*NEIC **20** 00:46:13.2±0.3, 36.57N×52.89E, mb4.6/7, MN4.6(TEH), Error ellipse: s-maj=5.6km s-min=4.7km az=210.0*
NEIC Felt at Babol.
ISC 20 00:46:11.3±0.3, **36.61N**±0.02×**52.98E**±0.04, **h30**^{km}, **h30**^{km}±1.3^{km}**:pP-P**, **n109**, σ**1^{s}14**/116, **mb4.1**/20, **MS3.3**/2, **4C-2D**, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGLO	Galoogah	0.52	126	Pg	Pb	00 46 25.9	+3.9
IPRN	Paran-Amol	0.70	238	Pg	Pb	00 46 32.3	+7.4
IFIR	Firoozkooh	0.99	191	Pg	Pn	00 46 28.4	-0.9
IFIR				Sg	Sn	00 46 39.8	-2.5
ILAS	Lasjerd	1.23	181	Pg	Pn	00 46 33.1	+0.4
IAFJ	Afjeh	1.27	234	Pg	Pn	00 46 34.0	+0.7
IAFJ				Sg	Sn	00 46 49.8	+0.3
DAMV	Damavand	1.27	220	*e*PG	Pn	00 46 33.8	+0.4
DAMV				*e*SG	Sn	00 46 49.9	+0.3
DAMV				AML	AML	00 46 53.7	
	comp=E,10μm,0.6s						
DAMV	Damavand	1.27	220	*e*Pg	Pn	00 46 33.8	+0.4
	SNR=96						
DAMV				*e*Sg	Sn	00 46 49.9	+0.3
	comp=E,10μm,0.6s,SNR=96						
IDMV	Damavand	1.29	217	Pg	Pn	00 46 34.1	+0.6
IANJ	Anjiloo	1.37	146	Pg	Pn	00 46 36.1	+1.3
IMIN	Minoodasht	1.89	73	Pn	Pn	00 46 46.0	+3.9
IVRN	Varamin	1.91	213	Pn	Pn	00 46 43.6	+1.2
IVRN				Sn	Sn	00 47 06.7	+1.1
IMHD	Mahdasht	2.08	244	Pn	Pn	00 46 47.3	+2.3
IRAZ	Razeghan	2.75	245	Pn	Pn	00 46 56.1	+1.6
IRAZ				Sn	Sn	00 47 27.8	+0.8
ASAO	Ashtian	3.17	230	*e*PN	Pn	00 47 01.1	+0.7
ASAO				*e*PG	Pn	00 47 06.9	+6.5
ASAO				AML	AML	00 47 58.2	
	comp=E,386nm,0.5s						
NASN	Na'in	3.81	182	*e*PN	Pn	00 47 09.4	-0.1
IKRD	Kardeh	4.46	86	Pn	Pn	00 47 31.7	+13
ICHK	Chekchek	4.52	164	Pn	Pn	00 47 19.1	-0.5
GRMI	Germi	4.59	300	*e*PN	Pn	00 47 21.1	+0.5
GRMI				AML	AML	00 48 12.8	
	comp=E,256nm,0.4s						
ISAD	Sadrabad	4.72	173	Pn	Pn	00 47 21.9	-0.6
SNGE	Sanandaj	4.82	253	*e*PN	Pn	00 47 24.8	+1.0
IPAY	Payeh	4.85	90	Pn	Pn	00 47 26.2	+1.9
IMOG	Moghan	5.16	94	Pn	Pn	00 47 31.6	+2.9
MHI	Mashhad	5.25	91	Pn	Pn	00 47 32.3	+2.5
IMEH	Mehriz	5.38	165	Pn	Pn	00 47 30.7	-1.1
IBAF	Bafgh	5.45	156	Pn	Pn	00 47 32.5	-0.3
IMYA	Miamay	5.75	91	Pn	Pn	00 47 38.4	+1.4
KRBR	Kerman	7.33	153	*e*PN	Pn	00 47 58.4	-0.8
GNI	Garni	7.37	301	P	Pn	00 48 03.5	+3.8
GNI						00 49 31.5	
GNI				pmax	pmax		
	comp=Z,3.0nm,0.3s						
GNI	Garni	7.37	301	Pn	Pn	00 48 03.5	+3.9
	comp=Z,2.8nm,0.3s,baz=272,slow=1.8,SNR=12						
GNI				Sn	Sn	00 49 31.5	+8.4
	comp=Z,2.0nm,0.3s,baz=57,slow=22,SNR=3.7						
GNI	Garni	7.37	301	P	Pn	00 48 03.5	+3.8
	comp=Z,3.0nm,0.3s						
GNI				*e*		00 49 31.5	
MAK	Makhachkala	7.61	328	*e*P	Pn	00 48 19.5	+16
TI2	Plekhanov	8.18	311	*e*P	P	00 48 21.6	+11
GHIR	Ghir-Karzin	8.30	180	*e*PN	P	00 48 11.9	-0.8
GHIR	Ghir-Karzin	8.30	180	*e*Pn	P	00 48 11.9	-0.9
	SNR=54						
DUS	Dusheti	8.42	313	P	P	00 48 13.3	-1.1
ONI	Oni	9.46	312	P	P	00 48 28.5	-0.2
ZHSF	Zahedan	9.56	135	*e*PN	P	00 48 29.1	-1.1
BNDS	Bandar-Abbas	9.58	163	*e*PN	P	00 48 29.3	-1.1
KIV	Kislovodsk	10.74	316	*e*P	P	00 48 45.0	-1.3
KIV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KIV	Kislovodsk	10.74	316	*e*P	P	00 48 45.0	-1.3
	comp=Z,7.0nm,0.6s						
GOF	Gofitskoye	11.30	321	*e*P	P	00 48 51.0	-2.9
MALT	Malatya	11.69	283	P	P	00 48 59.1	-0.1
MALT				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MALT	Malatya	11.69	283	P	P	00 48 59.1	-0.1
	comp=Z,4.9nm,1.1s						
ASF	Jabal al Asfar	13.99	256	Pn	P	00 49 30.5	+0.7
	comp=Z,0.1nm,0.3s,baz=34,slow=20,SNR=1.9						
BRTR	Keskin Array B	15.52	287	Pn	P	00 49 56.2	+6.5
	comp=Z,0.1nm,0.3s,baz=94,slow=18,SNR=2.1						
AAK	Ala-Archa	17.61	63	P	P	00 50 12.8	-3.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AAK	Ala-Archa	17.61	63	P	P	00 50 12.8	-3.3
	comp=Z,1.0nm,0.6s						
WHFO	Wadi Hawf	18.64	178	⇓P	P	00 50 25.4	-3.5
	SNR=8.9						
RBK	Rabkut	19.07	176	⇑P	P	00 50 29.8	-4.3
	SNR=6.0						
ABTO	Aybut	19.19	179	⇓P	P	00 50 31.3	-4.1
	SNR=12						
BVAR	Borovoye Array	20.45	31	P	P	00 50 49.2	+0.3
	comp=Z,5.9nm,0.7s,baz=219,slow=9.5,SNR=10						
CHKZ	Chkalovo	21.02	30	*e*P	P	00 50 55.8	+1.1
CHKZ				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.0						
OBN	Obninsk	21.65	334	⇑*i*P	P	00 51 01.9	+0.8
OBN				*e*S	S	00 54 56.1	+2.1
OBN				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.3						
OBN	Obninsk	21.65	334	⇑*i*P	P	00 51 01.9	+0.8
	comp=Z,26nm,1.4s,mb4.5						
OBN				*e*S	S	00 54 56.1	+2.1
OBN				LR	LR		
	comp=Z,100nm,16.0s,MS3.3						
OBN	Obninsk	21.65	334	⇑*i*P	P	00 51 01.9	+0.8
	comp=Z,26nm,1.4s,mb4.5						
OBN				*e*S	S	00 54 56.1	+2.1
MOS	Moscow	21.79	336	*e*P	P	00 51 04.5	+2.0
AKASG	Malin Array Be	22.09	317	P	P	00 51 06.5	+1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	22.09	317	P	P	00 51 06.5	+0.9
	comp=Z,1.5nm,0.5s,mb3.7,baz=123,slow=11,SNR=8.9						
MLR	Muntele Rosu	22.15	302	P	P	00 51 09.9	+3.8
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MLR	Muntele Rosu	22.15	302	P	P	00 51 09.9	+3.8
	comp=Z,3.8nm,0.8s,mb3.9,baz=158,slow=6.2,SNR=7.9						
MLR	Muntele Rosu	22.15	302	P	P	00 51 09.9	+3.8
KURK	Kurchatov	23.15	44	*e*P	P	00 51 14.8	-1.0
KURK				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.3						
SUW	Suwalki	26.94	320	P	P	00 51 51.5	-0.3
SUW				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.7						
SUW	Suwalki	26.94	320	P	P	00 51 51.5	-0.2
	comp=Z,28nm,1.1s,mb4.7						
SUW	Suwalki	26.94	320	P	P	00 51 51.5	-0.3
	comp=Z,28nm,1.1s,mb4.7						
OJC	Ojcow	27.41	310	*e*P	pP	00 52 06.2	+1.3
ZAL	Zalesovo	27.98	42	P	P	00 52 02.1	+0.9
ZAL				*PP	pP	00 52 09.0	-0.9
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL	Zalesovo	27.98	42	P	P	00 52 02.1	+0.9
	comp=Z,0.5nm,0.3s,mb3.6,baz=185,slow=11,SNR=2.1						
ZAL				pP	pP	00 52 09.0	-0.9
	comp=Z,0.5nm,0.6s,baz=306,slow=8.1,SNR=1.8						
FINES	FINESS Array B	30.05	334	P	P	00 52 18.7	-1.0
FINES				*PP	pP	00 52 28.8	+0.3
FINES				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FINES	FINESS Array B	30.05	334	P	P	00 52 18.7	-1.0
	comp=Z,3.5nm,1.1s,mb4.0,baz=112,slow=13,SNR=2.5						
FINES				pP	pP	00 52 28.8	+0.3
	comp=Z,7.5nm,1.3s,baz=143,slow=9.5,SNR=2.3						
GERES	GERESS Array B	30.99	306	P	P	00 52 28.1	0.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	30.99	306	P	P	00 52 28.1	0.0
	comp=Z,0.5nm,0.9s,mb3.3,baz=101,slow=10,SNR=3.3						
CLL	Collm	31.86	310	P	P	00 52 36.0	+0.2
CLL				*e**PP	pP	00 52 45.0	+0.4
CLL				*e**SP	sP	00 52 53.0	+4.5
DAVOX	Davos	33.37	301	P	P	00 52 48.3	-0.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=350,slow=18,SNR=3.5						
DAVOX				pP	pP	00 52 57.2	-0.6
	comp=Z,4.4nm,0.5s,baz=91,slow=6.0,SNR=6.7						
HFS	Hagfors	34.33	326	P	P	00 52 56.1	-1.0
HFS				*PP	pP	00 53 05.4	-0.6
HFS				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HFS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HFS	Hagfors	34.33	326	P	P	00 52 56.1	-1.0
	comp=Z,5.0nm,1.2s,mb4.3,baz=127,slow=9.1,SNR=2.6						
HFS				pP	pP	00 53 05.4	-0.6
	comp=Z,4.4nm,0.6s,baz=135,slow=8.4,SNR=6.0						
LPG	La Plagne	35.55	299	*e*P	P	00 53 07.0	-0.6
LPL	La Plagne	35.56	299	*e*P	P	00 53 07.0	-0.8
MBDF	Montbardon	35.57	298	*e*P	P	00 53 06.5	-1.3
HAU	Haudompre	35.80	303	*e*P	P	00 53 08.1	-1.7
	comp=Z,4.2nm,0.6s,mb4.3						
HAU	Haudompre	35.80	303	*e*P	P	00 53 08.1	-1.7
HAU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NB2	NORSAR Subarra	35.82	326	P	pP	00 53 18.3	-0.4
	comp=Z,1.4nm,0.7s,baz=115,slow=7.9						
NOA	NORSAR Array B	35.82	326	P	P	00 53 08.7	-1.0
	comp=Z,0.9nm,0.8s,mb3.8,baz=3.7,slow=6.1,SNR=3.5						
NOA				pP	pP	00 53 17.6	-1.1
	comp=Z,1.7nm,0.7s,baz=117,slow=8.2,SNR=5.3						
NOA	NORSAR Array B	35.82	326	P	P	00 53 08.8	-1.0
NOA				pP	pP	00 53 17.6	-1.1
CABF	La Chapelle	35.98	301	*e*P	P	00 53 11.0	-0.3
	comp=Z,36nm,0.9s,mb5.0						
CABF	La Chapelle	35.98	301	*e*P	P	00 53 11.0	-0.3
CABF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
ARCES	ARCESS Array B	36.20	344	LR	LR	01 13 16.3	
	comp=Z,55nm,19.8s,MS3.3,baz=16,slow=45						
BAIF	Baives	37.27	307	*e*P	P	00 53 22.5	+0.4
SMF	Signal de Mont	37.52	301	*e*P	P	00 53 23.8	-0.5
AVF	Avril sur Loir	37.85	301	*e*P	P	00 53 25.7	-1.3
	comp=Z,8.1nm,0.8s,mb4.2						
AVF	Avril sur Loir	37.85	301	*e*P	P	00 53 25.7	-1.3
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LDF	La Druitiere	40.11	305	*e*P	P	00 53 45.1	-0.7
	comp=Z,12nm,0.7s,mb4.5						
LDF	La Druitiere	40.11	305	*e*P	P	00 53 45.1	-0.7
LDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
SONM	Songino Array	40.37	57	P	P	00 53 48.4	+0.5
	comp=Z,0.2nm,0.6s,baz=283,slow=10,SNR=3.2						
GRR	Gorron	40.61	304	*e*P	P	00 53 48.8	-1.1
SGMF	Saint Gilles	41.75	304	*e*P	P	00 53 59.2	0.0
EKA	Eskdalemuir Ar	41.97	315	P	P	00 54 01.5	+0.6
EKA				*PP	pP	00 54 10.8	+0.9
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EKA	Eskdalemuir Ar	41.97	315	P	P	00 54 01.4	+0.6
	comp=Z,0.9nm,0.7s,mb3.5,baz=92,slow=7.9,SNR=2.6						
EKA				pP	pP	00 54 10.8	+0.9
	comp=Z,4.5nm,0.7s,baz=99,slow=8.5,SNR=4.6						
QUIF	Quistinic	42.19	304	*e*P	P	00 54 02.4	-0.4
CMAR	Chiang Mai Arr	44.13	101	P	P	00 54 16.9	-2.1
	comp=Z,0.4nm,0.4s,mb3.5,baz=300,slow=8.0,SNR=4.3						
RES	Resolute Bay	66.96	351	P	P	00 57 04.1	+1.5
RES				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
RES	Resolute Bay	66.96	351	P	P	00 57 04.1	+1.5
	comp=Z,4.3nm,0.6s,mb4.7						
RES	Resolute Bay	66.96	351	P	P	00 57 04.1	+1.5
	comp=Z,4.0nm,0.6s,mb4.6						
ILAR	Eielson Array	77.75	9	P	P	00 58 05.7	-0.7
ILAR				*PP	pP	00 58 15.1	-0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	77.75	9	P	P	00 58 05.7	-0.7
	comp=Z,0.8nm,1.1s,mb3.5,baz=315,slow=3.1,SNR=4.2						
ILAR				pP	pP	00 58 15.1	-0.8
	comp=Z,0.7nm,1.0s,baz=323,slow=4.5,SNR=3.3						
ILAR	Eielson Array	77.75	9	PcP	PcP	00 58 15.1	-1.7
	comp=Z,1.0nm,1.0s						
YKA	Yellowknife Ar	80.73	354	P	P	00 58 23.0	+0.4
YKA				*PP	pP	00 58 32.2	0.0
YKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YKA	Yellowknife Ar	80.73	354	P	P	00 58 23.0	+0.4
	comp=Z,0.1nm,0.5s,baz=6.3,slow=5.6,SNR=3.2						
YKA				pP	pP	00 58 32.2	+0.1
	comp=Z,1.7nm,1.1s,baz=7.2,slow=6.3,SNR=7.2						
YKA	Yellowknife Ar	80.73	354	P	P	00 58 23.0	+0.4
YKA				pP	pP	00 58 32.2	+0.1

*IDC **20** 00:54:58.2±1.2, 9.42S×159.35E, mb4.0/6, mb1 4.2/6, mb1mx4.1/13, mbtmp4.0/6, MS3.5/2, Ms1 3.5/2, ms1mx2.9/18, Error ellipse: s-maj=53.6km s-min=23.8km az=129.0*
*NEIC **20** 00:54:59.1±4.2, 9.43S×159.34E, h7^{km}±30^{km}, Error ellipse: s-maj=49.3km s-min=16.6km az=140.0*
ISC 20 00:54:58.0±0.7, **9.5S**±0.2×**159.35E**±0.06, **h10**^{km}, **n10**, σ**0^{s}86**/10, **mb3.8**/6, **MS3.3**/1, **1D**, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.60	86	⇓*i*P	Pg	00 55 10.7	+0.7
HNR				*e*S	Sg	00 55 17.4	-0.6
PMG	Port Moresby	12.02	269	LR	LR	01 02 13.7	
	comp=Z,305nm,20.8s,baz=176,slow=36						
WB2	Warramunga Arr	26.28	244	*e*P	P	01 00 35.0	-0.6
WB2				*e*		01 00 42.2	
WRA	Warramunga Arr	26.29	244	P	P	01 00 35.5	-0.2
	2.2nm,0.7s,mb3.8,baz=71,slow=9.5,SNR=9.1						
WRA				PcP	PcP	01 04 02.5	-0.1
	1.0nm,1.2s,baz=73,slow=2.4,SNR=4.7						
STKA	Stephens Creek	27.71	214	P	P	01 00 49.4	+0.8
	0.9nm,0.6s,mb3.6,baz=3.8,slow=15,SNR=2.0						
ASAR	Alice Springs	28.10	237	P	P	01 00 51.5	-0.6
	1.1nm,1.0s,mb3.4,baz=64,slow=8.6,SNR=6.2						
ASAR				PcP	PcP	01 04 06.5	-0.3
	0.6nm,0.8s,baz=57,slow=2.3,SNR=5.4						
ASAR				LR	LR	01 11 38.9	
	comp=Z,66nm,18.2s,MS3.3,baz=281,slow=36						
SONM	Songino Array	73.77	326	P	P	01 06 34.9	+0.6
	1.3nm,0.8s,mb3.9,baz=140,slow=5.0,SNR=10						
NVAR	Mina Array Bea	89.89	51	P	P	01 08 00.2	+1.3
	0.6nm,0.8s,mb4.0,baz=248,slow=4.9,SNR=4.3						
YKA	Yellowknife Ar	96.51	28	P	P	01 08 27.1	-1.6
	0.6nm,1.0s,mb4.0,baz=257,slow=4.5,SNR=5.9						
YKA	Yellowknife Ar	96.51	28	P	P	01 08 27.1	-1.6

*IDC **20** 01:59:37.5±2.7, 30.99S×179.23W, mb3.8/2, mb1 4.1/3, mb1mx3.9/13, mbtmp3.9/3, ML4.2/1, Error ellipse: s-maj=62.3km s-min=43.2km az=112.0*
*NEIC **20** 02:00:11.1±1.6, 34.00S×179.46W, h333^{km}±16^{km}, Error ellipse: s-maj=31.5km s-min=23.5km az=144.0*
ISC 20 02:00:13.7±1.2, **34.0S**±0.2×**179.9E**±0.3, **h319**^{km}±17^{km}, **n63**, σ**0^{s}96**/78, **mb3.1**/2, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.78	200	*e*P	P	02 01 18.4	-0.6
MXZ				S	S	02 02 08.8	-1.4
MXZ	Matakaoa Point	3.78	200	*e*PN	P	02 01 18.4	-0.7
MXZ				SN	S	02 02 08.6	-1.6
MXZ	Matakaoa Point	3.78	200	*e*PN	P	02 01 18.4	-0.7
MXZ				SN	S	02 02 08.6	-1.6
PUZ	Puketiti	4.27	198	*e*P	P	02 01 23.8	-0.5
PUZ				S	S	02 02 19.8	+0.1
PUZ	Puketiti	4.27	198	PN	P	02 01 23.8	-0.5
PUZ				SN	S	02 02 19.8	+0.1
PUZ	Puketiti	4.27	198	PN	P	02 01 23.8	-0.5
PUZ				SN	S	02 02 19.8	+0.1
MWZ	Matawai	4.73	203	*e*P	P	02 01 29.8	+0.4
MWZ				*e*S	S	02 02 27.9	-0.9
MWZ	Matawai	4.73	203	*e*PN	P	02 01 29.8	+0.4
MWZ				SN	S	02 02 27.9	-0.9
MWZ	Matawai	4.73	203	*e*PN	P	02 01 29.8	+0.4
MWZ				SN	S	02 02 27.9	-0.9
URZ	Urewera	4.81	207	Pn	P	02 01 32.2	+1.9
	3.2nm,0.3s,baz=284,slow=19,SNR=49						
URZ				Sn	S	02 03 17.6	+47
	baz=73,slow=19,SNR=2.0						
URZ	Urewera	4.81	207	*e*P	P	02 01 30.6	+0.3
URZ	Urewera	4.81	207	*e*PN	P	02 01 30.6	+0.3
URZ				SN	S	02 02 28.9	-1.5
URZ	Urewera	4.81	207	*e*PN	P	02 01 30.6	+0.3
URZ				SN	S	02 02 28.9	-1.5
KNZ	Kokohu	5.32	199	*e*P	P	02 01 36.8	+0.7
KNZ	Kokohu	5.32	199	*e*PN	P	02 01 36.8	+0.6
KNZ	Kokohu	5.32	199	*e*PN	P	02 01 36.8	+0.6
BKZ	Black Stump Fm	5.84	207	*e*P	P	02 01 42.7	+0.5
BKZ	Black Stump Fm	5.84	207	*e*PN	P	02 01 42.9	+0.7
BKZ				SN	S	02 02 53.7	+2.0
BKZ	Black Stump Fm	5.84	207	*e*PN	P	02 01 42.9	+0.7
BKZ				SN	S	02 02 53.7	+2.0
NGZ	Ngauruhoe	6.22	213	*e*P	P	02 01 47.9	+1.2
NGZ	Ngauruhoe	6.22	213	*e*PN	P	02 01 48.3	+1.6
NGZ	Ngauruhoe	6.22	213	*e*PN	P	02 01 48.3	+1.6
TUVZ	Tukino	6.27	212	*e*PN	P	02 01 49.6	+2.3
TUVZ	Tukino	6.27	212	*e*PN	P	02 01 49.6	+2.3
FWVZ	Far West T-bar	6.30	213	P	P	02 01 48.7	+1.0
FWVZ	Far West T-bar	6.30	213	*e*PN	P	02 01 48.7	+1.0
FWVZ	Far West T-bar	6.30	213	*e*PN	P	02 01 48.7	+1.0
MOVZ	Moawhango	6.34	211	*e*PN	P	02 01 48.4	+0.2
TSZ	Takapari Road	6.82	206	*e*PN	P	02 01 54.9	+1.0
MRZ	Mangatainoka R	7.49	206	*e*PN	P	02 02 01.8	-0.2
MRZ	Mangatainoka R	7.49	206	*e*PN	P	02 02 01.8	-0.2
KIW	Kapiti Island	7.92	209	*e*P	P	02 02 06.4	-0.8
KIW	Kapiti Island	7.92	209	*e*PN	P	02 02 06.4	-0.8
KIW	Kapiti Island	7.92	209	*e*PN	P	02 02 06.4	-0.8
CAW	Cannon Point	8.06	207	*e*P	P	02 02 08.9	-0.1
CAW	Cannon Point	8.06	207	*e*PN	P	02 02 08.2	-0.7
CAW	Cannon Point	8.06	207	*e*PN	P	02 02 08.2	-0.7
PAWZ	Paruwai Farm	8.18	204	*e*PN	P	02 02 10.2	-0.1
PAWZ	Paruwai Farm	8.18	204	*e*PN	P	02 02 10.2	-0.1
MSWZ	Moikau Station	8.27	205	*e*P	P	02 02 10.9	-0.5
MSWZ	Moikau Station	8.27	205	*e*PN	P	02 02 10.9	-0.5
MSWZ	Moikau Station	8.27	205	*e*PN	P	02 02 10.9	-0.5
MRW	Makara Radio	8.31	208	*e*PN	P	02 02 12.2	+0.2
MRW	Makara Radio	8.31	208	*e*PN	P	02 02 12.2	+0.2
TUWZ	Tuamarina	8.79	211	*e*PN	P	02 02 16.9	-0.8
TUWZ	Tuamarina	8.79	211	*e*PN	P	02 02 16.9	-0.8
NNZ	Nelson	8.87	214	*e*P	P	02 02 18.0	-0.7
NNZ	Nelson	8.87	214	*e*PN	P	02 02 18.2	-0.5
NNZ				SN	S	02 03 57.9	+0.7
NNZ	Nelson	8.87	214	*e*PN	P	02 02 18.2	-0.5
NNZ				SN	S	02 03 57.9	+0.7
KHZ	Kahutara	9.78	209	*e*PN	P	02 02 29.3	-0.5
KHZ				SN	S	02 04 15.5	-1.8
KHZ	Kahutara	9.78	209	*e*PN	P	02 02 29.3	-0.5
KHZ				SN	S	02 04 15.5	-1.8
DSZ	Denniston Nort	10.03	217	*e*P	P	02 02 32.5	-0.4
DSZ	Denniston Nort	10.03	217	*e*PN	P	02 02 32.6	-0.3
DSZ	Denniston Nort	10.03	217	*e*PN	P	02 02 32.6	-0.3
LTZ	Lake Taylor	10.61	212	*e*P	P	02 02 40.3	+0.3
LTZ	Lake Taylor	10.61	212	*e*PN	P	02 02 40.5	+0.5
LTZ	Lake Taylor	10.61	212	*e*PN	P	02 02 40.5	+0.5
MQZ	McQueen's Vall	11.21	208	SN	S	02 04 49.9	+1.1
MQZ	McQueen's Vall	11.21	208	SN	S	02 04 49.9	+1.1
ASAR	Alice Springs	41.30	272	P	P	02 07 30.5	+0.2
	0.2nm,0.3s,mb2.8,baz=111,slow=7.7,SNR=6.2						
WRA	Warramunga Arr	42.62	277	P	P	02 07 39.7	-1.3
	0.9nm,0.3s,mb3.4,baz=112,slow=8.0,SNR=50						
KAF	Kangasniemi	147.27	337	*e*pkp	PKPdf	02 19 13.2	-2.7
	baz=45,slow=2.9						
FINES	FINESS Array B	147.83	337	PKPbc	PKPdf	02 19 15.5	-1.3
	1.3nm,0.5s,baz=48,slow=4.2,SNR=34						

*IDC **20** 02:31:19.6±3.7, 24.51S×179.92E, h487^{km}±34^{km}, mb3.5/5, mb1 3.8/5, mb1mx3.5/13, mbtmp4.4/5, Error ellipse:*

s-maj=78.3km s-min=27.0km az=158.0

ISC 20 02:31:19.0±1.6**, 24.5S**±0.7×**179.8E**±0.3**, h487^{km}, n12, σ0ˢ.53**/10**, mb4.0**/7**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.30	271	⇓iP	P	02 37 00.9	+1.2
	8.1nm,0.4s,mb4.5						
CTA	Charters Tower	31.30	271	P	P	02 37 01.0	+1.3
	9.5nm,0.4s,mb4.6,baz=93,slow=11,SNR=35						
STKA	Stephens Creek	34.35	249	⇓iP	P	02 37 25.3	0.0
	1.9nm,0.3s,mb4.0						
STKA	Stephens Creek	34.35	249	P	P	02 37 25.6	+0.2
	2.5nm,0.4s,mb4.0,baz=90,slow=8.7,SNR=17						
ASAR	Alice Springs	41.76	261	P	P	02 38 26.1	-0.1
	1.6nm,0.4s,mb3.8,baz=92,slow=7.2,SNR=36						
ASPA	Alice Springs	41.77	261	eP	P	02 38 26.1	-0.1
WRA	Warramunga Arr	42.19	267	P	P	02 38 29.2	-0.4
	4.2nm,0.3s,mb4.3,baz=103,slow=8.0,SNR=38						
WRA				ScP		02 43 17.0	
	0.5nm,0.6s,baz=99,slow=3.8,SNR=5.9						
KAKA	Kakadu	46.18	276	eP	P	02 39 00.1	-0.7
	2.1nm,0.3s,mb4.0						
FITZ	Fitzroy Crossi	50.60	266	eP	P	02 39 34.0	-0.1
	6.1nm,0.6s,mb4.1						
TXAR	Lajitas Array	90.88	58	P	P	02 43 31.1	+0.1
	0.3nm,0.8s,mb3.3,baz=180,slow=7.5,SNR=4.2						
AKASG	Malin Array Be	145.33	327	PKPbc	PKPbc	02 50 01.0	-0.1
	0.1nm,0.3s,baz=44,slow=3.9,SNR=4.4						
BRTR	Keskin Array B	147.76	306	PKPbc	PKPdf	02 50 09.0	+4.6
	0.4nm,0.6s,baz=146,slow=4.4,SNR=3.3						

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*MAN **20** 02:48:12.5, 7.65N×124.73E, h1^{km}, mb4.3, ML3.2, MS3.0*
*IDC **20** 02:48:54.8±10.0, 1.10N×124.06E, mb3.4/3, mb1 3.6/3, mb1mx3.4/16, mbtmp3.4/3, Error ellipse: s-maj=220.5km s-min=162.5km az=61.0*

ISC 20 02:48:11.3±0.7**, 7.48N**±0.04×**125.0E**±0.1**, h33^{km}, n10, σ1ˢ.03**/13**, mb3.4**/3**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.40	8	eP	P	02 48 19.3	-1.1
BUKP				eS	S	02 48 27.0	+0.3
KCP	Kidapawan	0.48	170	⇑iP	P	02 48 21.8	+0.3
KCP				i S	S	02 48 29.5	+0.7
CGP	Cagayan de Oro	1.01	342	eP	P	02 48 28.6	-0.6
CGP				eS	S	02 48 42.9	+0.4
BUTP	Butuan	1.60	22	eP	P	02 48 42.0	+4.4
PAGZ	Pagadian	1.65	283	eP	P	02 48 37.4	-0.9
TBP	Tagbilaran	2.47	333	eP	P	02 48 51.8	+1.8
SNPH	Sibulan	2.55	317	eP	P	02 48 55.0	+3.8
WRA	Warramunga Arr	28.76	162	P	P	02 54 03.3	-5.1
	0.2nm,0.4s,mb3.2,baz=329,slow=11,SNR=8.8						
ASAR	Alice Springs	32.16	165	P	P	02 54 35.0	-3.5
	0.3nm,0.5s,mb3.4,baz=342,slow=7.3,SNR=5.2						
STKA	Stephens Creek	42.22	159	P	P	02 56 02.9	-0.3
	1.1nm,0.6s,mb3.7,baz=355,slow=9.0,SNR=4.6						

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*ISK **20** 02:50:05.5, 38.58N×26.53E, h14^{km}, MD3.6*
*ATH **20** 02:50:07.4, 38.55N×26.27E, h14^{km}±10^{km}, MD3.5/3*
*NEIC **20** 02:50:07.4, 38.55N×26.27E, h14^{km}, MD3.5(ATH), After ATH.*
*CSEM **20** 02:50:07.4±0.1, 38.58N×26.67E, h20^{km}, MD3.6, Error ellipse: s-maj=2.1km s-min=1.4km az=44.0*

ISC 20 02:50:07.3±0.5**, 38.59N**±0.03×**26.58E**±0.04**, h19^{km}**±6^{km}**, n50, σ0ˢ.96**/58**, 3C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.41	119	i PG	Pb	02 50 15.6	-0.2
BLCB				i SG	Sb	02 50 21.4	-0.2
KDAG	Bornova	0.57	109	i P	Pb	02 50 18.1	-0.4
KDAG				i S	Sb	02 50 25.6	-0.4
PRK	Paraskevi	0.70	340	ePB	Pb	02 50 20.9	+0.2
AYVA	Ayvalik	0.72	7	i P	Pb	02 50 20.3	-0.8
AYVA				i S	Sb	02 50 32.5	+1.9
SMG	Samos	0.90	167	ePB	Pb	02 50 25.6	+1.4
AKS	Akhisar	1.00	73	i PG	Pb	02 50 25.4	-0.5
AYDN	Tasoluk	1.38	132	i P	Pn	02 50 32.4	+0.6
AYDN				i S	Sb	02 50 51.0	+1.5
BALB	Balikesir	1.46	43	i PN	Pn	02 50 32.3	-0.6
BALB				i SN	Sn	02 50 52.6	+1.0
MANT	Manisa	1.55	93	i P	Pn	02 50 34.3	0.0
MANT				i S	Sn	02 50 55.3	+1.3
MLSB	Milas	1.60	144	PN	Pn	02 50 34.7	-0.3
BODT	Bodrum	1.63	159	PN	Pn	02 50 34.7	-0.7
LIA	Limnos Island	1.70	321	ePB	Pb	02 50 37.4	-0.4
APE	Apeiranthos	1.73	209	PN	Pn	02 50 35.2	-1.7
APE	Apeiranthos	1.73	209	ePb	Pb	02 50 37.4	-0.9
LOS	Limnos	1.78	319	eP	Pn	02 50 38.9	+1.4
DST	Dursunbey	1.89	57	ePN	Pn	02 50 38.9	-0.2
YER	Yerkesik	1.98	137	ePN	Pn	02 50 40.1	-0.3
EDC	Edincik	2.02	29	ePN	Pn	02 50 40.1	-0.8
EDC				eSN	Sn	02 51 06.1	+0.3
BNT	Bandirma	2.04	30	ePN	Pn	02 50 40.4	-1.0
DENT	Denizli	2.10	113	ePN	Pn	02 50 42.6	+0.4
MRMT	Marmara Adasi	2.16	21	ePN	Pn	02 50 41.6	-1.4
KCT	Karacabey	2.17	39	ePN	Pn	02 50 42.8	-0.3
MFT	Murefte	2.26	14	ePN	Pn	02 50 44.0	-0.4
ORLT	Orhaneli	2.31	50	ePN	Pn	02 50 45.7	+0.6
OUR	Ouranopolis	2.66	312	eP	Pn	02 50 51.2	+1.0
RDO	Rodhopi	2.68	343	ePN	Pn	02 50 50.3	-0.1
YLV	Yalova	2.92	47	ePN	Pn	02 50 54.4	+0.5
BADT	Buyukada	2.99	40	ePN	Pn	02 50 55.4	+0.6
PLG	Polygyros	3.01	307	ePB	Pb	02 50 56.3	-3.8
ISK	Istanbul-Kandi	3.12	37	ePN	Pn	02 50 56.4	-0.3
EDRB	Edirne	3.26	2	ePN	Pn	02 50 57.8	-0.8
HRT	Hereke	3.26	46	ePN	Pn	02 50 59.3	+0.6
RZN	Rozhen	3.41	336	i P	Pn	02 51 01.4	+0.6
SRS	Serrai	3.42	319	eP	Pn	02 51 01.4	+0.6
ESKT	Eskisehir	3.45	73	ePN	Pn	02 51 00.8	-0.6
NVR	Nevrokopi	3.46	324	ePN	Pn	02 51 01.9	+0.4
DIM	Dimitrovgrad	3.55	347	eP	Pn	02 51 02.5	-0.3
MMB	Musomiste	3.71	325	eP	Pn	02 51 06.5	+1.4
PLD	Plovdiv	3.79	338	i P	Pn	02 51 07.0	+0.7
KNT	Kendrikon	3.83	313	eP	Pn	02 51 08.6	+1.9
JMB	Yambol	3.87	360	eP	Pn	02 51 07.5	+0.1
GRG	Griva	4.00	308	eP	Pn	02 51 10.5	+1.4
MDU	Mudurnu	4.04	61	ePN	Pn	02 51 09.7	-0.1
KKB	Krupnik	4.23	322	eP	Pn	02 51 14.0	+1.5
PGB	Panagyurishte	4.36	336	i P	Pn	02 51 14.0	-0.4
VTS	Vitosha	4.75	328	eP	Pn	02 51 18.0	-1.9
VTS				i S	Sn	02 52 13.5	-1.6
TIRR	Tirgusor	6.02	13	⇑P	Pn	02 51 35.5	-2.3
CFR	Carcaliu	6.68	9	⇓P	Pn	02 51 44.0	-3.1
MLR	Muntele Rosu	6.91	356	⇑P	Pn	02 51 49.6	-0.7
BURAR	Bucovina Array	9.08	354	⇑P	P	02 52 20.3	-0.2

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*IDC **20** 03:11:24.3±6.7, 0.21N×122.73E, h196^{km}±62^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.4/16, mbtmp3.9/5, MS3.0/1, Ms1 3.2/1, ms1mx2.7/9, Error ellipse: s-maj=118.5km s-min=17.7km az=71.0*

ISC 20 03:11:22.9±0.7**, 0.2N**±0.2×**122.7E**±0.3**, h200^{km}, n12, σ0ˢ.22**/11**, mb4.1**/11**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.05	151	P	P	03 16 11.7	-0.1
	2.2nm,0.5s,mb4.0,baz=326,slow=11,SNR=102						
WRA				PcP	PcP	03 19 54.5	-1.7
	0.3nm,0.8s,baz=328,slow=2.1,SNR=5.2						
ASAR	Alice Springs	26.11	156	P	P	03 16 40.5	+0.2
	1.2nm,0.5s,mb3.8,baz=336,slow=8.9,SNR=32						
ASAR				PcP	PcP	03 20 02.8	0.0
	0.7nm,0.3s,baz=347,slow=2.0,SNR=25						
CMAR	Chiang Mai Arr	29.53	309	LR	LR	03 28 50.8	
	comp=Z,30nm,19.6s,baz=274,slow=35						
STKA	Stephens Creek	36.58	152	P	P	03 18 11.4	-0.1
	4.2nm,0.6s,mb4.1,baz=319,slow=9.3,SNR=8.1						
JIRN	Jiri	44.37	311	eP	P	03 19 15.6	+0.2
	10nm,0.3s,mb4.6						
PKI	Pulchoki	44.92	310	eP	P	03 19 19.1	-0.6
	4.2nm,0.3s,mb4.3						
KKN	Kakani	45.13	311	eP	P	03 19 21.4	0.0
	6.9nm,0.3s,mb4.4						
DMN	Daman	45.17	310	eP	P	03 19 21.8	+0.1
	9.2nm,0.6s,mb4.3						
GKN	Gorkha	45.72	310	eP	P	03 19 26.1	0.0
	11nm,0.3s,mb4.6						
KOLN	Koldanda	46.40	310	eP	P	03 19 31.6	+0.2
	14nm,0.6s,mb4.5						
SONM	Songino Array	49.52	346	P	P	03 19 55.1	0.0
	0.4nm,0.4s,mb3.1,baz=162,slow=10.0,SNR=10						
INK	Inuvik	94.93	21	P	P	03 24 23.2	+0.1
	0.5nm,1.0s,mb3.6,baz=296,slow=4.3,SNR=4.1						

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*CSEM **20** 03:13:16.6±0.4, 67.10N×20.65E, h2^{km}, ML2.5, Error ellipse: s-maj=9.0km s-min=8.3km az=23.0, Mining explosion.*
*HEL **20** 03:13:18.8±0.1, 67.18N×20.62E, ML1.9, ML2.5(UPP), Explosion*
*UPP **20** 03:13:18.2, 67.18N×20.64E, h0^{km}, ML2.5, Mining explosion.*
*IDC **20** 03:13:19.0±0.8, 67.15N×20.89E, mb1 2.9/4, mb1mx2.8/20, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=14.3km s-min=6.1km az=117.0*

ISC 20 03:13:17.2±0.5**, 67.15N**±0.03×**20.66E**±0.09**, n30, σ1ˢ.09**/44**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.60	59	i P	Pg	03 13 29.6	+0.3
MASU				i S	Sg	03 13 37.0	-0.4
KUA	Kurravaara	0.82	351	i P	Pg	03 13 32.9	-0.7
ERTU	Ertsjaerv	0.85	134	i P	Pg	03 13 34.4	+0.2
NIKU	Nikkaluokta	0.95	320	eP	Pg	03 13 35.6	-0.7
PAJU	Pajala	0.97	96	eP	Pg	03 13 36.3	-0.3
PAJU				eS	Sg	03 13 49.7	+0.2
LANU	Lannavaara	1.04	29	eP	Pb	03 13 36.9	-0.8
KIF	Kilpisjarvi	1.87	2	eP	Pn	03 13 51.7	+1.0
KIF				eS	Sn	03 14 16.4	+1.1
KIF	Kilpisjarvi	1.87	2	P	Pn	03 13 51.6	+0.9
KIF				S	Sn	03 14 16.4	+1.1
LILU	Lilltraesk	1.90	190	eP	Pn	03 13 52.8	+1.6
KTK1	Kautokeino	2.11	26	eP	Pn	03 13 55.7	+1.5
KTK1	Kautokeino	2.11	26	P	Pn	03 13 55.6	+1.4
SGF	Sodankyl	2.30	80	eP	Pn	03 13 58.3	+1.4
SGF				eSG	Sg	03 14 29.3	-4.4
SGF	Sodankyl	2.30	80	P	Pn	03 13 58.2	+1.3
SGF				Sg	Sg	03 14 29.2	-4.4
TRO	Tromso	2.58	346	eP	Pn	03 14 01.0	+0.1
TRO	Tromso	2.58	346	P	Pn	03 14 00.9	0.0
MOR8	Moi Rana	2.66	251	ePG	Pn	03 14 03.4	+1.3
MOR8	Moi Rana	2.66	251	e	Pn	03 14 03.4	+1.3
MOR8	Moi Rana	2.66	251	Pg	Pg	03 14 03.3	-7.1
OUL	Oulu	2.97	132	eP	Pn	03 14 07.6	+1.1
OUL				eS	Sn	03 14 44.1	+0.7
OUL	Oulu	2.97	132	P	Pn	03 14 07.6	+1.1
OUL				S	Sn	03 14 44.0	+0.6
ARCES	ARCESS Array B	3.00	35	Pn	Pn	03 14 07.4	+0.5
	0.3nm,0.3s,baz=219,slow=12,SNR=20						
ARCES				Sn	Sn	03 14 43.0	-1.1
	0.8nm,0.3s,baz=217,slow=22,SNR=8.5						
ARCES				Lg		03 14 51.2	
	0.9nm,0.3s,baz=214,slow=29,SNR=7.3						
KEV	Kevo	3.51	39	eP	Pn	03 14 14.2	-0.1
KEV				eS	Sn	03 14 55.5	-1.6
KEV	Kevo	3.51	39	P	Pn	03 14 14.1	-0.1
KEV				S	Sn	03 14 55.5	-1.6
MSF	Maaselka	3.58	106	eSG	Sg	03 15 08.0	-8.3
MSF				MSG		03 15 10.0	
	comp=Z,3.3nm,0.4s						
MSF	Maaselka	3.58	106	Sg	Sg	03 15 07.9	-8.4
	comp=Z,3.3nm,0.4s						
KU4	Oulanka	3.62	98	eSG	Sg	03 15 11.2	-6.6
KJN	Kajaani	4.24	133	eSG	Sg	03 15 31.6	-6.8
KJN				MSG		03 15 33.4	
	comp=Z,1.6nm,0.3s						
FINES	FINESS Array B	6.19	155	Pn	Pn	03 14 51.8	-0.4
	comp=Z,0.0nm,0.3s,baz=336,slow=14,SNR=8.3						
FINES				Sn	Sn	03 16 01.2	-3.4
	comp=Z,0.2nm,0.3s,baz=344,slow=21,SNR=7.7						
FINES				Lg		03 16 32.9	
	comp=Z,0.3nm,0.3s,baz=346,slow=27,SNR=7.0						
NOA	NORSAR Array B	7.39	218	Pn	Pn	03 15 07.9	-1.1
	comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=2.8						
NOA				Sn	Sn	03 16 27.9	-6.6
	comp=Z,0.1nm,0.3s,baz=29,slow=16,SNR=3.5						
NOA				Lg		03 17 15.1	
	comp=Z,0.2nm,0.3s,baz=280,slow=18,SNR=3.3						
HFS	Hagfors	7.69	207	Pn	Pn	03 15 11.1	-2.1
	comp=Z,0.0nm,0.3s,baz=21,slow=13,SNR=5.9						
HFS				Sn	Sn	03 16 34.7	-7.3
	comp=Z,0.0nm,0.3s,baz=238,slow=22,SNR=2.4						
HFS				Lg		03 17 21.2	
	comp=Z,0.0nm,0.3s,baz=16,slow=26,SNR=2.7						

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*FUNV **20** 03:24:50.6, 6.65N×73.20W, h171^{km}, MW3.2*
*NEIC **20** 03:24:52.5±1.0, 6.87N×73.07W, h171^{km}±10^{km}, mb3.2/1, Error ellipse: s-maj=28.7km s-min=15.3km az=128.0*
*IDC **20** 03:24:52.4±4.3, 6.80N×73.03W, h165^{km}±56^{km}, mb1 3.6/2, mb1mx2.9/21, mbtmp4.1/2, Error ellipse: s-maj=478.9km s-min=7.7km az=132.0*

ISC 20 03:24:51.2±0.9**, 6.86N**±0.07×**73.01W**±0.08**, h179^{km}**±9^{km}**, n13, σ0ˢ.87**/21**, 4C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.21	35	⇑iP	P	03 25 21.5	+0.7
CAPV				eS	S	03 25 43.5	-0.2
ROSC	El Rosal	2.39	213	P	P	03 25 33.5	+0.5
	28nm,0.3s,baz=270,slow=2.9,SNR=100						
ROSC				S	S	03 26 03.9	-1.3
	30nm,0.3s,baz=90,slow=23,SNR=17						
VIGV	El Vigia	2.55	40	⇑iP	P	03 25 35.9	+0.9
VIGV				eS	S	03 26 09.0	+0.3
SOCV	Socops	2.56	56	⇑iP	P	03 25 36.2	+1.2
SOCV				eS	S	03 26 09.1	+0.2
SDV	Santo Domingo	3.10	49	P	P	03 25 42.8	+1.2
	20nm,0.3s,baz=238,slow=5.3,SNR=255						
SDV				S	S	03 26 21.5	+1.2
	10.0nm,0.3s,baz=294,slow=23,SNR=14						
SDV	Santo Domingo	3.10	49	⇑ePn	P	03 25 42.7	+1.1
SDV				eSn	S	03 26 20.2	-0.2
VIRV	Villa del Rosa	3.67	9	eP	P	03 25 48.4	-0.4
VIRV				eS	S	03 26 32.1	-1.0
CURV	Curarigua	4.35	44	eP	P	03 25 58.3	+0.8
CURV				eS	S	03 26 48.1	-0.5
DABV	Dabajuro	4.67	30	eP	P	03 26 02.1	+0.5
DABV				eS	S	03 26 55.0	-1.0
BAUV	El Baul	5.34	67	⇓iP	P	03 26 09.7	-0.6
BAUV				eS	S	03 27 09.3	-2.3
SAML	Samuel	18.51	148	P	P	03 28 56.4	0.0
	1.0nm,0.9s						
ASAR	Alice Springs	149.22	234	PKPbc	PKPdf	03 44 21.4	+6.7
	0.3nm,0.7s,baz=107,slow=3.6,SNR=5.1						
WRA	Warramunga Arr	150.45	241	PKPbc	PKPdf	03 44 25.1	+8.4
	0.2nm,0.4s,baz=109,slow=2.8,SNR=10						

MAN 20 03:42:56.0, 17.87N×122.33E, h24^{km}, mb3.8, ML2.6, MS2.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	0.46	324	eP	Pb	03 43 06.2	+0.8
SGCP				eS	Sb	03 43 13.2	+1.2
CVP	Callao Caves	0.51	252	⇓iP	Pb	03 43 08.0	+1.7
APYP	Conner	1.04	270	eP	Pb	03 43 15.7	+0.6
CAUP	Cauayan	1.04	208	eP	Pb	03 43 17.2	+2.1
ABRA	Dolores	1.56	262	eP	Pn	03 43 21.4	-1.2
BALP	Baler	2.23	199	eP	Pn	03 43 31.6	-0.7

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*NEIC **20** 03:47:25.2±1.6, 18.99N×145.54E, h201^{km}±16^{km}, mb4.0/7, Error ellipse: s-maj=18.5km s-min=9.6km az=84.0*
*IDC **20** 03:47:27.2±2.8, 19.07N×145.46E, h216^{km}±26^{km}, mb3.8/14, mb1 4.0/15, mb1mx3.9/23, mbtmp4.4/15, Error ellipse: s-maj=18.8km s-min=9.7km az=94.0*

ISC 20 03:47:26.5±1.1**, 19.03N**±0.05×**145.4E**±0.1**, h226^{km}**±10^{km}**, n33, σ0ˢ.86**/32**, mb3.9**/17**, 1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.44	186	eP	P	03 48 43.1	-4.6
GUMO				eS	S	03 49 50.7	-0.2
CBIJ	Chichi jima	8.56	340	P	P	03 49 28.2	+0.4
	19nm,0.3s,baz=159,slow=23,SNR=7.0						
CBIJ				S	S	03 51 01.8	-0.9
	20nm,0.3s,baz=287,slow=23,SNR=6.4						
MAJO	Matsushiro	18.56	341	eP	P	03 51 28.8	+0.2
	8.7nm,0.5s						
MAT	Matsushiro	18.56	341	eP	P	03 51 30.0	+1.3
MAT	Matsushiro	18.56	341	P	P	03 51 30.2	+1.5
CTA	Charters Tower	38.88	179	eP	P	03 54 30.9	-1.0
	3.3nm,0.7s,mb4.0						
CTA	Charters Tower	38.88	179	P	P	03 54 31.8	-0.2
	3.9nm,0.7s,mb4.0,baz=7.3,slow=8.5,SNR=6.2						
CTAO	Charters Tower	38.88	179	eP	P	03 54 31.5	-0.4
	3.4nm,0.7s,mb4.0						
WRA	Warramunga Arr	40.23	196	P	P	03 54 43.6	+0.6
	12nm,0.7s,mb4.5,baz=18,slow=8.8,SNR=93						
SONM	Songino Array	42.72	321	P	P	03 55 03.7	+0.8
	0.4nm,0.6s,mb3.0,baz=136,slow=9.3,SNR=9.5						
ASAR	Alice Springs	43.90	195	P	P	03 55 12.9	+0.2
	5.6nm,0.5s,mb4.2,baz=18,slow=7.9,SNR=147						
ASPA	Alice Springs	43.90	195	eP	P	03 55 12.9	+0.2
CMAR	Chiang Mai Arr	43.91	277	P	P	03 55 14.2	+1.3
	1.1nm,0.5s,mb3.4,baz=66,slow=7.6,SNR=7.4						
STKA	Stephens Creek	50.75	184	⇓iP	P	03 56 04.7	-0.8
	2.1nm,0.6s,mb3.7						
STKA	Stephens Creek	50.75	184	P	P	03 56 04.8	-0.7
	3.4nm,0.7s,mb3.9,baz=5.5,slow=6.0,SNR=7.2						
KURK	Kurchatov	60.85	318	eP	P	03 57 16.2	-0.8
	1.8nm,0.8s,mb3.8						
ILAR	Eielson Array	63.47	26	P	P	03 57 33.4	-0.8
	0.9nm,0.6s,mb3.6,baz=255,slow=5.9,SNR=16						
BVAR	Borovoye Array	66.05	320	P	P	03 57 50.6	-0.2
	2.0nm,0.4s,mb4.1,baz=96,slow=7.2,SNR=16						
INK	Inuvik	69.17	23	P	P	03 58 09.6	-0.4
	2.2nm,1.0s,mb3.7,baz=260,slow=6.7,SNR=8.9						
INK	Inuvik	69.17	23	eP	P	03 58 09.9	-0.1
	2.4nm,0.9s,mb3.8						
YKA	Yellowknife Ar	77.82	28	P	P	03 59 00.6	+0.5
	0.9nm,0.5s,mb3.7,baz=290,slow=5.5,SNR=22						
MOD	Modoc	80.62	49	eP	P	03 59 13.9	-1.6
	2.8nm,0.8s,mb3.9						
ARCES	ARCESS Array B	82.10	342	P	P	03 59 23.2	+0.7
	6.9nm,1.1s,mb4.2,baz=30,slow=9.8,SNR=6.2						
NVAR	Mina Array Bea	83.15	52	P	P	03 59 30.1	+1.5
	10nm,1.0s,mb4.5,baz=267,slow=4.7,SNR=38						
JOF	Joensuu	83.61	335	ep	P	03 59 29.4	-0.9
KAF	Kangasniemi	86.01	336	ep	P	03 59 41.0	-1.2
	baz=50,slow=5.1						
FINES	FINESS Array B	86.47	335	P	P	03 59 43.3	-1.2
	1.1nm,0.3s,mb4.0,baz=70,slow=4.5,SNR=35						
PDAR	Pinedale Array	87.78	45	P	P	03 59 52.2	+1.1
	0.4nm,0.5s,mb3.5,baz=197,slow=0.4,SNR=6.3						
PV01	Paradox Valley	90.37	49	eP	P	04 00 04.2	+0.8
BRTR	Keskin Array B	93.69	314	P	P	04 00 18.6	-0.1
	0.5nm,0.7s,mb3.7,baz=63,slow=8.3,SNR=4.1						
LPAZ	La Paz	147.94	90	PKPbc	PKPdf	04 06 48.0	+5.6
	2.4nm,0.5s,baz=328,slow=3.4,SNR=8.0						
LPAZ	La Paz	147.94	90	ePKPbc	PKPdf	04 06 48.2	+5.8
SAML	Samuel	150.54	74	ePKPbc	PKPdf	04 06 53.3	+6.7
SAML				ePKPab	PKPab	04 07 00.3	-1.8

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*IDC **20** 04:08:01.9±0.6, 15.37S×173.40W, mb4.5/14, mb1 4.7/14, mb1mx4.5/21, mbtmp4.5/14, MS3.7/3, Ms1 3.7/3, ms1mx3.1/17, Error ellipse: s-maj=36.1km s-min=13.9km az=135.0*
*BJI **20** 04:08:03.2, 14.92S×173.40W, h10^{km}, mB5.3, mb5.1, Ms5.0, Msz4.8*
*NEIC **20** 04:08:03.6±0.3, 15.33S×173.40W, h10^{km}, mb4.8/15, Error ellipse: s-maj=17.6km s-min=6.5km az=140.0*

ISC 20 04:08:05.4±0.4**, 15.4S**±0.1×**173.4W**±0.1**, h33^{km}, n90, σ0ˢ.67**/51**, mb4.6**/29**, MS4.4**/4**, 4C-2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.19	47	⇑iP	P	04 08 36.8	-3.3
AFI				S	S	04 08 59.1	-7.1
RAR	Rarotonga	14.20	116	LR	LR	04 15 11.4	
	comp=Z,270nm,18.5s,baz=279,slow=30						
PPT	Papeete	22.98	99	eLR	LR	04 18 05.2	
	240nm,27.8s						
TBI	Tubuai	23.93	113	eLR	LR	04 18 36.1	
	232nm,29.2s						
URZ	Urewera	24.25	198	P	P	04 13 20.7	+0.3
	11nm,0.3s,mb4.7,baz=330,slow=3.2,SNR=18						
RPZ	Rata Peaks	31.17	202	P	P	04 14 22.9	-0.6
	17nm,1.1s,mb4.8,baz=102,slow=9.3,SNR=2.8						
RKT	Rikitea	37.02	108	eLR	LR	04 24 56.7	
	198nm,26.0s						
STKA	Stephens Creek	44.01	240	eP	P	04 16 11.8	+0.1
	2.4nm,0.8s,mb4.0						
STKA	Stephens Creek	44.01	240	P	P	04 16 12.0	+0.3
	3.3nm,0.9s,mb4.1,baz=87,slow=9.9,SNR=8.9						
WRA	Warramunga Arr	49.81	257	P	P	04 16 56.8	-0.6
	1.4nm,0.6s,mb4.2,baz=93,slow=6.9,SNR=48						
ASAR	Alice Springs	50.08	252	P	P	04 16 58.9	-0.6
	5.2nm,0.7s,mb4.7,baz=88,slow=7.9,SNR=41						
ASAR				LR	LR	04 36 53.2	
	comp=Z,90nm,18.7s,MS3.8,baz=290,slow=34						
ASPA	Alice Springs	50.08	252	eP	P	04 16 58.9	-0.6
YBH	Yreka Blue Hor	73.62	37	P	P	04 19 37.6	+0.2
	8.0nm,0.7s,mb4.8,baz=168,slow=2.1,SNR=23						
YBH	Yreka Blue Hor	73.62	37	eP	P	04 19 37.4	0.0
	6.7nm,0.8s,mb4.6						
NVAR	Mina Array Bea	74.35	42	P	P	04 19 41.5	-0.3
	3.4nm,0.7s,mb4.4,baz=231,slow=11,SNR=24						
TUC	Tucson	76.42	51	eP	P	04 19 53.4	-0.3
	6.1nm,0.9s,mb4.5						
WVOR	Wild Horse Val	76.46	38	eP	P	04 19 53.4	-0.2
	9.8nm,1.0s,mb4.7						
WUAZ	Wupatki	77.52	48	eP	P	04 19 60.0	+0.1
	87nm,1.1s,mb5.6						
MVU	Marysvale	78.42	45	eP	P	04 20 05.2	+0.5
	8.7nm,1.1s,mb4.6						
MSU	Marysvale	78.45	45	eP	P	04 20 05.4	+0.6
BMO	Blue Mountains	78.65	37	eP	P	04 20 04.9	-0.9
	3.4nm,0.8s,mb4.3						
MDJ	Mudanjiang	79.01	322	P	P	04 20 07.0	-0.8
TMUT	Trail Mountain	79.50	44	eP	P	04 20 11.3	+0.8
HLID	Hailey	79.65	39	eP	P	04 20 11.4	+0.1
	12nm,0.9s,mb4.8						
NJ2	Nanjing	80.14	307	eP	P	04 20 14.4	+0.3
NJ2				AP	pP	04 20 19.1	-5.4
NJ2				XP	sP	04 20 21.3	-6.8
NJ2				PP	PP	04 23 18.4	+0.3
NJ2				S	S	04 30 19.0	+3.9
NJ2				XS		04 30 26.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				LR	LR		
	comp=N,930nm,20.9s,MS5.2						
NJ2				LR	LR		
	comp=E,660nm,22.5s,MS5.2						
NJ2				LR	LR		
	comp=Z,560nm,22.6s,MS4.8						
TCUT	Toone Canyon	80.27	43	eP	P	04 20 15.1	+0.4
PV10	Paradox Valley	80.53	46	eP	P	04 20 16.0	-0.1
TXAR	Lajitas Array	80.64	56	P	P	04 20 17.2	+0.4
	comp=Z,2.4nm,0.8s,mb4.2,baz=217,slow=6.3,SNR=23						
TXAR				LR	LR	04 49 09.9	
	comp=Z,38nm,20.7s,MS3.7,baz=295,slow=31						
NEW	Newport	80.73	34	P	P	04 20 16.1	-0.8
	comp=Z,1.4nm,0.7s,mb4.0,baz=250,slow=9.3,SNR=4.0						
PV01	Paradox Valley	80.75	46	eP	P	04 20 17.3	+0.1
ANMO	Albuquerque	80.83	50	P	P	04 20 18.3	+0.5
	comp=Z,4.1nm,0.8s,mb4.4,baz=234,slow=6.0,SNR=18						
ANMO	Albuquerque	80.83	50	eP	P	04 20 17.7	0.0
	comp=Z,6.2nm,1.1s,mb4.5						
CN2	Changchun	81.07	320	eP	P	04 20 20.0	+1.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
MCK	McKinley	81.13	11	eP	P	04 20 18.0	-0.7
	comp=Z,3.7nm,0.7s,mb4.4						
MCMT	McKenzie Canyo	81.28	39	eP	P	04 20 20.0	+0.2
TPAW	Teton Pass	81.76	41	eP	P	04 20 22.6	+0.2
SNOW	Snow King Moun	81.87	41	eP	P	04 20 23.0	0.0
IMW	Indian Meadow	81.97	40	eP	P	04 20 23.8	+0.3
QLMT	Earthquake Lak	82.14	39	eP	P	04 20 25.3	+1.0
CHMT	Chamberlain Mo	82.15	37	eP	P	04 20 23.6	-0.7
PDAR	Pinedale Array	82.29	42	P	P	04 20 24.9	-0.3
	comp=Z,3.6nm,0.9s,mb4.3,baz=219,slow=3.0,SNR=30						
COLA	College	82.37	11	eP	P	04 20 24.3	-0.8
	comp=Z,9.6nm,0.8s,mb4.8						
BOZ	Bozeman (W)	82.44	39	eP	P	04 20 25.7	-0.1
	comp=Z,3.9nm,0.8s,mb4.4						
ILAR	Eielson Array	82.45	11	P	P	04 20 24.9	-0.6
	comp=Z,2.1nm,0.6s,mb4.2,baz=230,slow=6.3,SNR=55						
LKWY	Lake	82.64	40	eP	P	04 20 28.6	+1.7
	comp=Z,11nm,1.0s,mb4.8						

DAWY	**Dawson**	**83.43**	**14**	*e*P	**P**	**04 20 30.6**	**+0.1**
INK	**Inuvik**	**88.28**	**14**	P	**P**	**04 20 54.1**	**-0.1**
	comp=Z,2.1nm,0.9s,mb4.4,baz=215,slow=7.1,SNR=13						
HHC	**Hu-ho-hao-te**	**89.00**	**313**	*e*P	**P**	**04 21 02.1**	**+3.7**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.3						
HHC				AMB	AMB		
	comp=Z,122nm,6.0s						
YKA	**Yellowknife Ar**	**90.11**	**23**	P	**P**	**04 21 02.7**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.3,baz=240,slow=4.7,SNR=26						
YKA	**Yellowknife Ar**	**90.11**	**23**	P	**P**	**04 21 02.7**	**-0.3**
KMI	**Kunming**	**91.00**	**296**	P	**P**	**04 21 09.4**	**+1.3**
KMI				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb5.2						
KMI	**Kunming**	**91.00**	**296**	P	**P**	**04 21 09.4**	**+1.3**
	comp=Z,7.0nm,0.6s,mb5.2						
LZH	**Lanzhou**	**93.20**	**306**	*e*P	**P**	**04 21 18.4**	**+0.4**
LZH				AP	pP	04 21 21.8	-6.8
LZH				XP	sP	04 21 23.1	-8.9
LZH				AMB	AMB		
	comp=Z,22nm,1.5s,mb5.4						
LZH				LR	LR		
	comp=N,263nm,14.9s						
LZH				LR	LR		
	comp=Z,442nm,17.8s,MS5.0						
LZH	**Lanzhou**	**93.20**	**306**	*e*P	**P**	**04 21 18.4**	**+0.4**
	comp=Z,22nm,1.5s,mb5.4						
LZH				pP	pP	04 21 21.7	-6.9
LZH				sP	sP	04 21 23.1	-8.9
LZH				LR	LR		
	comp=Z,440nm,17.8s,MS5.0						
UPC	**Upice**	**144.16**	**350**	*e*PKP	PKPdf	04 27 42.6	+4.9
DPC	**Dobruska-Polom**	**144.26**	**349**	*e*PKP	PKPdf	04 27 38.4	+0.5
BURAR	**Bucovina Array**	**144.36**	**338**	⇑P	PKPbc	04 27 39.5	+1.8
OKC	**Ostrava-Krasne**	**144.39**	**347**	*e*PKP	PKPdf	04 27 39.0	+0.9
PRU	**Pruhonice**	**144.90**	**351**	*e*PKP	PKPdf	04 27 40.3	+1.3
NKC	**Novy Kostel**	**144.94**	**353**	*e*PKP	PKPdf	04 27 40.1	+1.0
CFR	**Carcaliu**	**145.19**	**333**	⇑P	PKPdf	04 27 41.6	+1.9
TNS	**Taunus Mts**	**145.24**	**358**	*e*PKP	PKPdf	04 27 41.0	+1.4
GIVF	**Givet**	**145.36**	**2**	*e*P	PKPdf	04 27 40.3	+0.5
BAIF	**Baives**	**145.38**	**3**	*e*P	PKPdf	04 27 40.6	+0.7
	comp=Z,22nm,0.9s						
VYHS	**Vyhne**	**145.49**	**346**	*e*PKP	PKPdf	04 27 42.6	+2.5
GRA1	**Grafenberg Arr**	**145.59**	**355**	*e*PKP	PKPdf	04 27 42.5	+2.3
GRF	**Grafenberg Arr**	**145.59**	**355**	*e*PKP	PKPdf	04 27 42.5	+2.3
HARR	**Harsova**	**145.66**	**333**	⇓P	PKPdf	04 27 43.5	+3.0
SMOL	**Smolenice**	**145.79**	**347**	*i* P	PKPdf	04 27 43.7	+3.1
MLR	**Muntele Rosu**	**145.86**	**335**	⇓P	PKPdf	04 27 43.2	+2.4
KHC	**Kasperske Hory**	**145.88**	**352**	*e*PKP	PKPdf	04 27 43.2	+2.5
BRTR	**Keskin Array B**	**146.14**	**321**	PKPbc	PKPbc	04 27 45.2	+2.6
	comp=Z,4.6nm,0.7s,baz=103,slow=2.4,SNR=38						
GEC2	**GERESS Array S**	**146.14**	**352**	*e*PKP	PKPdf	04 27 44.1	+2.9
GERES	**GERESS Array B**	**146.14**	**352**	PKPbc	PKPbc	04 27 44.1	+1.8
	comp=Z,2.5nm,0.7s,baz=27,slow=3.0,SNR=23						
FLN	**La Foliniere**	**146.23**	**8**	*e*P	PKPdf	04 27 42.5	+1.1
MEZF	**Maizieres J'vi**	**146.97**	**2**	*e*P	PKPdf	04 27 46.5	+3.9
CDF	**Champ du Feu**	**147.08**	**359**	*e*P	PKPdf	04 27 45.9	+3.1
	comp=Z,42nm,1.3s						
FUR	**Furstenfeldbru**	**147.10**	**354**	*e*PKP	PKPdf	04 27 47.0	+4.2
BFO	**Black Forest**	**147.13**	**358**	*e*PKP	PKPdf	04 27 47.0	+4.1
BZS	**Buzias**	**147.33**	**340**	⇑P	PKPdf	04 27 47.8	+4.5
HAU	**Haudompre**	**147.49**	**0**	*e*P	PKPdf	04 27 47.0	+3.5
	comp=Z,23nm,1.0s						
HINF	**Hinteralfeld**	**147.68**	**360**	*e*P	PKPdf	04 27 47.2	+3.4
SSF	**Saint Saulge**	**148.33**	**4**	*e*P	PKPdf	04 27 51.9	+7.1
	comp=Z,6.6nm,0.7s						
DAVOX	**Davos**	**148.59**	**356**	PKPbc	PKPdf	04 27 51.3	+6.0
	comp=Z,4.6nm,0.8s,baz=124,slow=3.9,SNR=5.5						
SMF	**Signal de Mont**	**148.77**	**4**	*e*P	PKPdf	04 27 53.5	+7.9
	comp=Z,8.1nm,0.9s						
CABF	**La Chapelle**	**148.88**	**1**	*e*P	PKPdf	04 27 51.4	+5.7
	comp=Z,32nm,1.2s						
TCF	**Toulx Ste Croi**	**148.99**	**6**	*e*P	PKPdf	04 27 54.3	+8.4
LPL	**La Plagne**	**149.98**	**360**	*e*P	PKPdf	04 27 54.6	+7.1
	comp=Z,14nm,1.1s						
LPG	**La Plagne**	**150.00**	**360**	*e*P	PKPdf	04 27 54.7	+7.1
ESDC	**Sonseca Array**	**154.12**	**19**	PKPab	PKPab	04 28 16.8	-1.2
	comp=Z,2.8nm,1.1s,baz=8.6,slow=4.2,SNR=5.3						

WEL 20 04:49:01.9±0.3**, 45.16S**×**167.38E, h123**^{km}±2^{km}**, ML3.7**/5**, 1C-2D, Error ellipse: s-maj=2.9km s-min=1.7km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.36**	**206**	PN	P	04 49 19.0	-0.5
DCZ				SN	S	04 49 31.8	-1.1
DCZ				SN	S	04 49 31.8	-1.0
MLZ	**Mavora Lakes**	**0.59**	**109**	⇑PN	P	04 49 20.6	-0.3
MLZ				SN	S	04 49 34.5	-0.8
MSZ	**Milford Sound**	**0.62**	**39**	PN	P	04 49 20.9	-0.1
MSZ				SN	S	04 49 35.2	-0.4
WHZ	**Wether Hill Ro**	**0.84**	**152**	PN	P	04 49 22.7	-0.2
WHZ				SN	S	04 49 37.8	-0.9
WKZ	**Wanaka**	**1.21**	**75**	PN	P	04 49 26.4	-0.2
WKZ				SN	S	04 49 44.2	-0.9
EAZ	**Earnscleugh**	**1.36**	**94**	PN	P	04 49 27.7	-0.7
EAZ				SN	S	04 49 46.1	-2.4
JCZ	**Jackson Bay**	**1.46**	**43**	PN	P	04 49 28.6	-0.9
JCZ				SN	S	04 49 48.5	-2.0
TUZ	**Tuapeka**	**1.77**	**118**	⇓PN	P	04 49 32.5	-0.7
TUZ				SN	S	04 49 53.5	-3.3
LBZ	**Lake Benmore**	**2.14**	**70**	PN	P	04 49 35.4	-2.4
LBZ				SN	S	04 50 00.5	-4.3
FOZ	**Fox Glacier**	**2.29**	**47**	PN	P	04 49 38.6	-1.2
FOZ				SN	S	04 50 06.2	-2.2
ODZ	**Otahua Downs**	**2.31**	**88**	⇓PN	P	04 49 38.1	-1.9
ODZ				SN	S	04 50 04.3	-4.6

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*MOS **20** 04:52:46.3±0.9, 9.56N×126.12E, h33^{km}, mb5.0/24, Error ellipse: s-maj=21.7km s-min=8.6km az=111.5*

*BJI **20** 04:52:48.0, 9.70N×126.45E, h35^{km}, mB5.3, mb4.9, Ms4.5, Msz4.2*

*NEIC **20** 04:52:49.1±0.2, 9.65N×126.23E, mb5.0/41, Error ellipse: s-maj=8.6km s-min=5.4km az=65.0*

NEIC Felt [III PIVS] at Surigao.

*HRVD **20** 04:52:49.1±0.5, 9.68N×126.34E, h25^{km}±1^{km}, MW5.0/54, Centroid moment Tensor Solution. LP body waves: s17,c18;Mantle waves: s54,c67; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.72±.15; M$_{\theta\theta}$-0.28±.11; M$_{\phi\phi}$-0.44±.13; M$_{r\theta}$-0.09±.20; M$_{\theta\phi}$0.08±.07; M$_{\phi r}$4.31±.38; Best double couple: M$_0$4.351×10^{16} NP1:φ$_s$165°,δ4°,λ76°. NP2:φ$_s$359°,δ86°,λ91°. Principal axes: T 4.488, Plg49°, Azm270°; N -.273, Plg1°, Azm179°; P -4.215, Plg41°, Azm88°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **20** 04:52:49.3±2.5, 9.64N×126.20E, h38^{km}±20^{km}, mb4.4/25, mb1 4.5/25, mb1mx4.5/27, mbtmp4.6/25, ML4.8/1, MS4.0/9, Ms1 4.1/9, ms1mx3.6/28 Error ellipse: s-maj=19.7km s-min=10.6km az=71.0*

*MAN **20** 04:52:50.1, 9.66N×126.27E, h27^{km}, mb5.6, ML4.6, MS5.0*

MAN SURIGAO CITY INTENSITY III.

ISC 20 04:52:47.4±0.2**, 9.67N**±0.02×**126.45E**±0.02**, h34**^{km}**, h34**^{km}±.8^{km}**:pP-P, n199,** σ1^{s}**29**/214**, mb4.9**/86**, MS4.1**/24**, 17C-15D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.95**	**277**	⇓*e*P	**P**	**04 53 04.8**	**+0.4**
SCPH				*e*S	**S**	**04 53 15.5**	**-1.5**
BUTP	**Butuan**	**1.07**	**230**	*e*P	**P**	**04 53 06.8**	**+0.7**
BUTP				*e*S	**S**	**04 53 19.5**	**-0.5**
BIPH	**Bislig**	**1.48**	**183**	⇓*i*P	**P**	**04 53 14.1**	**+2.1**
BIPH				*i* S	**S**	**04 53 32.7**	**+2.4**
MSLP	**Maasin**	**1.63**	**287**	*e*P	**P**	**04 53 15.9**	**+1.8**
MSLP				*e*S	**S**	**04 53 35.0**	**+0.8**
PLP	**Palo**	**2.07**	**316**	*i* P	**P**	**04 53 22.9**	**+2.4**
PLP				*e*S	**S**	**04 53 46.2**	**+0.9**
CGP	**Cagayan de Oro**	**2.11**	**235**	*e*P	**P**	**04 53 21.6**	**+0.6**
CGP				*e*S	**S**	**04 53 47.0**	**+0.7**
BUKP	**Musuan**	**2.25**	**218**	*e*P	**P**	**04 53 25.3**	**+2.4**
LLP	**Lapu-Lapu**	**2.53**	**285**	⇑*i*P	**P**	**04 53 28.3**	**+1.3**
LLP				*i* S	**S**	**04 53 58.3**	**+1.3**
TBP	**Tagbilaran**	**2.55**	**271**	*i* P	**P**	**04 53 28.1**	**+0.8**
TBP				*i* S	**S**	**04 53 56.4**	**-1.1**
MATI	**Mati**	**2.71**	**184**	*e*P	**P**	**04 53 32.1**	**+2.5**
DAV	**Davao City (W)**	**2.72**	**198**	⇑*e*P	**P**	**04 53 34.0**	**+4.2**
KCP	**Kidapawan**	**2.96**	**207**	⇓*i*P	**P**	**04 53 38.5**	**+5.3**
KCP				*i* S	**S**	**04 54 12.3**	**+4.3**
SNPH	**Sibulan**	**3.19**	**264**	⇑*e*P	**P**	**04 53 37.5**	**+1.1**
SNPH				*i* S	**S**	**04 54 08.5**	**-5.1**
DCPH	**Dipolog City**	**3.24**	**251**	⇓*i*P	**P**	**04 53 37.6**	**+0.5**
DCPH				*i* S	**S**	**04 54 14.2**	**-0.8**
PAGZ	**Pagadian**	**3.53**	**239**	*e*P	**P**	**04 53 42.0**	**+0.7**
MMPH	**Masbate**	**3.85**	**314**	*e*P	**P**	**04 53 52.0**	**+6.2**
GUIM	**Jordan**	**3.92**	**284**	*e*P	**P**	**04 53 47.2**	**+0.5**
RCP	**Roxas**	**4.10**	**298**	⇑*e*P	**P**	**04 53 50.7**	**+1.4**
IPIL	**Ipil**	**4.26**	**244**	*e*P	**P**	**04 53 51.2**	**-0.5**
AAP	**Anini-y**	**4.50**	**280**	*e*P	**P**	**04 53 53.0**	**-2.0**
PVCP	**Virac**	**4.50**	**330**	*e*P	**P**	**04 53 57.4**	**+2.3**
KALP	**Kalibo**	**4.51**	**297**	*e*P	**P**	**04 53 46.0**	**-9.1**
OTRP	**Odiongan**	**5.10**	**302**	*e*P	**P**	**04 54 05.4**	**+1.8**
CUYO	**Cuyo Island**	**5.47**	**283**	*e*P	**P**	**04 54 09.5**	**+0.8**
GQP	**Guinayangan**	**5.75**	**317**	⇓*e*P	**P**	**04 54 14.4**	**+1.8**
BOAC	**Boac**	**5.88**	**310**	*e*P	**P**	**04 54 17.4**	**+3.0**
SJMP	**San Jose**	**5.92**	**298**	*e*P	**P**	**04 54 16.2**	**+1.2**
LQP	**Lukban**	**6.53**	**313**	⇑*e*P	**P**	**04 54 28.3**	**+4.8**
BUSP	**Coron**	**6.56**	**291**	*e*P	**P**	**04 54 24.7**	**+0.6**
TGY	**Tagaytay City**	**6.96**	**310**	⇑*e*P	**P**	**04 54 33.9**	**+4.2**
TGY	**Tagaytay City**	**6.96**	**310**	Pn	**P**	**04 54 32.9**	**+3.2**
	20nm,0.3s,baz=87,slow=3.3,SNR=26						
TGY				LR	LR	04 57 28.3	
	comp=Z,3µm,20.1s,baz=130,slow=41						
ENPP	**El Nido**	**7.08**	**283**	*e*P	**P**	**04 54 31.0**	**-0.3**
LUBP	**Lubang**	**7.29**	**304**	*e*P	**P**	**04 54 37.9**	**+3.6**
BALP	**Baler**	**7.68**	**322**	*e*P	**P**	**04 54 39.6**	**-0.1**
CAUP	**Cauayan**	**8.52**	**329**	*e*P	**P**	**04 54 51.6**	**+0.3**
APYP	**Conner**	**9.58**	**329**	*e*P	**P**	**04 55 07.1**	**+0.9**
TSM	**Tawau**	**10.05**	**238**	P	**P**	**04 55 11.5**	**-1.0**
KKM	**Kota Kinabalu**	**10.76**	**251**	P	**P**	**04 55 24.2**	**+1.8**
QIZ	**Qiongzhong**	**18.57**	**302**	⇓P	**P**	**04 57 04.0**	**0.0**
QIZ				S	**S**	**05 00 28.1**	**+1.7**
QIZ				XS		05 00 39.3	
QIZ				LR	LR		
	comp=N,544nm,19.9s						
QIZ				LR	LR		
	comp=E,676nm,19.9s						
QIZ				LR	LR		
	comp=Z,1µm,23.6s						
QIZ	**Qiongzhong**	**18.57**	**302**	*e*P	**P**	**04 57 03.5**	**-0.5**
	comp=Z,21nm,0.7s						
SSE	**Sheshan**	**21.87**	**348**	P	**P**	**04 57 37.1**	**-2.1**
SSE				S	**S**	**05 01 35.3**	**+1.5**
SSE				XS		05 01 50.5	
SSE				AMB	AMB		
	comp=Z,57nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,185nm,5.7s						
SSE				LR	LR		
	comp=N,151nm,20.2s,MS3.4						
SSE				LR	LR		
	comp=E,62nm,20.2s,MS3.4						
SSE				LR	LR		
	comp=Z,204nm,21.0s,MS3.5						
SSE	**Sheshan**	**21.87**	**348**	P	**P**	**04 57 37.1**	**-2.1**
	comp=Z,57nm,0.8s,mb5.0						
SSE				S	**S**	**05 01 35.3**	**+1.5**
SSE				sS		05 01 50.5	
SSE				LR	LR		
	comp=Z,200nm,21.0s,MS3.5						
CBIJ	**Chichi jima**	**22.83**	**39**	P	**P**	**04 57 50.9**	**+2.1**
	comp=Z,147nm,0.5s,mb5.6,baz=275,slow=6.0,SNR=8.9						
CBIJ				LR	LR	05 04 46.7	
	comp=Z,378nm,21.9s,MS3.8,baz=180,slow=31						
KAKA	**Kakadu**	**23.02**	**165**	⇓*i*P	**P**	**04 57 50.7**	**0.0**
	comp=Z,27nm,0.5s,mb4.9						
NJ2	**Nanjing**	**23.36**	**344**	*e*P	**P**	**04 57 55.6**	**+1.7**
NJ2				AP		04 58 04.0	
NJ2				XP		04 58 09.0	
NJ2				S	**S**	**05 02 03.0**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,640nm,4.7s						
NJ2				LR	LR		
	comp=N,930nm,20.9s,MS4.3						
NJ2				LR	LR		
	comp=E,660nm,20.5s,MS4.3						
NJ2				LR	LR		
	comp=Z,560nm,16.6s,MS4.1						
KKTK	**Khon Kaen**	**23.94**	**289**	P	**P**	**04 58 01.0**	**+1.4**
	comp=Z,432nm,0.5s						
GYA	**Guiyang**	**25.09**	**314**	⇑*i*P	**P**	**04 58 16.1**	**+5.4**
GYA				AP	pP	04 58 25.4	+5.3
GYA				XP	sP	04 58 29.5	+5.5
GYA				S	**S**	**05 02 39.6**	**+9.3**
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
GYA				AMB	AMB		
	comp=Z,130nm,4.2s						
GYA				LR	LR		
	comp=N,540nm,20.0s,MS4.2						
GYA				LR	LR		
	comp=E,650nm,19.8s,MS4.2						
GYA				LR	LR		
	comp=Z,810nm,17.7s,MS4.3						
IPM	**Ipoh**	**25.72**	**260**	P	**P**	**04 58 16.6**	**-0.1**
ENH	**Enshi**	**25.90**	**325**	P	**P**	**04 58 14.8**	**-3.4**
	comp=Z,16nm,0.9s,mb4.5						
JHJ	**Hachijo jima 2**	**26.38**	**26**	LR	LR	05 07 50.0	
	comp=Z,175nm,19.8s,MS3.6,baz=95,slow=34						
NANT	**Nan**	**26.52**	**293**	P	**P**	**04 58 22.0**	**-2.1**
KMI	**Kunming**	**27.28**	**307**	⇑P	**P**	**04 58 32.3**	**+1.3**
KMI				AP	pP	04 58 42.1	+1.5
KMI				XP	sP	04 58 45.3	+0.5
KMI				S	**S**	**05 03 06.4**	**+0.1**
KMI				AMB	AMB		
	comp=Z,14nm,0.9s,mb4.5						
KMI				AMB	AMB		
	comp=Z,89nm,6.6s						
KMI				LR	LR		
	comp=N,343nm,12.4s,MS4.3						
KMI				LR	LR		
	comp=E,523nm,16.0s,MS4.3						
KMI				LR	LR		
	comp=Z,613nm,21.8s						
KMI	**Kunming**	**27.28**	**307**	⇑P	**P**	**04 58 32.3**	**+1.3**
	comp=Z,14nm,0.9s,mb4.5						
KMI				pP	pP	04 58 42.1	+1.5
KMI				sP	sP	04 58 45.2	+0.4
KMI				S	**S**	**05 03 06.4**	**+0.1**
KMI				LR	LR		
	comp=Z,610nm,21.8s,MS4.1						
CHRT	**Chiangrai**	**27.67**	**295**	P	**P**	**04 58 29.0**	**-5.6**
	comp=Z,129nm,1.1s,mb5.5						
KS15	**Wonju Array Si**	**27.68**	**2**	*e*P	**P**	**04 58 32.4**	**-2.2**
BDT	**Bhumibol Dam**	**27.71**	**289**	P	**P**	**04 58 34.0**	**-1.0**
PMG	**Port Moresby**	**28.00**	**132**	P	**P**	**04 58 38.7**	**+1.0**
	comp=Z,68nm,1.1s,mb5.2,baz=289,slow=10.0,SNR=5.0						
PMG	**Port Moresby**	**28.00**	**132**	*e*P	**P**	**04 58 38.1**	**+0.4**
	comp=Z,53nm,1.0s,mb5.1						
PMG				LR	LR		
	comp=Z,352nm,19.0s,MS4.0						
CM31	**Chiang Mai Arr**	**28.04**	**291**	*e*P	**P**	**04 58 36.8**	**-1.2**
	comp=Z,54nm,1.6s,mb4.9						
CMAR	**Chiang Mai Arr**	**28.04**	**291**	P	**P**	**04 58 36.1**	**-1.9**
	comp=Z,3.5nm,0.9s,mb4.0,baz=105,slow=6.7,SNR=14						
CMAR				PcP	PcP	05 01 51.6	-0.7
	comp=Z,0.9nm,0.5s,baz=90,slow=0.9,SNR=4.6						
CMAR				ScP		05 05 27.9	
	comp=Z,0.8nm,0.4s,baz=54,slow=1.2,SNR=4.8						
CMAR				LR	LR	05 10 59.4	
	comp=Z,360nm,18.2s,MS4.0,baz=115,slow=39						
XAN	**Xi'an**	**29.11**	**329**	P	**P**	**04 58 46.8**	**-0.5**
XAN				AP	pP	04 58 55.8	-1.2
XAN				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.7						
WRA	**Warramunga Arr**	**30.43**	**165**	P	**P**	**04 58 57.3**	**-2.0**
	comp=Z,5.0nm,0.8s,mb4.3,baz=344,slow=9.5,SNR=24						
WRA				PcP	PcP	05 01 57.6	-0.8
	comp=Z,2.5nm,1.0s,baz=344,slow=3.4,SNR=4.7						
BJT	**Baijiatuau**	**31.58**	**345**	P	**P**	**04 59 05.7**	**-3.5**
	comp=Z,12nm,0.6s,mb4.9						
SNY	**Shenyang**	**32.13**	**356**	⇑P	**P**	**04 59 14.8**	**+0.8**
SNY				AMB	AMB		
	comp=Z,140nm,0.9s,mb5.8						
LZH	**Lanzhou**	**33.37**	**326**	⇑P	**P**	**04 59 24.6**	**-0.2**
LZH				AP	pP	04 59 34.5	-0.1
LZH				XP	sP	04 59 38.6	-0.5
LZH				PP	PP	05 00 36.5	-0.5
LZH				*e*S	**S**	**05 04 41.6**	**-0.8**
LZH				XS		05 04 57.5	
LZH				SS	SS	05 06 45.6	-0.4
LZH				AMB	AMB		
	comp=Z,31nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,207nm,6.1s						
LZH				LR	LR		
	comp=N,1µm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,17.0s,MS5.0						
LZH	**Lanzhou**	**33.37**	**326**	⇑P	**P**	**04 59 24.6**	**-0.2**
	comp=Z,31nm,1.5s,mb5.0						
LZH				pP	pP	04 59 34.5	-0.1
LZH				sP	sP	04 59 38.6	-0.5
LZH				PP	PP	05 00 36.5	-0.5
LZH				*e*S	**S**	**05 04 41.6**	**-0.8**
LZH				sS		05 04 57.5	
LZH				SS	SS	05 06 45.6	-0.4
LZH				LR	LR		
	comp=Z,2µm,17.0s,MS5.0						
HHC	**Hu-ho-hao-te**	**33.74**	**339**	*e*P	**P**	**04 59 28.4**	**+0.5**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,274nm,5.4s						
ASAR	**Alice Springs**	**33.92**	**168**	P	**P**	**04 59 28.6**	**-1.1**
	comp=Z,4.3nm,0.7s,mb4.5,baz=15,slow=9.0,SNR=39						
ASAR				PcP	PcP	05 02 07.0	-0.8
	comp=Z,3.5nm,0.7s,baz=322,slow=1.9,SNR=7.0						
ASAR				LR	LR	05 12 47.1	
	comp=Z,140nm,18.4s,MS3.7,baz=351,slow=35						
ASPA	**Alice Springs**	**33.92**	**168**	*e*P	**P**	**04 59 28.6**	**-1.1**
CN2	**Changchun**	**34.01**	**359**	*e*P	**P**	**04 59 30.5**	**+0.2**
CN2				*e*XP	sP	04 59 43.9	-0.6
CN2				*e*S	**S**	**05 04 53.9**	**+1.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CN2				LR	LR		
	comp=N,700nm,12.0s,MS4.8						
CN2				LR	LR		
	comp=E,700nm,12.0s,MS4.8						
CN2				LR	LR		
	comp=Z,670nm,14.0s,MS4.5						
MDJ	**Mudanjiang**	**34.92**	**4**	P	**P**	**04 59 39.3**	**+1.2**
MDJ				AP	pP	04 59 47.9	-0.1
MDJ				XP	sP	04 59 51.9	-0.5
MDJ				PP	PP	05 00 59.3	+2.8
MDJ				PCP	PcP	05 02 11.1	+0.6
MDJ				S	**S**	**05 05 10.9**	**+4.5**
MDJ				XS		05 05 25.8	
MDJ				SCP		05 05 53.6	
MDJ				PCS		05 05 57.3	
MDJ				SCS	ScS	05 09 57.5	+3.2
MDJ				AMB	AMB		
	comp=Z,42nm,0.9s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,453nm,5.1s						
MDJ				LR	LR		
	comp=E,166nm,32.8s						
MDJ				LR	LR		
	comp=Z,78nm,25.1s						
MDJ	**Mudanjiang**	**34.92**	**4**	*e*P	**P**	**04 59 39.5**	**+1.4**
	comp=Z,37nm,0.9s,mb5.3						
CTA	**Charters Tower**	**35.42**	**147**	*e*P	**P**	**04 59 43.6**	**+1.0**
	comp=Z,10nm,1.1s,mb4.7						
CTA	**Charters Tower**	**35.42**	**147**	P	**P**	**04 59 42.9**	**+0.3**
	comp=Z,8.3nm,0.8s,mb4.7,baz=330,slow=10,SNR=7.9						
CTA				LR	LR	05 14 07.8	
	comp=Z,219nm,19.1s,MS3.9,baz=51,slow=36						
CTAO	**Charters Tower**	**35.42**	**147**	*e*P	**P**	**04 59 43.5**	**+0.9**
	comp=Z,11nm,0.8s,mb4.8						
CTAO				LR	LR		
	comp=Z,356nm,21.0s,MS4.1						
ASAJ	**Asahikawa**	**37.07**	**19**	P	**P**	**04 59 57.5**	**+1.2**
	comp=Z,17nm,0.8s,mb4.9,baz=256,slow=16,SNR=9.9						
ASAJ				LR	LR	05 12 35.0	
	comp=Z,223nm,21.9s,MS3.9,baz=197,slow=32						
GTA	**Gaotai**	**37.97**	**326**	P	**P**	**05 00 02.8**	**-1.1**
GTA				AP	pP	05 00 13.6	-0.2
GTA				XP	sP	05 00 16.8	-1.3
GTA				S	**S**	**05 05 47.3**	**-5.9**
GTA				SCP		05 06 06.0	
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.1						
GTA				AMB	AMB		
	comp=Z,127nm,6.5s						
GTA				LR	LR		
	comp=N,312nm,19.4s,MS4.3						
GTA				LR	LR		
	comp=E,336nm,22.1s,MS4.3						
GTA				LR	LR		
	comp=Z,399nm,23.6s,MS4.2						
LSA	**Lhasa**	**38.52**	**306**	P	**P**	**05 00 10.6**	**+2.1**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
LSA	**Lhasa**	**38.52**	**306**	*e*P	**P**	**05 00 10.0**	**+1.5**
	comp=Z,19nm,1.0s,mb4.8						
KLR	**Kul'dur**	**39.68**	**5**	*e*P	**P**	**05 00 16.2**	**-1.8**
HIA	**Hailar**	**39.87**	**353**	P	**P**	**05 00 19.3**	**-0.2**
	comp=Z,13nm,1.3s,mb4.5						
ULN	**Ulaanbaatar**	**41.44**	**340**	*e*P	**P**	**05 00 32.2**	**-0.3**
	comp=Z,11nm,0.8s,mb4.5						
ULN				LR	LR		
	comp=Z,216nm,20.0s,MS4.0						
SONM	**Songino Array**	**41.64**	**340**	P	**P**	**05 00 33.6**	**-0.6**
	comp=Z,2.5nm,0.9s,mb3.9,baz=154,slow=7.9,SNR=13						
SONM				PcP	PcP	05 02 29.4	-1.9
	comp=Z,2.4nm,1.0s,baz=166,slow=5.9,SNR=4.3						
SONM				ScP		05 06 17.4	
	comp=Z,2.6nm,1.1s,baz=180,slow=3.7,SNR=8.1						
KLBR	**Kellerberrin**	**41.86**	**191**	*e*P	**P**	**05 00 35.9**	**-0.3**
	comp=Z,355nm,1.3s,mb5.8						
JIRN	**Jiri**	**41.89**	**301**	*e*P	**P**	**05 00 36.1**	**-0.4**
	comp=Z,51nm,0.7s,mb5.3						
GUN	**Gumba**	**42.22**	**301**	*e*P	**P**	**05 00 38.0**	**-1.3**
	comp=Z,81nm,0.9s,mb5.4						
PKI	**Pulchoki**	**42.52**	**300**	*e*P	**P**	**05 00 41.8**	**+0.1**
	comp=Z,48nm,1.1s,mb5.1						
MUN	**Mundaring**	**42.55**	**193**	*e*P	**P**	**05 00 41.4**	**-0.5**
	comp=Z,16nm,0.7s,mb4.8						
VIS	**Vishakhapatnam**	**42.57**	**286**	*e*P	**P**	**05 00 36.9**	**-5.3**
KKN	**Kakani**	**42.70**	**301**	*e*P	**P**	**05 00 41.6**	**-1.5**
	comp=Z,52nm,1.0s,mb5.2						
DMN	**Daman**	**42.79**	**300**	*e*P	**P**	**05 00 42.8**	**-1.1**
	comp=Z,38nm,0.9s,mb5.1						
NWAO	**Narrogin (SRO)**	**43.26**	**191**	P	**P**	**05 00 47.4**	**-0.2**
	comp=Z,24nm,0.8s,mb5.0,baz=21,slow=8.6,SNR=18						
NWAO	**Narrogin (SRO)**	**43.26**	**191**	*e*P	**P**	**05 00 47.5**	**-0.2**
	comp=Z,15nm,0.6s,mb4.9						
GKN	**Gorkha**	**43.30**	**301**	*e*P	**P**	**05 00 45.9**	**-2.2**
STKA	**Stephens Creek**	**43.78**	**161**	⇓*i*P	**P**	**05 00 51.6**	**-0.3**
	comp=Z,13nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**43.78**	**161**	P	**P**	**05 00 51.8**	**-0.1**
	comp=Z,13nm,0.8s,mb4.7,baz=335,slow=7.4,SNR=30						
STKA				PP	PP	05 02 39.1	+3.7
	comp=Z,8.0nm,0.8s,baz=340,slow=8.0,SNR=3.3						
KOLN	**Koldanda**	**44.12**	**300**	*e*P	**P**	**05 00 52.9**	**-1.8**
	comp=Z,41nm,0.7s,mb5.2						
ZAK	**Zakamensk**	**44.88**	**339**	*e*P	**P**	**05 01 00.7**	**+0.2**
ZAK				*e*		05 02 37.7	
ZAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
TLY	**Talaya**	**45.85**	**340**	*i* P	**P**	**05 01 08.0**	**-0.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
TLY				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.7						
TLY	**Talaya**	**45.85**	**340**	*e*P	**P**	**05 01 07.6**	**-0.6**
	comp=Z,13nm,0.9s,mb4.8						
CLNS	**Chul'man**	**47.07**	**359**	*e*P	**P**	**05 01 18.5**	**+0.8**
CLNS				*e*		05 02 50.9	
CLNS				*e*S	**S**	**05 08 09.4**	**+3.0**
CLNS				*e*SS	SS	05 11 33.5	+7.0
CLNS				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
CLNS				pmax	pmax		
	comp=N,15nm,0.8s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.0s						
CLNS				smax			
	comp=N,5.0nm,0.9s						
CLNS				smax			

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            comp=Z,2.0nm,0.7s
CLNS                                smax
            comp=E,4.0nm,0.9s
CLNS                                MLR      MLR
            comp=Z,100nm,12.0s,MS4.0
CLNS                                MLR      MLR
            comp=N,100nm,15.0s,MS4.0
CLNS                                MLR      MLR
            comp=E,100nm,16.0s,MS4.0
HYB   Hyderabad          47.09 285 eP       P            05 01 18.0  -0.4
            comp=E,60nm,1.0s,mb5.5
HYB   Hyderabad          47.09 285 i P      P            05 01 18.0  -0.4
            comp=E,60nm,1.0s,mb5.5
WMQ   Urumqi             47.80 322 eP       P            05 01 24.0  +0.4
WMQ                                 XP      sP           05 01 38.0  +0.1
WMQ                                 PP      PP           05 03 15.0  +0.3
WMQ                                 S       S            05 08 17.0   0.0
WMQ                                 SS      SS           05 11 39.0  -0.9
WMQ                                 AMB     AMB
            comp=Z,11nm,0.8s,mb4.9
WMQ                                 LR      LR
            comp=N,325nm,22.0s,MS4.3
WMQ                                 LR      LR
            comp=E,254nm,23.0s,MS4.3
WMQ                                 LR      LR
            comp=Z,245nm,20.0s,MS4.2
BOD   Bodaibo            48.99 351 eP       P            05 01 32.2  -0.4
BOD                                 pmax    pmax
            comp=Z,8.0nm,1.1s,mb4.7
DDI   Dehra Dun          49.46 302 e        P            05 01 37.3  +0.6
CNB   Canberra Magne     49.71 155 eP       P            05 01 39.5  +1.0
            comp=Z,396nm,1.1s
NDI   New Delhi          49.80 299 e        P            05 01 31.5  -7.8
YAK   Yakutsk            52.32   2 i P      P            05 01 57.8   0.0
YAK                                 pmax    pmax
            comp=Z,50nm,0.7s,mb5.5
YAK                                 MLR     MLR
            comp=Z,100nm,21.0s,MS3.8
YAK   Yakutsk            52.32   2 eP       P            05 01 57.9   0.0
            comp=Z,63nm,0.8s,mb5.6
MKAR  Makanchi Array     52.61 323 eP       P            05 01 58.8  -1.4
MKAR                                pmax    pmax
            comp=Z,2.0nm,0.5s
MA2   Magadan            53.06  15d iP      P            05 02 04.4  +1.0
MA2                                 pmax    pmax
            comp=Z,42nm,1.0s,mb5.3
MA2   Magadan            53.06  15 eP       P            05 02 04.4  +1.0
            comp=Z,29nm,0.8s,mb5.3
ZAL   Zalesovo           55.24 331 i P      P            05 02 17.6  -1.9
ZAL                                 pmax    pmax
            comp=Z,3.0nm,0.4s
ZAL   Zalesovo           55.24 331  P       P            05 02 17.9  -1.6
            comp=Z,3.0nm,0.4s,mb4.7,baz=340,slow=6.3,SNR=9.9
AAK   Ala-Archa          55.87 315  P       P            05 02 22.6  -1.6
AAK                                 pmax    pmax
            comp=Z,4.0nm,1.1s,mb4.4
AAK   Ala-Archa          55.87 315 eP       P            05 02 22.1  -2.1
            comp=Z,2.1nm,0.6s,mb4.3
SEY   Seymchan           56.36  14 eP       P            05 02 31.3  +3.9
SEY                                                      05 03 25.8
SEY                                e                     05 04 36.9
SEY                                eS       S            05 10 20.1  +6.3
SEY                                                      05 12 07.1
SEY                                 pmax    pmax
            comp=Z,20nm,0.7s,mb5.3
NVS   Novosibirsk        56.51 332 eP       P            05 02 26.1  -2.5
NVS                                 pmax    pmax
            comp=Z,8.0nm,0.9s,mb4.8
NVS                                 pmax    pmax
            comp=N,3.0nm,0.7s
NVS                                 pmax    pmax
            comp=E,4.0nm,0.7s
KURK  Kurchatov          56.66 326  P       P            05 02 27.2  -2.5
KURK                                pmax    pmax
            comp=Z,4.0nm,0.7s,mb4.6
KURK  Kurchatov          56.66 326 eP       P            05 02 27.7  -2.0
            comp=Z,9.1nm,0.7s,mb4.9
FX1   Attu Island--F     57.15  32 eP       P            05 02 35.2  +1.9
TIXI  Tiksi              61.95   1 eP       P            05 03 05.1  -0.9
TIXI                                pmax    pmax
            comp=Z,32nm,0.9s,mb5.5
TIXI                                MLR     MLR
            comp=Z,104nm,19.0s,MS4.0
BVA0  Borovoye Array     62.26 326  P       P            05 03 05.8  -2.5
BVA0                                pmax    pmax
            comp=Z,1.0nm,0.9s,mb4.0
BVAR  Borovoye Array     62.26 326  P       P            05 03 06.3  -2.0
            comp=Z,3.7nm,0.6s,mb4.7,baz=121,slow=8.6,SNR=22
BVAR                                ScP                  05 07 44.3
            comp=Z,1.3nm,0.8s,baz=108,slow=4.7,SNR=3.8
CHKZ  Chkalovo           62.38 326  P       P            05 03 06.3  -2.8
CHKZ                                pmax    pmax
            comp=Z,17nm,1.7s,mb4.9
CHKZ  Chkalovo           62.38 326 eP       P            05 03 06.5  -2.6
            comp=Z,28nm,0.7s,mb5.5
BILL  Bilibino           63.93  16 i P      P            05 03 19.6  +0.5
BILL                                pmax    pmax
            comp=Z,30nm,1.1s,mb5.2
BILL  Bilibino           63.93  16 eP       P            05 03 18.9  -0.1
            comp=Z,17nm,0.7s,mb5.2
URZ   Urewera            67.10 139  LR      LR           05 29 12.0
            comp=Z,304nm,21.5s,MS4.5,baz=242,slow=32
BANOM Banah              68.03 294  P       P            05 03 45.4  -0.5
BANOM Banah              68.03 294 ⇑P       P            05 03 45.4  -0.5
ASHO  Ashiyiah           68.27 293  P       P            05 03 46.6  -0.8
ASHO  Ashiyiah           68.27 293 ⇑P       P            05 03 46.6  -0.8
SVE   Sverdlovsk         68.81 327 eP       P            05 03 48.0  -2.2
SVE                                e                     05 04 09.0
RBK   Rabkut             70.32 285 ⇓P       P            05 03 59.1  -1.0
            SNR=8.3
WHFO  Wadi Hawf          70.70 286 ⇑P       P            05 04 00.0  -2.4
            SNR=17
ABTO  Aybut              71.19 285 ⇓P       P            05 04 02.6  -2.8
            SNR=9.1
IMA   Indian Mountai     77.11  24 eP       P            05 04 40.8  +1.9
            comp=Z,47nm,0.7s,mb5.5
IMA                                e        pP           05 04 51.3  +1.8
RSO   Redoubt South      77.11  30 eP       P            05 04 40.3  +1.3
GNI   Garni              77.51 309 i P      P            05 04 41.1  -0.6
GNI                                 pmax    pmax
            comp=Z,5.0nm,0.6s
GNI   Garni              77.51 309  P       P            05 04 43.2  +1.5
            comp=Z,2.6nm,0.6s,mb4.3,baz=22,slow=5.4,SNR=3.5
RAYN  Ar Rayn            77.96 292  P       P            05 04 42.9  -1.5
            comp=Z,152nm,0.7s,SNR=20
KIV   Kislovodsk         78.89 313 eP       P            05 04 47.7  -1.4
KIV                                 pmax    pmax
            comp=Z,7.0nm,0.7s,mb4.7
KIV                                 pmax    pmax
            comp=E,6.0nm,0.8s
KIV   Kislovodsk         78.89 313 eP       P            05 04 49.1   0.0
            comp=E,13nm,0.7s,mb5.0
MCK   McKinley           79.01  27 eP       P            05 04 50.2  +0.9
            comp=E,10nm,0.7s,mb4.9
MCK                                e        pP           05 05 01.1  +1.1
SML   Sawmill            79.29  29 eP       P            05 04 52.2  +1.3
COLA  College            79.49  26 i P      P            05 04 52.5  +0.5
COLA  College            79.49  26 eP       P            05 04 52.1  +0.1
            comp=E,8.8nm,0.9s,mb4.7
ILAR  Eielson Array      79.90  26  P       P            05 04 54.3  +0.1
            comp=E,5.5nm,0.8s,mb4.5,baz=241,slow=4.5,SNR=70
THY   Trims Highway      80.44  27 eP       P            05 04 58.5  +1.5
DIV   Divide             80.54  29 eP       P            05 04 59.5  +1.9
            comp=E,58nm,0.9s,mb5.5
DIV                                e        pP           05 05 09.9  +1.6
SOC   Sochi              81.06 313 eP       P            05 04 57.7  -3.0
SOC                                e                     05 07 57.9
SOC                                ePPP     PPP          05 09 49.3   -10
SOC                                eS       S            05 15 02.1  -4.2
SOC                                eSSS     SSS          05 23 44.8  -1.6
SOC                                 pmax    pmax
            comp=Z,11nm,0.8s,mb4.8
SOC                                 pmax    pmax
            comp=N,4.0nm,0.5s
SOC                                 pmax    pmax
            comp=E,11nm,0.8s
SOC                                 MLR     MLR
            comp=Z,174nm,21.0s,MS4.4
SOC                                 MLR     MLR
            comp=N,114nm,20.0s
OBN   Obninsk            82.08 325deP       P            05 05 04.0  -1.8
OBN                                eS       S            05 15 09.3  -7.3
OBN                                 pmax    pmax
            comp=Z,6.0nm,0.8s,mb4.6
OBN                                 MLR     MLR
            comp=Z,100nm,20.0s,MS4.2
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APA   Apatity            82.30 337 i        P            05 05 06.5  -0.2
APA                                 pmax    pmax
            comp=Z,16nm,1.0s,mb4.9
MALT  Malatya            82.54 308 eP       P            05 05 08.3  -0.3
            comp=Z,3.9nm,0.7s,mb4.5
DAWY  Dawson             83.20  26 eP       P            05 05 13.3  +2.0
DAWY                               e        pP           05 05 24.0  +2.0
JOF   Joensuu            83.80 333 ep       P            05 05 13.1  -1.3
KEV   Kevo               84.25 340 ep       P            05 05 15.4  -1.2
ASF   Jabal al Asfar     84.55 302  P       P            05 05 17.8  -1.1
            comp=Z,1.2nm,0.4s,mb4.4,baz=45,slow=5.7,SNR=3.4
INK   Inuvik             84.78  22 eP       P            05 05 20.3  +1.1
            comp=Z,15nm,1.0s,mb5.1
ARCES ARCESS Array B     84.81 340  P       P            05 05 19.1  -0.3
            comp=Z,9.1nm,0.6s,mb5.1,baz=82,slow=5.9,SNR=39
SIM   Simferopol'        84.89 315  P       P            05 05 23.6  +3.3
SIM                                 pmax    pmax
            comp=Z,15nm,0.8s,mb5.2
BRTR  Keskin Array B     86.05 309  P       P            05 05 25.6  -0.6
            comp=Z,1.6nm,0.6s,mb4.4,baz=109,slow=4.6,SNR=13
KAF   Kangasniemi        86.24 332 ep       P            05 05 25.2  -1.3
            comp=Z,6.5nm,0.5s,mb5.1,baz=74,slow=4.5
KAF   Kangasniemi        86.24 332 eP       P            05 05 25.2  -1.3
KAF                                 pmax    pmax
            comp=Z,7.0nm,0.5s,mb5.2
FINES FINESS Array B     86.50 332 i P      P            05 05 27.0  -0.8
FINES                               pmax    pmax
            comp=Z,6.0nm,0.5s
FINES FINESS Array B     86.50 332  P       P            05 05 27.0  -0.8
            comp=Z,5.6nm,0.5s,mb5.1,baz=82,slow=5.5,SNR=69
EIL   Elat               86.57 299  P       P            05 05 28.8  -0.1
            comp=Z,11nm,0.8s,mb5.1
AKASG Malin Array Be     87.14 321  P       P            05 05 30.4  -0.8
            comp=Z,1.3nm,0.4s,mb4.5,baz=61,slow=4.8,SNR=4.9
VNDA  Vanda              89.31 173  P       P            05 05 41.2  +0.2
            comp=Z,3.8nm,0.9s,mb4.7,baz=309,slow=5.4,SNR=5.6
KMBO  Kilima Mbogo       89.39 269 i P      P            05 05 47.8  +4.9
KMBO                                pmax    pmax
            comp=Z,2.0nm,0.9s
KMBO  Kilima Mbogo       89.39 269  P       P            05 05 42.0  -0.8
            comp=Z,1.7nm,1.0s,mb4.3,slow=1.0,SNR=4.3
KMBO                                LR      LR           05 48 35.9
            comp=Z,68nm,18.2s,MS4.1,baz=100,slow=38
BURAR Bucovina Array     90.41 318 ⇑P       P            05 05 47.1  +0.3
MLR   Muntele Rosu       90.45 316  P       P            05 05 47.3  +0.3
            comp=Z,0.9nm,0.6s,mb4.3,baz=117,slow=11
MLR   Muntele Rosu       90.45 316 ⇓P       P            05 05 48.0  +1.0
DAG   Danmarks Havn      91.37 352⇓iP       P            05 05 50.3  -0.4
DAG                                 pmax    pmax
            comp=Z,2.0nm,0.4s,mb4.8
DAG   Danmarks Havn      91.37 352⇓iP       P            05 05 50.3  -0.4
            comp=Z,1.7nm,0.4s,mb4.7
KWP   Kalwaria           91.46 321 eP       P            05 05 50.0  -1.7
            comp=Z,10nm,0.9s,mb5.2
RES   Resolute Bay       92.05  10 eP       P            05 05 54.8  +0.9
            comp=Z,7.4nm,0.8s,mb5.1
HFS   Hagfors            92.66 332  P       P            05 05 55.7  -1.2
            comp=Z,3.7nm,0.5s,mb5.1,baz=90,slow=4.4,SNR=29
NB2   NORSAR Subarra     93.37 334  P       P            05 05 58.5  -1.6
            comp=Z,0.4nm,0.6s,mb4.0,baz=70,slow=5.3
NOA   NORSAR Array B     93.37 334  P       P            05 05 58.5  -1.7
            comp=Z,3.0nm,0.8s,mb4.8,baz=65,slow=4.5,SNR=11
NAO01 NORSAR Array S     93.60 334 eP       P            05 06 00.8  -0.4
            comp=Z,7.9nm,0.9s,mb5.1
YKW3  Yellowknife Ar     94.19  24 eP       P            05 06 04.8  +1.0
YKW3                               e        pP           05 06 16.4  +1.8
YKA   Yellowknife Ar     94.23  24 i P      P            05 06 05.3  +1.3
YKA                                 pmax    pmax
            comp=Z,7.0nm,0.7s
YKA   Yellowknife Ar     94.23  24  P       P            05 06 05.3  +1.4
            comp=Z,6.5nm,0.7s,mb5.2,baz=300,slow=4.7,SNR=138
YKA                                 PP      PP           05 09 51.1  -2.7
            comp=Z,0.3nm,0.9s,baz=302,slow=8.1,SNR=3.7
YKA   Yellowknife Ar     94.23  24  P       P            05 06 05.3  +1.4
YKA                                 PP      PP           05 09 51.1  -2.7
GERES GERESS Array B     97.27 322  P       P            05 06 18.0  -0.2
            comp=Z,0.8nm,0.7s,mb4.3,baz=72,slow=4.2,SNR=9.9
SYO   Syowa Base         97.83 201 ⇑P       P            05 06 20.8  +0.6
GRA1  Grafenberg Arr     98.40 324 ePdif    pP           05 06 33.7  -0.3
GRF   Grafenberg Arr     98.40 324 eP       pP           05 06 33.7  -0.3
PDAR  Pinedale Array    107.04  40  Pdiff   Pdif         05 07 09.0  +7.1
            comp=Z,0.3nm,0.8s,baz=11,slow=4.6,SNR=3.5
TXAR  Lajitas Array     118.08  49  PKP     PKPdf        05 11 33.9  +2.4
            comp=Z,0.5nm,0.6s,baz=15,slow=1.4,SNR=9.5
JCT   Junction City     120.29  46 ePKPdf   PKPdf        05 11 37.3  +1.4
DBIC  Dimbokro          128.84 287  PKP     PKPdf        05 11 53.7  +0.9
            comp=Z,2.1nm,0.8s,baz=105,slow=8.4,SNR=2.5
OTAV  Otavalo           153.33  70 ePKPab   PKPab        05 13 00.2  +2.7
LPAZ  La Paz            164.35 116  PKP     PKPdf        05 12 51.6  +3.4
            comp=Z,1.1nm,0.9s,baz=243,slow=11,SNR=2.3
LPAZ                                PKPab   PKPab        05 13 46.8  +2.1
            comp=Z,1.9nm,0.8s,baz=201,slow=3.1,SNR=3.9
SAML  Samuel            170.47  86 ePKPdf   PKPdf        05 12 54.0  +1.4
SAML                               ePKPab   PKPab        05 14 13.0  +1.3
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*MOS **20** 05:08:35.5±1.0, 9.00N×126.31E, h33km, mb5.4/29, Error ellipse: s-maj=11.6km s-min=5.8km az=111.0*

*BJI **20** 05:08:36.3, 9.04N×126.21E, h32km, mB5.2, mb5.2, Ms4.5, Msz4.3*

*NEIC **20** 05:08:38.3±0.2, 8.93N×126.23E, mb5.1/42, Error ellipse: s-maj=7.4km s-min=4.4km az=70.0*

NEIC Felt [III PIVS] at Butuan and [I PIVS] at Surigao.

*HRVD **20** 05:08:38.3±0.4, 8.74N×126.46E, h58km±2km, MW5.0/48, Centroid moment Tensor Solution. LP body waves: s37,c45;Mantle waves: s48,c77; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.59±.20; $M_{\theta\theta}$1.16±.16; $M_{\phi\phi}$-4.75±.16; $M_{r\theta}$0.31±.11; $M_{\theta\phi}$0.68±.13; $M_{\phi r}$0.51±.17; Best double couple: $M_0$4.262×10^{16} NP1:ϕ_s165°,δ42°,λ77°. NP2:ϕ_s2°,δ49°,λ101°. Principal axes: T 3.671, Plg81°, Azm333°; N 1.184, Plg8°, Azm174°; P -4.854, Plg3°, Azm84°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **20** 05:08:38.1±0.4, 8.92N×126.06E, h40km±3km, mb4.8/34, mb1 4.8/36, mb1mx4.8/37, mbtmp5.0/36, ML5.1/2, MS4.0/10, Ms1 4.1/10, ms1mx3.8/24 Error ellipse: s-maj=16.1km s-min=8.1km az=73.0*

*MAN **20** 05:08:39.2, 8.93N×126.43E, h48km, mb5.7, ML4.7, MS5.1*

MAN BUTUAN CITY III SURIGAO CITY I.

ISC 20 05:08:36.5±0.2, **9.04N**±0.02×**126.53E**±0.02, **h42**km, **h42**km±.6km**:pP-P, n271,** σ1ˢ**29**/269, **mb5.1**/93, **MS4.2**/18, **25C-18D, Mindanao**

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Code  Station Name         Δ°  AZ°   Phase ID               Time      Res
                                   Op       ISC           h  m  s    ISC
BIPH  Bislig              0.86 191⇓iP       P            05 08 53.1  +0.9
BIPH                               i S      S            05 09 02.2  -1.7
BUTP  Butuan              0.90 266 eP       P            05 08 54.6  +1.8
BUTP                               eS       S            05 09 05.7  +0.9
SCPH  Surigao             1.27 306⇓eP       P            05 09 01.3  +3.3
SCPH                               eS       S            05 09 21.0  +6.8
BUKP  Musuan              1.85 232 eP       P            05 09 07.7  +1.3
BUKP                               eS       S            05 09 29.2  +0.5
CGP   Cagayan de Oro      1.90 253 eP       P            05 09 07.8  +0.7
CGP                                eS       S            05 09 29.4  -0.6
MSLP  Maasin              1.98 304 eP       P            05 09 12.0  +3.8
MSLP                               eS       S            05 09 37.2  +5.3
MATI  Mati                2.09 187 eP       P            05 09 11.2  +1.4
MATI                               eS       S            05 09 36.0  +1.2
DAV   Davao City (W)      2.17 206 eP       P            05 09 13.5  +2.6
KCP   Kidapawan           2.46 215⇓iP       P            05 09 18.3  +3.2
KCP                                i S      S            05 09 45.2  +0.9
TBP   Tagbilaran          2.71 284 i P      P            05 09 20.8  +2.1
TBP                                i S      S            05 09 51.6  +1.1
LLP   Lapu-Lapu           2.83 297⇓eP       P            05 09 23.2  +2.8
LLP                                i S      S            05 09 56.9  +3.4
DCPH  Dipolog City        3.17 262⇓iP       P            05 09 26.1  +0.9
DCPH                               i S      S            05 10 03.5  +1.3
SNPH  Sibulan             3.26 276⇓iP       P            05 09 27.5  +1.0
SNPH                               i S      S            05 10 04.5  -0.1
PAGZ  Pagadian            3.33 249 eP       P            05 09 28.1  +0.7
IPIL  Ipil                4.11 253 eP       P            05 09 40.1  +1.6
GUIM  Jordan              4.19 292 eP       P            05 09 41.5  +1.9
MMPH  Masbate             4.37 319 eP       P            05 09 46.0  +3.9
PVCP  Virac               5.10 333 eP       P            05 09 54.9  +2.5
OTRP  Odiongan            5.53 307 eP       P            05 10 01.2  +2.8
CUYO  Cuyo Island         5.72 289 eP       P            05 10 02.7  +1.6
SJMP  San Jose            6.31 303 eP       P            05 10 12.9  +3.5
LQP   Lukban              7.02 316 eP       P            05 10 23.3  +3.8
ENPP  El Nido             7.32 288 eP       P            05 10 24.5  +1.0
TGY   Tagaytay City       7.44 313⇑eP       P            05 10 29.9  +4.7
TGY                                eS       rx           05 11 00.7
TGY   Tagaytay City       7.44 313  Pn      P            05 10 29.3  +4.0
            14nm,0.3s,baz=288,slow=8.3,SNR=13
TGY                                 Sn      S            05 11 46.3  -2.9
            56nm,0.3s,baz=108,slow=16,SNR=2.7
PPR   Puerto Princes      7.73 276⇓iP       P            05 10 29.2   0.0
BATP  Bataraza            8.63 269 eP       P            05 10 40.1  -1.5
TSM   Tawau               9.80 242  P       P            05 10 59.4  +1.4
KKM   Kota Kinabalu      10.65 255  P       P            05 11 11.4  +1.8
JOW   Kunigami           17.78   5  P       P            05 12 48.6  +6.0
            17nm,0.3s,baz=196,slow=11,SNR=21
JOW                                 LR      LR           05 19 13.1
            comp=Z,294nm,21.5s,baz=103,slow=35
QIZ   Qiongzhong         18.98 303  P       P            05 12 56.0  -1.3
QIZ                                 LR      LR
            comp=E,548nm,21.7s
QIZ                                 LR      LR
            comp=Z,887nm,26.7s
KAKA  Kakadu             22.39 165⇑iP       P            05 13 32.0  -0.7
            comp=Z,115nm,0.8s,mb5.4
SSE   Sheshan            22.51 348  P       P            05 13 34.9  +1.0
SSE                                 S       S            05 17 37.6  +4.3
SSE                                 XS                   05 17 50.6
SSE                                 AMB     AMB
            comp=Z,79nm,0.9s,mb5.1
SSE                                 AMB     AMB
            comp=Z,229nm,5.8s
SSE                                 LR      LR
            comp=N,167nm,24.2s,MS3.4
SSE                                 LR      LR
            comp=E,78nm,24.1s,MS3.4
SSE                                 LR      LR
            comp=Z,207nm,25.3s,MS3.5
SSE   Sheshan            22.51 348  P       P            05 13 34.9  +1.0
            comp=Z,79nm,0.9s,mb5.1
SSE                                 S       S            05 17 37.6  +4.3
SSE                                 sS                   05 17 50.6
SSE                                 LR      LR
            comp=Z,210nm,25.3s,MS3.5
CBIJ  Chichi jima        23.28  37  P       P            05 13 46.0  +4.4
            comp=Z,48nm,0.6s,mb5.1,baz=294,slow=19,SNR=3.0
CBIJ                                LR      LR           05 21 10.2
            comp=Z,231nm,20.3s,MS3.6,baz=138,slow=32
KGM   Kluang             24.12 255  P       P            05 13 51.5  +1.8
WHN   Wuhan              24.23 334 eP       P            05 13 52.0  +1.3
GYA   Guiyang            25.59 315⇑iP       P            05 14 04.1  +0.4
GYA                                 AP      pP           05 14 15.8  +1.1
GYA                                 PP      PP           05 14 44.8  +0.8
GYA                                 S       S            05 18 30.6  +4.3
GYA                                 SS      SS           05 19 31.0  -0.4
GYA                                 AMB     AMB
            comp=Z,20nm,0.7s,mb4.8
GYA                                 AMB     AMB
            comp=Z,150nm,4.0s
GYA                                 LR      LR
            comp=N,780nm,20.0s,MS4.4
GYA                                 LR      LR
            comp=E,620nm,17.9s,MS4.4
GYA                                 LR      LR
            comp=Z,660nm,17.6s,MS4.2
IPM   Ipoh               25.70 262  P       P            05 14 06.4  +1.5
NANT  Nan                26.85 294 ⇑P       P            05 14 14.5  -0.9
PMG   Port Moresby       27.52 131  P       P            05 14 24.7  +3.0
            comp=Z,33nm,1.2s,mb4.9,baz=353,slow=8.1,SNR=3.6
KMI   Kunming            27.73 308  P       P            05 14 22.3  -1.1
KMI                                 AP      pP           05 14 33.9  -0.6
KMI                                 S       S            05 19 00.0  -1.2
KMI                                 AMB     AMB
            comp=Z,14nm,1.1s,mb4.5
KMI                                 LR      LR
            comp=N,397nm,18.8s,MS4.2
KMI                                 LR      LR
            comp=E,425nm,18.2s,MS4.2
KMI                                 LR      LR
            comp=Z,585nm,18.8s,MS4.2
KMI   Kunming            27.73 308  P       P            05 14 22.3  -1.1
            comp=Z,14nm,1.1s,mb4.5
KMI                                 pP      pP           05 14 33.9  -0.6
KMI                                 S       S            05 19 00.0  -1.2
KMI                                 LR      LR
            comp=Z,580nm,18.8s,MS4.2
BDT   Bhumibol Dam       27.99 290  P       P            05 14 25.0  -0.8
CHRT  Chiangrai          28.00 296 ⇑P       P            05 14 25.0  -1.0
KS15  Wonju Array Si     28.31   2 eP       P            05 14 29.6  +1.1
INCN  Inchon             28.32   0 eP       P            05 14 31.4  +2.8
            comp=Z,235nm,0.7s,mb5.9
CMAR  Chiang Mai Arr     28.35 292  P       P            05 14 28.7  -0.3
            comp=Z,11nm,0.6s,mb4.7,baz=103,slow=6.9,SNR=63
CMAR                                PcP     PcP          05 17 40.5  -0.7
            comp=Z,3.6nm,0.7s,baz=66,slow=1.0,SNR=8.3
CMAR                                LR      LR           05 27 11.8
            comp=Z,219nm,18.8s,MS3.8,baz=105,slow=40
MAJO  Matsushiro         29.37  19 eP       P            05 14 38.4  +0.4
MAJO                                pmax    pmax
            comp=Z,12nm,0.6s,mb4.8
MAJO  Matsushiro         29.37  19 eP       P            05 14 38.4  +0.4
            comp=Z,12nm,0.6s,mb4.8
MAT   Matsushiro         29.37  19 eP       P            05 14 39.0  +1.0
MAT                                 S       S            05 19 29.0  +1.6
MAT                                 pmax    pmax
            comp=Z,34nm,1.0s,mb5.0
MAT   Matsushiro         29.37  19 eP       P            05 14 39.0  +1.0
            comp=Z,34nm,1.0s,mb5.0
MAT                                 S       S            05 19 29.0  +1.6
MAT   Matsushiro         29.37  19  P       P            05 14 38.5  +0.5
MAT                                eS       S            05 19 29.0  +1.6
XAN   Xi'an              29.69 330  P       P            05 14 38.3  -2.5
XAN                                 AMB     AMB
            comp=Z,13nm,0.7s,mb4.8
WRA   Warramunga Arr     29.80 165  P       P            05 14 39.8  -2.2
            comp=Z,9.5nm,0.6s,mb4.7,baz=346,slow=9.2,SNR=102
WRA                                 pP      pP           05 14 51.6  -1.7
            comp=Z,11nm,0.8s,baz=346,slow=9.6,SNR=9.7
WRA                                 PcP     PcP          05 17 44.0  -0.9
            comp=Z,9.4nm,0.7s,baz=337,slow=2.8,SNR=10
WRA                                 S       S            05 19 25.8  -8.6
            comp=Z,6.8nm,0.8s,baz=345,slow=15,SNR=9.1
DL2   Dalian             30.07 352  P       P            05 14 45.1  +1.0
DL2                                 AMB     AMB
            comp=Z,60nm,0.7s,mb5.4
CD2   Chengdu            30.40 319 eP       P            05 14 46.0  -1.2
MBWA  Marble Bar         30.74 192 eP       P            05 14 48.8  -1.5
            comp=Z,9.5nm,0.7s,mb4.7
BJT   Baijiatuau         32.21 345 eP       P            05 15 02.2  -0.8
BJT                                 pmax    pmax
            comp=Z,32nm,0.8s
BJT   Baijiatuau         32.21 345 eP       P            05 15 02.1  -0.9
            comp=Z,32nm,0.8s,mb5.2
SNY   Shenyang           32.77 356 ⇑P       P            05 15 08.8  +1.0
SNY                                 AMB     AMB
            comp=Z,140nm,0.8s,mb5.9
ASAR  Alice Springs      33.29 168  P       P            05 15 10.9  -1.6
            comp=Z,7.2nm,0.5s,mb4.9,baz=352,slow=6.7,SNR=214
ASAR                                pP      pP           05 15 22.4  -1.5
            comp=Z,4.0nm,0.4s,baz=348,slow=6.3,SNR=7.1
ASAR                                PcP     PcP          05 17 53.4  -0.8
            comp=Z,16nm,0.7s,baz=351,slow=2.6,SNR=19
ASAR                                pPcP                 05 18 06.3
            comp=Z,5.3nm,0.8s,baz=351,slow=2.0,SNR=4.5
ASAR                                S       S            05 20 21.4  -7.5
            comp=Z,4.6nm,0.8s,baz=353,slow=18,SNR=4.5
ASPA  Alice Springs      33.29 168 eP       P            05 15 10.7  -1.9
ASPA                               epP      pP           05 15 23.0  -1.0
ASPA                               ePCP     PcP          05 17 52.6  -1.6
ASPA                               eS       S            05 20 20.0  -9.0
ASPA                               ePCS                  05 21 37.0
LZH   Lanzhou            33.93 326 eP       P            05 15 18.0   0.0
LZH                                 AP      pP           05 15 29.5  +0.1
LZH                                 XP      sP           05 15 35.0  +0.3
LZH                                 PP      PP           05 16 30.5  -1.9
LZH                                eS       S            05 20 34.5  -4.3
LZH                                 XS                   05 20 54.1
LZH                                 SS      SS           05 22 39.5  -7.9
LZH                                 AMB     AMB
            comp=Z,33nm,1.3s,mb5.1
LZH                                 AMB     AMB
            comp=Z,198nm,5.7s
LZH                                 LR      LR
            comp=N,1μm,13.0s
LZH                                 LR      LR
            comp=Z,3μm,17.0s,MS5.1
LZH   Lanzhou            33.93 326 eP       P            05 15 18.0   0.0
            comp=Z,33nm,1.3s,mb5.1
LZH                                 pP      pP           05 15 29.5  +0.1
LZH                                 sP      sP           05 15 35.0  +0.3
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LZH				PP	PP	05 16 30.5	-1.9
LZH				eS	**S**	**05 20 34.5**	**-4.3**
LZH				sS		05 20 54.1	
LZH				SS	SS	05 22 39.5	-7.9
LZH				LR	LR		
	comp=Z,3µm,17.0s,MS5.1						
CN2	**Changchun**	**34.65**	**359**	eP	**P**	**05 15 24.6**	**+0.6**
CN2				eXP	sP	05 15 41.6	+0.8
CN2				eS	**S**	**05 20 53.9**	**+4.1**
CN2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
CN2				AMB	AMB		
	comp=Z,720nm,5.0s						
CN2				LR	LR		
	comp=N,900nm,12.0s,MS4.9						
CN2				LR	LR		
	comp=E,900nm,12.0s,MS4.9						
CN2				LR	LR		
	comp=Z,900nm,13.0s,MS4.7						
CTA	**Charters Tower**	**34.85**	**146**	eP	**P**	**05 15 26.4**	**+0.4**
	comp=Z,5.2nm,0.5s,mb4.7						
CTA				epP	pP	05 15 37.9	+0.5
CTA				ePCP	PcP	05 17 59.4	+0.7
CTA	**Charters Tower**	**34.85**	**146**	eP	**P**	**05 15 26.4**	**+0.4**
CTA				e*PP	pP	05 15 37.9	+0.5
CTA				e		05 17 59.4	
CTA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CTA	**Charters Tower**	**34.85**	**146**	P	**P**	**05 15 26.6**	**+0.6**
	comp=Z,6.3nm,0.5s,mb4.8,baz=335,slow=10,SNR=19						
CTA				pP	pP	05 15 38.4	+0.9
	comp=Z,16nm,0.9s,baz=331,slow=12,SNR=7.6						
CTA				PcP	PcP	05 17 59.5	+0.8
	comp=Z,7.5nm,1.0s,baz=348,slow=3.6,SNR=3.7						
CTAO	**Charters Tower**	**34.85**	**146**	eP	**P**	**05 15 26.3**	**+0.3**
CTAO				e*PP	pP	05 15 37.9	+0.5
CTAO				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
CTAO	**Charters Tower**	**34.85**	**146**	eP	**P**	**05 15 26.3**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0						
CTAO				epP	pP	05 15 37.9	+0.4
MDJ	**Mudanjiang**	**35.55**	**4**	P	**P**	**05 15 33.6**	**+1.9**
MDJ				AP	pP	05 15 44.8	+1.6
MDJ				XP	sP	05 15 49.8	+1.3
MDJ				PP	PP	05 16 55.5	+2.8
MDJ				PCP	PcP	05 17 59.3	-1.1
MDJ				S	**S**	**05 21 06.1**	**+2.4**
MDJ				SCP		05 21 43.0	
MDJ				PCS		05 21 47.1	
MDJ				SCS	ScS	05 25 48.3	+3.3
MDJ				AMB	AMB		
	comp=Z,117nm,1.0s,mb5.8						
MDJ				AMB	AMB		
	comp=Z,97nm,3.5s						
MDJ				LR	LR		
	comp=N,233nm,29.5s						
MDJ				LR	LR		
	comp=Z,211nm,31.5s,MS3.7						
MDJ	**Mudanjiang**	**35.55**	**4**	eP	**P**	**05 15 33.4**	**+1.7**
	comp=Z,115nm,0.9s,mb5.8						
MDJ				epP	pP	05 15 46.5	+3.3
SHL	**Shillong**	**36.78**	**301**	eP	**P**	**05 15 41.0**	**-1.3**
SHL				eS	**S**	**05 21 21.5**	**-1.4**
ASAJ	**Asahikawa**	**37.64**	**19**	P	**P**	**05 15 52.8**	**+3.5**
	comp=Z,50nm,0.6s,mb5.4,baz=227,slow=11,SNR=50						
GTA	**Gaotai**	**38.54**	**326**	P	**P**	**05 15 56.1**	**-0.7**
GTA				AP	pP	05 16 07.5	-0.9
GTA				XP	sP	05 16 11.3	-2.2
GTA				PP	PP	05 17 24.6	-4.5
GTA				PCP	PcP	05 18 15.0	+5.4
GTA				S	**S**	**05 21 41.3**	**-8.2**
GTA				XS		05 22 02.6	
GTA				SCS	ScS	05 26 05.8	+4.0
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.4						
GTA				AMB	AMB		
	comp=Z,387nm,10.7s						
GTA				LR	LR		
	comp=N,220nm,23.6s,MS4.0						
GTA				LR	LR		
	comp=E,189nm,21.7s,MS4.0						
GTA				LR	LR		
	comp=Z,372nm,24.0s,MS4.1						
LSA	**Lhasa**	**38.96**	**307**	P	**P**	**05 16 01.3**	**+0.9**
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
LSA	**Lhasa**	**38.96**	**307**	eP	**P**	**05 16 01.0**	**+0.6**
LSA				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
LSA	**Lhasa**	**38.96**	**307**	eP	**P**	**05 16 00.9**	**+0.5**
	comp=Z,23nm,0.8s,mb5.0						
YSS	**Yuzh-Sakhalins**	**40.24**	**17**	eP	**P**	**05 16 12.0**	**+1.1**
YSS	**Yuzh-Sakhalins**	**40.24**	**17**	eP	**P**	**05 16 13.6**	**+2.7**
	comp=Z,31nm,0.9s,mb5.0						
KLR	**Kul'dur**	**40.30**	**5**	eP	**P**	**05 16 10.2**	**-1.2**
HIA	**Hailar**	**40.50**	**353**	eP	**P**	**05 16 13.6**	**+0.6**
HIA				e		05 18 15.2	
HIA				pmax	pmax		
	comp=Z,14nm,0.6s						
HIA	**Hailar**	**40.50**	**353**	eP	**P**	**05 16 13.6**	**+0.5**
	comp=Z,14nm,0.6s,mb4.8						
HIA				ePcP	PcP	05 18 15.2	-0.5
BWNR	**Bhubaneshwar**	**40.84**	**291**	eP	**P**	**05 16 16.3**	**+0.1**
BWNR				e		05 16 16.6	
	comp=Z,46nm,0.7s						
KLBR	**Kellerberrin**	**41.26**	**191**	eP	**P**	**05 16 18.9**	**-0.6**
	comp=Z,69nm,0.4s,mb5.6						
KLBR				epP	pP	05 16 29.5	-1.6
BOK	**Bokaro**	**41.48**	**296**	eP	**P**	**05 16 21.9**	**+0.6**
BOK				e		05 16 23.1	
	comp=Z,35nm,2.1s						
MUN	**Mundaring**	**41.96**	**193**	eP	**P**	**05 16 25.5**	**+0.2**
	comp=Z,18nm,0.5s,mb5.0						
MUN				epP	pP	05 16 36.2	-0.7
MUN	**Mundaring**	**41.96**	**193**	eP	**P**	**05 16 25.5**	**+0.2**
MUN				e*PP	pP	05 16 36.2	-0.7
MUN				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.0						
SONM	**Songino Array**	**42.26**	**340**	P	**P**	**05 16 27.2**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.1,baz=155,slow=9.3,SNR=33						
SONM				PcP	PcP	05 18 20.8	-0.7
	comp=Z,4.0nm,0.5s,baz=155,slow=3.7,SNR=11						
SONM				ScP		05 22 07.3	
	comp=Z,0.9nm,1.2s,baz=124,slow=5.2,SNR=2.4						
SONM				pScP		05 22 15.6	
	comp=Z,0.7nm,0.8s,baz=145,slow=3.8,SNR=4.0						
JIRN	**Jiri**	**42.28**	**301**	eP	**P**	**05 16 28.0**	**0.0**
	comp=Z,153nm,0.6s,mb5.8						
GUN	**Gumba**	**42.62**	**302**	eP	**P**	**05 16 30.6**	**-0.2**
	comp=Z,226nm,0.8s,mb5.9						
NWAO	**Narrogin (SRO)**	**42.66**	**192**	eP	**P**	**05 16 30.8**	**-0.2**
NWAO				e*PP	pP	05 16 42.1	-0.5
NWAO				pmax	pmax		
	comp=Z,7.0nm,0.4s						
NWAO	**Narrogin (SRO)**	**42.66**	**192**	P	**P**	**05 16 30.7**	**-0.3**
	comp=Z,22nm,0.7s,mb5.0,baz=18,slow=8.5,SNR=26						
NWAO				pP	pP	05 16 41.2	-1.4
	comp=Z,21nm,0.8s,baz=15,slow=9.7,SNR=6.5						
NWAO				PcP	PcP	05 18 21.8	-1.3
	comp=Z,9.0nm,0.7s,baz=4.4,slow=4.4,SNR=2.5						
NWAO	**Narrogin (SRO)**	**42.66**	**192**	eP	**P**	**05 16 30.8**	**-0.2**
	comp=Z,7.2nm,0.4s,mb4.8						
NWAO				epP	pP	05 16 42.0	-0.6
VIS	**Vishakhapatnam**	**42.82**	**286**	eP	**P**	**05 16 33.4**	**+0.9**
VIS				e		05 16 34.1	
	comp=Z,43nm,0.7s						
PKI	**Pulchoki**	**42.91**	**301**	eP	**P**	**05 16 32.4**	**-0.8**
	comp=Z,56nm,0.6s,mb5.5						
KKN	**Kakani**	**43.09**	**301**	eP	**P**	**05 16 33.7**	**-0.9**
	comp=Z,54nm,0.7s,mb5.4						
STKA	**Stephens Creek**	**43.16**	**161**	eP	**P**	**05 16 34.6**	**-0.5**
	comp=Z,7.6nm,0.4s,mb4.8						
STKA				epP	pP	05 16 46.5	-0.2
STKA	**Stephens Creek**	**43.16**	**161**	P	**P**	**05 16 34.6**	**-0.5**
	comp=Z,11nm,0.5s,mb4.8,baz=342,slow=7.8,SNR=40						
STKA				pP	pP	05 16 46.5	-0.2
	comp=Z,50nm,0.7s,baz=332,slow=7.9,SNR=28						
STKA				LR	LR	05 36 32.2	
	comp=Z,206nm,19.8s,MS4.0,baz=12,slow=39						
DMN	**Daman**	**43.18**	**301**	eP	**P**	**05 16 34.6**	**-0.8**
GKN	**Gorkha**	**43.69**	**301**	eP	**P**	**05 16 38.3**	**-1.2**
	comp=Z,40nm,0.6s,mb5.3						
KOLN	**Koldanda**	**44.51**	**301**	eP	**P**	**05 16 45.4**	**-0.6**
	comp=Z,165nm,0.8s,mb5.9						
BLSP	**Bilaspur**	**44.53**	**292**	eP	**P**	**05 16 46.2**	**-0.1**
BLSP				e		05 16 47.6	
	comp=Z,40nm,2.1s						
TLY	**Talaya**	**46.48**	**340**	P	**P**	**05 17 01.6**	**+0.3**
	comp=Z,98nm,0.7s,mb5.8,SNR=19						
TLY	**Talaya**	**46.48**	**340**	eP	**P**	**05 17 01.1**	**-0.2**
TLY				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
TLY	**Talaya**	**46.48**	**340**	eP	**P**	**05 17 01.1**	**-0.2**
	comp=Z,12nm,0.8s,mb4.9						
HYB	**Hyderabad**	**47.33**	**285**	⇑eP	**P**	**05 17 08.5**	**0.0**
HYB				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
HYB	**Hyderabad**	**47.33**	**285**	⇑eP	**P**	**05 17 08.5**	**0.0**
	comp=Z,80nm,1.0s,mb5.6						
HYB	**Hyderabad**	**47.33**	**285**	⇑iP	**P**	**05 17 08.5**	**0.0**
	comp=Z,80nm,1.0s,mb5.6						
HYB				e	pP	05 17 21.0	+0.8
MOY	**Mondy**	**47.38**	**339**	eP	**P**	**05 17 08.4**	**-0.1**
CLNS	**Chul'man**	**47.70**	**359**	eP	**P**	**05 17 12.2**	**+1.3**
CLNS				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
CLNS				pmax	pmax		
	comp=N,43nm,0.9s						
CLNS				pmax	pmax		
	comp=E,23nm,0.9s						
SKR	**Severo-Kuril's**	**48.18**	**25**	eP	**P**	**05 17 13.7**	**-1.0**
WMQ	**Urumqi**	**48.35**	**323**	P	**P**	**05 17 16.0**	**-0.1**
WMQ				XP	sP	05 17 30.0	-2.8
WMQ				PP	PP	05 19 08.0	-0.4
WMQ				S	**S**	**05 24 12.0**	**-0.3**
WMQ				SS	SS	05 27 36.0	-1.2
WMQ				AMB	AMB		
	comp=Z,34nm,1.0s,mb5.3						
WMQ				LR	LR		
	comp=N,256nm,22.0s,MS4.3						
WMQ				LR	LR		
	comp=E,255nm,22.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,124nm,20.0s,MS3.9						
BHPL	**Bhopal**	**49.00**	**293**	eP	**P**	**05 17 20.8**	**-0.7**
BHPL				e		05 17 21.4	
	comp=Z,42nm,0.3s						
CNB	**Canberra Magne**	**49.10**	**155**	eP	**P**	**05 17 22.5**	**+0.4**
	comp=Z,58nm,0.6s,mb5.8						
CNB				epP	pP	05 17 34.8	+1.0
BOD	**Bodaibo**	**49.62**	**351**	⇓iP	**P**	**05 17 25.5**	**-0.3**
BOD				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
TOO	**Toolangi**	**49.64**	**160**	eP	**P**	**05 17 26.7**	**+0.5**
	comp=Z,0.2nm,0.5s						
TOO				epP	pP	05 17 38.9	+1.0
DDI	**Dehra Dun**	**49.86**	**302**	eP	**P**	**05 17 26.2**	**-1.8**
NDI	**New Delhi**	**50.19**	**300**	eP	**P**	**05 17 27.0**	**-3.5**
PET	**Petropavlovsk**	**50.98**	**24**	eP	**P**	**05 17 38.5**	**+2.4**
PET				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.5						
SDNR	**Sundarnagar**	**51.06**	**303**	eP	**P**	**05 17 37.2**	**+0.1**
KAD	**Karad**	**51.49**	**285**	eP	**P**	**05 17 39.5**	**-1.1**
KAD				e		05 17 40.9	
	comp=Z,26nm,2.4s						
POO	**Poona**	**51.87**	**286**	eP	**P**	**05 17 42.2**	**-1.1**
POO				e		05 17 43.0	
	comp=Z,24nm,0.5s						
YAK	**Yakutsk**	**52.95**	**2**	eP	**P**	**05 17 51.0**	**+0.2**
YAK				e*PP	pP	05 18 03.0	+0.4
YAK				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.6						
YAK	**Yakutsk**	**52.95**	**2**	eP	**P**	**05 17 51.0**	**+0.2**
	comp=Z,55nm,0.7s,mb5.6						
YAK				epP	pP	05 18 03.0	+0.4
MKAR	**Makanchi Array**	**53.16**	**323**	i P	**P**	**05 17 51.7**	**-0.9**
MA2	**Magadan**	**53.65**	**15**	eP	**P**	**05 17 57.5**	**+1.4**
MA2				e*PP	pP	05 18 08.3	+0.4
MA2				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
MA2	**Magadan**	**53.65**	**15**	eP	**P**	**05 17 57.5**	**+1.5**
	comp=Z,24nm,0.7s,mb5.2						
MA2				epP	pP	05 18 08.3	+0.4
KZA	**Kyzart**	**55.66**	**315**	P	**P**	**05 18 11.0**	**+0.1**
	SNR=19						
TKM2	**Tokmak 2**	**55.73**	**316**	P	**P**	**05 18 10.9**	**-0.5**
	SNR=13						
ZAL	**Zalesovo**	**55.83**	**332**	P	**P**	**05 18 10.3**	**-1.7**
	comp=Z,10nm,0.9s,mb4.9,baz=346,slow=5.6,SNR=68						
ZAL				PcP	PcP	05 19 08.4	-2.0
	comp=Z,4.5nm,0.5s,baz=331,slow=4.0,SNR=6.6						
UCH	**Uchtor**	**56.22**	**315**	P	**P**	**05 18 14.7**	**-0.3**
	SNR=31						
CHMS	**Chumysh**	**56.33**	**316**	P	**P**	**05 18 14.5**	**-1.2**
	SNR=8.6						
AAK	**Ala-Archa**	**56.38**	**316**	P	**P**	**05 18 15.2**	**-0.9**
	SNR=5.5						
AAK	**Ala-Archa**	**56.38**	**316**	eP	**P**	**05 18 14.1**	**-2.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
AAK	**Ala-Archa**	**56.38**	**316**	eP	**P**	**05 18 14.1**	**-2.0**
	comp=Z,4.2nm,0.7s,mb4.6						
USP	**Ospenovka**	**56.60**	**316**	P	**P**	**05 18 16.4**	**-1.2**
	SNR=17						
AML	**Almayashu**	**56.76**	**315**	P	**P**	**05 18 18.6**	**-0.2**
	SNR=26						
EKS2	**Erkin-Say**	**56.88**	**315**	P	**P**	**05 18 19.0**	**-0.7**
	SNR=14						
NVS	**Novosibirsk**	**57.10**	**332**	⇑iP	**P**	**05 18 18.5**	**-2.6**
NVS				i *PP	pP	05 18 28.6	-4.5
NVS				e		05 19 12.7	
NVS				eS	**S**	**05 26 13.6**	**+2.3**
NVS				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
NVS				pmax	pmax		
	comp=N,16nm,0.9s						
NVS				pmax	pmax		
	comp=E,24nm,1.1s						
NVS				smax			
	comp=N,14nm,1.7s						
NVS				smax			
	comp=E,11nm,1.6s						
KURK	**Kurchatov**	**57.22**	**326**	eP	**P**	**05 18 20.6**	**-1.4**
KURK				pmax	pmax		
	comp=Z,78nm,0.9s,mb5.7						
KURK	**Kurchatov**	**57.22**	**326**	eP	**P**	**05 18 20.6**	**-1.5**
	comp=Z,78nm,0.9s,mb5.7						
FX1	**Attu Island--F**	**57.65**	**31**	P	**P**	**05 18 28.1**	**+3.1**
	comp=Z,143nm,0.9s,mb6.0,baz=74,slow=22,SNR=7.6						
FX1	**Attu Island--F**	**57.65**	**31**	eP	**P**	**05 18 27.4**	**+2.4**
TIXI	**Tiksi**	**62.58**	**1**	⇑iP	**P**	**05 18 58.2**	**-0.2**
BVA0	**Borovoye Array**	**62.82**	**326**	i P	**P**	**05 18 58.6**	**-1.7**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**62.82**	**326**	P	**P**	**05 18 57.7**	**-2.6**
	comp=Z,18nm,0.9s,mb5.2,baz=129,slow=9.5,SNR=57						
CHKZ	**Chkalovo**	**62.95**	**326**	eP	**P**	**05 18 59.1**	**-2.0**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	**62.95**	**326**	eP	**P**	**05 18 59.1**	**-2.0**
	comp=Z,7.4nm,0.8s,mb4.9						
BILL	**Bilibino**	**64.52**	**15**	eP	**P**	**05 19 11.9**	**+0.8**
BILL				pmax	pmax		
	comp=Z,48nm,1.4s,mb5.3						
BILL	**Bilibino**	**64.52**	**15**	eP	**P**	**05 19 11.8**	**+0.7**
	comp=Z,48nm,1.4s,mb5.3						
MSZ	**Milford Sound**	**65.21**	**149**	PN	**P**	**05 19 16.9**	**+1.0**
	comp=Z,49nm,0.6s,mb5.7						
MSZ				pP	pP	05 19 27.9	-0.3
MSZ	**Milford Sound**	**65.21**	**149**	PN	**P**	**05 19 16.9**	**+1.0**
	comp=Z,49nm,0.6s,mb5.7						
MSZ				pP	pP	05 19 27.9	-0.3
RPZ	**Rata Peaks**	**66.22**	**146**	P	**P**	**05 19 22.5**	**+0.1**
	comp=Z,38nm,0.5s,mb5.7,baz=290,slow=2.0,SNR=44						
RPZ				pP	pP	05 19 35.2	+0.5
	comp=Z,41nm,0.7s,baz=271,slow=3.3,SNR=7.8						
RPZ				LR	LR	05 46 19.2	
	comp=Z,274nm,18.7s,MS4.5,baz=99,slow=34						
URZ	**Urewera**	**66.58**	**138**	P	**P**	**05 19 24.9**	**+0.1**
	comp=Z,6.1nm,0.6s,mb4.8,baz=355,slow=3.4,SNR=5.1						
BIDO	**Bidbid**	**66.69**	**292**	⇑P	**P**	**05 19 24.7**	**-1.1**
SMDO	**Samad**	**66.77**	**291**	⇓P	**P**	**05 19 24.7**	**-1.5**
	SNR=6.0						
HOQ	**Hoqain**	**67.44**	**292**	⇑P	**P**	**05 19 28.8**	**-1.7**
	SNR=7.5						
BSY	**Bisya**	**67.55**	**291**	⇑P	**P**	**05 19 29.3**	**-1.9**
	SNR=6.7						
BANOM	**Banah**	**68.36**	**294**	⇑P	**P**	**05 19 34.4**	**-1.8**
ASHO	**Ashiyiah**	**68.58**	**293**	⇑P	**P**	**05 19 35.9**	**-1.7**
	SNR=7.1						
RBK	**Rabkut**	**70.56**	**285**	⇑P	**P**	**05 19 48.1**	**-1.7**
	SNR=17						
WHFO	**Wadi Hawf**	**70.94**	**286**	⇑P	**P**	**05 19 50.1**	**-2.0**
	SNR=41						
ABTO	**Aybut**	**71.43**	**285**	⇑P	**P**	**05 19 53.5**	**-1.6**
	SNR=22						
TNA	**Tin City**	**71.82**	**23**	eP	**P**	**05 19 58.0**	**+1.5**
	comp=Z,3.3nm,0.7s,mb4.4						
SOKR	**Solikamsk**	**72.04**	**330**	⇓iP	**P**	**05 19 57.2**	**-0.7**
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
KDAK	**Kodiak Island**	**77.55**	**33**	eP	**P**	**05 20 31.8**	**+2.1**
	comp=Z,44nm,1.0s,mb5.3						
KDAK				epP	pP	05 20 44.3	+2.3
IMA	**Indian Mountai**	**77.65**	**24**	eP	**P**	**05 20 32.8**	**+2.7**
IMA				e*PP	pP	05 20 45.2	+2.7
IMA				pmax	pmax		
	comp=Z,92nm,0.9s,mb5.7						
IMA	**Indian Mountai**	**77.65**	**24**	eP	**P**	**05 20 32.8**	**+2.8**
	comp=Z,92nm,0.9s,mb5.7						
IMA				epP	pP	05 20 45.2	+2.8
TI2	**Plekhanov**	**77.92**	**311**	⇑iP	**P**	**05 20 31.6**	**-0.5**
GNI	**Garni**	**77.97**	**309**	P	**P**	**05 20 32.6**	**+0.3**
	comp=Z,9.5nm,0.9s,mb4.7,baz=49,slow=2.0,SNR=6.7						
RAYN	**Ar Rayn**	**78.27**	**292**	P	**P**	**05 20 33.8**	**-0.5**
	comp=Z,303nm,0.8s,SNR=50						
GOF	**Gofitskoye**	**79.08**	**314**	⇓iP	**P**	**05 20 33.0**	**-5.4**
GOF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**79.37**	**313**	P	**P**	**05 20 39.7**	**-0.2**
	comp=Z,192nm,0.8s,mb6.1,SNR=8.4						
KIV	**Kislovodsk**	**79.37**	**313**	⇑iP	**P**	**05 20 38.0**	**-1.9**
COLA	**College**	**80.02**	**26**	i P	**P**	**05 20 43.9**	**+0.9**
ILAR	**Eielson Array**	**80.44**	**26**	P	**P**	**05 20 45.6**	**+0.4**
	comp=Z,7.6nm,0.7s,mb4.8,baz=246,slow=4.7,SNR=123						
ILAR				PKKPbc		05 39 25.6	
	comp=Z,0.3nm,0.4s,baz=126,slow=2.1,SNR=9.3						
THY	**Trims Highway**	**80.97**	**27**	eP	**P**	**05 20 50.3**	**+2.2**
THY				epP	pP	05 21 02.9	+2.3
DIV	**Divide**	**81.05**	**29**	eP	**P**	**05 20 50.8**	**+2.3**
	comp=Z,60nm,0.7s,mb5.6						
SOC	**Sochi**	**81.54**	**313**	eP	**P**	**05 20 49.3**	**-2.2**
SOC				e		05 23 53.4	
SOC				eS	S	05 30 55.9	-2.8
SOC				eSSS	SSS	05 39 38.2	-3.7
SOC				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
SOC				pmax	pmax		
	comp=N,3.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.7s						
OBN	**Obninsk**	**82.64**	**325**	c iP	**P**	**05 20 55.7**	**-1.2**
OBN				e		05 24 10.2	
OBN				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
OBN	**Obninsk**	**82.64**	**325**	i P	**P**	**05 20 55.5**	**-1.4**
APA	**Apatity**	**82.91**	**337**	⇑iP	**P**	**05 20 58.0**	**0.0**
APA				i	pP	05 21 11.3	+0.8
APA				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.3						
MALT	**Malatya**	**82.99**	**308**	eP	**P**	**05 20 59.2**	**+0.2**
MALT				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
MALT	**Malatya**	**82.99**	**308**	eP	**P**	**05 20 59.2**	**+0.2**
	comp=Z,4.7nm,0.8s,mb4.6						
DAWY	**Dawson**	**83.73**	**26**	eP	**P**	**05 21 04.9**	**+2.8**
DAWY				epP	pP	05 21 16.8	+2.1
JOF	**Joensuu**	**84.40**	**333**	ep	**P**	**05 21 04.3**	**-1.3**
KEV	**Kevo**	**84.87**	**340**	ep	**P**	**05 21 07.0**	**-0.8**
ASF	**Jabal al Asfar**	**84.95**	**302**	P	**P**	**05 21 07.0**	**-2.1**
	comp=Z,4.4nm,0.8s,mb4.6,baz=332,slow=8.8,SNR=5.5						
ASF				LR	LR	06 03 48.1	
	comp=Z,66nm,20.4s,MS4.0,baz=117,slow=39						
INK	**Inuvik**	**85.33**	**22**	eP	**P**	**05 21 11.7**	**+1.6**
INK				e*PP	pP	05 21 24.0	+1.3
INK				pmax	pmax		
	comp=Z,32nm,1.4s						
INK	**Inuvik**	**85.33**	**22**	P	**P**	**05 21 12.1**	**+1.9**
	comp=Z,14nm,0.7s,mb5.2,baz=287,slow=4.2,SNR=120						
INK				pP	pP	05 21 24.9	+2.2
	comp=Z,6.4nm,0.7s,baz=294,slow=9.6,SNR=7.2						
INK				LR	LR	06 06 16.7	
	comp=Z,110nm,18.1s,MS4.3,baz=290,slow=40						
INK	**Inuvik**	**85.33**	**22**	eP	**P**	**05 21 11.7**	**+1.6**
	comp=Z,32nm,1.4s,mb5.3						
INK				epP	pP	05 21 24.0	+1.3
SIM	**Simferopol'**	**85.39**	**315**	⇑eP	**P**	**05 21 11.0**	**0.0**
SIM				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.6						
ARCES	**ARCESS Array B**	**85.43**	**340**	P	**P**	**05 21 10.9**	**+0.3**
	comp=Z,37nm,1.1s,mb5.4,baz=86,slow=6.5,SNR=39						
ARCES				LR	LR	06 03 54.0	
	comp=Z,81nm,18.5s,MS4.2,baz=20,slow=39						
ARE0	**ARCESS Array S**	**85.43**	**340**	eP	**P**	**05 21 10.7**	**+0.1**
BRTR	**Keskin Array B**	**86.51**	**309**	P	**P**	**05 21 15.2**	**-1.3**
	comp=Z,2.2nm,0.8s,mb4.5,baz=114,slow=4.4,SNR=8.8						
BRTR				pP	pP	05 21 28.8	-0.4
	comp=Z,3.6nm,1.1s,baz=112,slow=6.7,SNR=6.1						
KAF	**Kangasniemi**	**86.83**	**332**	ep	**P**	**05 21 16.4**	**-1.2**
PPT	**Papeete**	**86.94**	**108**	eLR	LR	05 49 13.7	
	comp=Z,171nm,26.0s						
FINES	**FINESS Array B**	**87.09**	**332**	P	**P**	**05 21 18.3**	**-0.6**
	comp=Z,6.5nm,0.4s,mb5.2,baz=73,slow=4.8,SNR=187						
AKASG	**Malin Array Be**	**87.68**	**321**	P	**P**	**05 21 20.6**	**-1.3**
	comp=Z,5.9nm,0.6s,mb5.0,baz=63,slow=4.7,SNR=38						
AKASG				pP	pP	05 21 33.3	-1.3
	comp=Z,3.1nm,0.6s,baz=58,slow=5.4,SNR=5.4						
TBI	**Tubuai**	**88.09**	**114**	eLR	LR	05 49 45.3	
	comp=Z,176nm,23.8s						
MAW	**Mawson**	**88.63**	**200**	P	**P**	**05 21 26.7**	**+0.6**
	comp=Z,5.7nm,0.5s,mb5.2,baz=259,slow=22,SNR=9.4						
MAW				LR	LR	05 56 47.5	
	comp=Z,94nm,18.4s,MS4.2,baz=252,slow=33						
VNDA	**Vanda**	**88.68**	**173**	eP	**P**	**05 21 25.9**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,13nm,0.7s						
VNDA	**Vanda**	**88.68**	**173**	P	**P**	**05 21 26.6**	**+0.4**
	comp=Z,17nm,0.6s,mb5.5,baz=318,slow=6.3,SNR=63						
VNDA				LR	LR	05 59 22.3	
	comp=Z,138nm,18.2s,MS4.4,baz=352,slow=34						
VNDA	**Vanda**	**88.68**	**173**	eP	**P**	**05 21 25.9**	**-0.2**
	comp=Z,13nm,0.7s,mb5.4						
ISP	**Isparta**	**89.24**	**308**	i P	**P**	**05 21 27.5**	**-2.2**
DLBC	**Dease Lake**	**89.32**	**31**	P	**P**	**05 21 32.3**	**+2.7**
	comp=Z,3.2nm,0.7s,mb4.7,baz=302,slow=5.7,SNR=11						
DLBC				PKKPbc		05 39 05.3	
	comp=Z,0.8nm,0.6s,baz=147,slow=14,SNR=3.0						
DLBC	**Dease Lake**	**89.32**	**31**	P	**P**	**05 21 32.3**	**+2.7**
DLBC				PKKPbc		05 39 05.3	
KMBO	**Kilima Mbogo**	**89.46**	**269**	eP	**P**	**05 21 31.1**	**-0.2**
KMBO				pmax	pmax		
	comp=Z,14nm,1.4s						
KMBO	**Kilima Mbogo**	**89.46**	**269**	P	**P**	**05 21 31.3**	**0.0**
	comp=Z,4.3nm,0.8s,mb4.8,baz=49,slow=9.7,SNR=11						
KMBO	**Kilima Mbogo**	**89.46**	**269**	eP	**P**	**05 21 31.1**	**-0.2**
	comp=Z,14nm,1.4s,mb5.1						
CFR	**Carcaliu**	**89.52**	**316**	⇓P	**P**	**05 21 29.9**	**-1.0**
HARR	**Harsova**	**89.77**	**315**	⇓P	**P**	**05 21 31.4**	**-0.6**
BURAR	**Bucovina Array**	**90.93**	**318**	⇓P	**P**	**05 21 26.9**	**-10**
MLR	**Muntele Rosu**	**90.96**	**316**	P	**P**	**05 21 37.1**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.5,baz=79,slow=0.8,SNR=5.8						
MLR				PKKP	PKKP	05 39 01.1	+12
	comp=Z,0.8nm,0.7s,baz=201,slow=14,SNR=3.3						
MLR	**Muntele Rosu**	**90.96**	**316**	⇓P	**P**	**05 21 37.1**	**-0.5**
KWP	**Kalwaria**	**92.00**	**321**	eP	**P**	**05 21 41.9**	**-0.4**
KWP				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
KWP	**Kalwaria**	**92.00**	**321**	eP	**P**	**05 21 41.9**	**-0.4**
	comp=Z,6.4nm,0.6s,mb5.1						
DAG	**Danmarks Havn**	**92.00**	**352**	⇓eP	**P**	**05 21 41.9**	**+0.2**
DAG				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.3						
DAG	**Danmarks Havn**	**92.00**	**352**	⇓iP	**P**	**05 21 41.9**	**+0.2**
	comp=Z,9.3nm,0.6s,mb5.3						
BBB	**Bella Bella**	**92.19**	**36**	P	**P**	**05 21 45.0**	**+1.9**
	comp=Z,10nm,0.8s,mb5.2,baz=243,slow=11,SNR=2.3						
BBB	**Bella Bella**	**92.19**	**36**	P	**P**	**05 21 45.0**	**+1.9**
KOLS	**Kolonicke sedl**	**92.47**	**320**	eP	**P**	**05 21 44.2**	**-0.3**
RES	**Resolute Bay**	**92.66**	**10**	eP	**P**	**05 21 45.9**	**+1.1**
RES				e*PP	pP	05 21 58.8	+1.3
RES				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.4						
RES	**Resolute Bay**	**92.66**	**10**	eP	**P**	**05 21 45.9**	**+1.1**
	comp=Z,12nm,0.8s,mb5.4						
RES				epP	pP	05 21 58.8	+1.3

CRVS	Cervenica-Dubn	92.99	320	*e*P	P	05 21 47.5	+0.6
HFS	Hagfors	93.26	332	P	P	05 21 46.6	-1.2
	comp=Z,5.2nm,0.6s,mb5.2,baz=90,slow=4.4,SNR=51						
HFS				pP	pP	05 21 59.1	-1.4
	comp=Z,2.4nm,0.5s,baz=108,slow=4.7,SNR=2.9						
OJC	Ojcow	93.62	322	*e*P	P	05 21 49.6	-0.1
NB2	NORSAR Subarra	93.97	334	P	P	05 21 49.6	-1.4
	comp=Z,1.9nm,0.7s,mb4.6,baz=64,slow=4.8						
NB2	NORSAR Subarra	93.97	334	P	P	05 21 49.6	-1.4
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.7						
NOA	NORSAR Array B	93.97	334	P	P	05 21 49.9	-1.1
	comp=Z,3.1nm,0.8s,mb4.8,baz=66,slow=4.5,SNR=7.8						
NOA				PKKP	PKKP	05 38 49.6	+5.5
	comp=Z,1.6nm,0.9s,baz=120,slow=4.1,SNR=3.4						
NAO01	NORSAR Array S	94.20	334	*e*P	P	05 21 50.5	-1.5
	comp=Z,1.8nm,0.5s,mb4.8						
YKW3	Yellowknife Ar	94.74	24	*e*P	P	05 21 56.0	+1.6
YKW3				*e*pP	pP	05 22 08.4	+1.3
YKA	Yellowknife Ar	94.78	24	P	P	05 21 56.4	+1.8
YKA				*PP	pP	05 22 08.9	+1.6
YKA						05 25 44.9	
YKA	Yellowknife Ar	94.78	24	P	P	05 21 56.4	+1.8
	comp=Z,7.6nm,0.6s,mb5.3,baz=300,slow=4.5,SNR=208						
YKA				pP	pP	05 22 08.8	+1.5
	comp=Z,2.7nm,0.7s,baz=300,slow=4.6,SNR=8.8						
YKA				PP	PP	05 25 44.9	-0.9
	comp=Z,0.6nm,0.9s,baz=293,slow=7.9,SNR=3.8						
YKA				PKiKP		05 26 37.6	
	comp=Z,0.6nm,0.8s,baz=320,slow=1.9,SNR=7.0						
YKA				PKKP	PKKP	05 38 50.2	+7.4
	comp=Z,1.3nm,0.8s,baz=123,slow=3.1,SNR=24						
VRAC	Vranov	95.88	322	P	P	05 22 00.2	+0.3
	comp=Z,3.5nm,0.8s,mb4.8,baz=45,slow=8.7,SNR=4.4						
SYO	Syowa Base	97.27	201	⇑P	P	05 22 05.5	-0.4
SYO	Syowa Base	97.27	201	⇓pP	pP	05 22 19.2	+0.6
GERES	GERESS Array B	97.82	322	P	P	05 22 08.4	-0.4
	comp=Z,1.8nm,0.8s,mb4.7,baz=71,slow=4.9,SNR=15						
GERES				pP	pP	05 22 20.6	-0.9
	comp=Z,0.9nm,0.8s,baz=56,slow=4.8,SNR=4.5						
NEW	Newport	100.19	37	P	P	05 22 21.4	+1.8
	comp=Z,3.8nm,0.8s,baz=336,slow=0.8,SNR=9.8						
NEW	Newport	100.19	37	*e*Pdif	P	05 22 20.1	+0.5
	comp=Z,4.6nm,0.9s						
RKT	Rikitea	101.26	112	*e*LR	LR	05 55 51.6	
	comp=Z,120nm,31.5s						
NVAR	Mina Array Bea	103.50	47	Pdiff	Pdif	05 22 37.4	+2.8
	comp=Z,1.1nm,0.7s,baz=275,slow=3.4,SNR=7.3						
NVAR				PKiKP		05 26 55.4	
	comp=Z,0.8nm,0.8s,baz=227,slow=1.6,SNR=5.6						
NVAR				PKKPbc		05 38 28.4	
	comp=Z,0.6nm,0.3s,baz=126,slow=5.0,SNR=7.9						
HLID	Hailey	103.98	41	*e*Pdif	Pdif	05 22 39.8	+3.2
FRB	Frobisher Bay	106.53	7	PKiKP		05 26 58.5	
	comp=Z,1.5nm,0.6s,baz=54,slow=1.5,SNR=8.0						
FRB				PKKPbc		05 38 16.6	
	comp=Z,1.6nm,0.9s,baz=164,slow=7.4,SNR=3.5						
FRB				PKKP	PKKP	05 38 31.5	+10
	comp=Z,0.9nm,0.8s,baz=168,slow=9.7,SNR=3.1						
PDAR	Pinedale Array	107.48	40	PKiKP		05 27 01.7	
	comp=Z,0.2nm,0.5s,baz=45,slow=3.8,SNR=4.0						
PDAR				PKKP	PKKP	05 38 27.4	+6.9
	comp=Z,0.5nm,0.8s,SNR=4.3						
ULM	Lac du Bonnet	110.41	28	PKKPab		05 38 14.2	
	comp=Z,1.8nm,0.5s,baz=134,slow=3.2,SNR=7.3						
ANMO	Albuquerque	113.55	46	PKiKP		05 27 14.2	
	comp=Z,1.0nm,0.5s,baz=299,slow=0.8,SNR=4.5						
SCHQ	Schefferville	115.39	9	PKP	PKPdf	05 27 15.8	+2.0
	comp=Z,3.8nm,0.6s,baz=359,slow=1.3,SNR=21						
SCHQ				PKKPbc		05 37 49.7	
	comp=Z,1.4nm,0.8s,baz=253,slow=2.9,SNR=4.3						
TXAR	Lajitas Array	118.43	50	PKP	PKPdf	05 27 22.8	+2.5
	comp=Z,2.1nm,0.7s,baz=262,slow=0.4,SNR=30						
TXAR				PKKPab		05 37 39.8	
	comp=Z,0.3nm,0.8s,baz=198,slow=4.0,SNR=3.7						
TXAR	Lajitas Array	118.43	50	PKP	PKPdf	05 27 22.8	+2.5
TXAR				PKKPab		05 37 39.8	
JCT	Junction City	120.67	47	*e*PKPdf	PKPdf	05 27 26.6	+1.9
JCT				*e*pPKPdf		05 27 40.0	
SADO	Sadowa	121.65	21	PKP	PKPdf	05 27 27.9	+1.7
	comp=Z,10nm,1.1s,baz=353,slow=2.9,SNR=3.2						
FVM	French Village	121.88	34	*e*PKPdf	PKPdf	05 27 27.9	+1.1
MIAR	Mount Ida	122.39	39	*e*PKPdf	PKPdf	05 27 29.7	+1.8
WCI	Wyandotte Cave	123.89	31	*e*PKPdf	PKPdf	05 27 31.7	+1.0
ACSO	Alum Creek Sta	123.90	27	*e*PKPdf	PKPdf	05 27 31.4	+0.7
DBIC	Dimbokro	129.10	286	PKhKP		05 27 38.1	
	comp=Z,2.7nm,0.7s,baz=22,slow=5.1,SNR=2.8						
DBIC				PKP	PKPdf	05 27 42.3	+0.9
	comp=Z,2.9nm,0.7s,baz=352,slow=1.5,SNR=4.2						
TRQA	Tornquist	150.10	166	*e*PKPbc	PKPdf	05 28 24.4	+6.3
SJG	San Juan	150.26	25	PKPbc	PKPdf	05 28 26.1	+7.2
	comp=Z,13nm,0.4s,baz=284,slow=3.2,SNR=10						
SJG	San Juan	150.26	25	*e*PKPbc	PKPdf	05 28 26.1	+7.2
OTAV	Otavalo	153.47	71	*e*PKPdf	PKPdf	05 28 27.9	+4.2
OTAV				*e*PKPbc	PKPdf	05 28 34.4	+11
ROSC	El Rosal	155.04	57	PKP	PKPdf	05 28 30.4	+4.6
	comp=Z,3.9nm,1.1s,baz=89,slow=19,SNR=4.6						
SDV	Santo Domingo	155.32	44	PKP	PKPdf	05 28 29.2	+3.0
	comp=Z,3.4nm,0.6s,baz=307,slow=3.4,SNR=5.0						
SDV				PKPab	PKPab	05 28 54.4	+0.4
	comp=Z,5.9nm,0.6s,baz=297,slow=6.9,SNR=5.8						
SDV	Santo Domingo	155.32	44	*e*PKPdf	PKPdf	05 28 28.7	+2.6
LVC	Limon Verde	159.96	134	PKPab	PKPab	05 29 14.3	+0.7
	comp=Z,2.8nm,0.7s,baz=259,slow=6.5,SNR=5.7						
LPAZ	La Paz	163.99	118	PKP	PKPdf	05 28 39.4	+3.5
	comp=Z,2.9nm,0.7s,baz=220,slow=0.7,SNR=12						
LPAZ				PKPab	PKPab	05 29 34.3	+3.0
	comp=Z,4.0nm,1.1s,baz=276,slow=1.9,SNR=4.9						
LPAZ	La Paz	163.99	118	*e*PKPdf	PKPdf	05 28 38.9	+3.0
LPAZ				PKPab	PKPab	05 29 32.9	+1.6
SAML	Samuel	170.41	90	*e*PKPdf	PKPdf	05 28 42.1	+1.5
BDFB	Brasilia	171.54	219	PKPab	PKPab	05 30 03.1	-1.4
	comp=Z,1.7nm,0.7s,baz=148,slow=7.4,SNR=4.1						

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*NEIC **20** 05:36:12.7±2.9, 15.57S×168.19E, h192^{km}±26^{km}, Error ellipse: s-maj=29.1km s-min=21.0km az=181.0*

*IDC **20** 05:36:15.6±8.1, 15.54S×168.06E, h216^{km}±74^{km}, mb3.4/8, mb1 3.6/8, mb1mx3.6/15, mbtmp4.0/8, Error ellipse: s-maj=34.7km s-min=22.5km az=13.0*

ISC 20 05:36:12.2±3.1**, 15.6S**±0.2×**168.0E**±0.2**, h193**^{km}±30^{km}**, n36, σ1^{s}14**/11**, mb3.6**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.64	193	*e*P	P	05 37 47.1	-1.3
NOUC	Port Laguerre	6.70	194	*e*P	P	05 37 50.7	+1.4
NOUC	Port Laguerre	6.70	194	*e*P	P	05 37 50.7	+1.4
URZ	Urewera	23.98	162	P	P	05 41 10.8	+0.5
	7.2nm,0.6s,mb4.5,baz=286,slow=1.8,SNR=6.3						
STKA	Stephens Creek	29.03	231	P	P	05 41 55.9	-0.5
	2.8nm,0.9s,mb3.9,baz=51,slow=12,SNR=5.5						
WRA	Warramunga Arr	32.35	257	P	P	05 42 24.8	-0.8
	0.3nm,0.4s,mb3.2,baz=80,slow=5.9,SNR=15						
WRA				PcP	PcP	05 45 07.0	-1.6
	0.2nm,0.6s,baz=85,slow=3.1,SNR=5.2						
ASAR	Alice Springs	33.08	250	P	P	05 42 31.4	-0.4
	1.4nm,0.5s,mb3.8,baz=76,slow=9.2,SNR=29						
ASAR				PcP	PcP	05 45 09.0	-1.6
	0.7nm,0.7s,baz=94,slow=3.4,SNR=5.3						
CMAR	Chiang Mai Arr	75.96	294	P	P	05 47 42.5	+2.5
	0.6nm,0.4s,mb3.6,baz=126,slow=4.9,SNR=5.5						
SONM	Songino Array	83.61	323	P	P	05 48 21.2	+1.1
	0.8nm,1.0s,mb3.4,baz=123,slow=3.1,SNR=4.0						
ILAR	Eielson Array	87.10	18	P	P	05 48 35.3	-1.5
	0.4nm,0.6s,mb3.3,baz=246,slow=5.0,SNR=8.5						
NVAR	Mina Array Bea	87.26	49	P	P	05 48 38.0	-0.2
	0.5nm,0.7s,mb3.4,baz=252,slow=8.6,SNR=3.4						
ARCES	ARCESS Array B	121.25	346	PKP	PKPdf	05 54 41.8	+0.1
	1.1nm,0.4s,baz=75,slow=2.3,SNR=26						
FINES	FINESS Array B	126.77	338	PKP	PKPdf	05 54 52.6	+0.1
	2.5nm,1.0s,baz=44,slow=3.1,SNR=7.0						
BDFB	Brasilia	132.79	129	PKP	PKPdf	05 55 04.8	-0.4
	2.2nm,1.1s,baz=118,slow=3.9,SNR=3.0						
GERES	GERESS Array B	140.72	333	PKhKP		05 55 15.1	
	0.2nm,0.5s,baz=63,slow=2.2,SNR=2.8						
CDF	Champ du Feu	143.63	338	*e*PKP1	PKPbc	05 55 23.2	+0.5
	4.4nm,0.6s						
DAVOX	Davos	143.96	334	PKP	PKPdf	05 55 25.2	+0.8
	5.5nm,0.4s,baz=234,slow=1.2,SNR=22						
HINF	Hinteralfeld	144.28	338	*e*PKP1	PKPbc	05 55 25.2	+0.6
	7.6nm,0.6s						
HAU	Haudompre	144.30	339	*e*PKP1	PKPbc	05 55 25.6	+0.9
	11nm,0.7s						
MEZF	Maizieres J'vi	144.31	341	*e*PKP1	PKPbc	05 55 25.9	+1.2
	10nm,0.8s						
CABF	La Chapelle	145.58	338	*e*PKP1	PKPbc	05 55 30.0	+1.9
FLN	La Foliniere	145.58	347	*e*PKP1	PKPbc	05 55 29.1	+1.0
LDF	La Druitiere	145.66	346	*e*PKP1	PKPbc	05 55 29.8	+1.5
GRR	Gorron	146.02	347	*e*PKP1	PKPbc	05 55 30.6	+1.4
SSF	Saint Saulge	146.07	341	*e*PKP1	PKPbc	05 55 31.0	+1.7
	11nm,0.8s						
LPL	La Plagne	146.26	336	*e*PKP1	PKPbc	05 55 32.0	+2.2
LPG	La Plagne	146.27	336	*e*PKP1	PKPbc	05 55 32.1	+2.3
SMF	Signal de Mont	146.33	340	*e*PKP1	PKPbc	05 55 31.3	+1.4
AVF	Avril sur Loir	146.36	341	*e*PKP1	PKPbc	05 55 31.3	+1.3
SGMF	Saint Gilles	146.50	349	*e*PKP1	PKPbc	05 55 31.9	+1.6
ORIF	Oris-en-Rattie	147.09	336	*e*PKP1	PKPdf	05 55 33.9	+4.1
TCF	Toulx Ste Croi	147.16	342	*e*PKP1	PKPdf	05 55 33.9	+4.0
	18nm,1.1s						
MFF	Saint Martin d	147.53	345	*e*PKP1	PKPdf	05 55 34.7	+4.2
	6.2nm,0.6s						
SMRF	Simiane la Rot	148.00	336	*e*PKP1	PKPdf	05 55 36.4	+5.1
	33nm,1.0s						
LASF	Ste Croix	148.56	338	*e*PKP1	PKPdf	05 55 37.8	+5.6
ETSF	Etsaut	151.06	343	*e*PKP1	PKPdf	05 55 44.0	+7.9

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*IDC **20** 05:46:18.4±1.0, 55.45S×28.59W, mb4.0/2, mb1 4.1/3, mb1mx3.7/14, mbtmp4.1/3, ML3.5/1, Error ellipse: s-maj=72.6km s-min=26.6km az=39.0*

*NEIC **20** 05:46:19.2±0.6, 55.21S×28.10W, h10^{km}, mb4.3/1, Error ellipse: s-maj=50.6km s-min=13.8km az=51.0*

ISC 20 05:46:15.5±3.4**, 54.9S**±0.8×**2 7W**± **, h10**^{km}**, n11, σ0^{s}94**/5**, mb4.1**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	19.80	157	P	P	05 50 48.6	+0.1
	0.1nm,0.3s,baz=285,slow=14,SNR=7.2						
SNAA	Sanae	19.80	157	*e*P	P	05 50 48.4	-0.1
	79nm,0.8s						
LVC	Limon Verde	44.76	299	P	P	05 54 30.1	-0.7
	1.9nm,0.7s,mb4.0,baz=112,slow=5.4,SNR=3.1						
LPAZ	La Paz	49.75	304	P	P	05 55 11.0	+1.1
	2.1nm,0.8s,mb4.2,baz=166,slow=6.1,SNR=5.3						
SAML	Samuel	54.02	314	*e*P	P	05 55 41.6	-0.4
	4.3nm,1.4s,mb4.2						
YKA	Yellowknife Ar	135.33	319	PKP	PKPdf	06 05 37.6	+0.1
	1.0nm,1.1s,baz=130,slow=2.2,SNR=7.2						
INK	Inuvik	144.92	322	PKP	PKPdf	06 05 54.2	0.0
	2.5nm,0.8s,baz=88,slow=4.1,SNR=9.0						
INK	Inuvik	144.92	322	*e*PKPdf	PKPdf	06 05 53.7	-0.5
INK				PKP	PKPdf	06 05 54.2	0.0
ILAR	Eielson Array	149.36	313	PKPbc	PKPdf	06 06 06.5	+4.9
	3.2nm,0.9s,baz=116,slow=1.4,SNR=20						
MCK	McKinley	150.05	311	*e*PKPbc	PKPdf	06 06 08.1	+5.4
SONM	Songino Array	150.59	84	PKPbc	PKPdf	06 06 11.8	+7.8
	0.6nm,0.7s,baz=217,slow=2.7,SNR=6.0						
SONM				PKPab	PKPab	06 06 23.0	+7.5
	1.2nm,0.8s,baz=221,slow=4.0,SNR=6.6						

JMA 20 05:49:06.5±0.4**, 44.01N**×**148.06E, M3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.80	250	P	Pn	05 49 39.0	0.0
NEM2				*e*S	Sn	05 50 02.9	0.0
JRA	Rausu	2.12	269	P	Pn	05 49 43.9	+0.2
JRA				*e*S	Sn	05 50 11.8	+0.7
JNK	Nakash	2.46	261	P	Pn	05 49 48.5	+0.1
JNK				*e*S	Sn	05 50 19.2	-0.4
JTKR	Abashiri--Toko	3.00	271	P	Pn	05 49 58.0	+1.8
JAR	Ashorobuto	3.19	259	P	Pn	05 49 59.7	+0.7
JAR				*e*S	Sn	05 50 39.1	+0.8
JCH	Churui	3.70	249	P	Pn	05 50 06.4	+0.2
JNBK	Urakawa-nobuka	4.25	248	P	Pn	05 50 14.3	+0.3

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*ISK **20** 06:02:37.7, 37.24N×36.25E, h3^{km}, MD3.5*

*CSEM **20** 06:02:37.7, 37.24N×36.25E, h3^{km}, MD3.5, After ISK*

ISC 20 06:02:38.2±0.4**, 37.20N**±0.03×**36.26E**±0.03**, h3**^{km}**, n24, σ0^{s}94**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.45	245	*i* PG	Pg	06 02 47.0	-0.1
KAHT	Ahir Dag	0.65	48	*i* P	Pg	06 02 50.5	-0.7
KAHT				*i* S	Sg	06 02 59.6	-0.3
COBT	Iskenderun	0.68	180	*i* P	Pg	06 02 51.2	-0.5
COBT				*i* S	Sg	06 03 00.8	+0.1
GAZ	Gaziantep	0.76	92	*i* PG	Pg	06 02 52.8	-0.6
GAZ				*i* SG	Sg	06 03 05.0	+1.5
GZT	Gaziantep	1.05	81	*i* P	Pb	06 02 58.0	-0.7
GZT				*i* S	Sb	06 03 12.8	+0.2
HTY	Hatay	1.08	185	*i* PN	Pn	06 02 59.8	-0.3
NIG	Nigde	1.59	305	PN	Pn	06 03 06.9	-0.5
BNN	Bunyan	1.68	349	PN	Pn	06 03 08.8	+0.1
MEST	Erdemli	1.80	251	*i* P	Pn	06 03 09.1	-1.2
MEST				*i* S	Sn	06 03 35.6	+1.6
AVNT	Avonos	1.93	325	*i* P	Pn	06 03 14.0	+1.8
AVNT				*i* S	Sn	06 03 41.6	+4.4
MALT	Malatya	2.05	56	PN	Pn	06 03 13.1	-0.8
MYA	Malataya	2.05	56	PN	Pn	06 03 13.6	-0.4
URFA	Urfa	2.06	82	PN	Pn	06 03 15.2	+1.2
ELZG	Elazig	2.52	58	*i* P	Pn	06 03 21.8	+1.2
ELZG				*i* S	Sn	06 03 56.9	+4.7
YOZ	Yozgat	2.55	343	*e*PN	Pn	06 03 20.8	-0.2
KAMT	Kaman	2.95	318	*e*PN	Pn	06 03 26.0	-0.8
DIY	Diyarbakir	3.23	76	*e*PN	Pn	06 03 31.4	+0.6
CORM	Corum	3.24	337	*e*PN	Pn	06 03 30.9	0.0
CTKT	Corum	3.61	342	*i* P	Pn	06 03 40.0	+3.9
CTKT				*i* S	Sn	06 04 24.6	+4.9
BINT	Bingol	3.74	62	*e*PN	Pn	06 03 38.9	+0.9
EZC	Erzincan	3.78	47	*e*PN	Pn	06 03 35.2	-3.3
BEST	Besiri	4.04	79	*i* P	Pn	06 03 53.4	+11
BEST				*i* S	Sn	06 04 47.5	+17
BTMT	Batman	4.26	75	*e*PN	Pn	06 03 44.0	-1.5
VRT	Varto	4.58	63	*e*PN	Pn	06 03 49.6	-0.3

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*IDC **20** 06:03:29.4±11.0, 3.43S×126.84E, mb4.1/2, mb1 4.5/3, mb1mx3.9/14, mbtmp4.3/3, ML4.5/1, Error ellipse: s-maj=317.5km s-min=164.6km az=77.0*

ISC 20 06:04:29.5±5.6**, 6.6S**±0.5×**128.2E**±0.3**, h331**^{km}±31^{km}**, n7, σ0^{s}81**/8**, mb3.4**/1**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	7.32	146	*e*P	P	06 06 16.3	+0.3
	13nm,1.2s						
KAKA				*e*S	S	06 07 39.7	0.0
FITZ	Fitzroy Crossi	11.67	192	*e*P	P	06 07 08.6	-0.1
WRA	Warramunga Arr	14.49	156	P	P	06 07 41.1	-1.0
	1.6nm,0.3s,baz=330,slow=13,SNR=86						
ASPA	Alice Springs	17.79	163	⇓*i*P	P	06 08 17.3	+0.5
ASAR	Alice Springs	17.79	163	P	P	06 08 17.8	+0.9
	6.3nm,0.6s,baz=345,slow=12,SNR=62						
STKA	Stephens Creek	28.04	155	*e*P	P	06 09 52.7	-0.6
	1.0nm,0.4s,mb3.4						
STKA	Stephens Creek	28.04	155	P	P	06 09 52.9	-0.4
	1.2nm,0.4s,mb3.5,baz=339,slow=7.8,SNR=7.0						

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*NIED **20** 06:19:00, 37.20N×138.80E, h5^{km}, Mw3.8 Best double couple: $M_0$5.27×10^{14} NP1:ϕ_s4°, δ62°, λ82°. NP2:ϕ_s201°, δ29°, λ105°.*

*JMA **20** 06:19:10.6, 37.23N×138.80E, h7^{km}±1^{km}, M4.1*

JMA Felt III J1.

*MOS **20** 06:19:11.3±0.5, 37.09N×138.76E, h33^{km}, mb4.2/5, Error ellipse: s-maj=27.9km s-min=11.6km az=76.0*

*NEIC **20** 06:19:13.7±0.8, 37.09N×138.61E, h36^{km}±7^{km}, mb3.9/3, Error ellipse: s-maj=8.9km s-min=6.6km az=112.0*

NEIC Recorded [3 JMA] in Niigata Prefecture.

*IDC **20** 06:19:14.8±4.1, 37.17N×138.58E, h45^{km}±38^{km}, mb3.5/14, mb1 3.7/15, mb1mx3.6/25, mbtmp3.7/15, ML3.3/1, Error ellipse: s-maj=22.4km s-min=17.3km az=105.0*

ISC 20 06:19:08.6±0.3**, 37.21N**±0.03×**138.68E**±0.05**, h7**^{km}**, n40, σ1^{s}17**/44**, mb3.7**/16**, 2C-3D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	Hiroka	0.28	81	⇓P	Pg	06 19 14.2	0.0
JHK				S	Sg	06 19 17.5	-0.5
JIZZ	Izumozaki	0.33	5	⇑P	Pg	06 19 17.4	+2.2
JKT	Katashina	0.63	133	⇓P	Pg	06 19 21.6	+0.3
MAJO	Matsushiro	0.76	210	⇑*i*Pg	Pg	06 19 25.7	+1.9
MAJO				Sg	Sg	06 19 32.6	-1.4
MAT	Matsushiro	0.76	210	*e*P	Pb	06 19 26.0	+2.3
MAT				*e*S	Sg	06 19 37.0	+3.0
MAT	Matsushiro	0.76	210	P	Pb	06 19 25.6	+1.9
MAT				S	Sg	06 19 37.0	+3.0
JNS	Sasagawa	0.80	40	P	Pb	06 19 23.8	-0.5
JSD	Sado	0.89	338	P	Pb	06 19 26.5	+0.5
JAG	Ashikaga	1.00	141	⇓P	Pb	06 19 28.6	+0.8
ASAJ	Asahikawa	7.52	22	P	Pn	06 21 03.0	+1.7
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	7.52	22	P	Pn	06 21 03.0	+1.7
	comp=Z,0.5nm,0.3s,baz=194,slow=4.2,SNR=4.5						
KS15	Wonju Array Si	8.60	275	*e*Pn	P	06 21 15.2	-1.2
YSS	Yuzh-Sakhalins	10.20	16	P	P	06 21 39.7	+1.2
HIA	Hailar	18.26	317	*e*P	P	06 23 25.8	+1.8
HIA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HIA	Hailar	18.26	317	*e*P	P	06 23 25.8	+1.7
	comp=Z,3.9nm,0.6s						
MA2	Magadan	23.71	15	*e*P	P	06 24 22.5	+1.0
ENH	Enshi	25.18	263	*e*P	P	06 24 34.4	-1.6
	comp=Z,7.5nm,0.8s,mb4.3						
ULN	Ulaanbaatar	25.45	305	P	P	06 24 38.2	-0.3
SONM	Songino Array	25.88	304	P	P	06 24 41.8	-0.6
	comp=Z,1.2nm,1.0s,mb3.4,baz=104,slow=8.7,SNR=7.1						
KURK	Kurchatov	44.10	308	*e*P	P	06 27 18.6	-0.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
KURK	Kurchatov	44.10	308	*e*P	P	06 27 18.6	-0.3
	comp=Z,1.5nm,0.8s,mb3.8						
ILAR	Eielson Array	50.52	32	P	P	06 28 08.0	-1.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=275,slow=4.6,SNR=8.1						
WRA	Warramunga Arr	56.98	185	P	P	06 28 55.2	-2.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	56.98	185	P	P	06 28 55.2	-2.1
	comp=Z,1.7nm,0.7s,mb4.2,baz=0.5,slow=7.5,SNR=15						
DLBC	Dease Lake	59.83	37	P	P	06 29 16.6	0.0
	comp=Z,0.5nm,0.6s,mb3.7,baz=241,slow=10,SNR=1.9						
ASAR	Alice Springs	60.71	185	P	P	06 29 21.6	-1.6
	comp=Z,0.6nm,1.0s,mb3.7,baz=30,slow=7.3,SNR=3.8						
YKA	Yellowknife Ar	64.75	29	P	P	06 29 47.9	-1.4
	comp=Z,0.4nm,0.7s,mb3.6,baz=305,slow=6.8,SNR=9.6						
FINES	FINESS Array B	67.63	331	P	P	06 30 06.3	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	67.63	331	P	P	06 30 06.3	-1.4
	comp=Z,1.8nm,0.9s,mb4.1,baz=68,slow=7.5,SNR=7.2						
FINES	FINESS Array B	67.63	331	P	P	06 30 06.3	-1.4
AKASG	Malin Array Be	72.81	321	P	P	06 30 38.4	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	72.81	321	P	P	06 30 38.4	-1.0
	comp=Z,0.8nm,0.6s,mb3.8,baz=51,slow=6.2,SNR=5.1						
HFS	Hagfors	73.02	335	P	P	06 30 40.2	-0.1
HFS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	Hagfors	73.02	335	P	P	06 30 40.2	-0.1
	comp=Z,2.1nm,0.9s,mb4.1,baz=76,slow=12,SNR=3.3						
NVAR	Mina Array Bea	76.62	52	P	P	06 31 01.8	+0.3
	comp=Z,0.2nm,0.4s,mb3.4,baz=281,slow=4.6,SNR=3.1						
NVAR	Mina Array Bea	76.62	52	P	P	06 31 01.8	+0.3
PDAR	Pinedale Array	79.09	44	P	P	06 31 15.4	+0.4
	comp=Z,0.4nm,0.8s,mb3.4,baz=315,slow=2.1,SNR=3.9						
ULM	Lac du Bonnet	80.54	32	P	P	06 31 22.5	-0.2
	comp=Z,1.3nm,0.8s,mb3.9,baz=0.5,slow=6.2,SNR=3.1						
GERES	GERESS Array B	81.39	327	P	P	06 31 26.8	-0.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=45,slow=4.2,SNR=2.8						
TXAR	Lajitas Array	91.73	51	P	P	06 32 18.3	+0.2
	comp=Z,0.2nm,0.8s,mb3.5,baz=304,slow=3.3,SNR=2.7						

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*IDC **20** 06:34:25.0±0.5, 2.39S×141.85E, mb4.5/12, mb1 4.6/15, mb1mx4.6/18, mbtmp4.5/15, ML4.3/3, MS3.7/4, Ms1 3.6/4, ms1mx3.3/17, Error ellipse: s-maj=24.3km s-min=13.1km az=77.0*

*BJI **20** 06:34:26.4, 2.50S×141.70E, h10^{km}, mB4.6, mb4.9*

*NEIC **20** 06:34:26.4±0.3, 2.47S×141.73E, h10^{km}, mb4.6/14, Error ellipse: s-maj=10.7km s-min=6.9km az=78.0*

ISC 20 06:34:27.2±2.5**, 2.58S**±0.04×**141.66E**±0.07**, h25**^{km}±18^{km}**, n64, σ0^{s}96**/59**, mb4.7**/28**, MS3.7**/3**, 3C, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.71	141	Pn	P	06 36 34.9	+0.1
	2.5nm,0.3s,baz=28,slow=1.8,SNR=8.1						
PMG	Port Moresby	8.71	141	*e*P	P	06 36 34.0	-0.9
	19nm,0.7s						
KAKA	Kakadu	13.59	222	⇑*i*P	P	06 37 39.5	-1.7
	31nm,0.4s						
KAKA				*e*S	S	06 40 05.5	-6.8
CTA	Charters Tower	17.98	166	*e*P	P	06 38 39.7	+2.3
	5.2nm,0.6s						
CTA	Charters Tower	17.98	166	P	P	06 38 38.0	+0.7
	0.4nm,0.3s,baz=327,slow=12,SNR=8.4						
CTA				LR	LR	06 45 11.1	
	comp=Z,110nm,18.8s,baz=136,slow=36						
CTAO	Charters Tower	17.98	166	*e*P	P	06 38 39.7	+2.3
	9.6nm,0.8s						
WRA	Warramunga Arr	18.68	202	P	P	06 38 45.8	-0.3
	3.6nm,0.3s,baz=22,slow=12,SNR=141						
WRA				S	S	06 42 09.7	-0.5
	0.1nm,0.3s,baz=14,slow=21,SNR=3.5						
FITZ	Fitzroy Crossi	22.02	224	*e*P	P	06 39 21.8	+0.1
	25nm,0.6s,mb4.8						
FITZ				*i* S	S	06 43 17.7	-0.6
ASAR	Alice Springs	22.27	199	P	P	06 39 24.6	+0.3
	15nm,0.6s,mb4.6,baz=31,slow=9.4,SNR=120						
ASAR				S	S	06 43 28.5	+5.6
	1.5nm,0.9s,baz=23,slow=23,SNR=4.9						
ASAR				LR	LR	06 48 26.7	
	comp=Z,193nm,19.3s,MS3.5,baz=27,slow=37						
ASPA	Alice Springs	22.27	199	⇑*i*P	P	06 39 24.4	+0.2
ASPA				*e*S	S	06 43 32.4	+10
MBWA	Marble Bar	28.23	227	*e*P	P	06 40 20.5	-0.1
	6.7nm,0.7s,mb4.4						
STKA	Stephens Creek	29.14	180	⇑*i*P	P	06 40 28.8	0.0
	6.1nm,0.8s,mb4.4						
STKA	Stephens Creek	29.14	180	P	P	06 40 28.8	+0.1
	6.9nm,0.8s,mb4.5,baz=351,slow=9.0,SNR=25						
STKA				LR	LR	06 52 34.6	
	comp=Z,93nm,19.6s,MS3.4,baz=16,slow=37						
ARMA	Armidale	29.26	162	*e*P	P	06 40 30.9	+1.1
NWAO	Narrogin (SRO)	37.89	214	P	P	06 41 47.6	+3.3
	7.9nm,0.8s,mb4.5,baz=34,slow=11,SNR=5.2						
CMAR	Chiang Mai Arr	46.95	298	P	P	06 42 58.7	+0.4
	1.1nm,0.4s,mb4.1,baz=127,slow=7.1,SNR=7.9						
CMAR				PcP	PcP	06 44 32.0	+1.0
	0.5nm,0.3s,baz=117,slow=2.0,SNR=3.6						
URZ	Urewera	48.08	142	P	P	06 43 07.5	+0.5
	2.8nm,0.5s,mb4.6,baz=292,slow=11,SNR=3.9						
MDJ	Mudanjiang	48.20	348	P	P	06 43 07.9	0.0
MDJ				AP	pP	06 43 17.0	+1.6
MDJ				XP	sP	06 43 20.6	+2.2
MDJ				PCP	PcP	06 44 33.0	-2.2
MDJ				PP	PP	06 45 00.1	+0.4
MDJ				SCP		06 48 27.0	
MDJ				PCS		06 48 30.6	
MDJ				S	S	06 50 06.0	+1.4
MDJ				XS		06 50 21.4	
MDJ				SCS	ScS	06 52 58.5	+2.1
MDJ				AMB	AMB		
	comp=Z,19nm,3.8s						
CN2	Changchun	48.41	344	*e*P	P	06 43 11.5	+2.0
RPZ	Rata Peaks	48.56	152	P	P	06 43 11.0	+0.4
	comp=Z,11nm,0.9s,mb4.9,baz=342,slow=9.6,SNR=2.9						
HHC	Hu-ho-hao-te	51.20	331	*e*P	P	06 43 30.1	-0.7
HHC				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,102nm,5.2s						
GTA	Gaotai	56.75	322	P	P	06 44 12.3	+0.6
GTA				XP	sP	06 44 23.1	+0.9
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.4						
LSA	Lhasa	57.94	308	P	P	06 44 22.1	+1.9
ULN	Ulaanbaatar	58.62	333	P	P	06 44 24.9	+0.1
	comp=Z,6.0nm,1.1s,mb4.5						
SONM	Songino Array	58.90	333	P	P	06 44 26.3	-0.3
	comp=Z,0.3nm,0.6s,mb3.5,baz=151,slow=6.8,SNR=5.4						
SONM				PcP	PcP	06 45 15.2	-0.4

	comp=Z,0.6nm,0.8s,baz=167,slow=3.0,SNR=2.6						
JIRN	Jiri	61.20	304	*e*P	P	06 44 43.5	+0.8
GUN	Gumba	61.55	304	*e*P	P	06 44 45.9	+0.8
	comp=Z,35nm,0.9s,mb5.5						
PKI	Pulchoki	61.82	303	*e*P	P	06 44 47.1	+0.2
KKN	Kakani	62.01	303	*e*P	P	06 44 48.7	+0.5
	comp=Z,44nm,0.9s,mb5.6						
DMN	Daman	62.09	303	*e*P	P	06 44 49.5	+0.8
	comp=Z,54nm,1.0s,mb5.6						
GKN	Gorkha	62.61	303	*e*P	P	06 44 52.6	+0.4
	comp=Z,32nm,0.6s,mb5.7						
KOLN	Koldanda	63.41	303	*e*P	P	06 44 58.0	+0.6
	comp=Z,33nm,0.9s,mb5.5						
JOSI	Joshimath	67.62	304	*e*P	P	06 45 17.4	-7.2
DDI	Dehra Dun	68.80	304	*e*	P	06 45 30.2	-1.7
KLP	Kalpa	68.98	305	*e*P	P	06 45 33.2	+0.2
AYAN	Aya Nagar	69.08	302	*e*P	P	06 45 33.2	-0.5
RTK	Rohtak	69.83	302	*e*P	P	06 45 38.4	+0.2
KHET	Khetri	70.11	301	*e*P	P	06 45 39.5	-0.5
ZAL	Zalesovo	73.33	329	P	P	06 45 57.2	-1.5
	comp=Z,1.5nm,0.6s,mb4.1,baz=11,slow=3.7,SNR=9.2						
AAK	Ala-Archa	75.17	315	P	P	06 46 06.8	-2.7
	comp=Z,4.7nm,1.0s,mb4.4						
KURK	Kurchatov	75.31	324	*e*P	P	06 46 09.4	-0.8
	comp=Z,11nm,1.1s,mb4.7						
VNDA	Vanda	75.67	176	P	P	06 46 11.9	+0.1
	comp=Z,2.3nm,0.8s,mb4.2,baz=328,slow=17,SNR=3.2						
VNDA	Vanda	75.67	176	*e*P	P	06 46 11.2	-0.6
	comp=Z,8.0nm,1.2s,mb4.5						
BVAR	Borovoye Array	80.90	325	P	P	06 46 41.2	+0.4
	comp=Z,4.6nm,0.5s,mb4.7,baz=109,slow=7.0,SNR=21						
IMA	Indian Mountai	82.32	22	*e*P	P	06 46 48.0	0.0
	comp=Z,39nm,1.2s,mb5.2						
MCK	McKinley	83.32	25	*e*P	P	06 46 51.6	-1.6
	comp=Z,12nm,1.4s,mb4.7						
MAW	Mawson	83.36	202	LR	LR	07 23 11.0	
	comp=Z,91nm,19.8s,MS4.2,baz=64,slow=35						
COLA	College	84.14	24	*e*P	P	06 46 58.1	+0.8
	comp=Z,3.0nm,0.6s,mb4.6						
ILAR	Eielson Array	84.50	24	P	P	06 46 56.8	-2.3
	comp=Z,2.0nm,0.7s,mb4.4,baz=257,slow=4.8,SNR=32						
DAWY	Dawson	87.47	26	*e*P	P	06 47 13.7	-0.1
INK	Inuvik	90.45	22	P	P	06 47 27.5	-0.3
	comp=Z,1.8nm,1.1s,mb4.3,baz=267,slow=7.1,SNR=3.3						
INK	Inuvik	90.45	22	P	P	06 47 27.4	-0.4
	comp=Z,3.9nm,1.1s,mb4.7						
YKA	Yellowknife Ar	98.61	27	P	P	06 48 03.9	-1.3
	comp=Z,0.6nm,0.9s,mb4.1,baz=282,slow=5.0,SNR=7.6						
YKA	Yellowknife Ar	98.61	27	P	P	06 48 03.9	-1.3
TXAR	Lajitas Array	112.70	59	PKiKP		06 53 03.6	
	comp=Z,0.2nm,0.8s,baz=315,slow=3.8,SNR=4.1						
SCHQ	Schefferville	122.98	19	PKP	PKPdf	06 53 21.2	-5.0
	comp=Z,1.1nm,0.6s,baz=304,slow=3.9,SNR=5.9						
ROSC	El Rosal	144.02	85	PKP	PKPdf	06 54 01.9	-4.6
	comp=Z,14nm,0.8s,baz=91,slow=6.4,SNR=20						
LPAZ	La Paz	145.11	123	PKPbc	PKPbc	06 54 06.2	+2.2
	comp=Z,7.0nm,0.8s,baz=285,slow=2.3,SNR=20						
LPAZ	La Paz	145.11	123	*e*PKP	PKPdf	06 54 05.7	-2.6
DBIC	Dimbokro	146.38	278	PKPbc	PKPbc	06 54 09.3	+2.1
	comp=Z,7.0nm,0.6s,baz=92,slow=3.0,SNR=11						
DBIC	Dimbokro	146.38	278	*e*PKPbc	PKPbc	06 54 09.0	+1.8
SDV	Santo Domingo	147.28	78	*e*PKPbc	PKPdf	06 54 10.4	-1.6
SJG	San Juan	148.67	59	*e*PKPbc	PKPdf	06 54 13.5	-0.7
BDFB	Brasilia	159.53	152	PKPab	PKPab	06 55 04.5	-0.6
	comp=Z,1.5nm,0.6s,baz=172,slow=7.0,SNR=4.2						

MAN 20 06:55:47.2, 8.85N×126.26E, h18^{km}, mb3.8, ML2.6, MS2.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.64	281	*e*P	Pb	06 56 00.2	+0.6
BUTP				*e*S	Sb	06 56 11.4	+3.4
BIPH	Bislig	0.66	171	⇓*i*P	Pb	06 55 58.9	-1.0
BIPH				*i* S	Sb	06 56 07.9	-0.7
BUKP	Musuan	1.52	231	*e*P	Pn	06 56 13.8	0.0
BUKP				*e*S	Sn	06 56 24.9	-8.4

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*NEIC **20** 07:08:01.5±0.6, 78.50N×6.99E, h10^{km}, mb3.3/1, ML2.9(BER), Error ellipse: s-maj=11.9km s-min=8.1km az=209.0*

*IDC **20** 07:08:01.1±1.0, 78.42N×6.29E, mb3.5/7, mb1 3.8/10, mb1mx3.6/23, mbtmp3.6/10, ML3.4/3, Error ellipse: s-maj=37.2km s-min=13.0km az=44.0*

*CSEM **20** 07:08:02.6±0.1, 78.55N×6.92E, h30^{km}, ML3.6, Error ellipse: s-maj=4.8km s-min=2.8km az=48.0*

*BER **20** 07:08:04.0±3.2, 78.41N×8.06E, h6^{km}±26^{km}, MD2.6, ML3.6, ML2.9(NAO)*

*NAO **20** 07:08:05.0±4.2, 78.34N×8.66E, ML2.9*

ISC 20 07:07:57.5±2.2**, 78.38N**±0.05×**7.0E**±0.2**, h0^{km}**±16^{km}**, n32, $\sigma 1\overset{s}{.}49$**/40**, mb3.5**/8**, 1C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.13	59	*e*P	Pb	07 08 20.6	+1.1
KBS				*e*S	Sb	07 08 32.9	-1.7
KBS	Kingsbay	1.13	59	*e*P	Pb	07 08 20.6	+1.1
KBS				*e*Sg	Sg	07 08 32.8	-2.2
KBS				AML	AML	07 08 34.6	
	comp=Z,2μm,0.2s						
SPA0	Spitsbergen Ar	1.93	92	Pn	Pn	07 08 33.6	+1.7
	baz=297,slow=16						
SPA0				Lg		07 08 56.2	
	baz=289,slow=56						
HSP	Hornsund	2.30	123	*e*P	Pn	07 08 38.0	+0.8
HSP				*e*S	Sn	07 09 03.7	-3.0
HOPEN	Hopen	4.35	107	*e*P	Pn	07 09 05.9	-0.5
HOPEN				*e*S	Sn	07 09 52.9	-5.7
DAG	Danmarks Havn	5.72	266	⇑*i*P	Pn	07 09 23.8	-2.0
	comp=Z,6.7nm,0.9s						
JMIC	Jan Mayen	8.44	217	Pn	P	07 10 03.8	0.0
	comp=Z,37nm,0.3s,baz=83,slow=2.5,SNR=12						
JMIC				Sn	Sn	07 11 32.0	-8.9
	comp=Z,1.9nm,0.3s,baz=3.6,slow=16,SNR=4.2						
JMIC	Jan Mayen	8.44	217	Pn	P	07 10 03.8	0.0
JMIC				Sn	Sn	07 11 32.0	-9.0
ARA0	ARCESS Array S	10.18	141	Pn	P	07 10 27.9	+0.2
	baz=344,slow=12						
ARA0				Sn	S	07 12 11.9	-12
	baz=332,slow=22						
ARCES	ARCESS Array B	10.18	141	Pn	P	07 10 27.9	+0.2
	comp=Z,0.6nm,0.3s,baz=343,slow=12,SNR=22						
ARCES				Sn	S	07 12 16.9	-6.9
	comp=Z,0.3nm,0.3s,baz=341,slow=22,SNR=3.1						
SCO	Scoresbysund	10.91	239	*i* P	P	07 10 35.5	-2.2
	comp=Z,4.4nm,0.5s						
SUMG	Summit	12.41	266	*e*P	P	07 10 56.3	-1.8
APA0	Apatity Array	13.02	132	P	P	07 11 05.3	-0.9
	baz=347,slow=11						
FIA0	FINESS Array S	18.05	149	P	P	07 12 14.4	+3.6
	baz=352,slow=12						
FINES	FINESS Array B	18.05	149	P	P	07 12 13.0	+2.2
	comp=Z,0.1nm,0.3s,slow=13,SNR=6.9						
HFS	Hagfors	18.47	169	P	P	07 12 19.8	+3.7
	baz=8.8,slow=7.9						
HFS	Hagfors	18.47	169	P	P	07 12 20.0	+3.9
	comp=Z,0.1nm,0.3s,baz=18,slow=9.1,SNR=12						
RES	Resolute Bay	21.10	314	P	P	07 12 43.7	-1.6
	comp=Z,1.2nm,0.8s,mb3.3						
RES	Resolute Bay	21.10	314	P	P	07 12 43.7	-1.6
	comp=Z,1.2nm,0.8s,mb3.3						
AKASG	Malin Array Be	28.95	150	P	P	07 14 01.6	+1.6
	comp=Z,1.1nm,0.8s,mb3.7,baz=349,slow=9.3,SNR=4.2						
BVAR	Borovoye Array	33.37	101	P	P	07 14 42.0	+3.1
	comp=Z,0.5nm,0.7s,mb3.5,baz=350,slow=8.8,SNR=3.7						
MLR	Muntele Rosu	33.82	156	P	P	07 14 45.8	+2.9
	comp=Z,1.5nm,0.8s,mb4.0,baz=38,slow=19,SNR=3.6						
YKA	Yellowknife Ar	35.11	317	P	P	07 14 54.1	+0.3
	comp=Z,0.2nm,1.0s,mb3.0,baz=11,slow=8.2,SNR=4.7						
YKA	Yellowknife Ar	35.11	317	P	P	07 14 54.2	+0.4
ILAR	Eielson Array	36.22	341	P	P	07 15 11.8	+8.6
	comp=Z,0.6nm,1.1s,mb3.4,slow=3.6,SNR=4.7						
ULM	Lac du Bonnet	43.79	295	P	P	07 16 06.2	+0.4
	comp=Z,0.5nm,0.3s,mb3.6,baz=34,slow=7.3,SNR=2.9						
PV10	Paradox Valley	57.61	303	*e*P	P	07 17 52.1	+1.1
PV10	Paradox Valley	57.61	303	*e*P	P	07 17 52.1	+1.1
PV01	Paradox Valley	57.77	303	*e*P	P	07 17 53.2	+1.1
PV01				*e*		07 18 00.9	
PV01	Paradox Valley	57.77	303	*e*P	P	07 17 53.2	+1.1
TXAR	Lajitas Array	65.48	296	P	P	07 18 45.2	+1.2
	comp=Z,0.3nm,0.6s,mb3.7,baz=37,slow=6.0,SNR=5.0						
TXAR	Lajitas Array	65.48	296	P	P	07 18 45.2	+1.2

IDC 20 07:41:42.7±1.2**, 0.74N×114.29E, mb3.9**/7**, mb1 4.0**/7**, mb1mx3.9**/18**, mbtmp3.9**/7**, Error ellipse: s-maj=124.3km s-min=17.5km az=58.0, Borneo**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.44	137	P	P	07 47 39.6	-1.9
	2.7nm,0.8s,baz=314,slow=9.9,SNR=25						
ASAR	Alice Springs	30.86	143	P	P	07 48 01.7	-1.4
	0.5nm,0.6s,baz=322,slow=7.8,SNR=8.7						
STKA	Stephens Creek	41.49	144	P	P	07 49 30.9	-2.4
	1.5nm,0.7s,baz=327,slow=9.7,SNR=5.3						
SONM	Songino Array	47.40	353	P	P	07 50 18.1	-2.6
	0.3nm,0.5s,baz=162,slow=9.1,SNR=3.5						
ZAL	Zalesovo	58.33	340	P	P	07 51 39.7	-2.1
	0.9nm,0.8s,baz=320,slow=7.4,SNR=4.9						
BVAR	Borovoye Array	63.54	332	P	P	07 52 15.8	-1.5
	4.1nm,1.1s,baz=153,slow=6.4,SNR=9.0						
AKASG	Malin Array Be	86.29	321	P	P	07 54 25.5	-2.3
	0.3nm,0.5s,baz=78,slow=4.9,SNR=4.4						

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*IGQ **20** 07:46:04.9, 1.69S×77.75W, h202^{km}±2^{km}, mb4.1, Error ellipse: s-maj=3.9km s-min=1.5km az=37.6*

*NEIC **20** 07:46:08.1±0.9, 1.49S×77.62W, h181^{km}±10^{km}, mb4.0/1, MD4.1(IGQ), Error ellipse: s-maj=24.5km s-min=10.1km az=75.0*

*IDC **20** 07:46:14.7±6.2, 1.38S×77.11W, h251^{km}±68^{km}, mb3.2/6, mb1 3.4/8, mb1mx3.1/21, mbtmp3.8/8, Error ellipse: s-maj=72.7km s-min=16.3km az=74.0*

ISC 20 07:46:07.3±0.5**, 1.62S**±0.06×**77.84W**±0.10**, h193^{km}**±4^{km}**, n37, $\sigma 0\overset{s}{.}98$**/43**, mb3.4**/6**, 3C-14D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	Ulba	0.59	286	⇑P	P	07 46 33.8	-0.6
ULBA				S	S	07 46 54.4	-0.8
PATA	Patacocha	0.61	281	P	P	07 46 34.1	-0.3
ARRY	Arrayan	0.63	280	⇑P	P	07 46 33.8	-0.7
ARRY				S	S	07 46 54.3	-1.1
RETU	Refugio	0.63	285	P	P	07 46 34.0	-0.4
RETU				S	S	07 46 57.8	+2.3
JUIV	Juive	0.66	287	P	P	07 46 34.0	-0.6
PISA	Pisayambo	0.78	315	⇓P	P	07 46 35.3	+0.1
PISA				S	S	07 47 00.2	+3.5
IGUA	Igualata	0.81	279	P	P	07 46 35.5	+0.2
TAMB	Tambo	1.06	330	⇓P	P	07 46 37.1	+0.1
VC1	Cotopaxi 1	1.12	330	⇓P	P	07 46 37.7	+0.2
NAS1	Nasa	1.17	327	⇓P	P	07 46 38.5	+0.6
ANTI	Antisana	1.21	344	⇓P	P	07 46 38.1	-0.1
ANTI				S	S	07 47 03.4	+1.4
CONE	Cono NE Rev Vo	1.55	7	⇑P	P	07 46 40.3	-1.0
ELAGU	Cayambe Volc	1.59	354	⇓P	P	07 46 41.6	0.0
JUA2	San Juan 2	1.59	331	⇓P	P	07 46 41.8	+0.1
TERV	Terraza Guagua	1.63	332	⇓P	P	07 46 42.3	+0.4
CAYR	Refugio Cayamb	1.63	354	⇓P	P	07 46 42.2	+0.2
PINO	Pino	1.64	332	⇓P	P	07 46 42.4	+0.3
YANA	Yana	1.66	334	⇓P	P	07 46 42.5	+0.2
CAYA	Cayambe	1.69	355	⇓P	P	07 46 42.8	+0.2
OTAV	Otavalo	1.94	342	*e*Pn	P	07 46 44.5	-0.6
COTA	Cotacachi	2.00	346	⇓P	P	07 46 46.3	+0.6
ECEN	Cerro Negro	2.43	357	⇓P	P	07 46 50.8	+0.3
HOJA	Cerro de Hojas	2.77	282	P	P	07 46 52.8	-1.6
SALI	Salinas	3.20	260	P	P	07 46 58.9	-0.7
NNA	Nana	10.35	175	Pn	P	07 48 33.5	+1.4
NNA				*e*Sn	S	07 50 12.3	-13
SDV	Santo Domingo	12.67	34	P	P	07 49 00.4	-1.3
	0.5nm,0.3s,baz=222,slow=16,SNR=7.3						
SDV	Santo Domingo	12.67	34	*e*Pn	P	07 48 59.8	-1.9
LPAZ	La Paz	17.43	147	P	P	07 49 59.0	-1.1
	0.3nm,0.3s,baz=338,slow=12,SNR=9.4						
LPAZ	La Paz	17.43	147	*e*P	P	07 49 59.4	-0.7
LVC	Limon Verde	22.60	158	P	P	07 50 54.7	+2.2
	0.8nm,0.4s,mb3.6,baz=323,slow=10,SNR=3.3						
ANMO	Albuquerque	45.19	326	P	P	07 54 09.1	+2.2
	1.3nm,0.6s,mb3.4,baz=158,slow=9.0,SNR=6.9						
PDAR	Pinedale Array	52.61	331	P	P	07 55 04.1	+0.7
	0.4nm,0.9s,mb2.9,baz=135,slow=8.9,SNR=3.0						
ULM	Lac du Bonnet	53.94	346	P	P	07 55 11.3	-1.7
	3.2nm,1.0s,mb3.8,baz=152,slow=5.3,SNR=5.9						
ULM	Lac du Bonnet	53.94	346	*e*P	P	07 55 10.6	-2.5
	2.1nm,0.6s,mb3.8						
YKA	Yellowknife Ar	69.70	343	P	P	07 56 56.9	-0.9
	0.7nm,0.7s,mb3.4,baz=140,slow=6.1,SNR=18						
YKA	Yellowknife Ar	69.70	343	P	P	07 56 56.9	-0.9
ILAR	Eielson Array	82.66	336	P	P	07 58 10.8	+0.7
	0.4nm,0.8s,mb3.2,baz=153,slow=3.7,SNR=5.3						

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*JMA **20** 08:15:08.8±0.1, 38.32N×141.63E, h54^{km}±1^{km}, M3.5 JMA Felt I J1.*

ISC 20 08:15:08.7±1.1**, 38.31N**±0.04×**141.64E**±0.09**, h50^{km}**±11^{km}**, n11, $\sigma 0\overset{s}{.}47$**/21**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.27	302	⇓P	P	08 15 18.1	+0.5
JIO				*i* S	S	08 15 24.4	+0.5
JMK	Ichinoseki	0.72	333	⇓P	P	08 15 23.1	+0.3
JMK				S	S	08 15 33.1	-0.1
OFUJ	Ofunato	0.77	2	⇓P	P	08 15 23.3	-0.1
OFUJ				*e*S	S	08 15 33.7	-0.6
JOU	Okura	0.77	275	P	P	08 15 23.8	+0.3
JOU				*e*S	S	08 15 34.4	+0.1
JMM	Marumori	0.80	237	⇓P	P	08 15 23.7	-0.2
JMM				*e*S	S	08 15 34.4	-0.7
JFK	Kawauchi	1.12	213	P	P	08 15 28.2	-0.1
JFK				*e*S	S	08 15 42.4	-0.5
JYK	Kaneyama	1.18	302	⇑P	P	08 15 29.1	+0.1
JYK				*e*S	S	08 15 44.0	-0.2
JOM	Ohasama	1.19	347	P	P	08 15 29.4	+0.1
JOM				*e*S	S	08 15 44.2	-0.5
JYS	Shirataka	1.25	266	P	P	08 15 30.3	+0.2
JYS				S	S	08 15 46.2	+0.2
JFT	Otama	1.30	233	P	P	08 15 31.1	+0.1
JFT				*e*S	S	08 15 46.8	-0.7
MAT	Matsushiro	3.25	238	P	P	08 16 00.0	+1.4

IDC 20 08:15:32.5±2.6**, 31.74S×141.41E, mb1 3.3**/2**, mb1mx3.3**/8**, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=149.7km s-min=14.5km az=46.0, New South Wales**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	0.21	131	Pg	Pg	08 15 36.5	-0.2
	42nm,0.3s,baz=300,slow=20,SNR=449						
STKA				Lg		08 15 38.4	
	182nm,0.3s,baz=230,slow=18,SNR=261						
ASAR	Alice Springs	10.43	319	Pn	P	08 18 04.8	-1.6
	0.2nm,0.3s,baz=145,slow=12,SNR=13						
ASAR				Sn	S	08 19 59.4	-5.8
	0.1nm,0.3s,baz=144,slow=22,SNR=4.3						
WRA	Warramunga Arr	13.35	330	Pn	P	08 18 42.7	-3.2
	0.1nm,0.3s,baz=148,slow=12,SNR=5.3						
WRA				Sn	S	08 21 07.3	-9.0
	0.0nm,0.3s,baz=147,slow=27,SNR=3.0						

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*THE **20** 08:27:43.7, 40.01N×21.44E, h5^{km}, ML2.6*

*ATH **20** 08:27:44.6, 40.08N×21.68E, h8^{km}, MD3.0/3*

*CSEM **20** 08:27:45.1±0.2, 40.06N×21.64E, h2^{km}, ML2.6, Error ellipse: s-maj=4.8km s-min=3.0km az=100.0*

ISC 20 08:27:44.5±0.7**, 40.08N**±0.03×**21.58E**±0.07**, h8^{km}, n9, $\sigma 1\overset{s}{.}06$**/13**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.27	33	*e*PG	Pg	08 27 49.8	-0.3
KZN				*e*SG	Sg	08 27 53.0	-0.9
JAN	Janina	0.70	233	*e*PB	Pb	08 27 59.0	+0.5
LIT	Litokhoron	0.70	88	*e*Pg	Pg	08 27 58.2	-0.3
LIT				*e*Sg	Sg	08 28 10.7	+2.8
FNA	Florina	0.72	348	*e*Pg	Pg	08 27 57.7	-1.3
FNA				*e*Sg	Sg	08 28 09.9	+1.3
GRG	Griva	1.08	35	*e*Pb	Pb	08 28 06.5	+1.5
EVR	Evrytania	1.17	171	*e*PB	Pb	08 28 06.5	-0.1
AGG	Agios Georgios	1.21	151	*e*Pb	Pb	08 28 06.2	-1.0
AGG				*e*Sb	Sb	08 28 23.8	+1.1
XOR	Xorichti	1.44	119	*e*Pb	Pb	08 28 10.5	-0.6
PAIG	Paliouri	1.62	95	*e*Pb	Pb	08 28 13.2	-1.1

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*FUNV **20** 08:30:31.7, 6.74N×73.25W, h167^{km}, MW3.2*

*NEIC **20** 08:30:32.9±0.7, 6.70N×72.92W, h171^{km}±11^{km}, Error ellipse: s-maj=28.1km s-min=9.7km az=127.0*

*IDC **20** 08:30:32.7±0.8, 6.74N×72.92W, h165^{km}±13^{km}, mb3.1/4, mb1 3.5/6, mb1mx3.1/21, mbtmp3.7/6, Error ellipse: s-maj=40.9km s-min=7.5km az=132.0*

ISC 20 08:30:32.3±0.5**, 6.89N**±0.06×**73.01W**±0.06**, h169^{km}**±6^{km}**, n20, $\sigma 0\overset{s}{.}84$**/31**, mb3.3**/5**, 3C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.19	35	⇑*i*P	P	08 31 01.7	+1.0
CAPV				*e*S	S	08 31 23.4	+0.7
ROSC	El Rosal	2.41	213	P	P	08 31 13.6	-0.1
	20nm,0.3s,baz=270,slow=22,SNR=118						
ROSC				S	S	08 31 44.7	-0.9
	106nm,0.3s,baz=90,slow=19,SNR=17						
SOCV	Socops	2.55	57	⇑*e*P	P	08 31 16.6	+1.2
SOCV				*e*S	S	08 31 49.2	+0.6
SDV	Santo Domingo	3.08	50	P	P	08 31 23.2	+1.2
	38nm,0.3s,baz=221,slow=4.2,SNR=414						
SDV				S	S	08 32 00.7	+0.5
	11nm,0.3s,baz=281,slow=21,SNR=16						
SDV	Santo Domingo	3.08	50	*e*Pn	P	08 31 23.0	+1.0
SDV				*e*Sn	S	08 32 00.0	-0.3
SDV				S	S	08 32 00.7	+0.5
ELOV	Elorza	3.50	88	⇑*i*P	P	08 31 28.1	+0.7
ELOV				*e*S	S	08 32 09.9	+0.1
VIRV	Villa del Rosa	3.64	9	*e*P	P	08 31 28.6	-0.6
VIRV				*e*S	S	08 32 11.7	-1.3
SANV	Sanarito	4.31	53	*e*P	P	08 31 38.3	+0.5
SANV				*e*S	S	08 32 27.8	-0.6
CURV	Curarigua	4.33	44	*e*P	P	08 31 38.5	+0.4
CURV				*e*S	S	08 32 28.9	+0.1
TEPV	Terepaima	4.86	51	⇓*i*P	P	08 31 45.6	+0.7
TEPV				*e*S	S	08 32 40.0	-1.2
SIQV	Siquisique	4.90	40	*e*P	P	08 31 45.6	+0.2
SIQV				*e*S	S	08 32 40.7	-1.3
BAUV	El Baul	5.33	67	*e*S	S	08 32 50.2	-2.0
OTAV	Otavalo	8.55	220	*e*Pn	P	08 32 32.4	-1.3
TXAR	Lajitas Array	36.50	312	P	P	08 37 23.8	+0.7
	0.2nm,0.6s,mb2.9,baz=122,slow=8.5,SNR=3.3						
MNTX	Cornudas Mount	39.01	314	P	P	08 37 44.5	+0.5
	0.3nm,0.5s,mb3.2						
ULM	Lac du Bonnet	47.26	340	P	P	08 38 50.3	+0.2
	0.6nm,0.4s,mb3.6,baz=131,slow=8.4,SNR=3.0						
PDAR	Pinedale Array	48.09	324	P	P	08 38 57.1	+0.4
	0.3nm,0.7s,mb3.0,baz=119,slow=11,SNR=3.9						
YKA	Yellowknife Ar	63.24	340	P	P	08 40 44.3	-0.4
	0.7nm,0.6s,mb3.7,baz=133,slow=6.6,SNR=37						
YKA	Yellowknife Ar	63.24	340	P	P	08 40 44.3	-0.4
WRA	Warramunga Arr	150.47	241	PKPbc	PKPdf	08 50 05.4	+6.4
	0.3nm,0.6s,baz=106,slow=3.0,SNR=5.7						

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*MOS **20** 08:31:25.2±2.0, 9.10S×123.90E, h35^{km}, mb4.7/7, Error ellipse: s-maj=15.0km s-min=8.1km az=130.3*

*BJI **20** 08:31:29.4, 9.20S×123.80E, h56^{km}, mB5.7, mb4.7, Ms5.4, Msz4.9*

*NEIC **20** 08:31:29.5±1.1, 9.19S×123.80E, h56^{km}±10^{km}, mb4.8/13, Error ellipse: s-maj=13.9km s-min=6.5km az=47.0*

*DJA **20** 08:31:29.0, 7.28S×123.54E, h2^{km}, MD5.1/4, ML5.5/4, Error ellipse: s-maj=268.7km s-min=3.5km az=93.0*

*IDC **20** 08:31:30.0±1.9, 9.10S×124.00E, h61^{km}±14^{km}, mb4.3/10, mb1 4.5/12, mb1mx4.4/17, mbtmp4.6/12, MS3.7/5, Ms1 3.7/5, ms1mx3.4/13, Error ellipse: s-maj=30.7km s-min=13.8km az=57.0*

ISC 20 08:31:24.9±0.3**, 9.17S**±0.05×**123.82E**±0.05**, h33^{km}, n91, $\sigma 1\overset{s}{.}34$**/90**, mb4.7**/32**, MS3.7**/4**, 13C-8D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	7.65	274	⇑*e*P	Pn	08 33 21.1	+4.2
KEDI				*e*		08 34 39.3	
KEDI	Kedomdong	7.65	274	⇑*e*Pn	Pn	08 33 21.1	+4.2
KEDI				*e*P		08 33 22.2	
KEDI				*e*Sn	Sn	08 34 39.3	-4.0
KEDI	Kedomdong	7.65	274	⇑*e*Pn	Pn	08 33 19.8	+2.9
	220nm,0.2s						
KEDI	Kedomdong	7.65	274	⇑*e*P	P	08 33 22.5	+5.8
KEDI				*e*Sn	Sn	08 34 39.3	-4.0
RATI	Rata	8.20	272	⇑*e*Pn	P	08 33 27.5	+3.1
RATI				*e*P		08 33 29.6	
RATI				*e*Sn	Sn	08 34 55.4	-1.8
RATI	Rata	8.20	272	⇑*e*Pn	P	08 33 27.5	+3.1
	401nm,0.2s						
RATI	Rata	8.20	272	*e*P	P	08 33 29.6	+5.2
RATI				*e*Sn	Sn	08 34 55.4	-1.8
FITZ	Fitzroy Crossi	9.05	169	⇓*i*P	P	08 33 34.9	-1.3
	190nm,0.4s						
FITZ				*e*S	S	08 35 08.0	-10
KAKA	Kakadu	9.16	113	*e*P	P	08 33 37.7	0.0
	31nm,0.4s						
KAKA				*e*S	S	08 35 13.4	-7.4
KELI	Kelakatan	9.27	275	⇑*e*Pn	P	08 33 41.5	+2.2
KELI				*e*P		08 33 44.5	
KELI	Kelakatan	9.27	275	⇑*e*Pn	P	08 33 41.5	+2.2
	30nm,0.2s						
KELI	Kelakatan	9.27	275	⇓*e*P	P	08 33 44.0	+4.7
SRDI	Scrawed	9.59	273	⇓*e*Pn	P	08 33 44.5	+0.7
SRDI				*e*Sn	Sn	08 35 27.3	-4.3
SRDI	Scrawed	9.59	273	⇓*e*Pn	P	08 33 44.7	+0.9
	119nm,0.2s						
SRDI	Scrawed	9.59	273	⇓*e*P	P	08 33 48.3	+4.5
SRDI				*e*Sn	Sn	08 35 27.3	-4.3
MBWA	Marble Bar	12.56	198	*e*P	P	08 34 23.8	-0.3
	32nm,0.7s						
MBWA				*e*S	S	08 36 35.8	-7.9
WRA	Warramunga Arr	14.77	138	P	P	08 34 49.7	-3.6
	2.6nm,0.3s,baz=316,slow=14,SNR=76						
WRA				S	S	08 37 21.3	-15
	10nm,0.3s,baz=312,slow=22,SNR=24						
ASPA	Alice Springs	17.34	147	⇑*i*P	P	08 35 25.3	-0.8
ASPA				*e*S	S	08 38 22.3	-14
ASAR	Alice Springs	17.34	147	P	P	08 35 24.4	-1.8
	3.1nm,0.3s,baz=319,slow=10,SNR=296						
ASAR				S	S	08 38 27.2	-9.0
	5.5nm,0.3s,baz=326,slow=24,SNR=21						
ASAR				LR	LR	08 43 11.3	
	comp=Z,164nm,18.0s,baz=325,slow=40						
KLBR	Kellerberrin	23.01	193	⇓*i*P	P	08 36 28.7	+0.7
	351nm,0.9s,mb5.8						
MUN	Mundaring	23.77	196	*e*P	P	08 36 35.7	+0.3
	18nm,0.6s,mb4.7						
MUN	Mundaring	23.77	196	*e*P	P	08 36 35.7	+0.3
MUN				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.7						
CTA	Charters Tower	24.23	119	⇑*i*P	P	08 36 42.8	+2.8
	comp=Z,11nm,0.8s,mb4.3						
CTA	Charters Tower	24.23	119	P	P	08 36 39.5	-0.5
	comp=Z,14nm,0.8s,mb4.5,baz=289,slow=12,SNR=13						
CTA				LR	LR	08 46 37.1	
	comp=Z,171nm,20.8s,MS3.5,baz=242,slow=38						
CTA	Charters Tower	24.23	119	⇑*i*P	P	08 36 42.8	+2.8
CTA				LR	LR	08 46 37.1	
CTAO	Charters Tower	24.23	119	P	P	08 36 41.8	+1.8
CTAO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
CTAO	Charters Tower	24.23	119	P	P	08 36 41.8	+1.8
	comp=Z,16nm,0.8s,mb4.5						
NWAO	Narrogin (SRO)	24.42	194	P	P	08 36 41.8	+0.1
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NWAO	Narrogin (SRO)	24.42	194	P	P	08 36 42.2	+0.6
	comp=Z,8.8nm,0.5s,mb4.5,baz=353,slow=5.1,SNR=50						
NWAO	Narrogin (SRO)	24.42	194	P	P	08 36 41.8	+0.1
	comp=Z,6.4nm,0.6s,mb4.2						
STKA	Stephens Creek	27.98	146	⇓*i*P	P	08 37 15.3	+0.5
	comp=Z,18nm,0.6s,mb4.9						
STKA				*e*S	S	08 42 33.6	+39
STKA	Stephens Creek	27.98	146	P	P	08 37 14.8	0.0
	comp=Z,19nm,0.6s,mb4.9,baz=316,slow=9.2,SNR=70						
STKA				PcP	PcP	08 40 26.8	-2.9
	comp=Z,3.6nm,0.6s,baz=304,slow=5.1,SNR=2.9						
STKA				LR	LR	08 48 15.6	
	comp=Z,206nm,20.8s,MS3.7,baz=24,slow=36						
ARMA	Armidale	33.47	133	⇑*i*P	P	08 38 05.5	+2.3
TOO	Toolangi	34.39	149	*e*P	P	08 38 13.5	+2.4

	comp=Z,0.6nm,1.0s						
TOO	Toolangi	34.39	149	*e*P	P	08 38 13.5	+2.4
TOO				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
CNB	Canberra Magne	34.95	142	*e*P	P	08 38 17.8	+1.9
	comp=Z,178nm,0.7s						
CMAR	Chiang Mai Arr	36.83	318	P	P	08 38 33.4	+1.4
	comp=Z,6.5nm,0.7s,mb4.5,baz=141,slow=7.1,SNR=25						
CMAR				ScP		08 44 34.8	
	comp=Z,1.5nm,0.8s,baz=170,slow=3.0,SNR=6.9						
CMAR				LR	LR	08 55 09.1	
	comp=Z,55nm,18.4s,MS3.4,baz=135,slow=38						
ENH	Enshi	41.56	341	P	P	08 39 13.2	+1.9
	comp=Z,5.5nm,0.7s,mb4.3						
LZH	Lanzhou	48.79	338	*e*P	P	08 40 10.1	+1.2
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb5.0						
LZH	Lanzhou	48.79	338	*e*P	P	08 40 10.1	+1.2
LZH				*SP	sP	08 40 20.5	-2.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
LZH	Lanzhou	48.79	338	*e*P	P	08 40 10.1	+1.2
	comp=Z,21nm,1.3s,mb5.0						
LZH				pP	pP	08 40 16.5	-2.3
LZH				sP	sP	08 40 20.5	-2.4
LSA	Lhasa	49.82	322	P	P	08 40 18.3	+1.3
LSA	Lhasa	49.82	322	*e*P	P	08 40 17.7	+0.7
LSA				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
LSA	Lhasa	49.82	322	*e*P	P	08 40 17.7	+0.7
	comp=Z,27nm,1.0s,mb5.2						
JIRN	Jiri	51.65	316	*e*P	P	08 40 30.4	-0.4
	comp=Z,42nm,0.6s,mb5.5						
GUN	Gumba	52.02	316	*e*P	P	08 40 33.1	-0.5
	comp=Z,70nm,0.7s,mb5.7						
PKI	Pulchoki	52.13	316	*e*P	P	08 40 33.6	-0.8
	comp=Z,35nm,0.6s,mb5.5						
KKN	Kakani	52.35	316	*e*P	P	08 40 35.4	-0.7
DMN	Daman	52.36	315	*e*P	P	08 40 35.5	-0.6
	comp=Z,28nm,0.8s,mb5.3						
CN2	Changchun	52.74	1	*e*P	P	08 40 43.5	+4.8
GKN	Gorkha	52.93	316	*e*P	P	08 40 39.3	-1.1
	comp=Z,32nm,0.5s,mb5.5						
GTA	Gaotai	53.23	337	P	P	08 40 42.4	-0.1
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.4						
RPZ	Rata Peaks	53.48	139	P	P	08 40 42.9	-1.3
	comp=Z,14nm,0.8s,mb4.9,baz=318,slow=3.9,SNR=5.2						
KOLN	Koldanda	53.51	315	*e*P	P	08 40 43.7	-1.0
	comp=Z,24nm,0.5s,mb5.4						
MDJ	Mudanjiang	53.78	5	P	P	08 40 48.3	+1.8
MDJ				AP	pP	08 41 04.1	+7.6
MDJ				XP	sP	08 41 11.3	+11
MDJ				PCP	PcP	08 41 51.0	-1.1
MDJ				PP	PP	08 42 51.5	+2.4
MDJ				SCP		08 45 43.8	
MDJ				PCS		08 45 51.5	
MDJ				S	S	08 48 21.0	+3.8
MDJ				SCS	ScS	08 50 31.3	+1.5
MDJ				AMB	AMB		
	comp=Z,11nm,2.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,254nm,4.8s						
MDJ				LR	LR		
	comp=E,742nm,4.8s						
MDJ				LR	LR		
	comp=Z,772nm,5.0s						
ULN	Ulaanbaatar	58.70	347	*e*P	P	08 41 23.1	+1.5
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ULN	Ulaanbaatar	58.70	347	*e*P	P	08 41 23.1	+1.4
	comp=Z,5.4nm,0.9s,mb4.6						
SONM	Songino Array	58.82	346	P	P	08 41 21.8	-0.6
	comp=Z,3.2nm,0.9s,mb4.4,baz=164,slow=8.6,SNR=20						
ZAK	Zakamensk	61.94	345	*e*P	P	08 41 42.2	-1.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.9						
WMQ	Urumqi	62.09	331	*e*P	P	08 41 45.3	+0.5
KSH	Kashi	65.65	321	*e*P	P	08 42 09.0	+0.8
KSH				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
BOD	Bodaibo	67.23	354	*e*P	P	08 42 14.5	-3.4
AAK	Ala-Archa	68.40	323	*e*P	P	08 42 23.7	-1.8
AAK				*e*		08 42 31.5	
AAK				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
AAK	Ala-Archa	68.40	323	*e*P	P	08 42 23.7	-1.8
	comp=Z,12nm,0.6s,mb5.1						
AAK				*e*		08 42 31.4	
ZAL	Zalesovo	70.98	337	P	P	08 42 39.8	-1.3
	comp=Z,2.0nm,0.4s,mb4.4,baz=3.0,slow=1.3,SNR=6.0						
VNDA	Vanda	71.11	172	LR	LR	09 14 14.8	
	comp=Z,94nm,19.3s,MS4.1,baz=340,slow=36						
YAK	Yakutsk	71.12	3⇑	*e*P	P	08 42 41.7	-0.1
KURK	Kurchatov	71.33	332⇓	*e*P	P	08 42 42.6	-0.6
KURK	Kurchatov	71.33	332	*e*P	P	08 42 41.6	-1.6
	comp=Z,9.7nm,0.8s,mb4.8						
NVS	Novosibirsk	72.26	337	*e*P	P	08 42 45.5	-3.1
NVS				*e*		08 51 58.4	
BVAR	Borovoye Array	76.75	330	P	P	08 43 13.9	-0.8
	comp=Z,1.6nm,0.8s,mb4.0,baz=135,slow=6.3,SNR=9.5						
CHKZ	Chkalovo	77.02	331	*e*P	P	08 43 14.9	-1.3
CHKZ				*e*	pP	08 43 26.3	-0.2
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CHKZ	Chkalovo	77.02	331	*e*P	P	08 43 14.9	-1.3
	comp=Z,2.6nm,0.8s,mb4.2						
CHKZ				*e*	pP	08 43 26.2	-0.3
TIXI	Tiksi	80.71	2	*e*P	P	08 43 35.0	-0.9
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
QSPA	South Pole Qui	80.83	180	*e*P	P	08 43 36.9	+0.5
	comp=Z,11nm,1.3s,mb4.6						
SVE	Sverdlovsk	83.53	330	*e*P	P	08 43 51.0	+0.3
SVE				*e*		08 44 10.0	
KMBO	Kilima Mbogo	86.44	269	P	P	08 44 08.3	+2.1
	comp=Z,0.8nm,0.6s,mb4.2,baz=104,slow=8.3,SNR=2.9						
BRTR	Keskin Array B	95.92	309	P	P	08 44 52.8	+3.0
	comp=Z,1.1nm,0.7s,mb4.4,baz=135,slow=5.2,SNR=6.1						
YKA	Yellowknife Ar	112.35	25	PKiKP		08 49 58.0	
	comp=Z,0.1nm,0.5s,baz=298,slow=2.0,SNR=6.5						
YKA				SKP		08 53 26.8	
	comp=Z,0.3nm,0.8s,baz=309,slow=1.9,SNR=6.1						
YKA				PKKPbc		09 00 48.5	
	comp=Z,0.5nm,1.0s,baz=108,slow=3.6,SNR=7.2						
YKA	Yellowknife Ar	112.35	25	PKPdf	PKPdf	08 49 58.0	+0.9
YKA				SKP		08 53 26.8	
YKA				PKKPbc		09 00 48.5	
NVAR	Mina Array Bea	117.42	51	PKP	PKPdf	08 50 09.8	+2.3
	comp=Z,0.4nm,0.6s,baz=243,slow=2.0,SNR=3.8						
NVAR	Mina Array Bea	117.42	51	PKP	PKPdf	08 50 09.8	+2.3
PDAR	Pinedale Array	122.74	45	PKP	PKPdf	08 50 19.0	+1.2
	comp=Z,0.4nm,0.7s,SNR=5.2						
PLCA	Paso Flores	128.61	166	PKP	PKPdf	08 50 31.6	+2.4
	comp=Z,0.9nm,0.9s,baz=187,slow=3.8,SNR=3.9						
TXAR	Lajitas Array	131.28	59	PKP	PKPdf	08 50 36.8	+2.2
	comp=Z,0.3nm,0.5s,baz=205,slow=3.2,SNR=7.0						
TXAR				SKPbc		08 53 55.2	
	comp=Z,3.7nm,1.1s,baz=264,slow=2.5,SNR=21						
TXAR	Lajitas Array	131.28	59	PKP	PKPdf	08 50 36.8	+2.2
TXAR				SKPbc		08 53 55.2	
SCHQ	Schefferville	133.67	9	SKPbc		08 54 00.4	
	comp=Z,3.9nm,1.0s,baz=335,slow=4.5,SNR=4.8						
LVC	Limon Verde	146.04	159	PKPbc	PKPbc	08 51 05.5	+3.1
	comp=Z,5.3nm,0.7s,baz=222,slow=3.2,SNR=12						
LVC	Limon Verde	146.04	159	PKPbc	PKPbc	08 51 05.5	+3.1
LPAZ	La Paz	152.08	155	PKPbc	PKPdf	08 51 21.0	+10
	comp=Z,4.4nm,0.8s,baz=156,slow=3.1,SNR=14						
LPAZ	La Paz	152.08	155	*e*PKPbc	PKPdf	08 51 21.1	+10

IDC 20 09:15:50.3±2.9**, 30.28S**×**176.79W, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.6**/15**, mbtmp3.7**/3**, ML3.6**/1**, Error ellipse: s-maj=72.6km s-min=35.7km az=118.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	9.43	211	Pn	P	09 18 06.3	-4.0
	0.6nm,0.3s,baz=293,slow=7.7,SNR=5.0						
URZ				Sn	Sn	09 19 55.0	-3.3
	1.0nm,0.3s,baz=302,slow=23,SNR=9.1						
ASAR	Alice Springs	44.16	266	P	P	09 24 01.6	-1.0
	0.3nm,0.4s,baz=103,slow=7.2,SNR=7.4						
WRA	Warramunga Arr	45.14	271	P	P	09 24 08.3	-2.3
	0.5nm,0.6s,baz=110,slow=7.7,SNR=11						
FINES	FINESS Array B	145.38	341	PKPbc	PKPbc	09 35 28.5	-1.4
	1.7nm,0.5s,baz=49,slow=3.5,SNR=18						

IDC 20 09:21:50.4±3.3**, 26.34N**×**142.03E, h38**^{km}±29^{km}**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.3**/20**, mbtmp3.7**/3**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx2.4**/18**, Error ellipse: s-maj=82.8km s-min=23.7km az=100.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	0.77	10	Pn	P	09 22 04.7	-0.2
	43nm,0.3s,baz=90,slow=22,SNR=14						
CBIJ				Sn	S	09 22 15.1	-0.3
	122nm,0.3s,baz=288,slow=19,SNR=21						
CMAR	Chiang Mai Arr	40.45	268	LR	LR	09 47 51.0	
	comp=Z,21nm,18.4s,baz=290,slow=39						
WRA	Warramunga Arr	46.60	190	P	P	09 30 14.5	-2.4
	0.7nm,0.5s,baz=10,slow=8.6,SNR=11						
YKA	Yellowknife Ar	72.88	28	P	P	09 33 15.4	-1.4
	0.4nm,0.8s,baz=294,slow=6.2,SNR=7.1						
FINES	FINESS Array B	78.57	334	P	P	09 33 47.9	-1.3
	1.2nm,0.9s,baz=90,slow=5.7,SNR=3.6						

IDC ***20*** *09:23:00.7±2.4, 11.86S×47.64E, mb3.9/3, mb1 4.1/4, mb1mx3.7/19, mbtmp4.1/4, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/24, Error ellipse: s-maj=73.2km s-min=51.1km az=2.0*

NEIC ***20*** *09:23:01.9±0.8, 11.93S×47.53E, h10*^{km}*, mb4.1/4, Error ellipse: s-maj=23.4km s-min=15.2km az=135.0*

ISC 20 09:23:00.9±0.9**, 11.5S**±0.1×**47.2E**±0.1**, h10**^{km}**, n11,** σ**1**^{s}**32**/11**, mb3.9**/6**, Northwest of Madagascar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMBO	Kilima Mbogo	14.29	316	Pn	P	09 26 30.1	+4.5
	0.6nm,0.3s,baz=86,slow=17,SNR=4.0						
KMBO				Sn	S	09 29 04.6	-0.5
	0.2nm,0.3s,baz=49,slow=19,SNR=2.8						
KMBO				LR	LR	09 31 12.3	
	comp=Z,73nm,18.6s,baz=39,slow=33						
KMBO	Kilima Mbogo	14.29	316	*e*P	P	09 26 30.7	+5.1
KMBO				Sn	S	09 29 04.6	-0.5
KMBO				LR	LR	09 31 12.3	
LSZ	Lusaka	18.86	256	*e*P	P	09 27 26.1	+2.5
	2.0nm,0.6s						
LBTB	Lobatse	24.46	234	*e*P	P	09 28 20.7	-0.6
	6.2nm,0.9s,mb4.0						
BOSA	Boshof	26.64	227	*e*P	P	09 28 40.5	-1.2
	4.5nm,0.9s,mb4.0						
BRTR	Keskin Array B	52.52	347	P	P	09 32 20.6	+4.0
	0.3nm,0.6s,mb3.4,baz=164,slow=9.8,SNR=2.7						
ZAL	Zalesovo	72.60	22	P	P	09 34 28.9	-1.4
	0.7nm,0.5s,mb3.9,baz=285,slow=8.5,SNR=3.5						
SONM	Songino Array	78.96	36	P	P	09 35 07.2	+0.8
	1.8nm,0.8s,mb4.0,baz=235,slow=5.3,SNR=13						
ULN	Ulaanbaatar	79.36	36	*e*P	P	09 35 09.0	+0.4
	1.5nm,0.7s,mb4.0						
TXAR	Lajitas Array	147.59	308	PKPbc	PKPdf	09 42 48.4	+1.9
	0.3nm,0.6s,baz=82,slow=4.2,SNR=6.2						
NVAR	Mina Array Bea	150.24	337	PKPbc	PKPdf	09 42 55.7	+5.3
	0.1nm,0.3s,baz=39,slow=5.8,SNR=2.5						
NVAR				PKPab	PKPab	09 43 02.1	+1.1
	0.6nm,0.7s,baz=36,slow=0.6,SNR=4.6						

BJI ***20*** *09:24:47.0, 15.18S×173.10W, h9*^{km}*, mB5.5, mb5.1, Ms5.3, Msz5.2*

NEIC ***20*** *09:24:47.8±0.1, 15.25S×173.22W, h10*^{km}*, mb5.0/29, Error ellipse: s-maj=10.2km s-min=4.5km az=127.0*

HRVD ***20*** *09:24:47.8±0.5, 14.91S×172.99W, h14*^{km}*±3*^{km}*, MW5.0/39, Centroid moment Tensor Solution. LP body waves: s4,c4; Mantle waves: s39,c56; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-1.24±.27;* $M_{\theta\theta}$*1.20±.18;* $M_{\phi\phi}$*0.04±.13;* $M_{r\theta}$*-1.08±.43;* $M_{\theta\phi}$*-0.72±.11;* $M_{\phi r}$*3.43±1.05; Best double couple:* M_0*3.835×10*^{16} *NP1:*ϕ_s*275°,δ16°,λ-151°. NP2:* ϕ_s*157°,δ82°,λ-76°. Principal axes: T 3.556, Plg36°, Azm235°; N .562, Plg14°, Azm335°; P -4.115, Plg51°, Azm83°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***20*** *09:24:50.3±4.6, 15.32S×173.23W, h24*^{km}*±28*^{km}*, mb4.5/15, mb1 4.7/16, mb1mx4.6/22, mbtmp4.6/16, ML5.0/1, MS4.0/13, Ms1 4.0/13, ms1mx3.8/21 Error ellipse: s-maj=26.3km s-min=11.5km az=124.0*

MOS ***20*** *09:24:51.2±1.5, 15.34S×172.79W, h33*^{km}*, mb5.2/18, Error ellipse: s-maj=15.8km s-min=9.8km az=66.8*

ISC 20 09:24:50.3±0.2**, 15.26S**±0.06×**173.11W**±0.07**, h33**^{km}**, (h7**^{km}±5.7^{km}**:pP-P), n253,** σ**0**^{s}**90**/138**, mb4.8**/50**, MS4.2**/17**, 21C-18D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.86	44⇑	*i*P	P	09 25 21.6	+1.3
AFI				*e*S	S	09 25 40.4	-2.4
RAR	Rarotonga	13.98	117	*e*P	P	09 28 02.1	-6.3
RAR	Rarotonga	13.98	117	Pn	P	09 28 04.8	-3.6
	7.6nm,0.3s,baz=244,slow=7.9,SNR=6.7						
NOUC	Port Laguerre	20.64	248	*e*P	P	09 29 33.9	+4.2
PPT	Papeete	22.69	99	*e*LQ		09 34 02.7	
PPT				*e*LR	LR	09 34 40.0	
	781nm,26.8s						
OUZ	Omahuta	23.19	209	*e*P	P	09 29 55.5	+0.4
OUZ	Omahuta	23.19	209	P*	P	09 29 55.5	+0.4
OUZ	Omahuta	23.19	209	P*	P	09 29 55.5	+0.4
KUZ	Kuaotunu	23.60	203	*e*P	P	09 29 59.8	+0.7
KUZ	Kuaotunu	23.60	203	P*	P	09 29 60.0	+0.9
KUZ	Kuaotunu	23.60	203	P*	P	09 29 60.0	+0.9
TBI	Tubuai	23.70	113	*e*LQ		09 34 17.8	
TBI				*e*LR	LR	09 35 15.2	
	793nm,29.5s						
MTAZ	Motutapu	23.95	204	*e*P	P	09 30 03.2	+0.7
MTAZ	Motutapu	23.95	204	P*	P	09 30 03.2	+0.7
MTAZ	Motutapu	23.95	204	P*	P	09 30 03.2	+0.7
PUZ	Puketiti	23.98	197	*e*P	P	09 30 02.8	+0.1
PUZ	Puketiti	23.98	197	P*	P	09 30 02.9	+0.2
PUZ	Puketiti	23.98	197	P*	P	09 30 02.9	+0.2
MKAZ	Moumakai	24.13	203	*e*P	P	09 30 04.5	+0.3
MKAZ	Moumakai	24.13	203	P*	P	09 30 04.5	+0.2
MKAZ	Moumakai	24.13	203	P*	P	09 30 04.5	+0.2
WTAZ	Waiatarua	24.21	205	P*	P	09 30 05.1	+0.1
WTAZ	Waiatarua	24.21	205	P*	P	09 30 05.1	+0.1
MWZ	Matawai	24.43	198	*e*P	P	09 30 06.7	-0.4
MWZ	Matawai	24.43	198	P*	P	09 30 06.9	-0.3
MWZ	Matawai	24.43	198	P*	P	09 30 06.9	-0.3
URZ	Urewera	24.49	199	P	P	09 30 05.5	-2.2
	32nm,0.7s,mb4.9,baz=18,slow=3.8,SNR=19						
URZ				S	S	09 34 25.3	+2.2
	6.8nm,0.8s,baz=276,slow=15,SNR=3.8						
URZ	Urewera	24.49	199	*e*P	P	09 30 05.1	-2.6
URZ	Urewera	24.49	199	P*	P	09 30 06.5	-1.2
URZ	Urewera	24.49	199	P*	P	09 30 06.5	-1.2
RPZ	Rata Peaks	31.42	202	P	P	09 31 09.6	-1.1
	10nm,0.8s,mb4.7,baz=191,slow=19,SNR=6.0						
TAOE	Nuku Hiva Isla	32.83	83	*e*LR	LR	09 39 15.2	
RKT	Rikitea	36.77	108	*e*LR	LR	09 41 15.3	
	478nm,28.5s						
CTA	Charters Tower	38.95	257	LR	LR	09 45 48.6	
	comp=Z,209nm,19.5s,MS4.0,baz=64,slow=32						
STKA	Stephens Creek	44.35	240	*e*P	P	09 32 56.9	-2.5
	2.1nm,0.5s,mb4.1						
STKA	Stephens Creek	44.35	240	P	P	09 32 56.8	-2.6
	5.1nm,0.8s,mb4.3,baz=86,slow=8.5,SNR=12						
STKA				PcP	PcP	09 34 42.9	-0.7
	3.8nm,0.8s,baz=28,slow=1.2,SNR=3.6						
STKA				LR	LR	09 48 42.1	
	comp=Z,185nm,20.7s,MS4.0,baz=22,slow=32						
WRA	Warramunga Arr	50.15	257	P	P	09 33 42.2	-2.8
	4.9nm,0.9s,mb4.5,baz=91,slow=7.0,SNR=59						
WRA				PcP	PcP	09 35 03.1	-1.1
	3.6nm,0.8s,baz=86,slow=3.9,SNR=8.8						
ASAR	Alice Springs	50.42	252	P	P	09 33 44.2	-2.7
	13nm,0.7s,mb5.1,baz=87,slow=7.6,SNR=97						
ASAR				LR	LR	09 53 29.8	
	comp=Z,201nm,20.6s,MS4.1,baz=90,slow=34						
ASPA	Alice Springs	50.42	252⇓	*i*P	P	09 33 44.5	-2.5
VNDA	Vanda	63.55	186	*e*P	P	09 35 18.7	-0.7
VNDA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VNDA	Vanda	63.55	186	P	P	09 35 19.0	-0.4
	comp=Z,5.8nm,1.0s,mb4.6,baz=19,slow=6.5,SNR=13						
VNDA				LR	LR	09 59 06.6	
	comp=Z,94nm,19.1s,MS4.0,baz=21,slow=32						
VNDA	Vanda	63.55	186	*e*P	P	09 35 18.7	-0.7
	comp=Z,9.4nm,0.8s,mb4.9						
CMB	Columbia Colle	72.47	41	*e*P	P	09 36 15.3	-0.2
CMB				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CMB	Columbia Colle	72.47	41	*e*P	P	09 36 15.3	-0.2
	comp=Z,4.3nm,1.0s,mb4.3						
MTUM	Tungsten Hills	73.25	43	*e*P	P	09 36 20.8	+0.5
YBH	Yreka Blue Hor	73.32	37	P	P	09 36 21.1	+0.5
	comp=Z,9.1nm,1.0s,mb4.7,baz=242,slow=2.6,SNR=9.1						
NVAR	Mina Array Bea	74.03	42	P	P	09 36 24.9	+0.1
	comp=Z,3.7nm,0.8s,mb4.3,baz=219,slow=7.4,SNR=20						
NVAR				LR	LR	10 02 13.8	
	comp=Z,54nm,20.1s,MS3.8,baz=195,slow=30						
LDFC	Landfair	74.34	46	*e*P	P	09 36 26.8	+0.1
QSPA	South Pole Qui	74.79	180	*e*P	P	09 36 28.0	-0.3
	comp=Z,56nm,1.0s,mb5.5						
NEN	Nelson	74.83	46	*e*P	P	09 36 28.9	-0.6
TUC	Tucson	76.08	51	*e*P	P	09 36 36.8	+0.1
TUC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TUC	Tucson	76.08	51	*e*P	P	09 36 36.8	+0.2
	comp=Z,6.6nm,0.9s,mb4.6						
WVOR	Wild Horse Val	76.15	38	*e*P	P	09 36 37.1	+0.3
WVOR				pmax	pmax		
	comp=Z,41nm,1.6s,mb5.1						
WVOR	Wild Horse Val	76.15	38	*e*P	P	09 36 37.1	+0.3
	comp=Z,42nm,1.6s,mb5.1						
ARUT	Antelope Range	76.90	45	*e*P	P	09 36 41.5	+0.3
WUAZ	Wupatki	77.20	47	*e*P	P	09 36 43.6	+0.7
	comp=Z,312nm,1.4s						
SSE	Sheshan	78.09	307	P	P	09 36 48.3	+0.4
SSE				S	S	09 46 31.3	-7.1
SSE				AMB	AMB		
	comp=Z,22nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,243nm,4.7s						
SSE	Sheshan	78.09	307	P	P	09 36 48.2	+0.3
	comp=Z,22nm,0.8s,mb5.1						
SSE				S	S	09 46 31.2	-7.2
SSE				sS		09 47 06.6	
SSE				LR	LR		
	comp=Z,80nm,28.7s,MS3.9						
MVU	Marysvale	78.10	44	*e*P	P	09 36 48.6	+0.8
	comp=Z,39nm,1.4s,mb5.1						
MSU	Marysvale	78.13	44	*e*P	P	09 36 48.7	+0.7
BMO	Blue Mountains	78.34	37	*e*P	P	09 36 48.1	-0.9
	comp=Z,23nm,1.4s,mb4.9						
DUG	Dugway	78.57	43	*e*P	P	09 36 50.0	-0.3
DUG				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.9						
DUG	Dugway	78.57	43	*e*P	P	09 36 50.0	-0.3
	comp=Z,200nm,1.2s,mb5.9						
MDJ	Mudanjiang	79.08	322	P	P	09 36 53.8	+0.7
MDJ				AP	pP	09 36 56.0	-7.4
MDJ				XP	sP	09 36 58.3	-8.8
MDJ				PCP	PcP	09 37 01.4	-0.4
MDJ				PP	PP	09 39 54.8	+0.7
MDJ				S	S	09 46 55.8	+7.2
MDJ				XS		09 47 01.1	
MDJ				SCS	ScS	09 47 16.8	+7.3
MDJ				AMB	AMB		
	comp=Z,15nm,3.0s						
MDJ				AMB	AMB		
	comp=Z,234nm,4.7s						
MDJ				LR	LR		
	comp=N,529nm,4.8s						
MDJ				LR	LR		
	comp=E,432nm,5.9s						
MDJ				LR	LR		
	comp=Z,581nm,4.8s						
TMUT	Trail Mountain	79.17	44	*e*P	P	09 36 54.3	+0.6
DIV	Divide	79.19	13	*e*P	P	09 36 53.1	-0.2
	comp=Z,78nm,1.4s,mb5.5						
HLID	Hailey	79.34	39	*e*P	P	09 36 54.6	+0.1
	comp=Z,18nm,1.0s,mb5.0						
SPUT	South Promonto	79.38	42	*e*P	P	09 36 55.1	+0.3
SRU	San Rafael	79.55	45	*e*P	P	09 36 55.8	+0.1
MNTX	Cornudas Mount	79.92	53	*e*P	P	09 36 57.1	-0.8
	comp=Z,19nm,1.4s,mb4.8						
TCUT	Toone Canyon	79.96	43	*e*P	P	09 36 57.6	-0.2
HWUT	Hardware Ranch	80.10	42	*e*P	P	09 36 58.4	-0.2
	comp=Z,12nm,1.3s,mb4.7						
MA2	Magadan	80.11	342⇓	*e*P	P	09 36 57.4	-0.9
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
PV10	Paradox Valley	80.21	46	*e*P	P	09 36 58.8	-0.5
LTX	Lajitas	80.30	56	*e*P	P	09 36 59.9	-0.1
LTX				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
LTX	Lajitas	80.30	56	*e*P	P	09 36 59.9	-0.1
	comp=Z,29nm,1.4s,mb5.0						
NJ2	Nanjing	80.30	307	*e*P	P	09 37 00.3	+0.4
NJ2				AP	pP	09 37 05.3	-5.0
NJ2				XP	sP	09 37 07.4	-6.5
NJ2				PP	PP	09 40 06.3	+1.9
NJ2				S	S	09 47 07.0	+5.4
NJ2				XS		09 47 14.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,390nm,4.8s						
NJ2				LR	LR		
	comp=N,540nm,27.8s,MS4.9						
NJ2				LR	LR		
	comp=E,680nm,32.0s,MS4.9						
NJ2				LR	LR		
	comp=Z,490nm,30.3s,MS4.7						
TXAR	Lajitas Array	80.30	56	P	P	09 37 00.5	+0.6
	comp=Z,8.0nm,1.1s,mb4.6,baz=225,slow=5.3,SNR=42						
TXAR				LR	LR	10 07 50.1	
	comp=Z,68nm,18.5s,MS4.0,baz=285,slow=32						
TXAR	Lajitas Array	80.30	56	P	P	09 37 00.5	+0.6
TXAR				LR	LR	10 07 50.1	
PV01	Paradox Valley	80.42	46	*e*P	P	09 37 00.4	0.0
ANMO	Albuquerque	80.50	50	*e*P	P	09 37 00.8	-0.1
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ANMO	Albuquerque	80.50	50	*e*P	P	09 37 00.8	-0.1
	comp=Z,9.5nm,1.1s,mb4.6						
MCK	McKinley	80.93	11	*e*P	P	09 37 01.4	-1.2
MCK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MCK	McKinley	80.93	11	*e*P	P	09 37 01.4	-1.1
	comp=Z,5.4nm,0.9s,mb4.5						
MCMT	McKenzie Canyo	80.97	39	*e*P	P	09 37 03.5	+0.4
AHID	Auburn Hatcher	80.99	41	*e*P	P	09 37 03.1	-0.2
	comp=Z,14nm,1.2s,mb4.8						
CN2	Changchun	81.16	320	*e*P	P	09 37 05.3	+1.1
CN2				*e*XP	sP	09 37 11.6	-6.6
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
CN2				AMB	AMB		
	comp=Z,830nm,5.0s						
MSO	Missoula	81.40	37	*e*P	P	09 37 05.0	-0.3
	comp=Z,15nm,1.2s,mb4.8						
TPAW	Teton Pass	81.45	41	*e*P	P	09 37 05.9	+0.3
SNOW	Snow King Moun	81.56	41	*e*P	P	09 37 06.6	+0.3
IMW	Indian Meadow	81.66	40	*e*P	P	09 37 06.9	+0.1
LOHW	Long Hollow	81.73	41	*e*P	P	09 37 07.0	-0.1
QLMT	Earthquake Lak	81.83	39	*e*P	P	09 37 08.5	+0.8
CHMT	Chamberlain Mo	81.84	37	*e*P	P	09 37 07.1	-0.5
BW06	Boulder Array	81.97	42	*e*P	P	09 37 07.7	-0.7
	comp=Z,20nm,1.4s,mb4.9						
PDAR	Pinedale Array	81.97	42	P	P	09 37 08.6	+0.2
	comp=Z,8.7nm,1.1s,mb4.6,baz=220,slow=2.6,SNR=33						
PDAR				LR	LR	10 06 43.7	
	comp=Z,98nm,19.7s,MS4.2,baz=69,slow=31						
YMR	Madison River	82.03	40	*e*P	P	09 37 09.4	+0.8
BOZ	Bozeman (W)	82.13	38	*e*P	P	09 37 08.8	-0.4
BOZ				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.0						
BOZ	Bozeman (W)	82.13	38	*e*P	P	09 37 08.8	-0.4
	comp=Z,31nm,1.4s,mb5.0						
COLA	College	82.17	11	*e*P	P	09 37 08.0	-1.0
COLA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
COLA	College	82.17	11	*e*P	P	09 37 08.0	-1.0
	comp=Z,17nm,1.0s,mb4.9						
YNR	Norris Junctio	82.23	40	*e*P	P	09 37 11.6	+1.8
ILAR	Eielson Array	82.25	11	P	P	09 37 08.6	-0.8
	comp=Z,2.2nm,0.9s,mb4.1,baz=211,slow=5.7,SNR=12						
ILAR				LR	LR	10 06 46.5	
	comp=Z,104nm,21.4s,MS4.2,baz=192,slow=31						

LKWY	Lake	82.33	40	eP	P	09 37 12.1	+1.9
LKWY				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
LKWY	Lake	82.33	40	eP	P	09 37 12.1	+1.9
	comp=Z,27nm,1.2s,mb5.1						
IMA	Indian Mountai	82.38	8	P	P	09 37 10.3	+0.3
SDCO	Great Sand Dun	82.41	48	eP	P	09 37 11.1	+0.3
	comp=Z,16nm,1.2s,mb4.8						
DAWY	Dawson	83.21	14	eP	P	09 37 14.4	+0.1
ISCO	Idaho Springs	83.23	46	eP	P	09 37 15.4	+0.5
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ISCO	Idaho Springs	83.23	46	eP	P	09 37 15.4	+0.5
	comp=Z,6.3nm,1.0s,mb4.6						
JCT	Junction City	83.84	56	eP	P	09 37 17.7	-0.6
JCT				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
JCT	Junction City	83.84	56	eP	P	09 37 17.7	-0.5
	comp=Z,6.2nm,1.0s,mb4.7						
AMTX	Amarillo	84.04	52	eP	P	09 37 18.9	-0.3
	comp=Z,25nm,0.9s,mb5.3						
BILL	Bilibino	84.40	352	⇓eP	P	09 37 19.2	-1.0
BILL				eS	tx	09 49 05.3	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
EDM	Edmonton	85.22	31	eP	P	09 37 24.2	-0.4
MAW	Mawson	88.02	199	LR	LR	10 18 12.5	
	comp=Z,150nm,18.1s,MS4.5,baz=72,slow=36						
INK	Inuvik	88.06	14	P	P	09 37 38.0	-0.1
	comp=Z,5.1nm,1.0s,mb4.7,baz=212,slow=5.1,SNR=15						
YAK	Yakutsk	89.09	337	⇓eP	P	09 37 40.7	-2.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.2						
HHC	Hu-ho-hao-te	89.13	313	eP	P	09 37 45.8	+1.9
HHC				AMB	AMB		
	comp=Z,14nm,1.4s,mb5.1						
HHC				AMB	AMB		
	comp=Z,170nm,4.5s						
PLCA	Paso Flores	89.40	132	LR	LR	10 08 40.3	
	comp=Z,88nm,18.7s,MS4.2,baz=77,slow=29						
YKA	Yellowknife Ar	89.86	23	P	P	09 37 46.6	-0.1
	comp=Z,2.3nm,0.9s,mb4.5,baz=234,slow=4.3,SNR=37						
YKA				LR	LR	10 09 26.0	
	comp=Z,126nm,20.0s,MS4.3,baz=270,slow=30						
KMI	Kunming	91.22	296	P	P	09 37 55.4	+1.4
KMI				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
KMI				MLR	MLR		
	comp=Z,60nm,37.1s,MS3.8						
KMI	Kunming	91.22	296	P	P	09 37 55.4	+1.4
	comp=Z,18nm,1.0s,mb5.4						
KMI				LR	LR		
	comp=Z,60nm,37.1s,MS3.8						
CMAR	Chiang Mai Arr	92.83	288	LR	LR	10 15 13.1	
	comp=Z,42nm,20.9s,MS3.9,baz=205,slow=33						
VNA3	Neumayer Olymp	92.97	175	e	P	09 38 03.0	+2.0
VNA3	Neumayer Olymp	92.97	175	e	P	09 38 04.6	+3.6
VNA3	Neumayer Olymp	92.97	175	⇑iP	P	09 38 00.6	-0.4
VNA3				e		09 38 03.0	
VNA3				e		09 38 04.6	
SNAA	Sanae	93.03	177	⇑iP	P	09 38 11.3	+10
SNAA	Sanae	93.03	177	⇑iP	P	09 38 11.3	+10
SNAA	Sanae	93.03	177	⇑iP	P	09 38 02.0	+0.7
SNAA				⇑iP	pP	09 38 11.3	-0.6
SNAA				e		09 38 33.0	
LZH	Lanzhou	93.36	306	⇓P	P	09 38 04.5	+0.9
LZH				AP	pP	09 38 07.8	-6.4
LZH				XP	sP	09 38 09.3	-8.3
LZH				PP	PP	09 41 51.5	+0.9
LZH				AMB	AMB		
	comp=Z,25nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,118nm,6.2s						
LZH				LR	LR		
	comp=N,439nm,14.8s						
LZH				LR	LR		
	comp=Z,687nm,17.6s,MS5.2						
LZH	Lanzhou	93.36	306	⇓P	P	09 38 04.5	+0.9
LZH						09 41 51.5	
LZH				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.4						
LZH				MLR	MLR		
	comp=Z,690nm,17.6s,MS5.2						
LZH	Lanzhou	93.36	306	⇓P	P	09 38 04.5	+0.9
	comp=Z,25nm,1.5s,mb5.4						
LZH				pP	pP	09 38 07.8	-6.4
LZH				sP	sP	09 38 09.3	-8.3
LZH				PP	PP	09 41 51.5	+0.9
LZH				LR	LR		
	comp=Z,690nm,17.6s,MS5.2						
VNA2	Neumayer--Watz	93.47	175	e	P	09 38 02.2	-1.1
VNA2	Neumayer--Watz	93.47	175	e	P	09 38 03.6	+0.3
VNA2	Neumayer--Watz	93.47	175	e	P	09 38 04.7	+1.4
VNA2	Neumayer--Watz	93.47	175	⇑iP	P	09 38 09.4	+6.1
VNA2	Neumayer--Watz	93.47	175	⇑iP	P	09 38 09.4	+6.1
VNA2	Neumayer--Watz	93.47	175	⇑iP	P	09 38 01.3	-2.0
VNA2				e		09 38 02.2	
VNA2				e		09 38 03.6	
VNA2				e		09 38 04.7	
VNA2				⇑iP		09 38 09.4	
VNA2				e		09 38 31.5	
ULM	Lac du Bonnet	93.64	39	P	P	09 38 04.2	-0.3
	comp=Z,0.8nm,0.5s,mb4.4,baz=294,slow=6.5,SNR=3.5						
ULM				LR	LR	10 18 42.6	
	comp=Z,86nm,18.1s,MS4.2,baz=284,slow=34						
VNA1	Neumayer--Stat	93.67	175	⇑iP	P	09 38 09.9	+5.7
VNA1				e		09 38 33.0	
SONM	Songino Array	94.92	318	P	P	09 38 11.0	+0.6
	comp=Z,0.7nm,1.1s,mb4.0,baz=94,slow=17,SNR=4.7						
TIXI	Tiksi	94.94	344	⇓eP	P	09 38 09.9	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.8						
GTA	Gaotai	97.31	309	P	P	09 38 22.3	+0.8
GTA				AP	pP	09 38 25.9	-6.2
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.6						
NVS	Novosibirsk	110.19	323	i PKIKP	PKPdf	09 43 20.3	+1.9
KURK	Kurchatov	113.22	319	ePKIKP	PKPdf	09 43 24.4	0.0
CHKZ	Chkalovo	117.67	323	ePKIKP	PKPdf	09 43 32.4	-0.6
BVAR	Borovoye Array	117.94	322	PKP	PKPdf	09 43 34.0	+0.5
	comp=Z,2.2nm,0.7s,baz=90,slow=1.5,SNR=10						
ARCES	ARCESS Array B	124.51	352	PKP	PKPdf	09 43 45.6	-0.2
	comp=Z,2.6nm,0.9s,baz=11,slow=6.2,SNR=3.8						
FINES	FINESS Array B	131.86	348	PKP	PKPdf	09 44 01.6	+1.4
	comp=Z,2.2nm,1.0s,baz=45,slow=2.7,SNR=4.9						
OBN	Obninsk	134.09	337	i PKIKP	PKPdf	09 44 05.6	+1.1
OBN				e		09 46 39.1	
OBN				ePS	PS	09 56 52.1	-1.9
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	140.31	338	PKhKP		09 44 06.0	
	comp=Z,0.4nm,0.4s,baz=34,slow=3.4,SNR=4.3						
AKASG				PKP	PKPdf	09 44 16.4	+0.4
	comp=Z,2.9nm,0.8s,baz=31,slow=1.3,SNR=9.5						
LSZ	Lusaka	143.08	216	ePKHKP		09 44 18.1	
OJC	Ojcow	143.59	346	ePKP	PKPdf	09 44 20.3	-1.3
CLL	Collm	143.70	354	i PKIKP	PKPdf	09 44 19.5	-2.3
	comp=Z,logA/T=0.9						
MALT	Malatya	143.96	316	PKIKP	PKPdf	09 44 24.0	+1.4
MALT	Malatya	143.96	316	ePKPdf	PKPdf	09 44 23.0	+0.4
BRG	Berggiesshubel	144.02	352	i PKIKP	PKPdf	09 44 27.1	+4.8
UPC	Upice	144.07	350	ePKP	PKPdf	09 44 21.4	-1.0
KOLS	Kolonicke sedl	144.12	343	ePKIKP	PKPdf	09 44 22.0	-0.6
KOLS	Kolonicke sedl	144.12	343	e	PKPbc	09 44 22.0	+0.1
DPC	Dobruska-Polom	144.17	350	ePKP	PKPdf	09 44 22.2	-0.4
DPC				ex	x	09 44 33.8	
NIE	Niedzica	144.21	345	ePKP	PKPdf	09 44 21.1	-1.6
PVCC	Panska Ves	144.27	352	ePKP	PKPdf	09 44 22.8	0.0
PVCC				ex	x	09 44 32.4	
OKC	Ostrava-Krasne	144.31	347	ePKP	PKPdf	09 44 22.7	-0.2
BURAR	Bucovina Array	144.34	339	⇓P	PKPbc	09 44 23.2	+0.7
BURAR	Bucovina Array	144.34	339	⇓P	PKPbc	09 44 23.3	+0.8
CRVS	Cervenica-Dubn	144.38	343	ePKP	PKPdf	09 44 28.3	+5.3
BOYT	Boyabat	144.41	323	i P	PKPbc	09 44 24.4	+1.4
MORC	Moravsky Berou	144.49	348	ePKIKP	PKPdf	09 44 23.3	+0.1
PRU	Pruhonice	144.81	351	ePKP	PKPdf	09 44 24.2	+0.4
PRU				ex	x	09 44 36.0	
NKC	Novy Kostel	144.82	354	ePKP	PKPdf	09 44 23.9	+0.1
CTKT	Corum	144.97	322	i P	PKPdf	09 44 25.9	+1.6
KECS	Kecovo	145.03	344	ePKP	PKPdf	09 44 24.8	+0.6
GZT	Gaziantep	145.03	315	i P	PKPdf	09 44 25.9	+1.3
TNS	Taunus Mts	145.10	358	ePKP2	PKPab	09 44 25.0	-0.8
VRAC	Vranov	145.12	349	PKPbc	PKPbc	09 44 25.4	+0.7
	comp=Z,14nm,1.1s,baz=19,slow=5.8,SNR=12						
VRAC	Vranov	145.12	349	P	PKPdf	09 44 26.1	+1.7
CFR	Carcaliu	145.20	333	⇓PKIKP	PKPdf	09 44 26.4	+1.8
CFR	Carcaliu	145.20	333	P	PKPdf	09 44 25.8	+1.2
CFR	Carcaliu	145.20	333	⇓iP	PKPdf	09 44 25.7	+1.1
GIVF	Givet	145.21	2	ePKP1	PKPbc	09 44 26.0	+1.2
	comp=Z,57nm,1.3s						
BALT	Daday	145.21	324	i P	PKPdf	09 44 24.9	+0.1
BAIF	Baives	145.22	3	ePKP1	PKPbc	09 44 25.5	+0.6
	comp=Z,72nm,1.3s						
VRI	Vrincioaia	145.23	335	⇓P	PKPdf	09 44 25.9	+1.3
KAHT	Ahir Dag	145.36	316	i P	PKPdf	09 44 26.6	+1.4
VYHS	Vyhne	145.43	346	ePKP	PKPdf	09 44 26.6	+1.7
VYHS				e		09 44 44.2	
GRA1	Grafenberg Arr	145.48	355	ePKP	PKPdf	09 44 26.7	+1.8
GRF	Grafenberg Arr	145.48	355	ePKP2	PKPab	09 44 26.7	-0.5
TIRR	Tirgusor	145.64	332	⇓P	PKPdf	09 44 27.4	+2.0
HARR	Harsova	145.67	333	P	PKPdf	09 44 27.6	+2.1
HARR	Harsova	145.67	333	⇓iP	PKPdf	09 44 27.8	+2.4
PSZ	Piszkesteto	145.70	344	ePKP2	PKPab	09 44 27.4	-0.7
SMOL	Smolenice	145.72	348	ePKP	PKPdf	09 44 28.4	+3.0
SMOL				e		09 44 45.8	
KHC	Kasperske Hory	145.78	352	ePKP	PKPdf	09 44 27.1	+1.6
KHC				ex	x	09 44 38.9	
KMBO	Kilima Mbogo	145.85	244	ePKIKP	PKPdf	09 44 28.5	+1.8
KMBO	Kilima Mbogo	145.85	244	PKPbc	PKPbc	09 44 29.3	+1.7
	comp=Z,9.5nm,1.1s,baz=46,slow=4.8,SNR=15						
WET	Wettzell	145.85	353	ePKP2	PKPab	09 44 27.4	-1.3
MLR	Muntele Rosu	145.85	336	PKIKP	PKPdf	09 44 27.6	+1.9
MLR	Muntele Rosu	145.85	336	PKPbc	PKPbc	09 44 27.7	+1.1
	comp=Z,16nm,1.0s,baz=70,slow=3.3,SNR=18						
MLR	Muntele Rosu	145.85	336	⇑iP	PKPdf	09 44 28.1	+2.4
ELDT	Eldivan	145.86	323	i P	PKPdf	09 44 28.4	+2.5
ISR	Istrita	145.92	335	PKP2	PKPab	09 44 28.7	-0.4
ISR	Istrita	145.92	335	⇓iP	PKPdf	09 44 28.4	+2.6
AVNT	Avonos	146.04	319	i P	PKPdf	09 44 28.6	+2.4
GEC2	GERESS Array S	146.04	352	ePKP2	PKPab	09 44 28.1	-1.3
GERES	GERESS Array B	146.04	352	PKPbc	PKPbc	09 44 28.3	+1.4
	comp=Z,7.4nm,1.0s,baz=45,slow=1.9,SNR=31						
ZST	Bratislava	146.09	348	ePKP	PKPdf	09 44 29.4	+3.4
ZST				e		09 44 46.6	
SNX	Sinaia	146.13	336	PKHKP		09 44 25.0	
SRO	Srobarova	146.19	346	e	Px	09 44 47.4	
BRTR	Keskin Array B	146.22	321	PKPbc	PKPbc	09 44 29.2	+1.6
	comp=Z,15nm,0.9s,baz=114,slow=2.0,SNR=74						
GRR	Gorron	146.35	9	ePKP1	PKPbc	09 44 29.3	+1.6
MEZF	Maizieres J'vi	146.81	2	ePKP1	PKPbc	09 44 31.5	+2.8
	comp=Z,29nm,1.2s						
MOA	Molln	146.93	351	⇑iP	PKPdf	09 44 30.6	+3.1
CDF	Champ du Feu	146.94	360	ePKP1	PKPbc	09 44 30.8	+1.8
	comp=Z,62nm,1.3s						
FUR	Furstenfeldbru	146.99	355	ePKP2	PKPab	09 44 31.4	-1.7
BFO	Black Forest	147.00	358	ePKP2	PKPab	09 44 31.0	-2.2
BZS	Buzias	147.29	341	P	PKPdf	09 44 31.6	+3.5
BZS	Buzias	147.29	341	⇓P	PKPdf	09 44 31.8	+3.7
ARSA	Arzberg	147.30	349	⇑iP	PKPdf	09 44 31.6	+3.5
HAU	Haudompre	147.34	1	ePKP1	PKPdf	09 44 31.8	+3.7
	comp=Z,30nm,1.1s						
HAU				eR			
	comp=Z,63nm,22.6s						
HINF	Hinteralfeld	147.53	0	ePKP1	PKPdf	09 44 32.1	+3.7
PKSM	Moragy	147.60	345	⇑PKIKP	PKPdf	09 44 29.5	+0.9
WATA	Walderalm	147.78	354	⇑iP	PKPdf	09 44 32.6	+3.8
MOTA	Moosalm	147.81	355	⇑iP	PKPdf	09 44 33.8	+4.9
KBA	Koelnbreinsper	147.82	352	⇑iP	PKPdf	09 44 31.1	+2.2
WTTA	Wattenberg	147.84	354	⇑iP	PKPdf	09 44 33.3	+4.3
ASF	Jabal al Asfar	147.93	307	PKPbc	PKPdf	09 44 34.6	+5.0
	comp=Z,3.6nm,0.6s,baz=161,slow=0.5,SNR=5.5						
DAVA	Damuels	147.97	356	⇑iP	PKPdf	09 44 34.5	+5.3
PERS	Pernice	147.97	349	ePKPdf	PKPdf	09 44 33.4	+4.3
ESKT	Eskisehir	147.99	324	i P	PKPdf	09 44 33.7	+4.3
SSF	Saint Saulge	148.16	4	ePKP1	PKPdf	09 44 34.1	+4.6
	comp=Z,87nm,1.5s						
MFF	Saint Martin d	148.20	9	ePKP1	PKPdf	09 44 33.5	+4.0
	comp=Z,46nm,1.3s						
DAVOX	Davos	148.47	356	PKPbc	PKPdf	09 44 35.6	+5.6
	comp=Z,8.0nm,0.8s,baz=349,slow=6.2,SNR=12						
ULDT	Uludag	148.51	326	i P	PKPdf	09 44 35.1	+4.9
BGF	Bois d'Agland	148.61	5	ePKP1	PKPdf	09 44 35.3	+5.1
	comp=Z,17nm,0.9s						
LJU	Ljubljana	148.64	350	ePKPdf	PKPdf	09 44 35.3	+5.0
CABF	La Chapelle	148.73	1	ePKP1	PKPdf	09 44 36.2	+5.8
	comp=Z,89nm,1.3s						
JAVS	Javornik	148.87	350	ePKPdf	PKPdf	09 44 35.6	+5.0
BOJS	Bojanci	149.03	349	ePKPdf	PKPdf	09 44 36.6	+5.7
ISP	Isparta	149.30	322	⇓iPKHKP		09 44 37.2	
VTS	Vitosha	149.36	336	⇑PKP2	PKPab	09 44 37.8	-5.0
BTOK	Tokmak	149.37	327	i P	PKPdf	09 44 37.0	+5.4
RJF	Les Rejaudoux	149.71	8	ePKP1	PKPdf	09 44 38.2	+6.2
RJF				eR			
	comp=Z,93nm,22.2s						
LPL	La Plagne	149.84	0	ePKP1	PKPdf	09 44 39.4	+7.2
	comp=Z,14nm,0.9s						
LPG	La Plagne	149.85	0	ePKP1	PKPdf	09 44 39.6	+7.4
	comp=Z,26nm,0.9s						
VIVF	Saint-Julien-l	150.44	3	ePKP1	PKPdf	09 44 40.2	+7.0
	comp=Z,15nm,0.9s						
EIL	Elat	150.47	304	PKPbc	PKPdf	09 44 40.8	+7.1
	comp=Z,16nm,1.0s,baz=107,slow=4.8,SNR=8.0						
EIL	Elat	150.47	304	ePKPbc	PKPdf	09 44 40.4	+6.7
SKO	Skopje	150.56	338	i PKP	PKPdf	09 44 40.0	+6.6
SMRF	Simiane la Rot	151.35	2	ePKP1	PKPdf	09 44 42.8	+8.3
ETSF	Etsaut	151.72	12	ePKP1	PKPdf	09 44 43.0	+7.9
	comp=Z,12nm,0.8s						
ESDC	Sonseca Array	153.88	19	PKPbc	PKPdf	09 44 47.4	+9.1
	comp=Z,0.4nm,0.5s,baz=318,slow=2.3,SNR=5.2						
ESDC				PKPab	PKPab	09 45 01.2	-0.7
	comp=Z,0.3nm,0.4s,baz=333,slow=3.3,SNR=5.1						

MEX 20 09:44:23.5±1.2**, 16.28N×94.35W, h114**^{km}±33^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	San Cristobal	1.71	74	eP	P	09 44 52.0	-1.4
SCX				i S	S	09 45 14.5	-1.5
HUIG	Huatulco	1.77	253	i P	P	09 44 51.7	-2.5
HUIG				i S	S	09 45 15.8	-1.5
CCIG	Comitan	2.12	90	i P	P	09 44 57.5	-1.2
CCIG				i S	S	09 45 23.2	-2.1
OXX	Oaxaca	2.41	290	i P	P	09 45 02.0	-0.6
OXX				i S	S	09 45 29.0	-3.1

MAN 20 09:47:36.4, 7.58N×122.23E, h9^{km}**, mb3.5, ML2.2, MS1.7, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIL	Ipil	0.40	58	eP	Pg	09 47 44.4	-0.1
IPIL				eS	Sg	09 47 51.4	+1.6
ZMPH	Zamboanga City	0.64	195	⇑iP	Pg	09 47 48.9	-0.4
ZMPH				i S	Sg	09 47 59.2	+1.3
PAGZ	Pagadian	1.17	77	eP	Pb	09 47 58.2	-0.2
PAGZ				eS	Sb	09 48 15.5	+2.0

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*IDC **20** 09:50:31.3±3.0, 6.05N×94.05E, mb3.6/4, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, ML4.0/1, MS3.2/2, Ms1 3.3/2, ms1mx2.8/19, Error ellipse: s-maj=103.5km s-min=23.0km az=67.0*

*NEIC **20** 09:50:32.5±1.3, 6.05N×93.49E, h30*^{km}*, mb4.0/3, Error ellipse: s-maj=32.9km s-min=16.7km az=74.0*

ISC 20 09:50:31.3±1.2**, 6.1N**±0.1×**93.6E**±0.2**, h30**^{km}**, n10, σ1s07**/9**, mb3.9**/7**, MS3.7**/1**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	13.34	22	P	P	09 53 41.1	-0.2
CMAR	Chiang Mai Arr	13.34	22	Pn	P	09 53 40.8	-0.5
	0.2nm,0.3s,baz=226,slow=14,SNR=10						
CMAR				LR	LR	09 59 05.8	
	comp=Z,41nm,18.6s,baz=198,slow=39						
LSA	Lhasa	23.60	355	eP	P	09 55 39.6	-1.0
	3.4nm,0.6s,mb4.0						
AAK	Ala-Archa	40.15	338	eP	P	09 58 06.1	-0.2
	2.1nm,0.9s,mb3.9						
SONM	Songino Array	43.00	13	P	P	09 58 31.8	+2.1
	0.3nm,0.6s,mb3.2,baz=195,slow=7.6,SNR=5.0						
WRA	Warramunga Arr	47.66	124	P	P	09 59 07.0	-0.3
	0.9nm,0.5s,mb4.0,baz=302,slow=9.7,SNR=19						
ZAL	Zalesovo	48.24	353	P	P	09 59 14.3	+3.0
	1.1nm,0.6s,mb4.1,baz=290,slow=7.9,SNR=7.7						
ASAR	Alice Springs	49.18	128	P	P	09 59 18.9	-0.1
	0.7nm,0.7s,mb3.8,baz=299,slow=7.3,SNR=15						
CHKZ	Chkalovo	51.01	343	eP	P	09 59 31.7	-0.8
	3.2nm,1.3s,mb4.1						
FINES	FINESS Array B	74.05	332	LR	LR	10 38 22.7	
	comp=Z,46nm,21.9s,MS3.7,baz=129,slow=39						

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*IDC **20** 09:52:23.9±12.0, 13.81N×145.03E, h66*^{km}*±109*^{km}*, mb3.5/7, mb1 3.7/7, mb1mx3.6/19, mbtmp3.8/7, MS3.6/1, Ms1 3.6/1, ms1mx2.5/18, Error ellipse: s-maj=45.7km s-min=21.7km az=91.0*

*NEIC **20** 09:52:31.8±1.0, 13.70N×144.89E, h140*^{km}*±9*^{km}*, mb3.9/2, Error ellipse: s-maj=32.0km s-min=15.5km az=91.0*

ISC 20 09:52:30.2±0.8**, 13.7N**±0.1×**145.0E**±0.2**, h142**^{km}±6^{km}**, n16, σ0s79**/14**, mb3.6**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.14	224	ePn	P	09 52 50.6	+0.8
GUMO				eSn	S	09 53 04.0	-0.6
CTA	Charters Tower	33.59	178	LR	LR	10 09 38.1	
	comp=Z,90nm,19.5s,baz=227,slow=31						
WRA	Warramunga Arr	35.02	198	P	P	09 59 11.4	+0.2
	0.9nm,0.5s,mb3.7,baz=20,slow=9.4,SNR=21						
WRA	Warramunga Arr	35.02	198	P	P	09 59 11.4	+0.2
ASAR	Alice Springs	38.67	196	P	P	09 59 42.3	+0.5
	0.6nm,0.4s,mb3.6,baz=19,slow=13,SNR=10						
STKA	Stephens Creek	45.42	184	P	P	10 00 36.2	-0.5
	0.7nm,0.5s,mb3.6,baz=297,slow=14,SNR=3.1						
STKA	Stephens Creek	45.42	184	eP	P	10 00 36.0	-0.7
ULN	Ulaanbaatar	46.35	325	eP	P	10 00 43.9	+0.1
	0.9nm,0.5s,mb3.7						
SONM	Songino Array	46.70	325	P	P	10 00 47.4	+0.9
	0.3nm,0.4s,mb3.2,baz=142,slow=7.8,SNR=5.1						
SONM				PcP	PcP	10 02 19.0	+0.9
	0.3nm,0.4s,baz=132,slow=4.6,SNR=3.6						
KURK	Kurchatov	64.57	320	eP	P	10 02 53.5	-0.9
	0.8nm,0.3s,mb4.0						
ILAR	Eielson Array	68.43	25	P	P	10 03 17.1	-1.4
	0.6nm,0.4s,mb3.7,baz=252,slow=5.8,SNR=23						
INK	Inuvik	74.23	22	eP	P	10 03 54.2	+1.2
	0.1nm,0.5s,mb2.8						
YKA	Yellowknife Ar	82.72	27	P	P	10 04 39.6	+0.4
	0.3nm,0.4s,mb3.4,baz=286,slow=5.1,SNR=10.0						
FINES	FINESS Array B	91.11	335	P	P	10 05 18.9	-0.7
	2.5nm,1.1s,mb4.2,baz=74,slow=3.5,SNR=8.0						
DBIC	Dimbokro	143.85	302	PKP	PKPdf	10 11 49.6	+0.1
	2.6nm,0.6s,baz=43,slow=3.5,SNR=8.9						
LPAZ	La Paz	147.94	99	PKPbc	PKPdf	10 12 04.8	+8.4
	1.8nm,0.5s,baz=269,slow=3.5,SNR=8.4						

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*NEIC **20** 10:01:52.8, 19.54N×67.28W, h25*^{km}*, MD3.6(RSPR), After RSPR.*

RSPR 20 10:01:52.8, 19.54N×67.28W, h25^{km}±31^{km}**, MD3.6**/15**, MD3.6**/15**, 13C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.08	172	⇑eP	Pn	10 02 09.8	-2.7
AGPR				eS	Sb	10 02 23.1	-3.3
AOPR	Arecibo Observ	1.29	157	⇑eP	Pn	10 02 12.6	-2.9
AOPR				eS	Sn	10 02 29.2	-2.9
LRS	Lares	1.31	162	⇑eP	Pn	10 02 12.7	-3.0
LRS				eS	Sn	10 02 29.6	-3.0
MPR	Mayaguez	1.33	174	⇑eP	Pn	10 02 13.8	-2.2
MPR				eS	Sn	10 02 29.8	-3.3
LSP	Las Mesas	1.37	172	⇑eP	Pn	10 02 14.3	-2.4
MGP	Maguayo	1.54	173	⇓eP	Pn	10 02 16.8	-2.3
MGP				eS	Sn	10 02 35.9	-2.5
PORP	Portuguez	1.60	158	⇑eP	Pn	10 02 17.1	-2.8
PORP				eS	Sn	10 02 36.9	-3.1
CELP	Cerrillos	1.60	156	⇑eP	Pn	10 02 17.8	-2.2
CELP				eS	Sn	10 02 36.1	-3.9
OBIP	Obispado Ponce	1.62	157	⇑eP	Pn	10 02 17.2	-3.1
OBIP				eS	Sn	10 02 37.3	-3.2
CSB	Colonia Sabana	1.64	139	⇑eP	Pn	10 02 18.1	-2.4
CSB				eS	Sn	10 02 37.8	-3.1
SJG	San Juan	1.78	143	⇑eP	Pn	10 02 20.4	-2.1
SJG				eS	Sn	10 02 40.6	-3.9
CBYP	Canovanas	1.85	133	⇑eP	Pn	10 02 21.1	-2.3
HUMP	Col San Antoni	1.94	136	⇑eP	Pn	10 02 22.4	-2.4
HUMP				eS	Sn	10 02 44.9	-3.7
CPD	Cerro la Pandu	1.98	139	⇑eP	Pn	10 02 22.8	-2.5
CPD				eS	Sn	10 02 45.7	-3.8
MTP	Monte Pirata	2.18	131	⇓eP	Pn	10 02 25.6	-2.6
MTP				eS	Sn	10 02 51.8	-2.9

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*NEIC **20** 10:10:13.1, 19.51N×67.27W, h25*^{km}*, MD3.6(RSPR), After RSPR.*

RSPR 20 10:10:13.1, 19.51N×67.27W, h25^{km}±35^{km}**, MD3.6**/15**, MD3.6**/15**, 10C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.05	172	⇑eP	Pn	10 10 29.7	-2.6
AGPR				eS	Sb	10 10 42.6	-3.1
AOPR	Arecibo Observ	1.26	157	⇑eP	Pn	10 10 32.3	-3.0
AOPR				eS	Sn	10 10 47.8	-3.8
LRS	Lares	1.27	161	⇓eP	Pn	10 10 32.4	-3.2
LRS				eS	Sn	10 10 48.7	-3.3
MPR	Mayaguez	1.29	174	⇑eP	Pn	10 10 33.8	-2.0
MPR				eS	Sn	10 10 48.8	-3.7
LSP	Las Mesas	1.33	172	⇓eP	Pn	10 10 34.0	-2.5
LSP				eS	Sn	10 10 51.1	-2.4
MGP	Maguayo	1.50	173	⇑eP	Pn	10 10 36.5	-2.3
MGP				eS	Sn	10 10 55.3	-2.5
PORP	Portuguez	1.57	157	⇓eP	Pn	10 10 36.9	-2.8
PORP				eS	Sn	10 10 56.1	-3.3
CELP	Cerrillos	1.57	155	⇓eP	Pn	10 10 37.0	-2.7
CELP				eS	Sn	10 10 56.6	-2.9
OBIP	Obispado Ponce	1.59	156	⇑eP	Pn	10 10 37.1	-3.0
OBIP				eS	Sn	10 10 56.0	-3.9
CSB	Colonia Sabana	1.61	139	⇓eP	Pn	10 10 37.9	-2.4
CSB				eS	Sn	10 10 56.7	-3.7
SJG	San Juan	1.75	142	⇑eP	Pn	10 10 39.9	-2.5
SJG				eS	Sn	10 11 01.0	-3.1
CBYP	Canovanas	1.82	132	⇑eP	Pn	10 10 41.2	-2.2
CBYP				eS	Sn	10 11 02.4	-3.4
HUMP	Col San Antoni	1.91	135	⇑eP	Pn	10 10 42.8	-1.9
HUMP				eS	Sn	10 11 05.4	-2.8
CPD	Cerro la Pandu	1.95	138	⇑eP	Pn	10 10 42.4	-2.8
CPD				eS	Sn	10 11 05.8	-3.2
MTP	Monte Pirata	2.15	131	⇑eP	Pn	10 10 46.0	-2.1
MTP				eS	Sn	10 11 10.0	-4.2

IDC 20 10:15:39.8±7.4**, 22.27S×66.11W, h264**^{km}±58^{km}**, mb2.9**/1**, mb1 3.1**/3**, mb1mx2.9**/14**, mbtmp3.5**/3**, Error ellipse: s-maj=89.3km s-min=31.6km az=23.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	6.24	342	P	P	10 17 12.1	+0.2
	0.2nm,0.3s,baz=166,slow=8.7,SNR=4.0						
LPAZ				S	S	10 18 26.2	+2.3
	baz=235,slow=19,SNR=2.2						
BDFB	Brasilia	18.33	72	P	P	10 19 35.4	-1.7
	0.3nm,0.3s,baz=235,slow=10,SNR=3.9						
YKA	Yellowknife Ar	92.79	340	P	P	10 28 21.8	-1.2
	0.1nm,0.5s,baz=135,slow=4.8,SNR=4.8						
WRA	Warramunga Arr	133.54	207	PKP	PKPdf	10 34 25.1	-0.5
	0.1nm,0.3s,baz=162,slow=1.7,SNR=5.4						

IDC 20 10:34:44.9±1.8**, 4.36N×94.63E, mb4.0**/3**, mb1 4.0**/4**, mb1mx3.6**/18**, mbtmp3.8**/4**, ML3.7**/1**, Error ellipse: s-maj=85.7km s-min=30.8km az=51.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.64	16	Pn	P	10 38 13.3	-2.1
	0.1nm,0.3s,baz=210,slow=14,SNR=2.8						
WRA	Warramunga Arr	45.89	123	P	P	10 43 09.4	-1.9
	1.0nm,0.6s,baz=302,slow=9.4,SNR=6.8						
FINES	FINESS Array B	76.03	333	P	P	10 46 34.0	-1.7
	0.5nm,0.4s,baz=90,slow=5.7,SNR=6.8						
ARCES	ARCESS Array B	78.72	340	P	P	10 46 49.0	-1.4
	5.2nm,1.1s,baz=113,slow=6.9,SNR=5.1						

*BJI **20** 10:44:05.8, 10.20S×161.50E, h92^{km}, mB5.2, mb4.8*

*NEIC **20** 10:44:05.8±0.4, 10.20S×161.46E, mb4.7/18, Error ellipse: s-maj=9.7km s-min=8.4km az=110.0*

*IDC **20** 10:44:06.3±0.7, 10.25S×161.45E, h98^{km}±5^{km}, mb4.4/13, mb1 4.5/15, mb1mx4.5/19, mbtmp4.7/15, MS3.6/3, Ms1 3.6/3, ms1mx3.0/20, Error ellipse: s-maj=17.4km s-min=12.7km az=107.0*

ISC 20 10:44:04.8±0.3**, 10.35S**±0.05×**161.42E**±0.06**, h96^{km}, h96^{km}**±2.6^{km}**:pP-P, n56,** σ**1^{s}.10**/54**, mb4.6**/30**, 2C-2D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	1.71	302	*e*P	P	10 44 36.0	+2.0
HNR				*e*S	S	10 44 57.6	+2.1
NOUC	**Port Laguerre**	12.59	159	*e*P	P	10 47 04.9	+3.2
NOUC				*e*S	S	10 49 18.8	-1.3
DZM	**Mont Dzumac**	12.62	158	*e*P	P	10 47 04.3	+2.2
DZM				*e*S	S	10 49 16.3	-4.4
DZM	**Mont Dzumac**	12.62	158	*e*P	P	10 47 04.3	+2.2
DZM				*e*S	S	10 49 16.3	-4.4
PMG	**Port Moresby**	14.08	273	P	P	10 47 29.6	+8.4
	0.5nm,0.3s,baz=77,slow=8.7,SNR=5.3						
PMG	**Port Moresby**	14.08	273	P	P	10 47 24.6	+3.4
	35nm,1.1s						
CTA	**Charters Tower**	17.53	235	⇑*i*P	P	10 48 08.2	+3.5
	51nm,0.9s						
CTA	**Charters Tower**	17.53	235	P	P	10 48 08.3	+3.7
	3.2nm,0.3s,baz=59,slow=12,SNR=49						
CTA				LR	LR	10 54 06.4	
	comp=Z,155nm,18.5s,baz=287,slow=34						
CTAO	**Charters Tower**	17.53	235	*e*P	P	10 48 07.5	+2.9
	81nm,0.9s						
CNB	**Canberra Magne**	27.17	202	*e*P	P	10 49 42.7	+1.3
	394nm,1.5s						
WRA	**Warramunga Arr**	27.79	247	P	P	10 49 46.2	-0.9
	19nm,0.7s,mb4.7,baz=76,slow=9.0,SNR=185						
WRA				pP	pP	10 50 10.4	+1.9
	6.2nm,0.6s,baz=75,slow=9.2,SNR=5.2						
WRA				PcP	PcP	10 53 00.2	-1.1
	1.0nm,0.5s,baz=69,slow=3.1,SNR=5.2						
WRA				ScP		10 56 32.4	
	0.6nm,0.7s,baz=71,slow=3.4,SNR=8.1						
STKA	**Stephens Creek**	28.20	218	*e*P	P	10 49 50.8	+0.1
	3.9nm,0.6s,mb4.1						
STKA	**Stephens Creek**	28.20	218	P	P	10 49 51.7	+1.0
	5.3nm,0.6s,mb4.2,baz=57,slow=15,SNR=19						
STKA				LR	LR	11 01 30.6	
	comp=Z,147nm,18.4s,baz=28,slow=37						
KAKA	**Kakadu**	28.48	262	⇑*i*P	P	10 49 52.3	-1.1
	10nm,0.6s,mb4.5						
ASAR	**Alice Springs**	29.38	240	P	P	10 50 00.2	-1.1
	44nm,0.5s,mb5.4,baz=64,slow=10,SNR=1.7						
ASPA	**Alice Springs**	29.39	240	*e*P	P	10 50 00.1	-1.2
TOO	**Toolangi**	30.67	205	*e*P	P	10 50 13.2	+0.7
	0.3nm,0.4s						
URZ	**Urewera**	31.16	156	P	P	10 50 17.7	+0.9
	26nm,1.2s,mb4.8,baz=305,slow=16,SNR=9.6						
RPZ	**Rata Peaks**	34.28	168	P	P	10 50 43.4	-0.4
	6.5nm,0.7s,mb4.6,baz=342,slow=6.4,SNR=4.3						
FITZ	**Fitzroy Crossi**	35.48	253	⇓*i*P	P	10 50 53.7	-0.5
	21nm,0.5s,mb5.2						
MBWA	**Marble Bar**	41.42	250	*e*P	P	10 51 43.1	-0.5
	6.6nm,0.5s,mb4.7						
KLBR	**Kellerberrin**	45.54	236	*e*P	P	10 52 16.6	-0.3
	116nm,1.0s,mb5.6						
NWAO	**Narrogin (SRO)**	46.37	234	P	P	10 52 23.1	-0.3
	24nm,0.8s,mb5.0,baz=62,slow=5.5,SNR=8.8						
MUN	**Mundaring**	46.91	236	⇓*i*P	P	10 52 28.1	+0.4
	23nm,1.2s,mb4.8						
ASAJ	**Asahikawa**	56.84	344	P	P	10 53 41.7	-0.1
	3.7nm,0.4s,mb4.7,baz=232,slow=16,SNR=6.9						
ASAJ				pP	pP	10 54 04.5	-1.0
	21nm,1.0s,baz=222,slow=6.5,SNR=3.8						
ASAJ				LR	LR	11 15 51.5	
	comp=Z,51nm,20.1s,baz=157,slow=34						
MDJ	**Mudanjiang**	61.82	335	P	P	10 54 17.0	+1.0
MDJ				AMB	AMB		
	comp=Z,204nm,6.2s						
CN2	**Changchun**	63.03	331	*e*P	P	10 54 22.9	-1.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
VNDA	**Vanda**	67.16	180	P	P	10 54 50.0	-0.2
	comp=Z,4.8nm,0.8s,mb4.4,baz=310,slow=3.4,SNR=10						
VNDA	**Vanda**	67.16	180	*e*P	P	10 54 49.5	-0.6
	comp=Z,6.0nm,0.7s,mb4.5						
CMAR	**Chiang Mai Arr**	67.95	295	P	P	10 54 55.4	-0.6
	comp=Z,3.0nm,1.0s,mb4.1,baz=122,slow=5.0,SNR=10.0						
HIA	**Hailar**	69.72	332	*e*P	P	10 55 05.1	-1.2
	comp=Z,5.4nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	75.28	326	*e*P	P	10 55 38.6	-0.5
	comp=Z,11nm,0.8s,mb4.6						
GTA	**Gaotai**	75.54	315	P	P	10 55 40.9	+0.1
GTA				AP	pP	10 56 08.8	+3.0
GTA				XP	sP	10 56 19.4	+3.2
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.5						
SONM	**Songino Array**	75.63	325	P	P	10 55 41.1	0.0
	comp=Z,11nm,0.6s,mb4.8,baz=142,slow=5.7,SNR=104						
SONM				pP	pP	10 56 05.0	-1.1
	comp=Z,3.1nm,0.6s,baz=141,slow=6.3,SNR=4.9						
QSPA	**South Pole Qui**	79.65	180	*e*P	P	10 56 03.0	+0.3
	comp=Z,18nm,0.8s,mb5.0						
MCK	**McKinley**	82.89	20	*e*P	P	10 56 19.6	-0.4
	comp=Z,6.0nm,0.8s,mb4.5						
MCK				*e*pP	pP	10 56 44.5	-0.8
IMA	**Indian Mountai**	83.03	17	*e*P	P	10 56 21.1	+0.5
COLA	**College**	84.00	19	*e*P	P	10 56 24.7	-0.7
	comp=Z,4.9nm,0.8s,mb4.4						
COLA				*e*pP	pP	10 56 49.6	-1.2
ILAR	**Eielson Array**	84.25	20	P	P	10 56 26.1	-0.6
	comp=Z,1.3nm,0.5s,mb4.0,baz=243,slow=5.0,SNR=45						
ILAR				pP	pP	10 56 50.7	-1.4
	comp=Z,1.2nm,0.6s,baz=248,slow=4.9,SNR=4.0						
WMQ	**Urumqi**	85.61	316	*e*P	P	10 56 35.6	+1.6
DAWY	**Dawson**	86.48	22	*e*P	P	10 56 38.3	+0.6
NVAR	**Mina Array Bea**	88.85	51	P	P	10 56 50.4	+0.7
	comp=Z,1.7nm,0.7s,mb4.2,baz=222,slow=4.4,SNR=8.0						
NVAR				pP	pP	10 57 15.3	-0.1
	comp=Z,0.7nm,0.5s,baz=241,slow=9.3,SNR=3.2						
WVOR	**Wild Horse Val**	89.59	47	*e*P	P	10 56 54.5	+1.4
	comp=Z,9.7nm,1.5s,mb4.7						
ZAL	**Zalesovo**	90.53	325	P	P	10 56 55.7	-1.5
	comp=Z,0.6nm,0.5s,mb4.0,baz=320,slow=11,SNR=4.1						
ZAL	**Zalesovo**	90.53	325	P	P	10 56 55.7	-1.5
HLID	**Hailey**	92.86	46	*e*P	P	10 57 09.3	+1.1
	comp=Z,1.7nm,1.0s,mb4.3						
KURK	**Kurchatov**	93.40	321	*e*P	P	10 57 09.0	-1.5
	comp=Z,3.5nm,1.0s,mb4.6						
YKA	**Yellowknife Ar**	96.32	28	P	P	10 57 22.9	-0.5
	comp=Z,1.3nm,0.6s,mb4.6,baz=260,slow=4.7,SNR=44						
YKA	**Yellowknife Ar**	96.32	28	P	P	10 57 22.9	-0.5
CHKZ	**Chkalovo**	98.72	323	*e*P	P	10 57 32.5	-2.1
	comp=Z,1.6nm,0.9s,mb4.5						
ARCES	**ARCESS Array B**	114.56	344	PKP	PKPdf	11 02 33.4	0.0
	comp=Z,2.0nm,0.9s,baz=83,slow=1.8,SNR=9.3						
FRB	**Frobisher Bay**	116.19	22	PKP	PKPdf	11 02 35.8	-0.9
	comp=Z,0.5nm,0.5s,slow=3.0,SNR=3.1						
SCHQ	**Schefferville**	121.64	30	PKP	PKPdf	11 02 47.5	+0.1
	comp=Z,1.1nm,0.6s,baz=247,slow=4.6,SNR=4.3						
AKASG	**Malin Array Be**	123.92	325	PKP	PKPdf	11 02 52.1	+0.2
	comp=Z,0.1nm,0.3s,baz=53,slow=2.7,SNR=4.1						
SDV	**Santo Domingo**	128.71	87	PKP	PKPdf	11 03 02.9	+0.8
	comp=Z,2.1nm,0.5s,baz=258,slow=4.4,SNR=3.6						
CLL	**Collm**	131.69	334	*e*PKIKP	PKPdf	11 03 10.0	+3.2

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*IDC **20** 10:49:14.9±0.9, 7.73N×37.43W, mb4.0/9, mb1 4.1/9, mb1mx3.8/22, mbtmp4.0/9, MS3.8/11, Ms1 3.8/11, ms1mx3.5/23, Error ellipse: s-maj=31.8km s-min=20.2km az=137.0*

*NEIC **20** 10:49:16.5±0.5, 7.70N×37.43W, h10^{km}, mb3.9/1, Error ellipse: s-maj=15.6km s-min=10.5km az=105.0*

ISC 20 10:49:14.5±0.6**, 7.70N**±0.09×**37.5W**±0.1**, h10^{km}, n23,** σ**1^{s}.02**/15**, mb3.8**/9**, MS3.8**/11**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	13.53	173	*e*P	P	10 52 28.3	-1.0
BAO	**Brasilia Array**	25.43	204	P	P	10 54 46.0	+1.7
BDFB	**Brasilia**	25.44	204	P	P	10 54 44.8	+0.4
	3.2nm,0.6s,mb4.0,baz=19,slow=7.9,SNR=6.3						
BDFB				LR	LR	11 03 28.6	
	comp=Z,129nm,21.3s,MS3.4,baz=18,slow=34						
SJG	**San Juan**	29.77	293	LR	LR	11 05 15.5	
	comp=Z,102nm,18.4s,MS3.5,baz=85,slow=32						
DBIC	**Dimbokro**	32.36	90	P	P	10 55 45.5	-1.2
	6.2nm,1.2s,mb4.3,baz=257,slow=11,SNR=3.8						
DBIC	**Dimbokro**	32.36	90	*e*P	P	10 55 45.8	-0.8
	0.9nm,0.6s,mb3.8						
LPAZ	**La Paz**	38.60	232	P	P	10 56 41.5	+1.7
	3.0nm,0.8s,mb4.1,baz=49,slow=6.0,SNR=9.8						
LPAZ				LR	LR	11 11 34.1	
	comp=Z,101nm,21.4s,MS3.6,baz=84,slow=35						
LPAZ	**La Paz**	38.60	232	*e*P	P	10 56 40.7	+0.9
LPAZ				LR	LR	11 11 34.1	
TAMB	**Tambo**	41.64	260	P	P	10 57 03.7	-1.4
VC1	**Cotopaxi 1**	41.66	260	P	P	10 57 03.6	-1.7
PLCA	**Paso Flores**	57.02	210	LR	LR	11 24 07.5	
	comp=Z,102nm,19.3s,MS3.9,baz=31,slow=37						
FRB	**Frobisher Bay**	60.22	345	LR	LR	11 22 04.5	
	comp=Z,100nm,19.6s,MS4.0,baz=130,slow=33						
NOA	**NORSAR Array B**	64.22	24	LR	LR	11 21 08.8	
	comp=Z,41nm,20.4s,MS3.6,baz=280,slow=30						
TXAR	**Lajitas Array**	65.54	299	P	P	11 00 00.8	0.0
	0.2nm,0.5s,mb3.4,baz=100,slow=6.1,SNR=3.8						
MLR	**Muntele Rosu**	66.00	44	LR	LR	11 25 49.8	
	comp=Z,51nm,18.6s,MS3.8,baz=62,slow=33						
AKASG	**Malin Array Be**	69.37	39	P	P	11 00 24.3	-0.3
	0.7nm,0.6s,mb3.8,baz=255,slow=6.0,SNR=5.2						
LBTB	**Lobatse**	69.42	120	LR	LR	11 24 35.2	
	comp=Z,90nm,19.1s,MS4.0,baz=300,slow=30						
BRTR	**Keskin Array B**	70.58	51	P	P	11 00 33.1	+1.0
	0.8nm,0.6s,mb3.8,baz=225,slow=5.2,SNR=4.3						
FINES	**FINESS Array B**	70.79	27	P	P	11 00 33.1	+0.1
	1.5nm,0.9s,mb3.9,baz=243,slow=4.3,SNR=6.8						
FINES				LR	LR	11 25 55.8	
	comp=Z,71nm,19.0s,MS4.0,baz=232,slow=31						
EIL	**Elat**	70.96	61	LR	LR	11 31 06.7	
	comp=Z,98nm,19.2s,MS4.1,baz=125,slow=35						
ARCES	**ARCESS Array B**	73.55	19	LR	LR	11 29 40.3	
	comp=Z,59nm,18.6s,MS3.9,baz=197,slow=33						
YKA	**Yellowknife Ar**	77.27	332	P	P	11 01 10.3	-0.2
	0.2nm,0.5s,mb3.3,baz=100,slow=6.2,SNR=6.3						
INK	**Inuvik**	85.14	338	P	P	11 01 52.8	+1.0
	0.6nm,0.7s,mb3.9,baz=43,slow=4.8,SNR=3.8						

IGQ 20 10:56:10.3, 1.51S×81.41W, h9^{km}±6^{km}, mb4.0, 2C, Error ellipse: s-maj=15.6km s-min=3.9km az=3.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	0.79	148	⇑P	Pb	10 56 25.0	-0.8
SALI				S	Sb	10 56 35.8	-0.5
HOJA	**Cerro de Hojas**	0.98	62	P	Pb	10 56 28.4	-0.5
IGUA	**Igualata**	2.77	90	P	Pn	10 56 56.3	+0.6
ARRY	**Arrayan**	2.96	90	P	Pn	10 56 59.1	+0.8
PISA	**Pisayambo**	3.06	82	P	Pn	10 57 01.6	+1.8
NAS1	**Nasa**	3.06	73	P	Pn	10 57 02.3	+2.5
TERV	**Terraza Guagua**	3.11	65	P	Pn	10 57 03.2	+2.8
PINO	**Pino**	3.11	64	P	Pn	10 57 00.7	+0.2
YANA	**Yana**	3.16	64	⇑P	Pn	10 57 01.6	+0.4
ANTI	**Antisana**	3.42	72	P	Pn	10 57 07.5	+2.6
COTA	**Cotacachi**	3.58	59	P	Pn	10 57 11.4	+4.2
ECEN	**Cerro Negro**	4.15	56	P	Pn	10 57 17.3	+2.0

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*IDC **20** 10:59:50.5±0.8, 5.50S×131.39E, mb4.2/6, mb1 4.5/8, mb1mx4.4/14, mbtmp4.3/8, ML4.3/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/19, Error ellipse: s-maj=63.2km s-min=18.2km az=66.0*

*BJI **20** 10:59:51.1, 5.92S×131.71E, h42^{km}, mb4.5*

*NEIC **20** 10:59:52.0±0.3, 5.54S×131.29E, h10^{km}, mb4.6/9, Error ellipse: s-maj=12.2km s-min=5.8km az=66.0*

ISC 20 10:59:50.3±0.5**, 5.66S**±0.05×**131.2E**±0.1**, h10^{km}, n44,** σ**0^{s}.85**/40**, mb4.8**/18**, MS3.1**/1**, 3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	7.11	170	⇓*i*P	Pn	11 01 37.3	+0.3
	61nm,0.4s						
KAKA				*e*S	Sn	11 02 52.0	-6.6
FITZ	**Fitzroy Crossi**	13.52	203	⇓*i*P	P	11 03 03.1	-1.8
	16nm,0.4s						
FITZ				*e*S	S	11 05 22.6	-14
WRA	**Warramunga Arr**	14.51	168	Pn	P	11 03 14.7	-3.2
	2.0nm,0.3s,baz=346,slow=12,SNR=66						
WRA				Sn	S	11 05 45.7	-14
	6.9nm,0.3s,baz=348,slow=22,SNR=12						
ASAR	**Alice Springs**	18.09	172	P	P	11 04 03.1	-0.4
	1.4nm,0.3s,baz=350,slow=12,SNR=62						
ASAR				S	S	11 07 12.7	-10
	2.1nm,0.3s,baz=357,slow=27,SNR=7.4						
ASPA	**Alice Springs**	18.09	172	⇓*i*P	P	11 04 03.5	0.0
MBWA	**Marble Bar**	19.02	215	*e*P	P	11 04 15.6	+0.7
	5.5nm,0.6s						
CTA	**Charters Tower**	20.47	136	P	P	11 04 31.6	+0.6
	5.5nm,0.7s,baz=310,slow=12,SNR=9.3						
CTA				LR	LR	11 13 17.0	
	comp=Z,74nm,18.9s,MS3.1,baz=285,slow=39						
CTAO	**Charters Tower**	20.47	136	*e*P	P	11 04 31.8	+0.8
STKA	**Stephens Creek**	27.83	161	*e*P	P	11 05 42.3	+0.3
	2.2nm,0.6s,mb4.0						
STKA	**Stephens Creek**	27.83	161	P	P	11 05 42.5	+0.5
	3.6nm,0.6s,mb4.2,baz=348,slow=7.5,SNR=12						
KLBR	**Kellerberrin**	28.72	204	*e*P	P	11 05 50.5	+0.4
	231nm,1.2s,mb5.8						
NWAO	**Narrogin (SRO)**	30.10	204	*e*P	P	11 06 02.9	+0.5
ENH	**Enshi**	41.36	331	*e*P	P	11 07 38.2	-0.1
	7.8nm,0.7s,mb4.5						
CN2	**Changchun**	49.51	354	*e*P	P	11 08 43.3	+0.1
LSA	**Lhasa**	52.11	315	*e*P	P	11 09 04.1	+1.0
	9.3nm,0.2s,mb5.4						
JIRN	**Jiri**	54.66	310	*e*P	P	11 09 21.7	-0.3
	20nm,0.6s,mb5.3						
GUN	**Gumba**	55.02	310	*e*P	P	11 09 24.3	-0.4
	54nm,0.7s,mb5.7						
PKI	**Pulchoki**	55.21	309	*e*P	P	11 09 25.3	-0.8
KKN	**Kakani**	55.42	309	*e*P	P	11 09 26.9	-0.7
	18nm,0.6s,mb5.3						
DMN	**Daman**	55.47	309	*e*P	P	11 09 27.4	-0.5
	24nm,0.7s,mb5.3						
GKN	**Gorkha**	56.02	309	*e*P	P	11 09 31.1	-0.8
	51nm,0.7s,mb5.7						
KOLN	**Koldanda**	56.71	308	*e*P	P	11 09 36.6	-0.2
	24nm,0.4s,mb5.5						
SONM	**Songino Array**	57.58	340	P	P	11 09 42.7	-0.1
	0.8nm,0.7s,mb3.8,baz=162,slow=7.4,SNR=7.0						
WMQ	**Urumqi**	62.96	326	*e*P	P	11 10 20.0	+0.5
KZA	**Kyzart**	69.57	319	P	P	11 11 03.1	+1.4
	SNR=6.4						
TKM2	**Tokmak 2**	69.75	320	P	P	11 11 03.3	+0.5
	SNR=6.4						
UCH	**Uchtor**	70.12	319	P	P	11 11 06.7	+1.6
	SNR=6.8						
AML	**Almayashu**	70.62	318	P	P	11 11 09.4	+1.3
	SNR=10						
USP	**Ospenovka**	70.62	320	P	P	11 11 08.5	+0.4
	SNR=8.0						
ZAL	**Zalesovo**	70.94	333	P	P	11 11 09.3	-0.6
	2.1nm,0.7s,mb4.2,baz=346,slow=6.0,SNR=15						
KURK	**Kurchatov**	72.03	328	*e*P	P	11 11 15.8	-0.6
	6.0nm,1.0s,mb4.5						
MAW	**Mawson**	76.64	201	*e*P	P	11 11 43.6	+0.8
	4.0nm,0.5s,mb4.6						
BVAR	**Borovoye Array**	77.60	327	P	P	11 11 48.0	-0.3
	6.9nm,1.0s,mb4.5,baz=122,slow=9.0,SNR=17						
CHKZ	**Chkalovo**	77.78	328	*e*P	P	11 11 48.1	-1.1
	2.7nm,0.8s,mb4.2						
QSPA	**South Pole Qui**	84.31	180	*e*P	P	11 12 23.9	+0.6
	5.1nm,0.8s,mb4.7						
ILAR	**Eielson Array**	91.62	25	P	P	11 12 56.9	-1.7
	0.3nm,0.6s,mb3.8,baz=282,slow=4.7,SNR=6.1						
YKA	**Yellowknife Ar**	106.02	26	PKiKP		11 18 15.0	
	0.3nm,0.5s,baz=294,slow=1.9,SNR=11						
YKA	**Yellowknife Ar**	106.02	26	PKPdf		11 18 15.0	
ULM	**Lac du Bonnet**	120.66	33	PKP	PKPdf	11 18 42.3	-3.5
	1.0nm,0.4s,baz=311,slow=2.6,SNR=4.1						
TXAR	**Lajitas Array**	123.19	59	PKP	PKPdf	11 18 49.8	-1.4
	0.2nm,0.4s,baz=208,slow=2.9,SNR=5.3						
DBIC	**Dimbokro**	136.34	274	PKP	PKPdf	11 19 16.1	-0.5
	1.8nm,0.9s,baz=155,slow=2.8,SNR=3.6						
LVC	**Limon Verde**	145.68	146	*e*PKP	PKPdf	11 19 33.0	0.0
LPAZ	**La Paz**	150.97	139	PKPbc	PKPdf	11 19 47.7	+6.1
	4.2nm,0.9s,baz=141,slow=4.3,SNR=10.0						
LPAZ	**La Paz**	150.97	139	PKPdf	PKPdf	11 19 41.0	-0.6
LPAZ				*e*PKPbc	PKPdf	11 19 47.3	+5.7
LPAZ				PKPbc	PKPdf	11 19 47.7	+6.1

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*IDC **20** 11:01:52.7±7.3, 30.31N×78.28E, mb3.8/6, mb1 3.9/6, mb1mx3.6/22, mbtmp3.8/6, MS2.8/1, Ms1 3.0/1, ms1mx2.5/29, Error ellipse: s-maj=175.0km s-min=40.8km az=4.0*

*NDI **20** 11:01:58.8±3.3, 30.78N×78.32E, h8^{km}±10^{km}, ML3.2, mb3.5(NEIC)*

*NEIC **20** 11:01:58.7±5.7, 30.66N×78.24E, h25^{km}±34^{km}, mb3.5/1, Error ellipse: s-maj=44.3km s-min=12.2km az=212.0*

ISC 20 11:01:57.0±0.9**, 30.82N**±0.03×**78.46E**±0.04**, h12^{km}**±6^{km}**, n25,** σ**1^{s}.28**/35**, mb3.8**/8**, MS2.7**/1**, 2C-1D, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	0.61	215	*e*PG	Pg	11 02 08.0	-1.4
DDI				*e*SG	Sg	11 02 17.8	+0.2
KLP	**Kalpa**	0.73	346	*e*	Pb	11 02 09.3	-1.9
KLP				*e*		11 02 17.4	
JOSI	**Joshimath**	0.98	105	*e*P	Pb	11 02 08.8	-6.7
JOSI				*e*S	Sb	11 02 23.9	-4.3
JOSI				⇑*e*		11 02 47.6	
SMLA	**Simla**	1.15	286	⇑*i*P	Pb	11 02 30.5	+12
SDNR	**Sundarnagar**	1.45	298	*e*PN	Pn	11 02 24.0	+0.9
SDNR				*e*SG	Sg	11 02 44.6	-0.7
KKR	**Kurukshetra**	1.66	239	*e*P	Pn	11 02 27.0	+0.9
KKR				*e*S	Sn	11 02 48.3	+0.8
KKR				*e*		11 02 49.2	
	comp=Z,294nm,0.2s						
BHK	**Bhakra**	1.85	289	*e*P	Pn	11 02 31.1	+2.2
BHK				*e*S	Sn	11 02 51.9	-0.5
PTH	**Pithoragarh**	1.98	129	*e*P	Pn	11 02 33.9	+3.1
PTH				*e*S	Sn	11 03 00.9	+5.2
LGTI	**Lohaghat**	2.07	131	*e*PB	Pb	11 02 35.0	+1.0
LGTI				*e*SB	Sb	11 03 03.3	+3.7
NDI	**New Delhi**	2.39	207	*e*P	Pn	11 02 36.5	-0.2
NDI				*e*SB	Sb	11 03 08.0	-1.0
PONG	**Pong**	2.42	298	*e*P	Pn	11 02 39.0	+1.8
PONG				*e*SB	Sb	11 03 12.0	+2.0
AYAN	**Aya Nagar**	2.60	207	*e*P	Pn	11 02 40.7	+0.9
AYAN				*e*		11 03 12.6	
AYAN				*e*		11 03 15.1	
	comp=Z,32nm,0.3s						
THN	**Thein Dam**	2.84	305	*e*P	Pn	11 02 43.6	+0.5
THN				*e*SB	Sb	11 03 23.1	+1.0
KHET	**Khetri**	3.58	221	*e*P	Pn	11 02 52.9	-0.8
KHET				*e*S	Sn	11 03 34.5	-1.9
KHET				*e*		11 03 35.9	
	comp=N,96nm,0.5s						
KHET				*e*		11 03 36.2	
	comp=E,86nm,0.4s						
LSA	**Lhasa**	11.03	93	P	P	11 04 37.8	0.0
AAK	**Ala-Archa**	12.21	346	P	P	11 04 52.6	-1.0
CMAR	**Chiang Mai Arr**	22.27	119	LR	LR	11 17 13.1	
	comp=E,29nm,21.7s,MS2.7,baz=170,slow=42						
CHKZ	**Chkalovo**	23.54	348	*e*P	P	11 07 07.9	+0.2
	comp=E,0.8nm,0.5s,mb3.4						
GYA	**Guiyang**	25.10	93	⇓*i*P	P	11 07 26.6	+3.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
SONM	**Songino Array**	27.27	44	P	P	11 07 43.6	+0.6
	comp=Z,0.6nm,0.9s,mb3.1,baz=240,slow=9.7,SNR=4.6						
FINES	**FINESS Array B**	45.62	328	P	P	11 10 17.3	-1.3
	comp=Z,1.0nm,0.7s,mb3.9,baz=108,slow=6.0,SNR=6.9						
ARCES	**ARCESS Array B**	48.73	338	P	P	11 10 41.8	-1.2
	comp=Z,2.7nm,0.8s,mb4.3,baz=104,slow=7.4,SNR=4.8						
HFS	**Hagfors**	51.32	325	P	P	11 11 00.8	-2.1
	comp=Z,1.0nm,0.6s,mb3.9,baz=101,slow=7.3,SNR=5.3						
INK	**Inuvik**	78.35	12	P	P	11 13 57.1	-1.0
	comp=Z,0.3nm,0.5s,mb3.5,baz=319,slow=3.4,SNR=7.0						
YKA	**Yellowknife Ar**	86.42	6	P	P	11 14 39.1	-0.9
	comp=Z,0.2nm,0.6s,mb3.6,baz=342,slow=5.1,SNR=8.1						

IDC 20 11:07:23.9±41.0**, 22.11N**×**143.47E, h357^{km}**±293^{km}**, mb3.3**/6**, mb1 3.4**/6**, mb1mx3.0**/21**, mbtmp4.0**/6**, Error ellipse: s-maj=374.5km s-min=32.4km az=176.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAL	**Zalesovo**	54.06	321	P	P	11 16 12.8	-1.8
	0.5nm,0.4s,baz=130,slow=4.0,SNR=3.8						
ILAR	**Eielson Array**	61.55	27	P	P	11 17 03.5	-2.3
	0.6nm,0.9s,baz=269,slow=5.5,SNR=5.7						
BVAR	**Borovoye Array**	62.53	319	P	P	11 17 10.5	-1.8
	1.0nm,0.3s,baz=97,slow=8.5,SNR=9.1						
YKA	**Yellowknife Ar**	75.97	28	P	P	11 18 32.6	-0.9
	0.3nm,0.3s,baz=291,slow=5.8,SNR=8.8						
ARCES	**ARCESS Array B**	78.61	342	P	P	11 18 47.2	-0.5
	3.4nm,0.9s,baz=84,slow=9.1,SNR=5.9						
FINES	**FINESS Array B**	82.92	335	P	P	11 19 08.6	-1.6
	1.1nm,0.7s,baz=68,slow=4.3,SNR=14						

IDC 20 11:10:17.9±3.4**, 5.78S**×**118.12E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=207.1km s-min=56.8km az=47.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	21.14	133	P	P	11 15 06.1	-0.9
	0.9nm,0.6s,baz=314,slow=11,SNR=9.8						
ASAR	**Alice Springs**	23.40	141	P	P	11 15 28.2	-1.2
	0.3nm,0.3s,baz=320,slow=8.5,SNR=8.1						
ASAR				PcP	PcP	11 19 16.2	-1.7
	0.2nm,0.4s,baz=323,slow=0.8,SNR=4.1						
STKA	**Stephens Creek**	34.01	143	P	P	11 17 02.5	-3.3
	1.7nm,0.3s,baz=316,slow=8.5,SNR=9.8						

IDC 20 11:10:24.4±3.6**, 48.94S**×**120.42E, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.8**/10**, mbtmp3.8**/3**, Error ellipse: s-maj=117.6km s-min=66.0km az=124.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	23.34	51	P	P	11 15 34.0	-0.9
	1.0nm,0.6s,baz=189,slow=13,SNR=3.1						
ASAR	**Alice Springs**	27.38	28	P	P	11 16 12.2	-1.1
	1.9nm,0.8s,baz=202,slow=8.6,SNR=11						
WRA	**Warramunga Arr**	31.02	26	P	P	11 16 42.6	-3.2
	1.0nm,1.0s,baz=199,slow=9.0,SNR=3.4						
YKA	**Yellowknife Ar**	147.28	45	PKPbc	PKPdf	11 30 07.7	-0.2
	0.2nm,0.6s,baz=267,slow=2.5,SNR=6.6						

CASC 20 11:27:32.0±2.0**, 13.71N**×**91.15W, h24^{km}**±11^{km}**, MD3.8, ML4.1, 2C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	0.79	22	⇑*e*P	Pb	11 27 47.4	+0.4
IXG	**Ixpaco**	0.82	56	⇓*e*P	Pb	11 27 47.3	-0.1
IXG				*e*S	Sb	11 27 59.0	+0.9
NBG	**Las Nubes**	1.17	42	⇑*e*P	Pn	11 27 53.4	+0.3
NBG				*e*S	Sb	11 28 10.1	+1.9
NBG				AML	AML	11 28 10.8	
	comp=E,4μm,0.2s						
RTR	**El Retiro**	1.48	83	*e*P	Pn	11 27 57.2	-0.3
RTR				*e*S	Sn	11 28 16.6	+0.4
RBDL	**Robledal**	1.48	74	*e*P	Pn	11 27 57.6	+0.1
RBDL				*e*S	Sn	11 28 17.4	+1.1
SBLS	**San Blas**	1.49	85	*e*P	Pn	11 27 57.1	-0.6
SBLS				*e*S	Sn	11 28 17.0	+0.5
SNJE	**San Jose**	1.51	84	*e*P	Pn	11 27 57.7	-0.3
SNJE				*e*S	Sn	11 28 17.1	+0.1
BOQS	**Boqueron**	1.82	89	*e*P	Pn	11 28 02.2	-0.2
BOQS				*e*S	Sn	11 28 25.0	0.0
MTO2	**Montecristo 2**	1.87	68	*e*P	Pn	11 28 03.2	+0.1
LFRS	**El Faro**	2.04	92	*e*P	Pn	11 28 04.7	-0.8
LFRS				*e*S	Sn	11 28 29.1	-1.2
LCBS	**La Ceiba**	2.12	91	*e*P	Pn	11 28 05.8	-0.9
LCBS				*e*S	Sn	11 28 34.9	+2.5
SNVI	**San Vicente**	2.25	92	*e*P	Pn	11 28 09.1	+0.5
SNVI				*e*S	Sn	11 28 37.0	+1.1

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*INMG **20** 11:29:05.6±1.3, 36.96N×2.58W, h7^{km}±4^{km}, ML2.0, Error ellipse: s-maj=2.5km s-min=2.4km az=143.0*

*CSEM **20** 11:29:05.7±0.1, 36.96N×2.61W, h2^{km}, ML2.6/3, Error ellipse: s-maj=2.1km s-min=1.6km az=157.0*

MDD 20 11:29:05.7±0.2**, 36.96N**×**2.58W, h4^{km}**±6^{km}**, mbLg2.2**/16**,**

3C, Error ellipse: s-maj=3.7km s-min=1.2km az=174.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EBER	**Berja**	**0.26**	**256**	⇑Pg	Pg	11 29 10.5	-0.4
	52nm,0.1s,SNR=18						
EBER				Lg		11 29 14.8	
	275nm,0.1s,SNR=7.9						
EBER	**Berja**	**0.26**	**256**	Pg	Pg	11 29 10.5	-0.4
	SNR=18						
ENIJ	**Nijar**	**0.30**	**88**	⇑Pg	Pg	11 29 11.2	-0.4
	108nm,0.1s,SNR=18						
ENIJ				Lg		11 29 14.9	
	507nm,0.3s,SNR=7.9						
ECOG	**Cogollos-Vega**	**0.85**	**292**	⇑Pg	Pg	11 29 20.7	-2.0
	10nm,0.2s,SNR=18						
ECOG				Lg		11 29 31.7	
	11nm,0.2s,SNR=7.5						
EQES	**Quesada**	**0.93**	**335**	Pg	Pg	11 29 23.6	-0.6
	10nm,0.1s,SNR=7.9						
EQES				Lg		11 29 36.1	
	14nm,0.1s,SNR=7.9						
EQES	**Quesada**	**0.93**	**335**	Pg	Pg	11 29 23.6	-0.6
	SNR=7.9						
ERON	**Agron**	**0.98**	**274**	Pg	Pg	11 29 23.3	-2.1
	8.4nm,0.2s,SNR=17						
ERON				Lg		11 29 36.5	
	18nm,0.4s,SNR=7.9						
EALB	**Alboran**	**1.08**	**200**	Pg	Pg	11 29 25.4	-1.9
	2.3nm,0.0s,SNR=7.9						
EALB				Lg		11 29 40.2	
	22nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.08**	**200**	Pg	Pg	11 29 25.4	-1.9
	SNR=7.9						
ELOJ	**Sierra Loja**	**1.27**	**279**	Pg	Pg	11 29 28.6	-2.5
	0.3nm,0.1s,SNR=7.9						
ELOJ				Lg		11 29 49.5	
	5.9nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**1.38**	**50**	Pg	Pg	11 29 30.2	-3.0
	5.0nm,0.3s,SNR=7.9						
EMUR				Lg		11 29 49.3	
	11nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**1.38**	**50**	Pg	Pg	11 29 30.2	-3.0
	SNR=7.9						
ELUQ	**Luque**	**1.47**	**294**	Pg	Pg	11 29 33.2	-1.9
	12nm,0.2s,SNR=5.7						
ELUQ				Lg		11 29 54.6	
	4.2nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**1.54**	**322**	Pg	Pg	11 29 33.6	-2.8
	27nm,0.3s,SNR=30						
EBAN				Lg		11 29 55.1	
	28nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**1.68**	**2**	Pg	Pg	11 29 36.4	-2.8
	3.1nm,0.1s,SNR=7.9						
EVIA				Lg		11 29 58.3	
	49nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.87**	**26**	Pn	Pn	11 29 37.8	-1.0
	0.3nm,0.1s,SNR=7.9						
ETOB				Pg	Pg	11 29 40.4	-2.5
	4.3nm,0.1s,SNR=7.9						
ETOB				Lg		11 30 06.1	
	8.8nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	**1.87**	**26**	Pn	Pn	11 29 37.8	-0.9
	SNR=7.9						
ETOB	**Tobarra**	**1.87**	**26**	Pg	Pg	11 29 40.4	-2.6
	4.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.99**	**308**	Pn	Pn	11 29 38.9	-1.7
	0.0nm,0.1s,SNR=4.0						
EADA				Pg	Pg	11 29 41.3	-4.1
	2.0nm,0.1s,SNR=7.9						
EADA				Lg		11 30 09.3	
	10.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.99**	**308**	Pn	Pn	11 29 38.9	-1.6
	SNR=4.0						
EADA	**Adamuz**	**1.99**	**308**	Pg	Pg	11 29 41.3	-4.2
	SNR=7.9						
ESDC	**Sonseca Array**	**2.92**	**339**	Pg	Pg	11 30 00.5	-3.4
	0.6nm,0.3s,baz=162,slow=17,SNR=12						
ESDC				Sn	Sn	11 30 25.3	-4.5
	1.2nm,0.3s,baz=155,slow=22,SNR=7.3						
ESDC				Lg		11 30 37.5	
	5.3nm,0.3s,baz=160,slow=26,SNR=20						
ESDC	**Sonseca Array**	**2.92**	**339**	Pg	Pg	11 30 00.5	-3.4
	0.6nm,0.3s,slow=17,SNR=12						
ESDC				Sn	Sn	11 30 25.3	-4.5
	1.2nm,0.3s,slow=22,SNR=7.3						
EMIN	**Mina Concepcio**	**3.36**	**285**	Pn	Pn	11 29 57.2	-2.9
	0.5nm,0.1s,SNR=8.6						
EMIN				Sn	Sn	11 30 36.9	-4.0
	0.3nm,0.2s,SNR=4.0						
EMIN				Lg		11 30 52.7	
	1.5nm,0.2s,SNR=4.0						
EMIN	**Mina Concepcio**	**3.36**	**285**	Pn	Pn	11 29 57.2	-2.8
	0.5nm,0.1s,SNR=8.6						
PALC	**Alcoutim**	**3.94**	**279**	*e*Pn	Pn	11 30 05.7	-2.6
PALC				*e*Sn	Sn	11 30 50.2	-5.5
	1.5nm,0.4s						
PALC	**Alcoutim**	**3.94**	**279**	*e*Pn	Pn	11 30 05.7	-2.6
PALC				*e*Sn	Sn	11 30 50.2	-5.5
	1.5nm,0.4s						
PCBR	**Castelo Branco**	**4.80**	**308**	*e*Pn	Pn	11 30 17.5	-3.0
PCBR				*e*Sn	Sn	11 31 11.2	-6.3
PCBR				*e*Sg	Sg	11 31 38.0	-7.6
	2.5nm,0.4s						
PCBR	**Castelo Branco**	**4.80**	**308**	*e*Pn	Pn	11 30 17.5	-3.0
PCBR				*e*Sn	Sn	11 31 11.2	-6.3
PCBR				*e*Sg	Sg	11 31 38.0	-7.6
	2.5nm,0.4s						
MTE	**Manteigas**	**5.18**	**313**	*e*Sg	Sg	11 31 50.0	-8.3
PBRG	**Braganca**	**5.81**	**328**	*e*Sg	Sg	11 32 08.7	-10

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*NEIC **20** 11:32:32.7, 19.53N×67.25W, h25^{km}, MD3.5(RSPR), After RSPR.*

RSPR 20 11:32:32.7, 19.53N×67.25W, h25^{km}±26^{km}, MD3.5/14, **MD3.5**/14, **14C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.07**	**173**	⇑*e*P	Pn	11 32 49.4	-2.8
AGPR				*e*S	Sb	11 33 02.2	-3.7
AOPR	**Arecibo Observ**	**1.27**	**158**	⇑*e*P	Pn	11 32 51.6	-3.5
AOPR				*e*S	Sn	11 33 07.6	-3.8
LRS	**Lares**	**1.29**	**163**	⇑*e*P	Pn	11 32 52.3	-3.1
LRS				*e*S	Sn	11 33 08.4	-3.5
MPR	**Mayaguez**	**1.31**	**175**	⇑*e*P	Pn	11 32 53.4	-2.3
MPR				*e*S	Sn	11 33 09.4	-3.2
LSP	**Las Mesas**	**1.35**	**173**	⇑*e*P	Pn	11 32 53.9	-2.4
LSP				*e*S	Sn	11 33 10.6	-3.0
MGP	**Maguayo**	**1.52**	**174**	⇑*e*P	Pn	11 32 56.2	-2.5
MGP				*e*S	Sn	11 33 14.8	-3.0
PORP	**Portuguez**	**1.58**	**158**	⇑*e*P	Pn	11 32 56.7	-2.8
PORP				*e*S	Sn	11 33 16.4	-2.9
CELP	**Cerrillos**	**1.58**	**156**	⇑*e*P	Pn	11 32 57.1	-2.5
CELP				*e*S	Sn	11 33 16.2	-3.1
OBIP	**Obispado Ponce**	**1.60**	**157**	⇑*e*P	Pn	11 32 57.1	-2.7
OBIP				*e*S	Sn	11 33 16.7	-3.1
CSB	**Colonia Sabana**	**1.61**	**140**	⇑*e*P	Pn	11 32 57.8	-2.2
CSB				*e*S	Sn	11 33 16.4	-3.7
SJG	**San Juan**	**1.75**	**143**	⇑*e*P	Pn	11 32 59.6	-2.4
SJG				*e*S	Sn	11 33 20.5	-3.2
CBYP	**Canovanas**	**1.82**	**133**	⇑*e*P	Pn	11 33 00.8	-2.1
HUMP	**Col San Antoni**	**1.92**	**136**	⇑*e*P	Pn	11 33 01.4	-2.9
HUMP				*e*S	Sn	11 33 24.3	-3.5
MTP	**Monte Pirata**	**2.15**	**131**	⇑*e*P	Pn	11 33 05.5	-2.2
MTP				*e*S	Sn	11 33 30.2	-3.6

MAN 20 11:36:18.5, 13.15N×121.24E, h34^{km}, mb4.0, ML2.8, MS2.5, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.66**	**63**	*e*P	P	11 36 31.4	+0.1
BOAC				*e*S	S	11 36 39.7	-0.9
SJMP	**San Jose**	**0.70**	**190**	*e*P	P	11 36 32.6	+0.8
SJMP				*e*S	S	11 36 41.6	+0.1
LQP	**Lukban**	**1.00**	**17**	⇑*e*P	P	11 36 38.0	+1.9
LQP				*e*S	S	11 36 49.2	0.0
LUBP	**Lubang**	**1.12**	**301**	*e*P	P	11 36 38.0	+0.1
LUBP				*e*S	S	11 36 52.0	-0.4

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*IDC **20** 11:43:37.2±0.5, 11.34N×92.14E, mb4.7/16, mb1 4.9/17, mb1mx4.8/21, mbtmp4.7/17, ML4.4/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/26, Error ellipse: s-maj=24.6km s-min=12.3km az=54.0*

*MOS **20** 11:43:40.2±1.0, 11.36N×92.27E, h33^{km}, mb5.2/23, Error ellipse: s-maj=13.7km s-min=6.9km az=109.5*

*BJI **20** 11:43:40.1, 11.26N×92.32E, h38^{km}, mB5.2, mb5.0, Ms4.6, Msz4.2*

*NEIC **20** 11:43:42.4±0.2, 11.41N×92.21E, mb4.9/39, Error ellipse: s-maj=5.4km s-min=3.9km az=52.0*

*HRVD **20** 11:43:42.3±0.8, 11.51N×92.07E, h30^{km}±3^{km}, MW4.8/31, Centroid moment Tensor Solution. LP body waves: s6,c8; Mantle waves: s31,c47; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.43±.34; $M_{\theta\theta}$0.67±.17; $M_{\phi\phi}$-2.10±.21; $M_{r\theta}$0.49±.23; $M_{\theta\phi}$-0.74±.10; $M_{\phi r}$-0.55±.23; Best double couple: $M_0$2.089×10^{16} NP1:ϕ_s43°,δ47°,λ135°. NP2: ϕ_s167°,δ59°,λ53°. Principal axes: T 1.847, Plg58°, Azm23°; N .481, Plg31°, Azm189°; P -2.331, Plg6°, Azm283°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 11:43:40.2±0.2**, 11.36N**±0.03×**92.21E**±0.03**, h32^{km}, h32^{km}**±.8^{km}**:pP-P, n214, σ1ˢ04**/214**, mb5.0**/74**, MS4.2**/22**, 26C-7D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**0.60**	**61**	*e*P	Px	11 43 53.9	
PBA				*e*S	Sx	11 44 03.1	
NNT	**Nongplab**	**7.47**	**80**	P	**Pn**	**11 45 31.3**	**+1.5**
BDT	**Bhumibol Dam**	**8.81**	**48**	P	**P**	**11 45 48.0**	**-0.5**
	22nm,0.8s						
NST	**Nakhon Sawan**	**8.82**	**60**	P	**P**	**11 45 49.5**	**+0.9**
CM31	**Chiang Mai Arr**	**9.60**	**42**	*e*P	**P**	**11 45 58.3**	**-1.2**
	31nm,0.7s						
CMAR	**Chiang Mai Arr**	**9.60**	**42**	*i* P	**P**	**11 45 58.0**	**-1.5**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**9.60**	**42**	Pn	**P**	**11 45 58.0**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=235,slow=15,SNR=42						
CMAR				Sn	**Sn**	**11 47 49.8**	**+2.5**
	baz=234,slow=30,SNR=2.2						
VIS	**Vishakhapatnam**	**10.67**	**307**	*e*P	**P**	**11 46 10.6**	**-3.6**
VIS				*e*S	**S**	**11 47 58.8**	**-15**
VIS				*e*		11 48 03.1	
	comp=N,596nm,0.6s						
VIS				*e*		11 48 03.5	
	comp=E,625nm,0.5s						
VIS				*i*		11 50 29.0	
BWNR	**Bhubaneshwar**	**10.81**	**326**	*e*P	**P**	**11 46 12.1**	**-4.0**
BWNR				*e*S	**S**	**11 47 57.6**	**-19**
BWNR				*e*		11 48 04.5	
	comp=N,211nm,0.4s						
BWNR				*e*		11 48 04.8	
	comp=E,498nm,0.5s						
CAL	**Calcutta**	**11.72**	**342**	*e*	**P**	**11 46 43.4**	**+15**
CAL				*e*		11 49 31.7	
MDRS	**Chennai**	**11.81**	**280**	*e*	**P**	**11 46 19.0**	**-11**
MDRS				*e*		11 48 27.0	
MDRS				*e*		11 50 44.0	
AGT	**Agartala**	**12.49**	**356**	*e*P	**P**	**11 46 37.0**	**-1.7**
SHL	**Shillong**	**14.14**	**359**	*e*P	**P**	**11 46 55.0**	**-5.6**
SHL				*e*		11 49 28.0	
BLSP	**Bilaspur**	**14.41**	**319**	*e*P	**P**	**11 47 02.1**	**-2.0**
BLSP				*e*		11 49 36.1	
HYB	**Hyderabad**	**14.53**	**296**	*i* P	**P**	**11 47 03.0**	**-2.7**
HYB				*e*		11 49 32.0	
HYB				*e*S	**S**	**11 49 44.0**	**-2.4**
HYB				*e*		11 50 04.0	
NGP	**Nagpur**	**15.94**	**309**	*e*	**P**	**11 47 30.1**	**+6.1**
NGP				*e*		11 50 06.4	
LATR	**Latur**	**16.66**	**297**	*e*P	**P**	**11 47 31.1**	**-2.1**
LATR				*e*		11 50 20.0	
LATR				*e*		12 00 00.0	
KMI	**Kunming**	**16.94**	**35**	⇑P	**P**	**11 47 37.8**	**+1.1**
KMI				AP		11 47 45.3	
KMI				XP		11 47 52.6	
KMI				PP	PP	11 47 54.4	+3.7
KMI				S	**S**	**11 50 44.0**	**+1.4**
KMI				XS		11 50 56.6	
KMI				SS	SS	11 51 06.1	+2.7
KMI				AMB	AMB		
	comp=Z,56nm,1.5s						
KMI				AMB	AMB		
	comp=Z,174nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,16.4s						
KMI				LR	LR		
	comp=E,691nm,16.4s						
KMI				LR	LR		
	comp=Z,764nm,18.1s						
KMI	**Kunming**	**16.94**	**35**	⇑P	**P**	**11 47 37.8**	**+1.1**
	comp=Z,56nm,1.5s						
KMI				pP		11 47 45.3	
KMI				sP		11 47 52.6	
KMI				PP	PP	11 47 54.4	+3.7
KMI				S	**S**	**11 50 44.0**	**+1.4**
KMI				sS		11 50 56.6	
KMI				SS	SS	11 51 06.1	+2.7
JIRN	**Jiri**	**17.17**	**342**	*e*P	**P**	**11 47 39.1**	**-0.5**
	comp=Z,84nm,0.7s						
PKI	**Pulchoki**	**17.35**	**339**	*e*P	**P**	**11 47 41.1**	**-0.6**
DMN	**Daman**	**17.49**	**339**	*e*P	**P**	**11 47 42.3**	**-1.2**
	comp=Z,82nm,0.7s						
GUN	**Gumba**	**17.50**	**341**	*e*P	**P**	**11 47 43.1**	**-0.6**
KKN	**Kakani**	**17.59**	**339**	*e*P	**P**	**11 47 44.7**	**-0.1**
	comp=Z,73nm,0.8s						
GKN	**Gorkha**	**18.02**	**338**	*e*P	**P**	**11 47 49.8**	**-0.3**
	comp=Z,59nm,0.4s						
KOLN	**Koldanda**	**18.22**	**335**	*e*P	**P**	**11 47 51.9**	**-0.7**
	comp=Z,70nm,0.7s						
LSA	**Lhasa**	**18.28**	**357**	P	**P**	**11 47 53.3**	**0.0**
LSA				AP		11 48 02.9	
LSA				XP		11 48 08.0	
LSA				S	**S**	**11 51 19.1**	**+6.2**
LSA				LR	LR		
	comp=N,300nm,19.9s						
LSA				LR	LR		
	comp=E,680nm,19.9s						
LSA				LR	LR		
	comp=Z,690nm,21.2s						
LSA	**Lhasa**	**18.28**	**357**	*e*P	**P**	**11 47 52.5**	**-0.8**
	comp=Z,32nm,0.6s						
LSA				*e*S	**S**	**11 51 10.5**	**-2.3**
QIZ	**Qiongzhong**	**18.64**	**64**	*e*P	**P**	**11 47 56.0**	**-1.8**
QIZ				*e*S	**S**	**11 51 19.3**	**-1.8**
QIZ				LR	LR		
	comp=N,710nm,18.2s						
QIZ				LR	LR		
	comp=E,538nm,16.4s						
QIZ				LR	LR		
	comp=Z,608nm,16.9s						
POO	**Poona**	**19.11**	**294**	⇑*i*	**P**	**11 47 55.0**	**-8.3**
	comp=Z,71nm,1.5s						
POO				*e*		11 51 19.0	
GYA	**Guiyang**	**20.28**	**40**	⇑*i*P	**P**	**11 48 15.5**	**-0.6**
GYA				AP		11 48 24.3	
GYA				XP		11 48 29.3	
GYA				PP	PP	11 48 34.3	-2.2
GYA				AMB	AMB		
	comp=Z,60nm,1.0s						
GYA				AMB	AMB		
	comp=Z,270nm,3.3s						
GYA				LR	LR		
	comp=N,670nm,13.5s,MS4.2						
GYA				LR	LR		
	comp=E,470nm,15.6s,MS4.2						
GYA				LR	LR		
	comp=Z,900nm,16.2s,MS4.2						
LGTI	**Lohaghat**	**21.18**	**330**	*e*P	**P**	**11 48 27.0**	**+1.7**
SONA	**Sohna**	**21.98**	**322**	*e*	**P**	**11 48 29.6**	**-3.7**
BISR	**Bishrakh**	**22.00**	**323**	*e*P	**P**	**11 48 34.9**	**+1.3**
AYAN	**Aya Nagar**	**22.12**	**323**	*e*P	**P**	**11 48 34.4**	**-0.4**
CD2	**Chengdu**	**22.21**	**27**	⇑*i*P	**P**	**11 48 35.4**	**-0.2**
CD2				AMB	AMB		
	comp=Z,155nm,1.0s,mb5.4						
NDI	**New Delhi**	**22.22**	**323**	*e*P	**P**	**11 48 36.5**	**+0.8**
NDI				*e*		11 52 29.0	
KUDL	**Kundal**	**22.27**	**321**	*e*P	**P**	**11 48 36.0**	**-0.2**
AJM	**Ajmer**	**22.37**	**315**	*e*P	**P**	**11 48 38.0**	**+0.8**
KHET	**Khetri**	**22.64**	**320**	*e*P	**P**	**11 48 41.2**	**+1.2**
DDI	**Dehra Dun**	**23.00**	**327**	*e*P	**P**	**11 48 46.0**	**+2.5**
DDI				*e*S	**S**	**11 52 52.3**	**+4.8**
KLP	**Kalpa**	**23.86**	**329**	*e*P	**P**	**11 48 53.2**	**+1.4**
SMLA	**Simla**	**24.10**	**327**	⇑*i*	**P**	**11 49 09.7**	**+15**
SMLA				*i*		11 53 36.2	
SDNR	**Sundarnagar**	**24.50**	**327**	*e*P	**P**	**11 49 00.2**	**+2.2**
ENH	**Enshi**	**24.74**	**38**	⇑*i*P	**P**	**11 48 59.6**	**-0.7**
	comp=Z,105nm,0.6s,mb5.5						
JASL	**Jaisalmer**	**25.33**	**311**	*e*P	**P**	**11 49 06.3**	**+0.3**
LZH	**Lanzhou**	**26.78**	**21**	⇑P	**P**	**11 49 19.8**	**+0.5**
LZH				AP	pP	11 49 28.3	-0.4
LZH				PP	PP	11 50 04.8	+0.4
LZH				*e*S	**S**	**11 53 52.1**	**+0.9**
LZH				XS		11 54 06.8	
LZH				SS	SS	11 55 04.9	+0.7
LZH				AMB	AMB		
	comp=Z,66nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,241nm,4.6s						
LZH				LR	LR		
	comp=N,1µm,12.1s						
LZH				LR	LR		
	comp=Z,2µm,14.9s,MS4.7						
LZH	**Lanzhou**	**26.78**	**21**	⇑P	**P**	**11 49 19.7**	**+0.4**
	comp=Z,66nm,1.3s,mb5.0						
LZH				sP	sP	11 49 23.4	-10
LZH				pP	pP	11 49 28.3	-0.4
LZH				PP	PP	11 50 04.8	+0.4
LZH				*e*S	**S**	**11 53 52.1**	**+0.9**
LZH				sS		11 54 06.7	
LZH				SS	SS	11 55 04.9	+0.7
LZH				LR	LR		
	comp=Z,2µm,14.9s,MS4.7						
XAN	**Xi’an**	**27.26**	**31**	P	**P**	**11 49 21.6**	**-2.1**
XAN				AP	pP	11 49 31.1	-2.0
XAN				AMB	AMB		
	comp=Z,34nm,0.9s,mb4.9						
TGY	**Tagaytay City**	**28.15**	**81**	LR	LR	12 00 54.6	
	comp=Z,515nm,19.4s,MS4.1,baz=357,slow=37						
GTA	**Gaotai**	**28.75**	**12**	P	**P**	**11 49 37.6**	**+0.6**
GTA				AP	pP	11 49 47.8	+1.3
GTA				XP	sP	11 49 51.8	+1.1
GTA				PP	PP	11 50 25.9	-4.3
GTA				PPP	PPP	11 50 39.8	-3.1
GTA				PCP	PcP	11 52 47.8	+0.9
GTA				S	**S**	**11 54 20.1**	**-2.8**
GTA				SCP		11 56 27.9	
GTA				SCS	ScS	12 00 20.3	+3.7
GTA				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
GTA				AMB	AMB		
	comp=Z,169nm,6.1s						
GTA				LR	LR		
	comp=N,263nm,19.0s,MS4.2						
GTA				LR	LR		
	comp=E,448nm,19.4s,MS4.2						
GTA				LR	LR		
	comp=Z,229nm,19.8s,MS3.8						
KSH	**Kashi**	**31.53**	**336**	⇑P	**P**	**11 50 03.0**	**+1.2**
KSH				*e*AP	pP	11 50 13.0	+1.7
KSH				*e*XP	sP	11 50 17.0	+1.5
KSH				*e*PP	PP	11 51 07.0	+0.6
KSH				*e*PPP	PPP	11 51 23.3	+1.9
KSH				*e*PCP	PcP	11 52 55.4	+1.3
KSH				*e*S	**S**	**11 55 07.0**	**+0.1**
KSH				*e*PS		11 55 16.3	
KSH				*e*XS		11 55 24.5	
KSH				*e*PCS		11 56 38.1	
KSH				*e*SS	SS	11 56 58.8	+2.5
KSH				*e*SCS	ScS	12 00 33.3	+3.4
KSH				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
KSH				AMB	AMB		
	comp=Z,130nm,3.2s						
KSH				LR	LR		
	comp=N,190nm,5.3s						
KSH				LR	LR		
	comp=E,300nm,5.6s						
NJ2	**Nanjing**	**32.05**	**46**	*e*P	**P**	**11 50 06.5**	**+0.1**
NJ2				AP	pP	11 50 16.8	+0.9
NJ2				XP	sP	11 50 20.9	+0.8
NJ2				PP	PP	11 51 14.3	+1.2
NJ2				S	**S**	**11 55 16.0**	**+1.0**
NJ2				XS		11 55 31.0	
NJ2				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,390nm,6.1s						
NJ2				LR	LR		
	comp=N,740nm,19.6s,MS4.5						
NJ2				LR	LR		
	comp=E,710nm,20.7s,MS4.5						
NJ2				LR	LR		
	comp=Z,450nm,21.0s,MS4.1						
WMQ	**Urumqi**	**32.58**	**354**	P	**P**	**11 50 12.0**	**+1.1**
WMQ				XP	sP	11 50 25.5	+0.9
WMQ				PP	PP	11 51 21.0	+1.0
WMQ				S	**S**	**11 55 24.0**	**+0.8**
WMQ				SS	SS	11 57 20.0	-0.8
WMQ				AMB	AMB		
	comp=Z,29nm,1.0s,mb5.2						
WMQ				LR	LR		
	comp=N,356nm,18.0s,MS4.5						
WMQ				LR	LR		
	comp=E,842nm,22.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,287nm,20.0s,MS4.0						
BTO	**Baotou**	**33.10**	**25**	*e*P	**P**	**11 50 13.8**	**-1.7**
BTO				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE	**Sheshan**	**33.23**	**49**	P	**P**	**11 50 12.8**	**-3.9**
SSE				S	**S**	**11 55 32.9**	**-0.5**
SSE				XS		11 55 48.4	
SSE				AMB	AMB		
	comp=Z,21nm,1.1s,mb5.0						
SSE				AMB	AMB		
	comp=Z,188nm,6.0s						
SSE				LR	LR		
	comp=N,123nm,20.0s,MS3.7						
SSE				LR	LR		
	comp=E,100nm,20.0s,MS3.7						
SSE				LR	LR		
	comp=Z,173nm,18.3s,MS3.8						
SSE	**Sheshan**	**33.23**	**49**	P	**P**	**11 50 12.8**	**-3.9**
	comp=Z,21nm,1.1s,mb5.0						
SSE				S	**S**	**11 55 32.9**	**-0.5**
SSE				sS		11 55 48.4	
SSE				SS	SS	11 57 58.2	+22
SSE				LR	LR		
	comp=Z,170nm,18.3s,MS3.8						
ULHL	**Ulahol**	**33.78**	**338**	P	**P**	**11 50 22.3**	**+0.9**
	SNR=5.4						
HHC	**Hu-ho-hao-te**	**33.97**	**27**	⇑*i*P	**P**	**11 50 22.9**	**-0.1**
HHC				AP	pP	11 50 32.3	-0.2
HHC				XP	sP	11 50 37.0	+0.3
HHC				PP	PP	11 51 36.4	-0.6
HHC				PCP	PcP	11 52 59.6	-1.2
HHC				S	**S**	**11 55 47.1**	**+2.4**
HHC				XS		11 56 00.1	
HHC				SCP		11 56 38.3	
HHC				SS	SS	11 57 55.4	+2.7
HHC				SCS	ScS	12 00 40.5	-1.9
HHC				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
HHC				AMB	AMB		
	comp=Z,147nm,10.7s						
HHC				LR	LR		
	comp=N,252nm,15.4s,MS4.3						
HHC				LR	LR		
	comp=E,421nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=Z,307nm,19.0s,MS4.0						
KZA	**Kyzart**	**34.01**	**337**	P	**P**	**11 50 24.5**	**+1.2**
	SNR=10.0						
UCH	**Uchtor**	**34.42**	**336**	P	**P**	**11 50 27.3**	**+0.5**
	SNR=6.8						
TKM2	**Tokmak 2**	**34.61**	**338**	P	**P**	**11 50 29.1**	**+0.6**
	SNR=7.3						
AML	**Almayashu**	**34.66**	**335**	P	**P**	**11 50 30.3**	**+1.3**
	SNR=24						
AAK	**Ala-Archa**	**34.77**	**337**	P	**P**	**11 50 30.1**	**+0.2**
	SNR=9.1						
AAK	**Ala-Archa**	**34.77**	**337**	P	**P**	**11 50 31.0**	**+1.1**
AAK				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
AAK	**Ala-Archa**	**34.77**	**337**	*e*P	**P**	**11 50 29.8**	**-0.1**
	comp=Z,35nm,1.6s,mb5.0						
EKS2	**Erkin-Say**	**35.08**	**336**	P	**P**	**11 50 34.0**	**+1.6**
	SNR=11						

USP	Ospenovka	35.31	337	P	P	11 50 35.1	+0.6
	SNR=16						
BJT	Baijiatuau	35.56	32	eP	P	11 50 36.6	0.0
	comp=Z,57nm,1.2s,mb5.4						
MKAR	Makanchi Array	36.30	348	i P	P	11 50 42.6	-0.2
MKAR				pmax	pmax		
	comp=Z,33nm,0.9s						
SONM	Songino Array	38.27	15	P	P	11 50 59.8	+0.5
	comp=Z,20nm,1.0s,mb4.8,baz=204,slow=8.0,SNR=110						
SONM				PcP	PcP	11 53 14.0	+0.5
	comp=Z,2.5nm,0.7s,baz=204,slow=3.7,SNR=4.6						
ULN	Ulaanbaatar	38.47	16	eP	P	11 51 00.9	-0.1
	comp=Z,16nm,1.1s,mb4.7						
ZAK	Zakamensk	39.96	11	i P	P	11 51 13.5	+0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
KURK	Kurchatov	40.80	347	P	P	11 51 19.9	-0.3
KURK				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.7						
KURK	Kurchatov	40.80	347	eP	P	11 51 20.3	+0.1
	comp=Z,41nm,1.1s,mb5.0						
MOY	Mondy	40.83	8	eP	P	11 51 21.7	+1.2
SNY	Shenyang	40.91	36	⇑P	P	11 51 21.3	+0.1
SNY				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.8						
KS15	Wonju Array Si	41.19	45	eP	P	11 51 23.4	-0.2
TLY	Talaya	41.27	11	eP	P	11 51 25.5	+1.4
TLY				eS	S	11 57 31.0	-4.8
TLY				eSS	SS	12 00 32.0	-3.1
TLY				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
TLY				MLR	MLR		
	comp=Z,223nm,20.0s,MS4.0						
TLY	Talaya	41.27	11	⇑iP	P	11 51 25.7	+1.6
MBWA	Marble Bar	42.14	140	eP	P	11 51 31.0	-0.6
	comp=Z,30nm,1.3s,mb4.8						
ZAL	Zalesovo	42.88	354	P	P	11 51 37.8	+0.6
	comp=Z,12nm,0.7s,mb4.7,baz=298,slow=7.3,SNR=73						
ZAL				LR	LR	12 13 39.9	
	comp=Z,278nm,18.8s,MS4.2,baz=292,slow=42						
CN2	Changchun	43.21	35	eP	P	11 51 40.4	+0.3
CN2				eXP	sP	11 51 52.9	-0.9
CN2				PCP	PcP	11 53 29.6	0.0
CN2				eS	S	11 58 03.9	-0.4
CN2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.3						
CN2				AMB	AMB		
	comp=Z,290nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,13.0s,MS4.7						
CN2				LR	LR		
	comp=E,300nm,13.0s,MS4.7						
CN2				LR	LR		
	comp=Z,310nm,13.0s,MS4.4						
NVS	Novosibirsk	43.95	353	eP	P	11 51 44.4	-1.5
NVS				pmax	pmax		
	comp=N,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.8						
HIA	Hailar	44.15	26	eP	P	11 51 47.5	-0.1
	comp=Z,12nm,0.9s,mb4.6						
BVA0	Borovoye Array	45.10	342	i P	P	11 51 54.6	-0.6
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BVAR	Borovoye Array	45.10	342	P	P	11 51 55.1	-0.1
	comp=Z,4.1nm,0.7s,mb4.4,baz=143,slow=7.4,SNR=22						
BVAR				PcP	PcP	11 53 35.7	-0.2
	comp=Z,3.1nm,0.7s,baz=180,slow=2.9,SNR=4.6						
CHKZ	Chkalovo	45.59	342	P	P	11 51 59.1	0.0
CHKZ				pmax	pmax		
	comp=Z,46nm,1.3s,mb5.2						
CHKZ	Chkalovo	45.59	342	eP	P	11 51 59.1	0.0
	comp=Z,17nm,0.7s,mb5.1						
MDJ	Mudanjiang	46.10	37	P	P	11 52 02.6	-0.6
MDJ				AP	pP	11 52 11.1	-1.8
MDJ				XP	sP	11 52 15.5	-1.4
MDJ				PCP	PcP	11 53 38.1	-1.4
MDJ				PP	PP	11 53 51.3	-0.1
MDJ				SCP		11 57 29.5	
MDJ				PCS		11 57 33.3	
MDJ				S	S	11 58 46.6	+0.7
MDJ				XS		11 59 01.8	
MDJ				SCS	ScS	12 01 56.0	+2.4
MDJ				AMB	AMB		
	comp=Z,12nm,2.4s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,492nm,5.3s						
MDJ				LR	LR		
	comp=N,308nm,4.7s						
MDJ				LR	LR		
	comp=E,191nm,4.5s						
MDJ				LR	LR		
	comp=Z,551nm,4.2s						
KAKA	Kakadu	46.55	120	eP	P	11 52 05.9	-1.2
	comp=Z,8.7nm,0.5s,mb4.9						
MUN	Mundaring	48.83	153	eP	P	11 52 25.0	+0.2
	comp=Z,11nm,0.5s,mb5.1						
KLBR	Kellerberrin	49.23	151	eP	P	11 52 27.9	0.0
	comp=Z,406nm,1.4s						
NWAO	Narrogin (SRO)	50.10	152	P	P	11 52 34.2	-0.3
	comp=Z,14nm,0.7s,mb5.1,baz=317,slow=9.0,SNR=14						
NWAO	Narrogin (SRO)	50.10	152	eP	P	11 52 34.2	-0.4
	comp=Z,10nm,0.6s,mb5.0						
GNI	Garni	50.66	313	c iP	P	11 52 40.1	+1.4
GNI				pmax	pmax		
	comp=Z,20nm,0.9s						
GNI				MLR	MLR		
	comp=Z,100nm,18.0s						
GNI	Garni	50.66	313	LR	LR	12 18 24.3	
	comp=Z,91nm,18.5s,MS3.8,baz=118,slow=41						
GNI	Garni	50.66	313	eP	P	11 52 40.5	+1.8
	comp=Z,9.3nm,0.8s,mb4.8						
TI2	Plekhanov	51.24	315	eP	P	11 52 44.0	+0.9
SVE	Sverdlovsk	51.48	338	⇑eP	P	11 52 44.8	+0.1
SVE				pmax	pmax		
	comp=Z,44nm,1.9s,mb5.1						
WRA	Warramunga Arr	51.84	127	P	P	11 52 46.9	-1.0
	comp=Z,22nm,0.4s,mb5.5,baz=300,slow=10,SNR=140						
CLNS	Chul'man	51.90	22	eP	P	11 52 47.2	-0.6
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
KIV	Kislovodsk	53.48	317	P	P	11 53 00.9	+1.1
	comp=E,111nm,0.8s,mb5.8,SNR=7.1						
KIV	Kislovodsk	53.48	317	eP	P	11 53 00.5	+0.7
KIV				eS	S	12 00 32.8	+4.2
KIV				pmax	pmax		
	comp=N,12nm,1.1s						
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
KIV	Kislovodsk	53.48	317	eP	P	11 53 00.3	+0.5
	comp=Z,19nm,0.9s,mb5.0						
ASPA	Alice Springs	53.61	131	eP	P	11 53 00.3	-0.7
ASAR	Alice Springs	53.61	131	P	P	11 53 00.3	-0.7
	comp=Z,16nm,0.7s,mb5.0,baz=306,slow=6.7,SNR=80						
ASF	Jabal al Asfar	54.76	301	LR	LR	12 18 28.8	
	comp=Z,70nm,19.7s,MS3.7,baz=132,slow=38						
MALT	Malatya	54.78	309	eP	P	11 53 09.3	-0.1
	comp=Z,4.8nm,0.8s,mb4.6						
SOKR	Solikamsk	54.88	339	⇑iP	P	11 53 10.6	+0.7
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,360nm,19.0s,MS4.5						
YSS	Yuzh-Sakhalins	55.29	40	eP	P	11 53 12.0	-1.0
YSS				e	pP	11 53 20.3	-2.6
YSS				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
YSS	Yuzh-Sakhalins	55.29	40	⇓eP	P	11 53 13.0	0.0
SOC	Sochi	55.37	316	eP	P	11 53 11.0	-2.6
SOC				e		11 54 08.8	
SOC				e		11 55 12.5	
SOC				ePPP	PPP	11 56 25.7	-7.1
SOC				eS	S	12 00 54.2	+0.3
SOC				e		12 02 56.7	
SOC				eSS	SS	12 04 36.4	-2.0
SOC				pmax	pmax		
	comp=N,7.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.5s						
SOC				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
KMBO	Kilima Mbogo	56.00	261	LR	LR	12 17 21.5	
	comp=Z,166nm,18.4s,MS4.2,baz=92,slow=36						
EIL	Elat	56.08	298	LR	LR	12 18 09.3	
	comp=Z,59nm,21.0s,MS3.6,baz=115,slow=37						
EIL	Elat	56.08	298	eP	P	11 53 19.4	+0.4
YAK	Yakutsk	57.35	20	eP	P	11 53 25.7	-1.9
YAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK	Yakutsk	57.35	20	eP	P	11 53 26.0	-1.5
	comp=E,32nm,0.6s,mb5.5						
PMG	Port Moresby	58.41	108	P	P	11 53 35.7	+0.2
	comp=E,11nm,0.8s,mb5.0,baz=319,slow=9.3,SNR=4.6						
PMG	Port Moresby	58.41	108	eP	P	11 53 35.3	-0.3
	comp=E,11nm,0.7s,mb5.0						
BRTR	Keskin Array B	58.74	310	P	P	11 53 36.5	-1.1
	comp=E,3.2nm,0.7s,mb4.5,baz=124,slow=7.9,SNR=20						
MOS	Moscow	61.13	328	eP	P	11 53 52.5	-1.2
MOS				e		11 54 37.9	
MOS				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.6						
OBN	Obninsk	61.44	327	c iP	P	11 53 55.0	-0.8
OBN				e		11 56 08.0	
OBN				i S	S	12 02 05.5	-7.4
OBN				eSS	SS	12 06 10.5	-4.8
OBN				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.3						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
OBN	Obninsk	61.44	327	⇑eP	P	11 53 55.1	-0.7
OBN				LR	LR		
	comp=Z,100nm,16.0s,MS4.1						
CTA	Charters Tower	61.68	120	eP	P	11 53 58.3	+0.3
	comp=Z,11nm,1.0s,mb4.9						
CTAO	Charters Tower	61.68	120	eP	P	11 53 57.8	-0.1
TIRR	Tirgusor	63.47	314	⇑P	P	11 54 09.1	-0.4
CFR	Carcaliu	63.79	315	⇓P	P	11 54 11.1	-0.5
STKA	Stephens Creek	63.88	134	eP	P	11 54 12.4	0.0
	comp=Z,6.6nm,0.6s,mb4.8						
STKA	Stephens Creek	63.88	134	P	P	11 54 12.5	0.0
	comp=Z,5.4nm,0.4s,mb4.9,baz=320,slow=8.2,SNR=12						
TIXI	Tiksi	64.23	12	⇑iP	P	11 54 12.8	-1.3
TIXI				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
AKASG	Malin Array Be	64.26	321	P	P	11 54 13.2	-1.4
	comp=Z,7.1nm,0.9s,mb4.7,baz=87,slow=5.2,SNR=18						
MA2	Magadan	64.61	29	c iP	P	11 54 16.0	-0.7
MA2				e		11 56 43.3	
MA2				S	S	12 02 52.1	-0.5
MA2				pmax	pmax		
	comp=E,7.0nm,0.9s						
MA2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
MA2				MLR	MLR		
	comp=Z,700nm,27.5s,MS4.7						
MA2	Magadan	64.61	29	eP	P	11 54 16.0	-0.7
	comp=Z,29nm,0.9s,mb5.3						
VRI	Vrincioaia	64.89	315	⇑P	P	11 54 19.3	+0.6
VRI	Vrincioaia	64.89	315	⇓iP	P	11 54 19.3	+0.6
MLR	Muntele Rosu	65.37	315	⇓P	P	11 54 22.3	+0.5
MLR	Muntele Rosu	65.37	315	LR	LR	12 28 18.0	
	comp=Z,130nm,18.0s,MS4.2,baz=260,slow=41						
MLR	Muntele Rosu	65.37	315	⇓iP	P	11 54 22.5	+0.7
MNK	Minsk	66.03	325	eP	P	11 54 23.0	-2.9
BURAR	Bucovina Array	66.21	317	⇑P	P	11 54 27.9	+0.8
SEY	Seymchan	66.60	26	eP	P	11 54 30.6	+1.2
SEY				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
IDID	Didziasalis	66.84	326	eP	P	11 54 30.1	-0.9
IDID				AMPb	AMB	11 54 32.8	
	comp=Z,7.6nm,1.1s,mb4.7						
JOF	Joensuu	66.90	334	ep	P	11 54 30.2	-1.1
IIGN	Ignalina	67.14	326	eP	P	11 54 32.1	-0.8
IIGN				AMPb	AMB	11 54 35.2	
	comp=Z,8.4nm,1.1s,mb4.7						
IZAR	Zarasai	67.22	326	eP	P	11 54 32.9	-0.6
IZAR				AMPb	AMB	11 54 35.3	
	comp=Z,6.8nm,1.4s,mb4.5						
APA	Apatity	67.94	339	⇑iP	P	11 54 37.9	+0.1
APA				pmax	pmax		
	comp=Z,120nm,1.6s,mb5.7						
KWP	Kalwaria	68.16	319	eP	P	11 54 37.2	-2.3
KOLS	Kolonicke sedl	68.35	318	eP	P	11 54 41.7	+1.1
SUW	Suwalki	68.58	324	eP	P	11 54 40.5	-1.5
LSZ	Lusaka	68.69	249	eP	P	11 54 44.7	+1.4
	comp=Z,8.0nm,1.0s,mb4.6						
FINES	FINESS Array B	68.76	332	P	P	11 54 42.9	-0.1
	comp=Z,10.0nm,0.7s,mb4.8,baz=101,slow=7.0,SNR=56						
KAF	Kangasniemi	68.84	333	ep	P	11 54 42.5	-1.0
	comp=Z,15nm,0.8s,mb5.0,baz=104,slow=5.9						
KAF	Kangasniemi	68.84	333	eP	P	11 54 42.5	-1.0
KAF				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
CRVS	Cervenica-Dubn	68.88	318	eP	P	11 54 46.8	+2.9
CRVS				epP	pP	11 54 57.5	+3.5
OJC	Ojcow	70.10	319	eP	P	11 54 51.3	-0.1
KEV	Kevo	70.94	340	ep	P	11 54 55.6	-0.5
OKC	Ostrava-Krasne	71.13	319	eP	P	11 54 57.5	-0.1
ARCES	ARCESS Array B	71.36	340	P	P	11 54 59.1	+0.4
	comp=Z,9.2nm,0.6s,mb4.9,baz=90,slow=5.6,SNR=38						
ARCES				LR	LR	12 28 05.2	
	comp=Z,185nm,19.4s,MS4.4,baz=291,slow=37						
MORC	Moravsky Berou	71.51	319	⇑P	P	11 55 00.3	+0.4
MORC	Moravsky Berou	71.51	319	eP	P	11 54 59.8	-0.1
	comp=Z,3.0nm,1.0s,mb4.2						
MORC				e	pP	11 55 10.0	0.0
DPC	Dobruska-Polom	72.33	319	eP	P	11 55 05.3	+0.5
KSP	Ksiaz	72.38	320	eP	P	11 55 05.1	0.0
KSP				epP	pP	11 55 15.5	+0.3
KSP	Ksiaz	72.38	320	eP	P	11 55 04.1	-1.0
UPC	Upice	72.54	319	eP	P	11 55 07.2	+1.2
UPC				epP	pP	11 55 18.2	+2.0
PRU	Pruhonice	73.46	319	eP	P	11 55 11.8	+0.4
PVCC	Panska Ves	73.46	319	eP	P	11 55 10.3	-1.1
BILL	Bilibino	73.59	22	d iP	P	11 55 11.9	+0.1
BILL				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
BILL	Bilibino	73.59	22	eP	P	11 55 11.7	-0.1
	comp=Z,7.2nm,0.6s,mb4.8						
BRG	Berggiesshubel	73.87	320	eP	P	11 55 14.4	+0.6
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BRG	Berggiesshubel	73.87	320	eP	P	11 55 14.4	+0.6
	comp=Z,5.2nm,0.9s,mb4.5						
GERES	GERESS Array B	73.98	318	P	P	11 55 14.7	+0.3
	comp=Z,2.1nm,0.6s,mb4.2,baz=90,slow=5.3,SNR=22						
KHC	Kasperske Hory	74.06	318	eP	P	11 55 14.8	-0.1
KHC				epP	pP	11 55 22.9	-2.2
LBTB	Lobatse	74.28	240	eP	P	11 55 18.5	+1.9
CLL	Collm	74.48	320	i P	P	11 55 17.2	-0.1
CLL				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
CLL	Collm	74.48	320	i P	P	11 55 17.2	-0.1
	comp=Z,11nm,1.3s,mb4.6						
CLL	Collm	74.48	320	P	P	11 55 17.2	-0.1
	comp=Z,logA/T=0.9,mb4.6						
MOX	Moxa	75.35	320	eP	P	11 55 22.0	-0.3
GRA1	Grafenberg Arr	75.61	319	eP	P	11 55 24.3	+0.5
	comp=Z,12nm,1.2s,mb4.7						
GRA1				epP	pP	11 55 35.1	+1.1
GRF	Grafenberg Arr	75.61	319	eP	P	11 55 24.3	+0.5
GRF				e*PP	pP	11 55 35.1	+1.1
GRF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
GRF	Grafenberg Arr	75.61	319	eP	P	11 55 24.3	+0.5
	comp=Z,12nm,1.2s,mb4.7						
GRF				epP	pP	11 55 35.1	+1.1
NB2	NORSAR Subarra	75.78	330	P	P	11 55 23.9	-0.6
	comp=Z,7.5nm,1.0s,mb4.6,baz=92,slow=5.8						
NOA	NORSAR Array B	75.78	330	P	P	11 55 24.2	-0.3
	comp=Z,3.7nm,0.8s,mb4.4,baz=93,slow=5.7,SNR=8.3						
LPG	La Plagne	78.83	314	eP	P	11 55 42.3	+0.5
	comp=Z,31nm,0.9s,mb4.9						
JMIC	Jan Mayen	82.82	341	LR	LR	12 35 36.4	
	comp=Z,98nm,18.7s,MS4.2,baz=86,slow=38						
ESDC	Sonseca Array	87.53	310	P	P	11 56 27.6	+1.1
	comp=Z,1.7nm,0.8s,mb4.3,baz=52,slow=5.2,SNR=4.4						
SYO	Syowa Base	88.16	197	⇓P	P	11 56 29.3	+0.5
SYO	Syowa Base	88.16	197	⇑PcP	PcP	11 56 33.6	+2.8
SYO	Syowa Base	88.16	197	⇑pP	pP	11 56 40.5	+1.3
IMA	Indian Mountai	89.13	22	eP	P	11 56 35.2	+1.7
	comp=Z,21nm,0.6s,mb5.6						
SUMG	Summit	90.34	347	eP	P	11 56 40.3	+1.2
	comp=Z,13nm,1.0s,mb5.2						
SPU	Mount Spurr	92.02	26	eP	P	11 56 47.7	+0.8
MCK	McKinley	92.03	23	eP	P	11 56 47.4	+0.4
	comp=Z,11nm,1.1s,mb5.1						
RSO	Redoubt South	92.05	27	eP	P	11 56 47.9	+0.9
ILAR	Eielson Array	92.24	22	P	P	11 56 47.6	-0.3
	comp=Z,6.1nm,0.7s,mb5.0,baz=299,slow=4.2,SNR=94						
RES	Resolute Bay	94.01	2	eP	P	11 56 56.4	+0.6
	comp=Z,9.0nm,0.9s,mb5.2						
INK	Inuvik	94.18	15	eP	P	11 56 57.1	+0.4
	comp=Z,2.7nm,0.5s,mb4.9						
DAWY	Dawson	95.29	20	eP	P	11 57 02.6	+0.7
DBIC	Dimbokro	95.58	278	LR	LR	12 39 29.5	
	comp=Z,90nm,19.7s,MS4.2,baz=233,slow=35						
YKA	Yellowknife Ar	103.48	12	Pdiff	Pdif	11 57 39.2	+0.5
	comp=Z,0.3nm,0.6s,baz=331,slow=3.9,SNR=8.5						
YKA				PP	PP	12 01 54.2	-3.2
	comp=Z,0.2nm,0.7s,baz=333,slow=7.7,SNR=4.9						
YKA				PKKPbc		12 13 30.9	
	comp=Z,0.1nm,0.6s,baz=154,slow=2.1,SNR=4.8						
YKA	Yellowknife Ar	103.48	12	Pdif	Pdif	11 57 39.2	+0.5
YKA				PP	PP	12 01 54.2	-3.2
YKA				PKKPbc		12 13 30.9	
ELK	Elko	122.28	24	ePKPdf	PKPdf	12 02 35.3	-2.4
PDAR	Pinedale Array	122.57	19	PKP	PKPdf	12 02 35.1	-3.1
	comp=Z,0.9nm,0.6s,baz=101,slow=1.3,SNR=11						
NVAR	Mina Array Bea	122.85	28	PKP	PKPdf	12 02 37.1	-1.7
	comp=Z,2.5nm,0.6s,baz=286,slow=2.7,SNR=9.5						
MVU	Marysvale	125.40	23	ePKPdf	PKPdf	12 02 42.4	-1.5
MSU	Marysvale	125.41	23	ePKPdf	PKPdf	12 02 41.8	-2.1
TXAR	Lajitas Array	136.74	20	PKhKP		12 02 53.0	
	comp=Z,0.2nm,0.6s,baz=105,SNR=6.0						
TXAR				PKP	PKPdf	12 03 03.0	-2.5
	comp=Z,1.1nm,0.7s,baz=38,slow=0.9,SNR=21						
JCT	Junction City	136.83	15	ePKPdf	PKPdf	12 03 02.2	-3.4
BDFB	Brasilia	141.13	259	PKP	PKPdf	12 03 11.5	-2.4
	comp=Z,1.0nm,0.4s,baz=148,slow=5.6,SNR=3.5						
TRQA	Tornquist	144.79	217	ePKPdf	PKPdf	12 03 15.1	-4.5
PLCA	Paso Flores	147.03	204	PKPbc	PKPdf	12 03 23.1	-0.3
	comp=Z,4.9nm,0.8s,baz=151,slow=2.8,SNR=12						
PLCA	Paso Flores	147.03	204	ePKPbc	PKPdf	12 03 22.7	-0.6
LPAZ	La Paz	160.29	253	PKP	PKPdf	12 03 40.2	-2.2
	comp=Z,1.2nm,0.8s,baz=116,slow=3.1,SNR=4.1						
LPAZ	La Paz	160.29	253	PKP	PKPdf	12 03 40.2	-2.2

IDC 20 11:56:11.9±1.6**, 5.24N**×**94.54E, mb3.6**/5**, mb1 3.9**/6**, mb1mx3.7**/18**, mbtmp3.7**/6**, ML3.9**/1**, Error ellipse: s-maj=69.8km s-min=23.3km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.82	18	Pn	P	11 59 38.3	+6.5
	0.2nm,0.3s,baz=211,slow=11,SNR=15						
SONM	Songino Array	43.64	12	P	P	12 04 18.0	-2.0
	0.5nm,0.7s,baz=192,slow=9.1,SNR=5.9						
WRA	Warramunga Arr	46.45	124	P	P	12 04 40.8	-2.0
	1.3nm,0.7s,baz=303,slow=9.2,SNR=13						
ASAR	Alice Springs	47.95	128	P	P	12 04 53.0	-1.7
	0.2nm,0.5s,baz=304,slow=8.1,SNR=6.2						
ZAL	Zalesovo	49.19	352	P	P	12 05 02.4	-1.4
	0.9nm,0.3s,baz=317,slow=6.7,SNR=4.1						
GERES	GERESS Array B	80.04	319	P	P	12 08 23.4	-1.6
	0.4nm,0.6s,baz=90,slow=5.3,SNR=6.3						

IDC 20 12:01:46.9±2.7**, 5.25S**×**123.03E, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.6**/15**, mbtmp3.6**/3**, ML3.3**/1**, Error ellipse: s-maj=215.1km s-min=27.2km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.29	144	P	P	12 06 01.8	-2.2
	0.1nm,0.3s,baz=317,slow=12,SNR=11						
ASAR	Alice Springs	21.10	151	P	P	12 06 33.5	-2.0
	1.3nm,0.6s,baz=328,slow=12,SNR=18						
SONM	Songino Array	54.85	346	P	P	12 11 19.0	-2.3
	0.5nm,0.6s,baz=168,slow=6.8,SNR=4.9						

*BJI **20** 12:14:49.6, 4.35S×153.29E, h36^{km}, mB5.5, mb5.2, Ms5.0, Msz4.8*

*MOS **20** 12:14:50.8±0.9, 4.34S×152.78E, h33^{km}, mb5.4/20, MS5.0/7, Error ellipse: s-maj=16.3km s-min=10.1km az=104.0*

*NEIC **20** 12:14:51.8±0.1, 4.69S×153.11E, mb5.3/40, MS4.8/18, MW5.5, Error ellipse: s-maj=5.2km s-min=3.5km az=75.0, Moment Tensor Solution. s11 Moment tensor: Scale 10^{17} Nm; M_{rr}0.18; $M_{\theta\theta}$0.99; $M_{\phi\phi}$-1.17; $M_{r\theta}$1.27; $M_{\theta\phi}$-1.46; $M_{\phi r}$0.45; Best double couple: $M_0$2.3×10^{17} NP1:ϕ_s162°, δ53°, λ3°. NP2:ϕ_s70°, δ87°, λ143°. Principal axes: T 2.21, Plg27°, Azm20°; N .11, Plg53°, Azm247°; P -2.32, Plg23°, Azm122°;*

*HRVD **20** 12:14:51.8±0.1, 4.83S×153.06E, h26^{km}, MW5.5/66, Centroid moment Tensor Solution. LP body waves: s61,c108;Mantle waves: s66,c137; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.19±.02; $M_{\theta\theta}$0.10±.02; $M_{\phi\phi}$0.09±.02; $M_{r\theta}$2.32±.07; $M_{\theta\phi}$-0.45±.02; $M_{\phi r}$0.72±.04; Best double couple: $M_0$2.459×10^{17} NP1: ϕ_s162°, δ9°, λ-3°. NP2:ϕ_s255°, δ90°, λ-99°. Principal axes: T 2.29, Plg44°, Azm354°; N .338, Plg9°, Azm255°; P -2.628, Plg45°, Azm156°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **20** 12:14:52.3±1.4, 4.68S×153.05E, h50^{km}±12^{km}, mb4.9/19, mb1 5.0/21, mb1mx5.0/21, mbtmp5.1/21, ML4.3/2, MS4.7/16, Ms1 4.7/16, ms1mx4.6/22 Error ellipse: s-maj=13.4km s-min=9.0km az=114.0*

ISC 20 12:14:49.8±1.0**, 4.67S**±0.03×**153.12E**±0.04**, h45^{km}**±9^{km}**, h45^{km}**±2.2^{km}**:pP-P, n347, σ0^{s}88**/234**, mb5.3**/83**, MS4.7**/45**, 27C-12D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.56	231	c iP	P	12 16 40.9	+0.9
PMG	Port Moresby	7.56	231	P	P	12 16 40.8	+0.8
	30nm,0.3s,baz=43,slow=16,SNR=130						
PMG				S	S	12 18 03.5	-1.7
	32nm,0.3s,baz=154,slow=21,SNR=13						
PMG	Port Moresby	7.56	231	eP	P	12 16 40.4	+0.4
	118nm,0.5s						
PMG				eS	S	12 18 02.5	-2.8
HNR	Honiara	8.26	125	eP	P	12 16 50.9	+1.1
	607nm,0.8s						
CTA	Charters Tower	16.72	203	⇓iP	P	12 18 43.5	+1.1
	58nm,1.2s						
CTA	Charters Tower	16.72	203	P	P	12 18 43.5	+1.1
	0.6nm,0.3s,baz=26,slow=14,SNR=22						
CTA				S	S	12 21 47.6	+1.9
	0.2nm,0.3s,baz=346,slow=8.0,SNR=2.6						
CTAO	Charters Tower	16.72	203	eP	P	12 18 43.6	+1.2
	366nm,1.6s						
GUMO	Guam	19.90	336	eP	P	12 19 22.0	+1.5
	629nm,1.3s						
NOUC	Port Laguerre	21.53	145	eP	P	12 19 36.2	-0.9
NOUC	Port Laguerre	21.53	145	eP	P	12 19 36.2	-0.9
DZM	Mont Dzumac	21.58	144	⇑eP	P	12 19 35.0	-2.6
KAKA	Kakadu	21.93	247	⇑iP	P	12 19 39.8	-1.3
	1µm,1.3s,mb6.2						
KAKA				eS	S	12 23 36.9	+1.4
WRA	Warramunga Arr	23.77	229	i P	P	12 19 59.2	0.0
WRA				pmax	pmax		
	comp=Z,39nm,0.5s						
WRA	Warramunga Arr	23.77	229	P	P	12 19 59.4	+0.2
	comp=Z,39nm,0.5s,mb5.1,baz=52,slow=9.8,SNR=234						
WRA				S	S	12 24 09.3	+1.0
	comp=Z,2.3nm,0.8s,baz=52,slow=15,SNR=5.4						
WRA				ScP		12 27 18.0	
	comp=Z,7.3nm,1.0s,baz=48,slow=2.5,SNR=6.1						
WRA				PKiKP		12 31 25.6	
	comp=Z,1.0nm,0.7s,baz=324,slow=0.9,SNR=13						
ASAR	Alice Springs	26.46	223	P	P	12 20 23.4	-1.4
	comp=Z,13nm,0.5s,mb4.7,baz=55,slow=8.8,SNR=143						
ASAR				PcP	PcP	12 23 49.6	+0.2
	comp=Z,4.6nm,0.7s,baz=51,slow=2.5,SNR=4.2						
ASAR				S	S	12 24 58.3	+5.0
	comp=Z,2.0nm,0.8s,baz=30,slow=20,SNR=2.1						
ASAR				ScP		12 27 25.9	
	comp=Z,3.9nm,0.8s,baz=59,slow=3.1,SNR=6.7						
ASAR				LR	LR	12 30 49.7	

	comp=Z,612nm,21.3s,MS4.1,baz=46,slow=36						
ASAR				PKiKP		12 31 27.1	
	comp=Z,0.9nm,0.9s,baz=131,slow=0.7,SNR=5.7						
ASAR	Alice Springs	26.46	223	P	P	12 20 23.4	-1.4
ASAR				PcP	PcP	12 23 49.6	+0.2
ASAR				S	S	12 24 58.3	+5.0
ASAR				ScP		12 27 25.9	
ASAR				LR	LR	12 30 49.7	
ASPA	Alice Springs	26.46	223	eP	P	12 20 24.0	-0.8
ASPA				eS	S	12 25 07.5	+14
ASPA				eSCS	ScS	12 31 17.7	+4.5
STKA	Stephens Creek	29.14	200	eP	P	12 20 46.8	-2.1
	comp=Z,23nm,1.0s,mb4.9						
STKA				i PCP	PcP	12 23 56.8	+0.9
STKA				i SCP		12 27 37.5	
STKA	Stephens Creek	29.14	200	P	P	12 20 47.5	-1.5
	comp=Z,33nm,1.1s,mb5.0,baz=16,slow=8.2,SNR=25						
STKA				PcP	PcP	12 23 56.4	+0.5
	comp=Z,13nm,0.8s,baz=89,slow=1.8,SNR=4.4						
STKA				ScP		12 27 33.0	
	comp=Z,3.3nm,0.8s,baz=315,slow=17,SNR=2.4						
STKA				PKiKP		12 31 28.8	
	comp=Z,2.4nm,1.1s,baz=358,slow=16,SNR=3.4						
STKA				LR	LR	12 31 46.2	
	comp=Z,3µm,22.0s,MS4.8,baz=15,slow=35						
FITZ	Fitzroy Crossi	30.00	241	⇓iP	P	12 20 54.8	-1.8
	comp=Z,88nm,0.5s,mb5.7						
CBIJ	Chichi jima	33.30	342	LR	LR	12 33 32.7	
	comp=Z,1µm,21.9s,MS4.6,baz=173,slow=34						
TOO	Toolangi	33.48	191	eP	P	12 21 26.9	-0.1
	comp=Z,0.8nm,1.5s						
AFI	Afiamalu	35.79	107	P	P	12 21 46.5	-0.4
	comp=Z,8.8nm,0.6s,mb4.9						
OUZ	Omahuta	35.81	151	P	P	12 21 47.5	+0.6
OUZ	Omahuta	35.81	151	PN	P	12 21 47.5	+0.6
OUZ	Omahuta	35.81	151	PN	P	12 21 47.5	+0.6
MBWA	Marble Bar	36.31	240	eP	P	12 21 49.5	-1.8
	comp=Z,72nm,0.8s,mb5.7						
MBWA				LR	LR		
	comp=Z,905nm,20.0s,MS4.5						
WCZ	Waipu Caves	36.75	151	P	P	12 21 55.4	+0.5
WCZ	Waipu Caves	36.75	151	PN	P	12 21 55.4	+0.5
WCZ	Waipu Caves	36.75	151	PN	P	12 21 55.4	+0.5
TAU	Tasmania Unive	38.42	187	eP	P	12 22 09.4	+0.7
	comp=Z,193nm,1.4s,mb5.6						
TAU				e		12 22 16.5	
TAU				LR	LR		
	comp=Z,791nm,22.0s,MS4.5						
HIZ	Hauiti	39.06	153	eP	P	12 22 15.2	+1.1
HIZ	Hauiti	39.06	153	PN	P	12 22 15.4	+1.3
HIZ	Hauiti	39.06	153	PN	P	12 22 15.4	+1.3
JOW	Kunigami	39.48	324	P	P	12 22 18.6	+1.0
	comp=Z,160nm,1.2s,mb5.6,baz=138,slow=7.0,SNR=4.8						
JOW				LR	LR	12 35 56.4	
	comp=Z,625nm,21.4s,MS4.4,baz=168,slow=32						
JOW	Kunigami	39.48	324	P	P	12 22 18.6	+1.0
JOW				LR	LR	12 35 56.4	
JHJ	Hachijo jima 2	39.65	342	LR	LR	12 37 54.5	
	comp=Z,656nm,18.3s,MS4.5,baz=246,slow=35						
URZ	Urewera	39.94	150	P	P	12 22 21.9	+0.6
	comp=Z,39nm,0.8s,mb5.2,baz=308,slow=2.3,SNR=24						
URZ				LR	LR	12 36 52.8	
	comp=Z,802nm,21.4s,MS4.5,baz=200,slow=33						
URZ	Urewera	39.94	150	eP	P	12 22 21.4	0.0
URZ	Urewera	39.94	150	PN	P	12 22 21.4	0.0
URZ				PcP	PcP	12 24 24.8	-2.0
URZ	Urewera	39.94	150	PN	P	12 22 21.4	0.0
URZ				PcP	PcP	12 24 24.8	-2.0
QRZ	Quartz Range	40.00	157	eP	P	12 22 22.8	+1.0
QRZ	Quartz Range	40.00	157	PN	P	12 22 22.7	+0.9
QRZ				PcP	PcP	12 24 25.5	-1.5
QRZ	Quartz Range	40.00	157	PN	P	12 22 22.7	+0.9
QRZ				PcP	PcP	12 24 25.5	-1.5
MWZ	Matawai	40.20	150	eP	P	12 22 24.4	+0.8
MWZ	Matawai	40.20	150	PN	P	12 22 24.6	+1.0
MWZ	Matawai	40.20	150	PN	P	12 22 24.6	+1.0
PUZ	Puketiti	40.38	149	eP	P	12 22 24.7	-0.3
PUZ	Puketiti	40.38	149	PN	P	12 22 24.7	-0.3
PUZ	Puketiti	40.38	149	PN	P	12 22 24.7	-0.3
NNZ	Nelson	40.67	156	eP	P	12 22 27.8	+0.4
NNZ	Nelson	40.67	156	PN	P	12 22 27.8	+0.5
NNZ	Nelson	40.67	156	PN	P	12 22 27.8	+0.5
KNZ	Kokohu	40.81	150	eP	P	12 22 28.4	-0.1
KNZ	Kokohu	40.81	150	PN	P	12 22 28.4	-0.2
KNZ	Kokohu	40.81	150	PN	P	12 22 28.4	-0.2
THZ	Tophouse	40.95	157	eP	P	12 22 29.7	0.0
THZ	Tophouse	40.95	157	PN	P	12 22 29.7	0.0
THZ	Tophouse	40.95	157	PN	P	12 22 29.7	0.0
MRZ	Mangatainoka R	41.13	154	eP	P	12 22 30.6	-0.6
MRZ	Mangatainoka R	41.13	154	PN	P	12 22 30.6	-0.6
MRZ				PcP	PcP	12 24 28.6	-2.0
MRZ	Mangatainoka R	41.13	154	PN	P	12 22 30.6	-0.6
MRZ				PcP	PcP	12 24 28.6	-2.0
FOZ	Fox Glacier	41.41	162	PN	P	12 22 33.4	-0.1
FOZ	Fox Glacier	41.41	162	PN	P	12 22 33.4	-0.1
BFZ	Birch Farm	41.44	153	eP	P	12 22 33.5	-0.3
BFZ	Birch Farm	41.44	153	PN	P	12 22 33.5	-0.2
BFZ	Birch Farm	41.44	153	PN	P	12 22 33.5	-0.2
LTZ	Lake Taylor	41.59	159	P	P	12 22 35.5	+0.5
LTZ	Lake Taylor	41.59	159	PN	P	12 22 35.6	+0.6
LTZ	Lake Taylor	41.59	159	PN	P	12 22 35.6	+0.6
KHZ	Kahutara	41.75	157	eP	P	12 22 35.7	-0.6
KHZ	Kahutara	41.75	157	⇑PN	P	12 22 35.9	-0.4
KHZ	Kahutara	41.75	157	⇑PN	P	12 22 35.9	-0.4
MSZ	Milford Sound	41.91	164	PN	P	12 22 38.6	+1.0
MSZ	Milford Sound	41.91	164	PN	P	12 22 38.6	+1.0
RPZ	Rata Peaks	41.99	161	P	P	12 22 38.8	+0.6
	comp=Z,66nm,0.6s,mb5.4,baz=315,slow=1.5,SNR=58						
RPZ	Rata Peaks	41.99	161	PcP	PcP	12 24 31.7	-1.8
RPZ	Rata Peaks	41.99	161	PcP	PcP	12 24 31.7	-1.8
LBZ	Lake Benmore	42.31	162	eP	P	12 22 40.5	-0.4
LBZ	Lake Benmore	42.31	162	PN	P	12 22 40.5	-0.4
LBZ	Lake Benmore	42.31	162	PN	P	12 22 40.5	-0.4
KLBR	Kellerberrin	42.62	227	eP	P	12 22 42.2	-1.4
	comp=Z,160nm,0.5s,mb6.0						
MAJO	Matsushiro	43.30	342	eP	P	12 22 47.3	-1.8
	comp=Z,10nm,0.6s,mb4.7						
MAJO				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
MAT	Matsushiro	43.30	342	eP	P	12 22 48.0	-1.1
	comp=Z,12nm,0.7s,mb4.7						
MAT				eS	S	12 29 11.0	-1.9
MAT				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
MAT	Matsushiro	43.30	342	P	P	12 22 47.6	-1.5
MAT				S	S	12 29 11.2	-1.7
TUZ	Tuapeka	43.56	163	eP	P	12 22 51.0	-0.1
TUZ	Tuapeka	43.56	163	PN	P	12 22 51.0	0.0
TUZ	Tuapeka	43.56	163	PN	P	12 22 51.0	0.0
NWAO	Narrogin (SRO)	43.70	226	LR	LR	12 40 58.3	
	comp=Z,7.6nm,19.7s,baz=74,slow=36						
NWAO	Narrogin (SRO)	43.70	226	eP	P	12 22 51.9	-0.5
MUN	Mundaring	43.95	227	eP	P	12 22 53.2	-1.2
	comp=Z,20nm,0.8s,mb4.9						
SSE	Sheshan	46.84	322	P	P	12 23 17.8	+0.4
SSE				S	S	12 30 03.5	-0.2
SSE				AMB	AMB		
	comp=Z,46nm,1.3s,mb5.2						
SSE				LR	LR		
	comp=N,579nm,27.4s,MS4.5						
SSE				LR	LR		
	comp=E,552nm,27.5s,MS4.5						
SSE				LR	LR		
	comp=Z,969nm,20.0s						
SSE	Sheshan	46.84	322	P	P	12 23 17.8	+0.4
	comp=Z,46nm,1.3s,mb5.2						
SSE				pP	pP	12 23 31.2	+1.4
SSE				S	S	12 30 03.5	-0.2
SSE				sS		12 30 29.1	
SSE				SS	SS	12 33 30.5	+7.2
SSE				LR	LR		
	comp=Z,970nm,20.0s,MS4.8						
KS15	Wonju Array Si	48.04	333	eP	P	12 23 26.6	-0.1
INCN	Inchon	48.65	332	eP	P	12 23 31.9	+0.5
	comp=Z,190nm,1.2s,mb6.0						
INCN				e	pP	12 23 43.7	-0.2
ASAJ	Asahikawa	49.48	350	P	P	12 23 38.8	+1.0
	comp=Z,37nm,0.9s,mb5.4,baz=225,slow=9.2,SNR=14						
ASAJ				LR	LR	12 42 05.5	
	comp=Z,800nm,21.4s,MS4.7,baz=159,slow=33						
YSS	Yuzh-Sakhalins	52.21	351	⇓eP	P	12 23 58.8	+0.4
YSS				MLR	MLR		
	comp=Z,200nm,26.0s,MS4.0						
YSS	Yuzh-Sakhalins	52.21	351	⇓eP	P	12 23 58.9	+0.5
TIA	Tai’an	52.80	323	eP	P	12 24 02.4	-0.5
TIA				AMB	AMB		
	comp=Z,22nm,1.0s,mb5.0						
MDJ	Mudanjiang	53.41	339	P	P	12 24 06.8	-0.6
MDJ				AP	pP	12 24 20.1	+0.1
MDJ				PCP	PcP	12 25 13.1	-1.0
MDJ				PP	PP	12 26 07.0	-2.5
MDJ				PCS		12 29 10.8	
MDJ				S	S	12 31 35.9	+1.2
MDJ				SCS	ScS	12 33 49.5	0.0
MDJ				SS	SS	12 35 16.6	+2.2
MDJ				AMB	AMB		
	comp=Z,31nm,1.2s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,375nm,5.6s						
MDJ				LR	LR		
	comp=N,674nm,30.8s,MS4.5						
MDJ				LR	LR		
	comp=E,359nm,32.5s,MS4.5						
MDJ				LR	LR		
	comp=Z,966nm,28.7s,MS4.7						
MDJ	Mudanjiang	53.41	339	eP	P	12 24 06.2	-1.2
	comp=Z,117nm,1.5s,mb5.6						
ENH	Enshi	54.30	313	eP	P	12 24 13.4	-0.7
	comp=Z,91nm,1.2s,mb5.6						
ENH				LR	LR		
	comp=Z,813nm,20.0s,MS4.8						
CN2	Changchun	54.31	336	eP	P	12 24 13.8	-0.2
CN2				eAP	pP	12 24 25.8	-0.9
CN2				PCP	PcP	12 25 16.6	-0.9
CN2				eS	S	12 31 46.5	-0.4
CN2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
CN2				AMB	AMB		
	comp=Z,490nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,21.0s,MS4.8						
CN2				LR	LR		
	comp=E,500nm,21.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
GYA	Guiyang	54.57	307	⇑iP	P	12 24 16.6	+0.5
GYA				PP	PP	12 26 20.4	+0.3
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
GYA				AMB	AMB		
	comp=Z,170nm,4.2s						
GYA				LR	LR		
	comp=N,660nm,18.9s,MS4.9						
GYA				LR	LR		
	comp=E,830nm,20.1s,MS4.9						
GYA				LR	LR		
	comp=Z,1µm,20.4s,MS5.0						
BJT	Baijiatuau	55.95	326	eP	P	12 24 25.5	-0.4
	comp=Z,7.5nm,0.7s,mb4.8						
BJT				LR	LR		
	comp=Z,893nm,22.0s,MS4.8						
POHA	Pohakuloa	56.00	63	eP	P	12 24 26.5	0.0
	comp=Z,833nm,0.8s						
XAN	Xi’an	56.75	316	P	P	12 24 30.8	-0.9
XAN				AP	pP	12 24 38.9	-5.6
XAN				AMB	AMB		
	comp=Z,25nm,1.3s,mb5.1						
KLR	Kul’dur	56.81	343	eP	P	12 24 28.4	-3.6
KLR				e		12 25 24.2	
KLR				pmax	pmax		
	comp=Z,62nm,1.6s,mb5.4						
KMI	Kunming	57.18	304	P	P	12 24 36.1	+1.2
KMI				PP	PP	12 26 44.3	+0.7
KMI				S	S	12 32 25.3	+0.1
KMI				AMB	AMB		
	comp=Z,19nm,1.4s,mb4.9						
KMI				AMB	AMB		
	comp=Z,164nm,4.5s						
KMI				LR	LR		
	comp=N,357nm,19.1s,MS4.8						
KMI				LR	LR		
	comp=E,700nm,22.8s,MS4.8						
KMI				LR	LR		
	comp=Z,1µm,24.6s,MS4.9						
KMI	Kunming	57.18	304	P	P	12 24 36.1	+1.2
	comp=Z,19nm,1.4s,mb4.9						
KMI				pP	pP	12 24 54.2	+6.5
KMI				sP	sP	12 25 03.5	+11
KMI				PP	PP	12 26 44.2	+0.6
KMI				S	S	12 32 25.3	+0.1
KMI				sS		12 32 55.6	
KMI				SS	tx	12 33 14.7	
KMI				LR	LR		
	comp=Z,1µm,24.6s,MS4.9						
PPT	Papeete	57.46	108	eP	P	12 24 36.8	-0.2
	comp=Z,40nm,1.0s,mb5.4						
PPT	Papeete	57.46	108	eLR	LR	12 41 26.4	
	comp=Z,394nm,21.5s						
PPT	Papeete	57.46	108	P	P	12 24 37.1	+0.1
	comp=Z,36nm,0.6s,mb5.6,baz=232,slow=8.4,SNR=3.5						
PET	Petropavlovsk	57.67	4	c iP	P	12 24 37.9	-0.1
PET				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
PET	Petropavlovsk	57.67	4	⇑iP	P	12 24 37.9	-0.1
TIAR	Tiarei	57.68	108	eP	P	12 24 38.4	-0.1
	comp=Z,187nm,0.8s,mb6.2						
TVO	Taravao	57.79	108	eP	P	12 24 39.3	0.0
	comp=Z,94nm,0.8s,mb5.9						
CM31	Chiang Mai Arr	58.11	295	eP	P	12 24 41.8	+0.3
	comp=Z,20nm,0.8s,mb5.2						
CM31				e	pP	12 24 54.7	+0.4
CM31				LR	LR		
	comp=Z,537nm,20.0s,MS4.7						
CMAR	Chiang Mai Arr	58.11	295	i P	P	12 24 41.5	0.0
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMAR	Chiang Mai Arr	58.11	295	P	P	12 24 41.5	0.0
	comp=Z,7.2nm,0.8s,mb4.8,baz=115,slow=5.1,SNR=41						
CMAR				LR	LR	12 47 48.0	
	comp=Z,311nm,20.2s,MS4.4,baz=110,slow=34						
CMAR				PKP2ab		12 54 53.5	
	comp=Z,0.7nm,0.8s,baz=289,slow=5.1,SNR=4.3						
TBI	Tubuai	58.32	114	eLR	LR	12 41 42.7	
	comp=Z,2µm,29.8s,baz=288						
PMOR	Pomariorio Ree	58.87	105	eP	P	12 24 46.4	-0.4
	comp=Z,128nm,1.1s,mb5.9						
CD2	Chengdu	58.90	310	P	P	12 24 46.8	0.0
CD2				AMB	AMB		
	comp=Z,180nm,1.0s,mb6.1						
MEH	Mehetia	58.92	108	eP	P	12 24 46.8	-0.4
	comp=Z,43nm,0.9s,mb5.5						
HHC	Hu-ho-hao-te	59.13	324	⇓iP	P	12 24 48.6	+0.3
HHC				AP	pP	12 25 00.4	-0.7
HHC				XP	sP	12 25 07.5	+1.1
HHC				PCP	PcP	12 25 34.8	-1.5
HHC				S	S	12 32 55.6	+5.1
HHC				SCS	ScS	12 34 30.8	+0.1
HHC				SS	SS	12 36 42.5	-4.3
HHC				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.9						
HHC				LR	LR		
	comp=E,192nm,1.2s						
HHC				LR	LR		
	comp=Z,1µm,25.0s,MS4.9						
BTO	Baotou	59.89	323	eP	P	12 24 54.1	+0.6
BTO				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
LZH	Lanzhou	61.36	316	⇑P	P	12 25 04.0	+0.4
LZH				PP	PP	12 27 22.3	+1.2
LZH				eS	S	12 33 18.3	-0.9
LZH				SS	SS	12 37 21.5	-0.2
LZH				AMB	AMB		
	comp=Z,48nm,1.3s,mb5.5						
LZH				AMB	AMB		
	comp=Z,167nm,6.1s						
LZH				LR	LR		
	comp=N,1µm,15.1s						
LZH				LR	LR		
	comp=Z,1µm,17.7s,MS5.1						
LZH	Lanzhou	61.36	316	⇑P	P	12 25 04.0	+0.4
	comp=Z,48nm,1.3s,mb5.5						
LZH				pP	pP	12 25 21.8	+5.3
LZH				sP	sP	12 25 29.5	+7.8
LZH				PP	PP	12 27 22.3	+1.2
LZH				eS	S	12 33 18.3	-0.9
LZH				sS		12 33 47.1	
LZH				SS	SS	12 37 21.5	-0.2
LZH				LR	LR		
	comp=Z,1µm,17.7s,MS5.1						
DRV	Dumont d’Urvil	62.55	186	P	P	12 25 18.0	+6.8
MA2	Magadan	64.07	359	ceP	P	12 25 20.1	-1.1
MA2				e*PP	pP	12 25 34.0	-0.2
MA2				eS	S	12 33 52.1	-0.8
MA2				ePS	PS	12 34 07.0	-12
MA2				pmax	pmax		
	comp=E,7.0nm,0.9s						
MA2				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
MA2				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
MA2	Magadan	64.07	359	eP	P	12 25 20.1	-1.1
	comp=Z,84nm,1.0s,mb5.7						
MA2				e	pP	12 25 33.9	-0.3
CLNS	Chul’man	65.47	343	eP	P	12 25 30.7	+0.4
CLNS				pmax	pmax		
	comp=N,13nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
GTA	Gaotai	65.78	317	P	P	12 25 33.1	+0.5
GTA				PCP	PcP	12 26 04.0	+0.7
GTA				PP	PP	12 28 01.6	+1.7
GTA				S	S	12 34 18.3	+4.2
GTA				SCS	ScS	12 35 24.3	+3.5
GTA				AMB	AMB		
	comp=Z,29nm,1.5s,mb5.1						
GTA				AMB	AMB		
	comp=Z,243nm,12.0s						
GTA				LR	LR		
	comp=N,343nm,25.2s						
GTA				LR	LR		
	comp=E,466nm,31.3s						
GTA				LR	LR		
	comp=Z,574nm,30.2s,MS4.6						
ULN	Ulaanbaatar	66.05	328	eP	P	12 25 34.9	+0.7
	comp=Z,25nm,1.2s,mb5.1						
ULN				LR	LR		
	comp=Z,586nm,22.0s,MS4.8						
TAOE	Nuku Hiva Isla	66.33	98	eLR	LR	12 45 06.8	
SONM	Songino Array	66.39	328	P	P	12 25 36.8	+0.5
	comp=Z,5.9nm,0.5s,mb4.9,baz=143,slow=6.2,SNR=56						
SONM				PKP2bc		12 54 11.1	
	comp=Z,1.6nm,0.9s,baz=276,slow=2.4,SNR=9.0						
SONM	Songino Array	66.39	328	P	P	12 25 36.8	+0.5
SONM				⇑e		12 54 11.1	
SHL	Shillong	66.52	300	eP	P	12 25 38.0	+0.5
SEY	Seymchan	67.42	360	eP	P	12 25 43.8	+1.3
SEY				e	pP	12 25 55.6	0.0
SEY				e		12 26 11.9	
SEY				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
CASY	Casey	68.23	197	eP	P	12 25 46.6	-0.9
	comp=Z,81nm,1.6s,mb5.5						
CASY				LR	LR		
	comp=Z,705nm,22.0s,MS4.8						
LSA	Lhasa	68.43	304	P	P	12 25 50.8	+1.4
LSA	Lhasa	68.43	304	eP	P	12 25 50.7	+1.3
	comp=Z,11nm,0.8s,mb4.9						
YAK	Yakutsk	68.91	348	eP	P	12 25 50.2	-1.6
YAK				e	pP	12 26 04.2	-0.7
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK	Yakutsk	68.91	348	eP	P	12 25 52.1	+0.3
	comp=E,72nm,1.3s,mb5.4						
YAK				LR	LR		
	comp=Z,451nm,20.0s,MS4.7						
ZAK	Zakamensk	69.55	329	eP	P	12 25 55.5	-0.4
ZAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
BOD	Bodaibo	69.78	339	eP	P	12 25 55.1	-2.1
BOD				e	pP	12 26 08.0	-2.4
BOD				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
BOD				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
TLY	Talaya	70.13	330	P	P	12 25 59.1	-0.3
	comp=Z,45nm,1.0s,mb5.3,SNR=8.5						
TLY	Talaya	70.13	330	eP	P	12 26 00.4	+1.0
TLY				e		12 26 24.8	
TLY				eS	S	12 35 05.3	-0.6
TLY				ePS	PS	12 35 48.6	+10
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
TLY	Talaya	70.13	330	eP	P	12 25 59.9	+0.5
	comp=Z,11nm,1.2s,mb4.7						
IRK	Irkutsk	70.15	331	eP	P	12 25 59.5	-0.1
MOY	Mondy	71.47	329	eP	P	12 26 07.9	+0.4
MOY				pmax	pmax		
	comp=Z,34nm,2.2s,mb4.9						
RKT	Rikitea	71.55	113	eLR	LR	12 47 49.1	
	comp=Z,2µm,28.2s,baz=273						
JIRN	Jiri	71.99	301	eP	P	12 26 11.5	+0.4
VIS	Vishakhapatnam	72.32	290	eP	P	12 26 12.8	-0.3
VIS				AMb	AMB	12 26 15.6	
	comp=Z,46nm,0.8s,mb5.5						
GUN	Gumba	72.33	301	eP	P	12 26 13.3	+0.3
	comp=Z,38nm,0.4s,mb5.6						
PKI	Pulchoki	72.64	301	eP	P	12 26 14.9	-0.1
	comp=Z,64nm,1.1s,mb5.5						
KKN	Kakani	72.81	301	eP	P	12 26 15.7	-0.3
DMN	Daman	72.91	301	eP	P	12 26 16.5	-0.1
VNDA	Vanda	72.95	178	P	P	12 26 16.3	+0.4
	comp=Z,21nm,0.6s,mb5.2,baz=338,slow=6.2,SNR=41						
VNDA				LR	LR	12 52 36.1	
	comp=Z,383nm,19.8s,MS4.7,baz=354,slow=31						
VNDA	Vanda	72.95	178	eP	P	12 26 15.8	-0.1
	comp=Z,25nm,0.8s,mb5.2						
BILL	Bilibino	73.13	5	c iP	P	12 26 17.1	0.0
BILL				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
BILL	Bilibino	73.13	5	eP	P	12 26 16.9	-0.1
	comp=Z,40nm,0.8s,mb5.4						
GKN	Gorkha	73.41	301	eP	P	12 26 19.5	0.0
KOLN	Koldanda	74.24	300	eP	P	12 26 23.8	-0.6
	comp=Z,51nm,0.9s,mb5.5						
BLSP	Bilaspur	74.29	294	eP	P	12 26 24.4	-0.3
BLSP				e		12 26 26.6	
	comp=Z,48nm,1.3s						
WMQ	Urumqi	75.86	317	P	P	12 26 34.3	+1.0
WMQ				PP	PP	12 29 28.0	+2.4
WMQ				S	S	12 36 10.0	-0.9
WMQ				SS	SS	12 41 07.0	+0.4
WMQ				AMB	AMB		
	comp=Z,58nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,65nm,10.0s						
WMQ				LR	LR		
	comp=N,265nm,24.0s,MS4.7						
WMQ				LR	LR		
	comp=E,437nm,25.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,522nm,25.0s,MS4.7						
HYB	Hyderabad	76.75	289	eP	P	12 26 38.0	-0.9
HYB	Hyderabad	76.75	289	i P	P	12 26 38.0	-0.9
PTH	Pithoragarh	77.55	301	eP	P	12 26 42.2	-0.9
TIXI	Tiksi	77.81	352	⇓eP	P	12 26 43.8	+0.1
TIXI				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
TIXI	Tiksi	77.81	352	⇓eP	P	12 26 43.9	+0.2
SLKM	Skilak Lake	78.42	25	eP	P	12 26 46.6	-0.6
DDI	Dehra Dun	79.54	302	eP	P	12 26 55.3	+1.3
SML	Sawmill	79.88	24	eP	P	12 26 55.2	+0.1
NDI	New Delhi	79.94	300	eP	P	12 26 54.0	-2.2
IMA	Indian Mountai	80.23	19	eP	P	12 26 57.1	+0.2
	comp=Z,110nm,1.2s,mb5.7						
MKAR	Makanchi Array	80.44	319	eP	P	12 26 58.6	+0.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DIV	Divide	80.62	26	eP	P	12 26 58.7	-0.4
	comp=Z,28nm,0.7s,mb5.3						
MCK	McKinley	80.62	22	eP	P	12 26 58.2	-0.8
	comp=Z,25nm,1.0s,mb5.1						

SDNR	Sundarnagar	80.69	303	*e*P	P	12 27 00.2	+0.1
ZAL	Zalesovo	81.23	326	*i* P	P	12 27 02.7	+0.2
ZAL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZAL	Zalesovo	81.23	326	P	P	12 27 01.7	-0.8
	comp=Z,7.0nm,0.8s,mb4.6,baz=349,slow=5.1,SNR=23						
ZAL				S	S	12 37 08.4	+0.6
	comp=Z,0.6nm,0.8s,baz=322,slow=17,SNR=3.8						
ZAL				LR	LR	13 02 00.1	
	comp=Z,517nm,20.8s,MS4.9,baz=360,slow=35						
POO	Poona	81.34	289	⇑*i*P	P	12 27 04.0	+0.2
	comp=Z,40nm,1.0s,mb5.3						
COLA	College	81.61	22	*c i*P	P	12 27 03.4	-0.8
COLA	College	81.61	22	*e*P	P	12 27 03.0	-1.3
	comp=Z,21nm,0.8s,mb5.1						
COLA				LR	LR		
	comp=Z,553nm,19.0s,MS4.9						
THY	Trims Highway	81.70	23	*e*P	P	12 27 04.2	-0.5
ILAR	Eielson Array	81.92	22	P	P	12 27 04.8	-1.1
	comp=Z,14nm,0.9s,mb4.9,baz=242,slow=5.9,SNR=79						
ILAR				LR	LR	12 56 46.9	
	comp=Z,422nm,20.6s,MS4.8,baz=234,slow=31						
NVS	Novosibirsk	82.40	327	*e*P	P	12 27 07.3	-1.2
NVS				*e*	pP	12 27 19.2	-2.6
NVS				*e*S	S	12 37 12.5	-7.2
NVS				pmax	pmax		
	comp=N,15nm,1.4s						
NVS				pmax	pmax		
	comp=E,27nm,1.4s						
NVS				pmax	pmax		
	comp=Z,57nm,1.4s,mb5.3						
NVS				smax			
	comp=N,28nm,2.7s						
NVS				smax			
	comp=E,175nm,3.2s						
KSH	Kashi	83.09	311	PR		12 27 15.0	
KSH				*e*PP	PP	12 30 29.1	+3.6
KSH				*e*S	S	12 37 27.8	+0.7
KSH				*e*SS	SS	12 42 56.8	+1.7
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.6						
KSH				AMB	AMB		
	comp=Z,200nm,3.6s						
KSH				LR	LR		
	comp=N,220nm,4.5s						
KSH				LR	LR		
	comp=E,240nm,5.0s						
ULHL	Ulahol	83.46	313	P	P	12 27 15.2	+1.0
	SNR=5.9						
KURK	Kurchatov	83.86	322	*c i*P	P	12 27 16.1	+0.1
KURK	Kurchatov	83.86	322	*e*P	P	12 27 15.8	-0.2
	comp=E,46nm,1.1s,mb5.5						
KURK				LR	LR		
	comp=Z,67nm,20.0s,MS4.0						
TKM2	Tokmak 2	84.07	314	P	P	12 27 18.4	+1.1
	SNR=39						
KZA	Kyzart	84.15	313	P	P	12 27 19.8	+2.2
	SNR=54						
KBK	Karagaybulak	84.48	313	P	P	12 27 20.6	+1.2
	SNR=22						
DAWY	Dawson	84.54	24	*e*P	P	12 27 19.3	+0.2
CHMS	Chumysh	84.69	314	P	P	12 27 21.2	+0.8
	SNR=26						
UCH	Uchtor	84.72	313	P	P	12 27 22.6	+2.1
	SNR=33						
FRU	Bishkek	84.76	314	*e*P	P	12 27 21.0	+0.3
FRU				*e*	pP	12 27 35.0	+0.9
FRU				pmax	pmax		
	comp=Z,80nm,1.8s,mb5.5						
AAK	Ala-Archa	84.81	313	P	P	12 27 22.4	+1.4
	SNR=26						
AAK	Ala-Archa	84.81	313	P	P	12 27 22.1	+1.1
AAK				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.4						
AAK	Ala-Archa	84.81	313	*e*P	P	12 27 20.9	-0.1
	comp=Z,33nm,0.9s,mb5.5						
AAK				LR	LR		
	comp=Z,103nm,21.0s,MS4.2						
USP	Ospenovka	84.93	314	P	P	12 27 22.3	+0.7
	SNR=52						
QSPA	South Pole Qui	85.29	180	*e*P	P	12 27 23.1	+0.5
	comp=Z,94nm,0.8s,mb6.0						
QSPA				LR	LR		
	comp=Z,443nm,21.0s,MS4.8						
AML	Almayashu	85.30	313	P	P	12 27 25.4	+2.0
	SNR=86						
EKS2	Erkin-Say	85.33	313	P	P	12 27 25.0	+1.4
	SNR=40						
MAW	Mawson	85.81	203	P	P	12 27 25.5	+0.2
	comp=Z,12nm,0.7s,mb5.2,baz=34,slow=12,SNR=7.0						
MAW				LR	LR	13 01 29.7	
	comp=Z,716nm,21.8s,MS5.0,baz=74,slow=33						
MAW	Mawson	85.81	203	*e*P	P	12 27 25.4	+0.1
	comp=Z,7.3nm,0.5s,mb5.2						
INK	Inuvik	88.22	21	P	P	12 27 36.8	-0.2
	comp=Z,12nm,1.0s,mb5.1,baz=238,slow=5.7,SNR=29						
INK				PKKPbc		12 45 21.8	
	comp=Z,2.7nm,0.7s,baz=42,slow=4.8,SNR=6.7						
INK				LR	LR	13 03 30.7	
	comp=Z,440nm,21.3s,MS4.8,baz=253,slow=33						
INK	Inuvik	88.22	21	*e*P	P	12 27 36.6	-0.4
	comp=Z,13nm,1.0s,mb5.1						
CHKZ	Chkalovo	89.29	324	P	P	12 27 41.3	-1.1
CHKZ				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.6						
CHKZ	Chkalovo	89.29	324	*e*P	P	12 27 41.1	-1.3
	comp=Z,764nm,0.3s						
BVA0	Borovoye Array	89.33	323	*i* P	P	12 27 42.0	-0.6
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
BVAR	Borovoye Array	89.33	323	P	P	12 27 42.4	-0.1
	comp=Z,70nm,0.8s,mb6.0,baz=101,slow=5.3,SNR=122						
NVAR	Mina Array Bea	91.76	52	P	P	12 27 55.2	+0.9
	comp=Z,1.8nm,0.8s,mb4.4,baz=251,slow=6.5,SNR=8.0						
NVAR	Mina Array Bea	91.76	52	P	P	12 27 55.2	+0.9
WVOR	Wild Horse Val	91.82	48	*e*P	P	12 27 54.4	-0.1
	comp=Z,1.8nm,0.8s,mb4.5						
BMO	Blue Mountains	92.96	45	*e*P	P	12 27 58.9	-0.8
	comp=Z,18nm,1.4s,mb5.3						
NEW	Newport	93.29	42	LR	LR	13 04 05.8	
	comp=Z,375nm,19.0s,MS4.9,baz=239,slow=32						
SYO	Syowa Base	93.89	199	⇓P	P	12 28 03.1	-0.2
YKW3	Yellowknife Ar	95.16	28	*e*P	P	12 28 09.3	0.0
YKA	Yellowknife Ar	95.17	28	P	P	12 28 09.3	0.0
	comp=Z,1.8nm,0.8s,mb4.6,baz=270,slow=4.7,SNR=44						
YKA				PKiKP		12 32 50.8	
	comp=Z,0.3nm,0.6s,baz=274,slow=1.8,SNR=5.5						
YKA				PKKP	PKKP	12 45 02.1	+7.5
	comp=Z,0.6nm,0.7s,baz=88,slow=2.7,SNR=14						
YKA				LR	LR	13 07 06.8	
	comp=Z,652nm,19.9s,MS5.1,baz=290,slow=33						
SVE	Sverdlovsk	95.24	327	*e*P	P	12 28 11.5	+1.8
SVE				MLR	MLR		
	comp=E,400nm,17.0s						
SVE				MLR	MLR		
	comp=Z,600nm,17.0s,MS5.1						
EDM	Edmonton	95.83	37	*e*P	P	12 28 11.8	-0.7
PDAR	Pinedale Array	98.53	48	P	P	12 28 24.7	-0.3
	comp=Z,0.4nm,0.5s,mb4.2,baz=270,slow=1.5,SNR=4.5						
PDAR				LR	LR	13 11 16.0	
	comp=Z,478nm,18.7s,MS5.0,baz=275,slow=34						
TXAR	Lajitas Array	103.79	61	PKKPbc		12 44 40.2	
	comp=Z,0.5nm,0.8s,baz=104,slow=5.2,SNR=6.3						
ARCES	ARCESS Array B	106.84	343	Pdiff	Pdif	12 29 00.9	-0.4
	comp=Z,3.6nm,0.8s,baz=45,slow=10,SNR=4.2						
ARCES				PKiKP		12 33 13.0	
	comp=Z,2.4nm,0.8s,baz=99,slow=2.3,SNR=10						
ARCES				PKKPbc		12 44 29.6	
	comp=Z,3.6nm,0.8s,baz=276,slow=2.2,SNR=16						
OBN	Obninsk	108.79	327	⇓*i*P	Pdif	12 29 09.8	-0.5
OBN				*e*		12 33 44.0	
OBN				*e*PS	PS	12 42 58.6	-7.2
OBN				*e*SS	SS	12 48 56.1	-0.7
OBN				pmax	pmax		
	comp=Z,12nm,1.3s						
OBN				MLR	MLR		
	comp=Z,400nm,19.0s,MS5.0						
KAF	Kangasniemi	110.62	336	*e*pkp	PKPdf	12 33 18.3	+1.2
	baz=33,slow=2.9						
FINES	FINESS Array B	111.07	336	Pdiff	Pdif	12 29 19.6	-0.5
	comp=Z,0.5nm,0.5s,baz=62,slow=5.8,SNR=11						
FINES				PKiKP		12 33 19.8	
	comp=Z,1.8nm,0.6s,baz=112,slow=3.1,SNR=11						
FINES				PKKPbc		12 44 16.1	
	comp=Z,1.8nm,0.8s,baz=180,slow=5.7,SNR=7.7						
AKASG	Malin Array Be	114.58	325	PKiKP		12 33 26.2	
	comp=Z,6.5nm,0.6s,baz=56,slow=2.1,SNR=38						
AKASG				PKKPbc		12 44 04.6	
	comp=Z,2.3nm,0.7s,baz=261,slow=3.7,SNR=10.0						
BRTR	Keskin Array B	115.45	312	PKiKP		12 33 28.4	
	comp=Z,1.6nm,0.7s,baz=126,slow=2.3,SNR=9.0						
SUW	Suwalki	116.29	330	*e*PKP	PKPdf	12 33 31.6	+3.2
HFS	Hagfors	116.67	339	PKP	PKPdf	12 33 30.2	+1.2
	comp=Z,1.3nm,0.5s,baz=108,slow=4.7,SNR=7.3						
NB2	NORSAR Subarra	116.90	340	PKPdf	PKPdf	12 33 30.8	+1.4
	comp=Z,1.4nm,0.7s,baz=39,slow=1.9						
NOA	NORSAR Array B	116.90	340	PKP	PKPdf	12 33 31.6	+2.2
	comp=Z,2.4nm,0.7s,baz=46,slow=2.0,SNR=10						
NOA				PKKPbc		12 43 57.2	
	comp=Z,2.1nm,0.8s,baz=41,slow=3.6,SNR=6.0						
TLCR		117.03	319	⇓P	PKPdf	12 33 33.1	+3.1
CFR	Carcaliu	117.47	319	⇓P	PKPdf	12 33 32.6	+1.8
HARR	Harsova	117.80	319	⇑P	PKPdf	12 33 33.8	+2.3
VRI	Vrincioaia	118.10	320	⇑P	PKPdf	12 33 33.5	+1.5
BURAR	Bucovina Array	118.28	323	⇑P	PKPdf	12 33 35.2	+2.8
MLR	Muntele Rosu	118.76	320	PKP	PKPdf	12 33 34.8	+1.4
	comp=Z,4.5nm,0.8s,baz=230,slow=4.6,SNR=9.6						
MLR				PKKPbc		12 43 51.3	
	comp=Z,1.2nm,0.6s,baz=170,slow=7.6,SNR=4.7						
MLR	Muntele Rosu	118.76	320	PKP	PKPdf	12 33 34.8	+1.4
MLR				PKKPbc		12 43 51.3	
KWP	Kalwaria	118.79	326	*e*PKP	PKPdf	12 33 35.1	+1.8
KOLS	Kolonicke sedl	119.39	325	*i* PKP	PKPdf	12 33 37.0	+2.5
KOLS				*e*		12 33 48.8	
GKP	Gorka Klasztor	119.63	331	*e*PKP	PKPdf	12 33 37.5	+2.6
PLCA	Paso Flores	119.69	143	PKP	PKPdf	12 33 37.7	+2.4
	comp=Z,7.2nm,0.6s,baz=224,slow=2.5,SNR=37						
PLCA				PKKPbc		12 43 47.7	
	comp=Z,2.4nm,0.8s,baz=66,slow=6.0,SNR=9.1						
CRVS	Cervenica-Dubn	119.86	325	*e*PKP	PKPdf	12 33 38.5	+3.0
OJC	Ojcow	120.08	327	*e*PKP	PKPdf	12 33 38.1	+2.2
NIE	Niedzica	120.23	326	*e*PKP	PKPdf	12 33 37.5	+1.3
SCHQ	Schefferville	120.53	26	PKP	PKPdf	12 33 38.7	+2.1
	comp=Z,2.2nm,0.8s,baz=339,slow=4.8,SNR=6.6						
SCHQ	Schefferville	120.53	26	PKP	PKPdf	12 33 38.7	+2.1
RZN	Rozhen	121.15	317	*e*P	PKPdf	12 33 40.0	+1.9
OKC	Ostrava-Krasne	121.18	328	*e*PKPdf	PKPdf	12 33 40.2	+2.2
OKC				AMS	AMS	13 26 40.0	
	comp=Z,400nm,20.5s						
PSZ	Piszkesteto	121.27	325	*e*PKPdf	PKPdf	12 33 40.1	+1.9
BZS	Buzias	121.41	322	⇑P	PKPdf	12 33 39.9	+1.4
MORC	Moravsky Berou	121.54	328	*e*PKPdf	PKPdf	12 33 39.8	+1.2
VYHS	Vyhne	121.55	326	*e*PKP	PKPdf	12 33 40.9	+2.2
KSP	Ksiaz	121.56	329	*e*PKP	PKPdf	12 33 40.8	+2.1
KSP				LR	LR		
	comp=Z,1µm,25.5s,MS5.4						
KSP	Ksiaz	121.56	329	*e*PKP	PKPdf	12 33 41.0	+2.3
VTS	Vitosha	121.79	318	*e*P	PKPdf	12 33 41.0	+1.7
DPC	Dobruska-Polom	121.84	329	*e*PKPdf	PKPdf	12 33 41.4	+2.2
DPC				AMS	AMS	13 24 40.0	
	comp=Z,500nm,24.2s						
MMB	Musomiste	121.87	317	*e*P	PKPdf	12 33 40.0	+0.5
UPC	Upice	121.91	329	*e*PKPdf	PKPdf	12 33 41.2	+1.9
KKB	Krupnik	122.19	317	*e*P	PKPdf	12 33 41.0	+0.9
SRO2	Moca	122.20	325	*e*PKP	PKPdf	12 33 41.9	+1.9
SRO	Srobarova	122.22	326	*e*PKP	PKPdf	12 33 42.1	+2.1
SRO1	Iza	122.29	326	*e*PKP	PKPdf	12 33 42.5	+2.3
VRAC	Vranov	122.31	328	PKP	PKPdf	12 33 42.6	+2.5
	comp=Z,7.1nm,0.7s,baz=52,slow=16,SNR=5.9						
SMOL	Smolenice	122.32	327	*e*PKP	PKPdf	12 33 41.4	+1.2
PVCC	Panska Ves	122.62	330	*e*PKPdf	PKPdf	12 33 42.4	+1.6
PVCC				AMS	AMS	13 26 00.0	
	comp=Z,400nm,19.4s						
ZST	Bratislava	122.68	326	*e*PKP	PKPdf	12 33 43.2	+2.3
BRG	Berggiesshubel	122.72	331	*e*PKIKP	PKPdf	12 33 43.0	+2.1
BRG				*e*		12 33 57.0	
BRG				pmax	pmax		
	comp=Z,18nm,0.8s						
CLL	Collm	122.89	331	*i* PKIKP	PKPdf	12 33 43.3	+2.0
CLL				pmax	pmax		
	comp=Z,25nm,0.7s						
CLL	Collm	122.89	331	*i* PKIKP	PKPdf	12 33 43.3	+2.0
	comp=Z,logA/T=1.6						
CLL				*e*		12 33 47.0	
PRU	Pruhonice	122.97	329	*e*PKPdf	PKPdf	12 33 42.8	+1.4
PRU				AMS	AMS	13 25 30.0	
	comp=Z,400nm,18.7s						
SKO	Skopje	123.24	318	*e*PKP	PKPdf	12 33 41.0	-1.2
NKC	Novy Kostel	123.86	331	*e*PKPdf	PKPdf	12 33 44.9	+1.7
NKC				*e*pPKP		12 33 59.9	
MOX	Moxa	123.99	331	*e*PKIKP	PKPdf	12 33 45.7	+2.3
MOX				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.9						
MOX	Moxa	123.99	331	*i* P	PKPdf	12 33 45.7	+2.3
MOX				L		13 32 41.0	
KHC	Kasperske Hory	124.00	329	*d i*PKIKP	PKPdf	12 33 45.2	+1.8
KHC	Kasperske Hory	124.00	329	*e*PKPdf	PKPdf	12 33 45.1	+1.7
KHC				*e*pPKP		12 33 58.7	
KHC				AMS	AMS	13 28 00.0	
	comp=Z,600nm,26.1s						
GERES	GERESS Array B	124.11	329	PKP	PKPdf	12 33 45.5	+1.9
	comp=Z,14nm,0.7s,baz=75,slow=1.5,SNR=124						
GERES				PKKPbc		12 43 30.9	
	comp=Z,0.7nm,0.8s,baz=207,slow=3.0,SNR=4.3						
MOA	Molln	124.42	328	⇑*i*P	PKPdf	12 33 46.3	+2.0
GRA1	Grafenberg Arr	124.81	331	*e*PKP	PKPdf	12 33 46.1	+1.1
GRA1				*e*pPKP		12 33 59.9	
GRF	Grafenberg Arr	124.81	331	*e*PKIKP	PKPdf	12 33 46.1	+1.1
GRF				*e*		12 33 59.9	
BOJS	Bojanci	125.26	325	*i* PKPdf	PKPdf	12 33 48.1	+2.1
KBA	Koelnbreinsper	125.39	327	⇑*i*P	PKPdf	12 33 47.8	+1.6
WATA	Walderalm	126.17	328	⇑*i*P	PKPdf	12 33 49.6	+1.9
WTTA	Wattenberg	126.18	328	⇑*i*P	PKPdf	12 33 49.8	+2.1
MOTA	Moosalm	126.41	329	⇑*i*P	PKPdf	12 33 49.9	+1.8
STU	Stuttgart	126.41	331	*e*PKPdf	PKPdf	12 33 50.6	+2.5
SQTA	Sankt Quirin	126.43	328	⇑*i*P	PKPdf	12 33 50.1	+1.9
DAVA	Damuels	127.08	329	⇑*i*P	PKPdf	12 33 51.6	+2.1
BRMO	Bormio	127.35	328	*e*PKP	PKPdf	12 33 52.7	+2.7
DAVOX	Davos	127.41	329	PKP	PKPdf	12 33 53.0	+2.8
	comp=Z,32nm,1.0s,baz=132,slow=3.1,SNR=30						
GIVF	Givet	127.44	335	*e*PKIKP	PKPdf	12 33 53.0	+2.9
	comp=Z,44nm,1.1s						
CDF	Champ du Feu	127.58	332	*e*PKIKP	PKPdf	12 33 52.1	+1.7
	comp=Z,13nm,0.8s						
BAIF	Baives	127.73	335	*e*PKIKP	PKPdf	12 33 52.8	+2.2
	comp=Z,11nm,0.8s						
HINF	Hinteralfeld	128.20	332	*e*PKIKP	PKPdf	12 33 53.4	+1.8
	comp=Z,23nm,0.8s						
HAU	Haudompre	128.30	332	*e*PKIKP	PKPdf	12 33 53.8	+2.0
	comp=Z,26nm,0.6s						
ZCCA	Zocca	128.38	326	*e*PKP	PKPdf	12 33 55.6	+3.6
VAI	Varese	128.59	329	*e*PKP	PKPdf	12 33 54.4	+2.0
MCGN	Macugnaga	128.94	329	*e*PKP	PKPdf	12 33 55.5	+2.4
CABF	La Chapelle	129.43	331	*e*PKIKP	PKPdf	12 33 56.6	+2.6
	comp=Z,24nm,0.7s						
LPL	La Plagne	129.88	330	*e*PKIKP	PKPdf	12 33 57.0	+2.2
LPG	La Plagne	129.88	329	*e*PKIKP	PKPdf	12 33 57.1	+2.2
	comp=Z,15nm,0.7s						
SSF	Saint Saulge	130.30	333	*e*PKIKP	PKPdf	12 33 58.1	+2.5
	comp=Z,12nm,0.7s						
MBDF	Montbardon	130.40	329	*e*PKIKP	PKPdf	12 33 58.1	+2.2
	comp=Z,25nm,0.9s						
SMF	Signal de Mont	130.46	332	*e*PKIKP	PKPdf	12 33 57.6	+1.7
	comp=Z,13nm,0.7s						
HYF	Humbligny	130.53	334	*e*PKIKP	PKPdf	12 33 59.0	+3.0
AVF	Avril sur Loir	130.58	333	*e*PKIKP	PKPdf	12 33 57.6	+1.5
	comp=Z,5.0nm,0.8s						
PGF	Pioggiola	130.64	325	*e*PKIKP	PKPdf	12 33 59.5	+3.1
	comp=Z,234nm,1.3s						
SBF	Sospel	130.64	327	*e*PKIKP	PKPdf	12 33 58.5	+2.1
	comp=Z,68nm,1.0s						
LDF	La Druitiere	130.64	337	*e*PKIKP	PKPdf	12 33 57.6	+1.4
FLN	La Foliniere	130.65	337	*e*PKIKP	PKPdf	12 33 58.3	+2.1
ORIF	Oris-en-Rattie	130.72	330	*e*PKIKP	PKPdf	12 33 58.4	+1.9
	comp=Z,26nm,0.7s						
LVC	Limon Verde	130.78	125	PKP	PKPdf	12 34 00.6	+3.4
	comp=Z,4.5nm,0.7s,baz=257,slow=2.9,SNR=13						
LVC	Limon Verde	130.78	125	*e*PKPdf	PKPdf	12 33 58.9	+1.7
BGF	Bois d'Agland	130.98	333	*e*PKIKP	PKPdf	12 33 59.4	+2.5
	comp=Z,25nm,0.7s						
GRR	Gorron	131.10	337	*e*PKIKP	PKPdf	12 33 58.9	+1.8
FRF	La Foret Royal	131.27	328	*e*PKIKP	PKPdf	12 33 59.1	+1.6
	comp=Z,23nm,0.7s						
VIVF	Saint-Julien-l	131.37	330	*e*PKIKP	PKPdf	12 33 59.7	+2.0
	comp=Z,5.2nm,0.6s						
TCF	Toulx Ste Croi	131.47	333	*e*PKIKP	PKPdf	12 34 00.4	+2.5
	comp=Z,20nm,0.7s						
LMR	La Mourre	131.49	328	*e*PKIKP	PKPdf	12 34 00.3	+2.3
	comp=Z,65nm,1.2s						
SMRF	Simiane la Rot	131.54	329	*e*PKIKP	PKPdf	12 34 00.5	+2.4
	comp=Z,24nm,0.7s						
ROSF	Rostrenen	132.04	339	*e*PKIKP	PKPdf	12 34 01.0	+2.1
	comp=Z,29nm,0.9s						
MFF	Saint Martin d	132.25	335	*e*PKIKP	PKPdf	12 34 01.1	+1.8
	comp=Z,12nm,0.8s						
LASF	Ste Croix	132.34	330	*e*PKIKP	PKPdf	12 34 02.7	+3.1
	comp=Z,54nm,1.0s						
QUIF	Quistinic	132.35	339	*e*PKIKP	PKPdf	12 34 02.1	+2.6
	comp=Z,9.9nm,0.7s						
RJF	Les Rejaudoux	132.54	333	*e*PKIKP	PKPdf	12 34 02.6	+2.7
CAF	Calviac	132.57	332	*e*PKIKP	PKPdf	12 34 02.9	+2.9
	comp=Z,7.6nm,0.8s						
ROSC	El Rosal	132.72	88	PKhKP		12 33 59.5	
	comp=Z,5.3nm,0.4s,baz=90,slow=12,SNR=4.9						
LFF	La Frestale	133.17	333	*e*PKIKP	PKPdf	12 34 03.0	+1.9
MTLF	Montolieu	133.69	331	*e*PKIKP	PKPdf	12 34 04.2	+2.1
	comp=Z,18nm,0.8s						
LPAZ	La Paz	134.20	118	PKhKP		12 33 56.6	
	comp=Z,1.4nm,0.6s,baz=244,slow=7.9,SNR=6.3						
LPAZ				PKP	PKPdf	12 34 06.9	+3.2
	comp=Z,4.6nm,0.6s,baz=241,slow=3.5,SNR=17						
LPAZ	La Paz	134.20	118	PKP	PKPdf	12 33 56.6	-7.1
LPAZ				*e*PKPdf	PKPdf	12 34 06.5	+2.8
LPAZ				LR	LR		
	comp=Z,306nm,21.0s,MS5.0						
EPF	Esparros	134.82	332	*e*PKIKP	PKPdf	12 34 07.2	+3.0
	comp=Z,16nm,1.0s						
ETSF	Etsaut	135.34	332	*e*PKIKP	PKPdf	12 34 09.1	+3.9
	comp=Z,25nm,0.6s						
SJPF	Ste Jean	135.48	333	*e*PKIKP	PKPdf	12 34 09.1	+3.7
	comp=Z,15nm,0.8s						
SDV	Santo Domingo	136.38	82	PKP	PKPdf	12 34 09.3	+1.5
	comp=Z,16nm,0.8s,baz=259,slow=3.9,SNR=9.9						
SDV	Santo Domingo	136.38	82	*e*PKPdf	PKPdf	12 34 09.0	+1.1
ESDC	Sonseca Array	139.46	332	PKhKP		12 34 06.3	
	comp=Z,1.1nm,0.8s,baz=348,slow=27,SNR=3.9						
ESDC				PKP	PKPdf	12 34 16.0	+3.2
	comp=Z,2.8nm,0.8s,baz=6.0,slow=3.2,SNR=8.7						
CAM4	Nova Friburgo	149.07	151	*e*P	PKPdf	12 34 34.0	+4.3
CAM4				*i*		12 34 36.3	
BDFB	Brasilia	150.93	134	PKP	PKPdf	12 34 35.8	+3.0
	comp=Z,12nm,0.5s,baz=199,slow=1.6,SNR=36						
BDFB				PKPbc	PKPdf	12 34 40.4	+7.6
	comp=Z,65nm,0.6s,baz=306,slow=1.8,SNR=77						
BAO	Brasilia Array	150.95	134	⇑*i*P	PKPdf	12 34 36.1	+3.3
BAO				*i*		12 34 40.1	
BAO				*i*		12 34 47.9	
DBIC	Dimbokro	157.99	276	PKP	PKPdf	12 34 44.1	+1.5
	comp=Z,1.7nm,0.6s,baz=177,slow=4.5,SNR=3.2						
DBIC				PKPab	PKPab	12 35 18.6	+0.2
	comp=Z,17nm,1.0s,baz=62,slow=6.4,SNR=8.7						

NEIC 20 12:24:02.8, 47.87S×165.40E, h33km, ML4.0(WEL), After WEL., Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	2.64	42	*e*P	P	12 24 42.1	-1.8
WHZ				S	S	12 25 11.7	-3.4
WHZ	Wether Hill Ro	2.64	42	PN	Pn	12 24 42.1	-2.0
WHZ				SN	Sn	12 25 11.7	-3.6
MLZ	Mavora Lakes	3.17	38	*e*P	P	12 24 49.5	-1.9
MLZ				S	S	12 25 25.2	-3.3
MLZ	Mavora Lakes	3.17	38	PN	Pn	12 24 49.5	-2.1
MLZ				SN	Sn	12 25 25.2	-3.5
TUZ	Tuapeka	3.48	58	P	P	12 24 54.3	-1.6
TUZ				S	S	12 25 32.5	-3.9
TUZ	Tuapeka	3.48	58	PN	Pn	12 24 54.3	-1.7
TUZ				SN	Sn	12 25 32.5	-4.0
EAZ	Earnscleugh	3.77	47	*e*P	P	12 24 57.6	-2.5
EAZ	Earnscleugh	3.77	47	PN	Pn	12 24 57.6	-2.6
EAZ				SN	Sn	12 25 40.2	-3.8
WKZ	Wanaka	3.94	41	*e*P	P	12 25 01.1	-1.4
WKZ	Wanaka	3.94	41	*e*PN	Pn	12 25 01.1	-1.5
JCZ	Jackson Bay	4.46	33	*e*P	P	12 25 09.0	-0.8
JCZ	Jackson Bay	4.46	33	*e*PN	Pn	12 25 08.6	-1.3
ODZ	Otahua Downs	4.59	54	*e*P	P	12 25 07.9	-3.9
ODZ	Otahua Downs	4.59	54	PN	Pn	12 25 07.9	-4.0
LBZ	Lake Benmore	4.81	45	*e*P	P	12 25 10.6	-4.3
LBZ	Lake Benmore	4.81	45	PN	Pn	12 25 10.6	-4.4
LBZ				SN	Sn	12 26 04.0	-6.3
FOZ	Fox Glacier	5.25	36	*e*PN	Pn	12 25 19.8	-1.3
DSZ	Denniston Nort	7.63	39	*e*PN	Pn	12 25 50.6	-4.0

NEIC 20 12:28:03.1, 63.60N×147.65W, h2km, ML3.6(PMR), ML3.1(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHY	Denali Highway	0.54	166	P	Pg	12 28 13.1	-0.7
RND	Reindeer	0.57	251	P	Pg	12 28 13.8	-0.7
MCK	McKinley	0.59	284	P	Pg	12 28 14.8	0.0
DDM	Donnelly Dome	0.82	76	P	Pg	12 28 19.4	0.0
HDA	Harding Lake	0.87	20	P	Pg	12 28 20.7	+0.3
THY	Trims Highway	0.87	101	P	Pg	12 28 19.7	-0.7
THY				S	Sg	12 28 30.8	-1.2
BWN	Browne	0.99	307	P	Pb	12 28 21.5	-1.1
CCB	Clear Creek Bu	1.06	356	P	Pb	12 28 24.0	+0.2
CCB				S	Sb	12 28 37.2	-0.7
NEA	Nenana	1.17	328	P	Pb	12 28 25.2	-0.4
PAX	Paxson	1.17	122	P	Pb	12 28 24.5	-1.1
PAX				S	Sb	12 28 40.8	-0.4
TRF	Thorofare Moun	1.19	264	P	Pb	12 28 24.7	-1.3
IL1	Eielson Array	1.23	15	P	Pb	12 28 26.5	-0.2
IL1				S	Sb	12 28 43.4	+0.6
COLA	College	1.29	356	P	Pb	12 28 27.2	-0.4
COLA				S	Sb	12 28 44.9	+0.4
MDM	Murphy Dome	1.39	350	P	Pb	12 28 28.8	-0.7
GLM	Gilmore Dome	1.40	5	P	Pb	12 28 29.0	-0.7
KTH	Kantishna Hill	1.47	270	P	Pn	12 28 30.6	0.0
KTH				S	Sb	12 28 49.5	-0.2
DOT	Dot Lake	1.60	87	P	Pn	12 28 32.2	-0.4
CUT	Chulitna	1.69	226	P	Pn	12 28 32.3	-1.5
SCM	Sheep Creek Mo	1.78	175	P	Pn	12 28 34.2	-0.9
SML	Sawmill	1.82	190	P	Pn	12 28 33.9	-1.9
TZL	Tazlina	1.86	146	P	Pn	12 28 37.0	+0.6
MENT	Mentasta	1.90	109	P	Pn	12 28 37.1	+0.3
GHO	Glory Hole Cre	1.92	198	P	Pn	12 28 35.6	-1.6
MLY	Manley	1.97	318	P	Pn	12 28 36.5	-1.4
PMR	Palmer	2.12	199	P	Pn	12 28 38.5	-1.6
PWA	Palmer West	2.21	209	P	Pn	12 28 39.9	-1.3
VLZ	Valdez	2.55	165	P	Pn	12 28 46.2	+0.1
VLZ				S	Sn	12 29 19.4	+1.2
DIV	Divide	2.63	160	P	Pn	12 28 47.2	-0.1
DIV				S	Sn	12 29 19.1	-1.0
RC01	Rabbit Creek A	2.70	202	P	Pn	12 28 47.7	-0.5
RC01				S	Sn	12 29 22.4	+0.4
BCA3	Beaver Creek A	2.70	99	P	Pn	12 28 47.3	-1.0
GLI	Glacier Island	2.74	174	P	Pn	12 28 49.1	+0.2
GLB	Gilahina Butte	2.80	139	P	Pn	12 28 50.5	+0.8
GLB				S	Sn	12 29 25.5	+0.9
STLK	Strandline Lak	2.86	225	P	Pn	12 28 49.3	-1.3
FID	Port Fidalgo	2.91	169	P	Pn	12 28 52.1	+0.8
CRP	Crater Peak	3.14	224	P	Pn	12 28 54.7	+0.2
SPU	Mount Spurr	3.17	222	P	Pn	12 28 55.0	0.0
CKN	Chakachatna No	3.18	224	P	Pn	12 28 55.6	+0.4
EYAK	Cordova Ski Ar	3.19	163	P	Pn	12 28 55.2	0.0
CKL	Chakachamna La	3.25	224	P	Pn	12 28 55.5	-0.6
HIN	Hinchinbrook I	3.26	170	P	Pn	12 28 56.4	+0.2
SLKM	Skilak Lake	3.33	202	*e*P	Pn	12 28 56.4	-0.9
IM3	Indian Mountai	3.54	315	P	Pn	12 28 58.5	-1.8
BALM	Baldy	3.57	134	P	Pn	12 29 01.8	+1.1
LTI	Latouche	3.57	182	P	Pn	12 29 00.9	+0.2
IMA	Indian Mountai	3.58	317	*e*P	Pn	12 28 59.0	-1.7
DAWY	Dawson	3.69	79	P	Pn	12 29 01.5	-0.9
COLD	Coldfoot	3.80	345	P	Pn	12 29 02.8	-1.2
DFR	Drift River	3.83	220	P	Pn	12 29 03.9	-0.5
TT01	Tatalina	3.85	263	P	Pn	12 29 03.1	-1.5
RDN	Redoubt North	3.92	220	P	Pn	12 29 04.7	-0.9
NCT	North Crescent	3.93	222	P	Pn	12 29 05.5	-0.2
RSO	Redoubt South	3.96	220	*e*P	Pn	12 29 05.5	-0.7
CTGM	Chitina Glacie	3.96	129	P	Pn	12 29 06.0	-0.2
BM3	Burnt Mountain	4.04	17	P	Pn	12 29 06.1	-1.3
ILIM	Iliamna	4.33	218	P	Pn	12 29 11.1	-0.5
INE	Iliamna NE	4.38	218	P	Pn	12 29 11.8	-0.4
ILW	Iliamna West	4.40	219	P	Pn	12 29 12.4	-0.1

*MEX **20** 12:43:40.6±1.0, 19.57N×102.11W, h50km±26km, MD4.1*
*NEIC **20** 12:43:41.0, 19.58N×102.11W, h40km, MD4.1(MEX), After MEX.*

ISC 20 12:43:38.5±0.6, **19.56N**±0.06×**102.11W**±0.03, **h56**^{km}±24^{km}, **n17**, σ**0^{s}98**/32, **1D**, **Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOIG	Morelia	0.87	82	⇓*i*P	P	12 43 54.6	-0.3
MOIG				*i*S	S	12 44 07.1	0.0
SFJM	Santa Fe	1.27	316	*i*P	P	12 44 01.2	+0.8
SFJM				*i*S	S	12 44 18.0	+1.3
SFJM	Santa Fe	1.27	316	*i*P	P	12 44 01.2	+0.8
SFJM				*i*S	S	12 44 16.0	-0.7
COLM	Colima	1.54	256	*i*P	P	12 44 03.3	-1.0
COLM				*i*S	S	12 44 23.0	-0.3
ZIIG	Zihuatanejo	2.04	163	*e*P	P	12 44 10.7	-0.5
ZIIG				*i*S	S	12 44 36.4	+1.0
CRX	Cerrillo	2.29	93	*e*P	P	12 44 21.0	+6.2
PLIG	Platanillo	2.73	115	*e*P	P	12 44 21.4	+0.5
PLIG				*i*S	S	12 44 52.5	-0.3
CJM	Chamela	2.77	269	*e*P	P	12 44 21.4	-0.2
CJM				*e*S	S	12 44 53.7	-0.2
YAIG	Yautepec	2.96	103	*i*P	P	12 44 23.4	-0.8
YAIG				*i*S	S	12 44 57.5	-1.0
CAIG	El Cayaco	3.05	145	*e*P	P	12 44 27.6	+2.0
CAIG				*i*S	S	12 45 01.1	+0.1
PPM	Popocatepetl	3.32	98	*e*P	P	12 44 30.3	+1.0
PPM				*e*S	S	12 45 07.0	-0.9
PPM	Popocatepetl	3.32	98	*e*P	P	12 44 29.5	+0.2
PPM				*e*P		12 44 30.3	
PPM				*e*S	S	12 45 07.0	-0.9
PPM				*i*S	S	12 45 07.1	-0.8
ACX	Acapulco	3.39	142	*e*P	P	12 44 33.5	+3.2
ACX	Acapulco	3.39	142	*e*P	P	12 44 30.0	-0.3
ACX				*i*S	S	12 45 06.5	-3.1
IIB	San Bernardino	3.60	99	*e*P	P	12 44 31.5	-1.8
IIB				*e*S	S	12 45 16.5	+1.6
IIB	San Bernardino	3.60	99	*e*P	P	12 44 34.0	+0.7
IIB				*e*S	S	12 45 16.5	+1.6
OXX	Oaxaca	5.68	115	*e*P	P	12 45 10.0	+7.8

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*RSPR **20** 12:46:02.6, 18.49N×68.62W, h150^{km}±3^{km}, MD3.9/14, MD3.9/14*

*NEIC **20** 12:46:02.6, 18.49N×68.62W, h150^{km}, MD3.9(RSPR), After RSPR.*

ISC 20 12:46:01.9±1.3, **18.5N**±0.2×**68.66W**±0.10, **h145**^{km}±14^{km}, **n16**, σ**0^{s}47**/31, **13C-2D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	1.47	92	⇑*e*P	P	12 46 30.9	-0.2
AGPR				*e*S	S	12 46 53.7	+0.1
MPR	Mayaguez	1.48	101	⇑*e*P	P	12 46 31.3	+0.1
MPR				*e*S	S	12 46 54.2	+0.5
LSP	Las Mesas	1.53	102	⇓*e*P	P	12 46 31.9	+0.1
LSP				*e*S	S	12 46 55.2	+0.4
MGP	Maguayo	1.58	108	⇑*e*P	P	12 46 31.5	-0.7
MGP				*e*S	S	12 46 54.9	-0.7
LRS	Lares	1.74	97	⇑*e*P	P	12 46 33.5	-0.5
LRS				*e*S	S	12 46 58.7	-0.1
AOPR	Arecibo Observ	1.82	95	⇑*e*P	P	12 46 34.3	-0.7
AOPR				*e*S	S	12 47 00.6	+0.1
PORP	Portuguez	1.98	103	⇑*e*P	P	12 46 36.7	-0.1
PORP				*e*S	S	12 47 03.1	-0.5
OBIP	Obispado Ponce	2.01	103	⇓*e*P	P	12 46 37.0	-0.1
OBIP				*e*S	S	12 47 04.8	+0.6
CELP	Cerrillos	2.03	102	⇑*e*P	P	12 46 37.4	0.0
CELP				*e*S	S	12 47 05.6	+1.0
CSB	Colonia Sabana	2.39	95	⇑*e*P	P	12 46 42.3	+0.4
CSB				*e*S	S	12 47 13.2	+0.6
SJG	San Juan	2.42	99	⇑*e*P	P	12 46 42.8	+0.4
SJG				*e*S	S	12 47 12.7	-0.6
CPD	Cerro la Pandu	2.65	100	⇑*e*P	P	12 46 46.2	+0.9
CPD				*e*S	S	12 47 18.5	0.0
CBYP	Canovanas	2.67	95	⇑*e*P	P	12 46 45.6	0.0
CBYP				*e*S	S	12 47 18.1	-0.8
HUMP	Col San Antoni	2.70	97	⇑*e*P	P	12 46 46.2	+0.3
HUMP				*e*S	S	12 47 19.1	-0.3
MTP	Monte Pirata	2.98	98	⇑*e*P	P	12 46 49.9	+0.4
MTP				*e*S	S	12 47 25.4	-0.5
SDV	Santo Domingo	9.76	192	*e*P	P	12 48 19.7	0.0

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*IDC **20** 13:04:03.9±6.5, 39.06N×13.47E, h338^{km}±52^{km}, mb2.9/3, mb1 3.1/7, mb1mx2.8/23, mbtmp3.7/7, Error ellipse: s-maj=86.9km s-min=33.6km az=52.0*

*NEIC **20** 13:04:04.2±2.9, 39.07N×13.45E, h342^{km}±16^{km}, Error ellipse: s-maj=51.6km s-min=19.2km az=51.0*

ISC 20 13:04:03.8±3.1, **39.1N**±0.3×**13.5E**±0.4, **h351**^{km}±17^{km}, **n8**, σ**0^{s}85**/9, **mb3.2**/3, **1D**, **Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIP	Timpagrande	2.51	87	⇓*i*Pn	P	13 04 60.0	+0.5
TIP				*e*S	S	13 05 36.5	-6.6
IDI	Anoyia	9.82	109	P	P	13 06 19.5	-1.0
	0.8nm,0.3s,baz=329,slow=14,SNR=5.2						
VRAC	Vranov	10.44	11	P	P	13 06 27.2	-0.7
	0.2nm,0.3s,baz=168,slow=9.3,SNR=3.9						
MLR	Muntele Rosu	11.19	51	P	P	13 06 37.0	+0.2
	0.2nm,0.3s,baz=294,slow=20,SNR=5.6						
BRTR	Keskin Array B	15.55	81	P	P	13 07 27.5	+0.9
	0.2nm,0.3s,baz=270,slow=11,SNR=4.2						
NOA	NORSAR Array B	22.02	357	P	P	13 08 32.3	+1.5
	0.8nm,0.8s,mb3.0,baz=183,slow=12,SNR=2.6						
FINES	FINESS Array B	23.68	15	P	P	13 08 45.5	-0.6
	0.7nm,0.4s,mb3.2,baz=202,slow=8.3,SNR=13						
ARCES	ARCESS Array B	31.17	8	P	P	13 09 51.8	-0.7
	1.4nm,0.6s,mb3.4,baz=190,slow=7.4,SNR=7.5						

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*IDC **20** 13:08:24.8±3.9, 41.43S×85.61W, mb3.8/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML3.5/1, MS4.0/3, Ms1 4.0/3, ms1mx3.2/22, Error ellipse: s-maj=93.7km s-min=33.1km az=7.0*

*NEIC **20** 13:08:27.0±2.0, 41.36S×85.58W, h10^{km}, mb4.1/1, Error ellipse: s-maj=45.3km s-min=16.2km az=203.0*

ISC 20 13:08:23.8±2.6, **41.6S**±0.4×**85.7W**±0.3, **h10**^{km}, **n15**, σ**0^{s}74**/10, **mb3.7**/5, **MS4.1**/2, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	11.43	91	Pn	P	13 11 09.0	-1.1
	0.1nm,0.3s,baz=15,slow=14,SNR=2.8						
PLCA				LR	LR	13 14 39.2	
	comp=Z,568nm,19.0s,baz=212,slow=33						
PLCA	Paso Flores	11.43	91	Pn	P	13 11 09.0	-1.1
PLCA				LR	LR	13 14 39.2	
TRQA	Tornquist	18.52	87	*e*P	P	13 12 43.5	+1.4
	18nm,1.2s						
LVC	Limon Verde	23.60	42	P	P	13 13 35.6	-0.1
	2.8nm,0.8s,mb3.7,baz=232,slow=8.2,SNR=5.1						
LPAZ	La Paz	29.43	36	P	P	13 14 29.5	-0.2
	1.3nm,0.8s,mb3.7,baz=186,slow=8.7,SNR=5.2						
LPAZ	La Paz	29.43	36	*e*P	P	13 14 30.2	+0.4
BDFB	Brasilia	41.48	63	P	P	13 16 12.3	-0.3
	2.6nm,0.9s,mb3.8,baz=76,slow=4.2,SNR=3.2						
RKT	Rikitea	44.90	279	*e*LR	LR	13 29 07.0	
	265nm,27.0s						
VNDA	Vanda	54.30	194	LR	LR	13 38 05.5	
	comp=Z,130nm,19.3s,MS4.0,baz=210,slow=33						
TBI	Tubuai	55.59	268	*e*LR	LR	13 34 07.3	
	221nm,32.8s						
PPT	Papeete	59.13	274	*e*LR	LR	13 35 44.0	
	257nm,26.5s						
RAR	Rarotonga	64.56	264	LR	LR	13 39 39.9	
	comp=Z,161nm,18.3s,MS4.2,baz=116,slow=29						
TXAR	Lajitas Array	72.54	344	P	P	13 19 52.3	-0.6
	0.9nm,1.0s,mb3.7,baz=166,slow=8.1,SNR=5.3						
ANMO	Albuquerque	78.56	343	P	P	13 20 27.3	+0.4
	0.7nm,0.7s,mb3.7,baz=149,slow=9.2,SNR=3.1						
ANMO	Albuquerque	78.56	343	*e*P	P	13 20 27.6	+0.7

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*NEIC **20** 13:16:06.0±0.7, 7.52N×94.12E, mb4.2/3, Error ellipse: s-maj=27.6km s-min=8.8km az=57.0*

*IDC **20** 13:16:06.0±0.9, 7.57N×94.14E, h18^{km}±5^{km}, mb3.5/7, mb1 3.7/7, mb1mx3.6/16, mbtmp3.6/7, Error ellipse: s-maj=52.8km s-min=16.7km az=48.0*

ISC 20 13:16:04.0±0.9, **7.5N**±0.2×**94.1E**±0.2, **h19**^{km}, **h19**^{km}±1.1^{km}**:pP-P**, **n19**, σ**0^{s}64**/18, **mb3.8**/11, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIRN	Jiri	21.43	340	*e*P	P	13 20 53.8	+0.6
PKI	Pulchoki	21.62	339	*e*P	P	13 20 55.3	+0.2
DMN	Daman	21.76	338	*e*P	P	13 20 56.5	-0.1
GUN	Gumba	21.76	340	*e*P	P	13 20 56.1	-0.5
KKN	Kakani	21.86	339	*e*P	P	13 20 58.1	+0.5
LSA	Lhasa	22.28	353	*e*P	P	13 21 03.4	+1.7
	5.6nm,0.6s,mb4.2						
GKN	Gorkha	22.29	337	*e*P	P	13 21 01.4	-0.5
KOLN	Koldanda	22.50	335	*e*P	P	13 21 03.8	-0.2
SONM	Songino Array	41.55	12	P	P	13 23 51.7	-0.3
	0.7nm,0.8s,mb3.3,baz=190,slow=7.5,SNR=4.8						
KURK	Kurchatov	44.98	346	P	P	13 24 18.6	-1.2
	7.1nm,1.5s,mb4.3						
ZAL	Zalesovo	46.93	352	P	P	13 24 35.0	-0.2
	1.3nm,0.4s,mb4.2,baz=304,slow=7.0,SNR=7.7						
WRA	Warramunga Arr	48.06	125	P	P	13 24 44.2	-0.4
	0.2nm,0.5s,mb3.4,baz=306,slow=8.5,SNR=6.4						
WRA				pP	pP	13 24 51.2	+0.7
	0.5nm,0.5s,baz=304,slow=8.7,SNR=6.6						
ASAR	Alice Springs	49.69	130	P	P	13 24 57.6	+0.6
	0.2nm,0.4s,mb3.5,baz=305,slow=7.6,SNR=4.8						
ASAR				pP	pP	13 25 03.1	+0.1
	0.6nm,0.7s,baz=303,slow=7.3,SNR=6.0						
CHKZ	Chkalovo	49.84	342	*e*P	P	13 24 57.2	-0.6
	2.3nm,0.9s,mb4.2						
BRTR	Keskin Array B	62.66	311	P	P	13 26 29.8	0.0
	0.4nm,0.4s,mb3.9,baz=124,slow=8.4,SNR=3.2						
FINES	FINESS Array B	73.04	332	P	P	13 27 34.0	-0.4
	1.5nm,0.9s,mb3.9,baz=112,slow=7.5,SNR=3.7						
FINES				pP	pP	13 27 40.0	-0.5
	1.6nm,0.7s,baz=98,slow=6.8,SNR=3.7						
GERES	GERESS Array B	78.09	318	P	P	13 28 04.1	+0.8
	0.4nm,0.8s,mb3.4,baz=78,slow=6.3,SNR=3.0						
GERES				pP	pP	13 28 09.9	+0.4
	0.7nm,0.7s,baz=90,slow=4.0,SNR=3.6						
NB2	NORSAR Subarra	80.06	331	P	P	13 28 19.2	+5.5
	0.8nm,0.7s,mb3.8,baz=92,slow=5.6						
NOA	NORSAR Array B	80.06	331	pP	pP	13 28 20.4	+0.5
	1.7nm,0.8s,baz=98,slow=8.1,SNR=2.8						

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*BJI **20** 13:16:57.1, 7.31N×93.79E, h39^{km}, mB4.8, mb4.7, Ms4.6, Msz4.3*

*MOS **20** 13:16:58.6±0.8, 7.64N×94.16E, h33^{km}, mb4.8/16, Error ellipse: s-maj=19.8km s-min=7.7km az=103.5*

*NEIC **20** 13:16:58.9±0.4, 7.59N×94.03E, mb4.5/14, Error ellipse: s-maj=11.2km s-min=8.3km az=86.0*

*IDC **20** 13:16:58.7±0.5, 7.67N×94.12E, h18^{km}±2^{km}, mb4.1/16, mb1 4.2/17, mb1mx4.2/23, mbtmp4.2/17, ML5.0/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/24, Error ellipse: s-maj=25.3km s-min=11.9km az=51.0*

ISC 20 13:16:57.1±0.4, **7.57N**±0.05×**94.10E**±0.05, **h23**^{km}, **h23**^{km}±1.9^{km}**:pP-P**, **n84**, σ**1^{s}08**/88, **mb4.5**/47, **MS4.1**/5, **3C-2D**, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	7.50	113	P	Pn	13 18 46.6	-1.4
IPM	Ipoh	7.50	113	S	Sn	13 20 08.5	-4.7
KGM	Kluang	10.71	121	P	P	13 19 32.5	0.0
CM31	Chiang Mai Arr	11.80	23	*e*P	P	13 19 47.6	+0.4
	12nm,0.4s						
CMAR	Chiang Mai Arr	11.80	23	Pn	P	13 19 47.4	+0.1
	2.7nm,0.3s,baz=212,slow=14,SNR=33						
VIS	Vishakhapatnam	14.56	315	*i*P	P	13 20 26.8	+2.9
HYB	Hyderabad	18.04	304	*e*P	P	13 21 14.0	+5.6
HYB	Hyderabad	18.04	304	*i*P	P	13 21 14.0	+5.6
HYB				*e*S	S	13 24 35.0	+8.9
KMI	Kunming	19.31	24	P	P	13 21 26.0	+2.5
KMI				AP		13 21 34.8	
KMI				S	S	13 24 56.3	+1.7
KMI				AMB	AMB		
	comp=Z,17nm,1.4s						
KMI				LR	LR		
	comp=N,365nm,11.6s						
KMI				LR	LR		
	comp=E,516nm,9.3s						
KMI				LR	LR		
	comp=Z,440nm,14.0s						
KMI	Kunming	19.31	24	P	P	13 21 26.0	+2.5
KMI				S	S	13 24 56.2	+1.6
KMI				pmax	pmax		
	comp=Z,17nm,1.4s						
KMI	Kunming	19.31	24	P	P	13 21 26.0	+2.5
	comp=Z,17nm,1.4s						
KMI				pP		13 21 34.7	
KMI				S	S	13 24 56.2	+1.6
JIRN	Jiri	21.34	340	*e*P	P	13 21 43.8	-1.2
	comp=Z,49nm,0.7s,mb5.0						
PKI	Pulchoki	21.53	339	*e*P	P	13 21 47.7	+0.8
	comp=Z,61nm,0.9s,mb5.0						
DMN	Daman	21.67	338	*e*P	P	13 21 49.2	+0.9
	comp=Z,47nm,0.6s,mb5.1						
GUN	Gumba	21.67	340	*e*P	P	13 21 47.6	-0.7
	comp=Z,33nm,0.4s,mb5.1						
KKN	Kakani	21.77	339	*e*P	P	13 21 48.8	-0.5
	comp=Z,33nm,0.7s,mb4.9						
LSA	Lhasa	22.19	353	*e*P	P	13 21 53.9	+0.5
LSA				pmax	pmax		
	comp=Z,27nm,0.5s,mb4.9						
LSA	Lhasa	22.19	353	*e*P	P	13 21 53.9	+0.4
	comp=Z,27nm,0.5s,mb4.9						
GKN	Gorkha	22.21	337	*e*P	P	13 21 52.2	-1.4
	comp=Z,52nm,0.7s,mb5.1						
GYA	Guiyang	22.26	31	⇑*i*P	P	13 21 56.4	+2.2
GYA				AP		13 22 05.6	
GYA				XP		13 22 09.8	
GYA				PP	PP	13 22 26.4	+5.2
GYA				S	S	13 26 01.1	+8.2
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
GYA				AMB	AMB		
	comp=Z,150nm,3.9s						
GYA				LR	LR		
	comp=N,660nm,14.7s,MS4.5						
GYA				LR	LR		
	comp=E,1µm,13.8s,MS4.5						
GYA				LR	LR		
	comp=Z,520nm,13.5s,MS4.1						
KOLN	Koldanda	22.41	335	*e*P	P	13 21 56.2	+0.5
	comp=Z,43nm,0.7s,mb5.0						
ENH	Enshi	26.80	31	*e*P	P	13 22 38.1	+0.4
	comp=Z,4.0nm,0.5s,mb4.2						
DDI	Dehra Dun	27.18	328	*e*	P	13 22 53.1	+12
XAN	Xi'an	29.68	25	P	P	13 23 03.8	+0.1
XAN				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.3						
LZH	Lanzhou	29.75	16	*e*P	P	13 23 03.6	-0.6
LZH				AP	pP	13 23 13.3	+2.3
LZH				XP	sP	13 23 17.1	+3.1
LZH				AMB	AMB		
	comp=Z,31nm,1.5s,mb4.8						
LZH	Lanzhou	29.75	16	*e*P	P	13 23 03.6	-0.6
LZH				*PP	pP	13 23 13.2	+2.2
LZH				*SP	sP	13 23 17.1	+3.1
LZH				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.8						
LZH	Lanzhou	29.75	16	*e*P	P	13 23 03.6	-0.6
	comp=Z,31nm,1.5s,mb4.8						
LZH				pP	pP	13 23 13.2	+2.2
LZH				sP	sP	13 23 17.1	+3.1
GTA	Gaotai	32.11	8	P	P	13 23 24.1	-0.9
GTA				AP	pP	13 23 32.9	+1.1
GTA				XP	sP	13 23 35.8	+1.1
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.5						
WMQ	Urumqi	36.54	352	P	P	13 24 03.4	+0.4
WMQ				XP	sP	13 24 17.0	+4.3
WMQ				PP	PP	13 25 28.0	+0.6
WMQ				S	S	13 29 42.0	-1.4
WMQ				SS	SS	13 32 08.0	-1.9
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.7						
WMQ				LR	LR		
	comp=N,128nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=E,247nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,121nm,18.0s,MS3.7						
HHC	Hu-ho-hao-te	36.61	22	*e*P	P	13 24 04.8	+1.2
HHC				AP	pP	13 24 13.6	+3.2
HHC				XP	sP	13 24 18.3	+5.0
HHC				S	S	13 29 42.0	-2.5
HHC				SCS	ScS	13 34 13.0	-3.1
HHC				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.4						
HHC				AMB	AMB		
	comp=Z,36nm,4.5s						
HHC				LR	LR		
	comp=N,285nm,16.7s,MS4.4						
HHC				LR	LR		
	comp=E,423nm,15.5s,MS4.4						
HHC				LR	LR		
	comp=Z,299nm,13.1s,MS4.2						
AAK	Ala-Archa	38.96	337	⇑*e*P	P	13 24 23.7	+0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
AAK	Ala-Archa	38.96	337	*e*P	P	13 24 23.3	-0.1
	comp=Z,3.5nm,0.8s,mb4.1						
MKAR	Makanchi Array	40.37	347	*e*P	P	13 24 34.6	-0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	Songino Array	41.46	13	P	P	13 24 44.4	+0.5
	comp=Z,1.7nm,0.4s,mb4.0,baz=196,slow=9.4,SNR=21						
SONM				PcP	PcP	13 26 42.6	+0.5
	comp=Z,0.6nm,0.8s,baz=200,slow=3.4,SNR=3.6						
ULN	Ulaanbaatar	41.64	13	*e*P	P	13 24 45.5	+0.2
ZAK	Zakamensk	43.35	9	*e*P	P	13 24 57.3	-2.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
KURK	Kurchatov	44.89	346	*e*P	P	13 25 12.0	+0.2
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
KURK	Kurchatov	44.89	346	*e*P	P	13 25 12.0	+0.2
	comp=Z,8.7nm,0.8s,mb4.6						
CN2	Changchun	45.30	32	*e*P	P	13 25 18.4	+3.3
NWAO	Narrogin (SRO)	45.90	153	P	P	13 25 21.5	+1.5
	comp=Z,7.4nm,0.9s,mb4.6,baz=337,slow=13,SNR=4.0						
ZAL	Zalesovo	46.84	352	P	P	13 25 27.5	+0.4
	comp=Z,8.3nm,0.4s,mb5.0,baz=307,slow=5.1,SNR=25						
NVS	Novosibirsk	47.94	352	*e*P	P	13 25 34.3	-1.4
NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
MDJ	Mudanjiang	48.08	34	P	P	13 25 37.4	+0.4
MDJ				AP	pP	13 25 45.8	+1.8
MDJ				XP	sP	13 25 50.3	+3.6
MDJ				PCP	PcP	13 27 04.1	-0.8
MDJ				PP	PP	13 27 29.8	+1.3
MDJ				SCP		13 30 56.8	
MDJ				PCS		13 31 00.6	
MDJ				S	S	13 32 34.5	+1.5
MDJ				XS		13 32 49.8	
MDJ				SCS	ScS	13 35 27.5	+1.6
MDJ				SS	SS	13 36 04.4	+7.4
MDJ				AMB	AMB		
	comp=Z,17nm,2.6s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,209nm,3.7s						
MDJ				LR	LR		
	comp=N,384nm,4.8s						
MDJ				LR	LR		
	comp=E,243nm,5.5s						
MDJ				LR	LR		
	comp=Z,486nm,4.5s						
WRA	Warramunga Arr	48.12	125	P	P	13 25 37.2	-0.5
	comp=Z,0.8nm,0.5s,mb4.0,baz=304,slow=8.7,SNR=6.1						
WRA				pP	pP	13 25 43.7	-0.9
	comp=Z,1.5nm,0.5s,baz=304,slow=8.7,SNR=7.4						
BVAR	Borovoye Array	49.26	341	P	P	13 25 44.9	-1.1
	comp=Z,0.7nm,0.4s,mb4.1,baz=145,slow=9.2,SNR=7.0						
BVAR				PcP	PcP	13 27 09.5	+0.5
	comp=Z,0.8nm,0.7s,baz=180,slow=1.4,SNR=2.7						
CHKZ	Chkalovo	49.74	342	*e*P	P	13 25 49.3	-0.4
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
CHKZ	Chkalovo	49.74	342	*e*P	P	13 25 49.3	-0.4
	comp=Z,4.6nm,0.4s,mb4.9						
ASAR	Alice Springs	49.75	130	P	P	13 25 49.8	-0.4
	comp=Z,0.6nm,0.6s,mb3.8,baz=302,slow=7.8,SNR=6.5						
ASAR				pP	pP	13 25 56.2	-0.9
	comp=Z,1.3nm,0.6s,baz=301,slow=7.3,SNR=5.0						
ASAR				PcP	PcP	13 27 13.2	+2.0
	comp=Z,0.5nm,0.5s,baz=300,slow=4.2,SNR=2.0						
ASAR				LR	LR	13 48 52.3	
	comp=Z,74nm,18.7s,MS3.7,baz=113,slow=38						
BOD	Bodaibo	52.45	13	*e*P	P	13 26 08.8	-1.4
SVE	Sverdlovsk	55.66	338	*e*P	P	13 26 34.0	+0.2
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
KMBO	Kilima Mbogo	57.35	264	P	P	13 26 46.8	+0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=52,slow=12,SNR=4.1						
KIV	Kislovodsk	57.51	318	P	P	13 26 47.0	-0.2
KIV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
KIV	Kislovodsk	57.51	318	P	P	13 26 47.0	-0.1
	comp=Z,4.5nm,0.5s,mb4.8						
SOC	Sochi	59.37	317	*e*P	P	13 27 00.5	+0.4
SOC				*e*		13 27 48.8	
SOC				*e*		13 29 08.8	
SOC				*e*S	S	13 35 03.6	-2.1
SOC				*e*		13 36 47.7	
SOC				*e*SSS	SSS	13 41 27.5	-2.3
SOC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
SOC				pmax	pmax		
	comp=N,3.0nm,0.4s						
SOC				pmax	pmax		
	comp=E,5.0nm,0.6s						
YAK	Yakutsk	60.29	18	⇓*e*P	P	13 27 05.2	-1.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
BRTR	Keskin Array B	62.59	311	P	P	13 27 21.0	-1.0
	comp=Z,1.1nm,0.7s,mb4.1,baz=132,slow=7.9,SNR=5.4						
BRTR				pP	pP	13 27 27.7	-1.4
	comp=Z,2.3nm,0.6s,baz=131,slow=6.8,SNR=9.8						
OBN	Obninsk	65.61	328	⇓*e*P	P	13 27 41.7	+0.3
OBN				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
MA2	Magadan	67.05	28	*e*P	P	13 27 50.5	0.0
MA2				*e*		13 28 03.2	
MA2				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
TIXI	Tiksi	67.53	11	*e*P	P	13 27 52.2	-1.2
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
AKASG	Malin Array Be	68.36	322	P	P	13 27 57.4	-1.6
	comp=Z,0.9nm,0.7s,mb3.9,baz=100,slow=4.2,SNR=4.4						
AKASG				pP	pP	13 28 04.9	-1.2
	comp=Z,1.7nm,0.6s,baz=90,slow=5.0,SNR=6.3						
IDI	Anoyia	68.71	305	P	P	13 28 01.8	+0.4
	comp=Z,3.2nm,0.5s,mb4.5,baz=101,slow=16,SNR=2.5						
LSZ	Lusaka	69.13	251	*e*P	P	13 28 06.6	+2.3
	comp=Z,2.4nm,0.7s,mb4.2						
JOF	Joensuu	71.10	335	*e*p	P	13 28 15.1	-0.4
FINES	FINESS Array B	72.96	332	P	P	13 28 26.2	-0.2
	comp=Z,2.4nm,0.6s,mb4.3,baz=103,slow=6.7,SNR=14						
FINES				pP	pP	13 28 31.8	-1.9
	comp=Z,4.5nm,0.6s,baz=90,slow=5.6,SNR=8.3						
KAF	Kangasniemi	73.04	333	*e*p	P	13 28 26.6	-0.4
	comp=Z,1.2nm,0.4s,mb4.2,baz=103,slow=5.6						
KAF	Kangasniemi	73.04	333	*e*P	P	13 28 26.6	-0.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
LBTB	Lobatse	74.06	241	P	P	13 28 35.9	+2.2
	comp=Z,2.0nm,0.7s,mb4.2,baz=297,slow=8.8,SNR=3.5						
OJC	Ojcow	74.18	320	*e*P	P	13 28 31.8	-2.0
KEV	Kevo	75.11	341	*e*p	P	13 28 38.6	-0.2
ARCES	ARCESS Array B	75.53	340	P	P	13 28 41.8	+0.6
	comp=Z,2.5nm,0.8s,mb4.2,baz=93,slow=7.3,SNR=12						
ARCES				pP	pP	13 28 47.8	-0.7
	comp=Z,3.0nm,0.7s,baz=90,slow=3.6,SNR=3.3						
GERES	GERESS Array B	78.02	318	P	P	13 28 56.6	+1.1
	comp=Z,0.6nm,0.4s,mb3.8,baz=106,slow=3.9,SNR=11						
GERES				pP	pP	13 29 02.0	-0.8
	comp=Z,2.8nm,0.7s,baz=90,slow=4.0,SNR=11						
KHC	Kasperske Hory	78.11	319	*e*P	pP	13 29 03.5	+0.2
KHC	Kasperske Hory	78.11	319	*e*pP	pP	13 29 03.5	+0.2
GRA1	Grafenberg Arr	79.67	319	*e*P	P	13 29 09.6	+5.1
	comp=Z,2.0nm,0.8s,mb4.1						
GRF	Grafenberg Arr	79.67	319	*e*P	P	13 29 09.6	+5.1
GRF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						

GRF	**Grafenberg Arr**	**79.67**	**319**	*e*P	**P**	**13 29 09.6**	**+5.1**
GRF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
GRF	**Grafenberg Arr**	**79.67**	**319**	*e*P	**P**	**13 29 09.6**	**+5.1**
	comp=Z,2.0nm,0.8s,mb4.1						
NB2	**NORSAR Subarra**	**79.97**	**331**	P	**P**	**13 29 05.3**	**-0.6**
	comp=Z,6.1nm,1.1s,mb4.4,baz=95,slow=5.6						
NB2	**NORSAR Subarra**	**79.97**	**331**	P	**P**	**13 29 05.3**	**-0.6**
NB2				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
NOA	**NORSAR Array B**	**79.97**	**331**	P	**P**	**13 29 06.0**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=94,slow=5.0,SNR=3.5						
NOA				pP	pP	13 29 11.7	-1.5
	comp=Z,2.1nm,0.8s,baz=94,slow=5.5,SNR=5.0						
SYO	**Syowa Base**	**85.11**	**197**	⇑PcP	PcP	13 29 37.6	+1.7
EKA	**Eskdalemuir Ar**	**87.94**	**325**	P	**P**	**13 29 47.0**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.4,baz=89,slow=5.3,SNR=4.0						
PDAR	**Pinedale Array**	**125.46**	**21**	PKP	PKPdf	13 35 58.3	-3.0
	comp=Z,0.2nm,0.6s,baz=324,slow=1.5,SNR=2.3						
PLCA	**Paso Flores**	**144.25**	**200**	PKP	PKPdf	13 36 33.4	-2.6
	comp=Z,1.5nm,0.8s,baz=216,slow=5.5,SNR=4.9						

IDC ***20*** *13:25:01.9±1.0, 52.61N×169.31W, mb3.9/17, mb1 4.1/18, mb1mx4.0/25, mbtmp3.9/18, ML3.5/1, Error ellipse: s-maj=27.1km s-min=16.0km az=174.0*

NEIC ***20*** *13:25:06.2, 52.37N×169.06W, h15^{km}, ML3.8(AEIC), After AEIC.*

ISC 20 13:25:04.8±0.6**, 52.40N**±0.07×**169.20W**±0.08**, h33^{km}, n35, σ1§31**/39**, mb3.8**/17**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	**Nikolski**	**0.61**	**20**	P	**P**	**13 25 17.0**	**+0.2**
NIKO				S	**S**	**13 25 25.3**	**-0.3**
OKFG	**Magazine Ridge**	**1.27**	**37**	P	**P**	**13 25 26.9**	**+0.6**
OKFG				S	**S**	**13 25 43.5**	**+0.9**
MSW	**Makushin Switc**	**2.10**	**43**	P	**P**	**13 25 38.6**	**+0.3**
MSW				S	**S**	**13 26 05.4**	**+2.0**
UNV	**Unalaska Valle**	**2.17**	**47**	P	**P**	**13 25 39.4**	**+0.1**
UNV				S	**S**	**13 26 04.5**	**-0.8**
MTBL	**Makushin Table**	**2.18**	**43**	P	**P**	**13 25 40.1**	**+0.7**
AKLV	**Akutan Long Va**	**2.63**	**47**	P	**P**	**13 25 47.4**	**+1.7**
AKUT	**Akutan**	**2.69**	**48**	P	**P**	**13 25 48.3**	**+1.6**
ATKA	**Atka Island**	**3.08**	**268**	P	**P**	**13 25 54.5**	**+2.4**
ATKA				S	**S**	**13 26 30.0**	**+1.8**
WFAR	**Faris Peak**	**3.40**	**49**	P	**P**	**13 25 58.0**	**+1.3**
SPIA	**Saint Paul Isl**	**4.82**	**353**	P	**P**	**13 26 18.2**	**+1.2**
KIWB	**Kanaga Island**	**4.93**	**267**	P	**P**	**13 26 20.3**	**+1.7**
ILAR	**Eielson Array**	**16.86**	**34**	Pn	**P**	**13 28 57.0**	**-2.5**
	0.1nm,0.3s,baz=226,slow=9.0,SNR=7.7						
INK	**Inuvik**	**23.26**	**33**	P	**P**	**13 30 07.8**	**-1.8**
	0.7nm,0.4s,mb3.4,baz=248,slow=8.6,SNR=13						
YKA	**Yellowknife Ar**	**30.14**	**49**	P	**P**	**13 31 12.0**	**-1.3**
	0.6nm,0.5s,mb3.6,baz=271,slow=7.7,SNR=19						
YKA	**Yellowknife Ar**	**30.14**	**49**	P	**P**	**13 31 12.0**	**-1.3**
NEW	**Newport**	**32.90**	**76**	P	**P**	**13 31 39.2**	**+1.5**
	0.8nm,0.6s,mb3.9,baz=292,slow=2.6,SNR=3.8						
NEW	**Newport**	**32.90**	**76**	P	**P**	**13 31 39.2**	**+1.5**
PDAR	**Pinedale Array**	**40.29**	**79**	P	**P**	**13 32 40.5**	**+0.3**
	0.4nm,0.6s,mb3.4,baz=297,slow=3.3,SNR=5.0						
SONM	**Songino Array**	**51.37**	**301**	P	**P**	**13 34 07.8**	**-0.1**
	0.7nm,0.5s,mb3.9,baz=59,slow=6.0,SNR=12						
SONM				PcP	PcP	13 35 21.6	-0.9
	0.5nm,0.7s,baz=51,slow=1.3,SNR=4.1						
TXAR	**Lajitas Array**	**52.64**	**89**	P	**P**	**13 34 18.4**	**+0.8**
	0.2nm,0.5s,mb3.3,baz=304,slow=3.3,SNR=3.6						
SCHQ	**Schefferville**	**55.34**	**43**	P	**P**	**13 34 35.1**	**-2.0**
	2.0nm,0.8s,mb4.2,baz=303,slow=6.3,SNR=4.3						
ZAL	**Zalesovo**	**57.49**	**318**	P	**P**	**13 34 50.5**	**-2.0**
	0.5nm,0.4s,mb3.9,baz=96,slow=4.1,SNR=3.4						
ARCES	**ARCESS Array B**	**57.90**	**354**	P	**P**	**13 34 53.2**	**-2.0**
	1.4nm,0.8s,mb4.0,baz=18,slow=3.8,SNR=6.3						
BVAR	**Borovoye Array**	**63.74**	**324**	P	**P**	**13 35 34.1**	**-0.8**
	2.8nm,0.6s,mb4.5,baz=50,slow=7.0,SNR=18						
JOF	**Joensuu**	**63.89**	**350**	*e*p	**P**	**13 35 34.8**	**-0.9**
KAF	**Kangasniemi**	**65.17**	**352**	*e*p	**P**	**13 35 42.3**	**-1.7**
	baz=346,slow=5.4						
FINES	**FINESS Array B**	**65.85**	**352**	P	**P**	**13 35 45.9**	**-2.4**
	0.6nm,0.6s,mb3.8,baz=37,slow=9.5,SNR=8.9						
NB2	**NORSAR Subarra**	**66.91**	**360**	P	**P**	**13 35 54.0**	**-1.0**
	0.1nm,0.6s,mb3.0,baz=2.0,slow=5.8						
NOA	**NORSAR Array B**	**66.91**	**360**	P	**P**	**13 35 53.6**	**-1.4**
	1.0nm,0.7s,mb4.0,baz=330,slow=5.2,SNR=4.9						
AKASG	**Malin Array Be**	**76.10**	**348**	P	**P**	**13 36 48.6**	**-1.5**
	0.8nm,0.4s,mb4.0,baz=14,slow=5.7,SNR=7.3						
CMAR	**Chiang Mai Arr**	**76.71**	**283**	P	**P**	**13 36 54.6**	**+0.3**
	1.9nm,1.0s,mb4.0,baz=25,slow=6.6,SNR=7.2						
GERES	**GERESS Array B**	**79.10**	**358**	P	**P**	**13 37 07.6**	**+0.8**
	1.0nm,0.8s,mb3.8,slow=4.0,SNR=8.9						
ESDC	**Sonseca Array**	**87.40**	**11**	P	**P**	**13 37 49.6**	**+0.3**
	0.9nm,0.7s,mb4.1,baz=346,slow=4.3,SNR=5.7						
ASAR	**Alice Springs**	**90.50**	**230**	P	**P**	**13 38 04.1**	**-0.3**
	0.4nm,0.8s,mb3.8,baz=41,slow=4.5,SNR=4.6						
LBTB	**Lobatse**	**150.44**	**332**	PKPbc	PKPdf	13 44 56.0	+8.8
	2.1nm,0.7s,baz=131,slow=9.0,SNR=4.8						

KRSC 20 13:25:46.6±0.7**, 55.00N×162.75E, h14^{km}**±**2^{km}, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.21**	**2**	*i* P	Pb	13 26 09.4	+0.6
KBTR				*e*S	Sb	13 26 26.4	+2.3
KBG	**Krutoberegovo**	**1.26**	**359**	*i* P	Pb	13 26 10.4	+0.8
KBG				*e*S	Sb	13 26 27.9	+2.4
KBG				Smax			
	740nm,0.6s						
KBG	**Krutoberegovo**	**1.26**	**359**	*i* P	Pb	13 26 10.3	+0.7
KBG				*i* S	Sb	13 26 28.3	+2.8
KBG				Smax			
	610nm,0.8s						
TUMR	**Tumrok**	**1.52**	**282**	*e*P	Pn	13 26 14.0	+0.4
TUMR				*e*S	Sb	13 26 34.2	+1.1
KMNR	**Kamenistaya**	**1.62**	**299**	*e*P	Pn	13 26 15.7	+0.7
KMNR				*e*S	Sn	13 26 36.7	+0.9
KLY	**Klyuchi**	**1.77**	**319**	*e*P	Pn	13 26 16.2	-1.0
KLY				*e*S	Sn	13 26 37.6	-2.0
SVLR	**Shiveluch**	**1.80**	**332**	*e*P	Pn	13 26 18.2	+0.6
SVLR				*e*S	Sn	13 26 41.3	+1.0
BKI	**Bering**	**1.86**	**82**	*e*P	Pn	13 26 17.7	-0.8
BKI				*e*S	Sn	13 26 39.6	-2.3
KOZ	**Kozyrevsk**	**1.95**	**304**	*e*P	Pn	13 26 20.8	+1.1
KOZ				*e*S	Sn	13 26 45.8	+1.7
SRDR	**Sredinnyy**	**2.17**	**309**	*e*P	Pn	13 26 23.2	+0.4
SRDR				*e*S	Sn	13 26 49.8	+0.2
ESO	**Esso**	**2.49**	**294**	*e*P	Pn	13 26 27.0	-0.4
ESO				*e*S	Sn	13 26 56.2	-1.5
ESO				Smax			
	30nm,1.4s						
SPN	**Mys Shipunski**	**2.49**	**221**	*e*P	Pn	13 26 27.0	-0.5
SPN				*e*S	Sn	13 26 56.7	-1.2
NLC	**Nalytchevo**	**2.72**	**229**	*e*P	Pn	13 26 31.0	+0.3
NLC				*e*S	Sn	13 27 03.7	+0.1
SDLR	**Sedlovina**	**2.85**	**234**	*e*P	Pn	13 26 33.2	+0.6
SMAR	**Somma**	**2.90**	**235**	*e*P	Pn	13 26 34.1	+0.8
UGLR	**Uglovaya**	**2.93**	**234**	*e*P	Pn	13 26 34.5	+0.8
AVH	**Avacha**	**2.93**	**235**	*e*P	Pn	13 26 34.6	+0.9
AVH				*e*S	Sn	13 27 09.4	+0.4
KOK	**Koryaka**	**2.96**	**236**	*e*P	Pn	13 26 34.9	+0.7
GNL	**Ganaly**	**3.10**	**247**	*e*P	Pn	13 26 36.4	+0.2
GNL				*e*S	Sn	13 27 12.8	-0.6
PET	**Petropavlovsk**	**3.12**	**232**	*e*P	Pn	13 26 37.3	+0.8
PET				*e*S	Sn	13 27 14.2	+0.3
KRMR	**Karymshinskiy**	**3.49**	**233**	*e*P	Pn	13 26 41.4	-0.3
KRMR				*e*S	Sn	13 27 21.6	-1.6
RUS	**Russkaya**	**3.60**	**226**	*e*P	Pn	13 26 43.1	-0.1
RUS				*e*S	Sn	13 27 24.3	-1.6
GRL	**Gorelyy**	**3.70**	**230**	*e*P	Pn	13 26 45.9	+1.2
GRL				*e*S	Sn	13 27 29.0	+0.4
APC	**Apacha**	**3.90**	**240**	*e*P	Pn	13 26 49.6	+2.1
APC				*e*S	Sn	13 27 34.0	+0.4

CNRM ***20*** *13:25:57.0, 38.13N×6.12W, h30^{km}, MD3.8*

MDD ***20*** *13:26:01.0±0.2, 38.03N×6.00W, h11^{km}, mbLg3.9/33, Error ellipse: s-maj=2.4km s-min=1.9km az=5.0, PRXIMO III MONESTERIO FUENTE DEL ARCO FUENTE DE N III CAZALLA DE LA SIERRA III EL PEDROSO DE LA PLATA*

MDD EMS: IV PUEBLA DEL MAESTRE EL REAL DE LA JARA.

LDG ***20*** *13:26:00.7±0.1, 38.03N×6.00W, h5^{km}, Md4.3/1, Ml4.1/18, Error ellipse: s-maj=1.8km s-min=1.4km az=34.0*

SFS ***20*** *13:26:00.0, 38.03N×5.98W, h8^{km}*

IGIL ***20*** *13:26:00.7, 38.00N×6.00W, h2^{km}, ML4.7*

CSEM ***20*** *13:26:01.4, 37.98N×6.04W, h20^{km}, ML4.9*

INMG ***20*** *13:26:01.2±1.5, 38.03N×6.00W, h15^{km}±3^{km}, ML4.1, Error ellipse: s-maj=2.2km s-min=1.5km az=46.0*

IAG ***20*** *13:26:01, 38.02N×6.01W, h20^{km}, Mw3.7, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.02; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$0.41; $M_{r\theta}$0.06; $M_{\theta\phi}$0.00; $M_{\phi r}$0.09; Best double couple: M_0.431×10^{15} NP1:ϕ_s315°, δ76°, λ177°. NP2:ϕ_s46°, δ87°, λ14°. Principal axes: T .434, Plg12°, Azm271°; N -.0072, Plg76°, Azm58°; P -.427, Plg7°, Azm179°;*

ZUR_RM ***20*** *13:26:01, 38.02N×6.01W, h15^{km}, Mw3.7/3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.53; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$3.61; $M_{r\theta}$1.36; $M_{\theta\phi}$-0.02; $M_{\phi r}$1.14; Best double couple: $M_0$3.66×10^{14} NP1:ϕ_s206°, δ61°, λ-57°. NP2:ϕ_s332°, δ42°, λ-135°. Principal axes: T 3.828, Plg11°, Azm273°; N -.342, Plg28°, Azm9°; P -3.486, Plg59°, Azm164°;*

NEIC ***20*** *13:26:01.1, 38.02N×6.01W, h11^{km}, MN3.9(MDD), After MDD.*

NEIC Felt [IV] at El Real de la Jara and Puebla del Maestre; [III] at Almaden de la Plata, Cazalla de la Sierra, Constantina, El Pedroso, Fuente del Arco, Guadalcanal and Monesterio.

ISC 20 13:25:57.9±0.3**, 38.15N**±0.01×**5.95W**±0.02**, h9^{km}**±**2^{km}, n169, σ1§50**/292**, 15C-7D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMIN	**Mina Concepcio**	**0.69**	**236**	⇑Pg	**Pg**	**13 26 12.1**	**+0.2**
	418nm,0.3s,SNR=18						
EMIN				Lg		13 26 20.0	
	3µm,0.1s,SNR=15						
EMIN	**Mina Concepcio**	**0.69**	**236**	Pg	**Pg**	**13 26 12.1**	**+0.3**
	418nm,0.3s,SNR=18						
EBAD	**Badajoz**	**1.03**	**306**	⇑Pg	**Pg**	**13 26 20.9**	**+2.3**
	360nm,0.1s,SNR=18						
EBAD				Lg		13 26 35.1	
	18µm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**1.03**	**306**	Pg	**Pg**	**13 26 20.9**	**+2.3**
	360nm,0.1s,SNR=18						
EADA	**Adamuz**	**1.08**	**89**	⇑Pg	**Pg**	**13 26 21.4**	**+1.9**
EADA				Lg		13 26 36.9	
EADA	**Adamuz**	**1.08**	**89**	⇑Pg	**Pg**	**13 26 21.4**	**+1.9**
	449nm,0.1s,SNR=18						
EADA				Lg		13 26 36.9	
	930nm,0.1s,SNR=17						
EADA	**Adamuz**	**1.08**	**89**	Pg	**Pg**	**13 26 21.4**	**+1.9**
	449nm,0.1s,SNR=18						
ESPR	**Espera**	**1.28**	**177**	⇓Pn	**Pn**	**13 26 21.5**	**-0.6**
	32nm,0.1s,SNR=18						
ESPR				Pg	**Pg**	**13 26 23.0**	**-0.6**
	1µm,0.3s,SNR=1092						
ESPR				Lg		13 26 37.3	
	2µm,0.2s,SNR=6.8						
ESPR	**Espera**	**1.28**	**177**	Pn	**Pn**	**13 26 21.5**	**-0.6**
	32nm,0.1s,SNR=18						
ESPR	**Espera**	**1.28**	**177**	Pg	**Pg**	**13 26 23.0**	**-0.6**
	1µm,0.3s,SNR=1000						
ERIP	**Rio Piedras**	**1.30**	**233**	⇓Pn	**Pn**	**13 26 21.4**	**-0.9**
	10nm,0.1s,SNR=18						
ERIP				Pg	**Pg**	**13 26 22.7**	**-1.2**
	404nm,0.1s,SNR=7.9						
ERIP				Lg		13 26 37.8	
	2µm,0.1s,SNR=7.9						
LIJA	**Lijar**	**1.32**	**161**	⇑P	**Pb**	**13 26 22.7**	**+0.2**
LIJA				S	**Sb**	**13 26 38.1**	**-1.2**
LIJA	**Lijar**	**1.32**	**161**	*i* P	**Pb**	**13 26 22.7**	**+0.3**
LIJA				*i* S	**Sb**	**13 26 38.1**	**-1.2**
GIBL	**Gibalbin**	**1.32**	**181**	⇑P	**Pb**	**13 26 23.5**	**+1.0**
GIBL				S	**Sb**	**13 26 37.5**	**-1.9**
GIBL	**Gibalbin**	**1.32**	**181**	*i* P	**Pb**	**13 26 23.5**	**+1.0**
GIBL				*e*S	**Sb**	**13 26 37.5**	**-1.9**
PALC	**Alcoutim**	**1.39**	**241**	*e*P	**Pn**	**13 26 23.1**	**-0.6**
PALC				*e*S	**Sb**	**13 26 39.8**	**-1.7**
	4µm,0.4s						
PALC	**Alcoutim**	**1.39**	**241**	P	**Pn**	**13 26 22.9**	**-0.8**
PALC				S	**Sb**	**13 26 39.9**	**-1.6**
PALC	**Alcoutim**	**1.39**	**241**	*e*P	**Pn**	**13 26 23.1**	**-0.6**
PALC				S	**Sb**	**13 26 39.9**	**-1.6**
ELUQ	**Luque**	**1.46**	**114**	⇑Pn	**Pn**	**13 26 25.7**	**+1.2**
	274nm,0.2s,SNR=18						
ELUQ				Lg		13 26 47.0	
	329nm,0.2s,SNR=8.3						
PBEJ	**Beja**	**1.52**	**266**	*e*P	**Pn**	**13 26 25.7**	**+0.2**
PBEJ				*i* -		13 26 27.3	
PBEJ				*e*S	**Sb**	**13 26 44.4**	**-0.8**
	996nm,0.2s						
PBEJ	**Beja**	**1.52**	**266**	P	**Pn**	**13 26 25.6**	**+0.1**
PBEJ				S	**Sb**	**13 26 45.2**	**0.0**
PBEJ	**Beja**	**1.52**	**266**	*e*P	**Pn**	**13 26 25.7**	**+0.2**
PBEJ				S	**Sb**	**13 26 45.2**	**0.0**
SCRT	**Cerro San Cris**	**1.53**	**187**	⇑P	**Pn**	**13 26 27.5**	**+1.9**
SCRT	**Cerro San Cris**	**1.53**	**187**	*i* P	**Pn**	**13 26 27.5**	**+1.9**
EVO	**Evora**	**1.67**	**284**	*e*Pn	**Pn**	**13 26 29.7**	**+2.1**
EVO				*e*Pg	**Pg**	**13 26 32.2**	**+0.9**
EVO				*e*Sg	**Sg**	**13 26 53.8**	**+0.3**
	2µm,0.3s						
SFS	**San Fernando**	**1.70**	**187**	*e*Pn	**Pn**	**13 26 30.2**	**+2.2**
SFS	**San Fernando**	**1.70**	**187**	P	**Pn**	**13 26 31.4**	**+3.3**
SFS				S	**Sn**	**13 26 54.6**	**+4.6**
SFS	**San Fernando**	**1.70**	**187**	*e*Pn	**Pn**	**13 26 30.2**	**+2.2**
SFS	**San Fernando**	**1.70**	**187**	*e*P	**Pn**	**13 26 31.4**	**+3.4**
EBAN	**Banos Encina**	**1.70**	**89**	⇑Pn	**Pn**	**13 26 30.1**	**+2.0**
	114nm,0.2s,SNR=18						
EBAN				Pg	**Pg**	**13 26 33.2**	**+1.3**
	177nm,0.2s,SNR=7.9						
EBAN				Lg		13 26 54.9	
	298nm,0.4s,SNR=11						
EJIF	**Jimena Fronter**	**1.74**	**167**	Pn	**Pn**	**13 26 28.8**	**+0.1**
	73nm,0.1s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.74**	**125**	⇑Pn	**Pn**	**13 26 29.6**	**+1.0**
	14nm,0.1s,SNR=18						
ELOJ				Pg	**Pg**	**13 26 31.9**	**-0.8**
	154nm,0.2s,SNR=72						
ELOJ				Lg		13 26 53.6	
	238nm,0.2s,SNR=9.3						
REAL	**Reales**	**1.77**	**160**	*i* P	**Pn**	**13 26 30.2**	**+1.2**
REAL				*e*S	**Sn**	**13 26 55.8**	**+4.0**
CNIL	**Conil**	**1.78**	**183**	⇑P	**Pn**	**13 26 32.0**	**+2.8**
CNIL				S	**Sn**	**13 26 53.6**	**+1.4**
CNIL	**Conil**	**1.78**	**183**	*i* P	**Pn**	**13 26 32.0**	**+2.8**
CNIL				*e*S	**Sn**	**13 26 53.6**	**+1.4**
MOMI	**Momias**	**1.83**	**174**	*e*S	**Sn**	**13 26 57.1**	**+3.7**
EMAL	**Malaga-Limoner**	**1.84**	**139**	⇓Pn	**Pn**	**13 26 30.5**	**+0.4**
	4.9nm,0.1s,SNR=18						
EMAL				Pg	**Pg**	**13 26 32.9**	**-1.8**
	14nm,0.1s,SNR=4.0						
EMAL				Lg		13 26 55.8	
	105nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.84**	**149**	⇓Pn	**Pn**	**13 26 30.2**	**+0.1**
	24nm,0.4s,SNR=18						
EMIJ				Pg	**Pg**	**13 26 32.8**	**-1.9**
	156nm,0.2s,SNR=5.9						
EMIJ				Lg		13 26 56.0	
	649nm,0.3s,SNR=5.0						
MOE	**Montemor**	**1.93**	**282**	*e*Pn	**Pn**	**13 26 31.6**	**+0.3**
MOE				*e*Pg	**Pg**	**13 26 34.8**	**-1.6**
MOE				*e*Sg	**Sg**	**13 26 59.2**	**-2.9**
MOE	**Montemor**	**1.93**	**282**	Pn	**Pn**	**13 26 31.5**	**+0.2**
MOE				Pg	**Pg**	**13 26 34.7**	**-1.7**
MOE				Lg		13 26 59.4	
MOE	**Montemor**	**1.93**	**282**	Pg	**Pg**	**13 26 34.7**	**-1.7**
MOE				*e*Sg	**Sg**	**13 26 59.2**	**-2.9**
ERON	**Agron**	**2.04**	**123**	⇓Pn	**Pn**	**13 26 33.9**	**+1.0**
	7.5nm,0.2s,SNR=18						
ERON				Pg	**Pg**	**13 26 38.2**	**-0.5**
	39nm,0.2s,SNR=20						
ERON				Lg		13 27 03.3	
	174nm,0.3s,SNR=8.1						
PCBR	**Castelo Branco**	**2.06**	**325**	*e*Pn	**Pn**	**13 26 35.9**	**+2.6**
PCBR				*e*Pg	**Pg**	**13 26 39.7**	**+0.5**
PCBR				*e*Sg	**Sg**	**13 27 07.2**	**+0.5**
	777nm,0.4s						
PCBR	**Castelo Branco**	**2.06**	**325**	Pn	**Pn**	**13 26 36.2**	**+2.9**
PCBR				Pg	**Pg**	**13 26 39.7**	**+0.5**
PCBR				Lg		13 27 07.7	
ECOG	**Cogollos-Vega**	**2.08**	**114**	Pn	**Pn**	**13 26 34.6**	**+1.1**
	10nm,0.2s,SNR=24						
ECOG				Pg	**Pg**	**13 26 39.6**	**+0.1**
	97nm,0.3s,SNR=9.3						
ECOG				Lg		13 27 06.4	
	250nm,0.3s,SNR=9.0						
ESDC	**Sonseca Array**	**2.17**	**45**	Pn	**Pn**	**13 26 37.5**	**+2.7**
ESDC				Pg	**Pg**	**13 26 44.8**	**+3.6**
ESDC				Lg		13 27 10.7	
ESDC	**Sonseca Array**	**2.17**	**45**	Pn	**Pn**	**13 26 37.5**	**+2.7**
	42nm,0.1s,baz=230,slow=12,SNR=127						
ESDC				Pg	**Pg**	**13 26 43.0**	**+1.8**
	102nm,0.2s,baz=225,slow=17,SNR=74						
ESDC				Lg		13 27 10.9	
	332nm,0.3s,baz=221,slow=27,SNR=17						
ESDC	**Sonseca Array**	**2.17**	**45**	Pn	**Pn**	**13 26 37.5**	**+2.8**
	42nm,0.1s,SNR=127						
ESDC	**Sonseca Array**	**2.17**	**45**	Pg	**Pg**	**13 26 43.0**	**+1.8**
	102nm,0.2s,SNR=74						
ESLA	**Sonseca Array**	**2.17**	**45**	*e*Pn	**Pn**	**13 26 37.2**	**+2.5**
ESLA				*e*Pg	**Pg**	**13 26 44.7**	**+3.5**
ESLA				Sn	**Sn**	**13 27 08.0**	**+6.0**
ESLA	**Sonseca Array**	**2.17**	**45**	*e*Pn	**Pn**	**13 26 37.2**	**+2.5**
ESLA	**Sonseca Array**	**2.17**	**45**	*e*Pg	**Pg**	**13 26 44.7**	**+3.5**
PTEO	**Sao Teotonio**	**2.28**	**255**	*e*Pn	**Pn**	**13 26 35.6**	**-0.8**
PTEO				*e*Pg	**Pg**	**13 26 40.5**	**-3.0**
PTEO				*e*Sn	**Sn**	**13 27 02.2**	**-2.7**
PTEO				*e*Sg	**Sg**	**13 27 08.5**	**-5.4**
	902nm,0.5s						
PTEO	**Sao Teotonio**	**2.28**	**255**	Pn	**Pn**	**13 26 35.9**	**-0.5**
PTEO				Pg	**Pg**	**13 26 40.3**	**-3.2**
PTEO				Sn	**Sn**	**13 27 02.2**	**-2.7**
PTEO				Lg		13 27 07.1	
ALMR	**Almeirim**	**2.29**	**297**	*e*P	**Pn**	**13 26 38.7**	**+2.2**
ALMR				*e*S	**Sn**	**13 27 03.2**	**-1.9**
ALMR				*e*S	**Sn**	**13 27 03.3**	**-1.8**
ALMR				AML	AML	13 27 18.1	
	comp=E,6µm,0.6s						
EQES	**Quesada**	**2.30**	**98**	⇑Pn	**Pn**	**13 26 37.9**	**+1.3**
	comp=E,61nm,0.2s,SNR=18						
EQES				Pg	**Pg**	**13 26 44.0**	**+0.2**
	comp=E,84nm,0.2s,SNR=7.9						
EQES				Lg		13 27 14.2	
	comp=E,219nm,0.2s,SNR=5.0						
EQES	**Quesada**	**2.30**	**98**	Pn	**Pn**	**13 26 37.9**	**+1.3**
	comp=E,61nm,0.2s,SNR=18						
EQES	**Quesada**	**2.30**	**98**	Pg	**Pg**	**13 26 44.0**	**+0.2**
	comp=E,84nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**2.56**	**332**	*e*Pn	**Pn**	**13 26 43.5**	**+3.1**
MTE				*e*Pg	**Pg**	**13 26 48.6**	**-0.5**
MTE				*e*Sg	**Sg**	**13 27 22.3**	**-1.0**
	comp=E,1µm,0.5s						
MTE	**Manteigas**	**2.56**	**332**	Pn	**Pn**	**13 26 43.8**	**+3.4**
MTE				Pg	**Pg**	**13 26 48.7**	**-0.4**
MTE				Lg		13 27 21.7	
INMG	**Instituto de M**	**2.57**	**285**	*e*Pn	**Pn**	**13 26 41.7**	**+1.2**
INMG	**Instituto de M**	**2.57**	**285**	Pn	**Pn**	**13 26 41.6**	**+1.1**
LIS	**Lisbon**	**2.58**	**284**	*e*P	**Pn**	**13 26 42.6**	**+2.0**
LIS				*e*S	**Sn**	**13 27 12.1**	**-0.3**
LIS				*e*S	**Sn**	**13 27 12.1**	**-0.3**
LIS				AML	AML	13 27 30.2	
	comp=E,3µm,0.1s						
PLOU	**Loures**	**2.62**	**287**	*e*Pn	**Pn**	**13 26 41.7**	**+0.5**
PLOU				*e*Pg	**Pg**	**13 26 48.6**	**-1.6**
PLOU				*e*Sg	**Sg**	**13 27 22.1**	**-3.0**
	comp=E,1µm,0.6s						
PLOU	**Loures**	**2.62**	**287**	Pn	**Pn**	**13 26 41.7**	**+0.5**
PLOU				Pg	**Pg**	**13 26 48.6**	**-1.6**
PLOU				Lg		13 27 22.1	
	comp=E,650nm,0.6s						
DKH	**Dar Kharkhour**	**2.70**	**170**	*i* P	**Pn**	**13 26 37.0**	**-5.4**
EBER	**Berja**	**2.73**	**116**	⇑Pn	**Pn**	**13 26 44.3**	**+1.4**
	comp=E,46nm,0.2s,SNR=18						
EBER				Pg	**Pg**	**13 26 51.3**	**-1.2**
	comp=E,93nm,0.3s,SNR=20						
EBER				Lg		13 27 26.9	
	comp=E,481nm,0.4s,SNR=5.0						
EBER	**Berja**	**2.73**	**116**	Pn	**Pn**	**13 26 44.3**	**+1.4**
	comp=E,46nm,0.2s,SNR=18						
EBER	**Berja**	**2.73**	**116**	Pg	**Pg**	**13 26 51.3**	**-1.2**
	comp=E,93nm,0.3s,SNR=20						
EVIA	**Vianos**	**2.75**	**79**	⇑Pn	**Pn**	**13 26 44.3**	**+1.3**
	comp=E,38nm,0.2s,SNR=18						
EVIA				Pg	**Pg**	**13 26 51.1**	**-1.7**
	comp=E,188nm,0.4s,SNR=19						
EVIA				Lg		13 27 30.5	
	comp=E,278nm,0.4s,SNR=5.0						
GUD	**Guadarrama**	**2.85**	**29**	Pn	**Pn**	**13 26 47.5**	**+3.1**
	comp=E,7.8nm,0.2s,SNR=7.9						
GUD				Pg	**Pg**	**13 26 55.4**	**+0.7**
	comp=E,33nm,0.2s,SNR=7.9						
GUD				Lg		13 27 34.5	
	comp=E,254nm,0.4s,SNR=7.9						
PVIS	**Viseu**	**2.97**	**330**	*e*Pn	**Pn**	**13 26 48.4**	**+2.2**
PVIS				*e*Sn	**Sn**	**13 27 23.6**	**+1.2**
PVIS				*e*Sg	**Sg**	**13 27 36.2**	**-0.6**
	comp=E,425nm,0.2s						
PVIS	**Viseu**	**2.97**	**330**	Pn	**Pn**	**13 26 48.7**	**+2.5**
PVIS				Sn	**Sn**	**13 27 23.9**	**+1.5**
PVIS				Lg		13 27 36.2	
ENIJ	**Nijar**	**3.20**	**111**	Pn	**Pn**	**13 26 50.2**	**+0.8**
	comp=E,24nm,0.2s,SNR=35						
ENIJ				Pg	**Pg**	**13 26 56.8**	**-5.0**
	comp=E,111nm,0.5s,SNR=16						
ENIJ				Sn	**Sn**	**13 27 24.8**	**-3.3**
	comp=E,63nm,0.4s,SNR=5.2						
ENIJ				Lg		13 27 42.9	
	comp=E,88nm,0.3s,SNR=5.1						
ENIJ	**Nijar**	**3.20**	**111**	Pg	**Pg**	**13 26 56.8**	**-5.0**
	comp=E,111nm,0.5s,SNR=16						
ENIJ				Sn	**Sn**	**13 27 24.8**	**-3.3**
	comp=E,63nm,0.4s,SNR=5.2						
EALB	**Alboran**	**3.21**	**133**	Pn	**Pn**	**13 26 49.2**	**-0.4**
EALB				Pg	**Pg**	**13 26 56.6**	**-5.4**
EALB				Sn	**Sn**	**13 27 24.1**	**-4.3**
EALB				Lg		13 27 34.3	
EALB	**Alboran**	**3.21**	**133**	Pn	**Pn**	**13 26 49.2**	**-0.4**
	comp=E,15nm,0.4s,SNR=7.9						
EALB				Pg	**Pg**	**13 26 56.6**	**-5.4**
	comp=E,34nm,0.3s,SNR=4.0						
EALB				Sn	**Sn**	**13 27 24.1**	**-4.3**
	comp=E,48nm,0.2s,SNR=4.0						
EALB				Lg		13 27 40.0	
	comp=E,92nm,0.3s,SNR=4.0						
EALB	**Alboran**	**3.21**	**133**	Pn	**Pn**	**13 26 49.2**	**-0.4**
	comp=E,15nm,0.4s,SNR=7.9						
EALB	**Alboran**	**3.21**	**133**	Pg	**Pg**	**13 26 56.6**	**-5.4**
	comp=E,34nm,0.3s,SNR=4.0						
EALB				Sn	**Sn**	**13 27 24.1**	**-4.4**
	comp=E,48nm,0.2s,SNR=4.0						
MPAL	**Palemas**	**3.34**	**151**	*e*P	**Pn**	**13 26 48.5**	**-2.9**
PVRL	**Vila Real**	**3.40**	**337**	*e*Pn	**Pn**	**13 26 54.5**	**+2.1**
PVRL				*e*Sn	**Sn**	**13 27 34.0**	**+0.7**
	comp=E,364nm,0.4s						
ETOB	**Tobarra**	**3.49**	**81**	⇑Pn	**Pn**	**13 26 54.4**	**+0.8**
	comp=E,15nm,0.1s,SNR=18						
ETOB				Pg	**Pg**	**13 27 06.3**	**-1.3**
	comp=E,29nm,0.2s,SNR=12						
ETOB				Lg		13 27 52.9	
	comp=E,97nm,0.2s,SNR=5.0						
ETOB	**Tobarra**	**3.49**	**81**	Pn	**Pn**	**13 26 54.4**	**+0.8**
	comp=E,15nm,0.1s,SNR=89						
ETOB	**Tobarra**	**3.49**	**81**	Pg	**Pg**	**13 27 06.3**	**-1.3**
	comp=E,29nm,0.2s,SNR=12						
TOU	**Touzarine**	**3.64**	**150**	*e*P	**Pn**	**13 26 50.0**	**-5.7**
PBRG	**Braganca**	**3.70**	**351**	*e*Pn	**Pn**	**13 26 58.7**	**+2.2**
PBRG				*e*Sn	**Sn**	**13 27 41.5**	**+0.7**
PBRG				*e*Sg	**Sg**	**13 27 58.3**	**-2.7**
	comp=E,240nm,0.6s						
PBRG	**Braganca**	**3.70**	**351**	Pn	**Pn**	**13 26 58.6**	**+2.1**
PBRG				Sn	**Sn**	**13 27 41.4**	**+0.6**
PBRG				Lg		13 27 59.7	
EMUR	**La Murta**	**3.73**	**93**	Pn	**Pn**	**13 26 57.6**	**+0.6**
	comp=E,23nm,0.4s,SNR=33						
EMUR				Pg	**Pg**	**13 27 10.1**	**-2.3**
	comp=E,52nm,0.4s,SNR=18						
EMUR				Lg		13 28 00.1	
	comp=E,201nm,0.6s,SNR=5.0						
EMUR	**La Murta**	**3.73**	**93**	Pn	**Pn**	**13 26 57.6**	**+0.6**
	comp=E,23nm,0.4s,SNR=33						
EMUR	**La Murta**	**3.73**	**93**	Pg	**Pg**	**13 27 10.1**	**-2.3**
	comp=E,52nm,0.4s,SNR=18						
ECAL	**Calabor**	**3.83**	**351**	Pn	**Pn**	**13 27 00.8**	**+2.3**
	comp=E,14nm,0.2s,SNR=33						
ECAL				Sn	**Sn**	**13 27 45.3**	**+1.1**
	comp=E,75nm,0.2s,SNR=7.9						
ECAL				Lg		13 28 05.2	

	comp=E,554nm,0.4s,SNR=14						
ECAL	**Calabor**	**3.83**	**351**	Pn	**Pn**	**13 27 00.8**	**+2.4**
	comp=E,14nm,0.2s,SNR=33						
ECAL				Sn	**Sn**	**13 27 45.3**	**+1.1**
	comp=E,75nm,0.2s,SNR=7.9						
CART	**Cartagena**	**3.95**	**97**	*e*Pn	**Pn**	**13 27 00.1**	**-0.1**
CART				*e*Pg	**Pg**	**13 27 16.6**	**-0.2**
CART	**Cartagena**	**3.95**	**97**	*e*Pn	**Pn**	**13 27 00.1**	**-0.1**
CART	**Cartagena**	**3.95**	**97**	*e*Pg	**Pg**	**13 27 16.6**	**-0.3**
ELOB	**Lobios**	**4.05**	**337**	Pn	**Pn**	**13 27 03.5**	**+2.0**
ELOB				Pg	**Pg**	**13 27 17.3**	**-1.5**
ELOB				Sn	**Sn**	**13 27 49.1**	**-0.6**
ELOB				Lg		13 28 12.9	
ELOB	**Lobios**	**4.05**	**337**	Pn	**Pn**	**13 27 03.5**	**+2.0**
	comp=E,16nm,0.2s,SNR=36						
ELOB				Pg	**Pg**	**13 27 17.3**	**-1.5**
	comp=E,16nm,0.2s,SNR=4.0						
ELOB				Sn	**Sn**	**13 27 49.1**	**-0.6**
	comp=E,27nm,0.2s,SNR=7.9						
ELOB				Lg		13 28 11.1	
	comp=E,299nm,0.6s,SNR=9.4						
ELOB	**Lobios**	**4.05**	**337**	Pn	**Pn**	**13 27 03.5**	**+2.0**
	comp=E,16nm,0.2s,SNR=36						
ELOB				Sn	**Sn**	**13 27 49.1**	**-0.6**
	comp=E,27nm,0.2s,SNR=7.9						
ZAI	**Zaio**	**4.09**	**140**	*e*P	**Pn**	**13 26 57.0**	**-5.1**
TZK	**Tazeka**	**4.30**	**160**	P	**Pn**	**13 27 00.0**	**-5.1**
TZK				S	**Sn**	**13 27 47.0**	**-9.0**
TZK	**Tazeka**	**4.30**	**160**	*i* P	**Pn**	**13 27 00.0**	**-5.1**
ERUA	**La Rua**	**4.33**	**348**	Pn	**Pn**	**13 27 07.6**	**+2.0**
	comp=E,33nm,0.2s,SNR=34						
ERUA				Sn	**Sn**	**13 27 55.0**	**-1.9**
	comp=E,25nm,0.2s,SNR=7.9						
ERUA				Lg		13 28 19.7	
	comp=E,196nm,0.5s,SNR=5.0						
TAF	**Taforalt**	**4.38**	**138**	P	**Pn**	**13 27 08.0**	**+1.7**
TAF				S	**Sn**	**13 27 58.0**	**-0.1**
EZAM	**Zamans**	**4.51**	**333**	Pn	**Pn**	**13 27 09.9**	**+1.8**
	comp=E,16nm,0.2s,SNR=13						
EZAM				Lg		13 28 26.2	
	comp=E,220nm,0.5s,SNR=5.0						
EBEN	**Beniarda**	**4.53**	**81**	Pn	**Pn**	**13 27 08.1**	**-0.3**
	comp=E,5.7nm,0.3s,SNR=19						
EBEN				Pg	**Pg**	**13 27 25.5**	**-2.8**
	comp=E,26nm,0.4s,SNR=15						
EBEN				Lg		13 28 25.9	
	comp=E,79nm,0.5s,SNR=7.9						
EBEN	**Beniarda**	**4.53**	**81**	Pn	**Pn**	**13 27 08.1**	**-0.2**
	comp=E,5.7nm,0.3s,SNR=19						
EINC	**Incio**	**4.63**	**347**	Pn	**Pn**	**13 27 11.7**	**+2.0**
	comp=E,5.6nm,0.2s,SNR=23						
EINC				Sn	**Sn**	**13 28 02.4**	**-1.9**
	comp=E,12nm,0.2s,SNR=7.9						
EINC				Lg		13 28 31.1	
	comp=E,68nm,0.4s,SNR=5.0						
EINC	**Incio**	**4.63**	**347**	Pn	**Pn**	**13 27 11.7**	**+2.0**
	comp=E,5.6nm,0.2s,SNR=23						
EINC				Sn	**Sn**	**13 28 02.5**	**-1.8**
MIF	**Mishlifen**	**4.77**	**173**	P	**Pn**	**13 27 07.0**	**-4.8**
MIF				S	**Sn**	**13 27 58.0**	**-10**
MIF	**Mishlifen**	**4.77**	**173**	*i* P	**Pn**	**13 27 07.0**	**-4.8**
EMOS	**Mosqueruela**	**4.79**	**61**	Pn	**Pn**	**13 27 14.0**	**+2.0**
	comp=E,21nm,0.4s,SNR=16						
EMOS				Lg		13 28 35.6	
	comp=E,52nm,0.3s,SNR=5.0						
EMOS	**Mosqueruela**	**4.79**	**61**	Pn	**Pn**	**13 27 14.0**	**+2.0**
	comp=E,21nm,0.4s,SNR=16						
AVE	**Averroes**	**4.99**	**194**	P	**Pn**	**13 27 12.5**	**-2.4**
STS	**Santiago**	**5.13**	**338**	Pn	**Pn**	**13 27 18.3**	**+1.5**
	comp=E,13nm,0.2s,SNR=8.8						
STS				Lg		13 28 47.2	
	comp=E,149nm,0.5s,SNR=5.0						
CZD	**Col de Zad**	**5.16**	**172**	P	**Pn**	**13 27 12.0**	**-5.3**
CZD				S	**Sn**	**13 28 07.0**	**-11**
CZD	**Col de Zad**	**5.16**	**172**	*i* P	**Pn**	**13 27 12.0**	**-5.3**
EARI	**Arriondas**	**5.17**	**6**	Pn	**Pn**	**13 27 20.3**	**+2.8**
	comp=E,3.8nm,0.3s,SNR=15						
EARI				Sn	**Sn**	**13 28 17.3**	**-0.8**
	comp=E,17nm,0.3s,SNR=4.9						
EARI				Lg		13 28 47.8	
	comp=E,212nm,0.6s,SNR=10						
EARI	**Arriondas**	**5.17**	**6**	Pn	**Pn**	**13 27 20.3**	**+2.8**
	comp=E,3.8nm,0.3s,SNR=15						
EARI				Sn	**Sn**	**13 28 17.3**	**-0.7**
	comp=E,17nm,0.3s,SNR=4.9						
EPON	**Pontenova**	**5.25**	**350**	Pn	**Pn**	**13 27 20.2**	**+1.7**
	comp=E,6.2nm,0.2s,SNR=18						
EPON				Sn	**Sn**	**13 28 18.6**	**-1.3**
	comp=E,11nm,0.2s,SNR=5.1						
EPON				Lg		13 28 48.6	
	comp=E,44nm,0.3s,SNR=8.5						
EPON	**Pontenova**	**5.25**	**350**	Pn	**Pn**	**13 27 20.2**	**+1.7**
	comp=E,6.2nm,0.2s,SNR=18						
EPON				Sn	**Sn**	**13 28 18.6**	**-1.3**
	comp=E,11nm,0.2s,SNR=5.1						
EMAZ	**Mazaricos**	**5.32**	**335**	Pn	**Pn**	**13 27 20.6**	**+1.1**
	comp=E,6.5nm,0.2s,SNR=9.6						
EMAZ				Sn	**Sn**	**13 28 20.5**	**-1.2**
	comp=E,14nm,0.2s,SNR=4.0						
EMAZ				Lg		13 28 51.4	
	comp=E,100nm,0.3s,SNR=5.0						
EMAZ	**Mazaricos**	**5.32**	**335**	Pn	**Pn**	**13 27 20.6**	**+1.1**
	comp=E,6.5nm,0.2s,SNR=9.6						
EMAZ				Sn	**Sn**	**13 28 20.5**	**-1.2**
	comp=E,14nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**5.42**	**20**	Pn	**Pn**	**13 27 24.4**	**+3.4**
	comp=E,2.5nm,0.3s,SNR=4.0						
ELAN				Lg		13 28 56.7	
	comp=E,158nm,0.6s,SNR=7.5						
ELAN	**Lanestosa**	**5.42**	**20**	Pn	**Pn**	**13 27 24.4**	**+3.5**
	comp=E,2.5nm,0.3s,SNR=4.0						
ESAC	**San Caprasio**	**5.51**	**48**	Pn	**Pn**	**13 27 24.0**	**+1.8**
	comp=E,20nm,0.3s,SNR=4.8						
ESAC				Lg		13 28 58.0	
	comp=E,203nm,0.4s,SNR=4.7						
ESAC	**San Caprasio**	**5.51**	**48**	Pn	**Pn**	**13 27 24.0**	**+1.7**
	comp=E,20nm,0.3s,SNR=4.8						
ERTA	**Horta de San J**	**5.60**	**58**	Pn	**Pn**	**13 27 24.4**	**+0.9**
	comp=E,6.0nm,0.4s,SNR=7.9						
ERTA				Lg		13 28 54.7	
	comp=E,14nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**5.60**	**58**	Pn	**Pn**	**13 27 24.5**	**+1.0**
EBR	**Ebro Roquetas**	**5.65**	**60**	*e*P*	**Pb**	**13 27 40.0**	**+3.5**
EBR				*e*Rs		13 27 55.7	
EBR	**Ebro Roquetas**	**5.65**	**60**	*e*SG	**Sg**	**13 29 08.0**	**+2.0**
EIBI	**Ibiza**	**5.78**	**79**	Pn	**Pn**	**13 27 26.0**	**0.0**
	comp=E,4.1nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**13 28 29.6**	**-3.7**
	comp=E,8.3nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**5.78**	**79**	Pn	**Pn**	**13 27 26.0**	**0.0**
	comp=E,4.1nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**13 28 29.6**	**-3.6**
	comp=E,8.3nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**6.08**	**32**	Pn	**Pn**	**13 27 31.8**	**+1.5**
	comp=E,3.9nm,0.2s,SNR=11						
EALK				Sn	**Sn**	**13 28 37.2**	**-3.6**
	comp=E,74nm,0.4s,SNR=14						
EALK				Lg		13 29 15.6	
	comp=E,86nm,0.5s,SNR=4.8						
SJPF	**Ste Jean**	**6.12**	**34**	*e*Pn	**Pn**	**13 27 32.1**	**+1.3**
SJPF				*e*Sn	**Sn**	**13 28 38.5**	**-3.2**
SJPF				*e*Sg	**Sg**	**13 29 14.0**	**-7.6**
	comp=E,65nm,0.5s						
SJPF	**Ste Jean**	**6.12**	**34**	*e*Pn	**Pn**	**13 27 32.1**	**+1.3**
SJPF				*e*Sg	**Sg**	**13 29 14.0**	**-7.6**
	comp=E,33nm,0.5s						
ETSF	**Etsaut**	**6.27**	**39**	*e*Pn	**Pn**	**13 27 33.9**	**+1.0**
ETSF				*e*Sn	**Sn**	**13 28 41.8**	**-3.7**
ETSF				*e*Sg	**Sg**	**13 29 19.8**	**-6.8**
	comp=E,155nm,0.9s						
ETSF	**Etsaut**	**6.27**	**39**	*e*Pn	**Pn**	**13 27 33.9**	**+1.0**
ETSF				*e*Sg	**Sg**	**13 29 19.8**	**-6.8**
	comp=E,77nm,0.9s						
EPOB	**Poblet**	**6.28**	**57**	Pn	**Pn**	**13 27 33.7**	**+0.5**
	comp=E,4.3nm,0.3s,SNR=9.6						
EPOB				Lg		13 29 21.2	
	comp=E,4.3nm,0.3s,SNR=5.0						
EPOB	**Poblet**	**6.28**	**57**	Pn	**Pn**	**13 27 33.7**	**+0.6**
	comp=E,4.3nm,0.3s,SNR=9.6						
EBIE	**Bielsa**	**6.49**	**44**	⇓Pn	**Pn**	**13 27 37.6**	**+1.6**
	comp=E,6.6nm,0.3s,SNR=18						
EBIE				Sn	**Sn**	**13 28 47.5**	**-3.5**
	comp=E,4.0nm,0.2s,SNR=5.0						
EBIE	**Bielsa**	**6.49**	**44**	⇓Pn	**Pn**	**13 27 37.6**	**+1.6**
EPF	**Esparros**	**6.83**	**42**	*e*Pn	**Pn**	**13 27 42.2**	**+1.4**
EPF				*e*Sn	**Sn**	**13 28 54.7**	**-4.8**
EPF				*e*Sg	**Sg**	**13 29 37.2**	**-8.0**
	comp=E,57nm,0.6s						
EPF	**Esparros**	**6.83**	**42**	*e*Pn	**Pn**	**13 27 42.2**	**+1.4**
EPF				*e*Sg	**Sg**	**13 29 37.2**	**-8.0**
	comp=E,28nm,0.6s						
EMIR	**Miracle**	**6.85**	**54**	Pn	**Pn**	**13 27 41.6**	**+0.5**
	comp=E,7.9nm,0.3s,SNR=12						
EMIR				Lg		13 29 39.4	
	comp=E,9.0nm,0.5s,SNR=4.0						
EMIR	**Miracle**	**6.85**	**54**	Pn	**Pn**	**13 27 41.6**	**+0.4**
EJON	**La Jonquera**	**8.00**	**55**	Pn	**Pn**	**13 27 57.3**	**+0.1**
EJON				Lg		13 30 15.4	
EJON	**La Jonquera**	**8.00**	**55**	Pn	**Pn**	**13 27 57.3**	**+0.1**
	comp=E,3.2nm,0.5s,SNR=5.6						
EJON				Lg		13 30 15.4	
	comp=E,3.0nm,0.0s,SNR=7.9						
MTLF	**Montolieu**	**8.07**	**48**	*e*Pn	**P**	**13 27 57.5**	**-0.8**
MTLF				*e*Sg	**Sg**	**13 30 17.1**	**-10**
	comp=E,15nm,0.4s						
LFF	**La Frestale**	**8.43**	**34**	*e*Pn	**P**	**13 28 02.3**	**-0.9**
LFF				*e*Sn	**Sn**	**13 29 32.8**	**-6.7**
	comp=E,11nm,0.4s						
CAF	**Calviac**	**9.04**	**39**	*e*Pn	**P**	**13 28 10.8**	**-0.9**
CAF				*e*Sn	**Sn**	**13 29 47.3**	**-7.5**
	comp=E,4.7nm,0.4s						
RJF	**Les Rejaudoux**	**9.06**	**36**	*e*Pn	**P**	**13 28 10.9**	**-1.0**
RJF				*e*Sn	**Sn**	**13 29 47.0**	**-8.2**
	comp=E,13nm,0.6s						
MFF	**Saint Martin d**	**9.47**	**25**	*e*Pn	**P**	**13 28 16.6**	**-1.0**
MFF				*e*Sn	**Sn**	**13 29 56.7**	**-8.5**
	comp=E,4.6nm,0.5s						
LASF	**Ste Croix**	**9.47**	**48**	*e*Sg	**Sg**	**13 31 00.9**	**-12**
	comp=E,31nm,0.8s						
QUIF	**Quistinic**	**9.97**	**11**	*e*Pn	**P**	**13 28 23.3**	**-1.1**
QUIF				*e*Sn	**Sn**	**13 30 09.4**	**-8.1**
	comp=E,13nm,0.5s						
TCF	**Toulx Ste Croi**	**10.13**	**34**	*e*Pn	**P**	**13 28 26.0**	**-0.6**
TCF				*e*Sn	**S**	**13 30 13.4**	**-8.0**
	comp=E,10nm,0.7s						
ROSF	**Rostrenen**	**10.36**	**10**	*e*Pn	**P**	**13 28 28.3**	**-1.5**
ROSF				*e*Sn	**S**	**13 30 19.3**	**-7.9**
SGMF	**Saint Gilles**	**10.39**	**13**	*e*Pn	**P**	**13 28 29.2**	**-1.0**
SGMF				*e*Sn	**S**	**13 30 18.7**	**-9.2**
SMRF	**Simiane la Rot**	**10.46**	**53**	*e*Pn	**P**	**13 28 30.1**	**-1.1**
BGF	**Bois d'Agland**	**10.62**	**35**	*e*Pn	**P**	**13 28 31.5**	**-1.8**
BGF				*e*Sn	**S**	**13 30 23.8**	**-10**
	comp=E,10nm,0.4s						
LMR	**La Mourre**	**10.77**	**57**	*e*Pn	**P**	**13 28 33.9**	**-1.5**
GRR	**Gorron**	**10.88**	**18**	*e*Pn	**P**	**13 28 35.7**	**-1.2**
GRR				*e*Sn	**S**	**13 30 30.3**	**-10**
	comp=E,3.8nm,0.4s						
AVF	**Avril sur Loir**	**11.02**	**36**	*e*Pn	**P**	**13 28 36.8**	**-2.0**
AVF				*e*Sn	**S**	**13 30 34.9**	**-8.4**
HYF	**Humbligny**	**11.08**	**32**	*e*Pn	**P**	**13 28 37.9**	**-1.7**
HYF				*e*Sn	**S**	**13 30 35.9**	**-8.8**
SMF	**Signal de Mont**	**11.14**	**37**	*e*Pn	**P**	**13 28 39.6**	**-0.9**
SMF				*e*Sn	**S**	**13 30 37.5**	**-8.8**
LDF	**La Druitiere**	**11.26**	**20**	*e*Pn	**P**	**13 28 40.8**	**-1.3**
LDF				*e*Sn	**S**	**13 30 40.6**	**-8.5**
	comp=E,15nm,0.8s						
SSF	**Saint Saulge**	**11.29**	**35**	*e*Pn	**P**	**13 28 39.4**	**-3.1**
SSF				*e*Sn	**S**	**13 30 41.1**	**-8.9**
	comp=E,2.2nm,0.7s						
FLN	**La Foliniere**	**11.32**	**19**	*e*Pn	**P**	**13 28 41.7**	**-1.2**
FLN				*e*Sn	**S**	**13 30 41.4**	**-9.2**
	comp=E,14nm,0.6s						
PGF	**Pioggiola**	**12.21**	**64**	*e*Pn	**P**	**13 28 53.3**	**-1.7**
BAIF	**Baives**	**13.94**	**28**	*e*Pn	**P**	**13 29 17.7**	**-0.2**

*MOS **20** 13:41:02.4±1.4, 2.28S×68.55E, h10^{km}, mb5.0/33, MS4.6/12, Error ellipse: s-maj=10.4km s-min=7.2km az=83.3*

*IDC **20** 13:41:02.6±0.5, 2.37S×68.53E, mb4.3/20, mb1 4.4/20, mb1mx4.4/23, mbtmp4.3/20, MS4.5/21, Ms1 4.5/21, ms1mx4.4/26, Error ellipse: s-maj=17.4km s-min=13.8km az=28.0*

*BJI **20** 13:41:04.0, 2.40S×68.50E, h9^{km}, mB5.3, mb4.8, Ms5.0, Msz4.6*

*HRVD **20** 13:41:04.1±0.2, 2.48S×68.61E, h13^{km}±1^{km}, MW5.3/66, Centroid moment Tensor Solution. LP body waves: s45,c69;Mantle waves: s66,c130; Half duration: $1^{s}1$ Moment tensor: Scale 10^{17}Nm; M_{rr}-0.07±.02; $M_{\theta\theta}$0.95±.02; $M_{\phi\phi}$-0.88±.02; $M_{r\theta}$0.39±.06; $M_{\theta\phi}$0.27±.02; $M_{\phi r}$-0.18±.05; Best double couple: $M_0$1.047×10^{17} NP1: ϕ_s36°, δ67°, λ179°. NP2: ϕ_s127°, δ89°, λ23°. Principal axes: T 1.104, Plg17°, Azm354°; N -.112, Plg67°, Azm130°; P -.991, Plg15°, Azm259°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 13:41:04.1±0.3, 2.36S×68.52E, mb4.9/39, MS4.6/8 Error ellipse: s-maj=8.4km s-min=7.8km az=92.0*

ISC 20 13:41:02.2±1.3, **2.38S**±0.05×**68.51E**±0.05, **h10**^{km}±8^{km}, **h14**^{km}±3.3^{km}**:pP-P, n179,** σ**1^{s}28**/171, **mb4.8**/67, **MS4.6**/40, **6C-6D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**6.36**	**142**	*e*P	**Pn**	**13 42 35.0**	**-3.3**
DGAR				pmax	pmax		
	comp=Z,299nm,0.6s						
DGAR	**Diego Garcia**	**6.36**	**142**	*e*P	**Pn**	**13 42 35.0**	**-3.3**
	comp=Z,299nm,0.6s						
DGAR				*e*S	**Sn**	**13 43 41.8**	**-10**
MNGI	**Mangalore**	**16.46**	**22**	*i* P	**P**	**13 44 56.8**	**+1.8**
	comp=Z,123nm,0.0s						
MNGI				*i*		13 48 13.9	
MDRS	**Chennai**	**19.27**	**37**	*e*P	**P**	**13 45 29.0**	**-0.7**
MDRS				*e*		13 49 10.0	
POO	**Poona**	**21.43**	**14**	⇓*i*P	**P**	**13 45 56.0**	**+3.3**
	comp=Z,60nm,1.0s,mb4.9						
POO				*i* S	**S**	**13 49 54.0**	**+8.6**
HYB	**Hyderabad**	**22.02**	**26**	*e*P	**P**	**13 45 58.5**	**-0.2**
HYB	**Hyderabad**	**22.02**	**26**	*i* P	**P**	**13 45 58.5**	**-0.2**
HYB				*e*S	**S**	**13 50 04.0**	**+7.5**
VIS	**Vishakhapatnam**	**24.74**	**36**	*i* P	**P**	**13 46 25.5**	**+0.1**
KMBO	**Kilima Mbogo**	**31.27**	**272**	*e*P	**P**	**13 47 26.3**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KMBO				MLR	MLR		
	comp=Z,622nm,22.0s						
KMBO	**Kilima Mbogo**	**31.27**	**272**	P	**P**	**13 47 25.6**	**+0.9**
	comp=Z,5.5nm,1.1s,mb4.3,baz=53,slow=12,SNR=6.9						
KMBO				LR	LR	13 57 34.9	
	comp=Z,595nm,21.6s,MS4.2,baz=95,slow=32						
KMBO	**Kilima Mbogo**	**31.27**	**272**	*e*P	**P**	**13 47 26.2**	**+1.5**
	comp=Z,4.8nm,0.9s,mb4.3						
KMBO				LR	LR		
	comp=Z,622nm,22.0s,MS4.2						
KOLN	**Koldanda**	**33.31**	**25**	*e*P	**P**	**13 47 42.3**	**-0.1**
	comp=Z,76nm,1.2s,mb5.5						
DDI	**Dehra Dun**	**33.77**	**15**	*e*P	**P**	**13 47 46.6**	**+0.2**
DMN	**Daman**	**33.83**	**27**	*e*P	**P**	**13 47 46.6**	**-0.3**
	comp=Z,127nm,1.2s,mb5.7						
PKI	**Pulchoki**	**33.93**	**28**	*e*P	**P**	**13 47 47.3**	**-0.5**
GKN	**Gorkha**	**33.96**	**26**	*e*P	**P**	**13 47 48.1**	**+0.1**
	comp=Z,126nm,1.0s,mb5.8						
KKN	**Kakani**	**34.06**	**27**	*e*P	**P**	**13 47 48.8**	**-0.1**
	comp=Z,76nm,1.1s,mb5.6						
JIRN	**Jiri**	**34.38**	**28**	*e*P	**P**	**13 47 51.5**	**-0.1**
GUN	**Gumba**	**34.44**	**28**	*e*P	**P**	**13 47 52.3**	**+0.1**
	comp=Z,143nm,1.0s						
CM31	**Chiang Mai Arr**	**36.41**	**54**	*e*P	**P**	**13 48 10.9**	**+1.9**
	comp=Z,12nm,0.9s,mb4.8						
CM31				LR	LR		
	comp=Z,493nm,19.0s,MS4.3						
CMAR	**Chiang Mai Arr**	**36.41**	**54**	P	**P**	**13 48 09.4**	**+0.4**
	comp=Z,3.8nm,1.0s,mb4.3,baz=246,slow=9.5,SNR=18						
CMAR				PcP	PcP	13 50 33.0	-0.6
	comp=Z,0.9nm,0.6s,baz=233,slow=4.5,SNR=3.6						
CMAR				LR	LR	14 01 38.5	
	comp=Z,251nm,18.3s,MS4.0,baz=240,slow=34						
CMAR	**Chiang Mai Arr**	**36.41**	**54**	P	**P**	**13 48 09.4**	**+0.4**
CMAR				PcP	PcP	13 50 33.0	-0.6
CMAR				LR	LR	14 01 38.5	
LSA	**Lhasa**	**38.55**	**33**	P	**P**	**13 48 28.8**	**+1.9**
LSA				AP	pP	13 48 38.4	+8.3
LSA				PP	PP	13 50 00.4	+1.6
LSA				S	**S**	**13 54 23.3**	**+1.0**
LSA				AMB	AMB		
	comp=Z,70nm,6.3s						
LSA				LR	LR		
	comp=N,210nm,17.0s,MS4.6						
LSA				LR	LR		
	comp=E,790nm,15.6s,MS4.6						
LSA				LR	LR		
	comp=Z,350nm,15.6s,MS4.3						
LSA	**Lhasa**	**38.55**	**33**	*e*P	**P**	**13 48 28.6**	**+1.7**
LSA				pmax	pmax		
	comp=Z,36nm,1.4s,mb4.9						
LSA				MLR	MLR		
	comp=Z,779nm,19.0s,MS4.5						
LSA	**Lhasa**	**38.55**	**33**	*e*P	**P**	**13 48 28.6**	**+1.6**
	comp=Z,36nm,1.4s,mb4.9						
LSA				LR	LR		
	comp=Z,779nm,19.0s,MS4.5						
LSZ	**Lusaka**	**41.76**	**250**	*e*P	**P**	**13 48 54.0**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
LSZ				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.9						
LSZ	**Lusaka**	**41.76**	**250**	*e*P	**P**	**13 48 54.0**	**+0.4**
	comp=Z,13nm,1.0s,mb4.5						
LSZ				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
KSH	**Kashi**	**42.25**	**9**	*e*P	**P**	**13 48 58.1**	**+0.7**
KSH				*e*AP	pP	13 49 03.3	+2.8
KSH				*e*XP	sP	13 49 05.8	+4.0
KSH				*e*PP	PP	13 50 38.6	+0.2
KSH				*e*PCP	PcP	13 50 52.3	+0.3
KSH				*e*PPP	PPP	13 51 10.3	-0.1
KSH				*e*SCP		13 54 39.8	
KSH				*e*S	**S**	**13 55 17.1**	**-0.4**
KSH				*e*PS		13 55 39.8	
KSH				*e*SS	SS	13 58 19.4	-0.6
KSH				*e*SCS	ScS	13 58 56.0	-1.6
KSH				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
KSH				AMB	AMB		
	comp=Z,180nm,6.2s						
KSH				LR	LR		
	comp=N,960nm,14.9s,MS5.0						
KSH				LR	LR		
	comp=E,740nm,10.4s,MS5.0						
KMI	**Kunming**	**42.99**	**48**	P	**P**	**13 49 06.9**	**+3.2**
KMI				S	**S**	**13 55 31.3**	**+2.7**
KMI				SS	SS	13 58 37.0	+2.8
KMI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.3						
KMI				AMB	AMB		
	comp=Z,134nm,4.9s						
KMI				LR	LR		
	comp=N,520nm,20.2s,MS4.5						
KMI				LR	LR		
	comp=E,310nm,21.7s,MS4.5						
KMI				LR	LR		
	comp=Z,352nm,31.2s						
KMI	**Kunming**	**42.99**	**48**	P	**P**	**13 49 06.9**	**+3.2**
KMI				*PP	pP	13 49 09.2	+2.4
KMI				S	**S**	**13 55 31.3**	**+2.7**
KMI				SS	SS	13 58 37.0	+2.8
KMI						13 59 05.4	
KMI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
KMI				MLR	MLR		
	comp=Z,350nm,31.2s,MS4.1						
KMI	**Kunming**	**42.99**	**48**	P	**P**	**13 49 06.9**	**+3.2**
	comp=Z,7.0nm,1.0s,mb4.3						
KMI				pP	pP	13 49 09.2	+2.4
KMI				S	**S**	**13 55 31.3**	**+2.7**
KMI				SS	SS	13 58 37.0	+2.8
KMI				ScS	ScS	13 59 05.4	+3.1
KMI				LR	LR		
	comp=Z,350nm,31.2s,MS4.1						
AML	**Almayashu**	**44.55**	**5**	P	**P**	**13 49 16.9**	**+0.8**
	SNR=14						
KZA	**Kyzart**	**44.67**	**7**	P	**P**	**13 49 18.1**	**+1.1**
	SNR=56						
UCH	**Uchtor**	**44.73**	**6**	P	**P**	**13 49 19.5**	**+2.0**
	SNR=17						
ULHL	**Ulahol**	**44.97**	**8**	P	**P**	**13 49 20.1**	**+0.7**
	SNR=14						
EKS2	**Erkin-Say**	**45.08**	**5**	P	**P**	**13 49 21.2**	**+0.9**
	SNR=31						
AAK	**Ala-Archa**	**45.13**	**6**	P	**P**	**13 49 21.2**	**+0.5**
	SNR=11						
AAK	**Ala-Archa**	**45.13**	**6**	*e*P	**P**	**13 49 20.1**	**-0.6**
AAK				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.8						
AAK	**Ala-Archa**	**45.13**	**6**	*e*P	**P**	**13 49 20.1**	**-0.6**
	comp=Z,24nm,1.4s,mb4.8						
KBK	**Karagaybulak**	**45.20**	**7**	P	**P**	**13 49 22.2**	**+1.0**
	SNR=28						
EIL	**Elat**	**45.23**	**317**	P	**P**	**13 49 24.0**	**+2.4**
	comp=Z,9.1nm,1.2s,mb4.5						
FRU	**Bishkek**	**45.34**	**6**	*e*P	**P**	**13 49 23.0**	**+0.6**
FRU				*e*		13 49 31.0	
FRU				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.1						
TKM2	**Tokmak 2**	**45.54**	**7**	P	**P**	**13 49 24.3**	**+0.4**
	SNR=41						
ASF	**Jabal al Asfar**	**45.59**	**322**	LR	LR	14 08 04.2	
	comp=Z,373nm,18.1s,MS4.4,baz=126,slow=36						
USP	**Ospenovka**	**45.76**	**6**	P	**P**	**13 49 25.2**	**-0.4**
	SNR=11						
GYA	**Guiyang**	**46.68**	**50**	⇓*i*P	**P**	**13 49 39.1**	**+5.9**
GYA				AP	pP	13 49 43.5	+7.2
GYA				XP	sP	13 49 46.3	+8.7
GYA				PP	PP	13 51 28.1	+5.3
GYA				S	**S**	**13 56 21.1**	**-0.6**
GYA				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
GYA				AMB	AMB		
	comp=Z,260nm,4.8s						
GYA				LR	LR		
	comp=N,530nm,19.1s,MS4.7						
GYA				LR	LR		
	comp=E,670nm,20.0s,MS4.7						
GYA				LR	LR		
	comp=Z,710nm,20.5s,MS4.6						
LBTB	**Lobatse**	**47.06**	**238**	P	**P**	**13 49 35.2**	**-1.0**
LBTB				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
LBTB				MLR	MLR		
	comp=Z,764nm,19.0s,MS4.7						
LBTB	**Lobatse**	**47.06**	**238**	P	**P**	**13 49 35.8**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.2,baz=261,slow=13,SNR=3.2						
LBTB	**Lobatse**	**47.06**	**238**	P	**P**	**13 49 35.2**	**-1.0**
	comp=Z,12nm,1.1s,mb4.8						
LBTB				LR	LR		
	comp=Z,764nm,19.0s,MS4.7						
CD2	**Chengdu**	**47.13**	**43**	P	**P**	**13 49 42.6**	**+5.9**
CD2				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.9						
GNI	**Garni**	**47.59**	**335**	⇓*e*P	**P**	**13 49 41.9**	**+1.7**
GNI				pmax	pmax		
	comp=Z,32nm,1.4s						
GNI				MLR	MLR		
	comp=Z,1µm,21.0s						
GNI	**Garni**	**47.59**	**335**	P	**P**	**13 49 40.4**	**+0.2**
	comp=Z,3.9nm,0.6s,mb4.6,baz=197,slow=23,SNR=4.8						
GNI				LR	LR	14 09 21.6	
	comp=Z,993nm,20.5s,MS4.8,baz=142,slow=36						
GNI	**Garni**	**47.59**	**335**	P	**P**	**13 49 40.4**	**+0.2**
	comp=Z,37nm,1.4s,mb5.2						
GNI				LR	LR		
	comp=Z,965nm,20.0s,MS4.8						
MALT	**Malatya**	**49.11**	**329**	*e*P	**P**	**13 49 53.3**	**+1.3**
MALT				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
MALT	**Malatya**	**49.11**	**329**	*e*P	**P**	**13 49 53.3**	**+1.3**
	comp=Z,12nm,1.0s,mb4.9						
WMQ	**Urumqi**	**49.11**	**18**	P	**P**	**13 49 52.0**	**+0.1**
WMQ				PP	PP	13 51 46.0	+0.1
WMQ				S	**S**	**13 56 55.0**	**-0.8**
WMQ				SS	SS	14 00 22.0	-0.7
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,41nm,8.0s						
WMQ				LR	LR		
	comp=N,956nm,22.0s,MS4.8						
WMQ				LR	LR		
	comp=E,698nm,24.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,945nm,22.0s,MS4.7						
LZH	**Lanzhou**	**50.50**	**37**	⇑P	**P**	**13 50 04.0**	**+1.3**
LZH				PP	PP	13 52 01.3	+1.9

LZH				eS	S	13 57 17.0	+1.9
LZH				SS	SS	14 00 48.3	+1.9
LZH				AMB	AMB		
	comp=Z,31nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,149nm,6.2s						
LZH				LR	LR		
	comp=N,876nm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.6s,MS5.0						
LZH	Lanzhou	50.50	37	⇑P	P	13 50 04.0	+1.3
LZH				*PP	pP	13 50 07.3	+1.4
LZH				*SP	sP	13 50 08.6	+1.5
LZH						13 52 01.2	
LZH				eS	S	13 57 17.0	+1.9
LZH				*SS		13 57 23.3	
LZH				SS	SS	14 00 48.3	+1.9
LZH				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.1						
LZH				MLR	MLR		
	comp=Z,1µm,17.6s,MS5.0						
LZH	Lanzhou	50.50	37	⇑P	P	13 50 04.0	+1.3
	comp=Z,31nm,1.5s,mb5.1						
LZH				pP	pP	13 50 07.3	+1.4
LZH				sP	sP	13 50 08.6	+1.5
LZH				PP	PP	13 52 01.2	+1.8
LZH				eS	S	13 57 17.0	+1.9
LZH				sS		13 57 23.3	
LZH				SS	SS	14 00 48.3	+1.9
LZH				LR	LR		
	comp=Z,1µm,17.6s,MS5.0						
GTA	Gaotai	50.56	31	P	P	13 50 02.3	-0.7
GTA				PCP	PcP	13 51 21.3	+0.2
GTA				PP	PP	13 52 01.6	+1.7
GTA				S	S	13 57 16.9	+1.0
GTA				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.5						
GTA				AMB	AMB		
	comp=Z,128nm,9.5s						
GTA				LR	LR		
	comp=N,377nm,26.0s,MS4.4						
GTA				LR	LR		
	comp=E,346nm,29.8s,MS4.4						
GTA				LR	LR		
	comp=Z,512nm,30.2s,MS4.4						
ENH	Enshi	50.81	47	eP	P	13 50 05.9	+0.8
	comp=Z,16nm,0.9s,mb5.0						
KIV	Kislovodsk	51.61	336	eP	P	13 50 12.0	+1.0
KIV				eS	S	13 57 28.4	-1.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
KIV				MLR	MLR		
	comp=N,236nm,17.0s,MS4.4						
KIV				MLR	MLR		
	comp=E,195nm,17.0s,MS4.4						
KIV				MLR	MLR		
	comp=Z,397nm,17.0s,MS4.5						
KIV	Kislovodsk	51.61	336	eP	P	13 50 10.1	-0.9
	comp=Z,4.2nm,0.5s,mb4.6						
KIV				LR	LR		
	comp=Z,134nm,20.0s,MS4.0						
GOF	Gofitskoye	52.39	337	⇑iP	P	13 50 17.0	+0.1
GOF				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
XAN	Xi’an	52.50	43	P	P	13 50 16.1	-1.7
XAN				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.6						
BRTR	Keskin Array B	52.70	326	P	P	13 50 19.1	-0.1
	comp=Z,1.6nm,0.8s,mb4.0,baz=135,slow=8.7,SNR=11						
KURK	Kurchatov	53.59	8	eP	P	13 50 23.9	-1.8
KURK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
KURK	Kurchatov	53.59	8	eP	P	13 50 23.9	-1.8
	comp=Z,18nm,0.9s,mb5.0						
SUR	Sutherland	53.78	231	P	P	13 50 28.2	+0.9
	comp=Z,5.8nm,1.0s,mb4.5,baz=194,slow=19,SNR=2.0						
SUR				LR	LR	14 10 05.9	
	comp=Z,767nm,18.8s,MS4.8,baz=191,slow=32						
NWAO	Narrogin (SRO)	54.78	129	P	P	13 50 35.1	+0.4
BVAR	Borovoye Array	55.22	1	P	P	13 50 37.2	-0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=174,slow=13,SNR=7.2						
CHKZ	Chkalovo	55.88	2	eP	P	13 50 40.9	-1.4
CHKZ				pmax	pmax		
	comp=Z,119nm,1.0s						
CHKZ	Chkalovo	55.88	2	eP	P	13 50 40.9	-1.5
	comp=Z,119nm,1.0s						
ZAL	Zalesovo	57.74	11	P	P	13 50 54.9	-0.7
	comp=Z,2.8nm,0.7s,mb4.4,baz=270,slow=7.0,SNR=17						
ZAL				LR	LR	14 16 01.4	
	comp=Z,681nm,20.8s,MS4.7,baz=266,slow=36						
NVS	Novosibirsk	58.31	10	eP	P	13 50 56.6	-2.9
NVS				pmax	pmax		
	comp=N,26nm,1.7s						
NVS				pmax	pmax		
	comp=E,23nm,1.7s						
NVS				pmax	pmax		
	comp=Z,51nm,1.7s,mb5.3						
NJ2	Nanjing	58.69	50	eP	P	13 51 04.0	+1.5
NJ2				PP	PP	13 53 16.0	+1.9
NJ2				S	S	13 59 08.0	+2.7
NJ2				AMB	AMB		
	comp=Z,80nm,0.7s						
NJ2				AMB	AMB		
	comp=Z,450nm,11.6s						
NJ2				LR	LR		
	comp=N,480nm,31.4s						
NJ2				LR	LR		
	comp=E,730nm,24.0s						
NJ2				LR	LR		
	comp=Z,420nm,28.1s,MS4.4						
SVE	Sverdlovsk	59.36	355	eP	P	13 51 06.0	-0.8
SVE				MLR	MLR		
	comp=N,300nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.7						
SONM	Songino Array	59.94	29	P	P	13 51 10.4	-0.5
	comp=Z,8.4nm,0.8s,mb4.8,baz=220,slow=7.4,SNR=87						
SSE	Sheshan	60.10	52	P	P	13 51 09.9	-2.4
SSE				S	S	13 59 19.8	-3.7
SSE				SS	SS	14 03 20.8	-0.8
SSE				AMB	AMB		
	comp=Z,13nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,179nm,3.8s						
SSE				LR	LR		
	comp=N,249nm,20.0s,MS4.4						
SSE				LR	LR		
	comp=E,111nm,20.0s,MS4.4						
SSE				LR	LR		
	comp=Z,236nm,23.3s,MS4.3						
SSE	Sheshan	60.10	52	P	P	13 51 09.9	-2.4
	comp=Z,13nm,0.9s,mb5.0						
SSE				S	S	13 59 19.8	-3.7
SSE				sS		13 59 38.3	
SSE				SS	SS	14 03 20.8	-0.8
SSE				LR	LR		
	comp=Z,240nm,23.3s,MS4.3						
KIS	Kishinev	60.25	330	eP	P	13 51 11.0	-2.1
ULN	Ulaanbaatar	60.28	29	eP	P	13 51 12.0	-1.3
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
ULN				MLR	MLR		
	comp=Z,554nm,21.0s,MS4.7						
ULN	Ulaanbaatar	60.28	29	eP	P	13 51 12.0	-1.3
	comp=Z,4.3nm,0.9s,mb4.5						
ULN				LR	LR		
	comp=Z,554nm,21.0s,MS4.7						
ZAK	Zakamensk	60.41	25	eP	P	13 51 12.3	-1.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
MOY	Mondy	60.48	23	eP	P	13 51 14.1	-0.5
MOY				pmax	pmax		
	comp=Z,29nm,3.2s						
BJT	Baijiatuau	60.63	41	eP	P	13 51 15.1	-0.7
BJT				pmax	pmax		
	comp=Z,17nm,1.0s						
BJT	Baijiatuau	60.63	41	eP	P	13 51 15.1	-0.6
	comp=Z,17nm,1.0s,mb5.1						
TLY	Talaya	61.54	24	eP	P	13 51 21.4	-0.4
TLY				eS	S	13 59 40.3	-1.4
TLY				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.9						
TLY				MLR	MLR		
	comp=Z,592nm,19.0s,MS4.8						
TLY	Talaya	61.54	24	eP	P	13 51 20.8	-1.0
	comp=Z,7.3nm,0.8s,mb4.9						
AKASG	Malin Array Be	62.62	333	P	P	13 51 27.0	-2.0
	comp=Z,2.0nm,0.8s,mb4.3,baz=134,slow=5.3,SNR=11						
OBN	Obninsk	63.04	340	⇓eP	P	13 51 30.5	-1.2
OBN				e		13 53 57.9	
OBN				eS	S	13 59 53.9	-6.6
OBN				i SS	SS	14 04 09.7	+1.4
OBN				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.5						
VAE	Valguarnera	63.82	314	LR	LR	14 18 23.4	
	comp=Z,137nm,18.5s,MS4.2,baz=156,slow=35						
KAKA	Kakadu	64.05	103	eP	P	13 51 38.6	-0.5
	comp=Z,5.2nm,0.6s,mb4.7						
JOW	Kunigami	64.46	59	LR	LR	14 16 36.7	
	comp=Z,268nm,21.5s,MS4.4,baz=296,slow=33						
MAW	Mawson	65.22	182	P	P	13 51 45.2	-0.6
MAW	Mawson	65.22	182	LR	LR	14 13 18.2	
	comp=Z,689nm,21.6s,MS4.8,baz=350,slow=30						
WRA	Warramunga Arr	66.49	111	P	P	13 51 53.7	-0.9
	comp=Z,4.3nm,0.7s,mb4.6,baz=284,slow=6.0,SNR=30						
ASPA	Alice Springs	66.55	115	eP	P	13 51 53.9	-1.1
ASAR	Alice Springs	66.55	115	P	P	13 51 54.2	-0.8
	comp=Z,5.0nm,0.7s,mb4.7,baz=283,slow=6.1,SNR=43						
ASAR				LR	LR	14 16 06.6	
	comp=Z,260nm,21.3s,MS4.4,baz=279,slow=32						
HIA	Hailar	67.75	33	eP	P	13 52 00.8	-1.3
HIA				pmax	pmax		
	comp=Z,17nm,1.3s						
HIA	Hailar	67.75	33	eP	P	13 52 00.8	-1.4
	comp=Z,17nm,1.3s,mb4.9						
MORC	Moravsky Berou	67.88	327	eP	P	13 52 01.1	-1.9
MORC				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
MORC	Moravsky Berou	67.88	327	eP	P	13 52 01.1	-1.9
	comp=Z,11nm,1.3s,mb4.7						
CN2	Changchun	68.51	41	eP	P	13 52 09.5	+2.5
CN2				eXP	sP	13 52 20.9	+9.4
CN2				eS	S	14 01 09.8	+2.3
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,19.0s,MS4.8						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.8						
CN2				LR	LR		
	comp=Z,350nm,21.0s,MS4.6						
DPC	Dobruska-Polom	68.85	327	eP	P	13 52 12.8	+3.8
UPC	Upice	69.11	327	eP	P	13 52 17.3	+6.8
UPC	Upice	69.11	327	epP	pP	13 52 17.3	+3.5
SYO	Syowa Base	69.29	191	⇑P	P	13 52 10.1	-1.3
GERES	GERESS Array B	69.55	325	P	P	13 52 15.0	+1.7
	comp=Z,0.3nm,0.4s,baz=162,slow=4.2,SNR=4.9						
KHC	Kasperske Hory	69.76	325	⇓eP	P	13 52 16.9	+2.3
KHC	Kasperske Hory	69.76	325	eP	P	13 52 12.5	-2.1
BOD	Bodaibo	70.12	24	eP	P	13 52 14.5	-2.1
BRG	Berggiesshubel	70.42	327	P	P	13 52 24.8	+6.2
BRG				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
BRG	Berggiesshubel	70.42	327	P	P	13 52 24.8	+6.2
	comp=Z,6.3nm,1.2s,mb4.4						
NKC	Novy Kostel	70.94	326	eP	P	13 52 20.9	-0.8
CLL	Collm	71.15	327	P	P	13 52 28.0	+5.0
CLL				e		13 52 39.0	
CLL				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.7						
CLL	Collm	71.15	327	P	P	13 52 28.0	+5.0
	comp=Z,18nm,1.7s,mb4.7						
CLL				e		13 52 39.0	
CLL	Collm	71.15	327	P	P	13 52 24.0	+1.0
	comp=Z,logA/T=1.0,mb4.7						
CLL				e		13 52 37.0	
RUE	Ruedersdorf	71.32	328	P	P	13 52 22.2	-1.8
	comp=Z,19nm,1.0s,mb5.0						
GRA1	Grafenberg Arr	71.38	325	eP	P	13 52 23.4	-1.0
	comp=Z,9.0nm,1.1s,mb4.6						
GRF	Grafenberg Arr	71.38	325	eP	P	13 52 23.4	-1.0
GRF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
GRF	Grafenberg Arr	71.38	325	eP	P	13 52 23.4	-1.0
GRF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
GRF	Grafenberg Arr	71.38	325	eP	P	13 52 23.4	-1.0
	comp=Z,9.0nm,1.1s,mb4.6						
FINES	FINESS Array B	71.45	340	P	P	13 52 26.2	+1.6
	comp=Z,0.8nm,0.8s,mb3.7,baz=225,slow=9.8,SNR=3.6						
MDJ	Mudanjiang	71.56	41	P	P	13 52 27.3	+1.7
MDJ				PCP	PcP	13 52 45.6	+0.4
MDJ				PP	PP	13 55 05.8	-0.5
MDJ				S	S	14 01 49.3	+6.0
MDJ				SS	SS	14 06 26.1	+5.8
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,263nm,4.9s						
MDJ				LR	LR		
	comp=N,443nm,5.1s						
MDJ				LR	LR		
	comp=E,269nm,4.7s						
MDJ				LR	LR		
	comp=Z,447nm,5.4s						
MDJ	Mudanjiang	71.56	41	eP	P	13 52 25.7	+0.1
	comp=Z,14nm,1.0s,mb4.8						
ORIF	Oris-en-Rattie	72.70	319	eP	P	13 52 27.5	-4.9
	comp=Z,52nm,1.4s,mb5.0						
ORIF	Oris-en-Rattie	72.70	319	eP	P	13 52 27.5	-4.9
ORIF				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
CDF	Champ du Feu	73.17	322	eP	P	13 52 30.8	-4.2
	comp=Z,64nm,1.7s,mb5.0						
CDF	Champ du Feu	73.17	322	eP	P	13 52 30.8	-4.2
CDF				pmax	pmax		
	comp=Z,32nm,1.7s,mb5.0						
DBIC	Dimbokro	73.78	278	P	P	13 52 39.6	+0.3
	comp=Z,2.3nm,0.8s,mb4.2,baz=124,slow=4.5,SNR=4.1						
DBIC				LR	LR	14 24 15.0	
	comp=Z,254nm,19.1s,MS4.5,baz=72,slow=35						
STKA	Stephens Creek	74.39	122	eP	P	13 52 43.9	+1.4
	comp=Z,4.1nm,0.8s,mb4.4						
STKA	Stephens Creek	74.39	122	P	P	13 52 44.0	+1.5
	comp=Z,3.9nm,0.7s,mb4.4,baz=307,slow=7.9,SNR=8.0						
STKA				LR	LR	14 23 13.7	
	comp=Z,342nm,18.5s,MS4.7,baz=86,slow=34						
SMF	Signal de Mont	74.66	320	eP	P	13 52 38.4	-5.3
	comp=Z,42nm,1.4s,mb4.9						
SMF	Signal de Mont	74.66	320	eP	P	13 52 38.4	-5.3
SMF				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
KLR	Kul’dur	74.70	37	eP	P	13 52 41.5	-2.4
SSF	Saint Saulge	75.02	320	eP	P	13 52 41.1	-4.7
SSF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
SSF	Saint Saulge	75.02	320	eP	P	13 52 41.1	-4.7
	comp=Z,7.3nm,1.1s,mb4.5						
CBIJ	Chichi jima	76.60	62	LR	LR	14 27 48.1	
	comp=Z,111nm,18.1s,MS4.2,baz=87,slow=37						
NOA	NORSAR Array B	76.89	335	LR	LR	14 27 51.7	
	comp=Z,272nm,18.6s,MS4.6,baz=145,slow=36						
ARCES	ARCESS Array B	77.39	346	P	P	13 52 59.5	+0.8
	comp=Z,2.2nm,0.8s,mb4.2,baz=127,slow=9.0,SNR=3.1						
ARCES				LR	LR	14 27 14.0	
	comp=Z,345nm,21.2s,MS4.7,baz=158,slow=36						
CTA	Charters Tower	77.67	110	P	P	13 53 03.2	+2.0
	comp=Z,10nm,1.0s,mb4.7,baz=309,slow=9.5,SNR=4.8						
CTA				LR	LR	14 24 32.5	
	comp=Z,281nm,18.0s,MS4.6,baz=258,slow=34						
CTAO	Charters Tower	77.67	110	eP	P	13 53 03.3	+2.1
CTAO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
CTAO	Charters Tower	77.67	110	eP	P	13 53 03.2	+2.0
	comp=Z,11nm,1.0s,mb4.7						
ESDC	Sonseca Array	78.11	311	P	P	13 53 03.4	+0.2
	comp=Z,2.0nm,0.7s,mb4.1,baz=101,slow=6.1,SNR=7.0						
PMG	Port Moresby	78.42	99	eP	P	13 53 06.2	+0.8
PMG				pmax	pmax		
	comp=Z,19nm,0.7s						
PMG	Port Moresby	78.42	99	⇑eP	P	13 53 07.4	+2.0
PMG	Port Moresby	78.42	99	P	P	13 53 06.2	+0.7
	comp=Z,9.6nm,0.7s,mb4.8,baz=313,slow=4.6,SNR=4.8						
PMG				LR	LR	14 25 06.8	
	comp=Z,276nm,19.0s,MS4.6,baz=93,slow=34						
PMG	Port Moresby	78.42	99	eP	P	13 53 06.2	+0.7
	comp=Z,19nm,0.7s,mb5.1						
YAK	Yakutsk	79.00	25	i P	P	13 53 07.9	+0.2
YSS	Yuzh-Sakhalins	81.03	42	P	P	13 53 16.0	-2.9
SNAA	Sanae	81.94	198	P	P	13 53 24.7	+1.6
TIXI	Tiksi	83.25	16	⇓iP	P	13 53 29.6	-0.3
TIXI				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,434nm,16.0s,MS4.9						
QSPA	South Pole Qui	87.62	180	eP	P	13 53 53.5	+2.1
	comp=Z,16nm,1.3s,mb5.1						
JMIC	Jan Mayen	88.02	341	LR	LR	14 34 30.4	
	comp=Z,216nm,21.7s,MS4.5,baz=85,slow=36						
MA2	Magadan	88.11	30	eP	P	13 53 53.5	-0.6
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.5						
MA2	Magadan	88.11	30	eP	P	13 53 53.2	-0.9
	comp=Z,4.8nm,0.3s,mb5.2						
VNDA	Vanda	88.42	167	eP	P	13 53 58.3	+3.0
VNDA				pmax	pmax		
	comp=Z,11nm,1.1s						
VNDA	Vanda	88.42	167	LR	LR	14 28 51.0	
	comp=Z,250nm,18.5s,MS4.7,baz=260,slow=32						
VNDA	Vanda	88.42	167	eP	P	13 53 58.3	+3.1
	comp=Z,11nm,1.1s,mb5.0						
BORG	Borgarnes	92.06	335	LR	LR	14 38 20.9	
	comp=Z,208nm,19.2s,MS4.6,baz=40,slow=37						
RPZ	Rata Peaks	97.41	134	LR	LR	14 31 05.8	
	comp=Z,334nm,18.6s,MS4.8,baz=96,slow=31						
YKA	Yellowknife Ar	119.98	2	PKIKP	PKPdf	13 59 53.4	-2.5
YKA	Yellowknife Ar	119.98	2	PKP	PKPdf	13 59 53.3	-2.6
	comp=Z,0.3nm,0.8s,baz=344,slow=2.5,SNR=4.7						
PDAR	Pinedale Array	139.75	358	PKP	PKPdf	14 00 30.4	-3.6
	comp=Z,0.2nm,0.6s,baz=117,slow=2.0,SNR=3.4						
NVAR	Mina Array Bea	143.58	9	PKP	PKPdf	14 00 38.9	-1.8
	comp=Z,1.1nm,0.8s,baz=38,slow=2.7,SNR=3.5						
SDCO	Great Sand Dun	144.38	352	ePKPdf	PKPdf	14 00 42.5	+0.3
WMOK	Wichita Mounta	145.70	341	ePKPdf	PKPdf	14 00 42.9	-1.7
AMTX	Amarillo	146.40	345	PKPdf	PKPdf	14 00 45.1	-0.7
NEN	Nelson	146.75	5	ePKPdf	PKPdf	14 00 46.8	+0.5
OTAV	Otavalo	146.91	267	ePKPbc	PKPbc	14 00 50.0	+4.3
WUAZ	Wupatki	147.03	360	ePKPbc	PKPdf	14 00 49.7	+2.9
ANMO	Albuquerque	147.26	352	PKPbc	PKPdf	14 00 48.9	+1.7
	comp=Z,0.8nm,0.7s,baz=41,slow=2.5,SNR=3.4						
ANMO	Albuquerque	147.26	352	PKPbc	PKPdf	14 00 48.9	+1.7
LDFC	Landfair	147.29	6	PKPdf	PKPdf	14 00 48.0	+0.8
PFO	Pinyon Flat Ob	148.59	8	ePKPdf	PKPdf	14 00 49.3	0.0
MNTX	Cornudas Mount	150.27	349	ePKPbc	PKPdf	14 00 56.4	+4.3
LTX	Lajitas	152.18	345	ePKPbc	PKPdf	14 01 02.5	+7.5
TXAR	Lajitas Array	152.18	345	PKPbc	PKPdf	14 00 59.5	+4.6
	comp=Z,1.4nm,0.8s,baz=90,slow=1.3,SNR=11						

IDC 20 13:52:21.6±2.4, 2.21N×95.94E, mb3.6/5, mb1 3.8/6, mb1mx3.6/18, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=92.6km s-min=21.8km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.41	10	Pn	P	13 56 14.6	-0.5
	0.1nm,0.3s,baz=197,slow=12,SNR=6.5						
WRA	Warramunga Arr	43.63	122	P	P	14 00 27.8	-2.1
	0.5nm,0.7s,baz=302,slow=9.1,SNR=5.3						
ASAR	Alice Springs	45.00	127	P	P	14 00 39.4	-1.5
	0.2nm,0.6s,baz=298,slow=7.8,SNR=6.3						
SONM	Songino Array	46.34	10	P	P	14 00 49.0	-2.1
	0.5nm,0.5s,baz=192,slow=8.9,SNR=9.4						
ZAL	Zalesovo	52.37	352	P	P	14 01 36.1	-1.4
	1.3nm,0.4s,baz=321,slow=6.2,SNR=8.7						
BVAR	Borovoye Array	54.89	341	P	P	14 01 53.0	-3.2
	0.8nm,0.6s,baz=263,slow=39,SNR=3.9						

IDC 20 14:02:50.6±1.0, 35.99N×71.22E, mb3.9/10, mb1 4.1/11, mb1mx3.9/20, mbtmp3.9/11, ML4.0/1, Error ellipse: s-maj=36.1km s-min=16.8km az=45.0

MOS 20 14:02:54.4±1.3, 36.14N×71.21E, h33^{km}, mb4.3/6, Error ellipse: s-maj=20.0km s-min=10.9km az=104.6

NEIC 20 14:02:58.5±1.6, 36.13N×71.29E, h57^{km}±14^{km}, mb4.0/1, Error ellipse: s-maj=22.5km s-min=6.3km az=59.0

BJI 20 14:03:00.3, 36.17N×71.19E, h69^{km}, mb3.9, ML4.0

ISC 20 14:03:01.7±0.7, 36.21N±0.03×71.43E±0.08, h105^{km}±8^{km}, n56, σ1^{s}22/62, mb3.7/11, 2C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.41	170	⇑P	P	14 03 41.8	+1.2
THW	Thamme Wali	3.41	176	P	P	14 03 54.1	-0.1
SARP	Sargodha	4.40	166	P	P	14 04 06.5	-1.1
KSH	Kashi	4.88	46	eP	P	14 04 17.3	+3.0
KSH				S	S	14 05 12.9	+2.9
KSH				Smax			
	comp=N,90nm,0.4s						
KSH				Smax			
	comp=E,50nm,0.3s						
THN	Thein Dam	5.17	135	eP	P	14 04 19.7	+1.5
THN				eS	S	14 05 18.3	+1.2
PONG	Pong	5.66	137	eP	P	14 04 26.0	+1.2
PONG				eS	S	14 05 31.0	+1.9
AML	Almayashu	6.17	16	P	P	14 04 31.3	-0.5
	SNR=90						
BHK	Bhakra	6.33	138	eS	S	14 05 44.2	-1.2
UCH	Uchtor	6.47	21	P	P	14 04 36.0	0.0
	SNR=20						
KZA	Kyzart	6.57	26	P	P	14 04 37.9	+0.5
	SNR=15						
SDNR	Sundarnagar	6.58	134	eP	P	14 04 39.2	+1.8
SDNR				eS	S	14 05 51.0	-0.5
EKS2	Erkin-Say	6.70	15	P	P	14 04 38.4	-0.7
	SNR=26						
AAK	Ala-Archa	6.84	19	P	P	14 04 41.0	0.0
	SNR=35						
AAK	Ala-Archa	6.84	19	ePN	P	14 04 39.4	-1.7
AAK				pmax	pmax		
	comp=Z,18nm,0.4s						
AAK	Ala-Archa	6.84	19	ePn	P	14 04 39.4	-1.7
	comp=Z,18nm,0.4s						
AAK				Sn	S	14 05 53.3	-4.6
SMLA	Simla	6.97	135	⇑iP	P	14 04 55.7	+13
SMLA				i S	S	14 06 14.2	+13
KBK	Karagaybulak	6.99	22	P	P	14 04 43.3	+0.2
	SNR=9.0						
ULHL	Ulahol	7.09	30	P	P	14 04 45.5	+1.0
	SNR=7.1						
CHMS	Chumysh	7.25	20	P	P	14 04 46.2	-0.4
	SNR=5.8						
TKM2	Tokmak 2	7.44	24	P	P	14 04 49.6	+0.4
	SNR=7.7						
USP	Ospenovka	7.44	18	P	P	14 04 47.9	-1.2
	SNR=15						
DDI	Dehra Dun	8.07	135	e	P	14 05 15.0	+17
NDI	New Delhi	8.95	145	eS	S	14 06 44.0	-5.4
KOLN	Koldanda	13.31	126	eP	P	14 06 05.9	-1.6
	comp=Z,7.5nm,0.3s						
GKN	Gorkha	13.86	122	eP	P	14 06 12.9	-1.6
	comp=Z,17nm,0.3s						
DMN	Daman	14.43	123	eP	P	14 06 20.7	-1.2
	comp=Z,6.3nm,0.2s						
KKN	Kakani	14.43	122	eP	P	14 06 20.2	-1.8
	comp=Z,14nm,0.4s						
PKI	Pulchoki	14.66	122	eP	P	14 06 23.7	-1.2
	comp=Z,12nm,0.4s						
GUN	Gumba	14.77	120	eP	P	14 06 24.6	-1.7
	comp=Z,13nm,0.4s						
JIRN	Jiri	15.14	120	eP	P	14 06 30.2	-0.9
	comp=Z,34nm,0.6s						
KURK	Kurchatov	15.40	17	eP	P	14 06 30.3	-3.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	15.40	17	eP	P	14 06 30.3	-3.9
	comp=Z,1.8nm,0.7s						
KURK				e		14 06 36.1	
BVAR	Borovoye Array	16.83	358	P	P	14 06 49.5	-2.5
	comp=Z,0.5nm,0.3s,baz=164,slow=13,SNR=7.7						
CHKZ	Chkalovo	17.48	358	eP	P	14 06 56.8	-3.2
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CHKZ	Chkalovo	17.48	358	eP	P	14 06 56.8	-3.2
	comp=Z,1.3nm,0.5s						
ZAL	Zalesovo	20.03	24	P	P	14 07 28.0	-0.2
ZAL				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ZAL	Zalesovo	20.03	24	P	P	14 07 28.0	-0.3

	comp=Z,6.7nm,0.3s,baz=252,slow=7.9,SNR=33						
GTA	Gaotai	22.62	73	P	P	14 08 00.1	+6.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb3.8						
SONM	Songino Array	28.22	55	P	P	14 08 48.3	+1.8
	comp=Z,0.2nm,0.5s,mb2.9,baz=255,slow=8.8,SNR=4.6						
CMAR	Chiang Mai Arr	30.01	119	P	P	14 09 02.5	-0.2
	comp=Z,0.3nm,0.4s,mb3.3,baz=90,slow=27,SNR=3.0						
AKASG	Malin Array Be	33.40	309	P	P	14 09 31.5	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	33.40	309	P	P	14 09 31.5	-0.4
	comp=Z,1.4nm,0.6s,mb4.0,baz=80,slow=7.0,SNR=6.1						
JOF	Joensuu	36.30	330	*e*p	P	14 09 56.6	+0.2
FINES	FINESS Array B	37.92	326	P	P	14 10 10.3	+0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	37.92	326	P	P	14 10 10.3	+0.3
	comp=Z,1.4nm,0.4s,mb4.2,baz=120,slow=9.9,SNR=25						
FINES	FINESS Array B	37.92	326	P	P	14 10 10.3	+0.3
KAF	Kangasniemi	38.06	327	*e*p	P	14 10 12.5	+1.3
	comp=Z,0.6nm,0.3s,mb3.9,baz=103,slow=6.6						
KAF	Kangasniemi	38.06	327	*e*P	P	14 10 12.5	+1.3
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
ARCES	ARCESS Array B	41.55	338	P	P	14 10 41.0	+1.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	41.55	338	P	P	14 10 41.0	+1.2
	comp=Z,1.3nm,0.4s,mb4.0,baz=112,slow=7.1,SNR=16						
NB2	NORSAR Subarra	44.82	323	P	P	14 11 06.4	0.0
	comp=Z,1.3nm,0.5s,mb3.9,baz=96,slow=7.9						
NOA	NORSAR Array B	44.82	323	P	P	14 11 06.3	-0.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	44.82	323	P	P	14 11 06.3	-0.1
	comp=Z,1.7nm,0.6s,mb3.9,baz=97,slow=7.8,SNR=6.9						
YKA	Yellowknife Ar	81.52	3	P	P	14 15 09.2	+0.9
	comp=Z,0.3nm,0.5s,mb3.4,baz=349,slow=5.5,SNR=16						
WRA	Warramunga Arr	81.54	122	P	P	14 15 09.9	+0.6
	comp=Z,0.4nm,0.6s,mb3.5,baz=323,slow=4.9,SNR=11						
ASAR	Alice Springs	83.80	125	P	P	14 15 21.9	+1.1
	comp=Z,0.4nm,0.6s,mb3.4,baz=310,slow=5.0,SNR=10						

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*JMA **20** 14:15:38.6±0.3, 29.14N×140.11E, h427^{km}±5^{km}, M3.6*

*IDC **20** 14:15:38.7±1.0, 29.01N×139.67E, h409^{km}±15^{km}, mb3.1/9, mb1 3.3/10, mb1mx3.1/24, mbtmp3.9/10, Error ellipse: s-maj=35.3km s-min=12.9km az=83.0*

*NEIC **20** 14:15:39.2±1.5, 29.00N×139.63E, h416^{km}±16^{km}, mb3.7/2, Error ellipse: s-maj=27.6km s-min=12.1km az=81.0*

ISC 20 14:15:37.7±0.6**, 29.03N**±0.06×**139.6E**±0.2**, h414**^{km}±10^{km}**, n21,** $\sigma 0^{s}$**75**/26**, mb3.5**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.97	130	P	P	14 16 41.8	-0.3
	30nm,0.3s,baz=264,slow=15,SNR=12						
CBIJ				S	S	14 17 33.6	+0.7
	60nm,0.3s,baz=275,slow=23,SNR=14						
CBIJ	Chichi jima	2.97	130	P	P	14 16 42.2	+0.1
CBIJ				*e*S	S	14 17 32.8	-0.1
JHHJ	Haha-jima-NKT	3.29	136	P	P	14 16 44.8	0.0
JHHJ				S	S	14 17 37.6	0.0
BSO3	Boso 3	5.80	7	*e*S	S	14 18 21.9	+0.6
JHU	Hanno	6.80	358	*e*S	S	14 18 38.7	-2.6
JRY	Ryogami san	6.99	355	P	P	14 17 23.1	+0.7
JRY				*e*S	S	14 18 45.6	+0.6
JAG	Ashikaga	7.37	359	P	P	14 17 26.1	-0.6
MAJO	Matsushiro	7.58	351	*e*P	P	14 17 29.7	+0.6
JHO	Hitachi	7.60	6	P	P	14 17 29.9	+0.7
JHO				*e*S	S	14 18 56.0	-1.2
HIA	Hailar	25.28	329	*e*P	P	14 20 30.3	+0.1
	2.2nm,0.4s,mb3.9						
SONM	Songino Array	31.76	315	P	P	14 21 27.9	+1.1
	0.5nm,0.5s,mb3.1,baz=126,slow=8.5,SNR=5.4						
WRA	Warramunga Arr	48.96	187	P	P	14 23 45.7	-0.6
	1.4nm,0.4s,mb3.6,baz=1.2,slow=7.8,SNR=94						
ASAR	Alice Springs	52.69	187	P	P	14 24 13.1	-0.8
	0.4nm,0.4s,mb3.0,baz=3.4,slow=6.9,SNR=20						
CHKZ	Chkalovo	54.92	317	*e*P	P	14 24 28.3	-1.2
	1.0nm,0.5s,mb3.3						
BVAR	Borovoye Array	55.09	316	P	P	14 24 30.2	-0.5
	1.0nm,0.5s,mb3.3,baz=92,slow=9.2,SNR=8.0						
INK	Inuvik	62.22	25	P	P	14 25 18.8	+0.2
	0.9nm,1.1s,mb3.2,baz=257,slow=6.6,SNR=4.1						
INK	Inuvik	62.22	25	*e*P	P	14 25 18.7	+0.2
ARCES	ARCESS Array B	70.97	340	P	P	14 26 13.4	+0.7
	1.1nm,0.5s,mb3.7,baz=74,slow=8.8,SNR=9.3						
FINES	FINESS Array B	75.21	333	P	P	14 26 37.3	+0.1
	0.7nm,0.4s,mb3.7,baz=68,slow=5.0,SNR=17						
HFS	Hagfors	80.75	336	P	P	14 27 07.5	+0.5
	1.9nm,0.9s,mb3.8,baz=90,slow=5.9,SNR=10						
NOA	NORSAR Array B	80.97	337	P	P	14 27 08.5	+0.4
	0.6nm,0.9s,mb3.3,baz=14,slow=6.9,SNR=2.3						

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*IDC **20** 14:29:32.9±1.7, 4.57N×94.21E, mb4.0/4, mb1 4.2/5, mb1mx3.7/18, mbtmp4.0/5, ML4.2/1, Error ellipse: s-maj=82.5km s-min=24.3km az=53.0*

*NEIC **20** 14:29:37.6±1.1, 4.69N×94.33E, h30^{km}, mb3.7/1, Error ellipse: s-maj=32.1km s-min=16.5km az=76.0*

ISC 20 14:29:35.8±1.2**, 4.7N**±0.1×**94.4E**±0.2**, h30**^{km}**, n7,** $\sigma 1^{s}$**05**/7**, mb4.0**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	14.38	18	*e*P	P	14 32 58.0	-1.6
CMAR	Chiang Mai Arr	14.38	18	Pn	P	14 33 01.6	+2.0
	0.3nm,0.3s,baz=206,slow=12,SNR=25						
WRA	Warramunga Arr	46.31	123	P	P	14 38 00.8	-0.4
	1.7nm,0.6s,mb4.1,baz=303,slow=9.3,SNR=28						
ASAR	Alice Springs	47.78	128	P	P	14 38 12.9	+0.3
	1.3nm,0.6s,mb4.1,baz=302,slow=7.7,SNR=30						
CHKZ	Chkalovo	52.53	342	*e*P	P	14 38 47.5	-1.0
	0.6nm,0.6s,mb3.7						
FINES	FINESS Array B	75.59	333	P	P	14 41 20.1	+0.7
	1.3nm,0.9s,mb3.8,baz=90,slow=3.8,SNR=4.2						
ARCES	ARCESS Array B	78.30	340	P	P	14 41 34.5	+0.3
	2.3nm,1.0s,mb4.1,baz=90,slow=4.5,SNR=3.9						

IDC 20 14:34:11.0±5.0**, 29.47S**×**177.25W, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.6**/13**, mbtmp3.4**/2**, Error ellipse: s-maj=280.6km s-min=72.8km az=165.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.82	266	P	P	14 42 19.1	-1.5
	0.2nm,0.4s,baz=104,slow=6.9,SNR=8.2						
WRA	Warramunga Arr	44.73	271	P	P	14 42 26.0	-2.0
	0.5nm,0.6s,baz=110,slow=8.0,SNR=15						
FINES	FINESS Array B	144.49	341	PKP	PKPdf	14 53 48.1	-2.3
	0.7nm,0.5s,baz=72,slow=4.4,SNR=12						

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*NEIC **20** 14:37:44.8, 31.38S×68.79W, h150^{km}, MD3.7(GUC), After GUC.*

GUC 20 14:37:44.8±0.6**, 31.38S**×**68.79W, h150**^{km}**, MD3.7, ML3.8, 1C-6D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACH	Jahuel	2.00	229	*e*P	P	14 38 20.9	+0.7
TLL	Tololo Astrono	2.11	304	*e*P	P	14 38 22.5	+0.8
TLL				*i* S	S	14 38 50.8	+0.9
TLL				AMP		14 38 54.1	
	comp=N,502nm,0.5s						
FCH	Farellones	2.32	213	⇑*i*P	P	14 38 24.8	+0.7
FCH				*i* S	S	14 38 55.5	+1.2
FCH				AMP		14 38 57.4	
	comp=E,219nm,0.3s						
ROCH	El Roble	2.46	229	⇓*i*P	P	14 38 26.4	+0.5
CLCH	Cerro Calan	2.49	216	*i* P	P	14 38 26.6	+0.2
CLCH				*i* S	S	14 38 58.1	-0.1
CLCH				AMP		14 39 06.4	
	comp=E,374nm,0.7s						
PACH	Papudo	2.52	242	⇓*i*P	P	14 38 26.3	-0.5
PACH				*i* S	S	14 38 58.2	-0.7
PCH	Pirque	2.66	213	⇓*i*P	P	14 38 29.5	+0.9
PCH				*i* S	S	14 39 03.4	+1.4
RCDM	Rinconada Maip	2.70	219	⇓*i*P	P	14 38 29.2	+0.1
RCDM				*i* S	S	14 39 03.1	+0.2
RCDM				AMP		14 39 04.8	
	comp=E,479nm,0.2s						
LMEL	Las Melosas	2.73	205	⇓*i*P	P	14 38 29.7	+0.3
LMEL				AMP		14 39 15.7	
	comp=N,167nm,0.2s						
TACH	Talagante	2.90	218	*i* P	P	14 38 31.2	-0.4
CHCH	Chadas Angostu	2.99	211	⇓*i*P	P	14 38 32.6	-0.1
CHCH				*i* S	S	14 39 08.9	-0.4
CACH	El Canelo	3.12	209	*e*P	P	14 38 34.8	+0.4

IDC 20 14:38:29.9±4.0**, 10.25S**×**165.41E, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/14**, mbtmp3.5**/3**, Error ellipse: s-maj=206.4km s-min=31.4km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	31.45	249	P	P	14 44 53.9	-1.7
	0.5nm,0.7s,baz=80,slow=9.0,SNR=7.0						
ASAR	Alice Springs	32.86	242	P	P	14 45 05.4	-2.4
	0.3nm,0.6s,baz=63,slow=11,SNR=4.8						
ILAR	Eielson Array	82.87	19	P	P	14 50 56.1	-1.3
	0.2nm,0.5s,baz=234,slow=4.9,SNR=9.5						

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*NIED **20** 14:58:00, 29.40N×130.60E, h29^{km}, Mw3.7 Best double couple: $M_0 4.29\times10^{14}$ NP1: ϕ_s140°, δ61°, λ-37°. NP2: ϕ_s250°, δ59°, λ-145°.*

JMA 20 14:58:20.1±0.2**, 29.43N**×**130.59E, h34**^{km}±4^{km}**, M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.74	304	P	P	14 58 34.1	0.0
JNN				*e*S	S	14 58 44.9	+0.5
JKC	Kuchinoerabu	1.08	342	P	P	14 58 39.3	+0.3
JKC				S	S	14 58 54.1	+1.1
JTN	Tanegashima 3	1.27	15	P	P	14 58 42.4	+0.9
JAM	Amami Oshima	1.33	221	P	P	14 58 43.5	+0.9
JTSR	Tashiro 2	1.75	9	P	P	14 58 49.7	+1.1
JSU	Suzuyama	2.07	357	P	P	14 58 53.1	0.0
JNAR	Kushima--Naru	2.17	16	P	P	14 58 55.6	+1.1
JTK	Tokunoshima	2.18	222	P	P	14 58 55.1	+0.4

IDC 20 15:05:40.2±3.9**, 10.40N**×**92.43E, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/18**, mbtmp3.3**/4**, ML3.6**/1**, Error ellipse: s-maj=107.6km s-min=28.9km az=81.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.19	37	Pn	P	15 08 07.7	-3.2
	0.2nm,0.3s,baz=232,slow=15,SNR=3.2						
SONM	Songino Array	39.13	15	P	P	15 13 09.6	-1.5
	0.3nm,0.5s,baz=208,slow=8.8,SNR=5.0						
WRA	Warramunga Arr	51.10	126	P	P	15 14 44.8	-2.1
	0.6nm,0.5s,baz=306,slow=8.4,SNR=27						
ASAR	Alice Springs	52.82	130	P	P	15 14 57.7	-2.2
	0.3nm,0.8s,baz=311,slow=6.4,SNR=5.9						

IDC 20 15:17:28.1±3.0**, 7.21N**×**91.82E, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.5**/18**, mbtmp3.5**/5**, ML3.8**/1**, MS2.7**/1**, Ms1 2.9**/1**, ms1mx2.4**/21**, Error ellipse: s-maj=95.4km s-min=25.4km az=70.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.16	31	Pn	P	15 20 35.8	-3.2
	0.2nm,0.3s,baz=234,slow=14,SNR=4.0						
CMAR				LR	LR	15 27 01.4	
	comp=Z,31nm,18.6s,baz=135,slow=44						
SONM	Songino Array	42.35	15	P	P	15 25 24.4	-1.2
	0.4nm,0.7s,baz=191,slow=6.2,SNR=5.3						
ZAL	Zalesovo	46.94	354	P	P	15 25 59.9	-2.4
	0.7nm,0.7s,baz=280,slow=4.8,SNR=3.1						
WRA	Warramunga Arr	49.78	124	P	P	15 26 22.7	-2.2
	0.4nm,0.6s,baz=302,slow=9.0,SNR=6.4						
ASAR	Alice Springs	51.29	128	P	P	15 26 34.5	-1.9
	0.7nm,0.8s,baz=298,slow=7.7,SNR=10						

IDC 20 15:22:25.2±1.4**, 0.37N**×**123.85E, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.5**/15**, mbtmp3.4**/4**, Error ellipse: s-maj=83.6km s-min=21.4km az=61.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.65	154	P	P	15 27 28.0	-1.5
	0.7nm,0.5s,baz=331,slow=10,SNR=16						
ASAR	Alice Springs	25.81	158	P	P	15 27 58.4	-1.6
	0.1nm,0.5s,baz=345,slow=12,SNR=4.0						
CMAR	Chiang Mai Arr	30.36	308	P	P	15 28 39.3	-1.9
	0.6nm,0.7s,baz=138,slow=7.5,SNR=7.1						
SONM	Songino Array	49.65	345	P	P	15 31 18.5	-2.1
	0.3nm,0.5s,baz=159,slow=9.2,SNR=7.0						

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*CSEM **20** 15:26:06.6±0.6, 34.52N×23.61E, h2^{km}, ML3.3, Error ellipse: s-maj=27.5km s-min=9.0km az=80.0*

*HLW **20** 15:26:07.6, 34.94N×23.84E, h33^{km}, Mb3.3*

*ATH **20** 15:26:11.4, 34.84N×23.73E, h23^{km}±3^{km}, MD3.3/5*

*NEIC **20** 15:26:11.4, 34.84N×23.73E, h23^{km}, MD3.3(ATH), After ATH.*

ISC 20 15:26:09.1±2.0**, 34.55N**±0.06×**23.7E**±0.2**, h27**^{km}±18^{km}**, n9,** $\sigma 1^{s}$**05**/13**, 1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.46	51	*e*PB	Pb	15 26 18.5	-0.3
VAM	Vamos	0.97	27	*e*PN	Pn	15 26 25.0	-2.1
NPS	Neapolis	1.76	66	*e*PN	Pn	15 26 40.0	+1.6
KYTH	Kithira	1.80	344	*e*PN	Pn	15 26 40.0	+1.0
VLI	Veliai	2.25	345	*e*PB	Pn	15 26 45.0	-0.3
SLUM		3.31	156	⇓P	Pn	15 27 01.6	+1.0
SLUM				S	Sn	15 27 40.7	+1.2
SWA2		5.50	163	P	Pn	15 27 31.8	+0.2
SWA2				S	Sn	15 28 34.0	-0.8
SWA1		5.55	161	P	Pn	15 27 32.7	+0.5
SWA1				S	Sn	15 28 34.7	-1.2
HFRF	Wahat Farafira	8.39	150	P	P	15 28 11.0	-1.0
HFRF				S	Sn	15 29 41.7	-5.1

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*LDG **20** 15:25:56.9±0.3, 12.56S×167.60E, h10^{km}, Mb5.2/3, Error ellipse: s-maj=50.9km s-min=17.6km az=90.0*

*MOS **20** 15:26:18.3±1.2, 13.56S×167.10E, h201^{km}, mb5.1/14, Error ellipse: s-maj=13.1km s-min=12.5km az=117.7*

*BJI **20** 15:26:18.3, 13.25S×167.12E, h192^{km}, mB5.2, mb5.2*

*NEIC **20** 15:26:18.6±0.1, 13.68S×167.31E, mb5.0/36, Error ellipse: s-maj=6.1km s-min=5.0km az=111.0*

*IDC **20** 15:26:18.6±0.7, 13.68S×167.12E, h198^{km}±6^{km}, mb4.4/18, mb1 4.5/18, mb1mx4.5/19, mbtmp4.8/18, MS3.9/3, Ms1 3.9/3, ms1mx3.3/20, Error ellipse: s-maj=12.7km s-min=9.5km az=134.0*

*HRVD **20** 15:26:18.6±0.4, 13.64S×167.00E, h204^{km}±2^{km}, MW5.0/49, Centroid moment Tensor Solution. LP body waves: s26,c34; Mantle waves: s49,c70; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.20±.16; $M_{\theta\theta}$-0.18±.19; $M_{\phi\phi}$-4.02±.17; $M_{r\theta}$0.24±.20; $M_{\theta\phi}$1.05±.24; $M_{\phi r}$-0.13±.18; Best double couple: $M_0 4.253\times10^{16}$ NP1: ϕ_s348°, δ44°, λ94°. NP2: ϕ_s163°, δ46°, λ86°. Principal axes: T 4.214, Plg87°, Azm10°; N .075, Plg3°, Azm166°; P -4.293, Plg1°, Azm256°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 15:26:19.6±1.0**, 13.74S**±0.04×**167.19E**±0.05**, h223**^{km}±9^{km}**, h201**^{km}±4.1^{km}**:pP-P, n286,** $\sigma 0^{s}$**87**/126**, mb4.8**/64**, 58C-13D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	8.29	300	*e*P	P	15 28 17.4	0.0
	198nm,0.9s						
DZM	Mont Dzumac	8.31	185	*e*P	P	15 28 17.3	-0.4
DZM				*e*S	S	15 29 47.5	-2.5
DZM	Mont Dzumac	8.31	185	*e*P	P	15 28 17.2	-0.4
DZM				*e*S	S	15 29 47.5	-2.5
NOUC	Port Laguerre	8.36	186	*e*P	P	15 28 18.1	-0.1
NOUC	Port Laguerre	8.36	186	*e*S	S	15 29 52.5	+1.5
NOUC	Port Laguerre	8.36	186	*e*P	P	15 28 18.1	-0.1
NOUC				*e*S	S	15 29 52.5	+1.5
PMG	Port Moresby	20.09	280*c*	*i*P	P	15 30 41.1	+3.4
PMG	Port Moresby	20.09	280	P	P	15 30 39.3	+1.7
	35nm,0.9s,baz=73,slow=6.5,SNR=9.5						
PMG	Port Moresby	20.09	280	*e*P	P	15 30 40.6	+2.9
	31nm,1.0s						
AFI	Afiamalu	20.42	93	*e*P	P	15 30 40.4	-0.5
AFI				pmax	pmax		
	comp=Z,102nm,0.9s						
AFI	Afiamalu	20.42	93	*e*P	P	15 30 40.4	-0.6
	comp=Z,102nm,0.9s						
CTA	Charters Tower	20.99	250	⇓*i*P	P	15 30 47.9	+1.3
	comp=Z,11nm,0.4s						
CTA				*i* S	S	15 34 29.6	+7.6
CTA	Charters Tower	20.99	250	*i* P	P	15 30 47.9	+1.3
CTA				*i* S	S	15 34 29.6	+7.6
CTA				pmax	pmax		
	comp=Z,11nm,0.4s						
CTA	Charters Tower	20.99	250	P	P	15 30 48.0	+1.4
	comp=Z,16nm,0.5s,baz=78,slow=12,SNR=46						
CTA				ScP		15 38 05.0	
	comp=Z,1.8nm,0.5s,baz=88,slow=6.8,SNR=6.7						
CTAO	Charters Tower	20.99	250	*e*P	P	15 30 47.6	+1.0
CTAO				pmax	pmax		
	comp=Z,20nm,0.8s						
CTAO	Charters Tower	20.99	250	*e*P	P	15 30 47.6	+1.1
	comp=Z,20nm,0.8s						
URZ	Urewera	25.96	162	P	P	15 31 32.7	-0.8
	comp=Z,6.4nm,0.7s,mb4.4,baz=90,slow=14,SNR=8.1						
CNB	Canberra Magne	26.83	214	⇑*i*P	P	15 31 42.1	+0.7
	comp=Z,259nm,0.6s						
STKA	Stephens Creek	29.58	228	⇑*i*P	P	15 32 06.5	+0.4
	comp=Z,25nm,0.4s,mb5.2						
STKA				*i* PCP	PcP	15 35 05.1	0.0
STKA				*i* SCP		15 38 29.2	
STKA	Stephens Creek	29.58	228	P	P	15 32 06.6	+0.5
	comp=Z,43nm,0.6s,mb5.3,baz=48,slow=8.5,SNR=215						
STKA				PcP	PcP	15 35 05.0	0.0
	comp=Z,13nm,0.7s,baz=51,slow=2.4,SNR=7.5						
STKA				ScP		15 38 29.3	
	comp=Z,5.6nm,0.7s,baz=44,slow=3.5,SNR=11						
RPZ	Rata Peaks	30.05	174	P	P	15 32 09.3	-0.7
	comp=Z,9.8nm,0.6s,mb4.6,baz=96,slow=8.6,SNR=14						
TOO	Toolangi	30.60	215	⇑*i*P	P	15 32 15.5	+0.6
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	32.01	254	P	P	15 32 26.0	-1.2
	comp=Z,9.3nm,0.6s,mb4.5,baz=86,slow=9.3,SNR=161						
WRA				PP	PP	15 33 40.3	-1.7
	comp=Z,6.5nm,1.1s,baz=81,slow=11,SNR=5.0						
WRA				PcP	PcP	15 35 11.5	0.0
	comp=Z,8.5nm,0.7s,baz=82,slow=3.2,SNR=18						
WRA				S	S	15 37 18.9	-2.4
	comp=Z,6.5nm,1.1s,baz=86,slow=15,SNR=8.5						
WRA				ScP		15 38 37.7	
	comp=Z,4.7nm,0.9s,baz=82,slow=3.6,SNR=14						
ASAR	Alice Springs	32.97	248	P	P	15 32 34.6	-0.9
	comp=Z,23nm,0.5s,mb5.0,baz=75,slow=9.4,SNR=942						
ASAR				PcP	PcP	15 35 13.8	-0.3
	comp=Z,9.0nm,0.8s,baz=82,slow=2.4,SNR=16						
ASAR				S	S	15 37 35.0	-1.2
	comp=Z,7.4nm,1.0s,baz=81,slow=16,SNR=12						
ASAR				ScP		15 38 40.7	
	comp=Z,9.7nm,0.9s,baz=87,slow=3.2,SNR=24						
ASAR				LR	LR	15 45 39.5	
	comp=Z,167nm,19.1s,baz=96,slow=35						
ASPA	Alice Springs	32.97	248	⇑*i*P	P	15 32 34.4	-1.1
ASPA				*i* PCP	PcP	15 35 13.7	-0.5
ASPA				*i* S	S	15 37 34.8	-1.4
ASPA				*i* SCP		15 38 40.3	
KAKA	Kakadu	33.83	268	⇑*i*P	P	15 32 42.7	-0.2
	comp=Z,27nm,0.6s,mb5.0						
KAKA				*i* PCP	PcP	15 35 17.0	+0.3
FITZ	Fitzroy Crossi	40.13	258	*e*P	P	15 33 35.7	+0.1
	comp=Z,26nm,1.5s,mb4.5						
FITZ				*i* PCP	PcP	15 35 36.6	+0.7
MBWA	Marble Bar	45.74	254	*e*P	P	15 34 21.1	+0.4
MBWA				*e*PcP	PcP	15 35 54.2	-0.6
KLBR	Kellerberrin	48.53	240	⇑*i*P	P	15 34 41.2	-0.9
	comp=Z,808nm,1.2s,mb5.9						
NWAO	Narrogin (SRO)	49.20	238	*e*P	P	15 34 46.7	-0.5
	comp=Z,31nm,0.7s,mb4.8						
MUN	Mundaring	49.89	240	*e*P	P	15 34 51.9	-0.5
	comp=Z,22nm,0.9s,mb4.5						
JOW	Kunigami	55.28	317	P	P	15 35 30.6	-1.5
	comp=Z,50nm,1.1s,mb5.0,baz=142,slow=26,SNR=4.5						
MAJO	Matsushiro	57.00	332	*e*P	P	15 35 43.0	-1.3
	comp=Z,11nm,0.4s,mb4.8						
MAT	Matsushiro	57.00	332	*e*P	P	15 35 43.0	-1.2
	comp=Z,19nm,0.8s,mb4.8						
MAT	Matsushiro	57.00	332	P	P	15 35 43.0	-1.2
SSE	Sheshan	62.76	316	P	P	15 36 23.0	-0.4
SSE				S	S	15 44 27.3	-5.6
SSE				SS	SS	15 48 38.8	-5.3
SSE				AMB	AMB		
	comp=Z,32nm,0.9s,mb5.0						
SSE				LR	LR		
	comp=N,39nm,21.9s						
SSE				LR	LR		
	comp=E,30nm,21.9s						
SSE				LR	LR		
	comp=Z,50nm,23.0s						
SSE	Sheshan	62.76	316	P	P	15 36 23.0	-0.4
	comp=Z,32nm,0.9s,mb5.0						
SSE				S	S	15 44 27.3	-5.6
SSE				sS		15 46 27.0	
SSE				SS	SS	15 48 38.7	-5.4
SSE				LR	LR		
	comp=Z,50nm,23.0s						
VNDA	Vanda	63.84	181	P	P	15 36 30.1	+0.3
	comp=Z,11nm,1.1s,mb4.4,baz=348,slow=9.1,SNR=11						
VNDA	Vanda	63.84	181	*e*P	P	15 36 29.5	-0.3
	comp=Z,4.1nm,0.6s,mb4.2						
YSS	Yuzh-Sakhalins	64.27	342	⇑*i*P	P	15 36 33.0	-0.1
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.2						
YSS	Yuzh-Sakhalins	64.27	342	*e*P	P	15 36 33.1	+0.1
	comp=Z,69nm,1.0s,mb5.2						
NJ2	Nanjing	64.92	316	*e*P	P	15 36 37.5	0.0
NJ2				S	S	15 44 59.0	-0.5
NJ2				AMB	AMB		
	comp=Z,80nm,0.7s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,50nm,10.0s						
NJ2				LR	LR		
	comp=N,480nm,31.4s						
NJ2				LR	LR		
	comp=E,730nm,24.0s						
NJ2				LR	LR		
	comp=Z,420nm,38.1s						
PET	Petropavlovsk	66.90	354	⇓*e*P	P	15 36 49.5	-0.1
PET				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.0						
WHN	Wuhan	67.23	312	*e*P	P	15 36 52.0	-0.1
MDJ	Mudanjiang	67.38	332	P	P	15 36 52.8	0.0
MDJ				PP	PP	15 39 22.8	-2.6
MDJ				S	S	15 45 33.0	+4.0
MDJ				SCS	ScS	15 46 30.3	+5.0
MDJ				AMB	AMB		
	comp=Z,41nm,1.3s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,158nm,5.0s						
MDJ				LR	LR		
	comp=N,34nm,25.1s						
MDJ				LR	LR		
	comp=E,27nm,26.8s						
MDJ				LR	LR		
	comp=Z,32nm,16.2s						
MDJ	Mudanjiang	67.38	332	*e*P	P	15 36 52.9	+0.1
	comp=Z,49nm,1.2s,mb5.0						
CN2	Changchun	68.77	329	*e*P	P	15 37 01.4	+0.1
CN2				PCP	PcP	15 37 26.3	+1.7
CN2				*e*AP	pP	15 37 45.1	-8.6
CN2				*e*S	S	15 45 47.3	+2.0
CN2				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.4						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
KLR	Kul'dur	70.08	336	*e*P	P	15 37 07.2	-2.0
ENH	Enshi	70.69	309	*e*P	P	15 37 12.5	-0.8
	comp=Z,61nm,0.9s,mb5.2						
GYA	Guiyang	71.10	304	⇑*i*P	P	15 37 16.3	+0.6
GYA				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
BJT	Baijiatuau	71.45	321	*e*P	P	15 37 17.9	+0.3
	comp=Z,12nm,0.7s,mb4.6						

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XAN   Xi'an             72.97 312  P        P        15 37 26.8  0.0
XAN                                AMB      AMB
      comp=Z,33nm,0.8s,mb5.0
KMI   Kunming           73.73 302 ⇑P        P        15 37 32.8 +1.4
KMI                                AP       pP       15 38 21.1 -3.2
KMI                                AMB      AMB
      comp=Z,40nm,1.3s,mb4.9
KMI                                AMB      AMB
      comp=Z,156nm,3.1s
KMI   Kunming           73.73 302 ⇑P        P        15 37 32.7 +1.3
      comp=Z,40nm,1.3s,mb4.9
KMI                                pP       pP       15 38 21.1 -3.2
MA2   Magadan           74.27 351c iP       P        15 37 32.8 -1.0
MA2                                pmax     pmax
      comp=Z,10.0nm,0.9s,mb4.5
MA2   Magadan           74.27 351  eP       P        15 37 32.8 -0.9
      comp=Z,14nm,0.8s,mb4.7
CM31  Chiang Mai Arr    74.48 294  eP       P        15 37 36.5 +0.6
      comp=Z,24nm,0.8s,mb4.9
CMAR  Chiang Mai Arr    74.48 294  i P      P        15 37 36.8 +1.0
CMAR                               pmax     pmax
      comp=Z,21nm,0.8s
CMAR  Chiang Mai Arr    74.48 294  P        P        15 37 36.8 +1.0
      comp=Z,21nm,0.8s,mb4.8,baz=127,slow=4.7,SNR=150
CD2   Chengdu           75.35 307⇓iP        P        15 37 41.4 +0.9
CD2                                AMB      AMB
      comp=Z,50nm,1.2s,mb5.0
HIA   Hailar            75.40 330  eP       P        15 37 40.4  0.0
      comp=Z,47nm,1.2s,mb5.0
BTO   Baotou            75.64 319  eP       P        15 37 42.8 +0.9
BTO                                AMB      AMB
      comp=Z,20nm,0.6s,mb4.9
QSPA  South Pole Qui    76.28 180  eP       P        15 37 45.3 +0.5
      comp=Z,50nm,0.9s,mb5.1
SEY   Seymchan          77.30 353  eP       P        15 37 52.5 +1.9
SEY                                e                 15 38 40.3
SEY                                e                 15 47 46.8
SEY                                pmax     pmax
      comp=Z,20nm,0.7s,mb4.9
LZH   Lanzhou           77.61 312 ⇑P        P        15 37 53.8 +0.9
LZH                                AMB      AMB
      comp=Z,85nm,1.3s,mb5.2
LZH                                AMB      AMB
      comp=Z,123nm,5.4s
LZH   Lanzhou           77.61 312 ⇑P        P        15 37 53.8 +0.9
      comp=Z,85nm,1.3s,mb5.2
LZH                                pP       tx       15 38 07.5
LZH                                sP       tx       15 38 12.3
LZH                                PP       tx       15 39 18.5
CLNS  Chul'man          78.59 338  eP       P        15 37 58.9 +1.1
CLNS                               pmax     pmax
      comp=Z,34nm,0.9s,mb5.0
CLNS                               pmax     pmax
      comp=N,15nm,1.1s
CLNS                               pmax     pmax
      comp=E,11nm,1.0s
YAK   Yakutsk           81.07 343  eP       P        15 38 09.3 -1.6
YAK                                pmax     pmax
      comp=N,12nm,1.0s
YAK                                pmax     pmax
      comp=Z,51nm,1.0s,mb5.1
YAK                                pmax     pmax
      comp=E,9.0nm,1.1s
YAK   Yakutsk           81.07 343  eP       P        15 38 10.6 -0.2
      comp=E,81nm,0.8s,mb5.4
ULN   Ulaanbaatar       81.30 324  eP       P        15 38 13.1 +0.7
      comp=E,29nm,0.9s,mb4.9
BILL  Bilibino          81.56 360c iP       P        15 38 13.4 +0.1
BILL                               pmax     pmax
      comp=Z,77nm,1.5s,mb5.1
BILL  Bilibino          81.56 360  eP       P        15 38 13.1 -0.2
      comp=Z,48nm,1.0s,mb5.1
SONM  Songino Array     81.66 324  P        P        15 38 14.8 +0.6
      comp=Z,4.1nm,0.5s,mb4.3,baz=144,slow=5.8,SNR=102
GTA   Gaotai            81.94 314⇑iP        P        15 38 17.3 +1.6
GTA                                AP       pP       15 39 03.6 -6.2
GTA                                XP       sP       15 39 22.1  -11
GTA                                AMB      AMB
      comp=Z,25nm,1.1s,mb4.8
MAW   Mawson            82.77 202  P        P        15 38 20.7 +1.2
      comp=Z,23nm,0.6s,mb5.1,baz=170,slow=4.1,SNR=16
MAW   Mawson            82.77 202  eP       P        15 38 20.5 +1.0
      comp=Z,26nm,0.5s,mb5.2
BOD   Bodaibo           83.56 334  eP       P        15 38 22.2 -1.5
BOD                                pmax     pmax
      comp=Z,15nm,1.3s,mb4.6
MCK   McKinley          84.24  18  eP       P        15 38 25.9 -1.0
      comp=Z,7.9nm,1.2s,mb4.3
ZAK   Zakamensk         84.71 325⇓iP        P        15 38 29.5 -0.1
ZAK                                e        pP       15 39 22.7 -1.2
ZAK                                pmax     pmax
      comp=Z,18nm,1.2s,mb4.7
IMA   Indian Mountai    84.72  15  eP       P        15 38 28.8 -0.5
      comp=Z,92nm,1.5s,mb5.3
LSA   Lhasa             84.98 302  P        P        15 38 33.4 +2.0
LSA                                AMB      AMB
      comp=Z,20nm,0.9s,mb4.8
LSA   Lhasa             84.98 302  eP       P        15 38 33.0 +1.5
      comp=Z,11nm,0.7s,mb4.7
IRK   Irkutsk           85.08 327  eP       P        15 38 30.6 -0.8
IRK                                pmax     pmax
      comp=Z,22nm,1.2s,mb4.8
TLY   Talaya            85.14 326  eP       P        15 38 31.5 -0.2
TLY                                pmax     pmax
      comp=Z,27nm,0.9s,mb5.0
TLY   Talaya            85.14 326  eP       P        15 38 32.0 +0.4
      comp=Z,25nm,0.9s,mb4.9
COLA  College           85.40  18⇑eP        P        15 38 32.8 +0.1
COLA  College           85.40  18  eP       P        15 38 32.3 -0.4
      comp=Z,5.2nm,0.8s,mb4.3
ILAR  Eielson Array     85.62  18  P        P        15 38 32.6 -1.1
      comp=Z,4.7nm,0.8s,mb4.3,baz=241,slow=5.1,SNR=80
ILAR                               pP       pP       15 39 22.4 -5.7
      comp=Z,5.1nm,0.9s,baz=234,slow=5.8,SNR=5.8
ILAR                               PKKPbc            15 56 35.1
      comp=Z,0.2nm,0.6s,baz=354,slow=2.5,SNR=4.6
MOY   Mondy             86.59 325  eP       P        15 38 39.5 +0.8
MOY                                pmax     pmax
      comp=Z,16nm,1.6s,mb4.5
NVAR  Mina Array Bea    86.69  49  P        P        15 38 39.4 -0.2
      comp=Z,2.6nm,0.9s,mb4.0,baz=219,slow=6.0,SNR=11
NVAR                               pP       pP       15 39 30.5 -3.6
      comp=Z,1.7nm,0.9s,baz=218,slow=5.8,SNR=3.6
LDFC  Landfair          88.01  53  eP       P        15 38 46.6 +0.8
JIRN  Jiri              88.52 299  eP       P        15 38 49.1 +0.6
      comp=Z,32nm,0.7s,mb5.3
GUN   Gumba             88.86 299  eP       P        15 38 50.5 +0.5
      comp=Z,39nm,0.8s,mb5.3
TIXI  Tiksi             88.99 349⇑iP        P        15 38 49.0 -0.6
TIXI                               pmax     pmax
      comp=Z,10.0nm,1.0s,mb4.6
PKI   Pulchoki          89.17 299  eP       P        15 38 51.8 +0.3
      comp=Z,60nm,1.0s,mb5.4
KKN   Kakani            89.33 299  eP       P        15 38 52.6 +0.3
      comp=Z,37nm,0.8s,mb5.3
DMN   Daman             89.43 298  eP       P        15 38 53.3 +0.6
      comp=Z,88nm,0.9s,mb5.6
SYO   Syowa Base        89.62 197 ⇓P        P        15 38 52.9 +0.3
SYO   Syowa Base        89.62 197 ⇓PcP      PcP      15 38 54.4 +0.3
SYO   Syowa Base        89.62 197 ⇑pP       pP       15 39 47.1 -0.3
SYO   Syowa Base        89.62 197 ⇓sP       sP       15 40 10.4 -0.2
GKN   Gorkha            89.94 299  eP       P        15 38 54.9 -0.2
TUC   Tucson            90.65  57  eP       P        15 38 59.2 +0.9
      comp=Z,1.8nm,0.9s,mb4.0
INK   Inuvik            91.98  19  LR       LR       16 15 22.8
      comp=Z,63nm,19.4s,baz=238,slow=32
WMQ   Urumqi            91.99 315  P        P        15 39 04.5 +0.3
WMQ                                PP       PP       15 42 50.0 +1.3
WMQ                                AMB      AMB
      comp=Z,12nm,1.0s,mb4.8
HYB   Hyderabad         92.76 287  i P      P        15 39 08.0 -0.4
PDAR  Pinedale Array    94.33  47  P        P        15 39 15.1 +0.1
      comp=Z,0.4nm,0.6s,baz=236,slow=4.1,SNR=3.6
PDAR                               PKKPbc            15 56 14.3
      comp=Z,0.3nm,0.5s,baz=90,slow=3.0,SNR=4.2
SNAA  Sanae             94.52 183⇓i         P        15 39 15.7 +0.5
ANMO  Albuquerque       94.80  55⇑eP        P        15 39 18.0 +0.7
ANMO  Albuquerque       94.80  55  PKKPbc            15 56 14.8
      comp=Z,0.2nm,0.3s,baz=343,slow=3.7,SNR=3.7
VNA3  Neumayer Olymp    95.19 181⇓i         P        15 39 19.3 +1.0
VNA2  Neumayer--Watz    95.46 182⇑i         P        15 39 20.5 +1.0
VNA2  Neumayer--Watz    95.46 182⇑i         P        15 39 28.7 +9.2
TXAR  Lajitas Array     95.87  61  P        P        15 39 21.4 -0.9
      comp=Z,0.4nm,0.7s,mb3.8,baz=246,slow=4.1,SNR=5.3
TXAR                               PP       PP       15 43 14.8 -4.3
      comp=Z,2.8nm,1.2s,baz=260,slow=7.6,SNR=6.9
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TXAR                               PKKP     PKKP     15 56 11.5  +28
      comp=Z,0.5nm,1.1s,baz=117,slow=4.5,SNR=3.9
TXAR                               LR       LR       16 21 32.5
      comp=Z,59nm,18.1s,baz=185,slow=35
TXAR  Lajitas Array     95.87  61  P        P        15 39 21.4 -0.9
TXAR                               PP       PP       15 43 14.8 -4.3
TXAR                               PKKP     PKKP     15 56 11.5  +28
TXAR                               LR       LR       16 21 32.5
MKAR  Makanchi Array    96.44 316  i P      P        15 39 24.9 +0.5
MKAR                               pmax     pmax
      comp=Z,8.0nm,0.7s
ZAL   Zalesovo          96.57 324  P        P        15 39 24.8  0.0
      comp=Z,3.9nm,0.7s,mb4.7,baz=358,slow=6.0,SNR=30
YKA   Yellowknife Ar    96.71  27  P        P        15 39 24.1 -1.1
      comp=Z,0.9nm,0.5s,mb4.2,baz=255,slow=4.6,SNR=20
YKA                                pP       pP       15 40 14.3 -5.9
      comp=Z,0.7nm,0.8s,baz=254,slow=4.9,SNR=3.8
YKA                                PKKPbc            15 56 06.8
      comp=Z,0.3nm,0.7s,baz=69,slow=2.6,SNR=5.9
KURK  Kurchatov         99.60 320c iP       P        15 39 38.0 -0.8
KURK  Kurchatov         99.60 320  P        P        15 39 37.8 -1.0
      comp=Z,4.6nm,1.3s,mb4.8
BVAR  Borovoye Array   104.93 322  PKiKP             15 44 15.0
      comp=Z,1.5nm,0.8s,baz=146,slow=1.3,SNR=5.7
BRVK  Borovoye         105.00 322  ePKiKP            15 44 16.5
LPAZ  La Paz           117.72 117  PKKPbc            15 55 03.0
      comp=Z,0.6nm,0.5s,baz=38,slow=8.4,SNR=3.7
KEV   Kevo             118.76 345  ep       PKPdf    15 44 41.3 +0.6
ARCES ARCESS Array B   119.28 346  PKP      PKPdf    15 44 42.7 +1.0
      comp=Z,15nm,0.7s,baz=73,slow=1.8,SNR=79
ARCES                              PKKPbc            15 54 55.9
      comp=Z,6.4nm,0.8s,baz=223,slow=2.1,SNR=9.6
ARCES ARCESS Array B   119.28 346  PKP      PKPdf    15 44 42.7 +1.0
ARCES                              PKKPbc            15 54 55.9
SCHQ  Schefferville    121.52  33  PKP      PKPdf    15 44 46.1 -0.3
      comp=Z,2.4nm,1.0s,baz=327,slow=5.4,SNR=5.4
SCHQ                               PKKPbc            15 54 50.3
      comp=Z,0.9nm,0.6s,baz=326,slow=9.7,SNR=5.0
JOF   Joensuu          121.95 338  ep       PKPdf    15 44 47.5 +0.5
SDV   Santo Domingo    123.20  88  ePKPdf   PKPdf    15 44 50.9 +0.4
GNI   Garni            123.45 309  PKP      PKPdf    15 44 53.3 +2.8
      comp=Z,26nm,1.1s,baz=1.6,slow=5.9,SNR=6.0
OBN   Obninsk          123.83 328⇓iPKIKP    PKPdf    15 44 52.4 +1.5
OBN                                pmax     pmax
      comp=Z,26nm,1.2s
VOR   Voronezh         123.84 324  PKIKP    PKPdf    15 44 53.0 +2.0
VOR                                pmax     pmax
      comp=Z,60nm,1.1s
KIV   Kislovodsk       124.11 314  ePKIKP   PKPdf    15 44 53.5 +1.8
KIV                                pmax     pmax
      comp=N,5.0nm,1.0s
KIV                                pmax     pmax
      comp=Z,8.0nm,1.0s
KAF   Kangasniemi      124.25 339  ep       PKPdf    15 44 51.7 +0.2
FINES FINESS Array B   124.78 338  PKP      PKPdf    15 44 53.8 +1.3
      comp=Z,9.4nm,0.8s,baz=90,slow=3.8,SNR=16
LBTB  Lobatse          126.27 224  PKP      PKPdf    15 44 58.2 +1.8
      comp=Z,4.5nm,0.6s,baz=190,slow=2.7,SNR=8.7
LBTB  Lobatse          126.27 224  PKP      PKPdf    15 44 58.2 +1.8
SOC   Sochi            126.29 314  i PKIKP  PKPdf    15 44 55.5 -0.4
SOC                                e                 15 46 54.7
SOC                                ePPP     PPP      15 49 35.6 -6.2
SOC                                ePS      PS       15 56 53.4 -6.4
SOC                                eSSS     SSS      16 08 24.3 -0.9
SOC                                pmax     pmax
      comp=Z,17nm,1.1s
SOC                                pmax     pmax
      comp=N,15nm,0.9s
SOC                                pmax     pmax
      comp=E,16nm,1.1s
KMBO  Kilima Mbogo     128.25 257  PKP      PKPdf    15 45 03.5 +3.0
      comp=E,5.2nm,0.9s,baz=57,slow=5.7,SNR=8.5
KMBO  Kilima Mbogo     128.25 257  ePKPdf   PKPdf    15 45 03.4 +2.8
NB2   NORSAR Subarra   129.66 345  PKPdf    PKPdf    15 45 03.0 +1.1
      comp=E,3.0nm,0.7s,baz=31,slow=1.9
NOA   NORSAR Array B   129.66 345  PKP      PKPdf    15 45 03.5 +1.6
      comp=E,3.9nm,0.7s,baz=32,slow=2.0,SNR=12
HFS   Hagfors          129.76 343  PKP      PKPdf    15 45 02.7 +0.6
      comp=E,12nm,1.1s,baz=45,slow=4.2,SNR=3.8
AKASG Malin Array Be   129.88 326  PKP      PKPdf    15 45 04.0 +1.4
      comp=E,4.2nm,0.7s,baz=51,slow=1.9,SNR=21
AKASG                              SKPbc             15 48 08.8
      comp=E,0.3nm,0.4s,baz=47,slow=4.0,SNR=4.0
LSZ   Lusaka           130.25 236  ePKPdf   PKPdf    15 45 06.2 +2.0
ASF   Jabal al Asfar   131.15 301  PKP      PKPdf    15 45 07.8 +2.2
      comp=E,4.1nm,0.7s,baz=206,slow=0.6,SNR=4.8
BRTR  Keskin Array B   131.81 311  PKP      PKPdf    15 45 07.8 +1.2
      comp=E,1.7nm,0.6s,baz=139,slow=3.1,SNR=10.0
BRTR                               PP       PP       15 47 30.0 -3.6
      comp=E,0.3nm,0.7s,baz=90,slow=8.6,SNR=3.8
BRTR                               SKPbc             15 48 17.0
      comp=E,1.6nm,0.7s,baz=106,slow=4.3,SNR=7.8
CFR   Carcaliu         133.32 320 ⇓P        PKPdf    15 45 11.1 +1.8
TIRR  Tirgusor         133.49 319 ⇑P        PKPdf    15 45 12.7 +3.1
BURAR Bucovina Array   133.77 325 ⇑P        PKPdf    15 45 13.0 +3.0
BURAR Bucovina Array   133.77 325 ⇑P        PKPdf    15 45 13.6 +3.6
VRI   Vrincioaia       133.83 322 ⇓P        PKPdf    15 45 13.5 +3.3
MLR   Muntele Rosu     134.50 322  PKP      PKPdf    15 45 12.5 +1.1
      comp=E,3.7nm,0.8s,baz=60,slow=3.9,SNR=4.7
MLR   Muntele Rosu     134.50 322 ⇑P        PKPdf    15 45 13.3 +1.9
BDFB  Brasilia         134.56 129  PKP      PKPdf    15 45 13.9 +1.6
      comp=E,3.1nm,1.0s,baz=254,slow=5.6,SNR=4.3
MBAR  Mbarara          134.58 255  ePKPdf   PKPdf    15 45 14.3 +1.9
KOLS  Kolonicke sedl   134.58 328  ePKP     PKPdf    15 45 13.9 +2.5
KOLS                               e                 15 45 20.6
TSUM  Tsumeb           135.64 223  PKP      PKPdf    15 45 16.0 +1.8
      comp=E,3.0nm,0.7s,baz=88,slow=3.2,SNR=3.6
BSEG  Bad Segeberg     135.96 340  ePKIKP   PKPdf    15 45 15.7 +1.9
KSP   Ksiaz            136.13 334  ePKP     PKPdf    15 45 15.4 +1.1
KSP   Ksiaz            136.13 334  ePKP     PKPdf    15 45 15.9 +1.6
DPC   Dobruska-Polom   136.47 333  ePKP     PKPdf    15 45 17.2 +2.3
DPC                                LR       LR
      comp=Z,300nm,26.0s
UPC   Upice            136.50 333  ePKPdf   PKPdf    15 45 16.8 +1.9
BZS   Buzias           136.95 324 ⇑P        PKPdf    15 45 18.0 +2.1
BRG   Berggiesshubel   137.09 335  e        PKPdf    15 45 17.8 +1.8
BRG   Berggiesshubel   137.09 335  e        PKPdf    15 45 17.8 +1.8
PVCC  Panska Ves       137.09 334  ePKPdf   PKPdf    15 45 17.8 +1.8
VRAC  Vranov           137.10 332  PKP      PKPdf    15 45 17.7 +1.6
      comp=Z,1.7nm,0.3s,baz=243,slow=16,SNR=3.3
CLL   Collm            137.13 336  i PKIKP  PKPdf    15 45 18.0 +2.0
CLL                                pmax     pmax
      comp=Z,13nm,1.0s
CLL   Collm            137.13 336  i PKIKP  PKPdf    15 45 18.0 +2.0
      comp=Z,logA/T=1.1
CLL                                i                 15 45 19.7
SMOL  Smolenice        137.27 330  ePKP     PKPdf    15 45 18.5 +2.1
PRU   Pruhonice        137.51 334  ePKP     PKPdf    15 45 19.2 +2.4
PRU                                LR       LR
      comp=Z,200nm,17.9s
CLZ   Clausthal        137.68 339  ePKP     PKPdf    15 45 19.6 +2.6
EKA   Eskdalemuir Ar   137.83 352  PKP      PKPdf    15 45 17.9 +0.7
      comp=Z,2.2nm,0.8s,baz=18,slow=2.6,SNR=3.4
MOX   Moxa             138.19 337  i P      PKPdf    15 45 19.2 +1.2
NKC   Novy Kostel      138.19 336  ePKPdf   PKPdf    15 45 22.5 +4.5
KHC   Kasperske Hory   138.57 334  ePKP     PKPdf    15 45 20.8 +2.0
KHC                                LR       LR
      comp=Z,300nm,25.0s
GEC2  GERESS Array S   138.74 333  ePKIKP   PKPdf    15 45 21.3 +2.2
GERES GERESS Array B   138.74 333  PKP      PKPdf    15 45 19.0 -0.1
      comp=Z,4.0nm,0.7s,baz=45,slow=1.9,SNR=9.8
GERES                              SKPbc             15 48 38.0
      comp=Z,1.0nm,0.9s,slow=1.3,SNR=4.1
WET   Wettzell         138.86 334  ePKIKP   PKPdf    15 45 23.1 +3.8
GRA1  Grafenberg Arr   139.10 336  ePKP     PKPdf    15 45 21.4 +1.7
GRF   Grafenberg Arr   139.10 336  ePKIKP   PKPdf    15 45 21.4 +1.7
TNS   Taunus Mts       139.70 339  ePKIKP   PKPdf    15 45 22.5 +1.7
TNS   Taunus Mts       139.70 339  ePKP     PKPdf    15 45 22.5 +1.7
PERS  Pernice          139.71 330  ePKPdf   PKPdf    15 45 21.9 +1.0
BOJS  Bojanci          140.43 329  ePKPdf   PKPdf    15 45 24.7 +2.5
WTTA  Wattenberg       140.84 333⇓iP        PKPdf    15 45 24.2 +1.3
WLF   Walferdange      140.95 340  P        Pdif     15 42 45.3 +4.5
CDF   Champ du Feu     141.64 338⇑iPKP1     PKPdf    15 45 20.2 -4.0
      comp=Z,15nm,0.8s
DAVOX Davos            141.97 335  PKhKP             15 45 22.5
      comp=Z,7.1nm,0.6s,baz=16,slow=2.5,SNR=10
DAVOX                              PKP      PKPdf    15 45 26.9 +2.1
      comp=Z,12nm,0.7s,baz=307,slow=5.1,SNR=7.6
HINF  Hinteralfeld     142.29 338  ePKP1    PKPdf    15 45 22.1 -3.2
      comp=Z,21nm,0.9s
HAU   Haudompre        142.31 339⇑iPKP1     PKPdf    15 45 22.5 -2.8
      comp=Z,16nm,0.7s
VAI   Varese           143.16 335  ePKP     PKPdf    15 45 25.7 -1.2
SNTG  Esanatoglia      143.19 328  ePKP     PKPdf    15 45 26.6 -0.4
SFI   Santa Sofia      143.27 330  ePKP     PKPdf    15 45 27.6 +0.4
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PGD   Poggio Sodo      143.36 330  ePKP     PKPdf    15 45 27.7 +0.4
VMG   Vicchio          143.38 330  ePKP     PKPdf    15 45 28.1 +0.7
MCGN  Macugnaga        143.41 335  ePKP     PKPdf    15 45 27.3 -0.1
ERBM  Eremo            143.57 332  ePKP     PKPdf    15 45 28.1 +0.5
CABF  La Chapelle      143.59 338  ePKP1    PKPbc    15 45 27.2 +0.7
      comp=Z,63nm,1.1s
FLN   La Foliniere     143.63 346⇑iPKP1     PKPbc    15 45 26.8 +0.2
      comp=Z,20nm,0.5s
TIP   Timpagrande      143.66 320  ePKPdf   PKPdf    15 45 28.2 +0.2
ORX   Oropa            143.67 335  P        PKPbc    15 45 26.6 -0.2
GRAM                   143.68 332  P        PKPbc    15 45 27.5 +0.6
LDF   La Druitiere     143.70 346  ePKP1    PKPbc    15 45 26.7 -0.1
      comp=Z,9.5nm,0.6s
VALM                   143.70 332  P        PKPbc    15 45 27.0  0.0
BOB   Bobbio (Coli)    143.74 333  ePKP     PKPdf    15 45 28.1 +0.2
SARO  Sassorosso       143.75 331  P        PKPbc    15 45 26.7 -0.5
BACM                   143.84 332  P        PKPbc    15 45 28.1 +0.8
CODM                   143.85 332  P        PKPbc    15 45 27.4  0.0
TRAV                   143.87 335  P        PKPbc    15 45 27.0 -0.4
VINC  Vinca            143.90 332  P        PKPbc    15 45 27.0 -0.6
MNS   Montasola        143.94 327  ePKP     PKPdf    15 45 28.0 -0.4
GRR   Gorron           144.06 346  ePKP1    PKPbc    15 45 28.6 +0.7
      comp=Z,37nm,0.5s
SSF   Saint Saulge     144.09 341⇑iPKP1     PKPbc    15 45 29.1 +1.1
      comp=Z,82nm,1.0s
LSD   Ceresole Reale   144.15 336  P        PKPbc    15 45 29.4 +1.2
HYF   Humbligny        144.17 342  ePKP1    PKPbc    15 45 29.6 +1.4
LPL   La Plagne        144.27 336⇑iPKP1     PKPbc    15 45 30.3 +1.7
      comp=Z,36nm,0.7s
LPG   La Plagne        144.28 336⇑iPKP1     PKPbc    15 45 30.4 +1.8
      comp=Z,49nm,0.6s
OG05  Jujurieux        144.31 338  PKP      PKPdf    15 45 30.2 +1.3
PCP   Pian Castagno    144.31 333  P        PKPbc    15 45 28.6 -0.1
SMF   Signal de Mont   144.34 340⇑iPKP1     PKPbc    15 45 29.7 +1.0
      comp=Z,84nm,0.9s
RSP   Reno Superiore   144.36 335  P        PKPbc    15 45 29.0 +0.2
AVF   Avril sur Loir   144.37 341⇑iPKP1     PKPbc    15 45 29.8 +1.0
      comp=Z,75nm,0.8s
FENE  Fenestrelle      144.54 335  P        PKPbc    15 45 29.9 +0.6
SGMF  Saint Gilles     144.56 348⇑iPKP1     PKPbc    15 45 30.4 +1.1
      comp=Z,192nm,0.8s
BHB   Bricherasio      144.61 335  P        PKPdf    15 45 28.9 -0.6
ROSF  Rostrenen        144.61 349⇑iPKP1     PKPbc    15 45 30.5 +1.1
      comp=Z,108nm,0.8s
BNI   Bardonecchia     144.67 336  ePKPdf   PKPdf    15 45 31.1 +1.5
FIN   Finale Ligure    144.72 333  P        PKPdf    15 45 29.4 -0.3
BGF   Bois d'Agland    144.74 341⇑iPKP1     PKPbc    15 45 31.4 +1.6
      comp=Z,137nm,0.7s
RRL   Cesana Torines   144.74 336  P        PKPdf    15 45 30.8 +1.1
SOI   Samo             144.75 319  ePKP     PKPdf    15 45 31.6 +1.7
GDM   Grand'Maison     144.77 337  PKP      PKPdf    15 45 31.9 +2.2
ROB   Roburent         144.80 334  P        PKPdf    15 45 29.7 -0.1
GRN   Grenoble         144.88 337  PKP      PKPdf    15 45 32.5 +2.6
MBDF  Montbardon       144.91 335⇑iPKP1     PKPbc    15 45 31.9 +1.5
      comp=Z,86nm,0.8s
PZZ   Prazzo           144.95 335  P        PKPdf    15 45 29.8 -0.3
QUIF  Quistinic        145.00 349⇑iPKP1     PKPbc    15 45 31.6 +1.1
      comp=Z,66nm,0.5s
PLDF  La Plantade      145.01 340  PKP      PKPdf    15 45 32.7 +2.6
MONE  Monesi           145.02 334  P        PKPdf    15 45 30.7 +0.5
ENR   Entracque        145.05 334  P        PKPdf    15 45 29.8 -0.4
STV2  Anna di Valdie   145.07 334  P        PKPdf    15 45 30.3 +0.1
STV   Sta Anna Valdi   145.07 334  P        PKPdf    15 45 30.3 +0.1
SURF  Saint Ours       145.09 335  PKP      PKPdf    15 45 33.0 +2.7
AGO   Saint Agoulin    145.10 340  PKP      PKPdf    15 45 32.5 +2.2
ORIF  Oris-en-Rattie   145.10 337⇑iPKP1     PKPbc    15 45 32.8 +1.9
      comp=Z,247nm,0.9s
IMI   Imperia          145.10 333  P        PKPdf    15 45 30.7 +0.4
TCF   Toulx Ste Croi   145.18 342⇑iPKP1     PKPbc    15 45 32.6 +1.6
      comp=Z,114nm,0.9s
SAOF  Saorge           145.18 334  PKP      PKPdf    15 45 32.4 +1.9
AUTN  L'Aution         145.23 334  PKP      PKPdf    15 45 32.9 +2.4
NEGI  Negi             145.23 334  P        PKPdf    15 45 31.0 +0.4
TOUF  Mont Tournerai   145.29 334  PKP      PKPdf    15 45 32.6 +2.0
SBF   Sospel           145.33 334⇑iPKP1     PKPbc    15 45 32.9 +1.4
      comp=Z,303nm,1.0s
COLF  Collangettes     145.38 339  PKP      PKPdf    15 45 33.5 +2.8
PYM   Petit Puy Mans   145.41 340  PKP      PKPdf    15 45 33.8 +3.0
MVIF  Mont Vial        145.43 334  PKP      PKPdf    15 45 33.2 +2.3
MFF   Saint Martin d   145.56 345⇑iPKP1     PKPbc    15 45 33.8 +1.8
      comp=Z,60nm,0.7s
OCF   Saint Nazaire    145.61 337  PKP      PKPdf    15 45 34.6 +3.4
OG26  St.-Nazaire-De   145.61 337  PKP      PKPdf    15 45 34.6 +3.4
VIVF  Saint-Julien-l   145.61 338⇑iPKP1     PKPbc    15 45 34.3 +2.2
      comp=Z,84nm,1.0s
LCHF  La Chataignera   145.65 345  PKP      PKPdf    15 45 34.8 +3.6
PGF   Pioggiola        145.66 331⇑iPKP1     PKPbc    15 45 34.2 +1.8
      comp=Z,197nm,0.8s
LBL   Lubilhac         145.78 340  PKP      PKPdf    15 45 35.4 +4.0
FRNF  Fournols         145.87 341  PKP      PKPdf    15 45 35.5 +3.9
FRF   La Foret Royal   145.91 334⇑iPKP1     PKPbc    15 45 34.8 +1.8
      comp=Z,130nm,0.7s
SMRF  Simiane la Rot   146.01 336⇑iPKP1     PKPbc    15 45 35.7 +2.5
      comp=Z,60nm,0.7s
VILF  Villemus         146.05 336  PKP      PKPdf    15 45 36.4 +4.4
LMR   La Mourre        146.16 334⇑iPKP1     PKPbc    15 45 35.6 +2.1
      comp=Z,221nm,1.0s
RJF   Les Rejaudoux    146.28 342⇑iPKP1     PKPbc    15 45 36.1 +2.4
      comp=Z,79nm,1.0s
CAF   Calviac          146.44 341⇑iPKP1     PKPbc    15 45 36.8 +2.7
      comp=Z,76nm,1.2s
LASF  Ste Croix        146.57 338⇑iPKP1     PKPbc    15 45 37.2 +2.7
      comp=Z,140nm,1.0s
LFF   La Frestale      146.84 342⇑iPKP1     PKPbc    15 45 37.7 +2.6
      comp=Z,88nm,0.8s
VSL   Villasalto       147.76 327  ePKPbc   PKPdf    15 45 40.1 +5.2
MTLF  Montolieu        147.80 339⇑iPKP1     PKPdf    15 45 40.6 +5.7
      comp=Z,93nm,0.7s
EPF   Esparros         148.69 341⇑iPKP1     PKPdf    15 45 42.5 +6.2
      comp=Z,43nm,1.1s
SJPF  Ste Jean         149.08 343  ePKP1    PKPdf    15 45 44.0 +7.1
      comp=Z,17nm,0.6s
ETSF  Etsaut           149.09 342⇑iPKP1     PKPdf    15 45 44.2 +7.3
      comp=Z,40nm,0.8s
EBR   Ebro Roquetas    150.62 339⇑ePKPB     PKPdf    15 45 45.5 +6.1
ABSA  Djebel Ababsia   151.12 325  P        PKPdf    15 45 48.0 +7.7
CKFL  Kef-Lekhel       151.45 326  P        PKPdf    15 45 50.0 +9.2
CASM  Ain Smara        151.68 326  P        PKPdf    15 45 50.0 +8.9
DFRA  Djebel Bou Aff   151.79 327  P        PKPdf    15 45 51.0  +10
CTEI  Djebel Teioual   151.87 326  P        PKPdf    15 45 51.0  +10
ESDC  Sonseca Array    153.02 345  PKP      PKPdf    15 45 44.6 +1.7
      comp=Z,0.8nm,0.7s,baz=45,slow=2.1,SNR=4.3
ESDC                               PKPbc    PKPdf    15 45 52.8  +10
      comp=Z,5.1nm,0.8s,baz=16,slow=2.7,SNR=12
ESDC                               PKPab    PKPab    15 46 05.0 -0.1
      comp=Z,4.6nm,0.7s,baz=4.4,slow=4.1,SNR=9.7
DBIC  Dimbokro         169.49 229  PKP      PKPdf    15 46 01.7 +1.2
      comp=Z,7.0nm,1.0s,baz=19,slow=5.7,SNR=5.4
DBIC                               PKPab    PKPab    15 47 17.2 +0.1
      comp=Z,3.7nm,0.8s,baz=129,slow=6.9,SNR=3.7
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*NEIC **20** 15:37:06.8, 32.59S×71.49W, h28km, ML2.8(GUC), After GUC.*

GUC 20 15:37:06.8±0.9**, 32.59S×71.49W, h28km**±3km**, MD3.8, ML2.8, 2C-2D, Near coast of central Chile**

```
Code  Station Name       Δ°   AZ°   Phase ID            Time      Res
                                    Op       ISC        h  m  s   ISC
PACH  Papudo            0.07  41⇑iP         Pb       15 37 12.1 +0.4
PACH                              i S       Sn       15 37 15.8 +1.0
ROCH  El Roble          0.56 133  i P       Pb       15 37 18.0  0.0
PTCH  Petorca           0.58  56⇓iP                  15 38 50.4
PTCH                              i S                15 38 59.3
PTCH                              AMP                15 38 59.6
      comp=E,873nm,0.2s
JACH  Jahuel            0.77  97⇑iP         Pb       15 37 21.4 -0.1
JACH                              i S       Sb       15 37 32.5 +1.0
ILCH  Illapel           0.99  16  eP        Pn       15 37 24.6 -0.4
ILCH                              i S       Sb       15 37 38.0  0.0
ILCH                              AMP                15 37 41.7
      comp=E,282nm,0.2s
RCDM  Rinconada Maip    1.06 147  eP        Pn       15 37 25.5 -0.5
RCDM                              i S       Sn       15 37 39.5 -0.5
RCDM                              AMP                15 37 40.0
      comp=E,2µm,0.1s
CLCH  Cerro Calan       1.14 135⇓iP         Pn       15 37 26.8 -0.3
CLCH                              i S       Sn       15 37 42.3 +0.4
CLCH                              AMP                15 37 49.4
      comp=E,146nm,0.8s
TACH  Talagante         1.16 156  eP        Pn       15 37 27.0 -0.3
FCH   Farellones        1.25 126  eP        Pn       15 37 28.5 -0.2
FCH                               i S       Sn       15 37 45.3 +0.6
FCH                               AMP                15 37 46.0
```

SFDO	**San Fernando**	2.06	169	*e*P	Pn	15 37 41.5	+1.2
TLL	**Tololo Astrono**	2.49	14	*e*P	Pn	15 37 47.4	+1.0
TLL				*i* S	Sn	15 38 19.0	+2.9
TLL				AMP		15 38 28.1	
	comp=E,74nm,0.4s						

MOS **20** *15:38:12.8±1.2,34.75N×23.58E,h33^{km},mb4.5/29,Error ellipse: s-maj=6.6km s-min=3.1km az=98.4*
HLW **20** *15:38:12.7,35.01N×23.77E,h33^{km},Mb4.0*
ATH **20** *15:38:14.3,34.77N×23.49E,h38^{km}±5^{km},MD4.1/20, ML4.2*
BJI **20** *15:38:14.7,34.96N×23.13E,h71^{km},mb4.4,Ms4.0, Msz3.7*
PDG **20** *15:38:14.0±0.2,34.86N×23.40E,h34^{km}±3^{km}*
NEIC **20** *15:38:17.4±0.6,34.85N×23.65E,h58^{km}±4^{km},mb4.3/30, MD4.1(ATH),Error ellipse: s-maj=8.0km s-min=3.4km az=201.0*
ZUR_RM **20** *15:38:17,34.85N×23.65E,h42^{km},Mw4.3/16,Moment Tensor Solution. s16 Moment tensor: Scale 10^{15}Nm; M_{rr}2.17; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$-1.81; $M_{r\theta}$0.82; $M_{\theta\phi}$2.01; $M_{\phi r}$-1.80; Best double couple: $M_0$3.36×10^{15} NP1:ϕ_s154°,δ64°,λ101°. NP2:ϕ_s311°,δ28°,λ69°. Principal axes: T 2.865, Plg69°, Azm87°; N .994, Plg10°, Azm330°; P -3.859, Plg18°, Azm236°;*
IDC **20** *15:38:19.0±1.6,34.98N×23.69E,h66^{km}±13^{km},mb3.9/16, mb1 4.0/23,mb1mx3.9/31,mbtmp4.1/23,MS3.6/4, Ms1 3.6/4,ms1mx3.0/30 Error ellipse: s-maj=19.5km s-min=13.7km az=9.0*
THE **20** *15:38:19.1,35.14N×23.43E,h19^{km},ML3.6*
CSEM **20** *15:38:20.3,35.07N×23.83E,h60^{km},mb4.6*
CRAAG **20** *15:38:22.4,35.22N×24.11E,Mb4.7*
ISC 20 15:38:13.3±0.3**,34.72N**±0.02×**23.60E**±0.04**,h43**^{km}±3^{km}**, n269,**σ1§**30**/295**,mb4.3**/40**,MS3.5**/6**,22C-17D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	0.42	74	*e*PN	P	15 38 25.5	+2.4
VAM	**Vamos**	0.84	36	*e*PN	P	15 38 31.0	+2.2
VAM				*e*SN	S	15 38 44.3	+4.1
IDI	**Anoyia**	1.20	62	P	P	15 38 37.7	+3.8
	30nm,0.3s,baz=249,slow=15,SNR=142						
IDI				S	S	15 38 56.5	+7.2
	107nm,0.3s,baz=357,slow=22,SNR=22						
LAST	**Lasithi**	1.61	74	P	P	15 38 43.9	+4.2
LAST				Pn	P	15 38 44.3	+4.6
KYTH	**Kithira**	1.62	344	*e*PB	P	15 38 42.0	+2.1
NPS	**Neapolis**	1.74	71	*e*PB	P	15 38 45.7	+4.1
VLI	**Veliai**	2.06	345	*e*PB	P	15 38 49.0	+2.8
ZKR	**Zakros**	2.19	79	P	P	15 38 52.5	+4.6
SANT	**Santorini**	2.24	42	*e*Pn	P	15 38 50.0	+1.3
SANT	**Santorini**	2.24	42	*e*Pn	P	15 38 50.0	+1.3
ITM	**Ithomi**	2.80	332	*e*PN	P	15 38 58.5	+1.8
ITM	**Ithomi**	2.80	332	*e*Pn	P	15 38 59.1	+2.4
APE	**Apeiranthos**	2.82	33	*e*PN	P	15 38 57.5	+0.5
NAIG	**Nisos Aigina**	3.03	358	*e*PN	P	15 39 00.6	+0.6
ATH	**Athens Observa**	3.25	2	*e*PN	P	15 39 03.5	+0.5
MGER	**Gerania Oros**	3.27	355	*e*PN	P	15 39 04.3	+1.0
PTL	**Penteli**	3.33	4	*e*PN	P	15 39 04.5	+0.3
MPAR	**Parnis Oros**	3.42	2	*e*PN	P	15 39 06.5	+1.0
SLUM		3.50	157	P	P	15 39 07.8	+1.3
SLUM				S	S	15 39 47.9	+0.8
LKR	**Lokris**	3.95	353	*e*PN	P	15 39 13.4	+0.4
ARG	**Arkhangelos**	3.98	67	*e*PN	P	15 39 15.2	+1.7
VLS	**Valsamata**	4.22	326	*e*PN	P	15 39 18.8	+2.1
EVR	**Evrytania**	4.43	342	*e*PN	P	15 39 21.5	+1.8
AOS	**Alonnisos**	4.45	3	*e*Pn	P	15 39 19.7	-0.3
NEO	**Neokhori**	4.59	356	*e*PN	P	15 39 22.0	0.0
XOR	**Xorichti**	4.65	356	*e*Pn	P	15 39 23.1	+0.2
PAIG	**Paliouri**	5.20	1	*e*Pn	P	15 39 30.2	-0.3
LIA	**Limnos Island**	5.32	13	Pn	P	15 39 32.6	+0.4
JAN	**Janina**	5.39	337	*e*PN	P	15 39 34.5	+1.3
DABA	**Dabaa**	5.41	132	⇑P	P	15 39 33.0	-0.5
LIT	**Litokhoron**	5.44	351	*e*Pn	P	15 39 33.4	-0.6
LIT				*e*Sn	S	15 40 31.5	-4.6
PLG	**Polygyros**	5.64	359	*e*PN	P	15 39 35.9	-0.9
SWA2		5.69	163	P	P	15 39 38.5	+1.2
SWA2				S	S	15 40 41.3	-1.0
SWA1		5.73	161	P	P	15 39 39.4	+1.4
SWA1				S	S	15 40 42.0	-1.4
KZN	**Kozani**	5.76	346	*e*PN	P	15 39 39.0	+0.6
KEK	**Kerkira**	5.83	330	*e*PN	P	15 39 39.5	+0.1
GRG	**Griva**	6.30	352	*e*Pn	P	15 39 44.3	-1.7
FNA	**Florina**	6.30	344	*e*Pn	P	15 39 45.0	-1.0
FNA				*e*Sn	S	15 40 51.6	-6.1
SRS	**Serrai**	6.38	360	*e*Pn	P	15 39 47.0	-0.2
ISP	**Isparta**	6.39	59	⇓*e*P	P	15 39 50.1	+2.8
ISP	**Isparta**	6.39	59	Pn	P	15 39 49.2	+1.9
	8.7nm,0.6s						
ISP	**Isparta**	6.39	59	Pn	P	15 39 49.2	+1.9
	8.7nm,0.6s						
ISP	**Isparta**	6.39	59	*e*P	P	15 39 50.1	+2.8
KNT	**Kendrikon**	6.45	355	*e*Pn	P	15 39 47.7	-0.4
ALN	**Alexandroupoli**	6.46	17	*e*Pn	P	15 39 48.1	-0.1
OHR	**Ohrid**	6.75	342	*i* Sn	S	15 41 03.1	-5.7
MMB	**Musomiste**	6.86	1	P	P	15 39 52.5	-1.3
RZN	**Rozhen**	7.01	7	P	P	15 39 55.0	-1.0
TIP	**Timpagrande**	7.05	311	*e*Pn	P	15 39 55.1	-1.4
KKB	**Krupnik**	7.14	357	*e*P	P	15 39 56.8	-1.0
SKO	**Skopje**	7.43	347	*e*Pn	P	15 39 58.5	-3.4
HNAT	**Natroun**	7.82	129	P	P	15 40 06.0	-1.1
VTS	**Vitosha**	7.86	358	P	P	15 40 07.0	-0.8
VTS	**Vitosha**	7.86	358	⇓P	P	15 40 07.4	-0.4
VAE	**Valguarnera**	7.93	293	P	P	15 40 13.1	+4.5
	1.3nm,0.3s,baz=70,slow=23,SNR=2.6						
VAE				S	S	15 41 30.1	-7.9
	7.0nm,0.3s,baz=119,slow=14,SNR=7.7						
ULC	**Ulcinj**	8.00	336	⇓*i*Pn	P	15 40 07.1	-2.5
ULC				*e*Sn	S	15 41 30.3	-9.4
CSS	**Prodhromos**	8.01	86	*e*Pn	P	15 40 10.6	+0.8
CSS	**Prodhromos**	8.01	86	*e*Pn	P	15 40 10.6	+0.8
SG1	**Sgolgore (BA)**	8.20	320	*e*Pn	P	15 40 12.4	-0.1
PVY	**Plav**	8.36	341	⇓*i*Pn	P	15 40 11.7	-2.9
PVY				*e*Sn	S	15 41 39.8	-8.9
TTG	**Podgorica**	8.41	337	⇓*i*Pn	P	15 40 12.8	-2.6
TTG				*e*Sn	S	15 41 40.7	-9.4
BUM	**Brajici-Budva**	8.41	335	*e*Pn	P	15 40 12.8	-2.6
BUM				*e*Sn	S	15 41 40.4	-10
HFRF	**Wahat Farafira**	8.56	151	P	P	15 40 17.8	+0.3
HFRF				S	S	15 41 49.3	-4.5
CDT	**Castel del Mon**	8.59	320	*e*Pn	P	15 40 16.6	-1.2
IVA	**Berane**	8.63	342	*e*Pn	P	15 40 15.8	-2.7
IVA				*e*Sn	S	15 41 46.1	-9.5
HCY	**Herceg Novi**	8.68	334	*e*Pn	P	15 40 16.4	-2.8
HCY				*e*Sn	S	15 41 47.0	-10
NKY	**Niksic**	8.84	337	⇓*i*Pn	P	15 40 18.6	-2.7
NKY				*e*Sn	S	15 41 50.8	-10
PRD	**Provadia**	8.97	18	*e*P	P	15 40 21.0	-2.1
AMAG	**Maghara**	9.06	114	P	P	15 40 22.1	-2.3
AMAG				S	S	15 41 56.5	-10
BRY	**Bratogost**	9.07	336	⇓*i*Pn	P	15 40 22.5	-2.0
BRY				*e*Sn	S	15 41 57.0	-9.3
PLE	**Pljevlja**	9.20	340	⇓*i*Pn	P	15 40 23.3	-2.9
PLE				*e*Sn	S	15 41 59.4	-10
PLE	**Pljevlja**	9.20	340	⇓*i*Pn	P	15 40 23.3	-2.9
PLE				*e*Sn	S	15 41 59.3	-10
UPM	**Unac-Piva**	9.22	338	⇓*i*Pn	P	15 40 24.0	-2.6
UPM				*e*Sn	S	15 42 00.2	-10
UPM	**Unac-Piva**	9.22	338	⇓*i*Pn	P	15 40 24.0	-2.5
UPM				*e*Sn	S	15 42 00.2	-10
ZAF		9.33	123	P	P	15 40 26.4	-1.7
STON	**Ston**	9.35	332	*i* Pn	P	15 40 24.6	-3.7
STON				*i* Sn	S	15 41 60.0	-13
BRTR	**Keskin Array B**	9.43	55	P	P	15 40 29.9	+0.3
	0.1nm,0.3s,baz=233,slow=12,SNR=14						
ZNM		9.50	122	P	P	15 40 29.0	-1.5
HNKL	**Nakhl**	10.00	116	P	P	15 40 35.4	-1.9
HNKL				S	S	15 42 19.3	-10
HNKL	**Nakhl**	10.00	116	P	P	15 40 35.3	-2.0
HNKL				S	S	15 42 19.3	-10
CII	**Carovilli**	10.11	316	*e*Pn	P	15 40 39.2	+0.5
CII				*e*Sn	S	15 42 15.2	-17
CII	**Carovilli**	10.11	316	*e*Pn	P	15 40 39.2	+0.4
GRB	**Gharib**	10.14	127	P	P	15 40 38.0	-1.2
TIRR	**Tirgusor**	10.41	19	⇑P	P	15 40 48.5	+5.7
HDK1	**Dakhla**	10.43	150	P	P	15 40 43.4	+0.2
TR2		10.70	123	P	P	15 40 45.0	-1.8
EIL	**Elat**	10.85	115	*e*Sn	S	15 42 39.8	-10
MLR	**Muntele Rosu**	10.90	9	P	P	15 40 48.3	-1.3
	0.1nm,0.3s,baz=157,slow=12,SNR=4.3						
MLR				LR	LR	15 45 17.9	
	comp=Z,228nm,21.7s,baz=194,slow=39						
MLR	**Muntele Rosu**	10.90	9	⇑P	P	15 40 48.1	-1.5
MLR	**Muntele Rosu**	10.90	9	⇓*i*P	P	15 40 48.1	-1.5
AKRG	**Al Kharijah**	10.95	145	P	P	15 40 50.8	+0.5
BZS	**Buzias**	10.99	353	⇑P	P	15 40 47.6	-3.1
CFR	**Carcaliu**	11.01	17	⇓P	P	15 40 49.2	-1.8
HHRG	**Al Ghardaqah**	11.36	128	P	P	15 40 54.8	-1.0
HDK2	**Wahat Dakhilah**	11.36	154	P	P	15 40 55.7	-0.2
MALT	**Malatya**	12.46	69	⇓P	P	15 41 15.0	+4.5
BOJS	**Bojanci**	12.51	332	*e*Pn	P	15 41 07.7	-3.5
BOJS				*e*Sn	S	15 43 18.1	-12
VISS	**Visnje**	12.92	332	*e*Pn	P	15 41 14.8	-1.9
BURAR	**Bucovina Array**	12.94	5	⇑P	P	15 41 18.9	+2.0
BURAR	**Bucovina Array**	12.94	5	⇑P	P	15 41 18.9	+2.0
PERS	**Pernice**	13.52	334	*e*Pn	P	15 41 20.7	-3.7
KOLS	**Kolonicke sedl**	14.23	356	*e*PN	P	15 41 35.5	+1.7
KBA	**Koelnbreinsper**	14.56	331	⇑*i*P	P	15 41 47.6	+10
	16nm,0.7s						
KBA	**Koelnbreinsper**	14.56	331	⇑*i*P	P	15 41 47.6	+10
KBA				pmax	pmax		
	comp=Z,16nm,0.7s						
MOA	**Molln**	14.86	335	⇑*i*P	P	15 41 48.4	+6.4
	comp=Z,23nm,0.7s						
WTTA	**Wattenberg**	15.42	328	⇑*i*P	P	15 41 55.4	+6.1
	comp=Z,26nm,1.4s						
WTTA	**Wattenberg**	15.42	328	⇑*i*P	P	15 41 55.4	+6.1
WTTA				pmax	pmax		
	comp=Z,26nm,1.4s						
VRAC	**Vranov**	15.47	343	P	P	15 41 50.2	+0.4
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC	**Vranov**	15.47	343	P	P	15 41 50.2	+0.4
	comp=Z,1.0nm,0.3s,baz=136,slow=10,SNR=17						
SQTA	**Sankt Quirin**	15.58	327	⇑*i*P	P	15 41 57.2	+5.9
	comp=Z,7.4nm,1.0s						
SQTA	**Sankt Quirin**	15.58	327	⇑*i*P	P	15 41 57.2	+5.9
SQTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
OKC	**Ostrava-Krasne**	15.63	347	*e*P	P	15 41 56.0	+4.1
MORC	**Moravsky Berou**	15.69	345	*e*P	P	15 41 56.2	+3.5
MORC				pmax	pmax		
	comp=Z,23nm,1.4s						
MORC	**Moravsky Berou**	15.69	345	*e*P	P	15 41 56.2	+3.5
	comp=Z,23nm,1.4s						
DAVOX	**Davos**	15.88	323	P	P	15 41 58.9	+3.7
	comp=Z,0.5nm,0.3s,baz=139,slow=7.9,SNR=8.5						
GEC2	**GERESS Array S**	15.90	336	*e*P	P	15 41 59.7	+4.3
GEC2				pmax	pmax		
	comp=Z,13nm,0.9s						
GEC2	**GERESS Array S**	15.90	336	*e*P	P	15 41 59.7	+4.3
	comp=Z,13nm,0.9s						
GERES	**GERESS Array B**	15.90	336	P	P	15 41 54.2	-1.2
	comp=Z,0.1nm,0.3s,baz=159,slow=11,SNR=7.0						
TUE	**Stuetta**	15.94	322	P	P	15 42 02.7	+6.8
KHC	**Kasperske Hory**	16.19	336	*c i*P	P	15 42 02.9	+3.8
KHC	**Kasperske Hory**	16.19	336	*e*P	P	15 42 02.9	+3.8
KHC				*e*x	x	15 44 47.5	
KHC				AMS	AMS	15 49 20.0	
	comp=Z,300nm,25.0s						
FUR	**Furstenfeldbru**	16.27	329	*e*P	P	15 42 03.7	+3.6
FUR				pmax	pmax		
	comp=Z,49nm,1.1s						
FUR	**Furstenfeldbru**	16.27	329	*e*P	P	15 42 03.7	+3.6
	comp=Z,49nm,1.1s						
WET	**Wettzell**	16.45	334	*e*P	P	15 42 05.4	+3.1
WET				pmax	pmax		
	comp=Z,33nm,1.1s						
WET	**Wettzell**	16.45	334	*e*P	P	15 42 05.4	+3.1
	comp=Z,33nm,1.1s						
AKASG	**Malin Array Be**	16.49	13	P	P	15 42 02.5	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	16.49	13	P	P	15 42 02.5	-0.3
	comp=Z,1.2nm,0.3s,baz=204,slow=11,SNR=14						
DPC	**Dobruska-Polom**	16.50	343	*e*P	P	15 42 05.5	+2.6
DPC				MLR	MLR		
	comp=Z,300nm,26.0s						
DPC	**Dobruska-Polom**	16.50	343	*e*P	P	15 42 05.5	+2.6
DPC				AMS	AMS	15 50 10.0	
	comp=Z,300nm,26.0s						
PRU	**Pruhonice**	16.64	339	*e*P	P	15 42 06.9	+2.2
PRU				AMS	AMS	15 49 30.0	
	comp=Z,200nm,17.9s						
UPC	**Upice**	16.72	343	*e*P	P	15 42 08.2	+2.5
KSP	**Ksiaz**	16.97	344	*e*P	P	15 42 10.5	+1.7
KSP	**Ksiaz**	16.97	344	*e*P	P	15 42 10.7	+1.9
KSP				*e*pP		15 42 25.3	
PVCC	**Panska Ves**	17.11	340	*e*P	P	15 42 09.9	-0.8
PVCC				AMS	AMS	15 49 50.0	
	comp=Z,200nm,24.0s						
KIV	**Kislovodsk**	17.38	52	*e*P	P	15 42 15.4	+1.4
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KIV	**Kislovodsk**	17.38	52	*e*P	P	15 42 15.4	+1.4
	comp=Z,27nm,1.1s						
KIV	**Kislovodsk**	17.38	52	*e*P	P	15 42 15.4	+1.4
	comp=Z,27nm,1.1s						
GRA1	**Grafenberg Arr**	17.51	332	*e*P	P	15 42 16.7	+1.1
	comp=Z,72nm,1.5s						
GRF	**Grafenberg Arr**	17.51	332	*e*P	P	15 42 16.7	+1.1
GRF				pmax	pmax		
	comp=Z,72nm,1.5s						
GRF	**Grafenberg Arr**	17.51	332	*e*P	P	15 42 16.7	+1.1
GRF				pmax	pmax		
	comp=Z,72nm,1.5s						
GRF	**Grafenberg Arr**	17.51	332	*e*P	P	15 42 16.7	+1.1
	comp=Z,72nm,1.5s						
GRFO	**Grafenberg**	17.51	332	P	P	15 42 18.9	+3.3
NKC	**Novy Kostel**	17.52	336	*e*P	P	15 42 17.5	+1.8
BRG	**Berggiesshubel**	17.60	339	*i* P	P	15 42 18.7	+1.9
BRG				pmax	pmax		
	comp=Z,14nm,1.0s						
BRG	**Berggiesshubel**	17.60	339	*i* P	P	15 42 18.7	+1.9
	comp=Z,14nm,1.0s						
BRG				*e*		15 42 33.8	
BRG	**Berggiesshubel**	17.60	339	*e*P	P	15 42 18.7	+1.9
	comp=Z,14nm,1.0s						
GNI	**Garni**	17.63	66	⇑*e*P	P	15 42 16.7	-0.5
GNI	**Garni**	17.63	66	LR	LR	15 50 30.4	
	comp=Z,199nm,18.2s,baz=341,slow=42						
GNI	**Garni**	17.63	66	P	P	15 42 15.0	-2.2
	comp=Z,14nm,1.2s						
GNI	**Garni**	17.63	66	*e*P	P	15 42 16.7	-0.5
BFO	**Black Forest**	17.72	325	*e*P	P	15 42 19.8	+1.6
BFO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BFO	**Black Forest**	17.72	325	*e*P	P	15 42 19.8	+1.6
	comp=Z,8.0nm,1.0s						
GOF	**Gofitskoye**	18.09	49	⇑*i*P	P	15 42 24.0	+1.0
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
GOF	**Gofitskoye**	18.09	49	*i* P	P	15 42 24.0	+1.0
	comp=Z,20nm,1.0s						
HINF	**Hinteralfeld**	18.10	321	*e*P	P	15 42 24.2	+1.2
	comp=Z,12nm,0.8s						
HINF	**Hinteralfeld**	18.10	321	*e*P	P	15 42 24.2	+1.2
HINF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MOX	**Moxa**	18.15	335	*i* P	P	15 42 24.1	+0.5
MOX	**Moxa**	18.15	335	*e*P	P	15 42 24.1	+0.5
	comp=Z,7.0nm,0.8s						
CLL	**Collm**	18.27	338	*e*P	P	15 42 19.0	-6.0
CLL				*i*		15 42 24.7	
CLL				*i*		15 42 41.5	
CLL	**Collm**	18.27	338	P	P	15 42 24.7	-0.3
	comp=Z,logA/T=1.1						
CLL				*i*		15 42 41.5	
CLL				*i*		15 42 49.7	
CLL	**Collm**	18.27	338	*e*P	P	15 42 24.8	-0.2
	comp=Z,19nm,1.4s						
CDF	**Champ du Feu**	18.28	323	*e*P	P	15 42 24.9	-0.4
HAU	**Haudompre**	18.48	321	*e*P	P	15 42 26.2	-1.6
HAU				*e*R			
	comp=Z,116nm,20.8s						
UBBA	**Unterbreizbach**	18.88	333	*e*P	P	15 42 32.7	+0.2
	comp=Z,22nm,1.7s						
TNS	**Taunus Mts**	19.04	329	*e*P	P	15 42 34.7	+0.4
TNS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TNS	**Taunus Mts**	19.04	329	*e*P	P	15 42 34.7	+0.4
	comp=Z,7.0nm,0.9s						
TNS	**Taunus Mts**	19.04	329	*e*P	P	15 42 34.7	+0.4
SMF	**Signal de Mont**	19.08	315	*e*P	P	15 42 34.0	-0.8
SUW	**Suwalki**	19.29	359	*e*P	P	15 42 35.8	-1.3
SSF	**Saint Saulge**	19.50	315	*e*P	P	15 42 38.9	-0.5
SSF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SSF	**Saint Saulge**	19.50	315	*e*P	P	15 42 38.9	-0.5
	comp=Z,7.4nm,1.0s						
CLZ	**Clausthal**	19.58	335	*e*P	P	15 42 40.3	+0.1
	comp=Z,16nm,1.4s						
BGF	**Bois d'Agland**	19.63	313	*e*P	P	15 42 39.7	-1.1
	comp=Z,42nm,1.2s						
BGF	**Bois d'Agland**	19.63	313	*e*P	P	15 42 39.7	-1.1
BGF				pmax	pmax		
	comp=Z,21nm,1.3s						
TCF	**Toulx Ste Croi**	19.88	312	*e*P	P	15 42 44.2	+0.7
LFF	**La Frestale**	20.24	307	*e*P	P	15 42 47.5	+0.1
	comp=Z,15nm,0.8s						
LFF	**La Frestale**	20.24	307	*e*P	P	15 42 47.5	+0.1
LFF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GIVF	**Givet**	20.61	324	*e*P	P	15 42 51.2	+0.1
DOU	**Dourbes**	20.72	324	P	P	15 42 52.3	+0.1
BAIF	**Baives**	20.88	323	*e*P	P	15 42 53.6	-0.3
	comp=Z,13nm,0.5s						
BAIF	**Baives**	20.88	323	*e*P	P	15 42 53.6	-0.3
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BSEG	**Bad Segeberg**	21.36	338	*e*P	P	15 42 57.5	-1.3
BSEG				pmax	pmax		
	comp=Z,34nm,1.1s,mb4.6						
BSEG	**Bad Segeberg**	21.36	338	*e*P	P	15 42 57.5	-1.3
	comp=Z,34nm,1.1s,mb4.6						
MFF	**Saint Martin d**	21.48	311	*e*P	P	15 43 00.4	+0.4
	comp=Z,5.2nm,0.7s,mb3.7						
MFF	**Saint Martin d**	21.48	311	*e*P	P	15 43 00.4	+0.4
MFF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
OBN	**Obninsk**	22.29	20	⇑*i*P	P	15 43 07.6	-0.4
OBN				*e*		15 43 29.2	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.4						
OBN	**Obninsk**	22.29	20	⇑*e*P	P	15 43 07.6	-0.4
LDF	**La Druitiere**	22.38	315	*e*P	P	15 43 09.5	+0.6
	comp=Z,26nm,0.7s,mb4.5						
LDF	**La Druitiere**	22.38	315	*e*P	P	15 43 09.5	+0.6
LDF				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.5						
ESDC	**Sonseca Array**	22.46	291	P	P	15 43 13.0	+3.3
	comp=Z,2.7nm,0.8s,mb3.7,baz=81,slow=10,SNR=8.8						
ESLA	**Sonseca Array**	22.46	291	P	P	15 43 11.8	+2.0
	comp=Z,0.2nm,0.6s						
FLN	**La Foliniere**	22.67	316	*e*P	P	15 43 12.5	+0.8
	comp=Z,46nm,0.9s,mb4.6						
FLN				*e*R			
	comp=Z,90nm,21.0s						
FLN	**La Foliniere**	22.67	316	*e*P	P	15 43 12.5	+0.8
FLN				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.6						
FLN				MLR	MLR		
	comp=Z,90nm,21.0s,MS3.2						
GRR	**Gorron**	22.71	314	*e*P	P	15 43 13.1	+1.0
QUIF	**Quistinic**	23.90	312	*e*P	P	15 43 24.4	+0.8
	comp=Z,62nm,1.1s,mb4.7						
QUIF	**Quistinic**	23.90	312	*e*P	P	15 43 24.4	+0.8
QUIF				pmax	pmax		
	comp=Z,31nm,1.1s,mb4.7						
PUL	**Pulkovo**	25.44	8	⇓*e*P	P	15 43 39.1	+0.7
HFS	**Hagfors**	26.23	349	P	P	15 43 44.7	-1.1
HFS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HFS	**Hagfors**	26.23	349	P	P	15 43 44.7	-1.1
	comp=Z,7.9nm,0.5s,mb4.5,baz=157,slow=11,SNR=24						
FINES	**FINESS Array B**	26.79	3	P	P	15 43 49.4	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,101nm,18.2s						
FINES	**FINESS Array B**	26.79	3	P	P	15 43 49.4	-1.5
	comp=Z,2.1nm,0.7s,mb3.8,baz=172,slow=9.3,SNR=12						
FINES				LR	LR	15 55 36.1	
	comp=Z,101nm,18.2s,MS3.4,baz=185,slow=39						
NB2	**NORSAR Subarra**	27.52	347	P	P	15 43 55.9	-1.6
	comp=Z,3.3nm,0.8s,mb4.0,baz=147,slow=9.3						
NB2	**NORSAR Subarra**	27.52	347	P	P	15 43 55.9	-1.6
NB2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
NOA	**NORSAR Array B**	27.52	347	P	P	15 43 56.7	-0.8
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	**NORSAR Array B**	27.52	347	P	P	15 43 56.7	-0.8
	comp=Z,2.7nm,0.7s,mb4.0,baz=151,slow=11,SNR=7.9						
NOA	**NORSAR Array B**	27.52	347	P	P	15 43 56.7	-0.8
EKA	**Eskdalemuir Ar**	27.68	326	P	P	15 43 59.1	+0.1
EKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EKA	**Eskdalemuir Ar**	27.68	326	P	P	15 43 59.1	+0.1
	comp=Z,3.8nm,0.8s,mb4.1,baz=125,slow=7.6,SNR=13						
ESK	**Eskdalemuir**	27.69	326	*e*P	P	15 43 59.2	+0.1
ESK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
ESK	**Eskdalemuir**	27.69	326	*e*P	P	15 43 59.2	+0.1
	comp=Z,2.5nm,0.5s,mb4.1						
ESK	**Eskdalemuir**	27.69	326	*e*P	P	15 43 59.2	+0.1
	comp=Z,2.0nm,0.5s,mb4.0						
ARCES	**ARCESS Array B**	34.88	1	P	P	15 45 00.4	-1.8
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,120nm,19.3s						
ARCES	**ARCESS Array B**	34.88	1	P	P	15 45 00.4	-1.8
	comp=Z,2.6nm,0.7s,mb4.3,baz=180,slow=7.3,SNR=8.0						
ARCES				LR	LR	16 00 17.8	
	comp=Z,120nm,19.3s,MS3.6,baz=185,slow=38						
MBAR	**Mbarara**	35.77	168	⇑*i*P	P	15 45 11.5	+1.2
BVAR	**Borovoye Array**	37.58	46	P	P	15 45 25.1	0.0
	comp=Z,2.9nm,0.8s,mb4.0,baz=270,slow=12,SNR=9.2						
CHKZ	**Chkalovo**	37.83	45	*e*P	P	15 45 27.0	-0.2
CHKZ				*e**PP	pP	15 45 43.5	+4.5
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
CHKZ	**Chkalovo**	37.83	45	*e*P	P	15 45 27.0	-0.2
	comp=Z,5.7nm,0.7s,mb4.4						
CHKZ				*e*pP	pP	15 45 43.5	+4.5
CHKZ	**Chkalovo**	37.83	45	*e*P	P	15 45 27.0	-0.2
	comp=Z,6.0nm,0.7s,mb4.4						
DBIC	**Dimbokro**	38.30	230	P	P	15 45 34.1	+2.6
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
DBIC	**Dimbokro**	38.30	230	P	P	15 45 34.0	+2.6
	comp=Z,2.3nm,0.8s,mb3.9,baz=26,slow=12,SNR=4.4						
AAK	**Ala-Archa**	40.00	63	⇑*e*P	P	15 45 46.1	+0.8
AAK				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.2						
AAK	**Ala-Archa**	40.00	63	*e*P	P	15 45 45.4	0.0
	comp=Z,5.2nm,0.9s,mb4.3						
KURK	**Kurchatov**	42.45	51	*e*P	P	15 46 04.7	-0.7
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
KURK	**Kurchatov**	42.45	51	*e*P	P	15 46 04.7	-0.7
	comp=Z,6.0nm,0.9s,mb4.2						
NVS	**Novosibirsk**	45.30	45	*e*P	P	15 46 27.7	-0.6
NVS				pmax	pmax		
	comp=N,8.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,15nm,1.4s						
NVS				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.8						
ZAL	**Zalesovo**	46.22	46	P	P	15 46 35.2	-0.4
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	**Zalesovo**	46.22	46	P	P	15 46 35.2	-0.4
	comp=Z,1.4nm,0.5s,mb4.1,baz=185,slow=5.9,SNR=6.2						
ZAL	**Zalesovo**	46.22	46	P	P	15 46 35.2	-0.4
WMQ	**Urumqi**	49.33	59	*e*P	P	15 47 01.0	+1.0
WMQ				PP	PP	15 48 55.0	+0.5
WMQ				S	S	15 54 03.0	+0.8
WMQ				SS	SS	15 57 31.0	+1.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,78nm,20.0s,MS3.8						
WMQ				LR	LR		
	comp=E,54nm,20.0s,MS3.8						
WMQ				LR	LR		

	comp=Z,56nm,20.0s,MS3.6						
KOLN	Koldanda	51.12	80	eP	P	15 47 14.1	+0.2
GKN	Gorkha	51.87	80	eP	P	15 47 19.6	+0.1
	comp=Z,16nm,0.9s,mb5.0						
DMN	Daman	52.41	80	eP	P	15 47 23.9	+0.4
	comp=Z,17nm,0.9s,mb5.0						
KKN	Kakani	52.47	80	eP	P	15 47 23.7	-0.3
PKI	Pulchoki	52.67	80	eP	P	15 47 25.7	+0.2
	comp=Z,18nm,1.0s,mb5.0						
GUN	Gumba	52.91	79	eP	P	15 47 27.3	0.0
	comp=Z,18nm,0.8s,mb5.0						
TLY	Talaya	57.84	46	⇓eP	P	15 48 03.5	+0.9
TLY	Talaya	57.84	46	eP	P	15 48 03.5	+0.9
ZAK	Zakamensk	57.99	48	eP	P	15 48 03.9	+0.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
ZAK	Zakamensk	57.99	48	eP	P	15 48 03.9	+0.2
	comp=Z,2.0nm,1.0s,mb4.1						
GTA	Gaotai	59.30	61	P	P	15 48 13.3	+0.4
GTA				AMB	AMB		
	comp=Z,2.0nm,1.3s,mb4.0						
FRB	Frobisher Bay	60.39	329	P	P	15 48 20.2	+0.1
FRB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FRB	Frobisher Bay	60.39	329	P	P	15 48 20.2	+0.1
	comp=Z,4.6nm,0.8s,mb4.5,baz=69,slow=8.8,SNR=10						
SONM	Songino Array	60.75	50	P	P	15 48 22.9	+0.1
	comp=Z,2.7nm,0.8s,mb4.4,baz=282,slow=9.1,SNR=25						
ULN	Ulaanbaatar	61.16	50	eP	P	15 48 25.2	-0.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.7						
ULN	Ulaanbaatar	61.16	50	eP	P	15 48 25.2	-0.3
	comp=Z,7.0nm,1.1s,mb4.7						
BOD	Bodaibo	61.59	37	eP	P	15 48 24.6	-3.6
TIXI	Tiksi	62.02	20	⇑eP	P	15 48 30.3	-0.7
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
TIXI	Tiksi	62.02	20	eP	P	15 48 30.3	-0.7
	comp=Z,9.0nm,1.2s,mb4.8						
SCHQ	Schefferville	62.69	319	P	P	15 48 35.9	+0.2
	comp=Z,1.7nm,0.5s,mb4.4,baz=64,slow=5.3,SNR=11						
YAK	Yakutsk	66.89	30	⇓eP	P	15 49 01.9	-0.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
YAK	Yakutsk	66.89	30	eP	P	15 49 01.9	-0.7
	comp=Z,6.0nm,0.6s,mb4.8						
CMAR	Chiang Mai Arr	67.90	82	P	P	15 49 10.2	+0.6
	comp=Z,0.2nm,0.4s,mb3.5,baz=314,slow=8.1,SNR=4.9						
BILL	Bilibino	73.80	14	⇑eP	P	15 49 58.1	+14
BILL				e		15 52 33.6	
BILL				eS	S	15 59 05.2	-5.9
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
BILL				MLR	MLR		
	comp=Z,1μm,20.0s						
CN2	Changchun	74.42	47	eP	P	15 49 49.8	+1.4
INK	Inuvik	75.86	351	P	P	15 49 55.8	-0.4
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	Inuvik	75.86	351	P	P	15 49 55.8	-0.4
	comp=Z,2.1nm,1.1s,mb4.0,baz=40,slow=8.5,SNR=4.1						
MA2	Magadan	76.42	25	eP	P	15 50 00.4	+0.9
MA2				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MA2	Magadan	76.42	25	eP	P	15 50 00.4	+0.9
	comp=Z,6.7nm,0.8s,mb4.6						
MA2	Magadan	76.42	25	eP	P	15 50 00.4	+0.9
	comp=Z,7.0nm,0.8s,mb4.6						
MDJ	Mudanjiang	76.42	45	P	P	15 49 58.1	-1.7
MDJ				PP	PP	15 52 48.3	-5.1
MDJ				S	S	15 59 38.8	-1.8
MDJ				SCS	ScS	16 00 08.8	+0.4
MDJ				SS	SS	16 04 33.9	-4.6
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
MDJ				LR	LR		
	comp=N,68nm,25.6s,MS3.9						
MDJ				LR	LR		
	comp=E,38nm,24.6s,MS3.9						
MDJ				LR	LR		
	comp=Z,51nm,18.4s						
YKA	Yellowknife Ar	77.46	342	P	P	15 50 06.0	+0.7
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YKA	Yellowknife Ar	77.46	342	P	P	15 50 06.0	+0.7
	comp=Z,1.5nm,0.9s,mb3.9,baz=37,slow=5.5,SNR=19						
YKA	Yellowknife Ar	77.46	342	P	P	15 50 06.0	+0.7
ILAR	Eielson Array	80.56	356	P	P	15 50 23.6	+1.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	Eielson Array	80.56	356	P	P	15 50 23.6	+1.5
	comp=Z,0.7nm,0.8s,mb3.7,baz=354,slow=3.6,SNR=8.8						
YSS	Yuzh-Sakhalins	82.06	37	i P	P	15 50 32.1	+1.9
EDM	Edmonton	84.77	336	eP	P	15 50 42.8	-1.0
EDM				*PP	pP	15 50 58.7	+2.0
WRA	Warramunga Arr	117.82	96	PKP	PKPdf	15 56 57.6	+2.2
	comp=Z,0.3nm,0.5s,baz=309,slow=2.1,SNR=8.0						
ASAR	Alice Springs	119.24	100	PKP	PKPdf	15 57 00.3	+2.2
	comp=Z,1.6nm,1.2s,baz=317,slow=1.2,SNR=6.2						

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*IDC **20** 15:51:27.1±0.9, 67.20N×20.79E, mb1 2.9/4, mb1mx2.9/20, mbtmp2.9/4, ML2.6/4, Error ellipse: s-maj=15.8km s-min=6.9km az=117.0*

*NAO **20** 15:51:29.1±1.5, 67.17N×20.88E, ML2.1*

*BER **20** 15:51:30.4±4.9, 67.12N×20.62E, ML2.0, ML2.1(NAO), Suspected explosion*

HEL 20 15:51:28.7±0.1**, 67.20N×20.79E, ML2.1, ML2.0**(BER)**, ML2.1**(NAO)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIF	Kilpisjarvi	1.81	0	eP	Pn	15 52 01.0	-0.5
KIF				eS	Sn	15 52 24.8	-0.7
KTK1	Kautokeino	2.04	26	eP	Pn	15 52 04.8	+0.1
KTK1				eS	Sn	15 52 32.1	+0.9
KTK1				AML	AML	15 52 36.0	
	comp=Z,24nm,0.5s						
SGF	Sodankyl	2.24	81	eP	Pn	15 52 06.9	-0.6
SGF				eS	Sn	15 52 35.3	-0.9
TRO	Tromso	2.54	345	eP	Pn	15 52 10.6	-1.3
TRO				eS	Sn	15 52 43.0	-1.0
MOR8	Moi Rana	2.73	251	eSB	Sb	15 52 46.1	-6.2
MOR8				AML	AML	15 52 49.9	
	comp=Z,17nm,0.5s						
LOF	Lofoten	2.92	292	e	Sg	15 53 02.8	-3.2
LOF	Lofoten	2.92	292	eSg	Sg	15 53 02.8	-3.2
ARA0	ARCESS Array S	2.92	34	Pn	Pn	15 52 16.0	-1.3
	baz=210,slow=16						
ARA0				Sn	Sn	15 52 52.1	-1.6
	baz=214,slow=28						
ARA0	ARCESS Array S	2.92	34	eP	Pn	15 52 16.0	-1.3
ARA0				eS	Sn	15 52 52.1	-1.6
ARCES	ARCESS Array B	2.92	34	Pn	Pn	15 52 16.1	-1.2
	comp=Z,1.2nm,0.3s,baz=210,slow=14,SNR=69						
ARCES				Lg		15 52 56.3	
	comp=Z,1.1nm,0.3s,baz=215,slow=25,SNR=5.8						
OUL	Oulu	2.97	133	eP	Pn	15 52 16.6	-1.3
OUL				eS	Sn	15 52 52.1	-2.7
STOK	Stokkvaagen	3.20	258	eSG	Sg	15 53 07.2	-8.1
KEV	Kevo	3.44	39	eP	Pn	15 52 23.1	-1.6
KEV				eS	Sn	15 53 04.0	-2.8
KEV				MSG		15 53 19.5	
	comp=Z,3.9nm,0.3s						
MSF	Maaselka	3.54	108	eSG	Sg	15 53 17.1	-10
MSF				MSG		15 53 20.3	
	comp=Z,5.6nm,0.4s						
NSS	Namsos	4.50	238	eSG	Sg	15 53 47.2	-11
FIA0	FINESS Array S	6.22	156	Pn	Pn	15 53 01.6	-2.4
	baz=350,slow=14						
FIA0				Sn	Sn	15 54 09.9	-6.8
	baz=347,slow=28						
FIA0				Lg		15 54 40.7	
	baz=349,slow=37						
FIA0	FINESS Array S	6.22	156	eP	Pn	15 53 01.6	-2.4
FIA0				eS	Sn	15 54 09.9	-6.8
FIA0				eSG	Sg	15 54 40.7	-15
FINES	FINESS Array B	6.22	156	Pn	Pn	15 53 00.7	-3.3
	comp=Z,0.1nm,0.3s,baz=347,slow=18,SNR=5.2						
FINES				Sn	Sn	15 54 10.2	-6.5
	comp=Z,0.2nm,0.3s,baz=349,slow=23,SNR=5.2						
FINES				Lg		15 54 43.4	
	comp=Z,0.4nm,0.3s,baz=340,slow=25,SNR=5.3						
NOA	NORSAR Array B	7.46	219	Pn	Pn	15 53 16.9	-4.5
	comp=Z,0.1nm,0.3s,baz=26,slow=11,SNR=2.8						
NOA				Sn	Sn	15 54 37.2	-11
	comp=Z,0.2nm,0.3s,baz=149,slow=5.8,SNR=2.7						
NOA				Lg		15 55 17.2	
	comp=Z,0.4nm,0.3s,baz=294,slow=24,SNR=3.2						
HFS	Hagfors	7.76	207	Pn	Pn	15 53 19.5	-6.1
	baz=42,slow=12						
HFS				Sn	Sn	15 54 45.2	-10
	baz=0.5,slow=28						
HFS	Hagfors	7.76	207	eP	Pn	15 53 19.5	-6.1
HFS				eS	Sn	15 54 45.2	-10
HFS	Hagfors	7.76	207	Pn	Pn	15 53 19.6	-6.0
	comp=Z,0.0nm,0.3s,baz=36,slow=12,SNR=4.3						
HFS				Sn	Sn	15 54 44.5	-11
	comp=Z,0.1nm,0.3s,baz=17,slow=25,SNR=5.3						
HFS				Lg		15 55 29.7	
	comp=Z,0.1nm,0.3s,baz=21,slow=25,SNR=3.2						
SPA0	Spitsbergen Ar	11.11	355	Pn	P	15 54 06.7	-4.9
	baz=147,slow=12						
SPA0	Spitsbergen Ar	11.11	355	eP	P	15 54 06.7	-4.9

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*IDC **20** 15:55:23.9±1.3, 7.39N×93.94E, mb3.6/6, mb1 3.8/7, mb1mx3.6/18, mbtmp3.5/7, ML3.9/1, Error ellipse: s-maj=49.4km s-min=21.5km az=58.0*

*NEIC **20** 15:55:28.8±0.8, 7.49N×94.12E, h30^{km}, mb4.3/3, Error ellipse: s-maj=21.1km s-min=12.9km az=74.0*

ISC 20 15:55:27.2±0.9**, 7.6N**±0.1×**94.2E**±0.2**, h30^{km}, n12,** σ**1^{s}00**/12**, mb3.8**/9**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	11.77	22	eP	P	15 58 15.2	-1.1
CMAR	Chiang Mai Arr	11.77	22	Pn	P	15 58 16.1	-0.1
	0.2nm,0.3s,baz=213,slow=14,SNR=6.2						
LSA	Lhasa	22.22	353	eP	P	16 00 25.0	+2.0
	7.5nm,0.8s,mb4.2						
SONM	Songino Array	41.46	12	P	P	16 03 15.3	+2.4
	0.7nm,0.8s,mb3.4,baz=204,slow=5.8,SNR=4.9						
KURK	Kurchatov	44.94	346	eP	P	16 03 41.1	-0.2
	4.4nm,1.0s,mb4.2						
ZAL	Zalesovo	46.88	352	P	P	16 03 55.7	-0.8
	0.5nm,0.3s,mb3.9,baz=281,slow=6.5,SNR=2.1						
ZAL	Zalesovo	46.88	352	P	P	16 03 55.7	-0.8
WRA	Warramunga Arr	48.00	125	P	P	16 04 06.1	+0.3
	0.6nm,0.9s,mb3.6,baz=305,slow=8.6,SNR=4.5						
ASAR	Alice Springs	49.64	130	P	P	16 04 18.2	-0.2
	0.4nm,0.8s,mb3.5,baz=310,slow=6.8,SNR=4.2						
CHKZ	Chkalovo	49.80	342	eP	P	16 04 18.5	-0.7
	3.1nm,1.0s,mb4.3						
FINES	FINESS Array B	73.03	332	P	P	16 06 55.3	-0.7
	0.7nm,0.8s,mb3.6,baz=100,slow=8.5,SNR=3.6						
GERES	GERESS Array B	78.12	318	P	P	16 07 25.1	0.0
	0.2nm,0.5s,mb3.3,baz=90,slow=4.9,SNR=2.8						

IDC 20 15:57:49.9±1.8**, 12.33N×120.10E, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=263.5km s-min=26.2km az=71.0, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	5.15	115	eP	Pn	15 58 49.4	-21
WRA	Warramunga Arr	34.99	156	P	P	16 04 44.7	-1.7
	0.4nm,0.5s,baz=328,slow=11,SNR=4.6						
SONM	Songino Array	37.21	345	P	P	16 05 03.0	-1.8
	0.3nm,0.5s,baz=163,slow=9.9,SNR=4.4						
ASAR	Alice Springs	38.23	159	P	P	16 05 11.6	-2.1
	0.6nm,0.8s,baz=349,slow=7.4,SNR=13						

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*NIED **20** 16:14:00, 29.40N×130.50E, h26^{km}, Mw4.1 Best double couple: M$_0$1.87×10^{15} NP1:φ$_s$138°, δ66°, λ-37°. NP2: φ$_s$245°, δ56°, λ-151°.*

*JMA **20** 16:14:35.0, 29.45N×130.49E, h52^{km}±3^{km}, M4.0*

*NEIC **20** 16:14:36.5±0.6, 29.48N×130.52E, mb3.8/4, Error ellipse: s-maj=13.1km s-min=9.4km az=119.0*

*IDC **20** 16:14:36.7±0.8, 29.49N×130.45E, h45^{km}±8^{km}, mb3.3/8, mb1 3.5/9, mb1mx3.4/23, mbtmp3.6/9, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.3/15, Error ellipse: s-maj=21.9km s-min=12.5km az=103.0*

*BJI **20** 16:14:41.2, 29.13N×130.18E, h51^{km}, mb3.8*

ISC 20 16:14:34.6±0.6**, 29.43N**±0.03×**130.56E**±0.07**, h48^{km}**±6^{km}**, h44^{km}**±3.9^{km}**:pP-P, n30,** σ**0^{s}82**/36**, mb3.6**/12**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	Nakanoshima	0.72	304	P	P	16 14 48.5	-0.1
JNN				eS	S	16 14 58.6	-0.3
JKC	Kuchinoerabu	1.07	343	P	P	16 14 53.7	+0.2
JKC				S	S	16 15 07.8	+0.3
JZK	Kikaishima	1.23	205	P	P	16 14 56.4	+0.7
JTN	Tanegashima 3	1.27	17	P	P	16 14 56.9	+0.6
JTN				eS	S	16 15 13.2	+0.7
JAM	Amami Oshima	1.32	220	P	P	16 14 56.7	-0.4
JAM				eS	S	16 15 13.0	-0.8
JTSR	Tashiro 2	1.75	10	P	P	16 15 03.8	+0.6
JSU	Suzuyama	2.07	358	P	P	16 15 07.5	-0.1
JSU				eS	S	16 15 31.9	-0.3
JTK	Tokunoshima	2.17	221	P	P	16 15 09.5	+0.5
JNAR	Kushima--Naru	2.17	16	P	P	16 15 10.1	+1.0
JSJ	Shimokoshiki	2.35	342	P	P	16 15 11.7	0.0
JOW	Kunigami	3.29	218	P	P	16 15 24.0	-0.9
	13nm,0.3s,baz=66,slow=13,SNR=11						
JOW				S	S	16 16 03.9	+0.8
	9.1nm,0.3s,baz=234,slow=30,SNR=3.6						
JOW				LR	LR	16 16 41.9	
	comp=Z,423nm,19.3s,baz=261,slow=38						
KS15	Wonju Array Si	8.29	345	P	P	16 16 31.5	-3.4
MAJO	Matsushiro	9.56	40	eP	P	16 16 50.8	-1.7
MAT	Matsushiro	9.56	40	eP	P	16 16 51.0	-1.5
MAT	Matsushiro	9.56	40	P	P	16 16 51.2	-1.3
CN2	Changchun	14.91	345	eP	P	16 18 12.3	+8.5
CN2				AMB	AMB		
	comp=Z,20nm,0.7s						
ENH	Enshi	18.30	278	eP	P	16 18 47.3	+0.6
	comp=Z,7.2nm,0.9s						
ULN	Ulaanbaatar	25.83	322	eP	P	16 20 03.4	+0.3
	comp=Z,1.1nm,0.6s,mb3.6						
SONM	Songino Array	26.17	321	P	P	16 20 06.0	-0.3
	comp=Z,1.3nm,0.6s,mb3.7,baz=139,slow=9.9,SNR=17						
GTA	Gaotai	27.13	300	eP	P	16 20 19.6	+4.4
GTA				AP	pP	16 20 28.3	+0.8
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.9						
KURK	Kurchatov	44.01	314	eP	P	16 22 38.7	-0.3
	comp=Z,2.3nm,0.9s,mb3.9						
WRA	Warramunga Arr	49.22	175	P	P	16 23 20.0	-0.4
	comp=Z,0.5nm,0.8s,mb3.6,baz=355,slow=8.5,SNR=6.5						
WRA				pP	pP	16 23 32.9	-0.6
	comp=Z,5.5nm,0.8s,baz=352,slow=8.4,SNR=28						
CHKZ	Chkalovo	49.24	317	eP	P	16 23 18.6	-1.6
	comp=Z,0.5nm,0.5s,mb3.8						
BVAR	Borovoye Array	49.33	316	P	P	16 23 20.3	-0.5
	comp=Z,1.9nm,0.9s,mb4.1,baz=100,slow=10.0,SNR=12						
ASAR	Alice Springs	52.89	176	P	P	16 23 48.9	+0.7
	comp=Z,0.2nm,0.5s,mb3.3,baz=9.4,slow=14,SNR=9.4						
ASAR				pP	pP	16 24 02.5	+1.2
	comp=Z,2.3nm,0.8s,baz=0.7,slow=5.7,SNR=24						
ILAR	Eielson Array	60.65	29	P	P	16 24 42.8	0.0
	comp=Z,0.4nm,0.9s,mb3.5,baz=280,slow=6.9,SNR=3.2						
FINES	FINESS Array B	71.10	331	P	P	16 25 49.0	-0.5
	comp=Z,0.4nm,0.6s,mb3.6,baz=50,slow=5.8,SNR=6.7						
FINES				pP	pP	16 26 02.0	-1.2
	comp=Z,1.2nm,0.8s,baz=63,slow=4.3,SNR=2.3						
YKA	Yellowknife Ar	74.76	26	P	P	16 26 12.2	+1.4
	comp=Z,0.3nm,0.7s,mb3.3,baz=303,slow=5.7,SNR=4.4						
YKA	Yellowknife Ar	74.76	26	P	P	16 26 12.2	+1.4
BRTR	Keskin Array B	76.69	308	P	P	16 26 24.1	+1.7
	comp=Z,0.6nm,0.9s,mb3.5,baz=108,slow=4.6,SNR=2.7						

IDC 20 16:29:58.6±47.0**, 17.33S×173.60W, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=906.1km s-min=177.2km az=80.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	42.94	242	P	P	16 37 59.9	-1.1
	1.4nm,0.6s,baz=86,slow=10,SNR=5.3						
WRA	Warramunga Arr	49.25	258	P	P	16 38 48.9	-2.3
	0.1nm,0.3s,baz=97,slow=7.2,SNR=6.2						
ASAR	Alice Springs	49.36	253	P	P	16 38 50.0	-2.1
	0.8nm,0.8s,baz=91,slow=8.0,SNR=12						

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*NEIC **20** 16:37:37.0±1.3, 15.09S×178.48W, h350^{km}, mb4.0/3, Error ellipse: s-maj=27.2km s-min=22.9km az=219.0*

IDC 20 16:37:36.6±27.0**, 15.10S×178.51W, h342^{km}**±253^{km}**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.5**/17**, mbtmp4.5**/5**, 3C, Error ellipse: s-maj=139.0km s-min=31.2km az=34.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	23.39	189	P	P	16 42 15.8	-1.7
	11nm,1.1s,baz=92,slow=9.0,SNR=7.4						
CTA	Charters Tower	33.91	256	⇑iP	P	16 43 49.1	-1.2
	3.5nm,0.4s						
CTA	Charters Tower	33.91	256	P	P	16 43 49.0	-1.3
	4.4nm,0.5s,baz=94,slow=12,SNR=14						
CTAO	Charters Tower	33.91	256	eP	P	16 43 49.0	-1.3
	4.8nm,0.5s						
STKA	Stephens Creek	39.96	238	P	P	16 44 39.6	-0.8
	2.2nm,0.7s,baz=93,slow=9.0,SNR=6.1						
STKA	Stephens Creek	39.96	238	eP	P	16 44 39.5	-0.9
WRA	Warramunga Arr	45.11	257	P	P	16 45 19.6	-2.3
	1.3nm,0.3s,baz=90,slow=8.2,SNR=66						
ASAR	Alice Springs	45.52	252	P	P	16 45 23.6	-1.5
	29nm,0.4s,baz=85,slow=8.6,SNR=559						
ASPA	Alice Springs	45.52	252	⇑iP	P	16 45 23.4	-1.7
KAKA	Kakadu	47.60	266	⇑iP	P	16 45 39.8	-1.5
	4.2nm,0.6s						
GERES	GERESS Array B	144.89	346	PKP	PKPdf	16 56 33.0	-0.2
	0.5nm,0.5s,baz=18,slow=4.2,SNR=6.0						

IDC 20 16:38:28.5±5.2**, 6.65S×148.79E, mb3.6**/2**, mb1 3.6**/4**, mb1mx3.5**/13**, mbtmp3.5**/4**, ML3.0**/2**, Error ellipse: s-maj=82.8km s-min=63.5km az=136.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.18	210	Pn	Pn	16 39 20.7	-0.1
	3.8nm,0.3s,baz=21,slow=7.8,SNR=20						
PMG				Sn	Sn	16 39 59.0	-1.0
	5.9nm,0.3s,baz=39,slow=14,SNR=6.5						
WRA	Warramunga Arr	19.28	225	P	P	16 42 53.4	-4.1
	0.1nm,0.3s,baz=53,slow=10,SNR=9.5						
ASAR	Alice Springs	22.16	219	P	P	16 43 25.3	-2.5
	1.0nm,0.5s,baz=54,slow=9.2,SNR=24						
STKA	Stephens Creek	25.99	194	P	P	16 44 04.7	-0.1
	1.0nm,0.5s,baz=20,slow=9.6,SNR=4.2						

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*ROM **20** 16:45:22.2±0.3, 46.14N×14.10E, h10^{km}, MD2.5/2, ML1.6/3, Error ellipse: s-maj=1.9km s-min=1.0km az=90.0*

*LJU **20** 16:45:22.9, 46.15N×14.07E, h15^{km}, ML1.9*

*CSEM **20** 16:45:22.9±0.1, 46.15N×14.06E, h15^{km}, ML1.9, Error ellipse: s-maj=1.5km s-min=1.0km az=22.0*

*NEIC **20** 16:45:23.1±0.3, 46.16N×14.07E, h10^{km}, MD2.5(ROM), ML2.2(VIE), ML1.9(LJU), Error ellipse: s-maj=4.6km s-min=2.6km az=194.0*

NEIC Felt at Skofja Loka.

ISC 20 16:45:22.7±0.3**, 46.17N**±0.02×**14.09E**±0.02**, h10^{km}, n50,** σ**0^{s}74**/88**, 14C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOJS	Vojsko	0.20	227	⇑iPg	Pg	16 45 27.0	-0.1
VOJS				i Sg	Sg	16 45 30.0	0.0
CADS	Cadrg	0.26	284	⇑iPg	Pg	16 45 28.2	0.0
CADS				i Sg	Sg	16 45 32.0	+0.2
	comp=Z,161nm,0.1s						
CADS	Cadrg	0.26	284	⇑iPg	Pg	16 45 28.2	0.0
CADS				i Sg	Sg	16 45 32.0	+0.2
	comp=Z,161nm,0.1s						
JAVS	Javornik	0.28	184	i Pg	Pg	16 45 28.4	-0.1
JAVS				i Sg	Sg	16 45 32.7	+0.3
	comp=Z,50nm,0.1s						
JAVS	Javornik	0.28	184	i Pg	Pg	16 45 28.4	-0.1
JAVS				i Sg	Sg	16 45 32.7	+0.3
	comp=Z,50nm,0.1s						
DRE	Drenchia	0.31	271	⇑iPg	Pg	16 45 28.9	-0.3
DRE				i Sg	Sg	16 45 33.6	0.0
LJU	Ljubljana	0.33	112	i Pg	Pg	16 45 30.4	+0.9
LJU				i Sg	Sg	16 45 35.5	+1.4
	comp=Z,91nm,0.1s						
LJU	Ljubljana	0.33	112	i Pg	Pg	16 45 30.4	+0.9
LJU				i Sg	Sg	16 45 35.5	+1.5
	comp=Z,91nm,0.1s						
ROBS	Robic	0.41	281	i Pg	Pg	16 45 30.6	-0.5
ROBS				i Sg	Sg	16 45 37.0	+0.2
	comp=Z,18nm,0.1s						
ROBS	Robic	0.41	281	i Pg	Pg	16 45 30.6	-0.6
ROBS				i Sg	Sg	16 45 37.0	+0.2
	comp=Z,18nm,0.1s						
OBKA	Obir	0.47	43	⇑iPG	Pg	16 45 32.9	+0.7
OBKA				i SG	Sg	16 45 39.9	+1.4
	comp=Z,31nm,0.2s						
CEY	Cerknica	0.49	151	i Pg	Pg	16 45 32.2	-0.5
CEY				eSg	Sg	16 45 40.0	+0.7
	comp=Z,12nm,0.1s						
CEY	Cerknica	0.49	151	i Pg	Pg	16 45 32.2	-0.4
CEY				eSg	Sg	16 45 40.0	+0.7
	comp=Z,12nm,0.1s						
COLI	Coloredo	0.50	266	⇑iPg	Pg	16 45 32.5	-0.4
COLI				eSg	Sg	16 45 40.1	+0.5
LSR	Lussari	0.50	308	⇑iPg	Pg	16 45 32.8	-0.1
LSR				i Sg	Sg	16 45 40.6	+1.0
TRI	Trieste	0.51	207	ePG	Pg	16 45 32.3	-0.8
TRI				SG	Sg	16 45 40.1	0.0
TRI	Trieste	0.51	207	ePg	Pg	16 45 32.3	-0.9
TRI				eSg	Sg	16 45 40.1	0.0
PTCC	Patocco-Chiusa	0.57	295	ePG	Pg	16 45 34.3	+0.1
PTCC				SG	Sg	16 45 42.6	+0.8
	comp=Z,27nm,0.3s						
PTCC	Patocco-Chiusa	0.57	295	ePg	Pg	16 45 34.4	+0.2
PTCC				eSg	Sg	16 45 42.6	+0.8
PTCC	Patocco-Chiusa	0.57	295	ePg	Pg	16 45 34.3	+0.1
	comp=Z,27nm,0.3s						
PTCC				Sg	Sg	16 45 42.6	+0.8
BAD	Bernadia	0.59	277	⇑iPg	Pg	16 45 33.9	-0.8
BAD				i Sg	Sg	16 45 42.8	0.0
GMNA	Gemona	0.60	281	ePG	Pg	16 45 35.3	+0.3
GMNA				SG	Sg	16 45 46.0	+2.9
	comp=Z,33nm,0.2s						
GMNA	Gemona	0.60	281	ePg	Pg	16 45 35.3	+0.4
GMNA				eSg	Sg	16 45 46.0	+2.9
GMNA	Gemona	0.60	281	ePg	Pg	16 45 35.3	+0.3
	comp=Z,33nm,0.2s						
GMNA				Sg	Sg	16 45 46.0	+2.9
VISS	Visnje	0.64	125	i Pg	Pg	16 45 35.6	+0.1
VISS				i Sg	Sg	16 45 44.3	+0.2
	comp=Z,28nm,0.1s						
VISS	Visnje	0.64	125	i Pg	Pg	16 45 35.6	+0.1
VISS				i Sg	Sg	16 45 44.3	+0.2
	comp=Z,28nm,0.1s						
PDKS	Podkum	0.64	99	⇑iPg	Pg	16 45 36.1	+0.5
PDKS				i Sg	Sg	16 45 45.0	+0.9
	comp=Z,27nm,0.1s						
PDKS	Podkum	0.64	99	⇑iPg	Pg	16 45 36.1	+0.5
PDKS				i Sg	Sg	16 45 45.0	+0.8
	comp=Z,27nm,0.1s						
BOO	Bordano	0.71	283	⇓iPg	Pg	16 45 35.9	-1.0
PLRO	Paularo	0.76	301	⇑iPg	Pg	16 45 38.3	+0.3
PLRO				eSg	Sg	16 45 49.1	+0.9
PERS	Pernice	0.85	56	i Pg	Pg	16 45 39.6	-0.1
PERS				i Sg	Sg	16 45 51.5	+0.3
	comp=Z,18nm,0.2s						
LEGS	Legarje	0.88	104	i Pg	Pg	16 45 40.3	-0.1
	comp=Z,20nm,0.2s						
LEGS	Legarje	0.88	104	i Pg	Pg	16 45 40.3	-0.1
	comp=Z,20nm,0.2s						
DOBS	Dobrina	0.96	91	i Pg	Pg	16 45 41.7	-0.2
	comp=Z,8.0nm,0.1s						
DOBS	Dobrina	0.96	91	i Pg	Pg	16 45 41.7	-0.2
	comp=Z,8.0nm,0.1s						
FVI	Forni Avoltri	1.01	296	ePG	Pg	16 45 42.4	-0.5
FVI				SG	Sg	16 45 57.0	+0.6
	comp=Z,11nm,0.3s						
FVI	Forni Avoltri	1.01	296	ePg	Pg	16 45 42.4	-0.5
FVI				eSg	Sg	16 45 57.0	+0.6
FVI	Forni Avoltri	1.01	296	ePg	Pg	16 45 42.4	-0.5
	comp=Z,11nm,0.3s						
FVI				Sg	Sg	16 45 57.0	+0.6
CRES	Cresnjev	1.01	109	i Pg	Pg	16 45 43.0	0.0
GROS	Grobnik	1.02	73	i Pg	Pg	16 45 42.6	-0.6

	comp=Z,7.0nm,0.1s						
GROS	Grobnik	1.02	73	*i* Pg	Pg	16 45 42.6	-0.6
	comp=Z,7.0nm,0.1s						
MLNI	Malnisio	1.03	270⇑	*i*Pg	Pg	16 45 43.1	-0.3
MLNI				*i* Sg	Sg	16 45 58.4	+1.2
BOJS	Bojanci	1.05	129	*i* Pg	Pg	16 45 42.9	-0.8
BOJS				*e*Sg	Sg	16 45 56.9	-0.8
	comp=Z,7.0nm,0.1s						
KBA	Koelnbreinsper	1.05	331⇓	*i*PG	Pg	16 45 42.9	-0.8
KBA				*i* SG	Sg	16 45 57.7	-0.1
	comp=Z,4.3nm,0.3s						
GOLS	Golise	1.08	98	*i* Pg	Pg	16 45 44.0	-0.3
	comp=Z,11nm,0.2s						
GOLS	Golise	1.08	98	*i* Pg	Pg	16 45 44.0	-0.3
	comp=Z,11nm,0.2s						
GCIS	Gornji Cirnik	1.11	105	*e*Pg	Pg	16 45 44.9	-0.1
	comp=Z,7.0nm,0.1s						
CAE	Caneva	1.17	263⇓	*i*Pg	Pg	16 45 45.5	-0.5
ARSA	Arzberg	1.46	42⇑	*i*PG	Pg	16 45 51.4	-0.6
ARSA				*i* SG	Sg	16 46 10.4	-1.2
	comp=Z,2.0nm,0.2s						
WTTA	Wattenberg	2.02	304⇑	*i*PG	Pg	16 46 00.6	-2.4
WTTA				*i* SG	Sg	16 46 28.6	-1.3
	comp=Z,3.2nm,0.3s						

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*IDC **20** 16:45:57.8±3.2, 6.53N×93.83E, mb3.8/4, mb1 4.0/5, mb1mx3.7/18, mbtmp3.7/5, ML3.9/1, MS3.6/2, Ms1 3.7/2, ms1mx3.1/19, Error ellipse: s-maj=132.9km s-min=24.8km az=65.0*

*NEIC **20** 16:46:00.8±1.1, 6.41N×93.50E, h30^{km}, mb3.9/2, Error ellipse: s-maj=31.6km s-min=13.7km az=69.0*

ISC 20 16:45:59.0±1.4, 6.5N±0.2×93.6E±0.3, h30^{km}, n9, σ0^{s}49/7, mb3.9/6, MS3.7/2, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.05	23	Pn	P	16 49 04.9	-0.2
	0.2nm,0.3s,baz=200,slow=14,SNR=2.8						
SONM	Songino Array	42.68	13	P	P	16 53 54.8	+0.1
	0.2nm,0.7s,mb3.0,baz=196,slow=8.3,SNR=2.3						
KURK	Kurchatov	45.85	347	P	P	16 54 19.9	-0.4
	0.6nm,0.5s,mb3.8						
ZAL	Zalesovo	47.88	353	P	P	16 54 37.3	+1.1
	1.2nm,0.4s,mb4.2,baz=320,slow=10,SNR=5.8						
WRA	Warramunga Arr	47.94	124	P	P	16 54 37.1	0.0
	1.5nm,0.7s,mb4.1,baz=303,slow=9.1,SNR=18						
ASAR	Alice Springs	49.47	129	P	P	16 54 48.9	0.0
	1.6nm,0.7s,mb4.2,baz=299,slow=7.3,SNR=32						
ASAR				PcP	PcP	16 56 11.4	+0.4
	0.6nm,0.6s,baz=309,slow=3.6,SNR=5.9						
CHKZ	Chkalovo	50.64	343	*e*P	P	16 54 56.9	-0.6
	1.0nm,0.6s,mb3.9						
PMG	Port Moresby	55.70	106	LR	LR	17 21 20.1	
	comp=Z,118nm,18.1s,MS4.0,baz=356,slow=38						
NOA	NORSAR Array B	80.68	331	LR	LR	17 37 02.2	
	comp=Z,16nm,19.8s,MS3.4,baz=125,slow=38						

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*CNRM **20** 16:58:01.5, 35.09N×2.99W, MD3.0*

*CSEM **20** 16:58:04.0±0.5, 35.01N×3.05W, h15^{km}, mb3.4/4, Error ellipse: s-maj=13.0km s-min=7.0km az=40.0*

*NEIC **20** 16:58:05.4, 35.00N×3.11W, h2^{km}, MG3.4(MDD), After MDD.*

MDD 20 16:58:03.3±1.2, 34.89N×2.93W, mbLg2.2/9, Error ellipse: s-maj=9.7km s-min=5.2km az=15.0, PRXIMO, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	0.17	61	P	Pg	16 58 06.0	-0.7
ZAI				S	Sg	16 58 08.8	-0.1
EMLI	Melilla	0.41	357	P	Pg	16 58 11.3	-0.2
	121nm,0.1s,SNR=10						
EMEL	Melilla	0.41	357	P	Pg	16 58 11.3	-0.2
	121nm,0.1s,SNR=10						
EMEL				S	Sg	16 58 16.1	-0.9
	123nm,0.1s,SNR=8.2						
TAF	Taforalt	0.43	100	P	Pg	16 58 16.0	+4.2
TAF				S	Sg	16 58 25.0	+7.5
EALB	Alboran	1.05	355	S	Sb	16 58 35.8	-2.4
	48nm,0.2s,SNR=4.0						
EALB	Alboran	1.05	355	S	Sb	16 58 34.5	-3.8
	48nm,0.2s,SNR=4.0						
EBER	Berja	2.01	1	P	Pn	16 58 36.7	-2.1
EBER				S	Sn	16 58 59.0	-5.9
EBER	Berja	2.01	1	P	Pn	16 58 36.7	-2.1
	0.6nm,0.2s,SNR=7.9						
EBER				S	Sn	16 58 59.0	-5.9
	12nm,0.5s,SNR=6.5						
EBER	Berja	2.01	1	P	Pn	16 58 36.7	-2.1
	0.6nm,0.2s,SNR=7.9						
EBER				S	Sn	16 58 59.0	-5.9
	12nm,0.5s,SNR=6.5						
ENIJ	Nijar	2.16	15	P	Pn	16 58 39.2	-1.8
	1.6nm,0.2s,SNR=7.9						
ENIJ				S	Sn	16 59 06.1	-2.7
	7.9nm,0.6s,SNR=4.0						
EMIJ	Mijas	2.25	319	P	Pn	16 58 39.6	-2.7
	4.2nm,0.3s,SNR=7.9						
EMIJ				S	Sn	16 59 04.8	-6.3
	1.7nm,0.2s,SNR=7.9						
EQES	Quesada	2.91	358	P	Pn	16 58 51.8	+0.1
EQES				S	Sn	16 59 25.7	-2.2
EQES	Quesada	2.91	358	P	Pn	16 58 50.5	-1.2
	0.8nm,0.1s,SNR=7.7						
EQES				S	Sn	16 59 25.7	-2.2
	8.2nm,0.3s,SNR=5.2						
EQES	Quesada	2.91	358	P	Pn	16 58 51.8	+0.1
	0.8nm,0.1s,SNR=7.7						
EQES				S	Sn	16 59 25.7	-2.2
	8.2nm,0.3s,SNR=5.2						
EMUR	La Murta	3.25	24	P	Pn	16 58 55.5	-1.0
	3.7nm,0.5s,SNR=4.8						
EMUR				S	Sn	16 59 29.7	-6.7
	3.4nm,0.5s						
EMUR	La Murta	3.25	24	P	Pn	16 58 55.5	-1.0
	3.7nm,0.5s,SNR=4.8						
EMUR				S	Sn	16 59 29.7	-6.7
	3.4nm,0.5s						
EADA	Adamuz	3.53	338	P	Pn	16 58 58.5	-2.0
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	16 59 36.8	-6.9
	1.4nm,0.3s,SNR=7.9						
EADA	Adamuz	3.53	338	P	Pn	16 58 58.5	-2.0
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	16 59 36.8	-6.9
	1.4nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.91	16	P	Pn	16 59 05.0	-0.9
	0.6nm,0.2s,SNR=7.9						
ETOB				S	Sn	16 59 48.3	-4.9
	1.7nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.91	16	P	Pn	16 59 05.0	-0.9
	0.6nm,0.2s,SNR=7.9						
ETOB				S	Sn	16 59 48.3	-4.9
	1.7nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	4.17	315	P	Pn	16 59 06.2	-3.4
	0.9nm,0.1s,SNR=9.2						
EMIN				S	Sn	16 59 52.5	-7.4
	0.5nm,0.3s,SNR=4.0						
EMIN	Mina Concepcio	4.17	315	P	Pn	16 59 06.2	-3.4
EMIN				S	Sn	16 59 52.5	-7.3
ESDC	Sonseca Array	4.85	350	P	Pn	16 59 16.9	-2.4
	0.4nm,0.1s,baz=166,slow=14,SNR=3.6						
ESDC	Sonseca Array	4.85	350	P	Pn	16 59 16.9	-2.3

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*IDC **20** 17:03:52.2±0.7, 15.70N×61.64W, mb3.9/9, mb1 4.2/10, mb1mx3.8/23, mbtmp3.9/10, ML5.7/1, MS3.3/3, Ms1 3.3/3, ms1mx2.8/25, Error ellipse: s-maj=11.8km s-min=10.0km az=121.0*

*TRN **20** 17:03:52.4, 15.75N×61.49W, h22^{km}, MD4.0, M3.5(FDF), Md3.1(FDF)*

*NEIC **20** 17:03:55.3±0.7, 15.69N×61.58W, h23^{km}±7^{km}, mb4.2/2, MD4.1(TRN), Error ellipse: s-maj=15.4km s-min=8.0km az=56.0*

ISC 20 17:03:54.2±0.4, 15.71N±0.04×61.67W±0.07, h23^{km}, n31, σ0^{s}90/35, mb3.9/11, MS3.3/1, 2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBL	Barber's Block	0.26	134	*e*P	Pb	17 04 00.2	-0.3
BBL				*e*S	Sb	17 04 04.1	-0.6
MDN	Morne-Daniel	0.47	146⇓	*e*P	Pb	17 04 04.1	+0.3
MDN				*e*S	Sb	17 04 10.8	+0.4
DBCT	Belle View Cho	0.53	145	*e*P	Pb	17 04 05.2	+0.3
DSHT	Scott's Head	0.57	150	*e*P	Pb	17 04 05.9	+0.5
DSHT				*e*S	Sb	17 04 13.7	+0.6
BPA	Boggy Peak	1.34	352⇓	*e*P	Pn	17 04 17.8	-0.1
BPA				*e*S	Sn	17 04 35.9	+0.8
NVBH	Bath Hotel, Ne	1.67	327	*e*P	Pn	17 04 26.1	+3.6
SKI	Saint Kitts	1.92	328	*e*P	Pn	17 04 28.9	+2.9
SKI				*e*S	Sn	17 04 55.3	+5.7
CPB	Codrington	1.93	355	*e*P	Pn	17 04 26.0	-0.2
CPB				*e*S	Sn	17 04 49.9	0.0
BSK	Brimstone Hill	1.98	326	*e*P	Pn	17 04 30.0	+3.0
BSK				*e*S	Sn	17 05 00.3	+9.0
STMA	St. Maarten, A	2.70	329	*e*S	Sn	17 05 18.6	+8.9
SJG	San Juan	4.91	300	Pn	Pn	17 05 09.5	+0.8
	6.5nm,0.3s,baz=322,slow=22,SNR=10						
SJG				Sn	Sn	17 06 05.0	-0.6
	9.4nm,0.3s,baz=110,slow=22,SNR=5.7						
SJG	San Juan	4.91	300	*e*P	Pn	17 05 09.3	+0.7
SJG				Sn	Sn	17 06 05.0	-0.5
SDV	Santo Domingo	11.08	233	LR	LR	17 11 12.8	
	comp=Z,123nm,18.4s,baz=222,slow=40						
ROSC	El Rosal	16.47	230	LR	LR	17 14 26.9	
	comp=Z,105nm,21.5s,baz=347,slow=38						
LPAZ	La Paz	32.43	192	LR	LR	17 25 09.1	
	comp=Z,51nm,18.1s,MS3.3,baz=45,slow=39						
TXAR	Lajitas Array	40.88	297	P	P	17 11 36.2	-0.2
	0.2nm,0.6s,mb3.0,baz=114,slow=8.9,SNR=3.1						
TXAR	Lajitas Array	40.88	297	P	P	17 11 36.2	-0.2
MNTX	Cornudas Mount	42.77	300	P	P	17 11 50.3	-1.6
	5.0nm,1.4s,mb4.0						
ULM	Lac du Bonnet	44.14	329	P	P	17 12 02.3	-0.5
	1.6nm,0.5s,mb4.0,baz=129,slow=7.4,SNR=4.7						
BW06	Boulder Array	48.88	314	*e*P	P	17 12 40.6	+0.4
	3.0nm,0.7s,mb4.4						
PDAR	Pinedale Array	48.88	314	P	P	17 12 40.6	+0.3
	1.1nm,0.6s,mb4.1,baz=112,slow=8.0,SNR=4.9						
EDM	Edmonton	54.97	325	*e*P	P	17 13 24.8	-1.0
YKA	Yellowknife Ar	59.48	335	P	P	17 13 56.5	-1.2
	1.2nm,0.6s,mb4.1,baz=107,slow=7.3,SNR=24						
YKA	Yellowknife Ar	59.48	335	P	P	17 13 56.5	-1.2
NOA	NORSAR Array B	68.10	30	P	P	17 14 54.5	+0.3
	1.1nm,0.8s,mb4.0,baz=262,slow=6.3,SNR=4.2						
GERES	GERESS Array B	68.73	43	P	P	17 14 57.3	-1.0
	1.0nm,1.0s,mb3.7,baz=256,slow=5.5,SNR=5.4						
INK	Inuvik	68.82	338	P	P	17 14 57.5	-1.0
	1.8nm,0.8s,mb4.1,baz=107,slow=7.5,SNR=7.1						
ILAR	Eielson Array	73.89	334	P	P	17 15 29.2	+0.3
	0.8nm,0.8s,mb3.7,baz=97,slow=3.6,SNR=8.9						
FINES	FINESS Array B	75.27	30	P	P	17 15 36.6	-0.3
	1.2nm,0.8s,mb3.9,baz=315,slow=2.7,SNR=3.6						
ASAR	Alice Springs	163.35	239	PKPab	PKPab	17 24 48.2	-0.4
	0.6nm,0.7s,baz=114,slow=3.9,SNR=7.5						
WRA	Warramunga Arr	164.19	252	PKP	PKPdf	17 23 57.1	-3.7
	0.8nm,0.9s,baz=160,slow=0.7,SNR=5.9						
WRA				PKPab	PKPab	17 24 53.5	+1.1
	0.6nm,0.8s,baz=104,slow=4.2,SNR=4.4						

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*IDC **20** 17:03:58.7±1.1, 13.35N×92.38E, mb3.7/7, mb1 3.9/7, mb1mx3.7/18, mbtmp3.7/7, Error ellipse: s-maj=56.4km s-min=19.5km az=50.0*

ISC 20 17:04:03.0±2.7, 13.7N±0.2×91.2E±0.1, h33^{km}, n14, σ0^{s}65/15, mb3.7/7, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIS	Vishakhapatnam	8.51	299	*e*P	P	17 06 07.0	+0.3
VIS				*e*S	S	17 07 42.0	-0.6
VIS				*e*		17 07 43.4	
	comp=N,51nm,0.4s						
VIS				*e*		17 07 43.7	
	comp=E,46nm,0.2s						
BLSP	Bilaspur	11.96	316	*e*S	S	17 09 07.7	+0.2
JIRN	Jiri	14.61	342	*e*P	P	17 07 29.2	0.0
PKI	Pulchoki	14.77	340	*e*P	P	17 07 30.9	-0.5
	comp=E,6.1nm,0.3s						
DMN	Daman	14.91	339	*e*P	P	17 07 33.1	-0.1
	comp=E,7.1nm,0.3s						
GKN	Gorkha	15.44	338	*e*P	P	17 07 40.6	+0.6
	comp=E,12nm,0.3s						
KOLN	Koldanda	15.64	334	*e*P	P	17 07 42.9	+0.3
	comp=E,13nm,0.5s						
SONM	Songino Array	36.29	17	P	P	17 11 04.4	-0.9
	comp=E,0.5nm,0.7s,mb3.5,baz=202,slow=7.6,SNR=3.8						
BVAR	Borovoye Array	42.53	342	P	P	17 12 00.4	+3.4
	comp=E,0.6nm,0.7s,mb3.5,baz=117,slow=6.4,SNR=3.0						
WRA	Warramunga Arr	54.09	127	P	P	17 13 16.9	-10
	comp=E,0.5nm,0.5s,mb3.8,baz=300,slow=9.9,SNR=17						
ASAR	Alice Springs	55.94	131	P	P	17 13 30.4	-10
	comp=E,0.7nm,0.5s,mb4.0,baz=312,slow=7.2,SNR=24						
BRTR	Keskin Array B	56.44	309	P	P	17 13 50.0	+6.1
	comp=E,0.5nm,0.5s,mb3.8,baz=127,slow=6.2,SNR=3.8						
FINES	FINESS Array B	66.19	332	P	P	17 14 54.8	+5.5
	comp=E,0.8nm,0.7s,mb3.9,baz=90,slow=7.6,SNR=5.7						
GERES	GERESS Array B	71.54	317	P	P	17 15 29.1	+6.6
	comp=E,0.6nm,0.8s,mb3.6,baz=90,slow=5.3,SNR=4.3						

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*ISK **20** 17:12:50.8, 37.03N×28.37E, h11^{km}, MD3.2*

*CSEM **20** 17:12:50.7±0.1, 37.03N×28.37E, h10^{km}, MD3.2, Error ellipse: s-maj=1.6km s-min=1.3km az=27.0*

*ATH **20** 17:12:52.4, 36.96N×28.24E, h27^{km}, MD3.2/4*

ISC 20 17:12:50.9±0.6, 37.01N±0.04×28.36E±0.04, h10^{km}±4^{km}, n23, σ0^{s}69/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.14	334	*i* PG	Pg	17 12 54.3	+0.1
YER				*i* SG	Sg	17 12 56.6	+0.1
DALT	Dalyan (Mudla)	0.33	137	*i* PG	Pg	17 12 58.1	+0.5
MLSB	Milas	0.55	302	*i* PG	Pg	17 13 02.2	+0.2
MLSB				*i* SG	Sg	17 13 09.8	+0.4
FETY	Fethiye	0.69	122	*i* PG	Pg	17 13 04.6	-0.2
BDRM	Kayabasi	0.74	275	*i* P	Pb	17 13 05.1	-0.3
BDRM				*i* S	Sb	17 13 16.3	+1.0
AYDN	Tasoluk	0.76	330	*i* P	Pb	17 13 05.7	-0.1
AYDN				*i* S	Sb	17 13 15.5	-0.4
ARG	Arkhangelos	0.81	194	*e*PN	Pn	17 13 07.1	-1.2
BODT	Bodrum	0.84	274	PG	Pg	17 13 07.4	-0.4
DNZL	Cakiroluk	0.87	39	*i* P	Pb	17 13 07.4	-0.3
DNZL				*i* S	Sb	17 13 23.7	+4.4
DENT	Denizli	0.92	35	PG	Pg	17 13 08.4	-0.9
NISR	Nisiros	1.06	249	*e*PN	Pn	17 13 11.5	-0.4
KSL	Kastellorizon	1.30	131	*e*PN	Pn	17 13 17.5	+2.2
SMG	Samos	1.40	300	*e*PN	Pn	17 13 17.0	+0.3
MANT	Manisa	1.49	6	*i* P	Pn	17 13 18.4	+0.4
MANT				*i* S	Sb	17 13 38.6	+1.5
KHL	Karahalli	1.61	35	*e*PN	Pn	17 13 19.6	0.0
KDAG	Bornova	1.64	328	*i* P	Pn	17 13 20.6	+0.5
KDAG				*i* S	Sn	17 13 40.5	-0.9
BLCB	Balcova	1.73	323	PN	Pn	17 13 21.1	-0.3
BCK	Bucak	1.83	75	*e*PN	Pn	17 13 22.9	0.0
ISP	Isparta	1.90	63	*e*PN	Pn	17 13 22.9	-1.0
AKS	Akhisar	1.92	347	PN	Pn	17 13 24.1	0.0
ALT	Altintas	2.47	34	*e*PN	Pn	17 13 32.1	+0.1
BALB	Balikesir	2.66	352	*e*PN	Pn	17 13 33.8	-0.8
KIZT	Kizilcal	3.35	55	*e*PN	Pn	17 13 44.9	+0.4

IDC 20 17:23:06.5±78.0, 23.61S×179.47E, h664^{km}±399^{km}, mb2.7/4, mb1 2.8/4, mb1mx2.7/14, mbtmp3.8/4, Error ellipse: s-maj=979.6km s-min=88.8km az=79.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	30.99	270	P	P	17 28 34.1	-0.9
	2.2nm,0.5s,baz=84,slow=10,SNR=11						
STKA	Stephens Creek	34.38	248	P	P	17 29 01.4	-1.8
	1.3nm,1.0s,baz=111,slow=14,SNR=2.7						
ASAR	Alice Springs	41.60	260	P	P	17 30 00.1	-1.6
	0.2nm,0.4s,baz=100,slow=7.3,SNR=6.3						
WRA	Warramunga Arr	41.94	266	P	P	17 30 02.9	-1.5
	0.6nm,0.5s,baz=96,slow=8.4,SNR=17						

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*TEH **20** 17:56:31.1, 33.40N×46.16E, h23^{km}, Mn3.6*

*CSEM **20** 17:56:35.7±0.1, 33.73N×46.48E, h50^{km}, ML4.0/1, Error ellipse: s-maj=3.0km s-min=2.5km az=147.0*

*THR **20** 17:56:37.2±0.8, 33.53N×47.07E, h14^{km}, ML3.1*

ISC 20 17:56:36.7±1.2, 33.70N±0.06×46.58E±0.09, h33^{km}, n19, σ0^{s}96/21, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGHG	Ghaleghazi	0.62	359	Pg	P	17 56 49.2	+0.2
IVIS	Veys	0.85	15	Pn	Pn	17 56 52.9	+0.4
IKOM	Komasi	0.91	58	Pg	P	17 56 54.2	+1.1
IDHR	Dehrash	1.01	351	Pn	Pn	17 56 55.6	+0.9
BHD	Baghdad	1.89	257	*e*Pn	Px	17 57 04.5	
BHD				*e*Sb	Sx	17 57 26.0	
BHD				*i* Sg	Sx	17 57 28.0	
SHGO	Shushtar	2.46	130	*e*PG	P	17 57 15.8	+0.5
SHGO				AML	AML	17 58 06.6	
	comp=N,157nm,0.6s						
SHGR	Shooshtar-Gavs	2.46	130	*e*PG	P	17 57 15.8	+0.5
SHGR				*e*SG	S	17 57 44.7	+0.4
SHGR				AML	AML	17 58 20.2	
	comp=N,196nm,0.8s						
SHGR	Shooshtar-Gavs	2.46	130	*e*Pg	P	17 57 15.8	+0.6
	SNR=91						
SHGR				*e*Sg	S	17 57 44.7	+0.3
	comp=N,196nm,0.8s,SNR=91						
ASAO	Ashtian	2.98	73	*e*PN	Pn	17 57 22.7	-0.2
ASAO				*e*SG	S	17 58 04.6	+6.9
ASAO				AML	AML	17 58 22.5	
	comp=N,54nm,0.8s						
IRAZ	Razeghan	3.25	58	Pn	Pn	17 57 28.2	+1.6
IQOM	Qom	3.89	72	Pn	Pn	17 57 34.9	-0.9
IQOM	Qom	3.89	72	Sn	Sn	17 58 22.3	+1.4
IMHD	Mahdasht	3.91	58	Pn	Pn	17 57 35.5	-0.5
IVRN	Varamin	4.45	72	Sn	Sn	17 58 35.7	+0.6
IVRN	Varamin	4.45	72	Pn	Pn	17 57 42.5	-1.3
IAFJ	Afjeh	4.74	62	Pn	Pn	17 57 46.7	-1.2
DAMV	Damavand	4.84	65	*e*PN	Pn	17 57 48.5	-0.8
IDMV	Damavand	4.87	66	Pn	Pn	17 57 48.4	-1.3
IFIR	Firoozkooh	5.44	67	Pn	Pn	17 57 56.1	-1.7

IDC 20 18:09:35.0±1.7, 12.88N×91.95E, mb3.6/3, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, ML3.1/1, Error ellipse: s-maj=55.6km s-min=30.1km az=55.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.72	50	Pn	P	18 11 42.0	-3.3
	0.1nm,0.3s,baz=243,slow=15,SNR=2.9						
WRA	Warramunga Arr	52.95	127	P	P	18 18 53.4	-2.5
	2.4nm,1.5s,baz=300,slow=10,SNR=5.0						
ASAR	Alice Springs	54.79	131	P	P	18 19 07.3	-2.0
	0.6nm,0.8s,baz=310,slow=7.2,SNR=8.4						
FINES	FINESS Array B	67.31	332	P	P	18 20 31.5	-2.1
	1.2nm,0.8s,baz=112,slow=7.5,SNR=4.5						

IDC 20 18:26:41.5±6.2, 13.15N×92.96E, mb3.1/2, mb1 3.4/3, mb1mx3.2/18, mbtmp3.1/3, ML3.1/1, Error ellipse: s-maj=129.6km s-min=46.4km az=103.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.81	47	Pn	Pn	18 28 36.0	-3.2
	0.1nm,0.3s,baz=237,slow=16,SNR=5.2						
WRA	Warramunga Arr	52.34	128	P	P	18 35 55.3	-2.4
	0.1nm,0.3s,baz=304,slow=9.6,SNR=4.9						
ASAR	Alice Springs	54.24	132	P	P	18 36 09.8	-1.9
	0.4nm,1.0s,baz=309,slow=6.8,SNR=8.3						

MAN 20 18:34:04.6, 13.47N×120.69E, h25^{km}, mb3.6, ML2.4, MS1.9, Mindoro

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*IDC **20** 18:34:26.3±1.2, 56.25N×153.45W, mb3.8/10, mb1 4.0/12, mb1mx3.8/23, mbtmp3.8/12, ML3.3/2, Error ellipse: s-maj=33.7km s-min=18.7km az=21.0*

ISC 20 18:34:29.8±5.4, 56.3N±0.2×153.4W±0.3, h36^{km}±43^{km}, n12, σ0^{s}53/12, mb3.9/9, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	Eielson Array	9.09	18	Pn	P	18 36 40.9	-0.6
	0.2nm,0.3s,baz=204,slow=14,SNR=25						
INK	Inuvik	15.08	29	Pn	P	18 38 02.6	+1.2
	0.1nm,0.3s,baz=234,slow=11,SNR=6.3						
YKA	Yellowknife Ar	20.44	56	P	P	18 39 05.5	-0.7
	0.5nm,0.6s,baz=270,slow=10,SNR=12						
NVAR	Mina Array Bea	29.29	113	P	P	18 40 30.3	-0.3
	0.7nm,0.6s,mb3.6,baz=297,slow=12,SNR=3.1						
TXAR	Lajitas Array	44.00	106	P	P	18 42 35.5	+0.3
	0.3nm,0.9s,mb3.0,baz=319,slow=9.6,SNR=2.7						
SCHQ	Schefferville	45.86	54	P	P	18 42 50.0	+0.3
	1.5nm,1.0s,mb3.9,baz=280,slow=11,SNR=2.6						
SONM	Songino Array	56.85	308	P	P	18 44 12.9	+0.2
	1.5nm,0.7s,mb4.1,baz=43,slow=6.9,SNR=18						
ZAL	Zalesovo	60.28	325	P	P	18 44 35.8	-0.7
	1.5nm,0.2s,mb4.6,baz=108,slow=4.5,SNR=3.0						
NOA	NORSAR Array B	62.38	8	P	P	18 44 50.2	-0.3
	0.6nm,0.7s,mb3.8,baz=14,slow=6.4,SNR=2.7						
HFS	Hagfors	63.47	7	P	P	18 44 57.8	+0.1
	1.2nm,0.8s,mb4.1,baz=68,slow=8.0,SNR=4.5						
BVAR	Borovoye Array	65.27	333	P	P	18 45 09.6	+0.2
	0.9nm,0.7s,mb3.9,baz=11,slow=7.3,SNR=3.6						
CMAR	Chiang Mai Arr	84.23	295	P	P	18 46 59.0	+0.3
	1.6nm,1.0s,mb4.1,baz=9.1,slow=5.1,SNR=7.1						

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*BJI **20** 18:36:35.0, 56.00N×153.30W, h25^{km}, mB5.1, mb4.7, Ms4.6, Msz4.2*

*IDC **20** 18:36:35.3±0.8, 56.26N×153.45W, mb4.1/23, mb1 4.3/26, mb1mx4.3/29, mbtmp4.1/26, ML4.0/3, MS3.8/9, Ms1 3.8/9, ms1mx3.5/31, Error ellipse: s-maj=24.9km s-min=13.0km az=29.0*

*MOS **20** 18:36:37.2±1.2, 56.16N×153.27W, h33^{km}, mb4.9/26, Error ellipse: s-maj=14.6km s-min=5.2km az=84.7*

*NEIC **20** 18:36:37.1, 55.98N×153.26W, h25^{km}, mb4.7/33, ML4.1(AEIC), After AEIC.*

ISC 20 18:36:35.5±0.3, 56.09N±0.03×153.24W±0.05, h25^{km}, h25^{km}±1.6^{km}:pP-P, n177, σ1^{s}27/177, mb4.6/69, MS4.1/11, 3C-6D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	1.74	12	P	Pn	18 37 05.8	+1.2
KDAK				S	Sn	18 37 27.0	+0.8
CAHL	Cahill	2.27	331	P	Pn	18 37 12.9	+0.6
KAWH	Katmai	2.45	340	P	Pn	18 37 15.5	+0.6
SYI	Shuyak Island	2.57	10	P	Pn	18 37 17.6	+1.1
KAPH	Katmai Pasha	2.59	347	P	Pn	18 37 18.1	+1.2
KAHC	Katmai Hardscr	2.74	340	P	Pn	18 37 19.8	+0.7
ANPK	Aniakchak Peak	2.82	288	P	Pn	18 37 19.6	-0.5
XLV	Seldovia	3.47	13	P	Pn	18 37 30.7	+1.3
OPT	Oil Point	3.58	0	P	Pn	18 37 32.4	+1.6
CNPM	China Poot	3.61	16	P	Pn	18 37 31.8	+0.4
HOM	Homer	3.68	13	P	Pn	18 37 33.8	+1.5
BRLK	Bradley Lake	3.89	18	P	Pn	18 37 35.3	-0.1
ILW	Iliamna West	3.98	1	P	Pn	18 37 37.2	+0.5
ILIM	Iliamna	4.01	2	P	Pn	18 37 37.7	+0.7
SDPT	Sand Point	4.16	263	P	Pn	18 37 37.8	-1.4
SDPT				S	Sn	18 38 23.0	-4.6
RSO	Redoubt South	4.39	3	P	Pn	18 37 43.4	+0.9
RDN	Redoubt North	4.45	3	P	Pn	18 37 44.0	+0.7
NCT	North Crescent	4.49	2	P	Pn	18 37 44.4	+0.5
SEW	Seward	4.50	25	P	Pn	18 37 42.4	-1.6
SLKM	Skilak Lake	4.71	18	P	Pn	18 37 46.3	-0.7
LTI	Latouche	4.89	34	P	Pn	18 37 47.8	-1.7
PVV	Pavlof Volcano	4.89	265	P	Pn	18 37 47.0	-2.5
HAG	Hague Volcano	4.96	265	P	Pn	18 37 48.2	-2.3
BLHA	Black Hill	4.99	269	P	Pn	18 37 48.7	-2.2
CKL	Chakachamna La	5.15	5	P	Pn	18 37 53.2	+0.1
SPU	Mount Spurr	5.15	6	*e*P	Pn	18 37 52.7	-0.5
CKT	Bend	5.16	6	P	Pn	18 37 53.3	0.0
SVW2	Sparrevohn	5.17	347	P	Pn	18 37 53.1	-0.4
DT1	Dutton Round H	5.22	263	P	Pn	18 37 51.5	-2.7
RC01	Rabbit Creek A	5.34	19	P	Pn	18 37 55.0	-0.9
STLK	Strandline Lak	5.48	7	P	Pn	18 37 57.9	+0.2
HIN	Hinchinbrook I	5.59	37	P	Pn	18 37 57.9	-1.5
GLI	Glacier Island	5.78	31	P	Pn	18 37 60.0	-2.1
PWA	Palmer West	5.84	16	P	Pn	18 38 02.7	-0.3
EYAK	Cordova Ski Ar	5.96	38	P	Pn	18 38 03.1	-1.5
GHO	Glory Hole Cre	6.12	20	P	Pn	18 38 05.6	-1.3
SML	Sawmill	6.27	22	*e*P	Pn	18 38 07.4	-1.6
DIV	Divide	6.38	35	*e*P	Pn	18 38 08.6	-2.0

SCM	Sheep Creek Mo	6.52	25	P	Pn	18 38 11.5	-1.0
TT01	Tatalina	6.99	349	P	Pn	18 38 18.4	-0.6
GLB	Gilahina Butte	7.26	38	P	Pn	18 38 21.2	-1.8
TRF	Thorofare Moun	7.54	10	P	Pn	18 38 25.8	-0.9
BALM	Baldy	7.55	44	P	Pn	18 38 25.7	-1.2
KTH	Kantishna Hill	7.58	8	P	Pn	18 38 26.3	-1.0
PAX	Paxson	7.95	27	P	Pn	18 38 31.3	-1.2
MCK	McKinley	7.97	14	*e*P	Pn	18 38 31.1	-1.6
MSW	Makushin Switc	8.09	260	P	P	18 38 30.8	-3.7
THY	Trims Highway	8.26	24	*e*P	P	18 38 35.6	-1.2
COLA	College	9.20	15	*e*P	P	18 38 47.3	-2.6
ILAR	Eielson Array	9.26	17	Pn	P	18 38 49.4	-1.2
	1.3nm,0.3s,baz=204,slow=12,SNR=35						
ILAR				Sn	Sn	18 40 27.1	-7.9
	0.3nm,0.3s,baz=335,slow=35,SNR=3.1						
IMA	Indian Mountai	10.02	359	*e*P	P	18 38 59.3	-1.6
TNA	Tin City	11.86	329	*e*P	P	18 39 24.3	-1.8
DLBC	Dease Lake	12.76	70	Pn	P	18 39 44.0	+5.8
	0.2nm,0.3s,baz=211,slow=12,SNR=3.5						
DLBC				LR	LR	18 44 21.2	
	comp=Z,519nm,18.4s,baz=283,slow=36						
DLBC	Dease Lake	12.76	70	Pn	P	18 39 44.0	+5.8
DLBC				LR	LR	18 44 21.2	
BBB	Bella Bella	15.20	94	LR	LR	18 44 58.1	
	comp=Z,242nm,20.8s,baz=81,slow=33						
INK	Inuvik	15.21	29	*e*P	P	18 40 09.9	-0.2
INK				pmax	pmax		
	comp=Z,11nm,0.8s						
INK	Inuvik	15.21	29	Pn	P	18 40 11.4	+1.3
	comp=Z,0.5nm,0.3s,baz=217,slow=14,SNR=11						
INK				LR	LR	18 46 40.4	
	comp=Z,327nm,20.5s,baz=31,slow=40						
INK	Inuvik	15.21	29	*e*P	P	18 40 09.9	-0.2
	comp=Z,11nm,0.8s						
YKW3	Yellowknife Ar	20.48	56	*e*P	P	18 41 13.9	+0.1
YKA	Yellowknife Ar	20.48	56	P	P	18 41 14.4	+0.5
	comp=Z,1.8nm,0.6s,baz=270,slow=9.3,SNR=5.8						
BILL	Bilibino	21.93	319	*e*P	P	18 41 27.1	-1.4
BILL				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.6						
BILL	Bilibino	21.93	319	*e*P	P	18 41 27.1	-1.4
	comp=Z,34nm,1.3s,mb4.6						
NEW	Newport	23.26	94	*e*P	P	18 41 41.2	-0.5
NEW				pmax	pmax		
	comp=Z,34nm,1.8s						
NEW	Newport	23.26	94	P	P	18 41 46.5	+4.9
	comp=Z,2.6nm,1.1s,mb3.6,baz=301,slow=8.9,SNR=3.1						
NEW	Newport	23.26	94	*e*P	P	18 41 41.2	-0.4
	comp=Z,34nm,1.8s,mb4.5						
YBH	Yreka Blue Hor	24.42	113	P	P	18 41 58.0	+5.0
	comp=Z,2.5nm,0.9s,mb3.6,baz=266,slow=4.2,SNR=3.4						
BMO	Blue Mountains	25.19	101	P	P	18 42 00.0	-0.2
	comp=Z,15nm,1.4s,mb4.3						
HLID	Hailey	27.61	100	P	P	18 42 21.4	-1.3
RES	Resolute Bay	28.77	28	*e*P	P	18 42 33.0	+0.2
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
RES	Resolute Bay	28.77	28	*e*P	P	18 42 33.0	+0.2
	comp=Z,3.7nm,0.8s,mb4.2						
NVAR	Mina Array Bea	29.13	112	P	P	18 42 39.0	+2.6
	comp=Z,2.4nm,1.0s,mb3.9,baz=286,slow=12,SNR=7.3						
NVAR				PcP	PcP	18 45 49.9	+5.9
	comp=Z,1.0nm,0.8s,baz=353,slow=4.7,SNR=4.2						
NVAR	Mina Array Bea	29.13	112	P	P	18 42 39.0	+2.6
NVAR				PcP	PcP	18 45 49.9	+5.9
MA2	Magadan	29.26	300	*e*P	P	18 42 36.6	-0.7
MA2				*e*		18 48 59.7	
MA2				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
MA2				pmax	pmax		
	comp=E,1.0nm,0.5s						
MA2	Magadan	29.26	300	*e*P	P	18 42 36.1	-1.3
	comp=E,2.2nm,0.4s,mb4.2						
PDAR	Pinedale Array	30.82	97	P	P	18 42 53.9	+2.5
	comp=E,0.3nm,0.8s,baz=315,slow=5.1,SNR=3.3						
MVU	Marysvale	32.30	105	P	P	18 43 04.7	+0.3
	comp=E,10nm,1.3s,mb4.5						
MSU	Marysvale	32.32	105	P	P	18 43 03.4	-1.1
NEN	Nelson	33.04	112	*e*P	P	18 43 09.6	-1.3
ULM	Lac du Bonnet	34.00	75	P	P	18 43 22.5	+3.5
	comp=E,7.4nm,0.9s,mb4.6,baz=316,slow=11,SNR=3.8						
ULM				LR	LR	18 57 09.5	
	comp=E,236nm,18.9s,MS3.9,baz=250,slow=36						
TIXI	Tiksi	34.64	327	⇓*i*P	P	18 43 24.0	-0.3
TIXI				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,372nm,14.0s,MS4.3						
TUC	Tucson	37.75	111	P	P	18 43 47.9	-3.1
TUC				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
TUC	Tucson	37.75	111	P	P	18 43 47.9	-3.1
	comp=Z,3.2nm,1.2s,mb3.9						
YAK	Yakutsk	37.87	312	*e*P	P	18 43 50.5	-1.2
YAK				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2						
YAK	Yakutsk	37.87	312	*e*P	P	18 43 50.5	-1.2
	comp=Z,37nm,0.8s,mb5.2						
ANMO	Albuquerque	38.04	104	*i* P	pP	18 44 03.8	+2.9
ANMO	Albuquerque	38.04	104	LR	LR	18 59 28.3	
	comp=Z,78nm,19.4s,MS3.5,slow=36						
FRB	Frobisher Bay	40.11	43	P	P	18 44 10.3	0.0
	comp=Z,3.0nm,0.9s,mb4.0,baz=309,slow=9.4,SNR=8.8						
MNTX	Cornudas Mount	41.09	106	P	P	18 44 17.0	-1.7
	comp=Z,20nm,1.6s,mb4.5						
WMOK	Wichita Mounta	42.43	97	P	P	18 44 31.5	+1.9
WMOK				*e*	pP	18 44 38.8	+1.7
WMOK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
WMOK	Wichita Mounta	42.43	97	P	P	18 44 31.5	+1.9
	comp=Z,6.8nm,0.9s,mb4.3						
WMOK				*e*	pP	18 44 38.8	+1.6
LTX	Lajitas	43.86	106	P	P	18 44 39.0	-2.3
LTX				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
LTX	Lajitas	43.86	106	P	P	18 44 39.0	-2.3
	comp=Z,18nm,1.3s,mb4.6						
TXAR	Lajitas Array	43.86	106	P	P	18 44 44.2	+2.9
	comp=Z,1.5nm,0.9s,mb3.7,baz=308,slow=5.6,SNR=11						
TXAR				PcP	PcP	18 46 28.0	+0.1
	comp=Z,0.1nm,0.3s,baz=315,slow=1.3,SNR=2.2						
TXAR				LR	LR	19 02 40.9	
	comp=Z,172nm,18.9s,MS4.0,slow=36						
TXAR	Lajitas Array	43.86	106	P	P	18 44 44.2	+2.9
TXAR				PcP	PcP	18 46 28.0	+0.1
TXAR				LR	LR	19 02 40.9	
KLR	Kul'dur	43.91	294	*e*P	P	18 44 38.2	-3.2
SUMG	Summit	44.04	23	*e*P	P	18 44 43.2	+1.0
	comp=Z,8.3nm,0.8s,mb4.5						
DAG	Danmarks Havn	44.34	14	⇓*i*P	P	18 44 45.4	+0.8
DAG				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
DAG	Danmarks Havn	44.34	14	⇓*i*P	P	18 44 45.4	+0.8
	comp=Z,11nm,0.8s,mb4.6						
JCT	Junction City	45.07	102	*e*P	P	18 44 49.5	-1.6
JCT				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.0						
JCT	Junction City	45.07	102	*e*P	P	18 44 49.5	-1.5
	comp=Z,34nm,1.3s,mb5.0						
SCHQ	Schefferville	45.91	54	P	P	18 44 58.9	+1.6
	comp=Z,1.9nm,0.8s,mb4.1,baz=315,slow=9.3,SNR=3.9						
SCHQ				LR	LR	19 03 44.6	
	comp=Z,104nm,18.6s,MS3.8,baz=333,slow=36						
SCHQ	Schefferville	45.91	54	P	P	18 44 58.9	+1.6
SCHQ				LR	LR	19 03 44.6	
BOD	Bodaibo	46.75	313	⇓*i*P	P	18 45 03.2	-0.8
BOD				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
OXF	Oxford	47.84	89	P	P	18 45 11.0	-1.9
OXF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.2						
OXF	Oxford	47.84	89	P	P	18 45 11.0	-1.9
	comp=Z,29nm,1.1s,mb5.2						
MDJ	Mudanjiang	48.05	291	P	P	18 45 13.5	-0.8
MDJ				PCP	PcP	18 46 41.8	-0.6
MDJ				PP	PP	18 47 05.3	-0.5
MDJ				SCP		18 50 36.5	
MDJ				PCS		18 50 37.8	
MDJ				S	S	18 52 11.1	+1.1
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,159nm,6.0s						
MDJ				LR	LR		
	comp=N,207nm,23.7s						
MDJ				LR	LR		
	comp=E,121nm,28.9s						
MDJ				LR	LR		
	comp=Z,145nm,22.6s,MS3.9						
SCO	Scoresbysund	49.03	20	*i* P	P	18 45 22.8	+1.2
BINY	Binghamton	49.75	72	*e*P	P	18 45 26.5	-1.0
	comp=Z,12nm,0.8s,mb5.0						
CN2	Changchun	50.77	292	*e*P	P	18 45 34.4	-0.8
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
ARCES	ARCESS Array B	54.68	1	P	P	18 46 03.9	-0.1
	comp=Z,1.5nm,0.6s,mb4.2,baz=1.7,slow=7.3,SNR=13						
TLY	Talaya	55.33	313	*c i*P	P	18 46 09.1	+0.1
TLY				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.8						
ZAK	Zakamensk	56.46	312	*e*P	P	18 46 16.9	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
ULN	Ulaanbaatar	56.73	307	*e*P	P	18 46 18.4	-0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ULN	Ulaanbaatar	56.73	307	*e*P	P	18 46 18.4	-0.7
	comp=Z,4.8nm,0.9s,mb4.5						
SONM	Songino Array	57.04	308	P	P	18 46 21.9	+0.5
	comp=Z,9.5nm,0.8s,mb4.9,baz=41,slow=7.7,SNR=64						
SONM				PcP	PcP	18 47 17.3	+1.2
	comp=Z,2.8nm,0.9s,baz=28,slow=3.3,SNR=3.7						
HHC	Hu-ho-hao-te	59.93	299	⇑P	P	18 46 42.0	+0.4
HHC				AP	pP	18 46 48.8	-0.6
HHC				XP	sP	18 46 52.3	+0.1
HHC				PCP	PcP	18 47 26.8	-0.7
HHC				PP	PP	18 48 54.8	-1.0
HHC				SCP		18 51 25.9	
HHC				PCS		18 51 28.3	
HHC				S	S	18 54 52.8	+2.4
HHC				PS	PS	18 55 09.4	+0.5
HHC				SCS	ScS	18 56 29.1	+2.5
HHC				SS	SS	18 58 48.3	+0.2
HHC				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.8						
HHC				AMB	AMB		
	comp=Z,58nm,4.8s						
HHC				LR	LR		
	comp=N,152nm,13.1s,MS4.5						
HHC				LR	LR		
	comp=E,157nm,14.3s,MS4.5						
NVS	Novosibirsk	60.23	326	*e*P	P	18 46 41.9	-1.5
NVS				pmax	pmax		
	comp=N,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ZAL	Zalesovo	60.50	325	P	P	18 46 46.0	+0.7
	comp=Z,5.3nm,1.0s,mb4.6,baz=82,slow=7.0,SNR=20						
NB2	NORSAR Subarra	62.57	8	P	P	18 46 59.4	+0.3
	comp=Z,2.6nm,0.8s,mb4.4,baz=350,slow=6.5						
NB2	NORSAR Subarra	62.57	8	P	P	18 46 59.4	+0.3
NB2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
NOA	NORSAR Array B	62.57	8	P	P	18 46 59.5	+0.3
	comp=Z,1.9nm,0.6s,mb4.4,baz=350,slow=6.7,SNR=9.9						
FINES	FINESS Array B	62.81	0	P	P	18 47 00.7	0.0
	comp=Z,1.3nm,0.7s,mb4.2,baz=14,slow=7.9,SNR=7.1						
HFS	Hagfors	63.66	7	P	P	18 47 06.7	+0.5
	comp=Z,3.7nm,0.7s,mb4.5,baz=45,slow=4.2,SNR=16						
CHKZ	Chkalovo	64.84	333	*e*P	P	18 47 12.8	-1.1
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
CHKZ	Chkalovo	64.84	333	*e*P	P	18 47 12.8	-1.2
	comp=Z,5.6nm,0.8s,mb4.7						
KURK	Kurchatov	65.22	327	*e*P	P	18 47 16.0	-0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
KURK	Kurchatov	65.22	327	*e*P	P	18 47 16.0	-0.5
	comp=Z,6.2nm,1.3s,mb4.5						
BVAR	Borovoye Array	65.49	333	P	P	18 47 18.5	+0.3
	comp=Z,4.2nm,0.7s,mb4.6,baz=34,slow=5.3,SNR=18						
EKA	Eskdalemuir Ar	66.29	18	P	P	18 47 24.4	+1.2
	comp=Z,3.1nm,0.8s,mb4.4,baz=352,slow=5.9,SNR=3.7						
WHN	Wuhan	66.52	290	*e*P	P	18 47 25.0	-0.1
XAN	Xi'an	66.55	296	P	P	18 47 25.1	-0.2
XAN				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.4						
GTA	Gaotai	66.61	306	P	P	18 47 25.6	+0.1
GTA				AP	pP	18 47 33.5	+0.2
GTA				XP	sP	18 47 35.9	-0.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,108nm,7.3s						
GTA				LR	LR		
	comp=N,262nm,18.7s,MS4.7						
GTA				LR	LR		
	comp=E,310nm,18.4s,MS4.7						
GTA				LR	LR		
	comp=Z,488nm,17.6s,MS4.8						
WMQ	Urumqi	68.02	317	*e*P	P	18 47 36.0	+1.6
WMQ				XP	sP	18 47 45.0	0.0
WMQ				PP	PP	18 50 08.0	+1.6
WMQ				S	S	18 56 33.0	+2.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,178nm,20.0s,MS4.4						
WMQ				LR	LR		
	comp=E,156nm,20.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,145nm,18.0s,MS4.2						
OBN	Obninsk	68.87	354	⇑*e*P	P	18 47 35.8	-3.6
OBN				*e*S	S	18 56 39.2	-1.3
OBN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
ENH	Enshi	69.27	293	*e*P	P	18 47 41.4	-0.9
	comp=Z,11nm,1.3s,mb4.6						
BSEG	Bad Segeberg	69.51	10	*e*P	P	18 47 44.9	+1.5
CLZ	Clausthal	71.59	11	*e*P	P	18 47 57.8	+1.8
	comp=Z,20nm,1.6s,mb4.8						
CLL	Collm	72.37	9	*e*P	P	18 48 02.0	+1.3
CLL				*e*		18 48 15.0	
CLL	Collm	72.37	9	P	P	18 48 02.0	+1.3
CLL				*e**SP	sP	18 48 10.0	-1.3
MOX	Moxa	72.89	10	*e*P	P	18 48 05.0	+1.4
MOX				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
MOX	Moxa	72.89	10	*e*P	P	18 48 05.0	+1.4
	comp=Z,10.0nm,1.2s,mb4.6						
MOX	Moxa	72.89	10	*i* P	P	18 48 05.0	+1.4
	comp=Z,logA/T=0.9,mb4.6						
TNS	Taunus Mts	72.97	12	*e*P	P	18 48 05.1	+1.0
TNS				pmax	pmax		
	comp=Z,21nm,1.9s,mb4.7						
TNS	Taunus Mts	72.97	12	*e*P	P	18 48 05.1	+1.0
	comp=Z,21nm,1.9s,mb4.7						
AKASG	Malin Array Be	73.56	358	P	P	18 48 07.6	+0.1
	comp=Z,1.3nm,0.5s,mb4.1,baz=0.8,slow=5.8,SNR=10						
AAK	Ala-Archa	73.70	325	*e*P	P	18 48 08.4	-0.1
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
AAK	Ala-Archa	73.70	325	*e*P	P	18 48 08.4	-0.1
	comp=Z,5.6nm,1.3s,mb4.3						
GRA1	Grafenberg Arr	73.80	10	*e*P	P	18 48 10.6	+1.7
	comp=Z,26nm,1.6s,mb4.9						
GRF	Grafenberg Arr	73.80	10	*e*P	P	18 48 10.6	+1.7
GRF				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.9						
GRF	Grafenberg Arr	73.80	10	*e*P	P	18 48 10.6	+1.7
GRF				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.9						
GRF	Grafenberg Arr	73.80	10	*e*P	P	18 48 10.6	+1.7
	comp=Z,26nm,1.6s,mb4.9						
GYA	Guiyang	73.81	293	⇓*i*P	P	18 48 09.8	+0.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
WET	Wettzell	74.50	9	*e*P	P	18 48 14.9	+1.9
WET				pmax	pmax		
	comp=Z,35nm,2.2s,mb4.9						
WET	Wettzell	74.50	9	*e*P	P	18 48 14.9	+1.9
	comp=Z,35nm,2.2s,mb4.9						
KHC	Kasperske Hory	74.58	9	*e*P	P	18 48 15.0	+1.6
KHC				*e*	pP	18 48 24.0	+2.7
KHC	Kasperske Hory	74.58	9	*e*P	P	18 48 15.0	+1.6
KHC				pP	pP	18 48 24.0	+2.7
VRAC	Vranov	74.63	7	P	P	18 48 15.4	+1.7
	comp=Z,1.4nm,0.8s,mb4.0,baz=21,slow=5.4,SNR=3.8						
BFO	Black Forest	74.82	13	*e*P	P	18 48 15.0	+0.2
BFO				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
BFO	Black Forest	74.82	13	*e*P	P	18 48 15.0	+0.2
	comp=Z,8.0nm,1.4s,mb4.5						
GEC2	GERESS Array S	74.87	9	*e*P	P	18 48 16.4	+1.3
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
GEC2	GERESS Array S	74.87	9	*e*P	P	18 48 16.4	+1.3
	comp=Z,4.0nm,1.0s,mb4.3						
GERES	GERESS Array B	74.87	9	P	P	18 48 16.6	+1.4
	comp=Z,1.0nm,0.6s,mb3.9,slow=5.3,SNR=14						
GOF	Gofitskoye	78.30	348	⇓*i*P	P	18 48 36.0	+1.6
GOF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
SDV	Santo Domingo	78.56	91	LR	LR	19 25 03.3	
	comp=Z,71nm,19.4s,MS4.0,baz=234,slow=37						
LSA	Lhasa	78.61	307	*e*P	P	18 48 39.1	+2.6
KIV	Kislovodsk	79.42	348	*e*P	P	18 48 42.0	+1.4
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
KIV				pmax	pmax		
	comp=N,6.0nm,1.0s						
ESDC	Sonseca Array	81.10	24	P	P	18 48 51.9	+2.4
	comp=N,1.4nm,0.7s,mb4.0,baz=346,slow=4.9,SNR=5.8						
JIRN	Jiri	82.56	310	*e*P	P	18 48 59.1	+1.7
	comp=N,38nm,1.0s,mb5.4						
KKN	Kakani	82.83	310	*e*P	P	18 48 59.9	+1.1
	comp=N,13nm,0.9s,mb5.0						
GKN	Gorkha	82.92	311	*e*P	P	18 49 00.2	+0.9
	comp=N,27nm,1.0s,mb5.2						
PKI	Pulchoki	82.97	310	*e*P	P	18 49 00.2	+0.7
	comp=N,32nm,1.2s,mb5.2						
DMN	Daman	83.07	310	*e*P	P	18 49 01.4	+1.4
	comp=N,22nm,0.9s,mb5.2						
KOLN	Koldanda	83.56	312	*e*P	P	18 49 03.7	+1.2
	comp=N,20nm,1.1s,mb5.2						
BRTR	Keskin Array B	84.38	355	P	P	18 49 08.4	+2.1
	comp=N,0.7nm,0.6s,mb4.0,baz=18,slow=3.9,SNR=5.6						
CM31	Chiang Mai Arr	84.39	295	*e*P	P	18 49 07.7	+0.8
	comp=N,3.2nm,0.8s,mb4.5						
CMAR	Chiang Mai Arr	84.39	295	P	P	18 49 07.8	+1.0
	comp=N,5.0nm,0.8s,mb4.7,baz=11,slow=5.7,SNR=37						
CMAR				LR	LR	19 29 03.7	
	comp=N,52nm,18.9s,MS3.9,baz=140,slow=37						
LBTB	Lobatse	148.95	2	PKPbc	PKPdf	18 56 23.6	+2.2
	comp=N,2.5nm,0.6s,baz=317,slow=6.4,SNR=4.4						

IDC 20 19:01:13.7±7.4, 57.28N×154.63W, h55^{km}±70^{km}, mb3.0/2, mb1 3.4/5, mb1mx3.2/22, mbtmp3.3/5, ML3.4/3, Error ellipse: s-maj=54.3km s-min=41.1km az=27.0, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ILAR	Eielson Array	8.40	23	P	P	19 03 12.6	-2.8
	0.1nm,0.3s,baz=211,slow=14,SNR=8.7						
ILAR				S	S	19 04 46.6	-3.1
	baz=214,slow=24,SNR=2.4						
DLBC	Dease Lake	13.13	75	P	P	19 04 17.1	-2.1
	0.2nm,0.3s,baz=72,slow=7.4,SNR=3.3						
INK	Inuvik	14.57	32	P	P	19 04 37.0	-0.8
	0.1nm,0.3s,baz=248,slow=11,SNR=3.3						
YKA	Yellowknife Ar	20.49	59	P	P	19 05 46.2	-2.8
	0.4nm,0.7s,baz=270,slow=12,SNR=6.7						
SONM	Songino Array	55.71	306	P	P	19 10 44.3	-2.1
	0.4nm,0.8s,baz=45,slow=7.0,SNR=4.3						

IDC 20 19:05:22.4±1.9, 6.77S×130.48E, mb3.9/1, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, ML3.2/2, Error ellipse: s-maj=114.1km s-min=27.3km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.62	164	Pn	P	19 08 36.6	-2.9
	0.2nm,0.3s,baz=344,slow=12,SNR=20						
WRA				Sn	S	19 11 08.1	-4.6
	0.1nm,0.3s,baz=350,slow=22,SNR=4.7						
ASAR	Alice Springs	17.12	169	P	P	19 09 24.3	-0.4
	0.1nm,0.3s,baz=345,slow=13,SNR=10						
SONM	Songino Array	58.38	341	P	P	19 15 19.6	-2.3
	1.8nm,1.1s,baz=154,slow=5.9,SNR=7.7						

IDC ***20*** *19:06:02.2±2.5, 43.46N×105.26W, mb1 3.4/3, mb1mx3.2/20, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=50.9km s-min=10.2km az=152.0*

NEIC ***20*** *19:06:05.7±0.6, 43.77N×105.32W, ML3.1, Error ellipse: s-maj=7.9km s-min=4.6km az=94.0, Suspected Mining explosion.*

NEIC 60 km [35 miles] SSE of Gillette.

ISC 20 19:06:03.8±0.8, 43.80N±0.04×105.28W±0.09, n33, σ1^{s}05/36, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PHWY	Pilot Hill	2.50	183	*e*Pn	Pn	19 06 46.9	+0.6
PHWY				*e*Sn	Sn	19 07 18.7	+0.8
LAO	LASA Array	2.97	347	*e*Pn	Pn	19 06 53.4	+0.3
PDAR	Pinedale Array	3.29	253	Pn	Pn	19 06 57.7	+0.1
	2.3nm,0.3s,baz=81,slow=16,SNR=43						
PDAR				Lg		19 07 42.4	
	6.3nm,0.3s,baz=82,slow=34,SNR=6.5						
BW06	Boulder Array	3.29	253	*e*Pn	Pn	19 06 57.6	0.0
BW06				*e*Sn	Sn	19 07 40.1	+2.0
GCMT	Greycliff	3.71	304	*e*Pn	Pn	19 07 04.9	+1.4
LKWY	Lake	3.76	284	*e*Pn	Pn	19 07 00.5	-3.9
LOHW	Long Hollow	3.87	269	*e*Pn	Pn	19 07 06.9	+1.2
MOOW	Moose Ponds	3.96	271	*e*Pn	Pn	19 07 08.2	+1.1
WUWY	Wally Ulrich	3.97	268	*e*P	Pn	19 07 13.2	+5.9
SNOW	Snow King Moun	3.99	267	*e*Pn	Pn	19 07 11.4	+3.9
ISCO	Idaho Springs	4.00	184	*e*Pn	Pn	19 07 08.6	+0.8
ISCO				*e*Sn	Sn	19 08 05.9	+10
YFT	Old Faithful	4.05	281	Pg	Pg	19 07 20.0	-4.7
IMW	Indian Meadow	4.09	273	*e*Pn	Pn	19 07 09.6	+0.5
TPAW	Teton Pass	4.13	268	*e*Pn	Pn	19 07 10.8	+1.3
YMR	Madison River	4.18	284	*e*Pn	Pn	19 07 09.9	-0.4
AHID	Auburn Hatcher	4.37	258	*e*P	Pn	19 07 13.7	+0.6
DGMT	Dagmar	4.73	9	*e*P	Pn	19 07 18.9	+0.8
BOZ	Bozeman (W)	4.89	294	*e*Pn	Pn	19 07 18.5	-1.8
HWUT	Hardware Ranch	5.12	247	*e*Pn	Pn	19 07 22.7	-0.9
	4.4nm,0.4s						
LRM	Limekiln Ridge	5.49	294	*e*Pn	Pn	19 07 28.2	-0.6
JLU	Jordanelle	5.58	237	*e*Pn	Pn	19 07 29.0	-1.2
MPU	Maple Canyon	6.06	234	*e*Pn	Pn	19 07 36.2	-0.6
PV10	Paradox Valley	6.12	209	*e*Pn	Pn	19 07 38.2	+0.6
SRU	San Rafael	6.12	222	*e*Pn	Pn	19 07 36.5	-1.2
PV01	Paradox Valley	6.18	205	*e*Pn	Pn	19 07 38.2	-0.4
TMUT	Trail Mountain	6.32	227	*e*Pn	Pn	19 07 40.2	-0.4
CHMT	Chamberlain Mo	6.42	302	*e*Pn	Pn	19 07 41.0	-1.0
HLID	Hailey	6.63	271	*e*Pn	Pn	19 07 39.9	-5.0
DUG	Dugway	6.67	240	*e*Pn	Pn	19 07 42.9	-2.6
	3.9nm,0.9s						
MSU	Marysvale	7.41	227	*e*Pn	Pn	19 07 54.8	-1.1
ULM	Lac du Bonnet	9.10	42	Pn	P	19 08 15.7	-3.7
	0.6nm,0.3s,baz=228,slow=12,SNR=3.6						
ULM				Lg		19 10 49.3	
	0.3nm,0.3s,baz=131,slow=20,SNR=3.1						
YKA	Yellowknife Ar	19.51	347	P	P	19 10 34.8	-0.2
YKA	Yellowknife Ar	19.51	347	P	P	19 10 34.8	-0.2
	0.1nm,0.3s,baz=160,slow=12,SNR=3.7						

IDC 20 19:10:42.6±1.5, 9.60N×93.48E, mb3.6/3, mb1 3.9/4, mb1mx3.5/18, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=56.6km s-min=28.4km az=53.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.28	30	Pn	P	19 13 11.2	-3.3
	0.1nm,0.3s,baz=218,slow=15,SNR=9.1						
WRA	Warramunga Arr	49.79	126	P	P	19 19 37.7	-1.8
	0.8nm,0.6s,baz=305,slow=8.5,SNR=21						
ASAR	Alice Springs	51.52	131	P	P	19 19 50.2	-2.3
	0.3nm,0.5s,baz=303,slow=7.5,SNR=15						
GERES	GERESS Array B	76.12	318	P	P	19 22 32.6	-1.5
	0.2nm,0.4s,baz=90,slow=6.9,SNR=4.7						

MAN 20 19:53:09.6, 9.51N×125.73E, h5^{km}, mb3.8, ML2.5, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.36**	**318**	*i* P	Pg	19 53 17.2	+0.4
SCPH				*e*S	Sg	19 53 28.7	+6.9
BUTP	**Butuan**	**0.55**	**192**	*e*P	Pg	19 53 20.7	+0.1
BUTP				*e*S	Sg	19 53 33.4	+5.5
MSLP	**Maasin**	**1.06**	**306**	*e*P	Pb	19 53 29.8	-0.3
MSLP				*e*S	Sb	19 53 48.9	+4.8

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*JMA **20** 20:10:31.6±0.3, 25.19N×123.05E*
*TAP **20** 20:10:31.6, 24.57N×122.80E, h69^{km}±1^{km}, ML3.3*
ISC 20 20:10:32.0±2.5**, 24.8N**±0.4×**122.7E**±0.1**, h85**^{km}±25^{km}**, n5, σ0^{s}.26**/10**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**136**	P	**P**	**20 10 45.9**	**+0.2**
YOJ				*e*S	**S**	**20 10 56.0**	**0.0**
IRIF	**Iriomote-Funau**	**1.04**	**114**	P	**P**	**20 10 51.8**	**-0.2**
IRIF				*e*S	**S**	**20 11 06.8**	**-0.3**
JKRS	**Kuro-shima**	**1.31**	**113**	P	**P**	**20 10 55.9**	**+0.3**
JKRS				*e*S	**S**	**20 11 13.5**	**+0.4**
JIJ	**Ishigaki jima**	**1.38**	**106**	P	**P**	**20 10 56.2**	**-0.3**
JIJ				S	**S**	**20 11 14.4**	**-0.2**
JTJ	**Tarama**	**1.83**	**93**	P	**P**	**20 11 02.3**	**-0.1**
JTJ				*e*S	**S**	**20 11 25.0**	**+0.3**

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*IDC **20** 20:21:54.4±0.9, 35.68S×104.15W, mb4.5/11, mb1 4.7/11, mb1mx4.4/18, mbtmp4.5/11, MS4.5/14, Ms1 4.5/14, ms1mx4.3/17, Error ellipse: s-maj=31.8km s-min=20.4km az=23.0*
*NEIC **20** 20:21:55.5±0.6, 35.81S×104.14W, h10^{km}, mb4.6/13, Error ellipse: s-maj=19.2km s-min=11.3km az=212.0*
*BJI **20** 20:21:59.4, 35.80S×104.10W, h10^{km}*
ISC 20 20:21:54.1±0.8**, 35.8S**±0.1×**104.1W**±0.2**, h10**^{km}**, n52, σ0^{s}.90**/30**, mb4.4**/21**, MS4.6**/14**, 1C-1D, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**26.72**	**111**	P	**P**	**20 27 36.8**	**+1.4**
	5.1nm,0.8s,mb4.1,baz=268,slow=8.9,SNR=11						
PLCA				LR	LR	20 35 25.3	
	comp=Z,535nm,18.3s,MS4.1,baz=278,slow=30						
USHA	**Ushuaia**	**31.04**	**139**	LR	LR	20 37 36.0	
	comp=Z,2μm,20.6s,MS4.7,baz=277,slow=30						
LVC	**Limon Verde**	**33.23**	**76**	P	**P**	**20 28 33.7**	**+0.2**
	18nm,1.0s,mb5.0,baz=242,slow=8.8,SNR=21						
LVC				LR	LR	20 38 32.6	
	comp=Z,647nm,18.4s,MS4.4,baz=239,slow=30						
LVC	**Limon Verde**	**33.23**	**76**	*e*P	**P**	**20 28 33.5**	**0.0**
	20nm,1.0s,mb5.0						
TRQA	**Tornquist**	**33.56**	**107**	*e*P	**P**	**20 28 36.0**	**-0.2**
	1.8nm,0.6s,mb4.2						
ARE	**Arequipa**	**34.80**	**65**	*e*P	**P**	**20 28 47.0**	**-0.1**
LPAZ	**La Paz**	**37.42**	**68**	P	**P**	**20 29 10.1**	**+0.9**
	36nm,1.3s,mb5.0,baz=239,slow=7.0,SNR=25						
LPAZ				LR	LR	20 41 35.4	
	comp=Z,420nm,18.6s,MS4.3,baz=34,slow=32						
LPAZ	**La Paz**	**37.42**	**68**	*e*P	**P**	**20 29 09.6**	**+0.4**
	24nm,1.2s,mb4.9						
OTAV	**Otavalo**	**43.06**	**39**	*e*P	**P**	**20 29 55.2**	**-0.9**
	20nm,1.4s,mb4.7						
ROSC	**El Rosal**	**49.13**	**41**	P	**P**	**20 30 44.6**	**+0.5**
	21nm,1.0s,mb5.1,baz=270,slow=9.1,SNR=12						
ROSC				LR	LR	20 47 45.2	
	comp=Z,796nm,20.7s,MS4.7,baz=0.1,slow=32						
BDFB	**Brasilia**	**53.64**	**83**	P	**P**	**20 31 17.3**	**-0.8**
	8.3nm,0.8s,mb4.7,baz=254,slow=7.3,SNR=14						
BDFB				LR	LR	20 52 51.4	
	comp=Z,536nm,18.6s,MS4.6,baz=118,slow=35						
BAO	**Brasilia Array**	**53.66**	**83**	P	**P**	**20 31 17.8**	**-0.5**
SDV	**Santo Domingo**	**54.48**	**42**	*e*P	**P**	**20 31 19.4**	**-5.0**
	8.6nm,0.9s,mb4.7						
VNDA	**Vanda**	**56.25**	**195**	LR	LR	20 51 20.8	
	comp=Z,409nm,18.6s,MS4.5,baz=97,slow=31						
TXAR	**Lajitas Array**	**64.75**	**0**	P	**P**	**20 32 34.3**	**-0.7**
	2.6nm,0.8s,mb4.3,baz=183,slow=9.6,SNR=18						
TXAR				LR	LR	20 55 07.6	
	comp=Z,198nm,20.7s,MS4.3,baz=170,slow=31						
LRAL	**Lakeview Retre**	**70.30**	**15**	*e*P	**P**	**20 33 08.7**	**-1.0**
	6.1nm,0.9s,mb4.5						
WMOK	**Wichita Mounta**	**70.32**	**5**	*e*P	**P**	**20 33 11.0**	**+1.2**
	2.9nm,0.9s,mb4.2						
ANMO	**Albuquerque**	**70.39**	**358**	P	**P**	**20 33 12.3**	**+2.1**
	2.0nm,1.1s,mb4.0						
SYO	**Syowa Base**	**72.14**	**167**	⇓P	**P**	**20 33 19.9**	**-0.3**
SYO	**Syowa Base**	**72.14**	**167**	⇑pP	pP	20 33 23.7	+0.3
SDCO	**Great Sand Dun**	**73.15**	**359**	*e*P	**P**	**20 33 29.4**	**+2.7**
	3.2nm,0.8s,mb4.3						
CCM	**Cathedral Cave**	**74.41**	**11**	*e*P	**P**	**20 33 33.1**	**-0.9**
	7.5nm,0.9s,mb4.6						
NVAR	**Mina Array Bea**	**74.98**	**349**	P	**P**	**20 33 37.8**	**+0.5**
	4.3nm,1.0s,mb4.3,baz=184,slow=7.9,SNR=9.2						
NVAR				LR	LR	20 59 13.6	
	comp=Z,227nm,19.7s,MS4.5,baz=305,slow=30						
MAW	**Mawson**	**76.48**	**175**	LR	LR	21 03 48.2	
	comp=Z,288nm,21.9s,MS4.5,baz=37,slow=33						
BW06	**Boulder Array**	**78.32**	**356**	P	**P**	**20 33 55.3**	**-0.6**
	4.9nm,0.9s,mb4.4						
PDAR	**Pinedale Array**	**78.32**	**356**	P	**P**	**20 33 55.5**	**-0.4**
	1.5nm,0.8s,mb4.0,baz=162,slow=4.7,SNR=15						
TPAW	**Teton Pass**	**79.13**	**355**	*e*P	**P**	**20 34 00.3**	**0.0**
LOHW	**Long Hollow**	**79.22**	**355**	P	**P**	**20 33 59.8**	**-1.0**
HLID	**Hailey**	**79.51**	**352**	*e*P	**P**	**20 34 02.4**	**+0.1**
	7.6nm,1.0s,mb4.6						
MCMT	**McKenzie Canyo**	**80.61**	**354**	*e*P	**P**	**20 34 09.3**	**+1.1**
NEW	**Newport**	**84.46**	**351**	P	**P**	**20 34 28.4**	**+0.5**
	2.9nm,0.9s,mb4.4,baz=157,slow=7.7,SNR=3.6						
NEW	**Newport**	**84.46**	**351**	*e*P	**P**	**20 34 27.9**	**0.0**
	8.9nm,1.2s,mb4.8						
ULM	**Lac du Bonnet**	**85.95**	**5**	P	**P**	**20 34 34.8**	**-0.6**
	0.8nm,0.5s,mb4.2,baz=198,slow=3.2,SNR=2.4						
STKA	**Stephens Creek**	**88.79**	**231**	LR	LR	21 07 12.9	
	comp=Z,596nm,18.9s,MS5.0,baz=302,slow=31						
SCHQ	**Schefferville**	**95.75**	**21**	LR	LR	21 12 47.0	
	comp=Z,218nm,19.4s,MS4.6,baz=199,slow=32						
YKA	**Yellowknife Ar**	**98.28**	**355**	P	**P**	**20 35 31.0**	**-1.3**
	0.1nm,0.6s,mb3.5,baz=180,slow=5.6,SNR=2.9						
YKA				LR	LR	21 14 25.0	
	comp=Z,167nm,20.7s,MS4.5,baz=195,slow=32						
ASAR	**Alice Springs**	**99.36**	**232**	LR	LR	21 15 36.8	
	comp=Z,417nm,18.7s,MS5.0,baz=178,slow=32						
CLL	**Collm**	**133.29**	**50**	*e*PKIKP	PKPdf	20 41 11.0	-2.1
CLL				*e*		20 41 33.0	
GERES	**GERESS Array B**	**133.44**	**54**	PKP	PKPdf	20 41 10.1	-3.3
	0.3nm,0.9s,baz=225,slow=4.2,SNR=2.2						
ARCES	**ARCESS Array B**	**136.65**	**23**	PKP	PKPdf	20 41 17.0	-1.8
	2.5nm,0.9s,baz=284,slow=2.9,SNR=2.2						
FINES	**FINESS Array B**	**139.69**	**35**	PKhKP		20 41 17.1	
	3.5nm,1.2s,baz=311,slow=1.8,SNR=4.0						
FINES				PKP	PKPdf	20 41 20.9	-3.7
	1.4nm,1.0s,baz=264,slow=1.7,SNR=3.3						
FINES	**FINESS Array B**	**139.69**	**35**	PKP	PKPdf	20 41 17.1	-7.5
FINES				PKP	PKPdf	20 41 20.9	-3.7
AKASG	**Malin Array Be**	**143.52**	**51**	PKhKP		20 41 26.1	
	0.6nm,0.6s,baz=265,slow=3.1,SNR=4.6						
EIL	**Elat**	**145.22**	**88**	*e*PKPdf	PKPdf	20 41 33.2	-1.9
BRTR	**Keskin Array B**	**146.59**	**70**	PKPbc	PKPbc	20 41 36.8	+1.3
	5.6nm,0.9s,baz=207,slow=2.8,SNR=24						
OBN	**Obninsk**	**146.91**	**42**	*e*PKPdf	PKPdf	20 41 36.7	-0.5
MALT	**Malatya**	**150.12**	**74**	*e*PKPbc	PKPdf	20 41 46.3	+3.4
CMAR	**Chiang Mai Arr**	**153.30**	**236**	PKP	PKPdf	20 41 46.5	-1.6
	0.5nm,0.8s,baz=346,slow=3.7,SNR=3.7						
CMAR				PKPbc	PKPdf	20 41 55.4	+7.3
	0.8nm,1.0s,baz=226,slow=1.9,SNR=5.3						
ULN	**Ulaanbaatar**	**154.00**	**307**	PKPbc	PKPdf	20 41 55.0	+6.8
SONM	**Songino Array**	**154.43**	**308**	PKP	PKPdf	20 41 47.9	-0.9
	1.2nm,0.9s,SNR=7.6						
SONM				PKPbc	PKPdf	20 41 57.0	+8.2
	3.1nm,0.9s,baz=86,slow=1.8,SNR=15						
GTA	**Gaotai**	**160.71**	**288**	PKP	PKPdf	20 42 02.3	+5.5
BVAR	**Borovoye Array**	**162.31**	**11**	PKPab	PKPab	20 42 44.1	-0.5
	0.9nm,0.8s,baz=14,slow=5.9,SNR=2.5						

MAN 20 20:22:11.1, 9.82N×125.48E, h21^{km}, mb3.8, ML2.5, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.04**	**167**	⇑*i*P	Pb	20 22 13.9	-0.8
SCPH				*i* S	Sb	20 22 15.2	-2.0
MSLP	**Maasin**	**0.69**	**297**	*e*P	Pb	20 22 24.3	0.0
MSLP				*e*S	Sb	20 22 34.2	+0.9
BUTP	**Butuan**	**0.85**	**171**	*e*P	Pb	20 22 27.5	+0.4
BUTP				*e*S	Sb	20 22 40.5	+2.4

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*CSEM **20** 20:28:34.3±0.1, 59.47N×30.26W, h10^{km}, mb4.5/18, Error ellipse: s-maj=4.3km s-min=1.8km az=21.0*
*IDC **20** 20:28:35.5±0.7, 59.38N×30.32W, mb3.9/18, mb1 4.1/21, mb1mx4.0/29, mbtmp4.0/21, ML4.0/3, MS3.8/12, Ms1 3.8/12, ms1mx3.6/25, Error ellipse: s-maj=21.8km s-min=11.5km az=10.0*
*NEIC **20** 20:28:36.9±0.3, 59.44N×30.25W, h10^{km}, mb4.5/23, Error ellipse: s-maj=9.8km s-min=4.4km az=205.0*
*BJI **20** 20:28:37.2, 59.94N×30.02W, h10^{km}, mB5.3, mb4.4*
ISC 20 20:28:35.0±0.3**, 59.46N**±0.06×**30.28W**±0.08**, h10**^{km}**, n88, σ0^{s}.97**/85**, mb4.2**/36**, MS3.7**/10**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.76**	**35**	Pn	**Pn**	**20 30 16.4**	**-0.4**
	15nm,0.3s,baz=207,slow=8.0,SNR=56						
BORG				Sn	**Sn**	**20 31 30.3**	**-4.3**
	3.7nm,0.3s,baz=108,slow=22,SNR=6.7						
BORG				LR	LR	20 32 09.3	
	comp=Z,494nm,20.3s,baz=208,slow=31						
BORG	**Borgarnes**	**6.76**	**35**	*e*P	**Pn**	**20 30 15.9**	**-0.9**
	142nm,0.8s						
BORG	**Borgarnes**	**6.76**	**35**	*e*P	**Pn**	**20 30 15.9**	**-0.9**
	142nm,0.8s						
SFJ	**Sondre**	**11.82**	**318**	*e*P	**P**	**20 31 26.1**	**-0.5**
	73nm,1.4s						
SFJ	**Sondre**	**11.82**	**318**	*e*P	**P**	**20 31 26.1**	**-0.4**
	73nm,1.4s						
SUMG	**Summit**	**13.56**	**349**	*e*P	**P**	**20 31 47.5**	**-2.0**
	20nm,0.9s						
SUMG	**Summit**	**13.56**	**349**	*e*P	**P**	**20 31 47.5**	**-2.0**
	20nm,0.9s						
JMIC	**Jan Mayen**	**14.60**	**29**	LR	LR	20 36 20.2	
	comp=Z,160nm,20.7s,baz=264,slow=32						
EKA	**Eskdalemuir Ar**	**15.13**	**94**	Pn	**P**	**20 32 09.4**	**-0.9**
	0.2nm,0.3s,baz=299,slow=10,SNR=4.0						
FRB	**Frobisher Bay**	**18.49**	**300**	P	**P**	**20 32 51.6**	**-1.1**
	0.3nm,0.3s,baz=83,slow=10,SNR=9.9						
FRB				LR	LR	20 38 58.7	
	comp=Z,518nm,18.9s,baz=127,slow=34						
ROSF	**Rostrenen**	**19.27**	**113**	*e*P	**P**	**20 33 01.8**	**-0.3**
QUIF	**Quistinic**	**19.62**	**114**	*e*P	**P**	**20 33 05.9**	**-0.2**
	73nm,1.2s						
SGMF	**Saint Gilles**	**19.66**	**113**	*e*P	**P**	**20 33 06.8**	**+0.2**
SCHQ	**Schefferville**	**20.18**	**273**	P	**P**	**20 33 11.8**	**-0.3**
	5.5nm,0.8s,baz=64,slow=11,SNR=10						
SCHQ	**Schefferville**	**20.18**	**273**	*e*P	**P**	**20 33 12.1**	**-0.1**
	18nm,1.1s						
SCHQ	**Schefferville**	**20.18**	**273**	*e*P	**P**	**20 33 12.1**	**-0.1**
	18nm,1.1s						
FLN	**La Foliniere**	**20.30**	**109**	*e*P	**P**	**20 33 12.6**	**-0.9**
	62nm,1.0s						
FLN				*e*R			
	78nm,17.0s						
GRR	**Gorron**	**20.38**	**110**	*e*P	**P**	**20 33 14.8**	**+0.5**
NOA	**NORSAR Array B**	**20.41**	**68**	P	**P**	**20 33 14.4**	**-0.1**
	1.8nm,0.9s,baz=283,slow=10,SNR=3.7						
NOA				LR	LR	20 39 43.6	
	comp=Z,84nm,18.3s,MS3.1,baz=300,slow=33						
LDF	**La Druitiere**	**20.59**	**109**	*e*P	**P**	**20 33 15.6**	**-0.9**
	52nm,1.0s						
LOF	**Lofoten**	**20.74**	**47**	*e*	**P**	**20 33 30.0**	**+12**
MOR8	**Moi Rana**	**21.09**	**53**	*e*	**P**	**20 33 33.8**	**+12**
SNF	**Seneffe**	**21.53**	**99**	P	**P**	**20 33 24.6**	**-1.5**
BAIF	**Baives**	**21.77**	**100**	*e*P	**P**	**20 33 27.9**	**-0.6**
	66nm,1.2s,mb4.7						
HFS	**Hagfors**	**21.83**	**69**	P	**P**	**20 33 31.2**	**+2.2**
	2.0nm,0.8s,mb3.6,baz=274,slow=19,SNR=2.6						
DOU	**Dourbes**	**21.94**	**100**	P	**P**	**20 33 29.6**	**-0.6**
MFF	**Saint Martin d**	**21.99**	**112**	*e*P	**P**	**20 33 30.3**	**-0.4**
	80nm,1.3s,mb4.7						
GIVF	**Givet**	**22.05**	**100**	*e*P	**P**	**20 33 30.6**	**-0.7**
TCF	**Toulx Ste Croi**	**23.34**	**110**	*e*P	**P**	**20 33 43.6**	**-0.2**
	47nm,1.2s,mb4.5						
SSF	**Saint Saulge**	**23.42**	**107**	*e*P	**P**	**20 33 44.8**	**+0.2**
	15nm,0.9s,mb4.4						
BGF	**Bois d'Agland**	**23.45**	**109**	*e*P	**P**	**20 33 44.6**	**-0.3**
	28nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**23.53**	**108**	*e*P	**P**	**20 33 45.6**	**-0.1**
	25nm,1.0s,mb4.3						
LFF	**La Frestale**	**23.64**	**114**	*e*P	**P**	**20 33 47.6**	**+0.8**
	16nm,0.8s,mb4.2						
SMF	**Signal de Mont**	**23.87**	**107**	*e*P	**P**	**20 33 48.9**	**-0.1**
	49nm,1.3s,mb4.5						
CDF	**Champ du Feu**	**24.37**	**100**	*e*P	**P**	**20 33 52.9**	**-1.0**
	27nm,1.2s,mb4.2						
HINF	**Hinteralfeld**	**24.55**	**102**	*e*P	**P**	**20 33 55.7**	**0.0**
CABF	**La Chapelle**	**25.00**	**105**	*e*P	**P**	**20 33 59.7**	**-0.2**
ARCES	**ARCESS Array B**	**25.06**	**43**	P	**P**	**20 34 02.6**	**+2.3**
	2.9nm,0.8s,mb3.8,baz=263,slow=9.8,SNR=5.0						
ARCES				LR	LR	20 42 01.9	
	comp=Z,88nm,18.5s,MS3.3,baz=199,slow=32						
MOX	**Moxa**	**25.17**	**92**	*e*P	**P**	**20 34 02.1**	**+0.6**
	18nm,1.6s,mb4.3						
MOX				LR	LR		
	comp=Z,200nm,15.0s,MS3.8						
MOX	**Moxa**	**25.17**	**92**	*i* P	**P**	**20 34 02.1**	**+0.6**
	comp=Z,logA/T=1.1,mb4.4						
MOX				QM		20 43 06.0	
MOX				RM		20 44 52.0	
EVO	**Evora**	**25.30**	**136**	*e*P	**P**	**20 34 03.2**	**+0.3**
	comp=Z,37nm,1.2s,mb4.5						
EVO				*e*R			
	comp=Z,404nm,21.5s						
CLL	**Collm**	**25.49**	**89**	P	**P**	**20 34 08.0**	**+3.5**
CLL				*e*		20 35 13.0	
ESDC	**Sonseca Array**	**25.84**	**128**	P	**P**	**20 34 08.4**	**+0.5**
	comp=Z,11nm,1.0s,mb4.3,baz=326,slow=9.3,SNR=17						
ESLA	**Sonseca Array**	**25.84**	**128**	*e*P	**P**	**20 34 09.8**	**+1.9**
	comp=Z,4.9nm,1.0s,mb4.0						
ESLA	**Sonseca Array**	**25.84**	**128**	*e*P	**P**	**20 34 09.8**	**+1.9**
	comp=Z,4.9nm,1.0s,mb4.0						
ORIF	**Oris-en-Rattie**	**26.11**	**108**	*e*P	**P**	**20 34 10.1**	**-0.2**
	comp=Z,34nm,1.2s,mb4.4						
ORIF				*e*R			
	comp=Z,208nm,17.0s						
LPG	**La Plagne**	**26.11**	**106**	*e*P	**P**	**20 34 10.8**	**+0.4**
KAF	**Kangasniemi**	**27.00**	**60**	*e*p	**P**	**20 34 19.9**	**+1.6**
	baz=309,slow=12						
FINES	**FINESS Array B**	**27.13**	**61**	P	**P**	**20 34 19.5**	**-0.1**
	comp=Z,2.3nm,0.8s,mb3.8,baz=304,slow=6.9,SNR=9.0						
FINES				LR	LR	20 45 25.0	
	comp=Z,35nm,18.1s,MS3.0,baz=254,slow=37						
GERES	**GERESS Array B**	**27.35**	**93**	P	**P**	**20 34 21.9**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.2,baz=292,slow=7.2,SNR=4.8						
RES	**Resolute Bay**	**27.50**	**329**	*e*P	**P**	**20 34 22.1**	**-0.7**
	comp=Z,11nm,1.2s,mb4.3						
FCC	**Fort Churchill**	**31.65**	**297**	*e*P	**P**	**20 34 59.4**	**-0.6**
	comp=Z,15nm,1.2s,mb4.7						
FCC	**Fort Churchill**	**31.65**	**297**	*e*P	**P**	**20 34 59.4**	**-0.6**
	comp=Z,15nm,1.2s,mb4.7						
AKASG	**Malin Array Be**	**34.07**	**78**	P	**P**	**20 35 20.7**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.0,baz=306,slow=8.4,SNR=6.9						
EYMN	**Ely**	**36.70**	**280**	*e*P	**P**	**20 35 46.1**	**+2.6**
	comp=Z,1.8nm,0.6s,mb4.1						
ULM	**Lac du Bonnet**	**37.38**	**286**	P	**P**	**20 35 49.7**	**+0.5**
	comp=Z,2.5nm,0.9s,mb4.1,baz=36,slow=11,SNR=3.6						
ULM				LR	LR	20 49 51.6	
	comp=Z,140nm,20.4s,MS3.8,baz=335,slow=34						
ULM	**Lac du Bonnet**	**37.38**	**286**	P	**P**	**20 35 49.7**	**+0.5**
ULM				LR	LR	20 49 51.6	
YKA	**Yellowknife Ar**	**38.29**	**312**	P	**P**	**20 35 56.5**	**-0.3**
	comp=Z,2.1nm,0.7s,mb4.0,baz=56,slow=9.1,SNR=32						
YKA				PcP	PcP	20 38 11.1	-0.2
	comp=Z,0.5nm,0.6s,baz=45,slow=3.1,SNR=7.3						
YKA				LR	LR	20 50 51.0	
	comp=Z,266nm,19.2s,MS4.1,baz=45,slow=35						
YKA	**Yellowknife Ar**	**38.29**	**312**	P	**P**	**20 35 56.5**	**-0.3**
YKA				PcP	PcP	20 38 11.2	-0.2
YKA				LR	LR	20 50 51.0	
YKA	**Yellowknife Ar**	**38.29**	**312**	PcP	PcP	20 38 11.1	-0.2
INK	**Inuvik**	**41.01**	**327**	P	**P**	**20 36 19.1**	**-0.1**
	comp=Z,2.2nm,1.1s,mb3.7,baz=44,slow=12,SNR=3.9						
INK	**Inuvik**	**41.01**	**327**	*e*P	**P**	**20 36 18.5**	**-0.7**
	comp=Z,5.3nm,1.3s,mb4.0						
INK	**Inuvik**	**41.01**	**327**	*e*P	**P**	**20 36 18.5**	**-0.7**
	comp=Z,5.2nm,1.3s,mb4.0						
BRTR	**Keskin Array B**	**43.91**	**87**	P	**P**	**20 36 45.4**	**+2.3**
	comp=Z,1.0nm,0.8s,mb3.6,baz=342,slow=7.8,SNR=4.9						
DAWY	**Dawson**	**45.68**	**324**	*e*P	**P**	**20 36 57.4**	**+0.4**
DAWY	**Dawson**	**45.68**	**324**	*e*P	**P**	**20 36 57.4**	**+0.4**
DLBC	**Dease Lake**	**46.71**	**315**	P	**P**	**20 37 07.6**	**+2.4**
	comp=Z,1.5nm,0.9s,mb3.9,baz=63,slow=9.8,SNR=4.0						
DLBC				LR	LR	20 54 41.5	
	comp=Z,157nm,20.4s,MS4.0,baz=330,slow=34						
DLBC	**Dease Lake**	**46.71**	**315**	P	**P**	**20 37 07.6**	**+2.4**
DLBC				LR	LR	20 54 41.5	
ILAR	**Eielson Array**	**47.25**	**329**	P	**P**	**20 37 09.8**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.3,baz=22,slow=8.0,SNR=17						
ILAR				LR	LR	20 56 22.8	
	comp=Z,157nm,18.2s,MS4.0,baz=274,slow=35						
IMA	**Indian Mountai**	**47.91**	**333**	*e*P	**P**	**20 37 15.1**	**+0.5**
IMA	**Indian Mountai**	**47.91**	**333**	*e*P	**P**	**20 37 15.1**	**+0.5**
NEW	**Newport**	**48.82**	**298**	LR	LR	20 57 17.3	
	comp=Z,324nm,20.7s,MS4.3,baz=245,slow=35						
PDAR	**Pinedale Array**	**49.34**	**287**	P	**P**	**20 37 25.8**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=68,slow=7.0,SNR=6.1						
WMOK	**Wichita Mounta**	**50.07**	**272**	*e*P	**P**	**20 37 31.1**	**-0.6**
	comp=Z,6.1nm,1.3s,mb4.5						
WMOK	**Wichita Mounta**	**50.07**	**272**	*e*P	**P**	**20 37 31.1**	**-0.6**
	comp=Z,6.1nm,1.3s,mb4.5						
BBB	**Bella Bella**	**50.61**	**308**	LR	LR	20 59 08.2	
	comp=Z,212nm,18.1s,MS4.2,baz=226,slow=36						
TNA	**Tin City**	**51.33**	**339**	P	**P**	**20 37 41.5**	**+0.7**
TNA	**Tin City**	**51.33**	**339**	P	**P**	**20 37 41.5**	**+0.7**
MNTX	**Cornudas Mount**	**55.84**	**275**	*e*P	**P**	**20 38 14.3**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.1						
MNTX	**Cornudas Mount**	**55.84**	**275**	*e*P	**P**	**20 38 14.3**	**-0.3**
	comp=Z,1.5nm,0.8s,mb4.1						
KURK	**Kurchatov**	**56.05**	**46**	*e*P	**P**	**20 38 14.8**	**-1.0**
	comp=Z,4.6nm,1.0s,mb4.5						
KURK	**Kurchatov**	**56.05**	**46**	*e*P	**P**	**20 38 14.8**	**-1.0**
	comp=Z,4.6nm,1.0s,mb4.5						
DBIC	**Dimbokro**	**56.13**	**149**	P	**P**	**20 38 14.7**	**-2.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=284,slow=5.0,SNR=4.3						
TXAR	**Lajitas Array**	**56.87**	**272**	P	**P**	**20 38 22.2**	**+0.2**
	comp=Z,0.5nm,0.6s,mb3.7,baz=51,slow=8.0,SNR=7.1						
WMQ	**Urumqi**	**65.18**	**45**	*e*P	**P**	**20 39 20.4**	**+2.5**
SONM	**Songino Array**	**67.35**	**30**	P	**P**	**20 39 31.2**	**-0.6**
	comp=Z,0.4nm,0.7s,mb3.6,baz=320,slow=5.8,SNR=3.7						
MDJ	**Mudanjiang**	**74.97**	**15**	P	**P**	**20 40 16.8**	**-0.7**
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,109nm,4.8s						
CN2	**Changchun**	**75.17**	**18**	*e*P	**P**	**20 40 18.9**	**+0.2**

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*JMA **20** 20:47:51.8±0.3, 25.39N×127.62E, h58^{km}, M3.0*
*IDC **20** 20:47:59.1±1.0, 27.49N×127.99E, mb3.7/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=73.9km s-min=13.8km az=68.0*
ISC 20 20:47:50.3±0.9**, 25.31N**±0.06×**127.73E**±0.05**, h58**^{km}**, n15, σ0^{s}.86**/23**, mb3.4**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.82**	**1**	P	**P**	**20 48 06.5**	**+0.5**
JJT2				*e*S	**S**	**20 48 17.7**	**-0.1**
NAH1	**Naha**	**0.89**	**358**	P	**P**	**20 48 07.8**	**+0.9**
NAH1				S	**S**	**20 48 19.0**	**-0.3**
JKE	**Kume jima 2**	**1.32**	**320**	P	**P**	**20 48 12.6**	**-0.4**
JAGN	**Aguni-jima**	**1.34**	**341**	P	**P**	**20 48 13.3**	**0.0**
JAGN				S	**S**	**20 48 29.1**	**-1.3**
JOW	**Kunigami**	**1.59**	**18**	Pn	**P**	**20 48 16.3**	**-0.4**
	7.2nm,0.3s,baz=146,slow=13,SNR=18						
JOW				Sn	**S**	**20 48 29.3**	**-6.9**
	31nm,0.3s,baz=186,slow=18,SNR=21						
JOW	**Kunigami**	**1.59**	**18**	P	**P**	**20 48 17.4**	**+0.7**
JIH	**Iheya**	**1.73**	**7**	P	**P**	**20 48 19.6**	**+1.0**
JIH				S	**S**	**20 48 38.5**	**-1.0**
JMJ	**Miyako jima 2**	**2.26**	**258**	*e*S	**S**	**20 48 52.3**	**-0.5**
JTK	**Tokunoshima**	**2.70**	**24**	P	**P**	**20 48 33.3**	**+1.1**
JTK				*e*S	**S**	**20 49 05.1**	**+1.3**
JMZ	**Minamidaito 2**	**3.19**	**80**	P	**P**	**20 48 39.1**	**-0.2**
JMZ				*e*S	**S**	**20 49 14.8**	**-1.6**
JAM	**Amami Oshima**	**3.51**	**28**	P	**P**	**20 48 44.4**	**+0.7**
JAM				*e*S	**S**	**20 49 23.6**	**-0.8**
SONM	**Songino Array**	**28.09**	**329**	P	**P**	**20 53 38.6**	**+0.2**
	0.3nm,0.5s,mb3.2,baz=121,slow=8.4,SNR=4.4						
FINES	**FINESS Array B**	**73.44**	**331**	P	**P**	**20 59 22.7**	**+4.9**
	0.9nm,0.9s,mb3.7,baz=76,slow=5.7,SNR=4.8						
YKA	**Yellowknife Ar**	**79.55**	**25**	P	**P**	**20 59 56.5**	**+4.5**
	0.1nm,0.6s,mb2.9,baz=310,slow=5.7,SNR=4.9						
NOA	**NORSAR Array B**	**79.93**	**334**	P	**P**	**20 59 58.1**	**+3.9**
	1.3nm,0.8s,mb3.9,baz=54,slow=5.8,SNR=3.3						

MAN 20 20:58:02.8, 13.60N×120.27E, h36^{km}, mb3.7, ML2.5, MS2.0, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.13**	**351**	*e*P	P	20 58 09.9	+0.9
LUBP				*e*S	S	20 58 13.5	+0.1
SJMP	**San Jose**	**1.41**	**144**	*e*P	P	20 58 27.0	+0.7
SJMP				*e*S	S	20 58 43.3	-0.5
BUSP	**Coron**	**1.59**	**182**	*e*P	P	20 58 29.8	+0.8
BUSP				*e*S	S	20 58 45.1	-3.4
ENPP	**El Nido**	**2.52**	**199**	*e*P	P	20 58 40.5	-1.7

BJI 20 21:20:54.4, 37.10N×103.89E, h18^{km}, ML3.5, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.01**	**182**	PG	Pb	21 21 11.8	-1.3
LZH				SG	Sb	21 21 24.4	-1.5
LZH				Smax			
	comp=N,761nm,0.5s						
LZH				Smax			
	comp=E,584nm,0.5s						
GTA	**Gaotai**	**3.95**	**307**	P	Pn	21 21 55.9	+0.3
GTA				PG	Pn	21 22 06.1	+10
GTA				S	Sn	21 22 43.0	+0.9
GTA				SG	Sn	21 22 55.3	+13
GTA				Smax			
	comp=N,187nm,0.5s						
GTA				Smax			
	comp=E,104nm,0.8s						
XAN	**Xi'an**	**5.11**	**125**	PG	Pn	21 22 24.9	+13
XAN				SG	Sn	21 23 27.8	+16
XAN				Smax			
	comp=N,21nm,0.8s						
XAN				Smax			
	comp=E,18nm,1.2s						

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*IDC **20** 22:17:33.1±1.5, 31.11S×71.36W, mb3.8/2, mb1 4.1/4, mb1mx3.8/15, mbtmp3.8/4, ML4.2/2, MS3.0/3, Ms1 2.9/3, ms1mx2.8/19, Error ellipse: s-maj=47.8km s-min=36.3km az=125.0*
*NEIC **20** 22:17:42.2±0.6, 30.82S×71.30W, h60^{km}±7^{km}, MD4.3(GUC), Error ellipse: s-maj=16.6km s-min=5.8km az=94.0*
*GUC **20** 22:17:43.4±0.8, 30.92S×71.10W, h39^{km}±3^{km}, MD4.3, ML4.0*
ISC 20 22:17:41.5±0.7**, 30.82S**±0.03×**71.4W**±0.1**, h64**^{km}±6^{km}**, n27, σ0^{s}.95**/33**, mb3.8**/2**, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.25**	**31**	*e*P	**P**	**22 17 51.8**	**0.0**
OVCH				*i* S	**S**	**22 17 58.7**	**-0.6**
OVCH				AMP		22 17 59.2	
	comp=E,46μm,0.2s						
TLL	**Tololo Astrono**	**0.81**	**36**	⇓*i*P	**P**	**22 17 58.5**	**+1.0**
TLL				*i* S	**S**	**22 18 10.4**	**+1.2**
TLL				AMP		22 18 12.0	
	comp=N,13μm,0.5s						
ILCH	**Illapel**	**0.82**	**169**	*e*P	**P**	**22 17 57.0**	**-0.7**
ILCH				*i* S	**S**	**22 18 07.8**	**-1.9**
ILCH				AMP		22 18 10.1	
	comp=E,8μm,0.6s						
PACH	**Papudo**	**1.71**	**182**	⇓*i*P	**P**	**22 18 10.8**	**+1.1**
PACH				*i* S	**S**	**22 18 31.8**	**+1.3**
JACH	**Jahuel**	**1.96**	**161**	*e*P	**P**	**22 18 13.4**	**+0.3**
JACH				*i* S	**S**	**22 18 36.5**	**0.0**
ROCH	**El Roble**	**2.16**	**172**	*e*P	**P**	**22 18 17.5**	**+1.5**
ROCH				*i* S	**S**	**22 18 42.7**	**+1.2**
IHA	**Instituto Hidr**	**2.21**	**186**	*e*P	**P**	**22 18 14.8**	**-1.9**
ZON	**Zonda**	**2.40**	**108**	*e*P	**P**	**22 18 19.0**	**-0.4**
FCH	**Farellones**	**2.65**	**160**	*e*P	**P**	**22 18 23.7**	**+0.8**
FCH				*i* S	**S**	**22 18 54.3**	**+0.3**

FCH				AMP		22 19 01.7	
	comp=E,670nm,0.3s						
CLCH	**Cerro Calan**	**2.66**	**165**	*e*P	**P**	**22 18 23.1**	**+0.1**
CLCH				*i* S	**S**	**22 18 53.6**	**-0.5**
RCDM	**Rinconada Maip**	**2.70**	**170**	*e*P	**P**	**22 18 23.3**	**-0.3**
TACH	**Talagante**	**2.84**	**173**	*i* P	**P**	**22 18 25.1**	**-0.5**
PCH	**Pirque**	**2.88**	**166**	*e*P	**P**	**22 18 26.4**	**+0.3**
CHCH	**Chadas Angostu**	**3.16**	**169**	*i* P	**P**	**22 18 29.5**	**-0.5**
LMEL	**Las Melosas**	**3.17**	**162**	*e*P	**P**	**22 18 30.9**	**+0.7**
LMEL				*i* S	**S**	**22 19 06.5**	**-0.5**
LMEL				AMP		22 19 14.7	
	comp=N,484nm,0.3s						
CPCH	**Copiapo**	**3.56**	**14**	*e*P	**P**	**22 18 34.5**	**-1.2**
LVC	**Limon Verde**	**8.46**	**15**	Pn	**P**	**22 19 39.9**	**-3.8**
	comp=N,0.7nm,0.3s,baz=192,slow=6.7,SNR=8.6						
LVC				Sn	**S**	**22 21 29.7**	**+11**
	comp=N,4.3nm,0.3s,baz=208,slow=23,SNR=4.9						
LVC				LR	LR	22 23 05.6	
	comp=N,89nm,20.2s,baz=124,slow=38						
LVC	**Limon Verde**	**8.46**	**15**	*e*Pn	**P**	**22 19 40.2**	**-3.5**
	comp=N,18nm,0.5s						
PLCA	**Paso Flores**	**9.91**	**176**	LR	LR	22 24 27.5	
	comp=N,48nm,19.4s,baz=348,slow=43						
TRQA	**Tornquist**	**10.57**	**136**	*e*Pn	**P**	**22 20 08.9**	**-3.7**
	comp=N,6.9nm,0.6s						
LPAZ	**La Paz**	**14.77**	**12**	Pn	**P**	**22 21 09.2**	**+1.1**
	comp=N,0.2nm,0.3s,baz=174,slow=7.8,SNR=5.7						
LPAZ	**La Paz**	**14.77**	**12**	*e*P	**P**	**22 21 09.4**	**+1.2**
	comp=N,2.5nm,0.8s						
BDFB	**Brasilia**	**26.15**	**60**	P	**P**	**22 23 10.8**	**-0.9**
	comp=N,3.8nm,0.9s,mb3.9,baz=259,slow=5.8,SNR=5.5						
BDFB				LR	LR	22 35 21.7	
	comp=N,53nm,18.6s,baz=34,slow=41						
SNAA	**Sanae**	**54.31**	**159**	⇓*i*	pP	22 27 16.5	-3.4
TXAR	**Lajitas Array**	**67.27**	**330**	P	**P**	**22 28 31.3**	**-0.2**
	comp=N,0.3nm,0.5s,mb3.6,baz=160,slow=8.4,SNR=4.6						
WRA	**Warramunga Arr**	**123.81**	**209**	PKP	PKPdf	22 36 32.7	0.0
	comp=N,0.4nm,0.9s,baz=161,slow=1.7,SNR=12						
ZAL	**Zalesovo**	**151.21**	**30**	PKPbc	PKPdf	22 37 28.6	+7.7
	comp=N,0.8nm,0.6s,baz=328,slow=1.4,SNR=3.5						

IDC 20 22:48:00.7±6.4**, 6.14S×148.57E, h70^{km}**±65^{km}**, mb3.1**/2**, mb1 3.5**/4**, mb1mx3.4**/13**, mbtmp3.6**/4**, ML3.4**/2**, Error ellipse: s-maj=102.2km s-min=38.3km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.54**	**203**	P	P	22 48 53.7	-0.9
	8.3nm,0.3s,baz=50,slow=3.1,SNR=14						
PMG				S	S	22 49 34.4	-1.0
	22nm,0.3s,baz=15,slow=21,SNR=20						
WB2	**Warramunga Arr**	**19.48**	**224**	*e*P	P	22 52 22.5	-2.2
WRA	**Warramunga Arr**	**19.48**	**224**	P	P	22 52 22.5	-2.2
	0.3nm,0.3s,baz=51,slow=11,SNR=8.7						
ASAR	**Alice Springs**	**22.43**	**217**	P	P	22 52 54.0	-0.6
	0.6nm,0.6s,baz=45,slow=9.9,SNR=9.1						
ILAR	**Eielson Array**	**85.00**	**23**	P	P	23 00 27.9	-1.4
	0.4nm,0.9s,baz=258,slow=5.2,SNR=4.2						

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*IDC **20** 22:50:30.2±1.4, 0.77N×98.31E, mb3.9/7, mb1 4.0/8, mb1mx3.8/17, mbtmp3.9/8, Error ellipse: s-maj=56.0km s-min=26.0km az=52.0*

*NEIC **20** 22:50:35.0±0.8, 0.79N×98.36E, h30^{km}, mb4.2/1, Error ellipse: s-maj=29.6km s-min=15.2km az=60.0*

ISC 20 22:50:33.2±1.2**, 0.8N**±0.2×**98.4E**±0.3**, h30^{km}, n11, σ0^{s}57**/11**, mb3.9**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.53**	**2**	P	**P**	**22 54 37.6**	**+0.4**
	baz=315,slow=28,SNR=3.1						
CHRT	**Chiangrai**	**18.98**	**4**	P	**P**	**22 54 50.0**	**-5.0**
	205nm,0.8s						
WRA	**Warramunga Arr**	**40.87**	**122**	P	**P**	**22 58 14.3**	**-0.1**
	0.6nm,0.5s,mb3.5,baz=303,slow=9.0,SNR=7.3						
SONM	**Songino Array**	**47.34**	**7**	P	**P**	**22 59 06.8**	**+0.5**
	1.1nm,0.7s,mb3.9,baz=192,slow=9.3,SNR=11						
SONM				PcP	PcP	23 00 35.9	-1.3
	0.3nm,0.4s,baz=183,slow=3.3,SNR=4.2						
ZAL	**Zalesovo**	**54.10**	**350**	P	**P**	**22 59 56.7**	**-0.8**
	1.9nm,0.3s,mb4.5,baz=298,slow=2.6,SNR=9.4						
ZAL	**Zalesovo**	**54.10**	**350**	P	**P**	**22 59 56.7**	**-0.8**
BVAR	**Borovoye Array**	**56.98**	**340**	P	**P**	**23 00 17.4**	**-1.0**
	0.6nm,0.5s,mb3.9,baz=149,slow=12,SNR=4.8						
CHKZ	**Chkalovo**	**57.45**	**341**	*e*P	**P**	**23 00 21.3**	**-0.3**
	2.5nm,1.1s,mb4.2						
BRTR	**Keskin Array B**	**70.21**	**312**	P	**P**	**23 01 46.1**	**+0.6**
	0.6nm,0.6s,mb3.7,baz=126,slow=7.7,SNR=4.9						
FINES	**FINESS Array B**	**80.86**	**332**	P	**P**	**23 02 46.0**	**+0.4**
	0.3nm,0.4s,mb3.5,baz=101,slow=9.7,SNR=8.1						
ARCES	**ARCESS Array B**	**83.27**	**340**	P	**P**	**23 02 58.5**	**+0.4**
	2.5nm,0.8s,mb4.3,baz=90,slow=6.1,SNR=5.7						

IDC 20 22:59:49.9±3.9**, 8.45S×156.20E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.7**/13**, mbtmp3.6**/3**, Error ellipse: s-maj=106.2km s-min=36.1km az=117.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.04**	**239**	P	P	23 05 07.8	+0.2
	2.4nm,0.8s,baz=65,slow=9.6,SNR=12						
ASAR	**Alice Springs**	**26.16**	**232**	P	P	23 05 25.4	-2.5
	0.8nm,0.9s,baz=62,slow=9.3,SNR=5.4						
SONM	**Songino Array**	**71.19**	**327**	P	P	23 11 10.8	-1.9
	0.4nm,0.8s,baz=135,slow=4.1,SNR=3.6						

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*BJI **20** 23:08:02.1, 10.07N×93.46E, h35^{km}, mB5.4, mb4.8, Ms5.2, Msz5.0*

*MOS **20** 23:08:03.2±0.8, 10.27N×93.68E, h33^{km}, mb5.3/69, MS4.7/31, Error ellipse: s-maj=8.1km s-min=4.0km az=123.1*

*NEIC **20** 23:08:04.0±0.1, 10.22N×93.61E, mb5.2/81, MS4.7/23, Error ellipse: s-maj=5.2km s-min=3.8km az=222.0*

*IDC **20** 23:08:04.8±2.5, 10.38N×93.73E, h32^{km}±18^{km}, mb4.6/21, mb1 4.6/22, mb1mx4.6/25, mbtmp4.7/22, ML4.2/1, MS4.7/16, Ms1 4.7/16, ms1mx4.4/27, Error ellipse: s-maj=18.8km s-min=11.0km az=54.0*

*HRVD **20** 23:08:04.0±0.2, 10.30N×93.84E, h12^{km}, MW5.4/64, Centroid moment Tensor Solution. LP body waves: s51,c89;Mantle waves: s64,c125; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.05±.03; M$_{\theta\theta}$-0.37±.03; M$_{\phi\phi}$1.42±.03; M$_{r\theta}$0.47±.09; M$_{\theta\phi}$0.49±.02; M$_{\phi r}$-0.54±.07; Best double couple: M$_0$1.536×10^{17} NP1: φ$_s$223°,δ44°,λ-44°. NP2:φ$_s$347°,δ61°,λ-125°. Principal axes: T 1.611, Plg9°, Azm102°; N -.145, Plg30°, Azm6°; P -1.462, Plg58°, Azm207°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 23:08:02.0±0.2**, 10.20N**±0.03×**93.68E**±0.02**, h25^{km}, h25^{km}**±.7^{km}**:pP-P, n414, σ1^{s}09**/412**, mb5.0**/118**, MS4.8**/64**, 28C-49D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.39**	**68**	P	**Pn**	**23 09 36.5**	**-0.6**
SNG	**Songkhla**	**7.49**	**113**	P	**Pn**	**23 09 51.0**	**-1.5**
	306nm,0.9s						
NST	**Nakhon Sawan**	**8.31**	**48**	P	**P**	**23 10 04.1**	**+0.1**
BDT	**Bhumibol Dam**	**8.70**	**36**	P	**P**	**23 10 10.0**	**+0.6**
	13nm,0.8s						
IPM	**Ipoh**	**9.18**	**127**	P	**P**	**23 10 14.4**	**-1.6**
CM31	**Chiang Mai Arr**	**9.66**	**31**	*e*P	**P**	**23 10 22.9**	**+0.2**
	34nm,0.6s						
CMAR	**Chiang Mai Arr**	**9.66**	**31**	Pn	**P**	**23 10 22.7**	**0.0**
	0.6nm,0.3s,baz=218,slow=13,SNR=26						
CMAR				LR	LR	23 13 31.6	
	comp=Z,988nm,20.1s,baz=225,slow=34						
KKTK	**Khon Kaen**	**10.78**	**55**	P	**P**	**23 10 39.0**	**+0.8**
NANT	**Nan**	**10.92**	**38**	P	**P**	**23 10 43.0**	**+3.0**
CHRT	**Chiangrai**	**11.27**	**31**	⇓P	**P**	**23 10 47.5**	**+2.7**
	260nm,1.2s						
UBT	**Ubonrachathani**	**12.14**	**64**	P	**P**	**23 11 06.5**	**+10**
VIS	**Vishakhapatnam**	**12.52**	**308**	*e*P	**P**	**23 11 00.7**	**-0.9**
VIS				*e*S	**S**	**23 13 10.4**	**-11**
KGM	**Kluang**	**12.56**	**130**	P	**P**	**23 11 09.6**	**+7.4**
BWNR	**Bhubaneshwar**	**12.58**	**324**	*e*	**P**	**23 10 56.0**	**-6.5**
BWNR				*e*S	**S**	**23 13 10.0**	**-13**
CAL	**Calcutta**	**13.29**	**338**	*e*P	**P**	**23 11 14.1**	**+2.2**
CAL				*e*		23 13 54.1	
MDRS	**Chennai**	**13.46**	**284**	*e*P	**P**	**23 11 13.0**	**-1.1**
MDRS				*i*		23 11 42.0	
MDRS				*e*		23 13 14.0	
MDRS				*e*S	**S**	**23 13 28.0**	**-16**
MDRS				*e*		23 19 09.0	
AGT	**Agartala**	**13.80**	**351**	*e*	**P**	**23 11 26.0**	**+7.3**
SHL	**Shillong**	**15.38**	**354**	*e*P	**P**	**23 11 40.0**	**+0.7**
SHL				*e*S	**S**	**23 14 28.0**	**-1.3**
BLSP	**Bilaspur**	**16.22**	**318**	*e*P	**P**	**23 11 52.8**	**+2.6**
BLSP				*e*S	**S**	**23 14 50.8**	**+1.8**
HYB	**Hyderabad**	**16.34**	**298**	*e*P	**P**	**23 11 52.0**	**+0.3**
HYB				*e*S	**S**	**23 14 56.0**	**+4.3**
HYB				pmax	pmax		
	comp=Z,300nm,1.4s						
HYB	**Hyderabad**	**16.34**	**298**	*e*P	**P**	**23 11 52.0**	**+0.3**
	comp=Z,300nm,1.4s						
HYB				*e*S	**S**	**23 14 56.0**	**+4.3**
HYB	**Hyderabad**	**16.34**	**298**	*i* P	**P**	**23 11 52.0**	**+0.3**
	comp=Z,300nm,1.4s						
HYB				*e*		23 14 41.0	
HYB				*e*S	**S**	**23 14 56.0**	**+4.3**
HYB				LR	LR	23 17 00.0	
	comp=Z,7.4nm,26.0s						
TRD	**Trivandrum**	**16.59**	**266**	*e*P	**P**	**23 11 56.5**	**+1.7**
TRD				*e*		23 12 06.9	
	comp=Z,89nm,1.2s						
KMI	**Kunming**	**17.15**	**29**	⇑P	**P**	**23 12 07.8**	**+5.9**
KMI				AP		23 12 13.0	
KMI				XP		23 12 15.4	
KMI				AMB	AMB		
	comp=Z,67nm,1.5s						
KMI				AMB	AMB		
	comp=Z,1µm,4.8s						
KMI				LR	LR		
	comp=N,4µm,14.7s						
KMI				LR	LR		
	comp=E,4µm,17.0s						
KMI				LR	LR		
	comp=Z,4µm,13.6s						
KMI	**Kunming**	**17.15**	**29**	⇑P	**P**	**23 12 07.7**	**+5.8**
KMI				pmax	pmax		
	comp=Z,67nm,1.5s						
KMI	**Kunming**	**17.15**	**29**	⇑P	**P**	**23 12 07.7**	**+5.8**
	comp=Z,67nm,1.5s						
KMI				pP		23 12 13.0	
KMI				sP		23 12 15.4	
KMI				PP	PP	23 12 24.8	+8.6
KMI				S	**S**	**23 15 26.4**	**+16**
KMI				sS		23 15 41.3	
KMI				SS	SS	23 15 50.3	+19
NGP	**Nagpur**	**17.79**	**309**	*e*P	**P**	**23 12 09.8**	**+0.1**
NGP				*e*		23 15 16.7	
QIZ	**Qiongzhong**	**17.92**	**59**	⇑P	**P**	**23 12 14.0**	**+2.6**
QIZ				PP	PP	23 12 26.8	+0.6
QIZ				S	**S**	**23 15 35.4**	**+7.6**
QIZ				SS	SS	23 15 57.4	+6.6
QIZ				AMB	AMB		
	comp=Z,1µm,9.4s						
QIZ				LR	LR		
	comp=N,4µm,16.0s						
QIZ				LR	LR		
	comp=E,4µm,15.5s						
QIZ				LR	LR		
	comp=Z,4µm,11.8s						
QIZ	**Qiongzhong**	**17.92**	**59**	P	**P**	**23 12 13.1**	**+1.6**
	comp=Z,28nm,0.9s						
LATR	**Latur**	**18.48**	**298**	*e*P	**P**	**23 12 19.0**	**+0.6**
LATR				*e*		23 15 31.3	
MNGI	**Mangalore**	**18.67**	**280**	*i* P	**P**	**23 12 20.9**	**+0.2**
	comp=Z,121nm,1.0s						
MNGI				*i*		23 15 33.8	
JIRN	**Jiri**	**18.74**	**339**	*e*P	**P**	**23 12 22.0**	**+0.5**
	comp=Z,355nm,1.2s						
PKI	**Pulchoki**	**18.95**	**337**	*e*P	**P**	**23 12 25.0**	**+1.0**
	comp=Z,630nm,1.6s						
DMN	**Daman**	**19.11**	**336**	*e*P	**P**	**23 12 26.9**	**+1.1**
	comp=Z,254nm,1.1s						
KKN	**Kakani**	**19.20**	**337**	*e*P	**P**	**23 12 27.1**	**+0.2**
	comp=Z,268nm,1.3s						
LSA	**Lhasa**	**19.54**	**353**	P	**P**	**23 12 30.5**	**-0.3**
LSA				S	**S**	**23 16 03.6**	**-0.7**
LSA				AMB	AMB		
	comp=Z,20nm,0.9s						
LSA				AMB	AMB		
	comp=Z,770nm,6.8s						
LSA				LR	LR		
	comp=N,840nm,20.1s						
LSA				LR	LR		
	comp=E,670nm,20.1s						
LSA				LR	LR		
	comp=Z,2µm,21.8s						
LSA	**Lhasa**	**19.54**	**353**	*e*P	**P**	**23 12 30.5**	**-0.3**
LSA				pmax	pmax		
	comp=Z,55nm,0.6s						
LSA	**Lhasa**	**19.54**	**353**	*e*P	**P**	**23 12 30.5**	**-0.3**
	comp=Z,55nm,0.6s						
GKN	**Gorkha**	**19.64**	**336**	*e*P	**P**	**23 12 32.7**	**+0.7**
	comp=Z,105nm,0.5s						
KOLN	**Koldanda**	**19.89**	**333**	*e*P	**P**	**23 12 34.0**	**-0.7**
	comp=Z,106nm,0.6s						
GOA	**Goa**	**20.05**	**287**	*e*	**P**	**23 12 43.6**	**+7.1**
GOA				*e*		23 16 26.6	
KAD	**Karad**	**20.20**	**293**	*e*P	**P**	**23 12 39.3**	**+1.3**
KAD				*e*		23 12 43.5	
	comp=Z,112nm,1.1s						
BHPL	**Bhopal**	**20.23**	**312**	*e*P	**P**	**23 12 40.8**	**+2.5**
BHPL				*e*		23 16 17.1	
BHPL				*e*S	**S**	**23 16 24.9**	**+6.1**
GYA	**Guiyang**	**20.30**	**35**	⇑*i*P	**P**	**23 12 41.0**	**+2.0**
GYA				AP		23 12 48.3	
GYA				XP		23 12 51.3	
GYA				PP	PP	23 13 04.8	+5.4
GYA				S	**S**	**23 16 30.6**	**+10**
GYA				XS		23 16 43.5	
GYA				AMB	AMB		
	comp=Z,60nm,0.6s						
GYA				AMB	AMB		
	comp=Z,590nm,5.1s						
GYA				LR	LR		
	comp=N,3µm,13.2s,MS5.1						
GYA				LR	LR		
	comp=E,4µm,11.1s,MS5.1						
GYA				LR	LR		
	comp=Z,4µm,13.5s,MS4.9						
POO	**Poona**	**20.90**	**296**	*e*P	**P**	**23 12 47.2**	**+1.9**
POO				*e*		23 13 00.8	
	comp=Z,178nm,1.5s						
POO				*i* S	**S**	**23 16 35.0**	**+2.8**
BOM	**Bombay**	**21.95**	**296**	*e*	**P**	**23 13 12.9**	**+17**
BOM				*e*		23 17 03.1	
COCO	**West Island**	**22.47**	**172**	*e*P	**P**	**23 13 03.5**	**+2.5**
	comp=Z,648nm,1.2s,mb5.9						
CD2	**Chengdu**	**22.63**	**23**	⇑*i*P	**P**	**23 13 03.4**	**+0.8**
CD2				AMB	AMB		
	comp=Z,126nm,1.2s,mb5.2						
KKM	**Kota Kinabalu**	**22.68**	**99**	P	**P**	**23 13 06.2**	**+3.0**
LGTI	**Lohaghat**	**22.90**	**329**	*e*P	**P**	**23 13 10.5**	**+5.3**
HKC	**Hong Kong**	**23.02**	**56**	P	**P**	**23 13 10.0**	**+3.5**
HKC				S	**S**	**23 17 28.0**	**+17**
NDI	**New Delhi**	**24.01**	**322**	*e*P	**P**	**23 13 16.0**	**0.0**
NDI				*e*S	**S**	**23 17 31.5**	**+3.2**
AJM	**Ajmer**	**24.20**	**315**	⇑*i*P	**P**	**23 13 21.0**	**+3.1**
TSM	**Tawau**	**24.70**	**102**	P	**P**	**23 13 25.0**	**+2.2**
DDI	**Dehra Dun**	**24.75**	**326**	*e*P	**P**	**23 13 24.5**	**+1.3**
DDI				*e*		23 17 51.5	
ENH	**Enshi**	**24.81**	**34**	*e*P	**P**	**23 13 24.1**	**+0.3**
	comp=Z,120nm,1.0s,mb5.4						
ENH				LR	LR		
	comp=Z,2µm,22.0s,MS4.6						
SMLA	**Simla**	**25.86**	**326**	⇓*i*	**P**	**23 13 50.4**	**+17**
	comp=Z,16nm,0.4s,mb4.9						
SMLA				*i*		23 18 15.3	
SDNR	**Sundarnagar**	**26.25**	**326**	*e*P	**P**	**23 13 39.2**	**+2.0**
BHK	**Bhakra**	**26.50**	**325**	*e*P	**P**	**23 13 41.9**	**+2.4**
LZH	**Lanzhou**	**27.37**	**18**	⇓P	**P**	**23 13 47.3**	**-0.1**
LZH				PP	PP	23 14 34.5	-0.5
LZH				*e*S	**S**	**23 18 24.5**	**+0.4**
LZH				SS	SS	23 19 42.1	+0.6
LZH				AMB	AMB		
	comp=Z,47nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,319nm,4.8s						
LZH				LR	LR		
	comp=N,2µm,11.0s						
LZH				LR	LR		
	comp=Z,3µm,15.0s,MS4.9						
LZH	**Lanzhou**	**27.37**	**18**	⇓P	**P**	**23 13 47.3**	**-0.1**
LZH				*SP	sP	23 13 58.3	+0.2
LZH						23 14 34.5	
LZH				*e*S	**S**	**23 18 24.5**	**+0.4**
LZH				*SS		23 18 36.5	
LZH				SS	SS	23 19 42.1	+0.6
LZH				pmax	pmax		
	comp=Z,47nm,1.5s,mb4.8						
LZH				MLR	MLR		
	comp=Z,3µm,15.0s,MS4.9						
LZH	**Lanzhou**	**27.37**	**18**	⇓P	**P**	**23 13 47.3**	**-0.1**
	comp=Z,47nm,1.5s,mb4.8						
LZH				pP	pP	23 13 52.8	-2.0
LZH				sP	sP	23 13 58.3	+0.2
LZH				PP	PP	23 14 34.5	-0.5
LZH				*e*S	**S**	**23 18 24.5**	**+0.4**
LZH				sS		23 18 36.5	
LZH				SS	SS	23 19 42.1	+0.6
LZH				LR	LR		
	comp=Z,3µm,15.0s,MS4.9						
XAN	**Xi’an**	**27.53**	**28**	P	**P**	**23 13 47.3**	**-1.6**
XAN				S	**S**	**23 18 31.3**	**+4.5**
XAN				SS	SS	23 19 47.0	+1.5
XAN				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.6						
XAN				AMB	AMB		
	comp=Z,99nm,4.7s						
XAN				LR	LR		
	comp=N,2µm,16.0s,MS5.0						
XAN				LR	LR		
	comp=E,3µm,14.6s,MS5.0						
XAN				LR	LR		
	comp=Z,3µm,14.1s,MS5.0						
WHN	**Wuhan**	**27.92**	**41**	*e*P	**P**	**23 13 53.5**	**+1.0**
WHN				LR	LR		
	comp=E,6µm,12.0s						
WHN				LR	LR		
	comp=Z,7µm,12.2s,MS5.5						
GTA	**Gaotai**	**29.60**	**10**	P	**P**	**23 14 07.3**	**-0.2**
GTA				AP	pP	23 14 14.9	0.0
GTA				XP	sP	23 14 18.9	+0.7
GTA				PP	PP	23 15 02.0	-1.9
GTA				PCP	PcP	23 17 11.8	-0.2
GTA				S	**S**	**23 18 56.8**	**-3.0**
GTA				SCP		23 20 49.3	
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
GTA				AMB	AMB		
	comp=Z,226nm,5.7s						
GTA				LR	LR		
	comp=N,994nm,18.6s,MS4.6						
GTA				LR	LR		
	comp=E,1µm,20.5s,MS4.6						
GTA				LR	LR		
	comp=Z,1µm,18.2s,MS4.6						
SSE	**Sheshan**	**32.92**	**47**	P	**P**	**23 14 39.0**	**+2.3**
SSE				S	**S**	**23 19 54.9**	**+2.9**
SSE				XS		23 20 09.8	
SSE				AMB	AMB		
	comp=Z,43nm,1.0s,mb5.3						
SSE				AMB	AMB		
	comp=Z,178nm,6.4s						
SSE				LR	LR		
	comp=N,2µm,19.3s,MS4.8						
SSE				LR	LR		
	comp=E,764nm,19.3s,MS4.8						
SSE				LR	LR		
	comp=Z,749nm,17.4s,MS4.5						
SSE	**Sheshan**	**32.92**	**47**	P	**P**	**23 14 39.0**	**+2.3**
	comp=Z,43nm,1.0s,mb5.3						
SSE				S	**S**	**23 19 54.9**	**+2.9**
SSE				sS		23 20 09.8	
SSE				SS	SS	23 22 14.0	+22
SSE				LR	LR		
	comp=Z,750nm,17.4s,MS4.5						
KSH	**Kashi**	**33.18**	**335**	*e*P	**P**	**23 14 40.0**	**+1.0**
KSH				*e*AP	pP	23 14 47.8	+1.4
KSH				*e*XP	sP	23 14 51.0	+1.3
KSH				*e*PP	PP	23 15 51.5	+1.2
KSH				*e*PCP	PcP	23 17 23.3	+1.7
KSH				*e*S	**S**	**23 19 56.0**	**0.0**
KSH				*e*XS		23 20 07.8	
KSH				*e*PS		23 20 16.5	
KSH				*e*PCS		23 21 08.3	
KSH				*e*SS	SS	23 21 55.8	-2.0
KSH				*e*SCS	ScS	23 25 03.4	+1.3
KSH				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
KSH				LR	LR		
	comp=N,1µm,14.7s,MS4.9						
KSH				LR	LR		
	comp=E,1µm,14.0s,MS4.9						
TIA	**Tai’an**	**33.50**	**36**	*e*P	**P**	**23 14 42.3**	**+0.6**
TIA				LR	LR		
	comp=N,2µm,11.0s,MS5.3						
TIA				LR	LR		
	comp=E,3µm,15.0s,MS5.3						
BTO	**Baotou**	**33.56**	**23**	*e*P	**P**	**23 14 41.8**	**-0.4**
WMQ	**Urumqi**	**33.89**	**352**	P	**P**	**23 14 46.0**	**+0.9**
WMQ				XP	sP	23 14 57.0	+1.2
WMQ				PP	PP	23 16 00.0	+1.2
WMQ				S	**S**	**23 20 08.0**	**+1.1**
WMQ				SS	SS	23 22 14.0	-0.1
WMQ				AMB	AMB		
	comp=Z,52nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,48nm,6.5s						
WMQ				LR	LR		
	comp=N,875nm,20.0s,MS4.8						
WMQ				LR	LR		
	comp=E,2µm,24.0s,MS4.8						
WMQ				LR	LR		
	comp=Z,957nm,20.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**34.38**	**24**	*e*P	**P**	**23 14 49.1**	**-0.2**
HHC				PP	PP	23 16 06.1	+1.1
HHC				PCP	PcP	23 17 22.3	-2.6
HHC				S	**S**	**23 20 13.4**	**-1.0**
HHC				SCP		23 21 05.8	
HHC				PCS		23 21 10.5	
HHC				SCS	ScS	23 25 07.3	-1.0
HHC				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,140nm,4.7s						
HHC				LR	LR		
	comp=N,1µm,13.1s,MS5.2						
HHC				LR	LR		
	comp=E,2µm,13.1s,MS5.2						
HHC				LR	LR		
	comp=Z,1µm,14.3s,MS4.8						
WBK	**Wadi Bani Khal**	**35.41**	**295**	⇓P	**P**	**23 14 58.5**	**+0.2**
KZA	**Kyzart**	**35.63**	**336**	P	**P**	**23 15 00.7**	**+0.8**
	SNR=11						
BJT	**Baijiatuau**	**35.78**	**30**	*e*P	**P**	**23 15 01.7**	**+0.4**
BJT				pmax	pmax		
	comp=Z,39nm,1.2s						
BJT				MLR	MLR		
	comp=Z,2µm,19.0s						
BJT	**Baijiatuau**	**35.78**	**30**	*e*P	**P**	**23 15 01.7**	**+0.5**
	comp=Z,39nm,1.2s,mb5.2						
BJT				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
UCH	**Uchtor**	**36.06**	**336**	P	**P**	**23 15 04.9**	**+1.4**
	SNR=11						
JMDO	**Jabal Madar**	**36.13**	**294**	⇑P	**P**	**23 15 05.7**	**+1.3**
TKM2	**Tokmak 2**	**36.22**	**337**	P	**P**	**23 15 05.3**	**+0.4**
	SNR=14						
KBK	**Karagaybulak**	**36.24**	**336**	P	**P**	**23 15 06.7**	**+1.6**
	SNR=32						
AML	**Almayashu**	**36.32**	**335**	P	**P**	**23 15 06.5**	**+0.7**
	SNR=49						
SMDO	**Samad**	**36.34**	**295**	⇓P	**P**	**23 15 09.1**	**+3.0**
	SNR=8.0						
BIDO	**Bidbid**	**36.40**	**296**	⇑P	**P**	**23 15 09.6**	**+3.0**
AAK	**Ala-Archa**	**36.40**	**336**	P	**P**	**23 15 07.5**	**+1.0**
	SNR=19						
AAK	**Ala-Archa**	**36.40**	**336**	*e*P	**P**	**23 15 06.1**	**-0.4**
AAK				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.3						
AAK				MLR	MLR		
	comp=Z,464nm,19.0s,MS4.3						

AAK	Ala-Archa	36.40	336	eP	P	23 15 06.0	-0.4
	comp=Z,51nm,1.2s,mb5.3						
AAK				LR	LR		
	comp=Z,464nm,19.0s,MS4.3						
FRU	Bishkek	36.52	336	eP	P	23 15 08.0	+0.5
FRU				e	pP	23 15 15.0	0.0
FRU				pmax	pmax		
	comp=Z,120nm,2.0s,mb5.4						
CHMS	Chumysh	36.61	336	P	P	23 15 08.6	+0.4
	SNR=14						
EKS2	Erkin-Say	36.72	335	P	P	23 15 10.2	+1.1
	SNR=32						
USP	Ospenovka	36.93	336	P	P	23 15 11.2	+0.3
	SNR=39						
BSY	Bisya	37.03	294	⇑P	P	23 15 15.3	+3.4
	SNR=22						
HOQ	Hoqain	37.13	296	⇑P	P	23 15 15.8	+3.0
MKAR	Makanchi Array	37.73	347	i P	P	23 15 17.3	-0.3
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ARQ	Araqi	37.78	295	⇑P	P	23 15 21.0	+2.8
DL2	Dalian	37.95	36	P	P	23 15 21.8	+2.3
DL2				S	S	23 21 20.4	+11
DL2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.1						
DL2				AMB	AMB		
	comp=Z,200nm,5.6s						
DL2				LR	LR		
	comp=N,510nm,19.0s,MS4.6						
DL2				LR	LR		
	comp=E,820nm,19.4s,MS4.6						
DL2				LR	LR		
	comp=Z,820nm,13.1s						
ASHO	Ashiyiah	38.52	297	⇑P	P	23 15 27.2	+2.8
	SNR=13						
SONM	Songino Array	39.01	14	P	P	23 15 27.9	-0.4
	comp=Z,5.9nm,0.9s,mb4.3,baz=198,slow=7.4,SNR=44						
SONM				PcP	PcP	23 17 37.9	-0.9
	comp=Z,2.4nm,0.6s,baz=206,slow=3.4,SNR=4.5						
ULN	Ulaanbaatar	39.20	14	eP	P	23 15 29.8	0.0
ULN				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.9						
WHFO	Wadi Hawf	39.40	286	⇓P	P	23 15 34.3	+2.5
	SNR=29						
ABTO	Aybut	39.80	285	⇑P	P	23 15 35.7	+0.6
	SNR=9.0						
MBWA	Marble Bar	40.33	141	eP	P	23 15 36.0	-3.5
	comp=Z,72nm,1.5s,mb5.2						
MBWA				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
ZAK	Zakamensk	40.84	9	eP	P	23 15 43.3	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.0						
SNY	Shenyang	41.00	35	⇓P	P	23 15 44.0	-0.7
SNY				AMB	AMB		
	comp=Z,20nm,2.9s,mb4.2						
SNY				LR	LR		
	comp=E,2µm,14.2s						
SNY				LR	LR		
	comp=Z,2µm,13.5s,MS5.0						
KS15	Wonju Array Si	41.01	43	eP	P	23 15 41.1	-3.8
MOY	Mondy	41.77	7	eP	P	23 15 51.9	+0.9
MOY				pmax	pmax		
	comp=Z,33nm,3.4s						
TLY	Talaya	42.15	9	eP	P	23 15 55.4	+1.3
TLY				e		23 18 02.2	
TLY				eS	S	23 22 11.7	-0.5
TLY				e		23 25 45.3	
TLY				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.4						
TLY				MLR	MLR		
	comp=Z,563nm,15.0s,MS4.6						
TLY	Talaya	42.15	9	eP	P	23 15 54.4	+0.3
	comp=Z,6.2nm,0.9s,mb4.2						
TLY				LR	LR		
	comp=Z,205nm,19.0s,MS4.0						
KURK	Kurchatov	42.26	346	eP	P	23 15 54.5	-0.5
KURK				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
KURK				MLR	MLR		
	comp=Z,293nm,20.0s,MS4.2						
KURK	Kurchatov	42.26	346	eP	P	23 15 54.5	-0.5
	comp=Z,20nm,1.1s,mb4.7						
KURK				LR	LR		
	comp=Z,293nm,20.0s,MS4.2						
FITZ	Fitzroy Crossi	42.27	132	eP	P	23 15 55.7	+0.2
FITZ				epP	pP	23 16 04.0	+0.9
CN2	Changchun	43.33	34	eP	P	23 16 04.3	+0.4
CN2				eAP	pP	23 16 14.3	+2.9
CN2				eS	S	23 22 30.4	+0.9
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,2µm,19.0s,MS5.1						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS5.1						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
ZAL	Zalesovo	44.19	352	P	P	23 16 10.1	-0.6
	comp=Z,13nm,0.8s,mb4.7,baz=304,slow=6.0,SNR=90						
HIA	Hailar	44.58	24	eP	P	23 16 12.8	-1.1
HIA				pmax	pmax		
	comp=Z,32nm,1.3s						
HIA				MLR	MLR		
	comp=Z,1µm,22.0s						
HIA	Hailar	44.58	24	eP	P	23 16 12.8	-1.1
	comp=Z,32nm,1.3s,mb5.0						
HIA				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
KAKA	Kakadu	44.72	120	⇓iP	P	23 16 15.3	-0.2
	comp=Z,69nm,1.4s,mb5.3						
NVS	Novosibirsk	45.29	352	eP	P	23 16 17.7	-1.8
NVS				pmax	pmax		
	comp=N,57nm,1.7s						
NVS				pmax	pmax		
	comp=E,38nm,1.7s						
NVS				pmax	pmax		
	comp=Z,85nm,1.7s,mb5.3						
BVA0	Borovoye Array	46.65	341	i P	P	23 16 28.9	-1.4
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
BVAR	Borovoye Array	46.65	341	P	P	23 16 29.1	-1.2
	comp=Z,5.5nm,0.6s,mb4.7,baz=135,slow=8.4,SNR=30						
BVAR				S	S	23 23 15.2	-2.0
	comp=Z,1.0nm,0.7s,baz=172,slow=10,SNR=3.9						
CHKZ	Chkalovo	47.13	341	eP	P	23 16 32.8	-1.3
CHKZ				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.5						
CHKZ	Chkalovo	47.13	341	eP	P	23 16 32.8	-1.3
	comp=Z,45nm,0.8s,mb5.5						
RAYN	Ar Rayn	47.75	292	P	P	23 16 40.2	+0.8
	comp=Z,140nm,0.7s,mb6.1,SNR=27						
MAT	Matsushiro	47.97	49	eP	P	23 16 42.0	+1.1
MAT				eS	S	23 23 40.0	+4.0
MAT				pmax	pmax		
	comp=Z,142nm,1.7s,mb5.7						
MAT				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.6						
MAT	Matsushiro	47.97	49	eP	P	23 16 42.0	+1.1
	comp=Z,142nm,1.7s,mb5.7						
MAT				eS	S	23 23 40.0	+4.0
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS4.6						
MAT	Matsushiro	47.97	49	P	P	23 16 41.8	+0.9
MAT				S	S	23 23 40.2	+4.2
NWAO	Narrogin (SRO)	48.41	153	eP	P	23 16 42.8	-1.6
NWAO				pmax	pmax		
	comp=Z,77nm,1.6s						
NWAO	Narrogin (SRO)	48.41	153	eP	P	23 16 42.8	-1.6
	comp=Z,77nm,1.6s,mb5.5						
WRA	Warramunga Arr	49.99	127	P	P	23 16 56.5	-0.2
	comp=Z,12nm,0.5s,mb5.2,baz=304,slow=8.7,SNR=122						
WRAB	Tennant Creek	50.00	127	d iP	P	23 16 56.6	-0.1
WB2	Warramunga Arr	50.00	127	⇓iP	P	23 16 56.5	-0.2
WB2				epP	pP	23 17 04.8	+0.3
BOD	Bodaibo	50.01	14	eP	P	23 16 54.8	-1.5
KLR	Kul’dur	50.14	32	eP	P	23 16 56.7	-0.7
KLR				e		23 29 12.0	
BHD	Baghdad	50.66	305	eP	P	23 17 01.5	-0.1
MAK	Makhachkala	51.69	318	eP	P	23 17 10.0	+0.7
MAK				ePPP	PPP	23 20 10.0	-0.1
MAK				eS	S	23 24 29.0	+1.3
MAK				ePS	PS	23 24 44.0	+3.7
MAK				pmax	pmax		
	comp=Z,1µm,6.0s						
MAK				smax			
	comp=E,700nm,8.0s						
ASPA	Alice Springs	51.76	131	⇓iP	P	23 17 09.6	-0.5
ASPA				epP	pP	23 17 18.4	+0.6
ASAR	Alice Springs	51.76	131	P	P	23 17 09.1	-1.0
	comp=E,20nm,0.9s,mb5.0,baz=303,slow=6.8,SNR=150						
ASAR				PcP	PcP	23 18 22.3	-0.9
	comp=E,6.6nm,0.8s,baz=302,slow=4.1,SNR=4.9						
ASAR				LR	LR	23 40 54.5	
	comp=E,412nm,21.2s,MS4.4,baz=302,slow=38						
ASAR	Alice Springs	51.76	131	P	P	23 17 09.1	-1.0
ASAR				PcP	PcP	23 18 22.3	-0.9
ASAR				LR	LR	23 40 54.5	
CLNS	Chul’man	52.43	21	eP	P	23 17 14.7	+0.1
CLNS				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
CLNS				pmax	pmax		
	comp=N,11nm,0.8s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.0s						
GNI	Garni	52.51	313	eP	P	23 17 16.4	+0.9
GNI				pmax	pmax		
	comp=Z,66nm,1.1s						
GNI				MLR	MLR		
	comp=Z,972nm,22.0s						
GNI	Garni	52.51	313	eP	P	23 17 16.4	+1.0
	comp=Z,66nm,1.1s,mb5.5						
GNI				LR	LR		
	comp=Z,972nm,22.0s,MS4.8						
MTA	Mtatsminda	53.03	315	P	P	23 17 19.8	+0.4
MTA				S	S	23 24 42.9	-3.1
TI2	Plekhanov	53.08	315	⇓iP	P	23 17 21.0	+1.3
TI2				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
SVE	Sverdlovsk	53.08	338	⇓iP	P	23 17 19.2	-0.3
SVE				e		23 30 06.0	
SVE				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
SVE				MLR	MLR		
	comp=N,500nm,23.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,1µm,23.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,1µm,23.0s,MS4.8						
ASAJ	Asahikawa	53.98	42	LR	LR	23 41 23.6	
	comp=Z,886nm,19.2s,MS4.8,baz=292,slow=37						
ERZM	Erzurum	54.88	312	i P	P	23 17 33.5	+0.6
YSS	Yuzh-Sakhalins	55.25	39	eP	P	23 17 34.8	-0.8
YSS				e*SP	sP	23 17 42.0	-4.3
YSS				ePPP	PPP	23 20 58.0	+3.9
YSS				eS	S	23 25 28.0	+12
YSS				eSSS	SSS	23 31 05.0	+1.9
YSS				MLR	MLR		
	comp=E,1µm,17.0s						
YSS				MLR	MLR		
	comp=Z,900nm,17.0s,MS4.9						
YSS	Yuzh-Sakhalins	55.25	39	eP	P	23 17 36.0	+0.4
	comp=Z,14nm,0.6s,mb5.2						
YSS				e	pP	23 17 42.4	-0.9
YSS				LR	LR		
	comp=Z,513nm,20.0s,MS4.6						
KIV	Kislovodsk	55.31	317	P	P	23 17 36.8	+0.8
	comp=Z,358nm,0.7s,SNR=26						
KIV	Kislovodsk	55.31	317	d iP	P	23 17 35.9	-0.1
KIV				e		23 18 35.4	
KIV				e		23 19 39.9	
KIV				i S	S	23 25 18.6	+2.0
KIV				eSS	SS	23 28 55.8	-5.2
KIV				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.6						
KIV				pmax	pmax		
	comp=N,21nm,0.9s						
KIV				pmax	pmax		
	comp=E,18nm,0.8s						
KIV				smax			
	comp=N,307nm,4.1s						
KIV				smax			
	comp=E,173nm,3.1s						
KIV				MLR	MLR		
	comp=E,457nm,20.0s						
KIV				MLR	MLR		
	comp=Z,703nm,20.0s,MS4.7						
KIV	Kislovodsk	55.31	317	eP	P	23 17 36.0	0.0
	comp=Z,42nm,0.8s,mb5.5						
KIV				LR	LR		
	comp=Z,124nm,20.0s,MS4.0						
GOF	Gofitskoye	55.49	318	⇑iP	P	23 17 34.0	-3.3
GOF				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
SOKR	Solikamsk	56.48	338	⇑iP	P	23 17 43.8	-0.4
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,2µm,24.0s,MS5.1						
ASF	Jabal al Asfar	56.59	302	LR	LR	23 40 58.5	
	comp=Z,261nm,21.6s,MS4.3,baz=141,slow=35						
MALT	Malatya	56.63	309	eP	P	23 17 44.8	-0.8
MALT				pmax	pmax		
	comp=Z,63nm,1.9s,mb5.3						
MALT	Malatya	56.63	309	eP	P	23 17 44.8	-0.8
	comp=Z,63nm,1.9s,mb5.3						
PMG	Port Moresby	56.67	108	eP	P	23 17 47.2	+1.0
PMG				e*PP	pP	23 17 55.1	+1.2
PMG				pmax	pmax		
	comp=Z,146nm,1.1s						
PMG				MLR	MLR		
	comp=Z,438nm,19.0s						
PMG	Port Moresby	56.67	108	eP	P	23 17 47.2	+1.0
	comp=Z,146nm,1.1s,mb5.9						
PMG				epP	pP	23 17 55.1	+1.1
PMG				LR	LR		
	comp=Z,438nm,19.0s,MS4.6						
GZT	Gaziantep	57.07	308	i P	P	23 17 48.5	-0.2
SOC	Sochi	57.20	316	eP	P	23 17 47.7	-1.9
SOC				e		23 18 42.8	
SOC				e		23 19 52.6	
SOC				ePPP	PPP	23 21 15.0	-3.5
SOC				eS	S	23 25 39.8	-1.9
SOC				e		23 27 36.4	
SOC				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
SOC				pmax	pmax		
	comp=N,9.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,5.0nm,0.6s						
SOC				MLR	MLR		
	comp=N,902nm,22.0s,MS5.0						
SOC				MLR	MLR		
	comp=Z,1µm,22.0s,MS4.9						
SOC				MLR	MLR		
	comp=E,747nm,21.0s,MS5.0						
KMBO	Kilima Mbogo	57.26	262	i P	P	23 17 52.6	+2.2
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMBO	Kilima Mbogo	57.26	262	P	P	23 17 51.8	+1.4
	comp=Z,6.3nm,1.1s,mb4.5,baz=58,slow=8.6,SNR=11						
KMBO				LR	LR	23 40 49.3	
	comp=Z,1µm,18.4s,MS5.0,baz=90,slow=34						
KMBO	Kilima Mbogo	57.26	262	eP	P	23 17 52.5	+2.0
	comp=Z,170nm,2.2s,mb5.7						
EIL	Elat	57.90	299	eP	P	23 17 54.6	-0.1
	comp=Z,13nm,0.8s,mb5.0						
YAK	Yakutsk	57.95	19	eP	P	23 17 52.3	-2.2
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
YAK				MLR	MLR		
	comp=N,347nm,12.0s						
YAK				MLR	MLR		
	comp=Z,406nm,12.0s,MS4.8						
YAK				MLR	MLR		
	comp=E,659nm,22.0s						
CTA	Charters Tower	59.85	120	eP	P	23 18 09.2	+0.9
	comp=E,30nm,1.2s,mb5.2						
CTA				epP	pP	23 18 17.6	+1.4
CTA	Charters Tower	59.85	120	eP	P	23 18 09.2	+0.9
CTA				e*PP	pP	23 18 17.6	+1.4
CTA				pmax	pmax		
	comp=Z,30nm,1.2s						
CTA	Charters Tower	59.85	120	P	P	23 18 08.3	0.0
	comp=Z,44nm,1.2s,mb5.4,baz=300,slow=7.8,SNR=18						
CTA				LR	LR	23 44 29.4	
	comp=Z,867nm,21.9s,MS4.8,baz=290,slow=36						
CTAO	Charters Tower	59.85	120	eP	P	23 18 08.9	+0.6
CTAO				e*PP	pP	23 18 17.6	+1.4
CTAO				pmax	pmax		
	comp=Z,180nm,1.3s,mb5.9						
CTAO	Charters Tower	59.85	120	eP	P	23 18 08.9	+0.6
	comp=Z,180nm,1.3s,mb5.9						
CTAO				epP	pP	23 18 17.6	+1.4
BOYT	Boyabat	60.02	312	i P	P	23 18 08.3	-0.9
BRTR	Keskin Array B	60.59	310	P	P	23 18 11.1	-2.0
	comp=Z,9.7nm,0.7s,mb5.0,baz=122,slow=7.4,SNR=76						
ELDT	Eldivan	60.90	311	i P	P	23 18 14.1	-1.1
BALT	Daday	61.15	312	i P	P	23 18 15.7	-1.2
SIM	Simferopol’	61.45	316	⇓eP	P	23 18 18.7	-0.1
SIM				eS	S	23 26 35.1	-1.5
SIM				pmax	pmax		
	comp=Z,52nm,6.8s						
STKA	Stephens Creek	62.04	134	⇓iP	P	23 18 22.7	-0.4
	comp=Z,30nm,1.2s,mb5.3						
STKA				epP	pP	23 18 30.8	-0.1
STKA	Stephens Creek	62.04	134	P	P	23 18 22.8	-0.3
	comp=Z,34nm,1.0s,mb5.4,baz=306,slow=6.6,SNR=39						
STKA				LR	LR	23 45 52.1	
	comp=Z,876nm,20.7s,MS4.9,baz=298,slow=36						
ISP	Isparta	62.66	307	eP	P	23 18 25.2	-1.9
ISP				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.3						
ISP	Isparta	62.66	307	eP	P	23 18 25.2	-1.9
	comp=Z,25nm,1.1s,mb5.3						
ESKT	Eskisehir	62.66	309	i P	P	23 18 25.4	-1.7
MOS	Moscow	62.87	328	eP	P	23 18 24.8	-3.4
MOS				e		23 18 35.0	
MOS				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
MOS				MLR	MLR		
	comp=Z,1µm,22.0s,MS4.9						
OBN	Obninsk	63.18	327	⇓iP	P	23 18 29.0	-1.2
OBN				e		23 20 50.9	
OBN				i S	S	23 27 03.6	+5.2
OBN				pmax	pmax		
	comp=Z,38nm,1.8s,mb5.2						
OBN				MLR	MLR		
	comp=Z,400nm,14.0s,MS4.7						
MBAR	Mbarara	63.52	264	eP	P	23 18 34.0	+0.8
MBAR				pmax	pmax		
	comp=Z,124nm,2.1s,mb5.6						
MBAR	Mbarara	63.52	264	eP	P	23 18 34.0	+0.8
	comp=Z,124nm,2.1s,mb5.6						
ULDT	Uludag	64.07	310	i P	P	23 18 34.8	-1.5
MA2	Magadan	64.93	28	eP	P	23 18 41.0	-0.6
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
MA2	Magadan	64.93	28	eP	P	23 18 41.0	-0.6
	comp=Z,9.5nm,0.8s,mb4.9						
TIXI	Tiksi	65.05	12	⇓iP	P	23 18 40.5	-1.7
TIXI				eS	S	23 27 24.4	+3.1
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,621nm,13.0s,MS5.0						
TIRR	Tirgusor	65.31	314	P	P	23 18 43.0	-1.3
TIRR	Tirgusor	65.31	314	⇑P	P	23 18 43.3	-1.0
KIS	Kishinev	65.51	317	eP	P	23 18 43.0	-2.5
KIS				e	pP	23 18 50.0	-3.4
KIS				MLR	MLR		
	comp=E,500nm,20.0s						
KIS				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.5						
CFR	Carcaliu	65.63	315	P	P	23 18 45.6	-0.7
CFR	Carcaliu	65.63	315	⇑P	P	23 18 45.4	-0.9
HARR	Harsova	65.69	314	P	P	23 18 46.0	-0.7
HARR	Harsova	65.69	314	⇓P	P	23 18 45.6	-1.1
AKASG	Malin Array Be	66.06	321	P	P	23 18 46.9	-2.1
	comp=Z,6.0nm,0.8s,mb4.7,baz=87,slow=4.8,SNR=27						
VRI	Vrincioaia	66.72	316	P	P	23 18 53.3	0.0
VRI	Vrincioaia	66.72	316	⇑P	P	23 18 53.6	+0.3
PET	Petropavlovsk	66.93	37	i P	P	23 18 53.7	-0.8
SEY	Seymchan	67.02	25	eP	P	23 18 56.1	+1.2
SEY				e		23 19 10.6	
MLR	Muntele Rosu	67.20	315	P	P	23 18 56.1	-0.3
MLR	Muntele Rosu	67.20	315	⇓P	P	23 18 56.2	-0.2
RZN	Rozhen	67.59	311	eP	P	23 18 57.0	-1.9
MNK	Minsk	67.80	325	eP	P	23 18 56.0	-3.9
TOO	Toolangi	67.87	138	eP	P	23 19 02.1	+1.4
	comp=Z,1.8nm,1.2s,mb4.0						
TOO				epP	pP	23 19 09.6	+1.0
TOO	Toolangi	67.87	138	eP	P	23 19 02.1	+1.4
TOO				e*PP	pP	23 19 09.6	+1.0
TOO				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
BURAR	Bucovina Array	68.03	317	P	P	23 19 01.6	0.0
BURAR	Bucovina Array	68.03	317	⇑P	P	23 19 01.6	+0.1
MMB	Musomiste	68.32	311	eP	P	23 19 02.0	-1.4
JOF	Joensuu	68.57	334	ep	P	23 19 03.1	-1.5
HNR	Honiara	68.76	104	eP	P	23 19 07.1	+0.5
HNR				pmax	pmax		
	comp=Z,135nm,1.0s,mb5.8						
HNR	Honiara	68.76	104	eP	P	23 19 07.1	+0.5
	comp=Z,135nm,1.0s,mb5.8						
VTS	Vitosha	68.80	312	⇑P	P	23 19 05.7	-0.7
VTS	Vitosha	68.80	312	P	P	23 19 05.5	-0.9
VTS	Vitosha	68.80	312	eP	P	23 19 05.0	-1.4
KKB	Krupnik	68.82	311	eP	P	23 19 05.0	-1.5
LVV	L’vov	69.16	319	eP	P	23 19 07.2	-1.2
LVZ	Lovozero	69.23	340	eP	P	23 19 07.0	-1.6
LVZ				eS	S	23 28 03.1	-8.6
LVZ				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
LVZ				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
LVZ				MLR	MLR		
	comp=N,516nm,18.0s,MS5.2						
LVZ				MLR	MLR		
	comp=E,1µm,18.0s,MS5.2						
APA	Apatity	69.52	339	⇓iP	P	23 19 09.7	-0.7
APA				i	pP	23 19 18.0	-0.3
APA				i		23 19 39.0	
APA				eS	S	23 28 22.0	+6.9
APA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
APA				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.3						
LSZ	Lusaka	69.63	250	eP	P	23 19 12.4	+0.5
LSZ				pmax	pmax		
	comp=Z,96nm,1.9s,mb5.4						
LSZ	Lusaka	69.63	250	eP	P	23 19 12.4	+0.5
	comp=Z,96nm,1.9s,mb5.4						
KWP	Kalwaria	69.98	319	eP	P	23 19 12.4	-1.1
KWP				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.2						
KWP	Kalwaria	69.98	319	eP	P	23 19 12.4	-1.1
	comp=Z,35nm,1.0s,mb5.2						
SKO	Skopje	70.05	311	eP	P	23 19 12.3	-1.8
KOLS	Kolonicke sedl	70.17	318	i P	P	23 19 14.6	0.0
KOLS				e	pP	23 19 23.5	+1.0
BZS	Buzias	70.24	315	⇑P	P	23 19 14.5	-0.6
SUW	Suwalki	70.37	324	eP	P	23 19 14.3	-1.4
SUW				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.4						
SUW	Suwalki	70.37	324	eP	P	23 19 14.3	-1.4
	comp=Z,55nm,1.0s,mb5.4						
FINES	FINESS Array B	70.45	332	P	P	23 19 15.0	-1.1
	comp=Z,3.4nm,0.8s,mb4.3,baz=90,slow=5.7,SNR=14						
FINES				LR	LR	23 56 47.2	
	comp=Z,438nm,18.7s,MS4.7,baz=270,slow=42						
FINES	FINESS Array B	70.45	332	P	P	23 19 15.0	-1.1
FINES				LR	LR	23 56 47.2	
KAF	Kangasniemi	70.53	333	ep	P	23 19 14.3	-2.3
	comp=Z,7.5nm,1.1s,mb4.5,baz=104,slow=5.7						
KAF	Kangasniemi	70.53	333	eP	P	23 19 14.3	-2.3
KAF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
CRVS	Cervenica-Dubn	70.70	318	eP	P	23 19 18.8	+1.0
CRVS				epP	pP	23 19 25.1	-0.6
KECS	Kecovo	71.29	318	eP	P	23 19 29.2	+7.7
KECS	Kecovo	71.29	318	epP	pP	23 19 29.2	-0.2
NIE	Niedzica	71.50	319	eP	P	23 19 21.4	-1.3
PSZ	Piszkesteto	71.63	317	eP	P	23 19 22.6	-0.9
PSZ				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
PSZ	Piszkesteto	71.63	317	eP	P	23 19 22.6	-1.0
	comp=Z,26nm,1.4s,mb5.0						
PSZ	Piszkesteto	71.63	317	⇑iP	P	23 19 23.2	-0.3
OJC	Ojcow	71.92	320	eP	P	23 19 24.5	-0.7
VYHS	Vyhne	72.39	318	eP	P	23 19 27.4	-0.6
VYHS				epP	pP	23 19 35.8	-0.1
KEV	Kevo	72.50	340	ep	P	23 19 27.1	-1.2
SRO2	Moca	72.63	317	eP	P	23 19 29.1	-0.3

SRO2				*e*		23 19 34.4	
SRO	**Srobarova**	**72.69**	**317**	*e*P	**P**	**23 19 30.1**	**+0.3**
SRO				*e*pP	pP	23 19 38.6	+0.9
SRO1	**Iza**	**72.74**	**317**	*e*P	**P**	**23 19 29.7**	**-0.4**
ARCES	**ARCESS Array B**	**72.94**	**340**	P	**P**	**23 19 30.3**	**-0.5**
	comp=Z,30nm,1.1s,mb5.1,baz=90,slow=6.1,SNR=23						
ARCES				LR	LR	23 54 22.0	
	comp=Z,1µm,21.6s,MS5.2,baz=114,slow=38						
ARCES	**ARCESS Array B**	**72.94**	**340**	P	**P**	**23 19 30.3**	**-0.5**
ARCES				LR	LR	23 54 22.0	
OKC	**Ostrava-Krasne**	**72.94**	**319**	*e*P	**P**	**23 19 30.8**	**-0.4**
OKC				*e*pP	pP	23 19 38.5	-0.7
SMOL	**Smolenice**	**73.32**	**318**	*e*P	**P**	**23 19 33.0**	**-0.5**
MORC	**Moravsky Berou**	**73.33**	**319**	*e*P	**P**	**23 19 32.8**	**-0.7**
MORC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
MORC	**Moravsky Berou**	**73.33**	**319**	*e*P	**P**	**23 19 32.8**	**-0.7**
	comp=Z,16nm,1.0s,mb4.9						
ZST	**Bratislava**	**73.52**	**317**	*e*P	**P**	**23 19 34.5**	**-0.1**
VKA	**Vienna**	**74.05**	**317**	*e*(P)	**P**	**23 19 39.0**	**+1.3**
BILL	**Bilibino**	**74.11**	**22**	⇓*e*P	**P**	**23 19 36.3**	**-1.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
BILL				MLR	MLR		
	comp=Z,500nm,14.0s,MS5.0						
DPC	**Dobruska-Polom**	**74.15**	**319**	*e*P	**P**	**23 19 38.2**	**0.0**
DPC				AMS	AMS	23 56 10.0	
	comp=Z,400nm,21.2s						
KSP	**Ksiaz**	**74.19**	**320**	*e*P	**P**	**23 19 38.4**	**-0.1**
KSP				*e**PP	pP	23 19 45.5	-0.9
KSP				*e*S	S	23 29 08.0	-1.0
KSP				MLR	MLR		
	comp=Z,700nm,24.1s,MS4.9						
UPC	**Upice**	**74.36**	**320**	*e*P	**P**	**23 19 39.7**	**+0.3**
ARSA	**Arzberg**	**74.55**	**316**	⇓*i*P	**P**	**23 19 40.5**	**-0.1**
	comp=Z,30nm,2.1s,mb4.9						
BOJS	**Bojanci**	**74.69**	**314**	*e*P	**P**	**23 19 41.1**	**-0.4**
PERS	**Pernice**	**74.81**	**316**	*i* P	**P**	**23 19 42.0**	**-0.2**
PERS				*i*		23 19 53.0	
LBTB	**Lobatse**	**74.97**	**241**	*e*P	**P**	**23 19 44.6**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.2						
LBTB				MLR	MLR		
	comp=Z,930nm,21.0s,MS5.1						
LBTB	**Lobatse**	**74.97**	**241**	*e*P	**P**	**23 19 44.6**	**+1.1**
	comp=Z,43nm,1.3s,mb5.2						
LBTB				LR	LR		
	comp=Z,930nm,21.0s,MS5.1						
LJU	**Ljubljana**	**75.21**	**315**	*i* P	**P**	**23 19 44.5**	**0.0**
LJU				*e*		23 19 55.0	
BSD	**Bornholm Skovb**	**75.27**	**324**	*i* P	**P**	**23 19 52.2**	**+7.6**
PVCC	**Panska Ves**	**75.28**	**320**	*e*P	**P**	**23 19 43.5**	**-1.2**
PVCC				AMS	AMS	23 57 10.0	
	comp=Z,300nm,19.5s						
PRU	**Pruhonice**	**75.28**	**319**	*e*P	**P**	**23 19 44.4**	**-0.4**
PRU				*e*pP	pP	23 19 52.2	-0.5
PRU				AMS	AMS	23 57 50.0	
	comp=Z,300nm,20.7s						
VAE	**Valguarnera**	**75.38**	**306**	LR	LR	23 55 47.2	
	comp=Z,249nm,21.7s,MS4.5,baz=329,slow=38						
BRG	**Berggiesshubel**	**75.69**	**320**	*e*P	**P**	**23 19 47.4**	**+0.3**
BRG				*e*S	S	23 29 27.0	+1.5
BRG				*e*SS	SS	23 34 17.0	-2.9
BRG				pmax	pmax		
	comp=Z,31nm,1.9s,mb4.9						
BRG				MLR	MLR		
	comp=Z,350nm,24.1s,MS4.6						
BRG	**Berggiesshubel**	**75.69**	**320**	*e*P	**P**	**23 19 47.4**	**+0.3**
	comp=Z,31nm,1.9s,mb4.9						
BRG				*e*S	S	23 29 27.0	+1.5
BRG				*e*		23 31 56.8	
BRG				*e*SS	SS	23 34 17.0	-2.9
BRG				LR	LR		
	comp=Z,350nm,24.1s,MS4.6						
GEC2	**GERESS Array S**	**75.80**	**318**	*e*P	**P**	**23 19 47.7**	**-0.1**
GEC2				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
GEC2	**GERESS Array S**	**75.80**	**318**	*e*P	**P**	**23 19 47.7**	**-0.1**
	comp=Z,22nm,1.1s,mb5.0						
GERES	**GERESS Array B**	**75.80**	**318**	P	**P**	**23 19 47.7**	**-0.1**
	comp=Z,6.0nm,0.7s,mb4.6,baz=90,slow=5.3,SNR=62						
KHC	**Kasperske Hory**	**75.89**	**318**	*e*P	**P**	**23 19 48.0**	**-0.2**
KHC				*e**PP	pP	23 19 55.4	-0.8
KHC				MLR	MLR		
	comp=Z,300nm,17.6s,MS4.7						
KHC	**Kasperske Hory**	**75.89**	**318**	*e*P	**P**	**23 19 48.0**	**-0.2**
KHC				*e*pP	pP	23 19 55.4	-0.8
KHC				*e*x	x	23 20 09.0	
KHC				AMS	AMS	23 57 20.0	
	comp=Z,300nm,17.6s						
ROBS	**Robic**	**75.92**	**315**	*e*P	**P**	**23 19 47.5**	**-1.0**
ROBS				*e*	pP	23 19 54.6	-1.8
PTCC	**Patocco-Chiusa**	**76.03**	**315**	*e*P	**P**	**23 19 48.7**	**-0.4**
CLL	**Collm**	**76.29**	**320**	*i* P	**P**	**23 19 49.7**	**-0.7**
CLL				*i*	pP	23 19 55.9	-2.5
CLL				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
CLL	**Collm**	**76.29**	**320**	*i* P	**P**	**23 19 49.7**	**-0.7**
	comp=Z,15nm,1.4s,mb4.7						
CLL				*i*	pP	23 19 55.9	-2.5
CLL				S	S	23 29 42.0	+10
CLL	**Collm**	**76.29**	**320**	P	**P**	**23 19 49.7**	**-0.7**
	comp=Z,logA/T=1.0,mb4.7						
CLL				*i* *PP	pP	23 19 55.9	-2.5
CLL				*i* *SP	sP	23 20 00.5	-0.6
CLL				*e*S	S	23 29 42.0	+10
WET	**Wettzell**	**76.35**	**318**	*e*P	**P**	**23 19 51.1**	**+0.3**
WET				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.9						
WET	**Wettzell**	**76.35**	**318**	*e*P	**P**	**23 19 51.1**	**+0.3**
	comp=Z,26nm,1.5s,mb4.9						
BOSA	**Boshof**	**76.44**	**237**	*e*P	**P**	**23 19 52.6**	**+0.8**
BOSA				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
BOSA	**Boshof**	**76.44**	**237**	*e*P	**P**	**23 19 52.6**	**+0.8**
	comp=Z,30nm,1.0s,mb5.2						
NKC	**Novy Kostel**	**76.63**	**319**	*e*P	**P**	**23 19 52.0**	**-0.4**
NKC				*e*pP	pP	23 20 00.0	-0.4
COP	**Copenhagen**	**76.71**	**325**	*i* P	pP	23 20 05.2	+4.5
	comp=Z,150nm,18.0s						
SFI	**Santa Sofia**	**77.13**	**313**	*e*P	**P**	**23 19 55.8**	**+0.5**
MOX	**Moxa**	**77.16**	**320**	*e*P	**P**	**23 19 55.4**	**+0.1**
MOX				pmax	pmax		
	comp=Z,41nm,2.0s,mb5.0						
MOX				MLR	MLR		
	comp=Z,300nm,22.0s,MS4.6						
MOX	**Moxa**	**77.16**	**320**	*e*P	**P**	**23 19 55.4**	**+0.1**
	comp=Z,41nm,2.0s,mb5.0						
MOX				LR	LR		
	comp=Z,300nm,22.0s,MS4.6						
MOX	**Moxa**	**77.16**	**320**	*i* P	**P**	**23 19 55.4**	**+0.1**
	comp=Z,logA/T=1.3,mb5.0						
MOX				L		23 59 11.0	
WTTA	**Wattenberg**	**77.19**	**316**	⇑*i*P	**P**	**23 19 55.1**	**-0.5**
	comp=Z,15nm,0.9s,mb4.9						
WTTA	**Wattenberg**	**77.19**	**316**	⇑*i*P	**P**	**23 19 55.1**	**-0.5**
WTTA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
CTI	**Castel Tesino**	**77.21**	**315**	*e*P	**P**	**23 19 55.7**	**0.0**
PGD	**Poggio Sodo**	**77.23**	**313**	*e*P	**P**	**23 19 56.8**	**+1.0**
WATA	**Walderalm**	**77.23**	**316**	⇑*i*P	**P**	**23 19 55.1**	**-0.7**
	comp=Z,12nm,1.3s,mb4.7						
WATA	**Walderalm**	**77.23**	**316**	⇑*i*P	**P**	**23 19 55.1**	**-0.7**
WATA				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
VMG	**Vicchio**	**77.35**	**313**	*e*P	**P**	**23 19 57.3**	**+0.8**
FUR	**Furstenfeldbru**	**77.42**	**317**	*e*P	**P**	**23 19 56.2**	**-0.6**
FUR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
FUR	**Furstenfeldbru**	**77.42**	**317**	*e*P	**P**	**23 19 56.2**	**-0.6**
	comp=Z,15nm,1.1s,mb4.8						
GRA1	**Grafenberg Arr**	**77.42**	**319**	*e*P	**P**	**23 19 56.9**	**+0.1**
	comp=Z,96nm,2.3s,mb5.3						
GRF	**Grafenberg Arr**	**77.42**	**319**	*e*P	**P**	**23 19 56.9**	**+0.1**
GRF				pmax	pmax		
	comp=Z,96nm,2.3s,mb5.3						
GRF				MLR	MLR		
	comp=Z,300nm,20.8s,MS4.6						
GRF	**Grafenberg Arr**	**77.42**	**319**	*e*P	**P**	**23 19 56.9**	**+0.1**
	comp=Z,96nm,2.3s,mb5.3						
GRF				LR	LR		
	comp=Z,300nm,20.8s,MS4.6						
SEI	**Scarperia**	**77.48**	**313**	*e*P	**P**	**23 19 58.3**	**+1.1**
SQTA	**Sankt Quirin**	**77.49**	**316**	⇓*i*P	**P**	**23 19 56.3**	**-0.9**
	comp=Z,16nm,1.2s,mb4.8						
SQTA	**Sankt Quirin**	**77.49**	**316**	⇓*i*P	**P**	**23 19 56.3**	**-0.9**
SQTA				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
NB2	**NORSAR Subarra**	**77.49**	**330**	P	**P**	**23 19 55.7**	**-1.2**
	comp=Z,17nm,1.1s,mb4.9,baz=91,slow=5.6						
NB2	**NORSAR Subarra**	**77.49**	**330**	P	**P**	**23 19 55.7**	**-1.2**
NB2				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
NOA	**NORSAR Array B**	**77.49**	**330**	P	**P**	**23 19 54.8**	**-2.2**
	comp=Z,3.7nm,0.9s,mb4.3,baz=92,slow=5.6,SNR=9.9						
NOA				LR	LR	23 57 46.6	
	comp=Z,372nm,20.6s,MS4.7,baz=85,slow=38						
MOTA	**Moosalm**	**77.56**	**316**	⇓*i*P	**P**	**23 19 56.7**	**-0.9**
	comp=Z,11nm,1.1s,mb4.7						
MOTA	**Moosalm**	**77.56**	**316**	⇓*i*P	**P**	**23 19 56.7**	**-0.9**
MOTA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
CLZ	**Clausthal**	**77.93**	**321**	*e*P	**P**	**23 19 59.5**	**0.0**
	comp=Z,36nm,1.7s,mb5.0						
GSCL	**Gusciola**	**78.02**	**313**	*e*P	**P**	**23 20 01.2**	**+1.0**
BRMO	**Bormio**	**78.08**	**315**	*e*P	**P**	**23 20 00.6**	**+0.2**
DAVA	**Damuels**	**78.39**	**316**	⇓*i*P	**P**	**23 20 01.8**	**-0.3**
	comp=Z,20nm,0.9s,mb5.0						
DAVOX	**Davos**	**78.41**	**316**	P	**P**	**23 20 01.7**	**-0.6**
	comp=Z,8.2nm,0.7s,mb4.8,baz=120,slow=7.8						
MUD	**Monsted U'grnd**	**78.54**	**326**	*i* P	**P**	**23 20 22.7**	**+20**
	comp=Z,14nm,0.8s,mb4.9						
MUD				*e*S	S	23 30 08.3	+12
	comp=Z,330nm,19.0s						
VAI	**Varese**	**79.23**	**315**	*e*P	**P**	**23 20 05.9**	**-0.9**
PGF	**Pioggiola**	**79.28**	**312**	*e*P	**P**	**23 20 06.7**	**-0.4**
BFO	**Black Forest**	**79.38**	**317**	*e*P	**P**	**23 20 06.2**	**-1.3**
BFO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BFO	**Black Forest**	**79.38**	**317**	*e*P	**P**	**23 20 06.2**	**-1.3**
	comp=Z,7.0nm,1.0s,mb4.5						
FIN	**Finale Ligure**	**79.74**	**313**	*e*P	**P**	**23 20 09.2**	**-0.4**
CDF	**Champ du Feu**	**80.08**	**318**	⇓*i*P	**P**	**23 20 10.6**	**-0.7**
SBF	**Sospel**	**80.32**	**313**	*e*P	**P**	**23 20 12.4**	**-0.3**
	comp=Z,44nm,0.8s,mb5.2						
SBF	**Sospel**	**80.32**	**313**	*e*P	**P**	**23 20 12.4**	**-0.3**
SBF				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
HINF	**Hinteralfeld**	**80.40**	**317**	*e*P	**P**	**23 20 12.5**	**-0.5**
TSUM	**Tsumeb**	**80.44**	**248**	P	**P**	**23 20 15.3**	**+1.5**
	comp=Z,7.8nm,1.1s,mb4.5,baz=335,slow=5.4,SNR=6.1						
TSUM	**Tsumeb**	**80.44**	**248**	*e*P	**P**	**23 20 15.9**	**+2.1**
	comp=Z,9.1nm,1.2s,mb4.6						
LPG	**La Plagne**	**80.67**	**315**	⇓*i*P	**P**	**23 20 14.8**	**+0.3**
	comp=Z,52nm,0.8s,mb5.2						
LPG	**La Plagne**	**80.67**	**315**	⇓*i*P	**P**	**23 20 14.8**	**+0.3**
LPG				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
LPL	**La Plagne**	**80.68**	**315**	⇓*i*P	**P**	**23 20 14.7**	**+0.2**
	comp=Z,54nm,0.8s,mb5.2						
LPL	**La Plagne**	**80.68**	**315**	⇓*i*P	**P**	**23 20 14.7**	**+0.2**
LPL				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.2						
MAW	**Mawson**	**80.71**	**191**	LR	LR	23 51 44.2	
	comp=Z,384nm,18.1s,MS4.8,baz=175,slow=32						
MBDF	**Montbardon**	**80.72**	**314**	*e*P	**P**	**23 20 14.1**	**-0.7**
HAU	**Haudompre**	**80.73**	**317**	⇓*i*P	**P**	**23 20 14.1**	**-0.6**
	comp=Z,20nm,0.8s,mb4.8						
HAU				*e*R			
	comp=Z,320nm,20.2s						
HAU	**Haudompre**	**80.73**	**317**	⇓*i*P	**P**	**23 20 14.1**	**-0.6**
HAU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
HAU				MLR	MLR		
	comp=Z,320nm,20.3s,MS4.7						
BNI	**Bardonecchia**	**80.76**	**314**	*e*P	**P**	**23 20 14.6**	**-0.4**
BNI				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
BNI	**Bardonecchia**	**80.76**	**314**	*e*P	**P**	**23 20 14.6**	**-0.4**
	comp=Z,21nm,0.9s,mb5.1						
FRF	**La Foret Royal**	**80.92**	**313**	*e*P	**P**	**23 20 15.7**	**-0.1**
	comp=Z,22nm,0.7s,mb4.9						
FRF	**La Foret Royal**	**80.92**	**313**	*e*P	**P**	**23 20 15.7**	**-0.1**
FRF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
CABF	**La Chapelle**	**81.03**	**316**	*e*P	**P**	**23 20 16.3**	**0.0**
LMR	**La Mourre**	**81.04**	**312**	*e*P	**P**	**23 20 16.2**	**-0.3**
SUR	**Sutherland**	**81.28**	**235**	P	**P**	**23 20 20.0**	**+2.0**
	comp=Z,14nm,0.7s,mb5.0,baz=109,slow=7.3,SNR=17						
SUR				LR	LR	23 51 05.2	
	comp=Z,523nm,19.2s,MS4.9,baz=67,slow=32						
ORIF	**Oris-en-Rattie**	**81.33**	**314**	*e*P	**P**	**23 20 18.1**	**+0.1**
	comp=Z,27nm,1.0s,mb4.8						
ORIF				*e*R			
	comp=Z,473nm,20.5s						
GIVF	**Givet**	**81.53**	**319**	*e*P	**P**	**23 20 18.7**	**-0.2**
SMRF	**Simiane la Rot**	**81.65**	**313**	*e*P	**P**	**23 20 19.3**	**-0.3**
BAIF	**Baives**	**81.93**	**319**	*e*P	**P**	**23 20 21.1**	**+0.1**
	comp=Z,23nm,1.0s,mb4.8						
BAIF	**Baives**	**81.93**	**319**	*e*P	**P**	**23 20 21.1**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
VIVF	**Saint-Julien-l**	**82.19**	**314**	*e*P	**P**	**23 20 22.3**	**-0.1**
	comp=Z,16nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**82.19**	**314**	*e*P	**P**	**23 20 22.3**	**-0.1**
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
SMF	**Signal de Mont**	**82.56**	**316**	⇓*i*P	**P**	**23 20 23.9**	**-0.4**
	comp=Z,27nm,1.0s,mb4.9						
SMF	**Signal de Mont**	**82.56**	**316**	⇓*i*P	**P**	**23 20 23.9**	**-0.4**
SMF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
SSF	**Saint Saulge**	**82.74**	**316**	⇓*i*P	**P**	**23 20 24.9**	**-0.3**
LASF	**Ste Croix**	**82.87**	**313**	*e*P	**P**	**23 20 26.2**	**+0.2**
AVF	**Avril sur Loir**	**82.88**	**316**	⇓*i*P	**P**	**23 20 25.6**	**-0.4**
	comp=Z,34nm,1.1s,mb5.0						
AVF	**Avril sur Loir**	**82.88**	**316**	⇓*i*P	**P**	**23 20 25.6**	**-0.4**
AVF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
BGF	**Bois d'Agland**	**83.25**	**316**	*e*P	**P**	**23 20 27.9**	**0.0**
	comp=Z,21nm,0.8s,mb4.9						
BGF	**Bois d'Agland**	**83.25**	**316**	*e*P	**P**	**23 20 27.9**	**0.0**
BGF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
TCF	**Toulx Ste Croi**	**83.73**	**316**	*e*P	**P**	**23 20 30.6**	**+0.3**
CAF	**Calviac**	**84.02**	**314**	*e*P	**P**	**23 20 32.1**	**+0.2**
	comp=Z,14nm,0.8s,mb4.8						
CAF	**Calviac**	**84.02**	**314**	*e*P	**P**	**23 20 32.1**	**+0.2**
CAF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
MTLF	**Montolieu**	**84.14**	**313**	*e*P	**P**	**23 20 32.6**	**+0.1**
	comp=Z,20nm,0.9s,mb4.9						
MTLF	**Montolieu**	**84.14**	**313**	*e*P	**P**	**23 20 32.6**	**+0.1**
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
RJF	**Les Rejaudoux**	**84.35**	**315**	⇓*i*P	**P**	**23 20 33.9**	**+0.4**
	comp=Z,14nm,0.7s,mb4.9						
RJF				*e*R			
	comp=Z,187nm,22.2s						
RJF	**Les Rejaudoux**	**84.35**	**315**	⇓*i*P	**P**	**23 20 33.9**	**+0.4**
RJF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
RJF				MLR	MLR		
	comp=Z,190nm,22.3s,MS4.4						
JMIC	**Jan Mayen**	**84.37**	**341**	LR	LR	00 01 13.3	
	comp=Z,317nm,19.7s,MS4.7,baz=264,slow=38						
LDF	**La Druitiere**	**84.94**	**318**	*e*P	**P**	**23 20 36.1**	**-0.2**
	comp=Z,121nm,1.6s,mb5.5						
LDF	**La Druitiere**	**84.94**	**318**	*e*P	**P**	**23 20 36.1**	**-0.2**
LDF				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.5						
FLN	**La Foliniere**	**85.14**	**319**	⇓*i*P	**P**	**23 20 37.2**	**-0.2**
	comp=Z,52nm,1.1s,mb5.3						
FLN				*e*R			
	comp=Z,242nm,21.2s						
FLN	**La Foliniere**	**85.14**	**319**	⇓*i*P	**P**	**23 20 37.2**	**-0.2**
FLN				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.3						
FLN				MLR	MLR		
	comp=Z,240nm,21.3s,MS4.6						
MFF	**Saint Martin d**	**85.29**	**316**	⇓*i*P	**P**	**23 20 38.1**	**0.0**
	comp=Z,18nm,0.8s,mb5.0						
MFF	**Saint Martin d**	**85.29**	**316**	⇓*i*P	**P**	**23 20 38.1**	**0.0**
MFF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
ETSF	**Etsaut**	**86.22**	**313**	*e*P	**P**	**23 20 43.4**	**+0.5**
SJPF	**Ste Jean**	**86.66**	**313**	*e*P	**P**	**23 20 45.6**	**+0.5**
SYO	**Syowa Base**	**87.48**	**197**	⇑P	**P**	**23 20 50.0**	**+1.6**
SYO	**Syowa Base**	**87.48**	**197**	⇓PcP	PcP	23 20 53.5	+2.7
RPZ	**Rata Peaks**	**88.00**	**135**	P	**P**	**23 20 52.7**	**+1.2**
	comp=Z,11nm,1.0s,mb5.0,baz=23,slow=11,SNR=3.5						
ESDC	**Sonseca Array**	**89.38**	**310**	P	**P**	**23 20 58.0**	**-0.2**
	comp=Z,1.8nm,0.6s,mb4.6,baz=60,slow=4.5,SNR=16						
IMA	**Indian Mountai**	**89.65**	**22**	*e*P	**P**	**23 21 00.3**	**+1.5**
	comp=Z,48nm,1.4s,mb5.6						
SUMG	**Summit**	**91.79**	**347**	P	**P**	**23 21 08.1**	**-0.4**
	comp=Z,13nm,0.9s,mb5.3						
ILAR	**Eielson Array**	**92.77**	**22**	P	**P**	**23 21 12.7**	**-0.5**
	comp=Z,1.9nm,1.0s,mb4.5,baz=303,slow=4.7,SNR=14						
ILAR				PKKPbc		23 38 23.9	
	comp=Z,0.4nm,0.5s,baz=133,slow=1.5,SNR=12						
ILAR				LR	LR	00 07 47.9	
	comp=Z,368nm,20.1s,MS4.8,baz=140,slow=39						
INK	**Inuvik**	**94.89**	**16**	P	**P**	**23 21 23.6**	**+0.7**
	comp=Z,1.9nm,0.8s,mb4.6,baz=325,slow=8.0,SNR=2.3						
INK	**Inuvik**	**94.89**	**16**	*e*P	**P**	**23 21 23.1**	**+0.2**
	comp=Z,7.4nm,1.1s,mb5.0						
RES	**Resolute Bay**	**95.11**	**2**	*e*P	**P**	**23 21 24.6**	**+0.8**
	comp=Z,9.7nm,0.9s,mb5.2						
DBIC	**Dimbokro**	**97.17**	**278**	LR	LR	00 04 05.1	
	comp=Z,342nm,21.1s,MS4.8,baz=64,slow=35						
YKA	**Yellowknife Ar**	**104.28**	**13**	PP	PP	23 26 19.6	-6.6
	comp=Z,0.3nm,0.7s,baz=331,slow=7.2,SNR=3.7						
YKA				PKKPbc		23 37 50.1	
	comp=Z,0.6nm,0.7s,baz=152,slow=3.0,SNR=12						
MSO	**Missoula**	**118.09**	**21**	*e*PKPdf	PKPdf	23 26 48.1	-3.5
MSO				*e*pPKPdf		23 26 55.7	
PPT	**Papeete**	**118.38**	**104**	*e*SS	SS	23 44 18.5	-2.2
PPT				*e*LR	LR	00 02 43.9	
	comp=Z,745nm,33.8s						
TBI	**Tubuai**	**118.56**	**111**	*e*SS	SS	23 44 21.2	-1.7
TBI				*e*LR	LR	00 02 49.1	
	comp=Z,550nm,34.0s						
ULM	**Lac du Bonnet**	**119.23**	**7**	PKP	PKPdf	23 26 49.9	-3.9
	comp=Z,1.3nm,0.5s,baz=15,slow=2.9,SNR=8.5						
BOZ	**Bozeman (W)**	**119.92**	**20**	*e*PKPdf	PKPdf	23 26 52.5	-2.7
BOZ				LR	LR		
	comp=Z,423nm,20.0s,MS5.1						
HLID	**Hailey**	**120.69**	**23**	*e*PKPdf	PKPdf	23 26 54.5	-2.3
HLID				LR	LR		
	comp=Z,368nm,20.0s,MS5.0						
YFT	**Old Faithful**	**121.24**	**20**	PKPdf	PKPdf	23 26 56.2	-1.7
LOHW	**Long Hollow**	**122.06**	**21**	*e*PKPdf	PKPdf	23 26 57.1	-2.3
SNOW	**Snow King Moun**	**122.14**	**21**	*e*PKPdf	PKPdf	23 26 57.6	-2.0
NVAR	**Mina Array Bea**	**123.15**	**30**	PKP	PKPdf	23 26 59.3	-2.4
	comp=Z,5.3nm,0.7s,baz=346,slow=1.9,SNR=13						
PDAR	**Pinedale Array**	**123.16**	**20**	PKP	PKPdf	23 26 57.7	-3.9
	comp=Z,3.9nm,0.7s,baz=36,slow=0.5,SNR=41						
PDAR				PKKPbc		23 36 47.6	
	comp=Z,0.7nm,0.5s,baz=145,slow=5.9,SNR=11						
HWUT	**Hardware Ranch**	**123.46**	**23**	*e*PKPdf	PKPdf	23 26 59.5	-2.7
DUG	**Dugway**	**124.17**	**24**	*e*PKPdf	PKPdf	23 27 01.3	-2.3
TRCR	**Troy Canyon**	**124.50**	**28**	*e*PKPdf	PKPdf	23 27 02.4	-2.0
DAU	**Daniels Canyon**	**124.61**	**23**	*e*PKPdf	PKPdf	23 27 02.4	-2.1
MVU	**Marysvale**	**125.85**	**25**	*e*PKPdf	PKPdf	23 27 05.8	-1.2
MSU	**Marysvale**	**125.86**	**25**	*e*PKPdf	PKPdf	23 27 05.8	-1.2
TAOE	**Nuku Hiva Isla**	**126.95**	**93**	*e*LR	LR	00 06 44.5	
PV10	**Paradox Valley**	**127.22**	**22**	*e*PKPdf	PKPdf	23 27 07.2	-2.4
ANMO	**Albuquerque**	**131.21**	**22**	*e*PKPdf	PKPdf	23 27 15.2	-2.1
ANMO				LR	LR		
	comp=Z,508nm,19.0s,MS5.2						
RKT	**Rikitea**	**131.87**	**112**	*e*LR	LR	00 08 59.4	
	comp=Z,705nm,35.2s						
TXAR	**Lajitas Array**	**137.28**	**23**	PKP	PKPdf	23 27 25.3	-3.4
	comp=Z,1.5nm,0.6s,baz=222,slow=1.1,SNR=22						
TXAR				SKPbc		23 30 55.9	
	comp=Z,2.2nm,0.9s,baz=270,slow=1.3,SNR=9.1						
TXAR	**Lajitas Array**	**137.28**	**23**	PKP	PKPdf	23 27 25.3	-3.4
TXAR				SKPbc		23 30 55.9	
JCT	**Junction City**	**137.53**	**17**	*e*PKPdf	PKPdf	23 27 26.6	-2.5
BAO	**Brasilia Array**	**142.29**	**258**	P	PKPdf	23 27 31.5	-6.6
BAO				*e*		23 27 36.1	
BDFB	**Brasilia**	**142.31**	**258**	PKP	PKPdf	23 27 34.6	-3.6
	comp=Z,6.0nm,0.6s,baz=94,slow=2.9,SNR=3.9						
TRQA	**Tornquist**	**144.69**	**214**	*e*PKPdf	PKPdf	23 27 37.4	-4.3
PLCA	**Paso Flores**	**146.54**	**202**	PKPbc	PKPbc	23 27 43.5	+2.1
	comp=Z,19nm,0.9s,baz=144,slow=1.5,SNR=42						
TEIG	**Tepich**	**149.70**	**4**	*e*PKPbc	PKPdf	23 27 51.4	+1.0
SDV	**Santo Domingo**	**155.44**	**320**	*e*PKPab	PKPab	23 28 21.3	-1.0
LPAZ	**La Paz**	**161.30**	**249**	PKP	PKPdf	23 28 03.2	-2.4
	comp=Z,2.1nm,0.9s,baz=9.9,slow=5.0,SNR=7.4						
LPAZ				PKPab	PKPab	23 28 46.7	-0.7
	comp=Z,1.8nm,0.6s,baz=130,slow=4.2,SNR=4.5						
LPAZ	**La Paz**	**161.30**	**249**	*e*PKPdf	PKPdf	23 28 04.1	-1.6
LPAZ				LR	LR		
	comp=Z,358nm,20.0s						

IDC ***20*** *23:20:26.0±0.8, 13.50N×92.75E, mb3.9/11, mb1 4.1/12, mb1mx4.0/19, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=34.2km s-min=16.4km az=50.0*

NEIC ***20*** *23:20:30.8±0.6, 13.58N×92.84E, h30^{km}, mb4.3/7, Error ellipse: s-maj=13.5km s-min=8.1km az=46.0*

BJI ***20*** *23:20:31.6, 13.51N×93.22E, h32^{km}, mb4.0, Ms4.1, Msz4.2*

ISC 20 23:20:24.9±5.1**, 13.5N**±0.1×**92.83E**±0.08**, h5^{km}**±31^{km}**, n31, σ0^{s}76**/32**, mb4.0**/18**, MS4.1**/1**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**7.69**	**49**	P	**Pn**	**23 22 26.0**	**+5.7**
CMAR	**Chiang Mai Arr**	**7.69**	**49**	Pn	**Pn**	**23 22 19.4**	**-0.9**
	0.4nm,0.3s,baz=240,slow=15,SNR=11						
CMAR				Sn	**Sn**	**23 23 37.9**	**-11**
	0.8nm,0.3s,baz=242,slow=18,SNR=3.3						
HYB	**Hyderabad**	**14.31**	**288**	*i* P	**P**	**23 23 51.0**	**+0.6**
JIRN	**Jiri**	**15.42**	**337**	*e*P	**P**	**23 24 03.4**	**-1.5**
	34nm,0.8s						
PKI	**Pulchoki**	**15.65**	**335**	*e*P	**P**	**23 24 08.3**	**+0.4**
	25nm,0.6s						
DMN	**Daman**	**15.81**	**334**	*e*P	**P**	**23 24 09.8**	**-0.1**
	43nm,0.8s						
KKN	**Kakani**	**15.89**	**335**	*e*P	**P**	**23 24 06.8**	**-4.2**
	22nm,0.7s						
LSA	**Lhasa**	**16.23**	**355**	*e*P	**P**	**23 24 19.3**	**+4.0**
LSA	**Lhasa**	**16.23**	**355**	*e*P	**P**	**23 24 19.1**	**+3.9**
	12nm,0.9s						
KOLN	**Koldanda**	**16.63**	**330**	*e*P	**P**	**23 24 21.0**	**+0.6**
	40nm,0.7s						
ENH	**Enshi**	**22.72**	**40**	*e*P	**P**	**23 25 28.9**	**-0.2**
	11nm,0.8s,mb4.3						
LZH	**Lanzhou**	**24.60**	**22**	*e*P	**P**	**23 25 48.8**	**+1.5**
LZH				AP		23 25 57.6	
LZH				XP		23 26 02.1	
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.5						
LZH				LR	LR		
	comp=N,318nm,13.1s						
LZH				LR	LR		
	comp=Z,589nm,17.2s,MS4.1						
LZH	**Lanzhou**	**24.60**	**22**	*e*P	**P**	**23 25 48.7**	**+1.4**
	comp=Z,21nm,1.3s,mb4.5						
LZH				pP		23 25 57.6	
LZH				sP		23 26 02.1	
LZH				LR	LR		
	comp=Z,590nm,17.2s,MS4.1						
XAN	**Xi'an**	**25.16**	**33**	P	**P**	**23 25 52.8**	**+0.2**
XAN				AP	pP	23 25 57.8	+3.7
XAN				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.0						
GTA	**Gaotai**	**26.57**	**12**	P	**P**	**23 26 10.8**	**+5.1**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb3.8						
SONM	**Songino Array**	**36.08**	**16**	P	**P**	**23 27 30.3**	**+0.8**
	comp=Z,4.3nm,1.3s,mb4.2,baz=198,slow=3.9,SNR=6.1						
KURK	**Kurchatov**	**38.90**	**346**	P	**P**	**23 27 54.4**	**+1.3**
	comp=Z,2.8nm,0.9s,mb4.0						
ZAL	**Zalesovo**	**40.87**	**353**	P	**P**	**23 28 09.3**	**+0.1**
	comp=Z,0.7nm,0.4s,mb3.7,baz=286,slow=16,SNR=2.6						
BVAR	**Borovoye Array**	**43.31**	**340**	P	**P**	**23 28 28.5**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.5,baz=95,slow=11,SNR=4.0						
CHKZ	**Chkalovo**	**43.79**	**341**	*e*P	**P**	**23 28 33.3**	**+0.1**
	comp=Z,3.7nm,0.9s,mb4.1						
KIV	**Kislovodsk**	**52.38**	**316**	P	**P**	**23 29 41.0**	**+0.7**
	comp=Z,2.6nm,0.4s,mb4.5						
WRA	**Warramunga Arr**	**52.64**	**128**	P	**P**	**23 29 42.3**	**-0.2**
	comp=Z,2.0nm,0.8s,mb4.1,baz=307,slow=8.0,SNR=26						
WRA				PcP	PcP	23 30 53.5	+1.0
	comp=Z,0.5nm,0.6s,baz=320,slow=3.3,SNR=4.9						
WB2	**Warramunga Arr**	**52.65**	**128**	*e*P	**P**	**23 29 42.8**	**+0.2**
ASAR	**Alice Springs**	**54.55**	**132**	P	**P**	**23 29 56.7**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.1,baz=309,slow=6.6,SNR=18						
BRTR	**Keskin Array B**	**57.88**	**309**	P	**P**	**23 30 19.9**	**-0.3**
	comp=Z,1.9nm,0.7s,mb4.2,baz=118,slow=8.2,SNR=14						
AKASG	**Malin Array Be**	**63.02**	**320**	P	**P**	**23 30 53.8**	**-1.4**
	comp=Z,0.2nm,0.4s,mb3.6,baz=82,slow=5.2,SNR=4.3						

FINES	**FINESS Array B**	**67.20**	**331**	P	**P**	**23 31 21.7**	**-0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=90,slow=9.5,SNR=4.4						
ARCES	**ARCESS Array B**	**69.60**	**340**	P	**P**	**23 31 36.0**	**-0.7**
	comp=Z,1.6nm,0.8s,mb4.0,baz=102,slow=8.3,SNR=3.1						
GERES	**GERESS Array B**	**72.84**	**317**	P	**P**	**23 31 56.7**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=79,slow=6.8,SNR=15						
NB2	**NORSAR Subarra**	**74.26**	**330**	P	**P**	**23 32 03.8**	**-0.8**
	comp=Z,1.0nm,0.8s,mb3.8,baz=91,slow=4.8						
NOA	**NORSAR Array B**	**74.26**	**330**	P	**P**	**23 32 04.1**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.6,baz=248,slow=19,SNR=2.3						

*NEIC **20** 23:43:30.1,35.02S×70.57W,h11^{km},ML2.5(GUC),After GUC.*

GUC 20 23:43:30.1±0.6**,35.02S×70.57W,h11^{km}**±72^{km}**,MD3.5, ML2.5,1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCH	**Pirque**	**1.40**	**2**	*e*P	Pn	23 43 54.5	-1.2
PCH				*i* S	Sb	23 44 13.7	+0.2
TACH	**Talagante**	**1.40**	**347**	⇓*i*P	Pn	23 43 54.7	-1.0
TACH				*i* S	Sb	23 44 12.8	-0.7
RCDM	**Rinconada Maip**	**1.54**	**352**	*e*P	Pn	23 43 56.6	-1.1
RCDM				*i* S	Sb	23 44 17.2	-0.4
RCDM				AMP		23 44 20.0	
	comp=E,126nm,0.1s						
FCH	**Farellones**	**1.70**	**8**	*e*P	Pn	23 43 60.0	-0.1
FCH				*i* S	Sn	23 44 23.0	+1.0
FCH				AMP		23 44 26.2	
	comp=E,82nm,0.3s						
LCCH	**Las Cruces**	**1.75**	**331**	*e*P	Pn	23 44 00.2	-0.6
LCCH				*i* S	Sn	23 44 23.8	+0.6
ROCH	**El Roble**	**2.08**	**350**	*e*P	Pn	23 44 06.1	+0.7
ROCH				*i* S	Sn	23 44 32.9	+1.4
JACH	**Jahuel**	**2.33**	**359**	*e*P	Pn	23 44 10.1	+1.1

IDC 20 23:54:15.2±5.3**,20.39S×175.95W,mb4.2**/3**,mb1 4.4**/3**, mb1mx3.8**/15**,mbtmp4.2**/3**,1D,Error ellipse: s-maj=247.1km s-min=85.8km az=158.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.42**	**264**	P	P	00 01 14.9	-0.2
	1.5nm,0.4s,baz=110,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**46.42**	**256**	P	P	00 02 43.4	-2.3
	1.9nm,0.5s,baz=96,slow=7.5,SNR=32						
WB2	**Warramunga Arr**	**46.51**	**261**	⇓*i*P	P	00 02 43.8	-2.6
WRA	**Warramunga Arr**	**46.52**	**261**	P	P	00 02 43.6	-2.9
	1.1nm,0.3s,baz=97,slow=7.6,SNR=16						
AKASG	**Malin Array Be**	**143.83**	**333**	PKP	PKPdf	00 13 52.2	-1.8
	0.3nm,0.4s,baz=48,slow=4.0,SNR=4.1						

WEL 20 23:57:00.3±0.3**,41.31S×172.61E,h193^{km}**±2^{km}**,ML3.5**/7**, 1C,Error ellipse: s-maj=2.7km s-min=2.1km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.49**	**353**	PN	P	23 57 26.4	-0.5
QRZ				SN	S	23 57 45.5	-1.8
THZ	**Tophouse**	**0.50**	**154**	PN	P	23 57 26.9	0.0
THZ				SN	S	23 57 46.4	-1.1
NNZ	**Nelson**	**0.59**	**81**	PN	P	23 57 26.8	-0.4
NNZ				SN	S	23 57 47.0	-1.1
DSZ	**Denniston Nort**	**0.75**	**234**	PN	P	23 57 27.2	-0.7
TUWZ	**Tuamarina**	**1.01**	**97**	PN	P	23 57 29.4	-0.1
KHZ	**Kahutara**	**1.31**	**148**	⇑PN	P	23 57 31.7	-0.3
KHZ				SN	S	23 57 55.3	-1.1
LTZ	**Lake Taylor**	**1.49**	**190**	PN	P	23 57 33.2	-0.5
LTZ				SN	S	23 57 56.8	-2.6
MRW	**Makara Radio**	**1.58**	**88**	PN	P	23 57 33.7	-0.7
MRW				SN	S	23 57 59.0	-1.8
BHW	**Baring Head**	**1.70**	**94**	PN	P	23 57 34.9	-0.7
KIW	**Kapiti Island**	**1.79**	**76**	PN	P	23 57 35.8	-0.8
KIW				SN	S	23 58 02.5	-2.0
CAW	**Cannon Point**	**1.86**	**85**	PN	P	23 57 36.4	-0.9
CAW				SN	S	23 58 03.6	-2.1
MTW	**Mount Morrison**	**2.19**	**87**	PN	P	23 57 39.8	-0.9
WVZ	**Waitaha Valley**	**2.25**	**218**	PN	P	23 57 39.7	-1.7
MRZ	**Mangatainoka R**	**2.34**	**75**	PN	P	23 57 41.2	-1.2
MRZ				SN	S	23 58 12.5	-2.3
MQZ	**McQueen's Vall**	**2.40**	**179**	PN	P	23 57 41.3	-1.8
MQZ				SN	S	23 58 11.8	-4.2
BFZ	**Birch Farm**	**2.82**	**78**	PN	P	23 57 47.0	-1.0
BFZ				SN	S	23 58 22.0	-2.8
FOZ	**Fox Glacier**	**3.12**	**223**	PN	P	23 57 47.8	-3.7
JCZ	**Jackson Bay**	**3.96**	**225**	PN	P	23 57 59.0	-3.0

*IDC **21** 00:04:55.0±0.6,30.05S×176.89W,mb4.7/12,mb1 4.9/15, mb1mx4.8/19,mbtmp4.7/15,ML4.4/3,MS4.7/8,Ms1 4.7/8, ms1mx4.1/26,Error ellipse: s-maj=30.2km s-min=17.3km az=166.0*

*BJI **21** 00:04:56.3,29.76S×176.50W,h19^{km},mB5.7,mb5.3, Ms5.3,Msz5.0*

*NEIC **21** 00:04:56.0±0.3,30.12S×176.83W,h10^{km},mb5.2/22, MS5.0/20,Error ellipse: s-maj=10.2km s-min=7.3km az=164.0*

*HRVD **21** 00:04:56.0±0.6,29.92S×176.28W,h33^{km}±1^{km},MW5.0/39, Centroid moment Tensor Solution. LP body waves: s23,c34;Mantle waves: s39,c52; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.84±.30; $M_{\theta\theta}$0.23±.22; $M_{\phi\phi}$-3.06±.20; $M_{r\theta}$0.82±.28; $M_{\theta\phi}$-1.04±.15; $M_{\phi r}$1.89±.23; Best double couple: $M_0$3.725×10^{16} NP1:ϕ_s190°,δ29°,λ81°. NP2:ϕ_s21°,δ62°,λ95°. Principal axes: T 3.474, Plg73°, Azm303°; N .506, Plg4°, Azm198°; P -3.976, Plg17°, Azm107°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **21** 00:04:59.6±1.5,29.65S×176.99W,h33^{km},mb5.3/13, MS5.0/10 Error ellipse: s-maj=13.5km s-min=12.8km az=8.2*

ISC 21 00:04:58.7±1.5**,30.49S**±0.06×**176.87W**±0.06**, h46^{km}**±13^{km}**,h48^{km}**±10.3^{km}**:pP-P,n216,**σ**1.09**/108**, mb5.1**/36**,MS4.9**/31**,11C-14D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.53**	**323**	*e*P	**P**	**00 05 18.4**	**-5.7**
URZ	**Urewera**	**9.21**	**211**	Pn	**P**	**00 07 10.7**	**-1.1**
	2.0nm,0.3s,baz=327,slow=4.6,SNR=10.0						
URZ				Sn	**S**	**00 08 57.0**	**+1.8**
	4.1nm,0.3s,baz=185,slow=23,SNR=8.7						
BFZ	**Birch Farm**	**11.61**	**207**	*e*SN	**S**	**00 09 52.5**	**-1.2**
BFZ	**Birch Farm**	**11.61**	**207**	*e*SN	**S**	**00 09 52.5**	**-1.2**
MRZ	**Mangatainoka R**	**11.86**	**209**	*e*SN	**S**	**00 09 57.5**	**-2.3**
MRZ	**Mangatainoka R**	**11.86**	**209**	*e*SN	**S**	**00 09 57.5**	**-2.3**
RPZ	**Rata Peaks**	**16.32**	**213**	Pn	**P**	**00 08 46.2**	**+0.1**
	1.6nm,0.3s,baz=22,slow=6.2,SNR=9.2						
RPZ				Sn	**S**	**00 11 40.1**	**-5.1**
	0.6nm,0.3s,baz=48,slow=15,SNR=3.6						
DZM	**Mont Dzumac**	**17.13**	**295**	*e*P	**P**	**00 08 56.8**	**+0.4**
AFI	**Afiamalu**	**17.15**	**17**	P	**P**	**00 08 46.1**	**-11**
AFI				pmax	pmax		
	comp=Z,85nm,1.0s						
AFI	**Afiamalu**	**17.15**	**17**	P	**P**	**00 08 46.1**	**-11**
	comp=Z,85nm,1.0s						
NOUC	**Port Laguerre**	**17.23**	**295**	*e*P	**P**	**00 08 58.1**	**+0.4**
NOUC	**Port Laguerre**	**17.23**	**295**	*e*P	**P**	**00 08 58.1**	**+0.4**
RAR	**Rarotonga**	**17.93**	**63**	P	**P**	**00 08 54.4**	**-12**
	comp=Z,2.7nm,0.3s,baz=152,slow=15,SNR=3.4						
RAR				LR	LR	00 14 39.7	
	comp=Z,3μm,20.7s,baz=225,slow=33						
ARMA	**Armidale**	**27.11**	**262**	*e*P	**P**	**00 10 44.1**	**+4.7**
TOO	**Toolangi**	**31.83**	**247**	*e*P	**P**	**00 11 24.3**	**+3.0**
	comp=Z,1.3nm,0.9s						
TOO	**Toolangi**	**31.83**	**247**	*e*P	**P**	**00 11 24.3**	**+3.0**
TOO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CTA	**Charters Tower**	**34.77**	**279**	P	**P**	**00 11 47.3**	**+0.4**
	comp=Z,15nm,0.8s,mb5.0,baz=94,slow=10.0,SNR=14						
CTA				LR	LR	00 24 19.2	
	comp=Z,2μm,18.3s,MS4.9,baz=118,slow=34						
CTA	**Charters Tower**	**34.77**	**279**	P	**P**	**00 11 47.3**	**+0.4**
CTA				LR	LR	00 24 19.2	
CTAO	**Charters Tower**	**34.77**	**279**	*e*P	**P**	**00 11 46.9**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,172nm,1.6s,mb5.7						
CTAO				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.8						
CTAO	**Charters Tower**	**34.77**	**279**	*e*P	**P**	**00 11 46.9**	**-0.1**
	comp=Z,172nm,1.6s,mb5.7						
CTAO				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
STKA	**Stephens Creek**	**35.41**	**257**	*e*P	**P**	**00 11 55.6**	**+3.3**
	comp=Z,14nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**35.41**	**257**	P	**P**	**00 11 53.9**	**+1.6**
	comp=Z,6.8nm,0.6s,mb4.8,baz=99,slow=9.6,SNR=18						
STKA				LR	LR	00 25 06.0	
	comp=Z,1μm,19.0s,MS4.8,baz=82,slow=34						
ASAR	**Alice Springs**	**44.08**	**267**	P	**P**	**00 13 04.0**	**-0.2**
	comp=Z,9.9nm,0.8s,mb4.6,baz=105,slow=6.6,SNR=46						
ASAR				ScP		00 18 42.7	
	comp=Z,1.9nm,1.1s,baz=117,slow=4.0,SNR=3.1						
ASAR				ScS	ScS	00 23 06.0	+10
	comp=Z,0.6nm,0.9s,baz=100,slow=5.9,SNR=4.3						
ASAR				LR	LR	00 32 04.4	
	comp=Z,2μm,18.0s,MS5.1,baz=130,slow=37						
ASPA	**Alice Springs**	**44.08**	**267**	*e*P	**P**	**00 13 03.0**	**-1.2**
ASPA				*e*S	**S**	**00 19 34.1**	**+1.1**
WB2	**Warramunga Arr**	**45.06**	**272**	⇓*i*P	**P**	**00 13 11.8**	**-0.3**
WB2				*i*		00 13 31.3	
WB2				*e*S	**S**	**00 19 45.3**	**-1.9**
WRAB	**Tennant Creek**	**45.07**	**272**	c *i*P	**P**	**00 13 11.7**	**-0.5**
WRA	**Warramunga Arr**	**45.07**	**272**	P	**P**	**00 13 11.2**	**-1.0**
WRA				S	**S**	**00 19 45.5**	**-1.8**
WRA	**Warramunga Arr**	**45.07**	**272**	P	**P**	**00 13 11.2**	**-1.0**
	comp=Z,11nm,0.7s,mb4.8,baz=110,slow=7.8,SNR=30						
WRA				ScP		00 18 47.1	
	comp=Z,2.4nm,1.1s,baz=114,slow=3.7,SNR=4.8						
WRA				S	**S**	**00 19 45.4**	**-1.9**
	comp=Z,1.1nm,1.0s,baz=107,slow=14,SNR=3.8						
FORT	**Forrest**	**46.97**	**255**	*e*P	**P**	**00 13 28.2**	**+1.1**
	comp=Z,550nm,0.6s						
VNDA	**Vanda**	**48.11**	**186**	LR	LR	00 31 22.4	
	comp=Z,677nm,18.2s,MS4.7,baz=12,slow=33						
KAKA	**Kakadu**	**49.91**	**279**	*e*P	**P**	**00 13 48.8**	**-1.3**
	comp=Z,8.0nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.33**	**269**	*e*P	**P**	**00 14 17.4**	**+1.6**
	comp=Z,14nm,1.0s,mb4.8						
KLBR	**Kellerberrin**	**55.24**	**251**	*e*P	**P**	**00 14 29.1**	**-0.5**
	comp=Z,153nm,0.9s,mb6.0						
CASY	**Casey**	**55.52**	**208**	*e*P	**P**	**00 14 30.9**	**-0.3**
MBWA	**Marble Bar**	**57.18**	**263**	*e*P	**P**	**00 14 42.0**	**-1.7**
	comp=Z,24nm,1.3s,mb5.1						
MBWA				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
SYO	**Syowa Base**	**77.25**	**193**	⇓P	**P**	**00 16 49.2**	**0.0**
SYO	**Syowa Base**	**77.25**	**193**	⇓pP	pP	00 16 53.3	-9.3
SNAA	**Sanae**	**78.04**	**178**	*e*	**P**	**00 17 01.7**	**+8.2**
SNAA	**Sanae**	**78.04**	**178**	*e*	**P**	**00 17 03.1**	**+10**
SNAA	**Sanae**	**78.04**	**178**	*e*	**P**	**00 17 07.7**	**+14**
SNAA	**Sanae**	**78.04**	**178**	⇓*i*P	**P**	**00 16 58.9**	**+5.4**
SNAA				*e*	pP	00 17 07.7	+0.7
SNAA				*e*	pP	00 17 16.1	+9.1
SNAA	**Sanae**	**78.04**	**178**	P	**P**	**00 16 57.5**	**+4.0**
	comp=Z,5.1nm,1.0s,mb4.4,baz=174,slow=3.0,SNR=4.9						
SNAA				LR	LR	00 48 31.6	
	comp=Z,254nm,19.8s,MS4.5,baz=221,slow=33						
SNAA	**Sanae**	**78.04**	**178**	⇓*i*P	**P**	**00 16 58.9**	**+5.4**
SNAA				*e*		00 17 01.7	
SNAA				*e*		00 17 03.1	
SNAA				*e*	pP	00 17 07.7	+0.7
SNAA				*e*	pP	00 17 16.1	+9.1
VNA3	**Neumayer Olymp**	**78.15**	**176**	*e*	**P**	**00 17 00.1**	**+6.0**
VNA3	**Neumayer Olymp**	**78.15**	**176**	*e*	**P**	**00 17 01.8**	**+7.7**
VNA3	**Neumayer Olymp**	**78.15**	**176**	*e*	**P**	**00 17 05.0**	**+11**
VNA3	**Neumayer Olymp**	**78.15**	**176**	*e*	**P**	**00 17 12.2**	**+18**
VNA3	**Neumayer Olymp**	**78.15**	**176**	⇓*i*P	**P**	**00 16 57.5**	**+3.4**
VNA3				*e*		00 17 00.1	
VNA3				*e*		00 17 01.8	
VNA3				*e*		00 17 05.0	
VNA3				*e*	pP	00 17 12.2	+4.6
VNA2	**Neumayer--Watz**	**78.60**	**176**	*e*	**P**	**00 17 03.1**	**+6.5**
VNA2	**Neumayer--Watz**	**78.60**	**176**	*e*	**P**	**00 17 04.5**	**+7.9**
VNA2	**Neumayer--Watz**	**78.60**	**176**	*e*	**P**	**00 17 08.5**	**+12**
VNA2	**Neumayer--Watz**	**78.60**	**176**	*e*	**P**	**00 17 14.5**	**+18**
VNA2	**Neumayer--Watz**	**78.60**	**176**	⇓*i*P	**P**	**00 17 00.0**	**+3.4**
VNA2				*e*		00 17 03.1	
VNA2				*e*		00 17 04.5	
VNA2				*e*	pP	00 17 08.5	-1.6
VNA2				*e*	pP	00 17 14.5	+4.4
MAT	**Matsushiro**	**78.87**	**325**	P	**P**	**00 16 56.0**	**-2.8**
MAT				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.2						
MAT	**Matsushiro**	**78.87**	**325**	P	**P**	**00 16 56.0**	**-2.8**
	comp=Z,46nm,1.4s,mb5.2						
MAT	**Matsushiro**	**78.87**	**325**	P	**P**	**00 16 56.6**	**-2.2**
FX1	**Attu Island--F**	**83.47**	**354**	LR	LR	00 52 21.2	
	comp=Z,47nm,18.9s,MS3.9,baz=157,slow=34						
SSE	**Sheshan**	**84.90**	**311**	P	**P**	**00 17 30.5**	**+0.3**
SSE				S	S	00 27 56.4	+2.7
SSE				AMB	AMB		
	comp=Z,42nm,0.7s,mb5.7						
SSE				AMB	AMB		
	comp=Z,234nm,7.1s						
SSE				LR	LR		
	comp=N,63nm,22.8s,MS4.2						
SSE				LR	LR		
	comp=E,83nm,22.9s,MS4.2						
SSE				LR	LR		
	comp=Z,97nm,21.3s,MS4.2						
SSE	**Sheshan**	**84.90**	**311**	P	**P**	**00 17 30.5**	**+0.3**
	comp=Z,42nm,0.7s,mb5.7						
SSE				S	S	00 27 56.4	+2.7
SSE				sS		00 28 02.9	
SSE				LR	LR		
	comp=Z,100nm,21.3s,MS4.2						
YSS	**Yuzh-Sakhalins**	**85.25**	**334**	*e*P	**P**	**00 17 31.3**	**-0.3**
YSS				*e*	pP	00 17 46.0	+0.8
CMB	**Columbia Colle**	**86.18**	**41**	*e*P	**P**	**00 17 35.7**	**-0.6**
CMB				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.2						
CMB				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.3						
CMB	**Columbia Colle**	**86.18**	**41**	*e*P	**P**	**00 17 35.7**	**-0.6**
	comp=Z,19nm,1.2s,mb5.2						
CMB				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
OHCM	**Honcut**	**86.47**	**40**	*e*P	**P**	**00 17 37.0**	**-0.7**
MTUM	**Tungsten Hills**	**86.76**	**43**	P	**P**	**00 17 38.1**	**-1.2**
NJ2	**Nanjing**	**87.04**	**310**	*e*P	**P**	**00 17 42.4**	**+1.7**
NJ2				AP	pP	00 17 46.8	-7.6
NJ2				XP	sP	00 17 51.8	-7.4
NJ2				PP	PP	00 21 07.5	+0.7
NJ2				S	S	00 28 18.0	+3.6
NJ2				XS		00 28 26.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,370nm,5.0s						
NJ2				LR	LR		
	comp=N,380nm,13.8s						
NJ2				LR	LR		
	comp=E,590nm,26.2s						
NJ2				LR	LR		
	comp=Z,460nm,14.2s,MS5.0						
YBH	**Yreka Blue Hor**	**87.50**	**37**	P	**P**	**00 17 42.6**	**-0.1**
	comp=Z,5.6nm,1.1s,mb4.7,baz=210,slow=9.2,SNR=4.2						
NVAR	**Mina Array Bea**	**87.64**	**42**	P	**P**	**00 17 43.4**	**-0.1**
	comp=Z,6.5nm,0.9s,mb4.8,baz=214,slow=5.6,SNR=16						
MNV	**Mina**	**87.73**	**42**	*e*P	**P**	**00 17 43.2**	**-0.7**
MNV				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.1						
MNV				MLR	MLR		
	comp=Z,913nm,19.0s,MS5.2						
MNV	**Mina**	**87.73**	**42**	*e*P	**P**	**00 17 43.2**	**-0.7**
	comp=Z,14nm,1.2s,mb5.1						
MNV				LR	LR		
	comp=Z,913nm,19.0s,MS5.2						
NEN	**Nelson**	**87.89**	**46**	*e*P	**P**	**00 17 44.5**	**-0.2**
TPH	**Tonopah**	**88.04**	**43**	*e*P	**P**	**00 17 43.6**	**-1.7**
TPH				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.2						
TPH				MLR	MLR		
	comp=Z,707nm,21.0s,MS5.1						
TPH	**Tonopah**	**88.04**	**43**	*e*P	**P**	**00 17 43.6**	**-1.7**
	comp=Z,21nm,1.2s,mb5.2						
TPH				LR	LR		
	comp=Z,707nm,21.0s,MS5.1						
TRQA	**Tornquist**	**88.68**	**134**	*e*P	**P**	**00 17 51.4**	**+3.0**
	comp=Z,34nm,1.4s,mb5.5						
TRQA				LR	LR		
	comp=Z,578nm,20.0s,MS5.0						
MDJ	**Mudanjiang**	**89.25**	**325**	P	**P**	**00 17 51.6**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,18nm,1.1s,mb5.3						
MDJ				AMB	AMB		
	comp=Z,323nm,5.6s						
MDJ				LR	LR		
	comp=N,117nm,18.0s,MS4.6						
MDJ				LR	LR		
	comp=E,164nm,18.9s,MS4.6						
MDJ				LR	LR		
	comp=Z,307nm,18.9s,MS4.8						
SNY	**Shenyang**	**90.48**	**320**	⇓P	**P**	**00 17 57.0**	**+0.2**
TIA	**Tai'an**	**90.74**	**312**	*e*P	**P**	**00 17 58.3**	**+0.1**
CN2	**Changchun**	**90.80**	**322**	*e*P	**P**	**00 17 58.0**	**-0.2**
CN2				*e*XP	sP	00 18 05.3	-11
CN2				*e*S	S	00 28 56.3	+7.6
CN2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.7						
CN2				AMB	AMB		
	comp=Z,270nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=E,400nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=Z,560nm,21.0s,MS5.0						
MVU	**Marysvale**	**91.32**	**45**	*e*P	**P**	**00 18 01.2**	**+0.4**
KLR	**Kul'dur**	**91.60**	**329**	*e*P	**P**	**00 18 02.0**	**+0.2**
TXAR	**Lajitas Array**	**91.62**	**57**	P	**P**	**00 18 02.4**	**0.0**
	comp=Z,2.3nm,1.0s,mb4.5,baz=207,slow=5.6,SNR=12						
BGU	**Big Grassy Mou**	**92.35**	**43**	*e*P	**P**	**00 18 04.9**	**-0.6**
BMO	**Blue Mountains**	**92.51**	**38**	*e*P	**P**	**00 18 05.1**	**-1.0**
	comp=Z,16nm,1.5s,mb5.2						
ANMO	**Albuquerque**	**92.87**	**51**	⇑*e*P	**P**	**00 18 08.3**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,400nm,6.0s						
ANMO	**Albuquerque**	**92.87**	**51**	*e*P	**P**	**00 18 07.6**	**-0.5**
	comp=Z,2.2nm,1.0s,mb4.5						
ANMO				LR	LR		
	comp=Z,658nm,20.0s,MS5.1						
HVU	**Hansel Valley**	**93.04**	**42**	P	**P**	**00 18 08.4**	**-0.2**
LVC	**Limon Verde**	**93.04**	**118**	*e*P	**P**	**00 18 12.1**	**+3.0**
	comp=Z,36nm,1.3s,mb5.6						
HLID	**Hailey**	**93.24**	**40**	*e*P	**P**	**00 18 09.4**	**0.0**
	comp=Z,8.8nm,1.1s,mb5.1						
HLID				LR	LR		
	comp=Z,812nm,20.0s,MS5.2						
BJI	**Beijing**	**93.67**	**315**	P	**P**	**00 18 11.8**	**+0.3**
BJI				AP	pP	00 18 17.1	-8.2
BJI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb5.0						
BJI				AMB	AMB		
	comp=Z,249nm,4.8s						
BJI				LR	LR		
	comp=N,258nm,10.7s,MS5.1						
BJI				LR	LR		
	comp=E,252nm,11.0s,MS5.1						
BJI				LR	LR		
	comp=Z,171nm,25.4s						
BJI	**Beijing**	**93.67**	**315**	P	**P**	**00 18 11.8**	**+0.3**
BJI				SS	SS	00 35 43.8	+7.1
BJI				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb5.0						
BJI				MLR	MLR		
	comp=Z,170nm,25.4s,MS4.4						
BJI	**Beijing**	**93.67**	**315**	P	**P**	**00 18 11.8**	**+0.3**
	comp=Z,10.0nm,1.5s,mb5.0						
BJI				pP	pP	00 18 17.1	-8.2
BJI				S		00 28 50.1	
BJI				SS	SS	00 35 43.8	+7.1
BJI				LR	LR		
	comp=Z,170nm,25.4s,MS4.4						
CMAR	**Chiang Mai Arr**	**94.35**	**289**	P	**P**	**00 18 17.1**	**+2.1**
	comp=Z,1.1nm,0.3s,mb4.7,baz=132,slow=3.3,SNR=7.5						
CMAR				PP	PP	00 22 07.5	+2.3
	comp=Z,0.7nm,0.5s,baz=136,slow=7.7,SNR=4.6						
AHID	**Auburn Hatcher**	**94.62**	**42**	*e*P	**P**	**00 18 15.2**	**-0.6**
	comp=Z,17nm,1.3s,mb5.3						
AHID				LR	LR		
	comp=Z,915nm,20.0s,MS5.2						
KMI	**Kunming**	**94.73**	**296**	P	**P**	**00 18 18.5**	**+1.8**
KMI				AMB	AMB		
	comp=Z,24nm,0.8s,mb5.7						
KMI				LR	LR		
	comp=Z,117nm,20.8s,MS4.3						
KMI	**Kunming**	**94.73**	**296**	P	**P**	**00 18 18.5**	**+1.8**
	comp=Z,24nm,0.8s,mb5.7						
KMI				LR	LR		
	comp=Z,120nm,20.8s,MS4.3						
SNOW	**Snow King Moun**	**95.25**	**42**	*e*P	**P**	**00 18 18.6**	**0.0**
PDAR	**Pinedale Array**	**95.53**	**43**	P	**P**	**00 18 20.9**	**+1.1**
	comp=Z,1.8nm,1.0s,mb4.4,baz=180,slow=3.0,SNR=8.1						
PDAR				PKKP	PKKP	00 35 14.8	+12
	comp=Z,0.6nm,1.0s,baz=45,slow=2.6,SNR=3.7						
QLMT	**Earthquake Lak**	**95.70**	**41**	*e*P	**P**	**00 18 20.8**	**+0.2**
BOZ	**Bozeman (W)**	**96.09**	**40**	*e*P	**P**	**00 18 22.1**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.2						
BOZ				MLR	MLR		
	comp=Z,847nm,20.0s,MS5.2						
BOZ	**Bozeman (W)**	**96.09**	**40**	*e*P	**P**	**00 18 22.1**	**-0.3**
	comp=Z,13nm,1.3s,mb5.2						
BOZ				LR	LR		
	comp=Z,847nm,20.0s,MS5.2						
SEY	**Seymchan**	**96.28**	**346**	*e*P	**P**	**00 18 22.7**	**-0.1**
SEY				*e*S	S	00 29 34.1	-1.5
SEY				PS	PS	00 31 01.7	-5.3
SEY				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.8						
SEY				smax			
	comp=N,400nm,13.3s						
SEY				smax			
	comp=E,600nm,17.7s						
SEY				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.7						
SEY				MLR	MLR		
	comp=N,2μm,20.0s,MS5.5						
SEY				MLR	MLR		
	comp=E,200nm,17.0s,MS5.5						
MCK	**McKinley**	**96.47**	**12**	P	**P**	**00 18 24.2**	**+0.6**
MCK				pmax	pmax		
	comp=Z,11nm,1.3s,mb5.1						
MCK				MLR	MLR		
	comp=Z,390nm,21.0s,MS4.9						
MCK	**McKinley**	**96.47**	**12**	P	**P**	**00 18 24.2**	**+0.5**
	comp=Z,10nm,1.3s,mb5.1						
MCK				LR	LR		
	comp=Z,390nm,21.0s,MS4.9						
LPAZ	**La Paz**	**97.22**	**114**	P	**P**	**00 18 31.6**	**+3.4**
	comp=Z,4.1nm,1.1s,mb4.8,baz=184,slow=5.0,SNR=8.1						
ILAR	**Eielson Array**	**97.79**	**12**	P	**P**	**00 18 29.6**	**0.0**
	comp=Z,1.1nm,0.8s,mb4.5,baz=226,slow=6.1,SNR=8.7						
ILAR				LR	LR	01 03 46.1	
	comp=Z,278nm,18.4s,MS4.8,baz=69,slow=36						
BILL	**Bilibino**	**99.03**	**354**	*e*P	**P**	**00 18 30.6**	**-4.6**
BILL				*e*		00 29 03.1	
BILL				*e*PS	PS	00 31 23.5	-12
BILL				*e*SS	SS	00 36 37.8	-13
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.7						
SONM	**Songino Array**	**103.86**	**318**	Pdiff	Pdif	00 19 04.5	+7.3
	comp=Z,0.4nm,0.8s,baz=146,slow=5.2,SNR=2.9						
YKA	**Yellowknife Ar**	**105.10**	**25**	PP	PP	00 23 16.6	-10
	comp=Z,0.1nm,0.5s,baz=237,slow=6.3,SNR=3.9						
YKA				PKKPbc		00 34 46.7	
	comp=Z,0.1nm,0.5s,baz=36,slow=3.0,SNR=4.0						
YKA				PKKP	PKKP	00 35 04.5	+19
	comp=Z,0.3nm,0.7s,baz=36,slow=4.4,SNR=6.1						
WMQ	**Urumqi**	**114.04**	**308**	*e*PKP	PKPdf	00 23 37.6	+4.8
ZAL	**Zalesovo**	**118.75**	**318**	PKP	PKPdf	00 23 43.7	+2.1
	comp=Z,0.5nm,0.6s,baz=300,slow=6.1,SNR=4.7						
NVS	**Novosibirsk**	**119.84**	**319**	*e*PKIKP	PKPdf	00 23 45.0	+1.2
NVS				pmax	pmax		
	comp=N,4.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KSH	**Kashi**	**121.12**	**300**	*e*PKP	PKPdf	00 23 51.6	+5.0
KSH				*e*PKS	PKS	00 27 26.8	+4.3
KSH				*e*PPP	PPP	00 28 03.4	+6.9
KSH				PP	PP		
	comp=Z,170nm,8.3s						
KSH				LR	LR		

	comp=N,180nm,5.1s						
KSH				LR	LR		
	comp=E,260nm,6.0s						
KURK	Kurchatov	121.81	314	d *i*PKIKP	PKPdf	00 23 49.8	+2.1
KURK	Kurchatov	121.81	314	*e*PKPdf	PKPdf	00 23 48.2	+0.6
KURK				LR	LR		
	comp=Z,76nm,20.0s,MS4.3						
AAK	Ala-Archa	122.97	304	⇓*i*PKIKP	PKPdf	00 23 52.4	+2.3
AAK				MLR	MLR		
	comp=Z,100nm,23.0s,MS4.4						
SCHQ	Schefferville	125.65	42	PKP	PKPdf	00 23 57.1	+2.2
	comp=Z,5.6nm,1.1s,baz=37,slow=3.5,SNR=4.0						
BVAR	Borovoye Array	127.14	316	PKP	PKPdf	00 24 00.0	+2.2
	comp=Z,3.3nm,0.8s,baz=90,slow=1.5,SNR=9.3						
LSZ	Lusaka	128.50	211	*e*PKIKP	PKPdf	00 24 07.1	+5.7
KMBO	Kilima Mbogo	134.80	232	PKP	PKPdf	00 24 19.8	+6.3
	comp=Z,1.5nm,0.9s,baz=80,slow=12,SNR=3.0						
ARCES	ARCESS Array B	138.87	348	PKP	PKPdf	00 24 22.9	+3.5
	comp=Z,3.7nm,1.0s,baz=18,slow=3.8,SNR=4.6						
KTK1	Kautokeino	139.72	349	*e*P	Pdif	00 21 25.7	-8.8
TRO	Tromso	139.79	352	*e*	Pdif	00 21 29.0	-5.7
JOF	Joensuu	142.85	339	*e*pkp	PKPdf	00 24 23.2	-3.2
MTA	Mtatsminda	144.83	300	P	PKPdf	00 24 29.8	-0.7
DUS	Dusheti	144.86	301	P	PKPdf	00 24 32.1	+1.5
KAF	Kangasniemi	144.95	341	*e*pkp	PKPdf	00 24 29.0	-1.1
	baz=40,slow=3.2						
MOS	Moscow	144.95	326	*e*PKIKP	PKPdf	00 24 30.9	+0.6
MOS				*e*		00 24 45.6	
MOS				*e*		00 27 49.6	
MOS				pmax	pmax		
	comp=Z,68nm,1.7s						
GNI	Garni	144.97	298	*e*P	PKPdf	00 24 32.9	+2.1
GNI	Garni	144.97	298	*e*PKIKP	PKPdf	00 24 32.5	+1.7
GNI				MLR	MLR		
	comp=Z,177nm,20.0s						
GNI	Garni	144.97	298	PKP	PKPdf	00 24 32.2	+1.4
	comp=Z,8.3nm,0.9s,baz=114,slow=7.2,SNR=10						
BHD	Baghdad	145.02	286	*e*PKP	PKPdf	00 24 32.0	+0.9
ZEI	Tsey	145.38	302	*e*PKIKP	PKPdf	00 24 32.8	+1.3
ZEI				pmax	pmax		
	comp=Z,32nm,1.0s						
FINES	FINESS Array B	145.55	341	PKPbc	PKPbc	00 24 31.5	-0.3
	comp=Z,45nm,0.7s,baz=59,slow=3.3,SNR=119						
GOF	Gofitskoye	145.63	306	⇑*i*PKP2	PKPab	00 24 32.0	-2.5
GOF				pmax	pmax		
	comp=Z,67nm,1.3s						
ONI	Oni	145.73	302	P	PKPdf	00 24 35.0	+2.9
OBN	Obninsk	145.79	326	*e*PKIKP	PKPdf	00 24 33.0	+1.3
OBN				*e*		00 24 48.0	
OBN				*e*		00 31 34.2	
OBN				pmax	pmax		
	comp=Z,65nm,0.8s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.9						
OBN	Obninsk	145.79	326	*e*PKP	PKPdf	00 24 33.0	+1.2
KIV	Kislovodsk	146.08	304	*e*PKP2	PKPab	00 24 34.7	-1.6
KIV				MLR	MLR		
	comp=Z,73nm,20.0s,MS4.5						
KIV	Kislovodsk	146.08	304	*e*PKPdf	PKPdf	00 24 34.6	+2.0
KIV				LR	LR		
	comp=Z,73nm,20.0s,MS4.5						
VANB	Van	146.08	295	*e*P	PKPdf	00 24 36.6	+3.8
KARS	Kars	146.20	298	*e*P	PKPdf	00 24 37.5	+4.6
BCA	Borcka	147.22	300	*e*P	PKPdf	00 24 39.8	+5.2
VRT	Varto	147.51	296	*e*P	PKPdf	00 24 41.2	+6.1
ERZM	Erzurum	147.58	297	*i* P	PKPdf	00 24 42.5	+7.3
EZM	Erzurum	147.58	297	*e*P	PKPdf	00 24 40.7	+5.5
BTMT	Batman	147.58	294	*e*P	PKPdf	00 24 41.2	+5.9
SOC	Sochi	148.26	305	*i* PKP2	PKPab	00 24 44.1	-0.8
SOC				*e*		00 28 10.6	
SOC				*e*PPP	PPP	00 31 31.4	-1.6
SOC				*e*SS	SS	00 47 11.7	-1.4
SOC				*e*SSS	SSS	00 52 43.4	-6.4
SOC				pmax	pmax		
	comp=Z,35nm,1.1s						
SOC				pmax	pmax		
	comp=N,26nm,1.2s						
SOC				pmax	pmax		
	comp=E,14nm,0.9s						
BINT	Bingol	148.33	296	*e*P	PKPdf	00 24 40.7	+4.3
DIY	Diyarbakir	148.59	294	*e*P	PKPdf	00 24 43.5	+6.6
EZC	Erzincan	148.78	297	*e*P	PKPdf	00 24 46.7	+10
GUMT	Gumushane	148.96	299	*e*P	PKPdf	00 24 44.4	+7.0
NB2	NORSAR Subarra	148.97	352	PKP	PKPdf	00 24 41.9	+5.1
	comp=E,48nm,1.4s,baz=11,slow=2.8						
NB2	NORSAR Subarra	148.97	352	⇑PKP2	PKPab	00 24 41.9	-5.3
NB2	NORSAR Subarra	148.97	352	PKPa		00 24 41.9	
	baz=11,slow=2.9						
NOA	NORSAR Array B	148.97	352	PKP	PKPdf	00 24 39.0	+2.2
	comp=E,3.2nm,1.3s,baz=344,slow=5.7,SNR=5.0						
NOA				PKPbc	PKPdf	00 24 43.3	+6.5
	comp=E,7.0nm,0.9s,baz=15,slow=4.4,SNR=16						
PTK	Pertek	149.18	296	*e*P	PKPdf	00 24 44.4	+6.6
NAO01	NORSAR Array S	149.20	353	*e*PKPbc	PKPdf	00 24 43.4	+6.2
ELZG	Elazig	149.53	295	*i* P	PKPdf	00 24 47.8	+9.4
MALT	Malatya	149.98	295	*e*P	PKPdf	00 24 45.8	+6.7
MALT	Malatya	149.98	295	*e*PKHKP		00 24 44.6	
MALT	Malatya	149.98	295	⇓P	PKPdf	00 24 47.8	+8.7
MNK	Minsk	150.16	331	*e*PKHKP		00 24 44.0	
GZT	Gaziantep	150.73	293	*i* P	PKPdf	00 24 49.3	+9.0
GAZ	Gaziantep	151.02	292	*e*P	PKPdf	00 24 46.2	+5.5
ASF	Jabal al Asfar	151.17	282	PKPbc	PKPdf	00 24 50.0	+8.9
	comp=E,12nm,0.8s,baz=339,slow=0.8,SNR=22						
AKASG	Malin Array Be	151.95	323	PKPbc	PKPdf	00 24 49.2	+7.5
	comp=E,9.9nm,0.6s,baz=44,slow=2.7,SNR=57						
BOYT	Boyabat	152.20	302	*i* P	PKPdf	00 24 51.4	+9.1
SUW	Suwalki	152.38	334	*e*PKIKP	PKPdf	00 24 50.7	+8.5
EIL	Elat	152.49	276	*e*PKPbc	PKPdf	00 24 53.5	+10
AVNT	Avonos	152.72	296	*i* P	PKPdf	00 24 54.4	+11
BALT	Daday	153.28	303	*i* P	PKPdf	00 24 55.1	+11
BRTR	Keskin Array B	153.50	299	PKP	PKPdf	00 24 47.9	+3.7
	comp=E,0.7nm,1.0s,baz=135,slow=1.7,SNR=4.4						
BRTR				PKPbc	PKPdf	00 24 55.6	+11
	comp=E,3.4nm,1.0s,baz=135,slow=3.5,SNR=19						
BRTR				PKPab	PKPab	00 25 08.1	+1.3
	comp=E,4.6nm,1.0s,baz=90,slow=1.2,SNR=12						
KIS	Kishinev	154.22	317	*e*PKP2	PKPab	00 25 09.0	-0.6
CSS	Prodhromos	154.25	288	*e*PKPbc	PKPdf	00 24 57.5	+12
CSS				PKPab	PKPab	00 25 09.7	-0.4
LVV	L'vov	155.08	327	*e*PKP2	PKPab	00 25 13.4	+0.3
DBIC	Dimbokro	155.15	161	PKPab	PKPab	00 25 17.4	+2.9
	comp=E,5.9nm,1.1s,baz=182,slow=6.6,SNR=3.8						
TIRR	Tirgusor	155.68	312	⇑P	PKPab	00 25 14.9	-1.0
KWP	Kalwaria	155.83	328	*e*PKP2	PKPab	00 25 15.4	-1.0
BURAR	Bucovina Array	155.91	321	⇑P	PKPab	00 25 17.0	+0.3
KOLS	Kolonicke sedl	156.53	327	*e*P	PKPdf	00 25 09.5	+22
KOLS				*e*		00 25 27.8	
KOLS	Kolonicke sedl	156.53	327	*e*	PKPdf	00 25 09.5	+22
KOLS				*e*		00 25 27.8	
MLR	Muntele Rosu	156.71	316	PKP	PKPdf	00 24 52.8	+4.6
	comp=E,2.9nm,1.2s,baz=38,slow=6.6,SNR=3.3						
MLR				PKPab	PKPab	00 25 20.8	+0.5
	comp=E,2.3nm,1.1s,baz=102,slow=6.7,SNR=3.4						
UZH	Uzhgorod	156.73	327	*e*PKP2	PKPab	00 25 11.0	-9.2
CRVS	Cervenica-Dubn	156.93	328	*e*PKP	PKPab	00 25 22.4	+1.3
CRVS				*e*		00 25 29.9	
KSP	Ksiaz	157.41	338	*e*PKPdf	PKPdf	00 24 56.1	+7.0
KSP				*e*PKPab	PKPab	00 25 22.9	-0.2
KSP				*e*pPKP		00 25 35.7	
KSP				LR	LR		
	comp=Z,400nm,20.5s,MS5.2						
OKC	Ostrava-Krasne	157.60	334	*e*PKPab	PKPab	00 25 22.6	-1.3
OKC				*e*x	x	00 25 36.9	
KECS	Kecovo	157.67	328	*e*P	Px	00 25 38.0	
KECS	Kecovo	157.67	328	*e*	Px	00 25 38.0	
UPC	Upice	157.79	338	*e*PKPab	PKPab	00 25 25.3	+0.6
UPC				*e*x	x	00 25 37.7	
DPC	Dobruska-Polom	157.82	337	*e*PKPab	PKPab	00 25 23.9	-1.0
DPC				*e*x	x	00 25 39.0	
CLL	Collm	157.94	343	*e*	PKPdf	00 25 05.0	+15
CLL				*i*		00 25 19.4	
CLL				*i* PKP2	PKPab	00 25 24.5	-0.9
CLL				*i* *PPKP2		00 25 38.9	
CLZ	Clausthal	158.00	348	*e*PKPab	PKPab	00 25 24.3	-1.3
BRG	Berggiesshubel	158.09	341	*e*P	PKPdf	00 25 08.0	+18
BRG				*e*		00 25 26.1	
BRG				*e*		00 25 40.2	
PSZ	Piszkesteto	158.36	328	⇑*e*	PKPab	00 25 29.6	+2.3
VYHS	Vyhne	158.39	331	*e*PKP	PKPab	00 25 27.9	+0.5
VYHS				*e*		00 25 40.2	
PRU	Pruhonice	158.71	339	*e*PKPab	PKPab	00 25 27.6	-1.1
PRU				*e*x	x	00 25 41.3	
MOX	Moxa	158.88	345	*e*PKP	PKPab	00 25 27.9	-1.5
MOX				LR	LR		
	comp=Z,300nm,18.0s,MS5.2						
SMOL	Smolenice	158.94	333	*e*PKP	PKPab	00 25 30.3	+0.5
SMOL				*e*		00 25 44.2	
NKC	Novy Kostel	159.07	343	*e*PKPab	PKPab	00 25 30.0	-0.2
NKC				*e*x	x	00 25 44.6	
SRO	Srobarova	159.13	330	*e*PKP	PKPab	00 25 29.5	-1.1
SRO				*e*		00 25 43.3	
ZST	Bratislava	159.33	333	*e*PKP	PKPab	00 25 33.8	+2.4
ZST				*e*		00 25 45.4	
KHC	Kasperske Hory	159.76	340	*e*PKPbc	PKPdf	00 25 20.0	+28
KHC				PKPab	PKPab	00 25 31.8	-1.4
KHC				*e*x	x	00 25 46.2	
GRA1	Grafenberg Arr	159.86	345	*e*PKPab	PKPab	00 25 32.7	-1.0
GRA1				*e*pPKPab		00 25 48.3	
GRA1				LR	LR		
	comp=Z,200nm,21.3s,MS4.9						
GRF	Grafenberg Arr	159.86	345	*e*PKP	PKPab	00 25 32.7	-1.0
GRF				pPKPab		00 25 48.3	
GRF				LR	LR		
	comp=Z,200nm,21.3s,MS4.9						
TNS	Taunus Mts	159.88	350	*e*PKPab	PKPab	00 25 33.4	-0.3
VTS	Vitosha	159.90	312	⇓P	PKPab	00 25 34.4	+0.3
WET	Wettzell	159.95	341	*e*PKPab	PKPab	00 25 33.4	-0.7
GEC2	GERESS Array S	159.97	339	*e*PKPab	PKPab	00 25 33.2	-1.0
GERES	GERESS Array B	159.97	339	PKPab	PKPab	00 25 33.5	-0.7
	comp=Z,2.3nm,0.9s,baz=27,slow=3.0,SNR=13						
PKSM	Moragy	160.19	327	⇑P	PKPdf	00 25 11.0	+19
MOA	Molln	160.66	337	⇑*i*P	PKPab	00 25 36.8	-0.4
MOA				*i*		00 25 50.1	
FUR	Furstenfeldbru	161.27	343	*e*PKPab	PKPab	00 25 38.8	-1.0
FUR				*e*pPKPab		00 25 54.4	
SKO	Skopje	161.34	313	*i* PKP	PKPab	00 25 40.0	-0.3
WATA	Walderalm	161.95	341	⇑*i*P	PKPab	00 25 43.5	+0.6
WATA				*i*		00 25 55.5	
WTTA	Wattenberg	162.00	341	⇑*i*P	PKPab	00 25 42.5	-0.6
WTTA				*i*		00 25 57.8	
MOTA	Moosalm	162.07	342	⇓*i*P	PKPab	00 25 42.9	-0.5
MOTA				*i*		00 25 57.4	
SQTA	Sankt Quirin	162.16	342	⇓*i*P	PKPab	00 25 43.1	-0.6
SQTA				*i*		00 25 57.2	

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*ISK **21** 00:12:15.8, 36.98N×27.91E, h21^{km}, MD3.4*

*CSEM **21** 00:12:15.3±0.1, 36.96N×27.94E, h15^{km}, MD3.4, Error ellipse: s-maj=2.4km s-min=1.8km az=36.0*

*ATH **21** 00:12:16.1, 36.91N×27.96E, h35^{km}, MD3.1/3*

ISC 21 00:12:15.9±0.6**, 36.91N**±0.03×**27.92E**±0.03**, h11**^{km}±4^{km}**, n18, σ1^{s}11**/28**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.37	52	*i* PG	Pg	00 12 23.3	-0.2
MLSB	Milas	0.40	344	*i* PG	Pg	00 12 23.3	-0.9
MLSB				*i* SG	Sg	00 12 29.3	-0.3
BDRM	Kayabasi	0.41	292	*i* P	Pg	00 12 24.3	-0.1
BDRM				*i* S	Sg	00 12 30.7	+0.7
BODT	Bodrum	0.51	287	*i* PG	Pg	00 12 26.1	-0.2
BODT				*i* SG	Sg	00 12 33.7	+0.5
DALT	Dalyan (Mudla)	0.59	104	PG	Pg	00 12 28.8	+0.8
NISR	Nisiros	0.70	245	*e*PN	Pn	00 12 31.0	-0.5
NISR				*e*SN	Sn	00 12 41.5	-0.8
ARG	Arkhangelos	0.71	166	*e*P	Pb	00 12 30.5	+0.6
ARG				*e*S	Sb	00 12 43.5	+4.1
AYDN	Tasoluk	0.75	358	*i* P	Pb	00 12 30.0	-0.5
AYDN				*i* S	Sb	00 12 40.0	-0.4
FETY	Fethiye	0.97	106	*e*PG	Pg	00 12 35.5	0.0
SMG	Samos	1.17	313	*e*P	Pb	00 12 38.2	+0.4
SMG				*e*S	Sb	00 12 55.0	+2.2
DNZL	Cakiroluk	1.19	49	*i* P	Pb	00 12 38.4	+0.4
DNZL				*i* S	Sb	00 12 56.4	+3.2
DENT	Denizli	1.22	46	*e*PN	Pn	00 12 37.7	-1.3
KDAG	Bornova	1.58	341	*i* P	Pn	00 12 45.8	+1.7
KDAG				*i* S	Sb	00 13 03.5	-0.9
ELL	Elmali	1.60	95	*e*PN	Pn	00 12 44.0	-0.4
BLCB	Balcova	1.63	335	*e*PN	Pn	00 12 42.6	-2.2
MANT	Manisa	1.66	18	*i* P	Pn	00 12 47.1	+2.0
MANT				*i* S	Sn	00 13 09.7	+3.1
AKS	Akhisar	1.97	358	*e*PN	Pn	00 12 48.0	-1.6
BCK	Bucak	2.20	75	*e*PN	Pn	00 12 52.2	-0.8

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*BJI **21** 00:26:41.6, 4.85N×94.57E, h45^{km}, mB4.5, mb4.9, Ms4.5, Msz4.1*

*NEIC **21** 00:26:45.3±0.4, 5.39N×94.49E, h30^{km}, mb4.5/11, Error ellipse: s-maj=14.2km s-min=7.0km az=54.0*

*IDC **21** 00:26:47.5±1.0, 5.40N×94.47E, h48^{km}±6^{km}, mb4.0/13, mb1 4.2/14, mb1mx4.1/20, mbtmp4.3/14, MS3.2/1, Ms1 3.4/1, ms1mx2.6/19, Error ellipse: s-maj=35.2km s-min=14.8km az=50.0*

ISC 21 00:26:45.6±0.5**, 5.35N**±0.08×**94.57E**±0.08**, h48**^{km}**, h48**^{km}±1.2^{km}**:pP-P, n51, σ0^{s}87**/50**, mb4.5**/30**, MS3.9**/3**, 2C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.71	18	P	P	00 30 04.3	+4.9
	2.3nm,0.3s,baz=207,slow=14,SNR=35						
CMAR				LR	LR	00 34 30.4	
	comp=Z,113nm,20.8s,baz=195,slow=34						
CHG	Chiang Mai	14.04	17	PG	P	00 30 08.8	+5.0
CHG				SG	rx	00 30 11.4	
HYB	Hyderabad	19.73	309	*i* P	P	00 31 15.0	+0.7
HYB				*e*S	S	00 34 49.5	+0.6
KMI	Kunming	21.16	21	P	P	00 31 29.3	+0.3
KMI				AP		00 31 37.4	
KMI				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.4						
KMI	Kunming	21.16	21	P	P	00 31 29.2	+0.2
	comp=Z,13nm,0.6s,mb4.4						
KMI				pP		00 31 37.4	
KMI				LR	LR		
	comp=Z,90nm,24.3s,MS3.1						
JIRN	Jiri	23.57	341	*e*P	P	00 31 52.2	-0.7
	comp=Z,14nm,0.5s,mb4.7						
PKI	Pulchoki	23.75	339	*e*P	P	00 31 54.2	-0.4
DMN	Daman	23.90	339	*e*P	P	00 31 55.5	-0.5
	comp=Z,14nm,0.6s,mb4.5						
GYA	Guiyang	23.96	28	⇑*i*P	P	00 31 59.1	+2.5
GYA				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
KKN	Kakani	24.00	339	*e*P	P	00 31 56.3	-0.7
	comp=Z,23nm,0.7s,mb4.7						
GKN	Gorkha	24.43	338	*e*P	P	00 32 01.2	0.0
	comp=Z,17nm,0.3s,mb4.9						
LSA	Lhasa	24.43	353	P	P	00 32 02.6	+1.4
LSA	Lhasa	24.43	353	*e*P	P	00 32 02.5	+1.4
	comp=Z,17nm,0.6s,mb4.6						
KOLN	Koldanda	24.62	336	*e*P	P	00 32 03.2	+0.2
	comp=Z,30nm,0.8s,mb4.9						
ENH	Enshi	28.50	28	*e*P	P	00 32 37.9	-0.9
	comp=Z,5.6nm,0.5s,mb4.5						
XAN	Xi'an	31.50	23	P	P	00 33 04.3	-1.0
XAN				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.0						
GTA	Gaotai	34.23	7	*e*P	P	00 33 28.9	-0.1
GTA				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.8						
GTA				AMB	AMB		
	comp=Z,62nm,3.9s						
GTA				LR	LR		
	comp=N,148nm,13.3s,MS4.0						
GTA				LR	LR		
	comp=E,111nm,11.0s,MS4.0						
GTA				LR	LR		
	comp=Z,103nm,12.9s,MS3.8						
WMQ	Urumqi	38.79	352	*e*P	P	00 34 08.4	+1.1
TKM2	Tokmak 2	41.02	339	P	P	00 34 25.6	-0.2
	SNR=5.2						
KBK	Karagaybulak	41.02	338	P	P	00 34 26.8	+0.9
	SNR=10						
AML	Almayashu	41.07	336	P	P	00 34 27.1	+0.8
	SNR=13						
AAK	Ala-Archa	41.18	337	*e*P	P	00 34 27.3	+0.1
	comp=Z,3.5nm,0.8s,mb4.0						
EKS2	Erkin-Say	41.48	337	P	P	00 34 30.3	+0.7
	SNR=5.2						
KAKA	Kakadu	41.69	116	*e*P	P	00 34 28.4	-3.3
	comp=Z,4.0nm,0.5s,mb4.3						
USP	Ospenovka	41.72	338	P	P	00 34 31.7	+0.1
	SNR=9.7						
SONM	Songino Array	43.52	12	P	P	00 34 46.0	-0.3
	comp=Z,3.1nm,0.8s,mb4.1,baz=193,slow=8.5,SNR=32						
SONM				pP	pP	00 34 58.2	-1.1
	comp=Z,3.8nm,0.9s,baz=193,slow=7.2,SNR=11						
SONM				PcP	PcP	00 36 34.0	-0.1
	comp=Z,1.3nm,0.4s,baz=194,slow=3.9,SNR=14						
ULN	Ulaanbaatar	43.69	12	*e*P	P	00 34 46.6	-1.1
	comp=Z,2.0nm,0.6s,mb4.0						
WRA	Warramunga Arr	46.48	124	P	P	00 35 10.6	+0.3
	comp=Z,6.5nm,0.7s,mb4.7,baz=303,slow=9.2,SNR=52						
WB2	Warramunga Arr	46.49	124	⇑*i*P	P	00 35 10.6	+0.3
KURK	Kurchatov	47.15	346	*e*P	P	00 35 15.0	-0.1
	comp=Z,8.4nm,0.6s,mb4.8						
ASAR	Alice Springs	48.00	129	P	P	00 35 22.3	+0.2
	comp=Z,1.4nm,0.6s,mb4.2,baz=301,slow=7.5,SNR=22						
ZAL	Zalesovo	49.09	352	P	P	00 35 30.0	-0.1
	comp=Z,7.2nm,0.4s,mb5.0,baz=302,slow=6.1,SNR=44						
ZAL	Zalesovo	49.09	352	P	P	00 35 30.0	-0.1
BVAR	Borovoye Array	51.50	342	P	P	00 35 47.4	-1.1
	comp=Z,4.3nm,0.7s,mb4.5,baz=144,slow=9.2,SNR=14						
BVAR				pP	pP	00 36 00.3	-1.4
	comp=Z,3.4nm,0.7s,baz=141,slow=9.5,SNR=4.7						
STKA	Stephens Creek	58.08	133	P	P	00 36 37.7	+1.0
	comp=Z,1.0nm,0.7s,mb4.0,baz=340,slow=12,SNR=2.2						
BRTR	Keskin Array B	64.40	312	P	P	00 37 17.4	-1.9
	comp=Z,1.5nm,0.6s,mb4.2,baz=137,slow=7.7,SNR=6.2						
AKASG	Malin Array Be	70.39	322	P	P	00 37 54.5	-2.2
	comp=Z,1.6nm,0.4s,mb4.3,baz=85,slow=5.5,SNR=5.3						
JOF	Joensuu	73.30	335	*e*p	P	00 38 13.0	-0.7
FINES	FINESS Array B	75.13	332	P	P	00 38 23.4	-0.9
	comp=Z,1.0nm,0.5s,mb4.0,baz=100,slow=5.2,SNR=14						
KAF	Kangasniemi	75.22	333	*e*p	P	00 38 20.8	-4.0
OJC	Ojcow	76.17	320	*e*P	P	00 38 30.3	-0.2
ARCES	ARCESS Array B	77.77	340	P	P	00 38 39.6	+0.6
	comp=Z,3.2nm,0.9s,mb4.2,baz=98,slow=6.8,SNR=13						
ARCES				pP	pP	00 38 54.0	+1.2
	comp=Z,1.5nm,0.5s,baz=90,slow=5.4,SNR=2.2						
BRG	Berggiesshubel	79.96	321	*e*PKP	P	00 38 51.4	+0.1
	comp=Z,20nm,1.7s,mb4.8						
BRG				LR	LR		
	comp=Z,350nm,15.5s,MS4.8						
GERES	GERESS Array B	79.98	319	P	P	00 38 51.8	+0.3
	comp=Z,4.0nm,0.7s,mb4.5,baz=105,slow=5.3,SNR=21						
GERES				pP	pP	00 39 06.0	+0.6
	comp=Z,1.5nm,0.6s,baz=90,slow=4.0,SNR=5.7						
GRA1	Grafenberg Arr	81.64	319	*e*P	P	00 39 00.9	+0.6
	comp=Z,5.0nm,1.2s,mb4.3						
GRF	Grafenberg Arr	81.64	319	*e*P	P	00 39 00.9	+0.6
	comp=Z,5.0nm,1.2s,mb4.3						
DAVOX	Davos	82.50	316	P	P	00 39 05.4	+0.7
	comp=Z,5.4nm,0.5s,mb4.8,baz=180,slow=12						
SYO	Syowa Base	83.14	197	⇓P	P	00 39 07.3	-0.2
ILAR	Eielson Array	96.90	22	P	P	00 40 13.5	+0.9
	comp=Z,0.4nm,0.9s,mb3.9,baz=310,slow=3.4,SNR=5.2						
PDAR	Pinedale Array	127.33	22	PKP	PKPdf	00 45 46.6	+1.0
	comp=Z,0.4nm,0.8s,baz=90,slow=3.0,SNR=3.7						
TXAR	Lajitas Array	141.31	26	PKhKP		00 46 07.3	
	comp=Z,0.4nm,0.5s,baz=257,slow=1.0,SNR=7.5						
TXAR				PKP	PKPdf	00 46 10.2	-1.7
	comp=Z,0.3nm,0.5s,baz=261,slow=1.0,SNR=7.5						

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*BJI **21** 00:33:14.7, 35.35N×22.82E, h55^{km}, mB4.1, mb3.7, Ms4.5, Msz4.3*

*MOS **21** 00:33:16.1±1.2, 35.95N×22.57E, h33^{km}, mb4.4/15, Error ellipse: s-maj=5.9km s-min=3.4km az=111.1*

*THE **21** 00:33:18.1, 35.85N×22.64E, h20^{km}, ML4.2*

*ATH **21** 00:33:18.9, 35.97N×22.73E, h58^{km}±6^{km}, MD4.0/21, ML3.8*

*PRU **21** 00:33:18.5, 36.48N×22.42E, M4.6*

*CSEM **21** 00:33:18.8±0.1, 36.03N×22.66E, h80^{km}, mb4.1/3, Ms2.9, Error ellipse: s-maj=2.7km s-min=1.4km az=23.0*

*NEIC **21** 00:33:18.9±0.3, 35.98N×22.62E, mb4.1/19, MD3.9(ATH), Error ellipse: s-maj=6.5km s-min=3.0km az=24.0*

*IDC **21** 00:33:19.6±0.8, 36.13N×22.63E, h46^{km}±7^{km}, mb3.8/14, mb1 3.9/24, mb1mx3.8/33, mbtmp4.0/24, ML3.6/9, MS3.4/1, Ms1 3.4/1, ms1mx2.5/26, Error ellipse: s-maj=16.7km s-min=7.5km az=31.0*

*HLW **21** 00:33:19.2, 35.97N×23.07E, h25^{km}, Mb4.0*

*PDG **21** 00:33:23.4±0.3, 36.45N×22.07E, h16^{km}±4^{km}*

ISC 21 00:33:17.6±0.4**, 35.93N**±0.03×**22.57E**±0.03**, h65**^{km}±3^{km}**, h49**^{km}±5.1^{km}**:pP-P, n243, σ1^{s}20**/274**, mb4.1**/22**, 15C-15D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	0.52	47	*e*P	P	00 33 30.0	-0.2
VLI	Veliai	0.84	20	*e*P	P	00 33 35.5	+1.5
ITM	Ithomi	1.35	338	*e*P	P	00 33 42.8	+1.8
VAM	Vamos	1.42	111	*e*P	P	00 33 43.3	+1.4
GVD	Gavdhos	1.65	131	*e*Pn	P	00 33 47.5	+2.5
NAIG	Nisos Aigina	1.97	22	*e*P	P	00 33 50.0	+0.6
IDI	Anoyia	1.99	108	P	P	00 33 49.6	-0.1
	9.2nm,0.3s,baz=293,slow=15,SNR=228						
IDI				S	S	00 34 16.9	+3.5
	62nm,0.3s,baz=326,slow=21,SNR=10.0						
MGER	Gerania Oros	2.13	15	*e*P	P	00 33 52.0	+0.4
ATH	Athens Observa	2.24	24	*e*P	P	00 33 54.4	+1.2
PTL	Penteli	2.36	26	*e*P	P	00 33 55.5	+0.6
SANT	Santorini	2.38	78	*e*Pn	P	00 33 54.9	-0.2
SANT	Santorini	2.38	78	*e*Pn	P	00 33 54.9	-0.3
MPAR	Parnis Oros	2.41	22	*e*P	P	00 33 56.0	+0.4
NPS	Neapolis	2.56	104	*e*P	P	00 33 58.0	+0.2
APE	Apeiranthos	2.64	64	*e*P	P	00 33 59.1	+0.2
LKR	Lokris	2.74	7	*e*P	P	00 34 00.6	+0.3
VLS	Valsamata	2.75	325	*e*P	P	00 34 01.1	+0.7
XRY	Khrisi	2.76	111	*e*P	P	00 34 00.0	-0.5
EVR	Evrytania	3.04	349	*e*P	P	00 34 08.0	+3.4
AGG	Agios Georgios	3.10	357	*e*Pn	P	00 34 07.9	+2.6
AGG				*e*Sn	S	00 34 43.8	+2.6
AOS	Alonnisos	3.40	17	*e*Pn	P	00 34 09.2	-0.3
AOS	Alonnisos	3.40	17	*e*Pn	P	00 34 09.2	-0.3
NEO	Neokhori	3.41	9	*e*P	P	00 34 10.4	+0.7
XOR	Xorichti	3.47	8	*e*Pn	P	00 34 12.3	+1.8
SMG	Samos	3.86	61	*e*P	P	00 34 15.5	-0.4
JAN	Janina	3.96	340	*e*P	P	00 34 19.1	+1.7
IGT	Igoumenitsa	4.01	334	*e*Pn	P	00 34 18.3	+0.2
BDRM	Kayabasi	4.09	72	*i* P	P	00 34 19.0	-0.1
PAIG	Paliouri	4.09	12	*e*Pn	P	00 34 18.7	-0.5
LIT	Litokhoron	4.17	359	*e*Pn	P	00 34 21.4	+1.1
LIT				*e*Sn	S	00 35 09.4	+1.3
KZN	Kozani	4.42	352	*e*P	P	00 34 24.8	+1.0
PRK	Paraskevi	4.43	40	*e*P	P	00 34 25.0	+1.1
SRN	Sarande	4.44	334	*i* Pn	P	00 34 24.8	+0.7
SRN				*i* Sn	S	00 35 10.8	-4.1
LOS	Limnos	4.46	26	*e*Pn	P	00 34 25.0	+0.6
KDAG	Bornova	4.49	55	*i* P	P	00 34 23.9	-0.8
LSK	Leskovik	4.49	340	*i* Pn	P	00 34 25.7	+0.9
LSK				*i* Sn	S	00 35 15.5	-0.8
LSK	Leskovik	4.49	340	*e*Pn	P	00 34 25.7	+0.9
LSK				*i* Sn	S	00 35 15.5	-0.8
ARG	Arkhangelos	4.51	85	*e*P	P	00 34 24.0	-1.0
OUR	Ouranopolis	4.54	14	*e*Pn	P	00 34 25.0	-0.5
THE	Thessaloniki	4.71	4	*e*Pn	P	00 34 27.6	-0.3
THE	Thessaloniki	4.71	4	*e*Pn	P	00 34 27.5	-0.3
SOH	Sokhos	4.92	7	*e*Pn	P	00 34 31.4	+0.6
FNA	Florina	4.94	349	*e*Pn	P	00 34 31.2	+0.2
FNA	Florina	4.94	349	*e*Pn	P	00 34 31.2	+0.2
GRG	Griva	5.02	359	*e*Pn	P	00 34 32.3	+0.1
KNT	Kendrikon	5.23	3	*e*Pn	P	00 34 35.5	+0.5
KNT				*e*Sn	S	00 35 35.4	+0.6
KNT	Kendrikon	5.23	3	*e*Pn	P	00 34 35.5	+0.4
SRS	Serrai	5.24	8	*e*Pn	P	00 34 35.3	+0.1
DNZL	Cakiroluk	5.48	69	*i* P	P	00 34 39.9	+1.3
LCI	Lecce	5.63	323	*e*Pn	P	00 34 40.2	-0.4
SOI	Samo	5.64	294	*e*Pn	P	00 34 40.1	-0.6
TIP	Timpagrande	5.64	307	*e*Pn	P	00 34 40.7	-0.1
ALN	Alexandroupoli	5.66	28	*e*Pn	P	00 34 41.5	+0.5
KSL	Kastellorizon	5.69	86	*e*P	P	00 34 40.5	-0.8
KSL	Kastellorizon	5.69	86	*e*P	P	00 34 40.0	-1.3
MMB	Musomiste	5.72	9	*e*P	P	00 34 41.0	-0.9
KKB	Krupnik	5.94	4	*e*P	P	00 34 49.0	+4.1
QSH	Qafa e Shtames	5.96	340	*i* Pn	P	00 35 05.2	+20
QSH				*i* Sn	S	00 35 48.2	-4.7
SKO	Skopje	6.10	352	*e*Pn	P	00 34 45.5	-1.6
SKO				*e*		00 34 55.0	
HMAT	Matruh	6.12	141	⇑P	P	00 34 45.5	-2.0
ORI	Oriolo Calabro	6.36	312	*e*Pn	P	00 34 50.3	-0.4
LTRZ	Laterza	6.50	318	*e*Pn	P	00 34 51.2	-1.5
LTRZ	Laterza	6.50	318	*e*Pn	P	00 34 51.2	-1.6
ULC	Ulcinj	6.56	338	*e*Pn	P	00 34 52.0	-1.6
ULC				*e*Sn	S	00 35 58.7	-9.0

ISP	Isparta	6.64	71	c iP	P	00 34 55.0	+0.3
ISP	Isparta	6.64	71	ePn	P	00 34 55.0	+0.2
	14nm,0.7s						
ISP	Isparta	6.64	71	iP	P	00 34 55.0	+0.3
ULDT	Uludag	6.67	49	iP	P	00 34 56.1	+0.9
VTS	Vitosha	6.67	4	eP	P	00 34 56.5	+1.3
VTS	Vitosha	6.67	4	⇓P	P	00 34 56.5	+1.3
VAE	Valguarnera	6.74	286	P	P	00 34 57.6	+1.5
	1.8nm,0.3s,baz=248,slow=5.9,SNR=8.3						
VAE				S	S	00 36 05.9	-6.2
	4.3nm,0.3s,baz=227,slow=19,SNR=4.5						
SG1	Sgolgore (BA)	6.74	318	ePn	P	00 34 55.0	-1.1
BAI	Bari	6.83	321	ePn	P	00 34 55.6	-1.8
MGR	Morigerati	6.95	309	ePn	P	00 34 58.4	-0.6
MGR	Morigerati	6.95	309	ePn	P	00 34 58.4	-0.7
PVY	Plav	6.96	344	⇓iPn	P	00 34 58.2	-0.9
PVY				eSn	S	00 36 09.2	-8.2
PVY	Plav	6.96	344	⇓iPn	P	00 34 58.2	-0.9
PVY				eSn	S	00 36 09.2	-8.3
BUM	Brajici-Budva	6.97	337	ePn	P	00 34 57.2	-2.2
BUM				eSn	S	00 36 08.5	-9.5
TTG	Podgorica	6.98	339	⇓iPn	P	00 34 58.1	-1.4
TTG				eSn	S	00 36 09.0	-9.1
SWA2		7.09	159	⇑P	P	00 34 59.4	-1.6
SWA2				S	S	00 36 13.6	-7.3
CDT	Castel del Mon	7.13	318	ePn	P	00 34 59.9	-1.6
SWA1		7.15	157	P	P	00 35 00.6	-1.2
SWA1				S	S	00 36 14.1	-8.2
HCY	Herceg Novi	7.24	335	⇓iPn	P	00 35 01.6	-1.4
HCY				eSn	S	00 36 15.1	-9.4
IVA	Berane	7.24	344	⇓iPn	P	00 35 02.2	-0.8
IVA				eSn	S	00 36 15.9	-8.6
SGO	Sicignano	7.35	311	eP	P	00 35 04.4	-0.2
SGO	Sicignano	7.35	311	ePn	P	00 35 04.3	-0.3
MRLC	Muro Lucano	7.36	313	ePn	P	00 35 04.2	-0.5
NKY	Niksic	7.41	339	ePn	P	00 35 04.2	-1.2
NKY				eSn	S	00 36 19.5	-9.2
ESKT	Eskisehir	7.47	59	iP	P	00 35 07.2	+1.0
BRY	Bratogost	7.63	337	⇓iPn	P	00 35 06.8	-1.6
BRY				eSn	S	00 36 24.6	-10
PLE	Pljevlja	7.79	343	⇓iPn	P	00 35 09.4	-1.2
PLE				eSn	S	00 36 28.8	-9.3
UPM	Unac-Piva	7.80	340	⇓iPn	P	00 35 09.4	-1.3
UPM				eSn	S	00 36 28.9	-9.4
FG5	Orsara di Pugl	7.83	315	eP	P	00 35 11.0	-0.1
FG5	Orsara di Pugl	7.83	315	ePn	P	00 35 10.9	-0.2
STON	Ston	7.89	333	iPn	P	00 35 08.8	-3.2
STON				iSn	S	00 36 29.6	-11
CII	Carovilli	8.66	314	ePn	P	00 35 22.2	-0.4
CII	Carovilli	8.66	314	ePn	P	00 35 22.2	-0.4
CSS	Prodhromos	8.83	93	Pn	P	00 35 25.6	+0.7
CSS	Prodhromos	8.83	93	Pn	P	00 35 25.6	+0.7
BRTR	Keskin Array B	9.54	63	P	P	00 35 33.8	-0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	Keskin Array B	9.54	63	P	P	00 35 33.8	-0.7
	comp=Z,0.5nm,0.3s,baz=243,slow=11,SNR=34						
AQU	L'Aquila	9.58	315	eP	P	00 35 36.5	+1.4
TIRR	Tirgusor	9.62	26	⇑P	P	00 35 34.1	-1.5
HARR	Harsova	9.66	23	⇓P	P	00 35 36.0	-0.1
MLR	Muntele Rosu	9.89	14	P	P	00 35 38.4	-0.9
	comp=Z,0.1nm,0.3s,baz=186,slow=4.9,SNR=6.3						
MLR	Muntele Rosu	9.89	14	⇓P	P	00 35 41.5	+2.2
NRCA	Norcia	10.05	316	ePn	P	00 35 41.5	0.0
NRCA	Norcia	10.05	316	ePn	P	00 35 41.5	0.0
CFR	Carcaliu	10.16	23	⇓P	P	00 35 44.8	+1.8
TLCR		10.39	25	⇑P	P	00 35 47.1	+1.0
SUZ		10.54	122	P	P	00 35 44.5	-3.7
PKSM	Moragy	10.69	345	⇓P	P	00 35 46.0	-4.2
HNKL	Nakhl	11.29	119	P	P	00 35 54.6	-3.7
BURAR	Bucovina Array	11.84	9	⇑P	P	00 36 07.2	+1.6
EIL	Elat	12.14	117	P	P	00 36 09.3	-0.3
	comp=Z,0.3nm,0.3s,baz=6.9,slow=15,SNR=7.5						
EIL	Elat	12.14	117	P	P	00 36 09.3	-0.3
	comp=Z,0.4nm,0.6s						
EIL				eSn	S	00 38 05.7	-18
PSZ	Piszkesteto	12.14	351	eP	P	00 36 08.3	-1.4
OBKA	Obir	12.17	333	⇓iPn	P	00 36 07.1	-2.9
OBKA				iSn	S	00 38 12.4	-12
ASF	Jabal al Asfar	12.46	103	P	P	00 36 13.5	-0.4
	comp=Z,0.2nm,0.3s,baz=281,slow=5.2,SNR=2.1						
ASF				S	S	00 38 32.1	+0.5
	comp=Z,0.4nm,0.3s,baz=210,slow=20,SNR=3.4						
ARSA	Arzberg	12.47	337	⇑iPn	P	00 36 11.6	-2.5
ARSA				iSn	S	00 38 19.7	-12
MALT	Malatya	12.88	75	⇑P	P	00 36 19.4	-0.1
MALT	Malatya	12.88	75	eP	P	00 36 19.1	-0.4
KBA	Koelnbreinsper	13.10	331	⇑iPn	P	00 36 20.3	-2.0
KBA				iSn	S	00 38 35.7	-11
MOA	Molln	13.41	335	⇑iPn	P	00 36 24.9	-1.5
MOA				iSn	S	00 38 42.4	-12
SQTA	Sankt Quirin	14.11	327	iSN	S	00 38 59.4	-11
SQTA	Sankt Quirin	14.11	327	⇑iPn	P	00 36 34.9	-0.6
SQTA				iSn	S	00 38 59.4	-11
SQTA	Sankt Quirin	14.11	327	iP	P	00 36 34.9	-0.6
MOTA	Moosalm	14.25	327	iSN	S	00 39 03.5	-11
MOTA	Moosalm	14.25	327	⇑iPn	P	00 36 36.6	-0.7
MOTA				iSn	S	00 39 03.5	-11
MOTA	Moosalm	14.25	327	iP	P	00 36 36.6	-0.7
OKC	Ostrava-Krasne	14.27	348	eP	P	00 36 49.9	+12
MORC	Moravsky Berou	14.32	347	P	P	00 36 36.4	-1.8
DAVOX	Davos	14.42	323	P	P	00 36 40.4	+1.0
	comp=Z,0.2nm,0.3s,baz=158,slow=19,SNR=4.2						
GERES	GERESS Array B	14.46	336	P	P	00 36 38.7	-1.4
	comp=Z,0.2nm,0.3s,baz=161,slow=14,SNR=7.8						
KHC	Kasperske Hory	14.75	336	eP	P	00 36 47.6	+3.8
KHC				e		00 36 55.0	
KHC				e		00 38 52.0	
KHC	Kasperske Hory	14.75	336	eP	P	00 36 47.6	+3.8
KHC				x	x	00 36 55.0	
KHC				x	x	00 38 52.0	
DAVA	Damuels	14.77	324	⇑iPn	P	00 36 43.8	-0.3
DAVA				iSn	S	00 39 17.5	-9.0
DPC	Dobruska-Polom	15.11	344	eP	P	00 36 55.4	+7.0
PRU	Pruhonice	15.22	340	eP	P	00 36 59.5	+10
SOC	Sochi	15.22	55	eP	P	00 36 49.5	-0.4
SOC				e		00 39 38.3	
SOC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SOC				pmax	pmax		
	comp=N,10.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,12nm,1.1s						
SOC	Sochi	15.22	55	eP	P	00 36 49.5	-0.4
	comp=E,10.0nm,0.8s						
LPG	La Plagne	15.31	313	eP	P	00 36 51.9	+0.8
	comp=E,19nm,1.1s						
LPG	La Plagne	15.31	313	eP	P	00 36 51.9	+0.8
LPG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
AKASG	Malin Array Be	15.53	16	P	P	00 36 51.2	-2.6
AKASG				S	S	00 39 47.5	+3.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	15.53	16	P	P	00 36 51.2	-2.6
	comp=Z,1.1nm,0.3s,baz=208,slow=12,SNR=23						
AKASG				S	S	00 39 47.5	+3.5
	comp=Z,0.2nm,0.3s,baz=200,slow=21,SNR=3.2						
GRA1	Grafenberg Arr	16.05	332	eP	P	00 37 05.0	+4.6
GRF	Grafenberg Arr	16.05	332	eP	P	00 37 05.0	+4.6
GRF	Grafenberg Arr	16.05	332	eP	P	00 37 05.0	+4.6
NKC	Novy Kostel	16.07	336	eP		00 37 14.6	
BRG	Berggiesshubel	16.18	340	eP		00 37 17.0	
CABF	La Chapelle	16.32	316	eP	P	00 37 03.4	-0.4
	comp=Z,58nm,1.5s						
CABF	La Chapelle	16.32	316	eP	P	00 37 03.4	-0.4
CABF				pmax	pmax		
	comp=Z,29nm,1.5s						
HINF	Hinteralfeld	16.64	320	eP	P	00 37 07.6	-0.1
	comp=Z,24nm,1.4s						
HINF	Hinteralfeld	16.64	320	eP	P	00 37 07.6	-0.1
HINF				pmax	pmax		
	comp=Z,12nm,1.4s						
CDF	Champ du Feu	16.82	323	eP	P	00 37 09.7	-0.3
CLL	Collm	16.84	339	e*PP		00 37 19.0	
CLL				i *SP		00 37 26.8	
CLL				i		00 37 28.7	
HAU	Haudompre	17.02	320	eP	P	00 37 11.8	-0.7
	comp=Z,9.2nm,0.8s						
HAU				eR			
	comp=Z,82nm,22.8s						
KIV	Kislovodsk	17.36	56	eP	P	00 37 18.7	+1.9
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				pmax	pmax		
	comp=N,3.0nm,0.7s						
KIV				pmax	pmax		
	comp=E,4.0nm,1.1s						
KIV	Kislovodsk	17.36	56	eP	P	00 37 14.2	-2.6
	comp=E,18nm,1.2s						
KIV	Kislovodsk	17.36	56	eP	P	00 37 14.2	-2.6
	comp=E,18nm,1.2s						
SMF	Signal de Mont	17.64	313	eP	P	00 37 19.6	-0.7
	comp=E,36nm,1.5s						
SMF	Signal de Mont	17.64	313	eP	P	00 37 19.6	-0.7
SMF				pmax	pmax		
	comp=Z,18nm,1.5s						
ZEI	Tsey	17.83	61	eP	P	00 37 20.5	-2.2
GNI	Garni	17.95	70	eP	P	00 37 24.5	+0.3
GNI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GNI	Garni	17.95	70	P	P	00 37 24.2	0.0
	comp=Z,0.4nm,0.3s,baz=260,slow=5.8,SNR=6.4						
GNI	Garni	17.95	70	eP	P	00 37 24.5	+0.3
	comp=Z,5.8nm,0.6s						
GNI	Garni	17.95	70	eP	P	00 37 24.5	+0.3
	comp=Z,5.8nm,0.6s						
CAF	Calviac	17.98	306	eP	P	00 37 25.3	+0.9
AVF	Avril sur Loir	18.00	313	eP	P	00 37 25.2	+0.4
	comp=Z,48nm,1.6s						
AVF	Avril sur Loir	18.00	313	eP	P	00 37 25.2	+0.4
AVF				pmax	pmax		
	comp=Z,24nm,1.6s						
SSF	Saint Saulge	18.05	314	eP	P	00 37 24.5	-0.9
BGF	Bois d'Agland	18.19	312	eP	P	00 37 26.1	-1.0
LFF	La Frestale	18.86	305	eP	P	00 37 37.2	+2.4
	comp=Z,26nm,0.8s						
LFF	La Frestale	18.86	305	eP	P	00 37 37.2	+2.4
LFF				pmax	pmax		
	comp=Z,13nm,0.8s						
GIVF	Givet	19.14	323	eP	P	00 37 38.1	+0.1
ETSF	Etsaut	19.15	298	eP	P	00 37 39.7	+1.6
	comp=Z,17nm,0.7s						
ETSF	Etsaut	19.15	298	eP	P	00 37 39.7	+1.6
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DOU	Dourbes	19.25	323	P	P	00 37 40.0	+0.8
BAIF	Baives	19.42	322	eP	P	00 37 40.2	-0.8
	comp=Z,13nm,0.8s						
BAIF	Baives	19.42	322	eP	P	00 37 40.2	-0.8
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
IIGN	Ignalina	19.59	6	eP	P	00 37 41.2	-1.6
IDID	Didziasalis	19.60	7	eP	P	00 37 41.4	-1.5
IDID				AMPb	AMB	00 37 51.6	
	comp=Z,1.6nm,1.8s						
SJPF	Ste Jean	19.67	299	eP	P	00 37 46.0	+2.2
	comp=Z,35nm,0.9s						
SJPF	Ste Jean	19.67	299	eP	P	00 37 46.0	+2.2
SJPF				pmax	pmax		
	comp=Z,17nm,0.9s						
BSD	Bornholm Skovb	19.90	347	iP	P	00 37 44.8	-1.3
BSD				i		00 37 52.4	
IZAR	Zarasai	19.98	6	eP	P	00 37 45.4	-1.6
IZAR				AMPb	AMB	00 37 46.2	
	comp=Z,3.8nm,0.7s						
MFF	Saint Martin d	20.06	309	eP	P	00 37 49.0	+1.1
	comp=Z,25nm,1.0s						
MFF	Saint Martin d	20.06	309	eP	P	00 37 49.0	+1.1
MFF				pmax	pmax		
	comp=Z,13nm,1.0s						
LDF	La Druitiere	20.94	314	eP	P	00 37 57.5	+0.6
	comp=Z,8.1nm,0.5s						
LDF	La Druitiere	20.94	314	eP	P	00 37 57.5	+0.6
LDF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
FLN	La Foliniere	21.23	314	eP	P	00 38 01.1	+1.3
FLN				eR			
	comp=Z,116nm,19.5s						
ESDC	Sonseca Array	21.27	288	P	P	00 38 02.1	+1.8
	comp=Z,4.6nm,0.8s,mb3.8,baz=84,slow=11,SNR=9.3						
GRR	Gorron	21.27	313	eP	P	00 38 01.6	+1.3
OBN	Obninsk	21.47	22	⇑eP	P	00 38 04.4	+2.2
OBN				e*PP		00 38 19.4	
OBN				eS	S	00 41 58.9	+7.5
OBN				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
SGMF	Saint Gilles	22.23	311	eP	P	00 38 11.8	+2.0
	comp=Z,27nm,0.7s,mb4.4						
SGMF	Saint Gilles	22.23	311	eP	P	00 38 11.8	+2.0
SGMF				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
QUIF	Quistinic	22.47	310	eP	P	00 38 13.7	+1.6
ROSF	Rostrenen	22.71	311	eP	P	00 38 16.4	+2.0
	comp=Z,24nm,0.6s,mb4.4						
ROSF	Rostrenen	22.71	311	eP	P	00 38 16.4	+2.0
ROSF				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.4						
EVO	Evora	24.44	285	eP	P	00 38 34.3	+3.0
	comp=Z,34nm,1.3s,mb4.2						
HFS	Hagfors	24.89	349	P	P	00 38 35.9	+0.5
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	Hagfors	24.89	349	P	P	00 38 35.9	+0.5
	comp=Z,1.8nm,0.4s,mb3.9,baz=168,slow=13,SNR=13						
FINES	FINESS Array B	25.63	4	P	P	00 38 42.8	+0.4
FINES				*PP	pP	00 38 56.2	-1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	25.63	4	P	P	00 38 42.8	+0.4
	comp=Z,2.2nm,0.6s,mb3.8,baz=170,slow=9.5,SNR=10						
FINES				pP	pP	00 38 56.1	-1.6
	comp=Z,1.0nm,0.4s,baz=160,slow=9.9,SNR=2.7						
NB2	NORSAR Subarra	26.16	347	P	P	00 38 46.9	-0.3
	comp=Z,0.9nm,0.5s,mb3.5,baz=145,slow=10						
NB2	NORSAR Subarra	26.16	347	P	P	00 38 46.9	-0.3
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
NOA	NORSAR Array B	26.16	347	P	P	00 38 47.8	+0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	26.16	347	P	P	00 38 47.8	+0.5
	comp=Z,0.8nm,0.5s,mb3.4,baz=149,slow=10.0,SNR=4.7						
EKA	Eskdalemuir Ar	26.21	326	P	P	00 38 49.3	+1.5
EKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKA	Eskdalemuir Ar	26.21	326	P	P	00 38 49.3	+1.5
	comp=Z,4.4nm,0.7s,mb4.0,baz=121,slow=9.7,SNR=9.2						
KAF	Kangasniemi	26.31	4	ep	P	00 38 41.6	-7.1
JOF	Joensuu	27.56	9	ep	P	00 38 53.8	-6.3
ARCES	ARCESS Array B	33.70	2	P	P	00 39 53.9	-0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES				MLR	MLR		
	comp=Z,63nm,18.7s						
ARCES	ARCESS Array B	33.70	2	P	P	00 39 53.9	-0.3
	comp=Z,1.4nm,0.5s,mb4.0,baz=191,slow=10.0,SNR=8.5						
ARCES				LR	LR	00 54 09.8	
	comp=Z,63nm,18.7s,baz=201,slow=37						
BVAR	Borovoye Array	37.37	48	P	P	00 40 25.3	-0.1
	comp=Z,6.0nm,0.9s,mb4.5,baz=275,slow=7.8,SNR=12						
DBIC	Dimbokro	38.47	227	P	P	00 40 37.2	+2.3
DBIC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
DBIC	Dimbokro	38.47	227	P	P	00 40 37.2	+2.2
	comp=Z,8.3nm,1.2s,mb4.4,slow=10,SNR=3.9						
DBIC	Dimbokro	38.47	227	P	P	00 40 37.2	+2.2
KURK	Kurchatov	42.34	52	⇓iP	P	00 41 06.5	0.0
KURK	Kurchatov	42.34	52	eP	P	00 41 05.9	-0.6
	comp=Z,5.8nm,0.7s,mb4.4						
ZAL	Zalesovo	45.99	47	iP	P	00 41 35.5	-0.3
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZAL	Zalesovo	45.99	47	P	P	00 41 35.7	-0.2
	comp=Z,2.6nm,0.5s,mb4.2,baz=202,slow=6.5,SNR=14						
ZAL				pP	pP	00 41 47.9	-4.5
	comp=Z,1.8nm,0.5s,baz=188,slow=7.3,SNR=5.8						
ZAL	Zalesovo	45.99	47	P	P	00 41 35.7	-0.2
ZAL				pP	pP	00 41 47.9	-4.5
WMQ	Urumqi	49.44	60	eP	P	00 42 03.3	+0.4
KOLN	Koldanda	51.75	81	eP	P	00 42 20.5	-0.1
GKN	Gorkha	52.48	80	eP	P	00 42 25.6	-0.5
DMN	Daman	53.02	80	eP	P	00 42 29.8	-0.4
	comp=Z,11nm,0.6s,mb5.1						
KKN	Kakani	53.08	80	eP	P	00 42 29.4	-1.2
PKI	Pulchoki	53.28	80	eP	P	00 42 31.5	-0.6
JIRN	Jiri	53.87	80	eP	P	00 42 35.8	-0.6
ZAK	Zakamensk	57.81	48	eP	P	00 43 00.2	-4.2
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.6						
FRB	Frobisher Bay	58.92	329	P	P	00 43 13.8	+1.9
FRB				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FRB	Frobisher Bay	58.92	329	P	P	00 43 13.8	+1.9
	comp=Z,0.7nm,0.5s,mb3.9,baz=66,slow=10.0,SNR=2.7						
SONM	Songino Array	60.62	50	P	P	00 43 23.7	-0.1
	comp=Z,1.1nm,0.6s,mb4.1,baz=282,slow=7.2,SNR=17						
SONM				pP	pP	00 43 36.8	-4.3
	comp=Z,0.9nm,0.7s,baz=283,slow=6.8,SNR=6.6						
TIXI	Tiksi	61.19	20	⇑eP	P	00 43 26.7	-0.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
SCHQ	Schefferville	61.23	319	P	P	00 43 29.3	+1.5
	comp=Z,1.2nm,0.8s,mb4.0,baz=90,slow=11,SNR=3.5						
SCHQ				pP	pP	00 43 41.8	-3.3
	comp=Z,1.2nm,0.6s,baz=224,slow=2.0,SNR=2.3						
SCHQ	Schefferville	61.23	319	P	P	00 43 29.3	+1.5
SCHQ				pP	pP	00 43 41.8	-3.3
CN2	Changchun	74.22	47	eP	P	00 44 49.1	+0.1
YKA	Yellowknife Ar	76.06	341	iP	P	00 45 03.0	+3.9
YKA	Yellowknife Ar	76.06	341	P	P	00 45 01.1	+2.0
	comp=Z,0.2nm,0.4s,mb3.2,baz=32,slow=5.5,SNR=4.8						
NJ2	Nanjing	76.52	60	eP	P	00 45 00.6	-1.8
NJ2				AP	pP	00 45 20.8	+0.5
NJ2				PP	PP	00 47 54.6	-1.9
NJ2				S	S	00 54 37.0	-4.7
ILAR	Eielson Array	79.29	355	P	P	00 45 19.6	+2.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	79.29	355	P	P	00 45 19.6	+2.6
	comp=Z,0.5nm,0.9s,mb3.3,baz=350,slow=5.5,SNR=4.3						

IDC ***21*** *00:39:31.4±1.3, 13.23N×92.52E, mb3.7/4, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=45.4km s-min=23.5km az=52.0*

NEIC ***21*** *00:39:36.0±0.9, 13.27N×92.54E, h30^{km}, mb3.7/1, Error ellipse: s-maj=18.0km s-min=17.1km az=225.0*

ISC 21 00:39:34.0±1.1**, 13.3N**±0.1×**92.6E**±0.1**, h30^{km}, n8,** σ**0^{s}65**/9**, mb3.7**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	7.98	49	P	Pn	00 41 30.5	-0.3
CM31				eS	Sn	00 42 53.9	-7.2
CMAR	Chiang Mai Arr	7.98	49	Pn	Pn	00 41 31.6	+0.7
	0.4nm,0.3s,baz=239,slow=15,SNR=14						
KURK	Kurchatov	39.03	346	P	P	00 46 59.9	+0.2
	1.6nm,1.0s,mb3.7						
ZAL	Zalesovo	41.03	353	P	P	00 47 15.1	-1.0
	0.6nm,0.8s,mb3.3,baz=298,slow=10,SNR=4.9						
ZAL	Zalesovo	41.03	353	P	P	00 47 15.1	-1.0
WRA	Warramunga Arr	52.69	128	P	P	00 48 48.9	+0.6
	0.8nm,0.7s,mb3.8,baz=306,slow=8.4,SNR=5.6						
ASAR	Alice Springs	54.58	132	P	P	00 49 01.4	-0.7
	0.8nm,0.7s,mb3.9,baz=314,slow=7.1,SNR=4.9						
BRTR	Keskin Array B	57.83	309	P	P	00 49 25.9	+0.6
	0.5nm,0.5s,mb3.8,baz=98,slow=8.7,SNR=4.7						

NEIC ***21*** *00:52:33.1±1.0, 5.09N×94.09E, mb4.5/1, Error ellipse: s-maj=31.2km s-min=16.2km az=67.0*

IDC ***21*** *00:52:34.1±1.4, 5.37N×94.41E, h48^{km}±9^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.5/17, mbtmp3.7/7, ML4.4/1, Error ellipse: s-maj=49.4km s-min=19.9km az=53.0*

ISC 21 00:52:31.3±1.1**, 5.1N**±0.1×**94.1E**±0.2**, h47^{km}, h47^{km}**±.5^{km}**:pP-P, n10,** σ**0^{s}98**/9**, mb3.7**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.10	19	P	P	00 55 51.5	+1.3
	0.6nm,0.3s,baz=209,slow=14,SNR=8.5						
SONM	Songino Array	43.88	12	P	P	01 00 33.4	-1.6
	0.2nm,0.4s,mb3.2,baz=192,slow=8.8,SNR=4.4						
SONM				pP	pP	01 00 45.9	-1.8
	0.9nm,0.9s,baz=184,slow=8.2,SNR=5.8						
WRA	Warramunga Arr	46.73	123	P	P	01 00 57.8	-0.2
	0.8nm,0.6s,mb3.8,baz=302,slow=9.5,SNR=8.8						
KURK	Kurchatov	47.29	347	eP	P	01 01 02.1	+0.1
	7.9nm,1.3s,mb4.5						
ASAR	Alice Springs	48.20	128	P	P	01 01 09.8	+0.2
	0.5nm,0.8s,mb3.6,baz=298,slow=7.8,SNR=4.8						
ZAL	Zalesovo	49.29	353	P	P	01 01 16.4	-1.0
	1.0nm,0.4s,mb4.2,baz=304,slow=2.2,SNR=7.2						
ZAL				pP	pP	01 01 29.3	-1.0
	0.6nm,0.3s,baz=305,slow=12,SNR=3.2						
ZAL	Zalesovo	49.29	353	P	P	01 01 16.4	-1.0
ZAL				pP	pP	01 01 29.3	-1.0
FINES	FINESS Array B	75.14	333	P	P	01 04 09.7	-0.4
	0.5nm,0.8s,mb3.5,baz=107,slow=23,SNR=3.2						
ARCES	ARCESS Array B	77.86	340	pP	pP	01 04 39.5	+0.5
	4.8nm,1.1s,baz=90,slow=7.2,SNR=2.5						
GERES	GERESS Array B	79.87	319	P	P	01 04 38.3	+1.6
	0.3nm,0.7s,mb3.4,baz=170,slow=11,SNR=2.7						
GERES				pP	pP	01 04 52.2	+1.8
	0.5nm,0.7s,baz=146,slow=4.8,SNR=2.9						

CSEM ***21*** *00:58:03.2±0.6, 38.66N×29.11W, h2^{km}±6^{km}, ML2.0, Error ellipse: s-maj=10.1km s-min=5.5km az=47.0, After PDA*

PDA ***21*** *00:58:03.2±0.6, 38.66N×29.11W, h2^{km}±6^{km}, MD2.9, ML2.0, Error ellipse: s-maj=10.1km s-min=5.5km az=47.0*

SVSA 21 00:58:03.2±0.6**, 38.66N×29.11W, h2^{km}**±6^{km}**, MD2.9, ML2.0, Error ellipse: s-maj=10.1km s-min=5.5km az=47.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	Cedros	0.32	95	eP	Pg	00 58 09.1	-0.5
PCED				eS	Sg	00 58 13.4	-0.4
	54nm,0.1s						
PCED	Cedros	0.32	95	eP	Pg	00 58 09.1	-0.5
PCED				eS	Sg	00 58 13.4	-0.4
	54nm,0.1s						
CALA	Caldeira	0.33	104	eP	Pg	00 58 09.3	-0.4
CALA				eS	Sg	00 58 13.6	-0.5
HOR	Horta	0.40	109	eP	Pg	00 58 10.2	-0.9
HOR				eS	Sg	00 58 15.6	-0.8
PICO	Pico	0.56	106	eP	Pg	00 58 13.0	-1.3
PICO				eS	Sg	00 58 20.5	-1.2
ROSA	Rosais	0.68	85	eS	Sg	00 58 23.5	-2.3
PMAN	Manadas	0.80	92	eS	Sg	00 58 26.1	-3.6
	18nm,0.2s						

IDC 21 00:59:44.3±1.1**, 6.52N**×**91.44E, mb3.7**/7**, mb1 4.0**/8**, mb1mx3.8**/18**, mbtmp3.7**/8**, ML3.9**/1**, Error ellipse: s-maj=43.8km s-min=21.0km az=50.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.94	31	Pn	P	01 03 03.8	-1.8
	0.2nm,0.3s,baz=230,slow=14,SNR=15						
SONM	Songino Array	43.10	15	P	P	01 07 46.5	-1.4
	0.4nm,0.6s,baz=196,slow=8.2,SNR=5.7						
ZAL	Zalesovo	47.58	355	P	P	01 08 21.9	-1.7
	1.0nm,0.8s,baz=284,slow=5.1,SNR=6.7						
WRA	Warramunga Arr	49.73	123	P	P	01 08 38.2	-2.5
	0.8nm,0.6s,baz=302,slow=8.8,SNR=8.5						
ASAR	Alice Springs	51.17	127	P	P	01 08 50.1	-1.6
	1.0nm,0.9s,baz=305,slow=8.1,SNR=7.0						
BRTR	Keskin Array B	61.30	312	P	P	01 10 02.5	-1.6
	0.4nm,0.6s,baz=135,slow=8.7,SNR=4.5						
FINES	FINESS Array B	72.66	333	P	P	01 11 12.0	-3.5
	1.7nm,1.0s,baz=90,slow=11,SNR=3.1						
GERES	GERESS Array B	77.05	319	P	P	01 11 40.7	-0.3
	0.5nm,0.7s,baz=104,slow=5.5,SNR=4.8						

TEH ***21*** *01:18:12.4, 35.77N×54.53E, Mn3.3*

CSEM ***21*** *01:18:18.6±0.5, 35.68N×53.90E, h16^{km}, ML3.3/2, Error ellipse: s-maj=9.3km s-min=5.5km az=83.0*

THR ***21*** *01:18:21.5±0.8, 35.48N×53.63E, h14^{km}, ML2.7*

ISC 21 01:18:20.7±1.0**, 35.48N**±0.06×**53.76E**±0.08**, h10^{km}, n16,** σ**1^{s}23**/20**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IANJ	Anjiloo	0.13	95	Pg	Pg	01 18 22.9	-1.0
ILAS	Lasjerd	0.66	262	Pg	Pg	01 18 35.4	+1.4
IFIR	Firoozkooh	0.83	282	Pg	Pg	01 18 36.1	-1.4
IDMV	Damavand	1.41	275	Pn	Pn	01 18 47.2	+0.6
DAMV	Damavand	1.47	276	ePG	Pg	01 18 47.6	-2.5
DAMV				AML	AML	01 19 16.4	
	comp=N,214nm,0.3s						
IAFJ	Afjeh	1.71	283	Pn	Pn	01 18 51.0	+0.2
IVRN	Varamin	1.73	254	Pn	Pn	01 18 46.5	-4.7
IQOM	Qom	2.29	255	Pn	Pn	01 19 00.4	+1.2
IQOM	Qom	2.29	255	Sn	Sn	01 19 36.0	+8.3
IMHD	Mahdasht	2.53	276	Pn	Pn	01 19 02.7	+0.1
NASN	Na’in	2.79	197	ePN	Pn	01 19 08.6	+2.4
NASN				eSG	Sg	01 19 52.5	-1.1
NASN				AML	AML	01 20 04.0	
	comp=N,21nm,0.3s						
NASN	Na’in	2.79	197	ePn	Pn	01 19 08.6	+2.3
	SNR=47						
NASN				eSg	Sg	01 19 52.5	-1.0
	comp=N,21nm,0.3s,SNR=91						
IRAZ	Razeghan	3.13	270	Pn	Pn	01 19 11.1	0.0
IRAZ	Razeghan	3.13	270	Sn	Sn	01 19 54.7	+5.8
ASAO	Ashtian	3.20	254	ePN	Pn	01 19 12.5	+0.3
ASAO				eSG	Sg	01 20 04.0	-3.3
ASAO				AML	AML	01 20 29.0	
	comp=N,11nm,0.6s						
ASAO	Ashtian	3.20	254	ePn	Pn	01 19 12.5	+0.3
	SNR=47						
ASAO				eSg	Sg	01 20 04.1	-3.3
	comp=N,11nm,0.6s,SNR=91						

IDC 21 01:23:04.9±3.1**,4.84S**×**123.48E,mb3.5**/2**,mb1 3.8**/3**, mb1mx3.6**/15**,mbtmp3.6**/3**,ML3.3**/1**,MS2.8**/1**,Ms1 2.8**/1**, ms1mx2.1**/13**,Error ellipse: s-maj=317.6km s-min=26.0km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.36	146	P	P	01 27 19.4	-3.5
	0.1nm,0.3s,baz=318,slow=12,SNR=11						
WB2	Warramunga Arr	18.37	146	eP	P	01 27 18.7	-4.3
ASAR	Alice Springs	21.25	153	P	P	01 27 53.9	-1.1
	1.5nm,0.8s,baz=328,slow=12,SNR=13						
ASAJ	Asahikawa	51.68	17	LR	LR	01 53 03.1	
	comp=Z,8.5nm,20.1s,baz=22,slow=35						
SONM	Songino Array	54.56	346	P	P	01 32 34.9	-2.2
	0.7nm,0.6s,baz=159,slow=7.8,SNR=8.4						

NIED ***21*** *01:50:00,36.00N×139.90E,h53^{km},Mw3.6 Best double couple: M$_0$2.82×10^{14} NP1:φ$_s$40°,δ77°,λ55°. NP2:φ$_s$293°, δ37°,λ158°.*

JMA ***21*** *01:50:48.7±0.1,36.03N×139.90E,h43^{km}±1^{km},M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$252°, δ10°,λ118°. NP2:φ$_s$44°,δ81°,λ85°. Principal axes: T Plg54°, Azm308°; N Plg5°, Azm45°; P Plg36°, Azm138°;*

JMA Felt I J1.

ISC 21 01:50:48.5±1.2**,36.01N**±0.05×**139.90E**±0.07**,h45**^{km}±15^{km}**, n10,σ0^{s}43**/16**,1C-4D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.32	47	⇑P	P	01 50 57.4	0.0
JYT				S	S	01 51 03.5	-0.1
TOK	Tokyo	0.34	200	P	P	01 50 58.6	+1.0
JHU	Hanno	0.53	253	⇓P	P	01 50 59.6	-0.2
JHU				S	S	01 51 07.8	-0.1
JAG	Ashikaga	0.55	319	⇓P	P	01 51 00.3	+0.2
JAG				S	S	01 51 08.3	-0.2
JRY	Ryogami san	0.81	271	⇓P	P	01 51 03.6	0.0
JRY				S	S	01 51 14.3	-0.4
JKT	Katashina	0.92	325	P	P	01 51 05.2	0.0
JOD2	Odawara 2	1.00	222	P	P	01 51 06.8	+0.6
JOD2				S	S	01 51 18.9	-0.5
JYN	Shimob	1.22	246	P	P	01 51 10.0	+0.7
BSO3	Boso 3	1.30	157	⇓P	P	01 51 09.9	-0.8
MAT	Matsushiro	1.47	292	P	P	01 51 12.9	-0.1
MAT				S	S	01 51 31.4	+0.1

IDC 21 02:06:49.9±1.8**,13.29N**×**92.37E,mb3.6**/4**,mb1 3.8**/4**, mb1mx3.5**/17**,mbtmp3.6**/4**,Error ellipse: s-maj=76.9km s-min=25.1km az=62.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	36.37	16	P	P	02 13 55.9	-1.7
	0.1nm,0.6s,baz=208,slow=11,SNR=2.8						
WRA	Warramunga Arr	52.88	128	P	P	02 16 07.8	-2.3
	0.5nm,0.7s,baz=308,slow=7.9,SNR=4.1						
ASAR	Alice Springs	54.76	132	P	P	02 16 21.6	-2.2
	0.4nm,0.5s,baz=312,slow=7.2,SNR=6.6						
FINES	FINESS Array B	67.14	331	P	P	02 17 45.3	-2.2
	1.7nm,1.1s,baz=121,slow=8.1,SNR=5.6						

BJI ***21*** *02:31:18.2,18.37N×145.23E,h446^{km},mB4.7,mb4.6*

IDC ***21*** *02:31:18.5±4.8,18.35N×145.35E,h443^{km}±56^{km}, mb3.4/11,mb1 3.6/11,mb1mx3.4/21,mbtmp4.2/11,Error ellipse: s-maj=28.9km s-min=12.3km az=90.0*

NEIC ***21*** *02:31:19.6±1.0,18.32N×145.40E,h458^{km}±12^{km}, mb4.0/11,Error ellipse: s-maj=18.7km s-min=7.1km az=85.0*

ISC 21 02:31:19.0±1.2**,18.28N**±0.06×**145.4E**±0.1**,h464**^{km}±14^{km}**, n36,σ0^{s}86**/35**,mb3.9**/21**,4C,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.69	186	eP	P	02 32 41.6	-0.4
MAJO	Matsushiro	19.25	342	eP	P	02 35 12.7	-0.3
	18nm,0.7s						
MAT	Matsushiro	19.25	342	P	P	02 35 13.0	0.0
	13nm,0.8s						
MAT	Matsushiro	19.25	342	P	P	02 35 12.9	-0.1
KS15	Wonju Array Si	24.48	325	eP	P	02 36 03.4	+2.1
NJ2	Nanjing	27.54	305	eP	P	02 36 28.3	-0.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
PMG	Port Moresby	27.57	176	P	P	02 36 28.3	-0.7
	comp=Z,2.6nm,0.4s,mb4.0						
MDJ	Mudanjiang	29.39	337	P	P	02 36 44.8	+0.2
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,169nm,4.8s						
CN2	Changchun	30.47	331	eP	P	02 36 55.1	+1.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
HHC	Hu-ho-hao-te	36.66	315	eP	P	02 37 41.1	-5.0
HHC				AP	pP	02 39 13.4	+1.7
HHC				XP	sP	02 39 57.4	-6.3
HHC				PCP	PcP	02 40 02.3	+4.7
HHC				S	S	02 42 49.9	-6.6
HHC				SCP		02 43 00.6	
HHC				SS	SS	02 45 51.8	-3.3
HHC				SCS	ScS	02 47 05.6	-0.9
HHC				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.4						
HIA	Hailar	37.17	332	eP	P	02 37 49.5	-0.8
	comp=Z,7.9nm,0.6s,mb4.3						
CTA	Charters Tower	38.14	179	⇑iP	P	02 37 59.5	+1.0
	comp=Z,4.5nm,0.8s,mb4.0						
CTA	Charters Tower	38.14	179	P	P	02 37 59.5	+1.1
	comp=Z,4.9nm,0.7s,mb4.0,baz=8.2,slow=6.5,SNR=8.0						
CTAO	Charters Tower	38.14	179	eP	P	02 37 59.1	+0.6
	comp=Z,5.2nm,0.7s,mb4.1						
WB2	Warramunga Arr	39.49	196	⇑iP	P	02 38 09.8	+0.3
WRA	Warramunga Arr	39.50	196	P	P	02 38 10.1	+0.6
	comp=Z,6.0nm,0.7s,mb4.1,baz=12,slow=8.8,SNR=46						
FITZ	Fitzroy Crossi	41.03	209	⇑iP	P	02 38 22.4	+0.4
	comp=Z,4.7nm,0.2s,mb4.6						
ULN	Ulaanbaatar	42.90	322	eP	P	02 38 36.3	-0.3
	comp=Z,1.2nm,0.8s,mb3.4						
ASAR	Alice Springs	43.17	195	P	P	02 38 39.0	-0.1
	comp=Z,2.8nm,0.5s,mb4.0,baz=13,slow=7.7,SNR=54						
ASAR				PcP	PcP	02 40 19.0	0.0
	comp=Z,0.3nm,0.6s,slow=1.8,SNR=3.8						
ASPA	Alice Springs	43.17	195	⇑iP	P	02 38 38.8	-0.2
SONM	Songino Array	43.27	322	P	P	02 38 40.0	+0.5
	comp=Z,1.4nm,0.5s,mb3.6,baz=135,slow=8.1,SNR=14						
DZM	Mont Dzumac	45.10	152	eP	P	02 38 54.9	+0.7
STKA	Stephens Creek	50.00	184	P	P	02 39 29.2	-2.2
	comp=Z,1.6nm,0.8s,mb3.4,baz=13,slow=9.0,SNR=6.5						
STKA	Stephens Creek	50.00	184	P	P	02 39 30.3	-1.0
ILAR	Eielson Array	64.16	26	P	P	02 41 06.7	-1.4
	comp=Z,0.9nm,0.5s,mb3.6,baz=252,slow=6.0,SNR=30						
CHKZ	Chkalovo	66.46	321	eP	P	02 41 21.6	-1.1
	comp=Z,2.8nm,1.1s,mb3.8						
INK	Inuvik	69.88	23	P	P	02 41 42.8	-0.4
	comp=Z,0.8nm,0.7s,mb3.4,baz=257,slow=6.8,SNR=7.8						
INK	Inuvik	69.88	23	eP	P	02 41 42.5	-0.7
	comp=Z,1.7nm,0.9s,mb3.6						
YKA	Yellowknife Ar	78.50	28	P	P	02 42 31.9	+0.1
	comp=Z,0.4nm,0.5s,mb3.2,baz=290,slow=5.5,SNR=7.1						
YKA	Yellowknife Ar	78.50	28	P	P	02 42 31.9	+0.1
RES	Resolute Bay	79.90	14	eP	P	02 42 39.5	+0.5
	comp=Z,1.0nm,0.6s,mb3.5						
ARCES	ARCESS Array B	82.79	342	P	P	02 42 53.8	-0.1
	comp=Z,3.4nm,0.9s,mb3.9,baz=74,slow=6.1,SNR=7.1						
NVAR	Mina Array Bea	83.65	52	P	P	02 43 00.8	+1.9
	comp=Z,1.5nm,0.6s,mb3.7,baz=272,slow=4.4,SNR=11						
FINES	FINESS Array B	87.13	335	P	P	02 43 13.8	-1.3
	comp=Z,1.2nm,1.1s,mb3.5,baz=37,slow=6.9,SNR=4.7						
LPAZ	La Paz	147.98	92	PKP	PKPdf	02 50 10.9	+2.9
	comp=Z,3.2nm,0.7s,baz=234,slow=3.8,SNR=4.3						
LPAZ				PKPbc	PKPdf	02 50 15.4	+7.5
	comp=Z,2.9nm,0.8s,baz=158,slow=12,SNR=9.0						
LPAZ	La Paz	147.98	92	ePKPdf	PKPdf	02 50 10.5	+2.5
LPAZ				ePKPbc	PKPdf	02 50 15.0	+7.0
LPAZ				ePKPab	PKPab	02 50 18.4	+0.1

IDC 21 02:53:35.8±5.6**,6.95N**×**94.22E,mb3.5**/3**,mb1 3.8**/4**, mb1mx3.5**/18**,mbtmp3.5**/4**,ML3.9**/1**,Error ellipse: s-maj=170.2km s-min=28.0km az=76.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	12.33	21	Pn	P	02 56 32.6	-3.0
	0.2nm,0.3s,baz=227,slow=14,SNR=13						
SONM	Songino Array	42.05	12	P	P	03 01 29.2	-1.5
	0.2nm,0.6s,baz=190,slow=8.8,SNR=2.6						
WRA	Warramunga Arr	47.66	125	P	P	03 02 14.5	-1.7
	1.2nm,0.8s,baz=304,slow=8.8,SNR=5.2						
WRA				pP	pP	03 02 25.6	+9.4
	1.2nm,0.7s,baz=305,slow=8.7,SNR=6.6						
ASAR	Alice Springs	49.26	129	P	P	03 02 26.3	-2.3
	0.8nm,1.0s,baz=303,slow=6.6,SNR=5.3						
ASAR				pP	pP	03 02 37.7	+9.1
	0.6nm,0.7s,baz=307,slow=7.3,SNR=5.1						

NEIC ***21*** *02:53:41.8,16.87N×100.46W,h5^{km},MD3.5(MEX),After MEX.*

MEX 21 02:53:42.1±0.5**,16.96N**×**100.44W,h7**^{km}±6^{km}**,MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.19	61	eP	Pg	02 53 45.6	-0.6
CAIG				i S	Sg	02 53 48.4	-0.4
ACX	Acapulco	0.51	100	i P	Pg	02 53 51.5	-0.9
ACX				i S	Sg	02 53 59.0	-0.2
ZIIG	Zihuatanejo	1.17	304	eP	Pb	02 54 01.1	-3.1
ZIIG				i S	Sb	02 54 17.8	-1.7
ZIIG	Zihuatanejo	1.17	304	eP	Pb	02 54 01.1	-3.1
ZIIG				i S	Sb	02 54 15.3	-4.2
PLIG	Platanillo	1.69	32	eP	Pn	02 54 10.1	-2.1
PLIG				i S	Sn	02 54 32.0	-2.3
PLIG	Platanillo	1.69	32	eP	Pn	02 54 08.6	-3.6
PLIG				i S	Sn	02 54 29.6	-4.6

IDC ***21*** *03:38:05.8±3.0,1.18N×124.46E,h225^{km}±29^{km},mb3.8/10, mb1 4.0/10,mb1mx3.8/16,mbtmp4.4/10,Error ellipse: s-maj=48.4km s-min=11.0km az=65.0*

BJI ***21*** *03:38:08.5,1.10N×124.30E,h250^{km},mB4.8,mb4.3*

NEIC ***21*** *03:38:08.6±0.4,1.06N×124.29E,h250^{km},mb4.3/9,Error ellipse: s-maj=27.1km s-min=7.5km az=64.0*

ISC 21 03:38:05.8±2.8**,1.1N**±0.1×**124.3E**±0.2**,h237**^{km}±28^{km}**,n28, σ1^{s}11**/30**,mb4.1**/17**,4D,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	15.89	150	⇓iP	P	03 41 37.5	-1.0
	9.7nm,0.5s						
FITZ	Fitzroy Crossi	19.09	176	eP	P	03 42 11.4	-1.3
	18nm,0.6s						
MBWA	Marble Bar	22.53	191	eP	P	03 42 46.7	0.0
	6.6nm,0.6s,mb4.3						
WRA	Warramunga Arr	23.07	155	P	P	03 42 51.8	-0.2
	51nm,0.5s,mb5.3,baz=333,slow=10,SNR=212						
WRA				S	S	03 46 40.4	-1.8
	1.3nm,1.0s,baz=332,slow=17,SNR=2.9						
WB2	Warramunga Arr	23.08	155	⇓iP	P	03 42 51.7	-0.3
WB2				eS	S	03 46 54.8	+12
ASAR	Alice Springs	26.29	160	P	P	03 43 21.4	-0.3
	3.9nm,0.3s,mb4.5,baz=339,slow=7.7,SNR=89						
ASAR				ScP		03 50 00.1	
	0.5nm,0.8s,baz=350,slow=1.6,SNR=5.0						
ASPA	Alice Springs	26.29	160	⇓iP	P	03 43 21.3	-0.3
CTAO	Charters Tower	30.07	136	P	P	03 43 56.5	+1.1
CMAR	Chiang Mai Arr	30.31	306	P	P	03 43 58.1	+0.6
	0.5nm,0.4s,mb3.5,baz=134,slow=8.2,SNR=4.2						
FORT	Forrest	31.86	174	eP	P	03 44 10.6	-0.3
	794nm,0.6s						
ENH	Enshi	32.28	336	eP	P	03 44 10.3	-4.3
	4.4nm,0.4s,mb4.3						
STKA	Stephens Creek	36.63	155	⇓iP	P	03 44 51.7	+0.3
	4.7nm,0.4s,mb4.4						
STKA	Stephens Creek	36.63	155	P	P	03 44 51.7	+0.3
	6.3nm,0.4s,mb4.5,baz=336,slow=7.7,SNR=29						
LSA	Lhasa	42.50	315	eP	P	03 45 42.2	+2.5
	3.9nm,0.5s,mb4.1						
CNB	Canberra Magne	43.10	150	eP	P	03 45 46.5	+2.0
	412nm,1.6s						
TOO	Toolangi	43.15	155	eP	P	03 45 46.5	+1.7
	0.3nm,0.6s						
GTA	Gaotai	44.23	333	eP	P	03 45 56.0	+2.6
GTA				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.2						
SONM	Songino Array	49.11	344	P	P	03 46 30.9	-0.3
	comp=Z,2.8nm,0.6s,mb3.8,baz=158,slow=7.5,SNR=34						
AAK	Ala-Archa	60.76	320	eP	P	03 47 55.5	+0.8
	comp=Z,1.7nm,0.8s,mb3.7						
ZAL	Zalesovo	61.91	335	P	P	03 47 59.7	-2.5
	comp=Z,2.2nm,0.3s,mb4.2,baz=338,slow=4.7,SNR=4.2						
KURK	Kurchatov	62.73	329	eP	P	03 48 06.7	-1.0
	comp=Z,8.2nm,0.5s,mb4.6						
KURK				epP	pP	03 49 04.7	+2.6
BVAR	Borovoye Array	68.26	328	P	P	03 48 42.2	-0.6
	comp=Z,1.6nm,0.7s,mb3.8,baz=148,slow=14,SNR=7.9						
CHKZ	Chkalovo	68.47	329	eP	P	03 48 43.1	-1.0
	comp=Z,3.4nm,1.0s,mb3.9						
VNDA	Vanda	81.11	172	eP	P	03 49 56.5	+1.0
	comp=Z,0.7nm,0.6s,mb3.5						
ILAR	Eielson Array	88.53	25	P	P	03 50 32.1	-0.2
	comp=Z,0.2nm,0.6s,baz=267,slow=4.3,SNR=5.5						
BRTR	Keskin Array B	89.85	310	P	P	03 50 39.1	0.0
	comp=Z,1.0nm,0.9s,mb3.7,baz=148,slow=5.8,SNR=5.6						
ARCES	ARCESS Array B	92.10	340	P	P	03 50 48.2	-0.7
	comp=Z,3.1nm,1.1s,mb4.2,baz=75,slow=10,SNR=3.6						
ARCES	ARCESS Array B	92.10	340	P	P	03 50 48.2	-0.7

NEIC ***21*** *03:51:42.1,17.97N×68.75W,h142^{km},MD3.6(RSPR), After RSPR.*

RSPR 21 03:51:42.1,17.97N×**68.75W,h142**^{km}±3^{km}**,MD3.6**/7**, MD3.6**/7**,8C-2D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGP	Maguayo	1.58	88	⇑eP	P	03 52 11.4	-0.9
LSP	Las Mesas	1.60	82	⇓eP	P	03 52 11.9	-0.6
LSP				eS	S	03 52 35.4	-0.3
AGPR	Aguadilla, PR	1.64	72	⇑eP	P	03 52 11.9	-1.0
AGPR				eS	S	03 52 36.2	-0.3
LRS	Lares	1.84	80	⇑eP	P	03 52 14.8	-0.4
LRS				eS	S	03 52 40.7	+0.1
AOPR	Arecibo Observ	1.94	79	⇓eP	P	03 52 15.4	-0.9
AOPR				eS	S	03 52 41.8	-0.8
PORP	Portuguez	2.01	87	⇑eP	P	03 52 16.9	-0.4
PORP				eS	S	03 52 44.1	0.0
CELP	Cerrillos	2.07	87	⇑eP	P	03 52 18.2	+0.2
CELP				eS	S	03 52 44.8	-0.6
CSB	Colonia Sabana	2.49	82	⇑eP	P	03 52 23.1	-0.1
HUMP	Col San Antoni	2.77	86	⇑eP	P	03 52 26.3	-0.5
HUMP				eS	S	03 53 00.2	-0.7
CBYP	Canovanas	2.77	83	⇑eP	P	03 52 26.5	-0.4
CBYP				eS	S	03 53 01.1	+0.1

IDC ***21*** *04:00:14.2±0.8,0.71S×119.68E,mb4.0/8,mb1 4.1/8, mb1mx4.0/17,mbtmp4.0/8,MS3.3/1,Ms1 3.3/1, ms1mx2.9/20,Error ellipse: s-maj=56.6km s-min=17.0km az=60.0*

BJI ***21*** *04:00:16.5,1.50S×120.16E,h87^{km},mB5.1,mb4.8*

DJA ***21*** *04:00:23.0±0.4,0.84S×119.73E,h30^{km},MD5.2/3,Error ellipse: s-maj=55.6km s-min=5.6km az=95.0*

NEIC ***21*** *04:00:24.9±0.6,0.85S×119.62E,h88^{km}±6^{km},mb4.4/10, Error ellipse: s-maj=17.0km s-min=6.8km az=72.0*

ISC 21 04:00:21.2±0.7**,0.70S**±0.07×**119.7E**±0.1**,h66**^{km}±7^{km}**,n30, σ0^{s}69**/29**,mb4.3**/16**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	0.23	155	ePg	S	04 00 39.2	+0.1
TANI	Tanete Lipujan	2.74	187	ePn	P	04 01 03.4	-0.6
BUNI	Buntu Taipa	3.00	169	ePn	P	04 01 07.2	-0.4
NINI	Niniconang	3.70	180	ePn	P	04 01 18.1	+0.7
MKS	Makassar	4.50	183	eP	P	04 01 38.5	+10
KAKA	Kakadu	17.35	134	eP	P	04 04 20.8	+0.2
	15nm,0.9s						
MBWA	Marble Bar	20.34	180	P	P	04 04 54.1	-0.5
	1.2nm,0.5s						
WRA	Warramunga Arr	23.88	144	P	P	04 05 30.1	+0.3
	2.6nm,0.7s,mb3.7,baz=325,slow=11,SNR=13						
WB2	Warramunga Arr	23.88	144	eP	P	04 05 30.2	+0.4
ASPA	Alice Springs	26.65	150	eP	P	04 05 59.7	+3.7
ASAR	Alice Springs	26.65	150	P	P	04 05 55.3	-0.7
	0.5nm,0.8s,baz=326,slow=8.9,SNR=5.6						
ASAR				PcP	PcP	04 09 19.1	+0.3
	0.5nm,0.5s,baz=352,slow=2.3,SNR=5.6						
ASAR				LR	LR	04 16 54.4	
	comp=Z,72nm,20.5s,baz=107,slow=38						
ENH	Enshi	32.31	343	eP	P	04 06 46.4	+0.1
	5.0nm,0.7s,mb4.3						
STKA	Stephens Creek	37.26	148	P	P	04 07 28.5	0.0
	1.4nm,0.7s,mb4.0,baz=334,slow=12,SNR=4.0						
STKA	Stephens Creek	37.26	148	eP	P	04 07 28.5	0.0
BJT	Baijiatuau	40.65	356	eP	P	04 07 57.1	+0.5
	9.5nm,0.8s,mb4.7						
BJI	Beijing	40.67	356	P	P	04 07 57.5	+0.7
BJI				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.8						
BJI	Beijing	40.67	356	P	P	04 07 57.5	+0.7
	comp=Z,13nm,0.9s,mb4.8						
GTA	Gaotai	43.89	338	eP	P	04 08 24.6	+1.4
GTA				AMB	AMB		
	comp=Z,11nm,0.6s,mb4.8						
MDJ	Mudanjiang	45.96	10	P	P	04 08 37.9	-1.7
MDJ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,65nm,6.0s						
ULN	Ulaanbaatar	49.61	349	eP	P	04 09 08.1	+0.1
	comp=Z,4.6nm,1.0s,mb4.4						
SONM	Songino Array	49.72	348	P	P	04 09 09.0	+0.3
	comp=Z,2.3nm,0.7s,mb4.2,baz=165,slow=8.9,SNR=25						
AAK	Ala-Archa	59.24	322	eP	P	04 10 17.6	-0.7
	comp=Z,1.9nm,0.9s,mb4.1						
ZAL	Zalesovo	61.65	337	P	P	04 10 33.8	-0.7
	comp=Z,1.9nm,0.7s,mb4.2,baz=334,slow=5.1,SNR=9.3						
KURK	Kurchatov	61.99	332	eP	P	04 10 36.2	-0.6
	comp=Z,6.6nm,0.8s,mb4.7						
BVAR	Borovoye Array	67.43	330	P	P	04 11 11.6	-0.3
	comp=Z,1.8nm,0.7s,mb4.0,baz=117,slow=6.6,SNR=6.9						
CHKZ	Chkalovo	67.69	331	eP	P	04 11 13.2	-0.4
	comp=Z,1.6nm,0.6s,mb4.0						
KMBO	Kilima Mbogo	82.47	269	P	P	04 12 39.9	+1.1
	comp=Z,0.8nm,0.5s,mb3.8,baz=201,slow=19,SNR=5.7						
KMBO	Kilima Mbogo	82.47	269	eP	P	04 12 39.7	+0.9
	comp=Z,3.8nm,1.1s,mb4.1						
BRTR	Keskin Array B	87.44	310	P	P	04 13 03.1	+0.2
	comp=Z,1.1nm,0.6s,mb4.0,baz=128,slow=4.2,SNR=12						
ULM	Lac du Bonnet	122.08	26	PKP	PKPdf	04 19 08.6	+0.1
	comp=Z,0.8nm,0.5s,baz=323,slow=3.0,SNR=3.6						

STR ***21*** *04:06:16.6±0.1,48.21N×7.67E,h10^{km}±1^{km},Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***21*** *04:06:16.9±0.0,48.19N×7.68E,h15^{km},ML2.5/15,Error ellipse: s-maj=0.7km s-min=0.6km az=170.0*

NEIC ***21*** *04:06:17.1,48.19N×7.67E,h13^{km},ML2.6(LDG), ML2.3(STR),ML2.2(LEDBW),ML1.9(SZGRF),After LDG.*

LEDBW ***21*** *04:06:17.3±0.1,48.18N×7.68E,h11^{km}±1^{km},ML2.1,Error ellipse: s-maj=2.0km s-min=2.0km az=42.0*

BGR ***21*** *04:06:17.2±0.2,48.20N×7.68E,h10^{km},ML1.9/4,Error ellipse: s-maj=2.2km s-min=1.1km az=134.0*

LDG 21 04:06:17.1±0.0**,48.19N**×**7.67E,h13**^{km}**,Md3.0**/3**,Ml2.6**/16**, 10C-4D,Error ellipse: s-maj=0.8km s-min=0.7km az=176.0,France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIBD	Limburg	0.06	227	⇓iPg	Pg	04 06 19.9	+0.2
LIBD				eSg	Sg	04 06 21.2	-0.2
	SNR=33						
LIBD	Limburg	0.06	227	⇓iP	Pg	04 06 19.8	+0.1
LIBD				⇓iP		04 06 19.9	
LIBD				S	Sb	04 06 21.8	+0.4
LIBD	Limburg	0.06	227	Pg	Pg	04 06 19.8	+0.1
LIBD				Sg	Sg	04 06 21.2	-0.2
FBB	Freiburg	0.23	147	⇑iPg	Pg	04 06 22.0	-0.2
FBB				Sg	Sg	04 06 25.1	-0.5
FBB	Freiburg	0.23	147	⇑eP	Pg	04 06 21.9	-0.3
FBB				⇑iP		04 06 22.0	
FBB				S	Sg	04 06 25.1	-0.5
FBB				eS	Sg	04 06 25.2	-0.3
KIZ	Kirchzarten	0.29	144	⇑iPg	Pg	04 06 22.8	-0.5
KIZ				i Sg	Sg	04 06 26.6	-0.9
WLS	Welschbruch	0.30	317	⇓iPg	Pg	04 06 23.7	+0.1
WLS				PmP		04 06 25.8	
WLS				eSg	Sg	04 06 27.7	-0.2
	SNR=7.6						
WLS	Welschbruch	0.30	317	Pg	Pg	04 06 23.5	-0.1
WLS				Sg	Sg	04 06 27.7	-0.3
	SNR=7.6						
ECH	Echery	0.34	274	Pg	Pg	04 06 24.4	+0.1
ECH				i Sg	Sg	04 06 29.1	0.0
ECH	Echery	0.34	274	Pg	Pg	04 06 24.0	-0.3
ECH				Sg	Sg	04 06 28.9	-0.2
ECH	Echery	0.34	274	Pg	Pg	04 06 24.0	-0.3
ECH				Sg	Sg	04 06 29.1	0.0
CDF	Champ du Feu	0.34	310	ePg	Pg	04 06 24.2	-0.1
CDF				eSg	Sg	04 06 29.0	-0.1
	124nm,0.2s						
FELD	Feldberg	0.39	144	⇑iPg	Pg	04 06 24.8	-0.4
FELD				PmP		04 06 26.6	
FELD				eSg	Sg	04 06 29.3	-1.3
	SNR=17						
FELD	Feldberg	0.39	144	⇑iP	Pg	04 06 24.7	-0.5
FELD				⇑iP		04 06 24.8	
FELD				P		04 06 26.6	
FELD				eS	Sg	04 06 29.7	-0.8
FELD	Feldberg	0.39	144	Pg	Pg	04 06 24.7	-0.5
FELD				Sg	Sg	04 06 29.3	-1.3
	SNR=17						
BFO	Black Forest	0.46	72	ePg	Pg	04 06 25.9	-0.7
	SNR=29						
BFO				eSg	Sg	04 06 31.9	-1.1
	SNR=7.4						
BFO	Black Forest	0.46	72	ePg	Pg	04 06 25.9	-0.7
BFO				eSg	Sg	04 06 31.9	-1.1
MOF	Molkenrain	0.49	227	ePg	Pg	04 06 27.7	+0.5
	SNR=24						
MOF				PmP		04 06 27.9	
MOF				eSg	Sg	04 06 34.1	+0.1
	SNR=5.6						
MOF	Molkenrain	0.49	227	Pg	Pg	04 06 27.1	-0.1
MOF	Molkenrain	0.49	227	P	Pb	04 06 27.9	+0.8
MOF	Molkenrain	0.49	227	Pg	Pg	04 06 27.7	+0.5
	SNR=24						
MOF				Sg	Sg	04 06 34.1	+0.1
	SNR=5.6						
HINF	Hinteralfeld	0.66	236	ePg	Pg	04 06 29.7	-0.8

HINF				*e*Pn	Pn	04 06 30.7	-1.2
HINF				*e*Sg	Sg	04 06 38.6	-0.9
	54nm,0.2s						
BBS	**Basel-Blauen**	**0.73**	**188**	⇑*e*PmP		04 06 31.7	
BBS	**Basel-Blauen**	**0.73**	**188**	Pg	Pg	04 06 31.3	-0.7
BBS				Sg	Sg	04 06 41.6	-0.3
SPAK	**Spaichingen**	**0.76**	**96**	⇑*i*Pg	Pg	04 06 31.5	-0.8
SPAK	**Spaichingen**	**0.76**	**96**	Pg	Pg	04 06 31.3	-1.0
LANF	**Langenberg**	**0.80**	**7**	*e*Pg	Pg	04 06 32.1	-1.1
	SNR=2.9						
LANF				*e*Sg	Sg	04 06 42.8	-1.0
	SNR=3.7						
LANF	**Langenberg**	**0.80**	**7**	Pg	Pg	04 06 31.9	-1.2
LANF				Sg	Sg	04 06 42.9	-0.9
LANF	**Langenberg**	**0.80**	**7**	Pg	Pg	04 06 32.1	-1.0
	SNR=2.9						
LANF				Sg	Sg	04 06 42.9	-0.9
LBG	**Lerchenberg**	**0.89**	**57**	Pn	Pn	04 06 33.3	-1.8
LBG				PmP		04 06 34.2	
HAU	**Haudompre**	**0.90**	**259**	*e*Pn	Pn	04 06 33.9	-1.5
HAU				*e*Pg	Pg	04 06 34.4	-0.9
HAU				*e*Sg	Sg	04 06 45.9	-1.5
	42nm,0.2s						
MSG	**Mossingen**	**0.94**	**77**	*e*P	Pb	04 06 34.2	-0.5
MSG				*e*S	Sb	04 06 47.4	+0.7
GUT	**Gutenstein**	**0.98**	**97**	*e*Pn	Pn	04 06 34.8	-1.6
GUT				⇑*i*Pg	Pg	04 06 35.6	-1.2
GUT				Sg	Sg	04 06 48.5	-1.4
GUT	**Gutenstein**	**0.98**	**97**	*e*Pn	Pn	04 06 34.8	-1.6
GUT				⇑*i*Pg	Pg	04 06 35.6	-1.2
GUT				Sg	Sg	04 06 48.5	-1.4
GUT	**Gutenstein**	**0.98**	**97**	⇑*i*PG	Pg	04 06 35.6	-1.2
GUT				SG	Sg	04 06 48.5	-1.4
GUT	**Gutenstein**	**0.98**	**97**	⇑*i*Pg	Pg	04 06 35.6	-1.2
TUBL	**Tuebingen Lnz**	**1.00**	**70**	Pg	Pg	04 06 36.4	-0.9
SISB	**Singen-Sch Ber**	**1.01**	**120**	*e*Pg	Pg	04 06 36.2	-1.2
SISB				Sg	Sg	04 06 49.5	-1.4
LOMF	**Lomont**	**1.01**	**214**	⇑*i*Pg	Pg	04 06 36.5	-1.0
LOMF				*e*Sg	Sg	04 06 50.3	-0.8
	SNR=5.3						
LOMF	**Lomont**	**1.01**	**214**	Pg	Pg	04 06 36.4	-1.1
LOMF				Sg	Sg	04 06 50.2	-0.9
THEF	**They Montfort**	**1.12**	**272**	Pg	Pg	04 06 38.1	-1.6
THEF				*e*Sg	Sg	04 06 53.4	-1.4
	SNR=4.6						
THEF	**They Montfort**	**1.12**	**272**	Pn	Pn	04 06 36.9	-1.6
THEF				Pg	Pg	04 06 37.8	-1.9
THEF	**They Montfort**	**1.12**	**272**	Pg	Pg	04 06 37.8	-1.9
BUCH	**Bad Urach**	**1.16**	**76**	Pn	Pn	04 06 37.2	-1.7
BUCH				Sg	Sg	04 06 54.0	-1.7
KTD	**Kalmit**	**1.16**	**14**	*e*Sg	Sg	04 06 53.9	-2.1
	SNR=1.8						
STU	**Stuttgart**	**1.17**	**60**	*e*Sg	Sg	04 06 54.0	-2.2
	SNR=1.5						
SWS	**Schriesheim**	**1.46**	**27**	Sg	Sg	04 07 03.8	-2.2
RFYF	**Reffroy**	**1.52**	**287**	*e*Pn	Pn	04 06 42.7	-1.6
RFYF				*e*Pg	Pg	04 06 45.6	-2.0
	baz=114						
RFYF				*e*Sn	Sn	04 07 00.8	-3.3
	baz=102						
RFYF				*e*Sg	Sg	04 07 05.6	-2.4
	29nm,0.2s,baz=107						
RFYF	**Reffroy**	**1.52**	**287**	*e*Pg	Pg	04 06 45.6	-2.0
RFYF				*e*Sn	Sn	04 07 00.8	-3.3
RFYF				*e*Sg	Sg	04 07 05.6	-2.4
	14nm,0.2s						
RUP	**Ruppelstein**	**1.56**	**345**	*e*Pg	Pg	04 06 46.5	-1.9
	SNR=4.6						
RUP				Sg	Sg	04 07 06.8	-2.5
RUP	**Ruppelstein**	**1.56**	**345**	S	Sb	04 07 06.8	+1.8
RUP	**Ruppelstein**	**1.56**	**345**	Pg	Pg	04 06 46.6	-1.8
RUP				Sg	Sg	04 07 06.5	-2.8
TOD	**Tromm**	**1.60**	**27**	*e*Sg	Sg	04 07 07.5	-3.1
	SNR=3.9						
ABH	**Alteburg**	**1.69**	**357**	Sg	Sg	04 07 11.1	-2.5
ABH	**Alteburg**	**1.69**	**357**	Pg	Pg	04 06 49.0	-2.0
ABH				Sg	Sg	04 07 10.1	-3.5
UBR	**Uberruh**	**1.72**	**106**	Pg	Pg	04 06 50.1	-1.4
UBR				Sg	Sg	04 07 11.1	-3.3
SIND	**Sindeldorf**	**1.73**	**47**	Pg	Pg	04 06 48.1	-3.6
HDH	**Heidenheim**	**1.74**	**76**	Pg	Pg	04 06 49.9	-2.0
SFTF	**Sexfontaines**	**1.76**	**271**	*e*Pn	Pn	04 06 45.6	-2.0
SFTF				*e*Pg	Pg	04 06 50.0	-2.3
	baz=96						
SFTF				*e*Sn	Sn	04 07 06.6	-3.4
SFTF				*e*Sg	Sg	04 07 12.7	-3.1
	7.5nm,0.2s,baz=89						
SFTF	**Sexfontaines**	**1.76**	**271**	*e*Pg	Pg	04 06 50.0	-2.3
SFTF				*e*Sn	Sn	04 07 06.6	-3.4
SFTF				*e*Sg	Sg	04 07 12.7	-3.1
	3.8nm,0.2s						
MEZF	**Maizieres J’vi**	**1.77**	**281**	*e*Pn	Pn	04 06 45.8	-2.0
MEZF				*e*Pg	Pg	04 06 50.2	-2.3
	baz=105						
MEZF				*e*Sn	Sn	04 07 06.9	-3.4
MEZF				*e*Sg	Sg	04 07 13.1	-3.1
	6.2nm,0.3s						
MEZF	**Maizieres J’vi**	**1.77**	**281**	*e*Pg	Pg	04 06 50.2	-2.3
MEZF				*e*Sn	Sn	04 07 06.9	-3.4
MEZF				*e*Sg	Sg	04 07 13.1	-3.1
	3.1nm,0.3s						
WLF	**Walferdange**	**1.78**	**326**	*e*Sg	Sg	04 07 13.5	-3.1
	SNR=8.8						
CABF	**La Chapelle**	**1.91**	**215**	*e*Pn	Pn	04 06 47.7	-2.1
CABF				*e*Sn	Sn	04 07 10.1	-3.7
CABF				*e*Sg	Sg	04 07 18.1	-2.7
	5.0nm,0.3s						
TNS	**Taunus Mts**	**2.10**	**14**	*e*Sg	Sg	04 07 23.2	-3.8
	SNR=3.4						
FUR	**Furstenfeldbru**	**2.42**	**89**	*e*Sg	Sg	04 07 33.9	-3.7
	SNR=3.4						
GIVF	**Givet**	**2.67**	**317**	*e*Pn	Pn	04 06 57.9	-2.8
GIVF				*e*P		04 07 00.2	
GIVF				*e*Sg	Sg	04 07 40.7	-5.5
	6.6nm,0.3s						
LPL	**La Plagne**	**2.75**	**194**	*e*Pn	Pn	04 06 59.4	-2.4
LPL				*e*Sg	Sg	04 07 44.0	-4.8
	1.1nm,0.3s						
LPG	**La Plagne**	**2.77**	**193**	*e*Pn	Pn	04 07 00.0	-2.0
LPG				*e*Sg	Sg	04 07 44.4	-4.9
	2.0nm,0.4s						
GRF	**Grafenberg Arr**	**2.78**	**56**	*e*Sg	Sg	04 07 44.2	-5.6
BAIF	**Baives**	**2.94**	**311**	*e*Pn	Pn	04 07 01.7	-2.8
BAIF				*e*Pg	Pg	04 07 11.5	-4.4
BAIF				*e*Sg	Sg	04 07 49.0	-6.1
	2.5nm,0.3s						
SMF	**Signal de Mont**	**3.02**	**241**	*e*Pn	Pn	04 07 02.7	-3.0
SMF				*e*Pg	Pg	04 07 13.0	-4.5
SMF				*e*Sn	Sn	04 07 36.6	-5.5
SMF				*e*Sg	Sg	04 07 51.7	-6.1
	5.1nm,0.2s						
SSF	**Saint Saulge**	**3.03**	**250**	*e*Pn	Pn	04 07 02.8	-3.0
SSF				*e*Pg	Pg	04 07 13.1	-4.6
SSF				*e*Sn	Sn	04 07 36.7	-5.6
SSF				*e*Sg	Sg	04 07 52.2	-5.9
	3.4nm,0.3s						
AVF	**Avril sur Loir**	**3.24**	**246**	*e*Pn	Pn	04 07 05.6	-3.2
AVF				*e*Pg	Pg	04 07 17.1	-4.8
AVF				*e*Sn	Sn	04 07 42.2	-5.5
AVF				*e*Sg	Sg	04 07 58.8	-6.4
	4.3nm,0.7s						
ORIF	**Oris-en-Rattie**	**3.50**	**201**	*e*Sg	Sg	04 08 06.9	-6.7
	5.2nm,0.7s						
HYF	**Humbligny**	**3.52**	**257**	*e*Pg	Pg	04 07 21.9	-5.4
HYF				*e*Sg	Sg	04 08 07.4	-6.8
BGF	**Bois d’Agland**	**3.66**	**245**	*e*Pn	Pn	04 07 11.6	-3.1
BGF				*e*Pg	Pg	04 07 25.0	-5.2
BGF				*e*Sg	Sg	04 08 12.3	-6.7
	4.1nm,0.3s						
VIVF	**Saint-Julien-l**	**3.92**	**213**	*e*Sg	Sg	04 08 20.4	-7.4
	2.6nm,0.3s						

IDC 21 04:11:50.5±1.8**, 12.02S**×**166.35E, mb4.0**/6**, mb1 4.3**/6**, mb1mx4.2**/14**, mbtmp4.0**/6**, MS3.6**/3**, Ms1 3.5**/3**, ms1mx3.1**/21**, Error ellipse: s-maj=79.5km s-min=22.8km az=134.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.16**	**225**	P	P	04 18 03.1	-1.5
	1.9nm,0.7s,baz=57,slow=12,SNR=7.1						
STKA				LR	LR	04 29 24.0	
	comp=Z,126nm,20.8s,baz=23,slow=35						
WRA	**Warramunga Arr**	**31.72**	**252**	P	P	04 18 16.1	-2.4
	1.1nm,0.6s,baz=83,slow=9.5,SNR=16						
ASAR	**Alice Springs**	**32.90**	**245**	P	P	04 18 26.1	-2.5
	1.8nm,0.7s,baz=72,slow=9.7,SNR=18						
ASAR				LR	LR	04 29 59.9	
	comp=Z,63nm,19.6s,baz=279,slow=33						
RAR	**Rarotonga**	**33.66**	**110**	LR	LR	04 29 31.8	
	comp=Z,118nm,21.6s,baz=189,slow=32						
SONM	**Songino Array**	**79.80**	**324**	P	P	04 24 01.3	-0.9
	0.3nm,0.5s,baz=129,slow=4.3,SNR=6.7						
ILAR	**Eielson Array**	**84.25**	**18**	P	P	04 24 23.9	-1.0
	1.6nm,0.7s,baz=237,slow=5.2,SNR=43						
YKA	**Yellowknife Ar**	**95.57**	**27**	P	P	04 25 16.4	-2.1
	0.3nm,0.5s,baz=261,slow=4.7,SNR=12						

IDC 21 04:14:10.8±47.0**, 15.88S**×**173.19W, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.8**/16**, mbtmp4.2**/3**, Error ellipse: s-maj=913.6km s-min=181.2km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.97**	**240**	P	P	04 22 20.2	-1.4
	2.0nm,0.7s,baz=109,slow=8.7,SNR=6.0						
WB2	**Warramunga Arr**	**49.92**	**257**	*e*P	P	04 23 06.4	-2.2
WRA	**Warramunga Arr**	**49.93**	**257**	P	P	04 23 06.3	-2.3
	0.7nm,0.6s,baz=95,slow=6.9,SNR=11						
ASAR	**Alice Springs**	**50.15**	**252**	P	P	04 23 08.4	-1.9
	5.3nm,0.5s,baz=88,slow=8.4,SNR=94						
ASPA	**Alice Springs**	**50.16**	**252**	*e*P	P	04 23 08.4	-1.9
KAKA	**Kakadu**	**52.66**	**266**	*e*P	P	04 23 29.4	0.0
	11nm,1.4s						

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*KRSC **21** 04:37:20.1±1.5, 55.33N×166.87E, h17^{km}±4^{km}, ML4.1*

*IDC **21** 04:37:21.3±2.6, 55.48N×166.55E, mb3.3/5, mb1 3.6/5, mb1mx3.4/22, mbtmp3.3/5, Error ellipse: s-maj=90.7km s-min=25.6km az=168.0*

*MOS **21** 04:37:22.1±1.5, 55.27N×166.69E, h24^{km}, mb3.5/2, Error ellipse: s-maj=23.4km s-min=15.0km az=147.6*

ISC 21 04:37:22.9±0.9**, 55.23N**±0.05×**166.64E**±0.06**, h28^{km}**±6^{km}**, n36, σ1^{s}11**/60**, mb3.2**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**0.38**	**267**	*i* P	**Pb**	**04 37 30.9**	**-0.4**
BKI				*i* S	**Sb**	**04 37 37.0**	**-0.1**
KBTR	**Krutoberegovo**	**2.37**	**296**	P	**Pn**	**04 37 58.4**	**-2.5**
KBTR				S	**Sn**	**04 38 26.0**	**-3.4**
KBTR	**Krutoberegovo**	**2.37**	**296**	*e*P	**Pn**	**04 37 58.5**	**-2.4**
KBTR				*e*S	**Sn**	**04 38 27.9**	**-1.5**
KBG	**Krutoberegovo**	**2.45**	**296**	*e*P	**Pn**	**04 37 59.4**	**-2.6**
KBG				*e*S	**Sn**	**04 38 28.9**	**-2.4**
KBG				Smax			
	400nm,1.0s						
KBG	**Krutoberegovo**	**2.45**	**296**	*e*P	**Pn**	**04 38 00.2**	**-1.8**
KBG				*e*S	**Sn**	**04 38 31.1**	**-0.2**
KBG				Smax			
	290nm,0.8s						
SVLR	**Shiveluch**	**3.34**	**296**	*e*P	**Pn**	**04 38 13.4**	**-1.2**
SVLR				*e*S	**Sn**	**04 38 53.5**	**-0.3**
KLY	**Klyuchi**	**3.55**	**290**	P	**Pn**	**04 38 17.0**	**-0.6**
KLY				S	**Sn**	**04 38 58.3**	**-0.9**
KLY	**Klyuchi**	**3.55**	**290**	*e*P	**Pn**	**04 38 16.9**	**-0.7**
KLY				*e*S	**Sn**	**04 38 58.3**	**-0.9**
KMNR	**Kamenistaya**	**3.68**	**281**	*e*P	**Pn**	**04 38 19.8**	**+0.3**
KMNR				*e*S	**Sn**	**04 39 03.7**	**+1.2**
TUMR	**Tumrok**	**3.72**	**274**	*e*P	**Pn**	**04 38 20.8**	**+0.8**
TUMR				*e*S	**Sn**	**04 39 05.8**	**+2.4**
KOZR	**Kozyr**	**3.91**	**285**	PN	**Pn**	**04 38 24.4**	**+1.7**
KOZR				S	**Sn**	**04 39 10.4**	**+2.1**
KOZ	**Kozyrevsk**	**3.92**	**285**	P	**Pn**	**04 38 24.4**	**+1.5**
KOZ				S	**Sn**	**04 39 10.4**	**+1.8**
KOZ	**Kozyrevsk**	**3.92**	**285**	*e*P	**Pn**	**04 38 24.3**	**+1.4**
KOZ				*e*S	**Sn**	**04 39 11.0**	**+2.4**
SRDR	**Sredinnyy**	**4.06**	**288**	*e*P	**Pn**	**04 38 24.9**	**0.0**
SRDR				*e*S	**Sn**	**04 39 12.6**	**+0.5**
KII	**Karymskiy**	**4.34**	**257**	*e*P	**Pn**	**04 38 29.1**	**+0.2**
KII				*e*S	**Sn**	**04 39 19.1**	**-0.2**
SPN	**Mys Shipunski**	**4.43**	**244**	P	**Pn**	**04 38 30.2**	**0.0**
SPN				S	**Sn**	**04 39 20.1**	**-1.5**
SPN	**Mys Shipunski**	**4.43**	**244**	*e*P	**Pn**	**04 38 30.3**	**+0.1**
SPN				*e*S	**Sn**	**04 39 21.5**	**-0.1**
NLC	**Nalytchevo**	**4.75**	**247**	P	**Pn**	**04 38 34.8**	**+0.1**
NLC				S	**Sn**	**04 39 28.7**	**-0.9**
NLC	**Nalytchevo**	**4.75**	**247**	*e*P	**Pn**	**04 38 34.8**	**+0.1**
NLC				*e*S	**Sn**	**04 39 29.4**	**-0.2**
SDLR	**Sedlovina**	**4.95**	**250**	*e*P	**Pn**	**04 38 38.3**	**+0.8**
SMAR	**Somma**	**5.00**	**250**	*e*P	**Pn**	**04 38 39.0**	**+0.8**
UGLR	**Uglovaya**	**5.01**	**249**	*e*P	**Pn**	**04 38 39.4**	**+1.1**
AVH	**Avacha**	**5.03**	**250**	*e*P	**Pn**	**04 38 39.3**	**+0.7**
AVH				*e*S	**Sn**	**04 39 36.8**	**+0.2**
KOK	**Koryaka**	**5.08**	**251**	*e*P	**Pn**	**04 38 39.9**	**+0.6**
PET	**Petropavlovsk**	**5.19**	**248**	P	**Pn**	**04 38 40.0**	**-0.8**
PET				S	**Sn**	**04 39 37.9**	**-2.7**
PET	**Petropavlovsk**	**5.19**	**248**	*e*P	**Pn**	**04 38 40.0**	**-0.8**
PET				*e*S	**Sn**	**04 39 39.8**	**-0.8**
GNL	**Ganaly**	**5.30**	**257**	*e*P	**Pn**	**04 38 42.0**	**-0.4**
GNL				*e*S	**Sn**	**04 39 41.5**	**-1.8**
RUS	**Russkaya**	**5.57**	**243**	*e*P	**Pn**	**04 38 46.3**	**+0.1**
RUS				*e*S	**Sn**	**04 39 49.1**	**-0.9**
GRL	**Gorelyy**	**5.73**	**246**	P	**Pn**	**04 38 49.1**	**+0.6**
ILAR	**Eielson Array**	**24.55**	**48**	P	**P**	**04 42 41.0**	**0.0**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ILAR	**Eielson Array**	**24.55**	**48**	P	**P**	**04 42 41.0**	**0.0**
	comp=Z,1.0nm,1.1s,mb3.3,baz=258,slow=8.3,SNR=3.9						
INK	**Inuvik**	**29.79**	**40**	P	**P**	**04 43 26.2**	**-2.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**29.79**	**40**	P	**P**	**04 43 26.2**	**-2.8**
	comp=Z,0.5nm,0.8s,mb3.3,baz=234,slow=8.7,SNR=2.9						
SONM	**Songino Array**	**37.13**	**284**	P	**P**	**04 44 32.4**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.3,baz=64,slow=8.4,SNR=2.8						
YKA	**Yellowknife Ar**	**38.94**	**46**	P	**P**	**04 44 48.4**	**+0.7**
	comp=Z,0.1nm,0.7s,mb2.6,baz=294,slow=7.7,SNR=3.0						
TXAR	**Lajitas Array**	**66.29**	**72**	P	**P**	**04 48 11.2**	**+0.5**
	comp=Z,0.4nm,0.9s,mb3.4,baz=321,slow=5.8,SNR=4.3						

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*IDC **21** 05:25:53.3±2.2, 22.94S×169.14E, mb3.9/5, mb1 4.1/5, mb1mx4.0/12, mbtmp3.9/5, MS3.3/2, Ms1 3.3/2, ms1mx2.8/20, Error ellipse: s-maj=102.7km s-min=30.5km az=154.0*

*NEIC **21** 05:26:02.7±1.9, 22.50S×168.82E, h58^{km}±17^{km}, mb4.1/1, Error ellipse: s-maj=28.6km s-min=16.3km az=167.0*

ISC 21 05:26:01.5±2.2**, 22.6S**±0.2×**168.9E**±0.1**, h64^{km}**±20^{km}**, n15, σ1^{s}01**/14**, mb3.8**/6**, New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.29**	**283**	*e*P	**P**	**05 26 37.6**	**-0.3**
DZM				*e*S	**S**	**05 27 08.4**	**+3.5**
DZM	**Mont Dzumac**	**2.29**	**283**	*e*P	**P**	**05 26 37.6**	**-0.3**
DZM				*e*S	**S**	**05 27 08.4**	**+3.5**
NOUC	**Port Laguerre**	**2.41**	**282**	*e*P	**P**	**05 26 39.2**	**-0.3**
NOUC	**Port Laguerre**	**2.41**	**282**	*e*P	**P**	**05 26 39.2**	**-0.4**
RPZ	**Rata Peaks**	**21.13**	**176**	LR	LR	05 37 05.0	
	comp=Z,91nm,19.8s,baz=44,slow=32						
CTA	**Charters Tower**	**21.19**	**273**	LR	LR	05 37 55.6	
	comp=Z,80nm,19.2s,baz=232,slow=34						
STKA	**Stephens Creek**	**25.87**	**243**	P	**P**	**05 31 27.8**	**-1.3**
	2.0nm,0.9s,mb3.6,baz=70,slow=10.0,SNR=2.9						
STKA	**Stephens Creek**	**25.87**	**243**	P	**P**	**05 31 28.1**	**-1.0**
TAU	**Tasmania Unive**	**27.02**	**216**	P	**P**	**05 31 40.6**	**+1.1**
	3.8nm,0.7s,mb4.0						
RAR	**Rarotonga**	**29.12**	**93**	*e*P	**P**	**05 31 59.0**	**+0.4**
ASAR	**Alice Springs**	**32.11**	**261**	P	**P**	**05 32 24.9**	**0.0**
	1.0nm,1.0s,mb3.6,baz=85,slow=10.0,SNR=5.5						
WRA	**Warramunga Arr**	**32.23**	**268**	P	**P**	**05 32 24.7**	**-1.3**
	0.4nm,0.8s,mb3.3,baz=97,slow=8.2,SNR=5.0						
CMAR	**Chiang Mai Arr**	**79.57**	**295**	P	**P**	**05 38 05.1**	**+1.4**
	0.5nm,0.4s,mb3.8,baz=151,slow=5.2,SNR=4.2						
NVAR	**Mina Array Bea**	**91.29**	**49**	P	**P**	**05 39 00.8**	**-0.6**
	1.4nm,0.9s,mb4.3,baz=236,slow=7.4,SNR=5.0						
GERES	**GERESS Array B**	**147.23**	**329**	PKPbc	PKPdf	05 45 39.5	+4.5
	0.6nm,0.7s,baz=36,slow=5.3,SNR=4.7						

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*IDC **21** 05:36:19.0±8.4, 2.29N×126.52E, mb3.8/3, mb1 4.0/3, mb1mx3.6/16, mbtmp3.8/3, Error ellipse: s-maj=164.8km s-min=131.4km az=74.0*

ISC 21 05:36:11.9±6.8**, 3.4N**±0.7×**126.3E**±0.6**, h33^{km}, n6, σ1^{s}22**/6**, mb3.7**/4**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**17.11**	**159**	*e*P	**P**	**05 40 10.7**	**+0.4**
	3.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.36**	**182**	*e*P	**P**	**05 40 58.5**	**-0.1**
	2.1nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**24.49**	**162**	P	**P**	**05 41 28.5**	**-1.0**
	2.7nm,0.5s,mb3.9,baz=339,slow=10,SNR=29						
WB2	**Warramunga Arr**	**24.49**	**161**	*e*P	**P**	**05 41 28.5**	**-1.0**
ASAR	**Alice Springs**	**27.89**	**165**	P	**P**	**05 42 02.6**	**+1.5**
	0.3nm,0.3s,mb3.3,baz=354,slow=16,SNR=8.2						
STKA	**Stephens Creek**	**37.96**	**159**	P	**P**	**05 43 28.6**	**+0.2**
	0.6nm,0.3s,mb3.8,baz=329,slow=7.9,SNR=4.9						

IDC 21 05:41:55.7±2.9**, 50.22N**×**28.97W, mb3.5**/5**, mb1 3.8**/5**, mb1mx3.4**/23**, mbtmp3.5**/5**, Error ellipse: s-maj=106.9km s-min=25.6km az=162.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**31.90**	**48**	P	P	05 48 23.2	-1.3
	1.3nm,0.6s,baz=262,slow=9.8,SNR=6.5						
ARCES	**ARCESS Array B**	**31.93**	**33**	P	P	05 48 21.4	-3.2
	2.3nm,1.0s,baz=252,slow=8.6,SNR=5.8						
PDAR	**Pinedale Array**	**53.43**	**295**	P	P	05 51 17.6	-1.6
	0.3nm,0.6s,baz=84,slow=8.2,SNR=3.3						
TXAR	**Lajitas Array**	**58.57**	**279**	P	P	05 51 53.9	-2.4
	0.2nm,0.7s,baz=65,slow=6.4,SNR=3.8						
SONM	**Songino Array**	**75.03**	**29**	P	P	05 53 39.8	-0.5
	0.2nm,0.7s,baz=333,slow=3.2,SNR=2.8						
ASAR	**Alice Springs**	**150.32**	**33**	PKPbc	PKPdf	06 01 48.5	+3.2
	0.4nm,0.6s,baz=349,slow=2.0,SNR=5.1						
ASAR				PKPab	PKPab	06 01 53.2	-3.9
	0.2nm,0.5s,baz=357,slow=1.6,SNR=4.0						

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*IDC **21** 06:10:08.1±0.4, 3.27N×93.79E, mb4.9/26, mb1 5.0/27, mb1mx5.0/30, mbtmp4.9/27, ML4.2/1, MS4.6/13, Ms1 4.6/13, ms1mx4.5/20, Error ellipse: s-maj=19.5km s-min=10.8km az=43.0*

*BJI **21** 06:10:10.5, 3.18N×93.81E, h34^{km}, mB5.4, mb5.2, Ms5.4, Msz5.2*

*MOS **21** 06:10:11.2±0.8, 3.28N×93.78E, h33^{km}, mb5.4/71, MS4.7/22, Error ellipse: s-maj=8.6km s-min=4.4km az=119.0*

*NEIC **21** 06:10:12.2±0.1, 3.26N×93.76E, mb5.2/77, MS4.7/10, Error ellipse: s-maj=4.8km s-min=3.6km az=224.0*

*HRVD **21** 06:10:12.2±0.2, 3.25N×93.67E, h12^{km}, MW5.2/63, Centroid moment Tensor Solution. LP body waves: s51,c76;Mantle waves: s63,c105; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.41±.14; M$_{\theta\theta}$-1.61±.13; M$_{\phi\phi}$-4.80±.16; M$_{r\theta}$-1.99±.39; M$_{\theta\phi}$3.23±.12; M$_{\phi r}$0.72±.40; Best double couple: M$_0$6.947×10^{16} NP1: φ$_s$159°,δ39°,λ108°. NP2:φ$_s$317°,δ53°,λ76°. Principal axes: T 6.877, Plg77°, Azm179°; N .141, Plg11°, Azm325°; P -7.018, Plg7°, Azm57°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 06:10:10.5±0.2**, 3.28N**±0.03×**93.78E**±0.03**, h28^{km}, h28^{km}**±.5^{km}**:pP-P, n378, σ0^{s}91**/377**, mb5.2**/131**, MS4.8**/53**, 35C-21D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**7.35**	**80**	P	**Pn**	**06 11 58.4**	**-0.4**
SNG	**Songkhla**	**7.84**	**60**	P	**Pn**	**06 12 05.0**	**-0.6**
	200nm,0.8s						
KGM	**Kluang**	**9.61**	**97**	P	**P**	**06 12 29.8**	**-0.5**
NNT	**Nongplab**	**10.97**	**32**	P	**P**	**06 12 49.0**	**0.0**
BDT	**Bhumibol Dam**	**14.80**	**20**	P	**P**	**06 13 38.0**	**-2.0**
KKTK	**Khon Kaen**	**15.73**	**34**	PG	**P**	**06 13 57.5**	**+5.4**
KKTK				SG	rx	06 14 05.5	
CM31	**Chiang Mai Arr**	**15.91**	**18**	*e*P	**P**	**06 13 53.7**	**-0.7**
	39nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.91**	**18**	Pn	**P**	**06 13 53.3**	**-1.1**
	0.3nm,0.3s,baz=215,slow=14,SNR=63						
CMAR				Sn	**S**	**06 16 56.0**	**+6.2**
	baz=212,slow=22,SNR=1.8						
CMAR				LR	LR	06 21 09.8	
	comp=Z,2μm,18.5s,baz=205,slow=42						
CHG	**Chiang Mai**	**16.25**	**18**	⇑P	**P**	**06 13 57.0**	**-1.7**
	92nm,0.9s						
UBT	**Ubonrachathani**	**16.25**	**42**	P	**P**	**06 14 00.5**	**+1.8**
MDRS	**Chennai**	**16.54**	**307**	*e*P	**P**	**06 14 07.0**	**+4.6**
MDRS				*e*		06 17 01.0	
MDRS				*e*		06 19 04.0	
MDRS				*e*		06 24 57.0	
NANT	**Nan**	**16.85**	**23**	⇑P	**P**	**06 14 05.0**	**-1.3**
	149nm,1.0s						
CHRT	**Chiangrai**	**17.50**	**19**	⇑P	**P**	**06 14 13.5**	**-1.0**
	250nm,0.9s						
VIS	**Vishakhapatnam**	**17.64**	**325**	*e*P	**P**	**06 14 15.5**	**-0.6**
VIS				*e*		06 14 47.5	
	comp=Z,360nm,1.7s						
VIS				*e*		06 17 23.5	
CAL	**Calcutta**	**19.86**	**345**	*e*P	**P**	**06 14 43.0**	**+0.4**
	comp=Z,492nm,0.2s						
CAL				*e*S	**S**	**06 18 25.6**	**+6.4**
HYB	**Hyderabad**	**20.51**	**314**	*e*P	**P**	**06 14 48.0**	**-1.3**
HYB				pmax	pmax		
	comp=Z,417nm,1.8s						
HYB	**Hyderabad**	**20.51**	**314**	*e*P	**P**	**06 14 48.0**	**-1.3**
	comp=Z,417nm,1.8s						
HYB				*e*S	**S**	**06 18 44.0**	**+12**
HYB	**Hyderabad**	**20.51**	**314**	*i* P	**P**	**06 14 48.0**	**-1.3**
	comp=Z,417nm,1.8s						
HYB				*e*S	**S**	**06 18 44.0**	**+12**
HYB				LR	LR	06 28 00.0	
	comp=Z,5.4nm,14.0s						
AGT	**Agartala**	**20.63**	**353**	⇑*i*P	**P**	**06 14 52.0**	**+1.4**
AGT				*i*		06 15 27.0	
MNGI	**Mangalore**	**21.06**	**298**	*i* P	**P**	**06 14 54.9**	**-0.1**
	comp=Z,124nm,0.0s						
MNGI				*i*		06 18 52.7	
IMP	**Imphal**	**21.38**	**0**	*e*P	**P**	**06 14 58.0**	**-0.2**
BLSP	**Bilaspur**	**21.89**	**330**	*e*P	**P**	**06 15 02.8**	**-0.5**
BLSP				*e*		06 15 21.1	
	comp=Z,228nm,1.6s						
BLSP				*e*S	**S**	**06 19 04.5**	**+6.0**
QIZ	**Qiongzhong**	**22.18**	**44**	P	**P**	**06 15 05.0**	**-1.2**
QIZ				AP		06 15 13.5	
QIZ				XP		06 15 18.1	
QIZ				S	**S**	**06 19 01.3**	**-2.6**
QIZ				AMB	AMB		
	comp=Z,36nm,1.4s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,424nm,5.0s						
QIZ				LR	LR		
	comp=E,5μm,10.2s						
QIZ				LR	LR		
	comp=Z,6μm,11.0s,MS5.2						
SHL	**Shillong**	**22.24**	**355**	*e*P	**P**	**06 15 05.0**	**-1.8**
SHL				*e*		06 19 19.0	
KKM	**Kota Kinabalu**	**22.53**	**82**	P	**P**	**06 15 11.3**	**+1.5**
GOA	**Goa**	**23.09**	**303**	*e*	**P**	**06 15 22.0**	**+6.7**
	comp=Z,162nm,2.1s,mb5.1						
GOA				*e*		06 19 39.3	
KMI	**Kunming**	**23.37**	**21**	P	**P**	**06 15 20.3**	**+2.3**
KMI				AP		06 15 28.0	
KMI				PP	PP	06 15 54.6	+5.0
KMI				PPP	PPP	06 16 02.8	+3.2
KMI				S	**S**	**06 19 29.1**	**+3.8**
KMI				XS		06 19 41.9	
KMI				SSS	SSS	06 20 32.0	+3.4
KMI				AMB	AMB		
	comp=Z,81nm,2.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,936nm,4.4s						
KMI				LR	LR		
	comp=N,5μm,10.8s,MS5.3						
KMI				LR	LR		
	comp=E,4μm,10.9s,MS5.3						
KMI				LR	LR		
	comp=Z,5μm,10.5s,MS5.2						
KMI	**Kunming**	**23.37**	**21**	P	**P**	**06 15 20.2**	**+2.2**
KMI				*PP		06 15 28.0	
KMI						06 15 54.6	
KMI				PPP	PPP	06 16 02.7	+3.1
KMI				S	**S**	**06 19 29.1**	**+3.8**

KMI				*SS		06 19 41.9	
KMI				SSS	SSS	06 20 32.0	+3.4
KMI				pmax	pmax		
	comp=Z,81nm,2.0s,mb4.8						
KMI				MLR	MLR		
	comp=Z,5µm,10.5s,MS5.2						
KMI	**Kunming**	**23.37**	**21**	P	**P**	**06 15 20.2**	**+2.2**
	comp=Z,81nm,2.0s,mb4.8						
KMI				pP		06 15 28.0	
KMI				PP	PP	06 15 54.6	+5.0
KMI				PPP	PPP	06 16 02.7	+3.1
KMI				S	**S**	**06 19 29.1**	**+3.8**
KMI				sS		06 19 41.9	
KMI				SSS	SSS	06 20 32.0	+3.4
KMI				LR	LR		
	comp=Z,5µm,10.5s,MS5.2						
KAD	**Karad**	**23.75**	**307**	_i_ P	**P**	**06 15 22.3**	**+0.6**
KAD				_e_		06 15 26.7	
	comp=Z,88nm,1.7s						
KAD				_e_S	**S**	**06 19 37.0**	**+5.1**
KAD				_i_		06 24 11.5	
DGAR	**Diego Garcia**	**23.78**	**243**	_e_P	**P**	**06 15 21.4**	**-0.6**
TSM	**Tawau**	**24.06**	**87**	P	**P**	**06 15 26.8**	**+2.0**
POO	**Poona**	**24.70**	**309**	⇓_i_P	**P**	**06 15 32.0**	**+1.1**
	comp=Z,50nm,1.0s,mb5.0						
POO				_i_		06 20 58.0	
JIRN	**Jiri**	**25.31**	**344**	_e_P	**P**	**06 15 35.7**	**-0.9**
	comp=Z,249nm,1.4s,mb5.6						
PKI	**Pulchoki**	**25.45**	**343**	_e_P	**P**	**06 15 37.7**	**-0.2**
	comp=Z,164nm,1.1s,mb5.5						
DMN	**Daman**	**25.58**	**342**	_e_P	**P**	**06 15 39.3**	**+0.2**
	comp=Z,120nm,0.7s,mb5.5						
GUN	**Gumba**	**25.63**	**344**	_e_P	**P**	**06 15 39.9**	**+0.3**
	comp=Z,268nm,1.3s,mb5.6						
KKN	**Kakani**	**25.69**	**342**	_e_P	**P**	**06 15 40.1**	**-0.1**
	comp=Z,86nm,0.8s,mb5.3						
BOM	**Bombay**	**25.72**	**309**	_e_	**P**	**06 15 31.5**	**-9.0**
BOM				_e_		06 20 28.6	
GKN	**Gorkha**	**26.09**	**341**	_e_P	**P**	**06 15 43.8**	**-0.1**
	comp=Z,118nm,1.0s,mb5.4						
GYA	**Guiyang**	**26.15**	**27**	⇑_i_P	**P**	**06 15 44.5**	**0.0**
GYA				AP	pP	06 15 53.8	+1.1
GYA				XP	sP	06 15 57.9	+1.5
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,330nm,5.7s						
GYA				LR	LR		
	comp=N,1µm,10.7s,MS5.2						
GYA				LR	LR		
	comp=E,3µm,10.1s,MS5.2						
GYA				LR	LR		
	comp=Z,3µm,11.3s,MS5.1						
KOLN	**Koldanda**	**26.22**	**339**	_e_P	**P**	**06 15 45.2**	**+0.1**
	comp=Z,243nm,1.3s,mb5.6						
LSA	**Lhasa**	**26.40**	**355**	P	**P**	**06 15 48.0**	**+1.3**
LSA				AP	pP	06 15 59.0	+4.1
LSA				PCP	PcP	06 19 13.8	+1.4
LSA				S	**S**	**06 20 18.1**	**+1.8**
LSA				SCP		06 22 47.1	
LSA				PCS		06 22 52.0	
LSA				SCS	ScS	06 26 38.0	+0.3
LSA				AMB	AMB		
	comp=Z,330nm,0.8s,mb5.9						
LSA				AMB	AMB		
	comp=Z,710nm,5.3s						
LSA				LR	LR		
	comp=E,2µm,14.7s						
LSA				LR	LR		
	comp=Z,2µm,14.7s,MS4.7						
LSA	**Lhasa**	**26.40**	**355**	_e_P	**P**	**06 15 48.4**	**+1.7**
LSA				pmax	pmax		
	comp=Z,257nm,0.8s,mb5.8						
LSA	**Lhasa**	**26.40**	**355**	_e_P	**P**	**06 15 48.4**	**+1.7**
	comp=Z,257nm,0.8s,mb5.8						
GZH	**Guangzhou**	**27.33**	**42**	P	**P**	**06 15 57.8**	**+2.5**
GZH				LR	LR		
	comp=N,4µm,10.3s,MS5.6						
GZH				LR	LR		
	comp=E,8µm,10.8s,MS5.6						
GZH				LR	LR		
	comp=Z,10µm,10.7s,MS5.6						
CD2	**Chengdu**	**29.06**	**18**	⇓_i_P	**P**	**06 16 10.0**	**-0.8**
CD2				AMB	AMB		
	comp=Z,87nm,1.4s,mb5.3						
AJM	**Ajmer**	**29.47**	**323**	_e_P	**P**	**06 16 14.0**	**-0.6**
SONA	**Sohna**	**29.50**	**329**	_e_P	**P**	**06 16 14.4**	**-0.4**
SONA				_e_		06 16 16.4	
	comp=Z,54nm,1.6s						
NDI	**New Delhi**	**29.78**	**330**	_e_P	**P**	**06 16 15.8**	**-1.5**
NDI				_e_		06 21 54.0	
ENH	**Enshi**	**30.69**	**27**	_e_P	**P**	**06 16 23.9**	**-1.5**
	comp=Z,18nm,0.6s,mb5.1						
ENH				_e_pP	pP	06 16 30.1	-3.5
DDI	**Dehra Dun**	**30.74**	**333**	_e_	**P**	**06 16 25.0**	**-0.8**
DDI				_e_		06 22 39.4	
KLP	**Kalpa**	**31.68**	**334**	_e_	**P**	**06 16 38.7**	**+4.6**
	comp=Z,38nm,1.7s,mb5.0						
JASL	**Jaisalmer**	**32.13**	**319**	_e_	**P**	**06 16 41.4**	**+3.4**
	comp=Z,42nm,1.6s,mb5.0						
QZH	**Quanzhou**	**32.17**	**46**	P	**P**	**06 16 37.8**	**-0.6**
QZH				S	**S**	**06 21 44.0**	**-4.2**
QZH				LR	LR		
	comp=N,3µm,12.7s,MS5.5						
QZH				LR	LR		
	comp=E,6µm,12.8s,MS5.5						
QZH				LR	LR		
	comp=Z,11µm,10.8s,MS5.8						
WHN	**Wuhan**	**33.37**	**33**	⇓P	**P**	**06 16 48.8**	**0.0**
WHN				S	**S**	**06 22 14.0**	**+7.1**
WHN				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.4						
XAN	**Xi’an**	**33.71**	**23**	P	**P**	**06 16 50.5**	**-1.2**
XAN				AP	pP	06 16 59.1	-0.9
XAN				AMB	AMB		
	comp=Z,69nm,0.9s,mb5.6						
XAN				LR	LR		
	comp=N,2µm,14.6s,MS5.3						
XAN				LR	LR		
	comp=E,3µm,12.0s,MS5.3						
XAN				LR	LR		
	comp=Z,2µm,10.6s,MS5.2						
LZH	**Lanzhou**	**33.95**	**15**	⇑P	**P**	**06 16 53.1**	**-0.6**
LZH				AP	pP	06 17 02.1	0.0
LZH				XP	sP	06 17 05.3	-0.4
LZH				_e_S	**S**	**06 22 16.3**	**+0.6**
LZH				_e_XS		06 22 33.0	
LZH				_e_SS	SS	06 24 26.0	+2.6
LZH				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,400nm,4.0s						
LZH				LR	LR		
	comp=N,2µm,11.8s						
LZH				LR	LR		
	comp=Z,3µm,13.0s,MS5.2						
LZH	**Lanzhou**	**33.95**	**15**	⇑P	**P**	**06 16 53.1**	**-0.6**
LZH				*PP	pP	06 17 02.1	0.0
LZH				*SP	sP	06 17 05.2	-0.5
LZH						06 18 26.0	
LZH				_e_S	**S**	**06 22 16.2**	**+0.5**
LZH				_e_*SS		06 22 33.0	
LZH				_e_SS	SS	06 24 26.0	+2.6
LZH				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
LZH				MLR	MLR		
	comp=Z,3µm,13.0s,MS5.2						
LZH	**Lanzhou**	**33.95**	**15**	⇑P	**P**	**06 16 53.1**	**-0.6**
	comp=Z,60nm,1.0s,mb5.5						
LZH				pP	pP	06 17 02.1	0.0
LZH				sP	sP	06 17 05.2	-0.5
LZH				PP	PP	06 18 26.0	+18
LZH				_e_S	**S**	**06 22 16.2**	**+0.5**
LZH				_e_sS		06 22 33.0	
LZH				_e_SS	SS	06 24 26.0	+2.6
LZH				LR	LR		
	comp=Z,3µm,13.0s,MS5.2						
MBWA	**Marble Bar**	**35.16**	**135**	_e_P	**P**	**06 17 03.6**	**-0.6**
	comp=Z,34nm,1.2s,mb5.2						
MBWA				_e_pP	pP	06 17 12.4	-0.2
MBWA				LR	LR		
	comp=Z,711nm,19.0s,MS4.4						
GTA	**Gaotai**	**36.38**	**8**	_e_P	**P**	**06 17 14.3**	**-0.1**
GTA				AP	pP	06 17 23.5	+0.7
GTA				XP	sP	06 17 27.5	+1.1
GTA				PP	PP	06 18 37.1	-1.2
GTA				PCP	PcP	06 19 39.9	+1.1
GTA				S	**S**	**06 22 49.3**	**-4.0**
GTA				XS		06 23 07.8	
GTA				SCP		06 23 23.1	
GTA				PCS		06 23 29.9	
GTA				SCS	ScS	06 27 28.1	+1.2
GTA				AMB	AMB		
	comp=Z,27nm,1.4s,mb5.0						
GTA				AMB	AMB		
	comp=Z,238nm,4.6s						
GTA				LR	LR		
	comp=N,772nm,11.0s,MS4.9						
GTA				LR	LR		
	comp=E,859nm,11.0s,MS4.9						
GTA				LR	LR		
	comp=Z,931nm,9.9s						
NJ2	**Nanjing**	**37.07**	**37**	_e_P	**P**	**06 17 20.6**	**+0.3**
NJ2				AP	pP	06 17 29.5	+0.8
NJ2				XP	sP	06 17 34.6	+2.4
NJ2				PP	PP	06 18 49.3	+2.1
NJ2				PPP	PPP	06 19 09.3	+1.9
NJ2				S	**S**	**06 23 05.0**	**+1.0**
NJ2				XS		06 23 22.0	
NJ2				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,246nm,4.2s						
NJ2				LR	LR		
	comp=Z,6µm,10.8s,MS5.7						
SSE	**Sheshan**	**37.86**	**40**	P	**P**	**06 17 27.8**	**+0.8**
SSE				AP	pP	06 17 36.5	+1.2
SSE				XP	sP	06 17 41.3	+2.4
SSE				PP	PP	06 19 00.3	+3.6
SSE				AMB	AMB		
	comp=Z,23nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,198nm,5.9s						
SSE				LR	LR		
	comp=N,1µm,17.6s,MS4.8						
SSE				LR	LR		
	comp=E,649nm,17.7s,MS4.8						
SSE				LR	LR		
	comp=Z,1µm,18.7s,MS4.8						
SSE	**Sheshan**	**37.86**	**40**	P	**P**	**06 17 27.8**	**+0.8**
	comp=Z,23nm,0.7s,mb5.0						
SSE				pP	pP	06 17 36.5	+1.2
SSE				sP	sP	06 17 41.3	+2.4
SSE				PP	PP	06 19 00.2	+3.5
SSE				S	**S**	**06 23 30.6**	**+15**
SSE				sS		06 23 45.2	
SSE				LR	LR		
	comp=Z,1µm,18.7s,MS4.8						
FITZ	**Fitzroy Crossi**	**37.91**	**125**	_e_P	**P**	**06 17 26.4**	**-1.1**
	comp=Z,19nm,0.7s,mb4.9						
FITZ				_e_	pP	06 17 35.2	-0.6
FITZ				_e_		06 19 44.0	
KSH	**Kashi**	**39.53**	**338**	_e_P	**P**	**06 17 41.5**	**+0.7**
KSH				_e_AP	pP	06 17 49.1	-0.1
KSH				_e_XP	sP	06 17 52.0	-0.7
KSH				_e_PP	PP	06 19 16.0	+0.5
KSH				_e_PPP	PPP	06 19 41.3	+1.1
KSH				_e_PCP	PcP	06 19 50.4	+1.8
KSH				_e_SCP		06 23 35.0	
KSH				_e_PCS		06 23 38.3	
KSH				_e_S	**S**	**06 23 41.3**	**+0.1**
KSH				_e_SS	SS	06 26 28.3	-1.0
KSH				_e_SCS	ScS	06 27 47.1	+2.3
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.5						
KSH				AMB	AMB		
	comp=Z,200nm,3.5s						
KSH				LR	LR		
	comp=N,1µm,14.2s,MS5.0						
KSH				LR	LR		
	comp=E,1µm,12.3s,MS5.0						
BTO	**Baotou**	**39.95**	**19**	_e_P	**P**	**06 17 43.4**	**-0.9**
BTO				AMB	AMB		
	comp=Z,14nm,1.7s,mb4.4						
JOW	**Kunigami**	**40.47**	**51**	P	**P**	**06 17 49.4**	**+0.7**
	comp=Z,22nm,0.4s,mb5.2,baz=225,slow=12,SNR=2.7						
JOW				LR	LR	06 34 32.5	
	comp=Z,1µm,20.9s,MS4.7,baz=280,slow=36						
HHC	**Hu-ho-hao-te**	**40.70**	**21**	_e_P	**P**	**06 17 51.0**	**+0.6**
HHC				AP	pP	06 17 58.0	-0.8
HHC				XP	sP	06 18 01.5	-0.8
HHC				PCP	PcP	06 19 50.8	-1.5
HHC				SCP		06 23 34.3	
HHC				PCS		06 23 39.3	
HHC				S	**S**	**06 24 01.5**	**+2.9**
HHC				XS		06 24 20.0	
HHC				SCS	ScS	06 27 50.0	-1.6
HHC				AMB	AMB		
	comp=Z,33nm,1.3s,mb4.8						
HHC				AMB	AMB		
	comp=Z,538nm,7.1s						
HHC				LR	LR		
	comp=N,2µm,11.9s,MS5.4						
HHC				LR	LR		
	comp=E,4µm,16.7s,MS5.4						
HHC				LR	LR		
	comp=Z,1µm,16.7s,MS4.9						
WMQ	**Urumqi**	**40.73**	**353**	⇓_i_P	**P**	**06 17 52.0**	**+1.4**
WMQ				XP	sP	06 18 03.0	+0.4
WMQ				PP	PP	06 19 30.0	+2.3
WMQ				S	**S**	**06 24 01.0**	**+1.9**
WMQ				SS	SS	06 26 58.0	+2.6
WMQ				AMB	AMB		
	comp=Z,85nm,1.0s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,115nm,8.0s						
WMQ				LR	LR		
	comp=N,375nm,20.0s,MS4.5						
WMQ				LR	LR		
	comp=E,594nm,20.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,425nm,20.0s,MS4.3						
KAKA	**Kakadu**	**41.56**	**113**	⇓_i_P	**P**	**06 17 57.2**	**-0.6**
	comp=Z,24nm,0.9s,mb4.8						
KAKA				_e_	pP	06 18 05.1	-1.1
KAKA				_i_		06 19 55.6	
BJT	**Baijiatuau**	**41.82**	**26**	_e_P	**P**	**06 18 01.2**	**+1.6**
BJT				_e_*PP	pP	06 18 09.5	+1.4
BJT				pmax	pmax		
	comp=Z,107nm,1.3s						
BJT				MLR	MLR		
	comp=Z,1µm,19.0s						
BJT	**Baijiatuau**	**41.82**	**26**	_e_P	**P**	**06 18 01.2**	**+1.5**
	comp=Z,107nm,1.3s,mb5.3						
BJT				_e_pP	pP	06 18 09.5	+1.4
BJT				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
BJI	**Beijing**	**41.84**	**26**	P	**P**	**06 18 00.9**	**+1.1**
BJI				AP	pP	06 18 09.9	+1.7
BJI				XP	sP	06 18 13.8	+2.1
BJI				AMB	AMB		
	comp=Z,66nm,0.9s,mb5.3						
BJI				AMB	AMB		
	comp=Z,451nm,3.6s						
BJI				LR	LR		
	comp=N,2µm,12.1s,MS5.3						
BJI				LR	LR		
	comp=E,2µm,13.4s,MS5.3						
BJI				LR	LR		
	comp=Z,847nm,28.9s						
BJI	**Beijing**	**41.84**	**26**	P	**P**	**06 18 00.9**	**+1.1**
BJI				*PP	pP	06 18 09.9	+1.7
BJI				*SP	sP	06 18 13.7	+2.0
BJI						06 19 49.1	
BJI				S	**S**	**06 24 21.3**	**+5.7**
BJI				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.3						
BJI				MLR	MLR		
	comp=Z,850nm,28.9s,MS4.5						
BJI	**Beijing**	**41.84**	**26**	P	**P**	**06 18 00.9**	**+1.1**
	comp=Z,66nm,0.9s,mb5.3						
BJI				pP	pP	06 18 09.9	+1.7
BJI				sP	sP	06 18 13.7	+2.0
BJI				PcP	PcP	06 19 49.1	-7.0
BJI				S	**S**	**06 24 21.3**	**+5.7**
BJI				SS	SS	06 27 36.8	+20
BJI				LR	LR		
	comp=Z,850nm,28.9s,MS4.5						
ULHL	**Ulahol**	**41.85**	**340**	P	**P**	**06 18 01.0**	**+1.1**
	SNR=12						
KZA	**Kyzart**	**42.04**	**339**	P	**P**	**06 18 03.0**	**+1.5**
	SNR=15						
NWAO	**Narrogin (SRO)**	**42.30**	**150**	_e_P	**P**	**06 18 03.5**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NWAO	**Narrogin (SRO)**	**42.30**	**150**	P	**P**	**06 18 02.7**	**-1.0**
	comp=Z,8.2nm,0.7s,mb4.5,baz=318,slow=9.7,SNR=5.0						
NWAO				LR	LR	06 34 44.7	
	comp=Z,3.0nm,19.7s,baz=121,slow=35						
NWAO	**Narrogin (SRO)**	**42.30**	**150**	_e_P	**P**	**06 18 03.5**	**-0.3**
	comp=Z,7.7nm,0.7s,mb4.4						
UCH	**Uchtor**	**42.44**	**339**	P	**P**	**06 18 06.3**	**+1.6**
	SNR=30						
AAA	**Alma-Ata**	**42.54**	**342**	_e_P	**P**	**06 18 06.0**	**+0.4**
AAA				pmax	pmax		
	comp=Z,500nm,4.0s						
AAA				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.6						
AML	**Almayashu**	**42.66**	**338**	P	**P**	**06 18 08.1**	**+1.6**
	SNR=44						
TKM2	**Tokmak 2**	**42.67**	**340**	P	**P**	**06 18 07.8**	**+1.2**
	SNR=30						
AAK	**Ala-Archa**	**42.80**	**339**	P	**P**	**06 18 09.0**	**+1.3**
	SNR=16						
AAK	**Ala-Archa**	**42.80**	**339**	_c_ _i_P	**P**	**06 18 07.0**	**-0.6**
AAK				pmax	pmax		
	comp=Z,46nm,1.7s,mb4.9						
AAK	**Ala-Archa**	**42.80**	**339**	_e_P	**P**	**06 18 07.7**	**0.0**
	comp=Z,108nm,1.8s,mb5.3						
FRU	**Bishkek**	**42.93**	**339**	⇑_e_P	**P**	**06 18 09.5**	**+0.8**
FRU				pmax	pmax		
	comp=Z,200nm,2.3s,mb5.4						
CHMS	**Chumysh**	**43.03**	**339**	P	**P**	**06 18 10.1**	**+0.6**
	SNR=7.6						
EKS2	**Erkin-Say**	**43.08**	**338**	P	**P**	**06 18 11.4**	**+1.5**
	SNR=20						
USP	**Ospenovka**	**43.35**	**339**	P	**P**	**06 18 13.0**	**+0.9**
	SNR=36						
MKAR	**Makanchi Array**	**44.48**	**349**	_i_ P	**P**	**06 18 21.3**	**0.0**
MKAR				pmax	pmax		
	comp=Z,37nm,0.8s						
MKAR	**Makanchi Array**	**44.48**	**349**	_i_ P	**P**	**06 18 21.4**	**+0.1**
SONM	**Songino Array**	**45.70**	**12**	P	**P**	**06 18 31.5**	**+0.6**
	comp=Z,23nm,0.8s,mb5.2,baz=192,slow=8.5,SNR=215						
SONM				PcP	PcP	06 20 09.4	+0.4
	comp=Z,4.7nm,0.6s,baz=194,slow=4.2,SNR=4.1						
ULN	**Ulaanbaatar**	**45.87**	**12**	_e_P	**P**	**06 18 32.3**	**0.0**
ULN				_e_*PP	pP	06 18 40.5	-0.2
ULN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
ULN				MLR	MLR		
	comp=Z,593nm,21.0s,MS4.5						
ULN	**Ulaanbaatar**	**45.87**	**12**	_e_P	**P**	**06 18 32.3**	**+0.1**
	comp=Z,13nm,0.8s,mb4.9						
ULN				_e_pP	pP	06 18 40.5	-0.2
ULN				LR	LR		
	comp=Z,593nm,21.0s,MS4.5						
WRA	**Warramunga Arr**	**46.03**	**122**	P	**P**	**06 18 33.2**	**-0.7**
	comp=Z,34nm,0.6s,mb5.4,baz=300,slow=8.9,SNR=260						
WRAB	**Tennant Creek**	**46.03**	**122**	_e_P	**P**	**06 18 33.2**	**-0.7**
WRAB				_e_*PP	pP	06 18 42.4	0.0
WRAB				pmax	pmax		
	comp=Z,77nm,0.8s,mb5.7						
WRAB				MLR	MLR		
	comp=Z,230nm,22.0s,MS4.1						
WRAB	**Tennant Creek**	**46.03**	**122**	_e_P	**P**	**06 18 33.2**	**-0.7**
	comp=Z,77nm,0.8s,mb5.7						
WRAB				_e_pP	pP	06 18 42.4	0.0
WRAB				LR	LR		
	comp=Z,230nm,22.0s,MS4.1						
SNY	**Shenyang**	**46.75**	**31**	⇓P	**P**	**06 18 39.5**	**+0.2**
SNY				S	**S**	**06 25 25.8**	**-0.8**
SNY				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SNY				LR	LR		
	comp=N,1µm,15.6s,MS5.2						
SNY				LR	LR		
	comp=E,1µm,13.2s,MS5.2						
SNY				LR	LR		
	comp=Z,1µm,17.6s,MS4.9						
FORT	**Forrest**	**47.07**	**139**	_e_P	**P**	**06 18 42.2**	**+0.2**
	comp=Z,335nm,0.7s						
ASPA	**Alice Springs**	**47.37**	**127**	_e_P	**P**	**06 18 44.1**	**-0.3**
ASPA				_i_	pP	06 18 52.9	0.0
ASAR	**Alice Springs**	**47.37**	**127**	P	**P**	**06 18 44.2**	**-0.2**
	comp=Z,12nm,0.6s,mb5.0,baz=302,slow=7.7,SNR=117						
ASAR				PcP	PcP	06 20 15.3	+0.1
	comp=Z,7.2nm,0.7s,baz=301,slow=3.6,SNR=8.9						
MOY	**Mondy**	**48.60**	**6**	_e_P	**P**	**06 18 52.3**	**-1.3**
MOY				pmax	pmax		
	comp=Z,34nm,4.1s						
TLY	**Talaya**	**48.94**	**8**	⇑_i_P	**P**	**06 18 56.2**	**0.0**
TLY				_e_PPP	PPP	06 21 43.2	-0.2
TLY				_e_S	**S**	**06 26 03.2**	**+5.9**
TLY				pmax	pmax		
	comp=Z,42nm,2.5s,mb5.0						
TLY				MLR	MLR		
	comp=Z,543nm,16.0s,MS4.6						
TLY	**Talaya**	**48.94**	**8**	⇑_i_P	**P**	**06 18 56.8**	**+0.6**
KURK	**Kurchatov**	**48.97**	**347**	_e_P	**P**	**06 18 56.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
KURK	**Kurchatov**	**48.97**	**347**	_e_P	**P**	**06 18 56.2**	**-0.3**
	comp=Z,17nm,0.8s,mb5.1						
CN2	**Changchun**	**49.13**	**30**	_e_P	**P**	**06 18 59.9**	**+2.1**
CN2				_e_XP	sP	06 19 10.0	+0.3
CN2				PCP	PcP	06 20 21.1	-0.2
CN2				_e_S	**S**	**06 26 02.9**	**+2.9**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
CN2				AMB	AMB		
	comp=Z,330nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,13.0s,MS5.3						
CN2				LR	LR		
	comp=E,2µm,13.0s,MS5.3						
CN2				LR	LR		
	comp=Z,2µm,13.0s,MS5.2						
IRK	**Irkutsk**	**49.58**	**8**	_e_P	**P**	**06 19 01.2**	**0.0**
IRK				_e_		06 20 57.7	
IRK				pmax	pmax		
	comp=Z,51nm,2.2s,mb5.2						
RAYN	**Ar Rayn**	**50.77**	**298**	P	**P**	**06 19 10.1**	**-0.5**
	comp=Z,118nm,0.9s,mb5.8,SNR=16						
HIA	**Hailar**	**50.88**	**22**	_e_P	**P**	**06 19 11.4**	**+0.2**
HIA				_e_*PP	pP	06 19 19.7	-0.1
HIA				pmax	pmax		
	comp=Z,36nm,0.7s						
HIA	**Hailar**	**50.88**	**22**	_e_P	**P**	**06 19 11.4**	**+0.2**
	comp=Z,36nm,0.7s,mb5.4						
HIA				_e_pP	pP	06 19 19.7	-0.1
ZAL	**Zalesovo**	**51.03**	**353**	_i_ P	**P**	**06 19 13.0**	**+0.8**
ZAL				pmax	pmax		
	comp=Z,19nm,0.7s						
ZAL	**Zalesovo**	**51.03**	**353**	P	**P**	**06 19 12.6**	**+0.4**
	comp=Z,19nm,0.7s,mb5.1,baz=301,slow=6.5,SNR=91						
ZAL				LR	LR	06 44 20.3	
	comp=Z,385nm,18.8s,MS4.5,baz=286,slow=40						
MDJ	**Mudanjiang**	**51.84**	**32**	P	**P**	**06 19 18.6**	**+0.2**
MDJ				AP	pP	06 19 24.6	-2.4
MDJ				XP	sP	06 19 27.6	-2.8
MDJ				PP	PP	06 21 18.9	+2.0
MDJ				SCP		06 24 22.1	
MDJ				PCS		06 24 24.8	
MDJ				AMB	AMB		
	comp=Z,24nm,1.5s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,348nm,7.1s						
MDJ				LR	LR		
	comp=N,2µm,11.8s,MS5.5						
MDJ				LR	LR		
	comp=E,946nm,10.8s,MS5.5						
MDJ				LR	LR		
	comp=Z,3µm,11.8s,MS5.5						
MDJ	**Mudanjiang**	**51.84**	**32**	_e_P	**P**	**06 19 19.0**	**+0.6**
	comp=Z,16nm,1.1s,mb4.9						
CBIJ	**Chichi jima**	**51.94**	**58**	LR	LR	06 39 19.6	
	comp=Z,516nm,18.4s,MS4.6,baz=230,slow=34						
NVS	**Novosibirsk**	**52.12**	**352**	_e_P	**P**	**06 19 18.7**	**-1.7**
NVS				_e_S	**S**	**06 26 42.3**	**+1.1**
NVS				pmax	pmax		
	comp=N,25nm,0.8s						
NVS				pmax	pmax		
	comp=E,16nm,0.8s						
NVS				pmax	pmax		

	comp=Z,59nm,0.8s,mb5.6						
NVS				smax			
	comp=N,26nm,1.8s						
NVS				smax			
	comp=E,56nm,1.8s						
JHJ	**Hachijo jima 2**	52.21	50	LR	LR	06 40 36.5	
	comp=E,505nm,19.3s,MS4.6,baz=26,slow=35						
MAT	**Matsushiro**	52.57	45	*e*P	P	06 19 24.0	-0.1
MAT				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.0						
MAT	**Matsushiro**	52.57	45	*e*P	P	06 19 24.0	-0.1
	comp=Z,7.5nm,0.8s,mb4.7						
MAT				*e*S	S	06 26 23.0	-25
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
MAT	**Matsushiro**	52.57	45	P	P	06 19 23.5	-0.6
MAT				*e*		06 26 45.6	
BVA0	**Borovoye Array**	53.22	343	*i* P	P	06 19 27.8	-0.9
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
BVAR	**Borovoye Array**	53.22	343	P	P	06 19 28.1	-0.6
	comp=Z,17nm,0.7s,mb5.1,baz=143,slow=7.4,SNR=74						
CHKZ	**Chkalovo**	53.72	343	*e*P	P	06 19 31.1	-1.2
CHKZ				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.5						
CHKZ	**Chkalovo**	53.72	343	*e*P	P	06 19 31.1	-1.2
	comp=Z,67nm,1.0s,mb5.5						
BHD	**Baghdad**	54.88	309	*e*P	P	06 19 36.5	-4.6
KLR	**Kul'dur**	56.03	29	*e*P	P	06 19 45.6	-3.6
KLR				*e*	pP	06 19 54.8	-3.0
KLR				*e*		06 21 56.0	
KLR				*e*S	S	06 27 39.5	+5.5
KLR				*e*		06 29 28.5	
KLR				pmax	pmax		
	comp=N,45nm,2.0s						
KLR				pmax	pmax		
	comp=E,85nm,2.0s						
KLR				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.5						
KLR				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.4						
CTA	**Charters Tower**	56.48	117	⇓*i*P	P	06 19 52.6	-0.2
	comp=Z,9.6nm,1.1s,mb4.7						
CTA				*e*	pP	06 20 01.1	-0.4
CTA	**Charters Tower**	56.48	117	⇓*i*P	P	06 19 52.6	-0.2
CTA				*e*	pP	06 20 01.1	-0.4
CTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CTA	**Charters Tower**	56.48	117	P	P	06 19 52.5	-0.4
	comp=Z,12nm,1.0s,mb4.9,baz=297,slow=10,SNR=7.4						
CTA				LR	LR	06 45 29.5	
	comp=Z,511nm,19.5s,MS4.6,baz=240,slow=38						
CTAO	**Charters Tower**	56.48	117	*e*P	P	06 19 52.2	-0.6
CTAO				*e**PP	pP	06 20 00.4	-1.1
CTAO				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,708nm,22.0s,MS4.7						
CTAO	**Charters Tower**	56.48	117	*e*P	P	06 19 52.2	-0.6
	comp=Z,21nm,1.1s,mb5.1						
CTAO				*e*pP	pP	06 20 00.4	-1.1
CTAO				LR	LR		
	comp=Z,708nm,22.0s,MS4.7						
KMBO	**Kilima Mbogo**	56.67	267	*e*P	P	06 19 54.9	+0.6
KMBO				*e**PP	pP	06 20 02.9	0.0
KMBO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KMBO				MLR	MLR		
	comp=Z,663nm,20.0s						
KMBO	**Kilima Mbogo**	56.67	267	P	P	06 19 55.2	+1.0
	comp=Z,3.4nm,0.9s,mb4.4,baz=66,slow=11,SNR=9.4						
KMBO				LR	LR	06 40 59.7	
	comp=Z,720nm,18.6s,MS4.8,baz=278,slow=33						
KMBO	**Kilima Mbogo**	56.67	267	*e*P	P	06 19 54.9	+0.6
	comp=Z,6.7nm,0.8s,mb4.7						
KMBO				*e*pP	pP	06 20 02.9	0.0
KMBO				LR	LR		
	comp=Z,663nm,20.0s,MS4.7						
BOD	**Bodaibo**	56.68	13	*e*P	P	06 19 53.1	-0.7
BOD				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
STKA	**Stephens Creek**	57.28	131	*e*P	P	06 19 57.3	-1.1
	comp=Z,13nm,0.6s,mb5.1						
STKA	**Stephens Creek**	57.28	131	P	P	06 19 58.0	-0.3
	comp=Z,16nm,0.6s,mb5.2,baz=311,slow=6.9,SNR=65						
GNI	**Garni**	57.44	317	*e*P	P	06 19 58.4	-1.0
GNI				pmax	pmax		
	comp=Z,24nm,1.0s						
GNI	**Garni**	57.44	317	P	P	06 19 59.1	-0.3
	comp=Z,7.2nm,0.7s,mb4.8,baz=351,slow=4.8,SNR=11						
GNI	**Garni**	57.44	317	*e*P	P	06 19 58.4	-1.0
	comp=Z,24nm,1.0s,mb5.2						
MTA	**Mtatsminda**	58.11	318	P	P	06 20 02.8	-1.2
TI2	**Plekhanov**	58.16	318	⇑*e*P	P	06 20 03.2	-1.2
TI2				*e*		06 29 43.0	
CLNS	**Chul'man**	58.86	19	*e*P	P	06 19 59.9	-9.1
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.8s						
CLNS				MLR	MLR		
	comp=N,1µm,13.0s						
CLNS				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.2						
ASAJ	**Asahikawa**	59.15	39	P	P	06 20 11.9	+0.7
	comp=Z,14nm,0.8s,mb5.0,baz=264,slow=8.4,SNR=5.0						
ZEI	**Tsey**	59.19	319	*e*P	P	06 20 10.8	-0.8
ZEI				*i* *PP	pP	06 20 21.2	+0.9
ZEI				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
ONI	**Oni**	59.40	319	P	P	06 20 12.4	-0.6
SVE	**Sverdlovsk**	59.54	340	⇑*i*P	P	06 20 11.9	-1.8
SVE				*e*	pP	06 20 21.0	-1.5
SVE				*e*S	S	06 28 17.0	-2.9
SVE				*e*SSS	SSS	06 34 42.0	-3.5
SVE				pmax	pmax		
	comp=Z,148nm,1.8s,mb5.7						
SVE				MLR	MLR		
	comp=N,1µm,15.0s,MS5.1						
SVE				MLR	MLR		
	comp=E,600nm,15.0s,MS5.1						
SVE				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.1						
ERZM	**Erzurum**	59.69	315	*i* P	P	06 20 15.4	+0.4
ASF	**Jabal al Asfar**	60.48	305	P	P	06 20 21.6	+1.1
	comp=Z,8.2nm,0.8s,mb4.8,baz=356,slow=2.5,SNR=10.0						
KIV	**Kislovodsk**	60.52	320	*e*P	P	06 20 19.4	-1.3
KIV				*e*		06 22 33.1	
KIV				*e*S	S	06 28 32.1	-0.6
KIV				*e*SS	SS	06 32 32.7	+0.5
KIV				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.2						
KIV				MLR	MLR		
	comp=N,88nm,18.0s,MS4.3						
KIV				MLR	MLR		
	comp=E,178nm,18.0s,MS4.3						
KIV				MLR	MLR		
	comp=Z,219nm,18.0s,MS4.3						
KIV	**Kislovodsk**	60.52	320	*e*P	P	06 20 19.0	-1.7
	comp=Z,27nm,1.1s,mb5.3						
KIV				LR	LR		
	comp=Z,59nm,18.3s,MS3.8						
YSS	**Yuzh-Sakhalins**	60.64	36	*e*P	P	06 20 20.4	-1.1
YSS				*e**PP	pP	06 20 30.8	+0.6
YSS				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.5						
YSS	**Yuzh-Sakhalins**	60.64	36	*e*P	P	06 20 20.4	-1.1
	comp=Z,36nm,0.9s,mb5.5						
YSS				*e*pP	pP	06 20 30.8	+0.5
GOF	**Gofitskoye**	60.80	321	*e*P	P	06 20 22.8	+0.2
GOF				pmax	pmax		
	comp=Z,100nm,2.5s,mb5.5						
ELZG	**Elazig**	60.87	313	*i* P	P	06 20 23.6	+0.5
MALT	**Malatya**	61.21	312	⇓P	P	06 20 26.1	+0.7
EIL	**Elat**	61.46	302	P	P	06 20 28.0	+0.8
	comp=Z,13nm,0.9s,mb5.0,baz=51,slow=5.1,SNR=8.0						
EIL	**Elat**	61.46	302	*e*P	P	06 20 27.8	+0.5
	comp=Z,13nm,0.8s,mb5.1						
GZT	**Gaziantep**	61.53	311	*i* P	P	06 20 28.2	+0.6
KAHT	**Ahir Dag**	62.14	311	*i* P	P	06 20 32.0	+0.3
SOC	**Sochi**	62.30	318	*e*P	P	06 20 29.4	-3.3
SOC				*e*		06 21 14.5	
SOC				*e*		06 22 46.2	
SOC				*e*S	S	06 28 52.9	-2.4
SOC				*e*		06 30 18.6	
SOC				pmax	pmax		
	comp=Z,83nm,1.3s,mb5.7						
SOC				pmax	pmax		
	comp=N,73nm,1.4s						
SOC				pmax	pmax		
	comp=E,73nm,1.0s						
SOC				MLR	MLR		
	comp=Z,307nm,19.0s,MS4.5						
SOC				MLR	MLR		
	comp=N,138nm,16.0s,MS4.3						
SOC				MLR	MLR		
	comp=E,106nm,17.0s,MS4.3						
SOKR	**Solikamsk**	62.95	340	*d* *i*P	P	06 20 35.0	-1.7
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
AVNT	**Avonos**	64.01	312	*i* P	P	06 20 43.0	-1.0
ARMA	**Armidale**	64.51	126	*e*P	P	06 20 48.8	+1.3
BOYT	**Boyabat**	64.81	315	*i* P	P	06 20 48.2	-1.1
BRTR	**Keskin Array B**	65.20	313	P	P	06 20 51.0	-0.8
	comp=Z,7.0nm,0.9s,mb4.7,baz=129,slow=7.0,SNR=39						
ELDT	**Eldivan**	65.58	313	*i* P	P	06 20 52.8	-1.4
SIM	**Simferopol'**	66.54	318	*e*P	P	06 21 00.0	-0.3
SIM				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.4						
ESKT	**Eskisehir**	67.20	312	*i* P	P	06 21 03.0	-1.6
LSZ	**Lusaka**	67.46	252	*e*P	P	06 21 06.0	-0.5
LSZ				*e**PP	pP	06 21 14.5	-0.8
LSZ				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
LSZ				MLR	MLR		
	comp=Z,798nm,20.0s,MS4.9						
LSZ	**Lusaka**	67.46	252	*e*P	P	06 21 06.0	-0.5
	comp=Z,8.0nm,0.7s,mb4.9						
LSZ				*e*pP	pP	06 21 14.5	-0.8
LSZ				LR	LR		
	comp=Z,798nm,20.0s,MS4.9						
HENT	**Hendek**	67.52	313	*i* P	P	06 21 05.6	-1.0
ULDT	**Uludag**	68.64	312	*i* P	P	06 21 13.1	-0.4
MOS	**Moscow**	68.82	330	*e*P	P	06 21 05.7	-8.7
MOS				*e*		06 21 31.7	
MOS				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.4						
OBN	**Obninsk**	69.08	329	⇑*i*P	P	06 21 14.5	-1.5
OBN				*e*		06 21 36.9	
OBN				*e*S	S	06 30 20.8	+2.9
OBN				*e*SS	SS	06 34 44.5	-1.3
OBN				pmax	pmax		
	comp=Z,53nm,1.6s,mb5.2						
OBN	**Obninsk**	69.08	329	⇑*i*P	P	06 21 14.5	-1.5
OBN				LR	LR		
	comp=Z,300nm,15.0s,MS4.7						
KDAG	**Bornova**	69.65	310	*i* P	P	06 21 14.6	-5.2
TIRR	**Tirgusor**	70.27	316	P	P	06 21 23.1	-0.3
TIRR	**Tirgusor**	70.27	316	⇑P	P	06 21 22.8	-0.6
CFR	**Carcaliu**	70.65	317	P	P	06 21 25.4	-0.3
CFR	**Carcaliu**	70.65	317	⇓P	P	06 21 25.5	-0.2
HARR	**Harsova**	70.66	316	P	P	06 21 25.9	+0.1
KIS	**Kishinev**	70.69	319	*e*P	P	06 21 23.0	-3.0
KIS				*e*	pP	06 21 32.0	-2.7
IDI	**Anoyia**	70.92	306	P	P	06 21 27.8	+0.2
	comp=Z,14nm,0.7s,mb5.0,baz=99,slow=7.8,SNR=6.8						
MA2	**Magadan**	70.99	27	*de*P	P	06 21 27.4	-0.2
MA2				*e*		06 21 52.4	
MA2				*e*S	S	06 30 40.2	-0.1
MA2				*e*		06 31 11.1	
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MA2				pmax	pmax		
	comp=E,8.0nm,1.2s						
MA2				MLR	MLR		
	comp=Z,2µm,22.5s,MS5.2						
MA2	**Magadan**	70.99	27	*e*P	P	06 21 27.8	+0.2
	comp=Z,12nm,0.8s,mb4.9						
AKASG	**Malin Array Be**	71.54	323	P	P	06 21 29.4	-1.6
	comp=Z,5.5nm,0.7s,mb4.6,baz=90,slow=4.7,SNR=44						
LBTB	**Lobatse**	71.77	242	*e*P	P	06 21 33.1	+0.3
LBTB				*e**PP	pP	06 21 41.3	-0.3
LBTB				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
LBTB	**Lobatse**	71.77	242	*e*P	P	06 21 33.0	+0.2
	comp=Z,18nm,0.7s,mb5.1						
LBTB				*e*pP	pP	06 21 41.3	-0.3
VRI	**Vrincioaia**	71.78	317	P	P	06 21 32.6	+0.1
VRI	**Vrincioaia**	71.78	317	⇑P	P	06 21 32.5	0.0
TIXI	**Tiksi**	71.78	11	⇑*i*P	P	06 21 31.1	-1.0
MLR	**Muntele Rosu**	72.22	317	P	P	06 21 35.6	+0.5
	comp=Z,21nm,0.9s,mb5.1,baz=110,slow=1.8,SNR=39						
MLR	**Muntele Rosu**	72.22	317	P	P	06 21 35.2	0.0
MLR	**Muntele Rosu**	72.22	317	⇓P	P	06 21 35.8	+0.6
PET	**Petropavlovsk**	72.47	35	*e*P	P	06 21 36.8	+0.3
PET				*e*		06 21 52.0	
PET				*e*		06 26 06.3	
PET				pmax	pmax		
	comp=Z,100nm,8.5s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.8						
SNX	**Sinaia**	72.48	317	P	P	06 21 56.1	+19
MTUR	**Matau**	72.77	316	P	P	06 21 38.7	+0.3
BOSA	**Boshof**	72.88	239	*e*P	P	06 21 39.0	-0.4
BOSA				*e**PP	pP	06 21 47.5	-0.7
BOSA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
BOSA	**Boshof**	72.88	239	*e*P	P	06 21 39.0	-0.4
	comp=Z,13nm,1.0s,mb4.8						
BOSA				*e*pP	pP	06 21 47.5	-0.8
BURAR	**Bucovina Array**	73.22	319	P	P	06 21 41.9	+0.8
BURAR	**Bucovina Array**	73.22	319	⇓P	P	06 21 41.9	+0.9
SEY	**Seymchan**	73.24	24	*e*P	P	06 21 43.0	+2.2
SEY						06 22 01.0	
SEY				*e*S	S	06 31 11.0	+5.2
SEY						06 31 47.0	
SEY				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
SEY				pmax	pmax		
	comp=E,30nm,1.5s						
SEY				smax			
	comp=N,180nm,14.4s						
SEY				smax			
	comp=E,170nm,16.5s						
SEY				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
SEY				MLR	MLR		
	comp=N,2µm,25.0s						
SEY				MLR	MLR		
	comp=E,670nm,17.0s						
VTS	**Vitosha**	73.53	313	⇑P	P	06 21 42.9	0.0
MAW	**Mawson**	73.99	192	LR	LR	06 47 03.1	
	comp=E,334nm,18.9s,MS4.7,baz=172,slow=30						
LVV	**L'vov**	74.51	321	*e*P	P	06 21 46.8	-1.6
JOF	**Joensuu**	74.83	335	*e*p	P	06 21 47.7	-2.3
BZS	**Buzias**	75.22	316	⇑P	P	06 21 52.4	-0.2
KWP	**Kalwaria**	75.30	321	*e*P	P	06 21 52.7	-0.3
KWP				*e**PP	pP	06 22 01.3	-0.6
KWP				pmax	pmax		
	comp=Z,117nm,1.8s,mb5.5						
KWP	**Kalwaria**	75.30	321	*e*P	P	06 21 52.7	-0.3
	comp=Z,117nm,1.8s,mb5.5						
KWP				*e*pP	pP	06 22 01.3	-0.5
KOLS	**Kolonicke sedl**	75.43	320	*i* P	P	06 21 54.2	+0.4
KOLS				*e*	pP	06 22 02.0	-0.6
LVZ	**Lovozero**	75.73	340	*e*P	P	06 21 48.1	-7.0
CRVS	**Cervenica-Dubn**	75.95	320	*e*P	P	06 21 58.0	+1.3
SUW	**Suwalki**	76.02	325	*e*P	P	06 21 56.4	-0.6
SUW				*e**PP	pP	06 22 04.4	-1.4
SUW				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.5						
SUW	**Suwalki**	76.02	325	*e*P	P	06 21 56.4	-0.6
	comp=Z,51nm,0.9s,mb5.5						
SUW				*e*pP	pP	06 22 04.4	-1.5
KECS	**Kecovo**	76.51	319	*e*P	P	06 21 59.3	-0.5
FINES	**FINESS Array B**	76.60	333	P	P	06 21 59.5	-0.5
	comp=Z,9.7nm,0.8s,mb4.8,baz=108,slow=6.0,SNR=32						
FINES				LR	LR	06 59 23.4	
	comp=Z,193nm,19.7s,MS4.4,baz=116,slow=39						
FINES	**FINESS Array B**	76.60	333	P	P	06 21 59.5	-0.5
FINES				LR	LR	06 59 23.4	
KAF	**Kangasniemi**	76.70	333	*e*p	P	06 21 59.4	-1.3
	comp=Z,16nm,0.9s,mb4.9,baz=106,slow=5.2						
KAF	**Kangasniemi**	76.70	333	*e*P	P	06 21 59.4	-1.3
KAF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
NIE	**Niedzica**	76.79	320	*e*P	P	06 22 00.5	-0.9
PSZ	**Piszkesteto**	76.80	318	*e*P	P	06 22 01.6	+0.1
PSZ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
PSZ	**Piszkesteto**	76.80	318	*e*P	P	06 22 01.6	+0.2
	comp=Z,11nm,0.9s,mb4.8						
PSZ	**Piszkesteto**	76.80	318	⇓*e*P	P	06 22 01.8	+0.3
OJC	**Ojcow**	77.26	321	*e*P	P	06 22 03.8	-0.2
PKSM	**Moragy**	77.37	317	⇑P	P	06 22 04.2	-0.5
VYHS	**Vyhne**	77.59	319	*i* P	P	06 22 05.9	+0.1
SRO	**Srobarova**	77.83	318	*e*P	P	06 22 07.9	+0.8
TSUM	**Tsumeb**	78.08	250	P	P	06 22 09.7	+0.6
	comp=Z,7.5nm,1.2s,mb4.5						
OKC	**Ostrava-Krasne**	78.25	320	*e*P	P	06 22 09.8	+0.4
OKC				*e*pP	pP	06 22 18.9	+0.6
OKC				AMS	AMS	07 05 50.0	
	comp=Z,200nm,17.5s						
MORC	**Moravsky Berou**	78.62	320	⇑P	P	06 22 11.4	-0.1
MORC				pmax	pmax		
	comp=Z,2.0nm,1.8s						
MORC	**Moravsky Berou**	78.62	320	⇑P	P	06 22 11.4	-0.1
	comp=Z,1.8nm,1.8s						
ZST	**Bratislava**	78.69	318	*e*P	P	06 22 12.4	+0.5
ZST				*e*pP	pP	06 22 20.2	-0.6
ARCES	**ARCESS Array B**	79.45	341	P	P	06 22 16.0	+0.4
	comp=Z,8.7nm,0.8s,mb4.8,baz=127,slow=6.1,SNR=22						
ARCES				LR	LR	07 00 10.7	
	comp=Z,241nm,19.0s,MS4.6,baz=242,slow=38						
DPC	**Dobruska-Polom**	79.48	321	*e*P	P	06 22 17.1	+1.0
DPC				*e*pP	pP	06 22 25.6	+0.5
DPC				*e*SKS	SKS	06 32 26.6	-7.1
DPC				AMS	AMS	07 06 20.0	
	comp=Z,200nm,15.6s						
KSP	**Ksiaz**	79.57	321	⇑*e*P	P	06 22 16.7	+0.1
KSP				*e**PP	pP	06 22 26.0	+0.5
ARSA	**Arzberg**	79.63	317	⇑*i*P	P	06 22 17.2	+0.2
	comp=Z,259nm,2.5s,mb5.7						
UPC	**Upice**	79.70	321	*e*P	P	06 22 17.9	+0.6
UPC				*e*pP	pP	06 22 26.5	+0.3
PERS	**Pernice**	79.84	317	*e*P	P	06 22 18.7	+0.5
LJU	**Ljubljana**	80.19	316	*e*P	P	06 22 20.4	+0.4
BILL	**Bilibino**	80.47	21	⇓*i*P	P	06 22 20.8	-0.3
BILL				*e*		06 22 27.2	
BILL				*e*S	S	06 32 25.7	+1.5
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
BILL	**Bilibino**	80.47	21	*e*P	P	06 22 21.4	+0.3
	comp=Z,8.8nm,0.9s,mb4.7						
MOA	**Molln**	80.54	318	⇑*i*P	P	06 22 21.8	0.0
	comp=Z,145nm,3.0s						
PRU	**Pruhonice**	80.58	320	*e*P	P	06 22 22.7	+0.7
PRU				*e*pP	pP	06 22 31.5	+0.6
PRU				*e*S	S	06 32 30.2	+4.6
PRU				AMS	AMS	07 07 10.0	
	comp=Z,300nm,14.6s						
PVCC	**Panska Ves**	80.62	321	*e*P	P	06 22 23.0	+0.8
SYO	**Syowa Base**	80.93	197	⇓P	P	06 22 24.2	+0.7
SYO	**Syowa Base**	80.93	197	⇑PcP	PcP	06 22 32.6	+2.2
BSD	**Bornholm Skovb**	80.95	325	*e*P	P	06 22 23.8	-0.1
BSD				MLR	MLR		
	comp=Z,180nm,16.0s,MS4.5						
BSD	**Bornholm Skovb**	80.95	325	*i* P	P	06 22 23.8	-0.1
BSD				*i*		06 22 57.0	
	comp=Z,170nm,16.0s						
GEC2	**GERESS Array S**	81.01	319	*e*P	P	06 22 24.5	+0.2
GEC2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
GEC2	**GERESS Array S**	81.01	319	*e*P	P	06 22 24.5	+0.2
	comp=Z,40nm,1.0s,mb5.3						
GERES	**GERESS Array B**	81.01	319	P	P	06 22 25.3	+1.0
	comp=Z,18nm,0.8s,mb5.1,baz=104,slow=5.5,SNR=99						
PTCC	**Patocco-Chiusa**	81.03	316	*e*P	P	06 22 24.9	+0.4
BRG	**Berggiesshubel**	81.05	321	*i* P	P	06 22 25.4	+0.9
BRG				*e*S	S	06 32 41.0	+10
BRG				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
BRG				MLR	MLR		
	comp=Z,400nm,15.8s,MS4.9						
BRG	**Berggiesshubel**	81.05	321	*i* P	P	06 22 25.4	+0.9
	comp=Z,19nm,1.0s,mb5.0						
BRG				*e*S	S	06 32 41.0	+10
BRG				*e*SS	SS	06 38 03.0	+14
BRG				LR	LR		
	comp=Z,400nm,15.8s,MS4.9						
KBA	**Koelnbreinsper**	81.09	317	⇑*i*P	P	06 22 25.0	+0.2
	comp=Z,33nm,1.9s,mb4.9						
KBA	**Koelnbreinsper**	81.09	317	⇑*i*P	P	06 22 25.0	+0.2
KBA				pmax	pmax		
	comp=Z,33nm,1.9s,mb4.9						
KHC	**Kasperske Hory**	81.12	319	*e*P	P	06 22 25.4	+0.6
KHC				*e*pP	pP	06 22 33.2	-0.6
KHC				*e*S	S	06 32 32.1	+0.9
KHC				AMS	AMS	07 06 50.0	
	comp=Z,300nm,13.9s						
WET	**Wettzell**	81.58	319	*e*P	P	06 22 27.4	+0.2
WET				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
WET	**Wettzell**	81.58	319	*e*P	P	06 22 27.4	+0.2
	comp=Z,40nm,1.5s,mb5.1						
CLL	**Collm**	81.68	321	*i* P	P	06 22 27.6	-0.1
CLL				*i*	pP	06 22 36.8	+0.1
CLL				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.8						
CLL	**Collm**	81.68	321	*i* P	P	06 22 27.6	-0.1
	comp=Z,21nm,1.5s,mb4.8						
CLL				*i*	pP	06 22 36.8	+0.1
CLL				*e*S	S	06 32 48.0	+11
CLL	**Collm**	81.68	321	P	P	06 22 27.6	-0.1
	comp=Z,logA/T=1.1,mb4.8						
CLL				*i* *PP	pP	06 22 36.8	+0.1
CLL				*e**SP	sP	06 22 40.0	+0.3
CLL				*e*		06 25 17.0	
CLL				*e*PP	PP	06 25 36.0	-0.8
CLL				*e*		06 25 54.0	
CLL				*e*S	S	06 32 48.0	+11
CLL				*e*PPS	PPS	06 34 00.0	+10
SFI	**Santa Sofia**	81.92	314	*e*P	P	06 22 30.0	+0.9
NKC	**Novy Kostel**	81.94	320	*e*P	P	06 22 29.9	+0.8
NKC				*e*pP	pP	06 22 39.0	+0.9
PGD	**Poggio Sodo**	82.01	314	*e*P	P	06 22 31.3	+1.7
VMG	**Vicchio**	82.14	314	*e*P	P	06 22 32.4	+2.1
CTI	**Castel Tesino**	82.19	316	*e*P	P	06 22 31.5	+1.0
WTTA	**Wattenberg**	82.27	317	⇓*i*P	P	06 22 30.2	-0.7
	comp=Z,194nm,2.5s,mb5.6						
WTTA	**Wattenberg**	82.27	317	⇓*i*P	P	06 22 30.2	-0.7
WTTA				pmax	pmax		
	comp=Z,194nm,2.5s,mb5.6						
WATA	**Walderalm**	82.31	317	⇑*i*P	P	06 22 31.3	+0.2
	comp=Z,13nm,0.9s,mb4.8						
WATA	**Walderalm**	82.31	317	⇑*i*P	P	06 22 31.3	+0.2
WATA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
COP	**Copenhagen**	82.42	326	*e*P	P	06 22 44.0	+13
COP				MLR	MLR		
	comp=Z,78nm,16.0s,MS4.2						
COP	**Copenhagen**	82.42	326	*i* P	P	06 22 44.0	+13
COP				*e*		06 23 59.2	
COP				*e*S	S	06 32 56.6	+12
	comp=Z,70nm,16.0s						
MOX	**Moxa**	82.50	320	*e*P	P	06 22 32.8	+0.8
MOX				pmax	pmax		
	comp=Z,58nm,2.0s,mb5.3						
MOX	**Moxa**	82.50	320	*e*P	P	06 22 32.8	+0.8
	comp=Z,58nm,2.0s,mb5.3						
MOX	**Moxa**	82.50	320	*i* P	P	06 22 32.8	+0.8
	comp=Z,logA/T=1.5,mb5.3						
MOX				L		07 10 07.0	
SQTA	**Sankt Quirin**	82.56	317	⇓*i*P	P	06 22 32.8	+0.4
	comp=Z,17nm,0.9s,mb5.1						
SQTA	**Sankt Quirin**	82.56	317	⇓*i*P	P	06 22 32.8	+0.4
SQTA				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
MOTA	**Moosalm**	82.64	317	⇑*i*P	P	06 22 33.1	+0.3
	comp=Z,9.8nm,1.0s,mb4.8						
MOTA	**Moosalm**	82.64	317	⇑*i*P	P	06 22 33.1	+0.3
MOTA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
GRA1	**Grafenberg Arr**	82.69	320	*e*P	P	06 22 33.5	+0.5
	comp=Z,41nm,1.2s,mb5.3						
GRA1				*e*pP	pP	06 22 43.3	+1.3
GRA1				*e*sP	sP	06 22 47.7	+2.8
GRF	**Grafenberg Arr**	82.69	320	*e*P	P	06 22 33.5	+0.5

GRF				e*PP	pP	06 22 43.3	+1.3
GRF				e*SP	sP	06 22 47.7	+2.8
GRF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.3						
GRF	**Grafenberg Arr**	**82.69**	**320**	eP	**P**	**06 22 33.5**	**+0.5**
GRF				e*PP	pP	06 22 43.3	+1.3
GRF				e*SP	sP	06 22 47.7	+2.8
GRF				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.3						
GRF	**Grafenberg Arr**	**82.69**	**320**	eP	**P**	**06 22 33.5**	**+0.5**
	comp=Z,41nm,1.2s,mb5.3						
GRF				epP	pP	06 22 43.3	+1.3
GRF				esP	sP	06 22 47.7	+2.8
RPZ	**Rata Peaks**	**83.09**	**135**	P	**P**	**06 22 36.0**	**+0.8**
	comp=Z,16nm,0.8s,mb5.1,baz=103,slow=1.3,SNR=7.5						
BRMO	**Bormio**	**83.09**	**316**	eP	**P**	**06 22 36.2**	**+1.0**
CLZ	**Clausthal**	**83.36**	**322**	eP	**P**	**06 22 36.4**	**0.0**
	comp=Z,20nm,1.1s,mb5.1						
DAVA	**Damuels**	**83.46**	**317**	⇑iP	**P**	**06 22 37.1**	**+0.1**
	comp=Z,215nm,2.7s,mb5.7						
NB2	**NORSAR Subarra**	**83.54**	**331**	P	**P**	**06 22 36.2**	**-0.9**
	comp=Z,13nm,1.0s,mb5.0,baz=98,slow=5.3						
NB2	**NORSAR Subarra**	**83.54**	**331**	P	**P**	**06 22 36.2**	**-0.9**
NB2				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
NOA	**NORSAR Array B**	**83.54**	**331**	P	**P**	**06 22 37.1**	**0.0**
	comp=Z,6.5nm,0.9s,mb4.8,baz=95,slow=5.5,SNR=17						
PGF	**Pioggiola**	**83.95**	**312**	eP	**P**	**06 22 39.8**	**+0.1**
	comp=Z,88nm,1.2s,mb5.5						
PGF	**Pioggiola**	**83.95**	**312**	eP	**P**	**06 22 39.8**	**+0.1**
PGF				pmax	pmax		
	comp=Z,44nm,1.2s,mb5.5						
MUD	**Monsted U’grnd**	**84.30**	**326**	eP	pP	06 22 51.3	+1.2
MUD				MLR	MLR		
	comp=Z,140nm,15.0s,MS4.5						
MUD	**Monsted U’grnd**	**84.30**	**326**	i P	pP	06 22 51.3	+1.2
MUD	**Monsted U’grnd**	**84.30**	**326**	eS	S	06 33 26.4	+23
	comp=Z,140nm,15.0s						
TNS	**Taunus Mts**	**84.51**	**320**	eP	**P**	**06 22 42.3**	**0.0**
TNS				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
TNS	**Taunus Mts**	**84.51**	**320**	eP	**P**	**06 22 42.3**	**0.0**
	comp=Z,15nm,0.9s,mb5.1						
BFO	**Black Forest**	**84.54**	**318**	eP	**P**	**06 22 41.9**	**-0.6**
BFO				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.1						
BFO	**Black Forest**	**84.54**	**318**	eP	**P**	**06 22 41.9**	**-0.6**
	comp=Z,19nm,1.3s,mb5.1						
SBF	**Sospel**	**85.11**	**314**	eP	**P**	**06 22 45.4**	**0.0**
	comp=Z,53nm,0.8s,mb5.4						
SBF	**Sospel**	**85.11**	**314**	eP	**P**	**06 22 45.4**	**0.0**
SBF				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.4						
CDF	**Champ du Feu**	**85.24**	**318**	eP	**P**	**06 22 45.6**	**-0.4**
HINF	**Hinteralfeld**	**85.52**	**318**	eP	**P**	**06 22 46.6**	**-0.8**
MBDF	**Montbardon**	**85.58**	**314**	eP	**P**	**06 22 47.9**	**+0.1**
	comp=Z,14nm,0.8s,mb5.0						
MBDF	**Montbardon**	**85.58**	**314**	eP	**P**	**06 22 47.9**	**+0.1**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
LPG	**La Plagne**	**85.60**	**315**	eP	**P**	**06 22 48.1**	**+0.3**
	comp=Z,37nm,0.8s,mb5.3						
LPG	**La Plagne**	**85.60**	**315**	eP	**P**	**06 22 48.1**	**+0.3**
LPG				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.4						
LPL	**La Plagne**	**85.61**	**315**	eP	**P**	**06 22 48.1**	**+0.2**
	comp=Z,36nm,0.9s,mb5.3						
LPL	**La Plagne**	**85.61**	**315**	eP	**P**	**06 22 48.1**	**+0.2**
LPL				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.3						
FRF	**La Foret Royal**	**85.68**	**313**	eP	**P**	**06 22 48.4**	**+0.1**
	comp=Z,43nm,1.0s,mb5.3						
FRF	**La Foret Royal**	**85.68**	**313**	eP	**P**	**06 22 48.4**	**+0.1**
FRF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.3						
HAU	**Haudompre**	**85.86**	**318**	eP	**P**	**06 22 48.7**	**-0.4**
	comp=Z,24nm,0.8s,mb5.2						
HAU				eR			
	comp=Z,164nm,17.0s						
HAU	**Haudompre**	**85.86**	**318**	eP	**P**	**06 22 48.7**	**-0.4**
HAU				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.2						
HAU				MLR	MLR		
	comp=Z,160nm,17.0s,MS4.5						
CABF	**La Chapelle**	**86.05**	**316**	eP	**P**	**06 22 50.3**	**+0.2**
	comp=Z,32nm,1.0s,mb5.2						
CABF	**La Chapelle**	**86.05**	**316**	eP	**P**	**06 22 50.3**	**+0.2**
CABF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.2						
ORIF	**Oris-en-Rattie**	**86.22**	**315**	eP	**P**	**06 22 50.7**	**-0.2**
ORIF				eR			
	comp=Z,183nm,21.5s						
SMRF	**Simiane la Rot**	**86.45**	**314**	eP	**P**	**06 22 51.9**	**-0.2**
MEZF	**Maizieres J’vi**	**86.72**	**318**	eP	**P**	**06 22 53.2**	**-0.1**
URZ	**Urewera**	**86.78**	**128**	P	**P**	**06 22 53.6**	**-0.3**
	comp=Z,14nm,0.6s,mb5.3,baz=58,slow=5.7,SNR=5.8						
VIVF	**Saint-Julien-l**	**87.08**	**315**	eP	**P**	**06 22 55.1**	**0.0**
	comp=Z,13nm,0.9s,mb4.9						
VIVF	**Saint-Julien-l**	**87.08**	**315**	eP	**P**	**06 22 55.1**	**0.0**
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
BAIF	**Baives**	**87.23**	**320**	eP	**P**	**06 22 55.9**	**+0.2**
SMF	**Signal de Mont**	**87.60**	**316**	eP	**P**	**06 22 57.3**	**-0.3**
	comp=Z,26nm,1.0s,mb5.1						
SMF	**Signal de Mont**	**87.60**	**316**	eP	**P**	**06 22 57.3**	**-0.3**
SMF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.1						
LASF	**Ste Croix**	**87.69**	**314**	eP	**P**	**06 22 58.4**	**+0.3**
	comp=Z,62nm,1.4s,mb5.3						
SSF	**Saint Saulge**	**87.81**	**317**	eP	**P**	**06 22 58.5**	**-0.1**
AVF	**Avril sur Loir**	**87.93**	**317**	eP	**P**	**06 22 58.9**	**-0.2**
	comp=Z,37nm,1.3s,mb5.2						
AVF	**Avril sur Loir**	**87.93**	**317**	eP	**P**	**06 22 58.9**	**-0.2**
AVF				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.2						
BGF	**Bois d’Agland**	**88.29**	**316**	eP	**P**	**06 23 01.1**	**+0.2**
	comp=Z,34nm,1.1s,mb5.2						
BGF	**Bois d’Agland**	**88.29**	**316**	eP	**P**	**06 23 01.1**	**+0.2**
BGF				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.2						
VNDA	**Vanda**	**88.53**	**168**	LR	LR	06 55 35.0	
	comp=Z,385nm,19.4s,MS4.8,baz=314,slow=31						
TCF	**Toulx Ste Croi**	**88.74**	**316**	eP	**P**	**06 23 03.2**	**+0.1**
MTLF	**Montolieu**	**88.91**	**313**	eP	**P**	**06 23 04.2**	**+0.2**
	comp=Z,28nm,1.0s,mb5.2						
MTLF	**Montolieu**	**88.91**	**313**	eP	**P**	**06 23 04.2**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
LDF	**La Druitiere**	**90.15**	**319**	eP	**P**	**06 23 08.9**	**-0.7**
FLN	**La Foliniere**	**90.37**	**319**	eP	**P**	**06 23 09.9**	**-0.7**
FLN				eR			
	comp=Z,145nm,22.2s						
GRR	**Gorron**	**90.66**	**318**	eP	**P**	**06 23 12.2**	**+0.2**
	comp=Z,47nm,1.2s,mb5.4						
GRR	**Gorron**	**90.66**	**318**	eP	**P**	**06 23 12.2**	**+0.2**
GRR				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.4						
ETSF	**Etsaut**	**90.97**	**313**	eP	**P**	**06 23 14.4**	**+0.9**
	comp=Z,36nm,1.1s,mb5.3						
ETSF	**Etsaut**	**90.97**	**313**	eP	**P**	**06 23 14.4**	**+0.9**
ETSF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
SJPF	**Ste Jean**	**91.44**	**313**	eP	**P**	**06 23 16.7**	**+1.0**
	comp=Z,47nm,1.2s,mb5.4						
SJPF	**Ste Jean**	**91.44**	**313**	eP	**P**	**06 23 16.7**	**+1.0**
SJPF				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.4						
ESDC	**Sonseca Array**	**93.88**	**310**	P	**P**	**06 23 28.1**	**+1.1**
	comp=Z,2.0nm,0.7s,mb4.7,baz=46,slow=5.0,SNR=6.9						
IMA	**Indian Mountai**	**95.99**	**22**	eP	**P**	**06 23 37.0**	**+0.9**
IMA				pmax	pmax		
	comp=Z,165nm,1.8s,mb6.2						
IMA	**Indian Mountai**	**95.99**	**22**	eP	**P**	**06 23 37.0**	**+1.0**
	comp=Z,166nm,1.8s,mb6.2						
DBIC	**Dimbokro**	**98.18**	**277**	LR	LR	07 06 19.5	
	comp=Z,272nm,19.6s,MS4.8,baz=71,slow=34						
ILAR	**Eielson Array**	**99.11**	**22**	P	**P**	**06 23 49.5**	**-0.6**
	comp=Z,0.5nm,0.7s,mb4.1,baz=295,slow=4.9,SNR=5.7						
ILAR				PP	PP	06 27 51.4	-3.6
	comp=Z,1.2nm,1.0s,baz=281,slow=7.3,SNR=7.9						
ILAR				LR	LR	07 11 38.2	
	comp=Z,269nm,18.6s,MS4.8,baz=133,slow=37						
RES	**Resolute Bay**	**101.98**	**2**	ePdif	P	06 24 04.0	+1.0
	comp=Z,4.6nm,0.8s						
RES				epP		06 24 12.4	
YKA	**Yellowknife Ar**	**110.95**	**14**	PP	PP	06 29 15.2	-8.5
	comp=Z,0.3nm,0.7s,baz=331,slow=8.2,SNR=5.1						
SCHQ	**Schefferville**	**119.91**	**347**	PKP	PKPdf	06 28 60.0	-3.4
	comp=Z,0.9nm,0.7s,baz=265,slow=15,SNR=4.7						
MSO	**Missoula**	**124.44**	**23**	ePKPdf	PKPdf	06 29 08.8	-3.5
MSO				epPKPdf		06 29 16.2	
ULM	**Lac du Bonnet**	**126.04**	**8**	PKP	PKPdf	06 29 11.5	-3.8
	comp=Z,2.7nm,0.6s,baz=255,slow=1.1,SNR=8.0						
LAO	**LASA Array**	**127.21**	**17**	ePKPdf	PKPdf	06 29 15.4	-2.3
LAO				epPKPdf		06 29 24.2	
SNOW	**Snow King Moun**	**128.50**	**23**	ePKPdf	PKPdf	06 29 18.8	-1.5
NVAR	**Mina Array Bea**	**129.00**	**32**	PKP	PKPdf	06 29 19.2	-2.2
	comp=Z,1.3nm,0.7s,baz=314,slow=1.9,SNR=6.4						
NVAR	**Mina Array Bea**	**129.00**	**32**	PKP	PKPdf	06 29 19.2	-2.2
PDAR	**Pinedale Array**	**129.54**	**22**	PKP	PKPdf	06 29 19.8	-2.6
	comp=Z,1.5nm,0.9s,baz=45,slow=2.1,SNR=12						
MSU	**Marysvale**	**132.00**	**28**	ePKPdf	PKPdf	06 29 26.4	-0.7
NEN	**Nelson**	**132.91**	**32**	PKPdf	PKPdf	06 29 25.7	-3.2
NEN				epPKPdf		06 29 35.4	
PV10	**Paradox Valley**	**133.49**	**25**	ePKPdf	PKPdf	06 29 28.0	-1.9
WMOK	**Wichita Mounta**	**140.39**	**16**	ePKPpre		06 29 31.4	
BDFB	**Brasilia**	**140.44**	**249**	PKP	PKPdf	06 29 39.5	-3.6
	comp=Z,2.0nm,0.7s,baz=211,slow=1.1,SNR=3.9						
MIAR	**Mount Ida**	**141.75**	**10**	ePKPpre		06 29 37.3	
TXAR	**Lajitas Array**	**143.52**	**26**	PKP	PKPdf	06 29 43.0	-5.2
	comp=Z,2.2nm,0.7s,baz=185,slow=1.3,SNR=28						
JCT	**Junction City**	**144.01**	**20**	ePKPdf	PKPdf	06 29 44.1	-5.0
NATX	**Nacogdoches**	**144.25**	**12**	ePKPdf	PKPdf	06 29 45.3	-4.1
HKT	**Hockley**	**145.71**	**15**	ePKPdf	PKPdf	06 29 48.8	-3.3
LPAZ	**La Paz**	**158.01**	**233**	PKP	PKPdf	06 30 08.7	-1.8
	comp=Z,1.5nm,0.8s,baz=281,slow=5.2,SNR=3.4						
LPAZ				PKPab	PKPab	06 30 42.5	+1.2
	comp=Z,3.0nm,0.6s,baz=150,slow=5.5,SNR=7.6						
LPAZ	**La Paz**	**158.01**	**233**	ePKPdf	PKPdf	06 30 08.7	-1.8
SDV	**Santo Domingo**	**160.31**	**308**	PKPab	PKPab	06 30 50.6	-0.7
	comp=Z,6.6nm,0.8s,baz=48,slow=4.4,SNR=6.9						
ROSC	**El Rosal**	**165.63**	**304**	PKP	PKPdf	06 30 16.3	-2.2
	comp=Z,6.2nm,1.0s,baz=94,slow=4.1,SNR=5.0						

*NEIC **21** 06:18:46.9, 32.97S×72.04W, h20^{km}, ML3.1(GUC), After GUC.*

GUC 21 06:18:46.9±0.5, 32.97S×72.04W, h20^{km}±10^{km}, MD3.9, ML3.1, 3C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.34**	**100**	⇓iP	Pb	06 18 54.1	-0.1
IHA				i S	Sb	06 18 59.5	+0.4
LCCH	**Las Cruces**	**0.64**	**142**	eP	Pb	06 18 58.5	-0.7
LCCH				i S	Sb	06 19 07.8	+0.1
PACH	**Papudo**	**0.66**	**50**	⇓iP	Pb	06 18 59.2	-0.4
PACH				i S	Sb	06 19 08.9	+0.5
ROCH	**El Roble**	**0.86**	**90**	⇑iP	Pb	06 19 02.6	-0.4
TACH	**Talagante**	**1.14**	**127**	⇑iP	Pb	06 19 07.0	-0.8
TACH				i S	Sb	06 19 22.0	-0.2
RCDM	**Rinconada Maip**	**1.15**	**117**	eP	Pb	06 19 06.8	-1.2
JACH	**Jahuel**	**1.25**	**77**	⇑iP	Pn	06 19 08.6	-0.8
JACH				i S	Sb	06 19 25.4	+0.2
STL	**Santa Lucia**	**1.26**	**112**	eP	Pn	06 19 08.9	-0.7
STL				i S	Sb	06 19 25.4	-0.2
ANTU	**Antumapu**	**1.32**	**117**	eP	Pn	06 19 09.9	-0.5
CLCH	**Cerro Calan**	**1.33**	**109**	⇓iP	Pn	06 19 10.3	-0.3
CLCH				i S	Sb	06 19 27.7	+0.2
CLCH				AMP		06 19 30.6	
	comp=N,493nm,0.5s						
FSR	**Penalolen**	**1.36**	**112**	eP	Pn	06 19 10.3	-0.8
FSR				i S	Sb	06 19 28.5	-0.1
FSR				AMP		06 19 36.3	
	comp=N,480nm,0.5s						
PCH	**Pirque**	**1.43**	**117**	eP	Pn	06 19 11.7	-0.4
PCH				i S	Sn	06 19 30.3	0.0
CHCH	**Chadas Angostu**	**1.50**	**130**	eP	Pn	06 19 12.8	-0.2
FCH	**Farellones**	**1.51**	**104**	⇓iP	Pn	06 19 13.2	+0.1
FCH				i S	Sn	06 19 33.1	+0.9
FCH				AMP		06 19 40.4	
	comp=N,391nm,0.4s						
SJCH	**San Jose de Ma**	**1.56**	**116**	⇓iP	Pn	06 19 13.7	-0.2
SJCH				AMP		06 19 38.1	
	comp=E,251nm,0.3s						
LMEL	**Las Melosas**	**1.76**	**120**	eP	Pn	06 19 17.1	+0.3
LMEL				i S	Sn	06 19 39.6	+0.8
LMEL				AMP		06 19 46.6	
	comp=N,419nm,0.6s						

IGQ 21 06:19:20.2, 2.26S×79.04W, h12^{km}±7^{km}, mb4.3, 6C-3D, Error ellipse: s-maj=11.2km s-min=2.7km az=52.1, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	**0.86**	**28**	⇑P	Pb	06 19 36.9	+0.2
ARRY	**Arrayan**	**0.95**	**38**	P	Pb	06 19 38.2	+0.1
PATA	**Patacocha**	**0.96**	**39**	P	Pb	06 19 39.0	+0.7
CUSU	**Cusua**	**0.98**	**34**	P	Pb	06 19 39.4	+0.6
RETU	**Refugio**	**1.00**	**36**	⇓P	Pb	06 19 39.8	+0.8
RETU				S	Sb	06 19 52.3	+0.5
JUIV	**Juive**	**1.01**	**35**	P	Pb	06 19 39.6	+0.4
ULBA	**Ulba**	**1.02**	**38**	⇑P	Pb	06 19 40.1	+0.8
RUN2	**Runtun**	**1.04**	**37**	P	Pb	06 19 40.2	+0.5
PISA	**Pisayambo**	**1.36**	**29**	P	Pn	06 19 46.0	+0.9
TAMB	**Tambo**	**1.69**	**23**	⇑P	Pn	06 19 52.0	+2.1
NAS1	**Nasa**	**1.71**	**19**	⇑P	Pn	06 19 52.4	+2.3
VC1	**Cotopaxi 1**	**1.73**	**22**	⇑P	Pn	06 19 52.8	+2.4
VC1				S	Sn	06 20 14.2	+1.7
HOJA	**Cerro de Hojas**	**1.93**	**309**	P	Pn	06 19 52.3	-0.9
SALI	**Salinas**	**1.95**	**272**	P	Pn	06 19 54.7	+1.1
ANTI	**Antisana**	**2.00**	**26**	P	Pn	06 19 57.5	+3.3
JUA2	**San Juan 2**	**2.08**	**12**	⇑P	Pn	06 19 59.2	+3.8
JUA2				S	Sn	06 20 26.3	+4.9
TERV	**Terraza Guagua**	**2.12**	**12**	⇓P	Pn	06 19 59.7	+3.8
TERV				S	Sn	06 20 27.0	+4.6
PINO	**Pino**	**2.13**	**12**	⇓P	Pn	06 19 59.8	+3.7
YANA	**Yana**	**2.18**	**12**	P	Pn	06 20 00.3	+3.5
YANA				S	Sn	06 20 27.7	+3.7
ELAGU	**Cayambe Volc**	**2.46**	**25**	P	Pn	06 20 05.6	+4.8
CAYR	**Refugio Cayamb**	**2.48**	**25**	P	Pn	06 20 07.0	+5.8
CAYA	**Cayambe**	**2.54**	**24**	P	Pn	06 20 07.7	+5.7
COTA	**Cotacachi**	**2.67**	**15**	P	Pn	06 20 10.1	+6.2
ECEN	**Cerro Negro**	**3.24**	**19**	P	Pn	06 20 18.8	+6.8
ECEN				S	Sn	06 21 03.8	+13

DJA 21 06:21:53.9±1.0, 9.54S×113.22E, h26^{km}±4^{km}, ML4.0/3, 6C-2D, Error ellipse: s-maj=22.4km s-min=20.8km az=102.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	**Scrawed**	**1.39**	**41**	⇑ePn	Pn	06 22 15.7	-2.2
	166nm,0.2s						
SRDI	**Scrawed**	**1.39**	**41**	⇑iP	Pn	06 22 18.0	+0.1
SRDI				⇑eSn	Sn	06 22 32.0	-3.5
KELI	**Kelakatan**	**1.81**	**44**	⇓ePn	Pn	06 22 22.1	-1.9
	94nm,0.1s						
KELI	**Kelakatan**	**1.81**	**44**	⇑iP	Pn	06 22 24.0	0.0
KELI				⇑eSn	Sn	06 22 42.7	-3.7
RATI	**Rata**	**2.42**	**71**	⇓ePn	Pn	06 22 30.6	-2.1
	96nm,0.2s						
RATI				⇑eSn	Sn	06 22 57.0	-4.7

*NEIC **21** 06:58:24.5, 39.28S×70.97W, h125^{km}, After GUC.*

GUC 21 06:58:24.5±1.1, 39.28S×70.97W, h125^{km}±56^{km}, ML4.2, 2D, Southern Argentina

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLCH	**Valdivia**	**1.84**	**253**	eP	P	06 58 56.8	+0.1
VLCH				i S	S	06 59 20.9	-0.2
VLCH				AMP		06 59 24.3	
	comp=N,7µm,0.1s						
OSCH	**Osorno**	**2.11**	**231**	⇓iP	P	06 58 59.4	-0.6
OSCH				i S	S	06 59 26.1	-0.9
OSCH				AMP		06 59 28.4	
	comp=N,1µm,0.5s						
PMCH	**Puerto Montt**	**2.65**	**213**	⇓iP	P	06 59 06.7	-0.6
PMCH				i S	S	06 59 39.4	-0.2
PMCH				AMP		06 59 47.7	
	comp=E,2µm,0.1s						
CCHI	**Chillan**	**2.81**	**341**	eP	P	06 59 09.2	-0.2
CCHI				i S	S	06 59 42.5	-0.9
CCHI				AMP		06 59 46.3	
	comp=N,136nm,0.3s						

IDC 21 07:05:39.4±50.0, 16.30S×176.22W, mb4.5/3, mb1 4.6/3, mb1mx4.0/15, mbtmp4.5/3, 1D, Error ellipse: s-maj=939.4km s-min=152.8km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.24**	**240**	eP	P	07 13 26.4	-1.5
	1.7nm,0.5s						
STKA	**Stephens Creek**	**41.24**	**240**	P	P	07 13 26.8	-1.1
	3.3nm,0.7s,baz=87,slow=9.8,SNR=13						
WRA	**Warramunga Arr**	**47.00**	**258**	P	P	07 14 12.4	-2.1
	2.1nm,0.8s,baz=95,slow=7.3,SNR=66						
ASAR	**Alice Springs**	**47.25**	**253**	P	P	07 14 14.4	-2.1
	10nm,0.5s,baz=89,slow=8.4,SNR=149						
ASPA	**Alice Springs**	**47.26**	**253**	⇓iP	P	07 14 14.3	-2.2

MEX 21 07:11:24.5±0.3, 17.09N×99.92W, h48^{km}±5^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.23**	**179**	i P	P	07 11 31.5	-1.3
ACX				i S	S	07 11 36.8	-1.9
CAIG	**El Cayaco**	**0.34**	**262**	i P	P	07 11 32.2	-1.6
CAIG				i S	S	07 11 38.8	-1.6
PLIG	**Platanillo**	**1.35**	**17**	eP	P	07 11 45.5	-1.9
PLIG				i S	S	07 12 01.7	-2.7
PPM	**Popocatepetl**	**2.32**	**32**	eP	P	07 11 59.1	-1.9
PPM				i S	S	07 12 26.6	-1.8

IDC 21 07:11:39.7±9.8, 12.06S×166.24E, h137^{km}±84^{km}, mb3.7/8, mb1 4.0/8, mb1mx3.9/15, mbtmp4.1/8, MS3.6/2, Ms1 3.6/2, ms1mx3.0/21, Error ellipse: s-maj=47.9km s-min=29.4km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**18.93**	**276**	LR	LR	07 22 15.0	
	comp=Z,242nm,18.3s,baz=231,slow=34						
CTA	**Charters Tower**	**20.78**	**245**	P	P	07 16 12.2	+0.6
	5.0nm,0.9s,baz=36,slow=11,SNR=3.9						
CTA				LR	LR	07 23 06.3	
	comp=Z,137nm,19.2s,baz=49,slow=33						
STKA	**Stephens Creek**	**30.06**	**225**	eP	P	07 17 35.8	-2.5
	2.3nm,0.8s						
STKA	**Stephens Creek**	**30.06**	**225**	P	P	07 17 36.5	-1.8
	2.6nm,0.7s,baz=61,slow=7.1,SNR=8.0						
TOO	**Toolangi**	**31.47**	**213**	eP	P	07 17 49.0	-1.6
	0.4nm,0.6s						
WRA	**Warramunga Arr**	**31.61**	**252**	P	P	07 17 48.8	-3.2
	3.1nm,0.7s,baz=84,slow=9.0,SNR=34						
WRA				PcP	PcP	07 20 38.8	-2.2
	1.0nm,0.8s,baz=84,slow=3.8,SNR=7.5						
ASAR	**Alice Springs**	**32.79**	**245**	P	P	07 17 59.2	-3.0
	3.6nm,0.6s,baz=68,slow=9.8,SNR=27						
ASAR				PcP	PcP	07 20 42.5	-1.6
	1.2nm,0.8s,baz=73,slow=2.3,SNR=9.9						
ASPA	**Alice Springs**	**32.79**	**245**	eP	P	07 17 58.7	-3.5
CMAR	**Chiang Mai Arr**	**72.96**	**294**	P	P	07 22 55.3	-1.3
	4.0nm,0.9s,baz=120,slow=4.8,SNR=16						
SONM	**Songino Array**	**79.77**	**324**	P	P	07 23 32.7	-1.3
	0.7nm,0.6s,baz=138,slow=4.4,SNR=7.9						
ILAR	**Eielson Array**	**84.31**	**18**	P	P	07 23 56.1	-1.0
	0.5nm,0.4s,baz=258,slow=5.2,SNR=20						
YKA	**Yellowknife Ar**	**95.65**	**27**	P	P	07 24 48.5	-1.9
	0.2nm,0.4s,baz=258,slow=5.0,SNR=11						

DJA 21 07:21:38.4±1.0, 9.69S×115.86E, h33^{km}, ML3.9/4, 7D, Error ellipse: s-maj=22.7km s-min=11.4km az=155.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	**Rata**	**1.02**	**341**	⇓ePg	P	07 21 55.4	-0.9
	210nm,0.2s						
RATI				⇓eSg	S	07 22 07.4	-2.2
KEDI	**Kedomdong**	**1.22**	**12**	⇓ePg	P	07 21 58.2	-1.0
	817nm,0.1s						
KEDI				⇓eSg	S	07 22 12.2	-2.7
KELI	**Kelakatan**	**2.00**	**317**	⇓ePn	Pn	07 22 09.6	-0.9
	22nm,0.2s						
SRDI	**Scrawed**	**2.08**	**305**	⇓ePn	Pn	07 22 09.8	-2.0
	39nm,0.2s						
SRDI				⇓eSn	Sn	07 22 33.9	-2.9

IDC 21 07:26:30.7±2.3, 5.29N×94.10E, mb3.6/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, ML4.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/21, Error ellipse: s-maj=84.9km s-min=22.4km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.91**	**19**	Pn	P	07 29 51.3	-0.4
	0.3nm,0.3s,baz=210,slow=15,SNR=2.7						
SONM	**Songino Array**	**43.68**	**12**	P	P	07 34 36.1	-2.9
	0.2nm,0.5s,baz=194,slow=8.4,SNR=4.0						
WRA	**Warramunga Arr**	**46.84**	**124**	P	P	07 35 02.5	-2.1
	0.6nm,0.6s,baz=298,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**48.33**	**128**	P	P	07 35 14.7	-1.6
	0.3nm,0.4s,baz=302,slow=7.3,SNR=6.1						
ZAL	**Zalesovo**	**49.09**	**353**	P	P	07 35 20.2	-1.5
	1.0nm,0.3s,baz=211,slow=2.0,SNR=3.9						
BVAR	**Borovoye Array**	**51.41**	**342**	P	P	07 35 37.4	-2.1
	0.6nm,0.5s,baz=144,slow=7.6,SNR=5.2						
KMBO	**Kilima Mbogo**	**57.14**	**265**	LR	LR	08 00 03.0	
	comp=Z,51nm,19.3s,baz=89,slow=35						

*NEIC **21** 07:39:22.6±1.1, 6.64S×125.84E, h503^{km}±20^{km}, mb4.2/7, Error ellipse: s-maj=21.8km s-min=12.5km az=55.0*

*IDC **21** 07:39:22.8±2.3, 6.52S×126.07E, h505^{km}±26^{km}, mb3.5/4, mb1 3.3/6, mb1mx3.2/15, mbtmp4.1/6, Error ellipse: s-maj=65.5km s-min=16.5km az=62.0*

ISC 21 07:39:21.1±2.2, 6.6S±0.2×125.8E±0.2, h495^{km}±37^{km}, n20, σ0ˢ.53/20, mb4.2/15, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.94**	**134**	⇑iP	**P**	**07 41 28.3**	**-0.2**
	14nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.47**	**181**	eP	**P**	**07 41 54.8**	**-0.5**
	3.8nm,0.4s						
WRAB	**Tennant Creek**	**15.66**	**149**	eP	**P**	**07 42 38.3**	**-0.1**
WRA	**Warramunga Arr**	**15.67**	**149**	P	**P**	**07 42 38.3**	**-0.2**
	0.4nm,0.3s,baz=333,slow=9.8,SNR=26						
ASAR	**Alice Springs**	**18.70**	**156**	P	**P**	**07 43 09.6**	**+1.2**
	0.2nm,0.3s,baz=331,slow=8.7,SNR=7.5						
ASAR				PcP	PcP	07 47 10.7	-2.0
	0.1nm,0.3s,baz=2.1,slow=1.8,SNR=4.5						
ASAR				ScP		07 49 59.4	
	0.0nm,0.3s,baz=329,slow=1.6,SNR=8.1						
CMAR	**Chiang Mai Arr**	**36.34**	**314**	P	**P**	**07 45 44.9**	**+1.2**
	3.5nm,0.8s,mb3.9,baz=141,slow=6.8,SNR=9.1						
ENH	**Enshi**	**39.83**	**338**	eP	**P**	**07 46 12.2**	**+0.1**
	5.4nm,0.6s,mb4.2						
LSA	**Lhasa**	**49.08**	**319**	eP	**P**	**07 47 25.4**	**+1.1**
	9.6nm,0.6s,mb4.3						
JIRN	**Jiri**	**51.22**	**313**	eP	**P**	**07 47 40.2**	**0.0**
	15nm,0.7s,mb4.4						
GUN	**Gumba**	**51.59**	**314**	eP	**P**	**07 47 42.8**	**-0.1**
	35nm,0.7s,mb4.8						
PKI	**Pulchoki**	**51.73**	**313**	eP	**P**	**07 47 43.5**	**-0.4**
	15nm,0.5s,mb4.5						
KKN	**Kakani**	**51.95**	**313**	eP	**P**	**07 47 45.2**	**-0.3**
	9.6nm,0.5s,mb4.4						
DMN	**Daman**	**51.98**	**313**	eP	**P**	**07 47 45.5**	**-0.2**
	13nm,0.7s,mb4.4						
GKN	**Gorkha**	**52.54**	**313**	eP	**P**	**07 47 49.4**	**-0.4**
	16nm,0.4s,mb4.7						
KOLN	**Koldanda**	**53.17**	**312**	eP	**P**	**07 47 53.9**	**-0.4**
	18nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**56.66**	**345**	eP	**P**	**07 48 18.5**	**0.0**
	2.7nm,0.9s,mb3.6						
SONM	**Songino Array**	**56.81**	**344**	P	**P**	**07 48 19.4**	**0.0**
	1.7nm,0.6s,mb3.5,baz=164,slow=5.6,SNR=21						
ZAL	**Zalesovo**	**69.41**	**336**	P	**P**	**07 49 39.5**	**-0.6**
	2.6nm,0.4s,mb4.1,baz=335,slow=6.7,SNR=10						
KURK	**Kurchatov**	**70.03**	**330**	eP	**P**	**07 49 43.5**	**-0.3**
	1.8nm,1.0s,mb3.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVAR	Borovoye Array	75.52	329	P	P	07 50 15.3	0.0
	4.4nm,0.8s,mb4.0,baz=117,slow=6.4,SNR=19						

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*IDC **21** 07:46:25.1±1.0, 63.52N×147.77W, mb3.7/8, mb1 3.8/11, mb1mx3.8/22, mbtmp3.7/11, ML3.5/3, Error ellipse: s-maj=16.9km s-min=12.5km az=70.0*

*NEIC **21** 07:46:26.3, 63.45N×147.51W, h5^{km}, ML3.8(PMR), ML3.6(AEIC), After AEIC.*

ISC 21 07:46:25.6±0.7**, 63.49N**±0.02×**147.46W**±0.04**, h9**^{km}±5^{km}**, n75,** σ0^{s}**87**/83**, mb3.8**/8**, Central Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DHY	Denali Highway	0.42	174	P	Pg	07 46 34.3	+0.1
DHY				S	Sg	07 46 38.5	-1.4
RND	Reindeer	0.63	263	P	Pg	07 46 38.2	-0.1
RND				S	Sg	07 46 46.6	-0.2
MCK	McKinley	0.70	291	P	Pb	07 46 39.8	+0.2
MCK				S	Sb	07 46 49.4	+0.3
THY	Trims Highway	0.77	95	P	Pb	07 46 41.1	+0.3
THY				S	Sb	07 46 51.8	+0.6
DDM	Donnelly Dome	0.77	67	P	Pb	07 46 41.6	+0.8
HDA	Harding Lake	0.94	14	P	Pb	07 46 45.0	+1.2
PAX	Paxson	1.04	119	P	Pb	07 46 44.7	-0.8
HUR	Hurricane	1.11	243	P	Pb	07 46 46.7	+0.1
BWN	Browne	1.12	308	P	Pb	07 46 47.0	+0.2
CCB	Clear Creek Bu	1.17	353	P	Pb	07 46 48.5	+1.0
TRF	Thorofare Moun	1.27	269	P	Pb	07 46 49.3	0.0
TRF				S	Sb	07 47 06.7	+1.2
NEA	Nenana	1.30	328	P	Pb	07 46 50.3	+0.5
NEA				S	Sb	07 47 08.2	+1.7
ILAR	Eielson Array	1.31	11	Pg	Pg	07 46 51.1	-0.7
	79nm,0.3s,baz=191,slow=16,SNR=2088						
ILAR				Lg		07 47 08.2	
	205nm,0.3s,baz=190,slow=27,SNR=79						
IL1	Eielson Array	1.31	11	P	Pb	07 46 50.7	+0.7
MDM	Murphy Dome	1.51	348	P	Pn	07 46 53.6	+0.5
DOT	Dot Lake	1.53	83	P	Pn	07 46 54.1	+0.7
KTH	Kantishna Hill	1.55	274	P	Pn	07 46 53.9	+0.3
KTH				S	Sb	07 47 16.0	+2.2
SCM	Sheep Creek Mo	1.67	178	P	Pn	07 46 55.1	-0.1
CUT	Chulitna	1.68	231	P	Pn	07 46 55.2	-0.3
TZL	Tazlina	1.73	146	P	Pn	07 46 57.2	+1.0
SML	Sawmill	1.74	194	P	Pn	07 46 55.9	-0.4
MENT	Mentasta	1.79	106	P	Pn	07 46 58.2	+1.3
GHO	Glory Hole Cre	1.85	202	P	Pn	07 46 57.4	-0.5
PMR	Palmer	2.06	203	P	Pn	07 47 00.6	-0.3
MLY	Manley	2.10	319	P	Pn	07 47 01.5	0.0
KNK	Knik Glacier	2.14	193	P	Pn	07 47 02.4	+0.4
PWA	Palmer West	2.16	212	P	Pn	07 47 02.8	+0.4
VLZ	Valdez	2.43	167	P	Pn	07 47 06.9	+0.8
JPK	Jack Peak	2.48	170	P	Pn	07 47 07.6	+0.7
DIV	Divide	2.50	161	P	Pn	07 47 07.9	+0.7
BCA3	Beaver Creek A	2.60	97	P	Pn	07 47 08.7	0.0
GLI	Glacier Island	2.63	176	P	Pn	07 47 09.8	+0.8
RC01	Rabbit Creek A	2.63	205	P	Pn	07 47 09.4	+0.3
FIB	Fire Island	2.66	210	P	Pn	07 47 09.8	+0.4
GLB	Gilahina Butte	2.67	139	P	Pn	07 47 10.3	+0.8
FID	Port Fidalgo	2.79	170	P	Pn	07 47 12.3	+0.9
STLK	Strandline Lak	2.85	227	P	Pn	07 47 12.4	+0.2
EYAK	Cordova Ski Ar	3.06	164	P	Pn	07 47 15.3	+0.1
CRP	Crater Peak	3.12	226	P	Pn	07 47 16.0	-0.1
HIN	Hinchinbrook I	3.14	171	P	Pn	07 47 16.7	+0.4
SPU	Mount Spurr	3.16	225	P	Pn	07 47 15.9	-0.7
CKN	Chakachatna No	3.17	226	P	Pn	07 47 16.9	+0.2
SLKM	Skilak Lake	3.27	205	P	Pn	07 47 17.8	-0.3
RAGM	Ragged Mountai	3.38	156	P	Pn	07 47 19.6	-0.2
BALM	Baldy	3.44	134	P	Pn	07 47 21.4	+0.9
LTI	Latouche	3.47	183	P	Pn	07 47 21.1	+0.2
TGL	Tana Glacier	3.50	140	P	Pn	07 47 21.5	0.0
SEW	Seward	3.53	196	P	Pn	07 47 21.7	-0.2
DAWY	Dawson	3.63	77	P	Pn	07 47 23.1	-0.1
IM3	Indian Mountai	3.68	316	P	Pn	07 47 23.3	-0.6
IMA	Indian Mountai	3.71	317	*e*P	Pn	07 47 23.8	-0.6
DFR	Drift River	3.81	223	P	Pn	07 47 24.5	-1.3
CTGM	Chitina Glacie	3.83	129	P	Pn	07 47 26.2	+0.1
NCT	North Crescent	3.91	224	P	Pn	07 47 26.7	-0.5
TT01	Tatalina	3.92	265	P	Pn	07 47 26.2	-1.2
COLD	Coldfoot	3.92	344	P	Pn	07 47 27.6	+0.1
RSO	Redoubt South	3.93	222	P	Pn	07 47 27.8	+0.2
BRLK	Bradley Lake	4.08	205	P	Pn	07 47 29.2	-0.5
BM3	Burnt Mountain	4.12	16	P	Pn	07 47 30.4	+0.1
YAH	Yahtse	4.14	137	P	Pn	07 47 31.4	+0.8
SVW2	Sparrevohn	4.49	241	P	Pn	07 47 35.7	+0.2
KDAK	Kodiak Island	6.26	206	P	Pn	07 47 59.1	-1.3
WHY	Whitehorse	6.55	110	P	Pn	07 48 03.7	-0.9
INK	Inuvik	7.46	44	Pn	Pn	07 48 15.8	-1.6
	1.6nm,0.3s,baz=227,slow=18,SNR=123						
INK				Sn	Sn	07 49 38.5	-4.6
	0.8nm,0.3s,baz=272,slow=6.8,SNR=6.9						
INK				Lg		07 50 20.9	
	0.4nm,0.3s,baz=152,slow=10,SNR=6.4						
DLBC	Dease Lake	9.86	113	Pn	P	07 48 52.1	+1.7
	0.1nm,0.3s,baz=327,slow=19,SNR=4.2						
DLBC				Lg		07 51 33.4	
	0.2nm,0.3s,baz=63,slow=26,SNR=3.9						
YKA	Yellowknife Ar	14.87	79	Pn	P	07 49 55.6	-1.8
	0.1nm,0.3s,baz=288,slow=13,SNR=11						
EDM	Edmonton	20.37	104	*e*P	P	07 51 04.0	-0.9
PDAR	Pinedale Array	30.08	115	P	P	07 52 36.9	-0.2
	0.3nm,0.8s,mb3.1,baz=324,slow=7.8,SNR=2.6						
TXAR	Lajitas Array	44.08	120	P	P	07 54 36.1	+0.8
	0.2nm,0.6s,mb3.0,baz=330,slow=7.3,SNR=3.1						
ARCES	ARCESS Array B	47.16	3	P	P	07 54 58.5	-0.9
	2.1nm,0.9s,mb4.0,baz=346,slow=7.4,SNR=3.8						
NOA	NORSAR Array B	54.74	13	P	P	07 55 55.1	-1.9
	1.3nm,1.1s,mb3.9,baz=347,slow=9.5,SNR=3.0						
SONM	Songino Array	54.81	308	P	P	07 55 56.1	-1.5
	0.2nm,0.5s,mb3.4,baz=14,slow=5.1,SNR=4.1						
FINES	FINESS Array B	55.29	4	P	P	07 55 58.3	-2.7
	0.7nm,0.4s,mb4.0,slow=7.6,SNR=5.3						
BVAR	Borovoye Array	60.12	335	P	P	07 56 32.5	-2.5
	3.4nm,1.1s,mb4.3,baz=45,slow=8.4,SNR=5.7						
AKASG	Malin Array Be	66.12	2	P	P	07 57 12.6	-2.0
	3.8nm,0.6s,mb4.6,baz=358,slow=6.1,SNR=20						

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*CSEM **21** 08:18:17.8±0.5, 39.00N×29.72W, h5^{km}, ML2.2, Error ellipse: s-maj=64.6km s-min=5.3km az=32.0, After PDA*

*PDA **21** 08:18:17.8±0.5, 39.00N×29.72W, h5^{km}, MD3.3, ML2.2, Error ellipse: s-maj=64.6km s-min=5.3km az=32.0*

SVSA 21 08:18:17.8±0.5**, 39.00N×29.72W, h5**^{km}**, MD3.3, ML2.2, Error ellipse: s-maj=64.6km s-min=5.3km az=32.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCED	Cedros	0.88	115	*e*P	Pb	08 18 31.7	-3.4
PCED				*e*S	Sb	08 18 42.3	-4.6
	19nm,0.2s						
PCED	Cedros	0.88	115	*e*P	Pb	08 18 31.7	-3.4
PCED				*e*S	Sb	08 18 42.3	-4.6
	19nm,0.2s						
CALA	Caldeira	0.90	118	*e*P	Pb	08 18 32.3	-3.2
CALA				*e*S	Sb	08 18 42.8	-4.7
PICO	Pico	1.13	116	*e*P	Pb	08 18 35.3	-4.1
PICO				*e*S	Sb	08 18 48.8	-5.4

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*IDC **21** 08:43:48.3±4.8, 21.27S×177.81W, h436^{km}±51^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.4/17, mbtmp4.3/7, Error ellipse: s-maj=29.7km s-min=24.1km az=61.0*

ISC 21 08:43:44.9±5.1**, 21.2S**±0.1×**177.8W**±0.2**, h408**^{km}±56^{km}**, n12,** σ1^{s}**24**/11**, mb3.7**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.60	193	P	P	08 47 24.5	-1.1
	2.4nm,0.3s,baz=17,slow=2.5,SNR=17						
URZ				S	S	08 50 23.9	-0.2
	0.2nm,0.3s,baz=78,slow=11,SNR=3.1						
RPZ	Rata Peaks	24.34	200	P	P	08 48 30.3	+0.9
	3.1nm,0.4s,mb4.1,baz=159,slow=23,SNR=5.4						
ARMA	Armidale	28.96	245	*e*P	P	08 49 13.4	+2.8
CTA	Charters Tower	33.62	265	*e*P	P	08 49 50.6	-0.2
	2.0nm,0.3s,mb3.9						
CTA	Charters Tower	33.62	265	P	P	08 49 50.5	-0.2
	2.4nm,0.3s,mb4.0,baz=86,slow=13,SNR=9.4						
STKA	Stephens Creek	37.68	245	*e*P	P	08 50 26.4	+1.9
	2.0nm,0.6s,mb3.6						
STKA	Stephens Creek	37.68	245	P	P	08 50 26.0	+1.4
	2.6nm,0.7s,mb3.7,baz=99,slow=11,SNR=10.0						
ASAR	Alice Springs	44.56	257	P	P	08 51 19.1	-1.0
	3.1nm,0.6s,mb3.8,baz=100,slow=7.7,SNR=9.3						
WRA	Warramunga Arr	44.70	263	P	P	08 51 19.5	-1.9
	2.0nm,0.6s,mb3.7,baz=95,slow=5.2,SNR=9.6						
ILAR	Eielson Array	88.91	13	P	P	08 55 55.0	+0.2
	0.3nm,0.7s,mb3.2,baz=216,slow=5.7,SNR=6.9						
AKASG	Malin Array Be	143.68	331	PKP	PKPdf	09 02 30.9	-0.6
	1.6nm,0.6s,baz=38,slow=3.9,SNR=5.7						
BRTR	Keskin Array B	147.42	312	PKPbc	PKPdf	09 02 42.1	+3.9
	0.8nm,0.7s,baz=180,slow=2.5,SNR=4.2						

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*IDC **21** 08:45:05.2±2.2, 8.39S×154.72E, mb3.8/5, mb1 4.0/6, mb1mx3.9/14, mbtmp3.9/6, ML3.6/1, MS3.6/3, Ms1 3.5/3, ms1mx3.0/26, Error ellipse: s-maj=48.4km s-min=27.2km az=108.0*

*NEIC **21** 08:45:11.6±1.6, 8.36S×154.54E, h35^{km}, mb4.3/2, Error ellipse: s-maj=30.1km s-min=20.4km az=104.0*

ISC 21 08:45:09.7±1.1**, 8.3S**±0.2×**154.51E**±0.09**, h33**^{km}**, n12,** σ1^{s}**28**/13**, mb3.9**/7**, MS3.7**/2**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.34	261	Pn	Pn	08 46 55.8	-1.6
	5.0nm,0.3s,baz=48,slow=11,SNR=12						
PMG				Sn	Sn	08 48 22.6	+2.2
	baz=34,slow=22,SNR=2.5						
PMG	Port Moresby	7.34	261	*e*P	P	08 46 55.6	-1.6
	26nm,0.7s						
PMG				*e*S	S	08 48 18.9	-1.4
PMG				Sn	Sn	08 48 22.6	+2.2
CTA	Charters Tower	14.18	213	LR	LR	08 52 45.5	
	comp=Z,126nm,20.2s,baz=38,slow=32						
KAKA	Kakadu	22.13	257	*e*P	P	08 50 05.1	+1.0
	11nm,0.7s,mb4.4						
WRAB	Tennant Creek	22.68	237	*e*P	P	08 50 11.2	+1.5
	6.0nm,0.6s,mb4.2						
WRA	Warramunga Arr	22.69	237	P	P	08 50 10.7	+0.9
	4.8nm,0.9s,mb3.9,baz=61,slow=10,SNR=13						
ASAR	Alice Springs	24.95	230	P	P	08 50 30.9	-0.9
	1.4nm,0.8s,mb3.5,baz=62,slow=9.6,SNR=15						
ASPA	Alice Springs	24.96	230	*e*P	P	08 50 32.5	+0.7
STKA	Stephens Creek	26.35	205	P	P	08 50 43.5	-1.2
	0.9nm,0.5s,mb3.6,baz=38,slow=12,SNR=3.3						
STKA				LR	LR	08 59 44.9	
	comp=Z,113nm,21.5s,MS3.4,baz=27,slow=33						
CMAR	Chiang Mai Arr	60.92	296	P	P	08 55 23.0	+1.0
	0.7nm,0.4s,mb4.2,baz=100,slow=5.5,SNR=2.9						
SONM	Songino Array	70.17	328	P	P	08 56 20.5	-0.6
	0.8nm,1.0s,mb3.6,baz=124,slow=5.2,SNR=3.0						
RPN	Rapa Nui	91.69	118	LR	LR	09 32 06.9	
	comp=Z,56nm,20.5s,MS4.0,baz=256,slow=31						

KRSC 21 09:11:28.9±1.1**, 51.35N×159.88E, h46**^{km}±41^{km}**, ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.38	323	*i* P	P	09 11 52.0	-0.2
RUS				*i* S	S	09 12 08.5	-0.9
GRL	Gorelyy	1.64	318	*e*P	P	09 11 56.9	+1.0
GRL				*e*S	S	09 12 17.4	+1.5
SPN	Mys Shipunski	1.75	3	*e*P	P	09 11 59.0	+1.6
SPN				*e*S	S	09 12 19.9	+1.2
KRMR	Karymshinskiy	1.83	325	*e*P	P	09 11 59.5	+0.9
KRMR				*e*S	S	09 12 21.9	+1.3
PET	Petropavlovsk	1.84	336	*e*P	P	09 11 59.1	+0.5
PET				*e*S	S	09 12 20.8	0.0
NLC	Nalytchevo	1.85	350	*e*P	P	09 11 59.2	+0.4
NLC				*e*S	S	09 12 21.3	+0.2
PAU	Pauzhetka	1.93	275	*e*P	P	09 12 01.5	+1.6
PAU				*e*S	S	09 12 24.5	+1.6
PAU				Smax			
	440nm,0.9s						
UGLR	Uglovaya	1.97	341	*e*P	P	09 12 00.9	+0.4
SDLR	Sedlovina	2.03	343	*e*P	P	09 12 01.4	+0.1
SMAR	Somma	2.03	341	*e*P	P	09 12 03.4	+2.1
AVH	Avacha	2.04	340	*e*P	P	09 12 02.4	+0.9
KOK	Koryaka	2.09	339	*e*P	P	09 12 03.8	+1.6
APC	Apacha	2.30	314	*e*P	P	09 12 06.1	+0.9
APC				*e*S	S	09 12 33.1	+0.6
APC				Smax			
	130nm,1.0s						
GNL	Ganaly	2.63	334	*e*P	P	09 12 11.0	+1.1
GNL				*e*S	S	09 12 41.9	+1.1
KII	Karymskiy	2.70	355	*e*P	P	09 12 11.9	+0.9
KII				*e*S	S	09 12 42.8	+0.1
ALID	Alaid	2.77	262	*e*P	P	09 12 11.5	-0.4
ALID				*e*S	S	09 12 42.7	-1.7
TUMR	Tumrok	3.94	2	*e*P	P	09 12 27.7	-0.8
TUMR				*e*S	S	09 13 11.6	-2.5
KBTR	Krutoberegovo	5.17	19	*e*P	P	09 12 45.4	-0.4
KBTR				*e*S	S	09 13 42.1	-2.8

KRSC 21 09:32:32.2±0.4**, 55.02N×162.20E, h14**^{km}±2^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUMR	Tumrok	1.21	283	*e*P	Pb	09 32 55.1	+0.8
TUMR				*e*S	Sb	09 33 11.7	+2.1
KBTR	Krutoberegovo	1.24	16	*e*P	Pb	09 32 55.9	+1.0
KBTR				*e*S	Sb	09 33 13.7	+3.1
KBG	Krutoberegovo	1.27	13	*e*P	Pb	09 32 55.5	+0.1
KBG				*e*S	Sb	09 33 12.0	+0.6
KBG				Smax			
	900nm,0.9s						
KBG	Krutoberegovo	1.27	13	*e*P	Pb	09 32 56.2	+0.8
KBG				*e*S	Sb	09 33 13.7	+2.3
KBG				Smax			
	630nm,0.7s						
ZLN	Zelenaya	1.28	322	P	Pb	09 32 56.8	+1.3
ZLN				*e*S	Sb	09 33 14.5	+2.9
KMNR	Kamenistaya	1.34	304	*e*P	Pn	09 32 57.2	+0.6
KMNR				*e*S	Sb	09 33 15.3	+1.8
KPT	Kopyto	1.47	311	*e*P	Pn	09 32 58.8	+0.3
KPT				*e*S	Sb	09 33 18.4	+1.1
KRSR	Krestovskiy	1.52	323	*e*P	Pn	09 32 59.5	+0.4
KRSR				*e*S	Sb	09 33 19.4	+0.8
KLY	Klyuchi	1.56	327	*e*P	Pn	09 32 59.2	-0.6
KLY				*e*S	Sn	09 33 18.9	-1.0
SVLR	Shiveluch	1.66	341	*e*P	Pn	09 33 02.0	+0.9
SVLR				*e*S	Sn	09 33 23.6	+1.4
KOZ	Kozyrevsk	1.68	309	*e*P	Pn	09 33 02.3	+0.8
KOZ				*e*S	Sn	09 33 24.2	+1.3
KII	Karymskiy	1.88	240	*e*P	Pn	09 33 04.7	+0.4
KII				*e*S	Sn	09 33 28.7	+0.7
SRDR	Sredinnyy	1.92	314	*e*P	Pn	09 33 05.0	+0.2
SRDR				*e*S	Sn	09 33 28.6	-0.2
ESO	Esso	2.19	296	*e*P	Pn	09 33 08.5	-0.2
ESO				*e*S	Sn	09 33 34.9	-0.9
ESO				Smax			
	80nm,0.6s						
SPN	Mys Shipunski	2.31	215	*e*P	Pn	09 33 09.8	-0.7
SPN				*e*S	Sn	09 33 37.9	-1.1
NLC	Nalytchevo	2.50	223	*e*P	Pn	09 33 13.6	+0.4
NLC				*e*S	Sn	09 33 43.7	0.0
SDLR	Sedlovina	2.62	230	*e*P	Pn	09 33 15.2	+0.3
SMAR	Somma	2.66	230	*e*P	Pn	09 33 16.0	+0.5
AVH	Avacha	2.69	231	*e*P	Pn	09 33 16.6	+0.7
AVH				*e*S	Sn	09 33 49.1	+0.6
UGLR	Uglovaya	2.69	229	*e*P	Pn	09 33 16.9	+1.0
KOK	Koryaka	2.72	232	*e*P	Pn	09 33 17.0	+0.7
GNL	Ganaly	2.82	244	*e*P	Pn	09 33 17.9	+0.1
GNL				*e*S	Sn	09 33 51.5	-0.4
PET	Petropavlovsk	2.89	228	*e*P	Pn	09 33 19.4	+0.6
PET				*e*S	Sn	09 33 53.6	-0.1
KRMR	Karymshinskiy	3.26	229	*e*P	Pn	09 33 25.3	+1.4
KRMR				*e*S	Sn	09 34 03.9	+1.0
RUS	Russkaya	3.39	222	*e*P	Pn	09 33 26.1	+0.2
RUS				*e*S	Sn	09 34 05.5	-0.8
GRL	Gorelyy	3.48	226	*e*P	Pn	09 33 28.4	+1.3
GRL				*e*S	Sn	09 34 09.4	+0.9
APC	Apacha	3.64	237	*e*P	Pn	09 33 30.8	+1.4

CASC 21 09:46:40.0±2.5**, 14.12N×91.83W, h14**^{km}±11^{km}**, MD3.9, 6C, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FUG	Fuego 3	1.01	71	⇑*i*P	Pb	09 46 58.0	-0.7
FUG				⇑*e*P		09 46 58.0	
FUG				*e*S	Sb	09 47 12.3	+0.8
PCG	Pacaya	1.21	77	*e*P	Pb	09 47 03.1	+0.9
PCG				*e*S	Sb	09 47 19.0	+1.5
IXG	Ixpaco	1.33	88	⇑*e*P	Pn	09 47 03.1	-1.1
IXG				*e*S	Sb	09 47 22.5	+1.5
NBG	Las Nubes	1.51	72	⇑*e*P	Pn	09 47 06.5	-0.2
NBG				*e*S	Sb	09 47 28.7	+2.7
RBDL	Robledal	2.08	90	*e*P	Pn	09 47 13.8	-1.1
RBDL				*e*S	Sn	09 47 41.9	+1.3
RTR	El Retiro	2.13	96	⇑*e*P	Pn	09 47 15.2	-0.5
RTR				*e*S	Sn	09 47 43.8	+1.8
SBLS	San Blas	2.16	97	*e*P	Pn	09 47 15.2	-0.9
SBLS				*e*S	Sn	09 47 43.0	+0.3
SNJE	San Jose	2.17	96	⇑*e*P	Pn	09 47 15.7	-0.5
SNJE				*e*S	Sn	09 47 43.1	+0.1
BOQS	Boqueron	2.50	99	*e*P	Pn	09 47 19.9	-1.0
BOQS				*e*S	Sn	09 47 50.7	-0.8
LFRS	El Faro	2.73	100	*e*P	Pn	09 47 22.7	-1.5
LFRS				*e*S	Sn	09 47 55.4	-1.9
LCBS	La Ceiba	2.81	99	*e*P	Pn	09 47 26.1	+0.8
LCBS				*e*S	Sn	09 48 00.3	+1.2
SNVI	San Vicente	2.95	100	*e*P	Pn	09 47 27.8	+0.5
SNVI				*e*P		09 47 29.4	
SNVI				*e*S	Sn	09 48 01.6	-1.1
SNVI				*e*S	Sn	09 48 05.7	+2.9

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*NEIC **21** 10:11:01.1, 60.01N×152.67W, h86^{km}, mb3.8/8, After AEIC.*

NEIC Felt [III] at Anchorage and Homer.

*IDC **21** 10:11:01.5±2.9, 60.15N×152.46W, h92^{km}±23^{km}, mb3.5/7, mb1 3.7/12, mb1mx3.6/26, mbtmp3.9/12, Error ellipse: s-maj=24.9km s-min=15.2km az=45.0*

ISC 21 10:10:59.2±0.2**, 60.03N**±0.02×**152.62W**±0.05**, h95**^{km}±2^{km}**, n115,** σ0^{s}**91**/129**, mb3.8**/14**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILIM	Iliamna	0.18	287	P	P	10 11 13.0	+0.2
ILIM				S	S	10 11 22.8	-0.2
IVE	Iliamna Volcan	0.20	267	P	P	10 11 13.0	+0.2
IVE				S	S	10 11 22.9	-0.1
INE	Iliamna NE	0.22	279	P	P	10 11 13.1	+0.3
ILW	Iliamna West	0.26	277	P	P	10 11 13.2	+0.1
RSO	Redoubt South	0.44	352	*e*P	P	10 11 14.6	+0.5
REF	Redoubt East F	0.46	355	P	P	10 11 15.1	+0.7
REF				S	S	10 11 26.2	+0.5
OPT	Oil Point	0.48	219	P	P	10 11 14.6	+0.1
RDN	Redoubt North	0.49	352	P	P	10 11 15.2	+0.6
RDN				S	S	10 11 26.3	+0.2
DFR	Drift River	0.57	357	P	P	10 11 15.8	+0.6
HOM	Homer	0.62	126	P	P	10 11 16.4	+0.8
HOM				S	S	10 11 28.2	+0.3
NNL	Ninilchik	0.67	88	P	P	10 11 17.6	+1.6
XLV	Seldovia	0.73	141	P	P	10 11 17.0	+0.3
XLV				S	S	10 11 30.3	+0.6
AUE	Augustine Isla	0.77	210	P	P	10 11 17.0	-0.1
AUW	Augustine West	0.79	213	P	P	10 11 17.3	+0.1
AUI	Augustine Isla	0.81	211	P	P	10 11 17.4	0.0
AUI				S	S	10 11 30.0	-0.9
CNPM	China Poot	0.86	125	P	P	10 11 18.6	+0.6
BRLK	Bradley Lake	0.92	106	P	P	10 11 18.9	+0.3
BRLK				S	S	10 11 33.8	+0.8
NKA	Nikishka	0.99	43	P	P	10 11 22.1	+2.7
SPU	Mount Spurr	1.19	13	P	P	10 11 22.8	+0.9
SPU				S	S	10 11 40.0	+1.3
MCNL	McNeil River	1.21	227	P	P	10 11 21.7	-0.4
MCNL				S	S	10 11 37.5	-1.8
CKN	Chakachatna No	1.22	10	P	P	10 11 23.3	+1.1
SLKM	Skilak Lake	1.29	67	P	P	10 11 23.9	+0.8
SYI	Shuyak Island	1.43	175	P	P	10 11 24.9	+0.3
VOGL	Vogel Lake	1.46	47	P	P	10 11 27.0	+2.0
STLK	Strandline Lak	1.53	14	P	P	10 11 27.1	+1.2
SEW	Seward	1.59	86	P	P	10 11 27.2	+0.4
FIB	Fire Island	1.66	46	P	P	10 11 28.4	+0.7
KAPH	Katmai Pasha	1.69	212	P	P	10 11 28.1	+0.2
RC01	Rabbit Creek A	1.78	52	P	P	10 11 29.4	+0.2
SVW2	Sparrevohn	1.81	308	P	P	10 11 29.6	0.0
KAHC	Katmai Hardscr	1.84	222	P	P	10 11 29.9	-0.1
KAWH	Katmai	1.99	215	P	P	10 11 32.0	+0.1
PWA	Palmer West	2.11	38	P	P	10 11 34.1	+0.5
KDAK	Kodiak Island	2.25	179	P	P	10 11 34.4	-1.1
ACHA	Angle Creek He	2.29	219	P	P	10 11 36.1	0.0
MGLS	Mageik LS	2.29	219	P	P	10 11 36.2	+0.1
PMR	Palmer	2.32	46	P	P	10 11 36.8	+0.3
LTI	Latouche	2.39	88	P	P	10 11 37.1	-0.3
CAHL	Cahill	2.42	216	P	P	10 11 38.0	+0.2
KNK	Knik Glacier	2.48	54	P	P	10 11 38.7	+0.1
KJL	Kejulik	2.50	219	P	P	10 11 38.7	-0.2
GHO	Glory Hole Cre	2.52	44	P	P	10 11 39.6	+0.4
CUT	Chulitna	2.64	25	P	P	10 11 41.2	+0.3
SML	Sawmill	2.75	48	P	P	10 11 42.5	+0.1
GLI	Glacier Island	2.87	70	P	P	10 11 42.5	-1.6
HIN	Hinchinbrook I	3.08	80	P	P	10 11 45.6	-1.3
FID	Port Fidalgo	3.13	74	P	P	10 11 45.8	-1.9
JPK	Jack Peak	3.15	68	P	P	10 11 46.8	-1.1
SCM	Sheep Creek Mo	3.16	53	P	P	10 11 47.8	-0.1
MID	Middleton Isla	3.24	98	P	P	10 11 48.8	-0.3
HUR	Hurricane	3.29	25	P	P	10 11 50.5	+0.7
VLZ	Valdez	3.30	68	P	P	10 11 49.1	-0.8
TT01	Tatalina	3.32	332	P	P	10 11 50.1	-0.1
EYAK	Cordova Ski Ar	3.46	78	P	P	10 11 50.5	-1.7
DIV	Divide	3.56	69	P	P	10 11 52.5	-1.0
TRF	Thorofare Moun	3.61	17	P	P	10 11 54.6	+0.4
KTH	Kantishna Hill	3.63	12	P	P	10 11 54.4	-0.1
RAGM	Ragged Mountai	3.98	81	P	P	10 11 59.2	-0.1
TZL	Tazlina	4.04	57	P	P	10 11 59.9	-0.2
MCK	McKinley	4.11	24	P	P	10 12 00.2	-0.8
BWN	Browne	4.42	18	P	P	10 12 05.8	+0.5
PAX	Paxson	4.52	46	P	P	10 12 06.8	+0.1
GLB	Gilahina Butte	4.55	68	P	P	10 12 06.0	-1.1
THY	Trims Highway	4.71	41	P	P	10 12 09.1	-0.2
NEA	Nenana	4.86	18	P	P	10 12 11.3	0.0
TGL	Tana Glacier	4.91	77	P	P	10 12 11.7	-0.4
DDM	Donnelly Dome	4.94	37	P	P	10 12 11.6	-0.9
HDA	Harding Lake	5.13	29	P	P	10 12 14.5	-0.5
CCB	Clear Creek Bu	5.15	24	P	P	10 12 14.7	-0.6
MENT	Mentasta	5.17	52	P	P	10 12 14.8	-0.8
BALM	Baldy	5.18	74	P	P	10 12 15.3	-0.3
WRG	White River Gl	5.31	85	P	P	10 12 17.8	+0.4
MDM	Murphy Dome	5.35	20	P	P	10 12 17.0	-1.0
YAH	Yahtse	5.44	82	P	P	10 12 18.5	-0.7
DOT	Dot Lake	5.44	44	P	P	10 12 19.0	-0.3
IL1	Eielson Array	5.46	27	P	P	10 12 19.1	-0.3
ILAR	Eielson Array	5.46	27	P	P	10 12 19.2	-0.2
	3.0nm,0.3s,baz=212,slow=13,SNR=136						
ILAR				S	S	10 13 17.5	-4.0
	4.6nm,0.3s,baz=9.6,slow=26,SNR=6.4						
CTGM	Chitina Glacie	5.66	76	P	P	10 12 21.6	-0.7
IM3	Indian Mountai	6.00	356	P	P	10 12 26.2	-0.7
BCA3	Beaver Creek A	6.01	55	P	P	10 12 26.3	-0.7
IMA	Indian Mountai	6.08	356	*e*P	P	10 12 28.4	+0.4
SDPT	Sand Point	6.30	225	P	P	10 12 29.1	-2.0
BLHA	Black Hill	6.64	233	P	P	10 12 34.3	-1.5
PNL	Peninsula	6.68	87	P	P	10 12 35.4	-0.9
COLD	Coldfoot	7.31	7	P	P	10 12 43.7	-1.3
DAWY	Dawson	7.42	51	P	P	10 12 45.1	-1.3
BM3	Burnt Mountain	8.22	22	P	P	10 12 56.1	-1.3
WHY	Whitehorse	8.82	78	P	P	10 13 04.1	-1.4
TNA	Tin City	8.92	315	P	P	10 13 04.9	-1.9
BESE	Bessie Mountai	9.20	91	P	P	10 13 09.1	-1.6
SIT	Sitka	9.52	101	P	P	10 13 13.0	-1.7
DLBC	Dease Lake	11.67	88	P	P	10 13 43.9	+0.3
	1.9nm,0.3s,baz=260,slow=10,SNR=35						
DLBC				S	S	10 15 50.9	-1.3
	1.4nm,0.3s,baz=93,slow=27,SNR=5.3						
DLBC	Dease Lake	11.67	88	*e*P	P	10 13 43.2	-0.3
INK	Inuvik	11.70	37	P	P	10 13 43.2	-0.7
	0.5nm,0.3s,baz=236,slow=14,SNR=40						
INK				S	S	10 15 48.2	-4.8
	0.0nm,0.3s,baz=246,slow=18,SNR=3.0						
INK	Inuvik	11.70	37	*e*P	P	10 13 44.2	+0.2
BBB	Bella Bella	15.69	109	P	P	10 14 37.1	+1.6
	0.2nm,0.3s,baz=301,slow=12,SNR=4.2						
BBB				S	S	10 17 25.4	-1.1
	0.1nm,0.3s,baz=129,slow=9.4,SNR=3.6						

YKA	**Yellowknife Ar**	18.27	66	P	P	10 15 06.5	-0.7
	0.2nm,0.3s,baz=279,slow=10.0,SNR=22						
YKA				pP		10 15 23.7	
	0.2nm,0.3s,baz=277,slow=12,SNR=7.3						
YKA				PcP	PcP	10 19 33.2	-2.2
	0.0nm,0.3s,baz=269,slow=1.2,SNR=4.2						
YKA				ScP		10 23 01.0	
	0.0nm,0.3s,baz=287,slow=2.3,SNR=5.1						
YKA	**Yellowknife Ar**	18.27	66	P	P	10 15 06.5	-0.7
YKA				pP		10 15 23.8	
YKA				PcP	PcP	10 19 33.2	-2.2
YKA				ScP		10 23 01.0	
NEW	**Newport**	23.57	104	P	P	10 16 02.5	+1.2
	4.3nm,1.1s,mb3.7,baz=354,slow=9.2,SNR=3.0						
NEW	**Newport**	23.57	104	*e*P	P	10 16 03.7	+2.4
	1.1nm,0.6s,mb3.4						
YBH	**Yreka Blue Hor**	25.94	121	P	P	10 16 24.0	+0.1
	1.3nm,0.8s,mb3.4,baz=338,slow=5.4,SNR=4.1						
HLID	**Hailey**	28.28	108	P	P	10 16 46.4	+1.2
	0.5nm,0.5s,mb3.3						
MNV	**Mina**	30.64	119	*e*P	P	10 17 07.7	+1.6
	1.0nm,0.7s,mb3.6						
BW06	**Boulder Array**	31.22	104	P	P	10 17 12.2	+0.9
	0.6nm,0.6s,mb3.5						
PDAR	**Pinedale Array**	31.22	104	P	P	10 17 12.8	+1.6
	0.9nm,0.8s,mb3.5,baz=345,slow=4.2,SNR=7.1						
ULM	**Lac du Bonnet**	32.88	81	P	P	10 17 26.3	+0.7
	0.5nm,0.3s,mb3.8,baz=333,slow=4.5,SNR=2.3						
PV01	**Paradox Valley**	35.28	108	*e*P	P	10 17 48.2	+2.0
SDCO	**Great Sand Dun**	37.06	105	*e*P	P	10 18 02.9	+1.6
	1.4nm,0.7s,mb4.0						
FRB	**Frobisher Bay**	37.10	47	P	P	10 18 01.7	+0.4
	0.4nm,0.5s,mb3.6,baz=226,slow=19,SNR=4.5						
MNTX	**Cornudas Mount**	42.03	111	*e*P	P	10 18 43.8	+1.5
	0.9nm,0.4s,mb3.9						
WMOK	**Wichita Mounta**	42.73	102	*e*P	P	10 18 49.5	+1.5
	1.9nm,0.7s,mb3.9						
TXAR	**Lajitas Array**	44.81	111	P	P	10 19 06.1	+1.1
	0.4nm,0.5s,mb3.4,baz=303,slow=7.0,SNR=12						
TXAR	**Lajitas Array**	44.81	111	P	P	10 19 06.1	+1.1
JCT	**Junction City**	45.70	106	*e*P	P	10 19 13.0	+1.1
	3.4nm,0.4s,mb4.4						
SONM	**Songino Array**	54.93	306	P	P	10 20 22.3	+0.5
	2.9nm,0.6s,mb4.5,baz=40,slow=6.9,SNR=32						

NEIC ***21*** *10:29:37.4±3.0, 3.86S×152.07E, h221^{km}±19^{km}, mb4.1/5, Error ellipse: s-maj=32.5km s-min=20.2km az=79.0*

IDC ***21*** *10:29:42.4±2.3, 4.26S×152.01E, h242^{km}±17^{km}, mb3.6/3, mb1 3.6/5, mb1mx3.4/14, mbtmp4.1/5, Error ellipse: s-maj=38.2km s-min=19.0km az=105.0*

ISC 21 10:29:36.7±2.3**, 4.1S**±0.1×**152.4E**±0.2**, h234**^{km}±15^{km}**, n15, σ0^{s}80**/19**, mb4.0**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	7.38	224	P	P	10 31 22.7	-0.1
	3.0nm,0.3s,baz=36,slow=14,SNR=10						
PMG				S	S	10 32 45.9	+0.1
	1.9nm,0.3s,baz=106,slow=19,SNR=4.8						
PMG	**Port Moresby**	7.38	224	*e*Pn	P	10 31 22.6	-0.2
PMG				S	S	10 32 45.9	+0.1
CTA	**Charters Tower**	16.97	200	P	P	10 33 21.8	-0.1
	0.4nm,0.3s,baz=30,slow=13,SNR=4.7						
KAKA	**Kakadu**	21.47	245	*e*P	P	10 34 07.2	-0.3
	12nm,0.4s,mb4.8						
WRAB	**Tennant Creek**	23.58	227	*e*P	P	10 34 28.6	+0.8
	84nm,0.5s						
WRA	**Warramunga Arr**	23.59	227	P	P	10 34 28.9	+0.9
	34nm,0.3s,baz=50,slow=10.0,SNR=492						
WRA				S	S	10 38 23.6	+1.3
	1.1nm,0.8s,baz=48,slow=16,SNR=5.8						
ASAR	**Alice Springs**	26.38	221	P	P	10 34 53.5	-0.1
	1.8nm,0.5s,mb4.0,baz=51,slow=8.5,SNR=69						
ASAR				S	S	10 39 06.7	-1.2
	0.5nm,0.8s,baz=52,slow=13,SNR=3.4						
ASPA	**Alice Springs**	26.38	221	*e*P	P	10 34 53.6	-0.1
STKA	**Stephens Creek**	29.43	199	*e*P	P	10 35 21.5	+0.7
	0.9nm,0.3s,mb3.9						
STKA	**Stephens Creek**	29.43	199	P	P	10 35 20.9	+0.1
	1.2nm,0.4s,mb3.9,baz=32,slow=13,SNR=6.5						
FITZ	**Fitzroy Crossi**	29.62	240	*e*P	P	10 35 20.9	-1.8
	4.2nm,0.3s,mb4.5						
FORT	**Forrest**	35.06	218	*e*P	P	10 36 09.7	+0.3
	450nm,0.7s						
MBWA	**Marble Bar**	35.95	239	*e*P	P	10 36 15.9	-1.0
	1.0nm,0.4s,mb3.7						
CMAR	**Chiang Mai Arr**	57.19	295	P	P	10 39 03.2	+1.4
	2.5nm,1.0s,mb3.8,baz=114,slow=5.1,SNR=7.9						
CHKZ	**Chkalovo**	88.39	324	*e*P	P	10 42 02.6	-0.6
	0.4nm,0.4s,mb3.6						

IDC ***21*** *10:46:35.1±11.0, 23.97S×179.79W, h420^{km}±129^{km}, mb3.5/5, mb1 3.7/6, mb1mx3.5/15, mbtmp4.3/6, Error ellipse: s-maj=57.3km s-min=24.5km az=19.0*

NEIC ***21*** *10:46:36.8±3.6, 24.04S×179.80W, h442^{km}±40^{km}, mb4.1/5, Error ellipse: s-maj=31.2km s-min=15.2km az=206.0*

ISC 21 10:46:37.5±5.1**, 24.2S**±0.1×**179.9W**±0.2**, h460**^{km}±58^{km}**, n14, σ0^{s}62**/15**, mb3.9**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	14.30	190	P	P	10 49 41.5	-0.7
	1.5nm,0.3s,baz=252,slow=6.4,SNR=4.2						
URZ				S	S	10 52 10.8	-0.3
	0.2nm,0.3s,baz=156,slow=24,SNR=4.9						
RPZ	**Rata Peaks**	20.90	199	P	P	10 50 48.1	+0.9
	13nm,0.5s,baz=341,slow=0.7,SNR=20						
CTAO	**Charters Tower**	31.60	271	*e*P	P	10 52 23.2	+0.7
	8.4nm,0.4s,mb4.5						
STKA	**Stephens Creek**	34.74	248	P	P	10 52 50.0	+1.1
	1.1nm,0.5s,mb3.6,baz=84,slow=8.2,SNR=6.1						
STKA	**Stephens Creek**	34.74	248	P	P	10 52 50.0	+1.1
ASAR	**Alice Springs**	42.11	261	P	P	10 53 49.4	0.0
	1.3nm,0.5s,mb3.6,baz=95,slow=7.1,SNR=45						
ASPA	**Alice Springs**	42.12	261	*e*P	P	10 53 49.6	+0.2
WRAB	**Tennant Creek**	42.50	266	*e*P	P	10 53 51.6	-0.9
	4.2nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	42.51	266	P	P	10 53 52.1	-0.4
	3.6nm,0.5s,mb4.0,baz=97,slow=8.4,SNR=140						
KAKA	**Kakadu**	46.45	275	*e*P	P	10 54 22.5	-0.9
	7.3nm,1.0s,mb4.1						
FITZ	**Fitzroy Crossi**	50.93	266	*e*P	P	10 54 57.2	+0.1
	4.3nm,0.8s,mb3.8						
QSPA	**South Pole Qui**	65.94	180	*e*P	P	10 56 38.0	+0.2
	2.0nm,0.5s,mb4.0						
TXAR	**Lajitas Array**	90.46	58	P	P	10 58 50.2	0.0
	0.5nm,0.7s,mb3.5,baz=217,slow=6.1,SNR=7.6						
TXAR	**Lajitas Array**	90.46	58	P	P	10 58 50.2	0.0

NIED ***21*** *10:49:00, 43.10N×142.00E, h135^{km}, Mw4.4 Best double couple: M$_0$4.26×10^{15} NP1:ϕ_s246°, δ87°, λ129°. NP2: ϕ_s340°, δ39°, λ5°.*

BJI ***21*** *10:49:34.3, 43.24N×141.97E, h138^{km}, mB5.1, mb4.8*

MOS ***21*** *10:49:34.3±1.0, 43.18N×141.85E, h136^{km}, mb4.5/33, Error ellipse: s-maj=8.3km s-min=5.4km az=100.9*

NEIC ***21*** *10:49:35.4±0.5, 43.19N×141.90E, h131^{km}±4^{km}, mb4.6/37, MW4.4(NIED), Error ellipse: s-maj=4.9km s-min=3.6km az=131.0*

NEIC Recorded [1 JMA] in the Chitose and Shizunai areas.

IDC ***21*** *10:49:35.9±0.5, 43.20N×141.93E, h134^{km}±4^{km}, mb3.9/21, mb1 4.1/23, mb1mx4.1/26, mbtmp4.4/23, Error ellipse: s-maj=13.0km s-min=9.4km az=114.0*

JMA ***21*** *10:49:36.2±0.1, 43.14N×141.96E, h138^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1:ϕ_s72°, δ74°, λ-166°. NP2:ϕ_s339°, δ77°, λ-17°. Principal axes: T Plg2°, Azm26°; N Plg69°, Azm121°; P Plg21°, Azm295°;*

JMA Felt I J1.

ISC 21 10:49:34.8±0.2**, 43.13N**±0.02×**141.93E**±0.03**, h142**^{km}±1^{km}**, h139**^{km}±3.2^{km}**:pP-P, n187, σ0^{s}97**/217**, mb4.4**/61**, 16C-10D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAB	**Ashibetsu**	0.43	30	⇑P	P	10 49 55.9	+0.5
JAB				S	S	10 50 10.7	-0.5
JEW	**Eniwo**	0.46	230	⇑P	P	10 49 56.2	+0.6
JEW				S	S	10 50 10.8	-0.6
JBT2	**Biratori 2**	0.48	138	⇓P	P	10 49 56.1	+0.4
JBT2				*e*S	S	10 50 11.3	-0.3
JFR	**Furan**	0.49	86	⇓P	P	10 49 55.7	0.0
JFR				*e*S	S	10 50 10.4	-1.3
JHR	**Hokuryu**	0.63	347	⇑P	P	10 49 57.4	+0.9
JHR				*e*S	S	10 50 13.6	+0.6
JKK2	**Kamakawa 2**	0.95	39	⇑P	P	10 49 59.3	+0.7
JKK2				S	S	10 50 16.4	-0.5
JNBK	**Urakawa-nobuka**	1.05	144	⇓P	P	10 50 00.8	+1.3
JNBK				*e*S	S	10 50 19.7	+1.3
JSK	**Shakotan**	1.08	282	⇓P	P	10 50 00.6	+0.8
JSK				S	S	10 50 18.7	-0.3
ASAJ	**Asahikawa**	1.10	26	PN	P	10 50 00.3	+0.3
ASAJ				S	S	10 50 17.4	-1.9
ASAJ				pmax	pmax		
	comp=Z,155nm,0.3s						
ASAJ	**Asahikawa**	1.10	26	P	P	10 50 00.3	+0.3
	comp=Z,154nm,0.3s,baz=230,slow=10,SNR=819						
ASAJ				S	S	10 50 17.4	-1.9
	comp=Z,71nm,0.3s,baz=24,slow=30,SNR=15						
JCH	**Churui**	1.18	116	⇓P	P	10 50 00.6	-0.2
JCH				*e*S	S	10 50 18.7	-2.0
JYG	**Yagishiri**	1.34	345	P	P	10 50 03.1	+0.6
JYG				*e*S	S	10 50 23.0	-0.7
JAR	**Ashorobuto**	1.36	82	⇓P	P	10 50 03.5	+0.9
JAR				*e*S	S	10 50 24.5	+0.5
JKB	**Kayabe**	1.41	208	⇑P	P	10 50 04.0	+0.8
JKB				S	S	10 50 24.8	-0.2
JTKR	**Abashiri--Toko**	1.67	59	⇑P	P	10 50 07.2	+1.2
JTKR				S	S	10 50 30.3	+0.4
JOT	**Ohata**	1.87	201	⇑P	P	10 50 08.9	+0.6
JOT				*e*S	S	10 50 33.4	-0.5
JSE	**Soyaes**	1.89	14	⇑P	P	10 50 09.3	+0.8
JSE				*e*S	S	10 50 35.0	+0.7
JAK	**Akkeshi**	2.04	93	⇓P	P	10 50 10.1	-0.2
JAK				*e*S	S	10 50 36.5	-0.9
JOSM	**Okushiri--Mats**	2.09	241	⇑P	P	10 50 12.1	+1.1
JOSM				*e*S	S	10 50 39.0	+0.3
JWK2	**Keihoku**	2.18	359	⇑P	P	10 50 13.4	+1.3
JWK2				*e*S	S	10 50 41.4	+0.8
YUK	**Yuzh-Kuril'sk**	3.00	71	⇑*i*PN	P	10 50 23.4	+0.8
YUK				*i* S	S	10 50 59.9	+0.9
YUK				pmax	pmax		
	comp=Z,3µm,1.0s						
YUK				pmax	pmax		
	comp=Z,500nm,0.4s						
YUK				smax			
	comp=N,8µm,1.5s						
YUK				smax			
	comp=E,3µm,1.5s						
YUK				smax			
	comp=N,900nm,0.5s						
YUK				smax			
	comp=E,360nm,0.3s						
YSS	**Yuzh-Sakhalins**	3.87	8	⇑*i*PN	P	10 50 34.1	+0.1
YSS				*i* S	S	10 51 18.0	-1.4
YSS				pmax	pmax		
	comp=N,390nm,0.9s						
YSS				pmax	pmax		
	comp=Z,400nm,0.9s						
YSS				pmax	pmax		
	comp=E,130nm,0.8s						
YSS				smax			
	comp=N,200nm,0.9s						
YSS				smax			
	comp=E,220nm,0.9s						
YSS	**Yuzh-Sakhalins**	3.87	8	*e*Pn	P	10 50 33.2	-0.8
YSS				*e*Sn	S	10 51 19.0	-0.4
KUR	**Kuril'sk**	4.76	62	⇓*i*PN	P	10 50 44.2	-1.7
KUR				*e*		10 51 40.3	
KUR				pmax	pmax		
	comp=Z,90nm,0.6s						
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,90nm,0.5s						
MAJO	**Matsushiro**	7.18	205	*e*PN	P	10 51 17.9	-0.4
MAJO				pmax	pmax		
	comp=Z,46nm,0.5s						
MAJO	**Matsushiro**	7.18	205	*e*Pn	P	10 51 17.9	-0.4
	comp=Z,46nm,0.5s						
MAT	**Matsushiro**	7.18	205	*e*PN	P	10 51 18.0	-0.3
MAT				S	S	10 52 36.0	-2.8
MAT				pmax	pmax		
	comp=Z,16nm,0.5s						
MAT	**Matsushiro**	7.18	205	*e*P	P	10 51 18.0	-0.3
	comp=Z,16nm,0.5s						
MAT				S	S	10 52 36.0	-2.8
MAT	**Matsushiro**	7.18	205	P	P	10 51 17.5	-0.8
MAT				*e*S	S	10 52 36.0	-2.8
MDJ	**Mudanjiang**	9.03	284	P	P	10 51 43.8	+0.8
MDJ				AMB	AMB		
	comp=Z,31nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,150nm,5.1s						
MDJ	**Mudanjiang**	9.03	284	*e*Pn	P	10 51 43.7	+0.7
	comp=Z,26nm,0.8s						
KLR	**Kul'dur**	9.32	314	*e*PN	P	10 51 44.9	-2.0
JHJ	**Hachijo jima 2**	10.14	190	P	P	10 51 54.7	-2.9
	comp=Z,56nm,0.3s,baz=264,slow=22,SNR=22						
JHJ				S	S	10 53 40.5	-9.1
	comp=Z,58nm,0.3s,baz=234,slow=22,SNR=6.8						
CN2	**Changchun**	12.00	279	*e*P	P	10 52 21.8	-0.2
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
PET	**Petropavlovsk**	14.89	43	*e*P	P	10 52 59.3	+0.3
CBIJ	**Chichi jima**	16.00	179	P	P	10 53 12.3	-0.7
	comp=Z,17nm,0.3s,baz=335,slow=14,SNR=4.3						
HIA	**Hailar**	16.51	299	*e*P	P	10 53 17.5	-1.7
HIA				pmax	pmax		
	comp=Z,51nm,0.9s						
HIA	**Hailar**	16.51	299	*e*P	P	10 53 17.5	-1.7
	comp=Z,51nm,0.9s						
MA2	**Magadan**	17.34	15	*e*P	P	10 53 27.2	-2.0
MA2				pmax	pmax		
	comp=N,4.0nm,0.6s						
MA2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2	**Magadan**	17.34	15	*e*P	P	10 53 27.5	-1.7
	comp=Z,10nm,0.6s						
CLNS	**Chul'man**	17.48	328	*e*P	P	10 53 29.5	-1.4
CLNS				pmax	pmax		
	comp=N,7.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.7s						
BJI	**Beijing**	19.48	270	P	P	10 53 51.0	-1.8
BJI				AMB	AMB		
	comp=Z,31nm,0.8s						
BJI				LR	LR		
	comp=N,123nm,10.4s						
BJI				LR	LR		
	comp=E,209nm,10.4s						
BJI				LR	LR		
	comp=Z,118nm,24.2s						
BJI	**Beijing**	19.48	270	P	P	10 53 51.0	-1.8
	comp=Z,31nm,0.8s						
BJI				S	rx	10 56 13.7	
BJT	**Baijiatuau**	19.50	270	*e*P	P	10 53 51.1	-1.8
BJT				pmax	pmax		
	comp=Z,28nm,0.8s						
BJT	**Baijiatuau**	19.50	270	*e*P	P	10 53 51.1	-1.8
	comp=Z,28nm,0.8s						
YAK	**Yakutsk**	20.27	343	*e*P	P	10 54 02.2	+1.5
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK	**Yakutsk**	20.27	343	P	P	10 53 58.4	-2.2
	comp=Z,19nm,0.7s						
SEY	**Seymchan**	20.75	14	*e*P	P	10 54 06.6	+1.1
SEY				*e*		10 54 33.5	
SEY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	22.62	275	*e*P	P	10 54 27.8	+3.8
HHC				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb4.5						
HHC				AMB	AMB		
	comp=Z,100nm,5.5s						
BOD	**Bodaibo**	22.83	320	*e*P	P	10 54 23.1	-2.7
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
BTO	**Baotou**	23.82	275	*e*P	P	10 54 36.0	+0.5
ULN	**Ulaanbaatar**	24.76	293	*e*P	P	10 54 43.7	-0.6
ULN				pmax	pmax		
	comp=Z,26nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	24.76	293	*e*P	P	10 54 43.7	-0.7
	comp=Z,26nm,1.1s,mb4.7						
SONM	**Songino Array**	25.20	293	P	P	10 54 48.6	+0.1
	comp=Z,20nm,0.6s,mb4.8,baz=82,slow=8.5,SNR=175						
SONM				ScP		11 01 43.9	
	comp=Z,0.6nm,0.8s,baz=176,slow=1.3,SNR=4.5						
TLY	**Talaya**	27.02	302	*d* *i*P	P	10 55 05.2	+0.1
TLY				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6						
TLY	**Talaya**	27.02	302	*e*P	P	10 55 04.7	-0.4
	comp=Z,10nm,0.8s,mb4.5						
ZAK	**Zakamensk**	27.20	299	*i* P	P	10 55 05.7	-1.2
BILL	**Bilibino**	28.10	19	P	P	10 55 13.3	-1.6
BILL				*e*		10 56 06.1	
BILL				*e*		10 58 21.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.6						
BILL				MLR	MLR		
	comp=Z,200nm,22.0s						
TIXI	**Tiksi**	29.30	352	*e*P	P	10 55 21.8	-3.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
LZH	**Lanzhou**	29.98	269	P	P	10 55 32.0	+0.1
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.0						
LZH	**Lanzhou**	29.98	269	P	P	10 55 32.0	+0.1
	comp=Z,42nm,1.5s,mb5.0						
LZH				pP	tx	10 55 46.5	
LZH				sP	tx	10 55 55.0	
GTA	**Gaotai**	31.63	278	*e*P	P	10 55 46.5	+0.2
GTA				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.6						
KMI	**Kunming**	36.68	254	P	P	10 56 30.9	+1.4
KMI				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.6						
KMI				LR	LR		
	comp=Z,71nm,28.0s						
KMI	**Kunming**	36.68	254	P	P	10 56 30.9	+1.4
	comp=Z,16nm,1.1s,mb4.6						
KMI				LR	LR		
	comp=Z,70nm,28.0s						
ZAL	**Zalesovo**	38.34	307	P	P	10 56 43.6	+0.5
ZAL						11 02 28.7	
ZAL				pmax	pmax		
	comp=Z,12nm,0.6s						
ZAL				pmax	pmax		
	comp=N,1.0nm,0.5s						
ZAL	**Zalesovo**	38.34	307	P	P	10 56 43.6	+0.5
	comp=N,12nm,0.6s,mb4.7,baz=25,slow=9.3,SNR=72						
ZAL				ScP		11 02 28.7	
	comp=N,1.4nm,0.5s,baz=4.4,slow=6.2,SNR=8.8						
WMQ	**Urumqi**	38.76	290	P	P	10 56 47.4	+0.7
WMQ				AP	pP	10 57 19.0	+0.8
WMQ				XP	sP	10 57 35.0	0.0
WMQ				S	S	11 02 33.0	+0.1
WMQ				SS	SS	11 05 24.0	+1.1
WMQ				SCS	ScS	11 06 40.0	+0.9
WMQ				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,66nm,18.0s						
WMQ				LR	LR		
	comp=E,64nm,18.0s						
WMQ				LR	LR		
	comp=Z,42nm,18.0s						
NVS	**Novosibirsk**	39.13	308	*e*P	P	10 56 48.7	-0.9
IMA	**Indian Mountai**	41.32	34	*e*P	P	10 57 07.0	-0.5
IMA				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.7						
IMA	**Indian Mountai**	41.32	34	*e*P	P	10 57 07.0	-0.4
	comp=Z,15nm,0.7s,mb4.7						
MKAR	**Makanchi Array**	41.48	296	*e*P	P	10 57 09.2	+0.2
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LSA	**Lhasa**	42.39	269	P	P	10 57 19.0	+2.4
LSA	**Lhasa**	42.39	269	*e*P	P	10 57 18.2	+1.6
LSA				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.7						
LSA	**Lhasa**	42.39	269	*e*P	P	10 57 18.2	+1.6
	comp=Z,8.2nm,0.4s,mb4.7						
KURK	**Kurchatov**	42.70	303	*d* *i*P	P	10 57 18.8	0.0
KURK	**Kurchatov**	42.70	303	*e*P	P	10 57 18.7	-0.1
	comp=Z,29nm,0.8s,mb5.0						
MCK	**McKinley**	43.44	37	*e*P	P	10 57 24.5	-0.1
MCK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
MCK	**McKinley**	43.44	37	*e*P	P	10 57 24.5	-0.1
	comp=Z,0.9nm,0.5s,mb3.7						
CMAR	**Chiang Mai Arr**	43.72	249	P	P	10 57 28.3	+0.8
CMAR				S	S	11 03 51.5	+5.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	43.72	249	P	P	10 57 28.3	+0.8
	comp=Z,1.0nm,0.4s,mb3.8,baz=45,slow=7.4,SNR=5.9						
CMAR				S	S	11 03 51.5	+5.2
	comp=Z,0.3nm,0.4s,baz=49,slow=9.6,SNR=2.6						
ILAR	**Eielson Array**	44.22	36	P	P	10 57 30.9	+0.1
ILAR				*PP	pP	10 58 02.7	-0.1
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	44.22	36	P	P	10 57 30.9	0.0
	comp=Z,1.5nm,0.6s,mb3.8,baz=277,slow=10,SNR=36						
ILAR				pP	pP	10 58 02.6	-0.2
	comp=Z,2.2nm,0.9s,baz=284,slow=7.4,SNR=3.7						
CHKZ	**Chkalovo**	46.60	309	*e*P	P	10 57 49.5	-0.3
CHKZ				pmax	pmax		
	comp=Z,30nm,2.5s,mb4.5						
CHKZ	**Chkalovo**	46.60	309	*e*P	P	10 57 49.5	-0.3
	comp=Z,30nm,2.5s,mb4.5						
BVA0	**Borovoye Array**	46.92	308	P	P	10 57 52.5	+0.1
JIRN	**Jiri**	47.14	270	*e*P	P	10 57 55.0	+0.5
GUN	**Gumba**	47.23	270	*e*P	P	10 57 55.7	+0.6
	comp=Z,73nm,0.5s						
TKM2	**Tokmak 2**	47.30	294	P	P	10 57 56.4	+0.9
	SNR=38						
KKN	**Kakani**	47.74	271	*e*P	P	10 57 59.6	+0.5
	comp=Z,30nm,0.6s,mb5.1						
PKI	**Pulchoki**	47.77	270	*e*P	P	10 57 59.6	+0.3
KZA	**Kyzart**	47.89	293	P	P	10 58 01.6	+1.6
	SNR=10						
USP	**Ospenovka**	47.89	295	P	P	10 58 00.4	+0.4
	SNR=10						
DMN	**Daman**	47.97	271	*e*P	P	10 58 01.4	+0.5
	comp=Z,24nm,0.6s,mb5.0						
GKN	**Gorkha**	48.09	271	*e*P	P	10 58 02.0	+0.2
	comp=Z,22nm,0.4s,mb5.1						
AAK	**Ala-Archa**	48.16	294	P	P	10 58 02.1	0.0
	SNR=8.0						
AAK	**Ala-Archa**	48.16	294	*i* P	P	10 58 01.2	-1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
AAK	**Ala-Archa**	48.16	294	*e*P	P	10 58 01.2	-1.0
	comp=Z,7.1nm,0.8s,mb4.3						
KSH	**Kashi**	48.51	289	*e*P	P	10 58 07.1	+2.2
KSH				AMB	AMB		
	comp=Z,30nm,3.5s						
EKS2	**Erkin-Say**	48.63	294	P	P	10 58 06.1	+0.3
	SNR=11						
INK	**Inuvik**	48.83	29	*e*P	P	10 58 06.5	-0.5
INK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
INK	**Inuvik**	48.83	29	P	P	10 58 06.9	-0.1
	comp=Z,2.2nm,0.3s,mb4.3,baz=295,slow=6.4,SNR=62						
INK	**Inuvik**	48.83	29	*e*P	P	10 58 06.5	-0.5
	comp=Z,2.4nm,0.3s,mb4.3						
AML	**Almayashu**	48.91	294	P	P	10 58 08.9	+1.0
	SNR=10						
KOLN	**Koldanda**	48.98	272	*e*P	P	10 58 09.3	+0.6
	comp=Z,38nm,0.5s,mb5.3						
SVE	**Sverdlovsk**	50.95	316	*e*P	P	10 58 21.0	-2.3
SVE				pmax	pmax		
	comp=Z,40nm,1.3s,mb4.9						
KAKA	**Kakadu**	56.25	191	*e*P	P	10 59 02.3	-0.4
	comp=Z,11nm,0.6s,mb4.8						
RES	**Resolute Bay**	56.61	15	*e*P	P	10 59 03.0	-1.5
RES				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
RES	**Resolute Bay**	56.61	15	*e*P	P	10 59 03.0	-1.6
	comp=Z,11nm,0.8s,mb4.7						
KEV	**Kevo**	57.91	338	*e*p	P	10 59 12.1	-1.5
	comp=Z,5.3nm,0.7s,mb4.5						
KEV	**Kevo**	57.91	338	*e*P	P	10 59 12.1	-1.5
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
YKA	**Yellowknife Ar**	58.39	32	P	P	10 59 16.5	-0.5
YKA				*PP	pP	10 59 48.8	-1.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				pmax	pmax		

	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**58.39**	**32**	P	**P**	**10 59 16.5**	**-0.5**
	comp=Z,1.0nm,0.6s,mb3.8,baz=308,slow=6.4,SNR=42						
YKA				pP	pP	10 59 48.8	-1.9
	comp=Z,0.5nm,0.7s,baz=305,slow=6.4,SNR=2.4						
YKA	**Yellowknife Ar**	**58.39**	**32**	P	**P**	**10 59 16.5**	**-0.5**
YKA				pP	pP	10 59 48.8	-1.9
ARCES	**ARCESS Array B**	**58.46**	**338**	P	**P**	**10 59 16.4**	**-1.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**58.46**	**338**	P	**P**	**10 59 16.4**	**-1.0**
	comp=Z,1.8nm,0.7s,mb4.0,baz=79,slow=7.4,SNR=12						
JOF	**Joensuu**	**60.81**	**331**	*e*p	**P**	**10 59 31.3**	**-2.3**
KAF	**Kangasniemi**	**63.10**	**332**	*e*p	**P**	**10 59 47.2**	**-1.7**
	comp=Z,2.9nm,0.5s,mb4.4,baz=48,slow=6.3						
KAF	**Kangasniemi**	**63.10**	**332**	*e*P	**P**	**10 59 47.2**	**-1.7**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
WRAB	**Tennant Creek**	**63.14**	**188**	*e*P	**P**	**10 59 48.7**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**63.14**	**188**	*e*P	**P**	**10 59 48.6**	**-1.1**
	comp=Z,6.4nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**63.15**	**188**	P	**P**	**10 59 48.5**	**-1.3**
WRA				*PP	pP	11 00 21.5	-2.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**63.15**	**188**	P	**P**	**10 59 48.5**	**-1.3**
	comp=Z,1.8nm,0.6s,mb4.1,baz=4.8,slow=6.1,SNR=54						
WRA				pP	pP	11 00 21.5	-2.5
	comp=Z,0.8nm,0.6s,baz=4.3,slow=7.0,SNR=2.1						
OBN	**Obninsk**	**63.50**	**322**	⇑*i*P	**P**	**10 59 50.8**	**-0.7**
OBN				*e**PP	pP	11 00 32.1	+6.4
OBN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
FINES	**FINESS Array B**	**63.64**	**331**	P	**P**	**10 59 50.9**	**-1.4**
FINES				pmax	pmax		
	comp=Z,7.0nm,0.5s						
FINES	**FINESS Array B**	**63.64**	**331**	P	**P**	**10 59 50.9**	**-1.4**
	comp=Z,6.7nm,0.5s,mb4.7,baz=51,slow=8.0,SNR=53						
SUMG	**Summit**	**64.59**	**0**	*e*P	**P**	**10 59 57.9**	**-0.5**
	comp=Z,6.3nm,0.7s,mb4.5						
YBH	**Yreka Blue Hor**	**66.39**	**54**	P	**P**	**11 00 10.4**	**0.0**
YBH				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YBH	**Yreka Blue Hor**	**66.39**	**54**	P	**P**	**11 00 10.4**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.8,baz=342,slow=6.4,SNR=3.9						
GOF	**Gofitskoye**	**66.40**	**310**	*e*P	**P**	**11 00 11.5**	**+1.1**
GOF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.1						
ASAR	**Alice Springs**	**66.88**	**188**	P	**P**	**11 00 14.0**	**+0.3**
	comp=Z,2.9nm,0.7s,mb4.2,baz=5.5,slow=4.8,SNR=46						
ASPA	**Alice Springs**	**66.88**	**188**	*e*P	**P**	**11 00 14.0**	**+0.3**
MBWA	**Marble Bar**	**67.16**	**202**	*e*P	**P**	**11 00 14.4**	**-1.1**
	comp=Z,2.3nm,0.5s,mb4.3						
KIV	**Kislovodsk**	**67.28**	**309**	*c i*P	**P**	**11 00 16.9**	**+1.0**
KIV				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.3						
KIV	**Kislovodsk**	**67.28**	**309**	*e*P	**P**	**11 00 16.7**	**+0.8**
	comp=Z,27nm,0.7s,mb5.2						
ZEI	**Tsey**	**67.32**	**308**	*e*P	**P**	**11 00 15.6**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
CHMT	**Chamberlain Mo**	**68.43**	**45**	*e*P	**P**	**11 00 23.0**	**0.0**
NB2	**NORSAR Subarra**	**68.73**	**337**	P	**P**	**11 00 23.4**	**-1.2**
	comp=Z,6.0nm,0.7s,mb4.4,baz=36,slow=6.2						
NB2	**NORSAR Subarra**	**68.73**	**337**	P	**P**	**11 00 23.4**	**-1.2**
NB2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
NOA	**NORSAR Array B**	**68.73**	**337**	P	**P**	**11 00 24.0**	**-0.6**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NOA	**NORSAR Array B**	**68.73**	**337**	P	**P**	**11 00 24.0**	**-0.6**
	comp=Z,4.4nm,0.6s,mb4.4,baz=37,slow=6.2,SNR=26						
SOC	**Sochi**	**69.18**	**311**	*e*P	**P**	**11 00 27.5**	**-0.1**
SOC				*e*		11 00 56.4	
SOC				*e*		11 03 04.4	
SOC				*e*PPP	PPP	11 04 36.8	-6.3
SOC				*e*S	S	11 09 21.3	+1.0
SOC				*e*		11 10 08.7	
SOC				*e*SS	SS	11 13 51.5	+0.2
SOC				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.9						
SOC				pmax	pmax		
	comp=N,10.0nm,0.6s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.7s						
AKASG	**Malin Array Be**	**69.75**	**321**	P	**P**	**11 00 30.3**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,11nm,0.8s						
AKASG	**Malin Array Be**	**69.75**	**321**	P	**P**	**11 00 30.3**	**-0.6**
	comp=Z,11nm,0.8s,mb4.6,baz=42,slow=6.0,SNR=28						
BOZ	**Bozeman (W)**	**70.11**	**46**	*e*P	**P**	**11 00 33.6**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
BOZ	**Bozeman (W)**	**70.11**	**46**	*e*P	**P**	**11 00 33.6**	**+0.4**
	comp=Z,1.1nm,0.6s,mb3.8						
NVAR	**Mina Array Bea**	**71.09**	**55**	P	**P**	**11 00 40.6**	**+1.4**
	comp=Z,0.8nm,0.6s,mb3.7,baz=315,slow=5.1,SNR=2.6						
NVAR				pP	pP	11 01 14.1	+0.1
	comp=Z,0.8nm,0.5s,baz=286,slow=6.6,SNR=2.4						
PDAR	**Pinedale Array**	**73.16**	**47**	P	**P**	**11 00 52.0**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.4,baz=270,slow=1.5,SNR=5.4						
PDAR				pP	pP	11 01 23.4	-3.0
	comp=Z,0.4nm,0.7s,baz=270,slow=1.8,SNR=2.1						
MALT	**Malatya**	**73.37**	**307**	*e*P	**P**	**11 00 53.3**	**+0.7**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
MALT	**Malatya**	**73.37**	**307**	*e*P	**P**	**11 00 53.3**	**+0.7**
	comp=Z,2.8nm,0.9s,mb4.0						
KWP	**Kalwaria**	**73.43**	**324**	*e*P	**P**	**11 00 53.0**	**+0.3**
KWP				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.7						
KWP	**Kalwaria**	**73.43**	**324**	*e*P	**P**	**11 00 53.0**	**+0.3**
	comp=Z,7.4nm,0.4s,mb4.8						
KOLS	**Kolonicke sedl**	**74.14**	**323**	*e*P	**P**	**11 00 57.0**	**+0.2**
KOLS				*e*	pP	11 01 36.6	+4.6
OJC	**Ojcow**	**74.22**	**326**	*e*P	**P**	**11 00 57.8**	**+0.5**
CRVS	**Cervenica-Dubn**	**74.52**	**324**	*e*P	**P**	**11 00 57.9**	**-1.1**
STKA	**Stephens Creek**	**74.65**	**180**	P	**P**	**11 01 00.1**	**+0.1**
	comp=Z,2.4nm,0.9s,mb3.8,baz=358,slow=12,SNR=4.2						
BRTR	**Keskin Array B**	**75.14**	**311**	P	**P**	**11 01 03.2**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRTR	**Keskin Array B**	**75.14**	**311**	P	**P**	**11 01 03.2**	**+0.5**
	comp=Z,2.5nm,0.5s,mb4.1,baz=78,slow=3.7,SNR=16						
MORC	**Moravsky Berou**	**75.48**	**326**	*e*P	**P**	**11 01 03.9**	**-0.5**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
MORC	**Moravsky Berou**	**75.48**	**326**	*e*P	**P**	**11 01 03.9**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.0						
DPC	**Dobruska-Polom**	**75.52**	**327**	*e*P	**P**	**11 01 05.6**	**+1.0**
VYHS	**Vyhne**	**75.95**	**325**	*e*P	**P**	**11 01 07.6**	**+0.5**
CLL	**Collm**	**76.02**	**330**	⇑*i*P	**P**	**11 01 07.8**	**+0.4**
CLL				*i*		11 01 09.6	
CLL	**Collm**	**76.02**	**330**	⇑P	**P**	**11 01 07.8**	**+0.4**
CLL				*i*		11 01 09.6	
ZST	**Bratislava**	**76.90**	**326**	*e*P	**P**	**11 01 08.9**	**-3.5**
ZST	**Bratislava**	**76.90**	**326**	*e*	**P**	**11 01 08.9**	**-3.5**
KHC	**Kasperske Hory**	**77.56**	**328**	*e*P	**P**	**11 01 16.8**	**+0.7**
GERES	**GERESS Array B**	**77.75**	**328**	P	**P**	**11 01 17.3**	**+0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GERES	**GERESS Array B**	**77.75**	**328**	P	**P**	**11 01 17.3**	**+0.2**
	comp=Z,1.3nm,0.9s,mb3.5,baz=151,slow=30,SNR=4.1						
SCHQ	**Schefferville**	**79.38**	**16**	P	**P**	**11 01 25.8**	**0.0**
	comp=Z,1.2nm,0.8s,mb3.6,baz=352,slow=13,SNR=3.3						
WLF	**Walferdange**	**79.81**	**333**	*e*P	**P**	**11 01 27.9**	**-0.3**
WLF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
WLF	**Walferdange**	**79.81**	**333**	*e*P	**P**	**11 01 27.9**	**-0.4**
	comp=Z,4.6nm,0.5s,mb4.4						
ANMO	**Albuquerque**	**80.39**	**51**	P	**P**	**11 01 33.6**	**+1.9**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ANMO	**Albuquerque**	**80.39**	**51**	P	**P**	**11 01 33.6**	**+2.0**
	comp=Z,0.5nm,0.5s,mb3.4,baz=326,slow=7.3,SNR=4.1						
CDF	**Champ du Feu**	**80.49**	**331**	*e*P	**P**	**11 01 32.9**	**+1.0**
HINF	**Hinteralfeld**	**81.14**	**331**	*e*P	**P**	**11 01 35.8**	**+0.4**
FLN	**La Foliniere**	**82.71**	**336**	*e*P	**P**	**11 01 43.3**	**-0.1**
SSF	**Saint Saulge**	**82.95**	**333**	*e*P	**P**	**11 01 45.6**	**+0.9**
LPG	**La Plagne**	**83.16**	**330**	*e*P	**P**	**11 01 46.8**	**+1.0**
SMF	**Signal de Mont**	**83.20**	**332**	*e*P	**P**	**11 01 46.2**	**+0.3**
	comp=Z,16nm,1.0s,mb4.4						
SMF	**Signal de Mont**	**83.20**	**332**	*e*P	**P**	**11 01 46.2**	**+0.3**
SMF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
AVF	**Avril sur Loir**	**83.23**	**333**	*e*P	**P**	**11 01 46.5**	**+0.4**
	comp=Z,13nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**83.23**	**333**	*e*P	**P**	**11 01 46.5**	**+0.4**
AVF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
ROSF	**Rostrenen**	**83.90**	**337**	*e*P	**P**	**11 01 50.0**	**+0.7**
MFF	**Saint Martin d**	**84.53**	**335**	*e*P	**P**	**11 01 53.3**	**+0.8**
	comp=Z,6.3nm,0.6s,mb4.2						
MFF	**Saint Martin d**	**84.53**	**335**	*e*P	**P**	**11 01 53.3**	**+0.8**
MFF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
LFF	**La Frestale**	**85.73**	**333**	*e*P	**P**	**11 01 59.8**	**+1.3**
TXAR	**Lajitas Array**	**86.11**	**53**	P	**P**	**11 02 00.9**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=308,slow=4.0,SNR=4.8						
TXAR				pP	pP	11 02 37.3	+0.4
	comp=Z,1.0nm,0.8s,baz=299,slow=3.5,SNR=7.3						

IDC 21 11:02:27.3±8.1**, 1.40N**×**124.13E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/16**, mbtmp3.8**/3**, Error ellipse: s-maj=180.5km s-min=127.5km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.46**	**155**	P	P	11 07 39.9	+0.4
	0.7nm,0.3s,baz=332,slow=11,SNR=31						
ASAR	**Alice Springs**	**26.67**	**160**	P	P	11 08 08.3	-1.8
	0.4nm,0.3s,baz=340,slow=7.7,SNR=14						
STKA	**Stephens Creek**	**37.01**	**155**	P	P	11 09 37.8	-2.9
	1.5nm,0.4s,baz=354,slow=9.5,SNR=9.5						

BJI ***21*** *11:07:23.7, 6.51N×92.42E, h38^{km}, mB4.9, mb4.8, Ms4.6, Msz4.0*

IDC ***21*** *11:07:23.3±0.6, 7.00N×92.33E, mb4.3/17, mb1 4.4/18, mb1mx4.3/25, mbtmp4.3/18, ML4.2/1, MS3.4/2, Ms1 3.4/2, ms1mx3.1/22, Error ellipse: s-maj=29.7km s-min=13.8km az=47.0*

NEIC ***21*** *11:07:26.9±0.3, 6.88N×92.30E, mb4.6/13, Error ellipse: s-maj=8.7km s-min=5.3km az=58.0*

MOS ***21*** *11:07:26.2±1.0, 6.89N×92.38E, h33^{km}, mb4.9/18, Error ellipse: s-maj=13.6km s-min=6.8km az=98.9*

ISC 21 11:07:25.7±0.4**, 6.92N**±0.06×**92.50E**±0.05**, h27**^{km}**, h27**^{km}±1.8^{km}**:pP-P, n107,** $\sigma 1^{s}12$/110**, mb4.6**/52**, MS4.2**/4**, 4C-2D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**9.09**	**51**	P	**P**	**11 09 46.5**	**+8.2**
CM31	**Chiang Mai Arr**	**13.08**	**28**	*e*Pn	**P**	**11 10 35.0**	**+2.5**
	6.6nm,0.7s						
CM31				*e*pPn		11 10 42.5	
CMAR	**Chiang Mai Arr**	**13.08**	**28**	Pn	**P**	**11 10 32.7**	**+0.2**
	0.4nm,0.3s,baz=231,slow=14,SNR=42						
CMAR				LR	LR	11 15 51.2	
	comp=Z,67nm,20.6s,baz=205,slow=39						
CHG	**Chiang Mai**	**13.39**	**27**	⇑P	**P**	**11 10 39.0**	**+2.4**
	19nm,1.0s						
VIS	**Vishakhapatnam**	**13.98**	**321**	*e*P	**P**	**11 10 43.0**	**-1.5**
VIS				*e*		11 10 43.8	
	comp=Z,91nm,0.2s						
VIS				*e*S	**S**	**11 13 03.6**	**-16**
NANT	**Nan**	**14.26**	**33**	P	**P**	**11 10 47.0**	**-1.2**
HYB	**Hyderabad**	**17.15**	**309**	*e*P	**P**	**11 11 18.0**	**-7.4**
HYB				*e*S	**S**	**11 14 36.0**	**+2.2**
HYB	**Hyderabad**	**17.15**	**309**	*i* P	**P**	**11 11 18.0**	**-7.4**
HYB				*e*S	**S**	**11 14 36.0**	**+2.2**
BLSP	**Bilaspur**	**18.13**	**328**	*e*P	**P**	**11 11 37.9**	**+0.3**
BLSP				*e*		11 11 40.0	
	comp=Z,18nm,0.3s						
KMI	**Kunming**	**20.59**	**27**	P	**P**	**11 12 06.3**	**+0.9**
KMI				S	**S**	**11 15 56.0**	**+6.7**
KMI				LR	LR		
	comp=N,184nm,13.3s,MS3.8						
KMI				LR	LR		
	comp=E,189nm,12.0s,MS3.8						
KMI				LR	LR		
	comp=Z,160nm,11.1s,MS3.6						
KMI	**Kunming**	**20.59**	**27**	P	**P**	**11 12 06.2**	**+0.8**
KMI				S	**S**	**11 15 56.0**	**+6.7**
KMI				MLR	MLR		
	comp=Z,160nm,11.1s,MS3.6						
KAD	**Karad**	**20.65**	**302**	*e*P	**P**	**11 12 08.0**	**+1.9**
JIRN	**Jiri**	**21.48**	**345**	*e*P	**P**	**11 12 14.2**	**-0.3**
	comp=Z,75nm,0.8s,mb5.1						
POO	**Poona**	**21.52**	**304**	*e*P	**P**	**11 12 16.0**	**+1.1**
PKI	**Pulchoki**	**21.62**	**343**	*e*P	**P**	**11 12 16.2**	**+0.3**
	comp=Z,92nm,1.0s,mb5.2						
DMN	**Daman**	**21.74**	**342**	*e*P	**P**	**11 12 17.3**	**+0.1**
	comp=Z,89nm,1.1s,mb5.1						
BHPL	**Bhopal**	**21.77**	**320**	*e*P	**P**	**11 12 18.2**	**+0.8**
BHPL				*e*		11 12 19.0	
	comp=Z,13nm,1.3s						
GUN	**Gumba**	**21.80**	**344**	*e*P	**P**	**11 12 17.6**	**-0.2**
	comp=Z,52nm,0.9s,mb5.0						
KKN	**Kakani**	**21.86**	**343**	*e*P	**P**	**11 12 18.1**	**-0.2**
	comp=Z,148nm,1.5s,mb5.2						
GKN	**Gorkha**	**22.26**	**341**	*e*P	**P**	**11 12 22.3**	**0.0**
	comp=Z,66nm,0.8s,mb5.1						
KOLN	**Koldanda**	**22.39**	**339**	*e*P	**P**	**11 12 24.0**	**+0.4**
	comp=Z,39nm,0.8s,mb4.9						
LSA	**Lhasa**	**22.70**	**357**	P	**P**	**11 12 29.0**	**+2.3**
LSA	**Lhasa**	**22.70**	**357**	*e*P	**P**	**11 12 28.5**	**+1.8**
LSA				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
LSA	**Lhasa**	**22.70**	**357**	*e*P	**P**	**11 12 28.5**	**+1.8**
	comp=Z,12nm,0.7s,mb4.4						
GYA	**Guiyang**	**23.66**	**33**	⇓*i*P	**P**	**11 12 37.4**	**+1.3**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,150nm,3.8s						
PTH	**Pithoragarh**	**25.31**	**334**	*e*P	**P**	**11 12 54.0**	**+2.0**
PTH				*e*S	**S**	**11 17 17.2**	**+3.5**
NDI	**New Delhi**	**26.02**	**328**	*e*P	**P**	**11 13 03.0**	**+4.4**
CD2	**Chengdu**	**26.10**	**22**	*e*P	**P**	**11 12 58.0**	**-1.3**
DDI	**Dehra Dun**	**26.95**	**332**	*e*P	**P**	**11 13 11.0**	**+3.9**
ENH	**Enshi**	**28.19**	**32**	*e*P	**P**	**11 13 17.6**	**-0.7**
	comp=Z,17nm,1.2s,mb4.6						
ENH				*e*pP	pP	11 13 23.7	-2.4
LZH	**Lanzhou**	**30.84**	**18**	*e*P	**P**	**11 13 42.5**	**+0.6**
LZH				AP	pP	11 13 48.5	-1.3
LZH				XP	sP	11 13 54.0	+0.8
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
LZH	**Lanzhou**	**30.84**	**18**	*e*P	**P**	**11 13 42.5**	**+0.6**
LZH				*SP	sP	11 13 54.0	+0.8
LZH				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
LZH	**Lanzhou**	**30.84**	**18**	*e*P	**P**	**11 13 42.5**	**+0.6**
	comp=Z,15nm,1.0s,mb4.8						
LZH				pP	pP	11 13 48.5	-1.3
LZH				sP	sP	11 13 54.0	+0.8
XAN	**Xi’an**	**30.97**	**27**	P	**P**	**11 13 41.1**	**-2.0**
XAN				AP	pP	11 13 53.8	+2.9
XAN				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.4						
WHN	**Wuhan**	**31.19**	**38**	*e*P	**P**	**11 13 45.0**	**-0.1**
GTA	**Gaotai**	**33.02**	**10**	*e*P	**P**	**11 14 00.8**	**-0.1**
GTA				AP	pP	11 14 08.8	0.0
GTA				XP	sP	11 14 12.1	-0.1
GTA				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.8						
NJ2	**Nanjing**	**35.05**	**41**	*e*P	**P**	**11 14 18.8**	**+0.2**
NJ2				AP	pP	11 14 28.8	+2.3
NJ2				XP	sP	11 14 32.4	+2.5
NJ2				PP	PP	11 15 37.8	+0.5
NJ2				PPP	PPP	11 15 59.9	+4.5
NJ2				S	**S**	**11 19 48.0**	**-0.4**
NJ2				XS		11 20 04.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,462nm,4.2s						
NJ2				LR	LR		
	comp=N,1µm,16.8s,MS5.2						
NJ2				LR	LR		
	comp=E,4µm,18.2s,MS5.2						
NJ2				LR	LR		
	comp=Z,2µm,16.4s,MS5.0						
WMQ	**Urumqi**	**37.00**	**354**	*e*P	**P**	**11 14 35.3**	**+0.4**
HHC	**Hu-ho-hao-te**	**37.84**	**24**	*e*P	**P**	**11 14 41.3**	**-0.7**
HHC				S	**S**	**11 20 28.8**	**-2.2**
HHC				AMB	AMB		
	comp=Z,16nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,94nm,7.1s						
HHC				LR	LR		
	comp=N,134nm,5.9s						
HHC				LR	LR		
	comp=E,172nm,5.8s						
HHC				LR	LR		
	comp=Z,98nm,7.8s						
KZA	**Kyzart**	**38.21**	**339**	P	**P**	**11 14 46.3**	**+1.2**
	SNR=6.3						
UCH	**Uchtor**	**38.61**	**338**	P	**P**	**11 14 49.6**	**+1.2**
	SNR=13						
KBK	**Karagaybulak**	**38.83**	**339**	P	**P**	**11 14 51.3**	**+1.1**
	SNR=5.2						
AML	**Almayashu**	**38.83**	**338**	P	**P**	**11 14 51.4**	**+1.1**
	SNR=33						
TKM2	**Tokmak 2**	**38.84**	**340**	P	**P**	**11 14 51.1**	**+0.7**
	SNR=6.7						
AAK	**Ala-Archa**	**38.97**	**339**	P	**P**	**11 14 53.0**	**+1.6**
	SNR=8.3						
AAK	**Ala-Archa**	**38.97**	**339**	*i* P	**P**	**11 14 51.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.5						
AAK	**Ala-Archa**	**38.97**	**339**	*e*P	**P**	**11 14 51.6**	**+0.1**
	comp=Z,9.4nm,1.0s,mb4.5						
FRU	**Bishkek**	**39.10**	**339**	*e*P	**P**	**11 14 53.0**	**+0.5**
EKS2	**Erkin-Say**	**39.25**	**338**	P	**P**	**11 14 55.4**	**+1.6**
	SNR=7.7						
USP	**Ospenovka**	**39.52**	**339**	P	**P**	**11 14 56.9**	**+0.9**
	SNR=15						
MKAR	**Makanchi Array**	**40.69**	**349**	*e*P	**P**	**11 15 05.2**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**41.08**	**128**	*e*P	**P**	**11 15 10.5**	**+1.4**
	comp=Z,12nm,0.8s,mb4.6						
SONM	**Songino Array**	**42.46**	**14**	P	**P**	**11 15 19.9**	**-0.3**
	comp=Z,3.4nm,0.9s,mb4.0,baz=201,slow=7.0,SNR=22						
SONM				PcP	PcP	11 17 13.6	+0.2
	comp=Z,0.8nm,0.5s,baz=199,slow=3.9,SNR=4.1						
ULN	**Ulaanbaatar**	**42.65**	**14**	*e*P	**P**	**11 15 21.1**	**-0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**42.65**	**14**	*e*P	**P**	**11 15 21.1**	**-0.6**
	comp=Z,2.1nm,0.9s,mb3.9						
ZAK	**Zakamensk**	**44.25**	**10**	⇑*e*P	**P**	**11 15 35.0**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.6						
MOY	**Mondy**	**45.16**	**7**	*e*P	**P**	**11 15 43.0**	**+1.1**
KURK	**Kurchatov**	**45.16**	**348**	*e*P	**P**	**11 15 41.7**	**-0.3**
KURK				*e**PP	pP	11 15 49.4	-0.6
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
KURK	**Kurchatov**	**45.16**	**348**	*e*P	**P**	**11 15 41.7**	**-0.3**
	comp=Z,9.6nm,0.9s,mb4.6						
KURK				*e*pP	pP	11 15 49.4	-0.6
TLY	**Talaya**	**45.57**	**10**	*e*P	**P**	**11 15 45.1**	**0.0**
TLY				*e**PP	pP	11 15 52.8	-0.3
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
TLY	**Talaya**	**45.57**	**10**	*e*P	**P**	**11 15 45.1**	**0.0**
	comp=Z,4.0nm,0.9s,mb4.3						
TLY				*e*pP	pP	11 15 52.8	-0.4
CN2	**Changchun**	**46.71**	**33**	*e*P	**P**	**11 15 57.3**	**+3.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
ZAL	**Zalesovo**	**47.30**	**354**	P	**P**	**11 15 57.9**	**-0.9**
	comp=Z,1.6nm,0.7s,mb4.1,baz=292,slow=8.8,SNR=12						
NVS	**Novosibirsk**	**48.37**	**353**	*e*P	**P**	**11 16 05.2**	**-1.9**
WRA	**Warramunga Arr**	**49.06**	**124**	P	**P**	**11 16 13.2**	**+0.3**
	comp=Z,7.0nm,0.8s,mb4.7,baz=303,slow=8.8,SNR=50						
WRAB	**Tennant Creek**	**49.06**	**124**	*e*P	**P**	**11 16 13.8**	**+0.8**
WRAB				*e**PP	pP	11 16 21.6	+0.5
WRAB				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**49.06**	**124**	*e*P	**P**	**11 16 13.8**	**+0.8**
	comp=Z,13nm,0.8s,mb5.0						
WRAB				*e*pP	pP	11 16 21.6	+0.6
BVAR	**Borovoye Array**	**49.39**	**343**	P	**P**	**11 16 13.7**	**-1.4**
	comp=Z,3.1nm,0.9s,mb4.4,baz=153,slow=6.6,SNR=16						
CHKZ	**Chkalovo**	**49.89**	**343**	*e*P	**P**	**11 16 18.3**	**-0.6**
CHKZ				*e**PP	pP	11 16 25.4	-1.6
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
CHKZ	**Chkalovo**	**49.89**	**343**	*e*P	**P**	**11 16 18.3**	**-0.6**
	comp=Z,4.2nm,0.6s,mb4.7						
CHKZ				*e*pP	pP	11 16 25.4	-1.6
ASPA	**Alice Springs**	**50.58**	**128**	*e*P	**P**	**11 16 25.3**	**+0.8**
ASAR	**Alice Springs**	**50.58**	**128**	P	**P**	**11 16 25.4**	**+0.8**
	comp=Z,5.3nm,0.8s,mb4.5,baz=308,slow=7.5,SNR=50						
BOD	**Bodaibo**	**53.46**	**14**	*e*P	**P**	**11 16 44.7**	**-1.0**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
ZEI	**Tsey**	**55.64**	**318**	*e*P	**P**	**11 16 59.3**	**-2.6**
ZEI				*i* *PP	pP	11 17 09.0	-1.0
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
KMBO	**Kilima Mbogo**	**55.70**	**264**	LR	LR	11 39 26.8	
	comp=Z,68nm,18.2s,MS3.8,baz=85,slow=35						
CLNS	**Chul’man**	**55.90**	**21**	*e*P	**P**	**11 17 02.5**	**-1.0**
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
CLNS				pmax	pmax		
	comp=N,7.0nm,1.2s						
PMG	**Port Moresby**	**56.82**	**106**	P	**P**	**11 17 10.9**	**+0.2**
	comp=N,7.1nm,0.9s,mb4.7,baz=270,slow=6.1,SNR=2.8						
KIV	**Kislovodsk**	**56.95**	**319**	*e*P	**P**	**11 17 10.3**	**-0.9**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
EIL	**Elat**	**58.50**	**301**	P	**P**	**11 17 21.0**	**-1.3**
	comp=Z,5.1nm,0.8s,mb4.6,baz=170,slow=17,SNR=3.0						
YSS	**Yuzh-Sakhalins**	**58.53**	**38**	*i* P	**P**	**11 17 21.5**	**-0.8**
SOC	**Sochi**	**58.77**	**317**	*e*P	**P**	**11 17 15.5**	**-8.4**
SOC				*e*		11 18 09.3	
SOC				*e*		11 19 31.3	
SOC				*e*S	**S**	**11 25 19.2**	**-6.4**
SOC				*e*		11 27 10.7	
SOC				*e*SS	SS	11 29 16.2	-4.4
SOC				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
SOC				pmax	pmax		
	comp=N,18nm,0.9s						
SOC				pmax	pmax		
	comp=E,17nm,0.7s						
STKA	**Stephens Creek**	**60.65**	**132**	P	**P**	**11 17 38.0**	**+0.9**
	comp=E,5.6nm,0.8s,mb4.8,baz=314,slow=8.3,SNR=16						
STKA	**Stephens Creek**	**60.65**	**132**	*e*P	**P**	**11 17 37.6**	**+0.5**
STKA				*e*pP	pP	11 17 45.8	+0.4
YAK	**Yakutsk**	**61.42**	**19**	*e*P	**P**	**11 17 41.5**	**-0.4**
YAK				pmax	pmax		
	comp=Z,20nm,1.7s,mb5.0						
BRTR	**Keskin Array B**	**61.83**	**312**	P	**P**	**11 17 43.4**	**-1.6**
	comp=Z,1.5nm,0.7s,mb4.2,baz=112,slow=6.7,SNR=7.5						
OBN	**Obninsk**	**65.33**	**328**	*e*P	**P**	**11 18 08.2**	**+0.5**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.1						
AKASG	**Malin Array Be**	**67.90**	**322**	P	**P**	**11 18 21.3**	**-2.8**
	comp=Z,0.7nm,0.6s,mb3.9,baz=86,slow=5.3,SNR=5.0						
MA2	**Magadan**	**68.36**	**28**	⇑*i*P	**P**	**11 18 25.1**	**-1.7**
MA2				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
TIXI	**Tiksi**	**68.49**	**12**	⇑*i*P	**P**	**11 18 26.5**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
MLR	**Muntele Rosu**	**68.72**	**316**	P	**P**	**11 18 28.7**	**-0.6**
	comp=Z,5.6nm,0.9s,mb4.5,baz=128,slow=3.0,SNR=9.9						
JOF	**Joensuu**	**71.01**	**335**	*e*p	**P**	**11 18 41.0**	**-2.0**
FINES	**FINESS Array B**	**72.80**	**333**	P	**P**	**11 18 52.0**	**-1.6**
	comp=Z,1.9nm,0.7s,mb4.2,baz=101,slow=9.7,SNR=8.6						
GERES	**GERESS Array B**	**77.45**	**318**	P	**P**	**11 19 19.6**	**-0.9**
	comp=Z,3.5nm,0.9s,mb4.3,baz=90,slow=8.0,SNR=8.1						
BILL	**Bilibino**	**77.57**	**22**	*e*P	**P**	**11 19 20.6**	**-0.1**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
HFS	**Hagfors**	**78.46**	**330**	P	**P**	**11 19 25.3**	**-0.4**
	comp=Z,1.0nm,0.8s,mb3.8,baz=90,slow=4.4,SNR=5.2						
GRA1	**Grafenberg Arr**	**79.12**	**319**	*e*P	**P**	**11 19 30.2**	**+0.6**
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**79.12**	**319**	*e*P	**P**	**11 19 30.2**	**+0.6**

GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	Grafenberg Arr	79.12	319	eP	P	11 19 30.2	+0.6
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	Grafenberg Arr	79.12	319	eP	P	11 19 30.2	+0.6
	comp=Z,6.0nm,1.0s,mb4.5						
NOA	NORSAR Array B	79.76	331	P	P	11 19 31.7	-1.1
	comp=Z,0.9nm,0.7s,mb3.8,baz=94,slow=5.8,SNR=3.6						
DAVOX	Davos	79.95	316	P	P	11 19 33.3	-0.8
	comp=Z,4.3nm,0.8s,mb4.5,baz=339,slow=15,SNR=3.8						
SYO	Syowa Base	84.02	197	⇓X		11 19 52.3	
EKA	Eskdalemuir Ar	87.58	325	P	P	11 20 12.7	+0.1
	comp=Z,2.1nm,0.7s,mb4.5,baz=79,slow=4.3,SNR=4.0						
YKA	Yellowknife Ar	107.72	13	PP	PP	11 26 10.0	-5.5
	comp=Z,0.2nm,0.9s,baz=333,slow=8.5,SNR=5.0						
PDAR	Pinedale Array	126.63	20	PKP	PKPdf	11 26 29.5	-2.4
	comp=Z,0.6nm,0.8s,slow=1.5,SNR=5.7						
TXAR	Lajitas Array	140.75	23	PKhKP		11 26 51.4	
	comp=Z,0.2nm,0.6s,slow=0.9,SNR=3.2						
LPAZ	La Paz	158.88	242	PKPab	PKPab	11 28 01.6	+1.2
	comp=Z,1.0nm,0.7s,baz=69,slow=8.7,SNR=3.9						

IDC 21 11:15:51.8±8.3**, 6.13S×152.55E, h65^{km}**±71^{km}**, mb3.0**/3**, mb1 3.4**/4**, mb1mx3.2**/14**, mbtmp3.4**/4**, ML2.8**/1**, Error ellipse: s-maj=114.6km s-min=35.1km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.26	238	P	P	11 17 22.6	-0.9
	1.5nm,0.3s,baz=58,slow=11,SNR=6.1						
PMG				S	S	11 18 31.6	-2.8
	0.7nm,0.3s,baz=313,slow=15,SNR=2.8						
WRA	Warramunga Arr	22.40	231	P	P	11 20 45.2	-0.8
	0.2nm,0.4s,baz=56,slow=9.8,SNR=9.8						
ASAR	Alice Springs	25.02	224	P	P	11 21 10.0	-1.4
	0.4nm,0.5s,baz=60,slow=9.0,SNR=8.0						
ILAR	Eielson Array	83.48	22	P	P	11 28 12.1	-1.4
	0.3nm,0.7s,baz=243,slow=5.9,SNR=5.9						

WEL 21 11:22:15.8±0.3**, 38.46S×175.93E, h170^{km}**±2^{km}**, ML3.8**/12**, 2C, Error ellipse: s-maj=2.4km s-min=2.2km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KATZ	Kakaramea	0.55	200	PN	P	11 22 39.9	-0.1
MGZ	Maungaku	0.62	210	PN	P	11 22 40.3	-0.1
WTVZ	West Tongariro	0.71	202	PN	P	11 22 40.5	-0.2
TWVZ	Taurewa	0.72	212	PN	P	11 22 40.6	-0.3
OTVZ	Oturere	0.73	197	PN	P	11 22 41.0	+0.1
NGZ	Ngauruhoe	0.76	200	PN	P	11 22 41.1	0.0
CNZ	Chateau	0.80	202	PN	P	11 22 41.2	-0.1
WPVZ	Whakapapa	0.80	202	PN	P	11 22 41.3	0.0
BKZ	Black Stump Fm	0.83	148	PN	P	11 22 41.5	0.0
BKZ				SN	S	11 23 00.7	-0.7
BKZ				SN	S	11 23 00.8	-0.5
TUVZ	Tukino	0.83	195	⇑PN	P	11 22 41.5	0.0
TUVZ				SN	S	11 23 01.2	-0.2
FWVZ	Far West T-bar	0.85	201	PN	P	11 22 41.6	0.0
URZ	Urewera	0.95	78	PN	P	11 22 41.8	-0.4
URZ				SN	S	11 23 02.0	-0.7
MOVZ	Moawhango	0.95	188	⇑PN	P	11 22 41.9	-0.4
MOVZ				SN	S	11 23 00.6	-2.2
MWZ	Matawai	1.26	85	PN	P	11 22 44.7	-0.2
MWZ				SN	S	11 23 06.3	-1.2
KNZ	Kokohu	1.47	113	PN	P	11 22 47.2	+0.2
KNZ				SN	S	11 23 10.0	-1.1
WAZ	Wanganui	1.49	209	PN	P	11 22 46.2	-0.9
TSZ	Takapari Road	1.60	179	PN	P	11 22 47.5	-0.7
PWZ	Pawanui	1.72	156	PN	P	11 22 49.0	-0.5
PWZ				SN	S	11 23 14.5	-1.1
MRZ	Mangatainoka R	2.21	187	PN	P	11 22 52.9	-2.1
MRZ				SN	S	11 23 21.7	-3.5
BFZ	Birch Farm	2.23	174	PN	P	11 22 53.5	-1.7
BFZ				SN	S	11 23 20.8	-4.8
KIW	Kapiti Island	2.52	198	PN	P	11 22 55.9	-2.8
MTW	Mount Morrison	2.71	187	PN	P	11 22 58.0	-3.1
CAW	Cannon Point	2.73	194	PN	P	11 22 58.2	-3.0
CAW				SN	S	11 23 32.2	-3.9
MRW	Makara Radio	2.92	199	PN	P	11 23 00.5	-3.1
WEL	Wellington	2.96	197	PN	P	11 23 00.9	-3.2
MSWZ	Moikau Station	3.00	190	PN	P	11 23 01.1	-3.5
MSWZ				SN	S	11 23 36.2	-5.8
BHW	Baring Head	3.06	195	PN	P	11 23 01.7	-3.6
TUWZ	Tuamarina	3.34	207	PN	P	11 23 04.8	-4.0
NNZ	Nelson	3.38	215	PN	P	11 23 05.0	-4.4
NNZ				SN	S	11 23 45.3	-5.4
QRZ	Quartz Range	3.53	227	PN	P	11 23 06.1	-5.2
THZ	Tophouse	4.03	214	ePN	P	11 23 12.4	-5.3
KHZ	Kahutara	4.35	204	PN	P	11 23 17.6	-4.3
DSZ	Denniston Nort	4.56	223	ePN	P	11 23 18.4	-6.2
LTZ	Lake Taylor	5.14	212	ePN	P	11 23 26.3	-5.8

NEIC ***21*** *11:52:52.0, 11.24N×62.12W, h93^{km}, MD3.5(TRN), After TRN.*
TRN ***21*** *11:52:52.0, 11.24N×62.12W, h93^{km}, MD3.5*
FUNV ***21*** *11:52:52.2, 11.23N×61.95W, h81^{km}, MW3.1*
ISC 21 11:52:50.8±0.6**, 11.18N**±0.03×**62.11W**±0.04**, h100^{km}**±7^{km}**, n24, σ1^{s}09**/38**, 1C-5D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.54	192	⇓iP	P	11 53 07.2	+0.1
GUIV				eS	S	11 53 18.4	-0.9
TRN	Trinidad (W)	0.87	127	⇑iP	P	11 53 10.9	+0.7
TRN				eS	S	11 53 24.1	-0.6
GRW	Mount Saint Ca	1.07	24	eP	P	11 53 12.2	-0.1
GRW				eS	S	11 53 27.6	-0.9
TPP	Pointe-a-Pierr	1.07	143	eP	P	11 53 14.1	+1.7
TPP				eS	S	11 53 31.9	+3.3
GRHS	Sauteurs	1.14	24	eP	P	11 53 13.4	+0.3
GRHS				eS	S	11 53 28.8	-1.0
CRUV	Carupano	1.21	246	⇓iP	P	11 53 14.8	+0.7
CRUV				eS	S	11 53 31.6	+0.1
GRSS	Sisters	1.22	24	eS	S	11 53 29.5	-2.0
GRSS	Sisters	1.22	24	eS	S	11 53 31.0	-0.5
TBH	Brigand Hill	1.24	124	eP	P	11 53 15.2	+0.9
TBH				eS	S	11 53 33.3	+1.3
TPR	Prospect	1.31	90	eP	P	11 53 15.2	0.0
TPR				eS	S	11 53 33.2	-0.2
BOT	Bacolet	1.37	90	eP	P	11 53 16.1	+0.3
ORIV	Oritupano	2.46	211	eS	S	11 54 00.4	+1.0
IBAV	Isla La Blanqu	2.50	285	eP	P	11 53 31.4	+0.7
PCRV	Puerto La Cruz	2.67	248	eP	P	11 53 34.8	+1.6
PCRV				eS	S	11 54 05.5	+0.6
RIOV	Rio Grande	3.10	175	eS	S	11 54 12.9	-2.4
GURV	El Guri	3.53	196	⇓eP	P	11 53 45.0	+0.2
GURV				eS	S	11 54 23.4	-2.4
CUPV	Cœpira	3.78	253	eP	P	11 53 49.7	+1.4
BIRV	Birongo	4.14	261	eP	P	11 53 54.7	+1.5
MERV	Las Mercedes	4.54	245	⇓iP	P	11 53 59.1	+0.4
MERV				eS	S	11 54 49.5	-1.2
LUEV	Luepa	5.34	173	eP	P	11 54 08.3	-1.2
CAOV	Caicara del Or	5.65	228	eP	P	11 54 13.6	-0.1
CAOV				eS	S	11 55 14.4	-3.5
BAUV	El Baul	6.25	250	eP	P	11 54 21.2	-0.7
BAUV				eS	S	11 55 28.7	-3.8
MONV	Montecano	7.74	276	eP	P	11 54 41.9	-0.5
PAYV	Puerto Ayacuch	7.93	224	⇓iP	P	11 54 44.1	-0.8
PAYV				eS	S	11 56 06.7	-6.9

STR ***21*** *11:57:56.7±0.2, 49.38N×6.89E, h1^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
NEIC ***21*** *11:57:56.7, 49.38N×6.89E, h1^{km}, ML2.9(LDG), ML2.5(STR), After STR.*
BGR ***21*** *11:57:56.8±0.2, 49.37N×6.89E, h1^{km}, ML2.2/1, Error ellipse: s-maj=2.2km s-min=1.1km az=88.0*
LDG ***21*** *11:57:57.1±0.1, 49.37N×6.89E, h1^{km}, Md3.1/1, Ml2.9/14, Error ellipse: s-maj=1.7km s-min=1.5km az=134.0, Suspected Mining induced.*
CSEM ***21*** *11:57:57.0±0.1, 49.37N×6.90E, h2^{km}, ML2.8/13, Error ellipse: s-maj=1.1km s-min=1.0km az=102.0*
BNS ***21*** *11:57:59.1±1.0, 49.46N×6.93E, h1^{km}, ML1.8*
ISC 21 11:57:55.1±0.2**, 49.35N**±0.01×**6.85E**±0.03**, n45, σ0^{s}98**/84**,**
Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.38	21	ePg	Pg	11 58 03.5	+0.8
RUP	Ruppelstein	0.38	21	Pg	Pg	11 58 03.4	+0.7
RUP				Sg	Sg	11 58 08.0	+0.3
RUP	Ruppelstein	0.38	21	Pg	Pg	11 58 03.5	+0.8
RUP				Sg	Sg	11 58 08.0	+0.3
WLF	Walferdange	0.55	305	ePg	Pg	11 58 08.1	+1.9
WLF				eSg	Sg	11 58 14.4	+0.9
	SNR=3.4						
WLF	Walferdange	0.55	305	ePg	Pg	11 58 07.9	+1.7
ABH	Alteburg	0.70	40	ePg	Pg	11 58 09.0	-0.1
ABH	Alteburg	0.70	40	Pg	Pg	11 58 08.7	-0.4
ABH				Sg	Sg	11 58 18.8	+0.3
ABH	Alteburg	0.70	40	Pg	Pg	11 58 09.0	-0.1
ABH				Sg	Sg	11 58 18.8	+0.3
LANF	Langenberg	0.73	120	ePg	Pg	11 58 10.2	+0.5
LANF	Langenberg	0.73	120	Pg	Pg	11 58 10.0	+0.3
LANF				Sg	Sg	11 58 20.6	+1.2
LANF	Langenberg	0.73	120	Pg	Pg	11 58 10.2	+0.5
LANF				Sg	Sg	11 58 20.6	+1.2
KTD	Kalmit	0.81	92	ePg	Pg	11 58 11.8	+0.5
BGG	Burgeitz	0.91	20	ePg	Pg	11 58 13.5	+0.1
BGG				eSg	Sg	11 58 25.2	-0.3
	41nm,0.9s						
CDF	Champ du Feu	0.98	163	ePg	Pg	11 58 15.2	+0.5
CDF				ePn	Pn	11 58 16.3	+0.3
CDF				eSg	Sg	11 58 28.5	+0.7
	28nm,0.2s						
CDF				eSn	Sn	11 58 30.4	-0.4
WLS	Welschbruch	1.00	160	ePg	Pg	11 58 15.8	+0.8
WLS				eSg	Sg	11 58 29.2	+0.9
	SNR=3.3						
WLS	Welschbruch	1.00	160	Pg	Pg	11 58 15.7	+0.7
ECH	Echery	1.15	170	ePg	Pg	11 58 19.2	+1.0
ECH				eSg	Sg	11 58 34.0	+0.4
	SNR=7.9						
ECH	Echery	1.15	170	Pg	Pg	11 58 19.3	+1.1
RFYF	Reffroy	1.16	232	ePg	Pg	11 58 20.0	+1.7
	baz=52						
RFYF				eSg	Sg	11 58 34.8	+1.1
	42nm,0.3s						
STB	Steinbach	1.25	360	ePg	Pg	11 58 20.6	+0.6
STB				eSg	Sg	11 58 36.0	-0.6
	26nm,0.8s						
THEF	They Montfort	1.26	207	ePg	Pg	11 58 20.8	+0.5
THEF				eSg	Sg	11 58 38.1	+1.0
	SNR=3.2						
TOD	Tromm	1.30	78	ePg	Pg	11 58 20.0	-1.2
TOD				eSg	Sg	11 58 37.6	-0.9
	SNR=3.0						
TOD	Tromm	1.30	78	Pg	Pg	11 58 19.9	-1.2
KLL	Kalltalsperre	1.34	345	ePg	Pg	11 58 22.1	+0.1
KLL				eSg	Sg	11 58 38.9	-1.0
	10nm,0.7s						
TNS	Taunus Mts	1.36	49	ePg	Pg	11 58 21.8	-0.5
TNS				eSg	Sg	11 58 39.1	-1.2
	SNR=2.3						
MEM	Membach	1.37	337	P	Pb	11 58 22.5	+1.1
HAU	Haudompre	1.39	194	ePn	Pn	11 58 22.4	+0.6
HAU				ePg	Pg	11 58 23.4	+0.6
HAU				eSn	Sn	11 58 40.4	-0.7
HAU				eSg	Sg	11 58 41.4	+0.1
	21nm,0.2s						
MEZF	Maizieres J'vi	1.46	235	ePg	Pg	11 58 25.5	+1.3
	baz=55						
MEZF				eSg	Sg	11 58 44.0	+0.3
	18nm,0.3s						
MOF	Molkenrain	1.51	173	ePg	Pg	11 58 25.9	+0.6
MOF				eSg	Sg	11 58 45.3	-0.2
	SNR=5.6						
MOF	Molkenrain	1.51	173	Pg	Pg	11 58 25.7	+0.4
GIVF	Givet	1.51	301	ePn	Pn	11 58 24.4	+0.8
GIVF				eSg	Sg	11 58 45.2	-0.3
	20nm,0.4s						
HGN	Heimansgroeve	1.53	338	ePn	Pn	11 58 24.5	+0.6
HGN				eSg	Sg	11 58 44.5	-1.6
	SNR=2.5						
HGN	Heimansgroeve	1.53	338	ePg	Pg	11 58 25.9	+0.1
HGN				eSg	Sg	11 58 44.2	-2.0
HINF	Hinteralfeld	1.54	180	ePg	Pg	11 58 26.0	+0.2
HINF				eSn	Sn	11 58 43.7	-1.1
HINF				eSg	Sg	11 58 46.0	-0.3
	51nm,0.3s						
DOU	Dourbes	1.64	298	P	Pn	11 58 27.7	+2.3
SFTF	Sexfontaines	1.66	227	ePg	Pg	11 58 26.5	-1.7
	baz=49						
SFTF				eSg	Sg	11 58 49.7	-0.6
	20nm,0.4s						
FELD	Feldberg	1.66	152	ePg	Pg	11 58 28.5	+0.2
FELD				eSg	Sg	11 58 49.6	-0.9
	SNR=8.1						
FELD	Feldberg	1.66	152	Pg	Pg	11 58 28.2	-0.2
FELD				Sg	Sg	11 58 50.1	-0.4
BAIF	Baives	1.85	293	ePn	Pn	11 58 28.9	+0.4
BAIF				ePg	Pg	11 58 32.3	+0.1
BAIF				eSg	Sg	11 58 55.9	-1.0
	6.5nm,0.3s						
LOMF	Lomont	2.00	180	eSg	Sg	11 59 00.8	-1.0
	SNR=2.9						
CABF	La Chapelle	2.79	191	ePn	Pn	11 58 41.9	+0.1
CABF				eSg	Sg	11 59 25.7	-2.3
	19nm,0.7s						
SSF	Saint Saulge	3.20	226	ePn	Pn	11 58 46.7	-1.0
SSF				eSg	Sg	11 59 38.0	-3.7
	2.2nm,0.3s						
SMF	Signal de Mont	3.38	218	ePn	Pn	11 58 49.5	-0.7
SMF				eSn	Sn	11 59 27.2	-4.4
	9.2nm,0.6s						
AVF	Avril sur Loir	3.47	224	ePn	Pn	11 58 49.0	-2.5
AVF				eSn	Sn	11 59 31.2	-2.8
	3.3nm,0.3s						
BGF	Bois d'Agland	3.88	225	ePn	Pn	11 58 56.1	-1.2
BGF				eSn	Sn	11 59 40.8	-3.4
	15nm,0.4s						

HEL ***21*** *12:43:18.7±0.5, 62.55N×39.59E, ML2.0, Explosion*
IDC ***21*** *12:43:20.3±3.0, 62.51N×39.57E, mb1 3.3/4, mb1mx3.1/19, mbtmp3.3/4, ML3.3/4, Error ellipse: s-maj=29.3km s-min=15.4km az=126.0*
ISC 21 12:43:20.6±1.4**, 62.72N**±0.09×**38.8E**±0.1**, n12, σ1^{s}61**/24**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOF	Joensuu	3.44	277	eP	Pn	12 44 19.7	+3.1
JOF				eS	Sn	12 45 03.7	+5.0
JOF				eSG	Sg	12 45 15.5	+0.2
JOF				MSG		12 45 19.2	
	comp=Z,2.5nm,0.2s						
KJN	Kajaani	5.17	290	eP	Pn	12 44 43.3	+2.2
KJN				eS	Sn	12 45 44.8	+2.4
KJN				eSG	Sg	12 46 10.6	-2.1
KJN				MSG		12 46 17.8	
	comp=Z,2.6nm,0.3s						
MSF	Maaselka	5.32	311	eP	Pn	12 44 43.9	+0.7
KU4	Oulanka	5.41	317	eP	Pn	12 44 44.8	+0.4
VJF	Virojoki	5.79	253	eP	Pn	12 44 49.3	-0.5
VJF				eS	Sn	12 45 56.2	-1.7
SUF	Sumiainen	5.82	276	eP	Pn	12 44 52.6	+2.4
SUF				eSG	Sg	12 46 29.3	-5.1
SUF				MSG		12 46 34.9	
	comp=Z,1.3nm,0.3s						
KAF	Kangasniemi	5.84	270	eP	Pn	12 44 51.0	+0.5
KAF				eS	Sn	12 46 00.2	+1.0
FIA0	FINESS Array S	6.11	264	eP	Pn	12 44 54.5	+0.1
FIA0				eS	Sn	12 46 06.6	+0.6
FIA0				eSG	Sg	12 46 35.7	-8.5
FIA0				MSG		12 46 44.5	
	comp=Z,1.1nm,0.3s						
FINES	FINESS Array B	6.11	264	Pn	Pn	12 44 53.4	-1.0
	comp=Z,0.4nm,0.3s,baz=78,slow=12,SNR=8.6						
FINES				Sn	Sn	12 46 07.1	+1.1
	comp=Z,0.5nm,0.3s,baz=75,slow=22,SNR=4.2						
FINES				Lg		12 46 42.2	
	comp=Z,0.4nm,0.3s,baz=80,slow=31,SNR=3.0						
ARCES	ARCESS Array B	8.69	328	Pn	P	12 45 28.3	-2.2
	comp=Z,0.4nm,0.3s,baz=138,slow=13,SNR=16						
ARCES				Sn	Sn	12 47 05.8	-4.7
	comp=Z,0.1nm,0.3s,baz=136,slow=26,SNR=3.7						
HFS	Hagfors	12.26	269	Pn	P	12 46 15.8	-3.5
	comp=Z,0.1nm,0.3s,baz=74,slow=10,SNR=6.6						
HFS				Sn	S	12 48 31.4	-6.5
	comp=Z,0.1nm,0.3s,baz=68,slow=26,SNR=3.0						
NOA	NORSAR Array B	13.08	275	Pn	P	12 46 27.6	-2.5
	comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=2.5						

WEL 21 12:45:44.6±0.4**, 36.98S×177.56E, h179^{km}**±3^{km}**, ML3.5**/3**, Error ellipse: s-maj=5.2km s-min=3.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	1.23	153	PN	P	12 46 13.8	-0.6
PUZ				SN	S	12 46 36.3	-1.0
URZ	Urewera	1.33	195	PN	P	12 46 15.0	-0.3
URZ				SN	S	12 46 38.8	-0.2
MWZ	Matawai	1.36	181	PN	P	12 46 15.3	-0.2
MWZ				SN	S	12 46 39.4	-0.1
KNZ	Kokohu	2.04	178	PN	P	12 46 22.3	-0.1
KNZ				SN	S	12 46 49.6	-2.0
BFZ	Birch Farm	3.84	195	PN	P	12 46 43.1	-1.3
BFZ				SN	S	12 47 27.5	-2.9
MRZ	Mangatainoka R	3.99	202	PN	P	12 46 44.3	-2.0
MRZ				SN	S	12 47 32.1	-1.9
KIW	Kapiti Island	4.40	207	PN	P	12 46 49.2	-2.3
KIW				SN	S	12 47 40.9	-2.3

IDC ***21*** *12:52:50.2±2.9, 31.48N×60.17E, mb3.6/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.6/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/21, Error ellipse: s-maj=119.2km s-min=35.5km az=75.0*
TEH ***21*** *12:52:57.0, 31.74N×60.13E, h5^{km}, Mn3.7*
CSEM ***21*** *12:52:57.0, 31.74N×60.13E, h5^{km}, ML3.7, After TEH*
ISC 21 12:52:51.2±0.9**, 31.6N**±0.1×**60.29E**±0.09**, h10^{km}, n17, σ0^{s}87**/18**, mb3.7**/4**, MS3.0**/1**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	4.03	272	Pn	Pn	12 53 55.1	+0.7
IMYA	Miamay	4.77	358	Pn	Pn	12 54 06.2	+1.3
IPAY	Payeh	5.00	348	Pn	Pn	12 54 08.7	+0.6
ICHK	Chekchek	5.05	279	Pn	Pn	12 54 10.4	+1.6
IKRD	Kardeh	5.40	345	Pn	Pn	12 54 12.5	-1.3
ISAD	Sadrabad	5.64	275	Pn	Pn	12 54 07.7	-9.4
IANJ	Anjiloo	6.60	308	Pn	Pn	12 54 29.9	-0.8
ILAS	Lasjerd	7.21	304	Pn	Pn	12 54 40.2	+0.9
IFIR	Firoozkooh	7.49	305	Pn	Pn	12 54 42.5	-0.7
IFIR				Sn	Sn	12 56 01.3	-7.7
IDMV	Damavand	7.97	302	Pn	Pn	12 54 49.4	-0.5
IAFJ	Afjeh	8.33	303	Pn	P	12 54 54.2	-0.7
IRAZ	Razeghan	9.46	297	Pn	P	12 55 09.7	-0.9
IRAZ				Sn	Sn	12 56 48.3	-10
BVAR	Borovoye Array	22.67	16	P	P	12 57 54.2	+0.5
	1.4nm,0.7s,mb3.5,baz=198,slow=9.1,SNR=6.1						
MLR	Muntele Rosu	30.00	307	LR	LR	13 12 39.5	
	comp=Z,34nm,19.2s,MS3.0,baz=235,slow=40						
YKA	Yellowknife Ar	86.19	358	P	P	13 05 33.3	0.0
	0.2nm,0.6s,mb3.5,baz=356,slow=5.2,SNR=6.2						
WRA	Warramunga Arr	87.47	115	P	P	13 05 39.7	-1.0
	0.3nm,0.8s,mb3.6,baz=318,slow=3.7,SNR=4.1						
ASAR	Alice Springs	89.26	118	P	P	13 05 49.3	+0.2
	1.1nm,1.2s,mb4.1,baz=315,slow=5.1,SNR=3.3						

NEIC ***21*** *13:28:43.8±1.0, 10.68S×120.72E, h55^{km}, Error ellipse: s-maj=35.6km s-min=7.6km az=214.0*
IDC ***21*** *13:28:43.7±1.6, 11.25S×120.69E, mb3.8/2, mb1 4.1/4, mb1mx3.9/12, mbtmp3.9/4, ML3.9/2, Error ellipse: s-maj=59.1km s-min=27.1km az=73.0*
ISC 21 13:28:42.6±4.3**, 11.7S**±0.3×**120.1E**±0.2**, h23^{km}**±39^{km}**, n12, σ1^{s}31**/15**, mb3.9**/2**, 1C-3D, South of Sumba**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	5.03	308	⇓ePn	Pn	13 30 00.1	+1.4
KEDI				eSn	Sn	13 30 58.1	+1.2
RATI	Rata	5.36	302	⇑iPn	Pn	13 30 03.7	+0.4
RATI				eSn	Sn	13 31 03.3	-1.7
KELI	Kelakatan	6.50	301	⇓ePn	Pn	13 30 19.2	-0.1
SRDI	Scrawed	6.66	298	⇓ePn	Pn	13 30 20.3	-1.4
SRDI				eSn	Sn	13 31 33.7	-4.0
FITZ	Fitzroy Crossi	8.35	141	eP	P	13 30 46.0	+0.8
	14nm,0.4s						
FITZ				eS	Sx	13 32 13.5	
WRA	Warramunga Arr	15.98	123	Pn	P	13 32 25.8	-2.0
	0.5nm,0.3s,baz=296,slow=13,SNR=38						
WRA				Sn	Sx	13 35 10.9	
	0.7nm,0.3s,baz=296,slow=26,SNR=7.6						
WRAB	Tennant Creek	15.98	123	ePn	P	13 32 25.8	-2.1
WRAB				eSn	Sx	13 35 06.3	
ASPA	Alice Springs	17.75	134	eP	P	13 32 51.3	+1.3
ASPA				eS	Sx	13 35 55.8	
ASAR	Alice Springs	17.75	134	P	P	13 32 51.2	+1.2
	0.8nm,0.3s,baz=312,slow=12,SNR=40						
ASAR				S	Sx	13 35 57.9	
	0.4nm,0.3s,baz=304,slow=22,SNR=8.7						
NWAO	Narrogin (SRO)	21.34	187	P	P	13 33 37.7	+7.4
	13nm,1.0s,mb4.2,baz=15,slow=14,SNR=6.0						
NWAO	Narrogin (SRO)	21.34	187	P	P	13 33 38.4	+8.0
SONM	Songino Array	60.46	349	P	P	13 38 53.4	+0.5
	0.4nm,0.6s,mb3.6,baz=164,slow=8.1,SNR=6.1						

IDC ***21*** *13:33:13.5±0.8, 52.85N×159.94E, mb3.7/13, mb1 3.9/14, mb1mx3.8/23, mbtmp3.8/14, ML3.7/1, Error ellipse: s-maj=22.0km s-min=14.7km az=175.0*
MOS ***21*** *13:33:18.4±1.6, 52.88N×160.24E, h50^{km}, mb4.2/7, Error ellipse: s-maj=16.5km s-min=10.4km az=87.1*
KRSC ***21*** *13:33:19.1±0.7, 52.83N×160.20E, h29^{km}±3^{km}, ML4.3*
NEIC ***21*** *13:33:21.1±1.4, 52.90N×159.96E, h57^{km}±11^{km}, mb3.8/3, Error ellipse: s-maj=17.7km s-min=11.2km az=150.0*
ISC 21 13:33:18.5±0.6**, 52.79N**±0.04×**160.30E**±0.06**, h51^{km}**±5^{km}**, n57, σ1^{s}04**/80**, mb3.6**/15**, MS4.0**/2**, 1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.35	331	P	P	13 33 27.1	-1.2
SPN				S	S	13 33 32.8	-2.5
SPN	Mys Shipunski	0.35	331	i P	P	13 33 27.1	-1.2
SPN				i S	S	13 33 32.9	-2.4
NLC	Nalytchevo	0.69	304	i P	P	13 33 31.7	-0.5
NLC				i S	S	13 33 40.8	-1.6
SDLR	Sedlovina	0.98	300	i P	P	13 33 36.3	0.0
UGLR	Uglovaya	0.99	296	i P	P	13 33 36.4	+0.1
SMAR	Somma	1.02	298	i P	P	13 33 36.6	-0.2
PET	Petropavlovsk	1.02	284	P	P	13 33 36.8	0.0
PET				S	S	13 33 49.5	-0.9
PET	Petropavlovsk	1.02	284	⇓iPN	P	13 33 36.7	-0.1
PET				eS	S	13 33 50.1	-0.3
PET				pmax	pmax		
	comp=Z,918nm,0.5s						
PET				smax			
	comp=N,3µm,0.6s						
PET				smax			
	comp=E,2µm,0.7s						
PET	Petropavlovsk	1.02	284	ePg	P	13 33 36.5	-0.3
PET	Petropavlovsk	1.02	284	i P	P	13 33 36.7	-0.1
PET				eS	S	13 33 49.5	-0.9
AVH	Avacha	1.06	297	i P	P	13 33 37.5	+0.2
AVH				eS	S	13 33 50.6	-0.6
KOK	Koryaka	1.12	297	i P	P	13 33 38.3	+0.1
RUS	Russkaya	1.15	252	eP	P	13 33 38.3	-0.2
RUS				eS	S	13 33 52.8	-0.6
KRMR	Karymshinskiy	1.32	273	eP	P	13 33 40.6	-0.5
KRMR				eS	S	13 33 56.9	-0.9
KII	Karymskiy	1.35	338	P	P	13 33 42.0	+0.5
KII				S	S	13 33 58.8	+0.3
KII	Karymskiy	1.35	338	i P	P	13 33 41.8	+0.3
KII				eS	S	13 33 58.8	+0.3
GRL	Gorelyy	1.38	261	i P	P	13 33 42.4	+0.5
GRL				eS	S	13 33 59.6	+0.4
GNL	Ganaly	1.68	304	i P	P	13 33 47.3	+1.2
GNL				eS	S	13 34 08.1	+1.5
APC	Apacha	1.91	275	i P	P	13 33 50.1	+0.8
APC				i S	S	13 34 13.3	+1.1
APC				Smax			
	comp=E,280nm,1.2s						
TUMR	Tumrok	2.50	358	i P	P	13 33 58.9	+1.2

TUMR				*e*S	S	13 34 28.1	+1.0
PAU	Pauzhetka	2.53	240	*e*P	P	13 34 00.5	+2.4
PAU				*e*S	S	13 34 30.5	+2.7
PAU				Smax			
	comp=E,340nm,0.7s						
KMNR	Kamenistaya	2.97	359	*e*P	P	13 34 05.6	+1.2
KMNR				*e*S	S	13 34 39.8	+0.8
ESO	Esso	3.28	344	*e*P	P	13 34 08.8	+0.1
SKR	Severo-Kuril's	3.35	233	*e*PN	P	13 34 14.0	+4.3
SKR				*e*		13 34 46.2	
SRDR	Sredinnyy	3.55	355	*e*P	P	13 34 13.4	+0.8
SRDR				*e*S	S	13 34 52.7	-1.0
KBTR	Krutoberegovo	3.73	22	P	P	13 34 15.9	+0.9
KBTR				S	S	13 34 57.3	-0.8
KBTR	Krutoberegovo	3.73	22	*e*P	P	13 34 16.1	+1.1
KBTR				*e*S	S	13 34 57.6	-0.5
KBG	Krutoberegovo	3.74	21	*e*P	P	13 34 16.5	+1.2
KBG				*e*S	S	13 34 58.0	-0.6
KBG				Smax			
	comp=E,440nm,1.0s						
KBG	Krutoberegovo	3.74	21	*e*P	P	13 34 17.4	+2.1
KBG				*e*S	S	13 34 59.7	+1.1
SVLR	Shiveluch	3.83	8	*e*P	P	13 34 17.8	+1.3
SVLR				*e*S	S	13 35 00.2	-0.6
BKI	Bering	4.13	52	*i* P	P	13 34 20.4	-0.3
BKI				*i* S	S	13 35 04.3	-4.0
FX1	Attu Island--F	7.79	84	Pn	P	13 35 10.4	-1.5
	comp=E,3.4nm,0.3s,baz=267,slow=18,SNR=7.6						
FX1				Sn	S	13 36 32.9	-6.8
	comp=E,8.4nm,0.3s,baz=152,slow=18,SNR=8.8						
HIA	Hailar	25.51	278	*e*P	P	13 38 41.5	-1.9
HIA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HIA	Hailar	25.51	278	*e*P	P	13 38 41.5	-2.0
	comp=Z,3.0nm,0.7s,mb3.9						
ILAR	Eielson Array	28.94	45	P	P	13 39 14.5	0.0
	comp=Z,0.1nm,0.4s,mb2.9,baz=247,slow=6.9,SNR=5.1						
INK	Inuvik	34.03	37	P	P	13 39 59.8	+0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	34.03	37	P	P	13 39 59.8	+0.6
	comp=Z,0.5nm,0.6s,mb3.6,baz=242,slow=7.2,SNR=5.5						
SONM	Songino Array	34.09	284	P	P	13 39 58.8	-1.1
	comp=Z,0.4nm,0.7s,mb3.5,baz=66,slow=7.6,SNR=3.1						
YKA	Yellowknife Ar	43.30	42	P	P	13 41 17.0	+0.7
	comp=Z,0.2nm,0.6s,mb3.0,baz=301,slow=8.1,SNR=6.0						
CHKZ	Chkalovo	50.17	309	*e*P	P	13 42 07.2	-3.3
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
CHKZ	Chkalovo	50.17	309	*e*P	P	13 42 07.2	-3.3
	comp=Z,0.8nm,0.3s,mb4.2						
BVAR	Borovoye Array	50.68	309	P	P	13 42 11.6	-2.8
	comp=Z,0.4nm,0.4s,mb3.7,baz=66,slow=7.9,SNR=6.4						
FINES	FINESS Array B	60.45	337	P	P	13 43 23.3	-1.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	60.45	337	P	P	13 43 23.3	-1.4
	comp=Z,0.8nm,0.5s,mb4.0,baz=31,slow=6.5,SNR=9.2						
PMG	Port Moresby	62.96	195	LR	LR	14 16 52.2	
	comp=Z,94nm,18.9s,MS4.0,baz=182,slow=36						
NB2	NORSAR Subarra	63.87	344	P	P	13 43 46.1	-1.2
	comp=Z,0.1nm,0.6s,mb3.0,baz=22,slow=6.2						
NOA	NORSAR Array B	63.87	344	P	P	13 43 46.7	-0.6
NOA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NOA	NORSAR Array B	63.87	344	P	P	13 43 46.7	-0.6
	comp=Z,2.7nm,1.0s,mb4.2,baz=20,slow=6.5,SNR=5.6						
SCHQ	Schefferville	65.86	28	P	P	13 44 00.1	-0.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=36,slow=12,SNR=3.5						
AKASG	Malin Array Be	68.94	329	P	P	13 44 18.8	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	68.94	329	P	P	13 44 18.8	-0.9
	comp=Z,0.8nm,0.3s,mb4.1,baz=28,slow=6.0,SNR=6.0						
GERES	GERESS Array B	74.84	338	P	P	13 44 55.2	+0.5
	comp=Z,0.2nm,0.3s,mb3.5,baz=37,slow=4.9,SNR=3.3						
WRA	Warramunga Arr	75.86	205	P	P	13 45 00.7	-0.4
	comp=Z,0.2nm,0.7s,mb3.1,baz=20,slow=6.1,SNR=2.9						
BRTR	Keskin Array B	76.94	321	P	P	13 45 07.0	+0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	76.94	321	P	P	13 45 07.0	+0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=52,slow=2.8,SNR=3.9						
ASAR	Alice Springs	79.53	204	P	P	13 45 22.1	+0.8
	comp=Z,0.3nm,0.7s,mb3.4,baz=21,slow=6.3,SNR=4.3						
ROSC	El Rosal	106.47	58	LR	LR	14 28 33.0	
	comp=Z,49nm,18.9s,MS4.1,baz=0.4,slow=40						

IDC 21 14:02:57.7±9.4**, 3.57N×127.62E, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/16**, mbtmp3.9**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/19**, Error ellipse: s-maj=153.7km s-min=133.1km az=154.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	24.28	164	P	P	14 08 16.6	-1.3
	3.1nm,0.4s,baz=344,slow=10,SNR=60						
ASAR	Alice Springs	27.76	168	P	P	14 08 48.3	-2.0
	0.4nm,0.7s,baz=356,slow=9.3,SNR=6.3						
STKA	Stephens Creek	37.68	160	P	P	14 10 15.2	-1.5
	1.3nm,0.3s,baz=332,slow=6.7,SNR=9.2						

IDC ***21*** *14:16:08.0±0.7, 20.87N×145.92E, mb4.0/13, mb1 4.2/13, mb1mx4.1/23, mbtmp4.0/13, Error ellipse: s-maj=27.2km s-min=17.2km az=116.0*

BJI ***21*** *14:16:09.1, 20.65N×146.18E, h35*^{km}*, mB5.2, mb4.4*

NEIC ***21*** *14:16:13.3±0.4, 20.84N×145.91E, h35*^{km}*, mb4.3/3, Error ellipse: s-maj=13.9km s-min=11.1km az=118.0*

ISC 21 14:16:11.4±0.6**, 20.8N**±0.1×**145.9E**±0.1**, h33**^{km}**, n21, σ0**^{s}**90**/20**, mb4.0**/16**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	41.63	320	P	P	14 23 58.3	+0.3
	0.7nm,0.5s,mb3.6,baz=129,slow=6.5,SNR=7.5						
WRA	Warramunga Arr	42.04	196	P	P	14 24 02.2	+0.4
	0.5nm,0.5s,mb3.4,baz=6.4,slow=8.7,SNR=14						
CMAR	Chiang Mai Arr	44.15	275	P	P	14 24 19.2	+0.3
	0.5nm,0.4s,mb3.6,baz=65,slow=6.9,SNR=5.7						
ASAR	Alice Springs	45.71	195	P	P	14 24 30.9	-0.5
	0.3nm,0.7s,mb3.3,baz=11,slow=6.6,SNR=6.0						
LSA	Lhasa	49.90	292	P	P	14 25 05.6	+1.6
LSA	Lhasa	49.90	292	*e*P	P	14 25 05.5	+1.6
	2.9nm,0.6s,mb4.5						
KURK	Kurchatov	59.84	317	P	P	14 26 14.7	-1.2
	1.6nm,0.6s,mb4.2						
NWAO	Narrogin (SRO)	60.03	208	P	P	14 26 16.7	-0.8
	5.6nm,0.8s,mb4.7,slow=1.0,SNR=2.8						
NWAO	Narrogin (SRO)	60.03	208	P	P	14 26 16.7	-0.8
ILAR	Eielson Array	61.70	27	P	P	14 26 25.5	-2.8
	0.9nm,0.8s,mb3.9,baz=265,slow=5.5,SNR=7.1						
CHKZ	Chkalovo	64.83	321	P	P	14 26 48.2	-0.8
	0.9nm,0.4s,mb4.2						
DLBC	Dease Lake	69.46	34	P	P	14 27 18.1	+0.1
	1.4nm,0.7s,mb4.0,baz=261,slow=8.3,SNR=4.8						
YKA	Yellowknife Ar	76.06	28	P	P	14 27 56.2	-0.7
	1.5nm,0.9s,mb3.9,baz=289,slow=5.5,SNR=16						
YKA	Yellowknife Ar	76.06	28	P	P	14 27 56.2	-0.7
YBH	Yreka Blue Hor	77.47	50	P	P	14 28 06.2	+0.8
	1.2nm,0.8s,mb3.9,baz=142,slow=5.1,SNR=3.6						
ARCES	ARCESS Array B	80.56	342	P	P	14 28 22.1	+0.6
	3.1nm,0.9s,mb4.2,baz=53,slow=6.1,SNR=5.2						
NVAR	Mina Array Bea	81.72	52	P	P	14 28 29.0	+0.8
	1.4nm,0.6s,mb4.0,baz=298,slow=5.4,SNR=4.8						
FINES	FINESS Array B	85.06	335	P	P	14 28 44.4	-0.2
	1.5nm,0.6s,mb4.3,baz=75,slow=5.3,SNR=13						
FINES	FINESS Array B	85.06	335	P	P	14 28 44.4	-0.2
PDAR	Pinedale Array	86.24	46	P	P	14 28 51.6	+0.8
	0.3nm,0.5s,mb3.8,baz=333,slow=2.0,SNR=4.0						
LPAZ	La Paz	147.48	88	PKPbc	PKPdf	14 35 56.1	+5.9
	0.8nm,0.5s,baz=302,slow=2.5,SNR=3.8						

IDC 21 14:16:40.4±1.9**, 12.71S×70.17W, mb3.5**/1**, mb1 3.9**/2**, mb1mx3.6**/17**, mbtmp3.6**/2**, ML3.8**/1**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.4**/20**, Error ellipse: s-maj=272.8km s-min=24.1km az=63.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	4.07	151	Pn	Pn	14 17 45.0	-0.3
	4.4nm,0.3s,baz=327,slow=9.2,SNR=77						
LPAZ				Pg	Pg	14 17 54.5	-7.0
	7.0nm,0.3s,baz=326,slow=15,SNR=23						
LPAZ				Sn	Sn	14 18 33.0	-1.3
	12nm,0.3s,baz=256,slow=5.6,SNR=5.7						
LPAZ				Lg		14 18 44.3	
	43nm,0.3s,baz=44,slow=22,SNR=16						
YKA	Yellowknife Ar	82.54	341	P	P	14 29 04.7	-1.5
	0.2nm,0.5s,baz=137,slow=5.5,SNR=7.7						
WRA	Warramunga Arr	139.57	217	PKP	PKPdf	14 36 11.3	-1.5
	0.1nm,0.4s,baz=140,slow=1.4,SNR=6.0						

NEIC ***21*** *14:22:46.4±2.8, 51.61N×16.45E, h5*^{km}*, ML2.7(VIE), Error ellipse: s-maj=28.4km s-min=10.5km az=221.0*

IPEC ***21*** *14:22:49.5±0.3, 51.49N×16.22E, ML1.9/4, Error ellipse: s-maj=4.0km s-min=1.9km az=85.0*

WAR ***21*** *14:22:50.7, 51.46N×16.11E, h1*^{km}*, ML2.6, Mining Induced*

PRU ***21*** *14:22:51.1, 51.43N×16.10E*

CSEM ***21*** *14:22:51.6±0.4, 51.40N×16.16E, h2*^{km}*, ML2.9/4, Error ellipse: s-maj=6.4km s-min=3.3km az=19.0*

ISC 21 14:22:48.7±0.8**, 51.41N**±0.04×**16.09E**±0.04**, n20, σ1**^{s}**16**/40**, 1C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.58	167	⇓*i*Pg	Pg	14 23 02.1	+1.8
KSP				*i* Sg	Sg	14 23 11.0	+3.0
KSP	Ksiaz	0.58	167	*e*PG	Pg	14 23 02.0	+1.7
KSP				*e*SG	Sg	14 23 11.0	+3.0
KSP	Ksiaz	0.58	167	⇓*i*Pg	Pg	14 23 02.1	+1.8
KSP				*e*Sg	Sg	14 23 10.1	+2.1
UPC	Upice	0.90	183	*e*PG	Pg	14 23 08.1	+1.4
DPC	Dobruska-Polom	1.07	172	*e*PG	Pg	14 23 10.9	+0.9
DPC				*e*SG	Sg	14 23 25.4	+1.1
	28nm,0.5s						
PVCC	Panska Ves	1.30	228	*e*PG	Pg	14 23 15.8	+1.1
PRU	Pruhonice	1.73	215	*e*PN	Pn	14 23 20.8	+0.6
PRU				*e*PG	Pg	14 23 23.0	-0.2
PRU				*e*SG	Sg	14 23 46.3	+0.1
PRU	Pruhonice	1.73	215	Pg	Pg	14 23 23.0	-0.2
PRU				Sg	Sg	14 23 46.3	+0.1
MORC	Moravsky Berou	1.88	150	*e*Pg	Pg	14 23 22.8	-3.4
MORC	Moravsky Berou	1.88	150	*e*Pg	Pg	14 23 22.8	-3.4
MORC	Moravsky Berou	1.88	150	*e*Pn	Pn	14 23 23.1	+0.8
MORC				*e*Sg	Sg	14 23 49.4	-1.8
	6.1nm,0.2s						
CLL	Collm	1.94	268	*e*PN	Pn	14 23 23.0	-0.2
CLL				*e*PG	Pg	14 23 26.0	-1.4
CLL				*e*SG	Sg	14 23 53.0	-0.2
OKC	Ostrava-Krasne	2.05	139	*e*PG	Pg	14 23 29.0	-0.5
OKC				*e*SG	Sg	14 23 56.4	-0.4
VRAC	Vranov	2.13	171	*e*Pn	Pn	14 23 27.1	+1.2
VRAC				*e*Sg	Sg	14 23 57.4	-2.1
	5.8nm,0.3s						
KRUC	Moravsky	2.36	175	*e*Pn	Pn	14 23 30.9	+1.7
KRUC				*e*Sg	Sg	14 24 06.1	-1.0
	4.0nm,0.2s						
NKC	Novy Kostel	2.59	244	*e*PN	Pn	14 23 33.4	+0.8
NKC				*e*SG	Sg	14 24 14.8	-0.2
OJC	Ojcow	2.64	115	*e*PG	Pg	14 23 41.0	-0.3
OJC				*e*SG	Sg	14 24 15.0	-1.5
KHC	Kasperske Hory	2.79	216	*e*PN	Pn	14 23 36.4	+1.0
KHC				*e*PG	Pg	14 23 41.8	-2.6
KHC				*e*SN	Sn	14 24 09.5	-0.8
KHC				*e*SG	Sg	14 24 21.0	-0.6
MOX	Moxa	2.93	257	*e*Pg	Pg	14 23 45.7	-1.4
MOX				*e*Sg	Sg	14 24 25.5	-0.6
MOA	Molln	3.75	199	⇑*i*PN	Pn	14 23 50.1	+1.0
MOA				*i* SG	Sg	14 24 54.0	+0.4
	4.3nm,0.5s						

MAN 21 14:25:37.1, 13.31N×122.15E, h7^{km}**, mb3.9, ML2.7, MS2.3, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	Boac	0.33	297	*e*P	Pg	14 25 44.7	+0.7
BOAC				*e*S	Sg	14 25 51.2	+2.7
AUQP	San Andres	0.51	88	*e*P	Pg	14 25 48.0	+0.5
GQP	Guinayangan	0.66	26	⇑*e*P	Pg	14 25 49.4	-1.0
OTRP	Odiongan	0.95	188	*e*P	Pb	14 25 54.1	-1.3
OTRP				*e*S	Sb	14 26 02.1	-5.9
LUBP	Lubang	1.90	283	*e*P	Pn	14 26 10.1	-0.2

IDC ***21*** *14:46:57.0±1.4, 40.05N×113.29E, mb3.5/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=34.8km s-min=26.5km az=94.0*

NEIC ***21*** *14:46:58.8±1.0, 40.09N×113.21E, h10*^{km}*, Error ellipse: s-maj=21.2km s-min=11.8km az=196.0*

BJI ***21*** *14:47:00.7, 40.18N×113.06E, h9*^{km}*, ML3.2*

ISC 21 14:46:55.0±0.8**, 40.1N**±0.1×**113.11E**±0.05**, h9**^{km}**, n8, σ1**^{s}**63**/11**, mb3.4**/4**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BJT	Baijiatuau	2.35	92	*e*Pn	Pn	14 47 38.2	+3.7
BJT				*e*Sg	Sg	14 48 11.0	-2.3
BJI	Beijing	2.35	92	PG	Pg	14 47 41.3	-0.8
BJI				SG	Sg	14 48 13.5	0.0
BJI				Smax			
	comp=N,157nm,0.8s						
BJI				Smax			
	comp=E,85nm,0.8s						
BTO	Baotou	2.40	282	*e*PG	Pg	14 47 41.4	-1.7
BTO				SG	Sg	14 48 12.8	-2.3
BTO				Smax			
	comp=N,103nm,0.6s						
BTO				Smax			
	comp=E,55nm,0.5s						
SONM	Songino Array	9.08	330	Pn	P	14 49 10.6	+1.3
	comp=E,0.2nm,0.3s,baz=152,slow=14,SNR=11						
SONM				Lg		14 51 49.4	
	comp=E,0.3nm,0.3s,baz=146,slow=28,SNR=3.7						
ZAL	Zalesovo	23.52	315	P	P	14 52 10.9	+5.0
	comp=E,0.5nm,0.3s,mb3.4,baz=107,slow=22,SNR=3.1						
CMAR	Chiang Mai Arr	24.83	214	P	P	14 52 20.7	+1.7
	comp=E,0.5nm,0.9s,mb3.0,baz=12,slow=9.4,SNR=4.3						
ILAR	Eielson Array	58.46	30	P	P	14 56 53.4	+0.2
	comp=E,0.5nm,1.0s,mb3.5,baz=281,slow=4.6,SNR=5.0						
YKA	Yellowknife Ar	70.78	21	P	P	14 58 15.5	+2.4
	comp=E,1.0nm,0.7s,mb3.9,baz=323,slow=5.9,SNR=22						

NEIC ***21*** *14:55:12.2±5.9, 23.10S×179.59W, h537*^{km}*±41*^{km}*, mb4.1/6, Error ellipse: s-maj=85.3km s-min=16.3km az=45.0*

IDC ***21*** *14:55:14.4±4.8, 23.02S×178.91W, h652*^{km}*±115*^{km}*, mb3.5/5, mb1 3.6/6, mb1mx3.3/17, mbtmp4.5/6, Error ellipse: s-maj=136.3km s-min=19.6km az=70.0*

ISC 21 14:55:15.5±3.3**, 23.3S**±0.2×**179.8W**±0.3**, h578**^{km}±40^{km}**, n14, σ0**^{s}**58**/16**, mb4.2**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	15.16	189	P	P	14 58 25.3	-0.2
	1.5nm,0.3s,baz=166,slow=12,SNR=9.8						
URZ				S	S	15 00 59.0	+0.4
	0.4nm,0.3s,baz=298,slow=18,SNR=4.2						
RPZ	Rata Peaks	21.73	198	P	P	14 59 26.3	-0.7
	5.6nm,0.7s,mb4.3,baz=19,slow=13,SNR=3.8						
RPZ				S	S	15 02 48.3	-0.7
	4.0nm,0.8s,baz=40,slow=18,SNR=3.0						
CTA	Charters Tower	31.63	269	P	P	15 00 54.7	+1.0
	10nm,0.3s,mb4.9,baz=94,slow=12,SNR=44						
CTAO	Charters Tower	31.63	269	*e*P	P	15 00 53.9	+0.3
	12nm,0.4s,mb4.9						
STKA	Stephens Creek	35.10	247	*e*P	P	15 01 23.6	+1.1
	2.1nm,0.6s,mb3.9						
STKA	Stephens Creek	35.10	247	P	P	15 01 23.5	+1.0
	3.4nm,0.7s,mb4.1,baz=87,slow=11,SNR=14						
ASAR	Alice Springs	42.29	260	P	P	15 02 21.1	+0.2
	5.8nm,0.8s,mb4.2,baz=96,slow=7.3,SNR=122						
ASPA	Alice Springs	42.29	260	*e*P	P	15 02 21.4	+0.5
WRAB	Tennant Creek	42.59	265	*e*P	P	15 02 22.7	-0.6
	5.8nm,0.8s,mb4.2						
WRA	Warramunga Arr	42.60	265	P	P	15 02 23.0	-0.3
	3.1nm,0.3s,mb4.2,baz=95,slow=8.4,SNR=241						
KAKA	Kakadu	46.41	275	*e*P	P	15 02 52.3	-0.5
	2.4nm,0.3s,mb4.2						
KLBR	Kellerberrin	55.37	247	*e*P	P	15 03 57.6	-0.1
	536nm,1.6s						
MBWA	Marble Bar	55.63	260	*e*P	P	15 03 58.8	-0.7
	3.9nm,0.5s,mb3.9						
QSPA	South Pole Qui	66.81	180	*e*P	P	15 05 12.1	+0.6
	1.8nm,0.6s,mb3.7						

IDC 21 15:11:50.9±0.8**, 60.52N×15.33E, mb1 2.8**/3**, mb1mx2.7**/19**, mbtmp2.6**/3**, ML2.4**/3**, Error ellipse: s-maj=13.2km s-min=5.5km az=157.0, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HFS	Hagfors	0.90	245	Pg	Pg	15 12 07.3	-1.5
	0.2nm,0.3s,baz=65,slow=18,SNR=24						
HFS				Lg		15 12 19.4	
	0.1nm,0.3s,baz=62,slow=31,SNR=15						
NOA	NORSAR Array B	2.08	286	Pn	Pn	15 12 27.1	-0.4
	0.4nm,0.3s,baz=93,slow=16,SNR=3.9						
NOA				Sn	Sn	15 12 54.1	-0.4
	0.8nm,0.3s,baz=231,slow=21,SNR=5.7						
FINES	FINESS Array B	5.32	75	Pn	Pn	15 13 11.7	-1.9
	0.1nm,0.3s,baz=266,slow=14,SNR=5.4						
FINES				Sn	Sn	15 14 13.2	-3.2
	0.2nm,0.3s,baz=256,slow=23,SNR=2.9						
FINES				Lg		15 14 36.5	
	0.3nm,0.3s,baz=267,slow=28,SNR=5.7						
ARCES	ARCESS Array B	10.01	21	Pn	P	15 14 12.5	-6.3
	0.1nm,0.3s,baz=207,slow=14,SNR=3.0						

NEIC ***21*** *15:35:16.8, 60.20N×139.35W, h1*^{km}*, mb3.8/3, ML4.2(PMR), ML3.9(AEIC), After AEIC.*

IDC ***21*** *15:35:17.3±1.1, 60.17N×139.55W, mb3.7/1, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, ML3.6/5, Error ellipse: s-maj=19.9km s-min=9.3km az=41.0*

PGC ***21*** *15:35:18.3, 60.14N×139.31W, h1*^{km}*, Mw4.3, Near Yakutat Bay, Alaska.*

ISC 21 15:35:15.3±0.2**, 60.16N**±0.03×**139.34W**±0.03**, h1**^{km}**, n95, σ1**^{s}**06**/111**, mb4.0**/2**, 1D, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNL	Peninsula	0.50	183	P	Pg	15 35 26.1	+1.0
YKU2	Yakutat	0.67	195	P	Pg	15 35 30.2	+1.5
CHX	Chaix Hills	0.90	264	P	Pg	15 35 34.5	+1.3
CHX				S	Sg	15 35 46.8	+1.7
HYT	Haines Junctio	1.12	53	⇓P	Pb	15 35 38.5	+1.3
HYT				S	Sb	15 35 53.2	+1.0
HYT				Trac		15 35 57.5	
	comp=Z,634nm,0.3s						
YAH	Yahtse	1.22	281	P	Pb	15 35 39.3	+0.5
CTGM	Chitina Glacie	1.27	310	P	Pb	15 35 39.2	-0.5
WRG	White River Gl	1.35	266	P	Pb	15 35 42.5	+1.3
CYK	Cape Yakataga	1.58	268	P	Pn	15 35 45.5	+0.9
CYK				S	Sb	15 36 07.3	+2.0
BALM	Baldy	1.72	302	P	Pn	15 35 46.4	-0.2
WHY	Whitehorse	2.27	75	P	Pn	15 35 56.1	+1.7
WHY				S	Sn	15 36 25.9	+2.5
WHY	Whitehorse	2.27	75	Pn	Pn	15 35 56.0	+1.7
WHY				Pg	Pg	15 35 59.2	-1.3
WHY				Sn	Sn	15 36 26.9	+3.5
WHY				Sg	Sg	15 36 29.7	-1.1
WHY				Trac		15 36 31.4	
	comp=Z,716nm,0.6s						
GLB	Gilahina Butte	2.54	302	P	Pn	15 35 59.6	+1.3
RAGM	Ragged Mountai	2.67	277	P	Pn	15 36 00.8	+0.7
BESE	Bessie Mountai	2.79	123	P	Pn	15 36 02.4	+0.5
BESE				S	Sn	15 36 40.9	+4.2
BCA3	Beaver Creek A	3.14	339	P	Pn	15 36 07.6	+0.8
EYAK	Cordova Ski Ar	3.21	280	P	Pn	15 36 07.9	+0.1
DIV	Divide	3.31	290	P	Pn	15 36 09.7	+0.4
MENT	Mentasta	3.48	325	P	Pn	15 36 12.7	+0.9
TZL	Tazlina	3.50	305	P	Pn	15 36 12.5	+0.4
HIN	Hinchinbrook I	3.58	277	P	Pn	15 36 12.7	-0.4
VLZ	Valdez	3.58	289	P	Pn	15 36 13.6	+0.5
FID	Port Fidalgo	3.58	283	P	Pn	15 36 14.1	+0.9
JPK	Jack Peak	3.69	287	P	Pn	15 36 14.8	+0.2
SIT	Sitka	3.76	144	P	Pn	15 36 16.2	+0.6
DAWY	Dawson	3.92	360	P	Pn	15 36 19.3	+1.4
DAWY	Dawson	3.92	360	⇑Pn	Pn	15 36 19.8	+1.9
DAWY				Sn	Sn	15 37 05.8	+0.7
DAWY				Sg	Sg	15 37 20.4	-5.3
DAWY				Trac		15 37 26.8	
	comp=Z,263nm,0.6s						
PAX	Paxson	4.07	317	P	Pn	15 36 20.4	+0.4
DOT	Dot Lake	4.15	329	P	Pn	15 36 21.3	+0.1
SCM	Sheep Creek Mo	4.24	297	P	Pn	15 36 23.0	+0.6
LTI	Latouche	4.26	272	P	Pn	15 36 22.1	-0.7
THY	Trims Highway	4.46	320	P	Pn	15 36 27.6	+2.0
KNK	Knik Glacier	4.64	290	P	Pn	15 36 28.8	+0.6
SML	Sawmill	4.68	295	P	Pn	15 36 28.6	-0.1
GHO	Glory Hole Cre	4.94	293	P	Pn	15 36 32.7	+0.2
PMR	Palmer	5.00	291	P	Pn	15 36 33.3	+0.1
DLBC	Dease Lake	5.08	106	Pn	Pn	15 36 35.4	+1.1
	0.9nm,0.3s,baz=280,slow=12,SNR=12						
DLBC				Pg	Pg	15 36 47.2	-9.4
	4.3nm,0.3s,baz=274,slow=16,SNR=20						
DLBC				Lg		15 37 55.8	
	9.4nm,0.3s,baz=145,slow=26,SNR=7.0						
DLBC	Dease Lake	5.08	106	P	Pn	15 36 35.2	+0.9
DLBC	Dease Lake	5.08	106	Pn	Pn	15 36 35.2	+0.9
DLBC				Pg	Pg	15 36 47.4	-9.2
DLBC				Sg	Sg	15 37 55.1	-9.2
DLBC				Trac		15 38 07.8	
	comp=Z,96nm,0.5s						
RC01	Rabbit Creek A	5.20	285	P	Pn	15 36 35.6	-0.5
PWA	Palmer West	5.36	291	P	Pn	15 36 38.4	+0.1
SLKM	Skilak Lake	5.42	278	P	Pn	15 36 38.8	-0.3
HDA	Harding Lake	5.54	323	P	Pn	15 36 40.8	-0.2
HUR	Hurricane	5.67	304	P	Pn	15 36 42.6	-0.2
CUT	Chulitna	5.73	298	P	Pn	15 36 44.2	+0.7
MCK	McKinley	5.77	312	P	Pn	15 36 44.6	+0.4
IL1	Eielson Array	5.80	326	P	Pn	15 36 43.0	-1.5
ILAR	Eielson Array	5.80	326	Pn	Pn	15 36 42.5	-2.0
	0.5nm,0.3s,baz=139,slow=14,SNR=37						
ILAR				Lg		15 38 21.2	
	2.1nm,0.3s,baz=138,slow=32,SNR=4.9						
BRLK	Bradley Lake	5.81	271	P	Pn	15 36 43.4	-1.4
CNPM	China Poot	6.03	269	P	Pn	15 36 47.6	-0.2
TRF	Thorofare Moun	6.15	307	P	Pn	15 36 49.3	-0.2
BWN	Browne	6.21	315	P	Pn	15 36 49.1	-1.3
STLK	Strandline Lak	6.25	288	P	Pn	15 36 50.9	-0.1
SPU	Mount Spurr	6.33	285	*e*P	Pn	15 36 52.3	+0.3
KTH	Kantishna Hill	6.45	307	P	Pn	15 36 53.0	-0.7
DFR	Drift River	6.63	279	P	Pn	15 36 55.7	-0.6
RSO	Redoubt South	6.67	278	*e*P	Pn	15 36 56.0	-0.9
RDN	Redoubt North	6.67	279	P	Pn	15 36 56.2	-0.7
NCT	North Crescent	6.75	279	P	Pn	15 36 56.8	-1.2
INE	Iliamna NE	6.86	275	P	Pn	15 36 58.5	-1.1
ILW	Iliamna West	6.90	275	P	Pn	15 36 59.8	-0.2
NDB	Naden	7.13	148	Pn	Pn	15 37 01.9	-1.4
KDAK	Kodiak Island	7.25	257	P	Pn	15 37 02.5	-2.4
RUBB	Prince Rupert	7.64	136	Trac		15 39 25.6	
	comp=Z,41nm,0.8s						
RUBB	Prince Rupert	7.64	136	Sg	Sg	15 39 14.4	-15
BM3	Burnt Mountain	7.65	345	P	Pn	15 37 10.3	-0.2
MOBC	Moresby Island	8.09	146	Pn	P	15 37 14.3	-2.4
BNAB	Bonilla	8.21	141	Pn	P	15 37 17.1	-1.3
FNBB	Fort Nelson	8.40	92	Pn	P	15 37 22.6	+1.6
FNBB				Sg	Sg	15 39 38.5	-16
FNBB				Trac		15 39 53.5	
	comp=Z,8.0nm,0.4s						
TT01	Tatalina	8.43	296	P	P	15 37 19.4	-2.0
MGLS	Mageik LS	8.44	264	P	P	15 37 19.5	-2.0
CAHL	Cahill	8.48	263	P	P	15 37 20.4	-1.7
INK	Inuvik	8.55	15	Pn	P	15 37 22.7	-0.5
	1.2nm,0.3s,baz=195,slow=13,SNR=22						
INK				Sn	Sn	15 38 57.4	-4.2
	1.0nm,0.3s,baz=165,slow=19,SNR=3.9						
INK				Lg		15 39 44.0	
	0.4nm,0.3s,baz=312,slow=7.3,SNR=4.7						
INK	Inuvik	8.55	15	*e*P	P	15 37 21.7	-1.5
INK	Inuvik	8.55	15	Pn	P	15 37 22.6	-0.6
INK				Sn	Sn	15 38 56.6	-4.9
INK				Sg	Sg	15 39 44.0	-16
INK				Trac		15 39 55.9	
	comp=Z,21nm,0.8s						
COLD	Coldfoot	8.56	330	P	P	15 37 22.0	-1.3
IM3	Indian Mountai	8.75	318	P	P	15 37 24.1	-1.8
IMA	Indian Mountai	8.78	319	*e*P	P	15 37 27.3	+1.1
FSB	Fort Saint Jam	9.90	119	Trac		15 41 06.3	
	comp=Z,5.0nm,0.6s						
BBB	Bella Bella	10.14	137	Pn	P	15 37 45.5	+0.5

	0.2nm,0.3s,baz=353,slow=8.1,SNR=3.5						
YKW3	Yellowknife Ar	12.07	68	P	P	15 38 10.1	-1.1
YKW3	Yellowknife Ar	12.07	68	Pn	P	15 38 11.2	0.0
YKW3				Pn	P	15 38 11.3	+0.1
YKW3				Sg	S	15 41 33.9	+66
YKW3				Trac		15 41 55.5	
	comp=Z,42nm,1.5s						
YKW3				Trac		15 41 56.6	
	comp=Z,6.0nm,0.8s						
YKA	Yellowknife Ar	12.08	68	Pn	P	15 38 09.8	-1.5
	0.2nm,0.3s,baz=269,slow=13,SNR=8.6						
YKA				Lg		15 41 36.4	
	0.1nm,0.3s,baz=269,slow=29,SNR=7.2						
YKA	Yellowknife Ar	12.08	68	Pn	P	15 38 09.8	-1.5
YKA				Lg		15 41 36.4	
NEW	Newport	17.52	123	P	P	15 39 23.4	+1.4
WALA	Waterton Lakes	18.32	116	*e*P	P	15 39 31.5	-0.6
	6.7nm,1.1s						
FFC	Flin Flon	20.62	89	P	P	15 39 59.2	+1.0
	3.1nm,1.0s						
RES	Resolute Bay	21.61	30	*e*P	P	15 40 07.2	-1.0
	4.0nm,0.3s,mb4.3						
RES	Resolute Bay	21.61	30	Pn	P	15 40 08.4	+0.2
MCMT	McKenzie Canyo	22.04	122	P	P	15 40 12.0	-0.8
HLID	Hailey	22.43	127	P	P	15 40 17.7	+1.0
FCC	Fort Churchill	22.70	74	P	P	15 40 19.9	+0.8
MVU	Marysvale	27.61	129	P	P	15 41 04.4	-1.4
SDCO	Great Sand Dun	31.00	121	P	P	15 41 36.2	+0.1
WMOK	Wichita Mounta	36.48	116	P	P	15 42 22.8	-0.7
SONM	Songino Array	59.90	315	P	P	15 45 24.9	+0.3
	0.5nm,0.6s,mb3.8,baz=43,slow=8.7,SNR=6.1						

WEL 21 15:46:45.0±0.3**, 39.90S**×**173.80E, h186**^{km}±2^{km}**, ML4.1**/14**, 8C-9D, Error ellipse: s-maj=2.2km s-min=1.2km az=90.0, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRZ	Ngariki Road	0.57	10	⇑PN	P	15 47 10.9	-0.2
NRZ				SN	S	15 47 31.1	-0.2
DFE	Dawson Falls	0.62	22	PN	P	15 47 11.1	-0.1
NWEZ	Newall Road	0.63	5	⇑PN	P	15 47 11.1	-0.2
NWEZ				SN	S	15 47 31.5	-0.2
NEZ	North Egmont	0.67	20	⇑PN	P	15 47 11.1	-0.4
PKE	Pukeiti	0.72	12	PN	P	15 47 11.4	-0.4
PKE				SN	S	15 47 31.6	-0.9
RAEZ	Rainy Point	0.76	37	⇓PN	P	15 47 11.6	-0.4
WAZ	Wanganui	0.92	81	⇓PN	P	15 47 13.1	+0.2
WAZ				SN	S	15 47 34.8	+0.2
VRZ	Vera Road	1.07	44	⇓PN	P	15 47 13.2	-0.8
VRZ				SN	S	15 47 34.6	-1.8
KIW	Kapiti Island	1.28	139	⇓PN	P	15 47 15.8	0.0
KIW				SN	S	15 47 37.1	-2.6
QRZ	Quartz Range	1.34	226	⇑PN	P	15 47 15.4	-1.0
QRZ				SN	S	15 47 38.4	-2.2
NNZ	Nelson	1.35	194	⇑PN	P	15 47 16.0	-0.5
NNZ				SN	S	15 47 38.1	-2.7
MRW	Makara Radio	1.49	153	PN	P	15 47 17.8	0.0
MRW				SN	S	15 47 40.9	-2.2
DRZ	Dome Shelter	1.50	66	PN	P	15 47 17.6	-0.2
DRZ				SN	S	15 47 40.8	-2.3
FWVZ	Far West T-bar	1.50	65	PN	P	15 47 17.2	-0.6
FWVZ				SN	S	15 47 42.0	-1.2
TWVZ	Taurewa	1.51	57	PN	P	15 47 16.9	-1.0
WPVZ	Whakapapa	1.52	63	PN	P	15 47 17.2	-0.8
WPVZ				SN	S	15 47 43.0	-0.5
CNZ	Chateau	1.52	63	PN	P	15 47 17.4	-0.7
TUWZ	Tuamarina	1.53	176	⇑PN	P	15 47 17.8	-0.3
TUWZ				SN	S	15 47 41.2	-2.5
CAW	Cannon Point	1.55	142	⇓PN	P	15 47 18.3	+0.1
MRZ	Mangatainoka R	1.56	120	⇓PN	P	15 47 18.1	-0.3
TUVZ	Tukino	1.56	67	PN	P	15 47 18.1	-0.3
TUVZ				SN	S	15 47 43.3	-1.0
WEL	Wellington	1.57	152	PN	P	15 47 18.4	0.0
NGZ	Ngauruhoe	1.57	63	⇓PN	P	15 47 17.7	-0.7
MOVZ	Moawhango	1.58	73	PN	P	15 47 17.8	-0.8
WTVZ	West Tongariro	1.59	61	PN	P	15 47 17.9	-0.8
HIZ	Hauiti	1.61	31	⇓PN	P	15 47 17.6	-1.2
HIZ				SN	S	15 47 42.8	-2.1
MGZ	Maungaku	1.62	57	PN	P	15 47 18.2	-0.8
OTVZ	Oturere	1.62	64	PN	P	15 47 18.4	-0.5
TSZ	Takapari Road	1.67	96	PN	P	15 47 18.9	-0.5
BHW	Baring Head	1.71	152	PN	P	15 47 19.5	-0.3
KATZ	Kakaramea	1.73	58	PN	P	15 47 19.4	-0.6
MTW	Mount Morrison	1.81	135	PN	P	15 47 20.5	-0.3
BSWZ	Blackbirch Sta	1.81	178	PN	P	15 47 20.7	-0.1
RITZ	Rihia Road	1.84	61	PN	P	15 47 20.8	-0.3
RATZ	Rangitukua	1.84	57	PN	P	15 47 21.0	-0.2
MSWZ	Moikau Station	1.87	144	PN	P	15 47 21.1	-0.4
CMWZ	Cape Campbell	1.87	170	⇑PN	P	15 47 22.0	+0.5
WATZ	Wairara	1.91	52	PN	P	15 47 21.0	-0.9
PAWZ	Paruwai Farm	1.93	141	PN	P	15 47 21.8	-0.2
THZ	Tophouse	1.98	200	PN	P	15 47 21.8	-0.8
BFZ	Birch Farm	2.03	113	⇓PN	P	15 47 22.6	-0.5
BKZ	Black Stump Fm	2.21	71	PN	P	15 47 23.9	-1.3
PWZ	Pawanui	2.36	94	PN	P	15 47 26.2	-0.7
DSZ	Denniston Nort	2.39	219	PN	P	15 47 26.1	-1.1
KHZ	Kahutara	2.52	184	⇑PN	P	15 47 27.9	-0.9
URZ	Urewera	3.05	59	PN	P	15 47 32.3	-2.8
LTZ	Lake Taylor	3.10	201	PN	P	15 47 33.9	-1.8
KNZ	Kokohu	3.12	75	PN	P	15 47 34.3	-1.7
MWZ	Matawai	3.29	63	PN	P	15 47 35.0	-3.0
CRLZ	Canterbury Las	3.78	193	PN	P	15 47 41.2	-2.9
MQZ	McQueen's Vall	3.90	192	PN	P	15 47 42.4	-3.2
WVZ	Waitaha Valley	3.92	215	PN	P	15 47 43.3	-2.7
PUZ	Puketiti	3.92	64	PN	P	15 47 42.9	-3.1
RPZ	Rata Peaks	4.33	207	PN	P	15 47 48.3	-2.8
FOZ	Fox Glacier	4.78	219	PN	P	15 47 52.5	-4.4
LBZ	Lake Benmore	5.23	210	PN	P	15 47 59.1	-3.6
JCZ	Jackson Bay	5.61	220	PN	P	15 48 04.2	-3.5
ODZ	Otahua Downs	5.65	203	PN	P	15 48 04.8	-3.4

IDC 21 15:48:32.7±48.0**, 18.28S**×**171.30W, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/17**, mbtmp3.7**/3**, Error ellipse: s-maj=933.2km s-min=187.8km az=82.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.44	243	P	P	15 56 45.5	-1.8
	0.5nm,0.4s,baz=82,slow=13,SNR=3.4						
ASAR	Alice Springs	51.20	254	P	P	15 57 38.1	-2.1
	0.3nm,0.4s,baz=92,slow=8.1,SNR=24						
WRA	Warramunga Arr	51.21	259	P	P	15 57 38.4	-1.9
	0.6nm,0.3s,baz=97,slow=7.0,SNR=32						

MOS ***21*** *15:55:43.8±0.9, 52.27N×176.12E, h83^{km}, mb4.2/11, Error ellipse: s-maj=22.9km s-min=12.8km az=106.2*

IDC ***21*** *15:55:43.8±2.7, 52.15N×176.22E, h66^{km}±21^{km}, mb3.5/12, mb1 3.7/13, mb1mx3.6/22, mbtmp3.8/13, Error ellipse: s-maj=23.0km s-min=14.5km az=158.0*

NEIC ***21*** *15:55:45.4, 52.02N×176.08E, h66^{km}, mb4.4/5, ML4.4(AEIC), After AEIC.*

ISC 21 15:55:43.9±0.7**, 52.26N**±0.10×**176.21E**±0.06**, h82**^{km}±5^{km}**, n50, σ0^{s}75**/54**, mb4.2**/23**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	1.37	291	P	P	15 56 07.9	-0.3
SMY				S	S	15 56 26.4	+0.2
FX1	Attu Island--F	1.96	290	P	P	15 56 15.6	-0.3
FX1				S	S	15 56 39.9	+0.4
FX1				pmax	pmax		
	comp=Z,177nm,0.3s						
FX1	Attu Island--F	1.96	290	P	P	15 56 15.6	-0.3
	comp=Z,177nm,0.3s,baz=112,slow=1.3,SNR=210						
FX1				S	S	15 56 39.9	+0.5
	comp=Z,527nm,0.3s,baz=156,slow=21,SNR=67						
FX1	Attu Island--F	1.96	290	P	P	15 56 15.7	-0.2
FX1				S	S	15 56 39.9	+0.4
KIMD	Kanaga Island	4.08	94	P	P	15 56 45.3	0.0
KIWB	Kanaga Island	4.12	93	P	P	15 56 46.0	+0.1
GSMY	Great Sitkin M	4.77	90	P	P	15 56 55.0	+0.1
ATKA	Atka Island	5.90	87	P	P	15 57 10.2	-0.2
NIKO	Nikolski	9.12	80	P	P	15 57 53.4	-1.2
UNV	Unalaska Valle	10.53	75	P	P	15 58 14.6	+1.1
BILL	Bilibino	16.54	347	*e*P	P	15 59 31.1	-0.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ILAR	Eielson Array	22.58	42	P	P	16 00 38.2	+0.7
	comp=Z,0.1nm,0.4s,baz=233,slow=9.0,SNR=4.4						
DAWY	Dawson	25.63	45	P	P	16 01 12.1	+5.2
BOD	Bodaibo	34.94	304	*e*P	P	16 02 28.7	-0.6
BOD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
YKA	Yellowknife Ar	36.86	46	P	P	16 02 46.0	+0.5
	comp=Z,0.1nm,0.3s,mb3.2,baz=292,slow=3.3,SNR=3.1						
ULN	Ulaanbaatar	43.08	293	*e*P	P	16 03 31.2	-5.7
SONM	Songino Array	43.47	293	P	P	16 03 41.0	+0.9
	comp=Z,1.7nm,0.5s,mb4.1,baz=59,slow=8.0,SNR=25						
NVAR	Mina Array Bea	46.48	80	P	P	16 04 04.7	+0.5
	comp=Z,0.4nm,0.5s,mb3.4,baz=204,slow=8.9,SNR=2.6						
ARCES	ARCESS Array B	56.64	348	P	P	16 05 20.0	-0.1
	comp=Z,2.3nm,0.9s,mb4.2,baz=30,slow=8.1,SNR=7.2						
ARCES	ARCESS Array B	56.64	348	P	P	16 05 20.0	-0.1
CHKZ	Chkalovo	57.61	317	*e*P	P	16 05 26.0	-1.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	57.61	317	*e*P	P	16 05 26.0	-1.1
	comp=Z,1.9nm,0.6s,mb4.3						
SCHQ	Schefferville	61.17	36	P	P	16 05 52.0	+0.4
	comp=Z,0.9nm,0.6s,mb4.0,baz=316,slow=9.3,SNR=3.8						
LTX	Lajitas	61.54	78	P	P	16 05 50.0	-4.4
	comp=Z,3.9nm,0.8s,mb4.5						
JOF	Joensuu	61.89	343	*e*p	P	16 05 54.5	-1.8
KAF	Kangasniemi	63.50	345	*e*p	P	16 06 05.9	-1.0
	comp=Z,1.6nm,0.4s,mb4.2						
KAF	Kangasniemi	63.50	345	*e*P	P	16 06 05.9	-1.0
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
AAK	Ala-Archa	63.88	306	*e*P	P	16 06 06.8	-2.9
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
AAK	Ala-Archa	63.88	306	*e*P	P	16 06 06.8	-2.9
	comp=Z,1.3nm,0.6s,mb3.9						
FINES	FINESS Array B	64.17	345	P	P	16 06 11.1	-0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	64.17	345	P	P	16 06 11.1	-0.1
	comp=Z,0.9nm,0.4s,mb4.0,baz=23,slow=7.9,SNR=17						
NB2	NORSAR Subarra	66.41	352	P	P	16 06 25.9	+0.3
	comp=Z,1.5nm,0.5s,mb4.1,baz=9.0,slow=6.2						
NB2	NORSAR Subarra	66.41	352	P	P	16 06 25.9	+0.3
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
NOA	NORSAR Array B	66.41	352	P	P	16 06 26.2	+0.6
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	66.41	352	P	P	16 06 26.2	+0.6
	comp=Z,1.9nm,0.6s,mb4.1,baz=10,slow=6.4,SNR=10						
CMAR	Chiang Mai Arr	67.86	272	P	P	16 06 35.4	0.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	67.86	272	P	P	16 06 35.4	0.0
	comp=Z,0.9nm,0.6s,mb3.8,baz=27,slow=7.2,SNR=8.0						
GUN	Gumba	68.64	288	*e*P	P	16 06 40.9	+0.8
	comp=Z,20nm,0.5s,mb5.2						
JIRN	Jiri	68.65	288	*e*P	P	16 06 41.0	+0.8
	comp=Z,18nm,0.5s,mb5.1						
KKN	Kakani	69.09	289	*e*P	P	16 06 43.3	+0.5
	comp=Z,9.8nm,0.5s,mb4.9						
PKI	Pulchoki	69.17	288	*e*P	P	16 06 44.0	+0.6
	comp=Z,7.7nm,0.5s,mb4.8						
GKN	Gorkha	69.30	289	*e*P	P	16 06 44.4	+0.2
	comp=Z,15nm,0.9s,mb4.8						
DMN	Daman	69.32	288	*e*P	P	16 06 45.0	+0.7
	comp=Z,7.1nm,0.6s,mb4.7						
KOLN	Koldanda	70.08	290	*e*P	P	16 06 49.0	+0.1
	comp=Z,6.6nm,0.7s,mb4.5						
AKASG	Malin Array Be	73.68	339	P	P	16 07 10.5	+0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	73.68	339	P	P	16 07 10.5	+0.8
	comp=Z,0.5nm,0.3s,mb3.7,baz=22,slow=6.1,SNR=5.4						
WRAB	Tennant Creek	80.60	220	P	P	16 07 48.0	-0.9
WRA	Warramunga Arr	80.61	220	P	P	16 07 48.0	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	80.61	220	P	P	16 07 48.0	-0.9
	comp=Z,1.0nm,1.0s,mb3.6,baz=30,slow=5.8,SNR=11						
ASAR	Alice Springs	84.15	218	P	P	16 08 07.2	+0.2
	comp=Z,0.4nm,0.6s,mb3.4,baz=23,slow=5.6,SNR=10						

GUC ***21*** *16:02:33.1±0.5, 31.25S×69.15W, h152^{km}±9^{km}, MD3.7, ML3.9*

NEIC ***21*** *16:02:33.1±0.7, 31.25S×68.76W, h99^{km}±14^{km}, MD3.7(GUC), Error ellipse: s-maj=12.9km s-min=7.9km az=98.0*

ISC 21 16:02:31.7±0.8**, 31.23S**±0.04×**68.75W**±0.07**, h115**^{km}±8^{km}**, n16, σ0^{s}97**/25**, 4C-2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.32	169	⇓*i*P	P	16 02 48.0	-0.2
ZON				*e*S	S	16 03 00.0	-0.6
TLL	Tololo Astrono	2.06	300	⇑*i*P	P	16 03 07.3	+1.1
TLL				*i* S	S	16 03 32.4	+0.3
TLL				AMP		16 03 36.3	
	comp=E,437nm,0.3s						
JACH	Jahuel	2.13	227	*e*P	P	16 03 07.6	+0.5
JACH				*i* S	S	16 03 34.7	+1.0
FCH	Farellones	2.46	212	⇑*i*P	P	16 03 13.0	+1.5
FCH				*i* S	S	16 03 43.5	+1.9
FCH				AMP		16 03 46.4	
	comp=E,606nm,0.3s						
PACH	Papudo	2.63	240	*e*P	P	16 03 12.7	-1.1
PACH				*i* S	S	16 03 43.5	-2.1
CLCH	Cerro Calan	2.64	215	*e*P	P	16 03 14.1	+0.2
CLCH				*i* S	S	16 03 45.4	-0.3
PCH	Pirque	2.81	212	*e*P	P	16 03 16.7	+0.5
RCDM	Rinconada Maip	2.85	217	*e*P	P	16 03 16.6	-0.1
RCDM				*i* S	S	16 03 49.6	-1.0
RCDM				AMP		16 03 52.4	
	comp=E,644nm,0.2s						
LMEL	Las Melosas	2.88	205	*e*P	P	16 03 18.1	+0.9
LMEL				*i* S	S	16 03 52.4	+0.8
LMEL				AMP		16 04 04.0	
	comp=N,255nm,0.3s						
TACH	Talagante	3.04	217	⇑*i*P	P	16 03 18.9	-0.5
CHCH	Chadas Angostu	3.14	210	⇓*i*P	P	16 03 20.8	+0.2
CHCH				*i* S	S	16 03 56.9	-0.8
LCCH	Las Cruces	3.27	226	⇑*i*P	P	16 03 21.3	-1.1
LVC	Limon Verde	8.58	359	*e*Pn	P	16 04 33.2	-1.2
TRQA	Tornquist	8.80	143	*e*Pn	P	16 04 37.1	-0.2
	comp=N,4.8nm,0.6s						
PLCA	Paso Flores	9.59	188	*e*Pn	P	16 04 47.3	-0.7
LPAZ	La Paz	14.88	2	*e*P	P	16 06 00.9	+3.5
	comp=N,4.1nm,0.7s						

IDC ***21*** *16:05:29.5±0.7, 2.15N×94.99E, mb4.2/12, mb1 4.4/13, mb1mx4.3/20, mbtmp4.2/13, ML4.0/1, MS3.7/6, Ms1 3.8/6, ms1mx3.5/21, Error ellipse: s-maj=35.0km s-min=15.4km az=51.0*

BJI ***21*** *16:05:31.9, 2.25N×95.11E, h23^{km}, mB5.4, mb4.6, Ms4.4, Msz4.1*

MOS ***21*** *16:05:32.2±1.4, 2.16N×95.05E, h33^{km}, mb4.9/12, Error ellipse: s-maj=26.7km s-min=11.3km az=100.8*

NEIC ***21*** *16:05:33.7±0.3, 2.20N×95.12E, mb4.9/18, Error ellipse: s-maj=8.5km s-min=5.7km az=64.0*

ISC 21 16:05:32.1±0.5**, 2.21N**±0.07×**95.16E**±0.07**, h27**^{km}**, h27**^{km}±1.4^{km}**: pP-P, n84, σ1^{s}02**/80**, mb4.7**/49**, MS3.9**/10**, 3C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKTK	Khon Kaen	15.94	28	P	P	16 09 15.0	-1.4
CM31	Chiang Mai Arr	16.57	13	*e*P	P	16 09 24.9	+0.5
	23nm,0.9s						
CMAR	Chiang Mai Arr	16.57	13	*i* P	P	16 09 26.0	+1.6
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CMAR	Chiang Mai Arr	16.57	13	Pn	P	16 09 23.3	-1.1
	comp=Z,0.2nm,0.3s,baz=204,slow=11,SNR=50						
CMAR				LR	LR	16 16 07.7	
	comp=Z,306nm,19.0s,baz=195,slow=38						
CHG	Chiang Mai	16.92	12	⇑P	P	16 09 34.5	+5.7
	comp=Z,20nm,0.9s						
VIS	Vishakhapatnam	19.30	324	*i* P	P	16 10 04.5	+6.5
HYB	Hyderabad	22.24	314	⇓*e*P	P	16 10 29.0	+0.5
	comp=Z,40nm,1.0s,mb4.8						
HYB	Hyderabad	22.24	314	⇓*i*P	P	16 10 29.0	+0.5
	comp=Z,40nm,1.0s,mb4.8						
KMI	Kunming	23.93	17	P	P	16 10 46.0	+1.0
KMI				AP		16 10 52.3	
KMI				XP		16 10 55.3	
KMI				AMB	AMB		
	comp=Z,25nm,1.7s,mb4.4						
KMI				AMB	AMB		
	comp=Z,133nm,4.5s						
KMI				LR	LR		
	comp=N,467nm,11.5s,MS4.2						
KMI				LR	LR		
	comp=E,323nm,14.6s,MS4.2						
KMI				LR	LR		
	comp=Z,415nm,15.0s,MS4.0						
KMI	Kunming	23.93	17	P	P	16 10 46.0	+1.0
	comp=Z,25nm,1.7s,mb4.4						
KMI				pP		16 10 52.3	
KMI				sP		16 10 55.3	
KMI				PP	PP	16 11 38.5	+19
KMI				S	S	16 15 25.1	+28
KMI				sS		16 15 37.6	
KMI				LR	LR		
	comp=Z,420nm,15.0s,MS4.0						
JIRN	Jiri	26.73	342	*e*P	P	16 11 11.9	+0.5
	comp=Z,81nm,0.9s,mb5.3						
PKI	Pulchoki	26.89	341	*e*P	P	16 11 12.9	0.0
	comp=Z,107nm,1.5s,mb5.2						
DMN	Daman	27.03	340	*e*P	P	16 11 14.1	-0.1
	comp=Z,56nm,1.1s,mb5.0						
GUN	Gumba	27.05	342	*e*P	P	16 11 14.6	+0.2
	comp=Z,114nm,1.2s,mb5.3						
KKN	Kakani	27.14	341	*e*P	P	16 11 15.0	-0.2
	comp=Z,93nm,1.1s,mb5.2						
GKN	Gorkha	27.55	340	*e*P	P	16 11 18.7	-0.3
	comp=Z,122nm,1.2s,mb5.4						
LSA	Lhasa	27.61	352	P	P	16 11 20.4	+1.0
LSA	Lhasa	27.61	352	*e*P	P	16 11 20.6	+1.2
	comp=Z,58nm,1.2s,mb5.1						
KOLN	Koldanda	27.72	338	*e*P	P	16 11 20.5	0.0
	comp=Z,49nm,1.0s,mb5.1						
CD2	Chengdu	29.69	15	*e*P	P	16 11 36.0	-2.2
NDI	New Delhi	31.40	329	*e*	P	16 11 50.5	-2.8
XAN	Xi'an	34.18	21	P	P	16 12 15.8	-1.7
XAN				AP	pP	16 12 23.6	-1.9
XAN				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
LZH	Lanzhou	34.66	12	⇓P	P	16 12 28.5	+7.0
	comp=Z,40nm,1.5s,mb5.1						
LZH				pP	pP	16 12 40.0	+10
LZH				sP	sP	16 12 44.0	+11
NJ2	Nanjing	37.14	34	*e*P	P	16 12 44.6	+2.1
NJ2				AP	pP	16 12 53.4	+2.8
NJ2				XP	sP	16 12 58.3	+4.2
NJ2				PP	PP	16 14 13.0	+3.3
NJ2				PPP	PPP	16 14 33.6	+3.7
NJ2				S	S	16 18 31.0	+4.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,1µm,5.2s						
NJ2				LR	LR		
	comp=N,2µm,16.2s						
NJ2				LR	LR		
	comp=E,1µm,14.2s						
GTA	Gaotai	37.27	6	*e*P	P	16 12 43.6	0.0
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
WMQ	Urumqi	41.96	352	*e*P	P	16 13 23.5	+1.0
BJT	Baijiatuau	42.19	24	*e*P	P	16 13 25.1	+0.7
	comp=Z,31nm,1.3s,mb4.8						
BJI	Beijing	42.22	24	P	P	16 13 25.4	+0.8
BJI				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.4						
BJI				AMB	AMB		
	comp=Z,119nm,3.5s						
BJI				LR	LR		
	comp=N,158nm,16.1s,MS4.1						
BJI				LR	LR		
	comp=E,148nm,17.9s,MS4.1						
BJI				LR	LR		
	comp=Z,75nm,23.2s						
BJI	Beijing	42.22	24	P	P	16 13 25.4	+0.8
	comp=Z,12nm,1.2s,mb4.4						
BJI				pP	pP	16 13 28.9	-3.9
BJI				sP	sP	16 13 33.2	-2.9
BJI				PP	PP	16 15 13.5	+8.2
BJI				S	tx	16 20 36.7	
BJI				LR	LR		
	comp=Z,80nm,23.2s,MS3.5						
ULHL	Ulahol	43.32	339	P	P	16 13 34.6	+1.1
	SNR=8.7						
KZA	Kyzart	43.53	338	P	P	16 13 36.8	+1.6
	SNR=6.4						
UCH	Uchtor	43.93	338	P	P	16 13 39.7	+1.2
	SNR=14						
TKM2	Tokmak 2	44.14	339	P	P	16 13 41.1	+0.9
	SNR=9.5						
KBK	Karagaybulak	44.14	339	P	P	16 13 41.9	+1.7
	SNR=12						
AML	Almayashu	44.17	337	P	P	16 13 41.7	+1.2
	SNR=16						
AAK	Ala-Archa	44.29	338	*d i*P	P	16 13 41.6	+0.1
AAK				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.8						
AAK	Ala-Archa	44.29	338	*e*P	P	16 13 41.0	-0.4
	comp=Z,14nm,1.0s,mb4.7						
AAK				*e*		16 13 53.8	
WRA	Warramunga Arr	44.30	122	P	P	16 13 41.8	0.0
	comp=Z,7.3nm,0.9s,mb4.4,baz=299,slow=9.0,SNR=44						
WRAB	Tennant Creek	44.30	122	⇑*i*P	P	16 13 42.5	+0.7
WRAB	Tennant Creek	44.30	122	*e*P	P	16 13 42.4	+0.5
	comp=Z,24nm,1.2s,mb4.8						
FRU	Bishkek	44.42	338	*e*P	P	16 13 44.0	+1.5
FRU				pmax	pmax		
	comp=Z,90nm,2.2s,mb5.1						
CHMS	Chumysh	44.51	339	P	P	16 13 51.4	+8.2
	SNR=5.1						
EKS2	Erkin-Say	44.59	337	P	P	16 13 44.8	+1.0
	SNR=9.8						
USP	Ospenovka	44.84	339	P	P	16 13 46.3	+0.5
	SNR=14						
ASAR	Alice Springs	45.63	127	P	P	16 13 53.2	+0.9
	comp=Z,1.9nm,0.8s,mb4.1,baz=299,slow=7.5,SNR=16						
SONM	Songino Array	46.48	10	P	P	16 13 59.1	+0.3
	comp=Z,5.4nm,1.2s,mb4.3,baz=196,slow=8.7,SNR=16						
SONM				PcP	PcP	16 15 33.7	+0.2
	comp=Z,1.7nm,0.9s,baz=199,slow=4.1,SNR=3.3						
ULN	Ulaanbaatar	46.63	11	*e*P	P	16 13 59.9	-0.1
	comp=Z,23nm,1.8s,mb4.8						
ZAK	Zakamensk	48.49	7	⇑*i*P	P	16 14 14.3	-0.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
MOY	Mondy	49.53	5	*e*P	P	16 14 30.7	+8.2
TLY	Talaya	49.81	7	*e*P	P	16 14 25.5	+0.8
TLY				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
TLY				MLR	MLR		
	comp=Z,82nm,14.0s,MS3.9						
TLY	Talaya	49.81	7	*e*P	P	16 14 24.2	-0.4
	comp=Z,17nm,1.3s,mb4.9						
TLY				*e*	pP	16 14 33.2	+0.2
KURK	Kurchatov	50.32	346	*e*P	P	16 14 28.6	+0.1
	comp=Z,38nm,1.3s,mb5.3						
KURK				*e*pP	pP	16 14 36.5	-0.4
IRK	Irkutsk	50.44	7	*e*P	P	16 14 28.2	-1.3
IRK				*e*		16 15 46.4	
IRK				pmax	pmax		
	comp=Z,31nm,1.9s,mb5.0						
HIA	Hailar	51.38	20	*e*P	P	16 14 36.4	-0.2
	comp=Z,12nm,1.0s,mb4.8						
HIA				*e*pP	pP	16 14 44.4	-0.6
ZAL	Zalesovo	52.26	352	P	P	16 14 43.2	0.0
	comp=Z,3.1nm,0.7s,mb4.4,baz=289,slow=6.6,SNR=24						
NVS	Novosibirsk	53.36	351	*e*P	P	16 14 49.6	-1.8
NVS				*i*	pP	16 14 57.9	-1.8
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						

BVAR	Borovoye Array	54.65	342	P	P	16 14 59.9	-0.9
	comp=Z,2.3nm,0.6s,mb4.4,baz=143,slow=7.4,SNR=18						
CHKZ	Chkalovo	55.14	342	eP	P	16 15 03.4	-1.1
	comp=Z,19nm,1.0s,mb5.1						
CHKZ				epP	pP	16 15 11.3	-1.5
CHKZ				e		16 15 18.2	
STKA	Stephens Creek	55.54	132	P	P	16 15 07.1	-0.6
	comp=Z,4.2nm,0.7s,mb4.6,baz=308,slow=7.2,SNR=8.7						
KLR	Kul'dur	56.30	28	eP	P	16 15 04.2	-8.6
BOD	Bodaibo	57.42	12	eP	P	16 15 19.6	-1.1
BOD				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.6						
KMBO	Kilima Mbogo	57.99	267	LR	LR	16 36 12.7	
	comp=Z,26nm,20.0s,MS3.3,baz=90,slow=32						
ZEI	Tsey	60.90	319	eP	P	16 15 45.6	+0.7
ZEI				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.3						
SVE	Sverdlovsk	61.02	339	eP	P	16 15 45.0	-0.5
SVE				pmax	pmax		
	comp=Z,40nm,2.1s,mb5.2						
KIV	Kislovodsk	62.22	320	eP	P	16 15 54.1	+0.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
MALT	Malatya	62.95	312	eP	P	16 15 57.8	-0.9
	comp=Z,5.5nm,1.1s,mb4.6						
MALT				epP	pP	16 16 06.8	-0.4
SOC	Sochi	64.01	318	eP	P	16 16 02.7	-3.0
SOC				e		16 16 38.1	
SOC				e		16 18 27.1	
SOC				ePPP	PPP	16 19 57.0	-3.3
SOC				eS	S	16 24 36.0	-2.6
SOC				e		16 25 55.8	
SOC				eSS	SS	16 28 48.2	-0.7
SOC				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
SOC				pmax	pmax		
	comp=N,8.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,18nm,0.9s						
YAK	Yakutsk	65.05	17	eP	P	16 16 10.4	-1.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
YAK	Yakutsk	65.05	17	eP	P	16 16 10.7	-1.4
	comp=Z,17nm,1.0s,mb5.0						
YAK				epP	pP	16 16 19.0	-1.6
BRTR	Keskin Array B	66.93	313	P	P	16 16 22.9	-1.6
	comp=Z,1.9nm,0.8s,mb4.2,baz=121,slow=7.2,SNR=10						
OBN	Obninsk	70.70	329d	iP	P	16 16 46.9	-0.6
OBN				i	pP	16 16 54.9	-1.1
OBN				eSS	SS	16 30 33.0	+0.3
OBN				pmax	pmax		
	comp=Z,27nm,1.7s,mb4.9						
LBTB	Lobatse	72.51	243	LR	LR	16 42 39.3	
	comp=Z,99nm,19.6s,MS4.1,baz=231,slow=31						
LBTB	Lobatse	72.51	243	eP	P	16 16 59.1	+0.1
	comp=Z,6.9nm,1.1s,mb4.5						
TIXI	Tiksi	72.57	11	eP	P	16 16 57.4	-1.0
TIXI				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,77nm,15.0s,MS4.1						
AKASG	Malin Array Be	73.22	323	i P	P	16 17 02.3	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	73.22	323	P	P	16 17 00.8	-1.9
	comp=Z,0.8nm,0.7s,mb3.8,baz=99,slow=4.2,SNR=6.4						
MLR	Muntele Rosu	73.94	317	P	P	16 17 07.3	+0.4
	comp=Z,4.7nm,0.9s,mb4.4,baz=160,slow=1.7,SNR=6.7						
SUR	Sutherland	78.01	236	LR	LR	16 46 44.9	
	comp=Z,46nm,18.0s,MS3.9,baz=80,slow=32						
FINES	FINESS Array B	78.17	333	P	P	16 17 30.0	-0.5
	comp=Z,0.7nm,0.7s,mb3.7,baz=135,slow=3.9,SNR=3.5						
ARCES	ARCESS Array B	80.91	340	P	P	16 17 45.9	+0.8
	comp=Z,1.6nm,0.8s,mb4.0,baz=297,slow=2.7,SNR=4.6						
ARCES				LR	LR	16 55 58.8	
	comp=Z,48nm,20.3s,MS3.8,baz=200,slow=37						
GERES	GERESS Array B	82.72	319	P	P	16 17 55.7	+0.8
	comp=Z,2.2nm,0.9s,mb4.2,baz=104,slow=5.5,SNR=11						
SNAA	Sanae	94.60	198	LR	LR	16 56 03.6	
	comp=Z,44nm,21.6s,MS3.9,baz=222,slow=32						
TXAR	Lajitas Array	143.83	29	PKP	PKPdf	16 25 06.0	-4.3
	comp=Z,0.2nm,0.3s,baz=270,slow=3.8,SNR=3.6						
LPAZ	La Paz	158.40	229	PKPab	PKPab	16 26 04.5	-0.1
	comp=Z,0.5nm,0.6s,baz=352,slow=3.8,SNR=3.8						

*IDC **21** 16:14:32.3±1.4, 59.66S×25.87W, mb4.0/2, mb1 4.1/2, mb1mx3.6/13, mbtmp3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.3/19, Error ellipse: s-maj=108.3km s-min=40.9km az=25.0*

*NEIC **21** 16:14:40.1±2.9, 59.57S×25.82W, h53^{km}±24^{km}, mb4.0/4, Error ellipse: s-maj=48.4km s-min=15.2km az=222.0*

ISC 21 16:14:37.8±4.7, **59.6S**±0.4×**26.0W**±0.9, **h42**^{km}±41^{km}, **n13, σ0^{s}67**/10, **mb4.1**/5, **MS3.2**/1, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	13.43	157	P	P	16 17 47.5	-0.3
VNA2	Neumayer--Watz	13.67	154	P	P	16 17 50.9	+0.2
SNAA	Sanae	15.25	152	P	P	16 18 11.4	0.0
SNAA	Sanae	15.25	152	eP	P	16 18 11.3	0.0
USHA	Ushuaia	23.18	263	LR	LR	16 26 47.6	
	comp=Z,88nm,18.5s,MS3.2,baz=325,slow=32						
QSPA	South Pole Qui	30.64	180	eP	P	16 20 50.4	+0.8
	1.9nm,0.4s,mb4.3						
TRQA	Tornquist	31.43	297	P	P	16 20 57.1	+0.1
	1.1nm,0.5s,mb3.9						
PLCA	Paso Flores	33.40	284	P	P	16 21 13.4	-0.7
	0.8nm,0.7s,mb3.8,baz=149,slow=8.9,SNR=4.8						
PLCA	Paso Flores	33.40	284	P	P	16 21 12.5	-1.6
	0.8nm,0.6s,mb3.8						
LVC	Limon Verde	47.69	302	P	P	16 23 13.0	+1.0
	2.1nm,0.7s,mb4.3						
ASAR	Alice Springs	95.40	162	P	P	16 27 58.0	-0.6
	0.7nm,0.9s,mb4.1,baz=179,slow=3.8,SNR=5.4						
SONM	Songino Array	150.12	92	PKPbc	PKPdf	16 34 24.5	+6.8
	0.4nm,0.4s,baz=247,slow=2.2,SNR=4.1						
ILAR	Eielson Array	152.87	306	PKPbc	PKPdf	16 34 28.6	+7.4
	0.2nm,0.4s,baz=150,slow=2.2,SNR=6.7						

IDC 21 16:28:47.8±4.2, **5.19S**×**104.14E, mb3.7**/3, **mb1 3.9**/3, **mb1mx3.5**/15, **mbtmp3.7**/3, **Error ellipse: s-maj=188.6km s-min=79.2km az=34.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.83	119	P	P	16 35 22.5	-3.0
	0.3nm,0.8s,baz=293,slow=9.6,SNR=3.4						
ASAR	Alice Springs	34.05	126	P	P	16 35 34.1	-1.9
	0.8nm,0.3s,baz=296,slow=7.4,SNR=33						
ASAR				PcP	PcP	16 38 11.7	-2.3
	0.1nm,0.5s,baz=305,slow=2.9,SNR=3.9						
STKA	Stephens Creek	43.96	132	P	P	16 36 57.4	-1.1
	1.0nm,0.5s,baz=310,slow=9.1,SNR=6.1						

IDC 21 16:36:30.7±2.6, **12.28N**×**94.37E, mb3.6**/3, **mb1 3.7**/4, **mb1mx3.5**/18, **mbtmp3.4**/4, **ML3.2**/1, **Error ellipse: s-maj=73.6km s-min=30.6km az=69.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.56	35	Pn	Pn	16 38 21.6	-3.3
	0.1nm,0.3s,baz=223,slow=15,SNR=5.3						
SONM	Songino Array	36.85	14	P	P	16 43 40.9	-1.5
	0.4nm,1.0s,baz=187,slow=12,SNR=3.1						
ZAL	Zalesovo	42.25	352	P	P	16 44 25.6	-1.7
	1.2nm,0.4s,baz=307,slow=5.1,SNR=6.3						
WRA	Warramunga Arr	50.72	129	P	P	16 45 32.5	-2.1
	0.4nm,0.7s,baz=306,slow=8.2,SNR=4.7						

*BJI **21** 16:39:17.2, 23.10S×169.20E, h10^{km}, mB5.4, mb4.7*

*IDC **21** 16:39:17.2±0.9, 23.10S×169.33E, mb4.3/8, mb1 4.5/8, mb1mx4.5/14, mbtmp4.3/8, MS3.9/9, Ms1 3.9/9, ms1mx3.6/18, Error ellipse: s-maj=31.8km s-min=24.3km az=145.0*

*NEIC **21** 16:39:19.2±0.4, 23.11S×169.23E, h10^{km}, mb4.9/9, Error ellipse: s-maj=14.3km s-min=11.1km az=11.0*

*HRVD **21** 16:39:19.2±0.6, 23.25S×169.15E, h22^{km}±1^{km}, MW4.8/46, Centroid moment Tensor Solution. LP body waves: s12,c15;Mantle waves: s46,c57; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.30±.25; $M_{\theta\theta}$1.78±.15; $M_{\phi\phi}$0.52±.14; $M_{r\theta}$-1.05±.19; $M_{\theta\phi}$-0.04±.10; $M_{\phi r}$0.54±.25; Best double couple: $M_0$2.346×10^{16} NP1:ϕ_s266°,δ31°, λ-104°. NP2:ϕ_s103°,δ60°,λ-81°. Principal axes: T 2.054, Plg14°, Azm187°; N .592, Plg7°, Azm279°; P -2.639, Plg74°, Azm36°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **21** 16:39:25.2±1.9, 22.38S×168.70E, h33^{km}, mb5.3/4 Error ellipse: s-maj=30.7km s-min=17.1km az=34.8*

ISC 21 16:39:17.5±3.6, **23.2S**±0.1×**169.30E**±0.07, **h14**^{km}±22^{km}, **n82, σ1^{s}08**/33, **mb4.6**/17, **MS3.8**/8, **8C-1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.85	292	eP	Pn	16 40 03.8	+0.3
DZM				eS	Sn	16 40 38.0	+0.1
DZM	Mont Dzumac	2.85	292	eP	Pn	16 40 03.8	+0.3
DZM				eS	Sn	16 40 38.0	0.0
NOUC	Port Laguerre	2.96	290⇑	eP	Pn	16 40 05.4	+0.3
NOUC				eS	Sn	16 40 40.7	0.0
NOUC	Port Laguerre	2.96	290⇑	eP	Pn	16 40 05.4	+0.3
NOUC				eS	Sn	16 40 40.7	0.0
URZ	Urewera	16.48	158	LR	LR	16 48 26.8	
	comp=Z,681nm,21.1s,baz=205,slow=33						
RPZ	Rata Peaks	20.57	176	P	P	16 43 57.9	-0.5
	28nm,1.0s,baz=43,slow=5.2,SNR=7.4						
RPZ				LR	LR	16 51 12.5	
	comp=Z,868nm,19.6s,MS4.1,baz=21,slow=35						
CTA	Charters Tower	21.64	274	LR	LR	16 51 35.4	
	comp=Z,165nm,19.2s,MS3.5,baz=265,slow=34						
PMG	Port Moresby	25.22	299	P	P	16 44 45.0	+0.4
PMG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PMG	Port Moresby	25.22	299	LR	LR	16 52 58.4	
	comp=Z,94nm,20.1s,MS3.3,baz=126,slow=33						
PMG	Port Moresby	25.22	299	P	P	16 44 45.0	+0.4
	comp=Z,7.0nm,0.7s,mb4.3						
STKA	Stephens Creek	26.01	244	P	P	16 44 53.5	+1.6
	comp=Z,1.9nm,0.8s,mb3.6,baz=95,slow=13,SNR=3.7						
STKA				LR	LR	16 55 29.8	
	comp=Z,183nm,18.7s,MS3.6,baz=45,slow=37						
ASAR	Alice Springs	32.44	262	P	P	16 45 49.4	-0.2
	comp=Z,5.5nm,1.1s,mb4.3,baz=82,slow=9.5,SNR=20						
ASAR				PcP	PcP	16 48 36.0	-0.9
	comp=Z,1.1nm,0.8s,baz=108,slow=2.8,SNR=8.2						
WRAB	Tennant Creek	32.62	269	P	P	16 45 49.4	-1.8
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
WRAB	Tennant Creek	32.62	269	P	P	16 45 49.4	-1.8
	comp=Z,2.8nm,0.6s,mb4.4						
WRA	Warramunga Arr	32.63	269	P	P	16 45 49.9	-1.4
	comp=Z,2.1nm,1.0s,mb4.0,baz=98,slow=8.2,SNR=17						
WRA				PcP	PcP	16 48 36.4	-1.0
	comp=Z,1.0nm,0.7s,baz=97,slow=2.8,SNR=10						
MBWA	Marble Bar	45.78	262	eP	P	16 47 40.1	-0.6
	comp=Z,8.2nm,0.6s,mb4.8						
VNDA	Vanda	54.55	182	LR	LR	17 06 15.2	
	comp=Z,193nm,21.4s,MS4.1,baz=240,slow=30						
QSPA	South Pole Qui	66.93	180	eP	P	16 50 11.6	+0.5
	comp=Z,7.2nm,1.1s,mb4.6						
MAW	Mawson	74.86	202	LR	LR	17 18 25.0	
	comp=Z,152nm,21.1s,MS4.3,baz=249,slow=31						
ENH	Enshi	78.21	310	eP	P	16 51 18.5	-0.1
	comp=Z,49nm,1.8s,mb5.1						
KLR	Kul'dur	79.44	336	eP	P	16 51 22.8	-2.1
CM31	Chiang Mai Arr	80.17	295	eP	P	16 51 30.7	+1.3
	comp=Z,8.7nm,1.0s,mb4.6						
CMAR	Chiang Mai Arr	80.17	295	P	P	16 51 31.1	+1.7
	comp=Z,5.5nm,0.8s,mb4.5,baz=134,slow=4.0,SNR=40						
LZH	Lanzhou	85.39	312	P	P	16 51 53.0	-2.9
LZH				XP	sP	16 52 07.5	+5.7
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.3						
LZH	Lanzhou	85.39	312	P	P	16 51 53.0	-2.9
	comp=Z,42nm,1.5s,mb5.3						
LZH				pP	pP	16 52 07.5	+7.2
LZH				sP	sP	16 52 14.0	+12
ULN	Ulaanbaatar	90.02	323	eP	P	16 52 18.7	+0.7
ULN				pmax	pmax		
	comp=Z,22nm,1.7s,mb5.2						
ULN	Ulaanbaatar	90.02	323	eP	P	16 52 18.6	+0.7
	comp=Z,22nm,1.7s,mb5.2						
SONM	Songino Array	90.37	323	P	P	16 52 20.4	+0.9
	comp=Z,2.9nm,0.8s,mb4.6,baz=140,slow=5.2,SNR=18						
YAK	Yakutsk	90.60	343	eP	P	16 52 19.7	-0.6
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.1						
YAK	Yakutsk	90.60	343	eP	P	16 52 19.7	-0.6
	comp=Z,9.5nm,0.9s,mb5.1						
NVAR	Mina Array Bea	91.33	48	P	P	16 52 25.5	+1.3
	comp=Z,2.3nm,0.7s,mb4.6,baz=216,slow=6.2,SNR=10						
NVAR	Mina Array Bea	91.33	48	P	P	16 52 25.5	+1.3
ZAK	Zakamensk	93.48	324⇓	iP	P	16 52 34.5	+0.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.6						
ILAR	Eielson Array	93.92	17	P	P	16 52 34.1	-1.4
	comp=Z,0.7nm,0.8s,mb4.1,baz=244,slow=4.3,SNR=6.9						
TXAR	Lajitas Array	98.56	62	LR	LR	17 27 46.2	
	comp=Z,50nm,22.0s,MS4.0,baz=315,slow=30						
PDAR	Pinedale Array	99.21	47	LR	LR	17 33 53.2	
	comp=Z,26nm,18.1s,MS3.8,baz=147,slow=33						
ARCES	ARCESS Array B	128.84	345	PKP	PKPdf	16 58 25.5	-2.3
	comp=Z,1.3nm,0.7s,baz=45,slow=1.7,SNR=3.9						
CRVS	Cervenica-Dubn	143.89	323	ePKIKP	PKPdf	16 58 53.1	-2.6
CRVS				e		16 59 01.9	
CRVS	Cervenica-Dubn	143.89	323	ePKP	PKPdf	16 58 53.1	-2.6
CRVS				e		16 58 56.6	
CRVS				e		16 59 01.9	
KECS	Kecovo	144.66	323	ePKP	PKPdf	16 58 55.4	-1.7
KECS				e		16 58 58.4	
OKC	Ostrava-Krasne	145.08	327	ePKP	PKPdf	16 58 56.3	-1.5
PSZ	Piszkesteto	145.31	323⇑	iPKP/p	PKPdf	16 58 57.2	-1.1
KSP	Ksiaz	145.31	330	ePKIKP	PKPdf	16 58 56.6	-1.6
VYHS	Vyhne	145.55	325	ePKP	PKPdf	16 58 58.1	-0.6
DPC	Dobruska-Polom	145.63	329	ePKP	PKPdf	16 58 58.0	-0.7
UPC	Upice	145.67	329	ePKP	PKPdf	16 58 58.0	-0.8
PVCC	Panska Ves	146.32	331	ePKP	PKPdf	16 59 00.2	+0.3
BRG	Berggiesshubel	146.36	332	i PKIKP	PKPdf	16 59 00.2	+0.2
BRG				pmax	pmax		
	comp=Z,12nm,0.8s						
CLL	Collm	146.44	333	i PKP2	PKPab	16 59 00.3	-0.7
CLL				pmax	pmax		
	comp=Z,20nm,1.0s						
CLL	Collm	146.44	333⇑	iPKP1	PKPbc	16 59 00.3	+2.4
CLL				e		16 59 10.0	
CLL				e		16 59 16.0	
ZST	Bratislava	146.64	325	ePKP	PKPdf	16 58 58.6	-1.9
PRU	Pruhonice	146.72	330	ePKP	PKPdf	16 59 00.9	+0.3
CLZ	Clausthal	147.08	336	ePKPbc	PKPdf	16 59 02.0	+0.9
NKC	Novy Kostel	147.47	332	ePKP	PKPdf	16 59 03.2	+1.4
MOX	Moxa	147.52	333	ePKP2	PKPab	16 59 03.1	-2.1
MOX				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOX	Moxa	147.52	333	i P	PKPdf	16 59 03.1	+1.2
	comp=Z,logA/T=1.0						
KHC	Kasperske Hory	147.76	330	ePKP	PKPdf	16 59 04.0	+1.7
GEC2	GERESS Array S	147.91	329	ePKP2	PKPab	16 59 04.2	-2.6
GERES	GERESS Array B	147.91	329	PKPbc	PKPdf	16 59 04.4	+1.8
	comp=Z,4.8nm,0.8s,baz=45,slow=1.9,SNR=21						
WET	Wettzell	148.08	330	ePKP2	PKPab	16 59 04.8	-2.7
MOA	Molln	148.32	327⇑	iP	PKPdf	16 59 05.4	+2.1
GRA1	Grafenberg Arr	148.41	332	ePKPbc	PKPdf	16 59 05.5	+2.2
GRF	Grafenberg Arr	148.41	332	ePKP	PKPdf	16 59 05.5	+2.2
CRES	Cresnjev	149.00	323	ePKPbc	PKPdf	16 59 07.5	+3.0
TNS	Taunus Mts	149.11	336	ePKP2	PKPab	16 59 11.5	-0.2
TNS	Taunus Mts	149.11	336	ePKPbc	PKPdf	16 59 07.7	+3.3
TNS				ePKPab	PKPab	16 59 11.5	-0.2
KBA	Koelnbreinsper	149.30	327⇑	iP	PKPdf	16 59 07.4	+2.5
WTTA	Wattenberg	150.01	329⇑	iP	PKPdf	16 59 09.7	+3.7
MOTA	Moosalm	150.20	329⇑	iP	PKPdf	16 59 09.7	+3.4
SQTA	Sankt Quirin	150.24	329⇑	iP	PKPdf	16 59 09.9	+3.6
GIVF	Givet	150.48	340	ePKP1	PKPdf	16 59 10.0	+3.4
BAIF	Baives	150.71	340	ePKP1	PKPdf	16 59 10.6	+3.6
CDF	Champ du Feu	151.02	335	ePKP1	PKPdf	16 59 11.0	+3.5
	comp=Z,23nm,1.2s						
HINF	Hinteralfeld	151.67	335	ePKP1	PKPdf	16 59 12.5	+4.0
	comp=Z,24nm,1.2s						
HAU	Haudompre	151.71	335	ePKP1	PKPdf	16 59 12.5	+4.0
	comp=Z,20nm,0.9s						
MEZF	Maizieres J'vi	151.77	338	ePKP1	PKPdf	16 59 13.1	+4.5
	comp=Z,27nm,0.8s						
CABF	La Chapelle	152.96	334	ePKP1	PKPdf	16 59 14.8	+4.5
SSF	Saint Saulge	153.55	338	ePKP1	PKPdf	16 59 16.7	+5.6
	comp=Z,8.8nm,0.9s						
LPG	La Plagne	153.57	332	ePKP1	PKPdf	16 59 17.2	+6.0
	comp=Z,27nm,1.2s						
MBDF	Montbardon	154.16	331	ePKP1	PKPdf	16 59 18.8	+6.7
	comp=Z,15nm,1.1s						
TCF	Toulx Ste Croi	154.66	339	ePKP1	PKPdf	16 59 18.8	+6.1
DBIC	Dimbokro	162.68	200	PKPab	PKPab	17 00 10.1	-0.5
	comp=Z,5.3nm,1.3s,baz=141,slow=6.2,SNR=3.2						

*NEIC **21** 16:56:03.6, 30.78S×71.66W, h18^{km}, ML3.4(GUC), After GUC.*

GUC 21 16:56:03.6±0.9, **30.78S**×**71.66W, h18**^{km}±7^{km}, **MD3.9, ML3.4, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	Ovalle	0.43	67	eP	Pb	16 56 11.9	-0.4
OVCH				i S	Sb	16 56 18.8	+0.6
OVCH				AMP		16 56 19.2	
	comp=N,9µm,0.1s						
ILCH	Illapel	0.95	154	i P	Pb	16 56 20.6	-0.7
ILCH				i S	Sb	16 56 33.8	+0.4
ILCH				AMP		16 56 35.4	
	comp=E,994nm,0.5s						
PTCH	Petorca	1.61	158	eP		16 58 30.4	
PTCH				i S		16 58 50.5	
PTCH				AMP		16 58 56.8	
	comp=E,1µm,0.2s						
JACH	Jahuel	2.11	155	eP	Pn	16 56 38.9	+0.3
JACH				i S	Sn	16 57 06.2	+1.7
LCCH	Las Cruces	2.69	178	eP	Pn	16 56 46.9	-0.1
FCH	Farellones	2.80	156	eP	Pn	16 56 49.7	+1.3
FCH				i S	Sn	16 57 23.9	+1.9
FCH				AMP		16 57 35.7	
	comp=E,129nm,0.4s						
TACH	Talagante	2.93	168	eP	Pn	16 56 50.0	-0.3

*IDC **21** 17:10:32.0±1.0, 5.35S×131.06E, mb4.0/6, mb1 4.3/8, mb1mx4.2/14, mbtmp4.1/8, ML4.2/2, Error ellipse: s-maj=68.6km s-min=18.0km az=61.0*

*NEIC **21** 17:10:34.1±0.7, 5.41S×131.29E, h20^{km}, mb4.0/5, Error ellipse: s-maj=27.4km s-min=8.9km az=77.0*

ISC 21 17:10:39.8±1.9, **5.71S**±0.06×**130.9E**±0.1, **h85**^{km}±19^{km}, **n17, σ1^{s}17**/22, **mb3.8**/7, **2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	7.11	168⇑	iP	P	17 12 23.1	0.0
	5.4nm,0.1s						
KAKA				eS	S	17 13 42.5	-0.6
FITZ	Fitzroy Crossi	13.35	202	eP	P	17 13 47.9	+0.8
	3.1nm,0.2s						
FITZ				eS	S	17 16 13.6	-0.2
WRAB	Tennant Creek	14.52	167	ePn	P	17 14 00.6	-1.7
	13nm,0.6s						
WRA	Warramunga Arr	14.53	167	Pn	P	17 13 59.7	-2.7
	1.2nm,0.3s,baz=347,slow=14,SNR=54						
WRA				Sn	S	17 16 35.8	-5.9
	0.9nm,0.3s,baz=353,slow=24,SNR=6.5						
ASAR	Alice Springs	18.08	171	P	P	17 14 48.2	+1.3
	1.7nm,0.3s,baz=351,slow=10,SNR=82						
ASAR				S	S	17 18 02.1	-0.3
	0.2nm,0.3s,baz=352,slow=26,SNR=4.1						
ASPA	Alice Springs	18.08	171	eP	P	17 14 48.1	+1.2
ASPA				eS	S	17 18 01.5	-0.9
MBWA	Marble Bar	18.80	214	eP	P	17 14 58.6	+3.4
	2.9nm,0.5s						
CTA	Charters Tower	20.65	135	eP	P	17 15 16.4	+1.6
	4.6nm,0.9s						
CTA	Charters Tower	20.65	135	P	P	17 15 16.4	+1.6
	6.7nm,1.0s,baz=343,slow=14,SNR=5.1						
STKA	Stephens Creek	27.88	160⇑	iP	P	17 16 26.2	+2.3
	1.1nm,0.3s,mb3.9						
STKA	Stephens Creek	27.88	160	P	P	17 16 26.1	+2.2
	1.1nm,0.3s,mb3.8,baz=354,slow=7.6,SNR=16						
CMAR	Chiang Mai Arr	39.64	308	P	P	17 18 05.7	+0.6
	1.3nm,0.5s,mb4.0,baz=131,slow=7.0,SNR=18						
SONM	Songino Array	57.53	341	P	P	17 20 21.7	-1.1
	0.5nm,0.6s,mb3.7,baz=163,slow=6.4,SNR=6.9						
ZAL	Zalesovo	70.85	333	P	P	17 21 48.6	-0.7
	1.1nm,0.6s,mb3.9,baz=315,slow=5.5,SNR=5.7						
KURK	Kurchatov	71.91	328	eP	P	17 21 55.4	-0.3
	1.1nm,0.5s,mb3.9						
BVAR	Borovoye Array	77.47	327	P	P	17 22 27.3	-0.3
	0.6nm,0.5s,mb3.6,baz=130,slow=10,SNR=7.0						
CHKZ	Chkalovo	77.66	328	eP	P	17 22 28.1	-0.5
	0.9nm,0.6s,mb3.7						

IDC 21 17:15:28.3±1.0, **12.12N**×**143.07E, mb3.6**/6, **mb1 3.9**/6, **mb1mx3.7**/20, **mbtmp3.6**/6, **Error ellipse: s-maj=57.3km s-min=22.4km az=106.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.00	195	P	P	17 22 04.8	-2.6
	0.4nm,0.7s,baz=19,slow=9.7,SNR=4.2						
ASAR	Alice Springs	36.68	194	P	P	17 22 37.1	-1.7
	0.2nm,0.5s,baz=20,slow=11,SNR=3.3						
BVAR	Borovoye Array	69.99	322	P	P	17 26 41.9	-1.7
	0.2nm,0.4s,baz=82,slow=10,SNR=4.1						
ILAR	Eielson Array	70.64	25	P	P	17 26 44.0	-3.3
	0.4nm,0.8s,baz=245,slow=6.3,SNR=5.0						
YKA	Yellowknife Ar	84.96	27	P	P	17 28 05.7	-0.6
	0.3nm,0.8s,baz=290,slow=5.1,SNR=5.2						
NVAR	Mina Array Bea	89.20	51	P	P	17 28 27.9	+0.3
	0.6nm,0.3s,baz=262,slow=6.4,SNR=5.5						

IDC 21 17:19:01.8±2.4, **12.04N**×**94.45E, mb3.5**/4, **mb1 3.6**/5, **mb1mx3.5**/18, **mbtmp3.4**/5, **ML3.1**/1, **Error ellipse: s-maj=77.9km s-min=24.2km az=71.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.71	34	Pn	Pn	17 20 55.6	-2.4
	0.1nm,0.3s,baz=223,slow=16,SNR=3.0						
SONM	Songino Array	37.06	13	P	P	17 26 13.4	-1.9
	0.6nm,1.0s,baz=207,slow=6.4,SNR=4.1						
ZAL	Zalesovo	42.49	352	P	P	17 26 58.8	-1.5
	1.1nm,0.4s,baz=326,slow=5.4,SNR=5.4						
WRA	Warramunga Arr	50.51	129	P	P	17 28 01.9	-2.3
	1.1nm,1.4s,baz=308,slow=8.3,SNR=3.9						
ASAR	Alice Springs	52.42	133	P	P	17 28 16.5	-2.1
	0.2nm,0.7s,baz=314,slow=6.5,SNR=4.5						

*PRU **21** 17:20:45.8, 51.46N×16.17E*

*CSEM **21** 17:20:45.7±0.5, 51.48N×16.13E, ML2.8/1, Error ellipse: s-maj=11.0km s-min=4.7km az=22.0*

*NEIC **21** 17:20:46.7±1.7, 51.41N×16.08E, h5^{km}, ML2.8(VIE), ML2.6(SZGRF), ML2.2(BRG), Error ellipse: s-maj=18.3km s-min=7.9km az=214.0*

WAR 21 17:20:46.4, 51.47N×**16.11E, h1**^{km}**, ML2.5, 1C, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.64	170	ePg	Pg	17 20 58.1	-1.1
KSP				e		17 21 00.0	
KSP				i Sg	Sg	17 21 06.6	-1.1
KSP	Ksiaz	0.64	170	ePG	Pg	17 20 58.0	-1.2
KSP				eSG	Sg	17 21 07.0	-0.7
UPC	Upice	0.97	184	ePG	Pg	17 21 04.1	-1.6
DPC	Dobruska-Polom	1.13	173	ePG	Pg	17 21 06.7	-2.3
DPC				eSG	Sg	17 21 21.7	-2.3
	12nm,0.3s						
PVCC	Panska Ves	1.36	226	ePG	Pg	17 21 11.3	-2.2
BRG	Berggiesshubel	1.49	247	ePn	Pn	17 21 13.7	-0.7
BRG				i Pg	Pg	17 21 14.5	-1.6
BRG				i Sg	Sg	17 21 34.0	-2.0
BRG	Berggiesshubel	1.49	247	i Pg	Pg	17 21 14.5	-1.6
PRU	Pruhonice	1.79	214	ePG	Pg	17 21 18.3	-3.8
PRU				eSG	Sg	17 21 42.0	-3.9
MORC	Moravsky Berou	1.93	151	ePn	Pn	17 21 18.9	-1.7
MORC				eSn	Sn	17 21 43.2	-2.6
MORC				eSg	Sg	17 21 46.7	-3.8
MORC	Moravsky Berou	1.93	151	ePn	Pn	17 21 18.9	-1.7

MORC				*e*Sn	Sn	17 21 43.2	-2.6
CLL	Collm	1.95	266	*e*Pn	Pn	17 21 19.0	-2.0
CLL				*e*Pg	Pg	17 21 22.0	-3.4
CLL				*i* Sg	Sg	17 21 48.3	-3.1
CLL	Collm	1.95	266	*e*PN	Pn	17 21 19.0	-2.0
CLL				*e*PG	Pg	17 21 22.0	-3.4
CLL				*e*		17 21 26.0	
CLL				*i* SG	Sg	17 21 48.3	-3.1
OKC	Ostrava-Krasne	2.09	141	*e*SG	Sg	17 21 50.3	-5.6
NKC	Novy Kostel	2.63	243	*e*PN	Pn	17 21 30.2	-0.5
NKC				*e*PG	Pg	17 21 34.6	-4.3
NKC				*e*SG	Sg	17 22 10.1	-3.9
NKC	Novy Kostel	2.63	243	Pg	Pg	17 21 34.6	-4.3
NKC				Sg	Sg	17 22 10.1	-3.9
KHC	Kasperske Hory	2.85	216	*e*PN	Pn	17 21 32.4	-1.5
KHC				*e*PG	Pg	17 21 37.4	-5.9
KHC				*e*SN	Sn	17 22 06.0	-3.3
KHC				*e*SG	Sg	17 22 16.9	-4.4
GEC2	GERESS Array S	3.05	211	*e*Pn	Pn	17 21 35.6	-1.1
SMOL	Smolenice	3.08	163	*e*SG	Sg	17 22 23.2	-5.7
WET	Wettzell	3.12	223	*e*Pn	Pn	17 21 36.0	-1.7
MOA	Molln	3.82	199	⇑*i*PN	Pn	17 21 46.1	-1.5
MOA				*i* SG	Sg	17 22 49.4	-4.1
	3.7nm,0.4s						

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*IDC **21** 17:30:18.0±1.3,6.03N×124.30E,mb3.8/5,mb1 4.0/5, mb1mx3.8/17,mbtmp3.8/5,Error ellipse: s-maj=74.6km s-min=19.9km az=61.0*
*MAN **21** 17:30:21.5,6.05N×123.96E,h64^{km},mb4.4,ML3.3,MS3.1*
*NEIC **21** 17:30:21.9±0.6,6.22N×124.61E,h35^{km},mb4.2/5,Error ellipse: s-maj=19.3km s-min=10.5km az=62.0*
ISC 21 17:30:20.5±0.5,5.92N±0.04×123.88E±0.04,h33^{km},n23, σ1^{s}30/31,mb3.8/9,5C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.35	16	⇑*i*P	P	17 30 58.0	+15
CTBH				*i* S	S	17 31 00.0	-0.1
KCP	Kidapawan	1.62	48	⇓*i*P	P	17 30 47.1	0.0
KCP				*i* S	S	17 31 07.5	+0.5
PAGZ	Pagadian	1.98	346	*i* P	P	17 30 51.9	-0.4
PAGZ				*e*S	S	17 31 14.0	-2.1
ZMPH	Zamboanga City	2.08	300	⇑*i*P	P	17 30 55.2	+1.6
ZMPH				*i* S	S	17 31 18.5	-0.1
IPIL	Ipil	2.27	325	*e*P	P	17 30 57.2	+0.8
BUKP	Musuan	2.28	31	*e*P	P	17 30 56.2	-0.3
MATI	Mati	2.58	66	*e*P	P	17 30 59.8	-1.0
CGP	Cagayan de Oro	2.65	18	⇑*i*P	P	17 30 59.7	-2.1
CGP				*i* S	S	17 31 36.1	+3.0
DCPH	Dipolog City	2.70	349	⇑*i*P	P	17 31 02.6	+0.1
DCPH				*i* S	S	17 31 29.7	-4.7
BIPH	Bislig	3.34	47	⇑*i*P	P	17 31 10.3	-1.3
BIPH				*i* S	S	17 31 52.6	+1.9
BUTP	Butuan	3.49	30	*e*P	P	17 31 16.3	+2.5
TBP	Tagbilaran	3.75	360	*e*P	P	17 31 16.5	-0.9
TBP				*i* S	S	17 31 54.1	-7.0
KAKA	Kakadu	20.37	155	*e*P	P	17 34 57.1	-0.1
	20nm,0.6s						
GUMO	Guam	22.03	68	*e*P	P	17 35 04.9	-9.1
	305nm,0.6s						
FITZ	Fitzroy Crossi	23.93	176	*e*P	P	17 35 34.8	+2.1
	6.1nm,1.0s,mb4.0						
CMAR	Chiang Mai Arr	27.32	299	P	P	17 36 08.8	+4.1
	0.7nm,0.7s,mb3.3,baz=113,slow=7.8,SNR=6.1						
WRAB	Tennant Creek	27.68	158	*e*P	P	17 36 05.8	-2.1
	7.8nm,0.8s,mb4.4						
WRA	Warramunga Arr	27.68	158	P	P	17 36 06.9	-0.9
	0.7nm,0.4s,mb3.6,baz=332,slow=11,SNR=30						
ASAR	Alice Springs	30.99	162	P	P	17 36 37.0	-0.4
	0.7nm,0.7s,mb3.6,baz=338,slow=7.2,SNR=17						
LSA	Lhasa	38.87	311	*e*P	P	17 37 46.8	+2.2
	1.7nm,0.6s,mb4.0						
STKA	Stephens Creek	41.20	157	P	P	17 38 04.9	+1.0
	3.1nm,0.8s,mb4.0,baz=328,slow=8.9,SNR=6.7						
SONM	Songino Array	44.36	343	P	P	17 38 29.2	-0.4
	0.6nm,0.8s,mb3.4,baz=164,slow=8.2,SNR=5.3						
KURK	Kurchatov	58.39	328	*e*P	P	17 40 14.1	-1.0
	0.9nm,0.6s,mb4.0						

IDC 21 17:34:35.7±1.8,12.05N×142.97E,mb3.8/4,mb1 4.2/4, mb1mx3.7/19,mbtmp3.8/4,Error ellipse: s-maj=151.7km s-min=26.5km az=113.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.91	195	P	P	17 41 11.5	-2.6
	0.5nm,0.5s,baz=18,slow=9.5,SNR=4.8						
ASAR	Alice Springs	36.59	194	P	P	17 41 43.9	-1.7
	0.5nm,0.6s,baz=20,slow=12,SNR=7.0						
YKA	Yellowknife Ar	85.06	27	P	P	17 47 12.6	-1.7
	0.5nm,0.7s,baz=289,slow=5.6,SNR=7.2						
NVAR	Mina Array Bea	89.32	51	P	P	17 47 35.4	-0.2
	1.4nm,0.7s,baz=267,slow=3.7,SNR=7.0						

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*JMA **21** 17:49:01.2±0.2,23.32N×122.05E,h59^{km}*
TAP 21 17:49:00.1,23.39N×121.94E,h15^{km}±1^{km},ML2.9, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.45	42	P	Pn	17 49 25.5	-0.5
YOJ				*e*S	Sb	17 49 43.3	-1.1
HATJ	Hateruma jima	1.83	68	P	Pn	17 49 30.0	-1.5
HATJ				S	Sn	17 49 51.8	-2.8
IRIF	Iriomote-Funau	1.89	60	P	Pn	17 49 31.2	-1.1
IRIF				*e*S	Sn	17 49 54.1	-1.9
JKRS	Kuro-shima	2.07	66	P	Pn	17 49 33.8	-1.2
JKRS				*e*S	Sn	17 49 56.9	-3.8
JIJ	Ishigaki jima	2.24	64	P	Pn	17 49 35.7	-1.6
JIJ				*e*S	Sn	17 50 01.3	-3.5
JTJ	Tarama	2.82	63	P	Pn	17 49 43.7	-1.9
JTJ				*e*S	Sn	17 50 16.3	-3.2

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*IDC **21** 17:54:00.1±1.1,8.90N×40.35W,mb3.9/6,mb1 4.0/6, mb1mx3.7/21,mbtmp3.9/6,MS3.6/10,Ms1 3.6/10, ms1mx3.3/26,Error ellipse: s-maj=33.3km s-min=25.3km az=102.0*
*NEIC **21** 17:54:01.7±0.8,8.86N×40.33W,h10^{km},mb4.2/1,Error ellipse: s-maj=21.3km s-min=15.7km az=78.0*
ISC 21 17:53:59.8±0.9,8.9N±0.1×40.3W±0.2,h10^{km},n15,σ0^{s}96/8, mb3.9/6,MS3.5/10,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	Riachuelo	15.26	163	*e*P	P	17 57 36.9	-0.4
	10.0nm,0.8s						
BDFB	Brasilia	25.54	197	P	P	17 59 30.7	+0.2
	1.3nm,0.4s,mb3.8,slow=6.1,SNR=2.5						
BDFB				LR	LR	18 09 08.4	
	comp=Z,158nm,18.6s,MS3.6,baz=168,slow=36						
SJG	San Juan	26.71	293	LR	LR	18 07 46.7	
	comp=Z,62nm,19.3s,MS3.2,baz=93,slow=31						
SDV	Santo Domingo	29.95	272	LR	LR	18 12 08.0	
	comp=Z,78nm,18.9s,MS3.4,baz=15,slow=36						
DBIC	Dimbokro	35.19	91	P	P	18 00 57.0	+0.7
	1.9nm,0.8s,mb4.1,baz=282,slow=13,SNR=4.0						
LPAZ	La Paz	37.20	228	P	P	18 01 14.9	+1.6
	1.2nm,0.6s,mb3.9,baz=72,slow=12,SNR=4.1						
LPAZ				LR	LR	18 17 31.5	
	comp=Z,51nm,21.3s,MS3.3,baz=219,slow=38						
SADO	Sadowa	49.00	324	LR	LR	18 20 09.3	
	comp=Z,82nm,20.1s,MS3.7,baz=291,slow=32						
SCHQ	Schefferville	50.45	340	LR	LR	18 20 35.1	
	comp=Z,33nm,18.8s,MS3.4,baz=128,slow=32						
PLCA	Paso Flores	56.70	207	P	P	18 03 44.6	-1.4
	0.7nm,0.4s,mb4.0,baz=349,slow=8.7,SNR=3.1						
PLCA				LR	LR	18 29 03.9	
	comp=Z,96nm,19.1s,MS3.9,baz=187,slow=37						
FRB	Frobisher Bay	58.36	346	LR	LR	18 24 05.5	
	comp=Z,17nm,19.4s,MS3.2,baz=166,slow=31						
ULM	Lac du Bonnet	61.55	323	P	P	18 04 19.9	+0.4
	1.3nm,0.5s,mb4.3,baz=92,slow=4.0,SNR=4.1						
NOA	NORSAR Array B	64.32	25	LR	LR	18 28 01.7	
	comp=Z,42nm,19.6s,MS3.6,baz=105,slow=32						
YKA	Yellowknife Ar	74.92	332	P	P	18 05 41.4	-1.1
	0.8nm,1.1s,mb3.6,baz=101,slow=5.6,SNR=5.8						
YKA	Yellowknife Ar	74.92	332	P	P	18 05 41.4	-1.1
DLBC	Dease Lake	82.35	328	LR	LR	18 39 03.3	
	comp=Z,141nm,21.6s,MS4.3,baz=10,slow=33						

IGQ 21 17:54:32.8,0.98S×81.46W,h12^{km}±8^{km},mb4.4,5C-4D, Error ellipse: s-maj=8.6km s-min=4.6km az=0.2,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.92	95	⇑P	Pb	17 54 48.4	-1.7
SALI	Salinas	1.29	159	P	Pb	17 54 56.4	-0.1
IGUA	Igualata	2.87	100	⇑P	Pn	17 55 20.6	+1.4
JUA2	San Juan 2	2.95	75	⇓P	Pn	17 55 22.1	+1.6
JUA2				S	Sn	17 55 56.0	-0.2
TERV	Terraza Guagua	2.96	74	P	Pn	17 55 22.1	+1.5
TERV				S	Sn	17 55 57.0	+0.5
PINO	Pino	2.96	74	⇓P	Pn	17 55 21.3	+0.7
JOR1	San Jorge 1	2.98	71	⇑P	Pn	17 55 20.3	-0.5
NAS1	Nasa	3.00	84	P	Pn	17 55 22.8	+1.7
YANA	Yana	3.01	74	⇓P	Pn	17 55 21.8	+0.5
CUSU	Cusua	3.02	99	P	Pn	17 55 24.1	+2.7
CUSU				S	Sn	17 56 00.6	+2.8
JUIV	Juive	3.03	98	P	Pn	17 55 23.5	+2.0
ARRY	Arrayan	3.05	100	⇑P	Pn	17 55 22.8	+1.0
ARRY				S	Sn	17 55 57.2	-1.3
RETU	Refugio	3.05	99	P	Pn	17 55 23.8	+1.9
PISA	Pisayambo	3.08	92	P	Pn	17 55 23.8	+1.6
VC1	Cotopaxi 1	3.08	84	P	Pn	17 55 24.8	+2.6
RUN2	Runtun	3.08	98	P	Pn	17 55 23.5	+1.3
RUN2				S	Sn	17 55 59.8	+0.5
ULBA	Ulba	3.09	99	P	Pn	17 55 23.9	+1.5
ULBA				S	Sn	17 55 59.8	+0.3
TAMB	Tambo	3.10	85	P	Pn	17 55 25.1	+2.5
ANTI	Antisana	3.34	81	P	Pn	17 55 28.2	+2.3
COTA	Cotacachi	3.38	67	P	Pn	17 55 27.3	+0.8
CAYR	Refugio Cayamb	3.59	74	⇑P	Pn	17 55 32.3	+2.8
CAYR				S	Sn	17 56 14.2	+1.9
ELAGU	Cayambe Volc	3.60	75	P	Pn	17 55 32.3	+2.8
CAYA	Cayambe	3.62	73	⇓P	Pn	17 55 33.0	+3.0
ECEN	Cerro Negro	3.92	63	P	Pn	17 55 35.5	+1.3
ECEN				S	Sn	17 56 24.5	+3.9
CONE	Cono NE Rev Vo	3.92	77	P	Pn	17 55 38.3	+4.1

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*IDC **21** 17:59:39.0±0.8,67.15N×21.36E,mb1 2.7/4, mb1mx2.7/20,mbtmp2.7/4,ML2.3/4,Error ellipse: s-maj=16.4km s-min=6.5km az=110.0*
*HEL **21** 17:59:39.8±0.1,67.09N×20.97E,ML1.9,Explosion*
ISC 21 17:59:38.2±0.5,67.05N±0.03×21.0E±0.1,n18,σ1^{s}47/26, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.97	358	*e*P	Pn	18 00 14.4	+1.2
KIF				*e*S	Sn	18 00 39.6	+0.6
KTK1	Kautokeino	2.14	22	*e*P	Pn	18 00 16.8	+1.1
SGF	Sodankyl	2.18	77	*e*P	Pn	18 00 17.3	+1.1
SGF				*e*SG	Sg	18 00 46.6	-4.2
SGF				MSG		18 00 53.4	
	comp=Z,6.2nm,0.2s						
TRO	Tromso	2.71	344	*e*SB	Sb	18 00 59.3	-2.1
MOR8	Moi Rana	2.77	255	*e*PB	Pn	18 00 24.7	+0.1
MOR8	Moi Rana	2.77	255	*e*	Pn	18 00 24.7	+0.1
OUL	Oulu	2.80	132	*e*P	Pn	18 00 25.4	+0.4
OUL				*e*SB	Sb	18 01 04.8	+1.0
OUL				MSG		18 01 16.5	
	comp=Z,2.9nm,0.2s						
ARCES	ARCESS Array B	3.00	32	Pn	Pn	18 00 27.7	-0.3
	comp=Z,0.3nm,0.3s,baz=211,slow=14,SNR=26						
ARCES				Pg	Pg	18 00 28.8	-9.5
	comp=Z,0.3nm,0.3s,baz=210,slow=14,SNR=26						
ARCES				Lg		18 01 06.0	
	comp=Z,0.6nm,0.3s,baz=217,slow=22,SNR=15						
LOF	Lofoten	3.06	294	*e*P	Pn	18 00 30.6	+1.7
LOF	Lofoten	3.06	294	*e*	Pn	18 00 30.6	+1.7
MSF	Maaselka	3.41	106	*e*P	Pn	18 00 35.2	+1.5
MSF				*e*SG	Sg	18 01 25.5	-6.3
KU4	Oulanka	3.47	97	*e*P	Pn	18 00 36.1	+1.5
KEV	Kevo	3.51	36	*e*P	Pn	18 00 35.0	-0.1
KEV				*e*S	Sn	18 01 15.8	-2.2
KJN	Kajaani	4.07	134	*e*SG	Sg	18 01 45.8	-8.0
KJN				MSG		18 01 55.8	
	comp=Z,1.6nm,0.2s						
VAF	Ylistaro	4.08	169	*e*P	Pn	18 00 44.1	+0.9
VAF				*e*SG	Sg	18 01 46.9	-7.2
FINES	FINESS Array B	6.04	156	Pn	Pn	18 01 11.0	0.0
	comp=Z,0.1nm,0.3s,baz=350,slow=14,SNR=4.5						
FINES				Sn	Sn	18 02 19.6	-2.2
	comp=Z,0.1nm,0.3s,baz=347,slow=24,SNR=3.6						
FINES				Lg		18 02 49.6	
	comp=Z,0.1nm,0.3s,baz=332,slow=33,SNR=2.8						
NOA	NORSAR Array B	7.40	220	Pn	Pn	18 01 28.3	-1.8
	comp=Z,0.1nm,0.3s,baz=39,slow=7.9,SNR=2.5						
HFS	Hagfors	7.66	209	Pn	Pn	18 01 31.5	-2.3
	comp=Z,0.0nm,0.3s,baz=22,slow=13,SNR=5.4						

IDC 21 18:00:53.2±3.7,11.49N×143.98E,mb3.5/3,mb1 3.8/3, mb1mx3.5/19,mbtmp3.5/3,Error ellipse: s-maj=257.8km s-min=35.2km az=119.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.64	197	P	P	18 07 27.2	-2.1
	0.4nm,0.8s,baz=20,slow=9.0,SNR=2.5						
ASAR	Alice Springs	36.30	196	P	P	18 07 58.6	-2.1
	0.2nm,0.6s,baz=24,slow=8.9,SNR=2.5						
NVAR	Mina Array Bea	88.91	51	P	P	18 13 50.2	-0.9
	0.6nm,0.6s,baz=256,slow=7.4,SNR=3.9						

IDC 21 18:17:49.0±6.7,35.33N×89.40E,h70^{km}±71^{km},mb3.1/2, mb1 3.3/5,mb1mx3.1/20,mbtmp3.4/5,ML3.4/3,MS3.3/2, Ms1 3.4/2,ms1mx3.0/7,Error ellipse: s-maj=56.2km s-min=27.3km az=63.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	17.78	40	P	P	18 21 52.8	-0.3
	0.1nm,0.3s,baz=228,slow=15,SNR=9.6						
CMAR	Chiang Mai Arr	18.82	151	P	P	18 22 02.9	-2.7
	0.0nm,0.3s,baz=335,slow=13,SNR=4.2						
ZAL	Zalesovo	18.89	352	P	P	18 22 02.1	-4.0
	0.4nm,0.3s,baz=306,slow=14,SNR=7.3						
ZAL				LR	LR	18 30 39.0	
	comp=Z,86nm,18.1s,baz=295,slow=41						
BVAR	Borovoye Array	22.22	329	P	P	18 22 40.1	-0.5
	2.6nm,1.1s,baz=144,slow=12,SNR=5.6						
NOA	NORSAR Array B	54.24	324	LR	LR	18 51 46.1	
	comp=Z,26nm,18.1s,baz=120,slow=38						
YKA	Yellowknife Ar	80.62	11	P	P	18 29 53.7	-1.3
	0.1nm,0.4s,baz=335,slow=5.3,SNR=4.6						

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*IDC **21** 18:18:08.2±2.1,23.34S×169.13E,mb3.9/6,mb1 4.0/6, mb1mx4.0/15,mbtmp3.9/6,MS3.5/2,Ms1 3.5/2, ms1mx3.0/19,Error ellipse: s-maj=43.8km s-min=36.2km az=56.0*
ISC 21 18:18:07.4±4.5,23.4S±0.2×169.0E±0.2,h4^{km}±30^{km},n8, σ1^{s}17/9,mb3.7/5,MS3.3/2,New Caledonia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.71	299	*e*P	Pn	18 18 52.2	-0.2
NOUC	Port Laguerre	2.81	297	*e*P	Pn	18 18 53.5	-0.4
NOUC				*e*S	Sn	18 19 28.0	-0.6
RPZ	Rata Peaks	20.33	176	P	P	18 22 45.9	-1.3
	7.7nm,0.8s,baz=23,slow=8.6,SNR=4.3						
CTA	Charters Tower	21.38	275	P	P	18 23 00.5	+2.3
	3.4nm,0.8s,mb3.7,baz=68,slow=15,SNR=3.1						
CTA				LR	LR	18 30 07.0	
	comp=Z,117nm,20.2s,MS3.3,baz=65,slow=33						
STKA	Stephens Creek	25.64	245	P	P	18 23 41.6	+1.8
	1.7nm,0.7s,mb3.7,baz=76,slow=14,SNR=4.7						
ASAR	Alice Springs	32.12	262	P	P	18 24 38.1	0.0
	1.2nm,0.9s,mb3.7,baz=100,slow=10.0,SNR=9.6						
ASAR				LR	LR	18 38 09.2	
	comp=Z,72nm,19.2s,MS3.4,baz=276,slow=37						
WRA	Warramunga Arr	32.34	269	P	P	18 24 38.5	-1.6
	0.4nm,0.6s,mb3.5,baz=99,slow=8.4,SNR=6.0						
WRA				PcP	PcP	18 27 28.1	0.0
	0.3nm,0.7s,baz=75,slow=2.2,SNR=4.6						
SONM	Songino Array	90.41	323	P	P	18 31 11.8	+0.6
	1.0nm,1.0s,mb4.1,baz=125,slow=3.7,SNR=8.7						

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*IDC **21** 18:25:00.5±0.9,12.50N×143.42E,mb3.8/7,mb1 4.1/7, mb1mx3.9/20,mbtmp3.8/7,MS3.8/5,Ms1 3.9/5, ms1mx3.4/23,Error ellipse: s-maj=42.3km s-min=20.2km az=99.0*
*NEIC **21** 18:25:03.5±7.6,12.51N×143.36E,h18^{km}±48^{km},mb4.4/2, Error ellipse: s-maj=22.7km s-min=10.0km az=108.0*
ISC 21 18:25:00.5±5.5,12.5N±0.1×143.2E±0.1,h9^{km}±35^{km},n16, σ0^{s}81/13,mb4.0/9,MS3.8/5,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.94	56	*e*Pn	Pn	18 25 33.9	0.0
GUMO				*e*Sn	Sn	18 25 58.7	+0.1
PMG	Port Moresby	22.11	170	LR	LR	18 36 49.3	
	comp=Z,133nm,19.5s,MS3.4,baz=170,slow=32						
ASAJ	Asahikawa	31.51	359	LR	LR	18 43 48.4	
	comp=Z,99nm,19.8s,MS3.5,baz=91,slow=36						
WRAB	Tennant Creek	33.39	195	*e*P	P	18 31 41.3	-0.3
	4.1nm,0.7s,mb4.5						
WRA	Warramunga Arr	33.40	195	P	P	18 31 40.9	-0.8
	2.4nm,1.0s,mb4.1,baz=18,slow=9.6,SNR=22						
ASAR	Alice Springs	37.08	194	P	P	18 32 13.4	+0.4
	0.7nm,0.5s,mb3.7,baz=23,slow=12,SNR=11						
ASPA	Alice Springs	37.08	194	*e*P	P	18 32 13.9	+0.9
SONM	Songino Array	46.72	326	P	P	18 33 33.1	+1.5
	0.3nm,0.7s,mb3.4,baz=142,slow=6.8,SNR=2.1						
KURK	Kurchatov	64.39	320	*e*P	P	18 35 38.5	-0.6
	2.8nm,0.9s,mb4.3						
BVAR	Borovoye Array	69.79	322	P	P	18 36 12.7	-0.5
	0.5nm,0.5s,mb3.7,baz=116,slow=6.6,SNR=5.4						
ILAR	Eielson Array	70.23	25	P	P	18 36 13.9	-1.7
	0.3nm,0.4s,mb3.6,baz=249,slow=6.1,SNR=8.5						
ILAR				LR	LR	19 06 33.7	
	comp=Z,76nm,18.1s,MS4.0,baz=349,slow=36						
YKA	Yellowknife Ar	84.56	27	P	P	18 37 35.1	+0.1
	0.4nm,0.4s,mb3.9,baz=289,slow=4.9,SNR=4.9						
ARCES	ARCESS Array B	87.62	342	LR	LR	19 16 35.1	
	comp=Z,52nm,20.5s,MS3.9,baz=196,slow=35						
NVAR	Mina Array Bea	88.85	51	P	P	18 37 57.5	+0.9
	1.5nm,0.7s,mb4.4,baz=264,slow=3.1,SNR=5.0						
NVAR	Mina Array Bea	88.85	51	P	P	18 37 57.5	+0.9
PDAR	Pinedale Array	93.87	45	LR	LR	19 17 26.3	
	comp=Z,124nm,19.4s,MS4.4,baz=316,slow=34						

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*BJI **21** 18:26:11.1,25.01N×96.58E,h48^{km},ML3.8,Msz3.8*
*NEIC **21** 18:26:15.4±1.1,25.20N×96.44E,h53^{km}±12^{km},mb3.8/2, Error ellipse: s-maj=19.2km s-min=7.5km az=49.0*
*IDC **21** 18:26:15.1±3.7,25.31N×96.57E,h48^{km}±38^{km},mb3.5/9, mb1 3.7/10,mb1mx3.5/21,mbtmp3.7/10,ML3.7/1,Error ellipse: s-maj=40.8km s-min=16.4km az=57.0*
ISC 21 18:26:14.0±1.8,25.1N±0.1×96.4E±0.1,h61^{km}±19^{km},n20, σ0^{s}72/20,mb3.8/11,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.50	316	P	P	18 27 50.4	+1.3
LSA	Lhasa	6.50	316	*e*Pn	P	18 27 50.5	+1.3
	5.9nm,0.4s						
CMAR	Chiang Mai Arr	7.05	160	P	P	18 27 57.0	+0.1
	0.4nm,0.3s,baz=339,slow=13,SNR=13						
CMAR				Lg		18 30 01.1	
	0.2nm,0.3s,baz=345,slow=28,SNR=4.4						
JIRN	Jiri	9.46	288	*e*P	P	18 28 30.2	+0.3
	31nm,0.7s						
PKI	Pulchoki	10.11	286	*e*P	P	18 28 38.7	-0.2
	7.6nm,0.4s						
KKN	Kakani	10.27	287	*e*P	P	18 28 40.0	-1.1
	7.8nm,0.2s						
DMN	Daman	10.38	286	*e*P	P	18 28 41.9	-0.7
	14nm,0.6s						
GKN	Gorkha	10.87	288	*e*P	P	18 28 49.3	+0.1
	18nm,0.4s						
KOLN	Koldanda	11.73	286	*e*P	P	18 29 00.4	-0.3
	7.2nm,0.5s						
SONM	Songino Array	24.03	17	P	P	18 31 23.5	-0.6
	0.4nm,0.5s,mb3.1,baz=202,slow=9.8,SNR=6.2						
AAK	Ala-Archa	25.07	320	*e*P	P	18 31 36.2	+2.0
	1.2nm,0.7s,mb3.5						
BVAR	Borovoye Array	34.03	332	P	P	18 32 53.9	-0.1
	0.6nm,0.4s,mb3.8,baz=137,slow=9.2,SNR=8.8						
CHKZ	Chkalovo	34.40	333	*e*P	P	18 32 56.5	-0.7
	1.2nm,0.6s,mb4.0						
BRTR	Keskin Array B	53.90	302	P	P	18 35 34.5	+1.1
	0.6nm,0.5s,mb3.8,baz=115,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	58.06	137	P	P	18 36 03.5	0.0
	0.5nm,0.6s,mb3.7,baz=325,slow=7.5,SNR=6.9						
ARCES	ARCESS Array B	60.02	337	P	P	18 36 15.9	-0.4
	2.8nm,0.9s,mb4.3,baz=63,slow=11,SNR=4.1						
ASAR	Alice Springs	60.63	140	P	P	18 36 21.5	+0.3
	1.3nm,0.8s,mb4.1,baz=322,slow=6.8,SNR=18						
NOA	NORSAR Array B	66.04	328	P	P	18 36 55.9	-0.2
	0.3nm,0.6s,mb3.5,baz=95,slow=5.7,SNR=2.5						
GERES	GERESS Array B	66.83	315	P	P	18 37 01.4	+0.1
	0.5nm,0.5s,mb3.8,baz=68,slow=5.3,SNR=4.5						
INK	Inuvik	79.94	17	P	P	18 38 16.9	-0.6
	1.5nm,0.8s,mb4.0,baz=14,slow=3.6,SNR=4.1						

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*IDC **21** 18:35:56.6±1.1,10.03N×93.36E,mb3.7/8,mb1 3.9/9, mb1mx3.7/19,mbtmp3.7/9,ML3.4/1,MS2.5/1,Ms1 2.7/1, ms1mx2.7/14,Error ellipse: s-maj=40.4km s-min=19.6km az=54.0*
*NEIC **21** 18:36:01.3±0.6,10.10N×93.43E,h30^{km},mb4.2/2,Error ellipse: s-maj=16.6km s-min=11.0km az=63.0*
ISC 21 18:35:59.4±0.9,10.1N±0.1×93.5E±0.2,h30^{km},n11, σ0^{s}52/11,mb3.8/9,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.80	32	Pn	P	18 38 21.6	-0.1
	0.1nm,0.3s,baz=224,slow=15,SNR=3.7						
CMAR				LR	LR	18 42 31.5	
	comp=Z,29nm,20.3s,baz=6.3,slow=40						
LSA	Lhasa	19.58	354	*e*P	P	18 40 27.0	-1.1
	4.9nm,0.6s						
SONM	Songino Array	39.11	14	P	P	18 43 26.8	+0.9
	0.4nm,0.7s,mb3.2,baz=210,slow=7.4,SNR=4.3						
ZAL	Zalesovo	44.23	353	P	P	18 44 08.4	+0.7
	2.1nm,0.4s,mb4.2,baz=302,slow=7.8,SNR=7.1						
BVAR	Borovoye Array	46.65	341	P	P	18 44 27.0	0.0
	0.6nm,0.4s,mb3.8,baz=145,slow=9.5,SNR=10						
CHKZ	Chkalovo	47.13	342	*e*P	P	18 44 30.6	-0.2
	1.9nm,0.4s,mb4.4						
WRA	Warramunga Arr	50.10	127	P	P	18 44 53.9	-0.3
	0.3nm,0.6s,mb3.5,baz=304,slow=8.9,SNR=13						
ASAR	Alice Springs	51.86	131	P	P	18 45 07.5	0.0
	0.5nm,0.9s,mb3.5,baz=304,slow=6.9,SNR=6.3						
BRTR	Keskin Array B	60.49	310	P	P	18 46 09.2	+0.1
	0.8nm,0.6s,mb3.9,baz=108,slow=7.8,SNR=4.7						
ARCES	ARCESS Array B	72.93	340	P	P	18 47 27.9	+0.4
	2.3nm,1.0s,mb4.1,baz=96,slow=8.2,SNR=3.7						
GERES	GERESS Array B	75.73	318	P	P	18 47 43.8	-0.3
	0.5nm,0.7s,mb3.5,baz=117,slow=4.4,SNR=3.1						

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*IDC **21** 18:41:35.0±2.1,6.25S×152.96E,mb3.3/4,mb1 3.7/5, mb1mx3.6/14,mbtmp3.5/5,ML2.7/1,Error ellipse: s-maj=72.7km s-min=24.3km az=123.0*
ISC 21 18:41:40.5±5.5,6.2S±0.3×152.6E±0.3,h44^{km}±44^{km},n6, σ0^{s}54/7,mb3.5/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.31	239	Pn	P	18 43 13.4	0.0
	1.0nm,0.3s,baz=60,slow=8.1,SNR=6.9						
PMG				Sn	S	18 44 25.1	0.0
	0.9nm,0.3s,baz=22,slow=19,SNR=2.9						
WRA	Warramunga Arr	22.44	231	P	P	18 46 37.0	-0.1
	0.4nm,0.7s,mb3.0,baz=56,slow=10.0,SNR=9.9						
ASAR	Alice Springs	25.05	224	P	P	18 47 03.0	+0.6
	0.4nm,0.5s,mb3.2,baz=59,slow=9.1,SNR=8.9						
FITZ	Fitzroy Crossi	28.89	243	*e*P	P	18 47 37.0	-0.6
	2.1nm,0.4s,mb4.2						
SONM	Songino Array	67.39	328	P	P	18 52 33.9	+0.4
	0.3nm,0.7s,mb3.4,baz=111,slow=6.0,SNR=2.7						
ILAR	Eielson Array	83.48	22	P	P	18 54 04.3	-0.3
	0.5nm,0.8s,mb3.6,baz=231,slow=5.8,SNR=5.3						

IDC 21 18:43:49.3±24.0,16.18S×173.18W,mb4.4/4,mb1 4.6/4, mb1mx4.0/18,mbtmp4.4/4,MS4.2/2,Ms1 4.2/2,

ms1mx3.0/29,**1C-2D,Error ellipse: s-maj=446.9km s-min=156.3km az=71.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**30.55**	**203**	LR	LR	19 00 40.0	
	comp=Z,4µm,21.9s,baz=251,slow=33						
CTA	**Charters Tower**	**38.69**	**258**	P	P	18 51 14.7	-2.0
	3.0nm,0.8s,baz=106,slow=14,SNR=3.9						
PMG	**Port Moresby**	**39.21**	**275**	LR	LR	19 02 42.0	
	comp=Z,32nm,21.8s,baz=194,slow=29						
STKA	**Stephens Creek**	**43.84**	**241**	P	P	18 51 58.0	-1.1
	3.7nm,0.8s,baz=89,slow=8.1,SNR=5.7						
WRA	**Warramunga Arr**	**49.88**	**257**	P	P	18 52 44.6	-2.2
	1.8nm,0.5s,baz=96,slow=7.0,SNR=93						
ASAR	**Alice Springs**	**50.08**	**253**	P	P	18 52 46.3	-1.9
	17nm,0.7s,baz=89,slow=8.1,SNR=343						
ASPA	**Alice Springs**	**50.08**	**253**	⇓*i*P	P	18 52 46.2	-2.1
KAKA	**Kakadu**	**52.66**	**266**	⇑*i*P	P	18 53 07.6	-0.3
	3.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**58.26**	**258**	⇓*i*P	P	18 53 48.2	-0.1
	4.5nm,1.8s						

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*JMA **21** 18:48:21.0±0.3,23.33N×122.14E,h53^{km},M2.7*

TAP 21 18:48:18.9,23.33N×122.04E,h13^{km}±1^{km},ML3.5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.44**	**38**	P	Pn	18 48 44.5	-0.2
YOJ				S	Sb	18 49 01.5	-1.5
HATJ	**Hateruma jima**	**1.77**	**66**	P	Pn	18 48 48.7	-0.8
HATJ				S	Sn	18 49 09.5	-2.5
IRIF	**Iriomote-Funau**	**1.84**	**57**	P	Pn	18 48 50.2	-0.3
IRIF				*e*S	Sn	18 49 11.9	-1.9
JKRS	**Kuro-shima**	**2.02**	**63**	P	Pn	18 48 52.5	-0.5
JKRS				*e*S	Sn	18 49 15.7	-2.5
JIJ	**Ishigaki jima**	**2.18**	**61**	P	Pn	18 48 54.2	-1.2
JIJ				S	Sn	18 49 19.3	-3.1
JTJ	**Tarama**	**2.76**	**61**	P	Pn	18 49 02.6	-1.1
JTJ				*e*S	Sn	18 49 33.6	-3.5

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*IDC **21** 19:17:11.3±1.2,1.16N×124.34E,mb4.1/5,mb1 4.3/5, mb1mx4.0/16,mbtmp4.1/5,Error ellipse: s-maj=81.6km s-min=18.5km az=63.0*

*NEIC **21** 19:17:37.8±5.2,0.57N×123.58E,h251^{km}±58^{km},mb4.2/10, Error ellipse: s-maj=32.8km s-min=12.9km az=59.0*

ISC 21 19:17:33.7±4.4,**0.7N**±0.1×**123.6E**±0.2,**h226**^{km}±47^{km},**n16,** σ**0^{s}78**/16,**mb4.0**/12,**1C-1D,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**15.90**	**147**	⇑*i*P	**P**	**19 21 07.5**	**+0.4**
	23nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.75**	**174**	*e*P	**P**	**19 21 36.9**	**-1.0**
	4.3nm,0.3s						
MBWA	**Marble Bar**	**22.02**	**190**	*e*P	**P**	**19 22 10.1**	**-0.3**
	1.4nm,0.4s,mb3.8						
WRAB	**Tennant Creek**	**23.00**	**153**	*e*P	**P**	**19 22 20.2**	**+0.1**
	18nm,0.7s,mb4.7						
WRA	**Warramunga Arr**	**23.01**	**153**	P	**P**	**19 22 20.3**	**+0.2**
	9.0nm,0.4s,mb4.6,baz=337,slow=10,SNR=77						
ASPA	**Alice Springs**	**26.16**	**158**	*e*P	**P**	**19 22 50.4**	**+1.0**
ASAR	**Alice Springs**	**26.16**	**158**	P	**P**	**19 22 49.0**	**-0.4**
	1.0nm,0.4s,mb3.8,baz=337,slow=8.8,SNR=25						
CMAR	**Chiang Mai Arr**	**30.00**	**308**	P	**P**	**19 23 23.6**	**-0.2**
	0.4nm,0.6s,mb3.2,baz=124,slow=6.5,SNR=4.6						
STKA	**Stephens Creek**	**36.56**	**154**	⇓*i*P	**P**	**19 24 19.7**	**0.0**
	1.7nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**36.56**	**154**	P	**P**	**19 24 19.8**	**0.0**
	2.2nm,0.4s,mb4.1,baz=332,slow=8.3,SNR=17						
LSA	**Lhasa**	**42.31**	**316**	*e*P	**P**	**19 25 10.1**	**+2.9**
	4.0nm,0.6s,mb4.0						
SONM	**Songino Array**	**49.31**	**345**	P	**P**	**19 26 00.7**	**-1.1**
	1.8nm,0.8s,mb3.5,baz=159,slow=7.7,SNR=16						
AAK	**Ala-Archa**	**60.62**	**320**	*e*P	**P**	**19 27 23.4**	**+0.5**
	0.8nm,0.5s,mb3.6						
YAK	**Yakutsk**	**61.39**	**3**	*e*P	**P**	**19 27 27.5**	**-0.3**
	8.4nm,0.7s,mb4.5						
KURK	**Kurchatov**	**62.73**	**330**	*e*P	**P**	**19 27 36.0**	**-0.8**
	6.5nm,0.8s,mb4.3						
CHKZ	**Chkalovo**	**68.46**	**329**	*e*P	**P**	**19 28 13.9**	**+0.7**
	1.9nm,0.9s,mb3.7						

NEIC 21 19:21:12.6,41.72S×172.24E,h96^{km},ML4.4(WEL)**,After WEL.,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSZ	**Denniston Nort**	**0.33**	**265**	P	P	19 21 26.7	-0.2
DSZ				S	S	19 21 37.2	-0.6
THZ	**Tophouse**	**0.50**	**95**	P	P	19 21 28.1	-0.1
QRZ	**Quartz Range**	**0.92**	**14**	P	P	19 21 31.7	-0.4
NNZ	**Nelson**	**0.99**	**60**	P	P	19 21 32.3	-0.6
NNZ				S	S	19 21 47.4	-0.7
LTZ	**Lake Taylor**	**1.06**	**179**	P	P	19 21 33.4	-0.3
KHZ	**Kahutara**	**1.19**	**126**	*e*P	P	19 21 34.6	-0.8
BSWZ	**Blackbirch Sta**	**1.23**	**90**	P	P	19 21 35.4	-0.4
MRW	**Makara Radio**	**1.91**	**76**	P	P	19 21 42.5	-1.8
BHW	**Baring Head**	**2.00**	**82**	P	P	19 21 43.2	-2.3
MQZ	**McQueen's Vall**	**2.01**	**171**	*e*P	P	19 21 43.6	-2.0
RPZ	**Rata Peaks**	**2.18**	**203**	*e*P	P	19 21 46.0	-2.0
KIW	**Kapiti Island**	**2.19**	**68**	P	P	19 21 46.1	-2.0
CAW	**Cannon Point**	**2.21**	**75**	P	P	19 21 45.9	-2.5
MSWZ	**Moikau Station**	**2.28**	**83**	P	P	19 21 46.3	-3.0
MRZ	**Mangatainoka R**	**2.73**	**68**	*e*P	P	19 21 52.4	-3.2
PKE	**Pukeiti**	**2.85**	**28**	P	P	19 21 56.7	-0.6
LBZ	**Lake Benmore**	**3.06**	**209**	*e*P	P	19 21 56.5	-3.6
ODZ	**Otahua Downs**	**3.52**	**199**	*e*P	P	19 22 03.1	-3.3
WKZ	**Wanaka**	**3.90**	**216**	*e*P	P	19 22 08.1	-3.5

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*CSEM **21** 19:39:54.7±0.5,31.52N×50.17E,h18^{km},ML4.0/2,Error ellipse: s-maj=11.6km s-min=9.0km az=23.0*

*THR **21** 19:39:55.4±1.0,31.63N×50.28E,h17^{km},ML3.2*

TEH 21 19:39:56.1,31.45N×49.97E,h12^{km},Mn3.1,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	**Borojen**	**1.15**	**74**	Pn	Pn	19 40 10.2	-7.7
SHGR	**Shooshtar-Gavs**	**1.19**	**304**	*e*PG	Pg	19 40 19.7	-0.3
SHGR				*e*SG	Sg	19 40 38.7	+2.7
SHGR				AML	AML	19 40 43.5	
	comp=N,756nm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.19**	**304**	*e*Pg	Pg	19 40 19.7	-0.3
	SNR=92						
SHGR				*e*Sg	Sg	19 40 38.7	+2.7
	comp=N,756nm,0.6s,SNR=92						
NASN	**Na'in**	**2.76**	**60**	*e*PN	Pn	19 40 37.4	-3.6
ASAO	**Ashtian**	**3.09**	**1**	*e*PN	Pn	19 40 43.2	-2.5
ASAO				*e*SG	Sg	19 41 26.8	-12
ASAO				AML	AML	19 41 34.2	
	comp=N,69nm,0.7s						
ASAO	**Ashtian**	**3.09**	**1**	*e*Pn	Pn	19 40 43.2	-2.5
	SNR=52						
ASAO				*e*Sg	Sg	19 41 26.8	-12
	comp=N,69nm,0.7s,SNR=91						
ISRV	**Sarvestan**	**3.41**	**126**	Pn	Pn	19 40 48.6	-1.6
IKOM	**Komasi**	**3.42**	**323**	Pn	Pn	19 40 48.7	-1.6
IQOM	**Qom**	**3.51**	**15**	Pn	Pn	19 40 49.8	-1.8
IQOM				Sn	Sn	19 41 29.9	-3.6
IRAZ	**Razeghan**	**3.95**	**360**	Pn	Pn	19 40 55.7	-2.1
IRAZ				Sn	Sn	19 41 40.3	-4.2
IVIS	**Veys**	**4.04**	**320**	Pn	Pn	19 40 57.2	-1.9
IMHD	**Mahdasht**	**4.27**	**8**	Pn	Pn	19 40 57.8	-4.6
IMHD				Sn	Sn	19 41 47.9	-4.8
IDMV	**Damavand**	**4.46**	**22**	Pn	Pn	19 41 03.0	-2.2
DAMV	**Damavand**	**4.49**	**21**	*e*PN	Pn	19 41 01.0	-4.6
DAMV				AML	AML	19 42 20.9	
	comp=N,13nm,0.6s						
IFIR	**Firoozkooh**	**4.78**	**28**	Pn	Pn	19 41 05.6	-4.1
IFIR				Sn	Sn	19 42 00.3	-5.5

MAN 21 19:43:40.3,13.22N×122.14E,h1^{km},mb3.9,ML2.6,MS2.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.38**	**310**	*i* P	Pg	19 43 47.3	-0.6
BOAC				*e*S	Sg	19 43 54.0	+1.2
AUQP	**San Andres**	**0.53**	**78**	*e*P	Pg	19 43 50.4	-0.6
OTRP	**Odiongan**	**0.85**	**188**	*i* P	Pg	19 43 56.7	-0.7
OTRP				*e*S	Sg	19 44 09.2	+0.3
SJMP	**San Jose**	**1.25**	**233**	*e*P	Pb	19 44 04.4	+0.1

IDC 21 19:45:17.7±5.9,**5.36N**×**93.93E,mb3.3**/2,**mb1 3.5**/3, **mb1mx3.3**/18,**mbtmp3.2**/3,**ML3.7**/1,**Error ellipse: s-maj=173.4km s-min=33.4km az=73.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.91**	**20**	Pn	P	19 48 37.6	-1.0
	0.1nm,0.3s,baz=207,slow=14,SNR=3.1						
SONM	**Songino Array**	**43.65**	**12**	P	P	19 53 23.8	-2.0
	0.3nm,0.7s,baz=199,slow=8.7,SNR=3.8						
WRA	**Warramunga Arr**	**47.02**	**124**	P	P	19 53 51.2	-1.8
	0.4nm,0.7s,baz=303,slow=9.2,SNR=7.1						

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*MOS **21** 20:04:37.5±1.5,54.39N×164.22E,h32^{km},mb4.1/4,Error ellipse: s-maj=13.4km s-min=11.3km az=90.9*

*KRSC **21** 20:04:37.9±0.9,54.38N×164.34E,h40^{km}±18^{km},ML4.4*

*NEIC **21** 20:04:40.6±0.5,54.44N×164.44E,mb4.0/3,Error ellipse: s-maj=14.2km s-min=9.1km az=172.0*

*IDC **21** 20:04:41.2±0.8,54.43N×164.47E,h36^{km}±6^{km},mb3.5/11, mb1 3.7/11,mb1mx3.6/21,mbtmp3.7/11,ML4.1/1,Error ellipse: s-maj=17.8km s-min=11.3km az=6.0*

ISC 21 20:04:38.5±0.4,**54.40N**±0.03×**164.26E**±0.04,**h33**^{km}**,** **h33**^{km}±1.0^{km}**:pP-P,n65,**σ**1^{s}14**/100,**mb3.6**/13, **Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**1.28**	**50**	*i* P	**P**	**20 04 58.7**	**-1.3**
BKI				*i* S	**S**	**20 05 13.3**	**-3.0**
KBTR	**Krutoberegovo**	**1.99**	**336**	P	**P**	**20 05 08.7**	**-1.6**
KBTR				S	**S**	**20 05 31.7**	**-2.5**
KBTR	**Krutoberegovo**	**1.99**	**336**	*e*P	**P**	**20 05 09.1**	**-1.2**
KBTR				*e*S	**S**	**20 05 32.4**	**-1.8**
KBG	**Krutoberegovo**	**2.06**	**335**	*e*P	**P**	**20 05 10.1**	**-1.2**
KBG				*e*S	**S**	**20 05 35.0**	**-1.0**
KBG				Smax			
	810nm,0.6s						
TUMR	**Tumrok**	**2.54**	**292**	*i* P	**P**	**20 05 19.2**	**+1.1**
TUMR				*e*S	**S**	**20 05 50.0**	**+1.8**
ZLN	**Zelenaya**	**2.56**	**311**	*e*P	**P**	**20 05 20.3**	**+1.9**
ZLN				*e*S	**S**	**20 05 50.6**	**+1.9**
KMNR	**Kamenistaya**	**2.68**	**302**	*e*P	**P**	**20 05 20.7**	**+0.5**
KMNR				*e*S	**S**	**20 05 52.6**	**+0.8**
SVLR	**Shiveluch**	**2.78**	**323**	*e*P	**P**	**20 05 21.6**	**0.0**
SVLR				*e*S	**S**	**20 05 54.0**	**-0.4**
KRSR	**Krestovskiy**	**2.78**	**312**	*e*P	**P**	**20 05 22.2**	**+0.5**
KRSR				*e*S	**S**	**20 05 54.1**	**-0.4**
KPT	**Kopyto**	**2.79**	**306**	*e*P	**P**	**20 05 23.0**	**+1.2**
KPT				*e*S	**S**	**20 05 55.7**	**+1.0**
KLY	**Klyuchi**	**2.81**	**314**	P	**P**	**20 05 21.0**	**-1.1**
KLY				S	**S**	**20 05 53.7**	**-1.4**
KLY	**Klyuchi**	**2.81**	**314**	*e*P	**P**	**20 05 20.9**	**-1.2**
KLY				*e*S	**S**	**20 05 52.8**	**-2.3**
SPN	**Mys Shipunski**	**2.83**	**244**	P	**P**	**20 05 21.7**	**-0.7**
SPN				S	**S**	**20 05 53.5**	**-2.3**
SPN	**Mys Shipunski**	**2.83**	**244**	*e*P	**P**	**20 05 21.9**	**-0.5**
SPN				*e*S	**S**	**20 05 53.8**	**-2.0**
KII	**Karymskiy**	**2.85**	**265**	P	**P**	**20 05 22.8**	**+0.2**
KII				S	**S**	**20 05 55.2**	**-0.9**
KII	**Karymskiy**	**2.85**	**265**	*e*P	**P**	**20 05 22.8**	**+0.2**
KII				*e*S	**S**	**20 05 55.4**	**-0.7**
KOZR	**Kozyr**	**3.00**	**305**	PN	**P**	**20 05 25.9**	**+1.1**
KOZR				S	**S**	**20 06 01.4**	**+1.4**
KOZ	**Kozyrevsk**	**3.01**	**305**	P	**P**	**20 05 25.9**	**+1.0**
KOZ				S	**S**	**20 06 01.4**	**+1.2**
KOZ	**Kozyrevsk**	**3.01**	**305**	*e*P	**P**	**20 05 25.9**	**+1.0**
KOZ				*e*S	**S**	**20 06 00.7**	**+0.5**
NLC	**Nalytchevo**	**3.17**	**249**	P	**P**	**20 05 26.9**	**-0.2**
NLC				S	**S**	**20 06 01.7**	**-2.5**
NLC	**Nalytchevo**	**3.17**	**249**	*e*P	**P**	**20 05 27.0**	**-0.1**
NLC				*e*S	**S**	**20 06 02.6**	**-1.6**
SRDR	**Sredinnyy**	**3.22**	**308**	*e*P	**P**	**20 05 28.5**	**+0.5**
SRDR				*e*S	**S**	**20 06 05.4**	**-0.3**
SDLR	**Sedlovina**	**3.38**	**253**	*e*P	**P**	**20 05 30.4**	**+0.3**
SMAR	**Somma**	**3.43**	**253**	*e*P	**P**	**20 05 31.3**	**+0.4**
UGLR	**Uglovaya**	**3.44**	**252**	*e*P	**P**	**20 05 30.3**	**-0.7**
AVH	**Avacha**	**3.46**	**253**	*e*P	**P**	**20 05 31.8**	**+0.4**
AVH				*e*S	**S**	**20 06 11.5**	**-0.3**
KOK	**Koryaka**	**3.51**	**254**	*e*P	**P**	**20 05 32.5**	**+0.5**
ESO	**Esso**	**3.53**	**298**	*e*P	**P**	**20 05 31.8**	**-0.5**
ESO				*e*S	**S**	**20 06 11.6**	**-1.9**
ESO				Smax			
	110nm,0.5s						
PET	**Petropavlovsk**	**3.60**	**250**	P	**P**	**20 05 33.0**	**-0.4**
PET				S	**S**	**20 06 13.1**	**-2.3**
PET	**Petropavlovsk**	**3.60**	**250**	*e*PN	**P**	**20 05 35.8**	**+2.4**
PET				*e*S	**S**	**20 06 13.7**	**-1.7**
PET				smax			
	comp=N,130nm,0.8s						
PET	**Petropavlovsk**	**3.60**	**250**	*e*P	**P**	**20 05 32.9**	**-0.5**
PET				*e*S	**S**	**20 06 13.6**	**-1.8**
GNL	**Ganaly**	**3.79**	**262**	*e*P	**P**	**20 05 37.2**	**+1.2**
GNL				*e*S	**S**	**20 06 20.4**	**+0.4**
RUS	**Russkaya**	**3.96**	**242**	P	**P**	**20 05 38.2**	**-0.3**
RUS				S	**S**	**20 06 21.7**	**-2.7**
RUS	**Russkaya**	**3.96**	**242**	*e*P	**P**	**20 05 38.3**	**-0.2**
RUS				*e*S	**S**	**20 06 22.5**	**-1.9**
KRMR	**Karymshinskiy**	**3.98**	**249**	*e*P	**P**	**20 05 39.4**	**+0.8**
KRMR				*e*S	**S**	**20 06 24.0**	**-0.7**
GRL	**Gorelyy**	**4.13**	**246**	*e*P	**P**	**20 05 41.6**	**+0.7**
GRL				*e*S	**S**	**20 06 28.3**	**-0.4**
APC	**Apacha**	**4.47**	**254**	*e*P	**P**	**20 05 46.9**	**+1.2**
APC				*e*S	**S**	**20 06 34.8**	**-2.5**
FX1	**Attu Island--F**	**5.51**	**102**	Pn	**P**	**20 05 57.7**	**-2.7**
	comp=N,23nm,0.3s,baz=334,slow=18,SNR=34						
FX1				Sn	**S**	**20 06 55.2**	**-8.2**
	comp=N,8.6nm,0.3s,baz=72,slow=20,SNR=3.1						
FX1	**Attu Island--F**	**5.51**	**102**	*e*P	**P**	**20 05 57.0**	**-3.3**
KAMR	**Kamenskoye**	**8.14**	**6**	*e*P	**P**	**20 06 36.6**	**-0.5**
KAMR				*e*S	**S**	**20 08 03.3**	**-5.7**
YAK	**Yakutsk**	**19.54**	**307**	*e*P	**P**	**20 09 04.9**	**-0.7**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
YAK	**Yakutsk**	**19.54**	**307**	*e*P	**P**	**20 09 04.9**	**-0.8**
	comp=Z,4.2nm,0.5s						
IMA	**Indian Mountai**	**23.40**	**43**	*e*P	**P**	**20 09 45.6**	**+1.0**
ILAR	**Eielson Array**	**26.12**	**47**	P	**P**	**20 10 10.6**	**-0.1**
ILAR				*PP	pP	20 10 20.3	+0.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	**Eielson Array**	**26.12**	**47**	P	**P**	**20 10 10.6**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.2,baz=256,slow=6.9,SNR=7.7						
ILAR				pP	pP	20 10 20.3	+0.2
	comp=Z,2.0nm,0.7s,baz=257,slow=8.7,SNR=10.0						
DAWY	**Dawson**	**29.41**	**48**	P	**P**	**20 10 39.2**	**-1.3**
SONM	**Songino Array**	**36.00**	**284**	P	**P**	**20 11 39.4**	**+1.5**
	comp=Z,0.2nm,0.3s,mb3.5,baz=68,slow=7.8,SNR=2.8						
YKA	**Yellowknife Ar**	**40.51**	**45**	P	**P**	**20 12 16.0**	**+0.7**
YKA				*PP	pP	20 12 25.9	+0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**40.51**	**45**	P	**P**	**20 12 16.0**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.2,baz=296,slow=8.2,SNR=6.0						
YKA				pP	pP	20 12 25.9	+0.7
	comp=Z,0.6nm,0.7s,baz=296,slow=8.2,SNR=5.4						
YKA	**Yellowknife Ar**	**40.51**	**45**	P	**P**	**20 12 16.0**	**+0.6**
YKA				pP	pP	20 12 25.9	+0.7
ENH	**Enshi**	**45.68**	**261**	P	**P**	**20 12 58.6**	**+0.9**
CHKZ	**Chkalovo**	**50.95**	**310**	*e*P	**P**	**20 13 37.6**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CHKZ	**Chkalovo**	**50.95**	**310**	*e*P	**P**	**20 13 37.6**	**-0.6**
	comp=Z,3.7nm,1.0s,mb4.3						
AAK	**Ala-Archa**	**56.68**	**298**	*e*P	**P**	**20 14 20.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**56.68**	**298**	*e*P	**P**	**20 14 20.3**	**-0.3**
	comp=Z,1.0nm,0.6s,mb4.0						
CMAR	**Chiang Mai Arr**	**60.85**	**261**	P	**P**	**20 14 51.6**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**60.85**	**261**	P	**P**	**20 14 51.5**	**+1.7**
	comp=Z,1.1nm,0.7s,mb4.1,baz=26,slow=7.1,SNR=8.3						
NOA	**NORSAR Array B**	**62.93**	**346**	P	**P**	**20 15 02.8**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.7,baz=19,slow=2.2,SNR=2.8						
TXAR	**Lajitas Array**	**67.86**	**70**	P	**P**	**20 15 36.5**	**+1.3**
	comp=Z,0.3nm,0.5s,mb3.6,baz=288,slow=4.0,SNR=3.6						
TXAR				pP	pP	20 15 46.4	+0.8
	comp=Z,0.5nm,0.5s,baz=297,slow=5.6,SNR=4.7						
TXAR	**Lajitas Array**	**67.86**	**70**	P	**P**	**20 15 36.5**	**+1.3**
TXAR				pP	pP	20 15 46.4	+0.8
AKASG	**Malin Array Be**	**68.71**	**331**	P	**P**	**20 15 40.2**	**0.0**
	comp=Z,0.1nm,0.2s,mb3.3,baz=22,slow=5.5,SNR=4.3						
BRTR	**Keskin Array B**	**77.12**	**323**	P	**P**	**20 16 30.0**	**+0.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=45,slow=4.1,SNR=3.5						
WRA	**Warramunga Arr**	**78.36**	**209**	P	**P**	**20 16 38.0**	**+1.0**
	comp=Z,0.3nm,0.8s,mb3.3,baz=22,slow=6.0,SNR=3.7						
ASAR	**Alice Springs**	**82.02**	**208**	P	**P**	**20 16 58.0**	**+1.6**
	comp=Z,0.8nm,1.0s,mb3.6,baz=39,slow=5.0,SNR=4.0						
ASAR				pP	pP	20 17 08.8	+1.8
	comp=Z,0.9nm,1.0s,baz=12,slow=6.8,SNR=3.7						
STKA	**Stephens Creek**	**88.13**	**199**	P	**P**	**20 17 27.4**	**+0.8**
	comp=Z,0.7nm,0.8s,mb3.9,baz=62,slow=5.3,SNR=2.9						

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*NEIC **21** 20:18:38.0±0.9,5.42N×94.43E,h30^{km},mb4.2/2,Error ellipse: s-maj=41.4km s-min=9.0km az=56.0*

*IDC **21** 20:18:38.4±1.5,5.41N×94.47E,h30^{km}±4^{km},mb3.6/6, mb1 3.9/7,mb1mx3.7/17,mbtmp3.9/7,ML4.2/1,Error ellipse: s-maj=62.1km s-min=16.5km az=60.0*

ISC 21 20:18:36.2±1.2,**5.4N**±0.2×**94.5E**±0.3,**h30**^{km}**,n15,** σ**0^{s}50**/13,**mb3.9**/8,**1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.68**	**18**	Pn	**P**	**20 21 57.4**	**+6.5**
	0.4nm,0.3s,baz=212,slow=13,SNR=20						
LSA	**Lhasa**	**24.35**	**353**	*e*P	**P**	**20 23 52.7**	**-0.2**
AAK	**Ala-Archa**	**41.07**	**337**	P	**P**	**20 26 18.7**	**-0.2**
SONM	**Songino Array**	**43.48**	**12**	P	**P**	**20 26 39.1**	**+0.6**
	0.8nm,0.9s,mb3.4,baz=204,slow=7.2,SNR=5.4						
SONM				sP	sP	20 26 51.9	+0.7
	0.7nm,0.7s,baz=196,slow=8.8,SNR=5.2						
SONM				PcP	PcP	20 28 25.6	-1.3
	0.3nm,0.6s,baz=172,slow=5.0,SNR=4.3						
WRA	**Warramunga Arr**	**46.62**	**124**	P	**P**	**20 27 04.2**	**+0.2**
	1.6nm,0.7s,mb4.1,baz=301,slow=9.9,SNR=26						
WRA				pP	pP	20 27 13.1	+0.1
	2.3nm,0.7s,baz=303,slow=9.2,SNR=10						
WRA				sP	sP	20 27 16.8	+0.1
	2.5nm,0.7s,baz=304,slow=9.3,SNR=10						
WRAB	**Tennant Creek**	**46.62**	**124**	*e*P	**P**	**20 27 03.6**	**-0.4**
WB2	**Warramunga Arr**	**46.63**	**124**	⇑*i*P	**P**	**20 27 04.1**	**+0.1**
KURK	**Kurchatov**	**47.05**	**346**	*e*P	**P**	**20 27 06.8**	**-0.2**
	4.1nm,1.1s,mb4.3						
ASAR	**Alice Springs**	**48.13**	**129**	P	**P**	**20 27 15.8**	**-0.1**
	0.7nm,0.5s,mb4.0,baz=301,slow=8.0,SNR=18						
ASAR				sP	sP	20 27 29.1	+0.5
	1.6nm,0.6s,baz=302,slow=7.4,SNR=10						
ZAL	**Zalesovo**	**49.00**	**352**	P	**P**	**20 27 22.6**	**+0.5**
	1.0nm,0.6s,mb4.0,baz=323,slow=3.4,SNR=6.3						
BVAR	**Borovoye Array**	**51.40**	**342**	P	**P**	**20 27 39.9**	**-0.5**
	0.7nm,0.8s,mb3.7,baz=149,slow=8.4,SNR=3.3						
CHKZ	**Chkalovo**	**51.89**	**342**	*e*P	**P**	**20 27 43.5**	**-0.7**
	1.4nm,0.5s,mb4.2						
BRTR	**Keskin Array B**	**64.27**	**312**	pP	pP	20 29 19.5	-1.0
	0.2nm,0.3s,baz=170,slow=18,SNR=1.6						
BRTR				sP	sP	20 29 25.9	+2.1
	0.4nm,0.6s,baz=106,slow=9.0,SNR=3.0						
ARCES	**ARCESS Array B**	**77.67**	**340**	sP	sP	20 30 46.4	+2.4
	1.6nm,0.8s,baz=53,slow=6.1,SNR=1.3						
GERES	**GERESS Array B**	**79.85**	**319**	P	**P**	**20 30 44.4**	**+0.9**
	0.8nm,0.7s,mb3.8,baz=79,slow=6.8,SNR=4.0						

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*NEIC **21** 20:38:03.3,18.10N×103.14W,h16^{km},MD3.9(MEX),After MEX.*

MEX 21 20:38:03.4±1.6,**18.16N**×**103.11W,h14**^{km}±23^{km}**,MD3.9, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLM	**Colima**	**1.16**	**332**	*i* P	Pb	20 38 20.7	-4.0
COLM				*i* S	Sb	20 38 35.4	-4.0
ZIIG	**Zihuatanejo**	**1.66**	**109**	*i* P	Pn	20 38 29.6	-2.8
ZIIG				*i* S	Sn	20 38 47.5	-6.1
CJM	**Chamela**	**2.27**	**306**	*e*P	Pn	20 38 38.0	-3.0
CJM				*i* S	Sn	20 39 05.1	-3.9
SFJM	**Santa Fe**	**2.32**	**2**	*i* P	Pn	20 38 38.5	-3.3
SFJM				*i* S	Sn	20 39 07.7	-2.7
SFJM	**Santa Fe**	**2.32**	**2**	*i* P	Pn	20 38 38.5	-3.3
SFJM				*i* S	Sn	20 39 07.5	-2.9

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*TRN **21** 20:46:12.6,10.93N×61.57W,h131^{km},MD3.2*

*FUNV **21** 20:46:12.8,10.85N×62.28W,h77^{km},MW2.6*

ISC 21 20:46:11.2±0.8,**10.80N**±0.04×**62.33W**±0.03,**h86**^{km}±9^{km}**,** **n14,**σ**1^{s}28**/25,**1C,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.19**	**145**	*e*P	**P**	**20 46 24.2**	**+0.5**
GUIV				*e*S	**S**	**20 46 32.5**	**-0.7**
GUNV	**Guanoco**	**0.87**	**223**	*e*P	**P**	**20 46 31.3**	**+1.9**
CRUV	**Carupano**	**0.90**	**262**	*e*P	**P**	**20 46 30.8**	**+1.1**
CRUV				*e*S	**S**	**20 46 43.8**	**+0.2**
TRN	**Trinidad (W)**	**0.93**	**99**	⇑*i*P	**P**	**20 46 31.2**	**+1.2**
TRN				*e*S	**S**	**20 46 43.2**	**-1.0**
ITEV	**Isla Los Testi**	**0.96**	**305**	*e*P	**P**	**20 46 31.2**	**+0.7**
ITEV				*e*S	**S**	**20 46 44.1**	**-0.8**
TPP	**Pointe-a-Pierr**	**0.99**	**119**	*e*S	**S**	**20 46 48.1**	**+2.6**
TBH	**Brigand Hill**	**1.28**	**104**	*e*P	**P**	**20 46 32.1**	**-2.4**
TBH				*e*S	**S**	**20 46 48.6**	**-3.3**
GRW	**Mount Saint Ca**	**1.50**	**26**	*e*P	**P**	**20 46 38.1**	**+0.8**
GRW				*e*S	**S**	**20 46 56.7**	**+0.1**
ORIV	**Oritupano**	**2.02**	**212**	*e*P	**P**	**20 46 45.5**	**+1.4**
ORIV				*e*S	**S**	**20 47 09.5**	**+1.1**
PCRV	**Puerto La Cruz**	**2.35**	**255**	*e*P	**P**	**20 46 49.8**	**+1.1**
PCRV				*e*S	**S**	**20 47 15.3**	**-1.3**
IBAV	**Isla La Blanqu**	**2.42**	**295**	*e*P	**P**	**20 46 49.6**	**-0.2**
IBAV				*e*S	**S**	**20 47 17.4**	**-1.1**
RIOV	**Rio Grande**	**2.76**	**169**	*e*P	**P**	**20 46 54.0**	**-0.5**
RIOV				*e*S	**S**	**20 47 25.0**	**-1.8**
CUPV	**Cœpira**	**3.48**	**258**	*e*P	**P**	**20 47 05.0**	**+0.6**
CUPV				*e*S	**S**	**20 47 42.2**	**-2.5**
CAOV	**Caicara del Or**	**5.24**	**229**	*e*S	**S**	**20 48 23.7**	**-4.5**

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*NEIC **21** 20:47:56.7±1.0,51.51N×16.12E,h5^{km},ML2.9(SZGRF), ML2.9(VIE),Error ellipse: s-maj=10.8km s-min=6.1km az=195.0*

*IPEC **21** 20:47:56.9±0.3,51.51N×16.15E,ML2.2/3,Error ellipse: s-maj=4.1km s-min=1.9km az=82.0*

*WAR **21** 20:47:57.8,51.50N×16.10E,h1^{km},ML2.9,Mining Induced*

*PRU **21** 20:47:57.7,51.46N×16.11E,Felt In Harrachov*

*CSEM **21** 20:47:57.4±0.2,51.49N×16.13E,h2^{km},ML2.2/3,Error ellipse: s-maj=2.9km s-min=1.9km az=5.0*

ISC 21 20:47:55.5±0.7,**51.49N**±0.04×**16.08E**±0.04,**n25,**σ**1^{s}27**/50, **2C,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.66**	**168**	*e*Pg	**Pg**	**20 48 09.9**	**+1.3**
KSP				*e*Sg	**Sg**	**20 48 19.0**	**+1.6**
KSP	**Ksiaz**	**0.66**	**168**	*e*Pg	**Pg**	**20 48 10.0**	**+1.4**
KSP				*e*Sg	**Sg**	**20 48 18.8**	**+1.4**
UPC	**Upice**	**0.98**	**182**	*e*PG	**Pg**	**20 48 16.1**	**+1.0**
DPC	**Dobruska-Polom**	**1.15**	**172**	*e*PG	**Pg**	**20 48 18.8**	**+0.4**
DPC				*e*SG	**Sg**	**20 48 34.5**	**+0.8**
	58nm,0.6s						
PVCC	**Panska Ves**	**1.35**	**225**	*e*PG	**Pg**	**20 48 23.0**	**+0.5**
BRG	**Berggiesshubel**	**1.48**	**246**	*e*Pn	**Pn**	**20 48 24.6**	**+1.2**
BRG				*i* Pg	**Pg**	**20 48 25.6**	**+0.6**
BRG				*i* Sg	**Sg**	**20 48 45.6**	**+0.9**
BRG	**Berggiesshubel**	**1.48**	**246**	*i* Pg	**Pg**	**20 48 25.6**	**+0.6**
PRU	**Pruhonice**	**1.79**	**214**	*e*PG	**Pg**	**20 48 30.5**	**-0.7**
PRU				*e*SG	**Sg**	**20 48 54.8**	**-0.3**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**20 48 30.0**	**+0.1**
CLL				*e*Pg	**Pg**	**20 48 33.0**	**-1.1**
CLL				*i* Sg	**Sg**	**20 48 59.8**	**-0.1**
CLL	**Collm**	**1.94**	**266**	*e*PN	**Pn**	**20 48 30.0**	**+0.1**
CLL				*e*PG	**Pg**	**20 48 33.0**	**-1.1**

CLL				i		20 48 37.6	
CLL				i SG	Sg	20 48 59.8	-0.1
MORC	Moravsky Berou	1.95	151	eP	Pn	20 48 30.4	+0.3
MORC	Moravsky Berou	1.95	151	eP	Pn	20 48 30.4	+0.2
MORC	Moravsky Berou	1.95	151	ePn	Pn	20 48 30.8	+0.6
MORC				eSg	Sg	20 48 57.8	-2.6
OKC	Ostrava-Krasne	2.11	141	ePN	Pn	20 48 32.6	+0.1
OKC				ePG	Pg	20 48 36.7	-0.9
OKC				eSG	Sg	20 49 04.6	-1.2
OKC	Ostrava-Krasne	2.11	141	Pg	Pg	20 48 36.7	-0.9
OKC				Sg	Sg	20 49 04.6	-1.2
VRAC	Vranov	2.21	171	ePn	Pn	20 48 35.1	+1.3
VRAC				eSg	Sb	20 49 06.1	+2.2
KRUC	Moravsky	2.44	175	ePn	Pn	20 48 38.5	+1.4
KRUC				eSg	Sb	20 49 13.0	+2.4
NKC	Novy Kostel	2.62	243	ePN	Pn	20 48 40.4	+0.6
NKC				eSG	Sg	20 49 21.0	-1.7
	50nm,0.7s						
OJC	Ojcow	2.68	117	ePN	Pn	20 48 40.0	-0.6
OJC				ePG	Pg	20 48 47.0	-1.9
OJC				eSG	Sg	20 49 23.0	-1.6
KHC	Kasperske Hory	2.85	215	ePN	Pn	20 48 43.3	+0.2
KHC				ePG	Pg	20 48 49.8	-2.6
KHC				eSN	Sn	20 49 17.5	-1.1
KHC				eSG	Sg	20 49 27.7	-2.7
MOX	Moxa	2.94	255	Pg	Pg	20 48 53.0	-1.1
MOX				Sg	Sg	20 49 33.0	-0.3
GEC2	GERESS Array S	3.06	211	ePn	Pn	20 48 47.4	+1.5
WET	Wettzell	3.12	222	ePn	Pn	20 48 47.3	+0.5
MOA	Molln	3.83	199	⇑iPN	Pn	20 48 57.6	+0.7
MOA				i SG	Sg	20 50 00.3	-2.6
	5.3nm,0.4s						
ARSA	Arzberg	4.26	185	⇑iPN	Pn	20 49 04.5	+1.5
ARSA				i SG	Sg	20 50 12.3	-4.9
	4.0nm,0.4s						

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*NEIC **21** 20:55:33.8±1.1, 48.15N×148.16E, h403^{km}±12^{km}, mb3.6/4, Error ellipse: s-maj=14.6km s-min=9.4km az=151.0*

*MOS **21** 20:55:34.1±1.2, 48.13N×148.08E, h427^{km}, mb3.7/9, Error ellipse: s-maj=20.1km s-min=14.7km az=85.3*

*IDC **21** 20:55:34.1±2.2, 48.13N×148.18E, h407^{km}±24^{km}, mb3.0/12, mb1 3.3/13, mb1mx3.2/22, mbtmp3.8/13, Error ellipse: s-maj=18.4km s-min=12.9km az=116.0*

ISC 21 20:55:31.4±0.6**, 47.97N**±0.07×**148.3E**±0.1**, h397**^{km}±7^{km}**, n67, σ1^{s}36**/77**, mb3.6**/22**, 1C, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	3.87	257	⇑iPN	P	20 56 45.0	+2.5
YSS				pmax	pmax		
	comp=E,40nm,0.8s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS	Yuzh-Sakhalins	3.87	257	eP	P	20 56 44.8	+2.3
NEM2	Nemuro 2	4.93	202	P	P	20 56 50.9	-2.2
NEM2				eS	S	20 57 53.5	-3.7
JTKR	Abashiri--Toko	5.02	219	P	P	20 56 55.7	+1.7
JNK	Nakash	5.04	211	P	P	20 56 54.4	+0.2
JMP	Maruseppu	5.23	223	P	P	20 56 58.5	+2.3
ASAJ	Asahikawa	5.51	228	PN	P	20 57 02.0	+2.8
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ	Asahikawa	5.51	228	P	P	20 57 02.0	+2.8
	comp=Z,4.8nm,0.3s,baz=76,slow=7.4,SNR=11						
ASAJ	Asahikawa	5.51	228	P	P	20 57 02.4	+3.2
JAK	Akkeshi	5.57	208	P	P	20 56 58.6	-1.2
JAK				eS	S	20 58 06.0	-3.2
JAR	Ashorobuto	5.63	216	P	P	20 57 00.9	+0.4
JOB	Onbets	5.95	213	P	P	20 57 03.4	-0.5
JOB				eS	S	20 58 15.1	-1.4
JAB	Ashibetsu	6.14	226	P	P	20 57 08.6	+2.5
JCH	Churui	6.37	215	P	P	20 57 07.7	-0.9
JCH				eS	S	20 58 21.8	-3.4
JBT2	Biratori 2	6.65	221	P	P	20 57 12.7	+1.0
JNBK	Urakawa-nobuka	6.89	216	P	P	20 57 13.2	-1.3
JNBK				eS	S	20 58 31.3	-4.5
JEM	Erimo	6.96	213	P	P	20 57 15.9	+0.6
JNB	Noboribetsu	7.50	225	P	P	20 57 23.3	+1.9
JNB				eS	S	20 58 49.2	+1.1
JSH	Shimam	7.87	230	P	P	20 57 27.7	+2.1
JKB	Kayabe	7.95	223	P	P	20 57 25.6	-1.0
JKB				eS	S	20 58 54.1	-3.4
JYM2	Yakumo 2	8.09	227	P	P	20 57 29.1	+0.9
JSR	Shiriuchi	8.52	224	P	P	20 57 33.3	+0.2
JTM	Tenmabayashi	8.83	218	P	P	20 57 35.3	-1.5
JTM				eS	S	20 59 10.6	-5.2
JANG	Nango	9.00	215	P	P	20 57 37.1	-1.7
JANG				eS	S	20 59 12.7	-6.7
JTH	Tanohata	9.26	212	P	P	20 57 42.1	+0.4
JTH				eS	S	20 59 20.0	-4.7
JIO	Ouri	10.76	210	eS	S	20 59 55.8	-0.6
YAK	Yakutsk	17.56	330	eP	P	20 59 10.9	-1.1
SONM	Songino Array	27.82	286	P	P	21 00 48.2	+0.7
	comp=Z,0.1nm,0.4s,mb2.5,baz=73,slow=8.2,SNR=4.2						
ENH	Enshi	34.44	253	P	P	21 01 42.6	-2.1
IMA	Indian Mountai	34.80	37	eP	P	21 01 46.8	-0.5
ILAR	Eielson Array	37.68	39	P	P	21 02 11.5	+0.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	37.68	39	P	P	21 02 11.5	+0.2
	comp=Z,1.0nm,0.6s,mb3.4,baz=252,slow=5.8,SNR=17						
KURK	Kurchatov	43.92	301	P	P	21 03 00.2	-1.6
LSA	Lhasa	46.96	269	eP	P	21 03 27.7	+1.9
LSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.0						
LSA	Lhasa	46.96	269	eP	P	21 03 27.6	+1.8
	comp=Z,3.8nm,0.5s,mb4.0						
CHKZ	Chkalovo	47.10	307	eP	P	21 03 24.5	-2.0
CMAR	Chiang Mai Arr	49.55	251	P	P	21 03 46.5	+0.9
	comp=Z,0.4nm,0.5s,mb3.0,baz=27,slow=7.7,SNR=4.2						
AAK	Ala-Archa	50.33	293	P	P	21 03 49.1	-2.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.2						
AAK	Ala-Archa	50.33	293	P	P	21 03 49.1	-2.0
	comp=Z,0.9nm,0.7s,mb3.2						
JIRN	Jiri	51.60	270	eP	P	21 04 01.8	+1.1
	comp=Z,10nm,0.5s,mb4.3						
YKA	Yellowknife Ar	51.89	36	P	P	21 04 01.4	-1.0
YKA	Yellowknife Ar	51.89	36	P	P	21 04 01.3	-1.1
	comp=Z,0.3nm,0.6s,mb2.7,baz=302,slow=7.1,SNR=7.6						
KKN	Kakani	52.13	271	eP	P	21 04 05.6	+1.0
	comp=Z,5.0nm,0.4s,mb4.1						
DMN	Daman	52.36	271	eP	P	21 04 07.4	+1.0
	comp=Z,13nm,0.7s,mb4.3						
GKN	Gorkha	52.42	272	eP	P	21 04 07.6	+0.8
	comp=Z,9.6nm,0.5s,mb4.3						
KOLN	Koldanda	53.27	272	eP	P	21 04 13.8	+0.8
	comp=Z,9.4nm,0.8s,mb4.1						
NEW	Newport	59.02	51	P	P	21 04 52.0	-0.6
NEW				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NEW	Newport	59.02	51	P	P	21 04 52.0	-0.6
	comp=Z,0.7nm,0.5s,mb3.2						
FINES	FINESS Array B	61.48	332	P	P	21 05 07.4	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	61.48	332	P	P	21 05 07.4	-1.4
	comp=Z,2.2nm,0.7s,mb3.7,baz=39,slow=9.0,SNR=16						
ELK	Elko	64.93	56	P	P	21 05 33.5	+2.1
NB2	NORSAR Subarra	65.95	339	P	P	21 05 36.2	-1.2
	comp=Z,0.7nm,0.5s,mb3.5,baz=28,slow=6.5						
NOA	NORSAR Array B	65.95	339	P	P	21 05 36.7	-0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	65.95	339	P	P	21 05 36.7	-0.7
	comp=Z,1.0nm,0.6s,mb3.6,baz=29,slow=6.6,SNR=4.6						
BW06	Boulder Array	66.64	52	P	P	21 05 42.0	0.0
PDAR	Pinedale Array	66.64	52	P	P	21 05 42.5	+0.5
	comp=Z,0.3nm,0.5s,mb3.2,baz=315,slow=4.2,SNR=3.4						
AKASG	Malin Array Be	68.65	323	P	P	21 05 53.1	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	68.65	323	P	P	21 05 53.1	-1.1
	comp=Z,0.7nm,0.3s,mb3.7,baz=37,slow=6.0,SNR=8.0						
WRAB	Tennant Creek	68.73	194	P	P	21 05 55.5	+0.3
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
WRAB	Tennant Creek	68.73	194	P	P	21 05 55.5	+0.3
	comp=Z,1.8nm,0.7s,mb3.8						
WRA	Warramunga Arr	68.74	194	P	P	21 05 55.9	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	68.74	194	P	P	21 05 55.9	+0.7
	comp=Z,0.8nm,0.6s,mb3.5,baz=9.4,slow=6.4,SNR=14						
ASAR	Alice Springs	72.46	194	P	P	21 06 18.6	+1.3
	comp=Z,0.6nm,0.7s,mb3.3,baz=4.4,slow=5.6,SNR=9.1						
CLL	Collm	73.93	333	P	P	21 06 24.3	-0.9
	comp=Z,logA/T=0.8,mb4.2						
GERES	GERESS Array B	75.85	331	P	P	21 06 35.7	-0.3
	comp=Z,0.4nm,0.8s,mb3.1,baz=27,slow=6.0,SNR=4.1						
TXAR	Lajitas Array	79.69	58	P	P	21 06 58.5	+1.3
	comp=Z,1.4nm,1.0s,mb3.5,baz=303,slow=4.4,SNR=3.7						
TXAR	Lajitas Array	79.69	58	P	P	21 06 58.5	+1.3

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*NEIC **21** 21:04:51.1±0.5, 7.04N×92.36E, mb4.1/5, Error ellipse: s-maj=13.7km s-min=7.1km az=59.0*

*IDC **21** 21:04:51.9±0.9, 7.06N×92.37E, h22^{km}±4^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.5/18, mbtmp3.6/6, ML3.5/1, MS3.3/3, Ms1 3.3/3, ms1mx3.2/8, Error ellipse: s-maj=42.2km s-min=17.6km az=49.0*

ISC 21 21:04:49.4±0.7**, 7.07N**±0.09×**92.4E**±0.1**, h21**^{km}**, n21, σ0^{s}67**/19**, mb4.1**/13**, MS3.5**/2**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	12.98	29	eP	P	21 07 54.9	-0.6
CMAR	Chiang Mai Arr	12.98	29	Pn	P	21 07 55.6	+0.1
	0.1nm,0.3s,baz=230,slow=13,SNR=14						
CMAR				LR	LR	21 13 04.2	
	comp=Z,63nm,18.6s,baz=204,slow=38						
JIRN	Jiri	21.32	345	eP	P	21 09 37.2	-0.1
	18nm,0.8s,mb4.4						
PKI	Pulchoki	21.45	343	eP	P	21 09 38.6	-0.1
	38nm,1.0s,mb4.7						
DMN	Daman	21.58	342	eP	P	21 09 40.7	+0.8
	9.8nm,0.5s,mb4.5						
KKN	Kakani	21.70	343	eP	P	21 09 41.3	+0.2
	9.2nm,0.7s,mb4.3						
GKN	Gorkha	22.09	341	eP	P	21 09 45.7	+0.6
KOLN	Koldanda	22.23	339	eP	P	21 09 47.3	+0.9
	6.9nm,0.6s,mb4.2						
LSA	Lhasa	22.55	357	eP	P	21 09 50.2	+0.5
AAK	Ala-Archa	38.80	339	eP	P	21 12 13.2	-1.3
	3.1nm,1.0s,mb4.0						
SONM	Songino Array	42.33	14	P	P	21 12 44.3	+0.7
	0.1nm,0.4s,baz=189,slow=9.7,SNR=2.9						
KURK	Kurchatov	45.00	348	eP	P	21 13 03.4	-1.8
	0.7nm,0.7s,mb3.6						
WRA	Warramunga Arr	49.20	124	P	P	21 13 38.6	+0.1
	1.1nm,0.7s,mb4.0,baz=303,slow=8.7,SNR=18						
WRA				pP	pP	21 13 44.7	-0.2
	1.8nm,0.8s,baz=304,slow=8.8,SNR=11						
WRA				sP	sP	21 13 49.5	+2.1
	2.9nm,0.8s,baz=303,slow=8.7,SNR=14						
WRAB	Tennant Creek	49.20	124	eP	P	21 13 38.3	-0.3
	2.7nm,0.7s,mb4.4						
WB2	Warramunga Arr	49.21	124	eP	P	21 13 38.6	0.0
CHKZ	Chkalovo	49.73	343	eP	P	21 13 41.6	-0.5
	0.8nm,0.4s,mb4.1						
ASAR	Alice Springs	50.73	128	P	P	21 13 50.6	+0.4
	0.5nm,0.6s,mb3.6,baz=302,slow=8.6,SNR=5.8						
ASAR				pP	pP	21 13 57.0	+0.5
	1.7nm,0.8s,baz=310,slow=7.6,SNR=6.9						
ASAR				sP	sP	21 14 01.4	+2.4
	3.2nm,1.1s,baz=313,slow=7.5,SNR=9.8						
ASAR				PcP	PcP	21 15 08.3	+0.9
	0.2nm,0.8s,baz=312,slow=2.8,SNR=2.8						
ASAR				pPcP		21 15 14.7	
	0.7nm,0.8s,baz=300,slow=3.5,SNR=2.5						
ASAR				sPcP		21 15 19.3	
	0.5nm,0.6s,baz=308,slow=3.7,SNR=5.1						
BRTR	Keskin Array B	61.68	311	P	P	21 15 08.2	-0.3
	0.8nm,0.9s,mb3.8,baz=18,slow=3.9,SNR=3.6						
FINES	FINESS Array B	72.63	333	LR	LR	21 49 57.4	
	comp=Z,44nm,21.7s,MS3.7,baz=339,slow=37						
GERES	GERESS Array B	77.30	318	P	P	21 16 44.5	+0.4
	0.9nm,0.9s,mb3.7,baz=90,slow=2.7,SNR=4.0						
GERES				sP	sP	21 16 54.7	+1.8
	0.3nm,0.3s,baz=141,slow=19,SNR=2.1						
NOA	NORSAR Array B	79.60	331	LR	LR	21 55 19.8	
	comp=Z,12nm,20.2s,MS3.2,baz=350,slow=38						

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*NEIC **21** 21:08:55.0±0.7, 4.98N×94.44E, h30^{km}, mb4.3/5, Error ellipse: s-maj=20.3km s-min=9.2km az=66.0*

*IDC **21** 21:09:02.7±11.0, 5.24N×94.80E, h88^{km}±92^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.6/18, mbtmp3.9/7, ML3.9/1, Error ellipse: s-maj=80.4km s-min=18.4km az=59.0*

ISC 21 21:08:53.8±0.8**, 5.0N**±0.1×**94.5E**±0.2**, h33**^{km}**, n15, σ0^{s}76**/15**, mb4.0**/11**, 1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	14.05	18	P	P	21 12 12.4	-0.4
CMAR	Chiang Mai Arr	14.05	18	P	P	21 12 14.2	+1.4
	0.2nm,0.3s,baz=208,slow=14,SNR=5.2						
LSA	Lhasa	24.76	353	eP	P	21 14 14.6	+0.6
	2.8nm,0.6s,mb4.0						
AAK	Ala-Archa	41.47	338	eP	P	21 16 38.9	-0.4
	0.9nm,0.7s,mb3.5						
SONM	Songino Array	43.87	12	P	P	21 16 57.7	-1.2
	0.7nm,0.5s,mb3.6,baz=191,slow=8.2,SNR=9.4						
SONM				PcP	PcP	21 18 44.7	-0.6
	0.2nm,0.4s,baz=202,slow=4.3,SNR=4.8						
WRA	Warramunga Arr	46.35	124	P	P	21 17 19.4	+0.4
	2.6nm,0.7s,mb4.3,baz=303,slow=9.2,SNR=23						
WRAB	Tennant Creek	46.35	124	eP	P	21 17 17.8	-1.2
	2.8nm,0.5s,mb4.5						
WB2	Warramunga Arr	46.36	124	⇓iP	P	21 17 19.4	+0.4
KURK	Kurchatov	47.46	346	eP	P	21 17 26.9	-0.4
	1.7nm,0.4s,mb4.3						
ASAR	Alice Springs	47.84	128	P	P	21 17 31.1	+0.4
	0.4nm,0.6s,mb3.6,baz=303,slow=7.9,SNR=5.9						
ZAL	Zalesovo	49.42	352	P	P	21 17 42.2	-0.2
	2.1nm,0.3s,mb4.6,baz=314,slow=5.3,SNR=15						
ZAL	Zalesovo	49.42	352	P	P	21 17 42.2	-0.2
CHKZ	Chkalovo	52.29	342	eP	P	21 18 03.6	-0.6
	2.0nm,0.6s,mb4.2						
ARCES	ARCESS Array B	78.07	340	P	P	21 20 50.6	0.0
	2.3nm,0.9s,mb4.1,baz=104,slow=7.2,SNR=7.3						
GERES	GERESS Array B	80.19	319	P	P	21 21 03.9	+1.3
	0.5nm,0.5s,mb3.8,baz=146,slow=4.8,SNR=4.9						

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*JMA **21** 21:17:05.6±0.2, 24.05N×122.62E, h34^{km}, M2.9*

TAP 21 21:17:04.5, 23.92N×122.54E, h3^{km}±1^{km}**, ML3.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.69	38	P	Pg	21 17 16.7	-1.6
YOJ				S	Sg	21 17 24.4	-3.1
IRIF	Iriomote-Funau	1.16	69	P	Pb	21 17 24.4	-2.5
IRIF				eS	Sb	21 17 39.1	-3.1
HATJ	Hateruma jima	1.17	83	P	Pb	21 17 24.6	-2.3
HATJ				eS	Sb	21 17 38.7	-3.6
JKRS	Kuro-shima	1.38	76	P	Pb	21 17 28.0	-2.6
JKRS				S	Sb	21 17 45.1	-3.4
JIJ	Ishigaki jima	1.53	73	P	Pn	21 17 29.4	-3.4
JIJ				eS	Sb	21 17 47.1	-5.7
JTJ	Tarama	2.10	70	P	Pn	21 17 37.8	-3.2
JTJ				eS	Sn	21 18 01.8	-6.1

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*IDC **21** 21:45:44.0±1.1, 26.21N×143.59E, mb3.7/7, mb1 4.0/7, mb1mx3.8/20, mbtmp3.7/7, MS4.0/2, Ms1 4.0/2, ms1mx2.8/26, Error ellipse: s-maj=30.2km s-min=26.5km az=35.0*

ISC 21 21:45:47.0±6.6**, 26.2N**±0.2×**143.5E**±0.2**, h30**^{km}±47^{km}**, n10, σ0^{s}97**/9**, mb3.6**/7**, MS4.0**/2**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.51	307	Pn	Pn	21 46 12.4	0.0
	13nm,0.3s,baz=157,slow=20,SNR=10.0						
CBIJ				Sn	Sn	21 46 30.9	-0.3
	155nm,0.3s,baz=289,slow=24,SNR=17						
PMG	Port Moresby	35.56	174	LR	LR	22 04 57.5	
	comp=Z,117nm,18.3s,MS3.7,baz=205,slow=32						
SONM	Songino Array	36.20	316	P	P	21 52 50.4	+1.5
	0.4nm,0.9s,mb3.3,baz=72,slow=4.6,SNR=3.1						
WRA	Warramunga Arr	46.73	192	P	P	21 54 15.0	-0.4
	1.0nm,0.9s,mb3.7,baz=13,slow=8.7,SNR=4.7						
ILAR	Eielson Array	57.92	28	P	P	21 55 36.9	-1.6
	0.5nm,0.7s,mb3.6,baz=240,slow=6.9,SNR=5.1						
URZ	Urewera	71.42	153	LR	LR	22 21 55.3	
	comp=Z,155nm,20.7s,MS4.2,baz=300,slow=30						
YKA	Yellowknife Ar	72.35	28	P	P	21 57 11.3	-0.3
	0.4nm,0.7s,mb3.4,baz=292,slow=5.6,SNR=7.2						
FINES	FINESS Array B	79.28	334	P	P	21 57 51.1	+0.4
	1.3nm,0.9s,mb3.8,baz=100,slow=25,SNR=3.1						
NVAR	Mina Array Bea	80.11	52	P	P	21 57 57.4	+1.7
	1.0nm,0.7s,mb3.8,baz=270,slow=6.3,SNR=3.8						
NOA	NORSAR Array B	84.89	339	P	P	21 58 18.8	-0.9
	0.6nm,0.8s,mb3.8,baz=39,slow=7.0,SNR=3.1						

IDC 21 21:54:39.9±6.2**, 54.20S**×**143.84E, mb3.7**/2**, mb1 3.9**/2**, mb1mx3.6**/10**, mbtmp3.7**/2**, Error ellipse: s-maj=340.5km s-min=65.6km az=88.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	31.39	342	P	P	22 01 02.6	-1.9
	0.5nm,0.9s,baz=164,slow=10,SNR=4.0						
WRA	Warramunga Arr	34.96	344	P	P	22 01 33.3	-2.3
	1.3nm,0.7s,baz=170,slow=7.7,SNR=14						
FINES	FINESS Array B	147.26	308	PKPbc	PKPdf	22 14 23.1	-0.2
	0.7nm,0.5s,baz=90,slow=3.8,SNR=6.3						

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*NEIC **21** 21:57:09.7, 15.71N×94.92W, h65^{km}, MD4.0(MEX), After MEX.*

MEX 21 21:57:08.9±0.7**, 15.64N**×**94.83W, h13**^{km}±14^{km}**, MD4.1, 1D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.24	276	⇓iP	Pb	21 57 28.2	-3.4
HUIG				i S	Sb	21 57 43.1	-4.2
OXX	Oaxaca	2.32	309	i P	Pn	21 57 46.8	-0.6
OXX	Oaxaca	2.32	309	i P	Pn	21 57 45.0	-2.4
VHO	Vista Hermosa	2.32	308	i P	Pn	21 57 43.7	-3.7
VHO				i S	Sn	21 58 07.0	-9.0
VHO	Vista Hermosa	2.32	308	i P	Pn	21 57 43.7	-3.7
VHO				i S	Sn	21 58 10.0	-5.9
SCX	San Cristobal	2.38	62	i P	Pn	21 57 45.5	-2.7
SCX				i S	Sn	21 58 14.3	-3.1
CCIG	Comitan	2.67	76	eP	Pn	21 57 47.8	-4.5
CCIG				i S	Sn	21 58 16.1	-8.8
CCIG	Comitan	2.67	76	eP	Pn	21 57 47.8	-4.5
CCIG				i S	Sn	21 58 19.2	-5.6

MEX 21 22:26:49.8±0.8**, 16.44N**×**97.82W, h16**^{km}±17^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.30	261	i P	Pb	22 26 55.9	-0.4
PNIG				i S	Sb	22 26 59.0	-1.7
VHO	Vista Hermosa	1.22	59	i P	Pb	22 27 07.0	-5.0
VHO				i S	Sb	22 27 23.4	-3.8
OXX	Oaxaca	1.23	59	i P	Pb	22 27 08.2	-3.9
ACX	Acapulco	2.06	282	eP	Pn	22 27 21.0	-3.2
PPM	Popocatepetl	2.72	344	eP	Pn	22 27 31.0	-2.8

DJA 21 22:33:14.6±1.0**, 9.58S**×**117.68E, h240**^{km}**, ML3.6**/3**, 6C, Error ellipse: s-maj=64.6km s-min=26.9km az=11.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	1.89	305	⇑ePn	P	22 33 55.7	+0.2
	25nm,0.2s						
KEDI				⇑eSn	S	22 34 26.2	-1.0
RATI	Rata	2.28	292	⇑ePn	P	22 34 00.1	+0.8
	43nm,0.4s						
RATI				⇑eSn	S	22 34 32.3	-1.7
SRDI	Scrawed	3.66	287	⇑ePn	P	22 34 14.7	+0.2
	16nm,0.2s						
SRDI				⇑eSn	S	22 34 59.6	-1.3

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*BJI **21** 22:41:26.3, 21.21N×93.45E, h54^{km}, mb4.4*

*NEIC **21** 22:41:27.9±0.5, 21.19N×93.53E, h54^{km}±5^{km}, mb4.3/3, Error ellipse: s-maj=10.1km s-min=4.3km az=216.0*

*IDC **21** 22:41:27.7±4.3, 21.23N×93.57E, h51^{km}±40^{km}, mb3.6/13, mb1 3.8/14, mb1mx3.8/18, mbtmp3.9/14, ML4.2/1, Error ellipse: s-maj=27.6km s-min=14.2km az=52.0*

ISC 21 22:41:25.6±0.8**, 21.18N**±0.09×**93.51E**±0.08**, h52**^{km}±9^{km}**, n39, σ0^{s}63**/39**, mb4.1**/16**, 2D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT	Agartala	3.40	323	eP	P	22 42 28.0	+10
CHG	Chiang Mai	5.63	114	⇓P	P	22 42 49.0	+0.2
	18nm,0.8s						
CM31	Chiang Mai Arr	5.79	117	eP	P	22 42 51.4	+0.4
	9.1nm,0.5s						
CMAR	Chiang Mai Arr	5.79	117	P	P	22 42 50.8	-0.2
	1.5nm,0.3s,baz=294,slow=14,SNR=42						
CHRT	Chiangrai	6.03	101	⇓P	P	22 42 53.5	-0.8
	147nm,0.6s						
BDT	Bhumibol Dam	6.51	126	P	P	22 43 02.0	+0.9
LSA	Lhasa	8.74	346	P	P	22 43 31.4	-0.7
LSA	Lhasa	8.74	346	eP	P	22 43 31.3	-0.7
	8.7nm,0.6s						
JIRN	Jiri	9.27	315	eP	P	22 43 39.6	+0.3
	27nm,0.3s						
KMI	Kunming	9.36	63	P	P	22 43 41.1	+0.6
KMI				AMB	AMB		
	comp=Z,5.0nm,0.5s						
KMI	Kunming	9.36	63	P	P	22 43 41.1	+0.6
	comp=Z,5.0nm,0.5s						
PKI	Pulchoki	9.74	312	eP	P	22 43 46.0	+0.2
	comp=Z,24nm,0.6s						
KKN	Kakani	9.97	313	eP	P	22 43 49.1	+0.2
	comp=Z,7.4nm,0.2s						
DMN	Daman	9.97	312	eP	P	22 43 49.3	+0.3
	comp=Z,9.9nm,0.3s						
GKN	Gorkha	10.54	312	eP	P	22 43 55.9	-0.9
	comp=Z,26nm,0.3s						
KOLN	Koldanda	11.15	308	eP	P	22 44 04.4	-0.6
	comp=Z,15nm,0.3s						
WMQ	Urumqi	23.09	349	eP	P	22 46 28.5	+1.0
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.3						
AAK	Ala-Archa	26.68	328	eP	P	22 47 02.7	+1.0
	comp=Z,6.4nm,1.0s,mb4.1						
SONM	Songino Array	28.55	18	P	P	22 47 17.4	-1.2
	comp=Z,0.1nm,0.4s,baz=208,slow=8.9,SNR=5.5						
KURK	Kurchatov	31.71	342	eP	P	22 47 45.8	-0.8
	comp=Z,3.1nm,0.6s,mb4.3						
ZAL	Zalesovo	33.37	351	P	P	22 48 01.0	+0.1
	comp=Z,1.0nm,0.3s,mb4.2,baz=295,slow=9.9,SNR=4.6						
CHKZ	Chkalovo	36.85	337	eP	P	22 48 31.1	+0.5
	comp=Z,4.3nm,0.7s,mb4.4						
BRTR	Keskin Array B	53.84	304	P	P	22 50 45.2	-0.5
	comp=Z,0.3nm,0.5s,mb3.5,baz=130,slow=11,SNR=3.3						
WRA	Warramunga Arr	57.15	133	P	P	22 51 09.4	-0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=319,slow=7.6,SNR=46						
WRAB	Tennant Creek	57.15	133	eP	P	22 51 08.9	-0.9
AKASG	Malin Array Be	57.67	317	P	P	22 51 12.8	-0.3
	comp=Z,0.6nm,0.3s,mb4.0,baz=87,slow=6.5,SNR=8.2						
KMBO	Kilima Mbogo	59.25	255	P	P	22 51 24.7	+0.2
	comp=Z,0.4nm,0.5s,mb3.7,baz=66,slow=19,SNR=2.8						
KMBO	Kilima Mbogo	59.25	255	P	P	22 51 24.7	+0.2
ASAR	Alice Springs	59.45	136	P	P	22 51 26.1	+0.3
	comp=Z,0.9nm,0.6s,mb4.0,baz=318,slow=6.8,SNR=13						
FINES	FINESS Array B	60.84	329	P	P	22 51 34.5	-0.2
	comp=Z,4.5nm,0.8s,mb4.6,baz=99,slow=5.2,SNR=17						
KAF	Kangasniemi	60.85	330	ep	P	22 51 35.4	+0.6
ARCES	ARCESS Array B	62.66	338	P	P	22 51 46.6	-0.3
	comp=Z,3.5nm,0.9s,mb4.5,baz=82,slow=8.6,SNR=4.4						
GERES	GERESS Array B	67.74	315	P	P	22 52 21.2	+1.4
	comp=Z,1.0nm,0.5s,mb4.2,baz=76,slow=7.0,SNR=8.4						
NB2	NORSAR Subarra	67.99	329	P	P	22 52 20.9	-0.2
	comp=Z,0.7nm,0.6s,mb3.9,baz=84,slow=6.2						
NOA	NORSAR Array B	67.99	329	P	P	22 52 20.9	-0.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=86,slow=6.2,SNR=3.8						
STKA	Stephens Creek	70.03	138	P	P	22 52 33.4	-0.7
	comp=Z,1.4nm,0.6s,mb4.0,baz=309,slow=13,SNR=3.8						
STKA	Stephens Creek	70.03	138	P	P	22 52 33.4	-0.7
MCK	McKinley	82.56	23	P	P	22 53 44.5	+0.4
ILAR	Eielson Array	82.71	22	P	P	22 53 45.1	+0.3
	comp=Z,0.3nm,0.6s,mb3.5,baz=292,slow=4.9,SNR=7.0						

WEL 21 22:42:27.5±0.3**, 38.41S×176.17E, h159**^{km}±2^{km}**, ML3.5**/7**, Error ellipse: s-maj=3.5km s-min=3.2km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	0.75	79	PN	P	22 42 51.3	-0.3
URZ				SN	S	22 43 09.3	-0.8
MGZ	**Maungaku**	0.77	220	PN	P	22 42 51.4	-0.3
MGZ				SN	S	22 43 10.2	-0.2
NGZ	**Ngauruhoe**	0.88	210	PN	P	22 42 52.4	0.0
TUVZ	**Tukino**	0.95	205	PN	P	22 42 52.9	0.0
TUVZ				SN	S	22 43 13.0	+0.6
MOVZ	**Moawhango**	1.05	198	PN	P	22 42 53.3	-0.3
MOVZ				SN	S	22 43 13.1	-0.8
TSZ	**Takapari Road**	1.65	186	PN	P	22 42 59.3	-0.3
TSZ				SN	S	22 43 23.3	-1.2
PUZ	**Puketiti**	1.68	79	PN	P	22 42 59.7	-0.2
BFZ	**Birch Farm**	2.27	179	PN	P	22 43 05.9	-0.8
MRZ	**Mangatainoka R**	2.29	191	PN	P	22 43 05.5	-1.5
MTW	**Mount Morrison**	2.79	190	PN	P	22 43 10.8	-2.4
KHZ	**Kahutara**	4.48	206	PN	P	22 43 31.0	-4.0

IDC 21 23:06:10.5±3.4**, 19.34N×147.01E, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.6**/20**, mbtmp3.9**/4**, Error ellipse: s-maj=143.1km s-min=28.9km az=83.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	40.97	198	P	P	23 13 55.2	-1.7
	0.6nm,0.9s,baz=15,slow=8.2,SNR=8.5						
SONM	**Songino Array**	43.43	320	P	P	23 14 16.5	-0.2
	0.6nm,0.6s,baz=133,slow=7.2,SNR=6.7						
BVAR	**Borovoye Array**	66.77	320	P	P	23 17 03.5	-2.3
	3.4nm,0.9s,baz=95,slow=7.3,SNR=13						
FINES	**FINESS Array B**	86.82	336	P	P	23 18 55.8	-2.0
	0.6nm,0.3s,baz=70,slow=5.1,SNR=7.1						

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*MOS **21** 23:06:59.7±1.8, 25.42N×94.94E, h33*^{km}*, mb4.4/7, Error ellipse: s-maj=13.1km s-min=8.0km az=116.2*

*BJI **21** 23:07:05.0, 25.62N×94.92E, h68*^{km}*, mB4.7, mb4.4, ML4.2, Ms3.8, Msz3.4*

*IDC **21** 23:07:05.6±0.6, 25.33N×94.77E, h78*^{km}*±4*^{km}*, mb3.7/15, mb1 3.9/16, mb1mx3.8/22, mbtmp4.0/16, MS3.1/1, Ms1 3.3/1, ms1mx2.6/25, Error ellipse: s-maj=25.5km s-min=10.3km az=57.0*

*NEIC **21** 23:07:05.7±0.9, 25.47N×95.02E, h76*^{km}*±9*^{km}*, mb4.2/5, Error ellipse: s-maj=10.5km s-min=7.0km az=62.0*

ISC 21 23:07:03.8±0.5**, 25.45N**±0.04×**94.80E**±0.03**, h77**^{km}±6^{km}**, h77**^{km}±1.8^{km}**:pP-P, n74,** σ1^{s}**33**/87**, mb4.0**/21**, 4C-5D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	1.03	230	⇑*i*	P	23 07 25.0	+1.8
LKP	**Lekhapani**	2.20	31	*e*P	P	23 07 38.5	-0.4
LKP				*e*S	S	23 08 10.5	+5.5
SHL	**Shillong**	2.64	273	*e*P	P	23 07 46.6	+1.4
SHL				*e*S	S	23 08 16.7	+0.5
AGT	**Agartala**	3.59	245	⇓*i*P	P	23 08 00.0	+1.6
AGT				*i*		23 09 17.0	
LSA	**Lhasa**	5.34	323	P	P	23 08 24.6	+2.0
LSA				S	S	23 09 21.8	-1.5
LSA				Smax			
	comp=N,100nm,0.9s						
LSA				Smax			
	comp=E,150nm,1.0s						
LSA	**Lhasa**	5.34	323	*e*P	P	23 08 24.0	+1.4
LSA				pmax	pmax		
	comp=Z,42nm,0.8s						
LSA	**Lhasa**	5.34	323	*e*P	P	23 08 24.0	+1.5
	comp=Z,42nm,0.8s						
KMI	**Kunming**	7.19	91	P	P	23 08 50.9	+2.6
KMI				S	S	23 10 09.3	+0.1
KMI				Smax			
	comp=N,29nm,1.4s						
KMI				Smax			
	comp=E,23nm,1.5s						
KMI				LR	LR		
	comp=N,512nm,5.7s						
KMI				LR	LR		
	comp=E,263nm,3.9s						
KMI				LR	LR		
	comp=Z,143nm,5.4s						
CHRT	**Chiangrai**	7.21	139	⇓P	P	23 08 48.5	0.0
	comp=Z,358nm,0.8s						
CHG	**Chiang Mai**	7.63	149	⇑P	P	23 08 54.9	+0.5
	comp=Z,22nm,1.0s						
CM31	**Chiang Mai Arr**	7.94	150	*e*P	P	23 08 59.2	+0.6
	comp=Z,8.1nm,0.6s						
CMAR	**Chiang Mai Arr**	7.94	150	P	P	23 08 58.9	+0.3
	comp=Z,0.8nm,0.3s,baz=328,slow=13,SNR=96						
CMAR				LR	LR	23 12 03.1	
	comp=Z,120nm,19.4s,baz=325,slow=38						
JIRN	**Jiri**	8.02	288	*e*P	P	23 08 59.5	-0.2
	comp=Z,44nm,0.2s						
NANT	**Nan**	8.58	139	P	P	23 09 06.0	-1.3
PKI	**Pulchoki**	8.68	286	*e*P	P	23 09 07.7	-0.9
	comp=Z,121nm,0.6s						
KKN	**Kakani**	8.84	287	*e*P	P	23 09 09.9	-0.9
	comp=Z,51nm,0.2s						
DMN	**Daman**	8.95	286	*e*P	P	23 09 10.0	-2.3
	comp=Z,32nm,0.3s						
BDT	**Bhumibol Dam**	9.05	154	P	P	23 09 14.0	+0.3
	comp=Z,16nm,1.0s						
GKN	**Gorkha**	9.44	288	*e*P	P	23 09 17.6	-1.4
	comp=Z,242nm,0.9s						
CD2	**Chengdu**	9.59	53	*e*P	P	23 09 19.0	-2.1
BWNR	**Bhubaneshwar**	9.75	240	*e*P	P	23 09 23.7	+0.5
BWNR				*e*S	S	23 11 02.9	-9.1
BWNR				AML	AML	23 11 14.6	
	comp=E,37nm,0.3s						
BWNR				AML	AML	23 11 17.7	
	comp=N,43nm,0.3s						
KOLN	**Koldanda**	10.29	285	*e*P	P	23 09 28.3	-2.3
	comp=N,127nm,0.8s						
GYA	**Guiyang**	10.72	82	⇓*i*P	P	23 09 37.8	+1.4
GYA				XP		23 09 57.0	
GYA				S	S	23 11 30.4	-5.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				AMB	AMB		
	comp=Z,60nm,3.0s						
GYA				LR	LR		
	comp=N,310nm,9.3s						
GYA				LR	LR		
	comp=E,170nm,10.8s						
GYA				LR	LR		
	comp=Z,150nm,7.8s						
BLSP	**Bilaspur**	12.06	257	*e*P	P	23 09 51.6	-2.7
BLSP				*e*S	S	23 11 58.5	-9.1
BLSP				AML	AML	23 12 03.6	
	comp=E,14nm,0.2s						
BLSP				AML	AML	23 12 03.7	
	comp=N,13nm,0.1s						
LZH	**Lanzhou**	13.14	34	⇑P	P	23 10 06.5	-2.1
LZH				AMB	AMB		
	comp=Z,42nm,1.5s						
LZH	**Lanzhou**	13.14	34	⇑P	P	23 10 06.5	-2.1
	comp=Z,42nm,1.5s						
LZH				pP		23 10 13.0	
LZH				sP		23 10 17.0	
VIS	**Vishakhapatnam**	13.15	236	*e*P	P	23 10 09.4	+0.7
VIS				*e*S	S	23 12 22.4	-11
VIS				*e*		23 12 53.1	
	comp=N,10nm,0.8s						
VIS				*e*		23 12 53.4	
	comp=E,6.7nm,1.1s						
ENH	**Enshi**	13.85	66	P	P	23 10 14.3	-3.5
	comp=E,13nm,0.7s						
GTA	**Gaotai**	14.55	16	*e*P	P	23 10 24.6	-2.3
GTA				AMB	AMB		
	comp=Z,2.0nm,0.7s						
XAN	**Xi'an**	14.95	52	P	P	23 10 28.1	-3.9
XAN				AMB	AMB		
	comp=Z,4.0nm,0.8s						
DDI	**Dehra Dun**	15.58	292	*e*P	P	23 10 38.4	-1.8
DDI				*e*		23 12 27.4	
BHPL	**Bhopal**	15.99	266	*e*P	P	23 10 45.3	0.0
BHPL				*e*S	S	23 13 29.6	-10
BHPL				AML	AML	23 13 37.3	
	comp=N,16nm,0.4s						
BHPL				AML	AML	23 13 37.9	
	comp=E,8.8nm,0.5s						
NDI	**New Delhi**	15.99	286	*e*	P	23 10 41.0	-4.4
NDI				*e*S	S	23 13 27.5	-13
SMLA	**Simla**	16.53	294	⇓*i*	P	23 11 03.8	+12
SMLA				*i*		23 11 25.0	
SDNR	**Sundarnagar**	16.79	295	*e*	P	23 10 54.6	-0.7
HYB	**Hyderabad**	17.10	245	*e*P	P	23 11 01.0	+1.8
HYB				*e*S	S	23 13 57.0	-8.2
HYB	**Hyderabad**	17.10	245	*i* P	P	23 11 01.0	+1.8
HYB				*e*S	S	23 13 57.0	-8.2
THN	**Thein Dam**	18.09	297	*e*	P	23 11 10.7	-0.6
WMQ	**Urumqi**	19.23	344	P	P	23 11 25.0	+0.7
WMQ				S	S	23 14 53.0	+0.7
WMQ				SS	SS	23 15 22.0	+0.4
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s						
WMQ				LR	LR		
	comp=N,54nm,18.0s						
WMQ				LR	LR		
	comp=E,107nm,20.0s						
WMQ				LR	LR		
	comp=Z,65nm,18.0s						
HHC	**Hu-ho-hao-te**	20.75	38	*e*P	P	23 11 39.4	-0.9
HHC				AMB	AMB		
	comp=Z,18nm,1.2s						
HHC				AMB	AMB		
	comp=Z,102nm,7.1s						
KSH	**Kashi**	21.14	316	*e*P	P	23 11 49.0	+4.8
KSH				*e*AP		23 12 06.3	
KSH				*e*S	S	23 15 36.1	+6.4
KSH				*e*PCS		23 19 28.1	
KSH				AMB	AMB		
	comp=Z,150nm,5.0s						
KSH				LR	LR		
	comp=N,160nm,5.3s						
KSH				LR	LR		
	comp=E,200nm,5.7s						
MKAR	**Makanchi Array**	23.52	338	P	P	23 12 09.5	+2.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AAK	**Ala-Archa**	23.92	321	*e*P	P	23 12 13.7	+2.3
AAK				*e*		23 12 29.4	
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb3.7						
AAK	**Ala-Archa**	23.92	321	*e*P	P	23 12 13.7	+2.3
	comp=Z,6.0nm,1.4s,mb3.7						
AAK				*e*		23 12 29.4	
SONM	**Songino Array**	24.15	19	P	P	23 12 15.3	+1.8
	comp=Z,2.6nm,0.7s,mb3.7,baz=203,slow=10,SNR=27						
SONM				ScP		23 19 24.9	
	comp=Z,0.6nm,0.7s,baz=208,slow=3.0,SNR=6.8						
ULN	**Ulaanbaatar**	24.38	20	*e*P	P	23 12 16.3	+0.5
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	24.38	20	*e*P	P	23 12 16.3	+0.5
	comp=Z,8.1nm,1.0s,mb4.0						
ZAK	**Zakamensk**	25.74	13	⇓*e*P	P	23 12 30.3	+1.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.6						
KURK	**Kurchatov**	28.14	338	*e*P	P	23 12 51.2	+0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	28.14	338	*e*P	P	23 12 51.2	+0.6
	comp=Z,4.7nm,0.9s,mb4.0						
ZAL	**Zalesovo**	29.42	348	P	P	23 13 02.5	+0.6
	comp=Z,1.0nm,0.6s,mb3.6,baz=305,slow=8.5,SNR=6.3						
ZAL				pP	pP	23 13 21.5	+1.4
	comp=Z,4.6nm,1.2s,baz=295,slow=12,SNR=5.8						
NVS	**Novosibirsk**	30.58	347	*e*P	P	23 13 10.0	-2.3
CN2	**Changchun**	30.91	46	*e*P	P	23 13 15.0	-0.3
BVAR	**Borovoye Array**	33.09	333	P	P	23 13 35.6	+1.4
	comp=Z,0.8nm,0.6s,mb3.7,baz=142,slow=12,SNR=6.8						
BVAR				ScP		23 19 54.5	
	comp=Z,1.2nm,0.9s,baz=162,slow=4.7,SNR=5.4						
CHKZ	**Chkalovo**	33.48	334	*e*P	P	23 13 38.0	+0.5
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
CHKZ	**Chkalovo**	33.48	334	*e*P	P	23 13 38.0	+0.5
	comp=Z,3.5nm,0.9s,mb4.2						
ZEI	**Tsey**	44.85	306	*e*P	pP	23 15 28.8	-2.2
BRTR	**Keskin Array B**	52.53	302	P	P	23 16 12.2	+0.8
	comp=Z,0.6nm,0.7s,mb3.7,baz=113,slow=6.9,SNR=5.0						
BRTR				pP	pP	23 16 30.2	-0.6
	comp=Z,1.4nm,0.9s,baz=111,slow=6.7,SNR=4.8						
AKASG	**Malin Array Be**	55.43	315	P	P	23 16 32.2	-0.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=79,slow=6.7,SNR=6.6						
AKASG				pP	pP	23 16 50.3	-1.8
	comp=Z,0.6nm,0.5s,baz=73,slow=7.3,SNR=4.0						
FINES	**FINESS Array B**	57.84	328	P	P	23 16 50.0	+0.6
	comp=Z,0.8nm,0.8s,mb3.8,baz=90,slow=1.9,SNR=3.9						
FINES				pP	pP	23 17 08.6	-0.6
	comp=Z,1.6nm,0.8s,baz=104,slow=7.9,SNR=2.7						
ARCES	**ARCESS Array B**	59.18	337	P	P	23 16 59.2	+0.6
	comp=Z,2.0nm,0.8s,mb4.2,baz=90,slow=11,SNR=4.2						
ARCES				pP	pP	23 17 18.8	+0.4
	comp=Z,2.7nm,0.8s,baz=49,slow=26,SNR=2.2						
WRA	**Warramunga Arr**	59.26	136	P	P	23 16 58.4	-1.5
	comp=Z,6.3nm,0.7s,mb4.8,baz=325,slow=7.5,SNR=39						
WRA				pP	pP	23 17 18.9	-0.8
	comp=Z,2.2nm,0.7s,baz=323,slow=7.4,SNR=5.3						
WRAB	**Tennant Creek**	59.26	136	*e*P	P	23 16 57.9	-1.9
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	59.26	136	*e*P	P	23 16 57.9	-1.9
	comp=Z,3.6nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	59.27	136	*e*P	P	23 16 58.2	-1.7
ASAR	**Alice Springs**	61.79	139	P	P	23 17 16.1	-0.9
	comp=Z,4.4nm,0.7s,mb4.6,baz=321,slow=6.8,SNR=42						
ASAR				pP	pP	23 17 37.1	+0.2
	comp=Z,2.0nm,0.7s,baz=322,slow=7.3,SNR=6.0						
ASAR				PcP	PcP	23 17 56.1	-1.0
	comp=Z,2.6nm,0.8s,baz=326,slow=5.3,SNR=8.4						
NWAO	**Narrogin (SRO)**	61.85	159	P	P	23 17 15.1	-2.2
	comp=Z,5.6nm,0.7s,mb4.7,baz=53,slow=5.8,SNR=5.8						
NB2	**NORSAR Subarra**	65.01	328	P	P	23 17 36.5	-1.1
	comp=Z,1.7nm,0.8s,mb3.9,baz=83,slow=6.5						
NOA	**NORSAR Array B**	65.01	328	P	P	23 17 36.2	-1.4
	comp=Z,1.3nm,0.8s,mb3.8,baz=83,slow=6.6,SNR=4.4						
NOA				pP	pP	23 17 57.9	+0.2
	comp=Z,1.8nm,0.9s,baz=82,slow=6.6,SNR=3.7						
GERES	**GERESS Array B**	65.60	314	P	P	23 17 43.3	+1.7
	comp=Z,0.9nm,0.8s,mb3.6,baz=45,slow=1.9,SNR=4.6						
GERES				PcP	PcP	23 18 10.7	-1.7
	comp=Z,1.3nm,0.7s,baz=72,slow=4.2,SNR=5.9						
ILAR	**Eielson Array**	78.33	23	P	P	23 18 57.3	+0.6
	comp=Z,1.2nm,0.8s,mb3.7,baz=304,slow=4.8,SNR=11						
ILAR				pP	pP	23 19 18.6	+1.1
	comp=Z,0.6nm,0.7s,baz=296,slow=3.7,SNR=3.3						
INK	**Inuvik**	80.03	16	P	P	23 19 06.7	+0.8
	comp=Z,1.6nm,0.6s,mb4.0,baz=304,slow=5.1,SNR=7.6						
YKA	**Yellowknife Ar**	89.27	13	P	P	23 19 53.4	+1.4
YKA	**Yellowknife Ar**	89.27	13	P	P	23 19 53.3	+1.3
	comp=Z,0.1nm,0.4s,mb3.2,baz=339,slow=3.9,SNR=4.3						

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*BJI **21** 23:19:33.3, 4.63N×94.43E, h40*^{km}*, mB4.9, mb4.7, Ms4.5, Msz4.2*

*MOS **21** 23:19:33.2±1.6, 4.73N×94.37E, h33*^{km}*, mb4.7/7, Error ellipse: s-maj=33.5km s-min=10.1km az=101.4*

*NEIC **21** 23:19:36.4±0.4, 5.03N×94.43E, h30*^{km}*, mb4.5/10, Error ellipse: s-maj=13.5km s-min=6.6km az=57.0*

*IDC **21** 23:19:39.8±0.8, 4.95N×94.34E, h58*^{km}*±6*^{km}*, mb3.9/13, mb1 4.1/14, mb1mx4.0/19, mbtmp4.2/14, MS3.4/2, Ms1 3.5/2, ms1mx2.8/23, Error ellipse: s-maj=28.9km s-min=12.7km az=55.0*

ISC 21 23:19:37.4±0.5**, 4.92N**±0.06×**94.34E**±0.08**, h58**^{km}**, h58**^{km}±2.7^{km}**:pP-P, n54,** σ1^{s}**08**/57**, mb4.5**/36**, MS4.1**/4**, 3C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	14.18	18	P	P	23 22 53.1	-3.8
	12nm,0.6s						
CMAR	**Chiang Mai Arr**	14.18	18	P	P	23 22 57.2	+0.3
	1.3nm,0.3s,baz=214,slow=12,SNR=31						
CMAR				LR	LR	23 28 08.7	
	comp=Z,78nm,20.7s,baz=213,slow=36						
KMI	**Kunming**	21.64	21	P	P	23 24 26.0	+1.3
KMI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.1						
JIRN	**Jiri**	23.91	342	*e*P	P	23 24 46.9	+0.1
	comp=Z,11nm,0.4s,mb4.7						
PKI	**Pulchoki**	24.07	340	*e*P	P	23 24 49.9	+1.4
	comp=Z,12nm,0.5s,mb4.5						
DMN	**Daman**	24.21	340	*e*P	P	23 24 50.7	+0.9
	comp=Z,19nm,0.7s,mb4.6						
KKN	**Kakani**	24.32	340	*e*P	P	23 24 50.8	-0.1
	comp=Z,10nm,0.6s,mb4.4						
GYA	**Guiyang**	24.44	28	⇑*i*P	P	23 24 53.3	+1.2
GYA				AP		23 25 02.5	
GYA				XP		23 25 06.8	
GYA				PP	PP	23 25 28.3	-0.9
GYA				S	S	23 29 08.4	+3.2
GYA				AMB	AMB		
	comp=Z,30nm,0.6s,mb4.9						
GYA				AMB	AMB		
	comp=Z,270nm,3.9s						
GYA				LR	LR		
	comp=N,380nm,12.8s,MS4.2						
GYA				LR	LR		
	comp=E,420nm,13.7s,MS4.2						
GYA				LR	LR		
	comp=Z,390nm,13.0s,MS4.1						
GKN	**Gorkha**	24.74	339	*e*P	P	23 24 55.3	+0.4
	comp=Z,24nm,0.6s,mb4.9						
LSA	**Lhasa**	24.83	353	P	P	23 24 57.3	+1.5
LSA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
LSA	**Lhasa**	24.83	353	*e*P	P	23 24 56.0	+0.2
LSA				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.8						
LSA	**Lhasa**	24.83	353	*e*P	P	23 24 56.0	+0.2
	comp=Z,17nm,0.6s,mb4.8						
KOLN	**Koldanda**	24.91	337	*e*P	P	23 24 57.3	+0.7
	comp=Z,17nm,0.6s,mb4.8						
ENH	**Enshi**	28.98	28	*e*P	P	23 25 31.7	-2.1
	comp=Z,7.8nm,0.7s,mb4.5						
XAN	**Xi'an**	31.98	23	P	P	23 25 58.3	-2.0
XAN				AMB	AMB		
	comp=Z,23nm,0.7s,mb5.1						
GTA	**Gaotai**	34.69	7	*e*P	P	23 26 23.3	-0.3
GTA				AP	pP	23 26 39.1	+0.7
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
NJ2	**Nanjing**	35.43	37	*e*P	P	23 26 30.3	+0.3
NJ2				AP	pP	23 26 40.3	-4.5
NJ2				XP	sP	23 26 43.9	-8.1
NJ2				PP	PP	23 27 51.0	-0.2
NJ2				PPP	PPP	23 28 11.0	+0.8
NJ2				S	S	23 32 02.0	+2.1
NJ2				XS		23 32 18.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,402nm,4.2s						
NJ2				LR	LR		
	comp=N,1μm,15.2s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,16.2s,MS5.0						
FITZ	**Fitzroy Crossi**	38.43	127	*e*P	P	23 26 55.0	-0.3
	comp=E,7.7nm,0.6s,mb4.6						
WMQ	**Urumqi**	39.18	352	P	P	23 27 00.0	-1.3
WMQ				XP	sP	23 27 14.0	-9.1
WMQ				PP	PP	23 28 34.0	-1.7
WMQ				S	S	23 32 57.0	+0.1
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
WMQ				LR	LR		
	comp=N,56nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=E,85nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,41nm,16.0s,MS3.4						
AAK	**Ala-Archa**	41.48	338	*e*P	P	23 27 19.1	-1.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
AAK	**Ala-Archa**	41.48	338	*e*P	P	23 27 19.1	-1.2
	comp=Z,2.4nm,0.8s,mb3.9						
KAKA	**Kakadu**	41.72	115	*e*P	P	23 27 21.6	-1.0
	comp=Z,11nm,1.4s,mb4.3						
MKAR	**Makanchi Array**	42.99	348	*i* P	P	23 27 33.0	+0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	**Songino Array**	43.99	12	P	P	23 27 40.5	-0.3
	comp=Z,2.7nm,0.5s,mb4.2,baz=194,slow=8.2,SNR=46						
SONM				pP	pP	23 27 56.2	+0.5
	comp=Z,1.2nm,0.7s,baz=194,slow=8.3,SNR=4.0						
SONM				PcP	PcP	23 29 26.4	+0.3
	comp=Z,0.4nm,0.7s,baz=194,slow=3.9,SNR=4.1						
SONM				pPcP		23 29 42.7	
	comp=Z,0.9nm,0.7s,baz=197,slow=3.9,SNR=4.4						
ULN	**Ulaanbaatar**	44.15	12	*e*P	P	23 27 41.3	-0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
ULN	**Ulaanbaatar**	44.15	12	*e*P	P	23 27 41.3	-0.8
	comp=Z,2.5nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	46.44	123	P	P	23 28 01.1	+0.5
	comp=Z,12nm,0.6s,mb5.0,baz=302,slow=9.1,SNR=166						
WRA				pP	pP	23 28 17.0	+1.3
	comp=Z,6.7nm,0.7s,baz=302,slow=9.1,SNR=6.7						
WRAB	**Tennant Creek**	46.44	123	*e*P	P	23 28 00.7	+0.1
WRAB				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
WRAB	**Tennant Creek**	46.44	123	*e*P	P	23 28 00.7	0.0
	comp=Z,18nm,0.7s,mb5.1						
WB2	**Warramunga Arr**	46.45	123	⇑*i*P	P	23 28 01.2	+0.5
CN2	**Changchun**	47.43	31	*e*P	P	23 28 09.0	+0.9
KURK	**Kurchatov**	47.50	346	*e*P	P	23 28 08.4	-0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KURK	**Kurchatov**	47.50	346	*e*P	P	23 28 08.4	-0.2
	comp=Z,3.7nm,0.7s,mb4.5						
ASPA	**Alice Springs**	47.91	128	*e*P	P	23 28 12.6	+0.4
ASAR	**Alice Springs**	47.92	128	P	P	23 28 12.6	+0.4
	comp=Z,3.7nm,0.6s,mb4.6,baz=299,slow=7.7,SNR=56						
ASAR				pP	pP	23 28 27.6	+0.3
	comp=Z,2.6nm,0.6s,baz=302,slow=7.9,SNR=8.9						
ZAL	**Zalesovo**	49.48	353	P	P	23 28 24.1	+0.3
	comp=Z,4.2nm,0.5s,mb4.7,baz=302,slow=5.9,SNR=26						
ZAL				pP	pP	23 28 39.0	0.0
	comp=Z,2.9nm,0.9s,baz=307,slow=6.2,SNR=3.6						
NVS	**Novosibirsk**	50.57	352	*e*P	P	23 28 29.5	-2.7
BVAR	**Borovoye Array**	51.83	342	P	P	23 28 41.5	-0.2
	comp=Z,2.4nm,0.6s,mb4.3,baz=145,slow=10.0,SNR=18						
BVAR				pP	pP	23 28 56.6	-0.3
	comp=Z,2.6nm,0.7s,baz=135,slow=8.4,SNR=7.5						
CHKZ	**Chkalovo**	52.32	342	*e*P	P	23 28 44.8	-0.5
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
CHKZ	**Chkalovo**	52.32	342	*e*P	P	23 28 44.8	-0.6
	comp=Z,5.5nm,0.6s,mb4.7						
BOD	**Bodaibo**	54.96	13	*e*P	P	23 29 02.7	-2.0
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KMBO	**Kilima Mbogo**	57.34	266	P	P	23 29 22.3	-0.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=230,slow=23,SNR=3.5						
STKA	**Stephens Creek**	57.96	133	P	P	23 29 26.3	-0.1
	comp=Z,1.5nm,0.7s,mb4.1,baz=302,slow=9.5,SNR=2.8						
STKA				LR	LR	23 57 10.6	
	comp=Z,65nm,18.6s,MS3.8,baz=27,slow=39						
BRTR	**Keskin Array B**	64.51	312	P	P	23 30 10.5	-0.1
	comp=Z,0.7nm,0.7s,mb3.8,baz=124,slow=7.9,SNR=5.0						
TIXI	**Tiksi**	70.07	11	*e*P	P	23 30 43.0	-1.9
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
FINES	**FINESS Array B**	75.40	333	P	P	23 31 16.6	+0.2
	comp=Z,2.3nm,0.6s,mb4.3,baz=97,slow=5.4,SNR=25						
KAF	**Kangasniemi**	75.49	333	*e*p	P	23 31 13.8	-3.1
ARCES	**ARCESS Array B**	78.09	340	P	P	23 31 34.0	+2.7
	comp=Z,2.2nm,0.8s,mb4.1,baz=90,slow=6.1,SNR=7.2						
GERES	**GERESS Array B**	80.15	319	P	P	23 31 44.9	+2.0
	comp=Z,0.9nm,0.6s,mb3.9,baz=90,slow=6.7,SNR=5.6						
NB2	**NORSAR Subarra**	82.38	331	P	P	23 31 54.8	+0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=98,slow=5.0						
NB2	**NORSAR Subarra**	82.38	331	P	P	23 31 54.8	+0.4
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
NOA	**NORSAR Array B**	82.38	331	P	P	23 31 54.0	-0.4
	comp=Z,0.8nm,0.7s,mb3.8,baz=118,slow=4.8,SNR=3.8						
SYO	**Syowa Base**	82.66	197	⇑P	P	23 32 00.5	+4.8
ILAR	**Eielson Array**	97.39	22	P	P	23 33 06.0	+0.7
	comp=Z,0.2nm,0.5s,mb3.8,baz=324,slow=4.9,SNR=4.6						

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*IDC **21** 23:45:45.4±1.2, 8.50N×92.33E, mb3.6/6, mb1 3.8/7, mb1mx3.7/18, mbtmp3.6/7, ML4.0/1, MS2.7/1, Ms1 2.9/1, ms1mx2.7/10, Error ellipse: s-maj=42.2km s-min=22.5km*

az=55.0

NEIC 21 23:45:50.0±0.6,8.57N×92.41E,h30^{km},mb3.8/2,Error ellipse: s-maj=21.5km s-min=9.5km az=57.0

ISC 21 23:45:49.2±7.1,8.6N±0.2×92.4E±0.2,h40^{km}±60^{km},n12,$\sigma 0\overset{s}{.}46$/12,mb3.6/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.71	32	Pn	P	23 48 37.0	+0.3
	0.3nm,0.3s,baz=222,slow=14,SNR=5.6						
CMAR				LR	LR	23 53 34.4	
	comp=Z,37nm,21.1s,baz=225,slow=40						
LSA	Lhasa	21.07	357	P	P	23 50 31.6	-0.6
ENH	Enshi	26.87	34	P	P	23 51 28.5	+0.1
AAK	Ala-Archa	37.42	338	eP	P	23 53 00.3	0.0
	0.6nm,0.7s,mb3.5						
SONM	Songino Array	40.90	14	P	P	23 53 29.5	+0.3
	1.0nm,1.2s,mb3.3,baz=162,slow=4.6,SNR=3.1						
ZAL	Zalesovo	45.67	354	P	P	23 54 07.5	-0.2
	0.5nm,0.8s,mb3.5,baz=320,slow=20,SNR=4.7						
CHKZ	Chkalovo	48.30	343	eP	P	23 54 28.1	-0.4
	1.2nm,0.7s,mb4.0						
WRA	Warramunga Arr	50.05	125	P	P	23 54 41.8	-0.6
	0.5nm,0.7s,mb3.6,baz=306,slow=8.5,SNR=4.6						
WRAB	Tennant Creek	50.06	125	P	P	23 54 42.3	-0.1
ASAR	Alice Springs	51.67	129	P	P	23 54 55.0	+0.5
	0.9nm,1.1s,mb3.6,baz=315,slow=8.9,SNR=3.6						
BRTR	Keskin Array B	60.69	311	P	P	23 55 58.8	-0.2
	0.5nm,0.7s,mb3.7,baz=126,slow=11,SNR=3.6						
GERES	GERESS Array B	76.18	318	P	P	23 57 36.0	+1.0
	0.8nm,0.8s,mb3.7,baz=90,slow=8.0,SNR=4.0						

IDC 21 23:58:14.1±0.7,2.73N×94.38E,mb4.0/9,mb1 4.3/10,mb1mx4.1/19,mbtmp4.1/10,ML4.5/1,MS3.8/6,Ms1 3.9/6,ms1mx3.6/13,Error ellipse: s-maj=30.9km s-min=16.7km az=47.0

BJI 21 23:58:18.6,2.70N×94.40E,h30^{km},mB5.2,mb4.9,Ms4.5,Msz4.0

NEIC 21 23:58:18.6±0.4,2.73N×94.40E,h30^{km},mb4.5/3,Error ellipse: s-maj=13.0km s-min=7.5km az=61.0

ISC 21 23:58:17.6±5.5,2.7N±0.1×94.4E±0.2,h36^{km}±49^{km},n24,$\sigma 0\overset{s}{.}76$/19,mb4.2/14,MS4.0/7,1D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	16.27	16	P	P	00 02 04.6	-0.6
CMAR	Chiang Mai Arr	16.27	16	Pn	P	00 02 05.4	+0.2
	0.7nm,0.3s,baz=212,slow=12,SNR=27						
CMAR				LR	LR	00 08 27.6	
	comp=Z,89nm,19.9s,baz=23,slow=38						
GYA	Guiyang	26.38	25	⇓iP	P	00 03 55.5	+2.8
GYA				XP	sP	00 04 04.3	-2.7
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
GYA				AMB	AMB		
	comp=Z,270nm,4.5s						
GYA				LR	LR		
	comp=N,540nm,16.8s,MS4.4						
GYA				LR	LR		
	comp=E,740nm,18.0s,MS4.4						
GYA				LR	LR		
	comp=Z,670nm,17.7s,MS4.2						
LSA	Lhasa	27.01	354	P	P	00 04 02.6	+4.2
LSA	Lhasa	27.01	354	eP	P	00 03 59.4	+0.9
GTA	Gaotai	36.86	7	eP	P	00 05 24.1	-0.3
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.2						
GTA				AMB	AMB		
	comp=Z,61nm,4.9s						
GTA				LR	LR		
	comp=N,169nm,15.2s,MS4.1						
GTA				LR	LR		
	comp=E,156nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=Z,120nm,16.0s,MS3.8						
AAK	Ala-Archa	43.54	339	eP	P	00 06 19.7	0.0
	comp=Z,5.8nm,1.3s,mb4.2						
WRA	Warramunga Arr	45.22	122	P	P	00 06 33.7	+0.2
	comp=Z,2.1nm,0.7s,mb4.0,baz=299,slow=8.7,SNR=26						
WRAB	Tennant Creek	45.22	122	eP	P	00 06 33.1	-0.4
	comp=Z,3.8nm,0.6s,mb4.4						
WB2	Warramunga Arr	45.23	122	eP	P	00 06 33.3	-0.3
SONM	Songino Array	46.13	11	P	P	00 06 40.6	+0.3
	comp=Z,0.8nm,0.5s,mb3.9,baz=188,slow=8.0,SNR=10						
ASAR	Alice Springs	46.55	127	P	P	00 06 44.4	+0.4
	comp=Z,1.2nm,0.6s,mb4.0,baz=296,slow=7.7,SNR=11						
ASAR				PcP	PcP	00 08 16.4	-1.9
	comp=Z,0.9nm,0.7s,baz=315,slow=3.8,SNR=5.9						
KURK	Kurchatov	49.65	347	eP	P	00 07 06.4	-1.3
	comp=Z,3.3nm,0.4s,mb4.7						
ZAL	Zalesovo	51.66	353	P	P	00 07 22.5	-0.4
	comp=Z,1.2nm,0.4s,mb4.2,baz=275,slow=3.9,SNR=4.0						
ZAL				LR	LR	00 32 49.6	
	comp=Z,149nm,18.5s,MS4.0,baz=201,slow=40						
STKA	Stephens Creek	56.46	131	P	P	00 07 58.1	-0.4
	comp=Z,6.0nm,0.9s,mb4.6,baz=317,slow=6.4,SNR=11						
STKA				LR	LR	00 31 52.4	
	comp=Z,117nm,19.9s,MS4.0,baz=346,slow=36						
KMBO	Kilima Mbogo	57.24	267	P	P	00 08 05.2	+0.8
	comp=Z,1.4nm,0.9s,mb4.0,baz=60,slow=11,SNR=4.9						
BRTR	Keskin Array B	66.02	313	P	P	00 09 02.5	-0.4
	comp=Z,0.9nm,0.9s,mb3.8,baz=135,slow=7.0,SNR=4.6						
MLR	Muntele Rosu	73.04	317	P	P	00 09 45.1	-0.7
	comp=Z,1.7nm,0.8s,mb4.0,baz=290,slow=15						
FINES	FINESS Array B	77.37	333	LR	LR	00 49 47.4	
	comp=Z,68nm,18.0s,MS4.0,baz=172,slow=40						
ARCES	ARCESS Array B	80.17	341	LR	LR	00 53 35.7	
	comp=Z,60nm,19.0s,MS4.0,baz=17,slow=41						
GERES	GERESS Array B	81.83	319	P	P	00 10 35.4	+0.9
	comp=Z,1.5nm,0.9s,mb3.9,baz=101,slow=6.8,SNR=4.9						
NOA	NORSAR Array B	84.32	331	LR	LR	00 51 58.6	
	comp=Z,64nm,18.1s,MS4.0,baz=245,slow=38						
TXAR	Lajitas Array	143.74	27	PKP	PKPdf	00 17 50.9	+1.4
	comp=Z,0.9nm,1.1s,baz=225,slow=2.6,SNR=3.3						
CFAA	Coronel Fontan	146.93	208	PKPbc	PKPbc	00 17 59.0	+2.4
	comp=Z,0.2nm,0.5s,baz=124,slow=4.1,SNR=7.6						

NEIC 22 00:08:06.7±0.6,6.75N×73.02W,h167^{km}±6^{km},mb4.1/2,Error ellipse: s-maj=9.2km s-min=7.8km az=113.0

IDC 22 00:08:06.2±0.7,6.76N×72.99W,h160^{km}±7^{km},mb3.6/12,mb1 3.8/14,mb1mx3.5/25,mbtmp4.1/14,Error ellipse: s-maj=15.0km s-min=7.6km az=131.0

ISC 22 00:08:05.6±0.6,6.76N±0.08×72.98W±0.09,h173^{km}±7^{km},n26,$\sigma 0\overset{s}{.}70$/23,mb3.8/14,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.32	215	P	P	00 08 47.4	+1.1
	102nm,0.3s,baz=110,slow=20,SNR=103						
ROSC				S	S	00 09 16.9	-0.7
	51nm,0.3s,baz=95,slow=15,SNR=7.9						
SDV	Santo Domingo	3.14	48	P	P	00 08 56.8	+0.5
	46nm,0.3s,baz=249,slow=8.0,SNR=264						
SDV				S	S	00 09 34.8	-0.5
	55nm,0.3s,baz=76,slow=19,SNR=34						
OTAV	Otavalo	8.47	220	P	P	00 10 05.5	-0.5
LPAZ	La Paz	23.40	168	pP		00 13 34.7	
	2.2nm,0.7s,baz=342,slow=15,SNR=5.6						
BDFB	Brasilia	33.27	132	P	P	00 14 29.6	+0.7
	1.0nm,0.4s,mb3.9,baz=306,slow=9.6,SNR=3.6						
TXAR	Lajitas Array	36.60	312	P	P	00 14 57.3	+0.4
	0.8nm,0.5s,mb3.6,baz=124,slow=9.1,SNR=10						
ISCO	Idaho Springs	44.04	323	P	P	00 15 58.3	+0.5
	4.3nm,1.0s,mb4.0						
ULM	Lac du Bonnet	47.39	340	P	P	00 16 23.4	-0.7
	2.6nm,0.3s,mb4.3,baz=140,slow=6.0,SNR=8.4						
MSU	Marysvale	47.44	318	eP	P	00 16 25.6	+0.9
MVU	Marysvale	47.46	318	eP	P	00 16 25.4	+0.6
	4.7nm,0.8s,mb4.2						
SCHQ	Schefferville	48.19	5	P	P	00 16 30.9	+0.6
	1.5nm,0.5s,mb3.9,baz=187,slow=7.2,SNR=12						
PDAR	Pinedale Array	48.21	324	P	P	00 16 30.9	+0.3
	0.9nm,0.5s,mb3.7,baz=123,slow=9.4,SNR=10						
BGU	Big Grassy Mou	49.28	320	P	P	00 16 37.9	-0.9
ELK	Elko	50.62	319	P	P	00 16 49.5	+0.6
	0.7nm,0.6s,mb3.5,baz=117,slow=4.5,SNR=1.5						
NVAR	Mina Array Bea	51.62	315	P	P	00 16 56.4	-0.1
	0.4nm,0.3s,mb3.5,baz=124,slow=9.8,SNR=3.7						
NVAR	Mina Array Bea	51.62	315	P	P	00 16 56.4	-0.1
YBH	Yreka Blue Hor	56.08	317	P	P	00 17 27.5	-1.5
	1.5nm,0.7s,mb4.0,baz=16,slow=2.9,SNR=5.2						
FRB	Frobisher Bay	56.97	2	P	P	00 17 34.2	-0.7
	0.7nm,0.5s,mb3.8,baz=150,slow=7.7,SNR=5.6						
YKA	Yellowknife Ar	63.37	340	P	P	00 18 17.8	-0.6
	2.3nm,0.6s,mb4.2,baz=132,slow=6.7,SNR=65						
YKA	Yellowknife Ar	63.37	340	P	P	00 18 17.8	-0.6
DBIC	Dimbokro	67.60	86	P	P	00 18 45.6	-0.7
	2.1nm,0.9s,mb3.9,baz=274,slow=6.2,SNR=3.2						
ILAR	Eielson Array	77.08	335	P	P	00 19 41.5	+0.5
	0.4nm,0.7s,mb3.2,baz=102,slow=4.7,SNR=7.5						
SONM	Songino Array	125.64	1	PKP	PKPdf	00 26 49.4	+2.8
	0.3nm,0.7s,baz=242,slow=1.6,SNR=5.1						
STKA	Stephens Creek	139.22	228	PKP	PKPdf	00 27 14.4	+1.9
	1.2nm,0.8s,baz=113,slow=15,SNR=3.6						
ASAR	Alice Springs	149.19	234	PKPbc	PKPdf	00 27 35.9	+6.0
	0.7nm,0.7s,baz=122,slow=3.4,SNR=8.9						
WRA	Warramunga Arr	150.43	241	PKPbc	PKPdf	00 27 39.2	+7.4
	0.7nm,0.4s,baz=107,slow=2.7,SNR=51						

BJI 22 00:10:05.6,5.09N×94.56E,h41^{km},mB5.3,mb4.7,Ms4.7,Msz4.2

MOS 22 00:10:07.3±0.8,5.38N×94.25E,h33^{km},mb4.7/9,Error ellipse: s-maj=20.9km s-min=9.5km az=98.9

NEIC 22 00:10:09.3±0.4,5.54N×94.40E,h30^{km},mb4.6/9,Error ellipse: s-maj=15.5km s-min=7.2km az=58.0

IDC 22 00:10:12.6±0.7,5.60N×94.45E,h56^{km}±4^{km},mb3.9/12,mb1 4.1/13,mb1mx4.0/19,mbtmp4.1/13,Error ellipse: s-maj=32.3km s-min=13.2km az=49.0

ISC 22 00:10:10.2±0.5,5.47N±0.07×94.36E±0.09,h57^{km},h57^{km}±.9^{km}:pP-P,n59,$\sigma 0\overset{s}{.}92$/53,mb4.3/35,2C-1D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	13.66	19	eP	P	00 13 24.4	+1.5
CMAR	Chiang Mai Arr	13.66	19	P	P	00 13 24.3	+1.3
	1.4nm,0.3s,baz=212,slow=14,SNR=31						
KMI	Kunming	21.13	21	P	P	00 14 53.0	+0.5
KMI				AP		00 15 00.3	
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.2						
KMI	Kunming	21.13	21	P	P	00 14 53.0	+0.5
KMI				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.2						
KMI	Kunming	21.13	21	P	P	00 14 53.0	+0.5
	comp=Z,13nm,1.1s,mb4.2						
KMI				pP		00 15 00.2	
JIRN	Jiri	23.40	341	eP	P	00 15 16.4	+1.5
	comp=Z,21nm,0.6s,mb4.8						
PKI	Pulchoki	23.58	340	eP	P	00 15 16.4	-0.2
	comp=Z,10.0nm,0.6s,mb4.4						
DMN	Daman	23.72	339	eP	P	00 15 16.9	-1.0
	comp=Z,11nm,0.6s,mb4.5						
KKN	Kakani	23.82	340	eP	P	00 15 18.8	-0.1
	comp=Z,7.5nm,0.4s,mb4.5						
GYA	Guiyang	23.95	28	⇓iP	P	00 15 21.3	+1.1
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
GKN	Gorkha	24.24	339	eP	P	00 15 23.2	+0.1
	comp=Z,18nm,0.4s,mb4.8						
LSA	Lhasa	24.30	353	P	P	00 15 25.0	+1.4
LSA	Lhasa	24.30	353	eP	P	00 15 24.9	+1.3
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
LSA	Lhasa	24.30	353	eP	P	00 15 24.9	+1.4
	comp=Z,9.5nm,0.6s,mb4.4						
KOLN	Koldanda	24.43	336	eP	P	00 15 25.9	+1.0
	comp=Z,18nm,0.5s,mb4.8						
OTRP	Odiongan	28.15	74	eP	P	00 15 52.6	-6.9
ENH	Enshi	28.49	28	eP	P	00 16 00.4	-2.1
	comp=Z,7.9nm,0.6s,mb4.5						
XAN	Xi'an	31.48	24	P	P	00 16 26.8	-2.0
XAN				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.7						
GTA	Gaotai	34.15	8	eP	P	00 16 51.6	-0.3
GTA				AP	pP	00 17 06.3	-0.1
GTA				XP	sP	00 17 12.3	-1.2
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
HHC	Hu-ho-hao-te	38.46	21	eP	P	00 17 29.4	+1.2
HHC				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb4.8						
HHC				AMB	AMB		
	comp=Z,169nm,6.3s						
AAK	Ala-Archa	40.99	338	eP	P	00 17 49.4	+0.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
AAK	Ala-Archa	40.99	338	eP	P	00 17 49.4	+0.2
	comp=Z,3.5nm,0.7s,mb4.1						
KAKA	Kakadu	41.93	116	eP	P	00 17 58.3	+1.0
	comp=Z,33nm,1.9s,mb4.6						
MKAR	Makanchi Array	42.47	348	i P	P	00 18 01.6	+0.2
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SONM	Songino Array	43.45	12	P	P	00 18 08.8	-0.6
	comp=Z,2.7nm,0.9s,mb4.0,baz=193,slow=8.9,SNR=27						
SONM				PcP	PcP	00 19 57.8	+0.5
	comp=Z,0.8nm,0.6s,baz=187,slow=3.8,SNR=7.7						
ULN	Ulaanbaatar	43.62	12	eP	P	00 18 08.9	-1.8
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
ULN	Ulaanbaatar	43.62	12	eP	P	00 18 08.9	-1.8
	comp=Z,2.7nm,0.6s,mb4.2						
ZAK	Zakamensk	45.39	8	eP	P	00 18 24.3	-0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.4						
WRA	Warramunga Arr	46.72	124	P	P	00 18 35.9	+0.1
	comp=Z,2.9nm,0.6s,mb4.4,baz=304,slow=9.6,SNR=59						
WRAB	Tennant Creek	46.72	124	eP	P	00 18 35.7	-0.1
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
WRAB	Tennant Creek	46.72	124	eP	P	00 18 35.7	0.0
	comp=Z,6.8nm,0.6s,mb4.8						
WB2	Warramunga Arr	46.73	124	eP	P	00 18 35.8	0.0
CN2	Changchun	46.95	31	eP	P	00 18 34.3	-3.0
KURK	Kurchatov	46.99	346	⇑eP	P	00 18 37.8	+0.4
KURK				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
KURK	Kurchatov	46.99	346	⇑eP	P	00 18 37.8	+0.4
	comp=Z,13nm,0.6s,mb5.0						
ASPA	Alice Springs	48.23	128	eP	P	00 18 48.1	+0.6
ASAR	Alice Springs	48.23	128	P	P	00 18 47.6	+0.1
	comp=Z,2.2nm,0.7s,mb4.3,baz=298,slow=7.9,SNR=36						
ASAR				pP	pP	00 19 03.4	+0.9
	comp=Z,3.1nm,0.6s,baz=302,slow=7.8,SNR=7.0						
ZAL	Zalesovo	48.95	353	P	P	00 18 52.9	+0.2
	comp=Z,5.6nm,0.9s,mb4.6,baz=294,slow=6.1,SNR=26						
ZAL				pP	pP	00 19 06.5	-1.1
	comp=Z,2.6nm,0.5s,baz=305,slow=5.7,SNR=4.5						
NVS	Novosibirsk	50.04	352	i P	P	00 19 00.0	-1.1
BVA0	Borovoye Array	51.33	342	i P	P	00 19 10.4	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
CHKZ	Chkalovo	51.82	342	P	P	00 19 14.6	+0.1
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
BOD	Bodaibo	54.43	13	eP	P	00 19 32.7	-1.1
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
STKA	Stephens Creek	58.30	133	P	P	00 20 01.7	-0.1
	comp=Z,0.9nm,0.5s,mb4.1,baz=357,slow=6.5,SNR=2.8						
BRTR	Keskin Array B	64.17	312	P	P	00 20 40.7	-0.6
	comp=Z,0.7nm,0.7s,mb3.8,baz=136,slow=7.0,SNR=5.6						
BRTR				pP	pP	00 20 56.6	-0.3
	comp=Z,1.8nm,1.0s,baz=135,slow=5.2,SNR=4.1						
AKASG	Malin Array Be	70.17	322	P	P	00 21 18.0	-0.9
	comp=Z,0.9nm,0.5s,mb4.0,baz=90,slow=5.2,SNR=6.1						
AKASG				pP	pP	00 21 33.8	-0.9
	comp=Z,1.1nm,0.7s,baz=92,slow=4.9,SNR=3.3						
MLR	Muntele Rosu	71.05	316	P	P	00 21 24.8	+0.6
	comp=Z,1.2nm,0.6s,mb4.0,baz=190,slow=20,SNR=4.8						
MLR				pP	pP	00 21 40.3	+0.2
	comp=Z,6.5nm,1.2s,baz=40,slow=7.1,SNR=4.1						
FINES	FINESS Array B	74.93	332	P	P	00 21 46.6	-0.1
	comp=Z,2.3nm,0.9s,mb4.1,baz=117,slow=4.3,SNR=7.7						
FINES				pP	pP	00 22 02.9	+0.2
	comp=Z,1.0nm,0.4s,baz=101,slow=5.3,SNR=2.9						
ARCES	ARCESS Array B	77.59	340	P	P	00 22 01.4	-0.2
	comp=Z,1.4nm,0.7s,mb4.0,baz=102,slow=7.3,SNR=7.0						
ARCES				pP	pP	00 22 16.9	-0.7
	comp=Z,1.1nm,0.6s,baz=117,slow=5.4,SNR=1.4						
GERES	GERESS Array B	79.76	319	P	P	00 22 15.3	+1.5
	comp=Z,2.3nm,0.6s,mb4.3,baz=91,slow=5.9,SNR=16						
GERES				pP	pP	00 22 31.8	+1.9
	comp=Z,0.9nm,0.6s,baz=90,slow=5.3,SNR=4.7						
CLL	Collm	80.36	321	P	P	00 22 17.0	0.0
ILAR	Eielson Array	96.88	22	P	P	00 23 36.3	+0.3
	comp=Z,0.3nm,0.6s,mb3.9,baz=313,slow=5.1,SNR=7.1						
INK	Inuvik	99.23	16	eP	P	00 23 46.0	-0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	99.23	16	eP	P	00 23 46.0	-0.6
	comp=Z,1.5nm,0.6s,mb4.7						
ULM	Lac du Bonnet	123.81	8	PKP	PKPdf	00 29 03.9	+1.9
	comp=Z,1.2nm,0.7s,baz=242,slow=1.8,SNR=3.0						
ELK	Elko	126.59	28	PKP	PKPdf	00 29 10.9	+3.3
	comp=Z,0.6nm,0.7s,baz=149,slow=16,SNR=2.3						
PDAR	Pinedale Array	127.31	22	PKP	PKPdf	00 29 11.6	+2.6
	comp=Z,0.6nm,0.6s,baz=88,slow=1.0,SNR=6.4						
ANMO	Albuquerque	135.27	25	PKP	PKPdf	00 29 26.9	+2.7
	comp=Z,0.7nm,0.6s,baz=210,slow=6.9,SNR=3.2						
TXAR	Lajitas Array	141.30	26	PKP	PKPdf	00 29 38.8	+3.4
	comp=Z,0.4nm,0.5s,baz=260,slow=0.8,SNR=6.9						
CPUP	Villa Florida	145.93	229	PKPbc	PKPbc	00 29 47.0	+2.6
	comp=Z,0.0nm,0.4s,baz=226,slow=14,SNR=2.4						

NEIC 22 00:40:56.6,36.06N×22.73E,h93^{km},After ATH.

ATH 22 00:40:57.3,35.93N×22.67E,h44^{km}±3^{km},MD3.6/12,ML3.7

HLW 22 00:41:00.5,35.86N×23.12E,h33^{km},Mb3.9

ISC 22 00:40:55.9±0.9,35.81N±0.07×22.5E±0.1,h59^{km}±24^{km},n18,$\sigma 0\overset{s}{.}72$/20,1C,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	0.62	41	⇑iP	P	00 41 08.2	-1.0
VLI	Veliai	0.96	20	eP	P	00 41 13.7	+0.1
VAM	Vamos	1.41	106	eP	P	00 41 21.5	+1.6
ITM	Ithomi	1.45	340	eP	P	00 41 21.0	+0.6
GVD	Gavdhos	1.60	127	ePn	P	00 41 27.3	+4.9
NAIG	Nisos Aigina	2.08	21	eP	P	00 41 30.0	+0.8
MGER	Gerania Oros	2.24	15	eP	P	00 41 32.0	+0.5
ATH	Athens Observa	2.35	23	eP	P	00 41 33.2	+0.2
PTL	Penteli	2.47	25	eP	P	00 41 34.0	-0.7
MPAR	Parnis Oros	2.52	22	eP	P	00 41 35.0	-0.4
NPS	Neapolis	2.57	101	eP	P	00 41 36.9	+0.8
APE	Apeiranthos	2.72	62	eP	P	00 41 37.0	-1.2
APE	Apeiranthos	2.72	62	eP	P	00 41 37.5	-0.7
VLS	Valsamata	2.83	327	eP	P	00 41 39.6	-0.2
KARP	Karpathos	3.77	93	eP	P	00 41 52.0	-1.0
KARP	Karpathos	3.77	93	eP	P	00 41 53.0	0.0
SWA2		7.00	159	P	P	00 42 37.9	-0.2
SWA2				S	S	00 43 50.5	-6.6
SWA1		7.06	157	P	P	00 42 38.4	-0.5
SWA1				S	S	00 43 52.0	-6.5

UCR 22 00:53:51.0,8.03N×83.24W,MD4.0

CASC 22 00:53:52.6±2.8,8.03N×83.03W,MD4.1,2C-5D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTP1	Petroterminal	0.62	74	⇓iP	Pg	00 53 57.9	-7.0
PTP1				eS	Sg	00 54 01.8	-11
ACR	Cerro Adams	0.63	347	⇑eP	Pg	00 54 05.5	+0.3
ACR				eS	Sg	00 54 16.5	+2.8
DVD	David	0.70	55	⇓iP	Pg	00 54 04.0	-2.5
DVD				eS	Sg	00 54 18.6	+2.8
BRU2	Volcan	0.83	24	⇓eP	Pg	00 54 08.3	-0.8
BRU2				eS	Sg	00 54 23.8	+3.7
CNI	Changuinola	1.47	20	⇓eP	Pn	00 54 18.0	-2.4
BUS	Buena Vista	1.68	334	⇓eP	Pn	00 54 22.8	-0.6
BUS				eS	Sb	00 54 47.0	+1.3
LCR2	La Lucha 2	1.95	330	⇑eP	Pn	00 54 26.8	-0.5
LCR2				eS	Sn	00 54 56.2	+3.2
ICR	Volcan Irazu	2.09	338	eP	Pn	00 54 30.8	+1.4
LAJ	Bijagual	2.12	329	eP	Pn	00 54 29.8	+0.1
SJS	Escuela Geolog	2.15	332	eS	Sn	00 54 59.2	+1.3
PRS1	Puriscal	2.32	327	eP	Pn	00 54 30.8	-1.7
CGA2	Cerro Gallo 2	2.43	324	eP	Pn	00 54 34.0	-0.2
VPS2	Volcan Poas 2	2.45	331	eP	Pn	00 54 35.4	+0.9
TRTC	Tortuguero	2.62	345	eP	Pn	00 54 37.5	+0.7
UPA	Univ. de Panam	3.58	74	eP	Pn	00 54 49.4	-1.1
UPA				eS	Sn	00 55 34.5	+0.3

IDC 22 01:06:37.8±2.2,3.51S×136.07E,mb3.4/2,mb1 3.7/3,mb1mx3.6/10,mbtmp3.4/3,ML3.2/1,Error ellipse: s-maj=153.5km s-min=33.8km az=102.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.42	186	Pn	P	01 10 31.2	-0.2
	0.1nm,0.3s,baz=7.4,slow=12,SNR=4.0						
ASAR	Alice Springs	20.14	186	P	P	01 11 13.1	-3.5
	1.0nm,0.9s,baz=8.2,slow=11,SNR=5.7						
ILAR	Eielson Array	87.65	25	P	P	01 19 28.0	-1.1
	0.3nm,0.6s,baz=254,slow=5.6,SNR=5.8						

MAN 22 01:11:44.9,13.78N×120.88E,h22^{km},mb3.9,ML2.7,MS2.3,1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.33	10	⇓iP	Pb	01 11 54.2	+2.0
TGY				eS	Sb	01 12 01.9	+4.8
LUBP	Lubang	0.61	266	eP	Pb	01 11 56.7	-0.1
LUBP				eS	Sb	01 12 08.6	+3.6
LUBP	Lubang	0.61	266	eP	Pb	01 11 56.2	-0.6
BOAC	Boac	0.99	108	eP	Pb	01 12 02.0	-1.3
BOAC				eS	Sb	01 12 15.3	-0.6
SJMP	San Jose	1.33	170	eP	Pn	01 12 08.1	-0.3
AUQP	San Andres	1.81	104	eP	Pn	01 12 18.2	+3.0

IDC 22 01:15:22.6±1.7,1.55N×67.04E,mb3.7/5,mb1 3.9/5,mb1mx3.7/16,mbtmp3.7/5,Error ellipse: s-maj=62.1km s-min=26.4km az=52.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRTR	Keskin Array B	48.64	326	P	P	01 24 08.2	-2.3
	0.7nm,0.8s,baz=148,slow=12,SNR=5.3						
ZAL	Zalesovo	54.22	13	P	P	01 24 48.9	-3.4
	1.1nm,0.8s,baz=273,slow=8.7,SNR=8.5						
SONM	Songino Array	57.27	31	P	P	01 25 13.3	-1.1
	0.5nm,0.8s,baz=217,slow=6.2,SNR=5.0						
WRA	Warramunga Arr	69.28	112	P	P	01 26 32.3	-1.9
	1.0nm,0.7s,baz=289,slow=5.7,SNR=8.7						
ASAR	Alice Springs	69.55	116	P	P	01 26 33.5	-2.3
	0.5nm,0.6s,baz=278,slow=6.7,SNR=6.1						
TXAR	Lajitas Array	148.03	345	PKPbc	PKPdf	01 35 11.2	+1.7
	0.9nm,0.7s,baz=60,slow=3.4,SNR=12						

NEIC 22 01:16:55.3,18.28N×101.03W,h50^{km},MD3.7(MEX),After MEX.

MEX 22 01:16:55.3±1.4,18.28N×101.06W,h54^{km}±51^{km},MD3.8,1D,Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.77	210	⇓iP	P	01 17 08.2	-2.0
ZIIG				i S	S	01 17 19.5	-1.7
MOIG	Morelia	1.40	355	i P	P	01 17 16.6	-2.4
MOIG				i S	S	01 17 34.4	-2.2
CAIG	El Cayaco	1.44	148	eP	P	01 17 18.7	-0.9
CAIG				i S	S	01 17 33.5	-4.1
CAIG	El Cayaco	1.44	148	eP	P	01 17 18.7	-0.9
CAIG				i S	S	01 17 33.9	-3.6
ACX	Acapulco	1.78	142	i P	P	01 17 25.0	+0.7
ACX	Acapulco	1.78	142	eP	P	01 17 22.0	-2.3
ACX				i S	S	01 17 46.0	+0.3
PPM	Popocatepetl	2.44	71	eP	P	01 17 40.0	+6.3
PPM				i S	S	01 18 10.0	+7.6

NEIC 22 01:25:54.8,34.71S×72.37W,h26^{km},ML2.8(GUC),After GUC.

GUC 22 01:25:54.8±0.7,34.71S×72.37W,h26^{km}±3^{km},MD3.6,ML2.8,1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	1.12	85	⇓iP	Pn	01 26 14.8	-0.1
SFDO				i S	Sb	01 26 29.3	-0.3
LNCH	Linares	1.29	151	eP	Pn	01 26 16.8	-0.6
LNCH				i S	Sn	01 26 34.1	+0.1

LNCH				AMP		01 26 41.2	
	comp=N,216nm,0.7s						
LCCH	**Las Cruces**	**1.40**	**28**	*e*P	Pn	01 26 17.9	-1.1
LCCH				*i* S	Sn	01 26 37.2	+0.5
CACH	**El Canelo**	**1.58**	**68**	*e*P	Pn	01 26 22.2	+0.7
CACH				*i* S	Sn	01 26 43.0	+1.8
CHCH	**Chadas Angostu**	**1.62**	**62**	*e*P	Pn	01 26 22.7	+0.6
CHCH				*i* S	Sn	01 26 43.7	+1.4
RCDM	**Rinconada Maip**	**1.78**	**47**	*e*P	Pn	01 26 24.5	+0.1
RCDM				*i* S	Sn	01 26 47.2	+0.8
LMEL	**Las Melosas**	**1.99**	**65**	*e*P	Pn	01 26 28.7	+1.3
LMEL				*i* S	Sn	01 26 54.0	+2.3
LMEL				AMP		01 26 56.2	
	comp=N,237nm,0.1s						
CLCH	**Cerro Calan**	**2.01**	**50**	*e*P	Pn	01 26 29.1	+1.4
CLCH				*i* S	Sn	01 26 54.7	+2.5
CLCH				AMP		01 27 06.4	
	comp=N,120nm,0.4s						
FCH	**Farellones**	**2.21**	**52**	*e*P	Pn	01 26 31.6	+1.0
FCH				*i* S	Sn	01 26 59.6	+2.3
FCH				AMP		01 27 07.9	
	comp=E,71nm,0.3s						

IDC 22 01:26:58.4±14.0,19.29N×145.47E,h344^{km}±156^{km}, mb2.8/6,mb1 3.0/6,mb1mx2.9/19,mbtmp3.5/6,Error ellipse: s-maj=48.9km s-min=22.4km az=89.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.49**	**196**	P	P	01 34 04.9	-1.4
	0.6nm,0.7s,baz=12,slow=8.8,SNR=15						
SONM	**Songino Array**	**42.55**	**321**	P	P	01 34 21.4	-1.3
	0.1nm,0.5s,baz=136,slow=4.8,SNR=3.6						
ASAR	**Alice Springs**	**44.16**	**195**	P	P	01 34 34.2	-1.7
	0.3nm,0.6s,baz=19,slow=7.4,SNR=3.0						
ILAR	**Eielson Array**	**63.21**	**26**	P	P	01 36 50.5	-1.7
	0.5nm,0.9s,baz=264,slow=5.6,SNR=5.5						
YKA	**Yellowknife Ar**	**77.57**	**28**	P	P	01 38 16.8	-1.3
	0.3nm,0.5s,baz=292,slow=5.7,SNR=4.3						
FINES	**FINESS Array B**	**86.26**	**335**	P	P	01 39 01.6	-0.9
	0.3nm,0.5s,baz=72,slow=6.0,SNR=5.7						

JMA 22 01:38:47.8±0.4,43.93N×147.86E,M3.8,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.64**	**251**	P	Pn	01 39 18.1	+0.1
NEM2				*e*S	Sb	01 39 39.9	+0.2
JRA	**Rausu**	**1.98**	**271**	P	Pn	01 39 23.3	+0.4
JNK	**Nakash**	**2.30**	**262**	P	Pn	01 39 27.8	+0.3
JNK				*e*S	Sn	01 39 56.6	-0.4
JAK	**Akkeshi**	**2.48**	**249**	P	Pn	01 39 30.4	+0.2
JAK				*e*S	Sn	01 40 01.5	-0.1
JOB	**Onbets**	**3.11**	**252**	*e*S	Sn	01 40 17.0	-0.4

IDC 22 01:44:17.4±11.0,17.77N×144.52E,h469^{km}±139^{km}, mb3.0/8,mb1 3.2/8,mb1mx3.1/18,mbtmp3.9/8,Error ellipse: s-maj=66.4km s-min=18.4km az=73.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.79**	**195**	P	P	01 51 00.6	-1.3
	1.5nm,1.0s,baz=22,slow=8.3,SNR=13						
ASAR	**Alice Springs**	**42.47**	**194**	P	P	01 51 31.6	0.0
	1.1nm,1.1s,baz=18,slow=8.8,SNR=6.7						
SONM	**Songino Array**	**43.18**	**323**	P	P	01 51 34.7	-2.2
	0.4nm,0.6s,baz=132,slow=8.6,SNR=4.0						
STKA	**Stephens Creek**	**49.44**	**183**	P	P	01 52 22.0	-3.3
	1.5nm,0.5s,baz=348,slow=11,SNR=5.1						
ZAL	**Zalesovo**	**58.08**	**323**	P	P	01 53 25.1	-1.2
	0.5nm,0.6s,baz=298,slow=9.5,SNR=2.8						
YKA	**Yellowknife Ar**	**79.33**	**28**	P	P	01 55 33.8	-0.4
	0.4nm,0.8s,baz=288,slow=4.4,SNR=5.6						
ARCES	**ARCESS Array B**	**83.02**	**342**	P	P	01 55 51.8	-1.2
	3.8nm,0.8s,baz=37,slow=6.1,SNR=5.5						
FINES	**FINESS Array B**	**87.25**	**335**	P	P	01 56 12.8	-0.9
	0.8nm,0.6s,baz=63,slow=4.3,SNR=5.3						

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*NEIC **22** 01:50:06.4±1.4,40.43N×126.12W,h10^{km},mb3.6/4,Error ellipse: s-maj=16.9km s-min=5.4km az=69.0*

*IDC **22** 01:50:10.1±2.0,40.71N×125.60W,mb3.2/3,mb1 3.6/9, mb1mx3.4/26,mbtmp3.3/9,ML3.5/4,Error ellipse: s-maj=21.5km s-min=15.4km az=64.0*

ISC 22 01:50:04.5±1.6,40.43N±0.06×126.2W±0.2,h10^{km},n55, σ0^{s}80/56,mb3.4/6,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	**Horse Mountain**	**1.90**	**76**	*e*P	**Pn**	**01 50 36.5**	**-0.8**
KBO	**Bosley Butte**	**2.30**	**39**	*e*P	**Pn**	**01 50 42.1**	**-0.9**
WDC	**Whiskeytown Da**	**2.76**	**86**	*e*P	**Pn**	**01 50 48.9**	**-0.8**
KEBM	**Edson Butte**	**2.79**	**29**	*e*P	**Pn**	**01 50 48.8**	**-1.3**
YBH	**Yreka Blue Hor**	**2.91**	**62**	Pn	**Pn**	**01 50 52.1**	**+0.3**
	14nm,0.3s,baz=264,slow=9.8,SNR=123						
YBH				Lg		01 51 25.4	
	6.5nm,0.3s,baz=115,slow=17,SNR=3.7						
YBH	**Yreka Blue Hor**	**2.91**	**62**	*e*P	**Pn**	**01 50 51.4**	**-0.4**
LAMM	**Antelope Mount**	**2.92**	**65**	P	**Pn**	**01 50 51.9**	**0.0**
LHEM	**Herd Peak**	**3.21**	**67**	P	**Pn**	**01 50 56.9**	**+0.9**
HUMO	**Hull Mountain**	**3.24**	**47**	*e*P	**Pn**	**01 50 56.1**	**-0.4**
DBO	**Dodson Butte**	**3.46**	**38**	P	**Pn**	**01 50 59.6**	**0.0**
BUOR	**Burton Butte**	**3.47**	**57**	P	**Pn**	**01 51 01.5**	**+1.7**
BBOR	**Butler Butte**	**3.58**	**46**	P	**Pn**	**01 51 02.0**	**+0.8**
LTIM	**Timbered Crate**	**3.62**	**77**	P	**Pn**	**01 51 02.3**	**+0.4**
LASM	**Arnica Sink**	**3.66**	**70**	P	**Pn**	**01 51 03.0**	**+0.6**
LBCM	**Butte Creek Ri**	**3.68**	**82**	P	**Pn**	**01 51 03.1**	**+0.4**
OHCM	**Honcut**	**3.76**	**105**	*e*P	**Pn**	**01 51 03.0**	**-0.8**
HOG	**Hogback Mounta**	**3.81**	**60**	P	**Pn**	**01 51 05.4**	**+0.8**
HSO	**Harness Mounta**	**3.84**	**35**	P	**Pn**	**01 51 05.0**	**-0.1**
HBO	**Huckleberry Mo**	**4.45**	**39**	P	**Pn**	**01 51 14.2**	**+0.6**
IRO	**Indian Ridge**	**4.60**	**38**	P	**Pn**	**01 51 16.1**	**+0.3**
MOD	**Modoc**	**4.66**	**70**	*e*P	**Pn**	**01 51 15.6**	**-1.0**
BROR	**Big Rock Looko**	**4.71**	**34**	P	**Pn**	**01 51 17.5**	**+0.1**
FRIS	**Frissel Point**	**4.83**	**37**	P	**Pn**	**01 51 19.3**	**+0.2**
NCOR	**Newberry Crate**	**4.96**	**47**	P	**Pn**	**01 51 21.5**	**+0.6**
WCN	**Washoe City**	**5.05**	**101**	*e*P	**Pn**	**01 51 22.1**	**-0.1**
CMB	**Columbia Colle**	**5.08**	**116**	*e*P	**Pn**	**01 51 23.1**	**+0.5**
BKCOR	**Black Crater**	**5.08**	**39**	P	**Pn**	**01 51 22.7**	**+0.1**
PINOR	**Pine Mountain**	**5.18**	**48**	P	**Pn**	**01 51 24.6**	**+0.6**
BPO	**Bald Peter**	**5.35**	**37**	P	**Pn**	**01 51 26.4**	**0.0**
VIPM	**Ingram Point**	**5.78**	**43**	P	**Pn**	**01 51 32.5**	**+0.1**
VFP	**Flag Point**	**5.97**	**34**	P	**Pn**	**01 51 35.7**	**+0.5**
WVOR	**Wild Horse Val**	**6.00**	**68**	*e*P	**Pn**	**01 51 33.7**	**-1.8**
OMM	**Old Mammoth Mi**	**6.25**	**114**	P	**Pn**	**01 51 37.2**	**-1.8**
NVAR	**Mina Array Bea**	**6.40**	**106**	Pn	**Pn**	**01 51 41.6**	**+0.4**
	1.3nm,0.3s,baz=285,slow=14,SNR=21						
NVAR				Sn	**Sn**	**01 52 49.5**	**-5.7**
	baz=285,slow=18,SNR=2.1						
NVAR				Lg		01 53 13.6	
	0.1nm,0.3s,baz=306,slow=26,SNR=3.4						
BMW	**Boistfort Moun**	**6.40**	**18**	P	**Pn**	**01 51 40.9**	**-0.3**
MTUM	**Tungsten Hills**	**6.67**	**115**	P	**Pn**	**01 51 44.9**	**-0.1**
WPW	**White Pass**	**7.10**	**27**	P	**Pn**	**01 51 51.1**	**0.0**
BMO	**Blue Mountains**	**7.88**	**53**	*e*P	**Pn**	**01 52 01.6**	**-0.3**
ELK	**Elko**	**8.32**	**84**	Pn	**P**	**01 52 08.4**	**+0.3**
	0.1nm,0.3s,baz=260,slow=11,SNR=3.7						
NEW	**Newport**	**10.15**	**37**	Pn	**P**	**01 52 32.6**	**-0.7**
	baz=102,slow=9.0,SNR=2.6						
MCMT	**McKenzie Canyo**	**10.74**	**62**	*e*P	**P**	**01 52 40.3**	**-1.1**
MSO	**Missoula**	**10.91**	**50**	*e*P	**P**	**01 52 43.4**	**-0.4**
CHMT	**Chamberlain Mo**	**11.36**	**51**	*e*P	**P**	**01 52 49.2**	**-0.7**
PDAR	**Pinedale Array**	**12.64**	**74**	Pn	**P**	**01 53 09.8**	**+2.6**
	0.0nm,0.3s,baz=279,slow=12,SNR=2.6						
SDCO	**Great Sand Dun**	**16.26**	**93**	*e*P	**P**	**01 53 54.9**	**+0.4**
	2.7nm,1.2s						
ANMO	**Albuquerque**	**16.51**	**103**	Pn	**P**	**01 54 03.3**	**+5.6**
	baz=309,slow=13,SNR=4.3						
MNTX	**Cornudas Mount**	**18.89**	**111**	P	**P**	**01 54 27.3**	**-0.1**
TXAR	**Lajitas Array**	**21.46**	**114**	P	**P**	**01 54 58.0**	**+2.9**
	0.8nm,1.1s,mb3.0,baz=299,slow=11,SNR=4.0						
TXAR	**Lajitas Array**	**21.46**	**114**	P	**P**	**01 54 58.0**	**+2.9**
FFC	**Flin Flon**	**21.54**	**40**	*e*P	**P**	**01 54 54.9**	**-0.8**
	5.9nm,0.7s,mb4.1						
WMOK	**Wichita Mounta**	**22.38**	**96**	*e*P	**P**	**01 55 04.1**	**-0.2**
	0.9nm,0.6s,mb3.4						
YKA	**Yellowknife Ar**	**23.16**	**14**	P	**P**	**01 55 12.1**	**+0.5**
	0.1nm,0.5s,mb2.5,baz=197,slow=11,SNR=4.4						
ULM	**Lac du Bonnet**	**23.29**	**55**	P	**P**	**01 55 14.1**	**+1.0**
	1.6nm,0.6s,mb3.6,baz=265,slow=11,SNR=6.4						
CCM	**Cathedral Cave**	**27.04**	**84**	P	**P**	**01 55 48.6**	**-0.1**
FCC	**Fort Churchill**	**27.32**	**37**	*e*P	**P**	**01 55 50.5**	**-0.6**
	1.3nm,0.6s,mb3.6						

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*NNC **22** 02:25:19.5±6.0,30.93N×55.97E,Error ellipse: s-maj=116.4km s-min=60.1km az=141.0*

*MOS **22** 02:25:20.6±1.2,30.74N×56.75E,h10^{km},mb6.3/107, MS6.3/64,Error ellipse: s-maj=5.2km s-min=2.3km az=134.0*

*IDC **22** 02:25:20.9±0.3,30.72N×56.91E,mb5.7/33,mb1 5.7/35, mb1mx5.7/36,mbtmp5.7/35,ML4.5/1,MS6.3/27,Ms1 6.3/27, ms1mx6.2/32,Error ellipse: s-maj=8.9km s-min=6.9km az=19.0*

*DHMR **22** 02:25:20.5±3.1,30.78N×56.80E,h10^{km}±54^{km},mb6.0*

*OMAN **22** 02:25:20.0,31.10N×56.03E,h30^{km},Error ellipse: s-maj=66.6km s-min=51.0km az=314.0*

*BJI **22** 02:25:21.0,30.72N×56.56E,h26^{km},mB6.8,mb5.7,Ms6.7, Msz6.4*

*THR **22** 02:25:21.8±0.9,30.80N×56.76E,h14^{km}±8^{km},MS6.4*

*NEIC **22** 02:25:22.9±0.2,30.75N×56.82E,h14^{km},mb6.0/220, ME6.2,MS6.5/123,MW6.3,MN6.2(TEH),Error ellipse: s-maj=4.7km s-min=2.3km az=193.0 Broadband fault plane solution: P waves. NP1:ϕ_s265°,δ65°,λ90°. NP2: ϕ_s85°,δ25°,λ90°. Principal axes: T Plg70°, Azm175°; N Plg0°, Azm0°; P Plg20°, Azm355°; Moment Tensor Solution. s30 Moment tensor: Scale 10^{18} Nm; M_{rr}2.42; $M_{\theta\theta}$-2.79; $M_{\phi\phi}$0.36; $M_{r\theta}$0.09; $M_{\theta\phi}$-0.77; $M_{\phi r}$1.11; Best double couple: $M_0$3×10^{18} NP1:ϕ_s279°,δ46°,λ124°. NP2: ϕ_s55°,δ53°,λ60°. Principal axes: T 2.92, Plg66°, Azm264°; N .07, Plg24°, Azm74°; P -2.99, Plg4°, Azm166°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 612 people killed and 1,411 injured in Kerman Province. An estimated 8,000 homes damaged or destroyed in the Zarand area.

*PDA **22** 02:25:22.7,30.74N×56.83E,h14^{km},mb6.0*

*HRVD **22** 02:25:22.8±0.1,30.76N×56.81E,h12^{km},MW6.4/81, Centroid moment Tensor Solution. LP body waves: s80,c194;Mantle waves: s81,c319; Half duration: 3^{s}9 Moment tensor: Scale 10^{18}Nm; M_{rr}4.35±.03; $M_{\theta\theta}$-5.68±.03; $M_{\phi\phi}$1.34±.03; $M_{r\theta}$-0.38±.08; $M_{\theta\phi}$-1.47±.03; $M_{\phi r}$0.30±.08; Best double couple: $M_0$5.197×10^{18} NP1: ϕ_s71°,δ44°,λ79°. NP2:ϕ_s266°,δ47°,λ100°. Principal axes: T 4.409, Plg82°, Azm246°; N 1.586, Plg8°, Azm79°; P -5.985, Plg2°, Azm349°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*CSEM **22** 02:25:22.2±0.0,30.79N×56.78E,h17^{km},mb5.9/99,Ms6.4, Mw6.4 Error ellipse: s-maj=1.6km s-min=1.2km az=27.0*

*BGS **22** 02:25:23.2,30.74N×56.83E,h15^{km},mb5.7*

*IPEC **22** 02:25:23.9±2.8,30.82N×56.80E,h13^{km}±20^{km},Error ellipse: s-maj=41.6km s-min=19.9km az=1.0*

*TEH **22** 02:25:24.0,30.81N×56.86E,h10^{km},Mn6.2*

*SFS **22** 02:25:26.0,30.75N×56.80E,h42^{km}*

ISC 22 02:25:21.4±0.4,30.77N±0.02×56.81E±0.01,h13^{km}±2^{km}, h17^{km}±1.3^{km}:pP-P,n1389,σ1^{s}25/1454,mb5.9/300, MS6.4/185,171C-53D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.79**	**183**	*e*Pg	**Pg**	**02 25 36.8**	**-0.5**
KRBR	**Kerman**	**0.79**	**183**	*i* PG	**Pg**	**02 25 36.9**	**-0.4**
KRBR	**Kerman**	**0.79**	**183**	*i* Pg	**Pg**	**02 25 36.8**	**-0.5**
	SNR=90						
IBAF	**Bafgh**	**1.34**	**308**	Pn	**Pn**	**02 25 46.8**	**+0.9**
IMEH	**Mehriz**	**1.98**	**289**	Pn	**Pn**	**02 25 56.0**	**+0.9**
ICHK	**Chekchek**	**2.52**	**306**	Pn	**Pn**	**02 26 02.8**	**0.0**
BNDS	**Bandar-Abbas**	**3.40**	**190**	*e*PN	**Pn**	**02 26 17.7**	**+2.3**
ZHSF	**Zahedan**	**3.62**	**108**	*e*Pn	**Pn**	**02 26 20.3**	**+1.8**
ZHSF				*e*Sg	**Sg**	**02 27 17.3**	**-4.8**
ZHSF	**Zahedan**	**3.62**	**108**	*i* PN	**Pn**	**02 26 20.3**	**+1.8**
ZHSF	**Zahedan**	**3.62**	**108**	*i* Pn	**Pn**	**02 26 20.3**	**+1.8**
	SNR=52						
ZHSF				*e*Sg	**Sg**	**02 27 17.3**	**-4.8**
SHI	**Shiraz**	**3.88**	**254**	Pn	**Pn**	**02 26 24.4**	**+2.3**
SHI	**Shiraz**	**3.88**	**254**	Pn	**Pn**	**02 26 24.4**	**+2.3**
SHI	**Shiraz**	**3.88**	**254**	P	**Pn**	**02 26 12.0**	**-10**
IMOK	**Mook**	**3.95**	**245**	Pn	**Pn**	**02 26 24.5**	**+1.5**
NASN	**Na'in**	**3.96**	**302**	*e*Pn	**Pn**	**02 26 24.5**	**+1.2**
NASN	**Na'in**	**3.96**	**302**	*e*PN	**Pn**	**02 26 23.7**	**+0.5**
NASN				*e*SG	**Sb**	**02 27 23.1**	**+4.2**
GHIR	**Ghir-Karzin**	**4.15**	**234**	*e*PN	**Pn**	**02 26 26.3**	**+0.3**
GHIR				*e*SG	**Sb**	**02 27 30.1**	**+5.8**
BANOM	**Banah**	**4.85**	**185**	⇑P	**Pn**	**02 26 38.4**	**+2.5**
	SNR=297						
BANOM				⇓S	**Sn**	**02 27 35.1**	**+2.6**
IANJ	**Anjiloo**	**5.28**	**333**	Pn	**Pn**	**02 26 41.2**	**-0.7**
ILAS	**Lasjerd**	**5.62**	**326**	Pn	**Pn**	**02 26 48.8**	**+2.1**
IMOG	**Moghan**	**5.73**	**21**	Pn	**Pn**	**02 26 49.3**	**+1.0**
IFIR	**Firoozkooh**	**5.93**	**326**	Pn	**Pn**	**02 26 50.4**	**-0.7**
IFIR				Sn	**Sn**	**02 27 55.1**	**-4.5**
IVRN	**Varamin**	**6.00**	**316**	Pn	**Pn**	**02 26 52.3**	**+0.2**
ASHO	**Ashiyiah**	**6.10**	**186**	*i* P	**Pb**	**02 27 09.0**	**+1.7**
ASHO	**Ashiyiah**	**6.10**	**186**	⇓P	**Pn**	**02 26 55.8**	**+2.3**
	SNR=193						
IDMV	**Damavand**	**6.25**	**321**	Pn	**Pn**	**02 26 55.3**	**-0.3**
IQOM	**Qom**	**6.31**	**312**	Pn	**Pn**	**02 26 53.8**	**-2.7**
DAMV	**Damavand**	**6.32**	**321**	*e*PN	**Pn**	**02 26 56.4**	**-0.2**
IAFJ	**Afjeh**	**6.62**	**321**	Pn	**Pn**	**02 27 01.7**	**+0.8**
IAFJ				Sn	**Sn**	**02 28 11.7**	**-5.3**
ASAO	**Ashtian**	**6.85**	**305**	*e*Pn	**Pn**	**02 27 05.0**	**+0.9**
ASAO	**Ashtian**	**6.85**	**305**	*e*PN	**Pn**	**02 27 04.1**	**+0.1**
SHGR	**Shooshtar-Gavs**	**6.97**	**283**	*e*PN	**Pn**	**02 27 05.0**	**-0.8**
SHGR	**Shooshtar-Gavs**	**6.97**	**283**	*e*Pn	**Pn**	**02 27 04.9**	**-0.9**
	SNR=52						
IMHD	**Mahdasht**	**7.10**	**315**	Pn	**Pn**	**02 27 07.1**	**-0.5**
IMHD				Sn	**Sn**	**02 28 23.1**	**-5.9**
HOQ	**Hoqain**	**7.17**	**176**	⇑P	**Pn**	**02 27 08.3**	**-0.3**
	SNR=56						
BIDO	**Bidbid**	**7.32**	**170**	⇑P	**Pn**	**02 27 10.6**	**-0.1**
	SNR=83						
IRAZ	**Razeghan**	**7.39**	**311**	Pn	**Pn**	**02 27 10.9**	**-0.8**
IRAZ				Sn	**Sn**	**02 28 30.6**	**-5.6**
ARQ	**Araqi**	**7.41**	**182**	⇑P	**Pn**	**02 27 12.9**	**+1.0**
	SNR=214						
SMDO	**Samad**	**7.76**	**171**	⇑P	**Pn**	**02 27 17.3**	**+0.5**
	SNR=160						
QRN	**Al-Qurain**	**7.99**	**258**	*e*P	**Pn**	**02 27 19.3**	**-0.7**
BSY	**Bisya**	**8.00**	**177**	⇓P	**P**	**02 27 22.0**	**+1.8**
	SNR=451						
BSYO	**Bisya**	**8.02**	**177**	P	**P**	**02 27 22.0**	**+1.6**
	SNR=451						
RDF	**Al-Radifah**	**8.25**	**259**	*e*P	**P**	**02 27 23.7**	**+0.1**
WBK	**Wadi Bani Khal**	**8.35**	**166**	⇑P	**P**	**02 27 24.6**	**-0.5**
	SNR=201						
NAY	**Al-Naaiem**	**8.43**	**262**	*e*P	**P**	**02 27 26.2**	**0.0**
NAY				*e*S	**Sn**	**02 29 01.7**	**-0.5**
JMDO	**Jabal Madar**	**8.45**	**172**	⇑P	**P**	**02 27 26.9**	**+0.5**
	SNR=183						
IKOM	**Komasi**	**8.55**	**296**	Pn	**P**	**02 27 27.0**	**-0.9**
RST	**Umm Al-Ruwaisa**	**8.59**	**264**	*e*P	**P**	**02 27 28.4**	**0.0**
SNGE	**Sanandaj**	**9.04**	**301**	*e*Pn	**P**	**02 27 37.2**	**+2.6**
SNGE	**Sanandaj**	**9.04**	**301**	*e*PN	**P**	**02 27 34.7**	**0.0**
IVIS	**Veys**	**9.19**	**297**	Pn	**P**	**02 27 35.6**	**-1.1**
IGHG	**Ghaleghazi**	**9.34**	**295**	Pn	**P**	**02 27 37.7**	**-1.1**
IGHG	**Ghaleghazi**	**9.34**	**295**	Pn	**P**	**02 27 37.7**	**-1.1**
BHD	**Baghdad**	**10.84**	**287**	*i* P	**P**	**02 27 57.0**	**-2.4**
BHD				*i* S	S	02 29 35.0	-27
GRMI	**Germi**	**10.86**	**320**	*e*P	**P**	**02 27 57.3**	**-2.3**
GRMI	**Germi**	**10.86**	**320**	*e*PN	**P**	**02 27 58.5**	**-1.1**
GRMI	**Germi**	**10.86**	**320**	*e*Pn	**P**	**02 27 58.5**	**-1.1**
	SNR=52						
DRP	**Derazinda**	**11.51**	**82**	⇓P	**P**	**02 28 12.7**	**+4.2**
RAYN	**Ar Rayn**	**12.38**	**237**	Pn	**P**	**02 28 15.1**	**-5.2**
	3μm,0.6s						
RAYN	**Ar Rayn**	**12.38**	**237**	Pn	**P**	**02 28 15.1**	**-5.2**
MSL	**Mosul**	**12.70**	**299**	*e*P	**P**	**02 28 23.0**	**-1.5**
MSL				*i* pP		02 28 35.0	
MSL				*i* sP		02 28 44.5	
MSL				*e*S	**S**	**02 30 31.5**	**-15**
MSL				*e*LQ		02 31 09.5	
MSL				*e*LR1		02 31 28.5	
MSL				*e*LQ2		02 32 17.0	
MSL				*e*LR2		02 32 59.0	
HKR	**Hakkari**	**12.77**	**306**	P	**P**	**02 28 27.1**	**+1.7**
HKR	**Hakkari**	**12.77**	**306**	*e*P	**P**	**02 28 27.0**	**+1.6**
THW	**Thamme Wali**	**12.87**	**77**	⇑P	**P**	**02 28 25.5**	**-1.3**
JASL	**Jaisalmer**	**12.94**	**104**	*e*P	**P**	**02 28 27.3**	**-0.4**
JASL				*e*		02 28 32.6	
WHFO	**Wadi Hawf**	**13.09**	**193**	⇑P	**P**	**02 28 26.5**	**-3.2**
	SNR=76						
WHFO				⇓S	**S**	**02 30 53.7**	**-2.5**
MAKU	**Maku**	**13.10**	**314**	*e*PN	**P**	**02 28 30.3**	**+0.4**
MAKU				AMS	AMS	02 34 23.1	
	comp=Z,314μm,17.1s						
CEP	**Cherat**	**13.13**	**73**	⇑P	**P**	**02 28 31.1**	**+0.8**
RBK	**Rabkut**	**13.42**	**191**	⇑P	**P**	**02 28 30.5**	**-3.6**
	SNR=29						
VANT	**Van**	**13.44**	**308**	P	**P**	**02 28 42.0**	**+7.7**
TVAN	**Van**	**13.47**	**309**	*i* P	**P**	**02 28 39.8**	**+5.1**
GNI	**Garni**	**13.56**	**317**	P	**P**	**02 28 40.3**	**+4.4**
GNI	**Garni**	**13.56**	**317**	Pn	**P**	**02 28 37.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=144,slow=6.1,SNR=7.1						
GNI				Lg		02 32 31.6	
	comp=Z,0.4nm,0.3s,baz=6.5,slow=23,SNR=1.8						
GNI				LR	LR	02 34 43.5	
	comp=Z,208μm,18.6s,baz=126,slow=41						
SARP	**Sargodha**	**13.61**	**81**	⇑P	**P**	**02 28 39.1**	**+2.5**
BHJ	**Bhuj**	**13.67**	**120**	⇑*e*P	**P**	**02 28 35.6**	**-1.9**
BHJ				*e*		02 31 43.4	
ABTO	**Aybut**	**13.73**	**194**	⇑P	**P**	**02 28 35.0**	**-3.3**
	SNR=579						
MAK	**Makhachkala**	**14.25**	**331**	*c i*P	**P**	**02 28 45.0**	**0.0**
MAK				*i* S	**S**	**02 31 25.0**	**+1.2**
MAK				pmax	pmax		
	comp=N,390nm,2.0s						
MAK				pmax	pmax		
	comp=E,624nm,2.0s						
MAK				pmax	pmax		
	comp=Z,2μm,2.0s						
MAK				pmax	pmax		
	comp=Z,10μm,4.0s						
MAK				pmax	pmax		
	comp=N,4μm,2.0s						
MAK				pmax	pmax		
	comp=E,5μm,2.0s						
MAK				pmax	pmax		
	comp=N,12μm,6.0s						
MAK				pmax	pmax		
	comp=E,19μm,6.0s						
MAK				pmax	pmax		
	comp=Z,28μm,6.0s						
MAK				smax			
	comp=N,6μm,7.0s						
MAK				smax			
	comp=E,4μm,3.0s						
MAK	**Makhachkala**	**14.25**	**331**	⇑*i*P	**P**	**02 28 45.0**	**0.0**
	comp=E,2μm,2.0s						
MAK				*i* S	**S**	**02 31 25.0**	**+1.2**
STE	**Stepanavan**	**14.31**	**319**	*i* P	**P**	**02 28 46.0**	**+0.2**
STE				*e*		02 31 27.0	
LEN	**Leninakan**	**14.48**	**317**	*i* P	**P**	**02 28 48.0**	**0.0**
LEN				*i* S	**S**	**02 31 30.0**	**+0.8**
MTA	**Mtatsminda**	**14.57**	**322**	P	**P**	**02 28 49.0**	**-0.2**
MTA				S	rx	02 32 30.0	
TAS	**Tashkent**	**14.58**	**40**	⇑*e*P	**P**	**02 28 46.0**	**-3.2**
TAS				pmax	pmax		
	comp=Z,20μm,6.0s						
TI2	**Plekhanov**	**14.62**	**322**	⇑*i*P	**P**	**02 28 51.6**	**+1.8**
TI2				pmax	pmax		
	comp=Z,110nm,1.5s						
TI2	**Plekhanov**	**14.62**	**322**	⇑*i*P	**P**	**02 28 51.6**	**+1.8**
	comp=Z,110nm,1.5s						
TBLG	**Delisi**	**14.63**	**322**	⇑*i*P	**P**	**02 28 51.6**	**+1.7**
	comp=Z,110nm,1.5s						
BTMT	**Batman**	**14.63**	**305**	P	**P**	**02 28 50.7**	**+0.7**
BEST	**Besiri**	**14.66**	**303**	*i* P	**P**	**02 28 51.6**	**+1.2**
KARS	**Kars**	**14.84**	**315**	P	**P**	**02 28 58.7**	**+6.1**
KBSD	**Kabsdagh**	**14.86**	**299**	⇑*i*P	**P**	**02 28 51.1**	**-1.9**
DUS	**Dusheti**	**14.90**	**323**	P	**P**	**02 28 54.6**	**+1.1**
SFNV	**Sufian**	**15.01**	**296**	⇑*i*P	**P**	**02 28 53.3**	**-1.6**
VRT	**Varto**	**15.04**	**308**	P	**P**	**02 28 58.9**	**+3.6**
DIY	**Diyarbakir**	**15.42**	**302**	P	**P**	**02 29 01.9**	**+1.6**
ERZM	**Erzurum**	**15.53**	**310**	*i* P	**P**	**02 29 05.0**	**+3.2**
EZM	**Erzurum**	**15.54**	**310**	P	**P**	**02 29 07.8**	**+6.1**
BINT	**Bingol**	**15.64**	**306**	P	**P**	**02 29 08.2**	**+5.2**
ONI	**Oni**	**15.90**	**321**	P	**P**	**02 29 06.1**	**-0.4**
THN	**Thein Dam**	**16.20**	**79**	*e*P	**P**	**02 29 10.5**	**+0.2**
BCA	**Borcka**	**16.23**	**315**	P	**P**	**02 29 13.3**	**+2.7**
AJM	**Ajmer**	**16.23**	**101**	⇑*i*P	**P**	**02 29 10.0**	**-0.8**
URFA	**Urfa**	**16.30**	**299**	P	**P**	**02 29 13.6**	**+1.9**
PONG	**Pong**	**16.40**	**81**	*e*P	**P**	**02 29 14.0**	**+1.1**
PONG				*e*		02 32 34.0	
DLH	**Dalhousie**	**16.41**	**79**	*e*P	**P**	**02 29 16.0**	**+2.9**
DLH				*e*		02 29 22.0	
PTK	**Pertek**	**16.42**	**304**	*e*P	**P**	**02 29 14.3**	**+1.2**
EZC	**Erzincan**	**16.50**	**307**	P	**P**	**02 29 22.1**	**+8.0**
ELZG	**Elazig**	**16.55**	**303**	*i* P	**P**	**02 29 16.7**	**+1.9**
KHET	**Khetri**	**16.77**	**94**	*e*P	**P**	**02 29 17.5**	**-0.2**
KHET				*e*		02 29 34.7	
	comp=Z,1μm,1.6s						
BHK	**Bhakra**	**16.81**	**83**	*e*P	**P**	**02 29 17.4**	**-0.7**
BHK				*e*		02 32 33.8	
ROOS	**tl_alroos**	**16.82**	**287**	⇑*i*P	**P**	**02 29 17.1**	**-1.0**
MALT	**Malatya**	**16.89**	**301**	P	**P**	**02 29 20.6**	**+1.5**
MALT	**Malatya**	**16.89**	**301**	⇑*e*P	**P**	**02 29 20.9**	**+1.8**
MALT				pmax	pmax		
	comp=Z,500nm,1.0s						
MALT	**Malatya**	**16.89**	**301**	⇓P	**P**	**02 29 22.8**	**+3.7**
MYA	**Malataya**	**16.90**	**301**	*e*P	**P**	**02 29 18.9**	**-0.2**
ASF	**Jabal al Asfar**	**17.05**	**280**	P	**P**	**02 29 18.7**	**-2.3**
	comp=Z,5.0nm,0.3s,baz=307,slow=9.0,SNR=65						
ASF				S	**S**	**02 32 44.3**	**+15**
	comp=Z,2.2nm,0.3s,baz=62,slow=17,SNR=2.3						
ASF				LR	LR	02 37 08.3	
	comp=Z,140μm,19.8s,baz=138,slow=41						
GUMT	**Gumushane**	**17.06**	**309**	*e*P	**P**	**02 29 28.4**	**+7.3**
RTK	**Rohtak**	**17.09**	**91**	*e*P	**P**	**02 29 21.9**	**+0.3**
RTK				*e*		02 29 30.8	
	comp=Z,2μm,1.3s						
GZT	**Gaziantep**	**17.23**	**298**	*i* P	**P**	**02 29 23.8**	**+0.4**
KIV	**Kislovodsk**	**17.26**	**324**	P	**P**	**02 29 24.6**	**+0.9**
	comp=Z,5μm,1.1s						
KIV	**Kislovodsk**	**17.26**	**324**	*d i*P	**P**	**02 29 24.3**	**+0.6**
KIV				*e*S	**S**	**02 32 41.8**	**+7.7**
KIV				pmax	pmax		
	comp=Z,1μm,1.3s						
KIV				MLR	MLR		
	comp=Z,67μm,16.0s						
KIV	**Kislovodsk**	**17.26**	**324**	*i* Pr	**P**	**02 29 24.3**	**+0.6**
	comp=Z,1μm,1.3s						
KIV				*e*S	**S**	**02 32 41.8**	**+7.7**
KIV	**Kislovodsk**	**17.26**	**324**	*i* P	**P**	**02 29 24.3**	**+0.6**
	comp=Z,67μm,16.0s						
SDNR	**Sundarnagar**	**17.28**	**82**	*e*P	**P**	**02 29 24.6**	**+0.6**
SDNR				*e*		02 32 42.2	
KKR	**Kurukshetra**	**17.29**	**88**	*e*P	**P**	**02 29 25.3**	**+1.1**
KKR				*e*		02 29 31.0	
	comp=Z,1μm,1.5s						
KUDL	**Kundal**	**17.34**	**94**	*e*P	**P**	**02 29 25.4**	**+0.6**
KUDL				*e*		02 29 34.1	
	comp=Z,2μm,1.4s						
KFRA	**Kufra**	**17.36**	**290**	⇑*i*P	**P**	**02 29 23.6**	**-1.3**
GAZ	**Gaziantep**	**17.45**	**297**	*e*P	**P**	**02 29 22.6**	**-3.4**
SMLA	**Simla**	**17.47**	**84**	⇓*i*	**P**	**02 29 44.1**	**+18**
	comp=Z,7μm,5.5s						
SMLA				*i*		02 33 08.0	
FKH	**Fakeheh**	**17.55**	**287**	*e*P	**P**	**02 29 29.6**	**+2.2**
FKH	**Fakeheh**	**17.55**	**287**	*e*P	**P**	**02 29 29.5**	**+2.1**
QASN	**Qassioun**	**17.60**	**284**	⇑*i*P	**P**	**02 29 28.6**	**+0.6**
BHGR	**Bahadurgarh**	**17.61**	**92**	*e*P	**P**	**02 29 27.8**	**-0.3**
BHGR				*e*		02 29 45.6	
	comp=Z,3μm,1.5s						
AML	**Almayashu**	**17.66**	**45**	P	**P**	**02 29 27.6**	**-1.1**
	SNR=155						
WRDH	**Warideh**	**17.71**	**291**	⇑*i*P	**P**	**02 29 28.4**	**-1.0**
MUKL	**Al Mukalla**	**17.72**	**205**	⇑*e*P	**P**	**02 29 26.5**	**-3.1**
MUKL				AMb	AMB	02 29 29.8	
	comp=Z,1μm,1.8s						
AYAN	**Aya Nagar**	**17.81**	**92**	*e*P	**P**	**02 29 31.0**	**+0.4**
AYAN				*e*		02 29 37.8	
	comp=Z,856nm,1.3s						
SONA	**Sohna**	**17.83**	**93**	*e*P	**P**	**02 29 30.7**	**-0.2**
SONA				*e*		02 29 40.2	
	comp=Z,2μm,1.1s						
TCHB	**Talchebab**	**17.83**	**282**	⇑*i*P	**P**	**02 29 30.2**	**-0.6**
KAHT	**Ahir Dag**	**17.84**	**298**	*i* P	**P**	**02 29 32.7**	**+1.8**
NDI	**New Delhi**	**17.85**	**92**	*e*P	**P**	**02 29 30.0**	**-1.1**

	comp=Z,76nm,1.2s						
NDI				*e*		02 34 01.0	
BRBR	**Barbar**	**17.87**	**284**	⇑*i*P	**P**	**02 29 33.0**	**+1.7**
GOF	**Gofitskoye**	**17.89**	**327**	⇑*i*P	**P**	**02 29 30.6**	**-0.9**
GOF				pmax	pmax		
	comp=Z,4µm,3.0s						
KSH	**Kashi**	**17.91**	**56**	PR	**P**	**02 29 32.0**	**+0.2**
KSH				*e*AP		02 29 36.3	
KSH				*e*XP		02 29 39.3	
KSH				*e*PP	PP	02 29 47.3	+0.6
KSH				*e*PPP	PPP	02 29 56.3	+0.7
KSH				*e*S	**S**	**02 32 48.3**	**-0.6**
KSH				*e*SS	SS	02 33 11.8	-0.2
KSH				*e*PCS		02 37 45.3	
KSH				*e*SCS	ScS	02 41 21.8	+0.4
KSH				AMB	AMB		
	comp=Z,720nm,2.5s						
KSH				LR	LR		
	comp=N,227µm,11.0s						
KSH				LR	LR		
	comp=E,138µm,7.7s						
KSH	**Kashi**	**17.91**	**56**	⇓P	**P**	**02 29 32.0**	**+0.2**
	comp=E,720nm,2.5s						
KSH				*e*pP		02 29 36.3	
KSH				*e*sP		02 29 39.3	
KSH				*e*PP	PP	02 29 47.3	+0.6
KSH				*e*S	**S**	**02 32 48.3**	**-0.6**
KSH				*e*SS	SS	02 33 11.8	-0.2
KSH				*e*PcS		02 37 45.3	
KSH				*e*ScS	ScS	02 41 21.8	+0.4
HWQ	**Hawqa**	**17.93**	**287**	*e*P	**P**	**02 29 33.5**	**+1.4**
HWQ	**Hawqa**	**17.93**	**287**	P	**P**	**02 29 33.8**	**+1.7**
HWQ	**Hawqa**	**17.93**	**287**	P	**P**	**02 29 33.8**	**+1.7**
KSHT	**Keshet**	**17.97**	**283**	P	**P**	**02 29 33.7**	**+1.1**
EKS2	**Erkin-Say**	**18.02**	**44**	P	**P**	**02 29 33.3**	**+0.2**
	SNR=370						
COBT	**Iskenderun**	**18.04**	**294**	*i* P	**P**	**02 29 34.1**	**+0.7**
HRI	**Mount Hermon**	**18.04**	**283**	P	**P**	**02 29 35.9**	**+2.4**
HTY	**Hatay**	**18.05**	**293**	*e*P	**P**	**02 29 32.7**	**-0.9**
KSDI	**Kefar Szold**	**18.10**	**283**	*e*P	**P**	**02 29 35.2**	**+0.9**
BHL	**Bhannes**	**18.14**	**285**	*e*P	**P**	**02 29 35.4**	**+0.6**
BHL	**Bhannes**	**18.14**	**285**	P	**P**	**02 29 36.1**	**+1.3**
UCH	**Uchtor**	**18.22**	**46**	P	**P**	**02 29 35.3**	**-0.4**
	SNR=177						
MMLI	**Mount Malkishu**	**18.29**	**281**	P	**P**	**02 29 36.7**	**+0.1**
DDI	**Dehra Dun**	**18.31**	**86**	*e*P	**P**	**02 29 37.0**	**+0.1**
DDI				*e*		02 32 39.5	
DRGI	**Dragot**	**18.34**	**278**	P	**P**	**02 29 38.6**	**+1.3**
KLP	**Kalpa**	**18.37**	**82**	*e*P	**P**	**02 29 38.8**	**+1.2**
MZDA	**Masada**	**18.39**	**277**	P	**P**	**02 29 38.9**	**+1.1**
MATL	**Matirih**	**18.39**	**284**	*e*P	**P**	**02 29 39.1**	**+1.3**
AAK	**Ala-Archa**	**18.43**	**45**	P	**P**	**02 29 38.5**	**+0.2**
	SNR=246						
AAK	**Ala-Archa**	**18.43**	**45**	⇑P	**P**	**02 29 38.2**	**-0.1**
	comp=E,3µm,2.0s						
AAK				⇓S	**S**	**02 33 15.4**	**+15**
	comp=E,2µm,3.3s						
AAK				⇓Rg		02 35 39.1	
	comp=E,81µm,10.6s						
SVST	**Sivas**	**18.50**	**304**	*i* P	**P**	**02 29 43.0**	**+3.8**
CEYT	**Ceyhan**	**18.54**	**295**	*e*P	**P**	**02 29 41.6**	**+1.9**
KZA	**Kyzart**	**18.60**	**48**	P	**P**	**02 29 40.1**	**-0.3**
	SNR=135						
ZFRI	**Zfri**	**18.61**	**275**	P	**P**	**02 29 41.9**	**+1.4**
SLTI	**Sal'it**	**18.62**	**280**	P	**P**	**02 29 41.1**	**+0.5**
FRU	**Bishkek**	**18.62**	**45**	⇑*e*P	**P**	**02 29 39.5**	**-1.1**
FRU				pmax	pmax		
	comp=Z,4µm,2.0s						
FRU				pmax	pmax		
	comp=Z,27µm,8.0s						
FRU				MLR	MLR		
	comp=Z,135µm,16.0s						
FRU	**Bishkek**	**18.62**	**45**	⇑*e*P	**P**	**02 29 39.5**	**-1.1**
	comp=Z,4µm,2.0s						
HAF	**Haifa**	**18.63**	**282**	P	**P**	**02 29 42.0**	**+1.3**
SOC	**Sochi**	**18.64**	**318**	*i* P	**P**	**02 29 40.4**	**-0.4**
SOC				*e*		02 33 09.8	
SOC				pmax	pmax		
	comp=Z,156nm,1.2s						
SOC				pmax	pmax		
	comp=N,126nm,1.6s						
SOC				pmax	pmax		
	comp=E,198nm,2.0s						
SOC				MLR	MLR		
	comp=Z,137µm,15.0s						
SOC				MLR	MLR		
	comp=N,181µm,16.0s						
SOC				MLR	MLR		
	comp=E,125µm,14.0s						
SOC	**Sochi**	**18.64**	**318**	*i* P	**P**	**02 29 40.4**	**-0.4**
	comp=E,156nm,1.2s						
SOC				*e*		02 33 09.8	
OFRI	**'Ofer**	**18.66**	**281**	P	**P**	**02 29 42.9**	**+1.8**
BOM	**Bombay**	**18.70**	**125**	*e*P	**P**	**02 29 42.8**	**+1.1**
BOM				*e*		02 33 18.9	
KBK	**Karagaybulak**	**18.72**	**46**	P	**P**	**02 29 42.3**	**+0.4**
	SNR=177						
CHMS	**Chumysh**	**18.80**	**45**	P	**P**	**02 29 43.7**	**+1.0**
	SNR=102						
USP	**Ospenovka**	**18.80**	**44**	P	**P**	**02 29 41.9**	**-0.8**
	SNR=64						
AGRA	**Agra**	**18.82**	**96**	*e*P	**P**	**02 29 42.5**	**-0.6**
AGRA				*e*		02 29 50.7	
	comp=Z,887nm,1.7s						
MASH	**Mash'abbe Sade**	**18.90**	**276**	P	**P**	**02 29 46.2**	**+2.1**
EIL	**Elat**	**18.92**	**272**	P	**P**	**02 29 43.5**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=36,slow=8.4,SNR=23						
EIL				S	**S**	**02 33 25.5**	**+14**
	comp=Z,1.3nm,0.3s,baz=8.1,slow=20,SNR=1.6						
EIL				LR	LR	02 38 34.5	
	comp=Z,258µm,18.2s,baz=85,slow=42						
EIL	**Elat**	**18.92**	**272**	⇑*e*P	**P**	**02 29 43.5**	**-0.8**
	comp=Z,528nm,0.8s						
EIL	**Elat**	**18.92**	**272**	*e*P	**P**	**02 29 44.6**	**+0.3**
	baz=81						
BNN	**Bunyan**	**18.98**	**301**	*e*P	**P**	**02 29 46.1**	**+1.2**
RTMM	**Retamin**	**18.98**	**277**	P	**P**	**02 29 45.3**	**+0.3**
TOKT	**Tokat**	**19.01**	**306**	*e*P	**P**	**02 29 46.8**	**+1.5**
KALG	**Kalgarh**	**19.02**	**88**	*e*	**P**	**02 29 43.4**	**-2.1**
	comp=Z,2µm,1.3s						
SANA	**San'a**	**19.18**	**220**	⇓*i*P	**P**	**02 29 43.0**	**-4.4**
SANA				AMb	AMB	02 29 43.9	
	comp=Z,609nm,0.8s						
KZIT	**Kziot**	**19.24**	**276**	P	**P**	**02 29 48.2**	**+0.1**
HAJJ	**Hajjah**	**19.27**	**222**	⇑*e*P	**P**	**02 29 44.8**	**-3.6**
HAJJ				AMb	AMB	02 29 46.3	
	comp=Z,1µm,1.4s						
HAJJ				*i* S	**S**	**02 33 23.6**	**+3.9**
HAJJ	**Hajjah**	**19.27**	**222**	⇑*e*P	**P**	**02 29 44.8**	**-3.7**
	comp=Z,694nm,1.4s						
HAJJ				*i* S	**S**	**02 33 23.6**	**+3.9**
TKM2	**Tokmak 2**	**19.27**	**46**	P	**P**	**02 29 48.7**	**+0.4**
	SNR=120						
ULHL	**Ulahol**	**19.32**	**48**	P	**P**	**02 29 49.2**	**+0.3**
	SNR=92						
PHNC	**Paralimni**	**19.58**	**288**	P	**P**	**02 29 52.7**	**+0.8**
YOZ	**Yozgat**	**19.63**	**303**	*e*P	**P**	**02 29 53.4**	**+1.0**
BDHA	**Al Bayda'**	**19.66**	**214**	⇑*e*P	**P**	**02 29 50.6**	**-2.3**
BDHA				*i* S	**S**	**02 33 33.4**	**+5.0**
BDHA	**Al Bayda'**	**19.66**	**214**	⇑*e*P	**P**	**02 29 50.6**	**-2.3**
BDHA				*i* S	**S**	**02 33 33.3**	**+5.0**
KVT	**Kavak**	**19.67**	**307**	*e*P	**P**	**02 29 55.1**	**+2.2**
POO	**Poona**	**19.68**	**124**	⇑*i*P	**P**	**02 29 54.0**	**+0.9**
	comp=Z,3µm,1.5s						
POO				*i* S	**S**	**02 33 36.0**	**+7.3**
NIG	**Nigde**	**19.69**	**298**	*e*P	**P**	**02 29 53.9**	**+0.7**
NIG	**Nigde**	**19.69**	**298**	*e*P	**P**	**02 29 53.8**	**+0.6**
DHBB	**Dhamar BB**	**19.75**	**218**	⇑*e*P	**P**	**02 29 51.1**	**-2.8**
DHBB				AMb	AMB	02 29 54.5	
	comp=Z,1µm,1.7s						
DHBB				*i* S	**S**	**02 33 34.5**	**+4.1**
DHBB	**Dhamar BB**	**19.75**	**218**	⇑*e*P	**P**	**02 29 51.1**	**-2.9**
	comp=Z,580nm,1.7s						
DHBB				*i* S	**S**	**02 33 34.5**	**+4.2**
BHPL	**Bhopal**	**19.82**	**107**	*e*P	**P**	**02 29 55.2**	**+0.4**
BHPL				*e*		02 30 04.5	
	comp=Z,2µm,2.1s						
JHNI	**Jhansi**	**19.87**	**100**	⇓*i*	**P**	**02 29 57.0**	**+1.7**
JHNI				*e*		02 31 03.0	
LBOS		**19.90**	**215**	⇑*e*P	**P**	**02 29 53.3**	**-2.4**
LBOS				*i* S	**S**	**02 33 37.2**	**+3.6**
CSS	**Prodhromos**	**20.14**	**288**	⇓P	**P**	**02 29 59.3**	**+1.2**
	comp=Z,24nm,1.0s						
CSS	**Prodhromos**	**20.14**	**288**	*e*P	**P**	**02 29 58.1**	**0.0**
MAMC	**Mammari**	**20.26**	**289**	P	**P**	**02 30 00.0**	**+0.7**
	comp=Z,73nm,1.2s						
PTH	**Pithoragarh**	**20.27**	**87**	*e*	**P**	**02 30 01.5**	**+2.0**
PTH				*e*		02 34 02.1	
AAA	**Alma-Ata**	**20.29**	**46**	*i* P	**P**	**02 30 02.8**	**+3.2**
AAA				pmax	pmax		
	comp=Z,26µm,6.0s						
AAA				MLR	MLR		
	comp=Z,78µm,10.0s,MS6.4						
CORM	**Corum**	**20.31**	**304**	P	**P**	**02 30 00.1**	**+0.3**
CORM	**Corum**	**20.31**	**304**	*e*P	**P**	**02 30 00.0**	**+0.2**
SZAC	**Souni-Zanaja**	**20.49**	**288**	P	**P**	**02 30 02.6**	**+0.9**
BOYT	**Boyabat**	**20.59**	**307**	*i* P	**P**	**02 30 03.0**	**+0.3**
BYBT	**Boyabat**	**20.70**	**307**	P	**P**	**02 30 03.6**	**-0.3**
KAMT	**Kaman**	**20.72**	**301**	P	**P**	**02 30 03.1**	**-0.9**
KAD	**Karad**	**20.73**	**126**	*e*P	**P**	**02 30 05.4**	**+1.1**
KAD				*e*		02 34 08.2	
ALFC	**Alevga**	**20.76**	**289**	P	**P**	**02 30 04.9**	**+0.4**
BR131	**Keskin Array S**	**20.88**	**302**	PFAKE		02 30 10.0	+4.3
BR131				LR	LR		
	comp=Z,224µm,21.0s,MS6.5						
BRTR	**Keskin Array B**	**20.88**	**302**	P	**P**	**02 30 03.9**	**-1.8**
	comp=Z,100nm,0.8s,baz=115,slow=12,SNR=105						
BRTR				S	**S**	**02 34 05.3**	**+12**
	comp=Z,7.6nm,0.9s,baz=310,slow=44,SNR=1.9						
BRTR				PKiKP		02 42 01.9	
	comp=Z,2.9nm,1.0s,baz=124,slow=4.5,SNR=3.8						
BRTR				P3KPbc		03 04 06.6	
	comp=Z,0.6nm,0.8s,baz=288,slow=4.6,SNR=2.7						
PPCY	**Paphos**	**20.95**	**288**	P	**P**	**02 30 05.4**	**-1.0**
AKMC	**Akamas**	**20.97**	**288**	⇓P	**P**	**02 30 07.8**	**+1.2**
ADEN	**Aden**	**20.98**	**214**	⇑*i*P	**P**	**02 30 03.9**	**-2.9**
TRBA	**At Turbah**	**21.02**	**217**	⇑*e*P	**P**	**02 30 05.4**	**-1.9**
TRBA				AMb	AMB	02 30 09.1	
	comp=Z,1µm,1.5s,mb6.0						
TOS	**Tosya**	**21.05**	**305**	*e*P	**P**	**02 30 08.0**	**+0.6**
HDMB	**Hadim**	**21.09**	**294**	*e*P	**P**	**02 30 07.9**	**0.0**
CANT	**Cankiri**	**21.18**	**304**	P	**P**	**02 30 09.6**	**+0.8**
ELDT	**Eldivan**	**21.28**	**304**	*i* P	**P**	**02 30 08.9**	**-0.9**
KONT	**Konya--Tatoy**	**21.38**	**296**	P	**P**	**02 30 12.2**	**+1.4**
BZK	**Bozkurt**	**21.43**	**308**	P	**P**	**02 30 13.5**	**+2.3**
ANTO	**Ankara**	**21.54**	**301**	P	**P**	**02 30 12.0**	**-0.4**
LOD	**Lodumlu**	**21.57**	**302**	*e*P	**P**	**02 30 12.9**	**+0.2**
BALT	**Daday**	**21.68**	**306**	*i* P	**P**	**02 30 14.1**	**+0.2**
LATR	**Latur**	**21.73**	**120**	*e*P	**P**	**02 30 16.2**	**+1.8**
GOA	**Goa**	**21.78**	**130**	*e*	**P**	**02 30 24.9**	**+10**
	comp=Z,2µm,1.6s,mb6.3						
GOA				*e*		02 34 38.0	
KIZT	**Kizilcal**	**21.96**	**298**	P	**P**	**02 30 16.2**	**-0.3**
KIZT	**Kizilcal**	**21.96**	**298**	*e*P	**P**	**02 30 16.2**	**-0.4**
SAFT	**Safranbolu**	**22.07**	**305**	*e*P	**P**	**02 30 19.7**	**+2.1**
ANTB	**Antalya**	**22.53**	**293**	P	**P**	**02 30 25.6**	**+3.3**
BCK	**Bucak**	**22.67**	**294**	*e*P	**P**	**02 30 24.3**	**+0.7**
ALBI	**Allahabad**	**22.71**	**98**	*e*P	**P**	**02 30 22.5**	**-1.7**
SIM	**Simferopol'**	**22.73**	**315**	⇑*e*P	**P**	**02 30 25.5**	**+1.3**
ISP	**Isparta**	**22.79**	**295**	P	**P**	**02 30 24.6**	**-0.3**
ISP	**Isparta**	**22.79**	**295**	P	**P**	**02 30 26.9**	**+2.0**
ISP				pmax	pmax		
	comp=Z,830nm,1.0s,mb6.1						
ISP	**Isparta**	**22.79**	**295**	⇓P	**P**	**02 30 27.0**	**+2.1**
MDU	**Mudurnu**	**22.88**	**302**	P	**P**	**02 30 26.8**	**+1.2**
ESKT	**Eskisehir**	**22.89**	**299**	P	**P**	**02 30 26.9**	**+1.0**
ESKT	**Eskisehir**	**22.89**	**299**	*i* P	**P**	**02 30 26.9**	**+1.1**
ELL	**Elmali**	**23.10**	**292**	*e*P	**P**	**02 30 29.1**	**+1.2**
HENT	**Hendek**	**23.21**	**303**	*i* P	**P**	**02 30 29.8**	**+0.9**
ALT	**Altintas**	**23.34**	**298**	P	**P**	**02 30 31.3**	**+1.1**
GPA	**Golpazari**	**23.49**	**301**	*e*P	**P**	**02 30 31.8**	**+0.1**
KOLN	**Koldanda**	**23.54**	**91**	*e*P	**P**	**02 30 33.4**	**+1.1**
	comp=Z,4µm,1.5s,mb6.7						
KHL	**Karahalli**	**23.64**	**296**	*e*P	**P**	**02 30 35.0**	**+1.8**
FETY	**Fethiye**	**23.75**	**292**	*e*P	**P**	**02 30 34.7**	**+0.5**
HYB	**Hyderabad**	**23.83**	**119**	⇑*e*P	**P**	**02 30 37.0**	**+1.8**
HYB				*e*S	**S**	**02 34 54.0**	**+6.7**
HYB				pmax	pmax		
	comp=Z,739nm,0.8s,mb6.2						
HYB	**Hyderabad**	**23.83**	**119**	⇑*e*P	**P**	**02 30 37.0**	**+1.8**
	comp=Z,738nm,0.8s,mb6.2						
HYB				*e*S	**S**	**02 34 54.0**	**+6.7**
HYB	**Hyderabad**	**23.83**	**119**	⇑*i*P	**P**	**02 30 37.0**	**+1.8**
	comp=Z,738nm,0.8s,mb6.2						
HYB				*e*S	**S**	**02 34 54.0**	**+6.7**
HYB				LR	LR	02 41 40.0	
	comp=Z,96nm,14.0s						
VLK	**Valmikinagar**	**23.89**	**91**	*i* P	**P**	**02 30 37.0**	**+1.4**
VLK				*i*		02 30 41.0	
DNZL	**Cakiroluk**	**23.91**	**294**	*i* P	**P**	**02 30 36.3**	**+0.5**
DENT	**Denizli**	**23.93**	**294**	*e*P	**P**	**02 30 36.3**	**+0.3**
HRT	**Hereke**	**24.11**	**302**	P	**P**	**02 30 37.1**	**-0.5**
HRT	**Hereke**	**24.11**	**302**	P	**P**	**02 30 37.2**	**-0.4**
DALT	**Dalyan (Mudla)**	**24.12**	**292**	*e*P	**P**	**02 30 36.7**	**-1.1**
BLSP	**Bilaspur**	**24.21**	**105**	⇑*i*P	**P**	**02 30 39.9**	**+1.1**
BLSP				*e*		02 35 07.7	
YLV	**Yalova**	**24.25**	**301**	*e*P	**P**	**02 30 37.8**	**-1.3**
YLV	**Yalova**	**24.25**	**301**	P	**P**	**02 30 37.7**	**-1.4**
MNGI	**Mangalore**	**24.32**	**133**	*i*	**P**	**02 30 46.0**	**+6.1**
	comp=Z,547nm,1.7s,mb5.7						
MNGI				*i*		02 35 09.3	
ULDT	**Uludag**	**24.32**	**300**	*i* P	**P**	**02 30 38.1**	**-1.6**
BVA0	**Borovoye Array**	**24.35**	**20**	P	**P**	**02 30 40.6**	**+0.7**
	comp=Z,305nm,1.8s,mb5.4,baz=206,slow=4.0,SNR=2507						
BVA0				⇑S	**S**	**02 34 59.2**	**+3.5**
	comp=Z,122nm,3.1s						
BVA0				⇓Rg		02 37 47.6	
	comp=Z,26µm,12.8s						
BVA0	**Borovoye Array**	**24.35**	**20**	*i* P	**P**	**02 30 40.5**	**+0.7**
BVA0				S	**S**	**02 34 59.1**	**+3.4**
BVA0				pmax	pmax		
	comp=Z,548nm,1.8s,mb5.7						
BVA0				smax			
	comp=Z,146µm,12.0s						
BVA0	**Borovoye Array**	**24.35**	**20**	*i* P	**P**	**02 30 40.5**	**+0.7**
	comp=Z,548nm,1.8s,mb5.7						
BVA0				S	**S**	**02 34 59.1**	**+3.4**
BVAR	**Borovoye Array**	**24.35**	**20**	P	**P**	**02 30 40.8**	**+1.0**
	comp=Z,253nm,0.7s,mb5.8,baz=199,slow=7.9,SNR=216						
BVAR				S	**S**	**02 35 04.5**	**+8.8**
	comp=Z,5.4nm,0.8s,baz=40,slow=27,SNR=2.1						
BVAR				P3KPbc		03 03 53.6	
	comp=Z,2.7nm,0.8s,baz=45,slow=4.2,SNR=9.7						
GKN	**Gorkha**	**24.38**	**89**	*e*P	**P**	**02 30 41.2**	**+0.8**
	comp=Z,2µm,1.1s,mb6.4						
MANT	**Manisa**	**24.42**	**296**	*i* P	**P**	**02 30 40.5**	**-0.3**
YER	**Yerkesik**	**24.44**	**293**	*e*P	**P**	**02 30 41.2**	**+0.2**
ORLT	**Orhaneli**	**24.48**	**300**	*e*P	**P**	**02 30 43.2**	**+1.9**
ARG	**Arkhangelos**	**24.48**	**291**	P	**P**	**02 30 43.4**	**+2.1**
ARG	**Arkhangelos**	**24.48**	**291**	*e*P	**P**	**02 30 41.9**	**+0.6**
BADT	**Buyukada**	**24.52**	**302**	P	**P**	**02 30 41.5**	**-0.1**
DST	**Dursunbey**	**24.58**	**299**	P	**P**	**02 30 43.2**	**+0.9**
ISK	**Istanbul-Kandi**	**24.61**	**302**	*e*P	**P**	**02 30 41.9**	**-0.7**
ISK	**Istanbul-Kandi**	**24.61**	**302**	*e*P	**P**	**02 30 41.8**	**-0.8**
VOR	**Voronezh**	**24.65**	**333**	*e*P	**P**	**02 30 43.0**	**+0.2**
VOR				pmax	pmax		
	comp=Z,1µm,2.0s,mb6.0						
AYDN	**Tasoluk**	**24.83**	**294**	*i* P	**P**	**02 30 45.4**	**+0.7**
MLSB	**Milas**	**24.86**	**293**	P	**P**	**02 30 44.2**	**-0.7**
MLSB	**Milas**	**24.86**	**293**	*e*P	**P**	**02 30 44.2**	**-0.8**
DMN	**Daman**	**24.88**	**90**	*e*P	**P**	**02 30 46.1**	**+0.9**
	comp=Z,1µm,0.9s,mb6.4						
CHKZ	**Chkalovo**	**24.98**	**20**	⇑P	**P**	**02 30 46.7**	**+0.8**
	comp=Z,470nm,1.3s,mb5.9						
CHKZ				⇓S	**S**	**02 35 13.1**	**+6.7**
	comp=Z,267nm,2.5s						
CHKZ				⇓Rg		02 38 14.8	
	comp=Z,146µm,14.1s						
CHKZ	**Chkalovo**	**24.98**	**20**	P	**P**	**02 30 46.7**	**+0.8**
CHKZ				S	**S**	**02 35 13.1**	**+6.6**
CHKZ				pmax	pmax		
	comp=Z,611nm,1.3s,mb6.0						
CHKZ				smax			
	comp=E,654nm,2.5s						
KKN	**Kakani**	**24.98**	**90**	*e*P	**P**	**02 30 47.1**	**+0.8**
	comp=E,3µm,1.1s,mb6.7						
AKS	**Akhisar**	**25.06**	**297**	P	**P**	**02 30 48.1**	**+1.2**
BTOK	**Tokmak**	**25.06**	**299**	*i* P	**P**	**02 30 47.6**	**+0.8**
CTT	**Catalca**	**25.09**	**302**	P	**P**	**02 30 47.0**	**-0.1**
BDRM	**Kayabasi**	**25.10**	**292**	*i* P	**P**	**02 30 47.3**	**0.0**
PKI	**Pulchoki**	**25.15**	**90**	*e*P	**P**	**02 30 48.6**	**+0.8**
	comp=E,3µm,1.0s,mb6.8						
BALB	**Balikesir**	**25.15**	**299**	*e*P	**P**	**02 30 46.9**	**-0.8**
BODT	**Bodrum**	**25.21**	**292**	P	**P**	**02 30 48.6**	**+0.3**
BNT	**Bandirma**	**25.28**	**300**	P	**P**	**02 30 49.4**	**+0.5**
MK31	**Makanchi Array**	**25.35**	**44**	P	**P**	**02 30 50.4**	**+0.9**
	comp=E,307nm,0.8s,mb5.9,baz=224,slow=7.9,SNR=2709						
MK31				⇑S	**S**	**02 35 23.9**	**+11**
	comp=E,130nm,1.7s						
MK31				⇓Rg		02 39 40.8	
	comp=E,49µm,9.1s,baz=225,slow=18,SNR=2.8						
MKAR	**Makanchi Array**	**25.35**	**44**	*i* P	**P**	**02 30 50.4**	**+0.9**
MKAR				pmax	pmax		
	comp=Z,2µm,1.3s						
KDAG	**Bornova**	**25.41**	**295**	*i* P	**P**	**02 30 49.9**	**-0.2**
IZM	**Izmir**	**25.41**	**295**	P	**P**	**02 30 50.6**	**+0.5**
MRMT	**Marmara Adasi**	**25.57**	**301**	*e*P	**P**	**02 30 50.4**	**-1.3**
BLCB	**Balcova**	**25.58**	**295**	*e*P	**P**	**02 30 50.8**	**-0.9**
KURK	**Kurchatov**	**25.72**	**33**	⇑P	**P**	**02 30 53.4**	**+0.5**
	comp=Z,495nm,1.3s,mb5.9,baz=214,slow=7.8,SNR=974						
KURK				⇑S	**S**	**02 35 27.4**	**+8.7**
	comp=Z,270nm,2.9s						
KURK				⇑Rg		02 41 43.4	
	comp=Z,88µm,13.8s,baz=300,slow=16,SNR=5.5						
KURK	**Kurchatov**	**25.72**	**33**	*i* P	**P**	**02 30 53.3**	**+0.4**
KURK				S	**S**	**02 35 27.4**	**+8.6**
KURK				pmax	pmax		
	comp=Z,2µm,2.4s,mb6.3						
KURK				smax			
	comp=E,785nm,2.9s						
JIRN	**Jiri**	**25.80**	**89**	*e*P	**P**	**02 30 54.6**	**+0.7**
	comp=E,2µm,1.0s,mb6.6						
MFT	**Murefte**	**25.85**	**301**	*e*P	**P**	**02 30 51.1**	**-3.1**
SART	**Tekirdag**	**25.90**	**301**	*i* P	**P**	**02 30 57.9**	**+3.2**
ZKR	**Zakros**	**25.98**	**288**	P	**P**	**02 30 57.4**	**+1.9**
AYVA	**Ayvalik**	**26.00**	**297**	*i* P	**P**	**02 30 57.6**	**+1.9**
PSN	**Preselentsi**	**26.04**	**308**	*e*P	**P**	**02 30 55.5**	**-0.5**
TIRR	**Tirgusor**	**26.16**	**309**	P	**P**	**02 30 58.9**	**+1.8**
TIRR	**Tirgusor**	**26.16**	**309**	⇓P	**P**	**02 30 58.4**	**+1.3**
TIRR	**Tirgusor**	**26.16**	**309**	P	**P**	**02 30 58.9**	**+1.8**
TLCR		**26.18**	**311**	⇑P	**P**	**02 30 58.1**	**+0.8**
SVE	**Sverdlovsk**	**26.19**	**5**	*i* P	**P**	**02 30 57.5**	**+0.3**
SVE				*e*		02 31 44.0	
SVE				*e*S	**S**	**02 35 34.0**	**+7.5**
SVE				pmax	pmax		
	comp=N,6µm,12.0s						
SVE				pmax	pmax		
	comp=E,300nm,12.0s						
SVE				pmax	pmax		
	comp=Z,10µm,12.0s						
PRD	**Provadia**	**26.42**	**306**	*e*P	**P**	**02 30 59.8**	**+0.3**
EDRB	**Edirne**	**26.50**	**303**	*e*P	**P**	**02 30 59.8**	**-0.5**
SLAT	**Slait**	**26.59**	**242**	*e*P	**P**	**02 31 01.3**	**0.0**
	comp=Z,258nm,0.9s,mb5.8						
SLAT				⇓*i*S	**S**	**02 35 40.8**	**+7.2**
	comp=N,28µm,3.6s						
SLAT	**Slait**	**26.59**	**242**	*e*P	**P**	**02 31 01.3**	**0.0**
	comp=Z,258nm,0.9s,mb5.8						
SLAT				⇓*i*S	**S**	**02 35 40.8**	**+7.2**
	comp=N,28µm,3.6s						
APE	**Apeiranthos**	**26.63**	**292**	*e*P	**P**	**02 30 59.5**	**-1.9**
APE	**Apeiranthos**	**26.63**	**292**	⇓P	**P**	**02 31 02.7**	**+1.2**
APE	**Apeiranthos**	**26.63**	**292**	*e*P	**P**	**02 31 02.3**	**+0.8**
SANT	**Santorini**	**26.64**	**291**	*e*P	**P**	**02 30 59.8**	**-1.8**
	comp=N,1µm,1.0s,mb6.4						
SANT	**Santorini**	**26.64**	**291**	*e*P	**P**	**02 31 00.3**	**-1.3**
BOK	**Bokaro**	**26.71**	**98**	⇑*i*P	**P**	**02 30 59.5**	**-2.8**
BOK				*i*		02 35 45.1	
JMB	**Yambol**	**26.78**	**304**	*e*P	**P**	**02 31 04.5**	**+1.7**
ALN	**Alexandroupoli**	**26.79**	**301**	*e*P	**P**	**02 31 05.0**	**+2.1**
MRKH	**Merkhyat**	**26.92**	**242**	*e*P	**P**	**02 31 04.0**	**-0.4**
MRKH				⇓*i*S	**S**	**02 35 40.8**	**+1.8**
MRKH	**Merkhyat**	**26.92**	**242**	*e*P	**P**	**02 31 04.0**	**-0.4**
MRKH				⇓*i*S	**S**	**02 35 40.8**	**+1.8**
KIS	**Kishinev**	**26.95**	**315**	*e*P	**P**	**02 31 03.0**	**-1.3**
KIS				*i*		02 31 43.0	
KIS				*e*PPP	PPP	02 31 58.0	-4.1
KIS				*i* S	**S**	**02 35 35.0**	**-4.3**
KIS				*i*		02 35 44.0	
KIS				*i* SS	SS	02 36 56.0	+3.1
KIS				pmax	pmax		
	comp=Z,360nm,1.4s,mb5.7						
KIS				pmax	pmax		
	comp=N,240nm,1.8s						
KIS				pmax	pmax		
	comp=E,270nm,1.6s						
KIS				pmax	pmax		
	comp=N,3µm,13.0s						
KIS				pmax	pmax		
	comp=E,5µm,13.0s						
KIS				pmax	pmax		
	comp=Z,8µm,13.0s						
KIS				pmax	pmax		
	comp=Z,9µm,14.0s						
KIS				MLR	MLR		
	comp=N,44µm,17.0s,MS6.2						
KIS				MLR	MLR		
	comp=Z,38µm,17.0s,MS6.0						
KIS				MLR	MLR		
	comp=E,26µm,16.0s,MS6.2						
KIS				MLR	MLR		
	comp=Z,50µm,20.0s						
KIS	**Kishinev**	**26.95**	**315**	*e*P	**P**	**02 31 03.0**	**-1.3**
	comp=Z,360nm,1.4s,mb5.7						
KIS				*i*		02 31 43.0	
KIS				*e*PPP	PPP	02 31 58.0	-4.1
KIS				*i* S	**S**	**02 35 35.0**	**-4.3**
KIS				*i*		02 35 44.0	
KIS				*i* SS	SS	02 36 56.0	+3.1
KIS				LR	LR		
	comp=Z,38µm,17.0s,MS6.0						
PECR	**Pechory**	**27.06**	**344**	*i* P	**P**	**02 31 04.4**	**-0.8**
PECR				*e*		02 32 02.8	
PECR				*e*S	**S**	**02 35 41.0**	**+0.1**
PECR				pmax	pmax		
	comp=Z,3µm,2.8s,mb6.3						
PECR				pmax	pmax		
	comp=Z,8µm,13.4s						
PECR				pmax	pmax		
	comp=N,4µm,12.0s						
PECR				smax			
	comp=N,68µm,18.0s						
PECR				MLR	MLR		
	comp=Z,121µm,17.0s,MS6.5						
IDI	**Anoyia**	**27.07**	**288**	P	**P**	**02 31 05.2**	**-0.4**
	comp=Z,114nm,0.8s,mb5.4,baz=107,slow=9.4,SNR=19						
IDI				S	**S**	**02 35 44.9**	**+3.7**
	comp=Z,25nm,0.9s,baz=350,slow=4.2,SNR=1.5						
IDI	**Anoyia**	**27.07**	**288**	*e*P	**P**	**02 31 05.6**	**+0.1**
JAWL	**J.Aulia**	**27.12**	**241**	*e*P	**P**	**02 31 05.5**	**-0.7**
JAWL				*i* S	**S**	**02 35 37.9**	**-4.3**
JAWL	**J.Aulia**	**27.12**	**241**	*e*P	**P**	**02 31 05.5**	**-0.7**
JAWL				*i* S	**S**	**02 35 37.9**	**-4.3**
RDO	**Rodhopi**	**27.22**	**301**	P	**P**	**02 31 06.9**	**+0.1**
LOS	**Limnos**	**27.33**	**298**	*e*P	**P**	**02 31 09.7**	**+1.8**
LOS	**Limnos**	**27.33**	**298**	P	**P**	**02 31 09.6**	**+1.8**
VIS	**Vishakhapatnam**	**27.37**	**112**	*i* P	**P**	**02 31 08.7**	**+0.3**
VIS				*i*		02 35 44.2	
KDZ	**Kurdzhali**	**27.42**	**302**	*e*P	**P**	**02 31 10.0**	**+1.4**
DIM	**Dimitrovgrad**	**27.43**	**303**	*e*P	**P**	**02 31 10.0**	**+1.3**
SZH	**Strazhica**	**27.46**	**306**	*e*P	**P**	**02 31 09.0**	**0.0**
WMQ	**Urumqi**	**27.64**	**53**	⇑*i*P	**P**	**02 31 11.4**	**+0.8**
WMQ				AP	pP	02 31 23.0	+8.6
WMQ				PP	PP	02 32 01.0	+1.9
WMQ				S	**S**	**02 35 50.0**	**-0.3**
WMQ				XS		02 36 10.0	
WMQ				SS	SS	02 37 12.0	+2.7
WMQ				AMB	AMB		
	comp=Z,503nm,1.2s,mb6.0						
WMQ				LR	LR		
	comp=N,280µm,20.0s,MS6.9						
WMQ				LR	LR		
	comp=E,66µm,18.0s,MS6.9						
WMQ				LR	LR		
	comp=Z,79µm,20.0s,MS6.3						
WMQ	**Urumqi**	**27.64**	**53**	⇑*i*P	**P**	**02 31 11.4**	**+0.8**
	comp=Z,500nm,1.2s,mb6.0						
WMQ				pP	pP	02 31 23.0	+8.6
WMQ				PP	PP	02 32 01.0	+1.9
WMQ				S	**S**	**02 35 50.0**	**-0.3**
WMQ				sS		02 36 10.0	
WMQ				SS	SS	02 37 12.0	+2.7
WMQ				LR	LR		
	comp=Z,79µm,20.0s,MS6.3						
ISR	**Istrita**	**27.64**	**310**	P	**P**	**02 31 23.0**	**+12**
BUC1	**Bucharest**	**27.73**	**308**	⇓P	**P**	**02 31 13.2**	**+1.8**
BUC1	**Bucharest**	**27.73**	**308**	P	**P**	**02 31 12.9**	**+1.5**
GVD	**Gavdhos**	**27.73**	**287**	*e*P	**P**	**02 31 10.1**	**-1.4**
	comp=Z,472nm,0.9s,mb6.1						
GVD	**Gavdhos**	**27.73**	**287**	*e*P	**P**	**02 31 11.9**	**+0.4**
VRI	**Vrincioaia**	**27.80**	**311**	P	**P**	**02 31 14.2**	**+2.2**

IAS	**Iasi**	**27.81**	**314**	⇑P	**P**	**02 31 13.6**	**+1.5**
IAS	**Iasi**	**27.81**	**314**	P	**P**	**02 31 11.9**	**-0.2**
PVL	**Pavlikeni**	**27.87**	**305**	*e*P	**P**	**02 31 14.0**	**+1.3**
MDRS	**Chennai**	**27.89**	**124**	*e*P	**P**	**02 31 14.0**	**+0.9**
MDRS				*e*		02 36 06.0	
MDRS				*e*		02 38 29.0	
RZN	**Rozhen**	**27.94**	**302**	*e*P	**P**	**02 31 10.5**	**-2.8**
GTK	**Gangtok**	**27.97**	**89**	*e*P	**P**	**02 31 10.0**	**-3.8**
PLD	**Plovdiv**	**28.04**	**303**	*e*P	**P**	**02 31 14.0**	**-0.3**
AOS	**Alonnisos**	**28.14**	**296**	*e*P	**P**	**02 31 15.6**	**+0.4**
MLR	**Muntele Rosu**	**28.17**	**310**	P	**P**	**02 31 15.9**	**+0.5**
	comp=Z,56nm,0.8s,mb5.2,baz=28,slow=1.8,SNR=42						
MLR				S	**S**	**02 36 07.0**	**+8.1**
	comp=Z,36nm,1.1s,baz=284,slow=22,SNR=1.2						
MLR				LR	LR	02 44 27.9	
	comp=Z,50µm,21.1s,MS6.1,baz=113,slow=41						
MLR				P3KPbc		03 03 37.7	
	comp=Z,5.4nm,0.9s,baz=51,slow=3.4,SNR=5.1						
MLR	**Muntele Rosu**	**28.17**	**310**	P	**P**	**02 31 17.2**	**+1.8**
MLR	**Muntele Rosu**	**28.17**	**310**	⇑P	**P**	**02 31 16.4**	**+1.0**
OUR	**Ouranopolis**	**28.22**	**299**	*e*P	**P**	**02 31 17.0**	**+1.0**
OBN	**Obninsk**	**28.28**	**335**	P	**P**	**02 31 16.1**	**-0.2**
	comp=Z,3µm,1.0s,mb6.9,SNR=64						
OBN	**Obninsk**	**28.28**	**335**	*c* *i*P	**P**	**02 31 16.5**	**+0.2**
OBN				*i*		02 32 07.1	
OBN				*i*		02 34 31.5	
OBN				*i* S	**S**	**02 36 04.9**	**+4.4**
OBN				pmax	pmax		
	comp=Z,804nm,1.1s,mb6.3						
OBN				pmax	pmax		
	comp=Z,6µm,3.9s						
OBN				MLR	MLR		
	comp=Z,75µm,20.0s,MS6.3						
OBN	**Obninsk**	**28.28**	**335**	⇑*i*P	**P**	**02 31 16.5**	**+0.2**
	comp=Z,804nm,1.1s,mb6.3						
OBN				*i*		02 32 07.1	
OBN				*i*		02 34 31.5	
OBN				*i* S	**S**	**02 36 04.9**	**+4.4**
OBN				LR	LR		
	comp=Z,75µm,20.0s,MS6.3						
OBN	**Obninsk**	**28.28**	**335**	⇑*i*P	**P**	**02 31 16.5**	**+0.2**
PAIG	**Paliouri**	**28.39**	**298**	*e*P	**P**	**02 31 18.0**	**+0.6**
SNX	**Sinaia**	**28.41**	**310**	P	**P**	**02 31 19.3**	**+1.8**
SNX	**Sinaia**	**28.41**	**310**	⇑P	**P**	**02 31 18.4**	**+0.9**
SNX	**Sinaia**	**28.41**	**310**	P	**P**	**02 31 19.3**	**+1.8**
MOS	**Moscow**	**28.41**	**337**	α *i*P	**P**	**02 31 18.3**	**+0.9**
MOS				*e*		02 32 06.8	
MOS				*e*PPP	PPP	02 32 17.4	-3.9
MOS				*e*S	**S**	**02 36 05.8**	**+3.2**
MOS				*e*SS	SS	02 37 20.1	-7.1
MOS				*e*SSS	SSS	02 37 45.7	-0.4
MOS				pmax	pmax		
	comp=Z,680nm,1.7s,mb6.0						
MOS				pmax	pmax		
	comp=E,259nm,1.3s						
MOS				pmax	pmax		
	comp=Z,6µm,3.4s						
MOS				pmax	pmax		
	comp=E,3µm,3.3s						
MOS				smax			
	comp=E,49µm,12.8s						
MOS				smax			
	comp=N,54µm,13.8s						
MOS				MLR	MLR		
	comp=Z,58µm,15.4s,MS6.3						
MOS				MLR	MLR		
	comp=N,57µm,18.6s						
MOS	**Moscow**	**28.41**	**337**	*i* Pcu	**P**	**02 31 18.3**	**+0.9**
	comp=N,680nm,1.7s,mb6.0						
MOS				*e*		02 32 06.8	
MOS				*e*PPP	PPP	02 32 17.4	-3.9
MOS				*e*S	**S**	**02 36 05.8**	**+3.2**
MOS				*e*SS	SS	02 37 20.1	-7.1
MOS				*e*SSS	SSS	02 37 45.7	-0.4
MOS				LR	LR		
	comp=Z,58µm,15.4s,MS6.3						
MOS	**Moscow**	**28.41**	**337**	*i* P	**P**	**02 31 18.3**	**+0.9**
	comp=Z,6µm,3.4s						
PGB	**Panagyurishte**	**28.53**	**303**	*e*P	**P**	**02 31 18.0**	**-0.7**
AKASG	**Malin Array Be**	**28.60**	**322**	P	**P**	**02 31 18.9**	**-0.3**
AKASG				S	**S**	**02 36 11.3**	**+5.6**
AKASG				pmax	pmax		
	comp=Z,249nm,1.0s						
AKASG	**Malin Array Be**	**28.60**	**322**	P	**P**	**02 31 18.9**	**-0.3**
	comp=Z,249nm,1.0s,mb5.9,baz=123,slow=8.1,SNR=109						
AKASG				S	**S**	**02 36 11.3**	**+5.7**
	comp=Z,2.1nm,0.6s,baz=329,slow=30,SNR=3.1						
AKASG	**Malin Array Be**	**28.60**	**322**	P	**P**	**02 31 18.9**	**-0.3**
	comp=Z,249nm,1.0s,mb5.9						
AKASG				S	**S**	**02 36 11.3**	**+5.6**
MMB	**Musomiste**	**28.64**	**301**	*i* P	**P**	**02 31 19.0**	**-0.7**
SRS	**Serrai**	**28.65**	**300**	*e*P	**P**	**02 31 18.9**	**-0.8**
MTUR	**Matau**	**28.66**	**309**	P	**P**	**02 31 21.6**	**+1.8**
XOR	**Xorichti**	**28.69**	**297**	*e*P	**P**	**02 31 19.6**	**-0.6**
SOH	**Sokhos**	**28.78**	**300**	*e*P	**P**	**02 31 20.3**	**-0.6**
SOKR	**Solikamsk**	**28.80**	**360**	*c* *i*P	**P**	**02 31 22.0**	**+1.1**
SOKR				S	**S**	**02 36 14.1**	**+5.2**
SOKR				pmax	pmax		
	comp=Z,330nm,1.4s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,147µm,19.0s,MS6.6						
SOKR	**Solikamsk**	**28.80**	**360**	⇑*i*P	**P**	**02 31 22.0**	**+1.1**
	comp=Z,330nm,1.4s,mb5.9						
SOKR				S	**S**	**02 36 14.1**	**+5.2**
SOKR				LR	LR		
	comp=Z,147µm,19.0s,MS6.6						
THE	**Thessaloniki**	**29.04**	**299**	*e*P	**P**	**02 31 23.8**	**+0.6**
TRD	**Trivandrum**	**29.06**	**135**	*e*P	**P**	**02 31 26.0**	**+2.3**
TRD				*e*		02 44 46.5	
KKB	**Krupnik**	**29.17**	**302**	*i* P	**P**	**02 31 23.5**	**-0.9**
KNT	**Kendrikon**	**29.18**	**300**	*e*P	**P**	**02 31 24.1**	**-0.4**
VTS	**Vitosha**	**29.23**	**303**	*i* P	**P**	**02 31 25.0**	**0.0**
VTS	**Vitosha**	**29.23**	**303**	⇓P	**P**	**02 31 26.2**	**+1.2**
CRAR	**CRAIOVA**	**29.25**	**307**	⇓P	**P**	**02 31 27.0**	**+1.9**
CAL	**Calcutta**	**29.27**	**99**	*e*P	**P**	**02 31 26.5**	**+1.0**
CAL				*e*		02 36 27.7	
CAL				*e*		02 37 09.5	
AGG	**Agios Georgios**	**29.32**	**296**	*e*P	**P**	**02 31 26.0**	**+0.2**
LIT	**Litokhoron**	**29.32**	**298**	*e*P	**P**	**02 31 23.1**	**-2.7**
BURAR	**Bucovina Array**	**29.43**	**314**	P	**P**	**02 31 29.0**	**+2.2**
BURAR	**Bucovina Array**	**29.43**	**314**	⇑P	**P**	**02 31 27.3**	**+0.5**
BURAR	**Bucovina Array**	**29.43**	**314**	P	**P**	**02 31 29.0**	**+2.2**
VAY	**Valandovo**	**29.45**	**300**	*i* P	**P**	**02 31 29.9**	**+3.0**
VAY				*i* S	**S**	**02 36 19.8**	**+0.5**
VAY				*i* SS	SS	02 38 02.2	+10
ITM	**Ithomi**	**29.51**	**292**	*e*P	**P**	**02 31 27.7**	**+0.1**
GRG	**Griva**	**29.51**	**300**	*e*P	**P**	**02 31 26.8**	**-0.7**
LSA	**Lhasa**	**29.63**	**83**	P	**P**	**02 31 28.4**	**-0.3**
LSA				AP	pP	02 31 36.1	+3.6
LSA				XP	sP	02 31 38.6	+4.4
LSA				S	**S**	**02 36 26.8**	**+4.5**
LSA				SCS	ScS	02 42 01.0	-6.2
LSA				LR	LR		
	comp=N,51µm,22.2s,MS6.3						
LSA				LR	LR		
	comp=E,49µm,18.0s,MS6.3						
LSA				LR	LR		
	comp=Z,58µm,16.2s,MS6.3						
LSA	**Lhasa**	**29.63**	**83**	*e*P	**P**	**02 31 28.7**	**0.0**
LSA				pmax	pmax		
	comp=Z,662nm,1.6s,mb6.1						
LSA	**Lhasa**	**29.63**	**83**	*e*P	**P**	**02 31 29.2**	**+0.5**
FNA	**Florina**	**30.25**	**299**	*e*P	**P**	**02 31 34.6**	**+0.5**
BARS	**Barje**	**30.27**	**303**	⇓*i*P	**P**	**02 31 32.3**	**-2.0**
SKO	**Skopje**	**30.39**	**301**	*e*P	**P**	**02 31 33.9**	**-1.5**
SKO				*i*		02 31 41.0	
SKO				*i* S	**S**	**02 36 31.1**	**-3.3**
SKO				pmax	pmax		
	comp=Z,44nm,0.6s,mb5.4						
SKO	**Skopje**	**30.39**	**301**	*e*P	**P**	**02 31 33.9**	**-1.5**
	comp=Z,0.0nm,0.6s						
SKO				*i*		02 31 41.0	
	comp=Z,0.1nm,0.6s						
SKO				*i* S	**S**	**02 36 31.1**	**-3.3**
BOLS	**Boljevac**	**30.40**	**305**	⇓*i*P	**P**	**02 31 34.6**	**-0.8**
NVS	**Novosibirsk**	**30.56**	**30**	*i* P	**P**	**02 31 36.5**	**-0.2**
NVS				*i*		02 32 37.2	
NVS				*i* S	**S**	**02 36 36.5**	**-0.4**
NVS				pmax	pmax		
	comp=N,829nm,1.5s						
NVS				pmax	pmax		
	comp=E,250nm,1.5s						
NVS				pmax	pmax		
	comp=Z,734nm,1.5s,mb6.3						
NVS				pmax	pmax		
	comp=N,425nm,1.9s						
NVS				pmax	pmax		
	comp=E,359nm,1.9s						
NVS				pmax	pmax		
	comp=Z,440nm,1.9s,mb6.0						
NVS				smax			
	comp=N,478nm,2.0s						
NVS				smax			
	comp=E,587nm,2.7s						
NVS	**Novosibirsk**	**30.56**	**30**	*i* P	**P**	**02 31 36.5**	**-0.2**
	comp=E,734nm,1.5s,mb6.3						
NVS				*i*		02 32 37.2	
NVS				*i* S	**S**	**02 36 36.5**	**-0.4**
ZAL	**Zalesovo**	**30.69**	**33**	P	**P**	**02 31 37.9**	**0.0**
	comp=E,155nm,0.7s,mb6.0,baz=237,slow=9.1,SNR=242						
ZAL				LR	LR	02 45 21.2	
	comp=E,51µm,20.8s,MS6.2,baz=238,slow=39						
ZAL				P3KPbc		03 03 27.1	
	comp=E,1.1nm,0.3s,baz=78,slow=4.6,SNR=5.4						
OHR	**Ohrid**	**30.73**	**300**	*i* P	**P**	**02 31 38.7**	**+0.3**
OHR				*i* S	**S**	**02 36 42.4**	**+2.7**
OHR	**Ohrid**	**30.73**	**300**	*i* P	**P**	**02 31 38.7**	**+0.3**
OHR				*i*		02 31 58.4	
OHR				*i* S	**S**	**02 36 42.4**	**+2.7**
OHR				*i*		02 39 25.8	
IGT	**Igoumenitsa**	**30.91**	**296**	*e*P	**P**	**02 31 38.1**	**-1.8**
SVIS	**Svilajnac**	**31.03**	**306**	⇑*i*P	**P**	**02 31 40.7**	**-0.2**
LVV	**L'vov**	**31.06**	**317**	*e*P	**P**	**02 31 42.2**	**+1.0**
LVV				*e*		02 32 53.9	
LVV				*e*S	**S**	**02 36 45.3**	**+0.5**
LVV				*e*SS	SS	02 38 32.3	+2.9
BZS	**Buzias**	**31.09**	**308**	P	**P**	**02 31 42.9**	**+1.4**
BZS	**Buzias**	**31.09**	**308**	⇑P	**P**	**02 31 43.0**	**+1.5**
SRN	**Sarande**	**31.19**	**297**	*i* p	**P**	**02 31 40.8**	**-1.6**
AGT	**Agartala**	**31.27**	**94**	⇓*i*P	**P**	**02 31 45.0**	**+1.7**
AGT				*i*		02 34 01.0	
GRUS	**Gruza**	**31.29**	**305**	⇑*i*P	**P**	**02 31 42.7**	**-0.5**
QSH	**Qafa e Shtames**	**31.46**	**300**	*i* p	**P**	**02 31 45.1**	**+0.4**
MNK	**Minsk**	**31.49**	**327**	*e*P	**P**	**02 31 42.0**	**-2.9**
PVY	**Plav**	**31.57**	**302**	⇑*i*P	**P**	**02 31 44.2**	**-1.6**
UZH	**Uzhgorod**	**31.63**	**314**	*e*P	**P**	**02 31 48.0**	**+1.8**
UZH				*e*S	**S**	**02 37 01.0**	**+7.3**
UZH				MLR	MLR		
	comp=Z,45µm,17.0s,MS6.2						
IVA	**Berane**	**31.67**	**303**	⇑*i*P	**P**	**02 31 44.8**	**-1.9**
KOLS	**Kolonicke sedl**	**31.76**	**315**	*e*P	**P**	**02 31 47.2**	**-0.1**
KOLS				*e*sP	sP	02 31 55.1	+2.3
KOLS				*e*PP	PP	02 32 57.4	+4.8
KWP	**Kalwaria**	**31.77**	**316**	*e*P	**P**	**02 31 47.6**	**+0.2**
KWP				*e*S	**S**	**02 37 15.0**	**+19**
KWP	**Kalwaria**	**31.77**	**316**	*e*P	**P**	**02 31 47.6**	**+0.3**
KWP				*e*S	**S**	**02 37 15.0**	**+19**
KWP				MLR	MLR	02 47 10.0	
	comp=Z,62µm,23.5s,MS6.2						
DIVS	**Divcibare**	**31.84**	**305**	⇑*i*P	**P**	**02 31 48.0**	**-0.1**
NVSS	**Nova Varos 2**	**31.93**	**304**	⇓*i*P	**P**	**02 31 46.8**	**-2.1**
ULC	**Ulcinj**	**32.00**	**301**	⇑*i*P	**P**	**02 31 44.6**	**-4.9**
TTG	**Podgorica**	**32.06**	**302**	⇑*i*P	**P**	**02 31 46.1**	**-4.0**
PLE	**Pljevlja**	**32.12**	**304**	⇑*i*P	**P**	**02 31 44.4**	**-6.1**
CRVS	**Cervenica-Dubn**	**32.24**	**314**	*e*P	**P**	**02 31 52.9**	**+1.4**
CRVS				*e*pP	pP	02 31 57.4	+2.0
CRVS				*e*S	**S**	**02 36 57.3**	**-6.0**
CRVS				*e*SS	SS	02 39 19.1	+22
CRVS				*e*		02 42 18.4	
BUM	**Brajici-Budva**	**32.31**	**301**	⇑*i*P	**P**	**02 31 49.7**	**-2.5**
NKY	**Niksic**	**32.32**	**302**	⇑*i*P	**P**	**02 31 47.2**	**-5.1**
UPM	**Unac-Piva**	**32.45**	**303**	⇑*i*P	**P**	**02 31 47.0**	**-6.4**
IDID	**Didziasalis**	**32.49**	**328**	*e*P	**P**	**02 31 53.9**	**+0.3**
IDID				AMPb	AMB	02 32 04.7	
	comp=Z,150nm,1.5s,mb5.6						
PKSN	**Nyarlorinc**	**32.62**	**310**	*e*P	**P**	**02 32 01.9**	**+7.1**
HCY	**Herceg Novi**	**32.63**	**302**	⇑*i*P	**P**	**02 31 53.0**	**-2.0**
BRY	**Bratogost**	**32.66**	**303**	⇑*i*P	**P**	**02 31 51.3**	**-4.0**
LCI	**Lecce**	**32.68**	**298**	P	**P**	**02 31 56.5**	**+1.1**
KECS	**Kecovo**	**32.71**	**313**	*e*P	**P**	**02 31 55.9**	**+0.3**
KECS					pP	02 31 59.2	-0.2
KECS				*e*		02 32 02.6	
KECS				*e*		02 33 10.4	
KECS	**Kecovo**	**32.71**	**313**	*e*P	**P**	**02 31 55.9**	**+0.3**
KECS				*e*sP	sP	02 32 02.6	+1.5
KECS				*e*PP	PP	02 33 10.4	+5.5
KECS				*e*PCP	PcP	02 34 27.1	-14
IIGN	**Ignalina**	**32.75**	**328**	*e*P	**P**	**02 31 56.3**	**+0.5**
IIGN				AMPb	AMB	02 32 06.4	
	comp=Z,153nm,1.0s,mb5.9						
PSZ	**Piszkesteto**	**32.90**	**312**	*e*P	**P**	**02 31 56.9**	**-0.4**
PSZ				pmax	pmax		
	comp=Z,96nm,0.8s,mb5.8						
PSZ	**Piszkesteto**	**32.90**	**312**	*e*P	**P**	**02 31 58.9**	**+1.6**
ISAL	**Salakas**	**32.92**	**328**	*e*P	**P**	**02 31 57.8**	**+0.5**
IZAR	**Zarasai**	**32.97**	**328**	*i* P	**P**	**02 31 58.2**	**+0.4**
IZAR				AMPb	AMB	02 32 11.3	
	comp=Z,190nm,1.5s,mb5.8						
NIE	**Niedzica**	**33.13**	**315**	*e*P	**P**	**02 32 00.1**	**+0.8**
PKSM	**Moragy**	**33.26**	**309**	*e*P	**P**	**02 32 00.0**	**-0.4**
PKSM	**Moragy**	**33.26**	**309**	⇑P	**P**	**02 31 58.8**	**-1.6**
STON	**Ston**	**33.27**	**302**	*i* P	**P**	**02 32 04.4**	**+3.8**
IMP	**Imphal**	**33.28**	**91**	*e*P	**P**	**02 32 02.0**	**+1.2**
BUD	**Budapest**	**33.34**	**311**	P	**P**	**02 32 02.4**	**+1.3**
BUD	**Budapest**	**33.34**	**311**	*e*P	**P**	**02 32 02.6**	**+1.5**
PKS8	**Sarbogard**	**33.40**	**310**	*e*P	**P**	**02 32 02.8**	**+1.2**
SUW	**Suwalki**	**33.49**	**324**	*e*P	**P**	**02 32 02.3**	**-0.1**
SUW				*e*pP	pP	02 32 10.9	+4.7
SUW				*e*S	**S**	**02 37 34.6**	**+12**
SUW	**Suwalki**	**33.49**	**324**	*e*P	**P**	**02 32 02.3**	**-0.1**
SUW				*e*pP	pP	02 32 10.8	+4.6
SUW				*e*S	**S**	**02 37 34.6**	**+12**
SUW				MLR	MLR	02 45 50.5	
	comp=Z,104µm,31.1s,MS6.4						
SUW	**Suwalki**	**33.49**	**324**	*e*P	**P**	**02 31 59.6**	**-2.8**
	comp=Z,1µm,1.1s,mb6.8						
SUW				*e*S	**S**	**02 37 23.6**	**+1.0**
RHK1	**Bakonya**	**33.61**	**308**	*e*P	**P**	**02 32 04.1**	**+0.6**
TIP	**Timpagrande**	**33.65**	**296**	*e*P	**P**	**02 32 03.9**	**0.0**
LTRZ	**Laterza**	**33.68**	**298**	*e*P	**P**	**02 32 03.8**	**-0.3**
PKSG		**33.72**	**310**	*e*P	**P**	**02 32 04.2**	**-0.2**
OJC	**Ojcow**	**33.73**	**316**	*e*P	**P**	**02 32 04.2**	**-0.3**
OJC				*e*pP	pP	02 32 09.3	+1.0
OJC				*e*S	**S**	**02 37 30.1**	**+3.8**
OJC				*e*SS	SS	02 39 55.9	+24
OJC				MLR	MLR	02 48 24.1	
	comp=Z,46µm,24.6s,MS6.1						
VYHS	**Vyhne**	**33.75**	**313**	*e*P	**P**	**02 32 06.5**	**+1.8**
VYHS				*e*		02 33 29.9	
VYHS				*e*S	**S**	**02 37 32.3**	**+5.6**
VYHS				*e*		02 42 30.2	
VYHS	**Vyhne**	**33.75**	**313**	*e*P	**P**	**02 32 06.5**	**+1.8**
VYHS				*e*PP	PP	02 33 29.9	+12
VYHS				*e*S	**S**	**02 37 32.3**	**+5.6**
VYHS				*e*SS	SS	02 40 08.1	+36
VYHS				*e*SCS	ScS	02 42 30.2	+2.7
WAR	**Warsaw**	**33.82**	**320**	*e*P	**P**	**02 32 06.4**	**+1.2**
WAR				*e*PP	PP	02 33 22.6	+4.1
WAR				*e*S	**S**	**02 37 33.2**	**+5.5**
WAR				MLR	MLR	02 45 25.2	
	comp=Z,49µm,29.1s,MS6.1						
SRO2	**Moca**	**33.82**	**311**	*e*P	**P**	**02 32 04.3**	**-1.0**
SRO	**Srobarova**	**33.89**	**311**	*e*P	**P**	**02 32 07.1**	**+1.2**
SRO				*e*PP	PP	02 33 35.8	+16
GRI	**Girifalco**	**33.91**	**295**	*e*P	**P**	**02 32 05.3**	**-0.8**
ORI	**Oriolo Calabro**	**33.93**	**297**	P	**P**	**02 32 08.2**	**+1.9**
PUL	**Pulkovo**	**34.01**	**336**	⇑*i*P	**P**	**02 32 09.5**	**+2.7**
PUL				*e*		02 33 23.1	
PUL				*e*		02 34 48.5	
PUL				*e*S	**S**	**02 37 30.3**	**-0.3**
PUL				pmax	pmax		
	comp=N,739nm,0.9s						
PUL				pmax	pmax		
	comp=Z,546nm,0.9s,mb6.5						
PUL				smax			
	comp=N,11µm,6.0s						
PUL				MLR	MLR		
	comp=N,36µm,14.0s,MS6.3						
PUL				MLR	MLR		
	comp=Z,39µm,14.0s,MS6.3						
PUL				MLR	MLR		
	comp=E,31µm,18.0s,MS6.3						
PUL	**Pulkovo**	**34.01**	**336**	⇑*i*P	**P**	**02 32 09.5**	**+2.7**
	comp=E,546nm,0.9s,mb6.5						
PUL				*e*		02 33 23.1	
PUL				*e*		02 34 48.5	
PUL				*e*S	**S**	**02 37 30.3**	**-0.3**
PUL				LR	LR		
	comp=Z,39µm,14.0s,MS6.3						
SOI	**Samo**	**34.19**	**294**	*e*P	**P**	**02 32 08.7**	**+0.2**
SCLL	**Scilla**	**34.45**	**294**	P	**P**	**02 32 11.5**	**+0.7**
MTTG	**Motta San Giov**	**34.47**	**293**	*e*P	**P**	**02 32 11.4**	**+0.4**
JAVC	**Velka Javorina**	**34.60**	**313**	P	**P**	**02 32 12.3**	**+0.3**
OKC	**Ostrava-Krasne**	**34.60**	**315**	*e*P	**P**	**02 32 11.0**	**-1.0**
OKC				*e*x	x	02 33 45.4	
OKC				*e*S	**S**	**02 37 45.0**	**+5.2**
OKC				AMS	AMS	02 50 30.0	
	comp=Z,31µm,15.4s						
OKC	**Ostrava-Krasne**	**34.60**	**315**	P	**P**	**02 32 11.0**	**-1.0**
OKC				*e*S	**S**	**02 37 41.0**	**+1.2**
MGR	**Morigerati**	**34.62**	**297**	*e*P	**P**	**02 32 11.5**	**-0.8**
SISC	**Sisak**	**34.64**	**307**	*i* P	**P**	**02 32 15.9**	**+3.5**
RAC	**Raciborz**	**34.65**	**315**	*e*P	**P**	**02 32 12.6**	**+0.2**
RAC				*e*S	**S**	**02 37 41.4**	**+0.8**
RAC				MLR	MLR		
	comp=Z,55µm,18.8s,MS6.3						
RAC	**Raciborz**	**34.65**	**315**	*e*P	**P**	**02 32 12.6**	**+0.2**
RAC				*e*S	**S**	**02 37 41.4**	**+0.8**
RAC				LMN		02 49 32.9	
RAC				MLR	MLR	02 50 59.6	
RAC				LME		02 51 03.9	
	comp=Z,79µm,20.0s						
SMOL	**Smolenice**	**34.65**	**312**	*e*P	**P**	**02 32 13.5**	**+1.1**
SMOL				*e*	pP	02 32 19.2	+2.9
SMOL				*e*		02 34 42.6	
SMOL				*e*S	**S**	**02 37 34.4**	**-6.3**
SMOL	**Smolenice**	**34.65**	**312**	*e*P	**P**	**02 32 13.5**	**+1.1**
SMOL				*e*sP	sP	02 32 19.2	+1.3
SMOL				*e*		02 33 37.4	
SMOL				*e*PCP	PcP	02 34 42.6	-4.2
SMOL				*e*S	**S**	**02 37 34.4**	**-6.3**
RGNG	**Rignano Grg**	**34.69**	**300**	P	**P**	**02 32 14.7**	**+1.9**
MRLC	**Muro Lucano**	**34.70**	**298**	*e*P	**P**	**02 32 13.0**	**0.0**
ZST	**Bratislava**	**34.78**	**311**	*e*P	**P**	**02 32 15.3**	**+1.8**
ZST				*e*	pP	02 32 19.0	+1.7
ZST				*e*		02 33 43.2	
ZST				*e*S	**S**	**02 37 47.1**	**+4.5**
ZST				*e*		02 42 39.0	
ZST	**Bratislava**	**34.78**	**311**	*e*P	**P**	**02 32 15.3**	**+1.8**
ZST				*e*pP	pP	02 32 19.0	+1.7
ZST				*e*		02 33 43.2	
ZST				*e*S	**S**	**02 37 47.1**	**+4.5**
ZST				*e*SS	SS	02 40 53.0	+57
ZST				*e*SCS	ScS	02 42 39.0	+6.1
SGO	**Sicignano**	**34.83**	**298**	*e*P	**P**	**02 32 13.6**	**-0.4**
AGST	**Augusta-Monte**	**34.86**	**292**	*e*P	**P**	**02 32 14.9**	**+0.6**
FG5	**Orsara di Pugl**	**34.90**	**299**	*e*P	**P**	**02 32 17.5**	**+2.9**
MORC	**Moravsky Berou**	**34.95**	**314**	*e*P	**P**	**02 32 14.0**	**-1.0**
MORC				pmax	pmax		
	comp=Z,115nm,0.9s,mb5.8						
MORC	**Moravsky Berou**	**34.95**	**314**	*e*P	**P**	**02 32 14.0**	**-1.0**
	comp=Z,115nm,0.9s,mb5.8						
MORC	**Moravsky Berou**	**34.95**	**314**	⇑P	**P**	**02 32 16.2**	**+1.2**
SOP	**Sopron**	**35.00**	**310**	⇓*e*P	**P**	**02 32 16.6**	**+1.2**
MRB1	**Monte Rocchett**	**35.11**	**299**	P	**P**	**02 32 18.6**	**+2.1**
SLNA	**Salina**	**35.15**	**294**	*e*P	**P**	**02 32 16.8**	**0.0**
CIGN	**Sant'Elia a Pi**	**35.20**	**300**	P	**P**	**02 32 19.2**	**+2.0**
PSB1	**Pescosannita**	**35.24**	**299**	P	**P**	**02 32 19.7**	**+2.2**
VRAC	**Vranov**	**35.41**	**313**	P	**P**	**02 32 18.6**	**-0.2**
VRAC				S	**S**	**02 37 56.3**	**+4.0**
VRAC				pmax	pmax		
	comp=Z,45nm,1.0s						
VRAC				MLR	MLR		
	comp=Z,52µm,19.6s						
VRAC	**Vranov**	**35.41**	**313**	P	**P**	**02 32 18.6**	**-0.3**
	comp=Z,45nm,1.0s,mb5.4,baz=104,slow=11,SNR=22						
VRAC				S	**S**	**02 37 56.3**	**+4.0**
	comp=Z,2.8nm,0.5s,baz=72,slow=21,SNR=2.2						
VRAC				LR	LR	02 49 50.1	
	comp=Z,52µm,19.6s,MS6.3,baz=336,slow=41						
VRAC	**Vranov**	**35.41**	**313**	*e*P	**P**	**02 32 19.0**	**+0.2**
VRAC				*e*S	**S**	**02 37 55.0**	**+2.7**
BOJS	**Bojanci**	**35.42**	**306**	*e*P	**P**	**02 32 18.8**	**-0.2**
BOJS				*e*pP	pP	02 32 25.4	+2.4
BOJS				*e*PP	PP	02 33 39.6	+0.8
KRUC	**Moravsky**	**35.46**	**313**	P	**P**	**02 32 19.9**	**+0.6**
VAE	**Valguarnera**	**35.50**	**293**	P	**P**	**02 32 21.7**	**+1.9**
	comp=Z,140nm,0.9s,mb5.9,baz=339,slow=4.1,SNR=14						
VAE				LR	LR	02 47 10.0	
	comp=Z,34µm,18.9s,MS6.1,baz=64,slow=37						
ARSA	**Arzberg**	**35.58**	**309**	⇑*i*P	**P**	**02 32 19.9**	**-0.5**
	comp=Z,2µm,4.0s						
ARSA	**Arzberg**	**35.58**	**309**	*e*P	**P**	**02 32 18.2**	**-2.2**
	comp=Z,78nm,1.0s,mb5.6						
CII	**Carovilli**	**35.65**	**300**	*e*P	**P**	**02 32 21.2**	**+0.2**
GIB	**Gibilmanna**	**35.79**	**293**	P	**P**	**02 32 24.7**	**+2.5**
RFI	**Roccamonfina**	**35.87**	**299**	*e*P	**P**	**02 32 23.1**	**+0.2**
DPC	**Dobruska-Polom**	**35.88**	**315**	*e*P	**P**	**02 32 22.0**	**-0.8**
DPC				*e*S	**S**	**02 37 58.9**	**-0.7**
DPC				MLR	MLR		
	comp=Z,34µm,20.2s,MS6.1						
DPC	**Dobruska-Polom**	**35.88**	**315**	*e*P	**P**	**02 32 22.0**	**-0.8**
DPC				*e*PP	PP	02 33 55.2	+11
DPC				*e*S	**S**	**02 37 58.9**	**-0.7**
DPC				AMS	AMS	02 51 30.0	
	comp=Z,34µm,20.2s						
DPC	**Dobruska-Polom**	**35.88**	**315**	P	**P**	**02 32 22.0**	**-0.8**
DPC				S	**S**	**02 37 58.9**	**-0.7**
GTA	**Gaotai**	**35.95**	**64**	⇑*i*P	**P**	**02 32 25.1**	**+1.5**
GTA				AP	pP	02 32 29.3	+1.8
GTA				XP	sP	02 32 31.6	+2.5
GTA				PP	PP	02 33 47.8	+2.5
GTA				PPP	PPP	02 34 07.4	+2.2
GTA				S	**S**	**02 38 04.3**	**+3.4**
GTA				XS		02 38 11.9	
GTA				SCP		02 38 36.5	
GTA				PCS		02 38 38.9	
GTA				SS	SS	02 40 28.4	+5.5
GTA				AMB	AMB		
	comp=Z,146nm,1.1s,mb5.8						
GTA				AMB	AMB		
	comp=Z,8µm,4.2s						
GTA				LR	LR		
	comp=N,66µm,17.1s,MS6.5						
GTA				LR	LR		
	comp=E,35µm,15.2s,MS6.5						
GTA				LR	LR		
	comp=Z,50µm,17.9s,MS6.3						
GTA	**Gaotai**	**35.95**	**64**	⇑*i*P	**P**	**02 32 25.1**	**+1.5**
	comp=Z,150nm,1.1s,mb5.8						
GTA				pP	pP	02 32 29.3	+1.8
GTA				sP	sP	02 32 31.6	+2.5
GTA				PP	PP	02 33 47.8	+2.5
GTA				S	**S**	**02 38 04.3**	**+3.4**
GTA				sS		02 38 11.9	
GTA				ScP		02 38 36.5	
GTA				PcS		02 38 38.9	
GTA				SS	SS	02 40 28.4	+5.5
GTA				LR	LR		
	comp=Z,50µm,17.9s,MS6.3						
INTR	**Introdacqua**	**35.97**	**300**	P	**P**	**02 32 25.9**	**+2.2**
LJU	**Ljubljana**	**36.02**	**307**	*e*P	**P**	**02 32 23.8**	**-0.3**
LJU				*e*pP	pP	02 32 30.3	+2.4
LJU				*e*S	**S**	**02 38 09.7**	**+7.8**
LJU				*e*SS	SS	02 40 50.0	+26
SDI	**San Donato**	**36.02**	**300**	*e*P	**P**	**02 32 22.2**	**-2.0**
KSP	**Ksiaz**	**36.05**	**316**	*e*P	**P**	**02 32 23.3**	**-1.0**
KSP				*e**PP	pP	02 32 29.9	+1.8
KSP				*e*S	**S**	**02 37 59.0**	**-3.2**
KSP				MLR	MLR		
	comp=Z,68µm,23.1s,MS6.3						
KSP	**Ksiaz**	**36.05**	**316**	*e*P	**P**	**02 32 23.3**	**-1.0**
KSP				*e*pP	pP	02 32 29.9	+1.8
KSP				*e*PP	PP	02 33 54.0	+7.7
KSP				*e*S	**S**	**02 37 59.0**	**-3.2**
KSP				LR	LR		
	comp=Z,68µm,23.1s,MS6.3						
KSP	**Ksiaz**	**36.05**	**316**	*e*P	**P**	**02 32 24.2**	**-0.1**
KSP				*e*pP	pP	02 32 33.2	+5.1
KSP				*e*PP	PP	02 33 57.5	+11
KSP				*e*PP	PP	02 33 58.3	+12
KSP				*e*S	**S**	**02 38 09.0**	**+6.8**
KSP				MLR	MLR	02 47 54.7	
	comp=Z,58µm,23.1s,MS6.3						
JOF	**Joensuu**	**36.08**	**340**	*e*p	**P**	**02 32 23.4**	**-1.0**
	comp=Z,359nm,1.0s,mb6.3						
OBKA	**Obir**	**36.09**	**308**	⇑*i*P	**P**	**02 32 24.2**	**-0.4**

	comp=Z,2µm,3.4s						
OBKA	**Obir**	**36.09**	**308**	*e*P	**P**	**02 32 22.5**	**-2.1**
	comp=Z,86nm,1.2s,mb5.6						
OBKA				*e*S	**S**	**02 38 06.9**	**+4.0**
MCT	**Mte Cammarata**	**36.11**	**293**	*e*P	**P**	**02 32 28.7**	**+3.8**
UPC	**Upice**	**36.11**	**315**	*e*P	**P**	**02 32 25.9**	**+1.1**
UPC				*e*x	x	02 33 57.0	
VVLD	**Villa Vallelon**	**36.17**	**300**	P	**P**	**02 32 26.8**	**+1.4**
MPG	**Monte Pellegri**	**36.31**	**294**	P	**P**	**02 32 28.1**	**+1.5**
AOI	**Ancona**	**36.33**	**303**	P	**P**	**02 32 28.9**	**+2.2**
GKP	**Gorka Klasztor**	**36.34**	**320**	*e*P	**P**	**02 32 27.6**	**+0.9**
GKP				*e*pP	pP	02 32 35.7	+5.1
GKP				*e*PP	PP	02 33 54.1	+4.1
GKP				*e*S	**S**	**02 38 13.4**	**+6.7**
GKP				MLR	MLR	02 50 41.2	
	comp=Z,76µm,19.7s,MS6.5						
PTQR	**Pietraquaria**	**36.35**	**300**	*e*P	**P**	**02 32 27.8**	**+0.9**
AQU	**L'Aquila**	**36.37**	**301**	P	**P**	**02 32 28.5**	**+1.4**
AQU				pmax	pmax		
	comp=Z,660nm,1.1s,mb6.5						
AQU	**L'Aquila**	**36.37**	**301**	*e*P	**P**	**02 32 28.6**	**+1.6**
GUAR	**Guarcino**	**36.40**	**300**	P	**P**	**02 32 28.1**	**+0.8**
USI	**Ustica**	**36.44**	**295**	*e*P	**P**	**02 32 29.3**	**+1.6**
VOY	**Vojsko**	**36.45**	**307**	*e*P	**P**	**02 32 26.8**	**-0.9**
VOY				*e*	pP	02 32 29.5	-2.1
VOY				*e*		02 32 32.9	
VOY	**Vojsko**	**36.45**	**307**	*e*P	**P**	**02 32 26.8**	**-0.9**
VOY				*e*pP	pP	02 32 30.3	-1.3
TRI	**Trieste**	**36.49**	**306**	*e*P	**P**	**02 32 28.7**	**+0.7**
MOA	**Molln**	**36.54**	**310**	⇑*i*P	**P**	**02 32 27.5**	**-1.0**
	comp=Z,2µm,4.1s						
MOA	**Molln**	**36.54**	**310**	*e*P	**P**	**02 32 26.2**	**-2.3**
	comp=Z,140nm,1.0s,mb5.8						
NRCA	**Norcia**	**36.62**	**302**	*e*P	**P**	**02 32 29.6**	**+0.4**
MFNL	**Monte Finestre**	**36.67**	**293**	P	**P**	**02 32 31.9**	**+2.3**
FINES	**FINESS Array B**	**36.68**	**336**	P	**P**	**02 32 28.8**	**-0.7**
	comp=Z,54nm,0.8s,mb5.5,baz=133,slow=10,SNR=84						
FINES				LR	LR	02 51 14.8	
	comp=Z,30µm,20.0s,MS6.1,baz=134,slow=42						
ROBS	**Robic**	**36.75**	**307**	*e*P	**P**	**02 32 30.1**	**-0.2**
ROBS	**Robic**	**36.75**	**307**	*e*P	**P**	**02 32 30.0**	**-0.2**
KMBO	**Kilima Mbogo**	**36.77**	**214**	P	**P**	**02 32 32.3**	**+1.5**
	comp=Z,225nm,1.1s,mb5.9,baz=27,slow=11,SNR=40						
KMBO				S	**S**	**02 38 15.2**	**+1.4**
	comp=Z,3.2nm,1.0s,baz=2.1,slow=11,SNR=2.1						
KMBO				LR	LR	02 47 54.6	
	comp=Z,87µm,18.4s,MS6.6,baz=32,slow=37						
SNTG	**Esanatoglia**	**36.78**	**302**	*e*P	**P**	**02 32 23.9**	**-6.6**
MTGR	**Montagna Grand**	**36.79**	**293**	P	**P**	**02 32 31.6**	**+0.9**
ARV	**Arcevia**	**36.80**	**303**	*e*P	**P**	**02 32 31.1**	**+0.4**
PRU	**Pruhonice**	**36.87**	**314**	*e*P	**P**	**02 32 31.3**	**+0.1**
PRU				*e*PP	PP	02 34 02.1	+5.0
PRU				*e*S	**S**	**02 38 18.8**	**+3.9**
PRU				AMS	AMS	02 50 00.0	
	comp=Z,47µm,17.8s						
PTCC	**Patocco-Chiusa**	**36.88**	**308**	*e*P	**P**	**02 32 30.7**	**-0.6**
MA9	**Marino**	**36.88**	**300**	*e*P	**P**	**02 32 33.0**	**+1.6**
MNS	**Montasola**	**36.90**	**301**	*e*P	**P**	**02 32 31.4**	**-0.2**
FSSB	**Fossombrone**	**36.94**	**303**	*e*P	**P**	**02 32 31.8**	**0.0**
GMNA	**Gemona**	**36.94**	**307**	*e*P	**P**	**02 32 31.0**	**-0.8**
PRA	**Prague**	**36.96**	**314**	P	**P**	**02 32 34.0**	**+2.0**
PRA				AMS	AMS	02 53 00.0	
PVCC	**Panska Ves**	**37.00**	**315**	*e*P	**P**	**02 32 31.6**	**-0.7**
PVCC				AMS	AMS	02 49 40.0	
	comp=Z,53µm,21.0s						
KBA	**Koelnbreinsper**	**37.00**	**309**	⇑*i*P	**P**	**02 32 31.5**	**-0.8**
	comp=Z,1µm,3.1s						
KBA	**Koelnbreinsper**	**37.00**	**309**	⇑*i*P	**P**	**02 32 31.5**	**-0.8**
KBA				pmax	pmax		
	comp=Z,1µm,3.1s						
KBA	**Koelnbreinsper**	**37.00**	**309**	*e*P	**P**	**02 32 30.2**	**-2.1**
	comp=Z,135nm,1.0s,mb5.7						
KBA				*e*S	**S**	**02 38 17.5**	**+0.6**
KAF	**Kangasniemi**	**37.06**	**337**	*e*p	**P**	**02 32 32.3**	**-0.4**
	comp=Z,57nm,0.8s,mb5.5,baz=131,slow=8.7						
KAF	**Kangasniemi**	**37.06**	**337**	*e*P	**P**	**02 32 32.3**	**-0.4**
KAF				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.5						
GERES	**GERESS Array B**	**37.13**	**312**	P	**P**	**02 32 32.6**	**-0.8**
	comp=Z,30nm,0.9s,mb5.1,baz=117,slow=9.0,SNR=48						
GERES				S	**S**	**02 38 22.5**	**+3.8**
	comp=Z,3.1nm,1.0s,baz=159,slow=8.4,SNR=2.2						
RSM	**Repubblica di**	**37.20**	**303**	*e*P	**P**	**02 32 33.2**	**-0.8**
KHC	**Kasperske Hory**	**37.27**	**312**	*e*P	**P**	**02 32 32.0**	**-2.6**
KHC				*e*	pP	02 32 34.5	-3.9
KHC				*e*		02 34 07.1	
KHC				*e*S	**S**	**02 38 24.1**	**+3.1**
KHC				MLR	MLR		
	comp=Z,36µm,19.5s,MS6.2						
KHC	**Kasperske Hory**	**37.27**	**312**	*e*P	**P**	**02 32 32.0**	**-2.6**
KHC				pP	pP	02 32 34.5	-3.9
KHC				*e*PP	PP	02 34 07.1	+5.1
KHC				*e*S	**S**	**02 38 24.1**	**+3.1**
KHC				AMS	AMS	02 51 30.0	
	comp=Z,36µm,19.5s						
FVI	**Forni Avoltri**	**37.30**	**308**	*e*P	**P**	**02 32 36.0**	**+1.1**
BRG	**Berggiesshubel**	**37.48**	**315**	*i* P	**P**	**02 32 37.3**	**+1.0**
BRG				*i*		02 32 43.2	
BRG				*e*		02 33 59.0	
BRG				*i* S	**S**	**02 38 25.0**	**+0.8**
BRG				*i* SS	SS	02 40 52.0	-4.9
BRG				pmax	pmax		
	comp=Z,103nm,1.1s,mb5.6						
BRG				MLR	MLR		
	comp=N,53µm,25.0s,MS6.4						
BRG				MLR	MLR		
	comp=E,58µm,25.0s,MS6.4						
BRG				MLR	MLR		
	comp=Z,50µm,25.0s,MS6.2						
BRG	**Berggiesshubel**	**37.48**	**315**	*i* P	**P**	**02 32 37.3**	**+1.0**
	comp=Z,103nm,1.1s,mb5.6						
BRG				*i*		02 32 43.2	
BRG				*i*		02 33 51.3	
BRG				*e*PP	PP	02 33 59.0	-5.4
BRG				*i*		02 34 14.2	
BRG				*i*		02 34 39.6	
BRG				*i*		02 35 33.2	
BRG				*i* S	**S**	**02 38 25.0**	**+0.8**
BRG				*i* SS	SS	02 40 52.0	-4.9
BRG				LR	LR		
	comp=Z,50µm,25.0s,MS6.2						
CRE	**Caprese Michel**	**37.53**	**303**	*e*P	**P**	**02 32 38.6**	**+1.8**
SFI	**Santa Sofia**	**37.63**	**303**	*e*P	**P**	**02 32 38.6**	**+1.0**
PGD	**Poggio Sodo**	**37.71**	**303**	*e*P	**P**	**02 32 38.7**	**+0.4**
WET	**Wettzell**	**37.72**	**312**	*e*P	**P**	**02 32 36.0**	**-2.4**
WET				pmax	pmax		
	comp=Z,210nm,1.2s,mb5.7						
WET	**Wettzell**	**37.72**	**312**	*e*P	**P**	**02 32 36.0**	**-2.4**
	comp=Z,210nm,1.2s,mb5.7						
VMG	**Vicchio**	**37.85**	**303**	*e*P	**P**	**02 32 40.1**	**+0.6**
SEI	**Scarperia**	**37.99**	**303**	*e*P	**P**	**02 32 41.2**	**+0.5**
CTI	**Castel Tesino**	**38.00**	**307**	*e*P	**P**	**02 32 40.1**	**-0.6**
BRES	**Bressanone**	**38.03**	**308**	P	**P**	**02 32 40.3**	**-0.7**
RUE	**Ruedersdorf**	**38.04**	**317**	*e*P	**P**	**02 32 41.8**	**+0.8**
	comp=Z,271nm,1.0s,mb5.9						
RUE	**Ruedersdorf**	**38.04**	**317**	*e*P	**P**	**02 32 39.5**	**-1.5**
	comp=Z,382nm,1.1s,mb6.0						
RUE				*e*S	**S**	**02 38 33.2**	**+0.5**
CLL	**Collm**	**38.17**	**315**	⇑*i*P	**P**	**02 32 42.1**	**0.0**
CLL				*e*S	**S**	**02 38 35.0**	**+0.4**
CLL				*i*		02 38 44.5	
CLL				pmax	pmax		
	comp=Z,570nm,1.4s,mb6.1						
CLL				MLR	MLR		
	comp=Z,46µm,22.3s,MS6.2						
CLL	**Collm**	**38.17**	**315**	⇑*i*P	**P**	**02 32 42.1**	**0.0**
	comp=Z,570nm,1.4s,mb6.1						
CLL				*e*S	**S**	**02 38 35.0**	**+0.4**
CLL				*i* ScP		02 38 44.5	
CLL				LR	LR		
	comp=Z,46µm,22.3s,MS6.2						
CLL	**Collm**	**38.17**	**315**	⇑P	**P**	**02 32 42.1**	**0.0**
	comp=Z,logA/T=2.1,mb5.6						
CLL				*i*		02 32 48.5	
CLL				*i*		02 32 53.9	
CLL				*e*PP	PP	02 34 19.0	+6.3
CLL				*e*S	**S**	**02 38 35.0**	**+0.4**
CLL				*i* SCP		02 38 44.5	
CLL				*i* PCS		02 38 49.3	
CLL				*e*		02 39 11.0	
CLL				*e*SS	SS	02 41 25.0	+12
CLL	**Collm**	**38.17**	**315**	*e*P	**P**	**02 32 40.8**	**-1.3**
	comp=Z,570nm,1.4s,mb6.1						
WTTA	**Wattenberg**	**38.18**	**309**	⇑*i*P	**P**	**02 32 40.1**	**-2.2**
	comp=Z,2µm,2.4s,mb6.3						
WTTA	**Wattenberg**	**38.18**	**309**	⇑*i*P	**P**	**02 32 40.1**	**-2.2**
WTTA				pmax	pmax		
	comp=Z,2µm,2.4s,mb6.3						
WTTA	**Wattenberg**	**38.18**	**309**	*e*P	**P**	**02 32 39.6**	**-2.7**
	comp=Z,316nm,0.9s,mb6.0						
WATA	**Walderalm**	**38.24**	**309**	⇓*i*P	**P**	**02 32 41.0**	**-1.7**
	comp=Z,333nm,1.1s,mb6.0						
WATA	**Walderalm**	**38.24**	**309**	⇓*i*P	**P**	**02 32 41.0**	**-1.7**
WATA				pmax	pmax		
	comp=Z,333nm,1.1s,mb6.0						
NKC	**Novy Kostel**	**38.24**	**313**	*e*P	**P**	**02 32 39.6**	**-3.1**
NKC				*e*PP	PP	02 34 18.3	+4.8
NKC				*e*S	**S**	**02 38 40.1**	**+4.4**
NKC				AMS	AMS	02 50 50.0	
	comp=Z,47µm,20.6s						
NKC	**Novy Kostel**	**38.24**	**313**	*e*P	**P**	**02 32 40.9**	**-1.8**
	comp=Z,88nm,1.1s,mb5.4						
ZCCA	**Zocca**	**38.29**	**304**	*e*P	**P**	**02 32 46.1**	**+2.9**
BSD	**Bornholm Skovb**	**38.30**	**322**	*i* P	**P**	**02 32 43.3**	**+0.1**
BSD				*i*		02 34 17.4	
BSD				*i* S	**S**	**02 38 38.5**	**+1.9**
BSD				pmax	pmax		
	comp=Z,850nm,0.8s,mb6.5						
BSD				MLR	MLR		
	comp=Z,45µm,19.0s,MS6.3						
BSD	**Bornholm Skovb**	**38.30**	**322**	*i* P	**P**	**02 32 43.3**	**+0.1**
	comp=Z,853nm,0.8s,mb6.5						
BSD				*i*		02 34 17.4	
BSD				*e*		02 35 12.2	
BSD				*i* S	**S**	**02 38 38.5**	**+1.9**
	comp=Z,45µm,19.0s						
BSD	**Bornholm Skovb**	**38.30**	**322**	*i* P	**P**	**02 32 43.3**	**+0.1**
	comp=Z,853nm,0.8s,mb6.5						
BSD				*i* S	**S**	**02 38 38.5**	**+1.9**
APPI	**Appiano**	**38.35**	**307**	P	**P**	**02 32 41.7**	**-1.9**
NOTT	**Nottersdorf**	**38.35**	**313**	*e*P	**P**	**02 32 41.8**	**-1.8**
	comp=Z,203nm,1.2s,mb5.7						
NOTT				*e*S	**S**	**02 38 36.7**	**-0.7**
WERD	**Werda**	**38.38**	**314**	*e*P	**P**	**02 32 41.8**	**-2.1**
	comp=Z,47nm,1.1s,mb5.1						
SQTA	**Sankt Quirin**	**38.47**	**308**	⇑*i*P	**P**	**02 32 42.5**	**-2.1**
	comp=Z,328nm,1.2s,mb5.9						
SQTA	**Sankt Quirin**	**38.47**	**308**	⇑*i*P	**P**	**02 32 42.5**	**-2.1**
SQTA				pmax	pmax		
	comp=Z,328nm,1.2s,mb5.9						
MOY	**Mondy**	**38.49**	**44**	*e*P	**P**	**02 32 46.5**	**+1.7**
MOY				pmax	pmax		
	comp=Z,1µm,1.9s,mb6.3						
MOY	**Mondy**	**38.49**	**44**	*e*P	**P**	**02 32 46.5**	**+1.7**
	comp=Z,1µm,1.9s,mb6.3						
BDI	**Bagni Di Lucca**	**38.54**	**303**	*e*P	**P**	**02 32 44.0**	**-1.3**
MOTA	**Moosalm**	**38.55**	**309**	⇑*i*P	**P**	**02 32 43.5**	**-1.9**
	comp=Z,179nm,1.1s,mb5.7						
MOTA	**Moosalm**	**38.55**	**309**	⇑*i*P	**P**	**02 32 43.5**	**-1.9**
MOTA				pmax	pmax		
	comp=Z,179nm,1.1s,mb5.7						
PII	**Pisa**	**38.57**	**303**	*e*P	**P**	**02 32 45.7**	**+0.2**
GSCL	**Gusciola**	**38.57**	**304**	*e*P	**P**	**02 32 47.3**	**+1.8**
FUR	**Furstenfeldbru**	**38.57**	**310**	*e*P	**P**	**02 32 42.9**	**-2.6**
FUR				pmax	pmax		
	comp=Z,259nm,0.9s,mb6.0						
FUR	**Furstenfeldbru**	**38.57**	**310**	*e*P	**P**	**02 32 42.9**	**-2.6**
	comp=Z,259nm,0.9s,mb6.0						
VLC	**Villacollemand**	**38.70**	**303**	*e*P	**P**	**02 32 45.4**	**-1.2**
	comp=Z,446nm,1.0s,mb6.2						
ERBM	**Eremo**	**38.70**	**304**	*e*P	**P**	**02 32 48.3**	**+1.7**
SAL	**Salo**	**38.73**	**306**	*e*P	**P**	**02 32 47.2**	**+0.4**
VALM		**38.81**	**304**	P	**P**	**02 32 46.8**	**-0.8**
MOX	**Moxa**	**38.85**	**314**	*e*P	**P**	**02 32 48.8**	**+1.0**
MOX				pmax	pmax		
	comp=Z,250nm,1.9s,mb5.6						
MOX				MLR	MLR		
	comp=Z,27µm,22.0s,MS6.0						
MOX	**Moxa**	**38.85**	**314**	*e*P	**P**	**02 32 48.8**	**+1.0**
	comp=Z,250nm,1.9s,mb5.6						
MOX				*e*PP	PP	02 34 22.0	+1.2
MOX				*e*S	**S**	**02 38 49.0**	**+4.0**
MOX				LR	LR		
	comp=Z,27µm,22.0s,MS6.0						
MOX	**Moxa**	**38.85**	**314**	*i* P	**P**	**02 32 48.8**	**+1.0**
	comp=Z,logA/T=2.1,mb5.6						
MOX				PP	PP	02 34 22.0	+1.2
MOX				S	**S**	**02 38 49.0**	**+4.0**
MOX				L		02 53 32.0	
MOX	**Moxa**	**38.85**	**314**	*e*P	**P**	**02 32 47.5**	**-0.3**
	comp=Z,316nm,2.0s,mb5.7						
MOX				*e*S	**S**	**02 38 45.4**	**+0.4**
VINC	**Vinca**	**38.86**	**303**	P	**P**	**02 32 47.4**	**-0.7**
GRA1	**Grafenberg Arr**	**38.90**	**312**	*e*P	**P**	**02 32 46.7**	**-1.5**
	comp=Z,380nm,1.1s,mb6.0						
GRA1				*e*S	**S**	**02 38 46.9**	**+1.3**
GRA1				LR	LR		
	comp=Z,34µm,21.1s,MS6.1						
GRF	**Grafenberg Arr**	**38.90**	**312**	*e*P	**P**	**02 32 46.7**	**-1.5**
GRF				*e*S	**S**	**02 38 46.9**	**+1.3**
GRF				pmax	pmax		
	comp=Z,380nm,1.1s,mb6.0						
GRF				MLR	MLR		
	comp=Z,34µm,21.1s,MS6.1						
GRF	**Grafenberg Arr**	**38.90**	**312**	*e*P	**P**	**02 32 46.7**	**-1.5**
GRF				*e*S	**S**	**02 38 46.9**	**+1.3**
GRF				pmax	pmax		
	comp=Z,380nm,1.1s,mb6.0						
GRF				MLR	MLR		
	comp=Z,34µm,21.1s,MS6.1						
GRF	**Grafenberg Arr**	**38.90**	**312**	*e*P	**P**	**02 32 46.7**	**-1.5**
	comp=Z,380nm,1.1s,mb6.0						
GRF				*e*S	**S**	**02 38 46.9**	**+1.3**
GRF				LR	LR		
	comp=Z,34µm,21.1s,MS6.1						
BACM		**38.93**	**304**	P	**P**	**02 32 48.6**	**0.0**
BRMO	**Bormio**	**38.93**	**307**	*e*P	**P**	**02 32 48.4**	**-0.1**
GRAM		**38.95**	**304**	P	**P**	**02 32 48.4**	**-0.4**
RGN	**Rugen**	**38.96**	**320**	*e*P	**P**	**02 32 49.9**	**+1.2**
	comp=Z,2µm,1.0s,mb6.7						
RGN	**Rugen**	**38.96**	**320**	*e*P	**P**	**02 32 47.1**	**-1.6**
	comp=Z,2µm,1.1s,mb6.7						
RGN				*e*S	**S**	**02 38 48.9**	**+2.3**
FUORN	**Ofenpass**	**39.02**	**307**	⇓*i*P	**P**	**02 32 48.3**	**-1.0**
CODM		**39.10**	**304**	P	**P**	**02 32 49.5**	**-0.5**
BERNI	**Berninapass**	**39.16**	**307**	⇑*e*P	**P**	**02 32 49.2**	**-1.3**
UBR	**Uberruh**	**39.27**	**309**	P	**P**	**02 32 50.2**	**-1.2**
UBR	**Uberruh**	**39.27**	**309**	*e*P	**P**	**02 32 50.8**	**-0.6**
DAVOX	**Davos**	**39.31**	**308**	P	**P**	**02 32 50.0**	**-1.7**
	comp=Z,80nm,0.6s,mb5.7,baz=100,slow=6.5,SNR=58						
DAVOX				S	**S**	**02 38 51.9**	**0.0**
	comp=Z,2.6nm,0.8s,baz=153,slow=4.1,SNR=1.7						
LZH	**Lanzhou**	**39.31**	**69**	⇑P	**P**	**02 32 52.8**	**+0.9**
LZH				AP	pP	02 32 57.0	+1.3
LZH				XP	sP	02 33 01.6	+4.2
LZH				PP	PP	02 34 26.0	-0.1
LZH				S	**S**	**02 38 57.4**	**+5.3**
LZH				XS		02 39 06.0	
LZH				AMB	AMB		
	comp=Z,170nm,1.0s,mb5.7						
LZH				AMB	AMB		
	comp=Z,12µm,4.3s						
LZH				LR	LR		
	comp=N,66µm,12.9s						
LZH				LR	LR		
	comp=Z,87µm,13.6s,MS6.8						
LZH	**Lanzhou**	**39.31**	**69**	⇑P	**P**	**02 32 52.8**	**+0.9**
LZH				*PP	pP	02 32 57.0	+1.3
LZH						02 34 26.0	
LZH				S	**S**	**02 38 57.4**	**+5.3**
LZH				*SS		02 39 06.0	
LZH				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.7						
LZH				MLR	MLR		
	comp=Z,87µm,13.6s,MS6.8						
LZH	**Lanzhou**	**39.31**	**69**	⇑P	**P**	**02 32 52.8**	**+0.9**
	comp=Z,170nm,1.0s,mb5.7						
LZH				pP	pP	02 32 57.0	+1.3
LZH				sP	sP	02 33 01.6	+4.2
LZH				PP	PP	02 34 26.0	-0.1
LZH				S	**S**	**02 38 57.4**	**+5.3**
LZH				sS		02 39 06.0	
LZH				LR	LR		
	comp=Z,87µm,13.6s,MS6.8						
HDH	**Heidenheim**	**39.35**	**310**	P	**P**	**02 32 52.4**	**+0.4**
HDH	**Heidenheim**	**39.35**	**310**	*e*P	**P**	**02 32 51.0**	**-1.0**
DAVA	**Damuels**	**39.37**	**308**	⇑*i*P	**P**	**02 32 50.3**	**-1.9**
	comp=Z,673nm,1.2s,mb6.2						
DAVA	**Damuels**	**39.37**	**308**	*e*P	**P**	**02 32 49.3**	**-2.9**
	comp=Z,294nm,0.8s,mb6.1						
VSL	**Villasalto**	**39.37**	**296**	*e*P	**P**	**02 32 51.8**	**-0.5**
	comp=Z,314nm,0.9s,mb6.0						
LVZ	**Lovozero**	**39.39**	**347**	*c* *i*P	**P**	**02 32 53.7**	**+1.6**
LVZ				*e*S	**S**	**02 38 47.3**	**-5.6**
LVZ				*e*SS	SS	02 41 37.1	-2.2
LVZ				*e*SSS	SSS	02 42 14.9	+0.9
LVZ				pmax	pmax		
	comp=Z,269nm,1.0s,mb5.9						
LVZ				pmax	pmax		
	comp=N,74nm,0.8s						
LVZ				pmax	pmax		
	comp=E,117nm,1.1s						
LVZ				smax			
	comp=N,20µm,12.2s						
LVZ				smax			
	comp=E,4µm,4.6s						
LVZ				MLR	MLR		
	comp=Z,65µm,16.0s,MS6.6						
LVZ				MLR	MLR		
	comp=N,48µm,17.0s,MS6.5						
LVZ				MLR	MLR		
	comp=E,27µm,12.0s,MS6.5						
LVZ	**Lovozero**	**39.39**	**347**	⇑*i*P	**P**	**02 32 53.7**	**+1.6**
LVZ				*e*S	**S**	**02 38 47.3**	**-5.6**
LVZ				*e*SS	SS	02 41 37.1	-2.2
LVZ				*e*SSS	SSS	02 42 14.9	+0.9
BOB	**Bobbio (Coli)**	**39.41**	**304**	*e*P	**P**	**02 32 52.7**	**+0.1**
CGL	**Cagliari Serpe**	**39.44**	**296**	*e*P	**P**	**02 32 54.0**	**+1.1**
ZAK	**Zakamensk**	**39.60**	**47**	*e*P	**P**	**02 32 58.1**	**+4.1**
ZAK				*e*		02 32 59.5	
ZAK				*e*		02 35 00.7	
PGF	**Pioggiola**	**39.63**	**301**	*e*P	**P**	**02 32 52.0**	**-2.4**
	comp=E,284nm,1.2s,mb5.6						
PGF	**Pioggiola**	**39.63**	**301**	*e*P	**P**	**02 32 52.0**	**-2.4**
PGF				pmax	pmax		
	comp=Z,142nm,1.2s,mb5.6						
LIENZ	**Alp Oberkamor**	**39.63**	**308**	⇑*e*P	**P**	**02 32 52.7**	**-1.7**
GENL	**Genova Univers**	**39.73**	**304**	P	**P**	**02 32 53.8**	**-1.4**
MUGIO	**Muggio**	**39.79**	**306**	⇑*e*P	**P**	**02 32 52.8**	**-2.9**
COP	**Copenhagen**	**39.83**	**322**	*i* P	**P**	**02 32 57.4**	**+1.5**
COP				*i*		02 34 33.6	
COP				*i* S	**S**	**02 38 59.4**	**-0.2**
COP				pmax	pmax		
	comp=Z,390nm,0.8s,mb6.2						
COP	**Copenhagen**	**39.83**	**322**	*i* P	**P**	**02 32 57.4**	**+1.5**
	comp=Z,389nm,0.8s,mb6.2						
COP				*i*		02 34 33.6	
COP				*i* S	**S**	**02 38 59.4**	**-0.2**
COP	**Copenhagen**	**39.83**	**322**	*i* P	**P**	**02 32 57.4**	**+1.5**
	comp=Z,389nm,0.8s,mb6.2						
COP				*i* S	**S**	**02 38 59.4**	**-0.2**
MBAR	**Mbarara**	**39.84**	**223**	⇑*e*P	**P**	**02 32 56.1**	**-0.3**
MBAR				pmax	pmax		
	comp=Z,382nm,1.2s,mb6.0						
MBAR				MLR	MLR		
	comp=Z,22µm,19.0s,MS6.0						
MBAR	**Mbarara**	**39.84**	**223**	⇑*e*P	**P**	**02 32 56.1**	**-0.3**
	comp=Z,382nm,1.2s,mb6.0						
MBAR				LR	LR		
	comp=Z,22µm,19.0s,MS6.0						
CHG	**Chiang Mai**	**39.85**	**97**	⇑P	**P**	**02 32 56.5**	**+0.1**
	comp=Z,150nm,1.1s,mb5.6						
SIND	**Sindeldorf**	**39.87**	**312**	P	**P**	**02 32 55.6**	**-0.7**
SIND	**Sindeldorf**	**39.87**	**312**	*e*P	**P**	**02 32 56.2**	**-0.1**
BUCH	**Bad Urach**	**39.89**	**310**	P	**P**	**02 32 57.4**	**+1.0**
BUCH	**Bad Urach**	**39.89**	**310**	*e*P	**P**	**02 32 56.4**	**0.0**
LLS	**Linth-Limmern**	**39.91**	**308**	⇑*i*P	**P**	**02 32 54.2**	**-2.5**
VAI	**Varese**	**39.98**	**306**	*e*P	**P**	**02 32 55.3**	**-1.9**
GUT	**Gutenstein**	**39.99**	**309**	P	**P**	**02 32 57.6**	**+0.3**
GUT	**Gutenstein**	**39.99**	**309**	*e*P	**P**	**02 32 56.2**	**-1.1**
CM31	**Chiang Mai Arr**	**40.00**	**98**	*e*P	**P**	**02 32 57.4**	**-0.3**
	comp=Z,148nm,0.9s,mb5.7						
CM31				LR	LR		
	comp=Z,9µm,22.0s,MS5.6						
CMAR	**Chiang Mai Arr**	**40.00**	**98**	P	**P**	**02 32 57.3**	**-0.4**
	comp=Z,77nm,1.0s,mb5.4,baz=296,slow=7.9,SNR=147						
CMAR				PP	PP	02 34 31.6	-2.0
	comp=Z,52nm,1.1s,baz=305,slow=7.9,SNR=2.0						
CMAR				PcP	PcP	02 35 03.9	+0.5
	comp=Z,20nm,0.7s,baz=289,slow=5.0,SNR=4.6						
CMAR				LR	LR	02 53 16.8	
	comp=Z,21µm,20.1s,MS6.0,baz=295,slow=42						
STU	**Stuttgart**	**40.04**	**311**	*e*P	**P**	**02 32 56.6**	**-1.1**
STU				pmax	pmax		
	comp=Z,267nm,1.3s,mb5.8						
STU	**Stuttgart**	**40.04**	**311**	*e*P	**P**	**02 32 56.6**	**-1.1**
	comp=Z,267nm,1.3s,mb5.8						
STU	**Stuttgart**	**40.04**	**311**	*e*P	**P**	**02 32 54.6**	**-3.1**
	comp=Z,250nm,1.2s,mb5.8						
PCP	**Pian Castagno**	**40.04**	**304**	P	**P**	**02 32 56.4**	**-1.4**
SISB	**Singen-Sch Ber**	**40.04**	**309**	P	**P**	**02 32 57.3**	**-0.4**
WILA	**Wila**	**40.04**	**308**	⇑*i*P	**P**	**02 32 56.4**	**-1.4**
CD2	**Chengdu**	**40.08**	**77**	⇑*i*P	**P**	**02 32 58.0**	**-0.2**
CD2				PP	PP	02 34 35.5	+1.2
CD2				PPP	PPP	02 35 03.1	+3.1
CD2				S	**S**	**02 39 03.0**	**-0.6**
CD2				XS		02 39 23.8	
CD2				SS	SS	02 41 58.8	+4.0
CD2				AMB	AMB		
	comp=Z,31nm,0.7s,mb5.2						
CD2				LR	LR		
	comp=E,45µm,12.0s						
CD2	**Chengdu**	**40.08**	**77**	⇑*i*P	**P**	**02 32 58.0**	**-0.2**
	comp=E,31nm,0.7s,mb5.2						
CD2				PP	PP	02 34 35.5	+1.2
CD2				S	**S**	**02 39 03.0**	**-0.6**
CD2				sS		02 39 23.8	
CD2				SS	SS	02 41 58.8	+4.0
TLY	**Talaya**	**40.10**	**45**	P	**P**	**02 33 00.2**	**+2.0**
	comp=E,802nm,1.3s,mb6.3,SNR=56						
TLY	**Talaya**	**40.10**	**45**	*e*P	**P**	**02 32 59.5**	**+1.3**
TLY				*e*		02 34 37.2	
TLY				pmax	pmax		
	comp=Z,226nm,1.3s,mb5.7						
TLY				MLR	MLR		
	comp=Z,77µm,13.0s,MS6.7						
FUSIO	**Fusio**	**40.10**	**307**	⇑*i*P	**P**	**02 32 56.3**	**-2.0**
CHRT	**Chiangrai**	**40.12**	**95**	⇑P	**P**	**02 32 59.0**	**+0.4**
	comp=Z,2µm,1.0s,mb6.8						
SPAK	**Spaichingen**	**40.21**	**309**	*e*P	**P**	**02 32 59.6**	**+0.5**
SPAK	**Spaichingen**	**40.21**	**309**	*e*P	**P**	**02 32 58.7**	**-0.4**
FIN	**Finale Ligure**	**40.26**	**303**	*e*P	**P**	**02 32 58.5**	**-1.1**
LBG	**Lerchenberg**	**40.28**	**310**	P	**P**	**02 33 00.2**	**+0.5**
LBG	**Lerchenberg**	**40.28**	**310**	*e*P	**P**	**02 32 59.9**	**+0.2**
BNALP	**Bannalp**	**40.31**	**308**	⇑*i*P	**P**	**02 32 58.5**	**-1.4**
SLE	**Schleitheim**	**40.36**	**309**	⇓*i*P	**P**	**02 32 56.9**	**-3.5**
TOD	**Tromm**	**40.42**	**312**	*e*P	**P**	**02 33 01.0**	**+0.2**
TOD	**Tromm**	**40.42**	**312**	*e*P	**P**	**02 33 00.4**	**-0.4**
SWS	**Schriesheim**	**40.47**	**312**	P	**P**	**02 33 02.2**	**+1.0**
IMI	**Imperia**	**40.48**	**303**	*e*P	**P**	**02 33 03.1**	**+1.7**
ORO	**Oropa**	**40.51**	**306**	*e*P	**P**	**02 33 01.3**	**-0.3**
ORX	**Oropa**	**40.51**	**306**	P	**P**	**02 33 01.1**	**-0.5**
ROB	**Roburent**	**40.51**	**304**	P	**P**	**02 33 00.5**	**-1.1**
MCGN	**Macugnaga**	**40.53**	**306**	*e*P	**P**	**02 33 01.1**	**-0.7**
MONE	**Monesi**	**40.58**	**303**	P	**P**	**02 33 00.4**	**-1.9**
BDT	**Bhumibol Dam**	**40.59**	**99**	P	**P**	**02 33 02.0**	**-0.6**
	comp=Z,51nm,0.8s,mb5.2						
IRK	**Irkutsk**	**40.60**	**44**	⇑*i*P	**P**	**02 33 03.2**	**+0.9**
IRK				*e*		02 34 34.0	
IRK				*e*		02 43 06.3	
IRK				pmax	pmax		
	comp=Z,903nm,2.3s,mb6.0						
IRK	**Irkutsk**	**40.60**	**44**	⇑*i*P	**P**	**02 33 03.2**	**+0.9**
	comp=Z,903nm,2.3s,mb6.0						
IRK				*e*		02 34 34.0	
IRK				*e*		02 43 06.3	
TRAV		**40.66**	**305**	P	**P**	**02 33 00.8**	**-2.1**
FELD	**Feldberg**	**40.70**	**309**	*e*P	**P**	**02 33 02.3**	**-0.9**
FELD	**Feldberg**	**40.70**	**309**	*e*P	**P**	**02 33 01.2**	**-2.0**
SAOF	**Saorge**	**40.73**	**303**	*e*P	**P**	**02 33 03.5**	**+0.1**
KMI	**Kunming**	**40.75**	**86**	P	**P**	**02 33 03.8**	**0.0**
KMI				PP	PP	02 34 40.8	-0.2
KMI				S	**S**	**02 39 12.3**	**-1.4**
KMI				AMB	AMB		
	comp=Z,343nm,1.1s,mb5.9						
KMI				AMB	AMB		
	comp=Z,6µm,5.6s						
KMI				LR	LR		
	comp=N,20µm,19.5s,MS6.1						
KMI				LR	LR		
	comp=E,17µm,19.0s,MS6.1						
KMI				LR	LR		

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       comp=Z,19µm,19.8s,MS6.0
KMI   Kunming          40.75  86   P      P      02 33 03.7 -0.1
KMI                                *SP    sP     02 33 07.8 -1.5
KMI                                              02 34 40.7
KMI                                PPP    PPP    02 35 07.6 -1.8
KMI                                S      S      02 39 12.2 -1.5
KMI                                *SS           02 39 17.1
KMI                                SS     SS     02 42 04.9 -4.6
KMI                                SSS    SSS    02 42 42.3 -4.8
KMI                                pmax   pmax
       comp=Z,343nm,1.1s,mb5.9
KMI                                MLR    MLR
       comp=Z,19µm,19.8s,MS6.0
KMI   Kunming          40.75  86   P      P      02 33 03.8  0.0
       comp=Z,340nm,1.1s,mb5.9
KMI                                PP     PP     02 34 40.8 -0.2
KMI                                S      S      02 39 12.3 -1.4
KMI                                LR     LR
       comp=Z,19µm,19.8s,MS6.0
TNS   Taunus Mts       40.75 313  eP      P      02 33 02.5 -1.1
TNS                                pmax   pmax
       comp=Z,585nm,1.2s,mb6.1
TNS   Taunus Mts       40.75 313  eP      P      02 33 02.5 -1.1
       comp=Z,585nm,1.2s,mb6.1
KIZ   Kirchzarten      40.77 309   P      P      02 33 05.4 +1.7
KIZ   Kirchzarten      40.77 309  eP      P      02 33 03.8 +0.1
SBF   Sospel           40.81 303  eP      P      02 33 02.2 -1.9
       comp=Z,622nm,0.8s,mb6.0
SBF   Sospel           40.81 303  eP      P      02 33 02.2 -1.9
SBF                                pmax   pmax
       comp=Z,311nm,0.8s,mb6.0
LKBD  Leukerbad        40.81 307⇑iP      P      02 33 02.7 -1.4
AUTN  L’Aution         40.82 303  eP      P      02 33 03.9 -0.2
DGAR  Diego Garcia     40.82 156  eP      P      02 33 05.8 +1.4
DGAR                               pmax   pmax
       comp=Z,879nm,1.3s,mb6.2
DGAR                               MLR    MLR
       comp=Z,24µm,20.0s,MS6.1
DGAR  Diego Garcia     40.82 156  eP      P      02 33 05.8 +1.4
       comp=Z,880nm,1.3s,mb6.2
DGAR                               LR     LR
       comp=Z,24µm,20.0s,MS6.1
ENR   Entracque        40.83 303   P      P      02 33 02.7 -1.5
WIMIS Wimmis           40.84 307⇑iP      P      02 33 02.6 -1.7
KTD   Kalmit           40.84 311  eP      P      02 33 04.3  0.0
KTD   Kalmit           40.84 311  eP      P      02 33 05.4 +1.1
REVF  Revere           40.85 303  eP      P      02 33 03.3 -1.1
STV2  Anna di Valdie   40.90 303   P      P      02 33 02.9 -1.9
STV   Sta Anna Valdi   40.90 303   P      P      02 33 03.1 -1.7
TOUF  Mont Tournerai   40.95 303  eP      P      02 33 04.8 -0.4
STR   Strasbourg       40.95 310  eP      P      02 33 03.6 -1.6
HFS   Hagfors          40.96 329   P      P      02 33 05.3 +0.2
       comp=Z,282nm,1.1s,mb5.8,baz=117,slow=9.9,SNR=65
DOI   San Damiano      40.97 304  eP      P      02 33 04.2 -1.1
BHB   Bricherasio      40.97 304   P      P      02 33 03.1 -2.2
LANF  Langenberg       40.98 311  eP      P      02 33 04.1 -1.3
RSP   Reno Superiore   40.99 305   P      P      02 33 02.8 -2.7
BBS   Basel-Blauen     40.99 308⇓eP      P      02 33 05.9 +0.4
BBS   Basel-Blauen     40.99 308  eP      P      02 33 04.8 -0.7
LIBD  Limburg          41.01 309  eP      P      02 33 06.3 +0.7
LIBD  Limburg          41.01 309  eP      P      02 33 05.5 -0.1
MVIF  Mont Vial        41.01 303  eP      P      02 33 03.1 -2.6
PZZ   Prazzo           41.07 304   P      P      02 33 04.0 -2.2
LSD   Ceresole Reale   41.08 305   P      P      02 33 05.7 -0.5
FENE  Fenestrelle      41.12 305   P      P      02 33 05.0 -1.6
ABSA  Djebel Ababsia   41.13 291   P      P      02 33 11.0 +4.2
CMAH  Djebel Manchou   41.14 292   P      P      02 33 09.0 +2.1
BOURR Bourrignon       41.17 308⇑iP      P      02 33 05.4 -1.6
WLS   Welschbruch      41.20 310  eP      P      02 33 06.4 -0.8
SONM  Songino Array    41.23  51   P      P      02 33 08.2 +0.7
       comp=Z,85nm,1.0s,mb5.3,baz=270,slow=9.0,SNR=223
SONM                               PP     PP     02 34 52.5 +6.7
       comp=Z,23nm,1.2s,baz=243,slow=6.4,SNR=2.8
CDF   Champ du Feu     41.25 310  eP      P      02 33 05.4 -2.3
       comp=Z,245nm,1.1s,mb5.5
CDF   Champ du Feu     41.25 310  eP      P      02 33 05.4 -2.3
CDF                                pmax   pmax
       comp=Z,123nm,1.1s,mb5.5
ABH   Alteburg         41.27 312⇓eP      P      02 33 09.3 +1.5
ABH   Alteburg         41.27 312  eP      P      02 33 07.4 -0.4
AIGLE Aigle            41.27 307⇑iP      P      02 33 05.6 -2.3
SURF  Saint Ours       41.27 304  eP      P      02 33 07.5 -0.4
MOF   Molkenrain       41.28 309  eP      P      02 33 07.4 -0.5
EMV   Vieux Emosson    41.29 306⇑iP      P      02 33 06.5 -1.5
ECH   Echery           41.31 309  eP      P      02 33 06.4 -1.7
RRL   Cesana Torines   41.31 304   P      P      02 33 07.4 -0.8
MBDF  Montbardon       41.31 304  eP      P      02 33 06.2 -2.0
       comp=Z,380nm,0.9s,mb5.7
MBDF  Montbardon       41.31 304  eP      P      02 33 06.2 -2.0
MBDF                               pmax   pmax
       comp=Z,190nm,0.9s,mb5.7
NANT  Nan              41.35  96 ⇑P      P      02 33 07.0 -1.8
       comp=Z,494nm,1.0s,mb6.1
LPG   La Plagne        41.36 305  eP      P      02 33 07.5 -1.1
       comp=Z,562nm,0.9s,mb5.9
LPG   La Plagne        41.36 305  eP      P      02 33 07.5 -1.1
LPG                                pmax   pmax
       comp=Z,281nm,0.9s,mb5.9
FRF   La Foret Royal   41.37 302  eP      P      02 33 06.3 -2.4
       comp=Z,146nm,1.0s,mb5.2
FRF   La Foret Royal   41.37 302  eP      P      02 33 06.3 -2.4
FRF                                pmax   pmax
       comp=Z,73nm,1.0s,mb5.3
LPL   La Plagne        41.38 305  eP      P      02 33 07.1 -1.6
       comp=Z,609nm,1.0s,mb5.9
LPL   La Plagne        41.38 305  eP      P      02 33 07.1 -1.6
LPL                                pmax   pmax
       comp=Z,304nm,1.0s,mb5.9
BNI   Bardonecchia     41.39 305  eP      P      02 33 06.7 -2.1
BNI                                pmax   pmax
       comp=Z,225nm,0.8s,mb5.8
BNI   Bardonecchia     41.39 305  eP      P      02 33 06.7 -2.2
       comp=Z,225nm,0.8s,mb5.8
LOMF  Lomont           41.44 308  eP      P      02 33 07.1 -2.1
HINF  Hinteralfeld     41.47 309  eP      P      02 33 07.5 -1.9
       comp=Z,432nm,1.4s,mb5.6
HINF  Hinteralfeld     41.47 309  eP      P      02 33 07.5 -1.9
HINF                               pmax   pmax
       comp=Z,216nm,1.4s,mb5.6
LMR   La Mourre        41.47 302  eP      P      02 33 06.9 -2.6
       comp=Z,142nm,1.2s,mb5.2
LMR   La Mourre        41.47 302  eP      P      02 33 06.9 -2.6
LMR                                pmax   pmax
       comp=Z,71nm,1.2s,mb5.2
RUP   Ruppelstein      41.56 312⇓eP      P      02 33 11.4 +1.3
RUP   Ruppelstein      41.56 312  eP      P      02 33 09.0 -1.1
IBBN  Ibbenburen       41.57 316  eP      P      02 33 09.1 -1.1
       comp=Z,2µm,2.4s,mb6.3
CAEH  ’Ain El Ouahch   41.58 292   P      P      02 33 12.0 +1.6
BRANT Les Verrieres    41.65 307⇑iP      P      02 33 09.9 -1.0
ULN   Ulaanbaatar      41.67  51⇑eP      P      02 33 12.0 +0.9
ULN                                pmax   pmax
       comp=Z,304nm,1.1s,mb5.8
ULN                                MLR    MLR
       comp=Z,45µm,19.0s,MS6.4
ULN   Ulaanbaatar      41.67  51⇑eP      P      02 33 12.0 +0.9
       comp=Z,304nm,1.1s,mb5.8
ULN                                LR     LR
       comp=Z,45µm,19.0s,MS6.4
BUG   Bochum--Univer   41.70 314  eP      P      02 33 10.2 -1.1
       comp=Z,213nm,1.3s,mb5.6
CKFL  Kef-Lekhel       41.73 292   P      P      02 33 14.0 +2.3
GDM   Grand’Maison     41.80 305  eP      P      02 33 12.1  0.0
TAVF  Tavernes         41.80 302  eP      P      02 33 09.5 -2.7
MUD   Monsted U’grnd   41.81 322  i P     P      02 33 14.9 +2.9
MUD                               i              02 34 56.9
MUD                               i S     S      02 39 38.7  +10
MUD                                pmax   pmax
       comp=Z,420nm,0.9s,mb6.1
MUD                                MLR    MLR
       comp=Z,26µm,18.0s,MS6.2
MUD   Monsted U’grnd   41.81 322  i P     P      02 33 14.9 +2.9
       comp=Z,415nm,0.9s,mb6.1
MUD                               i              02 34 56.9
MUD                               i S     S      02 39 38.7  +10
       comp=Z,26µm,18.0s
HAU   Haudompre        41.83 309  eP      P      02 33 10.2 -2.1
       comp=Z,361nm,1.3s,mb5.5
HAU                               eR
       comp=Z,43µm,22.8s
HAU   Haudompre        41.83 309  eP      P      02 33 10.2 -2.1
HAU                                pmax   pmax
       comp=Z,180nm,1.3s,mb5.5
HAU                                MLR    MLR
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       comp=Z,43µm,22.8s,MS6.3
CABF  La Chapelle      41.89 307  eP      P      02 33 11.5 -1.4
       comp=Z,886nm,1.0s,mb6.0
CABF  La Chapelle      41.89 307  eP      P      02 33 11.5 -1.4
CABF                               pmax   pmax
       comp=Z,443nm,1.0s,mb6.0
STOF  St-Etienne Org   41.91 303  eP      P      02 33 11.8 -1.3
CASM  Ain Smara        41.93 291   P      P      02 33 15.0 +1.7
ORIF  Oris-en-Rattie   41.95 304  eP      P      02 33 10.8 -2.6
       comp=Z,178nm,1.0s,mb5.4
ORIF                              eR
       comp=Z,46µm,22.0s
CTEI  Djebel Teioual   42.02 291   P      P      02 33 16.0 +1.9
VILF  Villemus         42.05 303  eP      P      02 33 11.4 -2.9
GRN   Grenoble         42.06 305  eP      P      02 33 12.9 -1.4
PUYF  Puyloubier       42.06 302  eP      P      02 33 15.4 +1.1
WTSB  Winterswijk      42.08 315  eP      P      02 33 15.1 +0.7
       comp=Z,65nm,1.8s,mb5.0
WTSB                              i x     x      02 33 21.2
       comp=Z,522nm,1.7s
THEF  They Montfort    42.09 309  eP      P      02 33 12.3 -2.2
WLF   Walferdange      42.14 311⇑eP      P      02 33 14.1 -0.8
WLF                                pmax   pmax
       comp=Z,366nm,1.1s,mb5.9
WLF   Walferdange      42.14 311⇑eP      P      02 33 14.1 -0.8
       comp=Z,366nm,1.1s,mb5.9
WLF   Walferdange      42.14 311   P      P      02 33 14.2 -0.7
       comp=Z,226nm,1.3s,mb5.6
SMRF  Simiane la Rot   42.15 303  eP      P      02 33 13.2 -1.9
       comp=Z,96nm,1.0s,mb5.1
OSL   Oslo             42.23 327  eP      P      02 33 17.9 +2.3
       comp=Z,148nm,1.5s,mb5.4
OSL   Oslo             42.23 327  eP      P      02 33 17.9 +2.3
OSL                                AMb    AMB    02 33 28.1
       comp=Z,148nm,1.5s,mb5.4
OSL   Oslo             42.23 327  eP      P      02 33 17.9 +2.4
       comp=Z,148nm,1.5s,mb5.4,SNR=25
GELF  Grande-Etoile    42.26 302  eP      P      02 33 13.2 -2.8
NST   Nakhon Sawan     42.28 101 ⇓P      P      02 33 17.1 +0.6
       comp=Z,192nm,0.6s,mb5.9
TREF  Trevaresse       42.29 302  eP      P      02 33 14.0 -2.2
WIT   Witteveen        42.32 316  eP      P      02 33 17.6 +1.3
MEM   Membach          42.36 313   P      P      02 33 17.0 +0.3
DFRA  Djebel Bou Aff   42.38 292   P      P      02 33 19.0 +1.9
HGN   Heimansgroeve    42.43 313  eP      P      02 33 17.6 +0.3
HGN                               i x     x      02 33 24.1
       comp=Z,456nm,2.2s
HGN                               ePP     PP     02 35 12.8  +14
HGN                               eS      S      02 39 41.1 +2.9
HGN                               eSS     SS     02 42 51.7  +10
PRAF  Pradon           42.45 303  eP      P      02 33 11.4 -6.1
PRAF  Pradon           42.45 303  eP      P      02 33 19.5 +2.0
NB2   NORSAR Subarra   42.45 329   P      P      02 33 17.0 -0.3
       comp=Z,241nm,1.0s,mb5.8,baz=115,slow=7.9
NB2   NORSAR Subarra   42.45 329   P      P      02 33 17.0 -0.3
NB2                                pmax   pmax
       comp=Z,241nm,1.0s,mb5.8
NB2   NORSAR Subarra   42.45 329   P      P      02 33 17.0 -0.3
       baz=115,slow=8.6
NOA   NORSAR Array B   42.45 329   P      P      02 33 16.9 -0.3
       comp=Z,127nm,1.0s,mb5.5,baz=115,slow=8.0,SNR=74
NOA                                PP     PP     02 34 57.9 -0.7
       comp=Z,22nm,0.9s,baz=120,slow=8.9,SNR=3.3
NOA                                LR     LR     02 54 29.1
       comp=Z,33µm,18.7s,MS6.2,baz=105,slow=41
CMER  Merouana         42.49 291   P      P      02 33 16.5 -1.5
KEV   Kevo             42.51 345  ep      P      02 33 17.9 +0.3
       comp=Z,279nm,0.9s,mb6.0
KEV   Kevo             42.51 345  eP      P      02 33 17.9 +0.3
KEV                                pmax   pmax
       comp=Z,279nm,0.9s,mb6.0
NAO01 NORSAR Array S   42.52 329  eP      P      02 33 17.4 -0.5
       comp=Z,167nm,0.9s,mb5.8
NAO01                              LR     LR
       comp=Z,43µm,21.0s,MS6.3
ARCES ARCESS Array B   42.68 344   P      P      02 33 19.5 +0.5
       comp=Z,62nm,0.8s,mb5.4,baz=143,slow=6.1,SNR=86
ARCES                              LR     LR     02 54 14.9
       comp=Z,71µm,18.4s,MS6.6,baz=139,slow=41
ARE0  ARCESS Array S   42.68 344  eP      P      02 33 19.4 +0.3
MEZF  Maizieres J’vi   42.73 310  eP      P      02 33 18.6 -1.2
       comp=Z,1µm,1.5s,mb6.1,baz=108
CKHR  Kef el Ahmar     42.75 291   P      P      02 33 20.5 +0.4
SET   Setif            42.81 292   P      P      02 33 21.0 +0.4
VIVF  Saint-Julien-l   42.81 304  eP      P      02 33 18.1 -2.4
       comp=Z,440nm,1.2s,mb5.8
VIVF  Saint-Julien-l   42.81 304  eP      P      02 33 18.1 -2.4
VIVF                               pmax   pmax
       comp=Z,220nm,1.2s,mb5.8
GIVF  Givet            43.04 312  eP      P      02 33 22.2 -0.1
       comp=Z,1µm,1.2s,mb6.2
GIVF  Givet            43.04 312  eP      P      02 33 22.2 -0.1
GIVF                               pmax   pmax
       comp=Z,529nm,1.2s,mb6.1
DOU   Dourbes          43.19 312   P      P      02 33 23.5  0.0
       comp=Z,170nm,1.2s,mb5.7
SNART Snartemo         43.39 324  eP      P      02 33 25.7 +0.7
       comp=Z,800nm,1.5s,mb6.2
SNART Snartemo         43.39 324  eP      P      02 33 25.7 +0.7
SNART                              AMb    AMB    02 33 38.5
       comp=Z,800nm,1.5s,mb6.2
LASF  Ste Croix        43.39 303  eP      P      02 33 22.9 -2.3
       comp=Z,228nm,1.1s,mb5.5
UCC   Uccle            43.42 313   P      P      02 33 27.0 +1.7
BAIF  Baives           43.43 312  eP      P      02 33 25.5 +0.1
       comp=Z,1µm,1.3s,mb6.2
BAIF  Baives           43.43 312  eP      P      02 33 25.5 +0.1
BAIF                               pmax   pmax
       comp=Z,735nm,1.3s,mb6.2
SNF   Seneffe          43.43 313   P      P      02 33 26.4 +1.0
SMF   Signal de Mont   43.44 307  eP      P      02 33 23.8 -1.7
       comp=Z,759nm,1.0s,mb6.1
SMF   Signal de Mont   43.44 307  eP      P      02 33 23.8 -1.7
SMF                                pmax   pmax
       comp=Z,379nm,1.0s,mb6.1
NNT   Nongplab         43.49 105   P      P      02 33 27.5 +1.2
PLDF  La Plantade      43.57 306  eP      P      02 33 26.5 -0.1
MOR8  Moi Rana         43.65 337  eP      P      02 33 26.9 -0.2
       comp=Z,383nm,1.5s,mb5.9
MOR8  Moi Rana         43.65 337  eP      P      02 33 26.9 -0.2
MOR8                               AMb    AMB    02 33 39.4
       comp=Z,383nm,1.5s,mb5.9
MOR8                              ePP     PP     02 35 09.6 -1.0
MOR8  Moi Rana         43.65 337  eP      P      02 33 26.9 -0.1
       comp=Z,383nm,1.5s,mb5.9,SNR=25
MOR8  Moi Rana         43.65 337  ePP     PP     02 35 09.6 -1.0
       SNR=34
SSF   Saint Saulge     43.68 307  eP      P      02 33 25.8 -1.7
SSF                                pmax   pmax
       comp=Z,366nm,1.0s,mb6.1
SSF   Saint Saulge     43.68 307  eP      P      02 33 25.8 -1.7
       comp=Z,366nm,1.0s,mb6.1
GYA   Guiyang          43.70  83⇑iP      P      02 33 27.3 -0.6
GYA                                AP     pP     02 33 31.8  0.0
GYA                                XP     sP     02 33 34.6 +1.2
GYA                                PP     PP     02 35 07.1 -4.4
GYA                                PPP    PPP    02 35 31.4  -17
GYA                                S      S      02 39 56.5 -0.5
GYA                                XS            02 40 10.3
GYA                                AMB    AMB
       comp=Z,70nm,0.8s,mb5.4
GYA                                AMB    AMB
       comp=Z,4µm,6.3s
GYA                                LR     LR
       comp=N,18µm,18.9s,MS6.2
GYA                                LR     LR
       comp=E,22µm,17.1s,MS6.2
GYA                                LR     LR
       comp=Z,19µm,14.1s,MS6.2
GYA   Guiyang          43.70  83⇑iP      P      02 33 27.3 -0.6
       comp=Z,70nm,0.8s,mb5.4
GYA                                pP     pP     02 33 31.8  0.0
GYA                                sP     sP     02 33 34.6 +1.2
GYA                                PP     PP     02 35 07.1 -4.4
GYA                                S      S      02 39 56.5 -0.5
GYA                                sS            02 40 10.3
GYA                                LR     LR
       comp=Z,19µm,14.1s,MS6.2
NSS   Namsos           43.70 334  eP      P      02 33 26.5 -0.9
NSS                               ePP     PP     02 35 09.0 -2.1
NSS                               eS      S      02 39 58.8 +2.2
NSS                                AMS    AMS    02 54 51.5
       comp=Z,60µm,19.2s,MS6.5
NSS   Namsos           43.70 334  ePP     PP     02 35 09.0 -2.1
       SNR=34
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NSS                               eS      S      02 39 58.8 +2.1
       SNR=26
XAN   Xi’an            43.73  71   P      P      02 33 27.5 -0.6
XAN                                AP     pP     02 33 38.5 +6.5
XAN                                PP     PP     02 35 11.8 -0.1
XAN                                S      S      02 39 54.3 -3.2
XAN                                AMB    AMB
       comp=Z,297nm,1.2s,mb5.9
XAN                                LR     LR
       comp=N,42µm,15.7s,MS6.5
XAN                                LR     LR
       comp=E,28µm,16.5s,MS6.5
XAN                                LR     LR
       comp=Z,34µm,16.9s,MS6.3
XAN   Xi’an            43.73  71   P      P      02 33 27.5 -0.6
       comp=Z,300nm,1.2s,mb5.9
XAN                                pP     pP     02 33 38.5 +6.5
XAN                                PP     PP     02 35 11.8 -0.1
XAN                                S      S      02 39 54.3 -3.2
XAN                                LR     LR
       comp=Z,34µm,16.9s,MS6.3
BTO   Baotou           43.74  62  eP      P      02 33 29.3 +1.2
BTO                                AMB    AMB
       comp=Z,432nm,1.0s,mb6.1
BTO   Baotou           43.74  62  eP      P      02 33 29.3 +1.2
       comp=Z,430nm,1.0s,mb6.1
AVF   Avril sur Loir   43.78 307  eP      P      02 33 26.5 -1.8
       comp=Z,678nm,1.1s,mb6.0
AVF   Avril sur Loir   43.78 307  eP      P      02 33 26.5 -1.8
AVF                                pmax   pmax
       comp=Z,339nm,1.1s,mb6.0
DOMB  Dombas           43.80 330  eP      P      02 33 28.5 +0.2
       comp=Z,567nm,1.4s,mb6.1
DOMB  Dombas           43.80 330  eP      P      02 33 28.5 +0.2
DOMB                               AMb    AMB    02 33 41.5
       comp=Z,567nm,1.4s,mb6.1
DOMB  Dombas           43.80 330  eP      P      02 33 28.5 +0.3
       comp=Z,567nm,1.4s,mb6.1,SNR=25
TRON  Trondheim        43.81 332  eP      P      02 33 31.4 +3.1
LBL   Lubilhac         43.82 305  eP      P      02 33 27.0 -1.7
AGO   Saint Agoulin    43.91 306  eP      P      02 33 28.6 -0.8
PYM   Petit Puy Mans   44.00 306  eP      P      02 33 28.6 -1.5
BLS5  Blasjo           44.09 326  eP      P      02 33 32.8 +2.2
       comp=Z,404nm,1.9s,mb5.8
BLS5  Blasjo           44.09 326  eP      P      02 33 32.8 +2.2
BLS5                               AMb    AMB    02 33 45.6
       comp=Z,404nm,1.9s,mb5.8
BLS5  Blasjo           44.09 326  eP      P      02 33 32.8 +2.2
       comp=Z,404nm,1.9s,mb5.8,SNR=25
BGF   Bois d’Agland    44.12 307  eP      P      02 33 29.2 -1.9
       comp=Z,428nm,1.0s,mb5.8
BGF   Bois d’Agland    44.12 307  eP      P      02 33 29.2 -1.9
BGF                                pmax   pmax
       comp=Z,214nm,1.0s,mb5.8
SJAF  Saint Jean de    44.15 301  eP      P      02 33 34.2 +2.8
ODD1  Odda             44.16 326  eP      P      02 33 31.9 +0.7
ODD1                               AMb    AMB    02 33 46.0
       comp=Z,1µm,1.4s,mb6.4
ODD1  Odda             44.16 326  eP      P      02 33 31.9 +0.7
       comp=Z,1µm,1.4s,mb6.4,SNR=25
STOK  Stokkvaagen      44.23 336  eP      P      02 33 31.3 -0.4
       comp=Z,666nm,1.6s,mb6.1
STOK  Stokkvaagen      44.23 336  eP      P      02 33 31.3 -0.4
STOK                               AMb    AMB    02 33 40.2
       comp=Z,666nm,1.6s,mb6.1
STOK  Stokkvaagen      44.23 336  eP      P      02 33 31.3 -0.4
       comp=Z,666nm,1.6s,mb6.1,SNR=25
KKTK  Khon Kaen        44.26  98   P      P      02 33 33.0 +0.4
       comp=Z,1µm,0.5s,mb6.9
HYF   Humbligny        44.28 308  eP      P      02 33 31.4 -1.0
STAV  Stavanger        44.31 325  eP      P      02 33 33.0 +0.5
       comp=Z,774nm,1.7s,mb6.2
STAV  Stavanger        44.31 325  eP      P      02 33 33.0 +0.5
STAV                               AMb    AMB    02 33 45.8
       comp=Z,774nm,1.7s,mb6.2
STAV  Stavanger        44.31 325  eP      P      02 33 33.0 +0.5
       comp=Z,774nm,1.7s,mb6.2,SNR=25
TRO   Tromso           44.38 342  eP      P      02 33 32.2 -0.7
TRO                               ePP     PP     02 35 20.0 +2.2
TRO                               eS      S      02 40 03.3 -3.2
TRO                               eSS     SS     02 43 24.9 +7.7
TRO                                AMS    AMS    02 55 40.0
       comp=Z,48µm,17.5s,MS6.5
TRO   Tromso           44.38 342  ePP     PP     02 35 20.0 +2.2
       SNR=34
TRO                               eS      S      02 40 03.3 -3.1
       SNR=26
TRO                               eSS     SS     02 43 24.9 +7.7
       SNR=36
TCF   Toulx Ste Croi   44.56 306  eP      P      02 33 33.0 -1.6
       comp=Z,618nm,1.1s,mb6.1
TCF   Toulx Ste Croi   44.56 306  eP      P      02 33 33.0 -1.6
TCF                                pmax   pmax
       comp=Z,309nm,1.1s,mb6.0
MTLF  Montolieu        44.60 302  eP      P      02 33 33.1 -1.9
       comp=Z,225nm,1.1s,mb5.6
MTLF  Montolieu        44.60 302  eP      P      02 33 33.1 -1.9
MTLF                               pmax   pmax
       comp=Z,113nm,1.1s,mb5.6
ABA   Alger-Bouzarea   44.61 293   P      P      02 33 27.0 -8.2
KMY   Karmoy           44.62 325  eP      P      02 33 35.8 +0.9
       comp=Z,711nm,1.4s,mb6.3
KMY   Karmoy           44.62 325  eP      P      02 33 35.8 +0.9
KMY                                AMb    AMB    02 33 46.6
       comp=Z,711nm,1.4s,mb6.3
KMY   Karmoy           44.62 325  eP      P      02 33 35.8 +0.9
       comp=Z,711nm,1.4s,mb6.3,SNR=25
MOL   Molde            44.66 330  eP      P      02 33 43.8 +8.6
       comp=Z,370nm,1.8s,mb5.9
MOL   Molde            44.66 330  eP      P      02 33 43.8 +8.6
MOL                                AMb    AMB    02 33 57.0
       comp=Z,370nm,1.8s,mb5.9
MOL   Molde            44.66 330  eP      P      02 33 43.8 +8.6
       comp=Z,370nm,1.8s,mb5.9,SNR=25
CAF   Calviac          44.66 304  eP      P      02 33 33.8 -1.7
       comp=Z,373nm,1.0s,mb5.9
CAF   Calviac          44.66 304  eP      P      02 33 33.8 -1.7
CAF                                pmax   pmax
       comp=Z,187nm,1.0s,mb5.9
EMHD  Djebel Mahouad   44.77 292   P      P      02 33 37.0 +0.6
HYA   Hoyanger         44.77 328  eP      P      02 33 37.9 +1.8
       comp=Z,1µm,1.3s,mb6.6
HYA   Hoyanger         44.77 328  eP      P      02 33 37.9 +1.8
HYA                                AMb    AMB    02 33 51.5
       comp=Z,1µm,1.3s,mb6.6
HYA   Hoyanger         44.77 328  eP      P      02 33 37.8 +1.7
       comp=Z,1µm,1.3s,mb6.6,SNR=25
MENF  Mencas           44.79 312  eP      P      02 33 34.9 -1.5
HHC   Hu-ho-hao-te     44.89  61⇑iP      P      02 33 38.3 +0.9
HHC                                AP     pP     02 33 42.4 +1.1
HHC                                XP     sP     02 33 46.9 +4.0
HHC                                PP     PP     02 35 23.5 +0.2
HHC                                S      S      02 40 17.8 +3.6
HHC                                SCS    ScS    02 43 31.6 -0.6
HHC                                AMB    AMB
       comp=Z,84nm,1.5s,mb5.3
HHC                                AMB    AMB
       comp=Z,9µm,4.9s
HHC                                LR     LR
       comp=N,55µm,19.0s,MS6.6
HHC                                LR     LR
       comp=E,34µm,16.6s,MS6.6
HHC                                LR     LR
       comp=Z,39µm,17.8s,MS6.4
HHC   Hu-ho-hao-te     44.89  61⇑iP      P      02 33 38.3 +0.9
       comp=Z,84nm,1.5s,mb5.3
HHC                                pP     pP     02 33 42.4 +1.1
HHC                                sP     sP     02 33 46.9 +4.0
HHC                                PP     PP     02 35 23.5 +0.2
HHC                                S      S      02 40 17.8 +3.6
HHC                                ScS    ScS    02 43 31.6 -0.6
HHC                                LR     LR
       comp=Z,39µm,17.8s,MS6.4
RUND  Rundenannen      44.91 327  eP      P      02 33 38.2 +0.9
RUND                              epP     pP     02 33 41.0 -0.2
RUND                               AMb    AMB    02 33 50.9
       comp=Z,730nm,1.7s,mb6.2
BER   Bergen           44.92 327  eP      P      02 33 38.0 +0.7
BER                               e       pP     02 33 40.0 -1.2
BER                               e              02 35 28.9
BER                               eS      S      02 40 14.0 -0.3
BER                               eSS     SS     02 43 36.0 +8.6
BER                                pmax   pmax
       comp=Z,1µm,1.5s,mb6.5
BER   Bergen           44.92 327  eP      P      02 33 38.0 +0.7
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	comp=Z,1µm,1.5s,mb6.5						
BER				eP	pP	02 33 40.0	-1.3
BER				ePP	PP	02 35 28.9	+5.6
BER				eS	S	02 40 14.0	-0.3
BER	Bergen	44.92	327	eP	P	02 33 38.0	+0.7
BER				eP	pP	02 33 40.0	-1.3
BER				epP	pP	02 33 40.6	-0.6
BER				AMb	AMB	02 33 51.0	
	comp=Z,1µm,1.6s,mb6.4						
BER				AMb	AMB	02 33 52.3	
	comp=Z,1µm,1.5s,mb6.5						
BER				ePP	PP	02 35 28.9	+5.6
BER				eS	S	02 40 14.0	-0.3
BER				eSS	SS	02 43 36.0	+8.6
BER	Bergen	44.92	327	eP	P	02 33 38.0	+0.7
	SNR=25						
BER				epP	pP	02 33 40.6	-0.6
	SNR=155						
BER	Bergen	44.92	327	ePP	PP	02 35 28.9	+5.6
	SNR=34						
BER				eS	S	02 40 14.0	-0.3
	SNR=26						
BER				eSS	SS	02 43 36.0	+8.6
	SNR=36						
EGD	Espegrend	44.94	326	eP	P	02 33 38.4	+0.9
	comp=Z,908nm,1.6s,mb6.3						
EGD	Espegrend	44.94	326	eP	P	02 33 38.4	+0.9
EGD				AMb	AMB	02 33 49.4	
	comp=Z,908nm,1.6s,mb6.4						
EGD	Espegrend	44.94	326	eP	P	02 33 38.4	+0.9
	comp=Z,908nm,1.6s,mb6.4,SNR=25						
ASK	Askoy	45.01	327	eP	P	02 33 39.4	+1.3
	comp=Z,1µm,1.7s,mb6.5						
ASK	Askoy	45.01	327	eP	P	02 33 39.4	+1.3
ASK				AMb	AMB	02 33 51.7	
	comp=Z,1µm,1.7s,mb6.5						
ASK	Askoy	45.01	327	eP	P	02 33 39.4	+1.3
	comp=Z,1µm,1.7s,mb6.5,SNR=25						
LOF	Lofoten	45.02	339	eP	P	02 33 39.9	+1.8
	comp=Z,256nm,1.7s,mb5.8						
LOF	Lofoten	45.02	339	eP	P	02 33 39.9	+1.8
LOF				AMb	AMB	02 33 52.2	
	comp=Z,256nm,1.7s,mb5.8						
LOF	Lofoten	45.02	339	eP	P	02 33 39.9	+1.8
	comp=Z,256nm,1.7s,mb5.8,SNR=25						
ENH	Enshi	45.03	77⇑	eP	P	02 33 37.8	-0.8
	comp=Z,435nm,1.4s,mb6.1						
ENH				e	pP	02 33 42.6	+0.1
RJF	Les Rejaudoux	45.05	305	eP	P	02 33 37.2	-1.3
	comp=Z,634nm,1.0s,mb6.1						
RJF				eR			
	comp=Z,47µm,21.8s						
RJF	Les Rejaudoux	45.05	305	eP	P	02 33 37.2	-1.3
RJF				pmax	pmax		
	comp=Z,317nm,1.0s,mb6.1						
RJF				MLR	MLR		
	comp=Z,47µm,21.8s,MS6.4						
EMIR	Miracle	45.20	300	P	P	02 33 40.0	+0.3
	comp=Z,3µm,2.4s,mb6.6						
SALF	Salau	45.38	301	eP	P	02 33 39.4	-1.9
SUE	Sulen	45.39	327	eP	P	02 33 43.5	+2.5
	comp=Z,685nm,1.7s,mb6.2						
SUE	Sulen	45.39	327	eP	P	02 33 43.5	+2.5
SUE				AMb	AMB	02 33 54.1	
	comp=Z,685nm,1.7s,mb6.2						
SUE	Sulen	45.39	327	eP	P	02 33 43.5	+2.5
	comp=Z,685nm,1.7s,mb6.2,SNR=25						
FOO	Floro	45.43	328	eP	P	02 33 41.7	+0.4
	comp=Z,460nm,1.5s,mb6.1						
FOO	Floro	45.43	328	eP	P	02 33 41.7	+0.4
FOO				AMb	AMB	02 33 54.2	
	comp=Z,460nm,1.5s,mb6.1						
FOO	Floro	45.43	328	eP	P	02 33 41.7	+0.4
	comp=Z,460nm,1.5s,mb6.1,SNR=25						
MLS	Moulis	45.44	302	eP	P	02 33 39.0	-2.7
EPOB	Poblet	45.58	299	P	P	02 33 42.4	-0.4
	comp=Z,612nm,1.7s,mb6.3						
LFF	La Frestale	45.60	304	eP	P	02 33 41.4	-1.6
	comp=Z,648nm,0.9s,mb6.3						
LFF	La Frestale	45.60	304	eP	P	02 33 41.4	-1.6
LFF				pmax	pmax		
	comp=Z,324nm,0.9s,mb6.3						
EIBI	Ibiza	45.63	296	P	P	02 33 43.9	+0.7
	comp=Z,198nm,1.5s,mb5.8						
EBNR	Beni Rached	45.89	292	P	P	02 33 46.0	+0.7
EPF	Esparros	45.99	302	eP	P	02 33 44.3	-1.7
	comp=Z,72nm,1.1s,mb5.2						
EPF	Esparros	45.99	302	eP	P	02 33 44.3	-1.7
EPF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
ECHA	Ech Chlef	46.04	292	P	P	02 33 47.0	+0.5
EBR	Ebro Roquetas	46.07	299	eP	P	02 33 47.0	+0.3
EBIE	Bielsa	46.16	301	P	P	02 33 47.6	+0.2
	comp=Z,77nm,1.4s,mb5.4						
LDF	La Druitiere	46.17	310	eP	P	02 33 45.2	-2.2
	comp=Z,260nm,1.0s,mb5.8						
LDF	La Druitiere	46.17	310	eP	P	02 33 45.2	-2.2
LDF				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.8						
ERTA	Horta de San J	46.17	299	P	P	02 33 47.2	-0.3
	comp=Z,232nm,1.6s,mb5.9						
MFF	Saint Martin d	46.18	307	eP	P	02 33 45.4	-2.1
	comp=Z,445nm,1.2s,mb6.0						
MFF	Saint Martin d	46.18	307	eP	P	02 33 45.4	-2.1
MFF				pmax	pmax		
	comp=Z,223nm,1.2s,mb6.0						
ETRT	Tiaret	46.23	291	P	P	02 33 50.0	+2.0
EANR	'Ain N'Sour	46.29	292	P	P	02 33 49.0	+0.5
FLN	La Foliniere	46.41	310	eP	P	02 33 47.3	-2.0
	comp=Z,446nm,1.1s,mb6.0,baz=96						
FLN				eR			
	comp=Z,31µm,20.0s						
FLN	La Foliniere	46.41	310	eP	P	02 33 47.3	-2.0
FLN				pmax	pmax		
	comp=Z,223nm,1.1s,mb6.0						
FLN				MLR	MLR		
	comp=Z,31µm,20.0s,MS6.3						
ETSF	Etsaut	46.66	302	eP	P	02 33 49.7	-1.6
	comp=Z,251nm,0.9s,mb5.8						
ETSF	Etsaut	46.66	302	eP	P	02 33 49.7	-1.6
ETSF				pmax	pmax		
	comp=Z,126nm,0.9s,mb5.8						
GRR	Gorron	46.66	309	eP	P	02 33 49.3	-1.9
	comp=Z,433nm,1.1s,mb6.0						
GRR	Gorron	46.66	309	eP	P	02 33 49.3	-1.9
GRR				pmax	pmax		
	comp=Z,217nm,1.1s,mb6.0						
ESAC	San Caprasio	46.70	300	P	P	02 33 52.5	+0.8
	comp=Z,211nm,1.2s,mb5.9						
EMOS	Mosqueruela	46.85	298	P	P	02 33 54.8	+1.9
	comp=Z,222nm,1.5s,mb5.9						
EBEN	Beniarda	46.88	296	P	P	02 33 54.4	+1.2
	comp=Z,164nm,1.4s,mb5.8						
SJPF	Ste Jean	47.13	302	eP	P	02 33 53.2	-1.8
	comp=Z,241nm,1.0s,mb5.8						
SJPF	Ste Jean	47.13	302	eP	P	02 33 53.2	-1.8
SJPF				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
BOD	Bodaibo	47.19	38	eP	P	02 33 55.2	-0.1
BOD				pmax	pmax		
	comp=Z,702nm,1.3s,mb6.4						
BOD	Bodaibo	47.19	38	eP	P	02 33 55.2	-0.1
	comp=Z,702nm,1.3s,mb6.4						
SNG	Songkhla	47.19	111	P	P	02 33 55.0	-1.0
	comp=Z,256nm,0.8s,mb6.2						
EALK	Alkurruntz	47.32	302	P	P	02 33 57.8	+1.2
	comp=Z,109nm,1.4s,mb5.6						
CART	Cartagena	47.66	295	i P	P	02 33 58.7	-0.7
CART	Cartagena	47.66	295	i PcP	Px	02 34 46.3	
CART	Cartagena	47.66	295	i PP	Px	02 35 14.1	
CART				i S	S	02 40 56.5	+2.7
CART				i SS	SS	02 44 25.1	+8.9
SGMF	Saint Gilles	47.79	309	eP	P	02 33 58.4	-1.8
	comp=Z,313nm,1.0s,mb6.0						
SGMF	Saint Gilles	47.79	309	eP	P	02 33 58.4	-1.8
SGMF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.0						
EMUR	La Murta	47.81	295	P	P	02 33 59.0	-1.5
	comp=Z,40nm,1.2s,mb5.3						
ETOB	Tobarra	47.92	296	P	P	02 34 00.9	-0.4
	comp=Z,1µm,3.4s						
HGH	Gray Hill	47.98	314	eP	P	02 34 00.1	-1.5
SSP1	Stoney Pound	48.19	315	eP	P	02 34 02.1	-1.1
QUIF	Quistinic	48.21	309	eP	P	02 34 01.2	-2.2
	comp=Z,510nm,1.1s,mb6.2						
QUIF	Quistinic	48.21	309	eP	P	02 34 01.2	-2.2
QUIF				pmax	pmax		
	comp=Z,255nm,1.1s,mb6.2						
ROSF	Rostrenen	48.27	309	eP	P	02 34 02.0	-1.9
	comp=Z,478nm,1.2s,mb6.1						
ROSF	Rostrenen	48.27	309	eP	P	02 34 02.0	-1.9
ROSF				pmax	pmax		
	comp=Z,239nm,1.2s,mb6.1						
EKA	Eskdalemuir Ar	48.40	319	P	P	02 34 04.3	-0.5
	comp=Z,29nm,0.6s,mb5.5,baz=111,slow=6.6,SNR=28						
ESK	Eskdalemuir	48.42	319	eP	P	02 34 04.6	-0.4
ESK				pmax	pmax		
	comp=Z,381nm,1.4s,mb6.2						
ESK				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.7						
ESK	Eskdalemuir	48.42	319	eP	P	02 34 04.6	-0.4
	comp=Z,381nm,1.4s,mb6.2						
ESK				LR	LR		
	comp=Z,7µm,19.0s,MS5.7						
BJT	Baijiatuau	48.48	62	eP	P	02 34 06.2	+0.6
BJT				pmax	pmax		
	comp=Z,149nm,0.8s						
BJT	Baijiatuau	48.48	62	eP	P	02 34 06.2	+0.5
	comp=Z,149nm,0.8s,mb6.1						
BJI	Beijing	48.48	62	P	P	02 34 06.4	+0.8
BJI				PP	PP	02 36 02.3	+4.1
BJI				AMB	AMB		
	comp=Z,66nm,0.9s,mb5.7						
BJI				AMB	AMB		
	comp=Z,5µm,3.5s						
BJI				LR	LR		
	comp=N,98µm,18.6s,MS6.8						
BJI				LR	LR		
	comp=E,33µm,22.1s,MS6.8						
BJI				LR	LR		
	comp=Z,31µm,20.5s,MS6.3						
BJI	Beijing	48.48	62	P	P	02 34 06.4	+0.8
BJI				*SP	sP	02 34 10.9	-0.3
BJI						02 36 02.3	
BJI				S	S	02 41 17.4	+12
BJI				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.7						
BJI				MLR	MLR		
	comp=Z,31µm,20.5s,MS6.3						
BJI	Beijing	48.48	62	P	P	02 34 06.4	+0.8
	comp=Z,66nm,0.9s,mb5.7						
BJI				PP	PP	02 36 02.3	+4.1
BJI				LR	LR		
	comp=Z,31µm,20.5s,MS6.3						
EVIA	Vianos	48.65	296	P	P	02 34 07.1	+0.1
	comp=Z,36nm,0.7s,mb5.5						
ENIJ	Nijar	48.72	294	P	P	02 34 09.4	+1.9
	comp=Z,30nm,0.8s,mb5.4						
ELAN	Lanestosa	48.72	302	P	P	02 34 07.9	+0.4
	comp=Z,95nm,1.1s,mb5.7						
EHUE	Huescar	48.87	295	P	P	02 34 07.6	-1.1
	comp=Z,12nm,0.7s,mb5.0						
WME	Myndd Eilian	48.95	316⇑	eP	P	02 34 09.8	+0.7
WME				AMb	AMB	02 34 18.5	
	comp=Z,228nm,1.9s,mb5.9						
YRE	Yr Eifl	49.01	315	eP	P	02 34 09.5	0.0
WHN	Wuhan	49.01	75	eP	P	02 34 09.5	-0.4
WHN				S	S	02 41 02.3	-11
WHN				LR	LR		
	comp=N,4µm,13.9s,MS6.5						
WHN				LR	LR		
	comp=E,34µm,12.2s,MS6.5						
WHN				LR	LR		
	comp=Z,54µm,15.0s,MS6.7						
IPM	Ipoh	49.06	113	P	P	02 34 09.6	-0.9
WCB1	Church Bay	49.10	316	eP	P	02 34 10.0	-0.2
WCB1				AMb	AMB	02 34 13.2	
	comp=Z,142nm,1.2s,mb5.9						
YRC	Rhoscolyn	49.11	316	eP	P	02 34 11.1	+0.8
YRC				AMb	AMB	02 34 19.7	
	comp=Z,319nm,2.0s,mb6.0						
QIZ	Qiongzhong	49.11	91	P	P	02 34 10.0	-0.8
QIZ				AP	pP	02 34 14.3	-0.4
QIZ				XP	sP	02 34 17.3	+1.0
QIZ				S	S	02 41 13.0	-1.3
QIZ				SS	SS	02 44 38.5	-2.9
QIZ				AMB	AMB		
	comp=Z,3µm,9.0s						
QIZ				LR	LR		
	comp=N,18µm,22.7s,MS6.0						
QIZ				LR	LR		
	comp=E,9µm,23.3s,MS6.0						
QIZ				LR	LR		
	comp=Z,19µm,22.4s,MS6.0						
EQES	Quesada	49.24	295	P	P	02 34 11.4	-0.2
	comp=Z,212nm,1.3s,mb6.0						
EBER	Berja	49.27	294	P	P	02 34 13.2	+1.4
	comp=Z,304nm,1.2s,mb6.2						
GUD	Guadarrama	49.59	299	P	P	02 34 12.6	-1.6
	comp=Z,8.2nm,0.6s,mb4.9						
ESDC	Sonseca Array	49.60	298	P	P	02 34 13.6	-0.7
	comp=Z,212nm,1.3s,mb6.0,baz=70,slow=7.2,SNR=39						
ESDC				S	S	02 41 24.6	+3.7
	comp=Z,1.1nm,0.9s,baz=90,slow=3.0,SNR=3.2						
ESDC	Sonseca Array	49.60	298	P	P	02 34 12.6	-1.7
	comp=Z,419nm,1.4s,mb6.3						
ESLA	Sonseca Array	49.60	298	eP	P	02 34 12.6	-1.7
	comp=Z,116nm,1.4s,mb5.7						
ESLA				LR	LR		
	comp=Z,92µm,19.0s,MS6.8						
MELI	Melilla	49.64	292	i P	P	02 34 14.0	-0.7
MELI	Melilla	49.64	292	i PP	PP	02 36 09.9	0.0
MELI				i S	S	02 41 37.7	+16
MELI				eSS	SS	02 45 07.1	+17
ECOG	Cogollos-Vega	49.73	295	P	P	02 34 13.3	-2.0
	comp=Z,11nm,0.7s,mb5.0						
EBAN	Banos Encina	49.73	296	P	P	02 34 13.7	-1.6
	comp=Z,15nm,0.5s,mb5.3						
TIA	Tai'an	49.90	67	⇑P	P	02 34 16.8	+0.2
TIA				S	S	02 41 29.5	+4.4
TIA				AMB	AMB		
	comp=Z,57nm,0.9s,mb5.6						
TIA				AMB	AMB		
	comp=Z,2µm,6.0s						
TIA	Tai'an	49.90	67	⇑P	P	02 34 16.8	+0.2
	comp=Z,57nm,0.9s,mb5.6						
TIA				S	S	02 41 29.5	+4.4
OPO	Ambohidratompo	49.92	192	P	P	02 34 15.2	-1.8
ERON	Agron	49.97	294	P	P	02 34 15.4	-1.8
	comp=Z,33nm,0.8s,mb5.4						
EARI	Arriondas	50.01	303	P	P	02 34 17.6	+0.3
	comp=Z,97nm,1.1s,mb5.8						
HSP	Hornsund	50.04	349	eP	P	02 34 18.0	+0.8
HIA	Hailar	50.12	49⇑	eP	P	02 34 18.6	+0.5
HIA				e*PP	pP	02 34 23.0	+0.9
HIA				pmax	pmax		
	comp=Z,624nm,1.4s						
HIA	Hailar	50.12	49⇑	eP	P	02 34 18.6	+0.5
	comp=Z,624nm,1.4s,mb6.5						
HIA				epP	pP	02 34 23.0	+0.9
ELOJ	Sierra Loja	50.21	295	P	P	02 34 17.7	-1.3
	comp=Z,58nm,1.5s,mb5.4						
ELUQ	Luque	50.22	295	P	P	02 34 17.8	-1.2
	comp=Z,24nm,0.8s,mb5.3						
DLF	Lyons Farm	50.28	316	eP	P	02 34 21.7	+2.4
EADA	Adamuz	50.34	296	P	P	02 34 18.0	-2.0
	comp=Z,116nm,1.4s,mb5.7						
TOU	Touzarine	50.37	292	i P	P	02 34 21.0	+0.8
GZH	Guangzhou	50.54	84	P	P	02 34 21.3	-0.4
GZH				PP	PP	02 36 20.8	+2.3
GZH				S	S	02 41 26.0	-8.1
GZH				LR	LR		
	comp=N,25µm,16.8s,MS6.5						
GZH				LR	LR		
	comp=E,25µm,16.8s,MS6.5						
GZH				LR	LR		
	comp=Z,20µm,15.2s,MS6.2						
DCN	Croghan	50.73	316	eP	P	02 34 24.1	+1.4
EMIJ	Mijas	50.82	294	P	P	02 34 21.8	-1.8
	comp=Z,89nm,1.2s,mb5.6						
TZK	Tazeka	50.92	291	i P	P	02 34 23.0	-1.4
REAL	Reales	51.18	294	eP	P	02 34 24.8	-1.6
LIJA	Lijar	51.24	295	eP	P	02 34 25.0	-1.8
ECAL	Calabor	51.31	301	P	P	02 34 27.3	0.0
	comp=Z,85nm,1.1s,mb5.6						
PBRG	Braganca	51.34	301	eP	P	02 34 26.3	-1.2
	comp=Z,77nm,1.3s,mb5.5						
PBRG				epP	pP	02 34 31.4	-0.1
EPON	Pontenova	51.40	303	P	P	02 34 26.9	-1.1
	comp=Z,115nm,1.5s,mb5.6						
DKH	Dar Kharkhour	51.53	293	i P	P	02 34 31.0	+2.0
ERUA	La Rua	51.54	302	P	P	02 34 29.4	+0.4
ERUA				pmax	pmax		
	comp=Z,87nm,1.4s,mb5.5						
ERUA	La Rua	51.54	302	P	P	02 34 29.4	+0.4
	comp=Z,87nm,1.4s,mb5.5						
HKC	Hong Kong	51.54	85⇑	iP	P	02 34 30.0	+0.7
HKC				i S	S	02 41 58.0	+10
ESPR	Espera	51.60	295	P	P	02 34 27.9	-1.7
	comp=Z,205nm,1.6s,mb5.8						
EINC	Incio	51.65	302	P	P	02 34 30.6	+0.8
	comp=Z,213nm,1.2s,mb6.0						
GIBL	Gibalbin	51.70	295	eP	P	02 34 30.0	-0.3
IFR	Ifrane	51.82	290	P	P	02 34 33.0	+1.7
CNIL	Conil	51.87	294	eP	P	02 34 32.0	+0.4
KBS	Kingsbay	51.87	350	eP	P	02 34 31.8	+0.7
KBS				eS	S	02 41 50.0	-1.8
KBS				eSS	SS	02 45 30.8	+4.0
KBS				pmax	pmax		
	comp=Z,316nm,2.6s,mb5.8						
KBS	Kingsbay	51.87	350	eP	P	02 34 31.8	+0.6
	comp=Z,316nm,2.6s,mb5.8						
KBS				eS	S	02 41 50.0	-1.8
KBS				eS	S	02 41 51.6	-0.2
KBS				eSS	SS	02 45 30.8	+4.0
KBS				eSS	SS	02 45 32.5	+5.7
KBS				LR	LR		
	comp=Z,47135µm,19.5s						
KBS	Kingsbay	51.87	350	eP	P	02 34 31.8	+0.6
KBS				AMb	AMB	02 34 38.5	
	comp=Z,316nm,2.6s,mb5.8						
KBS				eS	S	02 41 50.0	-1.8
KBS				eSS	SS	02 45 32.5	+5.7
KBS				AMS	AMS	03 00 58.0	
	comp=Z,47µm,19.5s,MS6.5						
KBS	Kingsbay	51.87	350	eP	P	02 34 31.8	+0.7
	comp=Z,316nm,2.6s,mb5.8,SNR=23						
KBS				eS	S	02 41 50.0	-1.8
	SNR=25						
KBS				eSS	SS	02 45 32.5	+5.7
	SNR=29						
SCRT	Cerro San Cris	51.91	294	eP	P	02 34 29.8	-2.1
SFS	San Fernando	51.97	294	eP	P	02 34 27.9	-4.5
SFS	San Fernando	51.97	294	i P	P	02 34 29.6	-2.8
SFS	San Fernando	51.97	294	i PcP	tx	02 35 35.0	
SFS	San Fernando	51.97	294	i PP	PcP	02 35 47.0	+2.1
SFS	San Fernando	51.97	294	i PcS		02 38 26.2	
SFS				i S	S	02 41 57.5	+3.9
SFS				i SS	SS	02 45 05.7	-23
EMIN	Mina Concepcio	52.05	296	P	P	02 34 31.4	-1.5
	comp=Z,152nm,1.4s,mb5.7						
EBAD	Badajoz	52.10	297	P	P	02 34 33.0	-0.3
	comp=Z,108nm,1.3s,mb5.6						
PVRL	Vila Real	52.15	300	eP	P	02 34 32.4	-1.3
	comp=Z,171nm,1.4s,mb5.8						
PVRL				epP	pP	02 34 38.3	+0.7
MTE	Manteigas	52.18	299	eP	P	02 34 32.6	-1.3
	comp=Z,248nm,1.1s,mb6.0						
MTE				epP	pP	02 34 40.3	+2.4
MTE				eS	S	02 41 58.9	+2.4
MTE				i LQ		02 45 42.1	
MTE				i LR	LR	02 46 22.7	
	comp=Z,15µm,24.2s						
MTE	Manteigas	52.18	299	eP	P	02 34 32.5	-1.4
	comp=Z,279nm,0.9s,mb6.2						
PCBR	Castelo Branco	52.24	299	eP	P	02 34 33.1	-1.2
	comp=Z,227nm,1.4s,mb5.9						
PCBR				epP	pP	02 34 39.2	+0.9
ELOB	Lobios	52.30	301	P	P	02 34 33.9	-0.9
	comp=Z,211nm,1.4s,mb5.9						
NJ2	Nanjing	52.31	71	eP	P	02 34 34.0	-1.0
NJ2				AP	pP	02 34 43.5	+4.6
NJ2				XP	sP	02 34 46.5	+6.0
NJ2				PP	PP	02 36 33.3	-1.3
NJ2				S	S	02 42 02.0	+3.7
NJ2				AMB	AMB		
	comp=Z,320nm,0.8s,mb6.3						
NJ2				AMB	AMB		
	comp=Z,7µm,4.5s						
NJ2				LR	LR		
	comp=N,104µm,19.1s,MS7.0						
NJ2				LR	LR		
	comp=E,51µm,14.3s,MS7.0						
NJ2				LR	LR		
	comp=Z,191µm,14.8s,MS7.3						
NJ2	Nanjing	52.31	71	eP	P	02 34 34.0	-1.0
	comp=Z,320nm,0.8s,mb6.3						
NJ2				pP	pP	02 34 43.5	+4.6
NJ2				sP	sP	02 34 46.5	+6.0
NJ2				PP	PP	02 36 33.3	-1.3
NJ2				S	S	02 42 02.0	+3.7
NJ2				LR	LR		
	comp=Z,191µm,14.8s,MS7.3						
PVIS	Viseu	52.38	300	eP	P	02 34 34.9	-0.5
	comp=Z,102nm,1.1s,mb5.7						
PVIS				epP	pP	02 34 40.4	+1.0
STS	Santiago	52.49	303	P	P	02 34 36.4	+0.2
STS				pmax	pmax		
	comp=Z,93nm,1.2s,mb5.6						
STS	Santiago	52.49	303	P	P	02 34 36.4	+0.2
	comp=Z,93nm,1.2s,mb5.6						
VAL	Valentia	52.59	314⇓	iP	P	02 34 37.2	+0.4
EZAM	Zamans	52.72	302	P	P	02 34 38.7	+0.8
EZAM				pmax	pmax		
	comp=Z,133nm,1.2s,mb5.7						
EZAM	Zamans	52.72	302	P	P	02 34 38.7	+0.8
	comp=Z,133nm,1.2s,mb5.7						
PALC	Alcoutim	52.73	296	eP	P	02 34 36.7	-1.4
	comp=Z,62nm,1.5s,mb5.3						
PALC				epP	pP	02 34 42.4	+0.3
EMAZ	Mazaricos	52.78	303	P	P	02 34 38.4	0.0
	comp=Z,221nm,1.7s,mb5.8						
DL2	Dalian	52.84	62	P	P	02 34 37.9	-0.9
DL2				S	S	02 42 07.4	+2.0
DL2				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.4						
DL2				AMB	AMB		
	comp=Z,3µm,4.8s						
DL2				LR	LR		
	comp=N,10µm,22.8s,MS6.1						
DL2				LR	LR		
	comp=E,15µm,21.3s,MS6.1						
DL2				LR	LR		
	comp=Z,16µm,17.2s,MS6.1						
DL2	Dalian	52.84	62	P	P	02 34 37.9	-0.9
	comp=Z,60nm,1.1s,mb5.4						
DL2				S	S	02 42 07.4	+2.0
DL2				LR	LR		
	comp=Z,16µm,17.2s,MS6.1						
PBEJ	Beja	52.91	297	eP	P	02 34 38.0	-1.4
	comp=Z,93nm,1.2s,mb5.6						
PBEJ				epP	pP	02 34 43.7	+0.3
EVO	Evora	52.91	297	eP	P	02 34 38.3	-1.1
	comp=Z,455nm,1.3s,mb6.0						
EVO				eR			
	comp=Z,31µm,21.5s						
CLNS	Chul'man	53.00	40	eP	P	02 34 39.6	-0.2
CLNS				e		02 35 45.6	
CLNS				e		02 36 34.1	
CLNS				eS	S	02 42 07.7	+0.3
CLNS				pmax	pmax		
	comp=Z,286nm,1.3s,mb6.0						
CLNS				pmax	pmax		
	comp=N,45nm,1.0s						
CLNS				pmax	pmax		
	comp=E,119nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,117nm,1.4s,mb5.6						
CLNS				pmax	pmax		
	comp=N,56nm,0.8s						
CLNS				pmax	pmax		
	comp=E,67nm,1.0s						
CLNS				smax			
	comp=N,3µm,12.2s						
CLNS				smax			
	comp=Z,3µm,11.5s						
CLNS				smax			
	comp=E,358nm,11.0s						
CLNS				MLR	MLR		
	comp=N,29µm,14.0s,MS6.6						
CLNS				MLR	MLR		
	comp=E,20µm,12.0s,MS6.6						
CLNS				MLR	MLR		
	comp=Z,50µm,12.0s,MS6.8						
MOE	Montemor	53.17	297	eP	P	02 34 41.0	-0.3
ALMR	Almeirim	53.21	298	eP	P	02 34 40.1	-1.5
JMIC	Jan Mayen	53.22	338	P	P	02 34 43.9	+2.6

	comp=Z,188nm,1.0s,mb6.0,baz=184,slow=6.7,SNR=4.5						
JMIC				LR	LR	02 59 55.5	
	comp=Z,43µm,18.6s,MS6.5,baz=111,slow=39						
JMIC	**Jan Mayen**	**53.22**	**338**	*e*P	**P**	**02 34 44.7**	**+3.4**
JMIC				*e*S	**S**	**02 42 11.2**	**+0.9**
JMIC				*e*SS	SS	02 45 48.8	-0.6
JMIC				AMS	AMS	03 00 23.4	
	comp=Z,38µm,15.4s,MS6.6						
PTEO	**Sao Teotonio**	**53.68**	**296**	*e*P	**P**	**02 34 45.5**	**+0.4**
	comp=Z,125nm,1.5s,mb5.6						
PTEO				*e*pP	pP	02 34 49.7	+0.7
PLOU	**Loures**	**53.71**	**298**	*e*P	**P**	**02 34 44.6**	**-0.6**
	comp=Z,153nm,1.6s,mb5.7						
PLOU				*e*pP	pP	02 34 50.4	+1.2
SNY	**Shenyang**	**53.71**	**58**	⇑P	**P**	**02 34 44.3**	**-0.9**
SNY				S	**S**	**02 42 22.8**	**+5.6**
SNY				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
SNY				AMB	AMB		
	comp=Z,4µm,6.5s						
SNY				LR	LR		
	comp=N,55µm,25.2s,MS6.5						
SNY				LR	LR		
	comp=E,19µm,26.4s,MS6.5						
SNY				LR	LR		
	comp=Z,34µm,15.9s						
SNY	**Shenyang**	**53.71**	**58**	⇑P	**P**	**02 34 44.3**	**-0.9**
	comp=Z,40nm,1.0s,mb5.3						
SNY				S	**S**	**02 42 22.8**	**+5.6**
SNY				LR	LR		
	comp=Z,34µm,15.9s,MS6.5						
AVE	**Averroes**	**53.72**	**291**	P	**P**	**02 34 44.0**	**-1.4**
LIS	**Lisbon**	**53.74**	**298**	*e*P	**P**	**02 34 43.7**	**-1.8**
LIS				*e*S	**S**	**02 42 22.7**	**+5.0**
LIS				*e*S	**S**	**02 42 23.1**	**+5.4**
LIS				AMS	AMS	02 47 32.3	
	comp=E,11µm,16.3s						
TIO	**Tiouine**	**54.28**	**288**	P	**P**	**02 34 51.0**	**+1.5**
QZH	**Quanzhou**	**54.34**	**80**	⇑*i*P	**P**	**02 34 50.3**	**+0.2**
QZH				S	**S**	**02 42 32.0**	**+5.9**
QZH				AMB	AMB		
	comp=Z,130nm,1.1s,mb5.8						
QZH				AMB	AMB		
	comp=Z,4µm,6.0s						
QZH				LR	LR		
	comp=N,28µm,18.0s,MS6.6						
QZH				LR	LR		
	comp=E,32µm,14.0s,MS6.6						
QZH				LR	LR		
	comp=Z,45µm,16.8s,MS6.6						
QZH	**Quanzhou**	**54.34**	**80**	⇑*i*P	**P**	**02 34 50.3**	**+0.2**
	comp=Z,130nm,1.1s,mb5.8						
QZH				S	**S**	**02 42 32.0**	**+5.9**
QZH				LR	LR		
	comp=Z,44µm,16.8s,MS6.6						
SSE	**Sheshan**	**54.49**	**72**	P	**P**	**02 34 49.9**	**-1.2**
SSE				AP	pP	02 34 56.1	+1.1
SSE				XP	sP	02 34 58.6	+2.0
SSE				S	**S**	**02 42 25.6**	**-2.3**
SSE				SS	SS	02 46 07.8	-2.4
SSE				AMB	AMB		
	comp=Z,41nm,0.9s,mb5.4						
SSE				AMB	AMB		
	comp=Z,3µm,8.9s						
SSE				LR	LR		
	comp=N,37µm,24.3s,MS6.4						
SSE				LR	LR		
	comp=E,8µm,24.4s,MS6.4						
SSE				LR	LR		
	comp=Z,17µm,24.2s,MS6.0						
SSE	**Sheshan**	**54.49**	**72**	P	**P**	**02 34 49.9**	**-1.2**
	comp=Z,41nm,0.9s,mb5.4						
SSE				pP	pP	02 34 56.1	+1.1
SSE				sP	sP	02 34 58.6	+2.0
SSE				S	**S**	**02 42 25.6**	**-2.3**
SSE				SS	SS	02 46 07.8	-2.4
SSE				LR	LR		
	comp=Z,17µm,24.2s,MS6.0						
CN2	**Changchun**	**54.68**	**56**	⇑P	**P**	**02 34 51.9**	**-0.4**
CN2				PP	PP	02 36 56.4	-0.1
CN2				*e*S	**S**	**02 42 29.4**	**-0.9**
CN2				AMB	AMB		
	comp=Z,230nm,1.3s,mb6.0						
CN2				AMB	AMB		
	comp=Z,7µm,4.0s						
CN2				LR	LR		
	comp=N,31µm,18.0s,MS6.7						
CN2				LR	LR		
	comp=E,45µm,18.0s,MS6.7						
CN2				LR	LR		
	comp=Z,55µm,19.0s,MS6.6						
CN2	**Changchun**	**54.68**	**56**	⇑P	**P**	**02 34 51.9**	**-0.4**
	comp=Z,230nm,1.3s,mb6.0						
CN2				PP	PP	02 36 56.4	-0.1
CN2				*e*S	**S**	**02 42 29.4**	**-0.9**
CN2				LR	LR		
	comp=Z,55µm,19.0s,MS6.6						
YAK	**Yakutsk**	**55.36**	**33**	*c* *i*P	**P**	**02 34 55.5**	**-1.5**
YAK				*e*		02 35 53.9	
YAK				*e*		02 37 01.9	
YAK				*e*S	**S**	**02 42 38.8**	**-0.3**
YAK				*e*		02 44 45.9	
YAK				*e*SS	SS	02 46 23.0	-0.7
YAK				*e*SSS	SSS	02 48 34.1	+7.5
YAK				pmax	pmax		
	comp=Z,246nm,0.9s,mb6.2						
YAK				pmax	pmax		
	comp=N,15nm,1.2s						
YAK				pmax	pmax		
	comp=E,89nm,1.1s						
YAK				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.8						
YAK				pmax	pmax		
	comp=N,40nm,1.0s						
YAK				pmax	pmax		
	comp=E,71nm,1.2s						
YAK				smax			
	comp=N,1µm,8.8s						
YAK				smax			
	comp=E,3µm,10.4s						
YAK				MLR	MLR		
	comp=N,21µm,13.0s,MS6.7						
YAK				MLR	MLR		
	comp=E,33µm,11.0s,MS6.7						
YAK				MLR	MLR		
	comp=Z,41µm,11.0s,MS6.8						
YAK	**Yakutsk**	**55.36**	**33**	⇑*i*P	**P**	**02 34 55.5**	**-1.5**
	comp=Z,246nm,0.9s,mb6.2						
YAK				*e*		02 35 53.9	
YAK				*e*		02 37 01.9	
YAK				*e*S	**S**	**02 42 38.8**	**-0.3**
YAK				*e*		02 44 45.9	
YAK				*e*SS	SS	02 46 23.0	-0.7
YAK				*e*SSS	SSS	02 48 34.1	+7.5
YAK				LR	LR		
	comp=Z,41µm,11.0s,MS6.8						
TATO	**Taipei**	**56.78**	**79**	PFAKE		02 35 20.0	+12
TATO				LR	LR		
	comp=Z,16µm,19.0s,MS6.1						
DAG	**Danmarks Havn**	**56.97**	**345**	⇓*i*P	**P**	**02 35 07.7**	**-0.7**
DAG				pmax	pmax		
	comp=Z,570nm,1.4s,mb6.4						
DAG				MLR	MLR		
	comp=E,37µm,22.0s,MS6.5						
DAG				MLR	MLR		
	comp=N,19µm,25.0s,MS6.5						
DAG				MLR	MLR		
	comp=Z,36µm,24.0s,MS6.4						
DAG	**Danmarks Havn**	**56.97**	**345**	⇓*i*P	**P**	**02 35 07.7**	**-0.7**
	comp=Z,567nm,1.4s,mb6.4						
	comp=Z,36µm,24.0s						
INCN	**Inchon**	**57.00**	**63**	*e*P	**P**	**02 35 08.1**	**-1.1**
	comp=Z,839nm,1.5s,mb6.5						
INCN				LR	LR		
	comp=Z,19µm,19.0s,MS6.2						
MDJ	**Mudanjiang**	**57.44**	**54**	P	**P**	**02 35 09.9**	**-2.2**
MDJ				PCP	PcP	02 36 03.8	-1.9
MDJ				PP	PP	02 37 18.8	-2.5
MDJ				SCP		02 40 03.0	
MDJ				S	**S**	**02 43 06.9**	**0.0**
MDJ				SCS	ScS	02 44 55.5	-2.2
MDJ				SS	SS	02 46 56.1	-2.0
MDJ				AMB	AMB		
	comp=Z,102nm,2.1s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,2µm,5.4s						
MDJ				LR	LR		
	comp=N,73µm,22.4s,MS6.8						
MDJ				LR	LR		
	comp=E,24µm,22.4s,MS6.8						
MDJ				LR	LR		
	comp=Z,30µm,17.3s						
MDJ	**Mudanjiang**	**57.44**	**54**	P	**P**	**02 35 09.9**	**-2.2**
	comp=Z,100nm,2.1s,mb5.5						
MDJ				PcP	PcP	02 36 03.8	-1.9
MDJ				PP	PP	02 37 18.8	-2.5
MDJ				ScP		02 40 03.0	
MDJ				S	**S**	**02 43 06.9**	**0.0**
MDJ				ScS	ScS	02 44 55.5	-2.2
MDJ				SS	SS	02 46 56.1	-2.0
MDJ				LR	LR		
	comp=Z,30µm,17.3s,MS6.5						
COCO	**West Island**	**57.48**	**132**	PFAKE		02 35 20.0	+7.2
COCO				LR	LR		
	comp=Z,6µm,21.0s,MS5.6						
SCO	**Scoresbysund**	**57.60**	**337**	*i* P	**P**	**02 35 15.9**	**+3.0**
	comp=Z,53nm,0.9s,mb5.6						
SCO				*i* S	**S**	**02 43 19.3**	**+11**
BORG	**Borgarnes**	**57.60**	**330**	LR	LR	03 04 11.9	
	comp=Z,30µm,18.3s,MS6.4,baz=106,slow=40						
BORG	**Borgarnes**	**57.60**	**330**	*e*P	**P**	**02 35 13.7**	**+0.7**
	comp=Z,344nm,1.3s,mb6.2						
BORG				LR	LR		
	comp=Z,7µm,19.0s,MS5.8						
KLR	**Kul'dur**	**57.93**	**48**	⇓*i*P	**P**	**02 35 11.7**	**-3.8**
KLR				*e*S	**S**	**02 43 10.5**	**-2.8**
KLR				*e*SS	SS	02 47 13.0	+7.1
KLR				*e*SSS	SSS	02 49 26.5	+2.2
KLR				pmax	pmax		
	comp=N,680nm,2.4s						
KLR				pmax	pmax		
	comp=E,920nm,2.4s						
KLR				pmax	pmax		
	comp=Z,1µm,2.4s,mb6.5						
KLR				pmax	pmax		
	comp=E,2µm,5.5s						
KLR				pmax	pmax		
	comp=Z,5µm,5.5s						
KLR				MLR	MLR		
	comp=Z,6µm,13.5s,MS5.9						
KS15	**Wonju Array Si**	**57.97**	**63**	⇑*e*P	**P**	**02 35 14.8**	**-1.2**
KS15				*e*	pP	02 35 20.5	+0.5
VLA	**Vladivostok**	**59.41**	**55**	⇑*i*P	**P**	**02 35 25.0**	**-0.9**
VLA				*i*		02 37 43.0	
VLA				*e*		02 39 05.0	
VLA				*i* S	**S**	**02 43 39.0**	**+6.2**
VLA				*i*		02 45 11.0	
VLA				pmax	pmax		
	comp=Z,4µm,7.0s						
VLA				pmax	pmax		
	comp=E,2µm,4.0s						
VLA				pmax	pmax		
	comp=N,2µm,5.0s						
VLA				pmax	pmax		
	comp=Z,1µm,5.6s						
VLA				pmax	pmax		
	comp=N,1µm,5.0s						
VLA				pmax	pmax		
	comp=E,1µm,6.0s						
VLA				smax			
	comp=N,4µm,8.8s						
VLA				smax			
	comp=E,950nm,6.0s						
VLA				MLR	MLR		
	comp=Z,37µm,13.0s,MS6.7						
VLA				MLR	MLR		
	comp=N,23µm,9.0s						
VLA				MLR	MLR		
	comp=E,28µm,9.0s						
BCPH	**Baguio City Da**	**59.48**	**88**	⇓*e*P	**P**	**02 35 26.4**	**-0.4**
	comp=E,114µm,1.0s						
CVP	**Callao Caves**	**59.97**	**86**	*e*P	**P**	**02 35 29.5**	**-0.6**
EFAM	**Famara**	**60.01**	**288**	P	**P**	**02 35 32.0**	**+1.9**
	comp=E,41nm,0.8s,mb5.5						
EFAM	**Famara**	**60.01**	**288**	P	**P**	**02 35 32.0**	**+1.8**
	comp=E,41nm,0.8s,mb5.5,SNR=5.4						
PCPH	**Palayan**	**60.29**	**89**	⇓*e*P	**P**	**02 35 31.3**	**-0.9**
LUBP	**Lubang**	**60.39**	**91**	*e*P	**P**	**02 35 33.6**	**+0.6**
KKM	**Kota Kinabalu**	**60.73**	**101**	P	**P**	**02 35 34.5**	**-0.9**
TGY	**Tagaytay City**	**60.81**	**90**	⇓*i*P	**P**	**02 35 32.0**	**-3.9**
TGY	**Tagaytay City**	**60.81**	**90**	P	**P**	**02 35 36.2**	**+0.3**
	comp=E,177nm,0.3s,mb6.6,baz=266,slow=2.5,SNR=11						
ENPP	**El Nido**	**60.88**	**94**	*e*P	**P**	**02 35 36.4**	**+0.1**
PPR	**Puerto Princes**	**60.98**	**96**	⇑*i*P	**P**	**02 35 36.4**	**-0.6**
BUSP	**Coron**	**61.16**	**93**	*e*P	**P**	**02 35 39.0**	**+0.7**
SJMP	**San Jose**	**61.73**	**92**	*e*P	**P**	**02 35 42.2**	**+0.1**
JOW	**Kunigami**	**61.77**	**74**	P	**P**	**02 35 40.3**	**-1.9**
	comp=E,187nm,1.2s,mb6.1						
EOSO	**Osorio**	**62.04**	**288**	P	**P**	**02 35 46.5**	**+2.4**
	comp=E,169nm,1.1s,mb6.1						
EOSO	**Osorio**	**62.04**	**288**	P	**P**	**02 35 46.5**	**+2.4**
	comp=E,169nm,1.1s,mb6.1,SNR=15						
DBIC	**Dimbokro**	**62.32**	**261**	P	**P**	**02 35 44.7**	**-1.4**
DBIC				S	**S**	**02 44 11.1**	**+0.9**
DBIC	**Dimbokro**	**62.32**	**261**	P	**P**	**02 35 44.7**	**-1.4**
DBIC				S	**S**	**02 44 10.5**	**+0.3**
DBIC				pmax	pmax		
	comp=Z,362nm,1.2s						
DBIC				MLR	MLR		
	comp=Z,55µm,18.6s						
DBIC	**Dimbokro**	**62.32**	**261**	P	**P**	**02 35 44.6**	**-1.4**
	comp=Z,362nm,1.2s,mb6.4,baz=40,slow=8.3,SNR=59						
DBIC				S	**S**	**02 44 10.5**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=222,slow=12,SNR=2.4						
DBIC				LR	LR	03 05 00.9	
	comp=Z,55µm,18.6s,MS6.8,baz=35,slow=38						
DBIC	**Dimbokro**	**62.32**	**261**	⇑*e*P	**P**	**02 35 44.6**	**-1.5**
	comp=Z,468nm,1.1s,mb6.5						
DBIC				LR	LR		
	comp=Z,57µm,20.0s,MS6.7						
TSUM	**Tsumeb**	**62.37**	**222**	P	**P**	**02 35 46.4**	**+0.1**
TSUM				S	**S**	**02 44 18.4**	**+7.6**
CUYO	**Cuyo Island**	**62.41**	**94**	*e*P	**P**	**02 35 47.2**	**+0.5**
SUMG	**Summit**	**62.51**	**340**	*e*P	**P**	**02 35 46.2**	**-0.3**
	comp=Z,713nm,1.1s,mb6.7						
EBAJ	**Bajamar**	**62.52**	**288**	P	**P**	**02 35 51.3**	**+4.1**
	comp=Z,81nm,0.9s,mb5.8						
CCAN	**Las Canadas**	**62.85**	**288**	P	**P**	**02 35 56.4**	**+7.0**
	comp=Z,21nm,0.9s,mb5.3						
LBTB	**Lobatse**	**63.01**	**212**	P	**P**	**02 35 50.3**	**-0.2**
LBTB				S	**S**	**02 44 23.9**	**+5.1**
LBTB				pmax	pmax		
	comp=Z,158nm,1.1s,mb6.1						
LBTB				smax			
	comp=N,2.0nm,1.0s						
LBTB	**Lobatse**	**63.01**	**212**	P	**P**	**02 35 50.3**	**-0.2**
	comp=N,158nm,1.1s,mb6.0,baz=35,slow=6.0,SNR=32						
LBTB				S	**S**	**02 44 23.9**	**+5.1**
	comp=N,2.1nm,0.9s,baz=22,slow=15,SNR=2.4						
LBTB	**Lobatse**	**63.01**	**212**	*e*P	**P**	**02 35 50.2**	**-0.3**
	comp=N,695nm,1.5s,mb6.6						
LBTB				*e*PcP	PcP	02 36 18.6	-10
LBTB				LR	LR		
	comp=Z,52µm,21.0s,MS6.7						
EGOM	**La Gomera**	**63.37**	**288**	P	**P**	**02 35 55.8**	**+3.0**
	comp=Z,66nm,1.0s,mb5.7						
SNPH	**Sibulan**	**65.05**	**94**	⇑*e*P	**P**	**02 36 03.6**	**-0.4**
TBP	**Tagbilaran**	**65.42**	**93**	⇓*e*P	**P**	**02 36 05.3**	**-1.1**
SEY	**Seymchan**	**65.52**	**30**	*e*P	**P**	**02 36 05.7**	**-0.5**
SEY				*SP	sP	02 36 09.5	-2.2
SEY						02 36 39.4	
SEY						02 38 27.9	
SEY				*e*PPP	PPP	02 40 06.1	-1.1
SEY				*e*S	S	02 44 49.1	-0.1
SEY						02 45 59.5	
SEY				*e*SS	SS	02 49 04.6	0.0
SEY				pmax	pmax		
	comp=E,430nm,1.0s						
SEY				pmax	pmax		
	comp=Z,940nm,1.0s						
SEY				pmax	pmax		
	comp=N,240nm,1.1s						
SEY				MLR	MLR		
	comp=Z,299µm,17.0s						
SEY				MLR	MLR		
	comp=N,110µm,16.0s						
SEY				MLR	MLR		
	comp=E,127µm,18.0s						
SEY	**Seymchan**	**65.52**	**30**	*e*P	**P**	**02 36 05.7**	**-0.5**
	comp=E,0.9nm,1.0s						
SEY				sP	sP	02 36 09.5	-2.2
SEY				*e*		02 36 39.4	
SEY				*e*		02 38 27.9	
SEY				*e*PPP	PPP	02 40 06.1	-1.1
SEY				*e*S	S	02 44 49.1	-0.1
SEY				*e*		02 45 59.5	
SEY				*e*SS	SS	02 49 04.6	0.0
SEY				LR	LR		
	comp=Z,299µm,17.0s						
YSS	**Yuzh-Sakhalins**	**65.64**	**49**	α *i*P	**P**	**02 36 05.8**	**-1.5**
YSS				*i* S	S	02 44 54.0	+3.0
YSS				*e*PS	PS	02 45 08.0	-5.8
YSS				pmax	pmax		
	comp=N,130nm,1.0s						
YSS				pmax	pmax		
	comp=E,250nm,1.0s						
YSS				pmax	pmax		
	comp=Z,400nm,1.0s,mb6.4						
YSS				pmax	pmax		
	comp=Z,4µm,6.0s						
YSS				smax			
	comp=N,5µm,11.0s						
YSS				smax			
	comp=E,2µm,10.0s						
YSS				MLR	MLR		
	comp=Z,32µm,16.0s,MS6.6						
YSS				MLR	MLR		
	comp=N,21µm,14.0s,MS6.8						
YSS				MLR	MLR		
	comp=E,40µm,17.0s,MS6.8						
YSS	**Yuzh-Sakhalins**	**65.64**	**49**	*i* Pcu	**P**	**02 36 05.8**	**-1.5**
	comp=E,400nm,1.0s,mb6.4						
YSS				*i* S	S	02 44 54.0	+3.0
YSS				*e*PS	PS	02 45 08.0	-5.8
YSS				LR	LR		
	comp=Z,32µm,16.0s,MS6.6						
MA2	**Magadan**	**65.93**	**34**	*c* *i*P	**P**	**02 36 08.1**	**-0.8**
MA2				*e*		02 36 36.7	
MA2				*i* S	S	02 44 51.6	-2.7
MA2				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.8						
MA2				MLR	MLR		
	comp=Z,74µm,26.0s,MS6.8						
MA2	**Magadan**	**65.93**	**34**	⇑*i*P	**P**	**02 36 08.1**	**-0.8**
MA2				*e*		02 36 36.7	
MA2				*i* S	S	02 44 51.6	-2.7
MA2				LR	LR		
	comp=Z,74µm,26.0s,MS6.8						
BART	**Pico Bartolome**	**66.06**	**301**	*e*P	**P**	**02 36 11.5**	**+1.4**
	comp=Z,512nm,1.2s,mb6.4						
MAJO	**Matsushiro**	**66.08**	**61**	PFAKE		02 36 20.0	+10
MAJO				LR	LR		
	comp=Z,19µm,19.0s,MS6.3						
MAT	**Matsushiro**	**66.08**	**61**	*e*P	**P**	**02 36 09.0**	**-1.3**
MAT				*e*S	S	02 44 58.0	+1.4
MAT				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.7						
MAT				MLR	MLR		
	comp=Z,21µm,21.0s,MS6.3						
MAT	**Matsushiro**	**66.08**	**61**	*e*P	**P**	**02 36 09.0**	**-1.3**
	comp=Z,100nm,1.4s,mb5.7						
MAT				*e*S	S	02 44 58.0	+1.4
MAT				LR	LR		
	comp=Z,21µm,21.0s,MS6.3						
MAT	**Matsushiro**	**66.08**	**61**	P	**P**	**02 36 08.5**	**-1.8**
MAT				S	S	02 44 57.0	+0.4
MIRA	**Miradouro**	**66.14**	**301**	*e*P	**P**	**02 36 13.3**	**+2.7**
PFAD	**Fenais da Ajud**	**66.16**	**301**	*e*P	**P**	**02 36 11.6**	**+0.9**
FRA1	**Furnas**	**66.21**	**301**	*e*P	**P**	**02 36 11.0**	**-0.1**
PCNG	**Congro**	**66.23**	**301**	*e*P	**P**	**02 36 12.4**	**+1.2**
MESC	**Monte Escuro**	**66.26**	**301**	*e*P	**P**	**02 36 19.5**	**+8.1**
PSMN	**Pico do Norte,**	**66.27**	**300**	*e*P	**P**	**02 36 16.3**	**+4.8**
BOSA	**Boshof**	**66.27**	**210**	⇑*e*P	**P**	**02 36 10.7**	**-0.9**
BOSA				*e*	pP	02 36 15.5	-0.2
BOSA				pmax	pmax		
	comp=Z,203nm,0.9s,mb6.2						
BOSA				MLR	MLR		
	comp=Z,49µm,22.0s,MS6.7						
BOSA	**Boshof**	**66.27**	**210**	⇑*e*P	**P**	**02 36 10.7**	**-0.9**
	comp=Z,203nm,0.9s,mb6.2						
BOSA				⇓*e*pP	pP	02 36 15.5	-0.2
BOSA				LR	LR		
	comp=Z,49µm,22.0s,MS6.7						
PMAT	**Coroa da Mata**	**66.27**	**301**	*e*P	**P**	**02 36 12.2**	**+0.7**
VIF	**Vila Franca**	**66.28**	**301**	*e*P	**P**	**02 36 12.7**	**+1.2**
LFA	**Lagoa do Fogo**	**66.30**	**301**	*e*P	**P**	**02 36 16.7**	**+5.1**
PRCH	**Ribeira Ch**	**66.31**	**301**	*e*P	**P**	**02 36 11.3**	**-0.4**
PVER	**Pico Vermelho**	**66.31**	**301**	*e*P	**P**	**02 36 13.9**	**+2.2**
PSMA	**Santa Maria**	**66.32**	**300**	*e*P	**P**	**02 36 12.9**	**+1.1**
	comp=Z,372nm,1.6s,mb6.2						
CML	**Cha da Macela**	**66.34**	**301**	*e*P	**P**	**02 36 13.4**	**+1.5**
FAC	**Faja de Cima**	**66.42**	**301**	*e*P	**P**	**02 36 14.0**	**+1.6**
PDA	**Ponta Delgada**	**66.44**	**301**	*i* P	**P**	**02 36 18.0**	**+5.5**
PDA	**Ponta Delgada**	**66.44**	**301**	*e*PP	PP	02 38 21.0	-20
PDA				*i* S	S	02 45 11.0	+10
PDA				*i*		02 46 17.0	
PDA				*e*SS	SS	02 49 23.0	+3.7
PDA				*i* LQ		02 53 20.0	
PDA				*i* LR	LR	02 56 41.0	
PSET	**Sete Cidades**	**66.45**	**301**	*e*P	**P**	**02 36 18.5**	**+5.9**
	comp=Z,351nm,1.5s,mb6.2						
ASAJ	**Asahikawa**	**66.51**	**52**	P	**P**	**02 36 12.2**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,75nm,1.0s						
ASAJ	**Asahikawa**	**66.51**	**52**	P	**P**	**02 36 12.2**	**-0.7**
	comp=Z,75nm,1.0s,mb5.7,baz=253,slow=12,SNR=7.1						
PFAV	**Pico das Favas**	**67.13**	**302**	*e*P	**P**	**02 36 18.2**	**+1.3**
	comp=Z,129nm,1.4s,mb5.8						
PVNV	**Vila Nova**	**67.16**	**302**	*e*P	**P**	**02 36 17.9**	**+0.8**
RIB2	**Ribeirinha**	**67.20**	**302**	*e*P	**P**	**02 36 16.0**	**-1.4**
PBIS	**Biscoitos**	**67.23**	**303**	*e*P	**P**	**02 36 17.0**	**-0.6**
ADH	**Angra Heroismo**	**67.26**	**302**	*e*P	**P**	**02 36 31.0**	**+13**
ADH				*e*		02 45 26.0	
ADH				*e*S		02 46 12.5	
ADH				*e*SS	tx	02 50 16.0	
ADH				*e*		02 51 31.0	
ADH				*e*		02 57 07.5	
ADH				*e*LR	LR	02 58 22.5	
PPAD	**Pico dos Padre**	**67.28**	**302**	*e*P	**P**	**02 36 17.6**	**-0.3**
PSBA	**Serra de Santa**	**67.28**	**303**	*e*P	**P**	**02 36 19.3**	**+1.4**
	comp=Z,149nm,0.9s,mb6.0						
ASBA	**Santa Barbara**	**67.30**	**302**	*e*P	**P**	**02 36 16.9**	**-1.1**
PMAN	**Manadas**	**67.88**	**303**	*e*P	**P**	**02 36 22.9**	**+1.2**
	comp=Z,690nm,1.4s,mb6.5						
ROSA	**Rosais**	**67.96**	**303**	*e*P	**P**	**02 36 25.3**	**+3.1**
PICO	**Pico**	**68.18**	**303**	*e*P	**P**	**02 36 28.1**	**+4.6**
DAV	**Davao City (W)**	**68.19**	**95**	⇑*e*P	**P**	**02 36 26.0**	**+2.0**
PCED	**Cedros**	**68.33**	**303**	*e*P	**P**	**02 36 27.6**	**+3.1**
	comp=Z,414nm,1.4s,mb6.3						
CALA	**Caldeira**	**68.35**	**303**	*e*P	**P**	**02 36 22.8**	**-1.8**
JHJ	**Hachijo jima 2**	**68.58**	**63**	P	**P**	**02 36 26.8**	**+0.6**
	comp=Z,222nm,1.0s,mb6.0,baz=66,slow=12,SNR=2.2						
JHJ				LR	LR	03 09 17.1	
	comp=Z,16µm,20.8s,MS6.2,baz=289,slow=38						
BILL	**Bilibino**	**68.67**	**22**	*e*P	**P**	**02 36 25.9**	**-0.2**
BILL				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.5						
BILL				MLR	MLR		
	comp=Z,37µm,20.0s,MS6.6						
BILL	**Bilibino**	**68.67**	**22**	*e*P	**P**	**02 36 25.9**	**-0.2**
	comp=Z,1µm,1.8s,mb6.5						
BILL				LR	LR		
	comp=Z,37µm,20.0s,MS6.6						
YUK	**Yuzh-Kuril'sk**	**68.72**	**51**	*e*P	**P**	**02 36 25.0**	**-1.8**
YUK				*e*		02 36 55.0	
YUK						02 39 00.5	
YUK				*e*S	S	02 45 34.0	+5.8
YUK				*e*PS	PS	02 45 58.0	+2.8
YUK				pmax	pmax		
	comp=N,5µm,2.5s						
YUK				pmax	pmax		
	comp=Z,11µm,2.5s						
YUK				pmax	pmax		
	comp=E,5µm,3.5s						
YUK				pmax	pmax		
	comp=Z,820nm,1.0s						
YUK				smax			
	comp=N,8µm,11.0s						
YUK				smax			
	comp=E,6µm,7.0s						
YUK				MLR	MLR		
	comp=N,34µm,15.0s						
YUK				MLR	MLR		
	comp=Z,33µm,15.0s						
YUK				MLR	MLR		
	comp=E,33µm,17.0s						

YUK	**Yuzh-Kuril'sk**	**68.72**	**51**	*e*P	**P**	**02 36 25.0**	**-1.8**
	comp=E,820nm,1.0s,mb6.6						
YUK				*e*		02 36 55.0	
YUK				*e*		02 39 00.5	
YUK				*e*S	S	02 45 34.0	+5.8
YUK				*e*PS	PS	02 45 58.0	+2.8
YUK				LR	LR		
	comp=Z,33µm,15.0s,MS6.7						
SUR	**Sutherland**	**71.46**	**212**	P	**P**	**02 36 44.8**	**+1.2**
	comp=Z,97nm,0.9s,mb5.7,baz=32,slow=2.7,SNR=17						
SUR	**Sutherland**	**71.46**	**212**	*e*P	**P**	**02 36 44.1**	**+0.4**
	comp=Z,137nm,0.8s,mb5.9						
SUR				LR	LR		
	comp=Z,18µm,22.0s,MS6.3						
SKR	**Severo-Kuril's**	**72.29**	**41**	*e*P	**P**	**02 36 48.0**	**-0.3**
SKR				*e*		02 37 09.0	
SKR				*e*PPP	PPP	02 41 18.0	+4.9
SKR				*e*S	S	02 46 08.0	-1.7
SKR				*e*PS	PS	02 46 36.0	-6.4
SKR				*e*		02 46 55.0	
SKR				pmax	pmax		
	comp=Z,220nm,1.0s,mb6.0						
SKR				pmax	pmax		
	comp=Z,2µm,6.0s						
SKR				smax			
	comp=N,5µm,14.0s						
SKR				MLR	MLR		
	comp=N,39µm,16.0s,MS6.8						
SKR				MLR	MLR		
	comp=E,12µm,16.0s,MS6.8						
SKR				MLR	MLR		
	comp=Z,28µm,16.0s,MS6.6						
SKR	**Severo-Kuril's**	**72.29**	**41**	*e*P	**P**	**02 36 48.0**	**-0.3**
	comp=Z,220nm,1.0s,mb6.0						
SKR				*e*		02 37 09.0	
SKR				*e*PPP	PPP	02 41 18.0	+4.9
SKR				*e*S	S	02 46 08.0	-1.7
SKR				*e*PS	PS	02 46 36.0	-6.4
SKR				*e*		02 46 55.0	
SKR				LR	LR		
	comp=Z,28µm,16.0s,MS6.6						
PET	**Petropavlovsk**	**72.61**	**38**	*e*P	**P**	**02 36 51.4**	**+1.3**
PET				*e*S	S	02 46 09.8	-3.4
PET				*e*PS	PS	02 46 44.0	-2.4
PET				*e*SS	SS	02 50 53.4	-1.2
PET				*e*SSS	SSS	02 54 05.3	+1.0
PET				pmax	pmax		
	comp=Z,168nm,1.9s,mb5.7						
PET				pmax	pmax		
	comp=Z,1µm,14.2s						
PET				smax			
	comp=N,3µm,18.3s						
PET				smax			
	comp=E,4µm,22.1s						
PET				MLR	MLR		
	comp=Z,29µm,21.0s,MS6.5						
PET				MLR	MLR		
	comp=N,28µm,20.0s						
PET				MLR	MLR		
	comp=Z,20µm,16.0s						
PET	**Petropavlovsk**	**72.61**	**38**	*e*P	**P**	**02 36 51.4**	**+1.3**
	comp=Z,168nm,1.9s,mb5.7						
PET				*e*S	S	02 46 09.8	-3.4
PET				*e*PS	PS	02 46 44.0	-2.4
PET				*e*SS	SS	02 50 53.4	-1.2
PET				*e*SSS	SSS	02 54 05.3	+1.0
PET				LR	LR		
	comp=Z,29µm,21.0s,MS6.5						
CBIJ	**Chichi jima**	**73.00**	**68**	LR	LR	03 10 32.1	
	comp=Z,9µm,21.9s,MS6.0,baz=119,slow=37						
RES	**Resolute Bay**	**73.18**	**352**	*e*P	**P**	**02 36 52.6**	**-0.5**
RES				pmax	pmax		
	comp=Z,87nm,1.2s,mb5.6						
RES	**Resolute Bay**	**73.18**	**352**	*e*P	**P**	**02 36 52.6**	**-0.5**
	comp=Z,87nm,1.2s,mb5.6						
TNA	**Tin City**	**77.97**	**17**	*e*P	**P**	**02 37 20.2**	**-0.1**
	comp=Z,132nm,1.3s,mb5.7						
MBWA	**Marble Bar**	**79.45**	**122**	*e*P	**P**	**02 37 27.9**	**-1.4**
	comp=Z,102nm,1.1s,mb5.7						
MBWA				LR	LR		
	comp=Z,21µm,20.0s,MS6.5						
FX1	**Attu Island--F**	**80.02**	**33**	*e*P	**P**	**02 37 31.4**	**-0.4**
SMY	**Shemya**	**80.56**	**33**	*e*P	**P**	**02 37 35.5**	**+0.9**
SMY				pmax	pmax		
	comp=Z,570nm,1.2s,mb6.4						
SMY	**Shemya**	**80.56**	**33**	*e*P	**P**	**02 37 36.8**	**+2.2**
SMY				LR	LR		
	comp=Z,23µm,21.0s,MS6.5						
IMA	**Indian Mountai**	**80.67**	**12**	*e*P	**P**	**02 37 35.1**	**+0.2**
INK	**Inuvik**	**80.92**	**4**	*e*P	**P**	**02 37 36.2**	**-0.1**
INK				pmax	pmax		
	comp=Z,143nm,1.1s						
INK	**Inuvik**	**80.92**	**4**	*e*P	**P**	**02 37 36.2**	**-0.1**
	comp=Z,142nm,1.1s,mb5.8						
GUMO	**Guam**	**81.54**	**79**	PFAKE		02 37 50.0	+9.5
GUMO				LR	LR		
	comp=Z,6µm,22.0s,MS5.9						
SCHQ	**Schefferville**	**81.99**	**331**	P	**P**	**02 37 42.2**	**+0.2**
	comp=Z,25nm,0.7s,mb5.3,baz=45,slow=4.9,SNR=36						
SCHQ				S	S	02 48 00.6	+6.2
	comp=Z,1.6nm,0.9s,baz=230,slow=19,SNR=2.1						
SCHQ				LR	LR	03 18 00.1	
	comp=Z,13µm,21.3s,MS6.3,baz=42,slow=38						
SCHQ	**Schefferville**	**81.99**	**331**	*e*P	**P**	**02 37 41.8**	**-0.3**
	comp=Z,134nm,0.8s,mb5.9						
SCHQ				LR	LR		
	comp=Z,21µm,22.0s,MS6.5						
FITZ	**Fitzroy Crossi**	**82.04**	**116**	*i* S	S	02 48 02.4	+6.7
FITZ				*e*PKKP	PKKP	02 56 13.4	+16
FITZ	**Fitzroy Crossi**	**82.04**	**116**	⇑*i*P	**P**	**02 37 42.5**	**-0.6**
	comp=Z,178nm,0.8s,mb6.0						
FITZ				*i* S	S	02 48 02.4	+6.7
FITZ				*e*PKKP	PKKP	02 56 13.4	+16
COLA	**College**	**82.74**	**10**	*e*P	**P**	**02 37 45.1**	**-0.7**
COLA				MLR	MLR		
	comp=Z,23µm,18.0s,MS6.6						
ILAR	**Eielson Array**	**82.99**	**10**	P	**P**	**02 37 46.0**	**-1.0**
	comp=Z,23nm,0.8s,mb5.3,baz=323,slow=4.2,SNR=125						
ILAR				PP	PP	02 41 02.4	+2.6
	comp=Z,10nm,1.0s,baz=324,slow=4.6,SNR=4.5						
ILAR				PKKPbc		02 56 07.7	
	comp=Z,1.1nm,1.0s,baz=181,slow=2.1,SNR=7.2						
ILAR				PKPPKP		03 04 03.2	
	comp=Z,0.8nm,0.9s,baz=226,slow=3.0,SNR=5.0						
ILAR				LR	LR	03 21 26.1	
	comp=Z,19µm,18.8s,MS6.5,baz=197,slow=40						
MCK	**McKinley**	**83.63**	**11**	⇑*e*P	**P**	**02 37 50.1**	**-0.2**
MCK				pmax	pmax		
	comp=Z,176nm,1.1s,mb6.1						
MCK				MLR	MLR		
	comp=Z,14µm,21.0s,MS6.3						
MCK	**McKinley**	**83.63**	**11**	⇑*e*P	**P**	**02 37 50.1**	**-0.2**
	comp=Z,176nm,1.1s,mb6.1						
MCK				LR	LR		
	comp=Z,14µm,21.0s,MS6.3						
MUN	**Mundaring**	**84.03**	**133**	*e*S	S	02 48 19.6	+4.1
MUN	**Mundaring**	**84.03**	**133**	*e*P	**P**	**02 37 51.7**	**-1.4**
	comp=Z,78nm,1.1s,mb5.8						
MUN				*e*S	S	02 48 19.6	+4.1
KAKA	**Kakadu**	**84.43**	**108**	⇑*i*P	**P**	**02 37 54.7**	**-0.7**
	comp=Z,214nm,0.7s,mb6.4						
THY	**Trims Highway**	**84.44**	**10**	*e*P	**P**	**02 37 54.3**	**-0.1**
DAWY	**Dawson**	**84.62**	**7**	*e*P	**P**	**02 37 55.5**	**+0.3**
SVW2	**Sparrevohn**	**84.73**	**15**	*e*P	**P**	**02 37 56.9**	**+1.0**
KLBR	**Kellerberrin**	**84.76**	**131**	⇑*i*P	**P**	**02 37 55.1**	**-1.7**
	comp=Z,1µm,0.9s						
MENT	**Mentasta**	**85.18**	**9**	*e*P	**P**	**02 37 58.8**	**+0.7**
NWAO	**Narrogin (SRO)**	**85.30**	**133**	*e*P	**P**	**02 37 58.0**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,293nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,6µm,21.0s						
NWAO	**Narrogin (SRO)**	**85.30**	**133**	LR	LR	03 08 58.0	
	comp=Z,21nm,21.9s,baz=135,slow=31						
NWAO	**Narrogin (SRO)**	**85.30**	**133**	*e*P	**P**	**02 37 58.0**	**-1.4**
	comp=Z,293nm,1.2s,mb6.3						
NWAO				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
SML	**Sawmill**	**85.53**	**12**	*e*P	**P**	**02 37 59.2**	**-0.6**
PMR	**Palmer**	**85.59**	**12**	*e*P	**P**	**02 38 00.4**	**+0.3**
PMR				LR	LR		
	comp=Z,42µm,21.0s,MS6.8						
FIB	**Fire Island**	**85.79**	**13**	*e*P	**P**	**02 38 01.2**	**0.0**
	comp=Z,360nm,0.8s,mb6.7						
FIB				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
DIV	**Divide**	**86.60**	**11**	*e*P	**P**	**02 38 05.4**	**+0.2**
	comp=Z,355nm,0.7s,mb6.7						
YKW3	**Yellowknife Ar**	**86.74**	**356**	*e*P	**P**	**02 38 06.1**	**+0.3**
YKA	**Yellowknife Ar**	**86.81**	**356**	*i* P	**P**	**02 38 06.0**	**-0.1**
YKA				pmax	pmax		
	comp=Z,45nm,0.9s						
YKA	**Yellowknife Ar**	**86.81**	**356**	P	**P**	**02 38 06.5**	**+0.4**
	comp=Z,45nm,0.9s,mb5.7,baz=357,slow=4.5,SNR=162						
YKA				PKiKP		02 43 12.5	
	comp=Z,1.3nm,0.8s,baz=355,slow=1.0,SNR=4.0						
YKA				S	S	02 48 34.2	-7.7
	comp=Z,0.4nm,0.9s,baz=83,slow=37,SNR=2.9						
YKA				PKKPbc		02 56 01.3	
	comp=Z,1.1nm,0.9s,baz=176,slow=2.6,SNR=7.6						
YKA				PKPPKP		03 03 56.3	
	comp=Z,0.1nm,0.4s,baz=162,slow=1.8,SNR=4.6						
YKA				LR	LR	03 23 12.6	
	comp=Z,24µm,18.7s,MS6.6,slow=40						
EYAK	**Cordova Ski Ar**	**87.15**	**11**	*e*P	**P**	**02 38 08.2**	**+0.3**
FCC	**Fort Churchill**	**87.56**	**345**	*e*P	**P**	**02 38 09.6**	**-0.3**
	comp=Z,154nm,1.2s,mb6.1						
UNV	**Unalaska Valle**	**87.77**	**24**	P	**P**	**02 38 10.6**	**-0.4**
	comp=Z,170nm,1.0s,mb6.2						
KDAK	**Kodiak Island**	**88.39**	**15**	*e*P	**P**	**02 38 14.6**	**+0.7**
KDAK				LR	LR		
	comp=Z,33µm,20.0s,MS6.8						
WRA	**Warramunga Arr**	**89.87**	**113**	P	**P**	**02 38 20.8**	**-0.9**
	comp=Z,19nm,0.6s,mb5.6,baz=316,slow=4.0,SNR=121						
WRA				PKKPbc		02 55 52.2	
	comp=Z,1.0nm,0.5s,baz=121,slow=2.3,SNR=25						
WRA				PKPPKP		03 04 07.7	
	comp=Z,2.2nm,1.1s,baz=113,slow=2.0,SNR=5.3						
WRAB	**Tennant Creek**	**89.88**	**113**	c *i*P	**P**	**02 38 20.7**	**-1.1**
WRAB	**Tennant Creek**	**89.88**	**113**	⇑*e*P	**P**	**02 38 20.8**	**-1.0**
	comp=Z,110nm,0.9s,mb6.2						
WRAB				*e*	pP	02 38 25.0	-1.0
WRAB				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
WB2	**Warramunga Arr**	**89.88**	**113**	⇑*i*P	**P**	**02 38 20.9**	**-0.9**
WB2				*e*S	S	02 49 00.9	-11
WB2				*e*		02 49 20.1	
WB2				*e*PKKP	PKKP	02 55 53.7	+10
DLBC	**Dease Lake**	**90.95**	**4**	LR	LR	03 24 33.2	
	comp=Z,23µm,21.2s,MS6.6,baz=326,slow=39						
DLBC	**Dease Lake**	**90.95**	**4**	*e*P	**P**	**02 38 27.0**	**+1.2**
FORT	**Forrest**	**91.21**	**125**	*e*P	**P**	**02 38 27.4**	**-0.3**
	comp=Z,2µm,0.7s						
ASPA	**Alice Springs**	**91.54**	**117**	⇑*i*P	**P**	**02 38 28.5**	**-0.9**
ASPA				*e*		02 49 32.6	
ASPA	**Alice Springs**	**91.54**	**117**	⇑*i*P	**P**	**02 38 28.5**	**-0.9**
ASPA				*e*S	S	02 49 07.5	-19
ASPA				*e*		02 49 32.6	
ASPA				*e*PKKP	PKKP	02 55 53.9	+13
ASAR	**Alice Springs**	**91.55**	**117**	P	**P**	**02 38 28.5**	**-0.9**
	comp=Z,47nm,0.8s,mb5.9,baz=306,slow=4.3,SNR=248						
ASAR				PKiKP		02 43 21.2	
	comp=Z,1.5nm,0.9s,baz=172,slow=22,SNR=2.9						
ASAR				PKKPbc		02 55 51.5	
	comp=Z,1.3nm,0.7s,baz=120,slow=3.2,SNR=10						
ASAR				LR	LR	03 23 54.4	
	comp=Z,7µm,20.6s,MS6.1,baz=169,slow=38						
SIT	**Sitka**	**91.92**	**7**	P	**P**	**02 38 32.2**	**+1.9**
SIT				pmax	pmax		
	comp=Z,139nm,1.1s,mb6.2						
SIT				MLR	MLR		
	comp=Z,37µm,22.0s,MS6.8						
SIT	**Sitka**	**91.92**	**7**	P	**P**	**02 38 32.2**	**+1.9**
	comp=Z,139nm,1.1s,mb6.2						
SIT				LR	LR		
	comp=Z,37µm,22.0s,MS6.8						
HNH	**Hanover**	**92.47**	**326**	*e*P	**P**	**02 38 34.9**	**+1.7**
	comp=Z,9.6nm,1.4s,mb4.9						
MIV	**Mineville/With**	**92.79**	**327**	*e*P	**P**	**02 38 34.1**	**-0.6**
FFC	**Flin Flon**	**92.91**	**348**	P	**P**	**02 38 35.1**	**+0.2**
	comp=Z,276nm,1.3s,mb6.5,SNR=22						
FFC	**Flin Flon**	**92.91**	**348**	*e*P	**P**	**02 38 34.9**	**0.0**
FFC				pmax	pmax		
	comp=Z,112nm,1.4s,mb6.1						
FFC				MLR	MLR		
	comp=Z,10µm,20.0s,MS6.2						
FFC	**Flin Flon**	**92.91**	**348**	*e*P	**P**	**02 38 34.9**	**-0.1**
	comp=Z,112nm,1.4s,mb6.1						
FFC				LR	LR		
	comp=Z,10µm,20.0s,MS6.2						
HRV	**Harvard--Oak R**	**93.00**	**325**	PFAKE		02 38 50.0	+14
HRV				LR	LR		
	comp=Z,9µm,20.0s,MS6.2						
ACCN	**Adirondack Com**	**93.38**	**326**	*e*P	**P**	**02 38 36.7**	**-0.6**
PMG	**Port Moresby**	**95.04**	**98**	LR	LR	03 26 43.7	
	comp=Z,4µm,21.7s,MS5.8,baz=64,slow=39						
RCBR	**Riachuelo**	**95.27**	**266**	*e*P	**P**	**02 38 48.0**	**+1.3**
	comp=Z,21nm,1.0s,mb5.5						
RCBR				LR	LR		
	comp=Z,25µm,21.0s,MS6.7						
BINY	**Binghamton**	**95.38**	**327**	P	**P**	**02 38 46.3**	**-0.4**
	comp=Z,167nm,1.5s,mb6.2						
BINY				LR	LR		
	comp=Z,14µm,21.0s,MS6.4						
ULM	**Lac du Bonnet**	**95.78**	**343**	P	**P**	**02 38 47.9**	**-0.4**
	comp=Z,12nm,0.8s,mb5.3,baz=18,slow=4.3,SNR=15						
ULM				PP	PP	02 42 41.9	-0.5
	comp=Z,7.4nm,0.8s,baz=16,slow=6.1,SNR=4.2						
ULM				LR	LR	03 29 08.6	
	comp=Z,22µm,19.4s,MS6.7,baz=18,slow=40						
ULM	**Lac du Bonnet**	**95.78**	**343**	*e*P	**P**	**02 38 47.2**	**-1.0**
	comp=Z,52nm,1.0s,mb5.9						
ULM				LR	LR		
	comp=Z,34µm,20.0s,MS6.8						
GENY	**Geneseo**	**95.79**	**328**	*e*P	**P**	**02 38 48.1**	**-0.4**
EDM	**Edmonton**	**95.92**	**354**	*e*P	**P**	**02 38 49.1**	**+0.3**
BBSR	**BB Station**	**96.28**	**313**	PFAKE		02 39 00.0	+9.0
BBSR				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
EYMN	**Ely**	**96.64**	**339**	P	**P**	**02 38 52.9**	**+0.7**
	comp=Z,106nm,1.6s,mb6.0						
EYMN				LR	LR		
	comp=Z,26µm,20.0s,MS6.7						
MVL	**Millersville**	**97.26**	**326**	P	**P**	**02 38 54.0**	**-1.2**
ERPA	**Erie**	**97.28**	**329**	PFAKE		02 39 10.0	+15
ERPA				LR	LR		
	comp=Z,22µm,20.0s,MS6.6						
BBB	**Bella Bella**	**97.29**	**3**	LR	LR	03 29 30.1	
	comp=Z,20µm,19.4s,MS6.6,baz=348,slow=40						
SSPA	**Standing Stone**	**97.50**	**327**	P	**P**	**02 38 57.4**	**+1.2**
	comp=Z,45nm,1.1s,mb5.8						
SSPA				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
SDMD	**Soldier's Deli**	**97.95**	**326**	P	**P**	**02 38 57.3**	**-1.0**
MAW	**Mawson**	**98.17**	**178**	LR	LR	03 18 05.9	
	comp=Z,24µm,20.6s,MS6.7,baz=357,slow=32						
MAW	**Mawson**	**98.17**	**178**	PFAKE		02 39 10.0	+11
MAW				LR	LR		
	comp=Z,40µm,21.0s,MS6.9						
AAM	**Ann Arbor**	**98.69**	**331**	PFAKE		02 39 10.0	+8.4
AAM				LR	LR		
	comp=Z,15µm,19.0s,MS6.5						
CBN	**Corbin**	**99.15**	**325**	PFAKE		02 39 10.0	+6.2
CBN				LR	LR		
	comp=Z,16µm,20.0s,MS6.5						
MCWV	**Mont Chateau**	**99.19**	**328**	PFAKE		02 39 10.0	+6.1
MCWV				LR	LR		
	comp=Z,18µm,20.0s,MS6.6						
DGMT	**Dagmar**	**99.31**	**347**	*e*P	**P**	**02 39 04.6**	**+0.4**
	comp=Z,76nm,1.2s,mb6.1						
DGMT				LR	LR		
	comp=Z,32µm,19.0s,MS6.8						
CTA	**Charters Tower**	**99.56**	**108**	*e*P	**P**	**02 39 06.7**	**+0.7**
	comp=Z,9.7nm,0.9s,mb5.2						
CTA				*e*PP	PP	02 43 14.3	+2.0
CTA	**Charters Tower**	**99.56**	**108**	LR	LR	03 31 14.7	
	comp=Z,11µm,19.6s,MS6.4,baz=295,slow=40						
CTAO	**Charters Tower**	**99.56**	**108**	PFAKE		02 39 20.0	+14
CTAO				LR	LR		
	comp=Z,11µm,20.0s,MS6.3						
WALA	**Waterton Lakes**	**100.10**	**354**	*e*P	P	02 39 07.1	-0.8
	comp=Z,26nm,1.1s						
ACSO	**Alum Creek Sta**	**100.12**	**330**	PFAKE		02 39 20.0	+12
ACSO				LR	LR		
	comp=Z,15µm,21.0s,MS6.5						
JFWS	**Jewell Farm**	**100.68**	**336**	PFAKE		02 39 20.0	+9.4
JFWS				LR	LR		
	comp=Z,19µm,21.0s,MS6.6						
NEW	**Newport**	**101.14**	**356**	*e*P	P	02 39 13.0	+0.5
	comp=Z,29nm,1.2s						
NEW				*e*PP	PP	02 43 20.1	-4.0
NEW				LR	LR		
	comp=Z,26µm,20.0s,MS6.7						
LAO	**LASA Array**	**101.39**	**348**	*e*Pdif	P	02 39 14.7	+1.0
	comp=Z,154nm,1.7s						
LAO				LR	LR		
	comp=Z,23µm,20.0s,MS6.7						
STKA	**Stephens Creek**	**101.59**	**120**	⇑*i*P	P	02 39 13.7	-1.3
	comp=Z,9.9nm,0.9s						
STKA				*e*PP	PP	02 43 32.1	+4.3
STKA	**Stephens Creek**	**101.59**	**120**	P	P	02 39 13.8	-1.2
	comp=Z,8.0nm,0.7s,baz=309,slow=6.7,SNR=20						
OCWA	**Octopus Mounta**	**101.84**	**1**	PFAKE		02 39 30.0	+14
OCWA				LR	LR		
	comp=Z,16µm,21.0s,MS6.5						
CHMT	**Chamberlain Mo**	**102.16**	**353**	*e*Pdif	Pdif	02 39 17.0	-0.2
MSO	**Missoula**	**102.31**	**354**	*e*Pdif	Pdif	02 39 16.4	-1.5
	comp=Z,13nm,1.4s						
MSO				LR	LR		
	comp=Z,12µm,21.0s,MS6.4						
KWAJ	**Kwajalein Atol**	**102.99**	**71**	PFAKE		02 39 30.0	+8.4
KWAJ				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
WCI	**Wyandotte Cave**	**103.20**	**331**	PFAKE		02 39 30.0	+8.0
WCI				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
BOZ	**Bozeman (W)**	**103.22**	**352**	PFAKE		02 39 30.0	+8.1
BOZ				LR	LR		
	comp=Z,32µm,20.0s,MS6.8						
LKWY	**Lake**	**104.12**	**351**	PFAKE		02 39 40.0	+14
LKWY				LR	LR		
	comp=Z,47µm,19.0s,MS7.0						
MCMT	**McKenzie Canyo**	**104.18**	**352**	Pdif	Pdif	02 39 27.1	+1.0
BMO	**Blue Mountains**	**104.55**	**356**	Pdif	Pdif	02 39 30.1	+2.3
	comp=Z,9.9nm,1.3s						
BMO				LR	LR		
	comp=Z,22µm,21.0s,MS6.7						
NHSC	**New Hope**	**104.57**	**324**	PFAKE		02 39 40.0	+12
NHSC				LR	LR		
	comp=Z,19µm,21.0s,MS6.6						
COR	**Corvallis**	**105.01**	**0**	PFAKE		02 43 50.0	
COR				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
CASY	**Casey**	**105.04**	**160**	PFAKE		02 43 50.0	
CASY				LR	LR		
	comp=Z,10µm,22.0s,MS6.3						
TPAW	**Teton Pass**	**105.25**	**351**	*e*PP	PP	02 43 49.1	-6.0
CCM	**Cathedral Cave**	**105.31**	**334**	PFAKE		02 44 00.0	
CCM				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
HLID	**Hailey**	**105.59**	**353**	PFAKE		02 44 00.0	
HLID				LR	LR		
	comp=Z,25µm,20.0s,MS6.8						
WVT	**Waverly**	**105.63**	**331**	PFAKE		02 44 00.0	
WVT				LR	LR		
	comp=Z,16µm,21.0s,MS6.5						
BW06	**Boulder Array**	**105.76**	**350**	PFAKE		02 44 00.0	
BW06				LR	LR		
	comp=Z,44µm,19.0s,MS7.0						
PDAR	**Pinedale Array**	**105.76**	**350**	Pdiff	Pdif	02 39 34.8	+1.6
	comp=Z,0.4nm,1.0s,slow=21,SNR=3.6						
PDAR				PKiKP		02 43 46.2	
	comp=Z,2.9nm,0.9s,baz=42,slow=2.7,SNR=6.2						
PDAR				PKKPbc		02 55 08.6	
	comp=Z,0.9nm,0.8s,baz=176,slow=2.2,SNR=3.6						
GOGA	**Godfrey**	**105.95**	**326**	PFAKE		02 44 00.0	
GOGA				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
AHID	**Auburn Hatcher**	**105.99**	**351**	PFAKE		02 44 00.0	
AHID				LR	LR		
	comp=Z,19µm,19.0s,MS6.7						
GNAR	**Gosnell**	**106.67**	**332**	*e*PP	PP	02 43 59.4	-6.5
HUMO	**Hull Mountain**	**106.98**	**360**	*e*PP	PP	02 44 00.7	-7.5
HUMO				LR	LR		
	comp=Z,17µm,19.0s,MS6.6						
WVOR	**Wild Horse Val**	**107.04**	**356**	PFAKE		02 44 00.0	
WVOR				LR	LR		
	comp=Z,35µm,22.0s,MS6.9						
HWUT	**Hardware Ranch**	**107.19**	**351**	PFAKE		02 44 00.0	
HWUT				LR	LR		
	comp=Z,24µm,20.0s,MS6.7						
CBKS	**Cedar Bluff**	**107.41**	**341**	PFAKE		02 44 00.0	
CBKS				LR	LR		
	comp=Z,30µm,20.0s,MS6.8						
MOD	**Modoc**	**107.64**	**358**	*e*Pdif	Pdif	02 39 42.8	+1.3
	comp=Z,46nm,2.0s						
MOD				LR	LR		
	comp=Z,19µm,22.0s,MS6.6						
OXF	**Oxford**	**107.68**	**331**	PFAKE		02 44 00.0	
OXF				LR	LR		
	comp=Z,16µm,21.0s,MS6.5						
YBH	**Yreka Blue Hor**	**107.86**	**360**	PFAKE		02 44 00.0	
YBH				LR	LR		
	comp=Z,20µm,21.0s,MS6.7						
LRAL	**Lakeview Retre**	**107.90**	**329**	PFAKE		02 44 00.0	
LRAL				LR	LR		
	comp=Z,21µm,20.0s,MS6.7						
ISCO	**Idaho Springs**	**107.92**	**346**	PFAKE		02 44 00.0	
ISCO				LR	LR		
	comp=Z,19µm,20.0s,MS6.7						
ELK	**Elko**	**108.47**	**354**	PFAKE		02 44 00.0	
ELK				LR	LR		
	comp=Z,22µm,19.0s,MS6.7						
DUG	**Dugway**	**108.74**	**352**	*e*Pdif	Pdif	02 39 46.6	+0.3
	comp=Z,71nm,1.4s						
DUG				LR	LR		
	comp=Z,361µm,22.0s						
CAM4	**Nova Friburgo**	**108.80**	**255**	*e*P	PP	02 44 23.1	+0.9
CAM4				*i*		02 44 28.4	
CAM4				*i*		02 44 47.6	
BMN	**Battle Mountai**	**108.94**	**355**	PFAKE		02 44 00.0	
BMN				LR	LR		
	comp=Z,16µm,20.0s,MS6.6						
WDC	**Whiskeytown Da**	**109.01**	**359**	PFAKE		02 44 00.0	
WDC				LR	LR		
	comp=Z,21µm,22.0s,MS6.7						
DWPF	**Disney**	**109.18**	**321**	PFAKE		02 44 00.0	
DWPF				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
MIAR	**Mount Ida**	**109.29**	**334**	PFAKE		02 44 00.0	
MIAR				LR	LR		
	comp=Z,24µm,19.0s,MS6.8						
SDCO	**Great Sand Dun**	**109.86**	**345**	PFAKE		02 44 00.0	
SDCO				LR	LR		
	comp=Z,24µm,21.0s,MS6.8						
SNAA	**Sanae**	**110.20**	**197**	*e*	PKPdf	02 43 56.8	+1.4
SNAA	**Sanae**	**110.20**	**197**	*e*	PKPdf	02 43 57.9	+2.5
SNAA	**Sanae**	**110.20**	**197**	*e*	PP	02 44 26.2	-4.9
SNAA	**Sanae**	**110.20**	**197**	PKPdf	PKPdf	02 43 53.3	-2.1
SNAA				*e*		02 43 56.8	
SNAA				*e*		02 43 57.9	
SNAA				*e*		02 44 26.2	
SNAA				*e*		02 55 07.9	
SNAA				*e*		02 55 18.2	
MVU	**Marysvale**	**110.33**	**351**	PFAKE		02 44 10.0	+14
MVU				LR	LR		
	comp=Z,27µm,19.0s,MS6.8						
BAO	**Brasilia Array**	**110.37**	**264**	P	PKPdf	02 43 48.1	-8.9
BAO				*e*		02 44 30.3	
BDFB	**Brasilia**	**110.40**	**264**	PKiKP		02 43 57.8	
	comp=Z,3.7nm,1.0s,baz=87,slow=6.2,SNR=4.0						
BDFB				PP	PP	02 44 31.9	-1.8
	comp=Z,51nm,1.2s,baz=45,slow=6.5,SNR=18						
TAU	**Tasmania Unive**	**110.55**	**128**	PFAKE		02 44 00.0	+3.2
TAU				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
HOPS	**Hopland**	**110.59**	**360**	PFAKE		02 44 10.0	+13
HOPS				LR	LR		
	comp=Z,19µm,22.0s,MS6.6						
WMOK	**Wichita Mounta**	**110.90**	**339**	PFAKE		02 44 10.0	+12
WMOK				LR	LR		
	comp=Z,21µm,19.0s,MS6.7						
VNA2	**Neumayer--Watz**	**110.95**	**198**	*e*	PKPdf	02 43 57.9	+1.0
VNA2	**Neumayer--Watz**	**110.95**	**198**	*e*	PKPdf	02 43 59.0	+2.1
VNA2	**Neumayer--Watz**	**110.95**	**198**	*e*	PP	02 44 28.8	-7.6
VNA2	**Neumayer--Watz**	**110.95**	**198**	⇓*i*PKPdf	PKPdf	02 43 54.5	-2.4
VNA2				*e*		02 43 57.9	
VNA2				*e*		02 43 59.0	
VNA2				*e*		02 44 28.8	
VNA2				*e*		02 54 57.1	
VNA2				*e*		02 55 08.5	
VNA2				*e*		02 55 13.4	
MNV	**Mina**	**111.00**	**356**	PFAKE		02 44 10.0	+12
MNV				LR	LR		
	comp=Z,16µm,21.0s,MS6.6						
NVAR	**Mina Array Bea**	**111.01**	**356**	Pdiff	Pdif	02 40 04.0	+7.7
	comp=Z,0.2nm,0.3s,baz=11,slow=28,SNR=3.3						

NVAR				PKiKP		02 43 56.5	
	comp=Z,1.3nm,0.6s,baz=90,slow=0.9,SNR=3.5						
NVAR				PP	PP	02 44 34.5	-3.0
	comp=Z,4.5nm,0.9s,baz=19,slow=4.0,SNR=4.2						
NVAR				PKKPbc		02 54 52.5	
	comp=Z,0.6nm,0.6s,baz=184,slow=5.6,SNR=4.1						
TPH	**Tonopah**	**111.28**	**355**	PFAKE		02 44 10.0	+12
TPH				LR	LR		
	comp=Z,19µm,20.0s,MS6.7						
CMB	**Columbia Colle**	**111.50**	**358**	PFAKE		02 44 10.0	+11
CMB				LR	LR		
	comp=Z,18µm,22.0s,MS6.6						
AMTX	**Amarillo**	**111.62**	**341**	PFAKE		02 44 10.0	+11
AMTX				LR	LR		
	comp=Z,33µm,21.0s,MS6.9						
VNA3	**Neumayer Olymp**	**111.75**	**199**	*e*	PKPdf	02 43 59.8	+1.4
VNA3	**Neumayer Olymp**	**111.75**	**199**	*e*	PKPdf	02 44 01.1	+2.7
VNA3	**Neumayer Olymp**	**111.75**	**199**	*e*	PP	02 44 29.1	-13
VNA3	**Neumayer Olymp**	**111.75**	**199**	⇓*i*PKPdf	PKPdf	02 43 56.4	-2.0
VNA3				*e*		02 43 59.8	
VNA3				*e*		02 44 01.1	
VNA3				*e*		02 44 29.1	
VNA3				*e*		02 54 54.4	
VNA3				*e*		02 55 04.9	
VNA3				*e*		02 55 10.2	
NATX	**Nacogdoches**	**112.18**	**334**	PFAKE		02 44 10.0	+10
NATX				LR	LR		
	comp=Z,17µm,21.0s,MS6.6						
ANMO	**Albuquerque**	**112.76**	**345**	PP	PP	02 44 48.9	-1.7
	comp=Z,5.2nm,1.2s,baz=22,slow=6.5,SNR=3.0						
SAO	**San Andreas Ge**	**112.80**	**358**	PFAKE		02 44 10.0	+8.7
SAO				LR	LR		
	comp=Z,23µm,20.0s,MS6.8						
HKT	**Hockley**	**114.24**	**334**	*e*PKPdf	PKPdf	02 44 04.6	+0.3
HKT				LR	LR		
	comp=Z,7µm,19.0s,MS6.3						
JCT	**Junction City**	**115.16**	**338**	PFAKE		02 44 10.0	+3.9
JCT				LR	LR		
	comp=Z,19µm,19.0s,MS6.7						
DRV	**Dumont d'Urvil**	**115.23**	**154**	PP	PP	02 45 01.0	-6.4
DRV				SP	SP	02 54 42.0	+0.7
DRV				SS	SS	03 01 28.0	+27
MNTX	**Cornudas Mount**	**115.62**	**343**	*e*PKPdf	PKPdf	02 44 04.5	-2.5
MNTX				LR	LR		
	comp=Z,14µm,19.0s,MS6.6						
PFO	**Pinyon Flat Ob**	**115.65**	**354**	PFAKE		02 44 20.0	+13
PFO				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
SDV	**Santo Domingo**	**116.04**	**299**	PKP	PKPdf	02 44 06.5	-1.7
	comp=Z,1.7nm,0.5s,baz=138,slow=7.2,SNR=2.1						
SDV				PP	PP	02 45 13.3	-0.9
	comp=Z,6.1nm,1.1s,baz=81,slow=10,SNR=4.1						
SDV				PKKPab		02 54 40.2	
	comp=Z,3.9nm,0.8s,baz=349,slow=2.9,SNR=4.0						
TUC	**Tucson**	**116.17**	**348**	*e*PKPdf	PKPdf	02 44 05.8	-2.3
TUC				LR	LR		
	comp=Z,14µm,20.0s,MS6.6						
LTX	**Lajitas**	**117.40**	**341**	*e*PKPdf	PKPdf	02 44 06.4	-4.1
LTX				LR	LR		
	comp=Z,18µm,21.0s,MS6.7						
TXAR	**Lajitas Array**	**117.40**	**341**	Pdiff	Pdif	02 40 32.7	+7.9
	comp=Z,0.3nm,0.8s,baz=34,slow=4.5,SNR=3.5						
TXAR				PKP	PKPdf	02 44 07.6	-2.9
	comp=Z,1.3nm,0.6s,baz=135,slow=1.3,SNR=18						
TXAR				PP	PP	02 45 22.5	-1.0
	comp=Z,10nm,1.2s,baz=27,slow=5.6,SNR=5.7						
TXAR				PKKPab		02 54 36.8	
	comp=Z,0.7nm,0.9s,baz=186,slow=6.2,SNR=3.9						
TXAR	**Lajitas Array**	**117.40**	**341**	Pdif	Pdif	02 40 32.7	+7.9
TXAR				PKP	PKPdf	02 44 07.6	-2.9
TXAR				PP	PP	02 45 22.5	-1.0
TXAR				PKKPab		02 54 36.8	
KIP	**Kipapa**	**118.26**	**37**	PFAKE		02 44 20.0	+7.7
KIP				LR	LR		
	comp=Z,12µm,20.0s,MS6.5						
ROSC	**El Rosal**	**121.43**	**298**	PKP	PKPdf	02 44 16.4	-2.2
	comp=Z,5.6nm,0.5s,baz=253,slow=22,SNR=4.6						
CPUP	**Villa Florida**	**122.71**	**257**	PKP	PKPdf	02 44 16.9	-3.8
	comp=Z,0.1nm,0.7s,baz=231,slow=14,SNR=2.4						
SBA	**Scott Base**	**124.03**	**166**	PFAKE		02 44 30.0	+7.7
SBA				LR	LR		
	comp=Z,17µm,20.0s,MS6.7						
JTS	**JuntasAbangare**	**125.10**	**312**	PFAKE		02 44 30.0	+4.2
JTS				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
OTAV	**Otavalo**	**127.54**	**297**	*e*PKPdf	PKPdf	02 44 28.6	-1.9
OTAV				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
LPAZ	**La Paz**	**127.97**	**273**	PKP	PKPdf	02 44 28.6	-2.6
	comp=Z,8.0nm,0.9s,baz=46,slow=5.1,SNR=11						
LPAZ	**La Paz**	**127.97**	**273**	*e*PKPdf	PKPdf	02 44 28.3	-2.9
LPAZ				*e*PP	PP	02 46 31.7	-3.1
LPAZ				LR	LR		
	comp=Z,18µm,20.0s,MS6.7						
TRQA	**Tornquist**	**129.77**	**244**	*e*PKPdf	PKPdf	02 44 30.2	-4.0
TRQA				LR	LR		
	comp=Z,15µm,20.0s,MS6.7						
PMSA	**Palmer Station**	**130.47**	**209**	PFAKE		02 44 40.0	+5.2
PMSA				LR	LR		
	comp=Z,11µm,21.0s,MS6.5						
ARE	**Arequipa**	**130.94**	**275**	*e*P	PKPdf	02 44 36.0	-0.9
ARE				*e*		02 44 39.0	
ARE				*e*		02 48 07.0	
LVC	**Limon Verde**	**131.22**	**266**	PKP	PKPdf	02 44 36.4	-1.0
	comp=Z,33nm,0.9s,baz=313,slow=3.0,SNR=22						
LVC				PP	PP	02 46 55.5	-0.7
	comp=Z,28nm,1.2s,baz=39,slow=4.8,SNR=5.5						
LVC				SKPab		02 48 05.5	
	comp=Z,20nm,1.2s,baz=85,slow=7.1,SNR=4.3						
NNA	**Nana**	**133.34**	**283**	PKPdf	PKPdf	02 44 38.0	-3.4
NNA				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
CFAA	**Coronel Fontan**	**133.41**	**254**	PKP	PKPdf	02 44 38.7	-2.4
	comp=Z,1.7nm,0.7s,baz=34,slow=1.4,SNR=20						
CFAA				SKPab		02 48 11.1	
CFAA	**Coronel Fontan**	**133.41**	**254**	PKP	PKPdf	02 44 38.7	-2.4
CFAA				SKPab		02 48 11.1	
USHA	**Ushuaia**	**134.63**	**222**	PKP	PKPdf	02 44 41.9	-0.9
	comp=Z,15nm,0.8s,baz=99,slow=4.6,SNR=6.6						
USHA				PP	PP	02 47 19.6	+2.8
	comp=Z,21nm,0.9s,baz=48,slow=4.4,SNR=5.4						
FCH	**Farellones**	**135.48**	**252**	*e*P	PKPdf	02 44 43.3	-1.7
PLCA	**Paso Flores**	**136.70**	**242**	PKP	PKPdf	02 44 44.4	-2.5
	comp=Z,20nm,0.9s,baz=146,slow=3.4,SNR=23						
PLCA				SKP		02 48 22.1	
	comp=Z,7.7nm,1.2s,baz=154,slow=9.6,SNR=3.4						
PLCA	**Paso Flores**	**136.70**	**242**	*e*PKPdf	PKPdf	02 44 44.9	-2.0
PLCA				LR	LR		
	comp=Z,17µm,20.0s,MS6.8						
PAYG	**Puerto Ayora**	**136.76**	**308**	PFAKE		02 45 00.0	+12
PAYG				LR	LR		
	comp=Z,5µm,21.0s,MS6.2						
RAR	**Rarotonga**	**145.90**	**83**	PKPbc	PKPbc	02 45 04.1	+2.7
	comp=Z,22nm,0.6s,baz=125,slow=2.5,SNR=3.0						
PMOR	**Pomariorio Ree**	**152.45**	**61**	*e*PKPbc	PKPdf	02 45 19.5	+5.2
	comp=Z,143nm,1.0s						
PPT	**Papeete**	**152.66**	**67**	*e*PKPbc	PKPdf	02 45 19.8	+5.3
	comp=Z,141nm,1.2s						
PPT	**Papeete**	**152.66**	**67**	PKPbc	PKPdf	02 45 21.3	+6.8
	comp=Z,32nm,0.8s,baz=250,slow=19,SNR=1.7						
PPT	**Papeete**	**152.66**	**67**	*e*PKPbc	PKPdf	02 45 19.8	+5.3
PPT				*e*PP	PP	02 48 57.6	-7.4
PPT				*e*SS	SS	03 08 16.1	-17
PPT				*e*LR	LR	03 37 59.0	
PAE	**Paea**	**152.71**	**68**	*e*PKPbc	PKPdf	02 45 19.6	+5.0
	comp=Z,287nm,1.1s						
TIAR	**Tiarei**	**152.84**	**67**	*e*PKPbc	PKPdf	02 45 20.0	+5.3
	comp=Z,275nm,1.0s						
TVO	**Taravao**	**153.03**	**67**	*e*PKPbc	PKPdf	02 45 20.7	+5.7
	comp=Z,158nm,0.8s						
TAOE	**Nuku Hiva Isla**	**153.06**	**40**	*e*PKPbc	PKPdf	02 45 23.1	+7.9
TAOE				*e*PP	PP	02 48 53.0	-15
TAOE				*e*SS	tx	03 09 32.5	
TAOE				*e*LR	LR	03 36 09.6	
RKT	**Rikitea**	**167.03**	**57**	*e*PKPab	PKPab	02 46 32.7	-0.3
	comp=Z,116nm,1.1s						
RPN	**Rapa Nui**	**167.33**	**283**	PKP	PKPdf	02 45 30.3	-0.2
	comp=Z,68nm,1.1s,baz=324,slow=6.2,SNR=5.3						
RPN				PKPab	PKPab	02 46 34.9	+0.7
	comp=Z,16nm,0.7s,baz=28,slow=5.2,SNR=1.9						
PTCN	**Pitcairn Islan**	**171.67**	**49**	PFAKE		02 45 40.0	+6.8
PTCN				LR	LR		
	comp=Z,11µm,19.0s						

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*NEIC **22** 02:32:10.4,34.91S×70.54W,h1^{km},ML2.5(GUC),After GUC.*

GUC 22 02:32:10.4±0.6**,34.91S**×**70.54W,h1**^{km}±2^{km}**,MD3.8, ML2.5,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFDO	**San Fernando**	**0.49**	**307**	*i* P	Pg	02 32 20.2	0.0
SFDO				*i* S	Sg	02 32 28.2	+1.4
CACH	**El Canelo**	**0.80**	**356**	*e*P	Pg	02 32 26.1	-0.2
CACH				*i* S	Sg	02 32 38.6	+1.7
CHCH	**Chadas Angostu**	**0.98**	**355**	*e*P	Pb	02 32 29.5	-0.3
CHCH				*i* S	Sg	02 32 43.5	+0.4
LMEL	**Las Melosas**	**1.10**	**15**	*e*P	Pb	02 32 31.5	-0.3
LMEL				*i* S	Sb	02 32 47.6	+1.0
LMEL				AMP		02 32 49.2	
	comp=N,162nm,0.2s						
PCH	**Pirque**	**1.29**	**1**	*e*P	Pb	02 32 34.5	-0.6
TACH	**Talagante**	**1.30**	**345**	*e*P	Pb	02 32 34.4	-0.9
TACH				*i* S	Sb	02 32 52.5	+0.1
RCDM	**Rinconada Maip**	**1.44**	**351**	*e*P	Pn	02 32 37.2	-0.4
RCDM				*i* S	Sb	02 32 57.5	+1.1
RCDM				AMP		02 32 59.0	
	comp=E,260nm,0.2s						
CLCH	**Cerro Calan**	**1.51**	**0**	*e*P	Pn	02 32 38.2	-0.5
CLCH				AMP		02 33 09.6	
	comp=E,113nm,0.4s						
LCCH	**Las Cruces**	**1.67**	**329**	*e*P	Pn	02 32 40.5	-0.4
LCCH				*i* S	Sb	02 33 02.8	-0.2

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*OMAN **22** 02:41:05.0±216.0,31.36N×55.89E,h20^{km},Error ellipse: s-maj=33.6km s-min=31.1km az=320.0*

*CSEM **22** 02:41:11.6±0.1,30.73N×56.77E,h10^{km},mb4.7/5,ML4.8/1, Error ellipse: s-maj=3.4km s-min=1.7km az=57.0*

*TEH **22** 02:41:12.9,30.67N×56.92E,h10^{km},Mn4.4*

*MOS **22** 02:41:12.0±1.1,30.67N×56.83E,h10^{km},mb4.7/5,Error ellipse: s-maj=15.3km s-min=10.5km az=119.3*

*THR **22** 02:41:12.6±1.1,30.81N×56.77E,h14^{km},ML4.2*

*IDC **22** 02:41:12.1±0.7,30.72N×56.81E,mb4.1/19,mb1 4.2/21, mb1mx4.2/24,mbtmp4.1/21,ML3.9/1,Error ellipse: s-maj=19.7km s-min=15.3km az=23.0*

*NEIC **22** 02:41:13.3±0.5,30.71N×56.77E,h10^{km},mb4.6/4, MN4.4(TEH),Error ellipse: s-maj=12.8km s-min=5.8km az=202.0*

ISC 22 02:41:11.8±1.4**,30.79N**±0.04×**56.79E**±0.05**,h6**^{km}±10^{km}**, n65,**σ**1**^{s}**15**/71**,mb4.2**/25**,8C-2D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.80**	**182**	*e*PG	**Pg**	**02 41 27.6**	**-0.2**
IBAF	**Bafgh**	**1.32**	**308**	Pn	**Pn**	**02 41 35.5**	**-1.3**
IMEH	**Mehriz**	**1.96**	**288**	Pn	**Pn**	**02 41 45.0**	**-1.0**
ICHK	**Chekchek**	**2.50**	**306**	Pn	**Pn**	**02 41 54.2**	**+0.5**
ISAD	**Sadrabad**	**2.88**	**294**	Pn	**Pn**	**02 42 00.7**	**+1.5**
BNDS	**Bandar-Abbas**	**3.42**	**189**	*e*PN	**Pn**	**02 42 08.1**	**+1.3**
BNDS				*e*SG	**Sg**	**02 43 00.2**	**-5.4**
BNDS				AML	AML	02 43 10.4	
	comp=E,675nm,0.5s						
BNDS				AML	AML	02 43 13.1	
	comp=N,505nm,0.5s						
BNDS	**Bandar-Abbas**	**3.42**	**189**	*e*Pn	**Pn**	**02 42 08.1**	**+1.4**
	SNR=52						
BNDS				*e*Sg	**Sg**	**02 43 00.2**	**-5.4**
	comp=N,505nm,0.5s,SNR=90						
ZHSF	**Zahedan**	**3.64**	**108**	*e*PN	**Pn**	**02 42 11.4**	**+1.5**
ZHSF				AML	AML	02 42 58.2	
	comp=N,413nm,0.6s						
NASN	**Na'in**	**3.94**	**302**	*e*PN	**Pn**	**02 42 14.8**	**+0.6**
GHIR	**Ghir-Karzin**	**4.15**	**234**	*e*PN	**Pn**	**02 42 17.5**	**+0.4**
BANOM	**Banah**	**4.87**	**185**	P	**Pn**	**02 42 28.4**	**+1.1**
	SNR=25						
BANOM				⇑S	**Sn**	**02 43 27.6**	**+2.9**
IFIR	**Firoozkooh**	**5.91**	**326**	Pn	**Pn**	**02 42 41.5**	**-0.5**
IVRN	**Varamin**	**5.98**	**316**	Pn	**Pn**	**02 42 42.5**	**-0.5**
IVRN				Sn	**Sn**	**02 43 49.4**	**-3.3**
ASHO	**Ashiyiah**	**6.12**	**186**	P	**Pn**	**02 42 46.1**	**+1.2**
	SNR=5.8						
ASHO				⇓S	**Sn**	**02 43 58.4**	**+2.4**
IDMV	**Damavand**	**6.22**	**321**	Pn	**Pn**	**02 42 46.5**	**+0.1**
IAFJ	**Afjeh**	**6.60**	**321**	Pn	**Pn**	**02 42 51.2**	**-0.6**
IAFJ				Sn	**Sn**	**02 44 04.4**	**-3.9**
HOQ	**Hoqain**	**7.19**	**176**	P	**Pn**	**02 42 58.5**	**-1.6**
	SNR=8.5						
BIDO	**Bidbid**	**7.33**	**170**	⇑P	**Pn**	**02 43 01.1**	**-1.0**
SMDO	**Samad**	**7.78**	**171**	⇑P	**Pn**	**02 43 07.3**	**-1.0**
BSY	**Bisya**	**8.02**	**177**	⇑P	**P**	**02 43 13.1**	**+1.5**
WBK	**Wadi Bani Khal**	**8.37**	**166**	⇓P	**P**	**02 43 13.4**	**-3.2**
JMDO	**Jabal Madar**	**8.46**	**172**	⇑P	**P**	**02 43 16.4**	**-1.5**
WHFO	**Wadi Hawf**	**13.10**	**193**	⇑P	**P**	**02 44 16.5**	**-4.7**
RBK	**Rabkut**	**13.43**	**191**	⇑P	**P**	**02 44 21.3**	**-4.2**
GNI	**Garni**	**13.54**	**317**	Pn	**P**	**02 44 29.9**	**+3.0**
	comp=N,0.1nm,0.3s,baz=218,slow=18,SNR=1.6						
ABTO	**Aybut**	**13.75**	**194**	⇑P	**P**	**02 44 24.5**	**-5.3**
ASF	**Jabal al Asfar**	**17.03**	**280**	P	**P**	**02 45 11.3**	**-0.9**
	comp=N,0.4nm,0.3s,baz=189,slow=5.3,SNR=2.5						
KIV	**Kislovodsk**	**17.24**	**324**	*e*P	**P**	**02 45 17.1**	**+2.4**
KIV				pmax	pmax		
	comp=Z,34nm,1.2s						
KIV	**Kislovodsk**	**17.24**	**324**	*e*P	**P**	**02 45 17.1**	**+2.3**
	comp=Z,34nm,1.2s						
KIV	**Kislovodsk**	**17.24**	**324**	*e*P	**P**	**02 45 17.0**	**+2.3**
	comp=Z,34nm,1.2s						
BRTR	**Keskin Array B**	**20.86**	**302**	P	**P**	**02 45 55.9**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=118,slow=13,SNR=9.4						
KOLN	**Koldanda**	**23.56**	**91**	*e*P	**P**	**02 46 24.7**	**+0.9**
	comp=Z,275nm,2.8s,mb5.2						
BVAR	**Borovoye Array**	**24.33**	**20**	P	**P**	**02 46 32.4**	**+1.3**
	comp=Z,2.9nm,0.6s,mb3.9,baz=204,slow=7.3,SNR=16						
GKN	**Gorkha**	**24.40**	**89**	*e*P	**P**	**02 46 29.9**	**-2.1**
	comp=Z,39nm,1.2s,mb4.7						
DMN	**Daman**	**24.89**	**90**	*e*P	**P**	**02 46 37.2**	**+0.4**
KKN	**Kakani**	**25.00**	**90**	*e*P	**P**	**02 46 36.4**	**-1.4**
	comp=Z,33nm,0.9s,mb4.9						
PKI	**Pulchoki**	**25.16**	**90**	*e*P	**P**	**02 46 39.3**	**-0.1**
	comp=Z,53nm,1.0s,mb5.0						
JIRN	**Jiri**	**25.81**	**89**	*e*P	**P**	**02 46 45.0**	**-0.5**
	comp=Z,36nm,1.0s,mb4.8						
AKASG	**Malin Array Be**	**28.57**	**322**	P	**P**	**02 47 09.8**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AKASG	**Malin Array Be**	**28.57**	**322**	P	**P**	**02 47 09.8**	**-0.6**
	comp=Z,3.6nm,1.1s,mb4.0,baz=130,slow=7.7,SNR=5.1						
ZAL	**Zalesovo**	**30.68**	**33**	P	**P**	**02 47 29.2**	**0.0**
	comp=Z,3.3nm,0.6s,mb4.3,baz=239,slow=12,SNR=17						
FINES	**FINESS Array B**	**36.66**	**336**	P	**P**	**02 48 20.9**	**+0.1**
	comp=Z,1.3nm,0.8s,mb3.8,baz=143,slow=9.5,SNR=3.6						
KMBO	**Kilima Mbogo**	**36.78**	**214**	P	**P**	**02 48 23.1**	**+0.8**
	comp=Z,1.6nm,1.0s,mb3.8,baz=57,slow=12,SNR=4.0						
GERES	**GERESS Array B**	**37.10**	**312**	P	**P**	**02 48 24.0**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.6,baz=124,slow=7.1,SNR=2.9						
DAVOX	**Davos**	**39.29**	**308**	P	**P**	**02 48 42.2**	**-0.8**
	comp=Z,1.6nm,0.5s,mb4.0,baz=158,slow=15,SNR=4.9						
CMAR	**Chiang Mai Arr**	**40.02**	**98**	P	**P**	**02 48 48.9**	**-0.3**
	comp=Z,1.4nm,0.4s,mb4.0,baz=296,slow=8.2,SNR=6.8						
HFS	**Hagfors**	**40.94**	**329**	P	**P**	**02 48 56.6**	**+0.2**
	comp=Z,2.6nm,0.9s,mb3.9,baz=121,slow=8.6,SNR=4.7						
SONM	**Songino Array**	**41.23**	**51**	P	**P**	**02 49 00.1**	**+1.2**
	comp=Z,2.2nm,0.8s,mb3.8,baz=274,slow=8.3,SNR=6.2						
ULN	**Ulaanbaatar**	**41.67**	**51**	P	**P**	**02 49 03.5**	**+1.0**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**41.67**	**51**	P	**P**	**02 49 03.5**	**+1.0**
	comp=Z,4.4nm,0.6s,mb4.3						
ULN	**Ulaanbaatar**	**41.67**	**51**	P	**P**	**02 49 03.5**	**+1.0**
	comp=Z,4.4nm,0.6s,mb4.3						
NOA	**NORSAR Array B**	**42.43**	**329**	P	**P**	**02 49 09.7**	**+1.1**
	comp=Z,2.1nm,1.0s,mb3.7,baz=113,slow=7.7,SNR=3.6						
ARCES	**ARCESS Array B**	**42.66**	**344**	P	**P**	**02 49 10.4**	**+0.1**
	comp=Z,2.0nm,0.8s,mb3.9,baz=145,slow=11,SNR=2.7						
BOD	**Bodaibo**	**47.19**	**38**	*e*P	**P**	**02 49 46.6**	**-0.2**
BOD				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
BOD	**Bodaibo**	**47.19**	**38**	*e*P	**P**	**02 49 46.6**	**-0.2**
	comp=Z,13nm,1.1s,mb4.8						
DBIC	**Dimbokro**	**62.31**	**261**	P	**P**	**02 51 36.9**	**-0.6**
DBIC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DBIC	**Dimbokro**	**62.31**	**261**	P	**P**	**02 51 37.1**	**-0.4**
	comp=Z,8.3nm,1.1s,mb4.8,baz=45,slow=4.2,SNR=5.1						
DBIC	**Dimbokro**	**62.31**	**261**	P	**P**	**02 51 36.9**	**-0.6**
	comp=Z,8.6nm,1.0s,mb4.8						
DBIC	**Dimbokro**	**62.31**	**261**	P	**P**	**02 51 36.9**	**-0.6**
	comp=Z,8.6nm,1.0s,mb4.8						
IMA	**Indian Mountai**	**80.65**	**12**	*e*P	**P**	**02 53 26.8**	**+0.4**
SCHQ	**Schefferville**	**81.97**	**331**	P	**P**	**02 53 35.4**	**+1.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=36,slow=6.9,SNR=4.8						
ILAR	**Eielson Array**	**82.97**	**10**	P	**P**	**02 53 38.2**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.8,baz=318,slow=4.5,SNR=7.4						
YKA	**Yellowknife Ar**	**86.79**	**356**	P	**P**	**02 53 57.9**	**+0.3**
	comp=Z,0.6nm,0.7s,mb4.0,baz=0.1,slow=5.6,SNR=9.8						
WRA	**Warramunga Arr**	**89.89**	**113**	P	**P**	**02 54 12.0**	**-1.5**
	comp=Z,0.5nm,0.6s,mb4.0,baz=317,slow=4.0,SNR=12						
ASAR	**Alice Springs**	**91.56**	**117**	P	**P**	**02 54 19.9**	**-1.1**
	comp=Z,2.8nm,0.7s,mb4.7,baz=304,slow=4.7,SNR=25						

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*ZUR **22** 02:45:37.0,47.00N×7.50E,h-0^{km}±3^{km},ML1.6/13*

*STR **22** 02:45:38.1±0.8,47.04N×7.39E,h10^{km}±1^{km},Ml2.1,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG 22 02:45:38.2±0.1**,47.01N**×**7.47E,h3**^{km}**,Md2.6**/1**,Ml2.2**/16**, 5C-8D,Error ellipse: s-maj=1.4km s-min=0.8km az=110.0,Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIMIS	**Wimmis**	**0.36**	**163**	⇑*i*P	Pg	02 45 44.5	-0.9
WIMIS				*i* S	Sg	02 45 49.7	-0.5
BALST	**Balsthal**	**0.36**	**25**	*i* S	Sg	02 45 50.4	+0.2
BALST	**Balsthal**	**0.36**	**25**	⇓*i*P	Pg	02 45 44.9	-0.5
BOURR	**Bourrignon**	**0.42**	**337**	⇓*i*P	Pg	02 45 46.3	-0.3
TORNY	**Torny**	**0.42**	**236**	*e*P	Pg	02 45 46.3	-0.4
TORNY				*i* S	Sg	02 45 52.7	+0.4
HASLI	**Hasliberg**	**0.53**	**118**	⇑*i*P	Pg	02 45 47.7	-1.1
HASLI				*e*S	Sg	02 45 55.3	-0.5
LKBD	**Leukerbad**	**0.63**	**170**	*e*S	Sg	02 45 58.1	-1.1
LKBD	**Leukerbad**	**0.63**	**170**	⇓*i*P	Pg	02 45 49.6	-1.2
SENIN	**Lac Senin**	**0.66**	**191**	⇓*i*P	Pg	02 45 50.1	-1.2
BNALP	**Bannalp**	**0.67**	**102**	⇑*e*P	Pg	02 45 50.4	-1.1
SULZ	**Sulz-Cheisache**	**0.68**	**40**	⇓*i*P	Pg	02 45 50.8	-1.0
GRYON	**Gryon**	**0.80**	**198**	⇓*i*P	Pg	02 45 52.6	-1.5
MOF	**Molkenrain**	**0.87**	**345**	Pg	Pg	02 45 54.7	-1.0
HINF	**Hinteralfeld**	**0.91**	**333**	*e*Pg	Pg	02 45 55.1	-1.3
HINF				*e*Pn	Pn	02 45 56.1	-1.6
HINF				*e*Sg	Sg	02 46 07.0	-1.6
HINF				*e*Sn	Sn	02 46 09.0	-2.5
	5.5nm,0.2s						
MMK	**Mattmark**	**1.02**	**160**	⇑*i*P	Pb	02 45 56.7	-1.4
EMV	**Vieux Emosson**	**1.03**	**203**	⇓*i*P	Pb	02 45 56.6	-1.6
SLE	**Schleitheim**	**1.03**	**42**	⇓*i*P	Pb	02 45 56.9	-1.4
CABF	**La Chapelle**	**1.03**	**248**	*e*Pg	Pg	02 45 57.9	-0.9
CABF				*e*Sg	Sg	02 46 11.6	-0.9
	6.4nm,0.2s						
ECH	**Echery**	**1.23**	**350**	Pg	Pg	02 46 00.0	-2.7
ECH				Sg	Sg	02 46 17.7	-1.3
HAU	**Haudompre**	**1.26**	**323**	*e*Pn	Pn	02 46 00.8	-1.8
HAU				*e*Pg	Pg	02 46 01.6	-1.7
HAU				*e*Sg	Sg	02 46 18.2	-1.8
	6.7nm,0.2s						
WLS	**Welschbruch**	**1.41**	**357**	Pg	Pg	02 46 04.7	-1.6
WLS				Sg	Sg	02 46 22.7	-2.4
CDF	**Champ du Feu**	**1.41**	**355**	*e*Pn	Pn	02 46 02.6	-2.2
CDF				*e*Pg	Pg	02 46 04.7	-1.7
CDF				*e*Sn	Sn	02 46 20.6	-3.5
CDF				*e*Sg	Sg	02 46 22.7	-2.5
	9.8nm,0.4s						
BFO	**Black Forest**	**1.44**	**23**	*e*Pn	Pn	02 46 04.4	-0.9
BFO				*e*Sg	Sg	02 46 23.7	-2.6
LPL	**La Plagne**	**1.58**	**199**	*e*Pg	Pg	02 46 07.4	-2.3
LPL				*e*Sg	Sg	02 46 28.9	-1.9
	2.2nm,0.3s						
LPG	**La Plagne**	**1.59**	**199**	*e*Pg	Pg	02 46 07.8	-2.2
LPG				*e*Sg	Sg	02 46 29.1	-2.1
	1.6nm,0.3s						
DAVA	**Damuels**	**1.67**	**80**	⇑*i*PG	Pg	02 46 08.1	-3.4
DAVA				*i* SG	Sg	02 46 31.2	-2.5
	2.3nm,0.2s						
SFTF	**Sexfontaines**	**2.04**	**307**	*e*Pn	Pn	02 46 12.1	-1.7
SFTF				*e*Sn	Sn	02 46 35.7	-4.3
SFTF				*e*Sg	Sg	02 46 42.2	-3.8
	4.2nm,0.3s						
RFYF	**Reffroy**	**2.11**	**321**	*e*Pn	Pn	02 46 13.2	-1.6
	baz=145						
RFYF				*e*Sg	Sg	02 46 44.3	-4.1
	7.9nm,0.3s,baz=137						
MEZF	**Maizieres J'vi**	**2.21**	**313**	*e*Pn	Pn	02 46 14.0	-2.3
MEZF				*e*Sg	Sg	02 46 48.1	-3.8
	1.2nm,0.2s						
MBDF	**Montbardon**	**2.33**	**192**	*e*Pg	Pg	02 46 21.8	-3.0
ORIF	**Oris-en-Rattie**	**2.37**	**209**	*e*Pg	Pg	02 46 22.0	-3.5
ORIF				*e*Sg	Sg	02 46 52.9	-4.1
	1.5nm,0.2s						
SMF	**Signal de Mont**	**2.52**	**263**	*e*Pn	Pn	02 46 18.5	-2.2
SMF				*e*Sg	Sg	02 46 56.6	-5.5
	2.9nm,0.2s						
SSF	**Saint Saulge**	**2.71**	**273**	*e*Pn	Pn	02 46 21.0	-2.5
SSF				*e*Pg	Pg	02 46 28.8	-3.6
SSF				*e*Sn	Sn	02 46 51.4	-5.9
SSF				*e*Sg	Sg	02 47 03.4	-5.1
	1.3nm,0.3s						
AVF	**Avril sur Loir**	**2.83**	**267**	*e*Pn	Pn	02 46 22.8	-2.4
AVF				*e*Sg	Sg	02 47 06.9	-5.6
	0.9nm,0.3s						
VIVF	**Saint-Julien-l**	**2.91**	**223**	*e*Pg	Pg	02 46 32.3	-3.9
VIVF				*e*Sg	Sg	02 47 09.6	-5.4
	2.0nm,0.3s						
BGF	**Bois d'Agland**	**3.21**	**264**	*e*Pn	Pn	02 46 27.8	-2.8
BGF				*e*Sg	Sg	02 47 19.1	-6.0
	3.1nm,0.3s						
BAIF	**Baives**	**3.75**	**326**	*e*Pn	Pn	02 46 35.2	-2.9

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*IDC **22** 02:47:09.1±1.5,30.61N×56.85E,mb3.8/15,mb1 4.0/15, mb1mx4.0/22,mbtmp3.9/15,Error ellipse: s-maj=37.4km s-min=20.0km az=9.0*

ISC 22 02:47:09.3±1.3**,30.7N**±0.2×**56.8E**±0.1**,h10**^{km}**,n16,** σ**0**^{s}**43**/16**,mb3.8**/14**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRTR	**Keskin Array B**	**20.94**	**302**	P	**P**	**02 51 55.0**	**+0.4**
	1.3nm,0.7s,baz=116,slow=11,SNR=5.6						
BVAR	**Borovoye Array**	**24.46**	**20**	P	**P**	**02 52 29.9**	**+0.6**
	2.6nm,0.6s,mb3.8,baz=201,slow=7.4,SNR=11						
AKASG	**Malin Array Be**	**28.69**	**322**	P	**P**	**02 53 08.2**	**-0.2**
	0.5nm,0.4s,mb3.6,baz=128,slow=8.7,SNR=5.0						
ZAL	**Zalesovo**	**30.80**	**33**	P	**P**	**02 53 26.5**	**-0.6**
	1.6nm,0.6s,mb4.1,baz=244,slow=10.0,SNR=7.8						
FINES	**FINESS Array B**	**36.80**	**336**	P	**P**	**02 54 18.7**	**-0.1**
	1.6nm,0.6s,mb4.0,baz=121,slow=11,SNR=6.9						
GERES	**GERESS Array B**	**37.20**	**312**	P	**P**	**02 54 23.0**	**+0.6**
	0.9nm,0.7s,mb3.7,baz=111,slow=8.4,SNR=2.8						
DAVOX	**Davos**	**39.38**	**308**	P	**P**	**02 54 40.4**	**-0.2**
HFS	**Hagfors**	**41.06**	**329**	P	**P**	**02 54 54.5**	**+0.2**
	5.5nm,1.1s,mb4.1,baz=121,slow=8.6,SNR=4.3						
SONM	**Songino Array**	**41.31**	**51**	P	**P**	**02 54 56.9**	**+0.4**
	0.9nm,1.0s,mb3.3,baz=266,slow=9.2,SNR=3.7						
NOA	**NORSAR Array B**	**42.56**	**329**	P	**P**	**02 55 06.0**	**-0.5**
	0.6nm,0.9s,mb3.3,baz=120,slow=7.7,SNR=2.9						
ARCES	**ARCESS Array B**	**42.80**	**344**	P	**P**	**02 55 08.1**	**-0.2**
	1.5nm,0.9s,mb3.7,baz=135,slow=10,SNR=3.3						
EKA	**Eskdalemuir Ar**	**48.49**	**319**	P	**P**	**02 55 53.7**	**-0.2**
	3.1nm,1.0s,mb4.3,baz=117,slow=5.6,SNR=3.7						
ESDC	**Sonseca Array**	**49.66**	**298**	P	**P**	**02 56 02.9**	**-0.1**
	0.6nm,0.8s,mb3.7,baz=70,slow=7.9,SNR=3.7						
ILAR	**Eielson Array**	**83.11**	**10**	P	**P**	**02 59 35.4**	**-0.7**
	0.6nm,0.7s,mb3.8,baz=321,slow=4.3,SNR=8.1						
YKA	**Yellowknife Ar**	**86.93**	**356**	P	**P**	**02 59 55.8**	**+0.7**
	0.6nm,0.6s,mb4.0,baz=359,slow=5.3,SNR=13						
WRA	**Warramunga Arr**	**89.83**	**113**	P	**P**	**03 00 09.9**	**-0.1**
	0.2nm,0.4s,mb3.8,baz=318,slow=4.0,SNR=7.7						

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*THR **22** 02:48:32.1±0.8,31.79N×55.34E,h14^{km}±12^{km},ML4.0*

*MOS **22** 02:48:55.1±1.3,30.54N×56.64E,h10^{km},mb4.4/2,Error ellipse: s-maj=27.7km s-min=13.0km az=119.0*

*IDC **22** 02:48:55.7±1.1,30.64N×56.69E,mb3.8/12,mb1 3.9/12, mb1mx3.8/21,mbtmp3.8/12,Error ellipse: s-maj=27.6km s-min=22.6km az=12.0*

*NEIC **22** 02:48:57.0±0.8,30.59N×56.66E,h10^{km},mb4.0/3,Error ellipse: s-maj=20.7km s-min=12.7km az=199.0*

*CSEM **22** 02:48:57.8±0.1,30.63N×56.51E,h25^{km},mb4.0/1,Error ellipse: s-maj=4.8km s-min=2.8km az=55.0*

ISC 22 02:48:59.0±1.7**,30.6N**±0.1×**56.6E**±0.1**,h33**^{km}±19^{km}**,n25,**

σ0^{s}93/25, mb3.8/11, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	Kerman	0.65	167	ePG	P	02 49 11.5	-0.1
BNDS	Bandar-Abbas	3.23	187	ePN	P	02 49 41.5	-7.0
BNDS				AML	AML	02 50 52.7	
	comp=N,267nm,0.5s						
ZHSF	Zahedan	3.75	104	eP	P	02 49 51.4	-4.6
ZHSF				AML	AML	02 51 06.1	
	comp=N,104nm,0.6s						
MALT	Malatya	16.82	302	P	P	02 52 52.6	-0.9
MALT				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MALT	Malatya	16.82	302	P	P	02 52 52.6	-0.8
	comp=Z,5.6nm,1.1s						
MALT	Malatya	16.82	302	P	P	02 52 52.6	-0.9
	comp=Z,5.6nm,1.1s						
KIV	Kislovodsk	17.28	324	eP	P	02 53 01.6	+2.4
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	17.28	324	eP	P	02 53 01.6	+2.3
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	17.28	324	eP	P	02 53 01.5	+2.3
	comp=Z,17nm,1.0s						
BRTR	Keskin Array B	20.81	302	P	P	02 53 39.2	-0.7
	comp=Z,1.0nm,0.6s,baz=115,slow=12,SNR=5.9						
BRTR	Keskin Array B	20.81	302	P	P	02 53 39.2	-0.7
BVAR	Borovoye Array	24.55	20	P	P	02 54 17.0	+0.3
	comp=Z,1.6nm,0.6s,mb3.7,baz=202,slow=7.5,SNR=6.8						
ZAL	Zalesovo	30.92	33	P	P	02 55 13.6	-1.2
	comp=Z,0.8nm,0.4s,mb3.9,baz=228,slow=7.1,SNR=3.6						
FINES	FINESS Array B	36.75	336	P	P	02 56 03.8	-1.0
	comp=Z,1.1nm,0.6s,mb3.9,baz=121,slow=11,SNR=3.9						
HFS	Hagfors	41.00	329	P	P	02 56 41.0	+0.8
	comp=Z,2.5nm,0.7s,mb4.0,baz=90,slow=7.2,SNR=3.9						
SONM	Songino Array	41.46	51	P	P	02 56 44.9	+0.8
	comp=Z,0.6nm,1.0s,mb3.2,baz=270,slow=4.3,SNR=2.9						
NB2	NORSAR Subarra	42.49	329	P	P	02 56 51.0	-1.4
	comp=Z,3.8nm,1.2s,mb3.9,baz=116,slow=7.9						
NB2	NORSAR Subarra	42.49	329	P	P	02 56 51.0	-1.4
NB2				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.9						
NOA	NORSAR Array B	42.49	329	P	P	02 56 52.1	-0.3
	comp=Z,1.1nm,0.7s,mb3.6,baz=114,slow=8.2,SNR=4.1						
DBIC	Dimbokro	62.12	261	P	P	02 59 20.1	+0.8
	comp=Z,2.6nm,0.9s,mb4.4,baz=171,slow=6.8,SNR=2.8						
ILAR	Eielson Array	83.17	10	P	P	03 01 21.9	-0.7
	comp=Z,0.4nm,0.9s,mb3.4,baz=324,slow=4.5,SNR=4.3						
YKA	Yellowknife Ar	86.95	356	P	P	03 01 42.3	+1.1
	comp=Z,0.1nm,0.4s,mb3.4,baz=2.7,slow=5.7,SNR=3.7						
WRA	Warramunga Arr	89.98	113	P	P	03 01 56.9	+0.2
	comp=Z,0.2nm,0.7s,mb3.6,baz=314,slow=4.0,SNR=4.1						
ASAR	Alice Springs	91.64	117	P	P	03 02 04.2	-0.1
	comp=Z,1.5nm,1.2s,mb4.2,baz=298,slow=4.4,SNR=5.4						
ASAR	Alice Springs	91.64	117	P	P	03 02 04.2	-0.2

IDC 22 02:54:45.0±19.0, 12.85N×143.91E, h263^{km}±196^{km}, mb3.1/6, mb1 3.3/6, mb1mx3.2/19, mbtmp3.7/6, Error ellipse: s-maj=44.2km s-min=28.1km az=51.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.92	196	P	P	03 01 03.8	-1.7
	0.6nm,1.1s,baz=18,slow=9.8,SNR=4.6						
CMAR	Chiang Mai Arr	43.57	283	P	P	03 02 23.3	-2.0
	1.3nm,0.4s,baz=80,slow=7.6,SNR=5.4						
SONM	Songino Array	46.81	326	P	P	03 02 48.8	-1.5
	0.6nm,0.9s,baz=140,slow=6.8,SNR=4.5						
ILAR	Eielson Array	69.63	25	P	P	03 05 25.8	-1.6
	0.5nm,1.0s,baz=243,slow=6.0,SNR=3.2						
BVAR	Borovoye Array	69.93	322	P	P	03 05 28.2	-1.2
	1.1nm,0.3s,baz=104,slow=7.9,SNR=12						
YKA	Yellowknife Ar	83.94	27	P	P	03 06 45.1	-1.4
	0.1nm,0.3s,baz=294,slow=5.0,SNR=3.5						

DJA 22 02:54:50.1±0.9, 9.32S×114.23E, h15^{km}, MD5.0/4, ML3.7/3, 2C-6D, Error ellipse: s-maj=20.1km s-min=8.5km az=32.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRDI	Scrawed	0.84	354	⇓ePn	Pn	02 55 04.6	-2.6
	146nm,0.1s						
SRDI				⇓eSn	Sn	02 55 15.0	-4.2
KELI	Kelakatan	1.13	13	⇑ePn	Pn	02 55 09.2	-2.1
	70nm,0.2s						
KELI				⇓eSn	Sn	02 55 22.1	-4.5
RATI	Rata	1.42	65	⇑ePn	Pn	02 55 12.7	-2.8
	128nm,0.2s						
RATI				⇓eSn	Sn	02 55 29.3	-4.7
KEDI	Kedomdong	2.04	66	⇓ePn	Pn	02 55 21.4	-3.0
	36nm,0.2s						
KEDI				⇓eSn	Sn	02 55 45.0	-4.7

IDC 22 03:16:31.4±1.0, 3.40N×92.74E, mb3.9/8, mb1 4.2/9, mb1mx3.9/19, mbtmp3.9/9, Error ellipse: s-maj=42.4km s-min=19.6km az=49.0

NEIC 22 03:16:35.9±0.7, 3.44N×92.88E, h30^{km}, mb4.3/4, Error ellipse: s-maj=22.4km s-min=11.6km az=59.0

ISC 22 03:16:34.8±0.8, 3.5N±0.1×92.9E±0.2, h33^{km}, n21, σ0^{s}88/20, mb4.2/17, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	16.05	21	Pn	P	03 20 19.0	-0.8
	baz=219,slow=13,SNR=6.9						
JIRN	Jiri	24.90	346	eP	P	03 21 57.5	+1.1
	12nm,0.7s,mb4.5						
PKI	Pulchoki	25.02	344	eP	P	03 21 58.1	+0.6
	5.4nm,0.5s,mb4.3						
DMN	Daman	25.14	344	eP	P	03 21 59.3	+0.7
	11nm,0.9s,mb4.4						
KKN	Kakani	25.26	344	eP	P	03 22 00.1	+0.3
	7.4nm,0.6s,mb4.4						
GKN	Gorkha	25.64	343	eP	P	03 22 03.6	+0.2
	17nm,0.8s,mb4.6						
KOLN	Koldanda	25.75	341	eP	P	03 22 04.0	-0.4
	12nm,1.0s,mb4.3						
LSA	Lhasa	26.15	357	eP	P	03 22 09.5	+1.4
	15nm,0.6s,mb4.7						
SONM	Songino Array	45.72	13	P	P	03 24 55.3	+0.6
	0.9nm,0.6s,mb3.9,baz=196,slow=8.9,SNR=9.8						
SONM				PcP	PcP	03 26 32.9	+0.3
	0.3nm,0.6s,baz=191,slow=2.3,SNR=3.9						
WRA	Warramunga Arr	46.89	121	P	P	03 25 04.4	+0.2
	0.6nm,0.5s,mb3.8,baz=297,slow=8.9,SNR=12						
ASAR	Alice Springs	48.20	126	P	P	03 25 14.5	0.0
	0.3nm,0.7s,mb3.4,baz=288,slow=8.6,SNR=2.7						
KURK	Kurchatov	48.60	348	eP	P	03 25 15.5	-1.7
	2.4nm,0.6s,mb4.4						
ZAL	Zalesovo	50.76	354	P	P	03 25 33.7	+0.1
	2.9nm,0.4s,mb4.6,baz=313,slow=3.3,SNR=11						
ZAL	Zalesovo	50.76	354	P	P	03 25 33.7	+0.1
BVAR	Borovoye Array	52.78	343	P	P	03 25 47.4	-1.5
	1.3nm,0.8s,mb3.9,baz=153,slow=6.6,SNR=6.1						
CHKZ	Chkalovo	53.29	344	eP	P	03 25 51.5	-1.2
	2.0nm,0.6s,mb4.2						
CHKZ				e	pP	03 26 01.0	-1.7
AKASG	Malin Array Be	70.86	323	P	P	03 27 48.7	-1.6
	0.1nm,0.3s,mb3.3,baz=105,slow=4.3,SNR=5.0						
MLR	Muntele Rosu	71.48	317	P	P	03 27 54.5	+0.3
	0.8nm,0.4s,mb4.0,baz=128,slow=13,SNR=5.1						
GERES	GERESS Array B	80.28	319	P	P	03 28 44.7	+0.6
	1.7nm,0.6s,mb4.1,baz=98,slow=9.4,SNR=7.9						
DAVOX	Davos	82.70	317	P	P	03 28 57.2	+0.5
	baz=113,slow=7.7						
TXAR	Lajitas Array	143.74	25	PKhKP		03 36 06.4	
	0.2nm,0.6s,baz=270,slow=1.3,SNR=3.6						

BJI 22 03:20:05.2, 12.63N×123.17E, h14^{km}, mB6.0, mb5.3, Ms5.9, Msz5.6

MAN 22 03:20:07.4, 12.70N×123.10E, h19^{km}, mb6.1, ML5.2, MS5.7

MAN MASBATE MASBATE INTENSITY IV ROXAS CITY NAGA CITY IROSIN SORSOGON III LUCBAN QUEZON II CAINTA RIZAL I.

NEIC 22 03:20:07.3±0.2, 12.58N×123.18E, mb5.6/66, MS5.7/111, Error ellipse: s-maj=6.7km s-min=4.1km az=64.0

NEIC Felt [IV PIVS] at Masbate. Felt [III PIVS] at Irosin and Naga; [II PIVS] at Lucban; [I PIVS] at Cainta, Luzon. Also felt [III PIVS] at Roxas City, Panay.

IDC 22 03:20:07.2±3.5, 12.57N×123.26E, h19^{km}±21^{km}, mb4.8/30, mb1 4.8/31, mb1mx4.8/33, mbtmp4.9/31, ML4.5/2, MS5.6/12, Ms1 5.6/12, ms1mx5.1/32, Error ellipse: s-maj=18.1km s-min=9.3km az=54.0

HRVD 22 03:20:07.3±0.2, 12.82N×123.21E, h14^{km}±1^{km}, MW5.8/78, Centroid moment Tensor Solution. LP body waves: s39,c62;Mantle waves: s78,c207; Half duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.61±.13; $M_{\theta\theta}$5.09±.12; $M_{\phi\phi}$-4.49±.12; $M_{r\theta}$-0.18±.24; $M_{\theta\phi}$3.32±.10; $M_{\phi r}$-1.45±.29; Best double couple: $M_0$6.025×10^{17} NP1: ϕ_s297°,δ76°,λ-7°. NP2:ϕ_s28°,δ84°,λ-166°. Principal axes: T 6.183, Plg5°, Azm162°; N -.325, Plg75°, Azm53°; P -5.867, Plg14°, Azm253°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

ORF 22 03:20:07.5, 11.69N×123.46E, h30^{km}, mb5.6

MOS 22 03:20:08.2±1.2, 12.69N×123.32E, h33^{km}, mb5.8/56, MS5.7/30, Error ellipse: s-maj=10.1km s-min=4.6km az=119.8

ISC 22 03:20:06.2±0.6, 12.68N±0.02×123.20E±0.03, h18^{km}±4^{km}, h19^{km}±1.0^{km}:pP-P, n525, σ1^{s}19/430, mb5.4/135, MS5.7/150, 33C-34D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	Masbate	0.52	127	⇓iP	Pb	03 20 15.0	-1.5
AUQP	San Andres	0.82	322	eP	Pb	03 20 21.7	+0.1
OTRP	Odiongan	1.19	255	eP	Pb	03 20 27.3	-0.6
PVCP	Virac	1.31	45	eP	Pn	03 20 30.1	+0.4
BOAC	Boac	1.53	301	eP	Pn	03 20 31.7	-1.3
SJMP	San Jose	2.04	264	eP	Pn	03 20 40.3	0.0
GUIM	Jordan	2.12	196	eP	Pn	03 20 43.7	+2.3
PLP	Palo	2.30	131	i P	Pn	03 20 44.3	+0.3
POLP	Polilio Island	2.38	329	eP	Pn	03 20 45.7	+0.7
LLP	Lapu-Lapu	2.46	162	⇑eP	Pn	03 20 47.2	+1.0
LLP				i S	Sn	03 21 19.5	+3.4
AAP	Anini-y	2.56	209	⇓eP	Pn	03 20 46.5	-1.1
	5µm,1.0s						
TGY	Tagaytay City	2.62	303	⇓eP	Pn	03 20 49.5	+1.0
TGY						03 47 31.0	
TGY	Tagaytay City	2.62	303	Pn	Pn	03 20 48.4	-0.1
	564nm,0.3s,baz=233,slow=6.6,SNR=131						
TGY				Sn	Sn	03 21 23.8	+3.7
	2µm,0.3s,baz=132,slow=13,SNR=5.8						
CUYO	Cuyo Island	2.80	230	eP	Pn	03 20 50.9	-0.2
BUSP	Coron	3.00	257	eP	Pn	03 20 53.6	-0.4
MSLP	Maasin	3.01	147	eP	Pn	03 20 55.6	+1.6
TBP	Tagbilaran	3.04	168	i P	Pn	03 20 55.5	+1.1
TBP				i S	Sn	03 21 27.1	-3.6
LUBP	Lubang	3.06	290	eP	Pn	03 20 53.7	-1.1
LUBP	Lubang	3.06	290	eP	Pn	03 20 53.5	-1.3
SNPH	Sibulan	3.31	179	⇓iP	Pn	03 21 00.5	+2.1
SNPH				i S	Sn	03 21 37.0	-0.7
BALP	Baler	3.43	333	eP	Pn	03 20 59.4	-0.6
PCPH	Palayan	3.52	325	⇑iP	Pn	03 21 00.7	-0.6
PCPH				i S	Sn	03 21 53.4	+11
SCPH	Surigao	3.65	142	eP	Pn	03 21 03.8	+0.6
SCPH				eS	Sn	03 21 12.9	-33
ENPP	El Nido	3.97	249	eP	Pn	03 21 07.4	-0.3
DCPH	Dipolog City	4.07	178	⇑eP	Pn	03 21 09.3	+0.2
PALP	Palanan	4.42	350	eP	Pn	03 21 30.1	+16
SCZP	Santa Cruz	4.43	314	eP	Pn	03 21 15.5	+1.2
CGP	Cagayan de Oro	4.45	161	eP	Pn	03 21 16.9	+2.4
CAUP	Cauayan	4.45	343	eP	Pn	03 21 13.7	-0.8
BCPH	Baguio City Da	4.47	326	⇓eP	Pn	03 21 14.6	-0.2
BCPH				eS	Sn	03 22 27.1	+20
PAGZ	Pagadian	4.80	178	eP	Pn	03 21 21.6	+2.1
BOLP	Bolinao	4.87	320	eP	Pn	03 21 21.7	+1.3
IPIL	Ipil	4.90	187	eP	Pn	03 21 36.8	+16
BUKP	Musuan	5.11	159	eP	Pn	03 21 27.9	+4.0
CVP	Callao Caves	5.17	345	eP	Pn	03 21 24.0	-0.7
PPR	Puerto Princes	5.24	237	⇑iP	Pn	03 21 26.8	+1.0
BIPH	Bislig	5.44	145	⇓iP	Pn	03 21 30.1	+1.5
ABRA	Dolores	5.50	334	eP	Pn	03 21 30.4	+1.1
SGCP	Mt. Cagua	5.64	349	eP	Pn	03 21 32.3	+0.9
ZMPH	Zamboanga City	5.79	191	⇑eP	Pn	03 21 47.2	+14
KCP	Kidapawan	5.93	161	eP	Pn	03 21 51.4	+16
DAV	Davao City (W)	6.04	157	eP	Pn	03 21 43.5	+6.4
BATP	Bataraza	6.55	235	eP	Pn	03 21 44.9	+0.7
BBP	Basco	7.81	351	eP	Pn	03 21 59.4	-2.5
KKM	Kota Kinabalu	9.53	227	P	P	03 22 37.6	+12
TSM	Tawau	9.85	213	P	P	03 22 32.8	+2.6
QZH	Quanzhou	12.96	341	P	P	03 23 14.3	+2.0
QZH				S	S	03 25 38.8	+1.8
QZH				AMB	AMB		
	comp=Z,320nm,1.2s						
QZH				LR	LR		
	comp=N,18µm,18.2s						
QZH				LR	LR		
	comp=E,24µm,12.5s						
QZH				LR	LR		
	comp=Z,40µm,16.4s						
GZH	Guangzhou	13.96	319	P	P	03 23 29.0	+3.4
GZH				LR	LR		
	comp=N,20µm,16.2s						
GZH				LR	LR		
	comp=E,18µm,14.9s						
GZH				LR	LR		
	comp=Z,35µm,16.5s						
QIZ	Qiongzhong	14.31	298	P	P	03 23 29.5	-0.8
QIZ				XP		03 23 37.6	
QIZ				S	S	03 26 08.9	-0.5
QIZ				AMB	AMB		
	comp=Z,113nm,1.9s						
QIZ				LR	LR		
	comp=E,14µm,14.8s						
QIZ				LR	LR		
	comp=Z,17µm,14.6s						
QIZ	Qiongzhong	14.31	298	⇓eP	P	03 23 29.9	-0.4
	comp=Z,504nm,1.2s						
QIZ				e		03 23 38.2	
JOW	Kunigami	14.87	18	Pn	P	03 23 36.3	-1.2
	comp=Z,1.7nm,0.3s,baz=164,slow=15,SNR=2.5						
JOW				LR	LR	03 30 01.0	
	comp=Z,16µm,18.5s,baz=81,slow=40						
SSE	Sheshan	18.43	355	P	P	03 24 23.4	+0.8
SSE				AP		03 24 29.1	
SSE				S	S	03 27 48.6	+4.1
SSE				AMB	AMB		
	comp=Z,56nm,1.0s						
SSE				AMB	AMB		
	comp=Z,4µm,6.7s						
SSE				LR	LR		
	comp=N,11µm,21.8s						
SSE				LR	LR		
	comp=E,11µm,21.8s						
SSE				LR	LR		
	comp=Z,9µm,16.6s						
SSE	Sheshan	18.43	355	P	P	03 24 23.4	+0.8
	comp=Z,56nm,1.0s						
SSE				pP		03 24 29.1	
SSE				S	S	03 27 48.6	+4.1
SSE				sS		03 28 03.1	
WHN	Wuhan	19.57	337	eP	P	03 24 36.0	-0.2
NJ2	Nanjing	19.69	349	eP	P	03 24 35.3	-2.2
NJ2				AP		03 24 43.6	
NJ2				XP		03 24 47.8	
NJ2				PP	PP	03 24 53.4	-2.5
NJ2				AMB	AMB		
	comp=Z,310nm,1.3s						
NJ2				AMB	AMB		
	comp=Z,512nm,3.5s						
NJ2				LR	LR		
	comp=N,29µm,13.4s						
NJ2				LR	LR		
	comp=E,13µm,14.4s						
NJ2				LR	LR		
	comp=Z,32µm,20.7s						
KKTK	Khon Kaen	20.05	283	P	P	03 24 41.0	-0.5
	comp=Z,2µm,0.5s						
GYA	Guiyang	20.72	314	⇓iP	P	03 24 48.3	-0.1
GYA				AP		03 24 53.8	
GYA				XP		03 24 56.9	
GYA				PP	PP	03 25 12.3	+2.0
GYA				S	S	03 28 39.0	+5.0
GYA				AMB	AMB		
	comp=Z,100nm,1.4s						
GYA				AMB	AMB		
	comp=Z,1µm,3.6s						
GYA				LR	LR		
	comp=N,10µm,14.4s,MS5.5						
GYA				LR	LR		
	comp=E,10µm,14.3s,MS5.5						
GYA				LR	LR		
	comp=Z,10µm,15.0s,MS5.3						
GUMO	Guam	21.12	85	P	P	03 24 51.3	-1.3
GUMO				pmax	pmax		
	comp=Z,935nm,1.5s,mb5.9						
GUMO	Guam	21.12	85	P	P	03 24 51.3	-1.3
	comp=Z,935nm,1.5s,mb5.9						
ENH	Enshi	21.63	326	eP	P	03 24 57.2	-0.4
	comp=Z,371nm,1.0s,mb5.8						
KEDI	Kedomdong	22.17	199	⇑eP	P	03 25 01.8	-1.3
KEDI				pmax	pmax		
	comp=Z,108nm,1.2s,mb5.2						
KEDI	Kedomdong	22.17	199	⇑eP	P	03 25 01.8	-1.3
	comp=Z,108nm,1.2s,mb5.2						
KGM	Kluang	22.35	243	P	P	03 25 05.8	+0.9
NANT	Nan	22.48	289	⇓P	P	03 25 04.0	-2.1
	comp=Z,252nm,1.0s,mb5.6						
KELI	Kelakatan	22.49	203	⇑eP	P	03 25 08.8	+2.6
	comp=Z,229nm,1.2s,mb5.5						
NST	Nakhon Sawan	22.56	280	⇑P	P	03 25 06.5	-0.5
	comp=Z,133nm,0.8s,mb5.4						
RATI	Rata	22.58	200	⇑eP	P	03 25 03.9	-3.4
	comp=Z,260nm,1.6s,mb5.4						
CBIJ	Chichi jima	22.86	48	P	P	03 25 10.2	+0.3
	comp=Z,136nm,0.9s,mb5.4,baz=328,slow=8.7,SNR=4.8						
CBIJ				LR	LR	03 32 40.5	
	comp=Z,8µm,18.9s,MS5.2,baz=232,slow=33						
SRDI	Scrawed	22.86	204	⇑eP	P	03 25 12.2	+2.1
SRDI				pmax	pmax		
	comp=Z,144nm,1.1s,mb5.3						
SRDI	Scrawed	22.86	204	⇑eP	P	03 25 12.2	+2.1
	comp=Z,144nm,1.1s,mb5.3						
SNG	Songkhla	22.89	258	P	P	03 25 09.0	-1.4
	comp=Z,312nm,0.8s,mb5.8						
NNT	Nongplab	22.89	272	P	P	03 25 10.5	+0.1
KMI	Kunming	22.93	306	P	P	03 25 11.9	+1.2
KMI				XP		03 25 19.6	
KMI				S	S	03 29 18.4	+3.1
KMI				AMB	AMB		
	comp=Z,284nm,1.7s,mb5.4						
KMI				AMB	AMB		
	comp=Z,4µm,3.6s						
KMI				LR	LR		
	comp=N,10µm,16.5s,MS5.4						
KMI				LR	LR		
	comp=E,8µm,16.5s,MS5.4						
KMI				LR	LR		
	comp=Z,8µm,18.8s,MS5.2						
KMI	Kunming	22.93	306	P	P	03 25 11.9	+1.2
KMI				*SP		03 25 19.6	
KMI						03 25 45.4	
KMI				S	S	03 29 18.4	+3.1
KMI				pmax	pmax		
	comp=Z,284nm,1.7s,mb5.4						
KMI				MLR	MLR		
	comp=Z,8µm,18.8s,MS5.2						
KMI	Kunming	22.93	306	P	P	03 25 11.9	+1.2
	comp=Z,284nm,1.7s,mb5.4						
KMI				sP		03 25 19.6	
KMI				PP	PP	03 25 45.4	+5.0
KMI				S	S	03 29 18.4	+3.1
KMI				LR	LR		
	comp=Z,8µm,18.8s,MS5.2						
IPM	Ipoh	23.33	252	P	P	03 25 15.0	+0.4
CHRT	Chiangrai	23.57	291	P	P	03 25 12.0	-4.9
	comp=Z,684nm,1.2s,mb6.0						
BDT	Bhumibol Dam	23.80	284	P	P	03 25 19.0	-0.1
	comp=Z,24nm,1.0s,mb4.6						
CM31	Chiang Mai Arr	24.05	287	eP	P	03 25 21.6	+0.1
	comp=Z,488nm,1.4s,mb5.7						
CMAR	Chiang Mai Arr	24.05	287	P	P	03 25 21.1	-0.4
	comp=Z,36nm,1.0s,mb4.8,baz=99,slow=7.9,SNR=92						
CMAR				S	S	03 29 40.8	+6.0
	comp=Z,0.7nm,0.3s,baz=94,slow=13,SNR=2.3						
CMAR				LR	LR	03 36 11.3	
	comp=Z,7µm,18.9s,MS5.2,baz=105,slow=40						
TIA	Tai’an	24.06	348	eP	P	03 25 21.5	0.0
TIA				AMB	AMB		
	comp=Z,119nm,1.3s,mb5.2						
CHG	Chiang Mai	24.11	288	⇓P	P	03 25 21.4	-0.8
	comp=Z,77nm,1.4s,mb4.9						
INCN	Inchon	24.89	7	PFAKE		03 25 40.0	+10
INCN				LR	LR		
	comp=Z,12µm,20.0s,MS5.4						
XAN	Xi’an	24.92	331	P	P	03 25 28.8	-1.1
XAN				XP		03 25 43.6	
XAN				S	S	03 29 54.3	+4.8
XAN				AMB	AMB		
	comp=Z,154nm,1.5s,mb5.3						
XAN				LR	LR		
	comp=N,17µm,14.5s,MS5.8						
XAN				LR	LR		
	comp=E,12µm,15.2s,MS5.8						
XAN				LR	LR		
	comp=Z,21µm,20.4s						
KS15	Wonju Array Si	25.02	9	eP	P	03 25 29.9	-0.8
CD2	Chengdu	25.52	318	P	P	03 25 34.8	-0.7
CD2				AP	pP	03 25 39.3	-1.4
CD2				XP	sP	03 25 42.5	-0.6
CD2				S	S	03 29 57.1	-2.4
CD2				SS	SS	03 30 58.3	-4.3
CD2				LR	LR		
	comp=E,37µm,14.0s						
DL2	Dalian	26.16	357	P	P	03 25 45.3	+3.9
DL2				AMB	AMB		
	comp=Z,80nm,1.5s,mb5.0						
DL2				LR	LR		
	comp=N,6µm,12.7s,MS5.4						
DL2				LR	LR		
	comp=E,5µm,13.1s,MS5.4						
DL2				LR	LR		
	comp=Z,7µm,12.3s,MS5.4						
TIY	Taiyuan	26.72	341	⇑P	P	03 25 44.0	-2.6
TIY				LR	LR		
	comp=N,14µm,15.0s						
TIY				LR	LR		
	comp=Z,3µm,16.0s,MS5.0						
KAKA	Kakadu	26.84	160	⇓iP	P	03 25 45.9	-1.9
	comp=Z,50nm,0.9s,mb5.0						
MAJO	Matsushiro	27.33	27	PFAKE		03 26 00.0	+7.9
MAJO				LR	LR		
	comp=Z,12µm,22.0s,MS5.4						
MAT	Matsushiro	27.33	27	P	P	03 25 56.0	+3.9
MAT				pmax	pmax		
	comp=Z,86nm,1.8s,mb5.0						
MAT	Matsushiro	27.33	27	P	P	03 25 56.0	+3.9
	comp=Z,86nm,1.8s,mb5.0						
MAT	Matsushiro	27.33	27	P	P	03 25 55.5	+3.4
BJT	Baijiatuau	27.93	348	eP	P	03 25 57.1	-0.5
BJT				pmax	pmax		
	comp=Z,190nm,1.0s						
BJT	Baijiatuau	27.93	348	eP	P	03 25 57.1	-0.5
	comp=Z,190nm,1.0s,mb5.7						
BJI	Beijing	27.95	348	P	P	03 25 56.8	-0.9
BJI				AP	pP	03 26 01.6	-1.4
BJI				XP	sP	03 26 04.1	-1.3
BJI				S	S	03 30 40.0	+0.8
BJI				AMB	AMB		
	comp=Z,24nm,1.1s,mb4.7						
BJI				LR	LR		
	comp=N,8µm,16.7s,MS5.5						
BJI				LR	LR		
	comp=E,7µm,14.7s,MS5.5						
BJI				LR	LR		
	comp=Z,12µm,24.4s						
BJI	Beijing	27.95	348	P	P	03 25 56.8	-0.9
BJI				*SP	sP	03 26 04.1	-1.3
BJI				S	S	03 30 40.0	+0.8
BJI				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.7						
BJI				MLR	MLR		
	comp=Z,12µm,24.4s,MS5.4						
BJI	Beijing	27.95	348	P	P	03 25 56.8	-0.9
	comp=Z,24nm,1.1s,mb4.7						
BJI				pP	pP	03 26 01.6	-1.4
BJI				sP	sP	03 26 04.1	-1.3
BJI				S	S	03 30 40.0	+0.8
BJI				LR	LR		
	comp=Z,12µm,24.4s,MS5.4						
SNY	Shenyang	29.04	1	⇑P	P	03 26 06.5	-1.1
SNY				AP	pP	03 26 10.8	-2.0

SNY				XP	sP	03 26 13.6	-1.6
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
SNY				LR	LR		
	comp=N,13µm,13.8s,MS5.8						
SNY				LR	LR		
	comp=E,6µm,12.6s,MS5.8						
SNY				LR	LR		
	comp=Z,12µm,14.4s,MS5.7						
LZH	**Lanzhou**	**29.11**	**327**	P	**P**	**03 26 09.5**	**+1.3**
LZH				AP	pP	03 26 14.3	+0.8
LZH				XP	sP	03 26 19.6	+3.8
LZH				PP	PP	03 27 05.0	+2.4
LZH				*e*S	**S**	**03 30 55.4**	**-2.4**
LZH				XS		03 31 12.0	
LZH				SS	SS	03 32 25.0	-2.7
LZH				AMB	AMB		
	comp=Z,90nm,1.3s,mb5.3						
LZH				LR	LR		
	comp=E,41µm,17.3s						
LZH				LR	LR		
	comp=Z,47µm,17.7s,MS6.2						
LZH	**Lanzhou**	**29.11**	**327**	P	**P**	**03 26 09.5**	**+1.3**
LZH				*SP	sP	03 26 19.6	+3.8
LZH						03 27 05.0	
LZH				*e*S	**S**	**03 30 55.4**	**-2.4**
LZH				*SS		03 31 12.0	
LZH				SS	SS	03 32 25.0	-2.7
LZH				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.3						
LZH				MLR	MLR		
	comp=Z,47µm,17.7s,MS6.2						
LZH	**Lanzhou**	**29.11**	**327**	P	**P**	**03 26 09.5**	**+1.3**
	comp=Z,90nm,1.3s,mb5.3						
LZH				pP	pP	03 26 14.2	+0.7
LZH				sP	sP	03 26 19.6	+3.8
LZH				PP	PP	03 27 05.0	+2.4
LZH				*e*S	**S**	**03 30 55.4**	**-2.4**
LZH				sS		03 31 12.0	
LZH				SS	SS	03 32 25.0	-2.7
LZH				LR	LR		
	comp=Z,47µm,17.7s,MS6.2						
HHC	**Hu-ho-hao-te**	**29.86**	**342**	*e*P	**P**	**03 26 14.9**	**-0.1**
HHC				AP	pP	03 26 20.8	+0.6
HHC				XP	sP	03 26 23.1	+0.5
HHC				S	**S**	**03 31 14.4**	**+4.6**
HHC				SCS	ScS	03 36 46.3	-5.4
HHC				AMB	AMB		
	comp=Z,105nm,1.4s,mb5.4						
HHC				AMB	AMB		
	comp=Z,2µm,12.9s						
HHC				LR	LR		
	comp=N,13µm,17.8s,MS5.7						
HHC				LR	LR		
	comp=E,9µm,17.8s,MS5.7						
HHC				LR	LR		
	comp=Z,13µm,22.6s,MS5.5						
BTO	**Baotou**	**30.14**	**340**	*e*P	**P**	**03 26 16.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**30.68**	**175**	*e*P	**P**	**03 26 19.1**	**-3.2**
	comp=Z,47nm,1.0s,mb5.3						
CN2	**Changchun**	**31.08**	**3**	*e*P	**P**	**03 26 28.5**	**+2.9**
CN2				*e*XP	sP	03 26 35.5	+2.3
CN2				PCP	PcP	03 29 21.9	+0.8
CN2				*e*S	**S**	**03 31 33.3**	**+4.5**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
CN2				AMB	AMB		
	comp=Z,3µm,9.0s						
CN2				LR	LR		
	comp=N,7µm,17.0s,MS5.6						
CN2				LR	LR		
	comp=E,10µm,17.0s,MS5.6						
CN2				LR	LR		
	comp=Z,10µm,17.0s,MS5.5						
AGT	**Agartala**	**32.24**	**295**	⇓*i*P	**P**	**03 26 37.0**	**+1.0**
AGT				*i*		03 27 34.0	
MDJ	**Mudanjiang**	**32.30**	**9**	P	**P**	**03 26 36.3**	**0.0**
MDJ				AP	pP	03 26 39.3	-2.3
MDJ				PP	PP	03 27 48.5	+4.5
MDJ				S	**S**	**03 31 52.9**	**+5.0**
MDJ				SCP		03 33 07.9	
MDJ				AMB	AMB		
	comp=Z,226nm,1.4s,mb5.8						
MDJ				LR	LR		
	comp=N,5µm,23.3s						
MDJ				LR	LR		
	comp=E,11µm,13.2s						
MDJ				LR	LR		
	comp=Z,10µm,15.7s						
MDJ	**Mudanjiang**	**32.30**	**9**	*e*P	**P**	**03 26 36.0**	**-0.3**
	comp=Z,472nm,1.4s,mb6.1						
MDJ				*e*	pP	03 26 40.4	-1.2
PMG	**Port Moresby**	**32.37**	**132**	P	**P**	**03 26 34.9**	**-2.3**
	comp=Z,3.7nm,0.4s,mb4.5,baz=311,slow=16,SNR=4.0						
GTA	**Gaotai**	**33.71**	**326**	*e*P	**P**	**03 26 48.6**	**-0.1**
GTA				AP	pP	03 26 54.1	+0.1
GTA				XP	sP	03 26 57.3	+1.0
GTA				PCP	PcP	03 29 30.3	+2.0
GTA				S	**S**	**03 32 08.8**	**-1.1**
GTA				SCP		03 33 12.1	
GTA				PCS		03 33 15.1	
GTA				SS	SS	03 34 12.8	-2.6
GTA				SCS	ScS	03 37 12.1	+1.1
GTA				AMB	AMB		
	comp=Z,22nm,1.5s,mb4.9						
GTA				AMB	AMB		
	comp=Z,3µm,7.6s						
GTA				LR	LR		
	comp=N,21µm,19.0s,MS6.0						
GTA				LR	LR		
	comp=E,16µm,20.5s,MS6.0						
GTA				LR	LR		
	comp=Z,20µm,16.4s,MS5.9						
MBWA	**Marble Bar**	**33.80**	**186**	*e*P	**P**	**03 26 47.7**	**-1.9**
	comp=Z,34nm,1.0s,mb5.2						
LSA	**Lhasa**	**34.19**	**305**	P	**P**	**03 26 53.4**	**+0.5**
LSA	**Lhasa**	**34.19**	**305**	⇓*e*P	**P**	**03 26 53.1**	**+0.2**
LSA				pmax	pmax		
	comp=Z,427nm,1.3s,mb6.2						
LSA	**Lhasa**	**34.19**	**305**	⇓*e*P	**P**	**03 26 53.1**	**+0.2**
	comp=Z,426nm,1.3s,mb6.2						
WRAB	**Tennant Creek**	**34.21**	**161**	*e*P	**P**	**03 26 50.5**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,20nm,2.7s,mb4.6						
WRAB	**Tennant Creek**	**34.21**	**161**	*e*P	**P**	**03 26 50.5**	**-2.7**
	comp=Z,20nm,2.7s,mb4.6						
WRA	**Warramunga Arr**	**34.22**	**161**	P	**P**	**03 26 50.3**	**-2.9**
	comp=Z,10nm,0.8s,mb4.8,baz=341,slow=8.8,SNR=28						
WB2	**Warramunga Arr**	**34.22**	**161**	*e*P	**P**	**03 26 50.6**	**-2.7**
ASAJ	**Asahikawa**	**35.48**	**24**	P	**P**	**03 27 05.0**	**+1.1**
	comp=Z,4.0nm,0.6s,mb4.5,baz=229,slow=31,SNR=2.5						
HIA	**Hailar**	**36.59**	**356**	*e*P	**P**	**03 27 12.1**	**-1.0**
HIA				pmax	pmax		
	comp=Z,152nm,1.4s						
HIA				MLR	MLR		
	comp=Z,8µm,19.0s						
HIA	**Hailar**	**36.59**	**356**	*e*P	**P**	**03 27 12.1**	**-1.1**
	comp=Z,152nm,1.4s,mb5.6						
HIA				LR	LR		
	comp=Z,8µm,19.0s,MS5.5						
KLR	**Kul'dur**	**37.13**	**9**	*e*P	**P**	**03 27 15.0**	**-2.6**
KLR				pmax	pmax		
	comp=N,74nm,1.8s						
KLR				pmax	pmax		
	comp=E,74nm,1.8s						
KLR				pmax	pmax		
	comp=Z,170nm,1.8s,mb5.6						
ULN	**Ulaanbaatar**	**37.59**	**342**	PFAKE		03 27 30.0	+8.5
ULN				LR	LR		
	comp=Z,15µm,20.0s,MS5.8						
ASAR	**Alice Springs**	**37.61**	**164**	P	**P**	**03 27 19.6**	**-2.3**
	comp=Z,9.0nm,0.7s,mb4.6,baz=338,slow=6.8,SNR=77						
ASAR				S	**S**	**03 33 07.2**	**-2.9**
	comp=Z,0.6nm,0.8s,baz=347,slow=29,SNR=3.0						
ASAR				LR	LR	03 44 07.3	
	comp=Z,3µm,21.2s,MS5.1,baz=341,slow=38						
ASPA	**Alice Springs**	**37.61**	**164**	⇓*i*P	**P**	**03 27 21.2**	**-0.7**
JIRN	**Jiri**	**37.63**	**299**	*e*P	**P**	**03 27 21.4**	**-0.7**
	comp=Z,541nm,1.2s,mb6.2						
SONM	**Songino Array**	**37.76**	**341**	P	**P**	**03 27 22.2**	**-0.7**
	comp=Z,19nm,0.8s,mb4.9,baz=161,slow=8.6,SNR=72						
YSS	**Yuzh-Sakhalins**	**37.92**	**22**	*e*P	**P**	**03 27 24.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**37.92**	**22**	⇑*i*P	**P**	**03 27 26.1**	**+1.8**
GUN	**Gumba**	**37.96**	**299**	*e*P	**P**	**03 27 24.0**	**-0.8**
	comp=Z,1µm,1.4s,mb6.4						
PKI	**Pulchoki**	**38.27**	**299**	*e*P	**P**	**03 27 25.0**	**-2.5**
	comp=Z,759nm,1.6s,mb6.2						
KKN	**Kakani**	**38.44**	**299**	*e*P	**P**	**03 27 27.3**	**-1.6**
	comp=Z,689nm,1.5s,mb6.2						
DMN	**Daman**	**38.54**	**299**	*e*P	**P**	**03 27 28.3**	**-1.4**
	comp=Z,770nm,1.5s,mb6.2						
VIS	**Vishakhapatnam**	**38.75**	**283**	*e*P	**P**	**03 27 31.1**	**-0.4**
VIS				*e*		03 27 41.4	
	comp=Z,143nm,1.2s						
GKN	**Gorkha**	**39.05**	**299**	*e*P	**P**	**03 27 32.1**	**-1.8**
	comp=Z,320nm,1.2s,mb5.9						
CTA	**Charters Tower**	**39.68**	**145**	*e*P	**P**	**03 27 37.1**	**-2.2**
	comp=Z,30nm,1.6s,mb4.8						
CTA	**Charters Tower**	**39.68**	**145**	*e*P	**P**	**03 27 37.1**	**-2.2**
CTA				pmax	pmax		
	comp=Z,30nm,1.6s						
CTA	**Charters Tower**	**39.68**	**145**	P	**P**	**03 27 36.8**	**-2.5**
	comp=Z,6.8nm,0.8s,mb4.4,baz=313,slow=5.4,SNR=4.4						
CTA				LR	LR	03 44 46.3	
	comp=Z,7µm,21.8s,MS5.4,baz=94,slow=37						
CTAO	**Charters Tower**	**39.68**	**145**	*e*P	**P**	**03 27 39.1**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.1						
CTAO	**Charters Tower**	**39.68**	**145**	*e*P	**P**	**03 27 39.1**	**-0.2**
	comp=Z,54nm,1.3s,mb5.1						
KOLN	**Koldanda**	**39.88**	**298**	*e*P	**P**	**03 27 39.6**	**-1.2**
	comp=Z,236nm,1.1s,mb5.8						
ALBI	**Allahabad**	**40.94**	**294**	*e*P	**P**	**03 27 47.0**	**-2.5**
ZAK	**Zakamensk**	**40.98**	**341**	*e*P	**P**	**03 27 49.1**	**-0.5**
ZAK				*e*		03 29 32.8	
ZAK				pmax	pmax		
	comp=Z,23nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,15nm,2.6s						
TLY	**Talaya**	**41.99**	**342**	P	**P**	**03 27 57.0**	**-0.9**
	comp=Z,295nm,1.2s,mb5.8,SNR=54						
TLY	**Talaya**	**41.99**	**342**	*e*P	**P**	**03 27 57.2**	**-0.7**
TLY				*e*	pP	03 28 02.3	-1.0
TLY				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.2						
TLY	**Talaya**	**41.99**	**342**	*e*P	**P**	**03 27 57.2**	**-0.8**
	comp=Z,82nm,1.2s,mb5.2						
TLY				*e*	pP	03 28 02.3	-1.0
WAKE	**Wake Island**	**42.20**	**75**	PFAKE		03 28 10.0	+10
WAKE				LR	LR		
	comp=Z,40µm,21.0s,MS6.3						
IRK	**Irkutsk**	**42.30**	**343**	*e*P	**P**	**03 28 00.9**	**+0.4**
IRK				pmax	pmax		
	comp=Z,132nm,1.9s,mb5.2						
MOY	**Mondy**	**42.83**	**340**	*e*P	**P**	**03 28 05.1**	**+0.3**
MOY				pmax	pmax		
	comp=Z,169nm,1.9s,mb5.5						
LGTI	**Lohaghat**	**43.14**	**300**	*e*P	**P**	**03 28 08.0**	**+0.4**
HYB	**Hyderabad**	**43.30**	**282**	⇑*e*P	**P**	**03 28 08.5**	**-0.5**
HYB				pmax	pmax		
	comp=Z,71nm,1.2s,mb5.3						
HYB	**Hyderabad**	**43.30**	**282**	⇑*e*P	**P**	**03 28 08.5**	**-0.5**
	comp=Z,71nm,1.2s,mb5.3						
HYB	**Hyderabad**	**43.30**	**282**	⇑*i*P	**P**	**03 28 08.5**	**-0.5**
	comp=Z,71nm,1.2s,mb5.3						
FORT	**Forrest**	**43.45**	**174**	*e*P	**P**	**03 28 09.1**	**-1.1**
	comp=Z,2µm,0.9s						
WMQ	**Urumqi**	**43.49**	**322**	P	**P**	**03 28 11.0**	**+0.8**
WMQ				AP	pP	03 28 17.0	+1.4
WMQ				XP	sP	03 28 20.0	+2.1
WMQ				PP	PP	03 29 54.0	+0.5
WMQ				S	**S**	**03 34 38.0**	**+0.4**
WMQ				SS	SS	03 37 44.0	-1.1
WMQ				AMB	AMB		
	comp=Z,64nm,1.1s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,3µm,10.0s						
WMQ				LR	LR		
	comp=N,23µm,20.0s,MS6.1						
WMQ				LR	LR		
	comp=E,13µm,20.0s,MS6.1						
WMQ				LR	LR		
	comp=Z,15µm,20.0s,MS5.9						
KWAJ	**Kwajalein Atol**	**43.77**	**90**	PFAKE		03 28 20.0	+7.1
KWAJ				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
CLNS	**Chul'man**	**44.09**	**1**	*e*P	**P**	**03 28 15.0**	**+0.1**
CLNS				*e**PP	pP	03 28 22.7	+2.4
CLNS				*e*		03 29 57.7	
CLNS				*e*S	**S**	**03 34 48.9**	**+2.8**
CLNS				*e*		03 38 09.7	
CLNS				pmax	pmax		
	comp=Z,144nm,1.1s,mb5.6						
CLNS				pmax	pmax		
	comp=N,144nm,1.3s						
CLNS				pmax	pmax		
	comp=E,40nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
CLNS				pmax	pmax		
	comp=N,11nm,1.2s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.2s						
CLNS				smax			
	comp=E,686nm,17.9s						
CLNS				smax			
	comp=Z,3µm,13.0s						
CLNS				smax			
	comp=N,3µm,14.8s						
CLNS				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.6						
CLNS				MLR	MLR		
	comp=N,4µm,14.0s,MS5.5						
CLNS				MLR	MLR		
	comp=E,1µm,13.0s,MS5.5						
KLBR	**Kellerberrin**	**44.32**	**187**	*e*P	**P**	**03 28 16.6**	**-0.6**
	comp=E,1µm,1.1s,mb6.5						
BHPL	**Bhopal**	**44.63**	**290**	*e*P	**P**	**03 28 18.9**	**-0.9**
BHPL				*e*		03 28 27.8	
	comp=Z,117nm,1.0s						
MUN	**Mundaring**	**44.90**	**188**	*e*P	**P**	**03 28 20.1**	**-1.8**
	comp=Z,37nm,1.1s,mb5.1						
MUN	**Mundaring**	**44.90**	**188**	*e*P	**P**	**03 28 20.1**	**-1.8**
MUN				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.1						
DDI	**Dehra Dun**	**45.19**	**300**	*e*P	**P**	**03 28 22.4**	**-1.8**
DDI				*e*		03 35 16.7	
LATR	**Latur**	**45.20**	**283**	*e*P	**P**	**03 28 23.1**	**-1.3**
BOD	**Bodaibo**	**45.59**	**353**	*e*P	**P**	**03 28 26.8**	**-0.1**
BOD				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
TRD	**Trivandrum**	**45.59**	**270**	*i* P	**P**	**03 28 28.0**	**+0.4**
TRD				*e*		03 28 36.0	
	comp=Z,97nm,1.6s						
NWAO	**Narrogin (SRO)**	**45.70**	**187**	*e*P	**P**	**03 28 27.2**	**-1.0**
NWAO				*e*	pP	03 28 34.0	+0.4
NWAO				pmax	pmax		
	comp=Z,179nm,1.1s						
NWAO	**Narrogin (SRO)**	**45.70**	**187**	*e*P	**P**	**03 28 27.2**	**-0.9**
	comp=Z,179nm,1.1s,mb5.9						
NWAO				*e*	pP	03 28 34.0	+0.4
SMLA	**Simla**	**46.12**	**301**	⇓*i*	**P**	**03 28 45.9**	**+14**
	comp=Z,359nm,4.1s						
SMLA				*i*		03 35 29.8	
SDNR	**Sundarnagar**	**46.36**	**302**	*e*P	**P**	**03 28 34.4**	**+1.0**
BHK	**Bhakra**	**46.80**	**301**	*e*	**P**	**03 28 52.4**	**+15**
PONG	**Pong**	**47.31**	**302**	*e*P	**P**	**03 28 40.0**	**-0.9**
AJM	**Ajmer**	**47.49**	**294**	⇓*i*P	**P**	**03 28 41.0**	**-1.4**
THN	**Thein Dam**	**47.61**	**302**	*e*P	**P**	**03 28 39.6**	**-3.7**
STKA	**Stephens Creek**	**47.68**	**159**	*e*P	**P**	**03 28 42.7**	**-1.1**
	comp=Z,15nm,0.9s,mb5.0						
STKA				*e*PP	PP	03 30 30.5	-4.4
STKA	**Stephens Creek**	**47.68**	**159**	P	**P**	**03 28 42.0**	**-1.8**
	comp=Z,5.3nm,0.7s,mb4.7,baz=336,slow=7.5,SNR=11						
STKA				PP	PP	03 30 33.0	-1.9
	comp=Z,48nm,1.5s,baz=332,slow=12,SNR=1.7						
POO	**Poona**	**47.77**	**284**	*e*P	**P**	**03 28 41.7**	**-3.0**
MKAR	**Makanchi Array**	**48.30**	**323**	*i* P	**P**	**03 28 47.8**	**-0.6**
PET	**Petropavlovsk**	**49.16**	**28**	PFAKE		03 29 10.0	+15
PET				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
KSH	**Kashi**	**49.39**	**312**	*e*P	**P**	**03 28 59.5**	**+2.5**
KSH				*e*AP	pP	03 29 05.5	+3.1
KSH				*e*XP	sP	03 29 07.3	+2.7
KSH				*e*PCP	PcP	03 30 21.0	+1.4
KSH				*e*PP	PP	03 30 54.8	+3.2
KSH				*e*SCP		03 34 14.8	
KSH				*e*S	**S**	**03 36 06.0**	**+4.2**
KSH				*e*XS		03 36 12.0	
KSH				*e*PS	PS	03 36 22.4	+10
KSH				*e*SCS	ScS	03 38 47.1	+1.9
KSH				*e*SS	SS	03 39 33.5	+3.8
KSH				AMB	AMB		
	comp=Z,210nm,1.1s,mb6.1						
KSH				AMB	AMB		
	comp=Z,1µm,8.0s						
KSH				LR	LR		
	comp=N,8µm,14.8s,MS5.9						
KSH				LR	LR		
	comp=E,4µm,12.9s,MS5.9						
YAK	**Yakutsk**	**49.50**	**4**	*e*P	**P**	**03 29 00.4**	**+2.9**
YAK				*e**PP	pP	03 29 09.0	+6.1
YAK				*e*		03 30 26.0	
YAK				*e*		03 30 53.6	
YAK				*e*S	**S**	**03 35 58.0**	**-4.9**
YAK				*e*		03 38 39.4	
YAK				*e*SS	SS	03 39 26.6	-4.6
YAK				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.5						
YAK				pmax	pmax		
	comp=N,37nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				smax			
	comp=E,4.0nm,0.8s						
YAK				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.4						
YAK				MLR	MLR		
	comp=N,2µm,13.0s,MS5.4						
YAK				MLR	MLR		
	comp=E,2µm,14.0s,MS5.4						
YAK	**Yakutsk**	**49.50**	**4**	*e*P	**P**	**03 28 55.8**	**-1.7**
	comp=E,172nm,1.3s,mb5.9						
ULHL	**Ulahol**	**50.16**	**315**	P	**P**	**03 29 03.1**	**+0.3**
	SNR=52						
KZA	**Kyzart**	**50.78**	**314**	P	**P**	**03 29 09.1**	**+1.5**
	SNR=45						
TKM2	**Tokmak 2**	**50.85**	**316**	P	**P**	**03 29 08.3**	**+0.2**
	SNR=24						
ZAL	**Zalesovo**	**51.09**	**332**	*i* P	**P**	**03 29 09.1**	**-0.6**
ZAL				pmax	pmax		
	comp=Z,22nm,1.0s						
ZAL	**Zalesovo**	**51.09**	**332**	P	**P**	**03 29 08.5**	**-1.2**
	comp=Z,22nm,1.0s,mb5.0,baz=352,slow=8.1,SNR=28						
ZAL				LR	LR	03 52 30.4	
	comp=Z,8µm,18.9s,MS5.8,baz=346,slow=38						
ZAL	**Zalesovo**	**51.09**	**332**	P	**P**	**03 29 08.5**	**-1.2**
MA2	**Magadan**	**51.10**	**18**	*e*P	**P**	**03 29 13.0**	**+3.3**
MA2				pmax	pmax		
	comp=Z,30nm,2.0s,mb4.9						
MA2	**Magadan**	**51.10**	**18**	*e*P	**P**	**03 29 13.1**	**+3.4**
MA2				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
KBK	**Karagaybulak**	**51.20**	**315**	P	**P**	**03 29 11.2**	**+0.5**
	SNR=21						
UCH	**Uchtor**	**51.35**	**314**	P	**P**	**03 29 12.6**	**+0.8**
	SNR=71						
CHMS	**Chumysh**	**51.46**	**315**	P	**P**	**03 29 12.8**	**+0.2**
	SNR=13						
FRU	**Bishkek**	**51.49**	**315**	*e*P	**P**	**03 29 13.5**	**+0.6**
FRU				pmax	pmax		
	comp=Z,150nm,2.0s,mb5.6						
AAK	**Ala-Archa**	**51.50**	**315**	P	**P**	**03 29 13.9**	**+0.9**
	SNR=12						
AAK	**Ala-Archa**	**51.50**	**315**	*e*P	**P**	**03 29 12.0**	**-1.0**
AAK				pmax	pmax		
	comp=Z,122nm,1.7s,mb5.6						
AAK	**Ala-Archa**	**51.50**	**315**	*e*P	**P**	**03 29 12.0**	**-1.0**
	comp=Z,122nm,1.7s,mb5.6						
USP	**Ospenovka**	**51.72**	**316**	P	**P**	**03 29 14.9**	**+0.2**
	SNR=16						
AML	**Almayashu**	**51.89**	**314**	P	**P**	**03 29 17.1**	**+1.1**
	SNR=49						
EKS2	**Erkin-Say**	**52.01**	**315**	P	**P**	**03 29 17.6**	**+0.7**
	SNR=29						
NVS	**Novosibirsk**	**52.37**	**332**	*i* P	**P**	**03 29 17.9**	**-1.5**
NVS				*i*		03 30 33.5	
NVS				*i* S	**S**	**03 36 40.0**	**-2.6**
NVS				pmax	pmax		
	comp=N,279nm,1.7s						
NVS				pmax	pmax		
	comp=E,295nm,1.7s						
NVS				pmax	pmax		
	comp=Z,361nm,1.7s,mb6.0						
NVS				smax			
	comp=N,295nm,1.7s						
KURK	**Kurchatov**	**52.39**	**326**	*i* P	**P**	**03 29 19.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,410nm,1.5s,mb6.1						
KURK	**Kurchatov**	**52.39**	**326**	*e*P	**P**	**03 29 19.0**	**-0.6**
	comp=Z,268nm,1.0s,mb6.1						
CNB	**Canberra Magne**	**53.78**	**153**	*e*P	**P**	**03 29 35.7**	**+5.6**
	comp=Z,449nm,1.1s,mb6.3						
TOO	**Toolangi**	**54.19**	**158**	*e*P	**P**	**03 29 36.4**	**+3.4**
	comp=Z,1.3nm,1.4s						
TOO	**Toolangi**	**54.19**	**158**	*e*P	**P**	**03 29 36.4**	**+3.4**
TOO				pmax	pmax		
	comp=Z,1.0nm,1.4s						
DGAR	**Diego Garcia**	**54.23**	**251**	PFAKE		03 29 40.0	+6.4
DGAR				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
SEY	**Seymchan**	**54.29**	**16**	*e*P	**P**	**03 29 34.1**	**+0.7**
SEY				pmax	pmax		
	comp=Z,180nm,1.9s,mb5.7						
SMY	**Shemya**	**56.81**	**34**	PFAKE		03 30 00.0	+8.2
SMY				LR	LR		
	comp=Z,6µm,21.0s,MS5.7						
BVA0	**Borovoye Array**	**57.99**	**325**	*i* P	**P**	**03 29 59.1**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.2						
BVAR	**Borovoye Array**	**57.99**	**325**	P	**P**	**03 29 59.1**	**-1.0**
	comp=Z,37nm,1.0s,mb5.4,baz=113,slow=11,SNR=39						
CHKZ	**Chkalovo**	**58.13**	**326**	*e*P	**P**	**03 29 59.7**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,144nm,1.4s,mb5.8						
CHKZ	**Chkalovo**	**58.13**	**326**	*e*P	**P**	**03 29 59.7**	**-1.3**
	comp=Z,144nm,1.4s,mb5.8						
TIXI	**Tiksi**	**59.04**	**2**	*e*P	**P**	**03 30 05.5**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,138nm,1.3s,mb5.8						
TIXI				pmax	pmax		
	comp=N,66nm,1.7s						
TIXI				pmax	pmax		
	comp=E,30nm,1.4s						
TIXI				pmax	pmax		
	comp=Z,277nm,1.5s,mb6.1						
TIXI				MLR	MLR		
	comp=Z,7µm,17.0s,MS5.9						
TIXI	**Tiksi**	**59.04**	**2**	PFAKE		03 30 20.0	+13
TIXI				LR	LR		
	comp=Z,7µm,19.0s,MS5.8						
TAU	**Tasmania Unive**	**59.57**	**160**	PFAKE		03 30 20.0	+8.7
TAU				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
BILL	**Bilibino**	**61.95**	**17**	⇓*i*P	**P**	**03 30 27.0**	**-0.2**
BILL				*i*		03 30 44.0	
BILL				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.5						
BILL				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.5						
BILL	**Bilibino**	**61.95**	**17**	⇓*i*P	**P**	**03 30 27.1**	**-0.1**
BILL				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
SVE	**Sverdlovsk**	**64.57**	**327**	⇓*i*P	**P**	**03 30 43.0**	**-1.5**
SVE				*e*S	**S**	**03 39 22.0**	**+0.5**
SVE				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.6						
SVE				MLR	MLR		
	comp=N,3µm,19.0s,MS5.6						
SVE				MLR	MLR		
	comp=E,2µm,19.0s,MS5.6						
SVE				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.8						
SOKR	**Solikamsk**	**67.26**	**330*c***	*i*P	**P**	**03 31 03.6**	**+1.9**
SOKR				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.6						
SOKR				MLR	MLR		
	comp=Z,8µm,21.0s,MS5.9						
UNV	**Unalaska Valle**	**68.25**	**37**	PFAKE		03 31 20.0	+12
UNV				LR	LR		
	comp=Z,8µm,20.0s,MS5.9						
TNA	**Tin City**	**69.84**	**24**	PFAKE		03 31 30.0	+12

TNA				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
RPZ	**Rata Peaks**	**71.05**	**145**	P	**P**	**03 31 23.1**	**-2.3**
	comp=Z,8.2nm,0.7s,mb4.8,baz=178,slow=5.9,SNR=8.2						
RPZ				LR	LR	03 59 40.4	
	comp=Z,6µm,21.2s,MS5.8,baz=308,slow=34						
MTA	**Mtatsminda**	**73.06**	**310**	P	**P**	**03 31 37.1**	**-0.2**
TI2	**Plekhanov**	**73.09**	**310**	*e*P	**P**	**03 31 37.6**	**+0.1**
DUS	**Dusheti**	**73.11**	**310**	P	**P**	**03 31 37.6**	**0.0**
GNI	**Garni**	**73.16**	**308**	*d i*P	**P**	**03 31 38.5**	**+0.6**
GNI				pmax	pmax		
	comp=Z,199nm,1.6s						
GNI				MLR	MLR		
	comp=Z,2µm,18.0s						
GNI	**Garni**	**73.16**	**308**	P	**P**	**03 31 38.3**	**+0.4**
	comp=Z,5.7nm,0.6s,mb4.7,baz=14,slow=4.8,SNR=20						
GNI	**Garni**	**73.16**	**308**	*e*P	**P**	**03 31 38.5**	**+0.6**
	comp=Z,193nm,1.4s,mb5.8						
BHD	**Baghdad**	**73.88**	**301**	*e*P	**P**	**03 31 39.0**	**-3.2**
RAYN	**Ar Rayn**	**73.89**	**291**	P	**P**	**03 31 42.5**	**0.0**
	comp=Z,417nm,1.2s,mb6.2,SNR=33						
ONI	**Oni**	**74.02**	**311**	P	**P**	**03 31 42.8**	**-0.1**
GOF	**Gofitskoye**	**74.22**	**313**	*e*P	**P**	**03 31 43.6**	**-0.3**
GOF				pmax	pmax		
	comp=Z,2µm,3.0s						
TVAN	**Van**	**74.28**	**307**	*i* P	**P**	**03 31 45.9**	**+1.5**
KIV	**Kislovodsk**	**74.51**	**312**	P	**P**	**03 31 46.6**	**+0.9**
	comp=Z,1µm,1.0s,SNR=62						
KIV	**Kislovodsk**	**74.51**	**312**	*d i*P	**P**	**03 31 45.3**	**-0.4**
KIV				*e*		03 32 01.6	
KIV				pmax	pmax		
	comp=Z,154nm,1.3s,mb5.8						
KIV				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.9						
KIV	**Kislovodsk**	**74.51**	**312**	*e*P	**P**	**03 31 46.3**	**+0.6**
	comp=Z,267nm,1.0s,mb6.1						
IMA	**Indian Mountai**	**75.72**	**25**	*e*P	**P**	**03 31 53.5**	**+1.4**
IMA				pmax	pmax		
	comp=Z,409nm,1.6s,mb6.1						
IMA	**Indian Mountai**	**75.72**	**25**	*e*P	**P**	**03 31 53.5**	**+1.4**
	comp=Z,409nm,1.6s,mb6.1						
ERZM	**Erzurum**	**75.76**	**308**	*i* P	**P**	**03 31 53.6**	**+0.7**
BEST	**Besiri**	**76.01**	**306**	*i* P	**P**	**03 31 55.5**	**+1.1**
KDAK	**Kodiak Island**	**76.31**	**33**	PFAKE		03 32 10.0	+14
KDAK				LR	LR		
	comp=Z,703nm,20.0s,MS5.0						
VOR	**Voronezh**	**76.45**	**320**	*e*P	**P**	**03 31 56.0**	**-0.6**
VOR				pmax	pmax		
	comp=Z,300nm,2.0s,mb5.9						
SOC	**Sochi**	**76.69**	**312**	*e*P	**P**	**03 31 55.6**	**-2.4**
SOC				*e*S	S	03 41 36.8	-5.7
SOC				pmax	pmax		
	comp=Z,150nm,1.8s,mb5.6						
SOC				pmax	pmax		
	comp=N,44nm,1.4s						
SOC				pmax	pmax		
	comp=E,34nm,1.1s						
SOC				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.7						
SOC				MLR	MLR		
	comp=N,1µm,21.0s,MS5.8						
SOC				MLR	MLR		
	comp=E,4µm,22.0s,MS5.8						
MOS	**Moscow**	**77.15**	**325**	*e*P	**P**	**03 31 59.4**	**-0.9**
MOS				*e*		03 32 10.4	
MOS				*e*		03 34 56.3	
MOS				*e*S	S	03 41 49.4	+2.2
MOS				pmax	pmax		
	comp=Z,700nm,2.3s,mb6.2						
MOS				pmax	pmax		
	comp=Z,193nm,1.8s,mb5.7						
MOS				pmax	pmax		
	comp=N,74nm,1.1s						
MOS				MLR	MLR		
	comp=Z,5µm,20.5s,MS5.8						
MOS				MLR	MLR		
	comp=E,4µm,19.8s						
FIB	**Fire Island**	**77.38**	**30**	PFAKE		03 32 10.0	+8.5
FIB				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
POHA	**Pohakuloa**	**77.72**	**72**	PFAKE		03 32 20.0	+16
POHA				LR	LR		
	comp=Z,36µm,21.0s,MS6.7						
ELZG	**Elazig**	**77.74**	**307**	*i* P	**P**	**03 32 05.5**	**+1.6**
OBN	**Obninsk**	**77.79**	**324**	*d i*P	**P**	**03 32 04.0**	**+0.1**
OBN				*i*		03 32 13.9	
OBN				*i*		03 32 19.3	
OBN				*e*		03 34 59.3	
OBN				*i* S	S	03 41 56.1	+1.9
OBN				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.3						
OBN				pmax	pmax		
	comp=Z,127nm,1.4s,mb5.7						
OBN				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.8						
OBN	**Obninsk**	**77.79**	**324**	*e*P	**P**	**03 32 03.3**	**-0.6**
	comp=Z,198nm,1.4s,mb5.8						
MCK	**McKinley**	**77.80**	**27**	*e*P	**P**	**03 32 03.0**	**-0.7**
MCK				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.4						
MCK				MLR	MLR		
	comp=Z,956nm,19.0s,MS5.1						
MCK	**McKinley**	**77.80**	**27**	*e*P	**P**	**03 32 03.0**	**-0.8**
	comp=Z,78nm,1.5s,mb5.4						
MCK				LR	LR		
	comp=Z,956nm,19.0s,MS5.1						
LVZ	**Lovozero**	**77.81**	**337**	⇓*e*P	**P**	**03 32 09.2**	**+5.5**
LVZ				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.4						
LVZ				pmax	pmax		
	comp=N,15nm,1.8s						
LVZ				pmax	pmax		
	comp=E,16nm,1.6s						
LVZ				MLR	MLR		
	comp=Z,6µm,25.0s,MS5.8						
LVZ				MLR	MLR		
	comp=N,3µm,20.0s,MS5.8						
LVZ				MLR	MLR		
	comp=E,4µm,23.0s,MS5.8						
COLA	**College**	**78.18**	**26**	PFAKE		03 32 20.0	+14
COLA				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MALT	**Malatya**	**78.19**	**307**	*e*P	**P**	**03 32 07.9**	**+1.4**
MALT				pmax	pmax		
	comp=Z,765nm,2.4s,mb6.2						
MALT	**Malatya**	**78.19**	**307**	*e*P	**P**	**03 32 07.9**	**+1.4**
	comp=Z,764nm,2.4s,mb6.2						
MALT	**Malatya**	**78.19**	**307**	⇑P	**P**	**03 32 07.5**	**+1.0**
APA	**Apatity**	**78.31**	**337**	⇑*i*P	**P**	**03 32 06.8**	**+0.3**
APA				*i*	pP	03 32 13.5	+1.3
APA				*i*		03 32 24.2	
APA				pmax	pmax		
	comp=Z,72nm,1.2s,mb5.5						
APA				MLR	MLR		
	comp=Z,8µm,15.0s,MS6.2						
ILAR	**Eielson Array**	**78.60**	**26**	P	**P**	**03 32 07.0**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=242,slow=3.8,SNR=25						
ILAR				PP	PP	03 35 06.4	-1.7
	comp=Z,1.3nm,1.1s,baz=281,slow=9.2,SNR=3.2						
GZT	**Gaziantep**	**78.99**	**306**	*i* P	**P**	**03 32 12.2**	**+1.3**
THY	**Trims Highway**	**79.24**	**27**	*e*P	**P**	**03 32 11.7**	**+0.1**
CASY	**Casey**	**79.29**	**185**	PFAKE		03 32 20.0	+8.1
CASY				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
KAHT	**Ahir Dag**	**79.50**	**306**	*i* P	**P**	**03 32 14.5**	**+0.9**
DIV	**Divide**	**79.51**	**30**	PFAKE		03 32 20.0	+6.8
DIV				LR	LR		
	comp=Z,8µm,19.0s,MS6.1						
JOF	**Joensuu**	**79.68**	**332**	*e*p	**P**	**03 32 12.4**	**-1.7**
	comp=Z,22nm,0.8s,mb5.1						
COBT	**Iskenderun**	**80.15**	**305**	*i* P	**P**	**03 32 16.5**	**-0.6**
ASF	**Jabal al Asfar**	**80.27**	**301**	P	**P**	**03 32 18.8**	**+0.9**
	comp=Z,108nm,1.3s,mb5.6,baz=332,slow=1.2,SNR=34						
KEV	**Kevo**	**80.34**	**339**	*e*p	**P**	**03 32 15.4**	**-2.1**
	comp=Z,7.0nm,0.7s,mb4.7						
KEV	**Kevo**	**80.34**	**339**	*e*P	**P**	**03 32 15.4**	**-2.1**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
BOYT	**Boyabat**	**80.47**	**310**	*i* P	**P**	**03 32 18.0**	**-0.7**
SIM	**Simferopol’**	**80.52**	**314**	*e*P	**P**	**03 32 19.7**	**+0.8**
SIM				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.5						
SIM				MLR	MLR		
	comp=Z,3µm,20.5s,MS5.7						
PUL	**Pulkovo**	**80.61**	**329**	*d e*P	**P**	**03 32 23.4**	**+4.3**
PUL				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.7						
PUL				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.8						
PUL				MLR	MLR		
	comp=N,2µm,19.0s,MS5.9						
PUL				MLR	MLR		
	comp=E,5µm,20.0s,MS5.9						
PUL	**Pulkovo**	**80.61**	**329**	*e*P	**P**	**03 32 18.9**	**-0.2**
CTKT	**Corum**	**80.67**	**310**	*i* P	**P**	**03 32 18.3**	**-1.5**
ARCES	**ARCESS Array B**	**80.90**	**339**	P	**P**	**03 32 20.4**	**0.0**
	comp=E,5.7nm,0.7s,mb4.6,baz=80,slow=7.4,SNR=18						
ARCES				LR	LR	04 11 00.6	
	comp=E,3µm,19.4s,MS5.7,baz=86,slow=38						
AVNT	**Avonos**	**80.91**	**308**	*i* P	**P**	**03 32 21.9**	**+0.8**
BALT	**Daday**	**81.58**	**311**	*i* P	**P**	**03 32 25.5**	**+0.9**
KBS	**Kingsbay**	**81.63**	**350**	PFAKE		03 32 40.0	+16
KBS				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
BR131	**Keskin Array S**	**81.69**	**309**	PFAKE		03 32 40.0	+15
BR131				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
BRTR	**Keskin Array B**	**81.69**	**309**	P	**P**	**03 32 24.8**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=91,slow=3.9,SNR=9.0						
BRTR				PP	PP	03 35 22.3	-12
	comp=Z,7.6nm,1.4s,baz=104,slow=12,SNR=3.1						
BRTR	**Keskin Array B**	**81.69**	**309**	P	**P**	**03 32 24.8**	**-0.4**
BRTR				PP	PP	03 35 22.2	-12
ELDT	**Eldivan**	**81.72**	**310**	*i* P	**P**	**03 32 27.9**	**+2.5**
DAWY	**Dawson**	**81.93**	**26**	*e*P	**P**	**03 32 26.7**	**+0.8**
KAF	**Kangasniemi**	**82.10**	**332**	*e*p	**P**	**03 32 25.3**	**-1.5**
	comp=Z,19nm,0.9s,mb5.0,baz=75,slow=5.0						
KAF	**Kangasniemi**	**82.10**	**332**	*e*P	**P**	**03 32 25.3**	**-1.5**
KAF				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
EIL	**Elat**	**82.33**	**299**	P	**P**	**03 32 29.5**	**+0.8**
	comp=Z,107nm,1.3s,mb5.6,baz=161,slow=2.3,SNR=20						
EIL	**Elat**	**82.33**	**299**	*e*P	**P**	**03 32 29.8**	**+1.1**
	comp=Z,318nm,1.5s,mb6.0						
FINES	**FINESS Array B**	**82.35**	**331**	P	**P**	**03 32 28.2**	**0.0**
	comp=Z,4.0nm,0.6s,mb4.5,baz=62,slow=5.9,SNR=26						
FINES				LR	LR	04 11 07.5	
	comp=Z,4µm,21.3s,MS5.8,baz=265,slow=37						
CSS	**Prodhromos**	**82.75**	**304**	*e*P	**P**	**03 32 30.7**	**0.0**
	comp=Z,214nm,1.6s,mb5.9						
AKASG	**Malin Array Be**	**82.80**	**320**	P	**P**	**03 32 29.5**	**-1.2**
	comp=Z,16nm,1.0s,mb5.0,baz=67,slow=5.1,SNR=18						
INK	**Inuvik**	**83.16**	**21**	P	**P**	**03 32 31.9**	**-0.3**
	comp=Z,25nm,1.2s,mb5.1,baz=273,slow=6.5,SNR=20						
IDID	**Didziasalis**	**83.33**	**325**	*e*P	**P**	**03 32 32.5**	**-0.9**
IDID				AMPb	AMB	03 32 45.3	
	comp=Z,21nm,2.0s,mb4.8						
IZAR	**Zarasai**	**83.51**	**326**	*e*P	**P**	**03 32 33.3**	**-0.9**
IZAR				AMPb	AMB	03 32 43.9	
	comp=Z,19nm,2.1s,mb4.9						
HENT	**Hendek**	**83.55**	**310**	*i* P	**P**	**03 32 33.7**	**-1.1**
IIGN	**Ignalina**	**83.61**	**325**	*e*P	**P**	**03 32 33.3**	**-1.4**
IIGN				AMPb	AMB	03 32 40.9	
	comp=Z,14nm,1.4s,mb4.9						
ISAL	**Salakas**	**83.61**	**325**	*e*P	**P**	**03 32 34.9**	**+0.1**
KIS	**Kishinev**	**83.80**	**317**	*e*P	**P**	**03 32 38.0**	**+2.1**
KIS				*e*		03 35 50.0	
KIS				*e*		03 42 48.0	
KIS				*e*S	S	03 42 55.0	-1.7
KIS				MLR	MLR		
	comp=E,3µm,19.0s						
KIS				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.9						
KIS				MLR	MLR		
	comp=Z,3µm,20.0s						
ESKT	**Eskisehir**	**83.84**	**309**	*i* P	**P**	**03 32 35.5**	**-0.9**
ISP	**Isparta**	**84.44**	**307**	*e*P	**P**	**03 32 38.9**	**-0.4**
ISP	**Isparta**	**84.44**	**307**	*e*P	**P**	**03 32 39.8**	**+0.4**
	comp=Z,429nm,1.8s,mb6.3						
ISP	**Isparta**	**84.44**	**307**	⇑P	**P**	**03 32 38.9**	**-0.4**
IAS	**Iasi**	**84.60**	**317**	P	**P**	**03 32 40.5**	**+0.6**
CFR	**Carcaliu**	**84.65**	**315**	P	**P**	**03 32 41.3**	**+1.1**
CFR	**Carcaliu**	**84.65**	**315**	⇓P	**P**	**03 32 41.1**	**+0.9**
ULDT	**Uludag**	**85.01**	**310**	*i* P	**P**	**03 32 42.6**	**+0.4**
VRI	**Vrincioaia**	**85.46**	**316**	P	**P**	**03 32 45.5**	**+1.3**
VRI	**Vrincioaia**	**85.46**	**316**	⇓P	**P**	**03 32 44.5**	**+0.3**
DNZL	**Cakiroluk**	**85.60**	**307**	*i* P	**P**	**03 32 45.5**	**+0.3**
SIT	**Sitka**	**85.61**	**32**	PFAKE		03 33 00.0	+15
SIT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SUW	**Suwalki**	**85.65**	**324**	⇑*e*P	**P**	**03 32 44.8**	**-0.2**
SUW				pmax	pmax		
	comp=Z,230nm,1.2s,mb6.3						
SUW	**Suwalki**	**85.65**	**324**	*e*P	**P**	**03 32 45.1**	**+0.1**
SUW				*e*PcP	PcP	03 32 48.6	+0.2
SUW	**Suwalki**	**85.65**	**324**	*e*P	**P**	**03 32 45.1**	**+0.2**
SUW				*e*PcP	PcP	03 32 48.6	+0.2
SUW				MLR	MLR	04 13 39.0	
	comp=Z,5µm,19.0s,MS5.9						
MANT	**Manisa**	**85.80**	**308**	*i* P	**P**	**03 32 45.8**	**-0.4**
BTOK	**Tokmak**	**85.92**	**310**	*i* P	**P**	**03 32 46.8**	**+0.1**
BURAR	**Bucovina Array**	**86.05**	**318**	P	**P**	**03 32 48.5**	**+1.4**
BURAR	**Bucovina Array**	**86.05**	**318**	⇓P	**P**	**03 32 47.8**	**+0.7**
MLR	**Muntele Rosu**	**86.08**	**316**	P	**P**	**03 32 48.0**	**+0.6**
	comp=Z,37nm,1.0s,mb5.6,baz=103,slow=2.7,SNR=23						
MLR				PP	PP	03 36 12.2	+2.8
	comp=Z,11nm,1.2s,baz=76,slow=14,SNR=6.4						
MLR				LR	LR	04 15 44.6	
	comp=Z,6µm,21.2s,MS6.0,baz=62,slow=39						
MLR	**Muntele Rosu**	**86.08**	**316**	P	**P**	**03 32 48.2**	**+0.8**
MLR	**Muntele Rosu**	**86.08**	**316**	⇑P	**P**	**03 32 47.4**	**0.0**
LVV	**L’vov**	**86.25**	**320**	*e*P	**P**	**03 32 46.5**	**-1.6**
KMBO	**Kilima Mbogo**	**86.29**	**268**	*i* P	**P**	**03 32 51.1**	**+2.0**
KMBO				pmax	pmax		
	comp=Z,27nm,1.2s						
KMBO	**Kilima Mbogo**	**86.29**	**268**	P	**P**	**03 32 50.4**	**+1.2**
	comp=Z,27nm,1.2s,mb5.4,baz=49,slow=5.6,SNR=22						
KMBO				LR	LR	04 10 02.6	
	comp=Z,2µm,18.4s,MS5.5,baz=67,slow=35						
SART	**Tekirdag**	**86.34**	**311**	*i* P	**P**	**03 32 42.5**	**-6.3**
SNX	**Sinaia**	**86.41**	**316**	P	**P**	**03 32 53.4**	**+4.4**
KDAG	**Bornova**	**86.81**	**308**	*i* P	**P**	**03 32 50.1**	**-1.0**
KWP	**Kalwaria**	**87.13**	**320**	*e*P	**P**	**03 32 53.3**	**+0.9**
KWP				MLR	MLR		
	comp=Z,3µm,19.7s,MS5.7						
KWP	**Kalwaria**	**87.13**	**320**	*e*P	**P**	**03 32 53.3**	**+0.9**
KWP				*e*PcP	PcP	03 32 55.0	+0.1
KWP				*e*pP	pP	03 32 57.8	-0.3
KWP	**Kalwaria**	**87.13**	**320**	*e*P	**P**	**03 32 53.3**	**+1.0**
KWP				*e*PcP	PcP	03 32 55.0	+0.1
KWP				*e*pP	pP	03 32 57.8	-0.3
KWP				MLR	MLR	04 15 12.5	
	comp=Z,3µm,19.7s,MS5.7						
WAR	**Warsaw**	**87.40**	**323**	*e*P	**P**	**03 32 54.1**	**+0.5**
WAR				*e*pP	pP	03 32 59.3	0.0
WAR				MLR	MLR	04 14 26.8	
	comp=Z,7µm,19.2s,MS6.1						
KOLS	**Kolonicke sedl**	**87.60**	**320**	*e*P	**P**	**03 32 55.8**	**+1.2**
KOLS				*e*pP	pP	03 33 01.5	+1.1
DAG	**Danmarks Havn**	**87.97**	**352**	*e*P	**P**	**03 33 06.0**	**+10**
DAG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
DAG	**Danmarks Havn**	**87.97**	**352**	*e*P	**P**	**03 33 06.0**	**+10**
	comp=Z,8.0nm,1.0s,mb4.9						
DAG	**Danmarks Havn**	**87.97**	**352**	*i* P	**P**	**03 33 06.0**	**+10**
	comp=Z,8.0nm,1.0s,mb4.9						
CRVS	**Cervenica-Dubn**	**88.12**	**320**	*e*P	**P**	**03 32 58.5**	**+1.4**
CRVS				*e*pP	pP	03 33 05.7	+2.8
HFS	**Hagfors**	**88.53**	**332**	P	**P**	**03 32 58.7**	**-0.1**
	comp=Z,7.0nm,0.8s,mb5.1,baz=90,slow=3.0,SNR=12						
NIE	**Niedzica**	**88.68**	**320**	*e*P	**P**	**03 32 59.6**	**-0.2**
VTS	**Vitosha**	**88.74**	**313**	P	**P**	**03 33 02.7**	**+2.4**
OJC	**Ojcow**	**88.75**	**321**	*e*P	**P**	**03 33 00.8**	**+0.7**
KECS	**Kecovo**	**88.86**	**320**	*e*P	**P**	**03 33 03.3**	**+2.6**
KECS	**Kecovo**	**88.86**	**320**	*e*	**P**	**03 33 03.3**	**+2.6**
GKP	**Gorka Klasztor**	**89.25**	**325**	*e*P	**P**	**03 33 03.0**	**+0.6**
GKP				MLR	MLR		
	comp=Z,7µm,18.4s,MS6.1						
GKP	**Gorka Klasztor**	**89.25**	**325**	*e*P	**P**	**03 33 03.0**	**+0.6**
GKP				MLR	MLR	04 15 37.0	
	comp=Z,7µm,18.4s,MS6.1						
BOLS	**Boljevac**	**89.27**	**315**	⇓*i*P	**P**	**03 33 05.5**	**+2.8**
NB2	**NORSAR Subarra**	**89.27**	**333**	P	**P**	**03 33 01.7**	**-0.7**
	comp=Z,7.0nm,0.9s,mb5.0,baz=68,slow=4.5						
NB2	**NORSAR Subarra**	**89.27**	**333**	P	**P**	**03 33 01.7**	**-0.7**
NB2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
NB2	**NORSAR Subarra**	**89.27**	**333**	P	**P**	**03 33 01.7**	**-0.7**
	baz=68,slow=4.4						
NOA	**NORSAR Array B**	**89.27**	**333**	P	**P**	**03 33 01.4**	**-1.0**
	comp=Z,3.3nm,0.8s,mb4.7,baz=68,slow=4.7,SNR=11						
NOA				PP	PP	03 36 30.8	-4.7
	comp=Z,2.8nm,1.0s,baz=71,slow=7.6,SNR=4.0						
NOA				LR	LR	04 15 59.2	
	comp=Z,4µm,19.7s,MS5.8,baz=60,slow=38						
PSZ	**Piszkesteto**	**89.41**	**319**	*e*P	**P**	**03 33 03.3**	**0.0**
PSZ						03 33 11.9	
PSZ				pmax	pmax		
	comp=Z,153nm,2.0s,mb6.0						
PSZ	**Piszkesteto**	**89.41**	**319**	*e*P	**P**	**03 33 03.3**	**0.0**
	comp=Z,153nm,2.0s,mb6.0						
PSZ				P		03 33 11.9	
IDI	**Anoyia**	**89.42**	**306**	P	**P**	**03 33 05.3**	**+1.6**
	comp=Z,5.9nm,0.8s,mb4.9,baz=7.1,slow=18,SNR=2.9						
NAO01	**NORSAR Array S**	**89.50**	**333**	PFAKE		03 33 10.0	+6.6
NAO01				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
OKC	**Ostrava-Krasne**	**89.88**	**321**	*e*P	**P**	**03 33 06.2**	**+0.7**
OKC				AMS	AMS	04 13 20.0	
	comp=Z,3µm,19.0s						
VYHS	**Vyhne**	**89.90**	**320**	*e*P	**P**	**03 33 06.0**	**+0.4**
VYHS				*e*pP	pP	03 33 11.0	-0.3
VYHS				*e*		03 33 42.7	
GRUS	**Gruza**	**90.11**	**315**	*e*	**P**	**03 33 20.9**	**+14**
SKO	**Skopje**	**90.17**	**313**	*e*P	**P**	**03 33 06.6**	**-0.4**
MORC	**Moravsky Berou**	**90.27**	**321**	P	**P**	**03 33 07.3**	**0.0**
MORC					pP	03 33 13.1	+0.1
MORC				pmax	pmax		
	comp=Z,64nm,1.8s,mb5.7						
MORC	**Moravsky Berou**	**90.27**	**321**	P	**P**	**03 33 07.3**	**0.0**
	comp=Z,64nm,1.8s,mb5.7						
MORC				P	pP	03 33 13.1	0.0
MORC	**Moravsky Berou**	**90.27**	**321**	⇑P	**P**	**03 33 07.4**	**+0.1**
KSP	**Ksiaz**	**90.65**	**323**	⇑*e*P	**P**	**03 33 09.5**	**+0.5**
KSP				*e*pP	pP	03 33 21.7	+6.9
KSP	**Ksiaz**	**90.65**	**323**	*e*P	**P**	**03 33 08.6**	**-0.4**
KSP				*e*pP	pP	03 33 13.2	-1.6
KSP				MLR	MLR	04 16 32.7	
	comp=Z,9µm,18.8s,MS6.2						
PKSM	**Moragy**	**90.77**	**318**	⇓P	**P**	**03 33 09.6**	**-0.1**
DPC	**Dobruska-Polom**	**90.81**	**322**	*e*P	**P**	**03 33 11.2**	**+1.5**
DPC				AMS	AMS	04 16 30.0	
	comp=Z,7µm,18.7s						
UPC	**Upice**	**90.94**	**322**	*e*P	**P**	**03 33 11.7**	**+1.4**
VRAC	**Vranov**	**91.01**	**321**	P	**P**	**03 33 11.5**	**+0.8**
	comp=Z,6.1nm,0.8s,mb5.0,baz=67,slow=7.5,SNR=7.0						
VRAC	**Vranov**	**91.01**	**321**	P	**P**	**03 33 12.3**	**+1.6**
ZST	**Bratislava**	**91.09**	**320**	*e*P	**P**	**03 33 07.4**	**-3.7**
PVCC	**Panska Ves**	**91.78**	**323**	*e*P	**P**	**03 33 19.0**	**+4.8**
PVCC				*e*PP	PP	03 37 00.1	+4.3
PVCC				AMS	AMS	04 17 10.0	
	comp=Z,4µm,17.6s						
PRU	**Pruhonice**	**92.00**	**322**	*e*P	**P**	**03 33 16.1**	**+0.9**
PRU				*e*PP	PP	03 37 01.2	+3.6
PRU				AMS	AMS	04 17 20.0	
	comp=Z,6µm,18.6s						
BRG	**Berggiesshubel**	**92.02**	**323**	*e*P	**P**	**03 33 17.7**	**+2.4**
BRG				pmax	pmax		
	comp=Z,35nm,1.5s,mb5.5						
BRG				MLR	MLR		
	comp=N,2µm,19.6s,MS5.9						
BRG				MLR	MLR		
	comp=E,4µm,19.6s,MS5.9						
BRG				MLR	MLR		
	comp=Z,8µm,19.6s,MS6.2						
BRG	**Berggiesshubel**	**92.02**	**323**	*e*P	**P**	**03 33 17.7**	**+2.4**
	comp=Z,35nm,1.4s,mb5.5						
BRG				*e*		03 33 37.7	
CLL	**Collm**	**92.39**	**324**	*i* P	**P**	**03 33 18.3**	**+1.3**
CLL				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.2						
CLL				MLR	MLR		
	comp=Z,3µm,19.7s,MS5.8						
CLL	**Collm**	**92.39**	**324**	*i* P	**P**	**03 33 18.3**	**+1.3**
	comp=Z,16nm,1.2s,mb5.2						
CLL				*i*		03 33 38.4	
CLL	**Collm**	**92.39**	**324**	P	**P**	**03 33 18.3**	**+1.3**
	comp=Z,logA/T=1.1,mb5.2						
CLL				*i*		03 33 38.4	
CLL				*i* PP	PP	03 36 58.8	-1.8
ARSA	**Arzberg**	**92.42**	**319**	⇑*i*P	**P**	**03 33 17.5**	**+0.3**
	comp=Z,14nm,1.2s,mb5.2						
MBAR	**Mbarara**	**92.53**	**270**	PFAKE		03 33 30.0	+11
MBAR				LR	LR		
	comp=Z,501nm,19.0s,MS5.0						
YKA	**Yellowknife Ar**	**92.77**	**23**	P	**P**	**03 33 19.1**	**+0.6**
	comp=Z,2.3nm,0.8s,mb4.7,baz=306,slow=4.4,SNR=35						
YKA				PKKPbc		03 50 27.9	
	comp=Z,0.5nm,0.8s,baz=125,slow=2.5,SNR=9.4						
KHC	**Kasperske Hory**	**92.91**	**322**	*e*P	**P**	**03 33 20.3**	**+0.9**
KHC				*e*	pP	03 33 27.0	+1.8
KHC				*e*		03 37 03.7	
KHC				MLR	MLR		
	comp=Z,4µm,18.7s,MS5.9						
KHC	**Kasperske Hory**	**92.91**	**322**	*e*P	**P**	**03 33 20.3**	**+0.9**
KHC				pP	pP	03 33 27.0	+1.8
KHC				*e*PP	PP	03 37 03.7	-1.2
KHC				AMS	AMS	04 17 40.0	
	comp=Z,4µm,18.7s						
GERES	**GERESS Array B**	**92.95**	**321**	P	**P**	**03 33 20.0**	**+0.4**
	comp=Z,7.0nm,1.1s,mb5.0,baz=27,slow=3.0,SNR=10.0						
MOA	**Molln**	**92.99**	**320**	⇑*i*P	**P**	**03 33 20.9**	**+1.1**
	comp=Z,34nm,1.2s,mb5.7						
NKC	**Novy Kostel**	**93.15**	**323**	*e*P	**P**	**03 33 23.4**	**+2.9**
NKC				AMS	AMS	04 18 10.0	
	comp=Z,5µm,17.4s						
BOJS	**Bojanci**	**93.24**	**318**	*e*P	**P**	**03 33 25.4**	**+4.4**
MOX	**Moxa**	**93.46**	**324**	*e*P	**P**	**03 33 25.7**	**+3.8**
MOX				pmax	pmax		
	comp=Z,58nm,2.1s,mb5.6						
MOX	**Moxa**	**93.46**	**324**	*e*P	**P**	**03 33 25.7**	**+3.8**
	comp=Z,58nm,2.1s,mb5.6						
MOX	**Moxa**	**93.46**	**324**	*i* P	**P**	**03 33 25.7**	**+3.8**
	comp=Z,logA/T=1.4,mb5.6						
MOX				pP	pP	03 33 48.0	+20
MOX				L		04 19 18.0	
SCO	**Scoresbysund**	**93.66**	**349**	*e*P	**P**	**03 33 21.9**	**-0.5**
SCO	**Scoresbysund**	**93.66**	**349**	*i* P	**P**	**03 33 21.9**	**-0.5**
JAVS	**Javornik**	**93.86**	**319**	*e*P	**P**	**03 33 24.5**	**+0.7**
ROBS	**Robic**	**94.08**	**319**	*e*P	**P**	**03 33 26.8**	**+1.9**
GRA1	**Grafenberg Arr**	**94.09**	**323**	*e*P	**P**	**03 33 25.7**	**+0.8**
	comp=Z,100nm,2.0s,mb5.9						
GRA1				*e*pP	pP	03 33 47.2	+17
GRA1				*e*PP	PP	03 37 16.6	+2.4
GRF	**Grafenberg Arr**	**94.09**	**323**	*e*P	**P**	**03 33 25.7**	**+0.8**
GRF				*e*		03 37 16.6	
GRF				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.9						
GRF	**Grafenberg Arr**	**94.09**	**323**	*e*P	**P**	**03 33 25.7**	**+0.8**
GRF				*e*		03 37 16.6	
GRF				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.9						
GRF	**Grafenberg Arr**	**94.09**	**323**	*e*P	**P**	**03 33 25.7**	**+0.8**
	comp=Z,100nm,2.0s,mb5.9						
GRF				*e*pP	pP	03 33 47.2	+17
GRF				*e*PP	PP	03 37 16.6	+2.4
WTTA	**Wattenberg**	**94.85**	**321**	⇑*i*P	**P**	**03 33 28.8**	**+0.4**
	comp=Z,39nm,1.4s,mb5.7						
WTTA	**Wattenberg**	**94.85**	**321**	⇑*i*P	**P**	**03 33 28.8**	**+0.4**
WTTA				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.6						
WATA	**Walderalm**	**94.86**	**321**	⇓*i*P	**P**	**03 33 29.1**	**+0.6**
	comp=Z,38nm,1.4s,mb5.6						
WATA	**Walderalm**	**94.86**	**321**	⇓*i*P	**P**	**03 33 29.1**	**+0.6**
WATA				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.6						
SQTA	**Sankt Quirin**	**95.14**	**321**	⇓*i*P	**P**	**03 33 30.4**	**+0.7**
	comp=Z,52nm,1.5s,mb5.7						
SQTA	**Sankt Quirin**	**95.14**	**321**	⇓*i*P	**P**	**03 33 30.4**	**+0.7**
SQTA				pmax	pmax		
	comp=Z,52nm,1.5s,mb5.7						
MOTA	**Moosalm**	**95.15**	**321**	⇑*i*P	**P**	**03 33 30.0**	**+0.2**
	comp=Z,19nm,1.4s,mb5.3						
OCWA	**Octopus Mounta**	**95.31**	**39**	PFAKE		03 33 40.0	+10
OCWA				LR	LR		
	comp=Z,4µm,21.0s,MS5.9						
DAVA	**Damuels**	**95.93**	**321**	⇑*i*P	**P**	**03 33 34.7**	**+1.3**
	comp=Z,17nm,1.5s,mb5.3						
DAVOX	**Davos**	**96.15**	**321**	P	**P**	**03 33 34.0**	**-0.4**
	comp=Z,13nm,1.1s,mb5.3,baz=100,slow=7.2,SNR=8.5						
CDF	**Champ du Feu**	**96.99**	**323**	*e*P	**P**	**03 33 38.4**	**+0.3**
	comp=Z,83nm,1.6s,mb5.6						
CDF	**Champ du Feu**	**96.99**	**323**	*e*P	**P**	**03 33 38.4**	**+0.3**
CDF				pmax	pmax		
	comp=Z,41nm,1.6s,mb5.6						

COR	**Corvallis**	**97.21**	**41**	PFAKE		03 33 50.0	+11
COR				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
HINF	**Hinteralfeld**	**97.52**	**322**	*e*P	**P**	**03 33 40.5**	**0.0**
HAU	**Haudompre**	**97.73**	**323**	*e*P	**P**	**03 33 41.5**	**+0.1**
HAU				*e*R			
	comp=Z,6µm,18.8s						
BAIF	**Baives**	**97.94**	**325**	*e*P	**P**	**03 33 42.5**	**+0.2**
BORG	**Borgarnes**	**98.28**	**345**	PFAKE		03 34 00.0	+16
BORG				LR	LR		
	comp=Z,635nm,22.0s,MS5.1						
HUMO	**Hull Mountain**	**98.29**	**43**	PFAKE		03 34 00.0	+16
HUMO				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
EDM	**Edmonton**	**98.59**	**30**	*e*P	**P**	**03 33 44.9**	**-0.3**
LPG	**La Plagne**	**98.67**	**320**	*e*P	**P**	**03 33 45.7**	**0.0**
	comp=Z,27nm,1.2s,mb5.4						
LPG	**La Plagne**	**98.67**	**320**	*e*P	**P**	**03 33 45.7**	**0.0**
LPG				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.4						
LPL	**La Plagne**	**98.67**	**320**	*e*P	**P**	**03 33 45.5**	**-0.2**
	comp=Z,43nm,1.3s,mb5.5						
LPL	**La Plagne**	**98.67**	**320**	*e*P	**P**	**03 33 45.5**	**-0.2**
LPL				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.5						
ESK	**Eskdalemuir**	**98.75**	**332**	PFAKE		03 34 00.0	+14
ESK				LR	LR		
	comp=Z,800nm,20.0s,MS5.2						
SBF	**Sospel**	**98.99**	**319**	*e*P	**P**	**03 33 47.2**	**0.0**
	comp=Z,55nm,1.1s,mb5.7						
SBF	**Sospel**	**98.99**	**319**	*e*P	**P**	**03 33 47.2**	**0.0**
SBF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.7						
MBDF	**Montbardon**	**99.02**	**320**	*e*P	**P**	**03 33 47.1**	**-0.2**
	comp=Z,82nm,1.8s,mb5.7						
MBDF	**Montbardon**	**99.02**	**320**	*e*P	**P**	**03 33 47.1**	**-0.2**
MBDF				pmax	pmax		
	comp=Z,41nm,1.8s,mb5.7						
NEW	**Newport**	**99.25**	**36**	PFAKE		03 34 00.0	+12
NEW				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
WDC	**Whiskeytown Da**	**99.45**	**45**	PFAKE		03 34 00.0	+11
WDC				LR	LR		
	comp=Z,3µm,22.0s,MS5.7						
SYO	**Syowa Base**	**99.45**	**201**	⇑Pdiff	**P**	**03 33 52.7**	**+3.9**
ORIF	**Oris-en-Rattie**	**99.48**	**320**	*e*P	**P**	**03 33 50.5**	**+1.0**
	comp=Z,48nm,1.3s,mb5.6						
ORIF				*e*R			
	comp=Z,6µm,19.2s						
HOPS	**Hopland**	**99.75**	**46**	PFAKE		03 34 00.0	+9.1
HOPS				LR	LR		
	comp=Z,4µm,21.0s,MS5.9						
SSF	**Saint Saulge**	**99.87**	**323**	*e*P	**P**	**03 33 51.2**	**0.0**
VIVF	**Saint-Julien-l**	**100.27**	**321**	*e*P	P	03 33 52.6	-0.5
	comp=Z,46nm,1.4s						
VIVF	**Saint-Julien-l**	**100.27**	**321**	*e*P	P	03 33 52.6	-0.5
VIVF				pmax	pmax		
	comp=Z,23nm,1.4s						
MOD	**Modoc**	**100.37**	**43**	PFAKE		03 34 10.0	+16
MOD				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
BMO	**Blue Mountains**	**100.87**	**39**	PFAKE		03 34 10.0	+14
BMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
LDF	**La Druitiere**	**101.12**	**326**	*e*P	P	03 33 56.9	+0.1
LASF	**Ste Croix**	**101.16**	**320**	*e*P	P	03 33 56.7	-0.4
	comp=Z,114nm,1.5s						
WVOR	**Wild Horse Val**	**101.21**	**42**	PFAKE		03 34 10.0	+13
WVOR				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
FLN	**La Foliniere**	**101.22**	**326**	*e*P	P	03 33 56.9	-0.3
FLN				*e*R			
	comp=Z,5µm,22.8s						
MSO	**Missoula**	**101.84**	**36**	PFAKE		03 34 10.0	+10
MSO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
SAO	**San Andreas Ge**	**101.87**	**48**	PFAKE		03 34 10.0	+10
SAO				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
LBTB	**Lobatse**	**102.05**	**247**	PFAKE		03 34 10.0	+8.4
LBTB				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
CMB	**Columbia Colle**	**102.07**	**46**	PFAKE		03 34 10.0	+8.6
CMB				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
QSPA	**South Pole Qui**	**102.53**	**180**	PFAKE		03 34 10.0	+7.5
QSPA				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
FFC	**Flin Flon**	**102.80**	**25**	PFAKE		03 34 20.0	+16
FFC				LR	LR		
	comp=Z,480nm,19.0s,MS5.0						
BOSA	**Boshof**	**102.85**	**243**	PFAKE		03 34 20.0	+15
BOSA				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
BMN	**Battle Mountai**	**103.12**	**43**	PFAKE		03 34 20.0	+14
BMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
HLID	**Hailey**	**103.32**	**39**	PFAKE		03 34 20.0	+13
HLID				LR	LR		
	comp=Z,3µm,21.0s,MS5.7						
NVAR	**Mina Array Bea**	**103.34**	**45**	Pdiff	Pdif	03 34 08.6	+1.6
	comp=Z,0.3nm,0.3s,baz=229,slow=8.3,SNR=3.9						
NVAR				PKKPbc		03 50 02.6	
	comp=Z,0.5nm,0.6s,baz=124,slow=5.4,SNR=3.9						
MNV	**Mina**	**103.45**	**45**	PFAKE		03 34 20.0	+13
MNV				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
BOZ	**Bozeman (W)**	**103.83**	**36**	PFAKE		03 34 20.0	+11
BOZ				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
TPH	**Tonopah**	**104.26**	**45**	PFAKE		03 34 20.0	+9.0
TPH				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
ELK	**Elko**	**104.26**	**42**	PFAKE		03 34 20.0	+9.0
ELK				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
DAC	**Darwin (Calif)**	**104.86**	**47**	PFAKE		03 34 30.0	+16
DAC				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
LKWY	**Lake**	**105.16**	**37**	PFAKE		03 38 40.0	
LKWY				LR	LR		
	comp=Z,4µm,21.0s,MS5.9						
AHID	**Auburn Hatcher**	**105.78**	**38**	PFAKE		03 38 40.0	
AHID				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
DGMT	**Dagmar**	**106.08**	**31**	PFAKE		03 38 40.0	
DGMT				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
DUG	**Dugway**	**106.13**	**41**	PFAKE		03 38 40.0	
DUG				LR	LR		
	comp=Z,32µm,20.0s						
HWUT	**Hardware Ranch**	**106.14**	**40**	PFAKE		03 38 40.0	
HWUT				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
LAO	**LASA Array**	**106.19**	**33**	PFAKE		03 38 40.0	
LAO				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
BW06	**Boulder Array**	**106.71**	**38**	PFAKE		03 38 40.0	
BW06				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
PDAR	**Pinedale Array**	**106.71**	**38**	PP	PP	03 38 47.1	-3.2
	comp=Z,0.4nm,0.8s,baz=315,slow=2.1,SNR=3.7						
PDAR				PKKPab		03 50 06.7	
	comp=Z,2.3nm,1.2s,baz=146,slow=5.3,SNR=8.6						
PFO	**Pinyon Flat Ob**	**106.94**	**49**	PFAKE		03 38 40.0	
PFO				LR	LR		
	comp=Z,681nm,20.0s,MS5.2						
SUR	**Sutherland**	**107.06**	**240**	PFAKE		03 38 40.0	
SUR				LR	LR		
	comp=Z,554nm,20.0s,MS5.1						
MVU	**Marysvale**	**107.43**	**43**	PFAKE		03 38 50.0	
MVU				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
ESDC	**Sonseca Array**	**108.44**	**320**	PP	PP	03 39 01.0	-2.3
	comp=Z,1.6nm,0.9s,baz=63,slow=6.6,SNR=3.6						
ESLA	**Sonseca Array**	**108.44**	**320**	PFAKE		03 38 50.0	
ESLA				LR	LR		
	comp=Z,10µm,19.0s,MS6.4						
ULM	**Lac du Bonnet**	**108.62**	**25**	PFAKE		03 38 50.0	
ULM				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
WUAZ	**Wupatki**	**109.60**	**45**	PFAKE		03 38 50.0	
WUAZ				LR	LR		
	comp=Z,39µm,19.0s						
PTCN	**Pitcairn Islan**	**110.26**	**112**	PFAKE		03 38 50.0	+8.5
PTCN				LR	LR		
	comp=Z,7µm,19.0s,MS6.2						
ISCO	**Idaho Springs**	**110.86**	**38**	PFAKE		03 38 50.0	+7.6
ISCO				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
TUC	**Tucson**	**111.72**	**47**	PFAKE		03 38 50.0	+5.9
TUC				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
SDCO	**Great Sand Dun**	**112.19**	**40**	PFAKE		03 38 50.0	+5.1
SDCO				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
EYMN	**Ely**	**112.22**	**24**	PFAKE		03 38 50.0	+5.3
EYMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
SCHQ	**Schefferville**	**112.22**	**6**	PFAKE		03 38 50.0	+5.5
SCHQ				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
VNA2	**Neumayer--Watz**	**114.50**	**196**	*e*	PKPdf	03 38 52.4	+3.7
VNA2	**Neumayer--Watz**	**114.50**	**196**	*e*	PKPdf	03 38 54.4	+5.7
VNA3	**Neumayer Olymp**	**114.90**	**195**	*e*	PKPdf	03 38 51.9	+2.4
VNA3	**Neumayer Olymp**	**114.90**	**195**	*e*	PKPdf	03 38 54.1	+4.6
CBKS	**Cedar Bluff**	**114.97**	**36**	PFAKE		03 39 00.0	+10
CBKS				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
MNTX	**Cornudas Mount**	**115.87**	**45**	PFAKE		03 39 00.0	+7.6
MNTX				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
AMTX	**Amarillo**	**116.39**	**40**	PFAKE		03 39 00.0	+6.7
AMTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
JFWS	**Jewell Farm**	**116.77**	**27**	PFAKE		03 39 00.0	+6.2
JFWS				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
LTX	**Lajitas**	**118.45**	**46**	PFAKE		03 39 10.0	+13
LTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
TXAR	**Lajitas Array**	**118.45**	**46**	PKP	PKPdf	03 38 55.0	-2.3
	comp=Z,0.6nm,0.9s,baz=193,slow=0.8,SNR=6.1						
TXAR				PKKPbc		03 49 13.7	
	comp=Z,1.7nm,1.1s,baz=22,slow=4.9,SNR=4.7						
AAM	**Ann Arbor**	**119.98**	**23**	PFAKE		03 39 10.0	+10
AAM				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
PQI	**Presque Isle**	**120.08**	**9**	PFAKE		03 39 10.0	+10
PQI				LR	LR		
	comp=Z,7µm,21.0s,MS6.3						
CCM	**Cathedral Cave**	**120.10**	**31**	PFAKE		03 39 10.0	+10
CCM				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
JCT	**Junction City**	**120.41**	**43**	PFAKE		03 39 10.0	+8.9
JCT				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
ERPA	**Erie**	**121.45**	**20**	PFAKE		03 39 10.0	+7.1
ERPA				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
MIAR	**Mount Ida**	**121.48**	**35**	*e*PKIKP	PKPdf	03 39 03.0	-0.2
MIAR				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.6						
WVL	**Waterville**	**121.85**	**11**	PFAKE		03 39 10.0	+6.4
WVL				LR	LR		
	comp=Z,8µm,20.0s,MS6.4						
ACSO	**Alum Creek Sta**	**122.02**	**23**	PFAKE		03 39 10.0	+6.0
ACSO				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
EMMW	**East Machias**	**122.08**	**9**	PFAKE		03 39 10.0	+6.0
EMMW				LR	LR		
	comp=Z,7µm,20.0s,MS6.3						
WCI	**Wyandotte Cave**	**122.32**	**27**	PFAKE		03 39 10.0	+5.4
WCI				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
BINY	**Binghamton**	**122.62**	**17**	PFAKE		03 39 10.0	+4.9
BINY				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
NATX	**Nacogdoches**	**122.83**	**38**	PFAKE		03 39 10.0	+4.3
NATX				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
HKT	**Hockley**	**123.35**	**41**	PFAKE		03 39 20.0	+13
HKT				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
HRV	**Harvard--Oak R**	**123.44**	**13**	PFAKE		03 39 20.0	+13
HRV				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
SSPA	**Standing Stone**	**123.47**	**19**	PFAKE		03 39 20.0	+13
SSPA				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
WES	**Weston**	**123.61**	**13**	PFAKE		03 39 20.0	+13
WES				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
MCWV	**Mont Chateau**	**123.69**	**21**	PFAKE		03 39 20.0	+13
MCWV				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
OXF	**Oxford**	**123.78**	**32**	PFAKE		03 39 20.0	+12
OXF				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
DBIC	**Dimbokro**	**124.92**	**287**	PKIKP	PKPdf	03 39 07.3	-3.1
DBIC				MLR	MLR		
	comp=Z,1µm,19.0s						
DBIC	**Dimbokro**	**124.92**	**287**	PKP	PKPdf	03 39 07.3	-3.1
	comp=Z,7.6nm,1.1s,baz=337,slow=2.3,SNR=7.6						
CBN	**Corbin**	**125.84**	**20**	PFAKE		03 39 20.0	+8.5
CBN				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
LRAL	**Lakeview Retre**	**126.18**	**32**	PFAKE		03 39 20.0	+7.7
LRAL				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
GOGA	**Godfrey**	**127.59**	**28**	PFAKE		03 39 20.0	+5.0
GOGA				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
PMSA	**Palmer Station**	**127.73**	**176**	PFAKE		03 39 20.0	+5.6
PMSA				LR	LR		
	comp=Z,4µm,22.0s,MS6.1						
NHSC	**New Hope**	**129.30**	**25**	PFAKE		03 39 30.0	+12
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
DWPF	**Disney**	**132.96**	**30**	PFAKE		03 39 30.0	+4.6
DWPF				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
BBSR	**BB Station**	**134.58**	**9**	PFAKE		03 39 40.0	+12
BBSR				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
JTS	**JuntasAbangare**	**143.92**	**52**	PFAKE		03 39 50.0	+9.3
JTS				LR	LR		
	comp=Z,426nm,20.0s,MS5.2						
PAYG	**Puerto Ayora**	**144.73**	**73**	PFAKE		03 40 00.0	+17
PAYG				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
PLCA	**Paso Flores**	**149.56**	**159**	PKPbc	PKPdf	03 39 54.9	+0.7
	comp=Z,7.2nm,0.8s,baz=206,slow=2.5,SNR=7.3						
PLCA	**Paso Flores**	**149.56**	**159**	*e*PKPbc	PKPdf	03 39 56.8	+2.6
PLCA				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
TRQA	**Tornquist**	**154.31**	**171**	PFAKE		03 40 10.0	+8.8
TRQA				LR	LR		
	comp=Z,2µm,19.0s,MS6.0						
OTAV	**Otavalo**	**154.99**	**61**	PFAKE		03 40 10.0	+7.2
OTAV				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
ROSC	**El Rosal**	**155.37**	**46**	PKP	PKPdf	03 40 00.5	-2.7
	comp=Z,2.1nm,0.4s,baz=105,slow=23,SNR=4.6						
RCBR	**Riachuelo**	**158.29**	**286**	PFAKE		03 40 20.0	+13
RCBR				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
CFAA	**Coronel Fontan**	**158.42**	**153**	PKP	PKPdf	03 40 04.5	-2.3
	comp=Z,0.1nm,0.3s,baz=270,slow=17,SNR=13						
NNA	**Nana**	**160.41**	**90**	PFAKE		03 40 20.0	+11
NNA				LR	LR		
	comp=Z,397nm,21.0s						
CAM4	**Nova Friburgo**	**163.37**	**233**	(P)	PKPab	03 41 01.2	-0.4
CAM4				*i*		03 41 07.2	
LVC	**Limon Verde**	**164.82**	**132**	PKP	PKPdf	03 40 13.0	-0.6
	comp=Z,1.3nm,0.5s,baz=260,slow=6.1,SNR=6.4						
LVC	**Limon Verde**	**164.82**	**132**	PKP	PKPdf	03 40 13.0	-0.6
LPAZ	**La Paz**	**168.46**	**109**	PKP	PKPdf	03 40 15.8	-0.6
	comp=Z,5.1nm,1.0s,baz=27,slow=6.5,SNR=10						
LPAZ				PKPab	PKPab	03 41 26.3	+2.4
	comp=Z,2.8nm,0.9s,baz=286,slow=7.4,SNR=2.5						
LPAZ	**La Paz**	**168.46**	**109**	PKP	PKPdf	03 40 15.8	-0.6
LPAZ				PKPab	PKPab	03 41 26.3	+2.4
LPAZ				LR	LR		
	comp=Z,1µm,21.0s						
BAO	**Brasilia Array**	**170.96**	**250**	P	PKPdf	03 40 16.2	-1.7
BAO				*e*		03 41 36.1	
BDFB	**Brasilia**	**170.98**	**250**	PKP	PKPdf	03 40 15.7	-2.3
	comp=Z,2.8nm,0.9s,baz=168,slow=2.5,SNR=4.3						
BDFB				PKPab	PKPab	03 41 37.5	+2.4
	comp=Z,4.7nm,1.0s,baz=191,slow=5.2,SNR=4.0						

IDC ***22*** *03:20:28.4±3.4, 40.72S×91.30W, mb3.9/9, mb1 4.1/10, mb1mx4.0/17, mbtmp3.9/10, ML3.5/1, Error ellipse: s-maj=87.3km s-min=26.2km az=8.0*

NEIC ***22*** *03:20:29.4±1.9, 40.80S×91.23W, h10^{km}, mb4.5/2, Error ellipse: s-maj=44.9km s-min=15.3km az=202.0*

ISC 22 03:20:28.8±1.9**, 40.7S**±0.3×**91.2W**±0.2**, h10^{km}, n18, σ0.^{s}92**/18**, mb4.1**/10**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.64**	**97**	Pn	**P**	**03 24 11.8**	**+1.0**
	0.0nm,0.3s,baz=252,slow=16,SNR=2.4						
PLCA	**Paso Flores**	**15.64**	**97**	Pn	**P**	**03 24 11.8**	**+1.0**
CFAA	**Coronel Fontan**	**20.57**	**71**	P	**P**	**03 25 09.6**	**-0.7**
	0.8nm,0.7s,baz=242,slow=10,SNR=7.3						
CFAA	**Coronel Fontan**	**20.57**	**71**	P	**P**	**03 25 09.6**	**-0.7**
TRQA	**Tornquist**	**22.68**	**93**	P	**P**	**03 25 28.7**	**-2.8**
	64nm,1.8s,mb4.8						
LVC	**Limon Verde**	**26.03**	**53**	P	**P**	**03 26 03.8**	**0.0**
	6.9nm,0.9s,mb4.2,baz=240,slow=15,SNR=4.2						
LPAZ	**La Paz**	**31.45**	**46**	P	**P**	**03 26 53.1**	**+0.5**
	0.8nm,0.5s,mb3.8,baz=197,slow=5.6,SNR=3.6						
OTAV	**Otavalo**	**42.34**	**19**	*e*P	**P**	**03 28 23.9**	**-0.9**
	7.0nm,1.2s,mb4.2						
BDFB	**Brasilia**	**44.89**	**69**	P	**P**	**03 28 46.0**	**+0.6**
	1.2nm,0.6s,mb3.9,baz=254,slow=7.4,SNR=3.0						
ROSC	**El Rosal**	**47.88**	**23**	P	**P**	**03 29 10.0**	**+0.9**
	1.8nm,0.4s,mb4.5,baz=98,slow=22,SNR=2.8						
TXAR	**Lajitas Array**	**70.61**	**348**	P	**P**	**03 31 45.0**	**-1.3**
	1.4nm,1.1s,mb3.8,baz=170,slow=5.5,SNR=6.8						
TXAR	**Lajitas Array**	**70.61**	**348**	P	**P**	**03 31 45.0**	**-1.3**
NVAR	**Mina Array Bea**	**82.55**	**339**	P	**P**	**03 32 53.2**	**+0.2**
	0.3nm,0.3s,mb3.8,baz=355,slow=34,SNR=3.6						
NVAR	**Mina Array Bea**	**82.55**	**339**	P	**P**	**03 32 53.2**	**+0.2**
ELK	**Elko**	**83.94**	**342**	P	**P**	**03 33 00.5**	**+0.5**
	0.7nm,0.8s,mb3.8,baz=141,slow=4.0,SNR=2.7						
ELK	**Elko**	**83.94**	**342**	P	**P**	**03 33 00.5**	**+0.5**
PDAR	**Pinedale Array**	**84.71**	**347**	P	**P**	**03 33 04.3**	**+0.5**
	1.6nm,0.9s,mb4.1,baz=166,slow=6.3,SNR=8.2						
PDAR	**Pinedale Array**	**84.71**	**347**	P	**P**	**03 33 04.3**	**+0.5**

CASC 22 03:22:20.6±3.2**, 11.36N**×**87.00W, h29^{km}**±13^{km}**, MD3.9, ML3.1, 4C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.91**	**26**	⇓*e*P	Pn	03 22 38.1	+0.6
COPN				*e*S	Sb	03 22 52.1	+2.6
TICN	**Ticuantepe**	**1.01**	**48**	⇑*e*P	Pn	03 22 38.8	-0.2
XAVN	**Gruta Xavier**	**1.03**	**40**	*e*P	Pn	03 22 38.7	-0.5
XAVN				*e*S	Sn	03 22 53.1	+0.4
LEON	**Leon**	**1.06**	**6**	⇑*e*P	Pn	03 22 39.7	+0.1
LEON				*e*S	Sn	03 22 54.2	+0.8
APON	**Apoyo**	**1.07**	**59**	⇓*e*P	Pn	03 22 39.3	-0.5
APON				*e*S	Sn	03 22 54.6	+0.7
MGAN	**Managua**	**1.08**	**43**	⇑*e*P	Pn	03 22 38.8	-1.2
MGAN				*e*S	Sn	03 22 53.2	-0.7
MGAN				*i*		03 22 53.7	
	comp=N,378nm,0.5s						
MIRN	**Miramar**	**1.11**	**15**	⇓*e*P	Pn	03 22 39.5	-0.9
MIRN				*e*S	Sn	03 22 58.7	+3.8
WILN	**Americas 2**	**1.13**	**45**	*e*P	Pn	03 22 39.1	-1.5
MOMJ	**Momotombo**	**1.14**	**23**	⇑*e*P	Pn	03 22 38.9	-1.9
MOMJ				*e*S	Sn	03 22 54.4	-1.1
CNGN	**Cerro Negro**	**1.17**	**15**	*e*P	Pn	03 22 41.8	+0.5
CNGN				*e*S	Sn	03 22 56.9	+0.5
CRIN	**San Cristobal**	**1.33**	**358**	*e*P	Pn	03 22 42.5	-1.0
CRIN				*e*S	Sn	03 23 00.8	+0.3
CONN	**Concepcion**	**1.37**	**81**	⇓*e*P	Pn	03 22 42.9	-1.1
CGA2	**Cerro Gallo 2**	**2.83**	**118**	*e*S	Sn	03 23 40.2	+1.8
LCR2	**La Lucha 2**	**3.36**	**118**	*e*S	Sn	03 23 51.1	-0.7
BUS	**Buena Vista**	**3.66**	**119**	*e*P	Pn	03 23 17.4	+0.6
BUS				*e*S	Sn	03 24 00.1	+0.6

TEH ***22*** *03:25:43.1, 30.64N×57.67E, h10^{km}, Mn3.6*

THR ***22*** *03:25:45.6±0.8, 30.96N×56.94E, h14^{km}±8^{km}, ML3.4*

CSEM ***22*** *03:25:48.1±0.1, 30.80N×57.00E, h25^{km}, ML3.4, Error ellipse: s-maj=5.6km s-min=3.4km az=71.0*

ISC 22 03:25:46.9±0.8**, 30.83N**±0.06×**57.0E**±0.1**, h10^{km}, n12, σ0.^{s}88**/16**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.86**	**192**	*e*PG	**Pg**	**03 26 04.5**	**+0.3**
KRBR	**Kerman**	**0.86**	**192**	*e*Pg	**Pg**	**03 26 04.4**	**+0.2**
	SNR=90						
BNDS	**Bandar-Abbas**	**3.49**	**192**	*e*PN	**Pn**	**03 26 43.0**	**+0.6**
BNDS				AML	AML	03 27 51.4	
	comp=N,70nm,0.6s						
ZHSF	**Zahedan**	**3.51**	**109**	*e*PN	**Pn**	**03 26 42.6**	**0.0**
ZHSF				AML	AML	03 27 53.5	
	comp=N,37nm,0.5s						
NASN	**Na’in**	**4.05**	**300**	*e*PN	**Pn**	**03 26 48.7**	**-1.7**
NASN				*e*SG	**Sg**	**03 27 48.6**	**-13**
NASN				AML	AML	03 27 53.7	
	comp=N,76nm,0.4s						
NASN	**Na’in**	**4.05**	**300**	*e*Pn	**Pn**	**03 26 48.7**	**-1.7**
	SNR=52						
NASN				*e*Sg	**Sg**	**03 27 48.6**	**-13**
	comp=N,76nm,0.4s,SNR=90						
GHIR	**Ghir-Karzin**	**4.30**	**235**	*e*PN	**Pn**	**03 26 53.7**	**-0.1**
IFIR	**Firoozkooh**	**5.96**	**325**	Pn	**Pn**	**03 27 17.3**	**0.0**
IFIR				Sn	**Sn**	**03 28 27.5**	**+1.0**
IDMV	**Damavand**	**6.29**	**320**	Pn	**Pn**	**03 27 22.2**	**+0.2**
DAMV	**Damavand**	**6.36**	**320**	*e*PN	**Pn**	**03 27 20.1**	**-2.9**
IAFJ	**Afjeh**	**6.67**	**320**	Pn	**Pn**	**03 27 27.5**	**+0.1**
IAFJ				Sn	**Sn**	**03 28 44.9**	**+0.7**
IRAZ	**Razeghan**	**7.46**	**310**	Pn	**Pn**	**03 27 38.8**	**+0.3**

CSEM ***22*** *03:29:00.9±0.4, 38.58N×29.31W, ML2.4, Error ellipse: s-maj=7.5km s-min=6.4km az=104.0, After PDA*

PDA ***22*** *03:29:00.9±0.4, 38.58N×29.31W, MD3.2, ML2.4, Error ellipse: s-maj=7.5km s-min=6.4km az=104.0*

SVSA 22 03:29:00.9±0.4**, 38.58N**×**29.31W, MD3.2, ML2.4, Error ellipse: s-maj=7.5km s-min=6.4km az=104.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CALA	**Caldeira**	**0.48**	**90**	*e*P	Pg	03 29 09.6	-0.8
PCED	**Cedros**	**0.48**	**84**	*i* P	Pg	03 29 09.7	-0.8
PCED				*e*S	Sg	03 29 16.3	-0.5
	51nm,0.2s						
PCED	**Cedros**	**0.48**	**84**	*e*S	Sg	03 29 16.3	-0.5
	51nm,0.2s						
HOR	**Horta**	**0.54**	**96**	*e*P	Pg	03 29 10.6	-1.0
PICO	**Pico**	**0.70**	**96**	*e*P	Pg	03 29 13.1	-1.7
PICO				*e*S	Sg	03 29 22.3	-1.8
ROSA	**Rosais**	**0.85**	**80**	*e*P	Pg	03 29 15.1	-2.7
ROSA				*e*S	Sg	03 29 25.7	-3.4

IDC ***22*** *03:31:11.3±1.1, 30.71N×56.99E, mb3.8/13, mb1 4.0/14, mb1mx3.9/22, mbtmp3.9/14, ML3.8/1, Error ellipse: s-maj=32.9km s-min=17.5km az=23.0*

CSEM ***22*** *03:31:12.6±0.1, 30.86N×56.93E, h14^{km}, mb4.2/1, ML4.5/1, Error ellipse: s-maj=3.1km s-min=2.3km az=18.0*

THR ***22*** *03:31:12.8±1.1, 30.80N×56.91E, h14^{km}±14^{km}, ML3.8*

NEIC ***22*** *03:31:13.3±0.6, 30.79N×56.94E, h10^{km}, mb3.9/3, Error ellipse: s-maj=19.1km s-min=8.1km az=195.0*

ISC 22 03:31:12.2±0.4**, 30.84N**±0.06×**56.92E**±0.06**, h10^{km}, n30, σ0.^{s}93**/32**, mb4.0**/16**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.87**	**189**	*e*PG	**Pg**	**03 31 28.5**	**-1.2**
BNDS	**Bandar-Abbas**	**3.49**	**191**	*e*PN	**Pn**	**03 32 08.7**	**+0.9**
BNDS				AML	AML	03 32 54.9	
	comp=N,150nm,0.5s						
ZHSF	**Zahedan**	**3.56**	**109**	*e*P	**Pn**	**03 32 09.8**	**+1.1**
ZHSF				AML	AML	03 33 19.1	
	comp=E,143nm,0.6s						
NASN	**Na’in**	**4.00**	**300**	*e*PN	**Pn**	**03 32 15.8**	**+0.8**
NASN				*e*SG	**Sg**	**03 33 18.3**	**-7.3**
NASN				AML	AML	03 33 23.6	
	comp=Z,182nm,0.7s						

NASN				AML	AML	03 33 26.1	
	comp=N,170nm,0.5s						
NASN	Na'in	4.00	300	ePn	Pn	03 32 15.8	+0.8
	SNR=52						
NASN				eSg	Sg	03 33 18.3	-7.2
	comp=N,170nm,0.5s,SNR=90						
MALT	Malatya	16.94	301	eP	P	03 35 08.5	-2.4
	comp=N,13nm,1.1s						
MALT	Malatya	16.94	301	eP	P	03 35 08.5	-2.3
	comp=N,13nm,1.1s						
ASF	Jabal al Asfar	17.13	280	P	P	03 35 14.6	+1.4
	comp=N,0.3nm,0.3s,baz=96,slow=10,SNR=4.4						
AAK	Ala-Archa	18.32	45	eP	P	03 35 27.6	-0.5
	comp=N,4.6nm,1.1s						
AAK	Ala-Archa	18.32	45	eP	P	03 35 27.6	-0.5
	comp=N,4.6nm,1.1s						
BRTR	Keskin Array B	20.92	301	P	P	03 35 58.2	+0.8
	comp=N,1.2nm,0.8s,baz=112,slow=7.8,SNR=4.5						
HYB	Hyderabad	23.79	119	i P	P	03 36 27.0	+1.0
BVAR	Borovoye Array	24.25	20	P	P	03 36 30.7	+0.6
	comp=N,1.5nm,0.6s,mb3.6,baz=200,slow=8.0,SNR=5.7						
DMN	Daman	24.79	90	eP	P	03 36 35.5	-0.1
	comp=N,11nm,0.9s,mb4.4						
KKN	Kakani	24.89	90	eP	P	03 36 37.6	+1.0
	comp=N,13nm,0.8s,mb4.5						
PKI	Pulchoki	25.05	90	eP	P	03 36 38.5	+0.3
	comp=N,21nm,0.8s,mb4.7						
GUN	Gumba	25.38	89	eP	P	03 36 41.4	+0.2
JIRN	Jiri	25.70	90	eP	P	03 36 43.6	-0.7
	comp=N,16nm,0.9s,mb4.6						
AKASG	Malin Array Be	28.60	322	P	P	03 37 10.2	-0.2
	comp=N,1.3nm,0.8s,mb3.7,baz=127,slow=9.3,SNR=4.2						
ZAL	Zalesovo	30.58	33	P	P	03 37 27.8	-0.3
	comp=N,1.3nm,0.6s,mb3.9,baz=246,slow=9.7,SNR=4.9						
FINES	FINESS Array B	36.66	336	P	P	03 38 20.0	-0.5
	comp=N,0.7nm,0.6s,mb3.7,baz=122,slow=18,SNR=3.7						
GERES	GERESS Array B	37.15	311	P	P	03 38 25.0	+0.1
	comp=N,1.7nm,1.0s,mb3.8,baz=102,slow=14,SNR=2.8						
DAVOX	Davos	39.34	307	P	P	03 38 44.2	+1.0
	comp=N,3.1nm,0.5s,mb4.3,baz=60,slow=8.1						
CMAR	Chiang Mai Arr	39.92	98	P	P	03 38 48.1	-0.2
	comp=N,0.6nm,0.3s,mb3.8,baz=300,slow=7.3,SNR=3.7						
SONM	Songino Array	41.11	51	P	P	03 38 58.6	+0.8
	comp=N,0.8nm,0.9s,mb3.4,baz=262,slow=8.7,SNR=5.4						
ILAR	Eielson Array	82.90	10	P	P	03 43 36.8	-1.1
	comp=N,0.3nm,0.6s,mb3.5,baz=323,slow=4.2,SNR=8.1						
YKA	Yellowknife Ar	86.74	356	P	P	03 43 56.5	-0.6
	comp=N,0.2nm,0.4s,mb3.7,baz=1.5,slow=5.2,SNR=6.9						
YKA	Yellowknife Ar	86.74	356	P	P	03 43 56.5	-0.6
WRA	Warramunga Arr	89.81	113	P	P	03 44 10.8	-2.1
	comp=N,0.2nm,0.5s,mb3.7,baz=316,slow=4.0,SNR=8.9						
ASAR	Alice Springs	91.49	117	P	P	03 44 19.4	-1.1
	comp=N,0.6nm,0.9s,mb3.9,baz=308,slow=5.4,SNR=3.7						

WEL 22 03:34:49.0±0.3**,39.67S**×**173.46E,h12**^{km}±2^{km}**,ML3.9**/22**, 2C,Error ellipse: s-maj=1.8km s-min=1.2km az=90.0, Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRZ	Ngariki Road	0.50	48	P*	Pb	03 34 58.8	-0.4
NWEZ	Newall Road	0.51	39	P*	Pb	03 34 59.2	-0.2
PKE	Pukeiti	0.63	41	P*	Pb	03 35 01.2	-0.3
PKE				S*	Sb	03 35 10.4	+0.4
NEZ	North Egmont	0.64	51	P*	Pb	03 35 00.9	-0.8
RAEZ	Rainy Point	0.82	62	P*	Pb	03 35 04.2	-0.6
VRZ	Vera Road	1.15	62	P*	Pb	03 35 09.1	-1.2
VRZ				S*	Sb	03 35 25.7	+0.7
WAZ	Wanganui	1.18	95	P*	Pb	03 35 09.6	-1.3
WAZ				S*	Sb	03 35 25.9	-0.2
QRZ	Quartz Range	1.35	211	PN	Pn	03 35 13.0	-0.9
QRZ				SN	Sn	03 35 30.4	-1.4
NNZ	Nelson	1.55	182	PN	Pn	03 35 15.8	-0.9
NNZ				SN	Sn	03 35 35.9	-0.8
HIZ	Hauiti	1.59	44	PN	Pn	03 35 15.6	-1.6
HIZ				SN	Sn	03 35 36.4	-1.5
KIW	Kapiti Island	1.63	137	PN	Pn	03 35 17.0	-0.8
KIW				SN	Sn	03 35 37.3	-1.6
TWVZ	Taurewa	1.65	69	PN	Pn	03 35 17.4	-0.7
TWVZ				SN	Sn	03 35 38.0	-1.3
FWVZ	Far West T-bar	1.68	76	PN	Pn	03 35 17.6	-0.9
FWVZ				SN	Sn	03 35 39.6	-0.5
DRZ	Dome Shelter	1.68	77	PN	Pn	03 35 19.0	+0.4
WPVZ	Whakapapa	1.69	75	PN	Pn	03 35 17.8	-0.9
WPVZ				SN	Sn	03 35 39.0	-1.2
CNZ	Chateau	1.69	74	PN	Pn	03 35 17.5	-1.1
NGZ	Ngauruhoe	1.73	74	PN	Pn	03 35 18.4	-0.9
NGZ				eSN	Sn	03 35 40.6	-0.9
WTVZ	West Tongariro	1.74	72	PN	Pn	03 35 18.5	-0.9
WTVZ				SN	Sn	03 35 41.0	-0.8
MGZ	Maungaku	1.75	68	⇑PN	Pn	03 35 18.7	-0.8
TUVZ	Tukino	1.75	77	PN	Pn	03 35 19.3	-0.2
OTVZ	Oturere	1.79	74	PN	Pn	03 35 19.3	-0.7
MOVZ	Moawhango	1.80	82	PN	Pn	03 35 19.9	-0.3
TUWZ	Tuamarina	1.80	168	PN	Pn	03 35 20.0	-0.2
MRW	Makara Radio	1.82	149	PN	Pn	03 35 20.0	-0.6
MRW				SN	Sn	03 35 44.3	+0.5
KATZ	Kakaramea	1.87	69	PN	Pn	03 35 20.6	-0.7
KATZ				SN	Sn	03 35 43.8	-1.1
CAW	Cannon Point	1.89	140	PN	Pn	03 35 20.9	-0.6
WEL	Wellington	1.90	149	PN	Pn	03 35 23.0	+1.3
MRZ	Mangatainoka R	1.90	122	PN	Pn	03 35 21.5	-0.2
MRZ				SN	Sn	03 35 46.3	+0.5
TSZ	Takapari Road	1.97	102	PN	Pn	03 35 21.8	-0.8
RATZ	Rangitukua	1.97	67	PN	Pn	03 35 22.2	-0.4
BHW	Baring Head	2.04	149	PN	Pn	03 35 24.1	+0.3
BSWZ	Blackbirch Sta	2.06	171	PN	Pn	03 35 24.1	0.0
THZ	Tophouse	2.13	191	⇑PN	Pn	03 35 24.6	-0.4
MTW	Mount Morrison	2.16	134	PN	Pn	03 35 25.4	+0.1
MSWZ	Moikau Station	2.21	142	PN	Pn	03 35 26.1	0.0
PAWZ	Paruwai Farm	2.27	139	PN	Pn	03 35 27.1	+0.1
BFZ	Birch Farm	2.36	116	ePN	Pn	03 35 29.8	+1.4
DSZ	Denniston Nort	2.42	211	PN	Pn	03 35 28.0	-1.2
KHZ	Kahutara	2.74	179	PN	Pn	03 35 33.7	0.0
MKAZ	Moumakai	2.89	28	PN	Pn	03 35 34.5	-1.4

CSEM ***22*** *03:49:55.7±0.2,30.55N×56.64E,h2^{km},mb4.4/2,Error ellipse: s-maj=8.2km s-min=3.7km az=34.0*
IDC ***22*** *03:49:57.3±1.5,30.55N×56.78E,mb3.7/8,mb1 3.9/8, mb1mx3.7/20,mbtmp3.7/8,Error ellipse: s-maj=39.6km s-min=27.7km az=39.0*
TEH ***22*** *03:49:58.4,30.30N×56.49E,h10^{km},Mn3.8*
NEIC ***22*** *03:49:58.8±0.8,30.64N×56.69E,h10^{km},mb4.0/4, MN3.8(TEH),Error ellipse: s-maj=16.5km s-min=8.1km az=17.0*
ISC 22 03:49:59.2±2.7**,30.73N**±0.09×**56.69E**±0.09**,h21**^{km}±21^{km}**, n27,**σ**0**^{s}**75**/31**,mb3.9**/9**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	1.29	312	Pn	Pn	03 50 21.3	-0.9
IMEH	Mehriz	1.90	291	Pn	Pn	03 50 31.3	+0.3
ICHK	Chekchek	2.47	308	Pn	Pn	03 50 39.3	+0.2
ISAD	Sadrabad	2.83	296	Pn	Pn	03 50 44.0	-0.2
IFIR	Firoozkooh	5.91	327	Pn	Pn	03 51 27.3	-0.5
IFIR				Sn	Sn	03 52 35.8	+0.1
IDMV	Damavand	6.21	322	Pn	Pn	03 51 32.5	+0.3
IAFJ	Afjeh	6.60	322	Pn	Pn	03 51 37.7	+0.1
IAFJ				Sn	Sn	03 52 52.5	-0.4
IAFJ	Afjeh	6.60	322	Pn	Pn	03 51 37.7	+0.1
IAFJ				Sn	Sn	03 52 51.5	-1.4
IRAZ	Razeghan	7.34	311	Pn	Pn	03 51 48.0	-0.1
IRAZ				Sn	Sn	03 53 07.3	-4.3
KIV	Kislovodsk	17.24	324	P	P	03 54 01.6	+1.3
	4.5nm,0.5s						
KIV	Kislovodsk	17.24	324	P	P	03 54 01.6	+1.3
	4.5nm,0.5s						
AAK	Ala-Archa	18.54	45	eP	P	03 54 16.5	0.0
	1.3nm,0.7s						
AAK	Ala-Archa	18.54	45	eP	P	03 54 16.5	0.0
	1.3nm,0.7s						
BRTR	Keskin Array B	20.82	302	P	P	03 54 41.8	0.0
	0.8nm,0.7s,baz=114,slow=12,SNR=5.7						
BVAR	Borovoye Array	24.42	20	P	P	03 55 18.1	+0.7
	0.9nm,0.6s,mb3.4,baz=194,slow=8.4,SNR=5.3						
ZAL	Zalesovo	30.78	33	P	P	03 56 14.8	-0.6
	2.4nm,0.3s,mb4.5,baz=209,slow=4.1,SNR=3.5						
ZAL	Zalesovo	30.78	33	P	P	03 56 14.8	-0.6
FINES	FINESS Array B	36.68	336	P	P	03 57 06.6	+0.4
	2.6nm,1.2s,mb4.0,baz=180,slow=15,SNR=2.9						
SONM	Songino Array	41.33	51	P	P	03 57 45.6	+0.5
	0.3nm,0.7s,mb3.0,baz=299,slow=16,SNR=3.8						
ULN	Ulaanbaatar	41.78	51	P	P	03 57 47.9	-0.7
	1.6nm,0.4s,mb4.0						
ULN	Ulaanbaatar	41.78	51	P	P	03 57 47.9	-0.8
	1.6nm,0.4s,mb4.0						
DBIC	Dimbokro	62.21	261	P	P	04 00 22.3	+0.3
	5.0nm,1.0s,mb4.6						
DBIC	Dimbokro	62.21	261	P	P	04 00 22.3	+0.3
	5.0nm,1.0s,mb4.6						
YKA	Yellowknife Ar	86.84	356	P	P	04 02 45.5	+2.6
	0.1nm,0.6s,mb3.2,baz=360,slow=5.0,SNR=6.8						
YKA	Yellowknife Ar	86.84	356	P	P	04 02 45.5	+2.6
WRA	Warramunga Arr	89.95	113	P	P	04 02 57.7	-1.1
	1.4nm,1.4s,mb4.1,baz=310,slow=4.1,SNR=3.9						
ASAR	Alice Springs	91.62	117	P	P	04 03 05.8	-0.6
	0.5nm,0.7s,mb3.9,baz=308,slow=5.0,SNR=5.4						

DJA 22 03:58:47.3±1.0**,9.76S**×**114.07E,h15**^{km}**,MD4.8**/4**, ML4.8**/4**,2C-1D,Error ellipse: s-maj=22.5km s-min=12.0km az=39.0,South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.27	3	⇓ePn	Pn	03 59 07.9	-2.7
	1μm,0.2s						
SRDI				eSn	Sn	03 59 22.8	-4.6
KELI	Kelakatan	1.59	15	⇑ePn	Pn	03 59 12.8	-2.3
	611nm,0.2s						
KELI				eSn	Sn	03 59 31.3	-4.1
RATI	Rata	1.77	55	ePn	Pn	03 59 14.9	-2.8
	856nm,0.2s						
RATI				eSn	Sn	03 59 35.3	-4.8
KEDI	Kedomdong	2.38	58	⇑iPn	Pn	03 59 23.8	-2.6
	236nm,0.2s						

NEIC ***22*** *04:03:45.2±0.6,7.55N×94.11E,h30^{km},mb4.4/7,Error ellipse: s-maj=18.4km s-min=9.4km az=57.0*
IDC ***22*** *04:03:49.8±6.7,7.67N×94.33E,h71^{km}±59^{km},mb3.6/12, mb1 3.8/13,mb1mx3.7/23,mbtmp4.0/13,ML4.5/1,Error ellipse: s-maj=45.9km s-min=18.5km az=50.0*
ISC 22 04:03:43.9±0.7**,7.6N**±0.1×**94.2E**±0.1**,h33**^{km}**,n26,** σ**0**^{s}**85**/26**,mb4.2**/23**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.78	23	P	P	04 06 33.1	+0.5
	1.0nm,0.3s,baz=214,slow=15,SNR=16						
JIRN	Jiri	21.37	340	eP	P	04 08 32.2	+1.5
	54nm,1.1s,mb4.8						
PKI	Pulchoki	21.57	338	eP	P	04 08 33.7	+1.0
	37nm,1.0s,mb4.8						
DMN	Daman	21.71	338	eP	P	04 08 35.5	+1.4
	25nm,0.8s,mb4.7						
KKN	Kakani	21.81	338	eP	P	04 08 35.9	+0.8
LSA	Lhasa	22.20	353	eP	P	04 08 38.7	-0.3
	11nm,0.6s,mb4.5						
GKN	Gorkha	22.24	337	eP	P	04 08 38.9	-0.5
	27nm,0.7s,mb4.8						
KOLN	Koldanda	22.46	335	eP	P	04 08 41.2	-0.3
	15nm,0.7s,mb4.5						
AAK	Ala-Archa	39.00	337	P	P	04 11 08.8	-0.2
	1.6nm,0.5s,mb4.0						
SONM	Songino Array	41.45	12	P	P	04 11 28.6	-0.6
	0.6nm,0.5s,mb3.5,baz=198,slow=7.8,SNR=8.8						
KURK	Kurchatov	44.92	346	eP	P	04 11 56.6	-0.7
	3.0nm,0.7s,mb4.2						
ZAL	Zalesovo	46.86	352	P	P	04 12 11.8	-0.8
	2.6nm,0.3s,mb4.6,baz=309,slow=5.0,SNR=9.3						
WRA	Warramunga Arr	48.05	125	P	P	04 12 21.9	-0.6
	0.8nm,0.9s,mb3.8,baz=304,slow=8.7,SNR=6.9						
WRAB	Tennant Creek	48.05	125	eP	P	04 12 24.6	+2.1
	2.0nm,0.5s,mb4.4						
BVAR	Borovoye Array	49.29	341	P	P	04 12 31.0	-0.6
	1.4nm,1.0s,mb4.0,baz=146,slow=5.3,SNR=3.9						
ASAR	Alice Springs	49.69	130	P	P	04 12 34.5	-0.5
	0.2nm,0.4s,mb3.5,baz=303,slow=7.8,SNR=3.9						
ASAR				PcP	PcP	04 14 02.1	+5.9
	1.0nm,0.8s,baz=305,slow=3.7,SNR=7.7						
CHKZ	Chkalovo	49.78	342	eP	P	04 12 34.1	-1.2
	5.5nm,0.9s,mb4.6						
BRTR	Keskin Array B	62.66	311	P	P	04 14 06.7	-1.1
	0.4nm,0.5s,mb3.8,baz=122,slow=5.8,SNR=3.4						
IDI	Anoyia	68.78	305	P	P	04 14 47.5	+0.5
	3.2nm,0.8s,mb4.3,baz=252,slow=20,SNR=3.2						
MLR	Muntele Rosu	69.42	316	P	P	04 14 51.7	+1.0
	1.8nm,0.8s,mb4.0,baz=121,slow=19,SNR=2.4						
MLR	Muntele Rosu	69.42	316	P	P	04 14 51.7	+1.0
FINES	FINESS Array B	73.00	332	P	P	04 15 10.9	-1.0
	3.3nm,1.0s,mb4.2,baz=117,slow=4.3,SNR=5.9						
ARCES	ARCESS Array B	75.57	340	P	P	04 15 26.6	0.0
	5.5nm,1.1s,mb4.4,baz=90,slow=7.3,SNR=4.3						
HFS	Hagfors	78.74	330	P	P	04 15 44.4	-0.2
	1.3nm,0.5s,mb4.1,baz=100,slow=8.8,SNR=6.3						
NB2	NORSAR Subarra	80.02	331	P	P	04 15 51.3	-0.2
	1.4nm,0.7s,mb4.0,baz=92,slow=5.6						
DAVOX	Davos	80.64	316	P	P	04 15 55.8	+0.7
	0.9nm,0.5s,mb4.0,baz=141,slow=13,SNR=2.8						

BJI ***22*** *05:08:27.9,30.80N×56.90E,h10^{km},mB5.2,mb4.6,Ms4.5, Msz4.4*
IDC ***22*** *05:08:28.6±0.8,30.67N×56.89E,mb4.1/18,mb1 4.3/21, mb1mx4.2/25,mbtmp4.1/21,ML3.4/1,Error ellipse: s-maj=22.7km s-min=14.2km az=11.0*
MOS ***22*** *05:08:29.2±1.1,30.79N×56.76E,h10^{km},mb4.6/12,Error ellipse: s-maj=11.2km s-min=8.3km az=89.3*
NEIC ***22*** *05:08:30.9±0.3,30.74N×56.89E,h10^{km},mb4.3/11, MN4.1(TEH),Error ellipse: s-maj=8.0km s-min=4.4km az=20.0*
THR ***22*** *05:08:30.5±0.6,30.79N×56.86E,h14^{km}±8^{km},ML4.0*
CSEM ***22*** *05:08:31.9±0.1,30.75N×56.81E,h30^{km},mb4.3/13, ML4.8/2,Error ellipse: s-maj=2.5km s-min=1.7km az=42.0*
TEH ***22*** *05:08:36.3,31.03N×56.83E,h15^{km},Mn4.1*
OMAN ***22*** *05:08:42.7±60.0,29.95N×56.02E,h20^{km},Error ellipse: s-maj=17.8km s-min=8.5km az=301.0*
ISC 22 05:08:29.8±0.2**,30.80N**±0.02×**56.87E**±0.03**,h10**^{km}**,n115,** σ**1**^{s}**01**/123**,mb4.3**/41**,MS4.3**/1**,6C-8D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.82	187	i PG	Pg	05 08 45.8	-0.5
KRBR				eSG	Sg	05 08 57.3	0.0
KRBR				AML	AML	05 09 00.2	
	comp=E,6μm,0.4s						
KRBR				AML	AML	05 09 00.7	
	comp=N,7μm,0.3s						
KRBR	Kerman	0.82	187	i Pg	Pg	05 08 45.8	-0.5
	SNR=90						
KRBR				eSg	Sg	05 08 57.3	0.0
	comp=N,7μm,0.3s,SNR=90						
IBAF	Bafgh	1.37	305	Pn	Pn	05 08 55.3	+0.3
IMEH	Mehriz	2.03	287	Pn	Pn	05 09 06.0	+1.6
ICHK	Chekchek	2.55	305	Pn	Pn	05 09 12.4	+0.5
IPAR	Pars	3.44	255	Pn	Pn	05 09 29.4	+4.8
BNDS	Bandar-Abbas	3.44	190	ePN	Pn	05 09 25.9	+1.3
ZHSF	Zahedan	3.58	108	eP	Pn	05 09 27.7	+1.2
ZHSF				AML	AML	05 10 33.5	
	comp=E,202nm,0.6s						
ZHSF				AML	AML	05 10 33.6	
	comp=N,330nm,0.6s						
SHI	Shiraz	3.95	254	Pn	Pn	05 09 36.9	+5.1
NASN	Na'in	3.99	301	ePN	Pn	05 09 33.8	+1.3
NASN				eSG	Sg	05 10 34.4	-8.4
NASN				AML	AML	05 10 44.1	
	comp=N,274nm,0.6s						
NASN				AML	AML	05 10 51.3	
	comp=E,186nm,0.6s						
NASN	Na'in	3.99	301	ePn	Pn	05 09 33.8	+1.3
	SNR=52						
NASN				eSg	Sg	05 10 34.4	-8.4
	comp=E,186nm,0.6s,SNR=90						
IMOK	Mook	4.01	245	Pn	Pn	05 09 37.6	+4.9
BANOM	Banah	4.88	186	⇓P	Pn	05 09 46.3	+1.2
	SNR=33						
BANOM				⇑S	Sn	05 10 44.2	+1.8
IMOG	Moghan	5.68	21	Pn	Pn	05 09 57.3	+1.0
MHI	Mashhad	5.91	21	Pn	Pn	05 09 59.9	+0.4
IFIR	Firoozkooh	5.94	326	Pn	Pn	05 09 59.8	-0.1
IVRN	Varamin	6.02	315	Pn	Pn	05 10 01.4	+0.3
ASHO	Ashiyiah	6.14	187	⇓P	Pn	05 10 03.3	+0.5
IMYA	Miamay	6.15	25	Pn	Pn	05 10 03.1	+0.2
IDMV	Damavand	6.26	321	Pn	Pn	05 10 04.7	+0.2
DAMV	Damavand	6.33	321	ePN	Pn	05 10 06.0	+0.5
DAMV	Damavand	6.33	321	ePn	Pn	05 10 05.9	+0.4
	SNR=52						
IQOM	Qom	6.33	311	Pn	Pn	05 10 04.9	-0.6
IAFJ	Afjeh	6.64	321	Pn	Pn	05 10 10.1	+0.3
HOQ	Hoqain	7.20	177	⇑P	Pn	05 10 16.4	-1.3
IRAZ	Razeghan	7.42	310	Pn	Pn	05 10 20.6	-0.2
IRAZ				Sn	Sn	05 11 38.1	-7.7
ARQ	Araqi	7.44	182	⇑P	Pn	05 10 14.8	-6.3
SMDO	Samad	7.78	172	⇓P	Pn	05 10 25.4	-0.5
BSY	Bisya	8.03	178	⇑P	P	05 10 30.2	+0.9
	SNR=7.4						
BSYO	Bisya	8.04	178	P	P	05 10 30.2	+0.7
	SNR=7.4						
WBK	Wadi Bani Khal	8.37	167	⇑P	P	05 10 32.2	-1.8
WHFO	Wadi Hawf	13.13	193	⇓P	P	05 11 35.1	-4.0
RBK	Rabkut	13.46	191	⇓P	P	05 11 40.2	-3.2
	SNR=5.8						
GNI	Garni	13.58	317	Pn	P	05 11 47.0	+2.2
	comp=E,0.4nm,0.3s,baz=189,slow=21,SNR=2.5						
ABTO	Aybut	13.78	194	⇓P	P	05 11 43.7	-4.0
	SNR=5.8						
ABTO				⇑S	S	05 14 07.0	-15
MALT	Malatya	16.93	301	eP	P	05 12 31.9	+3.6
MALT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MALT	Malatya	16.93	301	eP	P	05 12 31.9	+3.6
	comp=Z,10nm,1.1s						
ASF	Jabal al Asfar	17.10	280	P	P	05 12 31.6	+1.1
	comp=Z,0.8nm,0.3s,baz=282,slow=9.3,SNR=3.8						
KIV	Kislovodsk	17.27	323	eP	P	05 12 33.8	+1.2
KIV				pmax	pmax		
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	17.27	323	eP	P	05 12 33.8	+1.2
	comp=Z,12nm,0.8s						
NDI	New Delhi	17.79	92	e	P	05 12 38.5	-0.7
KSH	Kashi	17.85	56	eP	P	05 12 40.1	+0.3
KSH				eAP		05 12 44.0	
KSH				eXP		05 12 47.8	
KSH				ePP	PP	05 12 55.3	+0.7
KSH				ePPP	PPP	05 13 11.0	+7.5
KSH				eS	S	05 15 56.5	0.0
KSH				eXS		05 16 02.8	
KSH				ePS		05 16 10.0	
KSH				eSS	SS	05 16 19.0	-0.3
KSH				AMB	AMB		
	comp=Z,60nm,2.2s						
KSH				LR	LR		
	comp=N,250nm,5.5s						
KSH				LR	LR		
	comp=E,230nm,8.0s						
AAK	Ala-Archa	18.37	45	P	P	05 12 45.9	-0.4
AAK				pmax	pmax		
	comp=Z,65nm,2.2s						
AAK	Ala-Archa	18.37	45	P	P	05 12 45.9	-0.4
	comp=Z,65nm,2.2s						
EIL	Elat	18.98	272	P	P	05 12 52.5	-1.2
	comp=Z,0.1nm,0.3s,baz=15,slow=36,SNR=2.9						
BRTR	Keskin Array B	20.91	302	P	P	05 13 13.4	-1.4
	comp=Z,2.8nm,1.0s,baz=119,slow=12,SNR=7.7						
KOLN	Koldanda	23.49	91	eP	P	05 13 41.1	+0.6
	comp=Z,12nm,0.9s,mb4.3						
HYB	Hyderabad	23.80	119	⇓iP	P	05 13 45.0	+1.4
HYB	Hyderabad	23.80	119	⇓eP	P	05 13 45.0	+1.4
BVA0	Borovoye Array	24.30	20	i P	P	05 13 48.8	+0.6
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.3						
BVA0	Borovoye Array	24.30	20	i P	P	05 13 48.8	+0.6
	comp=Z,1.0nm,0.8s,mb3.3						
BVAR	Borovoye Array	24.30	20	P	P	05 13 49.1	+0.9
	comp=Z,6.0nm,0.7s,mb4.2,baz=203,slow=7.7,SNR=41						
GKN	Gorkha	24.32	90	eP	P	05 13 49.0	+0.3
DMN	Daman	24.82	90	eP	P	05 13 53.7	+0.2
	comp=Z,19nm,0.9s,mb4.6						
KKN	Kakani	24.93	90	eP	P	05 13 55.2	+0.7
	comp=Z,23nm,0.8s,mb4.7						
CHKZ	Chkalovo	24.93	20	eP	P	05 13 54.2	-0.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
PKI	Pulchoki	25.09	90	eP	P	05 13 57.3	+1.2
	comp=Z,38nm,0.9s,mb4.9						
MKAR	Makanchi Array	25.29	44	i P	P	05 13 58.2	+0.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	25.29	44	i P	P	05 13 58.2	+0.5
	comp=Z,3.0nm,0.7s,mb3.9						
GUN	Gumba	25.41	89	eP	P	05 13 59.4	+0.3
	comp=Z,49nm,1.1s,mb4.9						
KURK	Kurchatov	25.66	33	eP	P	05 14 01.4	+0.2
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
JIRN	Jiri	25.74	90	eP	P	05 14 01.1	-1.1
	comp=Z,40nm,1.1s,mb4.9						
IDI	Anoyia	27.11	288	P	P	05 14 14.8	0.0
	comp=Z,4.5nm,0.7s,mb4.1,baz=50,slow=4.2,SNR=3.9						
WMQ	Urumqi	27.57	53	eP	P	05 14 17.3	-1.6
MLR	Muntele Rosu	28.20	310	P	P	05 14 25.5	+1.0
	comp=Z,1.0nm,0.6s,mb3.6,baz=258,slow=19,SNR=2.9						
AKASG	Malin Array Be	28.61	322	P	P	05 14 27.1	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	28.61	322	P	P	05 14 27.1	-1.0
	comp=Z,1.6nm,0.5s,mb4.0,baz=124,slow=8.5,SNR=8.3						
ZAL	Zalesovo	30.64	33	P	P	05 14 45.5	-0.7
	comp=Z,3.3nm,0.5s,mb4.5,baz=242,slow=7.8,SNR=16						
GTA	Gaotai	35.89	64	eP	P	05 15 32.6	+0.7
GTA				AP	pP	05 15 35.8	+0.9
GTA				XP	sP	05 15 38.8	+2.7
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
JOF	Joensuu	36.07	340	ep	P	05 15 31.4	-1.8
	comp=Z,3.5nm,0.6s,mb4.5						
FINES	FINESS Array B	36.68	336	P	P	05 15 38.0	-0.4
	comp=Z,3.2nm,0.6s,mb4.4,baz=124,slow=10,SNR=16						
GERES	GERESS Array B	37.15	312	P	P	05 15 41.4	-1.0
	comp=Z,0.6nm,0.5s,mb3.7,baz=97,slow=11,SNR=4.3						
MOY	Mondy	38.43	44	eP	P	05 15 54.7	+1.6
MOY				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
MOY	Mondy	38.43	44	eP	P	05 15 54.7	+1.6
	comp=Z,14nm,1.3s,mb4.5						
ZAK	Zakamensk	39.53	47	eP	P	05 16 03.0	+0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
ZAK	Zakamensk	39.53	47	eP	P	05 16 03.0	+0.6
	comp=Z,1.0nm,1.2s,mb3.4						
CMAR	Chiang Mai Arr	39.95	98	P	P	05 16 05.4	-0.7
	comp=Z,1.1nm,0.4s,mb4.0,baz=297,slow=8.3,SNR=6.0						
SONM	Songino Array	41.16	51	P	P	05 16 16.3	+0.5
	comp=Z,1.8nm,0.9s,mb3.7,baz=270,slow=11,SNR=17						
ULN	Ulaanbaatar	41.61	51	eP	P	05 16 18.7	-0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
ULN	Ulaanbaatar	41.61	51	eP	P	05 16 18.7	-0.7
	comp=Z,2.7nm,0.7s,mb4.0						
ULN	Ulaanbaatar	41.61	51	eP	P	05 16 18.7	-0.7
	comp=Z,2.7nm,0.7s,mb4.0						
NB2	NORSAR Subarra	42.46	329	P	P	05 16 24.7	-1.5
	comp=Z,1.7nm,0.7s,mb3.8,baz=119,slow=7.9						
NB2	NORSAR Subarra	42.46	329	P	P	05 16 24.7	-1.5
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
NOA	NORSAR Array B	42.46	329	P	P	05 16 24.3	-1.9
	comp=Z,1.0nm,0.5s,mb3.7,baz=115,slow=8.0,SNR=5.6						
ARCES	ARCESS Array B	42.66	344	P	P	05 16 27.6	-0.2
	comp=Z,2.5nm,0.7s,mb4.1,baz=129,slow=7.8,SNR=11						
GYA	Guiyang	43.63	83	P	P	05 16 37.8	+1.6
GYA				S	S	05 23 07.6	+2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GYA				LR	LR		
	comp=N,290nm,17.6s,MS4.4						
GYA				LR	LR		
	comp=E,300nm,18.2s,MS4.4						
GYA				LR	LR		
	comp=Z,240nm,17.0s,MS4.2						
HHC	Hu-ho-hao-te	44.83	61	eP	P	05 16 42.6	-3.1
HHC				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.7						
BOD	Bodaibo	47.13	38	eP	P	05 17 03.2	-0.5
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BOD	Bodaibo	47.13	38	eP	P	05 17 03.2	-0.5
	comp=Z,10.0nm,0.9s,mb4.8						
SSE	Sheshan	54.42	72	P	P	05 17 54.8	-4.6

SSE				AMB	AMB		
	comp=Z,18nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,382nm,11.0s						
SSE	Sheshan	54.42	72	P	P	05 17 54.8	-4.6
	comp=Z,18nm,0.6s,mb5.2						
CN2	Changchun	54.62	56	eP	P	05 17 59.8	-0.9
DBIC	Dimbokro	62.38	261	P	P	05 18 53.2	-2.1
	comp=Z,2.8nm,0.9s,mb4.4,baz=32,slow=9.4,SNR=2.7						
LBTB	Lobatse	63.06	212	eP	P	05 18 59.5	-0.2
LBTB				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
LBTB	Lobatse	63.06	212	eP	P	05 18 59.5	-0.2
	comp=Z,2.5nm,1.0s,mb4.3						
LBTB	Lobatse	63.06	212	eP	P	05 18 59.5	-0.2
	comp=Z,2.5nm,1.0s,mb4.3						
IMA	Indian Mountai	80.62	12	eP	P	05 20 43.6	0.0
IMA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
IMA	Indian Mountai	80.62	12	eP	P	05 20 43.6	0.0
	comp=Z,18nm,0.9s,mb5.0						
IMA	Indian Mountai	80.62	12	eP	P	05 20 43.6	0.0
	comp=Z,18nm,0.9s,mb5.0						
INK	Inuvik	80.89	4	eP	P	05 20 44.1	-0.9
INK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
INK	Inuvik	80.89	4	eP	P	05 20 44.1	-0.9
	comp=Z,6.5nm,1.1s,mb4.5						
SCHQ	Schefferville	81.99	331	P	P	05 20 50.6	-0.3
	comp=Z,1.3nm,0.7s,mb4.0,baz=18,slow=14,SNR=3.7						
COLA	College	82.70	10	eP	P	05 20 53.4	-1.1
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
COLA	College	82.70	10	eP	P	05 20 53.4	-1.1
	comp=Z,5.8nm,0.9s,mb4.6						
COLA	College	82.70	10	eP	P	05 20 53.4	-1.1
	comp=Z,5.8nm,0.9s,mb4.6						
ILAR	Eielson Array	82.95	10	P	P	05 20 54.9	-0.9
	comp=Z,1.5nm,0.6s,mb4.2,baz=320,slow=4.4,SNR=33						
MCK	McKinley	83.59	11	eP	P	05 20 58.9	-0.1
MCK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
MCK	McKinley	83.59	11	eP	P	05 20 58.9	-0.1
	comp=Z,1.9nm,0.6s,mb4.4						
MCK	McKinley	83.59	11	eP	P	05 20 58.9	-0.1
	comp=Z,1.9nm,0.6s,mb4.4						
DAWY	Dawson	84.58	7	eP	P	05 21 03.4	-0.6
YKA	Yellowknife Ar	86.78	356	P	P	05 21 14.8	0.0
	comp=Z,1.3nm,0.7s,mb4.3,baz=0.9,slow=5.4,SNR=42						
YKA	Yellowknife Ar	86.78	356	P	P	05 21 14.9	0.0
WRA	Warramunga Arr	89.83	113	P	P	05 21 28.8	-1.7
	comp=Z,0.4nm,0.5s,mb4.0,baz=316,slow=4.0,SNR=16						
ASAR	Alice Springs	91.51	117	P	P	05 21 36.6	-1.5
	comp=Z,1.1nm,0.9s,mb4.2,baz=286,slow=4.2,SNR=6.2						
SNAA	Sanae	110.24	197	ePKIKP	PKPdf	05 27 04.1	0.0

IDC 22 05:09:20.2±1.4**,21.35S×66.74W,h220**^{km}±12^{km}**,mb2.9**/2**, mb1 3.2**/5**,mb1mx3.1**/16**,mbtmp3.5**/5**,Error ellipse: s-maj=26.7km s-min=14.6km az=106.0,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.38	238	P	P	05 10 05.0	+0.4
	1.8nm,0.3s,baz=48,slow=7.0,SNR=34						
LVC				S	S	05 10 39.3	+0.5
	9.9nm,0.3s,baz=227,slow=20,SNR=38						
LPAZ	La Paz	5.21	345	P	P	05 10 39.5	+1.1
	4.6nm,0.3s,baz=154,slow=8.2,SNR=79						
LPAZ				S	S	05 11 40.1	+0.9
	0.0nm,0.3s,baz=284,slow=24,SNR=4.6						
BDFB	Brasilia	18.64	75	P	P	05 13 21.5	-2.1
	0.3nm,0.3s,baz=227,slow=11,SNR=3.5						
TXAR	Lajitas Array	61.69	323	P	P	05 19 15.1	-2.0
	0.1nm,0.6s,baz=131,slow=8.3,SNR=2.8						
YKA	Yellowknife Ar	91.73	340	P	P	05 22 02.4	-0.9
	0.4nm,0.7s,baz=132,slow=4.4,SNR=9.5						
WRA	Warramunga Arr	134.07	208	PKP	PKPdf	05 28 11.9	-0.2
	0.2nm,0.3s,baz=155,slow=1.8,SNR=7.7						
SONM	Songino Array	153.00	10	PKPbc	PKPdf	05 28 51.3	+7.8
	0.3nm,0.4s,slow=2.9,SNR=7.1						

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*BJI **22** 05:26:44.3,30.62N×56.27E,h26^{km},mB5.1,mb4.8,Ms4.6, Msz4.4*

*NEIC **22** 05:26:46.6±0.4,30.47N×56.80E,h10^{km},mb4.6/32, MN4.5(TEH),Error ellipse: s-maj=9.8km s-min=6.2km az=13.0*

*MOS **22** 05:26:46.1±1.2,30.66N×56.68E,h10^{km},mb4.8/33,Error ellipse: s-maj=7.8km s-min=5.1km az=116.6*

*IDC **22** 05:26:47.1±0.6,30.72N×56.84E,mb4.4/22,mb1 4.5/25, mb1mx4.5/27,mbtmp4.4/25,ML4.0/2,Error ellipse: s-maj=19.1km s-min=13.5km az=23.0*

*THR **22** 05:26:49.0±1.1,30.78N×56.85E,h14^{km}±14^{km},ML4.2*

*CSEM **22** 05:26:50.5±0.1,30.77N×56.81E,h35^{km},mb4.6/30, ML4.4/1,Error ellipse: s-maj=2.5km s-min=1.5km az=19.0*

*OMAN **22** 05:26:53.6±84.0,30.53N×55.34E,h20^{km},Error ellipse: s-maj=21.0km s-min=9.1km az=296.0*

*TEH **22** 05:26:55.3,31.02N×56.61E,h10^{km},Mn4.5*

ISC 22 05:26:46.9±0.2**,30.72N**±0.03×**56.81E**±0.03**,h10**^{km}**, (h14**^{km}±.4^{km}**:pP-P),n220,**σ1§**31**/226**,mb4.5**/67**,MS4.2**/2**, 9C-9D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	Kerman	0.73	183	i PG	Pg	05 27 03.9	+2.2
KRBR				AML	AML	05 27 22.5	
	comp=E,11µm,0.3s						
IBAF	Bafgh	1.38	310	Pn	Pn	05 27 13.0	+0.7
IMEH	Mehriz	2.00	290	Pn	Pn	05 27 23.5	+2.3
ICHK	Chekchek	2.56	307	Pn	Pn	05 27 31.4	+2.3
ISAD	Sadrabad	2.93	295	Pn	Pn	05 27 36.1	+1.6
BNDS	Bandar-Abbas	3.35	190	ePN	Pn	05 27 44.4	+3.9
BNDS				AML	AML	05 28 35.6	
	comp=N,658nm,0.6s						
BNDS				AML	AML	05 28 45.0	
	comp=E,548nm,0.6s						
IPAR	Pars	3.37	256	Pn	Pn	05 27 47.4	+6.7
ZHSF	Zahedan	3.61	107	ePN	Pn	05 27 46.0	+1.9
ZHSF				eSG	Sg	05 28 40.9	-6.1
ZHSF				AML	AML	05 28 54.9	
	comp=N,417nm,0.7s						
ZHSF				AML	AML	05 28 56.2	
	comp=E,274nm,0.8s						
ZHSF	Zahedan	3.61	107	ePn	Pn	05 27 46.0	+1.9
	SNR=52						
ZHSF				eSg	Sg	05 28 40.9	-6.1
	comp=E,274nm,0.8s,SNR=90						
SHI	Shiraz	3.87	255	Pn	Pn	05 27 55.2	+7.3
IMOK	Mook	3.93	246	Pn	Pn	05 27 54.8	+6.1
NASN	Na'in	3.99	302	ePN	Pn	05 27 52.0	+2.5
NASN				AML	AML	05 29 03.2	
	comp=Z,548nm,0.4s						
GHIR	Ghir-Karzin	4.12	235	ePN	Pn	05 27 54.8	+3.4
BANOM	Banah	4.80	186	⇓P	Pn	05 28 04.6	+3.6
	SNR=35						
IANJ	Anjiloo	5.32	334	Pn	Pn	05 28 08.5	+0.1
ILAS	Lasjerd	5.66	326	Pn	Pn	05 28 14.7	+1.5
ISHM	Shahmirzad	5.87	331	Pn	Pn	05 28 17.0	+0.9
IFIR	Firoozkooh	5.97	326	Pn	Pn	05 28 18.1	+0.5
IFIR				Sn	Sn	05 29 19.8	-7.0
MHI	Mashhad	6.00	21	Pn	Pn	05 28 18.2	+0.2
IVRN	Varamin	6.04	316	Pn	Pn	05 28 19.3	+0.8
ASHO	Ashiyiah	6.05	187	P	Pn	05 28 22.3	+3.6
	SNR=17						
ASHO				⇑S	Sn	05 29 33.4	+4.7
IMYA	Miamay	6.25	25	Pn	Pn	05 28 21.5	+0.1
IDMV	Damavand	6.29	322	Pn	Pn	05 28 22.6	+0.6
IQOM	Qom	6.35	312	Pn	Pn	05 28 23.7	+0.8
IAFJ	Afjeh	6.67	322	Pn	Pn	05 28 27.6	+0.2
HOQ	Hoqain	7.12	176	P	Pn	05 28 34.7	+0.9
	SNR=19						
IRAZ	Razeghan	7.43	311	Pn	Pn	05 28 38.4	+0.3
IRAZ				Sn	Sn	05 29 54.8	-8.5
SMDO	Samad	7.71	171	⇑P	Pn	05 28 44.1	+2.1
BSY	Bisya	7.95	177	⇓P	Pn	05 28 48.5	+3.2
	SNR=9.7						
BSYO	Bisya	7.96	177	P	Pn	05 28 48.5	+2.9
	SNR=9.7						
WBK	Wadi Bani Khal	8.30	166	⇑P	P	05 28 51.4	+1.1
WHFO	Wadi Hawf	13.04	193	⇓S	S	05 32 13.3	-7.8
RBK	Rabkut	13.37	191	⇑S	S	05 32 21.7	-7.3
GNI	Garni	13.60	317	eP	P	05 30 01.5	-0.8
GNI				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GNI	Garni	13.60	317	Pn	P	05 30 08.2	+5.9
	comp=Z,0.3nm,0.3s,baz=187,slow=22,SNR=1.9						
GNI	Garni	13.60	317	eP	P	05 30 07.3	+5.0
GNI	Garni	13.60	317	eP	P	05 30 01.5	-0.8
	comp=Z,10.0nm,1.3s						
ABTO	Aybut	13.68	194	⇓P	P	05 30 01.3	-2.2
	SNR=14						
ABTO				⇓S	S	05 32 26.4	-10
ERZM	Erzurum	15.57	310	i P	P	05 30 35.7	+7.6
ELZG	Elazig	16.59	303	i P	P	05 30 44.1	+3.0
MALT	Malatya	16.92	302	eP	P	05 30 47.5	+2.1
MALT				pmax	pmax		
	comp=Z,12nm,1.0s						
MALT	Malatya	16.92	302	eP	P	05 30 47.5	+2.2
	comp=Z,12nm,1.0s						
MALT	Malatya	16.92	302	eP	P	05 30 47.5	+2.1
	comp=Z,12nm,1.0s						
ASF	Jabal al Asfar	17.06	280	P	P	05 30 46.8	-0.3
	comp=Z,0.7nm,0.3s,baz=297,slow=2.8,SNR=4.0						
GZT	Gaziantep	17.26	298	i P	P	05 30 52.2	+2.6
SDNR	Sundarnagar	17.29	82	eP	P	05 30 51.2	+1.2
KIV	Kislovodsk	17.31	324	Pn	P	05 30 55.6	+5.4
	comp=Z,158nm,1.3s,SNR=8.1						
KIV	Kislovodsk	17.31	324	d iP	P	05 30 51.6	+1.4
KIV				pmax	pmax		
	comp=Z,21nm,0.8s						
KIV	Kislovodsk	17.31	324	i Pr		05 30 51.6	
	comp=Z,21nm,0.8s						
KIV	Kislovodsk	17.31	324	i P	P	05 30 51.6	+1.4
	comp=Z,21nm,0.8s						
AML	Almayashu	17.69	45	P	P	05 30 54.2	-0.8
	SNR=14						
NDI	New Delhi	17.84	91	eP	P	05 30 57.0	0.0
GOF	Gofitskoye	17.94	327	eP	P	05 30 57.0	-1.0
KSH	Kashi	17.94	56	eP	P	05 30 58.1	0.0
KSH				eAP		05 31 02.1	
KSH				eXP		05 31 06.4	
KSH				ePP	PP	05 31 13.3	+0.4
KSH				ePPP	PPP	05 31 22.8	+0.9
KSH				eS	S	05 34 15.8	+0.1
KSH				ePCS		05 39 00.3	
KSH				AMB	AMB		
	comp=Z,60nm,1.4s						
KSH				LR	LR		
	comp=N,460nm,5.7s						
KSH				LR	LR		
	comp=E,410nm,6.7s						
EKS2	Erkin-Say	18.05	44	P	P	05 30 59.3	-0.1
	SNR=17						
COBT	Iskenderun	18.06	294	i P	P	05 30 59.5	-0.1
UCH	Uchtor	18.25	46	P	P	05 31 02.1	+0.1
	SNR=7.6						
AAK	Ala-Archa	18.47	45	P	P	05 31 04.1	-0.6
	SNR=9.3						
AAK	Ala-Archa	18.47	45	P	P	05 31 03.9	-0.7
AAK				pmax	pmax		
	comp=Z,130nm,2.3s						
AAK	Ala-Archa	18.47	45	P	P	05 31 03.9	-0.7
	comp=Z,130nm,2.3s						
KZA	Kyzart	18.64	47	P	P	05 31 09.8	+3.1
	SNR=8.8						
FRU	Bishkek	18.65	45	eP	P	05 31 07.0	+0.1
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
FRU	Bishkek	18.65	45	eP	P	05 31 07.0	+0.1
	comp=Z,60nm,2.0s						
EIL	Elat	18.93	272	P	P	05 31 12.9	+2.7
	comp=Z,0.3nm,0.3s,baz=342,slow=24,SNR=2.9						
EIL	Elat	18.93	272	P	P	05 31 11.8	+1.6
	comp=Z,22nm,1.1s						
EIL	Elat	18.93	272	P	P	05 31 11.9	+1.6
	comp=Z,22nm,1.1s						
TKM2	Tokmak 2	19.30	46	P	P	05 31 17.2	+2.5
	SNR=10						
ULHL	Ulahol	19.35	48	P	P	05 31 14.8	-0.4
	SNR=9.7						
AVNT	Avonos	19.72	300	i P	P	05 31 20.9	+1.5
CSS	Prodhromos	20.16	288	eP	P	05 31 26.8	+2.5
	comp=Z,9.3nm,0.5s						
CTKT	Corum	20.39	305	i P	P	05 31 28.4	+1.8
BOYT	Boyabat	20.62	307	i P	P	05 31 29.2	+0.2
BRTR	Keskin Array B	20.91	302	P	P	05 31 31.6	-0.3
	comp=Z,5.1nm,0.6s,baz=118,slow=12,SNR=20						
BALT	Daday	21.72	306	i P	P	05 31 43.5	+3.4
SIM	Simferopol'	22.77	315	eP	P	05 31 53.7	+3.2
SIM				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.4						
ISP	Isparta	22.82	295	⇓iP	P	05 31 53.5	+2.4
HYB	Hyderabad	23.81	119	⇑eP	P	05 32 03.5	+2.6
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb4.9						
HYB	Hyderabad	23.81	119	⇑iP	P	05 32 03.5	+2.6
	comp=Z,50nm,1.0s,mb4.9						
HYB	Hyderabad	23.81	119	⇑eP	P	05 32 03.5	+2.6
	comp=Z,50nm,1.0s,mb4.9						
BVA0	Borovoye Array	24.39	20	P	P	05 32 07.0	+0.8
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
BVA0	Borovoye Array	24.39	20	P	P	05 32 07.0	+0.8
	comp=Z,2.0nm,0.9s,mb3.5						
BVAR	Borovoye Array	24.39	20	P	P	05 32 07.1	+0.9
	comp=Z,13nm,0.7s,mb4.4,baz=202,slow=8.0,SNR=73						
BVAR				PcP	PcP	05 35 45.8	-1.0
	comp=Z,2.4nm,1.0s,baz=225,slow=4.1,SNR=4.4						
BVAR	Borovoye Array	24.39	20	PcP	PcP	05 35 45.8	-1.1
CHKZ	Chkalovo	25.03	20	eP	P	05 32 12.6	+0.3
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
MKAR	Makanchi Array	25.38	44	i P	P	05 32 15.8	0.0
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	25.38	44	i P	P	05 32 15.8	0.0
	comp=Z,8.0nm,0.8s,mb4.3						
KURK	Kurchatov	25.76	33	P	P	05 32 19.6	+0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
IDI	Anoyia	27.09	288	P	P	05 32 32.2	+0.6
	comp=Z,10nm,1.0s,mb4.3,baz=105,slow=4.9,SNR=2.9						
WMQ	Urumqi	27.67	53	eP	P	05 32 36.5	-0.3
WMQ				PP	PP	05 33 26.0	+0.7
WMQ				S	S	05 37 17.0	-0.1
WMQ				SS	SS	05 38 37.0	+1.0
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.6						
WMQ				LR	LR		
	comp=N,325nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=E,321nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,375nm,20.0s,MS4.0						
MLR	Muntele Rosu	28.21	310	P	P	05 32 42.4	+0.7
	comp=Z,3.0nm,0.9s,mb3.9,baz=23,slow=4.9,SNR=4.5						
OBN	Obninsk	28.33	335	eP	P	05 32 42.5	-0.2
OBN				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.8						
OBN	Obninsk	28.33	335	eP	P	05 32 42.5	-0.2
	comp=Z,24nm,1.0s,mb4.8						
AKASG	Malin Array Be	28.64	322	P	P	05 32 45.4	-0.1
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AKASG	Malin Array Be	28.64	322	P	P	05 32 45.4	-0.1
	comp=Z,6.8nm,0.7s,mb4.5,baz=127,slow=8.2,SNR=27						
NVS	Novosibirsk	30.60	30	i P	P	05 33 02.0	-1.0
ZAL	Zalesovo	30.73	33	P	P	05 33 04.2	0.0
	comp=Z,4.8nm,0.5s,mb4.5,baz=241,slow=9.3,SNR=36						
CERR	Cheremushki	33.49	39	i P	P	05 33 28.1	-0.2
CERR				eS	S	05 38 46.5	-2.4
SUW	Suwalki	33.54	324	eP	P	05 33 29.2	+0.5
GTA	Gaotai	35.97	64	eP	P	05 33 51.4	+1.6
GTA				AP	pP	05 33 55.4	+2.7
GTA				XP	sP	05 33 57.8	+3.8
GTA				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
JOF	Joensuu	36.13	340	ep	P	05 33 49.6	-1.2
	comp=Z,14nm,0.9s,mb4.9						
FINES	FINESS Array B	36.73	336	P	P	05 33 56.0	+0.2
	comp=Z,6.5nm,0.6s,mb4.7,baz=121,slow=11,SNR=30						
FINES	FINESS Array B	36.73	336	P	P	05 33 56.0	+0.1
KAF	Kangasniemi	37.11	337	ep	P	05 33 59.2	+0.1
	comp=Z,2.7nm,0.7s,mb4.2,baz=132,slow=8.6						
KAF	Kangasniemi	37.11	337	eP	P	05 33 59.2	+0.1
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
GERES	GERESS Array B	37.16	312	P	P	05 33 60.0	+0.3
	comp=Z,2.4nm,0.6s,mb4.2,baz=108,slow=8.4,SNR=10						
GERES				PcP	PcP	05 36 20.2	0.0
	comp=Z,1.1nm,0.8s,baz=153,slow=3.0,SNR=3.4						
KHC	Kasperske Hory	37.31	312	⇓eP	P	05 34 01.1	+0.2
KHC	Kasperske Hory	37.31	312	eP	P	05 34 00.0	-0.9
KHC	Kasperske Hory	37.31	312	eP	P	05 34 01.1	+0.2
CLL	Collm	38.21	315	⇑P	P	05 34 09.3	+0.9
	comp=Z,logA/T=0.9,mb4.4						
BSD	Bornholm Skovb	38.34	322	eP	P	05 34 09.6	+0.1
BSD				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.3						
BSD	Bornholm Skovb	38.34	322	i P	P	05 34 09.6	+0.1
	comp=Z,61nm,0.9s,mb5.3						
BSD	Bornholm Skovb	38.34	322	eP	P	05 34 09.6	+0.1
	comp=Z,61nm,0.9s,mb5.3						
APA	Apatity	39.41	346	⇑iP	P	05 34 14.0	-4.3
APA				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.1						
ZAK	Zakamensk	39.63	47	eP	P	05 34 21.5	+1.2
ZAK				e		05 36 27.6	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.5						
ZAK	Zakamensk	39.63	47	eP	P	05 34 21.5	+1.2
	comp=Z,2.0nm,1.0s,mb3.8						
ZAK	Zakamensk	39.63	47	ePcP	PcP	05 36 27.6	-0.3
	comp=Z,1.0nm,1.1s						
PGF	Pioggiola	39.66	301	eP	P	05 34 17.1	-3.5
	comp=Z,64nm,1.1s,mb5.0						
PGF	Pioggiola	39.66	301	eP	P	05 34 17.1	-3.5
PGF				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.0						
CMAR	Chiang Mai Arr	39.99	98	i P	P	05 34 24.0	+0.4
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	Chiang Mai Arr	39.99	98	P	P	05 34 23.8	+0.2
	comp=Z,2.4nm,0.9s,mb3.9,baz=298,slow=7.3,SNR=12						
TLY	Talaya	40.13	45	eP	P	05 34 26.0	+1.6
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.2						
TLY	Talaya	40.13	45	eP	P	05 34 26.0	+1.6
	comp=Z,7.0nm,1.5s,mb4.2						
SBF	Sospel	40.84	303	eP	P	05 34 28.2	-2.1
	comp=Z,38nm,0.8s,mb4.8						
SBF	Sospel	40.84	303	eP	P	05 34 28.2	-2.1
SBF				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
SONM	Songino Array	41.26	51	P	P	05 34 34.5	+0.8
	comp=Z,3.6nm,0.9s,mb4.0,baz=269,slow=9.7,SNR=30						
CDF	Champ du Feu	41.29	310	eP	P	05 34 31.2	-2.7
MBDF	Montbardon	41.34	304	eP	P	05 34 32.7	-1.7
	comp=Z,9.3nm,0.8s,mb4.2						
MBDF	Montbardon	41.34	304	eP	P	05 34 32.7	-1.7
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
LPG	La Plagne	41.40	305	eP	P	05 34 33.6	-1.2
	comp=Z,8.7nm,0.7s,mb4.2						
LPG	La Plagne	41.40	305	eP	P	05 34 33.6	-1.2
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
LPL	La Plagne	41.41	305	eP	P	05 34 33.1	-1.9
	comp=Z,8.5nm,0.8s,mb4.1						
LPL	La Plagne	41.41	305	eP	P	05 34 33.1	-1.9
LPL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
ULN	Ulaanbaatar	41.70	51	eP	P	05 34 37.8	+0.5
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
ULN	Ulaanbaatar	41.70	51	eP	P	05 34 37.8	+0.6
	comp=Z,5.2nm,0.8s,mb4.2						
ULN	Ulaanbaatar	41.70	51	eP	P	05 34 37.8	+0.5
	comp=Z,5.2nm,0.8s,mb4.2						
MUD	Monsted U'grnd	41.85	322	i P	P	05 34 40.3	+1.9
MUD				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
MUD	Monsted U'grnd	41.85	322	i P	P	05 34 40.3	+1.9
	comp=Z,17nm,0.7s,mb4.8						
HAU	Haudompre	41.86	309	eP	P	05 34 36.1	-2.5
CABF	La Chapelle	41.92	307	eP	P	05 34 38.2	-0.9
	comp=Z,10nm,0.7s,mb4.3						
CABF	La Chapelle	41.92	307	eP	P	05 34 38.2	-0.9
CABF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
ORIF	Oris-en-Rattie	41.99	304	eP	P	05 34 37.6	-2.1
SMRF	Simiane la Rot	42.19	303	eP	P	05 34 39.8	-1.5
	comp=Z,208nm,1.8s,mb5.2						
NB2	NORSAR Subarra	42.50	329	P	P	05 34 43.6	-0.1
	comp=Z,4.6nm,0.8s,mb4.2,baz=112,slow=7.9						
NB2	NORSAR Subarra	42.50	329	P	P	05 34 43.6	-0.1
NB2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
NOA	NORSAR Array B	42.50	329	P	P	05 34 43.6	-0.1
	comp=Z,3.1nm,0.8s,mb4.0,baz=115,slow=8.0,SNR=10.0						
ARCES	ARCESS Array B	42.73	344	P	P	05 34 45.5	+0.1
	comp=Z,4.3nm,0.7s,mb4.3,baz=135,slow=8.6,SNR=13						
MEZF	Maizieres J'vi	42.77	310	eP	P	05 34 44.1	-2.0
VIVF	Saint-Julien-l	42.84	304	eP	P	05 34 43.9	-2.8
GIVF	Givet	43.08	312	eP	P	05 34 49.2	+0.6
LASF	Ste Croix	43.42	303	eP	P	05 34 48.1	-3.3
BAIF	Baives	43.47	312	eP	P	05 34 52.3	+0.6
SMF	Signal de Mont	43.47	307	eP	P	05 34 50.7	-1.1
	comp=Z,12nm,0.8s,mb4.3						
SMF	Signal de Mont	43.47	307	eP	P	05 34 50.7	-1.1
SMF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
GYA	Guiyang	43.70	83	P	P	05 34 53.5	-0.4
GYA				S	S	05 41 23.3	-0.1
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
GYA				LR	LR		
	comp=N,310nm,18.3s,MS4.5						
GYA				LR	LR		
	comp=E,420nm,20.4s,MS4.5						
GYA				LR	LR		
	comp=Z,480nm,18.9s,MS4.4						
SSF	Saint Saulge	43.72	308	eP	P	05 34 52.8	-1.0
SSF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
SSF	Saint Saulge	43.72	308	eP	P	05 34 52.8	-1.0
	comp=Z,8.9nm,0.9s,mb4.5						
XAN	Xi'an	43.75	71	P	P	05 34 53.5	-0.7
AVF	Avril sur Loir	43.81	307	eP	P	05 34 53.2	-1.3
BGF	Bois d'Agland	44.15	307	eP	P	05 34 56.3	-1.0
HYF	Humbligny	44.32	308	eP	P	05 34 57.2	-1.4
TCF	Toulx Ste Croi	44.59	306	eP	P	05 34 59.9	-1.0
	comp=Z,6.4nm,0.7s,mb4.2						
TCF	Toulx Ste Croi	44.59	306	eP	P	05 34 59.9	-1.0
TCF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
MTLF	Montolieu	44.63	302	eP	P	05 34 58.5	-2.8
	comp=Z,22nm,1.3s,mb4.5						
MTLF	Montolieu	44.63	302	eP	P	05 34 58.5	-2.8
MTLF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.5						
HHC	Hu-ho-hao-te	44.91	61	eP	P	05 35 04.6	+1.1
HHC				AP	pP	05 35 09.1	+2.6
HHC				XP	sP	05 35 13.0	+5.2
HHC				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.9						
RJF	Les Rejaudoux	45.08	305	eP	P	05 35 04.0	-0.8
	comp=Z,67nm,1.3s,mb5.0						
RJF	Les Rejaudoux	45.08	305	eP	P	05 35 04.0	-0.8
RJF				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.0						
LFF	La Frestale	45.64	304	eP	P	05 35 07.3	-1.9
	comp=Z,11nm,0.7s,mb4.6						
LFF	La Frestale	45.64	304	eP	P	05 35 07.3	-1.9
LFF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
EPF	Esparros	46.02	302	eP	P	05 35 09.4	-2.9
LDF	La Druitiere	46.21	310	eP	P	05 35 11.1	-2.6
MFF	Saint Martin d	46.22	307	eP	P	05 35 11.7	-2.1
BOD	Bodaibo	47.23	38	eP	P	05 35 21.3	-0.3
BOD				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
BOD	Bodaibo	47.23	38	eP	P	05 35 21.3	-0.3
	comp=Z,20nm,0.9s,mb5.0						
SGMF	Saint Gilles	47.83	309	eP	P	05 35 24.3	-2.2
ROSF	Rostrenen	48.30	309	eP	P	05 35 27.1	-3.1
ESDC	Sonseca Array	49.63	298	P	P	05 35 40.5	0.0
	comp=Z,2.4nm,0.8s,mb4.3,baz=69,slow=7.8,SNR=7.6						
HIA	Hailar	50.15	49	eP	P	05 35 43.2	-1.2
HIA				pmax	pmax		
	comp=Z,5.0nm,0.7s						

HIA	Hailar	50.15	49	*e*P	P	05 35 43.2	-1.1
	comp=Z,5.3nm,0.7s,mb4.7						
HIA	Hailar	50.15	49	*e*P	P	05 35 43.2	-1.2
	comp=Z,5.3nm,0.7s,mb4.7						
SSE	Sheshan	54.50	72	P	P	05 36 13.3	-3.8
SSE				AMB	AMB		
	comp=Z,18nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,45nm,4.9s						
SSE	Sheshan	54.50	72	P	P	05 36 13.3	-3.8
	comp=Z,18nm,0.7s,mb5.2						
CN2	Changchun	54.71	56	*e*P	P	05 36 15.8	-2.7
YAK	Yakutsk	55.40	33	*e*P	P	05 36 21.9	-1.4
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK	Yakutsk	55.40	33	*e*P	P	05 36 21.9	-1.4
	comp=E,11nm,0.8s,mb4.9						
TIXI	Tiksi	55.52	21	*e*P	P	05 36 23.4	-0.7
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
TIXI	Tiksi	55.52	21	*e*P	P	05 36 23.4	-0.7
	comp=Z,6.0nm,0.7s,mb4.7						
KLR	Kul'dur	57.96	48	*e*P	P	05 36 37.2	-4.5
DBIC	Dimbokro	62.31	261	P	P	05 37 10.8	-1.2
	comp=Z,3.5nm,0.9s,mb4.5,baz=43,slow=5.8,SNR=4.4						
TSUM	Tsumeb	62.34	222	P	P	05 37 13.7	+1.6
	comp=Z,2.2nm,0.8s,mb4.3,baz=18,slow=6.4,SNR=2.4						
TSUM	Tsumeb	62.34	222	P	P	05 37 13.7	+1.6
YSS	Yuzh-Sakhalins	65.67	49	*e*P	P	05 37 32.0	-1.5
MA2	Magadan	65.97	34	*e*P	P	05 37 34.5	-0.6
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
MA2	Magadan	65.97	34	*e*P	P	05 37 34.5	-0.6
	comp=Z,8.0nm,1.1s,mb4.7						
BOSA	Boshof	66.23	210	*e*P	P	05 37 34.9	-2.5
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
BOSA	Boshof	66.23	210	*e*P	P	05 37 34.9	-2.4
	comp=Z,6.4nm,0.9s,mb4.7						
BILL	Bilibino	68.71	22	⇓*i*P	P	05 37 52.7	+0.4
BILL				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
BILL	Bilibino	68.71	22	*i* P	P	05 37 52.7	+0.4
	comp=Z,11nm,1.2s,mb4.7						
IMA	Indian Mountai	80.72	12	*e*P	P	05 39 02.1	+0.9
IMA				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
IMA	Indian Mountai	80.72	12	*e*P	P	05 39 02.1	+0.9
	comp=Z,32nm,0.8s,mb5.3						
IMA	Indian Mountai	80.72	12	*e*P	P	05 39 02.1	+0.9
	comp=Z,32nm,0.8s,mb5.3						
INK	Inuvik	80.98	4	*e*P	P	05 39 02.6	0.0
INK				*e*	pP	05 39 07.3	+1.6
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INK	Inuvik	80.98	4	*e*P	P	05 39 02.6	+0.1
	comp=Z,5.8nm,1.0s,mb4.5						
INK				*e*	pP	05 39 07.3	+1.6
SCHQ	Schefferville	82.04	331	P	P	05 39 08.4	+0.1
	comp=Z,2.1nm,1.0s,mb4.0,baz=40,slow=8.4,SNR=3.8						
COLA	College	82.79	10	*e*P	P	05 39 11.8	-0.3
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
COLA	College	82.79	10	*e*P	P	05 39 11.8	-0.2
	comp=Z,10nm,0.9s,mb4.8						
COLA	College	82.79	10	*e*P	P	05 39 11.8	-0.3
	comp=Z,10nm,0.9s,mb4.8						
ILAR	Eielson Array	83.04	10	P	P	05 39 13.2	-0.2
	comp=Z,2.8nm,0.7s,mb4.4,baz=320,slow=4.5,SNR=60						
MCK	McKinley	83.68	11	*e*P	P	05 39 16.2	-0.4
MCK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
MCK	McKinley	83.68	11	*e*P	P	05 39 16.2	-0.3
	comp=Z,5.5nm,0.8s,mb4.7						
MCK	McKinley	83.68	11	*e*P	P	05 39 16.2	-0.4
	comp=Z,6.0nm,0.8s,mb4.8						
DAWY	Dawson	84.67	7	*e*P	P	05 39 21.4	-0.1
NWAO	Narrogin (SRO)	85.27	133	P	P	05 39 26.7	+1.4
	comp=Z,4.6nm,0.7s,mb4.7,baz=90,slow=2.0,SNR=3.3						
YKA	Yellowknife Ar	86.86	356	P	P	05 39 33.1	+0.7
	comp=Z,3.6nm,0.8s,mb4.7,baz=360,slow=5.3,SNR=74						
WRA	Warramunga Arr	89.85	113	P	P	05 39 46.6	-1.1
	comp=Z,0.6nm,0.5s,mb4.2,baz=317,slow=4.0,SNR=18						
WRAB	Tennant Creek	89.85	113	P	P	05 39 43.2	-4.5
	comp=Z,4.1nm,0.8s,mb4.8						
WRAB	Tennant Creek	89.85	113	*e*P	P	05 39 48.0	+0.3
ASAR	Alice Springs	91.52	117	P	P	05 39 55.2	-0.1
	comp=Z,2.9nm,1.0s,mb4.6,baz=303,slow=4.4,SNR=12						
ULM	Lac du Bonnet	95.83	343	P	P	05 40 14.7	+0.2
	comp=Z,1.8nm,0.6s,mb4.7,baz=153,slow=2.3,SNR=4.9						
TXAR	Lajitas Array	117.45	341	PKP	PKPdf	05 45 33.5	-2.8
	comp=Z,0.4nm,0.8s,baz=135,slow=1.3,SNR=3.0						

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*IDC **22** 05:56:36.5±4.8, 30.68N×56.89E, mb3.6/6, mb1 3.8/6, mb1mx3.6/20, mbtmp3.6/6, Error ellipse: s-maj=107.1km s-min=39.7km az=173.0*

*NEIC **22** 05:56:37.6±1.8, 30.57N×56.87E, h10^{km}, mb3.9/1, MN3.5(TEH), Error ellipse: s-maj=32.2km s-min=10.6km az=187.0*

*THR **22** 05:56:38.4±0.8, 30.78N×56.85E, h14^{km}±10^{km}, ML3.3*

*CSEM **22** 05:56:40.7±0.1, 30.71N×56.77E, h35^{km}, mb3.8/1, ML4.2/1, Error ellipse: s-maj=5.2km s-min=3.2km az=36.0*

*TEH **22** 05:56:46.4, 30.79N×56.42E, h26^{km}, Mn3.5*

ISC 22 05:56:38.1±0.5**, 30.81N**±0.04×**56.90E**±0.07**, h10**^{km}**, n39, σ0**^{s}**88**/41**, mb3.7**/6**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.84	188	*e*PG	Pg	05 56 53.9	-1.0
KRBR				*e*SG	Sg	05 57 05.8	-0.3
KRBR				AML	AML	05 57 07.9	
	comp=N,1μm,0.5s						
KRBR				AML	AML	05 57 08.2	
	comp=E,1μm,0.3s						
KRBR	Kerman	0.84	188	*e*Pg	Pg	05 56 53.9	-1.1
	SNR=93						
KRBR				*e*Sg	Sg	05 57 05.8	-0.4
	comp=E,1μm,0.3s,SNR=93						
IBAF	Bafgh	1.38	305	Pn	Pn	05 57 02.9	-0.6
IMEH	Mehriz	2.04	287	Pn	Pn	05 57 13.9	+0.9
ICHK	Chekchek	2.56	304	Pn	Pn	05 57 20.0	-0.5
BNDS	Bandar-Abbas	3.46	191	*e*PN	Pn	05 57 33.6	+0.4
BNDS				AML	AML	05 58 28.2	
	comp=N,48nm,0.7s						
BNDS				AML	AML	05 58 40.0	
	comp=E,65nm,0.5s						
IPAR	Pars	3.47	255	Pn	Pb	05 57 40.9	+1.6
IPAR	Pars	3.47	255	Pn	Pb	05 57 40.9	+1.6
ZHSF	Zahedan	3.56	109	*e*P	Pn	05 57 36.5	+1.7
ZHSF				AML	AML	05 58 38.8	
	comp=N,46nm,0.5s						
NASN	Na'in	4.00	301	*e*PN	Pn	05 57 42.1	+1.1
IFIR	Firoozkooh	5.94	325	Pn	Pn	05 58 08.4	+0.1
IFIR	Firoozkooh	5.94	325	Lg		05 59 39.8	
IFIR	Firoozkooh	5.94	325	Pn	Pn	05 58 08.4	+0.1
IFIR				Lg		05 59 39.8	
IFIR	Firoozkooh	5.94	325	Pn	Pn	05 58 08.7	+0.4
IFIR				Sn	Sn	05 59 10.4	-6.8
IVRN	Varamin	6.02	315	Pn	Pn	05 58 09.5	-0.1
IVRN	Varamin	6.02	315	Pn	Pn	05 58 10.1	+0.5
IVRN	Varamin	6.02	315	Pn	Pn	05 58 10.1	+0.5
IDMV	Damavand	6.26	321	Pn	Pn	05 58 13.1	+0.2
IDMV	Damavand	6.26	321	Pn	Pn	05 58 13.2	+0.3
IDMV	Damavand	6.26	321	Pn	Pn	05 58 13.2	+0.3
IAFJ	Afjeh	6.64	321	Pn	Pn	05 58 18.3	0.0
IAFJ	Afjeh	6.64	321	Pn	Pn	05 58 18.7	+0.4
IAFJ	Afjeh	6.64	321	Pn	Pn	05 58 18.7	+0.4
IRAZ	Razeghan	7.42	310	Sn	Sn	05 59 43.4	-11
IRAZ	Razeghan	7.42	310	Pn	Pn	05 58 28.0	-1.2
IRAZ	Razeghan	7.42	310	Pn	Pn	05 58 29.0	-0.2
IRAZ	Razeghan	7.42	310	Pn	Pn	05 58 29.0	-0.2
BRTR	Keskin Array B	20.92	301	P	P	06 01 22.1	-1.3
	comp=N,0.6nm,0.7s,baz=108,slow=12,SNR=3.7						
BRTR	Keskin Array B	20.92	301	P	P	06 01 22.0	-1.3
BVAR	Borovoye Array	24.28	20	P	P	06 01 56.6	+0.3
	comp=N,1.0nm,0.6s,mb3.4,baz=198,slow=7.8,SNR=8.1						
KURK	Kurchatov	25.64	33	P	P	06 02 10.0	+0.6
	comp=N,1.9nm,0.7s,mb3.7						
KURK	Kurchatov	25.64	33	P	P	06 02 10.0	+0.6
	comp=N,1.9nm,0.7s,mb3.7						
ZAL	Zalesovo	30.61	33	P	P	06 02 53.7	-0.7
	comp=N,0.9nm,0.3s,mb4.1,baz=212,slow=11,SNR=3.1						
ZAL	Zalesovo	30.61	33	P	P	06 02 53.7	-0.7
FINES	FINESS Array B	36.68	336	P	P	06 03 45.0	-1.6
	comp=N,2.5nm,1.0s,mb4.0,baz=143,slow=9.5,SNR=3.4						
FINES	FINESS Array B	36.68	336	P	P	06 03 45.0	-1.7
ILAR	Eielson Array	82.93	10	P	P	06 09 03.1	-0.9
	comp=N,0.3nm,0.7s,mb3.5,baz=326,slow=4.6,SNR=7.1						
YKA	Yellowknife Ar	86.77	356	P	P	06 09 23.2	0.0
	comp=N,0.2nm,0.5s,mb3.6,baz=357,slow=5.2,SNR=7.8						
YKA	Yellowknife Ar	86.77	356	P	P	06 09 23.2	0.0

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*IDC **22** 06:06:27.6±4.9, 30.52N×56.88E, mb3.5/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=110.6km s-min=39.6km az=175.0*

*CSEM **22** 06:06:30.8±0.1, 30.83N×56.83E, h18^{km}, ML4.6/1, Error ellipse: s-maj=4.2km s-min=2.4km az=48.0*

*THR **22** 06:06:30.2±0.8, 30.89N×56.85E, h14^{km}±10^{km}, ML3.8*

*NEIC **22** 06:06:31.4±1.1, 30.85N×56.87E, h10^{km}, MN4.0(TEH), Error ellipse: s-maj=15.2km s-min=10.5km az=129.0*

*TEH **22** 06:06:38.2, 30.89N×56.32E, h10^{km}, Mn4.0*

ISC 22 06:06:29.6±2.0**, 30.90N**±0.07×**56.88E**±0.08**, h4**^{km}±15^{km}**, n26, σ0**^{s}**70**/29**, mb3.6**/5**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.92	186	*i* PG	Pg	06 06 47.2	-0.7
KRBR				AML	AML	06 07 25.8	
	comp=N,3μm,0.4s						
KRBR	Kerman	0.92	186	*i* Pg	Pg	06 06 47.2	-0.8
	SNR=90						
IBAF	Bafgh	1.32	302	Pn	Pn	06 06 54.3	-0.5
IMEH	Mehriz	2.00	285	Pn	Pn	06 07 05.2	+0.6
ICHK	Chekchek	2.50	303	Pn	Pn	06 07 11.5	-0.2
IPAR	Pars	3.47	253	Pn	Pn	06 07 26.6	+1.1
BNDS	Bandar-Abbas	3.54	190	*e*PN	Pn	06 07 27.1	+0.5
BNDS				AML	AML	06 08 39.2	
	comp=N,208nm,0.5s						
ISRV	Sarvestan	3.59	246	Pn	Pn	06 07 26.8	-0.5
ZHSF	Zahedan	3.61	110	*e*P	Pn	06 07 27.9	+0.4
ZHSF				AML	AML	06 08 58.2	
	comp=N,142nm,0.5s						
NASN	Na'in	3.95	300	*e*PN	Pn	06 07 32.7	+0.4
NASN				*e*SG	Sg	06 08 32.3	-8.8
NASN				AML	AML	06 09 07.5	
	comp=N,174nm,0.4s						
NASN	Na'in	3.95	300	*e*Pn	Pn	06 07 32.7	+0.4
	SNR=52						
NASN				*e*Sg	Sg	06 08 32.3	-8.8
	comp=N,174nm,0.4s,SNR=90						
IMOK	Mook	4.05	244	Pn	Pn	06 07 34.2	+0.4
IFIR	Firoozkooh	5.86	325	Pn	Pn	06 07 59.4	+0.1
IFIR				Lg		06 09 32.8	
IVRN	Varamin	5.95	315	Pn	Pn	06 08 01.1	+0.4
IDMV	Damavand	6.18	320	Pn	Pn	06 08 04.7	+0.8
DAMV	Damavand	6.26	320	*e*PN	Pn	06 08 04.8	-0.2
IAFJ	Afjeh	6.56	320	Pn	Pn	06 08 10.0	+0.7
IRAZ	Razeghan	7.36	309	Pn	Pn	06 08 19.6	-0.8
IRAZ				Sn	Sn	06 09 35.1	-10
KIV	Kislovodsk	17.20	323	*e*P	P	06 10 39.2	+7.0
KIV				pmax	pmax		
	comp=Z,6.0nm,1.3s						
BRTR	Keskin Array B	20.86	301	P	P	06 11 12.4	-2.7
	comp=Z,0.8nm,0.5s,baz=118,slow=12,SNR=5.1						
BVAR	Borovoye Array	24.21	20	P	P	06 11 48.4	+0.4
	comp=Z,0.8nm,0.6s,mb3.3,baz=198,slow=9.1,SNR=5.5						
FINES	FINESS Array B	36.59	336	P	P	06 13 38.6	+0.3
	comp=Z,1.8nm,0.9s,mb3.9,baz=140,slow=11,SNR=3.3						
GERES	GERESS Array B	37.09	311	P	P	06 13 41.9	-0.7
	comp=Z,0.3nm,0.3s,mb3.6,baz=130,slow=7.7,SNR=4.1						
ILAR	Eielson Array	82.85	10	P	P	06 18 55.6	-0.4
	comp=Z,0.9nm,1.3s,mb3.6,baz=321,slow=4.5,SNR=4.8						
YKA	Yellowknife Ar	86.69	356	P	P	06 19 14.8	-0.4
	comp=Z,0.2nm,0.6s,mb3.5,baz=1.7,slow=5.1,SNR=9.9						
YKA	Yellowknife Ar	86.69	356	P	P	06 19 14.9	-0.3

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*MOS **22** 06:06:50.7±0.7, 30.55N×56.91E, h10^{km}, mb4.2/4, Error ellipse: s-maj=24.0km s-min=14.1km az=108.0*

*IDC **22** 06:06:51.0±1.3, 30.49N×56.86E, mb3.9/14, mb1 4.1/14, mb1mx4.0/20, mbtmp3.9/14, Error ellipse: s-maj=38.0km s-min=20.3km az=29.0*

*NEIC **22** 06:06:52.8±0.8, 30.55N×56.89E, h10^{km}, mb3.7/2, Error ellipse: s-maj=21.5km s-min=12.3km az=195.0*

*CSEM **22** 06:06:53.7±0.2, 30.48N×56.80E, h33^{km}, mb4.2/2, Error ellipse: s-maj=9.8km s-min=5.5km az=16.0*

ISC 22 06:06:51.5±1.0**, 30.6N**±0.2×**56.9E**±0.1**, h10**^{km}**, n23, σ0**^{s}**78**/23**, mb3.8**/16**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	18.54	45	P	P	06 11 09.3	-0.8
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	Ala-Archa	18.54	45	P	P	06 11 09.3	-0.8
	comp=Z,5.5nm,1.1s						
AAK	Ala-Archa	18.54	45	P	P	06 11 09.3	-0.8
	comp=Z,5.5nm,1.1s						
BRTR	Keskin Array B	21.02	302	P	P	06 11 37.3	-0.3
	comp=Z,1.3nm,0.8s,mb3.3,baz=124,slow=10,SNR=4.2						
BVAR	Borovoye Array	24.51	20	P	P	06 12 12.6	+0.6
	comp=Z,3.1nm,0.6s,mb4.0,baz=204,slow=7.4,SNR=15						
CHKZ	Chkalovo	25.15	19	P	P	06 12 13.8	-4.3
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
CHKZ	Chkalovo	25.15	19	P	P	06 12 13.8	-4.3
	comp=Z,1.7nm,0.9s,mb3.6						
MLR	Muntele Rosu	28.33	310	P	P	06 12 48.5	+1.1
	comp=Z,1.5nm,0.7s,mb3.8,baz=140,slow=7.9,SNR=2.7						
AKASG	Malin Array Be	28.77	322	P	P	06 12 51.2	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	28.77	322	P	P	06 12 51.2	-0.2
	comp=Z,1.0nm,0.5s,mb3.8,baz=130,slow=8.0,SNR=6.8						
FINES	FINESS Array B	36.88	336	P	P	06 14 01.1	-0.6
	comp=Z,1.9nm,0.6s,mb4.1,baz=129,slow=9.6,SNR=9.2						
GERES	GERESS Array B	37.29	312	P	P	06 14 04.9	-0.4
	comp=Z,0.7nm,0.5s,mb3.8,baz=112,slow=7.2,SNR=4.8						
SONM	Songino Array	41.31	51	P	P	06 14 40.0	+1.2
	comp=Z,0.7nm,0.8s,mb3.4,baz=270,slow=7.4,SNR=5.8						
NOA	NORSAR Array B	42.64	329	P	P	06 14 48.9	-0.5
	comp=Z,1.4nm,1.0s,mb3.6,baz=149,slow=12,SNR=2.6						
ARCES	ARCESS Array B	42.87	344	P	P	06 14 51.1	-0.1
	comp=Z,1.9nm,0.7s,mb3.9,baz=108,slow=7.7,SNR=5.8						
BOD	Bodaibo	47.32	38	*e*P	P	06 15 26.8	-0.1
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BOD	Bodaibo	47.32	38	*e*P	P	06 15 26.8	-0.1
	comp=Z,4.0nm,0.9s,mb4.3						
SCHQ	Schefferville	82.18	331	P	P	06 19 14.3	+0.6
	comp=Z,0.9nm,0.8s,mb3.8,baz=242,slow=17,SNR=2.2						
ILAR	Eielson Array	83.17	10	P	P	06 19 18.2	-0.4
	comp=Z,0.8nm,0.8s,mb3.8,baz=323,slow=4.6,SNR=12						
YKA	Yellowknife Ar	87.00	356	P	P	06 19 38.1	+0.4
	comp=Z,0.8nm,0.8s,mb4.0,baz=0.8,slow=5.3,SNR=16						
YKA	Yellowknife Ar	87.00	356	P	P	06 19 38.2	+0.5
WRA	Warramunga Arr	89.76	113	P	P	06 19 50.1	-1.7
	comp=Z,0.3nm,0.5s,mb3.9,baz=314,slow=4.0,SNR=7.4						
ASAR	Alice Springs	91.42	117	P	P	06 20 00.5	+1.0
	comp=Z,0.9nm,0.9s,mb4.1,baz=292,slow=3.9,SNR=5.3						

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*NEIC **22** 06:16:04.6±1.6, 13.21N×87.62W, h201^{km}±17^{km}, mb4.2/2, Error ellipse: s-maj=24.5km s-min=12.1km az=67.0*

*IDC **22** 06:16:04.2±2.3, 13.36N×87.48W, h192^{km}±26^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.3/23, mbtmp4.0/10, Error ellipse: s-maj=32.5km s-min=15.8km az=60.0*

ISC 22 06:16:03.6±0.4**, 13.3N**±0.1×**87.53W**±0.08**, h205**^{km}±5^{km}**, n46, σ0**^{s}**98**/55**, mb3.6**/9**, 11C-3D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.30	272	⇑*e*P	P	06 16 29.9	-1.1
BLLM	Bellamira	0.71	284	⇑*i*P	P	06 16 31.5	-1.0
CRIN	San Cristobal	0.73	140	*e*P	P	06 16 33.0	+0.5
CRIN				*e*S	S	06 16 56.5	+1.5
VSM	San Miguel	0.74	283	⇑*e*P	P	06 16 31.9	-0.7
CAHU	Cacacuatique	0.83	307	⇑*e*P	P	06 16 33.0	0.0
TELN	Telica	0.94	134	*e*P	P	06 16 33.1	-0.5
LEON	Leon	1.05	144	⇑*e*P	P	06 16 34.3	-0.1
LEON				*e*S	S	06 16 55.8	-2.4
CNGN	Cerro Negro	1.11	133	*e*P	P	06 16 35.5	+0.7
CNGN				*e*S	S	06 17 00.2	+1.1
MIRN	Miramar	1.14	136	⇓*e*P	P	06 16 35.4	+0.3
MOMJ	Momotombo	1.29	131	*e*P	P	06 16 36.2	0.0
SNVI	San Vicente	1.32	285	*e*P	P	06 16 36.2	-0.4
SNVI				*e*S	S	06 17 03.0	+1.0
COPN	Copaltepe	1.41	140	*e*P	P	06 16 37.4	0.0
COPN				*e*S	S	06 17 00.9	-2.5
LCBS	La Ceiba	1.46	286	⇑*e*P	P	06 16 36.8	-1.0
LCBS				*e*S	S	06 17 05.0	+0.9
LFRS	El Faro	1.53	284	⇑*e*P	P	06 16 37.5	-0.9
LBRS	Las Brisas	1.55	288	⇑*e*P	P	06 16 38.3	-0.2
LFU	La Fuente	1.61	288	*e*P	P	06 16 38.5	-0.6
MGAN	Managua	1.67	131	*e*P	P	06 16 41.0	+1.4
MGAN				*e*S	S	06 17 07.3	-0.2
MGAN				*i*		06 17 09.2	
	comp=N,250nm,0.3s						
WILN	Americas 2	1.71	130	*e*P	P	06 16 40.9	+1.0
WILN				*e*S	S	06 17 07.5	-0.5
TICN	Ticuantepe	1.76	134	*e*P	P	06 16 41.5	+1.0
TICN				*e*S	S	06 17 09.8	+0.9
BOQS	Boqueron	1.77	286	⇓*e*P	P	06 16 40.1	-0.4
APON	Apoyo	1.96	133	*e*S	S	06 17 11.7	-0.6
SNJE	San Jose	2.11	287	⇑*e*P	P	06 16 43.4	-0.5
SBLS	San Blas	2.12	286	⇑*e*P	P	06 16 43.5	-0.5
SBLS				*e*S	S	06 17 14.8	-0.4
RTR	El Retiro	2.15	287	⇑*e*P	P	06 16 44.1	-0.3
RTR				*e*S	S	06 17 18.1	+2.2
RBDL	Robledal	2.26	292	⇓*e*P	P	06 16 45.5	0.0
RBDL				*e*S	S	06 17 18.3	+0.3
JTS	JuntasAbangare	3.89	139	P	P	06 17 04.7	0.0
	comp=N,3.5nm,0.3s,baz=308,slow=21,SNR=27						
JTS				S	S	06 17 46.9	-5.1
	comp=N,12nm,0.3s,baz=296,slow=21,SNR=17						
SDV	Santo Domingo	17.14	103	P	P	06 19 52.2	-0.1
	comp=N,1.3nm,0.3s,baz=319,slow=6.7,SNR=13						
LRAL	Lakeview Retre	19.69	1	*e*P	P	06 20 20.6	+1.8
	comp=N,4.2nm,0.5s						
GOGA	Godfrey	20.39	10	P	P	06 20 29.0	+3.1
	comp=N,18nm,0.5s						
TXAR	Lajitas Array	21.90	319	P	P	06 20 42.4	+1.7
	comp=N,0.6nm,0.6s,mb3.3,baz=142,slow=9.7,SNR=10						
TXAR				pP		06 21 20.6	
	comp=N,0.4nm,1.0s,baz=146,slow=9.0,SNR=3.2						
WMOK	Wichita Mounta	23.68	336	*e*P	P	06 20 57.4	-0.5
	comp=N,6.6nm,1.1s,mb4.2						
SADO	Sadowa	32.20	11	P	P	06 22 12.9	-1.4
	comp=N,3.4nm,0.7s,mb4.0,baz=219,slow=10,SNR=6.3						
PDAR	Pinedale Array	35.02	331	P	P	06 22 38.9	+0.4
	comp=N,0.4nm,0.7s,mb3.0,baz=121,slow=10,SNR=3.3						
LPAZ	La Paz	35.07	146	P	P	06 22 40.2	+1.1
	comp=N,1.0nm,0.5s,mb3.6,baz=306,slow=14,SNR=2.9						
LPAZ	La Paz	35.07	146	P	P	06 22 40.2	+1.1
ULM	Lac du Bonnet	37.51	351	P	P	06 22 57.7	-1.4
	comp=N,1.8nm,0.5s,mb3.9,baz=160,slow=9.4,SNR=5.8						
ULM	Lac du Bonnet	37.51	351	P	P	06 22 57.7	-1.4
SCHQ	Schefferville	44.52	17	P	P	06 23 56.3	0.0
	comp=N,3.6nm,0.9s,mb3.7,baz=69,slow=14,SNR=9.5						
FRB	Frobisher Bay	52.14	11	P	P	06 24 53.7	-0.9
	comp=N,2.8nm,0.5s,mb4.0,baz=217,slow=9.1,SNR=24						
FRB	Frobisher Bay	52.14	11	P	P	06 24 53.7	-0.9
YKA	Yellowknife Ar	52.81	345	P	P	06 24 58.8	-0.7
	comp=N,0.3nm,0.6s,mb2.9,baz=138,slow=7.8,SNR=14						
YKA				pP	pP	06 25 45.5	+0.1
	comp=N,0.3nm,0.8s,baz=143,slow=7.7,SNR=3.7						
YKA	Yellowknife Ar	52.81	345	P	P	06 24 58.9	-0.7
YKA				pP	pP	06 25 45.5	+0.1
WRA	Warramunga Arr	139.41	255	PKhKP		06 35 02.9	
	comp=N,0.2nm,0.8s,baz=89,slow=3.2,SNR=5.4						
WRA				PKP	PKPdf	06 35 08.9	+1.7
	comp=N,0.7nm,0.5s,baz=89,slow=2.4,SNR=20						
WRA	Warramunga Arr	139.41	255	PKP	PKPdf	06 35 08.9	+1.7
ASAR	Alice Springs	139.49	249	PKhKP		06 35 02.7	
	comp=N,0.4nm,0.9s,baz=89,slow=4.7,SNR=3.8						
ASAR				PKP	PKPdf	06 35 09.2	+1.9
	comp=N,0.5nm,0.6s,baz=95,slow=1.6,SNR=12						
ASAR	Alice Springs	139.49	249	PKP	PKPdf	06 35 09.2	+1.9

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*TAP **22** 06:20:35.0, 24.38N×122.94E, h57^{km}±1^{km}, ML3.7*

JMA 22 06:20:34.8±0.1**, 24.52N×122.95E, h67**^{km}±1^{km}**, M3.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.08	136	P	P	06 20 44.7	0.0
YOJ				S	S	06 20 51.8	0.0
IRIF	Iriomote-Funau	0.73	104	P	P	06 20 49.8	-0.2
IRIF				S	S	06 21 00.9	-0.5
HATJ	Hateruma jima	0.91	120	P	P	06 20 52.0	-0.2
HATJ				*e*S	S	06 21 05.0	0.0
JKRS	Kuro-shima	1.01	106	P	P	06 20 53.5	0.0
JKRS				S	S	06 21 07.9	+0.6
JIJ	Ishigaki jima	1.10	98	P	P	06 20 54.3	-0.4
JIJ				S	S	06 21 08.7	-0.7
JTJ	Tarama	1.60	85	P	P	06 21 01.7	+0.1
JTJ				*e*S	S	06 21 22.0	+0.7

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*IDC **22** 06:33:10.0±16.0, 24.90N×122.25E, h84^{km}±159^{km}, mb3.1/6, mb1 3.3/6, mb1mx3.2/21, mbtmp3.4/6, Error ellipse: s-maj=74.1km s-min=20.8km az=74.0*

*NEIC **22** 06:33:10.6, 24.83N×121.82E, h84^{km}, mb3.9/1, After TAP.*

NEIC Recorded [2 TAP] in I-lan; [1 TAP] in Hua-lien, T'ai-pei and T'ao-yuan Counties.

*TAP **22** 06:33:10.2, 24.79N×121.79E, h83^{km}, ML4.2*

TAP Felt I J at Ilan, I J at Neicheng, I J at Suao, II J at Nioudou, I J at Taipai, II J at Nanau, I J at Sanguang, I J at Kuangyinshan, I J at Jungli (National Central University).

*JMA **22** 06:33:10.0±0.3, 24.86N×121.84E, h78^{km}, M3.2*

ISC 22 06:33:09.6±0.3**, 24.80N**±0.02×**121.82E**±0.02**, h87**^{km}±2^{km}**, n62, σ0**^{s}**80**/106**, mb3.3**/7**, 4C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILA	Ilan	0.07	242	*i* P	P	06 33 22.4	+0.5
ILA				S	S	06 33 31.5	+0.4
EGS		0.12	66	⇓*i*P	P	06 33 22.4	+0.4
EGS				S	S	06 33 30.4	-0.8
TWE	Neicheng	0.16	240	⇓*i*P	P	06 33 22.5	+0.4
TWE				S	S	06 33 31.4	0.0
TWC	Suao	0.19	171	⇓*i*P	P	06 33 22.7	+0.6
TWC				S	S	06 33 31.9	+0.3
TWB1	Santiao Chiao	0.26	37	⇓*i*P	P	06 33 22.7	+0.2
TWB1				S	S	06 33 31.4	-0.8
NWF	Wu-fen Shan	0.27	353	⇓*i*P	P	06 33 22.9	+0.3
NWF				S	S	06 33 32.1	-0.3
ENTT	Nioudou	0.28	235	⇓*i*P	P	06 33 23.0	+0.4
ENTT				S	S	06 33 32.2	-0.2
TWA	Mucha	0.28	311	*i* P	P	06 33 22.9	+0.3
TWA				S	S	06 33 32.0	-0.4
TATO	Taipei	0.35	301	⇑*i*Pn	P	06 33 23.0	0.0
TATO				*e*Sn	S	06 33 32.3	-0.8
TAP1	Taipei	0.36	312	*i* P	P	06 33 23.3	+0.2
TAP1				S	S	06 33 32.7	-0.5
TAP	Taipei	0.37	311	*i* P	P	06 33 23.4	+0.2
TAP				S	S	06 33 33.0	-0.4
ENA	Nanau	0.38	191	⇓*i*P	P	06 33 23.4	+0.2
ENA				S	S	06 33 33.5	+0.2
NSK	Sanguang	0.43	254	*i* P	P	06 33 23.5	-0.1
NSK				S	S	06 33 32.6	-1.6
TWS1	Kuangyinshan	0.47	310	⇑*i*P	P	06 33 24.5	+0.6
TWS1				S	S	06 33 34.9	+0.3
TWY	Chenhua	0.51	338	*i* P	P	06 33 24.7	+0.5
TWY				S	S	06 33 35.7	+0.4
NNS	Nan Shan	0.54	229	⇓*i*P	P	06 33 24.8	+0.2
NNS				S	S	06 33 35.1	-0.4
NCU	National Centr	0.60	287	⇑*i*P	P	06 33 25.4	+0.4
NCU				S	S	06 33 36.4	0.0
TWD	Chiawan	0.74	196	*e*P	P	06 33 25.6	-1.0
TWD				S	S	06 33 37.0	-2.0
NSTT	Nanjuang	0.76	257	⇓*i*P	P	06 33 26.7	-0.1
NSTT				S	S	06 33 38.4	-0.9
HSN	Hsinchu	0.77	270	*e*P	P	06 33 26.5	-0.3
HSN				S	S	06 33 38.4	-1.1
TWT	Tachien	0.80	227	P	P	06 33 28.0	+0.8
TWT				S	S	06 33 40.2	+0.2
WHF	Hehuan Shan	0.82	218	⇓P	P	06 33 27.8	+0.5
WHF				S	S	06 33 40.3	-0.2
HWA	Hwalien	0.84	193	*e*P	P	06 33 27.0	-0.6
PCYT	Pengchaiyu	0.86	16	⇑*i*P	P	06 33 28.3	+0.6
PCYT				S	S	06 33 43.6	+2.4

NSY	Sanyi	1.03	249	eP	P	06 33 30.1	+0.4
NSY				S	S	06 33 44.6	-0.2
ESL	Shilin	1.04	200	eP	P	06 33 28.5	-1.3
TWQ1	Liyutan	1.05	245	P	P	06 33 30.2	+0.3
TWQ1				S	S	06 33 44.2	-1.0
YOJ	Yonaguni jima	1.14	107	P	P	06 33 30.8	-0.2
YOJ				eS	S	06 33 46.2	-0.9
TCU	Taichung	1.22	238	eP	P	06 33 32.1	0.0
SMLT	Sun Moon Lake	1.24	223	eP	P	06 33 32.6	+0.4
SMLT				S	S	06 33 49.9	+0.6
TYC	Yuchr	1.25	225	eP	P	06 33 32.8	+0.3
TYC				S	S	06 33 49.2	-0.3
EHY	Hungye	1.36	199	eP	P	06 33 32.7	-1.3
EHY				S	S	06 33 49.7	-2.2
WNT	Mingjian	1.38	229	eP	P	06 33 34.4	+0.2
WNT				S	S	06 33 52.5	+0.1
TWF1	Yuli	1.52	198	eP	P	06 33 34.3	-1.6
YUS	Yu-Shan	1.52	211	eP	P	06 33 37.0	+1.0
YUS				S	S	06 33 56.6	+1.1
ALS	Alishan	1.58	216	eP	P	06 33 37.3	+0.6
ALS				S	S	06 33 58.6	+1.9
CHN5	Tsauling	1.58	221	eP	P	06 33 37.2	+0.4
CHN5				S	S	06 33 57.3	+0.5
WTCT	Ta-ch'eng	1.68	237	eP	P	06 33 37.9	-0.1
WTCT				S	S	06 33 58.8	-0.2
ELDTW	Lidau	1.76	205	eP	P	06 33 39.1	0.0
ELDTW				S	S	06 34 00.8	0.0
IRIF	Iriomote-Funau	1.80	104	P	P	06 33 39.3	-0.3
IRIF				eS	S	06 34 01.5	-0.2
CHN4	Tsaushan	1.82	218	eP	P	06 33 40.5	+0.5
CHN4				S	S	06 34 05.5	+3.3
STYT	Tauyuan	1.89	211	eP	P	06 33 41.6	+0.7
STYT				S	S	06 34 05.2	+1.3
WTP	Ta-pu	1.90	216	eP	P	06 33 41.3	+0.4
TWK	Hsinying	1.95	219	eP	P	06 33 42.0	+0.5
HATJ	Hateruma jima	1.96	112	P	P	06 33 42.0	+0.3
HATJ				eS	S	06 34 05.9	+0.6
CHN1	Nanshi	1.99	217	eP	P	06 33 42.6	+0.4
CHN1				S	S	06 34 07.2	+1.1
SGST	Jiashian	2.05	214	eP	P	06 33 43.4	+0.5
JKRS	Kuro-shima	2.07	105	P	P	06 33 43.3	0.0
JKRS				eS	S	06 34 08.7	+0.6
TWG	Pinlang	2.08	199	eP	P	06 33 42.1	-1.3
JIJ	Ishigaki jima	2.16	101	P	P	06 33 44.0	-0.5
JIJ				eS	S	06 34 10.1	-0.2
SSD	Sandimen	2.31	208	eP	P	06 33 47.4	+0.8
SSD				S	S	06 34 14.8	+0.7
PNG	Penghu	2.40	240	eP	P	06 33 47.5	-0.3
WDGT	Dungji	2.50	233	eP	P	06 33 49.1	-0.1
JTJ	Tarama	2.63	93	P	P	06 33 51.6	+0.6
JTJ				eS	S	06 34 23.5	+1.5
LAY	Lan-yu	2.76	185	eP	P	06 33 51.2	-1.7
SONM	Songino Array	26.04	336	P	P	06 38 36.3	0.0
	0.7nm,0.7s,mb3.2,baz=160,slow=9.6,SNR=6.1						
SONM				pP	pP	06 38 54.7	-1.1
	1.0nm,0.9s,baz=152,slow=10,SNR=5.7						
KURK	Kurchatov	42.00	319	P	P	06 40 54.3	+0.7
	1.6nm,0.8s,mb3.8						
WRA	Warramunga Arr	46.11	164	P	P	06 41 24.9	-2.2
	0.2nm,0.4s,mb3.2,baz=345,slow=8.4,SNR=4.9						
ASAR	Alice Springs	49.58	165	P	P	06 41 53.7	-0.4
	0.2nm,0.6s,mb3.2,baz=342,slow=8.6,SNR=3.3						
FINES	FINESS Array B	71.21	330	P	P	06 44 20.2	-0.6
	0.9nm,0.6s,mb3.8,baz=37,slow=6.9,SNR=4.3						
INK	Inuvik	72.44	22	P	P	06 44 25.0	-3.1
	0.2nm,0.4s,mb3.3,baz=356,slow=6.0,SNR=3.9						
YKA	Yellowknife Ar	82.18	23	P	P	06 45 20.9	-1.1
	0.1nm,0.6s,mb2.8,baz=309,slow=5.2,SNR=7.0						

NEIC 22 06:47:12.5±2.6**, 40.51N**×**125.79W, h10^{km}, mb3.3**/3**, Error ellipse: s-maj=30.4km s-min=9.6km az=77.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.61	76	eP	Pn	06 47 39.1	-2.0
WDC	Whiskeytown Da	2.48	87	eP	Pn	06 47 51.4	-2.2
YBH	Yreka Blue Hor	2.63	61	eP	Pn	06 47 53.9	-1.8
LHEM	Herd Peak	2.92	66	P	Pn	06 48 00.2	+0.3
HUMO	Hull Mountain	2.98	44	eP	Pn	06 47 58.9	-2.0
BUOR	Burton Butte	3.20	55	P	Pn	06 48 04.5	+0.6
BBOR	Butler Butte	3.33	43	P	Pn	06 48 04.7	-1.0
LTIM	Timbered Crate	3.33	77	P	Pn	06 48 05.2	-0.6
LBCM	Butte Creek Ri	3.39	83	P	Pn	06 48 06.9	+0.2
HOG	Hogback Mounta	3.53	59	P	Pn	06 48 08.0	-0.5
MOD	Modoc	4.37	70	eP	Pn	06 48 18.3	-2.2
IRO	Indian Ridge	4.37	36	P	Pn	06 48 18.7	-1.8
FRIS	Frissel Point	4.60	35	P	Pn	06 48 21.9	-1.9
WCN	Washoe City	4.79	103	eP	Pn	06 48 25.2	-1.4
CMB	Columbia Colle	4.87	119	eP	Pn	06 48 25.8	-1.8
BMO	Blue Mountains	7.61	52	eP	Pn	06 49 03.8	-2.4
HLID	Hailey	9.00	66	P	P	06 49 22.7	-2.8
MCMT	McKenzie Canyo	10.46	61	eP	P	06 49 43.2	-2.3
CHMT	Chamberlain Mo	11.10	51	eP	P	06 49 52.2	-2.1
BOZ	Bozeman (W)	11.55	59	P	P	06 49 58.4	-2.1
BW06	Boulder Array	12.35	74	eP	P	06 50 07.5	-3.8
SDCO	Great Sand Dun	15.98	93	eP	P	06 50 58.4	-0.6
	1.4nm,0.9s						
MNTX	Cornudas Mount	18.66	112	eP	P	06 51 30.1	-2.5
FFC	Flin Flon	21.30	40	eP	P	06 51 58.9	-2.4
	1.8nm,0.6s						
WMOK	Wichita Mounta	22.11	96	P	P	06 52 08.9	-0.7
	0.6nm,0.6s						

IDC ***22*** *06:48:06.5±3.5, 30.52N×56.82E, mb3.8/11, mb1 4.0/11, mb1mx3.9/21, mbtmp3.8/11, MS3.0/1, Ms1 3.0/1, ms1mx2.5/24, Error ellipse: s-maj=81.3km s-min=26.3km az=177.0*

NEIC ***22*** *06:48:08.3±1.1, 30.55N×56.83E, h10^{km}, mb3.7/3, MN3.8(TEH), Error ellipse: s-maj=20.7km s-min=6.6km az=188.0*

THR ***22*** *06:48:09.1±0.7, 30.80N×56.81E, h14^{km}±6^{km}, ML3.6*

CSEM ***22*** *06:48:10.5±0.1, 30.81N×56.80E, h25^{km}, mb3.8/1, ML4.5/1, Error ellipse: s-maj=3.4km s-min=2.3km az=41.0*

TEH ***22*** *06:48:14.8, 30.74N×56.43E, h10^{km}, Mn3.8*

ISC 22 06:48:10.0±1.5**, 30.80N**±0.06×**56.83E**±0.07**, h19^{km}**±13^{km}**, n36, σ0^{s}72**/39**, mb3.7**/12**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.82	184	ePG	Pb	06 48 24.5	-0.9
KRBR				AML	AML	06 48 54.9	
	comp=E,2μm,0.4s						
IBAF	Bafgh	1.34	306	Pn	Pn	06 48 33.8	-0.1
IMEH	Mehriz	1.99	288	Pn	Pn	06 48 44.1	+0.9
ICHK	Chekchek	2.52	305	Pn	Pn	06 48 51.4	+0.6
BNDS	Bandar-Abbas	3.44	190	ePN	Pn	06 49 04.5	+0.6
BNDS				AML	AML	06 50 08.2	
	comp=N,120nm,0.6s						
BNDS				AML	AML	06 50 12.2	
	comp=E,117nm,0.7s						
ZHSF	Zahedan	3.61	108	eP	Pn	06 49 07.0	+0.7
ZHSF				AML	AML	06 50 13.0	
	comp=N,136nm,0.6s						
ZHSF				AML	AML	06 50 22.3	
	comp=E,64nm,0.6s						
NASN	Na'in	3.96	301	ePN	Pn	06 49 11.9	+0.6
NASN				eSG	Sn	06 50 11.8	+14
NASN				AML	AML	06 50 17.2	
	comp=N,112nm,0.3s						
NASN				AML	AML	06 50 21.9	
	comp=E,125nm,0.3s						
NASN	Na'in	3.96	301	ePn	Pn	06 49 11.9	+0.6
	SNR=52						
NASN				eSg	Sn	06 50 11.8	+14
	comp=E,125nm,0.3s,SNR=90						
GHIR	Ghir-Karzin	4.19	234	ePN	Pn	06 49 14.7	+0.2
IFIR	Firoozkooh	5.91	326	Pn	Pn	06 49 39.6	+0.7
IVRN	Varamin	5.99	316	Pn	Pn	06 49 40.0	0.0
IDMV	Damavand	6.23	321	Pn	Pn	06 49 43.6	+0.2
DAMV	Damavand	6.31	321	ePN	Pn	06 49 44.2	-0.3
IAFJ	Afjeh	6.62	321	Pn	Pn	06 49 48.9	+0.1
IAFJ				Sn	Sn	06 50 58.6	-5.8
IRAZ	Razeghan	7.39	310	Pn	Pn	06 49 58.7	-0.9
IRAZ				Sn	Sn	06 51 15.7	-8.1
GNI	Garni	13.55	317	LR	LR	06 57 21.6	
	comp=E,56nm,18.4s,baz=352,slow=40						
AAK	Ala-Archa	18.39	45	P	P	06 52 24.7	-1.0
	comp=E,2.0nm,0.9s						
AAK	Ala-Archa	18.39	45	P	P	06 52 24.7	-1.0
	comp=E,2.0nm,0.9s						
BRTR	Keskin Array B	20.88	302	P	P	06 52 52.2	-1.3
	comp=E,1.2nm,0.9s,baz=100,slow=8.8,SNR=4.9						
BRTR	Keskin Array B	20.88	302	P	P	06 52 52.2	-1.3
BVAR	Borovoye Array	24.31	20	P	P	06 53 28.1	+0.9
	comp=E,2.3nm,0.6s,mb3.8,baz=206,slow=7.6,SNR=16						
KURK	Kurchatov	25.68	33	P	P	06 53 41.0	+0.8
	comp=E,1.9nm,0.8s,mb3.7						
KURK	Kurchatov	25.68	33	P	P	06 53 41.0	+0.7
	comp=E,1.9nm,0.8s,mb3.7						
ZAL	Zalesovo	30.65	33	P	P	06 54 24.8	-0.4
	comp=E,1.5nm,0.3s,mb4.2,baz=247,slow=7.5,SNR=8.1						
FINES	FINESS Array B	36.66	336	P	P	06 55 16.5	-0.5
	comp=E,1.3nm,0.6s,mb3.9,baz=127,slow=9.5,SNR=6.7						
GERES	GERESS Array B	37.12	312	P	P	06 55 20.9	-0.1
	comp=E,0.4nm,0.6s,mb3.4,baz=106,slow=7.1,SNR=2.3						
SONM	Songino Array	41.19	51	P	P	06 55 55.0	+0.2
	comp=E,0.4nm,0.7s,mb3.2,baz=297,slow=8.3,SNR=4.5						
NOA	NORSAR Array B	42.44	329	P	P	06 56 04.3	-0.5
	comp=E,0.3nm,0.5s,mb3.2,baz=126,slow=7.6,SNR=2.4						
NOA	NORSAR Array B	42.44	329	P	P	06 56 04.3	-0.6
FRB	Frobisher Bay	76.42	338	P	P	06 59 59.0	-0.5
	comp=E,0.7nm,0.6s,mb3.8,baz=66,slow=5.4,SNR=5.2						
INK	Inuvik	80.89	4	P	P	07 00 26.7	+3.0
	comp=E,0.8nm,0.8s,mb3.7						
SCHQ	Schefferville	81.97	331	P	P	07 00 29.6	-0.1
	comp=E,3.4nm,1.2s,mb4.2,baz=95,slow=7.2,SNR=2.4						
ILAR	Eielson Array	82.95	10	P	P	07 00 33.5	-1.0
	comp=E,0.5nm,0.7s,mb3.6,baz=324,slow=4.7,SNR=10						
ILAR	Eielson Array	82.95	10	P	P	07 00 33.5	-1.0
YKA	Yellowknife Ar	86.78	356	P	P	07 00 53.7	+0.1
	comp=E,0.4nm,0.7s,mb3.8,baz=0.2,slow=5.2,SNR=16						
YKA	Yellowknife Ar	86.78	356	P	P	07 00 53.7	+0.1

CASC 22 07:00:21.9±2.9**, 14.30N**×**91.23W, h102^{km}**±18^{km}**, MD3.8, ML4.1, 3C-1D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.41	68	eP	P	07 00 37.1	-0.2
PCG	Pacaya	0.61	81	eP	P	07 00 39.2	+0.3
PCG				eS	S	07 00 52.7	+1.1
IXG	Ixpaco	0.76	99	eP	P	07 00 39.2	-1.1
IXG				eS	S	07 00 55.2	+1.3
IXG				AML	AML	07 00 57.9	
	comp=N,8μm,0.4s						
NBG	Las Nubes	0.90	71	eP	P	07 00 42.8	+1.1
NBG				eS	S	07 00 60.0	+3.5
NBG				AML	AML	07 01 05.5	
	comp=E,2μm,0.4s						
RBDL	Robledal	1.51	97	⇑eP	P	07 00 48.4	-0.4
RBDL				eS	S	07 01 08.1	-0.7
RTR	El Retiro	1.59	104	⇑eP	P	07 00 49.3	-0.5
RTR				eS	S	07 01 12.9	+2.4
SBLS	San Blas	1.62	106	⇑eP	P	07 00 49.6	-0.7
SBLS				eS	S	07 01 11.8	+0.6
SNJE	San Jose	1.63	105	eP	P	07 00 49.5	-0.8
SNJE				eS	S	07 01 12.4	+0.9
MTO2	Montecristo 2	1.81	87	eP	P	07 00 52.3	-0.3
MTO2				eS	S	07 01 14.8	-0.6
SNET	Serv Nac Est T	2.03	107	⇓eP	P	07 00 56.9	+1.4
LFU	La Fuente	2.12	105	eP	P	07 00 57.4	+0.7
LFU				eS	S	07 01 24.8	+2.2
LBRS	Las Brisas	2.19	104	eP	P	07 00 57.0	-0.7
LFRS	El Faro	2.21	107	eP	P	07 00 57.0	-0.8
LFRS				eS	S	07 01 25.9	+1.2
LCBS	La Ceiba	2.28	106	eP	P	07 00 58.3	-0.5
LCBS				eS	S	07 01 28.8	+2.4
SNVI	San Vicente	2.42	106	eP	P	07 01 01.7	+1.0
SNVI				eS	S	07 01 29.8	0.0
VSM	San Miguel	3.00	106	eP	P	07 01 10.5	+1.8

IDC ***22*** *07:14:00.8±11.0, 1.93S×80.93W, mb3.6/4, mb1 3.9/5, mb1mx3.6/19, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=233.4km s-min=58.8km az=169.0*

NEIC ***22*** *07:14:09.3±3.8, 0.97S×81.26W, h10^{km}, mb3.8/2, Error ellipse: s-maj=81.0km s-min=13.7km az=178.0*

ISC 22 07:14:04.3±5.2**, 2.6S**±0.4×**80.6W**±0.4**, h89^{km}**±42^{km}**, n10, σ0^{s}81**/11**, mb3.7**/6**, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	3.54	38	ePn	P	07 14 58.3	0.0
OTAV				eS	S	07 15 39.5	+0.3
SDV	Santo Domingo	15.13	41	Pn	P	07 17 33.9	-0.6
	0.1nm,0.3s,baz=246,slow=12,SNR=2.2						
TXAR	Lajitas Array	38.64	327	P	P	07 21 20.3	-0.5
	0.3nm,0.9s,mb3.1,baz=153,slow=10,SNR=3.5						
NVAR	Mina Array Bea	53.59	323	P	P	07 23 19.8	+1.1
	0.8nm,0.7s,mb3.8,baz=131,slow=7.6,SNR=5.2						
NVAR	Mina Array Bea	53.59	323	P	P	07 23 19.8	+1.1
ULM	Lac du Bonnet	54.22	348	P	P	07 23 22.4	-0.7
	1.5nm,0.5s,mb4.3,baz=158,slow=8.6,SNR=5.9						
HLID	Hailey	55.03	330	P	P	07 23 29.0	-0.1
	0.5nm,0.5s,mb3.8						
BOZ	Bozeman (W)	55.32	334	P	P	07 23 30.0	-1.1
	1.2nm,0.9s,mb3.9						
YKA	Yellowknife Ar	69.80	344	P	P	07 25 08.5	+1.6
	0.5nm,0.8s,mb3.4,baz=139,slow=6.0,SNR=14						
YKA	Yellowknife Ar	69.80	344	P	P	07 25 08.5	+1.6

DJA 22 07:28:19.0±0.8**, 8.75S**×**115.58E, h97^{km}**±6^{km}**, MD5.2**/4**, ML3.3**/2**, 4C-4D, Error ellipse: s-maj=30.5km s-min=8.9km az=2.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	0.06	299	⇑iPn	P	07 28 32.4	-0.3
	77nm,0.2s						
RATI				⇑iSn	S	07 28 42.2	-0.7
KEDI	Kedomdong	0.59	64	ePn	P	07 28 34.9	-0.5
	35nm,0.2s						
KEDI				⇓iSn	S	07 28 46.3	-1.3
KELI	Kelakatan	1.20	296	⇑iPn	P	07 28 41.7	-0.3
	42nm,0.9s						
KELI	Kelakatan	1.20	296	⇓iP	P	07 28 41.9	-0.1
KELI				⇓iSn	S	07 28 57.9	-1.2
SRDI	Scrawed	1.45	281	⇑iPn	P	07 28 44.3	-0.6
	25nm,0.9s						
SRDI				⇓iSn	S	07 29 03.0	-1.1

IDC 22 07:31:08.4±25.0**, 22.68S**×**172.20W, mb4.2**/4**, mb1 4.4**/4**, mb1mx4.0**/17**, mbtmp4.2**/4**, 1D, Error ellipse: s-maj=473.8km s-min=152.7km az=77.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	38.69	266	eP	P	07 38 34.8	-1.1
	4.9nm,0.4s						
CTA	Charters Tower	38.69	266	P	P	07 38 34.7	-1.1
	5.4nm,0.4s,baz=89,slow=11,SNR=14						
STKA	Stephens Creek	41.82	247	P	P	07 38 58.1	-3.5
	0.8nm,0.4s,baz=108,slow=9.6,SNR=4.7						
ASAR	Alice Springs	49.31	258	P	P	07 39 59.5	-1.9
	2.4nm,0.9s,baz=91,slow=7.1,SNR=15						
WB2	Warramunga Arr	49.65	263	⇓iP	P	07 40 02.7	-1.4
WRA	Warramunga Arr	49.66	263	P	P	07 40 03.0	-1.2
	2.0nm,0.6s,baz=99,slow=7.1,SNR=37						

IDC ***22*** *07:32:09.2±8.0, 5.90S×149.86E, h42^{km}±59^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.4/13, mbtmp3.7/4, ML2.8/1, MS2.2/1, Ms1 2.2/1, ms1mx2.0/11, Error ellipse: s-maj=84.3km s-min=53.6km az=126.0*

NEIC ***22*** *07:32:11.1±4.1, 5.84S×149.50E, h52^{km}±28^{km}, mb4.0/2, Error ellipse: s-maj=59.3km s-min=25.4km az=97.0*

ISC 22 07:32:08.2±4.6**, 5.8S**±0.2×**149.6E**±0.4**, h51^{km}**±34^{km}**, n9, σ0^{s}94**/9**, mb3.6**/3**, MS2.2**/1**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.34	214	P	P	07 33 13.2	-0.2
	3.3nm,0.3s,baz=47,slow=7.3,SNR=8.7						
PMG				S	S	07 34 03.8	+0.6
	6.9nm,0.3s,baz=195,slow=22,SNR=7.7						
WRAB	Tennant Creek	20.44	225	eP	P	07 36 41.7	-2.4
	7.3nm,0.8s						
WB2	Warramunga Arr	20.45	225	⇑iP	P	07 36 44.0	-0.1
WRA	Warramunga Arr	20.45	225	P	P	07 36 43.9	-0.3
	2.4nm,0.7s,baz=52,slow=11,SNR=23						
ASAR	Alice Springs	23.34	219	P	P	07 37 14.3	+1.4
	1.0nm,0.9s,mb3.2,baz=56,slow=8.7,SNR=11						
STKA	Stephens Creek	27.02	195	P	P	07 37 47.7	-0.1
	0.6nm,0.3s,mb3.6,baz=337,slow=13,SNR=3.7						
STKA	Stephens Creek	27.02	195	P	P	07 37 47.7	-0.1
JNU	Nakatsue	42.58	337	LR	LR	07 57 25.9	
	comp=Z,2.9nm,19.0s,MS2.2,baz=234,slow=35						
ULN	Ulaanbaatar	65.20	330	eP	P	07 42 47.1	+0.5
	1.0nm,0.7s,mb4.0						

BJI ***22*** *07:46:26.9, 23.58N×94.59E, h99^{km}, mB5.0, mb4.6*

NEIC ***22*** *07:46:28.6±0.6, 23.61N×94.55E, h95^{km}±6^{km}, mb4.4/7, Error ellipse: s-maj=9.8km s-min=5.5km az=210.0*

IDC ***22*** *07:46:28.3±0.6, 23.78N×94.77E, h90^{km}±5^{km}, mb3.9/15, mb1 4.0/16, mb1mx3.9/22, mbtmp4.2/16, Error ellipse: s-maj=27.0km s-min=10.4km az=52.0*

ISC 22 07:46:27.4±0.5**, 23.58N**±0.04×**94.54E**±0.03**, h96^{km}**±5^{km}**, h92^{km}**±1.9^{km}**:pP-P, n83, σ1^{s}35**/99**, mb4.2**/24**, 2C-4D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGT	Agartala	3.03	276	e	P	07 47 10.0	-4.5
SHL	Shillong	3.12	310	eP	P	07 47 16.4	+0.7
SHL				eS	S	07 47 50.2	-2.0
CHRT	Chiangrai	6.12	126	PG	P	07 47 56.5	-0.2
CHRT				SG	S	07 49 46.0	+40
CHG	Chiang Mai	6.28	138	⇓P	P	07 47 59.2	+0.2
	41nm,0.9s						
GTK	Gangtok	6.53	306	e	P	07 47 50.0	-12
GTK				e		07 49 04.0	
CM31	Chiang Mai Arr	6.55	140	eP	P	07 48 02.5	-0.3
CMAR	Chiang Mai Arr	6.55	140	P	P	07 48 03.1	+0.3
	2.4nm,0.3s,baz=317,slow=13,SNR=72						
LSA	Lhasa	6.80	334	P	P	07 48 06.8	+0.5
LSA				S	S	07 49 17.0	-5.8
LSA				Smax			
	comp=N,510nm,0.8s						
LSA				Smax			
	comp=E,100nm,0.8s						
LSA	Lhasa	6.80	334	⇓iP	P	07 48 06.6	+0.2
NANT	Nan	7.46	128	⇑P	P	07 48 14.0	-1.3
	comp=E,69nm,0.5s						
BDT	Bhumibol Dam	7.57	146	P	P	07 48 18.0	+1.2
KMI	Kunming	7.63	77	P	P	07 48 18.8	+1.2
KMI				AMB	AMB		
	comp=Z,48nm,0.8s						
KMI	Kunming	7.63	77	P	P	07 48 18.7	+1.1
	comp=Z,48nm,0.8s						
BOK	Bokaro	7.94	273	eP	P	07 48 23.3	+1.5
BOK				eS	S	07 49 47.1	-3.4
BOK				e		07 49 47.9	
BOK				e		07 49 51.0	
	comp=N,428nm,0.5s						
BOK				e		07 49 52.8	
	comp=E,173nm,0.5s						
JIRN	Jiri	8.56	300	ePn	P	07 48 30.0	-0.2
JIRN				eSn	S	07 50 00.1	-5.7
	comp=E,407nm,0.3s						
JIRN	Jiri	8.56	300	ePn	P	07 48 30.0	-0.2
	comp=E,204nm,0.3s						
JIRN				eSn	S	07 50 00.1	-5.7
BWNR	Bhubaneshwar	8.74	250	eP	P	07 48 33.1	+0.5
BWNR				e		07 50 05.7	
BWNR				e		07 50 08.7	
	comp=N,505nm,0.4s						
BWNR				e		07 50 10.6	
	comp=E,526nm,0.4s						
GUN	Gumba	8.92	301	ePn	P	07 48 34.6	-0.4
GUN				eSn	S	07 50 08.9	-5.6
	comp=E,466nm,0.4s						
PKI	Pulchoki	9.15	298	ePn	P	07 48 37.4	-0.7
PKI				eSn	S	07 50 14.4	-5.7
	comp=E,154nm,0.4s						
KKN	Kakani	9.34	299	ePn	P	07 48 39.9	-0.9
KKN				eSn	S	07 50 18.8	-6.0
	comp=E,147nm,0.2s						
DMN	Daman	9.41	297	ePn	P	07 48 40.8	-0.9
DMN				eSn	S	07 50 20.5	-6.0
	comp=E,200nm,0.5s						
GKN	Gorkha	9.95	298	ePn	P	07 48 47.9	-1.1
GKN				eSn	S	07 50 33.6	-5.9
	comp=E,385nm,0.4s						
KOLN	Koldanda	10.71	295	ePn	P	07 48 58.0	-1.2
KOLN				eSn	S	07 50 51.2	-6.6
	comp=E,200nm,0.4s						
GYA	Guiyang	11.36	73	⇓iP	P	07 49 10.5	+2.6
GYA				XP		07 49 30.8	
GYA				S	S	07 51 15.5	+2.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,280nm,8.1s						
GYA				LR	LR		
	comp=E,340nm,9.8s						
GYA				LR	LR		
	comp=Z,420nm,10.2s						
BLSP	Bilaspur	11.53	265	eP	P	07 49 10.7	+0.5
BLSP				eS	S	07 51 10.9	-6.6
BLSP				e		07 51 15.7	
	comp=N,168nm,0.3s						
BLSP				e		07 51 16.9	
	comp=E,105nm,0.2s						
ALBI	Allahabad	11.73	281	eS	S	07 51 11.5	-11
VIS	Vishakhapatnam	12.00	243	eP	P	07 49 18.9	+2.4
VIS				e		07 51 21.5	
VIS				e		07 51 24.3	
	comp=E,23nm,0.4s						
VIS				e		07 51 25.7	
	comp=N,38nm,0.6s						
LGTI	Lohaghat	14.06	298	⇑iP	P	07 49 43.0	-0.4
LGTI				e		07 52 16.0	
LZH	Lanzhou	14.84	31	eP	P	07 49 55.0	+1.7
LZH				AP		07 50 11.0	
LZH				AMB	AMB		
	comp=Z,26nm,1.0s						
LZH	Lanzhou	14.84	31	eP	P	07 49 55.0	+1.7
	comp=Z,26nm,1.0s						
LZH				pP		07 50 11.0	
LZH				sP		07 50 15.0	
ENH	Enshi	14.90	60	eP	P	07 49 52.7	-1.4
	comp=Z,72nm,0.9s						
JOSI	Joshimath	15.04	301	e	P	07 49 45.8	-10
JOSI				e		07 52 20.5	
BHPL	Bhopal	15.72	272	eP	P	07 50 07.3	+2.7
BHPL				e		07 52 52.3	
DDI	Dehra Dun	16.15	298	e	P	07 50 09.5	-0.4
DDI				e		07 53 01.5	
XAN	Xi'an	16.33	47	P	P	07 50 10.9	-1.3
XAN				AMB	AMB		
	comp=Z,48nm,0.8s						
NDI	New Delhi	16.36	292	eP	P	07 50 16.0	+3.4
NDI				e		07 53 00.5	
AYAN	Aya Nagar	16.39	291	eP	P	07 50 11.6	-1.4
AYAN				e		07 52 60.0	
GTA	Gaotai	16.40	15	eP	P	07 50 17.1	+4.1
GTA				AP		07 50 31.4	
GTA				PP	PP	07 50 33.3	+5.5
GTA				S	S	07 53 19.1	+7.8
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s						
GTA				AMB	AMB		
	comp=Z,118nm,4.9s						
GTA				LR	LR		
	comp=N,131nm,12.2s						
GTA				LR	LR		
	comp=E,87nm,11.4s						
GTA				LR	LR		
	comp=Z,83nm,12.2s						
KLP	Kalpa	16.46	302	eP	P	07 50 13.3	-0.5
KLP				e		07 53 09.9	
KUDL	Kundal	16.87	289	eP	P	07 50 20.2	+1.4
KUDL				e		07 53 12.0	
SMLA	Simla	17.15	300	⇓i	P	07 50 35.7	+13
SMLA				i S	S	07 53 37.8	+10
SDNR	Sundarnagar	17.45	301	eP	P	07 50 26.6	+0.5
SDNR				e		07 53 35.8	
POO	Poona	19.95	259	e	S	07 54 30.0	+1.7
WMQ	Urumqi	20.96	346	eP	P	07 51 04.0	-0.4
WMQ				AP		07 51 24.0	

WMQ				PP	PP	07 51 32.0	+2.1
WMQ				XP		07 51 37.0	
WMQ				S	S	07 54 47.0	-0.2
WMQ				AMB	AMB		
	comp=Z,26nm,0.8s						
JASL	Jaisalmer	21.63	284	e	P	07 51 13.3	+2.1
JASL				e		07 55 14.5	
KSH	Kashi	22.35	320	eP	P	07 51 20.6	+2.5
KSH				eAP		07 51 42.4	
KSH				eS	S	07 55 14.0	+1.5
KSH				ePS		07 55 24.1	
KSH				eSS	SS	07 56 05.1	+4.7
KSH				ePCS		07 58 48.5	
KSH				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.5						
KSH				LR	LR		
	comp=N,190nm,5.0s						
KSH				LR	LR		
	comp=E,220nm,5.4s						
ULHL	Ulahol	24.04	325	P	P	07 51 36.8	+2.4
	SNR=42						
KZA	Kyzart	24.45	324	P	P	07 51 40.8	+2.4
	SNR=7.6						
BJT	Baijiatuau	24.52	43	eP	P	07 51 37.3	-1.9
	comp=E,12nm,0.7s,mb4.4						
SSE	Sheshan	24.78	67	P	P	07 51 40.6	-1.2
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,41nm,3.3s						
SSE	Sheshan	24.78	67	P	P	07 51 40.6	-1.2
	comp=Z,30nm,0.8s,mb4.8						
TKM2	Tokmak 2	24.86	325	P	P	07 51 43.8	+1.5
	SNR=25						
UCH	Uchtor	24.96	323	P	P	07 51 45.5	+2.2
	SNR=16						
AAK	Ala-Archa	25.24	324	P	P	07 51 48.0	+2.0
	SNR=11						
AAK	Ala-Archa	25.24	324	eP	P	07 51 46.7	+0.7
	comp=Z,12nm,0.9s,mb4.3						
AML	Almayashu	25.36	322	P	P	07 51 48.9	+1.8
	SNR=8.4						
EKS2	Erkin-Say	25.66	323	P	P	07 51 52.1	+2.2
	SNR=11						
SONM	Songino Array	25.98	18	P	P	07 51 50.4	-2.4
	comp=Z,0.8nm,0.5s,mb3.4,baz=193,slow=9.6,SNR=12						
KURK	Kurchatov	29.78	339	P	P	07 52 27.7	+0.7
ZAL	Zalesovo	31.19	349	P	P	07 52 38.9	-0.5
	comp=Z,1.6nm,0.3s,mb4.2,baz=314,slow=3.1,SNR=3.1						
ZAL	Zalesovo	31.19	349	P	P	07 52 38.9	-0.5
CN2	Changchun	32.40	44	eP	P	07 52 50.8	+0.7
BVAR	Borovoye Array	34.64	334	P	P	07 53 08.2	-1.1
	comp=Z,3.0nm,0.7s,mb4.3,baz=132,slow=10,SNR=13						
BVAR				ScP		07 59 15.5	
	comp=Z,1.6nm,0.9s,baz=166,slow=5.9,SNR=5.4						
MALT	Malatya	49.61	301	eP	P	07 55 10.2	-0.8
	comp=Z,3.1nm,0.9s,mb4.2						
ASF	Jabal al Asfar	51.16	293	P	P	07 55 24.7	+1.8
	comp=Z,3.5nm,0.4s,mb4.7,baz=194,slow=2.3,SNR=4.3						
EIL	Elat	53.12	290	P	P	07 55 38.5	+0.9
	comp=Z,3.0nm,0.4s,mb4.7,baz=108,slow=3.2,SNR=3.3						
BRTR	Keskin Array B	53.32	303	P	P	07 55 38.6	-0.3
	comp=Z,0.7nm,0.5s,mb4.0,baz=90,slow=7.2,SNR=6.0						
AKASG	Malin Array Be	56.59	316	P	P	07 56 00.7	-1.7
	comp=Z,1.0nm,0.3s,mb4.3,baz=84,slow=6.7,SNR=10						
AKASG				pP	pP	07 56 24.4	-1.7
	comp=Z,1.3nm,0.6s,baz=75,slow=6.4,SNR=1.9						
JOF	Joensuu	57.12	331	ep	P	07 56 04.8	-1.2
	comp=Z,1.4nm,0.4s,mb4.3						
WRA	Warramunga Arr	58.11	135	P	P	07 56 12.4	-1.1
	comp=Z,0.9nm,0.4s,mb4.2,baz=322,slow=7.4,SNR=32						
WRA				pP	pP	07 56 35.6	-1.7
	comp=Z,1.2nm,0.6s,baz=324,slow=7.6,SNR=6.3						
WRAB	Tennant Creek	58.11	135	eP	P	07 56 12.0	-1.5
	comp=Z,2.3nm,0.6s,mb4.4						
WB2	Warramunga Arr	58.12	135	eP	P	07 56 12.5	-1.1
MLR	Muntele Rosu	58.78	310	P	P	07 56 18.1	+0.3
	comp=Z,5.3nm,0.6s,mb4.8,baz=198,slow=2.6,SNR=12						
KAF	Kangasniemi	59.27	329	ep	P	07 56 19.9	-1.0
	comp=Z,0.5nm,0.3s,mb4.0,baz=93,slow=6.2						
FINES	FINESS Array B	59.29	329	P	P	07 56 19.3	-1.7
	comp=Z,0.9nm,0.4s,mb4.2,baz=96,slow=6.2,SNR=14						
NWAO	Narrogin (SRO)	60.22	158	P	P	07 56 27.5	-0.4
	comp=Z,6.2nm,1.1s,mb4.6,baz=104,slow=5.5,SNR=5.2						
ASAR	Alice Springs	60.55	138	P	P	07 56 29.6	-0.7
	comp=Z,1.1nm,0.5s,mb4.1,baz=322,slow=6.9,SNR=31						
ASAR				pP	pP	07 56 52.0	-2.3
	comp=Z,1.8nm,0.6s,baz=320,slow=6.7,SNR=7.9						
ARCES	ARCESS Array B	60.80	338	P	P	07 56 30.4	-1.0
	comp=Z,3.7nm,0.9s,mb4.4,baz=95,slow=7.2,SNR=12						
NB2	NORSAR Subarra	66.46	328	P	P	07 57 06.7	-1.7
	comp=Z,1.5nm,0.6s,mb4.0,baz=85,slow=6.5						
NOA	NORSAR Array B	66.46	328	P	P	07 57 06.8	-1.6
	comp=Z,1.1nm,0.5s,mb3.9,baz=85,slow=6.3,SNR=6.0						
GERES	GERESS Array B	66.72	315	P	P	07 57 09.5	-0.8
	comp=Z,1.2nm,0.6s,mb3.9,baz=63,slow=6.0,SNR=8.9						
GERES				sP	sP	07 57 41.7	-3.4
	comp=Z,0.2nm,0.3s,baz=76,slow=4.0,SNR=1.8						
YKA	Yellowknife Ar	91.13	13	P	P	07 59 21.9	-0.3
	comp=Z,0.3nm,1.1s,mb3.3,baz=334,slow=5.0,SNR=2.9						
SDV	Santo Domingo	144.62	334	PKP	PKPdf	08 05 52.9	-0.6
	comp=Z,2.7nm,0.6s,baz=214,slow=22,SNR=7.0						

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*IDC **22** 07:52:00.7±1.4, 16.37S×178.55W, mb4.1/8, mb1 4.4/8, mb1mx4.2/15, mbtmp4.0/8, Error ellipse: s-maj=99.3km s-min=18.8km az=149.0*

ISC 22 07:52:04.1±1.2**, 16.5S**±0.5×**178.5W**±0.3**, h33^{km}, n12, σ0^{s}66**/12**, mb4.1**/9**, 1C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.23	240	⇓iP	P	07 59 31.6	+0.4
	2.9nm,0.6s,mb4.2						
STKA	Stephens Creek	39.23	240	P	P	07 59 31.4	+0.2
	3.9nm,0.6s,mb4.3,baz=96,slow=8.9,SNR=13						
WB2	Warramunga Arr	44.80	258	eP	P	08 00 16.9	0.0
WRA	Warramunga Arr	44.81	258	P	P	08 00 16.6	-0.4
	2.2nm,0.7s,mb4.1,baz=92,slow=6.9,SNR=29						
ASAR	Alice Springs	45.09	253	P	P	08 00 18.9	-0.4
	17nm,0.7s,mb5.0,baz=88,slow=8.2,SNR=257						
ASPA	Alice Springs	45.10	253	⇓iP	P	08 00 19.0	-0.3
KAKA	Kakadu	47.53	268	⇑iP	P	08 00 39.8	+1.2
	3.3nm,0.6s,mb4.5						
NVAR	Mina Array Bea	78.49	44	P	P	08 04 05.2	+1.4
	0.6nm,0.7s,mb3.7,baz=218,slow=5.5,SNR=6.0						
ILAR	Eielson Array	84.56	13	P	P	08 04 34.8	-0.2
	0.4nm,0.6s,mb3.7,baz=231,slow=4.1,SNR=5.4						
TXAR	Lajitas Array	85.33	58	P	P	08 04 39.5	-0.1
	0.9nm,0.8s,mb3.9,baz=219,slow=5.6,SNR=10						
PDAR	Pinedale Array	86.41	44	P	P	08 04 44.4	-0.2
	0.4nm,0.5s,mb3.9,baz=203,slow=3.1,SNR=5.6						
YKA	Yellowknife Ar	93.11	25	P	P	08 05 14.6	-1.0
	0.3nm,0.9s,mb3.7,baz=246,slow=4.4,SNR=5.9						

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*IDC **22** 08:02:15.7±1.1, 15.97N×61.45W, mb3.6/4, mb1 3.9/4, mb1mx3.5/21, mbtmp3.6/4, Error ellipse: s-maj=19.1km s-min=16.2km az=137.0*

*TRN **22** 08:02:15.8, 15.89N×61.64W, h19^{km}, M3.1(FDF)*

*NEIC **22** 08:02:16.4, 15.82N×61.69W, h29^{km}, MD3.5(TRN), After TRN.*

ISC 22 08:02:18.4±0.6**, 15.83N**±0.06×**61.71W**±0.10**, h30^{km}**±6^{km}**, n19, σ0^{s}73**/28**, mb3.6**/4**, 2C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBL	Barber's Block	0.38	143	⇑iP	Pb	08 02 26.6	-0.4
BBL				eS	Sb	08 02 32.5	-0.3
DWS	Wesley	0.46	124	⇓iP	Pb	08 02 28.2	0.0
DWS				eS	Sb	08 02 34.7	-0.2
MDN	Morne-Daniel	0.59	149	⇑iP	Pb	08 02 30.4	+0.1
MDN				eS	Sb	08 02 39.2	+0.8
DBCT	Belle View Cho	0.66	148	eP	Pb	08 02 31.4	+0.1
MBRY		0.97	334	eP	Pn	08 02 35.8	-0.3
MBRY				eS	Sb	08 02 49.4	+0.4
MRYT		0.97	334	eP	Pn	08 02 35.8	-0.3
MRYT				eS	Sb	08 02 49.4	+0.4
MLYT		1.00	332	eP	Pn	08 02 36.3	-0.2
MGH	Saint George's	1.01	331	eP	Pn	08 02 36.6	-0.1
MBWH		1.02	333	eP	Pn	08 02 36.4	-0.4
MBGB		1.03	331	i P	Pn	08 02 36.7	-0.2
MBGB				i S	Sb	08 02 50.5	-0.2
BPA	Boggy Peak	1.22	353	eP	Pn	08 02 39.2	-0.4
BPA				eS	Sn	08 02 55.3	+0.1
NVBH	Bath Hotel, Ne	1.55	326	eP	Pn	08 02 46.1	+1.7
NVBH				eS	Sn	08 03 07.5	+3.9
CPB	Codrington	1.80	356	eP	Pn	08 02 47.9	-0.2
CPB				eS	Sn	08 03 10.8	+0.6
SABS	Saba	2.31	321	eP	Pn	08 02 51.6	-3.7
SABT	Saba	2.31	321	eP	Pn	08 02 51.6	-3.7
ULM	Lac du Bonnet	44.02	329	P	P	08 10 24.6	-0.5
	0.6nm,0.3s,mb3.7,baz=121,slow=5.9,SNR=2.2						
PDAR	Pinedale Array	48.77	313	P	P	08 11 03.0	+0.3
	0.7nm,0.8s,mb3.8,baz=119,slow=8.3,SNR=5.9						
YKA	Yellowknife Ar	59.36	335	P	P	08 12 18.8	-1.2
	0.6nm,0.5s,mb3.9,baz=106,slow=7.4,SNR=18						
ILAR	Eielson Array	73.76	334	P	P	08 13 52.6	+1.3
	0.2nm,0.6s,mb3.2,baz=77,slow=5.2,SNR=6.3						

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*BJI **22** 08:02:20.4, 6.86N×92.40E, h43^{km}, mb4.6*

*IDC **22** 08:02:22.9±0.7, 7.35N×92.37E, h20^{km}±3^{km}, mb4.0/11, mb1 4.1/12, mb1mx4.0/20, mbtmp4.1/12, ML4.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/21, Error ellipse: s-maj=28.3km s-min=12.6km az=50.0*

*NEIC **22** 08:02:23.0±0.5, 7.22N×92.24E, mb4.5/8, Error ellipse: s-maj=14.2km s-min=9.3km az=60.0*

*MOS **22** 08:02:24.2±1.5, 7.42N×92.10E, h33^{km}, mb4.6/4, Error ellipse: s-maj=23.0km s-min=13.8km az=95.4*

ISC 22 08:02:20.8±0.5**, 7.23N**±0.07×**92.27E**±0.09**, h22^{km}, h22^{km}**±.5^{km}**:pP-P, n46, σ0^{s}95**/40**, mb4.4**/25**, MS3.7**/1**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	12.91	30	eP	P	08 05 26.2	+0.2
CMAR	Chiang Mai Arr	12.91	30	Pn	P	08 05 27.7	+1.7
	0.3nm,0.3s,baz=233,slow=14,SNR=28						
VIS	Vishakhapatnam	13.59	321	i P	P	08 05 32.0	-3.1
JIRN	Jiri	21.12	345	eP	P	08 07 06.8	+0.2
	39nm,1.2s,mb4.6						
PKI	Pulchoki	21.25	343	eP	P	08 07 08.2	+0.3
	53nm,1.2s,mb4.8						
DMN	Daman	21.38	342	eP	P	08 07 09.7	+0.5
	35nm,0.9s,mb4.7						
GUN	Gumba	21.44	344	eP	P	08 07 10.0	+0.1
	23nm,0.8s,mb4.6						
KOLN	Koldanda	22.02	339	eP	P	08 07 16.0	+0.3
	23nm,0.9s,mb4.6						
LSA	Lhasa	22.38	357	P	P	08 07 20.0	+0.8
LSA	Lhasa	22.38	357	eP	P	08 07 20.5	+1.3
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
LSA	Lhasa	22.38	357	eP	P	08 07 20.5	+1.3
	comp=Z,9.1nm,0.6s,mb4.4						
TGY	Tagaytay City	28.96	74	P	P	08 08 25.4	+4.2
	comp=Z,95nm,0.3s,baz=250,slow=11,SNR=3.1						
GTA	Gaotai	32.75	11	eP	P	08 08 54.5	+0.1
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.7						
AAK	Ala-Archa	38.59	339	i P	P	08 09 44.8	+0.7
AAK	Ala-Archa	38.59	339	eP	P	08 09 44.4	+0.3
	comp=Z,5.6nm,1.0s,mb4.2						
AAK				e	pP	08 09 50.9	+0.2
FITZ	Fitzroy Crossi	41.45	128	eP	P	08 10 08.4	+0.4
	comp=Z,5.2nm,0.8s,mb4.2						
SONM	Songino Array	42.21	14	P	P	08 10 13.9	0.0
	comp=Z,1.9nm,0.8s,mb3.8,baz=198,slow=7.8,SNR=6.7						
SONM				pP	pP	08 10 20.1	-0.4
	comp=Z,2.0nm,0.9s,baz=196,slow=9.0,SNR=6.8						
SONM				PcP	PcP	08 12 08.3	-0.2
	comp=Z,0.5nm,0.8s,baz=180,slow=1.4,SNR=2.9						
ZAK	Zakamensk	43.98	10	eP	P	08 10 27.0	-1.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.7						
KURK	Kurchatov	44.81	348	i P	P	08 10 35.3	+0.3
KURK	Kurchatov	44.81	348	eP	P	08 10 34.5	-0.5
	comp=Z,12nm,1.2s,mb4.6						
KURK				e	pP	08 10 41.1	-0.5
ZAL	Zalesovo	46.96	354	i P	P	08 10 59.6	+7.7
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	Zalesovo	46.96	354	P	P	08 10 51.2	-0.7
	comp=Z,0.7nm,0.3s,mb4.0,baz=329,slow=14,SNR=5.8						
BVAR	Borovoye Array	49.02	343	P	P	08 11 07.0	-1.0
	comp=Z,1.8nm,0.8s,mb4.2,baz=149,slow=8.6,SNR=9.4						
BVAR				pP	pP	08 11 13.5	-1.2
	comp=Z,1.3nm,0.7s,baz=135,slow=8.4,SNR=5.8						
WRA	Warramunga Arr	49.42	124	P	P	08 11 10.8	-0.7
	comp=Z,3.8nm,0.7s,mb4.5,baz=303,slow=8.9,SNR=33						
WRA				pP	pP	08 11 17.9	-0.3
	comp=Z,2.9nm,0.8s,baz=303,slow=8.7,SNR=11						
WRA				PcP	PcP	08 12 34.3	+0.4
	comp=Z,0.6nm,0.8s,baz=308,slow=2.6,SNR=2.8						
WRAB	Tennant Creek	49.42	124	eP	P	08 11 11.4	-0.2
WRAB				ePP	pP	08 11 18.6	+0.3
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
WRAB	Tennant Creek	49.42	124	eP	P	08 11 11.4	-0.2
	comp=Z,8.6nm,0.7s,mb4.9						
WRAB				epP	pP	08 11 18.6	+0.3
WB2	Warramunga Arr	49.43	124	eP	P	08 11 11.8	+0.2
ASAR	Alice Springs	50.95	128	P	P	08 11 23.2	+0.1
	comp=Z,5.3nm,1.1s,mb4.4,baz=299,slow=6.9,SNR=22						
ASAR				pP	pP	08 11 29.4	-0.4
	comp=Z,1.9nm,0.7s,baz=303,slow=7.3,SNR=9.6						
ASAR				PcP	PcP	08 12 40.4	+0.8
	comp=Z,0.8nm,0.7s,baz=300,slow=3.4,SNR=5.5						
BOD	Bodaibo	53.21	14	eP	P	08 11 37.6	-2.1
GNI	Garni	53.57	315	P	P	08 11 44.0	+1.4
	comp=Z,2.3nm,0.3s,mb4.6,baz=61,slow=5.7,SNR=2.5						
SVE	Sverdlovsk	55.33	339	eP	P	08 11 55.0	-0.2
KMBO	Kilima Mbogo	55.51	264	P	P	08 11 58.6	+1.5
	comp=Z,1.1nm,0.8s,mb3.9,baz=202,slow=22,SNR=2.7						
KIV	Kislovodsk	56.56	319	i P	P	08 12 05.9	+1.6
KIV	Kislovodsk	56.56	319	P	P	08 12 05.6	+1.4
	comp=Z,9.3nm,0.4s,mb5.2						
ASAJ	Asahikawa	57.11	41	LR	LR	08 36 01.7	
	comp=Z,60nm,19.2s,MS3.7,baz=69,slow=35						
STKA	Stephens Creek	61.02	132	eP	P	08 12 36.1	+0.7
	comp=Z,2.0nm,0.7s,mb4.4						
STKA	Stephens Creek	61.02	132	P	P	08 12 35.2	-0.2
	comp=Z,2.3nm,0.7s,mb4.4,baz=290,slow=6.5,SNR=7.6						
BRTR	Keskin Array B	61.45	311	P	P	08 12 37.0	-1.2
	comp=Z,0.6nm,0.6s,mb3.9,baz=63,slow=9.7,SNR=3.3						
FINES	FINESS Array B	72.42	333	P	P	08 13 46.0	-1.2
	comp=Z,0.9nm,0.6s,mb3.9,baz=121,slow=8.1,SNR=4.4						
GERES	GERESS Array B	77.07	318	P	P	08 14 14.1	-0.1
	comp=Z,0.4nm,0.4s,mb3.7,baz=72,slow=4.2,SNR=5.8						
GERES				pP	pP	08 14 21.2	+0.1
	comp=Z,0.7nm,0.7s,baz=117,slow=3.0,SNR=2.7						
INK	Inuvik	98.11	16	P	P	08 15 55.9	-0.9
	comp=Z,2.1nm,1.1s,mb4.6						
YKA	Yellowknife Ar	107.47	13	PP	PP	08 21 02.9	-6.6
	comp=Z,0.8nm,1.2s,baz=337,slow=7.6,SNR=3.6						
NVAR	Mina Array Bea	126.41	30	PKP	PKPdf	08 21 26.2	-0.8
	comp=Z,1.2nm,0.8s,baz=341,slow=1.5,SNR=7.9						
NVAR				pPKP		08 21 32.4	
	comp=Z,0.5nm,0.7s,baz=333,slow=2.0,SNR=3.7						
PDAR	Pinedale Array	126.42	20	PKP	PKPdf	08 21 24.4	-2.4
	comp=Z,0.6nm,0.7s,baz=351,slow=2.5,SNR=7.0						
PDAR				pPKP		08 21 31.0	
	comp=Z,0.5nm,0.9s,baz=72,slow=4.7,SNR=3.6						
TXAR	Lajitas Array	140.54	22	PKP	PKPdf	08 21 52.1	-1.7
	comp=Z,0.4nm,0.6s,baz=292,slow=0.2,SNR=8.4						
JCT	Junction City	140.76	17	ePKP	PKPdf	08 21 53.1	-1.0

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*BJI **22** 08:05:30.2, 3.70N×95.90E, h30^{km}, mB5.3, mb4.8, Ms4.5, Msz4.2*

*NEIC **22** 08:05:32.3±0.4, 3.75N×95.87E, h30^{km}, mb4.5/13, Error ellipse: s-maj=14.7km s-min=6.9km az=57.0*

*IDC **22** 08:05:34.3±0.6, 4.00N×96.01E, h43^{km}±4^{km}, mb4.2/15, mb1 4.3/16, mb1mx4.3/20, mbtmp4.4/16, ML4.1/1, MS3.4/1, Ms1 3.6/1, ms1mx2.8/23, Error ellipse: s-maj=27.4km s-min=12.0km az=50.0*

ISC 22 08:05:32.4±0.4**, 3.83N**±0.07×**95.99E**±0.09**, h44^{km}, h44^{km}**±1.6^{km}**:pP-P, n69, σ1^{s}03**/61**, mb4.5**/36**, MS4.4**/1**, 1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	14.82	11	eP	P	08 09 02.6	+1.7
CMAR	Chiang Mai Arr	14.82	11	P	P	08 09 03.4	+2.4
	0.3nm,0.3s,baz=203,slow=13,SNR=29						
CMAR				LR	LR	08 15 06.4	
	comp=Z,134nm,19.7s,baz=195,slow=39						
HYB	Hyderabad	21.78	310	eP	P	08 10 24.0	+1.7
HYB				eS	S	08 14 30.0	+15
HYB	Hyderabad	21.78	310	i P	P	08 10 24.0	+1.7
HYB				eS	S	08 14 30.0	+15
JIRN	Jiri	25.47	339	eP	P	08 10 58.5	+0.2
	27nm,0.6s,mb4.9						
JIRN	Jiri	25.47	339	eP	P	08 10 58.0	-0.3
	14nm,0.6s,mb4.7						
JIRN				eP		08 10 58.5	
PKI	Pulchoki	25.67	338	eP	P	08 11 01.3	+1.2
	11nm,0.6s,mb4.5						
PKI	Pulchoki	25.67	338	eP	P	08 11 00.6	+0.5
PKI				eP		08 11 01.3	
GUN	Gumba	25.81	339	eP	P	08 11 00.4	-1.0
	19nm,0.5s,mb4.9						
GUN	Gumba	25.81	339	eP	P	08 11 00.8	-0.6
	19nm,0.5s,mb4.9						
GUN	Gumba	25.81	339	eP	P	08 11 00.4	-1.0
GUN				eP		08 11 00.8	
DMN	Daman	25.82	337	eP	P	08 11 02.4	+0.9
	12nm,0.7s,mb4.5						
DMN	Daman	25.82	337	eP	P	08 11 03.1	+1.6
	12nm,0.7s,mb4.5						
DMN	Daman	25.82	337	eP	P	08 11 02.4	+0.9
DMN				eP		08 11 03.1	
KKN	Kakani	25.92	338	eP	P	08 11 02.5	+0.1
	30nm,0.9s,mb4.8						
KKN	Kakani	25.92	338	eP	P	08 11 02.5	+0.1
	30nm,0.9s,mb4.8						
LSA	Lhasa	26.13	350	P	P	08 11 06.6	+2.3
	4.7nm,0.5s,mb4.3						
GKN	Gorkha	26.36	337	eP	P	08 11 05.5	-1.0
	46nm,0.7s,mb5.1						
GKN	Gorkha	26.36	337	eP	P	08 11 05.8	-0.7
	51nm,0.8s,mb5.1						
GKN	Gorkha	26.36	337	eP	P	08 11 05.5	-1.0
GKN				eP		08 11 05.8	
KOLN	Koldanda	26.57	335	eP	P	08 11 07.7	-0.8
	28nm,0.7s,mb4.9						
KOLN	Koldanda	26.57	335	eP	P	08 11 08.0	-0.5
	44nm,0.8s,mb5.1						
KOLN	Koldanda	26.57	335	eP	P	08 11 07.7	-0.8
KOLN				eP		08 11 08.0	
CD2	Chengdu	27.91	14	P	P	08 11 19.6	-1.1
SDNR	Sundarnagar	32.82	329	eP	P	08 12 04.0	-0.1
MBWA	Marble Bar	34.04	138	P	P	08 12 14.5	-0.1
	4.7nm,0.9s,mb4.4						
GTA	Gaotai	35.58	5	eP	P	08 12 26.8	-0.9
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.2						
FITZ	Fitzroy Crossi	36.47	128	eP	P	08 12 34.9	-0.4
	comp=Z,6.6nm,0.6s,mb4.7						
BJI	Beijing	40.40	24	P	P	08 13 09.1	+1.2
BJI				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
BJI				LR	LR		
	comp=N,309nm,15.4s,MS4.4						
BJI				LR	LR		
	comp=E,277nm,14.9s,MS4.4						
AAK	Ala-Archa	43.12	337	eP	P	08 13 30.7	+0.5
	comp=E,3.0nm,0.8s,mb4.1						
WRA	Warramunga Arr	44.47	124	P	P	08 13 41.7	+0.2
	comp=E,4.4nm,0.5s,mb4.5,baz=301,slow=9.2,SNR=20						
WRAB	Tennant Creek	44.48	124	eP	P	08 13 42.0	+0.5
	comp=E,11nm,0.6s,mb4.8						
WB2	Warramunga Arr	44.48	124	eP	P	08 13 41.8	+0.2
SONM	Songino Array	44.74	10	P	P	08 13 42.6	-0.7
	comp=E,4.0nm,0.6s,mb4.4,baz=191,slow=9.6,SNR=38						
SONM				PcP	PcP	08 15 25.4	0.0
	comp=E,2.6nm,0.6s,baz=193,slow=3.3,SNR=9.1						
SONM				pPcP		08 15 37.9	
	comp=E,1.3nm,0.6s,baz=196,slow=4.0,SNR=5.1						
ULN	Ulaanbaatar	44.89	11	eP	P	08 13 42.2	-2.2
	comp=E,2.9nm,0.6s,mb4.3						
ASAR	Alice Springs	45.96	128	P	P	08 13 53.6	+0.4
	comp=E,2.2nm,0.4s,mb4.4,baz=300,slow=7.6,SNR=20						
ASAR				PcP	PcP	08 15 30.1	+0.2
	comp=E,1.3nm,0.7s,baz=297,slow=3.4,SNR=5.8						
ASAR				pPcP		08 15 43.7	
	comp=E,0.8nm,0.6s,baz=304,slow=3.7,SNR=3.3						
KURK	Kurchatov	48.95	345	eP	P	08 14 14.9	-1.4
	comp=E,2.6nm,0.5s,mb4.5						
ZAL	Zalesovo	50.78	351	P	P	08 14 29.0	-1.3
	comp=E,4.1nm,0.5s,mb4.6,baz=304,slow=6.2,SNR=17						
BVAR	Borovoye Array	53.38	341	P	P	08 14 48.2	-1.6
	comp=E,2.9nm,0.7s,mb4.3,baz=143,slow=7.4,SNR=18						
STKA	Stephens Creek	56.02	133	P	P	08 15 08.9	-0.3
	comp=E,4.6nm,0.8s,mb4.6,baz=316,slow=8.1,SNR=8.8						
STKA				pP	pP	08 15 23.3	+1.4
	comp=E,2.4nm,0.7s,baz=297,slow=17,SNR=3.0						
KMBO	Kilima Mbogo	58.90	266	P	P	08 15 31.4	+1.5
	comp=E,0.4nm,0.3s,mb3.9,baz=49,slow=12,SNR=5.8						
BRTR	Keskin Array B	66.46	312	P	P	08 16 18.8	-0.8
	comp=E,4.8nm,0.8s,mb4.6,baz=126,slow=6.9,SNR=23						
BRTR				pP	pP	08 16 32.5	0.0
	comp=E,4.1nm,1.1s,baz=121,slow=7.2,SNR=3.8						
BRTR	Keskin Array B	66.46	312	P	P	08 16 18.8	-0.8
BRTR				pP	pP	08 16 32.5	0.0
AKASG	Malin Array Be	72.44	322	P	P	08 16 54.2	-1.9
	comp=E,1.8nm,0.7s,mb4.1,baz=103,slow=4.6,SNR=8.0						
AKASG				pP	pP	08 17 07.4	-1.6
	comp=E,2.1nm,0.7s,baz=98,slow=4.4,SNR=3.7						
JOF	Joensuu	75.26	335	ep	P	08 17 24.5	+12
	comp=E,6.0nm,0.8s,mb4.6						
FINES	FINESS Array B	77.12	332	P	P	08 17 21.8	-1.0
	comp=E,2.8nm,0.7s,mb4.3,baz=135,slow=5.4,SNR=7.9						
FINES				pP	pP	08 17 33.9	-1.9
	comp=E,4.0nm,0.7s,baz=117,slow=8.5,SNR=6.4						
KAF	Kangasniemi	77.20	333	ep	P	08 17 35.6	+12
	comp=E,4.3nm,0.6s,mb4.6,baz=104,slow=5.4						
MORC	Moravsky Berou	79.62	320	P	P	08 17 37.4	+0.6
	comp=E,5.7nm,1.4s,mb4.3						
ARCES	ARCESS Array B	79.66	340	P	P	08 17 36.2	-0.4
	comp=E,4.4nm,0.9s,mb4.4,baz=99,slow=6.7,SNR=14						
ARCES				pP	pP	08 17 49.0	-0.7
	comp=E,1.6nm,0.4s,baz=100,slow=7.1,SNR=2.1						
ARCES	ARCESS Array B	79.66	340	P	P	08 17 36.2	-0.4
ARCES				pP	pP	08 17 49.0	-0.7
RPZ	Rata Peaks	81.91	135	P	P	08 17 49.7	+0.8
	comp=E,7.1nm,0.7s,mb4.7,baz=352,slow=11,SNR=4.9						
GERES	GERESS Array B	82.05	319	P	P	08 17 50.2	+0.7
	comp=E,1.7nm,0.6s,mb4.1,baz=90,slow=6.7,SNR=14						
GERES				pP	pP	08 18 03.8	+1.1
	comp=E,1.3nm,0.7s,baz=90,slow=5.3,SNR=4.8						
SYO	Syowa Base	82.12	198	⇓P	P	08 17 48.9	-0.7
HFS	Hagfors	82.85	330	P	P	08 17 53.7	+0.2
	comp=E,1.7nm,0.4s,mb4.4,baz=108,slow=4.7,SNR=6.8						
HFS				pP	pP	08 18 06.0	-0.6
	comp=E,3.3nm,0.6s,baz=117,slow=9.9,SNR=3.3						
GRA1	Grafenberg Arr	83.70	319	eP	P	08 17 59.1	+1.1
	comp=E,4.0nm,1.0s,mb4.5						
NB2	NORSAR Subarra	84.13	331	P	P	08 17 59.7	-0.2
	comp=E,0.1nm,0.7s,baz=91,slow=6.5						
NOA	NORSAR Array B	84.13	331	P	P	08 17 60.0	+0.1
	comp=E,1.9nm,0.8s,mb4.2,baz=92,slow=5.1,SNR=4.6						
NOA				pP	pP	08 18 12.2	-0.8
	comp=E,1.5nm,0.7s,baz=95,slow=4.9,SNR=5.3						
NOA	NORSAR Array B	84.13	331	P	P	08 17 60.0	+0.1
NOA				pP	pP	08 18 12.2	-0.8
LPG	La Plagne	86.75	315	eP	P	08 18 13.4	+0.2
	comp=E,17nm,0.9s,mb5.0						
INK	Inuvik	100.33	17	P	P	08 19 16.4	+1.1
	comp=E,0.2nm,0.5s,baz=281,slow=5.2,SNR=3.3						
INK	Inuvik	100.33	17	P	P	08 19 16.4	+1.1
YKA	Yellowknife Ar	109.88	15	PKiKP		08 24 00.4	
	comp=E,0.1nm,0.6s,baz=326,slow=2.4,SNR=5.0						
YKA				pPKiKP		08 24 12.8	
	comp=E,0.1nm,0.5s,baz=337,slow=2.2,SNR=5.4						
SCHQ	Schefferville	119.83	349	PKP	PKPdf	08 24 19.1	+1.1
	comp=E,1.7nm,0.9s,baz=315,slow=2.9,SNR=4.2						
ULM	Lac du Bonnet	125.17	9	PKP	PKPdf	08 24 29.1	+0.7
	comp=E,3.0nm,0.8s,baz=12,slow=4.0,SNR=8.4						
ULM				pPKP		08 24 43.9	
	comp=E,1.6nm,0.5s,baz=19,slow=2.5,SNR=3.6						
NVAR	Mina Array Bea	127.33	34	PKP	PKPdf	08 24 35.8	+2.8
	comp=E,1.3nm,0.8s,baz=355,slow=2.1,SNR=7.5						
NVAR				pPKP		08 24 48.3	
	comp=E,1.0nm,0.6s,baz=289,slow=1.1,SNR=5.8						
PDAR	Pinedale Array	128.17	24	PKP	PKPdf	08 24 36.6	+2.1
	comp=E,0.4nm,0.6s,baz=177,slow=2.8,SNR=4.1						
TXAR	Lajitas Array	142.01	28	PKhKP		08 24 56.6	
	comp=E,0.3nm,0.5s,baz=280,slow=1.2,SNR=6.2						
BDFB	Brasilia	142.70	249	PKhKP		08 25 00.9	
	comp=E,1.2nm,0.5s,baz=218,slow=3.2,SNR=3.3						

LPAZ	**La Paz**	**160.08**	**230**	PKPab	PKPab	08 26 10.3	+0.3
	comp=E,0.7nm,0.6s,baz=101,slow=5.2,SNR=3.4						
LPAZ				pPKPab		08 26 25.6	
	comp=E,1.4nm,0.8s,baz=80,slow=3.2,SNR=3.9						

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*IDC **22** 08:34:11.5±1.1, 13.19N×91.74E, mb3.8/7, mb1 4.1/8, mb1mx3.9/20, mbtmp3.8/8, ML3.6/1, MS2.5/1, Ms1 2.7/1, ms1mx2.3/25, Error ellipse: s-maj=50.4km s-min=19.3km az=55.0*

*NEIC **22** 08:34:16.2±0.9, 13.38N×91.81E, h30^{km}, mb4.2/6, Error ellipse: s-maj=30.3km s-min=12.3km az=57.0*

ISC 22 08:34:13.6±0.8**, 13.2N**±0.1×**91.5E**±0.1**, h33^{km}, n22, σ1^{s}48**/25**, mb4.0**/11**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.86**	**53**	Pn	**P**	**08 36 27.9**	**+5.7**
	0.2nm,0.3s,baz=246,slow=14,SNR=6.9						
CMAR				Sn	**Sn**	**08 37 50.9**	**-11**
	0.3nm,0.3s,baz=239,slow=28,SNR=3.5						
CMAR				LR	LR	08 40 30.2	
	comp=Z,31nm,18.5s,baz=205,slow=44						
BWNR	**Bhubaneshwar**	**8.88**	**323**	*e*P	**P**	**08 36 20.0**	**-2.5**
BWNR				*e*S	**S**	**08 37 51.6**	**-11**
VIS	**Vishakhapatnam**	**9.03**	**301**	*e*P	**P**	**08 36 24.0**	**-0.7**
VIS				*e*S	**S**	**08 37 58.0**	**-8.3**
JIRN	**Jiri**	**15.18**	**342**	*e*P	**P**	**08 37 48.4**	**+1.1**
PKI	**Pulchoki**	**15.35**	**339**	*e*P	**P**	**08 37 48.5**	**-1.0**
	14nm,0.6s						
DMN	**Daman**	**15.49**	**338**	*e*P	**P**	**08 37 50.0**	**-1.3**
	13nm,0.7s						
KKN	**Kakani**	**15.60**	**339**	*e*P	**P**	**08 37 51.3**	**-1.3**
	8.9nm,0.5s						
GKN	**Gorkha**	**16.02**	**338**	*e*P	**P**	**08 37 56.5**	**-1.6**
	9.9nm,0.4s						
KOLN	**Koldanda**	**16.23**	**334**	*e*P	**P**	**08 38 00.1**	**-0.6**
	14nm,0.6s						
LSA	**Lhasa**	**16.39**	**359**	P	**P**	**08 38 04.5**	**+1.8**
	10nm,0.9s						
ENH	**Enshi**	**23.75**	**42**	P	**P**	**08 39 21.4**	**-2.5**
	10nm,1.1s,mb4.2						
SONM	**Songino Array**	**36.67**	**17**	P	**P**	**08 41 20.3**	**+1.2**
	0.6nm,0.8s,mb3.5,baz=204,slow=7.4,SNR=5.3						
KURK	**Kurchatov**	**38.82**	**347**	*e*P	**P**	**08 41 38.3**	**+1.3**
	6.2nm,1.0s,mb4.3						
ZAL	**Zalesovo**	**40.95**	**354**	P	**P**	**08 41 55.5**	**+0.9**
	1.3nm,0.4s,mb4.0,baz=246,slow=6.7,SNR=4.9						
ZAL	**Zalesovo**	**40.95**	**354**	P	**P**	**08 41 55.5**	**+0.9**
BVAR	**Borovoye Array**	**43.10**	**341**	P	**P**	**08 42 14.5**	**+2.3**
	0.7nm,0.8s,mb3.5,baz=153,slow=6.6,SNR=3.6						
CHKZ	**Chkalovo**	**43.60**	**342**	*e*P	**P**	**08 42 17.4**	**+1.2**
	3.2nm,0.8s,mb4.1						
CHKZ				*e*		08 42 24.2	
WRA	**Warramunga Arr**	**53.53**	**127**	P	**P**	**08 43 32.5**	**-1.1**
	1.0nm,0.7s,mb3.9,baz=308,slow=8.1,SNR=8.3						
WRA				PcP	PcP	08 44 39.1	-1.0
	0.2nm,0.6s,baz=317,slow=3.6,SNR=4.7						
WRAB	**Tennant Creek**	**53.53**	**127**	*e*P	**P**	**08 43 33.3**	**-0.3**
	4.4nm,1.0s,mb4.3						
ASAR	**Alice Springs**	**55.37**	**131**	P	**P**	**08 43 46.5**	**-0.6**
	0.9nm,0.6s,mb4.0,baz=311,slow=6.4,SNR=16						
BRTR	**Keskin Array B**	**57.01**	**309**	P	**P**	**08 44 01.0**	**+2.5**
	0.3nm,0.4s,mb3.6,baz=90,slow=5.8,SNR=2.4						
MLR	**Muntele Rosu**	**63.55**	**314**	P	**P**	**08 44 45.8**	**+2.6**
	3.4nm,1.1s,mb4.3,baz=119,slow=2.3,SNR=3.1						

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*MOS **22** 08:46:08.5±1.8, 51.61N×15.97E, h10^{km}, mb3.5/1, Error ellipse: s-maj=12.7km s-min=5.0km az=81.3*

*BGR **22** 08:46:08.4±0.7, 51.54N×16.20E, h1^{km}, ML3.2/9, Error ellipse: s-maj=6.7km s-min=5.6km az=157.0*

*CSEM **22** 08:46:08.6±0.1, 51.54N×16.15E, h4^{km}, ML3.6/5, Error ellipse: s-maj=2.2km s-min=1.4km az=39.0*

*WAR **22** 08:46:09.9, 51.52N×16.11E, h1^{km}, ML3.2, Mining Induced*

*IPEC **22** 08:46:09.8±0.2, 51.51N×16.18E, h10^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=1.3km s-min=0.6km az=35.0*

*NEIC **22** 08:46:09.1±0.4, 51.53N×16.11E, h5^{km}, ML3.3(VIE), ML3.2(SZGRF), ML2.9(CLL), ML2.7(BRG), Error ellipse: s-maj=6.4km s-min=4.1km az=84.0*

*PRU **22** 08:46:10.0, 51.48N×16.11E*

*IDC **22** 08:46:10.1±0.8, 51.46N×16.05E, mb1 3.4/7, mb1mx3.3/22, mbtmp3.3/7, ML3.0/7, Error ellipse: s-maj=16.9km s-min=6.4km az=100.0*

ISC 22 08:46:07.7±0.3**, 51.45N**±0.02×**16.10E**±0.02**, n73, σ1^{s}34**/146**, 5C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**168**	⇓*i*Pg	**Pg**	**08 46 22.4**	**+2.3**
KSP				*e*Sg	**Sg**	**08 46 31.5**	**+3.1**
KSP	**Ksiaz**	**0.62**	**168**	*e*PG	**Pg**	**08 46 22.0**	**+1.9**
KSP				*e*SG	**Sg**	**08 46 31.0**	**+2.6**
UPC	**Upice**	**0.94**	**183**	*e*PG	**Pg**	**08 46 28.4**	**+1.8**
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*PG	**Pg**	**08 46 31.2**	**+1.3**
DPC				*e*SG	**Sg**	**08 46 46.4**	**+1.7**
	47nm,0.2s						
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*Pg	**Pg**	**08 46 31.1**	**+1.2**
DPC				*e*S	**Sg**	**08 46 46.4**	**+1.7**
DPC				Sg	**Sg**	**08 46 46.4**	**+1.7**
	47nm,0.2s						
PVCC	**Panska Ves**	**1.33**	**227**	*e*PG	**Pg**	**08 46 35.0**	**+0.6**
PVCC	**Panska Ves**	**1.33**	**227**	*e*Pn	**Pn**	**08 46 35.1**	**+1.5**
PVCC				*e*Sg	**Sg**	**08 46 55.0**	**+2.8**
BRG	**Berggiesshubel**	**1.47**	**248**	*e*Pg	**Pg**	**08 46 36.3**	**-0.8**
BRG				*e*Sg	**Sg**	**08 46 58.5**	**+1.7**
BRG	**Berggiesshubel**	**1.47**	**248**	*e*P	**Pn**	**08 46 36.7**	**+1.1**
BRG				*i*		08 46 58.4	
BRG	**Berggiesshubel**	**1.47**	**248**	*e*Pn	**Pn**	**08 46 36.7**	**+1.1**
BRG				*i* Pg	**Pg**	**08 46 37.6**	**+0.5**
BRG				*i* Sg	**Sg**	**08 46 58.4**	**+1.6**
BRG	**Berggiesshubel**	**1.47**	**248**	*i* Pg	**Pg**	**08 46 37.6**	**+0.5**
BRG				Sg	**Sg**	**08 46 58.5**	**+1.7**
PRU	**Pruhonice**	**1.77**	**215**	*e*P	**Pn**	**08 46 41.6**	**+1.8**
PRU				*e*		08 47 07.2	
PRU	**Pruhonice**	**1.77**	**215**	*e*PN	**Pn**	**08 46 41.6**	**+1.8**
PRU				*e*PG	**Pg**	**08 46 42.9**	**-0.1**
PRU				*e*SG	**Sg**	**08 47 07.2**	**+0.7**
PRU	**Pruhonice**	**1.77**	**215**	Pg	**Pg**	**08 46 42.9**	**-0.1**
PRU				Sg	**Sg**	**08 47 07.2**	**+0.7**
RUE	**Ruedersdorf**	**1.77**	**307**	*e*Pn	**Pn**	**08 46 39.1**	**-0.7**
RUE				*e*S	**Sn**	**08 47 02.2**	**-1.1**
RUE	**Ruedersdorf**	**1.77**	**307**	*e*Pn	**Pn**	**08 46 39.1**	**-0.7**
RUE				*e*S	**Sn**	**08 47 02.2**	**-1.1**
RUE				*e*Sg	**Sg**	**08 47 05.6**	**-0.9**
RAC	**Raciborz**	**1.91**	**135**	*e*P	**Pg**	**08 46 47.0**	**+1.1**
RAC				*e*S	**Sg**	**08 47 13.0**	**+1.7**
MORC	**Moravsky Berou**	**1.91**	**151**	*e*Pn	**Pn**	**08 46 42.5**	**+0.6**
MORC				*e*Sn	**Sn**	**08 47 11.4**	**+4.4**
MORC	**Moravsky Berou**	**1.91**	**151**	*e*P	**Pn**	**08 46 42.5**	**+0.6**
MORC				*e*Sg	**Sg**	**08 47 09.6**	**-1.8**
	42nm,0.4s						
MORC				*e*S	**Sn**	**08 47 11.4**	**+4.4**
CLL	**Collm**	**1.94**	**267**	*e*Pn	**Pn**	**08 46 42.3**	**0.0**
CLL				*e*Sg	**Sg**	**08 47 12.6**	**+0.2**
CLL	**Collm**	**1.94**	**267**	*e*P	**Pn**	**08 46 42.0**	**-0.3**
CLL				*i*		08 47 12.2	
CLL	**Collm**	**1.94**	**267**	*e*Pn	**Pn**	**08 46 42.0**	**-0.3**
CLL				*i* Pg	**Pg**	**08 46 45.7**	**-0.8**
CLL				*i* Sg	**Sg**	**08 47 12.2**	**-0.2**
CLL	**Collm**	**1.94**	**267**	*e*PN	**Pn**	**08 46 42.0**	**-0.3**
CLL				*i* PG	**Pg**	**08 46 45.7**	**-0.8**
CLL				*i*		08 46 48.6	
CLL				*i* SG	**Sg**	**08 47 12.2**	**-0.2**
CLL	**Collm**	**1.94**	**267**	*i* Pg	**Pg**	**08 46 45.7**	**-0.8**
CLL				Sg	**Sg**	**08 47 12.6**	**+0.2**
GKP	**Gorka Klasztor**	**1.95**	**21**	*e*Pn	**Pn**	**08 46 44.2**	**+1.8**
GKP				*e*Pg	**Pg**	**08 46 53.5**	**+6.8**
GKP				*e*Sn	**Sn**	**08 47 07.2**	**-0.8**
GKP				*e*Sg	**Sg**	**08 47 12.2**	**-0.5**
GKP	**Gorka Klasztor**	**1.95**	**21**	*e*Pn	**Pn**	**08 46 44.2**	**+1.8**
GKP				*e*Pg	**Pg**	**08 46 53.5**	**+6.8**
GKP				*e*Sn	**Sn**	**08 47 07.2**	**-0.8**
GKP				*e*Sg	**Sg**	**08 47 12.2**	**-0.5**
GKP	**Gorka Klasztor**	**1.95**	**21**	*e*S	**Sn**	**08 47 07.2**	**-0.8**
OKC	**Ostrava-Krasne**	**2.08**	**140**	*e*PG	**Pg**	**08 46 49.3**	**+0.1**
OKC				*e*SG	**Sg**	**08 47 16.0**	**-0.9**
OKC	**Ostrava-Krasne**	**2.08**	**140**	Pg	**Pg**	**08 46 49.3**	**+0.1**
OKC				*e*Sg	**Sg**	**08 47 15.3**	**-1.6**
OKC				*e*S	**Sg**	**08 47 16.0**	**-0.9**
VRAC	**Vranov**	**2.17**	**171**	Pn	**Pn**	**08 46 47.3**	**+1.8**
	2.3nm,0.3s,baz=344,slow=14,SNR=8.7						
VRAC				Lg		08 47 21.0	
	4.2nm,0.3s,baz=58,slow=14,SNR=9.3						
VRAC	**Vranov**	**2.17**	**171**	P	**Pn**	**08 46 47.3**	**+1.8**
VRAC				*e*Sg	**Sg**	**08 47 19.4**	**-0.5**
	25nm,0.4s						
VRAC				S	**Sn**	**08 47 21.0**	**+7.5**
KRUC	**Moravsky**	**2.40**	**175**	*e*Pg	**Pg**	**08 46 54.8**	**-0.8**
KRUC				*e*Sg	**Sg**	**08 47 26.7**	**-0.9**
	13nm,0.4s						
TANN	**Tannenbergstha**	**2.52**	**247**	*e*Pn	**Pn**	**08 46 52.0**	**+1.4**
TANN				*e*Sg	**Sg**	**08 47 31.1**	**-0.6**
WERD	**Werda**	**2.60**	**249**	*e*Pn	**Pn**	**08 46 52.4**	**+0.7**
WERD				*e*Sg	**Sg**	**08 47 34.0**	**-0.2**
NKC	**Novy Kostel**	**2.61**	**244**	*e*PN	**Pn**	**08 46 53.0**	**+1.1**
NKC				*e*PG	**Pg**	**08 46 59.5**	**-0.4**
NKC				*e*SG	**Sg**	**08 47 34.8**	**+0.1**
	109nm,0.3s						
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**08 46 59.9**	**-0.8**
OJC				*e*Sg	**Sg**	**08 47 35.2**	**-0.8**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**08 46 59.9**	**-0.8**
OJC				*e*Sg	**Sg**	**08 47 33.4**	**-2.6**
KHC	**Kasperske Hory**	**2.83**	**216**	*e*P	**Pn**	**08 46 55.9**	**+0.9**
KHC				*e*		08 47 29.5	
KHC	**Kasperske Hory**	**2.83**	**216**	*e*PN	**Pn**	**08 46 55.9**	**+0.9**
KHC				*e*PG	**Pg**	**08 47 02.1**	**-2.1**
KHC				*e*SN	**Sn**	**08 47 29.5**	**-0.7**
KHC				*e*SG	**Sg**	**08 47 39.3**	**-2.6**
KHC	**Kasperske Hory**	**2.83**	**216**	*e*Pn	**Pn**	**08 46 55.7**	**+0.7**
MOX	**Moxa**	**2.94**	**256**	*e*Pn	**Pn**	**08 46 58.1**	**+1.5**
MOX				*e*Sg	**Sg**	**08 47 45.2**	**-0.4**
MOX	**Moxa**	**2.94**	**256**	*e*Pn	**Pn**	**08 46 57.6**	**+1.0**
MOX				*e*Pg	**Pg**	**08 47 04.9**	**-1.5**
MOX				*e*Sg	**Sg**	**08 47 45.2**	**-0.4**
MOX	**Moxa**	**2.94**	**256**	*i* P	**Pn**	**08 46 57.6**	**+1.0**
MOX				Pg	**Pg**	**08 47 05.0**	**-1.4**
MOX				Sg	**Sg**	**08 47 45.0**	**-0.6**
MOX	**Moxa**	**2.94**	**256**	*e*Pg	**Pg**	**08 47 04.9**	**-1.5**
MOX				*e*Sg	**Sg**	**08 47 44.6**	**-1.0**
NOTT	**Nottersdorf**	**3.02**	**239**	*e*Pn	**Pn**	**08 46 58.3**	**+0.7**
NOTT				*e*Sg	**Sg**	**08 47 46.7**	**-1.4**
GEC2	**GERESS Array S**	**3.03**	**211**	*e*Pn	**Pn**	**08 46 59.6**	**+1.8**
GEC2				*e*Sg	**Sg**	**08 47 47.8**	**-0.7**
GEC2	**GERESS Array S**	**3.03**	**211**	*e*Pn	**Pn**	**08 46 59.6**	**+1.8**
GEC2				*e*Sg	**Sg**	**08 47 47.8**	**-0.7**
GERES	**GERESS Array B**	**3.03**	**211**	P	**Pn**	**08 46 58.7**	**+0.9**
GERES						08 47 36.6	
GERES	**GERESS Array B**	**3.03**	**211**	Pn	**Pn**	**08 46 58.7**	**+0.9**
	1.5nm,0.3s,baz=31,slow=12,SNR=32						
GERES				Pg	**Pg**	**08 47 05.2**	**-3.0**
	2.8nm,0.3s,baz=28,slow=14,SNR=37						
GERES				Sn	**Sn**	**08 47 36.6**	**+1.3**
	3.0nm,0.3s,baz=13,slow=23,SNR=6.4						
GERES				Lg		08 47 47.5	
	6.5nm,0.3s,baz=39,slow=28,SNR=9.9						
GERES	**GERESS Array B**	**3.03**	**211**	Pg	**Pg**	**08 47 05.2**	**-3.0**
GERES				S	**Sn**	**08 47 36.6**	**+1.3**
SMOL	**Smolenice**	**3.06**	**163**	*e*SG	**Sg**	**08 47 48.9**	**-0.8**
WET	**Wettzell**	**3.10**	**223**	*e*Pn	**Pn**	**08 46 59.9**	**+1.1**
WET				*e*Sg	**Sg**	**08 47 50.3**	**-0.5**
WET	**Wettzell**	**3.10**	**223**	*e*Pn	**Pn**	**08 46 59.9**	**+1.1**
WET				*e*Sg	**Sg**	**08 47 50.3**	**-0.5**
ZST	**Bratislava**	**3.32**	**168**	*e*SG	**Sg**	**08 47 56.9**	**-1.4**
NIE	**Niedzica**	**3.38**	**125**	*e*P	**Pg**	**08 47 11.6**	**-3.5**
NIE				*e*S	**Sg**	**08 47 57.7**	**-2.5**
VYHS	**Vyhne**	**3.45**	**148**	*e*SG	**Sg**	**08 47 59.6**	**-2.9**
GRA1	**Grafenberg Arr**	**3.57**	**242**	Sg	**Sg**	**08 48 05.2**	**-1.4**
GRA1	**Grafenberg Arr**	**3.57**	**242**	*e*Sg	**Sg**	**08 48 05.2**	**-1.4**
GRF	**Grafenberg Arr**	**3.57**	**242**	*e*Sg	**Sg**	**08 48 05.2**	**-1.4**
BSD	**Bornholm Skovb**	**3.74**	**350**	*i* P	**Pn**	**08 47 05.0**	**-2.9**
BSD				*i* S	**Sn**	**08 47 45.8**	**-7.5**
MOA	**Molln**	**3.79**	**199**	⇑*i*PN	**Pn**	**08 47 09.8**	**+1.1**
MOA				*i* SG	**Sg**	**08 48 13.7**	**-0.4**
	36nm,0.7s						
ARSA	**Arzberg**	**4.22**	**185**	⇓*i*PN	**Pn**	**08 47 15.0**	**+0.2**
ARSA				*i* SG	**Sg**	**08 48 26.3**	**-1.9**
	16nm,0.5s						
KWP	**Kalwaria**	**4.59**	**111**	*e*Pg	**Pg**	**08 47 33.8**	**-5.6**
KWP				*e*Sg	**Sg**	**08 48 42.1**	**+1.5**
KWP	**Kalwaria**	**4.59**	**111**	*e*Pg	**Pg**	**08 47 33.8**	**-5.6**
KWP				*e*Sg	**Sg**	**08 48 42.1**	**+1.5**
KBA	**Koelnbreinsper**	**4.73**	**203**	⇑*i*PN	**Pn**	**08 47 23.0**	**+1.0**
KBA				*i* SG	**Sg**	**08 48 42.8**	**-2.4**
	10nm,0.5s						
WTTA	**Wattenberg**	**5.10**	**217**	⇑*i*PN	**Pn**	**08 47 27.8**	**+0.5**
WTTA				*i* SG	**Sg**	**08 48 55.2**	**-2.4**
	7.5nm,0.5s						
WTTA	**Wattenberg**	**5.10**	**217**	⇑*i*Pn	**Pn**	**08 47 27.8**	**+0.5**
	7.5nm,0.5s						
WTTA				*i* Sg	**Sg**	**08 48 55.2**	**-2.4**
SQTA	**Sankt Quirin**	**5.30**	**219**	⇑*i*PN	**Pn**	**08 47 31.1**	**+1.0**
SQTA				*i*		08 48 57.0	
DAVOX	**Davos**	**6.20**	**224**	Pn	**Pn**	**08 47 42.4**	**-0.4**
	0.4nm,0.3s,baz=15,slow=17,SNR=2.9						
DAVOX				Sn	**Sn**	**08 48 57.0**	**+1.6**
	0.4nm,0.3s,baz=62,slow=18,SNR=1.9						
DAVOX				Lg		08 49 27.1	
	0.5nm,0.3s,baz=12,slow=20,SNR=3.1						
HFS	**Hagfors**	**8.81**	**352**	Pn	**P**	**08 48 16.2**	**-3.1**
	0.0nm,0.3s,baz=180,slow=12,SNR=2.8						
HFS				Sn	**Sn**	**08 49 54.8**	**-5.7**
	0.1nm,0.3s,baz=104,slow=6.1,SNR=3.0						
NOA	**NORSAR Array B**	**9.99**	**346**	Pn	**P**	**08 48 31.2**	**-4.2**
	0.1nm,0.3s,baz=149,slow=14,SNR=2.3						
FINES	**FINESS Array B**	**11.42**	**25**	Pn	**P**	**08 48 49.7**	**-5.3**
	0.2nm,0.3s,baz=214,slow=11,SNR=4.0						
FINES				Sn	**S**	**08 50 48.4**	**-16**
	0.2nm,0.3s,baz=202,slow=22,SNR=3.4						
ARCES	**ARCESS Array B**	**18.68**	**10**	Pn	**P**	**08 50 24.3**	**-4.7**
	0.2nm,0.3s,baz=188,slow=13,SNR=3.5						

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*MOS **22** 08:54:36.3±1.2, 56.08N×114.54E, h20^{km}, mb4.3/1, Error ellipse: s-maj=17.1km s-min=11.1km az=65.9*

BYKL 22 08:54:36.8±0.3**, 56.08N**×**114.54E, h19^{km}**±11^{km}**, 5C-9D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.55**	**274**	*e*PG	Pb	08 54 46.5	-1.1
SVKR				*e*		08 54 53.4	
SVKR				pmax	pmax		
	comp=Z,709nm,0.2s						
SVKR				smax			
	comp=N,3μm,0.6s						
SVKR	**Severomuysk**	**0.55**	**274**	⇓*i*Pg	Pb	08 54 46.9	-0.7
SVKR				*e*Sg	Sb	08 54 54.9	-0.1
SVKR				Pmax			
	comp=N,911nm,0.2s						
SVKR				Smax			
	comp=N,3μm,0.5s						
NLYR	**Nelyaty**	**0.77**	**57**	*e*PG	Pb	08 54 50.5	-0.8
NLYR				*e*		08 55 00.9	
NLYR				pmax	pmax		
	comp=Z,299nm,0.2s						
NLYR				smax			
	comp=N,1μm,0.8s						
NLYR	**Nelyaty**	**0.77**	**57**	⇓*i*Pg	Pb	08 54 50.8	-0.5
NLYR				*e*Sg	Sb	08 55 01.7	+0.4
NLYR				Pmax			
	comp=N,373nm,0.3s						
NLYR				Smax			
	comp=N,624nm,0.9s						
UKT	**Uakit**	**0.79**	**221**	*e*PG	Pb	08 54 50.8	-0.8
UKT				*e*		08 55 01.5	
UKT				pmax	pmax		
	comp=Z,77nm,0.1s						
UKT				smax			
	comp=E,829nm,0.3s						
UKT	**Uakit**	**0.79**	**221**	⇑*i*Pg	Pb	08 54 50.9	-0.7
	comp=E,65nm,0.4s						
UKT				⇑*i*Pg	Pb	08 54 50.9	-0.7
	comp=E,88nm,0.4s						
UKT				⇓*i*Pg	Pb	08 54 50.9	-0.7
	comp=E,132nm,0.4s						
UKT				*i* Sg	Sb	08 55 01.5	-0.3
UKT				Pmax			
	comp=E,120nm,0.3s						
UKT				Smax			
	comp=E,913nm,0.2s						
YOA	**Uoyan**	**1.58**	**273**	⇓*i*PN	Pn	08 55 04.7	+0.6
YOA				*i*		08 55 26.6	
YOA				pmax	pmax		
	comp=Z,206nm,0.4s						
YOA				smax			
	comp=N,3μm,0.5s						
YOA	**Uoyan**	**1.58**	**273**	*e*Pg	Pn	08 55 05.8	+1.7
YOA				*e*Sg	Sn	08 55 27.3	+3.1
YOA				Smax			
	comp=N,2μm,0.6s						
BOD	**Bodaibo**	**1.77**	**351**	*e*PN	Pn	08 55 07.2	+0.3
BOD				*e*		08 55 30.1	
BOD				pmax	pmax		
	comp=Z,376nm,0.3s						
BOD				smax			
	comp=E,660nm,0.4s						
BOD	**Bodaibo**	**1.77**	**351**	*e*Pn	Pn	08 55 07.4	+0.5
BOD				⇑*i*Pg	Pn	08 55 07.8	+0.9
	comp=E,200nm,0.4s						
BOD				⇓*i*Pg	Pn	08 55 07.8	+0.9
	comp=E,16nm,0.4s						
BOD				⇑*i*Pg	Pn	08 55 07.8	+0.9
	comp=E,211nm,0.4s						
BOD				*i* Sg	Sn	08 55 30.9	+1.9
BOD				Pmax			
	comp=E,313nm,0.3s						
BOD				Smax			
	comp=E,628nm,0.3s						
KMO	**Kumora**	**1.89**	**265**	*e*PN	Pn	08 55 10.1	+1.6
KMO	**Kumora**	**1.89**	**265**	*e*Pn	Pn	08 55 08.5	0.0
KMO				*e*Pg	Pn	08 55 09.8	+1.3
KMO				*e*Sg	Sn	08 55 35.0	+3.0
KMO				Pmax			
	comp=E,257nm,0.3s						
KMO				Smax			
	comp=E,427nm,0.8s						
CRS	**Chara**	**2.23**	**67**	*e*PN	Pn	08 55 13.4	0.0
CRS				*e*S	Sn	08 55 46.6	+6.0
CRS				smax			
	comp=N,176nm,0.7s						
CRS	**Chara**	**2.23**	**67**	*e*Pn	Pn	08 55 13.3	-0.1
CRS				⇓*i*Pg	Pn	08 55 17.0	+3.6
	comp=N,39nm,0.5s						
CRS				⇓*i*Pg	Pn	08 55 17.0	+3.6
	comp=N,22nm,0.5s						
CRS				⇓*i*Pg	Pn	08 55 17.0	+3.6
	comp=N,36nm,0.5s						
CRS				*e*Sg	Sn	08 55 46.6	+6.0
CRS				Pmax			
	comp=N,134nm,1.0s						
CRS				Smax			
	comp=N,296nm,1.3s						
YLYR	**Ulyunkhan**	**2.27**	**239**	*e*PN	Pn	08 55 13.9	-0.1
YLYR				*e*		08 55 16.2	
YLYR				*e*S	Sn	08 55 41.6	-0.2
YLYR	**Ulyunkhan**	**2.27**	**239**	⇓*i*Pn	Pn	08 55 13.9	-0.1
YLYR				*e*Pg	Pn	08 55 16.3	+2.3
YLYR				*e*Sn	Sn	08 55 42.1	+0.3
YLYR				*e*Sg	Sn	08 55 47.3	+5.5
YLYR				Pmax			
	comp=N,57nm,0.2s						
YLYR				Smax			
	comp=N,295nm,0.3s						
NIZ	**Nizh Angarsk**	**2.83**	**266**	*e*PN	Pn	08 55 20.6	-1.4
NIZ				*e*		08 55 26.5	
NIZ				*e*		08 56 04.5	
NIZ				pmax	pmax		
	comp=Z,18nm,0.6s						
NIZ				smax			
	comp=N,109nm,0.7s						
NIZ	**Nizh Angarsk**	**2.83**	**266**	*e*Pn	Pn	08 55 22.6	+0.6
NIZ				*e*Pg	Pn	08 55 26.5	+4.5
NIZ				*e*Sg	Sn	08 56 03.6	+7.7
NIZ				Pmax			
	comp=N,16nm,0.5s						
NIZ				Smax			
	comp=N,84nm,0.7s						
TUP	**Tupik**	**3.51**	**116**	*e*PN	Pn	08 55 30.7	-1.1
TUP				*e*		08 55 38.8	
TUP				*e*S	Sn	08 56 12.6	-0.7
TUP				*e*		08 56 25.2	
TUP				pmax	pmax		
	comp=Z,18nm,0.4s						
TUP				smax			
	comp=E,192nm,0.8s						
TUP	**Tupik**	**3.51**	**116**	⇑*i*Pn	Pn	08 55 30.9	-0.9
TUP				*e*Pg	Pn	08 55 39.3	+7.5
TUP				*e*Sg	Sn	08 56 25.3	+12
TUP				Pmax			
	comp=E,16nm,0.3s						
TUP				Smax			
	comp=E,237nm,0.8s						
SYVR	**Suvo**	**3.57**	**229**	*e*Pn	Pn	08 55 31.4	-1.2
SYVR				*e*Pg	Pn	08 55 40.7	+8.1
SYVR				*e*Sg	Sn	08 56 26.8	+12
SYVR				Pmax			
	comp=E,28nm,1.5s						
SYVR				Smax			
	comp=E,150nm,0.9s						
CIT	**Chita**	**4.11**	**189**	*e*PN	Pn	08 55 50.9	+11
CIT				*e*S	Sn	08 56 27.8	-0.5
CIT				*e*		08 56 43.8	
CIT				pmax	pmax		
	comp=Z,15nm,0.5s						
CIT				smax			
	comp=E,300nm,0.8s						
CIT	**Chita**	**4.11**	**189**	*e*Pg	Pn	08 55 50.5	+10
CIT				*e*Sg	Sn	08 56 43.6	+15
CIT				Pmax			
	comp=E,13nm,0.5s						
CIT				Smax			
	comp=E,288nm,0.7s						
OGRR	**Ongureny**	**4.70**	**242**	*e*Pn	Pn	08 55 47.0	-1.5
OGRR				*e*Pg	Pn	08 56 00.5	+12
OGRR				*e*Sg	Sn	08 57 02.1	+19
OGRR				Pmax			
	comp=E,11nm,0.9s						
OGRR				Smax			
	comp=E,46nm,1.0s						
ZRHB	**Zarechye**	**5.58**	**234**	*e*Sg	Sn	08 57 31.3	+26
ZRHB				Smax			
	comp=E,130nm,1.0s						
TRTB	**Turuntaevo**	**5.60**	**229**	*e*Pg	Pn	08 56 18.0	+17
TRTB				*e*Sg	Sn	08 57 29.8	+24
TRTB				Pmax			
	comp=E,5.0nm,0.7s						
TRTB				Smax			
	comp=E,56nm,1.4s						
TRG	**Tyrgan**	**5.82**	**239**	*e*Pg	Pn	08 56 20.2	+16
TRG				*e*Sg	Sn	08 57 35.2	+24
TRG				Pmax			
	comp=E,2.0nm,0.3s						
TRG				Smax			
	comp=E,23nm,1.2s						
HRMR	**Khuramsha**	**6.33**	**228**	*e*Sg	Sn	08 57 54.4	+30
HRMR				Smax			
	comp=E,228nm,0.6s						
KPC	**Khapcheranga**	**6.52**	**192**	*e*PN	Pn	08 56 11.6	-2.7
KPC				*e*		08 56 32.8	
KPC				*e*		08 57 58.4	
KPC				pmax	pmax		
	comp=Z,6.0nm,2.3s						
KPC				smax			
	comp=E,37nm,1.3s						
KPC	**Khapcheranga**	**6.52**	**192**	*e*Pn	Pn	08 56 12.6	-1.7
KPC				*e*Sg	Sn	08 57 58.7	+30
KPC				Smax			
	comp=E,55nm,1.0s						
LSTR	**Listvyanka**	**7.11**	**238**	*e*Sg	Sn	08 58 19.5	+36
LSTR				Smax			
	comp=E,28nm,2.5s						
TLY	**Talaya**	**7.80**	**240**	*e*PG	Pn	08 56 55.8	+24
TLY				*e*		08 58 35.4	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TLY				smax			
	comp=E,15nm,1.0s						
TLY	**Talaya**	**7.80**	**240**	*e*Sg	Sn	08 58 39.9	+39
TLY				Smax			
	comp=E,13nm,0.9s						
ARS	**Arshan**	**8.26**	**245**	*e*Sg	Sn	08 58 51.7	+39
ARS				Smax			
	comp=E,30nm,0.7s						
ORL	**Orlik**	**9.31**	**254**	*e*		08 58 55.6	
ORL				*e*Sg	Sn	08 59 23.3	+45

IDC 22 08:55:05.7±4.7**,56.59S**×**147.22E,mb4.2**/3**,mb1 4.4**/3**, mb1mx4.1**/10**,mbtmp4.2**/3**,MS4.0**/4**,Ms1 3.9**/4**, ms1mx3.2**/18**,Error ellipse: s-maj=224.7km s-min=50.5km az=89.0,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	19.84	60	LR	LR	09 04 53.5	
	comp=Z,351nm,18.4s,baz=9.1,slow=30						
STKA	Stephens Creek	25.01	349	P	P	09 00 32.4	0.0
	8.4nm,1.1s,baz=159,slow=12,SNR=5.5						
URZ	Urewera	26.96	60	LR	LR	09 11 24.2	
	comp=Z,292nm,18.6s,baz=47,slow=36						
ASAR	Alice Springs	34.30	338	P	P	09 01 53.4	-2.1
	1.6nm,0.7s,baz=163,slow=8.8,SNR=14						
MAW	Mawson	37.79	218	LR	LR	09 15 32.6	
	comp=Z,196nm,19.5s,baz=71,slow=32						
WRA	Warramunga Arr	37.83	340	P	P	09 02 22.7	-2.8
	3.2nm,0.7s,baz=166,slow=7.4,SNR=20						
PMG	Port Moresby	47.06	360	LR	LR	09 22 01.8	
	comp=Z,125nm,18.2s,baz=99,slow=34						
GERES	GERESS Array B	151.29	274	PKPbc	PKPdf	09 15 00.1	+4.5
	0.2nm,0.2s,baz=90,slow=2.7,SNR=4.2						

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*IDC **22** 08:55:30.9±0.6, 6.79N×72.97W, h166^{km}±6^{km}, mb3.1/5, mb1 3.4/7, mb1mx3.2/22, mbtmp3.6/7, Error ellipse: s-maj=19.2km s-min=7.4km az=126.0*

*NEIC **22** 08:55:31.3±0.7, 6.86N×73.10W, mb3.5/1, Error ellipse: s-maj=22.5km s-min=13.9km az=102.0*

ISC 22 08:55:30.7±0.7**,6.90N**±0.09×**73.1W**±0.1**,h170**^{km}±8^{km}**,n12, σ0**^{s}**88**/11**,mb3.3**/6**,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.38	211	P	P	08 56 12.2	+0.3
	29nm,0.3s,baz=282,slow=21,SNR=115						
ROSC				S	S	08 56 43.2	-0.5
	40nm,0.3s,baz=94,slow=16,SNR=11						
SDV	Santo Domingo	3.13	51	P	P	08 56 22.2	+1.2
	6.5nm,0.3s,baz=255,slow=4.0,SNR=86						
SDV				S	S	08 56 59.2	-0.5
	24nm,0.3s,baz=70,slow=23,SNR=35						
LPAZ	La Paz	23.56	168	P	P	09 00 25.7	-1.3
	0.4nm,0.4s,mb3.3,baz=326,slow=16,SNR=2.4						
LPAZ				pP		09 00 58.2	
	0.9nm,0.6s,baz=337,slow=12,SNR=2.9						
LPAZ	La Paz	23.56	168	P	P	09 00 25.7	-1.3
LPAZ				pP		09 00 58.2	
TXAR	Lajitas Array	36.43	312	P	P	09 02 20.9	0.0
	0.2nm,0.5s,mb3.0,baz=129,slow=9.4,SNR=5.0						
PLCA	Paso Flores	47.46	177	P	P	09 03 51.8	+1.7
	0.7nm,0.6s,mb3.5						
PDAR	Pinedale Array	48.03	324	P	P	09 03 55.1	+0.5
	0.2nm,0.4s,mb3.1,baz=121,slow=12,SNR=4.2						
SCHQ	Schefferville	48.05	5	P	P	09 03 53.4	-1.2
	2.9nm,1.2s,mb3.8,baz=214,slow=7.3,SNR=2.7						
YKA	Yellowknife Ar	63.20	340	P	P	09 05 42.6	-0.1
	0.3nm,0.5s,mb3.4,baz=134,slow=6.4,SNR=14						
YKA				pP	pP	09 06 21.1	-1.7
	0.1nm,0.5s,baz=132,slow=6.5,SNR=3.1						
ASAR	Alice Springs	149.19	234	PKPbc	PKPdf	09 14 59.8	+4.4
	0.7nm,0.6s,baz=125,slow=3.4,SNR=8.6						
WRAB	Tennant Creek	150.40	241	*e*PKPbc	PKPdf	09 15 04.3	+7.0
WRA	Warramunga Arr	150.41	241	PKPbc	PKPdf	09 15 03.5	+6.3
	0.6nm,0.5s,baz=110,slow=2.4,SNR=9.5						
WRA				pPKPbc		09 15 45.9	
	0.3nm,0.6s,baz=107,slow=2.4,SNR=1.9						

CASC 22 09:05:35.2±2.5**,9.60N**×**82.70W,h12**^{km}±14^{km}**,MD3.6, 3C-3D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNI	Changuinola	0.26	134	⇓*i*P	Pg	09 05 41.6	+0.8
CNI				*e*S	Sg	09 05 46.1	+1.6
BRU2	Volcan	0.80	179	*e*P	Pb	09 05 50.9	+0.5
BRU2				*e*S	Sb	09 06 02.4	+1.5
BUS	Buena Vista	1.04	268	⇑*i*P	Pb	09 05 54.4	-0.2
BUS				*e*S	Sb	09 06 09.0	+1.0
ACR	Cerro Adams	1.04	206	⇓*e*P	Pb	09 05 54.4	-0.3
ACR				*e*S	Sb	09 06 08.7	+0.6
ICR	Volcan Irazu	1.18	289	*e*P	Pb	09 05 58.2	+1.2
ICR				*e*S	Sb	09 06 14.8	+2.9
DVD	David	1.18	168	*e*P	Pb	09 05 52.2	-4.8
DVD				*e*S	Sb	09 06 11.8	-0.2
LCR2	La Lucha 2	1.29	277	⇓*e*P	Pb	09 05 58.0	-0.9
LCR2				*e*S	Sb	09 06 15.0	-0.2
SJS	Escuela Geolog	1.38	284	⇑*e*P	Pn	09 06 00.2	0.0
SJS				*e*S	Sb	09 06 17.7	0.0
TRTC	Tortuguero	1.39	314	*e*P	Pn	09 05 59.3	-1.2
TRTC				*e*S	Sb	09 06 18.1	-0.1
PTP1	Petroterminal	1.41	169	*e*P	Pn	09 05 58.9	-1.8
PTP1				*e*S	Sb	09 06 19.3	+0.6
LAJ	Bijagual	1.42	281	*e*P	Pn	09 06 06.9	+5.9
LAJ				*e*S	Sb	09 06 31.5	+12
PRS1	Puriscal	1.63	284	⇑*e*P	Pn	09 06 04.1	+0.1
PRS1				*e*S	Sn	09 06 26.5	+1.6

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*NEIC **22** 09:16:35.9±5.6, 19.88S×177.62W, h235^{km}±63^{km}, mb4.3/6, Error ellipse: s-maj=30.9km s-min=21.6km az=173.0*

*IDC **22** 09:16:58.2±8.9, 20.43S×176.81W, h563^{km}±168^{km}, mb3.4/5, mb1 3.5/7, mb1mx3.2/19, mbtmp4.5/7, Error ellipse: s-maj=49.6km s-min=38.3km az=102.0*

ISC 22 09:16:34.0±5.5**,19.9S**±0.2×**177.6W**±0.2**,h231**^{km}±62^{km}**, n15,σ1**^{s}**34**/15**,mb4.1**/9**,1C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	16.70	97	P	P	09 20 15.9	-0.4
	4.7nm,0.3s,baz=10,slow=4.2,SNR=3.6						
URZ	Urewera	18.85	193	P	P	09 20 39.9	+1.2
	3.0nm,0.3s,baz=359,slow=4.6,SNR=25						
RPZ	Rata Peaks	25.57	199	P	P	09 21 41.8	-1.8
	2.7nm,0.6s,mb4.1,baz=20,slow=18,SNR=5.6						
RPZ	Rata Peaks	25.57	199	P	P	09 21 41.8	-1.8
CTA	Charters Tower	33.97	263	*e*P	P	09 23 01.3	+3.5
	4.3nm,0.4s,mb4.3						
CTA	Charters Tower	33.97	263	P	P	09 23 01.4	+3.6
	5.3nm,0.4s,mb4.4,baz=96,slow=9.6,SNR=17						
CTAO	Charters Tower	33.97	263	*e*P	P	09 23 00.8	+3.0
	5.9nm,0.4s,mb4.5						
STKA	Stephens Creek	38.42	244	P	P	09 23 34.0	-1.0
	1.8nm,0.6s,mb3.8,baz=99,slow=9.8,SNR=6.1						
ASAR	Alice Springs	45.07	256	P	P	09 24 29.2	+0.3
	4.5nm,0.7s,mb3.9,baz=95,slow=8.3,SNR=38						
ASPA	Alice Springs	45.07	256	*e*P	P	09 24 29.2	+0.2
WRAB	Tennant Creek	45.09	261	*e*P	P	09 24 27.7	-1.5
	3.6nm,0.6s,mb3.9						
WRA	Warramunga Arr	45.10	261	P	P	09 24 29.9	+0.6
	1.6nm,0.3s,mb3.8,baz=98,slow=8.3,SNR=25						
KAKA	Kakadu	48.39	271	⇑*i*P	P	09 24 57.8	+2.9
	3.0nm,0.3s,mb4.1						
MBWA	Marble Bar	58.40	257	*e*P	P	09 26 06.1	-1.6
	4.7nm,0.4s,mb4.5						
QSPA	South Pole Qui	70.14	180	*e*P	P	09 27 24.0	+1.4
	2.5nm,0.5s,mb4.1						

JMA 22 09:27:49.6±0.3**,43.73N**×**148.04E,h8**^{km}**,M3.5,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.71	258	P	Pn	09 28 20.1	+0.2
NEM2				*e*S	Sn	09 28 42.3	+0.1
JRA	Rausu	2.12	277	P	Pn	09 28 26.0	+0.2
JRA				*e*S	Sn	09 28 52.7	0.0
JNK	Nakash	2.42	268	P	Pn	09 28 29.8	-0.2
JNK				*e*S	Sn	09 28 59.4	-0.7
JAK	Akkeshi	2.55	254	P	Pn	09 28 31.7	-0.2
JAK				*e*S	Sn	09 29 02.6	-0.8
JAR	Ashorobuto	3.14	264	P	Pn	09 28 40.7	+0.4
JAR				*e*S	Sn	09 29 17.7	-0.7
JCH	Churui	3.60	254	P	Pn	09 28 46.6	-0.3
JCH				*e*S	Sn	09 29 29.2	-0.9
JNBK	Urakawa-nobuka	4.14	251	P	Pn	09 28 54.1	-0.5
JKB	Kayabe	5.47	253	P	Pn	09 29 12.4	-1.1
JKB				*e*S	Sn	09 30 13.0	-4.4
JANG	Nango	5.90	238	*e*S	Sn	09 30 21.6	-6.6

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*NIED **22** 09:34:00, 46.70N×149.70E, h400^{km}, Mw4.3 Best double couple: M$_0$3×10^{15} NP1:φ$_s$295°, δ69°, λ-29°. NP2:φ$_s$36°, δ63°, λ-157°.*

*MOS **22** 09:34:33.9±0.9, 48.09N×148.79E, h344^{km}, mb4.3/14, Error ellipse: s-maj=12.5km s-min=7.7km az=77.2*

*SKHL **22** 09:34:34.2±0.5, 47.93N×148.90E, h353^{km}±20^{km}, mb4.8/4, msh5.3/3*

*BJI **22** 09:34:35.9, 47.67N×148.68E, h360^{km}, mB4.6, mb4.7*

*IDC **22** 09:34:36.1±1.5, 48.02N×148.72E, h356^{km}±16^{km}, mb3.6/23, mb1 3.8/24, mb1mx3.7/29, mbtmp4.3/24, Error ellipse: s-maj=15.0km s-min=10.0km az=167.0*

*NEIC **22** 09:34:37.2±0.7, 48.05N×148.75E, h367^{km}±8^{km}, mb4.3/18, Error ellipse: s-maj=8.8km s-min=5.4km az=151.0*

ISC 22 09:34:33.1±0.3**,47.88N**±0.05×**148.82E**±0.06**,h343**^{km}±5^{km}**, h355**^{km}±4.1^{km}**:pP-P,n127,σ1**^{s}**26**/154**,mb4.0**/43**,1C-4D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	4.22	260	⇓*i*PN	P	09 35 47.0	+2.5
YSS				pmax	pmax		
	comp=E,50nm,0.8s						
YSS				pmax	pmax		
	comp=Z,70nm,0.8s						
YSS	Yuzh-Sakhalins	4.22	260	*e*P	P	09 35 47.8	+3.3
YSS	Yuzh-Sakhalins	4.22	260	*i* P	P	09 35 47.0	+2.5
YSS				AMB	AMB	09 35 48.2	
	comp=Z,50nm,0.8s						
YSS				AMB	AMB	09 35 48.2	
	comp=Z,70nm,0.8s						
YSS				*e*S	S	09 36 44.2	+3.7
YSS				A		09 36 47.0	
	comp=Z,130nm,1.4s						
YUK	Yuzh-Kuril'sk	4.36	209	*e*PN	P	09 35 46.5	+0.6
YUK				*e*S	S	09 36 42.5	-0.6
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				pmax	pmax		
	comp=N,110nm,0.3s						
YUK				smax			
	comp=N,390nm,0.5s						
YUK				smax			
	comp=E,400nm,0.6s						
YUK	Yuzh-Kuril'sk	4.36	209	*e*P	P	09 35 46.5	+0.6
YUK				AMB	AMB	09 35 48.5	
	comp=E,110nm,0.4s						
YUK				AMB	AMB	09 35 48.5	
	comp=E,190nm,0.4s						
YUK				*e*S	S	09 36 42.5	-0.6
YUK				A		09 36 47.5	
	comp=E,390nm,0.6s						
YUK				A		09 36 47.5	
	comp=E,400nm,0.6s						
UGL	Uglegorsk	4.65	287	*e*P	P	09 35 49.0	-0.1
UGL				AMB	AMB	09 35 50.0	
	comp=E,81nm,0.7s						
JRA	Rausu	4.71	215	P	P	09 35 50.9	+1.2
NEM2	Nemuro 2	5.00	207	P	P	09 35 51.5	-1.4
NEM2				*e*S	S	09 36 49.6	-6.0
JNK	Nakash	5.16	215	P	P	09 35 55.3	+0.6
JTKR	Abashiri--Toko	5.20	223	P	P	09 35 57.6	+2.5
JTKR				*e*S	S	09 37 01.6	+2.1
JMP	Maruseppu	5.43	227	P	P	09 36 01.1	+3.4
JMP				*e*S	S	09 37 06.5	+2.3
SKR	Severo-Kuril's	5.54	57	*e*PN	P	09 35 56.5	-2.5
SKR				*e*S	S	09 37 02.8	-3.6
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				smax			
	comp=N,90nm,0.3s						
SKR				smax			
	comp=E,90nm,0.5s						
SKR	Severo-Kuril's	5.54	57	*e*P	P	09 35 56.5	-2.5
SKR				AMB	AMB	09 35 57.5	
	comp=E,80nm,0.5s						
SKR				AMB	AMB	09 35 57.5	
	comp=E,230nm,0.5s						
SKR				*e*S	S	09 37 02.8	-3.6
SKR				A		09 37 16.1	
	comp=E,90nm,0.4s						
SKR				A		09 37 16.1	
	comp=E,30nm,0.4s						
JAK	Akkeshi	5.68	212	P	P	09 35 59.6	-1.0
JAK				*e*S	S	09 37 05.8	-3.5
ASAJ	Asahikawa	5.74	231	PN	P	09 36 05.6	+4.3
ASAJ				S	S	09 37 14.9	+4.4
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ASAJ	Asahikawa	5.74	231	P	P	09 36 05.5	+4.3
	comp=Z,8.1nm,0.3s,baz=69,slow=10,SNR=41						
ASAJ				S	S	09 37 14.9	+4.4
	comp=Z,0.5nm,0.3s,baz=18,slow=32,SNR=4.2						
ASAJ	Asahikawa	5.74	231	P	P	09 36 05.6	+4.3
ASAJ				*e*S	S	09 37 15.0	+4.5
JAR	Ashorobuto	5.79	220	P	P	09 36 02.8	+0.9
JAR				*e*S	S	09 37 11.9	+0.3
JKK2	Kamakawa 2	5.83	229	P	P	09 36 05.8	+3.5
JKK2				*e*S	S	09 37 15.5	+3.1
JOB	Onbets	6.09	217	P	P	09 36 04.9	-0.4
JOB				*e*S	S	09 37 15.2	-2.5
PAU	Pauzhetka	6.31	52	*e*P	P	09 36 08.2	+0.3
JFR	Furan	6.43	225	*e*S	S	09 37 25.1	+0.2
JCH	Churui	6.52	218	P	P	09 36 09.3	-1.1
JCH				*e*S	S	09 37 22.6	-4.2
JBT2	Biratori 2	6.83	224	P	P	09 36 14.5	+0.4
JBT2				*e*S	S	09 37 31.6	-1.8
JNBK	Urakawa-nobuka	7.05	220	P	P	09 36 15.8	-0.9
JNBK				*e*S	S	09 37 32.0	-6.0
JEM	Erimo	7.10	217	P	P	09 36 17.3	0.0
JEM				*e*S	S	09 37 34.8	-4.3
JEW	Eniwo	7.23	229	*e*S	S	09 37 40.9	-1.0
JNB	Noboribetsu	7.71	228	P	P	09 36 26.2	+1.7
JNB				*e*S	S	09 37 50.5	-1.6
JSH	Shimam	8.10	233	P	P	09 36 31.3	+2.1
JSH				*e*S	S	09 37 58.7	-1.9
JKB	Kayabe	8.15	226	P	P	09 36 29.5	-0.2
JKB				*e*S	S	09 37 56.8	-4.7
JYM2	Yakumo 2	8.31	229	P	P	09 36 32.6	+1.0
JYM2				*e*S	S	09 38 02.9	-2.0
JSR	Shiriuchi	8.72	226	P	P	09 36 35.9	-0.6
JSR				*e*S	S	09 38 09.7	-4.1
JTM	Tenmabayashi	9.00	221	P	P	09 36 37.4	-2.5
JTM				*e*S	S	09 38 13.3	-6.6
JANG	Nango	9.15	218	P	P	09 36 39.7	-2.0
JANG				*e*S	S	09 38 15.7	-7.6
JTH	Tanohata	9.39	215	*e*S	S	09 38 20.6	-7.7
EKMR	Ekimchan	11.36	303	*e*P	P	09 37 08.4	+0.1
EKMR				AMB	AMB	09 37 12.0	
	comp=Z,12nm,0.8s						
KLR	Kul'dur	11.40	283	*e*P	P	09 37 09.2	+0.5
MA2	Magadan	11.78	5	*d e*PN	P	09 37 14.5	+1.3
MA2				pmax	pmax		
	comp=Z,30nm,0.8s						
MA2				pmax	pmax		
	comp=N,20nm,0.7s						
MA2	Magadan	11.78	5	⇓*i*P	P	09 37 14.3	+1.1
MDJ	Mudanjiang	13.70	263	P	P	09 37 36.4	+0.3
MDJ				AMB	AMB		
	comp=Z,17nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,100nm,4.0s						
MDJ	Mudanjiang	13.70	263	*e*P	P	09 37 37.3	+1.2
MAJO	Matsushiro	13.77	219	*e*P	P	09 37 39.4	+2.4
MAT	Matsushiro	13.77	219	*e*P	P	09 37 39.0	+2.0
MAT				pmax	pmax		
	comp=Z,12nm,0.7s						
MAT	Matsushiro	13.77	219	*e*P	P	09 37 39.0	+2.0
	comp=Z,12nm,0.7s						
MAT	Matsushiro	13.77	219	P	P	09 37 38.8	+1.8
BMKR	Bomnak	14.22	306	*e*P	P	09 37 40.0	-1.8
BMKR				*e*P		09 37 42.4	
BMKR				AMB	AMB	09 37 43.0	
	comp=Z,56nm,0.7s						
KROS	Kirovskiy	15.16	304	*e*P	P	09 37 52.1	+0.1
KROS				AMB	AMB	09 37 53.6	
	comp=Z,3.0nm,0.5s						
CN2	Changchun	16.77	265	*e*P	P	09 38 12.9	+3.9
CN2				*e*XP		09 39 42.3	
CN2				*e*S	S	09 41 06.8	+4.0
CN2				AMB	AMB		
	comp=Z,40nm,0.7s						
CN2				AMB	AMB		
	comp=Z,1μm,3.0s						
YAK	Yakutsk	17.83	330	*e*P	P	09 38 21.2	+1.5
YAK				*e*S	S	09 41 28.3	+5.6
YAK				pmax	pmax		
	comp=Z,28nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax			
	comp=E,8.0nm,1.2s						
YAK				smax			
	comp=N,4.0nm,1.1s						
YAK	Yakutsk	17.83	330	*e*P	P	09 38 21.3	+1.6
	comp=N,93nm,0.8s						
BILL	Bilibino	22.07	17	*e*P	P	09 39 00.2	-0.9
BILL				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.1						
BILL	Bilibino	22.07	17	*e*P	P	09 39 00.2	-0.9
	comp=Z,7.6nm,0.6s,mb4.1						
BJI	Beijing	24.63	264	P	P	09 39 26.9	+2.1
BJI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.5						
BJI	Beijing	24.63	264	P	P	09 39 26.9	+2.1
	comp=Z,3.0nm,1.0s,mb3.5						
TIXI	Tiksi	25.60	346	*e*P	P	09 39 32.0	-1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.8						
SSE	Sheshan	26.92	242	P	P	09 39 45.6	0.0
SSE				AMB	AMB		
	comp=Z,28nm,0.7s,mb4.6						
SSE				AMB	AMB		
	comp=Z,25nm,3.8s						
SSE	Sheshan	26.92	242	P	P	09 39 45.6	0.0
	comp=Z,28nm,0.7s,mb4.6						
NJ2	Nanjing	27.66	246	*e*P	P	09 39 50.9	-1.3
NJ2				AP		09 41 00.1	
NJ2				XP	sP	09 41 44.3	+8.9
NJ2				S	S	09 44 04.0	-4.0
NJ2				XS		09 46 07.0	
NJ2				AMB	AMB		
	comp=Z,34nm,1.0s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,210nm,4.6s						
SONM	Songino Array	28.21	286	P	P	09 39 57.9	+0.9
	comp=Z,0.4nm,0.5s,baz=63,slow=6.4,SNR=2.7						
SONM				PcP	PcP	09 42 60.0	-1.0
	comp=Z,0.5nm,0.6s,baz=88,slow=1.8,SNR=4.4						
TNA	Tin City	28.79	36	⇑*e*P	P	09 40 01.6	-0.2
	comp=Z,10nm,0.7s,mb4.2						
IMA	Indian Mountai	34.65	37	*e*P	P	09 40 52.8	+0.8
IMA				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.4						
IMA	Indian Mountai	34.65	37	*e*P	P	09 40 52.8	+0.8
	comp=Z,11nm,0.4s,mb4.5						
GTA	Gaotai	35.94	275	*e*P	P	09 41 05.3	+2.1
GTA				AP	pP	09 42 15.9	+5.6
GTA				XP	sP	09 42 54.4	+5.2
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.6						
MCK	McKinley	36.70	41	*e*P	P	09 41 09.7	+0.4
MCK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb3.9						
MCK	McKinley	36.70	41	*e*P	P	09 41 09.7	+0.4
	comp=Z,5.8nm,0.8s,mb3.9						
COLA	College	37.09	39	*e*P	P	09 41 12.7	+0.2
COLA				pmax	pmax		
	comp=Z,24nm,0.8s,mb4.5						
COLA	College	37.09	39	*e*P	P	09 41 12.7	+0.2
	comp=Z,24nm,0.8s,mb4.5						
SML	Sawmill	37.19	44	*e*P	P	09 41 13.4	+0.1
ILAR	Eielson Array	37.51	39	P	P	09 41 15.8	-0.1
	comp=Z,6.1nm,0.5s,mb4.0,baz=260,slow=5.7,SNR=123						
THY	Trims Highway	38.16	41	*e*P	P	09 41 21.5	+0.2
GYA	Guiyang	39.19	252	⇓*i*P	P	09 41 32.0	+1.8
GYA				AP	pP	09 42 41.0	+2.7
GYA				XP	sP	09 43 20.3	+4.0
GYA				S	S	09 47 06.3	+1.4
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.5						
ZAL	Zalesovo	39.59	303	P	P	09 41 33.3	+0.1
	comp=Z,0.6nm,0.5s,mb3.1,baz=192,slow=6.9,SNR=2.8						
DAWY	Dawson	40.83	40	*e*P	P	09 41 43.1	-0.1
WMQ	Urumqi	41.80	288	*e*P	P	09 41 53.4	+2.2
INK	Inuvik	42.27	33	*e*P	P	09 41 54.5	-0.1
INK				pmax	pmax		
	comp=Z,15nm,0.5s						
INK	Inuvik	42.27	33	P	P	09 41 54.8	+0.2
	comp=Z,10nm,0.4s,mb4.3,baz=303,slow=7.1,SNR=142						
INK	Inuvik	42.27	33	*e*P	P	09 41 54.5	-0.1
	comp=Z,15nm,0.5s,mb4.4						
MKAR	Makanchi Array	43.82	294	*i* P	P	09 42 07.7	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	44.30	301	*e*P	P	09 42 10.7	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.7						
KURK	Kurchatov	44.30	301	*e*P	P	09 42 10.7	-0.3
	comp=Z,4.1nm,0.6s,mb3.7						
DLBC	Dease Lake	46.89	45	P	P	09 42 32.4	+1.2
	comp=Z,2.9nm,0.8s,mb3.6,baz=290,slow=12,SNR=5.0						
CHKZ	Chkalovo	47.45	308	*e*P	P	09 42 34.9	-0.7
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.1						
CHKZ	Chkalovo	47.45	308	*e*P	P	09 42 34.9	-0.7
	comp=Z,5.8nm,0.5s,mb4.1						
BVA0	Borovoye Array	47.87	307	P	P	09 42 38.7	-0.1
BVAR	Borovoye Array	47.87	307	P	P	09 42 38.7	-0.1
	comp=Z,1.7nm,0.6s,mb3.5,baz=47,slow=8.1,SNR=15						
BVAR				PcP	PcP	09 44 00.8	-1.0
	comp=Z,1.0nm,0.6s,baz=18,slow=4.7,SNR=4.9						
RES	Resolute Bay	50.68	18	*e*P	P	09 42 57.9	-1.8
RES				*e*	pP	09 44 10.9	-0.2
RES				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.4						
RES	Resolute Bay	50.68	18	*e*P	P	09 42 57.9	-1.7
	comp=Z,14nm,0.6s,mb4.4						
RES				*e*	pP	09 44 10.9	-0.2
AAK	Ala-Archa	50.71	293	*i* P	P	09 43 00.0	-0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.5						
AAK	Ala-Archa	50.71	293	*e*P	P	09 42 59.7	-0.6
	comp=Z,3.9nm,0.8s,mb3.7						
YKW3	Yellowknife Ar	51.71	36	*e*P	P	09 43 06.6	-0.8
YKA	Yellowknife Ar	51.75	36	P	P	09 43 07.2	-0.5
	comp=Z,2.9nm,0.5s,mb3.9,baz=303,slow=7.0,SNR=112						
YKA				PcP	PcP	09 44 15.2	-0.7
	comp=Z,0.4nm,0.5s,baz=307,slow=3.6,SNR=6.4						
ARCES	ARCESS Array B	55.80	339	P	P	09 43 35.5	-1.2
	comp=Z,5.2nm,0.9s,mb3.9,baz=6.3,slow=7.3,SNR=5.5						
EDM	Edmonton	57.61	45	*e*P	P	09 43 49.3	-0.2
NEW	Newport	58.78	51	P	P	09 43 57.6	-0.1
	comp=Z,1.5nm,0.5s,mb3.6,baz=301,slow=6.1,SNR=4.8						
JOF	Joensuu	58.99	332	*e*p	P	09 43 56.7	-2.2
	comp=Z,6.1nm,0.4s,mb4.4						
YBH	Yreka Blue Hor	59.75	60	P	P	09 44 04.8	+0.5
	comp=Z,0.8nm,0.5s,mb3.4,baz=165,slow=12,SNR=4.0						
KAF	Kangasniemi	61.16	333	*e*p	P	09 44 09.9	-3.4
	comp=Z,2.8nm,0.4s,mb4.0,baz=39,slow=6.2						
KAF	Kangasniemi	61.16	333	*e*P	P	09 44 09.9	-3.4
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
FINES	FINESS Array B	61.74	333	P	P	09 44 16.1	-1.1
	comp=Z,11nm,0.7s,mb4.5,baz=44,slow=7.4,SNR=47						
OBN	Obninsk	62.70	323	*e*P	P	09 44 21.9	-1.6
OBN				pmax	pmax		
	comp=Z,28nm,1.6s,mb4.5						
HLID	Hailey	63.25	54	*e*P	P	09 44 27.9	+0.6
	comp=Z,2.6nm,1.1s,mb3.7						
BOZ	Bozeman (W)	63.34	51	*e*P	P	09 44 28.6	+0.8
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
BOZ	Bozeman (W)	63.34	51	*e*P	P	09 44 28.6	+0.8
	comp=Z,6.8nm,0.6s,mb4.3						
NVAR	Mina Array Bea	64.46	60	P	P	09 44 36.2	+1.2
	comp=Z,1.2nm,0.6s,mb3.7,baz=308,slow=5.6,SNR=9.4						
NVAR	Mina Array Bea	64.46	60	P	P	09 44 36.2	+1.2
ELK	Elko	64.67	57	P	P	09 44 37.5	+1.2
	comp=Z,0.5nm,0.5s,mb3.4,baz=302,slow=5.9,SNR=5.1						
FRB	Frobisher Bay	64.89	17	P	P	09 44 35.0	-2.3
	comp=Z,6.4nm,0.8s,mb4.3,baz=336,slow=7.9,SNR=16						
NB2	NORSAR Subarra	66.17	339	P	P	09 44 44.5	-1.0

	comp=Z,3.1nm,0.7s,mb4.2,baz=28,slow=6.2						
NB2	**NORSAR Subarra**	**66.17**	**339**	P	**P**	**09 44 44.5**	**-1.0**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
NOA	**NORSAR Array B**	**66.17**	**339**	P	**P**	**09 44 44.8**	**-0.6**
	comp=Z,4.4nm,0.5s,mb4.5,baz=30,slow=6.3,SNR=13						
PDAR	**Pinedale Array**	**66.40**	**52**	P	**P**	**09 44 48.0**	**+0.8**
	comp=Z,4.2nm,0.5s,mb4.4,baz=319,slow=1.0,SNR=55						
ULM	**Lac du Bonnet**	**67.53**	**39**	P	**P**	**09 44 53.1**	**-1.0**
	comp=Z,0.8nm,0.3s,mb3.9,baz=342,slow=3.7,SNR=4.3						
KIV	**Kislovodsk**	**67.89**	**312**	*i* P	**P**	**09 44 54.9**	**-1.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	**68.75**	**195**	P	**P**	**09 45 02.7**	**+0.7**
	comp=Z,0.3nm,0.7s,mb3.2,baz=11,slow=6.3,SNR=3.0						
AKASG	**Malin Array Be**	**68.95**	**324**	P	**P**	**09 45 01.8**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AKASG	**Malin Array Be**	**68.95**	**324**	P	**P**	**09 45 01.8**	**-0.9**
	comp=Z,3.5nm,0.4s,mb4.4,baz=36,slow=6.3,SNR=18						
PV10	**Paradox Valley**	**69.76**	**55**	*e*P	**P**	**09 45 09.2**	**+1.2**
KWP	**Kalwaria**	**72.32**	**327**	*e*P	**P**	**09 45 22.5**	**-0.5**
KOLS	**Kolonicke sedl**	**73.05**	**326**	*e*P	**P**	**09 45 27.6**	**+0.4**
SCHQ	**Schefferville**	**73.34**	**21**	P	**P**	**09 45 27.9**	**-0.9**
	comp=Z,0.9nm,0.4s,mb3.9,baz=299,slow=8.0,SNR=13						
VYHS	**Vyhne**	**74.67**	**328**	*e*P	**P**	**09 45 36.7**	**+0.1**
BRTR	**Keskin Array B**	**75.54**	**314**	P	**P**	**09 45 42.4**	**+0.7**
	comp=Z,0.3nm,0.3s,mb3.4,baz=45,slow=8.2,SNR=3.0						
GERES	**GERESS Array B**	**76.11**	**331**	P	**P**	**09 45 44.4**	**-0.3**
	comp=Z,2.6nm,0.6s,mb4.1,baz=35,slow=6.2,SNR=17						
TXAR	**Lajitas Array**	**79.42**	**58**	P	**P**	**09 46 03.8**	**+0.9**
	comp=Z,2.3nm,0.6s,mb4.1,baz=293,slow=4.3,SNR=40						
DBIC	**Dimbokro**	**120.94**	**329**	PKP	PKPdf	09 52 45.4	+0.3
	comp=Z,4.0nm,1.2s,baz=29,slow=9.7,SNR=2.9						
BDFB	**Brasilia**	**144.98**	**29**	PKP	PKPdf	09 53 31.4	+1.7
	comp=Z,3.2nm,0.5s,baz=286,slow=2.6,SNR=7.6						
PLCA	**Paso Flores**	**151.18**	**90**	PKPbc	PKPdf	09 53 47.2	+8.4
	comp=Z,1.8nm,0.6s,baz=220,slow=2.3,SNR=6.3						

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*CSEM **22** 09:50:36.9±0.1, 30.81N×56.72E, h8^{km}, ML3.4, Error ellipse: s-maj=4.4km s-min=1.9km az=43.0*

*THR **22** 09:50:39.2±1.4, 30.75N×56.88E, h14^{km}±17^{km}, ML3.4*

TEH 22 09:50:43.0, 31.01N×56.81E, h10^{km}, Mn3.0, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**1.03**	**183**	*e*PG	Pg	09 50 53.3	-10
KRBR				AML	AML	09 51 19.2	
	comp=N,1μm,0.2s						
IBAF	**Bafgh**	**1.21**	**299**	Pn	Pn	09 51 01.1	-4.9
IMEH	**Mehriz**	**1.92**	**282**	Pn	Pn	09 51 11.7	-4.5
ICHK	**Chekchek**	**2.39**	**302**	Pn	Pn	09 51 17.5	-5.4
ISAD	**Sadrabad**	**2.82**	**289**	Pn	Pn	09 51 24.6	-4.4
ISRV	**Sarvestan**	**3.59**	**244**	Pn	Pn	09 51 38.3	-1.7
BNDS	**Bandar-Abbas**	**3.64**	**189**	*e*PN	Pn	09 51 33.9	-6.8
BNDS				*e*SG	Sg	09 52 25.3	-19
BNDS				AML	AML	09 52 39.5	
	comp=N,74nm,0.6s						
ZHSF	**Zahedan**	**3.70**	**111**	*e*PN	Pn	09 51 36.5	-5.0
ZHSF				AML	AML	09 52 48.3	
	comp=N,73nm,0.5s						
NASN	**Na'in**	**3.84**	**299**	*e*PN	Pn	09 51 42.4	-1.1
NASN				*e*SG	Sg	09 52 44.8	-6.2
NASN				AML	AML	09 53 04.1	
	comp=N,79nm,0.5s						
IMOK	**Mook**	**4.06**	**242**	Pn	Pn	09 51 43.3	-3.3
IFIR	**Firoozkooh**	**5.73**	**325**	Pn	Pn	09 52 07.2	-3.1
IDMV	**Damavand**	**6.06**	**320**	Pn	Pn	09 52 11.7	-3.2
IAFJ	**Afjeh**	**6.44**	**320**	Sn	Sn	09 53 26.8	-7.9
IRAZ	**Razeghan**	**7.24**	**309**	Sn	Sn	09 53 45.5	-9.2

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*IDC **22** 10:12:07.3±1.4, 13.12N×120.00E, mb3.6/3, mb1 3.8/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=31.9km s-min=14.4km az=113.0*

ISC 22 10:12:05.8±4.0, 13.1N±0.2×120.0E±0.2, h1^{km}±25^{km}, n6, σ0^{s}68/6, mb3.5/3, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.68**	**20**	*e*P	**Pg**	**10 12 19.7**	**+0.4**
TGY	**Tagaytay City**	**1.35**	**42**	Pg	**Pg**	**10 12 32.2**	**-0.5**
	128nm,0.3s,baz=249,slow=11,SNR=14						
TGY				Lg		10 12 50.5	
	221nm,0.3s,baz=130,slow=14,SNR=14						
LQP	**Lukban**	**1.80**	**56**	⇓*e*P	**Pn**	**10 12 38.4**	**+0.2**
	276μm,1.0s						
WRA	**Warramunga Arr**	**35.73**	**157**	P	**P**	**10 19 07.8**	**-0.4**
	0.8nm,0.6s,mb3.8,baz=336,slow=9.5,SNR=15						
SONM	**Songino Array**	**36.45**	**345**	P	**P**	**10 19 13.8**	**-0.2**
	0.3nm,0.6s,mb3.3,baz=168,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**38.98**	**160**	P	**P**	**10 19 36.0**	**+0.5**
	0.9nm,0.6s,mb3.6,baz=340,slow=7.1,SNR=16						

WEL 22 10:18:33.5±0.3, 40.83S×173.16E, h173^{km}±2^{km}, ML3.5/13, 12C-2D, Error ellipse: s-maj=2.2km s-min=1.7km az=0.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.42**	**156**	⇑PN	P	10 18 57.3	-0.3
NNZ				SN	S	10 19 15.1	-0.9
QRZ	**Quartz Range**	**0.47**	**270**	⇑PN	P	10 18 57.0	-0.7
QRZ				SN	S	10 19 14.5	-1.8
TUWZ	**Tuamarina**	**0.84**	**136**	PN	P	10 18 59.8	+0.2
TUWZ				SN	S	10 19 19.0	-0.8
THZ	**Tophouse**	**0.95**	**191**	⇑PN	P	10 19 00.3	0.0
THZ				SN	S	10 19 19.9	-1.0
BSWZ	**Blackbirch Sta**	**1.04**	**149**	⇑PN	P	10 19 01.2	+0.2
BSWZ				SN	S	10 19 21.2	-0.9
MRW	**Makara Radio**	**1.23**	**109**	⇑PN	P	10 19 02.5	-0.2
MRW				SN	S	10 19 24.1	-1.1
WEL	**Wellington**	**1.30**	**111**	⇑PN	P	10 19 03.1	-0.3
WEL				SN	S	10 19 25.0	-1.4
KIW	**Kapiti Island**	**1.33**	**92**	⇑PN	P	10 19 03.3	-0.3
KIW				SN	S	10 19 25.0	-1.8
DSZ	**Denniston Nort**	**1.37**	**228**	⇓PN	P	10 19 02.9	-1.1
BHW	**Baring Head**	**1.42**	**115**	PN	P	10 19 03.8	-0.6
BHW				SN	S	10 19 26.4	-1.9
CAW	**Cannon Point**	**1.48**	**102**	⇑PN	P	10 19 04.5	-0.5
CAW				SN	S	10 19 27.3	-1.9
KHZ	**Kahutara**	**1.61**	**170**	PN	P	10 19 05.8	-0.6
KHZ				SN	S	10 19 29.6	-2.1
MSWZ	**Moikau Station**	**1.69**	**111**	⇑PN	P	10 19 06.5	-0.6
MSWZ				SN	S	10 19 30.6	-2.4
WAZ	**Wanganui**	**1.76**	**53**	PN	P	10 19 07.4	-0.4
PAWZ	**Paruwai Farm**	**1.80**	**109**	PN	P	10 19 07.6	-0.7
PAWZ				SN	S	10 19 32.8	-2.3
MTW	**Mount Morrison**	**1.81**	**101**	⇑PN	P	10 19 07.7	-0.6
MTW				SN	S	10 19 33.0	-2.2
MRZ	**Mangatainoka R**	**1.85**	**86**	⇑PN	P	10 19 08.0	-0.8
MRZ				SN	S	10 19 33.3	-2.6
LTZ	**Lake Taylor**	**2.06**	**198**	⇓PN	P	10 19 10.1	-1.0
LTZ				SN	S	10 19 36.2	-3.9
VRZ	**Vera Road**	**2.10**	**36**	PN	P	10 19 09.0	-2.6
VRZ				SN	S	10 19 38.6	-2.3
TSZ	**Takapari Road**	**2.27**	**71**	PN	P	10 19 12.5	-1.1
TSZ				SN	S	10 19 42.2	-2.4
BFZ	**Birch Farm**	**2.35**	**87**	PN	P	10 19 13.8	-0.8
CRLZ	**Canterbury Las**	**2.77**	**188**	SN	S	10 19 50.1	-5.0
MQZ	**McQueen's Vall**	**2.90**	**187**	PN	P	10 19 18.4	-2.8
MQZ				SN	S	10 19 52.3	-5.5
PWZ	**Pawanui**	**2.94**	**75**	SN	S	10 19 56.2	-2.5
BKZ	**Black Stump Fm**	**3.05**	**58**	*e*PN	P	10 19 23.9	+0.8
RPZ	**Rata Peaks**	**3.28**	**208**	PN	P	10 19 23.5	-2.4
RPZ				*e*SN	S	10 20 00.6	-5.7
FOZ	**Fox Glacier**	**3.75**	**222**	PN	P	10 19 27.5	-4.5
FOZ				*e*SN	S	10 20 08.5	-8.6
URZ	**Urewera**	**3.99**	**51**	*e*PN	P	10 19 32.5	-2.5
URZ				SN	S	10 20 16.8	-5.7
LBZ	**Lake Benmore**	**4.18**	**211**	PN	P	10 19 33.9	-3.5
JCZ	**Jackson Bay**	**4.59**	**224**	PN	P	10 19 38.9	-3.9
ODZ	**Otahua Downs**	**4.60**	**203**	⇑PN	P	10 19 40.2	-2.7
ODZ				SN	S	10 20 30.2	-6.3
TUZ	**Tuapeka**	**5.73**	**205**	*e*PN	P	10 19 54.2	-3.4

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*IDC **22** 10:25:10.5±0.9, 1.42S×99.09E, mb4.3/12, mb1 4.4/13, mb1mx4.3/17, mbtmp4.2/13, MS3.6/2, Ms1 3.7/2, ms1mx3.2/15, Error ellipse: s-maj=51.5km s-min=14.2km az=53.0*

*NEIC **22** 10:25:14.9±0.5, 1.41S×99.15E, h30^{km}, mb4.3/5, Error ellipse: s-maj=27.0km s-min=6.8km az=53.0*

ISC 22 10:25:13.8±0.7, 1.3S±0.2×99.3E±0.2, h33^{km}, n22, σ0^{s}83/19, mb4.3/17, MS3.7/1, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.64**	**359**	P	**P**	**10 29 43.2**	**+0.5**
	baz=186,slow=10.0,SNR=4.7						
CMAR				LR	LR	10 37 57.1	
	comp=Z,145nm,18.2s,baz=180,slow=39						
MBWA	**Marble Bar**	**28.07**	**136**	*e*P	**P**	**10 31 04.0**	**-0.7**
	5.1nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**30.81**	**124**	*e*P	**P**	**10 31 28.2**	**-0.9**
	4.8nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	**38.98**	**121**	P	**P**	**10 32 38.6**	**-0.3**
	6.2nm,0.5s,mb4.6,baz=301,slow=9.1,SNR=101						
WRAB	**Tennant Creek**	**38.98**	**121**	*e*P	**P**	**10 32 38.4**	**-0.5**
	16nm,0.5s,mb5.0						
WRAB				*e*		10 32 45.1	
ASPA	**Alice Springs**	**40.25**	**126**	*e*P	**P**	**10 32 49.8**	**+0.3**
ASAR	**Alice Springs**	**40.25**	**126**	P	**P**	**10 32 49.9**	**+0.4**
	1.3nm,0.5s,mb4.0,baz=296,slow=7.8,SNR=29						
ASAR				PcP	PcP	10 34 54.0	+0.4
	0.7nm,0.6s,baz=305,slow=3.9,SNR=5.2						
AAK	**Ala-Archa**	**49.11**	**336**	*e*P	**P**	**10 33 59.6**	**-0.7**
	1.2nm,0.5s,mb4.2						
SONM	**Songino Array**	**49.34**	**6**	P	**P**	**10 34 02.8**	**+0.9**
	1.0nm,0.5s,mb4.1,baz=193,slow=9.2,SNR=7.1						
SONM				PcP	PcP	10 35 24.3	-0.2
	1.9nm,0.9s,baz=196,slow=3.8,SNR=4.1						
CTA	**Charters Tower**	**49.56**	**115**	P	**P**	**10 34 03.8**	**-0.2**
	1.5nm,0.5s,mb4.3,baz=285,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**50.16**	**132**	P	**P**	**10 34 09.0**	**+0.5**
	5.7nm,0.8s,mb4.7,baz=308,slow=5.5,SNR=9.5						
STKA				LR	LR	10 56 43.4	
	comp=Z,82nm,19.9s,MS3.7,baz=77,slow=38						
ZAL	**Zalesovo**	**56.35**	**350**	P	**P**	**10 34 54.1**	**+0.1**
	6.0nm,0.5s,mb4.9,baz=319,slow=4.8,SNR=21						
BVAR	**Borovoye Array**	**59.29**	**340**	P	**P**	**10 35 12.9**	**-1.8**
	1.2nm,0.7s,mb4.0,baz=127,slow=7.4,SNR=6.5						
CHKZ	**Chkalovo**	**59.75**	**341**	*e*P	**P**	**10 35 16.5**	**-1.4**
	2.6nm,0.7s,mb4.4						
BRTR	**Keskin Array B**	**72.31**	**312**	P	**P**	**10 36 37.8**	**-0.4**
	0.5nm,0.7s,mb3.6,baz=72,slow=8.7,SNR=3.3						
RPZ	**Rata Peaks**	**75.99**	**135**	P	**P**	**10 37 00.8**	**+1.3**
	5.6nm,1.1s,mb4.4,baz=251,slow=7.4,SNR=4.1						
FINES	**FINESS Array B**	**83.16**	**332**	P	**P**	**10 37 38.4**	**+0.7**
	1.7nm,0.8s,mb4.1,baz=108,slow=6.0,SNR=7.5						
ARCES	**ARCESS Array B**	**85.58**	**340**	P	**P**	**10 37 50.8**	**+1.2**
	4.1nm,0.9s,mb4.7,baz=98,slow=6.4,SNR=3.9						
GERES	**GERESS Array B**	**88.05**	**319**	P	**P**	**10 38 03.1**	**+0.9**
	0.6nm,0.6s,mb4.0,baz=63,slow=3.0,SNR=4.4						
TXAR	**Lajitas Array**	**144.59**	**36**	PKP	PKPdf	10 44 49.6	+1.9
	1.9nm,0.5s,baz=199,slow=0.8,SNR=62						
MIAR	**Mount Ida**	**144.83**	**19**	*e*PKPdf	PKPdf	10 44 49.1	+1.0
JCT	**Junction City**	**145.81**	**30**	*e*PKPdf	PKPdf	10 44 52.8	+2.9

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*DJA **22** 11:18:25.3±0.9, 10.26S×119.61E, h160^{km}, MD4.7/4, ML4.7/4, Error ellipse: s-maj=71.8km s-min=17.7km az=19.0*

ISC 22 11:18:25.5±1.1, 11.2S±0.3×119.0E±0.2, h33^{km}, n6, σ1^{s}13/11, 6C-3D, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	**3.95**	**313**	⇑*i*Pn	**Pn**	**11 19 25.1**	**-0.4**
	197nm,0.2s						
KEDI	**Kedomdong**	**3.95**	**313**	⇑*i*P	**P**	**11 19 25.8**	**+0.4**
KEDI				⇓*i*Sn	**Sn**	**11 20 10.1**	**-1.2**
RATI	**Rata**	**4.24**	**306**	⇓*i*Pn	**Pn**	**11 19 30.8**	**+1.2**
	192nm,0.2s						
RATI				⇑*i*Sn	**Sn**	**11 20 19.3**	**+0.6**
KELI	**Kelakatan**	**5.37**	**303**	⇑*i*Pn	**Pn**	**11 19 46.1**	**+0.5**
	55nm,1.1s						
KELI				⇑*i*Sn	**Sn**	**11 20 45.8**	**-1.3**
SRDI	**Scrawed**	**5.53**	**299**	⇓*i*Pn	**Pn**	**11 19 50.0**	**+2.2**
	43nm,0.2s						
SRDI				⇑*i*Sn	**Sn**	**11 20 50.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.36**	**138**	*e*P	**P**	**11 20 41.0**	**-0.2**
	4.0nm,0.3s						
FITZ				*e*S	**S**	**11 22 22.3**	**-4.1**

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*ORF **22** 11:19:35.2, 30.80N×139.05E, h30^{km}, mb5.6*

*BJI **22** 11:20:22.3, 33.18N×137.08E, h349^{km}, mB5.7, mb5.6*

*MOS **22** 11:20:22.8±0.8, 33.11N×137.20E, h360^{km}, mb5.4/115, Error ellipse: s-maj=6.9km s-min=3.6km az=111.0*

*JMA **22** 11:20:23.8±0.1, 33.14N×137.21E, h375^{km}±2^{km}, M5.4 Broadband fault plane solution: P waves. NP1:φ$_s$52°, δ40°, λ142°. NP2:φ$_s$173°, δ67°, λ56°. Principal axes: T Plg55°, Azm40°; N Plg31°, Azm188°; P Plg15°, Azm287°;*

JMA Felt I J1.

*BGS **22** 11:20:25.0±2.8, 33.18N×137.15E, h370^{km}, mb5.0*

*HRVD **22** 11:20:25.3±0.2, 33.15N×137.16E, h372^{km}±1^{km}, MW5.6/61, Centroid moment Tensor Solution. LP body waves: s61, c129; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.56±.06; M$_{\theta\theta}$0.07±.08; M$_{\phi\phi}$-1.63±.09; M$_{r\theta}$0.20±.08; M$_{\theta\phi}$-1.13±.08; M$_{\phi r}$-2.70±.07; Best double couple: M$_0$3.338×10^{17} NP1:φ$_s$54°, δ25°, λ141°. NP2: φ$_s$181°, δ75°, λ70°. Principal axes: T 3.274, Plg56°, Azm66°; N .125, Plg19°, Azm186°; P -3.401, Plg27°, Azm286°; nsta1 refers to body waves, cutoff=40s.*

*NEIC **22** 11:20:25.3±0.4, 33.18N×137.15E, h370^{km}±3^{km}, mb5.3/149, MW5.6, MW5.6(NIED) Error ellipse: s-maj=3.5km s-min=2.6km az=170.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.61; M$_{\theta\theta}$-0.61; M$_{\phi\phi}$-1.00; M$_{r\theta}$0.57; M$_{\theta\phi}$-1.07; M$_{\phi r}$-2.70; Best double couple: M$_0$3.2×10^{17} NP1:φ$_s$60°, δ25°, λ146°. NP2: φ$_s$181°, δ76°, λ68°. Principal axes: T 3.57, Plg54°, Azm65°; N -.7, Plg21°, Azm187°; P -2.87, Plg28°, Azm288°;*

NEIC Felt [II] at Iwakuni. Also felt at Koga, Matsuyama and Otake. Recorded [1 JMA] in Tochigi Prefecture.

*IDC **22** 11:20:26.1±0.8, 33.17N×137.16E, h376^{km}±7^{km}, mb4.8/34, mb1 4.9/38, mb1mx4.9/39, mbtmp5.5/38 Error ellipse: s-maj=7.0km s-min=6.2km az=77.0*

*NIED **22** 11:21:00, 33.00N×137.20E, h380^{km}, Mw5.6 Best double couple: M$_0$3.34×10^{17} NP1:φ$_s$176°, δ72°, λ70°. NP2:φ$_s$46°, δ26°, λ137°.*

ISC 22 11:20:24.6±0.2, 33.20N±0.02×137.18E±0.02, h372^{km}±1^{km}, h363^{km}±3.5^{km}:pP-P, n805, σ0^{s}89/872, mb5.2/231, 136C-73D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	**Tokai 1**	**0.66**	**31**	P	**P**	**11 21 11.4**	**-0.4**
TK01				*e*S	**S**	**11 21 46.1**	**-2.8**
TK02	**Tokai 2**	**0.89**	**33**	⇑P	**P**	**11 21 12.4**	**0.0**
TK03	**Tokai 3**	**1.16**	**34**	P	**P**	**11 21 13.6**	**0.0**
TK03				*e*S	**S**	**11 21 53.4**	**+1.4**
JIE	**Ise**	**1.25**	**342**	⇑P	**P**	**11 21 13.9**	**-0.1**
JIE				*e*S	**S**	**11 21 52.5**	**-0.3**
JWZ	**Kozaga**	**1.27**	**285**	⇑P	**P**	**11 21 13.7**	**-0.4**
JWZ				*e*S	**S**	**11 21 52.5**	**-0.4**
TK04	**Tokai 4**	**1.31**	**26**	⇑P	**P**	**11 21 14.3**	**0.0**
TK04				*e*S	**S**	**11 21 55.2**	**+1.9**
JAA	**Atsumi**	**1.43**	**359**	⇑P	**P**	**11 21 14.6**	**-0.3**
JAA				S	**S**	**11 21 54.5**	**+0.2**
TSUJ	**Tsu 2**	**1.64**	**337**	⇑P	**P**	**11 21 15.9**	**-0.1**
TSUJ				S	**S**	**11 21 56.6**	**+0.3**
JWM	**Minabe**	**1.66**	**293**	⇑P	**P**	**11 21 15.9**	**-0.3**
JWY	**Kouya**	**1.67**	**308**	⇑P	**P**	**11 21 16.5**	**+0.3**
JWY				*e*S	**S**	**11 21 57.3**	**+0.6**
JHMK	**Hamakita**	**1.68**	**16**	P	**P**	**11 21 15.6**	**-0.7**
JHMK				*e*S	**S**	**11 21 56.5**	**-0.3**
JSG	**Sagara**	**1.69**	**29**	P	**P**	**11 21 16.3**	**0.0**
HMMJ	**Hamamatsu 2**	**1.71**	**15**	⇑P	**P**	**11 21 15.9**	**-0.6**
HMMJ				*e*S	**S**	**11 21 56.1**	**-1.0**
JHE	**Heguri**	**1.91**	**320**	⇑P	**P**	**11 21 17.8**	**+0.1**
JEG	**Eigenji**	**2.04**	**341**	⇑P	**P**	**11 21 18.8**	**+0.3**
JEG				*e*S	**S**	**11 22 01.6**	**+0.8**
SHZ3	**Shizuoka 3**	**2.05**	**24**	⇑P	**P**	**11 21 18.2**	**-0.4**
JAO	**Obara**	**2.06**	**2**	⇑P	**P**	**11 21 18.5**	**-0.2**
JAO				*e*S	**S**	**11 22 02.4**	**+1.3**
JHJ	**Hachijo jima 2**	**2.18**	**91**	P	**P**	**11 21 18.1**	**-1.5**
	168nm,0.3s,baz=219,slow=6.0,SNR=50						
JHJ				S	**S**	**11 22 04.2**	**+1.6**
	188nm,0.3s,baz=81,slow=22,SNR=7.6						
JNY	**Yasuok**	**2.23**	**14**	⇑P	**P**	**11 21 19.4**	**-0.4**
JAJ2	**Tsuna**	**2.27**	**303**	⇑P	**P**	**11 21 20.1**	**-0.1**
JAI	**Aioi**	**2.36**	**285**	⇑P	**P**	**11 21 21.0**	**+0.2**
JMIK	**Miki**	**2.39**	**313**	P	**P**	**11 21 21.1**	**+0.1**
JGF	**Kuroka**	**2.40**	**3**	⇑P	**P**	**11 21 20.7**	**-0.4**
JGM	**Miyama**	**2.52**	**351**	⇑P	**P**	**11 21 22.1**	**0.0**
JFM	**Mihama**	**2.53**	**337**	P	**P**	**11 21 22.1**	**0.0**
JWT	**Wachi**	**2.55**	**325**	⇑P	**P**	**11 21 22.3**	**0.0**
JWT				S	**S**	**11 22 07.6**	**+0.1**
MRT2	**Murotomisaki 2**	**2.55**	**275**	P	**P**	**11 21 22.5**	**+0.2**
JOD2	**Odawara 2**	**2.59**	**37**	⇓P	**P**	**11 21 21.5**	**-1.1**
JKS	**Kasai**	**2.63**	**313**	P	**P**	**11 21 22.9**	**0.0**
JNT	**Takato**	**2.78**	**16**	⇑P	**P**	**11 21 23.5**	**-0.6**
JMN	**Monobe**	**2.81**	**282**	⇑P	**P**	**11 21 25.0**	**+0.6**
JJS	**Sakaide**	**2.95**	**294**	P	**P**	**11 21 25.8**	**+0.3**
JKY	**Yasaka**	**2.97**	**325**	P	**P**	**11 21 25.7**	**0.0**
JGN	**Niukaw**	**3.02**	**2**	⇑P	**P**	**11 21 25.5**	**-0.6**
JAD	**Aida**	**3.05**	**306**	⇑P	**P**	**11 21 26.6**	**+0.2**
JRY	**Ryogami san**	**3.15**	**26**	P	**P**	**11 21 26.5**	**-0.8**
JKG	**Kaga**	**3.15**	**347**	P	**P**	**11 21 27.0**	**-0.3**
JKSM	**Kasumi**	**3.17**	**320**	P	**P**	**11 21 27.6**	**+0.2**
BSO4	**Boso 4**	**3.17**	**55**	P	**P**	**11 21 24.9**	**-2.6**
JNG	**Nsakai**	**3.29**	**13**	P	**P**	**11 21 27.9**	**-0.6**
JTT	**Ttatey**	**3.40**	**2**	P	**P**	**11 21 29.6**	**0.0**
MAJO	**Matsushiro**	**3.44**	**14**	*e*P	**P**	**11 21 28.7**	**-1.2**
MAT	**Matsushiro**	**3.44**	**14**	*e*P	**P**	**11 21 29.0**	**-0.9**
MAT				*e*S	**S**	**11 22 19.0**	**-2.3**
MAT	**Matsushiro**	**3.44**	**14**	P	**P**	**11 21 28.8**	**-1.1**
MAT				S	**S**	**11 22 19.2**	**-2.1**
MAT	**Matsushiro**	**3.44**	**14**	P	**P**	**11 21 29.0**	**-0.9**
JKU	**Kubokawa**	**3.45**	**273**	⇑P	**P**	**11 21 30.7**	**+0.6**
BSO1	**Boso 1**	**3.47**	**64**	P	**P**	**11 21 26.2**	**-4.0**
JET	**Tanbara**	**3.50**	**281**	P	**P**	**11 21 31.3**	**+0.8**
JTO	**Tosashimizu**	**3.70**	**266**	⇑P	**P**	**11 21 33.0**	**+0.6**
JAG	**Ashikaga**	**3.72**	**29**	P	**P**	**11 21 29.9**	**-2.7**
JHS	**Saijyo**	**3.82**	**299**	⇓P	**P**	**11 21 34.3**	**+0.7**
UWA2	**Uwa jima 2**	**3.82**	**271**	P	**P**	**11 21 34.4**	**+0.8**
JNA	**Nagahama**	**3.95**	**276**	⇑P	**P**	**11 21 35.9**	**+1.0**
JHM	**Kurahashi**	**3.99**	**285**	P	**P**	**11 21 36.1**	**+0.8**
JNM	**Ikuma**	**4.13**	**305**	⇓P	**P**	**11 21 37.2**	**+0.5**
JHT	**Toyohira**	**4.22**	**292**	⇓P	**P**	**11 21 38.0**	**+0.4**
JHO	**Hitachi**	**4.39**	**38**	⇓P	**P**	**11 21 36.1**	**-3.3**
JGT	**Gotsu**	**4.42**	**296**	P	**P**	**11 21 39.9**	**+0.3**
JKD	**Kudamatsu**	**4.51**	**282**	P	**P**	**11 21 41.5**	**+0.9**
JUS	**Usuki**	**4.56**	**270**	P	**P**	**11 21 42.0**	**+0.9**
JHIK	**Hikimi**	**4.57**	**288**	P	**P**	**11 21 41.7**	**+0.5**
JKI	**Kunimi**	**4.71**	**277**	⇓P	**P**	**11 21 43.9**	**+1.1**
JKIT	**Kitakata**	**4.85**	**265**	P	**P**	**11 21 45.6**	**+1.4**
JTSN	**Tsuno**	**4.88**	**260**	P	**P**	**11 21 45.5**	**+1.0**
JNS	**Sasagawa**	**4.93**	**20**	P	**P**	**11 21 43.3**	**-1.7**
JTY	**Toyota**	**5.21**	**283**	P	**P**	**11 21 48.8**	**+0.8**
JNAR	**Kushima--Naru**	**5.27**	**253**	P	**P**	**11 21 50.4**	**+1.7**
JNU	**Nakatsue**	**5.29**	**271**	⇓P	**P**	**11 21 49.9**	**+1.0**
JTZ	**Takazaki**	**5.31**	**258**	P	**P**	**11 21 50.3**	**+1.2**
JFA	**Akaike**	**5.36**	**277**	P	**P**	**11 21 50.4**	**+0.7**
JTA	**Tamana**	**5.59**	**269**	P	**P**	**11 21 53.2**	**+1.1**
JTSR	**Tashiro 2**	**5.68**	**251**	P	**P**	**11 21 54.6**	**+1.4**
JUR	**Ureshino**	**6.07**	**271**	P	**P**	**11 21 58.7**	**+1.2**
JII	**Iki**	**6.25**	**277**	P	**P**	**11 22 00.6**	**+1.0**
JSJ	**Shimokoshiki**	**6.49**	**259**	P	**P**	**11 22 03.6**	**+1.2**
CBIJ	**Chichi jima**	**7.46**	**143**	P	**P**	**11 22 08.0**	**-5.7**
	79nm,0.3s,baz=352,slow=2.7,SNR=28						
CBIJ				S	**S**	**11 23 31.4**	**-8.2**
	190nm,0.3s,baz=98,slow=22,SNR=12						
KS15	**Wonju Array Si**	**8.70**	**302**	⇓*e*P	**P**	**11 22 28.8**	**+0.7**
INCN	**Inchon**	**9.62**	**299**	⇓*e*P	**P**	**11 22 39.4**	**+0.4**
INCN				*e*S	**S**	**11 24 29.7**	**+4.4**
JOW	**Kunigami**	**9.99**	**233**	P	**P**	**11 22 43.8**	**+0.4**
	6.8nm,0.3s,baz=39,slow=6.6,SNR=19						
JOW				S	**S**	**11 24 37.5**	**+4.2**
	baz=83,slow=17,SNR=3.9						
JIH	**Iheya**	**10.07**	**235**	P	**P**	**11 22 44.5**	**+0.1**
VLA	**Vladivostok**	**10.74**	**339**	⇑*i*P	**P**	**11 22 53.0**	**+0.7**
VLA				*i*		11 24 51.0	
VLA				pmax	pmax		
	comp=N,4μm,2.0s						
VLA				pmax	pmax		
	comp=E,900nm,2.0s						
VLA				pmax	pmax		
	comp=Z,4μm,2.0s						
VLA				pmax	pmax		
	comp=E,14μm,5.0s						
VLA				pmax	pmax		
	comp=N,6μm,6.0s						
VLA				MLR	MLR		
	comp=E,1μm,14.0s						
VLA				MLR	MLR		
	comp=Z,2μm,14.0s						
VLA				MLR	MLR		
	comp=N,2μm,6.0s						
JKE	**Kume jima 2**	**11.33**	**236**	P	**P**	**11 22 59.8**	**+0.4**
ASAJ	**Asahikawa**	**11.69**	**20**	P	**P**	**11 23 02.4**	**-1.1**
ASAJ				S	**S**	**11 25 06.5**	**-3.1**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
ASAJ				pmax	pmax		
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**11.69**	**20**	P	**P**	**11 23 02.4**	**-1.1**
	comp=N,18nm,0.3s,baz=223,slow=11,SNR=66						
ASAJ				S	**S**	**11 25 06.5**	**-3.1**
	comp=N,5.9nm,0.3s,baz=35,slow=27,SNR=3.5						
ASAJ				ScP		11 31 15.0	
	comp=N,0.8nm,0.3s,baz=248,slow=6.6,SNR=9.7						
YUK	**Yuzh-Kuril'sk**	**12.76**	**30**	⇑*i*P	**P**	**11 23 14.5**	**-1.4**
YUK				*i* S	**S**	**11 25 27.5**	**-4.7**
YUK				pmax	pmax		
	comp=N,16μm,3.0s						
YUK				pmax	pmax		
	comp=E,8μm,3.0s						
YUK				pmax	pmax		
	comp=Z,12μm,3.0s						
YUK				pmax	pmax		
	comp=N,460nm,0.5s						
YUK				pmax	pmax		
	comp=E,150nm,0.5s						
YUK				pmax	pmax		
	comp=Z,360nm,0.5s						
YUK				smax			
	comp=N,1μm,0.5s						
YUK				smax			
	comp=E,600nm,0.5s						
YUK				smax			
	comp=N,12μm,4.0s						
YUK				smax			
	comp=E,8μm,2.5s						
MDJ	**Mudanjiang**	**12.83**	**335**	P	**P**	**11 23 14.9**	**-1.9**
MDJ				XP		11 24 38.4	
MDJ				S	**S**	**11 25 29.4**	**-4.3**
MDJ				PCP	PcP	11 28 18.1	-2.4
MDJ				SCP		11 31 15.8	
MDJ				PCS		11 31 54.3	
MDJ				SCS	ScS	11 34 50.1	-2.4
MDJ				AMB	AMB		
	comp=Z,123nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,793nm,5.7s						
MDJ	**Mudanjiang**	**12.83**	**335**	⇓*e*P	**P**	**11 23 14.5**	**-2.2**
MDJ				*e*ScP		11 31 16.6	
SSE	**Sheshan**	**13.72**	**266**	P	**P**	**11 23 23.8**	**-3.1**
SSE				XP		11 24 43.8	
SSE				S	**S**	**11 25 51.1**	**-1.3**
SSE				AMB	AMB		
	comp=Z,78nm,0.8s						
SSE				AMB	AMB		
	comp=Z,1μm,9.9s						
SSE				LR	LR		
	comp=N,1μm,9.3s						
SSE				LR	LR		
	comp=E,1μm,9.3s						
SSE				LR	LR		
	comp=Z,2μm,10.6s						
SSE	**Sheshan**	**13.72**	**266**	P	**P**	**11 23 23.8**	**-3.1**
	comp=Z,78nm,0.8s						
SSE				sP		11 24 43.8	
SSE				S	**S**	**11 25 51.1**	**-1.3**
SNY	**Shenyang**	**13.80**	**313**	⇓P	**P**	**11 23 26.4**	**-1.3**
SNY				S	**S**	**11 25 53.3**	**-0.7**
SNY				AMB	AMB		
	comp=Z,500nm,1.7s						
SNY				AMB	AMB		
	comp=Z,2μm,4.7s						

SNY				LR	LR		
	comp=N,2µm,9.6s						
SNY				LR	LR		
	comp=E,2µm,9.3s						
SNY				LR	LR		
	comp=Z,2µm,8.2s						
DL2	**Dalian**	**13.81**	**299**	P	**P**	**11 23 25.8**	**-2.0**
DL2				S	**S**	**11 25 50.8**	**-3.4**
DL2				SCS	ScS	11 34 54.3	-0.5
DL2				AMB	AMB		
	comp=Z,200nm,0.9s						
DL2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2	**Changchun**	**14.00**	**323**	⇓P	**P**	**11 23 28.1**	**-1.8**
CN2				*e*XP		11 24 49.3	
CN2				*e*S	**S**	**11 25 55.3**	**-2.8**
CN2				SCP		11 31 18.3	
CN2				AMB	AMB		
	comp=Z,170nm,1.1s						
CN2				AMB	AMB		
	comp=Z,2µm,3.0s						
YSS	**Yuzh-Sakhalins**	**14.38**	**16**	α*i*P	**P**	**11 23 32.0**	**-1.9**
YSS				*i* S	**S**	**11 26 06.0**	**+0.4**
YSS				pmax	pmax		
	comp=N,640nm,0.8s						
YSS				pmax	pmax		
	comp=Z,910nm,0.8s						
YSS				pmax	pmax		
	comp=N,3µm,4.0s						
YSS				pmax	pmax		
	comp=Z,3µm,4.0s						
YSS				smax			
	comp=N,870nm,1.0s						
YSS				smax			
	comp=E,870nm,1.0s						
YSS				smax			
	comp=N,4µm,4.0s						
YSS				smax			
	comp=E,4µm,4.0s						
YSS	**Yuzh-Sakhalins**	**14.38**	**16**	*e*P	**P**	**11 23 32.3**	**-1.6**
JIJ	**Ishigaki jima**	**14.42**	**236**	P	**P**	**11 23 32.2**	**-2.3**
JIJ				S	**S**	**11 26 05.5**	**-1.1**
KUR	**Kuril’sk**	**14.58**	**31**	⇓*i*P	**P**	**11 23 32.0**	**-4.0**
KUR				*i* S	**S**	**11 26 11.5**	**+1.9**
KUR				pmax	pmax		
	comp=N,80nm,0.7s						
KUR				pmax	pmax		
	comp=E,90nm,0.7s						
KUR				pmax	pmax		
	comp=Z,340nm,0.7s						
KUR				pmax	pmax		
	comp=N,3µm,3.0s						
KUR				pmax	pmax		
	comp=E,4µm,3.0s						
KUR				pmax	pmax		
	comp=Z,2µm,3.0s						
KUR				smax			
	comp=N,4µm,2.0s						
KUR				smax			
	comp=E,2µm,2.0s						
KUR				smax			
	comp=N,12µm,4.0s						
KUR				smax			
	comp=E,12µm,4.0s						
NJ2	**Nanjing**	**15.49**	**271**	*e*P	**P**	**11 23 44.5**	**-1.2**
NJ2				XP		11 25 10.8	
NJ2				S	**S**	**11 26 28.0**	**+0.6**
NJ2				SCP		11 31 21.1	
NJ2				AMB	AMB		
	comp=Z,290nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,3µm,10.8s						
NJ2				LR	LR		
	comp=N,3µm,11.1s						
NJ2				LR	LR		
	comp=E,4µm,8.5s						
NJ2				LR	LR		
	comp=Z,8µm,9.4s						
UGL	**Uglegorsk**	**16.28**	**12**	*e*P	**P**	**11 23 50.0**	**-3.7**
UGL				*e*S	**S**	**11 26 47.0**	**+4.7**
UGL				pmax	pmax		
	comp=Z,500nm,0.9s						
UGL				pmax	pmax		
	comp=Z,2µm,3.0s						
UGL				smax			
	comp=E,400nm,1.2s						
UGL				smax			
	comp=N,800nm,1.5s						
UGL				smax			
	comp=N,8µm,4.0s						
UGL				smax			
	comp=E,4µm,5.0s						
UGL				smax			
	comp=Z,6µm,5.0s						
KLR	**Kul’dur**	**16.52**	**347**	*e*P	**P**	**11 23 50.9**	**-5.3**
KLR				*e*		11 26 40.0	
TIA	**Tai’an**	**16.77**	**286**	⇓P	**P**	**11 23 57.8**	**-1.0**
TIA				S	**S**	**11 26 52.0**	**+0.4**
TIA				AMB	AMB		
	comp=Z,512nm,1.4s						
TIA				LR	LR		
	comp=N,3µm,15.0s						
TIA				LR	LR		
	comp=E,4µm,15.0s						
TYV	**Tymovskoe**	**18.10**	**11**	*e*P	**P**	**11 24 09.0**	**-3.2**
TYV				*e*S	**S**	**11 27 18.0**	**+1.6**
TYV				pmax	pmax		
	comp=Z,61nm,0.6s						
TYV				pmax	pmax		
	comp=Z,1µm,3.0s						
TYV				smax			
	comp=N,730nm,1.8s						
TYV				smax			
	comp=E,2µm,2.5s						
TYV				smax			
	comp=N,8µm,5.0s						
TYV				smax			
	comp=E,6µm,6.0s						
BJT	**Baijiatuau**	**18.17**	**298**	⇓*e*P	**P**	**11 24 12.9**	**-0.1**
BJT				pmax	pmax		
	comp=Z,2µm,0.6s						
BJT	**Baijiatuau**	**18.17**	**298**	⇓*e*P	**P**	**11 24 12.9**	**-0.1**
	comp=Z,2µm,0.6s						
BJI	**Beijing**	**18.17**	**298**	P	**P**	**11 24 12.9**	**-0.1**
BJI				S	**S**	**11 27 20.9**	**+3.2**
BJI				SCP		11 31 27.1	
BJI				SCS	ScS	11 35 06.1	-0.8
BJI	**Beijing**	**18.17**	**298**	P	**P**	**11 24 12.9**	**-0.1**
BJI				S	**S**	**11 27 20.9**	**+3.2**
BJI				pmax	pmax		
	comp=Z,3µm,0.7s						
BJI	**Beijing**	**18.17**	**298**	P	**P**	**11 24 12.9**	**-0.1**
	comp=Z,3µm,0.7s						
BJI				sP		11 25 51.4	
BJI				S	**S**	**11 27 20.9**	**+3.2**
BJI				ScP		11 31 27.1	
BJI				ScS	ScS	11 35 06.1	-0.8
QZH	**Quanzhou**	**18.20**	**248**	*i* PR		11 24 11.4	
QZH				XP		11 25 46.8	
QZH				S	**S**	**11 27 19.0**	**+0.7**
QZH				SCP		11 31 28.8	
QZH				AMB	AMB		
	comp=Z,200nm,1.2s						
QZH				AMB	AMB		
	comp=Z,2µm,4.6s						
QZH				LR	LR		
	comp=N,2µm,9.3s						
QZH				LR	LR		
	comp=E,1µm,10.8s						
QZH				LR	LR		
	comp=Z,3µm,13.3s						
WHN	**Wuhan**	**19.57**	**268**	⇓P	**P**	**11 24 27.0**	**+0.2**
WHN				S	**S**	**11 27 39.0**	**-3.7**
WHN				AMB	AMB		
	comp=Z,927nm,1.0s						
WHN				AMB	AMB		
	comp=Z,7µm,4.6s						
WHN				LR	LR		
	comp=Z,3µm,13.5s						
TIY	**Taiyuan**	**20.64**	**290**	⇑P	**P**	**11 24 32.0**	**-5.2**
TIY				S	**S**	**11 28 00.0**	**-1.1**
TIY				LR	LR		
	comp=N,1µm,10.0s						
TIY				LR	LR		
	comp=Z,1µm,8.0s						
HIA	**Hailar**	**20.65**	**326**	⇓*e*P	**P**	**11 24 36.6**	**-0.6**
HIA				*e*S	**S**	**11 28 04.8**	**+3.5**
HIA				pmax	pmax		
	comp=Z,756nm,1.2s						
HIA	**Hailar**	**20.65**	**326**	⇓*e*P	**P**	**11 24 36.6**	**-0.6**
	comp=Z,756nm,1.2s						
HIA				*e*S	**S**	**11 28 04.8**	**+3.5**
HIA				*e*ScP		11 31 32.6	
HHC	**Hu-ho-hao-te**	**21.78**	**298**	⇓*i*P	**P**	**11 24 48.3**	**+0.1**
HHC				XP		11 26 32.9	
HHC				S	**S**	**11 28 20.0**	**-0.5**
HHC				SCP		11 31 41.0	
HHC				PCS		11 32 14.3	
HHC				AMB	AMB		
	comp=Z,742nm,1.7s,mb5.6						
HHC				AMB	AMB		
	comp=Z,1µm,3.6s						
HHC				LR	LR		
	comp=N,1µm,15.5s						
HHC				LR	LR		
	comp=E,2µm,11.9s						
HHC				LR	LR		
	comp=Z,3µm,17.8s						
SKR	**Severo-Kuril’s**	**22.33**	**33**	*e*P	**P**	**11 24 49.5**	**-3.7**
SKR				pmax	pmax		
	comp=N,80nm,0.6s						
SKR				pmax	pmax		
	comp=E,40nm,0.6s						
SKR				pmax	pmax		
	comp=Z,140nm,0.6s,mb5.4						
SKR				MLR	MLR		
	comp=Z,3µm,14.0s						
SKR				MLR	MLR		
	comp=N,4µm,12.0s						
SKR				MLR	MLR		
	comp=E,4µm,12.0s						
BTO	**Baotou**	**22.89**	**297**	*e*P	**P**	**11 24 58.8**	**+0.4**
BTO				S	**S**	**11 28 33.9**	**-5.0**
BTO				AMB	AMB		
	comp=Z,882nm,0.9s,mb6.0						
BTO				LR	LR		
	comp=N,431nm,3.7s						
BTO				LR	LR		
	comp=E,1µm,11.0s						
GZH	**Guangzhou**	**23.26**	**250**	P	**P**	**11 24 57.3**	**-4.7**
GZH				S	**S**	**11 28 36.8**	**-8.4**
GZH				LR	LR		
	comp=N,1µm,11.2s						
GZH				LR	LR		
	comp=E,1µm,11.2s						
GZH				LR	LR		
	comp=Z,2µm,12.0s						
XAN	**Xi’an**	**23.52**	**280**	P	**P**	**11 25 03.4**	**-0.9**
XAN				PP	PP	11 26 04.3	+10
XAN				AMB	AMB		
	comp=Z,1µm,6.9s						
XAN				LR	LR		
	comp=N,1µm,11.3s						
XAN				LR	LR		
	comp=E,625nm,9.0s						
XAN				LR	LR		
	comp=Z,880nm,11.5s						
ENH	**Enshi**	**23.71**	**270**	⇓*e*P	**P**	**11 25 05.3**	**-0.8**
	comp=Z,2µm,0.9s,mb6.2						
PET	**Petropavlovsk**	**25.09**	**31**	⇓*i*P	**P**	**11 25 18.2**	**-0.1**
PET				*e*		11 28 39.9	
PET				*e*S	**S**	**11 29 14.4**	**-0.2**
PET				pmax	pmax		
	comp=Z,151nm,1.4s,mb5.0						
PET				pmax	pmax		
	comp=Z,400nm,10.0s						
PET				pmax	pmax		
	comp=Z,400nm,16.5s						
PET				smax			
	comp=N,64nm,1.3s						
PET				smax			
	comp=E,400nm,17.1s						
PET				pmax	pmax		
	comp=Z,104nm,1.2s,mb4.9						
PET				MLR	MLR		
	comp=Z,900nm,16.0s						
PET				MLR	MLR		
	comp=N,600nm,15.0s						
PET				MLR	MLR		
	comp=E,1µm,14.0s						
CLNS	**Chul’man**	**25.10**	**344**	*e*P	**P**	**11 25 17.8**	**-0.5**
CLNS				*e*		11 28 40.2	
CLNS				*e*S	**S**	**11 29 15.7**	**+0.9**
CLNS				pmax	pmax		
	comp=Z,53nm,0.7s,mb4.9						
CLNS				pmax	pmax		
	comp=N,34nm,0.8s						
CLNS				pmax	pmax		
	comp=E,11nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,54nm,0.7s,mb4.9						
CLNS				pmax	pmax		
	comp=N,42nm,0.6s						
CLNS				pmax	pmax		
	comp=E,51nm,0.8s						
CLNS				smax			
	comp=E,153nm,1.2s						
CLNS				smax			
	comp=Z,51nm,1.4s						
CLNS				smax			
	comp=N,131nm,1.0s						
CLNS				MLR	MLR		
	comp=N,500nm,13.0s						
CLNS				MLR	MLR		
	comp=Z,700nm,13.0s						
CLNS				MLR	MLR		
	comp=E,50nm,11.0s						
ULN	**Ulaanbaatar**	**26.98**	**312**	⇓*i*P	**P**	**11 25 36.1**	**+0.8**
ULN				pmax	pmax		
	comp=Z,232nm,0.8s,mb5.5						
ULN	**Ulaanbaatar**	**26.98**	**312**	⇓*i*P	**P**	**11 25 36.1**	**+0.8**
	comp=Z,232nm,0.8s,mb5.5						
ULN				*e*ScP		11 31 50.1	
GYA	**Guiyang**	**27.25**	**264**	⇓*i*P	**P**	**11 25 36.0**	**-2.0**
GYA				S	**S**	**11 29 45.8**	**-3.5**
GYA				AMB	AMB		
	comp=Z,180nm,0.8s,mb5.3						
GYA				AMB	AMB		
	comp=Z,690nm,4.2s						
GYA				LR	LR		
	comp=N,1µm,11.1s						
GYA				LR	LR		
	comp=E,2µm,15.3s						
GYA				LR	LR		
	comp=Z,3µm,17.4s						
SONM	**Songino Array**	**27.38**	**311**	P	**P**	**11 25 39.5**	**+0.6**
	comp=Z,156nm,0.7s,mb5.4,baz=112,slow=8.2,SNR=486						
SONM				S	**S**	**11 29 53.2**	**+2.1**
	comp=Z,6.0nm,1.0s,baz=124,slow=8.9,SNR=2.4						
SONM				ScP		11 31 51.4	
	comp=Z,42nm,0.9s,baz=135,slow=1.7,SNR=16						
LZH	**Lanzhou**	**27.51**	**285**	⇑P	**P**	**11 25 39.3**	**-0.8**
LZH				AP		11 26 48.0	
LZH				PCP	PcP	11 28 50.4	+2.7
LZH				S	**S**	**11 29 47.0**	**-6.2**
LZH				XS		11 31 48.0	
LZH				SCP		11 31 54.0	
LZH				PCS		11 32 31.0	
LZH				SCS	ScS	11 35 44.3	+1.6
LZH				AMB	AMB		
	comp=Z,680nm,1.4s,mb5.7						
LZH				AMB	AMB		
	comp=Z,2µm,4.0s						
LZH				LR	LR		
	comp=E,2µm,12.8s						
LZH				LR	LR		
	comp=Z,3µm,13.0s						
LZH	**Lanzhou**	**27.51**	**285**	⇑P	**P**	**11 25 39.2**	**-0.9**
LZH				*PP		11 26 48.0	
LZH				*SP	sP	11 27 30.0	-1.1
LZH						11 28 50.4	
LZH				S	**S**	**11 29 47.0**	**-6.2**
LZH				*SS		11 31 48.0	
LZH						11 35 44.3	
LZH				pmax	pmax		
	comp=Z,680nm,1.4s,mb5.7						
LZH				MLR	MLR		
	comp=Z,3µm,13.0s						
LZH	**Lanzhou**	**27.51**	**285**	⇑P	**P**	**11 25 39.2**	**-0.9**
	comp=Z,680nm,1.4s,mb5.7						
LZH				pP		11 26 48.0	
LZH				sP	sP	11 27 30.0	-1.1
LZH				PcP	PcP	11 28 50.4	+2.7
LZH				S	**S**	**11 29 47.0**	**-6.2**
LZH				sS		11 31 48.0	
LZH				ScP		11 31 54.0	
LZH				PcS		11 32 31.0	
LZH				ScS	ScS	11 35 44.3	+1.6
LZH				LR	LR		
	comp=Z,3µm,13.0s						
MA2	**Magadan**	**27.88**	**15**	*ce*P	**P**	**11 25 42.4**	**-0.8**
MA2				*e*S	**S**	**11 29 58.8**	**-0.1**
MA2				pmax	pmax		
	comp=N,90nm,0.7s						
MA2				pmax	pmax		
	comp=E,40nm,0.7s						
MA2				pmax	pmax		
	comp=Z,200nm,0.7s,mb5.5						
QIZ	**Qiongzhong**	**28.21**	**247**	P	**P**	**11 25 46.0**	**-0.5**
QIZ				S	**S**	**11 30 04.6**	**+0.2**
QIZ				AMB	AMB		
	comp=Z,34nm,1.2s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,324nm,14.4s						
QIZ	**Qiongzhong**	**28.21**	**247**	*e*P	**P**	**11 25 46.6**	**+0.1**
	comp=Z,24nm,0.9s,mb4.4						
CD2	**Chengdu**	**28.36**	**275**	⇓*i*P	**P**	**11 25 46.5**	**-1.2**
CD2				AP		11 26 51.3	
CD2				XP	sP	11 27 32.1	-7.0
CD2				S	**S**	**11 30 04.5**	**-2.1**
CD2				XS		11 31 59.8	
CD2				AMB	AMB		
	comp=Z,692nm,0.9s,mb5.9						
CD2				LR	LR		
	comp=E,11µm,10.0s						
BOD	**Bodaibo**	**29.21**	**334**	*e*P	**P**	**11 25 54.1**	**-0.7**
BOD				pmax	pmax		
	comp=Z,53nm,0.9s,mb4.8						
YAK	**Yakutsk**	**29.25**	**353**	*c i*P	**P**	**11 25 53.7**	**-1.4**
YAK				*e**PP		11 27 02.5	
YAK				*e*		11 28 49.9	
YAK				*i* S	**S**	**11 30 16.3**	**-4.0**
YAK				*i*		11 35 47.3	
YAK				pmax	pmax		
	comp=Z,57nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax			
	comp=N,210nm,0.8s						
YAK				smax			
	comp=Z,95nm,0.8s						
YAK				smax			
	comp=E,166nm,1.0s						
YAK	**Yakutsk**	**29.25**	**353**	⇑*e*P	**P**	**11 25 53.6**	**-1.5**
	comp=E,99nm,0.6s,mb5.2						
YAK				*e*S	**S**	**11 30 16.4**	**-3.8**
YAK				*e*ScP		11 31 56.1	
ZAK	**Zakamensk**	**30.21**	**315**	⇑*i*P	**P**	**11 26 03.5**	**-0.1**
ZAK				*e*		11 27 26.3	
ZAK				*e*		11 30 37.8	
ZAK				pmax	pmax		
	comp=Z,240nm,1.2s,mb5.3						
ZAK				pmax	pmax		
	comp=Z,92nm,1.4s,mb4.8						
IRK	**Irkutsk**	**30.39**	**319**	*e*P	**P**	**11 26 04.2**	**-1.0**
IRK				*e*		11 27 24.8	
IRK				*e*S	**S**	**11 30 40.4**	**+2.2**
IRK				pmax	pmax		
	comp=Z,174nm,2.4s,mb4.9						
TLY	**Talaya**	**30.51**	**317**	P	**P**	**11 26 07.8**	**+1.7**
	comp=Z,631nm,1.3s,mb5.7						
TLY	**Talaya**	**30.51**	**317**	*e*P	**P**	**11 26 07.0**	**+0.9**
TLY				*e*		11 27 25.8	
TLY				*e*S	**S**	**11 30 33.9**	**-6.1**
TLY				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.0						
TLY				MLR	MLR		
	comp=Z,560nm,14.0s						
TLY	**Talaya**	**30.51**	**317**	⇓*i*P	**P**	**11 26 06.9**	**+0.8**
	comp=Z,102nm,0.7s,mb5.2						
TLY				*e*		11 26 40.2	
TLY				⇓*i*ScP		11 32 01.0	
GTA	**Gaotai**	**30.59**	**292**	P	**P**	**11 26 06.6**	**-0.4**
GTA				AP	pP	11 27 16.8	+0.1
GTA				XP	sP	11 27 56.3	-3.0
GTA				PCP	PcP	11 28 56.3	+0.7
GTA				S	**S**	**11 30 39.3**	**-2.2**
GTA				SCP		11 32 02.1	
GTA				XS		11 32 43.6	
GTA				SS	SS	11 33 00.0	-3.4
GTA				SCS	ScS	11 35 57.1	-0.2
GTA				AMB	AMB		
	comp=Z,152nm,1.4s,mb5.0						
GTA				AMB	AMB		
	comp=Z,745nm,5.3s						
GTA				LR	LR		
	comp=N,679nm,14.8s						
GTA				LR	LR		
	comp=E,1µm,15.6s						
GTA				LR	LR		
	comp=Z,1µm,14.4s						
KMI	**Kunming**	**31.03**	**264**	P	**P**	**11 26 10.8**	**-0.1**
KMI				AP	pP	11 27 19.5	-1.3
KMI				PP	PP	11 27 31.3	+1.0
KMI				S	**S**	**11 30 46.4**	**-2.0**
KMI				SCP		11 32 04.6	
KMI				XS		11 32 49.1	
KMI				SS	SS	11 33 07.8	-4.9
KMI				SSS	SSS	11 33 43.6	-13
KMI				SCS	ScS	11 36 01.1	+1.5
KMI				AMB	AMB		
	comp=Z,161nm,0.9s,mb5.2						
KMI				AMB	AMB		
	comp=Z,692nm,3.3s						
KMI				LR	LR		
	comp=N,824nm,11.7s						
KMI				LR	LR		
	comp=E,1µm,13.9s						
KMI				LR	LR		
	comp=Z,1µm,14.6s						
KMI	**Kunming**	**31.03**	**264**	P	**P**	**11 26 10.7**	**-0.2**
KMI				*PP	pP	11 27 19.5	-1.3
KMI						11 27 31.3	
KMI				S	**S**	**11 30 46.4**	**-2.0**
KMI				*SS		11 32 49.1	
KMI				SS	SS	11 33 07.8	-4.9
KMI						11 36 01.1	
KMI				pmax	pmax		
	comp=Z,161nm,0.9s,mb5.2						
KMI				MLR	MLR		
	comp=Z,1µm,14.6s						
KMI	**Kunming**	**31.03**	**264**	P	**P**	**11 26 10.7**	**-0.2**
	comp=Z,161nm,0.9s,mb5.2						
KMI				pP	pP	11 27 19.5	-1.3
KMI				PP	PP	11 27 31.3	+1.0
KMI				S	**S**	**11 30 46.4**	**-2.0**
KMI				ScP		11 32 04.6	
KMI				sS		11 32 49.1	
KMI				SS	SS	11 33 07.8	-4.9
KMI				SSS	SSS	11 33 43.6	-13
KMI				ScS	ScS	11 36 01.1	+1.5
KMI				LR	LR		
	comp=Z,1µm,14.6s						
SEY	**Seymchan**	**31.27**	**13**	*e*P	**P**	**11 26 13.9**	**+1.3**
SEY				*e*	pP	11 27 26.7	+4.1
SEY				*SP	sP	11 28 06.8	+1.6
SEY				*e*S	**S**	**11 30 57.4**	**+5.7**
SEY				*SS		11 32 57.4	
SEY				*e*		11 33 11.5	
SEY						11 36 02.2	
SEY				pmax	pmax		
	comp=Z,60nm,0.8s,mb4.9						
SEY				pmax	pmax		
	comp=E,40nm,0.7s						
SEY				smax			
	comp=N,620nm,16.9s						
SEY				smax			
	comp=E,2µm,24.9s						
MOY	**Mondy**	**32.02**	**316**	⇑*e*P	**P**	**11 26 19.6**	**+0.4**
MOY				*e*		11 31 05.5	
MOY				pmax	pmax		
	comp=Z,150nm,2.2s,mb4.8						
FX1	**Attu Island--F**	**32.36**	**42**	P	**P**	**11 26 22.9**	**+0.8**
FX1				pmax	pmax		

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      comp=Z,283nm,0.9s
FX1                                 pmax   pmax
      comp=N,64nm,0.8s
FX1   Attu Island--F    32.36  42  P      P      11 26 22.9 +0.8
      comp=N,283nm,0.9s,mb5.5,baz=260,slow=2.2,SNR=40
FX1                                 ScP           11 32 06.3
      comp=N,64nm,0.8s,baz=195,slow=23,SNR=12
FX1   Attu Island--F    32.36  42  eP     P      11 26 22.8 +0.7
FX1                                ePcP   PcP    11 28 58.3 -2.0
KKTK  Khon Kaen         35.23 250  P      P      11 26 46.0 -0.7
      comp=N,1µm,0.5s
NANT  Nan               35.59 255⇓ P      P      11 26 48.0 -1.7
      comp=N,262nm,1.0s,mb5.4
CHRT  Chiangrai         35.80 258  P      P      11 26 52.0 +0.5
      comp=N,547nm,1.0s,mb5.7
CHG   Chiang Mai        37.01 257⇓ P      P      11 27 01.4 -0.2
      comp=N,101nm,0.9s,mb5.0
CM31  Chiang Mai Arr    37.20 256  eP     P      11 27 02.6 -0.5
      comp=N,48nm,0.6s,mb4.9
CMAR  Chiang Mai Arr    37.20 256  P      P      11 27 03.1  0.0
CMAR                               S      S      11 32 22.7 +0.1
CMAR                                pmax   pmax
      comp=Z,36nm,0.8s
CMAR                                pmax   pmax
      comp=N,6.0nm,0.8s
CMAR  Chiang Mai Arr    37.20 256  P      P      11 27 03.0  0.0
      comp=N,36nm,0.8s,mb4.7,baz=47,slow=8.0,SNR=168
CMAR                               S      S      11 32 22.7 +0.1
      comp=N,0.6nm,0.4s,baz=56,slow=25,SNR=2.1
CMAR                               ScP           11 32 27.2
      comp=N,6.2nm,0.8s,baz=39,slow=3.1,SNR=7.4
NST   Nakhon Sawan      37.73 252⇑ P      P      11 27 07.5  0.0
      comp=N,117nm,0.6s,mb5.3
CERR  Cheremushki       38.00 315  i P    P      11 27 07.8 -1.6
CERR                               i             11 28 44.4
CERR                               i             11 29 14.1
CERR                               i S    S      11 32 34.9 +0.6
CERR                               i             11 36 36.9
BILL  Bilibino          38.69  17⇑ iP     P      11 27 14.9  0.0
BILL                               e             11 28 52.0
BILL                               i             11 29 17.1
BILL                               i S    S      11 32 43.2 -1.1
BILL                                pmax   pmax
      comp=Z,472nm,0.7s,mb5.8
BILL                                MLR    MLR
      comp=Z,600nm,23.0s
BILL  Bilibino          38.69  17⇑ eP     P      11 27 14.6 -0.3
      comp=Z,394nm,0.6s,mb5.8
BILL                               eScP          11 32 30.3
TIXI  Tiksi             38.77 356  eP     P      11 27 14.4 -1.1
TIXI                               e             11 29 18.3
TIXI                               eS     S      11 32 45.0 -0.5
TIXI                               e*SS          11 34 51.7
TIXI                               eSS    SS     11 35 51.0 +3.7
TIXI                                pmax   pmax
      comp=Z,90nm,1.0s,mb5.0
TIXI                                MLR    MLR
      comp=Z,252nm,17.0s
LSA   Lhasa             39.19 278  P      P      11 27 20.4 +1.0
LSA                                 AMB    AMB
      comp=Z,120nm,1.1s,mb5.0
LSA                                 LR     LR
      comp=N,400nm,14.1s
LSA                                 LR     LR
      comp=E,530nm,13.1s
LSA                                 LR     LR
      comp=Z,940nm,15.0s
LSA   Lhasa             39.19 278⇓ iP     P      11 27 20.4 +1.0
LSA                                 pmax   pmax
      comp=Z,149nm,1.0s,mb5.2
LSA   Lhasa             39.19 278⇓ iP     P      11 27 20.4 +1.1
      comp=Z,149nm,1.0s,mb5.2
WMQ   Urumqi            39.62 300  P      P      11 27 23.6 +0.8
WMQ                                AP     pP     11 28 33.0 -2.7
WMQ                                XP     sP     11 29 12.0 -4.6
WMQ                                PCP    PcP    11 29 23.0 +0.8
WMQ                                S      S      11 33 02.0 +3.6
WMQ                                SCS    ScS    11 36 49.0 +2.4
WMQ                                AMB    AMB
      comp=Z,277nm,1.2s,mb5.4
NNT   Nongplab          39.84 248  P      P      11 27 25.7 +0.9
SHL   Shillong          39.95 271  eP     P      11 27 25.0 -0.7
SHL                                e             11 32 37.0
SHL                                e             11 36 48.0
AGT   Agartala          41.13 269⇓ iP     P      11 27 38.0 +2.7
AGT                                i             11 28 24.0
ZAL   Zalesovo          42.09 316  P      P      11 27 42.7 +0.1
ZAL                                              11 29 28.5
ZAL                                S      S      11 33 32.9 -1.3
ZAL                                 pmax   pmax
      comp=Z,25nm,0.7s
ZAL                                 pmax   pmax
      comp=Z,19nm,0.6s
ZAL                                 pmax   pmax
      comp=N,18nm,0.6s
ZAL   Zalesovo          42.09 316  P      P      11 27 42.7 +0.1
      comp=N,25nm,0.7s,mb4.4,baz=4.4,slow=8.5,SNR=131
ZAL                                PcP    PcP    11 29 28.5 -1.7
      comp=N,19nm,0.6s,baz=351,slow=1.5,SNR=4.9
ZAL                                ScP           11 32 43.7
      comp=N,18nm,0.6s,baz=352,slow=4.7,SNR=9.5
ZAL                                S      S      11 33 32.9 -1.3
      comp=N,17nm,0.9s,baz=255,slow=23,SNR=28
ZAL   Zalesovo          42.09 316  P      P      11 27 42.7 +0.1
ZAL                                PcP    PcP    11 29 28.5 -1.7
ZAL                                ScP           11 32 43.7
ZAL                                S      S      11 33 32.9 -1.3
NIKO  Nikolski          42.92  46  eP     P      11 27 47.6 -1.7
NVS   Novosibirsk       43.12 317⇓ iP     P      11 27 49.6 -1.2
NVS                                e*PP   PcP    11 29 28.6 -5.0
NVS                                i S    S      11 33 47.3 -1.6
NVS                                e*SS          11 35 50.2
NVS                                i             11 37 05.4
NVS                                 pmax   pmax
      comp=N,69nm,1.9s
NVS                                 pmax   pmax
      comp=Z,264nm,1.9s,mb5.0
NVS                                 pmax   pmax
      comp=E,277nm,2.0s
NVS                                 pmax   pmax
      comp=Z,63nm,1.8s,mb4.4
NVS                                 pmax   pmax
      comp=N,32nm,2.0s
NVS                                 pmax   pmax
      comp=E,54nm,1.9s
NVS                                 smax
      comp=N,300nm,1.4s
NVS                                 smax
      comp=E,360nm,1.8s
MKAR  Makanchi Array    43.34 305  eP     P      11 27 52.8 +0.1
MKAR                                pmax   pmax
      comp=Z,81nm,0.7s
PMG   Port Moresby      43.42 166  P      P      11 27 52.0 -1.8
PMG                                              11 29 34.4
PMG                                S      S      11 33 51.7 -2.1
PMG                                 pmax   pmax
      comp=Z,8.0nm,0.6s
PMG                                 pmax   pmax
      comp=Z,17nm,0.8s
PMG   Port Moresby      43.42 166  P      P      11 27 52.0 -1.8
      comp=Z,8.0nm,0.6s,baz=340,slow=4.8,SNR=9.3
PMG                                PcP    PcP    11 29 34.4 -0.7
      comp=Z,17nm,0.8s,baz=358,slow=7.7,SNR=5.4
PMG                                S      S      11 33 51.7 -2.0
      comp=Z,6.9nm,0.8s,baz=228,slow=19,SNR=3.8
JIRN  Jiri              43.97 277  eP     P      11 27 58.7 +0.8
      comp=Z,777nm,0.6s,mb6.0
IPM   Ipoh              44.11 238  P      P      11 27 59.2  0.0
CAL   Calcutta          44.13 269  eP     P      11 28 00.9 +1.6
CAL                                e             11 29 49.0
CAL                                e             11 34 03.0
GUN   Gumba             44.14 277  eP     P      11 27 59.8 +0.5
UNV   Unalaska Valle    44.39  45  eP     P      11 27 58.3 -2.6
      comp=Z,157nm,0.7s,mb5.2
PKI   Pulchoki          44.65 277  eP     P      11 28 03.3  0.0
      comp=Z,622nm,1.1s,mb5.6
KKN   Kakani            44.68 277  eP     P      11 28 03.5 -0.1
      comp=Z,603nm,1.0s,mb5.7
DMN   Daman             44.89 277  eP     P      11 28 05.2  0.0
      comp=Z,552nm,1.2s,mb5.6
GKN   Gorkha            45.14 278  eP     P      11 28 07.1 -0.1
      comp=Z,1µm,1.2s,mb5.8
KURK  Kurchatov         45.68 311⇓ iP     P      11 28 10.4 -0.7
KURK                               eS     S      11 34 23.1 -2.2
KURK                                pmax   pmax
      comp=Z,294nm,0.9s,mb5.4
KURK  Kurchatov         45.68 311⇓ iP     P      11 28 10.4 -0.7
      comp=Z,294nm,0.9s,mb5.4
KURK                               e             11 28 41.5
KURK                               eS     S      11 34 23.1 -2.2
KAKA  Kakadu            45.88 186⇑ iP     P      11 28 11.3 -1.8
      comp=Z,8.7nm,0.3s,mb4.4
KAKA                               eSCP          11 33 00.2
TNA   Tin City          45.88  28⇑ iP     P      11 28 12.7 +0.2
      comp=Z,100nm,0.7s,mb5.0
TNA                                eScP          11 32 58.5
KOLN  Koldanda          46.08 278  eP     P      11 28 14.6  0.0
      comp=Z,1µm,1.4s,mb5.8
BWNR  Bhubaneshwar      47.22 268  eP     P      11 28 21.8 -1.6
BWNR                               e             11 28 26.3
      comp=Z,208nm,1.0s
AAA   Alma-Ata          47.45 301  eP     P      11 28 25.0 +0.1
AAA                                eS     S      11 34 53.0 +2.8
AAA                                 MLR    MLR
      comp=Z,300nm,12.0s
ULHL  Ulahol            48.13 299  P      P      11 28 30.4 +0.3
      SNR=7.5
PTH   Pithoragarh       48.27 282  eP     P      11 28 30.9 -0.4
PTH                                e             11 33 08.2
LGTI  Lohaghat          48.28 282  eP     P      11 28 32.0 +0.6
LGTI                               e             11 33 10.7
ALBI  Allahabad         48.48 276  eP     P      11 28 29.5 -3.5
TKM2  Tokmak 2          48.48 300  P      P      11 28 33.3 +0.5
      SNR=92
KSH   Kashi             48.87 296  PR     P      11 28 37.0 +1.2
KSH                                eAP    pP     11 29 50.5 -1.1
KSH                                ePCP   PcP    11 29 56.8 +2.6
KSH                                ePPP   PP     11 30 36.4 +3.5
KSH                                eSCP          11 33 16.3
KSH                                ePCS          11 33 50.8
KSH                                eS     S      11 35 11.3 +1.4
KSH                                ePS    tx     11 35 55.5
KSH                                eXS           11 37 20.1
KSH                                eSCS   ScS    11 37 48.9 +3.5
KSH                                eSS    SS     11 38 48.0 +3.0
KSH                                 AMB    AMB
      comp=Z,210nm,1.1s,mb5.3
KSH                                 LR     LR
      comp=N,460nm,11.4s
KSH                                 LR     LR
      comp=E,460nm,6.2s
KZA   Kyzart            48.89 299  P      P      11 28 37.1 +1.3
      SNR=60
KBK   Karagaybulak      49.00 300  P      P      11 28 36.3 -0.4
      SNR=60
CHMS  Chumysh           49.08 301  P      P      11 28 37.1 -0.2
      SNR=19
FRU   Bishkek           49.21 300⇓ iP     P      11 28 36.0 -2.3
FRU                                i             11 30 39.0
FRU                                i             11 35 15.0
FRU                                 pmax   pmax
      comp=Z,300nm,1.8s,mb5.2
USP   Ospenovka         49.21 301  P      P      11 28 38.0 -0.3
      SNR=52
AAK   Ala-Archa         49.33 300  P      P      11 28 39.1 -0.1
      SNR=45
AAK   Ala-Archa         49.33 300⇓ iP     P      11 28 37.9 -1.3
AAK                                 pmax   pmax
      comp=Z,75nm,1.1s,mb4.8
AAK   Ala-Archa         49.33 300⇓ iP     P      11 28 37.9 -1.3
      comp=Z,75nm,1.1s,mb4.8
AAK                               ⇓iScP          11 33 12.8
UCH   Uchtor            49.40 300  P      P      11 28 40.5 +0.8
      SNR=73
BLSP  Bilaspur          49.50 272  eP     P      11 28 39.9 -0.8
BLSP                               e             11 28 42.8
      comp=Z,288nm,1.3s
DDI   Dehra Dun         49.78 284  eP     P      11 28 41.1 -1.6
DDI                                e             11 35 15.4
EKS2  Erkin-Say         49.85 300  P      P      11 28 42.9 -0.1
      SNR=18
AML   Almayashu         50.01 300  P      P      11 28 45.1 +0.8
      SNR=21
SMLA  Simla             50.23 285⇓ i      P      11 28 59.5  +13
      comp=Z,78nm,0.4s,mb5.3
SMLA                               i             11 35 41.3
SDNR  Sundarnagar       50.27 285⇓ iP     P      11 28 46.4  0.0
SDNR                               eS     S      11 35 28.4 -0.8
CHKZ  Chkalovo          50.48 315  P      P      11 28 46.6 -1.0
CHKZ                                pmax   pmax
      comp=Z,71nm,0.7s,mb5.0
VIS   Vishakhapatnam    50.49 266  eP     P      11 28 48.1  0.0
VIS                                e             11 28 50.5
      comp=Z,206nm,1.1s
SVW2  Sparrevohn        50.66  35  eP     P      11 28 49.0 +0.2
BVA0  Borovoye Array    50.66 314  P      P      11 28 48.3 -0.7
BVA0                                pmax   pmax
      comp=Z,11nm,0.8s
BVAR  Borovoye Array    50.66 314  P      P      11 28 48.3 -0.7
      comp=Z,85nm,0.7s,mb5.1,baz=101,slow=7.9,SNR=389
BVAR                               PcP    PcP    11 29 59.8 -0.8
      comp=Z,22nm,0.6s,baz=116,slow=3.6,SNR=4.8
BVAR                               ScP           11 33 19.3
      comp=Z,36nm,0.8s,baz=93,slow=4.7,SNR=13
BVAR                               S      S      11 35 32.4 -1.8
      comp=Z,41nm,0.8s,baz=90,slow=12,SNR=18
BHK   Bhakra            50.75 286  eP     P      11 28 47.5 -2.4
BHK                                e             11 35 32.3
DLH   Dalhousie         50.75 287  eP     P      11 28 49.0 -0.9
DLH                                e             11 29 12.0
PONG  Pong              50.95 286  eP     P      11 28 51.0 -0.4
PONG                               e             11 33 21.0
THN   Thein Dam         50.98 287  eP     P      11 28 50.0 -1.6
NDI   New Delhi         51.03 282  eP     P      11 28 50.0 -2.0
NDI                                eS     S      11 35 37.0 -2.5
IMA   Indian Mountai    51.73  29  P      P      11 28 56.9 +0.2
IMA                                 pmax   pmax
      comp=Z,760nm,1.2s,mb5.9
IMA   Indian Mountai    51.73  29  eP     P      11 28 56.4 -0.3
FITZ  Fitzroy Crossi    52.19 194⇑ iP     P      11 28 59.6 -1.1
      comp=Z,31nm,0.6s,mb4.8
FITZ                               eSCP          11 33 27.3
FITZ                               eS     S      11 35 50.0 -5.3
FITZ                               eSCS   ScS    11 38 10.2 +1.8
KDAK  Kodiak Island     52.26  40  eP     P      11 28 59.6 -1.1
WRAB  Tennant Creek     52.90 183  eP     P      11 29 04.0 -1.9
WRAB                                pmax   pmax
      comp=Z,61nm,0.7s,mb5.0
WRAB  Tennant Creek     52.90 183  eP     P      11 29 04.0 -1.9
      comp=Z,61nm,0.7s,mb5.0
WRA   Warramunga Arr    52.91 183  P      P      11 29 04.1 -1.9
WRA                                              11 30 09.0
WRA                                 pmax   pmax
      comp=Z,12nm,0.4s
WRA                                 pmax   pmax
      comp=Z,20nm,1.2s
WRA                                 pmax   pmax
      comp=N,5.0nm,0.9s
WRA   Warramunga Arr    52.91 183  P      P      11 29 04.1 -1.8
      comp=N,12nm,0.4s,mb4.6,baz=0.6,slow=7.7,SNR=212
WRA                                PcP    PcP    11 30 09.0 -0.4
      comp=N,20nm,1.1s,baz=359,slow=3.9,SNR=7.5
WRA                                ScP           11 33 30.2
      comp=N,5.4nm,0.9s,baz=359,slow=4.5,SNR=9.0
WRA                                S      S      11 36 02.1 -2.9
      comp=N,1.9nm,0.9s,baz=360,slow=12,SNR=4.3
BHPL  Bhopal            52.97 276  eP     P      11 29 05.7 -0.6
BHPL                               e             11 29 07.0
      comp=Z,149nm,0.8s
CTA   Charters Tower    53.69 169  eP     P      11 29 09.2 -2.4
      comp=Z,10.0nm,1.1s
CTA                                i S    S      11 36 14.9 -0.5
CTA   Charters Tower    53.69 169  eP     P      11 29 09.2 -2.4
CTA                                i S    S      11 36 14.9 -0.5
CTA                                 pmax   pmax
      comp=Z,10.0nm,1.1s
CTA   Charters Tower    53.69 169  P      P      11 29 09.2 -2.3
      comp=Z,15nm,1.1s,mb4.2,baz=343,slow=6.9,SNR=6.8
CTAO  Charters Tower    53.69 169  eP     P      11 29 09.2 -2.4
CTAO                                pmax   pmax
      comp=Z,23nm,1.1s,mb4.4
CTAO  Charters Tower    53.69 169  eP     P      11 29 09.2 -2.4
      comp=Z,23nm,1.1s,mb4.4
MCK   McKinley          53.73  32⇑ eP     P      11 29 10.1 -1.2
MCK                                 pmax   pmax
      comp=Z,128nm,0.7s,mb5.4
MCK   McKinley          53.73  32⇑ eP     P      11 29 10.1 -1.2
      comp=Z,128nm,0.7s,mb5.4
MCK                                eScP          11 33 32.2
PMR   Palmer            53.75  35  eP     P      11 29 09.8 -1.7
AJM   Ajmer             53.97 280⇓ iP     P      11 29 12.0 -1.5
SML   Sawmill           54.12  34  eP     P      11 29 13.0 -1.1
SML                                eScP          11 33 35.0
COLA  College           54.15  31  P      P      11 29 13.3 -1.0
COLA                                pmax   pmax
      comp=Z,76nm,0.8s,mb5.1
COLA  College           54.15  31  eP     P      11 29 13.5 -0.8
ILAR  Eielson Array     54.57  31  P      P      11 29 15.7 -1.6
ILAR                               S      S      11 36 26.1 -0.3
ILAR                                pmax   pmax
      comp=Z,61nm,0.6s
ILAR                                pmax   pmax
      comp=N,4.0nm,0.9s
ILAR  Eielson Array     54.57  31  P      P      11 29 15.7 -1.6
      comp=N,61nm,0.6s,mb5.1,baz=265,slow=5.2,SNR=958
ILAR                               ScP           11 33 35.1
      comp=N,4.3nm,0.9s,baz=297,slow=4.2,SNR=5.2
ILAR                               S      S      11 36 26.1 -0.3
      comp=N,1.6nm,1.1s,baz=256,slow=8.8,SNR=4.2
HYB   Hyderabad         54.63 268⇓ eP     P      11 29 17.5 -0.8
HYB                                eS     S      11 36 28.0 +0.2
HYB                                 pmax   pmax
      comp=Z,185nm,0.8s,mb5.5
HYB   Hyderabad         54.63 268⇓ eP     P      11 29 17.5 -0.8
      comp=Z,185nm,0.8s,mb5.5
HYB                                eS     S      11 36 28.0 +0.2
HYB   Hyderabad         54.63 268⇓ iP     P      11 29 17.5 -0.8
      comp=Z,185nm,0.8s,mb5.5
HYB                                e      pP     11 30 36.0 -0.2
HYB                                eScP          11 33 37.0
HYB                                eS     S      11 36 28.0 +0.2
HYB                                eScS   ScS    11 38 25.5 -0.1
THY   Trims Highway     55.17  32  eP     P      11 29 20.3 -1.2
DIV   Divide            55.41  35⇑ eP     P      11 29 22.8 -0.5
      comp=Z,1µm,1.0s,mb6.2
EYAK  Cordova Ski Ar    55.49  36  eP     P      11 29 23.3 -0.5
SVE   Sverdlovsk        55.77 320⇓ iP     P      11 29 25.7 -0.2
SVE                                i      pP     11 30 43.0 -1.2
SVE                                e             11 31 38.0
SVE                                eS     S      11 36 40.0 -2.3
SVE                                ePS    tx     11 37 09.0
SVE                                eSS    SS     11 40 42.0 +6.2
SVE                                 pmax   pmax
      comp=Z,140nm,1.0s,mb5.2
SVE                                 smax
      comp=E,1µm,9.0s
SVE                                 MLR    MLR
      comp=N,100nm,12.0s
SVE                                 MLR    MLR
      comp=E,500nm,12.0s
SVE                                 MLR    MLR
      comp=Z,600nm,12.0s
MENT  Mentasta          56.14  33  eP     P      11 29 27.8 -0.6
MBWA  Marble Bar        56.56 200  eP     P      11 29 30.1 -1.8
      comp=Z,30nm,0.9s,mb4.6
MBWA                               eScP          11 33 46.3
SOKR  Solikamsk         57.30 323d iP     P      11 29 34.6 -1.8
SOKR                               S      S      11 37 26.7  +25
SOKR                                pmax   pmax
      comp=Z,10.0nm,0.8s,mb4.2
SOKR                                MLR    MLR
      comp=Z,450nm,15.0s
DAWY  Dawson            57.88  31  eP     P      11 29 39.7 -0.6
KIP   Kipapa            57.96  84  eP     P      11 29 41.0 -0.5
KIP                                 pmax   pmax
      comp=Z,112nm,0.8s,mb5.2
KIP   Kipapa            57.96  84  eP     P      11 29 41.0 -0.4
      comp=Z,112nm,0.8s,mb5.2
POO   Poona             58.05 272  eP     P      11 29 41.4 -0.7
POO                                e             11 29 42.7
      comp=Z,173nm,0.8s
INK   Inuvik            59.35  26  P      P      11 29 49.7 -0.6
INK                                S      S      11 37 29.9 +1.5
INK                                 pmax   pmax
      comp=Z,147nm,0.6s
INK                                 pmax   pmax
      comp=N,9.0nm,0.8s
INK   Inuvik            59.35  26  P      P      11 29 49.7 -0.6
      comp=N,147nm,0.6s,mb5.6,baz=300,slow=6.1,SNR=986
INK                                ScP           11 33 56.9
      comp=N,9.2nm,0.8s,baz=234,slow=2.8,SNR=3.8
INK                                S      S      11 37 29.9 +1.4
      comp=N,3.1nm,1.1s,baz=184,slow=30,SNR=10
INK   Inuvik            59.35  26⇑ iP     P      11 29 49.6 -0.7
      comp=N,158nm,0.7s,mb5.5
POHA  Pohakuloa         60.79  85  eP     P      11 30 00.6 +0.2
      comp=N,2µm,0.8s
SIT   Sitka             61.54  38  P      P      11 30 05.6 +0.7
SIT                                 pmax   pmax
      comp=Z,220nm,1.1s,mb5.6
SIT   Sitka             61.54  38  eP     P      11 30 05.8 +0.9
NOUC  Port Laguerre     61.61 149  eP     P      11 30 06.4 +0.6
NOUC  Port Laguerre     61.61 149  eP     P      11 30 06.4 +0.6
DZM   Mont Dzumac       61.65 149  eP     P      11 30 05.2 -0.9
CRAG  Craig             63.22  40  eP     P      11 30 16.4 +0.5
DLBC  Dease Lake        63.77  36  P      P      11 30 20.0 +0.8
      comp=Z,51nm,0.7s,mb5.3,baz=286,slow=5.9,SNR=176
DLBC  Dease Lake        63.77  36  eP     P      11 30 19.9 +0.6
KBS   Kingsbay          63.82 350  eP     P      11 30 19.7 +0.3
      comp=Z,94nm,1.1s,mb5.3
KBS   Kingsbay          63.82 350  eP     P      11 30 19.7 +0.3
KBS                                 AMb    AMB    11 30 21.9
      comp=Z,94nm,1.1s,mb5.3
LVZ   Lovozero          64.18 336⇓ eP     P      11 30 22.1 +0.4
LVZ                                eS     S      11 38 25.3 -3.0
LVZ                                e             11 39 34.3
LVZ                                 pmax   pmax
      comp=Z,55nm,1.3s,mb5.0
LVZ                                 pmax   pmax
      comp=N,16nm,1.2s
LVZ                                 smax
      comp=N,452nm,2.7s
LVZ                                 smax
      comp=E,569nm,2.7s
FORT  Forrest           64.21 189  eP     P      11 30 21.6 -1.0
      comp=E,1µm,0.5s
HSP   Hornsund          64.45 348  eP     P      11 30 23.2 -0.2
ARMA  Armidale          64.73 166⇓ iP     P      11 30 25.8 -0.2
APA   Apatity           64.75 336⇓ iP     P      11 30 25.0 -0.4
APA                                i             11 30 52.7
APA                                i S    S      11 38 31.0 -4.2
APA                                i             11 39 37.0
APA                                 pmax   pmax
      comp=Z,47nm,1.0s,mb5.1
STKA  Stephens Creek    64.86 176⇑ iP     P      11 30 25.9 -0.8
      comp=Z,13nm,0.6s,mb4.7
STKA  Stephens Creek    64.86 176  P      P      11 30 26.0 -0.7
      comp=Z,18nm,0.6s,mb4.9,baz=341,slow=6.7,SNR=47
KEV   Kevo              65.78 339  ep     P      11 30 29.4 -2.5
      comp=Z,26nm,0.6s,mb5.1
KEV   Kevo              65.78 339  eP     P      11 30 29.4 -2.5
KEV                                 pmax   pmax
      comp=Z,26nm,0.6s,mb5.1
ARCES ARCESS Array B    66.35 339  P      P      11 30 35.2 -0.3
ARCES                              S      S      11 38 54.5 +0.1
ARCES                               pmax   pmax
      comp=Z,45nm,0.5s
ARCES ARCESS Array B    66.35 339  P      P      11 30 35.2 -0.3
      comp=Z,44nm,0.5s,mb5.4,baz=65,slow=8.4,SNR=322
ARCES                              S      S      11 38 54.5  0.0
      comp=Z,9.0nm,0.9s,baz=54,slow=10,SNR=5.7
ARCES ARCESS Array B    66.35 339  P      P      11 30 35.2 -0.3
ARCES                              S      S      11 38 54.5  0.0
ARE0  ARCESS Array S    66.35 339  eP     P      11 30 35.0 -0.4
KLBR  Kellerberrin      67.00 198  eP     P      11 30 38.6 -1.6
      comp=Z,133nm,0.9s,mb5.7
RES   Resolute Bay      67.14  13⇑ iP     P      11 30 40.0 -0.4
RES                                 pmax   pmax
      comp=Z,220nm,0.8s,mb5.9
RES   Resolute Bay      67.14  13⇑ iP     P      11 30 40.0 -0.4
      comp=Z,220nm,0.8s,mb5.9
BBB   Bella Bella       67.23  42  P      P      11 30 40.6 -0.7
      comp=Z,36nm,0.9s,mb5.1,baz=276,slow=5.5,SNR=16
KTK1  Kautokeino        67.31 339⇑ iP     P      11 30 41.9 +0.5
      comp=Z,77nm,1.5s,mb5.2
KTK1  Kautokeino        67.31 339⇑ iP     P      11 30 41.9 +0.5
KTK1                                AMb    AMB    11 30 44.5
      comp=Z,77nm,1.5s,mb5.2
JOF   Joensuu           67.69 332  ep     P      11 30 43.3 -0.6
      comp=Z,16nm,0.3s,mb5.2
JOF   Joensuu           67.69 332  eP     P      11 30 43.3 -0.6
JOF                                 pmax   pmax
      comp=Z,16nm,0.3s,mb5.2
MAK   Makhachkala       68.07 308  eP     P      11 30 46.5  0.0
MAK                                e             11 31 14.2
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MAK				iS	S	11 39 14.2	-1.0
MAK				ePS		11 39 38.0	
MAK				pmax	pmax		
	comp=Z,390nm,2.0s,mb5.8						
MAK				smax			
	comp=E,2µm,8.0s						
MAK				MLR	MLR		
	comp=N,2µm,14.0s						
MAK				MLR	MLR		
	comp=E,1µm,14.0s						
MAK				MLR	MLR		
	comp=Z,2µm,14.0s						
MOS	Moscow	68.24	323	⇓iP	P	11 30 47.6	+0.2
MOS				e		11 31 09.6	
MOS				e*PP	pP	11 32 07.1	-2.8
MOS				e		11 33 21.9	
MOS				ePPP	PPP	11 35 07.4	+2.1
MOS				iS	S	11 39 16.3	-0.7
MOS				pmax	pmax		
	comp=Z,73nm,0.7s,mb5.5						
MOS				smax			
	comp=E,1µm,2.5s						
WBK	Wadi Bani Khal	68.50	284	⇑P	P	11 30 49.7	+0.2
	SNR=13						
YKW3	Yellowknife Ar	68.80	28	eP	P	11 30 49.9	-0.7
YKA	Yellowknife Ar	68.84	28	P	P	11 30 50.5	-0.4
YKA				pmax	pmax		
	comp=Z,45nm,0.6s						
YKA				pmax	pmax		
	comp=N,1.0nm,0.8s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	68.84	28	P	P	11 30 50.5	-0.4
	comp=Z,45nm,0.6s,mb5.4,baz=303,slow=6.4,SNR=160						
YKA				ScP		11 34 39.5	
	comp=Z,1.2nm,0.8s,baz=315,slow=4.4,SNR=2.9						
YKA				PKPPKP		11 58 54.8	
	comp=Z,0.9nm,0.9s,baz=120,slow=2.7,SNR=10						
YKA	Yellowknife Ar	68.84	28	P	P	11 30 50.5	-0.4
YKA				ScP		11 34 39.5	
YKA				P'P'		11 58 54.8	
OBN	Obninsk	69.06	323	⇑iP	P	11 30 51.7	-0.7
OBN				i		11 31 21.0	
OBN				i*PP	pP	11 32 14.0	-1.1
OBN				iS	S	11 39 24.9	-1.8
OBN				iPPS	SKS	11 40 16.2	+4.4
OBN				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
OBN				MLR	MLR		
	comp=Z,300nm,19.0s						
OBN	Obninsk	69.06	323	eP	P	11 30 51.4	-1.0
	comp=Z,35nm,0.8s,mb5.1						
CNB	Canberra Magne	69.11	169	eP	P	11 30 52.8	-0.2
	comp=Z,142nm,1.0s,mb5.7						
BANOM	Banah	69.11	288	⇓P	P	11 30 54.0	+0.9
	SNR=6.0						
DAG	Danmarks Havn	69.26	354	⇓iP	P	11 30 53.7	+0.4
DAG				pmax	pmax		
	comp=Z,280nm,1.2s,mb5.9						
DAG	Danmarks Havn	69.26	354	⇓iP	P	11 30 53.7	+0.4
	comp=Z,279nm,1.2s,mb5.9						
JMDO	Jabal Madar	69.31	284	⇑P	P	11 30 54.7	+0.2
	SNR=12						
HOQ	Hoqain	69.39	285	⇑P	P	11 30 55.0	+0.1
	SNR=21						
BSY	Bisya	69.87	284	⇓P	P	11 30 58.2	+0.4
	SNR=11						
ASHO	Ashiyiah	69.88	287	⇑P	P	11 30 58.2	+0.3
	SNR=12						
GOF	Gofitskoye	70.04	311	⇑iP	P	11 30 58.5	+0.1
GOF				i		11 31 22.0	
GOF				eS	S	11 39 34.5	-3.6
GOF				pmax	pmax		
	comp=Z,120nm,1.3s,mb5.5						
KAF	Kangasniemi	70.09	332	ep	P	11 30 57.7	-0.8
	comp=Z,32nm,0.4s,mb5.4,baz=54,slow=5.7						
KAF	Kangasniemi	70.09	332	eP	P	11 30 57.7	-0.8
KAF				pmax	pmax		
	comp=Z,32nm,0.4s,mb5.4						
ARQ	Araqi	70.14	285	⇑P	P	11 31 00.1	+0.6
	SNR=22						
TI2	Plekhanov	70.44	307	⇓iP	P	11 31 01.1	+0.2
TI2				iS	S	11 39 43.2	+0.4
TI2				iS	S	11 39 43.2	+0.4
TI2				e		11 40 22.4	
TI2				e		11 40 23.0	
FINES	FINESS Array B	70.56	332	P	P	11 31 00.6	-0.7
FINES				S	S	11 39 41.8	-1.9
FINES				pmax	pmax		
	comp=Z,38nm,0.5s						
FINES	FINESS Array B	70.56	332	P	P	11 31 00.6	-0.7
	comp=Z,38nm,0.5s,mb5.4,baz=66,slow=6.0,SNR=370						
FINES				S	S	11 39 41.8	-2.0
	comp=Z,24nm,1.1s,baz=60,slow=15,SNR=18						
LOF	Lofoten	70.66	341	eP	P	11 31 03.6	+1.9
	comp=Z,54nm,1.0s,mb5.2						
LOF	Lofoten	70.66	341	eP	P	11 31 03.6	+1.9
LOF				AMb	AMB	11 31 07.3	
	comp=Z,54nm,1.0s,mb5.2						
KIV	Kislovodsk	70.76	310	P	P	11 31 03.1	+0.3
	comp=Z,1µm,0.7s,SNR=29						
KIV	Kislovodsk	70.76	310	d iP	P	11 31 03.4	+0.6
KIV				e*PP	pP	11 32 22.6	-3.4
KIV				iS	S	11 39 46.7	+0.3
KIV				pmax	pmax		
	comp=Z,169nm,1.0s,mb5.7						
KIV				MLR	MLR		
	comp=Z,300nm,20.0s						
KIV	Kislovodsk	70.76	310	⇓eP	P	11 31 03.5	+0.6
	comp=Z,154nm,0.7s,mb5.8						
TOO	Toolangi	70.83	173	eP	P	11 31 03.7	+0.4
	comp=Z,1.0nm,1.0s						
TOO	Toolangi	70.83	173	eP	P	11 31 03.7	+0.4
TOO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GNI	Garni	71.18	306	eP	P	11 31 06.3	+0.9
GNI	Garni	71.18	306	d iP	P	11 31 06.5	+1.2
GNI				pmax	pmax		
	comp=Z,191nm,1.7s						
GNI	Garni	71.18	306	P	P	11 31 06.9	+1.5
	comp=Z,54nm,0.9s,mb5.3,baz=345,slow=2.5,SNR=29						
GNI	Garni	71.18	306	⇓iP	P	11 31 06.6	+1.3
	comp=Z,94nm,0.9s,mb5.5						
PGC	Sidney	71.49	44	⇑eP	P	11 31 07.2	+0.2
	comp=Z,357nm,0.7s,mb6.2						
OCWA	Octopus Mounta	71.51	45	eP	P	11 31 08.1	+1.0
	comp=Z,193nm,0.9s,mb5.8						
MOR8	Moi Rana	71.72	339	⇑iP	P	11 31 06.3	-1.7
	comp=Z,83nm,0.5s,mb5.7						
MOR8	Moi Rana	71.72	339	⇑iP	P	11 31 06.3	-1.7
MOR8				AMb	AMB	11 31 07.8	
	comp=Z,83nm,0.5s,mb5.7						
OSR	Olympics--Salm	71.75	45	P	P	11 31 09.7	+1.1
STOK	Stokkvaagen	72.03	339	eP	P	11 31 09.5	-0.4
	comp=Z,50nm,1.6s,mb5.0						
STOK	Stokkvaagen	72.03	339	eP	P	11 31 09.5	-0.4
STOK				AMb	AMB	11 31 13.2	
	comp=Z,50nm,1.6s,mb5.0						
CLDR	Caldiran	72.21	305	eP	P	11 31 07.4	-4.0
BCA	Borcka	72.65	308	eP	P	11 31 14.0	0.0
SOC	Sochi	72.83	311	eP	P	11 31 14.8	-0.2
SOC				e*PP	pP	11 32 34.4	-4.2
SOC				eS	S	11 40 09.0	-0.6
SOC				eSS	SS	11 44 59.4	-1.8
SOC				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.4						
SOC				pmax	pmax		
	comp=N,9.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,6.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,393nm,19.0s						
SOC				MLR	MLR		
	comp=N,252nm,18.0s						
SOC				MLR	MLR		
	comp=E,133nm,19.0s						
VANB	Van	72.84	305	eP	P	11 31 15.4	+0.3
TVAN	Van	72.86	305	iP	P	11 31 15.1	-0.1
TTW	Tolt Reservoir	72.99	44	P	P	11 31 16.0	+0.2
HKR	Hakkari	73.09	304	eP	P	11 31 15.2	-1.4
PNT	Penticton	73.33	42	P	P	11 31 17.7	-0.1
ERZM	Erzurum	73.57	307	iP	P	11 31 20.5	+1.1
EZM	Erzurum	73.57	307	eP	P	11 31 20.3	+1.0
NSS	Namsos	73.60	338	eP	P	11 31 17.4	-1.6
COR	Corvallis	73.61	47	eP	P	11 31 20.4	+1.0
COR				pmax	pmax		
	comp=Z,343nm,1.3s,mb5.9						
COR	Corvallis	73.61	47	eP	P	11 31 20.4	+1.0
	comp=Z,343nm,1.3s,mb5.9						
IZAR	Zarasai	73.73	327	eP	P	11 31 19.7	-0.2
IDID	Didziasalis	73.76	326	eP	P	11 31 19.7	-0.4
IDID				AMPb	AMB	11 31 23.2	
	comp=Z,13nm,1.1s,mb4.6						
KEBM	Edson Butte	73.83	49	eP	P	11 31 21.3	+0.6
VRT	Varto	73.84	306	eP	P	11 31 21.6	+0.7
ISAL	Salakas	73.89	327	eP	P	11 31 20.7	-0.2
ISAL				AMPb	AMB	11 31 24.1	
	comp=Z,21nm,1.0s,mb4.8						
IIGN	Ignalina	73.98	326	eP	P	11 31 21.0	-0.3
IIGN				AMPb	AMB	11 31 24.6	
	comp=Z,14nm,1.1s,mb4.6						
WTV	Waterville	73.99	43	P	P	11 31 21.3	-0.3
EBG	Ellensburg	74.05	44	P	P	11 31 22.3	+0.4
MSL	Mosul	74.17	303	eP	P	11 31 22.0	-0.8
MSL				ePcP	PcP	11 31 51.0	+15
MSL				eS	S	11 40 21.0	-3.5
MSL				eSP	SP	11 40 49.5	-12
MSL				ePS	PS	11 40 55.5	-69
KBO	Bosley Butte	74.23	50	eP	P	11 31 23.8	+0.7
SUMG	Summit	74.47	359	⇑iP	P	11 31 25.0	+1.2
	comp=Z,152nm,0.6s,mb5.9						
EDM	Edmonton	74.49	36	eP	P	11 31 24.1	-0.2
GUMT	Gumushane	74.54	308	eP	P	11 31 25.8	+0.9
BEST	Besiri	74.64	305	iP	P	11 31 26.2	+0.8
BINT	Bingol	74.67	307	eP	P	11 31 26.8	+1.2
EZC	Erzincan	74.68	308	eP	P	11 31 28.2	+2.6
BHD	Baghdad	74.74	300	eP	P	11 31 23.5	-2.6
BHD				eS	S	11 40 27.0	-3.8
BHD				ePS		11 40 55.0	
HUMO	Hull Mountain	74.84	49	eP	P	11 31 27.2	+0.8
	comp=Z,40nm,0.8s,mb5.2						
OD2	Odessa Site #2	74.87	43	P	P	11 31 26.3	-0.2
RBK	Rabkut	74.89	281	⇓P	P	11 31 26.8	-0.4
	SNR=15						
WHFO	Wadi Hawf	75.03	282	P	P	11 31 27.4	-0.7
	SNR=27						
AKASG	Malin Array Be	75.16	321	P	P	11 31 27.4	-0.6
	comp=Z,25nm,0.5s,mb5.2,baz=51,slow=6.1,SNR=100						
AKASG				S	S	11 40 33.5	-1.4
	comp=Z,3.1nm,0.8s,baz=58,slow=12,SNR=4.3						
KHMM	Horse Mountain	75.23	51	eP	P	11 31 29.5	+0.7
NEW	Newport	75.29	42	eP	P	11 31 28.8	-0.1
NEW				pmax	pmax		
	comp=Z,159nm,1.2s						
NEW	Newport	75.29	42	P	P	11 31 29.0	+0.1
	comp=Z,68nm,1.1s,mb5.3,baz=305,slow=4.8,SNR=61						
NEW	Newport	75.29	42	eP	P	11 31 28.8	-0.1
	comp=Z,159nm,1.2s,mb5.6						
PTK	Pertek	75.40	307	eP	P	11 31 25.0	-4.7
YBH	Yreka Blue Hor	75.45	50	eP	P	11 31 30.5	+0.6
YBH				pmax	pmax		
	comp=Z,154nm,1.4s						
YBH	Yreka Blue Hor	75.45	50	P	P	11 31 30.4	+0.5
	comp=Z,45nm,0.9s,mb5.2,baz=10,slow=4.4,SNR=70						
YBH	Yreka Blue Hor	75.45	50	eP	P	11 31 30.5	+0.6
	comp=Z,154nm,1.4s,mb5.5						
SCO	Scoresbysund	75.53	353	iP	P	11 31 30.4	+0.6
SCO				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2						
SCO	Scoresbysund	75.53	353	iP	P	11 31 30.4	+0.6
	comp=Z,37nm,0.8s,mb5.2						
SIM	Simferopol'	75.58	314	eP	P	11 31 31.5	+0.9
SIM				eS	S	11 40 40.2	+0.6
SIM				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.5						
ABTO	Aybut	75.71	281	⇑P	P	11 31 31.7	-0.2
	SNR=15						
ELZG	Elazig	75.88	307	iP	P	11 31 34.0	+1.6
HFS	Hagfors	76.10	335	S	S	11 40 43.1	-1.8
	comp=Z,37nm,0.9s,baz=68,slow=16,SNR=24						
WDC	Whiskeytown Da	76.16	51	eP	P	11 31 34.0	+0.1
WDC				pmax	pmax		
	comp=Z,83nm,1.3s,mb5.3						
WDC	Whiskeytown Da	76.16	51	eP	P	11 31 34.0	0.0
	comp=Z,83nm,1.3s,mb5.3						
SUW	Suwalki	76.19	326	P	P	11 31 33.7	-0.1
SUW				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.4						
SUW	Suwalki	76.19	326	eP	P	11 31 34.1	+0.3
SUW	Suwalki	76.19	326	eP	P	11 31 34.1	+0.3
SUW				e		11 32 05.2	
DOMB	Dombas	76.31	338	eP	P	11 31 33.9	-0.4
	comp=Z,66nm,1.3s,mb5.2						
DOMB	Dombas	76.31	338	eP	P	11 31 33.9	-0.4
DOMB				AMb	AMB	11 31 36.4	
	comp=Z,66nm,1.3s,mb5.2						
NB2	NORSAR Subarra	76.33	336	P	P	11 31 33.8	-0.6
	comp=Z,25nm,0.5s,mb5.2,baz=44,slow=5.3						
NB2	NORSAR Subarra	76.33	336	P	P	11 31 33.8	-0.6
NB2				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.2						
NB2	NORSAR Subarra	76.33	336	P	P	11 31 33.8	-0.6
	baz=44,slow=5.6						
NOA	NORSAR Array B	76.33	336	P	P	11 31 33.8	-0.6
NOA				S	S	11 40 46.2	-1.1
NOA				pmax	pmax		
	comp=Z,23nm,0.5s						
NOA	NORSAR Array B	76.33	336	P	P	11 31 33.8	-0.6
	comp=Z,23nm,0.5s,mb5.2,baz=46,slow=5.7,SNR=116						
NOA				S	S	11 40 46.2	-1.1
	comp=Z,4.1nm,0.8s,baz=55,slow=11,SNR=6.5						
MYA	Malataya	76.34	307	eP	P	11 31 36.2	+1.2
MALT	Malatya	76.35	307	eP	P	11 31 31.2	-3.8
MALT	Malatya	76.35	307	eP	P	11 31 36.2	+1.2
MALT				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.3						
MALT	Malatya	76.35	307	eP	P	11 31 36.2	+1.2
	comp=Z,75nm,1.1s,mb5.3						
MOL	Molde	76.39	338	⇑iP	P	11 31 35.6	+0.9
KVT	Kavak	76.45	310	eP	P	11 31 35.8	+0.3
TOKT	Tokat	76.53	309	eP	P	11 31 36.9	+0.9
URFA	Urfa	76.54	306	eP	P	11 31 36.9	+0.8
SVST	Sivas	76.56	309	iP	P	11 31 37.1	+1.0
NAO01	NORSAR Array S	76.58	336	eP	P	11 31 34.8	-1.1
	comp=Z,14nm,0.6s,mb4.9						
WALA	Waterton Lakes	76.60	40	⇑iP	P	11 31 36.6	+0.4
	comp=Z,87nm,0.6s,mb5.7						
MOD	Modoc	76.88	48	⇑iP	P	11 31 38.2	+0.3
	comp=Z,176nm,1.3s,mb5.6						
BOYT	Boyabat	76.99	311	iP	P	11 31 39.4	+0.9
BMO	Blue Mountains	77.08	45	⇑eP	P	11 31 39.0	+0.1
	comp=Z,140nm,1.1s,mb5.6						
NSHM	Saint Helena R	77.21	52	eP	P	11 31 37.9	-1.8
BZK	Bozkurt	77.27	312	eP	P	11 31 40.5	+0.5
GZT	Gaziantep	77.43	306	iP	P	11 31 41.9	+0.9
KIS	Kishinev	77.50	318	eP	P	11 31 40.0	-1.1
KIS				e*PP	PP	11 34 40.0	-2.4
KIS				eS	S	11 40 58.0	-2.1
KIS				ePS	ScS	11 41 25.0	+3.4
KIS				MLR	MLR		
	comp=Z,500nm,17.0s						
CTKT	Corum	77.50	310	iP	P	11 31 42.1	+0.8
OHCM	Honcut	77.51	51	eP	P	11 31 40.9	-0.4
WVOR	Wild Horse Val	77.62	47	eP	P	11 31 42.2	+0.3
WVOR				pmax	pmax		
	comp=Z,91nm,1.0s,mb5.5						
WVOR	Wild Horse Val	77.62	47	eP	P	11 31 42.2	+0.3
	comp=Z,91nm,1.0s,mb5.5						
KAHT	Ahir Dag	77.75	307	iP	P	11 31 43.8	+1.1
TOS	Tosya	77.76	311	eP	P	11 31 43.9	+1.2
BNN	Bunyan	77.78	308	eP	P	11 31 42.5	-0.3
MSO	Missoula	77.88	42	⇑eP	P	11 31 42.8	-0.3
	comp=Z,28nm,0.9s,mb5.0						
BALT	Daday	77.89	312	iP	P	11 31 44.3	+1.0
FOO	Floro	77.90	339	eP	P	11 31 43.0	0.0
FOO				AMb	AMB	11 31 46.5	
	comp=Z,51nm,1.4s,mb5.1						
CHMT	Chamberlain Mo	78.21	41	eP	P	11 31 44.7	-0.3
LVV	L'vov	78.37	323	eP	P	11 31 45.5	-0.2
LVV				eS	S	11 41 02.9	-6.3
LVV				MLR	MLR		
	comp=Z,240nm,18.0s						
ELDT	Eldivan	78.44	311	iP	P	11 31 46.9	+0.6
AVNT	Avonos	78.46	309	iP	P	11 31 47.0	+0.6
SAFT	Safranbolu	78.49	312	eP	P	11 31 47.2	+0.6
WCN	Washoe City	78.65	50	eP	P	11 31 47.8	+0.4
WCN				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.3						
WCN	Washoe City	78.65	50	eP	P	11 31 47.8	+0.4
	comp=Z,59nm,1.0s,mb5.3						
PAHR	Pah Rah Range	78.67	50	eP	P	11 31 47.7	+0.2
	comp=Z,59nm,0.9s,mb5.3						
ODD1	Odda	78.69	337	eP	P	11 31 46.5	-0.7
RUND	Rundenannen	78.71	338	eP	P	11 31 47.8	+0.5
RUND				AMb	AMB	11 31 55.3	
	comp=Z,43nm,1.8s,mb4.9						
ASK	Askoy	78.72	338	eP	P	11 31 47.8	+0.5
BRTR	Keskin Array B	78.73	310	P	P	11 31 48.6	+0.8
BRTR				pmax	pmax		
	comp=Z,36nm,0.8s						
BRTR	Keskin Array B	78.73	310	P	P	11 31 48.5	+0.7
	comp=Z,36nm,0.8s,mb5.2,baz=102,slow=4.4,SNR=137						
BER	Bergen	78.75	338	eP	P	11 31 47.6	+0.1
COBT	Iskenderun	78.76	306	iP	P	11 31 48.5	+0.5
FFC	Flin Flon	78.78	31	P	P	11 31 47.1	-0.7
	comp=Z,718nm,0.7s,SNR=98						
FFC	Flin Flon	78.78	31	⇑iP	P	11 31 47.3	-0.5
FFC				pmax	pmax		
	comp=Z,92nm,0.7s,mb5.6						
FFC	Flin Flon	78.78	31	⇑iP	P	11 31 47.3	-0.4
	comp=Z,92nm,0.7s,mb5.6						
RAYN	Ar Rayn	78.83	291	P	P	11 31 49.2	+0.5
	comp=Z,465nm,0.7s,mb6.3,SNR=8.7						
EGD	Espegrend	78.87	338	eP	P	11 31 48.5	+0.3
KAMT	Kaman	78.88	310	eP	P	11 31 48.7	0.0
SAO	San Andreas Ge	78.93	53	eP	P	11 31 48.8	-0.2
SAO				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.3						
SAO	San Andreas Ge	78.93	53	eP	P	11 31 48.8	-0.1
	comp=Z,75nm,1.1s,mb5.3						
CMB	Columbia Colle	78.94	52	eP	P	11 31 49.0	0.0
CMB				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.5						
CMB	Columbia Colle	78.94	52	eP	P	11 31 49.0	0.0
	comp=Z,78nm,0.8s,mb5.5						
CFR	Carcaliu	78.95	317	⇓P	P	11 31 49.0	+0.1
FCC	Fort Churchill	78.95	24	eP	P	11 31 48.0	-0.6
FCC				pmax	pmax		
	comp=Z,63nm,0.7s,mb5.5						
FCC	Fort Churchill	78.95	24	eP	P	11 31 48.0	-0.6
	comp=Z,63nm,0.7s,mb5.5						
NIG	Nigde	78.99	308	eP	P	11 31 45.9	-3.4
BURAR	Bucovina Array	79.10	320	⇓P	P	11 31 50.4	+0.8
BSD	Bornholm Skovb	79.11	330	⇑eP	P	11 31 49.4	-0.1
BSD				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.2						
BSD	Bornholm Skovb	79.11	330	⇑eP	P	11 31 49.4	-0.1
	comp=Z,35nm,0.7s,mb5.2						
BSD	Bornholm Skovb	79.11	330	⇑iP	P	11 31 49.4	-0.1
	comp=Z,35nm,0.7s,mb5.2						
KWP	Kalwaria	79.16	323	eP	P	11 31 50.6	+0.7
KWP				eP		11 32 18.8	
KWP	Kalwaria	79.16	323	eP	P	11 31 50.6	+0.7
KWP				e		11 32 18.8	
ANTO	Ankara	79.19	311	eP	P	11 31 45.2	-5.1
ANTO	Ankara	79.19	311	⇓P	P	11 31 51.4	+1.1
TIRR	Tirgusor	79.21	316	⇓P	P	11 31 50.3	0.0
SGKT	Sivrigoynuk	79.26	312	iP	P	11 31 51.5	+0.9
VRI	Vrincioaia	79.33	318	⇑P	P	11 31 51.7	+0.8
VRI				⇓P		11 31 52.2	
HARR	Harsova	79.35	317	⇓P	P	11 31 51.7	+0.7
GKP	Gorka Klasztor	79.38	328	eP	P	11 31 49.6	-1.4
GKP				e		11 32 22.2	
LRV	Little Rabbit	79.40	53	eP	P	11 31 51.0	-0.5
HLID	Hailey	79.53	45	⇑iP	P	11 31 52.6	+0.7
	comp=Z,54nm,0.7s,mb5.4						
BMN	Battle Mountai	79.63	48	P	P	11 31 53.4	+0.8
BMN				pmax	pmax		
	comp=Z,82nm,0.9s,mb5.5						
BMN	Battle Mountai	79.63	48	⇑eP	P	11 31 53.4	+0.8
	comp=Z,117nm,0.9s,mb5.6						
MCMT	McKenzie Canyo	79.68	43	eP	P	11 31 52.8	0.0
PSN	Preselentsi	79.80	316	iP	P	11 31 54.5	+1.1
KOLS	Kolonicke sedl	79.82	323	eP	P	11 31 53.6	+0.2
KOLS				eS	S	11 41 25.4	+1.2
HENT	Hendek	79.84	312	iP	P	11 31 53.6	-0.1
MDU	Mudurnu	79.85	312	eP	P	11 31 53.4	-0.3
BOZ	Bozeman (W)	79.87	42	eP	P	11 31 54.3	+0.5
BOZ				pmax	pmax		
	comp=Z,84nm,0.7s,mb5.6						
BOZ	Bozeman (W)	79.87	42	eP	P	11 31 54.3	+0.5
	comp=Z,84nm,0.7s,mb5.6						
MLR	Muntele Rosu	80.00	318	P	P	11 31 54.7	+0.3
MLR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MLR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MLR	Muntele Rosu	80.00	318	P	P	11 31 54.7	+0.3
	comp=Z,7.6nm,0.5s,mb4.7,baz=31,slow=17,SNR=14						
MLR				PKKPbc		11 50 35.2	
	comp=Z,2.8nm,0.8s,baz=172,slow=5.3,SNR=4.9						
MLR	Muntele Rosu	80.00	318	⇑P	P	11 31 55.0	+0.5
NVAR	Mina Array Bea	80.08	51	P	P	11 31 55.6	+0.6
	comp=Z,58nm,0.6s,mb5.5,baz=310,slow=4.3,SNR=252						
NVAR				PKKPbc		11 50 36.1	
	comp=Z,0.6nm,0.9s,baz=140,slow=2.5,SNR=3.7						
OMM	Old Mammoth Mi	80.09	52	eP	P	11 31 55.1	0.0
MNV	Mina	80.17	50	⇑iP	P	11 31 55.7	+0.2
MNV				pmax	pmax		
	comp=Z,91nm,1.2s,mb5.4						
MNV	Mina	80.17	50	⇑iP	P	11 31 55.7	+0.2
	comp=Z,91nm,1.3s,mb5.3						
OJC	Ojcow	80.22	325	⇑eP	P	11 31 55.8	+0.3
OJC				iS	S	11 41 28.0	-0.3
OJC				MLR	MLR		
	comp=Z,500nm,16.5s						
OJC	Ojcow	80.22	325	⇑eP	P	11 31 55.8	+0.3
OJC				e		11 32 23.9	
OJC				iS	S	11 41 28.0	-0.3
OJC				MLR	MLR	12 11 23.8	
	comp=Z,500nm,16.5s						
CRVS	Cervenica-Dubn	80.25	323	eP	P	11 31 56.8	+1.1
CRVS				eS	S	11 41 22.5	-6.2
CRVS	Cervenica-Dubn	80.25	323	eP	P	11 31 56.9	+1.2
CRVS				e		11 31 59.3	
CRVS				eS	S	11 41 21.7	-7.0
SNX	Sinaia	80.32	318	P	P	11 31 57.4	+1.3
KIZT	Kizilcal	80.33	310	eP	P	11 31 56.6	+0.3
MUD	Monsted U'grnd	80.41	334	iP	P	11 31 56.6	+0.3
MUD				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.1						
MUD	Monsted U'grnd	80.41	334	iP	P	11 31 56.6	+0.3
	comp=Z,37nm,0.9s,mb5.1						
QLMT	Earthquake Lak	80.48	42	eP	P	11 31 57.7	+0.7
NIE	Niedzica	80.49	324	eP	P	11 31 56.7	-0.2
NIE				eS	S	11 41 32.1	+1.0
MTUM	Tungsten Hills	80.52	52	eP	P	11 31 57.5	+0.2
PRD	Provadia	80.55	316	iP	P	11 31 58.5	+1.1
KONT	Konya--Tatoy	80.56	309	eP	P	11 31 57.5	0.0
ESKT	Eskisehir	80.62	311	iP	P	11 31 57.6	-0.2
ELK	Elko	80.68	47	P	P	11 31 58.2	+0.1
ELK				pmax	pmax		
	comp=Z,68nm,1.0s						
ELK	Elko	80.68	47	P	P	11 31 59.1	+1.0
	comp=Z,32nm,0.7s,mb5.2,baz=310,slow=6.0,SNR=155						
ELK	Elko	80.68	47	⇑eP	P	11 31 59.0	+0.9
	comp=Z,42nm,0.8s,mb5.2						
ASF	Jabal al Asfar	80.69	302	P	P	11 31 59.3	+1.0
	comp=Z,22nm,0.8s,mb5.0,baz=278,slow=3.4,SNR=28						
YMR	Madison River	80.84	42	⇑iP	P	11 32 00.1	+1.2
YLV	Yalova	80.93	313	eP	P	11 31 51.2	-8.1
BORG	Borgarnes	80.93	351	eP	P	11 32 00.5	+1.6
	comp=Z,48nm,0.8s,mb5.3						
YNR	Norris Junctio	80.98	42	eP	P	11 32 01.8	+2.2
TPH	Tonopah	80.98	50	⇑iP	P	11 32 00.2	+0.5
	comp=Z,161nm,0.8s,mb5.8						
KECS	Kecovo	81.01	323	eP	P	11 32 00.2	+0.5
KECS				eP		11 32 17.5	
YFT	Old Faithful	81.05	42	eP	P	11 32 02.3	+2.4
PHNC	Paralimni	81.11	306	P	P	11 31 59.1	-1.3
	comp=Z,0.6nm,0.5s						
LKWY	Lake	81.22	42	⇑eP	P	11 32 03.2	+2.4
	comp=Z,234nm,1.0s,mb5.9						
FRB	Frobisher Bay	81.25	11	P	P	11 32 00.5	-0.1
	comp=Z,74nm,0.7s,mb5.5,baz=344,slow=5.1,SNR=283						
FRB				PKKPbc		11 50 31.3	
	comp=Z,1.4nm,0.7s,baz=155,slow=4.4,SNR=5.7						
OKC	Ostrava-Krasne	81.27	325	⇑iP	P	11 32 01.1	+0.2
OKC				ex	x	11 32 29.2	
ULDT	Uludag	81.33	312	iP	P	11 32 02.0	+0.6
LIKS	Likavka	81.33	324	eP	P	11 32 02.2	+0.9
IMW	Indian Meadow	81.33	43	eP	P	11 32 03.0	+1.6
ALT	Altintas	81.36	311	eP	P	11 32 02.2	+0.6

SZH	**Strazhica**	**81.36**	**316**	*i* P	**P**	**11 32 02.3**	**+0.7**
RUE	**Ruedersdorf**	**81.44**	**329**	*e*P	**P**	**11 32 03.1**	**+1.3**
	comp=Z,60nm,0.9s,mb5.3						
KSP	**Ksiaz**	**81.46**	**327**	⇑*e*P	**P**	**11 32 02.3**	**+0.4**
KSP				*e**PP	pP	11 33 21.2	-6.1
KSP				*e*S	S	11 41 40.0	-0.9
KSP	**Ksiaz**	**81.46**	**327**	⇑*e*P	**P**	**11 32 02.3**	**+0.4**
KSP				*e*		11 32 29.8	
KSP				*e*		11 33 00.0	
KSP				*e*pP	pP	11 33 21.2	-6.1
KSP				*e*S	S	11 41 40.0	-0.9
KSP				*e*SS		11 44 11.0	
KSP				*e*SS	SS	11 47 01.0	-9.5
KSP	**Ksiaz**	**81.46**	**327**	*e*P	**P**	**11 32 02.5**	**+0.6**
KSP				*e*		11 32 30.2	
MOOW	**Moose Ponds**	**81.54**	**43**	*e*P	**P**	**11 32 03.5**	**+1.1**
HVU	**Hansel Valley**	**81.56**	**45**	⇑*e*P	**P**	**11 32 03.6**	**+1.0**
TPAW	**Teton Pass**	**81.58**	**43**	*e*P	**P**	**11 32 04.0**	**+1.3**
MORC	**Moravsky Berou**	**81.60**	**325**	*e*P	**P**	**11 32 02.8**	**+0.2**
MORC				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.1						
MORC	**Moravsky Berou**	**81.60**	**325**	*e*P	**P**	**11 32 02.8**	**+0.2**
	comp=Z,23nm,0.8s,mb5.1						
CSS	**Prodhromos**	**81.61**	**306**	P	**P**	**11 31 58.2**	**-4.8**
CSS				*e*P		11 32 02.9	
WUWY	**Wally Ulrich**	**81.67**	**43**	*e*P	**P**	**11 32 03.9**	**+0.7**
PSZ	**Piszkesteto**	**81.68**	**323**	*e*P	**P**	**11 32 03.0**	**-0.1**
PSZ				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.3						
PSZ	**Piszkesteto**	**81.68**	**323**	*e*P	**P**	**11 32 03.0**	**-0.1**
	comp=Z,54nm,1.1s,mb5.3						
PSZ	**Piszkesteto**	**81.68**	**323**	⇓*i*P	**P**	**11 32 04.1**	**+1.0**
LOHW	**Long Hollow**	**81.70**	**43**	*e*P	**P**	**11 32 04.2**	**+0.9**
SNOW	**Snow King Moun**	**81.71**	**43**	*e*P	**P**	**11 32 04.4**	**+1.1**
DPC	**Dobruska-Polom**	**81.78**	**326**	⇑*i*P	**P**	**11 32 04.2**	**+0.6**
DPC				*e*x	x	11 32 32.1	
LEF	**Lefka**	**81.81**	**307**	*e*P	**P**	**11 32 04.3**	**+0.2**
UPC	**Upice**	**81.82**	**326**	⇑*i*P	**P**	**11 32 03.5**	**-0.3**
UPC				*e*x	x	11 32 32.1	
VYHS	**Vyhne**	**81.83**	**324**	*e*P	**P**	**11 32 04.6**	**+0.7**
VYHS				*e*S	S	11 41 41.1	-3.6
VYHS	**Vyhne**	**81.83**	**324**	*e*P	**P**	**11 32 04.6**	**+0.7**
VYHS				*e*		11 32 31.9	
VYHS	**Vyhne**	**81.83**	**324**	*e*P	**P**	**11 32 04.6**	**+0.7**
VYHS				*e*		11 32 31.9	
VYHS				*e*S	S	11 41 41.1	-3.6
BSEG	**Bad Segeberg**	**81.83**	**331**	*e*P	**P**	**11 32 03.7**	**-0.1**
BSEG				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.4						
TRCR	**Troy Canyon**	**81.87**	**49**	*e*P	**P**	**11 32 04.9**	**+0.6**
BGU	**Big Grassy Mou**	**81.92**	**46**	*e*P	**P**	**11 32 05.1**	**+0.6**
AHID	**Auburn Hatcher**	**81.94**	**44**	*e*P	**P**	**11 32 05.1**	**+0.6**
	comp=Z,90nm,1.1s,mb5.5						
DGMT	**Dagmar**	**81.98**	**36**	*e*P	**P**	**11 32 04.2**	**-0.5**
	comp=Z,198nm,1.1s,mb5.9						
ALFC	**Alevga**	**81.99**	**307**	P	**P**	**11 32 04.6**	**-0.4**
	comp=Z,1.8nm,0.7s						
SZAC	**Souni-Zanaja**	**82.03**	**306**	P	**P**	**11 32 05.7**	**+0.5**
SPUT	**South Promonto**	**82.04**	**45**	*e*P	**P**	**11 32 05.7**	**+0.6**
LAO	**LASA Array**	**82.13**	**38**	⇑*e*P	**P**	**11 32 05.9**	**+0.4**
	comp=Z,195nm,0.9s,mb5.9						
SART	**Tekirdag**	**82.19**	**314**	*i* P	**P**	**11 32 06.3**	**+0.4**
AKMC	**Akamas**	**82.24**	**307**	P	**P**	**11 32 06.0**	**-0.3**
BZS	**Buzias**	**82.29**	**320**	⇓P	**P**	**11 32 05.9**	**-0.4**
PPCY	**Paphos**	**82.31**	**307**	P	**P**	**11 32 05.0**	**-1.6**
VRAC	**Vranov**	**82.37**	**325**	P	**P**	**11 32 07.3**	**+0.7**
VRAC	**Vranov**	**82.37**	**325**	⇓P	**P**	**11 32 07.5**	**+0.9**
HWUT	**Hardware Ranch**	**82.38**	**45**	⇑*i*P	**P**	**11 32 07.7**	**+0.9**
	comp=Z,138nm,0.8s,mb5.8						
PVCC	**Panska Ves**	**82.47**	**327**	⇑*i*P	**P**	**11 32 07.5**	**+0.4**
PVCC				*e*x	x	11 32 35.3	
DUG	**Dugway**	**82.49**	**47**	⇑*i*P	**P**	**11 32 08.3**	**+0.9**
DUG				pmax	pmax		
	comp=Z,2µm,0.8s						
DUG	**Dugway**	**82.49**	**47**	⇑*i*P	**P**	**11 32 08.3**	**+0.8**
	comp=Z,2µm,0.8s						
BRG	**Berggiesshubel**	**82.51**	**328**	*i* P	**P**	**11 32 07.5**	**+0.2**
BRG				*i* *PP	pP	11 33 33.0	+0.2
BRG				*i* S	S	11 41 51.0	-0.3
BRG				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.3						
BRG				MLR	MLR		
	comp=N,250nm,12.9s						
BRG				MLR	MLR		
	comp=E,330nm,12.9s						
BRG				MLR	MLR		
	comp=Z,440nm,12.9s						
BRG	**Berggiesshubel**	**82.51**	**328**	*i* P	**P**	**11 32 07.5**	**+0.2**
	comp=Z,33nm,0.7s,mb5.3						
BRG				*i*		11 32 33.4	
BRG				*i* pP	pP	11 33 33.0	+0.2
BRG				*i* S	S	11 41 51.0	-0.3
BRG				*i* SP	SP	11 42 38.0	-7.9
BRG				*i*		11 44 22.0	
BRG				*i* SS	SS	11 47 18.0	-8.0
SMOL	**Smolenice**	**82.51**	**324**	*e*P	**P**	**11 32 08.5**	**+1.2**
SMOL	**Smolenice**	**82.51**	**324**	*e*P	**P**	**11 32 08.6**	**+1.3**
CLL	**Collm**	**82.61**	**328**	⇑*i*P	**P**	**11 32 07.7**	**-0.1**
CLL				*i*	pP	11 33 32.5	-0.9
CLL				*e*S	S	11 41 52.0	-0.4
CLL				pmax	pmax		
	comp=Z,87nm,0.8s,mb5.6						
CLL	**Collm**	**82.61**	**328**	⇑P	**P**	**11 32 07.7**	**-0.1**
	comp=Z,logA/T=2.0,mb5.6						
CLL				*i* *PP	pP	11 33 32.5	-0.9
CLL				*e*S	S	11 41 52.0	-0.4
CLL				*e*SP	SP	11 42 41.0	-6.3
CLL				*e**SS		11 44 22.0	
CLL				*e*SS	SS	11 47 12.0	-16
CLL				*e*		11 54 06.0	
NOQ	**North Oquirrh**	**82.64**	**46**	⇑*i*P	**P**	**11 32 09.1**	**+1.0**
MANT	**Manisa**	**82.67**	**311**	*i* P	**P**	**11 32 08.8**	**+0.5**
TCUT	**Toone Canyon**	**82.78**	**45**	*e*P	**P**	**11 32 09.5**	**+0.7**
BW06	**Boulder Array**	**82.83**	**43**	⇑*i*P	**P**	**11 32 09.2**	**+0.2**
	comp=Z,59nm,0.9s,mb5.4						
PDAR	**Pinedale Array**	**82.83**	**43**	P	**P**	**11 32 09.2**	**+0.2**
	comp=Z,38nm,0.7s,mb5.3,baz=278,slow=2.6,SNR=274						
DNZL	**Cakiroluk**	**82.84**	**311**	*i* P	**P**	**11 32 09.8**	**+0.6**
PRU	**Pruhonice**	**82.86**	**327**	⇑*i*P	**P**	**11 32 09.3**	**+0.2**
PRU				*e*x	x	11 32 37.2	
ZST	**Bratislava**	**82.89**	**324**	*e*P	**P**	**11 32 10.4**	**+1.2**
ZST	**Bratislava**	**82.89**	**324**	*e*P	**P**	**11 32 10.9**	**+1.7**
AKS	**Akhisar**	**82.90**	**312**	*e*P	**P**	**11 32 09.2**	**-0.3**
RZN	**Rozhen**	**83.05**	**316**	*i* P	**P**	**11 32 11.5**	**+1.3**
JLU	**Jordanelle**	**83.07**	**46**	*e*P	**P**	**11 32 10.9**	**+0.6**
NLU	**North Lily Min**	**83.09**	**46**	*e*P	**P**	**11 32 11.2**	**+0.8**
DAU	**Daniels Canyon**	**83.30**	**46**	*e*P	**P**	**11 32 12.7**	**+1.2**
MPU	**Maple Canyon**	**83.32**	**46**	*e*P	**P**	**11 32 12.4**	**+0.9**
AYVA	**Ayvalik**	**83.33**	**313**	*i* P	**P**	**11 32 12.0**	**+0.3**
VTS	**Vitosha**	**83.35**	**317**	⇓P	**P**	**11 32 12.9**	**+1.2**
VTS	**Vitosha**	**83.35**	**317**	*i* P	**P**	**11 32 13.5**	**+1.8**
CLZ	**Clausthal**	**83.36**	**330**	*e*P	**P**	**11 32 11.8**	**+0.3**
	comp=Z,92nm,1.0s,mb5.6						
EIL	**Elat**	**83.47**	**301**	*e*P	**P**	**11 32 12.3**	**-0.3**
	comp=Z,22nm,0.6s,mb5.2						
KDAG	**Bornova**	**83.53**	**312**	*i* P	**P**	**11 32 12.3**	**-0.4**
IZM	**Izmir**	**83.53**	**312**	*e*P	**P**	**11 32 11.9**	**-0.8**
ARUT	**Antelope Range**	**83.56**	**49**	*e*P	**P**	**11 32 13.4**	**+0.5**
AYDN	**Tasoluk**	**83.59**	**311**	*i* P	**P**	**11 32 14.0**	**+1.0**
NKC	**Novy Kostel**	**83.63**	**328**	⇑*i*P	**P**	**11 32 13.0**	**+0.1**
NKC				*e*x	x	11 32 40.2	
MMB	**Musomiste**	**83.68**	**316**	*i* P	**P**	**11 32 14.0**	**+0.6**
MOX	**Moxa**	**83.70**	**329**	*e*P	**P**	**11 32 13.2**	**0.0**
MOX				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.1						
MOX				MLR	MLR		
	comp=Z,200nm,16.0s						
MOX	**Moxa**	**83.70**	**329**	*e*P	**P**	**11 32 13.2**	**0.0**
	comp=Z,50nm,1.5s,mb5.1						
MOX				*e*		11 36 08.5	
MOX	**Moxa**	**83.70**	**329**	*i* P	**P**	**11 32 13.2**	**0.0**
	comp=Z,logA/T=1.5,mb5.1						
MOX				pP	tx	11 32 52.0	
MOX				*e*		11 36 08.0	
MOX				S	S	11 42 00.0	-3.1
MOX				LQ		11 54 04.0	
MOX				QM		12 12 30.0	
MOX				RM		12 16 21.0	
KKB	**Krupnik**	**83.88**	**317**	*i* P	**P**	**11 32 15.3**	**+0.9**
MVU	**Marysvale**	**83.89**	**48**	*e*P	**P**	**11 32 15.8**	**+1.3**
	comp=Z,96nm,0.8s,mb5.7						
KHC	**Kasperske Hory**	**83.91**	**327**	⇑*i*P	**P**	**11 32 14.2**	**-0.1**
KHC				*e*x	x	11 32 41.8	
MSU	**Marysvale**	**83.91**	**48**	*e*P	**P**	**11 32 15.7**	**+1.1**
TMUT	**Trail Mountain**	**84.02**	**47**	*e*P	**P**	**11 32 15.9**	**+0.7**
GEC2	**GERESS Array S**	**84.06**	**326**	*e*P	**P**	**11 32 15.0**	**-0.1**
GEC2				*e*S	S	11 42 07.4	+0.8
GEC2				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.1						
GEC2	**GERESS Array S**	**84.06**	**326**	*e*P	**P**	**11 32 15.0**	**-0.1**
	comp=Z,21nm,0.7s,mb5.1						
GEC2				*e*S	S	11 42 07.4	+0.8
GEC2				*e*		11 42 56.3	
GERES	**GERESS Array B**	**84.06**	**326**	P	**P**	**11 32 15.0**	**-0.1**
	comp=Z,18nm,0.7s,mb5.0,baz=41,slow=5.3,SNR=119						
GERES				PKKPbc		11 50 26.2	
	comp=Z,0.4nm,0.7s,baz=214,slow=4.8,SNR=4.7						
SRS	**Serrai**	**84.06**	**316**	*e*P	**P**	**11 32 15.5**	**+0.2**
PFO	**Pinyon Flat Ob**	**84.08**	**54**	*e*P	**P**	**11 32 15.4**	**-0.2**
PFO				pmax	pmax		
	comp=Z,109nm,0.8s,mb5.7						
PFO	**Pinyon Flat Ob**	**84.08**	**54**	*e*P	**P**	**11 32 15.4**	**-0.2**
	comp=Z,109nm,0.8s,mb5.7						
LDFC	**Landfair**	**84.11**	**52**	*e*P	**P**	**11 32 15.7**	**0.0**
WET	**Wettzell**	**84.22**	**327**	*e*P	**P**	**11 32 16.1**	**+0.2**
WET				*e*S	S	11 42 08.8	+0.6
WET				*e*		11 43 01.2	
WET				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
WET	**Wettzell**	**84.22**	**327**	*e*P	**P**	**11 32 16.1**	**+0.2**
	comp=Z,18nm,0.9s,mb4.9						
WET				*e*S	S	11 42 08.8	+0.6
WET				*e*		11 43 01.2	
WET				PS		11 44 39.6	
ARSA	**Arzberg**	**84.31**	**324**	⇑*i*P	**P**	**11 32 16.5**	**+0.1**
	comp=Z,85nm,2.9s,mb5.1						
OUR	**Ouranopolis**	**84.33**	**315**	*e*P	**P**	**11 32 16.8**	**+0.2**
SOH	**Sokhos**	**84.39**	**316**	*e*P	**P**	**11 32 16.8**	**-0.1**
KNT	**Kendrikon**	**84.44**	**316**	*e*P	**P**	**11 32 17.1**	**-0.1**
BAR	**Barrett**	**84.48**	**54**	*e*P	**P**	**11 32 17.3**	**-0.2**
MOA	**Molln**	**84.50**	**325**	⇑*i*P	**P**	**11 32 17.7**	**+0.4**
	comp=Z,25nm,1.2s,mb4.9						
SRU	**San Rafael**	**84.55**	**46**	⇑*i*P	**P**	**11 32 18.5**	**+0.7**
GRA1	**Grafenberg Arr**	**84.57**	**328**	*e*P	**P**	**11 32 18.1**	**+0.5**
	comp=Z,96nm,1.4s,mb5.4						
GRA1				*e*pP	Px	11 32 45.8	
GRA1				*e*		11 35 39.0	
GRA1				*e*		11 36 11.8	
GRA1				*e*S	S	11 42 12.1	+0.6
GRF	**Grafenberg Arr**	**84.57**	**328**	*e*P	**P**	**11 32 18.1**	**+0.5**
GRF				*e*		11 35 39.0	
GRF				*e*S	S	11 42 12.1	+0.6
GRF				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.4						
GRF	**Grafenberg Arr**	**84.57**	**328**	*e*P	**P**	**11 32 18.1**	**+0.5**
GRF				*e*		11 35 39.0	
GRF				*e*S	S	11 42 12.1	+0.6
GRF				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.4						
GRF	**Grafenberg Arr**	**84.57**	**328**	*e*P	**P**	**11 32 18.1**	**+0.5**
	comp=Z,96nm,1.4s,mb5.4						
GRF				*e*pP	Px	11 32 45.8	
GRF				*e*		11 35 39.0	
GRF				*e*		11 36 11.8	
GRF				*e*S	S	11 42 12.1	+0.6
ULM	**Lac du Bonnet**	**84.59**	**31**	P	**P**	**11 32 17.4**	**-0.3**
	comp=Z,34nm,0.9s,mb5.2,baz=315,slow=5.5,SNR=58						
ULM	**Lac du Bonnet**	**84.59**	**31**	*e*P	**P**	**11 32 17.1**	**-0.5**
	comp=Z,148nm,1.2s,mb5.7						
WTSB	**Winterswijk**	**84.72**	**332**	*e*P	**P**	**11 32 17.7**	**-0.6**
	comp=Z,41nm,0.8s,mb5.3						
SKO	**Skopje**	**84.75**	**318**	⇑*i*P	**P**	**11 32 19.6**	**+0.9**
SKO				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.2						
SKO	**Skopje**	**84.75**	**318**	⇑*i*P	**P**	**11 32 19.6**	**+0.9**
	comp=Z,0.0nm,0.8s						
PAIG	**Paliouri**	**84.77**	**315**	*e*P	**P**	**11 32 18.6**	**-0.2**
PERS	**Pernice**	**84.94**	**324**	*e*P	**P**	**11 32 19.8**	**+0.3**
LIT	**Litokhoron**	**85.36**	**316**	*e*P	**P**	**11 32 22.7**	**+1.0**
KBA	**Koelnbreinsper**	**85.48**	**325**	⇑*i*P	**P**	**11 32 23.1**	**+1.0**
	comp=Z,11nm,0.8s,mb4.7						
KBA	**Koelnbreinsper**	**85.48**	**325**	⇑*i*P	**P**	**11 32 23.1**	**+1.0**
KBA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
ESK	**Eskdalemuir**	**85.53**	**339**	*e*P	**P**	**11 32 21.5**	**-0.6**
ESK				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.0						
ESK	**Eskdalemuir**	**85.53**	**339**	*e*P	**P**	**11 32 21.5**	**-0.6**
	comp=Z,17nm,0.7s,mb5.0						
BBH	**Bruntsheil**	**85.60**	**338**	⇑*e*P	**P**	**11 32 22.4**	**0.0**
BBH				AMb	AMB	11 32 23.7	
	comp=Z,34nm,1.3s,mb5.0						
BOJS	**Bojanci**	**85.67**	**323**	*e*P	**P**	**11 32 23.2**	**+0.2**
TOD	**Tromm**	**85.69**	**329**	*e*P	**P**	**11 32 22.9**	**-0.1**
BTA	**Talkin**	**85.72**	**338**	⇑*e*P	**P**	**11 32 23.2**	**+0.2**
BTA				AMb	AMB	11 32 26.9	
	comp=Z,55nm,0.9s,mb5.4						
BHH	**Howats Hill**	**85.72**	**338**	⇑*e*P	**P**	**11 32 23.1**	**+0.1**
BHH				AMb	AMB	11 32 25.5	
	comp=Z,78nm,1.3s,mb5.4						
BWH	**Wardlaw**	**85.79**	**339**	⇑*e*P	**P**	**11 32 23.4**	**0.0**
BWH				AMb	AMB	11 32 27.3	
	comp=Z,28nm,1.0s,mb5.0						
BDL	**Dobcross Hall**	**85.88**	**338**	⇑*e*P	**P**	**11 32 22.7**	**-1.1**
BDL				AMb	AMB	11 32 26.9	
	comp=Z,114nm,1.3s,mb5.5						
PV10	**Paradox Valley**	**85.92**	**46**	*e*P	**P**	**11 32 25.5**	**+1.1**
JAVS	**Javornik**	**85.98**	**324**	*e*P	**P**	**11 32 22.6**	**-1.9**
HGN	**Heimansgroeve**	**85.99**	**331**	*e*P	**P**	**11 32 24.6**	**+0.2**
	comp=Z,35nm,1.5s,mb5.0						
ABH	**Alteburg**	**86.01**	**330**	*e*P	**P**	**11 32 24.4**	**-0.1**
BBO1	**Bothel**	**86.03**	**338**	⇑*e*P	**P**	**11 32 24.9**	**+0.4**
BBO1				AMb	AMB	11 32 27.0	
	comp=Z,116nm,1.5s,mb5.5						
FVI	**Forni Avoltri**	**86.10**	**325**	*e*P	**P**	**11 32 24.2**	**-0.8**
PHWY	**Pilot Hill**	**86.10**	**42**	*e*P	**P**	**11 32 25.7**	**+0.6**
WATA	**Walderalm**	**86.13**	**326**	⇑*i*P	**P**	**11 32 26.1**	**+0.9**
	comp=Z,5.6nm,0.9s,mb4.4						
WATA	**Walderalm**	**86.13**	**326**	⇑*i*P	**P**	**11 32 26.1**	**+0.9**
WATA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
AGG	**Agios Georgios**	**86.15**	**315**	*e*P	**P**	**11 32 24.1**	**-1.4**
WTTA	**Wattenberg**	**86.16**	**326**	⇑*i*P	**P**	**11 32 24.9**	**-0.4**
	comp=Z,14nm,0.7s,mb4.9						
WTTA	**Wattenberg**	**86.16**	**326**	⇑*i*P	**P**	**11 32 24.9**	**-0.4**
WTTA				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.9						
WUAZ	**Wupatki**	**86.27**	**50**	⇑*e*P	**P**	**11 32 26.9**	**+0.8**
	comp=Z,915nm,0.9s						
MOTA	**Moosalm**	**86.34**	**327**	⇑*i*P	**P**	**11 32 25.9**	**-0.3**
	comp=Z,3.6nm,0.8s,mb4.2						
MOTA	**Moosalm**	**86.34**	**327**	⇑*i*P	**P**	**11 32 25.9**	**-0.3**
MOTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
RUP	**Ruppelstein**	**86.35**	**330**	*e*P	**P**	**11 32 26.0**	**-0.2**
PV01	**Paradox Valley**	**86.35**	**46**	*e*P	**P**	**11 32 27.7**	**+1.2**
SQTA	**Sankt Quirin**	**86.39**	**326**	⇑*i*P	**P**	**11 32 26.1**	**-0.3**
	comp=Z,11nm,1.2s,mb4.6						
SQTA	**Sankt Quirin**	**86.39**	**326**	⇑*i*P	**P**	**11 32 26.1**	**-0.3**
SQTA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
BFO	**Black Forest**	**86.86**	**329**	*e*P	**P**	**11 32 28.3**	**-0.3**
BFO				*e*S	S	11 42 33.0	-0.2
BFO				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.0						
BFO	**Black Forest**	**86.86**	**329**	*e*P	**P**	**11 32 28.3**	**-0.3**
	comp=Z,16nm,0.6s,mb5.0						
BFO				*e*S	S	11 42 33.0	-0.2
DAVA	**Damuels**	**86.95**	**327**	⇑*i*P	**P**	**11 32 29.0**	**-0.1**
	comp=Z,40nm,1.2s,mb5.1						
GIVF	**Givet**	**86.95**	**332**	*e*P	**P**	**11 32 28.8**	**-0.2**
ISCO	**Idaho Springs**	**87.01**	**43**	*e*P	**P**	**11 32 30.7**	**+1.1**
ISCO				pmax	pmax		
	comp=Z,46nm,0.7s,mb5.4						
ISCO	**Idaho Springs**	**87.01**	**43**	*e*P	**P**	**11 32 30.7**	**+1.1**
	comp=Z,46nm,0.7s,mb5.4						
CTI	**Castel Tesino**	**87.04**	**325**	*e*P	**P**	**11 32 28.7**	**-0.9**
BAIF	**Baives**	**87.23**	**332**	*e*P	**P**	**11 32 29.7**	**-0.7**
CDF	**Champ du Feu**	**87.25**	**329**	*e*P	**P**	**11 32 30.0**	**-0.5**
	comp=Z,40nm,0.9s,mb4.9						
CDF	**Champ du Feu**	**87.25**	**329**	*e*P	**P**	**11 32 30.0**	**-0.5**
CDF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
BRMO	**Bormio**	**87.32**	**326**	*e*P	**P**	**11 32 31.1**	**+0.2**
FELD	**Feldberg**	**87.34**	**329**	*e*P	**P**	**11 32 30.4**	**-0.6**
ECH	**Echery**	**87.45**	**329**	*e*P	**P**	**11 32 32.1**	**+0.6**
MOF	**Molkenrain**	**87.74**	**329**	*e*P	**P**	**11 32 32.9**	**+0.1**
BBS	**Basel-Blauen**	**87.87**	**328**	*e*P	**P**	**11 32 33.6**	**+0.1**
HINF	**Hinteralfeld**	**87.89**	**329**	*e*P	**P**	**11 32 32.7**	**-0.8**
	comp=Z,15nm,0.8s,mb4.6						
HINF	**Hinteralfeld**	**87.89**	**329**	*e*P	**P**	**11 32 32.7**	**-0.8**
HINF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
HAU	**Haudompre**	**87.96**	**329**	*e*P	**P**	**11 32 33.0**	**-0.9**
HAU				*e*R			
	comp=Z,196nm,18.2s						
MEZF	**Maizieres J'vi**	**88.12**	**330**	*e*P	**P**	**11 32 33.1**	**-1.5**
FSSB	**Fossombrone**	**88.20**	**323**	*e*P	**P**	**11 32 35.0**	**-0.1**
EYMN	**Ely**	**88.21**	**30**	⇑*i*P	**P**	**11 32 35.0**	**-0.1**
	comp=Z,82nm,0.8s,mb5.6						
ARV	**Arcevia**	**88.25**	**323**	*e*P	**P**	**11 32 35.3**	**-0.1**
DLF	**Lyons Farm**	**88.27**	**339**	*e*P	**P**	**11 32 35.7**	**+0.5**
SNTG	**Esanatoglia**	**88.43**	**323**	*e*P	**P**	**11 32 36.3**	**+0.1**
SDCO	**Great Sand Dun**	**88.44**	**45**	⇓*e*P	**P**	**11 32 37.3**	**+0.9**
	comp=Z,58nm,1.2s,mb5.3						
DCN	**Croghan**	**88.45**	**340**	*e*P	**P**	**11 32 36.7**	**+0.7**
SFI	**Santa Sofia**	**88.51**	**324**	*e*P	**P**	**11 32 37.2**	**+0.7**
VAI	**Varese**	**88.52**	**327**	*e*P	**P**	**11 32 35.5**	**-1.1**
PGD	**Poggio Sodo**	**88.59**	**324**	*e*P	**P**	**11 32 37.9**	**+1.0**
NRCA	**Norcia**	**88.64**	**322**	*e*P	**P**	**11 32 37.2**	**0.0**
TUC	**Tucson**	**88.65**	**52**	*e*P	**P**	**11 32 37.5**	**0.0**
TUC				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
TUC	**Tucson**	**88.65**	**52**	*e*P	**P**	**11 32 37.5**	**0.0**
	comp=Z,17nm,0.9s,mb4.9						
GSCL	**Gusciola**	**88.80**	**325**	*e*P	**P**	**11 32 39.4**	**+1.6**
MCGN	**Macugnaga**	**88.81**	**327**	*e*P	**P**	**11 32 37.9**	**0.0**
ERBM	**Eremo**	**88.83**	**325**	*e*P	**P**	**11 32 38.7**	**+0.7**
AQU	**L'Aquila**	**88.84**	**322**	*e*P	**P**	**11 32 38.8**	**+0.7**
BOB	**Bobbio (Coli)**	**89.03**	**326**	*e*P	**P**	**11 32 38.9**	**0.0**
ORO	**Oropa**	**89.06**	**327**	*e*P	**P**	**11 32 38.0**	**-1.1**
PTQR	**Pietraquaria**	**89.08**	**322**	*e*P	**P**	**11 32 40.5**	**+1.3**
CABF	**La Chapelle**	**89.15**	**329**	*e*P	**P**	**11 32 38.8**	**-0.7**
	comp=Z,23nm,0.8s,mb4.8						
CABF	**La Chapelle**	**89.15**	**329**	*e*P	**P**	**11 32 38.8**	**-0.7**
CABF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
LPL	**La Plagne**	**89.71**	**328**	*e*P	**P**	**11 32 41.8**	**-0.3**
	comp=Z,52nm,0.8s,mb5.2						
LPL	**La Plagne**	**89.71**	**328**	*e*P	**P**	**11 32 41.8**	**-0.3**
LPL				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
ANMO	**Albuquerque**	**89.71**	**47**	P	**P**	**11 32 42.9**	**+0.5**
ANMO						11 36 18.2	
ANMO				pmax	pmax		
	comp=Z,21nm,0.7s						
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ANMO	**Albuquerque**	**89.71**	**47**	P	**P**	**11 32 42.9**	**+0.5**
	comp=Z,21nm,0.7s,mb5.2,baz=316,slow=4.7,SNR=126						
ANMO				PP	PP	11 36 18.2	-4.1
	comp=Z,1.8nm,1.1s,baz=311,slow=12,SNR=5.8						
LPG	**La Plagne**	**89.72**	**328**	*e*P	**P**	**11 32 42.0**	**-0.1**
	comp=Z,60nm,0.9s,mb5.2						
LPG	**La Plagne**	**89.72**	**328**	*e*P	**P**	**11 32 42.0**	**-0.1**
LPG				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
SSF	**Saint Saulge**	**89.89**	**330**	*e*P	**P**	**11 32 42.4**	**-0.5**
	comp=Z,37nm,1.0s,mb5.0						
SSF	**Saint Saulge**	**89.89**	**330**	*e*P	**P**	**11 32 42.4**	**-0.5**
SSF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
SCHQ	**Schefferville**	**89.92**	**14**	P	**P**	**11 32 43.0**	**+0.1**
	comp=Z,13nm,0.7s,mb5.0,baz=10,slow=5.7,SNR=48						
SCHQ				PKKPbc		11 50 11.2	
	comp=Z,1.6nm,0.7s,baz=61,slow=4.6,SNR=5.6						
SCHQ	**Schefferville**	**89.92**	**14**	*e*P	**P**	**11 32 42.7**	**-0.1**
	comp=Z,17nm,0.7s,mb5.1						
HYF	**Humbligny**	**90.08**	**331**	*e*P	**P**	**11 32 43.6**	**-0.2**
SMF	**Signal de Mont**	**90.08**	**330**	*e*P	**P**	**11 32 43.3**	**-0.5**
	comp=Z,58nm,1.1s,mb5.1						
SMF	**Signal de Mont**	**90.08**	**330**	*e*P	**P**	**11 32 43.3**	**-0.5**
SMF				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
FLN	**La Foliniere**	**90.09**	**334**	*e*P	**P**	**11 32 42.9**	**-0.9**
	comp=Z,67nm,1.2s,mb5.2						
FLN				*e*R			
	comp=Z,204nm,18.5s						
LDF	**La Druitiere**	**90.09**	**333**	*e*P	**P**	**11 32 43.8**	**0.0**
	comp=Z,55nm,1.0s,mb5.1						
LDF	**La Druitiere**	**90.09**	**333**	*e*P	**P**	**11 32 43.8**	**0.0**
LDF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
BNI	**Bardonecchia**	**90.09**	**327**	*e*P	**P**	**11 32 43.1**	**-0.8**
BNI				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
BNI	**Bardonecchia**	**90.09**	**327**	*e*P	**P**	**11 32 43.1**	**-0.7**
	comp=Z,18nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**90.17**	**330**	*e*P	**P**	**11 32 43.7**	**-0.5**
	comp=Z,48nm,0.9s,mb5.1						
AVF	**Avril sur Loir**	**90.17**	**330**	*e*P	**P**	**11 32 43.7**	**-0.5**
AVF				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
MBDF	**Montbardon**	**90.30**	**327**	*e*P	**P**	**11 32 43.8**	**-1.1**
	comp=Z,20nm,0.7s,mb4.9						
MBDF	**Montbardon**	**90.30**	**327**	*e*P	**P**	**11 32 43.8**	**-1.1**
MBDF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
GRR	**Gorron**	**90.54**	**334**	*e*P	**P**	**11 32 45.6**	**-0.2**
	comp=Z,81nm,0.9s,mb5.4						
GRR	**Gorron**	**90.54**	**334**	*e*P	**P**	**11 32 45.6**	**-0.2**
GRR				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4						
ORIF	**Oris-en-Rattie**	**90.56**	**328**	*e*P	**P**	**11 32 45.5**	**-0.5**
	comp=Z,11nm,0.7s,mb4.6						
ORIF				*e*R			
	comp=Z,154nm,19.0s						
BGF	**Bois d'Agland**	**90.57**	**330**	*e*P	**P**	**11 32 45.6**	**-0.4**
	comp=Z,46nm,1.1s,mb5.0						
BGF	**Bois d'Agland**	**90.57**	**330**	*e*P	**P**	**11 32 45.6**	**-0.4**
BGF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
SBF	**Sospel**	**90.66**	**326**	*e*P	**P**	**11 32 45.2**	**-1.3**
AGO	**Saint Agoulin**	**90.86**	**330**	*e*P	**P**	**11 32 48.5**	**+1.1**
PGF	**Pioggiola**	**90.91**	**324**	*e*P	**P**	**11 32 47.5**	**-0.2**
	comp=Z,44nm,0.9s,mb5.1						
PGF	**Pioggiola**	**90.91**	**324**	*e*P	**P**	**11 32 47.5**	**-0.2**
PGF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
CBKS	**Cedar Bluff**	**90.99**	**41**	*e*P	**P**	**11 32 48.5**	**+0.3**
CBKS				pmax	pmax		
	comp=Z,198nm,1.4s,mb5.8						
CBKS	**Cedar Bluff**	**90.99**	**41**	*e*P	**P**	**11 32 48.5**	**+0.3**
	comp=Z,198nm,1.4s,mb5.8						
TCF	**Toulx Ste Croi**	**91.05**	**331**	*e*P	**P**	**11 32 48.0**	**-0.2**
	comp=Z,53nm,1.0s,mb5.1						
TCF	**Toulx Ste Croi**	**91.05**	**331**	*e*P	**P**	**11 32 48.0**	**-0.2**
TCF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
VIVF	**Saint-Julien-l**	**91.14**	**328**	*e*P	**P**	**11 32 48.2**	**-0.5**
	comp=Z,26nm,0.7s,mb5.0						
VIVF	**Saint-Julien-l**	**91.14**	**328**	*e*P	**P**	**11 32 48.2**	**-0.5**
VIVF				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
PYM	**Petit Puy Mans**	**91.15**	**330**	*e*P	**P**	**11 32 48.9**	**+0.2**
FRF	**La Foret Royal**	**91.26**	**326**	*e*P	**P**	**11 32 47.9**	**-1.4**
	comp=Z,19nm,0.9s,mb4.7						
FRF	**La Foret Royal**	**91.26**	**326**	*e*P	**P**	**11 32 47.9**	**-1.4**
FRF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SGMF	**Saint Gilles**	**91.28**	**334**	*e*P	**P**	**11 32 49.0**	**-0.2**
	comp=Z,52nm,0.6s,mb5.3						
SGMF	**Saint Gilles**	**91.28**	**334**	*e*P	**P**	**11 32 49.0**	**-0.2**
SGMF				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.3						
SMRF	**Simiane la Rot**	**91.43**	**327**	*e*P	**P**	**11 32 49.6**	**-0.5**
LBL	**Lubilhac**	**91.46**	**329**	*e*P	**P**	**11 32 50.4**	**+0.2**
ROSF	**Rostrenen**	**91.46**	**335**	*e*P	**P**	**11 32 50.1**	**0.0**
	comp=Z,79nm,0.8s,mb5.4						
ROSF	**Rostrenen**	**91.46**	**335**	*e*P	**P**	**11 32 50.1**	**0.0**
ROSF				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
LMR	**La Mourre**	**91.50**	**326**	*e*P	**P**	**11 32 49.2**	**-1.2**
	comp=Z,62nm,1.3s,mb5.1						
MFF	**Saint Martin d**	**91.74**	**332**	*e*P	**P**	**11 32 51.3**	**-0.2**
	comp=Z,63nm,0.8s,mb5.3						
QUIF	**Quistinic**	**91.78**	**335**	*e*P	**P**	**11 32 51.1**	**-0.5**
	comp=Z,26nm,0.7s,mb5.0						
LASF	**Ste Croix**	**92.11**	**328**	*e*P	**P**	**11 32 52.8**	**-0.5**
	comp=Z,38nm,1.0s,mb5.0						
RJF	**Les Rejaudoux**	**92.13**	**330**	*e*P	**P**	**11 32 53.2**	**-0.2**
	comp=Z,48nm,0.8s,mb5.2						

RJF				eR			
	comp=Z,252nm,23.0s						
CAF	Calviac	92.21	330	eP	P	11 32 53.8	+0.1
	comp=Z,123nm,1.4s,mb5.3						
CAF	Calviac	92.21	330	eP	P	11 32 53.8	+0.1
CAF				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.3						
KSU1	Kansas State U	92.47	39	eP	P	11 32 54.7	-0.3
MNTX	Cornudas Mount	92.54	49	eP	P	11 32 55.7	+0.1
	comp=Z,28nm,0.7s,mb5.4						
AMTX	Amarillo	92.65	45	eP	P	11 32 56.5	+0.4
	comp=Z,119nm,0.9s,mb5.9						
LFF	La Frestale	92.75	331	eP	P	11 32 56.3	+0.1
	comp=Z,74nm,0.6s,mb5.6						
LFF	La Frestale	92.75	331	eP	P	11 32 56.3	+0.1
LFF				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.6						
MTLF	Montolieu	93.42	329	eP	P	11 32 58.8	-0.5
	comp=Z,22nm,1.1s,mb4.8						
MTLF	Montolieu	93.42	329	eP	P	11 32 58.8	-0.5
MTLF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
WMOK	Wichita Mounta	94.44	43	⇑eP	P	11 33 03.8	-0.3
WMOK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
WMOK	Wichita Mounta	94.44	43	⇑eP	P	11 33 03.8	-0.3
	comp=Z,21nm,0.7s,mb5.3						
ETSF	Etsaut	94.96	330	eP	P	11 33 06.5	+0.2
LTX	Lajitas	95.22	50	P	P	11 33 08.3	+0.4
LTX				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
LTX	Lajitas	95.22	50	⇑eP	P	11 33 08.3	+0.4
	comp=Z,49nm,0.9s,mb5.5						
TXAR	Lajitas Array	95.22	50	P	P	11 33 08.3	+0.5
	comp=Z,27nm,0.6s,mb5.4,baz=294,slow=3.1,SNR=376						
TXAR				PP	PP	11 37 02.5	-2.4
	comp=Z,3.6nm,1.0s,baz=292,slow=6.7,SNR=6.3						
TXAR				PKiKP		11 37 47.3	
	comp=Z,0.8nm,0.7s,baz=315,slow=2.6,SNR=3.6						
TXAR				PKKPbc		11 49 59.6	
	comp=Z,0.3nm,0.6s,baz=136,slow=5.1,SNR=4.4						
TXAR	Lajitas Array	95.22	50	P	P	11 33 08.3	+0.4
TXAR				PP	PP	11 37 02.5	-2.4
SADO	Sadowa	95.66	25	P	P	11 33 09.6	0.0
	comp=Z,5.5nm,0.8s,mb4.7,baz=32,slow=7.4,SNR=3.3						
SADO				PP	PP	11 37 06.1	-2.0
	comp=Z,9.0nm,1.1s,baz=313,slow=5.2,SNR=3.4						
CCM	Cathedral Cave	96.01	36	eP	P	11 33 10.8	-0.5
CCM				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.4						
CCM	Cathedral Cave	96.01	36	eP	P	11 33 10.8	-0.5
	comp=Z,27nm,0.8s,mb5.4						
FVM	French Village	96.47	36	eP	P	11 33 12.2	-1.2
FVM				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.3						
FVM	French Village	96.47	36	eP	P	11 33 12.2	-1.2
	comp=Z,21nm,0.8s,mb5.3						
JCT	Junction City	96.85	47	eP	P	11 33 14.9	-0.4
JCT				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.4						
JCT	Junction City	96.85	47	eP	P	11 33 14.9	-0.4
	comp=Z,18nm,0.6s,mb5.4						
MIAR	Mount Ida	97.48	40	eP	P	11 33 17.7	-0.3
	comp=Z,14nm,0.8s,mb5.2						
KMBO	Kilima Mbogo	98.93	275	P	P	11 33 24.6	-0.6
	comp=Z,0.5nm,0.3s,mb4.3,baz=47,slow=19,SNR=2.5						
ESDC	Sonseca Array	99.06	331	P	P	11 33 25.6	+0.5
	comp=Z,0.4nm,0.3s,mb4.2,baz=24,slow=3.5,SNR=4.9						
ESDC				PP	PP	11 37 29.6	-4.4
	comp=Z,3.4nm,0.8s,baz=27,slow=8.5,SNR=4.5						
WVT	Waverly	99.20	35	eP	P	11 33 25.2	-0.6
	comp=Z,8.7nm,0.6s,mb5.3						
LBTB	Lobatse	120.60	259	SKP		11 41 35.0	
	comp=Z,15nm,0.9s,baz=160,slow=1.9,SNR=11						
LBTB	Lobatse	120.60	259	ePKPdf	PKPdf	11 38 34.0	+1.2
LBTB				eSKPdf		11 41 34.6	
BOSA	Boshof	122.34	255	ePKP	PKPdf	11 38 37.2	+1.1
QSPA	South Pole Qui	122.95	180	ePKPdf	PKPdf	11 38 36.4	+0.2
DBIC	Dimbokro	126.43	311	PKPdf	PKPdf	11 38 45.2	+0.8
DBIC				SKKSac		11 46 59.8	
DBIC	Dimbokro	126.43	311	PKP	PKPdf	11 38 45.4	+1.0
	comp=Z,15nm,0.7s,baz=356,slow=1.9,SNR=33						
DBIC				SKPab		11 41 30.2	
	comp=Z,5.2nm,0.8s,baz=18,slow=6.3,SNR=3.0						
DBIC				SKP		11 41 45.3	
	comp=Z,4.8nm,0.6s,baz=337,slow=3.7,SNR=3.2						
DBIC	Dimbokro	126.43	311	ePKP	PKPdf	11 38 44.7	+0.3
SUR	Sutherland	127.27	252	SKPab		11 41 32.3	
	comp=Z,20nm,1.1s,baz=293,slow=3.2,SNR=4.5						
ROSC	El Rosal	131.79	44	PKP	PKPdf	11 38 57.3	+2.7
	comp=Z,13nm,0.5s,baz=96,slow=21,SNR=14						
ROSC				SKPbc		11 41 46.7	
	comp=Z,7.1nm,0.5s,baz=93,slow=21,SNR=5.1						
OTAV	Otavalo	132.78	53	ePKP	PKPdf	11 38 53.7	-2.8
OTAV				eSKP		11 41 49.8	
SNAA	Sanae	136.07	197	e	PKPdf	11 39 03.9	+2.9
SNAA	Sanae	136.07	197	⇑iPKPdf	PKPdf	11 38 56.2	-4.8
SNAA				e		11 39 03.9	
SNAA				eSKP		11 41 58.8	
SNAA				e		11 41 59.5	
VNA2	Neumayer--Watz	137.67	196	e	PKPdf	11 38 59.0	-5.0
VNA2	Neumayer--Watz	137.67	196	e	PKPdf	11 39 05.3	+1.3
VNA2	Neumayer--Watz	137.67	196	⇑iPKPdf	PKPdf	11 38 56.4	-7.6
VNA2				e		11 38 59.0	
VNA2				e		11 39 05.3	
VNA2				e		11 42 04.9	
VNA2				e		11 42 08.8	
VNA2				e		11 42 10.8	
VNA3	Neumayer Olymp	137.97	195	e	PKPdf	11 39 00.2	-4.3
VNA3	Neumayer Olymp	137.97	195	e	PKPdf	11 39 05.8	+1.3
VNA3	Neumayer Olymp	137.97	195	⇑iPKPdf	PKPdf	11 38 56.9	-7.6
VNA3				e		11 39 00.2	
VNA3				e		11 39 05.8	
VNA3				e		11 42 05.3	
VNA3				e		11 42 09.3	
VNA3				e		11 42 11.2	
NNA	Nana	142.41	64	ePKP	PKPdf	11 39 10.5	-3.4
NNA				eSKP		11 42 16.3	
ARE	Arequipa	149.24	64	eP	PKPdf	11 39 29.0	+3.8
ARE				i		11 39 33.8	
LPAZ	La Paz	151.62	60	PKP	PKPdf	11 39 32.1	+3.3
	comp=Z,7.2nm,0.8s,baz=3.1,slow=3.8,SNR=27						
LPAZ				PKPbc	PKPdf	11 39 37.6	+8.8
	comp=Z,50nm,0.9s,baz=358,slow=4.1,SNR=71						
LPAZ	La Paz	151.62	60	PKP	PKPdf	11 39 32.1	+3.3
LPAZ				ePKPbc	PKPdf	11 39 37.5	+8.7
LPAZ				ePP	PP	11 43 19.0	-2.7
USHA	Ushuaia	151.87	148	PKPbc	PKPdf	11 39 37.1	+9.0
	comp=Z,62nm,0.8s,baz=158,slow=1.7,SNR=19						
RCBR	Riachuelo	152.02	345	ePKPdf	PKPdf	11 39 31.3	+1.7
RCBR				ePKPbc	PKPdf	11 39 37.5	+8.0
PLCA	Paso Flores	156.66	117	PKP	PKPdf	11 39 36.5	+1.5
	comp=Z,1.7nm,0.8s,baz=217,slow=6.2,SNR=5.8						
PLCA				PKPbc	PKPdf	11 39 47.5	+13
	comp=Z,4.2nm,0.7s,baz=245,slow=4.6,SNR=6.1						
PLCA				PKPab	PKPab	11 40 09.1	+0.2
	comp=Z,13nm,1.0s,baz=241,slow=4.2,SNR=8.8						
CFAA	Coronel Fontan	158.49	93	PKPab	PKPab	11 40 16.7	-0.3
	baz=276,slow=5.8						
CFAA				PP	PP	11 43 57.0	-2.2
	comp=Z,0.2nm,0.5s,baz=285,slow=5.5,SNR=5.8						
BAO	Brasilia Array	161.90	16	P	PKPdf	11 39 43.2	+1.6
BDFB	Brasilia	161.90	16	PKP	PKPdf	11 39 43.4	+1.9
	comp=Z,14nm,0.8s,baz=245,slow=1.9,SNR=20						
BDFB				PKPab	PKPab	11 40 31.1	-1.0
	comp=Z,17nm,0.7s,baz=320,slow=3.7,SNR=10						
BDFB				PP	PP	11 44 15.2	-2.3
	comp=Z,12nm,0.9s,baz=332,slow=8.0,SNR=11						
CPUP	Villa Florida	165.66	65	PKPdf	PKPdf	11 39 46.2	+1.2

UPP **22** *11:53:42.2, 56.26N×23.51E, h0^{km}, ML2.5, Suspected Mining explosion.*
BER **22** *11:53:45.1±3.6, 56.31N×22.96E, ML2.6(NAO), Suspected explosion*
NAO **22** *11:53:47.7±6.0, 56.54N×22.81E, ML2.6*
CSEM **22** *11:53:49.4±0.3, 56.80N×22.70E, h2^{km}, ML2.0, Error ellipse: s-maj=7.3km s-min=3.3km az=157.0, Suspected Mining explosion.*
HEL 22 11:53:46.2±0.5**, 56.39N×22.89E, ML2.0, ML2.5**(UPP)**, ML2.6**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSU	Vasula	2.94	43	eP	Pn	11 54 35.1	+0.1
VSU				eS	Sn	11 55 12.2	+0.6
BYXU	Byxelkrok	3.35	288	eP	Pn	11 54 40.9	-0.1
BYXU	Byxelkrok	3.35	288	P	Pn	11 54 40.8	-0.1
VSTU	Vaestervik	3.70	293	eP	Pn	11 54 45.4	-0.4
VSTU	Vaestervik	3.70	293	P	Pn	11 54 45.3	-0.5
NYNU	Nynaeshamn	3.71	317	eP	Pn	11 54 44.7	-1.2
OSKU	Oskarshamn	3.82	285	eP	Pn	11 54 46.7	-0.8
BLEU	Blekinge	3.94	272	eP	Pn	11 54 47.9	-1.4
BLEU	Blekinge	3.94	272	P	Pn	11 54 47.8	-1.4
VIKU	Vikbolandet	3.96	305	eP	Pn	11 54 49.0	-0.5
VIKU				eS	Sn	11 55 36.7	-0.6
VIKU	Vikbolandet	3.96	305	P	Pn	11 54 48.9	-0.6
VIKU				S	Sn	11 55 36.7	-0.6
NRTU	Norrtaelje	4.00	327	eP	Pn	11 54 48.6	-1.5
PVF	Pernaja	4.45	19	eP	Pn	11 54 54.9	-1.6
PVF				eSG	Sg	11 56 04.2	-10
PVF				MSG		11 56 06.7	
	comp=Z,3.7nm,0.3s						
ESKU	Eskilstuna	4.49	312	eP	Pn	11 54 55.2	-1.8
GRAU	Graesoe	4.57	332	eP	Pn	11 54 54.8	-3.4
FLYU	Flymyra	4.58	327	eP	Pn	11 54 56.4	-2.0
BACU	Backbrunna	4.63	321	eP	Pn	11 54 57.1	-1.9
BACU	Backbrunna	4.63	321	P	Pn	11 54 57.1	-2.0
VJF	Virojoki	4.83	29	eSG	Sg	11 56 16.3	-11
OSTU	Oestervaala	4.90	324	eP	Pn	11 54 60.0	-2.9
FIA0	FINESS Array S	5.33	17	Pn	Pn	11 55 05.8	-3.2
	baz=195,slow=12						
FIA0				Pg	Pg	11 55 19.6	-13
	baz=205,slow=16						
FIA0				Sn	Sn	11 56 06.4	-5.6
	baz=192,slow=28						
FIA0				Lg		11 56 31.5	
	baz=202,slow=28						
FIA0	FINESS Array S	5.33	17	eP	Pn	11 55 05.5	-3.4
FIA0				eS	Sn	11 56 06.5	-5.5
FIA0				eSG	Sg	11 56 30.9	-13
FIA0				MSG		11 56 42.6	
	comp=Z,1.5nm,0.3s						
FIA0	FINESS Array S	5.33	17	P	Pn	11 55 05.5	-3.5
FIA0				S	Sn	11 56 06.4	-5.6
KEF	Keuruu	5.88	9	eP	Pn	11 55 12.5	-4.3
KEF				eS	Sn	11 56 18.7	-7.2
KEF	Keuruu	5.88	9	P	Pn	11 55 12.4	-4.3
KEF				S	Sn	11 56 18.6	-7.3
KAF	Kangasniemi	6.00	16	eS	Sn	11 56 21.8	-7.1
KAF				eSG	Sg	11 56 51.1	-15
KAF				MSG		11 56 56.0	
	comp=Z,1.0nm,0.3s						
KAF	Kangasniemi	6.00	16	S	Sn	11 56 21.7	-7.1
HFS	Hagfors	6.13	312	Pn	Pn	11 55 17.0	-3.2
	baz=132,slow=12						
HFS				Sn	Sn	11 56 26.7	-5.4
	baz=122,slow=28						
HFS				Lg		11 56 54.6	
	baz=123,slow=37						
HFS	Hagfors	6.13	312	eP	Pn	11 55 17.0	-3.2
HFS				eS	Sn	11 56 26.7	-5.4
HFS				eSG		11 56 54.6	
SUF	Sumiainen	6.56	13	eS	Sn	11 56 35.4	-7.4
SUF				eSG	Sg	11 57 07.8	-17
SUF				MSG		11 57 21.4	
	comp=Z,0.9nm,0.3s						
ARA0	ARCESS Array S	13.25	4	Pn	P	11 56 50.2	-7.7
	baz=186,slow=14						
ARA0	ARCESS Array S	13.25	4	eP	P	11 56 50.2	-7.7

NIED **22** *11:55:00, 33.70N×132.10E, h62^{km}, Mw4.1 Best double couple: M$_0$1.76×10^{15} NP1:φ$_s$4°, δ85°, λ51°. NP2:φ$_s$267°, δ39°, λ172°.*
JMA **22** *11:55:32.0, 33.69N×132.13E, h55^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1:φ$_s$172°, δ53°, λ12°. NP2:φ$_s$75°, δ80°, λ142°. Principal axes: T Plg33°, Azm27°; N Plg51°, Azm243°; P Plg18°, Azm129°;*
JMA Felt III J1.
NEIC **22** *11:55:34.7±2.4, 32.85N×130.16E, h39^{km}±23^{km}, mb4.1/3 Error ellipse: s-maj=25.5km s-min=15.4km az=88.0*
NEIC Recorded [3 JMA] in Yamaguchi, [2 JMA] in Hiroshima and [1 JMA] in Okayama and Shimane Prefectures. Also recorded [2 JMA] in Ehime and [1 JMA] in Kagawa and Kochi Prefectures, Shikoku.
IDC **22** *11:55:37.1±3.8, 32.86N×130.04E, h56^{km}±32^{km}, mb3.3/6, mb1 3.6/6, mb1mx3.4/23, mbtmp3.6/6, Error ellipse: s-maj=32.9km s-min=23.3km az=88.0*
ISC 22 11:55:30.9±0.5**, 33.64N**±0.06×**132.09E**±0.07**, h65**^{km}±4^{km}**, n20,** $\sigma 0^{s}$**64**/20**, mb3.7**/4**, 3C-4D, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNA	Nagahama	0.34	104	⇑P	P	11 55 41.7	-0.1
JNA				S	S	11 55 48.8	-1.1
JKI	Kunimi	0.43	269	⇓P	P	11 55 43.4	+0.8
JKI				S	S	11 55 52.0	+0.7
JKD	Kudamatsu	0.45	337	⇓P	P	11 55 42.7	-0.1
JKD				S	S	11 55 50.5	-1.1
JHM	Kurahashi	0.62	36	⇑P	P	11 55 44.2	-0.4
UWA2	Uwa jima 2	0.62	133	⇑P	P	11 55 45.1	+0.5
UWA2				S	S	11 55 55.0	+0.3
JET	Tanbara	0.81	80	⇓P	P	11 55 47.0	+0.1
JKU	Kubokawa	0.88	112	⇓P	P	11 55 48.0	+0.3
JHT	Toyohira	1.06	15	P	P	11 55 50.4	+0.3
KS15	Wonju Array Si	5.11	319	ePn	P	11 56 46.5	-0.2
MAJO	Matsushiro	5.79	58	Pn	P	11 56 57.0	+0.9
MAT	Matsushiro	5.79	58	P	P	11 56 56.5	+0.4
MAT				S	S	11 58 14.6	+13
SONM	Songino Array	23.94	314	P	P	12 00 40.2	+0.6
	0.6nm,0.6s,mb3.2,baz=130,slow=10.0,SNR=7.9						
SONM				ScP		12 07 58.2	
	0.5nm,0.9s,baz=128,slow=3.9,SNR=3.7						
BVAR	Borovoye Array	47.29	314	P	P	12 03 59.0	-0.4
	0.4nm,0.6s,mb3.6,baz=90,slow=8.6,SNR=3.9						
WRAB	Tennant Creek	53.32	177	P	P	12 04 44.3	-1.4
	2.0nm,0.8s,mb4.1						
WRA	Warramunga Arr	53.32	177	P	P	12 04 45.7	-0.1
	1.2nm,0.8s,mb3.9,baz=354,slow=8.1,SNR=12						
MCK	McKinley	55.61	32	P	pP	12 05 16.9	-2.0
	0.8nm,0.7s						
ILAR	Eielson Array	56.36	31	P	pP	12 05 21.4	-2.8
	0.5nm,0.6s,baz=270,slow=6.8,SNR=11						
INK	Inuvik	60.78	25	P	pP	12 05 52.6	-2.5
	0.9nm,0.9s,baz=327,slow=6.3,SNR=8.8						
INK	Inuvik	60.78	25	eP	pP	12 05 52.6	-2.5
	1.1nm,0.6s						
YKA	Yellowknife Ar	70.42	27	P	pP	12 06 55.2	-2.1
	0.3nm,0.8s,baz=310,slow=5.9,SNR=8.9						

NIED **22** *11:57:00, 24.90N×123.10E, h119^{km}, Mw4.1 Best double couple: M$_0$1.47×10^{15} NP1:φ$_s$35°, δ65°, λ-49°. NP2:φ$_s$151°, δ47°, λ-145°.*
IDC **22** *11:57:44.3±3.2, 25.11N×123.03E, h112^{km}±28^{km}, mb3.6/14, mb1 3.8/15, mb1mx3.7/24, mbtmp4.0/15, MS3.0/1, Ms1 3.0/1, ms1mx2.2/17, Error ellipse: s-maj=22.7km s-min=15.9km az=64.0*
BJI **22** *11:57:45.0, 25.10N×123.00E, h130^{km}, mB4.8, mb4.2*
NEIC **22** *11:57:46.1±0.8, 25.10N×123.02E, h130^{km}±7^{km}, mb4.0/6, Error ellipse: s-maj=10.8km s-min=8.7km az=45.0*
JMA **22** *11:57:46.9±0.2, 24.90N×123.07E, h122^{km}±2^{km}, M4.1*
ISC 22 11:57:44.5±0.3**, 25.03N**±0.05×**123.06E**±0.03**, h132**^{km}±3^{km}**, n45,** $\sigma 0^{s}$**97**/57**, mb3.8**/18**, 2C, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.57	184	P	P	11 58 04.8	+0.4
YOJ				S	S	11 58 18.7	-0.8
IRIF	Iriomote-Funau	0.93	138	P	P	11 58 07.3	+0.2
IRIF				S	S	11 58 23.2	-1.1
JKRS	Kuro-shima	1.18	132	P	P	11 58 10.4	+0.8
JKRS				S	S	11 58 27.7	-0.9
HATJ	Hateruma jima	1.19	145	P	P	11 58 09.9	+0.2
HATJ				eS	S	11 58 27.6	-1.2
JIJ	Ishigaki jima	1.19	124	P	P	11 58 10.2	+0.4
JIJ				S	S	11 58 27.1	-1.8
TATO	Taipei	1.42	268	⇑iPn	P	11 58 13.8	+1.5
TATO				eS	S	11 58 33.8	+0.3
JTJ	Tarama	1.55	104	P	P	11 58 14.8	+1.1
JTJ				S	S	11 58 35.7	-0.2
JMJ	Miyako jima 2	2.04	96	P	P	11 58 21.1	+1.6
JMJ				S	S	11 58 46.9	+0.7
JOGS	Gusukube	2.15	97	P	P	11 58 22.8	+1.9
JOGS				S	S	11 58 49.5	+0.8
JKE	Kume jima 2	3.60	68	P	P	11 58 41.1	+1.1
JKE				eS	S	11 59 23.8	+1.3
QZH	Quanzhou	4.05	270	⇑iP	P	11 58 46.3	+0.3
QZH				S	S	11 59 33.3	+0.2
QZH				Smax			
	comp=N,100nm,0.8s						
QZH				Smax			
	comp=E,80nm,0.9s						
JAGN	Aguni-jima	4.08	67	P	P	11 58 47.2	+0.8
JJT2	Tamagusuku 2	4.38	74	P	P	11 58 51.0	+0.6
JIH	Iheya	4.85	65	P	P	11 58 56.7	+0.1
JOW	Kunigami	5.03	68	P	P	11 58 58.6	-0.5
	comp=E,53nm,0.3s,baz=237,slow=8.5,SNR=98						
JOW				S	S	11 59 53.7	-2.9
	comp=E,6.3nm,0.3s,baz=128,slow=19,SNR=2.7						
JOW				LR	LR	12 00 44.1	
	comp=E,154nm,20.5s,baz=12,slow=36						
JOW	Kunigami	5.03	68	P	P	11 58 58.5	-0.6
JTK	Tokunoshima	5.95	61	P	P	11 59 10.5	-1.0
JAM	Amami Oshima	6.75	59	P	P	11 59 20.8	-1.6
JZK	Kikaishima	7.00	61	P	P	11 59 24.7	-1.0
JMZ	Minamidaito 2	7.42	82	P	P	11 59 28.6	-2.8
HHC	Hu-ho-hao-te	18.46	331	eP	P	12 01 57.3	+4.8
HHC				AMB	AMB		
	comp=Z,11nm,1.0s						
HHC				AMB	AMB		
	comp=Z,209nm,5.1s						
SONM	Songino Array	26.30	334	P	P	12 03 09.7	+0.3
	comp=Z,0.9nm,0.6s,mb3.6,baz=155,slow=10,SNR=7.7						
LSA	Lhasa	28.66	287	P	P	12 03 29.2	-1.8
	comp=Z,2.1nm,0.5s,mb4.1						
ZAL	Zalesovo	40.49	326	P	P	12 05 11.8	+0.1
	comp=Z,1.3nm,0.3s,mb4.0,baz=5.0,slow=9.7,SNR=2.0						
KURK	Kurchatov	42.56	319	P	P	12 05 28.2	-0.4
	comp=Z,3.0nm,0.5s,mb4.2						
AAK	Ala-Archa	43.36	306	eP	P	12 05 34.8	-0.4
	comp=Z,1.2nm,0.5s,mb3.8						
WRAB	Tennant Creek	46.03	165	eP	P	12 05 56.9	+0.1
	comp=Z,3.0nm,0.8s,mb4.0						
WRA	Warramunga Arr	46.03	165	P	P	12 05 56.8	+0.1
	comp=Z,1.2nm,0.5s,mb3.8,baz=347,slow=8.7,SNR=16						
WRA				pP	pP	12 06 25.3	-1.7
	comp=Z,0.9nm,0.7s,baz=347,slow=8.3,SNR=3.3						
WB2	Warramunga Arr	46.03	165	eP	P	12 05 57.2	+0.4
BVAR	Borovoye Array	48.11	320	P	P	12 06 12.1	-0.5
	comp=Z,1.5nm,0.5s,mb3.9,baz=115,slow=9.2,SNR=7.8						
BVAR				PcP	PcP	12 07 37.4	-1.1
	comp=Z,0.9nm,0.6s,baz=135,slow=4.2,SNR=5.0						
STKA	Stephens Creek	59.30	162	P	P	12 07 36.2	+1.4
	comp=Z,2.0nm,1.1s,mb3.9,baz=313,slow=9.9,SNR=3.0						
STKA	Stephens Creek	59.30	162	P	P	12 07 36.2	+1.4
ILAR	Eielson Array	67.68	28	P	P	12 08 29.3	+0.2
	comp=Z,0.2nm,0.7s,mb3.0,baz=295,slow=9.1,SNR=4.8						
ARCES	ARCESS Array B	69.39	338	P	P	12 08 38.7	-0.9
	comp=Z,5.2nm,1.1s,mb4.2,baz=45,slow=5.1,SNR=5.0						
ARCES	ARCESS Array B	69.39	338	P	P	12 08 38.7	-0.9
FINES	FINESS Array B	71.58	330	P	P	12 08 52.3	-0.5
	comp=Z,0.8nm,0.4s,mb3.8,baz=63,slow=5.2,SNR=7.8						
INK	Inuvik	71.80	22	P	P	12 08 53.6	-0.4
	comp=Z,0.4nm,0.4s,mb3.5,baz=306,slow=4.1,SNR=7.9						
INK	Inuvik	71.80	22	eP	P	12 08 53.3	-0.7
	comp=Z,0.7nm,0.5s,mb3.6						
BRTR	Keskin Array B	74.04	307	P	P	12 09 07.3	-0.3
	comp=Z,0.8nm,0.5s,mb3.7,baz=76,slow=3.8,SNR=3.6						
DLBC	Dease Lake	77.35	31	P	P	12 09 27.8	+1.9
	comp=Z,2.4nm,1.1s,mb3.7,baz=311,slow=17,SNR=2.0						
NB2	NORSAR Subarra	78.27	333	P	P	12 09 30.3	-0.6
	comp=Z,0.9nm,0.5s,mb3.7,baz=59,slow=5.0						
NOA	NORSAR Array B	78.27	333	P	P	12 09 30.6	-0.2
	comp=Z,0.7nm,0.5s,mb3.6,baz=52,slow=5.7,SNR=4.8						
YKA	Yellowknife Ar	81.53	23	P	P	12 09 48.2	-0.1
	comp=Z,0.3nm,0.5s,mb3.1,baz=310,slow=4.9,SNR=9.7						
YKA	Yellowknife Ar	81.53	23	P	P	12 09 48.2	-0.1
GERES	GERESS Array B	83.26	321	P	P	12 09 57.5	+0.1
	comp=Z,1.0nm,0.9s,mb3.5,baz=90,slow=2.7,SNR=4.4						

MAN 22 12:17:45.2, 12.60N×123.27E, h28^{km}, mb4.0, ML2.8, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.42	125	eP	Pb	12 17 56.3	+2.0
MMPH				i S	Sb	12 18 03.3	+2.9
AUQP	San Andres	0.92	321	eP	Pn	12 18 01.3	-1.1
AUQP				eS	Sb	12 18 17.8	+3.4
RCP	Roxas	1.16	207	eP	Pn	12 18 10.7	+4.9
OTRP	Odiongan	1.25	259	eP	Pn	12 18 06.8	-0.2
GQP	Guinayangan	1.52	328	⇓eP	Pn	12 18 10.5	-0.5
GQP				eS	Sn	12 18 30.7	+0.7
BOAC	Boac	1.63	302	eP	Pn	12 18 12.2	-0.3
BOAC				eS	Sn	12 18 32.6	-0.2
LQP	Lukban	2.26	312	eP	Pn	12 18 21.4	-0.1

IDC **22** *12:45:05.4±2.3, 20.75S×68.81W, h92^{km}±27^{km}, mb4.0/12, mb1 4.1/13, mb1mx4.1/17, mbtmp4.3/13, MS3.3/2, Ms1 3.3/2, ms1mx2.4/19, Error ellipse: s-maj=25.2km s-min=23.0km az=168.0*
NEIC **22** *12:45:06.1±0.9, 20.96S×68.89W, h106^{km}±9^{km}, mb4.2/8, Error ellipse: s-maj=16.3km s-min=9.5km az=75.0*
ISC 22 12:45:04.5±0.7**, 20.70S**±0.05×**68.78W**±0.09**, h96**^{km}±7^{km}**, n33,** $\sigma 1^{s}$**01**/34**, mb4.1**/17**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.91	184	P	P	12 45 36.4	+0.3
	51nm,0.3s,baz=3.7,slow=8.9,SNR=29						
LVC				S	S	12 45 59.5	0.0
	375nm,0.3s,baz=241,slow=21,SNR=32						
LPAZ	La Paz	4.43	8	P	P	12 46 17.9	+7.1
	8.6nm,0.3s,baz=208,slow=6.9,SNR=85						
LPAZ				S	S	12 47 01.4	-0.1
	1.4nm,0.3s,baz=65,slow=17,SNR=4.3						
ARE	Arequipa	4.94	328	eP	P	12 46 19.0	+1.3
ARE				eS	S	12 47 12.2	-1.9
CFAA	Coronel Fontan	10.87	178	P	P	12 47 32.4	-6.0
	0.1nm,0.3s,baz=346,slow=16,SNR=4.8						
CFAA				S	S	12 49 24.5	-14
	0.2nm,0.3s,baz=235,slow=20,SNR=6.0						
TRQA	Tornquist	18.27	163	eP	P	12 49 09.3	-3.6
	7.5nm,0.9s						
PLCA	Paso Flores	20.03	184	LR	LR	12 57 30.9	
	comp=Z,110nm,19.1s,baz=296,slow=37						
BDFB	Brasilia	20.35	79	P	P	12 49 36.1	+0.7
	21nm,0.6s,baz=268,slow=9.1,SNR=20						
BDFB				LR	LR	12 59 05.3	
	comp=Z,68nm,20.1s,baz=164,slow=41						
BAO	Brasilia Array	20.37	79	eP	P	12 49 36.1	+0.4
BAO				i		12 49 38.5	
OTAV	Otavalo	22.86	334	eP	P	12 50 01.9	+1.4
	5.8nm,0.7s,mb4.0						
OTAV				e		12 50 25.8	
SDV	Santo Domingo	29.46	356	P	P	12 51 00.8	-0.8
	2.4nm,0.5s,mb4.1,baz=281,slow=18,SNR=3.6						
SJG	San Juan	38.66	4	P	P	12 52 19.6	-0.8
	7.8nm,0.3s,mb5.0,baz=334,slow=20,SNR=3.2						
SJG	San Juan	38.66	4	P	P	12 52 19.6	-0.8
TXAR	Lajitas Array	60.05	325	P	P	12 55 03.4	-0.4
	0.6nm,0.6s,mb3.8,baz=151,slow=9.1,SNR=6.2						
FVM	French Village	61.82	341	eP	P	12 55 14.3	-1.3
	14nm,0.8s,mb5.0						
DBIC	Dimbokro	68.39	74	P	P	12 55 57.8	-0.5
	2.7nm,0.5s,mb4.3,baz=223,slow=12,SNR=4.1						
DBIC	Dimbokro	68.39	74	eP	P	12 55 57.7	-0.6
	6.3nm,0.8s,mb4.5						
ISCO	Idaho Springs	69.31	330	eP	P	12 56 04.3	+0.7
	2.2nm,0.8s,mb4.0						
QSPA	South Pole Qui	69.49	180	eP	P	12 56 02.8	-1.2
	4.1nm,0.9s,mb4.3						
MSU	Marysvale	71.59	325	eP	P	12 56 18.4	+1.0
PDAR	Pinedale Array	73.48	330	P	P	12 56 28.4	0.0
	0.8nm,1.0s,mb3.5,baz=139,slow=7.1,SNR=4.7						
HWUT	Hardware Ranch	73.57	328	eP	P	12 56 29.1	+0.1
	4.5nm,0.8s,mb4.2						
ULM	Lac du Bonnet	74.59	342	P	P	12 56 33.9	-0.7
	0.7nm,0.4s,mb3.7,baz=169,slow=5.7,SNR=9.6						
ULM	Lac du Bonnet	74.59	342	P	P	12 56 33.9	-0.8
ELK	Elko	74.84	325	P	P	12 56 37.4	+1.2
	1.0nm,0.9s,mb3.5,baz=183,slow=9.5,SNR=2.8						
ELK	Elko	74.84	325	P	P	12 56 37.4	+1.1

NVAR	**Mina Array Bea**	**74.94**	**322**	P	**P**	**12 56 37.9**	**+1.0**
	1.3nm,0.7s,mb3.8,baz=142,slow=7.0,SNR=7.9						
SCHQ	**Schefferville**	**75.24**	**1**	P	**P**	**12 56 37.8**	**-0.4**
	2.7nm,1.0s,mb3.9,baz=144,slow=9.4,SNR=3.7						
LKWY	**Lake**	**75.25**	**331**	P	**P**	**12 56 40.7**	**+2.1**
	4.9nm,0.9s,mb4.2						
YBH	**Yreka Blue Hor**	**79.66**	**322**	P	**P**	**12 57 01.8**	**-1.2**
	1.4nm,0.6s,mb4.0,baz=132,slow=8.4,SNR=6.2						
YKA	**Yellowknife Ar**	**90.48**	**341**	P	**P**	**12 57 56.3**	**+0.1**
	1.9nm,0.9s,mb4.2,baz=134,slow=4.4,SNR=42						
YKA				pP	pP	12 58 26.3	+4.3
	0.9nm,0.8s,baz=134,slow=4.7,SNR=5.5						
YKA				sP	sP	12 58 38.4	+6.4
	0.7nm,0.9s,baz=136,slow=4.4,SNR=2.9						
YKA	**Yellowknife Ar**	**90.48**	**341**	P	**P**	**12 57 56.3**	**+0.1**
YKA				pP	pP	12 58 26.3	+4.3
YKA				sP	sP	12 58 38.4	+6.4
WRA	**Warramunga Arr**	**133.70**	**211**	PKP	PKPdf	13 04 10.4	-0.4
	0.2nm,0.6s,baz=147,slow=1.6,SNR=5.2						
SONM	**Songino Array**	**152.65**	**7**	PKPbc	PKPdf	13 04 51.4	+9.0
	0.8nm,0.8s,baz=309,slow=1.5,SNR=6.1						
SONM				PKPab	PKPab	13 05 02.8	-0.1
	0.5nm,0.7s,baz=336,slow=4.1,SNR=4.9						

NEIC 22 12:50:24.2±0.9, 6.77S×68.15E, h10^{km}, mb4.5/6, Error ellipse: s-maj=27.3km s-min=19.2km az=35.0

IDC 22 12:50:24.0±1.5, 6.54S×68.26E, mb3.8/6, mb1 3.9/6, mb1mx3.8/16, mbtmp3.8/6, MS3.6/7, Ms1 3.7/7, ms1mx3.6/14, Error ellipse: s-maj=47.3km s-min=27.9km az=36.0

ISC 22 12:50:21.8±1.0, 6.8S±0.2×68.1E±0.2, h10^{km}, n22, σ0^{s}97/12, mb4.2/12, MS3.6/7, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**31.29**	**279**	LR	LR	13 06 45.7	
	comp=Z,127nm,20.8s,MS3.6,baz=276,slow=31						
CMAR	**Chiang Mai Arr**	**39.44**	**50**	P	**P**	**12 57 54.4**	**+0.4**
	0.3nm,0.6s,mb3.2,baz=241,slow=9.3,SNR=3.5						
CMAR				LR	LR	13 11 03.2	
	comp=Z,67nm,18.8s,MS3.5,baz=220,slow=32						
EIL	**Elat**	**48.28**	**320**	LR	LR	13 17 52.1	
	comp=Z,38nm,18.1s,MS3.4,baz=85,slow=34						
AAK	**Ala-Archa**	**49.55**	**6**	P	**P**	**12 59 16.6**	**+1.7**
	8.3nm,1.4s,mb4.6						
GNI	**Garni**	**51.46**	**337**	LR	LR	13 19 49.7	
	comp=Z,33nm,19.0s,MS3.4,baz=338,slow=34						
GNI	**Garni**	**51.46**	**337**	P	**P**	**12 59 30.1**	**+0.7**
	6.3nm,0.6s,mb4.7						
MALT	**Malatya**	**52.70**	**331**	P	**P**	**12 59 42.6**	**+3.7**
	4.7nm,1.0s,mb4.4						
BRTR	**Keskin Array B**	**56.19**	**328**	P	**P**	**13 00 04.5**	**+0.2**
	1.4nm,1.1s,mb3.9,baz=144,slow=11,SNR=4.2						
CHKZ	**Chkalovo**	**60.29**	**2**	*e*P	**P**	**13 00 32.3**	**-0.5**
	7.2nm,1.1s,mb4.6						
CHKZ				*e*		13 00 38.3	
MAW	**Mawson**	**60.81**	**182**	LR	LR	13 19 38.8	
	comp=Z,118nm,18.8s,MS4.1,baz=256,slow=29						
ZAL	**Zalesovo**	**62.13**	**11**	P	**P**	**13 00 43.3**	**-2.0**
	0.6nm,0.3s,mb4.1,SNR=2.9						
ZAL				LR	LR	13 29 01.4	
	comp=Z,72nm,20.1s,MS3.8,baz=33,slow=38						
SONM	**Songino Array**	**64.01**	**28**	P	**P**	**13 00 57.4**	**-0.4**
	1.7nm,0.9s,mb4.1,baz=220,slow=5.5,SNR=14						
WRA	**Warramunga Arr**	**65.38**	**109**	P	**P**	**13 01 08.0**	**+0.8**
	0.9nm,0.7s,mb3.9,baz=281,slow=6.2,SNR=14						
WRAB	**Tennant Creek**	**65.39**	**109**	*e*P	**P**	**13 01 06.7**	**-0.5**
	3.3nm,0.9s,mb4.4						
AKASG	**Malin Array Be**	**66.38**	**334**	P	**P**	**13 01 12.2**	**-0.8**
	0.3nm,0.2s,mb3.9,baz=121,slow=4.8,SNR=3.4						
DBIC	**Dimbokro**	**74.02**	**279**	P	**P**	**13 02 00.3**	**0.0**
	3.7nm,0.9s,mb4.3						
ARCES	**ARCESS Array B**	**81.56**	**346**	LR	LR	13 37 53.0	
	comp=Z,37nm,18.5s,MS3.8,baz=18,slow=35						
YKA	**Yellowknife Ar**	**124.39**	**2**	PKP	PKPdf	13 09 22.4	-1.7
	0.1nm,0.7s,baz=14,slow=2.5,SNR=4.3						
PDAR	**Pinedale Array**	**144.13**	**357**	PKP	PKPdf	13 10 03.1	+2.0
	0.3nm,0.8s,slow=3.6,SNR=3.2						
ELK	**Elko**	**146.08**	**5**	PKPbc	PKPbc	13 10 06.8	+4.2
	1.0nm,1.0s,baz=333,slow=6.8,SNR=2.9						
NVAR	**Mina Array Bea**	**147.99**	**10**	PKPbc	PKPdf	13 10 12.3	+4.5
	0.9nm,0.9s,baz=296,slow=0.5,SNR=4.9						
TXAR	**Lajitas Array**	**156.29**	**342**	PKPbc	PKPdf	13 10 32.1	+12
	0.2nm,0.7s,baz=56,slow=4.5,SNR=3.7						
TXAR				PKPab	PKPab	13 10 49.8	+2.0
	0.6nm,0.9s,baz=72,slow=4.0,SNR=5.6						

IDC 22 13:12:21.9±1.6, 6.50S×68.22E, mb3.7/6, mb1 3.9/6, mb1mx3.8/16, mbtmp3.7/6, MS3.5/2, Ms1 3.6/2, ms1mx3.1/19, Error ellipse: s-maj=53.2km s-min=30.0km az=33.0

ISC 22 13:12:21.1±1.9, 6.4S±0.3×68.2E±0.2, h10^{km}, n11, σ1^{s}43/6, mb3.7/6, MS3.6/2, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**39.12**	**50**	P	**P**	**13 19 51.0**	**+0.3**
	0.4nm,0.8s,mb3.2,baz=238,slow=8.7,SNR=4.1						
CMAR				LR	LR	13 34 11.7	
	comp=Z,32nm,21.0s,MS3.1,baz=205,slow=34						
BRTR	**Keskin Array B**	**55.88**	**328**	P	**P**	**13 22 02.1**	**+0.7**
	0.3nm,0.4s,mb3.7,baz=143,slow=7.2,SNR=3.4						
ZAL	**Zalesovo**	**61.71**	**11**	P	**P**	**13 22 39.5**	**-2.3**
	0.4nm,0.5s,mb3.9,baz=148,slow=13,SNR=2.5						
SONM	**Songino Array**	**63.61**	**28**	P	**P**	**13 22 55.7**	**+1.1**
	1.4nm,0.9s,mb4.0,baz=219,slow=5.6,SNR=12						
WRA	**Warramunga Arr**	**65.45**	**109**	P	**P**	**13 23 06.8**	**-0.2**
	1.6nm,1.1s,mb4.0,baz=282,slow=5.6,SNR=8.0						
AKASG	**Malin Array Be**	**66.04**	**334**	P	**P**	**13 23 10.0**	**-0.2**
	0.2nm,0.3s,mb3.6,baz=297,slow=6.2,SNR=3.3						
CBIJ	**Chichi jima**	**78.81**	**61**	LR	LR	13 56 44.2	
	comp=Z,78nm,21.1s,MS4.0,baz=18,slow=34						
YKA	**Yellowknife Ar**	**123.98**	**2**	PKP	PKPdf	13 31 20.5	-2.2
	0.1nm,0.5s,baz=344,slow=2.3,SNR=4.8						
PDAR	**Pinedale Array**	**143.72**	**357**	PKP	PKPdf	13 31 59.9	+0.1
	0.3nm,0.8s,baz=288,slow=2.9,SNR=2.5						
NVAR	**Mina Array Bea**	**147.57**	**10**	PKPbc	PKPdf	13 32 09.8	+3.3
	0.9nm,0.8s,baz=346,slow=2.1,SNR=3.7						
TXAR	**Lajitas Array**	**155.92**	**342**	PKPab	PKPab	13 32 47.2	+1.7
	0.2nm,0.4s,baz=53,slow=4.5,SNR=2.9						

PRU 22 13:13:21.2, 50.13N×18.37E

WAR 22 13:13:20.0, 50.07N×18.46E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.17**	**276**	*e*PG	Pg	13 13 24.0	+0.6
RAC				*e*SG	Sg	13 13 28.0	+2.3
OKC	**Ostrava-Krasne**	**0.31**	**221**	*e*PG	Pg	13 13 26.7	+0.6
OKC				*e*SG	Sg	13 13 32.0	+1.8
	53nm,0.4s						
OJC	**Ojcow**	**0.88**	**79**	*e*PG	Pg	13 13 37.0	-0.5
OJC				*e*SG	Sg	13 13 50.0	+0.9
NIE	**Niedzica**	**1.37**	**118**	*e*PG	Pg	13 13 45.0	-2.3
NIE				*e*SG	Sg	13 14 05.0	-0.5
DPC	**Dobruska-Polom**	**1.40**	**282**	*e*PG	Pg	13 13 46.1	-1.9
DPC				*e*SG	Sg	13 14 05.3	-1.4
	23nm,0.4s						
KSP	**Ksiaz**	**1.59**	**300**	*e*PG	Pg	13 13 51.0	-0.7
KSP				*e*SG	Sg	13 14 12.0	-0.8
VYHS	**Vyhne**	**1.59**	**171**	*e*PN	Pn	13 13 48.8	-0.7
VYHS				*e*SN	Sn	13 14 11.3	+0.2
UPC	**Upice**	**1.63**	**287**	*e*PG	Pg	13 13 50.2	-2.3
CRVS	**Cervenica-Dubn**	**2.28**	**120**	*e*SN	Sn	13 14 34.6	+6.1
PRU	**Pruhonice**	**2.53**	**270**	*e*SG	Sg	13 14 39.3	-4.8
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PG	Pg	13 14 19.0	-7.1
KHC				*e*x	x	13 14 42.0	
KHC				*e*SG	Sg	13 15 05.5	-4.7

DJA 22 13:19:59.6±0.8, 9.44S×113.11E, h33^{km}, MD5.1/4, ML4.0/4, 4C-7D, Error ellipse: s-maj=16.8km s-min=15.8km az=8.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	**Scrawed**	**1.40**	**47**	⇑*i*Pn	Pn	13 20 22.0	-1.2
	231nm,0.2s						
SRDI	**Scrawed**	**1.40**	**47**	⇑*i*P	P	13 20 22.2	-0.8
SRDI				⇓*i*Sn	Sn	13 20 37.4	-3.2
KELI	**Kelakatan**	**1.83**	**49**	⇑*e*Pn	Pn	13 20 28.7	-0.6
	116nm,0.3s						
KELI	**Kelakatan**	**1.83**	**49**	⇑*i*P	P	13 20 28.8	-0.3
KELI				⇓*e*Sn	Sn	13 20 49.3	-2.2
RATI	**Rata**	**2.50**	**74**	⇓*i*Pn	Pn	13 20 38.1	-0.8
	109nm,0.3s						
RATI				⇓*i*Sn	Sn	13 21 04.5	-4.1
KEDI	**Kedomdong**	**3.12**	**73**	⇓*i*Pn	Pn	13 20 46.1	-1.6
	23nm,0.2s						
KEDI	**Kedomdong**	**3.12**	**73**	⇓*i*P	P	13 20 46.2	-1.4
KEDI				⇓*e*Sn	Sn	13 21 19.5	-4.7

PRU 22 13:26:39.1, 50.22N×19.20E

WAR 22 13:26:38.4, 50.16N×19.30E, h0^{km}, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.33**	**80**	*e*PG	Pg	13 26 45.0	+0.1
OJC				*i* SG	Sg	13 26 49.7	+0.5
OKC	**Ostrava-Krasne**	**0.81**	**247**	*e*PG	Pg	13 26 53.8	-0.8
OKC				*e*SG	Sg	13 27 05.5	0.0
	23nm,0.3s						
NIE	**Niedzica**	**0.99**	**138**	*e*PG	Pg	13 26 58.0	-0.2
NIE				*e*SG	Sg	13 27 12.0	+0.5
LIKS	**Likavka**	**1.12**	**187**	*e*PN	Pn	13 27 02.8	+1.6
LIKS				*e*SN	Sn	13 27 16.0	-1.5
VYHS	**Vyhne**	**1.70**	**190**	*e*PN	Pn	13 27 08.6	-0.8
VYHS				*e*SN	Sn	13 27 30.7	-1.5
KECS	**Kecovo**	**1.85**	**155**	*e*SN	Sn	13 27 38.6	+2.5
CRVS	**Cervenica-Dubn**	**1.89**	**131**	*e*PN	Pn	13 27 14.7	+2.5
CRVS				*e*SN	Sn	13 27 40.3	+3.3
DPC	**Dobruska-Polom**	**1.92**	**277**	*e*PG	Pg	13 27 11.4	-5.3
DPC				*e*SG	Sg	13 27 37.3	-5.0
	15nm,0.3s						
KSP	**Ksiaz**	**2.04**	**291**	*e*PG	Pg	13 27 16.0	-3.1
KSP				*e*SG	Sg	13 27 43.0	-3.2
UPC	**Upice**	**2.13**	**281**	*e*SG	Sg	13 27 44.2	-5.3
KOLS	**Kolonicke sedl**	**2.29**	**121**	*e*PN	Pn	13 27 17.8	-0.2
KOLS				*e*PG	Pg	13 27 23.0	-1.2
PRU	**Pruhonice**	**3.07**	**269**	*e*SG	Sg	13 28 13.7	-6.9
KHC	**Kasperske Hory**	**3.86**	**257**	*e*SG	Sg	13 28 41.0	-5.9
MOA	**Molln**	**4.04**	**237**	*i*	Pn	13 27 50.8	+7.9
MOA	**Molln**	**4.04**	**237**	*i* SG	Sg	13 28 47.6	-5.4
	3.5nm,0.5s						
CLL	**Collm**	**4.16**	**288**	*e*SG	Sg	13 28 54.0	-2.9

IDC 22 13:31:40.0±1.3, 6.50N×94.30E, mb3.9/5, mb1 4.1/6, mb1mx3.9/17, mbtmp3.8/6, ML3.9/1, Error ellipse: s-maj=43.9km s-min=26.0km az=52.0

NEIC 22 13:31:41.5±1.1, 6.39N×93.85E, h30^{km}, mb4.2/5, Error ellipse: s-maj=35.7km s-min=14.1km az=63.0

ISC 22 13:31:41.1±1.0, 6.5N±0.1×94.1E±0.2, h33^{km}, n12, σ1^{s}26/12, mb4.1/10, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.79**	**21**	Pn	**P**	**13 34 43.3**	**-0.1**
	0.2nm,0.3s,baz=225,slow=15,SNR=13						
FITZ	**Fitzroy Crossi**	**39.60**	**129**	*e*P	**P**	**13 39 15.5**	**+4.2**
	2.9nm,0.6s,mb4.2						
AAK	**Ala-Archa**	**39.93**	**337**	*e*P	**P**	**13 39 12.3**	**-1.5**
	3.1nm,0.8s,mb4.1						
SONM	**Songino Array**	**42.51**	**12**	P	**P**	**13 39 36.5**	**+1.5**
	1.2nm,0.9s,mb3.6,baz=200,slow=6.8,SNR=9.1						
KURK	**Kurchatov**	**45.92**	**346**	*e*P	**P**	**13 40 01.1**	**-1.4**
	4.1nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**47.53**	**124**	P	**P**	**13 40 15.9**	**+0.3**
	1.1nm,0.6s,mb4.1,baz=306,slow=8.4,SNR=28						
WRAB	**Tennant Creek**	**47.53**	**124**	*e*P	**P**	**13 40 14.3**	**-1.3**
	2.3nm,0.5s,mb4.5						
WB2	**Warramunga Arr**	**47.54**	**124**	⇓*i*P	**P**	**13 40 16.0**	**+0.4**
ZAL	**Zalesovo**	**47.89**	**353**	P	**P**	**13 40 19.4**	**+1.5**
	0.6nm,0.4s,mb4.0,baz=278,slow=6.0,SNR=3.2						
CHKZ	**Chkalovo**	**50.75**	**342**	*e*P	**P**	**13 40 38.5**	**-1.4**
	1.4nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**63.28**	**311**	P	**P**	**13 42 10.8**	**+1.8**
	1.9nm,0.9s,mb4.2,baz=121,slow=7.2,SNR=5.8						
GERES	**GERESS Array B**	**78.80**	**318**	P	**P**	**13 43 47.5**	**+5.2**
	0.8nm,0.6s,mb3.8,baz=76,slow=5.5,SNR=6.4						

BJI 22 13:42:17.7, 38.95N×101.30E, h25^{km}, ML3.8, Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.24**	**292**	PG	Pn	13 42 38.0	-1.7
GTA				SG	Sn	13 42 53.3	-2.5
GTA				Smax			
	comp=N,1μm,0.6s						
GTA				Smax			
	comp=E,1μm,0.5s						
LZH	**Lanzhou**	**3.50**	**144**	PG	Pn	13 43 20.3	+8.4
LZH				SG	Sn	13 44 04.3	+11
LZH				Smax			
	comp=N,370nm,0.9s						
LZH				Smax			
	comp=E,420nm,1.0s						
BTO	**Baotou**	**6.92**	**73**	*e*P	Pn	13 43 56.0	-4.2
BTO				SG	Sn	13 45 55.8	+37
BTO				Smax			
	comp=N,22nm,0.4s						
BTO				Smax			
	comp=E,9.0nm,0.5s						

IDC 22 13:44:43.2±1.9, 12.33N×143.70E, mb3.6/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.6/3, Error ellipse: s-maj=167.0km s-min=31.8km az=113.0

NEIC 22 13:44:50.6±2.4, 12.23N×143.72E, h53^{km}±24^{km}, mb4.2/3, Error ellipse: s-maj=39.3km s-min=17.5km az=105.0

ISC 22 13:44:48.3±2.9, 12.2N±0.1×143.5E±0.2, h46^{km}±28^{km}, n8, σ0^{s}81/9, mb3.9/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.92**	**44**	Pn	**P**	**13 45 18.6**	**-0.5**
GUMO				*e*S	**S**	**13 45 42.5**	**+0.5**
WRAB	**Tennant Creek**	**33.18**	**196**	*e*P	**P**	**13 51 23.0**	**0.0**
	2.3nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**33.20**	**196**	P	**P**	**13 51 23.4**	**+0.3**
	1.0nm,0.7s,mb3.9,baz=19,slow=9.7,SNR=9.7						
KURK	**Kurchatov**	**64.79**	**320**	P	**P**	**13 55 26.0**	**+1.6**
	4.1nm,1.4s,mb4.3						
CHKZ	**Chkalovo**	**70.12**	**323**	*e*P	**P**	**13 55 56.4**	**-1.3**
	3.1nm,0.9s,mb4.2						
YKA	**Yellowknife Ar**	**84.69**	**27**	P	**P**	**13 57 17.6**	**-0.7**
	0.1nm,0.6s,mb3.1,baz=283,slow=4.9,SNR=3.0						
YKA	**Yellowknife Ar**	**84.69**	**27**	P	**P**	**13 57 17.6**	**-0.7**
NVAR	**Mina Array Bea**	**88.82**	**51**	P	**P**	**13 57 39.1**	**+0.2**
	0.2nm,0.4s,mb3.8,baz=270,slow=5.4,SNR=4.1						

IDC 22 13:47:36.4±1.7, 5.87N×92.71E, mb3.6/4, mb1 3.8/5, mb1mx3.7/17, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=55.5km s-min=29.5km az=58.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.91**	**25**	Pn	P	13 50 55.2	-2.2
	0.1nm,0.3s,baz=217,slow=14,SNR=6.4						
SONM	**Songino Array**	**43.42**	**13**	P	P	13 55 41.1	-1.6
	0.4nm,0.6s,baz=194,slow=8.3,SNR=5.0						
WRA	**Warramunga Arr**	**48.31**	**123**	P	P	13 56 20.1	-1.8
	0.4nm,0.8s,baz=302,slow=9.2,SNR=4.7						
ZAL	**Zalesovo**	**48.35**	**354**	P	P	13 56 19.7	-2.0
	0.9nm,0.5s,baz=305,slow=6.5,SNR=4.8						
GERES	**GERESS Array B**	**78.37**	**319**	P	P	13 59 38.8	-1.6
	0.8nm,0.8s,baz=108,slow=4.2,SNR=5.0						

IDC 22 13:54:15.8±2.8, 30.50S×177.37W, mb4.3/3, mb1 4.3/4, mb1mx4.0/15, mbtmp4.2/4, ML3.4/1, Error ellipse: s-maj=62.8km s-min=35.2km az=116.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.98**	**209**	Pn	P	13 56 26.9	-2.9
	0.4nm,0.3s,baz=117,slow=13,SNR=4.3						
URZ				Sn	Sn	13 58 07.9	-5.0
	0.7nm,0.3s,baz=158,slow=18,SNR=9.7						
CTA	**Charters Tower**	**34.35**	**279**	P	P	14 01 04.7	-1.8
	2.7nm,0.5s,baz=105,slow=11,SNR=6.2						
STKA	**Stephens Creek**	**34.98**	**257**	P	P	14 01 10.7	-1.2
	1.5nm,0.3s,baz=152,slow=13,SNR=2.7						
WRA	**Warramunga Arr**	**44.64**	**272**	P	P	14 02 29.6	-2.5
	2.3nm,0.6s,baz=110,slow=8.1,SNR=71						
FINES	**FINESS Array B**	**145.42**	**340**	PKPbc	PKPbc	14 13 54.1	-1.4
	1.8nm,0.5s,baz=58,slow=2.9,SNR=13						

NEIC 22 14:03:50.0, 17.62N×68.49W, h160^{km}, MD3.6(RSPR), After RSPR.

RSPR 22 14:03:50.0, 17.62N×68.49W, h160^{km}±4^{km}, MD3.6/5, MD3.6/5, 4C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MGP	**Maguayo**	**1.39**	**74**	⇑*e*P	P	14 04 18.8	-0.7
MGP				*e*S	S	14 04 42.1	-0.1
AOPR	**Arecibo Observ**	**1.80**	**66**	⇑*e*P	P	14 04 23.5	-0.3
AOPR				*e*S	S	14 04 49.8	-0.2
PORP	**Portuguez**	**1.81**	**76**	⇑*e*P	P	14 04 23.9	0.0
PORP				*e*S	S	14 04 49.6	-0.6
CSB	**Colonia Sabana**	**2.31**	**73**	⇑*e*P	P	14 04 29.4	-0.4
CSB				*e*S	S	14 04 59.9	-0.6
CBYP	**Canovanas**	**2.58**	**75**	⇓*e*P	P	14 04 33.1	-0.1
CBYP				*e*S	S	14 05 06.8	+0.4

IDC 22 14:40:19.9±3.8, 2.59N×94.00E, mb3.7/3, mb1 4.0/4, mb1mx3.7/17, mbtmp3.7/4, ML4.0/1, Error ellipse: s-maj=122.2km s-min=30.3km az=64.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.50**	**17**	Pn	P	14 44 14.3	-0.2
	0.2nm,0.3s,baz=211,slow=12,SNR=12						
WRA	**Warramunga Arr**	**45.48**	**121**	P	P	14 48 41.1	-1.9
	0.5nm,0.9s,baz=303,slow=8.7,SNR=3.6						
SONM	**Songino Array**	**46.33**	**12**	P	P	14 48 47.0	-2.4
	0.3nm,0.6s,baz=196,slow=9.0,SNR=5.4						
ZAL	**Zalesovo**	**51.74**	**353**	P	P	14 49 29.2	-1.9
	1.1nm,0.3s,baz=292,slow=3.2,SNR=4.0						

MOS 22 15:00:55.1±1.4, 52.40N×159.28E, h48^{km}, mb4.3/18, Error ellipse: s-maj=16.0km s-min=6.8km az=84.9

KRSC 22 15:00:55.9±0.8, 52.51N×159.39E, h13^{km}±2^{km}, ML4.5

IDC 22 15:00:55.7±6.9, 52.62N×159.14E, h29^{km}±49^{km}, mb3.8/20, mb1 4.1/22, mb1mx4.1/25, mbtmp4.0/22, ML3.9/2, Error ellipse: s-maj=22.7km s-min=14.4km az=173.0

BJI 22 15:00:57.2, 52.43N×159.76E, h99^{km}, mB5.0, mb4.1

NEIC 22 15:01:01.0±1.9, 52.59N×159.18E, h78^{km}±16^{km}, mb4.2/10, Error ellipse: s-maj=14.3km s-min=8.5km az=154.0

ISC 22 15:00:55.9±0.5, 52.39N±0.03×159.41E±0.06, h50^{km}±4^{km}, n94, σ1^{s}23/125, mb4.0/28, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.55**	**275**	*i* P	**P**	**15 01 07.7**	**-0.1**
RUS				*i* S	**S**	**15 01 16.1**	**-0.3**
NLC	**Nalytchevo**	**0.79**	**357**	P	**P**	**15 01 09.0**	**-1.8**
NLC				S	**S**	**15 01 18.5**	**-3.4**
NLC	**Nalytchevo**	**0.79**	**357**	*i* P	**P**	**15 01 09.1**	**-1.7**
NLC				*e*S	**S**	**15 01 18.5**	**-3.4**
PET	**Petropavlovsk**	**0.79**	**324**	⇓*i*PN	**P**	**15 01 09.8**	**-1.0**
PET				*e*S	**S**	**15 01 19.2**	**-2.7**
PET				pmax	pmax		
	comp=Z,1μm,0.6s						
PET				pmax	pmax		
	comp=Z,2μm,0.5s						
PET				smax			
	comp=E,3μm,1.4s						
PET				smax			
	comp=N,5μm,1.6s						
PET				smax			
	comp=N,1μm,2.9s						
PET				smax			
	comp=N,3μm,0.4s						
PET				smax			
	comp=E,3μm,0.5s						
PET	**Petropavlovsk**	**0.79**	**324**	*i* P	**P**	**15 01 10.1**	**-0.7**
PET				*e*S	**S**	**15 01 20.0**	**-1.9**
SPN	**Mys Shipunski**	**0.80**	**27**	P	**P**	**15 01 10.0**	**-1.1**
SPN				S	**S**	**15 01 20.0**	**-2.3**
SPN	**Mys Shipunski**	**0.80**	**27**	*e*P	**P**	**15 01 10.7**	**-0.4**
SPN				*e*S	**S**	**15 01 20.9**	**-1.4**
GRL	**Gorelyy**	**0.83**	**282**	*i* P	**P**	**15 01 12.2**	**+0.7**
GRL				*e*S	**S**	**15 01 23.6**	**+0.6**
KRMR	**Karymshinskiy**	**0.90**	**300**	*i* P	**P**	**15 01 12.3**	**0.0**
KRMR				*i* S	**S**	**15 01 24.3**	**-0.3**
UGLR	**Uglovaya**	**0.90**	**337**	*i* P	**P**	**15 01 11.8**	**-0.5**
SDLR	**Sedlovina**	**0.95**	**341**	*i* P	**P**	**15 01 12.1**	**-1.0**
SMAR	**Somma**	**0.95**	**337**	*i* P	**P**	**15 01 12.2**	**-0.9**
AVH	**Avacha**	**0.97**	**335**	*i* P	**P**	**15 01 12.9**	**-0.5**
AVH				*i* S	**S**	**15 01 24.7**	**-1.6**
KOK	**Koryaka**	**1.02**	**333**	*i* P	**P**	**15 01 13.6**	**-0.5**
KOK				*i* S	**S**	**15 01 26.1**	**-1.5**
APC	**Apacha**	**1.47**	**292**	*i* P	**P**	**15 01 21.7**	**+1.2**
APC				*i* S	**S**	**15 01 40.4**	**+1.6**
APC				Smax			
	comp=E,1μm,0.6s						
GNL	**Ganaly**	**1.58**	**327**	*i* P	**P**	**15 01 22.0**	**-0.1**
GNL				*i* S	**S**	**15 01 41.3**	**-0.2**
KII	**Karymskiy**	**1.65**	**1**	P	**P**	**15 01 23.7**	**+0.7**
KII				S	**S**	**15 01 43.4**	**+0.2**
KII	**Karymskiy**	**1.65**	**1**	*i* P	**P**	**15 01 23.8**	**+0.8**
KII				*i* S	**S**	**15 01 44.1**	**+0.9**
PAU	**Pauzhetka**	**1.85**	**241**	*e*P	**P**	**15 01 27.0**	**+1.2**
PAU				*e*S	**S**	**15 01 53.0**	**+4.9**
PAU				Smax			
	comp=E,1μm,0.9s						
SKR	**Severo-Kuril's**	**2.67**	**232**	*e*PN	**P**	**15 01 35.3**	**-2.2**
SKR				pmax	pmax		
	comp=Z,40nm,0.5s						
SKR	**Severo-Kuril's**	**2.67**	**232**	*e*S	**S**	**15 02 11.6**	**+2.8**
ALID	**Alaid**	**2.84**	**239**	*e*P	**P**	**15 01 44.2**	**+4.2**
TUMR	**Tumrok**	**2.93**	**8**	*e*P	**P**	**15 01 42.3**	**+1.1**
TUMR				*e*S	**S**	**15 02 17.0**	**+1.5**
KMNR	**Kamenistaya**	**3.41**	**8**	*e*P	**P**	**15 01 49.4**	**+1.5**
KMNR				*e*S	**S**	**15 02 28.6**	**+1.1**
ESO	**Esso**	**3.57**	**354**	*i* P	**P**	**15 01 51.2**	**+1.0**
ESO				*i* S	**S**	**15 02 32.4**	**+0.9**
ESO				Smax			
	comp=Z,140nm,1.0s						
KOZ	**Kozyrevsk**	**3.69**	**4**	P	**P**	**15 01 53.7**	**+1.8**
KOZ				S	**S**	**15 02 34.9**	**+0.4**
KOZ	**Kozyrevsk**	**3.69**	**4**	*i* P	**P**	**15 01 53.7**	**+1.8**
KOZ				*i* S	**S**	**15 02 36.3**	**+1.8**
KOZR	**Kozyr**	**3.70**	**4**	PN	**P**	**15 01 53.7**	**+1.7**
KOZR				S	**S**	**15 02 34.9**	**+0.2**
SRDR	**Sredinnyy**	**3.94**	**2**	*e*P	**P**	**15 01 56.8**	**+1.4**
KLY	**Klyuchi**	**4.00**	**10**	P	**P**	**15 01 57.6**	**+1.3**
KLY				S	**S**	**15 02 43.3**	**+0.9**
KLY	**Klyuchi**	**4.00**	**10**	*e*P	**P**	**15 01 57.7**	**+1.4**
KLY				*e*S	**S**	**15 02 43.3**	**+0.9**
KBTR	**Krutoberegovo**	**4.32**	**26**	P	**P**	**15 02 01.3**	**+0.6**
KBTR				S	**S**	**15 02 49.6**	**-0.8**
KBTR	**Krutoberegovo**	**4.32**	**26**	*e*P	**P**	**15 02 01.2**	**+0.5**
KBTR				*e*S	**S**	**15 02 49.6**	**-0.8**
KBG	**Krutoberegovo**	**4.33**	**25**	*e*P	**P**	**15 02 01.5**	**+0.6**
KBG				*e*S	**S**	**15 02 47.5**	**-3.2**
KBG				Smax			
	comp=Z,580nm,1.0s						
KBG	**Krutoberegovo**	**4.33**	**25**	*e*P	**P**	**15 02 01.8**	**+0.9**
KBG				*e*S	**S**	**15 02 50.9**	**+0.2**
SVLR	**Shiveluch**	**4.33**	**13**	*e*P	**P**	**15 02 02.9**	**+2.0**
SVLR				*e*S	**S**	**15 02 52.2**	**+1.5**
BKI	**Bering**	**4.81**	**51**	*i* P	**P**	**15 02 05.4**	**-2.2**
BKI				*i* S	**S**	**15 02 55.4**	**-7.2**
FX1	**Attu Island--F**	**8.38**	**81**	Pn	**P**	**15 02 56.3**	**-1.1**
	comp=Z,4.7nm,0.3s,baz=231,slow=14,SNR=2.6						
FX1				Sn	**S**	**15 04 22.9**	**-8.8**
	comp=Z,14nm,0.3s,baz=134,slow=19,SNR=12						
MA2	**Magadan**	**8.68**	**330**	PN	**P**	**15 03 01.1**	**-0.3**
ASAJ	**Asahikawa**	**13.90**	**240**	P	**P**	**15 04 16.4**	**+4.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**13.90**	**240**	Pn	**P**	**15 04 16.4**	**+4.8**
	comp=Z,0.7nm,0.3s,baz=90,slow=14,SNR=8.9						

BILL	Bilibino	16.05	9	eP	P	15 04 39.7	+0.5
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BILL	Bilibino	16.05	9	eP	P	15 04 39.7	+0.5
	comp=Z,2.7nm,0.5s						
BILL				e		15 04 57.4	
TNA	Tin City	21.06	39	eP	P	15 05 36.9	-0.6
	comp=Z,11nm,1.2s,mb4.1						
MAJO	Matsushiro	21.78	232	P	P	15 05 46.5	+1.6
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
MAJO	Matsushiro	21.78	232	P	P	15 05 46.5	+1.6
	comp=Z,7.2nm,0.7s,mb4.2						
ILAR	Eielson Array	29.61	44	P	P	15 06 56.7	-1.2
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	29.61	44	P	P	15 06 56.7	-1.2
	comp=Z,1.5nm,0.8s,mb3.8,baz=264,slow=7.8,SNR=16						
DAWY	Dawson	32.91	45	eP	P	15 07 26.1	-0.8
SONM	Songino Array	33.66	284	P	P	15 07 33.2	-0.4
	comp=Z,0.2nm,0.4s,mb3.4,baz=69,slow=8.2,SNR=5.1						
SONM				PcP	PcP	15 10 12.4	-0.4
	comp=Z,0.7nm,0.6s,baz=72,slow=1.0,SNR=7.6						
INK	Inuvik	34.69	37	eP	P	15 07 41.7	-0.5
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	34.69	37	eP	P	15 07 41.7	-0.5
	comp=Z,2.7nm,0.7s,mb4.3						
ZAL	Zalesovo	42.83	303	P	P	15 08 47.1	-2.9
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	42.83	303	P	P	15 08 47.1	-2.9
	comp=Z,0.6nm,0.3s,mb3.8,baz=297,slow=4.5,SNR=2.2						
YKA	Yellowknife Ar	43.97	42	P	P	15 08 59.2	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	43.97	42	P	P	15 08 59.2	+0.1
	comp=Z,1.0nm,0.6s,mb3.7,baz=298,slow=8.1,SNR=23						
YKA	Yellowknife Ar	43.97	42	P	P	15 08 59.2	+0.1
RES	Resolute Bay	44.14	22	eP	P	15 09 00.2	-0.2
RES				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
RES	Resolute Bay	44.14	22	eP	P	15 09 00.1	-0.2
	comp=Z,2.4nm,0.6s,mb4.1						
WMQ	Urumqi	46.81	290	eP	P	15 09 20.0	-2.0
KURK	Kurchatov	47.76	302	eP	P	15 09 26.4	-2.9
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
KURK	Kurchatov	47.76	302	eP	P	15 09 26.4	-3.0
	comp=Z,1.1nm,0.5s,mb4.1						
CHKZ	Chkalovo	50.00	309	eP	P	15 09 43.2	-3.4
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
CHKZ	Chkalovo	50.00	309	eP	P	15 09 43.2	-3.4
	comp=Z,1.6nm,0.4s,mb4.4						
BVAR	Borovoye Array	50.50	308	P	P	15 09 47.3	-3.2
	comp=Z,1.0nm,0.4s,mb4.1,baz=62,slow=6.9,SNR=16						
NVAR	Mina Array Bea	56.38	69	P	P	15 10 34.8	+0.7
	comp=Z,1.0nm,0.7s,mb4.0,baz=304,slow=5.6,SNR=8.6						
CMAR	Chiang Mai Arr	57.63	258	P	P	15 10 43.2	0.0
	comp=Z,0.3nm,0.5s,mb3.6,baz=28,slow=8.0,SNR=4.0						
PDAR	Pinedale Array	58.23	60	P	P	15 10 47.7	+0.7
	comp=Z,1.8nm,0.7s,mb4.2,baz=317,slow=2.5,SNR=16						
ULM	Lac du Bonnet	59.61	46	P	P	15 10 56.1	-0.3
	comp=Z,2.8nm,0.7s,mb4.4,baz=294,slow=6.0,SNR=5.9						
FINES	FINESS Array B	60.60	336	P	P	15 11 00.9	-2.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	60.60	336	P	P	15 11 00.9	-2.2
	comp=Z,2.0nm,0.9s,mb4.2,baz=45,slow=8.1,SNR=5.1						
NB2	NORSAR Subarra	64.10	343	P	P	15 11 24.9	-1.3
	comp=Z,0.8nm,0.5s,mb4.0,baz=21,slow=7.0						
NB2	NORSAR Subarra	64.10	343	P	P	15 11 24.9	-1.3
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
NOA	NORSAR Array B	64.10	343	P	P	15 11 24.9	-1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	64.10	343	P	P	15 11 24.9	-1.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=22,slow=6.8,SNR=5.0						
NOA	NORSAR Array B	64.10	343	P	P	15 11 24.9	-1.3
SCHQ	Schefferville	66.47	27	P	P	15 11 40.6	-0.9
	comp=Z,2.1nm,0.9s,mb4.1,baz=292,slow=5.4,SNR=3.3						
AKASG	Malin Array Be	69.00	329	P	P	15 11 54.2	-3.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	69.00	329	P	P	15 11 54.2	-3.3
	comp=Z,1.2nm,0.7s,mb4.0,baz=29,slow=6.6,SNR=3.9						
WMOK	Wichita Mounta	69.83	59	P	P	15 12 02.9	+0.1
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
WMOK	Wichita Mounta	69.83	59	P	P	15 12 02.9	+0.2
	comp=Z,4.3nm,1.1s,mb4.3						
TXAR	Lajitas Array	71.30	66	P	P	15 12 12.9	+1.1
	comp=Z,1.4nm,0.5s,mb4.1,baz=298,slow=4.6,SNR=15						
EKA	Eskdalemuir Ar	71.68	350	P	P	15 12 12.7	-0.9
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	Eskdalemuir Ar	71.68	350	P	P	15 12 12.7	-0.9
	comp=Z,0.7nm,0.4s,mb3.9,baz=16,slow=5.7,SNR=4.3						
MLR	Muntele Rosu	74.63	328	P	P	15 12 31.3	+0.4
MLR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MLR	Muntele Rosu	74.63	328	P	P	15 12 31.3	+0.4
	comp=Z,1.3nm,0.5s,mb4.1,baz=144,slow=6.1,SNR=3.8						
GERES	GERESS Array B	75.01	337	P	P	15 12 32.9	-0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	75.01	337	P	P	15 12 32.9	-0.1
	comp=Z,0.8nm,0.5s,mb3.9,baz=30,slow=6.1,SNR=8.6						
WRAB	Tennant Creek	75.25	204	eP	P	15 12 35.9	+0.9
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
WRAB	Tennant Creek	75.25	204	eP	P	15 12 35.9	+0.9
	comp=Z,4.4nm,0.8s,mb4.4						
WRA	Warramunga Arr	75.26	204	P	P	15 12 35.7	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	75.26	204	P	P	15 12 35.7	+0.6
	comp=Z,1.2nm,0.7s,mb3.9,baz=18,slow=6.0,SNR=12						
BRTR	Keskin Array B	76.90	320	P	P	15 12 44.8	+0.8
	comp=Z,0.3nm,0.3s,mb3.7,baz=270,slow=7.2,SNR=5.6						
ESDC	Sonseca Array	87.18	347	P	P	15 13 40.1	+2.8
	comp=Z,0.4nm,0.3s,mb4.1,baz=13,slow=4.8,SNR=4.3						

KRSC 22 15:02:05.3±0.4**, 52.51N**×**159.38E, h17**^{km}±4^{km}**, ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.54	262	iP	Pb	15 02 16.7	+0.8
RUS				iS	Sb	15 02 24.9	+1.9
NLC	Nalytchevo	0.66	358	eP	Pb	15 02 18.5	+0.5
NLC				eS	Sb	15 02 27.8	+1.1
PET	Petropavlovsk	0.68	320	eP	Pb	15 02 18.9	+0.6
PET				iS	Sb	15 02 28.7	+1.5
SPN	Mys Shipunski	0.71	33	eP	Pb	15 02 19.7	+0.9
SPN				eS	Sb	15 02 30.0	+2.0
UGLR	Uglovaya	0.78	335	eP	Pb	15 02 20.5	+0.5
GRL	Gorelyy	0.80	274	eP	Pb	15 02 21.7	+1.3
GRL				eS	Sb	15 02 33.2	+2.5
KRMR	Karymshinskiy	0.83	293	iP	Pb	15 02 21.1	+0.3
KRMR				iS	Sb	15 02 32.9	+1.5
SMAR	Somma	0.83	335	eP	Pb	15 02 22.6	+1.7
AVH	Avacha	0.85	333	eP	Pb	15 02 21.9	+0.7
AVH				eS	Sb	15 02 33.8	+1.6
KOK	Koryaka	0.90	330	eP	Pb	15 02 22.4	+0.3
APC	Apacha	1.41	288	eP	Pn	15 02 29.8	-0.7
APC				eS	Sb	15 02 48.2	-0.3
GNL	Ganaly	1.47	324	eP	Pn	15 02 31.5	+0.2
GNL				eS	Sb	15 02 51.0	+0.9
KII	Karymskiy	1.53	2	iP	Pn	15 02 32.9	+0.8
KII				eS	Sn	15 02 53.2	+1.5
KBTR	Krutoberegovo	4.22	27	eP	Pn	15 03 10.2	-0.2

JMA ***22*** *15:08:37.7±0.2, 24.27N×122.57E, h68^{km}±3^{km}, M2.5*
TAP ***22*** *15:08:38.2, 24.14N×122.53E, h53^{km}, ML3.2*
ISC 22 15:08:37.8±2.3**, 24.3N**±0.3×**122.6E**±0.2**, h72**^{km}±15^{km}**, n6, σ0^{s}24**/11**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.38	71	P	P	15 08 49.8	0.0
YOJ				S	S	15 08 58.7	0.0
IRIF	Iriomote-Funau	1.02	90	P	P	15 08 56.8	0.0
IRIF				S	S	15 09 11.3	+0.3
HATJ	Hateruma jima	1.12	104	P	P	15 08 58.2	0.0
HATJ				eS	S	15 09 13.4	0.0
JKRS	Kuro-shima	1.27	94	P	P	15 09 00.4	+0.1
JKRS				eS	S	15 09 17.0	0.0
JIJ	Ishigaki jima	1.39	89	P	P	15 09 01.5	-0.4
JIJ				eS	S	15 09 19.4	-0.4
JTJ	Tarama	1.92	81	P	P	15 09 09.5	+0.4

THR ***22*** *15:21:34.9±0.7, 30.80N×56.76E, h14^{km}±8^{km}, ML3.5*
CSEM ***22*** *15:21:35.8±0.1, 30.71N×56.66E, h16^{km}, ML4.0/1, Error ellipse: s-maj=2.2km s-min=1.6km az=64.0*
TEH ***22*** *15:21:37.2, 30.58N×56.68E, h16^{km}, Mn3.2*
ISC 22 15:21:35.6±0.6**, 30.77N**±0.06×**56.67E**±0.08**, h10**^{km}**, n18, σ1^{s}13**/20**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.79	174	iPG	Pg	15 21 50.3	-1.1
KRBR				AML	AML	15 22 11.7	
	comp=N,2µm,0.4s						
IBAF	Bafgh	1.25	311	Pn	Pn	15 21 58.6	-0.5
IMEH	Mehriz	1.87	290	Pn	Pn	15 22 09.6	+1.6
ICHK	Chekchek	2.43	308	Pn	Pn	15 22 16.2	+0.2
ISAD	Sadrabad	2.80	295	Pn	Pn	15 22 22.1	+0.9
BNDS	Bandar-Abbas	3.38	188	ePN	Pn	15 22 30.4	+0.8
BNDS				AML	AML	15 23 27.5	
	comp=N,78nm,0.5s						
ZHSF	Zahedan	3.74	107	ePN	Pn	15 22 33.5	-1.1
ZHSF				AML	AML	15 23 20.8	
	comp=N,62nm,0.6s						
NASN	Na'in	3.86	303	ePN	Pn	15 22 36.9	+0.6
NASN				eSG	Sg	15 23 36.5	-7.6
NASN				AML	AML	15 23 44.5	
	comp=N,70nm,0.6s						
NASN	Na'in	3.86	303	ePn	Pn	15 22 36.9	+0.5
	SNR=52						
NASN				eSg	Sg	15 23 36.5	-7.6
	comp=N,70nm,0.6s,SNR=90						
IFIR	Firoozkooh	5.86	327	Pn	Pn	15 23 04.8	+0.1
IFIR				Sn	Sn	15 24 10.0	-2.8
IPAY	Payeh	5.99	18	Pn	Pn	15 23 06.5	0.0
IDMV	Damavand	6.17	322	Pn	Pn	15 23 08.8	-0.3
IKRD	Kardeh	6.18	14	Pn	Pn	15 23 12.9	+3.7
DAMV	Damavand	6.25	322	ePN	Pn	15 23 09.1	-1.0
IMYA	Miamay	6.25	26	Pn	Pn	15 23 12.9	+2.7
IAFJ	Afjeh	6.55	322	Pn	Pn	15 23 14.3	-0.1
IRAZ	Razeghan	7.30	311	Lg		15 25 28.7	
IRAZ	Razeghan	7.30	311	Pn	Pn	15 23 24.2	-0.8

MAN 22 15:50:57.8, 12.76N×**122.81E, h9**^{km}**, mb3.9, ML2.6, MS2.3, 2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.57	347	eP	Pg	15 51 09.4	0.0
OTRP	Odiongan	0.86	243	eP	Pb	15 51 13.8	-0.7
MMPH	Masbate	0.90	117	⇓iP	Pb	15 51 14.5	-0.6
BOAC	Boac	1.16	307	eP	Pb	15 51 19.5	-0.2
BOAC				eS	Sb	15 51 39.0	+4.4
GQP	Guinayangan	1.19	343	⇓eP	Pb	15 51 18.5	-1.6
GQP				eS	Sb	15 51 36.6	+1.3
SJMP	San Jose	1.67	260	eP	Pn	15 51 19.3	-8.2
LQP	Lukban	1.82	318	eP	Pn	15 51 29.4	-0.2
POLP	Polilio Island	2.13	337	eP	Pn	15 51 35.0	+1.0

CASC 22 16:00:55.1±2.4**, 14.66N**×**90.21W, h192**^{km}±13^{km}**, MD3.7, 4C-3D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NBG	Las Nubes	0.15	242	⇓eP	P	16 01 21.6	+0.9
NBG				eS	S	16 01 41.2	+1.0
IXG	Ixpaco	0.54	206	⇓eP	P	16 01 20.7	-1.1
IXG				eS	S	16 01 44.7	+2.4
RBDL	Robledal	0.74	137	⇑eP	P	16 01 23.1	+0.4
RBDL				eS	S	16 01 46.3	+2.3
TP2	Tecpan 2	0.80	279	⇑eP	P	16 01 24.0	+1.1
TP2				eS	S	16 01 45.2	+0.7
MTO2	Montecristo 2	0.86	107	⇓iP	P	16 01 24.9	+1.6
MTO2				eS	S	16 01 45.5	+0.3
SNJE	San Jose	0.98	143	⇑eP	P	16 01 24.4	+0.4
SNJE				eS	S	16 01 46.8	+0.4
SBLS	San Blas	0.99	145	⇑eP	P	16 01 24.1	0.0
SBLS				eS	S	16 01 47.5	+1.0
LFRS	El Faro	1.52	133	eP	P	16 01 28.8	+0.1
LFRS				eS	S	16 01 52.9	-1.6
SNVI	San Vicente	1.69	128	eP	P	16 01 31.5	+1.3

NNC ***22*** *16:13:10.3±1.7, 42.43N×85.16E, mpv3.8, Error ellipse: s-maj=18.3km s-min=11.7km az=115.0*
MOS ***22*** *16:13:13.2±0.8, 42.40N×85.01E, h33^{km}, mb4.0/7, Error ellipse: s-maj=25.4km s-min=9.5km az=114.0*
BJI ***22*** *16:13:14.1, 42.21N×84.98E, h30^{km}, mB4.7, mb3.9, ML4.2, Ms3.5, Msz3.6*
NEIC ***22*** *16:13:15.6±1.1, 42.35N×84.95E, h38^{km}±9^{km}, mb4.4/1, Error ellipse: s-maj=11.0km s-min=8.3km az=202.0*
IDC ***22*** *16:13:16.1±3.8, 42.43N×85.06E, h41^{km}±35^{km}, mb3.5/9, mb1 3.8/12, mb1mx3.7/21, mbtmp3.8/12, ML3.5/3, Error ellipse: s-maj=28.8km s-min=16.4km az=50.0*
ISC 22 16:13:13.1±0.5**, 42.30N**±0.06×**84.99E**±0.06**, h33**^{km}**, n46, σ0^{s}80**/48**, mb3.7**/10**, 3C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	2.50	52	P	P	16 13 56.3	+4.1
WMQ				S	S	16 14 29.3	+7.5
WMQ				Smax			
	comp=N,732nm,0.6s						
WMQ				Smax			
	comp=E,1µm,0.6s						
MK31	Makanchi Array	4.89	338	Pn	Pn	16 14 26.8	+0.4
	comp=E,8.6nm,0.5s,baz=152,slow=13,SNR=401						
MK31				⇑Lg		16 15 42.9	
	comp=E,40nm,0.5s,baz=146,slow=29,SNR=10						
MKAR	Makanchi Array	4.89	338	P	P	16 14 26.7	+0.4
ULHL	Ulahol	6.49	272	P	P	16 14 48.9	+0.1
	SNR=29						
TKM2	Tokmak 2	6.96	278	P	P	16 14 56.0	+0.6
	SNR=31						
KZA	Kyzart	7.24	272	P	P	16 14 59.7	+0.5
	SNR=24						
KBK	Karagaybulak	7.43	276	P	P	16 15 02.1	+0.2
	SNR=14						
AAK	Ala-Archa	7.77	276	P	P	16 15 07.7	+1.1
	SNR=8.1						
AAK	Ala-Archa	7.77	276	⇓Pn	Pn	16 15 06.5	-0.3
	comp=E,2.6nm,0.5s						
AAK				⇓Lg		16 17 19.1	
	comp=E,30nm,0.9s						
AAK	Ala-Archa	7.77	276	iP	P	16 15 05.7	-0.9
AAK	Ala-Archa	7.77	276	eP	P	16 15 04.9	-1.7
UCH	Uchtor	7.77	273	P	P	16 15 06.6	-0.1
	SNR=7.3						
USP	Ospenovka	7.78	281	P	P	16 15 06.5	-0.2
	SNR=6.8						
KURK	Kurchatov	9.49	335	⇓Lg		16 18 08.0	
	comp=E,20nm,0.8s						
KURK	Kurchatov	9.49	335	P	P	16 15 29.5	-1.0
GTA	Gaotai	11.59	99	eP	P	16 15 58.1	-1.1
GTA				PP	PP	16 16 05.6	-2.3
GTA				S	S	16 18 02.1	-6.4
GTA				LG1		16 18 58.6	
GTA				LG2		16 19 16.0	
GTA				AMB	AMB		
	comp=Z,2.0nm,0.9s						
GTA				LR	LR		
	comp=N,103nm,6.8s						
GTA				LR	LR		
	comp=E,58nm,7.2s						
GTA				LR	LR		
	comp=Z,157nm,6.8s						
ZAL	Zalesovo	11.65	359	P	P	16 15 57.6	-2.2
ZAL				S	S	16 18 03.0	-6.7
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	11.65	359	P	P	16 15 57.5	-2.3
	comp=Z,0.8nm,0.3s,baz=303,slow=10.0,SNR=7.3						
ZAL				S	S	16 18 03.0	-6.7
	comp=Z,0.9nm,0.3s,baz=311,slow=20,SNR=8.8						
NVS	Novosibirsk	12.60	355	eP	P	16 16 21.7	+9.0
NVS				eS	S	16 18 34.7	+1.8
BVA0	Borovoye Array	14.53	323	Pn	P	16 16 37.6	-0.4
	comp=Z,0.8nm,1.3s,baz=136,slow=10,SNR=7.1						
BVA0				⇓Lg		16 20 50.0	
	comp=Z,2.2nm,0.9s						
BVA0	Borovoye Array	14.53	323	P	P	16 16 37.5	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BVAR	Borovoye Array	14.53	323	P	P	16 16 38.1	+0.1
	comp=Z,0.3nm,0.3s,baz=128,slow=12,SNR=9.3						
BVAR				Lg		16 20 50.5	
	comp=Z,0.2nm,0.3s,baz=143,slow=32,SNR=3.2						
CHKZ	Chkalovo	14.87	325	⇑Pn	P	16 16 41.9	-0.5
	comp=Z,1.8nm,0.6s						
CHKZ				⇑Lg		16 21 01.5	
	comp=Z,8.9nm,1.1s						
CHKZ	Chkalovo	14.87	325	eP	P	16 16 41.8	-0.6
SONM	Songino Array	16.08	63	P	P	16 16 59.2	+1.1
	comp=Z,0.1nm,0.3s,baz=255,slow=13,SNR=14						
SONM				Lg		16 21 36.0	
	comp=Z,0.0nm,0.3s,baz=260,slow=30,SNR=3.0						
CMAR	Chiang Mai Arr	26.57	149	P	P	16 18 51.0	+1.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	Chiang Mai Arr	26.57	149	P	P	16 18 51.0	+1.0
	comp=Z,1.9nm,0.7s,mb3.8,baz=316,slow=10.0,SNR=18						
TIXI	Tiksi	36.35	22	iP	P	16 20 28.4	+13
BRTR	Keskin Array B	38.36	284	P	P	16 20 33.7	+1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	38.36	284	P	P	16 20 33.7	+1.1
	comp=Z,0.5nm,0.5s,mb3.5,baz=108,slow=9.1,SNR=3.1						
FINES	FINESS Array B	39.46	320	P	P	16 20 40.8	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	39.46	320	P	P	16 20 40.8	-0.6
	comp=Z,2.2nm,0.9s,mb3.9,baz=92,slow=8.4,SNR=4.1						
ARCES	ARCESS Array B	40.52	332	P	P	16 20 50.2	0.0
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	40.52	332	P	P	16 20 50.2	-0.1
	comp=Z,2.7nm,0.9s,mb3.9,baz=84,slow=8.2,SNR=3.5						
NOA	NORSAR Array B	46.64	320	P	P	16 21 38.8	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA	NORSAR Array B	46.64	320	P	P	16 21 38.8	-0.8
	comp=Z,0.5nm,0.9s,mb3.5,baz=81,slow=6.9,SNR=2.7						
GERES	GERESS Array B	48.65	304	P	P	16 21 55.8	+0.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=60,slow=7.9,SNR=2.8						
ILAR	Eielson Array	65.83	22	P	P	16 23 56.2	-0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	Eielson Array	65.83	22	P	P	16 23 56.2	-0.5
	comp=Z,0.5nm,1.0s,mb3.5,baz=301,slow=5.3,SNR=3.8						
YKA	Yellowknife Ar	74.37	9	P	P	16 24 48.5	0.0
	comp=Z,0.2nm,0.6s,mb3.2,baz=341,slow=5.7,SNR=7.2						
WRAB	Tennant Creek	76.86	133	P	P	16 25 03.6	0.0
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WRAB	Tennant Creek	76.86	133	P	P	16 25 03.6	0.0
	comp=Z,3.3nm,0.8s,mb4.3						
WRA	Warramunga Arr	76.86	133	P	P	16 25 03.7	+0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	76.86	133	P	P	16 25 03.7	+0.1
	comp=Z,0.5nm,0.5s,mb3.7,baz=330,slow=5.2,SNR=14						
LPAZ	La Paz	145.33	310	PKIKP	PKPdf	16 32 49.0	+1.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	La Paz	145.33	310	PKPbc	PKPbc	16 32 49.0	+0.8
	comp=Z,0.6nm,0.7s,baz=41,slow=15,SNR=3.1						

IDC ***22*** *16:17:47.3±0.7, 54.84S×130.68W, mb4.1/8, mb1 4.3/8, mb1mx4.1/16, mbtmp4.1/8, MS4.6/12, Ms1 4.6/12, ms1mx4.3/17, Error ellipse: s-maj=30.2km s-min=18.7km az=5.0*
NEIC ***22*** *16:17:48.5±0.5, 54.77S×130.69W, h10^{km}, mb4.8/4, Error ellipse: s-maj=20.9km s-min=14.2km az=185.0*
ISC 22 16:17:46.9±0.5**, 54.72S**±0.08×**130.7W**±0.2**, h10**^{km}**, n33, σ1^{s}03**/17**, mb4.4**/12**, MS4.6**/12**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	Rikitea	31.72	352	eS	S	16 29 20.7	-0.7
RKT				eLQ		16 31 12.2	
RKT				eLR	LR	16 32 13.7	
	3µm,30.2s						
TBI	Tubuai	34.33	328	eS	S	16 30 03.2	+1.3
TBI				eLQ		16 32 06.2	
TBI				eLR	LR	16 33 15.9	
	3µm,29.8s						
USHA	Ushuaia	34.86	116	LR	LR	16 34 10.9	
	comp=Z,656nm,21.7s,MS4.3,baz=218,slow=28						
QSPA	South Pole Qui	35.45	180	eP	P	16 24 45.6	+0.9
	9.2nm,1.1s,mb4.6						
RPZ	Rata Peaks	38.53	262	LR	LR	16 36 55.5	
	comp=Z,1µm,20.1s,MS4.7,baz=119,slow=30						
URZ	Urewera	38.53	273	LR	LR	16 37 24.0	
	comp=Z,1µm,18.6s,MS4.8,baz=145,slow=30						
PPT	Papeete	39.83	331	eS	S	16 31 25.0	-1.0
PPT				eLQ		16 34 18.3	
PPT				eLR	LR	16 35 48.5	
	3µm,26.5s						
RAR	Rarotonga	40.00	315	P	P	16 25 24.9	+1.6
	20nm,0.8s,mb4.9,baz=140,slow=17,SNR=3.0						
RAR				LR	LR	16 38 00.1	
	comp=Z,760nm,18.2s,MS4.6,baz=105,slow=30						
PLCA	Paso Flores	41.51	96	P	P	16 25 35.9	+0.5
	1.7nm,0.7s,mb3.8,baz=242,slow=9.9,SNR=4.3						
PLCA				LR	LR	16 39 08.0	
	comp=Z,587nm,18.9s,MS4.5,baz=228,slow=31						
TAOE	Nuku Hiva Isla	46.36	347	eS	S	16 33 00.8	-0.8
TAOE				eLR	LR	16 39 00.5	
TRQA	Tornquist	48.22	99	eP	P	16 26 28.1	-1.2
	12nm,1.5s,mb4.7						
SNAA	Sanae	48.70	161	P	P	16 26 33.0	+0.5
	0.9nm,0.8s,mb3.9,baz=358,slow=20,SNR=3.5						
CFAA	Coronel Fontan	49.18	89	P	P	16 26 35.8	-1.0
	0.5nm,0.9s,mb3.5,baz=200,slow=8.1,SNR=6.4						
MAW	Mawson	57.57	186	LR	LR	16 50 22.1	
	comp=Z,525nm,18.4s,MS4.7,baz=165,slow=34						
LPAZ	La Paz	61.07	77	P	P	16 28 03.5	+0.2
	4.6nm,0.8s,mb4.6,baz=203,slow=6.4,SNR=16						
LPAZ				LR	LR	16 48 33.7	
	comp=Z,152nm,19.8s,MS4.2,baz=36,slow=30						
STKA	Stephens Creek	63.40	252	P	P	16 28 18.4	-0.2
	2.8nm,0.9s,mb4.4,baz=127,slow=10,SNR=4.3						
STKA				LR	LR	16 50 11.9	
	comp=Z,658nm,21.2s,MS4.8,baz=95,slow=31						
CTAO	Charters Tower	69.87	264	eP	P	16 28 58.5	-1.3
	11nm,1.1s,mb4.7						
BDFB	Brasilia	73.18	93	LR	LR	16 58 23.4	
	comp=Z,708nm,19.1s,MS5.0,baz=212,slow=33						
ROSC	El Rosal	75.42	59	LR	LR	16 58 33.7	
	comp=Z,129nm,18.3s,MS4.3,baz=208,slow=32						
WRA	Warramunga Arr	76.77	254	P	P	16 29 39.4	-0.7
	2.3nm,0.9s,mb4.1,baz=142,slow=5.3,SNR=20						
WRAB	Tennant Creek	76.77	254	eP	P	16 29 39.6	-0.5
	15nm,1.0s,mb4.9						
TXAR	Lajitas Array	86.89	23	P	P	16 30 35.2	+2.4
	0.4nm,0.3s,mb4.2,baz=102,slow=8.3,SNR=3.3						
TXAR	Lajitas Array	86.89	23	P	P	16 30 35.2	+2.4
NVAR	Mina Array Bea	93.39	10	LR	LR	17 02 02.8	
	comp=Z,191nm,19.4s,MS4.6,baz=180,slow=28						
PDAR	Pinedale Array	98.78	16	LR	LR	17 06 55.4	
	comp=Z,306nm,19.2s,MS4.8,baz=213,slow=30						
ILAR	Eielson Array	119.81	352	PKP	PKPdf	16 36 37.7	-1.5
	1.1nm,1.0s,baz=216,slow=2.1,SNR=12						
ULN	Ulaanbaatar	144.16	283	eP	PKPbc	16 37 21.4	+0.3
SONM	Songino Array	144.51	283	PKP	PKPdf	16 37 23.0	-2.5
	8.5nm,1.2s,baz=134,slow=2.3,SNR=12						
TLY	Talaya	147.99	287	PKPbc	PKPdf	16 37 34.3	+3.1
GERES	GERESS Array B	157.38	90	PKP	PKPdf	16 37 49.2	+4.4
	0.7nm,0.8s,baz=270,slow=1.3,SNR=4.9						
GERES				PKPab	PKPab	16 38 09.3	-6.3
	0.4nm,0.7s,baz=180,slow=2.9,SNR=3.1						
NOA	NORSAR Array B	159.03	57	PKPab	PKPab	16 38 25.8	+3.5
	0.6nm,0.7s,baz=237,slow=1.0,SNR=2.5						
ZAL	Zalesovo	159.42	282	PKPab	PKPab	16 38 24.7	+0.5
	1.0nm,0.3s,baz=138,slow=5.6,SNR=3.6						
BRTR	Keskin Array B	161.68	139	PKPab	PKPab	16 38 34.0	-0.4
	0.3nm,0.5s,baz=180,slow=4.3,SNR=2.2						

IDC 22 16:32:03.8±5.6,4.58N×93.26E,mb3.6/2,mb1 3.9/3, mb1mx3.6/17,mbtmp3.6/3,ML4.1/1,Error ellipse: s-maj=160.2km s-min=33.7km az=72.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.87**	**21**	Pn	P	16 35 37.1	-0.2
	0.3nm,0.3s,baz=212,slow=12,SNR=13						
SONM	**Songino Array**	**44.55**	**13**	P	P	16 40 17.0	-2.1
	0.4nm,0.6s,baz=197,slow=6.7,SNR=4.6						
WRA	**Warramunga Arr**	**47.15**	**123**	P	P	16 40 38.3	-1.8
	1.0nm,0.5s,baz=302,slow=9.1,SNR=17						

IDC 22 16:33:11.6±6.8,23.13S×179.54E,h582^{km}±75^{km},mb3.1/5, mb1 3.1/6,mb1mx3.0/17,mbtmp4.1/6,Error ellipse: s-maj=63.7km s-min=23.7km az=53.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**15.22**	**187**	P	P	16 36 21.7	-0.5
	0.6nm,0.3s,baz=359,slow=8.9,SNR=6.0						
URZ				S	S	16 38 55.3	-0.3
	0.3nm,0.3s,baz=260,slow=16,SNR=3.6						
RPZ	**Rata Peaks**	**21.69**	**197**	P	P	16 37 21.2	-1.5
	2.8nm,0.8s,baz=218,slow=12,SNR=2.9						
CTA	**Charters Tower**	**31.05**	**269**	P	P	16 38 43.6	-1.1
	1.6nm,0.3s,baz=101,slow=9.1,SNR=5.5						
PMG	**Port Moresby**	**33.84**	**288**	P	P	16 39 07.2	-1.0
	4.1nm,0.7s,baz=133,slow=6.0,SNR=4.2						
STKA	**Stephens Creek**	**34.62**	**247**	P	P	16 39 13.6	-0.9
	1.5nm,0.8s,baz=93,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**42.04**	**265**	P	P	16 40 12.8	-2.0
	0.5nm,0.3s,baz=94,slow=8.1,SNR=39						
AKASG	**Malin Array Be**	**144.10**	**328**	PKP	PKPdf	16 51 41.0	0.0
	0.5nm,0.3s,baz=38,slow=3.6,SNR=8.6						

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*IDC **22** 16:59:35.1±1.7,30.55N×56.81E,mb3.7/11,mb1 3.9/11, mb1mx3.8/21,mbtmp3.7/11,Error ellipse: s-maj=44.0km s-min=24.1km az=10.0*

*NEIC **22** 16:59:36.7±0.9,30.58N×56.90E,h10^{km},mb3.5/2, MN3.8(TEH),Error ellipse: s-maj=15.3km s-min=7.6km az=180.0*

*CSEM **22** 16:59:37.2±0.1,30.72N×56.96E,h18^{km},mb3.7/1,ML4.0/1, Error ellipse: s-maj=3.2km s-min=2.8km az=68.0*

*THR **22** 16:59:37.2±0.5,30.76N×56.90E,h14^{km}±6^{km},ML3.5*

*TEH **22** 16:59:38.9,30.69N×57.01E,h10^{km},Mn3.8*

ISC 22 16:59:38.1±1.3,30.78N±0.05×56.91E±0.06,h21^{km}±12^{km}, n36,σ0^{s}97/39,mb3.6/11,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.80**	**189**	*i* PG	**Pb**	**16 59 52.2**	**-1.1**
KRBR				AML	AML	17 00 11.7	
	comp=N,3µm,0.3s						
IBAF	**Bafgh**	**1.41**	**305**	Pn	**Pn**	**17 00 02.5**	**-0.3**
IMEH	**Mehriz**	**2.06**	**288**	Pn	**Pn**	**17 00 13.2**	**+1.0**
ICHK	**Chekchek**	**2.59**	**305**	Pn	**Pn**	**17 00 19.6**	**-0.1**
ISAD	**Sadrabad**	**2.98**	**293**	Pn	**Pn**	**17 00 26.2**	**+0.9**
BNDS	**Bandar-Abbas**	**3.43**	**191**	*e*PN	**Pn**	**17 00 32.3**	**+0.6**
BNDS				AML	AML	17 01 41.2	
	comp=N,118nm,0.5s						
ZHSF	**Zahedan**	**3.54**	**108**	*e*PN	**Pn**	**17 00 33.9**	**+0.6**
ZHSF				AML	AML	17 01 44.9	
	comp=N,79nm,0.7s						
NASN	**Na'in**	**4.03**	**301**	*e*PN	**Pn**	**17 00 40.9**	**+0.7**
NASN				*e*SG	**Sn**	**17 01 42.8**	**+15**
NASN				AML	AML	17 01 49.4	
	comp=N,54nm,0.5s						
NASN	**Na'in**	**4.03**	**301**	*e*Pn	**Pn**	**17 00 40.9**	**+0.7**
	SNR=52						
NASN				*e*Sg	**Sn**	**17 01 42.8**	**+15**
	comp=N,54nm,0.5s,SNR=90						
MHI	**Mashhad**	**5.92**	**21**	Pn	**Pn**	**17 01 06.1**	**-0.7**
IPAY	**Payeh**	**5.92**	**17**	Pn	**Pn**	**17 01 06.8**	**-0.1**
IFIR	**Firoozkooh**	**5.97**	**325**	Pn	**Pn**	**17 01 08.2**	**+0.6**
IVRN	**Varamin**	**6.05**	**315**	Pn	**Pn**	**17 01 09.0**	**+0.2**
IKRD	**Kardeh**	**6.13**	**12**	Pn	**Pn**	**17 01 12.8**	**+3.0**
IMYA	**Miamay**	**6.15**	**25**	Pn	**Pn**	**17 01 09.1**	**-1.1**
IDMV	**Damavand**	**6.29**	**321**	Pn	**Pn**	**17 01 12.6**	**+0.4**
DAMV	**Damavand**	**6.37**	**321**	*e*PN	**Pn**	**17 01 13.5**	**+0.3**
IAFJ	**Afjeh**	**6.67**	**321**	Pn	**Pn**	**17 01 17.5**	**0.0**
IAFJ				Sn	**Sn**	**17 02 30.8**	**-2.9**
IRAZ	**Razeghan**	**7.45**	**310**	Pn	**Pn**	**17 01 27.6**	**-0.9**
AAK	**Ala-Archa**	**18.36**	**45**	P	**P**	**17 03 52.2**	**-1.1**
	comp=N,0.9nm,0.5s						
AAK	**Ala-Archa**	**18.36**	**45**	P	**P**	**17 03 52.2**	**-1.1**
	comp=N,0.9nm,0.5s						
BRTR	**Keskin Array B**	**20.95**	**302**	P	**P**	**17 04 19.2**	**-2.8**
	comp=N,0.5nm,0.4s,baz=117,slow=13,SNR=3.2						
BVAR	**Borovoye Array**	**24.31**	**20**	P	**P**	**17 04 56.2**	**+1.2**
	comp=N,0.8nm,0.6s,mb3.3,baz=217,slow=7.2,SNR=6.3						
KURK	**Kurchatov**	**25.66**	**33**	P	**P**	**17 05 08.6**	**+0.6**
	comp=N,1.5nm,0.8s,mb3.6						
KURK	**Kurchatov**	**25.66**	**33**	P	**P**	**17 05 08.6**	**+0.6**
	comp=N,1.5nm,0.8s,mb3.6						
ZAL	**Zalesovo**	**30.64**	**33**	P	**P**	**17 05 52.4**	**-0.6**
	comp=N,0.8nm,0.4s,mb3.9,baz=271,slow=6.6,SNR=3.9						
ZAL	**Zalesovo**	**30.64**	**33**	P	**P**	**17 05 52.3**	**-0.6**
FINES	**FINESS Array B**	**36.71**	**336**	P	**P**	**17 06 44.7**	**-0.6**
	comp=N,1.7nm,0.9s,mb3.9,baz=127,slow=14,SNR=2.7						
GERES	**GERESS Array B**	**37.19**	**312**	P	**P**	**17 06 48.7**	**-0.7**
	comp=N,0.4nm,0.7s,mb3.4,baz=90,slow=9.3,SNR=5.2						
GERES	**GERESS Array B**	**37.19**	**312**	P	**P**	**17 06 48.8**	**-0.6**
DAVOX	**Davos**	**39.37**	**308**	P	**P**	**17 07 08.1**	**+0.3**
	comp=N,2.3nm,0.8s,mb4.0,baz=325,slow=20,SNR=2.7						
SONM	**Songino Array**	**41.15**	**51**	P	**P**	**17 07 24.7**	**+2.3**
	comp=N,0.3nm,0.8s,mb3.0,baz=240,slow=7.5,SNR=2.5						
INK	**Inuvik**	**80.91**	**4**	P	**P**	**17 11 51.6**	**-0.1**
	comp=N,2.1nm,1.2s,mb4.0,baz=137,slow=2.4,SNR=3.7						
ILAR	**Eielson Array**	**82.96**	**10**	P	**P**	**17 12 02.1**	**-0.3**
	comp=N,0.3nm,0.6s,mb3.5,baz=331,slow=3.9,SNR=5.1						
YKA	**Yellowknife Ar**	**86.81**	**356**	P	**P**	**17 12 22.1**	**+0.6**
	comp=N,0.3nm,0.5s,mb3.8,baz=359,slow=5.0,SNR=11						
WRA	**Warramunga Arr**	**89.80**	**113**	P	**P**	**17 12 35.5**	**-1.4**
	comp=N,0.2nm,0.9s,mb3.5,baz=316,slow=3.9,SNR=5.8						

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*CRAAG **22** 17:11:55.5,10.80N×91.88E,Mb5.7*

*GUC **22** 17:11:56.7±0.0,10.79N×91.77E,h6^{km},mb5.6(NEIC), MS4.9(NEIC),MW5.5(NEIC)*

*BJI **22** 17:11:58.6,10.84N×91.83E,h27^{km},mB6.0,mb5.4,Ms5.6, Msz5.3*

*MOS **22** 17:11:59.5±0.9,10.83N×91.81E,h33^{km},mb5.8/101, MS5.2/51,Error ellipse: s-maj=6.8km s-min=3.5km az=121.8*

*NEIC **22** 17:12:00.6±0.1,10.83N×91.77E,h30^{km},mb5.6/109, ME5.4,MS5.4/100,MW5.5,Error ellipse: s-maj=4.6km s-min=3.5km az=212.0,Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.40; M$_{\theta\theta}$-0.73; M$_{\phi\phi}$-1.66; M$_{r\theta}$-0.06; M$_{\theta\phi}$-0.97; M$_{\phi r}$-0.06; Best double couple: M$_0$2.3×10^{17} NP1:φ$_s$32°,δ44°,λ90°. NP2:φ$_s$213°, δ46°,λ90°. Principal axes: T 2.41, Plg89°, Azm138°; N -.13, Plg0°, Azm32°; P -2.27, Plg1°, Azm302°; Depth from synthetics of broadband displacement seismograms. Energy computed from MT mechanism.*

*HRVD **22** 17:12:00.6±0.1,10.81N×91.72E,h12^{km},MW5.5/72, Centroid moment Tensor Solution. LP body waves: s62,c111;Mantle waves: s72,c180; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.66±.02; M$_{\theta\theta}$0.10±.02; M$_{\phi\phi}$-1.76±.02; M$_{r\theta}$-0.34±.06; M$_{\theta\phi}$0.11±.02; M$_{\phi r}$-1.21±.06; Best double couple: M$_0$2.127×10^{17} NP1:φ$_s$345°,δ29°,λ69°. NP2:φ$_s$188°,δ63°,λ101°. Principal axes: T 2.11, Plg70°, Azm121°; N .032, Plg10°, Azm3°; P -2.145, Plg18°, Azm270°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **22** 17:12:02.6±2.6,10.87N×91.90E,h43^{km}±23^{km},mb5.1/33, mb1 5.1/34,mb1mx5.1/34,mbtmp5.3/34,ML4.3/1,MS5.1/18, Ms1 5.1/18,ms1mx4.9/25 Error ellipse: s-maj=15.1km s-min=8.5km az=34.0*

ISC 22 17:11:55.6±0.7,10.80N±0.03×91.81E±0.02,h8^{km}±4^{km}, h16^{km}±1.8^{km}:pP-P,n688,σ1^{s}06/627,mb5.5/180,MS5.3/161, 88C-31D,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.25**	**47**	*e*P	**Pb**	**17 12 21.8**	**+2.9**
NNT	**Nongplab**	**7.96**	**76**	P	**Pn**	**17 13 56.0**	**+1.6**
SNG	**Songkhla**	**9.41**	**112**	P	**P**	**17 14 26.0**	**+11**
NST	**Nakhon Sawan**	**9.44**	**58**	P	**P**	**17 14 15.5**	**+0.6**
BDT	**Bhumibol Dam**	**9.47**	**47**	P	**P**	**17 14 16.0**	**+0.7**
	38nm,0.8s						
CM31	**Chiang Mai Arr**	**10.27**	**41**	*e*P	**P**	**17 14 25.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**10.27**	**41**	*i* P	**P**	**17 14 25.6**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**10.27**	**41**	P	**P**	**17 14 25.6**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=235,slow=14,SNR=47						
CMAR				LR	LR	17 18 53.8	
	comp=Z,6µm,20.8s,baz=220,slow=40						
CHG	**Chiang Mai**	**10.53**	**40**	⇑P	**P**	**17 14 29.6**	**-0.4**
	comp=Z,68nm,1.1s						
VIS	**Vishakhapatnam**	**10.72**	**311**	*e*P	**P**	**17 14 30.0**	**-2.6**
VIS				AMb	AMB	17 14 37.1	
	comp=Z,1µm,0.8s						
VIS				*e*S	**S**	**17 16 20.1**	**-14**
VIS				*i*		17 25 02.0	
IPM	**Ipoh**	**11.03**	**123**	P	**P**	**17 14 36.1**	**-0.7**
BWNR	**Bhubaneshwar**	**11.07**	**329**	*e*P	**P**	**17 14 32.8**	**-4.5**
BWNR				AMb	AMB	17 14 40.5	
	comp=Z,456nm,1.0s						
BWNR				*e*S	**S**	**17 16 28.2**	**-14**
MDRS	**Chennai**	**11.54**	**282**	*e*P	**P**	**17 14 40.0**	**-3.8**
MDRS				*e*S	**S**	**17 16 37.0**	**-17**
MDRS				*e*		17 24 32.0	
MDRS				*e*		17 25 59.0	
MDRS				*e*		17 26 06.0	
NANT	**Nan**	**11.70**	**46**	⇑P	**P**	**17 14 45.0**	**-1.0**
	comp=Z,81nm,1.0s						
CHRT	**Chiangrai**	**11.84**	**39**	⇑P	**P**	**17 14 47.5**	**-0.4**
	comp=Z,221nm,1.3s						
KKTK	**Khon Kaen**	**12.03**	**62**	P	**P**	**17 14 55.0**	**+4.5**
	comp=Z,679nm,1.0s						
CAL	**Calcutta**	**12.13**	**345**	*e*P	**P**	**17 14 50.2**	**-1.6**
CAL				*e*		17 17 26.4	
AGT	**Agartala**	**13.02**	**358**	⇓*i*P	**P**	**17 15 04.0**	**+0.4**
AGT				*i*		17 16 43.0	
UBT	**Ubonrachathani**	**13.60**	**70**	P	**P**	**17 15 24.0**	**+13**
HYB	**Hyderabad**	**14.44**	**299**	*e*P	**P**	**17 15 20.0**	**-2.4**
HYB				pmax	pmax		
	comp=Z,120nm,1.0s						
HYB	**Hyderabad**	**14.44**	**299**	*e*P	**P**	**17 15 20.0**	**-2.4**
	comp=Z,120nm,1.0s						
HYB				*e*S	**S**	**17 17 52.0**	**-12**
HYB	**Hyderabad**	**14.44**	**299**	*i* P	**P**	**17 15 20.0**	**-2.4**
	comp=Z,120nm,1.0s						
HYB				*e*		17 17 52.0	
HYB				*e*S	**S**	**17 18 04.0**	**+0.3**
HYB				LR	LR	17 32 08.0	
	comp=Z,19nm,10.0s						
BLSP	**Bilaspur**	**14.59**	**322**	*i* P	**P**	**17 15 23.0**	**-1.4**
BLSP				*e*		17 15 30.3	
	comp=Z,258nm,0.9s						
BLSP				*e*S	**S**	**17 18 05.1**	**-2.1**
BLSP				*e*S	**S**	**17 18 07.0**	**-0.2**
MNGI	**Mangalore**	**16.76**	**279**	*i* P	**P**	**17 15 52.7**	**+0.2**
MNGI				*i*		17 18 43.5	
ALBI	**Allahabad**	**17.26**	**328**	*e*	**P**	**17 15 54.5**	**-4.3**
JIRN	**Jiri**	**17.58**	**343**	*e*P	**P**	**17 16 00.3**	**-2.4**
	comp=Z,564nm,1.3s						
KMI	**Kunming**	**17.61**	**35**	P	**P**	**17 16 05.0**	**+1.9**
KMI				AP		17 16 12.3	
KMI				XP		17 16 16.8	
KMI				PP	PP	17 16 20.5	+2.7
KMI				S	**S**	**17 19 21.1**	**+3.5**
KMI				AMB	AMB		
	comp=Z,75nm,1.1s						
KMI				AMB	AMB		
	comp=Z,3µm,10.0s						
KMI				LR	LR		
	comp=N,7µm,17.4s						
KMI				LR	LR		
	comp=E,8µm,17.4s						
KMI				LR	LR		
	comp=Z,7µm,16.0s						
KMI	**Kunming**	**17.61**	**35**	P	**P**	**17 16 05.0**	**+1.9**
KMI				S	**S**	**17 19 21.1**	**+3.5**
KMI				pmax	pmax		
	comp=Z,75nm,1.1s						
KMI	**Kunming**	**17.61**	**35**	P	**P**	**17 16 05.0**	**+1.9**
	comp=Z,75nm,1.1s						
KMI				pP		17 16 12.3	
KMI				sP		17 16 16.7	
KMI				PP	PP	17 16 20.5	+2.7
KMI				S	**S**	**17 19 21.1**	**+3.5**
KMI				SS	SS	17 19 44.1	+4.4
KMI				SSS	SSS	17 19 57.0	+4.1
PKI	**Pulchoki**	**17.73**	**341**	*e*P	**P**	**17 16 01.7**	**-2.9**
	comp=Z,620nm,1.2s						
DMN	**Daman**	**17.87**	**340**	*e*P	**P**	**17 16 03.9**	**-2.4**
	comp=Z,366nm,1.0s						
KKN	**Kakani**	**17.98**	**341**	*e*P	**P**	**17 16 05.6**	**-2.0**
	comp=Z,261nm,1.2s						
GOA	**Goa**	**18.12**	**287**	*e*	**P**	**17 16 15.3**	**+5.8**
	comp=Z,263nm,1.6s						
GOA				*e*		17 19 24.6	
KAD	**Karad**	**18.27**	**293**	*e*P	**P**	**17 16 12.7**	**+1.3**
KAD				*e*		17 16 19.1	
	comp=Z,232nm,1.4s						
KAD				*e*		17 19 15.8	
GKN	**Gorkha**	**18.39**	**340**	*e*P	**P**	**17 16 10.9**	**-1.9**
	comp=Z,417nm,1.1s						
GKN				*e*S	**S**	**17 19 28.0**	**-7.1**
BHPL	**Bhopal**	**18.48**	**314**	*e*P	**P**	**17 16 14.4**	**+0.5**
BHPL				*e*		17 16 19.9	
	comp=Z,262nm,1.1s						
BHPL				*e*		17 19 31.3	
KOLN	**Koldanda**	**18.56**	**337**	*e*P	**P**	**17 16 14.4**	**-0.5**
	comp=Z,723nm,1.5s						
LSA	**Lhasa**	**18.81**	**358**	P	**P**	**17 16 18.0**	**+0.1**
LSA				AP		17 16 25.8	
LSA				XP		17 16 33.4	
LSA				AMB	AMB		
	comp=Z,3µm,7.1s						
LSA				LR	LR		
	comp=N,4µm,16.4s						
LSA				LR	LR		
	comp=E,10µm,13.8s						
LSA				LR	LR		
	comp=Z,7µm,13.0s						
LSA	**Lhasa**	**18.81**	**358**	*e*P	**P**	**17 16 17.8**	**-0.1**
LSA				pmax	pmax		
	comp=Z,806nm,1.4s						
LSA	**Lhasa**	**18.81**	**358**	*e*P	**P**	**17 16 17.8**	**-0.1**
	comp=Z,806nm,1.4s						
POO	**Poona**	**18.99**	**296**	⇓*i*P	**P**	**17 16 20.0**	**-0.1**
	comp=Z,536nm,1.5s						
POO				*i*		17 19 35.0	
QIZ	**Qiongzhong**	**19.23**	**63**	P	**P**	**17 16 22.3**	**-0.7**
QIZ				XP		17 16 31.1	
QIZ				S	**S**	**17 19 52.9**	**-1.4**
QIZ				XS		17 20 03.4	
QIZ				AMB	AMB		
	comp=Z,2µm,8.8s						
QIZ				LR	LR		
	comp=N,8µm,16.4s						
QIZ				LR	LR		
	comp=E,5µm,14.0s						
QIZ				LR	LR		
	comp=Z,8µm,14.1s						
QIZ	**Qiongzhong**	**19.23**	**63**	*e*P	**P**	**17 16 24.0**	**+1.0**
	comp=Z,70nm,0.9s						
BOM	**Bombay**	**20.04**	**296**	*e*	**P**	**17 16 35.6**	**+3.6**
	comp=Z,246nm,2.1s						
BOM				*e*		17 20 24.2	
LGTI	**Lohaghat**	**21.46**	**331**	*e*P	**P**	**17 16 48.3**	**+1.6**
PTH	**Pithoragarh**	**21.56**	**332**	*e*P	**P**	**17 16 47.2**	**-0.5**
PTH				*e*		17 20 55.8	
NDI	**New Delhi**	**22.43**	**325**	*e*P	**P**	**17 16 56.0**	**-0.4**
	comp=Z,32nm,1.2s,mb4.6						
NDI				*e*S	**S**	**17 21 04.0**	**+6.1**
AJM	**Ajmer**	**22.49**	**316**	⇑*i*P	**P**	**17 16 58.0**	**+1.1**
CD2	**Chengdu**	**22.87**	**27**	⇓*i*P	**P**	**17 17 01.3**	**+0.5**
CD2				AP		17 17 08.3	
CD2				XP		17 17 11.6	
CD2				S	**S**	**17 21 04.0**	**-1.9**
CD2				XS		17 21 15.8	
CD2				SS	SS	17 21 48.3	-1.0
CD2				AMB	AMB		
	comp=Z,141nm,1.1s,mb5.3						
CD2				LR	LR		
	comp=E,30µm,12.0s						
DDI	**Dehra Dun**	**23.26**	**329**	*e*P	**P**	**17 17 06.5**	**+2.0**
DDI				*e*S	**S**	**17 21 20.2**	**+7.4**
COCO	**West Island**	**23.38**	**168**	*e*P	**P**	**17 17 09.1**	**+3.2**
	comp=E,1µm,1.2s,mb6.2						
COCO				LR	LR		
	comp=Z,1µm,20.0s,MS4.3						
HKC	**Hong Kong**	**24.25**	**59**	⇑*i*P	**P**	**17 17 16.0**	**+1.7**
HKC				*i* S	**S**	**17 21 50.0**	**+20**
SMLA	**Simla**	**24.36**	**328**	⇑*i*P	**P**	**17 17 31.3**	**+16**
	comp=Z,18nm,0.3s,mb5.0						
SMLA				*i* S	**S**	**17 21 49.4**	**+18**
KKM	**Kota Kinabalu**	**24.59**	**99**	P	**P**	**17 17 18.3**	**+0.6**
SDNR	**Sundarnagar**	**24.76**	**329**	*e*P	**P**	**17 17 21.6**	**+2.5**
BHK	**Bhakra**	**24.98**	**327**	*e*P	**P**	**17 17 23.1**	**+1.9**
BHK				*e*		17 22 35.5	
ENH	**Enshi**	**25.41**	**38**	*e*P	**P**	**17 17 24.6**	**-0.7**
	comp=Z,399nm,0.9s,mb6.0						
ENH				LR	LR		
	comp=Z,6µm,19.0s,MS5.1						
PONG	**Pong**	**25.65**	**328**	*e*P	**P**	**17 17 29.0**	**+1.5**
BATP	**Bataraza**	**25.68**	**92**	*e*P	**P**	**17 17 28.8**	**+0.7**
THN	**Thein Dam**	**26.14**	**328**	*e*P	**P**	**17 17 31.8**	**-0.3**
THN				*e*		17 22 30.4	
DGAR	**Diego Garcia**	**26.43**	**228**	PFAKE		17 17 50.0	+15
DGAR				LR	LR		
	comp=Z,2µm,21.0s,MS4.5						
TSM	**Tawau**	**26.62**	**102**	P	**P**	**17 17 35.8**	**-0.8**
ENPP	**El Nido**	**27.11**	**87**	*e*P	**P**	**17 17 41.6**	**+0.5**
LZH	**Lanzhou**	**27.43**	**22**	P	**P**	**17 17 44.9**	**+1.0**
LZH				XP	sP	17 18 00.6	+13
LZH				S	**S**	**17 22 29.3**	**+6.6**
LZH				AMB	AMB		
	comp=Z,270nm,1.2s,mb5.7						
LZH				AMB	AMB		
	comp=Z,2µm,4.5s						
LZH				LR	LR		
	comp=E,8µm,13.2s						
LZH				LR	LR		
	comp=Z,10µm,18.9s						
LZH	**Lanzhou**	**27.43**	**22**	P	**P**	**17 17 44.9**	**+1.0**
LZH				*PP	pP	17 18 00.6	+14
LZH						17 18 38.0	
LZH				S	**S**	**17 22 29.2**	**+6.5**
LZH				SS	SS	17 23 58.0	+18
LZH				pmax	pmax		
	comp=Z,270nm,1.2s,mb5.7						
LZH				MLR	MLR		
	comp=Z,10µm,18.9s,MS5.4						
LZH	**Lanzhou**	**27.43**	**22**	P	**P**	**17 17 44.9**	**+1.0**
	comp=Z,270nm,1.2s,mb5.7						
LZH				pP	pP	17 18 00.6	+14
LZH				sP	sP	17 18 08.0	+21
LZH				PP	PP	17 18 38.0	+6.6
LZH				S	**S**	**17 22 29.2**	**+6.5**
LZH				sS		17 22 54.0	
LZH				SS	SS	17 23 58.0	+18
LZH				LR	LR		
	comp=Z,10µm,18.9s,MS5.4						
BUSP	**Coron**	**27.85**	**85**	*e*P	**P**	**17 17 47.3**	**-0.6**
LUBP	**Lubang**	**27.93**	**81**	*e*P	**P**	**17 17 48.7**	**+0.1**
XAN	**Xi'an**	**27.93**	**31**	P	**P**	**17 17 46.6**	**-1.8**
XAN				AP	pP	17 17 57.1	+6.4
XAN				S	**S**	**17 22 37.8**	**+7.0**
XAN				AMB	AMB		
	comp=Z,56nm,0.9s,mb5.2						
XAN				LR	LR		
	comp=N,5µm,16.0s,MS5.3						
XAN				LR	LR		
	comp=E,4µm,14.6s,MS5.3						
XAN				LR	LR		
	comp=Z,4µm,15.0s,MS5.1						
TGY	**Tagaytay City**	**28.62**	**80**	P	**P**	**17 17 55.4**	**+0.6**
	comp=Z,170nm,0.4s,mb6.1,baz=241,slow=2.2,SNR=11						
WHN	**Wuhan**	**28.71**	**44**	⇑P	**P**	**17 17 55.0**	**-0.5**
WHN				LR	LR		
	comp=Z,10µm,14.1s,MS5.6						
SJMP	**San Jose**	**28.75**	**84**	*e*P	**P**	**17 17 56.1**	**+0.2**
QZH	**Quanzhou**	**29.03**	**57**	⇑*i*P	**P**	**17 17 58.8**	**+0.4**
QZH				S	**S**	**17 22 51.8**	**+3.2**
QZH				AMB	AMB		
	comp=Z,100nm,0.8s,mb5.6						
QZH				AMB	AMB		
	comp=Z,2µm,8.7s						
QZH				LR	LR		
	comp=N,4µm,12.0s,MS5.4						
QZH				LR	LR		
	comp=E,5µm,13.0s,MS5.4						
QZH				LR	LR		
	comp=Z,8µm,17.0s,MS5.4						
GTA	**Gaotai**	**29.37**	**13**	*e*P	**P**	**17 18 02.1**	**+0.8**
GTA				AP	pP	17 18 09.8	+6.1
GTA				XP	sP	17 18 12.9	+8.2
GTA				PP	PP	17 18 57.3	+0.8
GTA				PPP	PPP	17 19 10.9	+1.0
GTA				PCP	PcP	17 21 08.4	+0.6
GTA				S	**S**	**17 22 52.6**	**-1.2**
GTA				XS		17 23 06.3	
GTA				SS	SS	17 24 22.3	-2.8
GTA				SCP		17 24 48.5	
GTA				PCS		17 24 50.8	
GTA				SCS	ScS	17 28 42.6	+1.1
GTA				AMB	AMB		
	comp=Z,83nm,1.2s,mb5.3						
GTA				AMB	AMB		
	comp=Z,2µm,4.6s						
GTA				LR	LR		
	comp=N,4µm,19.4s,MS5.2						
GTA				LR	LR		
	comp=E,3µm,14.8s,MS5.2						
GTA				LR	LR		
	comp=Z,3µm,19.4s,MS4.9						
TATO	**Taipei**	**31.47**	**59**	PFAKE		17 18 30.0	+10
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS5.0						
KSH	**Kashi**	**31.88**	**336**	⇑P	**P**	**17 18 25.0**	**+1.5**
KSH				*e*AP	pP	17 18 33.1	+7.2
KSH				*e*XP	sP	17 18 36.4	+10
KSH				*e*PP	PP	17 19 29.1	-0.1
KSH				*e*S	**S**	**17 23 35.0**	**+1.7**
KSH				*e*PS		17 23 47.3	
KSH				*e*PCS		17 24 53.0	
KSH				*e*SS	SS	17 25 18.1	-6.2
KSH				AMB	AMB		
	comp=Z,210nm,1.1s,mb5.9						
KSH				LR	LR		
	comp=N,3µm,14.6s,MS5.4						
KSH				LR	LR		
	comp=E,5µm,14.3s,MS5.4						
NJ2	**Nanjing**	**32.71**	**46**	*e*P	**P**	**17 18 30.5**	**-0.3**
NJ2				AP	pP	17 18 41.0	+7.8
NJ2				XP	sP	17 18 45.0	+11
NJ2				PP	PP	17 19 41.0	+1.0
NJ2				PPP	PPP	17 19 57.0	+1.3
NJ2				S	**S**	**17 23 47.0**	**+0.7**
NJ2				XS		17 24 04.0	
NJ2				AMB	AMB		
	comp=Z,270nm,1.1s,mb6.1						
NJ2				AMB	AMB		
	comp=Z,2µm,8.6s						
NJ2				LR	LR		
	comp=N,14µm,12.5s,MS5.9						
NJ2				LR	LR		
	comp=E,6µm,12.7s,MS5.9						
NJ2				LR	LR		
	comp=Z,17µm,18.8s						
WMQ	**Urumqi**	**33.09**	**355**	P	**P**	**17 18 35.0**	**+1.0**
WMQ				XP	sP	17 18 42.0	+4.6
WMQ				PP	PP	17 19 46.0	+1.2
WMQ				S	**S**	**17 23 54.0**	**+1.9**
WMQ				SS	SS	17 25 52.0	-0.2
WMQ				AMB	AMB		
	comp=Z,141nm,1.0s,mb5.8						
WMQ				AMB	AMB		
	comp=Z,211nm,7.5s						
WMQ				LR	LR		
	comp=N,2µm,18.0s,MS5.4						
WMQ				LR	LR		
	comp=E,7µm,20.0s,MS5.4						
WMQ				LR	LR		
	comp=Z,2µm,18.0s,MS4.9						

WBK	**Wadi Bani Khal**	**33.49**	**295**	⇓P	**P**	**17 18 39.8**	**+2.1**
DAV	**Davao City (W)**	**33.55**	**93**	*e*P	**P**	**17 18 42.0**	**+3.6**
BTO	**Baotou**	**33.76**	**25**	*e*P	**P**	**17 18 38.9**	**-1.1**
BTO				LR	LR		
	comp=N,542nm,10.5s,MS5.3						
BTO				LR	LR		
	comp=E,3µm,12.8s,MS5.3						
SSE	**Sheshan**	**33.88**	**49**	P	**P**	**17 18 41.8**	**+0.7**
SSE				XP	sP	17 18 54.1	+10
SSE				PP	PP	17 19 58.9	+4.5
SSE				S	**S**	**17 24 04.9**	**+0.3**
SSE				XS		17 24 20.5	
SSE				AMB	AMB		
	comp=Z,87nm,1.1s,mb5.6						
SSE				AMB	AMB		
	comp=Z,739nm,7.6s						
SSE				LR	LR		
	comp=N,5µm,19.2s,MS5.3						
SSE				LR	LR		
	comp=E,2µm,19.2s,MS5.3						
SSE				LR	LR		
	comp=Z,3µm,14.7s,MS5.2						
SSE	**Sheshan**	**33.88**	**49**	P	**P**	**17 18 41.8**	**+0.7**
	comp=Z,87nm,1.1s,mb5.6						
SSE				sP	sP	17 18 54.1	+10
SSE				PP	PP	17 19 58.9	+4.5
SSE				S	**S**	**17 24 04.9**	**+0.3**
SSE				sS		17 24 20.5	
SSE				SS	SS	17 26 33.4	+23
SSE				LR	LR		
	comp=Z,3µm,14.7s,MS5.2						
ULHL	**Ulahol**	**34.16**	**339**	P	**P**	**17 18 44.1**	**+0.8**
	SNR=42						
JMDO	**Jabal Madar**	**34.21**	**294**	⇓P	**P**	**17 18 45.9**	**+2.0**
KZA	**Kyzart**	**34.37**	**338**	P	**P**	**17 18 47.0**	**+1.8**
	SNR=46						
SMDO	**Samad**	**34.43**	**295**	⇑P	**P**	**17 18 47.9**	**+2.1**
HHC	**Hu-ho-hao-te**	**34.63**	**27**	⇑*i*P	**P**	**17 18 47.8**	**+0.4**
HHC				AP	pP	17 18 53.1	+3.3
HHC				XP	sP	17 18 57.6	+6.8
HHC				PP	PP	17 20 06.3	+2.4
HHC				PCP	PcP	17 21 17.8	-4.2
HHC				S	**S**	**17 24 23.5**	**+7.4**
HHC				XS		17 24 31.3	
HHC				SCP		17 25 02.5	
HHC				SCS	ScS	17 29 03.8	-4.2
HHC				AMB	AMB		
	comp=Z,70nm,1.6s,mb5.3						
HHC				AMB	AMB		
	comp=Z,1µm,5.1s						
HHC				LR	LR		
	comp=N,4µm,14.3s,MS5.5						
HHC				LR	LR		
	comp=E,6µm,14.3s,MS5.5						
HHC				LR	LR		
	comp=Z,4µm,15.5s,MS5.3						
UCH	**Uchtor**	**34.77**	**337**	P	**P**	**17 18 49.6**	**+1.0**
	SNR=48						
AAA	**Alma-Ata**	**34.83**	**341**	*e*P	**P**	**17 18 51.0**	**+1.9**
AAA				*e*S	**S**	**17 24 12.0**	**-7.2**
AAA				MLR	MLR		
	comp=Z,700nm,16.0s,MS4.5						
TKM2	**Tokmak 2**	**34.98**	**339**	P	**P**	**17 18 51.6**	**+1.2**
	SNR=68						
KBK	**Karagaybulak**	**34.98**	**338**	P	**P**	**17 18 52.0**	**+1.6**
	SNR=62						
AML	**Almayashu**	**35.01**	**336**	P	**P**	**17 18 51.8**	**+1.2**
	SNR=174						
BSY	**Bisya**	**35.11**	**294**	⇑P	**P**	**17 18 53.3**	**+1.6**
	SNR=16						
AAK	**Ala-Archa**	**35.13**	**338**	P	**P**	**17 18 52.8**	**+1.1**
	SNR=93						
AAK	**Ala-Archa**	**35.13**	**338**	*c i*P	**P**	**17 18 52.5**	**+0.8**
AAK				pmax	pmax		
	comp=Z,164nm,1.3s,mb5.8						
AAK	**Ala-Archa**	**35.13**	**338**	*e*P	**P**	**17 18 51.6**	**0.0**
	comp=Z,173nm,1.1s,mb5.9						
AAK				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
HOQ	**Hoqain**	**35.22**	**296**	⇑P	**P**	**17 18 55.8**	**+3.2**
	SNR=8.8						
FRU	**Bishkek**	**35.25**	**338**	⇑*i*P	**P**	**17 18 54.5**	**+1.8**
FRU				*e*		17 20 18.0	
FRU				*e*		17 24 30.0	
FRU				pmax	pmax		
	comp=Z,370nm,2.0s,mb6.0						
FRU				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.3						
CHMS	**Chumysh**	**35.35**	**338**	P	**P**	**17 18 54.2**	**+0.7**
	SNR=35						
EKS2	**Erkin-Say**	**35.42**	**337**	P	**P**	**17 18 55.3**	**+1.1**
	SNR=121						
USP	**Ospenovka**	**35.67**	**338**	P	**P**	**17 18 57.2**	**+0.9**
	SNR=150						
ARQ	**Araqi**	**35.86**	**295**	P	**P**	**17 19 01.4**	**+3.3**
	SNR=13						
BJT	**Baijiatuau**	**36.23**	**32**	*e*P	**P**	**17 19 01.3**	**+0.3**
BJT				pmax	pmax		
	comp=Z,120nm,0.9s						
BJT				MLR	MLR		
	comp=Z,7µm,19.0s						
BJT	**Baijiatuau**	**36.23**	**32**	*e*P	**P**	**17 19 01.3**	**+0.3**
	comp=Z,120nm,0.9s,mb5.8						
BJT				LR	LR		
	comp=Z,7µm,19.0s,MS5.4						
BJI	**Beijing**	**36.25**	**32**	P	**P**	**17 19 01.6**	**+0.4**
BJI				XP	sP	17 19 13.6	+9.1
BJI				S	**S**	**17 24 44.3**	**+3.2**
BJI				AMB	AMB		
	comp=Z,124nm,0.9s,mb5.8						
BJI				LR	LR		
	comp=N,6µm,14.8s,MS5.5						
BJI				LR	LR		
	comp=E,4µm,17.1s,MS5.5						
BJI				LR	LR		
	comp=Z,5µm,21.9s,MS5.2						
BJI	**Beijing**	**36.25**	**32**	P	**P**	**17 19 01.6**	**+0.4**
BJI				*SP	sP	17 19 13.6	+9.1
BJI						17 21 20.1	
BJI				S	**S**	**17 24 44.2**	**+3.1**
BJI				pmax	pmax		
	comp=Z,124nm,0.9s,mb5.8						
BJI				MLR	MLR		
	comp=Z,5µm,21.9s,MS5.2						
BJI	**Beijing**	**36.25**	**32**	P	**P**	**17 19 01.6**	**+0.4**
	comp=Z,124nm,0.9s,mb5.8						
BJI				sP	sP	17 19 13.6	+9.1
BJI				PcP	PcP	17 21 20.1	-6.6
BJI				S	**S**	**17 24 44.2**	**+3.1**
BJI				LR	LR		
	comp=Z,5µm,21.9s,MS5.2						
ASHO	**Ashiyiah**	**36.61**	**297**	⇓P	**P**	**17 19 06.2**	**+1.8**
BANOM	**Banah**	**36.76**	**299**	⇓P	**P**	**17 19 08.6**	**+3.0**
MKAR	**Makanchi Array**	**36.77**	**349**	*i* P	**P**	**17 19 05.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,171nm,1.0s						
MKAR	**Makanchi Array**	**36.77**	**349**	*i* P	**P**	**17 19 05.3**	**-0.2**
RBK	**Rabkut**	**37.02**	**285**	⇑P	**P**	**17 19 09.5**	**+1.7**
WHFO	**Wadi Hawf**	**37.47**	**285**	⇓P	**P**	**17 19 13.1**	**+1.5**
JOW	**Kunigami**	**37.84**	**60**	P	**P**	**17 19 15.7**	**+1.0**
	comp=Z,129nm,1.2s,mb5.5,baz=233,slow=5.1						
JOW				LR	LR	17 36 37.4	
	comp=Z,2µm,20.2s,MS4.9,baz=26,slow=39						
ABTO	**Aybut**	**37.87**	**284**	⇑P	**P**	**17 19 16.7**	**+1.7**
DL2	**Dalian**	**38.59**	**38**	P	**P**	**17 19 22.8**	**+1.9**
DL2				PP	PP	17 20 50.5	-2.3
DL2				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
DL2				AMB	AMB		
	comp=Z,610nm,7.1s						
DL2				LR	LR		
	comp=N,2µm,14.7s,MS5.1						
DL2				LR	LR		
	comp=E,1µm,14.7s,MS5.1						
DL2				LR	LR		
	comp=Z,2µm,21.3s						
SONM	**Songino Array**	**38.90**	**16**	P	**P**	**17 19 23.8**	**+0.5**
	comp=Z,75nm,1.1s,mb5.3,baz=198,slow=5.4,SNR=196						
SONM				PcP	PcP	17 21 35.8	+1.1
	comp=Z,7.4nm,0.7s,baz=204,slow=3.6,SNR=4.3						
ULN	**Ulaanbaatar**	**39.10**	**16**	*e*P	**P**	**17 19 25.1**	**0.0**
ULN				*e*		17 21 34.1	
ULN				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.4						
ULN				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.1						
ULN	**Ulaanbaatar**	**39.10**	**16**	*e*P	**P**	**17 19 25.1**	**+0.1**
	comp=Z,76nm,1.1s,mb5.3						
ULN				*e*PcP	PcP	17 21 34.1	-1.2
ULN				LR	LR		
	comp=Z,3µm,21.0s,MS5.1						
ZAK	**Zakamensk**	**40.58**	**11**	⇓*i*P	**P**	**17 19 38.6**	**+1.4**
ZAK				*e*		17 21 40.1	
ZAK				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
INCN	**Inchon**	**41.02**	**44**	PFAKE		17 19 50.0	+9.0
INCN				LR	LR		
	comp=Z,5µm,21.0s,MS5.3						
KURK	**Kurchatov**	**41.25**	**347**	⇑*e*P	**P**	**17 19 43.5**	**+0.8**
KURK				pmax	pmax		
	comp=Z,160nm,1.2s,mb5.5						
KURK				MLR	MLR		
	comp=Z,900nm,20.0s,MS4.6						
KURK	**Kurchatov**	**41.25**	**347**	⇑*e*P	**P**	**17 19 43.5**	**+0.8**
	comp=Z,163nm,1.3s,mb5.5						
KURK				LR	LR		
	comp=Z,904nm,20.0s,MS4.6						
MOY	**Mondy**	**41.43**	**9**	*e*P	**P**	**17 19 45.7**	**+1.5**
MOY				*e*		17 21 24.4	
MOY				pmax	pmax		
	comp=Z,129nm,3.4s						
SNY	**Shenyang**	**41.58**	**36**	⇑P	**P**	**17 19 46.0**	**+0.5**
SNY				S	**S**	**17 25 58.6**	**-3.0**
SNY				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.1						
SNY				AMB	AMB		
	comp=Z,1µm,5.9s						
SNY				LR	LR		
	comp=N,2µm,16.8s,MS5.5						
SNY				LR	LR		
	comp=E,4µm,14.4s,MS5.5						
SNY				LR	LR		
	comp=Z,5µm,15.6s,MS5.5						
KS15	**Wonju Array Si**	**41.86**	**45**	*e*P	**P**	**17 19 48.5**	**+0.6**
TLY	**Talaya**	**41.89**	**11**	P	**P**	**17 19 50.9**	**+3.0**
	comp=Z,214nm,1.4s,mb5.6,SNR=22						
TLY	**Talaya**	**41.89**	**11**	*e*P	**P**	**17 19 49.7**	**+1.8**
TLY				*e*		17 21 33.2	
TLY				*e*S	**S**	**17 26 04.4**	**-1.6**
TLY				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.0						
TLY	**Talaya**	**41.89**	**11**	⇑*e*P	**P**	**17 19 49.8**	**+1.8**
	comp=Z,68nm,1.3s,mb5.1						
TLY				LR	LR		
	comp=Z,349nm,19.0s,MS4.3						
MBWA	**Marble Bar**	**41.97**	**139**	*e*P	**P**	**17 19 47.6**	**-1.4**
	comp=Z,87nm,1.3s,mb5.2						
MBWA				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
IRK	**Irkutsk**	**42.54**	**11**	*e*P	**P**	**17 19 54.5**	**+1.2**
IRK				*e*		17 21 39.4	
IRK				pmax	pmax		
	comp=Z,127nm,2.9s,mb5.1						
ZAL	**Zalesovo**	**43.38**	**354**	P	**P**	**17 19 59.9**	**-0.2**
	comp=Z,134nm,1.2s,mb5.5,baz=296,slow=8.9,SNR=128						
ZAL				LR	LR	17 43 02.7	
	comp=Z,3µm,18.6s,MS5.2,baz=293,slow=43						
CN2	**Changchun**	**43.88**	**35**	⇓P	**P**	**17 20 06.1**	**+1.8**
CN2				*e*XP	sP	17 20 16.3	+8.6
CN2				PCP	PcP	17 21 50.8	-0.3
CN2				*e*S	**S**	**17 26 35.9**	**+0.6**
CN2				SS	SS	17 29 47.5	+3.7
CN2				AMB	AMB		
	comp=Z,140nm,0.9s,mb5.7						
CN2				AMB	AMB		
	comp=Z,2µm,7.0s						
CN2				LR	LR		
	comp=N,5µm,18.0s,MS5.5						
CN2				LR	LR		
	comp=E,4µm,18.0s,MS5.5						
CN2				LR	LR		
	comp=Z,3µm,18.0s,MS5.2						
FITZ	**Fitzroy Crossi**	**44.05**	**130**	*e*P	**P**	**17 20 05.1**	**-0.9**
	comp=Z,119nm,0.8s,mb5.7						
FITZ				*e*PCP	PcP	17 21 52.1	+0.1
FITZ				*e*S	**S**	**17 26 39.4**	**+1.4**
NVS	**Novosibirsk**	**44.45**	**353**	⇑*i*P	**P**	**17 20 08.1**	**-0.7**
NVS				*e*		17 21 56.0	
NVS				*e*S	**S**	**17 26 36.3**	**-7.0**
NVS				pmax	pmax		
	comp=Z,218nm,2.2s,mb5.5						
NVS				pmax	pmax		
	comp=N,175nm,2.0s						
NVS				pmax	pmax		
	comp=E,125nm,2.4s						
NVS				smax			
	comp=N,43nm,2.3s						
NVS				smax			
	comp=E,72nm,2.8s						
HIA	**Hailar**	**44.82**	**26**	*e*P	**P**	**17 20 11.6**	**-0.2**
HIA				*e*		17 21 53.8	
HIA				pmax	pmax		
	comp=Z,68nm,1.3s						
HIA				MLR	MLR		
	comp=Z,2µm,20.0s						
HIA	**Hailar**	**44.82**	**26**	*e*P	**P**	**17 20 11.6**	**-0.2**
	comp=Z,68nm,1.3s,mb5.3						
HIA				*e*PP	PP	17 21 53.8	-3.8
HIA				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
BVA0	**Borovoye Array**	**45.50**	**342**	P	**P**	**17 20 16.7**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,100nm,3.0s						
BVAR	**Borovoye Array**	**45.50**	**342**	P	**P**	**17 20 17.0**	**-0.2**
	comp=Z,65nm,1.2s,mb5.4,baz=143,slow=7.4,SNR=61						
BVAR				PcP	PcP	17 21 55.7	-0.9
	comp=Z,8.7nm,0.9s,baz=180,slow=5.8,SNR=3.5						
BVAR	**Borovoye Array**	**45.50**	**342**	P	**P**	**17 20 17.0**	**-0.2**
BVAR				PcP	PcP	17 21 55.7	-0.9
RAYN	**Ar Rayn**	**45.82**	**292**	P	**P**	**17 20 21.0**	**+0.9**
	comp=Z,354nm,0.9s,mb6.3,SNR=46						
CHKZ	**Chkalovo**	**46.00**	**343**	P	**P**	**17 20 20.9**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,151nm,1.3s,mb5.8						
KAKA	**Kakadu**	**46.61**	**119**	⇓*i*P	**P**	**17 20 24.5**	**-2.0**
	comp=Z,49nm,1.2s,mb5.3						
MDJ	**Mudanjiang**	**46.77**	**37**	P	**P**	**17 20 28.0**	**+0.7**
MDJ				AP	pP	17 20 34.3	+4.6
MDJ				XP	sP	17 20 36.5	+5.8
MDJ				PCP	PcP	17 22 00.8	-0.3
MDJ				PP	PP	17 22 17.8	+0.6
MDJ				SCP		17 25 53.4	
MDJ				AMB	AMB		
	comp=Z,41nm,1.8s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,842nm,5.2s						
MDJ				LR	LR		
	comp=N,2µm,17.4s,MS5.4						
MDJ				LR	LR		
	comp=E,3µm,15.5s,MS5.4						
MDJ				LR	LR		
	comp=Z,4µm,17.4s,MS5.4						
MDJ	**Mudanjiang**	**46.77**	**37**	*e*P	**P**	**17 20 27.8**	**+0.5**
	comp=Z,84nm,1.5s,mb5.5						
MDJ				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
VLA	**Vladivostok**	**47.37**	**40**	*e*P	**P**	**17 20 31.0**	**-1.1**
VLA				*i*		17 22 19.0	
VLA				*e*		17 23 11.0	
VLA				*e*S	**S**	**17 27 20.0**	**-5.3**
VLA				pmax	pmax		
	comp=E,1µm,7.6s						
VLA				pmax	pmax		
	comp=Z,2µm,7.6s						
VLA				pmax	pmax		
	comp=N,600nm,4.0s						
VLA				pmax	pmax		
	comp=Z,1µm,7.0s						
VLA				pmax	pmax		
	comp=N,600nm,4.0s						
VLA				pmax	pmax		
	comp=E,700nm,7.0s						
VLA				smax			
	comp=E,1µm,12.0s						
VLA				MLR	MLR		
	comp=Z,4µm,14.0s,MS5.6						
VLA				MLR	MLR		
	comp=E,2µm,19.0s,MS5.2						
VLA				MLR	MLR		
	comp=N,2µm,18.0s,MS5.2						
MUN	**Mundaring**	**48.53**	**152**	*e*P	**P**	**17 20 41.7**	**+0.4**
	comp=N,40nm,0.8s,mb5.5						
MUN	**Mundaring**	**48.53**	**152**	*e*P	**P**	**17 20 41.7**	**+0.4**
MUN				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
BHD	**Baghdad**	**48.81**	**305**	*i* P	**P**	**17 20 41.0**	**-2.5**
BHD				*e*S	**S**	**17 27 45.0**	**-0.8**
BHD				*e*		05 16 21.5	
KLBR	**Kellerberrin**	**48.94**	**150**	*e*P	**P**	**17 20 44.2**	**-0.3**
	comp=Z,2µm,1.4s						
MAJO	**Matsushiro**	**49.00**	**51**	⇑*e*P	**P**	**17 20 44.9**	**0.0**
	comp=Z,131nm,1.3s,mb5.8						
MAJO				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
MAT	**Matsushiro**	**49.00**	**51**	*e*P	**P**	**17 20 45.0**	**+0.2**
MAT				*e*S	**S**	**17 27 56.0**	**+7.7**
MAT				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.4						
MAT	**Matsushiro**	**49.00**	**51**	*e*P	**P**	**17 20 45.0**	**+0.2**
	comp=Z,54nm,1.3s,mb5.4						
MAT				*e*S	**S**	**17 27 56.0**	**+7.7**
MAT	**Matsushiro**	**49.00**	**51**	P	**P**	**17 20 44.7**	**-0.1**
MAT				S	**S**	**17 27 56.0**	**+7.7**
JHJ	**Hachijo jima 2**	**49.21**	**55**	LR	LR	17 44 47.8	
	comp=Z,745nm,18.9s,MS4.7,baz=286,slow=40						
NWAO	**Narrogin (SRO)**	**49.79**	**152**	*e*P	**P**	**17 20 49.5**	**-1.5**
NWAO				*e*		17 20 56.6	
NWAO				pmax	pmax		
	comp=Z,160nm,1.4s						
NWAO	**Narrogin (SRO)**	**49.79**	**152**	P	**P**	**17 20 50.0**	**-1.1**
	comp=Z,27nm,0.7s,mb5.4,baz=309,slow=7.5,SNR=20						
NWAO	**Narrogin (SRO)**	**49.79**	**152**	*e*P	**P**	**17 20 49.5**	**-1.6**
	comp=Z,162nm,1.4s,mb5.9						
NWAO				*e*		17 20 56.6	
BOD	**Bodaibo**	**49.90**	**15**	*e*P	**P**	**17 20 51.6**	**+0.1**
BOD				pmax	pmax		
	comp=Z,53nm,1.4s,mb5.4						
CBIJ	**Chichi jima**	**49.98**	**64**	P	**P**	**17 20 51.2**	**-1.3**
	comp=Z,54nm,0.6s,mb5.8,baz=172,slow=15,SNR=3.8						
MAK	**Makhachkala**	**50.01**	**318**	*d i*P	**P**	**17 20 53.0**	**+0.4**
MAK				*e*		17 22 10.0	
MAK				*e*S	**S**	**17 28 05.0**	**+2.7**
MAK				*i* PS	PS	17 28 20.0	+8.8
MAK				pmax	pmax		
	comp=E,1µm,7.0s						
MAK				pmax	pmax		
	comp=Z,2µm,7.0s						
MAK				pmax	pmax		
	comp=Z,2µm,8.0s						
MAK				smax			
	comp=N,2µm,7.0s						
MAK				smax			
	comp=E,1µm,7.0s						
KLR	**Kul’dur**	**50.62**	**33**	*e*P	**P**	**17 20 53.7**	**-3.4**
KLR				*e*		17 22 53.5	
KLR				*e*S	**S**	**17 28 14.0**	**+3.4**
KLR				pmax	pmax		
	comp=E,180nm,2.8s						
KLR				pmax	pmax		
	comp=Z,240nm,2.8s,mb5.6						
KLR				pmax	pmax		
	comp=Z,2µm,7.0s						
KLR				MLR	MLR		
	comp=E,2µm,14.5s						
KLR				MLR	MLR		
	comp=Z,4µm,14.5s,MS5.6						
MSL	**Mosul**	**50.70**	**308**	*e*P	**P**	**17 20 56.0**	**-1.9**
GNI	**Garni**	**50.76**	**314**	⇑*e*P	**P**	**17 20 59.5**	**+1.2**
GNI				pmax	pmax		
	comp=Z,430nm,1.2s						
GNI				MLR	MLR		
	comp=Z,2µm,21.0s						
GNI	**Garni**	**50.76**	**314**	P	**P**	**17 20 59.9**	**+1.6**
	comp=Z,124nm,1.1s,mb5.8,baz=33,slow=1.3,SNR=28						
GNI				LR	LR	17 44 20.7	
	comp=Z,2µm,19.7s,MS5.1,baz=298,slow=38						
GNI	**Garni**	**50.76**	**314**	⇑*e*P	**P**	**17 20 59.5**	**+1.2**
	comp=Z,426nm,1.3s,mb6.2						
GNI				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
MTA	**Mtatsminda**	**51.31**	**315**	P	**P**	**17 21 03.4**	**+0.9**
MTA				S	**S**	**17 28 24.2**	**+3.9**
TI2	**Plekhanov**	**51.36**	**315**	⇑*i*P	**P**	**17 21 04.0**	**+1.2**
TI2				*e*		17 22 56.6	
TI2				*i* S	**S**	**17 28 24.0**	**+3.1**
TI2				*i* S	**S**	**17 28 24.0**	**+3.1**
WRA	**Warramunga Arr**	**51.83**	**126**	*i* P	**P**	**17 21 05.7**	**-1.0**
WRA				pmax	pmax		
	comp=Z,33nm,0.8s						
WRA	**Warramunga Arr**	**51.83**	**126**	P	**P**	**17 21 05.7**	**-1.0**
	comp=Z,33nm,0.8s,mb5.3,baz=305,slow=8.5,SNR=190						
WRA				PcP	PcP	17 22 19.3	-0.5
	comp=Z,13nm,0.9s,baz=312,slow=3.0,SNR=6.4						
WRA				S	**S**	**17 28 24.9**	**-2.8**
	comp=Z,5.0nm,1.0s,baz=300,slow=16,SNR=7.7						
WRAB	**Tennant Creek**	**51.83**	**126**	*c i*P	**P**	**17 21 05.5**	**-1.2**
WRAB	**Tennant Creek**	**51.83**	**126**	*e*P	**P**	**17 21 05.3**	**-1.4**
	comp=Z,366nm,1.6s,mb6.1						
WRAB				LR	LR		
	comp=Z,494nm,19.0s,MS4.6						
SVE	**Sverdlovsk**	**51.85**	**339**	⇑*i*P	**P**	**17 21 06.8**	**+0.5**
SVE				*e*		17 21 23.5	
SVE				*e*S	**S**	**17 28 26.0**	**-1.5**
SVE				pmax	pmax		
	comp=Z,400nm,2.1s,mb6.0						
SVE				pmax	pmax		
	comp=N,500nm,11.0s						
SVE				pmax	pmax		
	comp=E,100nm,11.0s						
SVE				pmax	pmax		
	comp=Z,1µm,11.0s						
SVE				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.5						
SVE				MLR	MLR		
	comp=N,2µm,18.0s,MS5.5						
SVE				MLR	MLR		
	comp=E,3µm,18.0s,MS5.5						
CLNS	**Chul’man**	**52.55**	**22**	*e*P	**P**	**17 21 09.9**	**-1.7**
CLNS				*e**PP	pP	17 21 15.5	+1.5
CLNS				*e*		17 22 17.2	
CLNS				*e*		17 23 05.0	
CLNS				*e*S	**S**	**17 28 34.5**	**-2.6**
CLNS				*e*SS	SS	17 32 15.8	+1.8
CLNS				pmax	pmax		
	comp=N,34nm,0.8s						
CLNS				pmax	pmax		
	comp=E,33nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.7						
CLNS				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
CLNS				pmax	pmax		
	comp=N,12nm,1.0s						
CLNS				pmax	pmax		
	comp=E,11nm,1.3s						
CLNS				smax			
	comp=N,286nm,12.8s						
CLNS				smax			
	comp=Z,247nm,12.1s						
CLNS				smax			
	comp=E,53nm,11.4s						
CLNS				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.5						
CLNS				MLR	MLR		
	comp=N,3µm,14.0s,MS5.5						
CLNS				MLR	MLR		
	comp=E,1µm,17.0s,MS5.5						
ONI	**Oni**	**52.58**	**316**	P	**P**	**17 21 13.0**	**+1.0**
ONI				S	**S**	**17 28 42.6**	**+5.0**
KIV	**Kislovodsk**	**53.62**	**317**	P	**P**	**17 21 19.1**	**-0.6**
	comp=E,939nm,0.9s,SNR=67						
KIV	**Kislovodsk**	**53.62**	**317**	*c i*P	**P**	**17 21 20.0**	**+0.3**
KIV				*e*		17 23 23.5	
KIV				*e*S	**S**	**17 28 56.4**	**+4.7**
KIV				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.8						
KIV				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.1						
KIV	**Kislovodsk**	**53.62**	**317**	⇑*e*P	**P**	**17 21 20.0**	**+0.4**
	comp=Z,185nm,1.0s,mb6.0						
KIV				LR	LR		
	comp=Z,387nm,20.0s,MS4.5						
GOF	**Gofitskoye**	**53.82**	**319**	⇑*i*P	**P**	**17 21 20.5**	**-0.6**
GOF				*e*		17 23 30.0	
GOF				pmax	pmax		

	comp=Z,200nm,1.5s,mb5.8						
GOF				pmax	pmax		
	comp=Z,2µm,4.0s						
GOF				pmax	pmax		
	comp=Z,1µm,6.0s						
GOF				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.3						
FORT	**Forrest**	**54.05**	**141⇓**	iP	**P**	**17 21 21.9**	**-1.1**
	comp=Z,2µm,1.0s						
ASF	**Jabal al Asfar**	**54.72**	**302**	P	**P**	**17 21 28.7**	**+0.8**
	comp=Z,21nm,1.1s,mb5.1,baz=306,slow=1.5,SNR=14						
ASF				LR	LR	17 48 02.6	
	comp=Z,2µm,19.6s,MS5.3,baz=320,slow=39						
ASAJ	**Asahikawa**	**54.79**	**43**	P	**P**	**17 21 28.2**	**-0.1**
	comp=Z,10.0nm,0.8s,mb4.9,slow=20,SNR=2.6						
ASAJ				LR	LR	17 45 39.9	
	comp=Z,2µm,19.4s,MS5.1,baz=322,slow=37						
MALT	**Malatya**	**54.83**	**309⇑**	eP	**P**	**17 21 28.7**	**0.0**
MALT				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.6						
MALT	**Malatya**	**54.83**	**309⇑**	eP	**P**	**17 21 28.7**	**+0.1**
	comp=Z,71nm,1.1s,mb5.6						
SOKR	**Solikamsk**	**55.26**	**339c**	iP	**P**	**17 21 31.8**	**+0.3**
SOKR				SSS	SSS	17 34 51.8	-7.9
SOKR				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.7						
SOKR				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.4						
SOC	**Sochi**	**55.49**	**316**	i P	**P**	**17 21 32.6**	**-0.8**
SOC				e		17 23 35.8	
SOC				ePPP	PPP	17 24 51.7	-0.9
SOC				eS	**S**	**17 29 15.0**	**-1.9**
SOC				e		17 31 17.8	
SOC				eSS	SS	17 33 04.7	+3.1
SOC				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.6						
SOC				pmax	pmax		
	comp=N,13nm,1.2s						
SOC				pmax	pmax		
	comp=E,28nm,1.4s						
SOC				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
SOC				MLR	MLR		
	comp=N,2µm,20.0s,MS5.2						
SOC				MLR	MLR		
	comp=E,1µm,18.0s,MS5.2						
SOC	**Sochi**	**55.49**	**316⇑**	iP	**P**	**17 21 32.6**	**-0.8**
KMBO	**Kilima Mbogo**	**55.53**	**261**	i P	**P**	**17 21 35.7**	**+1.6**
KMBO				pmax	pmax		
	comp=Z,14nm,1.0s						
KMBO	**Kilima Mbogo**	**55.53**	**261**	P	**P**	**17 21 35.7**	**+1.6**
	comp=Z,14nm,1.0s,mb5.0,baz=58,slow=8.2,SNR=18						
KMBO				LR	LR	17 41 48.6	
	comp=Z,2µm,21.3s,MS5.2,baz=89,slow=32						
KMBO	**Kilima Mbogo**	**55.53**	**261**	P	**P**	**17 21 35.7**	**+1.6**
KMBO				LR	LR	17 41 48.6	
YSS	**Yuzh-Sakhalins**	**55.96**	**40α**	iP	**P**	**17 21 36.0**	**-0.7**
YSS				e		17 29 31.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.6						
YSS				pmax	pmax		
	comp=Z,1µm,6.0s						
YSS	**Yuzh-Sakhalins**	**55.96**	**40⇑**	eP	**P**	**17 21 36.6**	**-0.1**
	comp=Z,74nm,0.9s,mb5.7						
EIL	**Elat**	**56.00**	**298**	P	**P**	**17 21 37.6**	**+0.4**
	comp=Z,34nm,1.2s,mb5.3,baz=135,slow=5.4,SNR=13						
EIL				LR	LR	17 46 59.5	
	comp=Z,2µm,19.0s,MS5.2,baz=97,slow=37						
EIL	**Elat**	**56.00**	**298⇑**	eP	**P**	**17 21 37.4**	**+0.2**
	comp=Z,33nm,1.1s,mb5.3						
YAK	**Yakutsk**	**58.00**	**20c**	iP	**P**	**17 21 50.2**	**-0.8**
YAK				e*PP	pP	17 22 01.1	+7.7
YAK				e		17 22 41.6	
YAK				e		17 24 00.7	
YAK				eS	**S**	**17 29 50.1**	**+0.2**
YAK				pmax	pmax		
	comp=N,21nm,0.9s						
YAK				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=E,21nm,1.1s						
YAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				smax			
	comp=N,44nm,4.4s						
YAK				smax			
	comp=E,23nm,5.5s						
YAK				MLR	MLR		
	comp=N,889nm,13.0s,MS5.1						
YAK				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.2						
YAK				MLR	MLR		
	comp=E,375nm,14.0s,MS5.1						
YAK	**Yakutsk**	**58.00**	**20**	eP	**P**	**17 21 49.3**	**-1.7**
	comp=E,88nm,0.9s,mb5.8						
YAK				e		17 21 53.9	
CSS	**Prodhromos**	**58.12**	**304⇑**	eP	**P**	**17 21 50.5**	**-1.7**
	comp=E,82nm,1.4s,mb5.6						
PECR	**Pechory**	**58.47**	**331**	eP	**P**	**17 21 53.4**	**-1.0**
PECR				e		17 22 48.5	
PECR				eS	**S**	**17 29 52.0**	**-4.2**
PECR				e		17 30 08.6	
PECR				pmax	pmax		
	comp=Z,2µm,2.0s						
PECR				pmax	pmax		
	comp=Z,1µm,4.0s						
PECR				MLR	MLR		
	comp=Z,2µm,18.0s						
PMG	**Port Moresby**	**58.60**	**108**	P	**P**	**17 21 54.5**	**-1.3**
PMG	**Port Moresby**	**58.60**	**108**	P	**P**	**17 21 54.4**	**-1.4**
	comp=Z,28nm,0.8s,mb5.4,baz=279,slow=3.8,SNR=18						
BR131	**Keskin Array S**	**58.79**	**310**	PFAKE		17 22 10.0	+13
BR131				LR	LR		
	comp=Z,742nm,19.0s,MS4.8						
BRTR	**Keskin Array B**	**58.79**	**310**	P	**P**	**17 21 55.4**	**-1.5**
	comp=Z,13nm,0.9s,mb5.0,baz=127,slow=6.2,SNR=42						
BRTR				PcP	PcP	17 22 48.0	+1.7
	comp=Z,5.9nm,1.0s,baz=90,slow=2.5,SNR=3.6						
SIM	**Simferopol’**	**59.74**	**316⇑**	eP	**P**	**17 22 03.5**	**+0.2**
SIM				eS	**S**	**17 30 12.5**	**-0.2**
SIM				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.6						
SIM	**Simferopol’**	**59.74**	**316⇑**	eP	**P**	**17 22 03.6**	**+0.3**
ISP	**Isparta**	**60.84**	**307⇑**	iP	**P**	**17 22 09.4**	**-1.5**
MOS	**Moscow**	**61.40**	**329α**	iP	**P**	**17 22 14.1**	**-0.4**
MOS				e		17 22 55.9	
MOS				eS	**S**	**17 30 34.9**	**+1.1**
MOS				e		17 30 49.1	
MOS				pmax	pmax		
	comp=Z,322nm,1.5s,mb6.2						
MOS				pmax	pmax		
	comp=Z,1µm,2.5s,mb6.5						
MOS				smax			
	comp=E,600nm,2.8s						
MOS				MLR	MLR		
	comp=Z,2µm,17.6s,MS5.3						
MOS	**Moscow**	**61.40**	**329⇑**	iP	**P**	**17 22 14.3**	**-0.2**
OBN	**Obninsk**	**61.69**	**328**	P	**P**	**17 22 15.2**	**-1.3**
	comp=Z,780nm,1.2s,SNR=35						
OBN	**Obninsk**	**61.69**	**328c**	iP	**P**	**17 22 15.9**	**-0.6**
OBN				i		17 22 25.6	
OBN				i S	**S**	**17 30 39.0**	**+1.5**
OBN				eSS	SS	17 34 43.3	+2.7
OBN				pmax	pmax		
	comp=Z,272nm,1.4s,mb6.2						
OBN				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
OBN	**Obninsk**	**61.69**	**328⇑**	eP	**P**	**17 22 15.8**	**-0.6**
	comp=Z,334nm,1.4s,mb6.3						
OBN				LR	LR		
	comp=Z,518nm,22.0s,MS4.6						
CTA	**Charters Tower**	**61.74**	**120**	eP	**P**	**17 22 17.1**	**-0.2**
	comp=Z,48nm,1.1s,mb5.5						
CTA	**Charters Tower**	**61.74**	**120**	eP	**P**	**17 22 17.1**	**-0.2**
CTA				pmax	pmax		
	comp=Z,48nm,1.1s						
CTA	**Charters Tower**	**61.74**	**120**	P	**P**	**17 22 17.2**	**-0.1**
	comp=Z,49nm,1.0s,mb5.6,baz=304,slow=7.6,SNR=28						
CTA				LR	LR	17 54 26.6	
	comp=Z,1µm,18.8s,MS5.2,baz=183,slow=41						
CTAO	**Charters Tower**	**61.74**	**120⇑**	eP	**P**	**17 22 16.9**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,130nm,1.1s,mb6.0						
CTAO	**Charters Tower**	**61.74**	**120⇑**	eP	**P**	**17 22 16.9**	**-0.4**
	comp=Z,132nm,1.1s,mb6.0						
MBAR	**Mbarara**	**61.75**	**263**	i P	**P**	**17 22 17.7**	**+0.2**
MBAR	**Mbarara**	**61.75**	**263**	eP	**P**	**17 22 17.6**	**+0.1**
	comp=Z,55nm,1.3s,mb5.5						
TIRR	**Tirgusor**	**63.57**	**314**	⇑P	**P**	**17 22 27.9**	**-1.3**
TIRR				⇑P	pP	17 22 28.7	-2.9
TIRR	**Tirgusor**	**63.57**	**314**	⇑P	**P**	**17 22 28.7**	**-0.4**
STKA	**Stephens Creek**	**63.78**	**134⇓**	iP	**P**	**17 22 29.9**	**-0.8**
	comp=Z,57nm,1.4s,mb5.4						
STKA	**Stephens Creek**	**63.78**	**134**	P	**P**	**17 22 30.4**	**-0.3**
	comp=Z,49nm,0.9s,mb5.5,baz=315,slow=6.7,SNR=61						
STKA				LR	LR	17 54 05.7	
	comp=Z,1µm,19.3s,MS5.2,baz=298,slow=40						
KIS	**Kishinev**	**63.82**	**317**	eP	**P**	**17 22 26.0**	**-4.7**
KIS				eS	**S**	**17 31 00.0**	**-4.5**
KIS				e		17 32 14.0	
KIS				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.1						
KIS				pmax	pmax		
	comp=Z,900nm,7.0s						
KIS				pmax	pmax		
	comp=Z,1µm,4.0s						
KIS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
KIS				MLR	MLR		
	comp=N,2µm,18.0s,MS5.5						
KIS				MLR	MLR		
	comp=E,2µm,18.0s,MS5.5						
KIS				MLR	MLR		
	comp=Z,2µm,18.0s						
CFR	**Carcaliu**	**63.91**	**315**	⇓P	**P**	**17 22 30.3**	**-1.0**
CFR				⇑P	pP	17 22 31.4	-2.4
CFR	**Carcaliu**	**63.91**	**315**	⇑P	**P**	**17 22 31.4**	**+0.1**
AKASG	**Malin Array Be**	**64.44**	**321**	P	**P**	**17 22 33.2**	**-1.5**
	comp=Z,26nm,0.8s,mb5.3,baz=90,slow=5.2,SNR=48						
TIXI	**Tiksi**	**64.85**	**12**	eP	**P**	**17 22 35.6**	**-1.4**
TIXI				e		17 25 01.0	
TIXI				eS	**S**	**17 31 15.3**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.7						
TIXI				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.3						
TIXI	**Tiksi**	**64.85**	**12⇑**	iP	**P**	**17 22 36.1**	**-0.9**
VRI	**Vrincioaia**	**65.01**	**316**	P	**P**	**17 22 38.3**	**-0.2**
VRI	**Vrincioaia**	**65.01**	**316**	⇑P	**P**	**17 22 38.5**	**0.0**
IDI	**Anoyia**	**65.03**	**304**	P	**P**	**17 22 38.8**	**0.0**
	comp=Z,27nm,0.8s,mb5.3,baz=120,slow=5.8,SNR=12						
MA2	**Magadan**	**65.28**	**29**	eP	**P**	**17 22 39.4**	**-0.6**
MA2				eS	S	17 31 19.4	-2.8
MA2				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
MA2				MLR	MLR		
	comp=Z,7µm,24.0s,MS5.8						
MA2	**Magadan**	**65.28**	**29**	eP	**P**	**17 22 39.0**	**-1.0**
	comp=Z,65nm,0.9s,mb5.7						
MLR	**Muntele Rosu**	**65.48**	**315**	P	**P**	**17 22 41.8**	**+0.3**
MLR	**Muntele Rosu**	**65.48**	**315**	P	**P**	**17 22 41.2**	**-0.3**
	comp=Z,95nm,1.0s,mb5.8,baz=70,slow=2.3,SNR=51						
MLR				LR	LR	17 57 35.1	
	comp=Z,1µm,20.4s,MS5.1,baz=76,slow=42						
MLR	**Muntele Rosu**	**65.48**	**315**	⇑P	**P**	**17 22 41.4**	**-0.1**
MLR				⇑P		17 22 41.6	
MLR	**Muntele Rosu**	**65.48**	**315**	⇑P	**P**	**17 22 41.4**	**-0.1**
SNX	**Sinaia**	**65.76**	**315**	P	**P**	**17 22 43.5**	**+0.2**
RZN	**Rozhen**	**65.81**	**311**	i P	**P**	**17 22 43.0**	**-0.7**
MTUR	**Matau**	**66.06**	**315**	P	**P**	**17 22 44.0**	**-1.2**
MNK	**Minsk**	**66.25**	**325⇑**	eP	**P**	**17 22 42.0**	**-4.3**
BURAR	**Bucovina Array**	**66.35**	**317**	⇓P	**P**	**17 22 47.0**	**-0.1**
BURAR	**Bucovina Array**	**66.35**	**317**	⇑P	**P**	**17 22 47.1**	**+0.1**
MMB	**Musomiste**	**66.53**	**311**	i P	**P**	**17 22 47.5**	**-0.8**
PUL	**Pulkovo**	**66.55**	**331⇑**	eP	**P**	**17 22 48.8**	**+0.7**
PUL				eS	S	17 31 38.3	+0.6
PUL				pmax	pmax		
	comp=Z,187nm,0.8s,mb6.2						
PUL				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.5						
PUL				MLR	MLR		
	comp=N,909nm,16.0s,MS5.3						
PUL				MLR	MLR		
	comp=E,1µm,17.0s,MS5.3						
PUL	**Pulkovo**	**66.55**	**331**	i P	**P**	**17 22 48.6**	**+0.5**
VTS	**Vitosha**	**67.03**	**312**	P	**P**	**17 22 50.8**	**-0.7**
VTS	**Vitosha**	**67.03**	**312**	⇓P	**P**	**17 22 49.5**	**-1.9**
VTS				⇑P	pP	17 22 50.1	-3.8
VTS	**Vitosha**	**67.03**	**312**	i P	**P**	**17 22 50.5**	**-1.0**
VTS	**Vitosha**	**67.03**	**312**	⇑P	**P**	**17 22 50.1**	**-1.4**
KKB	**Krupnik**	**67.04**	**311**	i P	**P**	**17 22 50.3**	**-1.2**
IDID	**Didziasalis**	**67.08**	**326**	eP	**P**	**17 22 51.1**	**-0.4**
IDID				AMPb	AMB	17 22 57.1	
	comp=Z,45nm,1.1s,mb5.4						
JOF	**Joensuu**	**67.23**	**334**	ep	**P**	**17 22 52.0**	**-0.4**
	comp=Z,102nm,0.9s,mb5.8						
JOF	**Joensuu**	**67.23**	**334**	eP	**P**	**17 22 52.0**	**-0.4**
JOF				pmax	pmax		
	comp=Z,102nm,0.9s,mb5.8						
SEY	**Seymchan**	**67.27**	**26**	eP	**P**	**17 22 53.3**	**+0.7**
SEY						17 23 23.5	
SEY				ePPP	PPP	17 26 55.1	-4.5
SEY				eS	S	17 31 43.7	-2.6
SEY				e		17 32 48.7	
SEY				eSS	SS	17 36 08.1	+0.6
SEY				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.7						
SEY				pmax	pmax		
	comp=N,40nm,1.1s						
SEY				smax			
	comp=N,700nm,14.7s						
SEY				smax			
	comp=E,600nm,16.9s						
SEY				MLR	MLR		
	comp=Z,10µm,21.0s,MS6.0						
SEY				MLR	MLR		
	comp=N,2µm,14.0s						
SEY				MLR	MLR		
	comp=E,40nm,19.0s						
VAY	**Valandovo**	**67.37**	**310**	i P	**P**	**17 22 50.9**	**-2.7**
IIGN	**Ignalina**	**67.37**	**326**	eP	**P**	**17 22 53.0**	**-0.4**
IIGN				AMPb	AMB	17 22 59.0	
	comp=Z,46nm,1.2s,mb5.4						
IZAR	**Zarasai**	**67.46**	**326**	eP	**P**	**17 22 52.0**	**-1.9**
IZAR				AMPb	AMB	17 22 59.5	
	comp=Z,35nm,1.4s,mb5.2						
ISAL	**Salakas**	**67.48**	**326**	eP	**P**	**17 22 52.8**	**-1.3**
ISAL				AMPb	AMB	17 22 59.0	
	comp=Z,32nm,1.1s,mb5.2						
PET	**Petropavlovsk**	**67.55**	**37**	eP	**P**	**17 22 54.6**	**0.0**
PET				eS	S	17 32 04.4	+15
PET				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
PET				pmax	pmax		
	comp=Z,300nm,14.3s						
PET				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
PET	**Petropavlovsk**	**67.55**	**37**	PFAKE		17 23 10.0	+15
PET				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
LVZ	**Lovozero**	**68.04**	**340⇓**	eP	**P**	**17 22 57.3**	**-0.1**
LVZ				e		17 25 27.4	
LVZ				eS	S	17 31 53.7	-1.7
LVZ				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.6						
LVZ				pmax	pmax		
	comp=N,23nm,1.1s						
LVZ				pmax	pmax		
	comp=E,26nm,1.3s						
LVZ				smax			
	comp=N,881nm,6.4s						
LVZ				smax			
	comp=E,493nm,3.8s						
LVZ				MLR	MLR		
	comp=Z,4µm,24.0s,MS5.6						
LVZ				MLR	MLR		
	comp=N,798nm,15.0s						
LVZ	**Lovozero**	**68.04**	**340**	i P	**P**	**17 22 57.4**	**0.0**
BOLS	**Boljevac**	**68.07**	**313⇑**	iP	**P**	**17 22 56.9**	**-1.1**
SKO	**Skopje**	**68.27**	**311**	i P	**P**	**17 22 57.3**	**-2.0**
SKO				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.4						
SKO	**Skopje**	**68.27**	**311**	i P	**P**	**17 22 57.3**	**-2.0**
	comp=Z,0.0nm,1.0s						
APA	**Apatity**	**68.31**	**339⇓**	iP	**P**	**17 22 59.0**	**-0.1**
APA				i		17 23 16.8	
APA				eS	S	17 32 00.0	+1.2
APA				e		17 32 53.0	
APA				eSS	SS	17 36 27.0	+3.6
APA				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.7						
APA				pmax	pmax		
	comp=Z,2µm,8.0s						
APA				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.7						
KWP	**Kalwaria**	**68.32**	**319**	eP	**P**	**17 22 59.2**	**-0.3**
KWP				epP	pP	17 23 05.5	+3.5
KWP				eS	S	17 31 57.2	-2.0
KWP				MLR	MLR	17 56 14.4	
	comp=Z,1µm,21.6s,MS5.2						
KOLS	**Kolonicke sedl**	**68.50**	**318**	eP	**P**	**17 23 00.6**	**0.0**
KOLS				epP	pP	17 23 08.1	+5.1
BZS	**Buzias**	**68.51**	**315**	P	**P**	**17 23 00.3**	**-0.4**
SUW	**Suwalki**	**68.80**	**324**	eP	**P**	**17 23 01.1**	**-1.2**
SUW				eS	S	17 32 02.7	-2.0
SUW				MLR	MLR	17 57 40.5	
	comp=Z,2µm,20.1s,MS5.2						
GRUS	**Gruza**	**68.97**	**313⇓**	iP	**P**	**17 23 02.7**	**-0.9**
CRVS	**Cervenica-Dubn**	**69.03**	**318**	eP	**P**	**17 23 05.1**	**+1.3**
CRVS				e		17 23 16.6	
CRVS				e		17 23 45.4	
FINES	**FINESS Array B**	**69.06**	**332**	P	**P**	**17 23 02.6**	**-1.2**
	comp=Z,28nm,0.8s,mb5.2,baz=104,slow=7.9,SNR=51						
FINES				LR	LR	17 57 05.3	
	comp=Z,2µm,18.4s,MS5.3,baz=279,slow=39						
KAF	**Kangasniemi**	**69.15**	**333**	ep	**P**	**17 23 04.1**	**-0.2**
	comp=Z,46nm,0.9s,mb5.4,baz=106,slow=5.8						
KAF	**Kangasniemi**	**69.15**	**333**	eP	**P**	**17 23 04.1**	**-0.2**
KAF				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
DIVS	**Divcibare**	**69.51**	**313⇑**	iP	**P**	**17 23 05.0**	**-1.9**
TOO	**Toolangi**	**69.55**	**137**	eP	**P**	**17 23 08.1**	**+0.8**
	comp=Z,1.7nm,1.1s						
TOO	**Toolangi**	**69.55**	**137**	eP	**P**	**17 23 08.1**	**+0.8**
TOO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KECS	**Kecovo**	**69.61**	**318**	eP	**P**	**17 23 07.7**	**+0.3**
NIE	**Niedzica**	**69.84**	**319**	eP	**P**	**17 23 07.2**	**-1.6**
PSZ	**Piszkesteto**	**69.94**	**317**	eP	**P**	**17 23 07.7**	**-1.7**
PSZ				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.4						
PSZ	**Piszkesteto**	**69.94**	**317**	P	**P**	**17 23 09.5**	**+0.1**
PSZ	**Piszkesteto**	**69.94**	**317**	eP	**P**	**17 23 07.7**	**-1.8**
	comp=Z,61nm,1.2s,mb5.4						
PSZ	**Piszkesteto**	**69.94**	**317⇑**	eP	**P**	**17 23 08.8**	**-0.6**
OJC	**Ojcow**	**70.27**	**320**	eP	**P**	**17 23 11.0**	**-0.4**
OJC				eS	S	17 32 22.1	0.0
OJC				MLR	MLR	17 59 46.3	
	comp=Z,1µm,17.1s,MS5.1						
PKSM	**Moragy**	**70.64**	**315**	⇑P	**P**	**17 23 12.6**	**-1.1**
PKSM	**Moragy**	**70.64**	**315**	⇓P	**P**	**17 23 12.3**	**-1.4**
PKSM				⇑P		17 23 12.6	
PKSM	**Moragy**	**70.64**	**315**	⇓P	**P**	**17 23 12.3**	**-1.4**
VYHS	**Vyhne**	**70.71**	**318**	i P	**P**	**17 23 13.5**	**-0.6**
SRO	**Srobarova**	**70.99**	**317**	eP	**P**	**17 23 15.2**	**-0.6**
SRO1	**Iza**	**71.04**	**317**	eP	**P**	**17 23 16.0**	**-0.1**
CNB	**Canberra Magne**	**71.10**	**133**	eP	**P**	**17 23 16.7**	**0.0**
	comp=Z,1µm,1.4s						
OKC	**Ostrava-Krasne**	**71.28**	**319**	eP	**P**	**17 23 17.3**	**-0.3**
OKC				eS	S	17 32 33.7	-0.3
OKC				MLR	MLR		
	comp=Z,600nm,17.6s,MS4.9						
OKC	**Ostrava-Krasne**	**71.28**	**319**	eP	**P**	**17 23 17.3**	**-0.3**
OKC				epP	pP	17 23 21.0	+1.0
OKC				eS	S	17 32 33.7	-0.3
OKC				AMS	AMS	18 00 10.0	
	comp=Z,600nm,17.6s						
KEV	**Kevo**	**71.33**	**341**	ep	**P**	**17 23 13.9**	**-3.6**
SMOL	**Smolenice**	**71.64**	**318**	eP	**P**	**17 23 19.1**	**-0.6**
MORC	**Moravsky Berou**	**71.67**	**319**	eP	**P**	**17 23 19.7**	**-0.2**
	comp=Z,64nm,1.1s,mb5.5						
MORC	**Moravsky Berou**	**71.67**	**319**	⇓P	**P**	**17 23 20.1**	**+0.2**
TIP	**Timpagrande**	**71.69**	**308**	eP	**P**	**17 23 19.5**	**-0.7**
ARCES	**ARCESS Array B**	**71.75**	**340**	P	**P**	**17 23 20.4**	**+0.4**
	comp=Z,17nm,0.7s,mb5.1,baz=84,slow=5.6,SNR=49						
ARCES				LR	LR	17 58 48.9	
	comp=Z,3µm,20.0s,MS5.5,baz=114,slow=39						
ARCES	**ARCESS Array B**	**71.75**	**340**	P	**P**	**17 23 20.4**	**+0.4**
ARCES				LR	LR	17 58 48.9	
ARE0	**ARCESS Array S**	**71.75**	**340**	eP	**P**	**17 23 19.9**	**-0.1**
ZST	**Bratislava**	**71.83**	**317**	eP	**P**	**17 23 20.7**	**-0.2**
GKP	**Gorka Klasztor**	**72.19**	**323**	eP	**P**	**17 23 21.7**	**-1.2**
GKP				MLR	MLR	17 56 33.5	
	comp=Z,2µm,23.8s,MS5.3						
WAKE	**Wake Island**	**72.31**	**73**	PFAKE		17 23 40.0	+16
WAKE				LR	LR		
	comp=Z,44µm,22.0s						
DPC	**Dobruska-Polom**	**72.50**	**319**	eP	**P**	**17 23 24.8**	**0.0**
DPC				ePP	PP	17 26 09.0	+1.1
DPC				LR	LR		
	comp=Z,1µm,18.9s,MS5.2						
DPC	**Dobruska-Polom**	**72.50**	**319**	eP	**P**	**17 23 24.8**	**0.0**
DPC				ePP	PP	17 26 09.0	+1.1
DPC				eS	S	17 32 43.8	-4.1
DPC				AMS	AMS	17 59 00.0	
	comp=Z,1µm,18.9s						
KSP	**Ksiaz**	**72.56**	**320**	eP	**P**	**17 23 24.4**	**-0.7**
KSP				e		17 26 09.0	
KSP				ePPP	PPP	17 27 48.5	-2.5
KSP				eS	S	17 32 46.0	-2.5
KSP				eSS	SS	17 37 31.0	+1.4
KSP				MLR	MLR		
	comp=Z,3µm,19.3s,MS5.6						
KSP	**Ksiaz**	**72.56**	**320**	eP	**P**	**17 23 24.4**	**-0.7**
KSP				epP	pP	17 23 29.1	+1.5
KSP				ePP	PP	17 26 09.0	+0.6
KSP				ePPP	PPP	17 27 48.5	-2.5
KSP				eS	S	17 32 46.0	-2.5
KSP				eSS	SS	17 37 31.0	+1.4
KSP				eSSS	SSS	17 40 55.0	+16
KSP				LR	LR		
	comp=Z,3µm,19.3s,MS5.6						
KSP	**Ksiaz**	**72.56**	**320**	eP	**P**	**17 23 24.9**	**-0.2**
KSP				epP	pP	17 23 31.9	+4.4
KSP				eS	S	17 32 48.5	0.0
KSP				MLR	MLR	17 59 10.8	
	comp=Z,2µm,19.3s,MS5.5						
UPC	**Upice**	**72.71**	**320**	eP	**P**	**17 23 26.1**	**+0.1**
UPC				e		17 26 05.1	
UPC	**Upice**	**72.71**	**320**	eP	**P**	**17 23 26.1**	**+0.1**
UPC				epP	pP	17 23 29.9	+1.4
UPC				ePP	PP	17 26 05.1	-4.7
ARSA	**Arzberg**	**72.84**	**316⇑**	iP	**P**	**17 23 26.9**	**0.0**
	comp=Z,816nm,4.2s						
BOJS	**Bojanci**	**72.96**	**314**	eP	**P**	**17 23 27.1**	**-0.6**
PERS	**Pernice**	**73.10**	**316**	eP	**P**	**17 23 28.5**	**+0.1**
OBKA	**Obir**	**73.48**	**315⇑**	iP	**P**	**17 23 30.5**	**-0.1**
	comp=Z,569nm,3.2s						
LJU	**Ljubljana**	**73.48**	**315**	eP	**P**	**17 23 31.1**	**+0.5**
PRU	**Pruhonice**	**73.62**	**319**	eP	**P**	**17 23 31.3**	**0.0**
PRU				e		17 26 15.9	
PRU				eS	S	17 32 55.5	-5.1
PRU				MLR	MLR		
	comp=Z,800nm,17.0s,MS5.1						
PRU	**Pruhonice**	**73.62**	**319**	eP	**P**	**17 23 31.3**	**0.0**
PRU				epP	pP	17 23 35.6	+1.8
PRU				ePP	PP	17 26 15.9	-1.5
PRU				eS	S	17 32 55.5	-5.1
PRU				AMS	AMS	18 05 20.0	
	comp=Z,800nm,17.0s						
PVCC	**Panska Ves**	**73.63**	**320**	eP	**P**	**17 23 31.6**	**+0.2**
PVCC				AMS	AMS	17 59 50.0	
	comp=Z,2µm,19.0s						
LBTB	**Lobatse**	**73.67**	**240⇑**	eP	**P**	**17 23 33.2**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.5						
LBTB	**Lobatse**	**73.67**	**240⇑**	eP	**P**	**17 23 33.2**	**+1.1**
	comp=Z,75nm,1.1s,mb5.5						
MOA	**Molln**	**73.72**	**317⇑**	iP	**P**	**17 23 31.4**	**-0.6**
	comp=Z,352nm,3.9s						
VOY	**Vojsko**	**73.93**	**315**	eP	**P**	**17 23 32.3**	**-0.9**
VOY				e		17 24 22.3	
TRO	**Tromso**	**74.00**	**340**	eP	**P**	**17 23 32.6**	**-0.6**
TRO				LR	LR		
	comp=Z,2724µm,19.2s						
TRO	**Tromso**	**74.00**	**340**	eP	**P**	**17 23 32.6**	**-0.6**
TRO				eS	S	17 33 04.6	+0.2
TRO				AMS	AMS	18 00 31.5	
	comp=Z,3µm,19.2s,MS5.5						
BRG	**Berggiesshubel**	**74.04**	**320**	eP	**P**	**17 23 33.9**	**+0.1**
BRG				e		17 26 16.0	
BRG				i S	S	17 33 05.0	-0.3

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BRG                               i             17 33 45.0
BRG                               i SS   SS      17 37 55.0 +2.7
BRG                                pmax  pmax
      comp=Z,65nm,1.1s,mb5.5
BRG                                MLR   MLR
      comp=N,1µm,22.2s,MS5.2
BRG                                MLR   MLR
      comp=E,860nm,22.2s,MS5.2
BRG                                MLR   MLR
      comp=Z,1µm,22.2s,MS5.2
BRG   Berggiesshubel    74.04 320 eP     P       17 23 33.9 +0.1
      comp=Z,65nm,1.1s,mb5.5
BRG                               i      pP      17 23 38.2 +1.9
BRG                               ePP    PP      17 26 16.0 -4.8
BRG                               i S    S       17 33 05.0 -0.3
BRG                               i              17 33 45.0
BRG                               i SS   SS      17 37 55.0 +2.7
BRG                                LR    LR
      comp=Z,1µm,22.2s,MS5.2
GEC2  GERESS Array S    74.12 318 eP     P       17 23 33.4 -0.9
GEC2                               pmax  pmax
      comp=Z,49nm,1.1s,mb5.3
GEC2  GERESS Array S    74.12 318 eP     P       17 23 33.4 -0.9
      comp=Z,49nm,1.1s,mb5.3
GERES GERESS Array B    74.12 318  P     P       17 23 33.8 -0.5
      comp=Z,16nm,0.9s,mb4.9,baz=92,slow=5.1,SNR=62
KHC   Kasperske Hory    74.22 318 eP     P       17 23 34.1 -0.7
KHC                               e              17 26 21.8
KHC                               eS     S       17 33 08.9 +1.7
KHC                                MLR   MLR
      comp=Z,1µm,14.9s,MS5.3
KHC   Kasperske Hory    74.22 318 eP     P       17 23 34.1 -0.7
KHC                               epP    pP      17 23 38.8 +1.5
KHC                               ePP    PP      17 26 21.8 -0.6
KHC                               eS     S       17 33 08.9 +1.7
KHC                                AMS   AMS     18 02 50.0
      comp=Z,1µm,14.9s
RUE   Ruedersdorf       74.22 322 eP     P       17 23 34.6 -0.1
      comp=Z,97nm,1.0s,mb5.7
BILL  Bilibino          74.24  22⇑iP     P       17 23 34.4 -0.2
BILL                               pmax  pmax
      comp=Z,33nm,1.1s,mb5.2
BILL                               MLR   MLR
      comp=Z,1µm,20.0s,MS5.2
BILL  Bilibino          74.24  22 eP     P       17 23 33.7 -0.9
      comp=Z,43nm,1.3s,mb5.2
PTCC  Patocco-Chiusa    74.31 315 eP     P       17 23 34.6 -0.8
KBA   Koelnbreinsper    74.32 316⇑iP     P       17 23 35.2 -0.3
      comp=Z,314nm,3.2s
KBA   Koelnbreinsper    74.32 316⇑iP     P       17 23 35.2 -0.3
KBA                                pmax  pmax
      comp=Z,314nm,3.2s
ARV   Arcevia           74.59 312 eP     P       17 23 35.6 -1.5
SNTG  Esanatoglia       74.59 312 eP     P       17 23 35.9 -1.2
CLL   Collm             74.65 320⇑iP     P       17 23 37.0 -0.3
CLL                               eS     S       17 33 18.0 +5.9
CLL                                pmax  pmax
      comp=Z,46nm,1.2s,mb5.3
CLL                                MLR   MLR
      comp=Z,1µm,17.7s,MS5.3
CLL   Collm             74.65 320⇑iP     P       17 23 37.0 -0.3
      comp=Z,46nm,1.2s,mb5.3
CLL                               i      pP      17 23 40.9 +1.1
CLL                               eS     S       17 33 18.0 +5.9
CLL                                LR    LR
      comp=Z,1µm,17.7s,MS5.3
CLL   Collm             74.65 320 ⇑P     P       17 23 37.0 -0.3
      comp=Z,logA/T=1.6,mb5.3
CLL                               i      pP      17 23 40.9 +1.1
CLL                               ePP    PP      17 26 18.0 -8.3
CLL                               ePPP   PPP     17 28 09.0 -2.3
CLL                               e              17 30 24.0
CLL                               eS     S       17 33 18.0 +5.9
CLL                               ePS    PS      17 33 48.0 -0.1
CLL                               eSS    SS      17 38 12.0  +11
CLL                               eSSS   SSS     17 41 28.0  +13
WET   Wettzell          74.67 318 eP     P       17 23 36.6 -0.9
WET                                pmax  pmax
      comp=Z,46nm,1.2s,mb5.3
WET   Wettzell          74.67 318 eP     P       17 23 36.6 -0.9
      comp=Z,46nm,1.2s,mb5.3
FVI   Forni Avoltri     74.70 315 eP     P       17 23 36.7 -1.0
NKC   Novy Kostel       74.98 319 eP     P       17 23 39.1 -0.1
NKC                                MLR   MLR
      comp=Z,1µm,18.3s,MS5.3
NKC   Novy Kostel       74.98 319 eP     P       17 23 39.1 -0.1
NKC                               epP    pP      17 23 43.7 +2.0
NKC                                AMS   AMS     18 00 40.0
      comp=Z,1µm,18.3s
BOSA  Boshof            75.23 237 eP     P       17 23 41.1  0.0
BOSA                               pmax  pmax
      comp=Z,84nm,1.0s,mb5.6
BOSA  Boshof            75.23 237 eP     P       17 23 41.1  0.0
      comp=Z,84nm,1.0s,mb5.6
SFI   Santa Sofia       75.38 313 eP     P       17 23 42.6 +1.0
CTI   Castel Tesino     75.49 315 eP     P       17 23 41.4 -0.8
WTTA  Wattenberg        75.49 316⇑iP     P       17 23 41.4 -0.8
      comp=Z,349nm,2.9s,mb5.8
WTTA  Wattenberg        75.49 316⇑iP     P       17 23 41.4 -0.8
WTTA                               pmax  pmax
      comp=Z,349nm,2.9s,mb5.8
MOX   Moxa              75.52 320 eP     P       17 23 42.2 -0.1
MOX                                pmax  pmax
      comp=Z,170nm,2.1s,mb5.6
MOX                                MLR   MLR
      comp=Z,1µm,20.0s,MS5.2
MOX   Moxa              75.52 320 eP     P       17 23 42.2 -0.1
      comp=Z,170nm,2.1s,mb5.6
MOX                                LR    LR
      comp=Z,1µm,20.0s,MS5.2
MOX   Moxa              75.52 320 i P    P       17 23 42.2 -0.1
      comp=Z,logA/T=1.9,mb5.6
MOX                                PP    PP      17 26 25.0 -8.5
MOX                                S     S       17 33 24.0 +2.3
MOX                                L             18 01 07.0
WATA  Walderalm         75.53 316⇑iP     P       17 23 41.2 -1.2
      comp=Z,31nm,1.3s,mb5.1
WATA  Walderalm         75.53 316⇑iP     P       17 23 41.2 -1.2
WATA                               pmax  pmax
      comp=Z,31nm,1.3s,mb5.1
VMG   Vicchio           75.59 313 eP     P       17 23 43.5 +0.6
FUR   Furstenfeldbru    75.73 317 eP     P       17 23 42.2 -1.3
FUR                                pmax  pmax
      comp=Z,71nm,1.3s,mb5.4
FUR   Furstenfeldbru    75.73 317 eP     P       17 23 42.2 -1.3
      comp=Z,71nm,1.3s,mb5.4
SEI   Scarperia         75.73 313 eP     P       17 23 44.3 +0.7
GRA1  Grafenberg Arr    75.76 319 eP     P       17 23 43.3 -0.4
      comp=Z,80nm,1.1s,mb5.6
GRA1                               LR    LR
      comp=Z,900nm,20.4s,MS5.1
GRF   Grafenberg Arr    75.76 319 eP     P       17 23 43.3 -0.4
GRF                                pmax  pmax
      comp=Z,80nm,1.1s,mb5.6
GRF                                MLR   MLR
      comp=Z,900nm,20.4s,MS5.1
GRF   Grafenberg Arr    75.76 319 eP     P       17 23 43.3 -0.4
GRF                                pmax  pmax
      comp=Z,80nm,1.1s,mb5.6
GRF                                MLR   MLR
      comp=Z,900nm,20.4s,MS5.1
GRF   Grafenberg Arr    75.76 319 eP     P       17 23 43.3 -0.4
      comp=Z,80nm,1.1s,mb5.6
GRF                                LR    LR
      comp=Z,900nm,20.4s,MS5.1
GRFO  Grafenberg        75.76 319 eP     P       17 23 43.4 -0.3
      comp=Z,824nm,1.1s
SQTA  Sankt Quirin      75.78 316⇓iP     P       17 23 42.9 -1.0
      comp=Z,46nm,1.3s,mb5.2
SQTA  Sankt Quirin      75.78 316⇓iP     P       17 23 42.9 -1.0
SQTA                               pmax  pmax
      comp=Z,46nm,1.3s,mb5.2
MOTA  Moosalm           75.85 316⇓iP     P       17 23 43.2 -1.1
      comp=Z,17nm,1.1s,mb4.9
MOTA  Moosalm           75.85 316⇓iP     P       17 23 43.2 -1.1
MOTA                               pmax  pmax
      comp=Z,17nm,1.1s,mb4.9
NSS   Namsos            75.95 334 eP     P       17 23 43.4 -1.1
NSS                                AMS   AMS     18 03 01.9
      comp=Z,2µm,18.8s,MS5.4
NB2   NORSAR Subarra    76.06 330  P     P       17 23 44.0 -1.2
      comp=Z,57nm,1.1s,mb5.4,baz=93,slow=5.8
NB2   NORSAR Subarra    76.06 330  P     P       17 23 44.0 -1.2
NB2                                pmax  pmax
      comp=Z,57nm,1.1s,mb5.4
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NB2   NORSAR Subarra    76.06 330  P     P       17 23 44.0 -1.2
      baz=92,slow=5.9
NOA   NORSAR Array B    76.06 330  P     P       17 23 44.2 -0.9
      comp=Z,48nm,1.2s,mb5.3,baz=95,slow=5.6,SNR=21
NOA                                LR    LR      18 00 21.0
      comp=Z,2µm,21.8s,MS5.5,baz=90,slow=38
NAO01 NORSAR Array S    76.22 330 eP     P       17 23 45.4 -0.6
      comp=Z,39nm,0.9s,mb5.3
FX1   Attu Island--F    76.25  38 eP     P       17 23 45.8 -0.6
GSCL  Gusciola          76.27 313 eP     P       17 23 46.9 +0.2
BDI   Bagni Di Lucca    76.28 313 eP     P       17 23 45.1 -1.6
CLZ   Clausthal         76.30 321 eP     P       17 23 45.9 -0.8
      comp=Z,61nm,1.0s,mb5.5
BSEG  Bad Segeberg      76.34 323 eP     P       17 23 46.4 -0.5
BSEG                               pmax  pmax
      comp=Z,90nm,1.1s,mb5.6
BRMO  Bormio            76.37 315 eP     P       17 23 46.8 -0.4
ERBM  Eremo             76.40 313 eP     P       17 23 47.8 +0.4
GRAM                    76.64 313  P     P       17 23 48.1 -0.6
DAVA  Damuels           76.69 316⇑iP     P       17 23 48.7 -0.2
      comp=Z,274nm,1.9s,mb5.9
DAVOX Davos             76.70 316  P     P       17 23 49.0  0.0
      comp=Z,10nm,0.6s,mb4.9,baz=101,slow=5.1,SNR=16
CODM                    76.80 313  P     P       17 23 49.4 -0.2
SMY   Shemya            76.82  38  PFAKE         17 24 00.0  +10
SMY                                LR    LR
      comp=Z,1µm,20.0s,MS5.2
MUD   Monsted U'grnd    77.01 326⇓iP     P       17 23 52.8 +2.3
MUD                               i S    S       17 33 32.2 -5.6
MUD                                pmax  pmax
      comp=Z,99nm,1.2s,mb5.6
MUD                                MLR   MLR
      comp=Z,570nm,16.0s,MS5.0
MUD   Monsted U'grnd    77.01 326⇓iP     P       17 23 52.8 +2.3
      comp=Z,99nm,1.2s,mb5.6
MUD                               i S    S       17 33 32.2 -5.6
      comp=Z,570nm,16.0s
STU   Stuttgart         77.10 318 eP     P       17 23 51.0 -0.2
STU                                pmax  pmax
      comp=Z,26nm,0.8s,mb5.2
STU   Stuttgart         77.10 318 eP     P       17 23 51.0 -0.3
      comp=Z,26nm,0.8s,mb5.2
TOD   Tromm             77.33 319 eP     P       17 23 52.6 +0.1
VAI   Varese            77.50 315 eP     P       17 23 52.4 -1.1
PGF   Pioggiola         77.51 311 eP     P       17 23 54.8 +1.2
      comp=Z,350nm,1.7s,mb5.7
PGF   Pioggiola         77.51 311 eP     P       17 23 54.8 +1.2
PGF                                pmax  pmax
      comp=Z,175nm,1.7s,mb5.7
KBS   Kingsbay          77.52 349 eP     P       17 23 54.1 +1.1
KBS                                AMS   AMS     18 02 05.8
      comp=Z,748nm,19.9s,MS5.0
TNS   Taunus Mts        77.55 319 eP     P       17 23 53.0 -0.6
TNS                                pmax  pmax
      comp=Z,50nm,1.1s,mb5.4
TNS   Taunus Mts        77.55 319 eP     P       17 23 53.0 -0.6
      comp=Z,50nm,1.1s,mb5.4
BFO   Black Forest      77.69 317 eP     P       17 23 53.3 -1.2
BFO                                pmax  pmax
      comp=Z,39nm,1.2s,mb5.2
BFO   Black Forest      77.69 317 eP     P       17 23 53.3 -1.2
      comp=Z,39nm,1.2s,mb5.2
PCP   Pian Castagno     77.73 313  P     P       17 23 52.6 -2.2
FELD  Feldberg          77.93 317 eP     P       17 23 55.3 -0.5
FIN   Finale Ligure     77.99 313 eP     P       17 23 56.4 +0.2
LANF  Langenberg        78.01 318 eP     P       17 23 55.1 -1.1
MCGN  Macugnaga         78.04 315 eP     P       17 23 58.1 +1.7
ORO   Oropa             78.07 315 eP     P       17 23 56.7 +0.1
ORX   Oropa             78.07 315  P     P       17 23 56.0 -0.6
CASY  Casey             78.10 172 eP     P       17 23 56.4  0.0
ABH   Alteburg          78.14 319 eP     P       17 23 57.1 +0.2
LIBD  Limburg           78.19 317 eP     P       17 23 58.9 +1.7
ROB   Roburent          78.22 313  P     P       17 23 56.6 -0.9
IMI   Imperia           78.23 313  P     P       17 23 56.9 -0.7
TRAV                    78.24 314  P     P       17 23 56.2 -1.3
BBS   Basel-Blauen      78.29 316 eP     P       17 23 59.7 +1.9
MONE  Monesi            78.32 313  P     P       17 23 57.1 -0.9
WLS   Welschbruch       78.34 317 eP     P       17 23 57.9 -0.1
CDF   Champ du Feu      78.39 317 eP     P       17 23 58.1 -0.2
      comp=Z,96nm,1.1s,mb5.3
CDF   Champ du Feu      78.39 317 eP     P       17 23 58.1 -0.2
CDF                                pmax  pmax
      comp=Z,48nm,1.1s,mb5.3
RUP   Ruppelstein       78.46 319 eP     P       17 23 59.0 +0.3
SAOF  Saorge            78.47 313 eP     P       17 24 00.9 +2.0
ECH   Echery            78.48 317 eP     P       17 24 00.5 +1.7
WTSB  Winterswijk       78.51 321 eP     P       17 23 59.0 +0.1
      comp=Z,90nm,1.9s,mb5.4
MOF   Molkenrain        78.52 317 eP     P       17 23 59.1 +0.1
ENR   Entracque         78.55 313  P     P       17 23 58.0 -1.3
SBF   Sospel            78.57 313 eP     P       17 23 59.0 -0.4
      comp=Z,112nm,1.1s,mb5.4
SBF   Sospel            78.57 313 eP     P       17 23 59.0 -0.4
SBF                                pmax  pmax
      comp=Z,56nm,1.1s,mb5.4
RSP   Reno Superiore    78.61 314  P     P       17 23 58.6 -1.0
STV   Sta Anna Valdi    78.62 313  P     P       17 23 58.9 -0.8
BHB   Bricherasio       78.62 314  P     P       17 23 58.0 -1.7
LSD   Ceresole Reale    78.66 314  P     P       17 23 59.8  0.0
TOUF  Mont Tournerai    78.69 313 eP     P       17 24 00.3 +0.2
HINF  Hinteralfeld      78.71 317 eP     P       17 23 59.5 -0.6
      comp=Z,43nm,1.1s,mb5.0
HINF  Hinteralfeld      78.71 317 eP     P       17 23 59.5 -0.6
HINF                               pmax  pmax
      comp=Z,22nm,1.1s,mb5.0
FENE  Fenestrelle       78.75 314  P     P       17 23 59.7 -0.7
LOMF  Lomont            78.76 316 eP     P       17 24 00.1 -0.2
MVIF  Mont Vial         78.77 313 eP     P       17 24 01.5 +1.0
LPG   La Plagne         78.94 314 eP     P       17 24 01.7 +0.3
      comp=Z,121nm,1.1s,mb5.5
LPG   La Plagne         78.94 314 eP     P       17 24 01.7 +0.3
LPG                                pmax  pmax
      comp=Z,61nm,1.1s,mb5.4
LPL   La Plagne         78.95 314 eP     P       17 24 01.7 +0.3
      comp=Z,121nm,0.9s,mb5.5
LPL   La Plagne         78.95 314 eP     P       17 24 01.7 +0.3
LPL                                pmax  pmax
      comp=Z,61nm,0.9s,mb5.5
BER   Bergen            78.95 330 eP     P       17 24 02.3 +1.1
BER                                AMS   AMS     18 06 54.2
      comp=Z,1µm,22.6s,MS5.3
RRL   Cesana Torines    78.96 314  P     P       17 24 01.7 +0.2
SURF  Saint Ours        78.97 313 eP     P       17 24 01.0 -0.6
MBDF  Montbardon        78.98 314 eP     P       17 24 01.0 -0.6
      comp=Z,72nm,1.1s,mb5.2
MBDF  Montbardon        78.98 314 eP     P       17 24 01.0 -0.6
MBDF                               pmax  pmax
      comp=Z,36nm,1.1s,mb5.2
RSL   Roselend          79.01 315 eP     P       17 24 01.1 -0.7
BNI   Bardonecchia      79.02 314 eP     P       17 24 01.0 -0.8
BNI                                pmax  pmax
      comp=Z,45nm,0.9s,mb5.4
BNI   Bardonecchia      79.02 314 eP     P       17 24 01.0 -0.9
      comp=Z,45nm,0.9s,mb5.4
HAU   Haudompre         79.04 317 eP     P       17 24 01.6 -0.3
      comp=Z,119nm,1.0s,mb5.5
HAU                               eR
      comp=Z,1µm,20.2s
HAU   Haudompre         79.04 317 eP     P       17 24 01.6 -0.3
HAU                                pmax  pmax
      comp=Z,59nm,1.0s,mb5.5
HAU                                MLR   MLR
      comp=Z,1µm,20.3s,MS5.2
WLF   Walferdange       79.05 319 eP     P       17 24 01.0 -0.9
WLF                                pmax  pmax
      comp=Z,65nm,1.3s,mb5.4
WLF   Walferdange       79.05 319 eP     P       17 24 01.0 -0.9
      comp=Z,65nm,1.3s,mb5.4
HGN   Heimansgroeve     79.12 320 eP     P       17 24 00.6 -1.6
      comp=Z,34nm,2.1s,mb4.9
FRF   La Foret Royal    79.16 312 eP     P       17 24 02.5 -0.1
      comp=Z,135nm,1.2s,mb5.4
FRF   La Foret Royal    79.16 312 eP     P       17 24 02.5 -0.1
FRF                                pmax  pmax
      comp=Z,68nm,1.2s,mb5.5
THEF  They Montfort     79.26 317 eP     P       17 24 02.2 -0.9
LMR   La Mourre         79.28 312 eP     P       17 24 03.1 -0.2
      comp=Z,168nm,1.6s,mb5.4
LMR   La Mourre         79.28 312 eP     P       17 24 03.1 -0.2
LMR                                pmax  pmax
      comp=Z,84nm,1.6s,mb5.4
CABF  La Chapelle       79.31 316 eP     P       17 24 03.8 +0.4
      comp=Z,197nm,1.3s,mb5.6
CABF  La Chapelle       79.31 316 eP     P       17 24 03.8 +0.4
CABF                               pmax  pmax
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      comp=Z,99nm,1.3s,mb5.6
GDM   Grand'Maison      79.41 314 eP     P       17 24 04.5 +0.6
TAVF  Tavernes          79.58 313 eP     P       17 24 05.5 +0.6
ORIF  Oris-en-Rattie    79.60 314 eP     P       17 24 05.2 +0.2
      comp=Z,38nm,1.0s,mb5.0
ORIF                              eR
      comp=Z,1µm,21.2s
STOF  St-Etienne Org    79.66 313 eP     P       17 24 06.2 +0.9
OG05  Jujurieux         79.80 315 eP     P       17 24 05.7 -0.3
PUYF  Puyloubier        79.85 313 eP     P       17 24 06.2 -0.1
MEZF  Maizieres J'vi    79.86 318 eP     P       17 24 06.4 +0.1
      comp=Z,122nm,1.2s,mb5.4
GIVF  Givet             79.88 319 eP     P       17 24 06.4  0.0
      comp=Z,85nm,1.2s,mb5.2
GIVF  Givet             79.88 319 eP     P       17 24 06.4  0.0
GIVF                               pmax  pmax
      comp=Z,42nm,1.2s,mb5.2
SMRF  Simiane la Rot    79.90 313 eP     P       17 24 07.1 +0.5
      comp=Z,135nm,1.5s,mb5.4
OCF   Saint Nazaire     80.04 314 eP     P       17 24 07.9 +0.6
OG26  St.-Nazaire-De    80.04 314 eP     P       17 24 07.9 +0.6
GELF  Grande-Etoile     80.06 312 eP     P       17 24 06.7 -0.8
SUR   Sutherland        80.13 234 eP     P       17 24 10.2 +2.1
      comp=Z,122nm,1.3s,mb5.7
PRAF  Pradon            80.20 313 eP     P       17 24 08.3  0.0
BAIF  Baives            80.28 319 eP     P       17 24 08.7 +0.2
      comp=Z,172nm,1.3s,mb5.5
BAIF  Baives            80.28 319 eP     P       17 24 08.7 +0.2
BAIF                               pmax  pmax
      comp=Z,86nm,1.3s,mb5.5
VIVF  Saint-Julien-l    80.46 314 eP     P       17 24 09.7 +0.1
      comp=Z,178nm,1.2s,mb5.6
VIVF  Saint-Julien-l    80.46 314 eP     P       17 24 09.7 +0.1
VIVF                               pmax  pmax
      comp=Z,89nm,1.2s,mb5.6
SMF   Signal de Mont    80.85 316 eP     P       17 24 11.4 -0.2
      comp=Z,141nm,1.2s,mb5.5
SMF   Signal de Mont    80.85 316 eP     P       17 24 11.4 -0.2
SMF                                pmax  pmax
      comp=Z,70nm,1.2s,mb5.5
MAW   Mawson            80.94 191  P     P       17 24 12.8 +1.2
      comp=Z,45nm,1.2s,mb5.3,baz=342,slow=3.2,SNR=3.3
MAW                                LR    LR      17 53 45.6
      comp=Z,713nm,19.4s,MS5.0,baz=39,slow=31
SSF   Saint Saulge      81.04 316 eP     P       17 24 12.7 +0.1
      comp=Z,199nm,1.5s,mb5.5
SSF   Saint Saulge      81.04 316 eP     P       17 24 12.7 +0.1
SSF                                pmax  pmax
      comp=Z,100nm,1.5s,mb5.5
COLF  Collangettes      81.08 315 eP     P       17 24 13.2 +0.4
PLDF  La Plantade       81.08 315 eP     P       17 24 13.0 +0.2
LASF  Ste Croix         81.12 313 eP     P       17 24 13.7 +0.6
      comp=Z,312nm,1.6s,mb5.7
AVF   Avril sur Loir    81.17 316 eP     P       17 24 13.1 -0.2
      comp=Z,134nm,1.3s,mb5.4
AVF   Avril sur Loir    81.17 316 eP     P       17 24 13.1 -0.2
AVF                                pmax  pmax
      comp=Z,67nm,1.3s,mb5.4
AGO   Saint Agoulin     81.41 315 eP     P       17 24 14.7 +0.2
LBL   Lubilhac          81.42 314 eP     P       17 24 13.7 -0.9
PYM   Petit Puy Mans    81.53 315 eP     P       17 24 15.6 +0.4
BGF   Bois d'Agland     81.55 316 eP     P       17 24 15.7 +0.5
      comp=Z,218nm,1.3s,mb5.6
BGF   Bois d'Agland     81.55 316 eP     P       17 24 15.7 +0.5
BGF                                pmax  pmax
      comp=Z,109nm,1.3s,mb5.6
HYF   Humbligny         81.60 317 eP     P       17 24 16.2 +0.7
TCF   Toulx Ste Croi    82.02 316 eP     P       17 24 18.3 +0.6
      comp=Z,157nm,1.4s,mb5.5
TCF   Toulx Ste Croi    82.02 316 eP     P       17 24 18.3 +0.6
TCF                                pmax  pmax
      comp=Z,79nm,1.4s,mb5.5
LRDF  Laroque-de-Fa     82.21 312 eP     P       17 24 19.2 +0.4
CAF   Calviac           82.29 314 eP     P       17 24 19.9 +0.8
      comp=Z,105nm,1.2s,mb5.3
CAF   Calviac           82.29 314 eP     P       17 24 19.9 +0.8
CAF                                pmax  pmax
      comp=Z,52nm,1.2s,mb5.3
MTLF  Montolieu         82.39 313 eP     P       17 24 20.2 +0.5
      comp=Z,149nm,1.2s,mb5.5
MTLF  Montolieu         82.39 313 eP     P       17 24 20.2 +0.5
MTLF                               pmax  pmax
      comp=Z,75nm,1.2s,mb5.5
RJF   Les Rejaudoux     82.62 315 eP     P       17 24 21.7 +0.8
      comp=Z,288nm,1.6s,mb5.8
RJF                               eR
      comp=Z,1µm,21.8s
RJF   Les Rejaudoux     82.62 315 eP     P       17 24 21.7 +0.8
RJF                                pmax  pmax
      comp=Z,144nm,1.6s,mb5.8
RJF                                MLR   MLR
      comp=Z,1µm,21.8s,MS5.2
LPEF  Le Peyrat         82.67 312 eP     P       17 24 21.6 +0.5
EMHD  Djebel Mahouad    82.80 305  P     P       17 24 25.0 +3.0
JMIC  Jan Mayen         83.21 341 eP     P       17 24 25.6 +2.2
JMIC                               AMS   AMS     18 03 35.4
      comp=Z,1µm,17.4s,MS5.3
LFF   La Frestale       83.22 314 eP     P       17 24 24.8 +0.8
      comp=Z,115nm,1.3s,mb5.4
LFF   La Frestale       83.22 314 eP     P       17 24 24.8 +0.8
LFF                                pmax  pmax
      comp=Z,57nm,1.3s,mb5.4
LDF   La Druitiere      83.27 318 eP     P       17 24 24.3 +0.2
      comp=Z,174nm,1.3s,mb5.6
LDF   La Druitiere      83.27 318 eP     P       17 24 24.3 +0.2
LDF                                pmax  pmax
      comp=Z,87nm,1.3s,mb5.6
FLN   La Foliniere      83.48 318 eP     P       17 24 25.3 +0.1
      comp=Z,104nm,1.0s,mb5.5
FLN                               eR
      comp=Z,1µm,22.0s
FLN   La Foliniere      83.48 318 eP     P       17 24 25.3 +0.1
FLN                                pmax  pmax
      comp=Z,52nm,1.0s,mb5.5
FLN                                MLR   MLR
      comp=Z,1µm,22.0s,MS5.2
MFF   Saint Martin d    83.58 316 eP     P       17 24 26.1 +0.3
      comp=Z,94nm,0.9s,mb5.6
MFF   Saint Martin d    83.58 316 eP     P       17 24 26.1 +0.3
MFF                                pmax  pmax
      comp=Z,47nm,0.9s,mb5.6
GRR   Gorron            83.78 318 eP     P       17 24 27.0 +0.2
      comp=Z,135nm,1.5s,mb5.6
GRR   Gorron            83.78 318 eP     P       17 24 27.0 +0.2
GRR                                pmax  pmax
      comp=Z,67nm,1.5s,mb5.5
EBNR  Beni Rached       83.92 306  P     P       17 24 31.0 +3.2
EKA   Eskdalemuir Ar    84.02 325  P     P       17 24 29.1 +1.4
      comp=Z,15nm,0.9s,mb5.2,baz=94,slow=5.2,SNR=12
EBR   Ebro Roquetas     84.02 310 ePCP   PcP     17 24 31.7 -0.9
ESK   Eskdalemuir       84.05 325  PFAKE         17 24 40.0  +12
ESK                                LR    LR
      comp=Z,391nm,21.0s,MS4.8
ECHA  Ech Chlef         84.08 306  P     P       17 24 30.0 +1.4
DAG   Danmarks Havn     84.14 347⇑eP     P       17 24 27.6 -0.4
DAG                                pmax  pmax
      comp=Z,78nm,1.5s,mb5.6
DAG   Danmarks Havn     84.14 347⇑eP     P       17 24 27.6 -0.4
      comp=Z,78nm,1.5s,mb5.6
DAG   Danmarks Havn     84.14 347⇑iP     P       17 24 27.6 -0.4
      comp=Z,78nm,1.5s,mb5.6
ETRT  Tiaret            84.25 305  P     P       17 24 32.5 +3.0
EANR  'Ain N'Sour       84.32 305  P     P       17 24 31.5 +1.7
TNA   Tin City          84.46  24 eP     P       17 24 29.8  0.0
      comp=Z,21nm,1.1s,mb5.2
ETSF  Etsaut            84.47 312 eP     P       17 24 31.3 +0.9
      comp=Z,57nm,1.0s,mb5.4
ETSF  Etsaut            84.47 312 eP     P       17 24 31.3 +0.9
ETSF                               pmax  pmax
      comp=Z,29nm,1.0s,mb5.4
SJPF  Ste Jean          84.91 313 eP     P       17 24 33.4 +0.8
      comp=Z,86nm,1.2s,mb5.4
SJPF  Ste Jean          84.91 313 eP     P       17 24 33.4 +0.8
SJPF                               pmax  pmax
      comp=Z,43nm,1.2s,mb5.5
DLF   Lyons Farm        86.37 323 eP     P       17 24 40.6 +1.1
DCN   Croghan           86.79 324 eP     P       17 24 41.9 +0.3
SYO   Syowa Base        87.53 197 ⇓P     P       17 24 45.7 +0.9
SYO   Syowa Base        87.53 197 ⇓PcP   PcP     17 24 49.5 +2.3
SCO   Scoresbysund      87.57 342 i P    P       17 24 44.2 -0.8
SCO                                pmax  pmax
      comp=Z,5.0nm,1.0s,mb4.7
SCO   Scoresbysund      87.57 342 i P    P       17 24 44.2 -0.8
      comp=Z,5.3nm,1.0s,mb4.7
ESDC  Sonseca Array     87.59 310  P     P       17 24 46.3 +0.4
      comp=Z,8.9nm,0.9s,mb5.0,baz=59,slow=4.9,SNR=14
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ESLA	**Sonseca Array**	**87.59**	**310**	*e*P	**P**	**17 24 44.1**	**-1.7**
	comp=Z,9.3nm,1.3s,mb4.8						
UNV	**Unalaska Valle**	**88.16**	**35**	PFAKE		17 25 00.0	+12
UNV				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
RPZ	**Rata Peaks**	**89.73**	**135**	P	**P**	**17 24 55.9**	**0.0**
	comp=Z,19nm,0.9s,mb5.4,baz=69,slow=3.1,SNR=13						
RPZ				LR	LR	18 04 07.9	
	comp=Z,789nm,19.0s,MS5.2,baz=250,slow=35						
IMA	**Indian Mountai**	**89.78**	**22**	*e*P	**P**	**17 24 57.1**	**+1.5**
BORG	**Borgarnes**	**89.85**	**337**	P	**P**	**17 24 59.5**	**+3.5**
	comp=Z,29nm,1.0s,mb5.6,baz=75,slow=2.2,SNR=6.8						
BORG	**Borgarnes**	**89.85**	**337**	P	**P**	**17 24 59.5**	**+3.5**
BORG				LR	LR		
	comp=Z,442nm,19.0s,MS4.9						
PVRL	**Vila Real**	**90.01**	**312**	*e*P	**P**	**17 24 57.8**	**+0.5**
	comp=Z,21nm,1.6s,mb5.2						
MTE	**Manteigas**	**90.10**	**311**	*e*P	**P**	**17 24 57.5**	**-0.2**
	comp=Z,17nm,1.8s,mb5.1						
MTE				*i* -		17 27 33.1	
MTE				*e*LR	LR	18 04 54.0	
	comp=Z,553nm,19.6s						
PCBR	**Castelo Branco**	**90.19**	**311**	*e*P	**P**	**17 24 58.3**	**+0.1**
	comp=Z,28nm,1.7s,mb5.3						
PVIS	**Viseu**	**90.28**	**311**	*e*P	**P**	**17 24 58.7**	**+0.1**
PALC	**Alcoutim**	**90.77**	**308**	*e*P	**P**	**17 25 01.0**	**+0.1**
	comp=Z,38nm,1.4s,mb5.5						
SUMG	**Summit**	**90.79**	**347**	*e*P	**P**	**17 25 01.1**	**+0.9**
	comp=Z,89nm,1.3s,mb5.9						
EVO	**Evora**	**90.91**	**309**	*e*P	**P**	**17 25 03.2**	**+1.7**
	comp=Z,40nm,1.1s,mb5.4						
EVO				*e*R			
	comp=Z,994nm,20.8s						
PBEJ	**Beja**	**90.93**	**309**	*e*P	**P**	**17 25 01.7**	**+0.1**
	comp=Z,12nm,2.2s,mb4.8						
SVW2	**Sparrevohn**	**91.19**	**27**	*e*P	**P**	**17 25 05.2**	**+3.0**
PTEO	**Sao Teotonio**	**91.71**	**309**	*e*P	**P**	**17 25 05.4**	**+0.2**
	comp=Z,14nm,1.3s,mb5.1						
COLA	**College**	**92.49**	**22**	*e*P	**P**	**17 25 07.2**	**-0.9**
COLA				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.4						
COLA	**College**	**92.49**	**22**	*e*P	**P**	**17 25 07.2**	**-0.9**
	comp=Z,19nm,1.1s,mb5.3						
COLA				*e*P	pP	17 25 10.6	-0.1
COLA				LR	LR		
	comp=Z,800nm,17.0s,MS5.2						
MCK	**McKinley**	**92.69**	**23**	*e*P	**P**	**17 25 09.1**	**+0.1**
ILAR	**Eielson Array**	**92.89**	**22**	P	**P**	**17 25 09.7**	**-0.3**
	comp=Z,8.3nm,1.0s,mb5.1,baz=298,slow=5.1,SNR=9.6						
ILAR				PP	PP	17 28 46.5	-8.7
	comp=Z,2.0nm,0.9s,baz=299,slow=7.7,SNR=4.7						
URZ	**Urewera**	**92.95**	**128**	P	**P**	**17 25 09.7**	**-1.2**
	comp=Z,8.2nm,1.0s,mb5.1,baz=67,slow=3.1,SNR=4.2						
PWA	**Palmer West**	**93.37**	**25**	*e*P	**P**	**17 25 13.1**	**+0.9**
FIB	**Fire Island**	**93.49**	**25**	PFAKE		17 25 20.0	+7.2
FIB				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
SML	**Sawmill**	**93.92**	**24**	*e*P	**P**	**17 25 13.8**	**-1.0**
KDAK	**Kodiak Island**	**94.03**	**29**	PFAKE		17 25 30.0	+15
KDAK				LR	LR		
	comp=Z,538nm,20.0s,MS5.0						
THY	**Trims Highway**	**94.06**	**22**	*e*P	**P**	**17 25 16.8**	**+1.5**
RES	**Resolute Bay**	**94.58**	**2**	*e*P	**P**	**17 25 18.0**	**+0.5**
RES				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.7						
RES	**Resolute Bay**	**94.58**	**2**	*e*P	**P**	**17 25 18.0**	**+0.4**
	comp=Z,29nm,1.0s,mb5.7						
INK	**Inuvik**	**94.81**	**15**	*e*P	**P**	**17 25 19.1**	**+0.4**
INK				pmax	pmax		
	comp=Z,33nm,1.3s						
INK	**Inuvik**	**94.81**	**15**	*e*P	**P**	**17 25 19.1**	**+0.3**
	comp=Z,32nm,1.4s,mb5.6						
MENT	**Mentasta**	**95.09**	**22**	*e*P	**P**	**17 25 22.3**	**+2.2**
DBIC	**Dimbokro**	**95.27**	**278**	P	**P**	**17 25 23.1**	**+1.0**
	comp=Z,7.4nm,1.0s,mb5.1,baz=32,slow=4.8,SNR=6.0						
DBIC				LR	LR	18 09 26.4	
	comp=Z,958nm,20.2s,MS5.3,baz=54,slow=36						
DBIC	**Dimbokro**	**95.27**	**278**	*e*P	**P**	**17 25 20.0**	**-2.1**
	comp=Z,31nm,1.4s,mb5.5						
DBIC				P	pP	17 25 23.1	-1.6
DBIC				LR	LR	18 09 26.4	
DIV	**Divide**	**95.32**	**24**	PFAKE		17 25 30.0	+8.8
DIV				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
DAWY	**Dawson**	**95.94**	**20**	*e*P	**P**	**17 25 24.7**	**+0.7**
VNDA	**Vanda**	**96.25**	**168**	P	**P**	**17 25 29.0**	**+3.8**
VNDA				MLR	MLR		
	comp=Z,2µm,19.0s						
VNDA	**Vanda**	**96.25**	**168**	P	**P**	**17 25 28.9**	**+3.8**
	comp=Z,4.2nm,1.1s,mb4.8,baz=345,slow=12,SNR=3.0						
SFJ	**Sondre**	**97.75**	**346**	PFAKE		17 25 40.0	+7.9
SFJ				LR	LR		
	comp=Z,788nm,19.0s,MS5.2						
QSPA	**South Pole Qui**	**100.69**	**180**	PFAKE		17 26 00.0	+15
QSPA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
SIT	**Sitka**	**102.08**	**24**	PFAKE		17 26 00.0	+8.1
SIT				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
YKA	**Yellowknife Ar**	**104.10**	**12**	Pdiff	Pdif	17 26 00.7	0.0
	comp=Z,0.9nm,0.9s,baz=329,slow=4.5,SNR=11						
YKA				PP	PP	17 30 17.7	-3.2
	comp=Z,1.8nm,0.9s,baz=336,slow=7.5,SNR=4.6						
YKA				PKKPbc		17 41 49.1	
	comp=Z,0.6nm,0.9s,baz=158,slow=2.3,SNR=7.7						
YKA	**Yellowknife Ar**	**104.10**	**12**	Pdif	Pdif	17 26 00.7	0.0
YKA				PP	PP	17 30 17.7	-3.2
YKA				PKKPbc		17 41 49.1	
SCHQ	**Schefferville**	**112.18**	**347**	PP	PP	17 31 19.0	-1.8
	comp=Z,6.7nm,1.1s,baz=1.1,slow=9.6,SNR=5.1						
SCHQ	**Schefferville**	**112.18**	**347**	PFAKE		17 30 40.0	+5.7
SCHQ				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
FFC	**Flin Flon**	**113.69**	**9**	PFAKE		17 30 50.0	+13
FFC				LR	LR		
	comp=Z,356nm,20.0s,MS5.0						
NEW	**Newport**	**115.85**	**21**	PFAKE		17 30 50.0	+8.2
NEW				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MSO	**Missoula**	**118.18**	**20**	PFAKE		17 31 00.0	+14
MSO				LR	LR		
	comp=Z,533nm,20.0s,MS5.2						
CHMT	**Chamberlain Mo**	**118.33**	**19**	*e*PKP	PKPdf	17 30 44.3	-2.3
BMO	**Blue Mountains**	**118.66**	**23**	PFAKE		17 31 00.0	+13
BMO				LR	LR		
	comp=Z,897nm,21.0s,MS5.4						
ULM	**Lac du Bonnet**	**118.84**	**6**	PKP	PKPdf	17 30 45.7	-1.8
	comp=Z,1.3nm,0.5s,baz=51,slow=1.6,SNR=4.6						
ULM				PP	PP	17 32 00.7	-7.6
	comp=Z,1.2nm,0.5s,baz=338,slow=9.6,SNR=3.0						
ULM				PKKPbc		17 40 59.5	
	comp=Z,1.9nm,0.8s,baz=201,slow=4.5,SNR=3.0						
ULM	**Lac du Bonnet**	**118.84**	**6**	PKP	PKPdf	17 30 45.7	-1.8
ULM				PP	PP	17 32 00.7	-7.6
ULM				PKKPbc		17 40 59.5	
ULM				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
DGMT	**Dagmar**	**119.31**	**12**	PFAKE		17 31 00.0	+12
DGMT				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
WDC	**Whiskeytown Da**	**119.81**	**30**	PFAKE		17 31 00.0	+10
WDC				LR	LR		
	comp=Z,468nm,21.0s,MS5.1						
MOD	**Modoc**	**119.82**	**27**	PFAKE		17 31 00.0	+10
MOD				LR	LR		
	comp=Z,547nm,19.0s,MS5.2						
PQI	**Presque Isle**	**120.00**	**344**	PFAKE		17 31 00.0	+10
PQI				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
WVOR	**Wild Horse Val**	**120.12**	**26**	*e*PKP	PKPdf	17 30 49.6	-0.5
WVOR				LR	LR		
	comp=Z,795nm,21.0s,MS5.3						
MCMT	**McKenzie Canyo**	**120.30**	**20**	*e*PKP	PKPdf	17 30 49.5	-0.9
MCMT				*e*PP	PP	17 32 14.4	-3.2
PPT	**Papeete**	**120.31**	**104**	*e*SS	SS	17 48 43.6	+0.1
PPT				*e*LR	LR	18 07 46.3	
	comp=Z,1µm,27.8s						
TBI	**Tubuai**	**120.49**	**111**	*e*SS	SS	17 48 42.9	-2.9
TBI				*e*LR	LR	18 07 46.7	
	comp=Z,1µm,35.5s						
LAO	**LASA Array**	**120.53**	**14**	*e*PKP	PKPdf	17 30 50.4	-0.5
LAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
HLID	**Hailey**	**120.85**	**22**	*e*PKP	PKPdf	17 30 49.7	-1.9
HLID				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
YMR	**Madison River**	**121.06**	**19**	*e*PKP	PKPdf	17 30 51.7	-0.3
LKWY	**Lake**	**121.33**	**18**	PFAKE		17 31 00.0	+7.5
LKWY				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
EYMN	**Ely**	**121.44**	**3**	PFAKE		17 31 00.0	+7.4
EYMN				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
EMMW	**East Machias**	**121.64**	**343**	PFAKE		17 31 00.0	+6.9
EMMW				LR	LR		
	comp=Z,6µm,19.0s,MS6.3						
IMW	**Indian Meadow**	**121.76**	**19**	*e*PKP	PKPdf	17 30 53.5	+0.2
SNOW	**Snow King Moun**	**122.21**	**19**	*e*PKP	PKPdf	17 30 54.0	-0.2
WVL	**Waterville**	**122.39**	**344**	PFAKE		17 31 00.0	+5.5
WVL				LR	LR		
	comp=Z,11µm,22.0s						
AHID	**Auburn Hatcher**	**122.72**	**20**	PFAKE		17 31 10.0	+15
AHID				LR	LR		
	comp=Z,754nm,19.0s,MS5.4						
CMB	**Columbia Colle**	**122.84**	**30**	PFAKE		17 31 10.0	+15
CMB				LR	LR		
	comp=Z,798nm,19.0s,MS5.4						
ELK	**Elko**	**122.94**	**24**	PKP	PKPdf	17 30 55.8	+0.2
	comp=Z,12nm,1.2s,baz=45,slow=2.2,SNR=13						
ELK				PP	PP	17 32 30.2	-6.1
	comp=Z,3.6nm,1.1s,baz=5.5,slow=4.7,SNR=2.5						
BW06	**Boulder Array**	**123.22**	**19**	PFAKE		17 31 10.0	+14
BW06				LR	LR		
	comp=Z,943nm,20.0s,MS5.4						
PDAR	**Pinedale Array**	**123.22**	**19**	PKP	PKPdf	17 30 55.0	-1.1
	comp=Z,6.3nm,1.0s,baz=106,slow=0.9,SNR=17						
PDAR				PP	PP	17 32 34.3	-3.8
	comp=Z,1.5nm,0.9s,slow=2.7,SNR=2.8						
PDAR				PKKPbc		17 40 43.1	
	comp=Z,2.1nm,1.3s,baz=90,slow=1.8,SNR=3.6						
NVAR	**Mina Array Bea**	**123.52**	**28**	PKP	PKPdf	17 30 56.6	-0.2
	comp=Z,7.7nm,0.8s,baz=287,slow=1.8,SNR=36						
NVAR				PKKPbc		17 40 45.3	
	comp=Z,2.4nm,1.2s,baz=164,slow=6.9,SNR=4.0						
HWUT	**Hardware Ranch**	**123.58**	**21**	*e*PKP	PKPdf	17 30 55.9	-1.0
HWUT				*e*PP	PP	17 32 35.8	-4.9
HWUT				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
MNV	**Mina**	**123.59**	**28**	PFAKE		17 31 10.0	+13
MNV				LR	LR		
	comp=Z,641nm,19.0s,MS5.3						
MTUM	**Tungsten Hills**	**124.26**	**29**	*e*PKP	PKPdf	17 30 58.4	0.0
DUG	**Dugway**	**124.36**	**23**	*e*PKP	PKPdf	17 30 57.9	-0.6
DUG				LR	LR		
	comp=Z,8µm,19.0s,MS6.4						
DAU	**Daniels Canyon**	**124.75**	**21**	*e*PKIKP	PKPdf	17 30 58.7	-0.6
WES	**Weston**	**124.86**	**345**	PFAKE		17 31 10.0	+11
WES				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
DAC	**Darwin (Calif)**	**125.59**	**29**	PFAKE		17 31 10.0	+9.0
DAC				LR	LR		
	comp=Z,706nm,19.0s,MS5.3						
PHWY	**Pilot Hill**	**125.76**	**16**	*e*PKP	PKPdf	17 30 59.8	-1.4
MVU	**Marysvale**	**126.06**	**23**	*e*PKP	PKPdf	17 31 01.9	+0.1
MVU				LR	LR		
	comp=Z,844nm,19.0s,MS5.4						
MSU	**Marysvale**	**126.07**	**23**	*e*PKIKP	PKPdf	17 31 02.2	+0.4
BINY	**Binghamton**	**126.08**	**349**	PFAKE		17 31 10.0	+8.3
BINY				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
ARUT	**Antelope Range**	**126.19**	**25**	*e*PKIKP	PKPdf	17 31 01.9	-0.1
JFWS	**Jewell Farm**	**126.51**	**2**	PFAKE		17 31 10.0	+7.5
JFWS				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
ERPA	**Erie**	**126.81**	**352**	PFAKE		17 31 10.0	+7.0
ERPA				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
AAM	**Ann Arbor**	**126.99**	**356**	PFAKE		17 31 10.0	+6.6
AAM				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
ISCO	**Idaho Springs**	**127.12**	**17**	PFAKE		17 31 10.0	+6.3
ISCO				LR	LR		
	comp=Z,950nm,19.0s,MS5.5						
SSPA	**Standing Stone**	**127.94**	**350**	PFAKE		17 31 20.0	+15
SSPA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
RCBR	**Riachuelo**	**128.08**	**271**	*e*PKP	PKPdf	17 31 05.0	-1.4
MVL	**Millersville**	**128.28**	**348**	*e*PKP	PKPdf	17 31 04.8	-1.3
PFO	**Pinyon Flat Ob**	**128.28**	**30**	PFAKE		17 31 20.0	+14
PFO				LR	LR		
	comp=Z,159nm,21.0s,MS4.7						
TAOE	**Nuku Hiva Isla**	**128.81**	**93**	*e*LR	LR	18 11 41.1	
WUAZ	**Wupatki**	**128.98**	**24**	PFAKE		17 31 20.0	+12
WUAZ				LR	LR		
	comp=Z,13µm,22.0s						
ACSO	**Alum Creek Sta**	**129.00**	**355**	PFAKE		17 31 20.0	+13
ACSO				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
SDCO	**Great Sand Dun**	**129.05**	**18**	PFAKE		17 31 20.0	+12
SDCO				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
MCWV	**Mont Chateau**	**129.20**	**352**	PFAKE		17 31 20.0	+12
MCWV				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
CBKS	**Cedar Bluff**	**129.48**	**12**	PFAKE		17 31 20.0	+12
CBKS				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
CBN	**Corbin**	**130.21**	**349**	PFAKE		17 31 20.0	+10
CBN				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
WCI	**Wyandotte Cave**	**131.19**	**358**	PFAKE		17 31 20.0	+8.3
WCI				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
ANMO	**Albuquerque**	**131.31**	**20**	PKIKP	PKPdf	17 31 12.6	+0.6
ANMO				MLR	MLR		
	comp=Z,895nm,19.0s						
ANMO	**Albuquerque**	**131.31**	**20**	PKP	PKPdf	17 31 12.6	+0.5
	comp=Z,2.1nm,0.5s,baz=302,slow=1.7,SNR=7.7						
CCM	**Cathedral Cave**	**131.31**	**3**	PFAKE		17 31 20.0	+8.1
CCM				LR	LR		
	comp=Z,968nm,20.0s,MS5.5						
TUC	**Tucson**	**131.99**	**26**	*e*PKIKP	PKPdf	17 31 14.8	+1.4
AMTX	**Amarillo**	**132.80**	**15**	PFAKE		17 31 30.0	+15
AMTX				LR	LR		
	comp=Z,865nm,20.0s,MS5.5						
WVT	**Waverly**	**133.32**	**360**	*e*PKP	PKPdf	17 31 14.8	-0.9
WVT				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
RKT	**Rikitea**	**133.79**	**112**	*e*LR	LR	18 13 56.6	
	comp=Z,846nm,38.8s						
MIAR	**Mount Ida**	**134.61**	**6**	PFAKE		17 31 30.0	+12
MIAR				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
MNTX	**Cornudas Mount**	**134.64**	**21**	*e*PKP	PKPdf	17 31 17.4	-0.9
MNTX				LR	LR		
	comp=Z,840nm,19.0s,MS5.5						
OXF	**Oxford**	**134.92**	**1**	PFAKE		17 31 30.0	+11
OXF				LR	LR		
	comp=Z,853nm,20.0s,MS5.5						
NHSC	**New Hope**	**135.67**	**350**	PFAKE		17 31 30.0	+10
NHSC				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
GOGA	**Godfrey**	**135.80**	**354**	PFAKE		17 31 30.0	+10
GOGA				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
LRAL	**Lakeview Retre**	**136.39**	**359**	PFAKE		17 31 30.0	+8.6
LRAL				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
NATX	**Nacogdoches**	**137.23**	**8**	PFAKE		17 31 30.0	+7.0
NATX				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
LTX	**Lajitas**	**137.39**	**20**	PFAKE		17 31 30.0	+6.6
LTX				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
TXAR	**Lajitas Array**	**137.39**	**20**	PKhKP		17 31 14.7	
	comp=Z,0.8nm,0.8s,baz=315,slow=1.8,SNR=4.3						
TXAR				PKP	PKPdf	17 31 24.2	+0.8
	comp=Z,2.3nm,0.7s,baz=297,slow=2.8,SNR=12						
TXAR				PP	PP	17 34 04.6	-5.2
	comp=Z,1.4nm,0.8s,baz=333,slow=4.0,SNR=4.2						
TXAR	**Lajitas Array**	**137.39**	**20**	PKP	PKPdf	17 31 14.7	-8.7
TXAR				PKP	PKPdf	17 31 24.2	+0.8
TXAR				PP	PP	17 34 04.6	-5.2
JCT	**Junction City**	**137.46**	**15**	*e*PKP	PKPdf	17 31 21.0	-2.4
JCT				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
HKT	**Hockley**	**138.82**	**10**	PFAKE		17 31 40.0	+14
HKT				LR	LR		
	comp=Z,932nm,20.0s,MS5.5						
BAO	**Brasilia Array**	**140.62**	**259**	P	PKPdf	17 31 28.2	-1.5
BDFB	**Brasilia**	**140.64**	**259**	PKP	PKPdf	17 31 27.8	-1.9
	comp=Z,18nm,1.1s,baz=91,slow=1.7,SNR=9.5						
DWPF	**Disney**	**140.77**	**351**	PFAKE		17 31 40.0	+10
DWPF				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
SJG	**San Juan**	**143.96**	**323**	PKIKP	PKPdf	17 31 32.9	-2.4
SJG				MLR	MLR		
	comp=Z,464nm,21.0s						
SJG	**San Juan**	**143.96**	**323**	PKP	PKPdf	17 31 32.9	-2.5
	comp=Z,10nm,0.3s,baz=285,slow=20,SNR=3.1						
TRQA	**Tornquist**	**144.11**	**216**	*e*PKP	PKPdf	17 31 31.3	-3.8
PLCA	**Paso Flores**	**146.37**	**205**	PKP2	PKPab	17 31 38.4	-1.9
PLCA				MLR	MLR		
	comp=Z,6µm,21.0s						
PLCA	**Paso Flores**	**146.37**	**205**	PKPbc	PKPbc	17 31 38.4	+1.1
	comp=Z,16nm,1.0s,baz=153,slow=4.0,SNR=23						
CPUP	**Villa Florida**	**147.04**	**238**	PKPdf	PKPdf	17 31 39.3	-1.2
TEIG	**Tepich**	**149.16**	**0**	PFAKE		17 31 50.0	+6.0
TEIG				LR	LR		
	comp=Z,447nm,21.0s,MS5.2						
FCH	**Farellones**	**152.21**	**213**	*e*P	PKPdf	17 31 54.2	+5.8
CFAA	**Coronel Fontan**	**152.27**	**219**	PKP	PKPdf	17 31 48.1	-0.3
	comp=Z,2.9nm,0.9s,baz=234,slow=0.8,SNR=8.3						
CFAA				PKPbc	PKPdf	17 31 54.8	+6.3
	comp=Z,3.9nm,0.9s,baz=160,slow=2.1,SNR=28						
SDV	**Santo Domingo**	**153.78**	**318**	PKP	PKPdf	17 31 49.6	-1.4
	comp=Z,2.5nm,0.5s,baz=306,slow=23,SNR=2.8						
SDV				PKPbc	PKPdf	17 31 58.0	+7.0
	comp=Z,17nm,1.1s,baz=347,slow=6.1,SNR=7.4						
SDV	**Santo Domingo**	**153.78**	**318**	PKP	PKPdf	17 31 49.6	-1.4
SDV				PKPbc	PKPdf	17 31 58.0	+7.0
SDV				LR	LR		
	comp=Z,518nm,20.0s,MS5.3						
LVC	**Limon Verde**	**158.15**	**235**	PKP	PKPdf	17 31 57.2	+0.7
	comp=Z,3.5nm,0.9s,baz=245,slow=7.6,SNR=5.1						
LVC				PKPab	PKPab	17 32 31.3	+1.3
	comp=Z,14nm,1.0s,baz=52,slow=1.3,SNR=7.7						
LVC				PP	PP	17 36 14.0	+2.9
	comp=Z,7.8nm,1.3s,baz=87,slow=3.1,SNR=4.2						
LVC	**Limon Verde**	**158.15**	**235**	PKP	PKPdf	17 31 57.2	+0.7
LVC				PKPab	PKPab	17 32 31.3	+1.3
LVC				PP	PP	17 36 14.0	+2.9
LVC				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
JTS	**JuntasAbangare**	**158.80**	**351**	PFAKE		17 32 10.0	+12
JTS				LR	LR		
	comp=Z,239nm,20.0s,MS5.0						
ROSC	**El Rosal**	**159.21**	**318**	PKP	PKPdf	17 31 58.4	+0.3
	comp=Z,13nm,0.9s,baz=262,slow=19,SNR=7.8						
ROSC				PKPab	PKPab	17 32 35.0	+0.2
	comp=Z,9.4nm,0.5s,baz=126,slow=8.7,SNR=6.5						
LPAZ	**La Paz**	**159.76**	**252**	PKP	PKPdf	17 31 58.6	0.0
	comp=Z,7.1nm,1.1s,baz=41,slow=4.0,SNR=9.9						
LPAZ				PKPab	PKPab	17 32 38.4	+1.3
	comp=Z,23nm,1.2s,baz=82,slow=10,SNR=9.4						
LPAZ	**La Paz**	**159.76**	**252**	*e*PKPdf	PKPdf	17 31 57.8	-0.7
LPAZ				*e*PKPab	PKPab	17 32 37.8	+0.8
LPAZ				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
OTAV	**Otavalo**	**165.37**	**318**	*e*PKPdf	PKPdf	17 32 04.2	-0.1
OTAV				*e*PKPab	PKPab	17 33 02.0	+0.5
NNA	**Nana**	**168.81**	**263**	PFAKE		17 32 20.0	+13
NNA				LR	LR		
	comp=Z,233nm,20.0s						

CASC 22 17:18:29.6±2.8, 14.44N×88.17W, h20^{km}±15^{km}, MD4.0, 3C-2D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLLM	**Bellamira**	**0.99**	**184**⇑	*e*P	Pb	17 18 48.2	+0.3
BLLM				*e*S	Sb	17 19 02.4	+1.9
VSM	**San Miguel**	**1.01**	**186**⇑	*e*P	Pb	17 18 48.2	0.0
VSM				*e*S	Sb	17 19 02.1	+1.1
SNVI	**San Vicente**	**1.04**	**218**	*e*P	Pb	17 18 50.4	+1.6
SNVI				*e*S	Sb	17 19 02.9	+0.9
LCBS	**La Ceiba**	**1.10**	**225**	*e*P	Pb	17 18 49.3	-0.5
LCBS				*e*S	Sb	17 19 05.7	+2.0
LFU	**La Fuente**	**1.14**	**233**⇓	*e*P	Pb	17 18 51.3	+0.9
LFRS	**El Faro**	**1.18**	**227**⇓	*e*P	Pb	17 18 49.0	-2.1
CNCH	**Conchagua**	**1.20**	**164**	*e*P	Pn	17 18 49.8	-1.7
CNCH				*e*S	Sb	17 19 07.1	+0.6
BOQS	**Boqueron**	**1.28**	**237**	*e*P	Pn	17 18 51.7	-0.9
BOQS				*e*S	Sb	17 19 08.6	-0.3
SNJE	**San Jose**	**1.50**	**248**	*e*P	Pn	17 18 55.5	-0.2
SNJE				*e*S	Sn	17 19 14.9	+0.1
RBDL	**Robledal**	**1.50**	**258**	*e*P	Pn	17 18 60.0	+4.2
RBDL				*e*S	Sn	17 19 21.2	+6.3
RTR	**El Retiro**	**1.52**	**250**	*e*P	Pn	17 18 57.7	+1.6
SBLS	**San Blas**	**1.52**	**247**⇑	*e*P	Pn	17 18 55.8	-0.3
SBLS				*e*S	Sn	17 19 16.6	+1.1

NEIC 22 17:20:25.4, 63.59N×147.65W, h4^{km}, ML3.5(PMR), ML3.0(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RND	**Reindeer**	**0.57**	**252**	P	Pg	17 20 36.2	-0.5
RND				S	Sg	17 20 44.3	0.0
MCK	**McKinley**	**0.59**	**285**	P	Pg	17 20 37.0	-0.2
MCK				S	Sg	17 20 44.5	-0.6
DDM	**Donnelly Dome**	**0.82**	**75**	P	Pb	17 20 39.9	-1.9
THY	**Trims Highway**	**0.87**	**100**	P	Pb	17 20 41.8	-0.8
THY				S	Sg	17 20 53.9	-0.4
HDA	**Harding Lake**	**0.88**	**20**	P	Pb	17 20 43.0	+0.2
BWN	**Browne**	**0.99**	**307**	P	Pb	17 20 43.8	-0.9
CCB	**Clear Creek Bu**	**1.07**	**356**	P	Pb	17 20 46.1	+0.1
HUR	**Hurricane**	**1.09**	**237**	P	Pb	17 20 45.8	-0.5
HUR				S	Sb	17 21 00.8	+0.2
PAX	**Paxson**	**1.16**	**121**	P	Pb	17 20 47.0	-0.6
PAX				S	Sb	17 21 03.5	+0.6
NEA	**Nenana**	**1.18**	**328**	P	Pb	17 20 47.5	-0.3
NEA				S	Sb	17 21 03.8	+0.6
TRF	**Thorofare Moun**	**1.19**	**265**	P	Pb	17 20 47.0	-1.1
IL1	**Eielson Array**	**1.24**	**15**	P	Pb	17 20 48.8	-0.1
COLA	**College**	**1.29**	**356**	P	Pb	17 20 49.4	-0.5
MDM	**Murphy Dome**	**1.40**	**350**	P	Pb	17 20 51.2	-0.4
GLM	**Gilmore Dome**	**1.41**	**5**	P	Pn	17 20 51.5	-0.3
KTH	**Kantishna Hill**	**1.46**	**270**	P	Pn	17 20 51.6	-1.0
DOT	**Dot Lake**	**1.60**	**86**	P	Pn	17 20 55.1	+0.5
CUT	**Chulitna**	**1.68**	**226**	P	Pn	17 20 54.6	-1.1
SCM	**Sheep Creek Mo**	**1.77**	**175**	P	Pn	17 20 56.5	-0.4
SML	**Sawmill**	**1.81**	**190**	P	Pn	17 20 57.0	-0.6
TZL	**Tazlina**	**1.86**	**146**	P	Pn	17 20 59.4	+1.2
GHO	**Glory Hole Cre**	**1.91**	**198**	P	Pn	17 20 58.1	-0.9
MLY	**Manley**	**1.98**	**319**	P	Pn	17 20 58.8	-1.1
PMR	**Palmer**	**2.12**	**200**	P	Pn	17 21 01.4	-0.5
PWA	**Palmer West**	**2.20**	**209**	P	Pn	17 21 02.4	-0.7
DIV	**Divide**	**2.62**	**160**	P	Pn	17 21 09.4	+0.3
RC01	**Rabbit Creek A**	**2.69**	**202**	P	Pn	17 21 10.1	0.0
BCA3	**Beaver Creek A**	**2.70**	**99**	P	Pn	17 21 09.8	-0.5
GLI	**Glacier Island**	**2.73**	**174**	P	Pn	17 21 11.2	+0.5
IM3	**Indian Mountai**	**3.55**	**315**	P	Pn	17 21 20.5	-1.8
IMA	**Indian Mountai**	**3.58**	**317**	*e*P	Pn	17 21 20.9	-1.9
DAWY	**Dawson**	**3.69**	**79**	P	Pn	17 21 23.7	-0.6
BM3	**Burnt Mountain**	**4.05**	**17**	P	Pn	17 21 28.3	-1.2

*IDC **22** 17:21:14.4±10.0, 13.17S×167.11E, h156^{km}±88^{km}, mb3.5/7, mb1 3.7/7, mb1mx3.6/15, mbtmp4.0/7, Error ellipse: s-maj=39.1km s-min=24.7km az=59.0*

*NEIC **22** 17:21:19.1±0.8, 13.26S×167.01E, h200^{km}, mb3.9/4, Error ellipse: s-maj=21.3km s-min=18.0km az=153.0*

ISC 22 17:21:17.7±1.1, 13.3S±0.2×167.0E±0.2, h200^{km}, n13, σ1§18/11, mb3.8/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**20.98**	**248**	P	**P**	**17 25 47.6**	**+1.3**
	5.0nm,1.1s,baz=72,slow=12,SNR=3.5						
CTAO	**Charters Tower**	**20.98**	**248**	*e*P	**P**	**17 25 48.0**	**+1.6**
	2.0nm,0.6s						
STKA	**Stephens Creek**	**29.75**	**227**	P	**P**	**17 27 07.9**	**+0.2**
	1.5nm,0.6s,mb3.8,baz=58,slow=11,SNR=3.2						
STKA				PcP	PcP	17 30 05.3	-1.0
	2.1nm,1.0s,slow=4.0,SNR=3.7						
RPZ	**Rata Peaks**	**30.50**	**174**	P	**P**	**17 27 13.9**	**-0.3**
	2.8nm,0.7s,mb4.0,baz=301,slow=5.9,SNR=3.6						
WRAB	**Tennant Creek**	**31.95**	**254**	P	**P**	**17 27 24.5**	**-2.5**
	1.9nm,0.6s,mb3.8						
WRA	**Warramunga Arr**	**31.96**	**254**	P	**P**	**17 27 25.0**	**-2.0**
	0.9nm,0.6s,mb3.5,baz=19,slow=9.6,SNR=6.1						
MBWA	**Marble Bar**	**45.69**	**253**	*e*P	**P**	**17 29 21.2**	**+0.6**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	2.4nm,0.8s,mb3.6						
VNDA	Vanda	64.27	181	P	P	17 31 33.8	+0.6
	2.9nm,1.0s,mb3.9,baz=14,slow=8.3,SNR=2.5						
CMAR	Chiang Mai Arr	74.15	294	P	P	17 32 36.1	+1.6
	1.4nm,0.9s,mb3.6,baz=131,slow=4.1,SNR=7.3						
QSPA	South Pole Qui	76.72	180	*e*P	P	17 32 47.6	-0.1
	3.3nm,0.6s,mb4.1						
ILAR	Eielson Array	85.25	18	P	P	17 33 32.0	-0.6
	0.5nm,0.5s,mb3.5,baz=238,slow=5.1,SNR=12						
ARCES	ARCESS Array B	118.82	346	PKP	PKPdf	17 39 42.7	+1.0
	5.1nm,1.1s,baz=71,slow=2.0,SNR=10						
FINES	FINESS Array B	124.31	338	PKP	PKPdf	17 39 53.9	+1.4
	1.2nm,0.9s,baz=45,slow=2.0,SNR=3.5						

DJA 22 17:22:37.3±0.9**, 8.89S**×**114.27E, h111**km±10km**, MD4.6**/4**, ML3.4**/2**, 6C-4D, Error ellipse: s-maj=31.6km s-min=10.3km az=6.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	Scrawed	0.43	343	⇓*i*Pn	P	17 22 53.3	-0.7
	82nm,0.2s						
SRDI	Scrawed	0.43	343	⇓*i*Pg	P	17 22 53.5	-0.5
SRDI				⇑*i*Sn	S	17 23 03.4	-3.1
KELI	Kelakatan	0.71	18	⇑*i*Pn	P	17 22 55.7	-0.2
	196nm,0.2s						
KELI	Kelakatan	0.71	18	⇓*i*Pg	P	17 22 56.1	+0.2
KELI				⇑*i*Sn	S	17 23 08.9	-1.1
RATI	Rata	1.26	82	⇓*i*Pn	P	17 23 01.5	-0.2
	60nm,0.2s						
RATI				⇑*i*Sn	S	17 23 19.1	-1.0
KEDI	Kedomdong	1.86	78	⇑*i*Pn	P	17 23 08.1	-1.0
	17nm,0.2s						
KEDI				⇑*i*Sn	S	17 23 30.3	-2.6

IDC ***22*** *17:31:27.0±1.8, 30.58N×56.96E, mb3.5/6, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, Error ellipse: s-maj=45.3km s-min=31.0km az=16.0*

NEIC ***22*** *17:31:28.0±1.1, 30.51N×56.83E, h10km, mb3.8/3, MN3.6(TEH), Error ellipse: s-maj=20.6km s-min=11.0km az=191.0*

THR ***22*** *17:31:27.6±0.6, 30.84N×56.82E, h14km±7km, ML3.4*

CSEM ***22*** *17:31:30.0±0.1, 30.69N×56.78E, h30km, mb3.8/1, ML3.9/1, Error ellipse: s-maj=4.3km s-min=2.8km az=36.0*

TEH ***22*** *17:31:33.1, 30.50N×56.40E, h10km, Mn3.6*

ISC 22 17:31:30.0±1.6**, 30.74N**±0.08×**56.83E**±0.09**, h26**km±16km**, n26, σ0^{s}90**/29**, mb3.6**/6**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.76	184	*e*PG	Pb	17 31 44.1	-0.4
KRBR				AML	AML	17 32 03.5	
	comp=N,1µm,0.5s						
IBAF	Bafgh	1.37	309	Pn	Pn	17 31 52.7	-1.2
IMEH	Mehriz	2.01	289	Pn	Pn	17 32 03.9	+0.9
ICHK	Chekchek	2.55	307	Pn	Pn	17 32 10.6	-0.2
ISAD	Sadrabad	2.93	294	Pn	Pn	17 32 16.3	+0.1
BNDS	Bandar-Abbas	3.38	190	*e*PN	Pn	17 32 23.3	+0.9
BNDS				AML	AML	17 33 32.8	
	comp=N,92nm,0.7s						
ZHSF	Zahedan	3.60	107	*e*P	Pn	17 32 25.6	-0.1
ZHSF				AML	AML	17 33 23.8	
	comp=N,48nm,0.6s						
NASN	Na'in	3.99	302	*e*PN	Pn	17 32 30.3	-0.9
NASN				*e*SG	Sn	17 33 30.0	+12
NASN				AML	AML	17 33 47.9	
	comp=N,51nm,0.6s						
NASN	Na'in	3.99	302	*e*Pn	Pn	17 32 30.3	-0.9
	SNR=52						
NASN				*e*Sg	Sn	17 33 30.0	+12
	comp=N,51nm,0.6s,SNR=90						
IFIR	Firoozkooh	5.96	326	Pn	Pn	17 33 00.7	+1.6
IDMV	Damavand	6.28	321	Pn	Pn	17 33 03.9	+0.3
IAFJ	Afjeh	6.66	321	Pn	Pn	17 33 09.4	+0.5
IAFJ				Sn	Sn	17 34 21.3	-3.5
IRAZ	Razeghan	7.43	311	Pn	Pn	17 33 18.8	-0.8
AAK	Ala-Archa	18.44	45	P	P	17 35 38.8	-6.9
	comp=N,2.5nm,0.9s						
EIL	Elat	18.94	272	P	P	17 35 48.4	-3.3
	comp=N,6.8nm,1.0s						
EIL	Elat	18.94	272	P	P	17 35 48.4	-3.3
	comp=N,6.8nm,1.0s						
BRTR	Keskin Array B	20.91	302	P	P	17 36 14.2	+1.1
	comp=N,1.2nm,1.0s,baz=132,slow=13,SNR=3.5						
BRTR	Keskin Array B	20.91	302	P	P	17 36 14.1	+1.1
BVAR	Borovoye Array	24.37	20	P	P	17 36 47.5	+0.5
	comp=N,1.4nm,0.8s,mb3.5,baz=207,slow=6.6,SNR=9.5						
KURK	Kurchatov	25.73	33	P	P	17 36 59.9	-0.1
	comp=N,1.2nm,0.5s,mb3.7						
KURK	Kurchatov	25.73	33	P	P	17 36 59.9	-0.1
	comp=N,1.2nm,0.5s,mb3.7						
ZAL	Zalesovo	30.71	33	P	P	17 37 44.5	-0.5
	comp=N,0.8nm,0.6s,mb3.7,baz=230,slow=7.7,SNR=3.9						
GERES	GERESS Array B	37.16	312	P	P	17 38 40.4	-0.1
	comp=N,0.4nm,0.5s,mb3.5,baz=100,slow=8.1,SNR=4.6						
YKA	Yellowknife Ar	86.84	356	P	P	17 44 13.8	+0.8
	comp=N,0.5nm,0.8s,mb3.8,baz=358,slow=5.1,SNR=8.1						
YKA	Yellowknife Ar	86.84	356	P	P	17 44 13.9	+0.9
WRA	Warramunga Arr	89.84	113	P	P	17 44 27.2	-1.2
	comp=N,0.3nm,0.8s,mb3.6,baz=319,slow=4.1,SNR=6.3						

WEL 22 17:48:18.1±0.8**, 35.51S**×**178.83E, h33**km**, ML4.3**/7**, Error ellipse: s-maj=16.6km s-min=6.7km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.10	191	P*	Pb	17 48 49.9	-5.4
MXZ				*e*S*	Sb	17 49 14.9	-6.3
MXZ				T		17 50 26.9	
PUZ	Puketiti	2.60	190	PN	Pn	17 48 57.6	-1.3
PUZ				*e*SN	Sn	17 49 27.0	-2.7
MWZ	Matawai	3.01	200	P*	Pb	17 49 03.8	-7.0
MWZ				*e*S*	Sb	17 49 39.0	-8.5
URZ	Urewera	3.08	206	P*	Pb	17 49 04.7	-7.3
URZ				*e*S*	Sb	17 49 39.1	-10
NGZ	Ngauruhoe	4.48	214	*e*P*	Pb	17 49 24.3	-12
TSZ	Takapari Road	5.08	206	*e*SN	Sn	17 50 28.0	-4.3
BFZ	Birch Farm	5.55	201	*e*SN	Sn	17 50 37.1	-7.1
MRZ	Mangatainoka R	5.75	205	PN	Pn	17 49 36.9	-6.5
MRZ				*e*SN	Sn	17 50 40.3	-8.8
KIW	Kapiti Island	6.17	209	*e*PN	Pn	17 49 42.6	-6.8
THZ	Tophouse	7.78	215	*e*PN	Pn	17 50 04.4	-7.5
THZ				*e*SN	Sn	17 51 28.8	-11
LTZ	Lake Taylor	8.87	213	*e*PN	P	17 50 18.7	-8.2
MQZ	McQueen's Vall	9.47	208	*e*SN	Sn	17 52 04.8	-17

ISC 22 17:48:43.8±0.6**, 46.41N**±0.04×**15.09E**±0.06**, n10, σ0^{s}81**/12**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PERS	Pernice	0.23	6	*i* Pg	Pg	17 48 48.9	+0.5
GROS	Grobnik	0.29	80	*e*Pg	Pg	17 48 50.0	+0.2
DOBS	Dobrina	0.37	134	*i* Pg	Pg	17 48 51.5	+0.2
OBKA	Obir	0.38	285	⇑*i*PG	Pg	17 48 52.1	+0.6
OBKA				*i* SG	Sg	17 48 57.6	+1.0
	19nm,0.5s						
LEGS	Legarje	0.49	161	*i* Pg	Pg	17 48 53.1	-0.5
GOLS	Golise	0.55	137	*i* Pg	Pg	17 48 55.5	+0.7
VISS	Visnje	0.63	196	*e*Pg	Pg	17 48 55.4	-1.0
ARSA	Arzberg	0.89	20	⇑*i*PG	Pg	17 49 00.9	-0.8
ARSA				*i* SG	Sg	17 49 13.3	-0.3
	4.5nm,0.7s						
BOJS	Bojanci	0.91	173	*i* Pg	Pg	17 49 03.0	+0.9
CADS	Cadrg	0.95	260	*i* Pg	Pg	17 49 01.1	-1.7

IDC ***22*** *18:19:27.3±0.5, 4.67N×85.38W, mb4.8/18, mb1 5.0/21, mb1mx4.9/25, mbtmp4.9/21, ML3.5/2, MS4.4/10, Ms1 4.4/10, ms1mx4.0/28, Error ellipse: s-maj=22.4km s-min=11.2km az=66.0*

BJI ***22*** *18:19:31.3, 4.60N×85.30W, h26km, mB5.6, Ms5.3, Msz4.9*

NEIC ***22*** *18:19:31.3±0.2, 4.60N×85.32W, mb5.2/96, MD4.6(CASC), Error ellipse: s-maj=4.4km s-min=3.1km az=49.0*

HRVD ***22*** *18:19:31.3±0.2, 4.59N×85.50W, h26km, MW5.3/62, Centroid moment Tensor Solution. LP body waves: s54,c83;Mantle waves: s62,c112; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.10±.03; $M_{\theta\theta}$0.73±.02; $M_{\phi\phi}$-0.62±.03; $M_{r\theta}$-0.14±.03; $M_{\theta\phi}$0.74±.02; $M_{\phi r}$0.39±.05; Best double couple: $M_0$1.088×10^{17} NP1: ϕ_s109°, δ73°, λ-15°. NP2: ϕ_s203°, δ76°, λ-163°. Principal axes: T 1.058, Plg2°, Azm336°; N .061, Plg68°, Azm242°; P -1.118, Plg22°, Azm67°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***22*** *18:19:31.3±0.8, 4.75N×85.31W, h33km, mb5.4/53 Error ellipse: s-maj=10.0km s-min=6.6km az=85.9*

CASC ***22*** *18:19:40.3±3.4, 5.43N×85.29W, h0km±20km, MD4.8, MW5.3, mb5.2(NEIC)*

ISC 22 18:19:29.9±0.2**, 4.63N**±0.02×**85.30W**±0.03**, h26**km**, h26**km±1.1km**:pP-P, n342, σ1^{s}00**/336**, mb5.1**/113**, MS4.5**/11**, 27C-19D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	Cerro Adams	4.53	28	*e*P	Pn	18 20 40.1	+1.5
ACR	Cerro Adams	4.53	28	*e*P	Pn	18 20 40.3	+1.7
ACR				*e*S	Sn	18 21 26.7	-4.4
PTP1	Petroterminal	4.56	39	*e*P	Pn	18 20 37.2	-1.8
PTP1				*e*S	Sn	18 21 23.0	-8.8
DVD	David	4.72	37	⇑*e*P	Pn	18 20 43.4	+2.0
DVD				*e*S	Sn	18 21 35.0	-1.1
BRU2	Volcan	4.88	32	*e*P	Pn	18 20 46.4	+2.7
BRU2	Volcan	4.88	32	*e*P	Pn	18 20 46.5	+2.8
BRU2				*e*S	Sn	18 21 37.8	-2.3
BUS	Buena Vista	5.13	17	⇓*e*P	Pn	18 20 48.5	+1.4
BUS	Buena Vista	5.13	17	⇓*e*P	Pn	18 20 48.4	+1.3
BUS				*e*S	Sn	18 21 42.9	-3.4
LCR2	La Lucha 2	5.24	14	*e*P	Pn	18 20 48.9	+0.1
LCR2	La Lucha 2	5.24	14	⇑*e*P	Pn	18 20 49.1	+0.4
LCR2				*e*S	Sn	18 21 43.0	-6.1
LAJ	Bijagual	5.33	13	*e*P	Pn	18 20 45.9	-4.2
LAJ	Bijagual	5.33	13	⇓*e*P	Pn	18 20 46.1	-3.9
LAJ				*e*S	Sn	18 21 37.7	-14
URSC	Urasca	5.39	16	*e*P	Pn	18 20 51.2	+0.4
PRS1	Puriscal	5.41	10	*e*P	Pn	18 20 49.9	-1.3
PRS1	Puriscal	5.41	10	*e*P	Pn	18 20 49.7	-1.5
PRS1				*e*S	Sn	18 21 43.7	-10
CGA2	Cerro Gallo 2	5.42	9	*e*P	Pn	18 20 52.4	+1.2
CGA2	Cerro Gallo 2	5.42	9	*e*P	Pn	18 20 52.4	+1.2
CGA2				*e*S	Sn	18 21 47.0	-6.5
SJS	Escuela Geolog	5.42	13	⇑*e*P	Pn	18 20 51.1	-0.2
SJS				*e*S	Sn	18 21 49.6	-3.9
SJS	Escuela Geolog	5.42	13	⇑*e*P	Pn	18 20 52.0	+0.7
SJS				*e*S	Sn	18 21 49.5	-4.1
VCR	Vista de Mar	5.47	357	*e*P	Pn	18 20 50.5	-1.5
VCR	Vista de Mar	5.47	357	⇑*e*P	Pn	18 20 50.5	-1.5
VCR				*e*S	Sn	18 21 50.1	-4.9
CNI	Changuinola	5.50	30	*e*P	Pn	18 20 56.5	+4.1
ICR	Volcan Irazu	5.51	15	*e*P	Pn	18 20 53.6	+1.0
ICR	Volcan Irazu	5.51	15	⇑*e*P	Pn	18 20 54.0	+1.5
ICR				*e*S	Sn	18 21 50.8	-5.1
VPS2	Volcan Poas 2	5.63	11	*e*P	Pn	18 20 55.5	+1.4
VPS2	Volcan Poas 2	5.63	11	*e*P	Pn	18 20 55.3	+1.2
JTS	JuntasAbangare	5.64	3	⇑*e*P	Pn	18 20 52.4	-1.9
JTS	JuntasAbangare	5.64	3	Pn	Pn	18 20 52.5	-1.8
	224nm,0.3s,baz=208,slow=5.2,SNR=342						
JTS				Sn	Sn	18 21 51.7	-7.4
	158nm,0.3s,baz=309,slow=19,SNR=8.8						
JTS				LR	LR	18 22 37.5	
	comp=Z,7µm,20.3s,baz=193,slow=34						
LIO	Limon	5.80	23	*e*P	Pn	18 20 57.4	+0.8
LIO	Limon	5.80	23	*e*P	Pn	18 20 59.5	+3.0
LIO				*e*S	Sn	18 21 57.5	-5.4
FORC	Fortuna	5.84	6	*e*P	Pn	18 20 57.7	+0.5
FORC	Fortuna	5.84	6	⇓*e*P	Pn	18 20 58.3	+1.1
FORC				*e*S	Sn	18 21 57.2	-6.9
TRTC	Tortuguero	6.12	15	⇓*e*P	Pn	18 21 02.3	+1.3
TRTC	Tortuguero	6.12	15	⇓*e*P	Pn	18 21 02.2	+1.2
CONN	Concepcion	6.90	357	*e*P	Pn	18 21 13.2	+1.1
UPA	Univ. de Panam	7.17	53	*e*P	Pn	18 21 19.8	+3.9
UPA				*e*S	Sn	18 22 41.3	+3.9
PAYG	Puerto Ayora	7.25	224	⇓*e*P	Pn	18 21 15.3	-1.7
APON	Apoyo	7.28	354	*e*P	Pn	18 21 19.7	+2.2
MASN	Masaya	7.36	353	*e*P	Pn	18 21 18.8	+0.2
TICN	Ticuantepe	7.42	353	⇓*e*P	Pn	18 21 20.8	+1.5
MGAN	Managua	7.53	353	⇓*e*P	Pn	18 21 20.3	-0.6
WILN	Americas 2	7.54	353	*e*P	Pn	18 21 20.3	-0.7
XAVN	Gruta Xavier	7.54	352	*e*P	Pn	18 21 22.1	+1.0
COPN	Copaltepe	7.61	350	*e*P	Pn	18 21 22.3	+0.2
MOMJ	Momotombo	7.83	351	*e*P	Pn	18 21 25.8	+0.7
MOMJ				*e*S	Sn	18 22 47.5	-6.3
MIRN	Miramar	7.89	350	*e*P	Pn	18 21 27.1	+1.2
PYTN	Playitas	7.90	355	⇓*e*P	Pn	18 21 26.4	+0.4
LEON	Leon	7.90	349	⇓*e*P	Pn	18 21 26.9	+0.8
LEON				*e*S	Sn	18 22 47.8	-7.8
CNGN	Cerro Negro	7.95	350	⇓*e*P	Pn	18 21 29.4	+2.6
TELN	Telica	8.07	349	*e*P	P	18 21 29.3	+0.8
OTAV	Otavalo	8.11	122	⇑*e*P	P	18 21 29.6	+0.6
CRIN	San Cristobal	8.21	348	*e*P	P	18 21 32.9	+2.5
CNCH	Conchagua	8.95	344	*e*P	P	18 21 39.7	-1.0
CNCH				*e*S	Sn	18 23 13.9	-7.8
VSM	San Miguel	9.23	342	*e*P	P	18 21 45.4	+0.9
BLLM	Bellamira	9.23	342	⇑*e*P	P	18 21 45.2	+0.7
SNVI	San Vicente	9.59	339	*e*P	P	18 21 50.7	+1.1
LCBS	La Ceiba	9.68	338	*e*P	P	18 21 51.5	+0.6
LFRS	El Faro	9.68	338	*e*P	P	18 21 51.0	+0.2
LBRS	Las Brisas	9.78	338	*e*P	P	18 21 53.2	+1.0
LFU	La Fuente	9.82	338	*e*P	P	18 21 52.6	-0.1
BOQS	Boqueron	9.87	337	*e*P	P	18 21 54.1	+0.7
SBLS	San Blas	10.10	335	⇓*e*P	P	18 21 58.0	+1.4
SNJE	San Jose	10.12	335	⇓*e*P	P	18 21 58.1	+1.3
RTR	El Retiro	10.16	335	*e*P	P	18 21 58.1	+0.6
RBDL	Robledal	10.37	336	*e*P	P	18 22 01.3	+1.0
MTO2	Montecristo 2	10.51	338	*e*P	P	18 22 03.9	+1.7
ROSC	El Rosal	10.93	88	Pn	P	18 22 12.7	+4.7
	3.5nm,0.3s,baz=243,slow=3.3,SNR=34						
SDV	Santo Domingo	15.16	73	Pn	P	18 23 06.1	+1.8
	0.5nm,0.3s,baz=258,slow=9.7,SNR=16						
SDV				LR	LR	18 28 42.7	
	comp=Z,2µm,20.6s,baz=132,slow=36						
SDV	Santo Domingo	15.16	73	⇓*e*P	P	18 23 06.2	+1.9
	227nm,0.9s						
HUIG	Huatulco	15.35	317	*e*P	P	18 23 09.2	+2.5
TEIG	Tepich	15.78	350	*e*P	P	18 23 12.1	-0.1
	93nm,1.1s						
VHO	Vista Hermosa	16.69	319	*i* P	P	18 23 26.2	+2.3
PNIG	Pinotepa	17.18	314	*e*P	P	18 23 36.4	+6.3
LVIG	Laguna Verde	18.51	325	⇑*i*P	P	18 23 45.7	-0.9
NNA	Nana	18.52	153	Pn	P	18 23 47.0	+0.3
	1µm,1.2s,SNR=42						
NNA	Nana	18.52	153	⇑*i*P	P	18 23 46.3	-0.4
	206nm,1.3s						
CAIG	El Cayaco	19.18	311	*i* P	P	18 23 54.3	-0.2
PPM	Popocatepetl	19.37	319	*i* P	P	18 23 58.1	+1.3
PLIG	Platanillo	19.49	316	*i* P	P	18 23 57.9	-0.3
YAIG	Yautepec	19.52	318	*i* P	P	18 23 55.7	-2.8
SZVM	Salazar	20.05	318	*e*P	P	18 24 05.0	+0.8
ZIIG	Zihuatanejo	20.42	310	*e*P	P	18 24 05.9	-2.1
MOIG	Morelia	21.53	315	⇑*i*P	P	18 24 20.7	+1.3
SJG	San Juan	23.03	53	*e*P	P	18 24 35.9	+1.6
SJG				pmax	pmax		
	comp=Z,95nm,1.0s						
SJG	San Juan	23.03	53	P	P	18 24 36.6	+2.3
	comp=Z,62nm,0.9s,mb5.0,baz=283,slow=7.2,SNR=9.9						
SJG	San Juan	23.03	53	*e*P	P	18 24 35.9	+1.6
	comp=Z,95nm,1.0s,mb5.2						
ARE	Arequipa	25.01	147	*e*P	P	18 24 56.0	+2.5
LPAZ	La Paz	26.83	141	⇑*e*P	P	18 25 11.5	+1.0
LPAZ				*e*	pP	18 25 17.9	-0.1
LPAZ				pmax	pmax		
	comp=Z,34nm,1.1s						
LPAZ	La Paz	26.83	141	P	P	18 25 11.7	+1.3
	comp=Z,12nm,1.1s,mb4.3,baz=325,slow=8.6,SNR=23						
LPAZ	La Paz	26.83	141	⇑*e*P	P	18 25 11.5	+1.0
	comp=Z,34nm,1.1s,mb4.8						
LPAZ				*e*	pP	18 25 17.9	-0.1
HKT	Hockley	27.09	340	*e*P	P	18 25 12.4	-0.3
HKT				pmax	pmax		
	comp=Z,73nm,1.6s,mb5.0						
HKT	Hockley	27.09	340	*e*P	P	18 25 12.4	-0.3
	comp=Z,73nm,1.6s,mb5.0						
LRAL	Lakeview Retre	28.31	357	*e*P	P	18 25 23.3	-0.4
	comp=Z,28nm,0.7s,mb5.0						
GOGA	Godfrey	28.69	3	*e*P	P	18 25 25.5	-1.6
GOGA				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
GOGA	Godfrey	28.69	3	*e*P	P	18 25 25.5	-1.6
	comp=Z,23nm,0.9s,mb4.9						
JCT	Junction City	29.13	334	*e*P	P	18 25 30.7	-0.4
JCT				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.0						
JCT	Junction City	29.13	334	*e*P	P	18 25 30.7	-0.5
	comp=Z,36nm,1.2s,mb5.0						
TXAR	Lajitas Array	30.11	327	P	P	18 25 39.3	-0.6
	comp=Z,5.1nm,0.8s,mb4.3,baz=146,slow=9.0,SNR=44						
TXAR				PcP	PcP	18 28 41.2	0.0
	comp=Z,0.5nm,0.7s,baz=180,slow=5.4,SNR=2.6						
TXAR				ScP		18 32 22.9	
	comp=Z,1.0nm,1.1s,baz=141,slow=8.0,SNR=3.9						
MIAR	Mount Ida	30.75	347	*e*P	P	18 25 43.8	-1.6
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
MIAR	Mount Ida	30.75	347	*e*P	P	18 25 43.8	-1.7
	comp=Z,3.7nm,0.7s,mb4.3						
WVT	Waverly	31.44	356	*e*P	P	18 25 49.8	-1.7
WVT				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
WVT	Waverly	31.44	356	*e*P	P	18 25 49.8	-1.8
	comp=Z,20nm,0.8s,mb5.0						
LVC	Limon Verde	31.46	150	P	P	18 25 53.2	+1.3
	comp=Z,11nm,0.9s,mb4.7,baz=305,slow=8.3,SNR=10						
LVC				PP	PP	18 26 50.2	-5.8
	comp=Z,19nm,1.2s,baz=332,slow=10,SNR=4.2						
ELN	Prospectdale	32.71	7	*e*P	P	18 26 02.6	-0.1
MNTX	Cornudas Mount	32.87	327	⇑*i*P	P	18 26 03.1	-1.0
	comp=Z,27nm,0.8s,mb5.2						
WCI	Wyandotte Cave	33.46	359	*e*P	P	18 26 07.9	-1.2
	comp=Z,46nm,1.0s,mb5.4						
CCM	Cathedral Cave	33.71	352	*e*P	P	18 26 09.7	-1.7
	comp=Z,35nm,1.0s,mb5.2						
CCM				*e*	pP	18 26 15.8	-3.2
AMTX	Amarillo	33.72	335	*e*P	P	18 26 10.8	-0.6
	comp=Z,28nm,0.7s,mb5.3						
MCWV	Mont Chateau	35.22	7	*e*P	P	18 26 23.4	-0.8
	comp=Z,26nm,0.8s,mb5.2						
ACSO	Alum Creek Sta	35.51	3	*e*P	P	18 26 25.6	-1.1
	comp=Z,12nm,0.8s,mb4.9						
KSU1	Kansas State U	35.82	345	*e*P	P	18 26 28.3	-1.1
ANMO	Albuquerque	35.98	330	⇑*e*P	P	18 26 31.1	+0.4
ANMO				pmax	pmax		
	comp=Z,23nm,0.9s						
ANMO	Albuquerque	35.98	330	⇑*e*P	P	18 26 31.1	+0.4
	comp=Z,23nm,0.9s,mb5.1						
TUC	Tucson	36.44	322	⇑*e*P	P	18 26 34.5	-0.1
TUC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
TUC	Tucson	36.44	322	⇑*e*P	P	18 26 34.5	-0.1
	comp=Z,13nm,0.9s,mb4.9						
CBKS	Cedar Bluff	36.47	341	*e*P	P	18 26 34.9	0.0
CBKS				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
CBKS	Cedar Bluff	36.47	341	*e*P	P	18 26 34.9	0.0
	comp=Z,16nm,0.6s,mb5.1						
SDCO	Great Sand Dun	37.78	333	⇓*e*P	P	18 26 46.6	+0.8
	comp=Z,52nm,1.0s,mb5.2						
GENY	Geneseo	38.56	9	P	P	18 26 51.8	-0.5
WUAZ	Wupatki	39.04	325	*e*P	P	18 26 57.3	+0.8
	comp=Z,815nm,1.1s						
WUAZ				*e*	pP	18 27 06.5	+2.3
PV01	Paradox Valley	39.52	331	*e*P	P	18 26 58.1	-2.4
CFAA	Coronel Fontan	39.53	157	P	P	18 27 00.9	+0.4
	comp=Z,1.8nm,0.8s,baz=333,slow=7.1,SNR=24						
ISCO	Idaho Springs	39.54	335	*e*P	P	18 27 01.1	+0.6
ISCO				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
ISCO	Idaho Springs	39.54	335	*e*P	P	18 27 01.1	+0.6
	comp=Z,26nm,0.9s,mb5.0						
PV10	Paradox Valley	39.94	330	*e*P	P	18 27 03.8	-0.1
PHWY	Pilot Hill	40.74	337	*e*P	P	18 27 11.0	+0.6
PFO	Pinyon Flat Ob	40.89	319	*e*P	P	18 27 12.5	+0.8
PFO				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.8						
PFO	Pinyon Flat Ob	40.89	319	*e*P	P	18 27 12.4	+0.8
	comp=Z,25nm,0.9s,mb4.8						
LDFC	Landfair	40.96	322	*e*P	P	18 27 12.9	+0.6
SRU	San Rafael	41.25	330	⇑*i*P	P	18 27 14.9	+0.3
MSU	Marysvale	41.65	328	*e*P	P	18 27 18.5	+0.5
MVU	Marysvale	41.67	328	*e*P	P	18 27 18.8	+0.7
	comp=Z,22nm,0.9s,mb4.8						
TMUT	Trail Mountain	41.73	329	*e*P	P	18 27 19.2	+0.5
ARUT	Antelope Range	41.82	326	*e*P	P	18 27 20.7	+1.3
BDFB	Brasilia	42.04	119	P	P	18 27 21.9	+0.4
	comp=Z,6.0nm,0.9s,mb4.2,baz=304,slow=15,SNR=3.3						
BAO	Brasilia Array	42.06	119	P	P	18 27 21.9	+0.3
BAO				*e*	pP	18 27 29.5	+0.1
MWC	Mount Wilson	42.32	318	*e*P	P	18 27 24.1	+0.5
MPU	Maple Canyon	42.49	330	*e*P	P	18 27 25.0	+0.2
DAU	Daniels Canyon	42.61	330	*e*P	P	18 27 26.6	+0.8
NLU	North Lily Min	42.67	329	*e*P	P	18 27 26.6	+0.2
JLU	Jordanelle	42.85	330	*e*P	P	18 27 27.8	+0.1
NOQ	North Oquirrh	43.22	330	*e*P	P	18 27 30.9	+0.2
TCUT	Toone Canyon	43.22	331	*e*P	P	18 27 31.1	+0.4
DUG	Dugway	43.23	329	⇑*e*P	P	18 27 31.2	+0.4
	comp=Z,86nm,0.8s,mb5.5						
EYMN	Ely	43.49	354	*e*P	P	18 27 31.2	-1.6
	comp=Z,9.7nm,0.6s,mb4.7						
PDAR	Pinedale Array	43.66	334	P	P	18 27 34.0	-0.3
	comp=Z,33nm,1.2s,mb4.9,baz=136,slow=8.9,SNR=74						
PDAR				PcP	PcP	18 29 22.1	+0.2
	comp=Z,1.4nm,0.7s,baz=135,slow=5.1,SNR=3.6						
HWUT	Hardware Ranch	43.67	331	⇑*e*P	P	18 27 34.3	-0.1
	comp=Z,47nm,0.8s,mb5.3						
SPUT	South Promonto	43.87	330	*e*P	P	18 27 35.9	-0.2
BGU	Big Grassy Mou	43.88	329	*e*P	P	18 27 36.0	-0.1
TPH	Tonopah	44.20	323	*e*P	P	18 27 39.0	+0.2
	comp=Z,40nm,0.9s,mb5.1						
AHID	Auburn Hatcher	44.35	333	*e*P	P	18 27 39.1	-0.8
	comp=Z,22nm,1.2s,mb4.8						
HVU	Hansel Valley	44.39	330	*e*P	P	18 27 39.8	-0.5
MTUM	Tungsten Hills	44.56	321	*e*P	P	18 27 42.2	+0.5
SNOW	Snow King Moun	44.75	334	*e*P	P	18 27 42.9	-0.2
LOHW	Long Hollow	44.80	334	*e*P	P	18 27 43.0	-0.5
WUWY	Wally Ulrich	44.80	334	*e*P	P	18 27 42.9	-0.7
TPAW	Teton Pass	44.86	333	*e*P	P	18 27 43.5	-0.4
OMM	Old Mammoth Mi	44.99	321	*e*P	P	18 27 45.6	+0.4
MNV	Mina	44.99	323	⇑*i*P	P	18 27 45.4	+0.3
MNV				pmax	pmax		
	comp=Z,78nm,1.1s,mb5.5						
MNV	Mina	44.99	323	⇑*i*P	P	18 27 45.4	+0.3
	comp=Z,78nm,1.1s,mb5.5						
NVAR	Mina Array Bea	45.08	323	P	P	18 27 46.5	+0.7
	comp=Z,27nm,0.8s,mb5.1,baz=131,slow=7.9,SNR=122						
IMW	Indian Meadow	45.17	334	*e*P	P	18 27 46.0	-0.5
LRV	Little Rabbit	45.57	319	*e*P	P	18 27 50.2	+0.5
YFT	Old Faithful	45.57	334	*e*P	P	18 27 50.4	+0.8
LAO	LASA Array	45.65	340	*e*P	P	18 27 49.4	-0.8
	comp=Z,34nm,0.8s,mb5.3						
BMN	Battle Mountai	45.77	326	⇑*i*P	P	18 27 50.7	-0.5
BMN				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
BMN	Battle Mountai	45.77	326	⇑*i*P	P	18 27 50.7	-0.5
	comp=Z,28nm,0.8s,mb5.2						
YMR	Madison River	45.80	334	*e*P	P	18 27 51.8	+0.4
QLMT	Earthquake Lak	46.13	334	*e*P	P	18 27 55.0	+1.0
ULM	Lac du Bonnet	46.33	351	P	P	18 27 54.6	-0.9
	comp=Z,37nm,0.9s,mb5.3,baz=166,slow=7.5,SNR=72						
ULM				PcP	PcP	18 29 29.6	-1.4
	comp=Z,3.7nm,0.6s,baz=181,slow=5.7,SNR=3.9						
ULM				LR	LR	18 50 01.7	
	comp=Z,261nm,20.4s,MS4.2,baz=127,slow=40						
ULM	Lac du Bonnet	46.33	351	*e*P	P	18 27 54.2	-1.4
	comp=Z,74nm,1.0s,mb5.6						
HLID	Hailey	46.52	331	⇑*e*P	P	18 27 56.9	-0.2
	comp=Z,13nm,0.9s,mb4.8						
DGMT	Dagmar	46.58	343	*e*P	P	18 27 57.2	-0.2
	comp=Z,14nm,0.7s,mb5.0						
MCMT	McKenzie Canyo	46.75	333	*e*P	P	18 27 59.4	+0.4
PLCA	Paso Flores	47.12	165	P	P	18 28 01.4	-0.5
	comp=Z,13nm,0.8s,mb4.9,baz=335,slow=9.4,SNR=21						
PLCA				LR	LR	18 43 24.4	
	comp=Z,530nm,18.8s,MS4.5,baz=245,slow=30						
OHCM	Honcut	47.59	322	*e*P	P	18 28 05.5	-0.1
TRQA	Tornquist	47.67	155	*e*P	P	18 28 05.2	-1.1
	comp=Z,26nm,0.9s,mb5.3						
TRQA				*e*	pP	18 28 12.8	-1.4
WVOR	Wild Horse Val	47.91	327	*e*P	P	18 28 07.1	-1.0
	comp=Z,83nm,1.2s,mb5.6						
CHMT	Chamberlain Mo	48.55	335	*e*P	P	18 28 11.5	-1.5
LTIM	Timbered Crate	48.72	324	P	P	18 28 13.8	-0.5
MSO	Missoula	48.78	334	*e*P	P	18 28 13.7	-1.0
	comp=Z,17nm,0.9s,mb5.1						
BMO	Blue Mountains	48.89	330	*e*P	P	18 28 13.2	-2.4
	comp=Z,9.6nm,1.0s,mb4.8						

BMO				*e*	pP	18 28 21.9	-1.6
LAMM	**Antelope Mount**	**49.66**	**323**	P	**P**	**18 28 19.8**	**-1.7**
RCBR	**Riachuelo**	**50.40**	**101**	⇓*e*P	**P**	**18 28 27.2**	**-0.5**
	comp=Z,33nm,1.0s,mb5.3						
GL2	**New Goldendale**	**51.44**	**329**	P	**P**	**18 28 35.0**	**-0.1**
FFC	**Flin Flon**	**51.75**	**348**	P	**P**	**18 28 36.6**	**-0.7**
	comp=Z,84nm,1.3s,mb5.5,SNR=16						
FFC	**Flin Flon**	**51.75**	**348**	*e*P	**P**	**18 28 36.1**	**-1.2**
FFC				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
FFC	**Flin Flon**	**51.75**	**348**	*e*P	**P**	**18 28 36.1**	**-1.2**
	comp=Z,21nm,1.1s,mb5.0						
ASR	**Mount Adams--S**	**51.97**	**329**	P	**P**	**18 28 38.9**	**-0.3**
SCHQ	**Schefferville**	**52.24**	**13**	P	**P**	**18 28 38.8**	**-2.2**
	comp=Z,8.0nm,0.7s,mb4.8,baz=208,slow=5.3,SNR=24						
SCHQ				PcP	PcP	18 29 51.2	-1.1
	comp=Z,2.7nm,0.8s,baz=236,slow=3.6,SNR=2.2						
SCHQ				LR	LR	18 51 27.8	
	comp=Z,671nm,18.1s,MS4.7,baz=23,slow=37						
SCHQ	**Schefferville**	**52.24**	**13**	P	**P**	**18 28 38.8**	**-2.2**
SCHQ				PcP	PcP	18 29 51.2	-1.1
ETW	**Entiat**	**52.32**	**331**	P	**P**	**18 28 41.1**	**-0.5**
EDM	**Edmonton**	**53.63**	**339**	*e*P	**P**	**18 28 49.3**	**-2.1**
FCC	**Fort Churchill**	**54.43**	**354**	*e*P	**P**	**18 28 56.0**	**-1.1**
FCC				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
FCC	**Fort Churchill**	**54.43**	**354**	*e*P	**P**	**18 28 56.0**	**-1.1**
	comp=Z,32nm,1.1s,mb5.2						
RKT	**Rikitea**	**55.77**	**238**	*e*LR	LR	18 45 25.3	
	comp=Z,448nm,28.2s						
TAOE	**Nuku Hiva Isla**	**56.30**	**256**	*e*S	**S**	**18 36 59.8**	**+1.9**
TAOE				*e*LR	LR	18 45 27.5	
USHA	**Ushuaia**	**60.88**	**169**	P	**P**	**18 29 42.2**	**-0.4**
	comp=Z,16nm,0.9s,mb5.2,baz=15,slow=3.1,SNR=5.0						
YKA	**Yellowknife Ar**	**61.67**	**345**	P	**P**	**18 29 45.8**	**-2.1**
YKA						18 32 03.5	
YKA	**Yellowknife Ar**	**61.67**	**345**	P	**P**	**18 29 45.8**	**-2.1**
	comp=Z,3.6nm,0.6s,mb4.7,baz=141,slow=6.7,SNR=109						
YKA				PP	PP	18 32 03.4	-2.5
	comp=Z,0.7nm,0.8s,baz=143,slow=9.3,SNR=3.3						
YKA				LR	LR	19 00 41.8	
	comp=Z,304nm,18.5s,MS4.5,baz=125,slow=40						
YKW3	**Yellowknife Ar**	**61.73**	**345**	*e*P	**P**	**18 29 46.1**	**-2.2**
DLBC	**Dease Lake**	**63.86**	**336**	*e*P	**P**	**18 30 02.4**	**0.0**
PPT	**Papeete**	**67.13**	**249**	*e*LR	LR	18 50 42.2	
	comp=Z,878nm,26.5s						
CHIE	**El Hierro**	**67.82**	**62**	P	**P**	**18 30 28.6**	**+0.2**
	comp=Z,20nm,0.8s,mb5.2						
TBI	**Tubuai**	**68.43**	**243**	*e*LR	LR	18 51 16.8	
	comp=Z,561nm,32.5s						
EGOM	**La Gomera**	**68.53**	**62**	P	**P**	**18 30 32.0**	**-0.8**
	comp=Z,56nm,0.9s,mb5.5						
CCAN	**Las Canadas**	**69.06**	**62**	P	**P**	**18 30 36.9**	**+0.8**
	comp=Z,18nm,0.8s,mb5.0						
INK	**Inuvik**	**71.26**	**343**	*e*P	**P**	**18 30 47.8**	**-0.9**
INK				*e*	pP	18 30 55.8	-1.0
INK				pmax	pmax		
	comp=Z,14nm,1.0s						
INK	**Inuvik**	**71.26**	**343**	*e*P	**P**	**18 30 47.8**	**-0.9**
	comp=Z,14nm,1.0s,mb4.8						
INK				*e*	pP	18 30 55.8	-1.0
CFTV	**Fuerteventura**	**71.30**	**62**	P	**P**	**18 30 49.4**	**-0.2**
	comp=Z,9.5nm,0.7s,mb4.8						
MENT	**Mentasta**	**71.94**	**336**	*e*P	**P**	**18 30 52.8**	**-0.1**
THY	**Trims Highway**	**72.98**	**336**	*e*P	**P**	**18 30 58.2**	**-0.8**
SUMG	**Summit**	**73.63**	**13**	*e*P	**P**	**18 31 02.3**	**-0.3**
	comp=Z,19nm,0.7s,mb5.1						
SUMG				*e*	pP	18 31 10.9	+0.2
ILAR	**Eielson Array**	**74.00**	**337**	P	**P**	**18 31 03.9**	**-1.0**
	comp=Z,7.4nm,0.8s,mb4.7,baz=119,slow=4.0,SNR=70						
ILAR				PP	PP	18 33 51.5	-0.2
	comp=Z,1.4nm,0.9s,baz=111,slow=7.8,SNR=4.2						
ILAR				LR	LR	19 07 48.8	
	comp=Z,200nm,21.0s,MS4.4,baz=250,slow=39						
MCK	**McKinley**	**74.41**	**336**	*e*P	**P**	**18 31 06.4**	**-0.9**
MCK				*e*	pP	18 31 15.0	-0.4
MCK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
MCK	**McKinley**	**74.41**	**336**	*e*P	**P**	**18 31 06.4**	**-0.9**
	comp=Z,12nm,0.9s,mb4.8						
MCK				*e*	pP	18 31 15.0	-0.5
COLA	**College**	**74.42**	**337**	*e*P	**P**	**18 31 06.1**	**-1.2**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
COLA	**College**	**74.42**	**337**	*e*P	**P**	**18 31 06.1**	**-1.1**
	comp=Z,3.4nm,0.8s,mb4.3						
SPU	**Mount Spurr**	**74.89**	**333**	*e*P	**P**	**18 31 09.7**	**-0.4**
RSO	**Redoubt South**	**74.99**	**332**	*e*P	**P**	**18 31 10.0**	**-0.7**
EVO	**Evora**	**77.19**	**52**	*e*P	**P**	**18 31 22.9**	**-0.6**
	comp=Z,34nm,0.9s,mb5.0						
EVO				*e*R			
	comp=Z,240nm,19.5s						
PBEJ	**Beja**	**77.26**	**52**	*e*P	**P**	**18 31 24.8**	**+0.8**
	comp=Z,18nm,1.4s,mb4.8						
PVIS	**Viseu**	**77.45**	**49**	*e*P	**P**	**18 31 25.2**	**+0.3**
	comp=Z,61nm,1.5s,mb5.3						
PALC	**Alcoutim**	**77.53**	**53**	*e*P	**P**	**18 31 25.4**	**-0.1**
	comp=Z,39nm,1.3s,mb5.2						
MTE	**Manteigas**	**77.69**	**50**	*e*P	**P**	**18 31 26.7**	**+0.5**
	comp=Z,34nm,1.5s,mb5.0						
PCBR	**Castelo Branco**	**77.70**	**50**	*e*P	**P**	**18 31 26.9**	**+0.6**
	comp=Z,37nm,1.4s,mb5.1						
ESPR	**Espera**	**78.79**	**53**	P	**P**	**18 31 33.0**	**+0.7**
	comp=Z,32nm,0.9s,mb5.2						
EJIF	**Jimena Fronter**	**79.09**	**54**	P	**P**	**18 31 35.0**	**+1.0**
EJIF				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
EJIF	**Jimena Fronter**	**79.09**	**54**	P	**P**	**18 31 35.0**	**+1.0**
	comp=Z,17nm,0.8s,mb5.0						
EARI	**Arriondas**	**79.63**	**47**	P	**P**	**18 31 36.9**	**+0.1**
	comp=Z,291nm,2.6s,mb5.8						
DBIC	**Dimbokro**	**80.00**	**84**	*e*P	**P**	**18 31 39.2**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,36nm,1.0s						
DBIC	**Dimbokro**	**80.00**	**84**	P	**P**	**18 31 39.1**	**-0.2**
	comp=Z,15nm,0.9s,mb5.0,baz=257,slow=5.7,SNR=17						
DBIC	**Dimbokro**	**80.00**	**84**	*e*P	**P**	**18 31 39.2**	**-0.1**
	comp=Z,36nm,1.0s,mb5.2						
ELOJ	**Sierra Loja**	**80.17**	**53**	P	**P**	**18 31 41.3**	**+1.5**
ELOJ				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
ELOJ	**Sierra Loja**	**80.17**	**53**	P	**P**	**18 31 41.3**	**+1.6**
	comp=Z,5.8nm,0.4s,mb4.9						
GUD	**Guadarrama**	**80.28**	**50**	P	**P**	**18 31 40.7**	**+0.4**
GUD				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
GUD	**Guadarrama**	**80.28**	**50**	P	**P**	**18 31 40.7**	**+0.3**
	comp=Z,19nm,1.0s,mb5.0						
ESDC	**Sonseca Array**	**80.39**	**51**	P	**P**	**18 31 41.6**	**+0.6**
	comp=Z,11nm,0.8s,mb4.8,baz=274,slow=5.2,SNR=28						
ESDC	**Sonseca Array**	**80.39**	**51**	P	**P**	**18 31 41.5**	**+0.6**
	comp=Z,15nm,0.8s,mb5.0						
ESLA	**Sonseca Array**	**80.39**	**51**	*e*P	**P**	**18 31 41.2**	**+0.3**
	comp=Z,8.7nm,1.1s,mb4.6						
ERON	**Agron**	**80.44**	**53**	P	**P**	**18 31 42.9**	**+1.6**
	comp=Z,11nm,0.7s,mb4.9						
ECOG	**Cogollos-Vega**	**80.64**	**53**	P	**P**	**18 31 43.8**	**+1.5**
ECOG				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
ECOG	**Cogollos-Vega**	**80.64**	**53**	P	**P**	**18 31 43.8**	**+1.5**
	comp=Z,9.0nm,0.5s,mb5.0						
EQES	**Quesada**	**81.04**	**53**	P	**P**	**18 31 44.7**	**+0.3**
	comp=Z,132nm,1.3s,mb5.7						
EBER	**Berja**	**81.17**	**54**	P	**P**	**18 31 45.7**	**+0.6**
	comp=Z,127nm,1.6s,mb5.6						
ROSF	**Rostrenen**	**81.26**	**42**	*e*P	**P**	**18 31 44.8**	**-0.5**
	comp=Z,112nm,1.3s,mb5.3						
ROSF	**Rostrenen**	**81.26**	**42**	*e*P	**P**	**18 31 44.8**	**-0.5**
ROSF				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.3						
EHUE	**Huescar**	**81.42**	**53**	P	**P**	**18 31 47.5**	**+1.1**
EHUE				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
EHUE	**Huescar**	**81.42**	**53**	P	**P**	**18 31 47.5**	**+1.2**
	comp=Z,26nm,0.9s,mb5.2						
SGMF	**Saint Gilles**	**81.73**	**42**	*e*P	**P**	**18 31 47.1**	**-0.7**
	comp=Z,114nm,1.1s,mb5.4						
SGMF	**Saint Gilles**	**81.73**	**42**	*e*P	**P**	**18 31 47.1**	**-0.7**
SGMF				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.4						
ETOB	**Tobarra**	**82.25**	**52**	P	**P**	**18 31 51.1**	**+0.5**
	comp=Z,694nm,2.8s,mb6.1						
SJPF	**Ste Jean**	**82.53**	**47**	*e*P	**P**	**18 31 52.3**	**+0.3**
	comp=Z,42nm,0.8s,mb5.2						
SJPF	**Ste Jean**	**82.53**	**47**	*e*P	**P**	**18 31 52.3**	**+0.3**
SJPF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
TNA	**Tin City**	**82.76**	**335**	*e*P	**P**	**18 31 52.6**	**-0.2**
	comp=Z,11nm,1.2s,mb4.8						
GRR	**Gorron**	**82.87**	**42**	*e*P	**P**	**18 31 53.2**	**-0.5**
	comp=Z,46nm,0.9s,mb5.2						
GRR	**Gorron**	**82.87**	**42**	*e*P	**P**	**18 31 53.2**	**-0.5**
GRR				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
ETSF	**Etsaut**	**83.02**	**47**	*e*P	**P**	**18 31 55.6**	**+1.0**
	comp=Z,59nm,1.2s,mb5.2						
ETSF	**Etsaut**	**83.02**	**47**	*e*P	**P**	**18 31 55.6**	**+1.0**
ETSF				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
FLN	**La Foliniere**	**83.13**	**42**	*e*P	**P**	**18 31 54.7**	**-0.3**
	comp=Z,58nm,1.0s,mb5.3						
FLN				*e*R			
	comp=Z,365nm,22.5s						
MFF	**Saint Martin d**	**83.33**	**44**	*e*P	**P**	**18 31 55.6**	**-0.5**
	comp=Z,50nm,1.1s,mb5.2						
MFF	**Saint Martin d**	**83.33**	**44**	*e*P	**P**	**18 31 55.6**	**-0.5**
MFF				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
LDF	**La Druitiere**	**83.36**	**42**	*e*P	**P**	**18 31 55.7**	**-0.5**
	comp=Z,53nm,1.0s,mb5.2						
LDF	**La Druitiere**	**83.36**	**42**	*e*P	**P**	**18 31 55.7**	**-0.5**
LDF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.2						
EBIE	**Bielsa**	**83.54**	**48**	P	**P**	**18 31 57.7**	**+0.4**
	comp=Z,14nm,0.7s,mb5.2						
EPF	**Esparros**	**83.68**	**47**	*e*P	**P**	**18 31 58.2**	**+0.2**
	comp=Z,55nm,1.2s,mb5.3						
EPF	**Esparros**	**83.68**	**47**	*e*P	**P**	**18 31 58.2**	**+0.2**
EPF				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.3						
LFF	**La Frestale**	**83.95**	**45**	*e*P	**P**	**18 31 57.9**	**-1.4**
RJF	**Les Rejaudoux**	**84.50**	**45**	*e*P	**P**	**18 32 01.7**	**-0.3**
RJF				*e*R			
	comp=Z,269nm,20.5s						
CAF	**Calviac**	**84.89**	**45**	*e*P	**P**	**18 32 03.7**	**-0.3**
	comp=Z,40nm,1.1s,mb5.1						
CAF	**Calviac**	**84.89**	**45**	*e*P	**P**	**18 32 03.7**	**-0.3**
CAF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
TCF	**Toulx Ste Croi**	**84.96**	**44**	*e*P	**P**	**18 32 03.7**	**-0.6**
	comp=Z,52nm,1.3s,mb5.2						
TCF	**Toulx Ste Croi**	**84.96**	**44**	*e*P	**P**	**18 32 03.7**	**-0.6**
TCF				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.2						
MTLF	**Montolieu**	**85.05**	**47**	*e*P	**P**	**18 32 04.6**	**-0.2**
	comp=Z,59nm,1.1s,mb5.3						
MTLF	**Montolieu**	**85.05**	**47**	*e*P	**P**	**18 32 04.6**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.3						
BGF	**Bois d’Agland**	**85.40**	**44**	*e*P	**P**	**18 32 05.9**	**-0.6**
	comp=Z,27nm,1.0s,mb5.0						
BGF	**Bois d’Agland**	**85.40**	**44**	*e*P	**P**	**18 32 05.9**	**-0.6**
BGF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**85.74**	**44**	*e*P	**P**	**18 32 07.2**	**-1.0**
	comp=Z,20nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**85.74**	**44**	*e*P	**P**	**18 32 07.2**	**-1.0**
AVF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
SSF	**Saint Saulge**	**85.83**	**43**	*e*P	**P**	**18 32 07.7**	**-0.9**
	comp=Z,21nm,1.1s,mb5.0						
SSF	**Saint Saulge**	**85.83**	**43**	*e*P	**P**	**18 32 07.7**	**-0.9**
SSF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**86.08**	**44**	*e*P	**P**	**18 32 09.0**	**-0.9**
	comp=Z,24nm,1.0s,mb5.1						
SMF	**Signal de Mont**	**86.08**	**44**	*e*P	**P**	**18 32 09.0**	**-0.9**
SMF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.1						
BAIF	**Baives**	**86.17**	**40**	*e*P	**P**	**18 32 09.4**	**-0.8**
LASF	**Ste Croix**	**86.21**	**46**	*e*P	**P**	**18 32 10.9**	**+0.3**
	comp=Z,29nm,1.0s,mb5.2						
GIVF	**Givet**	**86.56**	**40**	*e*P	**P**	**18 32 11.7**	**-0.5**
	comp=Z,77nm,1.3s,mb5.5						
GIVF	**Givet**	**86.56**	**40**	*e*P	**P**	**18 32 11.7**	**-0.5**
GIVF				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.5						
VIVF	**Saint-Julien-l**	**86.75**	**45**	*e*P	**P**	**18 32 13.6**	**+0.4**
	comp=Z,53nm,1.0s,mb5.4						
VIVF	**Saint-Julien-l**	**86.75**	**45**	*e*P	**P**	**18 32 13.6**	**+0.4**
VIVF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.4						
MEZF	**Maizieres J’vi**	**86.80**	**42**	*e*P	**P**	**18 32 12.9**	**-0.5**
WLF	**Walferdange**	**87.45**	**41**	*e*P	**P**	**18 32 16.7**	**+0.2**
WLF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.5						
WLF	**Walferdange**	**87.45**	**41**	*e*P	**P**	**18 32 16.6**	**+0.2**
	comp=Z,35nm,1.1s,mb5.5						
ORIF	**Oris-en-Rattie**	**87.60**	**45**	*e*P	**P**	**18 32 17.9**	**+0.6**
	comp=Z,39nm,1.2s,mb5.2						
ORIF				*e*R			
	comp=Z,245nm,20.8s						
CABF	**La Chapelle**	**87.62**	**44**	*e*P	**P**	**18 32 17.2**	**-0.2**
	comp=Z,43nm,1.1s,mb5.3						
CABF	**La Chapelle**	**87.62**	**44**	*e*P	**P**	**18 32 17.2**	**-0.2**
CABF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.3						
HAU	**Haudompre**	**87.70**	**42**	*e*P	**P**	**18 32 17.2**	**-0.5**
	comp=Z,23nm,0.9s,mb5.1						
HAU				*e*R			
	comp=Z,181nm,20.8s						
HINF	**Hinteralfeld**	**88.05**	**42**	*e*P	**P**	**18 32 18.6**	**-0.8**
	comp=Z,22nm,1.1s,mb5.0						
HINF	**Hinteralfeld**	**88.05**	**42**	*e*P	**P**	**18 32 18.6**	**-0.8**
HINF				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
LPL	**La Plagne**	**88.16**	**45**	*e*P	**P**	**18 32 20.4**	**+0.4**
LPG	**La Plagne**	**88.17**	**45**	*e*P	**P**	**18 32 20.6**	**+0.6**
	comp=Z,31nm,1.4s,mb5.1						
LPG	**La Plagne**	**88.17**	**45**	*e*P	**P**	**18 32 20.6**	**+0.6**
LPG				pmax	pmax		
	comp=Z,15nm,1.4s,mb5.0						
FRF	**La Foret Royal**	**88.26**	**47**	*e*P	**P**	**18 32 20.2**	**-0.3**
	comp=Z,16nm,0.8s,mb5.0						
FRF	**La Foret Royal**	**88.26**	**47**	*e*P	**P**	**18 32 20.2**	**-0.3**
FRF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
CDF	**Champ du Feu**	**88.28**	**42**	*e*P	**P**	**18 32 19.8**	**-0.7**
	comp=Z,54nm,1.5s,mb5.2						
CDF	**Champ du Feu**	**88.28**	**42**	*e*P	**P**	**18 32 19.8**	**-0.7**
CDF				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.3						
NOA	**NORSAR Array B**	**89.14**	**29**	P	**P**	**18 32 24.6**	**+0.3**
	comp=Z,1.8nm,1.1s,mb4.3,baz=330,slow=8.5,SNR=2.8						
NOA				LR	LR	19 12 26.9	
	comp=Z,137nm,18.5s,MS4.4,baz=285,slow=36						
PGF	**Pioggiola**	**90.07**	**47**	*e*P	**P**	**18 32 28.1**	**-1.0**
GRA1	**Grafenberg Arr**	**90.72**	**40**	*e*P	**P**	**18 32 32.3**	**+0.4**
	comp=Z,7.0nm,1.0s,mb5.0						
GRF	**Grafenberg Arr**	**90.72**	**40**	*e*P	**P**	**18 32 32.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
GRF	**Grafenberg Arr**	**90.72**	**40**	*e*P	**P**	**18 32 32.3**	**+0.4**
GRF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
GRF	**Grafenberg Arr**	**90.72**	**40**	*e*P	**P**	**18 32 32.3**	**+0.4**
	comp=Z,7.0nm,1.0s,mb5.0						
BRG	**Berggiesshubel**	**92.26**	**39**	*e*P	**P**	**18 32 39.7**	**+0.8**
BRG				pmax	pmax		
	comp=Z,16nm,1.6s,mb5.1						
BRG	**Berggiesshubel**	**92.26**	**39**	*e*P	**P**	**18 32 39.7**	**+0.8**
	comp=Z,16nm,1.6s,mb5.1						
KHC	**Kasperske Hory**	**92.33**	**41**	*e*P	**P**	**18 32 39.5**	**+0.2**
GERES	**GERESS Array B**	**92.46**	**41**	P	**P**	**18 32 40.3**	**+0.4**
	comp=Z,2.9nm,1.1s,mb4.5,baz=288,slow=4.2,SNR=9.8						
BILL	**Bilibino**	**92.54**	**339**	⇓*e*P	**P**	**18 32 40.2**	**+0.3**
BILL				pmax	pmax		
	comp=Z,12nm,1.4s,mb5.1						
BILL	**Bilibino**	**92.54**	**339**	*e*P	**P**	**18 32 39.8**	**-0.1**
	comp=Z,15nm,1.4s,mb5.2						
ARCES	**ARCESS Array B**	**92.84**	**19**	P	**P**	**18 32 40.9**	**-0.3**
	comp=Z,6.3nm,1.0s,mb5.0,baz=304,slow=4.4,SNR=6.4						
QSPA	**South Pole Qui**	**94.64**	**180**	*e*P	**P**	**18 32 49.8**	**+0.5**
	comp=Z,12nm,0.9s,mb5.3						
FINES	**FINESS Array B**	**95.99**	**27**	LR	LR	19 12 14.1	
	comp=Z,117nm,19.7s,MS4.4,baz=98,slow=33						
URZ	**Urewera**	**98.81**	**232**	LR	LR	19 04 40.6	
	comp=Z,196nm,21.4s,MS4.6,baz=158,slow=28						
TIXI	**Tiksi**	**100.68**	**350**	*i* P	P	18 33 16.1	-0.8
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.6						
SOC	**Sochi**	**111.14**	**40**	*i* PKIKP	PKPdf	18 38 01.3	-4.8
SOC				*e*PPP	PPP	18 41 01.3	-5.0
SOC				*e*		18 44 36.5	
SOC				*e*PS	PS	18 48 08.4	-3.1
SOC				*e*SS	SS	18 54 08.3	-4.3
SOC				*e*SSS	SSS	18 58 18.3	-4.6
ZAL	**Zalesovo**	**121.06**	**7**	PKP	PKPdf	18 38 20.6	-4.6
	comp=Z,1.6nm,0.3s,baz=354,slow=0.5,SNR=7.0						
KMBO	**Kilima Mbogo**	**122.53**	**88**	PKP	PKPdf	18 38 24.5	-4.4
	comp=Z,0.8nm,0.6s,baz=56,slow=23,SNR=2.4						
SONM	**Songino Array**	**126.76**	**350**	PKP	PKPdf	18 38 32.3	-4.0
	comp=Z,0.7nm,0.6s,baz=307,slow=1.0,SNR=7.8						
STKA	**Stephens Creek**	**128.44**	**232**	PKP	PKPdf	18 38 35.7	-4.3
	comp=Z,1.8nm,0.9s,baz=206,slow=6.5,SNR=2.6						
STKA	**Stephens Creek**	**128.44**	**232**	PKP	PKPdf	18 38 35.7	-4.3
AAK	**Ala-Archa**	**129.51**	**19**	*e*PKIKP	PKPdf	18 38 38.0	-3.8
WMQ	**Urumqi**	**131.36**	**7**	*e*PKP	PKPdf	18 38 44.0	-1.2
GTA	**Gaotai**	**135.93**	**354**	PKP	PKPdf	18 38 47.9	-6.0
GTA				SKS	SKS	18 45 57.3	-6.1
GTA				SKKS		18 48 19.4	
GTA				PP	PP		
	comp=Z,164nm,7.6s						
GTA				LR	LR		
	comp=N,151nm,16.0s,MS4.9						
GTA				LR	LR		
	comp=E,125nm,16.3s,MS4.9						
GTA				LR	LR		
	comp=Z,220nm,19.4s,MS4.9						
SSE	**Sheshan**	**136.40**	**326**	PKP	PKPdf	18 38 52.8	-2.1
SSE				PP	PP	18 41 36.3	+1.2
SSE				SS	SS	18 59 35.3	+2.7
SSE				PP	PP		
	comp=Z,83nm,3.5s						
SSE				LR	LR		
	comp=N,45nm,28.0s,MS4.5						
SSE				LR	LR		
	comp=E,113nm,28.0s,MS4.5						
SSE				LR	LR		
	comp=Z,110nm,23.2s,MS4.5						
SSE	**Sheshan**	**136.40**	**326**	PKP	PKPdf	18 38 52.8	-2.1
SSE				PP	PP	18 41 36.3	+1.2
SSE				SS	SS	18 59 35.2	+2.6
NJ2	**Nanjing**	**136.89**	**329**	*e*PKP	PKPdf	18 38 50.6	-5.2
NJ2				XPKP		18 39 05.0	
NJ2				PP	PP	18 41 36.0	-2.0
NJ2				PKS	PKS	18 42 26.0	-0.2
NJ2				SKS	SKS	18 45 56.0	-9.3
NJ2				SKKS		18 48 24.0	
NJ2				PP	PP		
	comp=Z,2µm,10.2s						
NJ2				LR	LR		
	comp=N,1µm,21.0s						
NJ2				LR	LR		
	comp=E,2µm,24.0s						
ASAR	**Alice Springs**	**137.75**	**240**	PKP	PKPdf	18 38 53.7	-4.0
	comp=E,0.3nm,0.6s,baz=90,slow=0.9,SNR=6.3						
WRAB	**Tennant Creek**	**138.53**	**245**	*e*PKPdf	PKPdf	18 38 54.6	-4.5
WRA	**Warramunga Arr**	**138.53**	**245**	PKP	PKPdf	18 38 54.6	-4.5
	comp=E,1.1nm,0.8s,baz=107,slow=2.7,SNR=8.0						
LSA	**Lhasa**	**145.70**	**5**	PKP	PKPdf	18 39 06.8	-4.7
LSA	**Lhasa**	**145.70**	**5**	*e*PKP2	PKPab	18 39 08.5	-1.1
GYA	**Guiyang**	**147.00**	**340**	⇓*i*PKP	PKPdf	18 39 12.0	-1.8
GYA				PP	PP	18 42 43.3	+3.4
GYA				PP	PP		
	comp=Z,100nm,6.7s						
HYB	**Hyderabad**	**152.91**	**36**	*i* PKP	PKPdf	18 39 19.5	-3.6
HYB				*e*		18 39 37.0	
CMAR	**Chiang Mai Arr**	**156.69**	**350**	PKP	PKPdf	18 39 24.4	-3.8
	comp=Z,0.8nm,0.8s,baz=278,slow=2.8,SNR=5.2						
CMAR				PKPab	PKPab	18 39 53.5	-1.8
	comp=Z,1.3nm,0.7s,baz=354,slow=5.2,SNR=6.9						

IDC 22 18:33:02.9±2.3**, 14.91S**×**175.30W, mb4.0**/4**, mb1 4.3**/4**, mb1mx3.9**/15**, mbtmp4.0**/4**, Error ellipse: s-maj=170.0km s-min=31.6km az=148.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.70**	**239**	P	P	18 41 01.4	-1.9
	1.4nm,0.8s,baz=88,slow=14,SNR=2.0						
WRA	**Warramunga Arr**	**48.17**	**256**	P	P	18 41 45.3	-1.9
	1.0nm,0.4s,baz=92,slow=6.5,SNR=53						
ASAR	**Alice Springs**	**48.52**	**251**	P	P	18 41 48.0	-1.8
	1.1nm,0.4s,baz=82,slow=9.2,SNR=32						
PDAR	**Pinedale Array**	**83.14**	**43**	P	P	18 45 31.1	-1.0
	0.3nm,0.5s,baz=219,slow=3.3,SNR=4.4						

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*NEIC **22** 18:50:04.5±2.0, 28.08S×179.12W, h404^{km}±27^{km}, mb4.2/3, Error ellipse: s-maj=29.7km s-min=14.4km az=125.0*

*IDC **22** 18:50:04.4±9.6, 28.12S×179.34W, h380^{km}±99^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.3/14, mbtmp4.2/5, Error ellipse: s-maj=74.7km s-min=32.5km az=16.0*

ISC 22 18:50:01.0±2.7**, 28.0S**±0.2×**179.3W**±0.4**, h366**^{km}±54^{km}**, n11, σ0**^{s}**70**/9**, mb3.7**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.65**	**196**	P	**P**	**18 52 28.6**	**+0.9**
	1.8nm,0.3s,baz=322,slow=16,SNR=9.5						
URZ				S	**S**	**18 54 22.7**	**-1.0**
	1.5nm,0.3s,baz=282,slow=23,SNR=12						
AFI	**Afiamalu**	**15.68**	**28**	*e*P	**P**	**18 53 24.3**	**-0.3**
	17nm,0.5s						
RPZ	**Rata Peaks**	**17.49**	**204**	P	**P**	**18 53 43.5**	**+0.6**
	0.3nm,0.3s,baz=186,slow=22,SNR=2.3						
STKA	**Stephens Creek**	**34.00**	**254**	P	**P**	**18 56 14.3**	**+1.1**
	1.1nm,0.4s,mb3.4,baz=102,slow=9.3,SNR=4.6						
ASAR	**Alice Springs**	**42.17**	**265**	P	**P**	**18 57 20.8**	**+0.1**
	2.0nm,0.5s,mb3.5,baz=98,slow=6.6,SNR=29						
WRAB	**Tennant Creek**	**42.93**	**270**	*e*P	**P**	**18 57 26.0**	**-0.8**
	3.9nm,0.4s,mb3.9						
WRA	**Warramunga Arr**	**42.94**	**270**	P	**P**	**18 57 26.9**	**0.0**
	2.0nm,0.4s,mb3.6,baz=108,slow=7.9,SNR=123						
MBWA	**Marble Bar**	**55.41**	**263**	P	**P**	**18 59 00.2**	**-0.6**
	8.7nm,0.9s,mb4.1						
FINES	**FINESS Array B**	**142.55**	**340**	PKhKP		19 08 48.1	
	1.5nm,0.8s,baz=56,slow=5.0,SNR=5.0						
HFS	**Hagfors**	**146.71**	**348**	PKPbc	PKPbc	19 09 00.9	+2.0
	3.3nm,1.0s,baz=90,slow=5.8,SNR=4.3						
AKASG	**Malin Array Be**	**148.74**	**324**	PKPbc	PKPdf	19 09 06.7	+6.1
	0.6nm,0.3s,baz=42,slow=3.2,SNR=6.4						

BJI 22 18:52:46.3, 20.61N×**99.44E, h15**^{km}**, ML4.2, 1C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHRT	**Chiangrai**	**0.80**	**156**	⇑P	Pb	18 53 22.5	+21
	3µm,0.8s						
CHG	**Chiang Mai**	**1.85**	**195**	⇓P	Pn	18 53 44.1	+26
	74nm,0.7s						
NANT	**Nan**	**2.16**	**146**	PN	Pn	18 53 38.0	+16
NANT				PG	Pg	18 54 17.0	+48
NANT				SG	Sg	18 54 25.0	+27
BDT	**Bhumibol Dam**	**3.37**	**187**	P	Pn	18 53 17.0	-23
KMI	**Kunming**	**5.42**	**33**	PG	Pg	18 54 21.9	-13

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*IDC **22** 19:00:17.6±8.0, 6.42S×103.73E, mb3.4/4, mb1 3.6/4, mb1mx3.5/15, mbtmp3.4/4, Error ellipse: s-maj=297.3km s-min=23.8km az=57.0*

ISC 22 19:00:19.2±1.0**, 6.6S**±0.2×**103.5E**±0.2**, h33**^{km}**, n6, σ0**^{s}**95**/6**, mb3.4**/4**, 2C, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**25.30**	**350**	P	**P**	**19 05 44.6**	**+0.1**
	0.8nm,0.6s,mb3.4,baz=180,slow=8.7,SNR=8.3						
WRA	**Warramunga Arr**	**32.76**	**117**	P	**P**	**19 06 52.0**	**+0.5**
	0.2nm,0.7s,mb3.2,baz=287,slow=12,SNR=5.1						
ASAR	**Alice Springs**	**33.80**	**123**	P	**P**	**19 06 60.0**	**-0.5**
	0.8nm,1.2s,mb3.5,baz=305,slow=8.1,SNR=3.3						
SONM	**Songino Array**	**54.26**	**2**	P	**P**	**19 09 44.1**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=175,slow=8.0,SNR=6.0						
VNA2	**Neumayer--Watz**	**90.49**	**198**	⇑*i*	**P**	**19 13 19.6**	**+1.1**
VNA3	**Neumayer Olymp**	**91.05**	**197**	⇑*i*	**P**	**19 13 20.1**	**-1.0**

IDC 22 19:03:37.9±14.0**, 2.63N**×**97.95E, h131**^{km}±114^{km}**, mb3.5**/3**, mb1 3.5**/4**, mb1mx3.2**/17**, mbtmp3.7**/4**, ML3.4**/1**, MS3.8**/1,

Ms1 3.8/1,ms1mx2.9/20,Error ellipse: s-maj=152.9km s-min=22.1km az=60.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.76	3	P	P	19 07 12.8	-1.1
	0.1nm,0.3s,baz=196,slow=12,SNR=2.9						
WRA	Warramunga Arr	42.18	124	P	P	19 11 17.9	-1.7
	0.3nm,0.4s,baz=302,slow=9.1,SNR=10						
ASAR	Alice Springs	43.68	129	LR	LR	19 34 12.2	
	comp=Z,100nm,18.4s,baz=149,slow=42						
SONM	Songino Array	45.62	8	P	P	19 11 45.2	-1.7
	0.4nm,0.4s,baz=193,slow=9.2,SNR=7.7						
ZAL	Zalesovo	52.27	350	P	P	19 12 35.5	-2.3
	3.2nm,0.4s,baz=318,slow=4.7,SNR=16						

MOS ***22*** *19:10:54.5±0.9,48.15N×152.60E,h137^{km},mb3.5/5,Error ellipse: s-maj=34.8km s-min=18.0km az=81.0*
IDC ***22*** *19:11:02.8±3.5,48.16N×152.66E,h197^{km}±34^{km}, mb3.2/11,mb1 3.5/12,mb1mx3.3/22,mbtmp3.8/12,Error ellipse: s-maj=23.8km s-min=17.2km az=127.0*
ISC 22 19:10:54.7±2.1**,48.1N**±0.2×**152.7E**±0.2**,h138**^{km}±19^{km}**, n20,**σ0^{s}**84**/20**,mb3.5**/11**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.39	40	*e*PN	P	19 11 47.2	-0.3
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
ASAJ	Asahikawa	8.09	244	P	P	19 12 56.5	+6.2
	comp=Z,0.4nm,0.3s,baz=205,slow=23,SNR=2.9						
SONM	Songino Array	30.64	287	P	P	19 16 58.9	+1.1
	comp=Z,0.2nm,0.5s,mb3.1,baz=68,slow=7.8,SNR=3.9						
ILAR	Eielson Array	35.65	40	P	P	19 17 41.8	+1.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	Eielson Array	35.65	40	P	P	19 17 41.8	+1.1
	comp=Z,0.6nm,0.8s,mb3.2,baz=256,slow=6.2,SNR=4.7						
ZAL	Zalesovo	41.61	304	P	P	19 18 31.2	+1.2
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	Zalesovo	41.61	304	P	P	19 18 31.1	+1.1
	comp=Z,0.7nm,0.5s,mb3.6,baz=60,slow=9.4,SNR=3.2						
YKA	Yellowknife Ar	49.99	37	P	P	19 19 36.1	0.0
	comp=Z,0.3nm,0.4s,mb3.2,baz=298,slow=7.1,SNR=5.2						
CMAR	Chiang Mai Arr	52.45	255	P	P	19 19 54.3	-0.9
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMAR	Chiang Mai Arr	52.45	255	P	P	19 19 54.2	-0.9
	comp=Z,0.5nm,0.6s,mb3.3,baz=17,slow=9.4,SNR=3.7						
ARCES	ARCESS Array B	56.46	340	P	P	19 20 22.7	-1.0
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARCES	ARCESS Array B	56.46	340	P	P	19 20 22.7	-1.0
	comp=Z,7.2nm,1.1s,mb4.4,baz=30,slow=7.3,SNR=2.6						
FINES	FINESS Array B	62.68	334	P	P	19 21 05.4	-1.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	62.68	334	P	P	19 21 05.4	-0.9
	comp=Z,1.1nm,0.4s,mb4.1,baz=39,slow=8.3,SNR=19						
NOA	NORSAR Array B	66.84	341	P	P	19 21 33.2	+0.1
	comp=Z,0.3nm,0.6s,mb3.3,baz=16,slow=6.5,SNR=2.4						
WRA	Warramunga Arr	69.73	198	P	P	19 21 51.6	+0.1
	comp=Z,0.1nm,0.6s,mb2.8,baz=14,slow=6.8,SNR=3.5						
AKASG	Malin Array Be	70.25	326	P	P	19 21 53.1	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	70.25	326	P	P	19 21 53.1	-1.1
	comp=Z,0.5nm,0.4s,mb3.6,baz=36,slow=6.1,SNR=4.5						
GERES	GERESS Array B	77.10	334	P	P	19 22 34.3	+0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	77.10	334	P	P	19 22 34.3	+0.6
	comp=Z,0.5nm,0.5s,mb3.4,baz=34,slow=4.8,SNR=5.5						

ECX ***22*** *19:15:37.6±0.8,25.00N×109.21W,h8^{km},MD5.2*
IDC ***22*** *19:15:48.0±0.8,25.70N×110.27W,mb4.3/23,mb1 4.4/29, mb1mx4.4/33,mbtmp4.3/29,ML4.2/5,MS5.0/25,Ms1 5.0/25, ms1mx4.8/33,Error ellipse: s-maj=25.4km s-min=13.0km az=63.0*
BJI ***22*** *19:15:49.9,25.70N×110.00W,h10^{km},mB5.7,mb4.8, Ms5.5,Msz5.3*
HRVD ***22*** *19:15:49.9±0.2,25.82N×110.09W,h19^{km},MW5.5/71, Centroid moment Tensor Solution. LP body waves: s57,c99;Mantle waves: s71,c147; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.06±.04; M$_{\theta\theta}$-2.17±.04; M$_{\phi\phi}$2.11±.04; M$_{r\theta}$0.49±.08; M$_{\theta\phi}$-0.56±.03; M$_{\phi r}$0.66±.09; Best double couple: M$_0$2.36×10^{17} NP1: ϕ_s308°,δ70°,λ179°. NP2:ϕ_s38°,δ89°,λ20°. Principal axes: T 2.338, Plg15°, Azm265°; N .041, Plg70°, Azm40°; P -2.382, Plg14°, Azm171°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***22*** *19:15:49.9±0.3,25.67N×109.97W,h10^{km},mb5.1/77, MW5.6 Error ellipse: s-maj=6.4km s-min=4.0km az=48.0, Moment Tensor Solution. s4 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.07; M$_{\theta\theta}$-3.02; M$_{\phi\phi}$2.95; M$_{r\theta}$-0.05; M$_{\theta\phi}$0.48; M$_{\phi r}$-0.54; Best double couple: M$_0$3.1×10^{17} NP1:ϕ_s139°, δ83°,λ173°. NP2:ϕ_s230°,δ83°,λ7°. Principal axes: T 3.08, Plg10°, Azm95°; N -.03, Plg80°, Azm274°; P -3.06, Plg0°, Azm5°;*
NEIC Felt widely in southern Sonora, Mexico. Also felt at Loreto, Baja California Sur and Los Mochis, Sinaloa, Mexico.
MOS ***22*** *19:15:50.8±1.4,25.91N×109.89W,h10^{km},mb5.2/26, MS5.2/10 Error ellipse: s-maj=8.0km s-min=4.3km az=95.7*
ISC 22 19:15:49.1±0.3**,25.77N**±0.04×**109.89W**±0.04**,h10**^{km}**, n275,**σ1^{s}**17**/251**,mb5.0**/77**,MS5.1**/37**,1C-15D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.70	193	⇓*i*P	Pn	19 16 15.6	-3.5
LPIG				*i* S	Sn	19 16 30.3	-11
LTX	Lajitas	6.56	56	*e*P	Pn	19 17 24.7	-3.4
LTX				pmax	pmax		
	comp=Z,130nm,0.8s						
LTX	Lajitas	6.56	56	*e*Pn	Pn	19 17 24.7	-3.4
	comp=Z,129nm,0.8s						
TXAR	Lajitas Array	6.56	56	Pn	Pn	19 17 25.3	-2.8
	comp=Z,3.1nm,0.3s,baz=228,slow=14,SNR=22						
TXAR				Sn	Sn	19 18 40.6	-3.2
	comp=Z,10nm,0.3s,baz=243,slow=22,SNR=4.5						
TXAR				Lg		19 19 16.7	
	comp=Z,20nm,0.3s,baz=249,slow=28,SNR=11						
TXAR				LR	LR	19 20 15.7	
	comp=Z,16µm,20.8s,baz=205,slow=39						
TXAR	Lajitas Array	6.56	56	Pn	Pn	19 17 25.3	-2.8
TXAR				Sn	Sn	19 18 40.6	-3.2
TXAR				Lg		19 19 16.8	
TUC	Tucson	6.57	353	*e*P	Pn	19 17 24.7	-3.4
MNTX	Cornudas Mount	7.11	33	*e*Pn	Pn	19 17 34.0	-1.7
SPX	San Pedro Mart	7.20	318	*e*PN	Pn	19 17 35.5	-1.4
SPX				*e*SN	Sn	19 19 02.7	+3.1
GVA	Apache Junctio	7.77	349	P	Pn	19 17 43.1	-1.9
ECNX	Esteban Cantu	8.31	316	*e*SN	Sn	19 19 34.0	+6.5
CBX	Cerro Bola	8.81	319	*e*PN	P	19 17 57.5	-2.0
CBX				*e*SN	Sn	19 19 40.8	+0.9
BAR	Barrett	9.09	321	*e*P	P	19 18 02.0	-1.2
ANMO	Albuquerque	9.62	17	⇓*e*P	P	19 18 10.3	-0.4
ANMO	Albuquerque	9.62	17	Pn	P	19 18 10.7	0.0
	baz=204,slow=13,SNR=25						
ANMO				Sn	Sn	19 19 56.9	-3.0
	baz=212,slow=18,SNR=2.3						
ANMO				Lg		19 20 52.8	
	baz=349,slow=16,SNR=7.5						
ANMO				LR	LR	19 22 27.2	
	comp=Z,8µm,20.8s,slow=41						
PFO	Pinyon Flat Ob	9.68	325	*e*P	P	19 18 12.0	+0.5
WUAZ	Wupatki	9.80	353	*e*P	P	19 18 12.4	-0.8
	comp=Z,75nm,1.3s						
JCT	Junction City	10.06	60	P	P	19 18 10.4	-6.4
	comp=Z,3µm,1.0s						
LDFC	Landfair	10.31	335	*e*P	P	19 18 18.4	-1.8
MWC	Mount Wilson	11.00	322	*e*P	P	19 18 29.9	+0.2
AMTX	Amarillo	11.52	36	*e*P	P	19 18 34.9	-1.8
	comp=Z,68nm,1.0s						
ARUT	Antelope Range	12.36	347	*e*P	P	19 18 49.5	+1.5
PV01	Paradox Valley	12.38	5	*e*P	P	19 18 48.0	-0.4
SDCO	Great Sand Dun	12.51	16	*e*P	P	19 18 50.4	+0.4
PV10	Paradox Valley	12.59	3	*e*P	P	19 18 49.3	-1.8
MVU	Marysvale	12.85	352	*e*P	P	19 18 55.3	+0.7
	comp=Z,5.9nm,1.0s						
MSU	Marysvale	12.85	352	*e*P	P	19 18 55.2	+0.6
WMOK	Wichita Mounta	13.11	44	*e*P	P	19 18 56.9	-1.1
SRU	San Rafael	13.32	358	⇓*e*P	P	19 19 00.7	0.0
TMUT	Trail Mountain	13.54	356	*e*P	P	19 19 04.2	+0.6
MTUM	Tungsten Hills	13.71	330	*e*P	P	19 19 06.7	+0.8
TPH	Tonopah	13.75	335	⇓*e*P	P	19 19 07.4	+0.9
OMM	Old Mammoth Mi	14.12	329	*e*P	P	19 19 12.4	+1.0
LRV	Little Rabbit	14.26	321	*e*P	P	19 19 15.1	+1.9
NLU	North Lily Min	14.27	353	*e*P	P	19 19 14.1	+0.9
MPU	Maple Canyon	14.28	355	*e*P	P	19 19 14.0	+0.5
MNV	Mina	14.43	333	⇓*e*P	P	19 19 15.8	+0.4
ISCO	Idaho Springs	14.44	13	*e*P	P	19 19 16.8	+1.2
NVAR	Mina Array Bea	14.49	333	Pn	P	19 19 15.6	-0.6
	comp=Z,0.2nm,0.3s,baz=150,slow=14,SNR=28						
NVAR				Lg		19 23 28.7	
	baz=164,slow=4.8,SNR=2.5						
NVAR				LR	LR	19 24 16.0	
	comp=Z,3µm,20.6s,baz=145,slow=35						
NVAR	Mina Array Bea	14.49	333	Pn	P	19 19 15.6	-0.6
NVAR				Lg		19 23 28.7	
DUG	Dugway	14.59	351	⇓*e*P	P	19 19 18.1	+0.5
DAU	Daniels Canyon	14.65	356	*e*P	P	19 19 18.8	+0.5
SAO	San Andreas Ge	14.75	321	*e*P	P	19 19 18.9	-0.7
SAO				pmax	pmax		
	comp=Z,88nm,1.2s						
SAO	San Andreas Ge	14.75	321	*e*P	P	19 19 18.9	-0.7
	comp=Z,88nm,1.2s						
JLU	Jordanelle	14.85	355	*e*P	P	19 19 21.8	+0.9
NOQ	North Oquirrh	14.96	353	*e*P	P	19 19 23.7	+1.3
VHO	Vista Hermosa	14.98	123	*i* P	P	19 19 33.0	+10
CMB	Columbia Colle	15.12	327	*e*P	P	19 19 24.2	-0.3
CMB				pmax	pmax		
	comp=Z,66nm,1.0s						
CMB	Columbia Colle	15.12	327	*e*P	P	19 19 24.2	-0.2
	comp=Z,66nm,1.1s						
BGU	Big Grassy Mou	15.34	351	*e*P	P	19 19 27.4	0.0
TCUT	Toone Canyon	15.36	356	⇓*e*P	P	19 19 28.0	+0.4
CBKS	Cedar Bluff	15.57	31	*e*P	P	19 19 31.3	+1.0
CBKS				pmax	pmax		
	comp=Z,240nm,1.3s						
CBKS	Cedar Bluff	15.57	31	*e*P	P	19 19 31.3	+1.0
	comp=Z,242nm,1.3s						
ELK	Elko	15.59	345	*e*P	P	19 19 30.8	+0.3
ELK				pmax	pmax		
	comp=Z,150nm,1.1s						
ELK	Elko	15.59	345	Pn	P	19 19 30.9	+0.4
	comp=Z,0.1nm,0.3s,baz=174,slow=10,SNR=34						
ELK				LR	LR	19 25 34.3	
	comp=Z,13µm,18.1s,baz=169,slow=38						
ELK	Elko	15.59	345	*e*P	P	19 19 30.8	+0.2
	comp=Z,152nm,1.1s						
SPUT	South Promonto	15.64	353	*e*P	P	19 19 31.1	-0.2
WCN	Washoe City	15.84	331	⇓*e*P	P	19 19 35.1	+1.3
WCN				pmax	pmax		
	comp=Z,360nm,1.3s						
WCN	Washoe City	15.84	331	⇓*e*P	P	19 19 35.1	+1.3
	comp=Z,360nm,1.4s						
BMN	Battle Mountai	15.85	339	*e*P	P	19 19 33.8	-0.1
BMN				pmax	pmax		
	comp=Z,160nm,1.2s						
BMN	Battle Mountai	15.85	339	*e*P	P	19 19 33.8	-0.1
	comp=Z,163nm,1.2s						
HWUT	Hardware Ranch	15.86	355	⇓*e*P	P	19 19 34.5	+0.5
	comp=Z,141nm,1.2s						
PHWY	Pilot Hill	15.92	12	*e*P	P	19 19 35.7	+0.9
PAHR	Pah Rah Range	16.02	333	⇓*e*P	P	19 19 37.1	+1.1
	comp=Z,63nm,0.9s						
HVU	Hansel Valley	16.15	352	*e*P	P	19 19 38.1	+0.4
MIAR	Mount Ida	16.59	54	*e*P	P	19 19 45.1	+1.8
MIAR				pmax	pmax		
	comp=Z,38nm,0.9s						
MIAR	Mount Ida	16.59	54	*e*P	P	19 19 45.1	+1.8
	comp=Z,38nm,0.9s						
NSHM	Saint Helena R	16.64	323	*e*P	P	19 19 43.4	-0.6
OHCM	Honcut	16.67	327	*e*P	P	19 19 44.1	-0.3
BW06	Boulder Array	16.96	1	*e*P	P	19 19 47.3	-0.7
	comp=Z,218nm,1.4s						
PDAR	Pinedale Array	16.96	1	P	P	19 19 47.4	-0.6
	comp=Z,0.3nm,0.3s,baz=173,slow=12,SNR=57						
PDAR				Lg		19 24 38.7	
	comp=Z,0.1nm,0.3s,baz=200,slow=18,SNR=4.7						
PDAR				LR	LR	19 26 38.4	
	comp=Z,14µm,18.3s,baz=197,slow=38						
AHID	Auburn Hatcher	16.98	357	*e*P	P	19 19 47.9	-0.4
	comp=Z,61nm,1.2s						
KSU1	Kansas State U	17.36	37	*e*P	P	19 19 54.8	+1.8
UALR	University of	17.59	55	*e*P	P	19 19 57.9	+2.0
	comp=Z,92nm,1.2s						
SNOW	Snow King Moun	17.67	358	*e*P	P	19 19 56.2	-0.6
TPAW	Teton Pass	17.70	357	*e*P	P	19 19 56.8	-0.5
WUWY	Wally Ulrich	17.74	358	*e*P	P	19 19 57.3	-0.5
LBCM	Butte Creek Ri	17.80	330	P	P	19 19 59.5	+1.0
LOHW	Long Hollow	17.81	358	*e*P	P	19 19 57.7	-0.9
MOOW	Moose Ponds	17.95	358	*e*P	P	19 19 59.8	-0.6
IMW	Indian Meadow	18.11	358	*e*P	P	19 20 02.4	0.0
WVOR	Wild Horse Val	18.12	339	⇓*e*P	P	19 20 02.6	+0.1
WVOR				pmax	pmax		
	comp=Z,270nm,1.6s						
WVOR	Wild Horse Val	18.12	339	⇓*e*P	P	19 20 02.6	+0.1
	comp=Z,268nm,1.6s						
HLID	Hailey	18.13	349	*e*P	P	19 20 03.5	+0.8
	comp=Z,694nm,2.6s						
WDC	Whiskeytown Da	18.15	328	*e*P	P	19 20 03.1	+0.2
WDC				pmax	pmax		
	comp=Z,55nm,1.3s						
WDC	Whiskeytown Da	18.15	328	*e*P	P	19 20 03.1	+0.2
	comp=Z,55nm,1.4s						
MOD	Modoc	18.25	334	⇓*e*P	P	19 20 04.7	+0.6
	comp=Z,148nm,1.1s						
YFT	Old Faithful	18.66	358	*e*P	P	19 20 11.1	+2.0
LKWY	Lake	18.76	359	*e*P	P	19 20 12.2	+1.8
LKWY				pmax	pmax		
	comp=Z,70nm,0.9s						
LKWY	Lake	18.76	359	*e*P	P	19 20 12.2	+1.9
	comp=Z,70nm,0.9s						
YMR	Madison River	18.88	358	*e*P	P	19 20 11.5	-0.3
YNR	Norris Junctio	18.92	358	*e*P	P	19 20 12.9	+0.6
KHMM	Horse Mountain	18.96	326	*e*P	P	19 20 12.7	-0.1
QLMT	Earthquake Lak	19.06	357	*e*P	P	19 20 14.1	+0.1
HOG	Hogback Mounta	19.10	332	P	P	19 20 16.4	+1.9
YBH	Yreka Blue Hor	19.13	330	*e*P	P	19 20 15.1	+0.3
YBH				pmax	pmax		
	comp=Z,30nm,1.2s						
YBH	Yreka Blue Hor	19.13	330	P	P	19 20 08.2	-6.6
	comp=Z,0.1nm,0.3s,baz=146,slow=3.6,SNR=4.4						
YBH	Yreka Blue Hor	19.13	330	*e*P	P	19 20 15.1	+0.3
	comp=Z,30nm,1.2s						
MCMT	McKenzie Canyo	19.17	354	*e*P	P	19 20 15.6	+0.3
HBAR	Harrisburg	19.18	55	*e*P	P	19 20 17.5	+2.1
OXF	Oxford	19.71	59	*e*P	P	19 20 21.5	-0.1
OXF				pmax	pmax		
	comp=Z,180nm,1.3s						
OXF	Oxford	19.71	59	*e*P	P	19 20 21.5	-0.1
	comp=Z,183nm,1.3s						
BMO	Blue Mountains	19.96	344	*e*P	P	19 20 22.5	-1.8
	comp=Z,66nm,1.2s						
CCM	Cathedral Cave	19.97	48	*e*P	P	19 20 24.3	-0.1
CCM				pmax	pmax		
	comp=Z,73nm,1.3s						
CCM	Cathedral Cave	19.97	48	*e*P	P	19 20 24.2	-0.1
	comp=Z,73nm,1.4s						
FVM	French Village	20.48	49	*e*P	P	19 20 29.5	-0.2
FVM				pmax	pmax		
	comp=Z,34nm,0.9s						
FVM	French Village	20.48	49	*e*P	P	19 20 29.5	-0.3
	comp=Z,34nm,0.9s						
TEIG	Tepich	20.63	101	*e*P	P	19 20 32.3	+0.9
	comp=Z,21nm,1.0s						
KEBM	Edson Butte	20.77	329	*e*P	P	19 20 33.1	+0.4
SLM	Saint Louis	20.95	47	*e*P	P	19 20 36.5	+2.0
SLM				pmax	pmax		
	comp=Z,75nm,0.9s						
SLM	Saint Louis	20.95	47	*e*P	P	19 20 36.5	+2.0
	comp=Z,75nm,0.8s						
HRY	Holter Researc	20.96	356	*e*P	P	19 20 34.3	-0.3
LAO	LASA Array	21.08	7	*e*P	P	19 20 34.4	-1.5
	comp=Z,146nm,1.1s,mb5.2						
LNOR	Lincton Mounta	21.16	344	P	P	19 20 35.9	-0.8
LRAL	Lakeview Retre	21.19	65	*e*P	P	19 20 37.7	+0.6
	comp=Z,36nm,1.0s,mb4.7						
MSO	Missoula	21.27	352	⇓*e*P	P	19 20 36.6	-1.1
	comp=Z,69nm,1.2s,mb4.9						
CHMT	Chamberlain Mo	21.27	354	*e*P	P	19 20 36.9	-0.9
WVT	Waverly	21.51	56	*e*P	P	19 20 41.0	+0.8
WVT				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.1						
WVT	Waverly	21.51	56	*e*P	P	19 20 41.0	+0.8
	comp=Z,104nm,1.2s,mb5.1						
SSOR	Sweet Springs	21.59	335	P	P	19 20 40.0	-1.0
COR	Corvallis	21.69	333	*e*P	P	19 20 42.6	+0.6
COR				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.3						
COR	Corvallis	21.69	333	*e*P	P	19 20 42.6	+0.6
	comp=Z,114nm,0.8s,mb5.3						
USIN	University of	22.39	52	*e*P	P	19 20 51.2	+2.2
	comp=Z,95nm,1.0s,mb5.2						
OD2	Odessa Site #2	22.68	344	P	P	19 20 50.3	-1.5
LON	Longmire	22.99	339	P	P	19 20 55.0	+0.2
DGMT	Dagmar	23.10	10	*e*P	P	19 20 54.4	-1.5
	comp=Z,159nm,1.3s,mb5.3						
FMW	Mount Fremont	23.11	339	P	P	19 20 56.4	+0.4
NEW	Newport	23.16	348	*e*P	P	19 20 55.4	-1.1
NEW				pmax	pmax		
	comp=Z,52nm,1.0s						
NEW	Newport	23.16	348	P	P	19 20 55.5	-1.0
	comp=Z,6.2nm,0.6s,mb4.2,baz=156,slow=13,SNR=16						
NEW				Lg		19 28 00.3	
	comp=Z,3.3nm,0.9s,baz=128,slow=19,SNR=2.8						
NEW				LR	LR	19 30 15.6	
	comp=Z,7µm,18.0s,MS5.2,baz=169,slow=38						
NEW	Newport	23.16	348	*e*P	P	19 20 55.4	-1.2
	comp=Z,52nm,1.0s,mb4.9						
WALA	Waterton Lakes	23.46	353	*e*P	P	19 20 58.5	-0.9
	comp=Z,130nm,1.4s,mb5.2						
JFWS	Jewell Farm	23.48	38	*e*P	P	19 21 00.5	+0.9
JFWS				pmax	pmax		
	comp=Z,41nm,0.8s,mb4.9						
JFWS	Jewell Farm	23.48	38	*e*P	P	19 21 00.5	+0.9
	comp=Z,41nm,0.8s,mb4.9						
WCI	Wyandotte Cave	23.48	52	*e*P	P	19 21 03.5	+3.8
WCI				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.7						
WCI	Wyandotte Cave	23.48	52	*e*P	P	19 21 03.5	+3.8
	comp=Z,28nm,0.8s,mb4.7						
BLO	Bloomington	23.73	50	*e*P	P	19 21 04.4	+2.3
BLO				pmax	pmax		
	comp=Z,83nm,0.9s,mb5.2						
BLO	Bloomington	23.73	50	*e*P	P	19 21 04.4	+2.3
	comp=Z,83nm,0.9s,mb5.2						
CPCT	Cooper Cave	23.81	60	*e*P	P	19 21 02.9	0.0
GOGA	Godfrey	24.16	65	*e*P	P	19 21 10.4	+4.0
GOGA				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.7						
GOGA	Godfrey	24.16	65	*e*P	P	19 21 10.4	+4.0
	comp=Z,35nm,1.0s,mb4.7						
OCWA	Octopus Mounta	24.67	336	*e*P	P	19 21 11.4	+0.3
	comp=Z,93nm,1.1s,mb5.2						
PGC	Sidney	25.19	339	*e*P	P	19 21 16.8	+0.6
	comp=Z,124nm,1.1s,mb5.3						
EYMN	Ely	26.45	28	*e*P	P	19 21 28.9	+1.0
	comp=Z,34nm,0.9s,mb4.9						
ULM	Lac du Bonnet	26.73	20	P	P	19 21 28.4	-2.0
	comp=Z,3.1nm,0.6s,mb4.0,baz=175,slow=11,SNR=5.3						
ULM				Lg		19 29 55.6	
	comp=Z,1.0nm,0.5s,baz=13,slow=14,SNR=2.3						
ULM				LR	LR	19 31 29.5	
	comp=Z,2µm,18.3s,MS4.8,baz=23,slow=35						
ULM	Lac du Bonnet	26.73	20	*e*P	P	19 21 28.1	-2.3
	comp=Z,30nm,1.2s,mb4.7						
EDM	Edmonton	27.54	355	*e*P	P	19 21 36.3	-1.5
JTS	JuntasAbangare	28.19	119	LR	LR	19 34 28.4	
	comp=Z,3µm,18.7s,MS4.8,baz=315,slow=39						
BBB	Bella Bella	29.77	337	LR	LR	19 33 28.8	
	comp=Z,4µm,20.1s,MS5.0,baz=164,slow=36						
SSPA	Standing Stone	30.41	53	*e*P	P	19 22 04.2	+0.6
	comp=Z,26nm,1.0s,mb4.9						
SADO	Sadowa	31.19	45	P	P	19 22 12.3	+1.8
	comp=Z,3.7nm,0.7s,mb4.3,baz=240,slow=8.1,SNR=2.4						
SADO				LR	LR	19 35 59.0	
	comp=Z,2µm,20.9s,MS4.8,baz=256,slow=38						
SADO	Sadowa	31.19	45	P	P	19 22 12.3	+1.8
FCC	Fort Churchill	34.80	14	*e*P	P	19 22 39.6	-2.2
FCC				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
FCC	Fort Churchill	34.80	14	*e*P	P	19 22 39.6	-2.2
	comp=Z,31nm,1.1s,mb5.2						
DLBC	Dease Lake	35.61	342	*e*P	P	19 22 48.5	-0.2
YKA	Yellowknife Ar	36.85	356	P	P	19 22 57.2	-1.9
	comp=Z,2.4nm,0.8s,mb4.1,baz=174,slow=8.1,SNR=30						
YKA				LR	LR	19 38 33.3	
	comp=Z,6µm,19.6s,MS5.4,baz=175,slow=37						
YKW3	Yellowknife Ar	36.92	356	*e*P	P	19 22 57.7	-2.0
OTAV	Otavalo	39.54	125	*e*P	P	19 23 22.9	+0.8
	comp=Z,16nm,1.0s,mb4.7						
ROSC	El Rosal	39.88	115	P	P	19 23 26.6	+1.6
	comp=Z,5.3nm,0.4s,mb4.6,baz=73,slow=19,SNR=2.6						
ROSC				LR	LR	19 42 08.3	
	comp=Z,1µm,18.6s,MS4.8,baz=347,slow=39						
SDV	Santo Domingo	40.86	107	P	P	19 23 34.7	+1.8
	comp=Z,5.1nm,0.6s,mb4.4,baz=109,slow=22,SNR=9.0						
SDV	Santo Domingo	40.86	107	*e*P	P	19 23 34.5	+1.5
	comp=Z,27nm,0.9s,mb4.9						
SJG	San Juan	41.13	92	*e*P	P	19 23 35.1	0.0
SJG				pmax	pmax		
	comp=Z,49nm,1.0s						
SJG	San Juan	41.13	92	P	P	19 23 36.0	+0.8
	comp=Z,7.1nm,0.4s,mb4.7,baz=319,slow=9.3,SNR=2.5						
SJG	San Juan	41.13	92	*e*P	P	19 23 35.1	-0.1
	comp=Z,49nm,1.0s,mb5.1						
SCHQ	Schefferville	42.79	36	P	P	19 23 47.9	-0.4
	comp=Z,8.9nm,0.9s,mb4.5,baz=275,slow=4.7,SNR=11						
SCHQ	Schefferville	42.79	36	*e*P	P	19 23 48.9	+0.6
	comp=Z,34nm,1.1s,mb5.0						
DAWY	Dawson	42.83	341	*e*P	P	19 23 48.3	-0.3
SML	Sawmill	44.29	335	*e*P	P	19 24 06.2	+5.8
SLKM	Skilak Lake	44.29	333	*e*P	P	19 24 03.7	+3.2
THY	Trims Highway	44.37	338	*e*P	P	19 24 02.2	+1.2
INK	Inuvik	44.89	348	*e*P	P	19 24 04.4	-0.8
INK				pmax	pmax		
	comp=Z,39nm,1.2s						
INK	Inuvik	44.89	348	*e*P	P	19 24 04.4	-0.8
	comp=Z,39nm,1.3s,mb5.1						
TAOE	Nuku Hiva Isla	45.29	224	*e*LQ		19 34 40.6	
TAOE				*e*LR	LR	19 36 29.5	
	baz=49						
SPU	Mount Spurr	45.41	333	*e*P	P	19 24 08.6	-0.8
ILAR	Eielson Array	45.63	339	P	P	19 24 10.0	-1.1
	comp=Z,3.5nm,0.8s,mb4.4,baz=144,slow=6.9,SNR=26						
ILAR				LR	LR	19 47 04.5	
	comp=Z,1µm,18.2s,MS4.8,baz=154,slow=41						
MCK	McKinley	45.67	337	*e*P	P	19 24 11.7	+0.3
MCK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
MCK	McKinley	45.67	337	*e*P	P	19 24 11.7	+0.2
	comp=Z,18nm,1.1s,mb4.9						
COLA	College	46.01	339	*e*P	P	19 24 16.4	+2.3
COLA				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3						
COLA	College	46.01	339	*e*P	P	19 24 16.6	+2.5
FRB	Frobisher Bay	46.50	24	P	P	19 24 18.5	+0.5
	comp=Z,6.1nm,1.0s,mb4.5,baz=234,slow=14,SNR=6.7						
FRB				PcP	PcP	19 25 57.4	+4.4
	comp=Z,22nm,1.0s,baz=226,slow=4.4,SNR=9.2						
IMA	Indian Mountai	48.68	338	*e*P	P	19 24 35.5	+0.5
IMA				pmax	pmax		
	comp=Z,220nm,1.4s,mb6.0						
RES	Resolute Bay	49.59	5	*e*P	P	19 24 38.9	-3.1
RES				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
RES	Resolute Bay	49.59	5	*e*P	P	19 24 38.9	-3.0
	comp=Z,16nm,1.0s,mb5.0						
TNA	Tin City	53.72	334	*e*P	P	19 25 12.4	-0.8
	comp=Z,44nm,1.5s,mb5.2						
RKT	Rikitea	54.34	209	*e*LR	LR	19 40 51.1	
	comp=Z,800nm,25.2s						
PPT	Papeete	57.84	226	*e*LQ		19 40 08.6	
PPT				*e*LR	LR	19 42 32.9	
	comp=Z,2µm,25.0s,baz=29						
LPAZ	La Paz	58.30	131	*e*P	P	19 25 51.0	+4.3
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
LPAZ	La Paz	58.30	131	P	P	19 25 47.9	+1.1
	comp=Z,0.8nm,0.6s,mb3.9,baz=335,slow=8.1,SNR=2.9						
LPAZ				LR	LR	19 48 24.1	
	comp=Z,511nm,21.5s,MS4.6,baz=326,slow=33						
SUMG	Summit	60.08	19	P	P	19 25 58.0	-0.3
	comp=Z,21nm,0.9s,mb5.2						
TBI	Tubuai	62.07	222	*e*LQ		19 41 37.7	

TBI				*e*LR	LR	19 44 23.3	
	comp=Z,1µm,29.5s,baz=36						
FX1	**Attu Island--F**	**62.14**	**318**	P	P	19 26 14.9	+2.4
	comp=Z,13nm,0.7s,mb5.2,baz=302,slow=7.4,SNR=3.5						
LVC	**Limon Verde**	**62.37**	**137**	P	P	19 26 19.5	+5.0
	comp=Z,1.0nm,0.7s,mb4.1,baz=288,slow=13,SNR=2.0						
LVC				LR	LR	19 50 07.4	
	comp=Z,302nm,20.6s,MS4.5,baz=170,slow=33						
BILL	**Bilibino**	**64.09**	**335**	*e*P	P	19 26 24.7	-0.4
BILL				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.3						
BILL				MLR	MLR		
	comp=Z,900nm,17.0s,MS5.0						
BILL	**Bilibino**	**64.09**	**335**	*e*P	P	19 26 24.3	-0.9
	comp=Z,46nm,1.1s,mb5.4						
BORG	**Borgarnes**	**66.41**	**28**	P	P	19 26 41.0	+0.9
	comp=Z,6.7nm,1.0s,mb4.6,baz=262,slow=7.1,SNR=2.1						
BORG				LR	LR	19 56 46.3	
	comp=Z,1µm,18.9s,MS5.1,baz=146,slow=37						
JMIC	**Jan Mayen**	**69.50**	**20**	AMS	AMS	19 58 17.0	
	comp=Z,714nm,14.6s,MS5.0						
CFAA	**Coronel Fontan**	**69.55**	**143**	P	P	19 27 00.5	+0.2
	comp=Z,0.6nm,0.7s,baz=297,slow=6.8,SNR=3.2						
CFAA	**Coronel Fontan**	**69.55**	**143**	P	P	19 27 00.5	+0.2
KBS	**Kingsbay**	**70.59**	**10**	*e*S	S	19 36 17.9	-0.5
KBS				*e*SS	SS	19 40 50.0	-1.7
KBS				AMS	AMS	19 59 21.9	
	comp=Z,2µm,18.2s,MS5.5						
PET	**Petropavlovsk**	**70.69**	**320**	*e*P	P	19 27 09.7	+2.8
PET				*e*S	S	19 36 24.9	+5.1
PET				*e*SS	SS	19 40 59.5	+6.0
PET				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.3						
PET				smax			
	comp=N,400nm,16.1s						
SEY	**Seymchan**	**70.80**	**331**	*e*P	P	19 27 08.5	+1.1
SEY						19 27 25.1	
SEY						19 29 42.5	
SEY				*e*S	S	19 36 20.2	-0.6
SEY				SS	SS	19 40 58.3	+3.3
SEY				pmax	pmax		
	comp=E,40nm,0.9s						
SEY				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.3						
SEY				smax			
	comp=N,1µm,21.6s						
SEY				smax			
	comp=E,1µm,15.9s						
SEY				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.3						
SEY				MLR	MLR		
	comp=N,1µm,16.0s,MS5.4						
SEY				MLR	MLR		
	comp=E,1µm,20.0s,MS5.4						
MA2	**Magadan**	**72.68**	**328**	*e*P	P	19 27 19.6	+0.9
MA2				*e*S	S	19 36 41.6	-0.9
MA2				pmax	pmax		
	comp=Z,30nm,1.6s,mb5.0						
MA2				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.2						
MA2	**Magadan**	**72.68**	**328**	*e*P	P	19 27 19.6	+0.9
	comp=Z,29nm,1.0s,mb5.2						
BDFB	**Brasilia**	**72.92**	**117**	P	P	19 27 19.9	-1.0
	comp=Z,1.6nm,0.4s,mb4.3,baz=167,slow=6.6,SNR=2.5						
BDFB				LR	LR	20 02 19.0	
	comp=Z,936nm,18.7s,MS5.1,baz=310,slow=38						
TIXI	**Tiksi**	**74.82**	**344**	*e*P	P	19 27 29.4	-1.4
TIXI				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,784nm,15.0s,MS5.1						
PLCA	**Paso Flores**	**75.58**	**150**	*e*P	P	19 27 34.4	-1.4
PLCA				pmax	pmax		
	comp=Z,15nm,1.1s						
PLCA	**Paso Flores**	**75.58**	**150**	P	P	19 27 34.8	-1.0
	comp=Z,2.4nm,0.9s,mb4.1,baz=312,slow=6.0,SNR=3.6						
PLCA				LR	LR	19 54 16.4	
	comp=Z,755nm,19.6s,MS5.0,baz=331,slow=30						
PLCA	**Paso Flores**	**75.58**	**150**	*e*P	P	19 27 34.4	-1.5
	comp=Z,15nm,1.2s,mb4.8						
TRO	**Tromso**	**78.05**	**16**	*e*S	S	19 37 44.7	+3.2
TRO				AMS	AMS	20 02 38.1	
	comp=Z,731nm,19.9s,MS5.0						
BER	**Bergen**	**79.37**	**27**	*e*S	S	19 37 58.1	+2.3
BER				*e*SS	SS	19 43 02.4	-3.5
BER				AMS	AMS	20 03 53.3	
	comp=Z,983nm,16.3s,MS5.2						
NSS	**Namsos**	**79.39**	**22**	AMS	AMS	20 02 20.5	
	comp=Z,1µm,20.5s,MS5.2						
ARCES	**ARCESS Array B**	**79.69**	**15**	P	P	19 27 59.4	+1.5
	comp=Z,18nm,1.2s,mb4.9,baz=14,slow=5.0,SNR=4.1						
ARCES				LR	LR	20 05 09.1	
	comp=Z,1µm,18.2s,MS5.2,baz=330,slow=37						
YAK	**Yakutsk**	**80.45**	**336**	*i* P	P	19 28 01.4	-0.7
YAK				pmax	pmax		
	comp=Z,35nm,1.5s,mb5.1						
YAK				MLR	MLR		
	comp=Z,700nm,23.0s,MS5.0						
YAK	**Yakutsk**	**80.45**	**336**	*e*P	P	19 28 05.6	+3.5
	comp=Z,46nm,0.9s,mb5.4						
NB2	**NORSAR Subarra**	**81.32**	**25**	P	P	19 28 06.7	0.0
	comp=Z,7.2nm,1.0s,mb4.6,baz=310,slow=5.3						
NOA	**NORSAR Array B**	**81.32**	**25**	P	P	19 28 08.1	+1.4
	comp=Z,1.1nm,0.8s,baz=286,slow=20,SNR=2.7						
NOA				LR	LR	20 02 29.7	
	comp=Z,941nm,19.4s,baz=320,slow=34						
QUIF	**Quistinic**	**81.64**	**41**	*e*P	P	19 28 07.7	-1.0
	comp=Z,192nm,1.5s,mb5.5						
SGMF	**Saint Gilles**	**81.83**	**40**	*e*P	P	19 28 09.0	-0.6
	comp=Z,169nm,1.5s,mb5.5						
YSS	**Yuzh-Sakhalins**	**82.49**	**319**	⇑*i*P	P	19 28 19.2	+6.1
GRR	**Gorron**	**82.74**	**39**	*e*P	P	19 28 13.9	-0.5
	comp=Z,128nm,1.4s,mb5.5						
FLN	**La Foliniere**	**82.77**	**39**	*e*P	P	19 28 14.2	-0.3
	comp=Z,118nm,1.2s,mb5.5						
FLN				*e*R			
	comp=Z,3µm,21.5s						
EVO	**Evora**	**82.95**	**51**	*e*P	P	19 28 14.4	-1.3
	comp=Z,89nm,1.5s,mb5.3						
EVO				*e*R			
	comp=Z,3µm,22.8s						
LDF	**La Druitiere**	**83.06**	**39**	*e*P	P	19 28 15.4	-0.6
	comp=Z,154nm,1.5s,mb5.5						
BAIF	**Baives**	**84.65**	**36**	*e*P	P	19 28 24.2	+0.2
	comp=Z,68nm,1.3s,mb5.3						
GIVF	**Givet**	**84.95**	**36**	*e*P	P	19 28 24.7	-0.8
	comp=Z,77nm,1.2s,mb5.4						
ESDC	**Sonseca Array**	**85.18**	**48**	P	P	19 28 28.5	+1.5
	comp=Z,0.3nm,0.6s,baz=213,slow=5.0,SNR=2.5						
SJPF	**Ste Jean**	**85.23**	**44**	*e*P	P	19 28 26.1	-1.0
	comp=Z,34nm,1.2s,mb5.1						
HYF	**Humbligny**	**85.33**	**39**	*e*P	P	19 28 27.0	-0.5
TCF	**Toulx Ste Croi**	**85.62**	**40**	*e*P	P	19 28 27.9	-1.1
	comp=Z,46nm,1.2s,mb5.3						
BGF	**Bois d'Agland**	**85.84**	**40**	*e*P	P	19 28 27.8	-2.3
	comp=Z,48nm,1.1s,mb5.3						
SSF	**Saint Saulge**	**85.94**	**39**	*e*P	P	19 28 29.6	-0.9
	comp=Z,58nm,1.3s,mb5.4						
AVF	**Avril sur Loir**	**86.01**	**39**	*e*P	P	19 28 29.5	-1.4
	comp=Z,65nm,1.5s,mb5.3						
FINES	**FINESS Array B**	**86.12**	**20**	*i* P	P	19 28 29.9	-1.2
FINES				pmax	pmax		
	comp=Z,8.0nm,1.2s						
FINES	**FINESS Array B**	**86.12**	**20**	P	P	19 28 30.9	-0.1
	comp=Z,7.7nm,1.2s,mb4.8,slow=1.9,SNR=6.6						
FINES				LR	LR	20 07 57.5	
	comp=Z,1µm,19.2s,MS5.2,baz=112,slow=36						
FINES	**FINESS Array B**	**86.12**	**20**	P	P	19 28 30.9	-0.1
SMF	**Signal de Mont**	**86.36**	**39**	*e*P	P	19 28 33.2	+0.6
	comp=Z,49nm,1.3s,mb5.3						
MTLF	**Montolieu**	**87.24**	**43**	*e*P	P	19 28 36.1	-0.9
	comp=Z,76nm,1.7s,mb5.4						
USHA	**Ushuaia**	**87.80**	**157**	LR	LR	20 01 36.6	
	comp=Z,343nm,21.2s,MS4.7,baz=120,slow=31						
LASF	**Ste Croix**	**87.82**	**41**	*e*P	P	19 28 39.0	-0.8
	comp=Z,42nm,1.4s,mb5.2						
MOX	**Moxa**	**88.08**	**33**	*e*P	P	19 28 40.0	-0.8
MOX				S	S	19 39 27.0	+4.2
MOX				LQ		19 52 00.0	
MOX				L		20 06 57.0	
CLL	**Collm**	**88.33**	**32**	*e*P	P	19 28 45.0	+3.0
CLL				*e*	pP	19 28 49.0	+3.8
CLL				MLR	MLR		
	comp=Z,1µm,18.9s,MS5.3						
CLL	**Collm**	**88.33**	**32**	P	P	19 28 45.0	+3.0
CLL				*e*	pP	19 28 49.0	+3.8
GRA1	**Grafenberg Arr**	**88.50**	**34**	*e*P	P	19 28 45.7	+2.8
	comp=Z,12nm,1.1s,mb5.0						
GRF	**Grafenberg Arr**	**88.50**	**34**	*e*P	P	19 28 45.7	+2.8
GRF				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
GRF				MLR	MLR		
	comp=Z,2µm,19.4s,MS5.5						
GRF	**Grafenberg Arr**	**88.50**	**34**	*e*P	P	19 28 45.7	+2.8
	comp=Z,12nm,1.1s,mb5.0						
LPG	**La Plagne**	**88.68**	**39**	*e*P	P	19 28 42.6	-1.2
	comp=Z,32nm,1.3s,mb5.2						
NKC	**Novy Kostel**	**88.76**	**33**	AMS	AMS	20 07 00.0	
	comp=Z,2µm,18.0s						
BOD	**Bodaibo**	**89.00**	**338**	*e*P	P	19 28 42.6	-2.5
BOD				pmax	pmax		
	comp=Z,12nm,1.6s,mb5.0						
BRG	**Berggiesshubel**	**89.06**	**32**	*e*P	P	19 28 53.5	+8.0
BRG				*i* S	S	19 39 39.0	+7.2
BRG				*e*SS	SS	19 45 32.0	+3.7
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.8						
BRG				MLR	MLR		
	comp=N,890nm,16.3s,MS5.5						
BRG				MLR	MLR		
	comp=E,1µm,16.3s,MS5.5						
BRG				MLR	MLR		
	comp=Z,2µm,17.7s,MS5.5						
BRG	**Berggiesshubel**	**89.06**	**32**	*e*P	P	19 28 53.5	+8.0
	comp=Z,7.3nm,1.3s,mb4.8						
BRG				*i* S	S	19 39 39.0	+7.2
BRG				*e*SS	SS	19 45 32.0	+3.7
PVCC	**Panska Ves**	**89.59**	**32**	AMS	AMS	20 09 50.0	
	comp=Z,2µm,16.4s						
LMR	**La Mourre**	**89.82**	**41**	*e*P	P	19 28 47.9	-1.4
	comp=Z,38nm,1.1s,mb5.3						
PRU	**Pruhonice**	**89.93**	**32**	AMS	AMS	20 08 10.0	
	comp=Z,2µm,18.2s						
KHC	**Kasperske Hory**	**90.03**	**33**	AMS	AMS	20 07 50.0	
	comp=Z,1µm,15.5s						
DPC	**Dobruska-Polom**	**90.53**	**31**	AMS	AMS	20 07 50.0	
	comp=Z,2µm,16.7s						
MAT	**Matsushiro**	**90.84**	**312**	*e*P	P	19 28 58.0	+3.8
	comp=Z,23nm,1.2s,mb5.4						
MAT				*e*S	S	19 39 53.0	+4.7
MAT	**Matsushiro**	**90.84**	**312**	P	P	19 28 58.2	+4.0
MAT				S	S	19 39 52.0	+3.7
JHJ	**Hachijo jima 2**	**91.59**	**308**	LR	LR	20 03 39.3	
	comp=Z,788nm,22.0s,MS5.1,baz=103,slow=31						
OKC	**Ostrava-Krasne**	**91.73**	**31**	AMS	AMS	20 11 20.0	
	comp=Z,2µm,17.2s						
CBIJ	**Chichi jima**	**92.96**	**302**	LR	LR	20 01 33.8	
	comp=Z,606nm,20.8s,MS5.0,baz=245,slow=30						
CN2	**Changchun**	**94.20**	**323**	*e*P	P	19 29 09.8	+0.4
CN2				*e*S	S	19 40 16.6	-1.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.4						
CN2				AMB	AMB		
	comp=Z,210nm,3.0s						
CN2				LR	LR		
	comp=N,600nm,15.0s,MS5.3						
CN2				LR	LR		
	comp=E,500nm,15.0s,MS5.3						
CN2				LR	LR		
	comp=Z,770nm,18.0s,MS5.2						
AKASG	**Malin Array Be**	**95.73**	**25**	*i* P	P	19 29 24.4	+8.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	**Malin Array Be**	**95.73**	**25**	P	P	19 29 19.0	+2.7
	comp=Z,0.2nm,0.4s,mb3.9,baz=315,slow=3.9,SNR=2.9						
TLY	**Talaya**	**97.45**	**340**	*i* P	P	19 29 24.4	+0.4
TLY				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.4						
TLY				MLR	MLR		
	comp=Z,800nm,22.0s,MS5.2						
KIS	**Kishinev**	**98.54**	**27**	*e*P	P	19 29 23.0	-6.1
KIS				MLR	MLR		
	comp=E,1µm,17.0s						
KIS				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.6						
KIS				MLR	MLR		
	comp=Z,1µm,16.0s						
ZAK	**Zakamensk**	**98.69**	**339**	*e*P	P	19 29 35.0	+5.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.2s,mb4.3						
ZAL	**Zalesovo**	**99.62**	**351**	LR	LR	20 17 12.1	
	comp=Z,905nm,19.9s,MS5.3,baz=92,slow=37						
SONM	**Songino Array**	**99.80**	**336**	P	P	19 29 34.2	-0.6
	comp=Z,0.5nm,1.0s,mb3.9,baz=56,slow=5.2,SNR=3.1						
SONM				PP	PP	19 33 32.0	-10
	comp=Z,0.4nm,1.0s,baz=56,slow=5.2,SNR=3.3						
BVAR	**Borovoye Array**	**101.54**	**360**	P	P	19 29 42.6	+0.1
	comp=Z,0.2nm,0.5s,baz=249,slow=37,SNR=2.2						
BVAR				PP	PP	19 33 59.3	+4.1
	comp=Z,0.8nm,0.8s,baz=315,slow=4.1,SNR=5.1						
BJI	**Beijing**	**101.73**	**326**	P	P	19 29 43.3	-0.4
BJI				S	S	19 41 24.9	+3.8
BJI				AMB	AMB		
	comp=Z,5.0nm,0.6s						
BJI				LR	LR		
	comp=N,534nm,17.8s,MS5.2						
BJI				LR	LR		
	comp=E,502nm,20.4s,MS5.2						
BJI				LR	LR		
	comp=Z,434nm,25.5s						
BJI	**Beijing**	**101.73**	**326**	P	P	19 29 43.2	-0.5
	comp=Z,5.0nm,0.6s						
BJI				S	S	19 41 24.9	+3.8
SSE	**Sheshan**	**105.30**	**316**	PDIF	Pdif	19 30 01.4	+1.7
SSE				PP	PP	19 34 25.1	+1.1
SSE				SS	SS	19 49 16.9	-0.2
SSE				PP	PP		
	comp=Z,69nm,6.4s						
SSE				LR	LR		
	comp=N,108nm,19.5s,MS4.8						
SSE				LR	LR		
	comp=E,217nm,19.5s,MS4.8						
SSE				LR	LR		
	comp=Z,216nm,24.5s,MS4.6						
SSE	**Sheshan**	**105.30**	**316**	Pdif	Pdif	19 30 01.4	+1.7
	comp=Z,0.1nm,6.4s						
SSE				PP	PP	19 34 25.1	+1.1
SSE				SS	SS	19 49 16.9	-0.2
WRAB	**Tennant Creek**	**121.02**	**261**	PKIKP	PKPdf	19 34 44.7	-1.0
WRA	**Warramunga Arr**	**121.03**	**261**	PKP	PKPdf	19 34 41.6	-4.1
	comp=Z,1.0nm,0.9s,baz=69,slow=2.3,SNR=10						
ASAR	**Alice Springs**	**122.53**	**257**	PKP	PKPdf	19 34 44.4	-4.0
	comp=Z,0.4nm,0.5s,baz=79,slow=2.3,SNR=7.2						
CMAR	**Chiang Mai Arr**	**127.86**	**325**	PKP	PKPdf	19 34 56.9	-2.1
	comp=Z,1.8nm,0.8s,baz=284,slow=1.0,SNR=10						

IDC 22 19:20:11.2±2.0, 25.80N×110.02W, mb4.1/3, mb1 4.4/7, mb1mx4.0/23, mbtmp4.1/7, ML3.5/3, Error ellipse: s-maj=29.8km s-min=19.8km az=13.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**6.64**	**57**	Pn	Pn	19 21 49.5	-3.0
	baz=10,slow=36,SNR=1.4						
TXAR				Sn	Sn	19 23 04.6	-5.4
	1.0nm,0.3s,baz=219,slow=39,SNR=2.5						
TXAR				Lg		19 23 43.4	
	4.2nm,0.3s,baz=244,slow=29,SNR=4.1						
NVAR	**Mina Array Bea**	**14.41**	**333**	Pn	P	19 23 39.6	+1.1
	0.1nm,0.3s,baz=336,slow=44,SNR=3.4						
ELK	**Elko**	**15.53**	**345**	Pn	P	19 23 55.5	+2.4
	0.1nm,0.3s,baz=166,slow=9.6,SNR=6.0						
PDAR	**Pinedale Array**	**16.93**	**1**	Pn	P	19 24 11.2	+0.1
	0.0nm,0.3s,baz=217,slow=9.0,SNR=3.5						
YKA	**Yellowknife Ar**	**36.81**	**356**	P	P	19 27 19.8	-2.6
	1.7nm,0.9s,baz=173,slow=8.0,SNR=8.1						
SDV	**Santo Domingo**	**40.98**	**107**	P	P	19 27 56.8	-0.9
	2.1nm,0.3s,baz=297,slow=9.0,SNR=4.4						
ILAR	**Eielson Array**	**45.56**	**339**	P	P	19 28 32.8	-1.5
	1.7nm,0.8s,baz=150,slow=6.3,SNR=6.4						

DJA 22 19:27:15.7±0.8, 9.94S×114.05E, h33^{km}, MD4.7/4, ML3.9/4, 8C-2D, Error ellipse: s-maj=17.7km s-min=10.4km az=30.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	**Scrawed**	**1.45**	**4**	⇑*i*Pn	Pn	19 27 38.5	-1.5
	158nm,0.2s						
SRDI				⇓*i*Sn	Sn	19 27 55.5	-2.5
KELI	**Kelakatan**	**1.76**	**14**	⇑*i*Pn	Pn	19 27 43.4	-1.1
	75nm,0.2s						
KELI	**Kelakatan**	**1.76**	**14**	⇑*i*P	P	19 27 43.9	-0.4
KELI				⇓*i*Sn	Sn	19 28 04.1	-1.9
RATI	**Rata**	**1.89**	**51**	⇑*i*Pn	Pn	19 27 45.0	-1.4
	128nm,0.2s						
RATI	**Rata**	**1.89**	**51**	⇑*i*P	P	19 27 45.5	-0.7
RATI				⇑*i*Sn	Sn	19 28 04.7	-4.6
KEDI	**Kedomdong**	**2.49**	**55**	⇑*i*Pn	Pn	19 27 54.1	-0.8
	34nm,0.2s						
KEDI				⇑*i*Sn	Sn	19 28 20.9	-3.6

IGQ 22 19:37:58.3, 1.29S×80.79W, h12^{km}±4^{km}, mb4.0, Error ellipse: s-maj=6.9km s-min=1.5km az=29.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.34**	**46**	P	Pg	19 38 06.0	+0.6
SALI	**Salinas**	**0.91**	**192**	P	Pb	19 38 14.7	-0.8
SALI				S	Sb	19 38 28.1	+0.7
IGUA	**Igualata**	**2.16**	**95**	P	Pn	19 38 36.1	+1.5
ARRY	**Arrayan**	**2.35**	**95**	P	Pn	19 38 38.8	+1.5
ARRY				S	Sn	19 39 10.3	+4.1
PATA	**Patacocha**	**2.37**	**95**	P	Pn	19 38 39.5	+1.9
RUN2	**Runtun**	**2.38**	**93**	P	Pn	19 38 40.1	+2.3
ULBA	**Ulba**	**2.39**	**94**	P	Pn	19 38 40.7	+2.8
ULBA				S	Sn	19 39 15.7	+8.3
NAS1	**Nasa**	**2.41**	**74**	P	Pn	19 38 40.0	+1.9
PISA	**Pisayambo**	**2.42**	**85**	P	Pn	19 38 39.9	+1.6
JUA2	**San Juan 2**	**2.44**	**64**	P	Pn	19 38 40.4	+1.9
TERV	**Terraza Guagua**	**2.45**	**63**	P	Pn	19 38 41.0	+2.1
PINO	**Pino**	**2.46**	**63**	P	Pn	19 38 39.8	+0.9
VC1	**Cotopaxi 1**	**2.48**	**75**	P	Pn	19 38 41.9	+2.8
TAMB	**Tambo**	**2.50**	**76**	P	Pn	19 38 42.0	+2.6
YANA	**Yana**	**2.51**	**62**	P	Pn	19 38 41.2	+1.6
YANA				S	Sn	19 39 19.1	+8.7
ANTI	**Antisana**	**2.76**	**72**	P	Pn	19 38 46.1	+2.9
ANTI				S	Sn	19 39 27.2	+10
COTA	**Cotacachi**	**2.94**	**57**	P	Pn	19 38 47.7	+2.0
COTA				S	Sn	19 39 30.8	+10
ELAGU	**Cayambe Volc**	**3.07**	**66**	P	Pn	19 38 52.2	+4.6
CAYR	**Refugio Cayamb**	**3.07**	**65**	P	Pn	19 38 51.7	+4.1
CAYA	**Cayambe**	**3.11**	**64**	P	Pn	19 38 51.9	+3.7
CAYA				S	Sn	19 39 33.5	+7.8

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*JMA **22** 20:12:10.7±0.2, 23.90N×121.73E, h72^{km}, M2.7*

TAP 22 20:12:10.0, 23.86N×121.66E, h31^{km}, ML3.4, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**1.37**	**64**	P	Pn	20 12 33.4	0.0
YOJ				*e*S	Sn	20 12 50.1	-0.5
IRIF	**Iriomote-Funau**	**1.95**	**76**	P	Pn	20 12 41.4	-0.2
IRIF				*e*S	Sn	20 13 04.9	-0.4
HATJ	**Hateruma jima**	**1.97**	**84**	P	Pn	20 12 41.6	-0.4
HATJ				*e*S	Sn	20 13 04.8	-1.0
JKRS	**Kuro-shima**	**2.18**	**80**	P	Pn	20 12 44.6	-0.4
JKRS				*e*S	Sn	20 13 10.7	-0.4
JIJ	**Ishigaki jima**	**2.32**	**77**	P	Pn	20 12 46.2	-0.8
JIJ				*e*S	Sn	20 13 12.3	-2.5
JTJ	**Tarama**	**2.88**	**74**	P	Pn	20 12 54.1	-0.9
JTJ				*e*S	Sn	20 13 26.9	-2.1

MAN 22 20:46:09.1, 13.70N×120.73E, h33^{km}, mb3.6, ML2.3, MS1.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.47**	**275**	*e*P	P	20 46 20.2	+1.1
LUBP				*e*S	S	20 46 28.3	+2.0
BOAC	**Boac**	**1.11**	**102**	*e*P	P	20 46 28.4	0.0
SJMP	**San Jose**	**1.28**	**163**	*e*P	P	20 46 25.7	-5.1
BUSP	**Coron**	**1.76**	**197**	*e*P	P	20 46 37.9	+0.3

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*MOS **22** 20:46:15.3±1.6, 36.44N×70.56E, h194^{km}, mb3.8/4, Error ellipse: s-maj=29.6km s-min=15.1km az=84.9*

*NEIC **22** 20:46:16.1±2.9, 36.39N×70.61E, h189^{km}±25^{km}, mb3.7/3, Error ellipse: s-maj=23.5km s-min=17.2km az=189.0*

*IDC **22** 20:46:20.0±5.2, 36.43N×70.56E, h224^{km}±50^{km}, mb3.1/7, mb1 3.3/8, mb1mx3.0/21, mbtmp3.7/8, Error ellipse: s-maj=28.1km s-min=19.8km az=179.0*

ISC 22 20:46:17.9±1.2, 36.53N±0.06×70.6E±0.1, h216^{km}±13^{km}, n29, σ0^{s}94/31, mb3.3/6, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.85**	**133**	*e*P	P	20 47 44.2	0.0
THN				*e*S	S	20 48 50.9	-0.5
AML	**Almayashu**	**6.08**	**22**	P	P	20 47 47.2	+0.2
	SNR=59						
UCH	**Uchtor**	**6.43**	**27**	P	P	20 47 52.2	+0.6
	SNR=18						
EKS2	**Erkin-Say**	**6.59**	**21**	P	P	20 47 53.9	+0.3
	SNR=44						
KZA	**Kyzart**	**6.59**	**31**	P	P	20 47 54.2	+0.5
	SNR=13						
AAK	**Ala-Archa**	**6.78**	**25**	P	P	20 47 56.7	+0.5
	SNR=24						
AAK	**Ala-Archa**	**6.78**	**25**	*e*PN	P	20 47 55.4	-0.7
AAK				*e*S	S	20 49 11.5	-1.3
KBK	**Karagaybulak**	**6.96**	**27**	P	P	20 47 59.2	+0.8
	SNR=16						
CHMS	**Chumysh**	**7.20**	**25**	P	P	20 48 01.6	+0.2
	SNR=14						
USP	**Ospenovka**	**7.35**	**23**	P	P	20 48 03.6	+0.1
	SNR=7.5						
TKM2	**Tokmak 2**	**7.44**	**29**	P	P	20 48 05.0	+0.4
	SNR=56						
SMLA	**Simla**	**7.65**	**133**	*i* P	P	20 48 36.2	+29
SMLA				*i* S	S	20 49 46.4	+14
	146nm,0.3s						
KURK	**Kurchatov**	**15.30**	**20**	P	P	20 49 42.4	-1.6
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	**Kurchatov**	**15.30**	**20**	P	P	20 49 42.4	-1.6
	comp=Z,2.1nm,1.0s						
BVAR	**Borovoye Array**	**16.50**	**359**	P	P	20 49 58.1	-0.3
	comp=Z,0.4nm,0.3s,baz=190,slow=9.0,SNR=10						
CHKZ	**Chkalovo**	**17.15**	**360**	*e*P	P	20 50 04.0	-1.7
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CHKZ	**Chkalovo**	**17.15**	**360**	*e*P	P	20 50 04.0	-1.7
	comp=Z,1.4nm,0.5s						
ZAL	**Zalesovo**	**19.99**	**25**	P	P	20 50 36.9	+1.8
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZAL	**Zalesovo**	**19.99**	**25**	P	P	20 50 36.9	+1.8
	comp=Z,2.5nm,0.3s,baz=253,slow=4.6,SNR=12						
GNI	**Garni**	**20.61**	**288**	P	P	20 50 42.4	+1.1
GNI				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GNI	**Garni**	**20.61**	**288**	P	P	20 50 42.4	+1.1
	comp=Z,0.8nm,0.3s,baz=256,slow=14,SNR=3.0						
FINES	**FINESS Array B**	**37.30**	**326**	P	P	20 53 10.5	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	**FINESS Array B**	**37.30**	**326**	P	P	20 53 10.5	+0.1
	comp=Z,1.8nm,1.0s,mb3.6,baz=121,slow=8.1,SNR=3.5						
NOA	**NORSAR Array B**	**44.18**	**323**	P	P	20 54 06.0	-0.5
	comp=Z,0.5nm,0.5s,mb3.1,baz=310,slow=23,SNR=2.7						
DBIC	**Dimbokro**	**74.41**	**267**	P	P	20 57 32.0	-2.2
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DBIC	**Dimbokro**	**74.41**	**267**	P	P	20 57 32.0	-2.2
	comp=Z,2.3nm,0.8s,mb3.9						
YKA	**Yellowknife Ar**	**81.23**	**2**	P	P	20 58 12.0	+1.7
	comp=Z,0.3nm,0.8s,mb3.0,baz=348,slow=4.8,SNR=6.4						
WRA	**Warramunga Arr**	**82.25**	**122**	P	P	20 58 16.3	-0.1
	comp=Z,0.3nm,0.6s,mb3.1,baz=326,slow=4.7,SNR=5.5						
ASAR	**Alice Springs**	**84.51**	**125**	P	P	20 58 27.9	+0.1
	comp=Z,0.4nm,0.6s,mb3.3,baz=313,slow=5.2,SNR=5.3						

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*IDC **22** 21:01:59.2±14.0, 4.94N×94.88E, h66^{km}±123^{km}, mb3.0/4, mb1 3.2/5, mb1mx3.1/19, mbtmp3.3/5, Error ellipse: s-maj=135.2km s-min=23.7km az=60.0*

ISC 22 21:01:51.9±1.4, 4.7N±0.2×94.4E±0.3, h33^{km}, n6, σ1^{s}06/6, mb3.4/4, Off west coast of northern Sumatera

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

CMAR	Chiang Mai Arr	14.34	18	P	P	21 05 14.7	0.0
	baz=193,slow=12,SNR=2.0						
DLH	Dalhousie	32.61	330	eP	P	21 08 22.0	-0.8
SONM	Songino Array	44.16	12	P	P	21 09 58.9	-0.3
	0.2nm,0.7s,mb3.0,baz=180,slow=10,SNR=3.0						
WRA	Warramunga Arr	46.27	123	P	P	21 10 17.1	+0.7
	0.5nm,0.6s,mb3.6,baz=302,slow=9.2,SNR=5.8						
ASAR	Alice Springs	47.73	128	P	P	21 10 27.2	-0.7
	0.2nm,0.7s,mb3.3,baz=294,slow=8.0,SNR=3.5						
BVAR	Borovoye Array	52.04	342	P	P	21 11 01.7	+1.3
	0.4nm,0.5s,mb3.6,baz=141,slow=9.5,SNR=4.7						

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*NEIC **22** 21:16:04.7,36.41N×10.69W,MG3.5(MDD),After MDD.*

*CSEM **22** 21:16:04.6±1.3,36.00N×10.37W,h10^{km},ML2.0,Error ellipse: s-maj=25.6km s-min=20.1km az=48.0*

*INMG **22** 21:16:05.5±1.5,36.28N×10.65W,h2^{km}±50^{km},ML2.0, Error ellipse: s-maj=55.9km s-min=8.2km az=56.0*

MDD 22 21:16:04.5±2.3,36.31N×10.65W,mbLg2.9/2,Error ellipse: s-maj=20.6km s-min=17.3km az=46.0,PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	Sao Teotonio	1.98	51	ePn	Pn	21 16 38.4	-1.2
PTEO				eSn	Sn	21 17 03.2	-2.2
PALC	Alcoutim	2.79	65	ePn	Pn	21 16 49.0	-2.3
PALC				eSn	Sn	21 17 21.9	-4.3
	3.9nm,0.2s						
PALC	Alcoutim	2.79	65	ePn	Pn	21 16 49.0	-2.3
PALC				eSn	Sn	21 17 21.9	-4.3
	3.9nm,0.2s						
PBEJ	Beja	2.81	52	ePn	Pn	21 16 49.2	-2.3
PBEJ				eSn	Sn	21 17 22.3	-4.2
PLOU	Loures	2.83	24	ePn	Pn	21 16 49.7	-2.2
PLOU				eSn	Sn	21 17 24.1	-3.1
MOE	Montemor	2.87	39	ePn	Pn	21 16 50.0	-2.4
MOE				eSn	Sn	21 17 24.9	-3.2
EMIN	Mina Concepcio	3.50	64	P	Pn	21 16 58.7	-2.6
	0.4nm,0.1s,SNR=7.2						
EMIN				S	Sn	21 17 39.0	-5.0
	0.9nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.50	64	P	Pn	21 16 58.7	-2.6
	0.4nm,0.1s,SNR=7.2						
EMIN				S	Sn	21 17 39.0	-5.1
	0.9nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.78	49	P	Pn	21 17 02.7	-2.7
	0.4nm,0.1s,SNR=7.9						
EBAD	Badajoz	3.78	49	P	Pn	21 17 02.7	-2.7
	1.4nm,0.1s,SNR=7.9						
ESPR	Espera	3.90	80	P	Pn	21 17 04.7	-2.2
	0.4nm,0.1s,SNR=7.9						
ESPR				S	Sn	21 17 47.9	-6.2
	9.0nm,0.2s,SNR=4.6						
ESPR	Espera	3.90	80	P	Pn	21 17 04.7	-2.3
	0.4nm,0.1s,SNR=7.9						
ESPR				S	Sn	21 17 47.9	-6.2
	9.0nm,0.2s,SNR=4.6						
PCBR	Castelo Branco	4.32	34	ePn	Pn	21 17 10.6	-2.4
EADA	Adamuz	5.19	67	P	Pn	21 17 22.6	-2.7
	0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	21 18 18.8	-8.0
	0.9nm,0.1s,SNR=7.9						
EADA	Adamuz	5.19	67	P	Pn	21 17 22.6	-2.7
	0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	21 18 18.8	-8.0
	0.9nm,0.1s,SNR=7.9						
ELOB	Lobios	5.90	19	S	Sn	21 18 35.6	-9.1
	0.9nm,0.3s,SNR=7.9						
ELOB	Lobios	5.90	19	S	Sn	21 18 35.6	-9.1
	0.9nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	6.26	56	P	Pn	21 17 37.0	-3.4
	0.6nm,0.1s,baz=245,slow=13,SNR=4.4						
ESDC				S	Sn	21 18 45.9	-7.7
	0.7nm,0.2s,baz=242,slow=24,SNR=3.7						
ESDC	Sonseca Array	6.26	56	P	Pn	21 17 37.0	-3.4
	0.6nm,0.1s,SNR=4.4						
ESDC				S	Sn	21 18 45.9	-7.7
	0.7nm,0.2s,SNR=3.7						
EHUE	Huescar	6.62	74	S	Sn	21 18 53.8	-8.7
	1.3nm,0.2s,SNR=4.0						
EMAZ	Mazaricos	6.75	10	S	Sn	21 18 54.7	-11
	0.5nm,0.1s,SNR=4.0						

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*TAP **22** 21:20:57.6,24.70N×122.33E,h3^{km},ML2.7*

JMA 22 21:20:59.1,24.98N×122.71E,h6^{km}±3^{km},M2.0,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.58	152	P	Pg	21 21 10.5	-0.3
YOJ				eS	Sg	21 21 18.4	-0.2
IRIF	Iriomote-Funau	1.13	124	P	Pb	21 21 20.3	-0.3
HATJ	Hateruma jima	1.36	132	eS	Sb	21 21 42.0	0.0
JKRS	Kuro-shima	1.40	122	P	Pn	21 21 24.8	-0.4
JKRS				eS	Sb	21 21 43.4	+0.3
JIJ	Ishigaki jima	1.44	115	P	Pn	21 21 25.7	-0.1
JIJ				eS	Sb	21 21 45.0	+0.6

IDC 22 21:31:15.6±7.3,16.79S×174.83W,mb3.7/3,mb1 4.0/3, mb1mx3.7/15,mbtmp3.7/3,Error ellipse: s-maj=317.6km s-min=37.4km az=141.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	48.20	258	P	P	21 39 57.9	-2.2
	0.5nm,0.7s,baz=96,slow=7.8,SNR=12						
ASAR	Alice Springs	48.39	253	P	P	21 39 60.0	-1.6
	1.2nm,0.4s,baz=88,slow=8.0,SNR=30						
ILAR	Eielson Array	84.07	12	P	P	21 43 47.7	-1.4
	1.2nm,1.2s,baz=216,slow=5.5,SNR=5.1						

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*NIED **22** 21:33:00,21.70N×122.00E,h32^{km},Mw4.2 Best double couple: $M_0$2.11×10^{15} NP1:ϕ_s68°,δ78°,λ142°. NP2:ϕ_s168°, δ53°,λ16°.*

*TAP **22** 21:33:45.5,21.47N×121.91E,h5^{km},ML4.2*

*MAN **22** 21:33:47.3,21.30N×122.54E,h9^{km},mb4.6,ML3.5,MS3.4*

*NEIC **22** 21:33:49.6±1.0,21.50N×122.12E,h37^{km}±11^{km},mb4.0/6, Error ellipse: s-maj=13.2km s-min=7.4km az=79.0*

*JMA **22** 21:33:49.7±0.2,21.71N×121.96E,h113^{km},M4.2*

*IDC **22** 21:33:49.9±3.8,21.49N×122.14E,h39^{km}±36^{km},mb3.4/8, mb1 3.6/9,mb1mx3.5/20,mbtmp3.7/9,ML4.0/2,MS3.4/2, Ms1 3.5/2,ms1mx2.6/22,Error ellipse: s-maj=29.3km s-min=16.3km az=72.0*

ISC 22 21:33:48.6±0.6,21.52N±0.03×122.12E±0.07,h47^{km}±8^{km}, n33,σ$0^{s}81$/40,mb3.8/13,MS3.5/2,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	Hateruma jima	2.97	31	P	P	21 34 35.0	+0.6
HATJ				S	S	21 35 09.3	+0.2
YOJ	Yonaguni jima	3.04	15	P	P	21 34 35.1	-0.4
YOJ				S	S	21 35 10.7	-0.3
IRIF	Iriomote-Funau	3.17	28	P	P	21 34 37.6	+0.3
IRIF				S	S	21 35 14.4	+0.1
JKRS	Kuro-shima	3.22	32	P	P	21 34 38.8	+0.8
JKRS				S	S	21 35 15.7	+0.2
JIJ	Ishigaki jima	3.39	33	P	P	21 34 40.6	+0.2
JIJ				S	S	21 35 18.9	-0.9
TATO	Taipei	3.49	351	ePn	P	21 34 40.6	-1.2
APYP	Conner	3.73	193	eP	P	21 34 44.6	-0.6
CVP	Callao Caves	3.81	184	eP	P	21 34 46.0	-0.3
CVP				eS	S	21 35 30.0	-0.3
JTJ	Tarama	3.91	37	P	P	21 34 47.9	+0.1
JTJ				eS	S	21 35 33.3	+0.3
ABRA	Dolores	4.07	199	eP	P	21 34 49.6	-0.4
ABRA				eS	S	21 35 38.7	+1.8
JMJ	Miyako jima 2	4.39	41	eS	S	21 35 45.2	+0.1
JOGS	Gusukube	4.42	43	P	P	21 34 55.2	+0.2
JOGS				eS	S	21 35 46.5	+0.6
PALP	Palanan	4.44	176	eP	P	21 35 03.6	+8.3
CAUP	Cauayan	4.56	184	eP	P	21 34 59.8	+2.9
TGY	Tagaytay City	7.46	189	Pn	P	21 35 36.3	-1.2
	23nm,0.3s,baz=249,slow=11,SNR=2.5						
JOW	Kunigami	7.72	46	Pn	P	21 35 40.0	-1.0
	2.0nm,0.3s,baz=124,slow=23,SNR=7.1						
BJT	Baijiatuau	19.13	346	P	P	21 38 10.3	-0.2
	5.0nm,0.4s						
CMAR	Chiang Mai Arr	21.99	266	P	P	21 38 41.8	+1.4
	0.6nm,0.6s,mb3.2,baz=67,slow=10,SNR=5.9						
ULN	Ulaanbaatar	28.95	339	P	P	21 39 46.2	+0.5
	1.3nm,0.8s,mb3.7						
LSA	Lhasa	29.02	293	P	P	21 39 45.9	-0.6
	1.5nm,0.6s,mb3.9						
SONM	Songino Array	29.15	338	P	P	21 39 46.8	-0.6
	0.4nm,0.8s,mb3.2,baz=158,slow=6.7,SNR=4.0						
WRAB	Tennant Creek	42.90	163	eP	P	21 41 43.6	-1.0
	7.5nm,1.0s,mb4.4						
WRA	Warramunga Arr	42.90	163	P	P	21 41 43.8	-0.8
	1.4nm,0.7s,mb3.8,baz=344,slow=9.0,SNR=14						
ZAL	Zalesovo	42.95	328	P	P	21 41 44.0	-0.6
	0.9nm,0.8s,mb3.5,baz=356,slow=8.7,SNR=6.0						
KURK	Kurchatov	44.69	322	eP	P	21 41 58.1	-0.6
	2.4nm,0.8s,mb4.1						
ASAR	Alice Springs	46.35	165	P	P	21 42 11.6	-0.6
	0.7nm,0.7s,mb3.7,baz=342,slow=8.2,SNR=6.0						
CTA	Charters Tower	47.61	149	LR	LR	22 00 37.3	
	comp=Z,72nm,19.1s,MS3.7,baz=49,slow=34						
BVAR	Borovoye Array	50.28	322	P	P	21 42 43.0	+0.7
	0.6nm,0.6s,mb3.8,baz=116,slow=8.0,SNR=5.7						
CHKZ	Chkalovo	50.36	323	eP	P	21 42 43.3	+0.4
	1.5nm,0.7s,mb4.1						
STKA	Stephens Creek	56.27	160	P	P	21 43 27.0	+0.1
	1.1nm,0.6s,mb4.0,baz=354,slow=9.2,SNR=2.0						
STKA	Stephens Creek	56.27	160	P	P	21 43 27.0	+0.1
NOA	NORSAR Array B	80.98	333	LR	LR	22 24 32.6	
	comp=Z,12nm,18.2s,MS3.3,baz=30,slow=38						
YKA	Yellowknife Ar	85.08	23	P	P	21 46 22.6	+2.4
	0.1nm,0.4s,mb3.3,baz=315,slow=4.4,SNR=3.9						

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*NEIC **22** 22:15:57.5±0.6,3.56N×94.30E,h30^{km},mb4.1/7,Error ellipse: s-maj=19.2km s-min=10.0km az=63.0*

*IDC **22** 22:16:12.6±13.0,4.07N×94.99E,h153^{km}±118^{km},mb3.4/6, mb1 3.7/7,mb1mx3.5/18,mbtmp3.9/7,ML4.3/1,MS3.3/1, Ms1 3.3/1,ms1mx2.4/12,Error ellipse: s-maj=90.1km s-min=17.5km az=58.0*

ISC 22 22:15:56.0±0.8,3.6N±0.1×94.3E±0.2,h33^{km},n15, σ$0^{s}82$/14,mb3.9/12,MS3.3/1,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	15.48	17	eP	P	22 19 34.3	+0.6
	5.4nm,0.8s						
CMAR	Chiang Mai Arr	15.48	17	P	P	22 19 34.4	+0.7
	0.4nm,0.3s,baz=208,slow=12,SNR=39						
LSA	Lhasa	26.16	354	eP	P	22 21 29.0	-0.4
	3.9nm,0.7s,mb4.0						
AAK	Ala-Archa	42.72	338	P	P	22 23 51.4	-0.4
	1.2nm,0.6s,mb3.8						
SONM	Songino Array	45.31	11	P	P	22 24 09.3	-3.3
	0.2nm,0.4s,mb3.3,baz=187,slow=9.4,SNR=5.2						
WRA	Warramunga Arr	45.74	122	P	P	22 24 16.5	+0.1
	1.8nm,0.7s,mb4.1,baz=301,slow=9.1,SNR=19						
WRAB	Tennant Creek	45.74	122	eP	P	22 24 15.9	-0.5
	4.2nm,0.8s,mb4.4						
ASAR	Alice Springs	47.12	127	P	P	22 24 27.6	+0.4
	0.5nm,0.7s,mb3.6,baz=313,slow=8.7,SNR=4.5						
KURK	Kurchatov	48.80	347	eP	P	22 24 38.7	-1.3
	1.3nm,0.7s,mb4.1						
ZAL	Zalesovo	50.81	353	P	P	22 24 55.0	-0.3
	1.2nm,0.7s,mb4.0,baz=293,slow=5.0,SNR=7.0						
CHKZ	Chkalovo	53.60	343	eP	P	22 25 15.8	-0.4
	1.2nm,0.6s,mb4.0						
GNI	Garni	57.59	316	LR	LR	22 53 20.1	
	comp=Z,22nm,18.8s,MS3.3,baz=154,slow=39						
KIV	Kislovodsk	60.64	319	P	P	22 26 06.8	+0.6
	2.3nm,0.8s,mb4.4						
FINES	FINESS Array B	76.58	333	P	P	22 27 45.9	+1.2
	2.2nm,0.9s,mb4.1,baz=45,slow=2.7,SNR=4.0						
GERES	GERESS Array B	81.14	319	P	P	22 28 10.5	+0.7
	0.7nm,0.9s,mb3.6,baz=83,slow=11,SNR=3.9						

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*NEIC **22** 22:42:49.7±1.6,5.25N×93.85E,h30^{km},mb4.1/3,Error ellipse: s-maj=43.7km s-min=9.6km az=79.0*

*IDC **22** 22:43:01.9±4.3,5.64N×96.74E,mb4.5/3,mb1 4.6/4, mb1mx3.9/18,mbtmp4.4/4,ML4.3/1,Error ellipse: s-maj=117.3km s-min=38.6km az=84.0*

ISC 22 22:42:49.2±2.3,5.3N±0.1×94.1E±0.4,h30^{km},n10, σ$0^{s}48$/10,mb4.4/6,1D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	Chiang Mai Arr	13.91	19	eP	P	22 46 06.5	-0.3
CMAR	Chiang Mai Arr	13.91	19	Pn	P	22 46 07.2	+0.4
	0.6nm,0.3s,baz=202,slow=11,SNR=23						
LSA	Lhasa	24.43	354	eP	P	22 48 06.5	-0.1
	1.7nm,0.4s,mb3.8						
FITZ	Fitzroy Crossi	38.85	128	eP	P	22 50 14.1	+0.4
	1.0nm,0.4s,mb3.9						
NWAO	Narrogin (SRO)	43.91	152	P	P	22 51 03.5	+8.4
	7.6nm,0.7s,mb4.5,baz=318,slow=7.0,SNR=8.0						
WRA	Warramunga Arr	46.85	124	P	P	22 51 18.4	-0.4
	4.4nm,0.5s,mb4.7,baz=306,slow=8.7,SNR=33						
WRAB	Tennant Creek	46.85	124	eP	P	22 51 18.1	-0.6
	11nm,0.6s,mb5.0						
WB2	Warramunga Arr	46.86	124	eP	P	22 51 18.2	-0.6
ASPA	Alice Springs	48.34	128	⇓iP	P	22 51 30.9	+0.6
ASAR	Alice Springs	48.34	128	P	P	22 51 31.0	+0.6
	2.5nm,0.6s,mb4.4,baz=302,slow=7.9,SNR=29						

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*BJI **22** 23:14:16.3,65.71S×133.31E,h10^{km},mB5.6,mb5.9, Ms5.4,Msz5.2*

*NEIC **22** 23:14:17.8±0.1,65.71S×133.29E,h10^{km},mb5.7/40, MS5.3/111,Error ellipse: s-maj=9.1km s-min=6.7km az=106.0*

*MOS **22** 23:14:17.9±1.6,65.54S×133.19E,h10^{km},mb5.6/31, MS5.1/23,Error ellipse: s-maj=23.1km s-min=8.9km az=84.8*

*HRVD **22** 23:14:17.8±0.1,65.64S×133.54E,h12^{km},MW5.4/70, Centroid moment Tensor Solution. LP body waves: s63,c111;Mantle waves: s70,c138; Half duration: $1^{s}3$ Moment tensor: Scale 10^{17}Nm; M_{rr}0.08±.03; $M_{\theta\theta}$1.29±.03; $M_{\phi\phi}$-1.38±.03; $M_{r\theta}$-0.32±.06; $M_{\theta\phi}$1.02±.03; $M_{\phi r}$0.20±.07; Best double couple: $M_0$1.722×10^{17} NP1:ϕ_s206°,δ77°, λ-180°. NP2:ϕ_s116°,δ90°,λ-13°. Principal axes: T 1.672, Plg9°, Azm162°; N .094, Plg77°, Azm295°; P -1.772, Plg9°, Azm71°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **22** 23:14:18.0±1.6,65.66S×133.45E,h8^{km}±8^{km},mb5.5/23, mb1 5.5/24,mb1mx5.5/25,mbtmp5.5/24,ML5.5/1,MS5.0/14, Ms1 5.0/14,ms1mx4.8/19 Error ellipse: s-maj=13.0km s-min=9.5km az=99.0*

ISC 22 23:14:16.5±0.2,65.69S±0.03×133.2E±0.1,h10^{km}, (h9^{km}±1.6^{km}:pP-P),n623,σ$1^{s}04$/179,mb5.6/60,MS5.2/127, 36C-9D,South of Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRV	Dumont d'Urvil	2.94	112	L		23 15 00.0	
CASY	Casey	9.23	256	eP	P	23 16 30.3	-2.5
CASY				eS	Sn	23 18 06.8	-11
VNDA	Vanda	14.65	156	P	P	23 17 37.0	-8.2
VNDA				pmax	pmax		
	comp=Z,18nm,0.3s						
VNDA				MLR	MLR		
	comp=Z,33µm,18.4s						
VNDA	Vanda	14.65	156	Pn	P	23 17 37.0	-8.2
	comp=Z,18nm,0.3s,baz=310,slow=14,SNR=255						
VNDA				Sn	S	23 20 10.6	-18
	comp=Z,6.7nm,0.3s,baz=79,slow=22,SNR=3.2						
VNDA				Lg		23 21 51.9	
	baz=160,slow=16,SNR=2.6						
VNDA				LR	LR	23 23 36.2	
	comp=Z,33µm,18.4s,baz=331,slow=38						
VNDA	Vanda	14.65	156	Pn	P	23 17 37.0	-8.2
VNDA				Sn	S	23 20 10.6	-18
VNDA				Lg		23 21 51.9	
VNDA				LR	LR	23 23 36.2	
SBA	Scott Base	15.70	154	eP	P	23 17 50.6	-8.3
SBA				pmax	pmax		
	comp=Z,12nm,0.6s						
SBA	Scott Base	15.70	154	ePn	P	23 17 50.6	-8.3
	comp=Z,12nm,0.6s						
MCQ	Macquarie Isla	16.90	61	eP	P	23 18 17.3	+3.0
TAU	Tasmania Unive	24.16	26	eP	P	23 19 33.1	-0.2
TAU				pmax	pmax		
	comp=Z,130nm,1.0s,mb5.3						
TAU				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.4						
TAU	Tasmania Unive	24.16	26	eP	P	23 19 33.1	-0.2
	comp=Z,135nm,0.9s,mb5.4						
TAU				LR	LR		
	comp=Z,1µm,19.0s,MS4.4						
MAW	Mawson	26.58	234	eP	P	23 19 56.5	+0.6
	comp=Z,85nm,0.9s,mb5.3						
MAW				i S	S	23 24 33.9	+5.4
MAW	Mawson	26.58	234	eP	P	23 19 56.5	+0.6
MAW				i S	S	23 24 33.9	+5.4
MAW				pmax	pmax		
	comp=Z,85nm,0.9s						
MAW	Mawson	26.58	234	P	P	23 19 57.5	+1.6
	comp=Z,123nm,1.0s,mb5.4,baz=122,slow=11,SNR=11						
MAW				LR	LR	23 31 09.4	
	comp=Z,4µm,18.9s,MS4.9,baz=109,slow=38						
MLZ	Mavora Lakes	27.81	60	eP*	P	23 20 07.1	-0.2
MLZ	Mavora Lakes	27.81	60	eP*	P	23 20 07.1	-0.2
ODZ	Otahua Downs	28.96	63	eP*	P	23 20 18.4	+0.6
ODZ	Otahua Downs	28.96	63	eP*	P	23 20 18.4	+0.6
TOO	Toolangi	29.07	20	⇑iP	P	23 20 19.7	+0.9
	comp=Z,2.3nm,1.1s						
TOO	Toolangi	29.07	20	⇑iP	P	23 20 19.7	+0.9
TOO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
JCZ	Jackson Bay	29.12	60	eP*	P	23 20 18.6	-0.6
JCZ	Jackson Bay	29.12	60	eP*	P	23 20 18.6	-0.6
RPZ	Rata Peaks	30.26	62	P	P	23 20 28.1	-1.2
	comp=Z,60nm,1.1s,mb5.2,baz=192,slow=12,SNR=17						
RPZ				LR	LR	23 30 27.5	
	comp=Z,3µm,21.7s,MS4.8,baz=126,slow=32						
CNB	Canberra Magne	31.90	26	eP	P	23 20 44.4	+0.5
	comp=Z,497nm,1.1s,mb6.3						
SYO	Syowa Base	32.88	221	⇑P	P	23 20 52.0	-0.1
SYO	Syowa Base	32.88	221	⇑pP	pP	23 20 57.3	+2.3
SYO	Syowa Base	32.88	221	⇓sP	sP	23 20 54.1	-2.2
NWAO	Narrogin (SRO)	34.19	336	P	P	23 21 03.7	-0.1
NWAO				pmax	pmax		
	comp=Z,61nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,24nm,18.9s						
NWAO	Narrogin (SRO)	34.19	336	P	P	23 21 03.7	-0.1
	comp=Z,61nm,1.0s,baz=165,slow=9.3,SNR=17						
NWAO				LR	LR	23 32 07.9	
	comp=Z,24nm,18.9s,baz=346,slow=31						
NWAO	Narrogin (SRO)	34.19	336	eP	P	23 21 03.2	-0.6
	comp=Z,53nm,0.9s,mb5.5						
NWAO				LR	LR		
	comp=Z,3µm,20.0s,MS5.0						
STKA	Stephens Creek	34.23	13	⇓iP	P	23 21 03.6	-0.6
	comp=Z,135nm,0.9s,mb5.9						
STKA				i S	S	23 26 29.4	-0.5
STKA	Stephens Creek	34.23	13	P	P	23 21 03.6	-0.6
	comp=Z,141nm,0.8s,mb5.9,baz=170,slow=8.4,SNR=118						
STKA				LR	LR	23 32 52.8	
	comp=Z,3µm,19.1s,MS5.0,baz=183,slow=33						
FORT	Forrest	35.08	352	⇑iP	P	23 21 11.6	+0.1
	comp=Z,2µm,0.9s						
FORT				eT		23 56 06.5	
MUN	Mundaring	35.29	335	eP	P	23 21 12.9	-0.4
	comp=Z,29nm,0.9s,mb5.2						
MUN				eS	S	23 26 44.8	-1.5
MUN				eT		23 55 41.8	
MUN	Mundaring	35.29	335	eP	P	23 21 12.9	-0.4
MUN				eS	S	23 26 44.8	-1.5
MUN				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.2						
KLBR	Kellerberrin	35.41	337	eP	P	23 21 13.7	-0.6
	comp=Z,717nm,0.8s						
KLBR				eT		23 55 28.4	
HIZ	Hauiti	36.19	62	P*	P	23 21 21.2	+0.4
HIZ	Hauiti	36.19	62	P*	P	23 21 21.2	+0.4
ARMA	Armidale	37.08	27	eP	P	23 21 28.7	+0.3
URZ	Urewera	37.25	64	P	P	23 21 28.8	-0.9
	comp=Z,72nm,0.9s,mb5.5,baz=229,slow=5.6,SNR=22						
URZ				S	S	23 27 15.9	-0.4
	comp=Z,7.5nm,1.0s,baz=144,slow=20,SNR=4.8						
URZ				LR	LR	23 34 25.8	
	comp=Z,3µm,20.9s,MS5.0,baz=92,slow=32						
NVL	N'lazarevskaya	38.05	207	⇑eP	P	23 21 34.0	-2.1
NVL				e		23 23 06.0	
NVL				eS	S	23 27 27.0	-1.2
NVL				pmax	pmax		
	comp=Z,868nm,3.2s						
NVL				MLR	MLR		
	comp=Z,9µm,10.0s,MS5.9						
WCZ	Waipu Caves	38.30	60	eP*	P	23 21 39.1	+0.5
WCZ	Waipu Caves	38.30	60	eP*	P	23 21 39.1	+0.5
SNAA	Sanae	39.71	200	⇑i	P	23 21 50.7	+0.7
SNAA	Sanae	39.71	200	⇑i	P	23 21 54.5	+4.5
SNAA	Sanae	39.71	200	P	P	23 21 48.9	-1.1
SNAA				pmax	pmax		
	comp=Z,85nm,1.0s						
SNAA				MLR	MLR		
	comp=Z,7.0nm,19.5s						
SNAA	Sanae	39.71	200	P	P	23 21 48.9	-1.1
	comp=Z,85nm,1.0s,baz=166,slow=8.5,SNR=128						
SNAA				LR	LR	23 38 45.8	
	comp=Z,6.6nm,19.5s,baz=166,slow=37						
SNAA	Sanae	39.71	200	⇑iP	P	23 21 48.9	-1.1
SNAA				⇑iP	pP	23 21 50.7	-2.3
SNAA				⇑iP		23 21 54.5	
VNA3	Neumayer Olymp	41.01	197		P	23 22 01.4	+0.8
VNA3	Neumayer Olymp	41.01	197		P	23 22 04.1	+3.5
VNA3	Neumayer Olymp	41.01	197	⇑iP	P	23 21 59.6	-1.0
VNA3				P	pP	23 22 01.4	-2.2
VNA3				P	pP	23 22 04.1	+0.5
VNA2	Neumayer--Watz	41.01	199	⇑i	P	23 22 01.8	+1.1
VNA2	Neumayer--Watz	41.01	199	⇑i	P	23 22 06.7	+6.0
VNA2	Neumayer--Watz	41.01	199	S	S	23 28 09.2	-3.5
VNA2	Neumayer--Watz	41.01	199	⇑iP	P	23 21 59.8	-0.9
VNA2				⇑iP	pP	23 22 01.8	-1.9
VNA2				⇑iP		23 22 06.7	
VNA1	Neumayer--Stat	41.38	198	⇑i	P	23 22 05.1	+1.4
VNA1	Neumayer--Stat	41.38	198	⇑iS	S	23 28 16.5	-1.7
VNA1	Neumayer--Stat	41.38	198	⇑iP	P	23 22 03.2	-0.5
VNA1				⇑iP	pP	23 22 05.1	-1.6
VNA1				i S	S	23 28 16.5	-1.7
ASPA	Alice Springs	42.02	1	eP	P	23 22 08.3	-1.1
ASPA				eS	S	23 28 27.1	-1.0
ASAR	Alice Springs	42.03	1	P	P	23 22 08.5	-0.9
	comp=Z,99nm,0.9s,mb5.4,baz=176,slow=7.7,SNR=224						
ASAR				S	S	23 28 27.3	-0.8
	comp=Z,7.6nm,1.1s,baz=178,slow=17,SNR=4.0						
ASAR				LR	LR	23 38 22.4	
	comp=Z,1µm,18.3s,MS4.9,baz=172,slow=34						
MBWA	Marble Bar	45.38	342	eP	P	23 22 36.0	-0.6
	comp=Z,110nm,1.1s,mb5.6						
MBWA				LR	LR		
	comp=Z,1µm,22.0s,MS4.8						
WB2	Warramunga Arr	45.73	2	⇓iP	P	23 22 37.8	-1.6
WB2				i S	S	23 29 18.8	-3.2
WB2				i SS	SS	23 32 42.9	+4.8
WRA	Warramunga Arr	45.73	2	P	P	23 22 37.9	-1.5
WRA						23 24 24.2	
WRA				S	S	23 29 21.3	-0.7
WRA				pmax	pmax		
	comp=Z,203nm,1.1s						
WRA				pmax	pmax		
	comp=Z,16nm,1.0s						
WRA	Warramunga Arr	45.73	2	P	P	23 22 37.9	-1.5
	comp=Z,203nm,1.1s,mb6.0,baz=180,slow=7.0,SNR=340						
WRA				PP	PP	23 24 24.2	-3.0
	comp=Z,16nm,1.0s,baz=184,slow=9.0,SNR=5.3						
WRA				S	S	23 29 21.3	-0.7
	comp=Z,5.6nm,1.2s,baz=182,slow=14,SNR=10						
WRAB	Tennant Creek	45.74	2	i P	P	23 22 38.1	-1.4
WRAB	Tennant Creek	45.74	2	eP	P	23 22 37.9	-1.6
	comp=Z,352nm,1.0s,mb6.2						
WRAB				ePP	PP	23 24 21.8	-5.4
WRAB				eS	S	23 29 20.7	-1.4
WRAB				LR	LR		
	comp=Z,819nm,22.0s,MS4.6						
CTA	Charters Tower	46.39	17	eP	P	23 22 44.4	-0.2
	comp=Z,51nm,1.0s,mb5.4						
CTA				i S	S	23 29 31.3	0.0
CTA				i SS	SS	23 32 58.9	+9.4
CTA	Charters Tower	46.39	17	eP	P	23 22 44.4	-0.2
CTA				i S	S	23 29 31.3	0.0
CTA				pmax	pmax		
	comp=Z,51nm,1.0s						
CTA	Charters Tower	46.39	17	P	P	23 22 43.9	-0.7
	comp=Z,95nm,1.1s,mb5.7,baz=187,slow=9.6,SNR=28						
CTA				LR	LR	23 39 08.4	
	comp=Z,2µm,20.3s,MS5.0,baz=181,slow=32						

CTAO	**Charters Tower**	**46.39**	**17**	*e*P	**P**	**23 22 43.7**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,99nm,1.1s,mb5.7						
CTAO				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
CTAO	**Charters Tower**	**46.39**	**17**	*e*P	**P**	**23 22 43.1**	**-1.5**
	comp=Z,99nm,1.1s,mb5.7						
CTAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
RAO	**Raoul Island**	**47.13**	**64**	P	**P**	**23 22 51.0**	**+0.6**
RAO				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.5						
RAO	**Raoul Island**	**47.13**	**64**	PFAKE		23 23 00.0	+10
RAO				LR	LR		
	comp=Z,5µm,20.0s,MS5.5						
FITZ	**Fitzroy Crossi**	**47.82**	**350**	*e*P	**P**	**23 22 55.6**	**-0.4**
	comp=Z,23nm,0.9s,mb5.2						
FITZ				*e*S	**S**	**23 29 46.8**	**-4.9**
PMSA	**Palmer Station**	**49.23**	**170**	PFAKE		23 23 20.0	+14
PMSA				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
KAKA	**Kakadu**	**52.92**	**359**	*e*P	**P**	**23 23 33.0**	**-1.9**
	comp=Z,215nm,1.0s,mb6.0						
KAKA				*e*S	**S**	**23 31 02.0**	**-0.3**
PMG	**Port Moresby**	**57.03**	**17**	P	**P**	**23 24 05.0**	**+0.2**
PMG				pmax	pmax		
	comp=Z,100nm,0.9s						
PMG				MLR	MLR		
	comp=Z,1µm,18.4s						
PMG	**Port Moresby**	**57.03**	**17**	P	**P**	**23 24 05.0**	**+0.2**
	comp=Z,100nm,0.9s,mb5.8,baz=138,slow=12,SNR=7.5						
PMG				LR	LR	23 46 49.8	
	comp=Z,1µm,18.4s,MS5.0,baz=7.0,slow=34						
PMG	**Port Moresby**	**57.03**	**17**	P	**P**	**23 24 01.0**	**-3.8**
	comp=Z,233nm,1.1s,mb6.1						
PMG				P	pP	23 24 05.0	-2.8
PMG				LR	LR	23 46 49.8	
RATI	**Rata**	**58.19**	**339**	⇓*e*P	**P**	**23 24 12.6**	**-0.3**
	comp=Z,141nm,0.9s,mb6.0						
KEDI	**Kedomdong**	**58.34**	**340**	*e*P	**P**	**23 24 13.8**	**-0.1**
KEDI				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.5						
KEDI	**Kedomdong**	**58.34**	**340**	*e*P	**P**	**23 24 13.8**	**-0.1**
	comp=Z,51nm,1.0s,mb5.5						
SRDI	**Scrawed**	**58.64**	**338**	⇑*i*P	**P**	**23 24 23.9**	**+7.9**
SRDI				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.3						
SRDI	**Scrawed**	**58.64**	**338**	⇑*i*P	**P**	**23 24 23.9**	**+7.9**
	comp=Z,34nm,1.1s,mb5.3						
USHA	**Ushuaia**	**58.68**	**166**	P	**P**	**23 24 15.0**	**-0.8**
	comp=Z,50nm,0.9s,mb5.5,baz=242,slow=1.5,SNR=11						
KELI	**Kelakatan**	**58.84**	**338**	⇓*e*P	**P**	**23 24 18.1**	**+0.6**
	comp=Z,140nm,1.1s,mb5.9						
COCO	**West Island**	**58.87**	**317**	PFAKE		23 24 30.0	+12
COCO				LR	LR		
	comp=Z,398nm,20.0s,MS4.5						
HNR	**Honiara**	**59.15**	**31**	P	**P**	**23 24 19.2**	**-0.4**
HNR	**Honiara**	**59.15**	**31**	PFAKE		23 24 30.0	+10
HNR				LR	LR		
	comp=Z,749nm,19.0s,MS4.8						
RAR	**Rarotonga**	**61.44**	**78**	P	**P**	**23 24 35.0**	**-0.2**
RAR				pmax	pmax		
	comp=Z,230nm,1.5s						
RAR	**Rarotonga**	**61.44**	**78**	P	**P**	**23 24 36.2**	**+1.0**
	comp=Z,177nm,1.4s,mb6.0,baz=194,slow=14,SNR=3.1						
RAR	**Rarotonga**	**61.44**	**78**	P	**P**	**23 24 35.0**	**-0.1**
	comp=Z,226nm,1.5s,mb6.1						
YOMI	**Yo Moklole**	**63.14**	**8**	⇑*e*P	**P**	**23 24 42.7**	**-3.9**
	comp=Z,97nm,1.0s,mb5.9						
MENI	**Mendum Tagoi**	**63.27**	**8**	⇓*e*P	**P**	**23 24 43.9**	**-3.5**
MENI				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.5						
MENI	**Mendum Tagoi**	**63.27**	**8**	⇓*e*P	**P**	**23 24 43.9**	**-3.5**
	comp=Z,48nm,1.1s,mb5.5						
AFI	**Afiamalu**	**63.40**	**63**	*e*P	**P**	**23 24 47.8**	**-0.5**
AFI				pmax	pmax		
	comp=Z,86nm,1.2s,mb5.8						
AFI	**Afiamalu**	**63.40**	**63**	*e*P	**P**	**23 24 47.8**	**-0.5**
	comp=Z,86nm,1.2s,mb5.8						
TBI	**Tubuai**	**63.77**	**89**	*e*SS	SS	23 37 30.8	-2.5
TBI				*e*LR	LR	23 43 39.9	
	comp=Z,4µm,27.8s,baz=204						
PAE	**Paea**	**68.80**	**86**	*e*P	**P**	**23 25 22.5**	**-0.2**
	comp=Z,119nm,1.1s,mb5.7						
TVO	**Taravao**	**68.83**	**86**	*e*P	**P**	**23 25 23.1**	**+0.2**
	comp=Z,238nm,1.2s,mb6.0						
PPT	**Papeete**	**68.89**	**86**	*e*P	**P**	**23 25 23.4**	**+0.2**
	comp=Z,107nm,1.4s,mb5.6						
PPT	**Papeete**	**68.89**	**86**	*e*SS	SS	23 38 45.4	-7.6
PPT				*e*LQ		23 42 46.1	
PPT				*e*LR	LR	23 45 54.8	
	comp=Z,5µm,28.0s,baz=207						
TIAR	**Tiarei**	**68.99**	**86**	*e*P	**P**	**23 25 24.0**	**+0.1**
	comp=Z,286nm,1.0s,mb6.1						
MEH	**Mehetia**	**69.23**	**87**	*e*P	**P**	**23 25 25.7**	**+0.3**
	comp=Z,76nm,1.3s,mb5.5						
SUR	**Sutherland**	**69.40**	**237**	P	**P**	**23 25 27.5**	**+1.4**
	comp=Z,45nm,0.8s,mb5.4,baz=158,slow=5.8,SNR=18						
SUR	**Sutherland**	**69.40**	**237**	*e*P	**P**	**23 25 26.7**	**+0.6**
	comp=Z,94nm,1.1s,mb5.6						
SUR				LR	LR		
	comp=Z,488nm,19.0s,MS4.8						
RKT	**Rikitea**	**69.94**	**102**	*e*P	**P**	**23 25 29.2**	**-0.4**
	comp=Z,157nm,1.4s,mb5.8						
RKT	**Rikitea**	**69.94**	**102**	*e*SS	SS	23 39 05.4	-3.4
RKT				*e*LR	LR	23 46 12.7	
	comp=Z,1µm,26.8s,baz=198						
TSM	**Tawau**	**70.70**	**344**	P	**P**	**23 25 35.6**	**+1.2**
KGM	**Kluang**	**70.91**	**328**	P	**P**	**23 25 37.0**	**+1.3**
BOSA	**Boshof**	**71.23**	**242**	*e*P	**P**	**23 25 37.2**	**-0.2**
BOSA				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
BOSA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
BOSA	**Boshof**	**71.23**	**242**	*e*P	**P**	**23 25 37.1**	**-0.2**
	comp=Z,30nm,0.8s,mb5.3						
BOSA				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
DGAR	**Diego Garcia**	**71.49**	**294**	PFAKE		23 25 50.0	+11
DGAR				LR	LR		
	comp=Z,432nm,20.0s,MS4.7						
PLCA	**Paso Flores**	**72.32**	**161**	P	**P**	**23 25 43.1**	**-0.6**
PLCA				pmax	pmax		
	comp=Z,40nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,1µm,19.1s						
PLCA	**Paso Flores**	**72.32**	**161**	P	**P**	**23 25 43.1**	**-0.6**
	comp=Z,40nm,0.8s,mb5.4,baz=197,slow=6.0,SNR=50						
PLCA				LR	LR	23 54 38.5	
	comp=Z,1µm,19.1s,MS5.3,baz=181,slow=34						
PLCA	**Paso Flores**	**72.32**	**161**	*e*P	**P**	**23 25 42.6**	**-1.1**
	comp=Z,61nm,1.0s,mb5.5						
PLCA				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
KKM	**Kota Kinabalu**	**72.63**	**342**	P	**P**	**23 25 46.6**	**+0.7**
IPM	**Ipoh**	**73.91**	**326**	P	**P**	**23 25 53.5**	**+0.1**
TRIS	**Tristan da Cun**	**74.13**	**208**	*e*P	**P**	**23 25 53.9**	**-0.2**
	comp=Z,151nm,0.9s,mb5.9						
TRIS				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
LBTB	**Lobatse**	**74.37**	**244**	P	**P**	**23 25 55.6**	**-0.2**
LBTB				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
LBTB	**Lobatse**	**74.37**	**244**	P	**P**	**23 25 55.5**	**-0.3**
	comp=Z,26nm,0.9s,mb5.2,baz=155,slow=6.3,SNR=22						
LBTB	**Lobatse**	**74.37**	**244**	*e*P	**P**	**23 25 54.5**	**-1.3**
	comp=Z,45nm,1.0s,mb5.3						
LBTB				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
TRQA	**Tornquist**	**75.91**	**168**	*e*P	**P**	**23 26 02.7**	**-1.7**
	comp=Z,107nm,1.5s,mb5.5						
TRQA				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
RPN	**Rapa Nui**	**75.96**	**125**	P	**P**	**23 26 07.5**	**+2.6**
	comp=Z,27nm,0.8s,mb5.2,baz=159,slow=14,SNR=3.2						
RPN				LR	LR	23 53 50.8	
	comp=Z,626nm,19.1s,MS4.9,baz=176,slow=31						
KWAJ	**Kwajalein Atol**	**78.52**	**35**	PFAKE		23 26 30.0	+11
KWAJ				LR	LR		
	comp=Z,248nm,19.0s,MS4.6						
GUMO	**Guam**	**79.54**	**12**	P	**P**	**23 26 23.9**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,420nm,1.2s,mb6.2						
GUMO	**Guam**	**79.54**	**12**	P	**P**	**23 26 16.0**	**-8.8**
	comp=Z,492nm,1.2s,mb6.3						
GUMO				LR	LR		
	comp=Z,998nm,19.0s,MS5.2						
TGY	**Tagaytay City**	**80.09**	**348**	P	**P**	**23 26 27.7**	**-0.1**
TGY				pmax	pmax		
	comp=Z,106nm,0.3s						
TGY	**Tagaytay City**	**80.09**	**348**	P	**P**	**23 26 27.7**	**-0.1**
	comp=Z,106nm,0.3s,mb6.2,baz=227,slow=14,SNR=2.2						
TAOE	**Nuku Hiva Isla**	**80.62**	**91**	*e*P	**P**	**23 26 31.1**	**+0.4**
TAOE				*e*SS	SS	23 42 02.8	+11
TAOE				*e*LR	LR	23 51 28.8	
CFAA	**Coronel Fontan**	**81.61**	**162**	P	**P**	**23 26 34.6**	**-0.9**
	comp=Z,16nm,1.2s,mb4.8,baz=192,slow=5.5						
LSZ	**Lusaka**	**82.24**	**250**	P	**P**	**23 26 39.4**	**+0.4**
TSUM	**Tsumeb**	**82.61**	**239**	*e*P	**P**	**23 26 41.2**	**+0.3**
	comp=Z,28nm,1.0s,mb5.2						
TSUM				*e*PP	PP	23 29 48.9	-3.6
TSUM				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
UBT	**Ubonrachathani**	**83.43**	**333**	P	**P**	**23 26 42.0**	**-3.2**
NST	**Nakhon Sawan**	**84.84**	**328**	P	**P**	**23 26 54.0**	**+1.8**
QIZ	**Qiongzhong**	**86.30**	**338**	P	**P**	**23 27 01.6**	**+2.2**
QIZ				S	S	23 37 35.1	+2.0
QIZ				XS		23 37 44.8	
QIZ				AMB	AMB		
	comp=Z,39nm,1.3s,mb5.5						
QIZ				LR	LR		
	comp=N,454nm,18.7s						
QIZ				LR	LR		
	comp=Z,557nm,19.3s,MS5.0						
BDT	**Bhumibol Dam**	**86.61**	**327**	P	**P**	**23 27 02.0**	**+1.0**
NANT	**Nan**	**87.75**	**329**	⇑P	**P**	**23 27 06.0**	**-0.5**
	comp=Z,61nm,1.0s,mb5.8						
CM31	**Chiang Mai Arr**	**87.80**	**328**	*e*P	**P**	**23 27 07.1**	**+0.4**
	comp=Z,24nm,0.8s,mb5.5						
CM31				LR	LR		
	comp=Z,736nm,20.0s,MS5.1						
CMAR	**Chiang Mai Arr**	**87.80**	**328**	P	**P**	**23 27 07.7**	**+1.0**
	comp=Z,16nm,0.9s,mb5.2,baz=196,slow=4.6,SNR=79						
CMAR				LR	LR	00 01 18.5	
	comp=Z,429nm,21.2s,MS4.8,baz=175,slow=32						
CPUP	**Villa Florida**	**87.92**	**171**	P	**P**	**23 27 06.5**	**-0.6**
CPUP	**Villa Florida**	**87.92**	**171**	P	**P**	**23 27 08.4**	**+1.3**
	comp=Z,0.0nm,0.4s,baz=225,slow=12,SNR=2.3						
CHG	**Chiang Mai**	**88.14**	**328**	⇓P	**P**	**23 27 09.5**	**+1.1**
	comp=Z,82nm,1.3s,mb5.8						
CHRT	**Chiangrai**	**88.98**	**329**	P	**P**	**23 27 13.5**	**+1.1**
	comp=Z,374nm,1.1s,mb6.6						
LVC	**Limon Verde**	**90.37**	**160**	P	**P**	**23 27 19.5**	**+0.7**
	comp=Z,46nm,1.1s,mb5.7,baz=202,slow=3.3,SNR=28						
LVC				LR	LR	00 09 31.1	
	comp=Z,1µm,18.9s,MS5.3,baz=23,slow=37						
LVC	**Limon Verde**	**90.37**	**160**	*e*P	**P**	**23 27 19.1**	**+0.3**
	comp=Z,253nm,1.4s,mb6.4						
LVC				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
TATO	**Taipei**	**90.82**	**349**	PFAKE		23 27 30.0	+9.2
TATO				LR	LR		
	comp=Z,596nm,22.0s,MS5.0						
VIS	**Vishakhapatnam**	**91.20**	**313**	*i* P	**P**	**23 27 22.0**	**-0.7**
KMBO	**Kilima Mbogo**	**91.43**	**264**	P	**P**	**23 27 27.8**	**+3.9**
KMBO				pmax	pmax		
	comp=Z,14nm,1.1s						
KMBO	**Kilima Mbogo**	**91.43**	**264**	P	**P**	**23 27 27.5**	**+3.6**
	comp=Z,6.6nm,0.9s,mb5.0,baz=158,slow=2.4,SNR=12						
KMBO				LR	LR	00 05 24.9	
	comp=Z,646nm,18.8s,MS5.1,baz=341,slow=34						
KMBO	**Kilima Mbogo**	**91.43**	**264**	*e*P	**P**	**23 27 27.0**	**+3.1**
	comp=Z,13nm,1.0s,mb5.2						
KMBO				LR	LR		
	comp=Z,649nm,20.0s,MS5.1						
CAM4	**Nova Friburgo**	**92.17**	**184**	(P)	**P**	**23 27 23.3**	**-3.8**
HYB	**Hyderabad**	**92.41**	**309**	⇑*e*P	**P**	**23 27 29.0**	**+0.8**
HYB				*e*S	S	23 38 28.0	-1.1
HYB				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.6						
HYB	**Hyderabad**	**92.41**	**309**	⇑*e*P	**P**	**23 27 29.0**	**+0.8**
	comp=Z,30nm,1.0s,mb5.6						
HYB				*e*S	S	23 38 28.0	-1.1
HYB	**Hyderabad**	**92.41**	**309**	⇑*i*P	**P**	**23 27 29.0**	**+0.8**
	comp=Z,30nm,1.0s,mb5.6						
HYB				*e*S	S	23 38 28.0	-1.1
KMI	**Kunming**	**93.49**	**333**	P	**P**	**23 27 36.0**	**+2.9**
KMI				AP	pP	23 27 39.3	+3.0
KMI				SKS	SKS	23 38 08.3	-2.6
KMI				S	S	23 38 38.5	+0.2
KMI				SS	SS	23 44 55.0	-4.4
KMI				AMB	AMB		
	comp=Z,28nm,1.1s,mb5.6						
KMI				AMB	AMB		
	comp=Z,148nm,4.7s						
KMI				LR	LR		
	comp=N,587nm,21.4s,MS5.2						
KMI				LR	LR		
	comp=E,541nm,20.1s,MS5.2						
KMI				LR	LR		
	comp=Z,883nm,21.4s,MS5.2						
KMI	**Kunming**	**93.49**	**333**	P	**P**	**23 27 36.0**	**+2.9**
KMI				*PP	pP	23 27 39.2	+2.9
KMI						23 38 08.2	
KMI				S	S	23 38 38.5	+0.2
KMI				PS	PS	23 39 55.3	-2.9
KMI				SS	SS	23 44 55.0	-4.4
KMI				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.6						
KMI				MLR	MLR		
	comp=Z,880nm,21.4s,MS5.2						
KMI	**Kunming**	**93.49**	**333**	P	**P**	**23 27 36.0**	**+2.9**
	comp=Z,28nm,1.1s,mb5.6						
KMI				pP	pP	23 27 39.2	+2.9
KMI				SKS	SKS	23 38 08.2	-2.7
KMI				S	S	23 38 38.5	+0.2
KMI				sS		23 38 43.6	
KMI				PS	PS	23 39 55.3	-2.9
KMI				SS	SS	23 44 55.0	-4.4
KMI				LR	LR		
	comp=Z,880nm,21.4s,MS5.2						
GYA	**Guiyang**	**94.09**	**336**	⇑*i*P	**P**	**23 27 38.1**	**+2.3**
GYA				SKS	SKS	23 38 10.5	-3.7
GYA				S	S	23 38 47.8	+4.2
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.5						
GYA				LR	LR		
	comp=N,530nm,20.4s,MS5.2						
GYA				LR	LR		
	comp=E,670nm,21.6s,MS5.2						
GYA				LR	LR		
	comp=Z,560nm,22.0s,MS5.0						
MBAR	**Mbarara**	**94.57**	**258**	*i* P	**P**	**23 27 39.4**	**+1.1**
MBAR	**Mbarara**	**94.57**	**258**	PFAKE		23 27 50.0	+12
MBAR				LR	LR		
	comp=Z,303nm,20.0s,MS4.8						
POO	**Poona**	**95.00**	**305**	⇓*i*P	**P**	**23 27 40.0**	**-0.2**
	comp=Z,68nm,1.2s,mb6.0						
LPAZ	**La Paz**	**96.70**	**159**	P	**P**	**23 27 48.0**	**+0.1**
	comp=Z,2.9nm,0.8s,mb4.7,baz=122,slow=5.7,SNR=11						
LPAZ				LR	LR	00 08 44.9	
	comp=Z,678nm,21.5s,MS5.1,baz=356,slow=34						
LPAZ	**La Paz**	**96.70**	**159**	*e*P	**P**	**23 27 48.2**	**+0.2**
	comp=Z,20nm,1.4s,mb5.3						
LPAZ				LR	LR		
	comp=Z,711nm,20.0s,MS5.2						
SSE	**Sheshan**	**96.92**	**350**	P	**P**	**23 27 49.9**	**+1.2**
SSE				XP	sP	23 27 55.1	+2.2
SSE				PP	PP	23 31 46.0	-0.7
SSE				S	S	23 39 12.6	+5.1
SSE				XS		23 39 19.3	
SSE				SS	SS	23 45 50.8	+3.5
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.6						
SSE				AMB	AMB		
	comp=Z,65nm,4.9s						
SSE				LR	LR		
	comp=N,264nm,23.7s,MS4.7						
SSE				LR	LR		
	comp=E,44nm,23.8s,MS4.7						
SSE				LR	LR		
	comp=Z,332nm,24.4s,MS4.7						
SSE	**Sheshan**	**96.92**	**350**	P	**P**	**23 27 49.9**	**+1.2**
	comp=Z,20nm,0.8s,mb5.6						
SSE				sP	sP	23 27 55.1	+2.2
SSE				PP	PP	23 31 46.0	-0.7
SSE				S	S	23 39 12.6	+5.1
SSE				sS		23 39 19.3	
SSE				SS	SS	23 45 50.7	+3.4
SSE				LR	LR		
	comp=Z,330nm,24.4s,MS4.7						
WHN	**Wuhan**	**97.02**	**344**	*e*P	**P**	**23 27 50.0**	**+0.9**
ENH	**Enshi**	**97.39**	**339**	*e*P	**P**	**23 27 51.7**	**+0.9**
	comp=Z,8.7nm,1.1s,mb5.1						
NJ2	**Nanjing**	**98.06**	**348**	*e*P	**P**	**23 27 54.8**	**+1.1**
NJ2				PP	PP	23 31 56.3	+0.6
NJ2				PPP	PPP	23 34 04.8	+1.9
NJ2				S	S	23 39 16.0	-1.0
NJ2				XS		23 39 32.0	
NJ2				LR	LR		
	comp=N,2µm,16.2s,MS5.8						
NJ2				LR	LR		
	comp=E,1µm,16.8s,MS5.8						
NJ2				LR	LR		
	comp=Z,4µm,17.2s,MS6.0						
BDFB	**Brasilia**	**98.91**	**179**	P	**P**	**23 27 57.1**	**-0.8**
BDFB				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BDFB				MLR	MLR		
	comp=Z,1µm,20.9s						
BDFB	**Brasilia**	**98.91**	**179**	P	**P**	**23 27 57.1**	**-0.8**
	comp=Z,2.9nm,1.1s,mb4.7,baz=149,slow=5.9,SNR=1.9						
BDFB				LR	LR	00 12 56.8	
	comp=Z,1µm,20.9s,MS5.4,baz=176,slow=36						
JIRN	**Jiri**	**99.78**	**319**	*e*P	**P**	**23 28 03.1**	**+1.4**
	comp=Z,66nm,1.2s,mb6.0						
PKI	**Pulchoki**	**99.91**	**318**	*e*P	**P**	**23 28 03.1**	**+0.8**
	comp=Z,43nm,1.2s,mb5.8						
DMN	**Daman**	**100.03**	**318**	*e*P	P	23 28 03.8	+1.0
	comp=Z,57nm,1.2s						
KKN	**Kakani**	**100.15**	**318**	*e*P	P	23 28 04.3	+0.9
	comp=Z,52nm,1.1s						
LSA	**Lhasa**	**100.44**	**324**	*e*P	P	23 28 05.2	+0.6
LSA				pmax	pmax		
	comp=Z,11nm,1.0s						
LSA	**Lhasa**	**100.44**	**324**	*e*P	P	23 28 05.2	+0.6
	comp=Z,11nm,1.0s						
GKN	**Gorkha**	**100.53**	**318**	*e*P	P	23 28 05.6	+0.5
	comp=Z,31nm,1.1s						
KOLN	**Koldanda**	**100.61**	**317**	*e*P	P	23 28 06.0	+0.6
	comp=Z,21nm,0.9s						
MAJO	**Matsushiro**	**101.98**	**4**	PFAKE		23 28 20.0	+8.6
MAJO				LR	LR		
	comp=Z,790nm,19.0s,MS5.2						
PAYG	**Puerto Ayora**	**106.85**	**134**	PFAKE		23 32 50.0	
PAYG				LR	LR		
	comp=Z,748nm,22.0s,MS5.2						
HHC	**Hu-ho-hao-te**	**107.53**	**343**	*e*PKP		23 32 42.8	
RCBR	**Riachuelo**	**108.21**	**191**	PFAKE		23 33 00.0	
RCBR				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
CN2	**Changchun**	**109.32**	**354**	*e*PDIF	Pdif	23 28 49.3	+5.7
CN2				*e*S		23 40 59.0	
CN2				LR	LR		
	comp=N,300nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=E,500nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=Z,730nm,21.0s,MS5.2						
OTAV	**Otavalo**	**110.87**	**146**	PFAKE		23 33 00.0	+7.5
OTAV				LR	LR		
	comp=Z,95nm,20.0s,MS4.4						
YSS	**Yuzh-Sakhalins**	**112.55**	**7**	PFAKE		23 33 00.0	+5.0
YSS				LR	LR		
	comp=Z,663nm,22.0s,MS5.2						
DBIC	**Dimbokro**	**114.25**	**227**	PFAKE		23 33 10.0	+11
DBIC				LR	LR		
	comp=Z,973nm,19.0s,MS5.4						
WMQ	**Urumqi**	**114.71**	**325**	*e*PKP	PKPdf	23 33 00.0	+0.7
WMQ				PP	PP	23 34 02.0	+3.0
WMQ				SKS	SKS	23 40 11.0	+22
WMQ				SKKS		23 40 54.0	
WMQ				SS	SS	23 49 53.0	+3.7
WMQ				PP	PP		
	comp=Z,215nm,12.0s						
WMQ				LR	LR		
	comp=N,285nm,25.0s,MS4.9						
WMQ				LR	LR		
	comp=E,339nm,28.0s,MS4.9						
WMQ				LR	LR		
	comp=Z,284nm,26.0s,MS4.8						
ULN	**Ulaanbaatar**	**115.01**	**341**	PFAKE		23 33 10.0	+10
ULN				LR	LR		
	comp=Z,337nm,22.0s,MS4.9						
SONM	**Songino Array**	**115.07**	**340**	PKP	PKPdf	23 32 58.0	-1.9
	comp=Z,1.3nm,1.0s,baz=245,slow=0.6,SNR=5.7						
SONM				PP	PP	23 34 00.5	-0.9
	comp=Z,1.5nm,1.1s,baz=168,slow=7.0,SNR=5.3						
SONM				PKKPbc		23 43 32.2	
	comp=Z,0.7nm,0.6s,baz=340,slow=2.7,SNR=6.7						
ROSC	**El Rosal**	**116.26**	**149**	PKP	PKPdf	23 33 03.1	0.0
	comp=Z,3.3nm,0.3s,baz=290,slow=22,SNR=2.9						
AAK	**Ala-Archa**	**117.10**	**315**	*i* PKIKP	PKPdf	23 33 00.6	-3.4
AAK				MLR	MLR		
	comp=Z,600nm,21.0s,MS5.2						
AAK	**Ala-Archa**	**117.10**	**315**	*e*PKPdf	PKPdf	23 33 01.9	-2.1
AAK				LR	LR		
	comp=Z,189nm,22.0s,MS4.7						
FRU	**Bishkek**	**117.25**	**315**	*e*PKIKP	PKPdf	23 33 04.0	-0.3
ZAK	**Zakamensk**	**118.00**	**339**	*e*PKIKP	PKPdf	23 33 03.1	-2.4
ZAK				*e*		23 34 19.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
JTS	**JuntasAbangare**	**118.82**	**136**	PFAKE		23 33 20.0	+12
JTS				LR	LR		
	comp=Z,161nm,20.0s,MS4.7						
TLY	**Talaya**	**119.22**	**339**	*i* PKIKP	PKPdf	23 33 05.4	-2.4
TLY				*e*		23 44 07.1	
TLY				*e*		23 51 02.2	
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,251nm,18.0s,MS4.9						
TLY	**Talaya**	**119.22**	**339**	PFAKE		23 33 20.0	+12
TLY				LR	LR		
	comp=Z,83nm,20.0s,MS4.4						
MOY	**Mondy**	**119.60**	**338**	*e*PKIKP	PKPdf	23 33 07.4	-1.1
EIL	**Elat**	**119.99**	**276**	PKP	PKPdf	23 33 09.8	-0.1
	comp=Z,2.6nm,0.7s,baz=355,slow=10,SNR=3.0						
SDV	**Santo Domingo**	**120.93**	**152**	PKP	PKPdf	23 33 12.0	-0.1
	comp=Z,3.6nm,0.7s,baz=280,slow=0.6,SNR=2.4						
SDV				PKKPbc		23 43 12.8	
	comp=Z,5.2nm,0.9s,baz=339,slow=5.1,SNR=4.3						
SDV	**Santo Domingo**	**120.93**	**152**	PKP	PKPdf	23 33 12.0	-0.1
SDV				PKKPbc		23 43 12.8	
SDV				LR	LR		
	comp=Z,804nm,20.0s,MS5.4						
ASF	**Jabal al Asfar**	**121.38**	**279**	PKP	PKPdf	23 33 12.1	-0.5
	comp=Z,8.1nm,1.2s,baz=151,slow=2.0,SNR=6.1						
ASF				PKKPbc		23 43 11.8	
	comp=Z,6.1nm,1.1s,baz=181,slow=4.6,SNR=6.0						
KURK	**Kurchatov**	**123.37**	**322**	*i* PKIKP	PKPdf	23 33 13.3	-2.6
KURK	**Kurchatov**	**123.37**	**322**	*e*PKPdf	PKPdf	23 33 13.3	-2.6
KURK				LR	LR		
	comp=Z,71nm,20.0s,MS4.3						
BOD	**Bodaibo**	**124.04**	**348**	*e*PKIKP	PKPdf	23 33 14.4	-2.7
BOD				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ZAL	**Zalesovo**	**124.86**	**327**	PKIKP	PKPdf	23 33 16.2	-2.4
ZAL				pmax	pmax		
	comp=Z,54nm,1.5s						
ZAL	**Zalesovo**	**124.86**	**327**	PKP	PKPdf	23 33 16.1	-2.4
	comp=Z,54nm,1.5s,baz=262,slow=2.2,SNR=17						
GNI	**Garni**	**125.17**	**290**	PKP	PKPdf	23 33 19.2	-0.4
	comp=Z,5.5nm,0.8s,baz=140,slow=2.3,SNR=9.4						
GNI	**Garni**	**125.17**	**290**	*e*PKPdf	PKPdf	23 33 17.3	-2.2
GNI				LR	LR		
	comp=Z,633nm,19.0s,MS5.3						
NVS	**Novosibirsk**	**126.05**	**327**	*i* PKIKP	PKPdf	23 33 17.4	-3.4
NVS				pmax	pmax		
	comp=Z,11nm,1.2s						
NVS				pmax	pmax		
	comp=E,3.0nm,1.3s						
MALT	**Malatya**	**126.08**	**284**	*e*PKIKP	PKPdf	23 33 19.8	-1.5
TI2	**Plekhanov**	**126.52**	**291**	*i* PKIKP	PKPdf	23 33 21.6	-0.4
TEIG	**Tepich**	**127.17**	**129**	PFAKE		23 33 30.0	+6.2
TEIG				LR	LR		
	comp=Z,181nm,19.0s,MS4.8						
YAK	**Yakutsk**	**127.44**	**358**	*e*PKIKP	PKPdf	23 33 20.7	-2.6
YAK				MLR	MLR		
	comp=Z,335nm,22.0s,MS5.0						
BVAR	**Borovoye Array**	**127.67**	**317**	PKP	PKPdf	23 33 22.5	-1.5
	comp=Z,3.3nm,0.7s,baz=175,slow=2.8,SNR=24						
CHKZ	**Chkalovo**	**128.18**	**318**	*e*PKIKP	PKPdf	23 33 22.4	-2.6
PFO	**Pinyon Flat Ob**	**128.45**	**93**	PKIKP	PKPdf	23 33 25.8	-0.3
PFO	**Pinyon Flat Ob**	**128.45**	**93**	*e*PKPdf	PKPdf	23 33 25.3	-0.8

PFO				LR	LR		
	comp=Z,327nm,22.0s,MS5.0						
IDI	**Anoyia**	**129.03**	**270**	PKP	PKPdf	23 33 27.7	+0.6
	comp=Z,17nm,1.1s,baz=56,slow=8.6,SNR=2.6						
SAO	**San Andreas Ge**	**129.10**	**86**	PFAKE		23 33 40.0	+13
SAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
KIV	**Kislovodsk**	**129.21**	**291**	*i* PKIKP	PKPdf	23 33 24.9	-2.3
KIV				*e*		23 35 33.0	
KIV				*e*SS	SS	23 52 57.5	+3.0
KIV				pmax	pmax		
	comp=Z,30nm,1.4s						
KIV	**Kislovodsk**	**129.21**	**291**	*e*PKPdf	PKPdf	23 33 26.1	-1.1
KIV				LR	LR		
	comp=Z,76nm,20.0s,MS4.4						
BRTR	**Keskin Array B**	**129.22**	**281**	PKIKP	PKPdf	23 33 26.1	-1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRTR	**Keskin Array B**	**129.22**	**281**	PKP	PKPdf	23 33 26.1	-1.3
	comp=Z,2.0nm,0.6s,baz=133,slow=4.6,SNR=13						
SAC	**San Andreas**	**129.40**	**85**	PKHKP		23 32 59.7	
TUC	**Tucson**	**129.65**	**99**	*e*PKIKP	PKPdf	23 33 27.6	-0.8
TUC				MLR	MLR		
	comp=Z,980nm,20.0s,MS5.5						
TUC	**Tucson**	**129.65**	**99**	*e*PKPdf	PKPdf	23 33 27.6	-0.8
TUC				*e*SKP		23 36 47.2	
TUC				LR	LR		
	comp=Z,980nm,20.0s,MS5.5						
LTX	**Lajitas**	**129.90**	**108**	PFAKE		23 33 40.0	+11
LTX				LR	LR		
	comp=Z,769nm,19.0s,MS5.4						
TXAR	**Lajitas Array**	**129.90**	**108**	PKP	PKPdf	23 33 28.2	-0.7
	comp=Z,1.5nm,0.7s,baz=180,slow=5.0,SNR=14						
TXAR				SKPbc		23 36 48.6	
	comp=Z,3.6nm,0.9s,baz=191,slow=6.4,SNR=8.8						
GOF	**Gofitskoye**	**130.01**	**292**	*e*PKIKP	PKPdf	23 33 29.0	+0.3
GOF				pmax	pmax		
	comp=Z,30nm,1.5s						
SOC	**Sochi**	**130.05**	**289**	*i* PKIKP	PKPdf	23 33 27.4	-1.4
SOC				*e*		23 35 39.2	
SOC				*e*PS	PS	23 45 52.0	+3.6
SOC				*e*SS	SS	23 53 04.2	-0.4
SOC				*e*SSS	SSS	23 57 52.3	-2.5
SOC				pmax	pmax		
	comp=Z,14nm,1.2s						
SOC				pmax	pmax		
	comp=N,8.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,9.0nm,0.9s						
LDFC	**Landfair**	**130.27**	**93**	*e*PKPdf	PKPdf	23 33 29.2	-0.3
LDFC				*e*SKP		23 36 49.0	
HOPS	**Hopland**	**130.33**	**83**	PFAKE		23 33 40.0	+10
HOPS				LR	LR		
	comp=Z,841nm,19.0s,MS5.5						
CMB	**Columbia Colle**	**130.62**	**86**	PFAKE		23 33 40.0	+10
CMB				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
SJG	**San Juan**	**130.75**	**155**	PFAKE		23 33 40.0	+9.2
SJG				LR	LR		
	comp=Z,621nm,21.0s,MS5.3						
MTUM	**Tungsten Hills**	**130.79**	**88**	*e*PKPdf	PKPdf	23 33 29.2	-1.2
MTUM				*e*SKP		23 36 51.4	
OMM	**Old Mammoth Mi**	**130.84**	**88**	*e*PKPdf	PKPdf	23 33 31.0	+0.5
OMM				*e*SKP		23 36 52.0	
OHCM	**Honcut**	**131.27**	**84**	*e*PKP	PKPdf	23 33 30.9	-0.4
MNTX	**Cornudas Mount**	**131.30**	**105**	*e*PKPdf	PKPdf	23 33 30.2	-1.4
MNTX				*e*SKP		23 36 51.7	
MNTX				LR	LR		
	comp=Z,880nm,20.0s,MS5.5						
NVAR	**Mina Array Bea**	**131.82**	**88**	PKP	PKPdf	23 33 31.5	-0.9
	comp=Z,4.1nm,0.7s,baz=177,slow=3.4,SNR=17						
NVAR				SKPbc		23 36 56.4	
	comp=Z,5.9nm,0.9s,baz=190,slow=4.6,SNR=11						
NVAR	**Mina Array Bea**	**131.82**	**88**	PKP	PKPdf	23 33 31.5	-0.9
NVAR				SKPbc		23 36 56.4	
WDC	**Whiskeytown Da**	**131.89**	**83**	PFAKE		23 33 40.0	+7.6
WDC				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
WUAZ	**Wupatki**	**132.19**	**96**	*e*PKPdf	PKPdf	23 33 33.1	0.0
WUAZ				LR	LR		
	comp=Z,9µm,19.0s						
JCT	**Junction City**	**132.42**	**111**	*e*PKIKP	PKPdf	23 33 32.4	-1.3
JCT				MLR	MLR		
	comp=Z,510nm,21.0s,MS5.2						
JCT	**Junction City**	**132.42**	**111**	*e*PKPdf	PKPdf	23 33 32.4	-1.4
JCT				*e*SKP		23 36 57.4	
JCT				LR	LR		
	comp=Z,510nm,21.0s,MS5.2						
YBH	**Yreka Blue Hor**	**132.78**	**82**	PKIKP	PKPdf	23 33 33.1	-1.0
YBH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
YBH				pmax	pmax		
	comp=N,4.0nm,1.0s						
YBH	**Yreka Blue Hor**	**132.78**	**82**	PKP	PKPdf	23 33 33.1	-1.0
	comp=N,5.6nm,1.1s,baz=150,slow=6.3,SNR=4.5						
YBH				SKPbc		23 36 59.3	
	comp=N,3.5nm,1.0s,baz=94,slow=1.9,SNR=4.0						
HUMO	**Hull Mountain**	**133.41**	**81**	*e*PKP	PKPdf	23 33 31.0	-4.1
HUMO				*e*SKP		23 37 00.9	
HUMO				LR	LR		
	comp=Z,865nm,20.0s,MS5.5						
HKT	**Hockley**	**133.46**	**116**	PFAKE		23 33 50.0	+14
HKT				LR	LR		
	comp=Z,121nm,19.0s,MS4.6						
ANMO	**Albuquerque**	**133.71**	**101**	PKIKP	PKPdf	23 33 35.8	-0.1
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ANMO				pmax	pmax		
	comp=N,5.0nm,0.9s						
ANMO	**Albuquerque**	**133.71**	**101**	PKP	PKPdf	23 33 35.8	-0.1
	comp=N,2.6nm,1.1s,baz=176,slow=3.1,SNR=4.3						
ANMO				SKPbc		23 37 01.9	
	comp=N,4.5nm,0.9s,baz=207,slow=2.9,SNR=8.6						
MOD	**Modoc**	**133.91**	**83**	*e*PKP	PKPdf	23 33 34.9	-1.1
MOD				LR	LR		
	comp=Z,789nm,19.0s,MS5.5						
MVU	**Marysvale**	**134.40**	**93**	PFAKE		23 33 50.0	+13
MVU				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MSU	**Marysvale**	**134.42**	**93**	PKIKP	PKPdf	23 33 28.6	-8.6
MSU	**Marysvale**	**134.42**	**93**	*e*PKP	PKPdf	23 33 25.5	-12
MSU				*e*SKP		23 37 05.6	
ELK	**Elko**	**135.04**	**89**	*e*PKIKP	PKPdf	23 33 33.5	-4.8
ELK	**Elko**	**135.04**	**89**	PKhKP		23 33 33.1	
	comp=Z,1.3nm,0.8s,baz=187,slow=7.0,SNR=3.4						
ELK				SKPbc		23 37 07.2	
	comp=Z,4.7nm,1.1s,baz=179,slow=4.3,SNR=6.2						
ELK	**Elko**	**135.04**	**89**	*e*PKP	PKPdf	23 33 32.3	-6.0
ELK				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
WVOR	**Wild Horse Val**	**135.04**	**84**	*e*PKIKP	PKPdf	23 33 34.8	-3.5
WVOR				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.6						
WVOR	**Wild Horse Val**	**135.04**	**84**	*e*PKPdf	PKPdf	23 33 34.8	-3.4
WVOR				*e*SKP		23 37 05.9	
WVOR				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
BILL	**Bilibino**	**135.48**	**17**	*e*PKIKP	PKPdf	23 33 34.3	-4.1
BILL				MLR	MLR		
	comp=Z,343nm,21.0s,MS5.0						
BILL	**Bilibino**	**135.48**	**17**	*e*PKP	PKPdf	23 33 34.3	-4.1
BILL				LR	LR		
	comp=Z,343nm,21.0s,MS5.0						
TMUT	**Trail Mountain**	**135.49**	**94**	*e*PKPdf	PKPdf	23 33 33.5	-5.7
AMTX	**Amarillo**	**135.57**	**106**	*e*PKP	PKPdf	23 33 36.7	-2.7
AMTX				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
DUG	**Dugway**	**135.58**	**91**	PKIKP	PKPdf	23 33 33.5	-5.8
DUG				MLR	MLR		
	comp=Z,15µm,20.0s						
PV10	**Paradox Valley**	**135.60**	**96**	*e*PKP	PKPdf	23 33 29.8	-10
SRU	**San Rafael**	**135.61**	**94**	PKHKP		23 33 27.2	
SRU	**San Rafael**	**135.61**	**94**	*e*PKPpre		23 33 26.8	
SRU				*e*SKP		23 37 05.3	
SDCO	**Great Sand Dun**	**136.51**	**100**	PFAKE		23 33 50.0	+9.0
SDCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
WMOK	**Wichita Mounta**	**136.59**	**109**	*e*PKIKP	PKPdf	23 33 40.7	-0.5
DWPF	**Disney**	**136.69**	**133**	PFAKE		23 33 50.0	+8.5
DWPF				LR	LR		
	comp=Z,153nm,19.0s,MS4.8						
TIXI	**Tiksi**	**137.11**	**358**	PFAKE		23 33 50.0	+8.8
TIXI				LR	LR		
	comp=Z,330nm,20.0s,MS5.1						
OCWA	**Octopus Mounta**	**137.13**	**75**	PFAKE		23 33 50.0	+8.2
OCWA				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
MLR	**Muntele Rosu**	**137.16**	**279**	PKIKP	PKPdf	23 33 41.4	-0.5
MLR				pmax	pmax		
	comp=Z,20nm,1.2s						
MLR				pmax	pmax		
	comp=N,5.0nm,1.1s						
MLR	**Muntele Rosu**	**137.16**	**279**	PKP	PKPdf	23 33 41.4	-0.5
	comp=N,20nm,1.2s,baz=112,slow=3.3,SNR=5.6						
MLR				SKPbc		23 37 13.8	
	comp=N,4.7nm,1.1s,baz=256,slow=18,SNR=3.4						
HWUT	**Hardware Ranch**	**137.28**	**91**	*e*PKP	PKPdf	23 33 34.5	-7.8
HWUT				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
CFTV	**Fuerteventura**	**137.53**	**225**	PKP	PKPdf	23 33 41.0	-2.2
BMO	**Blue Mountains**	**137.58**	**84**	*e*PKIKP	PKPdf	23 33 37.3	-5.5
BMO				MLR	MLR		
	comp=Z,780nm,20.0s,MS5.4						
EOSO	**Osorio**	**137.62**	**223**	PKP	PKPdf	23 33 42.5	-0.8
TNA	**Tin City**	**137.63**	**32**	*e*PKP	PKPdf	23 33 39.6	-2.8
TNA				LR	LR		
	comp=Z,208nm,22.0s,MS4.8						
HLID	**Hailey**	**137.72**	**87**	PFAKE		23 33 50.0	+6.9
HLID				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
EFAM	**Famara**	**138.03**	**226**	PKP	PKPdf	23 33 40.8	-3.3
ISCO	**Idaho Springs**	**138.21**	**99**	PFAKE		23 33 50.0	+5.9
ISCO				LR	LR		
	comp=Z,723nm,21.0s,MS5.4						
MIAR	**Mount Ida**	**138.41**	**115**	PFAKE		23 33 50.0	+5.3
MIAR				LR	LR		
	comp=Z,519nm,19.0s,MS5.3						
AHID	**Auburn Hatcher**	**138.43**	**91**	*e*PKP	PKPdf	23 33 42.2	-2.3
AHID				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
FIB	**Fire Island**	**138.58**	**45**	PKIKP	PKPdf	23 33 50.0	+5.8
FIB				MLR	MLR		
	comp=Z,3µm,22.0s,MS6.0						
FIB	**Fire Island**	**138.58**	**45**	PFAKE		23 33 50.0	+5.8
FIB				LR	LR		
	comp=Z,3µm,22.0s,MS6.0						
BW06	**Boulder Array**	**139.07**	**92**	PFAKE		23 34 00.0	+14
BW06				LR	LR		
	comp=Z,704nm,20.0s,MS5.4						
PDAR	**Pinedale Array**	**139.07**	**92**	PKhKP		23 33 34.8	
	comp=Z,1.2nm,0.7s,baz=188,slow=2.4,SNR=10						
PDAR				PKP	PKPdf	23 33 43.8	-1.8
	comp=Z,19nm,1.3s,baz=134,slow=4.7,SNR=13						
PDAR				SKPbc		23 37 19.2	
	comp=Z,1.7nm,0.9s,baz=207,slow=3.3,SNR=4.0						
TPAW	**Teton Pass**	**139.09**	**90**	*e*PKP	PKPdf	23 33 39.7	-6.0
MCMT	**McKenzie Canyo**	**139.40**	**88**	*e*PKP	PKPdf	23 33 40.8	-5.4
LRAL	**Lakeview Retre**	**139.43**	**124**	PFAKE		23 34 00.0	+13
LRAL				LR	LR		
	comp=Z,509nm,19.0s,MS5.3						
IMW	**Indian Meadow**	**139.43**	**90**	*e*PKP	PKPdf	23 33 37.8	-8.4
CBKS	**Cedar Bluff**	**139.75**	**105**	PKIKP	PKPdf	23 33 48.7	+1.8
CBKS	**Cedar Bluff**	**139.75**	**105**	*e*PKP	PKPdf	23 33 47.3	+0.4
CBKS				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
AQU	**L'Aquila**	**139.76**	**265**	PKIKP	PKPdf	23 33 45.3	-1.6
DIV	**Divide**	**139.88**	**48**	PFAKE		23 34 00.0	+13
DIV				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
OXF	**Oxford**	**139.91**	**120**	PKIKP	PKPdf	23 33 48.0	+0.6
OXF	**Oxford**	**139.91**	**120**	*e*PKPdf	PKPdf	23 33 47.3	-0.1
OXF				LR	LR		
	comp=Z,424nm,20.0s,MS5.2						
QLMT	**Earthquake Lak**	**139.99**	**89**	*e*PKP	PKPdf	23 33 39.3	-7.9
AKASG	**Malin Array Be**	**139.99**	**286**	*i* PKHKP		23 33 39.8	
AKASG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AKASG	**Malin Array Be**	**139.99**	**286**	PKhKP		23 33 39.8	
	comp=Z,5.2nm,0.9s,baz=123,slow=1.9,SNR=7.2						
LKWY	**Lake**	**140.20**	**90**	PFAKE		23 34 00.0	+12
LKWY				LR	LR		
	comp=Z,2µm,19.0s,MS6.0						
NEW	**Newport**	**140.40**	**81**	*e*PKHKP		23 33 37.4	
NEW				MLR	MLR		
	comp=Z,734nm,20.0s						
NEW	**Newport**	**140.40**	**81**	PKHKP		23 33 39.2	
MSO	**Missoula**	**140.56**	**85**	PFAKE		23 34 00.0	+12
MSO				LR	LR		
	comp=Z,564nm,20.0s,MS5.3						
OBN	**Obninsk**	**140.57**	**296**	*i* PKIKP	PKPdf	23 33 48.9	+1.1
OBN				pmax	pmax		
	comp=Z,21nm,1.0s						
MOS	**Moscow**	**140.66**	**297**	*e*PKIKP	PKPdf	23 33 51.9	+4.0
MOS				pmax	pmax		
	comp=Z,37nm,1.5s						
CHMT	**Chamberlain Mo**	**140.92**	**85**	*e*PKP	PKPdf	23 33 41.5	-7.1
MCK	**McKinley**	**140.95**	**44**	*e*PKIKP	PKPdf	23 33 49.2	+1.0
MCK	**McKinley**	**140.95**	**44**	*e*PKP	PKPdf	23 33 48.6	+0.5
MCK				LR	LR		
	comp=Z,289nm,19.0s,MS5.0						
GOGA	**Godfrey**	**140.96**	**128**	PFAKE		23 34 00.0	+11
GOGA				LR	LR		
	comp=Z,577nm,19.0s,MS5.3						
HALT	**Halls**	**141.19**	**119**	PKPdf	PKPdf	23 33 48.0	-1.5
KSU1	**Kansas State U**	**141.24**	**108**	*e*PKP	PKPdf	23 33 41.5	-8.0
KOLS	**Kolonicke sedl**	**141.42**	**279**	*e*PKIKP	PKPdf	23 33 45.5	-3.9
KOLS	**Kolonicke sedl**	**141.42**	**279**	*e*	PKPdf	23 33 45.5	-3.9
IMA	**Indian Mountai**	**141.46**	**39**	PKIKP	PKPdf	23 33 46.6	-2.4
IMA	**Indian Mountai**	**141.46**	**39**	*e*PKP	PKPdf	23 33 43.4	-5.6
THY	**Trims Highway**	**141.63**	**46**	*e*PKPdf	PKPdf	23 33 46.8	-2.5
CRVS	**Cervenica-Dubn**	**141.72**	**278**	*e*PKP	PKPdf	23 33 49.8	-0.2
NHSC	**New Hope**	**141.73**	**132**	PFAKE		23 34 00.0	+10
NHSC				LR	LR		
	comp=Z,629nm,19.0s,MS5.4						
PGF	**Pioggiola**	**141.73**	**261**	*e*PKIKP	PKPdf	23 33 48.9	-1.3
	comp=Z,78nm,1.2s						
KWP	**Kalwaria**	**141.78**	**280**	PKIKP	PKPdf	23 33 48.2	-1.8
KWP	**Kalwaria**	**141.78**	**280**	*e*PKP	PKPdf	23 33 45.2	-4.8
KECS	**Kecovo**	**141.79**	**277**	*e*PKP	PKPdf	23 33 48.5	-1.6
EIBI	**Ibiza**	**141.80**	**250**	PKP	PKPdf	23 33 44.7	-5.7
WVT	**Waverly**	**141.93**	**121**	PKHKP		23 33 42.2	
WVT	**Waverly**	**141.93**	**121**	*e*PKP	PKPdf	23 33 40.8	-10
WVT				LR	LR		
	comp=Z,552nm,21.0s,MS5.3						
SRO2	**Moca**	**142.09**	**274**	*e*PKHKP		23 33 44.5	
SRO2	**Moca**	**142.09**	**274**	*e*	PKPdf	23 33 44.5	-6.1
COLA	**College**	**142.13**	**43**	PFAKE		23 34 00.0	+10
COLA				LR	LR		
	comp=Z,324nm,19.0s,MS5.1						
ECOG	**Cogollos-Vega**	**142.13**	**243**	PKHKP		23 33 45.9	
SRO	**Srobarova**	**142.16**	**274**	*e*P	PKPdf	23 33 45.0	-5.7
SRO				*e*		23 33 59.7	
SRO	**Srobarova**	**142.16**	**274**	*e*	PKPdf	23 33 45.0	-5.7
SRO	**Srobarova**	**142.16**	**274**	*e*PKP	PKPdf	23 33 59.7	+9.0
ELOJ	**Sierra Loja**	**142.23**	**242**	PKHKP		23 33 45.2	
EHUE	**Huescar**	**142.25**	**244**	PKIKP	PKPdf	23 33 47.0	-4.2
ILAR	**Eielson Array**	**142.32**	**44**	*i* PKHKP		23 33 43.6	
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	**Eielson Array**	**142.32**	**44**	PKhKP		23 33 43.5	
	comp=Z,2.8nm,0.7s,baz=242,slow=4.5,SNR=11						
WALA	**Waterton Lakes**	**142.34**	**83**	*e*PKP	PKPdf	23 33 44.3	-6.7
CCM	**Cathedral Cave**	**142.39**	**115**	PKHKP		23 33 43.8	
CCM	**Cathedral Cave**	**142.39**	**115**	*e*PKP	PKPdf	23 33 43.2	-8.2
CCM				LR	LR		
	comp=Z,143nm,19.0s,MS4.8						
CPCT	**Cooper Cave**	**142.47**	**125**	*e*PKP	PKPdf	23 33 44.4	-7.3
JSC	**Jenkinsville**	**142.47**	**130**	PKIKP	PKPdf	23 33 47.3	-4.4
JSC	**Jenkinsville**	**142.47**	**130**	*e*PKP	PKPdf	23 33 44.5	-7.2
VYHS	**Vyhne**	**142.48**	**276**	*i* PKP	PKPdf	23 33 48.3	-3.0
VOY	**Vojsko**	**142.57**	**269**	*e*P	PKPdf	23 33 46.3	-5.2
VOY				*e*		23 33 59.2	
VOY				*e*		23 34 37.7	
ELUQ	**Luque**	**142.64**	**242**	PKHKP		23 33 46.9	
ARSA	**Arzberg**	**142.87**	**271**	⇑*i*P	PKPdf	23 33 49.0	-3.0
EVIA	**Vianos**	**142.94**	**245**	PKIKP	PKPdf	23 33 47.8	-4.6
ZST	**Bratislava**	**142.96**	**274**	*e*PKP	PKPdf	23 33 50.4	-1.7
SMOL	**Smolenice**	**143.08**	**274**	*e*PKP	PKPdf	23 33 50.9	-1.4
PTCC	**Patocco-Chiusa**	**143.09**	**269**	*e*PKP	PKPdf	23 33 48.6	-3.7
DLBC	**Dease Lake**	**143.13**	**61**	PKhKP		23 33 47.9	
	comp=Z,22nm,1.4s,baz=184,slow=4.8,SNR=4.1						
DLBC	**Dease Lake**	**143.13**	**61**	PKP	PKPdf	23 33 47.9	-4.1
SLM	**Saint Louis**	**143.28**	**116**	PKIKP	PKPdf	23 33 48.9	-4.0
SLM	**Saint Louis**	**143.28**	**116**	*e*PKP	PKPdf	23 33 46.4	-6.5
EADA	**Adamuz**	**143.29**	**242**	PKP	PKPdf	23 33 44.3	-8.7
EADA				PKP	PKPdf	23 33 49.3	-3.7
LMR	**La Mourre**	**143.40**	**259**	*e*PKIKP	PKPdf	23 33 49.8	-3.2
	comp=Z,188nm,1.3s						
FIN	**Finale Ligure**	**143.43**	**262**	PKIKP	PKPdf	23 33 50.1	-2.9
OJC	**Ojcow**	**143.43**	**278**	*e*PKP	PKPdf	23 33 49.9	-2.9
MNK	**Minsk**	**143.44**	**289**	*e*PKHKP		23 33 47.0	
SBF	**Sospel**	**143.46**	**260**	*e*PKIKP	PKPdf	23 33 51.5	-1.6
	comp=Z,246nm,1.3s						
FVI	**Forni Avoltri**	**143.48**	**268**	*e*PKIKP	PKPdf	23 33 49.2	-3.8
CTI	**Castel Tesino**	**143.51**	**267**	*e*PKIKP	PKPdf	23 33 49.2	-3.9
SAOF	**Saorge**	**143.51**	**261**	PKP	PKPdf	23 33 51.6	-1.6
FRF	**La Foret Royal**	**143.53**	**259**	*e*PKIKP	PKPdf	23 33 52.1	-1.1
	comp=Z,240nm,1.3s						
AUTN	**L'Aution**	**143.57**	**261**	PKP	PKPdf	23 33 52.7	-0.6
MVIF	**Mont Vial**	**143.60**	**260**	PKP	PKPdf	23 33 52.7	-0.6
SAL	**Salo**	**143.62**	**265**	*e*PKIKP	PKPdf	23 33 50.6	-2.7
USIN	**University of**	**143.63**	**119**	*e*PKP	PKPdf	23 33 48.3	-5.2
KBA	**Koelnbreinsper**	**143.63**	**269**	⇑*i*P	PKPbc	23 33 48.1	-0.9
ROB	**Roburent**	**143.64**	**261**	PKIKP	PKPdf	23 33 51.5	-1.9
LAO	**LASA Array**	**143.64**	**92**	*e*PKP	PKPdf	23 33 50.6	-2.6
LAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.8						
TOUF	**Mont Tournerai**	**143.66**	**260**	PKP	PKPdf	23 33 50.8	-2.6
EMOS	**Mosqueruela**	**143.66**	**249**	PKP	PKPdf	23 33 49.9	-3.7
EMIN	**Mina Concepcio**	**143.70**	**240**	PKP	PKPdf	23 33 49.3	-4.3
PALC	**Alcoutim**	**143.71**	**238**	*e*PKP	PKPdf	23 33 55.4	+1.7
ENR	**Entracque**	**143.77**	**261**	PKIKP	PKPdf	23 33 52.7	-0.9
OKC	**Ostrava-Krasne**	**143.81**	**276**	*e*PKP	PKPdf	23 33 52.4	-1.1
TAVF	**Tavernes**	**143.82**	**259**	PKP	PKPdf	23 33 50.6	-3.1
ERTA	**Horta de San J**	**143.86**	**250**	PKP	PKPdf	23 33 50.1	-3.7
MOA	**Molln**	**143.86**	**271**	⇑*i*P	PKPbc	23 33 49.5	-0.1
GELF	**Grande-Etoile**	**143.88**	**258**	PKP	PKPdf	23 33 50.4	-3.4
PUYF	**Puyloubier**	**143.89**	**258**	PKP	PKPdf	23 33 50.2	-3.6
EPOB	**Poblet**	**143.91**	**251**	PKP	PKPdf	23 33 49.9	-4.0
MORC	**Moravsky Berou**	**144.01**	**276**	PKIKP	PKPdf	23 33 51.8	-2.0
MORC	**Moravsky Berou**	**144.01**	**276**	*e*PKP	PKPdf	23 33 49.8	-4.1
DAWY	**Dawson**	**144.04**	**48**	*e*PKPdf	PKPdf	23 33 50.2	-3.2
DAWY				*e*SKP		23 37 27.2	
VRAC	**Vranov**	**144.04**	**275**	PKIKP	PKPdf	23 33 51.3	-2.6
VRAC				pmax	pmax		
	comp=Z,25nm,1.1s						
VRAC	**Vranov**	**144.04**	**275**	PKP	PKPdf	23 33 51.3	-2.6
	comp=Z,25nm,1.1s,baz=113,slow=5.2,SNR=19						
DOI	**San Damiano**	**144.06**	**261**	*e*PKIKP	PKPdf	23 33 50.4	-3.7
TREF	**Trevaresse**	**144.10**	**258**	PKP	PKPdf	23 33 51.3	-2.9
EJON	**La Jonquera**	**144.12**	**254**	PKP	PKPdf	23 33 48.4	-5.9
EJON				PKP	PKPdf	23 33 51.5	-2.8
PZZ	**Prazzo**	**144.12**	**261**	PKIKP	PKPdf	23 33 51.4	-2.8
SJAF	**Saint Jean de**	**144.15**	**254**	PKP	PKPdf	23 33 51.6	-2.7
VILF	**Villemus**	**144.15**	**259**	PKP	PKPdf	23 33 50.9	-3.4
STOF	**St-Etienne Org**	**144.19**	**259**	PKP	PKPdf	23 33 53.5	-0.8
EMIR	**Miracle**	**144.21**	**252**	PKP	PKPdf	23 33 52.0	-2.4
PTEO	**Sao Teotonio**	**144.22**	**237**	*e*PKP	PKPdf	23 33 56.2	+1.6
SURF	**Saint Ours**	**144.22**	**260**	PKP	PKPdf	23 33 53.3	-1.1
SMRF	**Simiane la Rot**	**144.31**	**259**	*e*PKIKP	PKPdf	23 33 52.0	-2.6
	comp=Z,341nm,1.4s						
PRAF	**Pradon**	**144.33**	**258**	PKP	PKPdf	23 33 53.7	-0.9
BHB	**Bricherasio**	**144.34**	**261**	P	PKPbc	23 33 52.0	+0.9
FILF	**Fillols**	**144.34**	**254**	PKP	PKPdf	23 33 52.1	-2.6
PBEJ	**Beja**	**144.35**	**238**	*e*PKP	PKPdf	23 33 53.8	-1.0
WCI	**Wyandotte Cave**	**144.35**	**121**	*e*PKHKP		23 33 48.9	
WCI				MLR	MLR		
	comp=Z,137nm,19.0s,MS4.7						
BRMO	**Bormio**	**144.38**	**266**	*e*PKP	PKPdf	23 33 51.9	-2.7
ESDC	**Sonseca Array**	**144.39**	**244**	PKP	PKPdf	23 33 51.9	-2.9
	comp=Z,83nm,1.2s,baz=157,slow=2.4,SNR=46						
ESDC	**Sonseca Array**	**144.39**	**244**	PKP	PKPdf	23 33 51.4	-3.4
ESLA	**Sonseca Array**	**144.39**	**244**	*e*PKPdf	PKPdf	23 33 52.4	-2.5
ESLA				LR	LR		
	comp=Z,4µm,19.0s,MS6.2						
OG25	**Le Caire**	**144.43**	**260**	PKP	PKPdf	23 33 53.2	-1.6
MBDF	**Montbardon**	**144.44**	**261**	*e*PKIKP	PKPdf	23 33 52.2	-2.6
	comp=Z,492nm,1.2s						
OG22	**Abries**	**144.45**	**261**	PKP	PKPdf	23 33 52.7	-2.1
WAR	**Warsaw**	**144.47**	**281**	*e*PKP	PKPdf	23 33 52.7	-1.9
WAR				*e*		23 33 55.2	
IDID	**Didziasalis**	**144.47**	**289**	*e*P	PKPbc	23 33 52.7	+1.6
IDID				AMPb	AMB	23 33 57.5	
	comp=Z,34nm,1.6s						
WTTA	**Wattenberg**	**144.49**	**268**	⇑*i*P	PKPbc	23 33 51.7	+0.3
VAI	**Varese**	**144.55**	**264**	*e*PKIKP	PKPdf	23 33 52.0	-2.9
WATA	**Walderalm**	**144.57**	**268**	⇑*i*P	PKPbc	23 33 52.1	+0.4
FENE	**Fenestrelle**	**144.57**	**261**	P	PKPbc	23 33 51.7	0.0
RSP	**Reno Superiore**	**144.59**	**262**	PKIKP	PKPdf	23 33 51.4	-3.6
RRL	**Cesana Torines**	**144.59**	**261**	PKIKP	PKPdf	23 33 52.7	-2.3
SQTA	**Sankt Quirin**	**144.63**	**267**	⇑*i*P	PKPbc	23 33 51.5	-0.3
ORO	**Oropa**	**144.68**	**263**	*e*PKHKP		23 33 51.0	
ORX	**Oropa**	**144.69**	**263**	PKHKP		23 33 50.7	
IIGN	**Ignalina**	**144.70**	**289**	*e*P	PKPbc	23 33 53.3	+1.6
IIGN				AMPb	AMB	23 33 58.9	
	comp=Z,53nm,1.4s						
BNI	**Bardonecchia**	**144.75**	**261**	PKIKP	PKPdf	23 33 53.8	-1.5
BNI	**Bardonecchia**	**144.75**	**261**	*e*PKPdf	PKPdf	23 33 52.8	-2.5
ESAC	**San Caprasio**	**144.83**	**250**	PKP	PKPdf	23 33 51.4	-4.2
DAVOX	**Davos**	**144.83**	**266**	PKP	PKPdf	23 33 53.1	-2.3
	comp=Z,43nm,0.7s,baz=201,slow=5.0,SNR=47						
EVO	**Evora**	**144.85**	**239**	*e*PKIKP	PKPdf	23 33 53.5	-2.2
	comp=Z,276nm,1.3s						
GERES	**GERESS Array B**	**144.88**	**271**	PKIKP	PKPdf	23 33 52.3	-3.1
GERES				pmax	pmax		
	comp=Z,137nm,1.2s						
GERES	**GERESS Array B**	**144.88**	**271**	PKP	PKPdf	23 33 52.3	-3.1
	comp=Z,137nm,1.2s,baz=157,slow=3.5,SNR=86						
LSD	**Ceresole Reale**	**144.88**	**262**	PKIKP	PKPdf	23 33 52.8	-2.7
ISAL	**Salakas**	**144.90**	**289**	*e*P	PKPbc	23 33 54.0	+1.7
ISAL				AMPb	AMB	23 33 58.8	
	comp=Z,39nm,1.4s						
OCF	**Saint Nazaire**	**144.92**	**259**	PKP	PKPdf	23 33 54.7	-0.9
OG26	**St.-Nazaire-De**	**144.92**	**259**	PKP	PKPdf	23 33 54.7	-0.9
SUW	**Suwalki**	**144.92**	**285**	PKIKP	PKPdf	23 33 53.9	-1.4
SUW	**Suwalki**	**144.92**	**285**	*e*PKP	PKPdf	23 33 53.7	-1.6
SUW				*e*		23 33 56.4	
SUW	**Suwalki**	**144.92**	**285**	*e*PKP	PKPdf	23 33 53.7	-1.7
SUW				*e*		23 33 56.4	
BBSR	**BB Station**	**144.93**	**153**	*e*PKPdf	PKPdf	23 33 52.6	-3.4
BBSR				LR	LR		
	comp=Z,832nm,21.0s,MS5.5						
MCGN	**Macugnaga**	**144.94**	**263**	*e*PKP	PKPdf	23 33 53.9	-1.7
DPC	**Dobruska-Polom**	**144.96**	**275**	*e*PKP	PKPdf	23 33 53.7	-1.8
ORIF	**Oris-en-Rattie**	**144.96**	**260**	*e*PKIKP	PKPdf	23 33 54.9	-0.8
	comp=Z,282nm,1.5s						
IZAR	**Zarasai**	**144.98**	**290**	*e*P	PKPbc	23 33 54.2	+1.6
IZAR				AMPb	AMB	23 34 00.5	
	comp=Z,57nm,1.2s						
SALF	**Salau**	**145.06**	**253**	PKP	PKPdf	23 33 54.4	-1.5
LPG	**La Plagne**	**145.08**	**261**	*e*PKIKP	PKPdf	23 33 53.9	-2.0
	comp=Z,71nm,0.7s						
LASF	**Ste Croix**	**145.09**	**257**	*e*PKIKP	PKPdf	23 33 54.8	-1.1
	comp=Z,435nm,1.3s						
LPL	**La Plagne**	**145.10**	**261**	*e*PKIKP	PKPdf	23 33 53.8	-2.1
	comp=Z,120nm,1.0s						
BLO	**Bloomington**	**145.11**	**120**	*e*PKPdf	PKPdf	23 33 52.0	-4.2
MTLF	**Montolieu**	**145.13**	**255**	*e*PKIKP	PKPdf	23 33 54.7	-1.3
	comp=Z,303nm,1.4s						
KHC	**Kasperske Hory**	**145.15**	**272**	*e*PKP	PKPdf	23 33 52.7	-3.2
KHC				*e*		23 33 56.6	
KHC				*e*		23 34 10.0	
KHC	**Kasperske Hory**	**145.15**	**272**	*e*PKP	PKPdf	23 33 52.7	-3.2
KHC				*e*pPKP		23 33 56.6	
KHC				x	x	23 34 10.0	
UPC	**Upice**	**145.21**	**275**	*e*PKP	PKPdf	23 33 56.7	+0.8
RSL	**Roselend**	**145.29**	**261**	PKP	PKPdf	23 33 54.4	-1.8
GUD	**Guadarrama**	**145.31**	**245**	PKP2	PKPab	23 33 54.4	-0.9
ELN	**Prospectdale**	**145.34**	**128**	*e*PKPdf	PKPdf	23 33 52.9	-3.7
KSP	**Ksiaz**	**145.35**	**276**	*e*PKP	PKPdf	23 33 54.8	-1.4
KSP				*e*pPKP		23 33 59.1	
KSP				*e*SS	SS	23 56 10.0	+4.9
KSP				LR	LR		
	comp=Z,600nm,22.2s,MS5.3						
KSP	**Ksiaz**	**145.35**	**276**	*e*PKP	PKPdf	23 33 55.2	-1.0
KSP				*e*		23 33 57.8	
FUR	**Furstenfeldbru**	**145.35**	**269**	*e*PKIKP	PKPdf	23 33 54.9	-1.3
VIVF	**Saint-Julien-l**	**145.40**	**259**	*e*PKIKP	PKPdf	23 33 55.5	-0.9
	comp=Z,237nm,1.3s						
EBIE	**Bielsa**	**145.41**	**252**	PKP	PKPdf	23 33 55.1	-1.4
PRU	**Pruhonice**	**145.42**	**273**	*e*PKP	PKPdf	23 33 54.9	-1.4
PRU				*e*		23 33 57.6	
RESF	**Ens**	**145.43**	**252**	PKP	PKPdf	23 33 56.4	-0.2
WET	**Wettzell**	**145.45**	**271**	*e*PKP2	PKPab	23 33 54.3	-1.3
PLOU	**Loures**	**145.57**	**238**	*e*PKP	PKPdf	23 33 58.6	+1.7
EPF	**Esparros**	**145.62**	**252**	*e*PKIKP	PKPdf	23 33 56.7	-0.2
FWV	**Forest Hill**	**145.64**	**128**	*e*PKPdf	PKPdf	23 33 53.8	-3.3
LABF	**Labassere**	**145.74**	**252**	PKP	PKPdf	23 33 57.5	+0.4
EDM	**Edmonton**	**145.74**	**78**	*e*PKIKP	PKPdf	23 33 54.6	-2.1
EDM				*e*		23 33 55.9	
OG01	**Vacheresse**	**145.78**	**262**	PKP	PKPdf	23 33 52.8	-4.2

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PVCC  Panska Ves        145.82 274 ePKP     PKPdf   23 33 55.9 -1.1
PCBR  Castelo Branco    145.82 240 ePKP     PKPdf   23 33 56.4 -0.9
ETSF  Etsaut            145.86 251 ePKIKP   PKPdf   23 33 57.0 -0.3
      comp=Z,32nm,0.8s
DGMT  Dagmar            145.89  92 ePKPdf   PKPdf   23 33 55.4 -1.8
DGMT                               ePKPbc   PKPbc   23 33 57.1 +2.1
DGMT                                LR      LR
      comp=Z,1µm,19.0s,MS5.7
REYF  Montagne du Re    145.94 251  PKP     PKPdf   23 33 57.1 -0.3
OG05  Jujurieux         146.05 261  PKP     PKPdf   23 33 56.1 -1.4
LARF  Larrau            146.15 251  PKP     PKPdf   23 33 58.0 +0.2
CABF  La Chapelle       146.25 262 ePKIKP   PKPdf   23 33 57.2 -0.6
      comp=Z,212nm,1.2s
PUL   Pulkovo           146.28 297 i PKP2   PKPab   23 33 58.5 +0.1
PUL                                 MLR     MLR
      comp=Z,280nm,14.0s,MS5.2
LBL   Lubilhac          146.29 258  PKP     PKPdf   23 33 59.4 +1.4
SJPF  Ste Jean          146.30 251 ePKIKP   PKPdf   23 33 58.0  0.0
      comp=Z,260nm,1.1s
SPAK  Spaichingen       146.33 266  PKP     PKPdf   23 34 00.1 +2.2
BRG   Berggiesshubel    146.34 274 i PKP2   PKPab   23 33 58.4 -0.6
BRG                                 pmax    pmax
      comp=Z,167nm,1.3s
BRG                                 MLR     MLR
      comp=N,250nm,18.0s,MS5.3
BRG                                 MLR     MLR
      comp=E,350nm,18.0s,MS5.3
BRG                                 MLR     MLR
      comp=Z,380nm,18.0s,MS5.2
BRG   Berggiesshubel    146.34 274 i PKP    PKPdf   23 33 58.4 +0.5
BRG                                i                23 34 02.4
BRG                                i                23 34 14.9
BRG                                 LR      LR
      comp=Z,380nm,18.0s,MS5.2
COLF  Collangettes      146.34 258  PKP     PKPdf   23 33 59.4 +1.4
MTE   Manteigas         146.34 241 ePKP     PKPdf   23 33 58.3 +0.1
BBS   Basel-Blauen      146.35 264  PKP2    PKPab   23 34 01.0 +1.9
OSSF  Osses             146.44 251  PKP     PKPdf   23 33 58.8 +0.5
NKC   Novy Kostel       146.47 272 ePKP     PKPdf   23 33 58.0 -0.1
FELD  Feldberg          146.47 265  PKP     PKPdf   23 34 00.3 +2.1
EALK  Alkurruntz        146.50 250  PKP     PKPdf   23 33 58.3 -0.1
CAF   Calviac           146.51 256 ePKIKP   PKPdf   23 33 57.9 -0.4
      comp=Z,196nm,1.4s
LOMF  Lomont            146.54 263  PKP     PKPdf   23 34 01.0 +2.7
GRA1  Grafenberg Arr    146.56 270 ePKPbc   PKPbc   23 33 57.2 +0.6
GRF   Grafenberg Arr    146.56 270 ePKP     PKPdf   23 33 57.2 -1.1
GRF                                 LR      LR
      comp=Z,500nm,20.8s,MS5.3
STU   Stuttgart         146.69 267  PKP2    PKPab   23 34 01.2 +0.8
STU   Stuttgart         146.69 267 ePKPbc   PKPbc   23 33 58.0 +1.1
FRNF  Fournols          146.69 257  PKP     PKPdf   23 34 00.2 +1.6
BFO   Black Forest      146.70 266 ePKIKP   PKPdf   23 33 57.8 -0.7
PLDF  La Plantade       146.74 259  PKP     PKPdf   23 34 00.2 +1.5
PVIS  Viseu             146.75 241 ePKP     PKPdf   23 33 56.9 -2.0
GKP   Gorka Klasztor    146.78 280 ePKP     PKPdf   23 33 59.0 +0.5
GKP                                e                23 34 02.8
GKP   Gorka Klasztor    146.78 280 ePKP     PKPdf   23 33 59.0 +0.5
GKP                                e                23 34 02.8
PYM   Petit Puy Mans    146.81 258  PKP     PKPdf   23 33 59.4 +0.6
MOF   Molkenrain        146.81 264  PKP     PKPdf   23 33 59.8 +1.0
LIBD  Limburg           146.85 265  PKP2    PKPab   23 34 01.0 -0.1
HINF  Hinteralfeld      146.90 264 ePKIKP   PKPdf   23 33 59.5 +0.6
      comp=Z,207nm,1.4s
JFWS  Jewell Farm       146.98 112 ePKPbc   PKPbc   23 33 58.5 +0.8
JFWS                                LR      LR
      comp=Z,1µm,20.0s,MS5.7
AGO   Saint Agoulin     147.00 258  PKP     PKPdf   23 34 02.5 +3.4
VERF  Verneugheol       147.02 257  PKP     PKPdf   23 34 00.7 +1.5
RJF   Les Rejaudoux     147.04 256 ePKIKP   PKPdf   23 33 59.3 +0.1
      comp=Z,247nm,1.5s
LFF   La Frestale       147.05 255 ePKIKP   PKPdf   23 33 58.0 -1.2
      comp=Z,155nm,1.3s
CLL   Collm             147.06 274 ePKP2    PKPab   23 33 59.0 -2.7
CLL                                 MLR     MLR
      comp=Z,400nm,20.4s,MS5.2
CLL   Collm             147.06 274 ePKP     PKPdf   23 33 59.0  0.0
CLL                                i PKP    PKPdf   23 34 03.1 +4.1
CLL                                i                23 34 11.7
CLL                                 LR      LR
      comp=Z,400nm,20.4s,MS5.2
CLL   Collm             147.06 274 ePKIKP   PKPdf   23 33 59.0  0.0
CLL                                i PKP    PKPdf   23 34 03.1 +4.1
CLL                                i                23 34 11.7
CLL                                ePP      PP      23 37 33.0 +6.1
ECH   Echery            147.09 265  PKP     PKPdf   23 34 00.0 +0.8
MOX   Moxa              147.13 272 ePKP2    PKPab   23 34 00.3 -1.7
MOX                                 pmax    pmax
      comp=Z,163nm,1.3s
MOX   Moxa              147.13 272 eP       PKPdf   23 34 00.3 +1.1
MOX                                e                23 34 03.3
MOX   Moxa              147.13 272 i P      PKPdf   23 34 00.3 +1.1
MOX                                 PP2             23 34 03.0
STR   Strasbourg        147.13 266  PKP     PKPdf   23 34 03.4 +4.2
WLS   Welschbruch       147.16 265  PKP     PKPdf   23 34 01.2 +1.9
PVRL  Vila Real         147.17 241 ePKP     PKPdf   23 33 58.8 -0.8
CDF   Champ du Feu      147.20 265 ePKIKP   PKPdf   23 33 59.2 -0.2
      comp=Z,134nm,1.2s
SMF   Signal de Mont    147.20 260 ePKIKP   PKPdf   23 33 59.6 +0.2
      comp=Z,159nm,1.3s
HAU   Haudompre         147.26 264 ePKIKP   PKPdf   23 33 59.4 -0.1
      comp=Z,118nm,1.0s
ELAN  Lanestosa         147.26 248  PKP     PKPdf   23 33 58.6 -1.1
PBRG  Braganca          147.28 243 ePKP     PKPdf   23 34 01.2 +1.5
ACSO  Alum Creek Sta    147.30 123 ePKPbc   PKPdf   23 33 59.9 +0.1
ACSO                                LR      LR
      comp=Z,878nm,19.0s,MS5.6
CBN   Corbin            147.30 132 ePKPbc   PKPdf   23 34 00.8 +0.9
CBN                                 LR      LR
      comp=Z,1µm,20.0s,MS5.7
ECAL  Calabor           147.40 243  PKP     PKPdf   23 33 58.7 -1.2
LANF  Langenberg        147.42 266  PKP     PKPdf   23 34 01.9 +2.2
TOD   Tromm             147.50 268  PKP2    PKPab   23 34 04.1 +0.6
AVF   Avril sur Loir    147.51 259 ePKIKP   PKPdf   23 34 00.3 +0.4
      comp=Z,231nm,1.2s
BGF   Bois d'Agland     147.53 259 ePKIKP   PKPdf   23 34 00.7 +0.7
      comp=Z,229nm,1.2s
TCF   Toulx Ste Croi    147.57 258 ePKIKP   PKPdf   23 34 00.8 +0.8
      comp=Z,116nm,1.3s
THEF  They Montfort     147.58 264  PKP     PKPdf   23 34 00.7 +0.7
RUE   Ruedersdorf       147.61 276 ePKPbc   PKPdf   23 34 01.9 +2.1
SSF   Saint Saulge      147.67 260 ePKIKP   PKPdf   23 34 00.8 +0.6
      comp=Z,119nm,1.3s
ELOB  Lobios            147.82 241  PKP     PKPdf   23 33 57.8 -2.8
ELOB                                PKP     PKPdf   23 34 00.8 +0.3
MCWV  Mont Chateau      147.84 128 ePKPbc   PKPdf   23 34 01.6 +0.9
MCWV                                LR      LR
      comp=Z,725nm,20.0s,MS5.5
ERUA  La Rua            147.94 243  PKIKP   PKPdf   23 33 59.7 -1.0
EARI  Arriondas         148.00 246  PKP     PKPdf   23 33 59.6 -1.2
JOF   Joensuu           148.03 302 epkp     PKPdf   23 34 00.9 +0.7
TNS   Taunus Mts        148.12 268 ePKIKP   PKPdf   23 34 00.6 -0.2
MEZF  Maizieres J'vi    148.18 263 ePKIKP   PKPdf   23 34 02.2 +1.3
      comp=Z,166nm,1.2s
HYF   Humbligny         148.19 259 ePKIKP   PKPdf   23 34 01.2 +0.2
ABH   Alteburg          148.23 267  PKP     PKPdf   23 34 03.4 +2.4
EINC  Incio             148.24 243  PKP     PKPdf   23 34 02.1 +0.9
RUP   Ruppelstein       148.29 266  PKP2    PKPab   23 34 03.4 -3.3
EZAM  Zamans            148.29 241  PKIKP   PKPdf   23 34 01.8 +0.5
CLZ   Clausthal         148.54 272 ePKPbc   PKPdf   23 34 02.5 +1.1
SDMD  Soldier's Deli    148.57 132 ePKPbc   PKPdf   23 34 03.2 +1.3
WLF   Walferdange       148.64 265  PKP2    PKPab   23 34 06.2 -1.9
WLF   Walferdange       148.64 265 ePKPbc   PKPdf   23 34 04.0 +2.4
INK   Inuvik            148.64  46  PKIKP   PKPdf   23 33 59.3 -1.8
INK                                                 23 34 03.1
INK                                 pmax    pmax
      comp=Z,95nm,1.2s
INK                                 pmax    pmax
      comp=Z,104nm,1.2s
INK   Inuvik            148.64  46  PKP     PKPdf   23 33 59.2 -1.8
      comp=Z,95nm,1.2s,baz=227,slow=2.9,SNR=98
INK                                 PKPbc   PKPdf   23 34 03.1 +2.0
      comp=Z,104nm,1.2s,baz=220,slow=3.5,SNR=102
INK   Inuvik            148.64  46  PKP     PKPdf   23 33 59.2 -1.8
INK                                 PKPbc   PKPdf   23 34 03.1 +2.0
INK                                ePKPbc   PKPdf   23 34 03.3 +2.2
EPON  Pontenova         148.75 244  PKP     PKPdf   23 34 01.5 -0.5
MFF   Saint Martin d    148.77 255 ePKIKP   PKPdf   23 34 03.6 +1.7
      comp=Z,152nm,1.4s
STS   Santiago          148.88 242  PKIKP   PKPdf   23 34 00.7 -1.5
AAM   Ann Arbor         148.89 121  PKIKP   PKPdf   23 34 03.6 +1.3
AAM   Ann Arbor         148.89 121 ePKPbc   PKPdf   23 34 03.0 +0.8
AAM                                 LR      LR
      comp=Z,775nm,22.0s,MS5.5
FINES FINESS Array B    148.96 297  PKP2    PKPab   23 34 05.4 -3.6
FINES                               pmax    pmax
      comp=Z,21nm,0.7s
FINES FINESS Array B    148.96 297  PKPbc   PKPdf   23 34 05.4 +3.6
      comp=Z,21nm,0.7s,baz=121,slow=3.5,SNR=58
LCHF  La Chataignera    149.07 255  PKP     PKPdf   23 34 06.0 +3.6
EMAZ  Mazaricos         149.09 241  PKP     PKPdf   23 34 02.2 -0.4
MVL   Millersville      149.26 132 ePKPbc   PKPdf   23 34 03.9 +0.9
KAF   Kangasniemi       149.30 298 epkp     PKPdf   23 34 04.3 +2.0
      baz=121,slow=1.8
SSPA  Standing Stone    149.36 130 ePKPbc   PKPdf   23 34 04.1 +1.0
SSPA                                LR      LR
      comp=Z,124nm,20.0s,MS4.7
GIVF  Givet             149.52 265 ePKIKP   PKPdf   23 34 04.5 +1.5
      comp=Z,239nm,1.4s
ALLY  Alegheny Colle    149.53 126 ePKPdf   PKPdf   23 34 01.9 -1.4
ALLY                               ePKPbc   PKPdf   23 34 06.4 +3.1
HGN   Heimansgroeve     149.57 267 eP       PKPdf   23 34 08.7 +5.6
      comp=Z,68nm,1.4s
BAIF  Baives            149.74 264 ePKIKP   PKPdf   23 34 03.4  0.0
      comp=Z,189nm,1.3s
LVZ   Lovozero          149.98 312 i PKP2   PKPab   23 34 07.2 -5.8
ERPA  Erie              150.00 126 ePKPbc   PKPdf   23 34 06.5 +2.5
ERPA                                LR      LR
      comp=Z,632nm,20.0s,MS5.4
BSEG  Bad Segeberg      150.10 275 ePKIKP   PKPdf   23 34 07.8 +4.0
WTSB  Winterswijk       150.12 269 eP       PKPdf   23 34 08.0 +4.1
      comp=Z,89nm,1.4s
LDF   La Druitiere      150.37 258 ePKIKP   PKPdf   23 34 04.6 +0.2
      comp=Z,195nm,1.2s
GRR   Gorron            150.50 257 ePKIKP   PKPdf   23 34 03.4 -1.2
      comp=Z,124nm,1.1s
FLN   La Foliniere      150.65 258 ePKIKP   PKPdf   23 34 05.2 +0.4
EYMN  Ely               150.67 105 ePKPbc   PKPdf   23 34 08.5 +3.6
EYMN                                LR      LR
      comp=Z,1µm,19.0s,MS5.8
ULM   Lac du Bonnet     150.71  98  PKP     PKPdf   23 34 02.9 -2.0
      comp=Z,9.1nm,0.8s,baz=258,slow=2.9,SNR=7.0
ULM                                 PKPbc   PKPdf   23 34 08.2 +3.3
      comp=Z,53nm,0.9s,baz=244,slow=4.0,SNR=62
ULM   Lac du Bonnet     150.71  98  PKP     PKPdf   23 34 02.9 -2.0
ULM                                ePKPbc   PKPdf   23 34 07.5 +2.6
ULM                                 PKPbc   PKPdf   23 34 08.2 +3.3
ULM                                 LR      LR
      comp=Z,995nm,19.0s,MS5.6
PAL   Palisades         150.92 135  PKIKP   PKPdf   23 34 09.5 +4.0
PAL   Palisades         150.92 135 ePKPbc   PKPdf   23 34 08.5 +3.1
QUIF  Quistinic         151.04 254 ePKIKP   PKPdf   23 34 06.3 +0.9
      comp=Z,154nm,1.2s
SGMF  Saint Gilles      151.07 255 ePKIKP   PKPdf   23 34 05.1 -0.4
GENY  Geneseo           151.30 128 ePKPbc   PKPdf   23 34 10.2 +4.3
BINY  Binghamton        151.38 131 ePKPbc   PKPdf   23 34 09.7 +3.5
BINY                                LR      LR
      comp=Z,926nm,20.0s,MS5.6
ROSF  Rostrenen         151.43 254 ePKIKP   PKPdf   23 34 06.7 +0.7
FFC   Flin Flon         151.49  86 ePKIKP   PKPdf   23 34 04.2 -1.7
FFC                                e                23 34 10.0
FFC                                 MLR     MLR
      comp=Z,253nm,20.0s,MS5.0
YKA   Yellowknife Ar    151.51  64  PKIKP   PKPdf   23 34 04.9 -0.8
YKA                                                 23 34 10.4
YKA                                 pmax    pmax
      comp=Z,77nm,1.3s
YKA   Yellowknife Ar    151.51  64  PKP     PKPdf   23 34 04.9 -0.8
      comp=Z,0.3nm,0.4s,baz=210,slow=1.9,SNR=10
YKA                                 PKPbc   PKPdf   23 34 10.4 +4.8
      comp=Z,77nm,1.3s,baz=242,slow=2.0,SNR=88
YKA   Yellowknife Ar    151.51  64  PKP     PKPdf   23 34 04.9 -0.8
YKA                                 PKPbc   PKPdf   23 34 10.4 +4.8
YKW3  Yellowknife Ar    151.55  64 ePKPbc   PKPdf   23 34 10.3 +4.6
SADO  Sadowa            152.63 124  PKP     PKPdf   23 34 07.7 -0.2
      comp=Z,14nm,1.1s,baz=184,slow=0.3,SNR=4.5
SADO                                PKPbc   PKPdf   23 34 14.8 +6.9
      comp=Z,12nm,0.7s,baz=230,slow=3.4,SNR=9.3
SADO                                PKPab   PKPab   23 34 23.8 -1.2
      comp=Z,18nm,0.9s,baz=220,slow=4.3,SNR=8.0
SADO  Sadowa            152.63 124  PKP     PKPdf   23 34 07.7 -0.2
SADO                                PKPbc   PKPdf   23 34 14.8 +6.9
SADO                                PKPab   PKPab   23 34 23.8 -1.2
HFS   Hagfors           152.88 287  PKPbc   PKPdf   23 34 14.9 +7.2
      comp=Z,4.2nm,0.5s,baz=127,slow=7.4,SNR=20
HFS                                 PKPab   PKPab   23 34 26.1 +0.7
      comp=Z,52nm,1.2s,baz=162,slow=4.7,SNR=5.9
WES   Weston            152.93 138  PFAKE           23 34 20.0  +12
WES                                 LR      LR
      comp=Z,1µm,19.0s,MS5.8
ARCES ARCESS Array B    153.68 311  PKPbc   PKPdf   23 34 15.9 +7.4
      comp=Z,6.6nm,0.8s,baz=106,slow=1.4,SNR=18
ARCES                               PKPab   PKPab   23 34 28.9 +0.3
      comp=Z,142nm,1.3s,baz=117,slow=2.7,SNR=15
ARE0  ARCESS Array S    153.68 311 ePKPab   PKPab   23 34 29.8 +1.2
NB2   NORSAR Subarra    154.40 287  PKPdf   PKPdf   23 34 17.0 +7.2
      comp=Z,22nm,1.2s,baz=126,slow=1.5
NB2   NORSAR Subarra    154.40 287  PKPd            23 34 17.0
      baz=126,slow=1.5
NOA   NORSAR Array B    154.40 287  PKPbc   PKPdf   23 34 17.2 +7.5
      comp=Z,0.8nm,0.6s,baz=137,slow=5.0,SNR=7.1
NOA                                 PKPab   PKPab   23 34 32.7 +0.9
      comp=Z,19nm,1.1s,baz=116,slow=4.1,SNR=8.0
NOA   NORSAR Array B    154.40 287  PKPbc   PKPdf   23 34 17.2 +7.5
NOA                                 PKPab   PKPab   23 34 32.7 +0.9
WVL   Waterville        155.41 138  PFAKE           23 34 20.0 +8.4
WVL                                 LR      LR
      comp=Z,5µm,20.0s,MS6.3
EMMW  East Machias      156.13 142  PFAKE           23 34 20.0 +7.5
EMMW                                LR      LR
      comp=Z,5µm,20.0s,MS6.3
EKA   Eskdalemuir Ar    156.66 265  PKPbc   PKPdf   23 34 22.5  +10
      comp=Z,3.6nm,0.8s,baz=112,slow=3.3,SNR=5.8
EKA                                 PKPab   PKPab   23 34 41.5 -0.1
      comp=Z,1.7nm,0.7s,baz=127,slow=5.0,SNR=4.1
ESK   Eskdalemuir       156.66 265  PFAKE           23 34 20.0 +7.1
ESK                                 LR      LR
      comp=Z,222nm,21.0s,MS5.0
FCC   Fort Churchill    157.42  85 ePKP2    PKPab   23 34 44.2 -0.6
PQI   Presque Isle      157.80 139  PFAKE           23 34 20.0 +5.3
PQI                                 LR      LR
      comp=Z,6µm,20.0s
KBS   Kingsbay          159.17 332  PFAKE           23 34 30.0  +14
KBS                                 LR      LR
      comp=Z,630nm,20.0s,MS5.5
RES   Resolute Bay      162.00  40  PKIKP   PKPdf   23 34 17.3 -1.2
RES   Resolute Bay      162.00  40 ePKPdf   PKPdf   23 34 15.3 -3.2
RES                                ePKPdif          23 34 31.8
RES                                ePKPab   PKPab   23 35 03.3 -0.9
SCHQ  Schefferville     165.36 128  PKP     PKPdf   23 34 21.3 -1.0
      comp=Z,16nm,1.3s,baz=78,slow=4.7,SNR=4.7
SCHQ                                PKPab   PKPab   23 35 17.8 -1.5
      comp=Z,91nm,1.4s,baz=271,slow=3.9,SNR=15
SCHQ  Schefferville     165.36 128 ePKPdf   PKPdf   23 34 19.6 -2.8
SCHQ                               ePKPab   PKPab   23 35 16.7 -2.6
SCHQ                                LR      LR
      comp=Z,2µm,19.0s
DAG   Danmarks Havn     165.90 333⇑iP       PKPab   23 35 20.0 -1.1
      comp=Z,34nm,1.0s
BORG  Borgarnes         169.28 277  PKPab   PKPab   23 35 36.1 -0.1
      comp=Z,7.6nm,0.9s,baz=158,slow=5.8,SNR=1.9
BORG  Borgarnes         169.28 277  PFAKE           23 34 30.0 +5.3
BORG                                LR      LR
      comp=Z,185nm,21.0s
FRB   Frobisher Bay     170.52  92  PKIKP   PKPdf   23 34 23.0 -2.5
FRB                                                 23 35 41.1
FRB                                 pmax    pmax
      comp=Z,6.0nm,1.1s
FRB                                 pmax    pmax
      comp=Z,23nm,1.1s
FRB   Frobisher Bay     170.52  92  PKP     PKPdf   23 34 22.9 -2.5
      comp=Z,5.9nm,1.1s,baz=148,slow=1.4,SNR=4.0
FRB                                 PKPab   PKPab   23 35 41.1 -0.6
      comp=Z,23nm,1.1s,baz=235,slow=5.0,SNR=14
SFJ   Sondre            177.99  48  PFAKE           23 34 40.0  +12
SFJ                                 LR      LR
      comp=Z,2µm,21.0s
```

CASC 22 23:19:28.6±1.7**, 14.08N**×**91.60W, h18**^{km}±10^{km}**, mb7.3, MD4.1, ML4.4, 1C-2D, Guatemala**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
TP2   Tecpan 2            0.90  39   eP      Pb       23 19 45.2 -0.1
TP2                                  eS      Sb       23 19 58.8 +2.0
TP2                                   AMP             23 19 59.8
      comp=N,7µm,0.6s
IXG   Ixpaco              1.12  85   eP      Pb       23 19 48.3 -0.7
IXG                                  eS      Sb       23 20 04.3 +1.2
IXG                                   AMP             23 20 08.2
      comp=N,50µm,0.9s
NBG   Las Nubes           1.32  67⇓eP      Pn       23 19 52.2 -0.1
NBG                                  eS      Sb       23 20 11.1 +2.2
NBG                                   AML    AML      23 20 16.9
      comp=N,3µm,0.2s
RBDL  Robledal            1.86  89⇓eP      Pn       23 19 59.8 -0.2
RBDL                                 eS      Sn       23 20 24.5 +1.2
RTR   El Retiro           1.91  95   eP      Pn       23 20 00.5 -0.3
RTR                                  eS      Sn       23 20 24.8 +0.3
SBLS  San Blas            1.94  97   eP      Pn       23 20 00.6 -0.6
SBLS                                 eS      Sn       23 20 25.2  0.0
SNJE  San Jose            1.95  96⇑eP      Pn       23 20 00.8 -0.5
SNJE                                 eS      Sn       23 20 25.6 +0.1
SNVI  San Vicente         2.72  99   eP      Pn       23 20 13.1 +0.7
SNVI                                 eS      Sn       23 20 46.5 +1.2
```

IDC 22 23:22:08.3±7.8**, 6.05S**×**149.86E, h74**^{km}±59^{km}**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/13**, mbtmp3.9**/4**, ML2.9**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.5**/14**, Error ellipse: s-maj=80.8km s-min=47.3km az=108.0, New Britain region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
PMG   Port Moresby        4.28 219   P       P        23 23 10.2 -2.2
      4.5nm,0.3s,baz=38,slow=6.5,SNR=9.4
PMG                                  S       S        23 24 00.7 -0.8
      4.8nm,0.3s,baz=136,slow=12,SNR=6.2
PMG                                  LR      LR       23 24 46.7
      comp=Z,92nm,18.2s,baz=88,slow=37
WRA   Warramunga Arr     20.45 226   P       P        23 26 40.5 -1.7
      4.1nm,0.6s,baz=51,slow=10,SNR=6.7
ASAR  Alice Springs      23.29 220   P       P        23 27 10.4  0.0
      1.4nm,0.8s,baz=49,slow=9.6,SNR=4.6
STKA  Stephens Creek     26.83 196   P       P        23 27 41.5 -2.4
      2.0nm,0.8s,baz=49,slow=16,SNR=2.5
GERES GERESS Array B    123.54 327   PKP     PKPdf    23 40 57.2 -0.3
      0.4nm,0.6s,baz=90,slow=1.0,SNR=2.9
```

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*IDC **22** 23:23:09.6±4.2, 41.64N×126.68W, mb2.8/2, mb1 3.4/6, mb1mx3.3/24, mbtmp3.1/6, ML3.2/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/12, Error ellipse: s-maj=54.2km s-min=27.4km az=63.0*

*NEIC **22** 23:23:11.5±2.7, 41.62N×126.57W, h10^{km}, mb3.3/2, Error ellipse: s-maj=36.3km s-min=15.0km az=63.0*

ISC 22 23:23:09.2±2.5**, 41.6N**±0.2×**126.7W**±0.3**, h10**^{km}**, n14, σ1**^{s}**07**/13**, mb2.7**/2**, Off coast of northern California**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
KHMM  Horse Mountain      2.35 107   eP      Pn       23 23 47.4 -1.1
HUMO  Hull Mountain       2.95  69   eP      Pn       23 23 57.2 +0.2
YBH   Yreka Blue Hor      2.98  86   Pn      Pn       23 23 58.8 +1.3
      3.3nm,0.3s,baz=267,slow=11,SNR=81
WDC   Whiskeytown Da      3.30 107   eP      Pn       23 24 00.2 -1.8
MOD   Modoc               4.79  84   eP      Pn       23 24 22.6 -0.5
WVOR  Wild Horse Val      6.05  80   eP      Pn       23 24 39.9 -1.1
      13nm,1.5s
NVAR  Mina Array Bea      7.18 114   Pn      Pn       23 24 56.7 -0.1
      0.1nm,0.3s,baz=292,slow=14,SNR=8.5
ELK   Elko                8.68  92   Pn      P        23 25 19.1 +1.3
      0.1nm,0.3s,baz=239,slow=5.9,SNR=3.4
PDAR  Pinedale Array     12.76  79   Pn      P        23 26 16.7 +3.3
      0.0nm,0.3s,baz=278,slow=6.4,SNR=2.4
SDCO  Great Sand Dun     16.76  96   P       P        23 27 05.5  0.0
      2.3nm,0.9s
ANMO  Albuquerque        17.20 106   LR      LR       23 33 58.6
      comp=Z,96nm,20.4s,slow=38
FFC   Flin Flon          20.92  43   P       P        23 27 53.8 -0.4
      1.1nm,0.6s
YKA   Yellowknife Ar     22.12  15   P       P        23 28 05.8 -0.3
      0.1nm,0.4s,mb2.6,baz=201,slow=9.8,SNR=4.7
TXAR  Lajitas Array      22.32 116   P       P        23 28 09.9 +1.5
      0.3nm,0.7s,mb2.9,baz=315,slow=7.7,SNR=1.8
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*CSEM **22** 23:25:01.9±0.3, 36.90N×23.99W, h10^{km}±3^{km}, ML3.3, Error ellipse: s-maj=9.3km s-min=5.1km az=50.0, After PDA*

*PDA **22** 23:25:01.9±1.2, 36.90N×23.99W, h10^{km}, MD3.1, ML3.3, Error ellipse: s-maj=9.6km s-min=4.2km az=45.0*

SVSA 22 23:25:01.9±1.2**, 36.90N**×**23.99W, h10**^{km}**, MD3.1, ML3.3, Error ellipse: s-maj=9.6km s-min=4.2km az=45.0, Azores Islands region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
PSMN  Pico do Norte,      0.87 277   eP      Pb       23 25 16.7 -1.9
PSMN                                 i S     Sb       23 25 26.6 -3.5
PSMA  Santa Maria         0.92 277   eP      Pb       23 25 15.6 -3.9
PSMA                                 eS      Sb       23 25 26.8 -4.7
      215nm,0.2s
BART  Pico Bartolome      1.29 313   i P     Pb       23 25 20.6 -5.2
BART                                 eS      Sb       23 25 35.7 -6.5
      343nm,0.4s
MIRA  Miradouro           1.36 311   eP      Pb       23 25 22.9 -4.1
MIRA                                 i S     Sb       23 25 38.2 -6.1
FRA1  Furnas              1.38 308   eP      Pn       23 25 23.0 -4.3
FRA1                                 i S     Sb       23 25 38.1 -6.8
PCNG  Congro              1.42 308   eP      Pn       23 25 23.8 -4.1
PCNG                                 eS      Sb       23 25 39.8 -6.2
      228nm,0.3s
PFAD  Fenais da Ajud      1.42 312   eP      Pn       23 25 23.6 -4.3
PFAD                                 i S     Sb       23 25 39.2 -6.9
VIF   Vila Franca         1.43 307   eP      Pn       23 25 23.0 -5.1
VIF                                  eS      Sb       23 25 39.2 -7.3
      92nm,0.3s
PRCH  Ribeira Ch          1.45 305   eP      Pn       23 25 23.2 -5.1
PRCH                                 i S     Sb       23 25 40.1 -6.8
      210nm,0.2s
MESC  Monte Escuro        1.47 308   eP      Pn       23 25 23.5 -5.0
MESC                                 eS      Sb       23 25 40.4 -7.0
LFA   Lagoa do Fogo       1.48 307   eP      Pn       23 25 23.7 -5.0
PMAT  Coroa da Mata       1.50 308   eP      Pn       23 25 24.1 -4.9
PMAT                                 eS      Sb       23 25 41.1 -7.2
      100nm,0.2s
PVER  Pico Vermelho       1.51 307   eP      Pn       23 25 24.0 -5.2
CML   Cha da Macela       1.52 306   eP      Pn       23 25 24.1 -5.2
CML                                  i S     Sb       23 25 41.0 -7.9
FAC   Faja de Cima        1.59 304   eP      Pn       23 25 25.2 -5.1
FAC                                  i S     Sb       23 25 43.5 -7.4
PSET  Sete Cidades        1.66 304   eP      Pn       23 25 25.9 -5.4
PSET                                 eS      Sn       23 25 44.9 -8.0
      141nm,0.3s
PSAN  Santo Antonio       1.68 305   eP      Pn       23 25 27.0 -4.6
PFET  Feteiras            1.70 303   eP      Pn       23 25 27.1 -4.8
SET2  Ginetes             1.73 304   eP      Pn       23 25 27.4 -4.9
SET4  Mosteiros           1.74 305   eP      Pn       23 25 27.9 -4.6
PFAV  Pico das Favas      3.05 307   eP      Pn       23 25 45.8 -5.4
PFAV                                 eS      Sn       23 26 18.9 -9.2
      19nm,0.2s
RIB2  Ribeirinha          3.08 306   eP      Pn       23 25 46.5 -5.2
RIB2                                 eS      Sn       23 26 19.8 -9.2
      48nm,0.2s
PVNV  Vila Nova           3.12 308   eP      Pn       23 25 47.1 -5.1
PVNV                                 eS      Sn       23 26 20.4  -10
      11nm,0.1s
PPAD  Pico dos Padre      3.17 306   eP      Pn       23 25 47.9 -5.0
PPAD                                 eS      Sn       23 26 21.9 -9.3
      21nm,0.3s
PBIS  Biscoitos           3.19 307   erx              23 26 24.0
ASBA  Santa Barbara       3.21 306   eP      Pn       23 25 48.6 -4.8
PSBA  Serra de Santa      3.23 306   eP      Pn       23 25 48.5 -5.3
PSBA                                 eS      Sn       23 26 23.1  -10
ROSA  Rosais              3.83 300   eP      Pn       23 25 57.2 -5.0
PICO  Pico                3.87 296   eP      Pn       23 25 57.7 -5.1
PICO                                 eS      Sn       23 26 39.1  -10
CALA  Caldeira            4.10 296   eP      Pn       23 26 00.7 -5.4
PCED  Cedros              4.12 296   eP      Pn       23 26 00.8 -5.5
```

IDC 22 23:56:06.4±20.0**, 5.43N**×**95.57E, h272**^{km}±139^{km}**, mb3.1**/2**, mb1 3.3**/3**, mb1mx2.9**/17**, mbtmp3.8**/3**, Error ellipse: s-maj=169.4km s-min=104.5km az=29.0, Northern Sumatera**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time     Res
                                     Op      ISC      h  m  s   ISC
CMAR  Chiang Mai Arr     13.37  14   P       P        23 59 06.7 -0.7
      0.3nm,0.3s,baz=201,slow=10,SNR=9.6
```

SONM	**Songino Array**	**43.26**	**11**	P	P	00 03 41.3	-1.7
	0.7nm,0.7s,baz=191,slow=9.2,SNR=8.0						
SONM				PcP	PcP	00 05 25.4	-1.9
	0.3nm,0.6s,baz=189,slow=3.3,SNR=3.9						
ZAL	**Zalesovo**	**49.15**	**352**	P	P	00 04 26.8	-2.0
	1.7nm,0.9s,baz=307,slow=8.6,SNR=9.2						

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*IDC **23** 00:00:00.3±2.1, 0.83S×90.99W, mb3.9/12, mb1 4.1/12, mb1mx4.0/21, mbtmp3.9/12, MS4.3/2, Ms1 4.2/2, ms1mx3.1/26, Error ellipse: s-maj=59.9km s-min=25.1km az=31.0*

*NEIC **23** 00:00:01.8±1.4, 0.88S×91.04W, h10^{km}, mb4.0/2, Error ellipse: s-maj=38.1km s-min=15.3km az=210.0*

ISC 23 00:00:00.2±1.7, 0.8S±0.3×91.0W±0.2, h10^{km}, n16, σ1^{s}01/16, mb3.9/13, MS4.2/2, Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	**22.50**	**64**	P	**P**	**00 05 03.2**	**+1.6**
	3.2nm,0.7s,mb3.9,baz=260,slow=11,SNR=2.7						
TXAR	**Lajitas Array**	**32.33**	**339**	P	**P**	**00 06 31.9**	**0.0**
	0.4nm,0.6s,mb3.4,baz=153,slow=8.4,SNR=4.0						
TXAR				LR	LR	00 17 49.9	
	comp=Z,325nm,21.6s,MS4.0,baz=180,slow=33						
BDFB	**Brasilia**	**44.91**	**111**	P	**P**	**00 08 17.0**	**-0.3**
	4.5nm,1.1s,mb4.2,baz=302,slow=8.4,SNR=3.9						
NVAR	**Mina Array Bea**	**46.44**	**330**	P	**P**	**00 08 31.0**	**+2.0**
	0.3nm,0.5s,mb3.5,baz=135,slow=8.9,SNR=3.3						
PDAR	**Pinedale Array**	**46.49**	**341**	P	**P**	**00 08 30.1**	**+0.6**
	0.3nm,0.7s,mb3.3,baz=130,slow=7.0,SNR=3.0						
ULM	**Lac du Bonnet**	**51.05**	**356**	P	**P**	**00 09 03.6**	**-1.0**
	0.6nm,0.4s,mb3.9,baz=148,slow=10,SNR=3.2						
ULM				LR	LR	00 31 16.3	
	comp=Z,477nm,20.2s,MS4.5,baz=339,slow=37						
SCHQ	**Schefferville**	**58.94**	**16**	P	**P**	**00 10 00.9**	**-1.1**
	3.0nm,1.1s,mb4.2,baz=218,slow=9.3,SNR=3.4						
YKA	**Yellowknife Ar**	**65.62**	**348**	P	**P**	**00 10 45.0**	**-1.3**
	0.8nm,0.8s,mb3.8,baz=148,slow=6.1,SNR=17						
YKA	**Yellowknife Ar**	**65.62**	**348**	P	**P**	**00 10 45.0**	**-1.3**
FRB	**Frobisher Bay**	**66.55**	**11**	P	**P**	**00 10 51.2**	**-1.1**
	1.8nm,0.8s,mb4.2,baz=188,slow=4.4,SNR=2.7						
FRB	**Frobisher Bay**	**66.55**	**11**	P	**P**	**00 10 51.2**	**-1.1**
DLBC	**Dease Lake**	**66.64**	**339**	P	**P**	**00 10 53.8**	**+0.8**
	2.0nm,0.8s,mb4.2,baz=243,slow=19,SNR=2.9						
INK	**Inuvik**	**74.88**	**345**	P	**P**	**00 11 43.1**	**+0.6**
	2.4nm,0.8s,mb4.2,baz=122,slow=6.6,SNR=7.2						
INK	**Inuvik**	**74.88**	**345**	*e*P	**P**	**00 11 43.1**	**+0.5**
	2.2nm,0.8s,mb4.1						
RES	**Resolute Bay**	**75.45**	**359**	P	**P**	**00 11 46.0**	**+0.2**
	0.7nm,0.8s,mb3.6						
ILAR	**Eielson Array**	**76.84**	**339**	P	**P**	**00 11 53.1**	**-0.6**
	1.5nm,0.8s,mb4.0,baz=137,slow=4.0,SNR=27						

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*IDC **23** 00:02:27.4±2.2, 2.77N×95.84E, mb4.0/5, mb1 4.2/6, mb1mx3.9/16, mbtmp4.0/6, Error ellipse: s-maj=87.8km s-min=22.2km az=61.0*

*NEIC **23** 00:02:32.0±0.7, 2.76N×95.90E, h30^{km}, mb4.3/1, Error ellipse: s-maj=26.5km s-min=8.1km az=57.0*

ISC 23 00:02:30.7±1.1, 2.8N±0.2×95.9E±0.2, h33^{km}, n12, σ0^{s}40/12, mb4.2/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.87**	**11**	Pn	**P**	**00 06 13.9**	**+0.4**
	baz=196,slow=10,SNR=4.5						
JIRN	**Jiri**	**26.44**	**340**	*e*P	**P**	**00 08 07.0**	**+0.4**
	8.9nm,0.6s,mb4.5						
PKI	**Pulchoki**	**26.63**	**339**	*e*P	**P**	**00 08 09.1**	**+0.7**
	7.3nm,0.5s,mb4.5						
DMN	**Daman**	**26.78**	**338**	*e*P	**P**	**00 08 09.6**	**-0.1**
	5.6nm,0.6s,mb4.3						
KKN	**Kakani**	**26.88**	**339**	*e*P	**P**	**00 08 10.4**	**-0.3**
	4.5nm,0.5s,mb4.3						
GKN	**Gorkha**	**27.31**	**338**	*e*P	**P**	**00 08 14.4**	**-0.2**
	12nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**43.96**	**123**	P	**P**	**00 10 37.0**	**+0.2**
	0.9nm,0.6s,mb3.7,baz=300,slow=9.3,SNR=9.7						
WB2	**Warramunga Arr**	**43.97**	**123**	*e*P	**P**	**00 10 36.7**	**-0.2**
ASAR	**Alice Springs**	**45.36**	**128**	P	**P**	**00 10 48.2**	**+0.2**
	0.3nm,0.5s,mb3.4,baz=301,slow=7.8,SNR=5.2						
SONM	**Songino Array**	**45.80**	**10**	P	**P**	**00 10 50.5**	**-0.7**
	6.3nm,1.1s,mb4.5,baz=187,slow=8.9,SNR=32						
SONM				PcP	PcP	00 12 28.6	-0.2
	0.5nm,0.6s,baz=194,slow=3.5,SNR=4.9						
ZAL	**Zalesovo**	**51.82**	**352**	P	**P**	**00 11 36.9**	**-0.6**
	1.4nm,0.3s,mb4.3,baz=288,slow=6.7,SNR=8.6						
ARCES	**ARCESS Array B**	**80.64**	**340**	P	**P**	**00 14 41.6**	**+0.2**
	2.9nm,0.8s,mb4.2,baz=90,slow=5.4,SNR=4.2						

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*NEIC **23** 00:02:30.2, 15.82N×61.56W, h29^{km}, MD3.7(TRN), After TRN.*

TRN 23 00:02:32.1, 15.90N×61.65W, h3^{km}, MD3.6, M3.1(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBL	**Barber's Block**	**0.41**	**155**	*e*P	Pg	00 02 39.6	-0.6
BBL				*e*S	Sg	00 02 44.6	-1.1
MDN	**Morne-Daniel**	**0.63**	**157**	*e*P	Pg	00 02 43.7	-0.9
MDN				*e*S	Sg	00 02 51.5	-1.4
DBCT	**Belle View Cho**	**0.69**	**155**	*e*P	Pg	00 02 44.8	-1.0
DBCT				*e*S	Sg	00 02 53.4	-1.6
BPA	**Boggy Peak**	**1.16**	**350**	*e*P	Pb	00 02 53.4	-1.0
BPA				*e*S	Sb	00 03 09.3	-0.3
CPB	**Codrington**	**1.74**	**354**	*e*P	Pn	00 03 01.6	-1.9
CPB				*e*S	Sn	00 03 23.8	-2.6

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*IDC **23** 00:19:54.6±1.4, 3.97N×94.22E, mb3.6/6, mb1 3.8/7, mb1mx3.7/18, mbtmp3.6/7, ML4.5/1, Error ellipse: s-maj=58.7km s-min=22.0km az=53.0*

*NEIC **23** 00:19:59.2±0.9, 3.94N×94.29E, mb4.4/1, Error ellipse: s-maj=30.5km s-min=13.1km az=63.0*

ISC 23 00:19:57.6±1.0, 3.9N±0.1×94.3E±0.2, h33^{km}, (h30^{km}±4.6^{km}:pP-P), n9, σ0^{s}89/9, mb3.7/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.13**	**17**	Pn	**P**	**00 23 31.0**	**+0.2**
	0.6nm,0.3s,baz=195,slow=13,SNR=6.0						
LSA	**Lhasa**	**25.80**	**354**	*e*P	**P**	**00 25 28.3**	**+0.6**
	9.1nm,0.8s,mb4.4						
SONM	**Songino Array**	**44.96**	**12**	P	**P**	**00 28 11.3**	**-0.2**
	0.3nm,0.7s,mb3.2,baz=198,slow=8.2,SNR=4.1						
WRA	**Warramunga Arr**	**45.92**	**123**	P	**P**	**00 28 18.6**	**-0.9**
	0.3nm,0.5s,mb3.5,baz=299,slow=9.2,SNR=5.3						
WRA				pP	pP	00 28 29.3	-0.1
	1.9nm,0.9s,baz=300,slow=9.1,SNR=13						
WRAB	**Tennant Creek**	**45.93**	**123**	P	**P**	**00 28 18.7**	**-0.8**
WRAB				*e*	pP	00 28 28.7	-0.7
ASAR	**Alice Springs**	**47.33**	**127**	P	**P**	**00 28 32.5**	**+2.0**
	0.2nm,0.5s,mb3.3,baz=316,slow=9.0,SNR=3.3						
ASAR				pP	pP	00 28 39.6	-0.8
	0.7nm,0.8s,baz=302,slow=8.4,SNR=4.5						
BVAR	**Borovoye Array**	**52.76**	**342**	P	**P**	**00 29 10.9**	**-0.7**
	2.0nm,1.0s,mb4.0,baz=146,slow=5.2,SNR=5.4						
FINES	**FINESS Array B**	**76.26**	**333**	P	**P**	**00 31 43.8**	**-0.7**
	1.1nm,0.7s,mb3.9,baz=104,slow=7.9,SNR=4.1						
GERES	**GERESS Array B**	**80.87**	**319**	P	**P**	**00 32 10.8**	**+0.8**
	0.5nm,0.8s,mb3.5,baz=90,slow=7.8,SNR=3.5						

WEL 23 00:28:25.8±0.3, 38.46S×176.20E, h148^{km}±2^{km}, ML3.5/7, Error ellipse: s-maj=4.0km s-min=3.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.74**	**162**	PN	P	00 28 48.5	-0.3
BKZ				SN	S	00 29 05.4	-0.9
BKZ				SN	S	00 29 05.4	-0.9
MGZ	**Maungaku**	**0.74**	**224**	PN	P	00 28 48.3	-0.4
NGZ	**Ngauruhoe**	**0.85**	**213**	PN	P	00 28 49.1	-0.3
CNZ	**Chateau**	**0.89**	**214**	PN	P	00 28 49.5	-0.2
TUVZ	**Tukino**	**0.91**	**208**	PN	P	00 28 49.8	0.0
TUVZ				SN	S	00 29 08.4	+0.1
MOVZ	**Moawhango**	**1.00**	**200**	PN	P	00 28 50.1	-0.5
MOVZ				SN	S	00 29 08.6	-1.0
TSZ	**Takapari Road**	**1.60**	**186**	PN	P	00 28 56.1	-0.5
TSZ				SN	S	00 29 19.4	-1.0
BFZ	**Birch Farm**	**2.21**	**179**	PN	P	00 29 02.7	-1.2
BFZ				SN	S	00 29 30.1	-2.8
MRZ	**Mangatainoka R**	**2.25**	**192**	PN	P	00 29 02.7	-1.6
KIW	**Kapiti Island**	**2.59**	**202**	PN	P	00 29 06.2	-2.4
MTW	**Mount Morrison**	**2.74**	**191**	PN	P	00 29 08.0	-2.5
CAW	**Cannon Point**	**2.78**	**198**	PN	P	00 29 08.5	-2.5
MRW	**Makara Radio**	**2.99**	**202**	PN	P	00 29 10.8	-2.9
THZ	**Tophouse**	**4.15**	**216**	*e*PN	P	00 29 23.1	-5.7
THZ				SN	S	00 30 13.7	-3.6
MQZ	**McQueen's Vall**	**5.88**	**206**	SN	S	00 30 48.8	-10

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*NEIC **23** 00:29:17.1±1.4, 24.22S×66.63W, h102^{km}±44^{km}, mb4.3/1, Error ellipse: s-maj=36.3km s-min=10.7km az=99.0*

*IDC **23** 00:29:17.1±2.4, 24.22S×66.79W, h115^{km}±80^{km}, mb1 3.8/4, mb1mx3.5/16, mbtmp4.2/4, ML4.4/4, Error ellipse: s-maj=57.9km s-min=14.0km az=90.0*

ISC 23 00:29:15.8±2.1, 24.22S±0.05×66.7W±0.4, h124^{km}±59^{km}, n8, σ1^{s}03/13, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.56**	**308**	P	**P**	**00 29 58.9**	**+1.5**
	19nm,0.3s,baz=134,slow=5.4,SNR=514						
LVC				S	**S**	**00 30 28.5**	**-0.3**
	80nm,0.3s,baz=306,slow=18,SNR=51						
CFAA	**Coronel Fontan**	**7.48**	**190**	P	**P**	**00 31 03.7**	**+0.2**
	baz=12,slow=14						
CFAA				S	**S**	**00 32 25.5**	**-1.7**
CFAA	**Coronel Fontan**	**7.48**	**190**	P	**P**	**00 31 03.7**	**+0.2**
CFAA				S	**S**	**00 32 25.5**	**-1.7**
LPAZ	**La Paz**	**8.00**	**350**	P	**P**	**00 31 11.5**	**+0.9**
	1.4nm,0.3s,baz=170,slow=10.0,SNR=20						
LPAZ				S	**S**	**00 32 38.4**	**-1.5**
	0.0nm,0.3s,baz=50,slow=19,SNR=3.1						
LPAZ	**La Paz**	**8.00**	**350**	*e*P	**P**	**00 31 10.6**	**0.0**
	2.8nm,0.3s						
LPAZ				S	**S**	**00 32 38.4**	**-1.5**
PLCA	**Paso Flores**	**16.77**	**190**	P	**P**	**00 33 05.8**	**+1.2**
	0.2nm,0.3s,baz=348,slow=14,SNR=4.9						
BDFB	**Brasilia**	**19.54**	**68**	P	**P**	**00 33 36.5**	**+0.5**
	1.4nm,0.3s,baz=247,slow=10,SNR=27						
BAO	**Brasilia Array**	**19.56**	**68**	*e*P	**P**	**00 33 35.9**	**-0.4**

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*THR **23** 01:58:07.7±0.7, 30.78N×56.80E, h14^{km}±8^{km}, ML3.1*

*CSEM **23** 01:58:08.5±0.1, 30.71N×56.79E, h18^{km}, ML3.8/1, Error ellipse: s-maj=5.2km s-min=2.4km az=52.0*

*TEH **23** 01:58:10.1, 30.57N×56.69E, h10^{km}, Mn3.4*

ISC 23 01:58:08.1±0.8, 30.77N±0.07×56.8E±0.1, h10^{km}, n14, σ0^{s}68/17, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.79**	**184**	*e*PG	**Pg**	**01 58 23.0**	**-0.9**
KRBR				AML	AML	01 58 39.8	
	comp=E,525nm,0.1s						
IBAF	**Bafgh**	**1.35**	**308**	Pn	**Pn**	**01 58 32.6**	**-0.5**
IMEH	**Mehriz**	**1.99**	**289**	Pn	**Pn**	**01 58 43.1**	**+0.9**
ICHK	**Chekchek**	**2.53**	**306**	Pn	**Pn**	**01 58 49.5**	**-0.5**
BNDS	**Bandar-Abbas**	**3.40**	**190**	*e*PN	**Pn**	**01 59 03.0**	**+0.7**
BNDS				AML	AML	02 00 06.5	
	comp=N,31nm,0.6s						
BNDS	**Bandar-Abbas**	**3.40**	**190**	*e*Pn	**Pn**	**01 59 03.0**	**+0.6**
	SNR=52						
ZHSF	**Zahedan**	**3.62**	**108**	*e*PN	**Pn**	**01 59 05.6**	**+0.2**
ZHSF				AML	AML	02 00 11.3	
	comp=N,29nm,0.6s						
NASN	**Na'in**	**3.97**	**302**	*e*PN	**Pn**	**01 59 10.2**	**-0.2**
NASN				*e*SG	**Sg**	**02 00 10.4**	**-10**
NASN				AML	AML	02 00 23.2	
	comp=N,40nm,0.5s						
NASN	**Na'in**	**3.97**	**302**	*e*Pn	**Pn**	**01 59 10.2**	**-0.2**
	SNR=52						
NASN				*e*Sg	**Sg**	**02 00 10.4**	**-10**
	comp=N,40nm,0.5s,SNR=90						
IFIR	**Firoozkooh**	**5.93**	**326**	Pn	**Pn**	**01 59 38.2**	**0.0**
IDMV	**Damavand**	**6.25**	**321**	Pn	**Pn**	**01 59 42.6**	**-0.1**
DAMV	**Damavand**	**6.33**	**321**	*e*PN	**Pn**	**01 59 43.1**	**-0.6**
IAFJ	**Afjeh**	**6.63**	**321**	Pn	**Pn**	**01 59 48.0**	**-0.1**
IAFJ				Sn	**Sn**	**02 01 00.3**	**-4.2**
IRAZ	**Razeghan**	**7.40**	**310**	Pn	**Pn**	**02 00 00.2**	**+1.3**

GUC 23 02:15:24.8±1.1, 37.74S×74.66W, h41^{km}±19^{km}, ML4.5, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMCH	**Temuco**	**1.90**	**123**	*e*P	P	02 16 12.5	+17
TMCH				*i* S	S	02 16 34.5	+16
CCHI	**Chillan**	**2.35**	**62**	*e*P	P	02 16 01.6	-0.2
CCHI				*i* S	S	02 16 30.0	+0.3
CCHI				AMP		02 16 42.7	
	comp=N,2µm,0.6s						
OSCH	**Osorno**	**3.07**	**158**	*e*P	P	02 16 11.5	-0.6
OSCH				*i* S	S	02 16 47.5	-0.5
OSCH				AMP		02 17 17.3	
	comp=E,837nm,0.7s						
LNCH	**Linares**	**3.10**	**53**	*e*P	P	02 16 12.6	+0.2
LNCH				*i* S	S	02 16 47.8	-0.7
LNCH				AMP		02 17 01.9	
	comp=N,2µm,0.6s						
LMEL	**Las Melosas**	**5.31**	**44**	*e*P	P	02 16 43.0	-0.6

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*IDC **23** 02:18:43.6±0.6, 65.71S×133.63E, mb4.6/9, mb1 4.7/10, mb1mx4.5/17, mbtmp4.6/10, ML4.6/1, MS4.2/4, Ms1 4.2/4, ms1mx3.5/16, Error ellipse: s-maj=33.0km s-min=16.1km az=94.0*

*NEIC **23** 02:18:45.0±0.2, 65.72S×133.50E, h10^{km}, mb4.7/7, Error ellipse: s-maj=15.9km s-min=6.8km az=98.0*

ISC 23 02:18:43.5±0.5, 65.71S±0.07×133.5E±0.5, h10^{km}, n100, σ0^{s}97/31, mb4.5/14, MS4.1/3, 9C-2D, South of Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**14.58**	**156**	Pn	**P**	**02 22 05.9**	**-5.3**
	2.7nm,0.3s,baz=306,slow=12,SNR=68						
VNDA				Sn	**S**	**02 24 43.0**	**-11**
	4.0nm,0.3s,baz=184,slow=20,SNR=4.2						
VNDA				LR	LR	02 28 03.9	
	comp=Z,886nm,18.3s,baz=341,slow=38						
VNDA	**Vanda**	**14.58**	**156**	Pn	**P**	**02 22 05.9**	**-5.3**
VNDA				Sn	**S**	**02 24 43.0**	**-11**
VNDA				LR	LR	02 28 03.9	
SBA	**Scott Base**	**15.63**	**154**	*e*P	**P**	**02 22 17.6**	**-7.3**
	69nm,0.9s						
MAW	**Mawson**	**26.67**	**234**	LR	LR	02 35 14.8	
	comp=Z,610nm,18.8s,MS4.2,baz=72,slow=37						
STKA	**Stephens Creek**	**34.22**	**12**	*e*P	**P**	**02 25 26.2**	**-4.9**
	4.5nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**34.22**	**12**	P	**P**	**02 25 31.1**	**0.0**
	5.5nm,0.6s,mb4.6,baz=187,slow=8.3,SNR=6.4						
URZ	**Urewera**	**37.15**	**64**	P	**P**	**02 25 57.8**	**+2.0**
	8.2nm,1.1s,mb4.5,baz=224,slow=1.3,SNR=3.7						
URZ				LR	LR	02 39 13.9	
	comp=Z,209nm,20.5s,MS3.9,baz=335,slow=33						
SNAA	**Sanae**	**39.73**	**200**	*e*	**P**	**02 26 18.0**	**+0.9**
SNAA	**Sanae**	**39.73**	**200**	*e*	**P**	**02 26 36.4**	**+19**
SNAA	**Sanae**	**39.73**	**200**	P	**P**	**02 26 17.2**	**0.0**
	4.9nm,0.8s,mb4.3,baz=178,slow=11,SNR=52						
SNAA	**Sanae**	**39.73**	**200**	⇑*i*P	**P**	**02 26 17.1**	**0.0**
SNAA				*e*		02 26 36.4	
VNA3	**Neumayer Olymp**	**41.03**	**197**	*e*	**P**	**02 26 28.9**	**+1.1**
VNA3	**Neumayer Olymp**	**41.03**	**197**	⇑*i*P	**P**	**02 26 27.5**	**-0.3**
VNA3				*e*		02 26 48.0	
VNA2	**Neumayer--Watz**	**41.03**	**198**	⇑*i*P	**P**	**02 26 27.7**	**-0.1**
VNA2				*e*		02 26 47.9	
VNA1	**Neumayer--Stat**	**41.40**	**198**	⇑*i*	**P**	**02 26 39.0**	**+8.2**
VNA1	**Neumayer--Stat**	**41.40**	**198**	*e*	**P**	**02 26 40.3**	**+9.5**
ASPA	**Alice Springs**	**42.04**	**1**	*e*P	**P**	**02 26 37.2**	**+0.7**
ASAR	**Alice Springs**	**42.04**	**1**	P	**P**	**02 26 36.8**	**+0.2**
	5.1nm,0.7s,mb4.3,baz=174,slow=9.2,SNR=44						
WB2	**Warramunga Arr**	**45.75**	**1**	⇓*i*P	**P**	**02 27 05.4**	**-1.1**
WRA	**Warramunga Arr**	**45.75**	**1**	P	**P**	**02 27 05.8**	**-0.7**
	7.4nm,0.9s,mb4.6,baz=184,slow=6.9,SNR=92						
WRAB	**Tennant Creek**	**45.76**	**1**	*e*P	**P**	**02 27 05.9**	**-0.7**
	16nm,1.0s,mb4.9						
CTA	**Charters Tower**	**46.37**	**17**	P	**P**	**02 27 12.0**	**+0.6**
	3.6nm,0.8s,mb4.3,baz=191,slow=10,SNR=3.7						
FITZ	**Fitzroy Crossi**	**47.86**	**350**	*e*P	**P**	**02 27 24.1**	**+0.9**
	2.1nm,0.8s,mb4.2						
KAKA	**Kakadu**	**52.94**	**359**	*e*P	**P**	**02 28 01.6**	**-0.4**
	9.2nm,0.4s,mb5.1						
USHA	**Ushuaia**	**58.63**	**165**	P	**P**	**02 28 42.7**	**+0.3**
	13nm,0.9s,mb5.0,baz=145,slow=11,SNR=3.3						
TBI	**Tubuai**	**63.65**	**88**	*e*LR	LR	02 48 02.5	
	151nm,24.8s						
PPT	**Papeete**	**68.76**	**86**	*e*LR	LR	02 50 36.2	
	188nm,28.0s						
RKT	**Rikitea**	**69.81**	**101**	*e*LR	LR	02 51 02.6	
	285nm,38.0s						
BOSA	**Boshof**	**71.33**	**242**	*e*P	**P**	**02 30 03.6**	**-1.4**
	4.7nm,0.7s,mb4.5						
PLCA	**Paso Flores**	**72.26**	**161**	P	**P**	**02 30 10.8**	**+0.5**
	7.1nm,0.8s,mb4.6,baz=193,slow=7.8,SNR=16						
PLCA	**Paso Flores**	**72.26**	**161**	*e*P	**P**	**02 30 10.5**	**+0.3**
	9.3nm,0.9s,mb4.7						
RPN	**Rapa Nui**	**75.85**	**125**	LR	LR	02 58 43.9	
	comp=Z,136nm,20.6s,MS4.2,baz=300,slow=32						
TRQA	**Tornquist**	**75.87**	**167**	*e*P	**P**	**02 30 30.8**	**-0.3**
	4.3nm,0.9s,mb4.4						
MATP	**Matopo**	**77.55**	**248**	P	**P**	**02 30 41.9**	**+1.0**
	3.9nm,0.8s,mb4.4,baz=154,slow=6.3,SNR=8.6						
CHKZ	**Chkalovo**	**128.28**	**318**	*e*PKPdf	PKPdf	02 37 50.5	-1.6
TXAR	**Lajitas Array**	**129.77**	**107**	SKPbc		02 41 14.1	
	0.6nm,0.9s,baz=191,slow=6.4,SNR=5.4						
NVAR	**Mina Array Bea**	**131.69**	**88**	SKPbc		02 41 22.4	
	0.8nm,0.8s,baz=207,slow=5.0,SNR=4.8						
PDAR	**Pinedale Array**	**138.94**	**92**	PKhKP		02 38 06.7	
	0.5nm,0.7s,baz=162,slow=4.7,SNR=4.3						
KBA	**Koelnbreinsper**	**143.76**	**269**	⇑*i*P	PKPbc	02 38 16.3	0.0
OKC	**Ostrava-Krasne**	**143.94**	**276**	*e*PKP	PKPdf	02 38 21.7	+1.0
SMRF	**Simiane la Rot**	**144.43**	**258**	*e*PKP1	PKPbc	02 38 19.8	+1.5
	18nm,0.8s						
ESDC	**Sonseca Array**	**144.50**	**244**	PKP	PKPdf	02 38 19.1	-2.9
	2.5nm,0.6s,baz=151,slow=1.1,SNR=15						
MBDF	**Montbardon**	**144.56**	**260**	*e*PKP1	PKPbc	02 38 20.4	+1.7
	54nm,0.8s						
WTTA	**Wattenberg**	**144.61**	**268**	⇑*i*P	PKPbc	02 38 19.3	+0.6
WATA	**Walderalm**	**144.69**	**268**	⇑*i*P	PKPbc	02 38 19.2	+0.2
SQTA	**Sankt Quirin**	**144.75**	**267**	⇑*i*P	PKPbc	02 38 20.1	+1.0
BNI	**Bardonecchia**	**144.87**	**261**	*e*PKPdf	PKPdf	02 38 19.5	-3.0
MOTA	**Moosalm**	**144.90**	**267**	⇓*i*P	PKPbc	02 38 20.4	+0.9
EVO	**Evora**	**144.95**	**238**	*e*PKIKP	PKPdf	02 38 21.4	-1.5
	27nm,0.9s						
BLO	**Bloomington**	**144.99**	**119**	*e*PKPdf	PKPdf	02 38 18.6	-4.3
GERES	**GERESS Array B**	**145.00**	**271**	PKP	PKPdf	02 38 20.2	-2.4
	5.1nm,0.7s,baz=149,slow=3.7,SNR=58						
SUW	**Suwalki**	**145.05**	**285**	*e*PKPdf	PKPdf	02 38 20.4	-2.2
ORIF	**Oris-en-Rattie**	**145.08**	**260**	*e*PKP1	PKPbc	02 38 23.2	+3.1
	8.9nm,0.7s						
DPC	**Dobruska-Polom**	**145.09**	**275**	*e*PKP	PKPdf	02 38 21.5	-1.2
DPC				*e*x	x	02 38 32.0	
LPG	**La Plagne**	**145.20**	**261**	*e*PKP1	PKPbc	02 38 22.0	+1.6
	16nm,0.7s						
LASF	**Ste Croix**	**145.21**	**257**	*e*PKP1	PKPbc	02 38 22.1	+1.7
LPL	**La Plagne**	**145.22**	**261**	*e*PKP1	PKPbc	02 38 22.0	+1.6
	21nm,0.7s						
MTLF	**Montolieu**	**145.25**	**254**	*e*PKP1	PKPbc	02 38 21.4	+0.8
KHC	**Kasperske Hory**	**145.28**	**271**	*e*PKP	PKPdf	02 38 21.1	-2.0
KHC				*e*x	x	02 38 36.9	
UPC	**Upice**	**145.34**	**275**	*e*PKP	PKPdf	02 38 22.3	-0.8
DAVA	**Damuels**	**145.36**	**266**	⇑*i*P	PKPbc	02 38 22.0	+1.3
KSP	**Ksiaz**	**145.47**	**276**	*e*P	PKPbc	02 38 22.0	+1.1
VIVF	**Saint-Julien-l**	**145.52**	**258**	*e*PKP1	PKPbc	02 38 22.7	+1.5
PRU	**Pruhonice**	**145.54**	**273**	*e*PKP	PKPdf	02 38 22.6	-0.9
EDM	**Edmonton**	**145.62**	**78**	*e*PKPdf	PKPdf	02 38 21.9	-1.7
EPF	**Esparros**	**145.73**	**252**	*e*PKP1	PKPbc	02 38 23.3	+1.5
	12nm,0.8s						
DGMT	**Dagmar**	**145.77**	**92**	*e*PKPdf	PKPdf	02 38 23.4	-0.5
PVCC	**Panska Ves**	**145.95**	**274**	*e*PKP	PKPdf	02 38 24.0	-0.1
ETSF	**Etsaut**	**145.97**	**251**	*e*PKP1	PKPbc	02 38 24.5	+2.1
	11nm,0.6s						
CABF	**La Chapelle**	**146.37**	**262**	*e*PKP1	PKPbc	02 38 24.4	+1.2
	41nm,1.2s						
SJPF	**Ste Jean**	**146.41**	**250**	*e*PKP1	PKPbc	02 38 26.0	+2.6
	16nm,0.8s						
BRG	**Berggiesshubel**	**146.47**	**274**	*e*P	PKPbc	02 38 25.3	+2.0
NKC	**Novy Kostel**	**146.60**	**272**	*e*PKP	PKPdf	02 38 27.4	+2.1
CAF	**Calviac**	**146.63**	**256**	*e*PKP1	PKPbc	02 38 25.2	+1.4
GRA1	**Grafenberg Arr**	**146.69**	**270**	*e*PKP	PKPdf	02 38 26.0	+0.6
GRF	**Grafenberg Arr**	**146.69**	**270**	*e*PKP	PKPdf	02 38 26.0	+0.6
ACSO	**Alum Creek Sta**	**147.18**	**123**	*e*PKPdf	PKPdf	02 38 23.6	-3.0
ACSO				*e*PKPbc	PKPdf	02 38 28.3	+1.7
CLL	**Collm**	**147.18**	**273**	*e*PKP1	PKPdf	02 38 27.0	+0.8
MOX	**Moxa**	**147.25**	**271**	*e*P	PKPdf	02 38 26.9	+0.6
MOX	**Moxa**	**147.25**	**271**	*i* P	PKPdf	02 38 26.9	+0.6
	logA/T=1.0						
SMF	**Signal de Mont**	**147.32**	**259**	*e*PKP1	PKPdf	02 38 28.1	+1.5
	9.4nm,0.7s						
HAU	**Haudompre**	**147.38**	**263**	*e*PKP1	PKPdf	02 38 27.5	+0.9
	24nm,1.1s						
AVF	**Avril sur Loir**	**147.63**	**259**	*e*PKP1	PKPdf	02 38 28.2	+1.1
	19nm,1.0s						
BGF	**Bois d'Agland**	**147.65**	**258**	*e*PKP1	PKPdf	02 38 29.1	+2.0
	14nm,0.8s						
TCF	**Toulx Ste Croi**	**147.69**	**257**	*e*PKP1	PKPdf	02 38 28.8	+1.6
SSF	**Saint Saulge**	**147.79**	**259**	*e*PKP1	PKPdf	02 38 28.0	+0.7
	8.6nm,0.9s						
JOF	**Joensuu**	**148.14**	**302**	*e*p	PKPdf	02 38 28.1	+0.7
	5.0nm,0.7s						
MEZF	**Maizieres J'vi**	**148.31**	**263**	*e*PKP1	PKPdf	02 38 30.2	+2.1
	8.4nm,0.7s						
INK	**Inuvik**	**148.56**	**45**	*e*PKPbc	PKPdf	02 38 29.7	+1.7
FINES	**FINESS Array B**	**149.08**	**297**	PKPbc	PKPdf	02 38 31.1	+2.2
	3.3nm,0.7s,baz=117,slow=4.4,SNR=14						
MVL	**Millersville**	**149.15**	**132**	*e*PKPbc	PKPdf	02 38 31.8	+2.0
KAF	**Kangasniemi**	**149.42**	**298**	*e*p	PKPdf	02 38 31.8	+2.3
	6.6nm,0.8s						
BAIF	**Baives**	**149.87**	**264**	*e*PKP1	PKPdf	02 38 33.7	+3.2
	13nm,0.9s						
LDF	**La Druitiere**	**150.49**	**257**	*e*PKP1	PKPdf	02 38 35.4	+3.9
ULM	**Lac du Bonnet**	**150.58**	**97**	PKPbc	PKPdf	02 38 34.1	+2.5
	3.2nm,0.6s,baz=246,slow=2.1,SNR=11						
FLN	**La Foliniere**	**150.76**	**257**	*e*PKP1	PKPdf	02 38 36.0	+4.1
YKA	**Yellowknife Ar**	**151.41**	**64**	PKPbc	PKPdf	02 38 37.0	+4.5
	1.2nm,0.6s,baz=242,slow=1.9,SNR=33						
KEV	**Kevo**	**153.42**	**312**	*e*p	PKPdf	02 38 34.6	-0.6
	25nm,1.4s						
ARCES	**ARCESS Array B**	**153.79**	**311**	PKPbc	PKPdf	02 38 42.5	+6.8
	5.9nm,1.0s,baz=117,slow=2.0,SNR=3.6						
ARCES				PKPab	PKPab	02 38 56.2	+0.2
	3.2nm,0.7s,baz=146,slow=3.3,SNR=5.6						
SCHQ	**Schefferville**	**165.25**	**128**	PKPab	PKPab	02 39 44.8	-0.9
	2.1nm,0.7s,baz=187,slow=2.2,SNR=8.3						

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*IDC **23** 02:26:24.0±0.8, 1.35S×99.26E, mb4.0/5, mb1 4.2/6, mb1mx4.0/14, mbtmp4.0/6, ML4.2/1, MS3.2/1, Ms1 3.4/1, ms1mx2.4/17, Error ellipse: s-maj=30.3km s-min=21.1km az=48.0*

*NEIC **23** 02:26:28.7±0.6, 1.37S×99.35E, h30^{km}, mb4.6/1, Error ellipse: s-maj=19.7km s-min=11.6km az=58.0*

ISC 23 02:26:27.0±0.8, 1.3S±0.1×99.3E±0.2, h33^{km}, n11, σ0^{s}56/8, mb4.1/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**19.66**	**359**	P	**P**	**02 30 56.0**	**-0.1**
	0.3nm,0.3s,baz=189,slow=10.0,SNR=6.5						
CMAR				LR	LR	02 39 29.9	
	comp=Z,71nm,19.7s,baz=175,slow=40						
WRA	**Warramunga Arr**	**38.94**	**121**	P	**P**	**02 33 51.6**	**-0.2**
	3.5nm,0.5s,mb4.3,baz=301,slow=9.1,SNR=36						
WRA				PcP	PcP	02 36 01.8	-0.8
	0.1nm,0.4s,baz=312,slow=2.4,SNR=5.3						
WRAB	**Tennant Creek**	**38.95**	**121**	*e*P	**P**	**02 33 51.5**	**-0.3**
	8.1nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	**38.95**	**121**	*e*P	**P**	**02 33 51.5**	**-0.4**
ASAR	**Alice Springs**	**40.22**	**126**	P	**P**	**02 34 03.0**	**+0.6**
	1.3nm,0.8s,mb3.7,baz=296,slow=8.4,SNR=8.6						
ASAR				PcP	PcP	02 36 06.8	+0.2
	0.6nm,0.8s,baz=276,slow=2.3,SNR=5.2						
SONM	**Songino Array**	**49.34**	**6**	P	**P**	**02 35 15.9**	**+0.7**
	0.6nm,0.5s,mb3.9,baz=190,slow=10,SNR=5.4						
SONM				PcP	PcP	02 36 38.0	+0.2
	0.3nm,0.5s,baz=175,slow=4.3,SNR=3.6						
MATP	**Matopo**	**71.56**	**249**	P	**P**	**02 37 47.8**	**+0.6**
	4.7nm,0.7s,mb4.5,baz=79,slow=6.1,SNR=14						
BRTR	**Keskin Array B**	**72.35**	**312**	P	**P**	**02 37 50.5**	**-1.0**
	0.6nm,0.8s,mb3.6,baz=135,slow=7.0,SNR=4.1						
TXAR	**Lajitas Array**	**144.58**	**36**	PKP	PKPdf	02 46 02.5	+1.6
	0.9nm,0.5s,baz=198,slow=1.0,SNR=22						
CFAA	**Coronel Fontan**	**145.18**	**199**	PKPbc	PKPbc	02 46 04.0	+1.7
	baz=150,slow=1.2						

CFAA	**Coronel Fontan**	**145.18**	**199**	PKPbc	PKPbc	02 46 04.0	+1.7

IDC 23 02:38:19.9±4.4**, 23.16S**×**148.15E, mb1 3.5**/4**, mb1mx3.5**/10**, mbtmp3.3**/4**, ML3.0**/4**, Error ellipse: s-maj=51.4km s-min=22.6km az=86.0, Queensland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**3.53**	**330**	Pn	Pn	02 39 16.8	-0.4
	1.6nm,0.3s,baz=151,slow=14,SNR=21						
CTA				Pg	Pg	02 39 26.1	-4.3
	8.1nm,0.3s,baz=149,slow=16,SNR=46						
CTA				Sn	Sn	02 39 59.6	-0.6
	2.6nm,0.3s,baz=41,slow=22,SNR=6.4						
CTA				Lg		02 40 11.0	
	4.6nm,0.3s,baz=59,slow=19,SNR=5.8						
STKA	**Stephens Creek**	**10.45**	**212**	Pn	P	02 40 50.1	-4.1
	0.1nm,0.3s,baz=44,slow=13,SNR=2.2						
STKA				Sn	S	02 42 45.2	-8.0
	0.1nm,0.3s,baz=258,slow=19,SNR=2.9						
ASAR	**Alice Springs**	**13.09**	**265**	Pn	P	02 41 27.1	-2.9
	0.1nm,0.3s,baz=89,slow=14,SNR=12						
WRA	**Warramunga Arr**	**13.24**	**281**	Pn	P	02 41 28.2	-3.8
	0.1nm,0.3s,baz=103,slow=12,SNR=5.0						
WRA				Lg		02 45 22.0	
	0.1nm,0.3s,baz=99,slow=25,SNR=5.4						

BJI ***23*** *02:42:09.2, 2.97N×95.54E, h21^{km}, mB5.4, mb5.3, Ms5.1, Msz4.9*

MOS ***23*** *02:42:10.6±0.9, 3.00N×95.53E, h33^{km}, mb5.3/42, MS4.8/6, Error ellipse: s-maj=12.1km s-min=5.8km az=118.6*

IDC ***23*** *02:42:10.8±0.5, 2.87N×95.42E, h23^{km}±2^{km}, mb4.5/14, mb1 4.6/14, mb1mx4.5/19, mbtmp4.7/14, ML4.9/1, MS4.5/11, Ms1 4.5/11, ms1mx4.3/18, Error ellipse: s-maj=22.1km s-min=11.1km az=50.0*

NEIC ***23*** *02:42:11.1±0.1, 2.89N×95.46E, mb5.1/52, MS4.5/7, Error ellipse: s-maj=4.8km s-min=3.3km az=54.0*

HRVD ***23*** *02:42:11.1±0.4, 2.32N×95.19E, h44^{km}±1^{km}, MW4.9/38, Centroid moment Tensor Solution. LP body waves: s25,c36;Mantle waves: s38,c58; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.82±.20; $M_{\theta\theta}$-1.76±.12; $M_{\phi\phi}$-0.06±.17; $M_{r\theta}$1.00±.10; $M_{\theta\phi}$1.82±.09; $M_{\phi r}$-0.77±.14; Best double couple: $M_0$2.69×10^{16} NP1:ϕ_s295°,δ31°,λ79°. NP2:ϕ_s128°,δ59°,λ97°. Principal axes: T 2.146, Plg75°, Azm56°; N 1.083, Plg6°, Azm304°; P -3.234, Plg14°, Azm213°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 23 02:42:09.3±0.2**, 2.89N**±0.03×**95.48E**±0.03**, h25^{km}, h25^{km}±.5^{km}:pP-P, n271, σ0^{s}94**/246**, mb5.0**/97**, MS4.8**/43**, 27C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.78**	**73**	P	**Pn**	**02 43 36.5**	**+0.8**
SNG	**Songkhla**	**6.66**	**50**	P	**Pn**	**02 43 48.0**	**-0.1**
	282nm,1.2s						
KGM	**Kluang**	**7.88**	**96**	P	**Pn**	**02 44 06.5**	**+1.3**
NNT	**Nongplab**	**10.52**	**23**	P	**P**	**02 44 52.0**	**+10**
NST	**Nakhon Sawan**	**13.50**	**20**	P	**P**	**02 45 24.0**	**+2.0**
UBT	**Ubonrachathani**	**15.46**	**37**	P	**P**	**02 45 48.5**	**+0.8**
CM31	**Chiang Mai Arr**	**15.84**	**12**	*e*P	**P**	**02 45 53.1**	**+0.6**
	132nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.84**	**12**	Pn	**P**	**02 45 52.2**	**-0.3**
	1.5nm,0.3s,baz=204,slow=12,SNR=97						
CMAR				LR	LR	02 52 58.6	
	comp=Z,2µm,18.8s,baz=195,slow=41						
CHG	**Chiang Mai**	**16.19**	**12**	⇓P	**P**	**02 45 56.8**	**-0.1**
	23nm,0.8s						
NANT	**Nan**	**16.62**	**18**	P	**P**	**02 46 03.0**	**+0.6**
MDRS	**Chennai**	**18.15**	**305**	*e*S	**S**	**02 49 43.0**	**+2.7**
MDRS				*e*		02 50 02.0	
MDRS				*e*		02 50 52.0	
VIS	**Vishakhapatnam**	**18.96**	**322**	*i* P	**P**	**02 46 29.5**	**-1.9**
CAL	**Calcutta**	**20.73**	**341**	*e*	**P**	**02 46 46.1**	**-4.6**
CAL				*e*		02 50 46.4	
KKM	**Kota Kinabalu**	**20.90**	**81**	P	**P**	**02 46 53.0**	**+0.5**
QIZ	**Qiongzhong**	**21.32**	**40**	P	**P**	**02 46 55.5**	**-1.2**
QIZ				S	**S**	**02 50 45.6**	**-1.7**
QIZ				XS		02 50 57.4	
QIZ				SS	SS	02 51 20.1	-1.9
QIZ				LR	LR		
	comp=N,3µm,15.7s						
QIZ				LR	LR		
	comp=Z,3µm,17.0s,MS4.8						
QIZ	**Qiongzhong**	**21.32**	**40**	*e*P	**P**	**02 46 56.6**	**-0.1**
	comp=Z,15nm,0.8s,mb4.4						
HYB	**Hyderabad**	**22.01**	**312**	*e*P	**P**	**02 47 04.5**	**+0.8**
HYB				*e*		02 47 12.0	
HYB				*e*S	**S**	**02 51 06.0**	**+5.9**
HYB	**Hyderabad**	**22.01**	**312**	*i* P	**P**	**02 47 04.5**	**+0.8**
HYB				*e*		02 47 12.0	
HYB				*e*S	**S**	**02 51 06.0**	**+5.9**
TSM	**Tawau**	**22.39**	**86**	P	**P**	**02 47 08.5**	**+1.1**
MNGI	**Mangalore**	**22.75**	**297**	*i*	**P**	**02 47 19.7**	**+8.6**
	comp=Z,68nm,1.0s,mb5.0						
MNGI				*i*		02 51 13.6	
BLSP	**Bilaspur**	**23.11**	**327**	*e*P	**P**	**02 47 15.2**	**+0.7**
KMI	**Kunming**	**23.19**	**17**	P	**P**	**02 47 17.3**	**+2.0**
KMI				AP		02 47 24.3	
KMI				PP	PP	02 47 46.3	+0.2
KMI				S	**S**	**02 51 19.0**	**-2.3**
KMI				XS		02 51 30.5	
KMI				SS	SS	02 52 01.8	-5.6
KMI				AMB	AMB		
	comp=Z,46nm,0.9s,mb4.9						
KMI				AMB	AMB		
	comp=Z,393nm,6.0s						
KMI				LR	LR		
	comp=N,4µm,14.4s,MS5.0						
KMI				LR	LR		
	comp=E,2µm,15.1s,MS5.0						
KMI				LR	LR		
	comp=Z,4µm,14.4s,MS5.0						
KMI	**Kunming**	**23.19**	**17**	P	**P**	**02 47 17.3**	**+2.0**
	comp=Z,46nm,0.9s,mb4.9						
KMI				pP		02 47 24.3	
KMI				PP	PP	02 47 46.2	+0.1
KMI				S	**S**	**02 51 19.0**	**-2.3**
KMI				sS		02 51 30.5	
KMI				SS	SS	02 52 01.8	-5.6
KMI				LR	LR		
	comp=Z,4µm,14.4s,MS5.0						
KAD	**Karad**	**25.35**	**306**	*e*	**P**	**02 47 45.0**	**+8.8**
GYA	**Guiyang**	**25.77**	**24**	⇑*i*P	**P**	**02 47 40.0**	**-0.1**
GYA				AP	pP	02 47 48.9	+1.4
GYA				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,490nm,4.5s						
GYA				LR	LR		
	comp=N,3µm,15.1s,MS4.9						
GYA				LR	LR		
	comp=E,1µm,15.7s,MS4.9						
GYA				LR	LR		
	comp=Z,3µm,15.1s,MS4.9						
JIRN	**Jiri**	**26.18**	**341**	*e*P	**P**	**02 47 44.6**	**+0.7**
	comp=Z,355nm,1.2s,mb5.8						
POO	**Poona**	**26.28**	**308**	*e*	**P**	**02 47 51.0**	**+6.2**
POO				*i*		02 53 17.0	
PKI	**Pulchoki**	**26.37**	**340**	*e*P	**P**	**02 47 45.5**	**0.0**
	comp=Z,341nm,1.7s,mb5.6						
DMN	**Daman**	**26.51**	**339**	*e*P	**P**	**02 47 46.9**	**+0.1**
	comp=Z,71nm,0.8s,mb5.3						
KKN	**Kakani**	**26.61**	**339**	*e*P	**P**	**02 47 47.5**	**-0.3**
	comp=Z,138nm,0.9s,mb5.5						
LSA	**Lhasa**	**26.98**	**352**	P	**P**	**02 47 51.3**	**+0.1**
LSA				AP	pP	02 48 00.3	+1.7
LSA				XP	sP	02 48 02.6	+0.7
LSA				PCP	PcP	02 51 08.9	-4.0
LSA				S	**S**	**02 52 25.3**	**+0.2**
LSA				XS		02 52 43.3	
LSA				SCP		02 54 46.6	
LSA				PCS		02 54 51.1	
LSA				SCS	ScS	02 58 37.8	-1.9
LSA				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.2						
LSA				LR	LR		
	comp=N,610nm,22.4s,MS4.4						
LSA				LR	LR		
	comp=E,1µm,22.4s,MS4.4						
LSA				LR	LR		
	comp=Z,1µm,23.1s,MS4.4						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**02 47 52.0**	**+0.8**
	comp=Z,41nm,0.8s,mb5.0						
GKN	**Gorkha**	**27.04**	**339**	*e*P	**P**	**02 47 51.7**	**0.0**
	comp=Z,193nm,1.0s,mb5.6						
KOLN	**Koldanda**	**27.22**	**336**	*e*P	**P**	**02 47 53.6**	**+0.2**
	comp=Z,167nm,1.0s,mb5.5						
CD2	**Chengdu**	**28.95**	**15**	⇑*i*P	**P**	**02 48 07.8**	**-1.1**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
ENH	**Enshi**	**30.29**	**25**	*e*P	**P**	**02 48 19.3**	**-1.6**
	comp=Z,43nm,1.2s,mb5.1						
ENH				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
NDI	**New Delhi**	**30.99**	**328**	*e*P	**P**	**02 48 25.0**	**-2.1**
NDI				*e*		02 53 28.0	
QZH	**Quanzhou**	**31.25**	**43**	⇑*i*P	**P**	**02 48 29.4**	**0.0**
QZH				AMB	AMB		
	comp=Z,170nm,1.5s,mb5.7						
QZH				LR	LR		
	comp=E,3µm,15.4s						
QZH				LR	LR		
	comp=Z,2µm,13.1s,MS5.0						
DDI	**Dehra Dun**	**31.89**	**331**	*e*P	**P**	**02 48 33.6**	**-1.4**
WHN	**Wuhan**	**32.79**	**31**	P	**P**	**02 48 42.5**	**-0.3**
WHN				AP	pP	02 48 51.5	+1.2
WHN				S	**S**	**02 54 00.0**	**+2.8**
WHN				AMB	AMB		
	comp=Z,160nm,1.3s,mb5.8						
WHN				LR	LR		
	comp=Z,6µm,13.7s,MS5.5						
XAN	**Xi’an**	**33.43**	**21**	P	**P**	**02 48 46.5**	**-1.9**
XAN				XP	sP	02 49 02.3	+3.1
XAN				S	**S**	**02 54 15.3**	**+8.2**
XAN				AMB	AMB		
	comp=Z,46nm,1.3s,mb5.2						
XAN				LR	LR		
	comp=N,679nm,13.9s,MS4.7						
XAN				LR	LR		
	comp=E,982nm,15.6s,MS4.7						
XAN				LR	LR		
	comp=Z,2µm,16.3s,MS4.8						
MBWA	**Marble Bar**	**33.69**	**136**	*e*P	**P**	**02 48 50.5**	**-0.2**
	comp=Z,5.2nm,0.7s,mb4.6						
MBWA				LR	LR		
	comp=Z,774nm,21.0s,MS4.4						
LZH	**Lanzhou**	**33.93**	**12**	⇑P	**P**	**02 48 51.5**	**-1.2**
LZH				AP	pP	02 48 59.5	-0.7
LZH				XP	sP	02 49 06.5	+3.1
LZH				AMB	AMB		
	comp=Z,65nm,1.5s,mb5.3						
LZH				LR	LR		
	comp=E,2µm,13.4s						
LZH				LR	LR		
	comp=Z,1µm,16.6s,MS4.8						
LZH	**Lanzhou**	**33.93**	**12**	⇑P	**P**	**02 48 51.5**	**-1.2**
	comp=Z,65nm,1.5s,mb5.3						
LZH				pP	pP	02 48 59.5	-0.7
LZH				sP	sP	02 49 06.5	+3.1
LZH				LR	LR		
	comp=Z,1µm,16.6s,MS4.8						
THN	**Thein Dam**	**34.76**	**330**	*e*	**P**	**02 49 02.1**	**+2.2**
FITZ	**Fitzroy Crossi**	**36.30**	**126**	*e*P	**P**	**02 49 12.0**	**-1.1**
	comp=Z,24nm,0.8s,mb5.2						
NJ2	**Nanjing**	**36.39**	**35**	*e*P	**P**	**02 49 14.4**	**+0.7**
NJ2				AP	pP	02 49 24.1	+2.8
NJ2				XP	sP	02 49 28.5	+4.0
NJ2				PP	PP	02 50 39.0	+1.4
NJ2				PPP	PPP	02 50 58.8	+1.2
NJ2				S	**S**	**02 54 50.0**	**-2.9**
NJ2				XS		02 55 07.0	
NJ2				AMB	AMB		
	comp=Z,160nm,1.0s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,360nm,4.0s						
NJ2				LR	LR		
	comp=N,2µm,18.1s,MS5.2						
NJ2				LR	LR		
	comp=E,2µm,15.9s,MS5.2						
NJ2				LR	LR		
	comp=Z,3µm,14.1s,MS5.2						
GTA	**Gaotai**	**36.57**	**6**	⇑*i*P	**P**	**02 49 14.8**	**-0.3**
GTA				AP	pP	02 49 22.0	-0.6
GTA				XP	sP	02 49 26.3	+0.4
GTA				PP	PP	02 50 38.6	-1.1
GTA				PPP	PPP	02 50 58.4	-1.3
GTA				PCP	PcP	02 51 39.0	+0.4
GTA				S	**S**	**02 54 53.8**	**-1.7**
GTA				XS		02 55 06.3	
GTA				SCP		02 55 24.3	
GTA				SS	SS	02 57 20.9	-1.4
GTA				SCS	ScS	02 59 30.3	+2.9
GTA				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.1						
GTA				AMB	AMB		
	comp=Z,218nm,4.9s						
GTA				LR	LR		
	comp=N,836nm,12.9s						
GTA				LR	LR		
	comp=E,547nm,21.3s						
GTA				LR	LR		
	comp=Z,843nm,13.7s,MS4.7						
SSE	**Sheshan**	**37.09**	**38**	P	**P**	**02 49 19.0**	**-0.6**
SSE				XP	sP	02 49 31.8	+1.5
SSE				PP	PP	02 50 45.9	-0.6
SSE				S	**S**	**02 55 09.3**	**+5.7**
SSE				AMB	AMB		
	comp=Z,26nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,105nm,5.7s						
SSE				LR	LR		
	comp=E,670nm,15.3s						
SSE				LR	LR		
	comp=Z,2µm,16.8s,MS5.0						
SSE	**Sheshan**	**37.09**	**38**	P	**P**	**02 49 19.0**	**-0.6**
	comp=Z,26nm,0.8s,mb5.1						
SSE				sP	sP	02 49 31.7	+1.4
SSE				PP	PP	02 50 45.9	-0.6
SSE				S	**S**	**02 55 09.3**	**+5.7**
SSE				sS		02 55 24.4	
SSE				LR	LR		
	comp=Z,2µm,16.8s,MS5.0						
TIA	**Tai’an**	**38.72**	**28**	⇑P	**P**	**02 49 33.0**	**-0.2**
TIA				AMB	AMB		
	comp=Z,44nm,1.4s,mb5.0						
JOW	**Kunigami**	**39.40**	**50**	P	**P**	**02 49 39.6**	**+0.6**
	comp=Z,22nm,0.6s,mb5.0,baz=185,slow=7.2,SNR=9.5						
BTO	**Baotou**	**39.78**	**17**	*e*P	**P**	**02 49 41.4**	**-0.6**
BTO				S	**S**	**02 55 47.4**	**+3.1**
BTO				LR	LR		
	comp=E,940nm,13.3s						
KAKA	**Kakadu**	**39.84**	**114**	*e*P	**P**	**02 49 41.3**	**-1.4**
	comp=E,9.0nm,0.7s,mb4.6						
MUN	**Mundaring**	**39.87**	**152**	*e*P	**P**	**02 49 44.2**	**+1.4**
	comp=E,7.0nm,0.6s,mb4.6						
HHC	**Hu-ho-hao-te**	**40.48**	**19**	*e*P	**P**	**02 49 48.9**	**+1.2**
HHC				AP	pP	02 49 53.3	-2.1
HHC				XP	sP	02 49 56.3	-2.2
HHC				PCP	PcP	02 51 50.3	-0.5
HHC				SCP		02 55 36.3	
HHC				PCS		02 55 40.4	
HHC				S	**S**	**02 55 58.8**	**+4.1**
HHC				XS		02 56 07.6	
HHC				SS	SS	02 58 49.6	+0.4
HHC				SCS	ScS	02 59 53.1	+3.2
HHC				AMB	AMB		
	comp=Z,69nm,1.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,279nm,4.0s						
HHC				LR	LR		
	comp=N,2µm,15.5s						
HHC				LR	LR		
	comp=E,1µm,21.4s						
HHC				LR	LR		
	comp=Z,2µm,17.8s,MS5.1						
KSH	**Kashi**	**40.54**	**337**	*e*P	**P**	**02 49 49.1**	**+0.8**
KSH				*e*AP	pP	02 49 58.4	+2.5
KSH				*e*XP	sP	02 50 04.4	+5.4
KSH				AMB	AMB		
	comp=Z,170nm,2.9s,mb5.2						
NWAO	**Narrogin (SRO)**	**41.14**	**152**	P	**P**	**02 49 54.3**	**+1.0**
	comp=Z,4.6nm,0.7s,mb4.2,baz=315,slow=8.6,SNR=4.5						
NWAO	**Narrogin (SRO)**	**41.14**	**152**	*e*P	**P**	**02 49 53.7**	**+0.5**
NWAO				LR	LR		
	comp=Z,506nm,19.0s,MS4.4						
WMQ	**Urumqi**	**41.34**	**351**	P	**P**	**02 49 55.5**	**+0.7**
WMQ				XP	sP	02 50 09.0	+3.5
WMQ				PP	PP	02 51 35.0	+1.7
WMQ				S	**S**	**02 56 07.0**	**-0.5**
WMQ				SS	SS	02 59 10.0	+3.2
WMQ				AMB	AMB		
	comp=Z,68nm,1.3s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,69nm,9.5s						
WMQ				LR	LR		
	comp=N,334nm,22.0s,MS4.5						
WMQ				LR	LR		
	comp=E,732nm,22.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,325nm,22.0s,MS4.2						
BJT	**Baijiatuau**	**41.44**	**24**	*e*P	**P**	**02 49 57.0**	**+1.3**
	comp=Z,93nm,1.0s,mb5.4						
BJT				*e*pP	pP	02 50 04.1	+0.8
BJI	**Beijing**	**41.46**	**24**	P	**P**	**02 49 57.3**	**+1.5**
BJI				AP	pP	02 50 03.8	+0.4
BJI				AMB	AMB		
	comp=Z,96nm,1.1s,mb5.3						
BJI				AMB	AMB		
	comp=Z,510nm,5.8s						
BJI				LR	LR		
	comp=N,967nm,15.2s,MS4.9						
BJI				LR	LR		
	comp=E,685nm,15.3s,MS4.9						
BJI				LR	LR		
	comp=Z,686nm,15.3s,MS4.6						
BJI	**Beijing**	**41.46**	**24**	P	**P**	**02 49 57.2**	**+1.4**
	comp=Z,96nm,1.1s,mb5.3						
BJI				pP	pP	02 50 03.7	+0.3
BJI				PP	PP	02 51 41.5	+6.8
BJI				S		02 56 23.3	
BJI				SS	tx	02 59 45.4	
BJI				LR	LR		
	comp=Z,690nm,15.3s,MS4.6						
ULHL	**Ulahol**	**42.80**	**339**	P	**P**	**02 50 07.7**	**+0.9**
	SNR=8.4						
KZA	**Kyzart**	**43.02**	**338**	P	**P**	**02 50 09.8**	**+1.2**
	SNR=11						
DL2	**Dalian**	**43.04**	**30**	P	**P**	**02 50 10.3**	**+1.5**
DL2				AP	pP	02 50 17.3	+0.9
DL2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.3						
DL2				LR	LR		
	comp=N,580nm,15.1s,MS4.8						
DL2				LR	LR		
	comp=E,600nm,13.9s,MS4.8						
DL2				LR	LR		
	comp=Z,680nm,15.1s,MS4.7						
UCH	**Uchtor**	**43.43**	**337**	P	**P**	**02 50 13.3**	**+1.4**
	SNR=33						
TKM2	**Tokmak 2**	**43.62**	**339**	P	**P**	**02 50 14.3**	**+0.9**
	SNR=15						
KBK	**Karagaybulak**	**43.63**	**338**	P	**P**	**02 50 15.1**	**+1.5**
	SNR=16						
AML	**Almayashu**	**43.67**	**336**	P	**P**	**02 50 15.3**	**+1.5**
	SNR=39						
AAK	**Ala-Archa**	**43.79**	**338**	P	**P**	**02 50 15.0**	**+0.2**
	SNR=11						
AAK	**Ala-Archa**	**43.79**	**338**	*e*P	**P**	**02 50 14.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**43.79**	**338**	*e*P	**P**	**02 50 14.4**	**-0.3**
	comp=Z,8.4nm,0.8s,mb4.5						
FRU	**Bishkek**	**43.91**	**338**	*e*P	**P**	**02 50 16.5**	**+0.7**
FRU				pmax	pmax		
	comp=Z,90nm,2.2s,mb5.1						
EKS2	**Erkin-Say**	**44.09**	**337**	P	**P**	**02 50 18.4**	**+1.2**
	SNR=23						
USP	**Ospenovka**	**44.33**	**338**	P	**P**	**02 50 19.8**	**+0.6**
	SNR=49						
WRA	**Warramunga Arr**	**44.38**	**122**	P	**P**	**02 50 19.2**	**-0.7**
	comp=Z,10nm,0.9s,mb4.5,baz=301,slow=9.0,SNR=48						
WRA				pP	pP	02 50 27.3	-0.2
	comp=Z,7.0nm,0.5s,baz=301,slow=9.2,SNR=12						
WRAB	**Tennant Creek**	**44.38**	**122**	*e*P	**P**	**02 50 19.9**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**44.38**	**122**	*e*P	**P**	**02 50 19.9**	**-0.1**
	comp=Z,12nm,0.6s,mb4.8						
WB2	**Warramunga Arr**	**44.39**	**122**	*e*P	**P**	**02 50 19.5**	**-0.5**
MKAR	**Makanchi Array**	**45.21**	**347**	*i* P	**P**	**02 50 26.0**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,28nm,0.6s						
FORT	**Forrest**	**45.66**	**140**	*e*P	**P**	**02 50 31.1**	**+1.1**
	comp=Z,865nm,0.8s						
SONM	**Songino Array**	**45.76**	**10**	P	**P**	**02 50 30.6**	**+0.1**
	comp=Z,30nm,0.8s,mb5.3,baz=198,slow=7.8,SNR=168						
SONM				pP	pP	02 50 38.1	-0.1
	comp=Z,12nm,0.9s,baz=196,slow=9.0,SNR=7.4						
SONM				PcP	PcP	02 52 08.6	+0.1
	comp=Z,5.6nm,0.7s,baz=189,slow=3.6,SNR=6.6						
ASPA	**Alice Springs**	**45.77**	**127**	*e*P	**P**	**02 50 30.7**	**-0.2**
ASAR	**Alice Springs**	**45.77**	**127**	P	**P**	**02 50 30.9**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.3,baz=304,slow=7.7,SNR=21						
ASAR				pP	pP	02 50 38.0	-0.7
	comp=Z,6.9nm,0.8s,baz=300,slow=8.2,SNR=14						
ASAR				PcP	PcP	02 52 08.8	0.0
	comp=Z,1.4nm,0.7s,baz=300,slow=2.4,SNR=4.0						
ULN	**Ulaanbaatar**	**45.91**	**11**	*e*P	**P**	**02 50 31.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
ULN	**Ulaanbaatar**	**45.91**	**11**	*e*P	**P**	**02 50 31.4**	**-0.3**
	comp=Z,26nm,1.0s,mb5.1						
SNY	**Shenyang**	**46.23**	**29**	⇑P	**P**	**02 50 33.1**	**-1.2**
SNY				AMB	AMB		
	comp=Z,50nm,2.3s,mb5.0						
SNY				AMB	AMB		
	comp=Z,290nm,4.1s						
SNY				LR	LR		
	comp=N,2µm,16.7s						
SNY				LR	LR		
	comp=Z,1µm,14.9s,MS5.0						
ZAK	**Zakamensk**	**47.78**	**7**	⇓*i*P	**P**	**02 50 46.1**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
CN2	**Changchun**	**48.62**	**29**	*e*P	**P**	**02 50 52.3**	**-0.7**
CN2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
CN2				AMB	AMB		
	comp=Z,450nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,14.0s,MS5.2						
CN2				LR	LR		
	comp=E,1µm,14.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,14.0s,MS5.1						
MOY	**Mondy**	**48.83**	**5**	*e*P	**P**	**02 50 54.6**	**+0.1**
MOY				pmax	pmax		
	comp=Z,29nm,2.1s,mb4.9						
TLY	**Talaya**	**49.10**	**7**	P	**P**	**02 50 57.9**	**+1.3**
	comp=Z,180nm,0.8s,SNR=27						
TLY	**Talaya**	**49.10**	**7**	*c i*P	**P**	**02 50 57.1**	**+0.5**
TLY				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
TLY	**Talaya**	**49.10**	**7**	*e*P	**P**	**02 50 56.8**	**+0.2**
	comp=Z,26nm,0.9s,mb5.3						
IRK	**Irkutsk**	**49.73**	**7**	*e*P	**P**	**02 51 01.3**	**-0.2**
IRK				*e*		02 52 20.8	
IRK				*e*		02 52 51.4	
IRK				pmax	pmax		
	comp=Z,48nm,2.0s,mb5.2						
KURK	**Kurchatov**	**49.74**	**346**	⇑*i*P	**P**	**02 51 01.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,108nm,1.6s,mb5.6						
KURK	**Kurchatov**	**49.74**	**346**	⇑*i*P	**P**	**02 51 01.3**	**-0.2**
	comp=Z,108nm,1.6s,mb5.6						
HIA	**Hailar**	**50.63**	**20**	*e*P	**P**	**02 51 08.3**	**-0.1**
HIA				pmax	pmax		
	comp=Z,26nm,1.1s						
HIA	**Hailar**	**50.63**	**20**	*e*P	**P**	**02 51 08.3**	**-0.1**
	comp=Z,26nm,1.1s,mb5.1						
MDJ	**Mudanjiang**	**51.27**	**31**	P	**P**	**02 51 15.3**	**+2.0**
MDJ				AMB	AMB		
	comp=Z,29nm,1.8s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,629nm,4.7s						
MDJ				LR	LR		
	comp=N,323nm,17.8s,MS4.6						
MDJ				LR	LR		
	comp=E,400nm,18.4s,MS4.6						
MDJ				LR	LR		

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            comp=Z,343nm,19.5s,MS4.4
ZAL   Zalesovo          51.64 352   P        P        02 51 16.0 +0.1
            comp=Z,36nm,0.7s,mb5.4,baz=303,slow=5.8,SNR=192
ZAL                                 pP       pP       02 51 23.4 -0.3
            comp=Z,22nm,0.6s,baz=288,slow=7.1,SNR=15
RAYN  Ar Rayn           52.46 298   P        P        02 51 29.1 +6.6
            comp=Z,82nm,0.8s,mb5.7,SNR=9.6
NVS   Novosibirsk       52.74 351⇑iP       P        02 51 22.9 -1.3
NVS                                i *PP     pP       02 51 30.7 -1.3
NVS                                e                  02 52 37.3
NVS                                i S       S        02 58 48.9 -0.2
NVS                                i PS      PS       02 58 59.7 -2.7
NVS                                 pmax     pmax
            comp=Z,55nm,1.0s,mb5.4
NVS                                 pmax     pmax
            comp=N,51nm,1.3s
NVS                                 pmax     pmax
            comp=E,25nm,1.2s
NVS                                 smax
            comp=N,29nm,1.6s
NVS                                 smax
            comp=E,56nm,1.8s
BVA0  Borovoye Array    54.11 342   P        P        02 51 33.2 -1.1
BVA0                                pmax     pmax
            comp=Z,4.0nm,0.9s,mb4.3
CHKZ  Chkalovo          54.60 342  eP        P        02 51 37.3 -0.6
CTA   Charters Tower    54.79 117  eP        P        02 51 34.8 -5.0
            comp=Z,9.3nm,1.2s,mb4.7
CTA   Charters Tower    54.79 117  eP        P        02 51 34.8 -5.0
CTA                                 pmax     pmax
            comp=Z,9.0nm,1.2s
CTA   Charters Tower    54.79 117   LR       LR       03 19 23.8
            comp=Z,602nm,18.9s,MS4.7,baz=271,slow=41
CTAO  Charters Tower    54.79 117  eP        P        02 51 39.0 -0.8
CTAO                               e*PP      pP       02 51 47.0 -0.5
CTAO                                pmax     pmax
            comp=Z,22nm,1.3s,mb5.0
CTAO  Charters Tower    54.79 117  eP        P        02 51 39.0 -0.7
            comp=Z,22nm,1.3s,mb5.0
CTAO                               epP       pP       02 51 47.0 -0.6
KLR   Kul'dur           55.55  28  eP        P        02 51 41.2 -3.7
KLR                                eS        S        02 59 23.0 -4.0
KLR                                 pmax     pmax
            comp=Z,82nm,2.2s,mb5.4
KLR                                 MLR      MLR
            comp=N,1µm,13.5s
KLR                                 MLR      MLR
            comp=Z,2µm,13.5s,MS5.3
STKA  Stephens Creek    55.75 132  eP        P        02 51 45.9 -0.7
            comp=Z,7.0nm,1.0s,mb4.7
STKA  Stephens Creek    55.75 132   P        P        02 51 46.0 -0.6
            comp=Z,7.8nm,1.1s,mb4.7,baz=318,slow=9.5,SNR=5.9
STKA                                LR       LR       03 19 58.3
            comp=Z,368nm,18.6s,MS4.5,baz=109,slow=41
BOD   Bodaibo           56.70  12⇓iP       P        02 51 51.8 -1.2
BOD                                 pmax     pmax
            comp=Z,22nm,1.3s,mb5.0
KMBO  Kilima Mbogo      58.35 267  i P       P        02 52 06.2 +1.0
KMBO                                pmax     pmax
            comp=Z,5.0nm,1.1s
KMBO  Kilima Mbogo      58.35 267   P        P        02 52 05.4 +0.2
            comp=Z,4.9nm,1.1s,mb4.5,baz=49,slow=8.8,SNR=8.0
KMBO                                LR       LR       03 14 42.5
            comp=Z,809nm,19.6s,MS4.8,baz=93,slow=34
KMBO  Kilima Mbogo      58.35 267  eP        P        02 52 05.2  0.0
            comp=Z,10.0nm,1.3s,mb4.7
KMBO                                LR       LR
            comp=Z,775nm,19.0s,MS4.8
CLNS  Chul'man          58.67  18  eP        P        02 52 05.7 -1.2
CLNS                               e*PP      pP       02 52 12.0 -2.7
CLNS                               e                  02 52 55.0
CLNS                               e                  02 54 12.6
CLNS                               eS        S        03 00 04.0 -4.0
CLNS                                pmax     pmax
            comp=Z,25nm,0.8s,mb5.3
CLNS                                pmax     pmax
            comp=N,14nm,1.1s
CLNS                                pmax     pmax
            comp=E,10.0nm,0.9s
CLNS                                pmax     pmax
            comp=N,7.0nm,0.8s
CLNS                                pmax     pmax
            comp=Z,4.0nm,0.8s,mb4.5
CLNS                                pmax     pmax
            comp=E,5.0nm,0.9s
CLNS                                smax
            comp=N,8.0nm,0.9s
CLNS                                smax
            comp=E,4.0nm,0.9s
CLNS                                smax
            comp=Z,5.0nm,0.9s
CLNS                                MLR      MLR
            comp=N,2µm,16.0s,MS5.3
CLNS                                MLR      MLR
            comp=Z,3µm,16.0s,MS5.5
CLNS                                MLR      MLR
            comp=E,300nm,14.0s,MS5.3
GNI   Garni             58.90 316  eP        P        02 52 08.7  0.0
            comp=E,31nm,1.3s,mb5.2
GNI                                 LR       LR
            comp=Z,215nm,21.0s,MS4.2
TI2   Plekhanov         59.58 318  eP        P        02 52 13.2 -0.2
TI2                                i         pP       02 52 21.2 -0.1
YSS   Yuzh-Sakhalins    59.95  36⇑eP       P        02 52 15.0 -0.9
YSS                                e                  02 52 27.0
YSS                                 pmax     pmax
            comp=Z,50nm,1.1s,mb5.5
YSS                                 MLR      MLR
            comp=Z,500nm,16.0s,MS4.8
YSS                                 MLR      MLR
            comp=E,500nm,15.0s
YSS   Yuzh-Sakhalins    59.95  36  eP        P        02 52 15.6 -0.3
            comp=E,46nm,1.1s,mb5.4
SVE   Sverdlovsk        60.50 339⇑iP       P        02 52 19.8 +0.3
SVE                                e         pP       02 52 27.8 +0.4
SVE                                e                  02 54 27.0
SVE                                eS                 03 00 44.0
SVE                                 pmax     pmax
            comp=Z,100nm,1.9s,mb5.6
SVE                                 MLR      MLR
            comp=N,300nm,18.0s,MS4.5
SVE                                 MLR      MLR
            comp=E,100nm,18.0s,MS4.5
SVE                                 MLR      MLR
            comp=Z,600nm,18.0s,MS4.8
KIV   Kislovodsk        61.92 319  i P       P        02 52 28.4 -0.9
KIV                                 pmax     pmax
            comp=Z,8.0nm,1.3s,mb4.7
KIV   Kislovodsk        61.92 319  eP        P        02 52 28.0 -1.3
            comp=Z,34nm,1.4s,mb5.3
GOF   Gofitskoye        62.18 321  eP        P        02 52 37.5 +6.5
GOF                                 pmax     pmax
            comp=Z,30nm,1.5s,mb5.2
ELZG  Elazig            62.38 312  i P       P        02 52 32.6 +0.1
MALT  Malatya           62.73 312  ⇑P        P        02 52 34.8  0.0
GZT   Gaziantep         63.07 311  i P       P        02 52 37.2 +0.2
EIL   Elat              63.11 302  eP        P        02 52 44.7 +7.4
            comp=Z,45nm,1.6s,mb5.3
KAHT  Ahir Dag          63.68 311  i P       P        02 52 40.6 -0.4
KAHT                               i S       tx       02 53 02.3
SOC   Sochi             63.73 318  eP        P        02 52 39.1 -2.2
SOC                                e                  02 53 11.4
SOC                                e                  02 55 03.3
SOC                                ePPP      PPP      02 56 33.2 -1.7
SOC                                eS        S        03 01 11.7 -0.9
SOC                                e                  03 02 21.5
SOC                                eSS       SS       03 05 25.0 +2.8
SOC                                 pmax     pmax
            comp=Z,30nm,1.2s,mb5.2
SOC                                 pmax     pmax
            comp=N,10.0nm,0.9s
SOC                                 pmax     pmax
            comp=E,8.0nm,0.9s
SOKR  Solikamsk         63.90 339d iP      P        02 52 41.9 -0.3
SOKR                                pmax     pmax
            comp=Z,30nm,0.8s,mb5.4
SOKR                                MLR      MLR
            comp=Z,730nm,24.0s,MS4.8
YAK   Yakutsk           64.30  17  eP        P        02 52 42.0 -2.7
YAK                                e         pP       02 52 50.0 -2.7
YAK                                 pmax     pmax
            comp=Z,33nm,1.0s,mb5.3
YAK                                 pmax     pmax
            comp=N,14nm,1.2s
YAK                                 pmax     pmax
            comp=E,11nm,1.3s
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YAK                                 pmax     pmax
            comp=Z,28nm,1.1s,mb5.2
YAK                                 pmax     pmax
            comp=N,9.0nm,0.9s
YAK                                 pmax     pmax
            comp=E,8.0nm,1.1s
YAK                                 MLR      MLR
            comp=Z,798nm,17.0s,MS5.0
YAK                                 MLR      MLR
            comp=N,706nm,19.0s,MS5.0
YAK                                 MLR      MLR
            comp=E,384nm,16.0s,MS5.0
YAK   Yakutsk           64.30  17  eP        P        02 52 43.6 -1.2
            comp=E,155nm,1.4s,mb5.8
CTKT  Corum             66.14 313  i P       P        02 53 01.2 +4.3
BOYT  Boyabat           66.30 314  i P       P        02 52 55.9 -2.1
BRTR  Keskin Array B    66.71 312   P        P        02 52 59.1 -1.5
            comp=E,1.7nm,0.9s,mb4.1,baz=127,slow=6.2,SNR=10
BRTR                                pP       pP       02 53 06.5 -2.1
            comp=E,3.6nm,1.0s,baz=165,slow=4.0,SNR=7.9
SIM   Simferopol'       67.97 318  eP        pP       02 53 15.7 -0.7
SIM                                e                  02 55 41.0
SIM                                eS        S        03 02 05.0 +0.7
SIM                                 pmax     pmax
            comp=Z,16nm,1.0s,mb5.0
ESKT  Eskisehir         68.73 311  i P       P        02 53 11.2 -2.1
LSZ   Lusaka            68.96 253  eP        P        02 53 14.9 -0.2
LSZ                                 pmax     pmax
            comp=Z,17nm,1.4s,mb4.8
LSZ   Lusaka            68.96 253  eP        P        02 53 14.9 -0.2
            comp=Z,17nm,1.4s,mb4.8
MATP  Matopo            69.58 247   LR       LR       03 21 00.4
            comp=Z,242nm,18.1s,MS4.5,baz=83,slow=34
MOS   Moscow            70.01 329  eP        P        02 53 19.6 -1.2
MOS                                e         pP       02 53 27.2 -1.5
MOS                                 pmax     pmax
            comp=Z,58nm,1.3s,mb5.3
OBN   Obninsk           70.29 328αiP       P        02 53 21.4 -1.1
OBN                                i         pP       02 53 28.8 -1.6
OBN                                i                  02 53 37.9
OBN                                e                  02 56 00.1
OBN                                eS        S        03 02 36.6 +5.0
OBN                                e                  03 03 25.4
OBN                                 pmax     pmax
            comp=Z,30nm,1.1s,mb5.1
OBN   Obninsk           70.29 328  eP        P        02 53 21.5 -1.0
            comp=Z,11nm,0.9s,mb4.8
OBN                                epP       pP       02 53 29.7 -0.8
MA2   Magadan           70.58  26  eP        P        02 53 23.8 -0.4
MA2                                eS        S        03 02 34.7 -0.1
MA2                                 pmax     pmax
            comp=Z,20nm,1.5s,mb4.8
MA2                                 MLR      MLR
            comp=Z,400nm,21.9s,MS4.6
MA2   Magadan           70.58  26  eP        P        02 53 23.7 -0.5
            comp=Z,10nm,0.8s,mb4.8
PET   Petropavlovsk     71.81  35  eP        sP       02 53 42.4 -0.1
PET                                eS        S        03 02 49.4 +0.2
PET                                 pmax     pmax
            comp=Z,100nm,14.5s
PET                                 MLR      MLR
            comp=Z,500nm,16.0s,MS4.9
HARR  Harsova           72.12 316  ⇓P        P        02 53 34.7 +1.0
LBTB  Lobatse           73.11 243  eP        P        02 53 40.2 +0.2
LBTB                                pmax     pmax
            comp=Z,25nm,0.9s,mb5.1
LBTB                                MLR      MLR
            comp=Z,723nm,20.0s,MS5.0
LBTB  Lobatse           73.11 243  eP        P        02 53 40.2 +0.2
            comp=Z,25nm,0.9s,mb5.1
LBTB                                LR       LR
            comp=Z,723nm,20.0s,MS5.0
VRI   Vrincioaia        73.22 317  ⇑P        P        02 53 40.2  0.0
VRI   Vrincioaia        73.22 317  ⇑P        P        02 53 40.3 +0.1
MLR   Muntele Rosu      73.67 317  ⇑P        P        02 53 42.4 -0.4
MAW   Mawson            73.97 192   LR       LR       03 23 26.8
            comp=Z,216nm,18.2s,MS4.5,baz=262,slow=34
BOSA  Boshof            74.14 239  eP        P        02 53 45.4 -0.5
BOSA                                pmax     pmax
            comp=Z,11nm,0.9s,mb4.8
BOSA  Boshof            74.14 239  eP        P        02 53 45.4 -0.6
            comp=Z,11nm,0.9s,mb4.8
BURAR Bucovina Array    74.63 319  ⇑P        P        02 53 47.9 -0.4
MNK   Minsk             74.80 326  eP        P        02 53 46.0 -3.2
VTS   Vitosha           75.03 313  ⇑P        P        02 53 49.9 -0.9
LVV   L'vov             75.88 321  eP        P        02 54 00.7 +5.3
LVV                                e         pP       02 54 06.9 +3.4
JOF   Joensuu           75.90 335  ep        P        02 53 54.2 -1.1
            comp=Z,12nm,1.0s,mb4.8
JOF   Joensuu           75.90 335  eP        P        02 53 54.2 -1.1
JOF                                 pmax     pmax
            comp=Z,12nm,1.0s,mb4.8
KWP   Kalwaria          76.68 320  eP        P        02 54 00.2 +0.3
KOLS  Kolonicke sedl    76.83 320  eP        P        02 54 01.8 +1.0
KOLS                               epP       pP       02 54 09.0 +0.2
SUW   Suwalki           77.31 325  eP        P        02 54 02.5 -0.8
CRVS  Cervenica-Dubn    77.35 319  eP        P        02 54 08.8 +5.2
CRVS  Cervenica-Dubn    77.35 319  e         P        02 54 08.8 +5.2
FINES FINESS Array B    77.72 333   P        P        02 54 05.1 -0.3
            comp=Z,6.7nm,0.7s,mb4.7,baz=100,slow=6.8,SNR=25
FINES                               pP       pP       02 54 12.6 -0.9
            comp=Z,3.9nm,0.6s,baz=112,slow=5.6,SNR=4.9
FINES                               LR       LR       03 33 40.2
            comp=Z,243nm,20.3s,MS4.5,baz=289,slow=40
KAF   Kangasniemi       77.81 333  ep        P        02 54 04.3 -1.6
            comp=Z,16nm,0.9s,mb4.9
KAF   Kangasniemi       77.81 333  eP        P        02 54 04.3 -1.6
KAF                                 pmax     pmax
            comp=Z,16nm,0.9s,mb5.0
KECS  Kecovo            77.91 319  eP        P        02 54 06.9 +0.1
OJC   Ojcow             78.64 321  eP        P        02 54 10.8 +0.1
SUR   Sutherland        78.66 236  eP        P        02 54 12.0 +0.8
            comp=Z,16nm,0.9s,mb5.0
SRO2  Moca              79.19 318  eP        pP       02 54 22.6 +0.7
SRO2  Moca              79.19 318  epP       pP       02 54 22.6 +0.7
SRO   Srobarova         79.25 318  eP        P        02 54 14.7 +0.6
OKC   Ostrava-Krasne    79.64 320  eP        P        02 54 16.5 +0.4
OKC                                epP       pP       02 54 24.6 +0.4
SMOL  Smolenice         79.93 319  eP        pP       02 54 25.6 -0.2
SMOL  Smolenice         79.93 319  epP       pP       02 54 25.6 -0.2
MORC  Moravsky Berou    80.02 320  eP        P        02 54 18.2  0.0
MORC                                pmax     pmax
            comp=Z,34nm,1.5s,mb5.1
MORC  Moravsky Berou    80.02 320  eP        P        02 54 18.2  0.0
            comp=Z,34nm,1.5s,mb5.1
ZST   Bratislava        80.11 318  eP        P        02 54 19.4 +0.7
ZST                                epP       pP       02 54 26.4 -0.4
BILL  Bilibino          80.21  21  i P       P        02 54 18.8 -0.1
BILL                               e         pP       02 54 26.6 -0.3
BILL                                pmax     pmax
            comp=Z,21nm,2.6s,mb4.6
BILL                                MLR      MLR
            comp=Z,700nm,18.0s,MS5.0
ARCES ARCESS Array B    80.38 340   P        P        02 54 20.2 +0.4
            comp=Z,5.8nm,0.7s,mb4.6,baz=92,slow=5.4,SNR=19
ARCES                               LR       LR       03 35 49.5
            comp=Z,431nm,20.5s,MS4.8,baz=193,slow=40
ARCES ARCESS Array B    80.38 340   P        P        02 54 20.2 +0.4
ARCES                               LR       LR       03 35 49.5
DPC   Dobruska-Polom    80.87 320  eP        P        02 54 23.2 +0.5
DPC                                epP       pP       02 54 31.3 +0.5
KSP   Ksiaz             80.94 321  eP        P        02 54 23.6 +0.6
KSP                                e*PP      pP       02 54 31.6 +0.5
KSP                                eS        S        03 04 29.0 +0.2
KSP   Ksiaz             80.94 321  eP        P        02 54 23.9 +0.9
UPC   Upice             81.08 321  eP        P        02 54 24.2 +0.4
UPC                                epP       pP       02 54 32.7 +0.8
BOJS  Bojanci           81.10 315  eP        P        02 54 24.3 +0.3
RPZ   Rata Peaks        81.61 135   P        P        02 54 27.3 +0.7
            comp=Z,3.7nm,0.7s,mb4.4,baz=270,slow=9.1,SNR=4.3
PRU   Pruhonice         81.97 320  eP        P        02 54 28.9 +0.5
PRU                                epP       pP       02 54 37.2 +0.7
PVCC  Panska Ves        82.00 320  eP        P        02 54 28.2 -0.4
PVCC                               epP       pP       02 54 37.3 +0.6
GEC2  GERESS Array S    82.42 319  eP        P        02 54 31.2 +0.4
GEC2                                pmax     pmax
            comp=Z,33nm,1.2s,mb5.1
GEC2  GERESS Array S    82.42 319  eP        P        02 54 31.2 +0.4
            comp=Z,33nm,1.2s,mb5.1
GERES GERESS Array B    82.42 319   P        P        02 54 31.6 +0.8
            comp=Z,3.7nm,0.8s,mb4.4,baz=104,slow=5.5,SNR=30
GERES                               pP       pP       02 54 39.7 +0.8
            comp=Z,8.3nm,0.9s,baz=104,slow=5.5,SNR=20
BRG   Berggiesshubel    82.43 321  eP        P        02 54 31.5 +0.7
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BRG                                e         pP       02 54 39.9 +1.0
BRG                                 pmax     pmax
            comp=Z,42nm,1.9s,mb5.0
BRG                                 MLR      MLR
            comp=Z,230nm,21.6s,MS4.5
BRG   Berggiesshubel    82.43 321  eP        P        02 54 31.5 +0.7
            comp=Z,42nm,1.9s,mb5.0
BRG                                e         pP       02 54 39.9 +1.0
BRG                                 LR       LR
            comp=Z,230nm,21.6s,MS4.5
PTCC  Patocco-Chiusa    82.49 316  eP        P        02 54 31.1 -0.1
KHC   Kasperske Hory    82.52 319  eP        P        02 54 30.2 -1.1
KHC                                epP       pP       02 54 38.9 -0.5
ARV   Arcevia           82.61 313  eP        P        02 54 32.5 +0.6
FVI   Forni Avoltri     82.89 316  eP        P        02 54 34.1 +0.8
WET   Wettzell          82.98 319  eP        P        02 54 34.0 +0.3
WET                                 pmax     pmax
            comp=Z,12nm,1.1s,mb4.8
WET   Wettzell          82.98 319  eP        P        02 54 34.0 +0.3
            comp=Z,12nm,1.1s,mb4.8
CLL   Collm             83.05 321  eP        P        02 54 26.0 -8.0
CLL                                e                  02 54 43.0
CLL   Collm             83.05 321  e*PP      pP       02 54 43.0 +0.9
SFI   Santa Sofia       83.42 314  eP        P        02 54 36.9 +0.8
PGD   Poggio Sodo       83.51 314  eP        pP       02 54 44.8 +0.1
CTI   Castel Tesino     83.65 316  eP        P        02 54 37.2  0.0
WTTA  Wattenberg        83.71 317⇑iP       P        02 54 37.3 -0.2
            comp=Z,5.4nm,0.7s,mb4.8
WTTA  Wattenberg        83.71 317⇑iP       P        02 54 37.3 -0.2
WTTA                                pmax     pmax
            comp=Z,5.0nm,0.7s,mb4.8
MOX   Moxa              83.89 320  eP        P        02 54 37.6 -0.7
MOX                                 pmax     pmax
            comp=Z,20nm,1.6s,mb5.0
MOX   Moxa              83.89 320  eP        P        02 54 37.6 -0.7
            comp=Z,20nm,1.6s,mb5.0
MOX   Moxa              83.89 320  i P       P        02 54 37.6 -0.7
            comp=Z,logA/T=1.1,mb5.0
FUR   Furstenfeldbru    83.99 318  eP        P        02 54 38.5 -0.4
SQTA  Sankt Quirin      84.00 317⇑iP       P        02 54 38.6 -0.4
            comp=Z,2.7nm,0.9s,mb4.4
SQTA  Sankt Quirin      84.00 317⇑iP       P        02 54 38.6 -0.4
SQTA                                pmax     pmax
            comp=Z,3.0nm,0.9s,mb4.4
MOTA  Moosalm           84.08 317⇑iP       P        02 54 38.9 -0.4
            comp=Z,2.0nm,1.0s,mb4.2
MOTA  Moosalm           84.08 317⇑iP       P        02 54 38.9 -0.4
MOTA                                pmax     pmax
            comp=Z,2.0nm,1.0s,mb4.2
GRA1  Grafenberg Arr    84.09 319  eP        P        02 54 40.0 +0.6
            comp=Z,26nm,1.1s,mb5.3
GRA1                               epP       pP       02 54 48.6 +1.1
GRF   Grafenberg Arr    84.09 319  eP        P        02 54 40.0 +0.6
GRF                                e*PP      pP       02 54 48.6 +1.1
GRF                                 pmax     pmax
            comp=Z,26nm,1.1s,mb5.3
GRF   Grafenberg Arr    84.09 319  eP        P        02 54 40.0 +0.6
GRF                                e*PP      pP       02 54 48.6 +1.1
GRF                                 pmax     pmax
            comp=Z,26nm,1.1s,mb5.3
GRF   Grafenberg Arr    84.09 319  eP        P        02 54 40.0 +0.6
            comp=Z,26nm,1.1s,mb5.3
GRF                                epP       pP       02 54 48.6 +1.1
BRMO  Bormio            84.55 316  eP        P        02 54 42.0 +0.3
NB2   NORSAR Subarra    84.71 331   P        P        02 54 41.7 -0.4
            comp=Z,27nm,1.4s,mb5.2,baz=91,slow=5.0
NB2   NORSAR Subarra    84.71 331   P        P        02 54 41.7 -0.4
NB2                                 pmax     pmax
            comp=Z,27nm,1.4s,mb5.2
NB2   NORSAR Subarra    84.71 331   P        P        02 54 41.7 -0.4
            baz=91,slow=5.3
NOA   NORSAR Array B    84.71 331   P        P        02 54 41.9 -0.2
            comp=Z,3.4nm,0.9s,mb4.5,baz=94,slow=5.2,SNR=7.1
NOA                                 pP       pP       02 54 50.2 -0.1
            comp=Z,3.0nm,0.8s,baz=95,slow=5.3,SNR=5.0
NOA                                 LR       LR       03 36 17.8
            comp=Z,159nm,19.9s,MS4.4,baz=95,slow=38
NOA   NORSAR Array B    84.71 331   P        P        02 54 41.9 -0.2
NOA                                 pP       pP       02 54 50.2 -0.1
NOA                                 LR       LR       03 36 17.8
CLZ   Clausthal         84.72 322  eP        P        02 54 42.8 +0.4
            comp=Z,18nm,1.1s,mb5.1
TNS   Taunus Mts        85.90 320  eP        P        02 54 48.6 +0.2
TNS                                 pmax     pmax
            comp=Z,22nm,1.1s,mb5.3
TNS   Taunus Mts        85.90 320  eP        P        02 54 48.6 +0.2
            comp=Z,22nm,1.1s,mb5.3
LPG   La Plagne         87.07 315  eP        P        02 54 54.0 -0.2
            comp=Z,25nm,0.9s,mb5.1
LPG   La Plagne         87.07 315  eP        P        02 54 54.0 -0.2
LPG                                 pmax     pmax
            comp=Z,13nm,0.9s,mb5.2
VNDA  Vanda             87.81 168   LR       LR       03 32 47.1
            comp=Z,222nm,18.9s,MS4.6,baz=241,slow=35
IMA   Indian Mountai    95.69  23  eP        P        02 55 34.9 +1.0
IMA                                 pmax     pmax
            comp=Z,48nm,1.4s,mb5.7
IMA   Indian Mountai    95.69  23  eP        P        02 55 34.9 +1.1
            comp=Z,48nm,1.4s,mb5.7
DBIC  Dimbokro          99.92 277   LR       LR       03 42 00.5
            comp=Z,157nm,20.1s,MS4.5,baz=64,slow=36
INK   Inuvik           101.37  17  eP        P        02 55 59.1 -0.4
INK                                 pmax     pmax
            comp=Z,3.0nm,1.3s
INK   Inuvik           101.37  17  ePdif     P        02 55 59.1 -0.4
            comp=Z,3.4nm,1.3s
RES   Resolute Bay     102.29   3  eP        Pdif     02 56 01.8 -1.7
RES                                 pmax     pmax
            comp=Z,2.0nm,1.0s
RES   Resolute Bay     102.29   3  ePdif     Pdif     02 56 01.8 -1.7
            comp=Z,2.3nm,1.0s
YKA   Yellowknife Ar   110.91  14   pPKiKP            03 00 49.9
            comp=Z,0.5nm,1.0s,baz=311,slow=1.5,SNR=4.9
YKA                                 PP       PP       03 01 12.9  -10
            comp=Z,0.6nm,0.7s,baz=331,slow=7.8,SNR=5.4
YKA                                 PKKPbc            03 11 46.1
            comp=Z,0.5nm,0.8s,baz=142,slow=3.2,SNR=9.2
TBI   Tubuai           114.11 114  eLR       LR       03 35 15.0
            comp=Z,194nm,26.2s
PPT   Papeete          114.63 108  eLR       LR       03 35 29.1
            comp=Z,108nm,22.5s
TAOE  Nuku Hiva Isla   124.39  99  eLR       LR       03 40 03.1
ULM   Lac du Bonnet    126.17   9   PKP      PKPdf    03 01 11.2 -3.3
            comp=Z,0.4nm,0.3s,baz=358,slow=6.1,SNR=3.9
ULM                                 pPKP              03 01 19.2
            comp=Z,4.3nm,0.9s,baz=354,slow=3.0,SNR=5.3
ULM   Lac du Bonnet    126.17   9   PKP      PKPdf    03 01 11.2 -3.3
ULM                                 pPKP              03 01 19.2
MCMT  McKenzie Canyo   126.19  25   PKPdf    PKPdf    03 01 12.8 -1.9
LAO   LASA Array       127.05  19  ePKPdf    PKPdf    03 01 13.9 -2.3
RKT   Rikitea          127.22 117  eLR       LR       03 41 19.2
            comp=Z,253nm,34.2s
ELK   Elko             128.30  30  ePKIKP    PKPdf    03 01 17.3 -1.6
NVAR  Mina Array Bea   128.39  34   PKP      PKPdf    03 01 17.0 -2.1
            comp=Z,1.0nm,0.8s,baz=257,slow=1.4,SNR=7.2
NVAR                                pPKP              03 01 25.2
            comp=Z,2.3nm,0.8s,baz=263,slow=1.2,SNR=9.6
NVAR  Mina Array Bea   128.39  34   PKP      PKPdf    03 01 17.0 -2.2
NVAR                                pPKP              03 01 25.2
PDAR  Pinedale Array   129.23  24   PKP      PKPdf    03 01 17.9 -2.7
            comp=Z,0.4nm,0.5s,baz=63,slow=3.3,SNR=4.8
PDAR                                pPKP              03 01 25.4
            comp=Z,0.9nm,0.6s,baz=144,slow=1.9,SNR=5.8
DUG   Dugway           129.90  28  ePKIKP    PKPdf    03 01 20.2 -1.8
MSU   Marysvale        131.53  29   PKIKP    PKPdf    03 01 22.4 -2.7
PV10  Paradox Valley   133.10  27  ePKPdf    PKPdf    03 01 26.1 -1.9
ANMO  Albuquerque      137.09  27  i PKIKP   PKPdf    03 01 32.5 -3.0
PLCA  Paso Flores      140.27 197   PKP      PKPdf    03 01 39.2 -1.9
            comp=Z,1.5nm,0.8s,baz=166,slow=3.1,SNR=4.2
MNTX  Cornudas Mount   140.29  28  ePKPdf    PKPdf    03 01 36.5 -5.0
BDFB  Brasilia         141.90 248   PKP      PKPdf    03 01 42.4 -2.3
            comp=Z,1.4nm,0.9s,baz=117,slow=2.3,SNR=2.9
TXAR  Lajitas Array    143.08  28   PKhKP             03 01 39.5
            comp=Z,0.7nm,0.7s,baz=347,slow=0.9,SNR=9.3
JCT   Junction City    143.75  23  ePKIKP    PKPdf    03 01 42.9 -4.6
HKT   Hockley          145.60  18  ePKIKP    PKPdf    03 01 47.4 -3.4
LVC   Limon Verde      155.23 216   pPKPab            03 02 38.1
            comp=Z,12nm,1.1s,baz=146,slow=3.2,SNR=6.2
LPAZ  La Paz           159.09 229   pPKP              03 02 17.4
            comp=Z,2.6nm,1.0s,baz=17,slow=3.3,SNR=7.4
LPAZ                                pPKPab            03 02 53.8
            comp=Z,3.0nm,0.7s,baz=102,slow=4.1,SNR=7.0
SDV   Santo Domingo    161.88 310   pPKPab            03 03 04.9
            comp=Z,4.5nm,0.8s,baz=106,slow=2.8,SNR=6.0
OTAV  Otavalo          173.19 297   PKPdf    PKPdf    03 02 19.1 -2.8
```

MAN 23 02:46:49.2,12.64N×123.21E,h33^{km},mb3.5,ML2.2, MS1.6,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.49**	**124**	*e*P	P	02 47 01.0	+1.3
MMPH				*i* S	S	02 47 09.0	+1.9
AUQP	**San Andres**	**0.85**	**323**	*e*P	P	02 47 05.1	+0.3
AUQP				*e*S	S	02 47 17.1	+0.8
OTRP	**Odiongan**	**1.19**	**257**	*e*P	P	02 47 10.3	+0.7
OTRP				*e*S	S	02 47 24.6	-0.3
BOAC	**Boac**	**1.56**	**302**	*e*P	P	02 47 20.5	+5.6
BOAC				*e*S	S	02 47 35.2	+1.0

IDC 23 02:55:18.6±2.9**,2.75N×95.38E,mb3.9**/3**,mb1 4.2**/4**, mb1mx3.8**/17**,mbtmp4.0**/4**,ML4.4**/1**,Error ellipse: s-maj=105.4km s-min=30.3km az=63.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.00**	**12**	Pn	P	02 59 07.0	+0.2
	0.5nm,0.3s,baz=202,slow=11,SNR=13						
WRA	**Warramunga Arr**	**44.39**	**122**	P	P	03 03 31.4	-1.7
	0.5nm,0.8s,baz=300,slow=9.2,SNR=4.8						
WRA				pP	pP	03 03 39.4	+6.3
	0.4nm,0.4s,baz=301,slow=9.2,SNR=4.6						
SONM	**Songino Array**	**45.91**	**10**	P	P	03 03 42.6	-2.2
	1.3nm,0.6s,baz=189,slow=8.6,SNR=14						
SONM				PcP	PcP	03 05 20.1	-2.4
	0.3nm,0.5s,baz=236,slow=2.2,SNR=4.0						
ZAL	**Zalesovo**	**51.76**	**352**	P	P	03 04 27.9	-2.2
	3.3nm,0.5s,baz=297,slow=5.4,SNR=17						

WEL 23 03:07:08.7±0.2**,37.13S×176.93E,h12^{km},ML4.1**/15**,2C, Error ellipse: s-maj=2.0km s-min=2.0km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.45**	**153**	P*	Pb	03 07 16.8	-1.2
WIZ				S*	Sb	03 07 23.9	-0.3
MYRZ	**Mayor Island**	**0.57**	**255**	P*	Pb	03 07 19.9	-0.3
MYRZ				S*	Sb	03 07 27.9	0.0
MARZ	**Manawahe**	**0.88**	**193**	P*	Pb	03 07 23.7	-1.6
LIRZ	**Lichensteins R**	**0.98**	**206**	P*	Pb	03 07 25.6	-1.4
EDRZ	**Edgecumbe**	**0.99**	**189**	P*	Pb	03 07 26.1	-1.1
KUZ	**Kuaotunu**	**1.04**	**291**	P*	Pb	03 07 27.7	-0.5
KUZ				S*	Sb	03 07 41.4	-0.2
KUZ				S*	Sb	03 07 41.5	-0.2
MKRZ	**Makatiti**	**1.07**	**200**	P*	Pb	03 07 28.0	-0.7
URZ	**Urewera**	**1.14**	**173**	P*	Pb	03 07 27.4	-2.4
TAZ	**Tarawera**	**1.15**	**197**	P*	Pb	03 07 29.6	-0.4
MXZ	**Matakaoa Point**	**1.18**	**112**	P*	Pb	03 07 29.0	-1.4
TOZ	**Tahuroa Road**	**1.29**	**242**	P*	Pb	03 07 30.3	-2.0
MWZ	**Matawai**	**1.29**	**159**	P*	Pb	03 07 30.3	-2.1
MKAZ	**Moumakai**	**1.41**	**270**	⇑PN	Pn	03 07 33.0	-1.3
MTAZ	**Motutapu**	**1.66**	**281**	PN	Pn	03 07 36.8	-0.9
KAAZ	**Kauri Point**	**1.81**	**279**	*e*PN	Pn	03 07 39.4	-0.6
WTAZ	**Waiatarua**	**1.90**	**275**	PN	Pn	03 07 43.2	+1.9
HIZ	**Hauiti**	**2.15**	**229**	PN	Pn	03 07 42.8	-2.0
WCZ	**Waipu Caves**	**2.40**	**299**	⇑PN	Pn	03 07 47.6	-0.8
OUZ	**Omahuta**	**3.31**	**304**	PN	Pn	03 08 00.7	-0.6

DJA 23 03:21:27.5±0.9**,8.47S×116.23E,h110^{km}±6^{km},MD4.4**/3**, ML3.4**/1**,5C-3D,Error ellipse: s-maj=54.4km s-min=15.5km az=175.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	**0.12**	**260**	⇑*i*Pn	P	03 21 42.8	-0.1
	38nm,0.2s						
KEDI	**Kedomdong**	**0.12**	**260**	⇓*i*P	P	03 21 43.1	+0.2
KEDI				⇑*i*Sn	S	03 21 54.2	-0.1
RATI	**Rata**	**0.73**	**250**	⇑*i*Pn	P	03 21 46.2	-0.1
	86nm,0.2s						
RATI				⇓*i*Sn	S	03 22 00.1	-0.4
SRDI	**Scrawed**	**2.06**	**269**	⇓*i*Pn	P	03 22 01.6	-0.2
	21nm,1.0s						
SRDI	**Scrawed**	**2.06**	**269**	⇑*i*P	P	03 22 01.9	+0.1
SRDI				⇑*i*Sn	S	03 22 27.2	-0.3

*NEIC **23** 03:22:21.8,35.07S×70.61W,h5^{km},ML2.8(GUC),After GUC.*

GUC 23 03:22:21.8±0.8**,35.07S×70.61W,h5^{km},MD3.8,ML2.8,3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFDO	**San Fernando**	**0.56**	**323**	⇑*i*P	Pg	03 22 33.2	+0.2
SFDO				*i* S	Sg	03 22 41.6	+1.1
CACH	**El Canelo**	**0.95**	**0**	*e*P	Pb	03 22 39.3	-1.0
CACH				*i* S	Sb	03 22 53.2	+0.2
CHCH	**Chadas Angostu**	**1.13**	**358**	⇑*i*P	Pb	03 22 42.8	-0.6
CHCH				*i* S	Sb	03 22 58.4	+0.1
LMEL	**Las Melosas**	**1.26**	**16**	*e*P	Pb	03 22 44.8	-0.9
LMEL				*i* S	Sb	03 23 02.3	+0.2
LMEL				AMP		03 23 03.4	
	comp=N,263nm,0.2s						
TACH	**Talagante**	**1.44**	**349**	*e*P	Pn	03 22 47.8	-0.7
TACH				*i* S	Sb	03 23 06.8	-0.3
PCH	**Pirque**	**1.45**	**3**	*e*P	Pn	03 22 47.8	-0.9
PCH				*i* S	Sb	03 23 08.1	+0.7
RCDM	**Rinconada Maip**	**1.58**	**354**	*e*P	Pn	03 22 50.2	-0.4
RCDM				*i* S	Sb	03 23 11.5	+0.1
RCDM				AMP		03 23 13.0	
	comp=E,377nm,0.1s						
CLCH	**Cerro Calan**	**1.67**	**2**	*e*P	Pn	03 22 52.0	+0.1
CLCH				*i* S	Sb	03 23 14.8	+0.9
CLCH				AMP		03 23 18.0	
	comp=N,170nm,0.4s						
FCH	**Farellones**	**1.75**	**9**	⇑*i*P	Pn	03 22 53.5	+0.3
FCH				*i* S	Sn	03 23 17.2	+1.1
FCH				AMP		03 23 18.3	
	comp=N,164nm,0.2s						
LPAZ	**La Paz**	**18.83**	**7**	*e*P	P	03 26 34.1	-11
	comp=N,5.4nm,0.6s						

IDC 23 03:47:38.0±2.0**,20.85S×178.90W,mb4.1**/4**,mb1 4.3**/4**, mb1mx4.0**/14**,mbtmp4.1**/4**,2D,Error ellipse: s-maj=165.1km s-min=33.1km az=159.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.88**	**244**	P	P	03 54 47.5	-2.6
	1.1nm,0.5s,baz=80,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**43.62**	**257**	P	P	03 55 44.2	-1.7
	2.8nm,0.7s,baz=94,slow=6.8,SNR=23						
WB2	**Warramunga Arr**	**43.70**	**263**	⇓*i*P	P	03 55 45.5	-1.2
WRA	**Warramunga Arr**	**43.72**	**263**	P	P	03 55 45.6	-1.2
	2.6nm,0.3s,baz=95,slow=8.2,SNR=174						
KAKA	**Kakadu**	**47.14**	**272**	⇓*i*P	P	03 56 13.2	-1.0
	5.7nm,0.3s						
FITZ	**Fitzroy Crossi**	**52.14**	**263**	*e*P	P	03 56 49.2	-3.4
	2.3nm,1.0s						
TXAR	**Lajitas Array**	**87.95**	**58**	P	P	04 00 30.2	-1.2
	0.2nm,0.7s,baz=217,slow=6.3,SNR=3.8						

*INMG **23** 03:48:00.8±1.1,35.93N×10.16W,h16^{km}±42^{km},ML2.0, Error ellipse: s-maj=39.1km s-min=5.9km az=48.0*

*CSEM **23** 03:48:02.5±0.3,36.03N×9.84W,h120^{km}±3^{km},ML3.2/2, Error ellipse: s-maj=6.6km s-min=5.8km az=167.0*

MDD 23 03:47:59.8±2.4**,36.04N×10.08W,mbLg2.4**/6**,Error ellipse: s-maj=20.9km s-min=14.5km az=69.0,PRXIMO, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTEO	**Sao Teotonio**	**1.86**	**35**	*e*Pn	Pn	03 48 31.8	-1.3
PTEO				*e*Sn	Sn	03 48 55.0	-2.6
	6.6nm,0.2s						
PTEO	**Sao Teotonio**	**1.86**	**35**	*e*Pn	Pn	03 48 31.8	-1.3
PTEO				*e*Sn	Sn	03 48 55.0	-2.6
	6.6nm,0.2s						
PALC	**Alcoutim**	**2.53**	**55**	*e*Pn	Pn	03 48 41.1	-1.6
PALC				*e*Sn	Sn	03 49 11.2	-3.5
	4.0nm,0.3s						
PALC	**Alcoutim**	**2.53**	**55**	*e*Pn	Pn	03 48 41.1	-1.6
PALC				*e*Sn	Sn	03 49 11.2	-3.5
	4.0nm,0.3s						
PBEJ	**Beja**	**2.66**	**41**	*e*Pn	Pn	03 48 42.6	-2.0
PBEJ				*e*Sn	Sn	03 49 14.8	-3.2
	2.0nm,0.2s						
	1.6nm,0.1s						
PBEJ	**Beja**	**2.66**	**41**	*e*Pn	Pn	03 48 42.6	-2.0
PBEJ				*e*Sn	Sn	03 49 14.8	-3.2
	2.0nm,0.2s						
MOE	**Montemor**	**2.84**	**29**	*e*Sn	Sn	03 49 19.4	-3.1
PLOU	**Loures**	**2.94**	**14**	*e*Sn	Sn	03 49 20.8	-4.2
	6.9nm,0.1s						
PLOU	**Loures**	**2.94**	**14**	*e*Sn	Sn	03 49 20.8	-4.2
	6.9nm,0.1s						
EMIN	**Mina Concepcio**	**3.23**	**57**	P	Pn	03 48 50.2	-2.5
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	03 49 27.3	-5.1
	0.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.23**	**57**	P	Pn	03 48 50.2	-2.5
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	03 49 27.3	-5.2
	0.7nm,0.1s,SNR=7.9						
ESPR	**Espera**	**3.50**	**75**	P	Pn	03 48 54.1	-2.5
	1.4nm,0.1s,SNR=6.3						
ESPR				S	Sn	03 49 33.8	-5.6
	7.7nm,0.4s						
ESPR	**Espera**	**3.50**	**75**	P	Pn	03 48 54.1	-2.5
	1.4nm,0.1s,SNR=6.3						
ESPR				S	Sn	03 49 33.8	-5.6
	7.7nm,0.4s						
EBAD	**Badajoz**	**3.65**	**41**	S	Sn	03 49 38.1	-4.9
	1.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**3.65**	**41**	S	Sn	03 49 38.2	-4.9
	1.1nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**4.32**	**28**	*e*Sn	Sn	03 49 54.0	-6.0
	1.8nm,0.3s						
PCBR	**Castelo Branco**	**4.32**	**28**	Sn	Sn	03 49 54.0	-6.0
	0.9nm,0.3s						
MTE	**Manteigas**	**4.79**	**24**	*e*Sn	Sn	03 50 05.7	-6.3
	2.4nm,0.5s						
MTE	**Manteigas**	**4.79**	**24**	Sn	Sn	03 50 05.7	-6.3
	1.2nm,0.5s						
EADA	**Adamuz**	**4.88**	**63**	P	Pn	03 49 13.0	-3.2
	0.3nm,0.1s,SNR=10.0						
EADA				S	Sn	03 50 06.7	-7.6
	1.4nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**4.88**	**63**	P	Pn	03 49 13.0	-3.2
	0.3nm,0.1s,SNR=10.0						
EADA				S	Sn	03 50 06.7	-7.6
	1.4nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**4.97**	**20**	*e*Pn	Pn	03 49 14.8	-2.7
PVIS				*e*Sn	Sn	03 50 09.8	-6.8
	1.8nm,0.1s						
PVIS	**Viseu**	**4.97**	**20**	Pn	Pn	03 49 14.8	-2.7
PVIS				Sn	Sn	03 50 09.8	-6.8
	0.9nm,0.1s						
PVRL	**Vila Real**	**5.55**	**19**	*e*Sn	Sn	03 50 21.4	-10
	3.5nm,0.2s						
PVRL	**Vila Real**	**5.55**	**19**	Sn	Sn	03 50 21.4	-10
	1.8nm,0.2s						
ELOB	**Lobios**	**6.03**	**14**	S	Sn	03 50 33.8	-9.2
	1.4nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**6.03**	**14**	S	Sn	03 50 33.8	-9.3
	1.4nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**6.05**	**51**	P	Pn	03 49 28.8	-3.8
	0.9nm,0.1s,baz=235,slow=14,SNR=4.7						
ESDC				S	Sn	03 50 36.3	-7.2
	1.2nm,0.3s,baz=237,slow=25,SNR=6.2						
ESDC	**Sonseca Array**	**6.05**	**51**	P	Pn	03 49 28.8	-3.8
	0.9nm,0.1s,SNR=4.7						
ESDC				S	Sn	03 50 36.3	-7.3
	1.2nm,0.3s,SNR=6.2						
PBRG	**Braganca**	**6.32**	**23**	*e*Pn	Pn	03 49 32.3	-4.2
PBRG				*e*Sn	Sn	03 50 41.7	-8.6
ECAL	**Calabor**	**6.44**	**23**	S	Sn	03 50 46.0	-7.5
	1.0nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.44**	**23**	S	Sn	03 50 46.0	-7.4
	1.0nm,0.1s,SNR=7.9						

*IDC **23** 03:58:39.7±0.7,34.14N×141.70E,mb3.6/9,mb1 3.9/11, mb1mx3.9/22,mbtmp3.8/11,ML3.7/2,Error ellipse: s-maj=24.2km s-min=15.0km az=111.0*

*NEIC **23** 03:58:41.1±0.6,34.15N×141.53E,h10^{km},mb3.6/1,Error ellipse: s-maj=16.5km s-min=12.9km az=52.0*

*JMA **23** 03:58:41.2±0.5,34.06N×141.73E,h33^{km}±5^{km},M3.2*

ISC 23 03:58:41.6±1.4**,34.15N**±0.05×**141.75E**±0.08**,h29^{km}**±10^{km}**, n19,σ1^{s}30**/24**,mb3.6**/10**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.81**	**308**	P	**Pb**	**03 58 57.0**	**-0.1**
BSO1				*e*S	**Sb**	**03 59 08.3**	**+0.6**
BSO3	**Boso 3**	**1.21**	**303**	P	**Pn**	**03 59 03.1**	**+0.2**
BSO4	**Boso 4**	**1.44**	**306**	P	**Pn**	**03 59 07.0**	**+1.0**
JHJ	**Hachijo jima 2**	**1.94**	**238**	Pn	**Pn**	**03 59 14.2**	**+1.1**
	72nm,0.3s,baz=53,slow=21,SNR=11						
JHJ				Sn	**Sn**	**03 59 37.9**	**+1.1**
	92nm,0.3s,baz=72,slow=22,SNR=10						
MAJO	**Matsushiro**	**3.75**	**311**	*e*P	**Pn**	**03 59 37.2**	**-1.8**
MAT	**Matsushiro**	**3.75**	**311**	P	**Pn**	**03 59 40.2**	**+1.1**
MAT				*e*S	**Sn**	**04 00 20.7**	**-2.1**
CBIJ	**Chichi jima**	**7.04**	**177**	Pn	**Pn**	**04 00 24.4**	**-1.1**
	5.3nm,0.3s,baz=3.8,slow=15,SNR=3.8						
CBIJ				Sn	**Sn**	**04 01 44.1**	**-1.2**
	0.5nm,0.3s,baz=291,slow=16,SNR=2.2						
ASAJ	**Asahikawa**	**9.97**	**4**	Pn	**P**	**04 01 03.6**	**-2.5**
	0.7nm,0.3s,baz=205,slow=17,SNR=3.3						
ASAJ				Sn	**Sn**	**04 02 47.5**	**-11**
	1.4nm,0.3s,baz=105,slow=11,SNR=3.7						
SONM	**Songino Array**	**29.70**	**308**	P	**P**	**04 04 47.7**	**+0.5**
	0.6nm,0.5s,mb3.6,baz=104,slow=8.1,SNR=8.5						
KURK	**Kurchatov**	**47.96**	**310**	*e*P	**P**	**04 07 17.9**	**-1.5**
ILAR	**Eielson Array**	**51.80**	**31**	P	**P**	**04 07 49.5**	**+1.0**
	0.5nm,0.7s,mb3.5,baz=268,slow=6.8,SNR=7.0						
CHKZ	**Chkalovo**	**52.51**	**315**	*e*P	**P**	**04 07 52.0**	**-2.1**
	0.5nm,0.7s,mb3.5						
WRA	**Warramunga Arr**	**54.25**	**189**	P	**P**	**04 08 07.0**	**-0.3**
	1.6nm,0.5s,mb4.2,baz=6.0,slow=7.6,SNR=33						
ASAR	**Alice Springs**	**57.98**	**188**	P	**P**	**04 08 33.6**	**-0.4**
	0.7nm,0.6s,mb3.9,baz=17,slow=9.2,SNR=7.3						
YKA	**Yellowknife Ar**	**66.17**	**30**	P	**P**	**04 09 28.7**	**+0.6**
	0.1nm,0.4s,mb3.2,baz=300,slow=6.3,SNR=4.4						
NOA	**NORSAR Array B**	**76.95**	**338**	P	**P**	**04 10 32.5**	**-0.1**
	1.4nm,0.9s,mb3.9,baz=349,slow=8.2,SNR=3.4						
PDAR	**Pinedale Array**	**79.50**	**45**	P	**P**	**04 10 49.3**	**+2.4**
	0.3nm,0.7s,mb3.3,baz=270,slow=3.0,SNR=3.8						
BRTR	**Keskin Array B**	**80.98**	**312**	P	**P**	**04 10 56.2**	**+1.4**
	0.5nm,0.9s,mb3.5,baz=53,slow=7.2,SNR=3.3						
TXAR	**Lajitas Array**	**91.66**	**53**	P	**P**	**04 11 50.0**	**+2.5**
	0.1nm,0.5s,mb3.4,baz=323,slow=4.5,SNR=2.6						

*TEH **23** 04:16:40.8,30.64N×56.76E,h10^{km},Mn3.2*

*CSEM **23** 04:16:40.4±0.1,30.77N×56.70E,h14^{km},ML4.0/2,Error ellipse: s-maj=4.8km s-min=2.0km az=61.0*

*THR **23** 04:16:41.2±0.7,30.74N×56.77E,h14^{km}±8^{km},ML3.1*

ISC 23 04:16:40.4±0.8**,30.78N**±0.05×**56.7E**±0.1**,h10^{km},n12, σ1^{s}00**/17**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.80**	**179**	*i* PG	**Pg**	**04 16 55.6**	**-0.8**
KRBR				*e*SG	**Sg**	**04 17 06.8**	**-0.4**
KRBR				AML	AML	04 17 08.0	
	comp=N,1µm,0.3s						
KRBR	**Kerman**	**0.80**	**179**	*i* Pg	**Pg**	**04 16 55.6**	**-0.8**
	SNR=90						
KRBR				*e*Sg	**Sg**	**04 17 06.8**	**-0.3**
	comp=N,1µm,0.3s,SNR=90						
IBAF	**Bafgh**	**1.29**	**309**	Pn	**Pn**	**04 17 04.4**	**-0.1**
IMEH	**Mehriz**	**1.93**	**289**	Pn	**Pn**	**04 17 14.4**	**+0.8**
ICHK	**Chekchek**	**2.47**	**307**	Pn	**Pn**	**04 17 22.1**	**+0.7**
BNDS	**Bandar-Abbas**	**3.41**	**189**	*e*PN	**Pn**	**04 17 35.3**	**+0.5**
BNDS				AML	AML	04 18 44.5	
	comp=N,49nm,0.6s						
ZHSF	**Zahedan**	**3.68**	**107**	*e*PN	**Pn**	**04 17 39.5**	**+0.9**
ZHSF				AML	AML	04 18 47.0	
	comp=N,19nm,0.6s						
NASN	**Na'in**	**3.91**	**302**	*e*PN	**Pn**	**04 17 43.9**	**+2.1**
NASN				*e*SG	**Sg**	**04 18 43.9**	**-6.6**
NASN				AML	AML	04 18 51.5	
	comp=N,29nm,0.6s						
NASN	**Na'in**	**3.91**	**302**	*e*Pn	**Pn**	**04 17 43.9**	**+2.1**
	SNR=52						
NASN				*e*Sg	**Sg**	**04 18 43.9**	**-6.6**
	comp=N,29nm,0.6s,SNR=90						
IFIR	**Firoozkooh**	**5.89**	**326**	Pn	**Pn**	**04 18 09.0**	**-0.8**
IDMV	**Damavand**	**6.20**	**322**	Pn	**Pn**	**04 18 13.3**	**-1.0**
IAFJ	**Afjeh**	**6.58**	**322**	Pn	**Pn**	**04 18 18.0**	**-1.6**
IAFJ				Sn	**Sn**	**04 19 30.6**	**-4.9**

*IDC **23** 04:21:57.0±1.7,1.91N×92.45E,mb3.8/4,mb1 4.1/5, mb1mx3.8/16,mbtmp3.9/5,ML4.5/1,MS3.4/2,Ms1 3.5/2, ms1mx2.8/27,Error ellipse: s-maj=57.3km s-min=29.5km az=59.0*

ISC 23 04:22:00.6±1.5**,2.0N**±0.2×**92.6E**±0.3**,h33^{km},n7,σ0^{s}96**/5**, mb3.8**/4**,MS3.7**/1**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.51**	**20**	P	**P**	**04 26 03.8**	**-0.1**
	0.6nm,0.3s,baz=215,slow=13,SNR=19						
CMAR				LR	LR	04 32 48.0	
	comp=Z,68nm,19.7s,baz=210,slow=37						
WRA	**Warramunga Arr**	**46.40**	**120**	P	**P**	**04 30 26.0**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=297,slow=8.7,SNR=8.2						
SONM	**Songino Array**	**47.20**	**13**	P	**P**	**04 30 33.1**	**+1.0**
	1.3nm,0.7s,mb4.0,baz=195,slow=8.2,SNR=14						
ZAL	**Zalesovo**	**52.17**	**354**	P	**P**	**04 31 08.9**	**-1.1**
	0.6nm,0.3s,mb4.0,baz=324,slow=5.9,SNR=4.3						
MLR	**Muntele Rosu**	**72.34**	**317**	LR	LR	05 07 03.5	
	comp=Z,42nm,18.4s,MS3.7,baz=69,slow=37						
GERES	**GERESS Array B**	**81.18**	**319**	P	**P**	**04 34 14.8**	**+0.3**
	0.8nm,0.9s,mb3.6,baz=90,slow=4.0,SNR=4.8						
TXAR	**Lajitas Array**	**145.19**	**25**	PKPbc	PKPbc	04 41 36.9	+1.1
	1.9nm,1.1s,baz=295,slow=1.5,SNR=7.9						

*CSEM **23** 04:42:47.8±0.5,36.40N×10.91E,h8^{km},ML3.3/4,Error ellipse: s-maj=11.0km s-min=3.7km az=126.0*

*TUN **23** 04:42:48.7,36.17N×10.90E,h0^{km},MD4.1*

*LDG **23** 04:42:51.9±0.8,36.13N×10.11E,h10^{km},Ml3.3/4,Error ellipse: s-maj=24.4km s-min=14.3km az=89.0*

*NEIC **23** 04:43:05.2±1.2,37.32N×10.00E,h10^{km},ML3.3(LDG), Error ellipse: s-maj=15.5km s-min=7.7km az=121.0*

ISC 23 04:42:54.4±0.8**,36.83N**±0.04×**10.51E**±0.08**,h10^{km},n44, σ1^{s}06**/48**,mb4.6**/1**,Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBZ	**Menzel Bouzelf**	**0.20**	**139**	*i* P	**Pg**	**04 42 58.5**	**-0.3**
ZGN	**Zaghouan**	**0.57**	**215**	*i* P	**Pg**	**04 43 00.2**	**-5.7**
KRIT	**Krib**	**1.25**	**247**	*i* P	**Pb**	**04 43 17.5**	**-0.2**
TROT	**Trozza**	**1.47**	**210**	*i* P	**Pn**	**04 43 11.0**	**-10**
GHAT	**Ghardimaou**	**1.80**	**260**	*i* P	**Pn**	**04 43 24.0**	**-1.9**
VSL	**Villasalto**	**2.80**	**342**	*e*P	**Pn**	**04 43 41.5**	**+1.4**
VSL	**Villasalto**	**2.80**	**342**	*e*P	**Pn**	**04 43 41.5**	**+1.3**
PGF	**Pioggiola**	**5.83**	**349**	*e*Pn	**Pn**	**04 44 24.3**	**+1.3**
PGF				*e*Sn	**Sn**	**04 45 35.1**	**+4.4**
	15nm,0.5s						
LMR	**La Mourre**	**7.18**	**336**	*e*Pn	**Pn**	**04 44 41.3**	**-0.8**
LMR				*e*Sn	**Sn**	**04 46 03.5**	**-1.0**
	3.0nm,0.4s						
FRF	**La Foret Royal**	**7.34**	**337**	*e*Pn	**Pn**	**04 44 43.3**	**-1.0**
FRF				*e*Sn	**Sn**	**04 46 08.3**	**-0.2**
	2.3nm,0.4s						
SBF	**Sospel**	**7.40**	**342**	*e*Pn	**Pn**	**04 44 44.4**	**-0.8**
EIBI	**Ibiza**	**7.56**	**290**	P	**Pn**	**04 44 47.7**	**+0.2**
EIBI	**Ibiza**	**7.56**	**290**	P	**Pn**	**04 44 47.7**	**+0.2**
	9.5nm,0.3s,SNR=7.9						
SMRF	**Simiane la Rot**	**8.06**	**334**	*e*Pn	**P**	**04 44 53.2**	**-1.3**
EJON	**La Jonquera**	**8.12**	**316**	P	**P**	**04 44 54.6**	**-0.6**
EJON	**La Jonquera**	**8.12**	**316**	P	**P**	**04 44 54.7**	**-0.5**
MBDF	**Montbardon**	**8.38**	**341**	*e*Pn	**P**	**04 44 59.7**	**+0.9**
MBDF				*e*Sn	**Sn**	**04 46 34.0**	**-0.5**
	0.5nm,0.2s						
EPOB	**Poblet**	**8.61**	**305**	P	**P**	**04 45 02.5**	**+0.5**
	0.7nm,0.2s						
EPOB	**Poblet**	**8.61**	**305**	P	**P**	**04 45 02.5**	**+0.5**
	0.7nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**8.61**	**309**	P	**P**	**04 45 01.8**	**-0.2**
	1.9nm,0.3s						
EMIR	**Miracle**	**8.61**	**309**	P	**P**	**04 45 01.8**	**-0.2**
	1.9nm,0.3s,SNR=4.0						
EBEN	**Beniarda**	**8.70**	**286**	P	**P**	**04 45 04.9**	**+1.6**
	1.8nm,0.3s						
EBEN	**Beniarda**	**8.70**	**286**	P	**P**	**04 45 04.9**	**+1.6**
	1.8nm,0.3s,SNR=7.9						
ORIF	**Oris-en-Rattie**	**8.80**	**338**	*e*Pn	**P**	**04 45 05.2**	**+0.5**
LASF	**Ste Croix**	**8.83**	**327**	*e*Pn	**P**	**04 45 03.2**	**-1.9**
ERTA	**Horta de San J**	**8.93**	**301**	P	**P**	**04 45 06.7**	**+0.1**
	1.0nm,0.2s						
ERTA	**Horta de San J**	**8.93**	**301**	P	**P**	**04 45 06.7**	**+0.2**
	1.0nm,0.2s,SNR=7.9						
MTLF	**Montolieu**	**9.08**	**318**	*e*Pn	**P**	**04 45 05.2**	**-3.4**
LPG	**La Plagne**	**9.11**	**343**	*e*Pn	**P**	**04 45 10.1**	**+1.2**
LPL	**La Plagne**	**9.13**	**343**	*e*Pn	**P**	**04 45 10.1**	**+0.9**
VIVF	**Saint-Julien-l**	**9.15**	**333**	*e*Pn	**P**	**04 45 08.0**	**-1.5**
EMOS	**Mosqueruela**	**9.29**	**296**	P	**P**	**04 45 12.1**	**+0.7**
	2.3nm,0.4s						
EMOS	**Mosqueruela**	**9.29**	**296**	P	**P**	**04 45 12.1**	**+0.7**
	2.3nm,0.4s,SNR=8.2						
EMUR	**La Murta**	**9.41**	**280**	P	**P**	**04 45 11.5**	**-1.6**
	2.0nm,0.3s						
EMUR	**La Murta**	**9.41**	**280**	P	**P**	**04 45 11.5**	**-1.6**
	2.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**9.72**	**284**	P	**P**	**04 45 17.5**	**+0.2**
	1.8nm,0.5s						
ETOB	**Tobarra**	**9.72**	**284**	P	**P**	**04 45 17.5**	**+0.1**
	1.8nm,0.5s,SNR=7.9						
ESAC	**San Caprasio**	**9.81**	**303**	P	**P**	**04 45 19.1**	**+0.5**
	6.5nm,0.2s,SNR=4.6						
EBIE	**Bielsa**	**9.89**	**309**	P	**P**	**04 45 21.6**	**+1.9**
	1.4nm,0.5s,SNR=7.9						
EQES	**Quesada**	**10.86**	**279**	P	**P**	**04 45 33.3**	**+0.4**
	1.6nm,0.3s						
EQES	**Quesada**	**10.86**	**279**	P	**P**	**04 45 33.3**	**+0.3**
	1.6nm,0.3s,SNR=5.3						
EALK	**Alkurruntz**	**11.20**	**308**	P	**P**	**04 45 39.1**	**+1.5**
	1.2nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**12.44**	**305**	P	**P**	**04 45 55.2**	**+0.8**
	1.0nm,0.3s,SNR=5.0						
DBIC	**Dimbokro**	**33.14**	**209**	P	**P**	**04 49 43.9**	**+11**
	12nm,1.5s,mb4.6						

*THR **23** 04:43:06.8±0.5,30.75N×56.55E,h14^{km}±5^{km},ML3.0*

*CSEM **23** 04:43:07.7±0.1,30.71N×56.56E,h18^{km},ML3.9/2,Error ellipse: s-maj=4.7km s-min=1.9km az=57.0*

*TEH **23** 04:43:15.2,30.89N×56.06E,h10^{km},Mn3.0*

ISC 23 04:43:07.2±0.8**,30.74N**±0.06×**56.6E**±0.1**,h10^{km},n14, σ0^{s}64**/18**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.77**	**169**	*i* PG	**Pg**	**04 43 22.1**	**-0.6**
KRBR				*e*SG	**Sg**	**04 43 32.9**	**-0.1**
KRBR				AML	AML	04 43 37.0	
	comp=N,480nm,0.2s						
KRBR	**Kerman**	**0.77**	**169**	*i* Pg	**Pg**	**04 43 22.0**	**-0.7**
	SNR=90						
KRBR				*e*Sg	**Sg**	**04 43 32.9**	**-0.1**
	comp=N,480nm,0.2s,SNR=90						
IBAF	**Bafgh**	**1.22**	**314**	Pn	**Pn**	**04 43 29.8**	**-0.5**
IMEH	**Mehriz**	**1.82**	**291**	Pn	**Pn**	**04 43 40.0**	**+1.1**
ICHK	**Chekchek**	**2.39**	**309**	Pn	**Pn**	**04 43 48.1**	**+1.0**
BNDS	**Bandar-Abbas**	**3.35**	**186**	*e*PN	**Pn**	**04 44 01.1**	**+0.4**
BNDS				AML	AML	04 45 06.0	
	comp=N,36nm,0.7s						
ZHSF	**Zahedan**	**3.79**	**106**	*e*PN	**Pn**	**04 44 07.5**	**+0.5**
NASN	**Na'in**	**3.82**	**303**	*e*PN	**Pn**	**04 44 06.8**	**-0.6**
NASN				*e*SG	**Sg**	**04 45 04.8**	**-10**
NASN				AML	AML	04 45 13.8	
	comp=N,32nm,0.5s						
NASN	**Na'in**	**3.82**	**303**	*e*Pn	**Pn**	**04 44 06.8**	**-0.6**
	SNR=52						
NASN				*e*Sg	**Sg**	**04 45 04.8**	**-10**
	comp=N,32nm,0.5s,SNR=90						
IFIR	**Firoozkooh**	**5.85**	**328**	Pn	**Pn**	**04 44 36.2**	**+0.1**
IFIR	**Firoozkooh**	**5.85**	**328**	Sn	**Sn**	**04 45 36.4**	**-7.7**
IDMV	**Damavand**	**6.15**	**323**	Pn	**Pn**	**04 44 40.0**	**-0.4**
IAFJ	**Afjeh**	**6.53**	**323**	Sn	**Sn**	**04 45 51.8**	**-9.4**
IAFJ	**Afjeh**	**6.53**	**323**	Pn	**Pn**	**04 44 45.0**	**-0.8**

*IDC **23** 04:44:31.2±0.6,65.81S×133.85E,mb4.6/13,mb1 4.7/14,* *mb1mx4.5/19, mbtmp4.6/14, ML5.0/1, MS3.9/11, Ms1 3.9/11, ms1mx3.7/16, Error ellipse: s-maj=26.8km s-min=14.1km az=102.0*

NEIC ***23*** *04:44:33.0±0.3, 65.78S×133.52E, h10^{km}, mb4.8/5, MS4.9/26, Error ellipse: s-maj=14.8km s-min=6.2km az=107.0*

ISC 23 04:44:30.6±0.4**, 65.82S**±0.06×**134.0E**±0.3**, h10^{km}, n95, σ0^{s}91**/29**, mb4.6**/15**, MS4.6**/36**, 8C-2D, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	14.39	156	Pn	P	04 47 54.2	-1.6
	6.9nm,0.3s,baz=311,slow=14,SNR=10						
VNDA				Sn	S	04 50 30.6	-5.9
	5.9nm,0.3s,baz=356,slow=15,SNR=4.3						
VNDA				LR	LR	04 54 08.9	
	comp=Z,490nm,20.1s,baz=322,slow=40						
VNDA	Vanda	14.39	156	*e*P	P	04 47 54.0	-1.9
	18nm,0.4s						
MAW	Mawson	26.79	234	P	P	04 50 12.0	0.0
	24nm,0.9s,mb4.7,baz=153,slow=4.5,SNR=3.6						
MAW				LR	LR	05 00 30.3	
	comp=Z,416nm,21.9s,MS4.0,baz=108,slow=36						
RPZ	Rata Peaks	30.01	61	P	P	04 50 44.7	+3.5
	2.4nm,0.6s,mb4.1,baz=238,slow=9.5,SNR=2.6						
RPZ				LR	LR	04 59 39.4	
	comp=Z,238nm,20.3s,MS3.8,baz=338,slow=30						
STKA	Stephens Creek	34.28	11	*e*P	P	04 51 19.7	+1.0
	14nm,0.9s,mb4.9						
STKA	Stephens Creek	34.28	11	P	P	04 51 19.2	+0.6
	14nm,0.8s,mb5.0,baz=183,slow=7.2,SNR=20						
STKA				LR	LR	05 01 48.1	
	comp=Z,213nm,19.8s,MS3.9,baz=202,slow=30						
NWAO	Narrogin (SRO)	34.45	335	P	P	04 51 19.6	-0.5
	6.4nm,0.8s,mb4.6,baz=131,slow=12,SNR=4.0						
URZ	Urewera	36.99	63	LR	LR	05 04 51.5	
	comp=Z,211nm,20.6s,MS3.9,baz=17,slow=33						
SNAA	Sanae	39.71	200	*e*	P	04 52 12.6	+8.5
SNAA	Sanae	39.71	200	P	P	04 52 04.2	+0.1
	2.2nm,0.4s,mb4.3,baz=177,slow=9.7,SNR=64						
SNAA	Sanae	39.71	200	⇑*i*P	P	04 52 04.1	0.0
SNAA				*e*		04 52 12.6	
VNA3	Neumayer Olymp	40.99	197	⇑*i*P	P	04 52 14.5	-0.1
VNA3				*e*		04 52 24.2	
VNA3				*e*		04 52 36.9	
VNA2	Neumayer--Watz	41.01	198	⇑*i*P	P	04 52 14.7	0.0
VNA2				*e*		04 52 24.7	
VNA2				*e*		04 52 37.0	
VNA1	Neumayer--Stat	41.37	198	⇑*i*P	P	04 52 17.1	-0.6
VNA1				*e*		04 52 27.0	
ASPA	Alice Springs	42.15	360	*e*P	P	04 52 24.3	-0.2
ASAR	Alice Springs	42.15	360	P	P	04 52 24.4	-0.1
	12nm,1.0s,mb4.5,baz=176,slow=8.7,SNR=49						
ASAR				LR	LR	05 08 38.7	
	comp=Z,101nm,18.4s,MS3.7,baz=164,slow=34						
WB2	Warramunga Arr	45.85	0	*e*P	P	04 52 54.0	-0.4
WRA	Warramunga Arr	45.85	0	P	P	04 52 53.9	-0.6
	17nm,0.9s,mb5.0,baz=180,slow=6.8,SNR=71						
WRAB	Tennant Creek	45.86	0	*e*P	P	04 52 53.3	-1.2
	31nm,1.0s,mb5.2						
CTA	Charters Tower	46.41	16	*e*P	P	04 53 00.5	+1.7
	4.2nm,0.9s,mb4.4						
CTA	Charters Tower	46.41	16	P	P	04 53 00.7	+1.9
	5.9nm,0.9s,mb4.5,baz=157,slow=7.0,SNR=4.7						
CTA				LR	LR	05 09 23.3	
	comp=Z,124nm,20.9s,MS3.8,baz=44,slow=32						
CTAO	Charters Tower	46.41	16	*e*P	P	04 53 00.2	+1.4
	8.7nm,1.1s,mb4.6						
KAKA	Kakadu	53.05	358	⇓*i*P	P	04 53 48.8	-1.1
	14nm,0.8s,mb4.9						
PMG	Port Moresby	57.06	15	P	P	04 54 18.3	-0.7
	9.0nm,1.0s,mb4.8,baz=234,slow=8.7,SNR=3.5						
PMG				LR	LR	05 16 46.8	
	comp=Z,102nm,19.2s,MS3.9,baz=165,slow=34						
PPT	Papeete	68.55	85	*e*LR	LR	05 16 03.2	
	231nm,27.8s						
SUR	Sutherland	69.62	236	P	P	04 55 41.6	0.0
	7.5nm,0.8s,mb4.7,baz=153,slow=11,SNR=3.5						
PLCA	Paso Flores	72.09	161	P	P	04 55 57.4	+1.0
	1.2nm,0.6s,mb4.0,baz=223,slow=12,SNR=6.9						
PLCA				LR	LR	05 26 49.4	
	comp=Z,146nm,19.7s,MS4.2,baz=183,slow=35						
LBTB	Lobatse	74.63	243	PFAKE		04 56 20.0	+8.6
LBTB				LR	LR		
	comp=Z,228nm,19.0s,MS4.5						
MATP	Matopo	77.72	248	P	P	04 56 29.4	+0.6
	comp=Z,5.7nm,0.9s,mb4.5,baz=180,slow=5.2,SNR=11						
GUMO	Guam	79.59	11	PFAKE		04 56 50.0	+11
GUMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
TAOE	Nuku Hiva Isla	80.27	90	*e*LR	LR	05 21 27.7	
CFAA	Coronel Fontan	81.38	161	P	P	04 56 49.8	+1.4
	comp=Z,0.2nm,0.5s,baz=44,slow=0.9,SNR=3.3						
LSZ	Lusaka	82.53	249	PFAKE		04 57 10.0	+15
LSZ				LR	LR		
	comp=Z,247nm,20.0s,MS4.6						
TSUM	Tsumeb	82.85	239	PFAKE		04 57 10.0	+14
TSUM				LR	LR		
	comp=Z,183nm,19.0s,MS4.5						
QIZ	Qiongzhong	86.55	337	PFAKE		04 57 30.0	+15
QIZ				LR	LR		
	comp=Z,126nm,19.0s,MS4.3						
CMAR	Chiang Mai Arr	88.09	327	P	P	04 57 23.4	+1.2
	comp=Z,0.6nm,0.4s,mb4.2,baz=200,slow=4.9,SNR=4.8						
CMAR				LR	LR	05 33 20.6	
	comp=Z,34nm,21.1s,MS3.7,baz=145,slow=33						
KMBO	Kilima Mbogo	91.76	263	PFAKE		04 57 50.0	+11
KMBO				LR	LR		
	comp=Z,84nm,21.0s,MS4.2						
ENH	Enshi	97.63	339	PFAKE		04 58 20.0	+14
ENH				LR	LR		
	comp=Z,96nm,20.0s,MS4.3						
BDFB	Brasilia	98.77	178	LR	LR	05 43 20.0	
	comp=Z,87nm,18.7s,MS4.3,baz=356,slow=36						
OTAV	Otavalo	110.57	145	PFAKE		05 03 20.0	+14
OTAV				LR	LR		
	comp=Z,137nm,21.0s,MS4.5						
DBIC	Dimbokro	114.42	226	PFAKE		05 03 20.0	+6.5
DBIC				LR	LR		
	comp=Z,168nm,21.0s,MS4.6						
JTS	JuntasAbangare	118.48	135	PFAKE		05 03 30.0	+8.6
JTS				LR	LR		
	comp=Z,53nm,19.0s,MS4.2						
LTX	Lajitas	129.52	107	PFAKE		05 03 50.0	+7.7
LTX				LR	LR		
	comp=Z,462nm,21.0s,MS5.2						
MNV	Mina	131.53	87	PFAKE		05 04 00.0	+14
MNV				LR	LR		
	comp=Z,352nm,21.0s,MS5.0						
BMN	Battle Mountai	133.61	87	PFAKE		05 04 00.0	+10
BMN				LR	LR		
	comp=Z,332nm,19.0s,MS5.1						
MVU	Marysvale	134.04	93	PFAKE		05 04 00.0	+10
MVU				LR	LR		
	comp=Z,295nm,19.0s,MS5.0						
ELK	Elko	134.69	88	PFAKE		05 04 00.0	+8.3
ELK				LR	LR		
	comp=Z,328nm,21.0s,MS5.0						
WVOR	Wild Horse Val	134.71	84	PFAKE		05 04 00.0	+8.3
WVOR				LR	LR		
	comp=Z,422nm,21.0s,MS5.1						
BILL	Bilibino	135.50	17	PFAKE		05 04 00.0	+7.5
BILL				LR	LR		
	comp=Z,153nm,21.0s,MS4.7						
BMO	Blue Mountains	137.25	83	PFAKE		05 04 10.0	+14
BMO				LR	LR		
	comp=Z,363nm,19.0s,MS5.1						
AHID	Auburn Hatcher	138.08	90	PFAKE		05 04 10.0	+12
AHID				LR	LR		
	comp=Z,166nm,19.0s,MS4.8						
FIB	Fire Island	138.42	45	PFAKE		05 04 10.0	+12
FIB				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
OXF	Oxford	139.55	119	PFAKE		05 04 10.0	+9.2
OXF				LR	LR		
	comp=Z,323nm,21.0s,MS5.0						
DIV	Divide	139.70	48	PFAKE		05 04 10.0	+10
DIV				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
FRF	La Foret Royal	143.85	258	*e*PKP1	PKPbc	05 04 05.2	+1.4
	comp=Z,55nm,1.2s						
SMRF	Simiane la Rot	144.63	258	*e*PKP1	PKPbc	05 04 06.6	+0.6
ESDC	Sonseca Array	144.65	243	PKP	PKPdf	05 04 07.7	-1.6
	comp=Z,1.5nm,0.7s,baz=141,slow=2.4,SNR=7.0						
MBDF	Montbardon	144.77	260	*e*PKP1	PKPbc	05 04 07.7	+1.3
	comp=Z,34nm,0.9s						
WTTA	Wattenberg	144.83	267	⇓*i*P	PKPbc	05 04 09.0	+2.5
WATA	Walderalm	144.91	267	⇑*i*P	PKPbc	05 04 08.5	+1.8
SQTA	Sankt Quirin	144.97	266	⇑*i*P	PKPbc	05 04 09.0	+2.1
EVO	Evora	145.09	237	*e*PKIKP	PKPdf	05 04 08.7	-1.5
	comp=Z,11nm,0.8s						
MOTA	Moosalm	145.12	267	⇑*i*P	PKPbc	05 04 07.7	+0.5
DAVOX	Davos	145.17	265	PKPbc	PKPbc	05 04 08.8	+1.4
	comp=Z,7.8nm,0.7s,baz=100,slow=12,SNR=9.6						
GERES	GERESS Array B	145.23	271	PKPbc	PKPbc	05 04 07.6	+0.2
	comp=Z,4.1nm,0.8s,baz=146,slow=4.8,SNR=26						
ORIF	Oris-en-Rattie	145.28	259	*e*PKP1	PKPbc	05 04 09.2	+1.5
DPC	Dobruska-Polom	145.32	275	*e*PKP	PKPdf	05 04 09.9	-0.3
LASF	Ste Croix	145.40	256	*e*PKP1	PKPbc	05 04 09.1	+1.1
LPG	La Plagne	145.41	260	*e*PKP1	PKPbc	05 04 09.1	+1.1
	comp=Z,12nm,0.9s						
LPL	La Plagne	145.43	260	*e*PKP1	PKPbc	05 04 09.2	+1.1
	comp=Z,5.8nm,0.6s						
KHC	Kasperske Hory	145.50	271	*e*PKP	PKPdf	05 04 10.6	+0.1
DGMT	Dagmar	145.54	91	PFAKE		05 04 20.0	+12
DGMT				LR	LR		
	comp=Z,400nm,19.0s,MS5.2						
UPC	Upice	145.57	274	*e*PKP	PKPdf	05 04 11.1	+0.5
DAVA	Damuels	145.57	265	⇑*i*P	PKPbc	05 04 10.0	+1.6
KSP	Ksiaz	145.71	275	*e*P	PKPbc	05 04 10.5	+1.9
VIVF	Saint-Julien-l	145.72	258	*e*PKP1	PKPbc	05 04 09.9	+1.1
PRU	Pruhonice	145.77	273	*e*PKP	PKPdf	05 04 10.9	-0.1
EPF	Esparros	145.91	251	*e*PKP1	PKPbc	05 04 10.5	+1.1
CABF	La Chapelle	146.58	261	*e*PKP1	PKPbc	05 04 12.5	+1.7
	comp=Z,22nm,0.9s						
SJPF	Ste Jean	146.59	249	*e*PKP1	PKPbc	05 04 12.1	+1.2
	comp=Z,22nm,1.1s						
JFWS	Jewell Farm	146.61	111	PFAKE		05 04 20.0	+9.0
JFWS				LR	LR		
	comp=Z,463nm,22.0s,MS5.2						
NKC	Novy Kostel	146.82	271	*e*PKP	PKPdf	05 04 14.5	+1.7
ACSO	Alum Creek Sta	146.94	122	PFAKE		05 04 20.0	+8.2
ACSO				LR	LR		
	comp=Z,608nm,20.0s,MS5.4						
CLL	Collm	147.41	273	*e*PKP1	PKPdf	05 04 14.0	+0.3
MOX	Moxa	147.48	271	*i* P	PKPdf	05 04 18.6	+4.8
	comp=Z,logA/T=1.0						
SSF	Saint Saulge	147.99	259	*e*PKP1	PKPdf	05 04 16.7	+2.0
INK	Inuvik	148.48	45	PKPbc	PKPdf	05 04 17.5	+2.6
	comp=Z,3.2nm,0.9s,baz=211,slow=4.5,SNR=10						
FINES	FINESS Array B	149.33	296	PKPbc	PKPdf	05 04 19.4	+2.9
	comp=Z,1.2nm,0.5s,baz=162,slow=6.0,SNR=7.1						
ULM	Lac du Bonnet	150.34	97	PKPbc	PKPdf	05 04 22.5	+4.1
	comp=Z,1.8nm,0.4s,baz=278,slow=1.5,SNR=7.2						
BINY	Binghamton	151.03	130	PFAKE		05 04 30.0	+10
BINY				LR	LR		
	comp=Z,540nm,20.0s,MS5.3						
YKA	Yellowknife Ar	151.25	64	PKPbc	PKPdf	05 04 24.3	+5.0
	comp=Z,1.5nm,1.0s,baz=231,slow=1.7,SNR=14						
WVL	Waterville	155.08	137	PFAKE		05 04 40.0	+15
WVL				LR	LR		
	comp=Z,10µm,21.0s						
EMMW	East Machias	155.81	140	PFAKE		05 04 40.0	+14
EMMW				LR	LR		
	comp=Z,5µm,21.0s						
PQI	Presque Isle	157.47	138	PFAKE		05 04 40.0	+12
PQI				LR	LR		
	comp=Z,7µm,22.0s						
SCHQ	Schefferville	165.00	127	PFAKE		05 04 50.0	+14
SCHQ				LR	LR		
	comp=Z,547nm,20.0s						

IDC ***23*** *04:45:13.6±1.3, 46.09N×95.54E, mb4.1/4, mb1 4.2/5, mb1mx3.7/19, mbtmp4.1/5, ML3.8/2, Error ellipse: s-maj=37.5km s-min=20.3km az=5.0*

BJI ***23*** *04:45:14.5, 46.25N×96.14E, h11^{km}, ML4.0, Ms3.3*

NNC ***23*** *04:45:15.5±5.0, 45.48N×95.22E, Error ellipse: s-maj=63.8km s-min=49.5km az=4.0*

NEIC ***23*** *04:45:15.4±0.7, 46.10N×95.39E, h10^{km}, mb3.5/2, Error ellipse: s-maj=18.6km s-min=8.2km az=175.0*

MOS ***23*** *04:45:17.5±0.8, 46.36N×95.35E, h33^{km}, mb4.4/2, Error ellipse: s-maj=33.5km s-min=20.7km az=139.4*

ISC 23 04:45:17.4±1.0**, 46.24N**±0.05×**95.59E**±0.06**, h36^{km}**±14^{km}**, n24, σ1^{s}27**/26**, mb4.0**/4**, 4C-1D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	6.10	249	*e*P	P	04 46 54.7	+7.3
WMQ				S	S	04 47 58.0	+1.1
WMQ				Smax			
	comp=N,81nm,0.8s						
WMQ				Smax			
	comp=E,75nm,0.8s						
ZAK	Zakamensk	6.59	48	*e*P	P	04 46 54.3	-0.1
ZAK				*e*S	S	04 48 08.8	-0.5
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
ZAK				pmax	pmax		
	comp=N,99nm,1.1s						
GTA	Gaotai	7.49	154	P	P	04 47 04.8	-2.2
GTA				S	S	04 48 32.4	+0.7
GTA				SG	S	04 49 11.1	+39
GTA				Smax			
	comp=N,21nm,1.3s						
GTA				Smax			
	comp=E,33nm,1.1s						
GTA				LR	LR		
	comp=N,94nm,6.8s						
GTA				LR	LR		
	comp=E,130nm,8.0s						
SONM	Songino Array	7.55	74	Pn	P	04 47 07.8	0.0
	comp=E,0.2nm,0.3s,baz=263,slow=14,SNR=5.8						
SONM				Pg	P	04 47 33.7	+26
	comp=E,1.9nm,0.3s,baz=262,slow=15,SNR=7.2						
SONM				Lg		04 49 14.6	
	comp=E,5.6nm,0.3s,baz=265,slow=31,SNR=7.3						
TLY	Talaya	7.60	41	*e*P	P	04 47 08.2	-0.2
TLY				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TLY	Talaya	7.60	41	*e*P	P	04 47 08.2	-0.2
	comp=Z,8.2nm,0.5s						
ULN	Ulaanbaatar	8.00	74	P	P	04 47 15.8	+1.8
ULN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ULN	Ulaanbaatar	8.00	74	P	P	04 47 15.8	+1.8
	comp=Z,8.7nm,0.6s						
MK31	Makanchi Array	9.19	278	⇑Pn	P	04 47 26.7	-3.9
	comp=Z,0.8nm,0.4s,baz=93,slow=17,SNR=5.4						
MK31				⇑Lg		04 50 04.6	
	comp=Z,7.2nm,0.7s,baz=97,slow=31,SNR=4.1						
ZAL	Zalesovo	10.36	322	Lg		04 50 35.9	
	comp=Z,0.3nm,0.3s,baz=302,slow=13,SNR=3.7						
KURK	Kurchatov	12.12	298	⇓Pn	P	04 48 12.1	+1.8
	comp=Z,4.4nm,1.8s,baz=280,slow=16,SNR=31						
KURK				⇑Lg		04 51 43.6	
	comp=Z,14nm,1.8s,baz=260,slow=17,SNR=12						
AAK	Ala-Archa	15.49	264	P	P	04 48 52.0	-2.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	15.49	264	P	P	04 48 52.0	-2.6
	comp=Z,1.8nm,0.8s						
BVA0	Borovoye Array	17.62	302	⇑P	P	04 49 24.5	+3.0
	comp=Z,0.4nm,0.7s,baz=118,slow=16,SNR=11						
BVAR	Borovoye Array	17.62	302	P	P	04 49 20.4	-1.2
	comp=Z,0.5nm,0.3s,baz=119,slow=15,SNR=8.4						
CHKZ	Chkalovo	17.65	304	*e*P	P	04 49 20.2	-1.6
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHKZ	Chkalovo	17.65	304	*e*P	P	04 49 20.2	-1.6
	comp=Z,2.4nm,0.6s						
ARCES	ARCESS Array B	40.80	330	P	P	04 52 56.5	+0.1
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	40.80	330	P	P	04 52 56.5	+0.1
	comp=Z,4.3nm,0.9s,mb4.1,baz=83,slow=9.8,SNR=5.1						
BRTR	Keskin Array B	44.77	285	P	P	04 53 30.0	+1.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	44.77	285	P	P	04 53 29.9	+1.0
	comp=Z,0.9nm,0.5s,mb3.8,baz=73,slow=5.7,SNR=5.1						
IMA	Indian Mountai	56.15	27	P	P	04 54 56.0	+0.9
ASAR	Alice Springs	77.76	144	P	P	04 57 11.4	-1.0
	comp=Z,0.4nm,0.7s,mb3.5,baz=339,slow=5.6,SNR=4.3						
DBIC	Dimbokro	92.41	282	P	P	04 58 25.7	0.0
	comp=Z,6.2nm,1.2s,mb4.8,baz=27,slow=2.3,SNR=3.0						

TAP ***23*** *04:54:07.2, 24.54N×122.87E, h14^{km}±1^{km}, ML2.8*

JMA 23 04:54:05.9±0.1**, 24.51N**×**123.08E, h62^{km}**±1^{km}**, M2.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.08	233	P	P	04 54 15.1	0.0
YOJ				S	S	04 54 21.7	-0.2
IRIF	Iriomote-Funau	0.62	106	P	P	04 54 19.2	-0.2
IRIF				S	S	04 54 29.1	-0.3
HATJ	Hateruma jima	0.80	124	P	P	04 54 21.5	-0.1
HATJ				S	S	04 54 33.0	-0.3
JKRS	Kuro-shima	0.89	108	P	P	04 54 22.9	+0.1
JKRS				S	S	04 54 35.6	+0.3
JIJ	Ishigaki jima	0.98	98	P	P	04 54 23.6	-0.4
JIJ				S	S	04 54 36.8	-0.6
JTJ	Tarama	1.48	85	P	P	04 54 30.9	-0.1
JTJ				S	S	04 54 49.4	-0.1

NEIC ***23*** *05:02:28.3, 34.98S×70.56W, h5^{km}, ML2.8(GUC), After GUC.*

GUC 23 05:02:28.3±0.8**, 34.98S**×**70.56W, h5^{km}**±3^{km}**, MD4.0, ML2.8, 1C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.52	314	⇓*i*P	Pg	05 02 39.2	+0.5
SFDO				*i* S	Sg	05 02 47.0	+1.4
CACH	El Canelo	0.86	358	*e*P	Pb	05 02 44.5	-0.9
CACH				*i* S	Sg	05 02 57.4	+0.5
CHCH	Chadas Angostu	1.04	356	*e*P	Pb	05 02 47.9	-0.6
CHCH				*i* S	Sb	05 03 02.1	-0.2
LMEL	Las Melosas	1.16	15	*e*P	Pb	05 02 50.0	-0.6
LMEL				*i* S	Sb	05 03 06.9	+1.1
LMEL				AMP		05 03 09.7	
	comp=N,268nm,0.2s						
SJCH	San Jose de Ma	1.34	7	*e*P	Pb	05 02 53.3	-0.3
PCH	Pirque	1.35	2	*e*P	Pb	05 02 53.3	-0.5
TACH	Talagante	1.36	346	⇑*i*P	Pb	05 02 53.9	0.0
TACH				*i* S	Sb	05 03 11.5	+0.1
ANTU	Antumapu	1.41	357	*e*P	Pn	05 02 55.0	+0.4
ANTU				*i* S	Sb	05 03 14.2	+1.4
ANTU				AMP		05 03 16.2	
	comp=E,344nm,0.2s						
RCDM	Rinconada Maip	1.50	352	*e*P	Pn	05 02 56.4	+0.4
RCDM				*i* S	Sb	05 03 16.6	+1.1
RCDM				AMP		05 03 18.4	
	comp=E,330nm,0.1s						
STL	Santa Lucia	1.54	357	*e*P	Pn	05 02 56.9	+0.3
STL				*i* S	Sb	05 03 17.9	+1.3
CLCH	Cerro Calan	1.58	1	*e*P	Pn	05 02 57.9	+0.8
CLCH				*i* S	Sb	05 03 19.6	+1.8
CLCH				AMP		05 03 23.7	
	comp=N,238nm,0.4s						
FCH	Farellones	1.66	8	*e*P	Pn	05 02 59.3	+1.0
FCH				*i* S	Sb	05 03 22.2	+2.0
FCH				AMP		05 03 23.6	
	comp=E,263nm,0.2s						
CCHI	Chillan	2.04	217	*e*P	Pn	05 03 03.5	-0.2
CCHI				*i* S	Sn	05 03 30.5	+0.6

DJA 23 05:03:05.4±0.8**, 8.21S**×**115.40E, h223^{km}**±6^{km}**, MD4.6**/4**, ML3.4**/2**, 4C-6D, Error ellipse: s-maj=17.7km s-min=8.3km az=16.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RATI	Rata	0.52	165	⇓*i*Pn	P	05 03 35.7	+0.2
	359nm,0.2s						
RATI	Rata	0.52	165	⇑*i*P	P	05 03 36.1	+0.6
RATI				⇓*i*Sn	S	05 03 57.5	-1.3
KEDI	Kedomdong	0.76	111	⇑*i*Pn	P	05 03 36.2	-0.2
	107nm,0.2s						
KEDI	Kedomdong	0.76	111	⇓*i*P	P	05 03 36.6	+0.2
KEDI				⇑*i*Sn	S	05 03 58.5	-2.0
KELI	Kelakatan	0.90	270	⇓*i*Pn	P	05 03 37.5	+0.4
	35nm,0.2s						
KELI				⇑*i*Sn	S	05 03 59.5	-2.2
SRDI	Scrawed	1.27	258	⇓*i*Pn	P	05 03 39.2	-0.5
	64nm,0.2s						
SRDI				⇓*i*Sn	S	05 04 04.8	-1.4

MDD 23 05:08:07.8±4.9**, 37.40N**×**14.18W, mb4.1**/3**, Error ellipse: s-maj=47.5km s-min=37.2km az=37.0, PRXIMO SIN SOLUCIN, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBAD	Badajoz	5.81	74	P	Pn	05 09 34.2	-3.2
	1.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	05 10 36.6	-9.1
	1.3nm,0.1s,SNR=7.9						
EBAD	Badajoz	5.81	74	P	Pn	05 09 34.2	-3.2
	1.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	05 10 36.6	-9.1
	1.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.97	84	P	Pn	05 09 36.2	-3.4
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	05 10 41.0	-8.7
	0.5nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.97	84	P	Pn	05 09 36.2	-3.4
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	05 10 41.0	-8.7
	0.5nm,0.1s,SNR=7.9						
ELOB	Lobios	6.49	45	P	Pn	05 09 43.4	-3.6
	1.0nm,0.3s,SNR=7.9						
ELOB				S	Sn	05 10 53.8	-9.0
	0.4nm,0.1s,SNR=7.9						
ELOB	Lobios	6.49	45	P	Pn	05 09 43.4	-3.6
	1.0nm,0.3s,SNR=7.9						
ELOB				S	Sn	05 10 53.8	-9.0
	0.4nm,0.1s,SNR=7.9						
ECAL	Calabor	7.31	49	P	Pn	05 09 54.9	-3.6
	2.3nm,0.3s,SNR=5.1						
ECAL	Calabor	7.31	49	P	Pn	05 09 54.9	-3.6
	2.3nm,0.3s,SNR=5.1						
EADA	Adamuz	7.64	81	P	Pn	05 09 59.0	-4.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	05 11 22.0	-9.4
	0.5nm,0.1s,SNR=7.9						
EADA	Adamuz	7.64	81	P	Pn	05 09 59.0	-4.1
	0.3nm,0.1s,SNR=7.9						
EADA				S	Sn	05 11 22.0	-9.5
	0.5nm,0.1s,SNR=7.9						

NEIC ***23*** *05:11:28.9±6.1, 36.58N×11.40W, h10^{km}, MG4.1(MDD), Error ellipse: s-maj=69.7km s-min=9.2km az=51.0*

MDD ***23*** *05:11:32.4±1.9, 36.74N×11.15W, mb4.1/7, Error ellipse: s-maj=16.6km s-min=12.1km az=58.0, PRXIMO*

CSEM ***23*** *05:11:35.2±0.2, 36.86N×11.00W, h126^{km}±2^{km}, ML3.4/3, Error ellipse: s-maj=4.2km s-min=3.1km az=53.0*

INMG 23 05:11:33.7±1.0**, 36.67N**×**11.21W, h11^{km}**±34^{km}**, ML2.3, Error ellipse: s-maj=33.2km s-min=3.9km az=58.0, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	2.17	65	*e*Pn	Pn	05 12 08.0	-2.3
PTEO				*e*Sn	Sn	05 12 33.6	-3.9
	13nm,0.2s						
PTEO	Sao Teotonio	2.17	65	P	Pn	05 12 07.6	-2.7
PTEO				S	Sn	05 12 32.5	-5.0
PTEO	Sao Teotonio	2.17	65	*e*Pn	Pn	05 12 08.0	-2.3
PTEO				*e*Sn	Sn	05 12 33.6	-3.9
	13nm,0.2s						
PLOU	Loures	2.75	36	*e*Pn	Pn	05 12 16.0	-2.6
PLOU				*e*Sn	Sn	05 12 47.6	-4.5
	12nm,0.1s						
PLOU	Loures	2.75	36	*e*Pn	Pn	05 12 16.0	-2.6
PLOU				*e*Sn	Sn	05 12 47.6	-4.5
	12nm,0.1s						
MOE	Montemor	2.93	50	*e*Sn	Sn	05 12 51.2	-5.5
PBEJ	Beja	2.99	62	*e*Pn	Pn	05 12 19.2	-2.8
PBEJ				*e*Sn	Sn	05 12 52.7	-5.5
	6.6nm,0.2s						
PBEJ	Beja	2.99	62	P	Pn	05 12 19.0	-3.0
PBEJ				S	Sn	05 12 52.7	-5.5
PALC	Alcoutim	3.09	74	*e*Pn	Pn	05 12 20.5	-2.9
PALC				*e*Sn	Sn	05 12 55.5	-5.3
	5.0nm,0.2s						
PALC	Alcoutim	3.09	74	*e*Pn	Pn	05 12 20.5	-2.9
PALC				*e*Sn	Sn	05 12 55.5	-5.3
	5.0nm,0.2s						

EMIN	Mina Concepcio	3.79	72	P	Pn	05 12 29.6	-3.7
	1.4nm,0.1s,SNR=26						
EMIN				S	Sn	05 13 12.0	-6.3
	3.5nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.79	72	P	Pn	05 12 29.6	-3.7
	1.4nm,0.1s,SNR=26						
EMIN				S	Sn	05 13 12.0	-6.3
	3.5nm,0.3s,SNR=7.9						
EBAD	Badajoz	3.93	57	P	Pn	05 12 31.6	-3.7
	1.6nm,0.1s,SNR=7.9						
EBAD				S	Sn	05 13 15.2	-6.7
	17nm,0.2s,SNR=7.9						
EBAD	Badajoz	3.93	57	P	Pn	05 12 31.6	-3.7
	1.6nm,0.1s,SNR=7.9						
EBAD				S	Sn	05 13 15.2	-6.7
	17nm,0.2s,SNR=7.9						
ESPR	Espera	4.30	86	P	Pn	05 12 37.0	-3.7
	11nm,0.2s,SNR=35						
ESPR				S	Sn	05 13 24.3	-7.2
	9.3nm,0.3s						
ESPR	Espera	4.30	86	P	Pn	05 12 37.0	-3.7
	11nm,0.2s,SNR=35						
ESPR				S	Sn	05 13 24.3	-7.2
	9.3nm,0.3s						
PCBR	Castelo Branco	4.32	42	*e*Pn	Pn	05 12 37.5	-3.4
PCBR				*e*Sn	Sn	05 13 24.8	-7.1
	3.3nm,0.3s						
PCBR	Castelo Branco	4.32	42	S	Sn	05 13 24.8	-7.1
MTE	Manteigas	4.71	37	*e*Sn	Sn	05 13 34.4	-7.3
	3.6nm,0.4s						
MTE	Manteigas	4.71	37	Sn	Sn	05 13 34.4	-7.3
	1.8nm,0.4s						
PVIS	Viseu	4.80	32	*e*Pn	Pn	05 12 43.9	-3.9
PVIS				*e*Sn	Sn	05 13 35.8	-8.3
	4.6nm,0.1s						
PVIS	Viseu	4.80	32	P	Pn	05 12 43.9	-3.9
PVIS				S	Sn	05 13 36.0	-8.1
EMIJ	Mijas	5.18	89	S	Sn	05 13 46.7	-6.9
	6.0nm,0.6s,SNR=7.9						
PVRL	Vila Real	5.35	30	*e*Sn	Sn	05 13 49.5	-8.3
	3.3nm,0.1s						
PVRL	Vila Real	5.35	30	S	Sn	05 13 49.7	-8.1
EADA	Adamuz	5.49	72	P	Pn	05 12 53.0	-4.4
	0.9nm,0.1s,SNR=15						
EADA				S	Sn	05 13 53.2	-8.1
	1.0nm,0.2s,SNR=4.7						
EADA	Adamuz	5.49	72	P	Pn	05 12 53.0	-4.4
	0.9nm,0.1s,SNR=15						
EADA				S	Sn	05 13 53.2	-8.1
	1.0nm,0.2s,SNR=4.7						
ELOB	Lobios	5.74	24	P	Pn	05 12 56.1	-4.9
	0.5nm,0.1s,SNR=7.9						
ELOB				S	Sn	05 13 58.1	-10
	1.7nm,0.1s,SNR=5.9						
ELOB	Lobios	5.74	24	P	Pn	05 12 56.1	-4.9
	0.5nm,0.1s,SNR=7.9						
ELOB				S	Sn	05 13 58.1	-10
	1.7nm,0.1s,SNR=5.9						
PBRG	Braganca	6.20	33	*e*Sn	Sn	05 14 09.2	-10
	2.1nm,0.1s						
PBRG	Braganca	6.20	33	Sn	Sn	05 14 09.2	-10
	1.1nm,0.1s						
ECAL	Calabor	6.31	32	P	Pn	05 13 04.3	-4.7
	1.5nm,0.3s,SNR=8.0						
ECAL				S	Sn	05 14 11.8	-10
	3.8nm,0.4s						
ECAL	Calabor	6.31	32	P	Pn	05 13 04.3	-4.7
	1.5nm,0.3s,SNR=8.0						
ECAL				S	Sn	05 14 11.8	-10
	3.8nm,0.4s						
ESDC	Sonseca Array	6.45	60	P	Pn	05 13 06.4	-4.6
ESDC				S	Sn	05 14 16.3	-9.1
ESDC	Sonseca Array	6.45	60	P	Pn	05 13 06.4	-4.6
	1.5nm,0.2s,baz=245,slow=13,SNR=13						
ESDC				S	Sn	05 14 16.3	-9.1
	1.4nm,0.2s,baz=248,slow=24,SNR=7.2						
ESDC	Sonseca Array	6.45	60	P	Pn	05 13 06.4	-4.6
	1.5nm,0.2s,SNR=13						
ESDC				S	Sn	05 14 16.3	-9.1
	1.4nm,0.2s,SNR=7.2						
EMAZ	Mazaricos	6.51	15	S	Sn	05 14 14.0	-13
	2.1nm,0.2s,SNR=7.9						
EQES	Quesada	6.59	78	P	Pn	05 13 08.2	-4.8
	0.4nm,0.2s,SNR=7.9						
EQES				S	Sn	05 14 20.6	-8.3
	0.6nm,0.2s,SNR=7.9						
EQES	Quesada	6.59	78	P	Pn	05 13 08.2	-4.8
	0.4nm,0.2s,SNR=7.9						
EQES				S	Sn	05 14 20.6	-8.3
	0.6nm,0.2s,SNR=7.9						
EINC	Incio	6.69	25	P	Pn	05 13 09.3	-5.0
	0.7nm,0.2s,SNR=5.7						
EINC				S	Sn	05 14 21.5	-10
	0.6nm,0.2s,SNR=7.9						
EINC	Incio	6.69	25	P	Pn	05 13 09.3	-5.0
	0.7nm,0.2s,SNR=5.7						
EINC				S	Sn	05 14 21.5	-10
	0.6nm,0.2s,SNR=7.9						
GUD	Guadarrama	6.80	52	P	Pn	05 13 11.3	-4.6
	0.4nm,0.2s,SNR=4.0						
GUD				S	Sn	05 14 23.9	-10
	0.6nm,0.2s,SNR=7.9						
EHUE	Huescar	6.97	78	S	Sn	05 14 29.6	-8.7
	0.2nm,0.2s,SNR=7.9						
EPON	Pontenova	7.35	24	P	Pn	05 13 17.8	-5.8
	1.0nm,0.2s,SNR=7.9						
EPON				S	Sn	05 14 37.2	-11
	0.8nm,0.2s,SNR=7.9						
EPON	Pontenova	7.35	24	P	Pn	05 13 17.8	-5.8
	1.0nm,0.2s,SNR=7.9						
EPON				S	Sn	05 14 37.2	-11
	0.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	7.92	73	P	Pn	05 13 26.4	-5.2
	0.7nm,0.2s,SNR=4.0						
ETOB	Tobarra	7.92	73	P	Pn	05 13 26.4	-5.1
	0.7nm,0.2s,SNR=4.0						

MEX 23 05:43:39.0±0.8**, 16.15N**×**95.89W, h16**^{km}±83^{km}**, MD3.6, 1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.43	209	⇓*i*P	Pb	05 43 46.2	-1.6
HUIG				*i* S	Sb	05 43 52.0	-1.8
VHO	Vista Hermosa	1.22	319	*e*P	Pb	05 43 57.6	-3.7
VHO				*i* S	Sb	05 44 12.4	-4.2
OXX	Oaxaca	1.23	319	*i* P	Pb	05 43 57.8	-3.5
OXX				*i* S	Sb	05 44 12.2	-4.5

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*IDC **23** 05:52:09.6±0.8, 28.76N×142.99E, mb3.8/9, mb1 4.1/9, mb1mx3.9/20, mbtmp3.8/9, MS3.2/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=29.6km s-min=17.9km az=103.0*

*NEIC **23** 05:52:11.1±0.5, 28.73N×142.99E, h10^{km}, Error ellipse: s-maj=19.4km s-min=11.6km az=93.0*

ISC 23 05:52:12.7±0.6**, 28.73N**±0.07×**142.9E**±0.2**, h33**^{km}**, (h48**^{km}±1.8^{km}**:pP-P), n14,** σ**0**^{s}**85**/14**, mb3.8**/9**, MS3.9**/1**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.75	202	Pn	Pn	05 52 41.2	0.0
	11nm,0.3s,baz=323,slow=18,SNR=15						
CBIJ				Sn	Sn	05 53 02.7	+0.2
	60nm,0.3s,baz=77,slow=23,SNR=13						
ASAJ	Asahikawa	15.36	359	LR	LR	06 01 49.7	
	comp=Z,26nm,21.2s,baz=275,slow=38						
SONM	Songino Array	34.01	314	P	P	05 58 56.6	+1.2
	0.3nm,0.4s,mb3.6,baz=120,slow=12,SNR=3.8						
ZAL	Zalesovo	48.71	318	P	P	06 00 55.4	-0.3
	0.6nm,0.3s,mb4.1,baz=7.4,slow=5.5,SNR=3.3						
WRAB	Tennant Creek	49.07	191	*e*P	P	06 00 58.0	-1.0
WB2	Warramunga Arr	49.08	191	*e*P	P	06 00 58.5	-0.5
WRA	Warramunga Arr	49.09	191	P	P	06 00 58.7	-0.3
	2.4nm,0.6s,mb4.4,baz=13,slow=8.8,SNR=27						
WRA				pP	pP	06 01 12.5	+3.6
	1.1nm,0.5s,baz=13,slow=8.8,SNR=5.9						
ASAR	Alice Springs	52.80	190	P	P	06 01 28.0	+0.9
	0.7nm,1.1s,mb3.5,baz=11,slow=8.3,SNR=3.8						
ILAR	Eielson Array	55.98	29	P	P	06 01 48.5	-1.3
	0.6nm,0.6s,mb3.8,baz=249,slow=6.2,SNR=6.9						
ILAR				pP	pP	06 02 01.9	+2.0
	0.4nm,0.6s,baz=259,slow=7.1,SNR=3.5						
BVAR	Borovoye Array	57.29	317	P	P	06 01 58.7	-0.7
	0.8nm,0.6s,mb3.9,baz=101,slow=7.6,SNR=6.5						
YKA	Yellowknife Ar	70.41	29	P	P	06 03 24.5	-0.5
	0.6nm,0.4s,mb3.9,baz=294,slow=6.4,SNR=4.3						
YKA				pP	pP	06 03 37.7	+2.4
	0.3nm,0.5s,baz=295,slow=6.5,SNR=3.7						
YKA				LR	LR	06 33 27.8	
	comp=Z,60nm,18.3s,MS3.9,baz=215,slow=35						
YKA	Yellowknife Ar	70.41	29	P	P	06 03 24.5	-0.5
YKA				pP	pP	06 03 37.7	+2.4
YKA				LR	LR	06 33 27.8	
NVAR	Mina Array Bea	79.01	52	P	P	06 04 15.6	+0.6
	0.7nm,0.8s,mb3.6,baz=292,slow=3.7,SNR=4.9						
TXAR	Lajitas Array	94.12	53	P	P	06 05 31.1	+1.8
	0.3nm,0.8s,mb3.8,baz=315,slow=3.5,SNR=3.7						

IDC 23 05:58:47.3±51.0**, 18.86S**×**178.21W, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/15**, mbtmp4.2**/3**, Error ellipse: s-maj=936.0km s-min=146.0km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.34	242	P	P	06 06 10.1	-1.7
	2.6nm,0.9s,baz=101,slow=10,SNR=2.4						
WB2	Warramunga Arr	44.64	260	*e*P	P	06 07 02.0	-1.7
WRA	Warramunga Arr	44.65	260	P	P	06 07 02.1	-1.7
	1.0nm,0.3s,baz=96,slow=7.6,SNR=43						
ASAR	Alice Springs	44.72	255	P	P	06 07 02.4	-1.9
	3.5nm,0.8s,baz=89,slow=8.4,SNR=24						

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*NEIC **23** 06:13:13.2, 34.48S×70.39W, h127^{km}, MD3.6(GUC), After GUC.*

GUC 23 06:13:13.2±0.7**, 34.48S**×**70.39W, h127**^{km}±3^{km}**, MD3.6, ML3.5, 1C-6D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACH	El Canelo	0.40	335	⇑*i*P	P	06 13 31.7	+0.1
CACH				*i* S	S	06 13 46.0	+0.7
SFDO	San Fernando	0.53	255	⇓*i*P	P	06 13 32.3	0.0
SFDO				*i* S	S	06 13 46.7	0.0
CHCH	Chadas Angostu	0.59	338	⇓*i*P	P	06 13 32.6	0.0
CHCH				*i* S	S	06 13 47.4	0.0
LMEL	Las Melosas	0.65	14	*e*P	P	06 13 33.2	+0.2
LMEL				*i* S	S	06 13 48.6	+0.5
LMEL				AMP		06 13 57.2	
	comp=N,1μm,0.1s						
SJCH	San Jose de Ma	0.84	2	*e*P	P	06 13 34.7	+0.2
SJCH				*i* S	S	06 13 51.0	+0.3
SJCH				AMP		06 13 52.4	
	comp=E,966nm,0.4s						
PCH	Pirque	0.86	353	*e*P	P	06 13 35.2	+0.5
PCH				*i* S	S	06 13 51.5	+0.4
ANTU	Antumapu	0.93	348	*e*P	P	06 13 35.6	+0.2
ANTU				*i* S	S	06 13 52.5	+0.4
ANTU				AMP		06 13 53.5	
	comp=N,2μm,0.4s						
TACH	Talagante	0.94	331	⇓*i*P	P	06 13 35.6	+0.1
TACH				*i* S	S	06 13 52.3	0.0
FSR	Penalolen	1.01	354	*e*P	P	06 13 36.4	+0.3
FSR				*i* S	S	06 13 54.2	+0.7
FSR				AMP		06 13 55.4	
	comp=E,972nm,0.3s						
RCDM	Rinconada Maip	1.05	341	*e*P	P	06 13 36.6	+0.1
RCDM				*i* S	S	06 13 54.5	+0.3
RCDM				AMP		06 13 56.0	
	comp=E,2μm,0.1s						
STL	Santa Lucia	1.06	349	⇓*i*P	P	06 13 36.9	+0.2
STL				*i* S	S	06 13 54.6	+0.2
PUEX	Pudahuel	1.08	344	*e*P	P	06 13 37.9	+1.0
PUEX				*i* S	S	06 13 56.2	+1.4
CLCH	Cerro Calan	1.09	354	⇓*i*P	P	06 13 37.2	+0.2
CLCH				*i* S	S	06 13 55.4	+0.5
CLCH				AMP		06 13 57.4	
	comp=E,552nm,0.2s						
FCH	Farellones	1.15	4	⇓*i*P	P	06 13 38.1	+0.4
FCH				*i* S	S	06 13 57.2	+1.1
FCH				AMP		06 13 58.8	
	comp=N,553nm,0.2s						
LCCH	Las Cruces	1.40	315	*e*P	P	06 13 40.1	-0.3
LCCH				*i* S	S	06 14 00.2	-0.9
LNCH	Linares	1.69	216	*e*P	P	06 13 43.8	+0.1
LNCH				*i* S	S	06 14 08.1	+1.3
LNCH				AMP		06 14 09.4	
	comp=N,711nm,0.7s						
JACH	Jahuel	1.80	355	*e*P	P	06 13 45.1	+0.1
JACH				*i* S	S	06 14 09.6	+0.5
PACH	Papudo	2.13	335	*i* P	P	06 13 48.8	-0.2

MAN 23 06:32:41.5, 12.73N×**123.14E, h15**^{km}**, mb3.9, ML2.7, MS2.3, 2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	Masbate	0.60	128	*e*P	Pb	06 32 53.2	+0.1
MMPH				*i* S	Sb	06 33 01.0	-0.1
AUQP	San Andres	0.74	322	*e*P	Pb	06 32 56.1	+0.4
AUQP				*e*S	Sb	06 33 10.0	+4.7
OTRP	Odiongan	1.16	252	*e*P	Pb	06 33 02.3	-0.4
RCP	Roxas	1.23	199	⇓*e*P	Pb	06 33 10.6	+6.6
PVCP	Virac	1.30	49	*e*P	Pb	06 33 22.8	+18
GQP	Guinayangan	1.35	330	⇓*e*P	Pn	06 33 05.1	-0.8
GQP				*e*S	Sb	06 33 23.5	+0.7
BOAC	Boac	1.46	300	*e*P	Pn	06 33 06.4	-1.1
BOAC				*e*S	Sb	06 33 26.1	+0.1
LQP	Lukban	2.08	311	*e*P	Pn	06 33 15.7	-0.7

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*IDC **23** 06:47:43.1±14.0, 9.95N×84.50W, mb3.3/4, mb1 3.7/4, mb1mx3.4/19, mbtmp3.3/4, Error ellipse: s-maj=341.4km s-min=105.8km az=8.0*

*CASC **23** 06:47:54.2±2.1, 10.30N×86.82W, h13^{km}±9^{km}, MD3.9*

ISC 23 06:47:52.9±0.9**, 10.16N**±0.04×**87.00W**±0.05**, h33**^{km}**, n25,** σ**0**^{s}**89**/39**, mb3.3**/4**, 7C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	Vista de Mar	1.35	91	*e*P	P	06 48 13.7	-1.9
VCR				*e*S	S	06 48 30.8	-1.7
APON	Apoyo	1.97	28	*e*P	P	06 48 25.3	+0.8
TICN	Ticuantepe	2.01	22	*e*P	P	06 48 25.6	+0.5
COPN	Copaltepe	2.04	11	⇑*e*P	P	06 48 26.0	+0.4
COPN				*e*S	S	06 48 50.3	+0.2
XAVN	Gruta Xavier	2.08	18	*e*P	P	06 48 26.4	+0.3
MGAN	Managua	2.10	20	⇓*e*P	P	06 48 26.6	+0.1
MGAN				*e*S	S	06 48 51.6	-0.1
WILN	Americas 2	2.14	22	*e*P	P	06 48 28.6	+1.6
WILN				*e*S	S	06 48 52.1	-0.4
LEON	Leon	2.24	3	*e*P	P	06 48 28.5	+0.1
LEON				*e*S	S	06 48 54.7	-0.5
MIRN	Miramar	2.28	7	⇑*e*P	P	06 48 29.2	+0.2
MIRN				*e*S	S	06 48 56.4	+0.2
FORC	Fortuna	2.31	82	*e*P	P	06 48 28.5	-1.0
CRIN	San Cristobal	2.52	359	⇑*e*P	P	06 48 31.8	-0.6
CRIN				*e*S	S	06 49 02.1	-0.2
PRS1	Puriscal	2.65	94	*e*P	P	06 48 33.4	-0.9
PRS1				*e*S	S	06 49 04.9	-0.8
VPS2	Volcan Poas 2	2.72	89	*e*P	P	06 48 35.7	+0.4
LAJ	Bijagual	2.85	96	⇑*e*P	P	06 48 30.9	-6.2
LAJ				*e*S	S	06 49 00.7	-10
SJS	Escuela Geolog	2.91	94	⇑*e*P	P	06 48 38.7	+0.7
SJS				*e*S	S	06 49 13.5	+1.3
LCR2	La Lucha 2	2.98	98	⇑*e*P	P	06 48 39.1	+0.1
LCR2				*e*S	S	06 49 14.5	+0.5
ICR	Volcan Irazu	3.13	93	*e*P	P	06 48 42.3	+1.3
ICR				*e*S	S	06 49 19.6	+1.9
URSC	Urasca	3.19	96	⇑*e*P	P	06 48 43.1	+1.2
BUS	Buena Vista	3.25	100	*e*P	P	06 48 42.9	+0.1
BUS				*e*S	S	06 49 21.3	+0.4
TRTC	Tortuguero	3.26	82	*e*P	P	06 48 41.6	-1.3
TRTC				*e*S	S	06 49 19.5	-1.6
ACR	Cerro Adams	4.07	111	*e*P	P	06 48 54.1	-0.3
TXAR	Lajitas Array	24.63	323	P	P	06 53 21.2	+9.3
	0.2nm,0.8s,mb2.7,baz=139,slow=8.3,SNR=3.5						
YKA	Yellowknife Ar	55.92	345	P	P	06 57 28.4	-1.5
	0.2nm,0.6s,mb3.4,baz=141,slow=7.3,SNR=9.2						
INK	Inuvik	65.51	343	P	P	06 58 34.9	0.0
	0.5nm,0.7s,mb3.6,baz=104,slow=4.2,SNR=4.3						
ILAR	Eielson Array	68.28	336	P	P	06 58 52.5	+0.2
	0.3nm,0.7s,mb3.4,baz=148,slow=4.5,SNR=4.2						

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*MAN **23** 07:23:15.6, 6.46N×126.92E, h40^{km}, mb4.7, ML3.6, MS3.6*

ISC 23 07:23:13.4±1.7**, 6.29N**±0.10×**127.0E**±0.1**, h52**^{km}±24^{km}**, n9,** σ**0**^{s}**83**/14**, mb3.8**/1**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.97	312	*e*P	P	07 23 31.7	+0.8
MATI				*e*S	S	07 23 43.2	-0.8
KCP	Kidapawan	2.01	291	⇓*e*P	P	07 23 45.7	+0.1
KCP				*i* S	S	07 24 08.9	-0.6
BUKP	Musuan	2.47	310	*e*P	P	07 23 53.0	+0.8
BUKP				*e*S	S	07 24 20.9	-0.3
CGP	Cagayan de Oro	3.13	314	*e*P	P	07 24 01.9	+0.5
CGP				*e*S	S	07 24 19.3	-18
SCPH	Surigao	3.77	337	*e*P	P	07 24 08.8	-1.7
SCPH				*e*S	S	07 24 54.7	+0.5
PAGZ	Pagadian	3.89	294	*e*P	P	07 24 13.2	+0.9
KAKA	Kakadu	19.64	164	*e*P	P	07 27 39.3	-1.4
	1.8nm,0.3s						
FITZ	Fitzroy Crossi	24.27	183	*e*P	P	07 28 27.1	0.0
	1.5nm,0.4s,mb3.8						
WB2	Warramunga Arr	27.06	165	*e*P	P	07 28 54.1	+0.9

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*TIR **23** 07:29:54.6, 41.51N×20.24E, h21^{km}, Ml2.7*

*PDG **23** 07:29:56.6±0.3, 41.49N×20.20E, h2^{km}±1^{km}*

ISC 23 07:29:55.9±0.5**, 41.48N**±0.03×**20.31E**±0.03**, h2**^{km}**, n14,** σ**1**^{s}**35**/28**, 2C, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSH	Qafa e Shtames	0.30	279	*i* Pg	Pg	07 30 01.2	-0.8
QSH				*i* Sg	Sg	07 30 06.4	+0.3
TIR	Tirane	0.36	249	⇑*i*Pg	Pg	07 30 02.6	-0.4
TIR				*i* Sg	Sg	07 30 08.8	+1.0
OHR	Ohrid	0.52	134	*e*Pg	Pg	07 30 05.8	-0.5
OHR				*i* Sg	Sg	07 30 14.4	+1.2
PUK	Puka	0.65	331	*i* Pg	Pg	07 30 07.0	-1.8
PUK				*i* Sg	Sg	07 30 17.7	+0.3
ULC	Ulcinj	0.93	302	⇑*i*Pg	Pg	07 30 11.8	-2.6
ULC				*e*Sg	Sg	07 30 26.1	-0.7
SKO	Skopje	0.98	59	*i* Pg	Pg	07 30 15.9	+0.4
SKO				*i* Sg	Sg	07 30 28.2	-0.4
SKO				Lg		07 30 31.5	
	comp=Z,0.1nm,0.4s						
PVY	Plav	1.14	348	*e*Pg	Pg	07 30 16.3	-2.4
PVY				*e*Sg	Sg	07 30 34.6	+0.6
TTG	Podgorica	1.23	321	*e*Pg	Pg	07 30 17.7	-2.8
TTG				*e*Sg	Sg	07 30 36.6	-0.3
BUM	Brajici-Budva	1.33	309	*e*Pg	Pg	07 30 20.1	-2.4
BUM				*e*Sg	Sg	07 30 39.7	-0.6
IVA	Berane	1.43	348	*e*Pg	Pg	07 30 22.5	-1.8
IVA				*e*Sg	Sg	07 30 44.0	+0.6
HCY	Herceg Novi	1.66	306	*e*Pn	Pn	07 30 26.6	+0.3
HCY				*e*Sn	Sn	07 30 50.6	+2.1
BRY	Bratogost	1.93	318	*e*Pn	Pn	07 30 30.8	+0.7
BRY				*e*Sn	Sn	07 30 58.0	+2.7
PLE	Pljevlja	1.97	340	*e*Pn	Pn	07 30 31.5	+0.8
PLE				*e*Sn	Sn	07 30 59.1	+2.8
UPM	Unac-Piva	2.01	329	*e*Pn	Pn	07 30 32.1	+0.8
UPM				*e*Sn	Sn	07 30 59.3	+2.0

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*IDC **23** 07:36:50.7±0.7, 65.74S×132.88E, mb4.5/9, mb1 4.6/10, mb1mx4.4/17, mbtmp4.6/10, ML5.0/1, MS3.8/6, Ms1 3.8/6, ms1mx3.3/18, Error ellipse: s-maj=47.9km s-min=16.2km az=93.0*

*NEIC **23** 07:36:51.4±0.4, 65.83S×133.68E, h10^{km}, mb4.7/7, Error ellipse: s-maj=26.8km s-min=8.9km az=90.0*

ISC 23 07:36:49.6±0.5**, 65.84S**±0.06×**134.4E**±0.5**, h10**^{km}**, n53,** σ**1**^{s}**33**/31**, mb4.6**/13**, MS3.7**/5**, 8C, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	14.30	156	Pn	P	07 40 13.2	-0.5
	6.0nm,0.3s,baz=318,slow=15,SNR=8.0						
VNDA				Sn	S	07 42 47.8	-5.6
	4.2nm,0.3s,baz=340,slow=15,SNR=4.7						
VNDA				LR	LR	07 46 10.0	
	comp=Z,740nm,18.0s,baz=151,slow=38						
VNDA	Vanda	14.30	156	P	P	07 40 12.7	-1.1
SBA	Scott Base	15.35	155	*e*P	P	07 40 25.2	-2.2
	22nm,0.6s						
QSPA	South Pole Qui	24.23	180	*e*P	P	07 42 08.3	+1.6
	42nm,0.8s,mb4.9						
MAW	Mawson	26.90	233	LR	LR	07 52 48.6	
	comp=Z,181nm,21.3s,MS3.6,baz=245,slow=36						
STKA	Stephens Creek	34.28	11	*e*P	P	07 43 38.4	+0.7
	7.7nm,0.8s,mb4.7						
STKA	Stephens Creek	34.28	11	P	P	07 43 38.7	+1.0
	11nm,0.8s,mb4.8,baz=171,slow=8.4,SNR=15						
STKA				LR	LR	07 54 54.6	
	comp=Z,147nm,19.2s,MS3.7,baz=205,slow=32						
NWAO	Narrogin (SRO)	34.54	334	P	P	07 43 37.0	-2.9
	1.3nm,0.3s,mb4.4,baz=180,slow=3.0,SNR=3.7						
URZ	Urewera	36.86	63	LR	LR	07 56 29.4	
	comp=Z,125nm,21.4s,MS3.7,baz=191,slow=32						
SNAA	Sanae	39.74	200	⇑*i*	P	07 44 23.5	+0.2
SNAA	Sanae	39.74	200	⇑*i*	P	07 44 23.5	+0.2
SNAA	Sanae	39.74	200	*e*	Px	07 44 26.3	
SNAA	Sanae	39.74	200	P	P	07 44 23.6	+0.3
	1.9nm,0.4s,mb4.2,baz=153,slow=8.7,SNR=26						
VNA3	Neumayer Olymp	41.01	197	⇑*i*	P	07 44 33.9	+0.1
VNA3	Neumayer Olymp	41.01	197	*e*	Px	07 44 36.6	
VNA3	Neumayer Olymp	41.01	197	⇑*i*P	P	07 44 33.9	+0.1
VNA3				*e*	pP	07 44 36.6	-0.2
VNA3				*e*		07 44 58.8	
VNA2	Neumayer--Watz	41.03	198	⇑*i*	P	07 44 34.1	+0.2
VNA2	Neumayer--Watz	41.03	198	*e*	Px	07 44 36.9	
VNA2	Neumayer--Watz	41.03	198	⇑*i*P	P	07 44 34.1	+0.2
VNA2				*e*	pP	07 44 36.9	0.0
VNA2				*e*		07 44 58.2	
VNA1	Neumayer--Stat	41.39	198	⇑*i*	P	07 44 50.0	+13
VNA1	Neumayer--Stat	41.39	198	⇑*i*	P	07 44 50.0	+13
VNA1	Neumayer--Stat	41.39	198	*e*	Px	07 44 52.2	
ASPA	Alice Springs	42.17	359	*e*P	P	07 44 44.0	+0.3
ASAR	Alice Springs	42.17	359	P	P	07 44 43.4	-0.4
	5.2nm,0.8s,mb4.2,baz=177,slow=8.7,SNR=38						
ASAR				LR	LR	07 59 12.7	
	comp=Z,95nm,21.0s,MS3.6,baz=142,slow=32						
WB2	Warramunga Arr	45.88	360	*e*P	P	07 45 12.8	-0.9
WRA	Warramunga Arr	45.88	360	P	P	07 45 12.9	-0.7
	8.4nm,0.9s,mb4.7,baz=181,slow=6.9,SNR=61						
WRAB	Tennant Creek	45.89	360	*e*P	P	07 45 12.7	-1.0
	16nm,0.9s,mb5.0						
CTA	Charters Tower	46.39	15	P	P	07 45 19.9	+2.2
	2.7nm,0.9s,mb4.2,baz=202,slow=5.4,SNR=2.5						
CTA	Charters Tower	46.39	15	P	P	07 45 19.9	+2.2
KAKA	Kakadu	53.09	358	*e*P	P	07 46 07.8	-1.4
	7.6nm,0.6s,mb4.8						
PMG	Port Moresby	57.04	15	P	P	07 46 40.1	+2.2
	2.4nm,0.3s,mb4.6,baz=256,slow=4.2,SNR=2.9						
SUR	Sutherland	69.73	236	P	P	07 47 55.9	-5.4
PLCA	Paso Flores	72.01	160	P	P	07 48 17.3	+2.4
	4.3nm,0.8s,mb4.4,baz=209,slow=7.2,SNR=11						
PLCA	Paso Flores	72.01	160	*e*P	P	07 48 17.1	+2.2
	6.7nm,1.0s,mb4.5						
TRQA	Tornquist	75.65	167	*e*P	P	07 48 35.2	-0.8
	6.7nm,1.1s,mb4.5						
CMAR	Chiang Mai Arr	88.20	327	LR	LR	08 23 52.6	
	comp=Z,24nm,18.8s,MS3.6,baz=70,slow=32						
LVC	Limon Verde	90.05	159	P	P	07 49 54.1	+3.7
	19nm,1.4s,mb5.2,baz=201,slow=8.2,SNR=5.1						
SBF	Sospel	143.93	259	*e*PKP1	PKPbc	07 56 24.3	+1.2
	122nm,1.3s						
ESDC	Sonseca Array	144.78	243	PKP	PKPdf	07 56 27.2	-1.4
	0.4nm,0.4s,baz=155,slow=2.5,SNR=4.8						
MBDF	Montbardon	144.91	259	*e*PKP1	PKPbc	07 56 26.9	+1.1
	39nm,1.1s						
GERES	GERESS Array B	145.39	270	PKP	PKPdf	07 56 27.0	-2.3
	5.4nm,1.0s,baz=153,slow=3.0,SNR=17						
DPC	Dobruska-Polom	145.48	274	*e*P	PKPbc	07 56 28.2	+1.2
LPG	La Plagne	145.56	260	*e*PKP1	PKPbc	07 56 28.4	+1.0
LPL	La Plagne	145.58	260	*e*PKP1	PKPbc	07 56 28.4	+0.9
	14nm,1.0s						
MTLF	Montolieu	145.58	253	*e*PKP1	PKPbc	07 56 30.5	+3.0
KHC	Kasperske Hory	145.66	270	*e*P	PKPbc	07 56 28.0	+0.5
UPC	Upice	145.72	274	*e*P	PKPbc	07 56 29.6	+1.9
VIVF	Saint-Julien-l	145.87	257	*e*PKP1	PKPbc	07 56 31.7	+3.5
BRG	Berggiesshubel	146.85	273	P	PKPbc	07 56 34.3	+4.0
CLL	Collm	147.57	272	*e*PKP1	PKPdf	07 56 35.0	+2.0
INK	Inuvik	148.39	45	PKPbc	PKPdf	07 56 38.0	+4.3
	2.2nm,1.0s,baz=261,slow=3.6,SNR=8.4						

FINES	FINESS Array B	149.48	296	PKPbc	PKPdf	07 56 38.9	+3.2
	1.1nm,0.8s,baz=63,slow=3.1,SNR=2.7						
YKA	Yellowknife Ar	151.12	64	PKPbc	PKPdf	07 56 44.0	+5.8
	0.3nm,0.6s,baz=236,slow=1.8,SNR=9.1						

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*THE **23** 07:58:38.8, 39.78N×19.84E, h10^{km}, ML3.5*

*CSEM **23** 07:58:40.3±0.2, 39.87N×19.92E, h2^{km}, ML3.5, Error ellipse: s-maj=5.4km s-min=2.5km az=95.0*

*ATH **23** 07:58:41.1, 39.74N×20.08E, h2^{km}, MD3.3/4*

*NEIC **23** 07:58:41.1, 39.74N×20.08E, h2^{km}, MD3.3(ATH), After ATH.*

ISC 23 07:58:38.9±1.6**, 39.79N**±0.04×**19.9E**±0.1**, h2**^{km}**, n16, σ0**^{s}**.90**/19**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRN	Sarande	0.12	40	iPg	Pg	07 58 40.9	-0.5
SRN				iSg	Sg	07 58 42.6	-0.4
IGT	Igoumenitsa	0.42	127	ePg	Pg	07 58 46.7	-0.6
JAN	Janina	0.75	100	ePG	Pg	07 58 52.3	-1.5
FNA	Florina	1.51	48	ePb	Pb	07 59 07.1	-0.2
FNA				eSb	Sb	07 59 28.7	+2.0
KZN	Kozani	1.53	70	ePN	Pn	07 59 08.1	+0.8
VLS	Valsamata	1.69	161	ePB	Pb	07 59 11.6	+1.2
EVR	Evrytania	1.72	120	ePB	Pb	07 59 11.0	+0.2
LIT	Litokhoron	2.02	80	ePn	Pn	07 59 14.5	+0.2
AGG	Agios Georgios	2.03	111	ePn	Pn	07 59 15.2	+0.6
AGG				eSn	Sn	07 59 42.0	+1.2
GRG	Griva	2.24	58	ePn	Pn	07 59 17.2	-0.3
SKO	Skopje	2.48	28	ePn	Pn	07 59 22.0	+1.1
XOR	Xorichti	2.58	98	ePn	Pn	07 59 22.5	+0.1
KNT	Kendrikon	2.67	58	ePn	Pn	07 59 23.0	-0.6
PAIG	Paliouri	2.92	86	ePn	Pn	07 59 25.8	-1.4
AOS	Alonnisos	3.14	100	ePn	Pn	07 59 29.6	-0.8
OUR	Ouranopolis	3.18	79	ePn	Pn	07 59 29.9	-1.1

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*BJI **23** 08:12:44.0, 47.60N×124.63E, h13^{km}, ML4.1*

*IDC **23** 08:12:45.2±8.3, 47.85N×124.14E, mb3.4/3, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, ML4.1/1, Error ellipse: s-maj=212.0km s-min=25.6km az=171.0*

ISC 23 08:12:42.2±0.8**, 47.46N**±0.06×**124.1E**±0.1**, h10**^{km}**, n5, σ0**^{s}**.96**/9**, mb3.5**/3**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CN2	Changchun	3.77	165	eP	Pn	08 13 42.3	+0.5
CN2				PG	Pg	08 13 57.3	-0.3
CN2				S	Sn	08 14 31.8	+5.0
CN2				SG	Sg	08 14 47.8	-0.2
CN2				Smax			
	comp=N,180nm,0.5s						
CN2				Smax			
	comp=E,370nm,0.5s						
SONM	Songino Array	11.97	278	Pn	P	08 15 37.0	+1.1
	comp=E,0.3nm,0.3s,baz=86,slow=12,SNR=8.2						
SONM				Sn	S	08 17 49.8	-0.8
	comp=E,0.2nm,0.3s,baz=78,slow=21,SNR=3.8						
SONM				Lg		08 19 03.5	
	comp=E,0.3nm,0.3s,baz=84,slow=28,SNR=5.4						
ILAR	Eielson Array	48.02	35	P	P	08 21 21.9	-1.0
	comp=E,0.4nm,0.5s,mb3.7,baz=288,slow=9.1,SNR=7.2						
INK	Inuvik	51.10	28	P	P	08 21 45.4	-1.0
	comp=E,0.6nm,0.7s,mb3.6,baz=300,slow=5.6,SNR=3.9						
YKA	Yellowknife Ar	60.85	27	P	P	08 22 58.4	+1.8
	comp=E,0.2nm,1.0s,mb3.2,baz=317,slow=7.1,SNR=4.3						

IDC 23 08:22:52.1±13.0**, 19.18S**×**171.11E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/14**, mbtmp3.7**/3**, Error ellipse: s-maj=393.6km s-min=55.1km az=135.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	34.61	262	P	P	08 29 42.4	-2.8
	0.1nm,0.6s,baz=87,slow=6.1,SNR=4.2						
ASAR	Alice Springs	34.85	256	P	P	08 29 45.6	-1.6
	3.8nm,1.0s,baz=86,slow=8.2,SNR=35						
SONM	Songino Array	88.24	322	P	P	08 35 45.5	-1.0
	0.3nm,0.4s,baz=125,slow=6.3,SNR=5.4						

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*IDC **23** 08:25:20.7±11.0, 4.66N×126.47E, h202^{km}±118^{km}, mb3.4/7, mb1 3.5/7, mb1mx3.4/16, mbtmp3.9/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=93.7km s-min=23.7km az=70.0*

ISC 23 08:25:10.6±2.4**, 4.8N**±0.2×**126.6E**±0.6**, h119**^{km}±25^{km}**, n9, σ0**^{s}**.93**/9**, mb3.7**/7**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	2.68	326	⇓eP	P	08 25 51.7	-1.9
KCP				iS	S	08 26 27.2	+1.2
PMG	Port Moresby	24.87	124	LR	LR	08 41 29.7	
	comp=Z,52nm,19.2s,baz=171,slow=39						
WRA	Warramunga Arr	25.70	163	P	P	08 30 31.1	-0.5
	1.3nm,0.5s,mb3.6,baz=343,slow=10,SNR=14						
ASAR	Alice Springs	29.14	166	P	P	08 31 03.0	+0.2
	0.3nm,0.4s,mb3.2,baz=342,slow=7.0,SNR=6.5						
STKA	Stephens Creek	39.14	160	P	P	08 32 29.2	+1.1
	2.2nm,0.9s,mb4.0,baz=315,slow=7.1,SNR=4.0						
SONM	Songino Array	46.28	341	P	P	08 33 26.6	+0.7
	0.2nm,0.4s,mb3.2,baz=160,slow=8.2,SNR=5.5						
ILAR	Eielson Array	84.24	25	P	P	08 37 29.9	+0.2
	0.5nm,1.1s,mb3.3,baz=252,slow=6.5,SNR=4.4						
ARCES	ARCESS Array B	89.44	340	P	P	08 37 53.6	-1.1
	3.4nm,0.8s,mb4.4,baz=76,slow=10.0,SNR=3.8						
FINES	FINESS Array B	90.86	332	P	P	08 38 01.4	-0.2
	2.5nm,0.9s,mb4.3,baz=90,slow=1.9,SNR=7.7						

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*NEIC **23** 08:33:32.3±0.4, 19.05S×69.49W, mb4.1/2, Error ellipse: s-maj=11.4km s-min=7.0km az=65.0*

*IDC **23** 08:33:32.1±0.6, 19.03S×69.47W, h109^{km}±5^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.7/19, mbtmp3.9/11, Error ellipse: s-maj=17.2km s-min=9.0km az=94.0*

ISC 23 08:33:30.8±0.4**, 19.04S**±0.04×**69.54W**±0.07**, h108**^{km}**, h108**^{km}±1.3^{km}**:pP-P, n28, σ1**^{s}**.03**/29**, mb3.8**/8**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.05	26	P	P	08 34 19.8	+1.4
	3.6nm,0.3s,baz=200,slow=8.8,SNR=78						
LPAZ				S	S	08 34 54.8	+0.5
	5.0nm,0.3s,baz=165,slow=10,SNR=5.9						
LPAZ	La Paz	3.05	26	eP	P	08 34 19.7	+1.3
ARE	Arequipa	3.17	324	⇑iP	P	08 34 20.4	+0.5
ARE				iS	S	08 34 55.2	-1.9
LVC	Limon Verde	3.60	171	P	P	08 34 26.9	+1.0
	30nm,0.3s,baz=356,slow=10,SNR=68						
LVC				S	S	08 35 08.1	+0.3
	63nm,0.3s,baz=14,slow=12,SNR=4.8						
LVC	Limon Verde	3.60	171	eP	P	08 34 26.8	+0.9
NNA	Nana	9.93	314	P	P	08 35 53.0	+1.2
CFAA	Coronel Fontan	12.57	175	P	P	08 36 22.3	-4.5
	baz=355,slow=15						
CFAA				S	S	08 38 34.0	-11
	0.0nm,0.3s,baz=290,slow=12,SNR=4.2						
CFAA	Coronel Fontan	12.57	175	P	P	08 36 22.3	-4.5
CFAA				S	S	08 38 34.0	-11
TRQA	Tornquist	20.06	162	eP	P	08 37 56.3	-1.3
	15nm,0.6s						
BDFB	Brasilia	20.82	84	P	P	08 38 05.3	-0.2
	11nm,0.7s,baz=266,slow=9.9,SNR=25						
BAO	Brasilia Array	20.84	84	eP	P	08 38 05.1	-0.6
OTAV	Otavalo	21.06	334	P	P	08 38 09.4	+1.5
	2.8nm,0.8s,mb3.6						
PLCA	Paso Flores	21.64	182	P	P	08 38 14.3	+0.8
	1.9nm,0.8s,mb3.5,baz=8.3,slow=10.0,SNR=6.1						
PLCA	Paso Flores	21.64	182	P	P	08 38 14.3	+0.8
TXAR	Lajitas Array	58.28	325	P	P	08 43 15.8	-0.9
	0.7nm,0.8s,mb3.7,baz=140,slow=8.1,SNR=7.8						
TXAR				pP	pP	08 43 41.6	-1.4
	0.3nm,0.7s,baz=148,slow=8.5,SNR=2.3						
DBIC	Dimbokro	68.63	75	P	P	08 44 22.1	-2.7
	1.1nm,0.4s,mb4.0,baz=250,slow=5.5,SNR=3.4						
MSU	Marysvale	69.82	326	eP	P	08 44 32.7	+1.0
PDAR	Pinedale Array	71.69	330	P	P	08 44 42.0	-0.9
	0.4nm,0.7s,mb3.4,baz=108,slow=4.7,SNR=4.0						
PDAR				pP	pP	08 45 09.2	-1.1
	0.5nm,0.9s,baz=141,slow=5.8,SNR=2.7						
ELK	Elko	73.07	325	P	P	08 44 51.5	+0.5
	0.8nm,0.9s,mb3.6,baz=187,slow=8.1,SNR=3.5						
NVAR	Mina Array Bea	73.20	322	P	P	08 44 51.1	-0.7
	0.8nm,0.7s,mb3.6,baz=140,slow=7.8,SNR=6.2						
NVAR				pP	pP	08 45 20.1	+0.8
	0.7nm,0.8s,baz=122,slow=6.2,SNR=4.0						
MCMT	McKenzie Canyo	74.81	330	eP	P	08 45 02.0	+1.0
MCMT				epP	pP	08 45 29.4	+0.7
EDM	Edmonton	81.29	335	eP	P	08 45 35.6	-0.8
YKA	Yellowknife Ar	88.68	341	P	P	08 46 12.6	-0.1
	3.6nm,0.6s,mb4.5,baz=134,slow=4.8,SNR=111						
YKA				pP	pP	08 46 40.7	-0.4
	2.0nm,0.7s,baz=134,slow=4.7,SNR=11						
YKW3	Yellowknife Ar	88.73	341	eP	P	08 46 12.4	-0.5
YKW3				epP	pP	08 46 40.8	-0.6
ASAR	Alice Springs	131.78	209	PKP	PKPdf	08 52 33.1	+1.1
	0.3nm,0.5s,baz=148,slow=1.8,SNR=5.5						
WRA	Warramunga Arr	134.73	212	PKP	PKPdf	08 52 39.3	+1.7
	0.7nm,0.6s,baz=148,slow=1.6,SNR=12						
ZAL	Zalesovo	139.97	23	PKP	PKPdf	08 52 47.9	+1.7
	0.5nm,0.3s,baz=149,slow=5.9,SNR=3.5						
SONM	Songino Array	151.09	6	PKPbc	PKPdf	08 53 12.9	+7.9
	1.7nm,0.4s,baz=321,slow=2.0,SNR=18						
SONM				pPKPbc		08 53 42.5	
	1.0nm,0.5s,baz=326,slow=1.2,SNR=5.8						

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*IDC **23** 08:39:21.0±17.0, 22.26S×169.48E, h83^{km}±148^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.9/5, MS2.6/1, Ms1 2.6/1, ms1mx2.1/18, Error ellipse: s-maj=86.8km s-min=54.9km az=145.0*

ISC 23 08:39:14.3±1.5**, 22.3S**±0.4×**169.4E**±0.1**, h33**^{km}**, n8, σ1**^{s}**.12**/9**, mb3.9**/5**, MS2.5**/1**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.74	273	eP	P	08 39 55.7	-1.1
DZM				eS	S	08 40 25.7	-3.4
NOUC	Port Laguerre	2.86	273	eP	P	08 39 58.5	-0.2
NOUC				eS	S	08 40 32.8	+0.5
CTA	Charters Tower	21.68	271	P	P	08 44 07.1	+2.9
	5.1nm,1.0s,mb3.9,baz=110,slow=13,SNR=3.8						
PMG	Port Moresby	24.87	297	P	P	08 44 36.5	+0.9
	2.6nm,0.4s,mb4.1,baz=146,slow=7.0,SNR=4.5						
ASAR	Alice Springs	32.65	261	P	P	08 45 45.8	+0.1
	0.9nm,0.7s,mb3.8,baz=94,slow=9.3,SNR=13						
ASAR				LR	LR	08 59 13.8	
	comp=Z,9.6nm,19.3s,MS2.5,baz=296,slow=36						
WRA	Warramunga Arr	32.74	267	P	P	08 45 46.4	0.0
	0.5nm,0.6s,mb3.6,baz=96,slow=8.2,SNR=12						
NVAR	Mina Array Bea	90.69	48	P	P	08 52 14.3	-0.8
	0.7nm,0.8s,mb4.1,baz=229,slow=8.3,SNR=4.7						
GERES	GERESS Array B	147.19	330	PKPbc	PKPdf	08 58 54.6	+2.8
	0.8nm,0.8s,baz=320,slow=7.7,SNR=2.5						

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*NEIC **23** 08:49:23.0, 19.59N×69.04W, h45^{km}, MD3.8(RSPR), After RSPR.*

RSPR 23 08:49:23.0, 19.59N×**69.04W, h45**^{km}±38^{km}**, MD3.8**/14**, MD3.8**/14**, 14C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	Aguadilla, PR	2.14	121	⇑eP	P	08 49 54.7	-2.3
AGPR				eS	S	08 50 20.0	-2.5
MPR	Mayaguez	2.26	127	eS	S	08 50 22.9	-2.7
LSP	Las Mesas	2.32	127	⇑eP	P	08 49 58.0	-1.7
LSP				eS	S	08 50 24.5	-2.6
MGP	Maguayo	2.43	130	⇑eP	P	08 49 59.8	-1.3
MGP				eS	S	08 50 28.9	-0.9
LRS	Lares	2.44	122	⇑eP	P	08 49 59.5	-1.9
LRS				eS	S	08 50 29.0	-1.2
AOPR	Arecibo Observ	2.50	119	⇑eP	P	08 50 00.2	-2.0
AOPR				eS	S	08 50 30.0	-1.5
PORP	Portuguez	2.74	124	⇑eP	P	08 50 03.6	-2.0
PORP				eS	S	08 50 34.8	-3.0
OBIP	Obispado Ponce	2.77	123	⇑eP	P	08 50 03.8	-2.2
OBIP				eS	S	08 50 37.1	-1.4
CELP	Cerrillos	2.77	123	⇑eP	P	08 50 04.8	-1.3
CELP				eS	S	08 50 36.8	-1.8
CSB	Colonia Sabana	3.02	115	⇑eP	P	08 50 08.5	-1.1
CSB				eS	S	08 50 42.1	-2.7
SJG	San Juan	3.11	118	⇑eP	P	08 50 09.3	-1.6
SJG				eS	S	08 50 44.5	-2.6
SJG	San Juan	3.11	118	⇑eP	P	08 50 09.8	-1.1
SJG				eS	S	08 50 45.9	-1.1
CBYP	Canovanas	3.29	113	⇑eP	P	08 50 10.7	-2.7
CBYP				eS	S	08 50 49.1	-2.5
CPD	Cerro la Pandu	3.34	117	eS	S	08 50 51.1	-1.8
HUMP	Col San Antoni	3.35	115	⇑eP	P	08 50 11.9	-2.3
HUMP				eS	S	08 50 51.3	-1.8
MTP	Monte Pirata	3.62	114	⇑eP	P	08 50 16.9	-1.2
MTP				eS	S	08 50 57.2	-2.8

IDC 23 08:49:32.8±12.0**, 65.67S**×**135.96E, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.7**/12**, mbtmp3.7**/3**, ML3.5**/1**, Error ellipse: s-maj=986.0km s-min=40.6km az=75.0, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	14.20	157	Pn	P	08 52 54.8	-2.1
	0.2nm,0.3s,baz=308,slow=14,SNR=5.3						
VNDA				Sn	S	08 55 28.1	-8.3
	0.2nm,0.3s,baz=8.1,slow=14,SNR=3.5						
ASAR	Alice Springs	42.02	357	P	P	08 57 25.6	-1.5
	0.6nm,0.7s,baz=172,slow=8.4,SNR=7.6						
WRA	Warramunga Arr	45.72	358	P	P	08 57 55.1	-2.0
	1.2nm,0.8s,baz=181,slow=6.6,SNR=11						

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*NEIC **23** 08:51:37.1±0.8, 21.14S×68.50W, h114^{km}±10^{km}, mb4.0/2, Error ellipse: s-maj=19.6km s-min=9.7km az=89.0*

*IDC **23** 08:51:37.7±1.3, 21.21S×68.35W, h116^{km}±14^{km}, mb3.6/3, mb1 3.6/6, mb1mx3.4/16, mbtmp3.9/6, Error ellipse: s-maj=34.2km s-min=17.6km az=108.0*

ISC 23 08:51:35.9±0.7**, 21.14S**±0.06×**68.7W**±0.2**, h133**^{km}±10^{km}**, n16, σ1**^{s}**.02**/20**, mb4.2**/3**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.48	188	P	P	08 52 05.0	+0.6
	58nm,0.3s,baz=12,slow=9.3,SNR=256						
LVC				S	S	08 52 25.8	-0.3
	168nm,0.3s,baz=90,slow=20,SNR=111						
LVC	Limon Verde	1.48	188	P	P	08 52 05.0	+0.6
LVC				S	S	08 52 25.8	-0.3
LPAZ	La Paz	4.86	6	P	P	08 52 49.7	+1.6
	2.8nm,0.3s,baz=212,slow=7.3,SNR=49						
LPAZ	La Paz	4.86	6	eP	P	08 52 49.7	+1.5
ARE	Arequipa	5.37	330	eP	P	08 52 55.0	+0.1
ARE				eS	S	08 53 55.0	-1.1
CFAA	Coronel Fontan	10.43	178	P	P	08 53 59.2	-3.6
	0.1nm,0.3s,baz=359,slow=14,SNR=16						
CFAA				S	S	08 55 47.7	-10
	0.1nm,0.3s,baz=194,slow=17,SNR=4.8						
CFAA	Coronel Fontan	10.43	178	P	P	08 53 59.2	-3.6
CFAA				S	S	08 55 47.7	-10
TRQA	Tornquist	17.82	162	eP	P	08 55 36.1	-0.7
	4.6nm,0.6s						
PLCA	Paso Flores	19.59	184	P	P	08 55 56.6	+0.8
	0.3nm,0.3s,baz=360,slow=12,SNR=16						
PLCA	Paso Flores	19.59	184	eP	P	08 55 56.5	+0.7
	7.5nm,0.9s						
BDFB	Brasilia	20.35	78	P	P	08 56 02.8	-0.9
	3.7nm,0.4s,baz=261,slow=11,SNR=13						
SNAA	Sanae	62.55	161	eP	P	09 01 48.4	+0.9
	28nm,0.7s,mb5.2						
DBIC	Dimbokro	68.42	73	P	P	09 02 25.4	-0.5
	2.4nm,0.6s,mb4.1,baz=261,slow=7.8,SNR=5.5						
YKA	Yellowknife Ar	90.92	341	P	P	09 04 29.0	+3.6
	0.1nm,0.4s,mb3.2,baz=133,slow=4.8,SNR=5.8						
YKA				pP	pP	09 04 49.8	-10
	0.2nm,0.7s,baz=125,slow=4.7,SNR=4.6						
YKA				sP	sP	09 04 59.4	-15
	0.3nm,0.6s,baz=131,slow=4.6,SNR=7.1						
YKA	Yellowknife Ar	90.92	341	P	P	09 04 29.0	+3.6
YKA				pP	pP	09 04 49.8	-10
YKA				sP	sP	09 04 59.4	-15
WRA	Warramunga Arr	133.37	210	PKP	PKPdf	09 10 40.8	+3.7
	0.6nm,0.6s,baz=169,slow=1.3,SNR=5.5						

IDC 23 09:00:11.3±1.8**, 16.99S**×**178.16W, mb4.0**/4**, mb1 4.3**/4**, mb1mx4.0**/15**, mbtmp4.0**/4**, Error ellipse: s-maj=156.1km s-min=31.6km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.29	240	P	P	09 07 42.4	-1.3
	0.9nm,0.3s,baz=95,slow=11,SNR=6.8						
WRA	Warramunga Arr	45.04	259	P	P	09 08 28.9	-2.0
	1.2nm,0.7s,baz=95,slow=7.2,SNR=28						
ASAR	Alice Springs	45.28	253	P	P	09 08 30.8	-2.0
	6.9nm,0.5s,baz=88,slow=8.4,SNR=131						
TXAR	Lajitas Array	85.30	58	P	P	09 12 50.7	-1.1
	0.3nm,0.8s,baz=219,slow=5.8,SNR=4.1						

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*BJI **23** 09:04:04.1, 18.64N×145.43E, h598^{km}, mB5.0, mb5.1*

*NEIC **23** 09:04:04.8±0.1, 18.57N×145.34E, mb4.8/49, Error ellipse: s-maj=4.8km s-min=4.2km az=105.0*

NEIC Felt on Saipan.

*MOS **23** 09:04:04.9±0.9, 18.59N×145.27E, h610^{km}, mb4.8/40, Error ellipse: s-maj=11.8km s-min=6.3km az=108.2*

*IDC **23** 09:04:05.6±0.6, 18.56N×145.30E, h596^{km}±7^{km}, mb4.0/22, mb1 4.2/25, mb1mx4.1/28, mbtmp5.1/25, Error ellipse: s-maj=11.9km s-min=6.8km az=94.0*

ISC 23 09:04:04.6±0.4**, 18.52N**±0.03×**145.27E**±0.04**, h601**^{km}±5^{km}**, h592**^{km}±3.3^{km}**:pP-P, n229, σ0**^{s}**.88**/239**, mb4.8**/100**, 17C-17D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SARN	Sarigan	1.87	165	eP	P	09 05 17.9	-0.8
ANAT	Anatahan	2.19	170	eP	P	09 05 19.9	-0.1
JHHJ	Haha-jima-NKT	8.56	341	P	P	09 06 10.5	+0.9
JHHJ				S	S	09 07 50.9	+1.2
CBIJ	Chichi jima	8.99	342	P	P	09 06 13.9	+0.2
	102nm,0.3s,baz=234,slow=5.3,SNR=58						
CBIJ				S	S	09 07 57.3	0.0
	17nm,0.3s,baz=289,slow=23,SNR=4.0						
CBIJ	Chichi jima	8.99	342	P	P	09 06 13.8	0.0
CBIJ				S	S	09 07 58.0	+0.7
JHJ	Hachijo jima 2	15.35	342	P	P	09 07 15.6	-0.4
	61nm,0.3s,baz=215,slow=4.9,SNR=25						
JHJ				S	S	09 09 49.8	-0.1
	16nm,0.3s,baz=283,slow=23,SNR=4.3						
JWZ	Kozaga	17.22	332	P	P	09 07 34.2	+0.5
JIE	Ise	17.55	336	P	P	09 07 36.6	-0.2
JOD2	Odawara 2	17.55	343	P	P	09 07 36.3	-0.6
JOD2				S	S	09 10 31.9	+4.3
JOW	Kunigami	17.72	301	P	P	09 07 39.5	+1.1
	43nm,0.3s,baz=131,slow=11,SNR=38						
MAJO	Matsushiro	19.00	342	eP	P	09 07 48.9	-1.4
MAJO				pmax	pmax		
	comp=Z,35nm,0.4s						
MAJO	Matsushiro	19.00	342	eP	P	09 07 48.9	-1.4
	comp=Z,35nm,0.4s						
MAT	Matsushiro	19.00	342	P	P	09 07 48.9	-1.4
MAT				S	S	09 10 55.2	+3.4
MAT	Matsushiro	19.00	342	P	P	09 07 49.3	-1.0
MAT				S	S	09 10 57.9	+6.1
JSJ	Shimokoshiki	19.21	316	P	P	09 07 51.8	-0.5
JHS	Saijyo	19.64	329	P	P	09 07 57.2	+0.9
KS15	Wonju Array Si	24.24	325	eP	P	09 08 36.4	-1.3
SSE	Sheshan	25.13	304	P	P	09 08 45.0	-0.6
SSE				XP	sP	09 11 26.4	+0.1
SSE				S	S	09 12 29.8	-0.5
SSE				PCS		09 15 38.9	
SSE				AMB	AMB		
	comp=Z,32nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,80nm,5.1s						
SSE	Sheshan	25.13	304	P	P	09 08 45.0	-0.6
	comp=Z,32nm,0.7s,mb5.1						
SSE				sP	sP	09 11 26.4	+0.1
SSE				S	S	09 12 29.8	-0.5
SSE				PcS		09 15 38.9	
SSE				LR	LR		
	comp=Z,30nm,15.9s						
JTKR	Abashiri--Toko	25.40	358	P	P	09 08 48.0	+0.2
QZH	Quanzhou	25.57	289	⇑iP	P	09 08 49.4	-0.1
QZH				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.2						
ASAJ	Asahikawa	25.62	356	P	P	09 08 48.6	-1.2
	comp=Z,13nm,0.4s,mb4.9,baz=247,slow=11,SNR=14						
NJ2	Nanjing	27.33	305	eP	P	09 09 05.5	+0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
PMG	Port Moresby	27.81	176	eP	P	09 09 08.8	-0.3
PMG				pmax	pmax		
	comp=Z,20nm,0.7s						
PMG	Port Moresby	27.81	176	P	P	09 09 09.1	0.0
	comp=Z,20nm,0.7s,mb4.9,baz=343,slow=6.4,SNR=13						
PMG				ScP		09 14 50.3	
	comp=Z,18nm,1.1s,baz=4.0,slow=5.4,SNR=4.1						
PMG	Port Moresby	27.81	176	eP	P	09 09 08.8	-0.3
	comp=Z,20nm,0.7s,mb4.8						
YSS	Yuzh-Sakhalins	28.43	356	⇑iP	P	09 09 13.3	-0.8
YSS				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
YSS	Yuzh-Sakhalins	28.43	356	eP	P	09 09 13.6	-0.6
	comp=Z,30nm,1.1s,mb4.8						
MDJ	Mudanjiang	29.14	337	P	P	09 09 20.0	-0.2
MDJ				XP	sP	09 12 04.0	-1.1
MDJ				PCP	PcP	09 12 08.3	-0.1
MDJ				S	S	09 13 30.9	-1.6
MDJ				SCP		09 14 54.0	
MDJ				SCS	ScS	09 18 49.5	+1.4
MDJ				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,233nm,5.4s						
CN2	Changchun	30.22	331	eP	P	09 09 29.3	-0.1
CN2				PCP	PcP	09 12 10.3	-0.9
CN2				eXP	sP	09 12 13.8	-1.2
CN2				eS	S	09 13 49.6	+0.4
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
CN2				AMB	AMB		
	comp=Z,390nm,4.0s						
WHN	Wuhan	30.47	299	⇓iP	P	09 09 32.5	+0.8
WHN				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.5						
KLR	Kul'dur	32.52	343	eP	P	09 09 45.8	-3.0
BJT	Baijiatuau	32.98	317	eP	P	09 09 52.7	0.0
BJT				pmax	pmax		
	comp=Z,34nm,0.9s						
BJT	Baijiatuau	32.98	317	eP	P	09 09 52.7	0.0
	comp=Z,34nm,0.9s,mb5.0						
BJI	Beijing	32.98	317	P	P	09 09 52.8	+0.1
BJI				AMB	AMB		
	comp=Z,44nm,1.3s,mb4.9						
BJI	Beijing	32.98	317	P	P	09 09 52.7	0.0
BJI				pmax	pmax		
	comp=Z,44nm,1.3s,mb4.9						
BJI				MLR	MLR		
	comp=Z,110nm,24.7s						
BJI	Beijing	32.98	317	P	P	09 09 52.7	0.0
	comp=Z,44nm,1.3s,mb4.9						
BJI				LR	LR		
	comp=Z,110nm,24.7s						
KAKA	Kakadu	33.52	203	⇑iP	P	09 09 57.7	+0.3
	comp=Z,16nm,0.4s,mb5.0						
KAKA				eS	S	09 14 36.5	-3.2
ENH	Enshi	34.48	297	eP	P	09 10 05.7	+0.4
	comp=Z,18nm,0.6s,mb4.9						
XAN	Xi'an	35.85	303	P	P	09 10 16.8	+0.3
XAN				AMB	AMB		
	comp=Z,35nm,1.0s,mb4.8						
GYA	Guiyang	36.43	290	⇓iP	P	09 10 23.0	+1.7
GYA				AP		09 12 04.4	
GYA				PCP	PcP	09 12 29.8	+0.6
GYA				XP	sP	09 13 12.3	+2.9
GYA				S	S	09 15 29.3	+6.2
GYA				AMB	AMB		
	comp=Z,20nm,0.4s,mb5.0						
HHC	Hu-ho-hao-te	36.44	315	⇓P	P	09 10 22.0	+0.7
HHC				PP	PP	09 12 02.6	+2.9
HHC				S	S	09 15 25.3	+2.2
HHC				AMB	AMB		
	comp=Z,67nm,1.0s,mb5.1						
HHC				AMB	AMB		
	comp=Z,176nm,8.4s						

HIA	**Hailar**	36.92	332	*e*P	P	09 10 25.3	+0.1
HIA				pmax	pmax		
	comp=Z,63nm,1.0s						
HIA	**Hailar**	36.92	332	*e*P	P	09 10 25.3	+0.1
	comp=Z,63nm,1.0s,mb5.1						
CTA	**Charters Tower**	38.38	179	⇑*i*P	P	09 10 38.2	+0.8
	comp=Z,18nm,0.7s,mb4.7						
CTA	**Charters Tower**	38.38	179	⇑*i*P	P	09 10 38.2	+0.8
CTA				pmax	pmax		
	comp=Z,18nm,0.7s						
CTA	**Charters Tower**	38.38	179	P	P	09 10 37.9	+0.5
	comp=Z,20nm,0.6s,mb4.8,baz=357,slow=8.3,SNR=36						
CTAO	**Charters Tower**	38.38	179	*e*P	P	09 10 38.0	+0.6
CD2	**Chengdu**	39.46	296	P	P	09 10 46.3	+0.3
WRAB	**Tennant Creek**	39.69	196	⇑*i*P	P	09 10 48.4	+0.5
WRAB	**Tennant Creek**	39.69	196	*e*P	P	09 10 48.0	+0.1
	comp=Z,43nm,0.6s,mb5.2						
WRA	**Warramunga Arr**	39.70	196	P	P	09 10 47.7	-0.3
WRA						09 12 39.5	
WRA	**Warramunga Arr**	39.70	196	P	P	09 10 47.7	-0.3
	comp=Z,22nm,0.6s,mb4.9,baz=20,slow=8.8,SNR=275						
WRA				PcP	PcP	09 12 39.5	-0.1
	comp=Z,6.3nm,0.6s,baz=5.2,slow=3.2,SNR=9.8						
WRA				ScP		09 15 32.1	
	comp=Z,2.1nm,0.6s,baz=15,slow=4.4,SNR=9.8						
WRA				PKiKP		09 19 46.9	
	comp=Z,0.2nm,0.4s,baz=327,slow=1.4,SNR=4.7						
WRA	**Warramunga Arr**	39.70	196	P	P	09 10 47.7	-0.3
WRA				PcP	PcP	09 12 39.5	-0.2
WRA				ScP		09 15 32.1	
LZH	**Lanzhou**	40.41	304	⇓P	P	09 10 54.8	+1.3
LZH				AP	pP	09 12 37.0	-0.3
LZH				PP	PP	09 12 40.3	+0.7
LZH				PCP	PcP	09 12 42.5	+0.6
LZH				XP	sP	09 13 44.8	+1.5
LZH				S	S	09 16 13.5	-7.4
LZH				SCS	ScS	09 19 52.8	+2.9
LZH				AMB	AMB		
	comp=Z,190nm,1.0s,mb5.6						
LZH				AMB	AMB		
	comp=Z,510nm,4.0s						
LZH	**Lanzhou**	40.41	304	⇓P	P	09 10 54.8	+1.3
LZH				*PP	pP	09 12 37.0	-0.3
LZH					pP	09 12 40.2	+2.9
LZH					pP	09 12 42.5	+5.2
LZH				*SP	sP	09 13 44.8	+1.5
LZH				S	S	09 16 13.5	-7.4
LZH				*SS		09 19 20.0	
LZH						09 19 52.7	
LZH				pmax	pmax		
	comp=Z,190nm,1.0s,mb5.6						
LZH				MLR	MLR		
	comp=Z,360nm,20.6s						
LZH	**Lanzhou**	40.41	304	⇓P	P	09 10 54.8	+1.3
	comp=Z,190nm,1.0s,mb5.6						
LZH				pP	pP	09 12 37.0	-0.3
LZH				PP	PP	09 12 40.2	+0.6
LZH				PcP	PcP	09 12 42.5	+0.6
LZH				sP	sP	09 13 44.8	+1.5
LZH				ScP		09 15 40.3	
LZH				S	S	09 16 13.5	-7.4
LZH				PcS		09 16 39.4	
LZH				sS		09 19 20.0	
LZH				SS	SS	09 19 30.0	-11
LZH				ScS	ScS	09 19 52.7	+2.8
LZH				LR	LR		
	comp=Z,360nm,20.6s						
CLNS	**Chul'man**	41.18	343	*e*P	P	09 10 58.2	-1.2
CLNS				pmax	pmax		
	comp=N,18nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,35nm,0.9s,mb4.9						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
FITZ	**Fitzroy Crossi**	41.19	209	⇑*i*P	P	09 11 00.6	+0.7
	comp=E,54nm,0.6s,mb5.2						
FITZ				*e*PCP	PcP	09 12 45.2	+0.6
FITZ				*e*S	S	09 16 31.3	-1.0
FITZ				*e*SCS	ScS	09 19 57.7	+2.9
MA2	**Magadan**	41.19	4	*e*P	P	09 10 59.2	-0.3
MA2				pmax	pmax		
	comp=Z,27nm,0.7s,mb4.9						
MA2	**Magadan**	41.19	4	*e*P	P	09 10 59.2	-0.3
	comp=Z,27nm,0.7s,mb4.9						
ULN	**Ulaanbaatar**	42.66	322	*e*P	P	09 11 11.5	+0.3
ULN				*e*		09 12 49.4	
ULN				pmax	pmax		
	comp=Z,41nm,1.0s,mb4.9						
ULN	**Ulaanbaatar**	42.66	322	*e*P	P	09 11 11.5	+0.3
	comp=Z,41nm,1.0s,mb4.9						
ULN				*e*		09 12 49.4	
SONM	**Songino Array**	43.03	322	P	P	09 11 14.5	+0.5
	comp=Z,16nm,0.6s,mb4.7,baz=117,slow=6.2,SNR=130						
SONM				PcP	PcP	09 12 50.2	-0.3
	comp=Z,7.0nm,0.6s,baz=135,slow=3.5,SNR=9.2						
SONM				ScP		09 15 43.0	
	comp=Z,1.2nm,0.5s,baz=132,slow=3.9,SNR=5.1						
SONM	**Songino Array**	43.03	322	P	P	09 11 14.5	+0.5
SONM				PcP	PcP	09 12 50.2	-0.3
SONM				ScP		09 15 43.0	
ASAR	**Alice Springs**	43.37	195	P	P	09 11 16.7	-0.4
	comp=Z,11nm,0.6s,mb4.6,baz=19,slow=8.1,SNR=180						
ASAR				PcP	PcP	09 12 52.3	+0.2
	comp=Z,5.8nm,0.8s,baz=19,slow=3.5,SNR=13						
ASAR				ScP		09 15 46.5	
	comp=Z,0.8nm,0.6s,baz=12,slow=3.8,SNR=4.7						
ASAR				S	S	09 17 02.2	-1.0
	comp=Z,1.1nm,0.7s,baz=19,slow=22,SNR=5.9						
ASPA	**Alice Springs**	43.38	195	⇑*i*P	P	09 11 17.1	0.0
ASPA				*e*PCP	PcP	09 12 52.6	+0.5
ASPA				*e*S	S	09 17 01.6	-1.6
CM31	**Chiang Mai Arr**	43.84	278	*e*P	P	09 11 22.1	+1.3
	comp=Z,67nm,0.8s,mb5.2						
CMAR	**Chiang Mai Arr**	43.84	278	P	P	09 11 21.9	+1.1
	comp=Z,53nm,0.8s,mb5.1,baz=68,slow=6.5,SNR=196						
CMAR				PcP	PcP	09 12 54.2	+0.5
	comp=Z,5.4nm,0.8s,baz=103,slow=1.5,SNR=8.1						
CMAR				pP	pP	09 13 05.5	-1.1
	comp=Z,5.8nm,0.9s,baz=68,slow=8.0,SNR=5.3						
CMAR				ScP		09 15 47.9	
	comp=Z,0.7nm,0.4s,baz=149,slow=2.7,SNR=4.6						
GTA	**Gaotai**	44.34	308	⇓P	P	09 11 25.1	+0.8
GTA				PCP	PcP	09 12 56.0	+0.8
GTA				AP	pP	09 13 12.4	+1.8
GTA				SCP		09 15 50.5	
GTA				PCS		09 16 49.5	
GTA				S	S	09 17 15.9	-0.5
GTA				XS		09 20 25.1	
GTA				AMB	AMB		
	comp=Z,39nm,1.0s,mb4.9						
GTA				AMB	AMB		
	comp=Z,78nm,3.8s						
SEY	**Seymchan**	44.64	5	*e*P	P	09 11 28.0	+1.6
SEY				*e*		09 12 56.8	
SEY				*e*S	S	09 17 23.0	+2.6
SEY				*SS		09 20 21.9	
SEY				*e*SS	SS	09 20 55.7	+4.3
SEY				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.9						
SEY				smax			
	comp=N,220nm,16.1s						
SEY				smax			
	comp=E,140nm,16.1s						
YAK	**Yakutsk**	44.82	350	*e*P	P	09 11 26.4	-1.3
YAK				pmax	pmax		
	comp=Z,139nm,0.9s,mb5.5						
YAK	**Yakutsk**	44.82	350	*e*P	P	09 11 26.4	-1.3
	comp=Z,139nm,0.9s,mb5.5						
BOD	**Bodaibo**	45.51	337	⇑*i*P	P	09 11 31.9	-1.2
BOD				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.5						
ZAK	**Zakamensk**	46.05	323	⇑*i*P	P	09 11 36.7	-0.5
ZAK				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.6						
TLY	**Talaya**	46.48	325	P	P	09 11 40.3	-0.2
	comp=Z,199nm,0.7s,mb5.8,SNR=11						
TLY	**Talaya**	46.48	325	⇓*i*P	P	09 11 40.5	0.0
TLY				*e*		09 13 02.6	
TLY				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.9						
TLY	**Talaya**	46.48	325	*e*P	P	09 11 40.6	+0.1
	comp=Z,48nm,1.1s,mb4.9						
MBWA	**Marble Bar**	46.70	214	*e*P	P	09 11 42.5	-0.2
	comp=Z,29nm,0.7s,mb4.9						
MOY	**Mondy**	47.92	324	*e*P	P	09 11 50.9	-0.5
MOY				pmax	pmax		
	comp=Z,35nm,2.7s,mb4.4						
STKA	**Stephens Creek**	50.23	184	⇑*i*P	P	09 12 08.4	-0.4
	comp=Z,11nm,0.6s,mb4.5						
STKA	**Stephens Creek**	50.23	184	P	P	09 12 08.4	-0.3
	comp=Z,18nm,0.7s,mb4.6,baz=355,slow=7.3,SNR=34						
LSA	**Lhasa**	50.25	294	P	P	09 12 11.0	+2.1
LSA				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.0						
LSA	**Lhasa**	50.25	294	*e*P	P	09 12 10.7	+1.8
LSA				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.0						
LSA	**Lhasa**	50.25	294	*e*P	P	09 12 10.7	+1.8
	comp=Z,54nm,0.8s,mb5.0						
BILL	**Bilibino**	51.26	10	*d i*P	P	09 12 14.9	-0.8
BILL				pmax	pmax		
	comp=Z,47nm,1.4s,mb4.7						
BILL	**Bilibino**	51.26	10	*e*P	P	09 12 14.6	-1.1
	comp=Z,11nm,0.5s,mb4.5						
FORT	**Forrest**	51.74	199	*e*P	P	09 12 19.5	-0.1
	comp=Z,544nm,0.5s						
CNB	**Canberra Magne**	53.68	176	*e*P	P	09 12 33.8	+0.5
	comp=Z,62nm,0.8s,mb5.0						
TIXI	**Tiksi**	54.00	354	⇓*i*P	P	09 12 32.8	-2.2
TIXI				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.4						
JIRN	**Jiri**	54.67	291	*e*P	P	09 12 41.3	+1.0
	comp=Z,170nm,0.5s,mb5.7						
GUN	**Gumba**	54.93	291	*e*P	P	09 12 42.8	+0.7
	comp=Z,85nm,0.4s,mb5.5						
PKI	**Pulchoki**	55.37	291	*e*P	P	09 12 45.4	+0.2
	comp=Z,111nm,0.4s,mb5.5						
KKN	**Kakani**	55.47	291	*e*P	P	09 12 46.0	+0.1
	comp=Z,39nm,0.4s,mb5.1						
DMN	**Daman**	55.64	291	*e*P	P	09 12 47.3	+0.3
	comp=Z,121nm,0.4s,mb5.5						
POHA	**Pohakuloa**	55.69	78	P	P	09 12 45.6	-1.8
GKN	**Gorkha**	56.02	292	*e*P	P	09 12 49.8	+0.1
	comp=Z,109nm,0.4s,mb5.5						
TNA	**Tin City**	56.13	21	*e*P	P	09 12 49.3	-0.6
	comp=Z,11nm,1.1s,mb4.0						
KLBR	**Kellerberrin**	56.39	208	*e*P	P	09 12 51.5	-0.6
	comp=Z,303nm,0.8s,mb5.6						
KLBR				*e*PCP	PcP	09 13 40.4	0.0
KOLN	**Koldanda**	56.95	291	*e*P	P	09 12 56.1	+0.1
	comp=Z,107nm,0.9s,mb5.1						
MUN	**Mundaring**	57.42	209	*e*P	P	09 12 58.9	-0.2
	comp=Z,8.6nm,0.5s,mb4.2						
MUN	**Mundaring**	57.42	209	*e*P	P	09 12 58.9	-0.2
MUN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.3						
NWAO	**Narrogin (SRO)**	57.76	208	P	P	09 13 00.9	-0.5
	comp=Z,13nm,0.8s,mb4.2,baz=36,slow=7.1,SNR=9.7						
NWAO				PcP	PcP	09 13 46.4	+0.6
	comp=Z,10nm,0.7s,baz=48,slow=5.8,SNR=6.7						
ZAL	**Zalesovo**	57.92	323	P	P	09 13 01.5	-0.7
	comp=Z,10nm,0.6s,mb4.2,baz=358,slow=5.7,SNR=49						
ZAL				PcP	PcP	09 13 45.4	-0.8
	comp=Z,1.9nm,0.4s,baz=346,slow=1.7,SNR=4.7						
MKAR	**Makanchi Array**	58.29	314	*i* P	P	09 13 04.8	0.0
MKAR				pmax	pmax		
	comp=Z,21nm,0.4s						
VIS	**Vishakhapatnam**	58.61	280	*e*P	P	09 13 08.0	+0.6
VIS				*e*		09 13 09.1	
	comp=Z,33nm,0.6s						
NVS	**Novosibirsk**	59.01	323	*i* P	P	09 13 08.2	-1.3
NVS				pmax	pmax		
	comp=Z,77nm,1.4s,mb4.6						
NVS				pmax	pmax		
	comp=N,25nm,1.5s						
NVS				pmax	pmax		
	comp=E,63nm,1.5s						
KURK	**Kurchatov**	61.13	318	⇓*i*P	P	09 13 22.8	-0.7
KURK	**Kurchatov**	61.13	318	*e*P	P	09 13 22.9	-0.6
	comp=E,110nm,0.8s,mb5.1						
IMA	**Indian Mountai**	61.60	24	*e*P	P	09 13 26.5	+0.2
IMA				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.2						
IMA	**Indian Mountai**	61.60	24	*e*P	P	09 13 26.5	+0.2
	comp=Z,19nm,1.1s,mb4.2						
SDNR	**Sundarnagar**	62.37	296	*e*P	P	09 13 32.2	+0.5
NDI	**New Delhi**	62.46	293	*e*P	P	09 13 31.0	-1.4
BHPL	**Bhopal**	63.06	287	*e*P	P	09 13 36.0	-0.3
BHPL				*e*		09 13 36.4	
	comp=Z,25nm,0.4s						
HYB	**Hyderabad**	63.13	281	*i* P	P	09 13 37.0	+0.2
FRU	**Bishkek**	63.57	309	*e*P	P	09 13 39.5	+0.2
FRU				pmax	pmax		
	comp=Z,50nm,1.5s,mb4.6						
COLA	**College**	63.60	26	*e*P	P	09 13 37.8	-1.3
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
COLA	**College**	63.60	26	*e*P	P	09 13 37.8	-1.3
	comp=Z,8.0nm,0.9s,mb4.0						
AAK	**Ala-Archa**	63.66	309	P	P	09 13 40.3	+0.4
	SNR=6.5						
AAK	**Ala-Archa**	63.66	309	*e*P	P	09 13 38.9	-0.9
AAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.5						
AAK	**Ala-Archa**	63.66	309	*e*P	P	09 13 38.9	-1.0
	comp=Z,20nm,0.9s,mb4.4						
ILAR	**Eielson Array**	63.98	26	P	P	09 13 39.5	-2.0
	comp=Z,5.3nm,0.5s,mb4.1,baz=248,slow=6.0,SNR=56						
THY	**Trims Highway**	64.21	28	*e*P	P	09 13 42.6	-0.3
CHKZ	**Chkalovo**	66.22	321	*i* P	P	09 13 54.6	-1.0
CHKZ				pmax	pmax		
	comp=Z,43nm,1.7s,mb4.6						
CHKZ	**Chkalovo**	66.22	321	*e*P	P	09 13 54.3	-1.3
	comp=Z,41nm,1.1s,mb4.8						
RPZ	**Rata Peaks**	66.29	160	P	P	09 13 55.6	-0.6
	comp=Z,3.7nm,0.6s,mb4.0,baz=102,slow=1.4,SNR=7.2						
BVA0	**Borovoye Array**	66.35	320	*i* P	P	09 13 56.0	-0.4
BVA0				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
DAWY	**Dawson**	67.10	28	*e*P	P	09 14 00.4	-0.4
KAD	**Karad**	67.22	281	*e*P	P	09 14 01.5	-0.8
KAD				*e*		09 14 02.7	
	comp=Z,48nm,0.4s						
POO	**Poona**	67.26	283	*e*P	P	09 14 01.0	-1.5
INK	**Inuvik**	69.69	23	*e*P	P	09 14 15.4	-0.8
INK				pmax	pmax		
	comp=Z,21nm,1.0s						
INK	**Inuvik**	69.69	23	*e*P	P	09 14 15.4	-0.8
	comp=Z,21nm,1.0s,mb4.5						
DLBC	**Dease Lake**	71.66	33	P	P	09 14 29.2	+1.4
	comp=Z,8.4nm,0.6s,mb4.5,baz=280,slow=7.1,SNR=15						
SVE	**Sverdlovsk**	71.79	325	⇓*i*P	P	09 14 28.7	+0.1
SVE				pmax	pmax		
	comp=Z,104nm,1.5s,mb5.1						
SOKR	**Solikamsk**	73.47	328	⇑*i*P	P	09 14 38.2	+0.2
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
BBB	**Bella Bella**	73.54	40	P	P	09 14 39.2	+0.5
	comp=Z,6.9nm,0.6s,mb4.3,baz=320,slow=9.6,SNR=4.2						
BBB	**Bella Bella**	73.54	40	P	P	09 14 39.2	+0.5
CMW	**Cultus Mountai**	78.07	43	P	P	09 15 04.7	+1.3
JCW	**Jim Creek**	78.25	43	P	P	09 15 05.5	+1.1
YKW3	**Yellowknife Ar**	78.31	28	*e*P	P	09 15 04.0	-0.3
YKA	**Yellowknife Ar**	78.33	28	P	P	09 15 04.3	-0.2
YKA				*PP	pP	09 17 10.7	-0.1
YKA	**Yellowknife Ar**	78.33	28	P	P	09 15 04.3	-0.2
	comp=Z,7.6nm,0.4s,mb4.4,baz=287,slow=5.0,SNR=150						
YKA				pP	pP	09 17 10.6	-0.2
	comp=Z,0.9nm,0.7s,baz=289,slow=5.6,SNR=5.4						
HUMO	**Hull Mountain**	78.97	49	*e*P	P	09 15 09.2	+0.9
	comp=Z,3.2nm,0.5s,mb3.9						
TBM	**Table Mountain**	79.39	44	P	P	09 15 11.2	+0.8
EBG	**Ellensburg**	79.47	44	P	P	09 15 11.9	+1.1
WTV	**Waterville**	79.66	43	P	P	09 15 12.1	+0.3
RES	**Resolute Bay**	79.69	14	*e*P	P	09 15 11.3	-0.2
	comp=Z,24nm,0.9s,mb4.5						
WBK	**Wadi Bani Khal**	79.79	290	⇑P	P	09 15 13.8	+0.8
	SNR=10						
BIDO	**Bidbid**	80.29	292	⇑P	P	09 15 16.7	+1.1
	SNR=9.7						
SMDO	**Samad**	80.48	291	⇑P	P	09 15 17.7	+1.1
	SNR=8.7						
OHCM	**Honcut**	80.93	52	*e*P	P	09 15 19.5	+1.0
HOQ	**Hoqain**	80.99	292	⇑P	P	09 15 20.3	+1.2
	SNR=17						
APA	**Apatity**	81.03	339	⇓*i*P	P	09 15 13.2	-5.2
APA				pmax	pmax		
	comp=Z,34nm,0.8s,mb4.8						
BANOM	**Banah**	81.22	294	⇓P	P	09 15 20.7	+0.5
ARQ	**Araqi**	81.75	292	⇑P	P	09 15 24.1	+1.0
	SNR=11						
ASHO	**Ashiyiah**	81.78	293	P	P	09 15 24.2	+1.0
	SNR=15						
EDM	**Edmonton**	81.97	37	*e*P	P	09 15 24.2	+0.7
KEV	**Kevo**	81.98	342	*e*p	P	09 15 22.2	-1.0
	comp=Z,7.4nm,0.4s,mb4.6						
KEV	**Kevo**	81.98	342	*e*P	P	09 15 22.2	-1.0
KEV				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.5						
CMB	**Columbia Colle**	82.13	53	*e*P	P	09 15 25.3	+0.7
	comp=Z,6.5nm,0.7s,mb4.3						
BMO	**Blue Mountains**	82.26	45	*e*P	P	09 15 25.3	+0.2
	comp=Z,11nm,1.1s,mb4.3						
ARCES	**ARCESS Array B**	82.54	342	P	P	09 15 25.9	-0.2
	comp=Z,16nm,0.5s,mb4.8,baz=61,slow=6.3,SNR=75						
ARE0	**ARCESS Array S**	82.54	342	*e*P	P	09 15 25.8	-0.3
BSMT	**Bassoo Peak**	82.93	42	P	P	09 15 29.8	+1.3
NVAR	**Mina Array Bea**	83.57	52	P	P	09 15 32.9	+1.1
	comp=Z,6.0nm,0.7s,mb4.2,baz=273,slow=4.0,SNR=41						
NVAR				pP	pP	09 17 38.1	-1.9
	comp=Z,1.2nm,0.7s,baz=257,slow=4.4,SNR=3.6						
MNV	**Mina**	83.68	52	*e*P	P	09 15 32.9	+0.5
MNV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
MNV	**Mina**	83.68	52	*e*P	P	09 15 32.9	+0.5
	comp=Z,4.8nm,0.8s,mb4.1						
JOF	**Joensuu**	84.01	335	*e*p	P	09 15 32.3	-1.1
	comp=Z,11nm,0.4s,mb4.7						
JOF	**Joensuu**	84.01	335	*e*P	P	09 15 32.3	-1.1
JOF				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.7						
CHMT	**Chamberlain Mo**	84.23	42	*e*P	P	09 15 34.6	-0.2
HLID	**Hailey**	84.65	46	*e*P	P	09 15 37.6	+0.7
	comp=Z,8.7nm,1.0s,mb4.3						
ELK	**Elko**	85.04	49	*e*P	P	09 15 39.8	+0.9
	comp=Z,8.3nm,0.7s,mb4.5						
ELK				*e*pP	pP	09 17 46.1	-1.6
OBN	**Obninsk**	85.20	327	*d i*P	P	09 15 38.2	-1.2
OBN				*e*	pP	09 17 45.0	-3.2
OBN						09 19 06.0	
OBN				pmax	pmax		
	comp=Z,49nm,1.6s,mb4.9						
MCMT	**McKenzie Canyo**	85.25	44	*e*P	P	09 15 40.7	+0.8
GOF	**Gofitskoye**	85.40	316	⇓*i*P	P	09 15 40.0	-0.6
GOF				pmax	pmax		
	comp=Z,36nm,1.1s,mb4.9						
TI2	**Plekhanov**	85.43	312	*i* P	P	09 15 40.6	-0.2
RBK	**Rabkut**	85.55	287	P	P	09 15 42.2	+0.2
	SNR=9.4						
WHFO	**Wadi Hawf**	85.82	287	⇓P	P	09 15 42.6	-0.6
	SNR=11						
GNI	**Garni**	85.99	311	*e*P	P	09 15 44.0	+0.5
GNI				pmax	pmax		
	comp=Z,79nm,1.8s						
GNI	**Garni**	85.99	311	*e*P	P	09 15 44.0	+0.4
	comp=Z,79nm,1.8s,mb5.0						
KIV	**Kislovodsk**	86.04	315	*i* P	P	09 15 43.0	-0.7
KIV				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.9						
KIV	**Kislovodsk**	86.04	315	*e*P	P	09 15 43.4	-0.3
	comp=Z,21nm,0.8s,mb4.8						
QLMT	**Earthquake Lak**	86.19	44	*e*P	P	09 15 44.2	-0.1
QLMT				*e*pP	pP	09 17 53.4	0.0
KAF	**Kangasniemi**	86.41	336	*e*p	P	09 15 43.0	-2.0
	comp=Z,6.6nm,0.4s,mb4.6,baz=52,slow=4.6						
KAF	**Kangasniemi**	86.41	336	*e*P	P	09 15 43.0	-2.0
KAF				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.6						
ABTO	**Aybut**	86.42	287	P	P	09 15 46.2	+0.2
	SNR=15						
FINES	**FINESS Array B**	86.88	335	P	P	09 15 45.7	-1.5
	comp=Z,14nm,0.4s,mb5.1,baz=72,slow=4.7,SNR=213						
LKWY	**Lake**	86.97	44	*e*P	P	09 15 46.0	-2.0
	comp=Z,10.0nm,0.3s,mb5.0						
DUG	**Dugway**	86.97	49	*e*P	P	09 15 48.3	+0.2
DUG				*e**PP	pP	09 17 55.6	-1.9
DUG				pmax	pmax		
	comp=Z,223nm,1.5s,mb5.7						
DUG	**Dugway**	86.97	49	*e*P	P	09 15 48.3	+0.1
	comp=Z,223nm,1.5s,mb5.7						
DUG				*e*pP	pP	09 17 55.6	-1.9
LDFC	**Landfair**	87.10	54	*e*P	P	09 15 48.3	-0.6
ARUT	**Antelope Range**	87.39	51	*e*P	P	09 15 51.5	+1.3
FFC	**Flin Flon**	87.46	32	P	P	09 15 50.2	+0.1
	comp=Z,82nm,0.9s,mb5.5,SNR=13						
FFC	**Flin Flon**	87.46	32	*e*P	P	09 15 49.9	-0.2
FFC				*e**PP	pP	09 17 57.3	-2.3
FFC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
FFC	**Flin Flon**	87.46	32	*e*P	P	09 15 49.9	-0.2
	comp=Z,16nm,1.0s,mb4.7						
FFC				*e*pP	pP	09 17 57.3	-2.3
DAU	**Daniels Canyon**	87.99	48	*e*P	P	09 15 54.1	+1.2
MSU	**Marysvale**	88.05	50	*e*P	P	09 15 54.2	+0.9
SOC	**Sochi**	88.17	316	*e*P	P	09 15 51.3	-2.4
SOC				*e*PPP	PPP	09 21 36.9	+0.4
SOC				*e*S	S	09 25 51.9	+5.0
SOC				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.9						
SOC				pmax	pmax		
	comp=N,10.0nm,0.5s						
SOC				pmax	pmax		
	comp=E,4.0nm,0.5s						
PDAR	**Pinedale Array**	88.24	45	P	P	09 15 54.5	+0.4
	comp=E,0.5nm,0.5s,baz=106,slow=1.2,SNR=8.6						
PDAR				pP	pP	09 18 01.4	-2.3
	comp=E,0.4nm,0.9s,slow=4.5,SNR=2.7						
FCC	**Fort Churchill**	89.00	27	*e*P	P	09 15 55.7	-1.5
FCC				*e**PP	pP	09 18 04.7	-2.5
FCC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
FCC	**Fort Churchill**	89.00	27	*e*P	P	09 15 55.7	-1.5
	comp=Z,11nm,1.1s,mb4.6						
FCC				*e*pP	pP	09 18 04.7	-2.5
SRU	**San Rafael**	89.01	49	*e*P	P	09 15 58.0	+0.2
PV10	**Paradox Valley**	90.37	49	*e*P	P	09 16 04.9	+0.9
PV01	**Paradox Valley**	90.81	49	*e*P	P	09 16 06.0	0.0
MALT	**Malatya**	91.22	311	*e*P	P	09 16 08.2	+0.3
MALT				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
MALT	**Malatya**	91.22	311	*e*P	P	09 16 08.2	+0.2
	comp=Z,6.9nm,1.0s,mb4.5						
RAYN	**Ar Rayn**	91.29	295	P	P	09 16 08.5	-0.1
	comp=Z,103nm,0.9s,mb5.8,SNR=16						
TUC	**Tucson**	91.47	55	*e*P	P	09 16 08.8	-0.4
TUC				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
TUC	**Tucson**	91.47	55	*e*P	P	09 16 08.8	-0.4
	comp=Z,4.4nm,1.4s,mb4.2						
ISCO	**Idaho Springs**	92.18	47	*e*P	P	09 16 13.5	+1.2
	comp=Z,3.1nm,0.9s,mb4.3						
NB2	**NORSAR Subarra**	92.60	340	P	P	09 16 12.2	-1.4
	comp=Z,2.4nm,0.5s,mb4.5,baz=45,slow=4.5						
NB2	**NORSAR Subarra**	92.60	340	P	P	09 16 12.2	-1.4
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
NB2	**NORSAR Subarra**	92.60	340	P	P	09 16 12.2	-1.4
	baz=45,slow=4.4						
NOA	**NORSAR Array B**	92.60	340	P	P	09 16 12.5	-1.1
	comp=Z,2.2nm,0.5s,mb4.5,baz=45,slow=4.4,SNR=8.4						
SDCO	**Great Sand Dun**	93.17	49	*e*P	P	09 16 17.0	+0.2
BRTR	**Keskin Array B**	93.94	314	P	P	09 16 19.5	-0.7
	comp=Z,7.5nm,1.0s,mb4.8,baz=108,slow=3.9,SNR=21						
TXAR	**Lajitas Array**	98.27	55	P	P	09 16 41.2	+1.2
	comp=Z,0.3nm,0.7s,mb3.7,baz=349,slow=4.6,SNR=4.4						
GERES	**GERESS Array B**	100.30	330	P	P	09 16 47.6	-1.1
	comp=Z,1.1nm,0.9s,baz=45,slow=7.5,SNR=5.0						
QSPA	**South Pole Qui**	108.33	180	*e*PKPdf		09 21 25.8	
LSZ	**Lusaka**	119.97	263	*e*PKPdf	PKPdf	09 21 50.1	+1.8
MATP	**Matopo**	120.69	257	PKP	PKPdf	09 21 51.0	+1.4
	comp=Z,4.1nm,0.6s,baz=108,slow=2.3,SNR=12						
LBTB	**Lobatse**	123.98	252	*e*PKPdf	PKPdf	09 21 57.3	+1.4
BOSA	**Boshof**	124.59	248	PKPdf	PKPdf	09 22 00.1	+3.0
DBIC	**Dimbokro**	141.34	308	SKPbc		09 25 09.9	
	comp=Z,1.2nm,0.5s,baz=23,slow=3.8,SNR=3.6						
PLCA	**Paso Flores**	142.18	134	PKP	PKPdf	09 22 28.8	-0.5
	comp=Z,5.6nm,0.7s,baz=219,slow=6.0,SNR=15						
PLCA				SKPbc		09 25 14.4	
	comp=Z,2.5nm,0.6s,baz=27,slow=4.5,SNR=7.6						
LVC	**Limon Verde**	147.78	103	*e*PKPbc	PKPdf	09 22 45.8	+6.4
LPAZ	**La Paz**	148.07	91	PKP	PKPdf	09 22 43.1	+3.2
	comp=Z,9.0nm,0.5s,baz=260,slow=2.5,SNR=23						
LPAZ				PKPbc	PKPdf	09 22 47.5	+7.5
	comp=Z,9.0nm,0.5s,baz=319,slow=4.2,SNR=23						
LPAZ	**La Paz**	148.07	91	*e*PKPdf	PKPdf	09 22 43.0	+3.1
TRQA	**Tornquist**	149.28	135	*e*PKPbc	PKPdf	09 22 47.8	+6.6

*NEIC **23** 09:33:48.2±0.7, 6.55N×91.51E, h30^{km}, mb4.4/4, Error ellipse: s-maj=17.2km s-min=13.6km az=110.0*
*IDC **23** 09:33:51.5±3.9, 6.62N×91.61E, h57^{km}±31^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.8/17, mbtmp4.0/7, ML4.4/1, MS2.8/1, Ms1 3.0/1, ms1mx2.4/23, Error ellipse: s-maj=42.1km s-min=23.2km az=51.0*
ISC 23 09:33:46.8±0.9**, 6.6N**±0.1×**91.5E**±0.2**, h33**^{km}**, n12, σ0^{s}52**/12**, mb4.1**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	13.85	31	P	P	09 37 03.1	0.0
	0.6nm,0.3s,baz=232,slow=14,SNR=27						
CMAR				LR	LR	09 42 11.3	
	comp=Z,38nm,20.6s,baz=190,slow=36						
SONM	Songino Array	43.03	15	P	P	09 41 45.1	0.0
	0.6nm,0.6s,mb3.5,baz=192,slow=9.1,SNR=6.2						
SONM				ScP		09 47 20.4	
	0.3nm,0.5s,baz=210,slow=7.4,SNR=3.5						
KURK	Kurchatov	45.31	348	*e*P	P	09 42 03.2	-0.1
	1.5nm,0.6s,mb4.0						
ZAL	Zalesovo	47.55	355	P	P	09 42 21.1	+0.2
	1.9nm,0.4s,mb4.5,baz=309,slow=8.2,SNR=8.1						
WRAB	Tennant Creek	49.67	123	*e*P	P	09 42 32.4	-5.4
	8.5nm,0.8s,mb4.8						
CHKZ	Chkalovo	49.95	344	*e*P	P	09 42 39.4	-0.2
	2.8nm,0.5s,mb4.5						
ASAR	Alice Springs	51.12	127	P	P	09 42 48.7	-0.1
	1.4nm,0.8s,mb3.9,baz=298,slow=7.5,SNR=18						
BRTR	Keskin Array B	61.35	312	P	P	09 44 01.2	-0.6
	1.1nm,0.8s,mb4.0,baz=153,slow=6.4,SNR=4.9						
FINES	FINESS Array B	72.67	333	P	P	09 45 12.1	-0.7
	1.1nm,0.7s,mb3.9,baz=106,slow=10,SNR=4.3						
FINES	FINESS Array B	72.67	333	P	P	09 45 12.1	-0.8
BOSA	Boshof	72.71	237	*e*P	P	09 45 13.8	0.0
	2.0nm,0.7s,mb4.2						
GERES	GERESS Array B	77.08	319	P	P	09 45 39.9	+1.4
	0.9nm,0.7s,mb3.8,baz=76,slow=5.5,SNR=6.9						

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*UAV **23** 09:43:55.9, 7.19N×73.45W, h171^{km}*
*IDC **23** 09:43:56.3±0.8, 6.76N×72.93W, h159^{km}±15^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.1/22, mbtmp3.9/5, Error ellipse: s-maj=61.3km s-min=7.6km az=132.0*
ISC 23 09:43:56.0±0.7**, 6.9N**±0.2×**73.1W**±0.3**, h166**^{km}±13^{km}**, n12, σ0^{s}64**/18**, mb3.6**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDMV	Paramo Marino	1.89	40	P	P	09 44 31.7	+0.4
PDMV				S	S	09 44 58.1	-0.3
OSV	Paramo de la O	2.35	41	P	P	09 44 37.1	+0.5
OSV				S	S	09 45 07.8	-0.1
ROSC	El Rosal	2.37	213	P	P	09 44 36.8	0.0
	44nm,0.3s,baz=98,slow=19,SNR=99						
ROSC				S	S	09 45 07.9	-0.4
	43nm,0.3s,baz=96,slow=16,SNR=12						
UAV	Universidad de	2.56	47	P	P	09 44 40.2	+0.9
UAV				S	S	09 45 12.9	+0.4
CUV	La Culata	2.72	46	P	P	09 44 42.1	+0.9
CUV				S	S	09 45 15.2	-0.7
EAV	Pico El Aguila	2.96	48	P	P	09 44 45.2	+1.0
EAV				S	S	09 45 21.1	-0.1
SDV	Santo Domingo	3.12	50	P	P	09 44 46.6	+0.3
	11nm,0.3s,baz=242,slow=3.8,SNR=256						
SDV				S	S	09 45 23.7	-1.2
	15nm,0.3s,baz=74,slow=22,SNR=29						
TORV	Torococo	3.87	46	P	P	09 44 54.8	-1.0
SCHQ	Schefferville	48.09	5	P	P	09 52 21.2	+0.6
	2.0nm,0.7s,mb3.9,baz=225,slow=8.6,SNR=6.3						
YKA	Yellowknife Ar	63.25	340	P	P	09 54 08.2	-0.6
	0.7nm,0.6s,mb3.7,baz=133,slow=6.6,SNR=39						
INK	Inuvik	73.02	340	P	P	09 55 08.6	-0.4
	0.5nm,0.8s,mb3.3,baz=87,slow=8.7,SNR=4.6						
WRA	Warramunga Arr	150.42	241	PKPbc	PKPdf	10 03 29.5	+6.5
	0.2nm,0.7s,baz=108,slow=2.8,SNR=6.1						

IDC 23 09:57:25.9±13.0**, 10.56N**×**91.00E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=451.6km s-min=32.9km az=75.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	39.36	16	P	P	10 04 57.1	-1.6
	0.5nm,0.8s,baz=199,slow=8.8,SNR=5.1						
WRA	Warramunga Arr	52.34	125	P	P	10 06 39.7	-2.3
	0.6nm,0.6s,baz=306,slow=8.3,SNR=9.1						
ASAR	Alice Springs	54.01	130	P	P	10 06 52.3	-2.1
	1.1nm,1.0s,baz=300,slow=6.9,SNR=8.9						

MEX 23 10:05:15.3±0.9**, 18.09N**×**103.35W, h14**^{km}±63^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	Colima	1.14	344	*i* P	Pb	10 05 33.3	-2.9
COLM				*i* S	Sb	10 05 46.3	-4.2
SFJM	Santa Fe	2.41	7	*i* P	Pn	10 05 51.8	-3.1
SFJM				*i* S	Sn	10 06 20.0	-4.3
MOIG	Morelia	2.59	52	*i* P	Pn	10 05 52.7	-4.7
MOIG				*i* S	Sn	10 06 25.4	-3.5

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*IDC **23** 10:36:15.1±1.6, 4.32N×124.46E, mb4.0/4, mb1 4.2/4, mb1mx4.0/17, mbtmp4.0/4, MS3.3/1, Ms1 3.5/1, ms1mx2.7/22, Error ellipse: s-maj=271.0km s-min=26.0km az=71.0*
ISC 23 10:36:38.0±3.4**, 3.7N**±0.3×**123.1E**±0.4**, h243**^{km}±42^{km}**, n12, σ0^{s}22**/11**, mb4.1**/10**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	10.34	345	*e*P	P	10 39 01.8	0.0
WRA	Warramunga Arr	25.99	155	P	P	10 41 50.6	0.0
	2.1nm,0.3s,mb4.2,baz=336,slow=9.6,SNR=54						
CMAR	Chiang Mai Arr	27.77	304	LR	LR	10 53 06.6	
	comp=Z,69nm,21.9s,baz=290,slow=35						
ASAR	Alice Springs	29.20	159	P	P	10 42 19.4	+0.1
	1.4nm,0.6s,mb3.7,baz=340,slow=7.1,SNR=24						
STKA	Stephens Creek	39.54	155	P	P	10 43 47.0	-0.1
	1.4nm,0.4s,mb3.8,baz=328,slow=7.9,SNR=7.8						
JIRN	Jiri	42.45	308	*e*P	P	10 44 11.3	+0.3
	8.4nm,0.6s,mb4.3						
GUN	Gumba	42.81	308	*e*P	P	10 44 14.1	+0.3
	13nm,0.6s,mb4.5						
PKI	Pulchoki	43.03	307	*e*P	P	10 44 15.5	-0.1
	4.4nm,0.4s,mb4.3						
KKN	Kakani	43.23	308	*e*P	P	10 44 16.7	-0.5
	5.5nm,0.4s,mb4.3						
DMN	Daman	43.29	307	*e*P	P	10 44 17.8	+0.1
	6.0nm,0.8s,mb4.1						
KOLN	Koldanda	44.56	307	*e*P	P	10 44 27.6	-0.2
	13nm,0.6s,mb4.5						
SONM	Songino Array	46.24	344	P	P	10 44 40.7	0.0
	0.4nm,0.6s,mb3.0,baz=152,slow=7.8,SNR=3.6						

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*LDG **23** 10:40:29.5±0.1, 17.71S×167.89E, h10^{km}, Mb5.2/3, Ms4.7/7, Error ellipse: s-maj=17.8km s-min=4.5km az=98.0*
*BJI **23** 10:40:30.5, 18.10S×168.40E, h38^{km}, mB5.5, mb5.3, Ms4.9, Msz4.7*
*MOS **23** 10:40:31.6±1.6, 17.87S×168.26E, h33^{km}, mb5.4/13, Error ellipse: s-maj=26.2km s-min=14.2km az=120.8*
*NEIC **23** 10:40:32.5±0.1, 18.07S×168.38E, mb5.3/48, MS4.9/8, Error ellipse: s-maj=6.2km s-min=4.7km az=138.0*
*HRVD **23** 10:40:32.5±0.2, 18.11S×168.19E, h68^{km}±1^{km}, MW5.3/67, Centroid moment Tensor Solution. LP body waves: s60,c103;Mantle waves: s67,c130; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.31±.02; M$_{\theta\theta}$0.99±.02; M$_{\phi\phi}$-0.67±.02; M$_{r\theta}$-0.21±.02; M$_{\theta\phi}$0.25±.02; M$_{\phi r}$-0.63±.01; Best double couple: M$_{0}$1.124×10^{17} NP1: φ$_{s}$301°,δ54°,λ-18°. NP2:φ$_{s}$42°,δ76°,λ-143°. Principal axes: T 1.098, Plg14°, Azm167°; N .054, Plg50°, Azm60°; P -1.151, Plg36°, Azm267°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **23** 10:40:36.6±4.4, 18.08S×168.35E, h73^{km}±38^{km}, mb4.8/20, mb1 5.0/20, mb1mx4.9/22, mbtmp5.1/20, MS4.6/14, Ms1 4.6/14, ms1mx4.3/25 Error ellipse: s-maj=16.4km s-min=14.6km az=70.0*
ISC 23 10:40:32.4±1.3**, 18.06S**±0.04×**168.28E**±0.04**, h48**^{km}±11^{km}**, h41**^{km}±1.9^{km}**:pP-P, n475, σ0^{s}91**/245**, mb5.3**/80**, MS4.6**/35**, 8C-48D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.35	203	⇑*i*P	P	10 41 36.7	-1.0
DZM				*e*S	S	10 42 23.6	-4.0
DZM	Mont Dzumac	4.35	203	⇑*i*P	P	10 41 36.6	-1.0
DZM				*e*S	S	10 42 23.6	-4.0
NOUC	Port Laguerre	4.43	205	*e*P	P	10 41 38.1	-0.7
NOUC				*e*S	S	10 42 24.6	-5.1
NOUC	Port Laguerre	4.43	205	*e*P	P	10 41 38.1	-0.7
NOUC				*e*S	S	10 42 24.6	-5.1
HNR	Honiara	11.79	316	*e*P	P	10 43 21.3	+0.7
	643nm,0.9s						
OUZ	Omahuta	17.73	166	PN	P	10 44 37.7	+0.3
	70nm,0.8s						
OUZ	Omahuta	17.73	166	PN	P	10 44 37.7	+0.3
	comp=Z,70nm,0.8s						
WCZ	Waipu Caves	18.60	164	PN	P	10 44 48.7	+0.6
WCZ	Waipu Caves	18.60	164	PN	P	10 44 48.7	+0.6
MTAZ	Motutapu	19.55	164	PN	P	10 44 58.5	-0.2
MTAZ	Motutapu	19.55	164	PN	P	10 44 58.5	-0.2
WTAZ	Waiatarua	19.60	165	PN	P	10 44 59.8	+0.5
WTAZ	Waiatarua	19.60	165	PN	P	10 44 59.8	+0.5
AFI	Afiamalu	19.61	81	*e*P	P	10 44 59.1	-0.4
	comp=Z,361nm,1.0s						
AFI				*e*		10 45 11.5	
KUZ	Kuaotunu	19.73	162	*e*PN	P	10 44 59.6	-1.2
KUZ	Kuaotunu	19.73	162	*e*PN	P	10 44 59.6	-1.2
MKAZ	Moumakai	19.92	164	*e*PN	P	10 45 01.9	-0.9
MKAZ	Moumakai	19.92	164	*e*PN	P	10 45 01.9	-0.9
CTA	Charters Tower	20.92	261	⇓*i*P	P	10 45 14.5	+1.3
	comp=Z,93nm,0.9s						
CTA	Charters Tower	20.92	261	P	P	10 45 14.6	+1.4
	comp=Z,132nm,0.9s,baz=84,slow=12,SNR=79						
CTA				LR	LR	10 52 34.4	
	comp=Z,3µm,19.8s,MS4.6,baz=85,slow=34						
CTAO	Charters Tower	20.92	261	*e*P	P	10 45 14.4	+1.1
	comp=Z,177nm,1.0s						
LIRZ	Lichensteins R	21.10	162	PN	P	10 45 15.3	+0.4
LIRZ	Lichensteins R	21.10	162	PN	P	10 45 15.3	+0.4
HIZ	Hauiti	21.17	166	PN	P	10 45 16.4	+0.7
HIZ	Hauiti	21.17	166	PN	P	10 45 16.4	+0.7
MXZ	Matakaoa Point	21.33	158	PN	P	10 45 18.1	+0.8
MXZ	Matakaoa Point	21.33	158	PN	P	10 45 18.1	+0.8
URZ	Urewera	21.55	161	P	P	10 45 19.8	+0.3
	comp=Z,102nm,0.8s,mb5.3,baz=334,slow=6.7,SNR=29						
URZ				LR	LR	10 52 19.6	
	comp=Z,2µm,19.3s,MS4.6,baz=23,slow=33						
URZ	Urewera	21.55	161	PN	P	10 45 19.7	+0.2
URZ	Urewera	21.55	161	PN	P	10 45 19.7	+0.2
MWZ	Matawai	21.75	160	PN	P	10 45 22.2	+0.7
MWZ	Matawai	21.75	160	PN	P	10 45 22.2	+0.7
PUZ	Puketiti	21.76	158	PN	P	10 45 20.6	-1.0
PUZ	Puketiti	21.76	158	PN	P	10 45 20.6	-1.0
MGZ	Maungaku	21.80	165	*e*PN	P	10 45 22.9	+0.9
MGZ	Maungaku	21.80	165	*e*PN	P	10 45 22.9	+0.9
NGZ	Ngauruhoe	21.98	165	PN	P	10 45 25.0	+1.2
NGZ	Ngauruhoe	21.98	165	PN	P	10 45 25.0	+1.2
OTVZ	Oturere	21.98	165	PN	P	10 45 24.6	+0.8
OTVZ	Oturere	21.98	165	PN	P	10 45 24.6	+0.8
CNZ	Chateau	21.99	165	PN	P	10 45 26.7	+2.9
CNZ	Chateau	21.99	165	PN	P	10 45 26.7	+2.9
TUVZ	Tukino	22.08	165	PN	P	10 45 28.2	+3.5
TUVZ	Tukino	22.08	165	PN	P	10 45 28.2	+3.5
PMG	Port Moresby	22.23	290	⇓*i*P	P	10 45 28.4	+2.0
PMG	Port Moresby	22.23	290	P	P	10 45 28.5	+2.1
	comp=Z,103nm,0.9s,mb5.3,baz=94,slow=5.6,SNR=38						
PMG				LR	LR	10 53 00.1	
	comp=Z,2µm,19.3s,MS4.6,baz=104,slow=33						
PMG	Port Moresby	22.23	290	*e*P	P	10 45 28.2	+1.8
	comp=Z,117nm,0.9s,mb5.3						
KNZ	Kokohu	22.43	161	PN	P	10 45 28.1	0.0
KNZ	Kokohu	22.43	161	PN	P	10 45 28.1	0.0
TSZ	Takapari Road	22.91	165	PN	P	10 45 33.2	+0.3
TSZ	Takapari Road	22.91	165	PN	P	10 45 33.2	+0.3
QRZ	Quartz Range	22.98	172	PN	P	10 45 36.5	+2.9
QRZ	Quartz Range	22.98	172	PN	P	10 45 36.5	+2.9
PWZ	Pawanui	23.11	163	PN	P	10 45 34.6	-0.3
PWZ	Pawanui	23.11	163	PN	P	10 45 34.6	-0.3
MRZ	Mangatainoka R	23.38	166	PN	P	10 45 37.1	-0.4
MRZ	Mangatainoka R	23.38	166	PN	P	10 45 37.1	-0.4
BFZ	Birch Farm	23.56	165	*e*PN	P	10 45 38.9	-0.3
BFZ	Birch Farm	23.56	165	*e*PN	P	10 45 38.9	-0.3
CAW	Cannon Point	23.70	167	PN	P	10 45 40.6	+0.1
CAW	Cannon Point	23.70	167	PN	P	10 45 40.6	+0.1
MRW	Makara Radio	23.74	168	PN	P	10 45 41.1	+0.2
MRW	Makara Radio	23.74	168	PN	P	10 45 41.1	+0.2
DSZ	Denniston Nort	23.80	173	PN	P	10 45 43.0	+1.5
DSZ	Denniston Nort	23.80	173	PN	P	10 45 43.0	+1.5
THZ	Tophouse	23.95	171	PN	P	10 45 43.7	+0.7
THZ	Tophouse	23.95	171	PN	P	10 45 43.7	+0.7
MSWZ	Moikau Station	24.03	167	PN	P	10 45 43.0	-0.8
MSWZ	Moikau Station	24.03	167	PN	P	10 45 43.0	-0.8
CNB	Canberra Magne	24.03	221	⇓*i*P	P	10 45 45.6	+1.8
	comp=Z,1µm,0.8s,mb6.3						
PAWZ	Paruwai Farm	24.04	167	PN	P	10 45 43.3	-0.5
PAWZ	Paruwai Farm	24.04	167	PN	P	10 45 43.3	-0.5
KHZ	Kahutara	24.69	171	PN	P	10 45 49.3	-0.9
KHZ	Kahutara	24.69	171	PN	P	10 45 49.3	-0.9
LTZ	Lake Taylor	24.87	173	PN	P	10 45 51.9	0.0
LTZ	Lake Taylor	24.87	173	PN	P	10 45 51.9	0.0
WVZ	Waitaha Valley	25.02	176	PN	P	10 45 53.1	-0.3
WVZ	Waitaha Valley	25.02	176	PN	P	10 45 53.1	-0.3
FOZ	Fox Glacier	25.45	178	PN	P	10 45 57.3	-0.1
FOZ	Fox Glacier	25.45	178	PN	P	10 45 57.3	-0.1
RPZ	Rata Peaks	25.68	175	P	P	10 45 59.6	+0.1
	comp=Z,41nm,0.7s,mb5.1,baz=319,slow=2.0,SNR=48						
RPZ				LR	LR	10 55 26.7	
	comp=Z,2µm,18.6s,MS4.6,baz=346,slow=35						
RPZ	Rata Peaks	25.68	175	PN	P	10 45 59.4	-0.2
RPZ	Rata Peaks	25.68	175	PN	P	10 45 59.4	-0.2
JCZ	Jackson Bay	25.94	179	*e*PN	P	10 46 02.2	+0.3
JCZ	Jackson Bay	25.94	179	*e*PN	P	10 46 02.2	+0.3
STKA	Stephens Creek	27.74	235	⇓*i*P	P	10 46 19.1	+0.5
	comp=Z,82nm,0.9s,mb5.4						
STKA	Stephens Creek	27.74	235	P	P	10 46 19.2	+0.6
	comp=Z,80nm,0.8s,mb5.4,baz=65,slow=7.7,SNR=117						
STKA				LR	LR	10 57 08.4	
	comp=Z,971nm,19.3s,MS4.4,baz=58,slow=36						
TOO	Toolangi	27.87	221	*e*P	P	10 46 20.1	+0.3
	comp=Z,0.8nm,0.9s						
RAR	Rarotonga	30.22	101	LR	LR	10 55 16.9	
	comp=Z,1µm,18.7s,MS4.5,baz=264,slow=29						
WRAB	Tennant Creek	32.11	261	⇓*i*P	P	10 46 56.3	-1.2
WRAB	Tennant Creek	32.11	261	*e*P	P	10 46 56.1	-1.4
	comp=Z,56nm,0.8s,mb5.5						
WRAB				LR	LR		
	comp=Z,498nm,22.0s,MS4.2						
WRA	Warramunga Arr	32.12	261	P	P	10 46 56.1	-1.5
	comp=Z,30nm,0.8s,mb5.2,baz=85,slow=8.3,SNR=102						
WRA				PcP	PcP	10 49 44.4	-1.5
	comp=Z,4.2nm,1.0s,baz=102,slow=2.9,SNR=4.5						
ASAR	Alice Springs	32.55	254	P	P	10 47 00.6	-0.8
	comp=Z,90nm,0.6s,mb5.9,baz=81,slow=9.1,SNR=707						
ASAR				PcP	PcP	10 49 46.0	-1.1
	comp=Z,4.8nm,0.8s,baz=106,slow=4.2,SNR=4.2						
ASAR				LR	LR	10 59 44.0	
	comp=Z,1µm,20.1s,MS4.7,baz=86,slow=35						
ASPA	Alice Springs	32.56	254	⇓*i*P	P	10 47 00.6	-0.7
KAKA	Kakadu	34.93	274	⇓*i*P	P	10 47 21.3	-0.5
	comp=Z,34nm,0.6s,mb5.5						
FORT	Forrest	38.55	243	⇓*i*P	P	10 47 52.3	+0.2
	comp=Z,4µm,0.6s						
TBI	Tubuai	39.77	105	*e*LQ		10 57 19.9	
TBI				*e*LR	LR	10 59 15.9	
	comp=Z,2µm,29.5s,baz=267						
PPT	Papeete	40.06	96	*e*LQ		10 57 28.1	
PPT				*e*LR	LR	10 59 25.9	
	comp=Z,4µm,29.0s,baz=262						
FITZ	Fitzroy Crossi	40.47	263	⇓*i*P	P	10 48 09.0	+0.8
	comp=Z,637nm,0.6s,mb6.5						
MBWA	Marble Bar	45.70	258	*e*P	P	10 48 51.0	+0.2
	comp=Z,221nm,0.8s,mb6.1						
MBWA				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
KLBR	Kellerberrin	47.41	243	⇓*i*P	P	10 49 03.2	-0.9
	comp=Z,1µm,0.9s						
KLBR				*e*PP	PP	10 50 56.5	+1.5
NWAO	Narrogin (SRO)	47.96	242	P	P	10 49 07.9	-0.5
	comp=Z,206nm,0.7s,mb6.3,baz=89,slow=7.5,SNR=133						
NWAO	Narrogin (SRO)	47.96	242	*e*P	P	10 49 07.8	-0.6
	comp=Z,166nm,0.8s,mb6.1						
NWAO				LR	LR		
	comp=Z,693nm,19.0s,MS4.7						
MUN	Mundaring	48.75	243	⇓*i*P	P	10 49 13.9	-0.6
	comp=Z,76nm,0.8s,mb5.8						
BUKP	Musuan	49.85	297	*e*P	P	10 49 23.6	+0.5
TAOE	Nuku Hiva Isla	50.84	87	*e*LR	LR	11 04 23.2	
MSLP	Maasin	51.21	300	*e*P	P	10 49 33.2	-0.3
PAGZ	Pagadian	51.26	296	*e*P	P	10 49 33.5	-0.3
CBIJ	Chichi jima	51.54	330	LR	LR	11 09 43.9	
	comp=Z,339nm,21.4s,MS4.3,baz=336,slow=34						
RKT	Rikitea	53.09	106	*e*LQ		11 03 23.8	
RKT				*e*LR	LR	11 05 21.1	
	comp=Z,2µm,29.5s,baz=266						
PVCP	Virac	53.70	303	*e*P	P	10 49 52.1	+0.1
TSM	Tawau	54.43	289	P	P	10 49 57.9	+0.4
OTRP	Odiongan	54.75	300	*e*P	P	10 49 59.3	-0.4
CUYO	Cuyo Island	54.79	298	*e*P	P	10 49 59.4	-0.7
SJMP	San Jose	55.55	300	*e*P	P	10 50 04.2	-1.4
BUSP	Coron	56.07	299	*e*P	P	10 50 09.8	+0.6
ENPP	El Nido	56.32	297	*e*P	P	10 50 11.2	+0.1
BATP	Bataraza	56.53	294	*e*P	P	10 50 12.3	-0.3
KKM	Kota Kinabalu	56.68	290	P	P	10 50 13.7	+0.1
LUBP	Lubang	56.95	300	*e*P	P	10 50 13.4	-2.1
LUBP	Lubang	56.95	300	*e*P	P	10 50 13.6	-2.0
BALP	Baler	56.97	303	*e*P	P	10 50 14.7	-0.9
CAUP	Cauayan	57.45	305	*e*P	P	10 50 24.5	+5.4
VNDA	Vanda	59.57	182	P	P	10 50 32.1	-1.0
	comp=Z,6.3nm,0.7s,mb4.8,baz=35,slow=5.5,SNR=15						
VNDA				LR	LR	11 12 26.1	
	comp=Z,534nm,21.2s,MS4.7,baz=17,slow=32						
SBA	Scott Base	59.83	180	*e*P	P	10 50 34.9	+0.1
	comp=Z,50nm,0.9s,mb5.5						
CASY	Casey	60.84	203	*e*P	P	10 50 40.9	-1.0
MAJO	Matsushiro	61.30	333	*e*P	P	10 50 43.7	-1.6
	comp=Z,10nm,0.8s,mb5.0						
MAT	Matsushiro	61.30	333	P	P	10 50 43.3	-2.0
MAT				*e*S	S	10 59 03.6	+3.3
QZH	Quanzhou	64.57	310	*i* PR		10 51 04.8	
QZH				S	S	10 59 46.8	+5.3
QZH				LR	LR		
	comp=Z,580nm,20.8s,MS4.8						
ASAJ	Asahikawa	66.19	340	P	P	10 51 17.6	+0.4
	comp=Z,13nm,0.8s,mb5.0,baz=254,slow=13,SNR=4.9						
ASAJ				LR	LR	11 15 42.4	
	comp=Z,974nm,21.1s,MS5.0,baz=344,slow=32						
SSE	Sheshan	66.60	317	P	P	10 51 22.0	+1.9
SSE				XP	sP	10 51 38.3	-0.8
SSE				PCP	PcP	10 51 49.8	+0.8
SSE				S	S	11 00 00.1	-6.0
SSE				AMB	AMB		
	comp=Z,17nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,48nm,5.5s						
SSE				LR	LR		
	comp=N,171nm,30.6s,MS4.3						
SSE				LR	LR		
	comp=E,199nm,30.3s,MS4.3						
SSE				LR	LR		
	comp=Z,326nm,32.0s,MS4.3						
SSE	Sheshan	66.60	317	P	P	10 51 22.0	+1.9
	comp=Z,17nm,0.7s,mb5.2						
SSE				sP	sP	10 51 38.3	-0.8
SSE				PcP	PcP	10 51 49.8	+0.8
SSE				S	S	11 00 00.1	-6.0
SSE				sS		11 00 33.4	
SSE				ScS	ScS	11 01 15.7	+6.6
SSE				LR	LR		
	comp=Z,330nm,32.0s,MS4.3						
KGM	Kluang	66.95	280	P	P	10 51 23.1	+0.5
KS15	Wonju Array Si	67.04	326	*e*P	P	10 51 22.7	0.0
INCN	Inchon	67.74	325	*e*P	P	10 51 27.3	+0.2
	comp=Z,66nm,1.1s,mb5.6						
QIZ	Qiongzhong	68.21	300	P	P	10 51 30.8	+0.4
QIZ				S	S	11 00 28.3	+2.6
QIZ				LR	LR		
	comp=Z,373nm,28.0s,MS4.5						
YSS	Yuzh-Sakhalins	68.68	342	*e*P	P	10 51 33.0	+0.2
YSS				*e*	pP	10 51 47.0	+0.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.8						
YSS				MLR	MLR		
	comp=E,400nm,18.0s						
YSS	Yuzh-Sakhalins	68.68	342	*e*P	P	10 51 33.3	+0.5
	comp=E,33nm,1.0s,mb5.2						
YSS				LR	LR		
	comp=Z,794nm,22.0s,MS4.9						
NJ2	Nanjing	68.74	316	*e*P	P	10 51 34.3	+0.9
NJ2				AP	pP	10 51 44.9	-2.3
NJ2				XP	sP	10 51 49.5	-3.0
NJ2				PCP	PcP	10 51 58.9	+0.9
NJ2				S	S	11 00 36.0	+4.3
NJ2				XS		11 00 57.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,360nm,6.7s						
NJ2				LR	LR		
	comp=N,1µm,20.8s,MS5.1						
NJ2				LR	LR		
	comp=E,650nm,25.0s,MS5.1						
NJ2				LR	LR		
	comp=Z,650nm,20.8s,MS4.8						
IPM	Ipoh	69.99	282	P	P	10 51 41.4	0.0
FX1	Attu Island--F	70.77	3	P	P	10 51 45.2	-0.3
	comp=Z,21nm,0.6s,mb5.3,baz=188,slow=7.1,SNR=10						
FX1	Attu Island--F	70.77	3	*e*P	P	10 51 45.1	-0.3
PET	Petropavlovsk	71.28	354	*e*P	P	10 51 48.2	-0.3
PET				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
PET				pmax	pmax		
	comp=Z,100nm,16.2s						
SNG	Songkhla	71.31	284	P	P	10 51 50.0	+0.6
	comp=Z,260nm,0.9s,mb6.2						
DL2	Dalian	71.53	323	P	P	10 51 50.8	+0.5
DL2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.5						
MDJ	Mudanjiang	71.66	332	P	P	10 51 51.3	+0.4
MDJ				XP	sP	10 52 04.3	-5.7
MDJ				PCP	PcP	10 52 09.8	-0.3
MDJ				PP	PP	10 54 30.3	-2.0
MDJ				S	S	11 01 13.5	+7.9
MDJ				AMB	AMB		
	comp=Z,35nm,1.1s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,448nm,4.4s						
MDJ				LR	LR		
	comp=N,248nm,28.7s,MS4.5						
MDJ				LR	LR		
	comp=E,268nm,26.8s,MS4.5						
MDJ				LR	LR		
	comp=Z,414nm,29.5s,MS4.5						
MDJ	Mudanjiang	71.66	332	*e*P	P	10 51 50.9	0.0
	comp=Z,40nm,1.1s,mb5.3						
QSPA	South Pole Qui	71.98	180	*e*P	P	10 51 51.7	-0.6
	comp=Z,46nm,0.8s,mb5.5						
TIA	Tai'an	72.47	319	*e*P	P	10 51 54.8	-1.1
CN2	Changchun	72.99	329	*e*P	P	10 52 01.3	+2.5
CN2				*e*XP	sP	10 52 13.6	-4.3
CN2				*e*S	S	11 01 25.3	+4.5
CN2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
CN2				AMB	AMB		
	comp=Z,260nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,19.0s,MS4.9						
CN2				LR	LR		
	comp=E,400nm,19.0s,MS4.9						
CN2				LR	LR		
	comp=Z,610nm,21.0s,MS4.9						
ENH	Enshi	74.23	310	*e*P	P	10 52 05.6	-0.8
	comp=Z,10nm,0.6s,mb4.9						
GYA	Guiyang	74.41	305	⇑*i*P	P	10 52 07.8	+0.3
GYA				AP	pP	10 52 18.1	-3.3
GYA				XP	sP	10 52 21.8	-4.8
GYA				PP	PP	10 54 58.3	+2.3
GYA				S	S	11 01 37.6	+0.6
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
GYA				AMB	AMB		
	comp=Z,110nm,4.0s						
GYA				LR	LR		

	comp=N,270nm,21.6s,MS4.8						
GYA				LR	LR		
	comp=E,420nm,20.7s,MS4.8						
GYA				LR	LR		
	comp=Z,520nm,21.0s,MS4.8						
KLR	**Kul'dur**	**74.43**	**336**	*e*P	**P**	**10 52 04.8**	**-2.3**
RPN	**Rapa Nui**	**75.39**	**114**	LR	LR	11 18 46.8	
	comp=Z,144nm,19.7s,MS4.3,baz=70,slow=30						
BJT	**Baijiatuau**	**75.45**	**321**	*e*P	**P**	**10 52 13.3**	**+0.2**
	comp=Z,34nm,0.8s,mb5.3						
BJT				*e*pP	pP	10 52 24.3	-2.8
BJI	**Beijing**	**75.46**	**321**	P	**P**	**10 52 13.8**	**+0.6**
BJI				AP	pP	10 52 25.3	-1.8
BJI				XP	sP	10 52 30.6	-1.8
BJI				S	S	11 01 56.3	+7.9
BJI				AMB	AMB		
	comp=Z,42nm,0.7s,mb5.5						
BJI				AMB	AMB		
	comp=Z,336nm,3.9s						
BJI				LR	LR		
	comp=N,479nm,23.8s,MS4.8						
BJI				LR	LR		
	comp=E,198nm,24.6s,MS4.8						
BJI				LR	LR		
	comp=Z,733nm,29.7s						
BJI	**Beijing**	**75.46**	**321**	P	**P**	**10 52 13.8**	**+0.6**
	comp=Z,42nm,0.7s,mb5.5						
BJI				pP	pP	10 52 25.3	-1.8
BJI				sP	sP	10 52 30.6	-1.8
BJI				PP	PP	10 55 17.1	+12
BJI				S	S	11 01 56.3	+7.9
BJI				SS	SS	11 07 11.7	+30
BJI				LR	LR		
	comp=Z,730nm,29.7s,MS4.8						
NANT	**Nan**	**75.82**	**295**	⇓P	**P**	**10 52 16.6**	**+0.9**
XAN	**Xi'an**	**76.65**	**313**	P	**P**	**10 52 20.3**	**+0.2**
XAN				AP	pP	10 52 33.4	-0.7
XAN				AMB	AMB		
	comp=Z,21nm,0.9s,mb5.1						
KMI	**Kunming**	**76.89**	**302**	P	**P**	**10 52 23.3**	**+1.7**
KMI				S	S	11 02 07.4	+3.1
KMI				AMB	AMB		
	comp=Z,32nm,1.1s,mb5.2						
KMI				AMB	AMB		
	comp=Z,186nm,5.9s						
KMI				LR	LR		
	comp=N,188nm,19.9s						
KMI				LR	LR		
	comp=E,212nm,27.6s						
KMI				LR	LR		
	comp=Z,341nm,31.1s						
KMI	**Kunming**	**76.89**	**302**	P	**P**	**10 52 23.2**	**+1.6**
	comp=Z,32nm,1.1s,mb5.2						
KMI				S	S	11 02 07.4	+3.1
KMI				LR	LR		
	comp=Z,340nm,31.1s,MS4.5						
CHRT	**Chiangrai**	**77.06**	**296**	⇓P	**P**	**10 52 24.0**	**+1.3**
	comp=Z,253nm,0.9s,mb6.2						
CM31	**Chiang Mai Arr**	**77.20**	**294**	*e*P	**P**	**10 52 25.0**	**+1.5**
	comp=Z,20nm,0.9s,mb5.0						
CMAR	**Chiang Mai Arr**	**77.20**	**294**	*i* P	**P**	**10 52 24.9**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,19nm,0.9s						
CMAR	**Chiang Mai Arr**	**77.20**	**294**	P	**P**	**10 52 24.9**	**+1.4**
	comp=Z,19nm,0.9s,mb5.0,baz=129,slow=4.4,SNR=78						
CHG	**Chiang Mai**	**77.34**	**295**	PG	**P**	**10 52 25.4**	**+1.1**
	comp=Z,27nm,0.8s,mb5.2						
MA2	**Magadan**	**78.67**	**351**	*e*P	**P**	**10 52 29.8**	**-0.9**
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MA2	**Magadan**	**78.67**	**351**	*e*P	**P**	**10 52 29.9**	**-0.8**
	comp=Z,10nm,0.9s,mb4.8						
HHC	**Hu-ho-hao-te**	**78.74**	**320**	⇓P	**P**	**10 52 32.5**	**+1.0**
HHC				PCP	PcP	10 52 40.9	+0.3
HHC				AP	pP	10 52 44.5	-1.0
HHC				XP	sP	10 52 50.5	-0.4
HHC				PP	PP	10 55 36.0	+4.2
HHC				S	S	11 02 29.5	+5.6
HHC				SKS	SKS	11 02 40.3	+2.8
HHC				XS		11 02 49.9	
HHC				AMB	AMB		
	comp=Z,38nm,0.9s,mb5.3						
HHC				LR	LR		
	comp=N,252nm,27.6s,MS4.6						
HHC				LR	LR		
	comp=E,274nm,25.2s,MS4.6						
HHC				LR	LR		
	comp=Z,435nm,38.4s						
CD2	**Chengdu**	**78.80**	**308**	P	**P**	**10 52 32.6**	**+0.5**
MAW	**Mawson**	**79.18**	**202**	*e*P	**P**	**10 52 34.0**	**+0.6**
	comp=Z,21nm,0.8s,mb5.1						
MAW	**Mawson**	**79.18**	**202**	P	**P**	**10 52 34.2**	**+0.8**
	comp=Z,27nm,0.9s,mb5.2,baz=127,slow=3.2,SNR=5.1						
MAW				LR	LR	11 22 44.5	
	comp=Z,354nm,18.5s,MS4.7,baz=91,slow=32						
BTO	**Baotou**	**79.56**	**319**	*e*P	**P**	**10 52 36.0**	**0.0**
HIA	**Hailar**	**79.64**	**330**	*e*P	**P**	**10 52 36.0**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.4						
HIA				*e*pP	pP	10 52 48.7	-1.5
LZH	**Lanzhou**	**81.27**	**312**	⇓P	**P**	**10 52 46.5**	**+1.3**
LZH				AP	pP	10 52 59.5	+0.3
LZH				AMB	AMB		
	comp=Z,78nm,1.5s,mb5.4						
LZH	**Lanzhou**	**81.27**	**312**	⇓P	**P**	**10 52 46.5**	**+1.3**
	comp=Z,78nm,1.5s,mb5.4						
LZH				pP	pP	10 52 59.5	+0.3
LZH				sP	sP	10 53 10.0	+5.4
SEY	**Seymchan**	**81.69**	**353**	*e*P	**P**	**10 52 48.8**	**+2.0**
SEY						10 55 57.8	
SEY				*e*S	S	11 03 00.5	+6.3
SEY				*e*PS	PS	11 03 50.5	+1.1
SEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
SEY				pmax	pmax		
	comp=N,20nm,1.1s						
CLNS	**Chul'man**	**82.96**	**338**	*e*P	**P**	**10 52 51.9**	**-1.5**
CLNS				*e*		10 56 02.7	
CLNS				*e*S	S	11 03 09.7	+2.5
CLNS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
CLNS				pmax	pmax		
	comp=N,16nm,0.9s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.1s						
CLNS				pmax	pmax		
	comp=N,3.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.9s						
CLNS				smax			
	comp=N,76nm,11.7s						
CLNS				smax			
	comp=Z,52nm,13.3s						
CLNS				smax			
	comp=E,59nm,12.5s						
TNA	**Tin City**	**85.30**	**10**	*e*P	**P**	**10 53 04.7**	**-0.2**
	comp=E,11nm,1.0s,mb4.9						
TNA				*e*pP	pP	10 53 15.9	-3.3
ULN	**Ulaanbaatar**	**85.38**	**324**	*e*P	**P**	**10 53 06.4**	**+0.7**
	comp=E,31nm,1.0s,mb5.4						
ULN				*e*pP	pP	10 53 18.4	-1.6
YAK	**Yakutsk**	**85.48**	**343**	*e*P	**P**	**10 53 05.2**	**-0.7**
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.5						
YAK				pmax	pmax		
	comp=E,5.0nm,1.2s						
YAK	**Yakutsk**	**85.48**	**343**	*e*P	**P**	**10 53 05.3**	**-0.6**
	comp=E,76nm,0.9s,mb5.8						
YAK				LR	LR		
	comp=Z,831nm,21.0s,MS5.1						
GTA	**Gaotai**	**85.66**	**314**	*e*P	**P**	**10 53 08.8**	**+1.4**
GTA				AP	pP	10 53 20.5	-1.1
GTA				XP	sP	10 53 24.4	-2.3
GTA				PP	PP	10 56 29.3	+1.1
GTA				SKS	SKS	11 03 28.8	+3.3
GTA				S	S	11 03 37.8	+3.5
GTA				XS		11 03 59.5	
GTA				SS	SS	11 09 19.6	+4.9
GTA				AMB	AMB		
	comp=Z,45nm,0.9s,mb5.7						
GTA				AMB	AMB		
	comp=Z,114nm,5.3s						
GTA				LR	LR		
	comp=N,226nm,23.2s,MS4.6						
GTA				LR	LR		
	comp=E,209nm,22.1s,MS4.6						
GTA				LR	LR		
	comp=Z,339nm,23.2s,MS4.7						
SONM	**Songino Array**	**85.74**	**323**	P	**P**	**10 53 08.2**	**+0.7**
	comp=Z,16nm,0.9s,mb5.2,baz=126,slow=4.9,SNR=95						
SYO	**Syowa Base**	**85.81**	**196**	⇓P	**P**	**10 53 05.2**	**-2.1**
SYO	**Syowa Base**	**85.81**	**196**	⇑pP	pP	10 53 20.8	-0.7
BILL	**Bilibino**	**85.86**	**359**	*d* *i*P	**P**	**10 53 07.3**	**-0.3**
BILL				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.5						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.3						
BILL	**Bilibino**	**85.86**	**359**	*e*P	**P**	**10 53 07.8**	**+0.2**
	comp=Z,28nm,1.0s,mb5.5						
KHMM	**Horse Mountain**	**86.01**	**45**	*e*P	**P**	**10 53 09.8**	**+0.8**
WDC	**Whiskeytown Da**	**86.68**	**45**	*e*P	**P**	**10 53 12.7**	**+0.4**
	comp=Z,6.3nm,0.9s,mb4.8						
OHCM	**Honcut**	**86.85**	**47**	*e*P	**P**	**10 53 12.8**	**-0.3**
CMB	**Columbia Colle**	**87.05**	**49**	*e*P	**P**	**10 53 13.8**	**-0.3**
	comp=Z,24nm,0.8s,mb5.5						
YBH	**Yreka Blue Hor**	**87.09**	**44**	P	**P**	**10 53 14.8**	**+0.5**
	comp=Z,6.9nm,0.8s,mb4.9,baz=203,slow=0.7,SNR=21						
YBH	**Yreka Blue Hor**	**87.09**	**44**	*e*P	**P**	**10 53 14.6**	**+0.3**
	comp=Z,6.9nm,0.9s,mb4.9						
HUMO	**Hull Mountain**	**87.33**	**44**	*e*P	**P**	**10 53 15.8**	**+0.4**
	comp=Z,10nm,0.9s,mb5.1						
LBCM	**Butte Creek Ri**	**87.60**	**46**	P	**P**	**10 53 17.2**	**+0.5**
BOD	**Bodaibo**	**87.88**	**334**	⇓*i*P	**P**	**10 53 16.9**	**-0.8**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
WCN	**Washoe City**	**88.04**	**48**	*e*P	**P**	**10 53 19.2**	**+0.3**
	comp=Z,9.6nm,1.0s,mb5.0						
MTUM	**Tungsten Hills**	**88.08**	**50**	*e*P	**P**	**10 53 19.6**	**+0.5**
LSA	**Lhasa**	**88.14**	**302**	P	**P**	**10 53 21.3**	**+1.7**
LSA	**Lhasa**	**88.14**	**302**	*e*P	**P**	**10 53 20.9**	**+1.3**
	comp=Z,15nm,0.8s,mb5.3						
LSA				*e*pP	pP	10 53 34.1	+0.2
PMSA	**Palmer Station**	**88.32**	**160**	P	**P**	**10 53 16.8**	**-2.9**
	comp=Z,76nm,1.1s,mb5.8						
NVAR	**Mina Array Bea**	**88.71**	**49**	P	**P**	**10 53 22.3**	**+0.2**
	comp=Z,7.6nm,0.8s,mb5.1,baz=232,slow=9.8,SNR=46						
MOD	**Modoc**	**88.78**	**45**	*e*P	**P**	**10 53 22.1**	**-0.3**
	comp=Z,7.0nm,0.8s,mb5.0						
MNV	**Mina**	**88.81**	**49**	*e*P	**P**	**10 53 22.5**	**-0.1**
	comp=Z,15nm,1.0s,mb5.3						
ZAK	**Zakamensk**	**88.82**	**325**	*e*P	**P**	**10 53 21.4**	**-0.9**
ZAK				*e*		10 56 53.8	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.7						
COLA	**College**	**89.19**	**17**	*e*P	**P**	**10 53 21.7**	**-2.0**
TLY	**Talaya**	**89.28**	**326**	P	**P**	**10 53 24.8**	**+0.3**
	comp=Z,78nm,0.7s,mb6.2,SNR=11						
TLY	**Talaya**	**89.28**	**326**	*e*P	**P**	**10 53 23.8**	**-0.7**
TLY				*e*S	S	11 04 03.3	-4.8
TLY				*e*		11 05 24.1	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.2						
TLY	**Talaya**	**89.28**	**326**	*e*P	**P**	**10 53 24.6**	**+0.2**
	comp=Z,7.6nm,0.7s,mb5.1						
TPH	**Tonopah**	**89.34**	**50**	*e*P	**P**	**10 53 25.6**	**+0.4**
	comp=Z,5.7nm,0.7s,mb5.0						
ILAR	**Eielson Array**	**89.38**	**18**	P	**P**	**10 53 22.9**	**-1.8**
	comp=Z,1.5nm,0.7s,mb4.5,baz=236,slow=5.9,SNR=9.1						
VFP	**Flag Point**	**89.52**	**42**	P	**P**	**10 53 26.1**	**+0.4**
CROR	**Criterion Ridg**	**89.67**	**42**	P	**P**	**10 53 26.7**	**+0.2**
VIPM	**Ingram Point**	**89.70**	**43**	P	**P**	**10 53 27.1**	**+0.5**
LDFC	**Landfair**	**89.75**	**53**	*e*P	**P**	**10 53 27.3**	**+0.2**
WVOR	**Wild Horse Val**	**90.12**	**45**	*e*P	**P**	**10 53 28.6**	**-0.1**
	comp=Z,15nm,1.0s,mb5.3						
BMN	**Battle Mountai**	**90.28**	**47**	*e*P	**P**	**10 53 29.3**	**-0.2**
	comp=Z,15nm,0.9s,mb5.3						
SNAA	**Sanae**	**90.29**	**183**	*d* *i*P	**P**	**10 53 28.1**	**-0.7**
SNAA	**Sanae**	**90.29**	**183**	⇓*i*P	**P**	**10 53 28.0**	**-0.8**
SNAA				*e*	pP	10 53 39.4	-3.7
SNAA				*e*	pP	10 53 46.4	+3.3
CMW	**Cultus Mountai**	**90.51**	**39**	P	**P**	**10 53 31.0**	**+0.7**
MOY	**Mondy**	**90.71**	**325**	*e*P	**P**	**10 53 31.6**	**+0.4**
EBG	**Ellensburg**	**90.78**	**40**	P	**P**	**10 53 31.9**	**+0.3**
TBM	**Table Mountain**	**90.87**	**40**	P	**P**	**10 53 32.2**	**+0.1**
VNA3	**Neumayer Olymp**	**90.92**	**181**	*e*P	**P**	**10 53 31.0**	**-0.7**
VNA3				*e*	pP	10 53 42.5	-3.6
VNA3				*e*	pP	10 53 48.2	+2.1
MDW	**Midway**	**91.15**	**41**	P	**P**	**10 53 33.7**	**+0.3**
VNA2	**Neumayer--Watz**	**91.19**	**181**	⇓*i*P	**P**	**10 53 32.6**	**-0.4**
VNA2				*e*	pP	10 53 43.9	-3.5
VNA2				*e*	pP	10 53 50.0	+2.6
WTV	**Waterville**	**91.50**	**40**	P	**P**	**10 53 34.8**	**-0.2**
JIRN	**Jiri**	**91.50**	**298**	*e*P	**P**	**10 53 35.5**	**0.0**
	comp=Z,11nm,0.6s,mb5.3						
ELK	**Elko**	**91.80**	**48**	P	**P**	**10 53 36.5**	**0.0**
	comp=Z,3.9nm,0.8s,mb4.8,baz=240,slow=3.4,SNR=18						
ELK	**Elko**	**91.80**	**48**	*e*P	**P**	**10 53 36.6**	**+0.2**
	comp=Z,4.9nm,0.9s,mb4.8						
GUN	**Gumba**	**91.85**	**299**	*e*P	**P**	**10 53 35.2**	**-1.8**
	comp=Z,13nm,0.7s,mb5.4						
BMO	**Blue Mountains**	**91.99**	**43**	*e*P	**P**	**10 53 36.0**	**-1.2**
	comp=Z,3.5nm,0.9s,mb4.7						
ARUT	**Antelope Range**	**92.00**	**51**	P	**P**	**10 53 37.9**	**+0.4**
TUC	**Tucson**	**92.12**	**57**	*e*P	**P**	**10 53 38.0**	**-0.2**
	comp=Z,5.3nm,1.1s,mb4.8						
PKI	**Pulchoki**	**92.13**	**298**	*e*P	**P**	**10 53 37.9**	**-0.4**
	comp=Z,23nm,1.1s,mb5.4						
KKN	**Kakani**	**92.31**	**298**	*e*P	**P**	**10 53 37.1**	**-2.1**
DMN	**Daman**	**92.39**	**298**	*e*P	**P**	**10 53 39.3**	**-0.3**
	comp=Z,14nm,0.7s,mb5.4						
GKN	**Gorkha**	**92.92**	**298**	*e*P	**P**	**10 53 40.3**	**-1.6**
DUG	**Dugway**	**93.32**	**49**	*e*P	**P**	**10 53 43.8**	**+0.3**
	comp=Z,41nm,0.8s,mb5.9						
TIXI	**Tiksi**	**93.41**	**348**	⇓*i*P	**P**	**10 53 41.9**	**-1.3**
TIXI				*e*S	S	11 04 47.7	+3.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,139nm,19.0s,MS4.4						
TIXI	**Tiksi**	**93.41**	**348**	*i* P	**P**	**10 53 42.7**	**-0.5**
KOLN	**Koldanda**	**93.71**	**298**	*e*P	**P**	**10 53 44.8**	**-0.8**
	comp=Z,9.7nm,0.9s,mb5.2						
PV10	**Paradox Valley**	**95.46**	**52**	P	**P**	**10 53 52.4**	**-0.8**
INK	**Inuvik**	**95.72**	**19**	P	**P**	**10 53 53.2**	**-0.5**
WMQ	**Urumqi**	**95.74**	**314**	P	**P**	**10 53 55.0**	**+0.6**
WMQ				AP	pP	10 54 09.0	+0.2
WMQ				XP	sP	10 54 14.0	+0.3
WMQ				PP	PP	10 57 50.0	+1.3
WMQ				S	S	11 05 07.0	+2.2
WMQ				SS	SS	11 11 42.0	+3.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.4						
WMQ				AMB	AMB		
	comp=Z,29nm,10.0s						
WMQ				LR	LR		
	comp=N,175nm,25.0s,MS4.7						
WMQ				LR	LR		
	comp=E,258nm,25.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,357nm,26.0s,MS4.7						
ANMO	**Albuquerque**	**96.38**	**55**	LR	LR	11 31 13.6	
	comp=Z,138nm,19.1s,MS4.5,slow=32						
PDAR	**Pinedale Array**	**96.48**	**47**	P	**P**	**10 53 57.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=199,slow=2.8,SNR=5.2						
PDAR				PKKP	PKKP	11 10 42.2	+7.7
	comp=Z,0.7nm,0.8s,baz=76,slow=6.1,SNR=5.8						
TXAR	**Lajitas Array**	**97.00**	**62**	P	**P**	**10 54 00.7**	**+0.2**
	comp=Z,1.0nm,0.7s,mb4.3,baz=226,slow=5.3,SNR=18						
TXAR				LR	LR	11 29 53.8	
	comp=Z,150nm,19.4s,MS4.5,baz=250,slow=30						
YKA	**Yellowknife Ar**	**100.04**	**27**	P	P	10 54 12.8	-0.7
	comp=Z,0.5nm,0.6s,baz=254,slow=4.7,SNR=14						
YKA				PKKPbc		11 10 31.1	
	comp=Z,0.2nm,0.6s,baz=73,slow=2.9,SNR=5.7						
ZAL	**Zalesovo**	**100.64**	**323**	*i* P	P	10 54 15.9	-0.5
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	**Zalesovo**	**100.64**	**323**	P	P	10 54 15.9	-0.5
	comp=Z,1.1nm,0.5s,baz=346,slow=9.5,SNR=5.6						
CHKZ	**Chkalovo**	**108.86**	**321**	*e*PKiKP		10 58 56.0	
RES	**Resolute Bay**	**109.09**	**16**	*e*PKiKP		10 58 56.5	
BOSA	**Boshof**	**121.43**	**218**	*e*PKPdf	PKPdf	10 59 22.1	+1.1
ARCES	**ARCESS Array B**	**123.70**	**345**	PKP	PKPdf	10 59 24.6	+0.1
	comp=Z,4.5nm,0.6s,baz=69,slow=1.7,SNR=14						
SCHQ	**Schefferville**	**124.48**	**35**	PKP	PKPdf	10 59 26.2	0.0
	comp=Z,2.3nm,0.8s,baz=55,slow=0.8,SNR=6.4						
GNI	**Garni**	**126.93**	**307**	⇓*i*PKIKP	PKPdf	10 59 33.5	+2.1
GNI				MLR	MLR		
	comp=Z,400nm,19.0s						
GNI	**Garni**	**126.93**	**307**	PKP	PKPdf	10 59 32.1	+0.7
	comp=Z,5.9nm,0.6s,baz=156,slow=18,SNR=5.6						
GNI	**Garni**	**126.93**	**307**	*e*PKPdf	PKPdf	10 59 32.6	+1.2
MOS	**Moscow**	**127.21**	**327**	*e*PKIKP	PKPdf	10 59 32.3	+0.8
MOS				pmax	pmax		
	comp=Z,49nm,0.6s						
GOF	**Gofitskoye**	**127.34**	**313**	⇑*i*PKIKP	PKPdf	10 59 34.0	+1.9
GOF				pmax	pmax		
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**127.81**	**312**	*i* PKIKP	PKPdf	10 59 34.1	+1.1
KIV				MLR	MLR		
	comp=Z,500nm,19.0s,MS5.2						
KIV	**Kislovodsk**	**127.81**	**312**	*i* PKP	PKPdf	10 59 34.2	+1.2
OBN	**Obninsk**	**128.02**	**327**	*i* PKIKP	PKPdf	10 59 33.8	+0.7
OBN						11 01 46.0	
OBN				*e*PPP	PPP	11 04 21.6	-4.2
OBN				*e*		11 13 18.5	
OBN				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS5.0						
OBN	**Obninsk**	**128.02**	**327**	*i* PKP	PKPdf	10 59 34.2	+1.1
OBN				LR	LR		
	comp=Z,300nm,18.0s,MS5.0						
KMBO	**Kilima Mbogo**	**128.20**	**254**	PKP	PKPdf	10 59 36.0	+1.5
	comp=Z,1.1nm,0.5s,baz=221,slow=23,SNR=4.5						
FINES	**FINESS Array B**	**129.16**	**338**	PKP	PKPdf	10 59 35.0	-0.1
	comp=Z,7.1nm,1.0s,baz=59,slow=3.0,SNR=10						
FINES	**FINESS Array B**	**129.16**	**338**	PKP	PKPdf	10 59 35.0	-0.1
BDFB	**Brasilia**	**131.00**	**131**	PKP	PKPdf	10 59 39.6	-0.2
	comp=Z,1.3nm,0.5s,baz=225,slow=4.3,SNR=2.0						
MALT	**Malatya**	**132.06**	**306**	*e*PKPdf	PKPdf	10 59 43.5	+2.3
AKASG	**Malin Array Be**	**134.01**	**325**	PKP	PKPdf	10 59 45.0	+0.4
	comp=Z,10.0nm,1.0s,baz=58,slow=2.4,SNR=11						
NB2	**NORSAR Subarra**	**134.08**	**345**	PKPdf	PKPdf	10 59 45.2	+0.8
	comp=Z,3.7nm,1.0s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**134.08**	**345**	PKP	PKPdf	10 59 45.2	+0.8
	comp=Z,2.4nm,0.8s,baz=33,slow=2.0,SNR=5.4						
NOA	**NORSAR Array B**	**134.08**	**345**	PKP	PKPdf	10 59 45.2	+0.8
ASF	**Jabal al Asfar**	**134.16**	**298**	PKP	PKPdf	10 59 47.0	+1.6
	comp=Z,3.8nm,0.6s,baz=241,slow=2.9,SNR=5.6						
HFS	**Hagfors**	**134.18**	**343**	PKP	PKPdf	10 59 45.1	+0.5
	comp=Z,1.1nm,0.4s,baz=117,slow=6.6,SNR=6.0						
BRTR	**Keskin Array B**	**135.38**	**309**	PKP	PKPdf	10 59 49.2	+1.8
	comp=Z,7.5nm,1.1s,baz=90,slow=2.5,SNR=12						
EIL	**Elat**	**136.05**	**294**	PKP	PKPdf	10 59 49.8	+1.0
	comp=Z,5.9nm,0.7s,baz=347,slow=12,SNR=6.0						
KWP	**Kalwaria**	**138.11**	**327**	*e*PKP	PKPdf	10 59 53.0	+0.9
KOLS	**Kolonicke sedl**	**138.75**	**326**	*i* PKP	PKPdf	10 59 55.4	+2.1
CRVS	**Cervenica-Dubn**	**139.20**	**326**	*e*PKP	PKPdf	11 00 01.1	+7.0
OKC	**Ostrava-Krasne**	**140.27**	**330**	*e*PKPdf	PKPdf	10 59 59.8	+3.8
MORC	**Moravsky Berou**	**140.60**	**330**	*e*PKPpre		10 59 51.3	
PSZ	**Piszkesteto**	**140.62**	**326**	PKPdf	PKPdf	10 59 57.7	+1.0
DPC	**Dobruska-Polom**	**140.76**	**332**	*e*PKPpre		10 59 51.4	
DPC				*e*PKPdf	PKPdf	10 59 57.3	+0.4
VYHS	**Vyhne**	**140.81**	**328**	*e*PKP	PKPdf	11 00 00.0	+3.0
BRG	**Berggiesshubel**	**141.42**	**334**	*i* PKIKP	PKPdf	11 00 01.3	+3.3
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG	**Berggiesshubel**	**141.42**	**334**	*e*P	PKPdf	10 59 56.9	-1.1
BRG				*i* PKP	PKPdf	11 00 01.3	+3.3
CLL	**Collm**	**141.47**	**335**	*i* PKIKP	PKPdf	11 00 01.1	+3.0
CLL				*i*		11 00 06.8	
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CLL	**Collm**	**141.47**	**335**	*e*PKP	PKPdf	10 59 58.0	-0.1
CLL				*i* PKP	PKPdf	11 00 01.1	+3.0
CLL				*i*		11 00 06.8	
CLL	**Collm**	**141.47**	**335**	*e*	PKPdf	10 59 58.0	-0.1
CLL				*i* PKIKP	PKPdf	11 00 01.1	+3.0
CLL				*i*		11 00 06.8	
EKA	**Eskdalemuir Ar**	**142.23**	**352**	PKhKP		10 59 55.8	
	comp=Z,1.1nm,0.5s,baz=359,slow=2.2,SNR=5.7						
EKA				PKP	PKPdf	11 00 01.6	+2.4
	comp=Z,3.0nm,0.8s,baz=23,slow=2.1,SNR=4.5						
NKC	**Novy Kostel**	**142.53**	**334**	*e*PKPpre		10 59 57.0	
DIVS	**Divcibare**	**142.83**	**321**	⇑*i*P	PKPdf	10 59 51.6	-9.0
KHC	**Kasperske Hory**	**142.88**	**332**	*e*PKPpre		10 59 54.1	
KHC				*e*PKPdf	PKPdf	10 59 58.4	-2.1
GERES	**GERESS Array B**	**143.03**	**332**	PKhKP		10 59 58.7	
	comp=Z,5.9nm,0.9s,baz=27,slow=3.0,SNR=19						
SKO	**Skopje**	**143.06**	**317**	*i* PKP	PKPdf	10 59 59.0	-2.1
ARSA	**Arzberg**	**143.30**	**329**	⇓*i*P	PKPbc	11 00 00.5	+0.9
IDI	**Anoyia**	**143.32**	**305**	PKP	PKPdf	11 00 02.6	+0.9
	comp=Z,8.0nm,0.5s,baz=91,slow=6.8,SNR=6.7						
GRA1	**Grafenberg Arr**	**143.45**	**335**	*e*PKP	PKPdf	11 00 00.2	-1.2
GRF	**Grafenberg Arr**	**143.45**	**335**	*e*PKIKP	PKPdf	11 00 00.2	-1.2
MOA	**Molln**	**143.49**	**330**	⇑*i*P	PKPbc	11 00 00.6	+0.4
IVA	**Berane**	**143.56**	**320**	⇑*i*PKP	PKPdf	10 59 59.6	-2.3
PLE	**Pljevlja**	**143.62**	**321**	⇓*i*PKP	PKPdf	11 00 02.0	+0.1
PVY	**Plav**	**143.66**	**319**	*e*PKP	PKPdf	11 00 00.5	-1.6
UPM	**Unac-Piva**	**143.98**	**321**	⇓*i*PKP	PKPdf	11 00 00.9	-1.7
NKY	**Niksic**	**144.15**	**320**	⇓*i*PKP	PKPdf	11 00 01.3	-1.6
TTG	**Podgorica**	**144.20**	**319**	⇓*i*PKP	PKPdf	11 00 00.4	-2.6
EVR	**Evrytania**	**144.24**	**312**	*e*PB	PKPbc	11 00 03.5	+0.8
OBKA	**Obir**	**144.30**	**328**	⇓*i*P	PKPbc	11 00 02.4	-0.2
SIND	**Sindeldorf**	**144.36**	**336**	⇓*e*P	PKPdf	11 00 03.0	-0.1
BRY	**Bratogost**	**144.37**	**321**	⇓*i*PKP	PKPdf	11 00 02.6	-0.7
TOD	**Tromm**	**144.46**	**337**	PKP	PKPdf	11 00 03.3	+0.1
TOD	**Tromm**	**144.46**	**337**	⇓*e*P	PKPbc	11 00 03.4	+0.5
ULC	**Ulcinj**	**144.46**	**319**	*e*PKP	PKPdf	11 00 01.6	-1.9
BUM	**Brajici-Budva**	**144.49**	**319**	⇓*i*PKP	PKPdf	11 00 01.2	-2.3
SWS	**Schriesheim**	**144.59**	**337**	⇓*e*P	PKPdf	11 00 03.7	+0.2
DCN	**Croghan**	**144.62**	**355**	*e*P	PKPbc	11 00 03.4	+0.1
BOJS	**Bojanci**	**144.62**	**327**	*e*PKPbc	PKPdf	11 00 04.3	+0.6
LJU	**Ljubljana**	**144.63**	**328**	*i* PKPbc	PKPdf	11 00 03.9	+0.3
HCY	**Herceg Novi**	**144.66**	**320**	⇓*i*PKP	PKPdf	11 00 01.9	-1.9
ABH	**Alteburg**	**144.68**	**338**	PKP	PKPdf	11 00 04.0	+0.4
ABH	**Alteburg**	**144.68**	**338**	⇓*e*P	PKPbc	11 00 04.3	+0.8
HDH	**Heidenheim**	**144.73**	**335**	⇓*e*P	PKPdf	11 00 04.2	+0.4
ITM	**Ithomi**	**144.88**	**310**	*e*PB	PKPdf	11 00 04.8	+0.4
VOY	**Vojsko**	**144.96**	**328**	⇓*e*PKP	PKPdf	11 00 04.4	+0.2
VOY	**Vojsko**	**144.96**	**328**	*e*PKPbc	PKPbc	11 00 04.4	0.0
KTD	**Kalmit**	**144.96**	**337**	PKP	PKPdf	11 00 04.8	+0.7
KTD	**Kalmit**	**144.96**	**337**	*e*P	PKPdf	11 00 05.1	+1.0
PTCC	**Patocco-Chiusa**	**144.96**	**329**	*e*PKP	PKPdf	11 00 04.1	-0.2
JAVS	**Javornik**	**144.97**	**328**	*e*PKPbc	PKPdf	11 00 04.4	+0.1
STU	**Stuttgart**	**144.99**	**336**	*e*PKPdf	PKPdf	11 00 05.5	+1.3
RUP	**Ruppelstein**	**145.00**	**339**	PKP	PKPdf	11 00 04.8	+0.6
RUP	**Ruppelstein**	**145.00**	**339**	⇓*e*P	PKPdf	11 00 05.4	+1.2
FVI	**Forni Avoltri**	**145.10**	**330**	*e*PKP	PKPdf	11 00 04.7	+0.2
GMNA	**Gemona**	**145.11**	**329**	*e*PKP	PKPdf	11 00 04.9	+0.4
WTTA	**Wattenberg**	**145.13**	**332**	⇓*i*P	PKPdf	11 00 05.7	+1.2
BUCH	**Bad Urach**	**145.18**	**335**	⇓*e*P	PKPdf	11 00 05.9	+1.4
LBG	**Lerchenberg**	**145.23**	**336**	⇓*e*P	PKPdf	11 00 06.0	+1.4
MOTA	**Moosalm**	**145.31**	**332**	⇑*i*P	PKPdf	11 00 06.1	+1.3
LANF	**Langenberg**	**145.34**	**337**	PKP	PKPdf	11 00 05.9	+1.1
WLF	**Walferdange**	**145.34**	**339**	*e*PKPdf	PKPdf	11 00 06.3	+1.6
GIVF	**Givet**	**145.39**	**341**	*e*PKP1	PKPbc	11 00 05.9	+0.5
VLS	**Valsamata**	**145.43**	**312**	*e*PB	PKPdf	11 00 07.5	+2.2
UBR	**Uberruh**	**145.48**	**334**	⇓*e*P	PKPdf	11 00 06.1	+1.0
GUT	**Gutenstein**	**145.58**	**335**	⇓*e*P	PKPdf	11 00 06.7	+1.5
BAIF	**Baives**	**145.61**	**342**	*e*PKP1	PKPbc	11 00 06.8	+0.8
	comp=Z,86nm,1.0s						
SPAK	**Spaichingen**	**145.69**	**335**	PKP	PKPdf	11 00 06.8	+1.4
SPAK	**Spaichingen**	**145.69**	**335**	⇓*e*P	PKPdf	11 00 07.2	+1.8
MENF	**Mencas**	**145.74**	**344**	PKP	PKPdf	11 00 07.0	+1.6
WLS	**Welschbruch**	**145.98**	**337**	PKP	PKPdf	11 00 08.1	+2.2
CDF	**Champ du Feu**	**146.01**	**337**	*e*PKP1	PKPbc	11 00 08.1	+1.1
	comp=Z,77nm,0.7s						
LIBD	**Limburg**	**146.11**	**337**	PKP	PKPdf	11 00 08.3	+2.2
LIBD	**Limburg**	**146.11**	**337**	*e*P	PKPdf	11 00 08.8	+2.7
KIZ	**Kirchzarten**	**146.15**	**336**	⇓*e*P	PKPdf	11 00 08.4	+2.2
FELD	**Feldberg**	**146.18**	**336**	⇓*e*P	PKPdf	11 00 08.6	+2.3
ECH	**Echery**	**146.22**	**337**	PKP	PKPdf	11 00 08.5	+2.2
DAVOX	**Davos**	**146.28**	**333**	PKPbc	PKPbc	11 00 09.4	+1.7
BRMO	**Bormio**	**146.30**	**332**	*e*PKP	PKPdf	11 00 09.4	+2.9
MOF	**Molkenrain**	**146.53**	**337**	PKP	PKPdf	11 00 09.2	+2.3
FGMS	**Monte Sant'Ang**	**146.63**	**321**	*e*PKP	PKPdf	11 00 09.7	+2.4
HINF	**Hinteralfeld**	**146.66**	**337**	*e*PKP1	PKPbc	11 00 09.6	+1.1
	comp=Z,36nm,0.9s						
HAU	**Haudompre**	**146.69**	**338**	*e*PKP1	PKPbc	11 00 10.0	+1.4
	comp=Z,52nm,0.7s						
HAU				*e*R			
	comp=Z,401nm,21.0s						
BBS	**Basel-Blauen**	**146.71**	**336**	PKP	PKPdf	11 00 09.8	+2.6
BBS	**Basel-Blauen**	**146.71**	**336**	*e*P	PKPdf	11 00 10.0	+2.8
MEZF	**Maizieres J'vi**	**146.72**	**340**	*e*PKP1	PKPbc	11 00 10.5	+1.9
	comp=Z,166nm,1.0s						

RGNG	**Rignano Grg**	**146.87**	**321**	*e*PKP	PKPdf	11 00 10.6	+3.0
LOMF	**Lomont**	**147.06**	**337**	PKP	PKPdf	11 00 11.3	+3.5
FSSB	**Fossombrone**	**147.15**	**326**	*e*PKP	PKPdf	11 00 11.7	+3.6
RSM	**Repubblica di**	**147.16**	**327**	*e*PKP	PKPdf	11 00 11.8	+3.7
ARV	**Arcevia**	**147.20**	**326**	*e*PKP	PKPdf	11 00 10.7	+2.5
ORI	**Oriolo Calabro**	**147.27**	**318**	*e*PKP	PKPdf	11 00 12.4	+4.1
SNTG	**Esanatoglia**	**147.36**	**326**	*e*PKP	PKPdf	11 00 12.5	+4.1
VAI	**Varese**	**147.47**	**333**	*e*PKP	PKPdf	11 00 11.8	+3.3
SFI	**Santa Sofia**	**147.49**	**327**	*e*PKP	PKPdf	11 00 13.4	+4.8
NRCA	**Norcia**	**147.55**	**325**	*e*PKP	PKPdf	11 00 12.7	+4.0
TIP	**Timpagrande**	**147.55**	**316**	*e*PKPbc	PKPdf	11 00 12.3	+3.4
PGD	**Poggio Sodo**	**147.57**	**328**	*e*PKP	PKPdf	11 00 14.0	+5.3
VMG	**Vicchio**	**147.60**	**328**	*e*PKP	PKPdf	11 00 13.7	+5.0
ZCCA	**Zocca**	**147.60**	**329**	*e*PKP	PKPdf	11 00 14.1	+5.3
SEI	**Scarperia**	**147.63**	**328**	*e*PKP	PKPdf	11 00 12.9	+4.1
CRE	**Caprese Michel**	**147.63**	**327**	*e*PKP	PKPdf	11 00 12.8	+4.0
SGO	**Sicignano**	**147.70**	**320**	*e*PKP	PKPdf	11 00 11.9	+2.9
AQU	**L'Aquila**	**147.71**	**324**	*e*PKPbc	PKPdf	11 00 13.2	+4.2
MCGN	**Macugnaga**	**147.74**	**334**	*e*PKP	PKPdf	11 00 13.2	+4.3
GSCL	**Gusciola**	**147.79**	**329**	*e*PKP	PKPdf	11 00 13.6	+4.5
ERBM	**Eremo**	**147.83**	**330**	*e*PKP	PKPdf	11 00 14.1	+5.0
SDI	**San Donato**	**147.89**	**323**	*e*PKP	PKPdf	11 00 10.8	+1.5
GRAM		**147.94**	**330**	P	PKPdf	11 00 13.6	+4.4
CABF	**La Chapelle**	**147.96**	**337**	*e*PKP1	PKPdf	11 00 14.0	+4.8
	comp=Z,165nm,0.9s						
VALM		**147.96**	**330**	P	PKPdf	11 00 13.2	+3.9
OG01	**Vacheresse**	**147.96**	**336**	PKP	PKPdf	11 00 09.9	+0.6
GRI	**Girifalco**	**147.97**	**316**	*e*PKP	PKPdf	11 00 14.4	+4.9
ORX	**Oropa**	**148.00**	**333**	P	PKPdf	11 00 12.8	+3.5
BDI	**Bagni Di Lucca**	**148.00**	**329**	*e*PKP	PKPdf	11 00 12.5	+3.1
ORO	**Oropa**	**148.00**	**333**	*e*PKP	PKPdf	11 00 13.1	+3.8
BOB	**Bobbio (Coli)**	**148.02**	**331**	*e*PKP	PKPdf	11 00 14.0	+4.6
FLN	**La Foliniere**	**148.05**	**346**	*e*PKP1	PKPdf	11 00 13.3	+4.0
	comp=Z,88nm,0.9s						
FLN				*e*R			
	comp=Z,316nm,20.2s						
MNS	**Montasola**	**148.09**	**325**	*e*PKP	PKPdf	11 00 13.5	+3.9
CODM		**148.12**	**330**	P	PKPdf	11 00 13.3	+3.8
LDF	**La Druitiere**	**148.12**	**345**	*e*PKP1	PKPdf	11 00 13.2	+3.8
	comp=Z,94nm,1.2s						
VINC	**Vinca**	**148.16**	**329**	P	PKPdf	11 00 13.3	+3.6
TRAV		**148.19**	**334**	P	PKPdf	11 00 13.1	+3.4
SSF	**Saint Saulge**	**148.48**	**340**	*e*PKP1	PKPdf	11 00 15.0	+4.9
	comp=Z,140nm,0.9s						
LSD	**Ceresole Reale**	**148.48**	**334**	P	PKPdf	11 00 15.4	+5.3
GRR	**Gorron**	**148.49**	**346**	*e*PKP1	PKPdf	11 00 14.6	+4.6
	comp=Z,84nm,1.0s						
RSL	**Roselend**	**148.51**	**335**	PKP	PKPdf	11 00 15.2	+5.0
HYF	**Humbligny**	**148.57**	**341**	*e*PKP1	PKPdf	11 00 15.4	+5.2
SOI	**Samo**	**148.60**	**315**	*e*PKP	PKPdf	11 00 15.7	+5.2
PCP	**Pian Castagno**	**148.61**	**332**	P	PKPdf	11 00 14.2	+3.9
LPL	**La Plagne**	**148.61**	**335**	*e*PKP1	PKPdf	11 00 15.9	+5.6
	comp=Z,56nm,0.7s						
LPG	**La Plagne**	**148.62**	**335**	*e*PKP1	PKPdf	11 00 16.0	+5.7
	comp=Z,86nm,0.8s						
OG05	**Jujurieux**	**148.67**	**337**	PKP	PKPdf	11 00 15.8	+5.4
RSP	**Reno Superiore**	**148.69**	**334**	P	PKPdf	11 00 14.8	+4.4
SMF	**Signal de Mont**	**148.73**	**339**	*e*PKP1	PKPdf	11 00 15.4	+4.9
	comp=Z,78nm,1.1s						
AVF	**Avril sur Loir**	**148.77**	**340**	*e*PKP1	PKPdf	11 00 15.3	+4.8
FENE	**Fenestrelle**	**148.87**	**334**	P	PKPdf	11 00 15.8	+5.1
BHB	**Bricherasio**	**148.93**	**333**	P	PKPdf	11 00 14.7	+3.8
SGMF	**Saint Gilles**	**148.97**	**348**	*e*PKP1	PKPdf	11 00 15.7	+4.9
	comp=Z,92nm,1.1s						
BNI	**Bardonecchia**	**149.01**	**334**	*e*PKPbc	PKPdf	11 00 16.2	+5.2
FIN	**Finale Ligure**	**149.02**	**332**	*e*PKP	PKPdf	11 00 15.4	+4.4
ROSF	**Rostrenen**	**149.03**	**349**	*e*PKP1	PKPdf	11 00 15.3	+4.4
	comp=Z,74nm,1.1s						
RRL	**Cesana Torines**	**149.07**	**334**	P	PKPdf	11 00 16.5	+5.4
ROB	**Roburent**	**149.10**	**332**	P	PKPdf	11 00 15.8	+4.6
GDM	**Grand'Maison**	**149.12**	**335**	PKP	PKPdf	11 00 17.1	+6.0
BGF	**Bois d'Agland**	**149.14**	**340**	*e*PKP1	PKPdf	11 00 16.5	+5.4
	comp=Z,91nm,0.8s						
DOI	**San Damiano**	**149.21**	**333**	*e*PKP	PKPdf	11 00 14.9	+3.6
GRN	**Grenoble**	**149.23**	**336**	PKP	PKPdf	11 00 17.5	+6.2
MBDF	**Montbardon**	**149.24**	**334**	*e*PKP1	PKPdf	11 00 16.8	+5.4
	comp=Z,42nm,0.9s						
PZZ	**Prazzo**	**149.27**	**333**	P	PKPdf	11 00 15.5	+4.1
MONE	**Monesi**	**149.32**	**332**	P	PKPdf	11 00 16.7	+5.2
ENR	**Entracque**	**149.36**	**332**	P	PKPdf	11 00 15.2	+3.7
STV2	**Anna di Valdie**	**149.38**	**333**	P	PKPdf	11 00 15.6	+4.0
STV	**Sta Anna Valdi**	**149.38**	**333**	P	PKPdf	11 00 15.8	+4.2
IMI	**Imperia**	**149.40**	**332**	*e*PKP	PKPdf	11 00 16.7	+5.0
PLDF	**La Plantade**	**149.40**	**339**	PKP	PKPdf	11 00 17.6	+6.0
QUIF	**Quistinic**	**149.41**	**349**	*e*PKP1	PKPdf	11 00 16.5	+5.0
	comp=Z,45nm,0.9s						
SURF	**Saint Ours**	**149.42**	**333**	PKP	PKPdf	11 00 18.0	+6.3
ORIF	**Oris-en-Rattie**	**149.44**	**335**	*e*PKP1	PKPdf	11 00 17.6	+5.9
	comp=Z,106nm,0.8s						
ORIF				*e*R			
	comp=Z,361nm,22.5s						
SAOF	**Saorge**	**149.49**	**332**	PKP	PKPdf	11 00 16.8	+5.0
AGO	**Saint Agoulin**	**149.49**	**339**	PKP	PKPdf	11 00 17.8	+6.1
NEGI	**Negi**	**149.53**	**332**	P	PKPdf	11 00 16.7	+4.9
AUTN	**L'Aution**	**149.53**	**332**	PKP	PKPdf	11 00 17.5	+5.6
TCF	**Toulx Ste Croi**	**149.58**	**341**	*e*PKP1	PKPdf	11 00 17.6	+5.7
	comp=Z,109nm,1.0s						
TOUF	**Mont Tournerai**	**149.60**	**332**	PKP	PKPdf	11 00 17.5	+5.5
SBF	**Sospel**	**149.64**	**332**	*e*PKP1	PKPdf	11 00 17.5	+5.5
	comp=Z,155nm,0.9s						
COLF	**Collangettes**	**149.76**	**338**	PKP	PKPdf	11 00 18.5	+6.3
PYM	**Petit Puy Mans**	**149.80**	**339**	PKP	PKPdf	11 00 18.1	+5.9
PGF	**Pioggiola**	**149.90**	**329**	*e*PKP1	PKPdf	11 00 18.5	+6.0
	comp=Z,288nm,0.9s						
VIVF	**Saint-Julien-l**	**149.97**	**336**	*e*PKP1	PKPdf	11 00 18.7	+6.2
	comp=Z,101nm,1.0s						
VERF	**Verneugheol**	**149.97**	**340**	PKP	PKPdf	11 00 19.1	+6.6
MFF	**Saint Martin d**	**149.98**	**344**	*e*PKP1	PKPdf	11 00 18.4	+5.9
	comp=Z,122nm,0.9s						
LCHF	**La Chataignera**	**150.07**	**345**	PKP	PKPdf	11 00 19.2	+6.6
LBL	**Lubilhac**	**150.17**	**338**	PKP	PKPdf	11 00 19.9	+7.1
STOF	**St-Etienne Org**	**150.19**	**334**	PKP	PKPdf	11 00 19.8	+6.9
FRF	**La Foret Royal**	**150.22**	**333**	*e*PKP1	PKPdf	11 00 19.0	+6.0
	comp=Z,130nm,1.0s						
FRNF	**Fournols**	**150.27**	**339**	PKP	PKPdf	11 00 19.9	+6.9
SMRF	**Simiane la Rot**	**150.34**	**334**	*e*PKP1	PKPdf	11 00 19.9	+6.8
	comp=Z,143nm,0.9s						
VILF	**Villemus**	**150.39**	**334**	PKP	PKPdf	11 00 20.4	+7.2
TAVF	**Tavernes**	**150.43**	**333**	PKP	PKPdf	11 00 20.4	+7.1
LMR	**La Mourre**	**150.47**	**332**	*e*PKP1	PKPdf	11 00 19.6	+6.3
	comp=Z,184nm,1.0s						
PRAF	**Pradon**	**150.65**	**335**	PKP	PKPdf	11 00 21.1	+7.5
RJF	**Les Rejaudoux**	**150.68**	**341**	*e*PKP1	PKPdf	11 00 20.3	+6.7
	comp=Z,71nm,0.9s						
RJF				*e*R			
	comp=Z,810nm,22.0s						
CAF	**Calviac**	**150.84**	**340**	*e*PKP1	PKPdf	11 00 20.8	+7.0
	comp=Z,22nm,0.7s						
GELF	**Grande-Etoile**	**150.89**	**334**	PKP	PKPdf	11 00 21.3	+7.3
LASF	**Ste Croix**	**150.94**	**337**	*e*PKP1	PKPdf	11 00 21.2	+7.2
	comp=Z,124nm,0.9s						
LFF	**La Frestale**	**151.25**	**341**	*e*PKP1	PKPdf	11 00 21.6	+7.2
	comp=Z,105nm,0.8s						
MTLF	**Montolieu**	**152.18**	**338**	*e*PKP1	PKPdf	11 00 23.6	+7.7
	comp=Z,39nm,0.8s						
EPF	**Esparros**	**153.09**	**340**	*e*PKP1	PKPdf	11 00 26.0	+8.8
SJPF	**Ste Jean**	**153.49**	**343**	*e*PKP1	PKPdf	11 00 27.6	+10
	comp=Z,43nm,1.2s						
ETSF	**Etsaut**	**153.49**	**341**	*e*PKP1	PKPdf	11 00 27.1	+9.4
	comp=Z,22nm,0.9s						
ESDC	**Sonseca Array**	**157.44**	**344**	PKPab	PKPab	11 00 56.2	-1.1
	comp=Z,1.7nm,0.7s,baz=14,slow=4.8,SNR=7.0						
DBIC	**Dimbokro**	**166.85**	**211**	PKP	PKPdf	11 00 34.2	+0.8
	comp=Z,6.7nm,1.0s,baz=124,slow=0.4,SNR=5.6						
DBIC				PKPab	PKPab	11 01 38.2	-0.5
	comp=Z,5.7nm,0.7s,baz=115,slow=5.5,SNR=9.0						
DBIC	**Dimbokro**	**166.85**	**211**	PKP	PKPdf	11 00 34.2	+0.8
DBIC				PKPab	PKPab	11 01 38.2	-0.5

*NEIC **23** 10:53:53.6±0.8, 2.03S×145.86E, h10^{km}, mb4.4/4, Error ellipse: s-maj=21.5km s-min=11.0km az=95.0*

*IDC **23** 10:54:01.2±5.5, 2.18S×146.05E, h79^{km}±53^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.8/14, mbtmp4.0/7, ML2.5/1, MS3.8/1, Ms1 4.0/1, ms1mx3.0/19, Error ellipse: s-maj=33.2km s-min=27.0km az=83.0*

ISC 23 10:53:55.7±3.9, 2.1S±0.1×146.0E±0.2, h43^{km}±36^{km}, n13, σ1^{s}16/13, mb4.1/9, MS3.8/1, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.34**	**171**	P	**P**	**10 55 44.9**	**+2.0**
	0.5nm,0.3s,baz=343,slow=14,SNR=3.0						
PMG	**Port Moresby**	**7.34**	**171**	*e*P	**P**	**10 55 42.4**	**-0.6**
KAKA	**Kakadu**	**17.03**	**231**	*e*P	**P**	**10 57 51.2**	**-1.2**
	4.9nm,0.5s						
WRAB	**Tennant Creek**	**21.03**	**212**	*e*P	**P**	**10 58 37.4**	**-0.8**
	10nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**21.05**	**212**	P	**P**	**10 58 38.3**	**-0.1**
	6.2nm,0.6s,mb4.1,baz=32,slow=11,SNR=20						
ASAR	**Alice Springs**	**24.40**	**208**	P	**P**	**10 59 13.1**	**+1.6**
	4.1nm,0.9s,mb3.9,baz=33,slow=8.7,SNR=25						
ASPA	**Alice Springs**	**24.40**	**208**	*e*P	**P**	**10 59 14.2**	**+2.7**
FITZ	**Fitzroy Crossi**	**25.49**	**230**	*e*P	**P**	**10 59 21.5**	**-0.4**
	9.5nm,0.8s,mb4.4						
RPZ	**Rata Peaks**	**47.04**	**155**	P	**P**	**11 02 22.6**	**-2.3**
	3.4nm,0.8s,mb4.3,baz=352,slow=15,SNR=2.6						
CMAR	**Chiang Mai Arr**	**50.57**	**296**	P	**P**	**11 02 52.9**	**+0.3**
	1.9nm,0.8s,mb4.1,baz=121,slow=6.0,SNR=5.5						
CMAR				LR	LR	11 22 48.8	
	comp=Z,91nm,19.2s,MS3.8,baz=90,slow=34						
SONM	**Songino Array**	**60.53**	**330**	P	**P**	**11 04 04.1**	**+0.1**
	0.4nm,0.6s,mb3.7,baz=143,slow=7.2,SNR=2.7						
ILAR	**Eielson Array**	**82.35**	**23**	P	**P**	**11 06 14.5**	**+0.3**
	0.8nm,0.7s,mb3.8,baz=253,slow=5.6,SNR=9.6						
CHKZ	**Chkalovo**	**83.06**	**325**	*e*P	**P**	**11 06 17.9**	**-0.2**
	1.7nm,0.7s,mb4.2						

IGQ 23 10:59:30.4, 1.89S×79.82W, h21^{km}±8^{km}, mb4.0, 3C-8D, Error ellipse: s-maj=7.0km s-min=1.4km az=80.8, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**1.21**	**256**	P	Pn	10 59 53.3	+1.0
IGUA	**Igualata**	**1.25**	**71**	⇓P	Pn	10 59 54.8	+1.9
IGUA				S	Sb	11 00 12.5	+3.8
CUSU	**Cusua**	**1.41**	**72**	P	Pn	10 59 57.6	+2.3
ARRY	**Arrayan**	**1.42**	**74**	⇓P	Pn	10 59 56.5	+1.2
JUIV	**Juive**	**1.43**	**71**	P	Pn	10 59 57.6	+2.0
ULBA	**Ulba**	**1.48**	**73**	⇑P	Pn	10 59 58.6	+2.4
ULBA				S	Sn	11 00 18.2	+3.2
RUN2	**Runtun**	**1.48**	**72**	⇓P	Pn	10 59 58.4	+2.1
RUN2				S	Sn	11 00 17.4	+2.3
PISA	**Pisayambo**	**1.66**	**60**	P	Pn	11 00 01.5	+2.8
NAS1	**Nasa**	**1.83**	**47**	⇑P	Pn	11 00 04.6	+3.3
TAMB	**Tambo**	**1.88**	**51**	⇓P	Pn	11 00 04.6	+2.7
TAMB				S	Sn	11 00 27.1	+1.9
VC1	**Cotopaxi 1**	**1.88**	**49**	⇓P	Pn	11 00 04.9	+2.9
JUA2	**San Juan 2**	**2.06**	**36**	P	Pn	11 00 07.5	+3.0
TERV	**Terraza Guagua**	**2.09**	**35**	⇓P	Pn	11 00 08.0	+3.0
TERV				S	Sn	11 00 34.8	+4.1
PINO	**Pino**	**2.11**	**35**	⇓P	Pn	11 00 08.1	+2.9
PINO				S	Sn	11 00 34.9	+3.9
YANA	**Yana**	**2.16**	**35**	⇓P	Pn	11 00 08.7	+2.7
YANA				S	Sn	11 00 37.1	+4.7
ANTI	**Antisana**	**2.19**	**49**	P	Pn	11 00 08.3	+1.9
CAYR	**Refugio Cayamb**	**2.62**	**44**	⇑P	Pn	11 00 15.2	+2.6
COTA	**Cotacachi**	**2.66**	**34**	P	Pn	11 00 15.7	+2.6
COTA				S	Sn	11 00 51.6	+6.5
CAYA	**Cayambe**	**2.67**	**43**	P	Pn	11 00 15.6	+2.3
ECEN	**Cerro Negro**	**3.27**	**34**	P	Pn	11 00 23.9	+2.1

IGQ 23 11:08:25.5, 1.30S×81.22W, h12^{km}±35^{km}, mb4.2, 1C-2D, Error ellipse: s-maj=30.3km s-min=4.7km az=178.1, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	**Salinas**	**0.91**	**166**	⇓P	Pb	11 08 43.1	+0.4
IGUA	**Igualata**	**2.58**	**94**	P	Pn	11 09 08.4	+0.5
JUIV	**Juive**	**2.75**	**93**	P	Pn	11 09 11.7	+1.4
ARRY	**Arrayan**	**2.77**	**94**	P	Pn	11 09 10.8	+0.2
ARRY				S	Sn	11 09 44.4	+0.2
RUN2	**Runtun**	**2.81**	**92**	P	Pn	11 09 12.4	+1.4
ULBA	**Ulba**	**2.81**	**93**	P	Pn	11 09 12.3	+1.1
ULBA				S	Sn	11 09 48.0	+2.6
NAS1	**Nasa**	**2.82**	**76**	P	Pn	11 09 12.6	+1.3
NAS1				S	Sn	11 09 47.8	+2.4
JUA2	**San Juan 2**	**2.83**	**68**	P	Pn	11 09 12.6	+1.3
JUA2				S	Sn	11 09 50.3	+4.6
PISA	**Pisayambo**	**2.84**	**85**	P	Pn	11 09 12.7	+1.1
TERV	**Terraza Guagua**	**2.84**	**67**	P	Pn	11 09 12.6	+1.0
PINO	**Pino**	**2.85**	**66**	⇑P	Pn	11 09 12.4	+0.8
VC1	**Cotopaxi 1**	**2.89**	**77**	P	Pn	11 09 14.4	+2.2
YANA	**Yana**	**2.90**	**66**	P	Pn	11 09 13.1	+0.7
TAMB	**Tambo**	**2.91**	**78**	P	Pn	11 09 15.3	+2.7
ANTI	**Antisana**	**3.17**	**75**	P	Pn	11 09 18.3	+2.1
COTA	**Cotacachi**	**3.31**	**61**	P	Pn	11 09 20.0	+1.8
CAYR	**Refugio Cayamb**	**3.47**	**68**	P	Pn	11 09 24.0	+3.6
CAYR				S	Sn	11 10 07.0	+5.1
CAYA	**Cayambe**	**3.50**	**67**	⇓P	Pn	11 09 24.6	+3.6
ECEN	**Cerro Negro**	**3.87**	**57**	P	Pn	11 09 29.1	+2.9

*IDC **23** 11:19:18.7±1.7, 13.59S×166.93E, mb4.2/7, mb1 4.3/7, mb1mx4.1/15, mbtmp4.2/7, Error ellipse: s-maj=64.5km s-min=24.0km az=131.0*

*NEIC **23** 11:19:19.7±0.9, 13.79S×167.03E, h10^{km}, Error ellipse: s-maj=21.0km s-min=15.7km az=126.0*

ISC 23 11:19:22.2±1.4, 13.7S±0.2×166.8E±0.2, h33^{km}, n12, σ0^{s}73/11, mb4.2/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.99**	**302**	*e*P	**P**	**11 21 19.0**	**+0.2**
	108nm,0.7s						
STKA	**Stephens Creek**	**29.34**	**228**	P	**P**	**11 25 26.2**	**+1.9**
	1.8nm,0.6s,mb4.0,baz=69,slow=14,SNR=6.6						
STKA	**Stephens Creek**	**29.34**	**228**	*e*P	**P**	**11 25 24.6**	**+0.3**
WRAB	**Tennant Creek**	**31.67**	**254**	P	**P**	**11 25 44.2**	**-0.9**
WRA	**Warramunga Arr**	**31.68**	**254**	P	**P**	**11 25 44.4**	**-0.7**
	1.1nm,0.6s,mb3.9,baz=85,slow=9.2,SNR=22						
WRA				PcP	PcP	11 28 35.4	-1.2
	0.6nm,0.8s,baz=67,slow=1.6,SNR=5.6						
ASAR	**Alice Springs**	**32.66**	**248**	P	**P**	**11 25 53.1**	**-0.5**
	2.0nm,0.7s,mb4.2,baz=75,slow=9.3,SNR=35						
NWAO	**Narrogin (SRO)**	**48.92**	**238**	P	**P**	**11 28 07.9**	**+0.7**
	8.5nm,0.9s,mb4.8,baz=91,slow=5.3,SNR=5.5						
NWAO	**Narrogin (SRO)**	**48.92**	**238**	P	**P**	**11 28 07.2**	**0.0**
CMAR	**Chiang Mai Arr**	**74.17**	**294**	P	**P**	**11 30 58.9**	**+1.0**
	6.2nm,1.2s,mb4.4,baz=125,slow=4.6,SNR=13						
SONM	**Songino Array**	**81.45**	**324**	P	**P**	**11 31 37.6**	**+0.1**
	0.4nm,0.4s,mb3.7,baz=142,slow=6.5,SNR=6.7						
ILAR	**Eielson Array**	**85.70**	**18**	P	**P**	**11 31 58.1**	**-0.5**
	0.9nm,0.5s,mb4.3,baz=233,slow=5.1,SNR=20						
ARCES	**ARCESS Array B**	**119.18**	**345**	PKP	PKPdf	11 38 09.2	+1.7
	8.2nm,1.1s,baz=33,slow=1.4,SNR=5.5						

*BJI **23** 11:33:50.7, 6.53S×151.13E, h29^{km}, mB5.9, mb5.2, Ms5.7, Msz5.5*

*NEIC **23** 11:33:52.9±0.1, 6.25S×150.66E, h10^{km}, mb5.8/57, MS5.5/17, MW5.8, Error ellipse: s-maj=4.3km s-min=3.4km az=141.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}-5.20; $M_{\theta\theta}$3.38; $M_{\phi\phi}$1.83; $M_{r\theta}$-1.70; $M_{\theta\phi}$3.43; $M_{\phi r}$-0.12; Best double couple: $M_0$5.9×10^{17} NP1: ϕ_s219°, δ39°, λ-108°. NP2: ϕ_s63°, δ53°, λ-76°. Principal axes: T 6.29, Plg7°, Azm142°; N -.72, Plg11°, Azm234°; P -5.57, Plg77°, Azm21°;*

*HRVD **23** 11:33:52.9±0.1, 6.49S×150.83E, h12^{km}, MW6.0/81, Centroid moment Tensor Solution. LP body waves: s81, c181; Mantle waves: s80, c292; Half duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.91±.01; $M_{\theta\theta}$0.78±.01; $M_{\phi\phi}$0.13±.01; $M_{r\theta}$-0.49±.02; $M_{\theta\phi}$0.31±.01; $M_{\phi r}$-0.43±.02; Best double couple: $M_0$1.118×10^{18} NP1: ϕ_s258°, δ29°, λ-72°. NP2: ϕ_s57°, δ63°, λ-100°. Principal axes: T 1.099, Plg17°, Azm154°; N .038, Plg9°, Azm62°; P -1.138, Plg70°, Azm306°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **23** 11:33:56.6±1.0, 6.00S×150.42E, h33^{km}, mb5.9/39, MS5.5/22 Error ellipse: s-maj=7.1km s-min=6.7km az=73.1*

*IDC **23** 11:33:57.0±3.0, 6.25S×150.72E, h38^{km}±24^{km}, mb5.0/20, mb1 5.0/22, mb1mx5.0/23, mbtmp5.2/22, ML4.1/2, MS5.4/17, Ms1 5.4/17, ms1mx5.3/20, Error ellipse: s-maj=14.7km s-min=9.7km az=113.0*

ISC 23 11:33:56.2±0.1, 6.32S±0.03×150.64E±0.03, h45^{km}, h45^{km}±3.5^{km}:pP-P, n553, σ1^{s}24/337, mb5.5/102, MS5.5/56, 30C-16D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.61**	**228**	Pn	**P**	**11 35 05.7**	**+0.5**
	27nm,0.3s,baz=33,slow=7.4,SNR=99						
PMG				Sn	**S**	**11 36 02.2**	**+4.0**
	192nm,0.3s,baz=8.9,slow=22,SNR=3.4						
PMG				LR	LR	11 36 38.7	
	comp=Z,39µm,18.1s,baz=47,slow=34						
PMG	**Port Moresby**	**4.61**	**228**	*e*Pn	**P**	**11 35 06.0**	**+0.8**
HNR	**Honiara**	**9.72**	**109**	P	**P**	**11 36 16.7**	**+0.2**
HNR				pmax	pmax		
	comp=Z,307nm,0.8s						
HNR	**Honiara**	**9.72**	**109**	Pn	**P**	**11 36 16.7**	**+0.3**
	comp=Z,308nm,0.8s						
JAY	**Jayapura**	**10.60**	**290**	*e*P	**P**	**11 36 27.4**	**-1.1**
CTA	**Charters Tower**	**14.33**	**197**	⇓*i*P	**P**	**11 37 18.3**	**0.0**
	comp=Z,93nm,1.8s						
CTA	**Charters Tower**	**14.33**	**197**	⇓*i*P	**P**	**11 37 18.3**	**0.0**
CTA				pmax	pmax		
	comp=Z,93nm,1.8s						
CTA	**Charters Tower**	**14.33**	**197**	Pn	**P**	**11 37 17.6**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=25,slow=12,SNR=20						
CTA				Sn	**S**	**11 40 00.7**	**+4.1**
	comp=Z,0.7nm,0.3s,baz=9.8,slow=11,SNR=2.2						
CTA				LR	LR	11 42 11.5	
	comp=Z,13µm,20.6s,baz=15,slow=34						
CTAO	**Charters Tower**	**14.33**	**197**	*e*P	**P**	**11 37 18.4**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,770nm,1.9s						
CTAO	**Charters Tower**	**14.33**	**197**	*e*Pn	**P**	**11 37 18.4**	**+0.2**
	comp=Z,772nm,1.9s						
KAKA	**Kakadu**	**19.03**	**249**	⇑*i*P	**P**	**11 38 16.9**	**-0.4**
	comp=Z,222nm,0.6s						
KAKA				*e*S	**S**	**11 41 48.4**	**+4.1**
WRAB	**Tennant Creek**	**20.82**	**228**	*i* P	**P**	**11 38 36.6**	**+0.2**
WRAB	**Tennant Creek**	**20.82**	**228**	*e*P	**P**	**11 38 35.1**	**-1.3**
	comp=Z,2µm,1.4s						
WRAB				LR	LR		
	comp=Z,4µm,19.0s,MS4.8						
WRA	**Warramunga Arr**	**20.83**	**228**	P	**P**	**11 38 36.3**	**-0.3**
	comp=Z,308nm,1.2s,baz=53,slow=11,SNR=266						
WRA				S	**S**	**11 42 29.3**	**+7.9**
	comp=Z,98nm,1.3s,baz=54,slow=19,SNR=10						
NOUC	**Port Laguerre**	**21.80**	**138**	*e*P	**P**	**11 38 44.5**	**-1.7**
NOUC	**Port Laguerre**	**21.80**	**138**	*e*P	**P**	**11 38 44.5**	**-1.7**
DZM	**Mont Dzumac**	**21.87**	**137**	*e*P	**P**	**11 38 44.3**	**-2.6**
DZM	**Mont Dzumac**	**21.87**	**137**	*e*P	**P**	**11 38 44.3**	**-2.6**
ASAR	**Alice Springs**	**23.59**	**221**	P	**P**	**11 39 05.0**	**+1.2**
	comp=Z,96nm,0.6s,mb5.4,baz=56,slow=7.5,SNR=379						
ASAR				S	**S**	**11 43 22.1**	**+11**
	comp=Z,29nm,0.9s,baz=41,slow=17,SNR=4.9						
ASPA	**Alice Springs**	**23.59**	**221**	⇑*i*P	**P**	**11 39 05.0**	**+1.2**
ASPA				*e*S	**S**	**11 43 22.2**	**+11**
ASPA				*e*SCS	ScS	11 50 16.1	+8.2
STKA	**Stephens Creek**	**26.80**	**197**	⇑*i*P	**P**	**11 39 32.8**	**-1.3**
	comp=Z,161nm,0.8s,mb5.6						
STKA				*e*S	**S**	**11 44 21.3**	**+16**
STKA	**Stephens Creek**	**26.80**	**197**	P	**P**	**11 39 32.9**	**-1.2**
	comp=Z,71nm,1.1s,mb5.1,baz=12,slow=9.4,SNR=47						
STKA				S	**S**	**11 44 17.3**	**+12**
	comp=Z,10nm,0.9s,baz=274,slow=12,SNR=1.5						
STKA				LR	LR	11 50 24.1	
	comp=Z,9µm,18.4s,MS5.4,baz=275,slow=37						
FITZ	**Fitzroy Crossi**	**27.05**	**242**	⇓*i*P	**P**	**11 39 36.2**	**-0.4**
	comp=Z,514nm,1.1s,mb6.0						
FITZ				*e*S	tx	11 44 56.0	
RIV	**Riverview**	**27.38**	**179**	*e*P	**P**	**11 39 43.5**	**+4.0**
MATI	**Mati**	**27.67**	**298**	*e*P	**P**	**11 39 47.4**	**+5.2**
DAV	**Davao City (W)**	**28.32**	**298**	P	**P**	**11 39 53.0**	**+4.9**
CNB	**Canberra Magne**	**28.88**	**182**	*e*P	**P**	**11 39 53.9**	**+1.0**
	comp=Z,1µm,1.4s,mb6.5						
PAGZ	**Pagadian**	**30.61**	**297**	*e*P	**P**	**11 40 08.9**	**+0.3**
TOO	**Toolangi**	**31.46**	**188**	*e*P	**P**	**11 40 16.7**	**+0.9**
	comp=Z,2.3nm,1.3s						
TOO	**Toolangi**	**31.46**	**188**	*e*P	**P**	**11 40 16.7**	**+0.9**
TOO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
FORT	**Forrest**	**32.26**	**218**	⇑*i*P	**P**	**11 40 22.3**	**-0.6**
	comp=Z,5µm,0.8s						
GUIM	**Jordan**	**32.61**	**301**	*e*P	**P**	**11 40 27.2**	**+1.1**
PVCP	**Virac**	**32.91**	**307**	*e*P	**P**	**11 40 35.2**	**+6.6**
MBWA	**Marble Bar**	**33.35**	**241**	*e*P	**P**	**11 40 30.9**	**-1.5**
	comp=Z,64nm,0.7s,mb5.7						
OTRP	**Odiongan**	**33.97**	**303**	*e*P	**P**	**11 40 39.6**	**+1.9**
CUYO	**Cuyo Island**	**34.06**	**300**	*e*P	**P**	**11 40 41.6**	**+3.0**
CBIJ	**Chichi jima**	**34.21**	**347**	LR	LR	11 52 55.5	
	comp=Z,6µm,21.9s,MS5.3,baz=147,slow=33						
KEDI	**Kedomdong**	**34.30**	**264**	⇑*i*P	**P**	**11 40 38.9**	**-1.7**
KEDI				pmax	pmax		
	comp=Z,112nm,0.9s,mb5.8						
KEDI	**Kedomdong**	**34.30**	**264**	⇑*i*P	**P**	**11 40 38.9**	**-1.7**
	comp=Z,224nm,0.9s,mb5.8						
SJMP	**San Jose**	**34.77**	**302**	*e*P	**P**	**11 40 47.5**	**+2.9**
RATI	**Rata**	**34.88**	**264**	⇑*i*P	**P**	**11 40 44.7**	**-0.9**
RATI				*e*pP	pP	11 40 47.4	-10
RATI	**Rata**	**34.88**	**264**	*e*pP	pP	11 40 47.4	-10
ENPP	**El Nido**	**35.61**	**299**	*e*P	**P**	**11 40 54.0**	**+2.2**
OUZ	**Omahuta**	**35.69**	**147**	*e*P*	**P**	**11 40 51.3**	**-1.0**
OUZ	**Omahuta**	**35.69**	**147**	*e*P*	**P**	**11 40 51.3**	**-1.0**
KELI	**Kelakatan**	**35.90**	**265**	⇑*i*P	**P**	**11 40 53.2**	**-1.1**
	comp=Z,673nm,1.1s,mb6.2						
BATP	**Bataraza**	**36.02**	**294**	*e*P	**P**	**11 40 57.0**	**+1.7**
LUBP	**Lubang**	**36.16**	**304**	*e*P	**P**	**11 40 51.6**	**-4.8**
BALP	**Baler**	**36.18**	**308**	*e*P	**P**	**11 41 00.8**	**+4.2**
SRDI	**Scrawed**	**36.25**	**264**	⇑*i*P	**P**	**11 40 55.1**	**-2.1**
SRDI				pmax	pmax		
	comp=Z,203nm,1.1s,mb6.0						
SRDI	**Scrawed**	**36.25**	**264**	⇑*i*P	**P**	**11 40 55.1**	**-2.1**
	comp=Z,407nm,1.1s,mb6.0						
TAU	**Tasmania Unive**	**36.56**	**184**	*e*P	**P**	**11 40 59.7**	**+0.2**
TAU				pmax	pmax		
	comp=Z,220nm,1.3s,mb5.8						
TAU	**Tasmania Unive**	**36.56**	**184**	*e*P	**P**	**11 40 59.6**	**+0.1**
	comp=Z,216nm,1.3s,mb5.8						
BCPH	**Baguio City Da**	**37.33**	**308**	⇓*e*P	**P**	**11 41 05.7**	**-0.5**
APYP	**Conner**	**37.68**	**310**	*e*P	**P**	**11 41 15.1**	**+5.9**
AFI	**Afiamalu**	**37.72**	**105**	*e*P	**P**	**11 41 08.0**	**-1.6**
	comp=Z,131nm,0.9s,mb5.7						
AFI				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
ABRA	**Dolores**	**37.96**	**309**	*e*P	**P**	**11 41 18.5**	**+7.0**
HIZ	**Hauiti**	**38.83**	**149**	*e*P*	**P**	**11 41 19.5**	**+1.0**
HIZ	**Hauiti**	**38.83**	**149**	*e*P*	**P**	**11 41 19.5**	**+1.0**
JOW	**Kunigami**	**39.44**	**328**	P	**P**	**11 41 24.6**	**+0.9**
	comp=Z,85nm,0.9s,mb5.5,baz=163,slow=5.9,SNR=8.7						
JOW				LR	LR	11 56 20.2	
	comp=Z,8µm,18.9s,MS5.6,baz=324,slow=34						
KLBR	**Kellerberrin**	**39.71**	**226**	*e*P	**P**	**11 41 25.3**	**-0.6**
	comp=Z,3µm,0.9s						
URZ	**Urewera**	**39.83**	**147**	P	**P**	**11 41 25.8**	**-1.1**
	comp=Z,8.4nm,0.4s,mb4.8,baz=148,slow=2.3,SNR=13						
URZ				LR	LR	11 55 12.1	
	comp=Z,10µm,22.0s,MS5.6,baz=127,slow=32						
MWZ	**Matawai**	**40.12**	**146**	P*	**P**	**11 41 29.0**	**-0.2**
MWZ	**Matawai**	**40.12**	**146**	P*	**P**	**11 41 29.0**	**-0.2**
JHJ	**Hachijo jima 2**	**40.55**	**346**	LR	LR	11 57 50.5	
	comp=Z,4µm,18.1s,MS5.3,baz=292,slow=35						
TSZ	**Takapari Road**	**40.56**	**150**	P*	**P**	**11 41 31.7**	**-1.2**
TSZ	**Takapari Road**	**40.56**	**150**	P*	**P**	**11 41 31.7**	**-1.2**
NWAO	**Narrogin (SRO)**	**40.80**	**225**	P	**P**	**11 41 36.8**	**+1.8**
	comp=Z,40nm,0.8s,mb5.1,baz=52,slow=9.8,SNR=15						
NWAO				LR	LR	11 58 02.2	
	comp=Z,27nm,18.4s,MS3.1,baz=57,slow=35						
NWAO	**Narrogin (SRO)**	**40.80**	**225**	*e*P	**P**	**11 41 36.1**	**+1.2**
	comp=Z,247nm,1.5s,mb5.6						
NWAO				LR	LR		
	comp=Z,9µm,19.0s,MS5.7						
JCZ	**Jackson Bay**	**40.82**	**160**	*e*P*	**P**	**11 41 34.6**	**-0.4**
JCZ	**Jackson Bay**	**40.82**	**160**	*e*P*	**P**	**11 41 34.6**	**-0.4**
MRZ	**Mangatainoka R**	**40.83**	**151**	P*	**P**	**11 41 33.0**	**-2.1**
MRZ	**Mangatainoka R**	**40.83**	**151**	P*	**P**	**11 41 33.0**	**-2.1**
MUN	**Mundaring**	**41.03**	**227**	⇓*i*P	**P**	**11 41 36.8**	**0.0**
	comp=Z,173nm,1.0s,mb5.6						
MUN	**Mundaring**	**41.03**	**227**	⇓*i*P	**P**	**11 41 36.8**	**0.0**
MUN				pmax	pmax		
	comp=Z,173nm,1.0s,mb5.6						
LTZ	**Lake Taylor**	**41.04**	**156**	*e*P*	**P**	**11 41 36.7**	**-0.1**
LTZ	**Lake Taylor**	**41.04**	**156**	*e*P*	**P**	**11 41 36.7**	**-0.1**
KHZ	**Kahutara**	**41.28**	**154**	*e*P*	**P**	**11 41 37.7**	**-1.0**
KHZ	**Kahutara**	**41.28**	**154**	*e*P*	**P**	**11 41 37.7**	**-1.0**
RPZ	**Rata Peaks**	**41.34**	**157**	P	**P**	**11 41 40.1**	**+0.9**
	comp=Z,15nm,0.6s,mb4.8,baz=325,slow=0.5,SNR=13						
RPZ				LR	LR	11 56 10.8	
	comp=Z,17µm,20.8s,MS5.9,baz=319,slow=32						

MLZ	**Mavora Lakes**	**41.76**	**161**	*e*P*	**P**	**11 41 41.8**	**-1.0**
MLZ	**Mavora Lakes**	**41.76**	**161**	*e*P*	**P**	**11 41 41.8**	**-1.0**
TATO	**Taipei**	**42.10**	**319**	*e*P	**P**	**11 41 46.1**	**+0.3**
	comp=Z,162nm,1.0s,mb5.6						
LEM	**Lembang**	**42.73**	**267**	*e*P	**P**	**11 41 52.5**	**+1.4**
QZH	**Quanzhou**	**44.03**	**316**	P	**P**	**11 41 58.8**	**-2.7**
QZH				PP	PP	11 43 47.0	+1.1
QZH				S	**S**	**11 48 32.0**	**+2.0**
QZH				LR	LR		
	comp=N,1µm,12.2s						
QZH				LR	LR		
	comp=E,7µm,17.6s						
QZH				LR	LR		
	comp=Z,18µm,30.9s						
MAT	**Matsushiro**	**44.20**	**346**	P	**P**	**11 42 01.3**	**-1.4**
MAT				S	**S**	**11 48 28.0**	**-4.3**
PULI	**Pulasari**	**44.38**	**267**	*e*P	**P**	**11 42 04.2**	**-0.3**
PASI	**Pasiripis**	**44.75**	**267**	*e*P	**P**	**11 42 06.8**	**-0.6**
PENI	**Pendagan**	**45.22**	**268**	*e*P	**P**	**11 42 10.6**	**-0.6**
HKC	**Hong Kong**	**45.65**	**310**	⇑*i*P	**P**	**11 42 22.0**	**+7.5**
SSE	**Sheshan**	**46.66**	**325**	P	**P**	**11 42 21.3**	**-1.1**
SSE				AP	pP	11 42 36.6	+1.8
SSE				PP	PP	11 44 12.9	+0.8
SSE				S	**S**	**11 49 12.8**	**+5.2**
SSE				AMB	AMB		
	comp=Z,56nm,0.7s,mb5.6						
SSE				AMB	AMB		
	comp=Z,923nm,8.2s						
SSE				LR	LR		
	comp=N,4µm,17.5s,MS5.6						
SSE				LR	LR		
	comp=E,4µm,17.5s,MS5.6						
SSE				LR	LR		
	comp=Z,6µm,17.5s,MS5.6						
SSE	**Sheshan**	**46.66**	**325**	P	**P**	**11 42 21.2**	**-1.2**
	comp=Z,56nm,0.7s,mb5.6						
SSE				pP	pP	11 42 36.6	+1.8
SSE				PP	PP	11 44 12.9	+0.8
SSE				S	**S**	**11 49 12.8**	**+5.2**
SSE				sS		11 49 33.6	
SSE				SS	tx	12 11 52.4	
SSE				LR	LR		
	comp=Z,6µm,17.5s,MS5.6						
GZH	**Guangzhou**	**46.72**	**310**	P	**P**	**11 42 19.3**	**-3.6**
GZH				LR	LR		
	comp=N,2µm,18.7s,MS5.5						
GZH				LR	LR		
	comp=E,6µm,22.7s,MS5.5						
GZH				LR	LR		
	comp=Z,9µm,27.4s,MS5.6						
QIZ	**Qiongzhong**	**47.43**	**303**	P	**P**	**11 42 29.0**	**+0.4**
QIZ				XP	sP	11 42 44.0	-2.5
QIZ				S	**S**	**11 49 18.8**	**+0.1**
QIZ				XS		11 49 44.1	
QIZ				LR	LR		
	comp=N,4µm,18.6s						
QIZ				LR	LR		
	comp=Z,6µm,29.1s						
QIZ	**Qiongzhong**	**47.43**	**303**	*e*P	**P**	**11 42 29.4**	**+0.8**
KS15	**Wonju Array Si**	**48.44**	**336**	*e*P	**P**	**11 42 36.2**	**+0.1**
NJ2	**Nanjing**	**48.72**	**323**	*e*P	**P**	**11 42 39.8**	**+1.4**
NJ2				XP	sP	11 42 54.1	-2.2
NJ2				PCP	PcP	11 44 04.0	+0.6
NJ2				S	**S**	**11 49 46.0**	**+9.4**
NJ2				AMB	AMB		
	comp=Z,130nm,1.3s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,4µm,10.9s						
NJ2				LR	LR		
	comp=N,10µm,16.0s,MS6.0						
NJ2				LR	LR		
	comp=E,8µm,19.9s,MS6.0						
NJ2				LR	LR		
	comp=Z,12µm,17.0s,MS5.9						
INCN	**Inchon**	**49.00**	**335**	*e*P	**P**	**11 42 40.8**	**+0.3**
	comp=Z,488nm,1.5s,mb6.3						
RAR	**Rarotonga**	**50.16**	**112**	LR	LR	12 00 45.1	
	comp=Z,1µm,20.6s,MS4.9,baz=289,slow=32						
WHN	**Wuhan**	**50.51**	**319**	P	**P**	**11 42 52.6**	**+0.4**
WHN				S	**S**	**11 50 11.0**	**+9.5**
WHN				LR	LR		
	comp=Z,9µm,18.0s,MS5.8						
ASAJ	**Asahikawa**	**50.72**	**353**	P	**P**	**11 42 53.2**	**-0.4**
	comp=Z,16nm,0.8s,mb5.0,baz=190,slow=11,SNR=8.8						
SNG	**Songkhla**	**51.67**	**284**	P	**P**	**11 43 02.0**	**+0.8**
VLA	**Vladivostok**	**52.07**	**343**	⇑*i*P	**P**	**11 43 03.0**	**-0.7**
VLA				*e*		11 44 13.0	
VLA				*e*S	**S**	**11 50 37.0**	**+14**
VLA				*i*		11 52 50.0	
VLA				pmax	pmax		
	comp=Z,2µm,15.0s						
VLA				pmax	pmax		
	comp=Z,2µm,11.0s						
VLA				pmax	pmax		
	comp=N,2µm,10.0s						
VLA				pmax	pmax		
	comp=E,1µm,9.0s						
VLA				smax			
	comp=N,3µm,12.0s						
VLA				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.4						
VLA				MLR	MLR		
	comp=N,2µm,13.0s,MS5.4						
VLA				MLR	MLR		
	comp=E,1µm,13.0s,MS5.4						
DL2	**Dalian**	**52.42**	**331**	P	**P**	**11 43 06.4**	**-0.1**
DL2				S	**S**	**11 50 34.5**	**+6.8**
DL2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
DL2				AMB	AMB		
	comp=Z,830nm,13.5s						
DL2				LR	LR		
	comp=N,950nm,16.5s,MS5.1						
DL2				LR	LR		
	comp=E,1µm,19.0s,MS5.1						
DL2				LR	LR		
	comp=Z,2µm,38.0s						
TIA	**Tai’an**	**52.70**	**326**	P	**P**	**11 43 06.4**	**-2.2**
TIA				S	**S**	**11 50 26.0**	**-5.6**
TIA				AMB	AMB		
	comp=Z,75nm,1.6s,mb5.4						
TIA				LR	LR		
	comp=N,3µm,15.0s,MS5.6						
TIA				LR	LR		
	comp=E,3µm,15.0s,MS5.6						
YSS	**Yuzh-Sakhalins**	**53.50**	**353**	*e*P	**P**	**11 43 12.0**	**-2.4**
YSS				*e*		11 43 30.0	
YSS				*e*		11 44 24.0	
YSS				SS	SS	11 54 22.0	-0.1
YSS				pmax	pmax		
	comp=N,4µm,19.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.3						
YSS				MLR	MLR		
	comp=N,2µm,17.0s						
GYA	**Guiyang**	**53.65**	**309**	⇑*i*P	**P**	**11 43 16.6**	**+0.9**
GYA				AP	pP	11 43 29.5	+1.1
GYA				PP	PP	11 45 21.9	+3.7
GYA				S	**S**	**11 50 53.3**	**+8.9**
GYA				PS	tx	11 52 16.4	
GYA				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.5						
GYA				AMB	AMB		
	comp=Z,1µm,10.8s						
GYA				LR	LR		
	comp=N,3µm,20.1s,MS5.5						
GYA				LR	LR		
	comp=E,4µm,18.3s,MS5.5						
GYA				LR	LR		
	comp=Z,5µm,22.8s,MS5.5						
ENH	**Enshi**	**53.66**	**315**	*e*P	**P**	**11 43 14.5**	**-1.2**
	comp=Z,180nm,1.5s,mb5.8						
SNY	**Shenyang**	**53.92**	**335**	⇑P	**P**	**11 43 16.3**	**-1.2**
SNY				AP	pP	11 43 21.3	-9.0
SNY				PCS		11 48 21.1	
SNY				S	**S**	**11 50 46.5**	**-1.5**
SNY				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
SNY				LR	LR		
	comp=N,2µm,18.6s						
SNY				LR	LR		
	comp=Z,3µm,18.1s,MS5.3						
MDJ	**Mudanjiang**	**54.13**	**342**	P	**P**	**11 43 18.8**	**-0.2**
MDJ				AP	pP	11 43 30.8	-0.9
MDJ				PCP	PcP	11 44 22.3	-0.9
MDJ				PP	PP	11 45 22.4	+0.1
MDJ				PCS		11 48 22.3	
MDJ				SS	SS	11 54 37.0	+4.8
MDJ				AMB	AMB		
	comp=Z,23nm,1.4s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,917nm,8.9s						
MDJ				LR	LR		
	comp=N,4µm,35.5s,MS5.3						
MDJ				LR	LR		
	comp=E,2µm,32.6s,MS5.3						
MDJ				LR	LR		
	comp=Z,6µm,39.2s						
MDJ	**Mudanjiang**	**54.13**	**342**	*e*P	**P**	**11 43 18.2**	**-0.8**
	comp=Z,22nm,0.9s,mb5.1						
NST	**Nakhon Sawan**	**54.58**	**294**	P	**P**	**11 43 24.0**	**+1.3**
CN2	**Changchun**	**54.84**	**338**	*e*P	**P**	**11 43 28.1**	**+3.9**
CN2				PCP	PcP	11 44 24.3	-1.6
CN2				PP	PP	11 45 30.3	+1.6
CN2				*e*S	**S**	**11 51 05.3**	**+5.0**
CN2				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.2						
CN2				AMB	AMB		
	comp=Z,1µm,8.0s						
CN2				LR	LR		
	comp=N,2µm,18.0s,MS5.4						
CN2				LR	LR		
	comp=E,2µm,18.0s,MS5.4						
CN2				LR	LR		
	comp=Z,3µm,18.0s,MS5.4						
BJT	**Baijiatuau**	**55.99**	**328**	*e*P	**P**	**11 43 31.8**	**-0.8**
BJT				pmax	pmax		
	comp=Z,120nm,1.4s						
BJT	**Baijiatuau**	**55.99**	**328**	*e*P	**P**	**11 43 31.8**	**-0.8**
	comp=Z,118nm,1.4s,mb5.7						
BJI	**Beijing**	**56.01**	**328**	P	**P**	**11 43 30.4**	**-2.3**
BJI				AP	pP	11 43 44.3	-1.2
BJI				PP	PP	11 45 38.1	-1.2
BJI				S	**S**	**11 51 16.5**	**+0.6**
BJI				SS	SS	11 55 07.0	+4.7
BJI				AMB	AMB		
	comp=Z,33nm,1.6s,mb5.1						
BJI				AMB	AMB		
	comp=Z,1µm,8.5s						
BJI				LR	LR		
	comp=N,4µm,17.0s,MS5.6						
BJI				LR	LR		
	comp=E,3µm,17.0s,MS5.6						
BJI				LR	LR		
	comp=Z,3µm,24.1s						
BJI	**Beijing**	**56.01**	**328**	P	**P**	**11 43 30.4**	**-2.3**
BJI				*PP	pP	11 43 44.3	-1.2
BJI						11 45 38.1	
BJI				S	**S**	**11 51 16.5**	**+0.6**
BJI				pmax	pmax		
	comp=Z,33nm,1.6s,mb5.1						
BJI				MLR	MLR		
	comp=Z,3µm,24.1s,MS5.3						
BJI	**Beijing**	**56.01**	**328**	P	**P**	**11 43 30.4**	**-2.3**
	comp=Z,33nm,1.6s,mb5.1						
BJI				pP	pP	11 43 44.3	-1.2
BJI				PP	PP	11 45 38.1	-1.2
BJI				S	**S**	**11 51 16.5**	**+0.6**
BJI				sS		11 51 47.3	
BJI				SS	SS	11 55 07.0	+4.7
BJI				LR	LR		
	comp=Z,3µm,24.1s,MS5.3						
KMI	**Kunming**	**56.09**	**306**	P	**P**	**11 43 33.3**	**-0.2**
KMI				PP	PP	11 45 41.5	+1.3
KMI				S	**S**	**11 51 20.1**	**+2.9**
KMI				SS	SS	11 55 08.8	+4.9
KMI				SSS	SSS	11 57 21.0	+7.8
KMI				AMB	AMB		
	comp=Z,24nm,1.5s,mb5.0						
KMI				LR	LR		
	comp=N,3µm,20.8s,MS5.6						
KMI				LR	LR		
	comp=E,3µm,16.2s,MS5.6						
KMI				LR	LR		
	comp=Z,5µm,22.6s						
KMI	**Kunming**	**56.09**	**306**	P	**P**	**11 43 33.3**	**-0.2**
KMI						11 45 41.5	
KMI				S	**S**	**11 51 20.1**	**+2.9**
KMI				PS	PS	11 51 37.0	+1.4
KMI				pmax	pmax		
	comp=Z,24nm,1.5s,mb5.0						
KMI				MLR	MLR		
	comp=Z,5µm,22.6s,MS5.5						
KMI	**Kunming**	**56.09**	**306**	P	**P**	**11 43 33.3**	**-0.2**
	comp=Z,24nm,1.5s,mb5.0						
KMI				sP	sP	11 43 52.9	+1.4
KMI				PP	PP	11 45 41.5	+1.3
KMI				S	**S**	**11 51 20.1**	**+2.9**
KMI				PS	PS	11 51 37.0	+1.4
KMI				sS		11 51 43.9	
KMI				SS	SS	11 55 08.8	+4.9
KMI				SSS	SSS	11 57 21.0	+7.8
KMI				LR	LR		
	comp=Z,5µm,22.6s,MS5.5						
XAN	**Xi’an**	**56.28**	**318**	P	**P**	**11 43 33.0**	**-1.7**
XAN				AP	pP	11 43 42.5	-5.0
XAN				PP	PP	11 45 38.3	-3.5
XAN				S	**S**	**11 51 22.6**	**+3.0**
XAN				AMB	AMB		
	comp=Z,23nm,0.9s,mb5.2						
XAN				LR	LR		
	comp=N,1µm,17.5s,MS5.3						
XAN				LR	LR		
	comp=E,2µm,19.1s,MS5.3						
XAN				LR	LR		
	comp=Z,3µm,16.7s,MS5.5						
CHRT	**Chiangrai**	**56.38**	**299**	⇓P	**P**	**11 43 35.5**	**-0.2**
	comp=Z,108nm,0.9s,mb5.9						
CMAR	**Chiang Mai Arr**	**56.61**	**297**	P	**P**	**11 43 37.1**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=120,slow=5.6,SNR=20						
CMAR				LR	LR	12 05 43.8	
	comp=Z,2µm,21.0s,baz=95,slow=34						
CHG	**Chiang Mai**	**56.73**	**297**	⇓P	**P**	**11 43 39.7**	**+1.5**
	comp=Z,12nm,1.2s,mb4.8						
HON	**Honolulu**	**57.37**	**60**	P	**P**	**11 43 43.0**	**+0.3**
HON	**Honolulu**	**57.37**	**60**	*e*P	**P**	**11 43 42.6**	**-0.1**
KIP	**Kipapa**	**57.40**	**60**	P	**P**	**11 43 42.6**	**-0.3**
KIP				pmax	pmax		
	comp=Z,720nm,1.5s,mb6.5						
KIP	**Kipapa**	**57.40**	**60**	*e*P	**P**	**11 43 42.0**	**-0.9**
	comp=Z,720nm,1.5s,mb6.5						
KLR	**Kul’dur**	**57.73**	**345**	*e*P	**P**	**11 43 40.2**	**-4.6**
CD2	**Chengdu**	**58.13**	**312**	P	**P**	**11 43 47.3**	**-0.5**
CD2				PCP	PcP	11 44 39.5	+0.6
CD2				PP	PP	11 45 56.3	-2.2
CD2				S	**S**	**11 51 47.5**	**+3.6**
CD2				SS	SS	11 55 42.0	+4.6
CD2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.5						
CD2				AMB	AMB		
	comp=Z,2µm,14.4s						
CD2				LR	LR		
	comp=Z,5µm,21.6s,MS5.6						
HKL	**Haleakala**	**58.65**	**61**	P	**P**	**11 43 53.9**	**+2.3**
HKL	**Haleakala**	**58.65**	**61**	*e*P	**P**	**11 43 51.9**	**+0.3**
HHC	**Hu-ho-hao-te**	**59.06**	**326**	⇓P	**P**	**11 43 54.3**	**+0.1**
HHC				AP	pP	11 44 07.9	+0.8
HHC				PCP	PcP	11 44 42.8	+0.4
HHC				PP	PP	11 46 07.8	+1.1
HHC				SCP		11 48 36.4	
HHC				PCS		11 48 44.8	
HHC				S	**S**	**11 51 57.8**	**+1.8**
HHC				PS	PS	11 52 15.8	-1.1
HHC				XS		11 52 18.3	
HHC				SCS	ScS	11 53 38.5	+2.0
HHC				AMB	AMB		
	comp=Z,991nm,14.4s						
HHC				LR	LR		
	comp=N,3µm,16.8s,MS5.7						
HHC				LR	LR		
	comp=E,3µm,16.8s,MS5.7						
HHC				LR	LR		
	comp=Z,6µm,19.2s,MS5.7						
PPT	**Papeete**	**59.34**	**107**	*e*LQ		11 58 40.8	
PPT				*e*LR	LR	12 01 30.6	
	comp=Z,3µm,26.5s						
PET	**Petropavlovsk**	**59.51**	**6**	*e*P	**P**	**11 43 54.9**	**-2.2**
PET				*e*		11 44 37.4	
PET				*e*		11 46 15.0	
PET				*e*S	**S**	**11 52 09.4**	**+7.8**
PET				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
PET				pmax	pmax		
	comp=N,19nm,0.7s						
PET				pmax	pmax		
	comp=Z,1µm,16.8s						
PET				smax			
	comp=N,4µm,19.7s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s,MS5.0						
TIAR	**Tiarei**	**59.55**	**107**	*e*P	**P**	**11 43 55.4**	**-2.5**
	comp=Z,159nm,1.4s,mb5.8						
TVO	**Taravao**	**59.66**	**107**	*e*P	**P**	**11 43 56.3**	**-2.3**
	comp=Z,198nm,1.6s,mb5.9						
BTO	**Baotou**	**59.76**	**325**	*e*P	**P**	**11 43 58.9**	**-0.2**
TBI	**Tubuai**	**59.92**	**113**	*e*P	**P**	**11 43 57.7**	**-2.7**
	comp=Z,286nm,1.4s,mb6.1						
TBI				*e*SS	SS	11 56 02.2	-3.0
TBI				*e*LQ		11 59 28.6	
TBI				*e*LR	LR	12 01 45.4	
	comp=Z,11µm,36.2s						
DRV	**Dumont d’Urvil**	**60.69**	**185**	P	**P**	**11 44 13.0**	**+7.9**
DRV				S	**S**	**11 52 25.0**	**+8.3**
LZH	**Lanzhou**	**60.85**	**317**	P	**P**	**11 44 05.1**	**-1.5**
LZH				XP	sP	11 44 22.3	-2.4
LZH				PP	PP	11 46 20.0	-2.9
LZH				S	**S**	**11 52 26.0**	**+6.9**
LZH				AMB	AMB		
	comp=Z,100nm,1.4s,mb5.8						
LZH				AMB	AMB		
	comp=Z,1µm,6.0s						
LZH				LR	LR		
	comp=E,3µm,13.7s						
LZH				LR	LR		
	comp=Z,7µm,20.4s						
LZH	**Lanzhou**	**60.85**	**317**	P	**P**	**11 44 05.1**	**-1.5**
LZH				*PP	pP	11 44 22.2	+2.8
LZH						11 46 20.0	
LZH				S	**S**	**11 52 26.0**	**+6.9**
LZH				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.8						
LZH				MLR	MLR		
	comp=Z,7µm,20.4s,MS5.8						
LZH	**Lanzhou**	**60.85**	**317**	P	**P**	**11 44 05.1**	**-1.5**
	comp=Z,100nm,1.4s,mb5.8						
LZH				pP	pP	11 44 22.2	+2.8
LZH				sP	sP	11 44 29.0	+4.3
LZH				PP	PP	11 46 20.0	-2.9
LZH				S	**S**	**11 52 26.0**	**+6.9**
LZH				sS		11 52 53.2	
LZH				SS	SS	11 56 36.0	+16
LZH				LR	LR		
	comp=Z,7µm,20.4s,MS5.8						
HIA	**Hailar**	**61.57**	**338**	*e*P	**P**	**11 44 09.9**	**-1.3**
HIA				pmax	pmax		
	comp=Z,32nm,0.7s						
HIA	**Hailar**	**61.57**	**338**	*e*P	**P**	**11 44 09.9**	**-1.3**
	comp=Z,32nm,0.6s,mb5.6						
FX1	**Attu Island--F**	**62.00**	**15**	P	**P**	**11 44 12.6**	**-1.4**
	comp=Z,32nm,0.6s,mb5.6,baz=175,slow=6.1,SNR=10.0						
FX1	**Attu Island--F**	**62.00**	**15**	*e*P	**P**	**11 44 13.0**	**-1.0**
KIWB	**Kanaga Island**	**64.16**	**22**	*e*P	**P**	**11 44 26.4**	**-1.9**
AGT	**Agartala**	**65.21**	**300**	*e*	**P**	**11 44 45.0**	**+9.4**
SHL	**Shillong**	**65.25**	**302**	*e*P	**P**	**11 44 34.5**	**-1.3**
SHL				*e*S	S	11 53 21.5	+7.3
GTA	**Gaotai**	**65.34**	**319**	*e*P	**P**	**11 44 35.8**	**-0.3**
GTA				AP	pP	11 44 51.0	+1.8
GTA				PCP	PcP	11 45 06.6	-1.3
GTA				PP	PP	11 47 02.1	-0.2
GTA				PPP	PPP	11 48 36.4	-0.3
GTA				S	S	11 53 17.4	+2.3
GTA				SS	SS	11 57 29.9	-0.4
GTA				AMB	AMB		
	comp=Z,991nm,8.4s						
GTA				LR	LR		
	comp=N,1µm,19.4s,MS5.3						
GTA				LR	LR		
	comp=E,1µm,16.7s,MS5.3						
GTA				LR	LR		
	comp=Z,2µm,22.0s						
MA2	**Magadan**	**65.68**	**0**	*e*P	**P**	**11 44 35.8**	**-2.2**
MA2				*e*PPP	PPP	11 48 32.6	-7.2
MA2				*e*S	S	11 53 18.3	-0.7
MA2				*e*PS	PS	11 53 57.3	+11
MA2				*e*SS	SS	11 57 39.1	+3.9
MA2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
MA2				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
MA2	**Magadan**	**65.68**	**0**	*e*P	**P**	**11 44 35.1**	**-2.9**
	comp=Z,34nm,0.9s,mb5.4						
CASY	**Casey**	**65.95**	**197**	*e*P	**P**	**11 44 34.5**	**-5.1**
CASY				*e*P		11 44 40.3	
ULN	**Ulaanbaatar**	**66.17**	**330**	P	**P**	**11 44 40.9**	**-0.4**
ULN				pmax	pmax		
	comp=Z,98nm,1.4s,mb5.7						
ULN	**Ulaanbaatar**	**66.17**	**330**	*e*P	**P**	**11 44 40.8**	**-0.5**
	comp=Z,98nm,1.4s,mb5.6						
ULN				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
CLNS	**Chul’man**	**66.38**	**345**	*e*P	**P**	**11 44 40.8**	**-1.6**
CLNS				e*PP	pP	11 44 47.7	-7.9
CLNS				*e*		11 45 10.3	
CLNS				*e*PPP	PPP	11 48 40.1	-6.7
CLNS				*e*S	S	11 53 30.3	+2.9
CLNS				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.3						
CLNS				pmax	pmax		
	comp=N,12nm,1.0s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,6.0nm,1.0s						
CLNS				smax			
	comp=N,1µm,12.3s						
CLNS				smax			
	comp=Z,1µm,12.8s						
CLNS				smax			
	comp=E,195nm,11.7s						
CLNS				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.4						
CLNS				MLR	MLR		
	comp=N,1µm,15.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS5.2						
SONM	**Songino Array**	**66.49**	**329**	P	**P**	**11 44 43.0**	**-0.3**
	comp=E,45nm,1.3s,mb5.3,baz=135,slow=5.2,SNR=71						
CAL	**Calcutta**	**67.33**	**297**	*e*P	**P**	**11 44 52.6**	**+3.6**
LSA	**Lhasa**	**67.34**	**306**	P	**P**	**11 44 48.4**	**-0.6**
LSA	**Lhasa**	**67.34**	**306**	*e*P	**P**	**11 44 48.4**	**-0.6**
LSA				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
LSA	**Lhasa**	**67.34**	**306**	*e*P	**P**	**11 44 48.4**	**-0.6**
	comp=Z,24nm,0.8s,mb5.3						
NIKO	**Nikolski**	**68.29**	**25**	*e*P	**P**	**11 44 53.9**	**-0.6**
TAOE	**Nuku Hiva Isla**	**68.57**	**97**	*e*SS	SS	11 58 10.0	-11
TAOE				*e*LR	LR	12 04 45.3	
SEY	**Seymchan**	**69.07**	**1**	*e*P	**P**	**11 44 59.6**	**+0.5**
SEY				e*PP	pP	11 45 13.6	+1.3
SEY						11 45 24.7	
SEY				*e*		11 47 31.1	
SEY				*e*PPP	PPP	11 49 06.3	-6.2
SEY				*e*S	S	11 54 01.4	+1.8
SEY				*SS		11 54 23.2	
SEY						11 54 52.1	
SEY				*e*		11 58 30.5	
SEY				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.5						
SEY				pmax	pmax		
	comp=N,20nm,1.2s						
ZAK	**Zakamensk**	**69.69**	**330**	⇓*e*P	**P**	**11 45 02.1**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.2						
UNV	**Unalaska Valle**	**69.90**	**25**	*e*P	**P**	**11 45 03.3**	**-1.1**
	comp=Z,104nm,0.7s,mb5.9						
YAK	**Yakutsk**	**70.05**	**350**	*e*P	**P**	**11 45 04.7**	**-0.5**
YAK				e*PP	pP	11 45 15.0	-3.3
YAK				*e*		11 45 26.3	
YAK				*e*		11 47 37.9	
YAK				*e*S	S	11 54 14.4	+3.2

YAK				*e**SS		11 54 48.6	
YAK				*e*SS	SS	11 58 45.1	+2.4
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				smax			
	comp=N,203nm,11.3s						
YAK				smax			
	comp=N,243nm,15.3s						
YAK				smax			
	comp=E,45nm,10.0s						
YAK	**Yakutsk**	**70.05**	**350**	*e*P	**P**	**11 45 03.5**	**-1.6**
	comp=E,100nm,1.2s,mb5.6						
YAK				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
TLY	**Talaya**	**70.33**	**331**	P	**P**	**11 45 06.5**	**-0.6**
	comp=Z,116nm,1.1s,mb5.7,SNR=25						
TLY	**Talaya**	**70.33**	**331**	*e*P	**P**	**11 45 06.8**	**-0.3**
TLY				*e*PPP	PPP	11 49 21.8	-3.6
TLY				*e*S	S	11 54 22.5	+7.9
TLY				*e*PS	PS	11 54 44.0	-4.0
TLY				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
TLY	**Talaya**	**70.33**	**331**	*e*P	**P**	**11 45 06.6**	**-0.5**
	comp=Z,56nm,1.4s,mb5.3						
IRK	**Irkutsk**	**70.40**	**332**	*e*P	**P**	**11 45 01.9**	**-5.5**
IRK				pmax	pmax		
	comp=Z,61nm,0.6s,mb5.7						
BOD	**Bodaibo**	**70.46**	**340**	*e*P	**P**	**11 45 03.9**	**-3.8**
BOD				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
VIS	**Vishakhapatnam**	**70.59**	**291**	*i* P	**P**	**11 45 09.5**	**+0.3**
JIRN	**Jiri**	**70.75**	**302**	*e*P	**P**	**11 45 09.3**	**-0.7**
	comp=Z,37nm,0.8s,mb5.4						
GUN	**Gumba**	**71.08**	**302**	*e*P	**P**	**11 45 11.8**	**-0.2**
	comp=Z,91nm,0.7s,mb5.8						
PKI	**Pulchoki**	**71.38**	**302**	*e*P	**P**	**11 45 12.8**	**-1.0**
VNDA	**Vanda**	**71.41**	**177**	P	**P**	**11 45 13.2**	**0.0**
	comp=Z,9.7nm,0.7s,mb4.9,baz=331,slow=6.3,SNR=17						
VNDA				LR	LR	12 14 17.5	
	comp=Z,2µm,19.0s,MS5.3,baz=339,slow=34						
KKN	**Kakani**	**71.55**	**302**	*e*P	**P**	**11 45 14.8**	**0.0**
	comp=Z,34nm,0.8s,mb5.3						
MOY	**Mondy**	**71.62**	**330**	*e*P	**P**	**11 45 14.9**	**+0.1**
MOY				pmax	pmax		
	comp=Z,82nm,1.8s,mb5.4						
DMN	**Daman**	**71.64**	**302**	*e*P	**P**	**11 45 14.4**	**-1.0**
	comp=Z,90nm,0.9s,mb5.7						
GKN	**Gorkha**	**72.16**	**302**	*e*P	**P**	**11 45 18.6**	**+0.2**
	comp=Z,143nm,1.3s,mb5.7						
MDRS	**Chennai**	**72.52**	**286**	*e*	**P**	**11 45 20.0**	**-0.8**
BLSP	**Bilaspur**	**72.74**	**295**	*e*	**P**	**11 45 12.5**	**-10**
BLSP				*e*		11 45 13.5	
	comp=Z,13nm,0.3s						
KOLN	**Koldanda**	**72.97**	**301**	*e*P	**P**	**11 45 22.2**	**-1.1**
	comp=Z,78nm,1.2s,mb5.5						
RKT	**Rikitea**	**73.20**	**112**	*e*P	**P**	**11 45 22.1**	**-2.7**
	comp=Z,195nm,1.4s,mb5.9						
RKT	**Rikitea**	**73.20**	**112**	*e*SS	SS	11 59 29.6	-3.1
RKT				*e*LQ		12 04 51.5	
RKT				*e*LR	LR	12 07 50.8	
	comp=Z,8µm,35.8s						
HYB	**Hyderabad**	**74.97**	**290**	*i* P	**P**	**11 45 35.0**	**-0.1**
BILL	**Bilibino**	**75.00**	**6**	⇓*i*P	**P**	**11 45 33.0**	**-1.3**
BILL				*e*	pP	11 45 45.2	-2.3
BILL				*i* SS	SS	11 59 57.9	-0.8
BILL				pmax	pmax		
	comp=Z,58nm,1.4s,mb5.3						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
BILL	**Bilibino**	**75.00**	**6**	*e*P	**P**	**11 45 32.7**	**-1.6**
	comp=Z,33nm,0.9s,mb5.3						
BILL				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
WMQ	**Urumqi**	**75.42**	**318**	*e*P	**P**	**11 45 37.0**	**-0.1**
WMQ				AP	pP	11 45 50.0	-0.4
WMQ				PP	PP	11 48 28.0	-0.5
WMQ				S	S	11 55 12.0	-0.4
WMQ				SS	SS	12 00 06.0	+0.2
WMQ				AMB	AMB		
	comp=Z,42nm,1.3s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,589nm,10.0s						
WMQ				LR	LR		
	comp=N,2µm,23.0s,MS5.5						
WMQ				LR	LR		
	comp=E,2µm,24.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,2µm,24.0s,MS5.4						
LGTI	**Lohaghat**	**76.27**	**302**	*e*P	**P**	**11 45 46.0**	**+3.7**
PTH	**Pithoragarh**	**76.32**	**302**	*e*P	**P**	**11 45 45.9**	**+3.3**
BHPL	**Bhopal**	**77.22**	**295**	*e*P	**P**	**11 45 48.4**	**+0.6**
BHPL				*e*		11 45 54.5	
	comp=Z,45nm,1.1s						
TNA	**Tin City**	**77.84**	**16**	*e*P	**P**	**11 45 46.5**	**-3.9**
	comp=Z,14nm,1.0s,mb4.9						
DDI	**Dehra Dun**	**78.33**	**303**	*e*P	**P**	**11 45 55.6**	**+1.9**
KAD	**Karad**	**79.05**	**289**	*e*P	**P**	**11 45 57.9**	**0.0**
KAD				*e*	pP	11 46 06.4	-4.8
	comp=Z,54nm,1.0s						
SVW2	**Sparrevohn**	**79.06**	**24**	*e*P	**P**	**11 45 58.0**	**+0.9**
GOA	**Goa**	**79.07**	**287**	*e*	**P**	**11 46 06.3**	**+8.2**
TIXI	**Tiksi**	**79.12**	**353**	*e*P	**P**	**11 45 54.5**	**-2.8**
TIXI				*e*		11 48 55.9	
TIXI				*e*S	S	11 55 54.0	+2.1
TIXI				*e*SS	SS	12 00 57.4	-4.0
TIXI				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.4						
TIXI	**Tiksi**	**79.12**	**353**	*i* P	**P**	**11 45 55.5**	**-1.8**
POO	**Poona**	**79.57**	**290**	*e*P	**P**	**11 46 03.3**	**+2.5**
POO				*e*		11 46 07.7	
	comp=Z,33nm,1.1s						
RSO	**Redoubt South**	**79.86**	**25**	P	**P**	**11 45 58.5**	**-2.9**
MKAR	**Makanchi Array**	**80.06**	**320**	*i* P	**P**	**11 46 02.1**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,25nm,1.0s						
AJM	**Ajmer**	**80.38**	**298**	⇓*i*P	**P**	**11 46 04.0**	**-1.0**
THN	**Thein Dam**	**80.78**	**304**	*e*P	**P**	**11 46 08.3**	**+1.4**
SLKM	**Skilak Lake**	**80.95**	**25**	P	**P**	**11 46 06.6**	**-0.6**
SLKM	**Skilak Lake**	**80.95**	**25**	*e*P	**P**	**11 46 05.5**	**-1.7**
ZAL	**Zalesovo**	**81.24**	**327**	P	**P**	**11 46 07.3**	**-1.6**
	comp=Z,12nm,0.7s,mb4.9,baz=5.3,slow=5.6,SNR=40						
ZAL				S	S	11 56 20.1	+5.9
	comp=Z,1.1nm,1.1s,baz=148,slow=18,SNR=3.1						
ZAL				LR	LR	12 23 59.7	
	comp=Z,2µm,19.7s,MS5.5,baz=353,slow=37						
KSH	**Kashi**	**82.30**	**311**	PR		11 46 16.5	
KSH				*e*XP	sP	11 46 33.4	+0.4
KSH				*e*PP	PP	11 49 27.0	+1.5
KSH				*e*S	S	11 56 27.0	+1.6
KSH				*e*SKS	SKS	11 56 32.3	+5.1
KSH				*e*XS		11 56 44.5	
KSH				*e*PS	PS	11 57 23.8	+2.2
KSH				*e*SS	SS	12 01 50.4	+0.8
KSH				AMB	AMB		
	comp=Z,6µm,3.0s						
NVS	**Novosibirsk**	**82.43**	**327**	⇑*i*P	**P**	**11 46 13.1**	**-1.9**
NVS				*i*		11 49 23.7	
NVS				*e*S	S	11 56 26.2	-0.2
NVS				*i* PS	PS	11 57 41.2	+18
NVS				pmax	pmax		
	comp=Z,70nm,1.9s,mb5.3						
NVS				pmax	pmax		
	comp=N,15nm,1.3s						
NVS				pmax	pmax		
	comp=E,23nm,1.4s						
NVS				pmax	pmax		
	comp=Z,25nm,2.0s,mb4.8						
NVS				pmax	pmax		
	comp=N,10.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,25nm,2.0s						
NVS				smax			
	comp=E,115nm,2.9s						
DIV	**Divide**	**83.17**	**26**	*e*P	**P**	**11 46 17.6**	**-1.1**
	comp=E,91nm,0.8s,mb5.9						
DIV				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
MAW	**Mawson**	**83.35**	**203**	*e*P	**P**	**11 46 20.2**	**+0.8**
	comp=Z,17nm,0.9s,mb5.1						
MAW	**Mawson**	**83.35**	**203**	P	**P**	**11 46 21.7**	**+2.3**
MAW				pmax	pmax		
	comp=Z,240nm,1.7s						
MAW	**Mawson**	**83.35**	**203**	P	**P**	**11 46 21.0**	**+1.5**
	comp=Z,12nm,0.6s,mb5.1,baz=89,slow=5.4,SNR=12						
MAW				LR	LR	12 21 05.4	
	comp=Z,4µm,20.1s,MS5.8,baz=82,slow=34						
TKM2	**Tokmak 2**	**83.44**	**314**	P	**P**	**11 46 22.2**	**+1.8**
	SNR=12						
KZA	**Kyzart**	**83.47**	**314**	P	**P**	**11 46 21.6**	**+1.0**
	SNR=18						
KURK	**Kurchatov**	**83.65**	**323**	*i* P	**P**	**11 46 20.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,37nm,1.2s,mb5.4						
KURK	**Kurchatov**	**83.65**	**323**	*e*P	**P**	**11 46 20.4**	**-0.9**
	comp=Z,2µm,1.4s						
QSPA	**South Pole Qui**	**83.65**	**180**	*e*P	**P**	**11 46 21.3**	**+0.6**
	comp=Z,156nm,1.1s,mb6.0						
QSPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
UCH	**Uchtor**	**84.04**	**314**	P	**P**	**11 46 24.6**	**+1.1**
	SNR=29						
COLA	**College**	**84.06**	**22**	*e*P	**P**	**11 46 22.1**	**-0.9**
COLA				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.3						
CHMS	**Chumysh**	**84.06**	**314**	P	**P**	**11 46 24.9**	**+1.3**
	SNR=22						
FRU	**Bishkek**	**84.11**	**314**	*e*P	**P**	**11 46 25.0**	**+1.1**
FRU				*e*		11 56 49.0	
FRU				pmax	pmax		
	comp=Z,130nm,1.8s,mb5.8						
AAK	**Ala-Archa**	**84.15**	**314**	P	**P**	**11 46 25.8**	**+1.7**
	SNR=26						
AAK	**Ala-Archa**	**84.15**	**314**	P	**P**	**11 46 25.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.6						
AAK	**Ala-Archa**	**84.15**	**314**	*e*P	**P**	**11 46 23.1**	**-0.9**
	comp=Z,84nm,1.4s,mb5.7						
AAK				LR	LR		
	comp=Z,806nm,22.0s,MS5.1						
USP	**Ospenovka**	**84.30**	**315**	P	**P**	**11 46 24.5**	**-0.3**
	SNR=45						
ILAR	**Eielson Array**	**84.37**	**22**	P	**P**	**11 46 23.8**	**-0.9**
	comp=Z,31nm,0.9s,mb5.4,baz=249,slow=4.8,SNR=20						
ILAR				LR	LR	12 22 49.8	
	comp=Z,2µm,19.1s,MS5.4,baz=76,slow=35						
AML	**Almayashu**	**84.61**	**313**	P	**P**	**11 46 27.2**	**+0.9**
	SNR=67						
EKS2	**Erkin-Say**	**84.67**	**314**	P	**P**	**11 46 27.2**	**+0.6**
	SNR=36						
CHKZ	**Chkalovo**	**89.17**	**324**	*i* P	**P**	**11 46 46.0**	**-2.2**
CHKZ				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.3						
CHKZ	**Chkalovo**	**89.17**	**324**	*e*P	**P**	**11 46 45.8**	**-2.4**
BVA0	**Borovoye Array**	**89.17**	**323**	*i* P	**P**	**11 46 46.2**	**-2.0**
BVA0				pmax	pmax		
	comp=Z,27nm,2.3s,mb5.2						
BVAR	**Borovoye Array**	**89.17**	**323**	P	**P**	**11 46 46.6**	**-1.6**
	comp=Z,9.6nm,0.8s,mb5.2,baz=124,slow=5.3,SNR=42						
BVAR				S	S	11 57 18.6	-13
	comp=Z,1.0nm,0.9s,baz=190,slow=8.8,SNR=3.9						
DLBC	**Dease Lake**	**89.78**	**31**	P	**P**	**11 46 51.5**	**+0.5**
	comp=Z,9.4nm,0.8s,mb5.2,baz=221,slow=3.7,SNR=12						
DLBC	**Dease Lake**	**89.78**	**31**	*e*P	**P**	**11 46 51.8**	**+0.8**
KBO	**Bosley Butte**	**90.61**	**48**	*e*P	**P**	**11 46 56.5**	**+1.3**
KEBM	**Edson Butte**	**90.62**	**47**	*e*P	**P**	**11 46 55.8**	**+0.5**
INK	**Inuvik**	**90.64**	**21**	P	**P**	**11 46 53.8**	**-1.0**
INK				pmax	pmax		
	comp=Z,54nm,1.3s						
INK	**Inuvik**	**90.64**	**21**	P	**P**	**11 46 54.2**	**-0.5**
	comp=Z,8.4nm,0.6s,mb5.3,baz=234,slow=2.4,SNR=52						
INK	**Inuvik**	**90.64**	**21**	*e*P	**P**	**11 46 53.6**	**-1.2**
	comp=Z,54nm,1.4s,mb5.7						
KHMM	**Horse Mountain**	**90.79**	**49**	*e*P	**P**	**11 46 57.4**	**+1.2**
OCWA	**Octopus Mounta**	**91.40**	**42**	*e*P	**P**	**11 46 59.9**	**+1.1**
	comp=Z,35nm,0.9s,mb5.7						
OSR	**Olympics--Salm**	**91.51**	**43**	P	**P**	**11 47 00.7**	**+1.4**
SYO	**Syowa Base**	**91.53**	**200**	⇑P	**P**	**11 47 03.1**	**+4.2**
HUMO	**Hull Mountain**	**91.59**	**47**	*e*P	**P**	**11 47 00.7**	**+0.8**
	comp=Z,43nm,0.9s,mb5.8						
WDC	**Whiskeytown Da**	**91.65**	**50**	P	**P**	**11 47 01.4**	**+1.2**
WDC				pmax	pmax		
	comp=Z,150nm,1.5s,mb6.1						
WDC	**Whiskeytown Da**	**91.65**	**50**	*e*P	**P**	**11 47 00.8**	**+0.6**
	comp=Z,146nm,1.6s,mb6.1						
YBH	**Yreka Blue Hor**	**91.66**	**48**	P	**P**	**11 47 01.3**	**+1.1**
YBH				pmax	pmax		
	comp=Z,130nm,1.5s						
YBH	**Yreka Blue Hor**	**91.66**	**48**	P	**P**	**11 47 00.9**	**+0.7**
	comp=Z,19nm,1.1s,mb5.4,baz=189,slow=3.2,SNR=27						
YBH	**Yreka Blue Hor**	**91.66**	**48**	*e*P	**P**	**11 47 01.0**	**+0.8**
	comp=Z,126nm,1.5s,mb6.0						
PGC	**Sidney**	**92.00**	**41**	*e*P	**P**	**11 47 03.5**	**+2.0**
	comp=Z,40nm,0.9s,mb5.8						
LHEM	**Herd Peak**	**92.02**	**49**	P	**P**	**11 47 02.8**	**+1.0**
SAO	**San Andreas Ge**	**92.07**	**53**	P	**P**	**11 47 05.0**	**+2.9**
SAO				pmax	pmax		
	comp=Z,180nm,1.8s,mb6.1						
SAO	**San Andreas Ge**	**92.07**	**53**	*e*P	**P**	**11 47 02.4**	**+0.2**
	comp=Z,182nm,1.8s,mb6.1						
BUOR	**Burton Butte**	**92.07**	**48**	P	**P**	**11 47 03.4**	**+1.3**
SSOR	**Sweet Springs**	**92.21**	**45**	P	**P**	**11 47 03.1**	**+0.5**
OHCM	**Honcut**	**92.32**	**51**	*e*P	**P**	**11 47 03.4**	**+0.1**
LRV	**Little Rabbit**	**92.38**	**54**	*e*P	**P**	**11 47 07.5**	**+3.9**
FRIS	**Frissel Point**	**92.40**	**46**	P	**P**	**11 47 04.3**	**+0.8**
LTIM	**Timbered Crate**	**92.51**	**49**	P	**P**	**11 47 04.9**	**+0.8**
LBCM	**Butte Creek Ri**	**92.58**	**49**	P	**P**	**11 47 05.0**	**+0.6**
CMB	**Columbia Colle**	**93.04**	**52**	P	**P**	**11 47 07.5**	**+0.9**
CMB				pmax	pmax		
	comp=Z,85nm,1.4s,mb6.0						
CMB	**Columbia Colle**	**93.04**	**52**	*e*P	**P**	**11 47 07.0**	**+0.4**
	comp=Z,85nm,1.4s,mb6.0						
CROR	**Criterion Ridg**	**93.27**	**45**	P	**P**	**11 47 07.7**	**+0.3**
MOD	**Modoc**	**93.47**	**48**	*e*P	**P**	**11 47 09.1**	**+0.7**
	comp=Z,93nm,1.5s,mb6.0						
WCN	**Washoe City**	**93.65**	**51**	P	**P**	**11 47 10.7**	**+1.4**
WCN				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.7						
WCN	**Washoe City**	**93.65**	**51**	*e*P	**P**	**11 47 10.2**	**+0.9**
	comp=Z,28nm,0.9s,mb5.7						
EBG	**Ellensburg**	**93.74**	**43**	P	**P**	**11 47 10.8**	**+1.3**
OMM	**Old Mammoth Mi**	**94.10**	**53**	*e*P	**P**	**11 47 12.8**	**+1.5**
MTUM	**Tungsten Hills**	**94.42**	**53**	*e*P	**P**	**11 47 14.2**	**+1.3**
MWC	**Mount Wilson**	**94.58**	**56**	P	**P**	**11 47 15.4**	**+1.7**
MWC	**Mount Wilson**	**94.58**	**56**	*e*P	**P**	**11 47 15.1**	**+1.4**
NVAR	**Mina Array Bea**	**94.71**	**52**	P	**P**	**11 47 15.4**	**+1.3**
	comp=Z,9.2nm,0.8s,mb5.3,baz=257,slow=4.4,SNR=60						
NVAR				PP	PP	11 51 04.8	-0.4
	comp=Z,2.4nm,0.9s,baz=245,slow=7.6,SNR=5.0						
NVAR				PKKPbc		12 04 19.1	
	comp=Z,0.7nm,0.7s,baz=80,slow=4.6,SNR=4.8						
NVAR				LR	LR	12 24 53.4	
	comp=Z,4µm,19.3s,MS5.9,baz=270,slow=32						
WVOR	**Wild Horse Val**	**94.75**	**48**	P	**P**	**11 47 14.6**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,77nm,1.4s,mb5.9						
WVOR	**Wild Horse Val**	**94.75**	**48**	*e*P	**P**	**11 47 14.1**	**-0.1**
	comp=Z,77nm,1.4s,mb5.9						
MNV	**Mina**	**94.83**	**52**	P	**P**	**11 47 15.9**	**+1.2**
MNV				pmax	pmax		
	comp=Z,110nm,1.5s,mb6.1						
MNV	**Mina**	**94.83**	**52**	*e*P	**P**	**11 47 15.7**	**+1.0**
	comp=Z,112nm,1.5s,mb6.1						
MNV				*e*PP	PP	11 51 00.6	-5.4
SVE	**Sverdlovsk**	**95.24**	**326**	*e*P	**P**	**11 47 16.0**	**-0.1**
SVE				*e*		11 51 13.0	
SVE				*e*S	S	11 58 15.0	-10
SVE				pmax	pmax		
	comp=Z,40nm,2.0s,mb5.5						
SVE				MLR	MLR		
	comp=N,500nm,22.0s,MS5.5						
SVE				MLR	MLR		
	comp=E,2µm,22.0s,MS5.5						
SVE				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.6						
TPH	**Tonopah**	**95.53**	**52**	P	**P**	**11 47 19.3**	**+1.4**
TPH				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.9						
TPH	**Tonopah**	**95.53**	**52**	*e*P	**P**	**11 47 18.9**	**+1.0**
	comp=Z,68nm,1.5s,mb5.9						
BMN	**Battle Mountai**	**95.68**	**50**	P	**P**	**11 47 21.5**	**+3.0**
BMN				pmax	pmax		
	comp=Z,71nm,1.6s,mb5.8						
BMN	**Battle Mountai**	**95.68**	**50**	*e*P	**P**	**11 47 20.3**	**+1.8**
	comp=Z,71nm,1.6s,mb5.8						
BMO	**Blue Mountains**	**95.87**	**46**	P	**P**	**11 47 19.6**	**+0.4**
BMO				pmax	pmax		
	comp=Z,69nm,1.5s,mb5.9						
BMO	**Blue Mountains**	**95.87**	**46**	*e*P	**P**	**11 47 18.5**	**-0.7**
	comp=Z,69nm,1.6s,mb5.8						
RPN	**Rapa Nui**	**96.01**	**118**	LR	LR	12 23 39.0	
	comp=Z,451nm,18.6s,MS5.0,baz=266,slow=31						
NEW	**Newport**	**96.16**	**42**	P	**P**	**11 47 20.8**	**+0.3**
NEW				pmax	pmax		
	comp=Z,79nm,1.7s						
NEW	**Newport**	**96.16**	**42**	*e*P	**P**	**11 47 20.3**	**-0.2**
	comp=Z,79nm,1.7s,mb5.9						
TRCR	**Troy Canyon**	**96.84**	**52**	*e*P	**P**	**11 47 25.6**	**+1.8**
LDFC	**Landfair**	**97.06**	**56**	*e*P	**P**	**11 47 26.4**	**+1.5**
ELK	**Elko**	**97.20**	**50**	P	**P**	**11 47 26.9**	**+1.5**
ELK				pmax	pmax		
	comp=Z,44nm,1.5s						
ELK	**Elko**	**97.20**	**50**	*e*P	**P**	**11 47 26.0**	**+0.5**
	comp=Z,44nm,1.5s,mb5.7						
ELK				*e*PP	PP	11 51 18.4	-6.3
YKW3	**Yellowknife Ar**	**97.76**	**28**	*e*P	**P**	**11 47 27.0**	**-0.4**
YKA	**Yellowknife Ar**	**97.77**	**28**	P	**P**	**11 47 27.1**	**-0.3**
YKA	**Yellowknife Ar**	**97.77**	**28**	P	**P**	**11 47 27.0**	**-0.4**
	comp=Z,8.3nm,0.7s,mb5.4,baz=269,slow=4.5,SNR=132						
YKA				PKiKP		11 52 02.9	
	comp=Z,1.6nm,0.9s,baz=276,slow=1.4,SNR=7.9						
YKA				PKKP	PKKP	12 04 02.2	+5.9
	comp=Z,0.7nm,0.6s,baz=88,slow=2.9,SNR=14						
YKA				LR	LR	12 27 24.4	
	comp=Z,2µm,20.5s,MS5.5,baz=285,slow=33						
HLID	**Hailey**	**97.90**	**47**	*e*P	**P**	**11 47 28.7**	**+0.2**
	comp=Z,7.9nm,0.9s,mb5.2						
WALA	**Waterton Lakes**	**98.31**	**41**	*e*P	**P**	**11 47 31.3**	**+1.1**
	comp=Z,33nm,1.2s,mb5.7						
ARUT	**Antelope Range**	**98.51**	**53**	P	**P**	**11 47 34.0**	**+2.6**
ARUT	**Antelope Range**	**98.51**	**53**	*e*P	**P**	**11 47 33.4**	**+2.0**
EDM	**Edmonton**	**98.62**	**37**	P	**P**	**11 47 31.8**	**+0.3**
EDM	**Edmonton**	**98.62**	**37**	*e*P	**P**	**11 47 31.5**	**-0.1**
CHMT	**Chamberlain Mo**	**98.75**	**44**	*e*P	**P**	**11 47 32.0**	**-0.2**
BGU	**Big Grassy Mou**	**98.88**	**50**	*e*P	**P**	**11 47 36.2**	**+3.2**
MCMT	**McKenzie Canyo**	**99.03**	**46**	*e*P	**P**	**11 47 34.1**	**+0.5**
HVU	**Hansel Valley**	**99.08**	**49**	P	**P**	**11 47 35.3**	**+1.4**
HVU	**Hansel Valley**	**99.08**	**49**	*e*P	**P**	**11 47 35.1**	**+1.2**
MSU	**Marysvale**	**99.52**	**52**	P	**P**	**11 47 38.1**	**+2.1**
MSU	**Marysvale**	**99.52**	**52**	*e*P	**P**	**11 47 37.3**	**+1.3**
QLMT	**Earthquake Lak**	**100.05**	**46**	*e*P	P	11 47 39.7	+1.5
JLU	**Jordanelle**	**100.08**	**50**	*e*P	P	11 47 38.9	+0.4
WUAZ	**Wupatki**	**100.13**	**55**	*e*Pdif	P	11 47 39.9	+1.0
DAU	**Daniels Canyon**	**100.23**	**50**	P	P	11 47 45.1	+5.9
DAU	**Daniels Canyon**	**100.23**	**50**	*e*Pdif	P	11 47 41.1	+2.0
TMUT	**Trail Mountain**	**100.27**	**51**	*e*P	P	11 47 40.5	+1.1
AHID	**Auburn Hatcher**	**100.32**	**48**	*e*P	P	11 47 39.8	+0.3
	comp=Z,8.6nm,0.9s						
YMR	**Madison River**	**100.38**	**46**	*e*P	P	11 47 39.3	-0.4
IMW	**Indian Meadow**	**100.42**	**47**	*e*P	P	11 47 40.5	+0.6
TPAW	**Teton Pass**	**100.42**	**47**	*e*P	P	11 47 39.9	-0.1
YFT	**Old Faithful**	**100.48**	**46**	*e*P	P	11 47 41.7	+1.5
YNR	**Norris Junctio**	**100.58**	**46**	*e*P	P	11 47 41.2	+0.5
LOHW	**Long Hollow**	**100.67**	**47**	*e*P	P	11 47 41.4	+0.3
SRU	**San Rafael**	**100.81**	**52**	P	P	11 47 42.8	+1.0
SRU	**San Rafael**	**100.81**	**52**	*e*P	P	11 47 42.2	+0.4
PDAR	**Pinedale Array**	**101.45**	**48**	P	P	11 47 44.5	-0.2
	comp=Z,5.5nm,0.8s,baz=251,slow=2.2,SNR=26						
PDAR				PP	PP	11 51 56.0	-1.3
	comp=Z,3.8nm,1.2s,baz=225,slow=4.2,SNR=5.1						
PDAR				PKiKP		11 52 09.3	
	comp=Z,1.2nm,0.8s,baz=243,slow=3.3,SNR=5.7						
PDAR				PKKPbc		12 03 56.6	
	comp=Z,0.9nm,1.0s,baz=90,slow=4.4,SNR=4.1						
PV10	**Paradox Valley**	**101.98**	**52**	*e*Pdif	P	11 47 47.6	+0.5
PV01	**Paradox Valley**	**102.36**	**52**	*e*Pdif	Pdif	11 47 48.5	-0.3
KBS	**Kingsbay**	**104.58**	**352**	*e*PP	PP	11 52 16.1	-3.9
KBS				*e*SKSa		11 58 34.3	
KBS				*e*SS	SS	12 06 57.7	-7.7
TXAR	**Lajitas Array**	**106.74**	**61**	PKiKP		11 52 20.1	
	comp=Z,0.3nm,0.7s,baz=239,slow=2.4,SNR=3.7						
TXAR				PP	PP	11 52 32.5	-4.8
	comp=Z,0.9nm,0.8s,baz=288,slow=4.0,SNR=5.9						
TXAR				PKKPbc		12 03 41.3	
	comp=Z,0.6nm,0.7s,baz=117,slow=4.2,SNR=4.8						
TXAR				PKKPab		12 03 57.4	
	comp=Z,1.3nm,0.8s,baz=104,slow=5.2,SNR=7.2						
ARCES	**ARCESS Array B**	**107.67**	**342**	PKiKP		11 52 19.9	
	comp=Z,5.5nm,0.8s,slow=1.2,SNR=6.5						
TRO	**Tromso**	**109.51**	**344**	*e*PP	PP	11 52 42.0	-15
TRO				*e*		12 03 06.7	
ULM	**Lac du Bonnet**	**109.76**	**39**	PKiKP		11 52 24.0	
	comp=Z,2.8nm,0.8s,baz=252,slow=1.7,SNR=6.2						
FINES	**FINESS Array B**	**111.52**	**335**	Pdiff	Pdif	11 48 28.2	-0.3
	comp=Z,1.6nm,0.8s,baz=72,slow=8.8,SNR=3.3						
FINES				PKiKP		11 52 26.0	
	comp=Z,2.8nm,0.8s,baz=108,slow=6.0,SNR=7.6						
EYMN	**Ely**	**113.16**	**40**	*e*PKPdf	PKPdf	11 52 29.7	+0.9
SUMG	**Summit**	**113.58**	**3**	*e*PKPdf	PKPdf	11 52 32.0	+3.0
MNK	**Minsk**	**113.76**	**328**	*e*PKIKP	PKPdf	11 52 29.0	-0.8
JMIC	**Jan Mayen**	**114.06**	**353**	*e*	PP	11 53 07.3	-23
AKASG	**Malin Array Be**	**114.45**	**323**	PKP	PKPdf	11 52 32.8	+1.4
	comp=Z,6.4nm,0.7s,baz=62,slow=2.3,SNR=11						
AKASG				PKKPab		12 03 19.5	
	comp=Z,0.2nm,0.2s,baz=259,slow=4.8,SNR=4.3						
BRTR	**Keskin Array B**	**114.69**	**311**	PKP	PKPdf	11 52 33.1	+1.0
	comp=Z,1.4nm,0.7s,baz=135,slow=3.5,SNR=6.4						
NSS	**Namsos**	**114.92**	**342**	*e*	PP	11 53 19.3	-17
NSS				AMS	AMS	12 44 48.4	
	comp=Z,1µm,16.8s,MS5.5						
CCM	**Cathedral Cave**	**115.91**	**51**	PKIKP	PKPdf	11 52 36.8	+2.4
CCM	**Cathedral Cave**	**115.91**	**51**	*e*PKPdf	PKPdf	11 52 35.2	+0.8
FRB	**Frobisher Bay**	**116.14**	**18**	PKP	PKPdf	11 52 34.9	+0.7
	comp=Z,6.1nm,0.7s,baz=355,slow=4.3,SNR=5.9						
SUW	**Suwalki**	**116.43**	**328**	*e*PKIKP	PKPdf	11 52 36.8	+1.8
SUW				*e*		11 52 42.4	
SUW				MLR	MLR		
	comp=Z,2µm,23.5s,MS5.7						
SUW	**Suwalki**	**116.43**	**328**	*e*PKP	PKPdf	11 52 36.8	+1.7
SUW				*e*pPKP		11 52 42.5	
SUW				MLR	MLR	12 39 31.5	
	comp=Z,2µm,23.5s,MS5.7						
CFR	**Carcaliu**	**117.07**	**318**	⇓P	PKPdf	11 52 38.2	+1.7
MATP	**Matopo**	**117.26**	**243**	PKP	PKPdf	11 52 39.0	+1.6
	comp=Z,3.8nm,0.6s,baz=133,slow=1.2,SNR=13						
HFS	**Hagfors**	**117.27**	**337**	PKP	PKPdf	11 52 37.5	+1.0
	comp=Z,2.7nm,0.5s,baz=63,slow=3.3,SNR=6.7						
NB2	**NORSAR Subarra**	**117.58**	**339**	PKPdf	PKPdf	11 52 37.1	+0.1
	comp=Z,1.6nm,0.6s,baz=45,slow=1.9						
NB2	**NORSAR Subarra**	**117.58**	**339**	PKPd	PKPdf	11 52 37.1	+0.1
	baz=44,slow=1.9						
NOA	**NORSAR Array B**	**117.58**	**339**	PKP	PKPdf	11 52 38.0	+1.0
	comp=Z,4.5nm,0.8s,baz=50,slow=1.7,SNR=14						
LVV	**L'vov**	**117.86**	**324**	*i* PKIKP	PKPdf	11 52 39.7	+1.9
LVV				*e*		11 53 58.7	
LVV				*e*PS	PS	12 03 32.1	-5.7
BURAR	**Bucovina Array**	**118.06**	**321**	⇑P	PKPdf	11 52 41.6	+3.3
LBTB	**Lobatse**	**118.15**	**237**	SKPdf		11 55 49.2	
LBTB				SKPdf		11 55 50.3	
MLR	**Muntele Rosu**	**118.41**	**319**	PKP	PKPdf	11 52 40.5	+1.5
	comp=Z,7.8nm,0.8s,baz=38,slow=3.4,SNR=7.8						
MLR	**Muntele Rosu**	**118.41**	**319**	P	PKPdf	11 52 41.4	+2.4
MLR	**Muntele Rosu**	**118.41**	**319**	⇑P	PKPdf	11 52 41.0	+2.0
KWP	**Kalwaria**	**118.71**	**324**	*e*PKP	PKPdf	11 52 41.0	+1.5
KWP				*e*pPKP		11 52 55.3	
KWP	**Kalwaria**	**118.71**	**324**	*e*PKP	PKPdf	11 52 41.0	+1.4
KWP				*e*pPKP		11 52 55.3	
KWP				MLR	MLR	12 38 41.2	
	comp=Z,3µm,32.1s,MS5.7						
LSZ	**Lusaka**	**119.09**	**249**	PKIKP	PKPdf	11 52 43.9	+2.8
LSZ	**Lusaka**	**119.09**	**249**	*e*PKPdf	PKPdf	11 52 43.5	+2.4
BLO	**Bloomington**	**119.19**	**48**	PKIKP	PKPdf	11 52 43.7	+2.9
BLO	**Bloomington**	**119.19**	**48**	*e*PKPdf	PKPdf	11 52 42.3	+1.5
KOLS	**Kolonicke sedl**	**119.28**	**324**	*e*PKP	PKPdf	11 52 42.9	+2.2
KOLS				*e*		11 52 48.9	
WCI	**Wyandotte Cave**	**119.64**	**49**	PKIKP	PKPdf	11 52 44.2	+2.5
WCI	**Wyandotte Cave**	**119.64**	**49**	*e*PKPdf	PKPdf	11 52 42.4	+0.7
CRVS	**Cervenica-Dubn**	**119.77**	**324**	*e*PKP	PKPdf	11 52 46.0	+4.3
PLCA	**Paso Flores**	**119.83**	**145**	PKP	PKPdf	11 52 43.1	+1.2
	comp=Z,2.4nm,0.8s,baz=258,slow=4.4,SNR=6.4						
BER	**Bergen**	**120.06**	**341**	*e*PP	PP	11 54 04.7	-6.4
OJC	**Ojcow**	**120.09**	**326**	*e*PKPdf	PKPdf	11 52 45.1	+2.8
NIE	**Niedzica**	**120.19**	**325**	*e*PKP	PKPdf	11 52 43.2	+0.7
LRAL	**Lakeview Retre**	**120.42**	**55**	*e*PKPdf	PKPdf	11 52 44.0	+0.6
BZS	**Buzias**	**121.14**	**320**	P	PKPdf	11 52 46.2	+1.8
BZS	**Buzias**	**121.14**	**320**	⇑P	PKPdf	11 52 45.7	+1.3

PSZ	**Piszkesteto**	**121.15**	**323**	PKIKP	PKPdf	11 52 46.8	+2.4
PSZ	**Piszkesteto**	**121.15**	**323**	*e*PKPdf	PKPdf	11 52 44.7	+0.3
PSZ	**Piszkesteto**	**121.15**	**323**	⇓*e*PKP/D	PKPdf	11 52 46.3	+1.9
OKC	**Ostrava-Krasne**	**121.20**	**326**	*e*PKPdf	PKPdf	11 52 46.3	+1.9
OKC				*e*PS	PS	12 04 05.4	-2.6
OKC				AMS	AMS	12 52 10.0	
	comp=Z,2µm,16.7s						
VTS	**Vitosha**	**121.33**	**317**	PKIKP	PKPdf	11 52 47.0	+2.2
ACSO	**Alum Creek Sta**	**121.45**	**46**	*e*PKPdf	PKPdf	11 52 46.0	+0.9
VYHS	**Vyhne**	**121.49**	**324**	*i* PKP	PKPdf	11 52 46.4	+1.4
MORC	**Moravsky Berou**	**121.57**	**326**	P	PKPdf	11 52 47.0	+1.9
MORC	**Moravsky Berou**	**121.57**	**326**	⇑P	PKPdf	11 52 46.8	+1.7
BOLS	**Boljevac**	**121.67**	**318**	⇑*i*P	PKPdf	11 52 46.0	+0.6
KSP	**Ksiaz**	**121.67**	**328**	*e*PKP	PKPdf	11 52 46.7	+1.4
KSP				*e*PP	PP	11 54 25.0	+2.4
KSP				*e*SP	SP	12 04 05.5	-1.3
KSP				*e*SS	SS	12 10 48.0	-4.5
KSP				LR	LR		
	comp=Z,4µm,20.3s,MS6.0						
KSP	**Ksiaz**	**121.67**	**328**	*e*PKP	PKPdf	11 52 47.1	+1.9
KSP				*e*pPKP		11 53 00.3	
KSP				MLR	MLR	12 44 12.0	
	comp=Z,2µm,25.3s,MS5.7						
CPCT	**Cooper Cave**	**121.79**	**52**	*e*PKPdf	PKPdf	11 52 46.1	+0.2
DPC	**Dobruska-Polom**	**121.93**	**327**	*e*PKPdf	PKPdf	11 52 47.5	+1.7
DPC				*e*PS	PS	12 04 14.7	+0.2
DPC				AMS	AMS	12 48 00.0	
	comp=Z,2µm,19.8s						
UPC	**Upice**	**122.01**	**328**	*e*PKPdf	PKPdf	11 52 48.0	+2.1
BARS	**Barje**	**122.17**	**317**	⇑*i*P	PKPdf	11 52 47.6	+1.1
VRAC	**Vranov**	**122.34**	**326**	PKP	PKPdf	11 52 47.1	+0.5
	comp=Z,3.5nm,0.5s,baz=79,slow=5.5,SNR=6.5						
IDI	**Anoyia**	**122.55**	**308**	PKP	PKPdf	11 52 47.8	+0.4
	comp=Z,32nm,0.9s,baz=29,slow=6.8,SNR=6.0						
ZST	**Bratislava**	**122.64**	**325**	*e*PKP	PKPdf	11 52 49.2	+2.0
ZST				*e*		11 53 38.9	
PKSM	**Moragy**	**122.72**	**322**	⇑P	PKPdf	11 52 48.5	+1.1
PVCC	**Panska Ves**	**122.76**	**328**	*e*PKPdf	PKPdf	11 52 49.7	+2.3
PVCC				AMS	AMS	12 49 20.0	
	comp=Z,2µm,20.1s						
SKO	**Skopje**	**122.78**	**317**	*i* PKP	PKPdf	11 52 49.5	+1.8
DIVS	**Divcibare**	**122.84**	**319**	⇑*i*P	PKPdf	11 52 48.5	+0.8
BRG	**Berggiesshubel**	**122.88**	**329**	*i* PKIKP	PKPdf	11 52 49.4	+1.8
BRG				*i*		11 52 54.9	
BRG				*e*		11 54 31.0	
BRG				*i* SP	SP	12 04 21.0	+3.3
BRG				*i* SS	SS	12 11 20.0	+12
BRG				pmax	pmax		
	comp=Z,62nm,1.3s						
BRG				MLR	MLR		
	comp=N,2µm,18.4s,MS5.9						
BRG				MLR	MLR		
	comp=E,1µm,18.4s,MS5.9						
BRG				MLR	MLR		
	comp=Z,3µm,18.4s,MS5.9						
SCHQ	**Schefferville**	**123.07**	**25**	PKP	PKPdf	11 52 48.8	+0.9
	comp=Z,3.2nm,0.7s,baz=326,slow=5.9,SNR=12						
SCHQ				PKKPbc		12 02 45.3	
	comp=Z,3.1nm,0.9s,baz=86,slow=2.1,SNR=5.1						
SCHQ	**Schefferville**	**123.07**	**25**	*e*PKPdf	PKPdf	11 52 48.8	+0.9
PRU	**Pruhonice**	**123.08**	**328**	*e*PKPdf	PKPdf	11 52 49.4	+1.4
PRU				*e*SP	SP	12 04 19.8	+0.4
PRU				AMS	AMS	12 48 10.0	
	comp=Z,1µm,22.7s						
CLL	**Collm**	**123.10**	**330**	*i* PKIKP	PKPdf	11 52 49.5	+1.5
CLL				pmax	pmax		
	comp=Z,17nm,0.8s						
CLL				MLR	MLR		
	comp=Z,3µm,24.2s,MS5.8						
CLL	**Collm**	**123.10**	**330**	*i* PKP	PKPdf	11 52 49.5	+1.5
CLL				*i*		11 52 53.4	
CLL				LR	LR		
	comp=Z,3µm,24.2s,MS5.8						
CLL	**Collm**	**123.10**	**330**	*i* PKIKP	PKPdf	11 52 49.5	+1.5
	comp=Z,logA/T=1.3						
CLL				*i* *PPKP		11 52 53.4	
CLL				*e*		11 53 03.0	
CLL				*e*PP	PP	11 54 33.0	+0.4
CLL				*e*PPP	PPP	11 57 18.0	+8.1
CLL				*e*		12 04 17.0	
CLL				*e*PPS	PPS	12 05 44.0	-10
CLL				*e*		12 06 28.0	
CLL				*e*		12 07 16.0	
CLL				*e*SS	SS	12 11 42.0	+31
CLL				*e*SSS	SSS	12 15 24.0	-21
FWV	**Forest Hill**	**123.95**	**49**	*e*PKPdf	PKPdf	11 52 51.4	+1.3
GENY	**Geneseo**	**124.02**	**42**	*e*PKPdf	PKPdf	11 52 52.3	+2.3
NKC	**Novy Kostel**	**124.03**	**329**	*e*PKPdf	PKPdf	11 52 51.4	+1.5
NKC				AMS	AMS	12 49 40.0	
	comp=Z,2µm,18.8s						
ARSA	**Arzberg**	**124.05**	**325**	⇓*i*P	PKPdf	11 52 51.6	+1.6
CLZ	**Clausthal**	**124.06**	**331**	*e*PKPdf	PKPdf	11 52 51.2	+1.3
KHC	**Kasperske Hory**	**124.09**	**327**	*e*PKPdf	PKPdf	11 52 51.4	+1.4
KHC				*e*PS	PS	12 04 34.0	+1.1
KHC				AMS	AMS	12 49 40.0	
	comp=Z,1µm,19.1s						
GEC2	**GERESS Array S**	**124.18**	**327**	*e*PKIKP	PKPdf	11 52 51.8	+1.6
GERES	**GERESS Array B**	**124.18**	**327**	PKP	PKPdf	11 52 51.4	+1.2
	comp=Z,12nm,0.7s,baz=73,slow=1.8,SNR=52						
MOX	**Moxa**	**124.20**	**330**	*e*PKIKP	PKPdf	11 52 52.3	+2.1
MOX				pmax	pmax		
	comp=Z,57nm,1.5s						
MOX				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.5						
MOX	**Moxa**	**124.20**	**330**	*i* P	PKPdf	11 52 52.3	+2.1
	comp=Z,logA/T=1.6						
MOX				PP	PP	11 54 48.0	+7.9
MOX				*e*		12 04 35.0	
MOX				SS	SS	12 11 44.0	+20
MOX				L		12 50 33.0	
MOA	**Molln**	**124.43**	**326**	⇑*i*P	PKPdf	11 52 51.9	+1.2
WET	**Wettzell**	**124.45**	**328**	*e*PKIKP	PKPdf	11 52 52.3	+1.6
JSC	**Jenkinsville**	**124.69**	**52**	*e*PKIKP	PKPdf	11 52 53.2	+1.6
JSC	**Jenkinsville**	**124.69**	**52**	PKIKP	PKPdf	11 52 54.9	+3.3
LEGS	**Legarje**	**124.85**	**323**	*e*PKPdf	PKPdf	11 52 52.7	+1.2
LEGS				*e*		11 55 00.7	
SSPA	**Standing Stone**	**124.88**	**44**	*e*PKPdf	PKPdf	11 52 52.9	+1.1
GRA1	**Grafenberg Arr**	**124.99**	**329**	*e*PKPdf	PKPdf	11 52 53.5	+1.8
GRF	**Grafenberg Arr**	**124.99**	**329**	*e*PKIKP	PKPdf	11 52 53.5	+1.8
GRF	**Grafenberg Arr**	**124.99**	**329**	*e*PKIKP	PKPdf	11 52 53.5	+1.8
LJU	**Ljubljana**	**125.27**	**324**	*e*PKPdf	PKPdf	11 52 54.0	+1.6
LJU				*e*		11 53 07.7	
LJU				*e*		12 07 17.0	
KBA	**Koelnbreinsper**	**125.38**	**325**	⇑*i*P	PKPdf	11 52 53.3	+0.8
WTSB	**Winterswijk**	**125.62**	**333**	*e*PKiKP		11 52 54.5	
	comp=Z,28nm,1.8s						
VOY	**Vojsko**	**125.65**	**324**	*e*PKPdf	PKPdf	11 52 52.2	-0.9
VOY				*e*		11 52 54.2	
PTCC	**Patocco-Chiusa**	**125.76**	**325**	*e*PKP	PKPdf	11 52 54.2	+1.0
GMNA	**Gemona**	**125.89**	**325**	*e*PKP	PKPdf	11 52 55.0	+1.5
FVI	**Forni Avoltri**	**125.98**	**325**	*e*PKIKP	PKPdf	11 52 55.5	+1.8
TNS	**Taunus Mts**	**126.03**	**331**	*e*PKIKP	PKPdf	11 52 55.5	+1.8
SDMD	**Soldier's Deli**	**126.13**	**45**	*e*PKPdf	PKPdf	11 52 55.4	+1.2
MVL	**Millersville**	**126.22**	**44**	*e*PKPdf	PKPdf	11 52 55.9	+1.5
WATA	**Walderalm**	**126.22**	**326**	⇓*i*P	PKPdf	11 52 55.6	+1.5
WTTA	**Wattenberg**	**126.23**	**326**	⇑*i*P	PKPdf	11 52 55.6	+1.4
TOD	**Tromm**	**126.26**	**330**	PKIKP	PKPdf	11 52 56.0	+1.8
MOTA	**Moosalm**	**126.47**	**327**	⇑*i*P	PKPdf	11 52 56.1	+1.5
SQTA	**Sankt Quirin**	**126.49**	**327**	⇑*i*P	PKPdf	11 52 56.2	+1.5
STU	**Stuttgart**	**126.60**	**329**	PKIKP	PKPdf	11 52 57.0	+2.1
STU	**Stuttgart**	**126.60**	**329**	*e*PKPdf	PKPdf	11 52 56.3	+1.4
ABH	**Alteburg**	**126.69**	**331**	PKP	PKPdf	11 52 57.5	+2.5
EKA	**Eskdalemuir Ar**	**126.82**	**342**	PKP	PKPdf	11 52 56.4	+1.3
	comp=Z,6.4nm,0.7s,baz=26,slow=3.7,SNR=11						
HGN	**Heimansgroeve**	**126.85**	**333**	*e*PKiKP		11 52 55.6	
	comp=Z,20nm,1.6s						
HGN				*e*PP	PP	11 54 39.4	-18
HGN				*e*x	x	12 03 10.8	
HGN				*e*PPS	PPS	12 06 09.7	-21
HGN				*e*SS	SS	12 11 44.7	-13
HGN				*e*SSS	SSS	12 17 06.7	+26
CTI	**Castel Tesino**	**126.93**	**325**	*e*PKIKP	PKPdf	11 52 56.9	+1.3
RUP	**Ruppelstein**	**127.05**	**331**	PKIKP	PKPdf	11 52 58.1	+2.4
CFAA	**Coronel Fontan**	**127.10**	**138**	PKP	PKPdf	11 52 57.2	+0.9
	comp=Z,1.2nm,0.7s,baz=248,slow=3.3,SNR=19						
LANF	**Langenberg**	**127.17**	**330**	PKP	PKPdf	11 52 57.3	+1.3
DAVA	**Damuels**	**127.17**	**327**	⇑*i*P	PKPdf	11 52 57.7	+1.7
TIP	**Timpagrande**	**127.18**	**315**	*e*PKPdf	PKPdf	11 52 58.0	+1.7
TSUM	**Tsumeb**	**127.27**	**240**	*e*PKPdf	PKPdf	11 52 59.6	+2.6
BFO	**Black Forest**	**127.33**	**329**	*e*PKIKP	PKPdf	11 52 59.4	+3.1
BRMO	**Bormio**	**127.40**	**326**	*e*PKP	PKPdf	11 52 58.1	+1.7
PAL	**Palisades**	**127.42**	**42**	PKIKP	PKPdf	11 53 00.1	+3.4
PAL	**Palisades**	**127.42**	**42**	*e*PKPdf	PKPdf	11 52 58.4	+1.8
DAVOX	**Davos**	**127.48**	**327**	PKP	PKPdf	11 52 58.4	+1.7
	comp=Z,24nm,0.8s,baz=90,slow=0.5,SNR=20						
WLF	**Walferdange**	**127.51**	**332**	PKIKP	PKPdf	11 52 59.4	+2.8
WLF	**Walferdange**	**127.51**	**332**	*e*PKPdf	PKPdf	11 52 59.2	+2.6
SGO	**Sicignano**	**127.55**	**318**	*e*PKIKP	PKPdf	11 52 59.7	+2.8
GRI	**Girifalco**	**127.57**	**315**	*e*PKIKP	PKPdf	11 52 59.7	+2.7
FSSB	**Fossombrone**	**127.58**	**322**	*e*PKP	PKPdf	11 52 59.0	+2.1
ARV	**Arcevia**	**127.59**	**322**	*e*PKP	PKPdf	11 52 59.1	+2.1
WLS	**Welschbruch**	**127.77**	**330**	PKP	PKPdf	11 52 58.6	+1.5
FELD	**Feldberg**	**127.79**	**329**	PKP	PKPdf	11 52 58.6	+1.4
CDF	**Champ du Feu**	**127.81**	**330**	*e*PKP1	PKPdf	11 52 58.7	+1.5
	comp=Z,114nm,1.4s						
GIVF	**Givet**	**127.82**	**333**	*e*PKP1	PKPdf	11 52 59.2	+2.0
	comp=Z,297nm,1.5s						
SFI	**Santa Sofia**	**128.03**	**323**	*e*PKIKP	PKPdf	11 52 59.0	+1.2
BAIF	**Baives**	**128.13**	**333**	*e*PKP1	PKPdf	11 52 59.6	+1.8
	comp=Z,93nm,1.4s						
MOF	**Molkenrain**	**128.25**	**329**	PKP	PKPdf	11 52 59.0	+0.9
ZCCA	**Zocca**	**128.30**	**324**	*e*PKP	PKPdf	11 53 00.4	+2.2
HINF	**Hinteralfeld**	**128.41**	**329**	*e*PKP1	PKPdf	11 52 59.9	+1.5
	comp=Z,318nm,1.5s						
GSCL	**Gusciola**	**128.53**	**324**	*e*PKP	PKPdf	11 53 03.3	+4.6
HAU	**Haudompre**	**128.54**	**330**	*e*PKP1	PKPdf	11 53 00.3	+1.7
	comp=Z,207nm,1.4s						
THEF	**They Montfort**	**128.57**	**330**	PKP	PKPdf	11 53 00.9	+2.2
VAI	**Varese**	**128.65**	**326**	*e*PKIKP	PKPdf	11 53 00.1	+1.2
BDI	**Bagni Di Lucca**	**128.69**	**324**	*e*PKIKP	PKPdf	11 53 01.9	+2.9
MEZF	**Maizieres J'vi**	**128.83**	**331**	*e*PKP1	PKPdf	11 53 01.4	+2.2
	comp=Z,320nm,1.5s						
MCGN	**Macugnaga**	**129.02**	**327**	*e*PKP	PKPdf	11 53 01.5	+1.9
NNA	**Nana**	**129.40**	**111**	*e*PKPdf	PKPdf	11 53 03.2	+2.1
OG01	**Vacheresse**	**129.48**	**328**	PKP	PKPdf	11 52 58.8	-1.6
CABF	**La Chapelle**	**129.60**	**329**	*e*PKP1	PKPdf	11 53 02.9	+2.2
	comp=Z,366nm,1.6s						
DCN	**Croghan**	**129.78**	**343**	*e*P	PKPdf	11 53 04.4	+3.6
LPL	**La Plagne**	**129.98**	**327**	*e*PKP1	PKPdf	11 53 03.7	+2.3
LPG	**La Plagne**	**129.98**	**327**	*e*PKP1	PKPdf	11 53 03.8	+2.4
BNI	**Bardonecchia**	**130.31**	**327**	PKIKP	PKPdf	11 53 05.1	+3.0
BNI	**Bardonecchia**	**130.31**	**327**	*e*PKPdf	PKPdf	11 53 02.9	+0.9
MBDF	**Montbardon**	**130.46**	**326**	*e*PKP1	PKPdf	11 53 04.3	+1.9
SAOF	**Saorge**	**130.49**	**325**	PKP	PKPdf	11 53 04.1	+1.7
PGF	**Pioggiola**	**130.51**	**323**	*e*PKP1	PKPdf	11 53 04.1	+1.6
	comp=Z,421nm,1.6s						
SSF	**Saint Saulge**	**130.59**	**331**	*e*PKP1	PKPdf	11 53 04.6	+2.1
	comp=Z,70nm,1.1s						
SURF	**Saint Ours**	**130.60**	**326**	PKP	PKPdf	11 53 05.6	+3.0
SBF	**Sospel**	**130.64**	**325**	*e*PKP1	PKPdf	11 53 04.2	+1.5
	comp=Z,364nm,1.6s						
OTAV	**Otavalo**	**130.65**	**95**	*e*PKPdf	PKPdf	11 53 04.8	+1.2
TOUF	**Mont Tournerai**	**130.65**	**325**	PKP	PKPdf	11 53 05.4	+2.7
SMF	**Signal de Mont**	**130.71**	**330**	*e*PKP1	PKPdf	11 53 04.6	+1.8
	comp=Z,212nm,1.4s						
MVIF	**Mont Vial**	**130.78**	**325**	PKP	PKPdf	11 53 03.2	+0.2
ORIF	**Oris-en-Rattie**	**130.82**	**327**	*e*PKP1	PKPdf	11 53 04.9	+1.9
	comp=Z,32nm,0.8s						
AVF	**Avril sur Loir**	**130.85**	**331**	*e*PKP1	PKPdf	11 53 04.8	+1.8
	comp=Z,221nm,1.9s						
HYF	**Humbligny**	**130.86**	**332**	*e*PKP1	PKPdf	11 53 05.5	+2.5
LDF	**La Druitiere**	**131.12**	**335**	*e*PKP1	PKPdf	11 53 05.4	+1.9
	comp=Z,119nm,1.4s						
FLN	**La Foliniere**	**131.14**	**335**	*e*PKP1	PKPdf	11 53 05.5	+2.0
	comp=Z,184nm,1.4s						
BGF	**Bois d'Agland**	**131.26**	**331**	*e*PKP1	PKPdf	11 53 05.9	+2.1
	comp=Z,45nm,0.9s						
FRF	**La Foret Royal**	**131.27**	**325**	*e*PKP1	PKPdf	11 53 05.7	+1.8
	comp=Z,375nm,1.6s						
AGO	**Saint Agoulin**	**131.48**	**330**	PKP	PKPdf	11 53 07.2	+2.9
LMR	**La Mourre**	**131.49**	**325**	*e*PKP1	PKPdf	11 53 06.1	+1.7
	comp=Z,225nm,1.4s						
VIVF	**Saint-Julien-l**	**131.51**	**328**	*e*PKP1	PKPdf	11 53 06.3	+2.0
	comp=Z,184nm,1.5s						
GRR	**Gorron**	**131.59**	**335**	*e*PKP1	PKPdf	11 53 06.4	+2.0
SMRF	**Simiane la Rot**	**131.60**	**326**	*e*PKP1	PKPdf	11 53 07.1	+2.5
	comp=Z,234nm,1.5s						
TCF	**Toulx Ste Croi**	**131.76**	**331**	*e*PKP1	PKPdf	11 53 07.0	+2.2
	comp=Z,194nm,1.5s						
LVC	**Limon Verde**	**131.79**	**128**	PKP	PKPdf	11 53 07.8	+2.3
	comp=Z,1.5nm,0.5s,baz=124,slow=3.7,SNR=3.7						
LVC	**Limon Verde**	**131.79**	**128**	*e*PKPdf	PKPdf	11 53 07.9	+2.4
TREF	**Trevaresse**	**131.94**	**326**	PKP	PKPdf	11 53 07.0	+1.8
LBL	**Lubilhac**	**131.99**	**329**	PKP	PKPdf	11 53 08.8	+3.5
GELF	**Grande-Etoile**	**132.07**	**326**	PKP	PKPdf	11 53 08.3	+2.8
SGMF	**Saint Gilles**	**132.40**	**336**	*e*PKP1	PKPdf	11 53 07.6	+1.7
	comp=Z,83nm,1.0s						
LASF	**Ste Croix**	**132.47**	**328**	*e*PKP1	PKPdf	11 53 08.3	+2.1
	comp=Z,99nm,1.3s						
ROSF	**Rostrenen**	**132.62**	**337**	*e*PKP1	PKPdf	11 53 08.1	+1.7
	comp=Z,114nm,1.5s						
MFF	**Saint Martin d**	**132.64**	**333**	*e*PKP1	PKPdf	11 53 08.6	+2.2
	comp=Z,196nm,1.7s						
CAF	**Calviac**	**132.81**	**330**	*e*PKP1	PKPdf	11 53 09.3	+2.5
	comp=Z,131nm,1.6s						
RJF	**Les Rejaudoux**	**132.81**	**330**	*e*PKP1	PKPdf	11 53 09.2	+2.4
	comp=Z,88nm,1.4s						
LFF	**La Frestale**	**133.45**	**331**	*e*PKP1	PKPdf	11 53 10.6	+2.6
MTLF	**Montolieu**	**133.84**	**328**	*e*PKP1	PKPdf	11 53 10.8	+2.0
EPF	**Esparros**	**135.03**	**329**	*e*PKP1	PKPdf	11 53 13.7	+2.7
	comp=Z,74nm,1.4s						
ROSC	**El Rosal**	**135.23**	**89**	PKP	PKPdf	11 53 13.3	+1.2
	comp=Z,8.6nm,0.4s,baz=273,slow=21,SNR=2.9						
LPAZ	**La Paz**	**135.54**	**121**	PKhKP		11 53 07.7	
	comp=Z,1.4nm,0.6s,baz=297,slow=4.3,SNR=6.4						
LPAZ				PKP	PKPdf	11 53 15.8	+3.3
	comp=Z,2.1nm,0.6s,baz=297,slow=3.3,SNR=5.1						
LPAZ	**La Paz**	**135.54**	**121**	*e*PKPpre		11 53 05.1	
LPAZ				PKP	PKPdf	11 53 15.8	+3.3
ETSF	**Etsaut**	**135.58**	**330**	*e*PKP1	PKPdf	11 53 14.5	+2.5
SJPF	**Ste Jean**	**135.75**	**330**	*e*PKP1	PKPdf	11 53 14.5	+2.2
SDV	**Santo Domingo**	**139.03**	**84**	PKhKP		11 53 12.6	
	comp=Z,17nm,0.9s,baz=257,slow=5.8,SNR=13						
SDV				PKP	PKPdf	11 53 21.5	+2.5
	comp=Z,30nm,0.7s,baz=287,slow=5.2,SNR=12						
SDV	**Santo Domingo**	**139.03**	**84**	*e*PKPpre		11 53 12.9	
SDV				PKP	PKPdf	11 53 21.5	+2.5
PBRG	**Braganca**	**139.34**	**334**	*e*PKPdf	PKPdf	11 53 20.7	+1.8
ESDC	**Sonseca Array**	**139.69**	**329**	PKP	PKPdf	11 53 21.2	+1.7
	comp=Z,0.9nm,0.5s,baz=17,slow=2.8,SNR=8.3						
PVRL	**Vila Real**	**140.20**	**334**	*e*PKPdf	PKPdf	11 53 22.1	+1.6
PVIS	**Viseu**	**140.73**	**334**	*e*PKPdf	PKPdf	11 53 23.6	+2.1
MTE	**Manteigas**	**140.84**	**333**	*e*PKPdf	PKPdf	11 53 25.7	+4.0
MTE				*e*PP	PP	11 56 33.7	+7.6
MTE				*i* -		12 15 53.1	
MTE				*e*LR	LR	12 41 53.1	
MTE	**Manteigas**	**140.84**	**333**	*e*PKPdf	PKPdf	11 53 24.3	+2.6
PCBR	**Castelo Branco**	**141.26**	**333**	*e*PKPdf	PKPdf	11 53 24.9	+2.5
SJG	**San Juan**	**142.27**	**69**	PKIKP	PKPdf	11 53 29.3	+4.6
SJG	**San Juan**	**142.27**	**69**	*e*PKPdf	PKPdf	11 53 27.7	+2.9
EVO	**Evora**	**142.56**	**332**	*e*PKIKP	PKPdf	11 53 26.1	+1.4
	comp=Z,100nm,1.2s						
PBEJ	**Beja**	**142.89**	**331**	*e*PKPdf	PKPdf	11 53 26.7	+1.4
PALC	**Alcoutim**	**143.15**	**330**	*e*PKPdf	PKPdf	11 53 24.9	-0.8
PTEO	**Sao Teotonio**	**143.68**	**332**	*e*PKPdf	PKPdf	11 53 29.0	+2.4
CPB	**Codrington**	**146.37**	**68**	*e*P	PKPdf	11 53 34.0	+2.2
BPA	**Boggy Peak**	**146.50**	**69**	*e*P	PKPdf	11 53 34.5	+2.4
TPP	**Pointe-a-Pierr**	**148.01**	**81**	*e*P	PKPdf	11 53 38.4	+3.7
TRN	**Trinidad (W)**	**148.03**	**80**	*e*P	PKPdf	11 53 40.8	+6.2
CAM4	**Nova Friburgo**	**148.70**	**156**	*e*P	PKPdf	11 53 41.1	+5.5
CAM4				*i*		11 53 58.0	
CAM4				*i*		11 54 07.5	
CAM4				*i*		11 54 13.1	
BDFB	**Brasilia**	**151.41**	**140**	PKP	PKPdf	11 53 41.9	+2.1
	comp=Z,6.1nm,0.7s,baz=191,slow=0.9,SNR=8.9						
BDFB				PKPbc	PKPdf	11 53 47.7	+7.9
	comp=Z,27nm,0.6s,baz=201,slow=2.7,SNR=24						
BAO	**Brasilia Array**	**151.43**	**140**	P	PKPdf	11 53 42.1	+2.2
BAO				*i*		11 53 47.1	
DBIC	**Dimbokro**	**155.65**	**272**	*e*PKIKP	PKPdf	11 53 48.4	+2.6
DBIC	**Dimbokro**	**155.65**	**272**	PKP	PKPdf	11 53 48.7	+2.9
	comp=Z,5.7nm,1.0s,baz=79,slow=2.2,SNR=6.0						
DBIC				PKPab	PKPab	11 54 14.3	-0.3
	comp=Z,15nm,0.7s,baz=77,slow=2.8,SNR=7.8						

IDC 23 11:39:59.8±6.7**,5.73S**×**150.18E,h55**^{km}±61^{km}**,mb3.9**/3**, mb1 4.3**/4**,mb1mx3.9**/13**,mbtmp4.3**/4**,ML3.1**/1**,Error ellipse: s-maj=130.5km s-min=38.8km az=126.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.73**	**219**	P	P	11 41 08.4	-2.0
	5.4nm,0.3s,baz=74,slow=7.4,SNR=3.7						
PMG				S	S	11 42 03.1	-1.4
	7.3nm,0.3s,baz=103,slow=21,SNR=4.0						
WRA	**Warramunga Arr**	**20.91**	**226**	P	P	11 44 38.0	-2.0
	6.5nm,0.5s,baz=51,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**23.74**	**220**	P	P	11 45 07.0	-1.0
	7.0nm,0.5s,baz=56,slow=9.0,SNR=6.6						
ILAR	**Eielson Array**	**84.00**	**23**	P	P	11 52 24.1	-1.2
	0.7nm,0.8s,baz=252,slow=5.2,SNR=4.2						

IDC 23 11:44:17.9±6.2**,5.75S**×**149.91E,h68**^{km}±58^{km}**,mb3.6**/3**, mb1 3.9**/4**,mb1mx3.7**/13**,mbtmp4.0**/4**,ML2.2**/1**,Error ellipse: s-maj=119.9km s-min=38.6km az=126.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.54**	**217**	P	P	11 45 23.9	-1.9
	0.9nm,0.3s,baz=62,slow=17,SNR=2.7						
PMG				S	S	11 46 16.5	-1.2
	3.1nm,0.3s,baz=64,slow=21,SNR=2.8						
WRA	**Warramunga Arr**	**20.69**	**226**	P	P	11 48 53.1	-1.7
	5.8nm,0.8s,baz=52,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**23.55**	**219**	P	P	11 49 22.6	-0.5
	3.7nm,0.6s,baz=52,slow=9.0,SNR=7.7						
ILAR	**Eielson Array**	**84.13**	**23**	P	P	11 56 41.0	-1.5
	0.6nm,1.0s,baz=250,slow=4.8,SNR=4.3						

IDC ***23*** *11:47:35.7±1.2,6.02S×150.76E,mb4.0/5,mb1 4.2/6, mb1mx4.1/12,mbtmp4.0/6,ML2.5/1,Error ellipse: s-maj=75.2km s-min=21.5km az=127.0*

ISC 23 11:47:40.2±4.5**,6.1S**±0.3×**150.6E**±0.4**,h39**^{km}±40^{km}**,n7, σ0^{s}79**/7**,mb3.8**/4**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.74**	**226**	Pn	**P**	**11 48 51.3**	**+0.3**
	1.2nm,0.3s,baz=339,slow=17,SNR=3.4						
PMG				Sn	**S**	**11 49 45.2**	**-0.3**
	3.8nm,0.3s,baz=104,slow=20,SNR=5.4						
WRA	**Warramunga Arr**	**20.95**	**228**	P	**P**	**11 52 21.9**	**-0.4**
	3.7nm,0.6s,baz=52,slow=10,SNR=9.6						
ASAR	**Alice Springs**	**23.73**	**221**	P	**P**	**11 52 51.0**	**+1.2**
	4.8nm,0.7s,mb4.0,baz=58,slow=8.3,SNR=16						
STKA	**Stephens Creek**	**26.98**	**197**	P	**P**	**11 53 20.0**	**-0.5**
	2.7nm,0.7s,mb3.9,baz=351,slow=11,SNR=4.7						
SONM	**Songino Array**	**66.31**	**329**	pP	pP	11 58 34.5	-4.2
	0.4nm,0.6s,baz=152,slow=4.6,SNR=3.9						
ILAR	**Eielson Array**	**84.20**	**22**	P	**P**	**12 00 08.2**	**-0.4**
	0.4nm,0.8s,mb3.6,baz=251,slow=5.6,SNR=5.7						
NVAR	**Mina Array Bea**	**94.60**	**52**	P	**P**	**12 00 58.6**	**+0.2**
	0.1nm,0.3s,mb3.7,baz=256,slow=3.7,SNR=3.0						
NVAR				pP	pP	12 01 09.0	-1.6
	0.4nm,0.6s,baz=233,slow=5.1,SNR=3.0						

IDC 23 11:50:35.8±7.1**,5.76S**×**150.65E,mb3.8**/3**,mb1 4.1**/3**, mb1mx3.8**/12**,mbtmp3.9**/3**,Error ellipse: s-maj=111.0km s-min=80.2km az=12.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.22**	**227**	P	P	11 55 24.0	-1.7
	1.2nm,0.5s,baz=52,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**24.02**	**220**	P	P	11 55 52.6	-0.8
	1.4nm,0.4s,baz=55,slow=9.2,SNR=13						
STKA	**Stephens Creek**	**27.33**	**197**	P	P	11 56 22.2	-2.2
	3.6nm,1.1s,baz=24,slow=10.0,SNR=2.7						

IDC 23 11:51:45.8±1.7**,6.38S**×**150.47E,mb3.9**/4**,mb1 4.1**/5**, mb1mx3.9**/13**,mbtmp3.9**/5**,ML2.4**/1**,Error ellipse: s-maj=73.7km s-min=24.6km az=126.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.45**	**227**	Pn	Pn	11 52 54.0	-2.0
	1.5nm,0.3s,baz=297,slow=18,SNR=2.8						
PMG				Sn	Sn	11 53 49.8	+0.5
	1.0nm,0.3s,baz=337,slow=13,SNR=2.1						
WRA	**Warramunga Arr**	**20.67**	**228**	P	P	11 56 27.9	-2.1
	3.4nm,0.6s,baz=53,slow=11,SNR=12						
ASAR	**Alice Springs**	**23.43**	**221**	P	P	11 56 56.4	-1.3
	2.5nm,0.7s,baz=55,slow=9.0,SNR=10						
STKA	**Stephens Creek**	**26.69**	**197**	P	P	11 57 26.3	-2.2
	2.2nm,0.7s,baz=11,slow=14,SNR=4.9						
ILAR	**Eielson Array**	**84.49**	**22**	P	P	12 04 20.7	-0.8
	0.2nm,0.7s,baz=259,slow=4.6,SNR=5.1						

BJI ***23*** *12:02:30.6,6.10S×151.09E,h10*^{km}*,mB5.7,mb4.8,Ms5.3, Msz5.2*

NEIC ***23*** *12:02:32.5±0.2,6.19S×150.77E,h10*^{km}*,mb4.9/25,Error ellipse: s-maj=7.6km s-min=5.0km az=109.0*

IDC ***23*** *12:02:35.4±0.6,6.20S×150.83E,h26*^{km}*±4*^{km}*,mb4.7/13, mb1 4.9/15,mb1mx4.9/16,mbtmp4.8/15,ML3.9/2,Error ellipse: s-maj=17.9km s-min=12.0km az=106.0*

MOS ***23*** *12:02:36.0±1.2,5.97S×150.36E,h33*^{km}*,mb5.0/5,Error ellipse: s-maj=32.0km s-min=17.9km az=62.9*

ISC 23 12:02:30.3±2.2**,6.17S**±0.04×**150.74E**±0.06**,h6**^{km}±13^{km}**, h22**^{km}±4.5^{km}**:pP-P,n105,σ1^{s}00**/89**,mb4.8**/48**,MS5.2**/3**, 3C-5D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.79**	**228**	*i* P	**Pn**	**12 03 46.9**	**+2.2**
PMG	**Port Moresby**	**4.79**	**228**	Pn	**Pn**	**12 03 47.2**	**+2.5**
	31nm,0.3s,baz=57,slow=6.7,SNR=92						
PMG				Sn	**Sn**	**12 04 43.2**	**+1.9**
	37nm,0.3s,baz=102,slow=23,SNR=12						
PMG	**Port Moresby**	**4.79**	**228**	*e*P	**Pn**	**12 03 47.0**	**+2.3**
CTA	**Charters Tower**	**14.51**	**197**	Pn	**P**	**12 05 58.5**	**+0.2**
	0.3nm,0.3s,baz=20,slow=15,SNR=4.8						
CTAO	**Charters Tower**	**14.51**	**197**	*e*P	**P**	**12 05 58.1**	**-0.2**
	12nm,0.6s						
KAKA	**Kakadu**	**19.18**	**249**	⇓*i*P	**P**	**12 06 57.1**	**-0.3**
	47nm,0.5s						
WRAB	**Tennant Creek**	**21.00**	**228**	*i* P	**P**	**12 07 16.2**	**-0.8**
WRAB	**Tennant Creek**	**21.00**	**228**	*e*P	**P**	**12 07 16.4**	**-0.6**
	70nm,0.6s						
WRA	**Warramunga Arr**	**21.01**	**228**	P	**P**	**12 07 16.8**	**-0.4**
	65nm,0.5s,mb5.2,baz=52,slow=11,SNR=254						
WRA				S	**S**	**12 11 07.9**	**+1.2**
	7.2nm,1.2s,baz=51,slow=20,SNR=6.7						
DZM	**Mont Dzumac**	**21.91**	**138**	*e*P	**P**	**12 07 25.2**	**-1.0**
ASAR	**Alice Springs**	**23.77**	**221**	P	**P**	**12 07 46.0**	**+1.4**
	87nm,0.5s,mb5.4,baz=56,slow=8.7,SNR=843						
ASAR				S	**S**	**12 12 02.2**	**+5.2**
	1.8nm,0.9s,baz=41,slow=17,SNR=4.8						
ASPA	**Alice Springs**	**23.77**	**221**	⇓*i*P	**P**	**12 07 45.5**	**+0.9**
ARMA	**Armidale**	**24.14**	**178**	*e*P	**P**	**12 07 48.6**	**+0.5**
STKA	**Stephens Creek**	**26.97**	**197**	*e*P	**P**	**12 08 13.1**	**-1.6**
	48nm,0.8s,mb5.1						
STKA	**Stephens Creek**	**26.97**	**197**	P	**P**	**12 08 14.6**	**-0.2**
	47nm,0.6s,mb5.2,baz=17,slow=11,SNR=72						
FITZ	**Fitzroy Crossi**	**27.21**	**242**	⇓*i*P	**P**	**12 08 17.1**	**0.0**
	60nm,0.4s,mb5.5						
FORT	**Forrest**	**32.45**	**218**	*e*P	**P**	**12 09 02.9**	**-0.7**
	1µm,0.6s						
MBWA	**Marble Bar**	**33.52**	**241**	*e*P	**P**	**12 09 12.2**	**-0.8**
	15nm,0.8s,mb5.0						
KLBR	**Kellerberrin**	**39.88**	**226**	⇑*i*P	**P**	**12 10 06.3**	**-0.4**
	215nm,0.5s						
URZ	**Urewera**	**39.90**	**147**	P	**P**	**12 10 05.9**	**-0.9**
	4.3nm,0.5s,mb4.5,baz=255,slow=4.0,SNR=12						
NWAO	**Narrogin (SRO)**	**40.98**	**225**	P	**P**	**12 10 14.1**	**-1.6**
	6.4nm,0.8s,mb4.3						
MUN	**Mundaring**	**41.21**	**227**	*e*P	**P**	**12 10 16.7**	**-0.9**
	13nm,0.7s,mb4.7						
RPZ	**Rata Peaks**	**41.44**	**158**	P	**P**	**12 10 18.7**	**-0.7**
	4.8nm,0.5s,mb4.3,baz=13,slow=4.2,SNR=8.3						
SSE	**Sheshan**	**46.60**	**324**	P	**P**	**12 11 00.9**	**-0.3**
SSE				AMB	AMB		
	comp=Z,21nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,1µm,10.9s						
SSE	**Sheshan**	**46.60**	**324**	P	**P**	**12 11 00.9**	**-0.3**
	comp=Z,21nm,0.7s,mb5.2						
NJ2	**Nanjing**	**48.66**	**323**	*e*P	**P**	**12 11 17.1**	**-0.2**
NJ2				AP	pP	12 11 27.0	+7.8
NJ2				XP	sP	12 11 31.5	+12
NJ2				S	**S**	**12 18 17.0**	**-1.9**
NJ2				XS		12 18 32.0	

NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1µm,10.0s						
NJ2				LR	LR		
	comp=N,1µm,17.8s,MS5.1						
NJ2				LR	LR		
	comp=E,1µm,17.8s,MS5.1						
NJ2				LR	LR		
	comp=Z,2µm,14.0s,MS5.2						
WHN	**Wuhan**	**50.47**	**318**	*e*P	**P**	**12 11 37.6**	**+6.4**
WHN				S	**S**	**12 18 44.0**	**0.0**
WHN				LR	LR		
	comp=Z,2µm,14.0s,MS5.3						
ENH	**Enshi**	**53.62**	**315**	*e*P	**P**	**12 11 55.0**	**0.0**
	comp=Z,9.3nm,0.7s,mb4.8						
MDJ	**Mudanjiang**	**54.02**	**341**	P	**P**	**12 11 59.3**	**+1.7**
MDJ				AMB	AMB		
	comp=Z,19nm,2.6s,mb4.6						
BJT	**Baijiatuau**	**55.92**	**328**	P	**P**	**12 12 12.6**	**+1.0**
	comp=Z,9.6nm,0.7s,mb4.9						
BJI	**Beijing**	**55.93**	**328**	P	**P**	**12 12 12.6**	**+0.9**
BJI				AMB	AMB		
	comp=Z,7.0nm,1.9s,mb4.4						
BJI	**Beijing**	**55.93**	**328**	P	**P**	**12 12 12.6**	**+0.9**
	comp=Z,7.0nm,1.9s,mb4.4						
KMI	**Kunming**	**56.08**	**306**	P	**P**	**12 12 18.5**	**+5.6**
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.9						
XAN	**Xi'an**	**56.23**	**318**	P	**P**	**12 12 13.4**	**-0.5**
XAN				AP	pP	12 12 18.9	+3.2
XAN				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.6						
CMAR	**Chiang Mai Arr**	**56.63**	**297**	P	**P**	**12 12 17.2**	**+0.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=121,slow=5.3,SNR=4.5						
CMAR				PcP	PcP	12 13 14.0	+0.9
	comp=Z,1.4nm,0.8s,baz=116,slow=3.9,SNR=4.6						
CMAR				PKP2bc		12 42 25.6	
	comp=Z,0.8nm,0.7s,baz=297,slow=4.4,SNR=5.0						
CMAR	**Chiang Mai Arr**	**56.63**	**297**	P	**P**	**12 12 17.2**	**+0.3**
CMAR				PcP	PcP	12 13 14.0	+0.9
CMAR				⇑*e*		12 42 25.6	
HHC	**Hu-ho-hao-te**	**58.99**	**326**	*e*P	**P**	**12 12 38.8**	**+5.5**
HHC				SCP		12 17 18.4	
HHC				S	**S**	**12 20 44.6**	**+6.2**
HHC				SCS	ScS	12 22 21.8	+1.6
HHC				AMB	AMB		
	comp=Z,17nm,1.1s,mb5.0						
HHC				AMB	AMB		
	comp=Z,3µm,9.6s						
HHC				LR	LR		
	comp=N,738nm,20.4s,MS5.1						
HHC				LR	LR		
	comp=E,1µm,19.2s,MS5.1						
HHC				LR	LR		
	comp=Z,871nm,18.0s,MS4.9						
PET	**Petropavlovsk**	**59.35**	**6**	*e*P	**P**	**12 12 25.9**	**-10**
PET				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
LZH	**Lanzhou**	**60.81**	**317**	*e*P	**P**	**12 12 49.5**	**+3.7**
LZH				AP	pP	12 12 55.0	+7.4
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.1						
LZH	**Lanzhou**	**60.81**	**317**	*e*P	**P**	**12 12 49.5**	**+3.7**
	comp=Z,15nm,1.0s,mb5.1						
LZH				pP	pP	12 12 55.0	+7.4
LZH				sP	sP	12 13 02.5	+14
HIA	**Hailar**	**61.47**	**337**	*e*P	**P**	**12 12 50.3**	**+0.2**
	comp=Z,16nm,0.7s,mb5.3						
MA2	**Magadan**	**65.53**	**0**	*e*P	**P**	**12 13 18.8**	**+2.2**
MA2				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.8						
SONM	**Songino Array**	**66.41**	**329**	P	**P**	**12 13 23.6**	**+1.1**
	comp=Z,6.8nm,1.1s,mb4.6,baz=146,slow=5.2,SNR=13						
SONM				PKP2bc		12 42 00.8	
	comp=Z,0.1nm,0.4s,baz=270,slow=1.2,SNR=3.5						
SONM	**Songino Array**	**66.41**	**329**	P	**P**	**12 13 23.6**	**+1.1**
SONM				⇑*e*		12 42 00.8	
LSA	**Lhasa**	**67.34**	**306**	P	**P**	**12 13 34.9**	**+6.1**
	comp=Z,6.4nm,0.7s,mb4.8						
ZAK	**Zakamensk**	**69.61**	**330**	*e*P	**P**	**12 13 40.7**	**-1.7**
YAK	**Yakutsk**	**69.92**	**350**	*i* P	**P**	**12 13 44.3**	**+0.2**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
JIRN	**Jiri**	**70.75**	**302**	*e*P	**P**	**12 13 48.7**	**-1.1**
	comp=Z,14nm,0.9s,mb4.9						
GUN	**Gumba**	**71.09**	**302**	*e*P	**P**	**12 13 51.8**	**0.0**
	comp=Z,14nm,0.6s,mb5.0						
PKI	**Pulchoki**	**71.39**	**302**	*e*P	**P**	**12 13 52.1**	**-1.5**
VNDA	**Vanda**	**71.55**	**177**	P	**P**	**12 13 53.9**	**+0.1**
	comp=Z,5.7nm,0.7s,mb4.6,baz=336,slow=7.5,SNR=18						
VNDA	**Vanda**	**71.55**	**177**	P	**P**	**12 13 53.9**	**+0.1**
DMN	**Daman**	**71.65**	**302**	*e*P	**P**	**12 13 54.4**	**-0.8**
	comp=Z,8.3nm,0.6s,mb4.8						
GKN	**Gorkha**	**72.17**	**302**	*e*P	**P**	**12 13 58.8**	**+0.5**
KOLN	**Koldanda**	**72.98**	**301**	*e*P	**P**	**12 14 01.6**	**-1.5**
	comp=Z,7.7nm,0.7s,mb4.8						
BILL	**Bilibino**	**74.84**	**6**	*i* P	**P**	**12 14 13.2**	**+0.1**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
SLKM	**Skilak Lake**	**80.77**	**25**	*e*P	**P**	**12 14 46.1**	**+0.1**
ZAL	**Zalesovo**	**81.17**	**327**	P	**P**	**12 14 47.8**	**-0.4**
	comp=Z,2.6nm,0.6s,mb4.3,baz=359,slow=5.8,SNR=17						
SML	**Sawmill**	**82.21**	**25**	*e*P	**P**	**12 14 53.6**	**+0.2**
NVS	**Novosibirsk**	**82.36**	**327**	*i* P	**P**	**12 15 00.8**	**+6.5**
IMA	**Indian Mountai**	**82.42**	**20**	*e*P	**P**	**12 14 55.4**	**+1.0**
	comp=Z,15nm,0.8s,mb5.0						
MCK	**McKinley**	**82.91**	**23**	*e*P	**P**	**12 14 55.5**	**-1.5**
	comp=Z,5.3nm,0.7s,mb4.7						
MAW	**Mawson**	**83.53**	**203**	P	**P**	**12 15 00.8**	**+0.7**
	comp=Z,4.8nm,0.6s,mb4.8,baz=108,slow=6.3,SNR=6.2						
MAW	**Mawson**	**83.53**	**203**	P	**P**	**12 15 00.4**	**+0.3**
	comp=Z,5.9nm,0.7s,mb4.8						
KURK	**Kurchatov**	**83.59**	**322**	*i* P	**P**	**12 15 00.8**	**0.0**
KURK	**Kurchatov**	**83.59**	**322**	*e*P	**P**	**12 15 00.2**	**-0.6**
	comp=Z,8.8nm,0.9s,mb4.9						
QSPA	**South Pole Qui**	**83.80**	**180**	*e*P	**P**	**12 15 01.6**	**+0.4**
	comp=Z,28nm,0.6s,mb5.6						
COLA	**College**	**83.88**	**22**	*i* P	**P**	**12 15 01.5**	**-0.4**
COLA	**College**	**83.88**	**22**	*e*P	**P**	**12 15 01.2**	**-0.7**
	comp=Z,6.6nm,0.8s,mb4.8						
AAK	**Ala-Archa**	**84.12**	**314**	*i* P	**P**	**12 15 02.9**	**-0.8**
AAK				pmax	pmax		
	comp=Z,12nm,1.8s,mb4.7						
AAK	**Ala-Archa**	**84.12**	**314**	*e*P	**P**	**12 15 03.7**	**0.0**
	comp=Z,3.6nm,0.8s,mb4.5						
ILAR	**Eielson Array**	**84.19**	**22**	P	**P**	**12 15 02.6**	**-0.9**
	comp=Z,5.4nm,0.7s,mb4.8,baz=256,slow=5.1,SNR=92						
DAWY	**Dawson**	**86.87**	**24**	*e*P	**P**	**12 15 18.1**	**+1.3**
CHKZ	**Chkalovo**	**89.11**	**324**	*e*P	**P**	**12 15 26.6**	**-1.2**
	comp=Z,2.7nm,0.6s,mb4.8						
BVAR	**Borovoye Array**	**89.11**	**323**	P	**P**	**12 15 27.0**	**-0.8**
	comp=Z,2.3nm,0.7s,mb4.6,baz=104,slow=6.1,SNR=19						
INK	**Inuvik**	**90.46**	**21**	*e*P	**P**	**12 15 33.9**	**+0.1**
	comp=Z,4.6nm,0.9s,mb4.8						
HUMO	**Hull Mountain**	**91.41**	**47**	*e*P	**P**	**12 15 41.0**	**+2.3**
	comp=Z,10.0nm,0.8s,mb5.2						
SYO	**Syowa Base**	**91.70**	**200**	⇓P	**P**	**12 15 38.4**	**-1.1**
SYO	**Syowa Base**	**91.70**	**200**	⇓pP	pP	12 15 55.1	+14
NVAR	**Mina Array Bea**	**94.53**	**52**	P	**P**	**12 15 55.2**	**+2.0**
	comp=Z,2.8nm,0.8s,mb4.8,baz=257,slow=4.3,SNR=20						
BMO	**Blue Mountains**	**95.69**	**46**	*e*P	**P**	**12 15 58.4**	**+0.1**
	comp=Z,3.0nm,1.0s,mb4.7						
YKW3	**Yellowknife Ar**	**97.58**	**28**	*e*P	**P**	**12 16 07.1**	**+0.7**
YKA	**Yellowknife Ar**	**97.58**	**28**	P	**P**	**12 16 07.2**	**+0.7**
	comp=Z,2.4nm,0.6s,mb4.9,baz=270,slow=4.6,SNR=80						
YKA				PKiKP		12 20 41.6	
	comp=Z,0.3nm,0.6s,baz=280,slow=1.5,SNR=5.5						
YKA				PKKPbc		12 32 42.7	
	comp=Z,0.6nm,0.8s,baz=84,slow=2.9,SNR=8.4						
EDM	**Edmonton**	**98.44**	**37**	*e*P	**P**	**12 16 11.6**	**+1.0**
PDAR	**Pinedale Array**	**101.28**	**48**	P	P	12 16 24.6	+0.9
	comp=Z,1.9nm,0.9s,baz=243,slow=2.3,SNR=17						
TXAR	**Lajitas Array**	**106.58**	**61**	PP	PP	12 21 18.4	+2.7
	comp=Z,0.2nm,0.7s,baz=236,slow=4.5,SNR=3.6						
FINES	**FINESS Array B**	**111.43**	**335**	PKiKP		12 21 06.6	
	comp=Z,1.1nm,0.8s,baz=80,slow=8.5,SNR=3.0						
AKASG	**Malin Array Be**	**114.39**	**323**	PKP	PKPdf	12 21 11.9	-1.7
	comp=Z,1.6nm,0.6s,baz=61,slow=2.4,SNR=4.9						
BRTR	**Keskin Array B**	**114.67**	**311**	PKP	PKPdf	12 21 14.4	0.0
	comp=Z,1.3nm,0.9s,slow=2.9,SNR=2.7						
NOA	**NORSAR Array B**	**117.48**	**339**	PKP	PKPdf	12 21 18.2	-1.3
	comp=Z,1.4nm,0.8s,baz=323,slow=3.0,SNR=3.7						
NOA				pPKP		12 21 27.2	
	comp=Z,1.7nm,1.0s,baz=68,slow=4.7,SNR=2.1						
PLCA	**Paso Flores**	**119.89**	**145**	PKP	PKPdf	12 21 23.7	-0.8
	comp=Z,0.9nm,0.6s,baz=266,slow=3.5,SNR=6.1						
PLCA				pPKP		12 21 33.2	
	comp=Z,0.9nm,0.6s,baz=175,slow=9.1,SNR=2.5						
BRG	**Berggiesshubel**	**122.81**	**329**	*e*PKIKP	PKPdf	12 21 29.5	-0.4
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SCHQ	**Schefferville**	**122.89**	**25**	PKP	PKPdf	12 21 29.4	-0.6
	comp=Z,2.1nm,0.7s,baz=33,slow=7.8,SNR=9.3						
CLL	**Collm**	**123.03**	**330**	*e*PKIKP	PKPdf	12 21 30.0	-0.3
CLL				*e**PPKP		12 21 39.0	
KHC	**Kasperske Hory**	**124.02**	**327**	*e*PKIKP	PKPdf	12 21 31.5	-0.9
KHC				*e*		12 21 40.5	
KHC	**Kasperske Hory**	**124.02**	**327**	*e*PKPdf	PKPdf	12 21 31.5	-0.9
KHC				pPKP		12 21 40.5	
GERES	**GERESS Array B**	**124.11**	**327**	PKP	PKPdf	12 21 31.9	-0.8
	comp=Z,3.6nm,0.6s,baz=72,slow=1.9,SNR=21						
GERES				pPKP		12 21 40.8	
	comp=Z,2.5nm,0.6s,baz=64,slow=1.6,SNR=7.3						
EKA	**Eskdalemuir Ar**	**126.71**	**342**	PKP	PKPdf	12 21 37.5	+0.3
	comp=Z,2.6nm,0.7s,baz=14,slow=3.4,SNR=5.3						
CFAA	**Coronel Fontan**	**127.14**	**138**	PKP	PKPdf	12 21 37.3	-1.5
	comp=Z,0.5nm,0.6s,baz=255,slow=1.8,SNR=11						
CFAA				pPKP		12 21 47.1	
	comp=Z,0.5nm,0.6s,baz=252,slow=3.5,SNR=5.7						
DAVOX	**Davos**	**127.41**	**327**	PKP	PKPdf	12 21 38.8	-0.2
	comp=Z,4.2nm,0.5s,baz=213,slow=12,SNR=6.2						
LPAZ	**La Paz**	**135.53**	**121**	PKP	PKPdf	12 21 54.9	-0.3
	comp=Z,1.7nm,1.0s,baz=286,slow=7.4,SNR=3.8						
LPAZ	**La Paz**	**135.53**	**121**	PKPdf	PKPdf	12 21 54.6	-0.6
SDV	**Santo Domingo**	**138.91**	**84**	PKP	PKPdf	12 22 00.1	-1.3
	comp=Z,4.6nm,0.8s,baz=302,slow=8.9,SNR=4.8						
BDFB	**Brasilia**	**151.46**	**140**	PKPbc	PKPdf	12 22 27.9	+5.4
	comp=Z,15nm,0.6s,baz=240,slow=1.2,SNR=21						
BDFB				pPKPbc		12 22 36.4	
	comp=Z,18nm,0.8s,baz=163,slow=1.9,SNR=8.3						
DBIC	**Dimbokro**	**155.75**	**273**	PKP	PKPdf	12 22 28.8	+0.3
	comp=Z,2.9nm,0.8s,baz=39,slow=6.5,SNR=3.5						
DBIC				PKPab	PKPab	12 22 54.9	-0.1
	comp=Z,1.6nm,0.5s,baz=114,slow=4.2,SNR=3.6						

BJI ***23*** *12:12:43.7,6.70S×150.90E,h34^{km},mB5.5,mb4.8,Ms5.3, Msz5.0*

NEIC ***23*** *12:12:43.4±0.3,6.27S×150.69E,h10^{km},mb5.1/27,Error ellipse: s-maj=9.1km s-min=6.2km az=111.0*

HRVD ***23*** *12:12:43.4±0.2,6.50S×150.90E,h13^{km},MW5.6/77, Centroid moment Tensor Solution. LP body waves: s60,c110;Mantle waves: s77,c169; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.65±.07; $M_{\theta\theta}$-2.65±.05; $M_{\phi\phi}$0.00±.05; $M_{r\theta}$1.21±.13; $M_{\theta\phi}$-0.74±.04; $M_{\phi r}$1.01±.16; Best double couple: $M_0$3.171×10^{17} NP1: ϕ_s268°,δ33°,λ112°. NP2:ϕ_s63°,δ60°,λ77°. Principal axes: T 3.143, Plg72°, Azm302°; N .052, Plg11°, Azm70°; P -3.199, Plg14°, Azm163°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***23*** *12:12:45.6±1.0,6.23S×150.64E,h33^{km},mb5.1/17 Error ellipse: s-maj=15.8km s-min=9.5km az=74.9*

IDC ***23*** *12:12:45.5±5.0,6.32S×150.78E,h24^{km}±32^{km},mb4.6/11, mb1 4.8/13,mb1mx4.7/15,mbtmp4.7/13,ML3.8/2,MS5.0/15, Ms1 5.0/15,ms1mx4.8/20,Error ellipse: s-maj=21.3km s-min=12.3km az=122.0*

ISC 23 12:12:45.4±0.2**,6.31S**±0.04×**150.68E**±0.05**,h33**^{km}**, (h41**^{km}±8.1^{km}**:pP-P),n131,**σ**1**^{s}**25**/120**,mb4.9**/52**,MS5.0**/24**, 2C-2D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.65**	**228**	*e*P	**P**	**12 13 56.8**	**+1.6**
PMG	**Port Moresby**	**4.65**	**228**	Pn	**Pn**	**12 13 57.2**	**+2.0**
	19nm,0.3s,baz=57,slow=10,SNR=25						
PMG				Sn	**Sn**	**12 14 51.3**	**+2.4**
	47nm,0.3s,baz=352,slow=23,SNR=4.1						
CTA	**Charters Tower**	**14.35**	**197**	Pn	**P**	**12 16 07.9**	**-0.4**
	0.4nm,0.3s,baz=17,slow=14,SNR=5.3						
CTA				LR	LR	12 20 59.0	
	comp=Z,5µm,18.2s,baz=15,slow=34						
CTAO	**Charters Tower**	**14.35**	**197**	*e*P	**P**	**12 16 08.3**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,53nm,1.5s						
CTAO	**Charters Tower**	**14.35**	**197**	*e*P	**P**	**12 16 08.3**	**0.0**
	comp=Z,53nm,1.5s						
KAKA	**Kakadu**	**19.08**	**249**	*e*P	**P**	**12 17 06.8**	**-1.2**
	comp=Z,47nm,0.7s						
WRAB	**Tennant Creek**	**20.86**	**228**	*i* P	**P**	**12 17 26.5**	**-0.6**
WRAB	**Tennant Creek**	**20.86**	**228**	*e*P	**P**	**12 17 26.2**	**-0.8**
	comp=Z,165nm,0.9s						
WRA	**Warramunga Arr**	**20.87**	**228**	P	**P**	**12 17 26.0**	**-1.2**
	comp=Z,29nm,0.5s,baz=53,slow=11,SNR=82						
WRA				S	**S**	**12 21 19.7**	**+6.6**
	comp=Z,19nm,1.5s,baz=54,slow=19,SNR=4.7						
NOUC	**Port Laguerre**	**21.77**	**138**	*e*P	**P**	**12 17 36.7**	**+0.4**
NOUC	**Port Laguerre**	**21.77**	**138**	*e*P	**P**	**12 17 36.6**	**+0.4**
DZM	**Mont Dzumac**	**21.85**	**137**	*e*P	**P**	**12 17 36.6**	**-0.4**
ASAR	**Alice Springs**	**23.62**	**221**	P	**P**	**12 17 55.3**	**+0.8**
	comp=Z,30nm,0.6s,mb4.9,baz=56,slow=8.6,SNR=130						
ASAR				S	**S**	**12 22 13.1**	**+10**
	comp=Z,6.1nm,1.1s,baz=42,slow=15,SNR=4.4						
ASAR				LR	LR	12 28 07.6	
	comp=Z,1µm,18.3s,MS4.4,baz=50,slow=39						
ASPA	**Alice Springs**	**23.63**	**221**	*e*P	**P**	**12 17 54.7**	**+0.1**
ASPA				*e*S	**S**	**12 22 12.9**	**+9.4**
ASPA				*e*SCS	ScS	12 29 05.9	+5.9
ARMA	**Armidale**	**24.00**	**178**	*e*P	**P**	**12 18 00.8**	**+2.7**
STKA	**Stephens Creek**	**26.82**	**197**	*e*P	**P**	**12 18 22.5**	**-2.2**
	comp=Z,40nm,1.1s,mb4.9						
STKA	**Stephens Creek**	**26.82**	**197**	P	**P**	**12 18 23.1**	**-1.6**
	comp=Z,51nm,1.0s,mb5.0,baz=20,slow=11,SNR=21						
STKA				LR	LR	12 28 31.0	
	comp=Z,3µm,18.4s,MS4.9,baz=17,slow=35						
FITZ	**Fitzroy Crossi**	**27.09**	**242**	*e*P	**P**	**12 18 26.7**	**-0.7**
	comp=Z,40nm,0.5s,mb5.2						
CNB	**Canberra Magne**	**28.89**	**182**	*e*P	**P**	**12 18 44.4**	**+1.0**
	comp=Z,136nm,1.1s,mb5.6						
FORT	**Forrest**	**32.30**	**218**	*e*P	**P**	**12 19 12.0**	**-1.6**
	comp=Z,1µm,0.9s						
MBWA	**Marble Bar**	**33.40**	**241**	*e*P	**P**	**12 19 22.1**	**-1.1**
	comp=Z,14nm,0.7s,mb5.0						
CBIJ	**Chichi jima**	**34.22**	**346**	LR	LR	12 31 56.8	
	comp=Z,2µm,21.9s,MS4.8,baz=143,slow=34						
JOW	**Kunigami**	**39.46**	**328**	LR	LR	12 34 39.8	
	comp=Z,2µm,18.5s,MS5.0,baz=139,slow=33						
KLBR	**Kellerberrin**	**39.74**	**227**	⇓*i*P	**P**	**12 20 16.0**	**-0.7**
	comp=Z,202nm,0.7s						
URZ	**Urewera**	**39.81**	**147**	P	**P**	**12 20 16.3**	**-1.0**
	comp=Z,7.4nm,0.9s,mb4.4,baz=14,slow=6.1,SNR=5.2						
URZ				LR	LR	12 33 58.4	
	comp=Z,3µm,19.1s,MS5.2,baz=116,slow=32						
NWAO	**Narrogin (SRO)**	**40.83**	**225**	*e*P	**P**	**12 20 26.4**	**+0.7**
NWAO				pmax	pmax		
	comp=Z,27nm,1.1s						
NWAO	**Narrogin (SRO)**	**40.83**	**225**	*e*P	**P**	**12 20 26.4**	**+0.7**
	comp=Z,27nm,1.2s,mb4.8						
MUN	**Mundaring**	**41.07**	**227**	*e*P	**P**	**12 20 26.9**	**-0.8**
	comp=Z,18nm,0.7s,mb4.8						
RPZ	**Rata Peaks**	**41.33**	**158**	LR	LR	12 34 12.2	
	comp=Z,6µm,19.2s,MS5.5,baz=320,slow=31						
SSE	**Sheshan**	**46.68**	**325**	P	**P**	**12 21 15.3**	**+2.3**
SSE				XP	sP	12 21 28.3	+1.3
SSE				S	**S**	**12 28 00.6**	**+1.2**
SSE				SCS	ScS	12 31 07.3	+4.8
SSE				AMB	AMB		
	comp=Z,19nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,813nm,11.2s						
SSE				LR	LR		
	comp=N,1µm,15.0s,MS5.2						
SSE				LR	LR		
	comp=E,1µm,14.8s,MS5.2						
SSE				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
SSE	**Sheshan**	**46.68**	**325**	P	**P**	**12 21 15.2**	**+2.2**
	comp=Z,19nm,0.8s,mb5.1						
SSE				sP	sP	12 21 28.2	+1.2
SSE				S	**S**	**12 28 00.6**	**+1.2**
SSE				sS		12 28 15.4	
SSE				ScS	ScS	12 31 07.2	+4.7
SSE				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
NJ2	**Nanjing**	**48.74**	**323**	*e*P	**P**	**12 21 31.6**	**+2.5**
NJ2				XP	sP	12 21 46.5	+3.4
NJ2				PCP	PcP	12 22 55.4	+1.2
NJ2				S	**S**	**12 28 30.0**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,2µm,6.3s						
NJ2				LR	LR		
	comp=N,2µm,17.9s,MS5.4						
NJ2				LR	LR		
	comp=E,3µm,15.0s,MS5.4						
NJ2				LR	LR		
	comp=Z,3µm,14.7s,MS5.4						
DL2	**Dalian**	**52.44**	**331**	P	**P**	**12 21 58.6**	**+1.5**
DL2				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
DL2				AMB	AMB		
	comp=Z,780nm,12.6s						
DL2				LR	LR		
	comp=N,260nm,15.7s,MS4.7						
DL2				LR	LR		
	comp=E,420nm,15.3s,MS4.7						
DL2				LR	LR		
	comp=Z,680nm,18.4s,MS4.7						
ENH	**Enshi**	**53.68**	**315**	*e*P	**P**	**12 22 07.5**	**+1.0**
	comp=Z,17nm,1.1s,mb4.9						
MDJ	**Mudanjiang**	**54.13**	**342**	P	**P**	**12 22 11.6**	**+2.0**
MDJ				PP	PP	12 24 13.6	+0.9
MDJ				PCS		12 27 11.4	
MDJ				AMB	AMB		
	comp=Z,621nm,12.0s						
MDJ				LR	LR		
	comp=N,1µm,36.2s,MS4.7						
MDJ				LR	LR		
	comp=E,605nm,35.3s,MS4.7						
MDJ				LR	LR		
	comp=Z,2µm,33.5s,MS4.9						
CN2	**Changchun**	**54.85**	**338**	*e*P	**P**	**12 22 17.8**	**+3.0**
CN2				*e*S	**S**	**12 29 54.3**	**+2.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				AMB	AMB		
	comp=Z,700nm,9.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=E,1µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
BJT	**Baijiatuau**	**56.01**	**328**	*e*P	**P**	**12 22 23.5**	**+0.2**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BJT	**Baijiatuau**	**56.01**	**328**	*e*P	**P**	**12 22 23.5**	**+0.2**
	comp=Z,4.7nm,0.5s,mb4.8						
BJI	**Beijing**	**56.02**	**328**	P	**P**	**12 22 23.6**	**+0.3**
BJI				S	**S**	**12 30 08.1**	**+0.3**
BJI				AMB	AMB		
	comp=Z,13nm,1.9s,mb4.6						
BJI				LR	LR		
	comp=N,927nm,17.0s,MS5.0						
BJI				LR	LR		
	comp=E,650nm,17.0s,MS5.0						
BJI				LR	LR		
	comp=Z,704nm,24.8s						
BJI	**Beijing**	**56.02**	**328**	P	**P**	**12 22 23.6**	**+0.3**
	comp=Z,13nm,1.9s,mb4.6						
BJI				sP	sP	12 22 47.3	+10
BJI				PP	PP	12 24 24.4	-5.4
BJI				S	**S**	**12 30 08.1**	**+0.3**
BJI				sS		12 30 41.6	
BJI				SS	SS	12 34 07.4	+13
BJI				LR	LR		
	comp=Z,700nm,24.8s,MS4.7						
KMI	**Kunming**	**56.12**	**306**	P	**P**	**12 22 28.1**	**+3.9**
KMI				S	**S**	**12 30 07.1**	**-2.2**
KMI				LR	LR		
	comp=Z,1µm,31.9s,MS4.8						
XAN	**Xi'an**	**56.30**	**318**	P	**P**	**12 22 23.4**	**-2.0**
XAN				AP	pP	12 22 36.6	+1.1
XAN				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.5						
CMAR	**Chiang Mai Arr**	**56.64**	**297**	*i* P	**P**	**12 22 33.5**	**+5.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**56.64**	**297**	P	**P**	**12 22 28.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=100,slow=5.5,SNR=2.6						
CMAR				LR	LR	12 43 24.8	
	comp=Z,528nm,21.9s,baz=105,slow=32						
CMAR				PKP2bc		12 52 38.3	
	comp=Z,0.7nm,0.7s,baz=279,slow=4.1,SNR=4.7						
CMAR	**Chiang Mai Arr**	**56.64**	**297**	P	**P**	**12 22 28.2**	**+0.1**
CMAR				LR	LR	12 43 24.8	
CMAR				⇑*e*		12 52 38.3	
HHC	**Hu-ho-hao-te**	**59.08**	**326**	*e*P	**P**	**12 22 43.8**	**-1.1**
HHC				AP	pP	12 22 57.1	+2.1
HHC				PCP	PcP	12 23 31.9	-1.3
HHC				PP	PP	12 24 57.0	-0.3
HHC				S	**S**	**12 30 45.9**	**-2.0**
HHC				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.9						
HHC				LR	LR		
	comp=N,991nm,15.6s,MS5.2						
HHC				LR	LR		
	comp=E,1µm,19.2s,MS5.2						
HHC				LR	LR		
	comp=Z,2µm,24.0s,MS5.0						
PET	**Petropavlovsk**	**59.49**	**6**	*e*P	**P**	**12 22 46.7**	**-0.9**
PET				*e*		12 31 10.2	
LZH	**Lanzhou**	**60.88**	**317**	*e*P	**P**	**12 22 59.0**	**+1.7**
LZH				AP	pP	12 23 07.5	+0.1
LZH				XP	sP	12 23 12.5	+1.2
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.0						
LZH	**Lanzhou**	**60.88**	**317**	*e*P	**P**	**12 22 59.0**	**+1.7**
	comp=Z,20nm,1.5s,mb5.0						
LZH				pP	pP	12 23 07.5	+0.1
LZH				sP	sP	12 23 12.5	+1.2
HIA	**Hailar**	**61.58**	**337**	*e*P	**P**	**12 22 59.9**	**-1.9**
HIA				pmax	pmax		
	comp=Z,15nm,0.9s						
HIA	**Hailar**	**61.58**	**337**	*e*P	**P**	**12 22 59.9**	**-1.9**
	comp=Z,15nm,0.8s,mb5.2						
FX1	**Attu Island--F**	**61.98**	**15**	LR	LR	12 47 55.2	
	comp=Z,45nm,19.7s,baz=295,slow=34						
FX1	**Attu Island--F**	**61.98**	**15**	*e*P	**P**	**12 23 05.2**	**+0.7**
GTA	**Gaotai**	**65.36**	**319**	*e*P	**P**	**12 23 26.4**	**-0.5**
GTA				XP	sP	12 23 42.4	+1.5
GTA				PP	PP	12 25 53.5	+0.6
GTA				PPP	PPP	12 27 30.1	+2.9
GTA				S	S	12 32 06.8	-0.2
GTA				SS	SS	12 36 23.4	+1.4
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.4						
GTA				AMB	AMB		
	comp=Z,221nm,6.1s						
GTA				LR	LR		
	comp=N,440nm,18.6s,MS4.8						
GTA				LR	LR		
	comp=E,459nm,19.0s,MS4.8						
GTA				LR	LR		
	comp=Z,712nm,17.9s,MS4.9						
MA2	**Magadan**	**65.68**	**0**	*e*P	**P**	**12 23 28.1**	**-0.4**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
SONM	**Songino Array**	**66.50**	**329**	P	**P**	**12 23 33.7**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=143,slow=6.2,SNR=17						
SONM				PKPPKP		12 52 09.7	
	comp=Z,6.1nm,1.5s,baz=270,slow=2.5,SNR=7.5						
LSA	**Lhasa**	**67.38**	**306**	P	**P**	**12 23 43.6**	**+3.8**
LSA	**Lhasa**	**67.38**	**306**	*e*P	**P**	**12 23 40.7**	**+0.9**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
LSA	**Lhasa**	**67.38**	**306**	*e*P	**P**	**12 23 40.6**	**+0.9**
	comp=Z,3.6nm,0.6s,mb4.6						
ZAK	**Zakamensk**	**69.71**	**330**	⇓*i*P	**P**	**12 23 51.7**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.9s,mb4.2						
YAK	**Yakutsk**	**70.05**	**350**	*i* P	**P**	**12 23 55.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,31nm,1.9s,mb4.9						
TLY	**Talaya**	**70.35**	**331**	*e*P	**P**	**12 23 58.4**	**+0.7**
TLY				*e*S	S	12 33 11.1	+4.6
TLY				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
BOD	**Bodaibo**	**70.47**	**340**	*e*P	**P**	**12 23 57.8**	**-0.5**
JIRN	**Jiri**	**70.78**	**302**	*e*P	**P**	**12 24 00.3**	**-0.5**
	comp=Z,8.7nm,0.7s,mb4.8						
GUN	**Gumba**	**71.12**	**302**	*e*P	**P**	**12 24 03.5**	**+0.7**
	comp=Z,17nm,0.7s,mb5.1						
PKI	**Pulchoki**	**71.41**	**302**	*e*P	**P**	**12 24 02.8**	**-1.8**
VNDA	**Vanda**	**71.41**	**177**	P	**P**	**12 24 03.6**	**-0.2**
	comp=Z,6.6nm,0.9s,mb4.6,baz=349,slow=3.4,SNR=6.1						

VNDA				LR	LR	12 53 17.6	
	comp=Z,768nm,18.2s,MS5.0,baz=73,slow=34						
KKN	**Kakani**	**71.59**	**302**	*e*P	**P**	**12 24 05.0**	**-0.6**
	comp=Z,10.0nm,0.6s,mb5.0						
MOY	**Mondy**	**71.64**	**330**	*e*P	**P**	**12 24 06.0**	**+0.5**
MOY				pmax	pmax		
	comp=Z,37nm,2.2s,mb4.9						
DMN	**Daman**	**71.68**	**302**	*e*P	**P**	**12 24 04.0**	**-2.2**
	comp=Z,49nm,1.3s,mb5.3						
KOLN	**Koldanda**	**73.00**	**301**	*e*P	**P**	**12 24 12.2**	**-1.9**
	comp=Z,11nm,0.8s,mb4.8						
BILL	**Bilibino**	**74.99**	**6**	*i* P	**P**	**12 24 24.3**	**-0.6**
BILL				*e*		12 24 37.2	
BILL				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.8						
BILL	**Bilibino**	**74.99**	**6**	*e*P	**P**	**12 24 24.4**	**-0.4**
	comp=Z,16nm,1.2s,mb4.8						
WMQ	**Urumqi**	**75.44**	**318**	P	**P**	**12 24 29.0**	**+1.1**
WMQ				PP	PP	12 27 21.0	+1.9
WMQ				S	S	12 34 02.0	-2.5
WMQ				SS	SS	12 38 57.0	-0.6
WMQ				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.2						
WMQ				LR	LR		
	comp=N,754nm,24.0s,MS5.1						
WMQ				LR	LR		
	comp=E,785nm,23.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,467nm,20.0s,MS4.8						
SVW2	**Sparrevohn**	**79.04**	**24**	*e*P	**P**	**12 24 49.5**	**+1.9**
TIXI	**Tiksi**	**79.12**	**353**	*e*P	**P**	**12 24 47.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.2						
SLKM	**Skilak Lake**	**80.93**	**25**	*e*P	**P**	**12 24 58.9**	**+1.2**
ZAL	**Zalesovo**	**81.25**	**327**	*i* P	**P**	**12 24 59.9**	**+0.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**81.25**	**327**	P	**P**	**12 24 59.2**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.3,baz=359,slow=6.6,SNR=14						
ZAL				LR	LR	13 02 08.7	
	comp=Z,750nm,19.5s,MS5.0,baz=355,slow=36						
SML	**Sawmill**	**82.36**	**25**	*e*P	**P**	**12 25 05.1**	**-0.1**
NVS	**Novosibirsk**	**82.45**	**327**	⇑*i*P	**P**	**12 25 04.7**	**-1.1**
NVS				*e*S	S	12 35 14.5	-3.9
NVS				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
NVS				pmax	pmax		
	comp=E,13nm,1.8s						
NVS				smax			
	comp=N,18nm,2.6s						
NVS				smax			
	comp=E,52nm,3.0s						
IMA	**Indian Mountai**	**82.58**	**20**	*e*P	**P**	**12 25 07.7**	**+1.5**
IMA				pmax	pmax		
	comp=Z,240nm,1.9s,mb5.9						
IMA	**Indian Mountai**	**82.58**	**20**	*e*P	**P**	**12 25 10.4**	**+4.2**
MCK	**McKinley**	**83.06**	**23**	*e*P	**P**	**12 25 08.4**	**-0.3**
MCK				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1						
MCK	**McKinley**	**83.06**	**23**	*e*P	**P**	**12 25 08.4**	**-0.3**
	comp=Z,23nm,1.2s,mb5.1						
MAW	**Mawson**	**83.37**	**203**	LR	LR	12 59 32.8	
	comp=Z,1μm,20.1s,MS5.3,baz=80,slow=34						
QSPA	**South Pole Qui**	**83.66**	**180**	*e*P	**P**	**12 25 11.4**	**0.0**
	comp=Z,41nm,1.0s,mb5.5						
KURK	**Kurchatov**	**83.67**	**323**	*i* P	**P**	**12 25 12.1**	**0.0**
KURK	**Kurchatov**	**83.67**	**323**	*e*P	**P**	**12 25 11.8**	**-0.2**
	comp=Z,12nm,1.1s,mb4.9						
COLA	**College**	**84.03**	**22**	*e*P	**P**	**12 25 12.2**	**-1.4**
COLA				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
COLA	**College**	**84.03**	**22**	*e*P	**P**	**12 25 12.2**	**-1.4**
	comp=Z,11nm,0.8s,mb5.0						
AAK	**Ala-Archa**	**84.18**	**314**	*i* P	**P**	**12 25 16.1**	**+1.2**
AAK				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.8						
AAK				MLR	MLR		
	comp=Z,900nm,20.0s,MS5.2						
ILAR	**Eielson Array**	**84.35**	**22**	P	**P**	**12 25 13.6**	**-1.6**
	comp=Z,7.6nm,1.0s,mb4.8,baz=247,slow=5.1,SNR=44						
ILAR				LR	LR	13 01 38.0	
	comp=Z,577nm,18.2s,MS5.0,baz=76,slow=35						
MENT	**Mentasta**	**84.80**	**25**	*e*P	**P**	**12 25 19.5**	**+2.1**
DAWY	**Dawson**	**87.02**	**24**	*e*P	**P**	**12 25 29.3**	**+1.0**
CHKZ	**Chkalovo**	**89.19**	**324**	*e*P	**P**	**12 25 37.1**	**-1.9**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.7						
CHKZ	**Chkalovo**	**89.19**	**324**	*e*P	**P**	**12 25 37.1**	**-1.8**
	comp=Z,4.0nm,1.0s,mb4.7						
BVAR	**Borovoye Array**	**89.19**	**323**	P	**P**	**12 25 36.9**	**-2.1**
	comp=Z,1.5nm,0.7s,mb4.4,baz=117,slow=6.6,SNR=7.7						
BBB	**Bella Bella**	**89.57**	**37**	LR	LR	12 58 03.5	
	comp=Z,724nm,20.1s,MS5.1,baz=31,slow=30						
INK	**Inuvik**	**90.61**	**21**	*e*P	**P**	**12 25 44.4**	**-0.9**
INK				pmax	pmax		
	comp=Z,14nm,1.1s						
INK	**Inuvik**	**90.61**	**21**	*e*P	**P**	**12 25 44.4**	**-1.0**
	comp=Z,14nm,1.1s,mb5.2						
MTUM	**Tungsten Hills**	**94.38**	**53**	*e*P	**P**	**12 26 05.1**	**+1.8**
NVAR	**Mina Array Bea**	**94.67**	**52**	P	**P**	**12 26 05.4**	**+0.8**
	comp=Z,2.4nm,0.7s,mb4.7,baz=250,slow=3.6,SNR=14						
NVAR				PP	PP	12 30 00.5	+5.1
	comp=Z,0.4nm,0.7s,baz=259,slow=8.7,SNR=3.7						
NVAR	**Mina Array Bea**	**94.67**	**52**	P	**P**	**12 26 05.4**	**+0.8**
NVAR				PP	PP	12 30 00.5	+5.1
MNV	**Mina**	**94.79**	**52**	*e*P	**P**	**12 26 06.2**	**+1.0**
MNV				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.4						
MNV	**Mina**	**94.79**	**52**	*e*P	**P**	**12 26 06.2**	**+1.0**
	comp=Z,19nm,1.3s,mb5.4						
BMO	**Blue Mountains**	**95.83**	**46**	*e*P	**P**	**12 26 09.3**	**-0.4**
BMO				pmax	pmax		
	comp=Z,12nm,1.5s,mb5.1						
BMO	**Blue Mountains**	**95.83**	**46**	*e*P	**P**	**12 26 09.3**	**-0.5**
	comp=Z,12nm,1.5s,mb5.1						
NEW	**Newport**	**96.12**	**42**	LR	LR	13 04 16.9	
	comp=Z,1μm,18.3s,MS5.4,baz=172,slow=32						
ELK	**Elko**	**97.16**	**50**	*e*P	**P**	**12 26 17.1**	**+1.1**
ELK				pmax	pmax		
	comp=Z,14nm,1.7s						
ELK	**Elko**	**97.16**	**50**	*e*P	**P**	**12 26 17.1**	**+1.1**
	comp=Z,14nm,1.8s,mb5.1						
YKA	**Yellowknife Ar**	**97.74**	**28**	*i* P	**P**	**12 26 18.1**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**97.74**	**28**	P	**P**	**12 26 18.1**	**+0.1**
	comp=Z,1.4nm,0.5s,mb4.7,baz=271,slow=4.7,SNR=36						
YKA				PKiKP		12 30 54.2	
	comp=Z,0.1nm,0.3s,baz=271,slow=1.5,SNR=4.1						
YKA				PKKPbc		12 42 51.8	
	comp=Z,0.8nm,1.1s,baz=85,slow=3.1,SNR=5.7						
YKA				LR	LR	13 05 51.8	
	comp=Z,639nm,20.4s,MS5.1,baz=320,slow=33						
ARUT	**Antelope Range**	**98.47**	**53**	*e*P	**P**	**12 26 20.6**	**-1.3**
EDM	**Edmonton**	**98.59**	**37**	P	**P**	**12 26 21.7**	**-0.4**
PDAR	**Pinedale Array**	**101.42**	**48**	P	P	12 26 35.1	0.0
	comp=Z,0.8nm,0.8s,baz=243,slow=3.3,SNR=5.2						
TXAR	**Lajitas Array**	**106.70**	**61**	PP	PP	12 31 28.6	+1.1
	comp=Z,0.5nm,0.9s,baz=225,slow=5.3,SNR=3.4						
SKO	**Skopje**	**122.80**	**317**	*e*PKP	PKPdf	12 31 40.7	+2.2
SCHQ	**Schefferville**	**123.04**	**25**	PKP	PKPdf	12 31 39.4	+0.8
	comp=Z,1.6nm,0.7s,baz=20,slow=6.5,SNR=5.5						
SCHQ	**Schefferville**	**123.04**	**25**	PKP	PKPdf	12 31 39.4	+0.8
KHC	**Kasperske Hory**	**124.10**	**327**	*e*PKIKP	PKPdf	12 31 41.0	+0.2
KHC				*e*		12 31 51.0	
KHC	**Kasperske Hory**	**124.10**	**327**	*e*PKPdf	PKPdf	12 31 41.0	+0.2
KHC				x	x	12 31 51.0	
GERES	**GERESS Array B**	**124.20**	**327**	PKP	PKPdf	12 31 42.8	+1.8
	comp=Z,0.6nm,0.6s,baz=117,slow=2.2,SNR=4.3						
CFAA	**Coronel Fontan**	**127.08**	**138**	PKP	PKPdf	12 31 48.0	+0.9
	comp=Z,0.5nm,0.9s,baz=228,slow=3.3,SNR=5.9						
OTAV	**Otavalo**	**130.60**	**95**	*e*PKPdf	PKPdf	12 31 56.5	+2.2
LPAZ	**La Paz**	**135.51**	**121**	*e*PKIKP	PKPdf	12 32 05.5	+2.2
SDV	**Santo Domingo**	**138.98**	**84**	PKP	PKPdf	12 32 12.6	+2.9
	comp=Z,5.6nm,0.9s,baz=339,slow=5.8,SNR=5.5						
SDV	**Santo Domingo**	**138.98**	**84**	*e*PKPdf	PKPdf	12 32 11.7	+2.0
BDFB	**Brasilia**	**151.39**	**140**	PKPbc	PKPdf	12 32 38.1	+7.5
	comp=Z,5.8nm,0.6s,baz=309,slow=2.4,SNR=8.6						
BAO	**Brasilia Array**	**151.41**	**140**	P	PKPdf	12 32 37.5	+6.9
DBIC	**Dimbokro**	**155.69**	**272**	PKPab	PKPab	12 33 05.4	-0.1
	comp=Z,1.5nm,0.5s,baz=114,slow=6.9,SNR=5.3						

IDC ***23*** *12:18:14.5±7.1, 6.18S×150.58E, h56^{km}±63^{km}, mb3.8/4, mb1 4.1/5, mb1mx3.8/12, mbtmp4.1/5, ML2.5/1, Error ellipse: s-maj=79.8km s-min=34.6km az=117.0*

ISC 23 12:18:13.4±5.1**, 6.3S**±0.3×**150.7E**±0.4**, h58**^{km}±44^{km}**, n5, σ1**^{s}**59**/6**, mb3.9**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.65**	**228**	P	**P**	**12 19 23.3**	**+0.4**
	1.5nm,0.3s,baz=34,slow=15,SNR=7.5						
PMG				S	**S**	**12 20 15.5**	**-0.6**
	1.1nm,0.3s,baz=108,slow=19,SNR=2.5						
WRA	**Warramunga Arr**	**20.87**	**228**	P	**P**	**12 22 52.4**	**-0.5**
	6.0nm,0.6s,baz=53,slow=11,SNR=11						
ASAR	**Alice Springs**	**23.63**	**221**	P	**P**	**12 23 22.2**	**+2.1**
	4.6nm,0.8s,mb4.0,baz=56,slow=8.8,SNR=11						
STKA	**Stephens Creek**	**26.83**	**197**	P	**P**	**12 23 49.8**	**-0.6**
	6.7nm,0.9s,mb4.2,baz=17,slow=12,SNR=3.8						
ILAR	**Eielson Array**	**84.33**	**22**	P	**P**	**12 30 39.6**	**-0.4**
	0.3nm,0.6s,mb3.6,baz=261,slow=4.2,SNR=5.2						

NEIC ***23*** *12:21:32.5±0.9, 6.29S×151.00E, h10^{km}, mb4.2/3, Error ellipse: s-maj=32.8km s-min=13.0km az=126.0*

IDC ***23*** *12:21:38.3±6.9, 6.34S×150.85E, h52^{km}±61^{km}, mb3.7/6, mb1 4.0/7, mb1mx3.9/13, mbtmp4.0/7, ML2.9/1, Error ellipse: s-maj=55.0km s-min=28.5km az=102.0*

ISC 23 12:21:38.2±3.9**, 6.3S**±0.2×**150.7E**±0.2**, h63**^{km}±32^{km}**, n11, σ0**^{s}**70**/12**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.69**	**228**	P	**P**	**12 22 48.6**	**+0.4**
	3.4nm,0.3s,baz=26,slow=7.8,SNR=8.6						
PMG				S	**S**	**12 23 41.5**	**-0.3**
	6.9nm,0.3s,baz=99,slow=23,SNR=6.2						
KAKA	**Kakadu**	**19.11**	**249**	*e*P	**P**	**12 25 57.9**	**-0.9**
	6.4nm,0.8s						
WRA	**Warramunga Arr**	**20.91**	**228**	P	**P**	**12 26 17.3**	**-0.5**
	9.8nm,1.1s,baz=54,slow=11,SNR=18						
ASAR	**Alice Springs**	**23.66**	**221**	P	**P**	**12 26 45.9**	**+1.0**
	6.8nm,0.8s,mb4.2,baz=53,slow=9.3,SNR=39						
ASPA	**Alice Springs**	**23.66**	**221**	*e*P	**P**	**12 26 46.0**	**+1.1**
STKA	**Stephens Creek**	**26.85**	**197**	*e*P	**P**	**12 27 13.9**	**-1.1**
	5.0nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**26.85**	**197**	P	**P**	**12 27 14.3**	**-0.7**
	7.0nm,0.9s,mb4.2,baz=348,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	**27.13**	**242**	*e*P	**P**	**12 27 17.9**	**+0.2**
	5.9nm,0.8s,mb4.2						
SONM	**Songino Array**	**66.49**	**329**	P	**P**	**12 32 23.9**	**+0.4**
	0.1nm,0.4s,mb3.2,baz=143,slow=6.5,SNR=3.1						
ILAR	**Eielson Array**	**84.31**	**22**	P	**P**	**12 34 03.5**	**-0.9**
	0.4nm,0.6s,mb3.7,baz=245,slow=5.2,SNR=9.3						
YKA	**Yellowknife Ar**	**97.70**	**28**	P	**P**	**12 35 07.5**	**+0.4**
	0.1nm,0.4s,mb3.7,baz=273,slow=4.6,SNR=5.2						

IDC 23 12:23:26.5±13.0**, 4.90S**×**151.33E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/13**, mbtmp3.8**/3**, Error ellipse: s-maj=220.5km s-min=84.8km az=25.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.30**	**226**	P	P	12 28 25.4	-1.8
	0.9nm,0.5s,baz=52,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**25.11**	**220**	P	P	12 28 53.8	-0.9
	1.0nm,0.5s,baz=55,slow=9.1,SNR=6.3						
STKA	**Stephens Creek**	**28.34**	**198**	P	P	12 29 22.1	-2.3
	1.5nm,0.6s,baz=31,slow=12,SNR=2.9						

IDC ***23*** *12:26:10.7±1.3, 8.03N×94.34E, mb3.8/5, mb1 4.1/6, mb1mx3.9/18, mbtmp3.8/6, ML3.4/1, MS4.5/1, Ms1 4.5/1, ms1mx3.2/21, Error ellipse: s-maj=63.4km s-min=22.8km az=58.0*

BJI ***23*** *12:26:13.4, 7.78N×94.25E, h36^{km}, mb4.2*

NEIC ***23*** *12:26:14.7±0.6, 7.89N×94.11E, h30^{km}, mb4.4/3, Error ellipse: s-maj=18.8km s-min=8.7km az=62.0*

ISC 23 12:26:13.4±1.0**, 7.9N**±0.1×**94.1E**±0.2**, h33**^{km}**, n20, σ0**^{s}**78**/16**, mb4.3**/14**, MS4.6**/1**, 1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.50**	**23**	Pn	**P**	**12 28 58.3**	**0.0**
	0.1nm,0.3s,baz=211,slow=14,SNR=16						
JIRN	**Jiri**	**21.06**	**340**	*e*P	**P**	**12 30 56.9**	**-0.1**
	30nm,1.0s,mb4.6						
PKI	**Pulchoki**	**21.25**	**338**	*e*P	**P**	**12 30 58.8**	**-0.2**
	16nm,0.7s,mb4.4						
GUN	**Gumba**	**21.39**	**340**	*e*P	**P**	**12 30 59.8**	**-0.6**
	35nm,0.9s,mb4.7						
DMN	**Daman**	**21.40**	**338**	*e*P	**P**	**12 31 00.6**	**+0.2**
	23nm,0.9s,mb4.5						
LSA	**Lhasa**	**21.88**	**353**	P	**P**	**12 31 06.8**	**+1.6**
LSA	**Lhasa**	**21.88**	**353**	*e*P	**P**	**12 31 05.5**	**+0.3**
	13nm,0.8s,mb4.4						
GKN	**Gorkha**	**21.93**	**337**	*e*P	**P**	**12 31 05.7**	**-0.1**
	28nm,0.8s,mb4.8						
GYA	**Guiyang**	**21.97**	**31**	⇓*i*P	**P**	**12 31 09.5**	**+3.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
KOLN	**Koldanda**	**22.15**	**335**	*e*P	**P**	**12 31 07.8**	**-0.1**
	comp=Z,35nm,1.0s,mb4.7						
SONM	**Songino Array**	**41.15**	**13**	P	**P**	**12 33 55.3**	**-0.9**
	comp=Z,0.6nm,0.7s,mb3.3,baz=194,slow=4.9,SNR=3.6						
ZAL	**Zalesovo**	**46.53**	**352**	P	**P**	**12 34 39.0**	**-0.5**
	comp=Z,1.6nm,0.6s,mb4.1,baz=302,slow=9.7,SNR=9.8						
WRA	**Warramunga Arr**	**48.27**	**126**	P	**P**	**12 34 53.0**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=305,slow=8.6,SNR=6.4						
CHKZ	**Chkalovo**	**49.46**	**342**	*e*P	**P**	**12 35 01.7**	**-0.7**
	comp=Z,3.5nm,0.9s,mb4.4						
ASAR	**Alice Springs**	**49.92**	**130**	P	**P**	**12 35 06.5**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.7,baz=305,slow=7.9,SNR=3.2						
ASAJ	**Asahikawa**	**55.40**	**41**	LR	LR	12 59 00.3	
	comp=Z,449nm,19.0s,MS4.6,baz=163,slow=36						
GERES	**GERESS Array B**	**77.82**	**318**	P	**P**	**12 38 10.7**	**+1.5**
	comp=Z,1.4nm,0.8s,mb3.9,baz=90,slow=5.3,SNR=5.7						
PDAR	**Pinedale Array**	**125.15**	**21**	PKP	PKPdf	12 45 12.6	+1.6
	comp=Z,0.4nm,0.8s,baz=90,slow=3.0,SNR=3.7						
PLCA	**Paso Flores**	**144.56**	**200**	PKP	PKPdf	12 45 49.2	+2.4
	comp=Z,4.1nm,0.9s,baz=162,slow=3.0,SNR=3.9						
PLCA	**Paso Flores**	**144.56**	**200**	PKP	PKPdf	12 45 49.2	+2.4

IDC ***23*** *12:48:24.6±1.3, 6.25S×150.97E, mb3.9/6, mb1 4.1/7, mb1mx4.1/13, mbtmp3.9/7, ML3.0/1, Error ellipse: s-maj=55.7km s-min=20.2km az=117.0*

NEIC ***23*** *12:48:26.2±0.9, 6.21S×150.85E, h10^{km}, mb4.2/3, Error ellipse: s-maj=32.9km s-min=12.6km az=126.0*

ISC 23 12:48:31.5±3.8**, 6.2S**±0.2×**150.6E**±0.2**, h59**^{km}±31^{km}**, n12, σ0**^{s}**79**/13**, mb3.8**/6**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.62**	**227**	Pn	**P**	**12 49 41.1**	**+0.5**
	3.9nm,0.3s,baz=54,slow=8.0,SNR=13						
PMG				Sn	**S**	**12 50 32.9**	**-0.6**
	3.8nm,0.3s,baz=233,slow=18,SNR=5.1						
KAKA	**Kakadu**	**19.00**	**249**	⇑*i*P	**P**	**12 52 50.9**	**-0.3**
	5.6nm,0.9s						
WRAB	**Tennant Creek**	**20.83**	**228**	*e*P	**P**	**12 53 09.5**	**-1.1**
	9.6nm,0.8s						
WRA	**Warramunga Arr**	**20.84**	**228**	P	**P**	**12 53 10.2**	**-0.5**
	5.2nm,0.5s,baz=52,slow=11,SNR=114						
ASAR	**Alice Springs**	**23.61**	**221**	P	**P**	**12 53 39.1**	**+1.1**
	3.3nm,0.5s,mb4.0,baz=56,slow=9.0,SNR=126						
ASPA	**Alice Springs**	**23.61**	**221**	*e*P	**P**	**12 53 39.1**	**+1.0**
STKA	**Stephens Creek**	**26.86**	**197**	P	**P**	**12 54 08.8**	**0.0**
	2.5nm,0.7s,mb3.8,baz=19,slow=12,SNR=6.0						
FITZ	**Fitzroy Crossi**	**27.03**	**242**	*e*P	**P**	**12 54 10.6**	**+0.2**
	4.7nm,0.5s,mb4.3						
SONM	**Songino Array**	**66.37**	**329**	P	**P**	**12 59 17.3**	**+0.9**
	0.3nm,0.9s,mb3.3,baz=117,slow=3.2,SNR=3.0						
ILAR	**Eielson Array**	**84.31**	**22**	P	**P**	**13 00 56.5**	**-1.5**
	0.4nm,0.7s,mb3.7,baz=254,slow=4.9,SNR=7.8						
YKA	**Yellowknife Ar**	**97.72**	**28**	P	**P**	**13 02 01.0**	**+0.1**
	0.1nm,0.5s,mb3.6,baz=272,slow=4.7,SNR=6.0						
YKA	**Yellowknife Ar**	**97.72**	**28**	P	**P**	**13 02 01.0**	**+0.1**

MOS ***23*** *12:58:50.3±1.3, 36.19N×139.64E, h52^{km}, mb4.5/29, Error ellipse: s-maj=13.6km s-min=7.3km az=95.0*

IDC ***23*** *12:58:50.3±3.2, 36.08N×139.71E, h36^{km}±27^{km}, mb4.1/18, mb1 4.3/21, mb1mx4.2/24, mbtmp4.3/21, ML4.3/3, MS4.0/1, Ms1 4.0/1, ms1mx2.8/22, Error ellipse: s-maj=19.0km s-min=12.7km az=86.0*

BJI ***23*** *12:58:51.1, 36.09N×139.96E, h76^{km}, mB4.7, mb4.5, Ms4.2, Msz4.0*

NEIC ***23*** *12:58:51.8±0.3, 36.04N×139.75E, mb4.5/28, MW4.3(NIED), Error ellipse: s-maj=7.6km s-min=5.9km az=157.0*

NEIC Felt in the Tokyo area. Recorded [3 JMA] in Gumma, Ibaraki, Saitama and Tochigi; [2 JMA] in Chiba, Fukushima, Kanagawa and Tokyo; [1 JMA] in Nagano and Yamanashi Prefectures.

JMA ***23*** *12:58:52.2±0.1, 36.11N×139.85E, h50^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1:φ$_s$54°, δ24°, λ-67°. NP2:φ$_s$209°, δ68°, λ-100°. Principal axes: T Plg22°, Azm307°; N Plg9°, Azm213°; P Plg66°, Azm102°;*

JMA Felt III J1.

NIED ***23*** *12:59:00, 36.20N×139.90E, h50^{km}, Mw4.3 Best double couple: M$_0$3.59×10^{15} NP1:φ$_s$46°, δ66°, λ-77°. NP2:φ$_s$197°, δ27°, λ-116°.*

ISC 23 12:58:50.9±0.2**, 36.08N**±0.02×**139.82E**±0.03**, h58**^{km}**, h58**^{km}±3.2^{km}**:pP-P, n135, σ1**^{s}**16**/148**, mb4.5**/57**, MS4.1**/5**, 6C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.34**	**64**	⇑P	**P**	**12 59 01.3**	**+0.1**
JYT				S	**S**	**12 59 07.6**	**-1.1**
TOK	**Tokyo**	**0.40**	**187**	⇓P	**P**	**12 59 03.5**	**+1.8**
JAG	**Ashikaga**	**0.45**	**320**	⇓P	**P**	**12 59 03.0**	**+0.7**
JAG				S	**S**	**12 59 10.7**	**+0.1**
JRY	**Ryogami san**	**0.74**	**265**	⇓P	**P**	**12 59 06.8**	**+1.2**
JRY				S	**S**	**12 59 17.7**	**+1.1**
JKT	**Katashina**	**0.82**	**326**	⇑P	**P**	**12 59 07.3**	**+0.6**
JKT				S	**S**	**12 59 18.9**	**+0.5**
JOD2	**Odawara 2**	**1.01**	**216**	P	**P**	**12 59 10.9**	**+1.7**
JOD2				S	**S**	**12 59 24.0**	**+1.2**
JYN	**Shimob**	**1.19**	**241**	P	**P**	**12 59 14.2**	**+2.6**
JFY	**Yanaizu**	**1.33**	**356**	⇑P	**P**	**12 59 14.5**	**+0.7**
JFY				S	**S**	**12 59 31.7**	**+1.0**
JHK	**Hiroka**	**1.33**	**331**	⇑P	**P**	**12 59 14.6**	**+0.8**
MAJO	**Matsushiro**	**1.38**	**290**	*e*P	**P**	**12 59 15.0**	**+0.5**
MAT	**Matsushiro**	**1.38**	**290**	P	**P**	**12 59 14.9**	**+0.4**
MAT				*e*S	**S**	**12 59 32.5**	**+0.6**
MAT	**Matsushiro**	**1.38**	**290**	P	**P**	**12 59 16.0**	**+1.5**
JIM2	**Oshima 3**	**1.40**	**193**	P	**P**	**12 59 15.3**	**+0.6**
JIM2				S	**S**	**12 59 32.4**	**+0.1**
BSO3	**Boso 3**	**1.40**	**156**	⇑P	**P**	**12 59 15.0**	**+0.3**
BSO3				S	**S**	**12 59 33.8**	**+1.5**
JHJ	**Hachijo jima 2**	**2.95**	**181**	Pn	**P**	**12 59 36.5**	**-0.1**
	205nm,0.3s,baz=319,slow=8.1,SNR=248						
JHJ				Sn	**S**	**13 00 09.4**	**-1.5**
	377nm,0.3s,baz=77,slow=24,SNR=16						
ASAJ	**Asahikawa**	**8.30**	**14**	P	**P**	**13 00 47.6**	**-3.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.30**	**14**	Pn	**P**	**13 00 47.5**	**-3.6**
	comp=Z,2.0nm,0.3s,baz=198,slow=13,SNR=9.4						
CBIJ	**Chichi jima**	**9.18**	**167**	Pn	**P**	**13 00 59.0**	**-4.2**
	comp=Z,17nm,0.3s,baz=247,slow=16,SNR=22						
CBIJ				Sn	**S**	**13 02 34.7**	**-11**
	comp=Z,6.8nm,0.3s,baz=287,slow=20,SNR=2.7						
KS15	**Wonju Array Si**	**9.67**	**282**	*e*P	**P**	**13 01 09.7**	**-0.2**
YSS	**Yuzh-Sakhalins**	**11.08**	**11**	*e*P	**P**	**13 01 26.0**	**-3.1**
MDJ	**Mudanjiang**	**11.55**	**321**	P	**P**	**13 01 36.8**	**+1.5**
MDJ				AMB	AMB		
	comp=Z,28nm,3.8s						
CN2	**Changchun**	**13.44**	**309**	*e*P	**P**	**13 02 00.9**	**+0.5**
CN2				*e*AP		13 02 10.1	
CN2				*e*S	**S**	**13 04 28.4**	**-0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,530nm,5.0s						
SSE	**Sheshan**	**16.30**	**258**	P	**P**	**13 02 36.5**	**-0.8**
SSE				AMB	AMB		
	comp=Z,36nm,0.7s						
SSE				AMB	AMB		
	comp=Z,54nm,4.5s						
SSE	**Sheshan**	**16.30**	**258**	P	**P**	**13 02 36.5**	**-0.8**
	comp=Z,36nm,0.7s						
NJ2	**Nanjing**	**17.82**	**263**	*e*P	**P**	**13 02 56.5**	**+0.1**
NJ2				PP	PP	13 03 12.3	+0.7
NJ2				XP		13 03 17.5	
NJ2				S	**S**	**13 06 10.0**	**-0.2**
NJ2				AMB	AMB		
	comp=Z,30nm,1.4s						
NJ2				AMB	AMB		
	comp=Z,450nm,11.3s						
NJ2				LR	LR		
	comp=N,530nm,12.4s						
NJ2				LR	LR		
	comp=E,850nm,19.0s						
NJ2				LR	LR		
	comp=Z,580nm,15.4s						
BJI	**Beijing**	**19.02**	**289**	P	**P**	**13 03 16.5**	**+5.9**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJI	**Beijing**	**19.02**	**289**	P	**P**	**13 03 16.5**	**+5.9**
	comp=Z,6.0nm,0.7s						
PET	**Petropavlovsk**	**21.50**	**32**	*e*P	**P**	**13 03 32.9**	**-3.6**
PET				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
HHC	**Hu-ho-hao-te**	**22.58**	**291**	*e*P	**P**	**13 03 49.8**	**+2.6**
HHC				AP		13 04 00.9	
HHC				XP		13 04 08.9	
HHC				PP	PP	13 04 20.9	+4.1
HHC				XS		13 08 17.8	
HHC				SCP		13 11 06.5	
HHC				SCS	ScS	13 14 54.3	-1.3
HHC				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,208nm,8.0s						
HHC				LR	LR		
	comp=N,286nm,14.0s,MS4.0						
HHC				LR	LR		
	comp=E,231nm,14.0s,MS4.0						
HHC				LR	LR		
	comp=Z,329nm,13.0s,MS4.0						
MA2	**Magadan**	**24.57**	**13**	*e*P	**P**	**13 04 06.3**	**0.0**
MA2				pmax	pmax		
	comp=E,2.0nm,0.7s						
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
MA2				pmax	pmax		
	comp=N,5.0nm,0.7s						
MA2	**Magadan**	**24.57**	**13**	*e*P	**P**	**13 04 06.2**	**-0.1**
	comp=N,18nm,0.7s,mb4.7						
YAK	**Yakutsk**	**26.74**	**349**	*e*P	**P**	**13 04 24.1**	**-2.6**
YAK				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.8						
YAK	**Yakutsk**	**26.74**	**349**	*e*P	**P**	**13 04 24.1**	**-2.6**
	comp=Z,19nm,0.6s,mb4.8						
ULN	**Ulaanbaatar**	**26.85**	**306**	*e*P	**P**	**13 04 28.8**	**+1.0**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
ULN	**Ulaanbaatar**	**26.85**	**306**	*e*P	**P**	**13 04 28.8**	**+1.0**
	comp=Z,2.5nm,0.4s,mb4.1						
SONM	**Songino Array**	**27.28**	**306**	P	**P**	**13 04 30.8**	**-0.9**
	comp=Z,1.5nm,0.5s,mb3.8,baz=106,slow=8.6,SNR=17						
BOD	**Bodaibo**	**27.68**	**330**	*e*P	**P**	**13 04 31.9**	**-3.3**
GYA	**Guiyang**	**29.79**	**261**	⇑*i*P	**P**	**13 04 53.4**	**-1.1**
GYA				AP	pP	13 05 08.3	-0.6
GYA				S	**S**	**13 09 43.0**	**-2.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GYA				LR	LR		
	comp=N,180nm,13.8s,MS4.2						
GYA				LR	LR		
	comp=E,340nm,15.2s,MS4.2						
GYA				LR	LR		
	comp=Z,250nm,14.2s,MS4.0						
BILL	**Bilibino**	**35.31**	**17**	*i* P	**P**	**13 05 41.6**	**-0.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BILL				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.0						
TIXI	**Tiksi**	**36.09**	**354**	*e*P	**P**	**13 05 46.8**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
WMQ	**Urumqi**	**40.13**	**298**	*e*P	**P**	**13 06 23.0**	**+0.5**
WMQ				AP	pP	13 06 39.0	+1.6
WMQ				XP	sP	13 06 46.0	+1.7

WMQ				PP	PP	13 08 00.0	+0.8
WMQ				S	S	13 12 29.0	+4.4
WMQ				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.4						
ZAL	Zalesovo	41.63	313	P	P	13 06 35.0	+0.3
ZAL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZAL				MLR	MLR		
	comp=Z,189nm,18.2s						
ZAL	Zalesovo	41.63	313	P	P	13 06 35.0	+0.4
	comp=Z,7.7nm,0.6s,mb4.5,baz=18,slow=9.2						
ZAL				LR	LR	13 26 11.8	
	comp=Z,189nm,18.2s,MS4.0,baz=89,slow=40						
NVS	Novosibirsk	42.58	314	*e*P	P	13 06 41.3	-1.1
NVS				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
NVS				pmax	pmax		
	comp=E,5.0nm,0.5s						
MKAR	Makanchi Array	43.54	303	P	P	13 06 50.2	-0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	45.52	309	*i* P	P	13 07 05.3	-0.9
KURK	Kurchatov	45.52	309	*e*P	P	13 07 05.3	-0.8
	comp=Z,12nm,0.7s,mb4.9						
JIRN	Jiri	45.82	275	*e*P	P	13 07 08.2	-0.7
	comp=Z,20nm,0.9s,mb5.1						
GUN	Gumba	45.97	276	*e*P	P	13 07 09.0	-1.1
	comp=Z,14nm,0.7s,mb5.0						
PKI	Pulchoki	46.49	276	*e*P	P	13 07 13.5	-0.7
KKN	Kakani	46.50	276	*e*P	P	13 07 13.7	-0.6
	comp=Z,7.7nm,0.6s,mb4.8						
DMN	Daman	46.72	276	*e*P	P	13 07 14.4	-1.6
GKN	Gorkha	46.93	276	*e*P	P	13 07 17.3	-0.4
	comp=Z,36nm,0.7s,mb5.4						
KOLN	Koldanda	47.86	277	*e*P	P	13 07 24.9	-0.1
	comp=Z,21nm,1.1s,mb5.1						
IMA	Indian Mountai	48.16	30	*e*P	P	13 07 29.1	+2.3
IMA				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
IMA	Indian Mountai	48.16	30	*e*P	P	13 07 29.1	+2.4
	comp=Z,12nm,0.8s,mb5.0						
TKM2	Tokmak 2	48.96	299	P	P	13 07 33.9	+0.7
	SNR=13						
KAKA	Kakadu	49.02	190	*e*P	P	13 07 33.1	-1.0
	comp=Z,5.6nm,0.6s,mb4.8						
KZA	Kyzart	49.42	298	P	P	13 07 38.2	+1.4
	SNR=5.8						
KBK	Karagaybulak	49.48	299	P	P	13 07 37.7	+0.4
	SNR=11						
USP	Ospenovka	49.64	299	P	P	13 07 38.2	-0.3
	SNR=6.1						
AAK	Ala-Archa	49.81	299	*i* P	P	13 07 38.0	-1.8
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
AAK				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.2						
AAK	Ala-Archa	49.81	299	*e*P	P	13 07 38.4	-1.5
	comp=Z,2.6nm,0.6s,mb4.4						
CHKZ	Chkalovo	50.03	313	P	P	13 07 39.9	-1.4
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	50.03	313	*e*P	P	13 07 39.9	-1.4
	comp=Z,28nm,0.6s,mb5.5						
MCK	McKinley	50.14	33	*e*P	P	13 07 42.3	+0.3
MCK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
MCK	McKinley	50.14	33	*e*P	P	13 07 42.3	+0.3
	comp=Z,2.3nm,0.9s,mb4.2						
BVA0	Borovoye Array	50.27	313	*i* P	P	13 07 42.2	-0.9
AML	Almayashu	50.52	298	P	P	13 07 45.7	+0.4
	SNR=29						
COLA	College	50.57	32	*e*P	P	13 07 45.9	+0.6
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
COLA	College	50.57	32	*e*P	P	13 07 45.9	+0.6
	comp=Z,3.1nm,0.6s,mb4.4						
ILAR	Eielson Array	50.98	32	P	P	13 07 48.0	-0.4
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	50.98	32	P	P	13 07 48.0	-0.4
	comp=Z,2.7nm,0.7s,mb4.3,baz=281,slow=5.7,SNR=45						
FITZ	Fitzroy Crossi	55.53	196	*e*P	P	13 08 21.9	-0.8
	comp=Z,3.4nm,0.6s,mb4.5						
INK	Inuvik	55.82	27	*e*P	P	13 08 23.2	-0.9
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
INK	Inuvik	55.82	27	*e*P	P	13 08 23.2	-0.9
	comp=Z,3.7nm,0.6s,mb4.6						
WRAB	Tennant Creek	55.95	186	*e*P	P	13 08 23.6	-2.0
WRAB				*e**PP	pP	13 08 39.4	-1.7
WRAB				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
WRAB	Tennant Creek	55.95	186	*e*P	P	13 08 23.6	-2.1
	comp=Z,21nm,0.9s,mb5.2						
WRAB				*e*pP	pP	13 08 39.4	-1.8
WRA	Warramunga Arr	55.96	186	P	P	13 08 24.2	-1.5
WRA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
WRA	Warramunga Arr	55.96	186	P	P	13 08 24.2	-1.5
	comp=Z,2.4nm,0.4s,mb4.6,baz=1.8,slow=7.6,SNR=64						
ASAR	Alice Springs	59.68	186	P	P	13 08 50.4	-1.4
	comp=Z,1.2nm,0.7s,mb4.0,baz=0.2,slow=6.0,SNR=26						
MBWA	Marble Bar	60.02	202	*e*P	P	13 08 53.8	-0.4
	comp=Z,5.7nm,0.8s,mb4.7						
MBWA				*e*pP	pP	13 09 06.5	-3.3
RES	Resolute Bay	63.84	14	*e*P	P	13 09 18.1	-0.8
RES				*e**PP	pP	13 09 32.8	-1.9
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
RES	Resolute Bay	63.84	14	*e*P	P	13 09 18.1	-0.8
	comp=Z,2.5nm,0.8s,mb4.3						
RES				*e*pP	pP	13 09 32.8	-1.9
KEV	Kevo	63.87	339	*e*p	P	13 09 16.6	-2.6
	comp=Z,67nm,1.8s,mb5.4						
KEV	Kevo	63.87	339	*e*P	P	13 09 16.6	-2.6
KEV				pmax	pmax		
	comp=Z,67nm,1.8s,mb5.4						
ARCES	ARCESS Array B	64.43	339	P	P	13 09 22.3	-0.5
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	ARCESS Array B	64.43	339	P	P	13 09 22.3	-0.5
	comp=Z,5.3nm,0.9s,mb4.6,baz=67,slow=9.2,SNR=6.5						
YKA	Yellowknife Ar	65.27	29	P	P	13 09 27.9	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	65.27	29	P	P	13 09 27.9	-0.4
	comp=Z,0.9nm,0.6s,mb4.0,baz=301,slow=6.6,SNR=33						
JOF	Joensuu	66.19	332	*e*p	P	13 09 32.8	-1.4
STKA	Stephens Creek	67.62	178	P	P	13 09 43.5	-0.1
	comp=Z,2.8nm,0.8s,mb4.4,baz=342,slow=8.9,SNR=3.3						
STKA	Stephens Creek	67.62	178	P	P	13 09 41.9	-1.8
KAF	Kangasniemi	68.56	332	*e*p	P	13 09 47.3	-1.7
	comp=Z,2.9nm,0.7s,mb4.3						
KAF	Kangasniemi	68.56	332	*e*P	P	13 09 47.3	-1.7
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
FINES	FINESS Array B	69.05	332	P	P	13 09 51.3	-0.8
FINES				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FINES	FINESS Array B	69.05	332	P	P	13 09 51.3	-0.8
	comp=Z,9.9nm,1.1s,mb4.7,baz=90,slow=5.7,SNR=13						
KIV	Kislovodsk	70.55	311	*i* P	P	13 10 01.6	+0.1
KIV				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
KIV	Kislovodsk	70.55	311	*e*P	P	13 10 01.7	+0.2
	comp=Z,11nm,0.9s,mb4.8						
SUMG	Summit	71.63	359	*e*P	P	13 10 08.6	+1.1
	comp=Z,12nm,0.9s,mb4.8						
SOC	Sochi	72.57	311	*e*P	P	13 10 11.2	-2.3
SOC				*e*	pP	13 10 29.2	-0.4
SOC				*e*		13 12 48.7	
SOC				*e*PPP	PPP	13 14 33.3	-6.8
SOC				*e*S	S	13 19 26.3	-6.1
SOC				*e*		13 20 04.5	
SOC				*e*SS	SS	13 24 06.1	-8.3
SOC				*e*SSS	SSS	13 27 22.8	-1.6
SOC				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
SOC				pmax	pmax		
	comp=N,3.0nm,0.4s						
SOC				pmax	pmax		
	comp=E,3.0nm,0.5s						
BMO	Blue Mountains	73.52	46	*e*P	P	13 10 18.1	-0.9
	comp=E,2.3nm,1.0s,mb4.1						
AKASG	Malin Array Be	74.26	322	P	P	13 10 22.5	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	74.26	322	P	P	13 10 22.5	-0.7
	comp=Z,2.1nm,0.4s,mb4.4,baz=48,slow=6.0,SNR=16						
NB2	NORSAR Subarra	74.56	337	P	P	13 10 24.1	-0.7
	comp=Z,2.3nm,0.6s,mb4.3,baz=42,slow=5.8						
NB2	NORSAR Subarra	74.56	337	P	P	13 10 24.1	-0.7
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NOA	NORSAR Array B	74.56	337	P	P	13 10 24.4	-0.4
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	74.56	337	P	P	13 10 24.4	-0.4
	comp=Z,2.7nm,0.6s,mb4.3,baz=39,slow=5.7,SNR=11						
NVAR	Mina Array Bea	76.59	52	P	P	13 10 38.5	+1.7
	comp=Z,2.4nm,0.8s,mb4.2,baz=278,slow=7.4,SNR=16						
MNV	Mina	76.68	52	*e*P	P	13 10 36.0	-1.3
MNV				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
MNV	Mina	76.68	52	*e*P	P	13 10 36.0	-1.4
	comp=Z,1.3nm,0.8s,mb3.9						
ELK	Elko	77.15	49	*e*P	P	13 10 41.8	+1.9
ELK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ELK	Elko	77.15	49	*e*P	P	13 10 41.8	+1.9
	comp=Z,1.4nm,0.6s,mb4.1						
KWP	Kalwaria	78.15	324	*e*P	P	13 10 45.3	+0.1
BRTR	Keskin Array B	78.51	311	P	P	13 10 48.2	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	Keskin Array B	78.51	311	P	P	13 10 48.2	+0.8
	comp=Z,0.7nm,0.4s,mb3.9,baz=140,slow=4.1,SNR=4.8						
DUG	Dugway	78.95	48	*e*P	P	13 10 50.9	+1.1
DUG				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
DUG	Dugway	78.95	48	*e*P	P	13 10 50.9	+1.1
	comp=Z,25nm,0.7s,mb5.2						
PDAR	Pinedale Array	79.25	45	P	P	13 10 52.2	+0.9
	comp=Z,0.9nm,0.7s,mb3.8,baz=269,slow=2.4,SNR=8.4						
ULM	Lac du Bonnet	81.00	32	P	P	13 11 01.7	+1.2
	comp=Z,0.8nm,0.4s,mb4.0,baz=302,slow=7.0,SNR=3.4						
CLL	Collm	81.27	329	*e*P	P	13 11 02.0	0.0
CLL	Collm	81.27	329	P	P	13 11 02.0	0.0
PV10	Paradox Valley	82.37	48	*e*P	P	13 11 10.1	+2.2
PV01	Paradox Valley	82.81	48	*e*P	P	13 11 11.2	+1.0
GERES	GERESS Array B	82.83	327	P	P	13 11 09.8	-0.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	82.83	327	P	P	13 11 09.8	-0.3
	comp=Z,0.6nm,0.4s,mb3.9,baz=37,slow=6.7,SNR=6.2						
ISCO	Idaho Springs	83.44	45	*e*P	P	13 11 15.1	+1.8
ISCO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
ISCO	Idaho Springs	83.44	45	*e*P	P	13 11 15.1	+1.8
	comp=Z,0.9nm,0.7s,mb3.9						
SDCO	Great Sand Dun	84.88	46	*e*P	P	13 11 22.3	+1.7
	comp=Z,2.1nm,0.9s,mb4.3						
TUC	Tucson	85.18	53	*e*P	P	13 11 23.9	+1.7
TUC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
TUC	Tucson	85.18	53	*e*P	P	13 11 23.9	+1.7
	comp=Z,1.8nm,0.8s,mb4.2						
SCHQ	Schefferville	86.60	15	P	P	13 11 29.6	+1.0
	comp=Z,1.7nm,0.7s,mb4.4,baz=337,slow=6.8,SNR=7.0						
TXAR	Lajitas Array	91.72	51	P	P	13 11 54.9	+1.5
	comp=Z,0.8nm,0.6s,mb4.2,baz=302,slow=3.2,SNR=15						
DBIC	Dimbokro	126.08	315	PKIKP	PKPdf	13 17 50.0	+2.7
DBIC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DBIC	Dimbokro	126.08	315	PKP	PKPdf	13 17 50.0	+2.6
	comp=Z,2.6nm,1.0s,baz=141,slow=6.5,SNR=2.9						

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*IDC **23** 13:16:21.0±1.5, 7.52N×91.90E, mb3.6/5, mb1 3.9/6, mb1mx3.7/18, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=51.2km s-min=23.1km az=62.0*

*NEIC **23** 13:16:25.9±0.8, 7.48N×91.92E, mb4.4/2, Error ellipse: s-maj=21.0km s-min=10.3km az=60.0*

ISC 23 13:16:24.4±1.1, **7.5N**±0.1×**92.0E**±0.2, **h33^{km}, n12, σ0^{s}70**/12, **mb4.0**/9, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.80	31	Pn	P	13 19 26.9	0.0
	0.2nm,0.3s,baz=233,slow=16,SNR=17						
JIRN	Jiri	20.77	345	*e*P	P	13 21 04.9	-0.3
	23nm,0.5s						
PKI	Pulchoki	20.90	343	*e*P	P	13 21 06.1	-0.3
	13nm,0.3s						
GUN	Gumba	21.09	345	*e*P	P	13 21 08.2	-0.2
	13nm,0.5s,mb4.5						
GKN	Gorkha	21.53	342	*e*P	P	13 21 12.7	-0.1
	16nm,0.3s,mb5.0						
KOLN	Koldanda	21.65	339	*e*P	P	13 21 14.2	+0.2
	7.4nm,0.3s,mb4.6						
LSA	Lhasa	22.08	358	*e*P	P	13 21 20.7	+2.4
	7.9nm,0.7s,mb4.2						
SONM	Songino Array	42.00	15	P	P	13 24 13.7	-0.5
	0.9nm,0.7s,mb3.5,baz=197,slow=7.7,SNR=12						
ZAL	Zalesovo	46.65	354	P	P	13 24 50.5	-0.9
	0.7nm,0.4s,mb3.9,baz=208,slow=1.3,SNR=3.2						
WRA	Warramunga Arr	49.81	124	P	P	13 25 16.4	-0.1
	0.2nm,0.4s,mb3.5,baz=300,slow=9.7,SNR=9.7						
WRA				pP	pP	13 25 25.8	-0.6
	1.4nm,1.0s,baz=302,slow=9.0,SNR=8.0						
ASAR	Alice Springs	51.34	128	P	P	13 25 28.3	+0.2
	0.3nm,1.0s,mb3.2,baz=308,slow=7.6,SNR=3.2						
ASAR				pP	pP	13 25 38.0	-0.1
	0.7nm,0.6s,baz=306,slow=7.5,SNR=9.4						
GERES	GERESS Array B	76.67	318	P	P	13 28 14.2	+0.4
	0.2nm,0.2s,mb3.6,baz=100,slow=6.0,SNR=4.7						

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*IDC **23** 13:25:50.1±8.6, 6.18S×150.37E, h74^{km}±60^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.5/13, mbtmp4.0/4, ML2.4/1, Error ellipse: s-maj=83.9km s-min=60.0km az=138.0*

ISC 23 13:25:47.9±5.7, **6.4S**±0.4×**150.6E**±0.3, **h61^{km}**±38^{km}, **n6, σ1^{s}03**/7, **mb3.9**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.55	229	P	P	13 26 56.1	+0.1
	1.5nm,0.3s,baz=48,slow=7.7,SNR=9.1						
PMG				S	S	13 27 48.0	-0.1
	2.4nm,0.3s,baz=90,slow=20,SNR=4.7						
WRA	Warramunga Arr	20.77	228	P	P	13 30 25.5	-0.8
	3.7nm,0.8s,baz=52,slow=11,SNR=45						
ASAR	Alice Springs	23.52	221	P	P	13 30 54.3	+0.9
	2.5nm,0.7s,mb3.8,baz=53,slow=8.7,SNR=31						
ASPA	Alice Springs	23.52	221	*e*P	P	13 30 54.7	+1.2
STKA	Stephens Creek	26.71	197	P	P	13 31 22.9	-0.7
	3.1nm,0.7s,mb3.9,baz=5.2,slow=11,SNR=4.2						
FITZ	Fitzroy Crossi	27.00	242	*e*P	P	13 31 25.9	-0.5
	4.0nm,0.8s,mb4.0						

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*IDC **23** 13:31:39.0±8.2, 6.32S×150.46E, h78^{km}±57^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.7/13, mbtmp4.3/4, ML2.8/1, Error ellipse: s-maj=82.0km s-min=57.3km az=141.0*

ISC 23 13:31:34.9±5.5, **6.3S**±0.4×**150.6E**±0.3, **h58^{km}**±37^{km}, **n7, σ0^{s}70**/8, **mb4.2**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.61	227	P	P	13 32 43.8	+0.1
	3.2nm,0.3s,baz=24,slow=6.1,SNR=14						
PMG				S	S	13 33 36.5	-0.1
	3.4nm,0.3s,baz=288,slow=20,SNR=4.4						
WRA	Warramunga Arr	20.83	228	P	P	13 36 13.4	-0.7
	6.7nm,0.5s,baz=53,slow=11,SNR=112						
ASAR	Alice Springs	23.59	221	P	P	13 36 42.0	+0.6
	3.9nm,0.4s,mb4.2,baz=55,slow=9.1,SNR=98						
ASPA	Alice Springs	23.59	221	*e*P	P	13 36 42.0	+0.6
STKA	Stephens Creek	26.84	197	*e*P	P	13 37 12.1	+0.1
	4.4nm,0.9s,mb4.0						
STKA	Stephens Creek	26.84	197	P	P	13 37 11.1	-0.9
	5.0nm,0.8s,mb4.1,baz=18,slow=12,SNR=6.7						
FITZ	Fitzroy Crossi	27.02	242	*e*P	P	13 37 13.6	-0.2
	6.1nm,0.5s,mb4.4						

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*IDC **23** 13:33:23.4±1.3, 6.29S×150.99E, mb4.1/6, mb1 4.3/7, mb1mx4.2/13, mbtmp4.1/7, ML2.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/19, Error ellipse: s-maj=56.9km s-min=19.8km az=121.0*

*NEIC **23** 13:33:25.5±0.9, 6.16S×150.80E, h10^{km}, mb4.3/4, Error ellipse: s-maj=31.5km s-min=12.0km az=125.0*

ISC 23 13:33:23.4±4.9, **6.2S**±0.2×**150.8E**±0.2, **h7^{km}**±31^{km}, **n13, σ0^{s}94**/13, **mb4.1**/8, **MS3.3**/1, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.83	228	Pn	Pn	13 34 40.0	+1.7
	3.0nm,0.3s,baz=349,slow=11,SNR=4.0						
PMG				Sn	Sn	13 35 35.7	+0.4
	3.1nm,0.3s,baz=6.9,slow=17,SNR=6.1						
KAKA	Kakadu	19.23	249	*e*P	P	13 37 50.0	-0.9
	3.1nm,0.4s						
WRAB	Tennant Creek	21.04	228	*e*P	P	13 38 09.4	-1.0
	15nm,0.6s,mb4.5						
WRA	Warramunga Arr	21.05	228	P	P	13 38 09.3	-1.2
	5.2nm,0.5s,mb4.2,baz=53,slow=11,SNR=18						
ASAR	Alice Springs	23.81	221	P	P	13 38 38.5	+0.6
	6.3nm,0.4s,mb4.4,baz=55,slow=9.0,SNR=56						
ASPA	Alice Springs	23.81	221	*e*P	P	13 38 38.5	+0.6
STKA	Stephens Creek	26.99	197	*e*P	P	13 39 08.3	+0.4
	4.5nm,0.8s,mb4.0						
STKA	Stephens Creek	26.99	197	P	P	13 39 06.7	-1.3
	4.9nm,0.6s,mb4.2,baz=359,slow=10,SNR=9.1						
FITZ	Fitzroy Crossi	27.26	242	*e*P	P	13 39 09.8	-0.6
	4.7nm,0.5s,mb4.3						
JOW	Kunigami	39.38	327	LR	LR	13 55 52.3	
	comp=Z,44nm,20.7s,MS3.3,baz=124,slow=34						
SONM	Songino Array	66.42	329	P	P	13 44 16.2	+0.7
	0.3nm,0.6s,mb3.5,baz=146,slow=5.2,SNR=2.5						
ILAR	Eielson Array	84.16	22	P	P	13 45 55.5	-0.8
	0.4nm,0.6s,mb3.8,baz=249,slow=5.3,SNR=6.5						
YKA	Yellowknife Ar	97.55	28	P	P	13 47 00.4	+1.1
	0.4nm,0.9s,mb4.0,baz=272,slow=4.7,SNR=5.8						

MAN 23 13:41:30.7, 11.78N×125.60E, h6^{km}, mb4.2, ML3.1, MS2.8, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.86	225	*i* P	Pb	13 41 47.4	-0.3
PLP				*e*S	Sb	13 41 57.1	-2.1
MSLP	Maasin	1.79	204	*e*P	Pn	13 42 03.6	+1.2
MSLP				*e*S	Sn	13 42 26.7	+1.0
SCPH	Surigao	1.99	183	*e*P	Pn	13 42 04.7	-0.6
SCPH				*e*S	Sn	13 42 29.3	-1.5
PVCP	Virac	2.29	322	*e*P	Pn	13 42 09.6	+0.1
PVCP				*e*S	Sn	13 42 44.1	+5.8
GUIM	Jordan	3.17	249	*e*P	Pn	13 42 21.4	-0.7
GUIM				*e*S	Sn	13 43 01.1	+0.4

IDC 23 13:44:34.3±9.5, **6.19S×150.49E, h60^{km}**±69^{km}, **mb3.5**/3, **mb1 3.7**/4, **mb1mx3.5**/13, **mbtmp3.8**/4, **ML2.1**/1, **Error ellipse: s-maj=88.8km s-min=62.7km az=139.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.60	226	P	P	13 45 41.6	-1.4
	0.6nm,0.3s,baz=15,slow=8.2,SNR=3.5						
PMG				S	S	13 46 34.1	-1.6
	1.0nm,0.3s,baz=90,slow=20,SNR=4.8						
WRA	Warramunga Arr	20.82	227	P	P	13 49 11.0	-2.2
	1.6nm,0.8s,baz=52,slow=11,SNR=11						
ASAR	Alice Springs	23.59	221	P	P	13 49 40.3	-0.3
	1.6nm,0.6s,baz=58,slow=8.7,SNR=18						
STKA	Stephens Creek	26.88	197	P	P	13 50 09.4	-2.3
	4.5nm,1.2s,baz=358,slow=12,SNR=4.0						

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*CNRM **23** 13:51:55.2, 36.48N×9.94W, h30^{km}, MD3.4*

*CSEM **23** 13:51:56.8±0.3, 36.34N×9.71W, h93^{km}±5^{km}, ML3.8/4, Error ellipse: s-maj=7.4km s-min=5.0km az=104.0*

*MDD **23** 13:51:57.6±1.4, 36.68N×9.76W, mbLg3.0/20, Error ellipse: s-maj=12.7km s-min=8.7km az=38.0, PRXIMO*

*SFS **23** 13:51:57.0, 36.56N×9.99W, h28^{km}*

*INMG **23** 13:52:00.0±1.1, 36.60N×9.90W, h31^{km}, ML2.9, Error ellipse: s-maj=5.5km s-min=3.1km az=60.0*

ISC 23 13:51:53.0±0.6, **36.44N**±0.03×**9.73W**±0.04, **h10^{km}, n59, σ1^{s}48**/103, **West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	1.36	36	*e*P	Pn	13 52 21.1	+2.9
PTEO				*e*S	Sb	13 52 36.7	+1.2
	111nm,0.2s						
PTEO	Sao Teotonio	1.36	36	P	Pn	13 52 21.1	+2.9
PTEO				S	Sb	13 52 36.7	+1.2
	55nm,0.2s						
PALC	Alcoutim	2.07	60	*e*Sn	Sn	13 52 55.2	+0.8
	72nm,0.2s						
PALC	Alcoutim	2.07	60	*e*Sn	Sn	13 52 55.2	+0.8
	72nm,0.2s						
PBEJ	Beja	2.17	43	*e*Pn	Pn	13 52 32.0	+2.3
PBEJ				*e*Sn	Sn	13 52 56.3	-0.5
	42nm,0.3s						
PBEJ	Beja	2.17	43	*e*Pn	Pn	13 52 32.0	+2.3
PBEJ				*e*Sn	Sn	13 52 56.3	-0.5
	42nm,0.3s						
ERIP	Rio Piedras	2.19	64	P	Pn	13 52 33.5	+3.6
	7.6nm,0.1s,SNR=7.9						
ERIP				S	Sn	13 52 58.6	+1.2
	67nm,0.1s,SNR=7.9						
MOE	Montemor	2.35	27	*e*Pn	Pn	13 52 33.6	+1.4
MOE				*e*Sn	Sn	13 52 59.4	-2.0
PLOU	Loures	2.48	10	*e*Pn	Pn	13 52 35.1	+0.9
PLOU				*e*Sn	Sn	13 53 01.1	-3.7
	55nm,0.2s						
EMIN	Mina Concepcio	2.78	61	P	Pn	13 52 41.1	+2.7
	2.3nm,0.1s,SNR=52						
EMIN				S	Sn	13 53 12.4	+0.2
	11nm,0.1s						
EMIN	Mina Concepcio	2.78	61	P	Pn	13 52 41.1	+2.7
	2.3nm,0.1s,SNR=52						
EMIN				S	Sn	13 53 12.4	+0.1
	11nm,0.1s						
ESPR	Espera	3.14	81	P	Pn	13 52 47.1	+3.5
	15nm,0.1s,SNR=46						
ESPR				S	Sn	13 53 22.7	+1.1
	24nm,0.2s						
ESPR	Espera	3.14	81	P	Pn	13 52 47.1	+3.5
	15nm,0.1s,SNR=46						
ESPR				S	Sn	13 53 22.7	+1.2
	24nm,0.2s						
LIJA	Lijar	3.51	81	*i* P	Pn	13 52 46.0	-2.8
AVE	Averroes	3.67	148	P	Pn	13 52 54.5	+3.4
AVE				S	Sn	13 53 34.5	-0.4
ECAB	El Cabril	3.80	63	P	Pn	13 52 55.2	+2.2
	5.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 53 37.2	-1.1
	3.7nm,0.1s,SNR=7.9						
ECAB	El Cabril	3.80	63	P	Pn	13 52 55.2	+2.2
	5.2nm,0.1s,SNR=7.9						
ECAB				S	Sn	13 53 37.2	-1.1
	3.7nm,0.1s,SNR=7.9						
PCBR	Castelo Branco	3.83	27	*e*Pn	Pn	13 52 53.8	+0.5
PCBR				*e*Sn	Sn	13 53 34.7	-4.2
	15nm,0.4s						
PCBR	Castelo Branco	3.83	27	*e*Pn	Pn	13 52 53.8	+0.5
PCBR				*e*Sn	Sn	13 53 34.7	-4.2
	15nm,0.4s						
EMIJ	Mijas	3.99	87	P	Pn	13 52 57.4	+1.7
	3.8nm,0.4s,SNR=7.9						
EMIJ				S	Sn	13 53 43.6	+0.5
	6.3nm,0.3s,SNR=4.9						
MTE	Manteigas	4.30	23	*e*Pn	Pn	13 53 00.6	+0.5
MTE				*e*Sn	Sn	13 53 45.5	-5.5
	15nm,0.3s						
MTE	Manteigas	4.30	23	*e*Pn	Pn	13 53 00.6	+0.5
MTE				*e*Sn	Sn	13 53 45.5	-5.5
	15nm,0.3s						
EADA	Adamuz	4.45	66	P	Pn	13 53 04.5	+2.3
	2.0nm,0.1s,SNR=31						
EADA				S	Sn	13 53 53.5	-1.2
	5.9nm,0.1s						
EADA	Adamuz	4.45	66	P	Pn	13 53 04.5	+2.3
	2.0nm,0.1s,SNR=31						
EADA				S	Sn	13 53 53.5	-1.2
	5.9nm,0.1s						
PVIS	Viseu	4.50	18	*e*Pn	Pn	13 53 02.6	-0.3
PVIS				*e*Sn	Sn	13 53 49.7	-6.2
	16nm,0.1s						
ELUQ	Luque	4.51	74	S	Sn	13 53 54.0	-2.2
	3.8nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	4.53	79	S	Sn	13 53 56.7	+0.1

	5.6nm,0.3s,SNR=7.9						
IFR	Ifrane	4.77	126	P	Pn	13 53 09.0	+2.2
IFR				S	Sn	13 54 01.0	-1.8
MIF	Mishlifen	4.78	128	*i* P	Pn	13 53 07.0	+0.2
MIF				*i* S	Sn	13 54 01.5	-1.4
ERON	Agron	4.79	81	S	Sn	13 54 04.7	+1.5
	3.1nm,0.3s,SNR=7.9						
CIA	Chichaoua	4.93	170	*i* P	Pn	13 53 07.5	-1.5
CIA				*i* S	Sn	13 54 00.5	-6.3
EBAN	Banos Encina	5.04	68	P	Pn	13 53 12.3	+1.8
	1.8nm,0.1s,SNR=7.9						
EBAN				S	Sn	13 54 05.6	-3.9
	9.1nm,0.2s,SNR=7.9						
EBAN	Banos Encina	5.04	68	P	Pn	13 53 12.3	+1.8
	1.8nm,0.1s,SNR=7.9						
EBAN				S	Sn	13 54 08.4	-1.1
	9.1nm,0.2s,SNR=7.9						
PVRL	Vila Real	5.07	17	*e*Pn	Pn	13 53 10.4	-0.6
PVRL				*e*Sn	Sn	13 54 02.7	-7.7
	21nm,0.1s						
TZK	Tazeka	5.11	116	*i* P	Pn	13 53 11.0	-0.5
TZK				*i* S	Sn	13 54 07.0	-4.2
CZD	Col de Zad	5.14	130	*e*P	Pn	13 53 12.0	0.0
CZD				*i* S	Sn	13 54 08.0	-4.1
OUK	Oukaimeden	5.45	163	*i* P	Pn	13 53 15.5	-0.7
OUK				*i* S	Sn	13 54 14.0	-5.7
EQES	Quesada	5.49	74	P	Pn	13 53 18.7	+1.8
	1.6nm,0.1s,SNR=7.9						
EQES				S	Sn	13 54 19.3	-1.6
	11nm,0.3s,SNR=7.9						
EQES	Quesada	5.49	74	P	Pn	13 53 18.7	+1.8
	1.6nm,0.1s,SNR=7.9						
EQES				S	Sn	13 54 19.3	-1.5
	11nm,0.3s,SNR=7.9						
EBER	Berja	5.51	83	S	Sn	13 54 21.3	-0.2
	1.9nm,0.2s,SNR=7.9						
EBER	Berja	5.51	83	S	Sn	13 54 21.3	-0.2
	1.9nm,0.2s,SNR=7.9						
ELOB	Lobios	5.57	13	P	Pn	13 53 17.0	-1.0
	3.0nm,0.2s,SNR=8.8						
ELOB				S	Sn	13 54 14.4	-8.4
	5.8nm,0.2s						
ESDC	Sonseca Array	5.58	53	P	Pn	13 53 19.4	+1.3
	2.4nm,0.2s,baz=239,slow=14,SNR=32						
ESDC				S	Sn	13 54 20.2	-2.8
	5.4nm,0.2s,baz=240,slow=24,SNR=38						
ESDC	Sonseca Array	5.58	53	P	Pn	13 53 19.4	+1.3
	2.4nm,0.2s,SNR=32						
EZAM	Zamans	5.75	8	P	Pn	13 53 19.3	-1.2
	2.4nm,0.1s,SNR=7.9						
EZAM				S	Sn	13 54 20.0	-7.4
	4.2nm,0.4s,SNR=7.9						
PBRG	Braganca	5.83	23	*e*Pn	Pn	13 53 20.4	-1.3
PBRG				*e*Sn	Sn	13 54 22.0	-7.5
	7.3nm,0.2s						
ECAL	Calabor	5.96	22	P	Pn	13 53 23.6	+0.1
	1.2nm,0.1s,SNR=6.1						
ECAL				S	Sn	13 54 25.4	-7.2
	4.0nm,0.2s						
ECAL	Calabor	5.96	22	P	Pn	13 53 23.6	+0.1
	1.2nm,0.1s,SNR=6.1						
EVIA	Vianos	6.14	67	P	Pn	13 53 28.2	+2.1
	1.0nm,0.1s,SNR=7.9						
EVIA				S	Sn	13 54 34.7	-2.6
	2.7nm,0.2s,SNR=7.9						
EINC	Incio	6.47	16	P	Pn	13 53 29.4	-1.4
	0.7nm,0.1s,SNR=5.7						
EINC				S	Sn	13 54 36.3	-9.2
	100nm,1.8s						
EMAZ	Mazaricos	6.52	5	P	Pn	13 53 29.2	-2.3
	11nm,0.2s,SNR=10						
EMAZ				S	Sn	13 54 35.1	-12
	3.9nm,0.2s						
ETOB	Tobarra	6.86	69	P	Pn	13 53 37.1	+0.9
	1.4nm,0.2s,SNR=7.9						
ETOB				S	Sn	13 54 49.0	-6.1
	3.1nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.86	69	P	Pn	13 53 37.1	+0.9
	1.4nm,0.2s,SNR=7.9						
EARI	Arriondas	7.68	25	P	Pn	13 53 47.8	+0.2
	0.2nm,0.1s,SNR=7.9						
EARI				S	Sn	13 55 06.5	-9.0
	0.2nm,0.1s,SNR=7.9						
EARI	Arriondas	7.68	25	P	Pn	13 53 47.8	+0.2
	0.2nm,0.1s,SNR=7.9						
EFAM	Famara	7.97	205	S	Sn	13 55 10.9	-12
	0.9nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	8.25	59	P	P	13 53 57.0	+1.3
	0.4nm,0.1s,SNR=7.9						
EMOS				S	Sn	13 55 23.7	-6.2
	3.1nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	8.25	59	P	P	13 53 57.0	+1.3
	0.4nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	8.55	206	S	Sn	13 55 23.6	-14
	2.6nm,0.1s,SNR=7.9						

*IDC **23** 14:00:21.5±2.4,23.27S×172.76E,mb4.2/7,mb1 4.5/7,mb1mx4.3/14,mbtmp4.2/7,Error ellipse: s-maj=104.9km s-min=26.3km az=155.0*

*NEIC **23** 14:00:23.4±1.1,23.11S×172.71E,h10^{km},mb4.2/4,Error ellipse: s-maj=35.4km s-min=16.4km az=160.0*

ISC 23 14:00:22.4±0.9,**23.0S**±0.2×**172.61E**±0.09,**h10**^{km},**n15,** σ**1^{s}11**/16,**mb4.4**/10,**1C-1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.77	278	*e*P	Pn	14 01 50.9	+0.6
DZM				*e*S	Sn	14 02 57.2	-0.2
DZM	Mont Dzumac	5.77	278	*e*P	Pn	14 01 50.9	+0.6
DZM				*e*S	Sn	14 02 57.2	-0.2
CNB	Canberra Magne	23.66	234	⇑*i*P	P	14 05 36.1	+1.3
	100nm,0.7s,mb5.3						
CTA	Charters Tower	24.67	272	*e*P	P	14 05 46.5	+1.6
	0.6nm,0.3s,mb3.6						
CTA	Charters Tower	24.67	272	P	P	14 05 46.2	+1.3
	5.8nm,0.8s,mb4.2,baz=102,slow=13,SNR=9.4						
CTAO	Charters Tower	24.67	272	*e*P	P	14 05 46.6	+1.7
	3.8nm,0.6s,mb4.1						
STKA	Stephens Creek	28.83	245	P	P	14 06 22.2	-0.8
	6.2nm,1.1s,mb4.2,baz=81,slow=11,SNR=3.9						
ASAR	Alice Springs	35.47	261	P	P	14 07 20.3	-0.9
	11nm,1.4s,mb4.6,baz=88,slow=9.0,SNR=31						
WRAB	Tennant Creek	35.67	268	*e*P	P	14 07 21.3	-1.6
	1.8nm,0.5s,mb4.3						
WRA	Warramunga Arr	35.68	267	P	P	14 07 21.6	-1.4
	1.4nm,0.4s,mb4.2,baz=97,slow=8.5,SNR=40						
FITZ	Fitzroy Crossi	44.11	267	⇓*i*P	P	14 08 33.2	+0.3
	14nm,0.7s,mb4.8						
CMAR	Chiang Mai Arr	82.89	293	P	P	14 12 51.1	+2.0
	1.9nm,0.7s,mb4.2,baz=142,slow=4.1,SNR=13						
NVAR	Mina Array Bea	88.98	47	P	P	14 13 19.1	+0.3
	0.3nm,0.4s,mb4.0,baz=200,slow=5.4,SNR=3.7						
ILAR	Eielson Array	92.91	16	P	P	14 13 35.5	-0.8
	0.6nm,0.8s,mb4.1,baz=237,slow=5.8,SNR=6.2						
CLL	Collm	147.62	336	*e*PKP1	PKPdf	14 20 11.0	+3.8

*NEIC **23** 14:02:57.9±1.0,6.22S×150.90E,h10^{km},mb4.2/3,Error ellipse: s-maj=33.7km s-min=16.3km az=140.0*

*IDC **23** 14:03:05.2±7.0,6.29S×150.58E,h62^{km}±60^{km},mb3.8/4,mb1 4.0/5,mb1mx3.7/13,mbtmp4.1/5,ML2.6/1,MS3.0/1,Ms1 3.0/1,ms1mx2.7/22,Error ellipse: s-maj=76.0km s-min=38.6km az=118.0*

ISC 23 14:03:02.8±4.3,**6.2S**±0.2×**150.6E**±0.3,**h50**^{km}±34^{km},**n11,** σ**1^{s}03**/11,**mb4.0**/4,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.62	227	P	P	14 04 12.7	+0.8
	2.2nm,0.3s,baz=48,slow=6.2,SNR=17						
PMG				S	S	14 05 04.0	-0.9
	1.6nm,0.3s,baz=28,slow=5.8,SNR=3.6						
CTA	Charters Tower	14.39	197	LR	LR	14 10 20.7	
	comp=Z,67nm,20.9s,baz=313,slow=30						
KAKA	Kakadu	19.00	249	*e*P	P	14 07 23.0	-0.2
	3.6nm,0.6s						
WRAB	Tennant Creek	20.83	228	*e*P	P	14 07 42.3	-0.3
	6.5nm,0.6s						
WRA	Warramunga Arr	20.84	228	P	P	14 07 42.7	-0.1
	5.6nm,0.6s,baz=53,slow=11,SNR=53						
ASAR	Alice Springs	23.61	221	P	P	14 08 11.4	+1.3
	3.8nm,0.5s,mb4.1,baz=56,slow=9.1,SNR=72						
ASPA	Alice Springs	23.61	221	*e*P	P	14 08 11.6	+1.4
STKA	Stephens Creek	26.85	197	P	P	14 08 38.8	-2.0
	3.7nm,0.7s,mb4.0,baz=358,slow=11,SNR=7.0						
STKA	Stephens Creek	26.85	197	*e*P	P	14 08 38.7	-2.1
QSPA	South Pole Qui	83.73	180	*e*P	P	14 15 28.0	+0.8
	2.5nm,0.6s,mb4.5						
YKA	Yellowknife Ar	97.72	28	P	P	14 16 32.3	-1.0
	0.1nm,0.6s,mb3.5,baz=267,slow=4.1,SNR=4.2						

*IDC **23** 14:13:55.7±9.2,6.16S×150.54E,h58^{km}±66^{km},mb3.6/3,mb1 3.8/4,mb1mx3.5/13,mbtmp3.9/4,ML2.6/1,Error ellipse: s-maj=83.7km s-min=62.1km az=141.0*

ISC 23 14:13:52.5±5.7,**6.1S**±0.4×**150.6E**±0.3,**h45**^{km}±39^{km},**n6,** σ**1^{s}08**/7,**mb3.8**/3,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.72	226	P	P	14 15 03.3	+0.2
	1.9nm,0.3s,baz=47,slow=7.2,SNR=9.3						
PMG				S	S	14 15 57.1	-0.1
	2.8nm,0.3s,baz=288,slow=15,SNR=3.5						
WRA	Warramunga Arr	20.94	228	P	P	14 18 33.1	-0.8
	2.0nm,0.4s,baz=53,slow=11,SNR=50						
ASAR	Alice Springs	23.71	221	P	P	14 19 02.4	+1.1
	1.4nm,0.4s,mb3.7,baz=55,slow=9.0,SNR=55						
ASPA	Alice Springs	23.72	221	*e*P	P	14 19 02.4	+1.1
STKA	Stephens Creek	26.96	197	P	P	14 19 31.2	-0.8
	1.9nm,0.8s,mb3.7,baz=8.7,slow=13,SNR=3.0						
FITZ	Fitzroy Crossi	27.12	242	*e*P	P	14 19 32.9	-0.6
	1.5nm,0.4s,mb3.9						

*NEIC **23** 14:26:02.7±4.1,27.88N×112.11W,h10^{km},Error ellipse: s-maj=49.4km s-min=11.2km az=224.0*

*IDC **23** 14:26:03.8±2.4,28.25N×111.95W,mb3.7/3,mb1 3.9/6,mb1mx3.6/23,mbtmp3.6/6,ML3.4/3,MS3.1/1,Ms1 3.1/1,ms1mx2.2/33,Error ellipse: s-maj=44.2km s-min=16.1km az=33.0*

ISC 23 14:26:05.9±1.2,**28.33N**±0.07×**111.73W**±0.10,**h10**^{km},**n18,** σ**1^{s}59**/21,**mb3.7**/3,**Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUC	Tucson	4.05	11	*e*Pn	Pn	14 27 06.8	-2.5
TUC				*e*Sg	Sg	14 28 18.9	-1.8
GVA	Apache Junctio	5.08	2	Pg	Pg	14 27 49.6	+2.4
GVA				Lg		14 28 49.6	
MNTX	Cornudas Mount	6.45	57	*e*Pn	Pn	14 27 43.6	+0.4
MNTX				*e*Pg	Pg	14 28 10.6	-4.1
MNTX				*e*Sg	Sg	14 29 35.9	-4.7
LTX	Lajitas	7.15	80	Pn	Pn	14 27 52.9	-0.1
LTX				*e*Pg	Pg	14 28 25.9	-2.6
TXAR	Lajitas Array	7.15	80	Pn	Pn	14 27 53.5	+0.5
	0.4nm,0.3s,baz=252,slow=13,SNR=9.0						
TXAR				Lg		14 30 02.8	
	1.4nm,0.3s,baz=260,slow=29,SNR=5.6						
TXAR				LR	LR	14 30 17.1	
	comp=Z,133nm,18.1s,baz=210,slow=34						
ANMO	Albuquerque	7.98	33	Lg		14 30 24.4	
	baz=18,slow=11,SNR=10						
ANMO	Albuquerque	7.98	33	Pn	Pn	14 28 06.8	+2.0
ANMO				*e*Pg	Pg	14 28 46.5	+1.2
ARUT	Antelope Range	9.54	352	*e*Pg	P	14 28 25.4	-0.9
MSU	Marysvale	10.16	358	*e*Pg	P	14 28 41.5	+6.6
PV10	Paradox Valley	10.27	12	Pn	P	14 28 46.8	+10
JCT	Junction City	10.62	76	Pn	P	14 28 42.2	+1.0
SDCO	Great Sand Dun	10.74	28	P	P	14 28 43.8	+0.9
NVAR	Mina Array Bea	11.46	333	Pn	P	14 28 51.9	-0.8
	0.1nm,0.3s,baz=155,slow=14,SNR=4.4						
BW06	Boulder Array	14.51	6	P	P	14 29 35.4	+2.1
	0.7nm,0.7s						
PDAR	Pinedale Array	14.51	6	Pn	P	14 29 35.4	+2.2
	0.0nm,0.3s,baz=180,slow=10,SNR=8.5						
INK	Inuvik	42.05	348	P	P	14 33 57.1	-1.7
	0.3nm,0.6s,mb3.1,baz=149,slow=16,SNR=2.9						
ILAR	Eielson Array	42.66	339	P	P	14 34 00.3	-3.6
	1.0nm,1.1s,mb3.5,baz=135,slow=7.7,SNR=4.3						
SDV	Santo Domingo	43.21	108	P	P	14 34 08.2	-0.9
	5.2nm,0.4s,mb4.6,baz=346,slow=8.3,SNR=4.3						

*NEIC **23** 14:32:19.5,32.80S×71.86W,h35^{km},ML2.9(GUC),After GUC.*

GUC 23 14:32:19.5±0.7,**32.80S**×**71.86W,h35**^{km}±3^{km},**MD3.8, ML2.9,1C-5D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	Papudo	0.44	54	⇓*i*P	P	14 32 29.3	+0.1
PACH				*i* S	S	14 32 36.4	+0.4
LCCH	Las Cruces	0.72	160	⇑*i*P	P	14 32 33.0	-0.1
ROCH	El Roble	0.73	104	⇓*i*P	P	14 32 34.0	+0.7
ROCH				*i* S	S	14 32 44.8	+1.3
JACH	Jahuel	1.07	84	*e*P	P	14 32 38.6	+0.4
JACH				*i* S	S	14 32 53.5	+1.4
RCDM	Rinconada Maip	1.12	128	*e*P	P	14 32 39.2	+0.3
RCDM				*i* S	S	14 32 54.1	+0.8
RCDM				AMP		14 32 55.4	
	comp=E,578nm,0.1s						
TACH	Talagante	1.15	138	⇓*i*P	P	14 32 39.8	+0.5
TACH				*i* S	S	14 32 55.4	+1.3
CLCH	Cerro Calan	1.26	119	*e*P	P	14 32 41.9	+1.1
CLCH				*i* S	S	14 32 59.1	+2.2
CLCH				AMP		14 33 00.8	
	comp=N,374nm,0.2s						
ANTU	Antumapu	1.28	127	*e*P	P	14 32 42.0	+0.8
ANTU				*i* S	S	14 32 59.4	+1.9
ANTU				AMP		14 33 02.1	
	comp=E,294nm,0.4s						
PCH	Pirque	1.39	126	*e*P	P	14 32 43.9	+1.0
PCH				*i* S	S	14 33 01.9	+1.7
FCH	Farellones	1.42	112	⇓*i*P	P	14 32 44.6	+1.4
FCH				*i* S	S	14 33 03.4	+2.5
FCH				AMP		14 33 05.1	
	comp=E,406nm,0.2s						
CHCH	Chadas Angostu	1.52	139	⇓*i*P	P	14 32 45.5	+0.9
LMEL	Las Melosas	1.74	128	*e*P	P	14 32 49.1	+1.3
LMEL				*i* S	S	14 33 11.4	+2.5
LMEL				AMP		14 33 15.6	
	comp=N,326nm,0.0s						

*MOS **23** 14:41:40.3±1.6,50.51N×18.77E,h10^{km},mb3.5/1,Error ellipse: s-maj=12.1km s-min=8.3km az=65.9*

*NEIC **23** 14:41:41.3±0.9,50.19N×18.92E,h5^{km},MG2.9(WAR),Error ellipse: s-maj=12.5km s-min=8.2km az=174.0*

*PRU **23** 14:41:41.8,50.28N×18.83E*

*CSEM **23** 14:41:41.0±0.2,50.32N×18.82E,h2^{km},ML3.4/4,Error ellipse: s-maj=4.2km s-min=2.4km az=6.0*

*IPEC **23** 14:41:41.4±0.2,50.32N×18.84E,h4^{km}±1^{km},ML2.5/3,Error ellipse: s-maj=2.3km s-min=0.8km az=171.0*

*IDC **23** 14:41:41.2±1.9,50.20N×18.93E,mb1 4.0/2,mb1mx3.4/16,mbtmp3.9/2,ML3.1/3,Error ellipse: s-maj=35.8km s-min=9.8km az=135.0*

WAR 23 14:41:40.1,50.35N×18.87E,h0^{km},ML2.9,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.51	238	*e*Pg	Pg	14 41 51.9	+1.6
RAC				*e*Sg	Sg	14 41 59.2	+2.0
OJC	Ojcow	0.61	102	*e*Pg	Pg	14 41 52.8	+0.5
OJC				*e*Sg	Sg	14 42 01.5	+1.1
OJC	Ojcow	0.61	102	*e*Pg	Pg	14 41 52.8	+0.5
OJC				*e*Sg	Sg	14 42 01.4	+1.0
OKC	Ostrava-Krasne	0.70	222	*e*P	Pg	14 41 54.4	+0.4
OKC				*e*		14 42 04.2	
OKC				smax			
	comp=N,80nm,0.4s						
OKC	Ostrava-Krasne	0.70	222	*e*PG	Pg	14 41 54.4	+0.4
OKC				*e*SG	Sg	14 42 04.2	+0.9
	comp=N,80nm,0.4s						
OKC	Ostrava-Krasne	0.70	222	*e*P	Pg	14 41 54.4	+0.4
	comp=N,80nm,0.4s						
OKC				Sg	Sg	14 42 04.2	+0.9
	comp=N,80nm,0.4s						
MORC	Moravsky Berou	1.03	236	*e*P	Pb	14 42 00.0	-0.5
MORC				*e*S	Sb	14 42 13.1	-1.3
MORC	Moravsky Berou	1.03	236	*e*Pg	Pg	14 42 00.1	-0.6
MORC				*e*Sg	Sg	14 42 13.7	-0.8
	comp=N,79nm,0.3s						
LIKS	Likavka	1.31	173	*i*	Sg	14 42 24.8	+0.9
NIE	Niedzica	1.32	135	*e*Pg	Pg	14 42 04.7	-1.8
NIE				*e*Sg	Sg	14 42 22.9	-1.2
DPC	Dobruska-Polom	1.63	271	*e*P	Pn	14 42 10.2	0.0
DPC				*e*		14 42 32.0	
DPC				smax			
	comp=N,92nm,0.7s						
DPC	Dobruska-Polom	1.63	271	*e*PG	Pg	14 42 10.2	-2.5
DPC				*e*SG	Sg	14 42 32.0	-2.5
	comp=N,92nm,0.7s						
DPC	Dobruska-Polom	1.63	271	*e*P	Pn	14 42 10.2	0.0
	comp=N,92nm,0.7s						
DPC				Sg	Sg	14 42 32.0	-2.5
	comp=N,92nm,0.7s						
KSP	Ksiaz	1.71	288	*e*P	Pn	14 42 11.8	+0.4
KSP				*e*		14 42 33.1	
KSP	Ksiaz	1.71	288	*e*Pn	Pn	14 42 11.8	+0.4
KSP				*i* Pg	Pg	14 42 13.0	-1.3
KSP				*e*Sn	Sn	14 42 33.1	-1.1
KSP				*e*Sg	Sg	14 42 35.5	-1.7
KSP	Ksiaz	1.71	288	*e*Pn	Pn	14 42 10.6	-0.7
KSP				*e*Pg	Pg	14 42 13.1	-1.2
KSP				*e*Sn	Sn	14 42 33.7	-0.5
KSP				*e*Sg	Sg	14 42 35.6	-1.6
VRAC	Vranov	1.81	236	Pn	Pn	14 42 12.2	-0.5
	comp=N,4.1nm,0.3s,baz=55,slow=16,SNR=14						
VRAC				Pg	Pg	14 42 13.7	-2.5
	comp=N,4.1nm,0.3s,baz=60,slow=14,SNR=14						
VRAC				Lg		14 42 37.2	
	comp=N,10nm,0.3s,baz=138,slow=23,SNR=18						
VRAC	Vranov	1.81	236	Pg	Pg	14 42 13.7	-2.5
VRAC				*e*Sg	Sg	14 42 36.5	-3.8
	comp=N,42nm,0.4s						
UPC	Upice	1.83	276	*e*PG	Pg	14 42 13.2	-3.5
VYHS	Vyhne	1.86	181	*i* PG	Pg	14 42 13.7	-3.6
VYHS				*i* SG	Sg	14 42 36.6	-5.5
VYHS	Vyhne	1.86	181	*e*Pn	Pn	14 42 13.2	-0.3
VYHS	Vyhne	1.86	181	*i* P	Pn	14 42 13.7	+0.2
VYHS				*i* S	Sn	14 42 36.6	-1.4
KRUC	Moravsky	2.06	232	*e*Pn	Pn	14 42 17.0	+0.7
KRUC				*e*Sg	Sg	14 42 43.6	-5.2
	comp=N,28nm,0.5s						
SMOL	Smolenice	2.07	208	*e*PG	Pg	14 42 17.1	-4.3
SMOL				*e*SG	Sg	14 42 43.4	-5.6
KECS	Kecovo	2.15	150	*e*SN	Sn	14 42 43.7	-1.6
CRVS	Cervenica-Dubn	2.23	130	*e*PG	Pg	14 42 23.2	-1.3
CRVS				*i*		14 42 54.4	
ZST	Bratislava	2.45	209	*e*SG	Sg	14 42 52.5	-9.2
ZST				*i*		14 42 56.2	
KWP	Kalwaria	2.58	105	*e*P	Pn	14 42 25.6	+1.9
KWP				*e*		14 43 04.2	
KWP	Kalwaria	2.58	105	*e*Pn	Pn	14 42 25.6	+1.9
KWP				*e*P*	Pb	14 42 30.0	+3.0
KWP				*e*Pg	Pg	14 42 33.9	+2.3
KWP				*e*Sg	Sg	14 43 04.2	-1.7
KOLS	Kolonicke sedl	2.63	121	*e*PG	Pg	14 42 30.6	-2.0
KOLS				*e*SG	Sg	14 42 59.7	-7.9
KOLS	Kolonicke sedl	2.63	121	*e*S	Sn	14 42 59.7	+2.2
PRU	Pruhonice	2.81	264	*e*SG	Sg	14 43 08.2	-5.4
BRG	Berggiesshubel	3.18	281	*e*P	Pg	14 42 40.8	-2.8
LVV	L'vov	3.37	97	*e*P	Pg	14 42 45.9	-1.4
LVV				*e*		14 43 26.3	
KHC	Kasperske Hory	3.65	252	*e*P	Pn	14 42 37.0	-1.9
KHC				*e*		14 43 16.0	
KHC	Kasperske Hory	3.65	252	*e*PN	Pn	14 42 37.0	-1.9
KHC				*e*PG	Pg	14 42 46.5	-6.4
KHC				*e*x	x	14 43 16.0	
KHC				*e*SG	Sg	14 43 36.5	-4.9
KHC	Kasperske Hory	3.65	252	Pg	Pg	14 42 46.5	-6.4
KHC				Sg	Sg	14 43 36.5	-4.9
GERES	GERESS Array B	3.69	248	Pn	Pn	14 42 39.2	-0.3
	comp=N,0.3nm,0.3s,baz=66,slow=13,SNR=4.7						
GERES				Pg	Pg	14 42 48.7	-5.0
	comp=N,1.5nm,0.3s,baz=60,slow=17,SNR=27						
GERES				Lg		14 43 36.7	
	comp=N,2.6nm,0.3s,baz=62,slow=26,SNR=20						
CLL	Collm	3.84	287	*e*PG	Pg	14 42 55.0	-1.8
CLL				*i*		14 43 43.4	
CLL				*i* SG	Sg	14 43 50.7	+2.7
MOA	Molln	3.93	232	*i*	Pn	14 42 49.4	+6.5
MOA	Molln	3.93	232	*i* SG	Sg	14 43 45.8	-5.1
	comp=N,13nm,0.6s						
FINES	FINESS Array B	11.82	17	Pn	P	14 44 27.1	-5.7
	comp=N,0.3nm,0.3s,baz=180,slow=12,SNR=9.9						
ARCES	ARCESS Array B	19.50	7	Pn	P	14 46 07.5	-3.6
	comp=N,0.1nm,0.3s,baz=192,slow=13,SNR=5.0						

*NEIC **23** 14:47:51.9,38.52N×24.10E,h33^{km},ML3.1(ATH),After ATH.*

*THE **23** 14:47:52.5,38.50N×24.13E,h10^{km},ML3.0*

*CSEM **23** 14:47:52.8±0.1,38.53N×24.05E,h12^{km},ML3.1,Error ellipse: s-maj=3.0km s-min=1.5km az=108.0*

*ATH **23** 14:47:52.0,38.52N×24.09E,h36^{km}±4^{km},MD3.2/9,ML3.1*

ISC 23 14:47:51.7±0.8,**38.49N**±0.03×**24.15E**±0.07,**h24**^{km}±7^{km},**n19,** σ**0^{s}71**/24,**1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAR	Parnis Oros	0.46	224	*e*PB	Pb	14 48 01.5	+0.3
PTL	Penteli	0.49	207	*e*PN	Pn	14 48 03.0	-0.1
ATH	Athens Observa	0.61	213	⇑*i*PN	Pn	14 48 04.6	-0.3
ATH				*e*SN	Sn	14 48 13.3	-0.7
AOS	Alonnisos	0.71	343	*e*Pg	Pb	14 48 05.6	+0.2
AOS				*e*Sg	Sb	14 48 16.1	+1.2
NSAL	Nisos Salamina	0.79	223	*e*PN	Pn	14 48 07.5	+0.1
MGER	Gerania Oros	0.86	235	*e*PN	Pn	14 48 08.5	+0.1
NAIG	Nisos Aigina	0.89	216	*e*PN	Pn	14 48 09.5	+0.6
LKR	Lokris	0.91	281	*e*PB	Pb	14 48 07.8	-1.0
LKR				*e*SN	Sn	14 48 20.8	-0.8
NEO	Neokhori	1.09	319	*e*PN	Pn	14 48 11.9	+0.2
NEO				*e*SN	Sn	14 48 25.8	-0.3
XOR	Xorichti	1.15	320	*e*Pg	Pn	14 48 12.9	+0.4
XOR	Xorichti	1.15	320	*e*Pg	Pn	14 48 12.9	+0.3
PAIG	Paliouri	1.48	346	*e*Pb	Pb	14 48 17.5	-1.0
AGG	Agios Georgios	1.52	291	*e*Pb	Pb	14 48 18.7	-0.4
AGG				*e*Sb	Sb	14 48 39.0	+1.1
LOS	Limnos	1.62	26	*e*Pb	Pb	14 48 20.6	-0.1
LIA	Limnos Island	1.62	29	*e*PN	Pn	14 48 19.7	+0.3
OUR	Ouranopolis	1.85	356	*e*Pb	Pb	14 48 23.0	-1.7
PLG	Polygyros	1.96	344	*e*PN	Pn	14 48 24.3	+0.1
VLI	Veliai	2.01	209	*e*PN	Pn	14 48 26.0	+1.1
LIT	Litokhoron	2.06	322	*e*Pn	Pn	14 48 26.3	+0.7

*IDC **23** 14:55:53.4±1.0,6.50S×68.28E,mb3.9/7,mb1 4.1/7,mb1mx3.9/17,mbtmp3.9/7,MS3.4/2,Ms1 3.5/2,ms1mx3.1/22,Error ellipse: s-maj=35.6km s-min=23.3km az=35.0*

*NEIC **23** 14:55:54.7±1.1,6.48S×68.44E,h10^{km},mb4.4/2,Error ellipse: s-maj=30.2km s-min=15.6km az=212.0*

ISC 23 14:55:52.8±1.0,**6.4S**±0.2×**68.4E**±0.1,**h10**^{km},**n16,** σ**1^{s}05**/11,**mb4.0**/9,**MS3.3**/2,**Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	4.11	104	*e*P	Pn	14 56 55.4	-1.8
KMBO	Kilima Mbogo	31.54	278	LR	LR	15 12 25.4	
	comp=Z,68nm,18.1s,MS3.4,baz=90,slow=32						
CMAR	Chiang Mai Arr	38.96	50	P	P	15 03 23.0	+2.0
	0.7nm,0.6s,mb3.5,baz=242,slow=9.1,SNR=6.9						
CMAR				PcP	PcP	15 05 33.0	+0.9
	0.5nm,0.5s,baz=250,slow=5.4,SNR=4.8						
CMAR				LR	LR	15 17 40.7	
	comp=Z,40nm,20.9s,MS3.2,baz=200,slow=33						
BRTR	Keskin Array B	56.04	328	P	P	15 05 33.9	-0.4
	1.2nm,1.0s,mb3.9,baz=139,slow=13,SNR=4.0						
KURK	Kurchatov	57.59	8	*e*P	P	15 05 44.4	-0.8
	1.8nm,0.9s,mb4.1						
CHKZ	Chkalovo	59.91	2	P	P	15 06 00.3	-0.9
	5.0nm,1.0s,mb4.5						
ZAL	Zalesovo	61.70	11	P	P	15 06 12.8	-0.7
	0.4nm,0.3s,mb4.0,baz=253,slow=5.5,SNR=3.6						
ZAL	Zalesovo	61.70	11	P	P	15 06 12.8	-0.7
SONM	Songino Array	63.54	28	P	P	15 06 26.9	+1.2
	1.4nm,0.7s,mb4.1,baz=219,slow=7.0,SNR=17						
ASAR	Alice Springs	65.00	113	P	P	15 06 36.1	+0.5
	1.1nm,0.8s,mb4.0,baz=277,slow=6.3,SNR=11						
WRA	Warramunga Arr	65.21	109	P	P	15 06 38.0	+0.9
	2.3nm,0.8s,mb4.2,baz=283,slow=6.2,SNR=19						
DBIC	Dimbokro	74.27	279	P	P	15 07 32.8	+0.1
	2.0nm,0.7s,mb4.2,baz=67,slow=3.6,SNR=3.1						
YKA	Yellowknife Ar	124.01	2	PKP	PKPdf	15 14 52.4	-2.0
	0.3nm,0.6s,baz=348,slow=2.4,SNR=9.4						
PDAR	Pinedale Array	143.77	357	PKP	PKPdf	15 15 31.1	-0.4

	0.4nm,0.7s,baz=90,slow=5.9,SNR=3.7						
NVAR	**Mina Array Bea**	147.57	10	PKPbc	PKPdf	15 15 41.1	+3.0
	0.8nm,0.7s,baz=31,slow=1.9,SNR=6.8						
TXAR	**Lajitas Array**	156.03	343	PKPab	PKPab	15 16 17.1	-0.5
	0.3nm,0.6s,baz=63,slow=2.8,SNR=5.7						

DJA 23 14:57:48.1±0.9**,9.47S**×**117.57E,h105**^{km}±20^{km}**,MD4.7**/4**, ML4.5**/4**,3C-1D,Error ellipse: s-maj=70.5km s-min=20.0km az=9.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	1.74	304	⇓*e*Pn	P	14 58 17.8	-0.2
	468nm,0.2s						
KEDI				*e*Sn	S	14 58 39.8	-0.4
RATI	**Rata**	2.14	290	⇑*e*Pn	P	14 58 23.0	-0.3
	506nm,0.2s						
RATI				*e*Sn	S	14 58 48.3	-1.2
KELI	**Kelakatan**	3.29	292	⇑*e*Pn	P	14 58 38.9	+0.1
	68nm,0.2s						
KELI				*e*Sn	S	14 59 14.5	-2.7
SRDI	**Scrawed**	3.52	286	⇑*e*Pn	P	14 58 41.1	-1.0
	74nm,0.2s						
SRDI				*e*Sn	S	14 59 21.4	-1.6

MAN 23 15:17:29.0,12.85N×**123.23E,h15**^{km}**,mb4.2,ML3.1, MS2.8,2C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	0.62	141	*e*P	Pb	15 17 41.0	0.0
MMPH				*i* S	Sb	15 17 47.0	-2.2
AUQP	**San Andres**	0.72	311	*e*P	Pb	15 17 43.2	+0.5
AUQP				*e*S	Sb	15 17 56.0	+3.9
PVCP	**Virac**	1.17	50	*e*P	Pb	15 17 48.8	-1.6
PVCP				*e*S	Sb	15 18 08.0	+2.8
GQP	**Guinayangan**	1.30	324	⇑*e*P	Pb	15 17 51.9	-0.8
GQP				*e*S	Sb	15 18 10.6	+1.6
RCP	**Roxas**	1.36	200	⇑*e*P	Pn	15 18 07.7	+14
BOAC	**Boac**	1.48	294	*e*P	Pn	15 17 53.6	-1.7
BOAC				*e*S	Sb	15 18 14.8	+0.6
GUIM	**Jordan**	2.29	196	*e*P	Pn	15 18 06.2	-0.7
GUIM				*e*S	Sn	15 18 36.4	+1.3

IDC 23 15:20:22.7±1.7**,6.59S**×**150.70E,mb3.9**/4**,mb1 4.1**/5**, mb1mx3.8**/13**,mbtmp3.9**/5**,ML2.5**/1**,Error ellipse: s-maj=72.3km s-min=25.2km az=128.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.49	231	Pn	Pn	15 21 34.2	+0.7
	1.6nm,0.3s,baz=349,slow=6.4,SNR=8.1						
PMG				Sn	Sn	15 22 27.5	+0.3
	2.0nm,0.3s,baz=246,slow=23,SNR=8.6						
WRA	**Warramunga Arr**	20.70	229	P	P	15 25 04.4	-2.8
	2.3nm,0.5s,baz=52,slow=11,SNR=40						
ASAR	**Alice Springs**	23.43	222	P	P	15 25 33.2	-1.3
	2.4nm,0.5s,baz=56,slow=8.8,SNR=59						
STKA	**Stephens Creek**	26.56	198	P	P	15 26 01.1	-3.1
	3.6nm,0.9s,baz=2.9,slow=14,SNR=3.8						
ILAR	**Eielson Array**	84.59	22	P	P	15 32 58.5	-0.4
	0.2nm,0.8s,baz=252,slow=5.4,SNR=4.5						

CASC ***23*** *15:30:12.7±1.1,7.46N×82.77W,MD4.2*
IDC ***23*** *15:30:16.1±8.7,8.66N×81.96W,mb3.6/3,mb1 3.9/4, mb1mx3.6/20,mbtmp3.7/4,ML3.8/1,Error ellipse: s-maj=187.8km s-min=45.5km az=5.0*
ISC 23 15:30:10.5±2.4**,7.1N**±0.2×**82.8W**±0.3**,h48**^{km}±17^{km}**,n13,** σ**0**^{s}**84**/15**,mb3.6**/3**,1C-2D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	1.62	345	*e*P	**P**	**15 30 35.3**	**-1.9**
BUS	**Buena Vista**	2.66	338	⇑*e*P	**P**	**15 30 52.1**	**+0.2**
BUS				*e*S	**S**	**15 31 23.8**	**+0.7**
LCR2	**La Lucha 2**	2.92	335	*e*P	**P**	**15 30 55.8**	**+0.1**
URSC	**Urasca**	2.92	340	⇓*e*P	**P**	**15 30 56.1**	**+0.4**
ICR	**Volcan Irazu**	3.08	340	*e*P	**P**	**15 30 58.3**	**+0.4**
LAJ	**Bijagual**	3.08	334	*e*P	**P**	**15 30 59.4**	**+1.5**
PRS1	**Puriscal**	3.28	332	⇓*e*P	**P**	**15 31 00.0**	**-0.7**
CGA2	**Cerro Gallo 2**	3.38	330	*e*P	**P**	**15 31 02.2**	**+0.1**
TRTC	**Tortuguero**	3.61	345	*e*P	**P**	**15 31 05.4**	**0.0**
JTS	**JuntasAbangare**	3.87	326	Pn	**P**	**15 31 09.0**	**0.0**
	8.7nm,0.3s,baz=116,slow=12,SNR=21						
JTS				Sn	**S**	**15 31 52.9**	**-0.8**
	baz=305,slow=22,SNR=2.4						
ULM	**Lac du Bonnet**	44.41	348	P	**P**	**15 38 17.1**	**-1.2**
	0.5nm,0.3s,mb3.6,baz=149,slow=5.9,SNR=2.9						
NVAR	**Mina Array Bea**	44.77	320	P	**P**	**15 38 26.8**	**+5.4**
	1.0nm,0.8s,mb3.7,baz=140,slow=7.0,SNR=4.9						
YKA	**Yellowknife Ar**	60.02	344	P	**P**	**15 40 15.6**	**+1.0**
	0.4nm,0.8s,mb3.5,baz=137,slow=6.9,SNR=8.4						

MAN 23 15:31:27.3,13.80N×**120.47E,h91**^{km}**,mb4.1,ML3.0, MS2.7,1C-1D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	0.23	253	⇑*i*P	P	15 31 42.1	+1.6
LUBP	**Lubang**	0.23	253	*e*P	P	15 31 42.1	+1.5
LUBP				*e*S	S	15 31 52.7	+2.1
LQP	**Lukban**	1.08	73	⇓*e*P	P	15 31 48.9	+0.6
BOAC	**Boac**	1.38	104	*e*P	P	15 31 52.1	+0.1
BOAC				*e*S	S	15 32 11.4	+1.1
SJMP	**San Jose**	1.48	155	*e*P	P	15 31 53.7	+0.5
SJMP				*e*S	S	15 32 13.1	+0.7
POLP	**Polilio Island**	1.69	57	*e*P	P	15 31 56.4	+0.4
BUSP	**Coron**	1.81	189	*e*P	P	15 31 57.5	0.0
BUSP				*e*S	S	15 32 20.3	+0.4
BUSP	**Coron**	1.81	189	*e*P	P	15 31 57.5	0.0
BUSP						15 32 20.3	
SCZP	**Santa Cruz**	2.03	345	*e*P	P	15 32 00.5	-0.1
OTRP	**Odiongan**	2.08	133	*e*P	P	15 32 01.1	-0.1
ENPP	**El Nido**	2.78	202	*e*P	P	15 32 10.9	0.0
ENPP				*e*S	S	15 32 43.1	-0.3

MAN 23 15:49:59.2,9.55N×**126.71E,h4**^{km}**,mb3.9,ML2.7,MS2.3, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	1.22	242	*e*P	Pb	15 50 21.5	-0.9
SCPH	**Surigao**	1.22	281	*e*P	Pb	15 50 22.0	-0.5
SCPH				*e*S	Sb	15 50 40.3	+1.9
BUKP	**Musuan**	2.32	224	*e*P	Pn	15 50 41.0	+2.2
MATI	**Mati**	2.62	190	*e*P	Pn	15 50 43.0	-0.1

NEIC ***23*** *15:53:12.4±0.6,6.24S×150.78E,h10*^{km}*,mb4.6/6,Error ellipse: s-maj=23.5km s-min=11.0km az=130.0*
IDC ***23*** *15:53:19.7±6.3,6.39S×150.68E,h62*^{km}*±54*^{km}*,mb4.1/6, mb1 4.3/7,mb1mx4.1/13,mbtmp4.3/7,ML3.1/1,Error ellipse: s-maj=49.1km s-min=28.3km az=98.0*
ISC 23 15:53:18.3±3.6**,6.2S**±0.1×**150.5E**±0.2**,h62**^{km}±29^{km}**,n17,** σ**0**^{s}**93**/16**,mb4.3**/8**,3D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.58	226	P	**P**	**15 54 26.6**	**-0.1**
	6.4nm,0.3s,baz=58,slow=6.2,SNR=28						
PMG				S	**S**	**15 55 19.7**	**+0.6**
	12nm,0.3s,baz=134,slow=13,SNR=12						
PMG	**Port Moresby**	4.58	226	*e*P	**P**	**15 54 26.1**	**-0.6**
KAKA	**Kakadu**	18.95	249	⇓*i*P	**P**	**15 57 36.6**	**-0.5**
	15nm,0.9s						
WRAB	**Tennant Creek**	20.79	228	*e*P	**P**	**15 57 55.7**	**-0.9**
	15nm,0.5s						
WRA	**Warramunga Arr**	20.80	228	P	**P**	**15 57 56.3**	**-0.4**
	15nm,0.6s,baz=52,slow=11,SNR=148						
ASAR	**Alice Springs**	23.57	221	P	**P**	**15 58 25.4**	**+1.4**
	11nm,0.5s,mb4.5,baz=54,slow=9.0,SNR=239						
ASPA	**Alice Springs**	23.57	221	⇓*i*P	**P**	**15 58 25.5**	**+1.4**
STKA	**Stephens Creek**	26.83	197	*e*P	**P**	**15 58 53.0**	**-1.9**
	9.3nm,0.9s,mb4.3						
STKA	**Stephens Creek**	26.83	197	P	**P**	**15 58 53.1**	**-1.8**
	11nm,0.8s,mb4.5,baz=20,slow=9.3,SNR=16						
FITZ	**Fitzroy Crossi**	26.98	242	⇓*i*P	**P**	**15 58 56.6**	**+0.2**
	14nm,0.5s,mb4.7						
SONM	**Songino Array**	66.36	329	P	**P**	**16 04 03.3**	**+0.6**
	0.6nm,0.7s,mb3.7,baz=145,slow=4.8,SNR=4.7						
QSPA	**South Pole Qui**	83.73	180	*e*P	**P**	**16 05 41.2**	**0.0**
	4.4nm,0.6s,mb4.8						
CHKZ	**Chkalovo**	89.04	324	*e*P	**P**	**16 06 06.1**	**-1.5**
	0.8nm,0.8s,mb4.1						
NVAR	**Mina Array Bea**	94.75	52	P	**P**	**16 06 35.3**	**+0.9**
	0.4nm,0.7s,mb4.0,baz=268,slow=4.0,SNR=3.7						
YKA	**Yellowknife Ar**	97.75	28	P	**P**	**16 06 47.6**	**+0.2**
	0.3nm,0.6s,mb4.0,baz=271,slow=4.8,SNR=7.9						
GERES	**GERESS Array B**	124.06	327	PKP	PKPdf	16 12 11.4	+1.5
	0.9nm,0.6s,baz=90,slow=1.3,SNR=8.3						
BDFB	**Brasilia**	151.54	140	PKPbc	PKPdf	16 13 07.3	+7.3
	3.2nm,0.5s,baz=133,slow=2.1,SNR=6.9						
BDFB				pPKPbc		16 13 16.2	
	4.5nm,0.8s,baz=181,slow=2.9,SNR=3.9						

IDC ***23*** *15:55:46.5±1.1,13.74N×93.02E,mb3.9/6,mb1 4.0/7, mb1mx3.7/18,mbtmp3.7/7,ML3.5/1,Error ellipse: s-maj=37.1km s-min=22.4km az=41.0*
ISC 23 15:55:47.8±7.3**,13.8N**±0.1×**93.1E**±0.1**,h21**^{km}±51^{km}**,n7,** σ**0**^{s}**53**/8**,mb3.8**/6**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	7.31	50	Pn	**Pn**	**15 57 36.2**	**+0.1**
	0.2nm,0.3s,baz=241,slow=16,SNR=4.7						
CMAR				Sn	**Sn**	**15 58 59.2**	**-0.1**
	0.3nm,0.3s,baz=240,slow=29,SNR=12						
WRA	**Warramunga Arr**	52.62	129	P	**P**	**16 05 02.8**	**-0.1**
	0.2nm,0.3s,mb3.5,baz=306,slow=8.1,SNR=5.5						
ASAR	**Alice Springs**	54.56	133	P	**P**	**16 05 17.1**	**0.0**
	0.7nm,0.4s,mb4.0,baz=315,slow=6.9,SNR=4.2						
BRTR	**Keskin Array B**	57.90	308	P	**P**	**16 05 40.0**	**-0.8**
	1.3nm,0.9s,mb4.0,baz=104,slow=5.1,SNR=4.3						
FINES	**FINESS Array B**	67.06	331	P	**P**	**16 06 41.4**	**-0.1**
	1.1nm,0.9s,mb3.9,baz=117,slow=6.2,SNR=4.0						
ARCES	**ARCESS Array B**	69.41	340	P	**P**	**16 06 56.4**	**+0.4**
	1.4nm,0.7s,mb4.0,baz=90,slow=3.6,SNR=4.2						
GERES	**GERESS Array B**	72.80	317	P	**P**	**16 07 17.2**	**+0.5**
	0.5nm,0.8s,mb3.5,baz=80,slow=8.1,SNR=3.7						

DJA 23 15:56:07.4±0.9**,9.29S**×**116.08E,h76**^{km}±12^{km}**,MD4.9**/4**, ML3.9**/1**,1C-3D,Error ellipse: s-maj=39.7km s-min=13.0km az=177.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATI	**Rata**	0.78	316	⇓*e*Pn	P	15 56 23.3	-0.6
	153nm,0.2s						
RATI				*e*Sn	S	15 56 35.0	-1.1
KEDI	**Kedomdong**	0.80	2	⇑*e*Pn	P	15 56 23.6	-0.5
	165nm,0.2s						
KEDI				*e*Sn	S	15 56 35.6	-0.8
KELI	**Kelakatan**	1.90	304	⇓*e*Pn	P	15 56 37.5	-0.9
KELI				*e*Sn	S	15 57 00.0	-1.3
SRDI	**Scrawed**	2.08	293	⇓*e*Pn	P	15 56 40.3	-0.6
	64nm,0.2s						
SRDI				*e*Sn	S	15 57 04.1	-1.6

IDC ***23*** *16:07:34.0±1.6,18.00S×168.30E,mb4.0/4,mb1 4.3/4, mb1mx3.9/14,mbtmp4.0/4,Error ellipse: s-maj=43.0km s-min=32.9km az=175.0*
ISC 23 16:07:42.2±3.4**,18.3S**±0.2×**168.2E**±0.2**,h70**^{km}±30^{km}**,n7,** σ**0**^{s}**60**/9**,mb4.0**/5**,1D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	4.09	203	*e*P	**P**	**16 08 44.1**	**+0.2**
DZM				*e*S	**S**	**16 09 30.7**	**-0.2**
NOUC	**Port Laguerre**	4.17	205	*e*P	**P**	**16 08 45.3**	**+0.3**
NOUC				*e*S	**S**	**16 09 32.4**	**-0.5**
RPZ	**Rata Peaks**	25.45	175	P	**P**	**16 13 06.0**	**+0.7**
	3.7nm,0.6s,mb4.0,baz=2.5,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	31.99	262	P	**P**	**16 14 03.5**	**-0.7**
	0.3nm,0.4s,mb3.4,baz=79,slow=6.1,SNR=12						
ASAR	**Alice Springs**	32.40	255	P	**P**	**16 14 07.5**	**-0.1**
	1.9nm,0.5s,mb4.1,baz=77,slow=9.0,SNR=24						
FITZ	**Fitzroy Crossi**	40.35	263	⇓*i*P	**P**	**16 15 15.9**	**+1.1**
	9.1nm,0.6s,mb4.8						
NVAR	**Mina Array Bea**	88.94	49	P	**P**	**16 20 29.7**	**-0.8**
	0.5nm,0.8s,mb3.6,baz=220,slow=7.2,SNR=4.1						

DJA 23 16:20:53.1±0.9**,8.40S**×**117.11E,h182**^{km}±8^{km}**,MD4.5**/3**, ML3.6**/2**,1C-2D,Error ellipse: s-maj=70.8km s-min=19.5km az=4.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	0.99	265	⇑*e*Pn	P	16 21 21.5	+0.4
	42nm,0.2s						
KEDI				*e*Sn	S	16 21 41.7	-1.0
RATI	**Rata**	1.59	258	⇓*i*Pn	P	16 21 26.5	0.0
	89nm,0.2s						
RATI				*e*Sn	S	16 21 50.4	-1.9
KELI	**Kelakatan**	2.60	274	*e*Pn	P	16 21 37.5	-0.1
KELI				*e*Sn	S	16 22 10.3	-1.5
SRDI	**Scrawed**	2.94	268	⇓*e*Pn	P	16 21 41.8	+0.2
SRDI				*e*Sn	S	16 22 17.9	-1.1

TEH ***23*** *16:54:11.8,30.78N×57.78E,h12*^{km}*,Mn3.1*
CSEM ***23*** *16:54:11.8,30.78N×57.78E,h12*^{km}*,ML3.1,After TEH*
THR ***23*** *16:54:17.7±1.0,30.74N×56.57E,h14*^{km}*±11*^{km}*,ML2.7*
ISC 23 16:54:17.3±0.7**,30.78N**±0.06×**56.65E**±0.10**,h10**^{km}**,n12,** σ**0**^{s}**84**/15**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	0.80	173	*e*PG	**Pg**	**16 54 32.4**	**-1.0**
KRBR				AML	AML	16 54 47.1	
	comp=E,291nm,0.1s						
IBAF	**Bafgh**	1.23	311	Pn	**Pn**	**16 54 39.8**	**-0.7**
IMEH	**Mehriz**	1.85	290	Pn	**Pn**	**16 54 49.6**	**+0.2**
ICHK	**Chekchek**	2.41	308	Pn	**Pn**	**16 54 57.0**	**-0.4**
ISRV	**Sarvestan**	3.37	246	Pn	**Pn**	**16 55 16.2**	**+5.1**
BNDS	**Bandar-Abbas**	3.40	187	*e*PN	**Pn**	**16 55 12.1**	**+0.6**
BNDS				AML	AML	16 56 17.8	
	comp=N,15nm,0.5s						
ZHSF	**Zahedan**	3.75	107	*e*P	**Pn**	**16 55 18.1**	**+1.5**
ZHSF				AML	AML	16 55 31.9	
	comp=E,8.1nm,0.3s						
NASN	**Na’in**	3.84	303	*e*PN	**Pn**	**16 55 18.8**	**+1.0**
NASN				*e*SG	**Sg**	**16 56 15.9**	**-9.3**
NASN				AML	AML	16 56 28.5	
	comp=N,19nm,0.4s						
IFIR	**Firoozkooh**	5.84	327	Pn	**Pn**	**16 55 45.3**	**-0.8**
IFIR				Sn	**Sn**	**16 56 54.5**	**+0.5**
IPAY	**Payeh**	5.98	18	Pn	**Pn**	**16 55 47.0**	**-1.0**
IDMV	**Damavand**	6.15	322	Pn	**Pn**	**16 55 50.2**	**-0.3**
IAFJ	**Afjeh**	6.53	322	Pn	**Pn**	**16 55 55.2**	**-0.6**
IAFJ				Sn	**Sn**	**16 57 12.3**	**+1.1**

IDC ***23*** *16:56:25.3±7.2,21.98S×168.17E,mb3.7/4,mb1 3.9/4, mb1mx3.7/13,mbtmp3.7/4,Error ellipse: s-maj=158.1km s-min=63.6km az=118.0*
ISC 23 16:56:18.2±4.3**,22.8S**±0.4×**169.4E**±0.2**,h14**^{km}±31^{km}**,n6,** σ**1**^{s}**44**/8**,mb3.6**/4**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	2.80	285	*e*P	**Pn**	**16 57 03.8**	**+0.3**
DZM				*e*S	**Sn**	**16 57 38.0**	**+0.6**
NOUC	**Port Laguerre**	2.92	284	*e*P	**Pn**	**16 57 05.1**	**0.0**
NOUC				*e*S	**Sn**	**16 57 39.9**	**-0.5**
STKA	**Stephens Creek**	26.20	244	P	**P**	**17 01 55.8**	**+1.4**
	2.5nm,0.7s,mb3.8,baz=80,slow=9.6,SNR=4.8						
ASAR	**Alice Springs**	32.54	261	P	**P**	**17 02 50.3**	**-0.8**
	0.4nm,0.6s,mb3.5,baz=80,slow=8.8,SNR=8.4						
WRA	**Warramunga Arr**	32.70	268	P	**P**	**17 02 50.2**	**-2.3**
	0.2nm,0.5s,mb3.3,baz=99,slow=8.2,SNR=10						
CMAR	**Chiang Mai Arr**	80.09	295	P	**P**	**17 08 30.4**	**+0.8**
	0.5nm,0.6s,mb3.6,baz=149,slow=3.6,SNR=4.6						

THR ***23*** *17:19:08.9±0.8,30.76N×56.80E,h14*^{km}*±8*^{km}*,ML3.5*
CSEM ***23*** *17:19:09.6±0.1,30.74N×56.82E,h18*^{km}*,ML4.5/2,Error ellipse: s-maj=3.0km s-min=2.8km az=65.0*
TEH ***23*** *17:19:11.7,30.66N×56.90E,h20*^{km}*,Mn3.6*
ISC 23 17:19:08.9±0.6**,30.80N**±0.03×**56.72E**±0.06**,h10**^{km}**,n28,** σ**1**^{s}**23**/32**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	0.82	178	*e*PG	**Pg**	**17 19 23.4**	**-1.9**
KRBR				*e*SG	**Sg**	**17 19 34.8**	**-1.5**
KRBR				AML	AML	17 19 39.1	
	comp=N,2µm,0.2s						
KRBR	**Kerman**	0.82	178	*e*Pg	**Pg**	**17 19 23.4**	**-1.9**
	SNR=90						
KRBR				*e*Sg	**Sg**	**17 19 34.8**	**-1.5**
	comp=N,2µm,0.2s,SNR=90						
IBAF	**Bafgh**	1.26	309	Pn	**Pn**	**17 19 32.2**	**-0.4**
IMEH	**Mehriz**	1.90	288	Pn	**Pn**	**17 19 41.9**	**+0.2**
ICHK	**Chekchek**	2.44	307	Pn	**Pn**	**17 19 49.2**	**-0.3**
BNDS	**Bandar-Abbas**	3.43	188	*e*PN	**Pn**	**17 20 04.0**	**+0.5**
BNDS				AML	AML	17 21 11.4	
	comp=N,86nm,0.6s						
ISRV	**Sarvestan**	3.44	247	Pn	**Pn**	**17 20 03.9**	**+0.3**
ZHSF	**Zahedan**	3.70	108	*e*PN	**Pn**	**17 20 06.9**	**-0.5**
NASN	**Na’in**	3.88	302	*e*PN	**Pn**	**17 20 11.4**	**+1.4**
NASN				*e*SG	**Sg**	**17 21 11.9**	**-6.2**
NASN				AML	AML	17 21 51.8	
	comp=N,103nm,0.5s						
NASN	**Na’in**	3.88	302	*e*Pn	**Pn**	**17 20 11.4**	**+1.5**
	SNR=52						
NASN				*e*Sg	**Sg**	**17 21 11.9**	**-6.2**
	comp=N,103nm,0.5s,SNR=90						
IMOK	**Mook**	3.90	244	Pn	**Pn**	**17 20 11.1**	**+1.0**
GHIR	**Ghir-Karzin**	4.11	233	*e*PN	**Pn**	**17 20 14.2**	**+1.0**
GHIR				AML	AML	17 21 44.0	
	comp=N,33nm,0.6s						
IFIR	**Firoozkooh**	5.86	326	Pn	**Pn**	**17 20 39.4**	**+1.5**
IFIR	**Firoozkooh**	5.86	326	Sn	**Sn**	**17 21 44.7**	**-1.3**
IPAY	**Payeh**	5.94	18	Pn	**Pn**	**17 20 39.0**	**-0.1**
IKRD	**Kardeh**	6.14	14	Pn	**Pn**	**17 20 46.2**	**+4.3**
IDMV	**Damavand**	6.17	322	Pn	**Pn**	**17 20 43.6**	**+1.2**
IMYA	**Miamay**	6.20	26	Pn	**Pn**	**17 20 42.2**	**-0.5**
IQOM	**Qom**	6.23	312	Pn	**Pn**	**17 20 44.1**	**+0.9**
IQOM	**Qom**	6.23	312	Sn	**Sn**	**17 21 53.6**	**-1.7**
DAMV	**Damavand**	6.25	322	*e*PN	**Pn**	**17 20 44.3**	**+0.9**
IAFJ	**Afjeh**	6.55	322	Pn	**Pn**	**17 20 49.5**	**+1.8**
IAFJ	**Afjeh**	6.55	322	Sn	**Sn**	**17 22 01.0**	**-2.3**
ASAO	**Ashtian**	6.77	305	*e*PN	**Pn**	**17 20 51.1**	**+0.4**
IMHD	**Mahdasht**	7.03	315	Pn	**Pn**	**17 20 55.1**	**+0.7**
IMHD	**Mahdasht**	7.03	315	Sn	**Sn**	**17 22 12.5**	**-2.7**
IRAZ	**Razeghan**	7.32	311	Sn	**Sn**	**17 22 19.2**	**-3.2**
IRAZ	**Razeghan**	7.32	311	Pn	**Pn**	**17 20 59.4**	**+1.0**

NEIC ***23*** *17:24:09.3,16.89N×100.09W,h8*^{km}*,MD3.7(MEX),After MEX.*
MEX 23 17:24:09.4±1.2**,16.90N**×**100.09W,h8**^{km}±7^{km}**,MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	0.16	101	*i* P	Pg	17 24 12.3	-0.7
ACX				*i* S	Sg	17 24 15.3	-0.1
CAIG	**El Cayaco**	0.23	310	*i* P	Pg	17 24 13.2	-1.0
CAIG				*i* S	Sg	17 24 17.5	+0.1
ZIIG	**Zihuatanejo**	1.50	298	*i* P	Pn	17 24 33.0	-3.7
ZIIG				*i* S	Sb	17 24 51.4	-4.6
PLIG	**Platanillo**	1.59	20	*i* P	Pn	17 24 34.2	-3.7
PLIG				*i* S	Sb	17 24 53.8	-4.8
PPM	**Popocatepetl**	2.56	33	*i* P	Pn	17 24 48.0	-4.0
PPM				*i* S	Sn	17 25 19.4	-4.2
PPM	**Popocatepetl**	2.56	33	*i* P	Pn	17 24 48.0	-4.0
PPM				*e*P		17 24 50.0	
PPM				*i* S	Sn	17 25 19.4	-4.2
IIB	**San Bernardino**	2.64	39	*e*P	Pn	17 24 51.0	-2.0
IIB				*i* S	Sn	17 25 23.0	-2.5

DJA 23 17:48:26.4±0.8**,9.89S**×**116.12E,h33**^{km}**,MD5.2**/3**, ML4.1**/2**,2C-2D,Error ellipse: s-maj=17.5km s-min=12.0km az=149.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATI	**Rata**	1.29	333	⇓*e*Pn	Pn	17 48 46.8	-1.7
	108nm,0.2s						
RATI				*e*Sg	S	17 49 01.5	-3.2
KEDI	**Kedomdong**	1.39	360	⇑*e*Pn	Pn	17 48 48.8	-1.1
	293nm,0.2s						
KEDI				*e*Sn	Sn	17 49 04.5	-2.8
KELI	**Kelakatan**	2.31	316	⇓*e*Pn	Pn	17 49 03.0	-0.1
KELI				*e*Sn	Sn	17 49 29.0	-1.7
SRDI	**Scrawed**	2.40	305	⇑*e*Pn	Pn	17 49 02.7	-1.7
SRDI	**Scrawed**	2.40	305	*e*P	P	17 49 03.2	-1.0
SRDI				*e*Sn	Sn	17 49 28.4	-4.6

IDC ***23*** *17:48:30.7±1.2,12.09N×116.49E,mb3.6/4,mb1 3.6/5, mb1mx3.5/19,mbtmp3.4/5,ML3.3/1,MS2.7/1,Ms1 2.9/1, ms1mx2.4/19,Error ellipse: s-maj=73.6km s-min=21.0km az=60.0*
ISC 23 17:48:37.3±1.5**,12.06N**±0.09×**116.33E**±0.10**,h69**^{km}±18^{km}**, n15,** σ**0**^{s}**89**/16**,mb3.6**/4**,1C,South China Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENPP	**El Nido**	3.15	105	*e*P	**P**	**17 49 24.8**	**-0.9**
PPR	**Puerto Princes**	3.27	134	⇑*e*P	**P**	**17 49 28.9**	**+1.4**
BATP	**Bataraza**	3.55	156	*e*P	**P**	**17 49 24.8**	**-6.5**
BUSP	**Coron**	3.79	90	*e*P	**P**	**17 49 34.1**	**-0.5**
LUBP	**Lubang**	4.17	66	*e*P	**P**	**17 49 40.1**	**+0.2**
LUBP	**Lubang**	4.17	66	*e*P	**P**	**17 49 39.7**	**-0.3**
LUBP				*e*S	**S**	**17 50 28.2**	**+0.4**
SJMP	**San Jose**	4.70	85	*e*P	**P**	**17 49 47.8**	**+0.4**
CUYO	**Cuyo Island**	4.75	104	*e*P	**P**	**17 49 46.9**	**-1.2**
SCZP	**Santa Cruz**	5.07	43	*e*P	**P**	**17 49 51.4**	**-1.2**
BOAC	**Boac**	5.56	75	*e*P	**P**	**17 50 00.9**	**+1.8**
CMAR	**Chiang Mai Arr**	17.93	293	P	**P**	**17 52 43.9**	**+0.2**
	0.0nm,0.3s,baz=112,slow=9.7,SNR=2.7						
CMAR				LR	LR	17 59 20.6	
	comp=Z,22nm,19.8s,baz=43,slow=36						
WRA	**Warramunga Arr**	36.41	151	P	**P**	**17 55 36.6**	**-0.6**
	1.1nm,0.7s,mb3.9,baz=332,slow=9.4,SNR=13						
SONM	**Songino Array**	36.62	349	P	**P**	**17 55 39.7**	**+0.9**
	0.4nm,0.9s,mb3.3,baz=158,slow=7.8,SNR=3.5						
ASAR	**Alice Springs**	39.45	154	P	**P**	**17 56 02.7**	**+0.2**
	0.4nm,0.8s,mb3.3,baz=319,slow=6.2,SNR=4.0						
BVAR	**Borovoye Array**	54.81	328	P	**P**	**17 58 01.7**	**-0.7**
	0.8nm,0.6s,mb3.9,baz=97,slow=12,SNR=5.3						

IGQ 23 17:50:50.5,3.00S×**81.24W,h12**^{km}±33^{km}**,mb4.1,1D, Error ellipse: s-maj=33.7km s-min=10.3km az=132.0, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	2.06	20	P	Pn	17 51 25.2	-0.1
IGUA	**Igualata**	3.00	60	P	Pn	17 51 39.3	+0.5
IGUA				S	Sn	17 52 15.6	+0.5
RETU	**Refugio**	3.19	61	P	Pn	17 51 42.5	+1.0
ULBA	**Ulba**	3.22	62	P	Pn	17 51 43.1	+1.1
ULBA				S	Sn	17 52 21.3	+0.6
RUN2	**Runtun**	3.23	61	P	Pn	17 51 43.0	+0.9
PISA	**Pisayambo**	3.44	56	P	Pn	17 51 46.7	+1.6
NAS1	**Nasa**	3.62	50	⇓P	Pn	17 51 50.0	+2.3
TAMB	**Tambo**	3.67	51	P	Pn	17 51 50.3	+2.0
VC1	**Cotopaxi 1**	3.68	50	P	Pn	17 51 50.4	+1.9
JUA2	**San Juan 2**	3.82	44	P	Pn	17 51 51.8	+1.3
TERV	**Terraza Guagua**	3.85	43	P	Pn	17 51 52.7	+1.8
PINO	**Pino**	3.86	43	P	Pn	17 51 51.6	+0.6
YANA	**Yana**	3.91	43	P	Pn	17 51 53.2	+1.4
ANTI	**Antisana**	3.98	51	P	Pn	17 51 54.8	+2.0
COTA	**Cotacachi**	4.40	41	P	Pn	17 52 00.4	+1.7
CAYR	**Refugio Cayamb**	4.41	47	P	Pn	17 52 01.3	+2.4
CAYA	**Cayambe**	4.46	47	P	Pn	17 52 02.7	+3.2
ECEN	**Cerro Negro**	5.01	41	P	Pn	17 52 09.2	+1.8

IDC ***23*** *18:11:18.1±6.8,23.59S×179.97E,h486*^{km}*±66*^{km}*,mb3.6/8, mb1 3.7/9,mb1mx3.5/18,mbtmp4.5/9,Error ellipse: s-maj=59.1km s-min=26.2km az=51.0*
NEIC ***23*** *18:11:20.7±3.9,23.74S×179.84E,h515*^{km}*±38*^{km}*,mb4.3/3, Error ellipse: s-maj=46.1km s-min=20.9km az=45.0*
ISC 23 18:11:20.8±5.7**,23.7S**±0.3×**179.9E**±0.5**,h538**^{km}±58^{km}**,**

n15,σ0$\overset{s}{.}$78/14,**mb4.1**/10,**1C,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.67	189	P	P	18 14 26.6	-0.2
	2.2nm,0.3s,baz=247,slow=3.8,SNR=9.0						
RPZ	Rata Peaks	21.21	198	P	P	18 15 29.3	0.0
	4.3nm,0.6s,mb4.3,baz=21,slow=7.5,SNR=6.4						
CTA	Charters Tower	31.36	270	P	P	18 16 59.8	+0.9
	8.9nm,0.3s,mb4.7,baz=93,slow=11,SNR=38						
CTAO	Charters Tower	31.36	270	*e*P	P	18 16 59.5	+0.7
	8.9nm,0.4s,mb4.7						
PMG	Port Moresby	34.33	289	P	P	18 17 23.3	-0.6
	6.2nm,0.6s,mb4.3,baz=194,slow=4.2,SNR=4.1						
STKA	Stephens Creek	34.67	248	P	P	18 17 28.0	+1.4
	2.2nm,0.5s,mb3.9,baz=94,slow=11,SNR=11						
STKA	Stephens Creek	34.67	248	P	P	18 17 27.4	+0.8
ASAR	Alice Springs	41.94	260	P	P	18 18 26.8	+1.0
	2.7nm,0.4s,mb4.1,baz=96,slow=7.6,SNR=33						
ASPA	Alice Springs	41.95	260	⇑*i*P	P	18 18 17.3	-8.6
WRAB	Tennant Creek	42.29	266	*e*P	P	18 18 27.9	-0.8
	5.5nm,0.5s,mb4.3						
WRA	Warramunga Arr	42.30	266	P	P	18 18 28.2	-0.5
	2.0nm,0.3s,mb4.1,baz=94,slow=8.3,SNR=35						
NWAO	Narrogin (SRO)	55.19	245	P	P	18 20 04.2	-0.5
	5.6nm,0.8s,mb3.9,baz=119,slow=10,SNR=4.4						
MBWA	Marble Bar	55.28	260	*e*P	P	18 20 04.1	-1.3
	2.6nm,0.5s,mb3.7						
CMAR	Chiang Mai Arr	89.36	290	P	P	18 23 22.2	+0.9
	0.7nm,0.9s,mb3.5,baz=146,slow=4.1,SNR=4.7						
BRTR	Keskin Array B	147.38	307	PKPbc	PKPdf	18 30 07.4	+7.0
	0.2nm,0.4s,baz=78,slow=4.7,SNR=4.3						

MOS ***23*** *18:24:34.5±1.4, 4.18N×95.23E, h33^{km}, mb5.1/15, Error ellipse: s-maj=22.6km s-min=8.8km az=99.8*

IDC ***23*** *18:24:34.9±0.8, 4.67N×95.07E, mb4.5/13, mb1 4.7/14, mb1mx4.6/19, mbtmp4.5/14, ML4.9/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/26, Error ellipse: s-maj=43.8km s-min=14.3km az=49.0*

BJI ***23*** *18:24:38.0, 4.48N×95.21E, h41^{km}, mB4.6, mb4.8, Ms4.5, Msz4.2*

NEIC ***23*** *18:24:39.7±0.4, 4.71N×95.18E, h30^{km}, mb4.9/19, Error ellipse: s-maj=13.2km s-min=5.7km az=52.0*

ISC 23 18:24:38.3±0.4,**4.65N**±0.06×**95.18E**±0.06,**h33**^{km}, **(h41**^{km}±5.6^{km}**:pP-P),n109,σ1$\overset{s}{.}$16**/108,**mb4.8**/56,**MS3.8**/7, **8C-2D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	5.83	90	P	P	18 26 07.3	+2.6
KGM	Kluang	8.54	108	P	P	18 26 45.9	+3.4
CM31	Chiang Mai Arr	14.21	15	*e*P	P	18 28 04.0	+4.6
	23nm,0.7s						
CMAR	Chiang Mai Arr	14.21	15	*i*P	P	18 28 04.0	+4.5
CMAR				pmax	pmax		
	comp=Z,21nm,0.7s						
CMAR	Chiang Mai Arr	14.21	15	Pn	P	18 28 03.7	+4.2
	comp=Z,1.6nm,0.3s,baz=206,slow=11,SNR=124						
CMAR				LR	LR	18 33 28.0	
	comp=Z,117nm,20.5s,baz=190,slow=38						
CHG	Chiang Mai	14.55	14	⇑P	P	18 28 10.9	+7.0
	comp=Z,24nm,0.8s						
NANT	Nan	15.06	21	P	P	18 28 15.0	+4.4
HYB	Hyderabad	20.64	309	*i*P	P	18 29 19.0	+1.2
HYB				*e*S	S	18 33 02.5	+0.8
TSM	Tawau	22.63	90	P	P	18 29 41.0	+3.1
GYA	Guiyang	24.31	26	⇓*i*P	P	18 29 55.6	+1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
JIRN	Jiri	24.43	340	*e*P	P	18 29 55.8	+0.4
	comp=Z,47nm,0.6s,mb5.1						
PKI	Pulchoki	24.62	339	*e*P	P	18 29 57.7	+0.5
	comp=Z,12nm,0.5s,mb4.7						
DMN	Daman	24.77	338	*e*P	P	18 29 58.4	-0.2
	comp=Z,12nm,0.6s,mb4.6						
GUN	Gumba	24.77	340	*e*P	P	18 29 58.4	-0.2
	comp=Z,50nm,0.5s,mb5.3						
KKN	Kakani	24.87	339	*e*P	P	18 29 58.9	-0.7
	comp=Z,15nm,0.6s,mb4.7						
LSA	Lhasa	25.21	352	P	P	18 30 03.3	+0.5
LSA	Lhasa	25.21	352	*e*P	P	18 30 02.3	-0.5
	comp=Z,9.8nm,0.6s,mb4.5						
GKN	Gorkha	25.30	338	*e*P	P	18 30 04.2	+0.5
	comp=Z,35nm,0.5s,mb5.2						
KOLN	Koldanda	25.50	336	*e*P	P	18 30 06.0	+0.4
	comp=Z,47nm,0.6s,mb5.2						
ENH	Enshi	28.85	26	*e*P	P	18 30 33.9	-2.2
	comp=Z,6.8nm,0.7s,mb4.5						
XAN	Xi'an	31.91	22	P	P	18 31 02.0	-1.2
XAN				AMB	AMB		
	comp=Z,47nm,0.7s,mb5.4						
GTA	Gaotai	34.86	6	⇑P	P	18 31 27.8	-0.8
GTA				AP	pP	18 31 40.4	+2.1
GTA				XP	sP	18 31 44.9	+2.3
GTA				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.9						
GTA				AMB	AMB		
	comp=Z,79nm,4.2s						
GTA				LR	LR		
	comp=N,88nm,13.7s,MS3.9						
GTA				LR	LR		
	comp=E,102nm,11.4s,MS3.9						
GTA				LR	LR		
	comp=Z,65nm,12.2s,MS3.6						
NJ2	Nanjing	35.15	36	*e*P	P	18 31 31.4	+0.3
NJ2				AP	pP	18 31 39.8	-1.0
NJ2				XP	sP	18 31 44.6	-0.5
NJ2				PP	PP	18 32 50.3	-0.1
NJ2				PPP	PPP	18 33 08.1	-0.5
NJ2				S	S	18 37 01.0	-0.1
NJ2				XS		18 37 18.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,160nm,8.4s						
NJ2				LR	LR		
	comp=N,460nm,17.4s						
NJ2				LR	LR		
	comp=E,330nm,11.4s						
NJ2				LR	LR		
	comp=Z,300nm,15.8s,MS4.1						
SSE	Sheshan	35.92	40	P	P	18 31 35.5	-2.2
SSE				XP	sP	18 31 48.1	-3.6
SSE				S	S	18 37 11.3	-1.7
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,40nm,4.0s						
SSE				LR	LR		
	comp=N,65nm,15.0s,MS3.6						
SSE				LR	LR		
	comp=E,58nm,15.4s,MS3.6						
SSE				LR	LR		
	comp=Z,119nm,13.4s,MS3.8						
SSE	Sheshan	35.92	40	P	P	18 31 35.5	-2.2
	comp=Z,20nm,0.8s,mb5.1						
SSE				sP	sP	18 31 48.1	-3.6
SSE				S	S	18 37 11.2	-1.8
SSE				sS		18 37 26.1	
SSE				LR	LR		
	comp=Z,120nm,13.4s,MS3.8						
FITZ	Fitzroy Crossi	37.60	128	⇑*i*P	P	18 31 51.5	-0.4
	comp=Z,6.6nm,0.6s,mb4.5						
KSH	Kashi	38.82	336	*e*P	P	18 32 04.0	+2.1
KSH				*e*AP	pP	18 32 14.1	+2.4
KSH				*e*XP	sP	18 32 18.4	+2.5
KSH				*e*PP	PP	18 33 37.0	+2.1
KSH				*e*PPP	PPP	18 34 01.5	+3.4
KSH				*e*PCP	PcP	18 34 14.3	+1.0
KSH				*e*S	S	18 38 00.3	+3.1
KSH				*e*PS		18 38 17.6	
KSH				*e*SS	SS	18 40 45.3	+4.8
KSH				*e*SCS	ScS	18 42 09.1	+2.0
KSH				AMB	AMB		
	comp=Z,30nm,2.1s,mb4.7						
KSH				LR	LR		
	comp=N,130nm,4.0s						
KSH				LR	LR		
	comp=E,150nm,4.3s						
WMQ	Urumqi	39.57	351	P	P	18 32 08.6	+0.5
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.6						
BJT	Baijiatuau	39.98	25	*e*P	P	18 32 13.0	+1.4
	comp=Z,23nm,0.7s,mb5.0						
BJI	Beijing	40.01	25	P	P	18 32 13.3	+1.6
BJI				AMB	AMB		
	comp=Z,35nm,0.8s,mb5.1						
BJI	Beijing	40.01	25	P	P	18 32 13.2	+1.5
	comp=Z,35nm,0.8s,mb5.1						
KAKA	Kakadu	40.84	115	⇑*i*P	P	18 32 18.1	-0.8
	comp=Z,5.6nm,0.7s,mb4.3						
KZA	Kyzart	41.29	337	P	P	18 32 24.1	+1.7
	SNR=18						
UCH	Uchtor	41.70	337	P	P	18 32 27.5	+1.8
	SNR=58						
TKM2	Tokmak 2	41.89	338	P	P	18 32 28.6	+1.3
	SNR=26						
KBK	Karagaybulak	41.90	338	P	P	18 32 29.3	+1.9
	SNR=76						
AML	Almayashu	41.95	336	P	P	18 32 29.6	+1.8
	SNR=62						
AAK	Ala-Archa	42.06	337	P	P	18 32 30.2	+1.5
	SNR=29						
AAK	Ala-Archa	42.06	337	*i*P	P	18 32 28.9	+0.2
AAK				pmax	pmax		
	comp=Z,37nm,1.4s,mb4.8						
AAK	Ala-Archa	42.06	337	*e*P	P	18 32 28.9	+0.2
	comp=Z,24nm,0.8s,mb4.9						
FRU	Bishkek	42.18	337	*e*P	P	18 32 31.5	+1.8
FRU				pmax	pmax		
	comp=Z,57nm,2.0s,mb4.8						
CHMS	Chumysh	42.27	338	P	P	18 32 31.5	+1.0
	SNR=10						
EKS2	Erkin-Say	42.36	336	P	P	18 32 32.9	+1.7
	SNR=23						
USP	Ospenovka	42.59	338	P	P	18 32 34.2	+1.1
	SNR=58						
MKAR	Makanchi Array	43.44	347	*i*P	P	18 32 39.5	-0.4
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SONM	Songino Array	44.09	11	P	P	18 32 44.3	-0.9
	comp=Z,3.0nm,1.1s,mb3.9,baz=190,slow=8.6,SNR=16						
SONM				PcP	PcP	18 34 30.3	-0.2
	comp=Z,2.5nm,0.5s,baz=198,slow=3.6,SNR=16						
SNY	Shenyang	44.87	30	⇑P	P	18 32 51.5	+0.1
SNY				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
WRA	Warramunga Arr	45.59	124	P	P	18 32 58.1	+0.5
	comp=Z,22nm,0.6s,mb5.2,baz=302,slow=9.2,SNR=235						
WRAB	Tennant Creek	45.60	124	*i*P	P	18 32 58.6	+1.0
WRAB	Tennant Creek	45.60	124	*e*P	P	18 32 58.2	+0.6
	comp=Z,38nm,0.8s,mb5.4						
ZAK	Zakamensk	46.08	7	*e*P	P	18 32 59.6	-1.5
ZAK				*e*		18 34 36.8	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASPA	Alice Springs	47.09	128	⇑*i*P	P	18 33 09.7	+0.4
ASAR	Alice Springs	47.09	128	P	P	18 33 09.8	+0.5
	comp=Z,5.9nm,0.7s,mb4.6,baz=298,slow=7.9,SNR=109						
ASAR				PcP	PcP	18 34 41.0	-0.3
	comp=Z,1.6nm,0.6s,baz=312,slow=3.7,SNR=5.4						
ASAR				LR	LR	18 51 54.0	
	comp=Z,52nm,20.5s,MS3.5,baz=136,slow=35						
CN2	Changchun	47.25	30	*e*P	P	18 33 10.0	-0.3
CN2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
TLY	Talaya	47.41	7	*i*P	P	18 33 10.0	-1.4
TLY				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
KURK	Kurchatov	47.97	346	*i*P	P	18 33 15.8	-0.1
KURK	Kurchatov	47.97	346	*e*P	P	18 33 15.0	-0.9
	comp=Z,3.0nm,0.3s,mb4.8						
HIA	Hailar	49.11	21	*e*P	P	18 33 24.3	-0.3
	comp=Z,6.8nm,0.6s,mb4.8						
ZAL	Zalesovo	49.86	352	*i*P	P	18 33 29.8	-0.6
ZAL				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZAL	Zalesovo	49.86	352	P	P	18 33 29.8	-0.6
	comp=Z,8.2nm,0.5s,mb5.0,baz=304,slow=5.9,SNR=43						
ZAL				PcP	PcP	18 34 49.9	-1.0
	comp=Z,2.0nm,0.4s,baz=266,slow=2.8,SNR=2.1						
MDJ	Mudanjiang	49.94	32	*e*P	P	18 33 31.6	+0.5
	comp=Z,7.1nm,0.7s,mb4.8						
NVS	Novosibirsk	50.97	351	*i*P	P	18 33 36.3	-2.5
BVA0	Borovoye Array	52.35	341	*i*P	P	18 33 48.5	-0.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BVAR	Borovoye Array	52.35	341	P	P	18 33 48.4	-0.8
	baz=136,slow=10						
CHKZ	Chkalovo	52.84	342	*i*P	P	18 33 52.5	-0.3
CHKZ				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.3						
CHKZ	Chkalovo	52.84	342	*e*P	P	18 33 52.1	-0.8
	comp=Z,32nm,0.6s,mb5.4						
BOD	Bodaibo	55.05	12	*e*P	P	18 34 06.2	-2.8
CTA	Charters Tower	55.87	118	P	P	18 34 14.9	-0.5
	comp=Z,5.6nm,0.9s,mb4.6,baz=284,slow=8.0,SNR=3.7						
STKA	Stephens Creek	57.16	133	P	P	18 34 24.3	-0.3
	comp=Z,1.4nm,0.7s,mb4.1,baz=127,slow=9.3,SNR=3.9						
STKA	Stephens Creek	57.16	133	*e*P	P	18 34 24.2	-0.4
GNI	Garni	57.43	315	*i*P	P	18 34 25.6	-0.8
GNI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KMBO	Kilima Mbogo	58.15	266	LR	LR	18 54 03.0	
	comp=Z,61nm,20.3s,MS3.7,baz=77,slow=30						
YSS	Yuzh-Sakhalins	58.72	36	*e*P	P	18 34 35.0	-0.3
KIV	Kislovodsk	60.40	319	*i*P	P	18 34 46.3	-0.6
KIV				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
KIV	Kislovodsk	60.40	319	*e*P	P	18 34 45.9	-1.0
	comp=Z,9.5nm,0.9s,mb4.8						
SOC	Sochi	62.23	317	*e*P	P	18 34 55.0	-4.2
SOC				*e*		18 35 35.3	
SOC				*e*		18 37 09.8	
SOC				*e*S	S	18 43 16.2	-4.8
SOC				*e*		18 44 40.5	
SOC				*e*SSS	SSS	18 50 15.3	+6.5
SOC				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
SOC				pmax	pmax		
	comp=N,12nm,0.9s						
SOC				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK	Yakutsk	62.73	17	*i*P	P	18 35 00.4	-1.9
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.1						
YAK	Yakutsk	62.73	17	*e*P	P	18 35 00.3	-2.0
	comp=Z,12nm,0.5s,mb5.3						
BRTR	Keskin Array B	65.32	312	P	P	18 35 18.7	-0.8
	comp=Z,5.6nm,0.7s,mb4.7,baz=131,slow=7.6,SNR=33						
OBN	Obninsk	68.64	328	*e*P	P	18 35 39.1	-1.1
OBN				*e*		18 35 54.1	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
MA2	Magadan	69.15	27	*e*P	P	18 35 42.7	-0.6
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TIXI	Tiksi	70.18	11	⇑*i*P	P	18 35 47.4	-2.0
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,39nm,16.0s,MS3.8						
AKASG	Malin Array Be	71.31	322	P	P	18 35 55.1	-1.5
	comp=Z,3.5nm,0.4s,mb4.7,baz=88,slow=5.5,SNR=30						
AKASG				pP	pP	18 36 10.1	+3.2
	comp=Z,1.9nm,0.5s,baz=83,slow=5.4,SNR=4.9						
JOF	Joensuu	74.19	335	*e*p	P	18 36 12.0	-1.2
	comp=Z,8.2nm,0.6s,mb4.8						
JOF	Joensuu	74.19	335	*e*P	P	18 36 12.0	-1.2
JOF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
FINES	FINESS Array B	76.03	332	*i*P	P	18 36 23.5	-0.4
FINES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FINES	FINESS Array B	76.03	332	P	P	18 36 23.5	-0.4
	comp=Z,4.5nm,0.5s,mb4.7,baz=105,slow=6.4,SNR=50						
KAF	Kangasniemi	76.11	333	*e*p	P	18 36 23.0	-1.3
	comp=Z,5.9nm,0.6s,mb4.7,baz=116,slow=5.7						
KAF	Kangasniemi	76.11	333	*e*P	P	18 36 23.0	-1.3
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
OJC	Ojcow	77.09	320	*e*P	P	18 36 30.3	+0.1
KEV	Kevo	78.20	341	*e*p	P	18 36 34.9	-1.0
	comp=Z,41nm,1.9s,mb5.0						
KEV	Kevo	78.20	341	*e*P	P	18 36 34.9	-1.0
KEV				pmax	pmax		
	comp=Z,41nm,1.9s,mb5.0						
ARCES	ARCESS Array B	78.63	340	P	P	18 36 38.2	0.0
	comp=Z,3.7nm,0.4s,mb4.6,baz=98,slow=6.7,SNR=49						
BILL	Bilibino	78.69	21	*i*P	P	18 36 37.9	-0.7
BILL				pmax	pmax		
	comp=Z,8.0nm,2.2s,mb4.3						
FX1	Attu Island--F	79.06	37	*e*P	P	18 36 40.9	-0.1
GERES	GERESS Array B	80.91	319	P	P	18 36 51.5	+0.6
	comp=Z,2.1nm,0.5s,mb4.3,baz=114,slow=5.1,SNR=21						
KHC	Kasperske Hory	81.00	319	*e*P	P	18 36 52.0	+0.6
KHC				*e*x	x	18 37 07.0	
SYO	Syowa Base	82.65	197	⇑P	P	18 36 58.4	-1.1
SYO	Syowa Base	82.65	197	⇓PcP	PcP	18 37 06.4	+1.5
NB2	NORSAR Subarra	83.03	331	P	P	18 37 01.0	-0.6
	comp=Z,1.1nm,0.8s,mb3.9,baz=97,slow=4.6						
NOA	NORSAR Array B	83.03	331	P	P	18 37 00.9	-0.6
	comp=Z,3.0nm,1.0s,mb4.3,baz=94,slow=5.8,SNR=4.0						
IMA	Indian Mountai	94.20	22	*e*P	P	18 37 56.2	+1.4
	comp=Z,17nm,0.7s,mb5.6						
ILAR	Eielson Array	97.32	22	P	P	18 38 10.0	+0.9
	comp=Z,0.3nm,0.5s,mb4.0,baz=309,slow=6.8,SNR=5.6						
INK	Inuvik	99.78	16	LR	LR	19 27 28.2	
	comp=Z,62nm,21.3s,MS4.1,baz=145,slow=38						
INK	Inuvik	99.78	16	*e*Pdif	P	18 38 20.0	-0.1
	comp=Z,1.0nm,0.9s,mb4.2						
NVAR	Mina Array Bea	127.10	33	PKP	PKPdf	18 43 42.6	+2.8
	comp=Z,0.3nm,0.6s,baz=233,slow=1.1,SNR=3.9						
PDAR	Pinedale Array	127.75	23	PKP	PKPdf	18 43 42.5	+1.5
	comp=Z,0.8nm,0.7s,baz=80,slow=1.5,SNR=8.3						
TXAR	Lajitas Array	141.67	27	PKiKP		18 44 11.3	
	comp=Z,0.5nm,0.4s,baz=320,slow=0.8,SNR=3.7						
TXAR	Lajitas Array	141.67	27	PKPdf	PKPdf	18 44 11.3	+4.1

MAN 23 18:32:30.6,12.60N×123.16E,h18^{km}**,mb4.3,ML3.2, MS3.0,1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.51	118	*e*P	Pb	18 32 43.0	+2.3
AUQP	San Andres	0.86	327	*e*P	Pb	18 32 46.2	-0.5
AUQP				*e*S	Sb	18 33 00.9	+3.2
PVCP	Virac	1.39	44	*e*P	Pn	18 32 54.1	-1.1
PVCP				*e*S	Sb	18 33 14.0	+1.0
GQP	Guinayangan	1.47	332	⇓*e*P	Pn	18 32 56.0	-0.5
GQP				*e*S	Sn	18 33 14.8	-0.5
BOAC	Boac	1.54	304	*e*P	Pn	18 32 56.3	-1.1
BOAC				*e*S	Sn	18 33 18.6	+1.5
SJMP	San Jose	2.00	266	*e*P	Pn	18 33 05.5	+1.5
GUIM	Jordan	2.04	196	*e*P	Pn	18 33 03.8	-0.7

NIED ***23*** *18:37:00, 26.50N×125.70E, h175^{km}, Mw4.6 Best double couple: M$_0$8×10^{15} NP1:φ$_s$225°, δ84°, λ89°. NP2:φ$_s$56°, δ6°, λ101°.*

BJI ***23*** *18:37:07.8, 26.50N×125.80E, h185^{km}, mB4.9, mb4.8*

JMA ***23*** *18:37:07.4±0.3, 26.53N×125.74E, h147^{km}±5^{km}, M4.3*

IDC ***23*** *18:37:07.7±0.5, 26.70N×125.89E, h157^{km}±4^{km}, mb4.0/20, mb1 4.1/22, mb1mx4.1/28, mbtmp4.5/22, Error ellipse: s-maj=10.8km s-min=7.4km az=40.0*

NEIC ***23*** *18:37:08.1±0.2, 26.61N×125.73E, mb4.6/17, Error ellipse: s-maj=7.4km s-min=5.0km az=57.0*

MOS ***23*** *18:37:08.3±0.8, 26.60N×125.74E, h181^{km}, mb4.6/9, Error ellipse: s-maj=19.2km s-min=8.3km az=115.2*

ISC 23 18:37:05.9±0.2,**26.52N**±0.03×**125.77E**±0.03,**h156**^{km}±2^{km}, **h162**^{km}±1.8^{km}**:pP-P,n108,σ1$\overset{s}{.}$11**/136,**mb4.3**/38,**5C-7D, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.93	102	P	P	18 37 31.9	+1.0
JKE				S	S	18 37 50.5	+0.4
JAGN	Aguni-jima	1.32	87	P	P	18 37 35.3	+0.8
JAGN				S	S	18 37 55.8	-0.7
JMJ	Miyako jima 2	1.75	194	P	P	18 37 39.9	+1.0
JMJ				*e*S	S	18 38 03.4	-1.0
NAH1	Naha	1.75	100	P	P	18 37 40.1	+1.2
NAH1				*e*S	S	18 38 03.7	-0.8
JOGS	Gusukube	1.78	191	P	P	18 37 40.5	+1.2
JOGS				*e*S	S	18 38 05.1	+0.1
JJT2	Tamagusuku 2	1.82	102	P	P	18 37 41.3	+1.6
JJT2				*e*S	S	18 38 06.1	+0.4
JIH	Iheya	2.03	75	P	P	18 37 43.1	+1.0
JIH				S	S	18 38 08.9	-1.1
JTJ	Tarama	2.10	207	P	P	18 37 43.5	+0.5
JTJ				S	S	18 38 10.2	-1.3
JOW	Kunigami	2.27	82	P	P	18 37 45.9	+0.9
	903nm,0.3s,baz=234,slow=8.7,SNR=739						
JOW				S	S	18 38 12.9	-2.0
	914nm,0.3s,baz=133,slow=28,SNR=7.1						
JOW	Kunigami	2.27	82	P	P	18 37 45.7	+0.7
JOW				S	S	18 38 13.5	-1.5
JIJ	Ishigaki jima	2.60	215	P	P	18 37 48.8	-0.3
JIJ				*e*S	S	18 38 18.8	-3.5
JKRS	Kuro-shima	2.77	215	P	P	18 37 51.0	-0.3
JKRS				*e*S	S	18 38 25.5	-0.6
IRIF	Iriomote-Funau	2.85	221	P	P	18 37 52.0	-0.3
IRIF				*e*S	S	18 38 26.4	-1.4
HATJ	Hateruma jima	3.03	216	P	P	18 37 54.2	-0.3
HATJ				*e*S	S	18 38 30.8	-1.0
JTK	Tokunoshima	3.10	65	P	P	18 37 55.3	-0.2
JTK				*e*S	S	18 38 31.6	-1.9
YOJ	Yonaguni jima	3.23	231	P	P	18 37 57.8	+0.7
YOJ				*e*S	S	18 38 36.2	-0.1
JAM	Amami Oshima	3.90	60	P	P	18 38 05.2	-0.6
JAM				*e*S	S	18 38 48.4	-3.4
JZK	Kikaishima	4.14	63	P	P	18 38 08.9	-0.1
JZK				*e*S	S	18 38 55.5	-2.1
TATO	Taipei	4.15	249	*e*P	P	18 38 09.1	0.0
JNN	Nakanoshima	4.91	47	P	P	18 38 19.6	+0.5
JNN				*e*S	S	18 39 17.7	+2.1
JMZ	Minamidaito 2	4.95	97	P	P	18 38 18.6	-1.0
JMZ				*e*S	S	18 39 11.1	-5.4
JKC	Kuchinoerabu	5.53	44	P	P	18 38 27.7	+0.4
JKC				*e*S	S	18 39 33.2	+2.8
JTN	Tanegashima 3	6.16	47	P	P	18 38 35.8	+0.1
JTN				*e*S	S	18 39 43.5	-1.9
BBP	Basco	6.98	211	*e*P	P	18 38 44.6	-2.1
BBP				*e*S	S	18 39 58.7	-6.4
NJ2	Nanjing	8.17	314	*e*P	P	18 39 04.1	+1.6
NJ2				S	S	18 40 38.0	+4.4
NJ2				AMB	AMB		
	comp=Z,190nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,260nm,4.0s						
NJ2				Smax			
	comp=N,190nm,1.6s						
NJ2				Smax			
	comp=E,80nm,0.9s						
NJ2				LR	LR		
	comp=N,600nm,3.6s						
NJ2				LR	LR		
	comp=E,340nm,4.6s						
NJ2				LR	LR		
	comp=Z,1μm,4.6s						
APYP	Conner	9.58	207	*e*P	P	18 39 22.4	+1.2
APYP				*e*S	S	18 41 03.3	-3.6
ABRA	Dolores	9.99	209	*e*P	P	18 39 28.7	+2.2
ABRA				*e*S	S	18 41 15.3	-1.4
CAUP	Cauayan	10.21	202	*e*P	P	18 39 34.4	+5.1
CAUP				*e*S	S	18 41 24.6	+2.8
WHN	Wuhan	10.81	294	P	P	18 39 38.5	+1.2
KS15	Wonju Array Si	11.04	9	*e*P	P	18 39 43.3	+3.1
CBIJ	Chichi jima	14.67	84	P	P	18 40 30.9	+3.9
	comp=Z,10nm,0.3s,baz=137,slow=18,SNR=7.3						
ENH	Enshi	14.81	288	*e*P	P	18 40 30.7	+2.0
	comp=Z,24nm,1.3s						
SNY	Shenyang	15.38	354	⇑P	P	18 40 37.5	+1.8
SNY				AMB	AMB		
	comp=Z,10.0nm,1.1s						
SNY				AMB	AMB		
	comp=Z,190nm,5.3s						
SNY				LR	LR		
	comp=N,290nm,22.5s						
SNY				LR	LR		
	comp=Z,50nm,21.6s						
BJT	Baijiatuau	15.66	332	*e*P	P	18 40 41.0	+1.8
BJT				pmax	pmax		
	comp=Z,46nm,1.0s						
BJT	Baijiatuau	15.66	332	*e*P	P	18 40 41.0	+1.8
	comp=Z,46nm,1.0s						
BJI	Beijing	15.68	332	P	P	18 40 41.1	+1.7
BJI				AMB	AMB		
	comp=Z,20nm,0.7s						

BJI				LR	LR		
	comp=Z,90nm,24.3s						
BJI	**Beijing**	**15.68**	**332**	P	**P**	**18 40 41.1**	**+1.7**
	comp=Z,20nm,0.7s						
BJI				S	**S**	**18 43 46.6**	**+18**
XAN	**Xi’an**	**16.36**	**301**	P	**P**	**18 40 48.5**	**+0.6**
XAN				AP		18 40 52.6	
XAN				S	**S**	**18 43 49.4**	**+5.7**
XAN				AMB	AMB		
	comp=Z,31nm,0.9s						
XAN				LR	LR		
	comp=N,54nm,5.0s						
XAN				LR	LR		
	comp=E,56nm,5.4s						
XAN				LR	LR		
	comp=Z,88nm,5.5s						
GYA	**Guiyang**	**17.11**	**274**	⇓*i*P	**P**	**18 40 59.6**	**+2.6**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s						
CN2	**Changchun**	**17.25**	**359**	*e*P	**P**	**18 40 59.5**	**+0.9**
CN2				AMB	AMB		
	comp=Z,60nm,1.0s						
HHC	**Hu-ho-hao-te**	**18.51**	**324**	⇓P	**P**	**18 41 13.0**	**+0.3**
HHC				PCP	PcP	18 45 33.3	-2.2
HHC				AMB	AMB		
	comp=Z,17nm,1.2s						
HHC				AMB	AMB		
	comp=Z,142nm,6.0s						
HHC				LR	LR		
	comp=N,166nm,18.0s						
HHC				LR	LR		
	comp=E,325nm,22.8s						
HHC				LR	LR		
	comp=Z,150nm,14.4s						
BTO	**Baotou**	**19.18**	**321**	*e*P	**P**	**18 41 19.8**	**+0.1**
BTO				AMB	AMB		
	comp=Z,39nm,0.7s						
CD2	**Chengdu**	**19.79**	**288**	⇑*i*P	**P**	**18 41 25.5**	**-0.5**
CD2				AMB	AMB		
	comp=Z,17nm,0.5s						
LZH	**Lanzhou**	**20.98**	**302**	⇓P	**P**	**18 41 38.5**	**+0.5**
LZH				AP		18 42 03.0	
LZH				AMB	AMB		
	comp=Z,88nm,1.0s						
LZH	**Lanzhou**	**20.98**	**302**	⇓P	**P**	**18 41 38.5**	**+0.5**
LZH				*SP		18 42 14.0	
LZH				pmax	pmax		
	comp=Z,88nm,1.0s						
LZH	**Lanzhou**	**20.98**	**302**	⇓P	**P**	**18 41 38.5**	**+0.5**
	comp=Z,88nm,1.0s						
LZH				pP		18 42 03.0	
LZH				sP		18 42 14.0	
HIA	**Hailar**	**23.19**	**350**	*e*P	**P**	**18 41 58.8**	**-0.6**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HIA	**Hailar**	**23.19**	**350**	*e*P	**P**	**18 41 58.8**	**-0.6**
	comp=Z,4.9nm,0.6s,mb4.1						
GTA	**Gaotai**	**25.19**	**307**	⇓*i*P	**P**	**18 42 18.0**	**-0.4**
GTA				AP	pP	18 42 52.9	+2.7
GTA				XP	sP	18 43 11.8	+3.4
GTA				PCP	PcP	18 45 50.5	+1.8
GTA				S	**S**	**18 46 24.6**	**-5.0**
GTA				PCS		18 49 30.1	
GTA				AMB	AMB		
	comp=Z,27nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,72nm,5.3s						
GTA				LR	LR		
	comp=N,71nm,9.9s						
GTA				LR	LR		
	comp=E,51nm,11.0s						
GTA				LR	LR		
	comp=Z,82nm,12.2s						
ULN	**Ulaanbaatar**	**25.88**	**330**	*e*P	**P**	**18 42 24.1**	**-0.6**
ULN				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
ULN	**Ulaanbaatar**	**25.88**	**330**	*e*P	**P**	**18 42 24.1**	**-0.7**
	comp=Z,21nm,1.0s,mb4.7						
CM31	**Chiang Mai Arr**	**26.01**	**258**	*e*P	**P**	**18 42 26.2**	**0.0**
	comp=Z,2.5nm,0.6s,mb4.0						
CMAR	**Chiang Mai Arr**	**26.01**	**258**	P	**P**	**18 42 27.0**	**+0.7**
	comp=Z,1.9nm,0.6s,mb3.9,baz=66,slow=6.5,SNR=12						
CMAR				pP	pP	18 43 01.3	+3.0
	comp=Z,2.2nm,1.0s,baz=50,slow=10,SNR=5.7						
CMAR				ScP		18 49 17.4	
	comp=Z,0.7nm,0.8s,baz=270,slow=2.9,SNR=4.1						
SONM	**Songino Array**	**26.15**	**330**	P	**P**	**18 42 26.8**	**-0.5**
	comp=Z,27nm,0.7s,mb5.0,baz=142,slow=10,SNR=72						
SONM				pP	pP	18 43 00.7	+1.4
	comp=Z,6.9nm,0.9s,baz=153,slow=11,SNR=3.4						
SONM				PcP	PcP	18 45 51.3	+0.5
	comp=Z,0.5nm,0.5s,baz=159,slow=4.2,SNR=5.9						
SONM				ScP		18 49 15.0	
	comp=Z,2.8nm,0.8s,baz=171,slow=4.3,SNR=16						
ZAK	**Zakamensk**	**29.41**	**330**	*e*P	**P**	**18 42 55.3**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,2.2s						
MOY	**Mondy**	**31.34**	**330**	*e*P	**P**	**18 43 12.7**	**-0.9**
MOY				*e*	pP	18 43 47.5	+0.7
MOY				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
JIRN	**Jiri**	**35.15**	**281**	*e*P	**P**	**18 43 46.7**	**+0.2**
	comp=Z,8.9nm,0.9s,mb4.4						
WMQ	**Urumqi**	**35.22**	**309**	P	**P**	**18 43 46.5**	**-0.4**
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.5						
YAK	**Yakutsk**	**35.60**	**3**	P	**P**	**18 43 48.2**	**-1.7**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.6						
YAK	**Yakutsk**	**35.60**	**3**	P	**P**	**18 43 48.2**	**-1.7**
	comp=Z,6.3nm,0.4s,mb4.6						
PKI	**Pulchoki**	**35.85**	**281**	*e*P	**P**	**18 43 51.7**	**-0.7**
	comp=Z,6.9nm,0.7s,mb4.4						
KKN	**Kakani**	**35.94**	**281**	*e*P	**P**	**18 43 52.4**	**-0.7**
	comp=Z,14nm,0.7s,mb4.7						
DMN	**Daman**	**36.11**	**281**	*e*P	**P**	**18 43 54.0**	**-0.6**
	comp=Z,6.2nm,0.6s,mb4.4						
GKN	**Gorkha**	**36.47**	**282**	*e*P	**P**	**18 43 57.0**	**-0.6**
	comp=Z,6.4nm,0.6s,mb4.4						
KOLN	**Koldanda**	**37.41**	**282**	*e*P	**P**	**18 44 04.8**	**-0.7**
	comp=Z,7.9nm,0.8s,mb4.4						
KAKA	**Kakadu**	**39.53**	**170**	⇑*i*P	**P**	**18 44 23.0**	**-0.2**
	comp=Z,10.0nm,0.6s,mb4.6						
ZAL	**Zalesovo**	**40.70**	**324**	P	**P**	**18 44 31.8**	**-0.6**
	comp=Z,5.8nm,0.6s,mb4.4,baz=3.3,slow=8.6,SNR=41						
ZAL				pP	pP	18 45 07.1	+0.2
	comp=Z,3.1nm,0.7s,baz=8.3,slow=8.8,SNR=5.0						
ZAL				ScP		18 50 04.8	
	comp=Z,2.3nm,0.7s,baz=334,slow=3.2,SNR=15						
ZAL	**Zalesovo**	**40.70**	**324**	P	**P**	**18 44 31.8**	**-0.6**
ZAL				pP	pP	18 45 07.1	+0.2
ZAL				ScP		18 50 04.8	
PMG	**Port Moresby**	**41.31**	**147**	P	**P**	**18 44 39.4**	**+1.5**
	comp=Z,13nm,0.7s,mb4.7,baz=30,slow=6.7,SNR=12						
KURK	**Kurchatov**	**43.10**	**317**	*e*P	**P**	**18 44 50.5**	**-1.4**
KURK				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
KURK	**Kurchatov**	**43.10**	**317**	*e*P	**P**	**18 44 50.5**	**-1.5**
	comp=Z,21nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**44.35**	**180**	⇑*i*P	**P**	**18 45 02.8**	**+0.4**
	comp=Z,29nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**46.92**	**169**	*e*P	**P**	**18 45 23.0**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**46.92**	**169**	*e*P	**P**	**18 45 23.0**	**+0.3**
	comp=Z,12nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**46.93**	**169**	P	**P**	**18 45 23.2**	**+0.5**
	comp=Z,7.1nm,0.5s,mb4.5,baz=352,slow=8.5,SNR=122						
WRA				pP	pP	18 45 58.7	+0.8
	comp=Z,3.4nm,0.7s,baz=349,slow=8.8,SNR=4.8						
BVAR	**Borovoye Array**	**48.59**	**318**	P	**P**	**18 45 34.0**	**-1.2**
	comp=Z,1.7nm,0.6s,mb3.9,baz=103,slow=8.3,SNR=18						
BVAR				pP	pP	18 46 11.4	+0.8
	comp=Z,2.2nm,0.7s,baz=98,slow=8.4,SNR=4.8						
BVAR				PcP	PcP	18 46 58.0	-0.7
	comp=Z,0.8nm,0.4s,baz=146,slow=5.3,SNR=5.1						
BVAR				ScP		18 50 37.9	
	comp=Z,2.8nm,0.8s,baz=90,slow=4.4,SNR=15						
CTA	**Charters Tower**	**50.41**	**155**	*e*P	**P**	**18 45 50.6**	**+1.1**
	comp=Z,8.8nm,1.5s,mb4.2						
CTA	**Charters Tower**	**50.41**	**155**	*e*P	**P**	**18 45 50.6**	**+1.1**
CTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CTA	**Charters Tower**	**50.41**	**155**	P	**P**	**18 45 50.5**	**+1.0**
	comp=Z,7.5nm,0.9s,mb4.3,baz=325,slow=8.1,SNR=6.1						
ASAR	**Alice Springs**	**50.51**	**170**	P	**P**	**18 45 50.9**	**+0.7**
	comp=Z,13nm,0.6s,mb4.8,baz=357,slow=13,SNR=271						
ASAR				PcP	PcP	18 47 06.0	-0.1
	comp=Z,1.3nm,0.6s,baz=339,slow=3.8,SNR=3.6						
ASPA	**Alice Springs**	**50.51**	**170**	⇑*i*P	**P**	**18 45 50.9**	**+0.7**
SVE	**Sverdlovsk**	**54.68**	**322**	*e*P	**P**	**18 46 20.3**	**-0.4**
FORT	**Forrest**	**57.02**	**178**	*e*P	**P**	**18 46 37.8**	**+0.1**
	comp=Z,726nm,1.3s						
STKA	**Stephens Creek**	**60.00**	**164**	*e*P	**P**	**18 46 58.7**	**+0.4**
	comp=Z,9.3nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**60.00**	**164**	P	**P**	**18 46 58.8**	**+0.4**
	comp=Z,9.5nm,0.7s,mb4.8,baz=359,slow=7.1,SNR=18						
ARMA	**Armidale**	**61.79**	**155**	*e*P	**P**	**18 47 11.8**	**+1.3**
ILAR	**Eielson Array**	**65.23**	**28**	P	**P**	**18 47 31.2**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.7,baz=277,slow=6.7,SNR=12						
CNB	**Canberra Magne**	**65.42**	**159**	⇓*i*P	**P**	**18 47 35.9**	**+1.7**
	comp=Z,112nm,0.9s						
JOF	**Joensuu**	**68.72**	**331**	*e*p	**P**	**18 47 52.7**	**-1.5**
ARCES	**ARCESS Array B**	**68.93**	**338**	P	**P**	**18 47 54.3**	**-1.1**
	comp=Z,11nm,1.2s,mb4.5,baz=59,slow=7.1,SNR=4.4						
ARCES				PcP	PcP	18 48 17.1	-1.6
	comp=Z,2.8nm,0.8s,baz=79,slow=4.6,SNR=5.6						
INK	**Inuvik**	**69.49**	**23**	*e*P	**P**	**18 47 58.8**	**-0.1**
INK				pmax	pmax		
	comp=Z,12nm,1.2s						
INK	**Inuvik**	**69.49**	**23**	*e*P	**P**	**18 47 58.8**	**-0.1**
	comp=Z,12nm,1.2s,mb4.5						
KAF	**Kangasniemi**	**71.17**	**331**	*e*p	**P**	**18 48 07.5**	**-1.6**
FINES	**FINESS Array B**	**71.52**	**330**	P	**P**	**18 48 10.2**	**-1.0**
	comp=Z,2.0nm,0.3s,mb4.3,baz=63,slow=5.9,SNR=41						
FINES				pP	pP	18 48 47.8	-1.4
	comp=Z,1.9nm,0.6s,baz=63,slow=8.5,SNR=4.1						
AKASG	**Malin Array Be**	**73.87**	**319**	P	**P**	**18 48 23.5**	**-1.6**
	comp=Z,0.3nm,0.3s,mb3.4,baz=52,slow=7.4,SNR=5.3						
AKASG				pP	pP	18 49 03.6	+0.3
	comp=Z,2.0nm,0.7s,baz=58,slow=5.9,SNR=4.6						
BRTR	**Keskin Array B**	**75.11**	**307**	P	**P**	**18 48 31.5**	**-0.9**
	comp=Z,2.2nm,0.8s,mb3.8,baz=90,slow=2.9,SNR=9.2						
BRTR				pP	pP	18 49 11.0	+0.2
	comp=Z,4.3nm,1.0s,baz=54,slow=2.7,SNR=6.1						
ASF	**Jabal al Asfar**	**75.50**	**299**	pP	pP	18 49 14.3	+1.1
	comp=Z,7.4nm,1.0s,baz=292,slow=2.9,SNR=3.5						
HFS	**Hagfors**	**77.53**	**332**	P	**P**	**18 48 44.6**	**-0.8**
	comp=Z,4.3nm,0.8s,mb4.2,baz=83,slow=5.0,SNR=12						
NB2	**NORSAR Subarra**	**78.07**	**333**	P	**P**	**18 48 47.4**	**-1.0**
	comp=Z,2.9nm,1.0s,mb3.9,baz=51,slow=5.8						
NB2	**NORSAR Subarra**	**78.07**	**333**	P	**P**	**18 48 47.4**	**-1.0**
NB2				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
NOA	**NORSAR Array B**	**78.07**	**333**	P	**P**	**18 48 47.6**	**-0.8**
	comp=Z,3.9nm,0.9s,mb4.0,baz=54,slow=5.5,SNR=7.0						
NOA				pP	pP	18 49 26.1	-1.0
	comp=Z,2.1nm,0.8s,baz=58,slow=5.5,SNR=4.2						
YKA	**Yellowknife Ar**	**79.18**	**24**	P	**P**	**18 48 55.0**	**+0.6**
	comp=Z,3.4nm,0.8s,mb4.0,baz=300,slow=5.5,SNR=45						
RPZ	**Rata Peaks**	**81.30**	**149**	P	**P**	**18 49 06.8**	**+0.8**
	comp=Z,10.0nm,0.8s,mb4.5,baz=84,slow=1.5,SNR=8.6						
RPZ	**Rata Peaks**	**81.30**	**149**	P	**P**	**18 49 06.8**	**+0.8**
CLL	**Collm**	**82.64**	**324**	P	**P**	**18 49 13.0**	**+0.2**
GERES	**GERESS Array B**	**83.63**	**322**	P	**P**	**18 49 18.0**	**+0.2**
	comp=Z,0.5nm,0.8s,mb3.3,baz=56,slow=4.8,SNR=4.4						
PDAR	**Pinedale Array**	**94.30**	**37**	P	**P**	**18 50 09.1**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.5,slow=3.0,SNR=3.9						
DBIC	**Dimbokro**	**121.89**	**297**	PKP	PKPdf	18 55 44.1	+1.9
	comp=Z,4.1nm,0.9s,baz=45,slow=7.7,SNR=4.2						

IDC 23 18:51:28.0±2.4**, 2.03N**×**92.63E, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.5**/18**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=77.0km s-min=29.8km az=61.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.46**	**20**	P	P	18 55 33.0	-1.7
	0.0nm,0.3s,baz=214,slow=14,SNR=12						
WRA	**Warramunga Arr**	**46.38**	**120**	P	P	18 59 56.4	-1.9
	0.3nm,0.5s,baz=298,slow=8.6,SNR=7.4						
SONM	**Songino Array**	**47.15**	**13**	P	P	19 00 03.4	-0.7
	0.5nm,0.8s,baz=195,slow=9.2,SNR=5.2						
BVAR	**Borovoye Array**	**54.06**	**344**	P	P	19 00 54.2	-2.3
	0.4nm,0.8s,baz=153,slow=6.4,SNR=3.4						
TXAR	**Lajitas Array**	**145.13**	**25**	PKPbc	PKPbc	19 11 05.8	-2.7
	0.5nm,0.9s,baz=315,slow=1.8,SNR=3.6						

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*IDC **23** 18:51:41.9±9.6, 5.95S×150.38E, h53^{km}±69^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.5/13, mbtmp3.8/4, ML2.3/1, Error ellipse: s-maj=86.0km s-min=62.8km az=135.0*

ISC 23 18:51:39.5±5.9**, 6.1S**±0.4×**150.6E**±0.4**, h44**^{km}±41^{km}**, n5,** σ**0$\overset{s}{.}$81**/6**, mb3.8**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.71**	**226**	P	**P**	**18 52 50.1**	**+0.1**
	1.0nm,0.3s,baz=67,slow=4.6,SNR=4.6						
PMG				S	**S**	**18 53 44.0**	**0.0**
	0.6nm,0.3s,baz=131,slow=22,SNR=4.2						
WRA	**Warramunga Arr**	**20.93**	**227**	P	**P**	**18 56 20.3**	**-0.6**
	1.9nm,0.6s,baz=51,slow=10,SNR=30						
ASAR	**Alice Springs**	**23.71**	**221**	P	**P**	**18 56 49.4**	**+0.9**
	2.1nm,0.6s,mb3.7,baz=56,slow=9.1,SNR=51						
STKA	**Stephens Creek**	**26.98**	**197**	P	**P**	**18 57 19.0**	**-0.3**
	1.5nm,0.6s,mb3.7,slow=12,SNR=3.9						
FITZ	**Fitzroy Crossi**	**27.09**	**242**	*e*P	**P**	**18 57 20.3**	**-0.1**
	1.7nm,0.4s,mb3.9						

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*BJI **23** 18:51:35.2, 1.30N×92.34E, h30^{km}, mB5.2, mb4.7, Ms4.5, Msz4.2*

*IDC **23** 18:51:37.2±0.9, 1.95N×92.39E, mb4.1/9, mb1 4.4/10, mb1mx4.2/19, mbtmp4.2/10, ML4.1/1, MS4.3/2, Ms1 4.3/2, ms1mx3.6/10, Error ellipse: s-maj=37.3km s-min=19.1km az=47.0*

*MOS **23** 18:51:39.9±1.4, 1.94N×92.39E, h33^{km}, mb4.9/15, Error ellipse: s-maj=17.2km s-min=8.7km az=95.7*

*NEIC **23** 18:51:41.4±0.7, 1.96N×92.35E, h30^{km}, mb4.7/14, Error ellipse: s-maj=17.1km s-min=11.5km az=54.0*

ISC 23 18:51:39.8±0.6**, 1.91N**±0.07×**92.32E**±0.06**, h33**^{km}**, (h28**^{km}±1.6^{km}**:pP-P), n78,** σ**1$\overset{s}{.}$24**/85**, mb4.5**/35**, MS4.4**/9**, 1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	**Songkhla**	**9.79**	**57**	P	**P**	**18 53 50.0**	**-11**
	682nm,1.0s						
NST	**Nakhon Sawan**	**15.70**	**29**	P	**P**	**18 55 20.0**	**-0.2**
	50nm,1.0s						
BDT	**Bhumibol Dam**	**16.59**	**23**	P	**P**	**18 55 35.0**	**+3.4**
CM31	**Chiang Mai Arr**	**17.68**	**21**	*e*P	**P**	**18 55 44.5**	**-0.7**
	33nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.68**	**21**	P	**P**	**18 55 43.5**	**-1.7**
	0.2nm,0.3s,baz=216,slow=13,SNR=68						
CHG	**Chiang Mai**	**18.01**	**21**	P	**P**	**18 55 48.3**	**-1.0**
VIS	**Vishakhapatnam**	**18.02**	**331**	*e*P	**P**	**18 55 48.5**	**-1.0**
VIS				*e*		18 55 57.3	
	comp=Z,41nm,0.6s						
VIS				*e*		18 58 53.0	
NANT	**Nan**	**18.69**	**26**	P	**P**	**18 55 58.7**	**+0.9**
CHRT	**Chiangrai**	**19.28**	**22**	⇑P	**P**	**18 56 04.5**	**-0.2**
BWNR	**Bhubaneshwar**	**19.34**	**341**	*e*P	**P**	**18 56 06.5**	**+1.1**
BWNR				*e*		18 56 06.9	
	comp=Z,25nm,0.5s						
BWNR				*e*		18 59 26.2	
HYB	**Hyderabad**	**20.50**	**320**	*i* P	**P**	**18 56 16.5**	**-1.3**
HYB				*e*S	**S**	**19 00 05.0**	**+4.6**
KAD	**Karad**	**23.49**	**312**	*e*P	**P**	**18 56 54.7**	**+7.0**
KAD				*e*		18 57 05.8	
	comp=Z,30nm,0.6s						
KAD				*e*S	**S**	**19 01 08.0**	**+12**
POO	**Poona**	**24.50**	**314**	*e*	**P**	**18 57 13.0**	**+15**
POO				*i*		19 01 34.0	
KMI	**Kunming**	**25.17**	**23**	P	**P**	**18 57 05.3**	**+1.4**
KMI				S	**S**	**19 01 33.0**	**+8.8**
KMI				AMB	AMB		
	comp=Z,38nm,1.1s,mb4.8						
KMI				LR	LR		
	comp=N,494nm,13.4s,MS4.4						
KMI				LR	LR		
	comp=E,584nm,13.9s,MS4.4						
KMI				LR	LR		
	comp=Z,437nm,12.7s,MS4.2						
KMI	**Kunming**	**25.17**	**23**	P	**P**	**18 57 05.3**	**+1.4**
	comp=Z,38nm,1.1s,mb4.8						
KMI				S	**S**	**19 01 33.0**	**+8.8**
KMI				LR	LR		
	comp=Z,440nm,12.7s,MS4.2						
BHPL	**Bhopal**	**25.65**	**327**	*e*P	**P**	**18 57 10.0**	**+1.6**
BHPL				*e*	pP	18 57 18.5	+0.7
	comp=Z,12nm,0.3s						
JIRN	**Jiri**	**26.27**	**348**	*e*P	**P**	**18 57 12.3**	**-1.8**
	comp=Z,44nm,0.9s,mb5.0						
PKI	**Pulchoki**	**26.36**	**346**	*e*P	**P**	**18 57 15.2**	**+0.2**
	comp=Z,29nm,1.0s,mb4.7						
DMN	**Daman**	**26.47**	**346**	*e*P	**P**	**18 57 15.7**	**-0.3**
	comp=Z,38nm,1.1s,mb4.8						
GUN	**Gumba**	**26.57**	**347**	*e*P	**P**	**18 57 15.2**	**-1.8**
KKN	**Kakani**	**26.60**	**346**	*e*P	**P**	**18 57 16.1**	**-1.1**
	comp=Z,56nm,1.0s,mb5.0						
GKN	**Gorkha**	**26.96**	**345**	*e*P	**P**	**18 57 18.9**	**-1.6**
	comp=Z,54nm,0.9s,mb5.1						
KOLN	**Koldanda**	**27.03**	**343**	*e*P	**P**	**18 57 21.1**	**-0.1**
GYA	**Guiyang**	**28.03**	**28**	⇓*i*P	**P**	**18 57 31.4**	**+1.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
CD2	**Chengdu**	**30.81**	**19**	P	**P**	**18 57 55.3**	**+0.4**
DDI	**Dehra Dun**	**31.33**	**336**	*e*	**P**	**18 58 06.6**	**+7.1**
ENH	**Enshi**	**32.57**	**28**	*e*P	**P**	**18 58 09.3**	**-1.1**
	comp=Z,19nm,1.1s,mb4.9						
WHN	**Wuhan**	**35.31**	**34**	P	**P**	**18 58 35.4**	**+1.4**
WHN				S	**S**	**19 04 05.4**	**+0.4**
WHN				LR	LR		
	comp=Z,1µm,15.2s,MS4.7						
XAN	**Xi’an**	**35.53**	**24**	P	**P**	**18 58 35.0**	**-0.8**
XAN				AP	pP	18 58 42.8	-2.8
XAN				S	**S**	**19 04 11.8**	**+3.4**
XAN				AMB	AMB		
	comp=Z,21nm,1.0s,mb5.0						
XAN				LR	LR		
	comp=N,309nm,16.3s,MS4.4						
XAN				LR	LR		
	comp=E,408nm,17.5s,MS4.4						
XAN				LR	LR		
	comp=Z,472nm,13.8s,MS4.4						
GTA	**Gaotai**	**37.94**	**9**	P	**P**	**18 58 57.0**	**+0.9**
GTA				AP	pP	18 59 05.1	-0.7
GTA				XP	sP	18 59 09.1	-1.0
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,57nm,5.7s						
GTA				LR	LR		
	comp=N,145nm,14.5s,MS4.1						
GTA				LR	LR		
	comp=E,148nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=Z,176nm,15.6s,MS4.0						
NJ2	**Nanjing**	**39.03**	**37**	*e*P	**P**	**18 59 07.4**	**+2.2**
NJ2				AP	pP	18 59 17.1	+2.1
NJ2				XP	sP	18 59 21.4	+2.2
NJ2				PP	PP	19 00 41.3	+2.4
NJ2				S	**S**	**19 05 05.0**	**+3.1**
NJ2				XS		19 05 18.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.3s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,350nm,4.8s						
NJ2				LR	LR		
	comp=N,1µm,17.0s,MS4.9						
NJ2				LR	LR		
	comp=E,1µm,16.2s,MS4.9						
NJ2				LR	LR		
	comp=Z,810nm,12.5s,MS4.8						
AAK	**Ala-Archa**	**43.57**	**341**	*e*P	**P**	**18 59 44.2**	**+1.7**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
AAK	**Ala-Archa**	**43.57**	**341**	*e*P	**P**	**18 59 44.2**	**+1.8**
	comp=Z,4.7nm,1.1s,mb4.1						
BJT	**Baijiatuau**	**43.68**	**27**	*e*P	**P**	**18 59 44.9**	**+1.5**
BJT				pmax	pmax		
	comp=Z,18nm,1.2s						
BJT	**Baijiatuau**	**43.68**	**27**	*e*P	**P**	**18 59 44.9**	**+1.5**
	comp=Z,18nm,1.2s,mb4.7						
BJI	**Beijing**	**43.70**	**27**	P	**P**	**18 59 45.1**	**+1.5**
BJI				AP	pP	18 59 54.1	+0.6
BJI				XP	sP	18 59 57.9	+0.3
BJI				PP	PP	19 01 31.4	+4.4
BJI				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.7						
BJI				LR	LR		
	comp=N,224nm,16.0s,MS4.5						
BJI				LR	LR		
	comp=E,399nm,16.0s,MS4.5						
BJI				LR	LR		
	comp=Z,201nm,22.0s						
BJI	**Beijing**	**43.70**	**27**	P	**P**	**18 59 45.1**	**+1.5**
	comp=Z,13nm,0.9s,mb4.7						
BJI				pP	pP	18 59 54.1	+0.6
BJI				sP	sP	18 59 57.9	+0.3
BJI				PP	PP	19 01 31.4	+4.4
BJI				S	**S**	**19 06 23.4**	**+12**
BJI				SS	SS	19 09 39.0	+20
BJI				LR	LR		
	comp=Z,200nm,22.0s,MS4.0						
WRA	**Warramunga Arr**	**46.59**	**120**	P	**P**	**19 00 06.5**	**-0.3**
	comp=Z,1.8nm,0.8s,mb4.1,baz=298,slow=8.6,SNR=10						
WRAB	**Tennant Creek**	**46.59**	**120**	*e*P	**P**	**19 00 06.4**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**46.59**	**120**	*e*P	**P**	**19 00 06.4**	**-0.4**
	comp=Z,7.4nm,1.0s,mb4.6						
SONM	**Songino Array**	**47.34**	**13**	P	**P**	**19 00 12.6**	**+0.2**
	comp=Z,6.2nm,0.9s,mb4.5,baz=194,slow=6.7,SNR=31						
SONM	**Songino Array**	**47.34**	**13**	P	**P**	**19 00 12.6**	**+0.2**
ULN	**Ulaanbaatar**	**47.52**	**13**	*e*P	**P**	**19 00 12.5**	**-1.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**47.52**	**13**	*e*P	**P**	**19 00 12.5**	**-1.3**
	comp=Z,3.5nm,1.0s,mb4.3						
ASAR	**Alice Springs**	**47.77**	**125**	P	**P**	**19 00 15.4**	**-0.7**
	comp=Z,0.8nm,1.0s,mb3.7,baz=305,slow=7.2,SNR=4.9						
ASAR				PcP	PcP	19 01 46.8	+1.6
	comp=Z,0.6nm,0.8s,baz=304,slow=6.5,SNR=2.9						
KURK	**Kurchatov**	**49.99**	**349**	*i* P	**P**	**19 00 33.2**	**+0.3**
KURK	**Kurchatov**	**49.99**	**349**	*e*P	**P**	**19 00 32.6**	**-0.2**
	comp=Z,9.5nm,1.1s,mb4.7						
TLY	**Talaya**	**50.50**	**9**	*i* P	**P**	**19 00 37.2**	**+0.5**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
TLY	**Talaya**	**50.50**	**9**	*e*P	**P**	**19 00 37.4**	**+0.7**
	comp=Z,3.8nm,1.4s,mb4.2						
CN2	**Changchun**	**51.03**	**31**	*e*P	**P**	**19 00 41.5**	**+0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
ZAL	**Zalesovo**	**52.22**	**354**	P	**P**	**19 00 48.9**	**-0.7**
	comp=Z,1.5nm,0.5s,mb4.2,baz=301,slow=5.5,SNR=8.9						
HIA	**Hailar**	**52.69**	**22**	*e*P	**P**	**19 00 53.9**	**+0.7**
HIA				pmax	pmax		
	comp=Z,13nm,1.3s						
HIA	**Hailar**	**52.69**	**22**	*e*P	**P**	**19 00 53.9**	**+0.6**
	comp=Z,13nm,1.3s,mb4.7						
NVS	**Novosibirsk**	**53.28**	**353**	*e*P	**P**	**19 00 55.6**	**-2.0**
BVAR	**Borovoye Array**	**54.09**	**344**	P	**P**	**19 01 04.5**	**+0.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=169,slow=7.6,SNR=10						
CHKZ	**Chkalovo**	**54.61**	**344**	*e*P	**P**	**19 01 05.1**	**-2.3**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
CHKZ	**Chkalovo**	**54.61**	**344**	*e*P	**P**	**19 01 05.1**	**-2.2**
	comp=Z,6.0nm,0.8s,mb4.7						
GNI	**Garni**	**57.44**	**318**	*i* P	**P**	**19 01 29.6**	**+1.7**
GNI				pmax	pmax		
	comp=Z,9.0nm,1.7s						
TI2	**Plekhanov**	**58.21**	**319**	*e*P	**P**	**19 01 34.4**	**+1.1**
TI2				*i*		19 01 41.4	
BOD	**Bodaibo**	**58.33**	**13**	*e*P	**P**	**19 01 31.3**	**-2.6**
BOD				*e*	pP	19 01 40.1	-3.9
BOD				*e*		19 01 48.2	
SVE	**Sverdlovsk**	**60.31**	**341**	*e*P	**P**	**19 01 41.2**	**-6.4**
KIV	**Kislovodsk**	**60.63**	**321**	*i* P	**P**	**19 01 51.6**	**+1.7**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
EIL	**Elat**	**60.96**	**303**	P	**P**	**19 01 52.7**	**+0.3**
	comp=Z,1.7nm,0.5s,mb4.4,baz=27,slow=19,SNR=5.2						
EIL	**Elat**	**60.96**	**303**	P	**P**	**19 01 52.7**	**+0.3**
SOC	**Sochi**	**62.36**	**319**	*e*P	**P**	**19 02 00.3**	**-1.3**
SOC				*e*		19 02 35.2	
SOC				*e*		19 04 16.7	
SOC				*e*PPP	PPP	19 05 46.6	-3.9
SOC				*e*S	**S**	**19 10 27.0**	**+2.8**
SOC				*e*		19 11 47.4	
SOC				*e*SS	SS	19 14 35.8	+6.1

SOC				pmax	pmax		
	comp=N,7.0nm,1.0s						
SOC				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
SOC				pmax	pmax		
	comp=E,7.0nm,0.9s						
SOC	**Sochi**	**62.36**	**319**	*e*P	**P**	**19 02 01.7**	**+0.1**
SOC				*e*		19 02 37.8	
SOC				*e*		19 04 14.4	
SOC				*e*PPP	PPP	19 05 48.7	-1.8
SOC				*e*S	**S**	**19 10 31.8**	**+7.6**
SOC				*e*		19 11 50.8	
SOC				*e*SS	SS	19 14 28.7	-1.0
SOC				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.9						
SOC				pmax	pmax		
	comp=N,6.0nm,0.9s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.9s						
BRTR	**Keskin Array B**	**65.05**	**313**	P	**P**	**19 02 19.2**	**-0.1**
BRTR	**Keskin Array B**	**65.05**	**313**	P	**P**	**19 02 19.1**	**-0.1**
	comp=E,1.4nm,1.0s,mb4.0,baz=112,slow=6.7,SNR=5.4						
YAK	**Yakutsk**	**66.19**	**18**	*e*P	**P**	**19 02 24.9**	**-1.3**
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YAK	**Yakutsk**	**66.19**	**18**	*e*P	**P**	**19 02 24.9**	**-1.3**
	comp=Z,20nm,1.0s,mb5.1						
OBN	**Obninsk**	**69.49**	**330**	P	**P**	**19 02 52.0**	**+5.1**
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
TIXI	**Tiksi**	**73.40**	**11**	*e*P	**P**	**19 03 08.3**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
FINES	**FINESS Array B**	**77.14**	**333**	P	**P**	**19 03 31.4**	**-0.3**
	comp=Z,2.2nm,0.9s,mb4.1,baz=90,slow=1.9,SNR=4.7						
FINES				LR	LR	19 39 36.9	
	comp=Z,134nm,18.2s,MS4.3,baz=276,slow=37						
ARCES	**ARCESS Array B**	**80.24**	**341**	LR	LR	19 41 46.2	
	comp=Z,160nm,18.8s,MS4.4,baz=192,slow=38						
GERES	**GERESS Array B**	**81.07**	**319**	P	**P**	**19 03 55.3**	**+2.1**
	comp=Z,4.9nm,1.1s,mb4.4,baz=108,slow=4.2,SNR=15						
BILL	**Bilibino**	**82.26**	**21**	*i* P	**P**	**19 03 57.9**	**-1.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0						
TXAR	**Lajitas Array**	**145.37**	**25**	PKPbc	PKPbc	19 11 17.8	+2.2
	comp=Z,2.2nm,0.8s,baz=297,slow=2.8,SNR=16						
TXAR	**Lajitas Array**	**145.37**	**25**	PKPbc	PKPbc	19 11 17.8	+2.2

IDC 23 18:57:48.8±1.9**,2.46N×92.16E,mb3.5**/3**,mb1 3.9**/4**, mb1mx3.5**/17**,mbtmp3.6**/4**,ML3.3**/1**,Error ellipse: s-maj=59.5km s-min=32.6km az=57.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.23**	**22**	P	P	19 01 53.0	+0.3
	0.0nm,0.3s,baz=213,slow=14,SNR=6.4						
SONM	**Songino Array**	**46.85**	**13**	P	P	19 06 20.3	-2.1
	0.7nm,1.0s,baz=207,slow=6.4,SNR=4.4						
WRA	**Warramunga Arr**	**46.99**	**120**	P	P	19 06 21.9	-2.0
	0.5nm,0.9s,baz=299,slow=8.7,SNR=3.2						
GERES	**GERESS Array B**	**80.56**	**319**	P	P	19 10 03.3	-1.3
	0.4nm,0.7s,baz=130,slow=7.7,SNR=3.6						

PGC 23 18:58:34.9,50.46N×130.19W,h10^{km},MLSn3.1/1**,Mw3.7, West of Vancouver Island, British Columbia, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.32**	**81**	Pn	Pn	18 58 57.4	-2.2
HOLB				Sn	Sn	18 59 13.1	-4.3
	comp=Z,69nm,0.1s						
HOLB				Trac		18 59 15.0	
	comp=Z,69nm,0.1s						
BPBC	**Brooks Peninsu**	**1.58**	**100**	Pn	Pn	18 59 00.9	-2.3
BPBC				Sn	Sn	18 59 19.0	-4.9
	comp=Z,52nm,0.1s						
BPBC				Trac		18 59 19.5	
	comp=Z,52nm,0.1s						
PHC	**Port Hardy**	**1.78**	**81**	⇑Pn	Pn	18 59 04.0	-2.0
PHC				Sn	Sn	18 59 24.8	-4.0
PHC				Trac		18 59 25.9	
	comp=Z,124nm,0.2s						
EDB	**Eliza Dome**	**2.06**	**105**	Pn	Pn	18 59 07.7	-2.4
EDB				Sn	Sn	18 59 32.8	-3.3
EDB				Trac		18 59 35.5	
	comp=Z,11nm,0.3s						
BBB	**Bella Bella**	**2.16**	**36**	Pn	Pn	18 59 09.2	-2.3
BBB				Sn	Sn	18 59 33.9	-4.7
BBB				Trac		18 59 35.5	
	comp=Z,32nm,0.3s						
BNB	**Barry Inlet**	**2.33**	**336**	Pn	Pn	18 59 11.6	-2.3
BNB				Sn	Sn	18 59 38.3	-4.6
	comp=Z,12nm,0.5s						
BNB				Trac		18 59 41.7	
	comp=Z,12nm,0.5s						
WOSB	**Woss**	**2.34**	**96**	Pn	Pn	18 59 12.2	-1.9
WOSB				Trac		18 59 45.9	
	comp=Z,12nm,0.2s						
NCRB	**Newcastle Ridg**	**2.65**	**90**	Pn	Pn	18 59 16.3	-2.2
NCRB				Trac		18 59 50.7	
	comp=Z,18nm,0.4s						
GDR	**Gold River**	**2.76**	**103**	Pn	Pn	18 59 17.6	-2.6
MOBC	**Moresby Island**	**2.94**	**340**	Pn	Pn	18 59 18.9	-3.7
MOBC				Sn	Sn	18 59 53.4	-4.9
BNAB	**Bonilla**	**3.05**	**355**	Pn	Pn	18 59 21.1	-3.1
BNAB				Sn	Sn	18 59 55.3	-5.8
	comp=Z,9.0nm,0.4s						
BNAB				Trac		18 59 56.6	
	comp=Z,9.0nm,0.4s						
CBB	**Campbell River**	**3.13**	**96**	Pn	Pn	18 59 23.6	-1.7
CBB				Sn	Sn	19 00 00.2	-2.9
CBB				Trac		19 00 19.6	
	comp=Z,6.0nm,0.2s						
BTB	**Buttle Lake**	**3.17**	**106**	Pn	Pn	18 59 23.8	-2.2
BTB				Sn	Sn	19 00 02.3	-2.0
	comp=Z,13nm,0.4s						
BTB				Trac		19 00 09.8	
	comp=Z,13nm,0.4s						
OZB	**Mount Ozzard**	**3.40**	**114**	Pn	Pn	18 59 26.5	-2.7
OZB				Sn	Sn	19 00 05.8	-4.2
OZB				Trac		19 00 14.7	
	comp=Z,7.0nm,0.3s						
TXB	**Texada**	**3.79**	**99**	Pn	Pn	18 59 33.1	-1.5
MGB	**Mount Grey**	**3.86**	**110**	Pn	Pn	18 59 33.8	-1.9
RUBB	**Prince Rupert**	**3.87**	**359**	Pn	Pn	18 59 32.9	-3.0
RUBB				Sn	Sn	19 00 18.0	-3.9
RUBB				Trac		19 00 20.4	
	comp=Z,8.0nm,0.3s						
SHB	**Sechelt**	**4.16**	**100**	Pn	Pn	18 59 39.1	-0.9
SHB				Sn	Sn	19 00 27.4	-1.9
GOBB	**Galiano Island**	**4.59**	**107**	Pn	Pn	18 59 45.0	-1.2
VDB	**Vedder Mountai**	**5.44**	**102**	Pn	Pn	18 59 57.6	-0.4

*THE **23** 19:00:07.5,39.76N×21.94E,h8^{km},ML2.9*
*ATH **23** 19:00:07.7,39.77N×22.00E,h16^{km},MD3.1/5*
*NEIC **23** 19:00:07.8,39.78N×21.99E,h10^{km},MD3.0(ATH),After ATH.*
*CSEM **23** 19:00:07.7±0.1,39.75N×21.97E,h12^{km},ML2.9,Error ellipse: s-maj=2.3km s-min=1.9km az=93.0*
ISC 23 19:00:06.8±0.7**,39.77N**±0.03×**21.94E**±0.06**,h15**^{km}±6^{km}**, n14,**σ1^{s}**01**/21**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIT	**Litokhoron**	**0.53**	**52**	*e*Pg	**Pg**	**19 00 17.7**	**-0.1**
LIT				*e*Sg	**Sg**	**19 00 25.9**	**+0.8**
KZN	**Kozani**	**0.55**	**346**	*e*PN	**Pn**	**19 00 18.0**	**-1.8**
KZN				*e*SN	**Sn**	**19 00 27.0**	**-1.6**
AGG	**Agios Georgios**	**0.81**	**158**	*e*Pg	**Pg**	**19 00 22.7**	**-0.5**
AGG				*e*Sg	**Sg**	**19 00 34.1**	**0.0**
JAN	**Janina**	**0.85**	**263**	*e*PN	**Pn**	**19 00 24.9**	**+0.8**
EVR	**Evrytania**	**0.86**	**187**	*e*Pb	**Pb**	**19 00 23.0**	**0.0**
EVR				*e*Sb	**Sb**	**19 00 37.5**	**+3.4**
EVR	**Evrytania**	**0.86**	**187**	*e*PN	**Pb**	**19 00 23.0**	**0.0**
EVR				*e*SN	**Sn**	**19 00 36.5**	**0.0**
XOR	**Xorichti**	**1.05**	**112**	*e*Pg	**Pg**	**19 00 27.0**	**-0.9**
NEO	**Neokhori**	**1.09**	**115**	*e*PN	**Pn**	**19 00 27.3**	**-0.3**
FNA	**Florina**	**1.10**	**337**	*e*Pg	**Pg**	**19 00 27.9**	**-1.0**
FNA				*e*Sg	**Sg**	**19 00 44.4**	**+0.7**
GRG	**Griva**	**1.23**	**16**	*e*Pb	**Pb**	**19 00 30.2**	**+0.9**
GRG				*e*Sb	**Sb**	**19 00 48.1**	**+3.2**
IGT	**Igoumenitsa**	**1.27**	**260**	*e*Pb	**Pb**	**19 00 30.5**	**+0.6**
PLG	**Polygyros**	**1.30**	**62**	*e*PN	**Pn**	**19 00 31.8**	**+1.2**
KNT	**Kendrikon**	**1.57**	**27**	*e*Pb	**Pb**	**19 00 34.6**	**-0.4**
OUR	**Ouranopolis**	**1.66**	**70**	*e*Pb	**Pb**	**19 00 36.0**	**-0.7**

PGC 23 19:07:36.5,50.44N×130.21W,h10^{km},MLSn3.1/2**,Mw3.8, 2C,West of Vancouver Island, British Columbia, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.34**	**81**	⇑Pn	Pn	19 07 58.9	-2.4
HOLB				Sn	Sn	19 08 15.0	-4.3
	comp=Z,67nm,0.2s						
HOLB				Trac		19 08 16.6	
	comp=Z,67nm,0.2s						
BPBC	**Brooks Peninsu**	**1.59**	**99**	Pn	Pn	19 08 02.4	-2.5
BPBC				Sn	Sn	19 08 20.7	-4.9
	comp=Z,88nm,0.3s						
BPBC				Trac		19 08 25.5	
	comp=Z,88nm,0.3s						
PHC	**Port Hardy**	**1.79**	**80**	⇑Pn	Pn	19 08 05.5	-2.3
PHC				Sn	Sn	19 08 26.2	-4.5
PHC				Trac		19 08 27.4	
	comp=Z,128nm,0.3s						
MAYB	**Maynard**	**1.94**	**90**	Pn	Pn	19 08 07.4	-2.6
MAYB				Sn	Sn	19 08 31.8	-2.8
	comp=Z,30nm,0.3s						
MAYB				Trac		19 08 35.9	
	comp=Z,30nm,0.3s						
EDB	**Eliza Dome**	**2.07**	**105**	Pn	Pn	19 08 09.2	-2.5
EDB				Sn	Sn	19 08 33.7	-4.0
EDB				Trac		19 08 41.5	
	comp=Z,12nm,0.3s						
BBB	**Bella Bella**	**2.19**	**36**	Pn	Pn	19 08 10.7	-2.7
BBB				Sn	Sn	19 08 36.5	-4.3
BBB				Trac		19 08 42.3	
	comp=Z,31nm,0.4s						
BNB	**Barry Inlet**	**2.34**	**336**	Pn	Pn	19 08 13.6	-2.1
BNB				Sn	Sn	19 08 38.7	-6.1
	comp=Z,16nm,0.5s						
BNB				Trac		19 08 43.5	
	comp=Z,16nm,0.5s						
WOSB	**Woss**	**2.35**	**95**	Pn	Pn	19 08 13.8	-1.9
WOSB				Trac		19 08 47.4	
	comp=Z,31nm,0.4s						
NCRB	**Newcastle Ridg**	**2.66**	**89**	Pn	Pn	19 08 17.8	-2.3
NCRB				Trac		19 09 12.6	
	comp=Z,42nm,0.7s						
GDR	**Gold River**	**2.77**	**102**	Pn	Pn	19 08 19.4	-2.4
GDR				Trac		19 09 20.0	
	comp=Z,17nm,0.4s						
MOBC	**Moresby Island**	**2.95**	**340**	Pn	Pn	19 08 20.6	-3.8
BNAB	**Bonilla**	**3.07**	**355**	Pn	Pn	19 08 22.5	-3.5
BNAB				Sn	Sn	19 08 57.0	-6.1
	comp=Z,6.0nm,0.4s						
BNAB				Trac		19 08 58.3	
	comp=Z,6.0nm,0.4s						
CBB	**Campbell River**	**3.14**	**96**	Pn	Pn	19 08 24.0	-3.0
BTB	**Buttle Lake**	**3.18**	**106**	Pn	Pn	19 08 25.2	-2.4
BTB				Sn	Sn	19 09 03.9	-2.1
	comp=Z,13nm,0.4s						
BTB				Trac		19 09 25.2	
	comp=Z,13nm,0.4s						
TXB	**Texada**	**3.79**	**99**	Pn	Pn	19 08 35.1	-1.2
TXB				Trac		19 09 54.6	
	comp=Z,12nm,0.7s						
MGB	**Mount Grey**	**3.86**	**110**	Pn	Pn	19 08 33.6	-3.7
RUBB	**Prince Rupert**	**3.89**	**360**	Pn	Pn	19 08 34.9	-2.8
RUBB				Sn	Sn	19 09 18.8	-5.2
RUBB				Trac		19 09 21.0	
	comp=Z,8.0nm,0.2s						
SHB	**Sechelt**	**4.17**	**99**	Pn	Pn	19 08 37.9	-3.8
SHB				Sn	Sn	19 09 24.6	-6.5
SHB				Trac		19 09 34.5	
	comp=Z,14nm,0.5s						

IDC 23 19:18:25.3±4.1**,2.28N×95.13E,mb3.4**/3**,mb1 3.6**/4**, mb1mx3.5**/18**,mbtmp3.4**/4**,ML3.5**/1**,Error ellipse: s-maj=133.4km s-min=31.8km az=64.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.50**	**13**	Pn	P	19 22 19.4	-0.6
	0.1nm,0.3s,baz=203,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**44.36**	**122**	P	P	19 26 37.7	-1.8
	0.2nm,0.6s,baz=299,slow=9.4,SNR=5.2						
SONM	**Songino Array**	**46.41**	**10**	P	P	19 26 53.4	-2.0
	0.2nm,0.6s,baz=188,slow=8.7,SNR=3.5						
ZAL	**Zalesovo**	**52.18**	**352**	P	P	19 27 37.5	-2.4
	0.6nm,0.7s,baz=311,slow=7.0,SNR=3.2						

IDC 23 19:20:55.7±5.7**,5.80N×92.90E,mb3.4**/3**,mb1 3.6**/4**, mb1mx3.5**/18**,mbtmp3.4**/4**,ML3.5**/1**,Error ellipse: s-maj=165.1km s-min=30.4km az=76.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.89**	**25**	Pn	P	19 24 14.2	-2.2
	0.1nm,0.3s,baz=228,slow=15,SNR=6.4						
SONM	**Songino Array**	**43.44**	**13**	P	P	19 29 00.2	-1.9
	0.3nm,1.0s,baz=214,slow=5.2,SNR=3.4						
WRA	**Warramunga Arr**	**48.11**	**123**	P	P	19 29 37.6	-2.0
	0.7nm,0.7s,baz=301,slow=9.4,SNR=8.9						
ASAR	**Alice Springs**	**49.58**	**128**	P	P	19 29 49.1	-1.8
	0.4nm,0.5s,baz=299,slow=8.1,SNR=12						

*IDC **23** 19:34:55.9±5.0,14.07S×122.02E,mb3.7/1,mb1 3.8/4, mb1mx3.6/12,mbtmp3.8/4,ML3.7/2,Error ellipse: s-maj=75.3km s-min=37.1km az=4.0*
*NEIC **23** 19:35:02.6±2.3,14.64S×122.10E,h10^{km},mb4.6/2,Error ellipse: s-maj=33.4km s-min=9.8km az=152.0*
AUST 23 19:35:05.4,14.63S×122.06E,h1^{km},ML3.9,Northwest of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**4.87**	**136**	*e*P	Pn	19 36 16.9	-4.6
FITZ				*e*S	Sn	19 37 11.0	-8.4
	22nm,0.2s						
KNA	**Kununurra**	**6.57**	**101**	*e*P	Pn	19 36 38.0	-7.5
KNA				*e*S	Sn	19 37 47.9	-14
	3.8nm,0.2s						
KNA	**Kununurra**	**6.57**	**101**	*e*P	Pn	19 36 38.0	-7.5
	3.8nm,0.2s						
KNA				*e*S	Sn	19 37 47.9	-14
MBWA	**Marble Bar**	**6.86**	**199**	*e*P	Pn	19 36 44.5	-5.1
MBWA				*e*S	Sn	19 37 57.1	-12
KAKA	**Kakadu**	**10.26**	**81**	*e*P	P	19 37 30.6	-6.4
KAKA				*e*S	S	19 39 18.2	-16
	16nm,0.4s						
KAKA	**Kakadu**	**10.26**	**81**	*e*P	P	19 37 30.6	-6.4
	16nm,0.4s						
KAKA				*e*S	S	19 39 18.2	-16
MEEK	**Meekatharra**	**12.37**	**195**	*e*P	P	19 37 59.0	-6.7
MEEK				*e*S	S	19 40 07.5	-18
	110nm,0.2s						
MEEK	**Meekatharra**	**12.37**	**195**	*e*P	P	19 37 59.0	-6.7
	110nm,0.2s						
MEEK				*e*S	S	19 40 07.5	-18
WRA	**Warramunga Arr**	**12.86**	**116**	Pn	P	19 38 04.7	-7.4
	0.6nm,0.3s,baz=288,slow=14,SNR=35						
WRA				Sn	S	19 40 18.7	-18
	0.8nm,0.3s,baz=291,slow=23,SNR=5.8						
WRA				Lg		19 41 56.5	
	baz=292,slow=30,SNR=4.8						
WRAB	**Tennant Creek**	**12.86**	**116**	*e*P	P	19 38 04.1	-8.1
	4.8nm,0.6s						
ASPA	**Alice Springs**	**14.34**	**131**	*e*P	P	19 38 26.1	-5.7
ASPA				*e*S	S	19 40 57.7	-15
ASAR	**Alice Springs**	**14.34**	**131**	Pn	P	19 38 25.6	-6.3
	0.4nm,0.3s,baz=316,slow=14,SNR=31						
ASAR				Sn	S	19 40 58.5	-14
	0.6nm,0.3s,baz=314,slow=25,SNR=16						
ASAR				Lg		19 42 43.9	
	baz=314,slow=29,SNR=2.6						
MORW	**Morawa**	**15.41**	**200**	*e*P	P	19 38 39.2	-6.6
MORW				*e*S	S	19 41 15.9	-22
	46nm,0.3s						
MORW	**Morawa**	**15.41**	**200**	*e*P	P	19 38 39.2	-6.6
	46nm,0.3s						
MORW				*e*S	S	19 41 15.9	-22
NWAO	**Narrogin (SRO)**	**18.74**	**193**	P	P	19 39 23.2	-4.6
	0.5nm,0.3s,baz=26,slow=14,SNR=8.2						
NWAO				S	S	19 42 34.0	-20
	0.9nm,0.3s,baz=105,slow=23,SNR=4.8						
NWAO	**Narrogin (SRO)**	**18.74**	**193**	*e*P	P	19 39 21.9	-5.9
	9.8nm,0.9s						
NWAO				S	S	19 42 34.0	-20
STKA	**Stephens Creek**	**24.76**	**137**	P	P	19 40 22.6	-7.4
	0.8nm,0.5s,baz=315,slow=8.6,SNR=2.3						

*NEIC **23** 19:49:49.8,36.35N×22.65E,h20^{km},MD3.3(ATH),After ATH.*
*CSEM **23** 19:49:49.8,36.35N×22.65E,h20^{km},MD3.3/7,After ATH*
ATH 23 19:49:49.8,36.35N×22.64E,h19^{km}±1^{km}**,MD3.3**/8**,ML3.5, 1C,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.33**	**102**	*e*PB	Pb	19 49 57.0	+0.1
VLI	**Veliai**	**0.44**	**33**	⇑*i*PB	Pb	19 49 58.7	0.0
VLI				*e*SB	Sb	19 50 05.0	+0.2
ITM	**Ithomi**	**1.01**	**326**	*e*PN	Pn	19 50 09.2	+0.2
ITM				*e*SN	Sn	19 50 23.1	+0.4
NAIG	**Nisos Aigina**	**1.56**	**26**	*e*PN	Pn	19 50 18.8	+1.9
VAM	**Vamos**	**1.58**	**126**	*e*PN	Pn	19 50 18.7	+1.6
MGER	**Gerania Oros**	**1.71**	**17**	*e*PN	Pn	19 50 20.5	+1.5
ATH	**Athens Observa**	**1.83**	**28**	*e*PN	Pn	19 50 22.5	+1.7
PTL	**Penteli**	**1.96**	**30**	*e*PN	Pn	19 50 24.5	+1.9

*LDG **23** 19:55:08.4±0.2,52.52N×101.56E,h10^{km},Mb4.8/21, Ms4.0/6,Error ellipse: s-maj=9.5km s-min=4.3km az=115.0*
*MOS **23** 19:55:09.5±1.1,52.42N×101.57E,h10^{km},mb5.0/62, MS4.1/16,Error ellipse: s-maj=6.1km s-min=4.5km az=118.8*
MOS Felt (III-IV) at Arshan, Orlik; (II) at Irkutsk.
*BJI **23** 19:55:11.4,52.39N×101.48E,h22^{km},mB4.7,mb4.5, Ms4.6,Msz4.5*
*BYKL **23** 19:55:11.2±0.5,52.35N×101.59E,h14^{km}±20^{km}, #FAULT_PLANE Typ Strike Dip Rake NP NS Plane Author # FM 49.00 42.00 -148.00 24 0 IEC + 294.00 69.00 -53.00 IEC #PRINAX sc T_val T_azim T_pl B_val B_azim B_pl P_val P_azim P_pl Author + eTv eTa eTp eBv eBa eBp ePv ePa ePp fCLVD # 358.00 16.00 99.00 34.00 247.00 51.00 IEC + 5.13 2.08 3.22 3.51 4.51 4.16 FELT I=IV-V MSK at Arshan, Orlik, Mondy, IV at Irkutsk, Usolye-sibirskoye,) Cheremkhovo, III-IV at Zalari, Novonukutskii, III at Srednii, Kutulik, Zima,) Slyudyanka, Zakamensk, II at Tulun)*
*NEIC **23** 19:55:11.3,52.36N×101.61E,h15^{km},mb4.8/73,After BYKL.*
NEIC Felt [IV] at Arshan and Orlik; [II] at Irkutsk.
*IDC **23** 19:55:12.2±0.5,52.31N×101.74E,h19^{km}±2^{km},mb4.5/23, mb1 4.6/25,mb1mx4.6/29,mbtmp4.6/25,ML3.2/2,MS4.0/18, Ms1 4.0/18,ms1mx3.8/31,Error ellipse: s-maj=13.7km s-min=9.3km az=39.0*
ISC 23 19:55:09.4±0.1**,52.43N**±0.02×**101.68E**±0.02**,h10**^{km}**, (h22**^{km}±2.4^{km}**:pP-P),n354,**σ1^{s}**23**/441**,mb4.8**/94**,MS4.2**/30**, 35C-28D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARS	**Arshan**	**0.68**	**138**	*e*PG	**Pg**	**19 55 23.8**	**+0.7**
ARS				*e*		19 55 32.4	
ARS				pmax	pmax		
	comp=Z,56μm,0.2s						
ARS				smax			
	comp=N,446μm,0.5s						
ARS	**Arshan**	**0.68**	**138**	⇓*i*Pg	**Pg**	**19 55 23.8**	**+0.7**
	comp=N,17μm,0.4s						
ARS				⇑*i*Pg	**Pg**	**19 55 23.8**	**+0.7**
	comp=N,17μm,0.4s						
ARS				⇑*i*Pg	**Pg**	**19 55 23.8**	**+0.7**
	comp=N,57μm,0.4s						
ARS				Pmax		19 55 24.3	
	comp=N,85μm,0.5s						
ARS				*i* Sg	**Sg**	**19 55 32.5**	**+0.2**
ARS				Smax		19 55 33.2	
	comp=N,452μm,0.5s						
MOY	**Mondy**	**0.87**	**209**	⇑*e*PG	**Pg**	**19 55 26.0**	**-0.8**
MOY				*e*		19 55 35.8	
MOY				pmax	pmax		
	comp=Z,19μm,0.7s						
MOY				smax			
	comp=E,139μm,0.3s						
MOY	**Mondy**	**0.87**	**209**	⇑*i*Pg	**Pg**	**19 55 26.0**	**-0.8**
MOY				Pmax		19 55 26.5	
	comp=E,21μm,0.6s						
MOY				*i* Sg	**Sg**	**19 55 36.1**	**-2.4**
MOY				Smax		19 55 37.7	
	comp=E,143μm,1.0s						
ORL	**Orlik**	**1.15**	**276**	⇓*i*PG	**Pg**	**19 55 31.9**	**-0.4**
ORL				*e*		19 55 46.3	
ORL				pmax	pmax		
	comp=E,6μm,0.3s						
ORL				smax			
	comp=N,83μm,0.7s						
ORL	**Orlik**	**1.15**	**276**	⇓*i*Pg	**Pg**	**19 55 31.9**	**-0.4**
ORL				Pmax		19 55 35.0	
	comp=N,3μm,0.3s						
ORL				*e*Sg	**Sg**	**19 55 46.7**	**-1.0**
ORL				Smax		19 55 47.6	
	comp=N,86μm,0.7s						
TLY	**Talaya**	**1.43**	**121**	Pn	**Pn**	**19 55 36.6**	**+1.2**
	comp=N,41μm,0.4s						
TLY	**Talaya**	**1.43**	**121**	*e*PG	**Pg**	**19 55 36.9**	**-1.0**
TLY				*e*		19 55 55.1	
TLY				pmax	pmax		
	comp=Z,3μm,0.6s						
TLY				smax			
	comp=N,25μm,0.5s						
TLY	**Talaya**	**1.43**	**121**	⇓*i*Pg	**Pg**	**19 55 36.8**	**-1.1**
TLY				Pmax		19 55 41.8	
	comp=N,4μm,0.3s						
TLY				*i* Sg	**Sg**	**19 55 55.1**	**-1.8**
TLY				Smax		19 55 59.5	
	comp=N,25μm,0.6s						
IRK	**Irkutsk**	**1.60**	**96**	*e*PN	**Pn**	**19 55 40.5**	**+2.6**
IRK				*e*		19 56 01.1	
IRK	**Irkutsk**	**1.60**	**96**	⇑*i*Pg	**Pg**	**19 55 40.6**	**-0.8**
IRK				Pmax		19 55 47.8	
	comp=N,10μm,0.5s						
IRK				*i* Sg	**Sg**	**19 56 01.3**	**-1.5**
IRK				Smax		19 56 06.5	
	comp=N,57μm,0.6s						
LSTR	**Listvyanka**	**2.02**	**105**	⇑*e*PN	**Pn**	**19 55 45.9**	**+1.9**
LSTR				*i*		19 55 47.2	
LSTR				*e*		19 56 12.9	
LSTR				pmax	pmax		
	comp=Z,4μm,0.6s						
LSTR				smax			
	comp=N,6μm,0.6s						
LSTR	**Listvyanka**	**2.02**	**105**	*e*Pn	**Pn**	**19 55 46.5**	**+2.5**
LSTR				*e*Pg	**Pg**	**19 55 47.3**	**-2.5**
LSTR				⇓*i*		19 55 52.9	
LSTR				max		19 55 53.2	
	comp=N,4μm,0.6s						
LSTR				*i* Sg	**Sg**	**19 56 13.1**	**-3.6**
LSTR				Smax		19 56 16.3	
	comp=N,25μm,0.6s						
ZAK	**Zakamensk**	**2.28**	**153**	*e*PN	**Pn**	**19 55 48.9**	**+1.3**
ZAK				*e*		19 55 50.8	
ZAK				*e*S	**Sn**	**19 56 19.8**	**+3.8**
ZAK				pmax	pmax		
	comp=Z,5μm,1.0s						
ZAK				smax			
	comp=N,10μm,0.9s						
ZAK	**Zakamensk**	**2.28**	**153**	*e*Pn	**Pn**	**19 55 49.0**	**+1.4**
ZAK				⇓*i*Pg	**Pg**	**19 55 50.9**	**-4.0**
	comp=N,1μm,0.4s						
ZAK				⇑*i*Pg	**Pg**	**19 55 50.9**	**-4.0**
	comp=N,810nm,0.4s						
ZAK				⇑*i*Pg	**Pg**	**19 55 50.9**	**-4.0**
	comp=N,1μm,0.4s						
ZAK				⇓*i*		19 55 57.3	

ZAK				max		19 55 58.2	
	comp=N,5µm,1.0s						
ZAK				*e*Sn	**Sn**	**19 56 15.9**	**-0.1**
ZAK				*e*Sg	**Sn**	**19 56 19.8**	**+3.8**
ZAK				Smax		19 56 30.0	
	comp=N,9µm,0.7s						
BTMB	**Babushkin**	**2.67**	**104**	*e*Pn	**Pn**	**19 55 54.9**	**+1.7**
BTMB				*e*Pg	**Pg**	**19 55 58.9**	**-3.7**
BTMB				*e*		19 56 00.2	
BTMB				max		19 56 04.9	
	comp=N,3µm,0.7s						
BTMB				*e*Sg	**Sg**	**19 56 32.1**	**-6.0**
BTMB				*e*		19 56 35.9	
BTMB				max		19 56 39.7	
	comp=N,15µm,0.5s						
TRG	**Tyrgan**	**2.87**	**81**	*e*PN	**Pn**	**19 55 57.2**	**+1.2**
TRG				*e*		19 56 04.1	
TRG				*e*S	**Sn**	**19 56 32.5**	**+1.5**
TRG				*e*		19 56 41.6	
TRG				pmax	pmax		
	comp=Z,2µm,0.6s						
TRG				smax			
	comp=N,710nm,0.5s						
TRG	**Tyrgan**	**2.87**	**81**	*e*Pn	**Pn**	**19 55 57.1**	**+1.1**
TRG				*e*PgPg		19 56 00.8	
TRG				⇓*i*Pg	**Pg**	**19 56 04.1**	**-2.5**
TRG				max		19 56 09.9	
	comp=N,2µm,0.8s						
TRG				*i* Sg	**Sg**	**19 56 42.4**	**-2.5**
TRG				Smax		19 56 42.9	
	comp=N,17µm,1.0s						
STDB	**Stepnoy Dvoret**	**2.89**	**93**	⇑*i*Pn	**Pn**	**19 55 59.3**	**+2.9**
STDB				⇓*i*		19 56 02.7	
STDB				*e*Pg	**Pg**	**19 56 06.3**	**-0.8**
STDB				Pmax		19 56 17.8	
	comp=N,3µm,0.9s						
STDB				*e*Sn	**Sn**	**19 56 37.0**	**+5.5**
STDB				*i* Sg	**Sg**	**19 56 45.6**	**0.0**
STDB				Smax		19 56 46.5	
	comp=N,64µm,0.9s						
KAB	**Kabansk**	**3.08**	**95**	⇑*i*PN	**Pg**	**19 56 08.1**	**-2.8**
KAB				*i*		19 56 49.4	
KAB				pmax	pmax		
	comp=Z,2µm,0.5s						
KAB				smax			
	comp=N,3µm,1.4s						
KAB	**Kabansk**	**3.08**	**95**	*e*Pn	**Pn**	**19 56 01.4**	**+2.3**
KAB				*e*		19 56 04.3	
KAB				⇓*i*Pg	**Pg**	**19 56 08.2**	**-2.7**
KAB				Pmax		19 56 22.3	
	comp=N,3µm,0.7s						
KAB				*i* Sg	**Sg**	**19 56 49.2**	**-2.8**
KAB				Smax		19 56 50.0	
	comp=N,82µm,0.7s						
FFNB	**Fofonovo**	**3.15**	**95**	*e*Pn	**Pn**	**19 56 02.0**	**+1.9**
FFNB				*e*Pg	**Pg**	**19 56 08.9**	**-3.4**
FFNB				Pmax		19 56 12.3	
	comp=N,505nm,0.2s						
FFNB				*e*Sn	**Sn**	**19 56 39.5**	**+1.4**
FFNB				*e*Sg	**Sg**	**19 56 50.3**	**-4.0**
FFNB				Smax		19 56 51.5	
	comp=N,60µm,0.5s						
ZRHB	**Zarechye**	**3.35**	**86**	*e*Pn	**Pn**	**19 56 05.4**	**+2.5**
ZRHB				*e*Pg	**Pg**	**19 56 12.9**	**-3.3**
ZRHB				*e*Sg	**Sg**	**19 56 57.4**	**-3.5**
HRMR	**Khuramsha**	**3.36**	**102**	*e*Pn	**Pn**	**19 56 04.6**	**+1.6**
HRMR				*e*Pg	**Pg**	**19 56 12.3**	**-4.1**
HRMR				Pmax		19 56 18.6	
	comp=N,2µm,0.4s						
HRMR				*e*Sn	**Sn**	**19 56 43.9**	**+0.6**
HRMR				*e*Sg	**Sg**	**19 56 56.1**	**-5.0**
HRMR				Smax		19 56 57.5	
	comp=N,78µm,0.7s						
TRTB	**Turuntaevo**	**3.66**	**91**	*e*Pn	**Pn**	**19 56 08.9**	**+1.7**
TRTB				*e*Pg	**Pg**	**19 56 17.8**	**-4.6**
TRTB				Pmax		19 56 24.4	
	comp=N,2µm,0.8s						
TRTB				*e*Sg	**Sg**	**19 57 05.3**	**-5.8**
TRTB				Smax		19 57 12.1	
	comp=N,15µm,0.9s						
OGRR	**Ongureny**	**3.77**	**69**	*e*Pn	**Pg**	**19 56 20.4**	**-4.3**
OGRR				*e*		19 57 09.5	
OGRR	**Ongureny**	**3.77**	**69**	*e*Pn	**Pn**	**19 56 11.0**	**+2.1**
OGRR				*e*Pg	**Pg**	**19 56 20.5**	**-4.2**
OGRR				*e*		19 56 22.8	
OGRR				max		19 56 23.7	
	comp=N,2µm,0.8s						
OGRR				*e*Sg	**Sg**	**19 57 09.6**	**-5.4**
OGRR				Smax		19 57 10.6	
	comp=N,10µm,0.6s						
MXMB	**Maximikha**	**4.37**	**76**	*e*Pn	**Pn**	**19 56 18.3**	**+1.0**
MXMB				*e*		19 56 23.0	
MXMB				*e*Pg	**Pg**	**19 56 30.6**	**-5.9**
MXMB				Pmax		19 56 40.4	
	comp=N,1µm,0.6s						
MXMB				*e*Sn	**Sn**	**19 57 10.5**	**+1.6**
MXMB				*e*Sg	**Sg**	**19 57 28.3**	**-6.4**
MXMB				Smax		19 57 34.7	
	comp=N,29µm,0.9s						
ARDR	**Aradan**	**5.04**	**275**	*e*Pg	**Pg**	**19 56 39.4**	**-11**
ARDR				*e*Sg	**Sg**	**19 57 43.2**	**-14**
SYVR	**Suvo**	**5.17**	**73**	*e*PN	**Pn**	**19 56 29.2**	**+0.5**
SYVR				*e*		19 56 44.7	
SYVR	**Suvo**	**5.17**	**73**	*e*Pn	**Pn**	**19 56 29.1**	**+0.4**
SYVR				⇓*i*		19 56 32.8	
SYVR				*e*		19 56 38.8	
SYVR				*e*Pg	**Pg**	**19 56 44.8**	**-7.8**
SYVR				Pmax		19 56 51.4	
	comp=N,276nm,0.8s						
SYVR				*e*Sg	**Sg**	**19 57 52.2**	**-9.3**
SYVR				Smax		19 57 58.9	
	comp=N,8µm,2.0s						
SONM	**Songino Array**	**5.51**	**145**	Pn	**Pn**	**19 56 33.3**	**-0.1**
	comp=N,1.5nm,0.3s,baz=326,slow=14,SNR=89						
SONM				Pg	**Pg**	**19 56 49.1**	**-10**
	comp=N,174nm,0.3s,baz=323,slow=17,SNR=226						
SONM				Sn	**Sn**	**19 57 35.6**	**-2.0**
	comp=N,58nm,0.3s,baz=317,slow=20,SNR=2.9						
SONM				Lg		19 58 02.0	
	comp=N,314nm,0.3s,baz=322,slow=30,SNR=14						
NIZ	**Nizh Angarsk**	**5.71**	**51**	*e*PN	**Pn**	**19 56 36.4**	**0.0**
NIZ				*e*		19 56 53.6	
NIZ				*e*S	**Sn**	**19 57 42.0**	**-0.8**
NIZ				*e*		19 58 10.4	
NIZ				pmax	pmax		
	comp=Z,289nm,0.5s						
NIZ				smax			
	comp=N,2µm,1.2s						
NIZ	**Nizh Angarsk**	**5.71**	**51**	*e*Pn	**Pn**	**19 56 36.4**	**0.0**
	comp=N,289nm,0.5s						
NIZ				*e*		19 56 53.6	
NIZ				*e*S	**Sn**	**19 57 42.0**	**-0.8**
NIZ				*e*		19 58 10.4	
NIZ	**Nizh Angarsk**	**5.71**	**51**	⇓*i*Pn	**Pn**	**19 56 36.4**	**0.0**
NIZ				⇓*i*		19 56 40.3	
NIZ				max		19 56 40.8	
	comp=N,470nm,0.9s						
NIZ				*e*Sg	**Sg**	**19 58 10.3**	**-9.3**
NIZ				Smax		19 58 13.6	
	comp=N,22µm,1.1s						
ULN	**Ulaanbaatar**	**5.72**	**141**	*e*PN	**Pn**	**19 56 36.3**	**-0.2**
ULN				pmax	pmax		
	comp=Z,589nm,0.8s						
ULN	**Ulaanbaatar**	**5.72**	**141**	*e*P	**Pn**	**19 56 36.3**	**-0.2**
	comp=Z,589nm,0.8s						
YLYR	**Ulyunkhan**	**6.15**	**63**	*e*PN	**Pn**	**19 56 42.6**	**+0.1**
YLYR				*e*S	**Sn**	**19 57 51.4**	**-2.3**
YLYR	**Ulyunkhan**	**6.15**	**63**	*e*Pn	**Pn**	**19 56 42.0**	**-0.5**
YLYR				*e*		19 56 47.3	
YLYR				*e*		19 57 06.7	
YLYR				max		19 57 14.5	
	comp=Z,350nm,0.7s						
YLYR				*e*Sn	**Sn**	**19 57 52.0**	**-1.7**
YLYR				*e*Sg	**Sg**	**19 58 22.7**	**-11**
YLYR				Smax		19 58 40.8	
	comp=Z,4µm,1.3s						
KMO	**Kumora**	**6.58**	**54**	*e*PN	**Pn**	**19 56 48.7**	**+0.1**
KMO				*e*		19 57 10.1	
KMO				*e*S	**Sn**	**19 58 03.5**	**-0.9**
KMO				*e*		19 58 35.8	
KMO				pmax	pmax		
	comp=Z,407nm,0.4s						
KMO				smax			
	comp=E,7µm,1.2s						
KMO	**Kumora**	**6.58**	**54**	*e*Pn	**Pn**	**19 56 48.7**	**+0.1**
	comp=E,407nm,0.4s						
KMO				*e*		19 57 10.1	
KMO				*e*S	**Sn**	**19 58 03.5**	**-0.9**
KMO				*e*		19 58 35.8	
KMO	**Kumora**	**6.58**	**54**	*e*Pn	**Pn**	**19 56 48.2**	**-0.4**
KMO				max		19 57 03.6	
	comp=E,459nm,0.4s						
KMO				Sn	**Sn**	**19 58 04.3**	**-0.1**
KMO				*e*Sg	**Sg**	**19 58 36.0**	**-12**
KMO				Smax		19 58 49.1	
	comp=E,7µm,1.2s						
YOA	**Uoyan**	**6.95**	**54**	*e*PN	**Pn**	**19 56 56.5**	**+2.6**
YOA	**Uoyan**	**6.95**	**54**	*e*Pn	**Pn**	**19 56 56.4**	**+2.5**
YOA				max		19 57 28.9	
	comp=E,668nm,1.0s						
YOA				*e*Sn	**Sn**	**19 58 14.3**	**+0.5**
YOA				*e*Sg	**Sg**	**19 58 51.5**	**-9.4**
YOA				Smax		19 59 04.6	
	comp=E,20µm,1.3s						
KPC	**Khapcheranga**	**7.27**	**108**	*e*PG	Px	19 57 24.1	
KPC				*e*		19 58 58.8	
KPC				pmax	pmax		
	comp=Z,111nm,0.6s						
KPC				smax			
	comp=E,995nm,1.2s						
KPC	**Khapcheranga**	**7.27**	**108**	*e*Pn	**Pn**	**19 56 57.1**	**-1.2**
KPC				*e*Pg	**Pg**	**19 57 22.9**	**-12**
KPC				Pmax		19 57 32.2	
	comp=E,132nm,1.0s						
KPC				*e*Sn	**Sn**	**19 58 17.5**	**-4.3**
KPC				*e*Sg	**Sg**	**19 58 57.8**	**-14**
KPC				Smax		19 59 05.8	
	comp=E,2µm,1.3s						
CIT	**Chita**	**7.31**	**88**	*e*PN	**Pn**	**19 56 58.3**	**-0.5**
CIT				*e*S	**Sg**	**19 58 58.2**	**-14**
CIT				smax			
	comp=N,3µm,1.3s						
CIT	**Chita**	**7.31**	**88**	*e*Pn	**Pn**	**19 56 58.3**	**-0.5**
CIT				⇓*i*		19 57 00.9	
CIT				max		19 57 44.4	
	comp=N,186nm,0.6s						
CIT				*e*Sg	**Sg**	**19 58 59.5**	**-13**
CIT				Smax		19 59 05.0	
	comp=N,3µm,1.3s						
UKT	**Uakit**	**7.69**	**62**	*e*	**Pn**	**19 57 03.5**	**-0.6**
UKT				*e*Pn	**Pn**	**19 57 05.1**	**+1.0**
UKT				⇓*i*		19 57 06.8	
UKT				max		19 57 41.1	
	comp=N,168nm,1.1s						
UKT				Smax		19 59 05.0	
	comp=N,2µm,1.3s						
UKT				*e*Sg	**Sg**	**19 59 09.9**	**-15**
SVKR	**Severomuysk**	**7.88**	**57**	*e*PN	**Pn**	**19 57 09.2**	**+2.5**
SVKR				*e*		19 57 35.6	
SVKR				pmax	pmax		
	comp=Z,249nm,0.5s						
SVKR	**Severomuysk**	**7.88**	**57**	*e*Pn	**Pn**	**19 57 09.2**	**+2.5**
	comp=Z,249nm,0.5s						
SVKR				*e*		19 57 35.6	
SVKR	**Severomuysk**	**7.88**	**57**	*e*Pn	**Pn**	**19 57 09.0**	**+2.3**
SVKR				max		19 57 40.0	
	comp=Z,263nm,0.5s						
SVKR				*e*Sn	**Sn**	**19 58 38.3**	**+1.5**
SVKR				*e*Sg	**Sg**	**19 59 19.6**	**-12**
SVKR				Smax		19 59 42.8	
	comp=Z,7µm,1.0s						
BOD	**Bodaibo**	**8.88**	**48**	*e*PN	**P**	**19 57 17.8**	**-3.0**
BOD				*e*		19 57 48.9	
BOD				*e*S	**Sn**	**19 58 57.3**	**-4.7**
BOD				*e*		19 59 44.6	
BOD				pmax	pmax		
	comp=Z,90nm,0.5s						
BOD				smax			
	comp=N,2µm,1.4s						
BOD	**Bodaibo**	**8.88**	**48**	*e*Pn	**P**	**19 57 17.8**	**-3.0**
	comp=N,90nm,0.5s						
BOD				*e*		19 57 48.9	
BOD				*e*S	**Sn**	**19 58 57.3**	**-4.7**
BOD				*e*		19 59 44.6	
BOD	**Bodaibo**	**8.88**	**48**	*e*Pn	**P**	**19 57 18.6**	**-2.2**
BOD				*e*Pg	P	19 57 52.8	+32
BOD				Pmax		19 58 39.6	
	comp=N,134nm,1.1s						
BOD				*e*Sn	**Sn**	**19 59 00.1**	**-1.9**
BOD				*e*Sg	**Sg**	**19 59 46.8**	**-18**
BOD				Smax		19 59 58.7	
	comp=N,2µm,1.5s						
NLYR	**Nelyaty**	**9.12**	**58**	*e*P	**P**	**19 57 24.5**	**+0.4**
NLYR				pmax	pmax		
	comp=Z,47nm,0.5s						
NLYR	**Nelyaty**	**9.12**	**58**	*e*P	**P**	**19 57 24.5**	**+0.4**
	comp=Z,47nm,0.5s						
NLYR	**Nelyaty**	**9.12**	**58**	*e*Pn	**P**	**19 57 24.1**	**0.0**
NLYR				max		19 58 00.6	
NLYR				*e*Sg	**Sg**	**19 59 56.6**	**-17**
NLYR				Smax		20 00 12.2	
	comp=Z,3µm,1.1s						
ZAL	**Zalesovo**	**10.25**	**285**	Pn	**P**	**19 57 40.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=20,slow=14,SNR=12						
ZAL				Lg		20 00 27.1	
	comp=Z,10nm,0.3s,baz=26,slow=11,SNR=5.2						
ZAL				LR	LR	20 02 17.5	
	comp=Z,517nm,20.6s,baz=13,slow=41						
CRS	**Chara**	**10.60**	**58**	*e*Pn	**P**	**19 57 45.8**	**+1.6**
CRS				max		19 58 19.5	
CRS				*e*Sg	S	20 00 40.6	+57
CRS				Smax		20 01 03.1	
	comp=Z,3µm,1.6s						
TUP	**Tupik**	**11.09**	**72**	*e*Pn	**P**	**19 57 53.1**	**+2.2**
TUP				⇓*i*		19 57 55.2	
TUP				max		19 58 50.9	
	comp=Z,44nm,3.1s						
TUP				*e*Sg	S	20 00 57.8	+62
TUP				Smax		20 01 06.7	
	comp=Z,2µm,1.6s						
NVS	**Novosibirsk**	**11.21**	**290**	*i* P	**P**	**19 57 58.9**	**+6.3**
HIA	**Hailar**	**11.85**	**98**	*e*P	**P**	**19 57 59.2**	**-2.1**
HIA				pmax	pmax		
	comp=Z,12nm,0.7s						
HIA	**Hailar**	**11.85**	**98**	*e*P	**P**	**19 57 59.2**	**-2.0**
	comp=Z,12nm,0.7s						
WMQ	**Urumqi**	**12.69**	**233**	*e*P	**P**	**19 58 14.0**	**+1.5**
WMQ				PP	PP	19 58 24.5	+1.9
WMQ				S	**S**	**20 00 36.0**	**+1.1**
WMQ				SS	SS	20 00 50.0	+0.2
WMQ				AMB	AMB		
	comp=Z,56nm,0.8s						
WMQ				LR	LR		
	comp=N,654nm,9.0s						
WMQ				LR	LR		
	comp=E,645nm,8.0s						
WMQ				LR	LR		
	comp=Z,897nm,9.0s						
WMQ	**Urumqi**	**12.69**	**233**	*e*P	**P**	**19 58 14.0**	**+1.5**
	comp=Z,56nm,0.8s						
WMQ				PP	PP	19 58 24.5	+1.9
WMQ				S	**S**	**20 00 36.0**	**+1.1**
WMQ				SS	SS	20 00 50.0	+0.2
GTA	**Gaotai**	**13.08**	**186**	*e*P	**P**	**19 58 17.9**	**+0.1**
GTA				AP		19 58 23.9	
GTA				XP		19 58 27.6	
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s						
GTA				AMB	AMB		
	comp=Z,53nm,3.8s						
GTA				LR	LR		
	comp=N,1µm,14.4s						
GTA				LR	LR		
	comp=E,2µm,10.3s						
GTA				LR	LR		
	comp=Z,2µm,10.6s						
GTA	**Gaotai**	**13.08**	**186**	*e*P	**P**	**19 58 17.9**	**+0.1**
	comp=Z,6.0nm,0.9s						
GTA				pP		19 58 23.9	
GTA				sP		19 58 27.6	
GTA				PP	PP	19 58 28.6	+0.4
BTO	**Baotou**	**13.13**	**151**	*e*P	**P**	**19 58 21.6**	**+3.1**
HHC	**Hu-ho-hao-te**	**13.41**	**146**	*e*P	**P**	**19 58 27.8**	**+5.7**
HHC				AP		19 58 31.8	
HHC				XP		19 58 34.9	
HHC				PP	PP	19 58 39.1	+6.3
HHC				S	**S**	**20 01 02.6**	**+10**
HHC				XS		20 01 07.8	
HHC				AMB	AMB		
	comp=Z,16nm,0.5s						
HHC				AMB	AMB		
	comp=Z,171nm,5.7s						
HHC				LR	LR		
	comp=N,2µm,10.1s						
HHC				LR	LR		
	comp=E,1µm,10.4s						
HHC	**Hu-ho-hao-te**	**13.41**	**146**	*e*P	**P**	**19 58 27.8**	**+5.7**
	comp=E,16nm,0.5s						
HHC				pP		19 58 31.8	
HHC				sP		19 58 34.9	
HHC				PP	PP	19 58 39.1	+6.3
HHC				S	**S**	**20 01 02.6**	**+10**
HHC				sS		20 01 07.8	
MKAR	**Makanchi Array**	**13.76**	**254**	*i* P	**P**	**19 58 26.7**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,35nm,0.7s						
CLNS	**Chul'man**	**14.12**	**63**	*e*P	**P**	**19 58 30.9**	**-0.5**
CLNS				pmax	pmax		
	comp=Z,19nm,1.0s						
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
CLNS				pmax	pmax		
	comp=E,14nm,0.8s						
KURK	**Kurchatov**	**14.43**	**272**	*i* P	**P**	**19 58 36.2**	**+0.8**
BJI	**Beijing**	**15.90**	**135**	P	**P**	**19 58 58.9**	**+4.3**
BJI				AMB	AMB		
	comp=Z,12nm,0.9s						
BJI				LR	LR		
	comp=N,2µm,8.7s						
BJI				LR	LR		
	comp=E,2µm,7.7s						
BJI				LR	LR		
	comp=Z,410nm,18.8s						
BJI	**Beijing**	**15.90**	**135**	P	**P**	**19 58 58.9**	**+4.3**
	comp=Z,12nm,0.9s						
BJT	**Baijiatuau**	**15.91**	**136**	*e*P	**P**	**19 58 58.1**	**+3.3**
BJT				pmax	pmax		
	comp=Z,16nm,0.6s						
BJT	**Baijiatuau**	**15.91**	**136**	*e*P	**P**	**19 58 58.1**	**+3.2**
	comp=Z,16nm,0.6s						
LZH	**Lanzhou**	**16.41**	**174**	*e*P	**P**	**19 59 01.3**	**+0.1**
LZH				AP		19 59 04.9	
LZH				XP		19 59 09.4	
LZH				PP	PP	19 59 15.0	+0.3
LZH				S	**S**	**20 02 03.1**	**+0.2**
LZH				XS		20 02 16.0	
LZH				SS	SS	20 02 25.0	+2.3
LZH				LG		20 03 41.3	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s						
LZH				AMB	AMB		
	comp=Z,140nm,4.0s						
LZH				LR	LR		
	comp=E,3µm,9.4s						
LZH				LR	LR		
	comp=Z,3µm,10.8s						
LZH	**Lanzhou**	**16.41**	**174**	*e*P	**P**	**19 59 01.3**	**+0.1**
LZH				S	**S**	**20 02 03.1**	**+0.2**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH	**Lanzhou**	**16.41**	**174**	*e*P	**P**	**19 59 01.3**	**+0.1**
	comp=Z,20nm,1.0s						
LZH				pP		19 59 04.9	
LZH				sP		19 59 09.4	
LZH				PP	PP	19 59 15.0	+0.3
LZH				S	**S**	**20 02 03.1**	**+0.2**
LZH				sS		20 02 16.0	
LZH				SS	SS	20 02 25.0	+2.3
TIY	**Taiyuan**	**16.53**	**149**	⇑P	**P**	**19 59 05.0**	**+2.3**
TIY				LR	LR		
	comp=N,2µm,11.0s						
TIY				LR	LR		
	comp=Z,992nm,6.0s						
YAK	**Yakutsk**	**17.80**	**46**	*e*P	**P**	**19 59 14.4**	**-4.1**
YAK				*e*S	**S**	**20 02 41.8**	**+7.1**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
YAK				pmax	pmax		
	comp=E,23nm,1.2s						
YAK				smax			
	comp=N,19nm,0.9s						
YAK				smax			
	comp=Z,23nm,1.0s						
YAK				smax			
	comp=E,39nm,1.1s						
YAK				MLR	MLR		
	comp=Z,358nm,11.0s						
YAK				MLR	MLR		
	comp=N,154nm,10.0s						
YAK				MLR	MLR		
	comp=E,223nm,9.0s						
YAK	**Yakutsk**	**17.80**	**46**	*e*P	**P**	**19 59 14.4**	**-4.1**
	comp=E,15nm,0.9s						
YAK				*e*S	**S**	**20 02 41.8**	**+7.1**
CN2	**Changchun**	**18.00**	**109**	*e*P	**P**	**19 59 23.3**	**+2.2**
CN2				*e*XP		19 59 29.3	
CN2				*e*S	**S**	**20 02 41.4**	**+2.2**
CN2				PCP	PcP	20 03 54.9	-2.1
CN2				AMB	AMB		
	comp=Z,20nm,0.8s						
CN2				AMB	AMB		
	comp=Z,400nm,3.0s						
CN2				LR	LR		
	comp=N,700nm,9.0s						
CN2				LR	LR		
	comp=E,800nm,9.0s						
CN2				LR	LR		
	comp=Z,2µm,10.0s						
CN2	**Changchun**	**18.00**	**109**	*e*P	**P**	**19 59 23.3**	**+2.2**
	comp=Z,20nm,0.8s						
CN2				*e*sP		19 59 29.3	
CN2				*e*S	**S**	**20 02 41.4**	**+2.2**
CN2				PcP	PcP	20 03 54.9	-2.1
SNY	**Shenyang**	**18.21**	**117**	⇑P	**P**	**19 59 26.3**	**+2.5**
SNY				XP		19 59 31.8	
SNY				SS	SS	20 03 09.4	+1.6
SNY				AMB	AMB		
	comp=Z,10.0nm,0.9s						
SNY				LR	LR		
	comp=N,570nm,18.2s						
SNY				LR	LR		
	comp=E,680nm,16.2s						
SNY				LR	LR		
	comp=Z,730nm,17.2s						
SNY	**Shenyang**	**18.21**	**117**	⇑P	**P**	**19 59 26.3**	**+2.5**
	comp=Z,10.0nm,0.9s						
SNY				sP		19 59 31.8	
SNY				SS	SS	20 03 09.4	+1.6
CHKZ	**Chkalovo**	**18.64**	**286**	*i* P	**P**	**19 59 28.0**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,37nm,1.1s						
BVA0	**Borovoye Array**	**18.89**	**284**	P	**P**	**19 59 30.8**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVA0	**Borovoye Array**	**18.89**	**284**	P	**P**	**19 59 30.8**	**-1.2**
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**18.89**	**284**	P	**P**	**19 59 31.0**	**-1.0**
	comp=Z,2.9nm,0.3s,baz=92,slow=9.4,SNR=48						
XAN	**Xi'an**	**19.10**	**161**	P	**P**	**19 59 33.5**	**-1.1**
XAN				AP		19 59 41.1	
XAN				S	**S**	**20 03 08.5**	**+4.2**
XAN				AMB	AMB		
	comp=Z,39nm,0.9s						
XAN				LR	LR		
	comp=N,1µm,13.7s						
XAN				LR	LR		
	comp=E,491nm,11.1s						
XAN				LR	LR		
	comp=Z,1µm,14.1s						
XAN	**Xi'an**	**19.10**	**161**	P	**P**	**19 59 33.5**	**-1.1**
	comp=Z,39nm,0.9s						
XAN				pP		19 59 41.1	
XAN				S	**S**	**20 03 08.5**	**+4.2**
KLR	**Kul'dur**	**19.20**	**88**	*e*P	**P**	**19 59 33.0**	**-2.6**
KLR				*e*		20 03 14.0	

KLR				MLR	MLR		
	comp=N,1µm,9.0s						
KLR				MLR	MLR		
	comp=Z,2µm,9.0s						
TKM2	**Tokmak 2**	**19.87**	**252**	P	**P**	**19 59 43.1**	**-0.3**
	SNR=83						
MDJ	**Mudanjiang**	**19.98**	**102**	P	**P**	**19 59 45.1**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,21nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,118nm,4.5s						
MDJ				LR	LR		
	comp=N,427nm,20.5s						
MDJ				LR	LR		
	comp=E,243nm,19.0s						
MDJ				LR	LR		
	comp=Z,245nm,17.5s						
MDJ	**Mudanjiang**	**19.98**	**102**	P	**P**	**19 59 45.1**	**+0.6**
	comp=Z,21nm,1.0s						
MDJ				LR	LR		
	comp=Z,250nm,17.5s						
USP	**Ospenovka**	**20.31**	**254**	P	**P**	**19 59 47.4**	**-0.5**
	SNR=35						
CHMS	**Chumysh**	**20.32**	**253**	P	**P**	**19 59 47.6**	**-0.5**
	SNR=23						
KBK	**Karagaybulak**	**20.41**	**252**	P	**P**	**19 59 49.0**	**0.0**
	SNR=36						
FRU	**Bishkek**	**20.50**	**253**	⇓*i*P	**P**	**19 59 49.5**	**-0.5**
FRU				pmax	pmax		
	comp=Z,111nm,1.8s						
FRU	**Bishkek**	**20.50**	**253**	⇓*i*P	**P**	**19 59 49.5**	**-0.5**
	comp=Z,111nm,1.8s						
KZA	**Kyzart**	**20.60**	**250**	P	**P**	**19 59 52.0**	**+1.0**
	SNR=62						
AAK	**Ala-Archa**	**20.69**	**253**	P	**P**	**19 59 51.7**	**-0.3**
	SNR=30						
AAK	**Ala-Archa**	**20.69**	**253**	*d i*P	**P**	**19 59 50.7**	**-1.3**
AAK				pmax	pmax		
	comp=Z,69nm,1.8s						
AAK	**Ala-Archa**	**20.69**	**253**	*i* Pr		19 59 50.7	
	comp=Z,69nm,1.8s						
UCH	**Uchtor**	**20.93**	**252**	P	**P**	**19 59 55.3**	**+0.9**
	SNR=85						
EKS2	**Erkin-Say**	**21.09**	**254**	P	**P**	**19 59 56.6**	**+0.5**
	SNR=284						
AML	**Almayashu**	**21.47**	**252**	P	**P**	**20 00 00.1**	**+0.2**
	SNR=50						
KSH	**Kashi**	**21.90**	**244**	*e*P	**P**	**20 00 06.0**	**+1.8**
KSH				*e*AP		20 00 10.0	
KSH				*e*XP		20 00 14.4	
KSH				*e*S	**S**	**20 04 02.6**	**+1.5**
KSH				*e*PCP	PcP	20 04 06.4	+2.2
KSH				*e*XS		20 04 10.3	
KSH				*e*PCS		20 07 42.4	
KSH				AMB	AMB		
	comp=Z,160nm,3.4s						
KSH				LR	LR		
	comp=N,500nm,10.7s						
KSH				LR	LR		
	comp=E,440nm,6.1s						
ENH	**Enshi**	**22.87**	**162**	*e*P	**P**	**20 00 13.8**	**-0.1**
	comp=E,32nm,0.9s,mb4.8						
KS15	**Wonju Array Si**	**23.67**	**119**	*e*P	**P**	**20 00 22.9**	**+1.4**
WHN	**Wuhan**	**23.77**	**152**	P	**P**	**20 00 22.5**	**-0.1**
WHN				S	**S**	**20 04 36.3**	**+1.8**
WHN				LR	LR		
	comp=Z,1µm,14.1s,MS4.4						
NJ2	**Nanjing**	**23.89**	**142**	*e*P	**P**	**20 00 25.5**	**+1.7**
NJ2				AP		20 00 29.5	
NJ2				XP		20 00 33.3	
NJ2				PP	PP	20 00 57.3	-0.1
NJ2				PPP	PPP	20 01 09.6	+2.2
NJ2				S	**S**	**20 04 36.0**	**-0.6**
NJ2				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,380nm,5.9s						
NJ2				LR	LR		
	comp=N,2µm,13.0s,MS4.8						
NJ2				LR	LR		
	comp=E,2µm,14.5s,MS4.8						
NJ2				LR	LR		
	comp=Z,2µm,13.4s,MS4.8						
NJ2	**Nanjing**	**23.89**	**142**	*e*P	**P**	**20 00 25.5**	**+1.7**
	comp=Z,60nm,0.8s,mb5.1						
NJ2				pP		20 00 29.5	
NJ2				sP		20 00 33.3	
NJ2				PP	PP	20 00 57.3	-0.1
NJ2				S	**S**	**20 04 36.0**	**-0.6**
NJ2				LR	LR		
	comp=Z,2µm,13.4s,MS4.8						
SVE	**Sverdlovsk**	**23.89**	**297**	*i* P	**P**	**20 00 25.2**	**+1.7**
SVE				*e*		20 00 32.7	
SVE				*e*S	**S**	**20 04 40.0**	**+3.6**
SVE				pmax	pmax		
	comp=Z,80nm,2.0s,mb4.8						
SVE				MLR	MLR		
	comp=N,500nm,16.0s,MS4.1						
SVE				MLR	MLR		
	comp=E,200nm,16.0s,MS4.1						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.9						
SVE	**Sverdlovsk**	**23.89**	**297**	*i* P	**P**	**20 00 25.2**	**+1.7**
	comp=Z,80nm,2.0s,mb4.8						
SVE				*e*		20 00 32.7	
SVE				*e*S	**S**	**20 04 40.0**	**+3.6**
SVE				LR	LR		
	comp=Z,300nm,16.0s,MS3.9						
LSA	**Lhasa**	**24.00**	**203**	P	**P**	**20 00 26.5**	**+1.6**
LSA				AP		20 00 34.3	
LSA				XP		20 00 39.4	
LSA				S	**S**	**20 04 41.1**	**+2.5**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.0						
LSA				LR	LR		
	comp=N,520nm,14.1s,MS4.5						
LSA				LR	LR		
	comp=E,1µm,15.6s,MS4.5						
LSA				LR	LR		
	comp=Z,1µm,14.1s,MS4.5						
LSA	**Lhasa**	**24.00**	**203**	*e*P	**P**	**20 00 25.1**	**+0.2**
LSA				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.5						
LSA	**Lhasa**	**24.00**	**203**	P	**P**	**20 00 26.5**	**+1.6**
	comp=Z,10.0nm,1.4s,mb4.0						
LSA				pP		20 00 34.3	
LSA				sP		20 00 39.4	
LSA				S	**S**	**20 04 41.1**	**+2.5**
LSA				LR	LR		
	comp=Z,1µm,14.1s,MS4.5						
SSE	**Sheshan**	**25.65**	**139**	P	**P**	**20 00 40.3**	**-0.4**
SSE				S	**S**	**20 05 06.8**	**+0.4**
SSE				XS		20 05 17.1	
SSE				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.7						
SSE				AMB	AMB		
	comp=Z,28nm,3.5s						
SSE				LR	LR		
	comp=N,388nm,13.3s,MS4.3						
SSE				LR	LR		
	comp=E,561nm,13.3s,MS4.3						
SSE				LR	LR		
	comp=Z,822nm,12.6s,MS4.5						
SSE	**Sheshan**	**25.65**	**139**	P	**P**	**20 00 40.3**	**-0.4**
	comp=Z,17nm,0.7s,mb4.7						
SSE				S	**S**	**20 05 06.8**	**+0.4**
SSE				sS		20 05 17.1	
SSE				LR	LR		
	comp=Z,820nm,12.6s,MS4.5						
SOKR	**Solikamsk**	**25.67**	**304**	⇓*i*P	**P**	**20 00 48.8**	**+8.3**
SOKR				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.0						
SOKR				MLR	MLR		
	comp=Z,570nm,17.0s,MS4.2						
SOKR	**Solikamsk**	**25.67**	**304**	⇓*i*P	**P**	**20 00 48.8**	**+8.3**
	comp=Z,60nm,1.2s,mb5.0						
SOKR				LR	LR		
	comp=Z,570nm,17.0s,MS4.2						
GYA	**Guiyang**	**26.20**	**170**	⇑*i*P	**P**	**20 00 46.3**	**+0.4**
GYA				AP	pP	20 00 55.8	+7.0
GYA				XP	sP	20 00 59.9	+10
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
GYA				AMB	AMB		
	comp=Z,90nm,3.6s						
GYA				LR	LR		
	comp=N,680nm,12.0s,MS4.5						
GYA				LR	LR		
	comp=E,230nm,11.1s,MS4.5						
GYA				LR	LR		
	comp=Z,1µm,12.6s,MS4.6						
GYA	**Guiyang**	**26.20**	**170**	⇑*i*P	**P**	**20 00 46.3**	**+0.4**
	comp=Z,20nm,0.8s,mb4.7						
GYA				pP	pP	20 00 55.8	+7.0
GYA				sP	sP	20 00 59.9	+10
GYA				LR	LR		
	comp=Z,1µm,12.6s,MS4.6						
KMI	**Kunming**	**27.28**	**178**	P	**P**	**20 00 54.9**	**-0.8**
KMI				S	**S**	**20 05 34.3**	**+1.1**
KMI				AMB	AMB		
	comp=Z,18nm,0.8s,mb4.7						
KMI				AMB	AMB		
	comp=Z,118nm,5.3s						
KMI				LR	LR		
	comp=N,471nm,11.8s						
KMI				LR	LR		
	comp=E,233nm,9.0s						
KMI				LR	LR		
	comp=Z,463nm,12.4s,MS4.3						
KMI	**Kunming**	**27.28**	**178**	P	**P**	**20 00 54.9**	**-0.8**
KMI				*SP	sP	20 00 58.4	-1.5
KMI				PPP	PPP	20 01 54.7	+0.1
KMI				S	**S**	**20 05 34.2**	**+1.0**
KMI				*SS		20 05 38.3	
KMI				SSS	SSS	20 07 09.7	+2.5
KMI				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
KMI				MLR	MLR		
	comp=Z,460nm,12.4s,MS4.2						
KMI	**Kunming**	**27.28**	**178**	P	**P**	**20 00 54.9**	**-0.8**
	comp=Z,18nm,0.8s,mb4.7						
KMI				S	**S**	**20 05 34.3**	**+1.1**
KMI				LR	LR		
	comp=Z,460nm,12.4s,MS4.2						
JIRN	**Jiri**	**27.31**	**211**	*e*P	**P**	**20 00 56.4**	**+0.4**
	comp=Z,94nm,1.0s,mb5.3						
KKN	**Kakani**	**27.49**	**213**	*e*P	**P**	**20 00 57.9**	**+0.3**
	comp=Z,214nm,0.9s,mb5.7						
GKN	**Gorkha**	**27.51**	**214**	*e*P	**P**	**20 00 57.8**	**0.0**
	comp=Z,81nm,0.8s,mb5.4						
PKI	**Pulchoki**	**27.65**	**212**	*e*P	**P**	**20 00 59.2**	**+0.1**
	comp=Z,148nm,1.1s,mb5.5						
DMN	**Daman**	**27.71**	**213**	*e*P	**P**	**20 00 59.8**	**+0.2**
	comp=Z,148nm,1.1s,mb5.5						
DDI	**Dehra Dun**	**28.08**	**227**	*e*	**P**	**20 01 01.4**	**-1.6**
KOLN	**Koldanda**	**28.09**	**216**	*e*P	**P**	**20 01 03.1**	**+0.1**
	comp=Z,118nm,1.0s,mb5.5						
ASAJ	**Asahikawa**	**28.15**	**91**	LR	LR	20 13 03.0	
	comp=Z,380nm,18.0s,MS4.0,baz=337,slow=38						
SEY	**Seymchan**	**28.31**	**48**	*e*P	**P**	**20 01 07.1**	**+2.5**
SEY				*e*		20 02 01.6	
SEY						20 04 18.7	
SEY				*e*S	**S**	**20 05 54.1**	**+4.7**
SEY				SS	SS	20 07 21.3	+8.2
SEY				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
SEY				smax			
	comp=N,140nm,23.2s						
SEY				smax			
	comp=E,90nm,21.1s						
SEY				MLR	MLR		
	comp=Z,670nm,18.0s,MS4.3						
SEY				MLR	MLR		
	comp=N,160nm,17.0s,MS3.9						
SEY				MLR	MLR		
	comp=E,200nm,17.0s,MS3.9						
SEY	**Seymchan**	**28.31**	**48**	*e*P	**P**	**20 01 07.1**	**+2.5**
SEY				*e*		20 02 01.6	
SEY				*e*		20 04 18.7	
SEY				*e*S	**S**	**20 05 54.1**	**+4.7**
SEY				SS	SS	20 07 21.3	+8.2
SEY				LR	LR		
	comp=Z,670nm,18.0s,MS4.3						
JHJ	**Hachijo jima 2**	**33.46**	**110**	LR	LR	20 16 09.8	
	comp=Z,122nm,19.1s,MS3.6,baz=228,slow=38						
CM31	**Chiang Mai Arr**	**33.97**	**185**	*e*P	**P**	**20 01 54.3**	**-0.7**
	comp=Z,24nm,0.8s,mb5.2						
CMAR	**Chiang Mai Arr**	**33.97**	**185**	P	**P**	**20 01 54.4**	**-0.6**
CMAR				pmax	pmax		
	comp=Z,19nm,0.8s						
CMAR				MLR	MLR		
	comp=Z,520nm,19.2s						
CMAR	**Chiang Mai Arr**	**33.97**	**185**	P	**P**	**20 01 54.4**	**-0.6**
	comp=Z,19nm,0.8s,mb5.1,baz=358,slow=8.8,SNR=142						
CMAR				LR	LR	20 16 49.0	
	comp=Z,520nm,19.2s,MS4.3,slow=38						
MOS	**Moscow**	**36.53**	**301**	*e*P	**P**	**20 02 22.8**	**+6.3**
MOS				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.4						
MOS	**Moscow**	**36.53**	**301**	*e*P	**P**	**20 02 22.8**	**+6.3**
	comp=Z,39nm,0.6s,mb5.4						
KEV	**Kevo**	**37.11**	**326**	*e*p	**P**	**20 02 20.7**	**-0.5**
	comp=Z,22nm,0.8s,mb5.0						
KEV	**Kevo**	**37.11**	**326**	*e*P	**P**	**20 02 20.7**	**-0.5**
KEV				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.0						
JOF	**Joensuu**	**37.15**	**314**	*e*p	**P**	**20 02 20.9**	**-0.7**
	comp=Z,13nm,0.8s,mb4.8						
JOF	**Joensuu**	**37.15**	**314**	*e*P	**P**	**20 02 20.9**	**-0.7**
JOF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
OBN	**Obninsk**	**37.33**	**301**	*e*P	**P**	**20 02 23.2**	**0.0**
OBN				*i*		20 02 31.0	
OBN				S	**S**	**20 08 12.0**	**+1.6**
OBN				SS	SS	20 10 34.0	-7.7
OBN				pmax	pmax		
	comp=Z,30nm,2.3s,mb4.7						
OBN	**Obninsk**	**37.33**	**301**	*e*P	**P**	**20 02 23.2**	**0.0**
	comp=Z,30nm,2.3s,mb4.7						
OBN				*i*		20 02 31.0	
OBN				S	**S**	**20 08 12.0**	**+1.6**
OBN				SS	SS	20 10 34.0	-7.7
ARCES	**ARCESS Array B**	**37.67**	**326**	P	**P**	**20 02 27.1**	**+1.2**
ARCES						20 04 43.5	
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARCES				MLR	MLR		
	comp=Z,101nm,19.0s						
ARCES	**ARCESS Array B**	**37.67**	**326**	P	**P**	**20 02 27.1**	**+1.2**
	comp=Z,4.6nm,0.5s,mb4.5,baz=70,slow=9.5,SNR=35						
ARCES				PcP	PcP	20 04 43.5	-0.3
	comp=Z,7.0nm,0.9s,baz=72,slow=7.7,SNR=3.6						
ARCES				LR	LR	20 20 35.3	
	comp=Z,100nm,19.0s,MS3.6,baz=192,slow=40						
ARE0	**ARCESS Array S**	**37.67**	**326**	*e*P	**P**	**20 02 25.4**	**-0.5**
GOF	**Gofitskoye**	**38.41**	**283**	*i* P	**P**	**20 02 31.0**	**-1.4**
GOF				pmax	pmax		
	comp=Z,37nm,1.6s,mb4.9						
GOF	**Gofitskoye**	**38.41**	**283**	*i* P	**P**	**20 02 31.0**	**-1.4**
	comp=Z,37nm,1.6s,mb4.9						
PUL	**Pulkovo**	**38.66**	**310**	⇑*e*P	**P**	**20 02 43.3**	**+9.0**
PUL				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.4						
PUL				pmax	pmax		
	comp=N,129nm,1.1s						
PUL				pmax	pmax		
	comp=E,98nm,1.7s						
PUL	**Pulkovo**	**38.66**	**310**	⇑*e*P	**P**	**20 02 43.3**	**+9.0**
	comp=E,74nm,1.0s,mb5.4						
DUS	**Dusheti**	**39.07**	**278**	P	**P**	**20 02 38.4**	**+0.4**
KIV	**Kislovodsk**	**39.23**	**282**	P	**P**	**20 02 40.4**	**+1.2**
	comp=E,138nm,0.8s,mb5.7,SNR=9.2						
KIV	**Kislovodsk**	**39.23**	**282**	*e*P	**P**	**20 02 40.2**	**+1.0**
KIV				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
KIV	**Kislovodsk**	**39.23**	**282**	*e*P	**P**	**20 02 40.2**	**+1.0**
	comp=Z,20nm,0.9s,mb4.8						
MTA	**Mtatsminda**	**39.25**	**277**	P	**P**	**20 02 39.9**	**+0.5**
TI2	**Plekhanov**	**39.25**	**278**	⇑*i*P	**P**	**20 02 40.4**	**+1.0**
TI2				*i*		20 02 49.4	
TBLG	**Delisi**	**39.26**	**278**	⇑*i*P	**P**	**20 02 40.4**	**+0.9**
TBLG				*i*		20 02 49.4	
HYB	**Hyderabad**	**39.39**	**216**	⇓*i*P	**P**	**20 02 40.0**	**-0.8**
	comp=Z,60nm,1.0s,mb5.3						
ONI	**Oni**	**39.55**	**280**	P	**P**	**20 02 47.1**	**+5.2**
KAF	**Kangasniemi**	**39.61**	**314**	*e*p	**P**	**20 02 42.4**	**+0.2**
	comp=Z,6.3nm,0.7s,mb4.5,baz=63,slow=7.6						
KAF	**Kangasniemi**	**39.61**	**314**	*e*P	**P**	**20 02 42.4**	**+0.2**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**39.96**	**314**	P	**P**	**20 02 45.6**	**+0.5**
	comp=Z,7.6nm,0.6s,mb4.6,baz=78,slow=8.7,SNR=50						
FINES				pP	pP	20 02 51.2	+3.1
	comp=Z,11nm,0.6s,baz=78,slow=9.2,SNR=14						
FINES				sP	sP	20 02 54.2	+4.9
	comp=Z,11nm,0.6s,baz=79,slow=9.4,SNR=12						
FINES				LR	LR	20 21 17.7	
	comp=Z,342nm,18.1s,MS4.2,baz=249,slow=39						
GNI	**Garni**	**40.20**	**276**	*e*P	**P**	**20 02 47.8**	**+0.5**
GNI				pmax	pmax		
	comp=Z,28nm,1.3s						
GNI	**Garni**	**40.20**	**276**	*e*P	**P**	**20 02 47.8**	**+0.5**
	comp=Z,28nm,1.3s,mb4.8						
SOC	**Sochi**	**41.21**	**283**	*e*P	**P**	**20 02 54.3**	**-1.3**
SOC				*e*		20 04 30.1	
SOC				*e*PPP	PPP	20 05 03.6	0.0
SOC				*e*S	**S**	**20 09 03.0**	**-5.9**
SOC				*e*SS	SS	20 12 11.9	+4.8
SOC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
SOC				pmax	pmax		
	comp=N,8.0nm,0.8s						
SOC				pmax	pmax		
	comp=E,7.0nm,1.0s						
SOC				MLR	MLR		
	comp=Z,234nm,20.0s,MS4.0						
SOC				MLR	MLR		
	comp=N,189nm,18.0s,MS4.1						
SOC				MLR	MLR		
	comp=E,100nm,16.0s,MS4.1						
SOC	**Sochi**	**41.21**	**283**	*e*P	**P**	**20 02 54.3**	**-1.3**
	comp=E,10.0nm,0.6s,mb4.6						
SOC				*e*		20 04 30.1	
SOC				*e*PPP	PPP	20 05 03.6	0.0
SOC				*e*S	**S**	**20 09 03.0**	**-5.9**
SOC				*e*SS	SS	20 12 11.9	+4.8
SOC				LR	LR		
	comp=Z,230nm,20.0s,MS4.0						
FX1	**Attu Island--F**	**41.70**	**60**	P	**P**	**20 02 59.2**	**-0.1**
	comp=Z,25nm,0.8s,baz=215,slow=12,SNR=8.1						
FX1				LR	LR	20 20 46.0	
	comp=Z,9.8nm,21.1s,baz=309,slow=37						
FX1	**Attu Island--F**	**41.70**	**60**	*e*P	**P**	**20 02 59.2**	**-0.1**
AKASG	**Malin Array Be**	**43.32**	**298**	P	**P**	**20 03 12.4**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKASG	**Malin Array Be**	**43.32**	**298**	P	**P**	**20 03 12.4**	**-0.2**
	comp=Z,5.7nm,0.5s,mb4.6,baz=51,slow=8.7,SNR=31						
TNA	**Tin City**	**44.18**	**37**	*e*P	**P**	**20 03 20.5**	**+1.1**
	comp=Z,23nm,0.8s,mb5.0						
MALT	**Malatya**	**45.18**	**278**	*e*P	**P**	**20 03 28.7**	**+0.9**
MALT				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
MALT	**Malatya**	**45.18**	**278**	*e*P	**P**	**20 03 28.7**	**+0.9**
	comp=Z,8.3nm,1.0s,mb4.5						
DAG	**Danmarks Havn**	**45.73**	**344**	⇑*i*P	**P**	**20 03 31.3**	**-0.4**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
DAG	**Danmarks Havn**	**45.73**	**344**	⇑*i*P	**P**	**20 03 31.3**	**-0.4**
	comp=Z,4.7nm,0.6s,mb4.6						
HFS	**Hagfors**	**45.96**	**316**	P	**P**	**20 03 33.5**	**-0.1**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS	**Hagfors**	**45.96**	**316**	P	**P**	**20 03 33.5**	**-0.2**
	comp=Z,2.9nm,0.6s,mb4.4,baz=76,slow=6.1,SNR=9.6						
NB2	**NORSAR Subarra**	**46.51**	**318**	P	**P**	**20 03 38.1**	**+0.1**
	comp=Z,10nm,0.7s,mb4.9,baz=54,slow=7.9						
NB2	**NORSAR Subarra**	**46.51**	**318**	P	**P**	**20 03 38.1**	**+0.1**
NB2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
NOA	**NORSAR Array B**	**46.51**	**318**	P	**P**	**20 03 37.9**	**-0.1**
NOA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,168nm,18.5s						
NOA	**NORSAR Array B**	**46.51**	**318**	P	**P**	**20 03 37.9**	**-0.1**
	comp=Z,5.1nm,0.6s,mb4.6,baz=59,slow=7.7,SNR=13						
NOA				LR	LR	20 24 42.0	
	comp=Z,168nm,18.5s,MS4.0,baz=50,slow=38						
LVV	**L'vov**	**46.59**	**299**	*e*P	**P**	**20 03 39.3**	**+0.5**
CFR	**Carcaliu**	**47.03**	**292**	⇑P	**P**	**20 03 42.6**	**+0.2**
BRTR	**Keskin Array B**	**47.17**	**283**	P	**P**	**20 03 44.1**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,11nm,1.1s						
BRTR	**Keskin Array B**	**47.17**	**283**	P	**P**	**20 03 44.1**	**+0.6**
	comp=Z,10nm,1.1s,mb4.7,baz=79,slow=6.3,SNR=22						
BURAR	**Bucovina Array**	**47.22**	**296**	⇑P	**P**	**20 03 44.5**	**+0.6**
VRI	**Vrincioaia**	**47.42**	**294**	⇑P	**P**	**20 03 46.1**	**+0.7**
KOLS	**Kolonicke sedl**	**48.04**	**299**	*i* P	**P**	**20 03 50.6**	**+0.3**
KOLS				*e*sP	sP	20 03 58.9	+4.4
MLR	**Muntele Rosu**	**48.08**	**294**	LR	LR	20 25 29.2	
	comp=Z,376nm,19.4s,MS4.4,baz=237,slow=38						
MLR	**Muntele Rosu**	**48.08**	**294**	⇑P	**P**	**20 03 49.3**	**-1.3**
CRVS	**Cervenica-Dubn**	**48.49**	**300**	*i* P	**P**	**20 03 53.9**	**+0.1**
CRVS				*e*pP	pP	20 04 05.1	+8.3
OJC	**Ojcow**	**48.59**	**302**	*e*P	**P**	**20 03 54.6**	**+0.1**
NIE	**Niedzica**	**48.80**	**301**	*e*P	**P**	**20 03 56.1**	**0.0**
IMA	**Indian Mountai**	**48.80**	**32**	*e*P	**P**	**20 03 56.6**	**+0.8**
	comp=Z,88nm,0.8s,mb5.8						
IMA				*e*		20 05 48.7	
KECS	**Kecovo**	**49.26**	**300**	*e*P	**P**	**20 04 00.6**	**+0.9**
OKC	**Ostrava-Krasne**	**49.67**	**302**	*e*P	**P**	**20 04 03.1**	**+0.3**
OKC				*e*x	x	20 04 12.0	
KSP	**Ksiaz**	**50.01**	**304**	*e*P	**P**	**20 04 05.9**	**+0.5**
KSP				*e**PP	pP	20 04 15.1	+6.6
MORC	**Moravsky Berou**	**50.02**	**303**	*e*P	**P**	**20 04 06.3**	**+0.8**
MORC				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
MORC	**Moravsky Berou**	**50.02**	**303**	*e*P	**P**	**20 04 06.3**	**+0.8**
	comp=Z,4.9nm,0.8s,mb4.6						
MORC	**Moravsky Berou**	**50.02**	**303**	⇓P	**P**	**20 04 06.2**	**+0.7**
VYHS	**Vyhne**	**50.13**	**301**	*i* P	**P**	**20 04 07.2**	**+0.9**
ASF	**Jabal al Asfar**	**50.19**	**273**	P	**P**	**20 04 07.1**	**+0.1**
	comp=Z,6.1nm,0.7s,mb4.8,baz=285,slow=3.9,SNR=11						
ASF				LR	LR	20 27 50.1	
	comp=Z,96nm,18.6s,MS3.8,baz=261,slow=39						
DPC	**Dobruska-Polom**	**50.30**	**304**	*e*P	**P**	**20 04 08.6**	**+1.0**
DPC				*e*x	x	20 04 18.1	
UPC	**Upice**	**50.36**	**304**	*e*P	**P**	**20 04 08.8**	**+0.7**
UPC				*e*x	x	20 04 18.2	
BZS	**Buzias**	**50.41**	**296**	⇑P	**P**	**20 04 09.0**	**+0.5**
VRAC	**Vranov**	**50.80**	**303**	P	**P**	**20 04 11.8**	**+0.4**
VRAC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VRAC	**Vranov**	**50.80**	**303**	P	**P**	**20 04 11.8**	**+0.4**
	comp=Z,4.2nm,0.8s,mb4.4,baz=54,slow=7.9,SNR=4.9						
VRAC	**Vranov**	**50.80**	**303**	*e*P	**P**	**20 04 12.3**	**+0.9**
SRO	**Srobarova**	**50.83**	**300**	*i* P	**P**	**20 04 13.2**	**+1.6**
SMOL	**Smolenice**	**50.86**	**301**	*i* P	**P**	**20 04 13.0**	**+1.1**
SMOL				*e*		20 04 22.0	
SCO	**Scoresbysund**	**50.91**	**339**	*i* P	**P**	**20 04 12.1**	**+0.2**
PVCC	**Panska Ves**	**51.07**	**305**	*e*P	**P**	**20 04 14.1**	**+0.6**
BRG	**Berggiesshubel**	**51.17**	**306**	*e*P	**P**	**20 04 14.8**	**+0.6**
BRG				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
BRG	**Berggiesshubel**	**51.17**	**306**	*e*P	**P**	**20 04 14.8**	**+0.6**
	comp=Z,12nm,1.0s,mb4.8						
BRG				*e*		20 04 24.5	
RAYN	**Ar Rayn**	**51.20**	**258**	P	**P**	**20 04 14.2**	**-0.6**
	comp=Z,180nm,0.6s,SNR=31						
RAYN	**Ar Rayn**	**51.20**	**258**	P	**P**	**20 04 14.3**	**-0.5**
UNV	**Unalaska Valle**	**51.30**	**49**	*e*P	**P**	**20 04 13.3**	**-1.8**
CLL	**Collm**	**51.37**	**307**	*i* P	**P**	**20 04 15.9**	**+0.2**
CLL				*i*		20 04 22.3	
CLL				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
CLL	**Collm**	**51.37**	**307**	*i* P	**P**	**20 04 15.9**	**+0.2**
	comp=Z,11nm,1.1s,mb4.7						
CLL				*i*		20 04 22.3	
CLL				*i*		20 04 27.2	
CLL	**Collm**	**51.37**	**307**	P	**P**	**20 04 15.9**	**+0.2**
	comp=Z,logA/T=1.0,mb4.7						
CLL				*i* *PP	pP	20 04 22.3	+3.5
CLL				*i* *SP	sP	20 04 25.6	+5.7
PRU	**Pruhonice**	**51.42**	**304**	*e*P	**P**	**20 04 16.4**	**+0.3**
COLA	**College**	**51.43**	**31**	*e*P	**P**	**20 04 16.4**	**+0.4**
COLA				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
COLA	**College**	**51.43**	**31**	*e*P	**P**	**20 04 16.4**	**+0.4**
	comp=Z,18nm,0.6s,mb5.2						
ILAR	**Eielson Array**	**51.80**	**31**	P	**P**	**20 04 18.9**	**+0.1**
ILAR						20 05 37.1	
ILAR				pmax	pmax		
	comp=Z,16nm,0.6s						
ILAR				MLR	MLR		
	comp=Z,150nm,18.3s						
ILAR	**Eielson Array**	**51.80**	**31**	P	**P**	**20 04 18.9**	**0.0**

	comp=Z,16nm,0.6s,mb5.1,baz=309,slow=3.7,SNR=38						
ILAR				PcP	PcP	20 05 37.0	+5.0
	comp=Z,4.9nm,0.8s,baz=310,slow=5.1,SNR=5.0						
ILAR				LR	LR	20 29 16.9	
	comp=Z,150nm,18.3s,MS4.1,baz=349,slow=39						
MCK	McKinley	51.86	32	eP	P	20 04 20.4	+1.1
MCK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MCK	McKinley	51.86	32	eP	P	20 04 20.4	+1.1
	comp=Z,3.3nm,0.7s,mb4.4						
NKC	Novy Kostel	52.32	306	eP	pP	20 04 29.5	+3.5
NKC	Novy Kostel	52.32	306	epP	pP	20 04 29.5	+3.5
KHC	Kasperske Hory	52.45	304	eP	P	20 04 24.1	+0.2
KHC				ex	x	20 04 33.2	
MOX	Moxa	52.47	307	eP	P	20 04 24.4	+0.4
MOX				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.9						
MOX				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.5						
MOX	Moxa	52.47	307	eP	P	20 04 24.4	+0.4
	comp=Z,19nm,1.2s,mb4.9						
MOX				LR	LR		
	comp=Z,400nm,18.0s,MS4.5						
MOX	Moxa	52.47	307	i P	P	20 04 24.4	+0.4
	comp=Z,logA/T=1.2,mb4.9						
MOX				QM		20 24 55.0	
MOX				RM		20 29 20.0	
GERES	GERESS Array B	52.57	304	P	P	20 04 24.8	0.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	52.57	304	P	P	20 04 24.8	0.0
	comp=Z,1.4nm,0.7s,mb4.0,baz=59,slow=7.8,SNR=11						
ARSA	Arzberg	52.65	301	⇑iP	P	20 04 26.4	+1.0
	comp=Z,4.7nm,0.7s,mb4.5						
RES	Resolute Bay	52.69	5	eP	P	20 04 25.1	-0.3
RES				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
RES	Resolute Bay	52.69	5	eP	P	20 04 25.1	-0.2
	comp=Z,14nm,0.9s,mb4.9						
RSO	Redoubt South	52.75	37	eP	P	20 04 25.6	-0.4
INK	Inuvik	52.85	23	LR	LR	20 28 45.9	
	comp=Z,117nm,18.5s,MS4.0,baz=314,slow=38						
THY	Trims Highway	53.11	31	eP	P	20 04 28.1	-0.5
EIL	Elat	53.14	272	eP	P	20 04 28.5	-0.8
	comp=Z,3.8nm,0.8s,mb4.4						
GRA1	Grafenberg Arr	53.27	306	eP	P	20 04 31.2	+1.2
	comp=Z,11nm,1.0s,mb4.7						
GRF	Grafenberg Arr	53.27	306	eP	P	20 04 31.2	+1.2
GRF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
GRF	Grafenberg Arr	53.27	306	eP	P	20 04 31.2	+1.2
GRF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
GRF	Grafenberg Arr	53.27	306	eP	P	20 04 31.2	+1.2
	comp=Z,11nm,1.0s,mb4.7						
KBA	Koelnbreinsper	53.89	302	⇑iP	P	20 04 35.9	+1.3
	comp=Z,9.8nm,0.6s,mb4.9						
KBA	Koelnbreinsper	53.89	302	⇑iP	P	20 04 35.9	+1.3
KBA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
DAWY	Dawson	54.56	28	eP	P	20 04 38.9	-0.4
MOTA	Moosalm	54.87	304	⇑iP	P	20 04 42.3	+0.5
	comp=Z,1.7nm,0.6s,mb4.2						
MOTA	Moosalm	54.87	304	⇑iP	P	20 04 42.3	+0.5
MOTA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
SQTA	Sankt Quirin	54.90	304	⇑iP	P	20 04 42.7	+0.7
	comp=Z,3.6nm,0.5s,mb4.7						
SQTA	Sankt Quirin	54.90	304	⇑iP	P	20 04 42.7	+0.7
SQTA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
DAVA	Damuels	55.53	304	⇑iP	P	20 04 47.3	+0.7
	comp=Z,4.0nm,0.5s,mb4.7						
DAVOX	Davos	55.87	304	P	P	20 04 49.7	+0.7
	comp=Z,3.1nm,0.5s,mb4.6,baz=71,slow=10,SNR=7.6						
DAVOX	Davos	55.87	304	P	P	20 04 49.7	+0.7
EKA	Eskdalemuir Ar	56.00	318	P	P	20 04 50.7	+0.9
EKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EKA	Eskdalemuir Ar	56.00	318	P	P	20 04 50.6	+0.8
	comp=Z,3.7nm,0.8s,mb4.5,baz=36,slow=6.5,SNR=6.0						
CDF	Champ du Feu	56.07	307	eP	P	20 04 49.2	-1.2
	comp=Z,9.4nm,0.8s,mb4.6						
CDF	Champ du Feu	56.07	307	eP	P	20 04 49.2	-1.2
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
GIVF	Givet	56.10	310	eP	P	20 04 49.4	-1.2
BAIF	Baives	56.42	310	eP	P	20 04 50.8	-2.1
	comp=Z,29nm,1.1s,mb4.9						
BAIF	Baives	56.42	310	eP	P	20 04 50.8	-2.1
BAIF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
HINF	Hinteralfeld	56.68	307	eP	P	20 04 54.3	-0.5
HAU	Haudompre	56.80	307	eP	P	20 04 54.6	-1.1
	comp=Z,15nm,0.6s,mb4.9						
HAU				eR			
	comp=Z,176nm,20.8s						
HAU	Haudompre	56.80	307	eP	P	20 04 54.6	-1.1
HAU				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
HAU				MLR	MLR		
	comp=Z,180nm,20.8s,MS4.2						
MEZF	Maizieres J'vi	57.09	308	eP	P	20 04 56.9	-0.8
	comp=Z,10nm,0.6s,mb4.8						
CABF	La Chapelle	57.89	306	eP	P	20 05 02.5	-0.9
LPL	La Plagne	58.33	305	eP	P	20 05 05.3	-1.2
	comp=Z,6.2nm,0.6s,mb4.5						
LPL	La Plagne	58.33	305	eP	P	20 05 05.3	-1.2
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
LPG	La Plagne	58.33	305	eP	P	20 05 05.8	-0.7
SSF	Saint Saulge	58.84	308	eP	P	20 05 08.4	-1.6
	comp=Z,8.3nm,0.7s,mb4.6						
SSF	Saint Saulge	58.84	308	eP	P	20 05 08.4	-1.6
SSF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
MBDF	Montbardon	58.86	304	eP	P	20 05 09.4	-0.8
SMF	Signal de Mont	58.97	307	eP	P	20 05 09.3	-1.6
	comp=Z,12nm,1.0s,mb4.6						
SMF	Signal de Mont	58.97	307	eP	P	20 05 09.3	-1.6
SMF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
AVF	Avril sur Loir	59.10	308	eP	P	20 05 10.9	-1.0
	comp=Z,6.6nm,0.7s,mb4.5						
AVF	Avril sur Loir	59.10	308	eP	P	20 05 10.9	-1.0
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
HYF	Humbligny	59.11	308	eP	P	20 05 10.6	-1.3
ORIF	Oris-en-Rattie	59.18	305	eP	P	20 05 11.2	-1.2
	comp=Z,13nm,1.0s,mb4.6						
ORIF				eR			
	comp=Z,352nm,17.0s						
LDF	La Druitiere	59.47	311	eP	P	20 05 12.2	-2.1
	comp=Z,19nm,0.9s,mb4.8						
LDF	La Druitiere	59.47	311	eP	P	20 05 12.2	-2.1
LDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
FLN	La Foliniere	59.51	311	eP	P	20 05 12.5	-2.1
	comp=Z,67nm,1.4s,mb5.2						
FLN				eR			
	comp=Z,190nm,19.2s						
FLN	La Foliniere	59.51	311	eP	P	20 05 12.5	-2.1
FLN				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.2						
FLN				MLR	MLR		
	comp=Z,190nm,19.3s,MS4.2						
BGF	Bois d'Agland	59.52	308	eP	P	20 05 13.1	-1.6
	comp=Z,21nm,0.9s,mb4.9						
BGF	Bois d'Agland	59.52	308	eP	P	20 05 13.1	-1.6
BGF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VIVF	Saint-Julien-l	59.83	305	eP	P	20 05 16.0	-0.9
GRR	Gorron	59.95	311	eP	P	20 05 15.5	-2.2
TCF	Toulx Ste Croi	60.02	308	eP	P	20 05 16.8	-1.4
	comp=Z,14nm,0.9s,mb4.7						
TCF	Toulx Ste Croi	60.02	308	eP	P	20 05 16.8	-1.4
TCF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
LASF	Ste Croix	60.79	305	eP	P	20 05 22.4	-1.1
	comp=Z,20nm,1.0s,mb4.9						
SGMF	Saint Gilles	60.83	312	eP	P	20 05 21.8	-1.8
	comp=Z,41nm,1.0s,mb5.2						
SGMF	Saint Gilles	60.83	312	eP	P	20 05 21.8	-1.8
SGMF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
MFF	Saint Martin d	60.92	309	eP	P	20 05 22.8	-1.5
	comp=Z,13nm,1.0s,mb4.7						
MFF	Saint Martin d	60.92	309	eP	P	20 05 22.8	-1.5
MFF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
CAF	Calviac	61.07	307	eP	P	20 05 24.4	-0.9
ROSF	Rostrenen	61.09	313	eP	P	20 05 24.7	-0.7
QUIF	Quistinic	61.35	312	eP	P	20 05 25.4	-1.8
	comp=Z,89nm,1.3s,mb5.4						
QUIF	Quistinic	61.35	312	eP	P	20 05 25.4	-1.8
QUIF				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.4						
LFF	La Frestale	61.70	308	eP	P	20 05 28.9	-0.8
DLBC	Dease Lake	61.79	28	LR	LR	20 33 19.8	
	comp=Z,31nm,18.4s,MS3.5,baz=332,slow=37						
YKW3	Yellowknife Ar	61.84	18	eP	P	20 05 29.4	-0.9
YKA	Yellowknife Ar	61.90	18	P	P	20 05 30.0	-0.7
YKA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA				MLR	MLR		
	comp=Z,107nm,18.7s						
YKA	Yellowknife Ar	61.90	18	P	P	20 05 30.0	-0.8
	comp=Z,7.3nm,0.8s,mb4.9,baz=334,slow=6.8,SNR=115						
YKA				LR	LR	20 33 20.2	
	comp=Z,107nm,18.7s,MS4.0,baz=340,slow=37						
EPF	Esparros	63.30	306	eP	P	20 05 40.0	-0.3
ETSF	Etsaut	63.84	307	eP	P	20 05 43.3	-0.5
FRB	Frobisher Bay	63.92	355	LR	LR	20 35 47.1	
	comp=Z,122nm,18.2s,MS4.1,baz=305,slow=38						
ESDC	Sonseca Array	67.96	307	P	P	20 06 10.4	+0.2
	comp=Z,2.8nm,0.8s,mb4.3,baz=44,slow=6.0,SNR=8.8						
ESDC				pP	pP	20 06 17.0	+3.7
	comp=Z,3.8nm,0.8s,baz=40,slow=6.6,SNR=8.6						
FCC	Fort Churchill	68.43	9	eP	P	20 06 11.6	-1.2
FCC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
FCC	Fort Churchill	68.43	9	eP	P	20 06 11.6	-1.2
	comp=Z,9.0nm,0.9s,mb4.8						
KAKA	Kakadu	70.08	148	⇓iP	P	20 06 21.7	-1.9
	comp=Z,11nm,0.6s,mb5.0						
EDM	Edmonton	70.72	21	eP	P	20 06 27.9	+1.0
SCHQ	Schefferville	72.69	353	P	P	20 06 38.8	+0.3
	comp=Z,7.3nm,1.0s,mb4.6,baz=351,slow=8.6,SNR=7.1						
SCHQ				pP	pP	20 06 44.2	+2.6
	comp=Z,7.3nm,1.0s,baz=6.1,slow=5.2,SNR=6.9						
SCHQ				LR	LR	20 42 57.3	
	comp=Z,128nm,18.4s,MS4.2,baz=16,slow=39						
SCHQ	Schefferville	72.69	353	P	P	20 06 38.8	+0.3
SCHQ				pP	pP	20 06 44.2	+2.6
SCHQ				LR	LR	20 42 57.3	
FITZ	Fitzroy Crossi	73.26	156	eP	P	20 06 40.3	-2.3
	comp=Z,11nm,0.8s,mb4.8						
KMBO	Kilima Mbogo	75.59	249	P	P	20 06 56.0	-0.2
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMBO	Kilima Mbogo	75.59	249	P	P	20 06 56.0	-0.1
	comp=Z,4.8nm,0.7s,mb4.6,baz=27,slow=9.4,SNR=15						
KMBO	Kilima Mbogo	75.59	249	eP	P	20 06 55.0	-1.1
	comp=Z,6.0nm,1.0s,mb4.5						
ULM	Lac du Bonnet	76.62	11	P	P	20 07 01.1	-0.1
	comp=Z,4.2nm,1.0s,mb4.3,baz=349,slow=9.1,SNR=3.6						
ULM				LR	LR	20 41 30.3	
	comp=Z,105nm,18.4s,MS4.2,baz=12,slow=36						
BMO	Blue Mountains	77.46	27	eP	P	20 07 06.9	+0.9
	comp=Z,7.3nm,1.2s,mb4.5						
WRAB	Tennant Creek	77.47	149	eP	P	20 07 04.8	-1.7
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
WRAB	Tennant Creek	77.47	149	eP	P	20 07 04.8	-1.7
	comp=Z,16nm,0.8s,mb5.0						
WRA	Warramunga Arr	77.47	149	P	P	20 07 05.1	-1.4
WRA				*PP	pP	20 07 11.5	+1.8
WRA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	77.47	149	P	P	20 07 05.1	-1.5
	comp=Z,9.3nm,0.6s,mb4.9,baz=345,slow=6.4,SNR=114						
WRA				pP	pP	20 07 11.5	+1.8
	comp=Z,4.7nm,0.8s,baz=344,slow=6.3,SNR=9.0						
MOOW	Moose Ponds	80.20	23	eP	P	20 07 12.6	-8.3
	comp=Z,3.8nm,0.4s,mb4.7						
LOHW	Long Hollow	80.37	23	eP	P	20 07 12.9	-8.9
	comp=Z,12nm,0.6s,mb5.0						
ASAR	Alice Springs	80.83	150	P	P	20 07 23.6	-1.1
	comp=Z,12nm,1.1s,mb4.8,baz=343,slow=5.0,SNR=50						
PDAR	Pinedale Array	81.42	23	LR	LR	20 48 17.0	
	comp=Z,123nm,19.5s,MS4.3,baz=339,slow=39						
ELK	Elko	81.83	27	P	P	20 07 31.5	+1.9
ELK				*PP	pP	20 07 37.3	+4.5
ELK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ELK	Elko	81.83	27	P	P	20 07 31.5	+1.9
	comp=Z,1.2nm,0.8s,mb3.9,baz=337,slow=7.7,SNR=5.4						
ELK				pP	pP	20 07 37.3	+4.5
	comp=Z,2.3nm,0.8s,baz=316,slow=1.8,SNR=7.0						
DUG	Dugway	83.02	26	eP	P	20 07 38.7	+3.0
DUG				pmax	pmax		
	comp=Z,135nm,1.2s,mb5.8						
DUG	Dugway	83.02	26	eP	P	20 07 38.7	+3.0
	comp=Z,135nm,1.2s,mb5.8						
NVAR	Mina Array Bea	83.06	31	P	P	20 07 37.7	+1.7
	comp=Z,7.4nm,1.0s,mb4.7,baz=326,slow=3.7,SNR=4.7						
NVAR				pP	pP	20 07 43.9	+4.7
	comp=Z,21nm,1.2s,baz=317,slow=3.6,SNR=6.5						
NVAR	Mina Array Bea	83.06	31	P	P	20 07 37.7	+1.7
NVAR				pP	pP	20 07 43.9	+4.7
MNV	Mina	83.11	30	eP	P	20 07 38.3	+2.1
MNV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
MNV	Mina	83.11	30	eP	P	20 07 38.3	+2.1
	comp=Z,7.0nm,1.1s,mb4.6						
MSU	Marysvale	84.76	26	eP	P	20 07 46.7	+2.2
FORT	Forrest	86.01	157	eP	P	20 07 49.6	-1.3
	comp=Z,410nm,0.7s						
WMOK	Wichita Mounta	91.38	17	eP	P	20 08 17.9	+1.6
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
WMOK	Wichita Mounta	91.38	17	eP	P	20 08 17.9	+1.6
	comp=Z,5.5nm,0.9s,mb4.9						
TXAR	Lajitas Array	95.62	22	LR	LR	20 57 37.1	
	comp=Z,79nm,19.7s,MS4.2,baz=335,slow=39						
VNA2	Neumayer--Watz	144.33	212	⇓i	PKPbc	20 14 51.5	+8.0
VNA2	Neumayer--Watz	144.33	212	⇓iP	PKPbc	20 14 43.2	-0.3
VNA2				⇓iP		20 14 51.5	
VNA3	Neumayer Olymp	145.10	212	⇑i	PKPbc	20 14 53.6	+7.9
VNA3	Neumayer Olymp	145.10	212	⇓iP	PKPbc	20 14 44.7	-1.0
VNA3				⇑iP		20 14 53.6	

IGQ 23 20:01:37.2, 1.26S×81.51W, h4^{km}±5^{km}, mb4.3, 1C-2D, Error ellipse: s-maj=7.7km s-min=3.5km az=175.0, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.98	78	P	Pb	20 01 55.3	-1.1
SALI	Salinas	1.06	151	P	Pb	20 01 56.8	-0.8
SALI				S	Sb	20 02 11.2	-0.4
IGUA	Igualata	2.88	95	P	Pn	20 02 25.4	+0.8
IGUA				S	Sn	20 03 00.3	+0.2
JUIV	Juive	3.04	93	P	Pn	20 02 29.1	+2.0
ARRY	Arrayan	3.06	95	P	Pn	20 02 27.7	+0.5
JUA2	San Juan 2	3.08	70	P	Pn	20 02 28.7	+1.1
JUA2				S	Sn	20 03 07.4	+2.1
NAS1	Nasa	3.09	78	P	Pn	20 02 29.7	+2.0
TERV	Terraza Guagua	3.09	70	P	Pn	20 02 28.9	+1.1
RUN2	Runtun	3.10	93	P	Pn	20 02 30.0	+2.2
PINO	Pino	3.10	69	P	Pn	20 02 28.6	+0.8
ULBA	Ulba	3.10	94	P	Pn	20 02 29.2	+1.3
PISA	Pisayambo	3.13	86	P	Pn	20 02 30.0	+1.8
YANA	Yana	3.15	69	⇓P	Pn	20 02 29.0	+0.6
VC1	Cotopaxi 1	3.16	79	P	Pn	20 02 31.1	+2.4
TAMB	Tambo	3.19	80	⇑P	Pn	20 02 31.8	+2.7
ANTI	Antisana	3.44	77	⇓P	Pn	20 02 34.6	+1.9
COTA	Cotacachi	3.54	63	P	Pn	20 02 35.2	+1.1
CAYR	Refugio Cayamb	3.72	70	P	Pn	20 02 39.3	+2.7
ELAGU	Cayambe Volc	3.72	71	P	Pn	20 02 39.4	+2.7
CAYA	Cayambe	3.75	69	P	Pn	20 02 39.4	+2.3
ECEN	Cerro Negro	4.09	60	P	Pn	20 02 43.1	+1.1

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*IDC **23** 20:03:22.3±0.7, 6.31S×150.84E, mb4.2/8, mb1 4.4/10, mb1mx4.4/13, mbtmp4.2/10, ML3.6/2, MS3.7/8, Ms1 3.7/8, ms1mx3.5/19, Error ellipse: s-maj=30.1km s-min=17.0km az=119.0*

*NEIC **23** 20:03:24.0±0.5, 6.27S×150.73E, h10^{km}, mb5.1/8, Error ellipse: s-maj=16.6km s-min=8.6km az=123.0*

ISC 23 20:03:29.1±2.8**, 6.3S**±0.1×**150.6E**±0.1**, h59^{km}**±24^{km}**, n30, σ0ˢ88**/26**, mb4.4**/13**, MS3.7**/6**, 3D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.54	228	Pn	P	20 04 37.5	+0.4
	19nm,0.3s,baz=64,slow=7.5,SNR=93						
PMG				Sn	S	20 05 29.5	+0.4
	16nm,0.3s,baz=141,slow=15,SNR=9.4						
PMG				LR	LR	20 06 25.2	
	comp=Z,542nm,20.4s,baz=158,slow=38						
CTA	Charters Tower	14.29	197	Pn	P	20 06 48.9	-1.1
	0.2nm,0.3s,baz=28,slow=15,SNR=4.8						
CTA				LR	LR	20 11 53.8	
	comp=Z,212nm,18.6s,baz=33,slow=36						
CTA	Charters Tower	14.29	197	Pn	P	20 06 48.9	-1.1
CTA				LR	LR	20 11 53.8	
KAKA	Kakadu	18.95	249	eP	P	20 07 47.5	-0.8
	30nm,0.6s						
WRAB	Tennant Creek	20.75	228	eP	P	20 08 06.8	-0.6
	85nm,0.7s						
WRA	Warramunga Arr	20.76	228	P	P	20 08 07.1	-0.4
	50nm,0.5s,baz=52,slow=11,SNR=140						
WRA				ScP		20 15 53.1	
	4.4nm,1.1s,baz=42,slow=2.5,SNR=11						
ASAR	Alice Springs	23.52	221	P	P	20 08 35.8	+1.0
	27nm,0.6s,mb4.9,baz=55,slow=8.9,SNR=192						
ASAR				ScP		20 16 00.3	
	1.8nm,0.7s,baz=52,slow=2.7,SNR=11						
ASAR				LR	LR	20 17 29.0	
	comp=Z,94nm,20.1s,MS3.2,baz=35,slow=36						
ASPA	Alice Springs	23.52	221	⇓iP	P	20 08 35.7	+0.8
ARMA	Armidale	23.98	178	eP	P	20 08 40.9	+1.8
STKA	Stephens Creek	26.75	197	eP	P	20 09 03.9	-1.5
	32nm,0.8s,mb4.9						
STKA	Stephens Creek	26.75	197	P	P	20 09 04.3	-1.1
	40nm,0.8s,mb5.0,baz=8.6,slow=8.1,SNR=26						
STKA				LR	LR	20 20 07.0	
	comp=Z,151nm,19.9s,MS3.5,baz=21,slow=37						
FITZ	Fitzroy Crossi	26.97	242	⇓iP	P	20 09 07.6	+0.1
	34nm,0.6s,mb5.0						
FORT	Forrest	32.20	218	eP	P	20 09 53.1	-0.8
	726nm,0.7s						
MBWA	Marble Bar	33.28	241	eP	P	20 10 03.2	-0.1
	17nm,1.0s,mb4.9						
CBIJ	Chichi jima	34.21	347	LR	LR	20 21 44.1	
	comp=Z,182nm,20.1s,MS3.8,baz=128,slow=32						
KLBR	Kellerberrin	39.63	226	⇓iP	P	20 10 56.5	-0.4
	153nm,0.7s						
JHJ	Hachijo jima 2	40.55	346	LR	LR	20 28 12.7	
	comp=Z,66nm,18.0s,MS3.5,baz=157,slow=37						
MUN	Mundaring	40.96	227	eP	P	20 11 08.3	+0.5
	15nm,0.9s,mb4.6						
CMAR	Chiang Mai Arr	56.54	297	P	P	20 13 09.6	+1.3
	0.3nm,0.5s,mb3.6,baz=129,slow=5.8,SNR=3.4						
HIA	Hailar	61.56	338	eP	P	20 13 47.0	+4.4
	9.7nm,0.6s,mb5.1						
SONM	Songino Array	66.46	329	P	P	20 14 14.8	+0.2
	0.7nm,0.8s,mb3.7,baz=153,slow=3.2,SNR=8.1						
SONM				pP	pP	20 14 20.7	-10
	2.5nm,0.6s,baz=148,slow=4.7,SNR=16						
ZAL	Zalesovo	81.21	327	P	P	20 15 39.4	-0.7
	1.1nm,0.7s,mb3.9,baz=357,slow=5.0,SNR=5.7						
ZAL				LR	LR	20 52 11.2	
	comp=Z,60nm,19.7s,MS4.0,baz=287,slow=36						
ILAR	Eielson Array	84.42	22	P	P	20 15 54.0	-2.2
	1.1nm,0.9s,mb4.0,baz=250,slow=5.0,SNR=11						
ILAR				LR	LR	20 53 19.6	
	comp=Z,56nm,19.0s,MS4.0,baz=360,slow=36						
YBH	Yreka Blue Hor	91.74	48	P	P	20 16 32.3	+0.5
	1.6nm,0.9s,mb4.4,baz=320,slow=3.1,SNR=3.9						
NVAR	Mina Array Bea	94.78	52	P	P	20 16 46.6	+0.8
	0.9nm,0.7s,mb4.3,baz=256,slow=4.8,SNR=4.5						
YKA	Yellowknife Ar	97.82	28	P	P	20 16 59.2	+0.2
	1.1nm,1.0s,mb4.4,baz=268,slow=4.7,SNR=11						
YKA	Yellowknife Ar	97.82	28	P	P	20 16 59.2	+0.2
PDAR	Pinedale Array	101.53	48	P	P	20 17 15.8	-0.5
	0.5nm,0.8s,baz=270,slow=1.5,SNR=4.3						
GERES	GERESS Array B	124.16	327	PKP	PKPdf	20 22 23.0	+1.6
	1.3nm,0.8s,baz=90,slow=1.3,SNR=5.9						
BDFB	Brasilia	151.44	140	PKPbc	PKPdf	20 23 18.8	+7.6
	5.6nm,0.7s,baz=27,slow=1.0,SNR=8.6						
BDFB				pPKPbc		20 23 27.0	
	4.4nm,0.8s,baz=193,slow=3.4,SNR=4.0						

MAN 23 20:05:58.9, 6.05N×123.31E, h37^{km}, mb4.4, ML3.3, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	Zamboanga City	1.52	306	⇓eP	P	20 06 24.5	+0.4
ZMPH				i S	S	20 06 43.0	0.0
PAGZ	Pagadian	1.79	2	eP	P	20 06 28.0	+0.2
PAGZ				eS	S	20 06 47.9	-1.6
IPIL	Ipil	1.87	337	eP	P	20 06 30.2	+1.1
IPIL				eS	S	20 06 51.7	0.0
BUKP	Musuan	2.52	44	eP	P	20 06 38.7	+0.4
BUKP				eS	S	20 07 08.3	+0.3
MATI	Mati	3.06	73	eP	P	20 06 45.5	-0.6
ENPP	El Nido	6.40	323	eP	P	20 07 32.8	-0.3

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*BJI **23** 20:15:20.8, 34.95N×24.28E, h26^{km}, mB5.5, mb4.8, Ms5.2, Msz4.6*

*MOS **23** 20:15:20.3±1.2, 34.86N×24.66E, h10^{km}, mb4.4/33, Error ellipse: s-maj=6.8km s-min=3.4km az=112.0*

*HLW **23** 20:15:20.3, 35.31N×24.66E, h33^{km}, Mb4.0*

*CSEM **23** 20:15:21.3±0.1, 34.87N×24.68E, h15^{km}, mb4.4/34, Ms3.7, Error ellipse: s-maj=2.0km s-min=1.1km az=36.0*

*ATH **23** 20:15:22.5, 35.02N×24.62E, h19^{km}±2^{km}, MD4.0/20, ML4.0*

*IDC **23** 20:15:22.9±1.7, 35.05N×24.71E, h12^{km}±9^{km}, mb4.2/16, mb1 4.4/25, mb1mx4.3/33, mbtmp4.3/25, ML4.2/7, MS3.6/4, Ms1 3.6/4, ms1mx2.9/32, Error ellipse: s-maj=17.1km s-min=14.7km az=56.0*

*ZUR_RM **23** 20:15:22, 34.91N×24.72E, h18^{km}, Mw4.3/8, Moment Tensor Solution. s8 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.36; $M_{\theta\theta}$3.11; $M_{\phi\phi}$-2.75; $M_{r\theta}$0.07; $M_{\theta\phi}$-0.58; $M_{\phi r}$-0.15; Best double couple: $M_0$2.99×10^{15} NP1:ϕ_s321°,δ89°,λ-3°. NP2:ϕ_s51°,δ87°,λ-179°. Principal axes: T 3.166, Plg1°, Azm6°; N -.351, Plg86°, Azm119°; P -2.815, Plg3°, Azm276°;*

*NEIC **23** 20:15:22.5±0.3, 34.91N×24.72E, h10^{km}, mb4.2/50, ML3.9(ATH) Error ellipse: s-maj=5.6km s-min=3.4km az=193.0*

ISC 23 20:15:20.6±0.9**, 34.88N**±0.02×**24.72E**±0.02**, h10^{km}**±6^{km}**, n301, σ1ˢ14**/311**, mb4.4**/55**, MS3.6**/4**, 3C-7D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	Anoyia	0.43	19	Pg	Pg	20 15 28.9	-0.5
	617nm,0.3s,baz=213,slow=17,SNR=2157						
IDI				Lg		20 15 33.6	
	2μm,0.3s,baz=314,slow=22,SNR=96						
GVD	Gavdhos	0.52	266	ePB	Pb	20 15 32.0	+0.6
VAM	Vamos	0.68	321	⇑iPN	Pn	20 15 32.3	-3.7
VAM				eSN	Sn	20 15 40.6	-6.1
XRY	Khrisi	0.80	90	ePN	Pn	20 15 39.5	+1.7
NPS	Neapolis	0.83	62	ePB	Pb	20 15 38.1	+1.4
NPS				eSN	Sn	20 15 51.3	+0.8
NPS	Neapolis	0.83	62	eP	Pb	20 15 38.1	+1.4
NPS				eS	Sb	20 15 51.5	+3.9
SANT	Santorini	1.61	22	eP	Pn	20 15 49.1	-0.2
SANT	Santorini	1.61	22	eP	Pn	20 15 49.1	-0.2
KYTH	Kithira	1.96	316	ePN	Pn	20 15 55.0	+0.7
KARP	Karpathos	2.11	71	ePB	Pb	20 15 59.2	+0.6
APE	Apeiranthos	2.29	17	ePB	Pb	20 15 58.5	-3.1
APE	Apeiranthos	2.29	17	ePg	Pg	20 16 01.9	-4.3
VLI	Veliai	2.34	322	⇓iPB	Pb	20 15 59.6	-2.9
NAIG	Nisos Aigina	3.04	341	ePN	Pn	20 16 10.5	+0.7
ARG	Arkhangelos	3.08	63	ePB	Pb	20 16 14.8	-0.4
BDRM	Kayabasi	3.11	45	i P	Pn	20 16 12.0	+1.3
ATH	Athens Observa	3.19	346	ePN	Pn	20 16 12.4	+0.4
ITM	Ithomi	3.23	316	ePB	Pb	20 16 13.8	-3.9
PTL	Penteli	3.24	348	ePN	Pn	20 16 12.5	-0.1
SMG	Samos	3.30	31	ePB	Pb	20 16 17.4	-1.6
MGER	Gerania Oros	3.32	340	ePN	Pn	20 16 13.5	-0.2

MPAR	Parnis Oros	3.36	347	*e*PN	Pn	20 16 14.5	+0.1
SLUM		3.40	173	P	Pn	20 16 17.1	+2.2
SLUM				S	Sn	20 16 58.8	+3.0
SLUM		3.40	173	P	Pn	20 16 17.1	+2.2
SLUM				S	Sn	20 16 58.8	+3.0
AYDN	Tasoluk	3.77	42	*i* P	Pn	20 16 24.2	+4.1
LKR	Lokris	4.01	340	*e*PN	Pn	20 16 23.5	-0.1
KDAG	Bornova	4.07	29	*i* P	Pn	20 16 26.1	+1.7
KSL	Kastellorizon	4.17	71	*e*PN	Pn	20 16 28.5	+2.7
HMAT	Matruh	4.27	151	P	Pn	20 16 28.9	+1.7
HMAT				S	Sn	20 17 18.1	+0.3
AOS	Alonnisos	4.34	351	*e*P	Pn	20 16 28.3	+0.1
DNZL	Cakiroluk	4.48	50	*i* P	Pn	20 16 32.8	+2.5
AGG	Agios Georgios	4.56	336	*e*P	Pn	20 16 31.2	-0.1
NEO	Neokhori	4.58	345	*e*PN	Pn	20 16 31.4	-0.3
XOR	Xorichti	4.64	345	*e*P	Pn	20 16 33.2	+0.7
EVR	Evrytania	4.66	331	*e*PN	Pn	20 16 33.5	+0.7
AYVA	Ayvalik	4.70	19	*i* P	Pn	20 16 34.6	+1.3
MANT	Manisa	4.75	39	*i* P	Pn	20 16 36.6	+2.6
DABA	Dabaa	4.88	141	P	Pn	20 16 37.5	+1.5
PAIG	Paliouri	5.11	351	*e*P	Pn	20 16 39.3	+0.2
OUR	Ouranopolis	5.48	354	*e*P	Pn	20 16 45.3	+0.9
LIT	Litokhoron	5.51	342	*e*P	Pn	20 16 44.6	-0.1
BTOK	Tokmak	5.54	27	*i* P	Pn	20 16 44.9	-0.4
PLG	Polygyros	5.58	350	*e*PN	Pn	20 16 45.4	-0.4
SWA2		5.65	173	⇓P	Pn	20 16 48.2	+1.4
SWA1		5.66	171	⇓P	Pn	20 16 48.3	+1.4
SWA1				S	Sn	20 17 53.1	+0.3
IGT	Igoumenitsa	5.82	324	*e*P	Pn	20 16 48.3	-0.9
SOH	Sokhos	6.03	350	*e*P	Pn	20 16 52.6	+0.5
ALN	Alexandroupoli	6.10	10	*e*P	Pn	20 16 53.7	+0.5
SRS	Serrai	6.29	352	*e*P	Pn	20 16 56.1	+0.3
ULDT	Uludag	6.32	32	*i* P	Pn	20 16 48.6	-7.6
KNT	Kendrikon	6.44	348	*e*P	Pn	20 16 58.4	+0.5
FNA	Florina	6.46	337	*e*P	Pn	20 16 58.0	-0.2
FNA	Florina	6.46	337	*e*P	Pn	20 16 58.0	-0.2
NVR	Nevrokopi	6.50	354	*e*PN	Pn	20 16 58.8	+0.1
ESKT	Eskisehir	6.74	45	*i* P	Pn	20 16 59.3	-2.9
MMB	Musomiste	6.75	354	P	Pn	20 17 02.0	-0.2
RZN	Rozhen	6.80	360	P	Pn	20 17 04.0	+1.0
CSS	Prodhromos	7.08	87	*e*P	Pn	20 17 05.9	-1.0
	19nm,0.7s						
CSS	Prodhromos	7.08	87	*e*P	Pn	20 17 05.9	-1.0
	19nm,0.7s						
KKB	Krupnik	7.10	350	P	Pn	20 17 06.0	-1.1
HMYD	Mayadein	7.22	133	P	Pn	20 17 09.5	+0.6
HMYD				S	Sn	20 18 28.1	-3.7
HNAT	Natroun	7.23	135	P	Pn	20 17 09.1	+0.1
HNAT				S	Sn	20 18 28.8	-3.2
SKO	Skopje	7.54	341	*e*Pn	Pn	20 17 14.0	+0.7
PGB	Panagyurishte	7.67	357	*e*P	Pn	20 17 15.0	-0.2
VTS	Vitosha	7.79	352	*e*P	Pn	20 17 17.0	+0.1
VTS	Vitosha	7.79	352	⇓P	Pn	20 17 16.7	-0.2
HSAF	As Saff	7.81	130	P	Pn	20 17 16.8	-0.3
MEST	Erdemli	7.85	75	*i* P	Pn	20 17 17.8	0.0
GLL	Jalalah	7.93	130	P	Pn	20 17 18.4	-0.5
HHAG	Hagoal	7.94	126	P	Pn	20 17 18.2	-0.7
HHAG				S	Sn	20 18 44.5	-5.3
AMAG	Maghara	8.30	118	P	P	20 17 22.5	-1.5
SUZ		8.50	124	P	P	20 17 25.8	-1.0
BRTR	Keskin Array B	8.60	53	Pn	P	20 17 29.8	+1.7
	0.4nm,0.3s,baz=228,slow=13,SNR=16						
ZAF		8.67	128	P	P	20 17 28.3	-0.8
VAE	Valguarnera	8.73	290	Sn	Sn	20 19 05.5	-3.9
	1.8nm,0.3s,baz=84,slow=9.2,SNR=3.2						
OFRI	‘Ofer	8.84	102	Pn	P	20 17 31.5	0.0
HNTI	Hanita	8.87	99	Pn	P	20 17 31.4	-0.4
SLTI	Sal’it	9.01	104	Pn	P	20 17 33.2	-0.6
KZIT	Kziot	9.05	113	Pn	P	20 17 34.1	-0.3
KZIT				Sn	Sn	20 19 10.6	-6.8
RTMM	Retamin	9.20	112	Pn	P	20 17 35.7	-0.8
HNKL	Nakhl	9.25	120	P	P	20 17 36.0	-1.2
KSHT	Keshet	9.41	98	Pn	P	20 17 38.6	-0.7
DRGI	Dragot	9.52	107	Pn	P	20 17 39.9	-1.0
MZDA	Masada	9.61	109	Pn	P	20 17 41.2	-0.9
MZDA				Sn	Sn	20 19 24.8	-6.5
ZFRI	Zfri	9.81	113	Pn	P	20 17 44.0	-0.8
MBH	Mount Berech	10.00	118	Pn	P	20 17 47.2	-0.3
TR2		10.04	128	P	P	20 17 46.7	-1.3
EIL	Elat	10.10	118	Pn	P	20 17 48.3	-0.5
	1.7nm,0.3s,baz=327,slow=15,SNR=23						
EIL				Sn	S	20 19 37.1	-6.1
	2.3nm,0.3s,baz=320,slow=17,SNR=5.7						
EIL	Elat	10.10	118	*e*P	P	20 17 48.0	-0.9
	14nm,0.4s						
EIL	Elat	10.10	118	*e*P	P	20 17 48.0	-0.8
	14nm,0.4s						
HKAT	Jabal Katrina	10.12	126	P	P	20 17 48.4	-0.7
HBST	Basata	10.20	121	P	P	20 17 49.3	-0.9
TR1		10.44	128	P	P	20 17 52.7	-0.9
ASF	Jabal al Asfar	10.52	101	Pn	P	20 17 58.3	+3.7
	1.2nm,0.3s,baz=145,slow=7.8,SNR=6.0						
ASF				Sn	S	20 19 57.1	+3.5
	0.5nm,0.3s,baz=228,slow=16,SNR=3.9						
MLR	Muntele Rosu	10.64	5	Pn	P	20 17 55.3	-0.9
	0.2nm,0.3s,baz=161,slow=10,SNR=6.3						
MLR	Muntele Rosu	10.64	5	⇓P	P	20 17 55.1	-1.2
HHRG	Al Ghardaqah	10.76	133	P	P	20 17 57.5	-0.4
HHRG				S	S	20 19 52.6	-6.9
HHRG	Al Ghardaqah	10.76	133	P	P	20 17 57.5	-0.4
BZS	Buzias	10.98	349	⇑P	P	20 17 59.4	-1.5
VRI	Vrincioaia	11.08	7	⇑P	P	20 18 00.9	-1.4
MALT	Malatya	11.54	69	P	P	20 18 04.7	-3.8
MALT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MALT	Malatya	11.54	69	P	P	20 18 04.7	-3.9
	comp=Z,7.0nm,0.9s						
BURAR	Bucovina Array	12.73	2	⇓P	P	20 18 28.7	+4.1
PGF	Pioggiola	14.45	307	*e*P	P	20 18 46.1	-1.1
VRAC	Vranov	15.62	340	Pn	P	20 19 04.9	+2.6
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=5.7						
OKC	Ostrava-Krasne	15.71	344	*e*P	P	20 19 06.4	+2.9
MORC	Moravsky Berou	15.79	343	*e*P	P	20 19 03.0	-1.6
MORC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MORC	Moravsky Berou	15.79	343	*e*P	P	20 19 03.0	-1.6
	comp=Z,3.6nm,0.7s						
MORC	Moravsky Berou	15.79	343	*e*P	P	20 19 03.0	-1.6
	comp=Z,3.6nm,0.7s						
SBF	Sospel	16.07	309	*e*P	P	20 19 06.8	-1.5
AKASG	Malin Array Be	16.15	10	P	P	20 19 10.5	+1.3
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKASG	Malin Array Be	16.15	10	Pn	P	20 19 10.4	+1.2
	comp=Z,3.5nm,0.3s,baz=202,slow=10,SNR=17						
GEC2	GERESS Array S	16.16	333	*e*P	P	20 19 12.9	+3.5
GERES	GERESS Array B	16.16	333	P	P	20 19 09.7	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	GERESS Array B	16.16	333	Pn	P	20 19 09.7	+0.3
	comp=Z,0.9nm,0.3s,baz=150,slow=11,SNR=39						
DAVOX	Davos	16.32	321	Pn	P	20 19 12.1	+0.7
	baz=148,slow=19						
KHC	Kasperske Hory	16.45	333	*e*P	P	20 19 13.6	+0.6
KHC				*e*		20 19 16.0	
KHC	Kasperske Hory	16.45	333	*e*P	P	20 19 13.6	+0.6
KHC				pP		20 19 16.0	
KIV	Kislovodsk	16.55	51	P	P	20 19 19.3	+4.9
	comp=Z,133nm,0.6s,SNR=8.0						
KIV	Kislovodsk	16.55	51	*e*P	P	20 19 18.9	+4.5
KIV				pmax	pmax		
	comp=Z,13nm,0.6s						
KIV	Kislovodsk	16.55	51	*e*P	P	20 19 18.9	+4.5
	comp=Z,13nm,0.6s						
DPC	Dobruska-Polom	16.63	341	*e*P	P	20 19 17.2	+1.8
WET	Wettzell	16.72	332	*e*P	P	20 19 18.8	+2.3
WET				pmax	pmax		
	comp=Z,22nm,1.0s						
WET	Wettzell	16.72	332	*e*P	P	20 19 18.8	+2.3
	comp=Z,22nm,1.0s						
GNI	Garni	16.73	66	*e*P	P	20 19 17.4	+0.8
GNI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GNI	Garni	16.73	66	Pn	P	20 19 20.3	+3.7
	comp=Z,0.8nm,0.3s,baz=334,slow=4.3,SNR=8.5						
GNI	Garni	16.73	66	*e*P	P	20 19 17.4	+0.8
	comp=Z,5.6nm,0.6s						
PRU	Pruhonice	16.84	337	*e*P	P	20 19 19.1	+1.1
UPC	Upice	16.86	341	*e*P	P	20 19 21.6	+3.4
MBDF	Montbardon	16.91	311	*e*P	P	20 19 17.4	-1.4
	comp=Z,14nm,0.7s						
MBDF	Montbardon	16.91	311	*e*P	P	20 19 17.4	-1.4
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TI2	Plekhanov	17.13	61	*e*P	P	20 19 25.4	+3.7
PVCC	Panska Ves	17.30	338	*e*P	P	20 19 24.9	+1.1
LPG	La Plagne	17.31	313	*e*P	P	20 19 22.7	-1.2
	comp=Z,6.9nm,0.8s						
LPG	La Plagne	17.31	313	*e*P	P	20 19 22.7	-1.2
LPG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPL	La Plagne	17.33	313	*e*P	P	20 19 23.3	-0.9
	comp=Z,5.0nm,0.7s						
LPL	La Plagne	17.33	313	*e*P	P	20 19 23.3	-0.9
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOTT	Nottersdorf	17.55	332	*e*P	P	20 19 28.5	+1.6
	comp=Z,6.0nm,0.9s						
ORIF	Oris-en-Rattie	17.55	310	*e*P	P	20 19 24.9	-2.1
	comp=Z,16nm,1.0s						
ORIF	Oris-en-Rattie	17.55	310	*e*P	P	20 19 24.9	-2.1
ORIF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NKC	Novy Kostel	17.77	333	*e*P	P	20 19 33.0	+3.4
BRG	Berggiesshubel	17.80	337	*e*P	P	20 19 31.0	+1.0
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
BRG	Berggiesshubel	17.80	337	P	P	20 19 31.0	+1.0
	comp=Z,18nm,1.4s						
GRA1	Grafenberg Arr	17.81	330	*e*P	P	20 19 31.2	+1.0
	comp=Z,40nm,1.1s						
GRF	Grafenberg Arr	17.81	330	*e*P	P	20 19 31.2	+1.0
GRF				pmax	pmax		
	comp=Z,40nm,1.1s						
GRF				MLR	MLR		
	comp=Z,400nm,18.6s						
GRF	Grafenberg Arr	17.81	330	*e*P	P	20 19 31.2	+1.0
GRF				pmax	pmax		
	comp=Z,40nm,1.1s						
GRF	Grafenberg Arr	17.81	330	*e*P	P	20 19 31.2	+1.0
	comp=Z,40nm,1.1s						
TANN	Tannenbergstha	17.92	334	*e*P	P	20 19 33.1	+1.7
	comp=Z,10.0nm,1.2s						
WERD	Werda	18.00	334	*e*P	P	20 19 32.9	+0.4
	comp=Z,44nm,2.0s						
VIVF	Saint-Julien-l	18.29	309	*e*P	P	20 19 34.7	-1.4
CABF	La Chapelle	18.30	315	*e*P	P	20 19 33.9	-2.3
	comp=Z,7.2nm,0.6s						
CABF	La Chapelle	18.30	315	*e*P	P	20 19 33.9	-2.3
CABF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MOX	Moxa	18.42	333	*i* P	P	20 19 39.0	+1.3
MOX	Moxa	18.42	333	*e*P	P	20 19 39.0	+1.3
	comp=Z,5.0nm,1.1s						
CLL	Collm	18.48	336	*e*P	P	20 19 38.0	-0.4
CLL				pmax	pmax		
	comp=Z,14nm,1.0s						
CLL	Collm	18.48	336	*e*P	P	20 19 38.0	-0.4
	comp=Z,14nm,1.0s						
CLL				*e*		20 19 49.0	
CLL	Collm	18.48	336	P	P	20 19 38.0	-0.4
	comp=Z,logA/T=1.1						
CLL				*e*		20 19 49.0	
CLL	Collm	18.48	336	*e*P	P	20 19 38.5	+0.1
	comp=Z,12nm,0.9s						
LASF	Ste Croix	18.50	306	*e*P	P	20 19 37.3	-1.4
	comp=Z,38nm,1.1s						
HINF	Hinteralfeld	18.57	320	*e*P	P	20 19 37.7	-1.9
CDF	Champ du Feu	18.72	322	*e*P	P	20 19 41.4	0.0
HAU	Haudompre	18.96	319	*e*P	P	20 19 43.5	-0.7
	comp=Z,10nm,0.7s						
HAU	Haudompre	18.96	319	*e*P	P	20 19 43.5	-0.7
HAU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MTLF	Montolieu	19.36	303	*e*P	P	20 19 47.9	-1.1
SMF	Signal de Mont	19.64	313	*e*P	P	20 19 50.7	-1.5
	comp=Z,12nm,0.7s						
SMF	Signal de Mont	19.64	313	*e*P	P	20 19 50.7	-1.5
SMF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NAY	Al-Naaiem	19.88	100	*e*P	P	20 19 55.4	+0.4
MEZF	Maizieres J’vi	19.95	319	*e*P	P	20 19 54.6	-1.0
	comp=Z,28nm,0.8s						
AVF	Avril sur Loir	20.00	313	*e*P	P	20 19 56.0	-0.2
	comp=Z,12nm,1.0s						
AVF	Avril sur Loir	20.00	313	*e*P	P	20 19 56.0	-0.2
AVF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CAF	Calviac	20.01	307	*e*P	P	20 19 55.8	-0.5
SSF	Saint Saulge	20.04	314	*e*P	P	20 19 55.7	-0.9
SSF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSF	Saint Saulge	20.04	314	*e*P	P	20 19 55.7	-0.9
	comp=Z,5.6nm,0.7s						
BGF	Bois d’Agland	20.20	312	*e*P	P	20 19 57.6	-0.7
	comp=Z,11nm,0.7s						
BGF	Bois d’Agland	20.20	312	*e*P	P	20 19 57.6	-0.7
BGF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
RDF	Al-Radifah	20.25	101	*e*P	P	20 20 00.2	+1.3
TCF	Toulx Ste Croi	20.47	311	*e*P	P	20 20 00.8	-0.3
RJF	Les Rejaudoux	20.51	307	*e*P	P	20 20 01.3	-0.2
	comp=Z,23nm,1.0s						
RJF	Les Rejaudoux	20.51	307	*e*P	P	20 20 01.3	-0.2
RJF				pmax	pmax		
	comp=Z,12nm,1.0s						
EPF	Esparros	20.58	301	*e*P	P	20 20 01.9	-0.4
EBIE	Bielsa	20.64	300	P	P	20 20 02.8	-0.1
	comp=Z,5.5nm,0.5s						
EBIE	Bielsa	20.64	300	P	P	20 20 02.8	0.0
	comp=Z,5.5nm,0.5s,SNR=7.9						
MEM	Membach	20.79	325	P	P	20 20 04.9	+0.5
	comp=Z,12nm,1.5s						
LFF	La Frestale	20.89	306	*e*P	P	20 20 05.8	+0.4
	comp=Z,8.6nm,0.5s						
LFF	La Frestale	20.89	306	*e*P	P	20 20 05.8	+0.4
LFF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GIVF	Givet	21.04	322	*e*P	P	20 20 06.6	-0.3
DOU	Dourbes	21.15	322	P	P	20 20 07.2	-0.8
	comp=Z,9.0nm,1.4s,mb3.9						
ETSF	Etsaut	21.19	300	*e*P	P	20 20 09.5	+1.0
BAIF	Baives	21.32	322	*e*P	P	20 20 08.7	-1.1
	comp=Z,20nm,0.7s,mb4.2						
BAIF	Baives	21.32	322	*e*P	P	20 20 08.7	-1.1
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
RAYN	Ar Rayn	21.34	116	P	P	20 20 13.1	+3.0
	comp=Z,39nm,0.7s,mb4.8,SNR=9.7						
SJPF	Ste Jean	21.71	300	*e*P	P	20 20 14.4	+0.6
	comp=Z,16nm,0.8s,mb4.2						
SJPF	Ste Jean	21.71	300	*e*P	P	20 20 14.4	+0.6
SJPF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
OBN	Obninsk	21.84	18	P	P	20 20 17.0	+2.0
ENIJ	Nijar	21.88	283	P	P	20 20 19.7	+4.2
ENIJ				pmax	pmax		
	comp=Z,25nm,0.7s,mb4.8						
ENIJ	Nijar	21.88	283	P	P	20 20 19.6	+4.1
	comp=Z,25nm,0.7s,mb4.8						
MFF	Saint Martin d	22.09	310	*e*P	P	20 20 18.5	+1.0
	comp=Z,13nm,0.6s,mb4.2						
MFF	Saint Martin d	22.09	310	*e*P	P	20 20 18.5	+1.0
MFF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
EBER	Berja	22.43	283	P	P	20 20 25.0	+4.0
	comp=Z,30nm,0.9s,mb4.7						
EQES	Quesada	22.54	286	P	P	20 20 25.5	+3.4
	comp=Z,44nm,1.4s,mb4.7						
LDF	La Druitiere	22.92	314	*e*P	P	20 20 26.5	+0.8
	comp=Z,45nm,1.2s,mb4.5						
LDF	La Druitiere	22.92	314	*e*P	P	20 20 26.5	+0.8
LDF				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.5						
EBAN	Banos Encina	23.10	287	P	P	20 20 29.6	+2.0
	comp=Z,2.6nm,0.4s,mb4.0,SNR=7.9						
FLN	La Foliniere	23.21	314	*e*P	P	20 20 28.4	-0.1
	comp=Z,56nm,1.0s,mb4.6						
FLN	La Foliniere	23.21	314	*e*P	P	20 20 28.4	-0.1
FLN				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.7						
GRR	Gorron	23.27	313	*e*P	P	20 20 29.8	+0.7
ESDC	Sonseca Array	23.27	290	P	P	20 20 30.4	+1.2
	comp=Z,6.7nm,0.7s,mb4.2,baz=81,slow=9.5,SNR=19						
ESDC	Sonseca Array	23.27	290	P	P	20 20 30.2	+1.0
	comp=Z,2.4nm,0.5s,mb3.9						
ESDC	Sonseca Array	23.27	290	P	P	20 20 30.2	+1.0
	comp=Z,2.4nm,0.5s,mb3.9,SNR=24						
ESLA	Sonseca Array	23.27	290	*e*P	P	20 20 28.8	-0.4
	comp=Z,2.6nm,0.9s,mb3.7						
ESLA	Sonseca Array	23.27	290	*e*P	P	20 20 28.8	-0.4
	comp=Z,2.6nm,0.9s,mb3.7						
ELAN	Lanestosa	23.32	299	P	P	20 20 30.2	+0.6
	comp=Z,21nm,1.2s,mb4.4,SNR=7.9						
EADA	Adamuz	23.73	287	P	P	20 20 35.9	+2.3
	comp=Z,13nm,1.2s,mb4.2						
EADA	Adamuz	23.73	287	P	P	20 20 35.9	+2.3
	comp=Z,13nm,1.2s,mb4.2,SNR=7.9						
EMIJ	Mijas	23.96	283	P	P	20 20 38.0	+2.1
	comp=Z,16nm,0.7s,mb4.5						
EMIJ	Mijas	23.96	283	P	P	20 20 38.0	+2.1
	comp=Z,16nm,0.7s,mb4.5,SNR=5.6						
SGMF	Saint Gilles	24.24	312	*e*P	P	20 20 39.0	+0.5
	comp=Z,29nm,0.9s,mb4.4						
SGMF	Saint Gilles	24.24	312	*e*P	P	20 20 39.0	+0.5
SGMF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4						
QUIF	Quistinic	24.49	311	*e*P	P	20 20 41.2	+0.3
EARI	Arriondas	24.61	299	P	P	20 20 41.3	-0.8
	comp=Z,172nm,2.1s,mb5.2						
EARI	Arriondas	24.61	299	P	P	20 20 41.3	-0.8
	comp=Z,172nm,2.1s,mb5.2,SNR=7.9						
ROSF	Rostrenen	24.71	311	*e*P	P	20 20 43.4	+0.3
	comp=Z,13nm,0.8s,mb4.2						
ROSF	Rostrenen	24.71	311	*e*P	P	20 20 43.4	+0.3
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
ESPR	Espera	24.81	284	P	P	20 20 43.9	-0.3
	comp=Z,17nm,0.8s,mb4.6						
ESPR	Espera	24.81	284	P	P	20 20 43.9	-0.2
	comp=Z,17nm,0.8s,mb4.6,SNR=7.7						
EMIN	Mina Concepcio	25.40	286	P	P	20 20 49.9	+0.2
	comp=Z,9.8nm,0.7s,mb4.5,SNR=7.9						
ECAL	Calabor	25.54	295	P	P	20 20 50.7	-0.3
	comp=Z,18nm,0.8s,mb4.7						
ECAL	Calabor	25.54	295	P	P	20 20 50.7	-0.3
	comp=Z,18nm,0.8s,mb4.6,SNR=7.9						
EBAD	Badajoz	25.63	288	P	P	20 20 52.1	+0.2
	comp=Z,6.5nm,0.7s,mb4.3						
EBAD	Badajoz	25.63	288	P	P	20 20 52.1	+0.2
	comp=Z,6.5nm,0.7s,mb4.3,SNR=7.9						
HFS	Hagfors	26.27	348	P	P	20 20 56.2	-1.4
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	Hagfors	26.27	348	P	P	20 20 56.2	-1.4
	comp=Z,2.4nm,0.6s,mb3.9,baz=149,slow=8.4,SNR=7.5						
FINES	FINESS Array B	26.60	1	P	P	20 20 58.4	-2.2
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	26.60	1	P	P	20 20 58.4	-2.3
	comp=Z,2.5nm,0.6s,mb3.9,baz=156,slow=10,SNR=18						
KAF	Kangasniemi	27.28	2	*e*p	P	20 21 02.7	-4.1
	comp=Z,5.0nm,0.7s,mb4.2						
KAF	Kangasniemi	27.28	2	*e*P	P	20 21 02.7	-4.1
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
NB2	NORSAR Subarra	27.58	346	P	P	20 21 08.5	-1.1
	comp=Z,0.8nm,0.5s,mb3.6,baz=164,slow=10						
NB2	NORSAR Subarra	27.58	346	P	P	20 21 08.5	-1.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NOA	NORSAR Array B	27.58	346	P	P	20 21 07.6	-2.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	NORSAR Array B	27.58	346	P	P	20 21 07.6	-2.0
	comp=Z,2.2nm,0.8s,mb3.8,baz=173,slow=10,SNR=6.0						
EKA	Eskdalemuir Ar	28.07	325	P	P	20 21 12.7	-1.3
EKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EKA	Eskdalemuir Ar	28.07	325	P	P	20 21 12.7	-1.3
	comp=Z,3.9nm,0.6s,mb4.2,baz=135,slow=10.0,SNR=5.8						
JOF	Joensuu	28.37	6	*e*p	P	20 21 13.4	-3.3
	comp=Z,2.3nm,0.5s,mb4.1						
JOF	Joensuu	28.37	6	*e*P	P	20 21 13.4	-3.3
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
ARCES	ARCESS Array B	34.72	0	P	P	20 22 09.6	-2.9
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,39nm,21.5s						
ARCES	ARCESS Array B	34.72	0	P	P	20 22 09.6	-2.9
	comp=Z,6.6nm,0.9s,mb4.6,baz=162,slow=7.7,SNR=12						
ARCES				LR	LR	20 38 07.3	
	comp=Z,39nm,21.5s,MS3.1,baz=194,slow=40						
ARCES	ARCESS Array B	34.72	0	P	P	20 22 09.6	-2.9
ARCES				LR	LR	20 38 07.3	
CHKZ	Chkalovo	37.07	45	*e*P	P	20 22 31.8	-0.7
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
CHKZ	Chkalovo	37.07	45	*e*P	P	20 22 31.8	-0.7
	comp=Z,4.0nm,0.6s,mb4.4						
DBIC	Dimbokro	39.11	231	P	P	20 22 50.3	+0.3
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.4s						
DBIC	Dimbokro	39.11	231	P	P	20 22 50.3	+0.2
	comp=Z,1.4nm,0.4s,mb4.1,baz=54,slow=7.9,SNR=6.3						
AAK	Ala-Archa	39.11	63	*e*P	P	20 22 50.4	+0.6
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
AAK	Ala-Archa	39.11	63	*e*P	P	20 22 50.4	+0.7
	comp=Z,4.2nm,0.7s,mb4.3						
AAK	Ala-Archa	39.11	63	*e*P	P	20 22 50.4	+0.6
	comp=Z,4.0nm,0.7s,mb4.3						
KURK	Kurchatov	41.64	51	*e*P	P	20 23 10.0	-0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
KURK	Kurchatov	41.64	51	*e*P	P	20 23 10.0	-0.5
	comp=Z,3.0nm,0.6s,mb4.1						
NVS	Novosibirsk	44.55	45	⇓*i*P	P	20 23 33.5	-0.6
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
ZAL	Zalesovo	45.45	46	P	P	20 23 40.7	-0.6
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZAL	Zalesovo	45.45	46	P	P	20 23 40.7	-0.6
	comp=Z,6.0nm,0.4s,mb4.8,baz=198,slow=6.8,SNR=30						
ZAL	Zalesovo	45.45	46	P	P	20 23 40.7	-0.6
WMQ	Urumqi	48.46	59	*e*P	P	20 24 05.5	+0.4
KOLN	Koldanda	50.18	81	*e*P	P	20 24 18.6	0.0
	comp=Z,7.2nm,0.9s,mb4.7						
GKN	Gorkha	50.93	80	*e*P	P	20 24 24.2	-0.1
	comp=Z,9.8nm,0.7s,mb4.8						
DMN	Daman	51.47	80	*e*P	P	20 24 28.6	+0.2
	comp=Z,12nm,0.8s,mb4.9						
KKN	Kakani	51.54	80	*e*P	P	20 24 28.4	-0.5
	comp=Z,6.0nm,0.6s,mb4.7						
PKI	Pulchoki	51.73	80	*e*P	P	20 24 30.3	-0.1
	comp=Z,11nm,1.0s,mb4.8						
JIRN	Jiri	52.33	80	*e*P	P	20 24 34.9	0.0
	comp=Z,7.2nm,0.6s,mb4.8						
TSUM	Tsumeb	54.20	188	LR	LR	20 51 44.9	
	comp=Z,74nm,18.2s,MS3.8,baz=193,slow=40						
MATP	Matopo	55.11	176	P	P	20 24 57.0	+1.5
	comp=Z,2.3nm,0.7s,mb4.3,baz=358,slow=9.4,SNR=9.5						
MATP	Matopo	55.11	176	P	P	20 24 57.0	+1.5
LSA	Lhasa	55.48	75	*e*P	P	20 24 58.9	+0.8
LSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
LSA	Lhasa	55.48	75	*e*P	P	20 24 58.9	+0.8
	comp=Z,2.2nm,0.8s,mb4.2						
LSA	Lhasa	55.48	75	*e*P	P	20 24 58.9	+0.8
	comp=Z,2.0nm,0.8s,mb4.2						
ZAK	Zakamensk	57.20	48	*e*P	P	20 25 09.1	-1.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.6						
ZAK	Zakamensk	57.20	48	*e*P	P	20 25 09.1	-1.0
	comp=Z,1.0nm,1.5s,mb3.6						
GTA	Gaotai	58.42	62	*e*P	P	20 25 18.8	+0.1
GTA				AP	pP	20 25 23.3	+1.6
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
LBTB	Lobatse	59.57	179	LR	LR	20 51 23.0	
	comp=Z,47nm,18.6s,MS3.6,baz=305,slow=36						
SONM	Songino Array	59.95	50	P	P	20 25 29.2	-0.1
	comp=Z,1.6nm,0.7s,mb4.2,baz=294,slow=7.1,SNR=27						
ULN	Ulaanbaatar	60.35	50	*e*P	P	20 25 31.2	-0.8
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ULN	Ulaanbaatar	60.35	50	*e*P	P	20 25 31.2	-0.8
	comp=Z,1.8nm,0.6s,mb4.3						
ULN	Ulaanbaatar	60.35	50	*e*P	P	20 25 31.2	-0.8
	comp=Z,2.0nm,0.6s,mb4.3						
FRB	Frobisher Bay	60.73	329	P	P	20 25 32.7	-1.6

FRB				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FRB	Frobisher Bay	60.73	329	P	P	20 25 32.7	-1.6
	comp=Z,5.8nm,1.2s,mb4.6,baz=194,slow=14,SNR=4.0						
BOD	Bodaibo	60.90	38	*e*P	P	20 25 32.9	-2.7
SCHQ	Schefferville	63.17	320	P	P	20 25 49.8	-1.0
	comp=Z,6.8nm,0.6s,mb4.9,baz=67,slow=6.4,SNR=25						
SCHQ	Schefferville	63.17	320	*e*P	P	20 25 49.5	-1.3
	comp=Z,9.7nm,0.8s,mb5.0						
CMAR	Chiang Mai Arr	66.97	83	P	P	20 26 15.4	-0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	66.97	83	P	P	20 26 15.4	-0.5
	comp=Z,0.8nm,0.7s,mb3.9,baz=298,slow=7.3,SNR=4.5						
INK	Inuvik	75.85	352	P	P	20 27 07.8	-0.4
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	75.85	352	P	P	20 27 07.8	-0.5
	comp=Z,1.7nm,0.6s,mb4.2,baz=14,slow=8.1,SNR=9.9						
YKA	Yellowknife Ar	77.61	342	P	P	20 27 17.7	-0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YKA	Yellowknife Ar	77.61	342	P	P	20 27 17.7	-0.4
	comp=Z,1.5nm,0.4s,mb4.3,baz=33,slow=5.4,SNR=34						
IMA	Indian Mountai	79.37	359	*e*P	P	20 27 28.9	+1.2
IMA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
IMA	Indian Mountai	79.37	359	*e*P	P	20 27 28.9	+1.2
	comp=Z,18nm,0.9s,mb5.0						
ULM	Lac du Bonnet	80.34	326	LR	LR	21 03 02.0	
	comp=Z,73nm,19.2s,MS4.0,baz=37,slow=36						
ILAR	Eielson Array	80.46	356	P	P	20 27 34.0	+0.4
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	80.46	356	P	P	20 27 34.0	+0.4
	comp=Z,1.5nm,0.8s,mb4.0,baz=356,slow=3.5,SNR=23						
DAWY	Dawson	80.59	353	*e*P	P	20 27 34.6	+0.3
SML	Sawmill	83.49	357	*e*P	P	20 27 50.0	+0.6
WRA	Warramunga Arr	116.92	96	PKP	PKPdf	20 34 07.2	-1.8
	comp=Z,0.2nm,0.6s,baz=312,slow=1.7,SNR=5.4						
ASAR	Alice Springs	118.36	100	PKP	PKPdf	20 34 09.8	-2.0
	comp=Z,0.2nm,0.5s,baz=279,slow=0.8,SNR=4.4						

*NEIC **23** 20:20:04.3±2.1, 6.69S×150.73E, h10^{km}, mb3.8/3, Error ellipse: s-maj=45.1km s-min=24.3km az=108.0*

*IDC **23** 20:20:09.4±8.3, 6.75S×150.85E, h50^{km}±68^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.7/13, mbtmp3.9/5, ML2.2/1, Error ellipse: s-maj=60.6km s-min=32.7km az=92.0*

ISC 23 20:20:08.2±4.8**, 6.7S**±0.2×**150.8E**±0.3**, h63**^{km}±35^{km}**, n9, σ1^{s}44**/10**, mb3.8**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.47	233	P	P	20 21 14.5	-0.7
	0.9nm,0.3s,baz=346,slow=7.2,SNR=8.6						
PMG				S	S	20 22 08.1	+1.6
	1.4nm,0.3s,baz=250,slow=22,SNR=6.6						
KAKA	Kakadu	19.02	250	*e*P	P	20 24 25.1	-2.6
	1.8nm,0.5s						
WRAB	Tennant Creek	20.67	229	*e*P	P	20 24 43.4	-1.9
	4.0nm,0.7s						
WRA	Warramunga Arr	20.68	229	P	P	20 24 44.7	-0.7
	2.8nm,0.6s,baz=52,slow=11,SNR=55						
ASAR	Alice Springs	23.40	222	P	P	20 25 13.8	+1.5
	2.6nm,0.5s,mb3.9,baz=56,slow=8.9,SNR=57						
ASPA	Alice Springs	23.40	222	*e*P	P	20 25 13.4	+1.1
STKA	Stephens Creek	26.48	198	P	P	20 25 41.6	+0.1
	3.5nm,0.9s,mb3.9,baz=15,slow=9.0,SNR=4.4						
FITZ	Fitzroy Crossi	26.99	243	*e*P	P	20 25 45.0	-1.3
	2.3nm,0.6s,mb3.9						
SONM	Songino Array	66.86	329	P	P	20 30 57.6	+2.0
	0.3nm,0.4s,mb3.7,baz=146,slow=6.6,SNR=4.9						

IDC 23 20:27:38.5±3.9**, 9.77N**×**83.29W, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.4**/19**, mbtmp3.5**/2**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.5**/24**, Error ellipse: s-maj=98.8km s-min=19.3km az=7.0, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	1.72	288	Pn	Pn	20 28 10.3	+0.5
	229nm,0.3s,baz=83,slow=9.4,SNR=600						
JTS				Lg		20 28 32.5	
	358nm,0.3s,baz=315,slow=21,SNR=52						
ELK	Elko	41.84	323	LR	LR	20 54 01.4	
	comp=Z,76nm,21.3s,baz=278,slow=38						
YKA	Yellowknife Ar	57.30	343	P	P	20 37 27.7	-2.5
	0.2nm,0.6s,baz=140,slow=6.5,SNR=8.4						
ILAR	Eielson Array	70.12	336	P	P	20 38 52.5	-1.9
	0.5nm,0.6s,baz=94,slow=5.0,SNR=5.3						
WRA	Warramunga Arr	142.33	250	PKP	PKPdf	20 47 12.7	-3.1
	0.3nm,0.9s,baz=106,slow=2.7,SNR=3.2						

*IDC **23** 20:35:51.6±1.2, 26.01S×71.27E, mb4.1/5, mb1 4.3/5, mb1mx4.0/17, mbtmp4.1/5, MS3.6/2, Ms1 3.7/2, ms1mx3.1/16, Error ellipse: s-maj=42.3km s-min=25.4km az=5.0*

ISC 23 20:35:51.4±1.1**, 26.1S**±0.3×**71.3E**±0.2**, h10**^{km}**, n7, σ0^{s}02**/5**, mb4.1**/5**, MS3.6**/2**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	39.61	269	P	P	20 43 25.0	0.0
	0.6nm,0.5s,mb3.6,baz=90,slow=11,SNR=3.6						
MAW	Mawson	41.89	185	LR	LR	20 56 54.0	
	comp=Z,150nm,20.5s,MS3.9,baz=62,slow=30						
CMAR	Chiang Mai Arr	51.75	34	P	P	20 45 01.4	0.0
	3.0nm,1.1s,mb4.1,baz=219,slow=9.1,SNR=7.0						
CMAR				LR	LR	21 02 21.0	
	comp=Z,36nm,21.9s,MS3.4,baz=225,slow=31						
ASAR	Alice Springs	56.35	102	P	P	20 45 35.2	0.0
	2.7nm,0.7s,mb4.4,baz=250,slow=6.3,SNR=35						
WRA	Warramunga Arr	57.85	98	P	P	20 45 45.9	0.0
	3.6nm,0.7s,mb4.5,baz=254,slow=7.2,SNR=26						
SONM	Songino Array	80.02	23	P	P	20 48 02.5	0.0
	0.8nm,0.7s,mb3.8,baz=213,slow=4.0,SNR=12						
YKA	Yellowknife Ar	143.35	5	PKhKP		20 55 23.1	
	0.4nm,0.9s,baz=337,slow=3.3,SNR=5.1						

IDC 23 20:45:45.9±1.4**, 4.14N**×**92.91E, mb3.6**/5**, mb1 3.9**/6**, mb1mx3.7**/18**, mbtmp3.6**/6**, ML3.8**/1**, Error ellipse: s-maj=47.6km s-min=27.6km az=49.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.40	22	Pn	P	20 49 25.6	-0.8
	0.1nm,0.3s,baz=214,slow=13,SNR=5.3						
SONM	Songino Array	45.05	13	P	P	20 54 03.7	-1.6
	0.3nm,0.8s,baz=185,slow=7.4,SNR=3.4						
WRA	Warramunga Arr	47.22	122	P	P	20 54 20.9	-1.9
	0.7nm,0.6s,baz=301,slow=9.1,SNR=9.7						
ZAL	Zalesovo	50.08	354	P	P	20 54 41.7	-2.8
	1.1nm,0.5s,baz=298,slow=5.6,SNR=5.9						
BRTR	Keskin Array B	63.97	312	P	P	20 56 21.6	-1.9
	0.4nm,0.5s,baz=127,slow=6.2,SNR=4.2						
GERES	GERESS Array B	79.79	319	P	P	20 57 56.5	-1.1
	0.6nm,0.7s,baz=104,slow=5.5,SNR=6.2						

IDC 23 20:51:30.2±9.8**, 5.92S**×**150.35E, h63**^{km}±69^{km}**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/13**, mbtmp3.8**/4**, ML2.2**/1**, Error ellipse: s-maj=86.3km s-min=66.3km az=134.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.69	222	P	P	20 52 38.3	-2.0
	0.7nm,0.3s,baz=56,slow=17,SNR=3.3						
PMG				S	S	20 53 32.7	-1.3
	1.0nm,0.3s,baz=262,slow=22,SNR=4.3						
WRA	Warramunga Arr	20.89	227	P	P	20 56 07.7	-1.9
	1.5nm,0.6s,baz=52,slow=11,SNR=22						
ASAR	Alice Springs	23.70	220	P	P	20 56 36.6	-0.7
	1.3nm,0.6s,baz=55,slow=9.0,SNR=17						
STKA	Stephens Creek	27.09	197	P	P	20 57 07.2	-2.1
	3.2nm,1.0s,baz=18,slow=12,SNR=3.3						

IDC 23 21:00:38.0±12.0**, 3.79N**×**94.86E, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.5**/18**, mbtmp3.6**/3**, ML3.4**/1**, Error ellipse: s-maj=307.5km s-min=50.0km az=81.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	15.11	15	Pn	P	21 04 13.1	-1.7
	0.1nm,0.3s,baz=207,slow=11,SNR=6.8						
WRA	Warramunga Arr	45.38	123	P	P	21 08 58.6	-1.8
	1.0nm,0.6s,baz=301,slow=9.1,SNR=15						
ASAR	Alice Springs	46.81	128	P	P	21 09 09.8	-1.8
	0.5nm,0.6s,baz=301,slow=7.9,SNR=7.5						

*NEIC **23** 21:12:38.2±1.6, 14.63S×76.19W, h44^{km}±15^{km}, mb4.9/2, Error ellipse: s-maj=27.4km s-min=9.6km az=64.0*

*IDC **23** 21:12:40.2±4.4, 14.62S×76.04W, h62^{km}±42^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.7/19, mbtmp4.0/10, ML4.9/2, MS3.7/5, Ms1 3.7/5, ms1mx3.2/25, Error ellipse: s-maj=39.9km s-min=21.7km az=75.0*

ISC 23 21:12:37.4±1.7**, 14.65S**±0.09×**76.2W**±0.2**, h55**^{km}±16^{km}**, n27, σ1^{s}35**/24**, mb3.8**/7**, MS3.9**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.71	348	*e*P	P	21 13 17.6	-1.9
ARE	Arequipa	4.92	112	*e*P	P	21 13 53.0	+2.3
ARE				*e*		21 13 55.0	
ARE				*i*		21 14 57.9	
ARE				*i* S	S	21 15 04.0	+17
LPAZ	La Paz	7.99	103	P	P	21 14 33.6	+0.2
	4.0nm,0.3s,baz=292,slow=9.6,SNR=82						
LPAZ				LR	LR	21 18 05.4	
	comp=Z,354nm,21.2s,baz=287,slow=42						
LPAZ	La Paz	7.99	103	*e*P	P	21 14 33.4	+0.1
	26nm,0.5s						
LVC	Limon Verde	10.53	140	P	P	21 15 05.5	-2.9
	2.4nm,0.3s,baz=306,slow=10,SNR=25						
LVC				S	S	21 16 59.2	-6.5
	1.0nm,0.3s,baz=63,slow=20,SNR=8.0						
LVC				LR	LR	21 18 43.9	
	comp=Z,185nm,18.9s,baz=284,slow=35						
LVC	Limon Verde	10.53	140	*e*P	P	21 15 05.3	-3.0
	18nm,0.6s						
OTAV	Otavalo	14.95	351	*e*P	P	21 16 08.7	+1.6
	6.0nm,0.8s						
CFAA	Coronel Fontan	18.40	158	P	P	21 16 50.6	+0.4
	0.1nm,0.3s,baz=313,slow=12,SNR=6.0						
SDV	Santo Domingo	24.04	14	P	P	21 17 48.5	+0.1
	9.6nm,0.7s,mb4.4,baz=248,slow=11,SNR=9.4						
SDV	Santo Domingo	24.04	14	*e*P	P	21 17 48.4	0.0
	9.3nm,0.7s,mb4.3						
PLCA	Paso Flores	26.46	170	P	P	21 18 11.0	-0.1
	1.2nm,0.6s,mb3.6,baz=350,slow=11,SNR=3.3						
PLCA	Paso Flores	26.46	170	P	P	21 18 11.0	-0.1
BDFB	Brasilia	27.26	96	P	P	21 18 17.3	-1.5
	2.7nm,0.6s,mb3.9,baz=281,slow=12,SNR=4.2						
BDFB				LR	LR	21 30 07.3	
	comp=Z,424nm,18.0s,MS4.0,baz=345,slow=39						
BDFB	Brasilia	27.26	96	P	P	21 18 17.3	-1.5
BDFB				LR	LR	21 30 07.3	
RPN	Rapa Nui	33.21	243	LR	LR	21 29 31.4	
	comp=Z,100nm,21.7s,MS3.5,baz=174,slow=30						
TXAR	Lajitas Array	51.12	329	P	P	21 21 38.9	+2.0
	0.4nm,0.5s,mb3.6,baz=153,slow=8.4,SNR=6.8						
TXAR	Lajitas Array	51.12	329	P	P	21 21 38.9	+2.0
PDAR	Pinedale Array	64.81	333	P	P	21 23 13.4	+0.6
	0.7nm,1.0s,mb3.6,baz=169,slow=4.6,SNR=3.3						
PDAR	Pinedale Array	64.81	333	P	P	21 23 13.4	+0.6
ULM	Lac du Bonnet	66.89	346	P	P	21 23 23.9	-1.9
	0.8nm,0.3s,mb4.2,baz=172,slow=7.1,SNR=3.2						
SNAA	Sanae	70.98	161	*e*P	P	21 23 51.0	+0.3
	22nm,0.6s						
DBIC	Dimbokro	73.87	79	LR	LR	21 55 24.8	
	comp=Z,76nm,18.9s,MS4.0,baz=313,slow=35						
YKA	Yellowknife Ar	82.54	343	P	P	21 24 55.0	-0.4
	0.3nm,0.5s,mb3.6,baz=140,slow=5.6,SNR=6.3						
YKA	Yellowknife Ar	82.54	343	P	P	21 24 55.0	-0.4
ZAL	Zalesovo	138.07	17	PKP	PKPdf	21 31 58.5	+2.4
	0.9nm,0.8s,baz=138,slow=1.1,SNR=3.7						
ZAL	Zalesovo	138.07	17	PKP	PKPdf	21 31 58.5	+2.4
SONM	Songino Array	146.84	357	PKPbc	PKPbc	21 32 15.9	+2.8
	1.0nm,0.6s,baz=330,slow=2.5,SNR=13						

*NEIC **23** 21:21:00.9±3.8, 22.15S×179.57W, h565^{km}±43^{km}, mb4.4/8, Error ellipse: s-maj=27.2km s-min=15.1km az=225.0*

*IDC **23** 21:21:01.2±5.0, 22.19S×179.55W, h566^{km}±55^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.5/17, mbtmp4.5/9, Error ellipse: s-maj=33.4km s-min=23.5km az=53.0*

ISC 23 21:20:58.8±3.7**, 22.0S**±0.1×**179.6W**±0.2**, h550**^{km}±45^{km}**, n22, σ0^{s}93**/22**, mb4.2**/12**, 7D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.42	189	P	P	21 24 21.0	-0.7
	2.1nm,0.3s,baz=277,slow=3.2,SNR=7.2						
URZ				S	S	21 27 06.9	+1.3
	1.3nm,0.3s,baz=356,slow=21,SNR=7.1						
CNB	Canberra Magne	30.13	237	⇓*i*P	P	21 26 26.8	+1.1
	156nm,0.6s						
CTA	Charters Tower	31.88	267	⇓*i*P	P	21 26 41.7	+1.1
	6.6nm,0.6s,mb4.3						
CTA	Charters Tower	31.88	267	P	P	21 26 41.7	+1.0
	6.9nm,0.4s,mb4.5,baz=92,slow=10,SNR=19						
CTAO	Charters Tower	31.88	267	*e*P	P	21 26 41.3	+0.6
	8.9nm,0.6s,mb4.5						
TOO	Toolangi	33.79	235	⇓*i*P	P	21 26 57.1	+0.5
	0.5nm,0.6s						
PMG	Port Moresby	34.27	286	P	P	21 27 02.2	+1.5
	7.8nm,0.6s,mb4.4,baz=129,slow=4.6,SNR=6.2						
STKA	Stephens Creek	35.78	246	⇓*i*P	P	21 27 13.9	+0.7
	7.4nm,0.6s,mb4.4						
STKA	Stephens Creek	35.78	246	P	P	21 27 13.8	+0.6
	8.8nm,0.5s,mb4.5,baz=97,slow=10,SNR=25						
ASAR	Alice Springs	42.72	259	P	P	21 28 09.3	0.0
	11nm,0.7s,mb4.5,baz=93,slow=8.1,SNR=115						
ASAR				PcP	PcP	21 29 47.3	-1.5
	0.8nm,0.5s,baz=105,slow=3.8,SNR=4.1						
ASPA	Alice Springs	42.73	259	⇓*i*P	P	21 28 09.2	-0.1
WRAB	Tennant Creek	42.91	264	*e*P	P	21 28 10.1	-0.8
	15nm,0.9s,mb4.5						
WRA	Warramunga Arr	42.92	264	P	P	21 28 10.4	-0.6
	4.0nm,0.3s,mb4.4,baz=94,slow=7.9,SNR=175						
KAKA	Kakadu	46.53	273	⇓*i*P	P	21 28 38.2	-0.7
	4.1nm,0.6s,mb4.1						
FORT	Forrest	47.32	248	*e*P	P	21 28 43.3	-1.4
	479nm,0.6s						
FITZ	Fitzroy Crossi	51.35	264	⇓*i*P	P	21 29 14.2	-0.6
	8.4nm,0.9s,mb4.1						
MBWA	Marble Bar	56.07	259	*e*P	P	21 29 46.4	-1.5
	14nm,0.6s,mb4.4						
VNDA	Vanda	56.27	185	P	P	21 29 47.6	-1.0
	1.9nm,0.9s,mb3.3,baz=9.4,slow=10,SNR=3.2						
QSPA	South Pole Qui	68.05	180	*e*P	P	21 31 04.2	-0.4
	4.7nm,0.6s,mb4.2						
NVAR	Mina Array Bea	83.16	44	P	P	21 32 28.9	+0.6
	0.6nm,0.7s,baz=219,slow=6.5,SNR=4.6						
CMAR	Chiang Mai Arr	89.22	290	P	P	21 32 59.1	+1.4
	1.5nm,0.8s,mb3.9,baz=138,slow=3.1,SNR=10						
BRTR	Keskin Array B	146.70	310	PKPbc	PKPbc	21 39 39.8	+1.5
	0.9nm,0.7s,baz=90,slow=2.9,SNR=3.6						

*IDC **23** 21:21:59.3±0.9, 8.69N×93.78E, mb3.9/8, mb1 4.0/9, mb1mx3.9/18, mbtmp3.9/9, ML3.7/1, MS3.7/7, Ms1 3.7/7, ms1mx3.4/21, Error ellipse: s-maj=36.3km s-min=22.2km az=41.0*

*NEIC **23** 21:22:04.1±0.8, 8.43N×93.86E, h30^{km}, mb4.3/4, Error ellipse: s-maj=23.0km s-min=12.6km az=59.0*

ISC 23 21:22:02.7±0.7**, 8.47N**±0.10×**93.9E**±0.1**, h33**^{km}**, n25, σ1^{s}31**/21**, mb4.1**/13**, MS3.8**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.06	26	Pn	P	21 24 41.2	-0.5
	0.2nm,0.3s,baz=209,slow=15,SNR=8.6						
CMAR				LR	LR	21 29 04.1	
	comp=Z,140nm,18.7s,baz=215,slow=39						
JIRN	Jiri	20.43	340	*e*P	P	21 26 41.3	+1.4
	46nm,1.1s						
PKI	Pulchoki	20.63	338	*e*P	P	21 26 43.0	+1.0
	48nm,1.2s						
DMN	Daman	20.77	337	*e*P	P	21 26 45.3	+1.8
	24nm,0.8s						
KKN	Kakani	20.87	338	*e*P	P	21 26 45.4	+0.9
	26nm,1.0s						
LSA	Lhasa	21.27	353	*e*P	P	21 26 46.0	-2.5
	8.2nm,0.8s,mb4.1						
GKN	Gorkha	21.31	337	*e*P	P	21 26 50.3	+1.4
	25nm,0.8s,mb4.6						
KOLN	Koldanda	21.52	334	*e*P	P	21 26 52.7	+1.7
	84nm,1.4s,mb5.0						
ENH	Enshi	26.13	32	P	P	21 27 29.5	-6.3
AAK	Ala-Archa	38.07	337	P	P	21 29 19.5	-0.5
	3.7nm,1.0s,mb4.1						
SONM	Songino Array	40.63	13	P	P	21 29 41.5	+0.2
	0.9nm,0.9s,mb3.4,baz=180,slow=9.9,SNR=3.9						
KURK	Kurchatov	43.98	346	*e*P	P	21 30 07.1	-1.5
ZAL	Zalesovo	45.93	353	LR	LR	21 53 57.5	
	comp=Z,40nm,21.7s,MS3.3,baz=207,slow=42						
WRA	Warramunga Arr	48.79	126	P	P	21 30 47.5	+0.6
	0.6nm,0.7s,mb3.7,baz=303,slow=9.0,SNR=4.6						
WRAB	Tennant Creek	48.80	126	P	P	21 30 46.6	-0.4
CHKZ	Chkalovo	48.84	342	*e*P	P	21 30 46.5	-0.3
	4.0nm,0.9s,mb4.5						
ASAR	Alice Springs	50.47	130	P	P	21 31 01.4	+1.6
	0.6nm,0.8s,mb3.7,baz=294,slow=7.0,SNR=4.7						
ASAR				LR	LR	21 52 38.1	
	comp=Z,43nm,20.3s,MS3.5,baz=101,slow=36						
KMBO	Kilima Mbogo	57.27	263	P	P	21 31 50.0	+0.1
	3.7nm,0.8s,mb4.5,baz=60,slow=12,SNR=11						
STKA	Stephens Creek	60.68	134	LR	LR	21 58 51.3	
	comp=Z,80nm,18.7s,MS3.9,baz=206,slow=36						
BRTR	Keskin Array B	61.87	311	P	P	21 32 18.0	-3.2
	0.5nm,0.5s,mb3.9,baz=121,slow=6.8,SNR=3.0						
FINES	FINESS Array B	72.08	332	P	P	21 33 23.1	-2.2
	1.6nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=4.9						
ARCES	ARCESS Array B	74.63	340	P	P	21 33 38.5	-1.5
	4.1nm,0.9s,mb4.4,baz=79,slow=9.2,SNR=2.9						
ARCES				LR	LR	22 09 13.3	
	comp=Z,70nm,18.4s,MS4.0,baz=191,slow=38						
GERES	GERESS Array B	77.23	318	P	P	21 33 54.2	-1.1
	1.6nm,0.8s,mb4.0,baz=90,slow=4.0,SNR=5.6						
NOA	NORSAR Array B	79.10	331	LR	LR	22 12 57.5	
	comp=Z,27nm,18.5s,MS3.6,baz=15,slow=39						
BORG	Borgarnes	92.79	337	LR	LR	22 23 04.1	
	comp=Z,164nm,20.0s,MS4.5,baz=141,slow=40						

*NEIC **23** 21:23:35.5, 36.21N×7.72W, h36^{km}, MG4.1(MDD), After MDD.*

*SFS **23** 21:23:35.0, 36.41N×7.48W*

*LDG **23** 21:23:36.5±0.3, 36.25N×7.69W, h25^{km}, Md3.4/1, Ml3.1/4, Error ellipse: s-maj=5.1km s-min=2.7km az=33.0*

*INMG **23** 21:23:36.1±1.2, 36.26N×7.70W, h23^{km}±11^{km}, ML2.3, Error ellipse: s-maj=9.3km s-min=2.7km az=35.0*

*CSEM **23** 21:23:36.5±0.3, 36.31N×7.54W, h62^{km}±3^{km}, ML3.1/21, Error ellipse: s-maj=5.8km s-min=2.6km az=30.0*

MDD 23 21:23:35.4±1.2**, 36.20N**×**7.72W, h36**^{km}±21^{km}**, mbLg2.6**/26**, 5C, Error ellipse: s-maj=14.7km s-min=5.1km az=34.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERIP	Rio Piedras	1.23	18	⇑P	P	21 23 55.4	-0.8
	8.4nm,0.1s,SNR=18						
ERIP				S	S	21 24 10.6	-1.3
	106nm,0.1s,SNR=7.9						
ERIP	Rio Piedras	1.23	18	Pn	P	21 23 55.5	-0.8
ERIP				Sn	S	21 24 10.6	-1.3
	106nm,0.1s,SNR=7.9						
PALC	Alcoutim	1.27	9	*e*P	P	21 23 56.3	-0.7
PALC				*e*S	S	21 24 11.1	-2.1
	40nm,0.2s						
PALC	Alcoutim	1.27	9	⇑Pn	P	21 23 56.3	-0.7
PALC				Sn	S	21 24 11.1	-2.1
	20nm,0.2s						
PALC	Alcoutim	1.27	9	Pn	P	21 23 56.2	-0.8
PALC				Sn	S	21 24 11.0	-2.2
PTEO	Sao Teotonio	1.56	329	*e*P	P	21 24 00.1	-1.1
PTEO				*e*S	S	21 24 19.2	-1.2
	23nm,0.2s						
PTEO	Sao Teotonio	1.56	329	Pn	P	21 24 00.1	-1.1
PTEO				Sn	S	21 24 19.2	-1.2
	11nm,0.2s						
PTEO	Sao Teotonio	1.56	329	Pn	P	21 24 00.1	-1.1
PTEO				Sn	S	21 24 19.1	-1.4
ESPR	Espera	1.64	66	⇑P	P	21 24 01.2	-1.0
	21nm,0.3s,SNR=18						
ESPR				S	S	21 24 20.8	-1.6
	21nm,0.2s,SNR=5.3						
ESPR	Espera	1.64	66	Pn	P	21 24 01.2	-1.1
	21nm,0.3s,SNR=88						
ESPR				Sn	S	21 24 20.8	-1.6
	21nm,0.2s,SNR=5.3						
EMIN	Mina Concepcio	1.77	28	P	P	21 24 02.9	-1.3
	0.7nm,0.1s,SNR=19						
EMIN				S	S	21 24 22.9	-2.7
	15nm,0.1s,SNR=12						
EMIN	Mina Concepcio	1.77	28	Pn	P	21 24 02.9	-1.2
	0.7nm,0.1s,SNR=19						
EMIN				Sn	S	21 24 23.0	-2.7
PBEJ	Beja	1.82	356	*e*Pn	P	21 24 03.8	-1.1
PBEJ				*e*Sn	S	21 24 24.4	-2.6
	22nm,0.2s						
PBEJ	Beja	1.82	356	Pn	P	21 24 03.8	-1.1
PBEJ				Sn	S	21 24 24.4	-2.6
	11nm,0.2s						
PBEJ	Beja	1.82	356	*e*Pn	P	21 24 03.8	-1.1
PBEJ				Sn	S	21 24 24.3	-2.7
LIJA	Lijar	1.99	69	*i* P	P	21 24 06.0	-1.3
LIJA				*e*S	S	21 24 28.0	-3.2
EVO	Evora	2.34	354	*e*Pn	P	21 24 10.8	-1.4
EVO				*e*Sn	S	21 24 36.8	-3.2
	27nm,0.2s						
MOE	Montemor	2.37	348	*e*Pn	P	21 24 10.9	-1.8
MOE				*e*Sn	S	21 24 37.9	-2.9
EMIJ	Mijas	2.40	81	P	P	21 24 11.4	-1.8
	2.7nm,0.3s,SNR=7.7						
EMIJ				S	S	21 24 37.7	-4.0
	1.5nm,0.2s						
EBAD	Badajoz	2.61	12	P	P	21 24 14.6	-1.6
	1.6nm,0.1s,SNR=7.9						
EBAD				S	S	21 24 43.5	-3.4
	5.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.61	12	Pn	P	21 24 14.6	-1.5
	1.6nm,0.1s,SNR=7.9						
EBAD				Sn	S	21 24 43.5	-3.4
	5.1nm,0.1s,SNR=7.9						
PLOU	Loures	2.91	337	*e*Pn	P	21 24 18.9	-1.5
PLOU				*e*Sn	S	21 24 50.6	-3.9
	13nm,0.3s						
PLOU	Loures	2.91	337	*e*Pn	P	21 24 18.9	-1.5
PLOU				*e*Sn	S	21 24 50.6	-3.9
	13nm,0.3s						
ELOJ	Sierra Loja	3.02	71	P	P	21 24 20.7	-1.2
	1.4nm,0.2s,SNR=7.9						
ELOJ				S	S	21 24 53.5	-3.8
	3.9nm,0.4s,SNR=7.9						
ELUQ	Luque	3.08	63	Pn	P	21 24 22.6	-0.2
ELUQ				Sn	S	21 24 55.1	-3.8
ELUQ	Luque	3.08	63	P	P	21 24 21.8	-1.1
	5.6nm,0.2s,SNR=6.2						
ELUQ				S	S	21 24 55.1	-3.8
	2.0nm,0.1s,SNR=7.9						
EADA	Adamuz	3.18	51	P	P	21 24 22.7	-1.6
	1.2nm,0.1s,SNR=7.9						
EADA				S	S	21 24 56.9	-4.6
	2.5nm,0.1s,SNR=7.9						
EADA	Adamuz	3.18	51	Pn	P	21 24 22.7	-1.6
	1.2nm,0.1s,SNR=7.9						
EADA				Sn	S	21 24 56.9	-4.6
	2.5nm,0.1s,SNR=7.9						
ERON	Agron	3.25	74	P	P	21 24 24.0	-1.3
	2.4nm,0.3s,SNR=7.9						
ECOG	Cogollos-Vega	3.50	71	P	P	21 24 26.8	-2.0
	3.0nm,0.2s,SNR=7.9						
ECOG				S	S	21 25 05.4	-4.3
	1.2nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	3.64	3	*e*Pn	P	21 24 28.5	-2.2
PCBR				*e*Sn	S	21 25 07.4	-5.6
	5.4nm,0.3s						
PCBR	Castelo Branco	3.64	3	Pn	P	21 24 28.6	-2.1
PCBR				Sn	S	21 25 07.6	-5.4
PCBR	Castelo Branco	3.64	3	Pn	P	21 24 28.6	-2.1
PCBR				Sn	S	21 25 07.4	-5.6
	2.7nm,0.3s						
PCBR	Castelo Branco	3.64	3	*e*Pn	P	21 24 28.5	-2.2
PCBR				*e*Sn	S	21 25 07.4	-5.6
	5.4nm,0.3s						
EBAN	Banos Encina	3.70	57	⇑Pn	P	21 24 29.6	-2.1

EBAN				Sn	S	21 25 07.9	-6.8
EBAN	**Banos Encina**	**3.70**	**57**	⇑P	P	21 24 29.6	-2.1
	12nm,0.1s,SNR=18						
EBAN				S	S	21 25 08.2	-6.4
	2.4nm,0.1s						
EBER	**Berja**	**3.95**	**78**	P	P	21 24 33.9	-1.2
	0.8nm,0.1s,SNR=7.4						
EBER				S	S	21 25 15.1	-5.9
	81nm,1.6s						
EBER	**Berja**	**3.95**	**78**	Pn	P	21 24 33.9	-1.2
	0.8nm,0.1s,SNR=7.4						
EBER				Sn	S	21 25 15.1	-5.8
	81nm,1.6s						
EQES	**Quesada**	**4.05**	**65**	P	P	21 24 34.8	-1.7
	2.8nm,0.2s,SNR=7.9						
EQES				S	S	21 25 18.4	-5.0
	1.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**4.05**	**65**	Pn	P	21 24 34.8	-1.7
	2.8nm,0.2s,SNR=7.9						
EQES				Sn	S	21 25 18.4	-5.0
	1.3nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**4.19**	**2**	*e*Pn	P	21 24 36.3	-2.3
MTE				*e*Sn	S	21 25 21.3	-5.8
	5.6nm,0.4s						
MTE	**Manteigas**	**4.19**	**2**	Pn	P	21 24 36.3	-2.3
MTE				Sn	S	21 25 21.3	-5.8
	2.8nm,0.4s						
EHUE	**Huescar**	**4.41**	**67**	P	P	21 24 38.8	-2.9
	1.1nm,0.1s,SNR=7.9						
EHUE				S	S	21 25 26.4	-6.1
	0.3nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**4.50**	**79**	P	P	21 24 40.3	-2.7
	2.0nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**4.51**	**358**	*e*Sn	S	21 25 28.7	-6.3
	2.1nm,0.1s						
PVIS	**Viseu**	**4.51**	**358**	Sn	S	21 25 28.7	-6.3
	1.1nm,0.1s						
PVIS	**Viseu**	**4.51**	**358**	Sn	S	21 25 27.8	-7.2
ESDC	**Sonseca Array**	**4.56**	**39**	Pn	P	21 24 41.3	-2.6
ESDC	**Sonseca Array**	**4.56**	**39**	P	P	21 24 41.6	-2.2
	0.8nm,0.4s,baz=222,slow=13,SNR=18						
ESDC				S	S	21 25 29.4	-7.0
	2.0nm,0.3s,baz=223,slow=23,SNR=7.9						
ESDC	**Sonseca Array**	**4.56**	**39**	Pn	P	21 24 41.6	-2.3
	0.8nm,0.4s,SNR=18						
ESDC				Sn	S	21 25 29.4	-7.0
	2.0nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**4.81**	**58**	Pn	P	21 24 43.5	-3.9
EVIA				Sn	S	21 25 34.5	-8.1
EVIA	**Vianos**	**4.81**	**58**	P	P	21 24 44.1	-3.3
	2.6nm,0.2s,SNR=7.9						
EVIA				S	S	21 25 36.3	-6.4
	2.6nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**5.07**	**0**	*e*Sn	S	21 25 41.3	-7.7
	5.5nm,0.2s						
PVRL	**Vila Real**	**5.07**	**0**	Sn	S	21 25 41.3	-7.7
	2.8nm,0.2s						
EMUR	**La Murta**	**5.43**	**71**	P	P	21 24 52.5	-3.6
	1.2nm,0.2s,SNR=7.9						
EMUR				S	S	21 25 51.0	-7.3
	1.6nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**5.43**	**71**	Pn	P	21 24 52.5	-3.6
	1.2nm,0.2s,SNR=7.9						
EMUR				Sn	S	21 25 51.0	-7.3
	1.6nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.48**	**62**	Pn	P	21 24 52.6	-4.2
ETOB				Sn	S	21 25 51.7	-7.9
ETOB	**Tobarra**	**5.48**	**62**	P	P	21 24 53.4	-3.4
	4.1nm,0.2s,SNR=7.9						
ETOB				S	S	21 25 51.7	-7.9
	2.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**5.48**	**62**	Pn	P	21 24 53.4	-3.4
	4.1nm,0.2s,SNR=7.9						
ETOB				Sn	S	21 25 51.7	-7.8
	2.1nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**5.64**	**7**	*e*Pn	P	21 24 55.7	-3.4
PBRG				*e*Sn	S	21 25 55.5	-8.1
	1.4nm,0.1s						
PBRG	**Braganca**	**5.64**	**7**	Pn	P	21 24 55.7	-3.4
PBRG				Sn	S	21 25 55.5	-8.1
	0.7nm,0.1s						
ELOB	**Lobios**	**5.66**	**357**	P	P	21 24 55.9	-3.4
	0.7nm,0.2s,SNR=7.9						
ELOB				S	S	21 25 55.3	-8.7
	1.1nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**5.66**	**357**	Pn	P	21 24 55.9	-3.4
	0.7nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.78**	**7**	Pn	P	21 24 57.2	-3.8
ECAL				Sn	S	21 25 59.0	-8.0
ECAL	**Calabor**	**5.78**	**7**	P	P	21 24 57.9	-3.0
	1.3nm,0.2s,SNR=7.9						
ECAL				S	S	21 25 59.0	-8.0
	1.4nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.78**	**7**	Pn	P	21 24 57.9	-3.1
	1.3nm,0.2s,SNR=7.9						
ECAL				Sn	S	21 25 59.0	-8.0
	1.4nm,0.2s,SNR=7.9						
EINC	**Incio**	**6.46**	**2**	S	S	21 26 15.0	-8.8
	5.9nm,0.6s,SNR=7.9						
EBEN	**Beniarda**	**6.46**	**65**	P	P	21 25 06.6	-3.9
	0.5nm,0.5s,SNR=7.9						
EBEN				S	S	21 26 15.9	-8.1
	SNR=7.9						
EBEN	**Beniarda**	**6.46**	**65**	Pn	P	21 25 06.6	-4.0
	0.5nm,0.5s,SNR=7.9						
EBEN				Sn	S	21 26 15.9	-8.1
	SNR=7.9						
EMOS	**Mosqueruela**	**7.05**	**52**	Pn	P	21 25 15.8	-3.0
EMOS				Sn	S	21 26 27.4	-11
EMOS	**Mosqueruela**	**7.05**	**52**	P	P	21 25 15.8	-3.0
	0.6nm,0.2s,SNR=7.9						
EMOS				S	S	21 26 28.5	-10
	2.6nm,0.7s,SNR=7.9						
EMOS	**Mosqueruela**	**7.05**	**52**	Pn	P	21 25 15.8	-3.0
	0.6nm,0.2s,SNR=7.9						
EMOS				Sn	S	21 26 28.5	-10
	2.6nm,0.7s,SNR=7.9						
EPON	**Pontenova**	**7.13**	**3**	S	S	21 26 31.3	-9.3
	3.1nm,0.7s,SNR=4.0						
EARI	**Arriondas**	**7.35**	**14**	P	P	21 25 20.2	-2.7
	0.5nm,0.3s,SNR=4.0						
EARI				S	S	21 26 36.5	-10
	2.6nm,0.4s,SNR=4.0						
EARI	**Arriondas**	**7.35**	**14**	Pn	P	21 25 20.2	-2.7
	0.5nm,0.3s,SNR=4.0						
EARI				Sn	S	21 26 36.5	-10
	2.6nm,0.4s,SNR=4.0						
EIBI	**Ibiza**	**7.72**	**66**	P	P	21 25 24.9	-3.3
	0.9nm,0.2s,SNR=4.0						
EIBI				S	S	21 26 44.2	-11
	3.1nm,0.7s,SNR=4.0						
EIBI	**Ibiza**	**7.72**	**66**	Pn	P	21 25 24.9	-3.3
	0.9nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**7.76**	**24**	P	P	21 25 25.8	-2.8
	0.4nm,0.3s,SNR=4.0						
ELAN				S	S	21 26 45.8	-10
	1.7nm,0.4s,SNR=7.9						
ELAN	**Lanestosa**	**7.76**	**24**	Pn	P	21 25 25.8	-2.8
	0.4nm,0.3s,SNR=4.0						
EALK	**Alkurruntz**	**8.48**	**32**	Pn	P	21 25 36.7	-2.0
EALK				Sn	S	21 27 02.6	-12
EALK	**Alkurruntz**	**8.48**	**32**	P	P	21 25 35.6	-3.1
	0.7nm,0.2s,SNR=4.0						
EALK				S	S	21 27 02.6	-12
	1.5nm,0.2s,SNR=7.9						
EALK	**Alkurruntz**	**8.48**	**32**	Pn	P	21 25 36.7	-2.0
SJPF	**Ste Jean**	**8.52**	**34**	*e*Pn	P	21 25 37.3	-2.0
SJPF				*e*Sn	S	21 27 03.8	-12
	1.5nm,0.3s						
ETSF	**Etsaut**	**8.67**	**37**	*e*Pn	P	21 25 38.4	-3.0
ETSF				*e*Sn	S	21 27 08.2	-11
	0.9nm,0.3s						
EBIE	**Bielsa**	**8.88**	**41**	Pn	P	21 25 42.0	-2.3
EBIE				Sn	S	21 27 14.4	-10
EBIE	**Bielsa**	**8.88**	**41**	P	P	21 25 41.5	-2.7
	0.8nm,0.2s,SNR=7.9						
EBIE				S	S	21 27 13.4	-11
	0.9nm,0.6s,SNR=4.0						
EBIE	**Bielsa**	**8.88**	**41**	Pn	P	21 25 42.0	-2.2
EPF	**Esparros**	**9.22**	**40**	*e*Pn	P	21 25 45.4	-3.6
EPF				*e*Sn	S	21 27 20.8	-12
	0.8nm,0.3s						
LFF	**La Frestale**	**10.83**	**34**	*e*Pn	P	21 26 05.8	-5.3
CAF	**Calviac**	**11.45**	**37**	*e*Pn	P	21 26 14.8	-4.6
TCF	**Toulx Ste Croi**	**12.53**	**33**	*e*Pn	P	21 26 29.7	-4.3

DJA 23 21:26:29.6±0.9**, 8.96S×116.19E, h115^{km}±7^{km}, MD4.9**/4**,**
ML3.8/2**, 1C-3D, Error ellipse: s-maj=41.6km**
s-min=14.5km az=1.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	**0.47**	**351**	⇓*e*Pn	P	21 26 46.7	-0.3
	401nm,0.2s						
KEDI				*e*Sn	S	21 26 59.9	-0.2
RATI	**Rata**	**0.69**	**290**	⇑*e*Pn	P	21 26 48.2	-0.3
	190nm,0.2s						
RATI				*e*Sn	S	21 27 01.8	-1.1
KELI	**Kelakatan**	**1.83**	**294**	⇓*e*Pn	P	21 27 00.9	-0.3
	42nm,0.2s						
KELI				*e*Sn	S	21 27 23.0	-2.0
SRDI	**Scrawed**	**2.08**	**283**	⇓*e*Pn	P	21 27 04.0	-0.3
	65nm,0.2s						
SRDI				*e*Sn	S	21 27 29.5	-0.9

IGQ 23 21:41:22.4, 3.19S×77.85W, h6^{km}±4^{km}, mb4.0, 1C-6D,
Error ellipse: s-maj=5.3km s-min=2.2km az=153.5,
Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATA	**Patacocha**	**1.77**	**341**	⇑P	Pn	21 41 56.8	+2.8
ARRY	**Arrayan**	**1.78**	**340**	⇓P	Pn	21 41 56.3	+2.3
ARRY				S	Sn	21 42 19.1	+1.9
ULBA	**Ulba**	**1.82**	**342**	⇓P	Pn	21 41 57.1	+2.5
ULBA				S	Sn	21 42 21.3	+3.1
RETU	**Refugio**	**1.83**	**341**	P	Pn	21 41 57.2	+2.4
RUN2	**Runtun**	**1.85**	**342**	P	Pn	21 41 57.2	+2.3
CUSU	**Cusua**	**1.85**	**340**	P	Pn	21 41 57.2	+2.2
CUSU				S	Sn	21 42 22.2	+3.3
JUIV	**Juive**	**1.86**	**341**	P	Pn	21 41 57.2	+2.0
JUIV				S	Sn	21 42 22.2	+2.9
IGUA	**Igualata**	**1.86**	**335**	P	Pn	21 41 57.6	+2.3
IGUA				S	Sn	21 42 24.1	+4.7
PISA	**Pisayambo**	**2.19**	**346**	⇓P	Pn	21 42 02.4	+2.5
TAMB	**Tambo**	**2.53**	**348**	⇓P	Pn	21 42 07.5	+2.7
VC1	**Cotopaxi 1**	**2.59**	**348**	⇓P	Pn	21 42 08.3	+2.7
NAS1	**Nasa**	**2.62**	**346**	P	Pn	21 42 08.8	+2.8
ANTI	**Antisana**	**2.74**	**354**	⇓P	Pn	21 42 09.5	+1.7
TERV	**Terraza Guagua**	**3.09**	**346**	P	Pn	21 42 15.8	+3.0
PINO	**Pino**	**3.11**	**346**	P	Pn	21 42 15.0	+2.0
CONE	**Cono NE Rev Vo**	**3.11**	**4**	P	Pn	21 42 14.0	+1.0
YANA	**Yana**	**3.14**	**347**	P	Pn	21 42 15.0	+1.6
CAYR	**Refugio Cayamb**	**3.19**	**357**	P	Pn	21 42 16.4	+2.3
CAYA	**Cayambe**	**3.25**	**358**	P	Pn	21 42 17.3	+2.3
JOR1	**San Jorge 1**	**3.27**	**346**	P	Pn	21 42 13.5	-1.8
HOJA	**Cerro de Hojas**	**3.43**	**308**	P	Pn	21 42 17.9	+0.4
ECEN	**Cerro Negro**	**3.99**	**358**	P	Pn	21 42 28.3	+2.7

*BJI **23** 22:03:38.6, 1.19N×92.17E, h48^{km}, mB4.8, mb4.7, Ms4.2, Msz3.9*

*IDC **23** 22:03:38.1±0.8, 1.81N×92.22E, mb4.0/8, mb1 4.3/9, mb1mx4.1/18, mbtmp4.1/9, ML4.1/1, MS3.8/11, Ms1 3.8/11, ms1mx3.8/17, Error ellipse: s-maj=28.0km s-min=20.3km az=50.0*

*MOS **23** 22:03:40.3±1.2, 1.65N×92.08E, h33^{km}, mb4.9/9, Error ellipse: s-maj=23.0km s-min=10.6km az=93.3*

*NEIC **23** 22:03:42.7±0.5, 1.79N×92.25E, h30^{km}, mb4.7/11, Error ellipse: s-maj=14.1km s-min=9.8km az=62.0*

ISC 23 22:03:39.0±3.0**, 1.79N**±0.08×**92.25E**±0.08**, h18^{km}±21^{km},**
n64, σ1^{s}08/60**, mb4.5**/31**, MS4.0**/15**, 1C-1D, Off west coast**
of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**9.91**	**57**	P	**P**	**22 06 02.0**	**-1.9**
	626nm,0.9s						
KKTK	**Khon Kaen**	**17.82**	**35**	P	**P**	**22 07 48.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**17.82**	**21**	P	**P**	**22 07 46.4**	**-1.6**
	0.3nm,0.3s,baz=217,slow=14,SNR=82						
CMAR				LR	LR	22 14 15.9	
	comp=Z,128nm,18.4s,baz=180,slow=36						
VIS	**Vishakhapatnam**	**18.10**	**332**	*i* P	**P**	**22 07 48.0**	**-3.5**
CHG	**Chiang Mai**	**18.15**	**21**	P	**P**	**22 07 50.7**	**-1.4**
NANT	**Nan**	**18.83**	**26**	P	**P**	**22 08 02.5**	**+2.1**
HYB	**Hyderabad**	**20.55**	**320**	*i* P	**P**	**22 08 18.5**	**-1.0**
HYB				*e*S	**S**	**22 12 03.5**	**-0.1**
KAD	**Karad**	**23.52**	**312**	*e*	**P**	**22 09 03.1**	**+14**
KAD				*e*		22 13 08.7	
POO	**Poona**	**24.55**	**314**	*e*	**P**	**22 09 19.0**	**+20**
POO				*e*		22 13 39.0	
KMI	**Kunming**	**25.31**	**23**	P	**P**	**22 09 08.4**	**+1.9**
KMI				AMB	AMB		
	comp=Z,22nm,1.2s,mb4.6						
KMI				LR	LR		
	comp=N,244nm,13.7s,MS4.1						
KMI				LR	LR		
	comp=E,279nm,13.7s,MS4.1						
KMI				LR	LR		
	comp=Z,228nm,12.9s,MS3.9						
KMI	**Kunming**	**25.31**	**23**	P	**P**	**22 09 08.4**	**+1.9**
	comp=Z,22nm,1.2s,mb4.6						
KMI				sP	sP	22 09 16.0	+1.7
KMI				S	**S**	**22 13 21.2**	**-7.7**
KMI				LR	LR		
	comp=Z,230nm,12.9s,MS3.9						
JIRN	**Jiri**	**26.37**	**348**	*e*P	**P**	**22 09 17.1**	**+0.8**
	comp=Z,27nm,0.7s,mb4.9						
PKI	**Pulchoki**	**26.46**	**346**	*e*P	**P**	**22 09 18.2**	**+1.1**
DMN	**Daman**	**26.57**	**346**	*e*P	**P**	**22 09 19.1**	**+1.0**
	comp=Z,20nm,0.9s,mb4.6						
KKN	**Kakani**	**26.70**	**346**	*e*P	**P**	**22 09 20.4**	**+1.1**
	comp=Z,37nm,1.0s,mb4.9						
GKN	**Gorkha**	**27.07**	**345**	*e*P	**P**	**22 09 23.1**	**+0.5**
	comp=Z,46nm,1.0s,mb5.0						
KOLN	**Koldanda**	**27.13**	**343**	*e*P	**P**	**22 09 23.6**	**+0.4**
	comp=Z,22nm,0.8s,mb4.7						
LSA	**Lhasa**	**27.78**	**358**	P	**P**	**22 09 30.6**	**+1.5**
LSA	**Lhasa**	**27.78**	**358**	*e*P	**P**	**22 09 30.5**	**+1.4**
LSA				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.0						
LSA	**Lhasa**	**27.78**	**358**	*e*P	**P**	**22 09 30.5**	**+1.4**
	comp=Z,22nm,0.6s,mb5.0						
GYA	**Guiyang**	**28.17**	**28**	⇓*i*P	**P**	**22 09 33.3**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
ENH	**Enshi**	**32.71**	**28**	*e*P	**P**	**22 10 12.1**	**-0.8**
	comp=Z,10nm,0.7s,mb4.9						
WHN	**Wuhan**	**35.45**	**34**	P	**P**	**22 10 37.0**	**+0.5**
XAN	**Xi'an**	**35.67**	**24**	P	**P**	**22 10 37.5**	**-0.8**
XAN				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GTA	**Gaotai**	**38.08**	**10**	*e*P	**P**	**22 10 59.3**	**+0.8**
GTA				AP	pP	22 11 07.3	+3.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.2						
GTA				AMB	AMB		
	comp=Z,56nm,4.6s						
GTA				LR	LR		
	comp=N,95nm,15.6s,MS4.0						
GTA				LR	LR		
	comp=E,141nm,15.2s,MS4.0						
GTA				LR	LR		
	comp=Z,108nm,14.8s,MS3.8						
WMQ	**Urumqi**	**42.05**	**355**	*e*P	**P**	**22 11 32.0**	**+0.7**
WMQ				XP	sP	22 11 46.0	+6.8
WMQ				PP	PP	22 13 12.0	+0.1
WMQ				S	**S**	**22 17 48.0**	**-1.3**
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.5						
WMQ				LR	LR		
	comp=N,165nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=E,98nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,77nm,20.0s,MS3.6						
HHC	**Hu-ho-hao-te**	**42.63**	**22**	*e*P	**P**	**22 11 36.9**	**+0.8**
HHC				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,52nm,4.0s						
HHC				LR	LR		
	comp=N,221nm,15.0s,MS4.5						
HHC				LR	LR		
	comp=E,429nm,19.2s,MS4.5						
HHC				LR	LR		
	comp=Z,134nm,16.8s,MS3.9						
BJT	**Baijiatuau**	**43.82**	**27**	*e*P	**P**	**22 11 47.2**	**+1.4**
BJT				pmax	pmax		
	comp=Z,26nm,1.4s						
BJT	**Baijiatuau**	**43.82**	**27**	*e*P	**P**	**22 11 47.2**	**+1.4**
	comp=Z,26nm,1.4s,mb4.8						
BJI	**Beijing**	**43.84**	**27**	P	**P**	**22 11 47.4**	**+1.4**
BJI				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
BJI				LR	LR		
	comp=N,122nm,14.2s,MS4.2						
BJI				LR	LR		
	comp=E,183nm,14.2s,MS4.2						
BJI				LR	LR		
	comp=Z,119nm,14.2s,MS4.0						
BJI	**Beijing**	**43.84**	**27**	P	**P**	**22 11 47.4**	**+1.4**
	comp=Z,15nm,1.0s,mb4.7						
BJI				S	**S**	**22 18 27.1**	**+12**
BJI				SS	SS	22 22 21.5	+57
BJI				LR	LR		
	comp=Z,120nm,14.2s,MS4.0						
WRA	**Warramunga Arr**	**46.58**	**120**	P	**P**	**22 12 08.1**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.9,baz=298,slow=8.6,SNR=19						
WRAB	**Tennant Creek**	**46.59**	**120**	*e*P	**P**	**22 12 08.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	**46.59**	**120**	*e*P	**P**	**22 12 08.0**	**-0.2**
	comp=Z,3.1nm,0.7s,mb4.3						
SONM	**Songino Array**	**47.48**	**13**	P	**P**	**22 12 15.2**	**+0.3**
	comp=Z,5.3nm,0.8s,mb4.5,baz=192,slow=8.5,SNR=58						
ULN	**Ulaanbaatar**	**47.66**	**13**	*e*P	**P**	**22 12 15.9**	**-0.3**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.5						
ULN	**Ulaanbaatar**	**47.66**	**13**	*e*P	**P**	**22 12 15.9**	**-0.3**
	comp=Z,7.2nm,1.4s,mb4.5						
ASAR	**Alice Springs**	**47.75**	**125**	P	**P**	**22 12 17.6**	**+0.3**
	comp=Z,0.3nm,0.7s,mb3.5,baz=297,slow=7.1,SNR=3.3						
ASAR				LR	LR	22 33 12.6	
	comp=Z,71nm,18.2s,MS3.7,baz=294,slow=37						
ZAK	**Zakamensk**	**49.32**	**9**	*e*P	**P**	**22 12 28.2**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.6						
KURK	**Kurchatov**	**50.10**	**349**	*e*P	**P**	**22 12 34.1**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
KURK	**Kurchatov**	**50.10**	**349**	*e*P	**P**	**22 12 34.1**	**-1.0**
	comp=Z,2.3nm,1.0s,mb4.2						
ZAL	**Zalesovo**	**52.34**	**354**	P	**P**	**22 12 51.5**	**-0.5**
	comp=Z,1.5nm,0.5s,mb4.2,baz=298,slow=8.8,SNR=8.0						
ZAL				LR	LR	22 37 12.8	
	comp=Z,78nm,19.7s,MS3.8,baz=15,slow=38						
HIA	**Hailar**	**52.83**	**22**	*e*P	**P**	**22 12 55.4**	**-0.3**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HIA	**Hailar**	**52.83**	**22**	*e*P	**P**	**22 12 55.4**	**-0.3**
	comp=Z,4.5nm,0.7s,mb4.5						
NVS	**Novosibirsk**	**53.40**	**354**	*e*P	**P**	**22 12 57.9**	**-1.9**
CHKZ	**Chkalovo**	**54.72**	**344**	*e*P	**P**	**22 13 06.9**	**-2.6**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
CHKZ	**Chkalovo**	**54.72**	**344**	*e*P	**P**	**22 13 06.9**	**-2.6**
	comp=Z,7.1nm,0.9s,mb4.7						
CTA	**Charters Tower**	**57.21**	**115**	LR	LR	22 40 42.0	
	comp=Z,70nm,20.0s,MS3.8,baz=227,slow=39						
STKA	**Stephens Creek**	**57.47**	**130**	LR	LR	22 37 34.2	
	comp=Z,85nm,18.8s,MS3.9,baz=303,slow=35						
TI2	**Plekhanov**	**58.27**	**320**	⇑*i*P	**P**	**22 13 43.0**	**+8.0**
TI2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
BOD	**Bodaibo**	**58.47**	**13**	*e*P	**P**	**22 13 32.0**	**-4.2**
BRTR	**Keskin Array B**	**65.09**	**313**	P	**P**	**22 14 20.4**	**-0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=127,slow=6.2,SNR=4.7						
MATP	**Matopo**	**66.18**	**247**	P	**P**	**22 14 28.3**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.2,baz=79,slow=10.0,SNR=7.1						
MATP	**Matopo**	**66.18**	**247**	P	**P**	**22 14 28.3**	**0.0**
OBN	**Obninsk**	**69.57**	**330**	*e*P	**P**	**22 14 44.1**	**-4.8**
OBN				*e*		22 15 18.3	
MAW	**Mawson**	**72.23**	**191**	LR	LR	22 39 46.0	
	comp=Z,69nm,18.2s,MS4.0,baz=248,slow=30						
TIXI	**Tiksi**	**73.53**	**11**	*e*P	**P**	**22 15 10.9**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
FINES	**FINESS Array B**	**77.22**	**333**	P	**P**	**22 15 32.9**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.1,baz=135,slow=2.7,SNR=6.1						
FINES				LR	LR	22 51 38.5	
	comp=Z,57nm,18.2s,MS3.9,baz=116,slow=37						
ARCES	**ARCESS Array B**	**80.34**	**341**	LR	LR	22 53 39.1	
	comp=Z,94nm,20.4s,MS4.1,baz=169,slow=37						
GERES	**GERESS Array B**	**81.12**	**319**	P	**P**	**22 15 56.0**	**+1.2**
	comp=Z,1.4nm,0.8s,mb3.9,baz=117,slow=6.0,SNR=11						
RPZ	**Rata Peaks**	**83.14**	**134**	LR	LR	22 49 09.7	
	comp=Z,106nm,20.4s,MS4.2,baz=96,slow=33						
NOA	**NORSAR Array B**	**84.10**	**331**	LR	LR	22 55 18.7	
	comp=Z,40nm,20.7s,MS3.8,baz=290,slow=37						
URZ	**Urewera**	**87.05**	**128**	LR	LR	22 53 15.8	
	comp=Z,136nm,20.8s,MS4.3,baz=78,slow=34						
TXAR	**Lajitas Array**	**145.51**	**25**	PKPbc	PKPbc	22 23 19.1	+1.6
	comp=Z,3.0nm,0.8s,baz=297,slow=2.8,SNR=17						

IDC 23 22:09:39.6±44.0**, 15.31S×174.13W, mb4.3**/3**, mb1 4.5**/3**,**
mb1mx3.9/14**, mbtmp4.3**/3**, Error ellipse:**
s-maj=845.8km s-min=170.6km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.47**	**240**	P	P	22 17 44.6	-1.8
	4.8nm,1.1s,baz=80,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**49.18**	**257**	P	P	22 18 29.9	-1.8
	0.8nm,0.4s,baz=90,slow=8.1,SNR=50						
ASAR	**Alice Springs**	**49.47**	**252**	P	P	22 18 31.9	-2.0
	7.4nm,0.4s,baz=89,slow=8.1,SNR=135						
ASPA	**Alice Springs**	**49.47**	**252**	*e*P	P	22 18 31.9	-2.0
KAKA	**Kakadu**	**51.80**	**266**	*e*P	P	22 18 52.5	+0.7
	1.5nm,0.3s						

*IDC **23** 22:50:28.8±1.7, 1.75N×92.18E, mb3.5/5, mb1 3.8/5, mb1mx3.6/17, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=57.6km s-min=28.3km az=56.0*

ISC 23 22:50:32.1±1.5**, 1.9N**±0.2×**92.3E**±0.3**, h33^{km}, n7, σ0^{s}68**/6**,**
mb3.5/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.74**	**21**	P	**P**	**22 54 37.9**	**-0.4**
	0.1nm,0.3s,baz=216,slow=14,SNR=12						
WRA	**Warramunga Arr**	**46.56**	**120**	P	**P**	**22 58 58.8**	**-0.1**
	0.3nm,0.8s,mb3.3,baz=297,slow=8.6,SNR=3.0						
SONM	**Songino Array**	**47.41**	**13**	P	**P**	**22 59 06.2**	**+1.1**
	0.4nm,0.8s,mb3.4,baz=194,slow=5.9,SNR=2.2						
ZAL	**Zalesovo**	**52.29**	**354**	P	**P**	**22 59 42.2**	**-0.2**
	0.5nm,0.6s,mb3.6,baz=295,slow=5.9,SNR=3.0						
BVAR	**Borovoye Array**	**54.15**	**344**	P	**P**	**22 59 56.1**	**-0.2**
	0.5nm,0.7s,mb3.6,baz=149,slow=8.4,SNR=3.3						
GERES	**GERESS Array B**	**81.11**	**319**	P	**P**	**23 02 45.6**	**-0.1**
	0.5nm,0.8s,mb3.5,baz=22,slow=7.2,SNR=3.9						
TXAR	**Lajitas Array**	**145.43**	**25**	PKPbc	PKPbc	23 10 10.5	+2.6
	0.2nm,0.4s,baz=180,slow=1.3,SNR=3.5						

WEL 23 22:53:14.5±0.1**, 39.89S×174.65E, h24^{km}±1^{km}, ML3.5**/20**,**
2C-2D, Error ellipse: s-maj=1.0km s-min=0.7km az=90.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.29**	**64**	P*	Pb	22 53 21.6	+0.2
WAZ				S*	Sb	22 53 26.9	+1.0
RAEZ	**Rainy Point**	**0.63**	**342**	P*	Pb	22 53 26.9	+0.1
DFE	**Dawson Falls**	**0.70**	**323**	P*	Pb	22 53 27.9	0.0
NEZ	**North Egmont**	**0.75**	**325**	P*	Pb	22 53 28.4	-0.3
VRZ	**Vera Road**	**0.77**	**7**	P*	Pb	22 53 28.9	-0.2
VRZ				S*	Sb	22 53 40.1	+1.1
NRZ	**Ngariki Road**	**0.78**	**315**	P*	Pb	22 53 29.0	-0.2
NWEZ	**Newall Road**	**0.86**	**315**	P*	Pb	22 53 30.5	-0.1
PKE	**Pukeiti**	**0.86**	**323**	P*	Pb	22 53 30.2	-0.4
PKE				S*	Sb	22 53 43.4	+1.7
WNVZ	**Wahianoa**	**0.92**	**53**	PN	Pn	22 53 31.2	-0.8
WNVZ				SN	Sn	22 53 43.8	-0.7
DRZ	**Dome Shelter**	**0.94**	**50**	PN	Pn	22 53 31.5	-0.6
DRZ				SN	Sn	22 53 44.3	-0.6
FWVZ	**Far West T-bar**	**0.94**	**48**	PN	Pn	22 53 31.5	-0.8
FWVZ				SN	Sn	22 53 44.6	-0.4
WPVZ	**Whakapapa**	**0.97**	**46**	PN	Pn	22 53 32.0	-0.7
WPVZ				SN	Sn	22 53 45.3	-0.5
CNZ	**Chateau**	**0.98**	**46**	PN	Pn	22 53 32.2	-0.6
MOVZ	**Moawhango**	**0.98**	**61**	⇓PN	Pn	22 53 31.9	-0.9

MOVZ				SN	Sn	22 53 44.7	-1.3
TUVZ	**Tukino**	0.99	52	PN	Pn	22 53 32.5	-0.5
TUVZ				SN	Sn	22 53 45.6	-0.8
KIW	**Kapiti Island**	0.99	168	⇑PN	Pn	22 53 31.8	-1.2
TWVZ	**Taurewa**	1.02	37	PN	Pn	22 53 32.6	-0.8
NGZ	**Ngauruhoe**	1.02	46	⇓PN	Pn	22 53 32.8	-0.7
NGZ				SN	Sn	22 53 46.6	-0.5
TSZ	**Takapari Road**	1.03	100	PN	Pn	22 53 32.9	-0.6
TSZ				SN	Sn	22 53 46.5	-0.7
MRZ	**Mangatainoka R**	1.05	138	⇑PN	Pn	22 53 33.5	-0.4
WTVZ	**West Tongariro**	1.06	44	PN	Pn	22 53 33.2	-0.8
OTVZ	**Oturere**	1.07	48	PN	Pn	22 53 33.5	-0.6
MGZ	**Maungaku**	1.12	38	PN	Pn	22 53 34.2	-0.7
KATZ	**Kakaramea**	1.22	42	PN	Pn	22 53 35.5	-0.8
CAW	**Cannon Point**	1.26	165	PN	Pn	22 53 35.9	-0.9
RITZ	**Rihia Road**	1.30	46	ePN	Pn	22 53 37.6	+0.1
RATZ	**Rangitukua**	1.34	41	ePN	Pn	22 53 37.5	-0.5
MRW	**Makara Radio**	1.34	178	ePN	Pn	22 53 36.6	-1.4
HIZ	**Hauiti**	1.38	7	PN	Pn	22 53 38.2	-0.3
MTW	**Mount Morrison**	1.43	153	PN	Pn	22 53 39.2	0.0
WATZ	**Wairara**	1.45	36	PN	Pn	22 53 38.6	-0.9
BFZ	**Birch Farm**	1.46	123	ePN	Pn	22 53 40.4	+0.7
HATZ	**Hinemaiaia**	1.50	49	ePN	Pn	22 53 40.5	+0.3
BHW	**Baring Head**	1.53	174	ePN	Pn	22 53 40.0	-0.7
MSWZ	**Moikau Station**	1.59	163	PN	Pn	22 53 41.5	-0.1
BKZ	**Black Stump Fm**	1.60	64	ePN	Pn	22 53 41.2	-0.5
PAWZ	**Paruwai Farm**	1.61	159	PN	Pn	22 53 41.8	0.0
TUWZ	**Tuamarina**	1.63	199	ePN	Pn	22 53 40.0	-2.2
NNZ	**Nelson**	1.64	216	ePN	Pn	22 53 40.9	-1.5
QRZ	**Quartz Range**	1.87	239	ePN	Pn	22 53 44.2	-1.3
BSWZ	**Blackbirch Sta**	1.92	197	ePN	Pn	22 53 45.4	-0.8
TOZ	**Tahuroa Road**	2.25	18	ePN	Pn	22 53 49.6	-1.5
THZ	**Tophouse**	2.29	215	ePN	Pn	22 53 50.8	-0.8
URZ	**Urewera**	2.51	51	ePN	Pn	22 53 51.9	-2.8
KHZ	**Kahutara**	2.66	198	ePN	Pn	22 53 55.2	-1.7
MKAZ	**Moumakai**	2.80	9	PN	Pn	22 53 57.7	-1.1
KUZ	**Kuaotunu**	3.25	15	ePN	Pn	22 54 02.5	-2.7
LTZ	**Lake Taylor**	3.40	211	ePN	Pn	22 54 05.4	-2.0

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*TEH **23** 22:54:07.7,30.40N×56.78E,h8^{km},Mn3.5*
*THR **23** 22:54:08.7±0.9,30.83N×56.69E,h14^{km}±9^{km},ML3.2*
*CSEM **23** 22:54:10.1±0.3,30.73N×56.73E,h18^{km},ML3.5,Error ellipse: s-maj=8.2km s-min=6.1km az=70.0*
ISC 23 22:54:09.2±0.6,**30.77N**±0.05×**56.61E**±0.06,**h10^{km},n20, σ1^{s}08**/26,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	0.80	171	ePG	**Pg**	**22 54 24.4**	**-0.8**
KRBR				AML	AML	22 54 44.8	
	comp=N,708nm,0.3s						
IBAF	**Bafgh**	1.21	312	Pn	**Pn**	**22 54 30.4**	**-1.8**
IMEH	**Mehriz**	1.82	290	Pn	**Pn**	**22 54 40.0**	**-1.0**
ICHK	**Chekchek**	2.39	308	Pn	**Pn**	**22 54 47.7**	**-1.3**
BNDS	**Bandar-Abbas**	3.38	187	ePN	**Pn**	**22 55 04.3**	**+1.1**
BNDS				AML	AML	22 56 08.4	
	comp=N,54nm,0.6s						
BNDS	**Bandar-Abbas**	3.38	187	ePn	**Pn**	**22 55 04.3**	**+1.1**
	SNR=52						
ZHSF	**Zahedan**	3.78	107	ePN	**Pn**	**22 55 08.2**	**-0.7**
ZHSF				AML	AML	22 56 17.3	
	comp=N,32nm,0.8s						
NASN	**Na'in**	3.82	303	ePN	**Pn**	**22 55 09.9**	**+0.5**
NASN				eSG	**Sg**	**22 56 08.2**	**-8.2**
NASN				AML	AML	22 56 19.6	
	comp=N,47nm,0.6s						
NASN	**Na'in**	3.82	303	ePn	**Pn**	**22 55 09.9**	**+0.5**
	SNR=52						
NASN				eSg	**Sg**	**22 56 08.1**	**-8.2**
	SNR=90						
GHIR	**Ghir-Karzin**	4.02	233	ePN	**Pn**	**22 55 13.5**	**+1.3**
GHIR				AML	AML	22 56 32.3	
	comp=N,21nm,0.6s						
ISFB	**Sefidab**	5.14	315	Pn	**Pg**	**22 55 47.1**	**-4.7**
ISFB				Sn	**Sn**	**22 56 29.6**	**+1.4**
IFIR	**Firoozkooh**	5.83	327	Pn	**Pn**	**22 55 36.7**	**-1.2**
IFIR				Sn	**Sn**	**22 56 46.5**	**+0.9**
IVRN	**Varamin**	5.88	317	Pn	**Pn**	**22 55 39.3**	**+0.7**
IPAY	**Payeh**	6.00	19	Pn	**Pn**	**22 55 40.0**	**-0.2**
MHI	**Mashhad**	6.01	23	Pn	**Pn**	**22 55 41.0**	**+0.6**
IDMV	**Damavand**	6.14	322	Pn	**Pn**	**22 55 42.1**	**-0.1**
IKRD	**Kardeh**	6.19	14	Pn	**Pn**	**22 55 46.1**	**+3.2**
IMYA	**Miamay**	6.27	27	Pn	**Pn**	**22 55 43.9**	**-0.2**
IAFJ	**Afjeh**	6.52	322	Pn	**Pn**	**22 55 48.0**	**+0.4**
IAFJ				Sn	**Sn**	**22 57 02.7**	**-0.1**
IRAZ	**Razeghan**	7.26	311	Pn	**Pn**	**22 55 59.4**	**+1.3**
IRAZ				Sn	**Sn**	**22 57 19.5**	**-1.9**

OTT 23 23:04:01.6±0.4,**61.36N×60.07W,h18^{km},ML2.7**/4,**Labrador Sea 258km east from Resolution Island, Nu LAlbertaRADOR Sea Seismic Zone.,Davis Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRB	**Frobisher Bay**	4.60	305	PN	Pn	23 05 09.8	-2.2
FRB				SN	Sn	23 05 59.9	-5.7
FRB				Trac		23 06 09.7	
	comp=Z,1.3nm,0.2s						
KUQ	**Kuujjuuaa**	5.33	236	PN	Pn	23 05 20.1	-2.3
KUQ				SN	Sn	23 06 18.0	-6.1
KUQ				Trac		23 06 37.5	
	comp=Z,1.2nm,0.2s						
SCHQ	**Schefferville**	7.46	212	PN	Pn	23 05 48.4	-3.9
SCHQ				SN	Sn	23 07 07.3	-10
SCHQ				Trac		23 07 12.1	
	comp=Z,1.2nm,0.2s						
LG4Q	**La Grande 4**	10.80	230	PN	P	23 06 32.4	-5.9
LG4Q				SN	S	23 08 27.0	-13
LG4Q				Trac		23 08 35.0	
	comp=Z,0.7nm,0.3s						
MNQ	**Manicouagan**	11.88	208	PN	P	23 06 47.2	-5.9
QILN	**Qililugaq Expl**	12.63	306	PN	P	23 06 58.6	-4.4
QILN				SN	S	23 09 14.0	-10
SILO	**Sutton Inlier**	14.82	253	PN	P	23 07 28.3	-3.4
SILO				SN	S	23 10 01.4	-15
LMQ	**La Malbaie**	15.04	208	PN	P	23 07 28.7	-6.0

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*IDC **23** 23:15:57.5±0.8,10.73N×140.99E,mb4.0/8,mb1 4.2/8, mb1mx4.1/18,mbtmp3.9/8,MS3.3/5,Ms1 3.3/5, ms1mx2.9/30,Error ellipse: s-maj=33.8km s-min=19.1km az=92.0*
*NEIC **23** 23:16:04.9±0.6,10.68N×140.87E,h55^{km},mb4.5/2,Error ellipse: s-maj=26.2km s-min=12.7km az=87.0*
ISC 23 23:16:02.9±0.8,**10.66N**±0.10×**140.9E**±0.2,**h55^{km},n16, σ1^{s}05**/11,**mb4.0**/10,**MS3.2**/5,**Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	20.88	162	LR	LR	23 27 13.6	
	comp=Z,72nm,20.3s,MS3.0,baz=120,slow=32						
JHJ	**Hachijo jima 2**	22.38	358	LR	LR	23 28 24.7	
	comp=Z,81nm,20.4s,MS3.1,baz=291,slow=34						
CTA	**Charters Tower**	31.00	170	LR	LR	23 33 32.0	
	comp=Z,68nm,21.1s,MS3.3,baz=230,slow=34						
WRAB	**Tennant Creek**	31.07	192	eP	**P**	**23 22 17.6**	**-0.6**
	7.2nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	31.08	192	P	**P**	**23 22 17.8**	**-0.6**
	4.8nm,0.8s,mb4.4,baz=10,slow=9.4,SNR=29						
ASAJ	**Asahikawa**	33.37	2	LR	LR	23 33 14.2	
	comp=Z,58nm,21.0s,MS3.3,baz=59,slow=31						
ASAR	**Alice Springs**	34.79	191	P	**P**	**23 22 51.0**	**+0.6**
	2.0nm,0.5s,mb4.3,baz=18,slow=12,SNR=24						
CMAR	**Chiang Mai Arr**	41.26	286	P	**P**	**23 23 45.0**	**+0.6**
	1.4nm,0.5s,mb3.9,baz=94,slow=5.7,SNR=11						
CMAR				LR	LR	23 38 55.7	
	comp=Z,27nm,21.5s,MS3.1,baz=139,slow=33						
STKA	**Stephens Creek**	42.30	179	P	**P**	**23 23 53.2**	**+0.2**
	5.9nm,1.1s,mb4.1,baz=329,slow=4.7,SNR=3.7						
STKA	**Stephens Creek**	42.30	179	P	**P**	**23 23 53.2**	**+0.2**
SONM	**Songino Array**	47.03	329	P	**P**	**23 24 30.3**	**-0.4**
	0.3nm,0.8s,mb3.3,baz=143,slow=4.4,SNR=3.6						
KURK	**Kurchatov**	64.37	321	eP	**P**	**23 26 33.8**	**-1.5**
	4.9nm,0.9s,mb4.5						
ILAR	**Eielson Array**	72.86	25	P	**P**	**23 27 26.2**	**-1.2**
	0.2nm,0.5s,mb3.3,baz=254,slow=6.6,SNR=5.6						
YKA	**Yellowknife Ar**	87.22	27	P	**P**	**23 28 45.3**	**+1.1**
	0.5nm,0.6s,mb3.9,baz=289,slow=4.9,SNR=10						
FINES	**FINESS Array B**	92.13	334	P	**P**	**23 29 09.9**	**+2.6**
	0.9nm,0.7s,mb4.2,baz=69,slow=12,SNR=5.4						
LPAZ	**La Paz**	151.25	104	PKPbc	PKPdf	23 35 55.1	+10
	1.4nm,0.6s,baz=309,slow=3.1,SNR=5.7						

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*IDC **23** 23:33:10.8±1.1,6.28S×151.00E,mb4.1/6,mb1 4.3/7, mb1mx4.1/13,mbtmp4.0/7,ML2.9/1,MS2.6/1,Ms1 2.6/1, ms1mx2.0/17,Error ellipse: s-maj=55.7km s-min=19.8km az=118.0*
*NEIC **23** 23:33:12.3±0.8,6.27S×150.93E,h10^{km},mb4.2/3,Error ellipse: s-maj=32.7km s-min=12.0km az=126.0*
ISC 23 23:33:18.1±3.7,**6.3S**±0.2×**150.6E**±0.2,**h64^{km}**±30^{km},**n14, σ0^{s}91**/14,**mb4.0**/6,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.63	228	Pn	**P**	**23 34 27.8**	**+0.6**
	3.0nm,0.3s,baz=16,slow=4.7,SNR=7.2						
PMG				Sn	**S**	**23 35 19.7**	**-0.6**
	5.6nm,0.3s,baz=69,slow=23,SNR=11						
PMG				LR	LR	23 36 34.8	
	comp=Z,65nm,18.1s,baz=340,slow=42						
KAKA	**Kakadu**	19.03	249	eP	**P**	**23 37 37.2**	**-0.6**
	5.4nm,0.8s						
WRAB	**Tennant Creek**	20.84	228	eP	**P**	**23 37 56.1**	**-0.7**
	6.7nm,0.6s						
WRA	**Warramunga Arr**	20.85	228	P	**P**	**23 37 56.7**	**-0.3**
	4.4nm,0.5s,baz=53,slow=11,SNR=113						
WRA				PcP	PcP	23 42 05.0	+1.4
	0.4nm,0.7s,baz=40,slow=2.0,SNR=5.5						
ASAR	**Alice Springs**	23.61	221	P	**P**	**23 38 25.7**	**+1.5**
	3.1nm,0.5s,mb4.0,baz=55,slow=8.9,SNR=62						
ASPA	**Alice Springs**	23.61	221	eP	**P**	**23 38 25.7**	**+1.5**
STKA	**Stephens Creek**	26.83	197	P	**P**	**23 38 53.4**	**-1.2**
	3.0nm,0.6s,mb4.0,baz=13,slow=9.2,SNR=7.6						
STKA	**Stephens Creek**	26.83	197	eP	**P**	**23 38 53.3**	**-1.3**
FITZ	**Fitzroy Crossi**	27.06	242	eP	**P**	**23 38 56.9**	**+0.1**
	5.3nm,0.5s,mb4.3						
SONM	**Songino Array**	66.45	329	P	**P**	**23 44 03.1**	**+0.2**
	0.4nm,0.5s,mb3.7,baz=150,slow=5.7,SNR=5.4						
ILAR	**Eielson Array**	84.34	22	P	**P**	**23 45 42.8**	**-1.4**
	0.6nm,0.6s,mb3.9,baz=247,slow=4.9,SNR=11						
YKA	**Yellowknife Ar**	97.74	28	P	**P**	**23 46 47.8**	**+0.8**
	0.2nm,0.5s,mb3.9,baz=270,slow=4.8,SNR=7.5						
YKA	**Yellowknife Ar**	97.74	28	P	**P**	**23 46 47.8**	**+0.8**
GERES	**GERESS Array B**	124.15	327	PKP	PKPdf	23 52 12.2	+2.6
	0.3nm,0.5s,baz=135,slow=1.9,SNR=4.7						

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*LDG **23** 23:34:50.3±0.2,49.33N×6.85E,h1^{km},Md2.3/1,Ml2.6/3, Error ellipse: s-maj=6.2km s-min=3.6km az=113.0, Suspected Mining induced.*
*BGR **23** 23:34:50.5±0.7,49.31N×6.77E,h1^{km},ML1.5/2,Error ellipse: s-maj=10.0km s-min=4.4km az=59.0*
*CSEM **23** 23:34:50.0±0.1,49.33N×6.74E,h2^{km},ML2.5/2,Error ellipse: s-maj=2.5km s-min=2.0km az=89.0*
ISC 23 23:34:49.2±0.5,**49.32N**±0.03×**6.82E**±0.06,**n9, σ0^{s}60**/14,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLF	**Walferdange**	0.55	308	P	**Pg**	**23 35 01.5**	**+1.3**
CDF	**Champ du Feu**	0.96	161	ePg	**Pg**	**23 35 08.7**	**+0.4**
CDF				eSg	**Sg**	**23 35 21.8**	**+0.6**
	16nm,0.2s						
RFYF	**Reffroy**	1.13	232	ePg	**Pg**	**23 35 12.2**	**+0.6**
HAU	**Haudompre**	1.36	193	ePg	**Pg**	**23 35 15.2**	**-1.0**
HAU				eSg	**Sg**	**23 35 33.9**	**-0.4**
	7.8nm,0.3s						
TNS	**Taunus Mts**	1.39	49	ePg	**Pg**	**23 35 17.2**	**+0.4**
	SNR=1.3						
TNS				eSg	**Sg**	**23 35 35.6**	**+0.2**
	SNR=2.2						
MEM	**Membach**	1.39	338	P	**Pb**	**23 35 15.6**	**-0.1**
BFO	**Black Forest**	1.41	134	ePg	**Pg**	**23 35 17.2**	**-0.1**
	SNR=2.3						
BFO				eSg	**Sg**	**23 35 35.6**	**-0.5**
	SNR=3.0						
HGN	**Heimansgroeve**	1.55	339	ePg	**Pg**	**23 35 19.5**	**-0.6**
	SNR=1.5						
HGN				eSg	**Sg**	**23 35 40.0**	**-0.7**
	SNR=2.5						
DOU	**Dourbes**	1.64	299	P	**Pn**	**23 35 19.3**	**-0.1**

IDC 24 00:16:34.4±4.5,**5.92S×150.52E,mb3.7**/3,**mb1 3.9**/3,**mb1mx3.8**/12,**mbtmp3.7**/3,**Error ellipse: s-maj=130.9km s-min=29.4km az=106.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	19.06	248	eP	P	00 20 57.7	-3.2
	3.3nm,0.5s						
WRA	**Warramunga Arr**	21.02	227	P	P	00 21 19.2	-3.0
	2.1nm,0.3s,baz=50,slow=10.0,SNR=28						
ASAR	**Alice Springs**	23.81	220	P	P	00 21 49.0	-1.0
	0.8nm,0.4s,baz=55,slow=8.2,SNR=16						
FITZ	**Fitzroy Crossi**	27.13	241	eP	P	00 22 18.0	-3.4
	2.5nm,0.3s						
SONM	**Songino Array**	66.08	329	P	P	00 27 23.8	-1.6
	0.4nm,0.5s,baz=146,slow=5.9,SNR=8.8						

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*IPEC **24** 00:23:12.3±0.3,49.88N×18.66E,ML1.9/4,Error ellipse: s-maj=2.1km s-min=1.7km az=18.0*
*NEIC **24** 00:23:15.7±1.1,49.74N×18.27E,h5^{km},ML2.9(VIE),Error ellipse: s-maj=20.7km s-min=9.7km az=217.0*
*CSEM **24** 00:23:15.1±0.2,49.85N×18.47E,h2^{km},ML3.0/2,Error ellipse: s-maj=4.1km s-min=2.1km az=28.0*
PRU 24 00:23:14.5,49.89N×18.47E,1C,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	0.21	256	ePG	Pg	00 23 19.2	+0.4
OKC				eSG	Sg	00 23 21.7	0.0
	34nm,0.2s						
OKC	**Ostrava-Krasne**	0.21	256	ePg	Pg	00 23 19.1	+0.3
OKC				Sg	Sg	00 23 21.7	0.0
	34nm,0.2s						
MORC	**Moravsky Berou**	0.61	260	ePg	Pg	00 23 26.7	0.0
MORC	**Moravsky Berou**	0.61	260	ePg	Pg	00 23 26.5	-0.2
MORC				eSg	Sg	00 23 35.4	+0.6
	16nm,0.2s						
JAVC	**Velka Javorina**	1.16	207	ePg	Pg	00 23 36.3	-1.3
VRAC	**Vranov**	1.35	245	ePg	Pg	00 23 38.8	-2.7
VRAC				eSg	Sg	00 23 57.9	-1.6
	15nm,0.2s						
VYHS	**Vyhne**	1.42	170	i PG	Pg	00 23 39.0	-3.8
VYHS				i SG	Sg	00 23 58.0	-3.7
DPC	**Dobruska-Polom**	1.46	289	ePG	Pg	00 23 41.3	-2.3
DPC				eSG	Sg	00 24 01.3	-1.7
	15nm,0.3s						
DPC	**Dobruska-Polom**	1.46	289	ePn	Pn	00 23 41.2	-0.9
DPC	**Dobruska-Polom**	1.46	289	Pg	Pg	00 23 41.3	-2.3
DPC				eSg	Sg	00 24 01.5	-1.5
KRUC	**Moravsky**	1.59	239	ePn	Pn	00 23 42.6	-1.4
KRUC				eSg	Sg	00 24 04.6	-2.7
	13nm,0.2s						
UPC	**Upice**	1.70	292	ePG	Pg	00 23 45.6	-2.8
UPC				eSG	Sg	00 24 08.8	-2.2
CRVS	**Cervenica-Dubn**	2.19	116	ePN	Pn	00 23 54.4	+1.8
CRVS				eSN	Sn	00 24 23.8	+3.0
CRVS	**Cervenica-Dubn**	2.19	116	eSg	Sg	00 24 23.8	-3.6
PRU	**Pruhonice**	2.54	274	eSG	Sg	00 24 34.3	-4.8
KHC	**Kasperske Hory**	3.28	258	ePG	Pg	00 24 16.0	-3.9
KHC				ex	x	00 24 26.0	
KHC				ex	x	00 24 39.0	
KHC				eSG	Sg	00 24 58.3	-5.3
KHC	**Kasperske Hory**	3.28	258	Pg	Pg	00 24 16.0	-3.9
KHC				Sg	Sg	00 24 58.3	-5.3
MOA	**Molln**	3.44	235	⇑i PN	Pn	00 24 08.1	-2.4
MOA				i SG	Sg	00 25 04.8	-4.4
	1.5nm,0.2s						

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*HLW **24** 01:09:34.9,36.45N×29.08E,h15^{km},Mb3.1*
*ISK **24** 01:09:35.2,36.50N×28.99E,h8^{km},MD3.6*
*ATH **24** 01:09:35.5,36.43N×29.05E,h26^{km}±3^{km},MD3.8/7*
*CSEM **24** 01:09:35.4±0.1,36.36N×28.89E,h40^{km},Mw3.1,Error ellipse: s-maj=2.5km s-min=1.4km az=65.0*
*NIC **24** 01:09:36.4±0.2,36.19N×28.72E,h25^{km},mb4.2,ML3.8, MW3.1*
*NEIC **24** 01:09:38.5±0.7,36.35N×28.99E,h35^{km},MD3.3(ATH), ML3.8(NIC),Error ellipse: s-maj=19.6km s-min=7.2km az=189.0*
ISC 24 01:09:33.8±0.2,**36.32N**±0.02×**29.02E**±0.03,**h10^{km},n64, σ1^{s}24**/84,**2C-1D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	0.31	9	PG	**Pg**	**01 09 38.6**	**-1.7**
FETY				SG	**Sg**	**01 09 42.4**	**-2.3**
KSL	**Kastellorizon**	0.49	111	ePN	**Pn**	**01 09 46.2**	**-0.2**
ARG	**Arkhangelos**	0.73	262	ePB	**Pb**	**01 09 49.8**	**+1.6**
ARG				eSN	**Sn**	**01 10 02.5**	**+1.4**
ELL	**Elmali**	0.83	59	i PG	**Pg**	**01 09 50.1**	**-0.4**
YER	**Yerkesik**	1.00	324	PG	**Pg**	**01 09 52.1**	**-1.8**
DNZL	**Cakiroluk**	1.36	1	i P	**Pn**	**01 09 58.1**	**-0.9**
DNZL				i S	**Sb**	**01 10 17.5**	**+1.2**
MLSB	**Milas**	1.39	314	PN	**Pn**	**01 09 59.4**	**0.0**
MLSB				SN	**Sn**	**01 10 17.6**	**-0.3**
DENT	**Denizli**	1.43	0	PN	**Pn**	**01 09 59.0**	**-0.9**
ANTB	**Antalya**	1.43	66	ePN	**Pn**	**01 10 01.6**	**+1.6**
BDRM	**Kayabasi**	1.47	301	i P	**Pn**	**01 10 02.3**	**+1.8**
BDRM				i S	**Sb**	**01 10 20.8**	**+1.5**
BODT	**Bodrum**	1.56	299	ePN	**Pn**	**01 10 02.6**	**+0.8**
AYDN	**Tasoluk**	1.62	326	i P	**Pn**	**01 10 03.8**	**+1.2**
AYDN				i S	**Sn**	**01 10 23.0**	**-0.7**
BCK	**Bucak**	1.69	47	PN	**Pn**	**01 10 05.0**	**+1.3**
KARP	**Karpathos**	1.70	243	ePB	**Pb**	**01 10 05.8**	**+1.1**
ISP	**Isparta**	1.93	38	ePN	**Pn**	**01 10 07.5**	**+0.5**
KHL	**Karahalli**	2.04	11	ePN	**Pn**	**01 10 08.1**	**-0.5**
MANT	**Manisa**	2.19	350	i P	**Pn**	**01 10 10.3**	**-0.5**
MANT				i S	**Sn**	**01 10 36.2**	**-2.1**
SMG	**Samos**	2.23	309	ePB	**Pb**	**01 10 13.0**	**-0.8**
IZM	**Izmir**	2.50	326	PN	**Pn**	**01 10 15.0**	**-0.2**
KDAG	**Bornova**	2.50	327	i P	**Pn**	**01 10 14.9**	**-0.3**
KDAG				i S	**Sn**	**01 10 42.2**	**-3.9**
BLCB	**Balcova**	2.59	323	ePN	**Pn**	**01 10 16.3**	**-0.2**
AKS	**Akhisar**	2.73	340	PN	**Pn**	**01 10 17.7**	**-0.7**
HDMB	**Hadim**	2.86	76	ePN	**Pn**	**01 10 22.8**	**+2.5**
ALT	**Altintas**	2.86	17	ePN	**Pn**	**01 10 19.6**	**-0.8**
APE	**Apeiranthos**	2.90	286	ePN	**Pn**	**01 10 22.0**	**+1.0**
NPS	**Neapolis**	2.97	250	ePN	**Pn**	**01 10 24.7**	**+2.8**
AKMC	**Akamas**	2.99	115	⇑eP	**Pn**	**01 10 23.6**	**+1.4**
PPCY	**Paphos**	3.06	117	⇓P	**Pn**	**01 10 24.3**	**+1.0**
XRY	**Khrisi**	3.07	243	ePN	**Pn**	**01 10 26.5**	**+3.1**
KONT	**Konya--Tatoy**	3.12	58	ePN	**Pn**	**01 10 25.4**	**+1.3**
ALFC	**Alevga**	3.13	111	P	**Pn**	**01 10 25.3**	**+1.0**
	2.1nm,0.3s						
ALFC				S	**Sn**	**01 11 04.0**	**+1.9**
DST	**Dursunbey**	3.29	355	ePN	**Pn**	**01 10 25.8**	**-0.7**
LEF	**Lefka**	3.37	110	ePN	**Pn**	**01 10 31.3**	**+3.7**
KIZT	**Kizilcal**	3.42	41	PN	**Pn**	**01 10 29.0**	**+0.8**
BALB	**Balikesir**	3.43	345	ePN	**Pn**	**01 10 27.7**	**-0.8**
ESKT	**Eskisehir**	3.50	24	ePN	**Pn**	**01 10 28.9**	**-0.6**
SZAC	**Souni-Zanaja**	3.52	115	⇑i P	**Pn**	**01 10 30.7**	**+1.0**
	2.3nm,0.2s						
SZAC				S	**Sn**	**01 11 13.5**	**+1.7**
MAMC	**Mammari**	3.60	107	P	**Pn**	**01 10 32.8**	**+1.9**
PRK	**Paraskevi**	3.64	324	ePN	**Pn**	**01 10 31.9**	**+0.5**
CSS	**Prodhromos**	3.76	110	P	**Pn**	**01 10 34.4**	**+1.2**
CSS				S	**Sn**	**01 11 20.1**	**+2.1**
KCT	**Karacabey**	3.97	353	ePN	**Pn**	**01 10 35.2**	**-0.9**
PHNC	**Paralimni**	4.29	106	P	**Pn**	**01 10 43.1**	**+2.5**
LOD	**Lodumlu**	4.62	39	ePN	**Pn**	**01 10 45.7**	**+0.3**
KAMT	**Kaman**	4.80	49	ePN	**Pn**	**01 10 48.7**	**+0.8**
HMAT	**Matruh**	5.46	198	P	**Pn**	**01 10 58.0**	**+0.8**
HMAT				S	**Sn**	**01 11 58.0**	**-2.8**
SLUM		5.77	214	P	**Pn**	**01 11 01.6**	**+0.1**
SLUM				S	**Sn**	**01 12 04.8**	**-3.7**
HNTI	**Hanita**	6.01	121	Pn	**Pn**	**01 11 04.7**	**-0.3**
HNTI				Sn	**Sn**	**01 12 12.6**	**-2.1**
OFRI	**'Ofer**	6.16	125	Pn	**Pn**	**01 11 06.9**	**-0.1**
OFRI				Sn	**Sn**	**01 12 16.0**	**-2.3**
KSDI	**Kefar Szold**	6.29	118	Pn	**Pn**	**01 11 09.0**	**0.0**
KSDI				Sn	**Sn**	**01 12 19.4**	**-2.3**
SLTI	**Sal'it**	6.43	128	Pn	**Pn**	**01 11 09.4**	**-1.6**
KSHT	**Keshet**	6.51	119	Pn	**Pn**	**01 11 11.8**	**-0.3**
MMLI	**Mount Malkishu**	6.56	124	Pn	**Pn**	**01 11 12.5**	**-0.2**
AMAG	**Maghara**	6.66	147	P	**Pn**	**01 11 13.0**	**-1.1**
AMAG				S	**Sn**	**01 12 25.6**	**-5.2**
HNAT	**Natroun**	6.81	168	P	**Pn**	**01 11 15.8**	**-0.4**
KZIT	**Kziot**	7.02	139	Pn	**Pn**	**01 11 18.4**	**-0.8**
RTMM	**Retamin**	7.07	136	Pn	**Pn**	**01 11 18.8**	**-1.1**
GLL	**Jalalah**	7.10	161	P	**Pn**	**01 11 20.1**	**-0.2**
GLL				S	**Sn**	**01 12 36.8**	**-5.0**
SUZ		7.21	153	P	**Pn**	**01 11 21.4**	**-0.5**
SWA1		7.57	203	P	**Pn**	**01 11 26.4**	**-0.6**
SWA1				S	**Sn**	**01 12 48.7**	**-5.1**
HNKL	**Nakhl**	7.61	145	P	**Pn**	**01 11 26.6**	**-0.9**
HNKL				S	**Sn**	**01 12 48.3**	**-6.4**
SWA2		7.67	204	P	**Pn**	**01 11 28.2**	**-0.2**
HRFI	**Mount Harif**	8.04	140	Pn	**P**	**01 11 32.2**	**-1.3**
MBH	**Mount Berech**	8.18	141	Pn	**P**	**01 11 34.1**	**-1.3**
ASUT		9.16	166	P	**P**	**01 11 47.7**	**-1.3**

WEL 24 01:11:57.7±0.2,**38.37S×178.78E,h12^{km},ML3.6**/8,**Error ellipse: s-maj=2.0km s-min=0.9km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	0.88	335	P*	Pb	01 12 14.0	-0.5
MXZ				S*	Sb	01 12 25.9	-0.1
MWZ	**Matawai**	0.98	271	P*	Pb	01 12 15.9	-0.3
MWZ				eS*	Sb	01 12 28.6	-0.2
KNZ	**Kokohu**	1.08	233	P*	Pb	01 12 17.3	-0.6
KNZ				S*	Sb	01 12 32.5	+0.7
URZ	**Urewera**	1.31	274	PN	Pn	01 12 20.8	-1.2
URZ				SN	Sn	01 12 38.8	-0.6
BKZ	**Black Stump Fm**	1.96	245	PN	Pn	01 12 30.2	-0.9
BKZ				SN	Sn	01 12 53.4	-2.3
TUVZ	**Tukino**	2.60	249	PN	Pn	01 12 39.3	-1.0
TUVZ				SN	Sn	01 13 09.1	-3.0
TSZ	**Takapari Road**	2.76	231	PN	Pn	01 12 39.5	-3.2
TSZ				SN	Sn	01 13 12.1	-4.2
WAZ	**Wanganui**	3.26	244	SN	Sn	01 13 26.6	-2.3
MRZ	**Mangatainoka R**	3.37	226	PN	Pn	01 12 47.3	-4.0
MRZ				SN	Sn	01 13 25.6	-6.0
KIW	**Kapiti Island**	3.89	229	PN	Pn	01 12 54.4	-4.3
KIW				SN	Sn	01 13 38.7	-6.0
PAWZ	**Paruwai Farm**	3.96	220	SN	Sn	01 13 39.3	-7.3
QRZ	**Quartz Range**	5.42	241	SN	Sn	01 14 14.3	-9.0
KHZ	**Kahutara**	5.69	223	eSN	Sn	01 14 19.4	-11
DSZ	**Denniston Nort**	6.33	236	SN	Sn	01 14 35.1	-11

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*IDC **24** 01:23:22.6±0.7,4.68S×76.90W,h106^{km}±5^{km},mb3.9/12, mb1 4.1/16,mb1mx3.9/23,mbtmp4.3/16,MS2.7/1, Ms1 2.7/1,ms1mx1.8/20,Error ellipse: s-maj=25.4km s-min=12.5km az=57.0*
*BJI **24** 01:23:23.7,4.80S×77.00W,h116^{km},mB4.9*
*NEIC **24** 01:23:23.8±0.2,4.76S×76.97W,mb4.5/31,Error ellipse: s-maj=9.2km s-min=4.9km az=68.0*
ISC 24 01:23:21.7±0.3,**4.77S**±0.05×**77.04W**±0.08,**h112^{km}, h112^{km}**±2.6^{km}**:pP-P,n77, σ0^{s}93**/66,**mb4.4**/41,**1C, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	7.18	178	ePn	**P**	**01 25 04.5**	**-1.1**
	38nm,0.6s						
NNA				eSn	**S**	**01 26 17.9**	**-8.0**
ROSC	**El Rosal**	9.94	16	P	**P**	**01 25 44.4**	**+1.6**
	1.5nm,0.3s,baz=342,slow=5.3,SNR=4.5						
ROSC				LR	LR	01 29 25.0	
	comp=Z,40nm,18.3s,baz=8.0,slow=37						
LPAZ	**La Paz**	14.41	143	P	**P**	**01 26 43.8**	**+2.2**
	0.2nm,0.3s,baz=336,slow=11,SNR=2.9						
LPAZ	**La Paz**	14.41	143	eP	**P**	**01 26 44.0**	**+2.5**
	4.3nm,0.7s						
SDV	**Santo Domingo**	14.99	25	P	**P**	**01 26 49.1**	**+0.1**
	3.9nm,0.3s,baz=196,slow=16,SNR=19						
LVC	**Limon Verde**	19.41	157	P	**P**	**01 27 42.8**	**+1.2**
	0.7nm,0.3s,baz=316,slow=8.3,SNR=12						
BDFB	**Brasilia**	30.50	113	P	**P**	**01 29 25.0**	**-1.6**
	3.9nm,0.9s,mb4.0,baz=294,slow=12,SNR=4.9						
TRQA	**Tornquist**	35.87	160	eP	**P**	**01 30 11.4**	**-1.2**
	6.4nm,1.1s,mb4.5						
PLCA	**Paso Flores**	36.28	172	P	**P**	**01 30 15.0**	**-1.1**
	7.6nm,1.2s,mb4.5,baz=336,slow=10,SNR=5.6						

PLCA	**Paso Flores**	36.28	172	*e*P	P	01 30 15.9	-0.2
	5.1nm,1.0s,mb4.4						
WVT	**Waverly**	41.92	347	*e*P	P	01 31 01.2	-1.7
	2.6nm,0.6s,mb4.1						
ELN	**Prospectdale**	41.92	356	*e*P	P	01 31 03.5	+0.7
MIAR	**Mount Ida**	42.09	339	P	P	01 31 03.9	-0.4
	6.1nm,1.2s,mb4.2						
TXAR	**Lajitas Array**	42.46	325	P	P	01 31 08.6	+1.2
	1.1nm,0.6s,mb3.7,baz=146,slow=8.6,SNR=14						
TXAR				PcP	PcP	01 32 58.2	-0.8
	0.5nm,0.8s,baz=119,slow=3.0,SNR=3.7						
TXAR	**Lajitas Array**	42.46	325	P	P	01 31 08.6	+1.2
TXAR				PcP	PcP	01 32 58.2	-0.8
LTX	**Lajitas**	42.46	325	P	P	01 31 08.1	+0.6
WMOK	**Wichita Mounta**	44.31	334	*e*P	P	01 31 22.4	+0.1
	4.7nm,0.7s,mb4.3						
WMOK				*e*		01 32 01.5	
AMTX	**Amarillo**	45.76	331	*e*P	P	01 31 34.3	+0.6
	10nm,0.9s,mb4.6						
SDCO	**Great Sand Dun**	49.89	330	*e*P	P	01 32 06.9	+1.0
	6.7nm,0.8s,mb4.6						
SDCO				pP	pP	01 32 30.9	-1.5
MSU	**Marysvale**	53.97	326	*e*P	P	01 32 36.9	+0.5
DUG	**Dugway**	55.51	327	*e*P	P	01 32 48.0	+0.5
	82nm,1.0s						
PDAR	**Pinedale Array**	55.74	331	P	P	01 32 48.5	-0.6
	0.8nm,0.7s,mb3.9,baz=132,slow=8.2,SNR=7.7						
PDAR				pP	pP	01 33 12.8	-3.3
	0.7nm,0.7s,baz=117,slow=7.7,SNR=4.3						
HWUT	**Hardware Ranch**	55.86	329	*e*P	P	01 32 49.2	-0.9
	6.3nm,1.0s,mb4.6						
HWUT				*e*pP	pP	01 33 17.1	0.0
ULM	**Lac du Bonnet**	57.16	346	P	P	01 32 57.1	-2.1
	4.5nm,0.5s,mb4.8,baz=154,slow=7.1,SNR=15						
IMW	**Indian Meadow**	57.25	331	P	P	01 32 59.5	-0.4
NVAR	**Mina Array Bea**	57.50	322	P	P	01 33 02.0	+0.4
	1.2nm,0.6s,mb4.1,baz=126,slow=7.1,SNR=8.4						
NVAR				pP	pP	01 33 25.9	-3.0
	1.0nm,0.7s,baz=130,slow=7.0,SNR=3.1						
CMB	**Columbia Colle**	58.55	321	P	P	01 33 09.2	+0.1
	2.6nm,0.8s,mb4.3						
HLID	**Hailey**	58.73	329	*e*P	P	01 33 10.5	+0.3
	2.1nm,0.9s,mb4.2						
HLID				*e*pP	pP	01 33 38.5	+1.0
SCHQ	**Schefferville**	59.99	7	P	P	01 33 16.9	-1.8
	2.9nm,0.8s,mb4.4,baz=204,slow=7.8,SNR=12						
SCHQ	**Schefferville**	59.99	7	*e*P	P	01 33 16.9	-1.7
	3.5nm,0.6s,mb4.6						
WALA	**Waterton Lakes**	62.47	334	*e*P	P	01 33 35.2	-0.2
	4.9nm,0.7s,mb4.7						
WALA				*e*	pP	01 34 04.7	+1.6
NEW	**Newport**	63.38	331	*e*P	P	01 33 41.1	-0.4
	4.2nm,0.8s,mb4.4						
NEW				*e*pP	pP	01 34 10.0	+0.8
FCC	**Fort Churchill**	64.78	350	*e*P	P	01 33 48.2	-2.2
	3.4nm,0.8s,mb4.2						
FRB	**Frobisher Bay**	68.63	4	P	P	01 34 13.2	-1.3
	3.1nm,0.7s,mb4.3,baz=175,slow=13,SNR=6.8						
YKA	**Yellowknife Ar**	72.92	343	P	P	01 34 39.7	-0.6
	2.0nm,0.4s,mb4.3,baz=140,slow=6.2,SNR=55						
YKA				pP	pP	01 35 07.7	-1.0
	1.0nm,0.7s,baz=138,slow=5.9,SNR=6.0						
YKA	**Yellowknife Ar**	72.92	343	P	P	01 34 39.7	-0.6
YKA				pP	pP	01 35 07.7	-1.0
DBIC	**Dimbokro**	72.94	82	P	P	01 34 40.1	-1.3
	3.4nm,0.6s,mb4.4,baz=214,slow=7.9,SNR=10						
DBIC				pP	pP	01 35 07.9	-1.9
	4.8nm,0.8s,baz=221,slow=7.3,SNR=3.2						
DLBC	**Dease Lake**	75.80	334	*e*P	P	01 34 57.8	+0.9
RES	**Resolute Bay**	80.07	355	*e*P	P	01 35 19.2	-0.9
	22nm,1.9s,mb4.7						
RES				*e*pP	pP	01 35 50.2	+1.3
ESLA	**Sonseca Array**	80.13	49	P	P	01 35 19.9	-1.2
	1.9nm,1.1s,mb3.8						
SNAA	**Sanae**	80.55	162	*e*P	P	01 35 22.9	+0.1
	43nm,0.7s,mb5.4						
INK	**Inuvik**	82.65	342	*e*P	P	01 35 34.0	+0.3
	12nm,0.9s,mb4.7						
INK				*e*pP	pP	01 36 05.1	+2.4
INK				*e*sP	sP	01 36 17.4	+2.3
SJPF	**Ste Jean**	82.96	46	*e*P	P	01 35 37.0	+1.3
	9.2nm,0.8s,mb4.4						
ETSF	**Etsaut**	83.39	46	*e*P	P	01 35 38.3	+0.4
EPF	**Esparros**	84.06	46	*e*P	P	01 35 41.8	+0.5
	9.3nm,0.8s,mb4.4						
GRR	**Gorron**	84.43	41	*e*P	P	01 35 42.8	-0.2
	16nm,0.7s,mb4.7						
MFF	**Saint Martin d**	84.49	42	*e*P	P	01 35 43.3	-0.1
	11nm,0.6s,mb4.5						
LFF	**La Frestale**	84.74	44	*e*P	P	01 35 44.7	+0.1
	20nm,0.8s,mb4.8						
LFF				*e*pP	pP	01 36 31.5	+18
FLN	**La Foliniere**	84.76	40	*e*P	P	01 35 45.4	+0.8
	16nm,0.7s,mb4.8						
EKA	**Eskdalemuir Ar**	84.82	33	P	P	01 35 43.9	-0.9
	2.2nm,0.8s,mb4.2,baz=259,slow=4.3,SNR=4.4						
LDF	**La Druitiere**	84.95	40	*e*P	P	01 35 45.5	-0.1
QSPA	**South Pole Qui**	85.32	180⇑	*i*P	P	01 35 48.5	+1.7
RJF	**Les Rejaudoux**	85.35	44	*e*P	P	01 35 47.5	-0.2
	7.6nm,0.8s,mb4.4						
MTLF	**Montolieu**	85.47	46	*e*P	P	01 35 48.2	-0.1
CAF	**Calviac**	85.66	44	*e*P	P	01 35 49.3	+0.1
ILAR	**Eielson Array**	85.84	336	P	P	01 35 49.9	+0.3
	1.1nm,0.7s,mb3.9,baz=125,slow=3.8,SNR=14						
ILAR				pP	pP	01 36 17.1	-1.7
	2.2nm,1.0s,baz=129,slow=5.8,SNR=6.9						
MCK	**McKinley**	86.34	335	*e*P	P	01 35 51.4	-0.6
	2.3nm,1.1s,mb4.0						
BGF	**Bois d’Agland**	86.50	43	*e*P	P	01 35 54.3	+1.0
AVF	**Avril sur Loir**	86.89	43	*e*P	P	01 35 54.9	-0.2
AVF				*e*pP	pP	01 36 39.8	+15
ORIF	**Oris-en-Rattie**	88.33	45	*e*P	P	01 36 03.3	+1.2
	18nm,1.1s,mb4.7						
FRF	**La Foret Royal**	88.69	46	*e*P	P	01 36 04.0	+0.2
CABF	**La Chapelle**	88.72	43	*e*P	P	01 36 03.7	-0.2
	16nm,1.0s,mb4.7						
IMA	**Indian Mountai**	88.93	337	*e*P	P	01 36 05.8	+1.4
	14nm,0.9s,mb5.0						
IMA				*e*pP	pP	01 36 36.8	+2.9
LPL	**La Plagne**	89.01	44	*e*P	P	01 36 05.7	+0.4
	5.6nm,0.8s,mb4.3						
LPG	**La Plagne**	89.02	44	*e*P	P	01 36 06.0	+0.7
	6.8nm,0.9s,mb4.4						
ZAL	**Zalesovo**	128.79	14	PKP	PKPdf	01 42 17.3	+1.2
	2.4nm,0.5s,baz=169,slow=2.0,SNR=15						
SONM	**Songino Array**	136.99	357	PKP	PKPdf	01 42 33.0	+1.4
	0.8nm,0.6s,baz=337,slow=1.4,SNR=9.2						
ASAR	**Alice Springs**	138.65	226	PKhKP		01 42 27.6	
	0.4nm,0.8s,baz=126,slow=2.4,SNR=4.9						
ASAR				PKP	PKPdf	01 42 36.2	+0.9
	0.5nm,0.8s,baz=143,slow=2.5,SNR=6.6						
WRA	**Warramunga Arr**	140.57	230	PKhKP		01 42 33.2	
	0.6nm,0.7s,baz=119,slow=2.2,SNR=12						
WRA				PKP	PKPdf	01 42 39.8	+0.8
	1.4nm,0.9s,baz=116,slow=2.1,SNR=7.7						
WRA				pPKP		01 43 08.8	
	1.2nm,1.1s,baz=116,slow=2.0,SNR=2.8						
GTA	**Gaotai**	145.40	4	*e*PKP	PKPdf	01 42 48.8	+2.0
XAN	**Xi’an**	150.35	350	PKP	PKPdf	01 43 01.8	+6.9
KOLN	**Koldanda**	150.63	37	*e*P	PKPdf	01 43 02.7	+7.2
	14nm,0.8s						
GKN	**Gorkha**	151.06	35	*e*P	PKPdf	01 43 04.1	+7.9
	40nm,0.7s						
KKN	**Kakani**	151.59	34	*e*P	PKPdf	01 43 05.3	+8.3
	16nm,0.6s						
DMN	**Daman**	151.63	35	*e*P	PKPdf	01 43 05.2	+8.2
	14nm,0.6s						
PKI	**Pulchoki**	151.83	35	*e*P	PKPdf	01 43 05.3	+8.0
	11nm,0.7s						
JIRN	**Jiri**	152.19	33	*e*P	PKPdf	01 43 06.5	+8.6
	6.7nm,0.4s						

IDC 24 01:28:15.3±46.0**, 15.76S**×**173.51W, mb4.4**/3**, mb1 4.6**/3**, mb1mx3.8**/16**, mbtmp4.4**/3**, Error ellipse: s-maj=881.4km s-min=163.2km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	43.77	240	P	P	01 36 22.7	-1.8
	3.2nm,0.7s,baz=98,slow=11,SNR=11						
WRA	**Warramunga Arr**	49.66	257	P	P	01 37 09.1	-2.0
	1.2nm,0.6s,baz=93,slow=7.1,SNR=32						
ASAR	**Alice Springs**	49.90	252	P	P	01 37 11.0	-1.9
	8.7nm,0.5s,baz=88,slow=8.3,SNR=148						
ASPA	**Alice Springs**	49.90	252	*e*P	P	01 37 11.1	-1.8
KAKA	**Kakadu**	52.37	266	*e*P	P	01 37 31.8	+0.1
	2.5nm,0.4s						

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*IDC **24** 01:31:40.0±1.4, 51.11N×30.00W, mb3.5/7, mb1 3.8/7, mb1mx3.5/24, mbtmp3.6/7, MS3.4/10, Ms1 3.4/10, ms1mx3.2/21, Error ellipse: s-maj=50.7km s-min=21.1km az=8.0*

ISC 24 01:31:39.6±1.0**, 51.1N**±0.2×**30.0W**±0.2**, h10^{km}, n15, σ0^{s}34**/7**, mb3.5**/7**, MS3.3**/10**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	21.43	112	P	P	01 36 29.8	0.0
	0.6nm,0.6s,mb3.1,baz=309,slow=9.6,SNR=4.5						
JMIC	**Jan Mayen**	22.29	18	LR	LR	01 43 05.5	
	comp=Z,69nm,20.3s,MS3.1,baz=76,slow=31						
SCHQ	**Schefferville**	22.34	294	P	P	01 36 38.1	-0.6
	3.5nm,0.7s,mb3.9,baz=91,slow=7.4,SNR=8.1						
SCHQ				LR	LR	01 43 42.1	
	comp=Z,80nm,19.5s,MS3.1,baz=352,slow=32						
FRB	**Frobisher Bay**	23.89	317	LR	LR	01 44 18.6	
	comp=Z,126nm,20.0s,MS3.4,baz=114,slow=32						
NOA	**NORSAR Array B**	24.68	50	LR	LR	01 45 17.1	
	comp=Z,52nm,18.8s,MS3.1,baz=245,slow=33						
FINES	**FINESS Array B**	31.85	49	P	P	01 38 06.1	-0.3
	3.6nm,1.2s,mb4.1,baz=297,slow=4.3,SNR=3.6						
FINES				LR	LR	01 49 20.9	
	comp=Z,47nm,20.2s,MS3.2,baz=307,slow=33						
ULM	**Lac du Bonnet**	40.50	296	LR	LR	01 53 35.0	
	comp=Z,61nm,18.6s,MS3.5,baz=6.5,slow=32						
YKA	**Yellowknife Ar**	44.39	319	P	P	01 39 51.6	+0.2
	0.4nm,0.7s,mb3.2,baz=63,slow=8.4,SNR=6.1						
YKA				LR	LR	01 56 19.1	
	comp=Z,47nm,19.9s,MS3.4,baz=65,slow=33						
DBIC	**Dimbokro**	48.93	146	LR	LR	01 59 17.5	
	comp=Z,42nm,18.5s,MS3.5,baz=62,slow=34						
GNI	**Garni**	51.29	71	LR	LR	02 03 05.5	
	comp=Z,34nm,18.9s,MS3.4,baz=167,slow=37						
PDAR	**Pinedale Array**	52.48	294	P	P	01 40 55.0	+0.5
	0.3nm,0.6s,mb3.4,baz=54,slow=7.1,SNR=4.6						
TXAR	**Lajitas Array**	57.78	278	P	P	01 41 33.0	-0.1
	0.4nm,1.0s,mb3.4,baz=67,slow=9.5,SNR=3.5						
TXAR				LR	LR	02 07 36.7	
	comp=Z,74nm,21.6s,MS3.8,baz=350,slow=37						
SONM	**Songino Array**	74.62	29	P	P	01 43 20.3	+0.2
	0.4nm,0.7s,mb3.5,baz=340,slow=4.6,SNR=4.8						
WRA	**Warramunga Arr**	146.59	27	PKPbc	PKPbc	01 51 22.5	+1.5
	0.7nm,0.6s,baz=342,slow=3.7,SNR=15						
ASAR	**Alice Springs**	149.95	30	PKPbc	PKPdf	01 51 31.1	+3.1
	0.7nm,0.6s,baz=346,slow=1.7,SNR=9.3						

JMA 24 01:42:31.2±0.2**, 27.43N**×**139.68E, h462^{km}, M4.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	2.25	98	P	P	01 43 34.6	-0.2
CBIJ				*e*S	S	01 44 24.5	-0.5
JAG	**Ashikaga**	8.97	359	P	P	01 44 38.4	-0.3

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*BJI **24** 01:51:28.0, 1.80N×127.50E, h108^{km}, mB5.1, mb4.5*

*NEIC **24** 01:51:30.0±2.2, 1.81N×127.52E, h109^{km}±22^{km}, mb4.7/13, Error ellipse: s-maj=14.4km s-min=5.5km az=73.0*

*IDC **24** 01:51:31.8±3.4, 1.79N×127.42E, h124^{km}±30^{km}, mb4.1/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.5/9, Error ellipse: s-maj=51.0km s-min=12.2km az=69.0*

ISC 24 01:51:28.5±3.7**, 1.83N**±0.07×**127.5E**±0.2**, h110^{km}**±38^{km}**, n34, σ0^{s}81**/34**, mb4.7**/26**, 2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	15.25	161	*e*P	P	01 54 59.1	0.0
	27nm,0.6s						
FITZ	**Fitzroy Crossi**	19.89	185	*e*P	P	01 55 52.2	-1.3
	15nm,0.6s						
WRAB	**Tennant Creek**	22.64	163	*e*P	P	01 56 22.2	+1.2
	101nm,0.5s,mb5.4						
WRA	**Warramunga Arr**	22.65	163	P	P	01 56 22.0	+0.9
	52nm,0.5s,mb5.2,baz=343,slow=11,SNR=446						
ASAR	**Alice Springs**	26.09	167	P	P	01 56 53.8	-0.1
	7.4nm,0.7s,mb4.2,baz=345,slow=6.9,SNR=62						
ASAR				ScP		02 03 46.8	
	0.4nm,0.5s,baz=342,slow=2.2,SNR=6.4						
ASPA	**Alice Springs**	26.09	167⇓	*i*P	P	01 56 54.0	+0.1
FORT	**Forrest**	32.43	179⇓	*i*P	P	01 57 49.6	-0.7
	360nm,0.6s						
CMAR	**Chiang Mai Arr**	32.52	302	P	P	01 57 51.1	-0.1
	1.2nm,0.3s,mb4.2,baz=114,slow=5.7,SNR=6.6						
ENH	**Enshi**	33.06	331	*e*P	P	01 57 55.8	+0.1
	11nm,0.8s,mb4.7						
KLBR	**Kellerberrin**	34.50	195	*e*P	P	01 58 07.4	-0.7
	47nm,0.4s,mb5.7						
NWAO	**Narrogin (SRO)**	35.91	195	P	P	01 58 19.4	-0.6
	6.0nm,0.8s,mb4.6,baz=18,slow=9.4,SNR=5.8						
MAJO	**Matsushiro**	35.93	15	*e*P	P	01 58 20.6	+0.4
	21nm,1.1s,mb5.0						
STKA	**Stephens Creek**	36.08	159	*e*P	P	01 58 22.1	+0.6
	9.4nm,0.3s,mb5.2						
STKA	**Stephens Creek**	36.08	159	P	P	01 58 22.1	+0.7
	15nm,0.4s,mb5.3,baz=332,slow=8.0,SNR=49						
XAN	**Xi’an**	36.46	334	P	P	01 58 24.8	+0.2
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
BJT	**Baijiatuau**	39.39	346	*e*P	P	01 58 48.9	-0.1
	comp=Z,6.1nm,0.6s,mb4.6						
BJI	**Beijing**	39.41	346	*e*P	P	01 58 48.4	-0.7
BJI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.7						
BJI	**Beijing**	39.41	346	*e*P	P	01 58 48.4	-0.7
	comp=Z,9.0nm,0.8s,mb4.7						
HHC	**Hu-ho-hao-te**	41.44	342	*e*P	P	01 59 03.8	-2.0
HHC				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.4						
LSA	**Lhasa**	44.28	312	*e*P	P	01 59 30.9	+1.8
	comp=Z,3.7nm,0.7s,mb4.2						
JIRN	**Jiri**	47.12	307	*e*P	P	01 59 52.3	+0.7
	comp=Z,5.8nm,0.4s,mb4.7						
PKI	**Pulchoki**	47.71	306	*e*P	P	01 59 58.2	+2.0
KKN	**Kakani**	47.91	307	*e*P	P	01 59 57.8	+0.1
	comp=Z,7.3nm,0.5s,mb4.8						
DMN	**Daman**	47.97	306	*e*P	P	01 59 58.8	+0.6
	comp=Z,9.3nm,0.7s,mb4.7						
GKN	**Gorkha**	48.51	307	*e*P	P	02 00 01.9	-0.5
	comp=Z,4.5nm,0.4s,mb4.7						
ULN	**Ulaanbaatar**	49.16	342	*e*P	P	02 00 07.4	+0.4
	comp=Z,6.9nm,1.0s,mb4.5						
KOLN	**Koldanda**	49.25	306	*e*P	P	02 00 08.3	+0.2
	comp=Z,24nm,0.7s,mb5.2						
SONM	**Songino Array**	49.34	341	P	P	02 00 08.8	+0.3
	comp=Z,1.9nm,0.7s,mb4.1,baz=155,slow=8.1,SNR=20						
SONM				PcP	PcP	02 01 29.1	-0.6
	comp=Z,0.2nm,0.5s,baz=153,slow=3.2,SNR=3.7						
AAK	**Ala-Archa**	62.28	318	*e*P	P	02 01 40.9	-0.4
	comp=Z,11nm,1.4s,mb4.7						
ZAL	**Zalesovo**	62.63	333	P	P	02 01 42.7	-0.7
	comp=Z,0.8nm,0.3s,mb4.1,baz=331,slow=12,SNR=5.6						
ZAL	**Zalesovo**	62.63	333	P	P	02 01 42.7	-0.7
KURK	**Kurchatov**	63.76	328	*e*P	P	02 01 49.9	-1.0
	comp=Z,12nm,0.6s,mb4.9						
BVAR	**Borovoye Array**	69.33	327	P	P	02 02 25.1	-1.0
	comp=Z,1.4nm,0.5s,mb4.1,baz=127,slow=6.9,SNR=17						
VNDA	**Vanda**	81.45	173	P	P	02 03 34.5	+0.2
	comp=Z,2.1nm,0.7s,mb4.1,baz=319,slow=7.8,SNR=5.0						

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*CSEM **24** 02:01:05.2, 30.44N×56.99E, h15^{km}, ML3.3, After TEH*

TEH 24 02:01:05.2, 30.44N×56.99E, h15^{km}, Mn3.3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBRJ	**Borojen**	5.09	286	Pn	Pn	02 02 34.2	+11
IBRJ	**Borojen**	5.09	286	Pn	Pn	02 02 34.2	+11
IPAY	**Payeh**	6.22	15	Pn	Pn	02 02 35.5	-3.3
IFIR	**Firoozkooh**	6.29	327	Pn	Pn	02 02 36.4	-3.3
IKRD	**Kardeh**	6.44	11	Pn	Pn	02 02 39.0	-2.9
IDMV	**Damavand**	6.60	322	Pn	Pn	02 02 40.9	-3.2
ISFR	**Esferayen**	6.64	7	Pn	Pn	02 02 39.9	-4.8
IQHU	**Quchan**	6.73	11	Pn	Pn	02 02 42.6	-3.4
IAFJ	**Afjeh**	6.98	322	Pn	Pn	02 02 45.8	-3.7
IAFJ				Sn	Sn	02 04 00.7	-8.6
IRAZ	**Razeghan**	7.73	312	Pn	Pn	02 02 58.0	-1.9

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*IDC **24** 02:13:01.4±1.0, 8.36N×90.45E, mb3.8/10, mb1 4.0/11, mb1mx3.9/19, mbtmp3.7/11, ML4.0/1, MS3.9/13, Ms1 3.9/13, ms1mx3.9/20, Error ellipse: s-maj=36.0km s-min=20.0km az=44.0*

*NEIC **24** 02:13:06.5±0.8, 8.54N×90.45E, h30^{km}, mb4.4/7, Error ellipse: s-maj=17.6km s-min=13.1km az=69.0*

*BJI **24** 02:13:08.3, 8.66N×90.62E, h20^{km}, mB4.9, mb4.6, Ms4.1, Msz3.7*

ISC 24 02:13:03.9±2.3**, 8.81N**±0.09×**90.23E**±0.06**, h8^{km}**±14^{km}**, n48, σ1^{s}14**/48**, mb4.1**/19**, MS3.9**/18**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	**Vishakhapatnam**	11.11	324	*e*P	P	02 15 44.8	-1.5
VIS				*e*S	S	02 17 39.2	-13
VIS				*e*		02 17 48.7	
	comp=E,59nm,0.6s						
VIS				*e*		02 17 48.7	
	comp=N,59nm,0.7s						
BWNR	**Bhubaneshwar**	12.19	340	*e*P	P	02 15 59.2	-1.7
BWNR				*e*S	S	02 18 03.9	-14
BWNR				*e*		02 18 11.3	
	comp=E,46nm,0.4s						
BWNR				*e*		02 18 11.5	
	comp=N,49nm,0.3s						
CMAR	**Chiang Mai Arr**	12.79	41	Pn	P	02 16 07.7	-1.2
	comp=N,0.3nm,0.3s,baz=232,slow=14,SNR=6.7						
CMAR				LR	LR	02 21 59.9	
	comp=N,275nm,19.4s,baz=225,slow=41						
HYB	**Hyderabad**	14.22	308	*i* P	P	02 16 37.0	+9.0
HYB				*e*		02 18 51.0	
HYB				*e*S	S	02 19 07.0	+0.1
BLSP	**Bilaspur**	15.36	330	*e*P	P	02 16 45.7	+2.8
BLSP				*e*S	S	02 19 33.8	0.0
BOK	**Bokaro**	15.47	345	*e*P	P	02 16 44.8	+0.6
BOK				*e*		02 19 33.0	
KAD	**Karad**	17.76	300	*e*P	P	02 17 16.5	+3.2
KAD				*e*		02 20 21.1	
POO	**Poona**	18.60	303	*e*	P	02 17 14.0	-10
POO				*e*		02 20 42.0	
BHPL	**Bhopal**	18.88	321	*i* P	P	02 17 27.0	-0.1
BHPL				*i*		02 20 54.7	
JIRN	**Jiri**	19.13	349	*e*P	P	02 17 31.5	+1.4
	comp=N,52nm,0.9s						
PKI	**Pulchoki**	19.21	347	*e*P	P	02 17 30.8	-0.2
	comp=N,36nm,0.7s						
DMN	**Daman**	19.32	346	*e*P	P	02 17 31.8	-0.4
	comp=N,65nm,0.7s						
KKN	**Kakani**	19.45	347	*e*P	P	02 17 33.3	-0.5
GKN	**Gorkha**	19.81	345	*e*P	P	02 17 37.0	-0.8
KOLN	**Koldanda**	19.87	342	*e*P	P	02 17 38.2	-0.3
	comp=N,49nm,0.9s						
KMI	**Kunming**	20.13	35	P	P	02 17 46.6	+5.3
KMI				AP		02 17 54.8	
KMI				S	S	02 21 21.0	-1.0
KMI				AMB	AMB		
	comp=Z,17nm,1.3s						
KMI				AMB	AMB		
	comp=Z,77nm,3.6s						
KMI				LR	LR		
	comp=N,227nm,19.5s,MS3.8						
KMI				LR	LR		
	comp=E,338nm,19.5s,MS3.8						
KMI				LR	LR		
	comp=Z,270nm,20.3s,MS3.6						
KMI	**Kunming**	20.13	35	P	P	02 17 46.6	+5.3
	comp=Z,17nm,1.3s						
KMI				pP		02 17 54.8	
KMI				sP		02 18 00.2	
KMI				S	S	02 21 21.0	-1.0
LSA	**Lhasa**	20.80	2	P	P	02 17 48.1	-0.1
LSA				AP		02 17 55.8	
LSA				XP		02 18 00.8	
LSA				S	S	02 21 42.0	+6.5
LSA				LR	LR		
	comp=N,370nm,19.6s,MS4.0						
LSA				LR	LR		
	comp=E,490nm,19.6s,MS4.0						
LSA				LR	LR		
	comp=Z,690nm,19.1s,MS4.0						
LSA	**Lhasa**	20.80	2	*e*P	P	02 17 49.4	+1.1
	comp=Z,38nm,0.8s						
GYA	**Guiyang**	23.47	40⇑	*i*P	P	02 18 16.3	+1.3
GYA				AP		02 18 25.4	
GYA				XP		02 18 29.6	
GYA				S	S	02 22 30.5	+5.7
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,170nm,4.5s						
GYA				LR	LR		
	comp=N,180nm,12.9s,MS3.9						
GYA				LR	LR		
	comp=E,210nm,12.9s,MS3.9						
GYA				LR	LR		
	comp=Z,190nm,14.1s,MS3.7						
CD2	**Chengdu**	25.35	28	P	P	02 18 34.0	+0.9
CD2				AMB	AMB		
	comp=Z,19nm,0.8s,mb4.7						
LZH	**Lanzhou**	29.85	23	*e*P	P	02 19 09.0	-5.0
	comp=Z,15nm,1.0s,mb4.7						
LZH				pP	pP	02 19 15.0	-1.5
LZH				sP	sP	02 19 20.0	+2.4
GTA	**Gaotai**	31.66	14	*e*P	P	02 19 31.8	+1.9
GTA				AP	pP	02 19 38.8	+6.4
GTA				XP	sP	02 19 42.1	+8.7
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.2						
GTA				AMB	AMB		
	comp=Z,89nm,4.2s						
GTA				LR	LR		
	comp=N,126nm,15.6s,MS3.9						
GTA				LR	LR		
	comp=E,165nm,17.1s,MS3.9						
GTA				LR	LR		
	comp=Z,120nm,15.6s,MS3.7						
WMQ	**Urumqi**	34.95	357	*e*P	P	02 20 04.5	+6.1
WMQ				XP	sP	02 20 18.0	+16
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
WMQ				LR	LR		
	comp=N,203nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=E,165nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,176nm,20.0s,MS3.8						
BJI	**Beijing**	38.76	32	*e*P	P	02 20 30.8	+0.2
BJI				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.1						
BJI				LR	LR		
	comp=N,145nm,18.0s,MS4.0						
BJI				LR	LR		
	comp=E,162nm,20.2s,MS4.0						
BJI				LR	LR		
	comp=Z,152nm,22.1s,MS3.8						
BJI	**Beijing**	38.76	32	*e*P	P	02 20 30.7	+0.1
	comp=Z,4.0nm,1.0s,mb4.1						
BJI				S	S	02 26 06.4	-21
SONM	**Songino Array**	41.23	17	P	P	02 20 50.2	-0.8
	comp=Z,1.8nm,0.9s,mb3.7,baz=204,slow=11,SNR=14						
ULN	**Ulaanbaatar**	41.45	17	*e*P	P	02 20 52.9	+0.2
	comp=Z,4.0nm,1.0s,mb4.0						
ZAL	**Zalesovo**	45.21	355	P	P	02 21 24.8	+1.6
	comp=Z,1.1nm,0.5s,mb4.0,baz=318,slow=5.0,SNR=9.5						
ZAL				LR	LR	02 43 20.5	
	comp=Z,318nm,19.8s,MS4.2,baz=280,slow=40						
ZAL	**Zalesovo**	45.21	355	P	P	02 21 24.8	+1.6
CN2	**Changchun**	46.40	35	*e*P	P	02 21 31.1	-1.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
GNI	**Garni**	51.03	315	LR	LR	02 48 13.2	
	comp=Z,55nm,18.4s,MS3.6,baz=312,slow=41						
WRA	**Warramunga Arr**	51.97	124	P	P	02 22 09.1	-7.0
	comp=Z,0.2nm,0.6s,mb3.3,baz=304,slow=8.2,SNR=2.8						
ASAR	**Alice Springs**	53.51	128	P	P	02 22 21.0	-6.5
	comp=Z,0.7nm,0.7s,mb3.7,baz=301,slow=6.7,SNR=4.9						
ASAR				LR	LR	02 49 46.3	
	comp=Z,77nm,18.9s,MS3.8,baz=199,slow=42						
ASF	**Jabal al Asfar**	54.47	303	LR	LR	02 48 48.9	
	comp=Z,71nm,19.7s,MS3.7,baz=150,slow=39						
EIL	**Elat**	55.61	300	LR	LR	02 47 52.7	
	comp=Z,138nm,18.0s,MS4.1,baz=112,slow=37						
BRTR	**Keskin Array B**	58.90	311	P	P	02 23 04.4	-1.5
	comp=Z,0.4nm,0.7s,mb3.5,baz=105,slow=7.9,SNR=3.3						

CTA	Charters Tower	62.15	118	LR	LR	02 50 54.5	
	comp=Z,80nm,19.4s,MS3.9,baz=55,slow=37						
AKASG	Malin Array Be	65.03	322	P	P	02 23 48.0	+1.1
	comp=Z,0.2nm,0.3s,mb3.6,baz=87,slow=4.9,SNR=4.1						
MLR	Muntele Rosu	65.81	316	P	P	02 23 51.3	-0.6
	comp=Z,2.7nm,0.9s,mb4.3,baz=68,slow=5.4,SNR=3.4						
FINES	FINESS Array B	70.09	333	P	P	02 24 17.1	-1.3
	comp=Z,0.8nm,0.7s,mb3.8,baz=82,slow=9.8,SNR=3.2						
FINES				LR	LR	02 58 43.5	
	comp=Z,57nm,18.2s,MS3.9,baz=116,slow=39						
BOSA	Boshof	72.84	236	P	P	02 24 34.7	-0.9
	comp=Z,2.0nm,0.6s,mb4.2						
ARCES	ARCESS Array B	73.09	341	LR	LR	02 59 35.6	
	comp=Z,75nm,21.6s,MS3.9,baz=307,slow=38						
GERES	GERESS Array B	74.55	318	P	P	02 24 46.8	+1.7
	comp=Z,0.4nm,0.7s,mb3.5,baz=101,slow=5.0,SNR=3.1						
NOA	NORSAR Array B	77.02	331	LR	LR	03 02 56.4	
	comp=Z,84nm,19.9s,MS4.1,baz=90,slow=39						
MAW	Mawson	78.71	190	LR	LR	02 51 16.9	
	comp=Z,132nm,18.8s,MS4.3,baz=70,slow=29						
DBIC	Dimbokro	93.98	277	LR	LR	03 09 05.3	
	comp=Z,70nm,19.5s,MS4.1,baz=104,slow=36						
ILAR	Eielson Array	95.31	21	P	P	02 26 29.6	+0.2
	comp=Z,0.3nm,0.9s,mb3.7,baz=307,slow=4.5,SNR=4.1						
ILAR				LR	LR	03 13 06.9	
	comp=Z,54nm,18.6s,MS4.0,baz=176,slow=38						

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*MOS **24** 02:14:12.1±1.1, 34.90N×23.30E, h10^{km}, mb4.3/5, Error ellipse: s-maj=15.7km s-min=8.9km az=55.0*
*CSEM **24** 02:14:16.7±0.1, 34.77N×23.77E, h60^{km}, MD3.5, Error ellipse: s-maj=3.9km s-min=1.3km az=75.0*
*ATH **24** 02:14:17.8, 34.87N×23.58E, h42^{km}±4^{km}, MD3.5/10*
*NEIC **24** 02:14:17.8, 34.83N×23.60E, h40^{km}, mb4.0/5, MD3.5(ATH), After ATH.*
*HLW **24** 02:14:17.7, 34.79N×23.74E, h33^{km}, Mb3.7*
*IDC **24** 02:14:18.0±2.4, 34.86N×23.30E, h50^{km}±16^{km}, mb3.7/7, mb1 3.7/11, mb1mx3.5/24, mbtmp3.8/11, ML3.3/4, Error ellipse: s-maj=33.1km s-min=11.5km az=7.0*
ISC 24 02:14:15.8±0.5**, 34.66N**±0.03×**23.56E**±0.06**, h65**^{km}±6^{km}**, n71, σ1^{s}38**/76**, mb3.8**/10**, 3C-1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.47	68	eP	P	02 14 27.5	-0.5
VAM	Vamos	0.91	35	eP	P	02 14 32.7	-0.5
VAM				eS	S	02 14 44.5	-1.5
IDI	Anoyia	1.26	60	P	P	02 14 39.3	+1.4
	41nm,0.3s,baz=244,slow=14,SNR=265						
IDI				S	S	02 14 58.2	+4.0
	45nm,0.3s,baz=320,slow=17,SNR=11						
KYTH	Kithira	1.67	345	eP	P	02 14 44.0	+0.5
KYTH	Kithira	1.67	345	eP	P	02 14 46.0	+2.5
XRY	Khrisi	1.77	83	eP	P	02 14 47.5	+2.6
NPS	Neapolis	1.79	70	eP	P	02 14 47.6	+2.4
NPS	Neapolis	1.79	70	eP	P	02 14 47.3	+2.1
VLI	Veliai	2.11	346	eP	P	02 14 52.6	+3.0
VLI	Veliai	2.11	346	eP	P	02 14 50.5	+0.9
SANT	Santorini	2.31	42	ePn	P	02 14 52.0	-0.4
SANT	Santorini	2.31	42	ePn	P	02 14 52.0	-0.4
APE	Apeiranthos	2.89	33	eP	P	02 14 59.4	-1.2
KARP	Karpathos	3.08	72	eP	P	02 15 05.0	+1.6
KARP	Karpathos	3.08	72	eP	P	02 15 03.1	-0.3
NAIG	Nisos Aigina	3.09	359	eP	P	02 15 02.5	-0.9
NAIG	Nisos Aigina	3.09	359	eP	P	02 15 03.5	+0.1
NSAL	Nisos Salamina	3.24	359	eP	P	02 15 04.5	-1.0
NSAL	Nisos Salamina	3.24	359	eP	P	02 15 05.0	-0.5
SLUM		3.46	156	P	P	02 15 10.0	+1.5
SLUM				S	S	02 15 48.3	-0.2
MPAR	Parnis Oros	3.48	2	eP	P	02 15 08.2	-0.8
MPAR	Parnis Oros	3.48	2	eP	P	02 15 08.5	-0.5
RLS	Riolos of Patr	3.78	334	eP	P	02 15 13.9	+0.8
LKR	Lokris	4.00	354	eP	P	02 15 15.1	-1.1
ARG	Arkhangelos	4.04	66	eP	P	02 15 17.5	+0.8
EVR	Evrytania	4.47	342	eP	P	02 15 23.5	+0.7
EVR	Evrytania	4.47	342	eP	P	02 15 24.3	+1.5
HMAT	Matruh	4.64	139	P	P	02 15 25.7	+0.6
HMAT				S	S	02 16 15.4	-2.8
SWA2		5.64	163	P	P	02 15 40.7	+1.8
SWA2				S	S	02 16 41.4	-1.7
SWA1		5.69	161	P	P	02 15 41.3	+1.7
SWA1				S	S	02 16 42.3	-2.0
HNAT	Natroun	7.81	128	P	P	02 16 09.2	+0.1
VAE	Valguarnera	7.92	293	P	P	02 16 09.1	-1.5
	0.3nm,0.3s,baz=96,slow=9.2,SNR=2.8						
VAE				S	S	02 17 31.8	-7.7
	2.0nm,0.3s,baz=127,slow=19,SNR=6.4						
CSS	Prodhromos	8.05	85	ePn	P	02 16 09.8	-2.5
CSS				eSn	S	02 17 25.1	-18
CSS	Prodhromos	8.05	85	ePn	P	02 16 09.8	-2.5
GLL	Jalalah	8.57	124	P	P	02 16 19.4	-0.1
GLL				S	S	02 17 49.2	-6.5
BRTR	Keskin Array B	9.50	55	P	P	02 16 32.1	-0.1
	0.1nm,0.3s,baz=229,slow=13,SNR=7.3						
MALT	Malatya	12.51	69	P	P	02 17 13.3	+0.5
KBA	Koelnbreinsper	14.59	331	⇑iP	P	02 17 47.3	+7.3
	2.4nm,0.6s						
KBA	Koelnbreinsper	14.59	331	⇑iP	P	02 17 47.3	+7.3
KBA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MOA	Molln	14.89	335	⇓iP	P	02 17 50.1	+6.2
	comp=Z,4.3nm,0.6s						
MORC	Moravsky Berou	15.74	346	eP	P	02 17 57.8	+3.2
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MORC	Moravsky Berou	15.74	346	eP	P	02 17 57.8	+3.2
	comp=Z,2.3nm,0.8s						
GERES	GERESS Array B	15.94	336	P	P	02 17 55.3	-1.9
	comp=Z,0.0nm,0.3s,baz=157,slow=13,SNR=2.8						
KHC	Kasperske Hory	16.23	336	eP	P	02 18 04.5	+3.7
AKASG	Malin Array Be	16.55	13	P	P	02 18 03.8	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	16.55	13	P	P	02 18 03.8	-1.1
	comp=Z,1.0nm,0.3s,baz=208,slow=9.7,SNR=6.9						
KIV	Kislovodsk	17.44	52	P	P	02 18 16.3	+0.2
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KIV	Kislovodsk	17.44	52	P	P	02 18 16.3	+0.2
	comp=Z,6.9nm,0.8s						
KIV	Kislovodsk	17.44	52	P	P	02 18 16.3	+0.2
	comp=Z,6.9nm,0.8s						
HFS	Hagfors	26.28	349	P	P	02 19 46.2	-0.5
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	Hagfors	26.28	349	P	P	02 19 46.2	-0.5
	comp=Z,1.5nm,0.4s,mb3.7,baz=150,slow=12,SNR=11						
FINES	FINESS Array B	26.85	3	P	P	02 19 50.7	-1.1
FINES				pmax	pmax		
	comp=Z,4.0nm,1.2s						
FINES	FINESS Array B	26.85	3	P	P	02 19 50.7	-1.1
	comp=Z,3.6nm,1.1s,mb3.8,baz=158,slow=10,SNR=5.8						
FINES	FINESS Array B	26.85	3	P	P	02 19 50.7	-1.1
NAO01	NORSAR Array S	27.45	347	P	P	02 19 55.0	-2.3
	comp=Z,1.3nm,0.4s,mb3.8						
NOA	NORSAR Array B	27.56	347	P	P	02 19 58.3	-0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	27.56	347	P	P	02 19 58.3	-0.1
	comp=Z,0.5nm,0.7s,mb3.2,baz=144,slow=10,SNR=3.0						
ARCES	ARCESS Array B	34.94	1	P	P	02 21 02.1	-0.9
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	34.94	1	P	P	02 21 02.1	-0.9
	comp=Z,1.4nm,0.6s,mb4.0,baz=180,slow=9.7,SNR=8.3						
DBIC	Dimbokro	38.23	230	P	P	02 21 35.2	+4.0
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DBIC	Dimbokro	38.23	230	P	P	02 21 35.2	+3.9
	comp=Z,3.0nm,0.9s,mb4.1						
KURK	Kurchatov	42.52	50	P	P	02 21 59.9	-6.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
KURK	Kurchatov	42.52	50	P	P	02 21 59.9	-6.2
	comp=Z,4.0nm,0.9s,mb4.2						
SONM	Songino Array	60.82	50	P	P	02 24 24.8	+1.5
	comp=Z,0.7nm,0.6s,mb3.8,baz=283,slow=8.2,SNR=5.5						
SCHQ	Schefferville	62.71	319	P	P	02 24 37.2	+1.2
	comp=Z,1.4nm,0.7s,mb4.0,baz=57,slow=4.8,SNR=9.2						
SCHQ	Schefferville	62.71	319	P	P	02 24 37.2	+1.2
YKA	Yellowknife Ar	77.51	342	P	P	02 26 08.0	+2.5
	comp=Z,0.1nm,0.4s,mb2.9,baz=38,slow=5.3,SNR=4.5						
VNA1	Neumayer--Stat	107.48	191		Pdif	02 28 32.6	+5.3
VNA2	Neumayer--Watz	107.59	190	⇑i	Pdif	02 28 36.1	+8.3
WRA	Warramunga Arr	117.85	96	PKP	PKPdf	02 32 58.8	+3.6
	comp=Z,0.3nm,0.7s,baz=315,slow=2.0,SNR=5.8						
ASAR	Alice Springs	119.26	100	PKP	PKPdf	02 33 01.6	+3.7
	comp=Z,0.3nm,0.6s,baz=266,slow=1.4,SNR=4.4						

IDC 24 02:26:06.6±1.7**, 17.23S**×**177.89W, mb3.9**/5**, mb1 4.3**/5**, mb1mx3.9**/15**, mbtmp3.9**/5**, Error ellipse: s-maj=152.4km s-min=25.6km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.39	241	P	P	02 33 37.9	-2.0
	0.8nm,0.5s,baz=103,slow=7.6,SNR=4.4						
WRA	Warramunga Arr	45.24	259	P	P	02 34 25.9	-1.9
	0.8nm,0.5s,baz=95,slow=7.0,SNR=24						
ASAR	Alice Springs	45.45	254	P	P	02 34 27.9	-1.5
	5.3nm,0.5s,baz=88,slow=8.5,SNR=108						
TXAR	Lajitas Array	85.21	57	P	P	02 38 46.6	-0.1
	0.3nm,0.7s,baz=225,slow=6.4,SNR=3.8						
PDAR	Pinedale Array	86.52	43	P	P	02 38 50.8	-2.1
	0.3nm,0.9s,baz=198,slow=4.7,SNR=3.6						

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*IDC **24** 02:36:34.6±0.7, 54.54N×162.23W, mb4.2/22, mb1 4.3/25, mb1mx4.3/29, mbtmp4.1/25, ML3.8/3, MS3.4/9, Ms1 3.4/9, ms1mx3.1/27, Error ellipse: s-maj=18.6km s-min=13.6km az=168.0*
*BJI **24** 02:36:42.6, 54.50N×162.00W, h58^{km}, mB5.2, mb4.8, Ms4.7, Msz4.4*
*NEIC **24** 02:36:42.7±0.3, 54.55N×162.00W, h59^{km}±2^{km}, mb4.5/17, ML4.7(PMR), ML4.3(AEIC), Error ellipse: s-maj=6.8km s-min=2.4km az=153.0*
NEIC Felt [III] at King Cove and [II] at False Pass.
ISC 24 02:36:41.2±0.5**, 54.53N**±0.05×**161.91W**±0.05**, h61**^{km}±3^{km}**, n146, σ1^{s}00**/149**, mb4.5**/45**, 2C, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRIA	Deer Island	0.48	335	P	P	02 36 52.4	-0.7
DT1	Dutton Round H	0.61	340	P	P	02 36 54.3	-0.3
DOL	Dolgoi Island	0.62	2	P	P	02 36 54.2	-0.3
DTNA	Dutton South F	0.65	342	P	P	02 36 54.9	-0.1
HAG	Hague Volcano	0.79	0	P	P	02 36 57.2	+0.6
BALA	Baldy Mountain	0.83	323	P	P	02 36 58.2	+1.0
PVV	Pavlof Volcano	0.84	5	P	P	02 36 57.9	+0.5
FALS	False Pass	0.93	291	P	P	02 36 58.5	-0.1
FALS				S	S	02 37 12.4	+0.9
SDPT	Sand Point	1.16	45	P	P	02 37 02.0	+0.3
SDPT				S	S	02 37 18.2	+1.2
BLHA	Black Hill	1.18	356	P	P	02 37 03.3	+1.4
SSLW	Shishaldin Wes	1.31	281	P	P	02 37 04.2	+0.3
WTUG	Tugumak	1.47	283	P	P	02 37 06.8	+0.7
WESN	West Dahl Nort	1.56	272	P	P	02 37 07.9	+0.7
WESS	West Dahl Sout	1.64	269	P	P	02 37 08.9	+0.5
WFAR	Faris Peak	1.67	271	P	P	02 37 09.2	+0.5
AKA	Akutan	2.30	262	P	P	02 37 17.6	+0.1
AKA				S	S	02 37 45.8	+1.2
AKUT	Akutan	2.30	262	P	P	02 37 17.4	-0.2
AKUT				S	S	02 37 45.2	+0.5
AKLV	Akutan Long Va	2.40	263	P	P	02 37 18.7	-0.3
AKGG	Akutan Green G	2.41	264	P	P	02 37 19.1	-0.1
AKGG				S	S	02 37 49.5	+2.0
LVA	Lava Point	2.44	263	P	P	02 37 20.0	+0.3
UNV	Unalaska Valle	2.79	258	P	P	02 37 23.3	-1.1
MTBL	Makushin Table	2.85	261	P	P	02 37 25.1	-0.4
MSW	Makushin Switc	2.93	260	P	P	02 37 25.7	-0.8
ANPB	Aniakchak Plen	3.06	41	P	P	02 37 29.0	+0.6
OKFG	Magazine Ridge	3.72	255	P	P	02 37 36.8	-0.8
NIKO	Nikolski	4.41	252	P	P	02 37 47.0	-0.2
CAHL	Cahill	5.10	44	P	P	02 37 56.7	-0.2
MGLS	Mageik LS	5.19	42	P	P	02 37 58.2	+0.1
SPIA	Saint Paul Isl	5.39	303	P	P	02 38 01.2	+0.3
KAWH	Katmai	5.51	43	P	P	02 38 02.3	-0.3
KAHC	Katmai Hardscr	5.62	40	P	P	02 38 04.2	+0.1
KAPH	Katmai Pasha	5.83	43	P	P	02 38 07.8	+0.7
KDAK	Kodiak Island	6.14	54	P	P	02 38 09.0	-2.3
MCNL	McNeil River	6.24	39	P	P	02 38 13.1	+0.4
ILS	Iliamna Low So	7.25	38	P	P	02 38 27.9	+1.1
ILW	Iliamna West	7.29	37	P	P	02 38 27.7	+0.2
INE	Iliamna NE	7.32	37	P	P	02 38 28.9	+1.1
ILIM	Iliamna	7.37	37	P	P	02 38 29.6	+1.1
SVW2	Sparrevohn	7.39	25	P	P	02 38 27.6	-1.3
ATKA	Atka Island	7.71	257	P	P	02 38 31.1	-2.1
RSO	Redoubt South	7.72	36	P	P	02 38 34.7	+1.4
NCT	North Crescent	7.73	35	P	P	02 38 33.9	+0.5
RDN	Redoubt North	7.75	36	P	P	02 38 34.9	+1.1
BRLK	Bradley Lake	7.96	44	P	P	02 38 36.0	-0.6
CKN	Chakachatna No	8.47	34	P	P	02 38 43.3	-0.3
STLK	Strandline Lak	8.79	33	P	P	02 38 48.5	+0.6
GSMY	Great Sitkin M	8.84	259	P	P	02 38 48.8	+0.2
TT01	Tatalina	8.93	18	P	P	02 38 48.9	-1.1
FIB	Fire Island	9.12	38	P	P	02 38 54.1	+1.6
ADK	Adak	9.26	259	P	P	02 38 52.4	-1.9
KIWB	Kanaga Island	9.53	260	P	P	02 38 57.2	-0.9
PWA	Palmer West	9.55	37	eP	P	02 38 56.7	-1.6
GHO	Glory Hole Cre	9.97	38	P	P	02 39 02.4	-1.6
SML	Sawmill	10.21	39	eP	P	02 39 03.0	-4.3
EYAK	Cordova Ski Ar	10.55	49	eP	P	02 39 09.1	-2.8
DIV	Divide	10.83	46	eP	P	02 39 13.1	-2.5
MCK	McKinley	11.35	31	eP	P	02 39 21.1	-1.6
TNA	Tin City	11.46	347	eP	P	02 39 23.7	-0.4
THY	Trims Highway	12.16	36	eP	P	02 39 32.1	-1.4
IMA	Indian Mountai	12.25	16	eP	P	02 39 35.2	+0.4
COLA	College	12.53	29	eP	P	02 39 37.3	-1.1
MENT	Mentasta	12.61	41	eP	P	02 39 38.1	-1.5
ILAR	Eielson Array	12.72	30	Pn	P	02 39 35.9	-5.2
	0.3nm,0.3s,baz=222,slow=14,SNR=17						
ILAR				LR	LR	02 44 58.2	
	comp=Z,204nm,19.3s,baz=199,slow=39						
FX1	Attu Island--F	14.83	274	eP	P	02 40 06.1	-2.4
DAWY	Dawson	14.86	41	eP	P	02 40 06.2	-2.5
DLBC	Dease Lake	17.93	64	P	P	02 40 47.6	+0.1
	0.1nm,0.3s,baz=270,slow=17,SNR=2.5						
DLBC				LR	LR	02 46 52.0	
	comp=Z,113nm,21.6s,baz=347,slow=34						
INK	Inuvik	19.09	33	P	P	02 40 58.8	-2.4
	0.7nm,0.3s,baz=216,slow=11,SNR=26						
INK				LR	LR	02 49 10.6	
	comp=Z,177nm,19.9s,baz=204,slow=39						
INK	Inuvik	19.09	33	eP	P	02 40 58.3	-2.9
	6.1nm,0.8s						
BBB	Bella Bella	20.20	83	LR	LR	02 47 35.2	
	comp=Z,137nm,21.0s,baz=264,slow=32						
YKA	Yellowknife Ar	25.42	53	P	P	02 42 04.6	+0.5
	2.0nm,0.6s,mb3.8,baz=270,slow=8.8,SNR=39						
YKA				LR	LR	02 52 59.5	
	comp=Z,62nm,19.4s,baz=90,slow=38						
YKA	Yellowknife Ar	25.42	53	P	P	02 42 04.6	+0.5
YKA				LR	LR	02 52 59.5	
EDM	Edmonton	28.21	72	eP	P	02 42 30.8	+1.0
NEW	Newport	28.24	84	LR	LR	02 51 55.1	
	comp=Z,67nm,20.5s,baz=303,slow=32						
NEW	Newport	28.24	84	P	P	02 42 29.3	-0.9
HLID	Hailey	32.41	90	eP	P	02 43 07.0	0.0
NVAR	Mina Array Bea	33.44	101	P	P	02 43 18.0	+1.9
	0.2nm,0.5s,baz=280,slow=10,SNR=3.2						
BW06	Boulder Array	35.72	87	P	P	02 43 36.4	+0.9
PDAR	Pinedale Array	35.72	87	P	P	02 43 36.5	+1.0
	0.3nm,0.7s,baz=307,slow=4.5,SNR=4.5						
ULM	Lac du Bonnet	39.19	68	P	P	02 44 04.3	-0.1
	1.3nm,0.6s,mb3.9,baz=270,slow=5.6,SNR=3.8						
ULM				LR	LR	02 58 58.6	
	comp=Z,56nm,19.2s,baz=311,slow=34						
ULM	Lac du Bonnet	39.19	68	P	P	02 44 04.3	-0.1
ULM				LR	LR	02 58 58.6	
SDCO	Great Sand Dun	41.33	90	P	P	02 44 22.9	+0.7
MDJ	Mudanjiang	43.84	286	P	P	02 44 47.3	+4.8
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,48nm,3.4s						
MAJO	Matsushiro	44.17	271	eP	P	02 44 44.2	-1.1
	comp=Z,12nm,0.7s,mb4.7						
MAT	Matsushiro	44.17	271	eP	P	02 44 44.0	-1.4
	comp=Z,5.0nm,0.9s,mb4.2						
MAT	Matsushiro	44.17	271	P	P	02 44 44.0	-1.4
TXAR	Lajitas Array	48.40	97	P	P	02 45 18.9	+0.1
	comp=Z,0.4nm,0.9s,baz=303,slow=5.6,SNR=5.8						
TXAR				LR	LR	03 03 14.5	
	comp=Z,36nm,20.4s,baz=45,slow=33						
SCHQ	Schefferville	50.73	48	P	P	02 45 35.8	-0.6
	comp=Z,0.6nm,0.5s,mb3.8,baz=12,slow=0.9,SNR=5.1						
TLY	Talaya	52.57	309	eP	P	02 45 48.4	-1.8
	comp=Z,6.2nm,0.7s,mb4.7						
WVT	Waverly	52.67	78	eP	P	02 45 50.4	-0.8
	comp=Z,4.6nm,0.6s,mb4.6						
ULN	Ulaanbaatar	53.58	303	eP	P	02 45 56.6	-1.1
	comp=Z,5.3nm,0.6s,mb4.7						
SONM	Songino Array	53.92	304	P	P	02 45 59.1	-1.2
	comp=Z,5.8nm,0.7s,mb4.6,baz=46,slow=6.4,SNR=66						
SONM				PcP	PcP	02 47 04.7	-0.3
	comp=Z,1.1nm,0.5s,baz=89,slow=2.2,SNR=7.1						
BJI	Beijing	54.29	291	eP	P	02 46 05.8	+2.7
BJI				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.8						
BJI	Beijing	54.29	291	eP	P	02 46 05.7	+2.6
	comp=Z,6.0nm,0.5s,mb4.8						
ARCES	ARCESS Array B	56.12	357	P	P	02 46 13.5	-2.4
	comp=Z,1.9nm,0.6s,mb4.3,baz=12,slow=7.7,SNR=9.6						
ARCES	ARCESS Array B	56.12	357	P	P	02 46 13.5	-2.4
SSE	Sheshan	57.93	280	eP	P	02 46 30.3	+1.0
SSE				AMB	AMB		
	comp=Z,51nm,0.7s						
SSE				AMB	AMB		
	comp=Z,136nm,4.1s						
SSE	Sheshan	57.93	280	eP	P	02 46 30.2	+0.9
	comp=Z,51nm,0.7s						
NJ2	Nanjing	58.56	282	eP	P	02 46 36.6	+3.0
NJ2				PP	PP	02 48 47.8	+2.4
NJ2				S	S	02 54 36.0	+4.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,220nm,4.5s						
NJ2				LR	LR		
	comp=N,200nm,13.3s						
NJ2				LR	LR		
	comp=E,490nm,25.6s						
NJ2				LR	LR		
	comp=Z,410nm,25.0s						
ZAL	Zalesovo	58.73	321	P	P	02 46 33.0	-1.4
	comp=Z,1.1nm,0.7s,mb4.0,baz=53,slow=6.8,SNR=6.3						
ZAL				PcP	PcP	02 47 22.8	-0.6
	comp=Z,0.8nm,0.8s,baz=92,slow=2.3,SNR=4.1						
ZAL				LR	LR	03 12 42.4	
	comp=Z,57nm,18.9s,baz=348,slow=37						
GTA	Gaotai	63.33	301	eP	P	02 47 04.9	-1.0
GTA				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb5.0						
FINES	FINESS Array B	64.19	356	P	P	02 47 09.5	-1.5
	comp=Z,4.6nm,0.8s,mb4.5,baz=33,slow=6.9,SNR=20						
BVAR	Borovoye Array	64.39	328	P	P	02 47 11.1	-1.3
	comp=Z,4.3nm,0.6s,mb4.6,baz=38,slow=7.2,SNR=36						
BVAR				PcP	PcP	02 47 46.3	+0.1
	comp=Z,1.5nm,0.6s,baz=5.7,slow=2.8,SNR=5.7						
NOA	NORSAR Array B	64.64	4	P	P	02 47 13.1	-0.8
	comp=Z,1.5nm,0.7s,mb4.1,baz=357,slow=6.6,SNR=4.3						
WMQ	Urumqi	65.57	312	eP	P	02 47 20.4	+0.3
EKA	Eskdalemuir Ar	69.11	13	P	P	02 47 42.0	-0.2
	comp=Z,2.6nm,0.6s,mb4.3,baz=335,slow=4.7,SNR=8.0						
KMI	Kunming	72.91	289	P	P	02 48 10.9	+5.5
KMI				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
AKASG	Malin Array Be	74.72	353	P	P	02 48 14.4	-1.0
	comp=Z,10nm,1.0s,mb4.7,baz=7.5,slow=5.7,SNR=14						
BAIF	Baives	75.13	9	eP	P	02 48 18.4	+0.6
	comp=Z,7.2nm,0.7s,mb4.4						
LDF	La Druitiere	76.11	12	eP	P	02 48 24.9	+1.5
SGMF	Saint Gilles	76.11	14	eP	P	02 48 25.0	+1.6
GRR	Gorron	76.21	13	eP	P	02 48 24.4	+0.4
KHC	Kasperske Hory	76.64	3	eP	P	02 48 27.0	+0.6
GERES	GERESS Array B	76.93	3	P	P	02 48 28.8	+0.8
	comp=Z,1.2nm,0.6s,mb4.0,baz=1.5,slow=4.5,SNR=15						
HAU	Haudompre	77.36	8	eP	P	02 48 30.9	+0.5
SSF	Saint Saulge	78.03	10	eP	P	02 48 34.2	+0.1
	comp=Z,4.0nm,0.5s,mb4.3						
MFF	Saint Martin d	78.06	13	eP	P	02 48 34.8	+0.5
	comp=Z,6.9nm,0.6s,mb4.4						
AVF	Avril sur Loir	78.28	10	eP	P	02 48 35.7	+0.2
	comp=Z,8.4nm,0.9s,mb4.4						
SQTA	Sankt Quirin	78.45	5	⇑iP	P	02 48 37.6	+1.2
	comp=Z,8.7nm,1.4s,mb4.5						
BGF	Bois d'Agland	78.46	11	eP	P	02 48 37.2	+0.7
	comp=Z,5.6nm,0.7s,mb4.3						
TCF	Toulx Ste Croi	78.65	11	eP	P	02 48 38.0	+0.4
KBA	Koelnbreinsper	78.68	3	⇑iP	P	02 48 39.3	+1.6
	comp=Z,11nm,1.4s,mb4.6						
DAVOX	Davos	78.82	6	P	P	02 48 39.6	+1.1
	comp=Z,2.8nm,0.6s,mb4.4,baz=157,slow=9.0						
JIRN	Jiri	79.49	303	eP	P	02 48 42.9	+0.4
	comp=Z,53nm,0.8s,mb5.5						
LFF	La Frestale	79.81	12	eP	P	02 48 44.4	+0.5
KKN	Kakani	79.82	304	eP	P	02 48 44.5	+0.2
	comp=Z,28nm,1.1s,mb5.1						
LPL	La Plagne	79.86	8	eP	P	02 48 44.2	+0.1
LPG	La Plagne	79.88	8	eP	P	02 48 44.7	+0.5
PKI	Pulchoki	79.94	304	eP	P	02 48 45.0	0.0
	comp=Z,20nm,0.9s,mb5.0						
GKN	Gorkha	79.96	305	eP	P	02 48 44.9	-0.1
	comp=Z,43nm,1.2s,mb5.2						
DMN	Daman	80.06	304	eP	P	02 48 45.9	+0.3
	comp=Z,16nm,0.7s,mb5.1						
MLR	Muntele Rosu	80.13	354	P	P	02 48 47.3	+1.7
	comp=Z,1.2nm,0.7s,mb3.9,baz=309,slow=14,SNR=3.5						
CMAR	Chiang Mai Arr	80.34	288	P	P	02 48 47.0	-0.3
	comp=Z,5.1nm,0.7s,mb4.6,baz=20,slow=5.5,SNR=19						
ORIF	Oris-en-Rattie	80.38	9	eP	P	02 48 47.1	+0.2
	comp=Z,5.6nm,0.8s,mb4.2						
MBDF	Montbardon	80.65	8	eP	P	02 48 48.6	+0.2
	comp=Z,10nm,0.8s,mb4.5						
KOLN	Koldanda	80.65	305	eP	P	02 48 48.5	-0.2
	comp=Z,13nm,0.8s,mb4.9						
LASF	Ste Croix	81.02	10	eP	P	02 48 50.2	-0.1
SBF	Sospel	81.56	8	eP	P	02 48 52.6	-0.5
MTLF	Montolieu	81.56	12	eP	P	02 48 53.4	+0.2
EPF	Esparros	81.63	13	eP	P	02 48 53.9	+0.3
ETSF	Etsaut	81.64	14	eP	P	02 48 54.0	+0.4
	comp=Z,6.5nm,0.8s,mb4.3						
FRF	La Foret Royal	81.79	8	eP	P	02 48 54.3	-0.1
BRTR	Keskin Array B	85.17	348	P	P	02 49 12.5	+1.1
	comp=Z,2.8nm,0.8s,mb4.4,baz=28,slow=2.1,SNR=13						
CTA	Charters Tower	86.50	228	P	P	02 49 18.8	+0.4
	comp=Z,4.1nm,0.6s,mb4.8,baz=23,slow=7.7,SNR=5.3						
WRA	Warramunga Arr	91.89	238	P	P	02 49 43.3	-0.6
	comp=Z,1.1nm,0.7s,mb4.3,baz=34,slow=5.8,SNR=15						
ASAR	Alice Springs	95.26	236	P	P	02 49 59.4	+0.2
	comp=Z,0.7nm,0.6s,mb4.3,baz=27,slow=5.0,SNR=7.7						
MATP	Matopo	145.04	343	PKP	PKPdf	02 56 12.6	+1.3
	comp=Z,4.5nm,0.4s,baz=354,slow=3.3,SNR=32						

OTT 24 02:51:59.7±0.2**, 67.47N**×**87.97W, h18**^{km}**, MN2.5**/5**, 128km northwest from Repulse Bay, Nu, Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YRTN	Rankin Inlet	4.99	202	PN	Pn	02 53 13.2	-2.4
YRTN				SN	Sn	02 54 07.5	-6.1
YRTN				LG		02 54 33.2	
YRTN				Trac		02 54 37.2	
	comp=Z,4.8nm,0.2s						
PINU	Pond Inlet	6.26	28	PN	Pn	02 53 35.5	+2.0
PINU				SN	Sn	02 54 37.1	-8.3
PINU				LG		02 55 13.1	
RES	Resolute Bay	7.59	346	PN	Pn	02 53 48.9	-3.4
RES				SN	Sn	02 55 09.6	-9.1
RES				LG		02 55 53.7	
RES				Trac		02 56 06.6	
	comp=Z,1.0nm,0.4s						
FRB	Frobisher Bay	8.84	106	PN	P	02 54 07.5	-2.1
FRB				SN	Sn	02 55 39.0	-11
FRB				LG		02 56 30.3	
FRB				Trac		02 56 45.6	
	comp=Z,1.8nm,0.3s						
FCC	Fort Churchill	9.16	200	PN	P	02 54 09.9	-4.2
FCC				SN	Sn	02 55 45.1	-13
FCC				LG		02 56 40.9	
FCC				Trac		02 57 00.8	
	comp=Z,0.9nm,0.3s						
LUPN	Lupin Mine	9.40	270	PN	P	02 54 12.8	-4.6
LUPN				SN	Sn	02 55 49.3	-14
LUPN				LG		02 56 44.5	
LUPN				Trac		02 56 55.9	
	comp=Z,1.4nm,0.4s						

ACKN	**Achilles Lake**	9.55	266	PN	P	02 54 14.2	-4.9
ACKN				SN	Sn	02 55 54.3	-13
ACKN				LG		02 56 53.5	
ACKN				Trac		02 56 58.7	
	comp=Z,2.1nm,0.5s						
SNPN	**Snap Lake**	10.28	258	PN	P	02 54 24.4	-4.9
SNPN				SN	S	02 56 12.2	-13
SNPN				Trac		02 56 26.9	
	comp=Z,2.4nm,0.1s						
YKW3	**Yellowknife Ar**	12.22	259	PN	P	02 54 51.6	-4.0
YKW3				SN	S	02 56 55.2	-17
YKW3				LG		02 58 13.2	
YKW3				Trac		02 58 30.9	
	comp=Z,0.6nm,0.3s						
SILO	**Sutton Inlier**	13.11	172	PN	P	02 55 02.2	-5.4
SILO				SN	S	02 57 19.9	-14

IDC 24 03:01:30.2±1.8**, 5.81S×146.54E, mb3.3**/2**, mb1 3.6**/4**, mb1mx3.5**/13**, mbtmp3.4**/4**, ML3.1**/2**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.4**/12**, Error ellipse: s-maj=70.7km s-min=28.8km az=113.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.63	170	Pn	Pn	03 02 28.4	-0.4
	5.3nm,0.3s,baz=15,slow=12,SNR=5.5						
PMG				Sn	Sn	03 03 26.3	+13
	5.7nm,0.3s,baz=216,slow=20,SNR=7.0						
PMG				LR	LR	03 04 13.1	
	comp=Z,129nm,18.6s,baz=163,slow=45						
WRA	**Warramunga Arr**	18.39	219	P	P	03 05 46.3	-2.2
	0.1nm,0.3s,baz=39,slow=12,SNR=4.6						
ASAR	**Alice Springs**	21.52	213	P	P	03 06 20.8	-2.4
	0.3nm,0.4s,baz=52,slow=8.6,SNR=9.2						
ILAR	**Eielson Array**	85.48	23	P	P	03 14 09.8	-1.1
	0.3nm,0.6s,baz=248,slow=4.6,SNR=5.2						

IDC 24 03:04:47.7±1.8**, 2.68S×141.99E, mb3.6**/2**, mb1 4.1**/3**, mb1mx3.8**/12**, mbtmp3.8**/3**, ML4.1**/1**, Error ellipse: s-maj=293.5km s-min=29.4km az=112.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	18.71	203	P	P	03 09 07.5	-2.4
	0.6nm,0.3s,baz=22,slow=12,SNR=16						
ASAR	**Alice Springs**	22.28	200	P	P	03 09 47.0	-1.2
	1.8nm,0.6s,baz=30,slow=11,SNR=11						
ILAR	**Eielson Array**	84.46	24	P	P	03 17 22.0	-1.3
	0.4nm,0.7s,baz=260,slow=4.4,SNR=5.7						

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*IDC **24** 03:07:15.9±0.6, 8.88S×160.59E, h42^{km}±4^{km}, mb4.2/12, mb1 4.4/14, mb1mx4.4/17, mbtmp4.4/14, ML3.8/2, MS3.8/6, Ms1 3.8/6, ms1mx3.5/20, Error ellipse: s-maj=20.0km s-min=12.3km az=136.0*

*BJI **24** 03:07:17.4, 9.00S×160.50E, h67^{km}, mB4.9, mb4.7, Ms4.5, Msz4.1*

*NEIC **24** 03:07:18.4±1.1, 9.01S×160.51E, h68^{km}±9^{km}, mb4.6/18, Error ellipse: s-maj=11.3km s-min=8.1km az=118.0*

ISC 24 03:07:18.0±1.0**, 9.09S**±0.08×**160.51E**±0.10**, h78**^{km}±7^{km}**, h44**^{km}±1.8^{km}**:pP-P, n60,** σ**1**^{s}**00**/58**, mb4.6**/37**, 1C-1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	0.65	238	*e*Pg	**P**	**03 07 33.1**	**-0.1**
HNR				*e*Sg	**S**	**03 07 44.3**	**-0.1**
PMG	**Port Moresby**	13.18	268	P	**P**	**03 10 26.7**	**+3.3**
	0.5nm,0.3s,baz=117,slow=6.8,SNR=2.8						
PMG	**Port Moresby**	13.18	268	*e*P	**P**	**03 10 26.7**	**+3.3**
CTA	**Charters Tower**	17.59	230	*e*P	**P**	**03 11 24.3**	**+4.8**
	8.4nm,0.8s						
CTA	**Charters Tower**	17.59	230	P	**P**	**03 11 23.8**	**+4.2**
	0.7nm,0.3s,baz=52,slow=12,SNR=8.4						
CTAO	**Charters Tower**	17.59	230	*e*P	**P**	**03 11 24.1**	**+4.5**
	15nm,0.9s						
WRAB	**Tennant Creek**	27.48	244	*e*P	**P**	**03 12 58.4**	**-0.7**
	22nm,0.7s,mb4.8						
WRAB				*e*pP	pP	03 13 12.8	-4.4
WRA	**Warramunga Arr**	27.49	244	P	**P**	**03 12 59.5**	**+0.2**
	25nm,1.1s,mb4.7,baz=69,slow=9.1,SNR=40						
WRA				pP	pP	03 13 12.8	-4.6
	8.6nm,0.7s,baz=69,slow=9.3,SNR=13						
WRA				PcP	PcP	03 16 16.5	+0.5
	0.4nm,0.6s,baz=72,slow=3.0,SNR=5.2						
WRA				S	**S**	**03 17 41.3**	**+8.7**
	1.7nm,1.1s,baz=71,slow=16,SNR=4.3						
WRA	**Warramunga Arr**	27.49	244	P	**P**	**03 12 59.5**	**+0.2**
WRA				pP	pP	03 13 12.8	-4.6
WRA				PcP	PcP	03 16 16.5	+0.5
WRA				S	**S**	**03 17 41.3**	**+8.7**
KAKA	**Kakadu**	27.79	260	*e*P	**P**	**03 13 02.2**	**+0.2**
	5.7nm,0.5s,mb4.4						
STKA	**Stephens Creek**	28.68	215	*e*P	**P**	**03 13 11.9**	**+2.1**
	3.4nm,0.8s,mb4.0						
STKA	**Stephens Creek**	28.68	215	P	**P**	**03 13 11.7**	**+1.9**
	1.8nm,0.6s,mb3.9,baz=50,slow=14,SNR=5.5						
STKA				LR	LR	03 24 44.0	
	comp=Z,215nm,18.8s,baz=24,slow=36						
ASAR	**Alice Springs**	29.28	237	P	**P**	**03 13 14.2**	**-1.0**
	3.0nm,0.5s,mb4.2,baz=64,slow=9.4,SNR=14						
ASAR				pP	pP	03 13 27.2	-6.2
	2.1nm,0.7s,baz=65,slow=9.1,SNR=4.7						
ASAR				PcP	PcP	03 16 20.4	+0.1
	0.9nm,0.5s,baz=75,slow=2.4,SNR=6.2						
ASAR				LR	LR	03 24 35.5	
	comp=Z,124nm,19.5s,baz=42,slow=35						
ASPA	**Alice Springs**	29.28	237	*e*P	**P**	**03 13 14.7**	**-0.5**
FITZ	**Fitzroy Crossi**	35.00	251	*e*P	**P**	**03 14 04.4**	**-0.6**
	16nm,0.5s,mb5.1						
RPZ	**Rata Peaks**	35.70	167	P	**P**	**03 14 10.8**	**0.0**
	12nm,0.7s,mb4.9,baz=179,slow=5.7,SNR=9.2						
FORT	**Forrest**	37.14	230	*e*P	**P**	**03 14 23.6**	**+0.6**
	340nm,0.8s						
MBWA	**Marble Bar**	41.03	248	*e*P	**P**	**03 14 55.3**	**0.0**
	22nm,1.0s,mb4.9						
MBWA				*e*pP	pP	03 15 08.4	-5.9
NWAO	**Narrogin (SRO)**	46.40	233	*e*P	**P**	**03 15 35.4**	**-3.2**
	6.4nm,0.7s,mb4.5						
NJ2	**Nanjing**	57.06	318	*e*P	**P**	**03 17 01.4**	**+2.8**
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.5						
MDJ	**Mudanjiang**	60.31	335	P	**P**	**03 17 19.5**	**-1.4**
MDJ				S	**S**	**03 25 35.5**	**+8.1**
MDJ				SS	SS	03 29 32.4	+5.2
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,51nm,3.2s						
MDJ				LR	LR		
	comp=N,32nm,20.3s						
MDJ				LR	LR		
	comp=Z,26nm,20.3s						
MDJ	**Mudanjiang**	60.31	335	P	**P**	**03 17 19.7**	**-1.2**
	comp=Z,12nm,1.2s,mb4.8						
CN2	**Changchun**	61.50	332	*e*P	**P**	**03 17 27.9**	**-1.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
KMI	**Kunming**	65.72	303	P	**P**	**03 17 57.3**	**+0.3**
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.7						
KMI				LR	LR		
	comp=Z,29nm,18.0s						
KMI	**Kunming**	65.72	303	P	**P**	**03 17 57.3**	**+0.3**
	comp=Z,13nm,1.1s,mb4.7						
KMI				pP	pP	03 18 11.1	-6.3
KMI				LR	LR		
	comp=Z,30nm,18.0s						
CASY	**Casey**	66.39	200	*e*P	**P**	**03 17 58.4**	**-2.2**
	comp=Z,68nm,0.7s,mb5.6						
CASY				*e*	pP	03 18 20.5	-0.5
CMAR	**Chiang Mai Arr**	66.61	295	P	**P**	**03 18 02.2**	**-0.5**
	comp=Z,3.8nm,0.6s,mb4.4,baz=119,slow=4.7,SNR=14						
CMAR				LR	LR	03 45 43.4	
	comp=Z,24nm,19.5s,baz=165,slow=35						
HHC	**Hu-ho-hao-te**	67.05	322	⇑P	**P**	**03 18 04.8**	**-0.3**
HHC				PP	PP	03 20 36.6	+1.2
HHC				S	S	03 26 59.0	+7.8
HHC				SCS	ScS	03 27 55.4	+3.7
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
HHC				AMB	AMB		
	comp=Z,69nm,8.4s						
HHC				LR	LR		
	comp=N,86nm,13.2s						
HHC				LR	LR		
	comp=E,434nm,18.0s						
HHC				LR	LR		
	comp=Z,119nm,10.8s						
HIA	**Hailar**	68.19	333	*e*P	**P**	**03 18 11.5**	**-0.5**
	comp=Z,6.7nm,0.8s,mb4.5						
HIA				*e*pP	pP	03 18 23.6	-9.1
VNDA	**Vanda**	68.42	180	P	**P**	**03 18 14.3**	**+1.3**
	comp=Z,3.6nm,0.8s,mb4.2,baz=349,slow=6.9,SNR=5.3						
VNDA				LR	LR	03 41 02.3	
	comp=Z,116nm,21.6s,baz=14,slow=30						
ULN	**Ulaanbaatar**	73.74	326	*e*P	**P**	**03 18 45.5**	**+0.1**
	comp=Z,9.4nm,0.9s,mb4.5						
ULN				*e*pP	pP	03 18 57.5	-8.8
GTA	**Gaotai**	74.02	315	P	**P**	**03 18 48.4**	**+1.2**
GTA				PP	PP	03 21 36.6	+1.7
GTA				S	S	03 28 16.9	+4.9
GTA				XS		03 28 47.0	
GTA				SS	SS	03 33 05.3	+4.9
GTA				AMB	AMB		
	comp=Z,5.0nm,1.5s,mb4.0						
GTA				AMB	AMB		
	comp=Z,62nm,4.2s						
GTA				LR	LR		
	comp=N,84nm,17.1s						
GTA				LR	LR		
	comp=E,121nm,20.1s						
GTA				LR	LR		
	comp=Z,71nm,14.4s						
SONM	**Songino Array**	74.09	325	P	**P**	**03 18 47.9**	**+0.5**
	comp=Z,8.4nm,0.8s,mb4.5,baz=139,slow=5.3,SNR=69						
SONM				pP	pP	03 18 59.2	-9.2
	comp=Z,4.4nm,0.8s,baz=138,slow=4.9,SNR=8.5						
LSA	**Lhasa**	76.96	303	P	**P**	**03 19 05.3**	**+1.1**
	comp=Z,5.9nm,0.9s,mb4.3						
BILL	**Bilibino**	77.04	2	*e*P	**P**	**03 19 03.5**	**-0.4**
	comp=Z,9.1nm,1.0s,mb4.5						
BILL				*e*PcP	PcP	03 19 14.1	-0.7
BILL				*e*pP	pP	03 19 19.5	-5.3
TLY	**Talaya**	77.68	328	*e*P	**P**	**03 19 07.7**	**+0.1**
	comp=Z,6.5nm,0.8s,mb4.4						
TLY				*e*pP	pP	03 19 20.1	-8.5
JIRN	**Jiri**	80.54	300	*e*P	**P**	**03 19 24.1**	**+0.4**
	comp=Z,8.1nm,0.6s,mb4.8						
PKI	**Pulchoki**	81.19	300	*e*P	**P**	**03 19 27.3**	**+0.2**
	comp=Z,10nm,0.6s,mb4.8						
KKN	**Kakani**	81.35	300	*e*P	**P**	**03 19 28.2**	**+0.2**
	comp=Z,7.6nm,0.5s,mb4.8						
DMN	**Daman**	81.45	300	*e*P	**P**	**03 19 29.1**	**+0.6**
	comp=Z,40nm,1.1s,mb5.2						
GKN	**Gorkha**	81.96	300	*e*P	**P**	**03 19 31.3**	**+0.2**
	comp=Z,23nm,0.8s,mb5.1						
MCK	**McKinley**	82.03	20	*e*P	**P**	**03 19 30.2**	**-0.5**
	comp=Z,6.1nm,1.1s,mb4.3						
MCK				*e*pP	pP	03 19 42.8	-9.1
KOLN	**Koldanda**	82.79	300	*e*P	**P**	**03 19 35.3**	**-0.1**
	comp=Z,13nm,0.8s,mb4.8						
COLA	**College**	83.12	20	*e*P	**P**	**03 19 35.4**	**-0.9**
	comp=Z,4.5nm,0.9s,mb4.3						
COLA				*e*pP	pP	03 19 47.7	-10
ILAR	**Eielson Array**	83.38	20	P	**P**	**03 19 36.9**	**-0.7**
	comp=Z,2.9nm,1.2s,mb4.0,baz=249,slow=4.9,SNR=15						
ILAR				pP	pP	03 19 48.8	-10
	comp=Z,1.4nm,0.7s,baz=242,slow=5.2,SNR=9.3						
WMQ	**Urumqi**	84.09	316	*e*P	**P**	**03 19 38.5**	**-3.1**
DLBC	**Dease Lake**	87.20	30	LR	LR	03 54 21.2	
	comp=Z,83nm,20.1s,baz=344,slow=32						
NVAR	**Mina Array Bea**	88.75	51	P	**P**	**03 20 06.1**	**+1.6**
	comp=Z,0.7nm,0.8s,mb3.8,baz=235,slow=5.3,SNR=4.9						
NVAR				pP	pP	03 20 18.1	-7.9
	comp=Z,1.9nm,0.8s,baz=243,slow=5.1,SNR=6.6						
NVAR	**Mina Array Bea**	88.75	51	P	**P**	**03 20 06.1**	**+1.6**
NVAR				pP	pP	03 20 18.1	-7.9
ZAL	**Zalesovo**	88.99	325	P	**P**	**03 20 04.6**	**-0.6**
	comp=Z,0.8nm,0.3s,mb4.2,baz=8.1,slow=1.6,SNR=4.3						
ZAL	**Zalesovo**	88.99	325	P	**P**	**03 20 04.6**	**-0.6**
SYO	**Syowa Base**	92.09	198	⇓P	**P**	**03 20 16.0**	**-3.3**
YKA	**Yellowknife Ar**	95.63	28	P	**P**	**03 20 35.7**	**+0.2**
	comp=Z,0.7nm,0.7s,mb4.2,baz=260,slow=4.7,SNR=19						
YKA				pP	pP	03 20 48.4	-8.8
	comp=Z,1.0nm,0.8s,baz=260,slow=4.6,SNR=9.7						
YKA				LR	LR	04 02 54.4	
	comp=Z,48nm,19.1s,baz=255,slow=35						
YKA	**Yellowknife Ar**	95.63	28	P	**P**	**03 20 35.7**	**+0.2**
YKA				pP	pP	03 20 48.4	-8.8
YKA				LR	LR	04 02 54.4	
PDAR	**Pinedale Array**	96.04	48	P	**P**	**03 20 39.0**	**+1.0**
	comp=Z,0.7nm,0.7s,mb4.2,baz=244,slow=1.5,SNR=6.9						
PDAR				pP	pP	03 20 51.9	-7.7
	comp=Z,1.6nm,0.8s,baz=248,slow=2.1,SNR=12						
AKASG	**Malin Array Be**	122.37	326	PKP	PKPdf	03 26 05.7	+1.5
	comp=Z,0.9nm,0.5s,baz=51,slow=1.8,SNR=6.5						
NOA	**NORSAR Array B**	123.39	343	PKP	PKPdf	03 26 06.3	+0.4
	comp=Z,0.4nm,0.6s,baz=37,slow=1.8,SNR=3.3						
LPAZ	**La Paz**	125.67	117	PKP	PKPdf	03 26 15.1	+3.6
	comp=Z,0.9nm,0.7s,baz=273,slow=6.7,SNR=3.7						
GERES	**GERESS Array B**	131.59	331	PKP	PKPdf	03 26 23.2	+1.2
	comp=Z,0.8nm,0.7s,baz=45,slow=1.9,SNR=8.7						
BDFB	**Brasilia**	142.56	131	PKhKP		03 26 41.7	
	comp=Z,2.9nm,0.8s,baz=174,slow=2.0,SNR=6.7						
BDFB				PKP	PKPdf	03 26 46.3	+3.4
	comp=Z,4.2nm,0.9s,baz=143,slow=5.8,SNR=6.1						

IDC 24 03:11:18.4±9.2**, 1.39N×122.78E, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/16**, mbtmp4.2**/3**, Error ellipse: s-maj=360.5km s-min=147.0km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	12.52	349	*e*P	P	03 14 34.3	+13
TGY	**Tagaytay City**	12.77	352	*e*P	P	03 14 34.3	+10
WRA	**Warramunga Arr**	24.04	152	P	P	03 16 34.3	-1.9
	3.2nm,0.4s,baz=331,slow=9.9,SNR=28						
ASAR	**Alice Springs**	27.15	157	P	P	03 17 03.2	-2.2
	2.6nm,0.4s,baz=340,slow=9.4,SNR=27						
STKA	**Stephens Creek**	37.58	153	P	P	03 18 36.2	-0.3
	1.2nm,0.4s,baz=327,slow=8.5,SNR=5.1						

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*CSEM **24** 03:25:27.9±0.3, 35.16N×2.53W, h12^{km}, mb3.1/7, Error ellipse: s-maj=9.4km s-min=6.8km az=89.0*

*NEIC **24** 03:25:28.4, 35.10N×2.56W, MG3.1(MDD), After MDD.*

*SFS **24** 03:25:28.0, 35.10N×2.56E*

*MDD **24** 03:25:30.2±1.3, 35.15N×2.60W, h8^{km}±8^{km}, mbLg1.9/8, Error ellipse: s-maj=14.4km s-min=8.9km az=20.0, PRXIMO*

ISC 24 03:25:28.9±0.8**, 35.13N**±0.05×**2.61W**±0.06**, h23**^{km}±6^{km}**, n26,** σ**1**^{s}**19**/42**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MELI	**Melilla**	0.31	302	P	**Pb**	**03 25 38.1**	**+2.1**
MELI				S	**Sb**	**03 25 40.7**	**-0.1**
MELI	**Melilla**	0.31	302	*i* P	**Pb**	**03 25 38.1**	**+2.1**
EMLI	**Melilla**	0.33	301	P	**Pb**	**03 25 34.9**	**-1.3**
	82nm,0.1s,SNR=9.5						
EMEL	**Melilla**	0.33	301	P	**Pb**	**03 25 34.9**	**-1.4**
	82nm,0.1s,SNR=9.5						
EMEL				S	**Sb**	**03 25 40.3**	**-0.9**
	219nm,0.2s,SNR=8.9						
TAF	**Taforalt**	0.35	153	P	**Pb**	**03 25 36.0**	**-0.6**
EALB	**Alboran**	0.88	337	P	**Pb**	**03 25 47.0**	**+1.6**
	5.7nm,0.2s,SNR=4.0						
EALB				S	**Sb**	**03 25 57.5**	**+0.9**
	28nm,0.4s,SNR=7.9						
EALB	**Alboran**	0.88	337	P	**Pb**	**03 25 47.0**	**+1.6**
	5.7nm,0.2s,SNR=4.0						
EALB				S	**Sb**	**03 25 57.5**	**+0.8**
	28nm,0.4s,SNR=7.9						
EBER	**Berja**	1.78	353	P	**Pn**	**03 25 59.9**	**+1.2**
	0.5nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**03 26 18.9**	**-1.9**
	4.9nm,0.2s,SNR=7.0						
EBER	**Berja**	1.78	353	P	**Pn**	**03 25 59.9**	**+1.2**
	0.5nm,0.1s,SNR=7.9						
ENIJ	**Nijar**	1.87	10	P	**Pn**	**03 25 59.3**	**-0.7**
	1.7nm,0.2s,SNR=6.7						
ENIJ				S	**Sn**	**03 26 24.2**	**+1.1**
	3.8nm,0.2s,SNR=4.0						
EMIJ	**Mijas**	2.27	310	P	**Pn**	**03 26 05.6**	**-0.1**
EMIJ				S	**Sn**	**03 26 31.5**	**-1.7**
EMIJ	**Mijas**	2.27	310	P	**Pn**	**03 26 05.6**	**-0.1**
	1.1nm,0.3s,SNR=4.0						
EMIJ				S	**Sn**	**03 26 32.4**	**-0.8**
	2.2nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	2.67	300	P	**Pn**	**03 26 12.7**	**+1.2**
	0.3nm,0.2s,SNR=4.0						
EHUE	**Huescar**	2.68	0	P	**Pn**	**03 26 13.0**	**+1.4**
	0.6nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**03 26 44.6**	**+0.9**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	2.69	352	P	**Pn**	**03 26 13.0**	**+1.2**
	0.4nm,0.1s,SNR=8.6						
EQES				S	**Sn**	**03 26 45.3**	**+1.2**
	4.6nm,0.5s,SNR=7.2						
EQES	**Quesada**	2.69	352	P	**Pn**	**03 26 13.0**	**+1.2**
	0.4nm,0.1s,SNR=8.6						
EQES				S	**Sn**	**03 26 45.3**	**+1.3**
	4.6nm,0.5s,SNR=7.2						
EMUR	**La Murta**	2.92	22	P	**Pn**	**03 26 14.3**	**-0.8**
	0.8nm,0.2s,SNR=4.0						
EMUR				S	**Sn**	**03 26 47.9**	**-1.9**
	2.1nm,0.3s,SNR=4.0						
EMUR	**La Murta**	2.92	22	P	**Pn**	**03 26 14.3**	**-0.8**
	0.8nm,0.2s,SNR=4.0						
EMUR				S	**Sn**	**03 26 47.9**	**-1.9**
	2.1nm,0.3s,SNR=4.0						
ESPR	**Espera**	3.15	304	S	**Sn**	**03 26 56.0**	**+0.3**
	1.6nm,0.3s,SNR=4.0						
ESPR	**Espera**	3.15	304	S	**Sn**	**03 26 56.0**	**+0.4**
	1.6nm,0.3s,SNR=13						
EADA	**Adamuz**	3.42	333	P	**Pn**	**03 26 23.1**	**+1.0**
	0.1nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**03 27 00.3**	**-2.1**
	0.7nm,0.3s,SNR=7.9						
EADA	**Adamuz**	3.42	333	P	**Pn**	**03 26 23.1**	**+1.0**
	0.1nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	3.61	13	P	**Pn**	**03 26 24.6**	**-0.3**
	0.4nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**03 27 05.9**	**-1.3**
	0.8nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	3.61	13	P	**Pn**	**03 26 24.5**	**-0.3**
	0.4nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**03 27 05.9**	**-1.3**
ESDC	**Sonseca Array**	4.66	347	P	**Pn**	**03 26 40.0**	**+0.2**
	0.2nm,0.2s,baz=169,slow=12,SNR=4.6						
ESDC	**Sonseca Array**	4.66	347	P	**Pn**	**03 26 40.0**	**+0.2**

IDC 24 03:27:10.7±2.4**, 2.71N×95.39E, h24**^{km}±6^{km}**, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.5**/19**, mbtmp3.8**/5**, Error ellipse: s-maj=83.6km s-min=22.9km az=60.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	16.03	12	Pn	P	03 30 56.0	-0.5
	baz=198,slow=12,SNR=8.4						
WRA	**Warramunga Arr**	44.37	122	P	P	03 35 19.8	-1.6
	0.3nm,0.6s,baz=301,slow=9.0,SNR=3.2						
WRA				pP	pP	03 35 26.6	-2.0
	0.3nm,0.5s,baz=300,slow=9.2,SNR=3.6						
SONM	**Songino Array**	45.94	10	P	P	03 35 31.5	-2.2
	1.1nm,0.8s,baz=190,slow=9.1,SNR=11						
SONM				pP	pP	03 35 39.2	-1.6
	0.5nm,0.8s,baz=172,slow=7.4,SNR=3.6						
ZAL	**Zalesovo**	51.80	352	P	P	03 36 16.4	-2.4
	2.1nm,0.7s,baz=308,slow=6.2,SNR=12						
ZAL				pP	pP	03 36 24.1	-2.1
	1.4nm,0.4s,baz=110,slow=6.8,SNR=2.6						
BVAR	**Borovoye Array**	54.25	342	P	P	03 36 34.2	-2.7
	0.9nm,0.7s,baz=135,slow=8.4,SNR=7.1						

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*JMA **24** 03:27:28.5±0.2, 24.12N×121.96E, h76^{km}, M2.8*

TAP 24 03:27:28.2, 24.01N×121.84E, h34^{km}**, ML3.4, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	1.16	67	P	P	03 27 47.8	-0.3
YOJ				*e*S	S	03 28 01.8	-1.3
IRIF	**Iriomote-Funau**	1.76	79	P	P	03 27 55.7	-1.0
IRIF				*e*S	S	03 28 16.7	-1.4
HATJ	**Hateruma jima**	1.80	88	P	P	03 27 56.5	-0.8
HATJ				*e*S	S	03 28 17.8	-1.4
JKRS	**Kuro-shima**	2.00	83	P	P	03 27 59.5	-0.6
JKRS				*e*S	S	03 28 23.4	-0.7
JIJ	**Ishigaki jima**	2.13	80	P	P	03 28 00.7	-1.4
JIJ				*e*S	S	03 28 24.7	-2.9
JTJ	**Tarama**	2.69	76	P	P	03 28 08.7	-1.3
JTJ				*e*S	S	03 28 39.7	-2.0

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*IDC **24** 03:39:09.7±1.7, 41.17N×127.48W, mb3.5/5, mb1 3.8/11, mb1mx3.6/26, mbtmp3.5/11, ML3.4/6, MS3.4/8, Ms1 3.4/8, ms1mx3.2/21, Error ellipse: s-maj=30.1km s-min=14.9km az=31.0*

*NEIC **24** 03:39:13.0±1.1, 41.42N×127.21W, h10^{km}, mb4.3/4, Error ellipse: s-maj=17.6km s-min=9.8km az=48.0*

*BJI **24** 03:39:13.9, 41.40N×127.20W, h10^{km}, mB4.7, mb4.5, Ms4.1, Msz4.0*

ISC 24 03:39:16.4±0.7**, 41.25N**±0.07×**126.65W**±0.08**, h10**^{km}**, n51,** σ**1**^{s}**18**/48**, mb3.5**/6**, MS3.3**/6**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	2.06	61	*e*P	**Pn**	**03 39 51.1**	**-0.4**
KHMM	**Horse Mountain**	2.24	99	*e*P	**Pn**	**03 39 54.2**	**+0.1**
KEBM	**Edson Butte**	2.37	46	P	**Pn**	**03 39 55.3**	**-0.7**
YBH	**Yreka Blue Hor**	3.00	79	Pn	**Pn**	**03 40 06.8**	**+1.9**
	8.2nm,0.3s,baz=270,slow=11,SNR=148						
YBH	**Yreka Blue Hor**	3.00	79	*e*P	**Pn**	**03 40 06.3**	**+1.3**
HUMO	**Hull Mountain**	3.07	62	*e*P	**Pn**	**03 40 05.5**	**-0.5**
WDC	**Whiskeytown Da**	3.18	101	*e*P	**Pn**	**03 40 07.6**	**0.0**
HOPS	**Hopland**	3.55	128	*e*P	**Pn**	**03 40 11.0**	**-1.7**
MOD	**Modoc**	4.81	80	P	**Pn**	**03 40 30.8**	**+0.1**
SAC	**San Andreas**	4.91	137	*e*P	**Pn**	**03 40 28.2**	**-3.9**
CMB	**Columbia Colle**	5.80	122	*e*P	**Pn**	**03 40 44.0**	**-0.7**
SAO	**San Andreas Ge**	6.04	136	*e*P	**Pn**	**03 40 42.5**	**-5.5**
WVOR	**Wild Horse Val**	6.10	76	*e*P	**Pn**	**03 40 47.2**	**-1.7**
LRV	**Little Rabbit**	6.52	136	*e*P	**Pn**	**03 40 50.0**	**-4.8**
OMM	**Old Mammoth Mi**	6.95	119	*e*P	**Pn**	**03 41 00.7**	**-0.1**
NVAR	**Mina Array Bea**	7.01	111	Pn	**Pn**	**03 41 02.4**	**+0.6**
	0.2nm,0.3s,baz=300,slow=12,SNR=15						
MNV	**Mina**	7.12	110	*e*P	**Pn**	**03 41 02.4**	**-0.8**
ELK	**Elko**	8.64	90	Pn	**P**	**03 41 26.9**	**+2.3**
	0.0nm,0.3s,baz=276,slow=14,SNR=7.2						
ELK	**Elko**	8.64	90	*e*P	**P**	**03 41 24.5**	**0.0**
HLID	**Hailey**	9.34	72	P	**P**	**03 41 32.3**	**-1.9**
NEW	**Newport**	9.75	41	Pn	**P**	**03 41 41.2**	**+1.5**
	0.1nm,0.3s,baz=247,slow=15,SNR=2.8						
NEW				LR	LR	03 45 32.2	
	comp=Z,206nm,20.3s,baz=234,slow=37						
NEW	**Newport**	9.75	41	Pn	**P**	**03 41 41.2**	**+1.5**
NEW				LR	LR	03 45 32.2	
DUG	**Dugway**	10.56	91	*e*P	**P**	**03 41 48.8**	**-2.1**
ARUT	**Antelope Range**	10.77	104	P	**P**	**03 41 52.2**	**-1.6**
NLU	**North Lily Min**	11.16	92	P	**P**	**03 41 59.2**	**+0.2**
MSU	**Marysvale**	11.45	99	*e*P	**P**	**03 42 03.6**	**+0.6**
BW06	**Boulder Array**	12.81	78	*e*P	**P**	**03 42 20.9**	**-0.4**
PDAR	**Pinedale Array**	12.81	78	Pn	**P**	**03 42 25.6**	**+4.3**
	0.0nm,0.3s,baz=284,slow=12,SNR=8.4						
WUAZ	**Wupatki**	13.27	111	*e*P	**P**	**03 42 29.6**	**+2.1**
SDCO	**Great Sand Dun**	16.69	95	*e*P	**P**	**03 43 15.0**	**+3.2**
	119nm,1.9s						
ANMO	**Albuquerque**	17.07	105	P	**P**	**03 43 18.8**	**+2.1**
	baz=305,slow=15,SNR=2.2						
ANMO				LR	LR	03 50 35.7	
	comp=Z,296nm,19.3s,slow=39						
ANMO	**Albuquerque**	17.07	105	*e*P	**P**	**03 43 18.1**	**+1.4**
	8.9nm,1.6s						
MNTX	**Cornudas Mount**	19.54	112	*e*P	**P**	**03 43 47.9**	**+1.1**
	34nm,2.1s						
TXAR	**Lajitas Array**	22.14	115	P	**P**	**03 44 14.4**	**+0.6**
	0.7nm,1.0s,mb3.0,baz=315,slow=7.1,SNR=5.1						
TXAR				LR	LR	03 53 43.0	
	comp=Z,42nm,20.1s,MS2.9,baz=335,slow=38						
YKA	**Yellowknife Ar**	22.47	15	P	**P**	**03 44 12.2**	**-4.6**
	0.8nm,0.9s,mb3.1,baz=203,slow=10.0,SNR=11						
YKA	**Yellowknife Ar**	22.47	15	P	**P**	**03 44 12.2**	**-4.6**
WMOK	**Wichita Mounta**	22.85	97	*e*P	**P**	**03 44 21.9**	**+1.1**
	17nm,1.8s,mb4.2						
ULM	**Lac du Bonnet**	23.15	57	P	**P**	**03 44 24.2**	**+0.7**
	2.8nm,1.2s,mb3.6,baz=266,slow=8.6,SNR=2.3						
ULM				LR	LR	03 53 49.2	

	comp=Z,88nm,19.8s,MS3.2,baz=116,slow=37						
ILAR	Eielson Array	26.28	340	P	P	03 44 45.0	-8.3
	1.6nm,1.2s,mb3.4,baz=147,slow=5.6,SNR=6.6						
ILAR				LR	LR	03 53 11.9	
	comp=Z,80nm,18.9s,MS3.3,baz=179,slow=32						
MIAR	Mount Ida	26.83	94	P	P	03 44 58.7	0.0
FCC	Fort Churchill	26.91	38	P	P	03 44 53.7	-5.4
CCM	Cathedral Cave	27.33	85	P	P	03 45 02.5	-0.8
SADO	Sadowa	34.53	68	LR	LR	03 59 26.6	
	comp=Z,63nm,19.3s,MS3.4,baz=278,slow=35						
ROSC	El Rosal	59.03	113	LR	LR	04 16 43.0	
	comp=Z,26nm,19.6s,MS3.4,baz=168,slow=38						
CN2	Changchun	73.43	314	eP	P	03 50 49.6	-0.8
SONM	Songino Array	79.64	327	P	P	03 51 17.1	-8.0
	1.6nm,1.2s,mb3.8,baz=63,slow=2.8,SNR=7.3						
ZAL	Zalesovo	81.42	342	LR	LR	04 30 04.2	
	comp=Z,40nm,18.5s,MS3.8,baz=14,slow=38						
HHC	Hu-ho-hao-te	82.73	319	eP	P	03 51 42.6	+1.1
HHC				AP	pP	03 51 47.3	+2.6
HHC				XP	sP	03 51 49.8	+4.0
HHC				SKS	SKS	04 01 57.5	-6.2
HHC				AMB	AMB		
	comp=Z,6.0nm,1.4s						
HHC				AMB	AMB		
	comp=Z,100nm,8.4s						
HHC				LR	LR		
	comp=N,139nm,15.6s						
HHC				LR	LR		
	comp=E,374nm,16.8s						
HHC				LR	LR		
	comp=Z,89nm,13.2s						
SSE	Sheshan	84.64	307	eP	P	03 51 50.0	-1.4
SSE				AMB	AMB		
	comp=Z,24nm,0.8s						
SSE				AMB	AMB		
	comp=Z,185nm,3.4s						
NJ2	Nanjing	85.33	309	eP	P	03 51 54.1	-0.8
WMQ	Urumqi	89.86	336	eP	P	03 52 18.3	+1.9

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*NEIC **24** 03:56:55.9,34.39S×70.54W,h112^{km},MD3.5(GUC),After GUC.*

GUC 24 03:56:55.9±0.5**,34.39S**×**70.54W,h112^{km}**±2^{km}**,MD3.5, ML3.5,2C-6D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACH	El Canelo	0.28	349	⇓ iP	P	03 57 12.1	+0.2
CACH				i S	S	03 57 25.1	+1.1
SFDO	San Fernando	0.45	241	⇓ iP	P	03 57 13.0	+0.2
SFDO				i S	S	03 57 25.8	+0.3
CHCH	Chadas Angostu	0.47	348	eP	P	03 57 13.0	+0.1
CHCH				i S	S	03 57 26.0	+0.3
LMEL	Las Melosas	0.61	27	⇓ iP	P	03 57 14.3	+0.4
LMEL				i S	S	03 57 28.4	+0.9
LMEL				AMP		03 57 36.1	
	comp=E,2μm,0.1s						
SJCH	San Jose de Ma	0.77	12	eP	P	03 57 15.3	+0.1
SJCH				i S	S	03 57 30.2	+0.4
SJCH				AMP		03 57 32.5	
	comp=N,692nm,0.4s						
PCH	Pirque	0.77	1	⇑ iP	P	03 57 15.7	+0.4
PCH				i S	S	03 57 29.9	+0.1
TACH	Talagante	0.81	336	⇑ iP	P	03 57 15.8	+0.2
TACH				i S	S	03 57 30.5	0.0
ANTU	Antumapu	0.83	354	eP	P	03 57 16.1	+0.2
ANTU				i S	S	03 57 31.1	+0.4
ANTU				AMP		03 57 31.6	
	comp=N,2μm,0.3s						
FSR	Penalolen	0.91	1	⇓ iP	P	03 57 17.0	+0.3
FSR				i S	S	03 57 32.8	+0.5
FSR				AMP		03 57 33.4	
	comp=N,2μm,0.7s						
RCDM	Rinconada Maip	0.93	346	eP	P	03 57 16.9	0.0
RCDM				i S	S	03 57 32.7	+0.2
RCDM				AMP		03 57 33.7	
	comp=E,4μm,0.1s						
STL	Santa Lucia	0.96	355	eP	P	03 57 17.2	0.0
STL				i S	S	03 57 33.0	-0.1
STL				AMP		03 57 33.8	
	comp=N,2μm,0.2s						
PUEX	Pudahuel	0.97	349	eP	P	03 57 18.4	+1.2
PUEX				i S	S	03 57 34.8	+1.6
CLCH	Cerro Calan	0.99	0	eP	P	03 57 17.8	+0.2
CLCH				i S	S	03 57 34.2	+0.5
CLCH				AMP		03 57 39.0	
	comp=E,1μm,0.4s						
FCH	Farellones	1.08	11	⇓ iP	P	03 57 19.1	+0.6
FCH				i S	S	03 57 36.7	+1.3
FCH				AMP		03 57 37.8	
	comp=N,780nm,0.2s						
LCCH	Las Cruces	1.25	317	⇓ iP	P	03 57 20.2	-0.2
ROCH	El Roble	1.47	344	i P	P	03 57 23.3	+0.4
PACH	Papudo	2.00	338	eP	P	03 57 29.2	-0.2

IDC 24 04:01:20.9±8.6**,6.00S**×**150.11E,h113^{km}**±52^{km}**,mb3.6**/3**, mb1 3.7**/4**,mb1mx3.4**/13**,mbtmp4.0**/4**,MS3.7**/1**,Ms1 3.7**/1**, ms1mx2.6**/18**,Error ellipse: s-maj=78.6km s-min=65.7km az=142.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.47	221	P	P	04 02 26.5	-1.3
	1.6nm,0.3s,baz=66,slow=12,SNR=8.6						
PMG				S	S	04 03 18.6	-0.6
	2.5nm,0.3s,baz=97,slow=23,SNR=6.2						
WRA	Warramunga Arr	20.66	226	P	P	04 05 51.5	-2.1
	2.8nm,0.5s,baz=53,slow=11,SNR=16						
ASAR	Alice Springs	23.49	220	P	P	04 06 20.6	-0.6
	2.7nm,0.5s,baz=56,slow=9.0,SNR=11						
ASPA	Alice Springs	23.49	220	eP	P	04 06 25.2	+3.9
FITZ	Fitzroy Crossi	26.74	241	eP	P	04 06 56.2	+4.2
	2.8nm,0.6s						
STKA	Stephens Creek	26.95	196	P	P	04 06 52.0	-1.7
	2.0nm,0.7s,baz=4.7,slow=14,SNR=5.0						
CBIJ	Chichi jima	33.78	347	LR	LR	04 19 49.6	
	comp=Z,140nm,21.9s,baz=98,slow=33						

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*JMA **24** 04:06:46.7±0.3,24.61N×121.90E,h52^{km},M3.1*

*TAP **24** 04:06:47.2,24.42N×121.87E,h16^{km},ML3.6*

TAP Felt IV J at Nanau, II J at Suao, I J at Neicheng, I J at Nioudou, I J at Nanshan.

ISC 24 04:06:46.1±0.4**,24.39N**±0.02×**122.00E**±0.02**,h5^{km}**±3^{km}**, n49,**σ**0^{s}83**/80**,6C-6D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.24	278	⇓ iP	Pg	04 06 51.4	+0.4
ENA				S	Sg	04 06 54.2	-0.1
TWC	Suao	0.26	327	⇑ iP	Pg	04 06 52.2	+0.9
TWC				S	Sg	04 06 55.1	+0.3
ILA	Ilan	0.44	328	⇑ iP	Pg	04 06 55.5	+0.6
ILA				S	Sg	04 07 01.5	+0.7
TWE	Neicheng	0.45	317	⇓ iP	Pg	04 06 55.4	+0.3
TWE				S	Sg	04 07 00.9	-0.2
EGS		0.45	352	⇑ iP	Pg	04 06 56.2	+1.0
EGS				S	Sg	04 07 03.1	+1.8
ENTT	Nioudou	0.47	302	⇓ iP	Pg	04 06 55.5	0.0
ENTT				S	Sg	04 07 00.9	-0.8
TWD	Chiawan	0.48	230	⇑ P	Pg	04 06 55.6	-0.3
TWD				S	Sg	04 07 02.9	+0.5
HWA	Hwalien	0.55	221	eP	Pg	04 06 58.1	+0.9
NNS	Nan Shan	0.57	275	⇓ iP	Pg	04 06 57.1	-0.6
NNS				S	Sg	04 07 03.6	-1.8
TWB1	Santiao Chiao	0.61	359	⇑ iP	Pg	04 06 59.1	+0.7
TWB1				S	Sg	04 07 07.2	+0.6
NSK	Sanguang	0.65	296	⇓ iP	Pg	04 06 58.7	-0.5
NSK				S	Sg	04 07 06.0	-1.8
TWA	Mucha	0.70	327	eP	Pg	04 07 00.2	+0.1
TWA				S	Sg	04 07 08.8	-0.6
NWF	Wu-fen Shan	0.70	343	⇑ P	Pg	04 07 00.9	+0.7
NWF				S	Sg	04 07 09.6	0.0
WHF	Hehuan Shan	0.72	250	⇓ iP	Pg	04 06 59.6	-0.9
WHF				S	Sg	04 07 08.6	-1.5
TWT	Tachien	0.77	260	P	Pb	04 07 01.0	-0.6
TWT				S	Sg	04 07 10.1	-1.6
TAP1	Taipei	0.78	326	eP	Pb	04 07 01.8	+0.1
TAP1				S	Sg	04 07 11.5	-0.5
ESL	Shilin	0.78	222	eP	Pb	04 07 01.3	-0.4
TAP	Taipei	0.79	325	eP	Pb	04 07 01.9	+0.1
TAP				S	Sg	04 07 11.9	-0.4
TWS1	Kuangyinshan	0.88	323	eP	Pb	04 07 04.0	+0.5
TWS1				S	Sb	04 07 15.0	-0.4
YOJ	Yonaguni jima	0.92	86	P	Pb	04 07 04.9	+0.7
YOJ				S	Sb	04 07 18.5	+2.0
NCU	National Centr	0.94	308	eP	Pb	04 07 04.5	+0.1
NCU				S	Sb	04 07 17.4	+0.4
NSTT	Nanjuang	0.94	285	eP	Pb	04 07 04.2	-0.4
NSTT				S	Sb	04 07 15.2	-2.0
TWY	Chenhua	0.95	337	eP	Pb	04 07 05.1	+0.4
TWY				S	Sb	04 07 17.1	-0.2
HSN	Hsinchu	1.02	294	eP	Pb	04 07 06.0	+0.1
EHY	Hungye	1.08	215	eP	Pb	04 07 06.0	-0.9
EHY				S	Sb	04 07 22.0	+0.8
TWQ1	Liyutan	1.12	268	eP	Pb	04 07 07.9	+0.2
TWQ1				S	Sb	04 07 24.1	+1.8
SMLT	Sun Moon Lake	1.13	243	eP	Pb	04 07 07.5	-0.2
SMLT				S	Sb	04 07 22.9	+0.4
NSY	Sanyi	1.13	271	eP	Pb	04 07 08.3	+0.5
TYC	Yuchr	1.15	245	eP	Pb	04 07 07.6	-0.6
PCYT	Pengchaiyu	1.23	3	eP	Pb	04 07 09.1	-0.4
WNT	Mingjian	1.31	247	eP	Pb	04 07 11.6	+0.7
YUS	Yu-Shan	1.32	227	eP	Pb	04 07 10.8	-0.2
YUS				S	Sb	04 07 29.2	+1.2
ALS	Alishan	1.41	231	eP	Pn	04 07 12.3	-0.1
ALS				S	Sb	04 07 31.8	+1.3
CHN5	Tsauling	1.45	237	eP	Pn	04 07 13.5	+0.4
ELDTW	Lidau	1.50	217	eP	Pn	04 07 12.9	-0.9
IRIF	Iriomote-Funau	1.58	92	P	Pn	04 07 14.3	-0.6
IRIF				S	Sb	04 07 34.6	-1.0
CHN4	Tsaushan	1.66	231	eP	Pn	04 07 16.8	+0.8
STYT	Tauyuan	1.67	223	eP	Pn	04 07 15.9	-0.4
HATJ	Hateruma jima	1.68	101	P	Pn	04 07 16.4	0.0
CHY	Chiayi	1.70	239	eP	Pn	04 07 17.7	+1.1
WTP	Ta-pu	1.71	228	eP	Pn	04 07 17.3	+0.5
WTP				S	Sn	04 07 40.1	+0.9
TWK	Hsinying	1.78	231	eP	Pn	04 07 17.9	+0.1
CHN1	Nanshi	1.81	229	eP	Pn	04 07 19.4	+1.2
JKRS	Kuro-shima	1.84	94	P	Pn	04 07 18.5	-0.1
JKRS				S	Sn	04 07 41.4	-1.1
SGST	Jiashian	1.84	225	eP	Pn	04 07 19.1	+0.4
JIJ	Ishigaki jima	1.95	90	P	Pn	04 07 19.5	-0.8
JIJ				S	Sn	04 07 43.0	-2.4
SCZT	Fangliau	2.38	213	eP	Pn	04 07 26.9	+0.5
WDGT	Dungji	2.42	243	eP	Pn	04 07 26.2	-0.9
JTJ	Tarama	2.47	84	P	Pn	04 07 27.5	-0.2
JTJ				S	Sn	04 07 57.5	-1.1

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*PRU **24** 04:14:48.9,42.96N×15.55E*

*MOS **24** 04:14:53.3±1.3,43.30N×15.03E,h10^{km},mb3.8/1,Error ellipse: s-maj=8.3km s-min=5.4km az=127.8*

*CSEM **24** 04:14:53.3±0.1,43.34N×15.18E,h10^{km},ML3.2/6,Error ellipse: s-maj=2.4km s-min=1.9km az=114.0*

*LDG **24** 04:14:56.6±0.3,43.18N×15.12E,h10^{km},Ml3.3/11,Error ellipse: s-maj=8.1km s-min=3.9km az=64.0*

*ROM **24** 04:14:56.9±0.7,43.12N×14.99E,h10^{km},MD3.2/13, ML2.7/12,Error ellipse: s-maj=6.3km s-min=4.6km az=90.0*

*NEIC **24** 04:14:57.0,43.12N×14.99E,h10^{km},MD3.2(ROM), ML3.6(VIE),ML3.5(SZGRF),ML3.3(LDG),After ROM.*

ISC 24 04:14:53.8±0.5**,43.32N**±0.03×**15.03E**±0.06**,h10^{km},n75,** σ**1^{s}37**/113**,5C-3D,Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	Norcia	1.48	251	ePN	Pn	04 15 21.5	+0.8
	52nm,0.5s						
NRCA	Norcia	1.48	251	ePn	Pn	04 15 21.5	+0.9
NRCA	Norcia	1.48	251	ePn	Pn	04 15 21.5	+0.8
	52nm,0.5s						
SNTG	Esanatoglia	1.53	268	ePN	Pn	04 15 22.7	+1.5
	117nm,0.6s						
SNTG	Esanatoglia	1.53	268	ePn	Pn	04 15 22.7	+1.4
SNTG	Esanatoglia	1.53	268	ePn	Pn	04 15 22.7	+1.5
	117nm,0.6s						
ARV	Arcevia	1.53	277	ePN	Pn	04 15 23.3	+2.0
	30nm,0.4s						
ARV	Arcevia	1.53	277	ePn	Pn	04 15 23.3	+1.9
ARV	Arcevia	1.53	277	ePn	Pn	04 15 23.3	+2.0
	30nm,0.4s						
AQU	L'Aquila	1.54	232	ePN	Pn	04 15 22.3	+0.9
FSSB	Fossombrone	1.68	283	ePN	Pn	04 15 25.5	+2.1
	67nm,0.5s						
FSSB	Fossombrone	1.68	283	ePn	Pn	04 15 25.5	+2.1
	67nm,0.5s						
CII	Carovilli	1.69	199	ePN	Pn	04 15 23.3	-0.2
CII	Carovilli	1.69	199	ePn	Pn	04 15 19.1	-4.5
CII				ePn	Pn	04 15 23.3	-0.2
PTQR	Pietraquaria	1.77	223	ePN	Pn	04 15 25.9	+1.2
	65nm,0.6s						
PTQR	Pietraquaria	1.77	223	ePn	Pn	04 15 25.9	+1.2
PTQR	Pietraquaria	1.77	223	ePn	Pn	04 15 25.9	+1.2
	65nm,0.6s						
SDI	San Donato	1.85	210	ePN	Pn	04 15 25.0	-0.8
	108nm,0.4s						
SDI	San Donato	1.85	210	ePn	Pn	04 15 25.0	-0.8
	108nm,0.4s						
MNS	Montasola	1.96	242	ePN	Pn	04 15 29.0	+1.5
	43nm,0.4s						
STON	Ston	2.01	102	i Pn	Pn	04 15 23.1	-5.0
STON				i Pg	Pg	04 15 25.0	-8.9
STON				i Sn	Sn	04 15 46.6	-6.9
STON				i Sg	Sg	04 15 48.4	-12
STON	Ston	2.01	102	i Pn	Pn	04 15 23.1	-5.1
STON				i Pg	Pg	04 15 25.0	-8.9
STON				i Sn	Sn	04 15 46.6	-7.0
STON				i Sg	Sg	04 15 48.4	-12
FG5	Orsara di Pugl	2.05	175	ePN	Pn	04 15 27.7	-1.0
	133nm,0.5s						
FG5	Orsara di Pugl	2.05	175	ePn	Pn	04 15 27.7	-1.0
	133nm,0.5s						
CRE	Caprese Michel	2.26	279	ePN	Pn	04 15 35.0	+3.2
	36nm,0.6s						
SFI	Santa Sofia	2.38	285	ePN	Pn	04 15 36.6	+3.1
	36nm,0.6s						
CDT	Castel del Mon	2.42	157	ePn	Pn	04 15 28.3	-5.8
PGD	Poggio Sodo	2.46	284	ePN	Pn	04 15 37.5	+2.8
	24nm,0.7s						
PGD	Poggio Sodo	2.46	284	eP	Pn	04 15 37.6	+2.9
MRLC	Muro Lucano	2.59	172	ePN	Pn	04 15 36.6	+0.2
MRLC	Muro Lucano	2.59	172	ePn	Pn	04 15 36.6	+0.1
LJU	Ljubljana	2.74	353	i Pn	Pn	04 15 40.8	+2.1
SEI	Scarperia	2.76	287	ePN	Pn	04 15 41.9	+3.0
	64nm,0.4s						
SEI	Scarperia	2.76	287	ePn	Pn	04 15 41.9	+3.0
SEI	Scarperia	2.76	287	ePn	Pn	04 15 41.9	+3.0
	64nm,0.4s						
SG1	Sgolgore (BA)	2.77	153	ePn	Pn	04 15 34.1	-4.9
VOY	Vojsko	2.83	344	ePn	Pn	04 15 41.6	+1.7
VOY				e		04 15 48.0	
VOY				eSn	Sn	04 16 20.2	+5.9
OBKA	Obir	3.21	354	⇓ iPN	Pn	04 15 46.6	+1.4
OBKA				i SN	Sn	04 16 28.7	+4.8
OBKA				i SG	Sg	04 16 45.1	+4.6
	86nm,0.8s						
OBKA	Obir	3.21	354	ePn	Pn	04 15 46.6	+1.4
OBKA				i Sn	Sn	04 16 28.7	+4.8
RHK1	Bakonya	3.52	37	eP	Pn	04 15 48.0	-1.7
RHK1				eS	Sn	04 16 32.5	+0.6
	2.4nm,0.4s						
PKSM	Moragy	3.87	40	⇑ eP	Pn	04 15 53.6	-1.1
KBA	Koelnbreinsper	3.94	343	⇑ iPN	Pn	04 15 57.3	+1.6
KBA				i SN	Sn	04 16 47.1	+4.6
KBA	Koelnbreinsper	3.94	343	ePn	Pn	04 15 57.3	+1.6
KBA				i Sn	Sn	04 16 47.1	+4.6
ARSA	Arzberg	3.94	5	⇑ iPN	Pn	04 15 56.0	+0.3
ARSA				i SN	Sn	04 16 43.2	+0.6
PGF	Pioggiola	4.49	262	ePn	Pn	04 16 03.4	-0.1
MOA	Molln	4.56	354	⇑ iPN	Pn	04 16 05.8	+1.3
MOA				i SN	Sn	04 17 00.9	+2.7
MOA	Molln	4.56	354	ePn	Pn	04 16 05.8	+1.3
MOA				eSn	Sn	04 16 58.9	+0.7
SQTA	Sankt Quirin	4.74	327	⇑ iPN	Pn	04 16 07.9	+0.9
SQTA				i SN	Sn	04 17 06.5	+3.8
MOTA	Moosalm	4.88	327	⇓ iPN	Pn	04 16 09.9	+0.9
MOTA				i SN	Sn	04 17 10.9	+4.6
DAVA	Damuels	5.38	319	⇓ iPN	Pn	04 16 17.6	+1.6
DAVA				i SN	Sn	04 17 24.4	+5.7
DAVA	Damuels	5.38	319	ePn	Pn	04 16 17.9	+1.9
DAVA				i Sn	Sn	04 17 24.4	+5.7
SBF	Sospel	5.54	278	ePn	Pn	04 16 18.2	-0.1
GEC2	GERESS Array S	5.60	351	eP	Pn	04 16 19.0	-0.2
GEC2				eS	Sn	04 17 23.5	-0.9
KHC	Kasperske Hory	5.90	351	ePn	Pn	04 16 23.1	-0.2
KHC				e		04 16 30.2	
KHC				eSn	Sn	04 17 31.0	-0.8
KHC				e		04 18 09.0	
KHC	Kasperske Hory	5.90	351	ePN	Pn	04 16 23.1	-0.2
KHC				ex	x	04 16 30.2	
KHC				eSN	Sn	04 17 31.0	-0.8
KHC				SG	Sg	04 18 09.0	-1.1
KHC	Kasperske Hory	5.90	351	eP	Pn	04 16 23.1	-0.2
KHC				eS	Sn	04 17 31.0	-0.8
WET	Wettzell	6.01	346	eP	Pn	04 16 24.7	-0.3
WET				eS	Sn	04 17 33.6	-1.0
FRF	La Foret Royal	6.11	275	ePn	Pn	04 16 25.8	-0.5
FRF				eSn	Sn	04 17 32.6	-4.4
	2.3nm,0.3s						
MBDF	Montbardon	6.12	286	ePn	Pn	04 16 25.2	-1.3
MBDF				eSn	Sn	04 17 32.8	-4.5
	3.1nm,0.3s						
LMR	La Mourre	6.21	273	ePn	Pn	04 16 25.7	-2.1
LMR				eSn	Sn	04 17 34.8	-4.9
	1.1nm,0.2s						
LPG	La Plagne	6.31	293	ePn	Pn	04 16 27.6	-1.7
LPG				eSn	Sn	04 17 38.7	-3.5
	11nm,0.5s						
LPL	La Plagne	6.33	293	ePn	Pn	04 16 27.9	-1.6
LPL				eSn	Sn	04 17 39.1	-3.6
	7.7nm,0.4s						
ORIF	Oris-en-Rattie	6.78	287	ePn	Pn	04 16 34.8	-0.9
ORIF				eSn	Sn	04 17 48.9	-4.8
	2.2nm,0.3s						
SMRF	Simiane la Rot	6.89	279	ePn	Pn	04 16 36.5	-0.8
CABF	La Chapelle	7.14	300	ePn	Pn	04 16 40.4	-0.5
CABF				eSn	Sn	04 17 58.5	-4.4
	0.7nm,0.3s						
HINF	Hinteralfeld	7.29	311	ePn	Pn	04 16 41.4	-1.5
HINF				eSn	Sn	04 18 01.7	-4.8
	3.8nm,0.4s						
CDF	Champ du Feu	7.43	316	ePn	Pn	04 16 44.5	-0.4
VIVF	Saint-Julien-l	7.61	285	ePn	Pn	04 16 47.0	-0.5
HAU	Haudompre	7.67	311	ePn	Pn	04 16 47.6	-0.7
HAU				eSn	Sn	04 18 11.6	-4.6
	12nm,0.5s						
MOX	Moxa	7.69	344	i P	Pn	04 16 47.3	-1.2
MOX	Moxa	7.69	344	eP	Pn	04 16 47.3	-1.2
SMF	Signal de Mont	8.60	297	ePn	P	04 16 59.6	-1.6
SMF				eSn	Sn	04 18 32.9	-6.3
	1.7nm,0.3s						
AVF	Avril sur Loir	8.96	297	ePn	P	04 17 03.9	-2.4
BGF	Bois d'Agland	9.22	295	ePn	P	04 17 08.3	-1.6
BGF				eSn	Sn	04 18 47.9	-6.9
	6.5nm,0.4s						
TCF	Toulx Ste Croi	9.58	292	ePn	P	04 17 13.5	-1.3

IDC 24 04:42:24.5±2.6**,20.79S**×**114.10W,mb3.5**/4**,mb1 3.9**/4**, mb1mx3.6**/16**,mbtmp3.5**/4**,Error ellipse: s-maj=87.9km s-min=40.4km az=41.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	43.70	92	P	P	04 50 32.3	-0.9
	0.8nm,0.3s,baz=303,slow=9.2,SNR=3.8						
NVAR	Mina Array Bea	59.03	356	P	P	04 52 26.9	-1.7
	0.2nm,0.4s,baz=158,slow=4.9,SNR=3.6						
PDAR	Pinedale Array	63.37	4	P	P	04 52 55.2	-2.7
	0.3nm,0.6s,baz=166,slow=7.4,SNR=3.4						
YKA	Yellowknife Ar	82.99	360	P	P	04 54 51.1	-1.5
	0.8nm,1.2s,baz=174,slow=6.0,SNR=3.9						
SONM	Songino Array	137.74	319	PKP	PKPdf	05 01 50.6	-2.1
	0.6nm,1.1s,baz=90,slow=1.4,SNR=2.9						
ZAL	Zalesovo	143.90	341	PKP	PKPdf	05 01 59.4	-3.9
	0.8nm,0.3s,baz=20,slow=2.4,SNR=3.6						
BVAR	Borovoye Array	147.63	355	PKPbc	PKPdf	05 02 10.5	+0.8
	1.7nm,1.0s,baz=304,slow=5.2,SNR=4.9						

MAN 24 04:43:23.7,16.84N×**120.79E,h8^{km},mb4.0,ML2.7,MS2.4, 1C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.50	203	⇑ iP	Pg	04 43 33.9	+0.1
BCPH				i S	Sg	04 43 45.1	+4.6
ABRA	Dolores	0.81	355	eP	Pb	04 43 39.0	-0.5
ABRA				eS	Sb	04 43 53.7	+3.4
APYP	Conner	1.10	23	eP	Pb	04 43 44.0	-0.5
APYP				eS	Sb	04 44 02.4	+3.5
BALP	Baler	1.33	145	eP	Pb	04 43 47.0	-1.5
LUBP	Lubang	3.13	190	eP	Pn	04 44 07.4	-7.0

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*NEIC **24** 04:45:30.7±1.2,50.30N×19.15E,h5^{km},MG2.5(WAR), Error ellipse: s-maj=16.6km s-min=7.2km az=178.0*

*PRU **24** 04:45:31.1,50.23N×19.23E*

WAR 24 04:45:30.9,50.16N×**19.31E,h0^{km},ML2.5,Mining Induced,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.32	80	ePG	Pg	04 45 38.0	+0.7
OJC				eSG	Sg	04 45 43.0	+1.5
OKC	Ostrava-Krasne	0.82	247	ePG	Pg	04 45 47.0	-0.2
OKC				eSG	Sg	04 45 58.3	+0.2
	26nm,0.4s						
NIE	Niedzica	0.99	139	ePG	Pg	04 45 49.0	-1.7
NIE				eSG	Sg	04 46 04.0	+0.1
LIKS	Likavka	1.12	187	ePG	Pg	04 45 53.7	+0.4
LIKS				eSG	Sg	04 46 10.7	+2.4
MORC	Moravsky Berou	1.21	252	ePg	Pg	04 45 53.5	-1.5
MORC				eSg	Sg	04 46 07.2	-3.8
VYHS	Vyhne	1.70	191	i Pg	Pg	04 46 01.8	-3.0
VYHS				eSn	Sn	04 46 24.3	-0.4
VYHS				i Sg	Sg	04 46 25.5	-2.0
CRVS	Cervenica-Dubn	1.89	131	ePG	Pg	04 46 07.9	-0.7
CRVS				eSG	Sg	04 46 34.1	+0.4
DPC	Dobruska-Polom	1.93	277	ePG	Pg	04 46 04.5	-4.9
DPC				eSG	Sg	04 46 30.1	-4.9
	19nm,0.7s						
KSP	Ksiaz	2.04	291	ePG	Pg	04 46 09.0	-2.7
KSP				eSG	Sg	04 46 35.0	-3.9
UPC	Upice	2.14	281	eSG	Sg	04 46 37.6	-4.6
KWP	Kalwaria	2.26	102	ePn	Pn	04 46 10.7	+0.8
KWP				eSn	Sn	04 46 40.9	+1.9
KOLS	Kolonicke sedl	2.29	121	ePG	Pg	04 46 16.0	-0.6
ZST	Bratislava	2.44	217	ePN	Pn	04 46 12.0	-0.6
PRU	Pruhonice	3.08	269	eSG	Sg	04 47 07.1	-6.2
KHC	Kasperske Hory	3.87	257	ex	x	04 47 02.0	
KHC				eSG	Sg	04 47 32.1	-7.5
CLL	Collm	4.17	288	eSG	Sg	04 47 46.0	-3.6

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*GUC **24** 04:55:49.9±0.0,21.02S×113.64W,h10^{km},mb5.5(NEIC), MS5.3(NEIC),MW5.7(NEIC)*

*IDC **24** 04:55:49.3±0.4,20.85S×113.77W,mb4.8/25,mb1 4.9/26, mb1mx4.8/29,mbtmp4.8/26,ML3.9/1,MS5.3/24,Ms1 5.3/24, ms1mx5.1/26,Error ellipse: s-maj=15.5km s-min=12.1km az=82.0*

*NEIC **24** 04:55:50.9±0.2,20.89S×113.68W,h10^{km},mb5.5/95, MS5.3/113,MW5.7,Error ellipse: s-maj=5.9km s-min=4.1km az=82.0,Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.01; $M_{\theta\theta}$-3.92; $M_{\phi\phi}$3.92; $M_{r\theta}$-1.27; $M_{\theta\phi}$1.85; $M_{\phi r}$-0.82; Best double couple: $M_0$4.6×10^{17} NP1:ϕ_s148°,δ71°,λ180°. NP2:ϕ_s238°, δ90°,λ19°. Principal axes: T 4.59, Plg14°, Azm104°; N -.01, Plg71°, Azm238°; P -4.59, Plg13°, Azm11°;*

*HRVD **24** 04:55:50.9±0.1,21.00S×113.69W,h15^{km},MW5.7/78, Centroid moment Tensor Solution. LP body waves: s71,c154;Mantle waves: s78,c181; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.49±.06; $M_{\theta\theta}$-2.99±.06; $M_{\phi\phi}$3.49±.06; $M_{r\theta}$-0.50±.17; $M_{\theta\phi}$2.76±.05; $M_{\phi r}$1.30±.20; Best double couple: $M_0$4.48×10^{17} NP1:ϕ_s65°, δ72°,λ-2°. NP2:ϕ_s156°,δ88°,λ-162°. Principal axes: T 4.72, Plg12°, Azm289°; N -.475, Plg72°, Azm161°; P -4.239, Plg14°, Azm22°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **24** 04:55:51.3,20.90S×113.70W,h10^{km},mB5.6,Ms5.8, Msz5.6*

MOS ***24*** *04:55:51.1±1.1, 20.59S×113.50W, h10^{km}, mb5.6/50, MS5.2/21, Error ellipse: s-maj=13.7km s-min=6.1km az=83.7*

ISC 24 04:55:48.9±0.2**, 20.87S**±0.03×**113.70W**±0.04**, h10^{km}, (h12^{km}**±1.3^{km}**:pP-P), n459, σ0^{s}93**/277**, mb5.4**/116**, MS5.3**/139**, 17C-25D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**7.39**	**148**	Pn	**Pn**	**04 57 37.4**	**-2.1**
	2.0nm,0.3s,baz=345,slow=7.8,SNR=3.4						
RPN				LR	LR	04 59 40.3	
	comp=Z,28µm,19.4s,baz=331,slow=31						
RPN				T		05 05 14.9	
	56nm,0.3s,baz=22,slow=21,SNR=7.0						
PTCN	**Pitcairn Islan**	**15.67**	**251**	*e*P	**P**	**04 59 32.5**	**+1.0**
	792nm,0.9s						
RKT	**Rikitea**	**19.86**	**260**	*e*P	**P**	**05 00 22.3**	**-0.7**
	410nm,1.4s						
RKT	**Rikitea**	**19.86**	**260**	*e*LQ		05 04 10.0	
RKT				*e*LR	LR	05 04 59.2	
	25µm,24.8s						
TAOE	**Nuku Hiva Isla**	**28.17**	**291**	*e*LR	LR	05 08 32.6	
	baz=124						
PAYG	**Puerto Ayora**	**30.43**	**52**	*e*P	**P**	**05 02 05.8**	**+1.8**
	208nm,1.7s,mb5.6						
PAYG				LR	LR		
	comp=Z,3µm,20.0s,MS4.9						
MEH	**Mehetia**	**32.52**	**269**	*e*P	**P**	**05 02 21.4**	**-0.9**
	comp=Z,160nm,1.2s,mb5.8						
PMOR	**Pomariorio Ree**	**33.01**	**274**	*e*P	**P**	**05 02 25.7**	**-0.9**
	comp=Z,201nm,1.2s,mb5.9						
TBI	**Tubuai**	**33.17**	**259**	*e*P	**P**	**05 02 28.3**	**+0.4**
	comp=Z,469nm,1.3s,mb6.3						
TBI				*e*LQ		05 09 47.9	
TBI				*e*LR	LR	05 11 06.4	
	comp=Z,15µm,27.1s,baz=85						
TVO	**Taravao**	**33.65**	**269**	*e*P	**P**	**05 02 31.8**	**-0.3**
	comp=Z,397nm,1.5s,mb6.1						
PAE	**Paea**	**33.98**	**269**	*e*P	**P**	**05 02 34.4**	**-0.6**
	comp=Z,354nm,1.5s,mb6.1						
PPT	**Papeete**	**33.99**	**269**	*e*P	**P**	**05 02 34.7**	**-0.4**
	comp=Z,87nm,1.3s,mb5.5						
PPT	**Papeete**	**33.99**	**269**	*e*LQ		05 10 18.2	
PPT				*e*LR	LR	05 11 24.8	
	comp=Z,15µm,26.1s,baz=101						
NNA	**Nana**	**36.36**	**82**⇑	*e*P	**P**	**05 02 56.0**	**+0.7**
	comp=Z,42nm,1.2s,mb5.2						
NNA				LR	LR		
	comp=Z,948nm,20.0s,MS4.6						
ARE	**Arequipa**	**40.14**	**91**	*e*P	**P**	**05 03 28.0**	**+1.1**
FCH	**Farellones**	**40.31**	**117**	*e*P	**P**	**05 03 29.8**	**+1.6**
OTAV	**Otavalo**	**40.34**	**63**⇑	*e*P	**P**	**05 03 30.6**	**+2.0**
	comp=Z,110nm,1.4s,mb5.4						
OTAV				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
ZON	**Zonda**	**41.51**	**114**	*e*P	**P**	**05 03 38.0**	**-0.1**
PLCA	**Paso Flores**	**41.52**	**128**	P	**P**	**05 03 39.3**	**+1.3**
	comp=Z,17nm,1.2s,mb4.6,baz=287,slow=9.5,SNR=20						
PLCA				LR	LR	05 16 29.7	
	comp=Z,8µm,18.6s,MS5.6,baz=286,slow=30						
LVC	**Limon Verde**	**41.52**	**101**	LR	LR	05 16 08.8	
	comp=Z,9µm,21.8s,MS5.6,baz=258,slow=29						
LVC	**Limon Verde**	**41.52**	**101**	*e*P	**P**	**05 03 36.7**	**-1.5**
	comp=Z,108nm,1.5s,mb5.3						
LVC				LR	LR		
	comp=Z,7µm,19.0s,MS5.6						
CFAA	**Coronel Fontan**	**41.89**	**114**	P	**P**	**05 03 41.7**	**+0.5**
	comp=Z,3.1nm,1.0s,baz=280,slow=8.9,SNR=40						
JTS	**JuntasAbangare**	**41.92**	**45**	P	**P**	**05 03 43.9**	**+2.3**
	comp=Z,12nm,1.0s,mb4.5,baz=105,slow=0.6,SNR=8.0						
JTS				LR	LR	05 16 10.2	
	comp=Z,3µm,21.4s,MS5.1,baz=223,slow=29						
JTS	**JuntasAbangare**	**41.92**	**45**	*e*P	**P**	**05 03 42.6**	**+1.0**
	comp=Z,179nm,1.7s,mb5.4						
JTS				LR	LR		
	comp=Z,821nm,22.0s,MS4.6						
COYC	**Coyhaique**	**41.99**	**136**	*e*P	**P**	**05 03 42.9**	**+1.1**
RAR	**Rarotonga**	**42.88**	**261**	LR	LR	05 16 48.1	
	comp=Z,8µm,19.1s,MS5.6,baz=103,slow=29						
LPAZ	**La Paz**	**43.33**	**92**	P	**P**	**05 03 55.4**	**+2.3**
	comp=Z,27nm,1.1s,mb4.9,baz=267,slow=6.8,SNR=33						
LPAZ				LR	LR	05 17 43.2	
	comp=Z,9µm,21.4s,MS5.6,baz=256,slow=30						
LPAZ	**La Paz**	**43.33**	**92**	P	**P**	**05 03 55.4**	**+2.3**
LPAZ				LR	LR	05 17 43.2	
ROSC	**El Rosal**	**46.32**	**61**	P	**P**	**05 04 19.6**	**+2.5**
	comp=Z,6.6nm,0.7s,mb4.7,baz=83,slow=2.3,SNR=13						
ROSC				LR	LR	05 19 46.6	
	comp=Z,979nm,19.3s,MS4.8,baz=20,slow=31						
TRQA	**Tornquist**	**47.56**	**123**⇑	*i*P	**P**	**05 04 27.3**	**+0.6**
	comp=Z,170nm,1.6s,mb5.8						
TRQA				LR	LR		
	comp=Z,6µm,20.0s,MS5.6						
TEIG	**Tepich**	**47.82**	**33**⇑	*e*P	**P**	**05 04 28.1**	**-0.8**
	comp=Z,167nm,1.4s,mb5.9						
TEIG				LR	LR		
	comp=Z,427nm,20.0s,MS4.4						
USHA	**Ushuaia**	**47.95**	**146**	P	**P**	**05 04 30.2**	**+0.8**
	comp=Z,20nm,1.0s,mb5.1,baz=259,slow=11,SNR=3.3						
USHA				LR	LR	05 19 40.0	
	comp=Z,6µm,21.0s,MS5.5,baz=297,slow=30						
LPA	**La Plata**	**50.64**	**119**	*de*P	**P**	**05 04 47.0**	**-3.4**
LPA				*e*pP	pP	05 04 51.0	-2.4
LPA				*e*S	**S**	**05 12 03.0**	**-0.8**
LPA				*e*sS		05 12 09.0	
	comp=Z,8µm,18.0s						
TXAR	**Lajitas Array**	**50.84**	**11**	P	**P**	**05 04 52.8**	**+0.8**
	comp=Z,4.7nm,0.9s,mb4.4,baz=196,slow=9.1,SNR=44						
TXAR				PcP	PcP	05 06 08.3	-0.7
	comp=Z,2.3nm,1.1s,baz=196,slow=6.6,SNR=2.1						
TXAR				LR	LR	05 22 34.5	
	comp=Z,3µm,18.1s,MS5.4,baz=170,slow=32						
TXAR	**Lajitas Array**	**50.84**	**11**	P	**P**	**05 04 52.8**	**+0.8**
TXAR				PcP	PcP	05 06 08.3	-0.7
TXAR				LR	LR	05 22 34.5	
LTX	**Lajitas**	**50.84**	**11**	*e*P	**P**	**05 04 52.5**	**+0.5**
	comp=Z,12nm,1.0s,mb4.8						
LTX				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
CPUP	**Villa Florida**	**51.60**	**108**	P	**P**	**05 04 57.3**	**-0.5**
SDV	**Santo Domingo**	**51.63**	**59**	*e*P	**P**	**05 04 58.7**	**+0.6**
	comp=Z,42nm,1.2s,mb5.2						
SDV				LR	LR		
	comp=Z,502nm,22.0s,MS4.5						
JCT	**Junction City**	**52.78**	**15**⇓	*i*P	**P**	**05 05 07.3**	**+0.7**
JCT				pmax	pmax		
	comp=Z,123nm,0.9s,mb5.8						
JCT				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
JCT	**Junction City**	**52.78**	**15**⇓	*i*P	**P**	**05 05 07.3**	**+0.7**
	comp=Z,123nm,0.9s,mb5.8						
JCT				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
MNTX	**Cornudas Mount**	**52.88**	**9**⇓	*i*P	**P**	**05 05 07.2**	**-0.2**
	comp=Z,58nm,1.2s,mb5.4						
MNTX				LR	LR		
	comp=Z,4µm,21.0s,MS5.4						
TUC	**Tucson**	**52.95**	**3**	P	**P**	**05 05 08.7**	**+0.8**
TUC				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
TUC	**Tucson**	**52.95**	**3**⇓	*e*P	**P**	**05 05 08.4**	**+0.5**
	comp=Z,16nm,1.1s,mb4.8						
BAR	**Barrett**	**53.33**	**357**	*e*P	**P**	**05 05 11.1**	**+0.5**
HKT	**Hockley**	**53.38**	**19**	P	**P**	**05 05 11.6**	**+0.6**
HKT				pmax	pmax		
	comp=Z,150nm,1.5s,mb5.7						
HKT	**Hockley**	**53.38**	**19**⇓	*e*P	**P**	**05 05 11.3**	**+0.3**
	comp=Z,195nm,1.6s,mb5.8						
HKT				LR	LR		
	comp=Z,5µm,19.0s,MS5.6						
PFO	**Pinyon Flat Ob**	**54.24**	**357**	P	**P**	**05 05 18.6**	**+1.3**
PFO				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
PFO	**Pinyon Flat Ob**	**54.24**	**357**	*e*P	**P**	**05 05 18.3**	**+1.0**
	comp=Z,28nm,1.4s,mb5.0						
PFO				LR	LR		
	comp=Z,472nm,19.0s,MS4.6						
MWC	**Mount Wilson**	**54.95**	**356**	P	**P**	**05 05 23.2**	**+0.7**
MWC	**Mount Wilson**	**54.95**	**356**⇓	*e*P	**P**	**05 05 23.1**	**+0.6**
NATX	**Nacogdoches**	**55.42**	**20**⇓	*i*P	**P**	**05 05 26.3**	**+0.3**
	comp=Z,74nm,0.8s,mb5.8						
NATX				LR	LR		
	comp=Z,5µm,19.0s,MS5.6						
LDFC	**Landfair**	**55.66**	**359**⇓	*i*P	**P**	**05 05 29.1**	**+1.5**
ANMO	**Albuquerque**	**55.94**	**7**	P	**P**	**05 05 30.1**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,22nm,1.4s						
ANMO	**Albuquerque**	**55.94**	**7**	P	**P**	**05 05 29.5**	**-0.2**
	comp=Z,4.4nm,0.8s,mb4.5,baz=184,slow=7.5,SNR=15						
ANMO	**Albuquerque**	**55.94**	**7**⇓	*e*P	**P**	**05 05 29.8**	**+0.1**
	comp=Z,19nm,1.3s,mb5.0						
WUAZ	**Wupatki**	**56.12**	**2**⇓	*e*P	**P**	**05 05 31.7**	**+0.7**
	comp=Z,431nm,1.0s,mb6.4						
WUAZ				LR	LR		
	comp=Z,21µm,20.0s,MS6.2						
AMTX	**Amarillo**	**56.61**	**12**⇓	*e*P	**P**	**05 05 34.0**	**-0.5**
	comp=Z,37nm,1.0s,mb5.4						
AMTX				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
DAC	**Darwin (Calif)**	**56.96**	**356**	PFAKE		05 05 50.0	+13
DAC				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
WMOK	**Wichita Mounta**	**57.09**	**15**	P	**P**	**05 05 36.8**	**-1.1**
WMOK				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.2						
WMOK	**Wichita Mounta**	**57.09**	**15**	*e*P	**P**	**05 05 36.4**	**-1.6**
	comp=Z,24nm,1.2s,mb5.1						
WMOK				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
LRV	**Little Rabbit**	**57.40**	**353**	*e*P	**P**	**05 05 40.6**	**+0.5**
SAO	**San Andreas Ge**	**57.79**	**353**	PFAKE		05 05 50.0	+7.2
SAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
DWPF	**Disney**	**57.82**	**34**	*e*P	**P**	**05 05 38.8**	**-4.3**
	comp=Z,263nm,1.4s,mb6.1						
DWPF				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
MTUM	**Tungsten Hills**	**58.09**	**355**	*e*P	**P**	**05 05 45.1**	**+0.2**
MIAR	**Mount Ida**	**58.34**	**19**	P	**P**	**05 05 46.0**	**-0.7**
MIAR				pmax	pmax		
	comp=Z,130nm,1.8s,mb5.7						
MIAR	**Mount Ida**	**58.34**	**19**	*e*P	**P**	**05 05 45.5**	**-1.2**
	comp=Z,83nm,1.5s,mb5.5						
MIAR				LR	LR		
	comp=Z,5µm,20.0s,MS5.6						
ARUT	**Antelope Range**	**58.35**	**0**	*e*P	**P**	**05 05 47.3**	**+0.6**
OMM	**Old Mammoth Mi**	**58.39**	**355**	*e*P	**P**	**05 05 45.6**	**-1.4**
TPH	**Tonopah**	**58.73**	**357**	P	**P**	**05 05 50.7**	**+1.4**
TPH				pmax	pmax		
	comp=Z,130nm,1.8s,mb5.7						
TPH	**Tonopah**	**58.73**	**357**	*e*P	**P**	**05 05 50.4**	**+1.1**
	comp=Z,92nm,1.6s,mb5.6						
TPH				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
SDCO	**Great Sand Dun**	**58.81**	**8**	*e*P	**P**	**05 05 50.0**	**+0.1**
	comp=Z,40nm,1.0s,mb5.4						
SDCO				LR	LR		
	comp=Z,5µm,20.0s,MS5.7						
CMB	**Columbia Colle**	**58.93**	**354**	P	**P**	**05 05 51.2**	**+0.5**
CMB				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.2						
CMB	**Columbia Colle**	**58.93**	**354**	*e*P	**P**	**05 05 51.0**	**+0.2**
	comp=Z,38nm,1.4s,mb5.2						
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
TRCR	**Troy Canyon**	**58.93**	**358**	*e*P	**P**	**05 05 51.5**	**+0.7**
UALR	**University of**	**58.95**	**20**	*e*P	**P**	**05 05 49.8**	**-1.1**
	comp=Z,27nm,0.9s,mb5.3						
MVU	**Marysvale**	**59.08**	**1**	*e*P	**P**	**05 05 52.0**	**+0.2**
	comp=Z,55nm,1.6s,mb5.3						
MVU				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
MSU	**Marysvale**	**59.09**	**1**	*e*P	**P**	**05 05 52.8**	**+1.0**
MNV	**Mina**	**59.14**	**356**	P	**P**	**05 05 52.9**	**+0.7**
MNV				pmax	pmax		
	comp=Z,120nm,1.7s,mb5.7						
MNV	**Mina**	**59.14**	**356**	*e*P	**P**	**05 05 52.3**	**+0.2**
	comp=Z,98nm,1.6s,mb5.6						
MNV				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
NVAR	**Mina Array Bea**	**59.15**	**356**	P	**P**	**05 05 53.1**	**+0.9**
	comp=Z,26nm,1.0s,mb5.2,baz=178,slow=8.3,SNR=86						
NVAR				LR	LR	05 26 23.5	
	comp=Z,2µm,18.1s,MS5.3,baz=160,slow=31						
NVAR				PKP2bc		05 35 41.9	
	comp=Z,0.4nm,0.8s,baz=29,slow=1.9,SNR=4.6						
NVAR	**Mina Array Bea**	**59.15**	**356**	P	**P**	**05 05 53.1**	**+0.9**
NVAR				LR	LR	05 26 23.5	
NVAR			⇑	*e*		05 35 41.9	
LRAL	**Lakeview Retre**	**59.36**	**26**	*e*P	**P**	**05 05 53.2**	**-0.6**
	comp=Z,40nm,1.1s,mb5.4						
LRAL				LR	LR		
	comp=Z,970nm,20.0s,MS4.9						
OXF	**Oxford**	**59.73**	**23**	*e*P	**P**	**05 05 55.3**	**-1.0**
	comp=Z,92nm,1.4s,mb5.6						
OXF				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
SRU	**San Rafael**	**59.74**	**3**	P	**P**	**05 05 56.4**	**+0.1**
SRU	**San Rafael**	**59.74**	**3**	*e*P	**P**	**05 05 56.0**	**-0.3**
TMUT	**Trail Mountain**	**59.90**	**2**	*e*P	**P**	**05 05 58.3**	**+0.9**
WCN	**Washoe City**	**60.13**	**355**	P	**P**	**05 06 00.3**	**+1.3**
WCN				pmax	pmax		
	comp=Z,90nm,1.8s,mb5.5						
WCN	**Washoe City**	**60.13**	**355**	*e*P	**P**	**05 05 59.7**	**+0.7**
	comp=Z,76nm,1.7s,mb5.5						
HOPS	**Hopland**	**60.20**	**352**	*e*P	**P**	**05 05 59.9**	**+0.4**
	comp=Z,62nm,1.3s,mb5.5						
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
HBAR	**Harrisburg**	**60.22**	**22**	*e*P	**P**	**05 05 58.6**	**-1.0**
OHCM	**Honcut**	**60.33**	**353**	*e*P	**P**	**05 05 59.9**	**-0.5**
KIP	**Kipapa**	**60.34**	**311**	*e*P	**P**	**05 06 00.0**	**-0.6**
	comp=Z,226nm,1.5s,mb6.0						
PAHR	**Pah Rah Range**	**60.50**	**355**	*e*P	**P**	**05 06 02.4**	**+0.9**
NLU	**North Lily Min**	**60.53**	**1**	*e*P	**P**	**05 06 02.2**	**+0.5**
MPU	**Maple Canyon**	**60.60**	**2**	*e*P	**P**	**05 06 02.9**	**+0.7**
DUG	**Dugway**	**60.76**	**1**	P	**P**	**05 06 03.8**	**+0.6**
DUG				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.4						
DUG	**Dugway**	**60.76**	**1**	*e*P	**P**	**05 06 03.7**	**+0.5**
	comp=Z,618nm,1.3s						
DUG				LR	LR		
	comp=Z,30µm,20.0s						
CBKS	**Cedar Bluff**	**60.80**	**12**	P	**P**	**05 06 03.3**	**-0.2**
CBKS				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.4						
CBKS	**Cedar Bluff**	**60.80**	**12**	*e*P	**P**	**05 06 02.8**	**-0.7**
	comp=Z,40nm,1.3s,mb5.4						
CBKS				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
GNAR	**Gosnell**	**60.81**	**22**	*e*P	**P**	**05 06 01.3**	**-2.4**
ISCO	**Idaho Springs**	**60.83**	**7**	P	**P**	**05 06 04.2**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.3						
ISCO	**Idaho Springs**	**60.83**	**7**	*e*P	**P**	**05 06 03.8**	**0.0**
	comp=Z,36nm,1.1s,mb5.4						
ISCO				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
HALT	**Halls**	**61.00**	**23**	P	**P**	**05 06 02.8**	**-2.1**
DAU	**Daniels Canyon**	**61.01**	**2**	*e*P	**P**	**05 06 05.9**	**+1.0**
BMN	**Battle Mountai**	**61.07**	**357**	P	**P**	**05 06 06.5**	**+1.1**
BMN				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.3						
BMN	**Battle Mountai**	**61.07**	**357**	*e*P	**P**	**05 06 03.1**	**-2.3**
	comp=Z,40nm,1.2s,mb5.4						
BMN				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
JLU	**Jordanelle**	**61.19**	**2**	*e*P	**P**	**05 06 06.5**	**+0.4**
GOGA	**Godfrey**	**61.20**	**29**	PFAKE		05 06 20.0	+14
GOGA				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
NOQ	**North Oquirrh**	**61.22**	**1**	*e*P	**P**	**05 06 06.3**	**-0.1**
ELK	**Elko**	**61.32**	**359**	P	**P**	**05 06 07.9**	**+0.9**
ELK				pmax	pmax		
	comp=Z,60nm,1.3s						
ELK	**Elko**	**61.32**	**359**	P	**P**	**05 06 07.4**	**+0.4**
	comp=Z,11nm,1.0s,mb5.0,baz=183,slow=5.4,SNR=28						
ELK	**Elko**	**61.32**	**359**	*e*P	**P**	**05 06 07.6**	**+0.5**
	comp=Z,31nm,1.0s,mb5.4						
ELK				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
URZ	**Urewera**	**61.32**	**237**	P	**P**	**05 06 07.6**	**+0.5**
	comp=Z,15nm,1.0s,mb5.1,baz=197,slow=2.4,SNR=4.7						
URZ				LR	LR	05 25 47.1	
	comp=Z,2µm,19.3s,MS5.2,baz=124,slow=29						
BGU	**Big Grassy Mou**	**61.48**	**1**	*e*P	**P**	**05 06 08.3**	**+0.2**
UTMT	**University of**	**61.56**	**23**	P	**P**	**05 06 06.4**	**-2.4**
	comp=Z,173nm,1.4s,mb6.0						
WDC	**Whiskeytown Da**	**61.69**	**352**	P	**P**	**05 06 09.2**	**-0.4**
WDC				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
WDC	**Whiskeytown Da**	**61.69**	**352**	*e*P	**P**	**05 06 08.7**	**-0.9**
	comp=Z,30nm,1.1s,mb5.3						
WDC				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
TCUT	**Toone Canyon**	**61.71**	**2**	*e*P	**P**	**05 06 09.8**	**+0.1**
WVT	**Waverly**	**61.75**	**24**	P	**P**	**05 06 09.1**	**-1.0**
WVT				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
WVT	**Waverly**	**61.75**	**24**	*e*P	**P**	**05 06 08.5**	**-1.5**
	comp=Z,15nm,0.8s,mb5.2						
WVT				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
KSU1	**Kansas State U**	**61.77**	**15**	*e*P	**P**	**05 06 09.7**	**-0.5**
SPUT	**South Promonto**	**61.87**	**1**	*e*P	**P**	**05 06 10.7**	**-0.1**
KHMM	**Horse Mountain**	**62.13**	**351**	*e*P	**P**	**05 06 13.4**	**+0.9**
LTIM	**Timbered Crate**	**62.15**	**353**	P	**P**	**05 06 13.2**	**+0.6**
HWUT	**Hardware Ranch**	**62.19**	**2**	*e*P	**P**	**05 06 12.7**	**-0.3**
	comp=Z,20nm,1.1s,mb5.2						
HWUT				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
BDFB	**Brasilia**	**62.23**	**97**	P	**P**	**05 06 13.1**	**-0.4**
	comp=Z,11nm,1.2s,mb4.9,baz=276,slow=8.8,SNR=10						
BDFB				LR	LR	05 29 59.9	
	comp=Z,4µm,20.4s,MS5.6,baz=96,slow=33						
BAO	**Brasilia Array**	**62.25**	**97**	P	**P**	**05 06 12.5**	**-1.2**
BAO				*e*		05 06 19.1	
BAO				*i*		05 06 25.1	
CCM	**Cathedral Cave**	**62.30**	**20**	P	**P**	**05 06 12.6**	**-1.1**
CCM				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.3						
CCM	**Cathedral Cave**	**62.30**	**20**	*e*P	**P**	**05 06 12.3**	**-1.4**
	comp=Z,26nm,0.8s,mb5.4						
CCM				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
PHWY	**Pilot Hill**	**62.33**	**7**	*e*P	**P**	**05 06 13.5**	**-0.3**
HVU	**Hansel Valley**	**62.34**	**1**	P	**P**	**05 06 14.2**	**+0.3**
HVU	**Hansel Valley**	**62.34**	**1**	*e*P	**P**	**05 06 11.9**	**-2.0**
CPCT	**Cooper Cave**	**62.47**	**27**	*e*P	**P**	**05 06 13.8**	**-1.1**
NHSC	**New Hope**	**62.49**	**32**	PFAKE		05 06 30.0	+15
NHSC				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
FVM	**French Village**	**62.50**	**21**	P	**P**	**05 06 14.5**	**-0.5**
FVM				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.5						
FVM	**French Village**	**62.50**	**21**	*e*P	**P**	**05 06 13.8**	**-1.2**
	comp=Z,58nm,1.4s,mb5.5						
MOD	**Modoc**	**62.76**	**354**	*e*P	**P**	**05 06 16.9**	**+0.2**
	comp=Z,31nm,1.1s,mb5.3						
MOD				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
YBH	**Yreka Blue Hor**	**62.84**	**352**	P	**P**	**05 06 17.5**	**+0.3**
YBH				pmax	pmax		
	comp=Z,19nm,1.3s						
YBH	**Yreka Blue Hor**	**62.84**	**352**	P	**P**	**05 06 17.0**	**-0.2**
	comp=Z,7.1nm,1.2s,mb4.7,baz=135,slow=3.7,SNR=6.6						
YBH	**Yreka Blue Hor**	**62.84**	**352**	*e*P	**P**	**05 06 16.5**	**-0.7**
	comp=Z,13nm,1.0s,mb5.0						
YBH				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
JSC	**Jenkinsville**	**62.94**	**30**	P	**P**	**05 06 18.3**	**+0.3**
JSC	**Jenkinsville**	**62.94**	**30**	*e*P	**P**	**05 06 17.2**	**-0.8**
WVOR	**Wild Horse Val**	**63.15**	**356**	P	**P**	**05 06 20.2**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.5						
WVOR	**Wild Horse Val**	**63.15**	**356**	*e*P	**P**	**05 06 19.9**	**+0.7**
	comp=Z,60nm,1.2s,mb5.6						
WVOR				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
AHID	**Auburn Hatcher**	**63.36**	**2**	*e*P	**P**	**05 06 20.0**	**-0.6**
	comp=Z,29nm,1.1s,mb5.3						
AHID				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
BW06	**Boulder Array**	**63.43**	**3**	PFAKE		05 06 30.0	+8.9
BW06				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
PDAR	**Pinedale Array**	**63.43**	**3**	P	**P**	**05 06 20.2**	**-0.9**
	comp=Z,12nm,0.7s,mb5.1,baz=169,slow=6.3,SNR=123						
PDAR				LR	LR	05 29 16.1	
	comp=Z,2µm,21.0s,MS5.2,baz=189,slow=32						
PDAR				PKP2bc		05 35 22.1	
	comp=Z,1.0nm,1.1s,baz=45,slow=2.1,SNR=4.4						
PDAR	**Pinedale Array**	**63.43**	**3**	P	**P**	**05 06 20.2**	**-0.9**
PDAR				LR	LR	05 29 16.1	
PDAR			⇑	*e*		05 35 22.1	
USIN	**University of**	**63.44**	**23**	*e*P	**P**	**05 06 20.6**	**-0.6**
	comp=Z,31nm,0.8s,mb5.5						
HUMO	**Hull Mountain**	**63.74**	**352**	*e*P	**P**	**05 06 23.6**	**+0.5**
	comp=Z,28nm,1.0s,mb5.2						
HUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
SNOW	**Snow King Moun**	**64.07**	**2**	*e*P	**P**	**05 06 24.7**	**-0.6**
TPAW	**Teton Pass**	**64.09**	**2**	*e*P	**P**	**05 06 24.8**	**-0.7**
HLID	**Hailey**	**64.12**	**359**	*e*P	**P**	**05 06 26.0**	**+0.4**
	comp=Z,36nm,1.0s,mb5.4						
HLID				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
WUWY	**Wally Ulrich**	**64.15**	**2**	*e*P	**P**	**05 06 25.0**	**-0.8**
WCI	**Wyandotte Cave**	**64.18**	**24**	P	**P**	**05 06 25.5**	**-0.6**
WCI				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
WCI	**Wyandotte Cave**	**64.18**	**24**	*e*P	**P**	**05 06 25.3**	**-0.8**
	comp=Z,19nm,0.9s,mb5.1						
WCI				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
LOHW	**Long Hollow**	**64.23**	**2**	*e*P	**P**	**05 06 25.5**	**-0.9**
MOOW	**Moose Ponds**	**64.36**	**2**	*e*P	**P**	**05 06 26.5**	**-0.7**
IMW	**Indian Meadow**	**64.50**	**2**	*e*P	**P**	**05 06 27.7**	**-0.4**
BLO	**Bloomington**	**64.92**	**23**	*e*P	**P**	**05 06 29.4**	**-1.5**
BLO				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.5						
BLO	**Bloomington**	**64.92**	**23**	*e*P	**P**	**05 06 29.4**	**-1.5**
	comp=Z,61nm,1.3s,mb5.5						
LKWY	**Lake**	**65.19**	**3**	*e*P	**P**	**05 06 33.2**	**+0.7**
	comp=Z,12nm,0.9s,mb4.9						
LKWY				LR	LR		
	comp=Z,2µm,21.0s,MS5.3						
YMR	**Madison River**	**65.27**	**2**	*e*P	**P**	**05 06 33.3**	**+0.3**
RSSD	**Black Hills**	**65.28**	**8**	P	**P**	**05 06 34.3**	**+1.2**
	comp=Z,0.2nm,1.0s						
YNR	**Norris Junctio**	**65.33**	**2**	P	**P**	**05 06 33.0**	**-0.4**
RPZ	**Rata Peaks**	**65.38**	**230**	P	**P**	**05 06 33.7**	**-0.1**
	comp=Z,36nm,1.0s,mb5.3,baz=78,slow=5.1,SNR=12						
RPZ				LR	LR	05 29 04.6	
	comp=Z,3µm,19.9s,MS5.5,baz=90,slow=30						
MCMT	**McKenzie Canyo**	**65.38**	**1**	*e*P	**P**	**05 06 34.1**	**+0.4**
QLMT	**Earthquake Lak**	**65.42**	**2**	*e*P	**P**	**05 06 34.4**	**+0.4**
BMO	**Blue Mountains**	**65.49**	**357**	*e*P	**P**	**05 06 34.4**	**0.0**
	comp=Z,67nm,1.4s,mb5.5						
BMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
CAM4	**Nova Friburgo**	**65.55**	**106**	*e*P	**P**	**05 06 34.4**	**-0.8**
CAM4				*i*		05 06 42.5	
CAM4				*i*		05 06 46.6	
CAM4				*i*		05 06 59.9	
COR	**Corvallis**	**65.73**	**352**	PFAKE		05 06 50.0	+14
COR				LR	LR		
	comp=Z,688nm,20.0s,MS4.8						
FWV	**Forest Hill**	**65.87**	**28**	*e*P	**P**	**05 06 36.2**	**-0.8**
CROR	**Criterion Ridg**	**65.87**	**354**	P	**P**	**05 06 37.8**	**+0.9**
BOZ	**Bozeman (W)**	**66.23**	**2**	P	**P**	**05 06 38.8**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
BOZ	**Bozeman (W)**	**66.23**	**2**	*e*P	**P**	**05 06 38.6**	**-0.5**
	comp=Z,29nm,1.6s,mb5.0						
BOZ				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
VFP	**Flag Point**	**66.25**	**354**	P	**P**	**05 06 39.9**	**+0.6**
JFWS	**Jewell Farm**	**67.05**	**19**	P	**P**	**05 06 44.4**	**0.0**
JFWS				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
JFWS	**Jewell Farm**	**67.05**	**19**	*e*P	**P**	**05 06 43.5**	**-0.9**
	comp=Z,34nm,1.2s,mb5.3						
JFWS				LR	LR		
	comp=Z,4µm,21.0s,MS5.6						
ACSO	**Alum Creek Sta**	**67.19**	**25**	*e*P	**P**	**05 06 44.3**	**-1.1**
	comp=Z,41nm,1.1s,mb5.4						
ACSO				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
MSO	**Missoula**	**67.38**	**360**	*e*P	**P**	**05 06 46.3**	**-0.2**
	comp=Z,16nm,1.1s,mb5.0						
MSO				LR	LR		
	comp=Z,888nm,22.0s,MS4.9						
CHMT	**Chamberlain Mo**	**67.47**	**0**	*e*P	**P**	**05 06 47.5**	**+0.5**
SBA	**Scott Base**	**67.53**	**193**	P	**P**	**05 06 46.3**	**-0.7**
SBA				pmax	pmax		
	comp=Z,113nm,1.2s,mb5.8						
SBA	**Scott Base**	**67.53**	**193**	P	**P**	**05 06 46.2**	**-0.8**

	comp=Z,113nm,1.2s,mb5.8						
LAO	**LASA Array**	67.58	6	*e*P	P	05 06 46.7	-1.1
	comp=Z,19nm,0.7s,mb5.2						
LAO				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
CBN	**Corbin**	67.95	30	P	P	05 06 50.0	-0.2
	comp=Z,58nm,1.3s,mb5.5						
CBN				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
MCWV	**Mont Chateau**	68.01	28	*e*P	P	05 06 49.2	-1.4
	comp=Z,69nm,1.1s,mb5.6						
MCWV				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
OD2	**Odessa Site #2**	68.09	356	P	P	05 06 51.3	+0.3
WTV	**Waterville**	68.48	355	P	P	05 06 54.1	+0.7
VNDA	**Vanda**	68.57	193	P	P	05 06 54.9	+1.5
	comp=Z,8.1nm,0.8s,mb4.7,baz=78,slow=3.4,SNR=8.3						
VNDA				LR	LR	05 30 18.3	
	comp=Z,2µm,19.6s,MS5.4,baz=101,slow=30						
AAM	**Ann Arbor**	68.71	23	P	P	05 06 55.2	+0.3
AAM				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4						
AAM	**Ann Arbor**	68.71	23	*e*P	P	05 06 54.7	-0.2
	comp=Z,45nm,0.9s,mb5.4						
AAM				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
NEW	**Newport**	68.89	358	P	P	05 06 55.9	+0.1
NEW				pmax	pmax		
	comp=Z,45nm,1.3s						
NEW	**Newport**	68.89	358	LR	LR	05 32 20.1	
	comp=Z,2µm,18.6s,MS5.4,baz=282,slow=32						
NEW	**Newport**	68.89	358	*e*P	P	05 06 55.8	-0.1
	comp=Z,44nm,1.3s,mb5.2						
NEW				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
OCWA	**Octopus Mounta**	68.95	352	*e*P	P	05 06 57.0	+0.8
	comp=Z,108nm,1.7s,mb5.5						
OCWA				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
SDMD	**Soldier's Deli**	69.16	30	*e*P	P	05 06 57.7	0.0
QSPA	**South Pole Qui**	69.27	180	*e*P	P	05 06 58.8	+1.1
	comp=Z,188nm,1.1s,mb5.9						
ALLY	**Alegheny Colle**	69.54	26	*e*P	P	05 07 00.1	+0.1
DGMT	**Dagmar**	69.55	7	*e*P	P	05 07 00.1	+0.2
	comp=Z,82nm,1.1s,mb5.6						
DGMT				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
WALA	**Waterton Lakes**	69.61	360	*e*P	P	05 06 58.5	-1.8
	comp=Z,19nm,1.1s,mb4.9						
SSPA	**Standing Stone**	69.67	28	*e*P	P	05 07 00.1	-0.7
	comp=Z,43nm,1.3s,mb5.2						
SSPA				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
PGC	**Sidney**	69.75	353	*e*P	P	05 07 01.1	-0.1
	comp=Z,121nm,1.3s,mb5.7						
MVL	**Millersville**	69.86	30	*e*P	P	05 07 01.8	-0.2
ERPA	**Erie**	69.99	26	*e*P	P	05 07 02.2	-0.5
	comp=Z,73nm,1.1s,mb5.5						
ERPA				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
BBSR	**BB Station**	70.70	43	*e*P	P	05 07 07.5	+0.3
	comp=Z,168nm,1.6s,mb5.7						
BRNJ	**Basking Ridge**	71.24	30	*e*P	P	05 07 06.6	-3.7
EYMN	**Ely**	71.34	16	*e*P	P	05 07 10.3	-0.5
	comp=Z,36nm,0.9s,mb5.3						
EYMN				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
BINY	**Binghamton**	71.78	29	*e*P	P	05 07 13.9	+0.4
	comp=Z,115nm,1.2s,mb5.7						
PAL	**Palisades**	71.80	31	P	P	05 07 17.0	+3.3
PAL				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.4						
PAL	**Palisades**	71.80	31	*e*P	P	05 07 13.3	-0.4
	comp=Z,56nm,1.1s,mb5.4						
ULM	**Lac du Bonnet**	72.54	12	P	P	05 07 17.1	-0.8
	comp=Z,13nm,0.7s,mb5.0,baz=204,slow=6.0,SNR=28						
ULM				LR	LR	05 36 05.5	
	comp=Z,880nm,18.7s,MS5.1,baz=39,slow=33						
ULM	**Lac du Bonnet**	72.54	12	*e*P	P	05 07 16.4	-1.5
	comp=Z,19nm,0.8s,mb5.1						
ACCN	**Adirondack Com**	73.76	29	*e*P	P	05 07 24.6	-0.5
EDM	**Edmonton**	73.78	0	P	P	05 07 25.1	0.0
EDM	**Edmonton**	73.78	0	*e*P	P	05 07 24.6	-0.5
BBB	**Bella Bella**	73.83	351	P	P	05 07 24.0	-1.3
	comp=Z,9.2nm,0.8s,mb4.8,baz=159,slow=12						
BBB	**Bella Bella**	73.83	351	P	P	05 07 24.0	-1.3
MIV	**Mineville/With**	74.36	29	P	P	05 07 28.3	-0.3
HNH	**Hanover**	74.65	30	*e*P	P	05 07 29.8	-0.5
	comp=Z,5.0nm,1.2s,mb4.3						
FFD	**Franklin Falls**	74.76	30	P	P	05 07 34.2	+3.3
	comp=Z,193nm,1.4s,mb5.8						
VNA3	**Neumayer Olymp**	74.82	161	*e*	P	05 07 33.7	+2.9
VNA3	**Neumayer Olymp**	74.82	161	*e*	P	05 07 35.2	+4.4
VNA3	**Neumayer Olymp**	74.82	161	*e*	P	05 07 41.1	+10
VNA3	**Neumayer Olymp**	74.82	161	⇑*i*P	P	05 07 30.4	-0.4
VNA3				*e*	pP	05 07 33.7	-0.2
VNA3				*e*	pP	05 07 35.2	+1.3
VNA3				*e*		05 07 41.1	
VNA1	**Neumayer--Stat**	75.46	161	*e*	P	05 07 36.9	+2.5
VNA1	**Neumayer--Stat**	75.46	161	⇑*i*P	P	05 07 33.8	-0.7
VNA1				*e*	pP	05 07 36.9	-0.7
VNA2	**Neumayer--Watz**	75.63	161	*e*	P	05 07 38.4	+3.0
VNA2	**Neumayer--Watz**	75.63	161	*e*	P	05 07 39.5	+4.1
VNA2	**Neumayer--Watz**	75.63	161	*e*	P	05 07 45.3	+10
VNA2	**Neumayer--Watz**	75.63	161	⇑*i*P	P	05 07 35.3	-0.1
VNA2				*e*	pP	05 07 38.4	-0.1
VNA2				*e*	pP	05 07 39.5	+1.0
VNA2				*e*		05 07 45.3	
FFC	**Flin Flon**	75.96	7	P	P	05 07 37.7	+0.2
	comp=Z,95nm,1.8s,mb5.4,SNR=14						
WVL	**Waterville**	76.54	31	PFAKE		05 07 50.0	+9.0
WVL				LR	LR		
	comp=Z,10µm,19.0s,MS6.2						
RCBR	**Riachuelo**	76.56	91	P	P	05 07 39.7	-2.0
	comp=Z,22nm,1.1s,mb5.0						
SNAA	**Sanae**	76.66	162	*e*	P	05 07 43.7	+2.5
SNAA	**Sanae**	76.66	162	*e*	P	05 07 45.2	+4.0
SNAA	**Sanae**	76.66	162	*e*	P	05 07 50.2	+9.0
SNAA	**Sanae**	76.66	162	⇑*i*P	P	05 07 40.4	-0.8
SNAA				*e*	pP	05 07 43.7	-0.7
SNAA				*e*	pP	05 07 45.2	+0.8
SNAA				*e*		05 07 50.2	
DRV	**Dumont d'Urvil**	77.27	203	S	S	05 17 37.0	+3.9
EMMW	**East Machias**	77.71	32	PFAKE		05 08 00.0	+12
EMMW				LR	LR		
	comp=Z,10µm,19.0s,MS6.2						
PQI	**Presque Isle**	78.87	30	PFAKE		05 08 10.0	+16
PQI				LR	LR		
	comp=Z,10µm,21.0s,MS6.1						
SIT	**Sitka**	79.73	348	*e*P	P	05 07 57.4	-0.9
SIT				pmax	pmax		
	comp=Z,217nm,1.3s,mb5.9						
SIT	**Sitka**	79.73	348	*e*P	P	05 07 57.4	-0.8
	comp=Z,217nm,1.3s,mb5.9						
DLBC	**Dease Lake**	80.17	351	P	P	05 08 01.9	+1.3
	comp=Z,11nm,0.8s,mb4.8,baz=184,slow=7.5,SNR=19						
DLBC	**Dease Lake**	80.17	351	*e*P	P	05 08 01.6	+1.0
FCC	**Fort Churchill**	80.98	10	*e*P	P	05 08 04.8	-0.1
FCC				pmax	pmax		
	comp=Z,82nm,1.3s,mb5.5						
FCC	**Fort Churchill**	80.98	10	*e*P	P	05 08 04.8	0.0
	comp=Z,82nm,1.3s,mb5.5						
TAU	**Tasmania Unive**	82.36	227	*e*P	P	05 08 09.5	-2.9
TAU				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.4						
TAU				MLR	MLR		
	comp=Z,497nm,20.0s,MS4.9						
TAU	**Tasmania Unive**	82.36	227	*e*P	P	05 08 09.5	-2.9
	comp=Z,64nm,1.4s,mb5.4						
TAU				LR	LR		
	comp=Z,497nm,20.0s,MS4.9						
KWAJ	**Kwajalein Atol**	82.68	282	PFAKE		05 08 30.0	+15
KWAJ				LR	LR		
	comp=Z,994nm,22.0s,MS5.1						
YKA	**Yellowknife Ar**	83.08	360	P	P	05 08 16.0	+0.3
	comp=Z,7.1nm,0.9s,mb4.7,baz=176,slow=5.4,SNR=93						
YKA				PKKPbc		05 26 39.4	
	comp=Z,0.2nm,0.7s,baz=355,slow=2.3,SNR=4.4						
YKA				LR	LR	05 40 49.3	
	comp=Z,1µm,19.6s,MS5.3,baz=170,slow=32						
YKA	**Yellowknife Ar**	83.08	360	P	P	05 08 16.1	+0.3
YKA				PKKPbc		05 26 39.4	
YKA				LR	LR	05 40 49.3	
YKW3	**Yellowknife Ar**	83.15	360	*e*P	P	05 08 16.5	+0.4
CNB	**Canberra Magne**	83.60	235	*e*P	P	05 08 19.6	+0.6
	comp=Z,164nm,1.0s,mb6.1						
KDAK	**Kodiak Island**	84.79	340	PFAKE		05 08 40.0	+16
KDAK				LR	LR		
	comp=Z,219nm,21.0s,MS4.5						
SCHQ	**Schefferville**	85.35	25	P	P	05 08 27.8	+0.5
	comp=Z,4.5nm,0.8s,mb4.6,baz=324,slow=1.6,SNR=6.6						
SCHQ				LR	LR	05 45 53.8	
	comp=Z,1µm,18.2s,MS5.4,baz=215,slow=35						
SCHQ	**Schefferville**	85.35	25	*e*P	P	05 08 27.5	+0.2
	comp=Z,45nm,1.2s,mb5.5						
SCHQ				LR	LR		
	comp=Z,392nm,19.0s,MS4.8						
DIV	**Divide**	85.70	345	P	P	05 08 29.9	+1.0
	comp=Z,87nm,1.1s,mb5.9						
DIV				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
SLKM	**Skilak Lake**	86.33	343	P	P	05 08 32.3	+0.3
SLKM	**Skilak Lake**	86.33	343	*e*P	P	05 08 31.8	-0.2
MENT	**Mentasta**	86.83	347	*e*P	P	05 08 34.7	+0.3
SML	**Sawmill**	86.92	344	P	P	05 08 38.3	+3.4
SML	**Sawmill**	86.92	344	P	P	05 08 35.8	+0.9
PMR	**Palmer**	86.94	344	*e*P	P	05 08 36.1	+1.1
DAWY	**Dawson**	86.99	349	*e*P	P	05 08 35.0	-0.2
RSO	**Redoubt South**	87.01	342	P	P	05 08 36.2	+0.9
UNV	**Unalaska Valle**	87.15	332	*e*P	P	05 08 35.6	-0.6
	comp=Z,454nm,1.2s						
UNV				LR	LR		
	comp=Z,2µm,20.0s						
SPU	**Mount Spurr**	87.39	342	*e*P	P	05 08 36.5	-0.6
THY	**Trims Highway**	87.69	346	P	P	05 08 40.6	+2.1
SYO	**Syowa Base**	88.31	171	⇓P	P	05 08 39.1	-2.3
SVW2	**Sparrevohn**	88.36	341	*e*P	P	05 08 41.5	-0.3
MCK	**McKinley**	88.70	345	P	P	05 08 43.8	+0.4
MCK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.6						
MCK	**McKinley**	88.70	345	*e*P	P	05 08 42.8	-0.6
	comp=Z,31nm,1.0s,mb5.6						
MCK				LR	LR		
	comp=Z,278nm,21.0s,MS4.7						
ILAR	**Eielson Array**	89.12	346	P	P	05 08 46.0	+0.7
	comp=Z,2.6nm,0.9s,mb4.6,baz=186,slow=4.9,SNR=18						
COLA	**College**	89.42	346	P	P	05 08 47.4	+0.6
COLA				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.4						
COLA	**College**	89.42	346	*e*P	P	05 08 47.2	+0.4
	comp=Z,27nm,1.1s,mb5.5						
INK	**Inuvik**	90.10	353	*e*P	P	05 08 49.1	-0.8
INK				pmax	pmax		
	comp=Z,44nm,1.3s						
INK	**Inuvik**	90.10	353	P	P	05 08 48.6	-1.3
	comp=Z,7.3nm,1.0s,mb5.0,baz=161,slow=6.0,SNR=19						
INK	**Inuvik**	90.10	353	*e*P	P	05 08 49.1	-0.8
	comp=Z,44nm,1.3s,mb5.6						
GSTR	**Great Sitkin T**	90.64	327	P	P	05 08 53.0	+0.3
STKA	**Stephens Creek**	90.91	235	*e*P	P	05 08 54.2	-0.3
	comp=Z,15nm,0.9s,mb5.3						
STKA	**Stephens Creek**	90.91	235	P	P	05 08 54.5	0.0
	comp=Z,10nm,1.0s,mb5.1,baz=99,slow=1.4,SNR=9.8						
STKA				LR	LR	05 46 53.7	
	comp=Z,1µm,18.1s,MS5.4,baz=113,slow=34						
KIWB	**Kanaga Island**	91.07	326	*e*P	P	05 08 55.3	+0.6
MAW	**Mawson**	91.75	179	LR	LR	05 46 38.9	
	comp=Z,2µm,18.2s,MS5.6,baz=185,slow=33						
IMA	**Indian Mountai**	91.78	345	*e*P	P	05 08 58.8	+1.1
IMA				pmax	pmax		
	comp=Z,180nm,1.7s,mb6.1						
IMA	**Indian Mountai**	91.78	345	*e*P	P	05 08 58.8	+1.1
	comp=Z,177nm,1.8s,mb6.1						
CTA	**Charters Tower**	91.86	248	*e*P	P	05 09 04.5	+5.4
	comp=Z,7.8nm,0.9s,mb5.0						
CTA	**Charters Tower**	91.86	248	*e*P	P	05 09 04.5	+5.4
CTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CTA	**Charters Tower**	91.86	248	P	P	05 09 03.3	+4.2
	comp=Z,15nm,1.0s,mb5.3,baz=102,slow=5.1,SNR=7.5						
CTA				LR	LR	05 42 06.9	
	comp=Z,2µm,21.1s,MS5.4,baz=109,slow=30						
CTAO	**Charters Tower**	91.86	248	*e*P	P	05 09 03.8	+4.7
CTAO				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.4						
CTAO	**Charters Tower**	91.86	248	*e*P	P	05 09 03.8	+4.7
	comp=Z,21nm,1.1s,mb5.4						
PMG	**Port Moresby**	95.11	258	*e*P	P	05 09 13.9	-0.3
PMG				pmax	pmax		
	comp=Z,20nm,1.1s						
PMG	**Port Moresby**	95.11	258	LR	LR	05 44 27.5	
	comp=Z,3µm,21.1s,MS5.7,baz=108,slow=31						
PMG	**Port Moresby**	95.11	258	*e*P	P	05 09 13.9	-0.3
	comp=Z,20nm,1.1s,mb5.5						
TNA	**Tin City**	95.43	340	*e*P	P	05 09 13.6	-0.9
	comp=Z,24nm,1.7s,mb5.3						
TNA				LR	LR		
	comp=Z,362nm,20.0s,MS4.8						
RES	**Resolute Bay**	96.10	5	P	P	05 09 17.3	-0.1
RES				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3						
RES	**Resolute Bay**	96.10	5	*e*P	P	05 09 16.1	-1.3
	comp=Z,13nm,1.0s,mb5.3						
SMY	**Shemya**	96.16	324	PFAKE		05 09 30.0	+12
SMY				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
FX1	**Attu Island--F**	96.74	324	LR	LR	05 44 41.4	
	comp=Z,36nm,19.3s,baz=132,slow=30						
SFJ	**Sondre**	99.17	21	PFAKE		05 09 40.0	+8.7
SFJ				LR	LR		
	comp=Z,730nm,22.0s,MS5.1						
ASAR	**Alice Springs**	100.68	240	P	P	05 09 40.9	+1.6
	comp=Z,1.1nm,0.8s,baz=117,slow=4.0,SNR=3.8						
ASAR				PP	PP	05 13 42.3	-7.1
	comp=Z,0.4nm,0.3s,baz=130,slow=7.0,SNR=4.9						
ASAR				PKKPbc		05 25 53.8	
	comp=Z,0.5nm,0.8s,baz=324,slow=3.0,SNR=5.1						
WRAB	**Tennant Creek**	102.06	243	PFAKE		05 10 00.0	+14
WRAB				LR	LR		
	comp=Z,463nm,20.0s,MS5.0						
WRA	**Warramunga Arr**	102.06	243	P	Pdif	05 09 46.9	+1.4
	comp=Z,1.2nm,1.0s,baz=116,slow=4.0,SNR=3.6						
WRA				PP	PP	05 13 46.0	-13
	comp=Z,0.6nm,1.0s,baz=119,slow=5.5,SNR=4.7						
WRA				PKKPbc		05 25 49.3	
	comp=Z,0.5nm,0.8s,baz=308,slow=2.4,SNR=7.6						
PET	**Petropavlovsk**	105.02	321	PFAKE		05 14 20.0	
PET				LR	LR		
	comp=Z,563nm,19.0s,MS5.1						
BILL	**Bilibino**	105.50	337	PFAKE		05 14 30.0	
BILL				LR	LR		
	comp=Z,585nm,22.0s,MS5.1						
BORG	**Borgarnes**	109.67	27	PFAKE		05 14 30.0	
BORG				LR	LR		
	comp=Z,293nm,22.0s,MS4.8						
MA2	**Magadan**	110.54	327	PFAKE		05 14 30.0	+5.8
MA2				LR	LR		
	comp=Z,501nm,21.0s,MS5.1						
SUR	**Sutherland**	111.47	140	PFAKE		05 14 40.0	+13
SUR				LR	LR		
	comp=Z,231nm,19.0s,MS4.8						
MBWA	**Marble Bar**	113.14	235	PFAKE		05 14 40.0	+10
MBWA				LR	LR		
	comp=Z,798nm,19.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	114.09	313	PFAKE		05 14 40.0	+8.5
YSS				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
MAJO	**Matsushiro**	116.35	301	PFAKE		05 14 50.0	+14
MAJO				LR	LR		
	comp=Z,799nm,20.0s,MS5.3						
KBS	**Kingsbay**	116.93	10	PFAKE		05 14 50.0	+14
KBS				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
TSUM	**Tsumeb**	117.86	127	*e*PKPdf	PKPdf	05 14 38.0	-1.3
TSUM				LR	LR		
	comp=Z,395nm,19.0s,MS5.1						
ESDC	**Sonseca Array**	117.97	55	PKP	PKPdf	05 14 37.0	-2.1
	comp=Z,1.3nm,0.8s,baz=296,slow=38,SNR=3.6						
ESLA	**Sonseca Array**	117.97	55	PFAKE		05 14 50.0	+11
ESLA				LR	LR		
	comp=Z,5µm,19.0s,MS6.1						
TIXI	**Tiksi**	118.19	341	PFAKE		05 14 50.0	+11
TIXI				LR	LR		
	comp=Z,520nm,20.0s,MS5.2						
ESK	**Eskdalemuir**	118.54	38	*e*PKIKP	PKPdf	05 14 34.9	-5.0
ESK				MLR	MLR		
	comp=Z,157nm,20.0s,MS4.6						
SGMF	**Saint Gilles**	119.27	46	*e*PKP1	PKPdf	05 14 40.1	-1.3
	comp=Z,164nm,1.6s						
GRR	**Gorron**	120.40	45	*e*PKP1	PKPdf	05 14 43.0	-0.6
	comp=Z,111nm,1.5s						
YAK	**Yakutsk**	120.66	331	PFAKE		05 14 50.0	+6.2
YAK				LR	LR		
	comp=Z,752nm,20.0s,MS5.3						
ETSF	**Etsaut**	120.68	52	*e*PKP1	PKPdf	05 14 43.1	-1.3
EPF	**Esparros**	121.34	52	*e*PKP1	PKPdf	05 14 45.1	-0.6
	comp=Z,51nm,1.5s						
MTLF	**Montolieu**	122.71	51	*e*PKP1	PKPdf	05 14 48.0	-0.2
BGF	**Bois d'Agland**	123.01	47	*e*PKP1	PKPdf	05 14 48.9	+0.3
	comp=Z,57nm,1.4s						
MDJ	**Mudanjiang**	123.24	310	PKP	PKPdf	05 14 45.6	-3.6
MDJ				SKKS		05 23 20.0	
MDJ				S		05 24 23.0	
MDJ				PP	PP		
	comp=Z,117nm,4.1s						
MDJ				LR	LR		
	comp=N,224nm,24.1s,MS5.2						
MDJ				LR	LR		
	comp=E,711nm,25.1s,MS5.2						
MDJ				LR	LR		
	comp=Z,1µm,26.0s,MS5.4						
LASF	**Ste Croix**	123.87	50	*e*PKP1	PKPdf	05 14 50.1	-0.4
	comp=Z,55nm,1.4s						
KONO	**Kongsberg**	124.46	31	PFAKE		05 15 00.0	+8.7
KONO				LR	LR		
	comp=Z,534nm,21.0s,MS5.2						
NOA	**NORSAR Array B**	124.74	29	PKP	PKPdf	05 14 50.7	-1.0
	comp=Z,1.1nm,1.0s,baz=228,slow=6.7,SNR=2.2						
HAU	**Haudompre**	125.23	45	*e*PKP1	PKPdf	05 14 51.9	-1.1
ORIF	**Oris-en-Rattie**	125.25	49	*e*PKP1	PKPdf	05 14 52.7	-0.5
INCN	**Inchon**	125.65	302	PFAKE		05 15 00.0	+5.9
INCN				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
LPL	**La Plagne**	125.80	48	*e*PKP1	PKPdf	05 14 54.5	+0.3
	comp=Z,40nm,1.2s						
LPG	**La Plagne**	125.81	48	*e*PKP1	PKPdf	05 14 54.6	+0.4
	comp=Z,43nm,1.2s						
TNS	**Taunus Mts**	126.23	42	*e*PKIKP	PKPdf	05 14 59.9	+5.1
SBF	**Sospel**	126.46	50	*e*PKP1	PKPdf	05 14 55.3	-0.1
	comp=Z,50nm,1.0s						
BFO	**Black Forest**	126.50	45	*e*PKIKP	PKPdf	05 14 59.6	+4.3
CLZ	**Clausthal**	127.07	40	*e*PKPdf	PKPdf	05 14 57.5	+1.2
DAVA	**Damuels**	127.70	46	⇓*i*P	PKPdf	05 15 00.8	+3.0
DAVOX	**Davos**	127.79	46	PKP	PKPdf	05 14 55.3	-2.7
	comp=Z,2.3nm,0.7s,baz=198,slow=3.2,SNR=2.2						
GRA1	**Grafenberg Arr**	128.10	43	*e*PKPdf	PKPdf	05 14 58.7	+0.2
GRA1				LR	LR		
	comp=Z,900nm,21.1s,MS5.4						
GRF	**Grafenberg Arr**	128.10	43	*e*PKIKP	PKPdf	05 14 58.7	+0.2
GRF				MLR	MLR		
	comp=Z,900nm,21.1s,MS5.4						
MOX	**Moxa**	128.12	41	*e*PKIKP	PKPdf	05 14 58.8	+0.3
MOX				pmax	pmax		
	comp=Z,32nm,1.8s						
MOX				MLR	MLR		
	comp=Z,600nm,19.0s,MS5.3						
MOX	**Moxa**	128.12	41	*i* P	PKPdf	05 14 58.8	+0.3
	comp=Z,logA/T=1.2						
MOX				SS	SS	05 34 11.0	-2.9
MOX				LQ		05 48 55.0	
MOX				L		06 11 44.0	
LSZ	**Lusaka**	128.12	131	*e*PKIKP	PKPdf	05 14 57.1	-2.3
LSZ				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.6						
LSZ	**Lusaka**	128.12	131	PKIKP	PKPdf	05 14 58.2	-1.2
FUR	**Furstenfeldbru**	128.46	44	*e*PKIKP	PKPdf	05 15 01.6	+2.4
MOTA	**Moosalm**	128.51	46	⇑*i*P	PKPdf	05 14 58.9	-0.5
SQTA	**Sankt Quirin**	128.60	46	⇓*i*P	PKPdf	05 14 59.6	+0.1
NKC	**Novy Kostel**	128.74	42	*e*PKPdf	PKPdf	05 14 59.0	-0.7
NKC				AMS	AMS	06 09 30.0	
	comp=Z,700nm,24.0s						
CLL	**Collm**	128.80	40	*i* PKIKP	PKPdf	05 15 02.0	+2.2
CLL				pmax	pmax		
	comp=Z,29nm,1.7s						
CLL				MLR	MLR		
	comp=Z,700nm,17.3s,MS5.4						
CLL	**Collm**	128.80	40	*i* PKP	PKPdf	05 15 02.0	+2.2
CLL				*i*		05 15 17.0	
CLL				LR	LR		
	comp=Z,700nm,17.3s,MS5.4						
CLL	**Collm**	128.80	40	*i* PKIKP	PKPdf	05 15 02.0	+2.2
	comp=Z,logA/T=1.2						
CLL				*i*		05 15 17.0	
CLL				*e*PP	PP	05 17 14.0	+6.2
CLL				*e*SS	SS	05 34 24.0	+1.3
CLL				*e*L		05 50 13.0	
WET	**Wettzell**	129.28	43	*e*PKIKP	PKPdf	05 15 00.4	-0.4
TATO	**Taipei**	129.29	286	PFAKE		05 15 10.0	+8.5
TATO				LR	LR		
	comp=Z,729nm,20.0s,MS5.4						
BRG	**Berggiesshubel**	129.49	41	*e*PKIKP	PKPdf	05 15 00.3	-0.8
BRG				*e*		05 15 04.6	
BRG				*i*		05 34 32.0	
BRG				pmax	pmax		
	comp=Z,25nm,1.4s						
BRG				MLR	MLR		
	comp=N,380nm,19.8s,MS5.3						
BRG				MLR	MLR		
	comp=E,440nm,19.8s,MS5.3						
BRG				MLR	MLR		
	comp=Z,530nm,19.8s,MS5.2						
BRG	**Berggiesshubel**	129.49	41	*e*P	PKPdf	05 15 00.3	-0.8
BRG				*e*		05 15 04.6	
BRG				*e*		05 15 14.8	
BRG				*i*	SS	05 34 32.0	+0.8
BRG				LR	LR		
	comp=Z,530nm,19.8s,MS5.2						
BOD	**Bodaibo**	129.50	329	*e*PKIKP	PKPdf	05 14 57.0	-3.9
BOD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KHC	**Kasperske Hory**	129.72	43	*e*PKIKP	PKPdf	05 14 58.6	-3.0
KHC				*e*		05 15 05.5	
KHC				MLR	MLR		
	comp=Z,700nm,19.1s,MS5.4						
KHC	**Kasperske Hory**	129.72	43	*e*PKPdf	PKPdf	05 14 58.6	-3.0
KHC				x	x	05 15 05.5	
KHC				AMS	AMS	06 10 00.0	
	comp=Z,700nm,19.1s						
GEC2	**GERESS Array S**	129.88	43	*e*PKIKP	PKPdf	05 15 01.6	-0.3
GERES	**GERESS Array B**	129.88	43	PKP	PKPdf	05 15 00.4	-1.5
	comp=Z,1.9nm,0.9s,baz=243,slow=2.2,SNR=9.4						
GERES				PP	PP	05 17 14.2	-0.4
	comp=Z,6.5nm,1.3s,baz=326,slow=4.8,SNR=4.3						
PVCC	**Panska Ves**	129.97	41	*e*PKPdf	PKPdf	05 15 01.5	-0.5
PVCC				AMS	AMS	06 12 30.0	
	comp=Z,700nm,16.2s						
SSE	**Sheshan**	130.05	294	*e*PKP	PKPdf	05 15 01.6	-1.2
SSE				PP	PP	05 17 17.9	+1.7
SSE				PP	PP		
	comp=Z,34nm,12.0s						
SSE				LR	LR		
	comp=N,315nm,17.3s,MS5.5						
SSE				LR	LR		
	comp=E,747nm,17.3s,MS5.5						
SSE				LR	LR		
	comp=Z,902nm,17.8s,MS5.5						
KBA	**Koelnbreinsper**	130.06	45	⇑*i*P	PKPdf	05 15 01.0	-1.3
PRU	**Pruhonice**	130.10	42	*e*PKPdf	PKPdf	05 15 02.1	-0.2
PRU				AMS	AMS	06 03 20.0	
	comp=Z,500nm,18.6s						
MOA	**Molln**	130.49	44	⇓*i*P	PKPdf	05 15 00.3	-2.8
FINES	**FINESS Array B**	130.82	24	PKP	PKPdf	05 15 01.1	-2.3
	comp=Z,6.0nm,1.2s,baz=90,slow=1.9,SNR=4.0						
UPC	**Upice**	130.85	40	*e*PKPdf	PKPdf	05 15 04.6	+0.9
KSP	**Ksiaz**	130.92	40	*e*PKIKP	PKPdf	05 15 03.0	-0.8
KSP				*e*		05 15 07.2	
KSP				*e*SS	SS	05 34 47.0	-1.3
KSP				MLR	MLR		
	comp=Z,1µm,19.6s,MS5.6						
KSP	**Ksiaz**	130.92	40	*e*PKP	PKPdf	05 15 03.2	-0.6
DPC	**Dobruska-Polom**	131.09	41	*e*PKPdf	PKPdf	05 15 08.6	+4.4
DPC				AMS	AMS	06 15 50.0	
	comp=Z,500nm,16.5s						
ARSA	**Arzberg**	131.46	45	⇓*i*P	PKPdf	05 15 04.5	-0.5
MORC	**Moravsky Berou**	132.02	41	PKIKP	PKPdf	05 15 05.6	-0.4
MORC	**Moravsky Berou**	132.02	41	*e*PKPdf	PKPdf	05 15 03.5	-2.5
NJ2	**Nanjing**	132.06	295	*e*PKP	PKPdf	05 14 59.6	-7.0
NJ2				XPKP		05 15 13.8	
NJ2				PP	PP	05 17 26.0	-3.2
NJ2				PKS	PKS	05 18 35.0	-3.6
NJ2				PP	PP		
	comp=Z,1µm,9.2s						
NJ2				LR	LR		
	comp=N,1µm,28.1s						
NJ2				LR	LR		
	comp=E,2µm,20.3s						
NJ2				LR	LR		

	comp=Z,2µm,29.2s,MS5.8						
ZST	**Bratislava**	**132.23**	**43**	*e*PKP	PKPdf	05 15 10.0	+3.6
OKC	**Ostrava-Krasne**	**132.37**	**41**	*e*PKPdf	PKPdf	05 15 06.8	+0.2
OKC				AMS	AMS	06 13 30.0	
	comp=Z,400nm,18.7s						
VYHS	**Vyhne**	**133.24**	**42**	*i* PKP	PKPdf	05 15 08.2	0.0
SUW	**Suwalki**	**133.53**	**34**	*e*PKP	PKPdf	05 15 09.1	+0.5
BJI	**Beijing**	**133.60**	**306**	PKP	PKPdf	05 15 07.3	-1.8
BJI				PKS	PKS	05 18 44.1	+2.8
BJI				SS	SS	05 35 28.8	+7.0
BJI				LR	LR		
	comp=N,399nm,25.2s,MS5.4						
BJI				LR	LR		
	comp=E,915nm,24.9s,MS5.4						
BJI				LR	LR		
	comp=Z,2µm,27.7s,MS5.6						
BJI	**Beijing**	**133.60**	**306**	PKIKP	PKPdf	05 15 07.3	-1.8
BJI						05 17 34.3	
BJI				SS	SS	05 35 28.7	+6.9
BJI				MLR	MLR		
	comp=Z,2µm,27.7s,MS5.6						
BJI	**Beijing**	**133.60**	**306**	PKP	PKPdf	05 15 07.3	-1.8
BJI				PP	PP	05 17 34.3	-4.5
BJI				PKS	PKS	05 18 44.1	+2.8
BJI				SKS	SKS	05 22 27.9	+8.3
BJI				SKKS		05 24 38.1	
BJI				SS	SS	05 35 28.7	+6.9
BJI				LR	LR		
	comp=Z,2µm,27.7s,MS5.6						
CRVS	**Cervenica-Dubn**	**134.72**	**41**	*e*	Pdif	05 12 23.4	+15
CRVS	**Cervenica-Dubn**	**134.72**	**41**	*i* PKP	PKPdf	05 15 16.0	+5.0
HHC	**Hu-ho-hao-te**	**136.90**	**308**	*e*PKP	PKPdf	05 15 16.6	+1.5
HHC				PKS	PKS	05 18 49.1	+1.9
HHC				SKS	SKS	05 22 27.3	+2.1
HHC				LR	LR		
	comp=N,251nm,28.8s,MS5.1						
HHC				LR	LR		
	comp=E,433nm,27.6s,MS5.1						
HHC				LR	LR		
	comp=Z,261nm,20.4s						
BURAR	**Bucovina Array**	**137.54**	**41**	⇑P	PKPdf	05 15 16.4	+0.2
ULN	**Ulaanbaatar**	**137.64**	**319**	PKIKP	PKPdf	05 15 12.8	-3.6
ULN	**Ulaanbaatar**	**137.64**	**319**	*e*PKPpre		05 15 08.2	
ULN				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
TLY	**Talaya**	**137.74**	**326**	*i* PKHKP		05 15 06.8	
TLY				*e*		05 17 58.6	
TLY				*e*		05 30 07.3	
TLY				*e*SS	SS	05 36 09.2	-1.8
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY	**Talaya**	**137.74**	**326**	PFAKE		05 15 30.0	+14
TLY				LR	LR		
	comp=Z,315nm,22.0s,MS5.0						
VTS	**Vitosha**	**138.00**	**49**	⇓PKIKP	PKPdf	05 15 19.2	+2.0
VTS	**Vitosha**	**138.00**	**49**	*e*P	PKPdf	05 15 21.0	+3.8
SONM	**Songino Array**	**138.05**	**320**	PKhKP		05 15 06.1	
	comp=Z,1.2nm,1.0s,baz=90,slow=1.2,SNR=6.6						
SONM				PP	PP	05 18 02.2	-4.5
	comp=Z,0.8nm,1.0s,baz=45,slow=4.1,SNR=4.5						
BTO	**Baotou**	**138.09**	**308**	*e*PKP	PKPdf	05 15 17.8	+0.3
KKB	**Krupnik**	**138.12**	**50**	*e*P	PKPdf	05 15 22.0	+4.5
AKASG	**Malin Array Be**	**138.40**	**35**	PKP	PKPdf	05 15 13.7	-4.0
	comp=Z,1.1nm,0.6s,baz=288,slow=2.7,SNR=7.8						
AKASG				PP	PP	05 17 55.3	-13
	comp=Z,1.4nm,0.7s,baz=317,slow=6.7,SNR=4.4						
ZAK	**Zakamensk**	**138.62**	**324**	⇑*e*PKHKP		05 15 05.7	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MMB	**Musomiste**	**138.66**	**50**	*e*P	PKPdf	05 15 22.0	+3.5
MOY	**Mondy**	**139.12**	**327**	*e*PKIKP	PKPdf	05 15 21.3	+2.3
OBN	**Obninsk**	**139.15**	**26**	*e*PKIKP	PKPdf	05 15 18.2	-0.7
OBN				pmax	pmax		
	comp=Z,42nm,1.2s						
OBN	**Obninsk**	**139.15**	**26**	*e*PKPdf	PKPdf	05 15 19.4	+0.4
OBN				LR	LR		
	comp=Z,219nm,21.0s,MS4.9						
MBAR	**Mbarara**	**139.20**	**117**	PFAKE		05 15 30.0	+10
MBAR				LR	LR		
	comp=Z,311nm,20.0s,MS5.0						
RZN	**Rozhen**	**139.34**	**50**	*e*P	PKPdf	05 15 21.0	+1.3
KIS	**Kishinev**	**140.01**	**40**	*e*PKIKP	PKPdf	05 15 23.0	+2.3
KIS				*e*		05 15 28.0	
CFR	**Carcaliu**	**140.39**	**43**	⇓PKIKP	PKPdf	05 15 21.9	+0.4
SOKR	**Solikamsk**	**140.75**	**8**	⇑*i*PKIKP	PKPdf	05 15 20.7	-1.0
SOKR				pmax	pmax		
	comp=Z,40nm,1.3s						
BTOK	**Tokmak**	**142.33**	**51**	*i* P	PKPdf	05 15 24.7	-0.3
GYA	**Guiyang**	**142.73**	**287**	⇑*i*PKP	PKPdf	05 15 23.6	-2.5
GYA				PP	PP	05 18 33.8	-1.6
GYA				PKS	PKS	05 18 58.3	+0.7
GYA				SKS	SKS	05 22 32.4	-2.7
GYA				SKKS		05 25 23.6	
GYA				PP	PP		
	comp=Z,130nm,8.5s						
GYA				LR	LR		
	comp=N,530nm,18.9s,MS5.6						
GYA				LR	LR		
	comp=E,870nm,19.1s,MS5.6						
GYA				LR	LR		
	comp=Z,1µm,18.6s,MS5.7						
ULDT	**Uludag**	**143.01**	**50**	*i* P	PKPbc	05 15 16.0	-5.0
NVS	**Novosibirsk**	**143.75**	**343**	⇓*i*PKHKP		05 15 21.2	
NVS				*i*		05 18 38.0	
NVS				pmax	pmax		
	comp=Z,110nm,2.3s						
NVS				pmax	pmax		
	comp=N,30nm,2.1s						
NVS				pmax	pmax		
	comp=E,45nm,2.2s						
LZH	**Lanzhou**	**143.94**	**303**	⇓PKP	PKPdf	05 15 23.3	-4.6
LZH				APKP		05 15 30.1	
LZH				XPKP		05 15 33.9	
LZH				PP	PP		
	comp=Z,340nm,5.1s						
LZH				LR	LR		
	comp=E,3µm,20.0s						
LZH				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
LZH	**Lanzhou**	**143.94**	**303**	⇓PKHKP		05 15 23.2	
LZH				MLR	MLR		
	comp=Z,3µm,21.0s,MS6.1						
LZH	**Lanzhou**	**143.94**	**303**	⇓PKP	PKPdf	05 15 23.2	-4.7
LZH				pPKP		05 15 30.1	
LZH				sPKP		05 15 33.9	
LZH				PP	PP	05 18 26.1	-16
LZH				SKKS		05 25 15.0	
LZH				*e*SS	SS	05 36 51.1	-33
LZH				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
HENT	**Hendek**	**144.01**	**48**	*i* P	PKPbc	05 15 23.5	-0.6
ZAL	**Zalesovo**	**144.10**	**341**	PKP	PKPdf	05 15 23.8	-3.7
	comp=Z,60nm,1.3s,baz=73,slow=4.6,SNR=24						
KMBO	**Kilima Mbogo**	**144.14**	**124**	PKIKP	PKPdf	05 15 27.3	-1.6
KMBO	**Kilima Mbogo**	**144.14**	**124**	PKP	PKPdf	05 15 26.9	-1.9
	comp=Z,9.2nm,1.1s,baz=225,slow=4.0,SNR=15						
KMBO	**Kilima Mbogo**	**144.14**	**124**	*e*PKPdf	PKPdf	05 15 26.5	-2.4
KMBO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
ESKT	**Eskisehir**	**144.46**	**51**	*i* P	PKPbc	05 15 26.2	+0.9
ISP	**Isparta**	**144.78**	**53**	*e*PKIKP	PKPdf	05 15 27.1	-2.2
CD2	**Chengdu**	**145.00**	**294**	PKP	PKPdf	05 15 27.6	-2.3
KKTK	**Khon Kaen**	**145.15**	**269**	P	PKPbc	05 15 30.0	+2.2
GTA	**Gaotai**	**145.90**	**310**	PKP	PKPdf	05 15 30.5	-0.7
GTA				PKP2	PKPab	05 15 32.3	+1.0
GTA				APKP		05 15 36.0	
GTA				PP	PP	05 18 53.5	-0.5
GTA				SKS	SKS	05 22 37.8	-1.6
GTA				SKKS		05 25 43.4	
GTA				SS	SS	05 37 49.0	+3.7
GTA				PP	PP		
	comp=Z,151nm,8.7s						
GTA				LR	LR		
	comp=N,568nm,24.0s,MS5.6						
GTA				LR	LR		
	comp=E,952nm,19.8s,MS5.6						
GTA				LR	LR		
	comp=Z,1µm,20.5s,MS5.7						
ELDT	**Eldivan**	**145.90**	**48**	*i* P	PKPbc	05 15 31.6	+2.5
KMI	**Kunming**	**146.26**	**284**	PKP	PKPdf	05 15 32.3	+0.1
KMI				XPKP		05 15 38.1	
KMI				PP	PP	05 19 01.4	+4.8
KMI				PP	PP		
	comp=Z,131nm,6.3s						
KMI				LR	LR		
	comp=N,488nm,19.2s,MS5.6						
KMI				LR	LR		
	comp=E,770nm,19.2s,MS5.6						
KMI				LR	LR		
	comp=Z,933nm,24.4s						
KMI	**Kunming**	**146.26**	**284**	PKIKP	PKPdf	05 15 32.2	0.0
KMI						05 15 38.1	
KMI						05 19 01.4	
KMI				SS	SS	05 37 58.5	+8.5
KMI				SSS	SSS	05 43 21.9	+1.1
KMI				MLR	MLR		
	comp=Z,930nm,24.4s,MS5.5						
BRTR	**Keskin Array B**	**146.37**	**49**	PKPbc	PKPbc	05 15 30.4	+0.2
	comp=Z,9.9nm,0.9s,baz=270,slow=1.2,SNR=31						
BOYT	**Boyabat**	**146.49**	**45**	*i* P	PKPbc	05 15 31.9	+1.5
CTKT	**Corum**	**146.78**	**47**	*i* P	PKPbc	05 15 34.2	+3.1
NNT	**Nongplab**	**147.00**	**261**	P	PKPbc	05 15 34.5	+2.2
NST	**Nakhon Sawan**	**147.50**	**267**	P	PKPdf	05 15 30.0	-4.5
NANT	**Nan**	**147.61**	**272**	P	PKPdf	05 15 35.0	+0.4
AVNT	**Avonos**	**147.62**	**50**	*i* P	PKPdf	05 15 35.4	+1.3
CSS	**Prodhromos**	**147.83**	**57**	*e*PKPbc	PKPdf	05 15 37.0	+2.4
MEST	**Erdemli**	**147.93**	**54**	*i* P	PKPdf	05 15 36.8	+2.2
SOC	**Sochi**	**148.33**	**38**	*i* PKIKP	PKPdf	05 15 33.9	-1.1
SOC				*e*		05 22 42.6	
SOC				pmax	pmax		
	comp=Z,119nm,1.5s						
SOC				pmax	pmax		
	comp=N,68nm,1.4s						
SOC				pmax	pmax		
	comp=E,52nm,1.3s						
SOC				MLR	MLR		
	comp=N,944nm,18.0s,MS5.7						
SOC				MLR	MLR		
	comp=Z,899nm,18.0s,MS5.6						
SOC				MLR	MLR		
	comp=E,553nm,20.0s,MS5.7						
CHRT	**Chiangrai**	**148.63**	**274**	⇓P	PKPdf	05 15 39.0	+2.8
	comp=E,168nm,0.9s						
KURK	**Kurchatov**	**148.68**	**345**	*e*PKHKP		05 15 31.9	
KURK				*e*		05 15 36.5	
KURK				MLR	MLR		
	comp=Z,270nm,20.0s,MS5.0						
BDT	**Bhumibol Dam**	**148.91**	**269**	P	PKPdf	05 15 39.0	+2.3
GOF	**Gofitskoye**	**149.18**	**33**	⇓*i*PKP2	PKPab	05 15 40.0	-4.2
GOF				pmax	pmax		
	comp=Z,100nm,1.4s						
CM31	**Chiang Mai Arr**	**149.20**	**271**	*e*PKPbc	PKPdf	05 15 39.9	+2.7
CM31				LR	LR		
	comp=Z,3µm,19.0s,MS6.2						
CMAR	**Chiang Mai Arr**	**149.20**	**271**	PKPbc	PKPdf	05 15 40.1	+2.9
	comp=Z,9.6nm,0.8s,baz=86,slow=0.8,SNR=33						
CHG	**Chiang Mai**	**149.26**	**272**	⇑P	PKPdf	05 15 57.6	+20
	comp=Z,32nm,0.9s						
COBT	**Iskenderun**	**149.54**	**53**	*i* P	PKPdf	05 15 33.0	-4.2
KAHT	**Ahir Dag**	**149.54**	**50**	*i* P	PKPdf	05 15 40.9	+3.7
KIV	**Kislovodsk**	**149.75**	**35**	*i* PKP2	PKPab	05 15 41.2	-5.4
KIV				pmax	pmax		
	comp=E,10.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,38nm,1.1s						
KIV				MLR	MLR		
	comp=N,468nm,18.0s,MS5.4						
KIV				MLR	MLR		
	comp=E,213nm,18.0s,MS5.4						
KIV				MLR	MLR		
	comp=Z,440nm,18.0s,MS5.3						
GZT	**Gaziantep**	**150.16**	**50**	*i* P	PKPdf	05 15 42.7	+4.5
MALT	**Malatya**	**150.34**	**48**	*e*PKIKP	PKPdf	05 15 38.4	0.0
MALT				*e*		05 15 42.8	
EIL	**Elat**	**150.40**	**66**	*e*PKPdf	PKPdf	05 15 38.2	-0.6
EIL				*e*PKPbc	PKPdf	05 15 42.5	+3.7
ELZG	**Elazig**	**150.64**	**47**	*i* P	PKPdf	05 15 43.7	+4.8
WMQ	**Urumqi**	**151.01**	**327**	*e*PKP	PKPdf	05 15 40.0	+0.8
WMQ				PP	PP	05 19 28.0	+4.5
WMQ				SKS	SKS	05 22 46.0	-0.2
WMQ				SKKS		05 26 16.0	
WMQ				SS	SS	05 38 45.0	+2.7
WMQ				LR	LR		
	comp=N,657nm,25.0s,MS5.6						
WMQ				LR	LR		
	comp=E,1µm,26.0s,MS5.6						
WMQ				LR	LR		
	comp=Z,985nm,25.0s,MS5.5						
MKAR	**Makanchi Array**	**151.05**	**337**	*i* PKIKP	PKPdf	05 15 42.6	+3.4
MKAR				pmax	pmax		
	comp=Z,567nm,1.8s						
ASF	**Jabal al Asfar**	**151.47**	**61**	PKP	PKPdf	05 15 40.1	-0.2
	comp=Z,6.2nm,1.1s,baz=140,slow=2.4,SNR=10						
ASF				PKPbc	PKPdf	05 15 45.4	+5.1
	comp=Z,28nm,1.2s,baz=128,slow=0.4,SNR=18						
ERZM	**Erzurum**	**151.48**	**43**	*i* P	PKPdf	05 15 45.9	+5.8
TI2	**Plekhanov**	**152.36**	**36**	*e*PKIKP	PKPdf	05 15 42.0	+0.7
TI2				*e*		05 15 42.0	
TI2				*e*		05 15 50.0	
GNI	**Garni**	**153.40**	**39**	*e*PKIKP	PKPdf	05 15 44.9	+2.1
GNI				MLR	MLR		
	comp=Z,275nm,19.0s						
LSA	**Lhasa**	**155.91**	**296**	PKP	PKPdf	05 15 39.3	-7.2
AAK	**Ala-Archa**	**157.24**	**344**	PFAKE		05 16 00.0	+12
AAK				LR	LR		
	comp=Z,356nm,20.0s,MS5.2						
DDI	**Dehra Dun**	**165.84**	**314**	*e*	PKPdf	05 16 02.6	+5.3
POO	**Poona**	**172.52**	**253**	*e*P	PKPdf	05 16 05.0	+3.3

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*IDC **24** 05:22:25.8±7.7, 32.87S×179.46E, h382^{km}±92^{km}, mb2.9/2, mb1 3.2/3, mb1mx3.1/13, mbtmp3.8/3, Error ellipse: s-maj=114.7km s-min=43.3km az=3.0*

ISC 24 05:22:25.1±1.9**, 33.0S**±0.2×**179.9E**±0.4**, h428**^{km}±22^{km}**, n20,** $\sigma 0^{s}_{.}75$/24**, mb3.1**/2**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.69**	**195**	PN	**P**	**05 23 47.2**	**+1.1**
MXZ				SN	**S**	**05 24 49.0**	**-0.7**
PUZ	**Puketiti**	**5.19**	**194**	PN	**P**	**05 23 51.8**	**+0.8**
PUZ				SN	**S**	**05 24 58.7**	**+0.1**
MWZ	**Matawai**	**5.62**	**199**	PN	**P**	**05 23 55.6**	**+0.3**
URZ	**Urewera**	**5.67**	**203**	P	**P**	**05 23 55.1**	**-0.9**
	5.1nm,0.3s,baz=33,slow=14,SNR=34						
URZ				S	**S**	**05 25 06.4**	**-1.1**
	2.9nm,0.3s,baz=244,slow=22,SNR=13						
URZ	**Urewera**	**5.67**	**203**	PN	**P**	**05 23 55.7**	**-0.2**
URZ				SN	**S**	**05 25 07.3**	**-0.2**
BKZ	**Black Stump Fm**	**6.70**	**203**	PN	**P**	**05 24 07.7**	**+0.8**
MGZ	**Maungaku**	**6.91**	**209**	PN	**P**	**05 24 10.1**	**+0.8**
NGZ	**Ngauruhoe**	**7.03**	**208**	PN	**P**	**05 24 10.5**	**-0.1**
TUVZ	**Tukino**	**7.09**	**208**	*e*PN	**P**	**05 24 09.9**	**-1.4**
WNVZ	**Wahianoa**	**7.16**	**208**	PN	**P**	**05 24 12.4**	**+0.3**
TSZ	**Takapari Road**	**7.68**	**203**	PN	**P**	**05 24 16.9**	**-0.9**
MRZ	**Mangatainoka R**	**8.35**	**203**	PN	**P**	**05 24 25.1**	**-0.2**
KIW	**Kapiti Island**	**8.76**	**206**	PN	**P**	**05 24 29.7**	**-0.2**
KIW				SN	**S**	**05 26 10.3**	**+1.6**
CAW	**Cannon Point**	**8.92**	**204**	PN	**P**	**05 24 31.8**	**0.0**
TUWZ	**Tuamarina**	**9.61**	**208**	PN	**P**	**05 24 39.9**	**+0.3**
THZ	**Tophouse**	**10.32**	**210**	PN	**P**	**05 24 46.3**	**-1.3**
KHZ	**Kahutara**	**10.62**	**206**	PN	**P**	**05 24 50.8**	**-0.2**
ASAR	**Alice Springs**	**41.25**	**271**	P	**P**	**05 29 31.9**	**-0.5**
	0.3nm,0.6s,mb2.8,baz=120,slow=7.3,SNR=3.9						
WRA	**Warramunga Arr**	**42.48**	**276**	P	**P**	**05 29 43.0**	**+0.7**
	0.6nm,0.3s,mb3.4,baz=113,slow=7.8,SNR=8.3						
FINES	**FINESS Array B**	**146.93**	**337**	PKPbc	PKPbc	05 41 21.6	+4.9
	1.0nm,0.8s,baz=45,slow=2.0,SNR=5.7						

IDC 24 05:24:44.0±1.1**, 13.68N**×**143.31E, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.6**/20**, mbtmp3.6**/5**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.7**/17**, Error ellipse: s-maj=52.7km s-min=28.2km az=104.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**19.61**	**351**	LR	LR	05 36 09.9	
	comp=Z,135nm,20.1s,baz=144,slow=35						
ASAR	**Alice Springs**	**38.24**	**194**	P	P	05 32 05.9	-1.8
	0.7nm,0.6s,baz=8.2,slow=9.6,SNR=8.4						
BVAR	**Borovoye Array**	**68.92**	**322**	P	P	05 35 50.9	-1.9
	0.6nm,0.8s,baz=92,slow=8.3,SNR=2.8						
ILAR	**Eielson Array**	**69.13**	**25**	P	P	05 35 51.5	-2.4
	0.2nm,0.4s,baz=245,slow=6.3,SNR=4.1						
YKA	**Yellowknife Ar**	**83.47**	**27**	P	P	05 37 13.9	-0.7
	0.1nm,0.4s,baz=286,slow=4.9,SNR=4.6						
NVAR	**Mina Array Bea**	**88.04**	**51**	P	P	05 37 36.8	-1.0
	0.3nm,0.5s,baz=259,slow=4.6,SNR=3.8						

IDC 24 05:30:05.7±6.4**, 8.98S**×**130.51E, mb3.9**/1**, mb1 4.2**/3**, mb1mx3.8**/11**, mbtmp4.0**/3**, ML4.0**/2**, MS4.6**/2**, Ms1 4.6**/2**, ms1mx3.4**/18**, Error ellipse: s-maj=107.7km s-min=71.2km az=84.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**11.51**	**162**	Pn	P	05 32 52.6	-1.9
	1.3nm,0.3s,baz=343,slow=13,SNR=33						
WRA				Sn	S	05 35 02.5	-2.5
	1.9nm,0.3s,baz=325,slow=24,SNR=6.3						
ASAR	**Alice Springs**	**14.96**	**168**	Pn	P	05 33 38.3	-2.1
	1.0nm,0.3s,baz=347,slow=9.6,SNR=22						
ASAR				Sn	S	05 36 24.4	-3.4
	0.3nm,0.3s,baz=351,slow=26,SNR=4.4						
STKA	**Stephens Creek**	**25.00**	**157**	P	P	05 35 31.1	-1.7
	3.0nm,1.0s,baz=326,slow=13,SNR=3.2						
CBIJ	**Chichi jima**	**37.60**	**17**	LR	LR	05 53 13.6	
	comp=Z,879nm,18.1s,baz=327,slow=37						
ILAR	**Eielson Array**	**94.91**	**25**	LR	LR	06 23 27.4	
	comp=Z,203nm,18.3s,baz=91,slow=34						

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*LDG **24** 06:06:08.9±0.1, 42.67N×0.37E, h2^{km}, Md2.7/1, Ml1.7/4, Error ellipse: s-maj=2.8km s-min=1.3km az=166.0*

MDD 24 06:06:10.9±0.2**, 42.75N**×**0.28E, mbLg1.3**/5**, 1C, Error ellipse: s-maj=3.0km s-min=1.3km az=135.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RESF	**Ens**	**0.07**	**38**	P	Pg	06 06 12.4	0.0
RESF				S	Sg	06 06 13.5	+0.1
EBIE	**Bielsa**	**0.12**	**237**	⇑Pg	Pg	06 06 13.2	-0.1
	9.0nm,0.1s,SNR=18						
EBIE				Lg		06 06 14.8	
	15nm,0.1s,SNR=18						
VIEF	**Viey**	**0.23**	**306**	P	Pg	06 06 15.2	-0.3
VIEF				S	Sg	06 06 18.1	-0.5
EPF	**Esparros**	**0.28**	**9**	*e*Pg	Pg	06 06 16.2	-0.4
EPF				*e*Sg	Sg	06 06 20.4	0.0
	6.0nm,0.2s						
ETSF	**Etsaut**	**0.63**	**284**	*e*Pg	Pg	06 06 22.5	-1.1
ETSF				*e*Sg	Sg	06 06 30.5	-1.5
	6.5nm,0.3s						
SALF	**Salau**	**0.67**	**89**	P	Pg	06 06 23.0	-1.3
SALF				S	Sg	06 06 32.0	-1.3
SJPF	**Ste Jean**	**1.16**	**289**	*e*Pg	Pg	06 06 32.4	-1.7
SJPF				*e*Sg	Sg	06 06 48.6	-1.0
	1.2nm,0.2s						
ESAC	**San Caprasio**	**1.17**	**209**	Pg	Pg	06 06 32.8	-1.4
	7.5nm,0.3s,SNR=7.7						
ESAC				Lg		06 06 48.7	
	8.3nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**1.25**	**132**	Lg		06 06 52.7	
	0.5nm,0.1s,SNR=4.0						
EALK	**Alkurruntz**	**1.39**	**290**	Pg	Pg	06 06 36.3	-2.4
	0.8nm,0.2s,SNR=7.9						
EALK				Lg		06 06 54.8	
	1.1nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**1.52**	**157**	Lg		06 06 59.5	
	0.8nm,0.3s,SNR=4.0						
MTLF	**Montolieu**	**1.54**	**67**	*e*Pg	Pg	06 06 37.1	-4.6
MTLF				*e*Sg	Sg	06 06 56.5	-5.7
	1.1nm,0.3s						
LFF	**La Frestale**	**2.21**	**9**	*e*Sg	Sg	06 07 20.8	-3.9
	1.2nm,0.2s						
CAF	**Calviac**	**2.53**	**30**	*e*Sg	Sg	06 07 29.7	-5.5
	1.0nm,0.3s						

IDC 24 06:14:44.4±15.0**, 25.34N**×**46.80W, mb3.3**/4**, mb1 3.8**/4**, mb1mx3.4**/22**, mbtmp3.3**/4**, Error ellipse: s-maj=347.1km s-min=74.3km az=143.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**50.26**	**288**	P	P	06 23 42.1	-2.5
	0.1nm,0.7s,baz=90,slow=8.1,SNR=2.5						
PDAR	**Pinedale Array**	**53.63**	**306**	P	P	06 24 09.0	-0.8
	0.6nm,1.0s,baz=84,slow=8.2,SNR=4.1						
YKA	**Yellowknife Ar**	**57.61**	**329**	P	P	06 24 35.0	-3.2
	0.8nm,1.1s,baz=95,slow=7.8,SNR=4.5						
ILAR	**Eielson Array**	**71.54**	**334**	P	P	06 26 07.4	-1.4
	0.1nm,0.5s,baz=68,slow=4.9,SNR=5.0						

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*BJI **24** 06:16:31.2, 13.42N×93.01E, h49^{km}, mB5.5, mb4.6, Ms4.3, Msz4.2*

*MOS **24** 06:16:31.1±0.9, 13.73N×93.12E, h33^{km}, mb4.9/19, Error ellipse: s-maj=14.0km s-min=6.3km az=115.3*

*NEIC **24** 06:16:32.8±0.3, 13.80N×93.09E, h30^{km}, mb4.8/23, MS4.2/1, Error ellipse: s-maj=7.1km s-min=5.3km az=216.0*

*IDC **24** 06:16:32.5±0.5, 13.79N×93.10E, h29^{km}±2^{km}, mb4.2/18, mb1 4.4/19, mb1mx4.3/23, mbtmp4.4/19, ML4.1/1, MS4.0/2, Ms1 4.1/2, ms1mx3.8/15, Error ellipse: s-maj=19.5km s-min=9.9km az=50.0*

ISC 24 06:16:30.9±0.4**, 13.76N**±0.05×**93.09E**±0.03**, h31**^{km}**, h31**^{km}±.4^{km}**:pP-P, n137,** $\sigma 0^{s}_{.}99$/137**, mb4.6**/43**, MS4.4**/5**, 2C-6D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.58**	**99**	P	**Pn**	**06 18 10.0**	**+1.8**
BDT	**Bhumibol Dam**	**6.67**	**58**	P	**Pn**	**06 18 09.5**	**0.0**
	20nm,0.9s						
NST	**Nakhon Sawan**	**7.08**	**74**	P	**Pn**	**06 18 13.0**	**-2.2**
	58nm,0.6s						
CM31	**Chiang Mai Arr**	**7.32**	**50**	*e*Pn	**Pn**	**06 18 17.5**	**-1.0**
	29nm,0.8s						
CMAR	**Chiang Mai Arr**	**7.32**	**50**	Pn	**Pn**	**06 18 17.9**	**-0.7**
	0.8nm,0.3s,baz=240,slow=15,SNR=14						
CMAR				Sn	**Sn**	**06 19 40.2**	**-1.2**
	0.5nm,0.3s,baz=238,slow=27,SNR=4.6						
CMAR				LR	LR	06 21 36.3	
	comp=Z,360nm,19.5s,baz=235,slow=42						
CHG	**Chiang Mai**	**7.54**	**47**	⇓P	**Pn**	**06 18 24.1**	**+2.4**
	10nm,0.8s						
CHRT	**Chiangrai**	**8.84**	**46**	⇓P	**P**	**06 18 48.0**	**+8.4**
	197nm,1.0s						
NANT	**Nan**	**8.86**	**55**	P	**P**	**06 18 40.0**	**0.0**
BWNR	**Bhubaneshwar**	**9.53**	**314**	*e*P	**P**	**06 18 46.7**	**-2.6**
BWNR				*e*S	**Sn**	**06 20 22.4**	**-14**
BWNR				*e*		06 20 45.2	
	comp=E,276nm,0.4s						
BWNR				*e*		06 20 45.2	
	comp=N,202nm,0.5s						
CAL	**Calcutta**	**9.84**	**333**	*e*	**P**	**06 18 42.5**	**-11**
CAL				*e*		06 21 53.0	
CAL				*e*		06 21 57.8	
VIS	**Vishakhapatnam**	**10.19**	**294**	*e*P	**P**	**06 18 56.2**	**-2.2**
VIS				AMb	AMB	06 19 07.0	
	comp=Z,87nm,0.8s						
VIS				*e*S	**S**	**06 20 40.6**	**-12**
VIS				*e*		06 20 46.8	
	comp=E,99nm,0.3s						
VIS				*e*		06 20 46.8	
	comp=N,170nm,0.4s						
SHL	**Shillong**	**11.80**	**355**	*e*P	**P**	**06 19 15.5**	**-4.9**
SHL				*e*		06 21 14.0	
HYB	**Hyderabad**	**14.47**	**286**	*e*P	Px	06 20 04.0	
HYB				*e*S	**S**	**06 22 36.0**	**+0.1**
HYB				pmax	pmax		
	comp=Z,40nm,1.0s						
HYB	**Hyderabad**	**14.47**	**286**	*e*P	Px	06 20 04.0	
	comp=Z,40nm,1.0s						
HYB				*e*S	**S**	**06 22 36.0**	**+0.1**
HYB	**Hyderabad**	**14.47**	**286**	*i* P	**P**	**06 19 57.0**	**+1.3**
	comp=Z,40nm,1.0s						
HYB				*e*		06 20 04.0	
HYB				*e*		06 22 20.0	
HYB				*e*S	**S**	**06 22 36.0**	**+0.1**
KMI	**Kunming**	**14.51**	**37**	P	**P**	**06 20 00.9**	**+4.7**
KMI				AMB	AMB		
	comp=Z,11nm,0.9s						
KMI				LR	LR		
	comp=N,416nm,15.9s						

KMI				LR	LR		
	comp=E,429nm,15.9s						
KMI				LR	LR		
	comp=Z,418nm,20.6s						
KMI	Kunming	14.51	37	P	P	06 20 00.9	+4.7
	comp=Z,11nm,0.9s						
JIRN	Jiri	15.26	336	*e*P	P	06 20 04.9	-1.1
	comp=Z,43nm,0.8s						
PKI	Pulchoki	15.50	334	*e*P	P	06 20 08.2	-1.0
	comp=Z,19nm,0.5s						
GUN	Gumba	15.60	336	*e*P	P	06 20 08.3	-2.2
DMN	Daman	15.67	333	*e*P	P	06 20 11.4	+0.1
KKN	Kakani	15.75	334	*e*P	P	06 20 11.3	-1.1
LSA	Lhasa	15.97	354	P	P	06 20 19.0	+3.8
LSA	Lhasa	15.97	354	*e*P	P	06 20 15.8	+0.6
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
LSA	Lhasa	15.97	354	*e*P	P	06 20 15.8	+0.6
	comp=Z,13nm,0.8s						
GKN	Gorkha	16.22	332	*e*P	P	06 20 17.2	-1.1
	comp=Z,11nm,0.3s						
KOLN	Koldanda	16.51	329	*e*P	P	06 20 21.5	-0.6
	comp=Z,50nm,1.0s						
BHPL	Bhopal	17.58	305	*e*P	P	06 20 37.5	+2.0
BHPL				*e*		06 20 39.8	
	comp=Z,12nm,0.6s						
GYA	Guiyang	17.93	43	P	P	06 20 40.4	+0.6
GYA				AP		06 20 49.0	
GYA				S	S	06 23 56.9	+0.9
GYA				AMB	AMB		
	comp=Z,20nm,0.8s						
GYA				LR	LR		
	comp=N,310nm,16.8s						
GYA				LR	LR		
	comp=E,320nm,15.0s						
GYA				LR	LR		
	comp=E,510nm,16.5s						
KAD	Karad	18.55	283	*e*P	P	06 20 48.8	+1.2
KAD				AMb	AMB	06 20 51.5	
	comp=Z,16nm,0.9s						
POO	Poona	19.07	287	*e*P	P	06 20 53.1	-0.7
POO				AMb	AMB	06 20 55.5	
	comp=Z,22nm,0.6s						
CD2	Chengdu	19.70	28	P	P	06 21 06.4	+5.6
DDI	Dehra Dun	21.55	322	*e*P	P	06 21 21.4	+1.6
ENH	Enshi	22.34	40	*e*P	P	06 21 27.6	-0.2
	comp=Z,15nm,0.6s,mb4.6						
LZH	Lanzhou	24.25	22	P	P	06 21 47.5	+1.1
LZH				AP		06 21 56.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
LZH				LR	LR		
	comp=E,690nm,16.8s						
LZH				LR	LR		
	comp=Z,790nm,20.5s,MS4.2						
LZH	Lanzhou	24.25	22	P	P	06 21 47.5	+1.1
	comp=Z,20nm,1.0s,mb4.5						
LZH				pP		06 21 56.0	
LZH				sP		06 22 00.1	
LZH				LR	LR		
	comp=Z,790nm,20.5s,MS4.2						
GTA	Gaotai	26.23	12	*e*P	P	06 22 06.4	+1.3
GTA				AP	pP	06 22 16.0	+1.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.7						
NJ2	Nanjing	29.79	48	*e*P	P	06 22 37.8	+0.4
NJ2				AP	pP	06 22 47.4	+1.0
NJ2				PP	PP	06 23 35.3	+0.6
NJ2				S	S	06 27 31.0	+0.4
NJ2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,2µm,6.1s						
NJ2				LR	LR		
	comp=N,520nm,16.1s						
NJ2				LR	LR		
	comp=E,1µm,24.7s						
NJ2				LR	LR		
	comp=Z,1µm,15.1s,MS4.6						
WMQ	Urumqi	30.32	352	*e*P	P	06 22 42.3	+0.4
SSE	Sheshan	31.05	52	*e*P	P	06 22 47.8	-0.7
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.2						
SSE	Sheshan	31.05	52	*e*P	P	06 22 47.7	-0.8
	comp=Z,25nm,0.7s,mb5.2						
MKAR	Makanchi Array	34.16	347	*i* P	P	06 23 15.2	-0.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	35.74	15	P	P	06 23 28.9	-0.1
	comp=Z,2.0nm,1.0s,mb4.0,baz=212,slow=6.0,SNR=14						
SONM				pP	pP	06 23 37.7	-0.3
	comp=Z,2.8nm,0.9s,baz=196,slow=9.0,SNR=12						
SONM				PcP	PcP	06 25 56.4	-0.4
	comp=Z,0.7nm,0.8s,baz=198,slow=4.6,SNR=3.1						
SONM				pPcP		06 26 06.3	
	comp=Z,1.3nm,0.9s,baz=180,slow=2.5,SNR=4.7						
SONM	Songino Array	35.74	15	P	P	06 23 28.9	-0.1
SONM				pP	pP	06 23 37.7	-0.3
SONM				PcP	PcP	06 25 56.4	-0.4
SONM				pPcP		06 26 06.3	
ZAK	Zakamensk	37.46	11	*e*P	P	06 23 44.7	+1.3
KURK	Kurchatov	38.69	345	*e*P	P	06 23 53.3	-0.4
KURK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
KURK	Kurchatov	38.69	345	*e*P	P	06 23 53.3	-0.4
	comp=Z,12nm,1.1s,mb4.5						
TLY	Talaya	38.77	10	*e*P	P	06 24 03.3	+8.9
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
ZAL	Zalesovo	40.62	352	P	P	06 24 09.3	-0.3
	comp=Z,2.0nm,0.9s,mb3.8,baz=290,slow=10,SNR=10						
ZAL				pP	pP	06 24 18.1	-0.7
	comp=Z,2.6nm,0.6s,baz=302,slow=7.9,SNR=6.7						
CN2	Changchun	40.78	36	*e*P	P	06 24 12.8	+1.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
HIA	Hailar	41.64	26	P	P	06 24 19.2	+1.2
HIA				pmax	pmax		
	comp=Z,15nm,1.6s						
HIA	Hailar	41.64	26	P	P	06 24 19.2	+1.2
	comp=Z,15nm,1.6s,mb4.4						
NVS	Novosibirsk	41.71	351	*e*P	P	06 24 24.3	+5.8
BVAR	Borovoye Array	43.13	340	P	P	06 24 29.8	-0.4
	comp=Z,2.2nm,0.9s,mb3.9,baz=149,slow=8.6,SNR=11						
BVAR				pP	pP	06 24 38.6	-0.8
	comp=Z,1.0nm,0.6s,baz=129,slow=9.5,SNR=5.8						
CHKZ	Chkalovo	43.60	341	*e*P	P	06 24 33.5	-0.5
CHKZ				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
CHKZ	Chkalovo	43.60	341	*e*P	P	06 24 33.5	-0.5
	comp=Z,9.3nm,1.0s,mb4.5						
MDJ	Mudanjiang	43.68	38	P	P	06 24 34.8	0.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,105nm,3.4s						
BOD	Bodaibo	46.74	15	*e*P	P	06 24 54.4	-4.6
SVE	Sverdlovsk	49.60	337	*e*P	P	06 25 21.5	+0.3
SVE				*e*	pP	06 25 31.2	+0.6
SVE				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.1						
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.1						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.1						
SVE				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.6						
GNI	Garni	49.70	311	P	P	06 25 23.7	+1.4
	comp=Z,5.0nm,0.5s,mb4.8,baz=188,slow=19,SNR=9.8						
NWAO	Narrogin (SRO)	51.84	154	P	P	06 25 37.8	-0.8
	comp=Z,3.5nm,0.4s,mb4.6,baz=321,slow=5.8,SNR=5.7						
KIV	Kislovodsk	52.36	315	*e*P	P	06 25 43.1	+0.7
KIV				pmax	pmax		
	comp=N,13nm,1.0s						
KIV				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
KIV				pmax	pmax		
	comp=E,9.0nm,1.1s						
KIV	Kislovodsk	52.36	315	*e*P	P	06 25 41.4	-0.9
	comp=E,24nm,0.9s,mb5.1						
WRA	Warramunga Arr	52.62	129	P	P	06 25 43.5	-1.1
	comp=E,4.5nm,0.7s,mb4.5,baz=307,slow=8.2,SNR=23						
WRA				pP	pP	06 25 54.1	+0.1
	comp=E,1.2nm,0.5s,baz=308,slow=8.2,SNR=6.0						
WRA				PcP	PcP	06 26 54.1	-0.3
	comp=E,0.9nm,0.5s,baz=320,slow=2.9,SNR=4.9						
WRA				pPcP		06 27 04.4	
	comp=E,1.0nm,0.5s,baz=320,slow=3.1,SNR=5.2						
WRAB	Tennant Creek	52.62	129	*e*P	P	06 25 43.2	-1.4
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
WRAB	Tennant Creek	52.62	129	*e*P	P	06 25 43.2	-1.4
	comp=Z,7.3nm,0.7s,mb4.7						
ASAR	Alice Springs	54.55	133	P	P	06 25 58.0	-0.8
	comp=Z,6.5nm,0.6s,mb4.9,baz=310,slow=6.9,SNR=46						
ASAR				pP	pP	06 26 07.2	-1.0
	comp=Z,3.8nm,0.5s,baz=307,slow=6.7,SNR=12						
EIL	Elat	55.75	297	P	P	06 26 07.0	-0.5
	comp=Z,2.5nm,0.6s,mb4.4,baz=47,slow=12,SNR=4.7						
EIL	Elat	55.75	297	*e*P	P	06 26 06.6	-0.9
	comp=Z,17nm,1.2s,mb5.0						
BRTR	Keskin Array B	57.90	308	P	P	06 26 21.9	-0.7
	comp=Z,6.8nm,0.8s,mb4.7,baz=120,slow=6.9,SNR=28						
BRTR				pP	pP	06 26 31.5	-0.6
	comp=Z,4.9nm,0.9s,baz=144,slow=6.8,SNR=7.5						
OBN	Obninsk	59.91	326	*e*P	P	06 26 34.7	-1.6
OBN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
OBN	Obninsk	59.91	326	*e*P	P	06 26 35.0	-1.3
	comp=Z,25nm,0.9s,mb5.2						
TIXI	Tiksi	61.72	12	*e*P	P	06 26 47.1	-1.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
CFR	Carcaliu	62.74	314	⇓P	P	06 26 55.7	+0.1
AKASG	Malin Array Be	62.96	320	P	P	06 26 55.1	-1.8
	comp=Z,2.8nm,0.8s,mb4.5,baz=88,slow=4.7,SNR=11						
AKASG				pP	pP	06 27 04.5	-2.0
	comp=Z,2.0nm,0.9s,baz=86,slow=5.3,SNR=1.5						
VRI	Vrincioaia	63.81	314	⇓P	P	06 27 03.7	+1.1
MLR	Muntele Rosu	64.31	314	P	P	06 27 05.8	-0.1
	comp=Z,16nm,1.0s,mb5.0,baz=96,slow=3.4,SNR=18						
MLR				pP	pP	06 27 15.1	-0.4
	comp=Z,8.3nm,0.9s,baz=153,slow=17,SNR=6.1						
MLR	Muntele Rosu	64.31	314	⇓P	P	06 27 06.3	+0.4
STKA	Stephens Creek	64.94	135	P	P	06 27 09.4	-0.8
	comp=Z,2.8nm,0.7s,mb4.4,baz=307,slow=15,SNR=6.3						
STKA	Stephens Creek	64.94	135	*e*P	P	06 27 06.1	-4.2
BURAR	Bucovina Array	65.06	316	⇑P	P	06 27 11.4	+0.7
JOF	Joensuu	65.14	334	*e*p	P	06 27 09.6	-1.3
MMB	Musomiste	65.59	310	*e*P	P	06 27 14.0	-0.2
VTS	Vitosha	66.04	311	*e*P	P	06 27 17.0	0.0
VTS	Vitosha	66.04	311	⇓P	P	06 27 17.5	+0.5
KKB	Krupnik	66.09	310	*i* P	P	06 27 17.0	-0.4
KWP	Kalwaria	66.94	318	*e*P	P	06 27 22.7	0.0
FINES	FINESS Array B	67.07	331	P	P	06 27 22.6	-0.7
	comp=Z,4.5nm,0.8s,mb4.6,baz=108,slow=6.0,SNR=11						
FINES				pP	pP	06 27 32.0	-0.9
	comp=Z,2.0nm,0.6s,baz=104,slow=7.9,SNR=4.3						
SUW	Suwalki	67.19	323	*e*P	P	06 27 23.6	-0.5
CRVS	Cervenica-Dubn	67.69	317	*i* P	P	06 27 28.1	+0.7
CRVS				*e*pP	pP	06 27 37.2	+0.2
OJC	Ojcow	68.86	319	*e*P	P	06 27 34.9	+0.2
VYHS	Vyhne	69.40	317	*e*P	P	06 27 38.2	+0.2
VYHS				*e*pP	pP	06 27 49.3	+1.7
ARCES	ARCESS Array B	69.42	340	P	P	06 27 37.5	-0.3
	comp=Z,3.3nm,0.8s,mb4.3,baz=98,slow=7.5,SNR=10.0						
ARCES				pP	pP	06 27 46.9	-0.5
	comp=Z,3.0nm,0.7s,baz=105,slow=7.0,SNR=2.5						
ARCES				LR	LR	07 02 22.9	
	comp=Z,269nm,18.0s,MS4.5,baz=151,slow=40						
OKC	Ostrava-Krasne	69.91	318	*e*P	P	06 27 41.8	+0.7
MORC	Moravsky Berou	70.30	318	*e*P	P	06 27 43.6	+0.1
MORC				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
MORC	Moravsky Berou	70.30	318	*e*P	P	06 27 43.6	+0.2
	comp=Z,10nm,0.9s,mb4.8						
DPC	Dobruska-Polom	71.10	319	*e*P	P	06 27 48.8	+0.5
DPC				*e*pP	pP	06 27 57.7	-0.2
KSP	Ksiaz	71.13	319	*e*P	P	06 27 48.2	-0.3
KSP				*e**PP	pP	06 27 58.5	+0.4
KSP	Ksiaz	71.13	319	*e*P	P	06 27 48.4	-0.1
PRU	Pruhonice	72.24	318	*e*P	P	06 27 55.4	+0.3
PRU				*e*pP	pP	06 28 05.5	+0.8
BRG	Berggiesshubel	72.62	319	*i* P	P	06 27 57.9	+0.5
BRG				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
BRG	Berggiesshubel	72.62	319	*i* P	P	06 27 57.9	+0.5
	comp=Z,13nm,1.2s,mb4.7						
GEC2	GERESS Array S	72.81	317	*e*P	P	06 27 59.2	+0.7
GEC2				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
GEC2	GERESS Array S	72.81	317	*e*P	P	06 27 59.2	+0.7
	comp=Z,11nm,0.9s,mb4.8						
GERES	GERESS Array B	72.81	317	P	P	06 27 58.8	+0.2
	comp=Z,6.4nm,0.7s,mb4.7,baz=90,slow=5.3,SNR=52						
GERES				pP	pP	06 28 08.2	0.0
	comp=Z,3.8nm,0.6s,baz=90,slow=5.3,SNR=12						
KHC	Kasperske Hory	72.88	317	*e*P	P	06 27 59.2	+0.3
KHC				*e*pP	pP	06 28 08.7	+0.2
CLL	Collm	73.20	320	*e*P	P	06 28 01.0	+0.2
CLL	Collm	73.20	320	P	P	06 28 01.0	+0.2
CLL				*e**SP	sP	06 28 12.0	-1.8
WET	Wettzell	73.34	318	*e*P	P	06 28 02.4	+0.8
WET				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
WET	Wettzell	73.34	318	*e*P	P	06 28 02.4	+0.8
	comp=Z,16nm,1.2s,mb4.8						
NKC	Novy Kostel	73.58	319	*e*P	P	06 28 03.7	+0.7
MOX	Moxa	74.10	319	*e*P	P	06 28 06.5	+0.5
MOX	Moxa	74.10	319	*i* P	P	06 28 06.5	+0.5
NB2	NORSAR Subarra	74.14	330	P	P	06 28 05.1	-0.9
	comp=Z,3.6nm,0.7s,mb4.4,baz=90,slow=5.8						
NB2	NORSAR Subarra	74.14	330	P	P	06 28 05.1	-0.9
NB2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
NOA	NORSAR Array B	74.14	330	P	P	06 28 05.2	-0.8
	comp=Z,2.2nm,0.6s,mb4.3,baz=90,slow=5.8,SNR=10.0						
NOA				pP	pP	06 28 14.6	-1.0
	comp=Z,2.3nm,0.7s,baz=90,slow=5.8,SNR=6.1						
GRA1	Grafenberg Arr	74.40	318	*e*P	P	06 28 08.9	+1.2
	comp=Z,12nm,0.9s,mb4.8						
GRA1				*e*pP	pP	06 28 18.6	+1.2
GRF	Grafenberg Arr	74.40	318	*e*P	P	06 28 08.9	+1.2
GRF				*e**PP	pP	06 28 18.6	+1.2
GRF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
CLZ	Clausthal	74.83	320	*e*P	P	06 28 10.9	+0.7
	comp=Z,11nm,1.0s,mb4.7						
TNS	Taunus Mts	76.15	319	*e*P	P	06 28 18.4	+0.7
BFO	Black Forest	76.40	317	*e*P	P	06 28 19.5	+0.3
BFO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BFO	Black Forest	76.40	317	*e*P	P	06 28 19.5	+0.3
	comp=Z,3.0nm,0.9s,mb4.2						
LPG	La Plagne	77.78	314	*e*P	P	06 28 27.5	+0.6
	comp=Z,25nm,0.8s,mb4.9						
LPG	La Plagne	77.78	314	*e*P	P	06 28 27.5	+0.6
LPG				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
IMA	Indian Mountai	86.60	22	*e*P	P	06 29 14.0	+1.8
IMA				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.4						
IMA	Indian Mountai	86.60	22	*e*P	P	06 29 14.0	+1.8
	comp=Z,21nm,0.9s,mb5.4						
ESDC	Sonseca Array	86.66	310	P	P	06 29 13.1	-0.1
	comp=Z,0.3nm,0.5s,mb3.8,baz=56,slow=3.9,SNR=4.9						
ESDC				pP	pP	06 29 22.1	-0.9
	comp=Z,0.7nm,0.6s,baz=58,slow=5.4,SNR=4.2						
MCK	McKinley	89.50	23	P	P	06 29 23.1	-3.1
MCK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.6						
MCK	McKinley	89.50	23	P	P	06 29 23.1	-3.1
	comp=Z,3.1nm,1.0s,mb4.6						
ILAR	Eielson Array	89.71	22	P	P	06 29 26.8	-0.3
	comp=Z,1.3nm,1.1s,mb4.2,baz=292,slow=3.8,SNR=7.2						
ILAR				pP	pP	06 29 35.5	-1.4
	comp=Z,1.5nm,0.8s,baz=273,slow=4.2,SNR=12						
ILAR				PP	PP	06 32 59.6	-2.0
	comp=Z,0.4nm,0.9s,baz=310,slow=7.0,SNR=3.6						
SYO	Syowa Base	90.69	197	⇑sP	sP	06 29 47.1	+2.5
DAWY	Dawson	92.75	20	P	P	06 29 42.0	+0.8
YKA	Yellowknife Ar	100.97	13	Pdiff	P	06 30 28.0	+9.4
	comp=Z,0.3nm,0.8s,baz=332,slow=4.8,SNR=5.5						
YKA				PP	PP	06 34 26.7	-3.0
	comp=Z,0.1nm,0.4s,baz=335,slow=7.0,SNR=4.2						
PDAR	Pinedale Array	120.04	19	PKP	PKPdf	06 35 20.8	-3.2
	comp=Z,0.3nm,0.6s,baz=333,slow=2.0,SNR=3.4						
PDAR				pPKP		06 35 30.0	
	comp=Z,1.2nm,1.1s,slow=1.5,SNR=4.4						
NVAR	Mina Array Bea	120.35	28	PKP	PKPdf	06 35 21.9	-2.9
	comp=Z,0.7nm,1.0s,baz=3.7,slow=2.8,SNR=4.0						
NVAR				pPKP		06 35 32.6	
	comp=Z,0.7nm,0.7s,baz=343,slow=0.9,SNR=4.6						
TXAR	Lajitas Array	134.21	21	PKP	PKPdf	06 35 48.9	-2.7
	comp=Z,0.2nm,0.5s,baz=195,slow=0.7,SNR=6.8						
TXAR				pPKP		06 35 58.4	
	comp=Z,1.1nm,1.0s,baz=149,slow=0.6,SNR=6.2						
PLCA	Paso Flores	149.55	205	PKPbc	PKPdf	06 36 20.4	+2.3
	comp=Z,2.8nm,0.8s,baz=154,slow=3.4,SNR=11						

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*IDC **24** 07:00:04.4±1.3, 42.77S×83.09W, mb3.7/7, mb1 3.9/8, mb1mx3.8/17, mbtmp3.7/8, ML3.3/1, Error ellipse: s-maj=31.5km s-min=29.5km az=44.0*

ISC 24 07:00:04.6±1.1, **42.8S**±0.2×**82.9W**±0.2, **h10**^{km}, **n8**, σ**0**^{s}**58**/8, **mb3.6**/7, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	9.49	82	Pn	P	07 02 23.6	-0.7
	0.1nm,0.3s,baz=257,slow=13,SNR=5.2						
LVC	Limon Verde	23.29	35	P	P	07 05 14.4	+1.0
	1.2nm,0.8s,mb3.4,baz=184,slow=15,SNR=2.2						
LPAZ	La Paz	29.32	30	P	P	07 06 09.2	-0.3
	0.8nm,0.6s,mb3.6,baz=68,slow=11,SNR=4.3						
BDFB	Brasilia	40.30	59	P	P	07 07 44.1	+0.5
	4.2nm,1.0s,mb4.1,baz=208,slow=6.3,SNR=2.5						
SNAA	Sanae	46.97	155	P	P	07 08 37.2	+0.3
	0.7nm,0.9s,mb3.6,baz=184,slow=21,SNR=3.8						
TXAR	Lajitas Array	74.28	341	P	P	07 11 42.9	-0.8
	0.2nm,0.8s,mb3.1,baz=135,slow=5.1,SNR=2.9						
NVAR	Mina Array Bea	87.01	333	P	P	07 12 51.1	0.0
	0.6nm,1.0s,mb3.8,baz=153,slow=4.0,SNR=2.4						
PDAR	Pinedale Array	88.49	341	P	P	07 12 58.2	+0.1
	0.4nm,0.8s,mb3.7,baz=117,slow=6.6,SNR=3.8						

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*GUC **24** 07:04:41.7±0.0, 43.22S×82.85W, h10^{km}, mb5.0(NEIC)*

*BJI **24** 07:04:42.0, 43.00S×82.70W, h10^{km}, mB5.4, Ms5.9, Msz5.6*

*IDC **24** 07:04:42.1±0.8, 43.02S×82.60W, mb4.3/11, mb1 4.4/14, mb1mx4.3/20, mbtmp4.3/14, ML4.1/2, MS4.7/8, Ms1 4.7/8, ms1mx4.1/21, Error ellipse: s-maj=25.1km s-min=20.9km az=75.0*

*NEIC **24** 07:04:43.0±0.3, 43.01S×82.71W, h10^{km}, mb5.0/26, Error ellipse: s-maj=12.1km s-min=7.8km az=67.0*

*HRVD **24** 07:04:43.0±0.4, 43.03S×82.84W, h18^{km}±1^{km}, MW5.2/65, Centroid moment Tensor Solution. LP body waves: s27,c31;Mantle waves: s65,c94; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.02±.26; $M_{\theta\theta}$2.28±.24; $M_{\phi\phi}$-2.29±.31; $M_{r\theta}$-0.39±.45; $M_{\theta\phi}$-5.22±.20; $M_{\phi r}$4.41±.79; Best double couple: $M_0$7.203×10^{16} NP1:ϕ_s259°, δ52°, λ-178°. NP2:ϕ_s168°, δ89°, λ-38°. Principal axes: T 6.951, Plg24°, Azm220°; N .51, Plg52°, Azm347°; P -7.455, Plg27°, Azm117°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 24 07:04:42.2±0.5, **42.88S**±0.07×**82.65W**±0.10, **h10**^{km}, **(h14**^{km}±1.1^{km}**:pP-P)**, **n91**, σ**1**^{s}**26**/75, **mb4.8**/33, **MS4.9**/7, **2C-4D**, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COYC	Coyhaique	8.05	113	*e*P	P	07 06 43.4	+1.4
PLCA	Paso Flores	9.29	81	Pn	P	07 06 58.2	-0.9
	0.8nm,0.3s,baz=257,slow=12,SNR=24						
PLCA				Sn	Sn	07 08 38.8	-6.0
	baz=268,slow=20,SNR=1.1						
PLCA				LR	LR	07 10 00.4	
	comp=Z,3µm,19.4s,baz=255,slow=34						
PLCA				T		07 14 34.2	
	0.1nm,0.3s,baz=217,slow=7.3,SNR=2.9						
PLCA	Paso Flores	9.29	81	*e*Pn	P	07 06 58.5	-0.6
	98nm,1.4s						
CLCH	Cerro Calan	13.42	49	*e*P	P	07 07 50.7	-4.5
FCH	Farellones	13.61	50	*e*P	P	07 07 53.4	-4.3
USHA	Ushuaia	15.15	147	Pn	P	07 08 16.1	-1.5
	0.2nm,0.3s,baz=244,slow=8.2,SNR=4.0						
USHA				LR	LR	07 13 37.6	
	comp=Z,1µm,18.5s,baz=298,slow=36						
CFAA	Coronel Fontan	16.05	50	Pn	P	07 08 27.0	-2.5
	baz=214,slow=15						
CFAA	Coronel Fontan	16.05	50	Pn	P	07 08 27.0	-2.5
TRQA	Tornquist	16.44	80	*e*P	P	07 08 36.8	+2.4
	46nm,0.9s						
LPA	La Plata	20.77	76	*c**e*P	P	07 09 26.0	+0.3
LPA				*e*pP		07 09 28.0	
LPA				*e*PP	PP	07 09 42.0	-5.7
LPA				*e*S	S	07 13 19.0	+6.4
LPA				*e*SS	SS	07 13 42.0	-1.8
LVC	Limon Verde	23.22	34	P	P	07 09 52.4	+2.1
	18nm,1.1s,mb4.4,baz=205,slow=8.4,SNR=19						
LVC				LR	LR	07 16 46.3	
	comp=Z,1µm,20.3s,MS4.3,baz=192,slow=31						
LVC	Limon Verde	23.22	34	*e*P	P	07 09 52.2	+2.0
	142nm,1.6s,mb5.2						
RPN	Rapa Nui	26.77	297	LR	LR	07 18 04.1	
	comp=Z,2µm,19.4s,MS4.6,baz=114,slow=30						
ARE	Arequipa	28.00	23	*e*P	P	07 10 36.0	+0.7
LPAZ	La Paz	29.27	30	P	P	07 10 47.4	+0.7
	4.8nm,0.8s,mb4.2,baz=211,slow=13,SNR=6.3						
LPAZ	La Paz	29.27	30	*e*P	P	07 10 47.1	+0.5
	28nm,1.4s,mb4.8						
NNA	Nana	31.19	11	*e*P	P	07 10 58.2	-5.5
	16nm,1.0s,mb4.8						
BDFB	Brasilia	40.15	58	P	P	07 12 19.9	-0.2
	16nm,0.9s,mb4.8,baz=227,slow=5.5,SNR=28						
BDFB				LR	LR	07 29 29.7	
	comp=Z,2µm,18.9s,MS4.9,baz=51,slow=37						
BAO	Brasilia Array	40.17	58	P	P	07 12 20.1	-0.1
BAO				*i*		07 12 26.5	
OTAV	Otavalo	43.09	6	*e*P	P	07 12 43.5	-0.7
	24nm,1.5s,mb4.7						
VNA3	Neumayer Olymp	44.67	154	*e*	P	07 12 58.3	+2.0
VNA3	Neumayer Olymp	44.67	154	*e*	P	07 12 59.4	+3.1
VNA3	Neumayer Olymp	44.67	154	*e*	P	07 13 03.0	+6.7
VNA3	Neumayer Olymp	44.67	154	⇓*i*P	P	07 12 55.0	-1.3
VNA3				*e*	pP	07 12 58.3	-1.0
VNA3				*e*	pP	07 12 59.4	+0.1
VNA3				*e*		07 13 03.0	
VNA1	Neumayer--Stat	45.16	153	*e*	P	07 13 02.4	+2.2
VNA1	Neumayer--Stat	45.16	153	*e*	P	07 13 03.7	+3.5
VNA1	Neumayer--Stat	45.16	153	*e*	P	07 13 07.3	+7.1
VNA1	Neumayer--Stat	45.16	153	⇓*i*P	P	07 12 57.9	-2.3
VNA1				*e*	pP	07 13 02.4	-0.8
VNA1				*e*		07 13 03.7	
VNA1				*e*		07 13 07.3	
VNA2	Neumayer--Watz	45.43	153	*e*	P	07 13 04.8	+2.5
VNA2	Neumayer--Watz	45.43	153	*e*	P	07 13 05.9	+3.6
VNA2	Neumayer--Watz	45.43	153	*e*	P	07 13 08.9	+6.6
VNA2	Neumayer--Watz	45.43	153	⇓*i*P	P	07 13 01.0	-1.3
VNA2				*e*	pP	07 13 04.8	-0.5
VNA2				*e*	pP	07 13 05.9	+0.6
VNA2				*e*		07 13 08.9	
SNAA	Sanae	46.82	155	*e*	P	07 13 12.9	-0.4
SNAA	Sanae	46.82	155	*e*	P	07 13 14.4	+1.1
SNAA	Sanae	46.82	155	*e*	P	07 13 19.3	+6.0
SNAA	Sanae	46.82	155	P	P	07 13 12.1	-1.2
	0.7nm,0.7s,mb3.7,baz=263,slow=8.1,SNR=5.6						
SNAA	Sanae	46.82	155	⇓*i*P	P	07 13 07.5	-5.8
SNAA				P	pP	07 13 12.1	-4.2
SNAA				*e*		07 13 12.9	
SNAA				*e*		07 13 14.4	
SNAA				*e*		07 13 19.3	
ROSC	El Rosal	48.11	11	P	P	07 13 26.0	+1.8
	2.9nm,0.6s,mb4.5,baz=110,slow=5.7,SNR=9.4						
ROSC				LR	LR	07 32 00.5	
	comp=Z,696nm,18.5s,MS4.7,baz=180,slow=34						
SDV	Santo Domingo	52.67	15	*e*P	P	07 13 57.8	-1.2
	49nm,1.6s,mb5.2						
JTS	JuntasAbangare	52.95	357	P	P	07 14 01.4	+0.4
	10nm,0.9s,mb4.8,baz=207,slow=9.1,SNR=3.9						
JTS	JuntasAbangare	52.95	357	*e*P	P	07 14 01.7	+0.7
	21nm,1.0s,mb5.0						
VNDA	Vanda	53.63	194	LR	LR	07 32 45.0	
	comp=Z,807nm,19.4s,MS4.8,baz=146,slow=32						
SYO	Syowa Base	60.59	160	⇑P	P	07 14 48.4	-6.3
TEIG	Tepich	63.00	354	*e*P	P	07 15 11.0	-0.5
	8.6nm,0.8s,mb4.9						
RAR	Rarotonga	66.62	262	LR	LR	07 38 00.1	
	comp=Z,902nm,19.6s,MS5.0,baz=13,slow=30						
DWPF	Disney	70.65	1	P	P	07 16 01.4	+1.5

	31nm,1.0s,mb5.2						
LTX	**Lajitas**	**74.41**	**341**	P	**P**	**07 16 21.6**	**-0.4**
	5.5nm,0.9s,mb4.5						
TXAR	**Lajitas Array**	**74.41**	**341**	P	**P**	**07 16 22.2**	**+0.1**
	1.0nm,1.0s,mb3.7,baz=158,slow=6.7,SNR=7.7						
TXAR	**Lajitas Array**	**74.41**	**341**	P	**P**	**07 16 22.2**	**+0.1**
LRAL	**Lakeview Retre**	**75.65**	**356**	*e*P	**P**	**07 16 28.5**	**-0.6**
	14nm,0.9s,mb4.9						
LRAL				*e*		07 16 34.9	
BBSR	**BB Station**	**76.67**	**16**	P	**P**	**07 16 35.6**	**+0.7**
	53nm,1.4s,mb5.3						
OXF	**Oxford**	**77.27**	**354**	*e*P	**P**	**07 16 36.7**	**-1.4**
	25nm,0.9s,mb5.1						
OXF				*e*		07 16 43.1	
MIAR	**Mount Ida**	**77.70**	**351**	P	**P**	**07 16 41.4**	**+0.8**
	3.8nm,0.8s,mb4.4						
WMOK	**Wichita Mounta**	**78.64**	**347**	*e*P	**P**	**07 16 47.0**	**+1.3**
	7.3nm,0.9s,mb4.6						
WVT	**Waverly**	**78.78**	**356**	*e*P	**P**	**07 16 45.5**	**-0.9**
	11nm,1.0s,mb4.7						
WVT				*e*		07 16 51.5	
AMTX	**Amarillo**	**79.32**	**344**	P	**P**	**07 16 48.5**	**-0.9**
	17nm,1.0s,mb4.9						
ELN	**Prospectdale**	**79.75**	**2**	*e*P	**P**	**07 16 51.4**	**-0.2**
ELN				*e*		07 16 57.2	
ANMO	**Albuquerque**	**80.46**	**340**	*e*P	**P**	**07 16 55.2**	**-0.3**
	11nm,1.0s,mb4.8						
ANMO				*e*		07 17 02.8	
USIN	**University of**	**80.59**	**356**	*e*P	**P**	**07 16 53.9**	**-2.3**
	62nm,1.0s,mb5.5						
USIN				*e*		07 17 01.3	
CCM	**Cathedral Cave**	**80.93**	**353**	*e*P	**P**	**07 16 56.3**	**-1.6**
	40nm,0.8s,mb5.4						
CCM				*e*		07 17 04.0	
KSU1	**Kansas State U**	**82.58**	**349**	P	**P**	**07 17 06.2**	**-0.3**
KSU1				*e*		07 17 12.3	
ACSO	**Alum Creek Sta**	**82.73**	**360**	*e*P	**P**	**07 17 05.8**	**-1.5**
	22nm,0.9s,mb5.2						
ACSO				*e*		07 17 12.5	
ALLY	**Alegheny Colle**	**84.17**	**2**	*e*P	**P**	**07 17 11.5**	**-3.0**
ALLY				*e*		07 17 19.8	
TSUM	**Tsumeb**	**84.36**	**111**	P	**P**	**07 17 15.1**	**-0.9**
	3.8nm,0.7s,mb4.6						
TSUM				*e*		07 17 22.5	
AAM	**Ann Arbor**	**84.80**	**359**	P	**P**	**07 17 21.9**	**+4.3**
	9.2nm,0.9s,mb4.9						
DBIC	**Dimbokro**	**85.63**	**77**	P	**P**	**07 17 21.8**	**-0.7**
	5.9nm,1.0s,mb4.8,baz=209,slow=9.7,SNR=3.4						
TPH	**Tonopah**	**86.48**	**333**	P	**P**	**07 17 26.5**	**+0.3**
	14nm,1.1s,mb5.1						
TPH				*e*		07 17 34.2	
DAU	**Daniels Canyon**	**86.85**	**339**	*e*P	**P**	**07 17 31.9**	**+4.1**
NVAR	**Mina Array Bea**	**87.17**	**333**	P	**P**	**07 17 30.9**	**+1.4**
	1.7nm,0.8s,mb4.3,baz=129,slow=4.9,SNR=5.6						
HWUT	**Hardware Ranch**	**88.05**	**339**	*e*P	**P**	**07 17 34.0**	**+0.4**
PDAR	**Pinedale Array**	**88.62**	**341**	P	**P**	**07 17 36.5**	**+0.1**
	1.0nm,0.8s,mb4.2,baz=135,slow=4.2,SNR=3.9						
HLID	**Hailey**	**90.64**	**338**	*e*P	**P**	**07 17 46.9**	**+1.1**
	4.6nm,1.0s,mb4.8						
HLID				*e*		07 17 54.2	
QLMT	**Earthquake Lak**	**91.03**	**340**	P	**P**	**07 17 50.6**	**+3.1**
MCMT	**McKenzie Canyo**	**91.39**	**339**	*e*P	**P**	**07 17 48.8**	**-0.3**
LAO	**LASA Array**	**91.60**	**344**	P	**P**	**07 17 49.7**	**-0.4**
	6.3nm,0.9s,mb5.0						
LAO				*e*		07 17 56.4	
ULM	**Lac du Bonnet**	**93.46**	**352**	P	**P**	**07 18 01.3**	**+2.7**
	3.7nm,1.1s,mb4.7,baz=154,slow=2.9,SNR=5.9						
YKA	**Yellowknife Ar**	**108.11**	**345**	Pdiff	Pdif	07 19 10.1	+6.2
	0.1nm,0.4s,baz=147,slow=3.8,SNR=7.0						
ILAR	**Eielson Array**	**118.40**	**334**	PKP	PKPdf	07 23 31.8	-0.4
	0.5nm,0.9s,baz=156,slow=1.3,SNR=5.0						
GERES	**GERESS Array B**	**124.24**	**53**	PKP	PKPdf	07 23 41.1	-2.8
	1.6nm,0.8s,baz=297,slow=3.0,SNR=9.5						
BRTR	**Keskin Array B**	**133.05**	**71**	PKP	PKPdf	07 24 00.7	-0.3
	0.6nm,0.6s,baz=237,slow=2.7,SNR=3.5						
HYB	**Hyderabad**	**150.00**	**142**	*e*P	PKPdf	07 24 39.0	+7.9
HYB	**Hyderabad**	**150.00**	**142**	*i* PKP	PKPdf	07 24 39.0	+7.9
CMAR	**Chiang Mai Arr**	**155.62**	**184**	PKP	PKPdf	07 24 38.0	-0.9
	1.3nm,0.3s,baz=247,slow=3.2,SNR=4.5						
SSE	**Sheshan**	**157.70**	**246**	*e*PKP	PKPdf	07 24 38.3	-3.2
CN2	**Changchun**	**159.58**	**282**	*e*PKP	PKPdf	07 24 42.4	-0.9
NJ2	**Nanjing**	**159.85**	**245**	*e*PKP	PKPdf	07 24 36.3	-7.6
NJ2				APKP		07 24 47.1	
NJ2				XPKP		07 24 50.8	
NJ2				PP	PP		
	comp=Z,2μm,10.2s						
NJ2				LR	LR		
	comp=N,1μm,21.0s,MS6.0						
NJ2				LR	LR		
	comp=E,2μm,24.0s,MS6.0						
NJ2				LR	LR		
	comp=Z,4μm,24.2s,MS6.2						
KMI	**Kunming**	**161.74**	**196**	PKP	PKPdf	07 24 43.5	-2.5
ZAL	**Zalesovo**	**166.17**	**33**	PKP	PKPdf	07 24 47.0	-2.5
	comp=Z,1.3nm,0.3s,baz=309,slow=3.6,SNR=2.9						
ZAL				PKPab	PKPab	07 25 49.1	-0.1
	comp=Z,0.5nm,0.6s,baz=348,slow=8.7,SNR=2.6						
SONM	**Songino Array**	**171.93**	**311**	PKP	PKPdf	07 24 52.0	-1.1
	comp=Z,0.2nm,0.7s,baz=135,slow=2.0,SNR=3.1						
SONM				PKPab	PKPab	07 26 14.4	-0.4
	comp=Z,0.4nm,0.8s,baz=63,slow=3.2,SNR=2.1						
WMQ	**Urumqi**	**172.90**	**79**	*e*PKP	PKPdf	07 24 52.4	-1.4
GTA	**Gaotai**	**176.07**	**209**	*e*PKP	PKPdf	07 24 54.9	0.0

CASC 24 07:05:32.6±4.0**, 9.50N×78.27W, h77^{km}**±44^{km}**, MD4.4, MW4.1, 3C-3D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD1	**Univ de Panama**	**0.98**	**165**	⇓*i*P	P	07 05 49.5	-1.9
UPD1				*e*S	S	07 06 03.5	-2.1
UPA	**Univ. de Panam**	**1.35**	**248**	⇑*e*P	P	07 05 56.5	+0.2
UPA				*e*S	S	07 06 13.4	-0.5
ACLA	**Agua Clara, Si**	**1.42**	**265**	⇑*e*P	P	07 05 56.8	-0.5
ACLA				*e*S	S	07 06 16.4	+0.9
AZU	**Azuero**	**2.60**	**230**	*e*P	P	07 06 14.1	+0.5
AZU2	**Pedas**	**2.61**	**222**	⇑*e*P	P	07 06 14.0	+0.4
AZU2				*e*S	S	07 06 45.4	+1.2
BUS	**Buena Vista**	**5.41**	**271**	*e*P	P	07 06 53.0	+0.6
BUS				*e*S	S	07 07 52.5	-1.5
TRTC	**Tortuguero**	**5.46**	**282**	*e*P	P	07 06 50.7	-2.4
LCR2	**La Lucha 2**	**5.66**	**273**	⇓*e*P	P	07 06 56.5	+0.8
LCR2				*e*S	S	07 07 57.4	-2.7
VPS2	**Volcan Poas 2**	**5.92**	**277**	*e*P	P	07 06 56.6	-2.8
PRS1	**Puriscal**	**5.97**	**275**	⇓*e*P	P	07 07 01.5	+1.4

IDC 24 07:20:02.5±3.3**, 6.19N×92.91E, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.7**/18**, mbtmp3.6**/5**, ML4.5**/1**, Error ellipse: s-maj=107.8km s-min=27.0km az=68.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.54**	**25**	Pn	P	07 23 16.5	-2.1
	0.8nm,0.3s,baz=225,slow=15,SNR=3.7						
SONM	**Songino Array**	**43.07**	**13**	P	P	07 28 04.1	-1.8
	0.1nm,0.4s,baz=196,slow=10,SNR=2.6						
ZAL	**Zalesovo**	**48.06**	**354**	P	P	07 28 43.5	-2.1
	1.3nm,0.3s,baz=267,slow=2.4,SNR=3.6						
WRA	**Warramunga Arr**	**48.31**	**124**	P	P	07 28 46.2	-1.8
	0.4nm,0.8s,baz=305,slow=8.8,SNR=4.7						
ASAR	**Alice Springs**	**49.81**	**128**	P	P	07 28 57.4	-2.1
	0.2nm,0.7s,baz=300,slow=7.6,SNR=4.0						

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*IDC **24** 07:35:46.0±0.4, 3.00N×95.73E, mb4.8/24, mb1 4.8/25, mb1mx4.8/26, mbtmp4.8/25, ML5.1/1, MS5.1/13, Ms1 5.1/13, ms1mx4.9/19, Error ellipse: s-maj=17.7km s-min=11.3km az=57.0*

*BJI **24** 07:35:48.6, 2.96N×95.73E, h26^{km}, mB5.9, mb5.7, Ms5.9, Msz5.7*

*MOS **24** 07:35:49.8±1.0, 2.97N×95.74E, h33^{km}, mb5.7/63, MS5.3/43, Error ellipse: s-maj=8.1km s-min=4.5km az=113.2*

*NEIC **24** 07:35:50.5±0.1, 2.89N×95.73E, h30^{km}, mb5.6/85, ME5.3, MS5.5/132, MW5.6, Error ellipse: s-maj=5.5km s-min=3.9km az=51.0 Broadband fault plane solution: P waves. NP1:φ$_s$140°,δ75°,λ90°. NP2:φ$_s$320°,δ15°,λ90°. Principal axes: T Plg60°, Azm50°; N Plg0°, Azm0°; P Plg30°, Azm230°; Moment Tensor Solution. s33 Moment tensor: Scale 10^{17} Nm; M$_{rr}$1.26; M$_{\theta\theta}$-1.60; M$_{\phi\phi}$0.33; M$_{r\theta}$2.23; M$_{\theta\phi}$1.40; M$_{\phi r}$-2.20; Best double couple: M$_0$3.7×10^{17} NP1:φ$_s$266°,δ20°,λ42°. NP2:φ$_s$136°,δ77°, λ105°. Principal axes: T 3.25, Plg56°, Azm65°; N .82, Plg15°, Azm312°; P -4.07, Plg30°, Azm214°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*HRVD **24** 07:35:50.5±0.2, 2.53N×95.51E, h27^{km}, MW5.6/65, Centroid moment Tensor Solution. LP body waves: s62,c113;Mantle waves: s65,c126; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.81±.04; M$_{\theta\theta}$-0.72±.03; M$_{\phi\phi}$-0.08±.04; M$_{r\theta}$1.69±.06; M$_{\theta\phi}$1.04±.03; M$_{\phi r}$-2.10±.08; Best double couple: M$_0$2.95×10^{17} NP1: φ$_s$277°,δ15°,λ46°. NP2:φ$_s$142°,δ79°,λ101°. Principal axes: T 2.673, Plg54°, Azm65°; N .554, Plg10°, Azm320°; P -3.227, Plg33°, Azm223°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 24 07:35:49.3±0.2**, 2.93N**±0.03×**95.70E**±0.02**, h31^{km}, h31^{km}**±.8^{km}**:pP-P, n521,** σ1^{s}**07**/440**, mb5.5**/142**, MS5.5**/173**, 32C-20D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.57**	**73**	P	**Pn**	**07 37 13.3**	**+1.1**
SNG	**Songkhla**	**6.47**	**49**	P	**Pn**	**07 37 26.0**	**+1.0**
	1μm,1.0s						
KGM	**Kluang**	**7.67**	**97**	P	**Pn**	**07 37 42.5**	**+0.7**
NNT	**Nongplab**	**10.40**	**22**	P	**P**	**07 38 22.0**	**+2.3**
NST	**Nakhon Sawan**	**13.40**	**19**	P	**P**	**07 38 59.8**	**-0.2**
	69nm,1.0s						
BDT	**Bhumibol Dam**	**14.60**	**13**	P	**P**	**07 39 15.0**	**-0.8**
	18nm,1.0s						
COCO	**West Island**	**15.06**	**176**	P	**P**	**07 39 19.4**	**-2.4**
	672nm,1.5s						
KKTK	**Khon Kaen**	**15.06**	**27**	P	**P**	**07 39 22.5**	**+0.6**
	6μm,0.4s						
CM31	**Chiang Mai Arr**	**15.76**	**11**	*e*P	**P**	**07 39 31.6**	**+0.6**
	376nm,1.0s						
CMAR	**Chiang Mai Arr**	**15.76**	**11**	Pn	**P**	**07 39 30.3**	**-0.7**
	2.6nm,0.3s,baz=200,slow=9.6,SNR=66						
CMAR				Sn	**S**	**07 42 35.8**	**+11**
	0.4nm,0.3s,baz=197,slow=27,SNR=2.6						
CMAR				LR	LR	07 46 36.5	
	comp=Z,16μm,18.1s,baz=195,slow=42						
CMAR	**Chiang Mai Arr**	**15.76**	**11**	Pn	**P**	**07 39 30.3**	**-0.7**
CMAR				Sn	**S**	**07 42 35.8**	**+11**
CMAR				LR	LR	07 46 36.5	
CHG	**Chiang Mai**	**16.11**	**11**	⇑P	**P**	**07 39 34.6**	**-0.8**
	61nm,1.0s						
CHTO	**Chiang Mai**	**16.11**	**11**	Pn	**P**	**07 39 34.2**	**-1.1**
CHTO				sSn		07 42 45.2	
NANT	**Nan**	**16.52**	**17**	P	**P**	**07 39 41.0**	**+0.4**
	250nm,1.5s						
CHRT	**Chiangrai**	**17.31**	**13**	⇓P	**P**	**07 39 50.5**	**0.0**
	434nm,1.3s						
MDRS	**Chennai**	**18.30**	**304**	⇑*e*P	**P**	**07 40 03.0**	**+0.1**
MDRS				*e*S	**S**	**07 43 29.0**	**+6.2**
MDRS				*e*		07 44 55.0	
VIS	**Vishakhapatnam**	**19.06**	**321**	*e*P	**P**	**07 40 10.7**	**-1.4**
VIS				*e*		07 43 27.1	
BWNR	**Bhubaneshwar**	**19.78**	**332**	*e*P	**P**	**07 40 18.5**	**-1.6**
BWNR				*e*		07 40 30.5	
	comp=Z,353nm,1.8s						
BWNR				*e*		07 43 43.7	
KKM	**Kota Kinabalu**	**20.69**	**81**	P	**P**	**07 40 30.1**	**+0.5**
QIZ	**Qiongzhong**	**21.16**	**40**	P	**P**	**07 40 33.6**	**-0.8**
QIZ				XP		07 40 45.9	
QIZ				*e*S	**S**	**07 44 22.6**	**-0.5**
QIZ				XS		07 44 36.8	
QIZ				LR	LR		
	comp=N,22μm,16.7s						
QIZ				LR	LR		
	comp=Z,17μm,17.6s,MS5.5						
QIZ	**Qiongzhong**	**21.16**	**40**	*e*P	**P**	**07 40 34.3**	**-0.1**
	comp=Z,387nm,1.4s,mb5.5						
AGT	**Agartala**	**21.27**	**349**	⇓*i*P	**P**	**07 40 35.0**	**-0.5**
AGT				*i*		07 41 24.0	
SRDI	**Scrawed**	**21.60**	**122**	⇑*e*P	**P**	**07 40 44.6**	**+5.7**
SRDI				pmax	pmax		
	comp=Z,93nm,1.0s,mb5.2						
SRDI	**Scrawed**	**21.60**	**122**	⇑*e*P	**P**	**07 40 44.6**	**+5.7**
	comp=Z,93nm,1.0s,mb5.2						
KELI	**Kelakatan**	**21.77**	**121**	⇓*e*P	**P**	**07 40 44.8**	**+4.2**
	comp=Z,64nm,1.1s,mb5.0						
IMP	**Imphal**	**21.80**	**356**	*e*P	**P**	**07 40 39.0**	**-1.8**
HYB	**Hyderabad**	**22.15**	**312**	*e*P	**P**	**07 40 45.0**	**+0.7**
HYB				*e*S	**S**	**07 44 44.0**	**+2.5**
HYB				pmax	pmax		
	comp=Z,375nm,1.4s,mb5.6						
HYB	**Hyderabad**	**22.15**	**312**	*e*P	**P**	**07 40 45.0**	**+0.7**
	comp=Z,375nm,1.4s,mb5.6						
HYB				*e*S	**S**	**07 44 44.0**	**+2.5**
HYB	**Hyderabad**	**22.15**	**312**	*i* P	**P**	**07 40 45.0**	**+0.7**
	comp=Z,375nm,1.4s,mb5.6						
HYB				*e*S	**S**	**07 44 44.0**	**+2.5**
HYB				LR	LR	07 48 42.0	
	comp=Z,9.9nm,20.0s						
TSM	**Tawau**	**22.18**	**86**	P	**P**	**07 40 45.7**	**+1.0**
BOK	**Bokaro**	**22.81**	**336**	*e*P	**P**	**07 40 51.9**	**+1.0**
BOK				*e*		07 40 54.5	
	comp=Z,178nm,1.0s						
BOK				*e*		07 44 53.8	
RATI	**Rata**	**22.91**	**120**	⇑*e*P	**P**	**07 40 50.0**	**-2.0**
	comp=Z,72nm,1.0s,mb5.1						
MNGI	**Mangalore**	**22.92**	**297**	*e*P	**P**	**07 41 01.1**	**+9.0**
MNGI				*e*S	**S**	**07 45 02.7**	**+7.1**
KMI	**Kunming**	**23.09**	**16**	P	**P**	**07 40 55.0**	**+1.4**
KMI				AP		07 41 04.0	
KMI				XP		07 41 07.5	
KMI				PP	PP	07 41 24.5	+0.4
KMI				S	**S**	**07 45 03.3**	**+4.8**
KMI				XS		07 45 17.0	
KMI				AMB	AMB		
	comp=Z,190nm,1.5s,mb5.3						
KMI				AMB	AMB		
	comp=Z,3μm,5.6s						
KMI				LR	LR		
	comp=N,25μm,14.0s,MS5.8						
KMI				LR	LR		
	comp=E,13μm,17.9s,MS5.8						
KMI				LR	LR		
	comp=Z,28μm,14.4s,MS5.9						
KMI	**Kunming**	**23.09**	**16**	P	**P**	**07 40 55.0**	**+1.4**
KMI				*PP		07 41 04.0	
KMI				*SP		07 41 07.5	
KMI						07 41 24.5	
KMI				S	**S**	**07 45 03.2**	**+4.7**
KMI				*SS		07 45 17.0	
KMI				SS	SS	07 46 00.3	+16
KMI				pmax	pmax		
	comp=Z,190nm,1.5s,mb5.3						
KMI				MLR	MLR		
	comp=Z,28μm,14.4s,MS5.9						
KMI	**Kunming**	**23.09**	**16**	P	**P**	**07 40 55.0**	**+1.4**
	comp=Z,190nm,1.5s,mb5.3						
KMI				pP		07 41 04.0	
KMI				sP		07 41 07.5	
KMI				PP	PP	07 41 24.5	+0.4
KMI				S	**S**	**07 45 03.2**	**+4.7**
KMI				sS		07 45 17.0	
KMI				SS	SS	07 46 00.3	+16
KMI				LR	LR		
	comp=Z,28μm,14.4s,MS5.9						
BLSP	**Bilaspur**	**23.19**	**326**	*e*P	**P**	**07 40 54.7**	**0.0**
BLSP				*e*		07 44 57.2	
KEDI	**Kedomdong**	**23.30**	**119**	⇓*e*P	**P**	**07 40 51.4**	**-4.4**
KEDI				pmax	pmax		
	comp=Z,72nm,1.6s,mb4.8						
KEDI	**Kedomdong**	**23.30**	**119**	⇓*e*P	**P**	**07 40 51.4**	**-4.4**
	comp=Z,72nm,1.6s,mb4.8						
PPR	**Puerto Princes**	**23.87**	**72**	⇓*i*P	**P**	**07 41 03.4**	**+2.0**
GOA	**Goa**	**24.90**	**301**	⇑*i*	**P**	**07 41 21.4**	**+10**
	comp=Z,159nm,0.7s,mb5.7						
GOA				*i*		07 45 39.4	
ENPP	**El Nido**	**24.93**	**70**	*e*P	**P**	**07 41 11.8**	**+0.3**
GTK	**Gangtok**	**25.20**	**345**	*e*	**P**	**07 41 08.0**	**-6.0**
DGAR	**Diego Garcia**	**25.36**	**246**	*e*P	**P**	**07 41 14.4**	**-1.3**
DGAR				*e*	pP	07 41 22.7	-1.9
DGAR				pmax	pmax		
	comp=Z,1μm,1.9s,mb6.0						
DGAR	**Diego Garcia**	**25.36**	**246**	*e*P	**P**	**07 41 13.2**	**-2.5**
	comp=Z,572nm,1.6s,mb5.8						
DGAR				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						
KAD	**Karad**	**25.50**	**306**	*e*P	**P**	**07 41 18.1**	**+1.2**
KAD				*e*	pP	07 41 27.7	+1.9
	comp=Z,62nm,1.1s						
KAD				*e*		07 45 39.1	
GYA	**Guiyang**	**25.66**	**23**	⇑*i*P	**P**	**07 41 17.9**	**-0.4**
GYA				AP	pP	07 41 26.0	-1.2
GYA				XP	sP	07 41 30.4	-0.9
GYA				AMB	AMB		
	comp=Z,160nm,1.1s,mb5.5						
GYA				AMB	AMB		
	comp=Z,2μm,6.3s						
GYA				LR	LR		
	comp=N,17μm,18.2s,MS5.7						
GYA				LR	LR		
	comp=E,4μm,13.4s,MS5.7						
GYA				LR	LR		
	comp=Z,5μm,16.5s,MS5.1						
BUSP	**Coron**	**25.89**	**68**	*e*P	**P**	**07 41 21.4**	**+0.8**
ALBI	**Allahabad**	**25.96**	**330**	*e*P	**P**	**07 41 20.5**	**-0.6**
JIRN	**Jiri**	**26.22**	**341**	*e*P	**P**	**07 41 20.8**	**-2.7**
	comp=Z,1μm,1.2s,mb6.3						
HKC	**Hong Kong**	**26.32**	**41**	⇑*i*P	**P**	**07 41 26.0**	**+1.5**
CUYO	**Cuyo Island**	**26.32**	**71**	*e*P	**P**	**07 41 15.6**	**-9.0**
PKI	**Pulchoki**	**26.41**	**339**	*e*P	**P**	**07 41 23.1**	**-2.1**
	comp=Z,2μm,2.1s,mb6.3						
POO	**Poona**	**26.42**	**307**	⇑*i*P	**P**	**07 41 26.0**	**+0.6**
	comp=Z,40nm,1.0s,mb4.9						
POO				*i*		07 46 08.0	
LUBP	**Lubang**	**26.52**	**65**	*e*P	**P**	**07 41 26.2**	**-0.2**
DMN	**Daman**	**26.55**	**339**	*e*P	**P**	**07 41 24.9**	**-1.6**
	comp=Z,834nm,1.5s,mb6.0						
GUN	**Gumba**	**26.55**	**340**	*e*P	**P**	**07 41 25.1**	**-1.5**
	comp=Z,465nm,0.7s,mb6.1						
KKN	**Kakani**	**26.65**	**339**	*e*P	**P**	**07 41 26.7**	**-0.8**
	comp=Z,354nm,0.9s,mb5.9						
BHPL	**Bhopal**	**26.85**	**320**	*e*P	**P**	**07 41 30.1**	**+0.8**
BHPL				*e*	pP	07 41 39.9	+1.6
	comp=Z,34nm,1.0s						
SJMP	**San Jose**	**26.89**	**68**	*e*P	**P**	**07 41 30.9**	**+1.2**
LSA	**Lhasa**	**26.98**	**351**	*e*P	**P**	**07 41 30.8**	**+0.4**
LSA				pmax	pmax		
	comp=Z,121nm,0.7s,mb5.5						
LSA	**Lhasa**	**26.98**	**351**	*e*P	**P**	**07 41 30.8**	**+0.4**
	comp=Z,121nm,0.7s,mb5.5						
GKN	**Gorkha**	**27.08**	**338**	*e*P	**P**	**07 41 31.2**	**-0.2**
	comp=Z,614nm,0.9s,mb6.1						
KOLN	**Koldanda**	**27.27**	**336**	*e*P	**P**	**07 41 33.2**	**+0.1**
	comp=Z,1μm,1.3s,mb6.2						
BOM	**Bombay**	**27.44**	**307**	*e*P	**P**	**07 41 37.2**	**+2.4**
	comp=Z,400nm,2.4s,mb5.5						
RCP	**Roxas**	**28.15**	**71**	⇓*e*P	**P**	**07 41 41.8**	**+0.6**
TBP	**Tagbilaran**	**28.77**	**75**	*e*P	**P**	**07 41 46.9**	**+0.1**
CD2	**Chengdu**	**28.86**	**14**	P	**P**	**07 41 46.0**	**-1.4**
CD2				XP	sP	07 42 00.1	-0.4
CD2				PP	PP	07 42 42.8	+1.8
CD2				PPP	PPP	07 42 55.8	+2.0
CD2				S	**S**	**07 46 33.3**	**-0.9**
CD2				XS		07 46 48.3	
CD2				SS	SS	07 48 04.8	+2.1
CD2				AMB	AMB		
	comp=Z,290nm,0.7s,mb6.1						
CD2				LR	LR		
	comp=N,12μm,13.8s						
CD2				LR	LR		
	comp=Z,21μm,13.2s,MS5.9						
DAV	**Davao City (W)**	**30.05**	**81**	*e*P	**P**	**07 42 00.0**	**+1.8**
ENH	**Enshi**	**30.17**	**24**	*e*P	**P**	**07 41 57.0**	**-2.2**
	comp=Z,86nm,0.8s,mb5.5						
LGTI	**Lohaghat**	**30.19**	**332**	*e*P	**P**	**07 42 00.0**	**+0.7**
PTH	**Pithoragarh**	**30.28**	**333**	*e*P	**P**	**07 42 02.9**	**+2.7**
PTH				*e*S	**S**	**07 46 59.2**	**+2.4**
AJM	**Ajmer**	**30.92**	**321**	⇑*i*P	**P**	**07 42 06.0**	**+0.2**
NDI	**New Delhi**	**31.08**	**327**	*e*P	**P**	**07 42 05.0**	**-2.2**
NDI				*e*		07 47 07.0	
QZH	**Quanzhou**	**31.08**	**43**	⇑*i*P	**P**	**07 42 07.1**	**-0.1**
QZH				AP	pP	07 42 17.1	+0.8
QZH				AMB	AMB		
	comp=Z,330nm,1.3s,mb6.0						
QZH				AMB	AMB		
	comp=Z,2μm,3.9s						
QZH				LR	LR		
	comp=N,3μm,15.2s,MS6.0						
QZH				LR	LR		
	comp=E,25μm,15.2s,MS6.0						
QZH				LR	LR		
	comp=Z,14μm,13.7s,MS5.8						
DDI	**Dehra Dun**	**31.96**	**330**	*e*P	**P**	**07 42 14.2**	**-0.7**
DDI				*e*		07 47 28.5	
WHN	**Wuhan**	**32.65**	**31**	⇓P	**P**	**07 42 21.0**	**+0.1**
WHN				S	**S**	**07 47 26.0**	**-7.8**
WHN				AMB	AMB		
	comp=Z,2μm,8.2s						
WHN				LR	LR		
	comp=Z,37μm,14.4s,MS6.2						
TATO	**Taipei**	**33.13**	**46**	PFAKE		07 42 40.0	+15
TATO				LR	LR		
	comp=Z,6μm,19.0s,MS5.3						
XAN	**Xi'an**	**33.33**	**20**	P	**P**	**07 42 25.3**	**-1.4**
XAN				S	**S**	**07 47 45.6**	**+1.4**
XAN				AMB	AMB		
	comp=Z,249nm,1.3s,mb6.0						
XAN				AMB	AMB		
	comp=Z,933nm,8.0s						
XAN				LR	LR		
	comp=N,7μm,18.4s,MS5.5						
XAN				LR	LR		
	comp=E,6μm,17.9s,MS5.5						
XAN				LR	LR		
	comp=Z,12μm,13.0s,MS5.8						
SDNR	**Sundarnagar**	**33.46**	**330**	*e*P	**P**	**07 42 27.2**	**-0.7**
MBWA	**Marble Bar**	**33.57**	**137**	*e*P	**P**	**07 42 28.0**	**-1.0**
	comp=Z,64nm,1.3s,mb5.4						
MBWA				LR	LR		
	comp=Z,5μm,20.0s,MS5.2						
BHK	**Bhakra**	**33.67**	**329**	*e*	**P**	**07 42 39.0**	**+9.2**
LZH	**Lanzhou**	**33.85**	**12**	⇓P	**P**	**07 42 30.5**	**-0.8**
LZH				AP	pP	07 42 37.8	-2.6
LZH				XP	sP	07 42 41.0	-3.3
LZH				PP	PP	07 43 49.0	+4.1
LZH				S	**S**	**07 48 01.0**	**+8.7**
LZH				AMB	AMB		
	comp=Z,530nm,1.4s,mb6.3						
LZH				AMB	AMB		
	comp=Z,2μm,4.0s						
LZH				LR	LR		
	comp=N,7μm,13.4s						
LZH				LR	LR		
	comp=Z,9μm,21.6s						
LZH	**Lanzhou**	**33.85**	**12**	⇓P	**P**	**07 42 30.5**	**-0.8**
LZH				*SP	sP	07 42 41.0	-3.3
LZH						07 43 49.0	
LZH				S	**S**	**07 48 01.0**	**+8.7**
LZH				*SS		07 48 18.0	
LZH				SS	SS	07 50 20.0	+21
LZH				pmax	pmax		
	comp=Z,530nm,1.4s,mb6.3						
LZH				MLR	MLR		
	comp=Z,9μm,21.6s,MS5.5						
LZH	**Lanzhou**	**33.85**	**12**	⇓P	**P**	**07 42 30.5**	**-0.8**
	comp=Z,530nm,1.4s,mb6.3						
LZH				pP	pP	07 42 37.8	-2.6
LZH				sP	sP	07 42 41.0	-3.3
LZH				PP	PP	07 43 49.0	+4.1
LZH				S	**S**	**07 48 01.0**	**+8.7**
LZH				sS		07 48 18.0	
LZH				SS	SS	07 50 20.0	+21
LZH				LR	LR		
	comp=Z,9μm,21.6s,MS5.5						
PONG	**Pong**	**34.33**	**329**	*e*P	**P**	**07 42 35.0**	**-0.5**
DLH	**Dalhousie**	**34.80**	**330**	*e*P	**P**	**07 42 41.0**	**+1.5**
DLH				*e*	pP	07 42 52.0	+3.4
THN	**Thein Dam**	**34.84**	**330**	*e*	**P**	**07 42 28.3**	**-12**
FITZ	**Fitzroy Crossi**	**36.15**	**126**	*e*P	**P**	**07 42 49.5**	**-1.6**
	comp=Z,28nm,0.8s,mb5.2						
NJ2	**Nanjing**	**36.24**	**34**	*e*P	**P**	**07 42 51.6**	**-0.1**
NJ2				AP	pP	07 43 01.3	+0.4
NJ2				XP	sP	07 43 05.3	+0.5
NJ2				PP	PP	07 44 15.6	+0.6
NJ2				S	**S**	**07 48 31.0**	**+1.6**
NJ2				XS		07 48 47.0	
NJ2				AMB	AMB		
	comp=Z,630nm,1.2s,mb6.4						
NJ2				AMB	AMB		
	comp=Z,630nm,4.2s						

NJ2				LR	LR		
	comp=N,14µm,17.5s,MS6.1						
NJ2				LR	LR		
	comp=E,18µm,13.3s,MS6.1						
NJ2				LR	LR		
	comp=Z,11µm,19.4s						
GTA	**Gaotai**	**36.51**	**5**	*e*P	**P**	**07 42 53.0**	**-0.9**
GTA				AP	pP	07 43 01.3	-1.7
GTA				XP	sP	07 43 05.1	-1.8
GTA				PP	PP	07 44 15.1	-3.2
GTA				PPP	PPP	07 44 35.3	-3.0
GTA				PCP	PcP	07 45 18.3	+0.8
GTA				S	**S**	**07 48 31.3**	**-2.1**
GTA				SCP		07 49 03.6	
GTA				PCS		07 49 05.3	
GTA				AMB	AMB		
	comp=Z,96nm,1.3s,mb5.5						
GTA				AMB	AMB		
	comp=Z,1µm,6.5s						
GTA				LR	LR		
	comp=N,6µm,13.7s						
GTA				LR	LR		
	comp=E,3µm,20.1s						
GTA				LR	LR		
	comp=Z,7µm,14.4s,MS5.6						
SSE	**Sheshan**	**36.93**	**38**	P	**P**	**07 42 58.4**	**+0.9**
SSE				AP	pP	07 43 07.0	+0.3
SSE				XP	sP	07 43 11.8	+1.3
SSE				S	**S**	**07 48 41.0**	**+1.1**
SSE				XS		07 48 57.9	
SSE				AMB	AMB		
	comp=Z,91nm,0.8s,mb5.7						
SSE				AMB	AMB		
	comp=Z,627nm,6.3s						
SSE				LR	LR		
	comp=N,9µm,16.3s,MS5.7						
SSE				LR	LR		
	comp=E,7µm,16.3s,MS5.7						
SSE				LR	LR		
	comp=Z,16µm,16.2s,MS5.9						
SSE	**Sheshan**	**36.93**	**38**	P	**P**	**07 42 58.4**	**+0.9**
	comp=Z,91nm,0.8s,mb5.7						
SSE				pP	pP	07 43 07.0	+0.3
SSE				sP	sP	07 43 11.7	+1.2
SSE				PP	PP	07 44 30.2	+6.3
SSE				S	**S**	**07 48 41.0**	**+1.1**
SSE				sS		07 48 57.9	
SSE				SS	SS	07 51 49.5	+40
SSE				LR	LR		
	comp=Z,16µm,16.2s,MS5.9						
TIA	**Tai’an**	**38.59**	**28**	⇑P	**P**	**07 43 11.3**	**-0.1**
TIA				S	**S**	**07 49 08.0**	**+2.9**
TIA				AMB	AMB		
	comp=Z,183nm,1.6s,mb5.6						
TIA				LR	LR		
	comp=N,10µm,15.0s,MS5.9						
TIA				LR	LR		
	comp=E,10µm,14.0s,MS5.9						
KAKA	**Kakadu**	**39.66**	**114**	*e*P	**P**	**07 43 18.6**	**-1.9**
	comp=E,49nm,1.1s,mb5.2						
BTO	**Baotou**	**39.68**	**17**	*e*P	**P**	**07 43 19.3**	**-1.1**
BTO				S	**S**	**07 49 13.5**	**-8.1**
BTO				AMB	AMB		
	comp=Z,237nm,1.6s,mb5.7						
BTO				LR	LR		
	comp=N,2µm,12.8s,MS5.8						
BTO				LR	LR		
	comp=E,9µm,13.3s,MS5.8						
MUN	**Mundaring**	**39.80**	**152**	*e*P	**P**	**07 43 23.4**	**+1.8**
	comp=E,12nm,0.5s,mb4.9						
MUN				*e*S	**S**	**07 49 27.1**	**+3.6**
MUN	**Mundaring**	**39.80**	**152**	*e*P	**P**	**07 43 23.4**	**+1.8**
MUN				*e*S	**S**	**07 49 27.1**	**+3.6**
MUN				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.9						
KLBR	**Kellerberrin**	**40.23**	**150**	*e*P	**P**	**07 43 26.3**	**+1.3**
	comp=Z,467nm,1.2s,mb6.1						
HHC	**Hu-ho-hao-te**	**40.38**	**19**	⇑P	**P**	**07 43 26.9**	**+0.7**
HHC				AP	pP	07 43 36.3	+0.9
HHC				XP	sP	07 43 41.1	+1.9
HHC				PP	PP	07 45 06.3	+3.8
HHC				PCP	PcP	07 45 31.4	+1.8
HHC				SCP		07 49 14.4	
HHC				S	**S**	**07 49 29.9**	**-2.1**
HHC				XS		07 49 51.5	
HHC				SS	SS	07 52 28.6	+2.6
HHC				SCS	ScS	07 53 28.5	+0.7
HHC				AMB	AMB		
	comp=Z,3µm,7.4s						
HHC				LR	LR		
	comp=N,17µm,15.6s,MS6.1						
HHC				LR	LR		
	comp=E,11µm,16.8s,MS6.1						
HHC				LR	LR		
	comp=Z,16µm,15.6s,MS6.0						
KSH	**Kashi**	**40.59**	**336**	⇑P	**P**	**07 43 29.3**	**+1.4**
KSH				*e*XP	sP	07 43 37.1	-3.9
KSH				*e*PP	PP	07 45 07.3	+2.6
KSH				*e*PCS		07 49 21.3	
KSH				*e*S	**S**	**07 49 36.0**	**+0.8**
KSH				*e*PS		07 49 54.8	
KSH				*e*SS	SS	07 52 28.4	-2.3
KSH				*e*SCS	ScS	07 53 32.8	+3.7
KSH				AMB	AMB		
	comp=Z,210nm,1.1s,mb5.7						
KSH				AMB	AMB		
	comp=Z,820nm,3.0s						
KSH				LR	LR		
	comp=N,1µm,8.4s						
KSH				LR	LR		
	comp=E,1µm,7.0s						
NWAO	**Narrogin (SRO)**	**41.07**	**152**	*e*P	**P**	**07 43 32.3**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,59nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,3µm,20.0s						
NWAO	**Narrogin (SRO)**	**41.07**	**152**	P	**P**	**07 43 32.2**	**+0.3**
	comp=Z,50nm,1.2s,baz=317,slow=8.4,SNR=8.7						
NWAO				LR	LR	08 00 17.2	
	comp=Z,21nm,18.5s,baz=335,slow=36						
NWAO	**Narrogin (SRO)**	**41.07**	**152**	*e*P	**P**	**07 43 32.3**	**+0.4**
	comp=Z,59nm,1.3s,mb5.0						
NWAO				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
BJT	**Baijiatuau**	**41.32**	**24**	*e*P	**P**	**07 43 34.9**	**+1.0**
BJT				*e*	pP	07 43 43.3	+0.2
BJT				pmax	pmax		
	comp=Z,503nm,0.9s						
BJT	**Baijiatuau**	**41.32**	**24**	*e*P	**P**	**07 43 34.9**	**+0.9**
	comp=Z,503nm,0.9s,mb6.2						
BJT				*e*	pP	07 43 43.2	+0.1
WMQ	**Urumqi**	**41.34**	**351**	⇓*i*P	**P**	**07 43 35.0**	**+1.0**
WMQ				PP	PP	07 45 13.0	+0.6
WMQ				SCP		07 49 24.0	
WMQ				S	**S**	**07 49 50.0**	**+3.8**
WMQ				SS	SS	07 52 50.0	+4.3
WMQ				AMB	AMB		
	comp=Z,168nm,1.3s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,457nm,9.0s						
WMQ				LR	LR		
	comp=N,4µm,20.0s,MS5.5						
WMQ				LR	LR		
	comp=E,5µm,22.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,3µm,22.0s,MS5.2						
BJI	**Beijing**	**41.34**	**24**	*e*P	**P**	**07 43 35.0**	**+0.9**
BJI				XP	sP	07 43 46.3	-0.8
BJI				PP	PP	07 45 12.8	+0.2
BJI				PCS		07 49 24.3	
BJI				S	**S**	**07 49 44.5**	**-1.9**
BJI				SCS	ScS	07 53 35.4	+1.9
BJI				AMB	AMB		
	comp=Z,420nm,1.0s,mb6.0						
BJI				LR	LR		
	comp=N,4µm,19.0s,MS5.7						
BJI				LR	LR		
	comp=E,8µm,15.2s,MS5.7						
BJI				LR	LR		
	comp=Z,4µm,22.8s						
BJI	**Beijing**	**41.34**	**24**	*e*P	**P**	**07 43 35.0**	**+0.9**
BJI				*SP	sP	07 43 46.2	-0.9
BJI						07 45 12.7	
BJI				S	**S**	**07 49 44.5**	**-1.9**
BJI						07 53 35.4	
BJI				pmax	pmax		
	comp=Z,420nm,1.0s,mb6.0						
BJI				MLR	MLR		
	comp=Z,4µm,22.8s,MS5.2						
BJI	**Beijing**	**41.34**	**24**	*e*P	**P**	**07 43 35.0**	**+0.9**
	comp=Z,420nm,1.0s,mb6.0						
BJI				sP	sP	07 43 46.2	-0.9
BJI				PP	PP	07 45 12.7	+0.1
BJI				PcS		07 49 24.3	
BJI				S	**S**	**07 49 44.5**	**-1.9**
BJI				ScS	ScS	07 53 35.4	+1.9
BJI				LR	LR		
	comp=Z,4µm,22.8s,MS5.2						
DL2	**Dalian**	**42.91**	**30**	P	**P**	**07 43 47.4**	**+0.4**
DL2				S	**S**	**07 50 12.4**	**+3.0**
DL2				AMB	AMB		
	comp=Z,200nm,1.2s,mb5.7						
DL2				AMB	AMB		
	comp=Z,600nm,4.7s						
DL2				LR	LR		
	comp=N,4µm,16.1s,MS5.5						
DL2				LR	LR		
	comp=E,2µm,13.1s,MS5.5						
DL2				LR	LR		
	comp=Z,4µm,16.2s,MS5.4						
KZA	**Kyzart**	**43.07**	**338**	P	**P**	**07 43 50.6**	**+2.3**
	SNR=7.4						
UCH	**Uchtor**	**43.48**	**337**	P	**P**	**07 43 52.5**	**+0.9**
	SNR=32						
AAA	**Alma-Ata**	**43.50**	**340**	*i* P	**P**	**07 43 51.0**	**-0.7**
AAA				*i* S	**S**	**07 50 21.0**	**+3.1**
AAA				*e*SS	SS	07 53 42.0	+16
AAA				pmax	pmax		
	comp=Z,2µm,4.0s						
AAA				smax			
	comp=E,4µm,16.0s						
AAA				smax			
	comp=N,2µm,6.0s						
TKM2	**Tokmak 2**	**43.67**	**339**	P	**P**	**07 43 55.0**	**+2.0**
	SNR=6.9						
KBK	**Karagaybulak**	**43.68**	**338**	P	**P**	**07 43 54.2**	**+1.1**
	SNR=14						
AML	**Almayashu**	**43.72**	**336**	P	**P**	**07 43 54.8**	**+1.2**
	SNR=32						
AAK	**Ala-Archa**	**43.83**	**337**	P	**P**	**07 43 56.6**	**+2.2**
	SNR=20						
AAK	**Ala-Archa**	**43.83**	**337**	P	**P**	**07 43 56.0**	**+1.6**
AAK				pmax	pmax		
	comp=Z,392nm,2.2s,mb5.8						
AAK	**Ala-Archa**	**43.83**	**337**	*e*P	**P**	**07 43 54.4**	**-0.1**
	comp=Z,156nm,1.4s,mb5.5						
FRU	**Bishkek**	**43.96**	**338**	*i* P	**P**	**07 43 58.0**	**+2.6**
FRU				*e*		08 50 26.0	
FRU				pmax	pmax		
	comp=Z,320nm,2.0s,mb5.7						
FRU				MLR	MLR		
	comp=Z,5µm,18.0s,MS5.5						
CHMS	**Chumysh**	**44.05**	**338**	P	**P**	**07 43 56.9**	**+0.7**
	SNR=15						
EKS2	**Erkin-Say**	**44.14**	**337**	P	**P**	**07 43 57.9**	**+1.0**
	SNR=18						
WRA	**Warramunga Arr**	**44.22**	**123**	P	**P**	**07 43 56.6**	**-1.3**
WRA				S	**S**	**07 50 23.7**	**-5.0**
WRA	**Warramunga Arr**	**44.22**	**123**	P	**P**	**07 43 56.6**	**-1.3**
	comp=Z,96nm,1.2s,mb5.4,baz=300,slow=9.0,SNR=127						
WRA				ScP		07 49 31.3	
	comp=Z,3.7nm,1.2s,baz=291,slow=5.3,SNR=4.8						
WRA				S	**S**	**07 50 23.7**	**-5.0**
	comp=Z,7.1nm,1.3s,baz=295,slow=16,SNR=7.4						
WRAB	**Tennant Creek**	**44.23**	**123**	⇑*e*P	**P**	**07 43 56.7**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,122nm,1.1s,mb5.5						
WRAB				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
WRAB	**Tennant Creek**	**44.23**	**123**	⇑*e*P	**P**	**07 43 56.7**	**-1.2**
	comp=Z,122nm,1.1s,mb5.5						
WRAB				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
USP	**Ospenovka**	**44.37**	**338**	P	**P**	**07 43 59.0**	**+0.2**
	SNR=42						
INCN	**Inchon**	**44.59**	**36**	*e*P	**P**	**07 44 00.5**	**-0.2**
	comp=Z,324nm,1.6s,mb5.9						
INCN				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
MKAR	**Makanchi Array**	**45.23**	**347**	*i* P	**P**	**07 44 05.2**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,258nm,1.0s						
FORT	**Forrest**	**45.55**	**140**	*e*P	**P**	**07 44 08.7**	**+0.3**
	comp=Z,1µm,0.9s						
ASPA	**Alice Springs**	**45.63**	**128**	⇓*i*P	**P**	**07 44 08.4**	**-0.7**
ASPA				*e*S	**S**	**07 50 48.0**	**-0.9**
ASPA				*e*SCS	ScS	07 54 01.5	+1.2
ASAR	**Alice Springs**	**45.63**	**127**	P	**P**	**07 44 08.3**	**-0.8**
	comp=Z,7.2nm,0.6s,mb4.8,baz=300,slow=7.0,SNR=69						
SONM	**Songino Array**	**45.68**	**10**	P	**P**	**07 44 08.6**	**-0.6**
	comp=Z,53nm,0.8s,mb5.5,baz=190,slow=7.5,SNR=223						
ULN	**Ulaanbaatar**	**45.83**	**11**	P	**P**	**07 44 09.6**	**-0.7**
ULN				pmax	pmax		
	comp=Z,190nm,1.5s,mb5.8						
ULN	**Ulaanbaatar**	**45.83**	**11**	*e*P	**P**	**07 44 09.4**	**-0.9**
	comp=Z,172nm,1.5s,mb5.8						
ULN				LR	LR		
	comp=Z,6µm,20.0s,MS5.5						
SNY	**Shenyang**	**46.10**	**29**	⇑P	**P**	**07 44 12.1**	**-0.4**
SNY				AP	pP	07 44 19.6	-2.2
SNY				XP	sP	07 44 22.5	-3.1
SNY				PP	PP	07 46 01.8	+1.0
SNY				S	**S**	**07 50 59.3**	**+3.9**
SNY				XS		07 51 12.3	
SNY				AMB	AMB		
	comp=Z,170nm,1.4s,mb5.8						
SNY				LR	LR		
	comp=N,10µm,17.3s,MS5.8						
SNY				LR	LR		
	comp=E,3µm,15.7s,MS5.8						
SNY				LR	LR		
	comp=Z,9µm,16.2s,MS5.8						
ZAK	**Zakamensk**	**47.72**	**7**	⇑*i*P	**P**	**07 44 24.7**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,39nm,1.8s,mb5.1						
ZAK				pmax	pmax		
	comp=Z,43nm,1.8s,mb5.2						
CN2	**Changchun**	**48.49**	**29**	⇑P	**P**	**07 44 31.5**	**+0.2**
CN2				*e*XP	sP	07 44 44.5	+0.2
CN2				PP	PP	07 46 24.1	+0.4
CN2				*e*S	**S**	**07 51 30.5**	**+1.2**
CN2				*e*SS	SS	07 54 55.8	+1.5
CN2				AMB	AMB		
	comp=Z,90nm,1.3s,mb5.6						
CN2				AMB	AMB		
	comp=Z,1µm,8.0s						
CN2				LR	LR		
	comp=N,7µm,16.0s,MS6.0						
CN2				LR	LR		
	comp=E,10µm,16.0s,MS6.0						
CN2				LR	LR		
	comp=Z,7µm,18.0s,MS5.7						
MOY	**Mondy**	**48.78**	**4**	*e*P	**P**	**07 44 32.9**	**-0.5**
MOY				pmax	pmax		
	comp=Z,148nm,2.8s,mb5.5						
TLY	**Talaya**	**49.04**	**7**	P	**P**	**07 44 35.6**	**+0.2**
	comp=Z,320nm,0.9s,mb6.3,SNR=47						
TLY	**Talaya**	**49.04**	**7**	*c i*P	**P**	**07 44 35.4**	**0.0**
TLY				*e*		07 46 27.7	
TLY				*e*PPP	PPP	07 47 29.8	+6.7
TLY				*e*S	**S**	**07 51 37.9**	**+1.0**
TLY				*e*		07 54 22.7	
TLY				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.7						
TLY				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.6						
TLY	**Talaya**	**49.04**	**7**	*e*P	**P**	**07 44 34.5**	**-0.9**
	comp=Z,147nm,1.3s,mb5.8						
TLY				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
IRK	**Irkutsk**	**49.67**	**7**	*e*P	**P**	**07 44 40.6**	**+0.4**
IRK				*e*		07 46 05.1	
IRK				pmax	pmax		
	comp=Z,248nm,2.3s,mb5.8						
GUMO	**Guam**	**49.71**	**75**	PFAKE		07 44 50.0	+9.0
GUMO				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
KURK	**Kurchatov**	**49.76**	**346**	P	**P**	**07 44 40.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,460nm,2.1s,mb6.1						
KURK	**Kurchatov**	**49.76**	**346**	*e*P	**P**	**07 44 40.3**	**-0.6**
	comp=Z,108nm,0.8s,mb5.9						
KURK				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
CBIJ	**Chichi jima**	**50.51**	**57**	LR	LR	08 04 13.3	
	comp=Z,2µm,20.2s,MS5.0,baz=270,slow=34						
HIA	**Hailar**	**50.52**	**20**	*e*P	**P**	**07 44 46.1**	**-0.7**
HIA				pmax	pmax		
	comp=Z,143nm,1.2s						
HIA	**Hailar**	**50.52**	**20**	*e*P	**P**	**07 44 46.1**	**-0.7**
	comp=Z,143nm,1.2s,mb5.8						
JHJ	**Hachijo jima 2**	**50.98**	**49**	LR	LR	08 10 37.8	
	comp=Z,1µm,18.4s,MS4.9,baz=129,slow=41						
MDJ	**Mudanjiang**	**51.13**	**31**	P	**P**	**07 44 52.1**	**+0.6**
MDJ				AP	pP	07 44 59.3	-1.6
MDJ				XP	sP	07 45 02.8	-1.7
MDJ				PP	PP	07 46 48.0	-1.0
MDJ				SCP		07 49 54.5	
MDJ				PCS		07 50 00.0	
MDJ				S	**S**	**07 52 08.8**	**+2.9**
MDJ				SCS	ScS	07 54 39.3	+2.8
MDJ				AMB	AMB		
	comp=Z,103nm,1.1s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,1µm,3.6s						
MDJ				LR	LR		
	comp=N,2µm,15.2s,MS5.7						
MDJ				LR	LR		
	comp=E,6µm,16.5s,MS5.7						
MDJ				LR	LR		
	comp=Z,5µm,15.2s,MS5.6						
MDJ	**Mudanjiang**	**51.13**	**31**	*e*P	**P**	**07 44 52.1**	**+0.6**
	comp=Z,504nm,1.7s,mb6.2						
VLA	**Vladivostok**	**51.34**	**34**	⇓*i*P	**P**	**07 44 53.0**	**-0.1**
VLA				*i*		07 46 52.0	
VLA				*i* S	**S**	**07 52 00.0**	**-8.8**
VLA				pmax	pmax		
	comp=Z,2µm,6.4s						
VLA				pmax	pmax		
	comp=E,1µm,5.0s						
VLA				pmax	pmax		
	comp=N,500nm,3.0s						
VLA				pmax	pmax		
	comp=Z,850nm,7.0s						
VLA				smax			
	comp=N,2µm,18.0s						
VLA				smax			
	comp=E,2µm,16.0s						
VLA				MLR	MLR		
	comp=Z,6µm,16.0s,MS5.8						
VLA				MLR	MLR		
	comp=N,5µm,15.0s,MS5.8						
VLA				MLR	MLR		
	comp=E,5µm,18.0s,MS5.8						
MAT	**Matsushiro**	**51.47**	**44**	*e*P	**P**	**07 44 53.0**	**-1.2**
MAT				*e*S	**S**	**07 52 12.0**	**+1.3**
MAT				pmax	pmax		
	comp=Z,127nm,1.7s,mb5.6						
MAT				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.4						
MAT	**Matsushiro**	**51.47**	**44**	*e*P	**P**	**07 44 53.0**	**-1.2**
	comp=Z,127nm,1.7s,mb5.6						
MAT				*e*S	**S**	**07 52 12.0**	**+1.3**
MAT				LR	LR		
	comp=Z,4µm,22.0s,MS5.4						
MAT	**Matsushiro**	**51.47**	**44**	P	**P**	**07 44 52.6**	**-1.6**
MAT				S	**S**	**07 52 11.0**	**+0.3**
MAJO	**Matsushiro**	**51.47**	**44**	P	**P**	**07 44 54.1**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,140nm,1.8s,mb5.6						
MAJO	**Matsushiro**	**51.47**	**44**	*e*P	**P**	**07 44 53.7**	**-0.5**
	comp=Z,165nm,1.7s,mb5.7						
MAJO				LR	LR		
	comp=Z,3µm,22.0s,MS5.3						
ZAL	**Zalesovo**	**51.63**	**352**	P	**P**	**07 44 54.4**	**-0.7**
	comp=Z,60nm,0.6s,mb5.7,baz=305,slow=5.9,SNR=101						
RAYN	**Ar Rayn**	**52.63**	**297**	P	**P**	**07 45 03.6**	**+0.5**
	comp=Z,93nm,0.6s,mb5.9,SNR=14						
PMG	**Port Moresby**	**52.72**	**104**	P	**P**	**07 45 03.1**	**-0.8**
PMG				pmax	pmax		
	comp=Z,100nm,1.3s						
PMG	**Port Moresby**	**52.72**	**104**	*e*P	**P**	**07 45 02.3**	**-1.6**
	comp=Z,54nm,1.0s,mb5.4						
PMG				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
NVS	**Novosibirsk**	**52.74**	**351**	⇑*i*P	**P**	**07 45 01.5**	**-2.0**
NVS				pmax	pmax		
	comp=Z,168nm,1.3s,mb5.8						
NVS				pmax	pmax		
	comp=N,150nm,1.5s						
NVS				pmax	pmax		
	comp=E,89nm,1.2s						
NVS				pmax	pmax		
	comp=Z,80nm,2.1s,mb5.3						
NVS				pmax	pmax		
	comp=E,61nm,2.0s						
BVA0	**Borovoye Array**	**54.14**	**341**	P	**P**	**07 45 12.4**	**-1.4**
BVA0				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
BVAR	**Borovoye Array**	**54.14**	**341**	P	**P**	**07 45 12.4**	**-1.4**
	comp=Z,40nm,0.7s,mb5.5,baz=141,slow=8.2,SNR=119						
CTA	**Charters Tower**	**54.62**	**117**	*e*P	**P**	**07 45 17.2**	**-0.5**
	comp=Z,36nm,1.1s,mb5.3						
CTA				*e*	pP	07 45 25.7	-1.4
CTA				*e*S	**S**	**07 52 56.0**	**+2.4**
CTA	**Charters Tower**	**54.62**	**117**	*e*P	**P**	**07 45 17.2**	**-0.5**
CTA				*e*	pP	07 45 25.7	-1.4
CTA				*e*S	**S**	**07 52 56.0**	**+2.4**
CTA				pmax	pmax		
	comp=Z,36nm,1.1s						
CTAO	**Charters Tower**	**54.62**	**117**	*e*P	**P**	**07 45 16.9**	**-0.8**
CTAO				*e**PP	pP	07 45 25.7	-1.4
CTAO				pmax	pmax		
	comp=Z,191nm,1.3s,mb6.0						
CTAO				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.4						
CTAO	**Charters Tower**	**54.62**	**117**	*e*P	**P**	**07 45 16.9**	**-0.8**
	comp=Z,190nm,1.3s,mb6.0						
CTAO				*e*pP	pP	07 45 25.7	-1.5
CTAO				LR	LR		
	comp=Z,4µm,22.0s,MS5.4						
KLR	**Kul’dur**	**55.42**	**28**	κ *i*P	**P**	**07 45 20.8**	**-2.4**
KLR				*e*		07 45 27.8	
KLR				*e*S	**S**	**07 53 04.5**	**+0.5**
KLR				pmax	pmax		
	comp=N,200nm,2.2s						
KLR				pmax	pmax		
	comp=E,260nm,2.2s						
KLR				pmax	pmax		
	comp=Z,360nm,2.2s,mb6.0						
KLR				pmax	pmax		
	comp=N,800nm,7.0s						
KLR				pmax	pmax		
	comp=E,700nm,7.0s						
KLR				pmax	pmax		
	comp=Z,2µm,7.0s						
KLR				MLR	MLR		
	comp=E,6µm,14.0s						
KLR				MLR	MLR		
	comp=Z,12µm,14.0s,MS6.1						
STKA	**Stephens Creek**	**55.62**	**132**	*e*P	**P**	**07 45 24.2**	**-0.7**
	comp=Z,13nm,1.2s,mb4.8						
STKA				*e*pP	pP	07 45 33.2	-1.1
STKA				*e*S	**S**	**07 53 08.6**	**+1.7**
STKA	**Stephens Creek**	**55.62**	**132**	P	**P**	**07 45 24.5**	**-0.4**
	comp=Z,18nm,1.2s,mb5.0,baz=306,slow=10.0,SNR=13						
STKA				LR	LR	08 11 01.3	
	comp=Z,1µm,21.3s,MS4.9,baz=303,slow=38						
BOD	**Bodaibo**	**56.62**	**12**	*e*P	**P**	**07 45 29.9**	**-1.8**
BOD				*e*	pP	07 45 37.7	-3.4
BOD				pmax	pmax		
	comp=Z,67nm,1.6s,mb5.4						
BOD				pmax	pmax		
	comp=Z,84nm,1.9s,mb5.5						
ASAJ	**Asahikawa**	**58.22**	**38**	P	**P**	**07 45 42.1**	**-1.0**
	comp=Z,18nm,1.0s,mb5.1,baz=243,slow=14,SNR=5.2						
KMBO	**Kilima Mbogo**	**58.56**	**267**	P	**P**	**07 45 46.0**	**+0.1**
KMBO				S	**S**	**07 53 49.4**	**+3.5**
KMBO	**Kilima Mbogo**	**58.56**	**267**	P	**P**	**07 45 46.1**	**+0.2**
KMBO				pmax	pmax		
	comp=Z,160nm,2.2s						
KMBO	**Kilima Mbogo**	**58.56**	**267**	P	**P**	**07 45 46.0**	**+0.1**
	comp=Z,6.7nm,1.0s,mb4.6,baz=61,slow=8.4,SNR=15						
KMBO				LR	LR	08 08 27.2	
	comp=Z,7µm,18.9s,MS5.8,baz=89,slow=34						
KMBO	**Kilima Mbogo**	**58.56**	**267**	*e*P	**P**	**07 45 45.7**	**-0.3**
	comp=Z,125nm,2.0s,mb5.6						

KMBO				epP	pP	07 45 53.6	-1.9
KMBO				LR	LR		
	comp=Z,6µm,19.0s,MS5.8						
CLNS	**Chul'man**	**58.57**	**18**	eP	**P**	**07 45 45.3**	**-0.1**
CLNS				e		07 46 33.1	
CLNS				e		07 47 53.0	
CLNS				eS	**S**	**07 53 50.3**	**+4.9**
CLNS				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.7						
CLNS				pmax	pmax		
	comp=N,33nm,0.9s						
CLNS				pmax	pmax		
	comp=E,29nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
CLNS				pmax	pmax		
	comp=N,17nm,1.3s						
CLNS				pmax	pmax		
	comp=E,16nm,1.1s						
CLNS				smax			
	comp=N,31nm,1.7s						
CLNS				smax			
	comp=Z,8.0nm,1.2s						
CLNS				smax			
	comp=E,12nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,18µm,15.0s,MS6.3						
CLNS				MLR	MLR		
	comp=N,12µm,16.0s,MS6.2						
CLNS				MLR	MLR		
	comp=E,2µm,15.0s,MS6.2						
GNI	**Garni**	**59.02**	**316**	P	**P**	**07 45 49.0**	**+0.2**
GNI				pmax	pmax		
	comp=Z,51nm,1.1s						
GNI	**Garni**	**59.02**	**316**	P	**P**	**07 45 48.3**	**-0.4**
	comp=Z,2.6nm,0.4s,mb4.7,baz=232,slow=22,SNR=5.2						
GNI	**Garni**	**59.02**	**316**	eP	**P**	**07 45 47.6**	**-1.1**
	comp=Z,61nm,1.4s,mb5.4						
GNI				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
MTA	**Mtatsminda**	**59.65**	**318**	P	**P**	**07 45 52.0**	**-1.1**
TI2	**Plekhanov**	**59.70**	**318**	eP	**P**	**07 45 52.6**	**-0.8**
TI2				eS	**S**	**07 53 58.6**	**-1.7**
TI2				eS	**S**	**07 53 58.6**	**-1.7**
TI2				i		07 55 43.6	
TI2				MLR	MLR		
	comp=N,500nm,18.0s,MS4.8						
TI2				MLR	MLR		
	comp=E,500nm,18.0s,MS4.8						
TI2				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**59.80**	**35**α	iP	**P**	**07 45 53.2**	**-0.9**
YSS				i *PP	pP	07 46 04.3	+0.6
YSS				e*SP	sP	07 46 11.0	+3.9
YSS				e		07 46 33.7	
YSS				e		07 48 04.0	
YSS				eS	**S**	**07 54 00.0**	**-1.6**
YSS				ePS	PS	07 54 12.0	-8.8
YSS				eSSS	SSS	08 00 24.0	-5.6
YSS				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.8						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YSS				MLR	MLR		
	comp=E,2µm,17.0s						
YSS				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**59.80**	**35**	eP	**P**	**07 45 53.8**	**-0.3**
	comp=Z,95nm,1.0s,mb5.8						
YSS				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
SVE	**Sverdlovsk**	**60.54**	**339**⇑	iP	**P**	**07 45 57.0**	**-2.0**
SVE				e		07 46 42.6	
SVE				ePPP	PPP	07 49 38.0	-3.5
SVE				i S	**S**	**07 54 10.0**	**-0.9**
SVE				i PS	PS	07 54 26.0	-4.4
SVE				e		07 55 48.0	
SVE				eSS	SS	07 58 12.0	+1.5
SVE				pmax	pmax		
	comp=Z,380nm,2.3s,mb6.1						
SVE				smax			
	comp=N,500nm,9.0s						
SVE				smax			
	comp=E,2µm,9.0s						
SVE				MLR	MLR		
	comp=N,1µm,16.0s,MS5.4						
SVE				MLR	MLR		
	comp=E,2µm,16.0s,MS5.4						
SVE				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.5						
ONI	**Oni**	**60.93**	**318**	P	**P**	**07 46 00.2**	**-1.7**
ONI				S	**S**	**07 54 15.9**	**-0.3**
ERZM	**Erzurum**	**61.29**	**315**	i P	**P**	**07 46 05.2**	**+0.9**
KIV	**Kislovodsk**	**62.03**	**319**c	iP	**P**	**07 46 08.3**	**-1.0**
KIV				e		07 46 48.1	
KIV				e		07 48 23.9	
KIV				i S	**S**	**07 54 29.1**	**-0.9**
KIV				eSS	SS	07 58 37.0	+2.6
KIV				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.4						
KIV				smax			
	comp=N,82nm,2.3s						
KIV				smax			
	comp=E,71nm,2.3s						
KIV				MLR	MLR		
	comp=N,571nm,19.0s,MS5.0						
KIV				MLR	MLR		
	comp=E,963nm,19.0s,MS5.0						
KIV				MLR	MLR		
	comp=Z,970nm,19.0s,MS5.0						
KIV	**Kislovodsk**	**62.03**	**319**	eP	**P**	**07 46 08.0**	**-1.3**
	comp=Z,75nm,1.3s,mb5.7						
KIV				LR	LR		
	comp=Z,281nm,20.0s,MS4.4						
ASF	**Jabal al Asfar**	**62.25**	**305**	P	**P**	**07 46 11.1**	**+0.2**
	comp=Z,2.7nm,0.8s,mb4.5,baz=309,slow=2.0,SNR=4.7						
GOF	**Gofitskoye**	**62.28**	**320**⇑	iP	**P**	**07 46 10.0**	**-0.9**
GOF				pmax	pmax		
	comp=Z,70nm,1.8s,mb5.5						
ELZG	**Elazig**	**62.51**	**312**	i P	**P**	**07 46 12.9**	**+0.3**
GZT	**Gaziantep**	**63.20**	**311**	i P	**P**	**07 46 17.0**	**-0.1**
EIL	**Elat**	**63.27**	**302**	P	**P**	**07 46 18.2**	**+0.6**
	comp=Z,4.4nm,0.8s,mb4.7,baz=90,slow=9.1,SNR=3.8						
EIL	**Elat**	**63.27**	**302**	eP	**P**	**07 46 18.0**	**+0.3**
	comp=Z,68nm,1.4s,mb5.6						
EIL				e	pP	07 46 26.9	-0.4
KAHT	**Ahir Dag**	**63.81**	**311**	i P	**P**	**07 46 30.5**	**+9.3**
SOC	**Sochi**	**63.84**	**318**	eP	**P**	**07 46 17.2**	**-4.1**
SOC				e		07 46 50.8	
SOC				e		07 48 36.8	
SOC				ePPP	PPP	07 50 10.6	-4.6
SOC				eS	**S**	**07 54 50.4**	**-2.4**
SOC				e		07 56 08.3	
SOC				eSS	SS	07 59 03.9	+1.3
SOC				pmax	pmax		
	comp=Z,74nm,1.5s,mb5.5						
SOC				pmax	pmax		
	comp=N,58nm,1.6s						
SOC				pmax	pmax		
	comp=E,16nm,1.0s						
SOKR	**Solikamsk**	**63.94**	**339**c	iP	**P**	**07 46 21.0**	**-0.7**
SOKR				S	**S**	**07 54 52.8**	**-1.0**
SOKR				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
SOKR				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
YAK	**Yakutsk**	**64.21**	**17**	eP	**P**	**07 46 21.7**	**-1.6**
YAK	**Yakutsk**	**64.21**	**17**	eP	**P**	**07 46 21.6**	**-1.8**
	comp=Z,388nm,1.1s,mb6.3						
YAK				LR	LR		
	comp=Z,9µm,19.0s,MS6.0						
MBAR	**Mbarara**	**65.03**	**268**	PFAKE		07 46 40.0	+11
MBAR				LR	LR		
	comp=Z,835nm,19.0s,MS5.0						
TAU	**Tasmania Unive**	**65.09**	**141**	PFAKE		07 46 40.0	+11
TAU				LR	LR		
	comp=Z,501nm,20.0s,MS4.7						
HNR	**Honiara**	**65.18**	**102**	P	**P**	**07 46 32.6**	**+2.2**
HNR				pmax	pmax		
	comp=Z,210nm,1.1s,mb6.1						
HNR	**Honiara**	**65.18**	**102**	eP	**P**	**07 46 27.2**	**-3.2**
	comp=Z,271nm,1.2s,mb6.2						
HNR				LR	LR		
	comp=Z,959nm,19.0s,MS5.0						
AVNT	**Avonos**	**65.67**	**311**	i P	**P**	**07 46 33.2**	**0.0**
CSS	**Prodhromos**	**65.83**	**307**	P	**P**	**07 46 33.5**	**-0.8**
	comp=Z,99nm,1.4s,mb5.7						
BRTR	**Keskin Array B**	**66.85**	**312**	P	**P**	**07 46 38.8**	**-1.9**
	comp=Z,3.9nm,0.9s,mb4.4,baz=135,slow=6.5,SNR=8.1						
ELDT	**Eldivan**	**67.22**	**313**	i P	**P**	**07 46 41.4**	**-1.7**
BALT	**Daday**	**67.55**	**314**	i P	**P**	**07 46 57.3**	**+12**
SIM	**Simferopol'**	**68.08**	**318**c	iP	**P**	**07 46 47.3**	**-1.1**
SIM				e		07 47 06.0	
SIM				i S	S	07 55 44.5	+0.1
SIM				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
SIM				MLR	MLR		
	comp=Z,1µm,24.2s,MS5.0						
SIM	**Simferopol'**	**68.08**	**318**	eP	**P**	**07 46 47.8**	**-0.6**
SGKT	**Sivrigoynuk**	**68.25**	**313**	i P	**P**	**07 46 49.5**	**0.0**
ESKT	**Eskisehir**	**68.87**	**311**	i P	**P**	**07 46 53.8**	**+0.5**
HENT	**Hendek**	**69.16**	**313**	i P	**P**	**07 46 50.6**	**-4.5**
LSZ	**Lusaka**	**69.18**	**253**	P	**P**	**07 46 54.7**	**-0.9**
LSZ				pmax	pmax		
	comp=Z,110nm,1.9s,mb5.5						
LSZ	**Lusaka**	**69.18**	**253**	eP	**P**	**07 46 53.6**	**-1.9**
	comp=Z,105nm,1.8s,mb5.5						
LSZ				e	pP	07 47 02.3	-2.9
LSZ				LR	LR		
	comp=Z,4µm,19.0s,MS5.6						
SKR	**Severo-Kuril's**	**69.35**	**36**	i P	**P**	**07 46 52.7**	**-3.4**
SKR				e	pP	07 47 02.5	-3.1
SKR				e		07 56 45.0	
SKR				pmax	pmax		
	comp=Z,90nm,0.7s,mb5.8						
SKR				MLR	MLR		
	comp=N,3µm,16.0s,MS5.8						
SKR				MLR	MLR		
	comp=E,3µm,16.0s,MS5.8						
SKR				MLR	MLR		
	comp=Z,6µm,16.0s,MS5.9						
MATP	**Matopo**	**69.79**	**247**	P	**P**	**07 46 58.5**	**-0.8**
	comp=Z,8.9nm,0.9s,mb4.7,baz=77,slow=7.0,SNR=19						
CASY	**Casey**	**69.87**	**174**	PFAKE		07 47 10.0	+11
CASY				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
MOS	**Moscow**	**70.09**	**329**	eP	**P**	**07 47 00.0**	**-0.5**
MOS				e		07 47 06.7	
MOS				e		07 47 24.9	
MOS				eS	S	07 56 06.2	-1.7
MOS				pmax	pmax		
	comp=Z,148nm,1.8s						
MOS				MLR	MLR		
	comp=Z,3µm,20.5s						
MOS				MLR	MLR		
	comp=N,3.0nm,22.3s						
MOS				MLR	MLR		
	comp=E,2.0nm,20.5s						
MOS	**Moscow**	**70.09**	**329**	eP	**P**	**07 46 57.5**	**-3.0**
ULDT	**Uludag**	**70.30**	**312**	i P	**P**	**07 47 10.3**	**+8.3**
OBN	**Obninsk**	**70.37**	**328**	eP	**P**	**07 47 01.8**	**-0.4**
OBN				i *PP	pP	07 47 11.6	-0.2
OBN				e		07 49 34.5	
OBN				S	S	07 56 06.7	-4.5
OBN				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
OBN	**Obninsk**	**70.37**	**328**	eP	**P**	**07 47 00.8**	**-1.4**
	comp=Z,122nm,1.2s,mb5.7						
OBN				LR	LR		
	comp=Z,495nm,19.0s,MS4.8						
MA2	**Magadan**	**70.45**	**26**	eP	**P**	**07 47 02.5**	**-0.1**
MA2	**Magadan**	**70.45**	**26**	eP	**P**	**07 47 01.4**	**-1.2**
	comp=Z,210nm,1.4s,mb5.9						
MA2				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
AYDN	**Tasoluk**	**70.72**	**309**	i P	**P**	**07 47 04.2**	**-0.4**
BTOK	**Tokmak**	**71.04**	**311**	i P	**P**	**07 47 15.3**	**+8.8**
PET	**Petropavlovsk**	**71.66**	**35**α	iP	**P**	**07 47 09.4**	**-0.6**
PET				e		07 47 30.6	
PET				eS	S	07 56 30.0	+3.8
PET				pmax	pmax		
	comp=Z,1µm,4.5s						
PET				pmax	pmax		
	comp=Z,700nm,18.1s						
PET				pmax	pmax		
	comp=Z,58nm,1.1s,mb5.4						
PET				pmax	pmax		
	comp=Z,900nm,4.4s						
PET				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
PET				pmax	pmax		
	comp=Z,200nm,18.6s						
PET				pmax	pmax		
	comp=Z,200nm,13.1s						
PET				smax			
	comp=N,800nm,21.4s						
PET				smax			
	comp=E,700nm,21.6s						
PET				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
PET				MLR	MLR		
	comp=Z,3µm,21.0s						
PET	**Petropavlovsk**	**71.66**	**35**	eP	**P**	**07 47 08.7**	**-1.4**
	comp=Z,80nm,1.2s,mb5.5						
PET				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
TIXI	**Tiksi**	**71.77**	**11**	eP	**P**	**07 47 07.9**	**-2.5**
TIXI				e		07 49 54.4	
TIXI				eS	S	07 56 29.3	+2.2
TIXI				pmax	pmax		
	comp=Z,227nm,1.4s,mb5.9						
TIXI				pmax	pmax		
	comp=N,40nm,1.2s						
TIXI				pmax	pmax		
	comp=E,64nm,1.5s						
TIXI				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.8						
TIXI	**Tiksi**	**71.77**	**11**	PFAKE		07 47 20.0	+10
TIXI				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
KIS	**Kishinev**	**72.22**	**319**	eP	**P**	**07 47 14.0**	**+0.5**
KIS				e	pP	07 47 25.0	+1.9
KIS				e		07 47 31.0	
KIS				ePPP	PPP	07 51 41.0	+3.1
KIS				eS	S	07 56 28.0	-4.7
KIS				MLR	MLR		
	comp=N,900nm,19.0s,MS5.2						
KIS				MLR	MLR		
	comp=E,800nm,19.0s,MS5.2						
KIS				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
PRD	**Provadia**	**72.26**	**314**	eP	**P**	**07 47 26.0**	**+12**
IDI	**Anoyia**	**72.68**	**306**	P	**P**	**07 47 16.3**	**-0.2**
	comp=Z,9.3nm,0.8s,mb4.8,baz=101,slow=3.9,SNR=8.2						
JMB	**Yambol**	**72.69**	**314**	eP	**P**	**07 47 27.0**	**+11**
SEY	**Seymchan**	**72.78**	**24**	eP	**P**	**07 47 17.1**	**+0.6**
SEY					pP	07 47 25.6	-0.5
SEY						07 50 01.3	
SEY				ePPP	PPP	07 51 46.8	+3.5
SEY				eS	S	07 56 42.2	+3.4
SEY				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.6						
SEY				smax			
	comp=N,3µm,19.8s						
SEY				smax			
	comp=E,2µm,18.8s						
AKASG	**Malin Array Be**	**72.98**	**322**	P	**P**	**07 47 15.7**	**-2.2**
	comp=E,5.6nm,0.6s,mb4.7,baz=89,slow=4.7,SNR=15						
AKASG				PP	PP	07 50 03.7	+1.2
	comp=E,0.7nm,0.4s,baz=89,slow=7.3,SNR=4.0						
SZH	**Strazhica**	**73.32**	**314**	eP	**P**	**07 47 36.0**	**+16**
VRI	**Vrincioaia**	**73.34**	**317**	⇑P	**P**	**07 47 20.0**	**-0.1**
DIM	**Dimitrovgrad**	**73.37**	**313**	eP	**P**	**07 47 33.0**	**+13**
MLR	**Muntele Rosu**	**73.79**	**317**	P	**P**	**07 47 22.1**	**-0.6**
	comp=E,5.6nm,0.8s,mb4.6,baz=110,slow=3.0,SNR=7.4						
MLR	**Muntele Rosu**	**73.79**	**317**	⇓P	**P**	**07 47 23.8**	**+1.1**
MAW	**Mawson**	**74.05**	**192**	P	**P**	**07 47 24.4**	**+0.6**
	comp=E,6.0nm,0.7s,mb4.6,baz=53,slow=18,SNR=2.1						
MAW				LR	LR	08 16 31.3	
	comp=E,1µm,18.0s,MS5.3,baz=39,slow=33						
PGB	**Panagyurishte**	**74.46**	**313**	eP	**P**	**07 47 36.0**	**+9.4**
MMB	**Musomiste**	**74.61**	**312**	eP	**P**	**07 47 37.0**	**+9.5**
BURAR	**Bucovina Array**	**74.74**	**319**	⇑P	**P**	**07 47 28.3**	**+0.1**
MNK	**Minsk**	**74.89**	**326**	eP	**P**	**07 47 25.0**	**-3.9**
KKB	**Krupnik**	**75.13**	**312**	eP	**P**	**07 47 43.0**	**+12**
VTS	**Vitosha**	**75.16**	**313**	⇑P	**P**	**07 47 26.4**	**-4.3**
VTS	**Vitosha**	**75.16**	**313**	eP	**P**	**07 47 45.0**	**+14**
IDID	**Didziasalis**	**75.72**	**327**	eP	**P**	**07 47 33.5**	**-0.2**
IDID				AMPb	AMB	07 47 51.1	
	comp=Z,11nm,1.2s,mb4.7						
JOF	**Joensuu**	**75.95**	**335**	ep	**P**	**07 47 34.5**	**-0.3**
	comp=Z,30nm,1.1s,mb5.1						
LVV	**L'vov**	**75.99**	**321**	eP	**P**	**07 47 39.2**	**+4.0**
LVV				e		07 47 55.0	
LVV				ePS	PS	07 58 15.8	+19
LVV				eSS	SS	08 02 07.0	-3.7
LVV				MLR	MLR		
	comp=N,160nm,19.0s,MS5.0						
LVV				MLR	MLR		
	comp=E,680nm,19.0s,MS5.0						
LVV				MLR	MLR		
	comp=Z,790nm,19.0s,MS5.0						
IIGN	**Ignalina**	**76.02**	**327**	eP	**P**	**07 47 35.1**	**-0.1**
IIGN				AMPb	AMB	07 47 48.8	
	comp=Z,16nm,1.2s,mb4.8						
IZAR	**Zarasai**	**76.11**	**327**	eP	**P**	**07 47 35.6**	**-0.2**
ISAL	**Salakas**	**76.13**	**327**	eP	**P**	**07 47 35.2**	**-0.8**
ISAL				AMPb	AMB	07 47 50.6	
	comp=Z,9.0nm,1.1s,mb4.6						
DRV	**Dumont d'Urvil**	**76.22**	**163**	S	S	07 57 18.0	+1.0
DRV				L		08 07 00.0	
KWP	**Kalwaria**	**76.79**	**320**	eP	**P**	**07 47 40.6**	**+0.9**
KWP				ePcP	PcP	07 47 49.0	-2.2
KWP				epP	pP	07 47 55.8	+6.3
KWP				MLR	MLR	08 30 14.2	
	comp=Z,1µm,19.8s,MS5.1						
KOLS	**Kolonicke sedl**	**76.94**	**320**	i P	**P**	**07 47 42.5**	**+1.9**
KOLS				e		07 47 54.6	
SUW	**Suwalki**	**77.41**	**325**	eP	**P**	**07 47 43.1**	**+0.1**
SUW				epP	pP	07 47 53.2	+0.4
SUW				MLR	MLR	08 27 57.3	
	comp=Z,1µm,20.0s,MS5.2						
CRVS	**Cervenica-Dubn**	**77.46**	**319**	i P	**P**	**07 47 45.1**	**+1.6**
CRVS				e		07 48 04.0	
CRVS				i S	S	07 57 34.8	+4.0
DIVS	**Divcibare**	**77.71**	**314**	eP	**P**	**07 47 45.0**	**+0.1**
FINES	**FINESS Array B**	**77.78**	**333**	P	**P**	**07 47 44.0**	**-1.0**
	comp=Z,5.1nm,0.6s,mb4.6,baz=105,slow=6.1,SNR=21						
FINES				LR	LR	08 27 22.7	
	comp=Z,2µm,20.4s,MS5.5,baz=110,slow=40						
FINES	**FINESS Array B**	**77.78**	**333**	P	**P**	**07 47 44.0**	**-1.0**
FINES				LR	LR	08 27 22.7	
KAF	**Kangasniemi**	**77.88**	**333**	ep	**P**	**07 47 45.3**	**-0.2**
	comp=Z,28nm,1.1s,mb5.1,baz=104,slow=5.1						
KAF	**Kangasniemi**	**77.88**	**333**	eP	**P**	**07 47 45.3**	**-0.2**
KAF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
KECS	**Kecovo**	**78.03**	**319**	i P	**P**	**07 47 47.9**	**+1.3**
KECS				e		07 48 07.6	
PSZ	**Piszkesteto**	**78.33**	**318**	eP	**P**	**07 47 48.0**	**-0.3**
PSZ				e*PP	pP	07 48 01.1	+3.1
PSZ				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
PSZ	**Piszkesteto**	**78.33**	**318**	eP	**P**	**07 47 48.0**	**-0.3**
	comp=Z,21nm,1.0s,mb5.0						
PSZ				epP	pP	07 48 01.1	+3.1
PSZ	**Piszkesteto**	**78.33**	**318**	eP	**P**	**07 47 48.5**	**+0.2**
OJC	**Ojcow**	**78.75**	**321**	eP	**P**	**07 47 50.5**	**0.0**
OJC				ePcP	PcP	07 47 59.8	+0.2
OJC				eS	S	07 57 44.4	-0.1
OJC				MLR	MLR	08 27 46.0	
	comp=Z,900nm,20.6s,MS5.1						
SUR	**Sutherland**	**78.85**	**236**	eP	**P**	**07 47 52.2**	**+0.7**
	comp=Z,102nm,1.5s,mb5.5						
SUR				epP	pP	07 48 00.2	-1.0
SUR				LR	LR		
	comp=Z,892nm,19.0s,MS5.1						
VYHS	**Vyhne**	**79.11**	**319**	i P	**P**	**07 47 53.1**	**+0.6**
VYHS				i S	S	07 57 49.2	+0.7
VYHS	**Vyhne**	**79.11**	**319**	i P	**P**	**07 47 53.1**	**+0.6**
VYHS				e		07 48 20.1	
VYHS				i S	S	07 57 49.2	+0.7
OKC	**Ostrava-Krasne**	**79.74**	**320**	eP	**P**	**07 47 56.9**	**+1.0**
OKC				epP	pP	07 48 09.1	+3.4
OKC				eS	S	07 57 53.9	-1.2
OKC				eSKS	SKS	07 58 07.0	-7.1
OKC				AMS	AMS	08 30 10.0	
	comp=Z,500nm,16.1s						
TSUM	**Tsumeb**	**79.75**	**250**	eP	**P**	**07 47 56.5**	**0.0**
	comp=Z,27nm,1.4s,mb5.0						
TSUM				epP	pP	07 48 04.9	-1.5
TSUM				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
BILL	**Bilibino**	**80.10**	**21**	eP	**P**	**07 47 57.2**	**-0.3**
BILL				e*PP	pP	07 48 05.5	-1.8
BILL				pmax	pmax		
	comp=Z,141nm,1.7s,mb5.6						
BILL				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.9						
BILL	**Bilibino**	**80.10**	**21**	eP	**P**	**07 47 57.2**	**-0.3**
	comp=Z,141nm,1.7s,mb5.6						
BILL				epP	pP	07 48 05.5	-1.7
BILL				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
FX1	**Attu Island--F**	**80.12**	**37**	eP	**P**	**07 47 57.3**	**-0.5**
MORC	**Moravsky Berou**	**80.12**	**320**	eP	**P**	**07 47 57.7**	**-0.3**
MORC				e*PP	pP	07 48 08.0	+0.3
MORC				pmax	pmax		
	comp=Z,33nm,1.2s,mb5.1						
MORC	**Moravsky Berou**	**80.12**	**320**	eP	**P**	**07 47 57.7**	**-0.2**
	comp=Z,34nm,1.2s,mb5.2						
MORC				epP	pP	07 48 08.0	+0.3
ZST	**Bratislava**	**80.22**	**318**	i sP	sP	07 48 12.2	+0.7
ZST				i S	S	07 58 01.2	+1.1
ARCES	**ARCESS Array B**	**80.42**	**340**	P	**P**	**07 47 58.9**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.6,baz=90,slow=3.6,SNR=12						
ARCES				LR	LR	08 29 11.8	
	comp=Z,3µm,20.3s,MS5.7,baz=117,slow=40						
SMY	**Shemya**	**80.66**	**37**	PFAKE		07 48 10.0	+9.3
SMY				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
GKP	**Gorka Klasztor**	**80.76**	**323**	eP	**P**	**07 48 00.1**	**-1.2**
GKP				e*PP	pP	07 48 08.1	-2.9
GKP				MLR	MLR		
	comp=Z,1µm,21.8s,MS5.2						
GKP	**Gorka Klasztor**	**80.76**	**323**	eP	**P**	**07 48 00.1**	**-1.1**
GKP				epP	pP	07 48 08.2	-2.9
GKP				MLR	MLR	08 30 02.2	
	comp=Z,1µm,21.8s,MS5.2						
DPC	**Dobruska-Polom**	**80.97**	**320**	eP	**P**	**07 48 03.8**	**+1.4**
DPC				epP	pP	07 48 15.4	+3.2
DPC				eS	S	07 58 08.1	+0.3
DPC				eSKS	SKS	07 58 19.1	-3.7
DPC				AMS	AMS	08 30 40.0	
	comp=Z,1µm,19.0s						
KTK1	**Kautokeino**	**81.04**	**340**	eP	**P**	**07 48 04.5**	**+2.1**
KSP	**Ksiaz**	**81.05**	**321**	eP	**P**	**07 48 03.8**	**+1.0**
KSP				e*PP	pP	07 48 15.3	+2.7
KSP				eS	S	07 58 08.0	-0.6
KSP				MLR	MLR		
	comp=Z,2µm,21.2s,MS5.4						
SYO	**Syowa Base**	**81.17**	**198**	⇓P	**P**	**07 48 03.8**	**+0.7**
SYO	**Syowa Base**	**81.17**	**198**	⇓PcP	PcP	07 48 10.7	+1.0
ARSA	**Arzberg**	**81.19**	**317**⇓	iP	**P**	**07 48 04.1**	**+0.5**
	comp=Z,278nm,3.1s						
UPC	**Upice**	**81.19**	**321**	eP	**P**	**07 48 04.2**	**+0.7**
UPC				epP	pP	07 48 16.4	+3.1
BOJS	**Bojanci**	**81.22**	**315**	eP	**P**	**07 48 03.6**	**-0.2**
VISS	**Visnje**	**81.53**	**316**	eP	**P**	**07 48 05.0**	**-0.4**
LJU	**Ljubljana**	**81.77**	**316**	eP	**P**	**07 48 08.0**	**+1.3**
PRU	**Pruhonice**	**82.08**	**320**	eP	**P**	**07 48 09.3**	**+1.1**
PRU				e	pP	07 48 19.8	+1.8
PRU				e		07 58 19.7	
PRU				e		07 58 20.4	
PRU				MLR	MLR		
	comp=Z,900nm,17.5s,MS5.2						
PRU	**Pruhonice**	**82.08**	**320**	eP	**P**	**07 48 09.3**	**+1.1**
PRU				epP	pP	07 48 19.8	+1.8
PRU				eS	S	07 58 19.7	+0.5
PRU				AMS	AMS	08 31 30.0	
	comp=Z,900nm,17.5s						
MOA	**Molln**	**82.08**	**318**⇑	iP	**P**	**07 48 08.4**	**+0.1**
	comp=Z,308nm,4.0s						
PVCC	**Panska Ves**	**82.11**	**320**	eP	**P**	**07 48 09.3**	**+1.0**
PVCC				e		07 48 21.9	
PVCC				e		07 58 21.2	
PVCC				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.2						
PVCC	**Panska Ves**	**82.11**	**320**	eP	**P**	**07 48 09.3**	**+1.0**
PVCC				epP	pP	07 48 21.9	+3.8
PVCC				eS	S	07 58 21.2	+1.7

PVCC				*e*x	x	07 58 33.5	
PVCC				AMS	AMS	08 31 40.0	
	comp=Z,1µm,18.0s						
VOY	**Vojsko**	**82.21**	**316**	*e*P	**P**	**07 48 09.8**	**+0.9**
VOY				*e*		07 48 32.2	
VOY				*e*		07 48 48.8	
BRG	**Berggiesshubel**	**82.53**	**321**	*i* P	**P**	**07 48 12.2**	**+1.7**
BRG				*e*		07 48 24.1	
BRG				*e*S	S	07 58 23.0	-0.8
BRG				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.2						
BRG				MLR	MLR		
	comp=Z,1µm,16.1s,MS5.4						
BRG	**Berggiesshubel**	**82.53**	**321**	*i* P	**P**	**07 48 12.2**	**+1.7**
	comp=Z,40nm,1.8s,mb5.2						
BRG				*e*		07 48 24.1	
BRG				*i*		07 48 38.9	
BRG				*i*		07 48 46.4	
BRG				*e*S	S	07 58 23.0	-0.8
BRG				*e*SS	SS	08 03 31.0	-18
BRG				LR	LR		
	comp=Z,1µm,16.1s,MS5.4						
GEC2	**GERESS Array S**	**82.53**	**319**	*e*P	**P**	**07 48 11.2**	**+0.6**
GEC2				pmax	pmax		
	comp=Z,81nm,1.8s,mb5.5						
GEC2	**GERESS Array S**	**82.53**	**319**	*e*P	**P**	**07 48 11.2**	**+0.6**
	comp=Z,81nm,1.8s,mb5.5						
GERES	**GERESS Array B**	**82.53**	**319**	P	**P**	**07 48 10.6**	**0.0**
	comp=Z,3.4nm,0.7s,mb4.5,baz=104,slow=5.5,SNR=28						
PTCC	**Patocco-Chiusa**	**82.61**	**316**	*e*P	**P**	**07 48 12.0**	**+1.0**
KHC	**Kasperske Hory**	**82.64**	**319**	*e*P	**P**	**07 48 12.2**	**+1.1**
KHC				*e*	pP	07 48 24.0	+3.1
KHC				*e*		07 58 26.4	
KHC				MLR	MLR		
	comp=Z,900nm,24.6s,MS5.0						
KHC	**Kasperske Hory**	**82.64**	**319**	*e*P	**P**	**07 48 12.2**	**+1.1**
KHC				*e*pP	pP	07 48 24.0	+3.1
KHC				*e*S	S	07 58 26.4	+1.5
KHC				*e*x	x	07 58 38.3	
KHC				AMS	AMS	08 30 50.0	
	comp=Z,900nm,24.6s						
ARV	**Arcevia**	**82.74**	**313**	*e*P	**P**	**07 48 10.5**	**-1.2**
RUE	**Ruedersdorf**	**82.76**	**322**	P	**P**	**07 48 11.4**	**-0.3**
	comp=Z,101nm,1.2s,mb5.7						
FSSB	**Fossombrone**	**82.86**	**313**	*e*P	**P**	**07 48 14.2**	**+1.8**
WET	**Wettzell**	**83.09**	**319**	*e*P	**P**	**07 48 13.9**	**+0.4**
WET				pmax	pmax		
	comp=Z,110nm,2.7s,mb5.4						
WET	**Wettzell**	**83.09**	**319**	*e*P	**P**	**07 48 13.9**	**+0.4**
	comp=Z,110nm,2.7s,mb5.4						
CLL	**Collm**	**83.15**	**321**	*e*P	**P**	**07 48 15.0**	**+1.3**
CLL				*i*		07 48 32.6	
CLL				*e*S	S	07 58 30.0	-0.1
CLL				MLR	MLR		
	comp=Z,1µm,21.9s,MS5.2						
CLL	**Collm**	**83.15**	**321**	P	**P**	**07 48 15.0**	**+1.3**
CLL				*i* *SP	sP	07 48 27.3	+0.5
CLL				*i*		07 48 32.6	
CLL				*i*		07 48 59.1	
CLL				*e*S	S	07 58 30.0	-0.1
CLL				*e*SS	SS	08 03 54.0	-4.0
CLL				*e*SSS	SSS	08 07 18.0	-5.4
NKC	**Novy Kostel**	**83.44**	**320**	*e*P	**P**	**07 48 16.5**	**+1.3**
NKC				*e*pP	pP	07 48 27.0	+2.0
NKC				AMS	AMS	08 31 50.0	
	comp=Z,900nm,19.5s						
SFI	**Santa Sofia**	**83.55**	**314**	*e*P	**P**	**07 48 13.2**	**-2.7**
CTI	**Castel Tesino**	**83.77**	**316**	*e*P	**P**	**07 48 18.3**	**+1.3**
MOR8	**Moi Rana**	**83.80**	**336**	*e*P	**P**	**07 48 16.5**	**-0.2**
MOX	**Moxa**	**83.99**	**320**	*e*P	**P**	**07 48 19.1**	**+1.1**
MOX				pmax	pmax		
	comp=Z,63nm,2.0s,mb5.4						
MOX				MLR	MLR		
	comp=Z,800nm,20.0s,MS5.1						
MOX	**Moxa**	**83.99**	**320**	*e*P	**P**	**07 48 19.1**	**+1.1**
	comp=Z,63nm,2.0s,mb5.4						
MOX				LR	LR		
	comp=Z,800nm,20.0s,MS5.1						
MOX	**Moxa**	**83.99**	**320**	*i* P	**P**	**07 48 19.1**	**+1.1**
	comp=Z,logA/T=1.5,mb5.4						
MOX				S	S	07 58 40.0	+1.5
MOX				L		08 34 06.0	
GRA1	**Grafenberg Arr**	**84.20**	**319**	*e*P	**P**	**07 48 19.4**	**+0.3**
	comp=Z,61nm,1.8s,mb5.4						
GRA1				*e*S	S	07 58 41.9	+1.3
GRA1				LR	LR		
	comp=Z,1µm,18.2s,MS5.3						
GRF	**Grafenberg Arr**	**84.20**	**319**	*e*P	**P**	**07 48 19.4**	**+0.3**
GRF				*e*S	S	07 58 41.9	+1.3
GRF				pmax	pmax		
	comp=Z,61nm,1.8s,mb5.4						
GRF				MLR	MLR		
	comp=Z,1µm,18.2s,MS5.3						
BRMO	**Bormio**	**84.67**	**316**	*e*P	**P**	**07 48 23.1**	**+1.6**
NSS	**Namsos**	**84.67**	**334**	*e*P	**P**	**07 48 21.5**	**+0.4**
NSS				*e*SKSa		07 58 42.8	
NSS				AMS	AMS	08 32 11.1	
	comp=Z,1µm,19.5s,MS5.4						
NB2	**NORSAR Subarra**	**84.78**	**331**	P	**P**	**07 48 21.1**	**-0.6**
	comp=Z,29nm,1.2s,mb5.3,baz=91,slow=5.0						
NB2	**NORSAR Subarra**	**84.78**	**331**	P	**P**	**07 48 21.1**	**-0.6**
NB2				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.3						
NB2	**NORSAR Subarra**	**84.78**	**331**	P	**P**	**07 48 21.1**	**-0.6**
	baz=91,slow=5.3						
NOA	**NORSAR Array B**	**84.78**	**331**	P	**P**	**07 48 21.8**	**+0.1**
	comp=Z,4.2nm,0.9s,mb4.6,baz=95,slow=5.2,SNR=5.9						
NOA				LR	LR	08 29 59.5	
	comp=Z,1µm,21.0s,MS5.2,baz=85,slow=38						
CLZ	**Clausthal**	**84.82**	**322**	*e*P	**P**	**07 48 23.2**	**+1.1**
	comp=Z,40nm,1.8s,mb5.2						
BSEG	**Bad Segeberg**	**84.92**	**324**	*e*P	**P**	**07 48 23.3**	**+0.7**
DAVA	**Damuels**	**85.02**	**317**⇑	*i*P	**P**	**07 48 23.7**	**+0.4**
	comp=Z,109nm,2.9s,mb5.5						
URZ	**Urewera**	**85.06**	**129**	P	**P**	**07 48 23.2**	**-0.5**
	comp=Z,6.6nm,1.1s,mb4.7,baz=218,slow=7.2,SNR=4.5						
STU	**Stuttgart**	**85.51**	**319**	P	**P**	**07 48 25.9**	**+0.3**
KONO	**Kongsberg**	**85.52**	**329**	PFAKE		07 48 40.0	+15
KONO				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
KBS	**Kingsbay**	**85.94**	**349**	*e*P	**P**	**07 48 28.3**	**+1.1**
KBS				AMS	AMS	08 33 16.2	
	comp=Z,1µm,17.5s,MS5.4						
KIWB	**Kanaga Island**	**85.96**	**38**	*e*P	**P**	**07 48 28.0**	**+0.2**
KIWB				*e*pP	pP	07 48 35.9	-1.8
TNS	**Taunus Mts**	**86.01**	**320**	*e*P	**P**	**07 48 28.6**	**+0.5**
TNS				pmax	pmax		
	comp=Z,36nm,1.8s,mb5.3						
TNS	**Taunus Mts**	**86.01**	**320**	*e*P	**P**	**07 48 28.6**	**+0.5**
	comp=Z,36nm,1.8s,mb5.3						
BFO	**Black Forest**	**86.08**	**318**	*e*P	**P**	**07 48 28.2**	**-0.3**
BFO				pmax	pmax		
	comp=Z,20nm,1.5s,mb5.1						
BFO	**Black Forest**	**86.08**	**318**	*e*P	**P**	**07 48 28.2**	**-0.3**
	comp=Z,20nm,1.5s,mb5.1						
CDF	**Champ du Feu**	**86.78**	**318**	*e*P	**P**	**07 48 31.3**	**-0.6**
	comp=Z,45nm,1.4s,mb5.2						
CDF	**Champ du Feu**	**86.78**	**318**	*e*P	**P**	**07 48 31.3**	**-0.6**
CDF				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.2						
LPG	**La Plagne**	**87.19**	**315**	*e*P	**P**	**07 48 34.1**	**+0.1**
	comp=Z,27nm,0.9s,mb5.2						
LPG	**La Plagne**	**87.19**	**315**	*e*P	**P**	**07 48 34.1**	**+0.1**
LPG				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
MBDF	**Montbardon**	**87.20**	**314**	*e*P	**P**	**07 48 33.1**	**-0.9**
	comp=Z,11nm,0.8s,mb4.8						
MBDF	**Montbardon**	**87.20**	**314**	*e*P	**P**	**07 48 33.1**	**-0.9**
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
LPL	**La Plagne**	**87.20**	**315**	*e*P	**P**	**07 48 34.1**	**0.0**
	comp=Z,111nm,1.4s,mb5.6						
LPL	**La Plagne**	**87.20**	**315**	*e*P	**P**	**07 48 34.1**	**0.0**
LPL				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.6						
HAU	**Haudompre**	**87.41**	**318**	*e*P	**P**	**07 48 34.3**	**-0.7**
	comp=Z,53nm,1.0s,mb5.4						
HAU				*e*R			
	comp=Z,785nm,18.8s						
HAU	**Haudompre**	**87.41**	**318**	*e*P	**P**	**07 48 34.3**	**-0.7**
HAU				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.4						
HAU				MLR	MLR		
	comp=Z,790nm,18.8s,MS5.2						
CABF	**La Chapelle**	**87.62**	**316**	*e*P	**P**	**07 48 35.9**	**-0.2**
	comp=Z,46nm,1.1s,mb5.3						
CABF	**La Chapelle**	**87.62**	**316**	*e*P	**P**	**07 48 35.9**	**-0.2**
CABF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.3						
BER	**Bergen**	**87.66**	**330**	AMS	AMS	08 34 49.1	
	comp=Z,1µm,15.6s,MS5.5						
VNDA	**Vanda**	**87.80**	**169**	P	**P**	**07 48 36.8**	**+0.5**
	comp=Z,5.8nm,1.2s,mb4.7,baz=270,slow=2.0,SNR=3.8						
VNDA				LR	LR	08 24 02.1	
	comp=Z,1µm,18.4s,MS5.4,baz=298,slow=33						
ORIF	**Oris-en-Rattie**	**87.82**	**315**	*e*P	**P**	**07 48 37.0**	**-0.1**
ORIF				*e*R			
	comp=Z,1µm,21.8s						
GIVF	**Givet**	**88.34**	**320**	*e*P	**P**	**07 48 39.4**	**0.0**
VIVF	**Saint-Julien-l**	**88.68**	**315**	*e*P	**P**	**07 48 41.1**	**-0.1**
BAIF	**Baives**	**88.74**	**320**	*e*P	**P**	**07 48 41.3**	**0.0**
SBA	**Scott Base**	**88.90**	**168**	PFAKE		07 48 50.0	+8.5
SBA				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
SMF	**Signal de Mont**	**89.17**	**316**	*e*P	**P**	**07 48 43.2**	**-0.2**
	comp=Z,55nm,1.3s,mb5.4						
SMF	**Signal de Mont**	**89.17**	**316**	*e*P	**P**	**07 48 43.2**	**-0.2**
SMF				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.4						
LASF	**Ste Croix**	**89.31**	**314**	*e*P	**P**	**07 48 44.4**	**+0.2**
SSF	**Saint Saulge**	**89.38**	**317**	*e*P	**P**	**07 48 44.3**	**-0.1**
	comp=Z,135nm,1.8s,mb5.7						
SSF	**Saint Saulge**	**89.38**	**317**	*e*P	**P**	**07 48 44.3**	**-0.1**
SSF				pmax	pmax		
	comp=Z,67nm,1.8s,mb5.7						
AVF	**Avril sur Loir**	**89.50**	**317**	*e*P	**P**	**07 48 44.6**	**-0.4**
	comp=Z,42nm,1.3s,mb5.3						
AVF	**Avril sur Loir**	**89.50**	**317**	*e*P	**P**	**07 48 44.6**	**-0.4**
AVF				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.3						
BGF	**Bois d'Agland**	**89.86**	**316**	*e*P	**P**	**07 48 46.0**	**-0.7**
TNA	**Tin City**	**90.00**	**24**	*e*P	**P**	**07 48 46.4**	**-0.5**
	comp=Z,19nm,1.5s,mb5.2						
TNA				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
TCF	**Toulx Ste Croi**	**90.32**	**316**	*e*P	**P**	**07 48 49.2**	**+0.4**
CAF	**Calviac**	**90.53**	**315**	*e*P	**P**	**07 48 50.4**	**+0.6**
	comp=Z,48nm,1.4s,mb5.3						
CAF	**Calviac**	**90.53**	**315**	*e*P	**P**	**07 48 50.4**	**+0.6**
CAF				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.3						
RJF	**Les Rejaudoux**	**90.89**	**315**	*e*P	**P**	**07 48 52.2**	**+0.8**
RJF				*e*R			
	comp=Z,1µm,20.8s						
LDF	**La Druitiere**	**91.68**	**319**	*e*P	**P**	**07 48 55.0**	**0.0**
	comp=Z,68nm,1.1s,mb5.6						
LDF	**La Druitiere**	**91.68**	**319**	*e*P	**P**	**07 48 55.0**	**0.0**
LDF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.6						
JMIC	**Jan Mayen**	**91.86**	**341**	LR	LR	08 34 54.3	
	comp=Z,2µm,21.8s,MS5.5,baz=77,slow=39						
JMIC	**Jan Mayen**	**91.86**	**341**	*e*SKSa		07 59 25.5	
JMIC				AMS	AMS	08 35 31.6	
	comp=Z,1µm,22.1s,MS5.4						
FLN	**La Foliniere**	**91.90**	**319**	*e*P	**P**	**07 48 55.9**	**-0.1**
	comp=Z,186nm,1.5s,mb5.9						
FLN				*e*R			
	comp=Z,1µm,21.5s						
FLN	**La Foliniere**	**91.90**	**319**	*e*P	**P**	**07 48 55.9**	**-0.1**
FLN				pmax	pmax		
	comp=Z,93nm,1.5s,mb5.9						
FLN				MLR	MLR		
	comp=Z,1µm,21.5s,MS5.3						
MFF	**Saint Martin d**	**91.91**	**317**	*e*P	**P**	**07 48 56.4**	**+0.3**
EPF	**Esparros**	**91.94**	**313**	*e*P	**P**	**07 48 56.5**	**+0.1**
GRR	**Gorron**	**92.19**	**318**	*e*P	**P**	**07 48 57.6**	**+0.2**
	comp=Z,110nm,1.4s,mb5.7						
GRR	**Gorron**	**92.19**	**318**	*e*P	**P**	**07 48 57.6**	**+0.2**
GRR				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.7						
UNV	**Unalaska Valle**	**92.27**	**36**	PFAKE		07 49 10.0	+12
UNV				LR	LR		
	comp=Z,4µm,22.0s,MS5.8						
ESK	**Eskdalemuir**	**92.68**	**326**	PFAKE		07 49 10.0	+11
ESK				LR	LR		
	comp=Z,269nm,19.0s,MS4.7						
QSPA	**South Pole Qui**	**92.86**	**180**	*e*P	**P**	**07 49 01.7**	**+1.9**
	comp=Z,35nm,1.3s,mb5.6						
ESLA	**Sonseca Array**	**95.57**	**310**	PFAKE		07 49 20.0	+6.9
ESLA				LR	LR		
	comp=Z,5µm,20.0s,MS6.0						
IMA	**Indian Mountai**	**95.58**	**23**	*e*P	**P**	**07 49 13.8**	**+1.3**
IMA				pmax	pmax		
	comp=Z,253nm,1.5s,mb6.4						
IMA	**Indian Mountai**	**95.58**	**23**	*e*P	**P**	**07 49 13.8**	**+1.3**
	comp=Z,253nm,1.5s,mb6.4						
SCO	**Scoresbysund**	**96.20**	**343**	*i* P	**P**	**07 49 22.3**	**+7.0**
COLA	**College**	**98.29**	**23**	PFAKE		07 49 40.0	+15
COLA				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
MCK	**McKinley**	**98.34**	**24**	*e*P	**P**	**07 49 25.7**	**+0.7**
MCK				pmax	pmax		
	comp=Z,25nm,1.6s,mb5.5						
MCK				MLR	MLR		
	comp=Z,840nm,20.0s,MS5.2						
MCK	**McKinley**	**98.34**	**24**	*e*P	**P**	**07 49 25.7**	**+0.7**
	comp=Z,25nm,1.6s,mb5.5						
MCK				LR	LR		
	comp=Z,840nm,20.0s,MS5.2						
BORG	**Borgarnes**	**98.56**	**337**	LR	LR	08 38 53.2	
	comp=Z,1µm,20.3s,MS5.5,baz=66,slow=38						
BORG	**Borgarnes**	**98.56**	**337**	PFAKE		07 49 40.0	+14
BORG				LR	LR		
	comp=Z,457nm,20.0s,MS5.0						
ILAR	**Eielson Array**	**98.70**	**23**	P	**P**	**07 49 25.6**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=296,slow=4.9,SNR=5.4						
ILAR				PP	PP	07 53 14.4	-16
	comp=Z,2.2nm,1.2s,baz=287,slow=8.3,SNR=4.8						
FIB	**Fire Island**	**98.83**	**27**	PFAKE		07 49 40.0	+13
FIB				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
KDAK	**Kodiak Island**	**98.93**	**30**	PFAKE		07 49 40.0	+12
KDAK				LR	LR		
	comp=Z,500nm,19.0s,MS5.0						
SUMG	**Summit**	**99.28**	**347**	*e*P	**P**	**07 49 29.9**	**+0.7**
	comp=Z,24nm,1.4s,mb5.5						
DIV	**Divide**	**100.79**	**26**	PFAKE		07 49 50.0	+14
DIV				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
INK	**Inuvik**	**101.27**	**17**	P	P	07 49 37.5	-0.7
	comp=Z,1.8nm,1.2s,baz=323,slow=6.9,SNR=6.8						
INK				PP	PP	07 53 37.0	-13
	comp=Z,2.3nm,1.1s,baz=251,slow=7.7,SNR=3.5						
INK	**Inuvik**	**101.27**	**17**	P	P	07 49 37.5	-0.7
INK				PP	PP	07 53 37.0	-13
RES	**Resolute Bay**	**102.24**	**3**	*e*P	Pdif	07 49 43.0	+0.6
RES				*e*		07 53 52.2	
RES				pmax	pmax		
	comp=Z,11nm,1.3s						
RES	**Resolute Bay**	**102.24**	**3**	*e*Pdif	Pdif	07 49 43.0	+0.6
	comp=Z,11nm,1.3s						
RES				*e*PP	PP	07 53 52.2	-5.0
TRIS	**Tristan da Cun**	**106.11**	**232**	PFAKE		07 54 20.0	
TRIS				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
SFJ	**Sondre**	**106.26**	**347**	PFAKE		07 54 20.0	
SFJ				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
SIT	**Sitka**	**107.51**	**26**	PFAKE		07 54 30.0	
SIT				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
YKA	**Yellowknife Ar**	**110.82**	**15**	P	Pdif	07 50 22.8	+2.4
YKA						08 05 24.1	
YKA	**Yellowknife Ar**	**110.82**	**15**	Pdiff	Pdif	07 50 22.8	+2.5
	comp=Z,0.1nm,0.7s,baz=337,slow=4.7,SNR=2.9						
YKA				PP	PP	07 54 38.8	-22
	comp=Z,1.4nm,1.0s,baz=331,slow=6.0,SNR=6.1						
YKA				PKKPbc		08 05 24.0	
	comp=Z,0.1nm,0.5s,baz=133,slow=3.2,SNR=4.1						
YKA	**Yellowknife Ar**	**110.82**	**15**	Pdif	Pdif	07 50 22.8	+2.5
YKA				PP	PP	07 54 38.8	-22
YKA				PKKPbc		08 05 24.1	
TBI	**Tubuai**	**113.93**	**114**	*e*PP	PP	07 55 13.2	-12
TBI				*e*PS	PS	08 05 24.6	+28
TBI				*e*SS	SS	08 11 01.0	-7.7
TBI				*e*LR	LR	08 28 26.5	
	comp=Z,1µm,27.5s						
PPT	**Papeete**	**114.44**	**108**	*e*PP	PP	07 55 19.7	-8.9
PPT				*e*PS	PS	08 05 06.0	+4.1
PPT				*e*LR	LR	08 28 40.9	
	comp=Z,1µm,27.0s						
OCWA	**Octopus Mounta**	**118.68**	**30**	PFAKE		07 54 50.0	+10
OCWA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
EDM	**Edmonton**	**118.98**	**19**	*e*PKIKP	PKPdf	07 54 35.0	-5.2
SCHQ	**Schefferville**	**120.65**	**348**	PKP	PKPdf	07 54 39.6	-3.8
	comp=Z,1.7nm,0.9s,baz=35,slow=14,SNR=7.4						
SCHQ	**Schefferville**	**120.65**	**348**	PKP	PKPdf	07 54 39.6	-3.8
SCHQ				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
COR	**Corvallis**	**121.28**	**32**	PFAKE		07 54 50.0	+5.1
COR				LR	LR		
	comp=Z,325nm,21.0s,MS5.0						
NEW	**Newport**	**121.54**	**25**	PFAKE		07 54 50.0	+4.7
NEW				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
HUMO	**Hull Mountain**	**122.80**	**33**	*e*PKPdf	PKPdf	07 54 44.6	-3.2
HUMO				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
YBH	**Yreka Blue Hor**	**123.52**	**34**	PFAKE		07 55 00.0	+11
YBH				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MSO	**Missoula**	**124.00**	**24**	*e*PKPdf	PKPdf	07 54 46.0	-4.1
MSO				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
BMO	**Blue Mountains**	**124.07**	**28**	PFAKE		07 55 00.0	+10
BMO				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
TAOE	**Nuku Hiva Isla**	**124.19**	**99**	*e*LR	LR	08 33 08.2	
CHMT	**Chamberlain Mo**	**124.21**	**24**	*e*PKPdf	PKPdf	07 54 45.5	-5.0
CHMT				*e*PP	PP	07 56 34.7	-0.3
WDC	**Whiskeytown Da**	**124.38**	**35**	PFAKE		07 55 00.0	+9.0
WDC				LR	LR		
	comp=Z,880nm,20.0s,MS5.4						
MOD	**Modoc**	**124.71**	**32**	*e*PKPdf	PKPdf	07 54 47.7	-4.0
MOD				LR	LR		
	comp=Z,822nm,20.0s,MS5.4						
HOPS	**Hopland**	**125.10**	**37**	PFAKE		07 55 00.0	+7.5
HOPS				LR	LR		
	comp=Z,835nm,19.0s,MS5.4						
WVOR	**Wild Horse Val**	**125.20**	**31**	PFAKE		07 55 00.0	+7.4
WVOR				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
BOZ	**Bozeman (W)**	**125.89**	**23**	PFAKE		07 55 00.0	+6.2
BOZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
DGMT	**Dagmar**	**125.96**	**16**	PFAKE		07 55 00.0	+6.2
DGMT				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
MCMT	**McKenzie Canyo**	**126.06**	**25**	*e*PKPdf	PKPdf	07 54 51.0	-3.1
MCMT				*e*		07 54 59.5	
ULM	**Lac du Bonnet**	**126.11**	**9**	PKP	PKPdf	07 54 49.1	-5.0
	comp=Z,3.4nm,0.8s,baz=358,slow=4.7,SNR=5.2						
ULM	**Lac du Bonnet**	**126.11**	**9**	*e*PKPdf	PKPdf	07 54 48.0	-6.0
ULM				*e*		07 54 58.1	
ULM				LR	LR		
	comp=Z,3µm,22.0s,MS6.0						
HLID	**Hailey**	**126.39**	**27**	PFAKE		07 55 00.0	+5.2
HLID				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
QLMT	**Earthquake Lak**	**126.65**	**24**	*e*PKPdf	PKPdf	07 54 51.3	-4.0
QLMT				*e*		07 55 01.2	
LAO	**LASA Array**	**126.95**	**19**	*e*PKPpre		07 54 46.6	
LAO				*e*PKPdf	PKPdf	07 54 52.6	-3.1
LAO				*e*PP	PP	07 56 47.6	-4.9
LAO				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
YMR	**Madison River**	**126.97**	**24**	*e*PKPdf	PKPdf	07 54 52.5	-3.3
RKT	**Rikitea**	**127.05**	**117**	*e*PS	PS	08 07 08.1	+13
RKT				*e*SS	SS	08 13 56.4	-0.9
RKT				*e*LR	LR	08 34 30.0	
	comp=Z,1µm,23.0s						
LKWY	**Lake**	**127.28**	**23**	PFAKE		07 55 00.0	+3.5
LKWY				LR	LR		
	comp=Z,4µm,19.0s,MS6.1						
CMB	**Columbia Colle**	**127.32**	**36**	PFAKE		07 55 00.0	+3.3
CMB				LR	LR		
	comp=Z,775nm,19.0s,MS5.4						
BMN	**Battle Mountai**	**127.39**	**31**	PFAKE		07 55 00.0	+3.2
BMN				LR	LR		
	comp=Z,961nm,22.0s,MS5.4						
SAO	**San Andreas Ge**	**127.53**	**38**	PFAKE		07 55 00.0	+2.8
SAO				LR	LR		
	comp=Z,624nm,21.0s,MS5.3						
TPAW	**Teton Pass**	**127.95**	**24**	*e*PKPdf	PKPdf	07 54 54.9	-2.9
TPAW				*e*PP	PP	07 56 56.9	-2.7
ELK	**Elko**	**128.16**	**30**	PFAKE		07 55 10.0	+12
ELK				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
NVAR	**Mina Array Bea**	**128.24**	**34**	PKP	PKPdf	07 54 55.4	-3.2
	comp=Z,1.9nm,0.9s,baz=338,slow=0.7,SNR=13						
NVAR				PP	PP	07 56 55.4	-6.4
	comp=Z,3.1nm,1.2s,baz=270,slow=3.6,SNR=1.9						
MNV	**Mina**	**128.32**	**34**	*e*PKIKP	PKPdf	07 54 55.6	-3.1
MNV				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.5						
AHID	**Auburn Hatcher**	**128.48**	**25**	PFAKE		07 55 10.0	+11
AHID				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
PQI	**Presque Isle**	**128.56**	**346**	PFAKE		07 55 10.0	+11
PQI				LR	LR		
	comp=Z,6µm,20.0s,MS6.3						
EYMN	**Ely**	**128.95**	**6**	*e*PKPdf	PKPdf	07 54 55.8	-3.8
EYMN				*e*		07 55 04.4	
EYMN				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
TPH	**Tonopah**	**129.09**	**34**	PFAKE		07 55 10.0	+10
TPH				LR	LR		
	comp=Z,772nm,19.0s,MS5.4						
BW06	**Boulder Array**	**129.12**	**24**	PFAKE		07 55 10.0	+10
BW06				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
PDAR	**Pinedale Array**	**129.12**	**24**	PKP	PKPdf	07 54 56.4	-3.7
	comp=Z,1.1nm,0.9s,baz=315,slow=2.1,SNR=12						
PDAR				PP	PP	07 57 06.7	-1.0
	comp=Z,1.9nm,1.0s,baz=45,slow=4.2,SNR=3.6						
HWUT	**Hardware Ranch**	**129.22**	**26**	PFAKE		07 55 10.0	+10
HWUT				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
DUG	**Dugway**	**129.77**	**28**	*e*PKIKP	PKPdf	07 54 58.8	-2.6
DUG				*e*		07 57 07.6	
DUG				MLR	MLR		
	comp=Z,15µm,20.0s						
DAC	**Darwin (Calif)**	**130.15**	**35**	PFAKE		07 55 10.0	+7.8
DAC				LR	LR		
	comp=Z,925nm,22.0s,MS5.4						
EMMW	**East Machias**	**130.24**	**344**	PFAKE		07 55 10.0	+7.8
EMMW				LR	LR		
	comp=Z,7µm,19.0s,MS6.4						
NLU	**North Lily Min**	**130.31**	**28**	*e*PKPdf	PKPdf	07 54 59.8	-2.6
NLU				*e*PP	PP	07 57 13.5	-1.7
NLU				*e*SKP		07 58 20.9	
WVL	**Waterville**	**130.94**	**346**	PFAKE		07 55 10.0	+6.5
WVL				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
MVU	**Marysvale**	**131.38**	**29**	PFAKE		07 55 10.0	+5.5
MVU				LR	LR		
	comp=Z,855nm,21.0s,MS5.4						
MSU	**Marysvale**	**131.39**	**29**	*e*PKPdf	PKPdf	07 55 03.1	-1.5
MSU				*e*PP	PP	07 57 14.5	-7.9
MSU				*e*SKPbc		07 58 25.1	
MSU				*e*SKPdf		07 58 38.3	
RCBR	**Riachuelo**	**131.66**	**265**	PFAKE		07 55 10.0	+4.3
RCBR				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
PFO	**Pinyon Flat Ob**	**132.67**	**37**	PFAKE		07 55 10.0	+2.9
PFO				LR	LR		
	comp=Z,252nm,20.0s,MS4.9						
ISCO	**Idaho Springs**	**133.20**	**23**	PFAKE		07 55 20.0	+12
ISCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
HRV	**Harvard--Oak R**	**133.33**	**347**	PFAKE		07 55 20.0	+12
HRV				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
WES	**Weston**	**133.39**	**347**	PFAKE		07 55 20.0	+12
WES				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
JFWS	**Jewell Farm**	**134.06**	**6**	PFAKE		07 55 20.0	+11
JFWS				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
WUAZ	**Wupatki**	**134.12**	**31**	PFAKE		07 55 20.0	+10
WUAZ				LR	LR		
	comp=Z,14µm,21.0s						
AAM	**Ann Arbor**	**134.98**	**359**	PFAKE		07 55 20.0	+8.9
AAM				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						

ERPA	**Erie**	**135.00**	**355**	PFAKE		07 55 20.0	+8.8
ERPA				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
SDCO	**Great Sand Dun**	**135.01**	**24**	PFAKE		07 55 20.0	+8.7
SDCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
CBKS	**Cedar Bluff**	**136.09**	**17**	PFAKE		07 55 20.0	+6.8
CBKS				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
SSPA	**Standing Stone**	**136.25**	**353**	PFAKE		07 55 20.0	+6.5
SSPA				LR	LR		
	comp=Z,290nm,20.0s,MS5.0						
TUC	**Tucson**	**136.89**	**34**	PFAKE		07 55 20.0	+5.1
TUC				LR	LR		
	comp=Z,737nm,20.0s,MS5.4						
ANMO	**Albuquerque**	**136.96**	**27**	*e*PKIKP	PKPdf	07 55 09.1	-5.8
ANMO				MLR	MLR		
	comp=Z,1µm,19.0s						
ACSO	**Alum Creek Sta**	**137.04**	**359**	PFAKE		07 55 20.0	+5.1
ACSO				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
MCWV	**Mont Chateau**	**137.43**	**355**	PFAKE		07 55 20.0	+4.3
MCWV				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
CBN	**Corbin**	**138.58**	**352**	PFAKE		07 55 30.0	+12
CBN				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
CCM	**Cathedral Cave**	**138.72**	**8**	PFAKE		07 55 30.0	+12
CCM				LR	LR		
	comp=Z,337nm,22.0s,MS5.0						
AMTX	**Amarillo**	**139.00**	**22**	PFAKE		07 55 30.0	+11
AMTX				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
WCI	**Wyandotte Cave**	**139.01**	**2**	PFAKE		07 55 30.0	+11
WCI				LR	LR		
	comp=Z,324nm,20.0s,MS5.1						
TRQA	**Tornquist**	**139.50**	**208**	PFAKE		07 55 30.0	+10
TRQA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
WMOK	**Wichita Mounta**	**140.14**	**19**	PFAKE		07 55 30.0	+9.2
WMOK				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
MNTX	**Cornudas Mount**	**140.16**	**29**	*e*PKPdf	PKPdf	07 55 16.4	-4.4
MNTX				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
BBSR	**BB Station**	**140.28**	**334**	PFAKE		07 55 30.0	+8.9
BBSR				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
PLCA	**Paso Flores**	**140.37**	**196**	PKIKP	PKPdf	07 55 18.0	-3.0
PLCA				MLR	MLR		
	comp=Z,1µm,19.0s						
PLCA	**Paso Flores**	**140.37**	**196**	PKP	PKPdf	07 55 17.9	-3.0
	comp=Z,2.0nm,1.0s,baz=161,slow=3.3,SNR=3.6						
WVT	**Waverly**	**141.01**	**5**	PKPdf	PKPdf	07 55 18.2	-4.1
WVT				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
MIAR	**Mount Ida**	**141.72**	**12**	*e*PKHKP		07 55 13.8	
MIAR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.8						
BAO	**Brasilia Array**	**142.09**	**248**	P	PKPdf	07 55 23.5	-1.2
BAO				*e*		07 55 31.8	
BAO				*i*		07 55 47.8	
BDFB	**Brasilia**	**142.10**	**248**	PKP	PKPdf	07 55 20.5	-4.2
	comp=Z,0.7nm,0.4s,baz=141,slow=3.8,SNR=2.4						
OXF	**Oxford**	**142.46**	**7**	PFAKE		07 55 30.0	+5.2
OXF				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
LTX	**Lajitas**	**142.94**	**29**	PFAKE		07 55 30.0	+4.2
LTX				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
TXAR	**Lajitas Array**	**142.94**	**29**	PKhKP		07 55 18.1	
	comp=Z,1.6nm,0.8s,baz=267,slow=1.2,SNR=13						
TXAR				PP	PP	07 58 30.6	-3.5
	comp=Z,1.3nm,0.9s,baz=315,slow=3.5,SNR=4.5						
JCT	**Junction City**	**143.64**	**23**	*e*PKIKP	PKPdf	07 55 20.8	-6.2
JCT				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.6						
GOGA	**Godfrey**	**143.85**	**359**	PFAKE		07 55 40.0	+19
GOGA				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
NHSC	**New Hope**	**143.95**	**354**	PFAKE		07 55 40.0	+19
NHSC				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
NATX	**Nacogdoches**	**144.13**	**15**	*e*PKPdf	PKPdf	07 55 22.9	-4.9
NATX				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
LRAL	**Lakeview Retre**	**144.15**	**4**	*e*PKPpre		07 55 21.6	
LRAL				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
CPUP	**Villa Florida**	**145.20**	**226**	PKPbc	PKPbc	07 55 26.5	+1.5
HKT	**Hockley**	**145.50**	**18**	*e*PKIKP	PKPdf	07 55 26.8	-3.5
HKT				MLR	MLR		
	comp=Z,487nm,20.0s,MS5.3						
CFAA	**Coronel Fontan**	**147.70**	**206**	PKPbc	PKPdf	07 55 33.4	-0.5
	baz=162,slow=2.7						
DWPF	**Disney**	**149.02**	**355**	PFAKE		07 55 40.0	+3.9
DWPF				LR	LR		
	comp=Z,404nm,19.0s,MS5.2						
SJG	**San Juan**	**152.49**	**320**	PFAKE		07 55 50.0	+8.4
SJG				LR	LR		
	comp=Z,960nm,21.0s,MS5.6						
LVC	**Limon Verde**	**155.38**	**216**	PKP	PKPdf	07 55 43.6	-1.8
	comp=Z,0.7nm,0.7s,baz=224,slow=2.8,SNR=1.8						
LVC				PKPab	PKPab	07 56 08.6	+0.5
	comp=Z,3.3nm,1.1s,baz=119,slow=10,SNR=3.0						
LVC	**Limon Verde**	**155.38**	**216**	PKPdf	PKPdf	07 55 45.3	-0.1
LVC				*e*PKPab	PKPab	07 56 10.6	+2.5
LVC				LR	LR		
	comp=Z,891nm,20.0s,MS5.6						
TEIG	**Tepich**	**156.67**	**9**	PFAKE		07 55 50.0	+2.8
TEIG				LR	LR		
	comp=Z,878nm,21.0s,MS5.6						
LPAZ	**La Paz**	**159.28**	**229**	*e*PKIKP	PKPdf	07 55 48.9	-1.7
LPAZ				MLR	MLR		
	comp=Z,1µm,21.0s						
LPAZ	**La Paz**	**159.28**	**229**	PKP	PKPdf	07 55 48.5	-2.0
	comp=Z,1.0nm,0.8s,baz=150,slow=6.0,SNR=3.6						
LPAZ				PKPab	PKPab	07 56 25.4	+0.3
	comp=Z,4.9nm,1.1s,baz=105,slow=9.1,SNR=4.6						
SDV	**Santo Domingo**	**162.02**	**311**	PFAKE		07 56 00.0	+6.5
SDV				LR	LR		
	comp=Z,1µm,19.0s						
JTS	**JuntasAbangare**	**166.86**	**3**	PFAKE		07 56 10.0	+12
JTS				LR	LR		
	comp=Z,310nm,22.0s						
ROSC	**El Rosal**	**167.39**	**308**	PKP	PKPdf	07 55 54.9	-3.4
	comp=Z,2.0nm,0.5s,baz=86,slow=22,SNR=2.6						
NNA	**Nana**	**168.35**	**219**	PFAKE		07 56 10.0	+11
NNA				LR	LR		
	comp=Z,279nm,19.0s						
OTAV	**Otavalo**	**173.36**	**298**	*e*PKPdf	PKPdf	07 55 59.1	-2.6
OTAV				LR	LR		
	comp=Z,2µm,19.0s						
PAYG	**Puerto Ayora**	**173.62**	**70**	PFAKE		07 56 10.0	+8.2
PAYG				LR	LR		
	comp=Z,1µm,19.0s						

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*BJI **24** 07:43:01.6, 2.64N×95.50E, h33^{km}, mB5.3, mb5.1*
*MOS **24** 07:43:02.8±0.9, 2.77N×95.48E, h33^{km}, mb4.9/17, Error ellipse: s-maj=15.1km s-min=7.9km az=101.8*
*NEIC **24** 07:43:03.4±0.2, 2.76N×95.45E, mb4.8/25, Error ellipse: s-maj=8.1km s-min=4.9km az=62.0*
*IDC **24** 07:43:03.3±0.5, 2.81N×95.44E, h23^{km}±2^{km}, mb4.3/18, mb1 4.4/19, mb1mx4.4/24, mbtmp4.4/19, ML4.8/1, Error ellipse: s-maj=18.5km s-min=10.6km az=48.0*
ISC 24 07:43:01.4±0.4**, 2.76N**±0.06×**95.48E**±0.07**, h24^{km}, h24^{km}**±.5^{km}**:pP-P, n87, σ0^{s}89**/78**, mb4.7**/52**, 1C-1D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**15.96**	**12**	*e*P	**P**	**07 46 48.6**	**+2.3**
CMAR	**Chiang Mai Arr**	**15.96**	**12**	Pn	**P**	**07 46 47.2**	**+0.9**
	1.4nm,0.3s,baz=201,slow=11,SNR=29						
QIZ	**Qiongzhong**	**21.42**	**40**	P	**P**	**07 47 49.8**	**-0.2**
QIZ	**Qiongzhong**	**21.42**	**40**	*e*P	**P**	**07 47 49.6**	**-0.5**
	34nm,1.2s,mb4.5						
KMI	**Kunming**	**23.31**	**17**	P	**P**	**07 48 10.0**	**+1.3**
KMI				AMB	AMB		
	comp=Z,25nm,2.0s,mb4.3						
KMI	**Kunming**	**23.31**	**17**	P	**P**	**07 48 10.0**	**+1.3**
	comp=Z,25nm,2.0s,mb4.3						
GYA	**Guiyang**	**25.89**	**23**	⇑*i*P	**P**	**07 48 33.6**	**+0.1**
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
JIRN	**Jiri**	**26.30**	**341**	*e*P	**P**	**07 48 37.9**	**+0.7**
	comp=Z,93nm,0.9s,mb5.3						
PKI	**Pulchoki**	**26.48**	**340**	*e*P	**P**	**07 48 39.8**	**+0.9**
DMN	**Daman**	**26.62**	**339**	*e*P	**P**	**07 48 41.2**	**+1.0**
	comp=Z,42nm,0.7s,mb5.1						
GUN	**Gumba**	**26.64**	**341**	*e*P	**P**	**07 48 40.9**	**+0.6**
	comp=Z,75nm,0.7s,mb5.3						
KKN	**Kakani**	**26.73**	**340**	*e*P	**P**	**07 48 41.6**	**+0.5**
	comp=Z,60nm,0.8s,mb5.2						
LSA	**Lhasa**	**27.11**	**352**	*e*P	**P**	**07 48 45.5**	**+0.9**
LSA				pmax	pmax		
	comp=Z,25nm,0.6s,mb4.9						
LSA	**Lhasa**	**27.11**	**352**	*e*P	**P**	**07 48 45.5**	**+1.0**
	comp=Z,25nm,0.6s,mb4.9						
GKN	**Gorkha**	**27.15**	**339**	*e*P	**P**	**07 48 45.0**	**0.0**
	comp=Z,75nm,1.0s,mb5.2						
KOLN	**Koldanda**	**27.34**	**337**	*e*P	**P**	**07 48 46.3**	**-0.4**
	comp=Z,51nm,0.7s,mb5.2						
ENH	**Enshi**	**30.41**	**24**	*e*P	**P**	**07 49 12.9**	**-1.3**
	comp=Z,10nm,0.6s,mb4.7						
XAN	**Xi'an**	**33.55**	**20**	P	**P**	**07 49 40.5**	**-1.2**
XAN				AP	pP	07 49 46.3	-2.6
XAN				AMB	AMB		
	comp=Z,25nm,0.9s,mb5.1						
MBWA	**Marble Bar**	**33.60**	**136**	P	**P**	**07 49 41.9**	**-0.4**
	comp=Z,10.0nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**36.23**	**126**	*e*P	**P**	**07 50 04.9**	**+0.1**
	comp=Z,11nm,1.2s,mb4.7						
GTA	**Gaotai**	**36.69**	**6**	*e*P	**P**	**07 50 08.5**	**+0.1**
GTA				AMB	AMB		
	comp=Z,14nm,0.7s,mb4.9						
JOW	**Kunigami**	**39.49**	**50**	P	**P**	**07 50 33.0**	**+1.0**
	comp=Z,17nm,0.5s,mb5.0,baz=225,slow=20,SNR=3.5						
NWAO	**Narrogin (SRO)**	**41.03**	**152**	P	**P**	**07 50 46.7**	**+2.1**
NWAO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NWAO	**Narrogin (SRO)**	**41.03**	**152**	P	**P**	**07 50 46.7**	**+2.0**
	comp=Z,3.0nm,0.6s,mb4.1						
BJT	**Baijiatuau**	**41.56**	**24**	*e*P	**P**	**07 50 50.0**	**+1.1**
BJT				pmax	pmax		
	comp=Z,42nm,1.0s						
BJT	**Baijiatuau**	**41.56**	**24**	*e*P	**P**	**07 50 50.0**	**+1.1**
	comp=Z,42nm,1.0s,mb5.0						
AAK	**Ala-Archa**	**43.90**	**338**	*e*P	**P**	**07 51 08.7**	**+0.7**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
AAK	**Ala-Archa**	**43.90**	**338**	*e*P	**P**	**07 51 08.7**	**+0.7**
	comp=Z,5.9nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**44.32**	**122**	P	**P**	**07 51 11.7**	**0.0**
	comp=Z,10nm,1.0s,mb4.5,baz=299,slow=9.4,SNR=19						
WRA				pP	pP	07 51 18.9	-0.1
	comp=Z,5.8nm,0.9s,baz=299,slow=9.6,SNR=6.7						
WRA				PP	PP	07 52 56.4	+0.1
	comp=Z,0.7nm,0.7s,baz=308,slow=9.5,SNR=2.3						
WRA				pPcP		07 53 04.5	
	comp=Z,0.5nm,0.4s,baz=303,slow=3.1,SNR=4.6						
WRAB	**Tennant Creek**	**44.32**	**122**	*e*P	**P**	**07 51 12.2**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,58nm,1.4s,mb5.1						
WRAB	**Tennant Creek**	**44.32**	**122**	*e*P	**P**	**07 51 12.2**	**+0.5**
	comp=Z,58nm,1.4s,mb5.1						
MKAR	**Makanchi Array**	**45.34**	**347**	*i* P	**P**	**07 51 19.8**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,14nm,0.7s						
ASAR	**Alice Springs**	**45.70**	**127**	P	**P**	**07 51 22.9**	**+0.2**
	comp=Z,3.7nm,0.8s,mb4.3,baz=298,slow=7.8,SNR=13						
ASAR				pP	pP	07 51 30.4	+0.4
	comp=Z,1.9nm,0.6s,baz=298,slow=8.1,SNR=4.4						
ASAR				PcP	PcP	07 53 01.1	+0.2
	comp=Z,1.0nm,0.8s,baz=295,slow=2.9,SNR=3.7						
ASAR				pPcP		07 53 08.7	
	comp=Z,1.0nm,0.6s,baz=306,slow=3.9,SNR=4.1						
SONM	**Songino Array**	**45.88**	**10**	P	**P**	**07 51 23.7**	**-0.1**
	comp=Z,12nm,0.8s,mb4.9,baz=190,slow=8.8,SNR=43						
SONM				PcP	PcP	07 53 00.7	-0.5
	comp=Z,2.5nm,0.6s,baz=193,slow=3.0,SNR=6.8						
SONM				pPcP		07 53 08.6	
	comp=Z,1.3nm,0.6s,baz=199,slow=3.0,SNR=4.5						
ULN	**Ulaanbaatar**	**46.03**	**11**	*e*P	**P**	**07 51 24.8**	**-0.1**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**46.03**	**11**	*e*P	**P**	**07 51 24.8**	**-0.2**
	comp=Z,6.8nm,0.8s,mb4.6						
ZAK	**Zakamensk**	**47.91**	**7**	⇓*e*P	**P**	**07 51 39.3**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
TLY	**Talaya**	**49.23**	**7**	*e*P	**P**	**07 51 49.7**	**-0.2**
TLY				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
TLY	**Talaya**	**49.23**	**7**	*e*P	**P**	**07 51 49.7**	**-0.2**
	comp=Z,14nm,0.9s,mb5.0						
KURK	**Kurchatov**	**49.86**	**346**	P	**P**	**07 51 54.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,95nm,1.8s,mb5.5						
KURK	**Kurchatov**	**49.86**	**346**	*e*P	**P**	**07 51 54.5**	**-0.2**
	comp=Z,25nm,0.9s,mb5.2						
HIA	**Hailar**	**50.75**	**20**	*e*P	**P**	**07 52 01.1**	**-0.5**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HIA	**Hailar**	**50.75**	**20**	*e*P	**P**	**07 52 01.1**	**-0.5**
	comp=Z,5.8nm,0.7s,mb4.6						
ZAL	**Zalesovo**	**51.76**	**352**	P	**P**	**07 52 09.4**	**+0.2**
	comp=Z,20nm,0.7s,mb5.2,baz=308,slow=5.9,SNR=54						
ZAL				pP	pP	07 52 16.4	-0.2
	comp=Z,17nm,0.6s,baz=290,slow=5.0,SNR=16						
PMG	**Port Moresby**	**52.89**	**104**	*e*P	**P**	**07 52 17.9**	**-0.3**
PMG				pmax	pmax		
	comp=Z,12nm,0.9s						
PMG	**Port Moresby**	**52.89**	**104**	P	**P**	**07 52 18.1**	**-0.1**
	comp=Z,4.7nm,0.7s,mb4.5,baz=303,slow=9.1,SNR=4.3						
PMG	**Port Moresby**	**52.89**	**104**	*e*P	**P**	**07 52 17.9**	**-0.3**
	comp=Z,12nm,0.9s,mb4.8						
BVAR	**Borovoye Array**	**54.23**	**342**	P	**P**	**07 52 26.7**	**-0.7**
	comp=Z,20nm,1.0s,mb5.0,baz=142,slow=8.3,SNR=37						
BVAR				pP	pP	07 52 33.6	-1.3
	comp=Z,4.9nm,0.6s,baz=143,slow=11,SNR=8.7						
CTA	**Charters Tower**	**54.74**	**117**	P	**P**	**07 52 31.0**	**-0.7**
	comp=Z,6.8nm,1.0s,mb4.6,baz=254,slow=10,SNR=3.7						
CTA				pP	pP	07 52 39.2	+0.1
	comp=Z,7.4nm,1.0s,baz=304,slow=5.6,SNR=4.1						
CTAO	**Charters Tower**	**54.74**	**117**	*e*P	**P**	**07 52 32.0**	**+0.3**
CTAO				*e**PP	pP	07 52 39.5	+0.4
CTAO				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.9						
CTAO	**Charters Tower**	**54.74**	**117**	*e*P	**P**	**07 52 32.0**	**+0.4**
	comp=Z,16nm,1.4s,mb4.8						
CTAO				*e*pP	pP	07 52 39.5	+0.4
STKA	**Stephens Creek**	**55.67**	**132**	P	**P**	**07 52 38.9**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=287,slow=14,SNR=2.8						
BOD	**Bodaibo**	**56.82**	**12**	*e*P	**P**	**07 52 44.5**	**-1.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
GNI	**Garni**	**58.98**	**316**	P	**P**	**07 53 00.7**	**-0.9**
GNI				pmax	pmax		
	comp=Z,15nm,1.2s						
GNI	**Garni**	**58.98**	**316**	P	**P**	**07 53 00.7**	**-0.9**
	comp=Z,15nm,1.2s,mb4.9						
YSS	**Yuzh-Sakhalins**	**60.06**	**36**	*e*P	**P**	**07 53 07.7**	**-1.2**
YSS				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**60.06**	**36**	*e*P	**P**	**07 53 07.7**	**-1.2**
	comp=Z,28nm,1.0s,mb5.2						
MALT	**Malatya**	**62.81**	**312**	P	**P**	**07 53 28.2**	**+0.6**
MALT				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
MALT	**Malatya**	**62.81**	**312**	P	**P**	**07 53 28.2**	**+0.6**
	comp=Z,2.9nm,0.9s,mb4.4						
YAK	**Yakutsk**	**64.43**	**17**	*e*P	**P**	**07 53 36.9**	**-0.9**
YAK				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.5						
YAK	**Yakutsk**	**64.43**	**17**	*e*P	**P**	**07 53 36.9**	**-0.9**
	comp=Z,28nm,0.6s,mb5.5						
BRTR	**Keskin Array B**	**66.80**	**312**	P	**P**	**07 53 51.9**	**-1.5**
	comp=Z,0.9nm,0.6s,mb4.0,baz=153,slow=6.4,SNR=3.3						
MATP	**Matopo**	**69.53**	**247**	P	**P**	**07 54 10.3**	**-0.4**
	comp=Z,3.9nm,1.1s,mb4.2,baz=81,slow=8.4,SNR=5.6						
MATP				pP	pP	07 54 18.8	+0.5
	comp=Z,4.7nm,0.8s,baz=80,slow=6.5,SNR=7.1						
OBN	**Obninsk**	**70.40**	**329**	*e*P	**P**	**07 54 09.8**	**-5.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
MA2	**Magadan**	**70.69**	**26**	P	**P**	**07 54 14.2**	**-3.0**
MA2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MA2	**Magadan**	**70.69**	**26**	P	**P**	**07 54 14.2**	**-2.9**
	comp=Z,5.6nm,0.7s,mb4.6						
TIXI	**Tiksi**	**71.97**	**11**	*e*P	**P**	**07 54 23.6**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
AKASG	**Malin Array Be**	**72.98**	**323**	P	**P**	**07 54 29.4**	**-1.6**
	comp=Z,2.1nm,0.7s,mb4.2,baz=88,slow=5.1,SNR=4.5						
AKASG				pP	pP	07 54 36.8	-1.8
	comp=Z,2.2nm,0.6s,baz=89,slow=4.9,SNR=4.2						
MLR	**Muntele Rosu**	**73.76**	**317**	P	**P**	**07 54 36.2**	**+0.6**
	comp=Z,2.7nm,0.8s,mb4.3,baz=198,slow=8.7,SNR=3.2						
FINES	**FINESS Array B**	**77.83**	**333**	P	**P**	**07 54 58.3**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.2,baz=104,slow=7.9,SNR=7.9						
FINES				pP	pP	07 55 05.8	-0.2
	comp=Z,2.6nm,0.6s,baz=104,slow=7.9,SNR=5.7						
SUR	**Sutherland**	**78.58**	**236**	P	**P**	**07 55 06.7**	**+3.6**
	comp=Z,20nm,1.1s,mb5.0						
TSUM	**Tsumeb**	**79.50**	**250**	P	**P**	**07 55 08.2**	**-0.1**
	comp=Z,4.3nm,0.9s,mb4.4						
ARCES	**ARCESS Array B**	**80.50**	**340**	P	**P**	**07 55 12.7**	**+0.1**
	comp=Z,4.0nm,0.7s,mb4.4,baz=100,slow=6.6,SNR=10						
ARCES				pP	pP	07 55 20.5	+0.1
	comp=Z,2.3nm,0.6s,baz=92,slow=4.8,SNR=1.9						
GERES	**GERESS Array B**	**82.51**	**319**	P	**P**	**07 55 24.4**	**+0.8**
	comp=Z,1.3nm,0.7s,mb4.1,baz=104,slow=5.5,SNR=7.7						
GERES				pP	pP	07 55 32.2	+0.9
	comp=Z,2.7nm,0.8s,baz=90,slow=5.3,SNR=9.0						
NB2	**NORSAR Subarra**	**84.81**	**331**	P	**P**	**07 55 35.4**	**+0.4**
	comp=Z,1.0nm,0.6s,mb4.1,baz=85,slow=7.9						
NB2	**NORSAR Subarra**	**84.81**	**331**	P	**P**	**07 55 35.4**	**+0.4**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
NOA	**NORSAR Array B**	**84.81**	**331**	P	**P**	**07 55 34.8**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.9,baz=99,slow=5.3,SNR=3.4						
NOA				pP	pP	07 55 43.1	+0.3
	comp=Z,1.2nm,0.7s,baz=114,slow=4.4,SNR=4.0						
EKA	**Eskdalemuir Ar**	**92.66**	**326**	pP	pP	07 56 19.9	-0.4
	comp=Z,2.0nm,0.7s,baz=90,slow=6.7,SNR=2.5						
ILAR	**Eielson Array**	**98.94**	**23**	P	**P**	**07 56 39.5**	**-1.3**
	comp=Z,0.5nm,1.1s,mb4.0,baz=288,slow=5.7,SNR=2.3						
NVAR	**Mina Array Bea**	**128.49**	**34**	PKP	PKPdf	08 02 08.4	-3.1
	comp=Z,0.5nm,0.8s,baz=333,slow=2.0,SNR=3.6						
TXAR	**Lajitas Array**	**143.19**	**29**	PKhKP		08 02 33.1	
	comp=Z,0.6nm,0.7s,baz=266,slow=1.5,SNR=4.4						
JCT	**Junction City**	**143.87**	**23**	*e*PKIKP	PKPdf	08 02 35.9	-4.0
CFAA	**Coronel Fontan**	**147.46**	**206**	PKPbc	PKPdf	08 02 46.6	+0.5
	baz=90,slow=3.7						
CFAA				pPKPbc		08 02 53.2	
CFAA	**Coronel Fontan**	**147.46**	**206**	PKPbc	PKPdf	08 02 46.6	+0.5
CFAA				pPKPbc		08 02 53.2	
LPAZ	**La Paz**	**159.01**	**229**	PKP	PKPdf	08 03 02.5	-0.3
	comp=Z,0.8nm,0.7s,baz=82,slow=6.4,SNR=3.1						
LPAZ				PKPab	PKPab	08 03 38.0	+0.9
	comp=Z,0.5nm,0.4s,baz=220,slow=7.9,SNR=3.2						
LPAZ				pPKPab		08 03 46.5	
	comp=Z,1.4nm,0.6s,baz=84,slow=6.5,SNR=6.7						
LPAZ	**La Paz**	**159.01**	**229**	PKP	PKPdf	08 03 02.5	-0.3
LPAZ				PKPab	PKPab	08 03 38.0	+0.9
LPAZ				pPKPab		08 03 46.5	
JTS	**JuntasAbangare**	**167.03**	**2**	*e*PKIKP	PKPdf	08 03 02.4	-8.2

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*MOS **24** 07:55:19.3±1.8, 44.44N×148.69E, h28^{km}, mb4.1/3, Error ellipse: s-maj=21.9km s-min=19.6km az=120.2*
*JMA **24** 07:55:23.3±0.4, 44.08N×148.19E, M4.3*
*IDC **24** 07:55:27.3±4.0, 44.56N×148.28E, h84^{km}±37^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.4/23, mbtmp3.5/11, Error ellipse: s-maj=25.1km s-min=17.0km az=124.0*
ISC 24 07:55:20.5±0.6**, 44.46N**±0.05×**148.60E**±0.06**, h33^{km}, n34, σ1^{s}29**/46**, mb3.5**/10**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.93**	**327**	⇓*i*PN	**Pn**	**07 55 36.5**	**-1.0**
KUR				*i* S	**S**	**07 55 48.5**	**-1.1**
KUR				pmax	pmax		
	comp=N,410nm,0.4s						
KUR				pmax	pmax		
	comp=E,410nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1µm,0.4s						
KUR				pmax	pmax		
	comp=Z,6µm,3.0s						
KUR				smax			
	comp=N,8µm,2.0s						
KUR				smax			
	comp=E,15µm,2.0s						
KUR				smax			
	comp=N,4µm,0.4s						
KUR				smax			
	comp=E,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.01**	**259**	*e*PN	**Pn**	**07 55 53.0**	**+0.1**
YUK				*i* S	**S**	**07 56 15.5**	**-1.4**
YUK				pmax	pmax		
	comp=Z,470nm,0.2s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				smax			
	comp=E,850nm,0.4s						
YUK				smax			
	comp=N,770nm,0.5s						
YUK				smax			
	comp=N,2µm,1.0s						
YUK				smax			
	comp=E,2µm,1.0s						
NEM2	**Nemuro 2**	**2.33**	**243**	P	**P**	**07 55 57.4**	**+0.1**
NEM2				*e*S	**S**	**07 56 22.7**	**-2.4**
JRA	**Rausu**	**2.55**	**259**	P	**P**	**07 56 02.1**	**+1.7**
JRA				*e*S	**S**	**07 56 30.8**	**+0.1**
JNK	**Nakash**	**2.93**	**254**	P	**P**	**07 56 06.9**	**+1.1**
JNK				*e*S	**S**	**07 56 38.4**	**-1.8**
JAK	**Akkeshi**	**3.18**	**244**	P	**P**	**07 56 09.7**	**+0.3**
JAK				*e*S	**S**	**07 56 42.9**	**-3.7**
JTKR	**Abashiri--Toko**	**3.41**	**263**	P	**P**	**07 56 14.0**	**+1.4**
JAR	**Ashorobuto**	**3.68**	**253**	P	**P**	**07 56 18.1**	**+1.7**
JAR				*e*S	**S**	**07 57 00.3**	**+1.0**
JCH	**Churui**	**4.23**	**246**	P	**P**	**07 56 24.9**	**+0.6**
JCH				*e*S	**S**	**07 57 12.6**	**-0.6**
JKK2	**Kamakawa 2**	**4.25**	**264**	P	**P**	**07 56 27.9**	**+3.3**
JSE	**Soyaes**	**4.32**	**279**	P	**P**	**07 56 26.5**	**+1.0**
ASAJ	**Asahikawa**	**4.32**	**268**	PN	**Pn**	**07 56 27.3**	**+1.6**
ASAJ				S	**S**	**07 57 22.6**	**+7.1**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	**Asahikawa**	**4.32**	**268**	P	**P**	**07 56 27.2**	**+1.6**
	comp=Z,4.3nm,0.3s,baz=69,slow=16,SNR=9.3						
ASAJ				S	**S**	**07 57 22.6**	**+7.1**
	comp=Z,2.5nm,0.3s,baz=189,slow=7.6,SNR=2.2						
JFR	**Furan**	**4.53**	**256**	P	**P**	**07 56 30.7**	**+2.1**
JNBK	**Urakawa-nobuka**	**4.78**	**245**	P	**P**	**07 56 32.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**4.79**	**303**	*e*PN	**Pn**	**07 56 32.8**	**+0.4**
JWK2	**Keihoku**	**4.84**	**283**	P	**P**	**07 56 36.1**	**+3.2**
JKB	**Kayabe**	**6.10**	**248**	P	**P**	**07 56 49.6**	**-1.0**
JKB				*e*S	**S**	**07 57 55.8**	**-4.3**
JOT	**Ohata**	**6.33**	**244**	P	**P**	**07 56 53.4**	**-0.6**
JOT				*e*S	**S**	**07 58 00.1**	**-6.0**
JANG	**Nango**	**6.64**	**235**	P	**P**	**07 56 57.1**	**-1.2**
JANG				*e*S	**S**	**07 58 05.4**	**-8.3**
SONM	**Songino Array**	**29.17**	**292**	P	**P**	**08 01 19.2**	**-1.4**
	comp=Z,0.4nm,0.5s,mb3.4,baz=78,slow=8.3,SNR=7.6						
ILAR	**Eielson Array**	**40.30**	**37**	P	**P**	**08 02 56.4**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.1,baz=264,slow=8.2,SNR=4.7						
INK	**Inuvik**	**45.27**	**31**	P	**P**	**08 03 36.3**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	**Inuvik**	**45.27**	**31**	P	**P**	**08 03 36.3**	**+0.2**
	comp=Z,1.6nm,1.1s,mb3.7,baz=293,slow=6.4,SNR=4.4						
BVAR	**Borovoye Array**	**49.86**	**309**	P	**P**	**08 04 09.4**	**-2.8**
	comp=Z,0.4nm,0.5s,mb3.7,baz=101,slow=7.3,SNR=3.5						
YKA	**Yellowknife Ar**	**54.63**	**34**	P	**P**	**08 04 47.6**	**-0.2**
	comp=Z,0.3nm,0.8s,mb3.4,baz=298,slow=6.7,SNR=4.6						
WRA	**Warramunga Arr**	**65.40**	**195**	P	**P**	**08 06 00.8**	**-1.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**65.40**	**195**	P	**P**	**08 06 00.8**	**-1.3**
	comp=Z,0.9nm,0.7s,mb3.9,baz=15,slow=6.9,SNR=6.8						
NVAR	**Mina Array Bea**	**66.32**	**59**	pP	pP	08 06 20.7	+2.8
	comp=Z,0.9nm,0.8s,baz=294,slow=6.0,SNR=7.0						
PDAR	**Pinedale Array**	**68.66**	**51**	P	**P**	**08 06 21.3**	**-0.9**
	comp=Z,0.1nm,0.4s,mb3.1,baz=288,slow=2.9,SNR=1.9						
PDAR				pP	pP	08 06 35.4	+2.8
	comp=Z,0.5nm,0.8s,SNR=3.6						
ASAR	**Alice Springs**	**69.11**	**194**	P	**P**	**08 06 25.1**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.7,baz=9.8,slow=4.7,SNR=9.0						
NOA	**NORSAR Array B**	**69.32**	**339**	P	**P**	**08 06 23.8**	**-2.1**
NOA				pmax	pmax		

	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**69.32**	**339**	P	**P**	**08 06 23.8**	**-2.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=30,slow=6.4,SNR=2.4						
TXAR	**Lajitas Array**	**81.39**	**57**	P	**P**	**08 07 36.6**	**+1.2**
	comp=Z,0.2nm,0.5s,mb3.4,baz=310,slow=5.3,SNR=5.2						
TXAR				pP	pP	08 07 49.4	+3.5
	comp=Z,1.0nm,0.8s,baz=314,slow=6.0,SNR=8.7						

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*IDC **24** 08:19:26.5±4.0,41.73N×29.62W,mb3.5/4,mb1 3.8/4, mb1mx3.4/23,mbtmp3.5/4,Error ellipse: s-maj=121.1km s-min=37.4km az=167.0*

*CSEM **24** 08:19:29.9±0.6,41.32N×29.19W,ML3.5,Error ellipse: s-maj=13.0km s-min=7.3km az=157.0,After PDA*

*PDA **24** 08:19:29.9±0.8,41.32N×29.19W,ML3.5,Error ellipse: s-maj=13.1km s-min=9.7km az=85.0*

*SVSA **24** 08:19:29.9±0.8,41.32N×29.19W,ML3.5,Error ellipse: s-maj=13.1km s-min=9.7km az=85.0*

ISC 24 08:19:23.8±0.7,41.42N±0.09×29.3W±0.2,h10^{km},n26, σ0.^{s}62/27,mb3.6/4,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosais**	**2.81**	**163**	*e*P	**Pn**	**08 20 10.1**	**+0.5**
CALA	**Caldeira**	**2.87**	**171**	*e*rx	**Pn**	**08 20 11.8**	**+1.4**
HOR	**Horta**	**2.93**	**170**	*e*P	**Pn**	**08 20 11.9**	**+0.6**
PICO	**Pico**	**2.98**	**167**	*e*P	**Pn**	**08 20 12.2**	**+0.1**
PBIS	**Biscoitos**	**3.07**	**149**	*e*P	**Pn**	**08 20 13.7**	**+0.4**
ASBA	**Santa Barbara**	**3.08**	**151**	*i* P	**Pn**	**08 20 13.1**	**-0.3**
ASBA				*i* S	**Sn**	**08 20 46.4**	**-4.3**
	30nm,0.2s						
PVNV	**Vila Nova**	**3.10**	**148**	*e*P	**Pn**	**08 20 13.7**	**-0.1**
PPAD	**Pico dos Padre**	**3.11**	**150**	*e*P	**Pn**	**08 20 13.6**	**-0.3**
ADH	**Angra Heroismo**	**3.17**	**150**	*e*P	**Pn**	**08 20 14.3**	**-0.4**
RIB2	**Ribeirinha**	**3.18**	**149**	*e*P	**Pn**	**08 20 14.3**	**-0.6**
PFAV	**Pico das Favas**	**3.18**	**148**	*i* P	**Pn**	**08 20 14.8**	**-0.1**
SET4	**Mosteiros**	**4.43**	**142**	*e*P	**Pn**	**08 20 32.5**	**-0.2**
SET2	**Ginetes**	**4.46**	**142**	*e*P	**Pn**	**08 20 32.5**	**-0.5**
PFET	**Feteiras**	**4.48**	**142**	*e*P	**Pn**	**08 20 33.5**	**+0.1**
PSAN	**Santo Antonio**	**4.49**	**141**	*e*P	**Pn**	**08 20 33.1**	**-0.4**
FAC	**Faja de Cima**	**4.58**	**141**	*e*P	**Pn**	**08 20 34.9**	**0.0**
CML	**Cha da Macela**	**4.64**	**141**	*e*P	**Pn**	**08 20 35.2**	**-0.4**
LFA	**Lagoa do Fogo**	**4.66**	**140**	*e*P	**Pn**	**08 20 36.1**	**+0.1**
MESC	**Monte Escuro**	**4.67**	**140**	*e*P	**Pn**	**08 20 35.6**	**-0.4**
PFAD	**Fenais da Ajud**	**4.69**	**138**	*e*P	**Pn**	**08 20 36.8**	**+0.4**
FRA1	**Furnas**	**4.75**	**139**	*e*P	**Pn**	**08 20 37.4**	**+0.2**
MIRA	**Miradouro**	**4.75**	**138**	*e*P	**Pn**	**08 20 37.3**	**0.0**
YKA	**Yellowknife Ar**	**52.26**	**324**	P	**P**	**08 28 36.7**	**-0.2**
	0.3nm,0.9s,mb3.2,baz=69,slow=7.0,SNR=4.4						
PDAR	**Pinedale Array**	**57.37**	**300**	P	**P**	**08 29 12.8**	**-1.6**
	0.6nm,0.7s,mb3.7,baz=68,slow=9.7,SNR=5.8						
TXAR	**Lajitas Array**	**60.15**	**284**	P	**P**	**08 29 34.2**	**+0.3**
	0.7nm,0.9s,mb3.7,baz=66,slow=6.6,SNR=7.7						
BVAR	**Borovoye Array**	**63.32**	**42**	P	**P**	**08 29 56.6**	**+1.7**
	0.3nm,0.6s,mb3.6,baz=297,slow=6.4,SNR=3.7						

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*IDC **24** 08:23:33.9±4.3,35.93N×72.63E,mb3.8/2,mb1 4.0/4, mb1mx3.5/20,mbtmp3.8/4,ML3.5/2,Error ellipse: s-maj=87.1km s-min=76.7km az=105.0*

ISC 24 08:24:03.6±1.7,37.70N±0.08×72.9E±0.4,h174^{km}±16^{km}, n14,σ0.^{s}65/15,mb3.5/2,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.47**	**8**	P	**P**	**08 25 10.9**	**-0.5**
	SNR=157						
UCH	**Uchtor**	**4.70**	**15**	P	**P**	**08 25 14.6**	**+0.3**
	SNR=45						
KZA	**Kyzart**	**4.75**	**22**	P	**P**	**08 25 15.1**	**+0.2**
	SNR=23						
EKS2	**Erkin-Say**	**5.01**	**8**	P	**P**	**08 25 18.2**	**-0.1**
	SNR=41						
AAK	**Ala-Archa**	**5.09**	**14**	P	**P**	**08 25 19.9**	**+0.5**
	SNR=22						
CHMS	**Chumysh**	**5.49**	**15**	P	**P**	**08 25 24.4**	**-0.2**
	SNR=9.7						
USP	**Ospenovka**	**5.70**	**12**	P	**P**	**08 25 26.9**	**-0.5**
	SNR=6.5						
DLH	**Dalhousie**	**5.74**	**153**	*e*P	**P**	**08 25 29.0**	**+1.1**
DLH				*e*S	**S**	**08 26 34.0**	**+0.6**
PONG	**Pong**	**6.27**	**155**	*e*	**S**	**08 26 45.0**	**-0.9**
SDNR	**Sundarnagar**	**7.05**	**150**	*e*	**S**	**08 27 00.8**	**-3.6**
BVAR	**Borovoye Array**	**15.42**	**354**	Pn	**P**	**08 27 33.1**	**+0.1**
	0.2nm,0.3s,baz=173,slow=11,SNR=5.1						
ZAL	**Zalesovo**	**18.21**	**23**	P	**P**	**08 28 05.5**	**-0.1**
	0.3nm,0.3s,baz=231,slow=6.5,SNR=3.0						
ARCES	**ARCESS Array B**	**40.62**	**337**	P	**P**	**08 31 26.8**	**-0.6**
	2.8nm,1.0s,mb3.9,baz=112,slow=6.5,SNR=5.6						
YKA	**Yellowknife Ar**	**79.97**	**4**	P	**P**	**08 35 54.7**	**+0.6**
	0.2nm,0.3s,mb3.2,baz=350,slow=5.4,SNR=11						

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*OMAN **24** 08:39:26.8±0.1,31.36N×55.96E,h30^{km},Error ellipse: s-maj=14.6km s-min=10.8km az=273.0*

*IDC **24** 08:39:32.4±1.5,30.56N×56.77E,mb3.6/8,mb1 3.8/8, mb1mx3.7/20,mbtmp3.6/8,Error ellipse: s-maj=38.0km s-min=30.4km az=43.0*

*THR **24** 08:39:33.7±0.5,30.78N×56.77E,h14^{km}±6^{km},ML3.6*

*NEIC **24** 08:39:35.8±1.0,30.77N×56.71E,h10^{km},MN3.6(TEH), Error ellipse: s-maj=15.0km s-min=7.8km az=149.0*

*CSEM **24** 08:39:36.5±0.1,30.72N×56.74E,h40^{km},ML3.6,Error ellipse: s-maj=3.4km s-min=3.2km az=36.0*

*TEH **24** 08:39:37.3,30.65N×56.75E,h20^{km},Mn3.6*

ISC 24 08:39:33.7±0.3,30.77N±0.03×56.79E±0.06,h10^{km},n35, σ0.^{s}97/39,mb3.6/7,5C-4D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.79**	**182**	*i* PG	**Pg**	**08 39 48.8**	**-0.7**
KRBR				AML	AML	08 40 02.9	
	comp=E,3µm,0.4s						
IBAF	**Bafgh**	**1.33**	**308**	Pn	**Pn**	**08 39 56.8**	**-1.7**
IMEH	**Mehriz**	**1.97**	**289**	Pn	**Pn**	**08 40 08.5**	**+0.9**
ICHK	**Chekchek**	**2.51**	**306**	Pn	**Pn**	**08 40 15.2**	**-0.2**
BNDS	**Bandar-Abbas**	**3.40**	**189**	*e*PN	**Pn**	**08 40 28.8**	**+0.7**
BNDS				AML	AML	08 41 20.3	
	comp=N,134nm,0.5s						
ISRV	**Sarvestan**	**3.48**	**247**	Pn	**Pn**	**08 40 31.1**	**+2.0**
ZHSF	**Zahedan**	**3.63**	**108**	*e*PN	**Pn**	**08 40 32.0**	**+0.7**
ZHSF				AML	AML	08 41 37.0	
	comp=N,70nm,0.5s						
IMOK	**Mook**	**3.94**	**245**	Pn	**Pn**	**08 40 35.2**	**-0.4**
NASN	**Na’in**	**3.95**	**302**	*e*PN	**Pn**	**08 40 36.2**	**+0.4**
NASN				*e*SG	**Sg**	**08 41 35.9**	**-9.4**
NASN				AML	AML	08 41 39.6	
	comp=N,116nm,0.6s						
BANOM	**Banah**	**4.85**	**185**	⇓P	**Pn**	**08 40 49.5**	**+1.0**
	SNR=28						
BANOM				⇓S	**Sn**	**08 41 48.3**	**+2.9**
IFIR	**Firoozkooh**	**5.92**	**326**	Pn	**Pn**	**08 41 04.1**	**+0.4**
IPAY	**Payeh**	**5.96**	**17**	Pn	**Pn**	**08 41 04.9**	**+0.7**
ASHO	**Ashiyiah**	**6.10**	**186**	⇑P	**Pn**	**08 41 06.3**	**+0.1**
ASHO				⇑S	**Sn**	**08 42 17.9**	**+1.1**
IKRD	**Kardeh**	**6.16**	**13**	Pn	**Pn**	**08 41 11.3**	**+4.3**
IMYA	**Miamay**	**6.21**	**26**	Pn	**Pn**	**08 41 07.8**	**+0.1**
IQOM	**Qom**	**6.30**	**312**	Pn	**Pn**	**08 41 08.9**	**-0.2**
DAMV	**Damavand**	**6.31**	**321**	*e*PN	**Pn**	**08 41 08.6**	**-0.6**
ISFR	**Esferayen**	**6.34**	**9**	Pn	**Pn**	**08 41 10.2**	**+0.6**
IQHU	**Quchan**	**6.45**	**13**	Pn	**Pn**	**08 41 12.5**	**+1.4**
IAFJ	**Afjeh**	**6.62**	**321**	Pn	**Pn**	**08 41 13.4**	**-0.1**
IAFJ				Lg		08 43 05.7	
ISHV	**Shirvan**	**6.79**	**6**	Pn	**Pn**	**08 41 15.7**	**-0.2**
HOQ	**Hoqain**	**7.17**	**176**	⇑P	**Pn**	**08 41 19.9**	**-1.4**
	SNR=5.5						
IRAZ	**Razeghan**	**7.38**	**311**	Pn	**Pn**	**08 41 23.6**	**-0.7**
IRAZ				Sn	**Sn**	**08 42 42.5**	**-6.5**
SMDO	**Samad**	**7.76**	**171**	⇓P	**Pn**	**08 41 28.4**	**-1.2**
WBK	**Wadi Bani Khal**	**8.36**	**166**	⇑P	**P**	**08 41 36.3**	**-1.6**
RBK	**Rabkut**	**13.42**	**191**	⇑P	**P**	**08 42 41.9**	**-4.9**
ABTO	**Aybut**	**13.73**	**194**	⇓P	**P**	**08 42 46.1**	**-4.9**
BRTR	**Keskin Array B**	**20.87**	**302**	P	**P**	**08 44 17.5**	**-0.9**
	comp=N,0.6nm,0.7s,baz=124,slow=10,SNR=3.0						
BVAR	**Borovoye Array**	**24.35**	**20**	P	**P**	**08 44 53.7**	**+1.1**
	comp=N,1.7nm,0.5s,mb3.8,baz=201,slow=8.0,SNR=21						
ZAL	**Zalesovo**	**30.70**	**33**	P	**P**	**08 45 50.1**	**-0.6**
	comp=N,1.8nm,0.4s,mb4.3,baz=240,slow=5.9,SNR=4.2						
SONM	**Songino Array**	**41.23**	**51**	P	**P**	**08 47 20.9**	**+0.5**
	comp=N,0.4nm,0.8s,mb3.1,baz=251,slow=9.0,SNR=4.5						
ILAR	**Eielson Array**	**82.99**	**10**	P	**P**	**08 51 59.5**	**-0.5**
	comp=N,0.2nm,0.6s,mb3.3,baz=315,slow=5.2,SNR=4.6						
YKA	**Yellowknife Ar**	**86.81**	**356**	P	**P**	**08 52 19.5**	**+0.5**
	comp=N,0.1nm,0.4s,mb3.4,baz=3.1,slow=5.4,SNR=4.2						
WRA	**Warramunga Arr**	**89.88**	**113**	P	**P**	**08 52 33.1**	**-1.5**
	comp=N,0.3nm,1.0s,mb3.6,baz=313,slow=4.6,SNR=3.4						
ASAR	**Alice Springs**	**91.55**	**117**	P	**P**	**08 52 41.2**	**-1.1**
	comp=N,0.3nm,0.7s,mb3.8,baz=308,slow=4.5,SNR=5.8						

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*BER **24** 08:39:59.0±4.4,63.79N×9.52E,MD2.0,ML1.6, ML2.6(NAO),Explosion*

*NAO **24** 08:40:00.1±3.0,63.78N×10.01E,ML2.6*

*CSEM **24** 08:40:00.2±0.5,63.86N×9.27E,h25^{km},ML2.6,Error ellipse: s-maj=14.5km s-min=7.5km az=117.0*

ISC 24 08:39:57.3±1.0,63.76N±0.05×9.6E±0.1,n11,σ1.^{s}31/16, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRON	**Trondheim**	**0.49**	**128**	*e*P	**Pg**	**08 40 08.1**	**+1.0**
TRON				*e*S	**Sg**	**08 40 14.6**	**+1.0**
NSS	**Namsos**	**1.30**	**52**	*i* P	**Pb**	**08 40 20.9**	**-1.5**
NSS				*e*		08 40 21.2	
	baz=236,slow=18						
NSS				*e*S	**Sb**	**08 40 39.4**	**-0.2**
NSS				AML	AML	08 40 45.2	
	comp=Z,12nm,0.4s						
MOL	**Molde**	**1.51**	**219**	*e*P	**Pn**	**08 40 26.4**	**+0.7**
MOL				*e*S	**Sb**	**08 40 45.5**	**0.0**
DOMB	**Dombas**	**1.74**	**188**	*e*P	**Pn**	**08 40 30.1**	**+1.1**
DOMB				*e*Sg	**Sg**	**08 40 52.9**	**-2.3**
DOMB				AML	AML	08 40 54.2	
	comp=Z,14nm,0.5s						
NB2	**NORSAR Subarra**	**2.83**	**164**	Pn	**Pn**	**08 40 46.1**	**+1.5**
NB2				Lg		08 41 27.8	
ODD1	**Odda**	**4.10**	**201**	*e*Sg	**Sg**	**08 42 01.9**	**-12**
HFS	**Hagfors**	**4.12**	**150**	Pn	**Pn**	**08 41 03.5**	**+0.6**
	baz=334,slow=12						
HFS				Pg	**Pg**	**08 41 13.3**	**-6.3**
	baz=326,slow=16						
HFS				Sn	**Sn**	**08 41 50.5**	**-2.1**
	baz=355,slow=18						
HFS				Lg		08 42 07.4	
	baz=332,slow=28						
HFS	**Hagfors**	**4.12**	**150**	Pg	**Pg**	**08 41 13.3**	**-6.3**
	SNR=90						
HFS				Sn	**Sn**	**08 41 50.5**	**-2.1**
	SNR=50						
FIA0	**FINESS Array S**	**7.95**	**99**	Lg		08 44 04.2	
	baz=290,slow=28						
FIA0	**FINESS Array S**	**7.95**	**99**	Lg		08 44 04.2	
	baz=290,slow=28						
ARA0	**ARCESS Array S**	**8.56**	**40**	Pn	**P**	**08 42 01.5**	**-3.9**
	baz=233,slow=14						

IDC 24 08:51:14.3±1.4,3.51N×127.61E,mb3.7/4,mb1 3.9/4, mb1mx3.8/17,mbtmp3.7/4,MS3.9/1,Ms1 3.9/1, ms1mx3.3/17,Error ellipse: s-maj=134.5km s-min=23.3km az=73.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.22**	**164**	P	P	08 56 32.9	-1.1
	2.4nm,0.4s,baz=344,slow=10,SNR=34						
CBIJ	**Chichi jima**	**27.29**	**29**	LR	LR	09 07 10.0	
	comp=Z,217nm,18.3s,baz=122,slow=35						
ASAR	**Alice Springs**	**27.70**	**168**	P	P	08 57 04.6	-1.8
	0.8nm,0.6s,baz=356,slow=7.9,SNR=22						
STKA	**Stephens Creek**	**37.62**	**160**	P	P	08 58 30.9	-1.9
	1.0nm,0.4s,baz=344,slow=7.3,SNR=4.5						
SONM	**Songino Array**	**47.79**	**341**	P	P	08 59 53.4	-1.9
	0.1nm,0.3s,baz=164,slow=7.9,SNR=2.3						

IDC 24 09:03:28.6±4.0,11.67N×92.94E,mb3.6/4,mb1 3.8/5, mb1mx3.6/18,mbtmp3.6/5,ML4.0/1,Error ellipse: s-maj=156.2km s-min=23.8km az=67.0,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.90**	**40**	Pn	P	09 05 44.9	+3.6
	0.5nm,0.3s,baz=237,slow=15,SNR=5.7						
SONM	**Songino Array**	**37.78**	**15**	P	P	09 10 46.6	-1.6
	0.2nm,0.4s,baz=153,slow=3.2,SNR=3.3						
ZAL	**Zalesovo**	**42.66**	**353**	P	P	09 11 26.6	-1.9
	0.9nm,0.3s,baz=138,slow=4.1,SNR=2.6						
WRA	**Warramunga Arr**	**51.45**	**127**	P	P	09 12 35.9	-2.1
	0.7nm,0.5s,baz=312,slow=8.0,SNR=22						
ASAR	**Alice Springs**	**53.27**	**131**	P	P	09 12 49.4	-2.3
	0.1nm,0.4s,baz=310,slow=6.9,SNR=5.6						

IDC 24 09:09:28.7±15.0,4.56N×96.75E,h68^{km}±112^{km},mb3.6/4, mb1 3.8/5,mb1mx3.5/17,mbtmp3.9/5,ML4.4/1,Error ellipse: s-maj=232.4km s-min=29.0km az=69.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.98**	**9**	P	P	09 12 44.0	-1.1
	0.6nm,0.3s,baz=205,slow=13,SNR=3.8						
SONM	**Songino Array**	**43.91**	**9**	P	P	09 17 28.5	-1.9
	0.4nm,0.7s,baz=188,slow=6.4,SNR=4.2						
WRA	**Warramunga Arr**	**44.24**	**125**	P	P	09 17 31.0	-2.4
	2.5nm,0.5s,baz=302,slow=9.2,SNR=26						
ASAR	**Alice Springs**	**45.82**	**129**	P	P	09 17 44.1	-1.8
	1.0nm,0.5s,baz=303,slow=7.9,SNR=14						
STKA	**Stephens Creek**	**55.96**	**134**	P	P	09 19 01.0	-1.5
	1.2nm,0.7s,baz=306,slow=12,SNR=3.5						

CASC 24 09:14:56.8±2.3,14.17N×91.41W,h67^{km}±15^{km},MD3.8, ML4.2,1C-2D,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.27**	**304**	⇑*e*P	P	09 15 07.2	-0.3
JAT				*e*S	S	09 15 16.9	+1.5
FUG	**Fuego 3**	**0.62**	**63**	⇓*e*P	P	09 15 10.6	-0.1
PCG	**Pacaya**	**0.81**	**74**	*e*P	P	09 15 13.5	+0.6
PCG				*e*S	S	09 15 25.6	+0.6
IXG	**Ixpaco**	**0.93**	**89**	*e*P	P	09 15 14.3	-0.1
IXG				*e*S	S	09 15 27.9	+0.4
IXG				AML	AML	09 15 31.5	
	comp=N,7µm,0.4s						
NBG	**Las Nubes**	**1.11**	**68**	⇓*e*P	P	09 15 17.6	+0.7
NBG				*e*S	S	09 15 35.3	+3.5
NBG				AML	AML	09 15 41.4	
	comp=E,5µm,0.5s						
RBDL	**Robledal**	**1.67**	**92**	*e*P	P	09 15 24.5	0.0
RTR	**El Retiro**	**1.73**	**99**	*e*P	P	09 15 25.5	+0.1
RTR				*e*S	S	09 15 48.9	+2.4
SBLS	**San Blas**	**1.76**	**100**	*e*P	P	09 15 26.0	+0.2
SBLS				*e*S	S	09 15 48.5	+1.4
SNJE	**San Jose**	**1.77**	**99**	*e*P	P	09 15 26.1	+0.2
SNJE				*e*S	S	09 15 48.0	+0.6
BOQS	**Boqueron**	**2.11**	**102**	*e*P	P	09 15 31.1	+0.5
BOQS				*e*S	S	09 15 55.5	-0.1
LFRS	**El Faro**	**2.34**	**103**	*e*P	P	09 15 33.6	-0.3
LFRS				*e*S	S	09 16 01.5	+0.1
LCBS	**La Ceiba**	**2.42**	**102**	*e*P	P	09 15 35.1	+0.3
SNVI	**San Vicente**	**2.56**	**102**	*e*P	P	09 15 36.5	-0.4
SNVI				*e*S	S	09 16 06.4	-0.5

IDC 24 09:38:14.9±1.1,16.67S×175.55W,mb3.9/6,mb1 4.1/6, mb1mx3.9/16,mbtmp3.9/6,Error ellipse: s-maj=45.6km s-min=23.2km az=139.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**22.45**	**195**	P	P	09 43 14.8	-2.2
	3.8nm,0.4s,baz=340,slow=12,SNR=11						
STKA	**Stephens Creek**	**41.61**	**241**	P	P	09 46 05.5	-1.0
	0.8nm,0.4s,baz=66,slow=6.8,SNR=3.1						
WRA	**Warramunga Arr**	**47.55**	**258**	P	P	09 46 52.7	-1.7
	0.9nm,0.6s,baz=95,slow=7.1,SNR=23						
ASAR	**Alice Springs**	**47.76**	**253**	P	P	09 46 54.0	-2.1
	4.1nm,0.6s,baz=88,slow=8.4,SNR=56						
TXAR	**Lajitas Array**	**83.03**	**57**	P	P	09 50 43.9	-0.1
	0.3nm,1.0s,baz=225,slow=8.9,SNR=2.4						
ILAR	**Eielson Array**	**84.10**	**12**	P	P	09 50 45.9	-2.7
	0.3nm,0.5s,baz=216,slow=5.7,SNR=5.9						

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*BER **24** 09:45:52.9±2.5,63.81N×9.66E,MD2.0,ML1.6, ML2.6(NAO),Explosion*

*NAO **24** 09:45:53.3±3.3,63.77N×9.98E,ML2.6*

ISC 24 09:45:50.5±0.8,63.81N±0.05×9.6E±0.1,n8,σ0.^{s}87/13, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRON	**Trondheim**	**0.53**	**131**	*e*P	**Pg**	**09 46 01.3**	**+0.2**
TRON				*e*S	**Sg**	**09 46 07.9**	**-0.2**
NSS	**Namsos**	**1.28**	**54**	*e*P	**Pb**	**09 46 14.7**	**-0.5**
NSS				*e*S	**Sb**	**09 46 32.4**	**+0.3**
NSS				AML	AML	09 46 36.1	
	comp=Z,8.9nm,0.2s						
MOL	**Molde**	**1.54**	**217**	*e*P	**Pn**	**09 46 20.5**	**+1.3**
MOL				*e*S	**Sb**	**09 46 38.6**	**-1.0**
MOL				AML	AML	09 46 45.5	
	comp=Z,12nm,0.5s						
DOMB	**Dombas**	**1.79**	**187**	*e*P	**Pn**	**09 46 23.4**	**+0.6**
DOMB				*e*S	**Sn**	**09 46 45.8**	**-0.7**
DOMB				AML	AML	09 46 48.2	
	comp=Z,14nm,0.4s						
NB2	**NORSAR Subarra**	**2.88**	**164**	Pn	**Pn**	**09 46 39.3**	**+0.8**
NB2				Lg		09 47 21.3	
MOR8	**Moi Rana**	**3.15**	**39**	*e*P	**Pn**	**09 46 43.0**	**+0.6**
HFS	**Hagfors**	**4.17**	**150**	Pn	**Pn**	**09 46 56.8**	**0.0**
	baz=328,slow=12						
HFS				Pg	**Pg**	**09 47 05.8**	**-8.0**
	baz=333,slow=16						
HFS				Lg		09 48 00.7	
	baz=332,slow=28						
ARA0	**ARCESS Array S**	**8.53**	**41**	Pn	**P**	**09 47 55.2**	**-2.9**
	baz=225,slow=14						

IDC 24 09:47:19.8±2.1,15.36N×92.82E,mb3.5/4,mb1 3.7/5, mb1mx3.5/18,mbtmp3.5/5,ML3.5/1,Error ellipse: s-maj=61.2km s-min=24.9km az=71.0,Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.62**	**61**	Pn	Pn	09 48 58.0	-2.9
	0.2nm,0.3s,baz=249,slow=15,SNR=8.1						
SONM	**Songino Array**	**34.27**	**16**	P	P	09 54 08.4	-1.3
	0.5nm,0.6s,baz=197,slow=8.3,SNR=5.1						
ZAL	**Zalesovo**	**39.00**	**352**	P	P	09 54 47.4	-2.2
	1.1nm,0.7s,baz=240,slow=4.2,SNR=4.0						
WRA	**Warramunga Arr**	**53.82**	**129**	P	P	09 56 45.2	-1.8
	0.3nm,0.8s,baz=314,slow=8.6,SNR=4.1						
ASAR	**Alice Springs**	**55.83**	**133**	P	P	09 56 58.8	-2.9
	0.3nm,0.6s,baz=313,slow=6.5,SNR=5.7						

IDC 24 10:19:36.0±6.3,10.58S×124.74E,mb4.0/1,mb1 3.9/3, mb1mx3.6/12,mbtmp3.7/3,ML3.4/2,1D,Error ellipse: s-maj=105.5km s-min=74.0km az=45.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**7.53**	**173**	⇓*i*P	Pn	10 21 28.7	-1.1
	6.2nm,0.3s						
FITZ				*e*S	Sn	10 22 55.5	-1.5
KAKA	**Kakadu**	**7.84**	**106**	*e*P	Pn	10 21 34.2	+0.1
	3.1nm,0.2s						
KAKA				*i* S	Sn	10 23 05.9	+1.3
WRA	**Warramunga Arr**	**13.13**	**136**	Pn	P	10 22 44.6	-2.0
	0.3nm,0.3s,baz=317,slow=13,SNR=13						
WRA				Sn	S	10 25 10.4	-4.1
	1.2nm,0.3s,baz=310,slow=26,SNR=7.5						
ASAR	**Alice Springs**	**15.68**	**147**	Pn	P	10 23 19.4	-0.7
	0.2nm,0.3s,baz=319,slow=12,SNR=14						
ASAR				Sn	S	10 26 13.9	-1.2
	0.3nm,0.3s,baz=320,slow=23,SNR=13						
STKA	**Stephens Creek**	**26.31**	**146**	P	P	10 25 13.3	-2.0
	1.9nm,0.7s,baz=306,slow=8.7,SNR=4.0						

IDC 24 10:30:09.7±4.1,49.61S×124.83E,mb3.8/2,mb1 4.0/2, mb1mx3.7/10,mbtmp3.9/2,Error ellipse: s-maj=136.5km s-min=74.3km az=115.0,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**21.71**	**42**	P	P	10 35 02.1	-2.0
	5.2nm,1.1s,baz=204,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**26.85**	**19**	P	P	10 35 51.8	-1.9
	1.4nm,0.9s,baz=189,slow=8.9,SNR=6.9						
YKA	**Yellowknife Ar**	**145.71**	**45**	PKPbc	PKPbc	10 49 48.4	-0.9
	0.1nm,0.4s,baz=272,slow=2.2,SNR=3.9						

CASC 24 10:30:43.0±1.5,12.73N×88.39W,h41^{km}±68^{km},MD3.6, ML3.3,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**0.71**	**9**	*e*P	P	10 30 57.1	+0.5
VSM				*e*S	S	10 31 08.5	+2.0
BLLM	**Bellamira**	**0.73**	**12**	*e*P	P	10 30 56.8	-0.1
BLLM				*e*S	S	10 31 07.8	+0.8
CNCH	**Conchagua**	**0.77**	**45**	*e*P	P	10 30 57.0	-0.5
CNCH				*e*S	S	10 31 08.8	+0.7
SNVI	**San Vicente**	**0.98**	**334**	*e*P	P	10 31 00.7	+0.2
SNVI				*e*S	S	10 31 14.0	+0.6
CAHU	**Cacacuatique**	**1.05**	**10**	*e*P	P	10 31 01.6	+0.1
CAHU				*e*S	S	10 31 16.6	+1.5
LCBS	**La Ceiba**	**1.09**	**328**	*e*P	P	10 31 01.8	-0.2
LCBS				*e*S	S	10 31 16.0	-0.1
LFRS	**El Faro**	**1.10**	**324**	*e*P	P	10 31 02.1	-0.1
LFRS				*e*S	S	10 31 16.8	+0.3
LBRS	**Las Brisas**	**1.19**	**328**	*e*P	P	10 31 03.4	0.0
LBRS				*e*S	S	10 31 18.8	+0.1
SNET	**Serv Nac Est T**	**1.26**	**320**	*i*	P	10 31 22.8	+18
	comp=Z,532nm,0.1s						
BOQS	**Boqueron**	**1.32**	**319**	*e*P	P	10 31 05.4	-0.1
BOQS				*e*S	S	10 31 22.7	+0.6
LEON	**Leon**	**1.50**	**102**	*e*P	P	10 31 09.0	+1.1
LEON				*e*S	S	10 31 25.0	-1.4
SBLS	**San Blas**	**1.63**	**313**	*e*P	P	10 31 09.6	-0.2
SBLS				*e*S	S	10 31 30.8	+1.1
SNJE	**San Jose**	**1.64**	**314**	*e*P	P	10 31 09.9	0.0
SNJE				*e*S	S	10 31 30.8	+0.9
RTR	**El Retiro**	**1.69**	**314**	*e*P	P	10 31 10.0	-0.5
RTR				*e*S	S	10 31 31.4	+0.3
RBDL	**Robledal**	**1.87**	**318**	*e*P	P	10 31 13.0	-0.1
MGAN	**Managua**	**2.17**	**105**	*e*P	P	10 31 16.5	-0.9
MGAN				*e*S	S	10 31 41.5	-1.8
TICN	**Ticuantepe**	**2.22**	**108**	*e*P	P	10 31 18.4	+0.3
TICN				*e*S	S	10 31 44.8	+0.2

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*IDC **24** 10:37:22.5±1.1,5.17N×93.22E,mb3.8/7,mb1 4.0/8, mb1mx3.9/18,mbtmp3.8/8,ML4.0/1,Error ellipse: s-maj=45.3km s-min=20.4km az=50.0*

ISC 24 10:37:25.8±1.0,5.2N±0.1×93.3E±0.2,h33^{km},n8,σ0.^{s}39/8, mb3.9/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.29**	**22**	Pn	**P**	**10 40 48.0**	**+0.1**
	0.2nm,0.3s,baz=213,slow=15,SNR=3.5						
SONM	**Songino Array**	**43.94**	**13**	P	**P**	**10 45 31.5**	**+0.1**
	0.3nm,0.9s,mb3.0,baz=191,slow=7.3,SNR=2.6						
WRA	**Warramunga Arr**	**47.46**	**123**	P	**P**	**10 45 59.4**	**-0.3**
	1.6nm,0.8s,mb4.0,baz=301,slow=9.1,SNR=16						
ASAR	**Alice Springs**	**48.91**	**128**	P	**P**	**10 46 11.2**	**+0.3**
	0.2nm,0.4s,mb3.5,baz=299,slow=7.9,SNR=4.5						
ZAL	**Zalesovo**	**49.08**	**353**	P	**P**	**10 46 11.4**	**-0.4**
	1.1nm,0.4s,mb4.2,baz=340,slow=6.6,SNR=3.1						
BRTR	**Keskin Array B**	**63.55**	**312**	P	**P**	**10 47 55.0**	**-0.5**
	0.7nm,0.7s,mb3.8,baz=119,slow=5.8,SNR=3.4						
ARCES	**ARCESS Array B**	**77.48**	**341**	P	**P**	**10 49 19.5**	**+0.2**
	14nm,1.2s,mb4.8,baz=100,slow=7.4,SNR=6.8						
GERES	**GERESS Array B**	**79.25**	**319**	P	**P**	**10 49 30.2**	**+0.7**
	0.8nm,0.7s,mb3.7,baz=76,slow=5.5,SNR=5.1						

DJA 24 10:58:11.7±1.0,9.50S×115.19E,h30^{km}±28^{km},MD4.8/3, ML3.3/2,5C-1D,Error ellipse: s-maj=59.6km s-min=10.3km az=1.0,South of Bali

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATI	**Rata**	**0.84**	**24**	⇓*e*Pn	Pn	10 58 27.4	-0.2
	259nm,0.2s						

RATI				⇑*e*Sn	Sn	10 58 38.6	-0.4
KEDI	**Kedomdong**	**1.36**	**42**	⇑*e*Pn	Pn	10 58 33.9	-1.1
	39nm,0.2s						
KEDI				⇑*e*Sn	Sn	10 58 50.4	-1.7
SRDI	**Scrawed**	**1.45**	**314**	⇑*e*Pn	Pn	10 58 35.3	-1.0
	20nm,0.2s						
SRDI				⇑*e*Sn	Sn	10 58 52.5	-1.9

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*IDC **24** 11:03:30.9±0.5, 13.77N×93.04E, mb4.4/15, mb1 4.6/16, mb1mx4.5/20, mbtmp4.4/16, ML3.9/1, MS3.7/6, Ms1 3.8/6, ms1mx3.4/25, Error ellipse: s-maj=25.5km s-min=13.1km az=56.0*

*BJI **24** 11:03:32.7, 13.41N×93.09E, h46^{km}, mB5.1, mb4.6, Ms4.1, Msz3.7*

*MOS **24** 11:03:34.2±0.9, 13.81N×93.17E, h33^{km}, mb4.9/22, Error ellipse: s-maj=10.7km s-min=6.1km az=108.5*

*NEIC **24** 11:03:35.6±0.3, 13.78N×93.14E, h30^{km}, mb4.8/25, Error ellipse: s-maj=6.9km s-min=5.5km az=222.0*

ISC 24 11:03:34.2±0.3**, 13.79N**±0.05×**93.11E**±0.03**, h34**^{km}**,**
h34^{km}±1.1^{km}**:pP-P, n136,** σ1^{s}**17**/148**, mb4.6**/50**, MS3.8**/14**,**
1C-4D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**6.56**	**100**	P	**P**	**11 05 14.0**	**+3.2**
BDT	**Bhumibol Dam**	**6.64**	**58**	P	**P**	**11 05 11.0**	**-0.9**
	20nm,0.8s						
NST	**Nakhon Sawan**	**7.05**	**74**	P	**P**	**11 05 17.5**	**-0.1**
CM31	**Chiang Mai Arr**	**7.28**	**50**	*e*Pn	**P**	**11 05 19.2**	**-1.6**
CM31				*e*		11 05 28.2	
CMAR	**Chiang Mai Arr**	**7.28**	**50**	Pn	**P**	**11 05 20.1**	**-0.7**
	0.5nm,0.3s,baz=241,slow=15,SNR=24						
CMAR				Sn	**S**	**11 06 39.3**	**-3.8**
	1.5nm,0.3s,baz=234,slow=23,SNR=6.3						
CMAR				LR	LR	11 08 38.3	
	comp=Z,362nm,18.9s,baz=230,slow=42						
CHG	**Chiang Mai**	**7.50**	**48**	P	**P**	**11 05 26.4**	**+2.4**
CHRT	**Chiangrai**	**8.79**	**46**	⇓P	**P**	**11 05 51.5**	**+10**
NANT	**Nan**	**8.83**	**55**	P	**P**	**11 05 46.0**	**+3.7**
BWNR	**Bhubaneshwar**	**9.52**	**314**	*e*P	**P**	**11 05 49.6**	**-2.3**
BWNR				*e*		11 07 23.6	
	comp=E,302nm,0.2s						
BWNR				*e*S	**S**	**11 07 26.3**	**-13**
BWNR				*e*		11 07 27.3	
	comp=N,303nm,0.2s						
VIS	**Vishakhapatnam**	**10.19**	**294**	*e*P	**P**	**11 05 59.7**	**-1.6**
VIS				AMb	AMB	11 06 12.1	
	comp=Z,136nm,1.7s						
VIS				*e*S	**S**	**11 07 43.4**	**-12**
VIS				*i*		11 15 56.2	
SHL	**Shillong**	**11.77**	**355**	*e*P	**P**	**11 06 19.0**	**-3.7**
SHL				*e*S	**S**	**11 08 22.5**	**-11**
BLSP	**Bilaspur**	**13.33**	**310**	*e*P	**P**	**11 06 42.2**	**-1.3**
BLSP				AMb	AMB	11 06 53.1	
	comp=Z,25nm,0.8s						
BLSP				*e*S	**S**	**11 08 56.4**	**-15**
KMI	**Kunming**	**14.47**	**37**	P	**P**	**11 07 00.3**	**+1.8**
KMI				AP		11 07 05.8	
KMI				S	**S**	**11 09 44.3**	**+5.7**
KMI				AMB	AMB		
	comp=Z,4.0nm,1.2s						
KMI				LR	LR		
	comp=N,212nm,19.4s						
KMI				LR	LR		
	comp=E,243nm,20.3s						
KMI				LR	LR		
	comp=Z,241nm,17.8s						
KMI	**Kunming**	**14.47**	**37**	P	**P**	**11 07 00.3**	**+1.8**
KMI				S	**S**	**11 09 44.3**	**+5.7**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KMI	**Kunming**	**14.47**	**37**	P	**P**	**11 07 00.3**	**+1.8**
	comp=Z,4.0nm,1.2s						
KMI				pP		11 07 05.7	
KMI				sP		11 07 09.7	
KMI				S	**S**	**11 09 44.3**	**+5.7**
HYB	**Hyderabad**	**14.47**	**286**	*i* P	**P**	**11 06 58.0**	**-0.7**
HYB				*e*		11 07 07.0	
HYB				*e*		11 09 26.0	
HYB				*e*S	**S**	**11 09 36.5**	**-2.3**
JIRN	**Jiri**	**15.23**	**336**	*e*P	**P**	**11 07 09.1**	**+0.6**
PKI	**Pulchoki**	**15.48**	**334**	*e*P	**P**	**11 07 11.6**	**-0.1**
GUN	**Gumba**	**15.58**	**336**	*e*P	**P**	**11 07 10.2**	**-2.8**
DMN	**Daman**	**15.64**	**333**	*e*P	**P**	**11 07 13.8**	**0.0**
KKN	**Kakani**	**15.72**	**334**	*e*P	**P**	**11 07 13.4**	**-1.4**
LSA	**Lhasa**	**15.93**	**354**	P	**P**	**11 07 21.3**	**+3.8**
LSA	**Lhasa**	**15.93**	**354**	*e*P	**P**	**11 07 20.6**	**+3.1**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	**Lhasa**	**15.93**	**354**	*e*P	**P**	**11 07 20.6**	**+3.1**
	comp=Z,10.0nm,0.7s						
GKN	**Gorkha**	**16.19**	**332**	*e*P	**P**	**11 07 16.4**	**-4.4**
KOLN	**Koldanda**	**16.49**	**329**	*e*P	**P**	**11 07 21.1**	**-3.5**
QIZ	**Qiongzhong**	**16.87**	**70**	P	**P**	**11 07 29.4**	**0.0**
QIZ				*e*S	**S**	**11 10 33.3**	**-1.4**
QIZ				LR	LR		
	comp=E,321nm,16.2s						
QIZ				LR	LR		
	comp=Z,360nm,15.2s						
BHPL	**Bhopal**	**17.58**	**305**	*e*P	**P**	**11 07 40.2**	**+2.0**
BHPL				*e*		11 07 52.0	
	comp=Z,16nm,0.7s						
BHPL				*e*		11 10 40.6	
GYA	**Guiyang**	**17.89**	**43**	P	**P**	**11 07 45.0**	**+2.9**
GYA				AP		11 07 53.3	
GYA				S	**S**	**11 11 03.3**	**+5.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
GYA				AMB	AMB		
	comp=Z,160nm,3.6s						
GYA				LR	LR		
	comp=N,560nm,12.4s						
GYA				LR	LR		
	comp=E,400nm,12.3s						
GYA				LR	LR		
	comp=Z,650nm,11.4s						
KAD	**Karad**	**18.56**	**283**	*e*P	**P**	**11 07 51.0**	**+0.4**
KAD				*e*		11 11 02.0	
POO	**Poona**	**19.08**	**287**	⇑*i*	**P**	**11 08 08.0**	**+11**
	comp=Z,20nm,1.0s						
POO				*i*		11 11 10.0	
NDI	**New Delhi**	**20.91**	**318**	*e*P	**P**	**11 08 15.0**	**-1.2**
NDI				*e*S	**S**	**11 12 11.0**	**+8.5**
ENH	**Enshi**	**22.30**	**40**	*e*P	**P**	**11 08 27.7**	**-2.4**
	comp=Z,28nm,1.0s,mb4.7						
LZH	**Lanzhou**	**24.20**	**22**	⇓P	**P**	**11 08 50.0**	**+1.3**
LZH				AP		11 09 03.5	
LZH				XP		11 09 10.0	
LZH				AMB	AMB		
	comp=Z,40nm,1.4s,mb4.7						
LZH	**Lanzhou**	**24.20**	**22**	⇓P	**P**	**11 08 50.0**	**+1.3**
LZH				*PP		11 09 03.5	
LZH				pmax	pmax		
	comp=Z,40nm,1.4s,mb4.7						
LZH	**Lanzhou**	**24.20**	**22**	⇓P	**P**	**11 08 50.0**	**+1.3**
	comp=Z,40nm,1.4s,mb4.7						
LZH				pP		11 09 03.5	
LZH				sP		11 09 10.0	
XAN	**Xi'an**	**24.74**	**33**	P	**P**	**11 08 54.0**	**+0.1**
XAN				AMB	AMB		
	comp=Z,17nm,0.8s,mb4.6						
GTA	**Gaotai**	**26.19**	**12**	*e*P	**P**	**11 09 08.9**	**+1.3**
GTA				AP	pP	11 09 18.4	+1.2
GTA				XP	sP	11 09 21.8	+0.5
GTA				PP	PP	11 09 53.8	+3.8
GTA				S	**S**	**11 13 40.4**	**+5.3**
GTA				XS		11 13 53.3	
GTA				SS	SS	11 14 50.3	+6.4
GTA				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb4.1						
GTA				AMB	AMB		
	comp=Z,84nm,4.9s						
GTA				LR	LR		
	comp=N,132nm,14.1s,MS3.7						
GTA				LR	LR		
	comp=E,83nm,12.2s,MS3.7						
GTA				LR	LR		
	comp=Z,115nm,16.4s,MS3.5						
NJ2	**Nanjing**	**29.75**	**48**	*e*P	**P**	**11 09 38.1**	**-1.6**
NJ2				AP	pP	11 09 47.8	-1.8
NJ2				PP	PP	11 10 34.8	-2.3
NJ2				S	**S**	**11 14 31.0**	**-1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,320nm,5.7s						
NJ2				LR	LR		
	comp=N,430nm,13.0s,MS4.5						
NJ2				LR	LR		
	comp=E,510nm,10.9s,MS4.5						
NJ2				LR	LR		
	comp=Z,2µm,24.1s						
WMQ	**Urumqi**	**30.28**	**352**	*e*P	**P**	**11 09 46.4**	**+2.0**
WMQ				XP	sP	11 10 00.0	+1.2
WMQ				PP	PP	11 10 46.4	+2.5
WMQ				S	**S**	**11 14 44.0**	**+3.3**
WMQ				SS	SS	11 16 24.0	+3.3
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.6						
WMQ				LR	LR		
	comp=N,112nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=E,98nm,18.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,111nm,18.0s,MS3.5						
SSE	**Sheshan**	**31.01**	**52**	*e*P	**P**	**11 09 49.9**	**-1.1**
SSE				AP	pP	11 09 58.6	-2.2
SSE				S	**S**	**11 14 53.1**	**+0.9**
SSE				XS		11 15 09.8	
SSE				AMB	AMB		
	comp=Z,45nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,42nm,3.2s						
SSE				LR	LR		
	comp=N,83nm,24.5s,MS3.3						
SSE				LR	LR		
	comp=E,33nm,24.3s,MS3.3						
SSE				LR	LR		
	comp=Z,63nm,24.0s,MS3.2						
SSE	**Sheshan**	**31.01**	**52**	*e*P	**P**	**11 09 49.9**	**-1.1**
	comp=Z,45nm,0.7s,mb5.4						
SSE				pP	pP	11 09 58.6	-2.2
SSE				sP	sP	11 10 02.4	-3.0
SSE				S	**S**	**11 14 53.1**	**+0.9**
SSE				sS		11 15 09.7	
SSE				LR	LR		
	comp=Z,60nm,24.0s,MS3.2						
HHC	**Hu-ho-hao-te**	**31.41**	**27**	*e*P	**P**	**11 10 00.3**	**+5.9**
HHC				AP	pP	11 10 08.8	+4.5
HHC				XP	sP	11 10 14.8	+6.0
HHC				PCP	PcP	11 12 49.3	+1.9
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,97nm,8.3s						
HHC				LR	LR		
	comp=N,247nm,23.8s,MS4.0						
HHC				LR	LR		
	comp=E,341nm,23.8s,MS4.0						
HHC				LR	LR		
	comp=Z,116nm,13.1s						
AAK	**Ala-Archa**	**32.93**	**334**	*i* P	**P**	**11 10 07.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,12nm,2.3s,mb4.4						
BJT	**Baijiatuau**	**33.05**	**33**	*e*P	**P**	**11 10 09.1**	**+0.4**
BJT				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BJT	**Baijiatuau**	**33.05**	**33**	*e*P	**P**	**11 10 09.1**	**+0.4**
	comp=Z,10nm,1.1s,mb4.7						
BJI	**Beijing**	**33.07**	**33**	*e*P	**P**	**11 10 08.9**	**0.0**
BJI				S	**S**	**11 15 27.1**	**+2.8**
BJI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
BJI				LR	LR		
	comp=N,209nm,23.1s,MS3.9						
BJI				LR	LR		
	comp=E,207nm,23.8s,MS3.9						
BJI				LR	LR		
	comp=Z,115nm,23.8s,MS3.5						
BJI	**Beijing**	**33.07**	**33**	*e*P	**P**	**11 10 08.9**	**0.0**
	comp=Z,7.0nm,1.0s,mb4.5						
BJI				S	**S**	**11 15 27.1**	**+2.8**
BJI				LR	LR		
	comp=Z,120nm,23.8s,MS3.5						
MKAR	**Makanchi Array**	**34.13**	**347**	*i* P	**P**	**11 10 17.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	**Songino Array**	**35.70**	**15**	P	**P**	**11 10 31.9**	**+0.6**
	comp=Z,3.3nm,0.9s,mb4.3,baz=196,slow=9.0,SNR=25						
SONM				PcP	PcP	11 13 00.0	+0.7
	comp=Z,1.5nm,0.9s,baz=211,slow=3.0,SNR=5.5						
ULN	**Ulaanbaatar**	**35.90**	**16**	*e*P	**P**	**11 10 33.0**	**0.0**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**35.90**	**16**	*e*P	**P**	**11 10 33.0**	**0.0**
	comp=Z,3.1nm,0.8s,mb4.3						
ZAK	**Zakamensk**	**37.42**	**11**	*e*P	**P**	**11 10 45.3**	**-0.5**
ZAK				*e*		11 13 05.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.0s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KURK	**Kurchatov**	**38.66**	**345**	*e*P	**P**	**11 10 56.3**	**+0.2**
KURK				*e*	pP	11 11 07.1	+0.9
KURK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
KURK	**Kurchatov**	**38.66**	**345**	*e*P	**P**	**11 10 56.3**	**+0.1**
	comp=Z,15nm,1.1s,mb4.6						
KURK				*e*	pP	11 11 07.1	+0.9
TLY	**Talaya**	**38.73**	**10**	*i* P	**P**	**11 10 54.7**	**-2.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
TLY	**Talaya**	**38.73**	**10**	P	**P**	**11 10 57.6**	**+0.9**
	comp=Z,3.7nm,0.8s,mb4.2						
ZAL	**Zalesovo**	**40.58**	**352**	P	**P**	**11 11 12.6**	**+0.5**
	comp=Z,2.7nm,0.3s,mb4.3,baz=127,slow=1.0,SNR=16						
CN2	**Changchun**	**40.73**	**36**	*e*P	**P**	**11 11 15.0**	**+1.6**
NVS	**Novosibirsk**	**41.68**	**351**	*e*P	**P**	**11 11 18.7**	**-2.3**
CHKZ	**Chkalovo**	**43.58**	**341**	*e*P	**P**	**11 11 36.4**	**-0.2**
CHKZ				*e*	pP	11 11 45.3	-1.4
CHKZ				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
CHKZ	**Chkalovo**	**43.58**	**341**	*e*P	**P**	**11 11 36.4**	**-0.2**
	comp=Z,16nm,1.0s,mb4.7						
CHKZ				*e*	pP	11 11 45.3	-1.5
MDJ	**Mudanjiang**	**43.64**	**38**	P	**P**	**11 11 34.1**	**-3.1**
MDJ				PP	PP	11 13 18.3	-2.3
MDJ				S	**S**	**11 18 03.8**	**-0.3**
MDJ				SS	SS	11 21 12.0	-0.1
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,95nm,3.3s						
MDJ				LR	LR		
	comp=N,28nm,20.3s,MS3.4						
MDJ				LR	LR		
	comp=E,41nm,20.3s,MS3.4						
MDJ				LR	LR		
	comp=Z,53nm,21.7s,MS3.4						
FITZ	**Fitzroy Crossi**	**45.10**	**134**	*e*P	**P**	**11 11 48.5**	**-0.8**
	comp=Z,8.3nm,0.9s,mb4.6						
BOD	**Bodaibo**	**46.70**	**15**	*e*P	**P**	**11 12 00.9**	**-0.5**
BOD				*e*	pP	11 12 10.2	-1.3
SVE	**Sverdlovsk**	**49.57**	**337**	*e*P	**P**	**11 12 22.9**	**-0.9**
SVE				*e*	pP	11 12 33.0	-1.0
GNI	**Garni**	**49.69**	**311**	*e*P	**P**	**11 12 26.5**	**+1.6**
GNI				pmax	pmax		
	comp=Z,24nm,1.1s						
GNI	**Garni**	**49.69**	**311**	LR	LR	11 37 03.0	
	comp=Z,72nm,18.2s,MS3.7,baz=144,slow=40						
GNI	**Garni**	**49.69**	**311**	*e*P	**P**	**11 12 26.5**	**+1.6**
	comp=Z,24nm,1.1s,mb5.1						
NWAO	**Narrogin (SRO)**	**51.86**	**154**	P	**P**	**11 12 41.1**	**-0.4**
	comp=Z,5.0nm,0.7s,mb4.6,baz=342,slow=9.8,SNR=3.5						
KIV	**Kislovodsk**	**52.34**	**315**	*e*P	**P**	**11 12 45.6**	**+0.7**
KIV				pmax	pmax		
	comp=N,10.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
KIV				MLR	MLR		
	comp=N,36nm,18.0s						
KIV				MLR	MLR		
	comp=Z,70nm,18.0s,MS3.7						
KIV	**Kislovodsk**	**52.34**	**315**	*e*P	**P**	**11 12 44.2**	**-0.7**
	comp=Z,38nm,1.2s,mb5.2						
WRA	**Warramunga Arr**	**52.62**	**129**	P	**P**	**11 12 46.6**	**-0.7**
	comp=Z,3.6nm,0.8s,mb4.4,baz=309,slow=8.2,SNR=30						
WRA				PcP	PcP	11 13 57.0	-0.2
	comp=Z,1.0nm,0.5s,baz=317,slow=3.3,SNR=9.5						
WRAB	**Tennant Creek**	**52.63**	**129**	*i* P	**P**	**11 12 46.5**	**-0.9**
WRAB	**Tennant Creek**	**52.63**	**129**	*e*P	**P**	**11 12 46.4**	**-1.0**
	comp=Z,9.7nm,0.9s,mb4.7						
ASPA	**Alice Springs**	**54.56**	**133**	*e*P	**P**	**11 13 01.0**	**-0.6**
ASAR	**Alice Springs**	**54.56**	**133**	P	**P**	**11 13 01.2**	**-0.5**
	comp=Z,4.4nm,0.8s,mb4.6,baz=308,slow=6.7,SNR=69						
ASAR				PcP	PcP	11 14 04.8	+0.4
	comp=Z,0.9nm,0.8s,baz=317,slow=3.7,SNR=3.8						
ASAR				ScP		11 18 00.2	
	comp=Z,1.8nm,1.1s,baz=299,slow=3.7,SNR=5.9						
YAK	**Yakutsk**	**54.78**	**20**	*i* P	**P**	**11 13 01.1**	**-1.6**
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
KMBO	**Kilima Mbogo**	**57.28**	**260**	LR	LR	11 34 05.1	
	comp=Z,80nm,19.8s,MS3.8,baz=91,slow=32						
BRTR	**Keskin Array B**	**57.90**	**308**	P	**P**	**11 13 24.8**	**-0.5**
	comp=Z,7.2nm,0.8s,mb4.7,baz=127,slow=6.2,SNR=29						
SIM	**Simferopol'**	**58.52**	**314**	*e*P	**P**	**11 13 31.1**	**+1.5**
SIM				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
OBN	**Obninsk**	**59.89**	**326**	*e*P	**P**	**11 13 38.1**	**-0.8**
OBN				*e**PP	pP	11 13 49.0	-0.3
OBN				*e*S	**S**	**11 21 49.8**	**+3.1**
OBN				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
TIXI	**Tiksi**	**61.68**	**12**	*e*P	**P**	**11 13 49.3**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.9						
AKASG	**Malin Array Be**	**62.95**	**320**	P	**P**	**11 13 57.9**	**-1.7**
	comp=Z,9.5nm,1.1s,mb4.8,baz=85,slow=5.4,SNR=13						
STKA	**Stephens Creek**	**64.95**	**135**	P	**P**	**11 14 12.7**	**-0.3**
	comp=Z,1.8nm,0.8s,mb4.1,baz=308,slow=5.6,SNR=3.3						
KWP	**Kalwaria**	**66.93**	**318**	*e*P	**P**	**11 14 25.6**	**+0.4**
FINES	**FINESS Array B**	**67.05**	**331**	P	**P**	**11 14 25.6**	**-0.2**
	comp=Z,12nm,1.1s,mb4.8,baz=100,slow=8.5,SNR=16						
FINES				LR	LR	11 45 39.2	
	comp=Z,66nm,22.0s,MS3.8,baz=51,slow=38						
SUW	**Suwalki**	**67.17**	**323**	*e*P	**P**	**11 14 26.3**	**-0.4**
CRVS	**Cervenica-Dubn**	**67.67**	**317**	*i* P	**P**	**11 14 30.8**	**+0.9**
CRVS				*i* sP	sP	11 14 42.2	-2.2
CRVS				*i*		11 14 57.5	
NIE	**Niedzica**	**68.46**	**318**	*e*P	**P**	**11 14 35.0**	**+0.1**
VYHS	**Vyhne**	**69.39**	**317**	*i* P	**P**	**11 14 40.9**	**+0.3**
VYHS				*e*sP	sP	11 14 52.6	-2.4
ARCES	**ARCESS Array B**	**69.39**	**340**	P	**P**	**11 14 40.5**	**+0.3**
	comp=Z,4.4nm,0.8s,mb4.4,baz=90,slow=7.3,SNR=13						
ARCES				LR	LR	11 48 11.0	
	comp=Z,88nm,19.5s,MS4.0,baz=140,slow=39						
OKC	**Ostrava-Krasne**	**69.89**	**318**	*e*P	**P**	**11 14 44.3**	**+0.7**
MORC	**Moravsky Berou**	**70.28**	**318**	*e*P	**P**	**11 14 46.4**	**+0.4**
MORC				*e*	pP	11 14 56.5	-0.1
MORC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
MORC	**Moravsky Berou**	**70.28**	**318**	*e*P	**P**	**11 14 46.4**	**+0.4**
	comp=Z,12nm,0.9s,mb4.8						
MORC				*e*	pP	11 14 56.5	-0.1
LSZ	**Lusaka**	**70.40**	**248**	*e*P	**P**	**11 14 48.6**	**+1.3**
LSZ				*e*	pP	11 14 59.9	+2.0
LSZ				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
LSZ	**Lusaka**	**70.40**	**248**	*e*P	**P**	**11 14 48.6**	**+1.3**
	comp=Z,13nm,0.9s,mb4.9						
LSZ				*e*	pP	11 14 59.9	+2.0
BILL	**Bilibino**	**71.01**	**22**	*i* P	**P**	**11 14 49.2**	**-0.9**
BILL				*i*	pP	11 15 00.9	+0.1
BILL				*i*		11 17 22.7	
BILL				*e*S	S	11 24 01.2	-1.2
BILL				pmax	pmax		
	comp=Z,7.0nm,2.4s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
DPC	**Dobruska-Polom**	**71.08**	**319**	*e*P	**P**	**11 14 51.6**	**+0.7**
KSP	**Ksiaz**	**71.11**	**319**	*e*P	**P**	**11 14 51.4**	**+0.4**
UPC	**Upice**	**71.28**	**319**	*e*P	**P**	**11 14 53.0**	**+1.0**
PRU	**Pruhonice**	**72.23**	**318**	*e*P	**P**	**11 14 58.3**	**+0.7**
BRG	**Berggiesshubel**	**72.60**	**319**	*i* P	**P**	**11 15 00.6**	**+0.8**
BRG				*e*	pP	11 15 11.8	+1.3
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
BRG	**Berggiesshubel**	**72.60**	**319**	*i* P	**P**	**11 15 00.6**	**+0.8**
	comp=Z,7.7nm,1.2s,mb4.5						
BRG				*e*	pP	11 15 11.8	+1.3
GEC2	**GERESS Array S**	**72.79**	**317**	*e*P	**P**	**11 15 01.6**	**+0.6**
GEC2				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
GEC2	**GERESS Array S**	**72.79**	**317**	*e*P	**P**	**11 15 01.6**	**+0.6**
	comp=Z,12nm,0.8s,mb4.9						
GERES	**GERESS Array B**	**72.79**	**317**	P	**P**	**11 15 01.6**	**+0.6**
	comp=Z,7.4nm,0.7s,mb4.7,baz=79,slow=6.8,SNR=46						
KHC	**Kasperske Hory**	**72.87**	**317**	*e*P	**P**	**11 15 01.7**	**+0.2**
KHC				*e*pP	pP	11 15 13.1	+1.0
CLL	**Collm**	**73.19**	**320**	P	**P**	**11 15 06.0**	**+2.7**
WET	**Wettzell**	**73.33**	**318**	*e*P	**P**	**11 15 04.7**	**+0.5**
WET				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.7						
WET	**Wettzell**	**73.33**	**318**	*e*P	**P**	**11 15 04.7**	**+0.5**
	comp=Z,14nm,1.3s,mb4.7						
MOX	**Moxa**	**74.09**	**319**	*e*P	**P**	**11 15 09.3**	**+0.8**
MOX	**Moxa**	**74.09**	**319**	*i* P	**P**	**11 15 09.3**	**+0.8**
NB2	**NORSAR Subarra**	**74.12**	**330**	P	**P**	**11 15 07.8**	**-0.7**
	comp=Z,4.0nm,0.6s,mb4.5,baz=90,slow=5.8						
NB2	**NORSAR Subarra**	**74.12**	**330**	P	**P**	**11 15 07.8**	**-0.7**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
NOA	**NORSAR Array B**	**74.12**	**330**	P	**P**	**11 15 08.4**	**-0.1**
	comp=Z,3.3nm,0.7s,mb4.4,baz=90,slow=5.8,SNR=15						
NOA				LR	LR	11 49 48.0	
	comp=Z,43nm,21.8s,MS3.7,baz=125,slow=38						
GRA1	**Grafenberg Arr**	**74.38**	**318**	*e*P	**P**	**11 15 11.2**	**+0.9**
	comp=Z,15nm,1.4s,mb4.7						
GRA1				*e*pP	pP	11 15 22.1	+1.2
GRF	**Grafenberg Arr**	**74.38**	**318**	*e*P	**P**	**11 15 11.2**	**+0.9**
GRF				*e**PP	pP	11 15 22.1	+1.2
GRF				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
BSEG	**Bad Segeberg**	**74.74**	**323**	*e*P	**P**	**11 15 13.1**	**+0.8**
CLZ	**Clausthal**	**74.81**	**320**	*e*P	**P**	**11 15 13.4**	**+0.7**
	comp=Z,10.0nm,0.8s,mb4.8						
LPG	**La Plagne**	**77.77**	**314**	*e*P	**P**	**11 15 30.5**	**+0.9**
	comp=Z,29nm,0.8s,mb5.0						
LPG	**La Plagne**	**77.77**	**314**	*e*P	**P**	**11 15 30.5**	**+0.9**
LPG				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
IMA	**Indian Mountai**	**86.56**	**22**	*e*P	**P**	**11 16 15.2**	**+0.6**
IMA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.3						
IMA	**Indian Mountai**	**86.56**	**22**	*e*P	**P**	**11 16 15.2**	**+0.6**
	comp=Z,21nm,1.0s,mb5.3						
ESDC	**Sonseca Array**	**86.66**	**310**	P	**P**	**11 16 15.8**	**0.0**
	comp=Z,1.2nm,0.3s,mb4.7,baz=72,slow=4.6,SNR=5.9						
MCK	**McKinley**	**89.46**	**23**	*e*P	**P**	**11 16 29.4**	**+0.8**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.6						
MCK	**McKinley**	**89.46**	**23**	*e*P	**P**	**11 16 29.4**	**+0.8**
	comp=Z,2.5nm,0.9s,mb4.5						
ILAR	**Eielson Array**	**89.67**	**22**	P	**P**	**11 16 29.6**	**0.0**
	comp=Z,1.1nm,0.7s,mb4.3,baz=299,slow=4.8,SNR=14						
INK	**Inuvik**	**91.61**	**16**	P	**P**	**11 16 39.3**	**+0.7**
	comp=Z,2.7nm,1.1s,mb4.5,baz=340,slow=5.9,SNR=8.8						
YKA	**Yellowknife Ar**	**100.92**	**13**	P	P	11 17 21.9	+0.9
	comp=Z,0.3nm,0.8s,baz=329,slow=4.1,SNR=5.7						
YKA				PKKPbc		11 33 33.6	
	comp=Z,0.2nm,0.7s,baz=151,slow=2.2,SNR=4.9						
PDAR	**Pinedale Array**	**119.99**	**19**	PKP	PKPdf	11 22 23.8	+2.2
	comp=Z,0.7nm,0.8s,baz=72,slow=1.5,SNR=7.3						
NVAR	**Mina Array Bea**	**120.30**	**28**	PKP	PKPdf	11 22 25.9	+3.5
	comp=Z,0.9nm,0.6s,baz=348,slow=1.4,SNR=8.9						
TXAR	**Lajitas Array**	**134.17**	**21**	PKP	PKPdf	11 22 52.7	+3.6
	comp=Z,0.5nm,0.6s,baz=106,slow=0.6,SNR=8.9						
TXAR	**Lajitas Array**	**134.17**	**21**	PKP	PKPdf	11 22 52.7	+3.6
PLCA	**Paso Flores**	**149.59**	**205**	PKPbc	PKPdf	11 23 23.3	+7.6
	comp=Z,2.7nm,0.7s,baz=194,slow=3.4,SNR=12						
LPAZ	**La Paz**	**161.71**	**260**	PKPab	PKPab	11 24 21.1	+1.2
	comp=Z,1.6nm,0.9s,baz=88,slow=6.2,SNR=4.6						

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*NEIC **24** 11:12:38.4±0.8, 20.30S×177.85W, h512^{km}±10^{km}, mb4.1/10, Error ellipse: s-maj=12.8km s-min=8.0km az=137.0*

*IDC **24** 11:12:50.6±3.0, 20.89S×178.24W, h640^{km}±39^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.3/18, mbtmp4.5/9, Error ellipse: s-maj=34.7km s-min=18.4km az=2.0*

ISC 24 11:12:36.6±1.1**, 20.3S**±0.1×**177.9W**±0.1**, h500**^{km}±17^{km}**,**

n28,$\sigma 0^{s}68$/24,mb4.0/15,3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.60**	**44**	*e*Pn	**P**	**11 14 41.5**	**+1.1**
AFI				*e*Sn	**S**	**11 16 17.9**	**-0.9**
RAR	**Rarotonga**	**16.97**	**96**	P	**P**	**11 16 18.9**	**+12**
	7.7nm,0.3s,baz=256,slow=8.3,SNR=4.3						
URZ	**Urewera**	**18.46**	**193**	P	**P**	**11 16 21.3**	**+0.2**
	2.5nm,0.3s,baz=105,slow=9.4,SNR=21						
RPZ	**Rata Peaks**	**25.15**	**199**	P	**P**	**11 17 22.3**	**-0.5**
	1.8nm,0.4s,mb3.9,baz=53,slow=5.1,SNR=3.4						
CTA	**Charters Tower**	**33.62**	**264**	⇓*i*P	**P**	**11 18 37.2**	**+1.0**
	5.3nm,0.7s,mb4.1						
CTA	**Charters Tower**	**33.62**	**264**	P	**P**	**11 18 37.3**	**+1.1**
	6.6nm,0.6s,mb4.3,baz=98,slow=11,SNR=10						
CTAO	**Charters Tower**	**33.62**	**264**	*e*P	**P**	**11 18 36.7**	**+0.5**
	8.1nm,0.8s,mb4.2						
PMG	**Port Moresby**	**35.40**	**283**	*e*P	**P**	**11 18 51.8**	**+0.7**
	3.5nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**37.99**	**244**	P	**P**	**11 19 13.4**	**+1.2**
	3.1nm,1.1s,mb3.6,baz=42,slow=6.7,SNR=3.9						
STKA	**Stephens Creek**	**37.99**	**244**	*e*P	**P**	**11 19 11.7**	**-0.5**
ASAR	**Alice Springs**	**44.68**	**256**	P	**P**	**11 20 06.0**	**+0.2**
	5.4nm,0.5s,mb4.3,baz=96,slow=7.5,SNR=148						
ASAR				PcP	PcP	11 21 37.2	-1.1
	0.5nm,0.5s,baz=99,slow=3.6,SNR=4.2						
ASPA	**Alice Springs**	**44.68**	**256**	*e*P	**P**	**11 20 05.9**	**0.0**
WRAB	**Tennant Creek**	**44.73**	**262**	*e*P	**P**	**11 20 05.6**	**-0.7**
	6.8nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**44.74**	**262**	P	**P**	**11 20 05.9**	**-0.5**
	2.6nm,0.3s,mb4.1,baz=96,slow=7.6,SNR=172						
KAKA	**Kakadu**	**48.08**	**271**	⇓*i*P	**P**	**11 20 31.4**	**-0.6**
	4.9nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.17**	**262**	⇓*i*P	**P**	**11 21 08.9**	**-0.5**
	3.0nm,0.4s,mb4.0						
MBWA	**Marble Bar**	**58.01**	**257**	*e*P	**P**	**11 21 41.9**	**-1.2**
	2.6nm,0.4s,mb3.9						
QSPA	**South Pole Qui**	**69.81**	**180**	*e*P	**P**	**11 22 57.6**	**+0.4**
	1.6nm,0.7s,mb3.7						
ENH	**Enshi**	**85.99**	**304**	P	**P**	**11 24 24.8**	**+0.1**
MCK	**McKinley**	**86.71**	**12**	P	**P**	**11 24 27.5**	**+0.3**
	2.2nm,1.0s,mb3.8						
COLA	**College**	**87.95**	**12**	P	**P**	**11 24 32.8**	**-0.3**
	2.9nm,0.8s,mb4.1						
ILAR	**Eielson Array**	**88.05**	**13**	P	**P**	**11 24 33.4**	**-0.2**
	0.3nm,0.4s,mb3.4,baz=219,slow=5.4,SNR=6.9						
CMAR	**Chiang Mai Arr**	**90.14**	**290**	P	**P**	**11 24 45.6**	**+1.3**
	1.9nm,0.8s,mb4.0,baz=129,slow=3.2,SNR=10						
BVAR	**Borovoye Array**	**118.96**	**320**	PKP	PKPdf	11 30 27.3	-0.3
	0.5nm,0.4s,baz=138,slow=2.6,SNR=4.3						
AKASG	**Malin Array Be**	**142.85**	**331**	PKP	PKPdf	11 31 10.5	-1.7
	1.8nm,0.4s,baz=34,slow=3.3,SNR=20						
BRTR	**Keskin Array B**	**146.76**	**313**	PKPbc	PKPbc	11 31 23.1	+1.8
	0.9nm,0.5s,baz=136,slow=3.6,SNR=4.3						
CLL	**Collm**	**147.85**	**347**	*i* PKP1	PKPdf	11 31 25.8	+5.2
GERES	**GERESS Array B**	**150.00**	**345**	PKPbc	PKPdf	11 31 31.2	+7.1
	0.3nm,0.5s,baz=135,slow=1.9,SNR=4.1						

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*MOS **24** 11:14:14.4±2.3,52.55N×106.72E,h17^{km},mb4.4/1,Error ellipse: s-maj=13.0km s-min=8.3km az=61.8*

MOS Felt (II) at Elantsy.

BYKL 24 11:14:14.9±0.2**,52.54N**×**106.75E,h17**^{km}±4^{km}**,7C-6D, FELT I=II MSK at Yelantsy,Tirgan),Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZRHB	**Zarechye**	**0.25**	**87**	⇑*i*Pg	Pb	11 14 19.8	-0.7
ZRHB				*i* Sg	Sb	11 14 24.0	-0.3
ZRHB				Pmax			
	4μm,0.2s						
ZRHB				Smax			
	13μm,0.4s						
TRG	**Tyrgan**	**0.33**	**312**	*e*PG	Pb	11 14 21.5	-0.4
TRG				*e*		11 14 25.1	
TRG				pmax	pmax		
	comp=Z,702nm,0.1s						
TRG				smax			
	comp=E,4μm,0.2s						
TRG	**Tyrgan**	**0.33**	**312**	*e*Pg	Pb	11 14 21.5	-0.4
TRG				*e*Sg	Sb	11 14 26.6	-0.1
TRG				Pmax			
	comp=E,945nm,0.1s						
TRG				Smax			
	comp=E,4μm,0.2s						
STDB	**Stepnoy Dvoret**	**0.44**	**213**	⇑*i*Pg	Pb	11 14 24.4	+0.6
STDB				*i* Sg	Sb	11 14 32.1	+2.2
STDB				Pmax			
	comp=E,613nm,0.2s						
STDB				Smax			
	comp=E,4μm,0.2s						
FFNB	**Fofonovo**	**0.49**	**179**	⇑*i*Pg	Pb	11 14 23.8	-0.9
FFNB				*e*Sg	Sb	11 14 30.1	-1.4
FFNB				Pmax			
	comp=E,2μm,0.1s						
FFNB				Smax			
	comp=E,8μm,0.2s						
KAB	**Kabansk**	**0.49**	**187**	⇑*i*PG	Pb	11 14 23.8	-0.9
KAB				*e*		11 14 30.8	
KAB				pmax	pmax		
	comp=Z,485nm,0.3s						
KAB				smax			
	comp=N,4μm,0.4s						
KAB	**Kabansk**	**0.49**	**187**	*e*Pg	Pb	11 14 24.0	-0.7
KAB				*e*Sg	Sb	11 14 30.9	-0.6
KAB				Pmax			
	comp=N,483nm,0.2s						
KAB				Smax			
	comp=N,4μm,0.4s						
TRTB	**Turuntaevo**	**0.62**	**120**	⇓*i*Pg	Pb	11 14 26.1	-0.8
	comp=N,856nm,0.3s						
TRTB				⇑*i*Pg	Pb	11 14 26.1	-0.8
	comp=N,1μm,0.3s						
TRTB				⇑*i*Pg	Pb	11 14 26.1	-0.8
	comp=N,1μm,0.3s						
TRTB				*e*Sg	Sb	11 14 34.3	-0.9
TRTB				Pmax			
	comp=N,1μm,0.2s						
TRTB				Smax			
	comp=N,2μm,0.1s						
BTMB	**Babushkin**	**1.01**	**214**	*e*Pg	Pb	11 14 33.0	-0.6
BTMB				*e*Sg	Sb	11 14 46.9	+0.4
BTMB				Pmax			
	comp=N,180nm,0.4s						
BTMB				Smax			
	comp=N,3μm,0.7s						
OGRR	**Ongureny**	**1.22**	**24**	*e*PG	Pb	11 14 36.8	-0.3
OGRR				*e*		11 14 53.6	
OGRR				pmax	pmax		
	comp=Z,118nm,0.2s						
OGRR				smax			
	comp=E,1μm,0.6s						
OGRR	**Ongureny**	**1.22**	**24**	*e*Pg	Pb	11 14 37.4	+0.3
OGRR				*e*Sg	Sb	11 14 54.0	+1.6
OGRR				Pmax			
	comp=E,110nm,0.2s						
OGRR				Smax			
	comp=E,775nm,0.4s						
LSTR	**Listvyanka**	**1.36**	**241**	*e*PG	Pn	11 14 38.4	-0.9
LSTR				*e*		11 14 56.9	
LSTR				pmax	pmax		
	comp=Z,95nm,0.2s						
LSTR				smax			
	comp=N,595nm,0.2s						
LSTR	**Listvyanka**	**1.36**	**241**	⇓*i*Pg	Pn	11 14 39.3	0.0
	comp=N,79nm,0.5s						
LSTR				⇓*i*Pg	Pn	11 14 39.3	0.0
	comp=N,108nm,0.5s						
LSTR				⇑*i*Pg	Pn	11 14 39.3	0.0
	comp=N,97nm,0.5s						
LSTR				*e*Sg	Sb	11 14 57.2	+0.7
LSTR				Pmax			
	comp=N,158nm,0.1s						
LSTR				Smax			
	comp=N,560nm,0.3s						
MXMB	**Maximikha**	**1.41**	**58**	*e*Pg	Pn	11 14 40.5	+0.5
MXMB				*i* Sg	Sb	11 15 00.3	+2.4
MXMB				Pmax			
	comp=N,121nm,0.1s						
MXMB				Smax			
	comp=N,1μm,0.7s						
IRK	**Irkutsk**	**1.55**	**260**	*e*PN	Pn	11 14 42.6	+0.6
IRK				*e*		11 15 02.4	
IRK				pmax	pmax		
	comp=Z,739nm,0.2s						
IRK				smax			
	comp=N,7μm,0.4s						
IRK	**Irkutsk**	**1.55**	**260**	*e*Pg	Pn	11 14 43.0	+1.0
IRK				*e*Sg	Sn	11 15 03.7	+1.9
IRK				Pmax			
	comp=N,1μm,0.3s						
IRK				Smax			
	comp=N,5μm,0.4s						
TLY	**Talaya**	**2.10**	**247**	*e*PN	Pn	11 14 50.0	+0.1
TLY				*e*		11 14 51.8	
TLY				*e*		11 15 18.9	
TLY				pmax	pmax		
	comp=Z,180nm,0.2s						
TLY				smax			
	comp=N,639nm,0.3s						
TLY	**Talaya**	**2.10**	**247**	*e*Pn	Pn	11 14 50.3	+0.4
TLY				*e*Pg	Pn	11 14 52.0	+2.1
TLY				*e*Sn	Sn	11 15 17.0	+1.2
TLY				*e*Sg	Sn	11 15 19.1	+3.3
TLY				Pmax			
	comp=N,174nm,0.2s						
TLY				Smax			
	comp=N,587nm,0.3s						
SYVR	**Suvo**	**2.26**	**59**	⇓*i*Pn	Pn	11 14 51.6	-0.5
	comp=N,10.0nm,0.6s						
SYVR				⇓*i*Pn	Pn	11 14 51.6	-0.5
	comp=N,6.0nm,0.6s						
SYVR				⇓*i*Pn	Pn	11 14 51.6	-0.5
	comp=N,21nm,0.6s						
SYVR				*e*Pg	Pn	11 14 55.2	+3.1
SYVR				*e*Sn	Sn	11 15 20.8	+1.0
SYVR				*e*Sg	Sn	11 15 25.8	+6.0
SYVR				Pmax			
	comp=N,34nm,0.2s						
SYVR				Smax			
	comp=N,224nm,0.3s						
ARS	**Arshan**	**2.73**	**259**	*e*PN	Pn	11 14 58.5	-0.4
ARS				*e*		11 15 03.0	
ARS				*e*		11 15 37.9	
ARS				pmax	pmax		
	comp=Z,124nm,0.2s						
ARS				smax			
	comp=E,1μm,0.3s						
ARS	**Arshan**	**2.73**	**259**	*e*Pn	Pn	11 14 58.9	0.0
ARS				*e*Pg	Pn	11 15 02.9	+4.0
ARS				*e*Sg	Sn	11 15 37.9	+6.1
ARS				Pmax			
	comp=E,117nm,0.3s						
ARS				Smax			
	comp=E,1μm,0.5s						
ZAK	**Zakamensk**	**3.06**	**226**	*e*Pn	Pn	11 15 03.6	0.0
ZAK				*e*Pg	Pn	11 15 09.9	+6.3
ZAK				*e*Sg	Sn	11 15 49.8	+10
ZAK				Pmax			
	comp=E,19nm,0.3s						
ZAK				Smax			
	comp=E,90nm,0.3s						
YLYR	**Ulyunkhan**	**3.51**	**46**	*e*PN	Pn	11 15 09.1	-0.9
YLYR				*e*		11 15 16.3	
YLYR				*e*S	Sn	11 15 48.0	-3.6
YLYR	**Ulyunkhan**	**3.51**	**46**	*e*Pn	Pn	11 15 09.1	-0.9
YLYR				*e*Pg	Pn	11 15 17.5	+7.5
YLYR				*e*Sn	Sn	11 15 51.0	-0.6
YLYR				*e*Sg	Sn	11 16 03.5	+12
YLYR				Pmax			
	comp=E,14nm,0.6s						
YLYR				Smax			
	comp=E,76nm,1.0s						
NIZ	**Nizh Angarsk**	**3.63**	**26**	*e*PN	Pn	11 15 19.5	+7.8
NIZ				*e*		11 16 07.4	
NIZ				pmax	pmax		
	comp=Z,32nm,0.5s						
NIZ				smax			
	comp=N,294nm,0.8s						
NIZ	**Nizh Angarsk**	**3.63**	**26**	*e*Pn	Pn	11 15 11.6	-0.1
NIZ				*e*Pg	Pn	11 15 19.7	+8.0
NIZ				*e*Sn	Sn	11 15 51.0	-3.6
NIZ				*e*Sg	Sn	11 16 06.6	+12
NIZ				Pmax			
	comp=N,35nm,0.4s						
NIZ				Smax			
	comp=N,367nm,0.6s						
MOY	**Mondy**	**3.66**	**258**	*e*PN	Pn	11 15 20.4	+8.4
MOY				*e*S	Sn	11 15 52.0	-3.2
MOY				*e*		11 16 05.4	
MOY				pmax	pmax		
	comp=Z,81nm,0.3s						
MOY				smax			
	comp=E,293nm,0.4s						
MOY	**Mondy**	**3.66**	**258**	*e*Pn	Pn	11 15 13.7	+1.7
MOY				*e*Pg	Pn	11 15 20.0	+8.0
MOY				*e*Sg	Sn	11 16 06.4	+11
MOY				Pmax			
	comp=E,77nm,0.6s						
MOY				Smax			
	comp=E,276nm,0.5s						
CIT	**Chita**	**4.21**	**94**	*e*PN	Pn	11 15 17.6	-2.3
CIT				*e*		11 15 29.6	
CIT				*e*		11 16 24.6	
CIT				pmax	pmax		
	comp=Z,33nm,0.5s						
CIT				smax			
	comp=N,330nm,0.5s						
CIT	**Chita**	**4.21**	**94**	*e*Pn	Pn	11 15 17.5	-2.4
CIT				*e*Pg	Pn	11 15 29.6	+10
CIT				*e*Sg	Sn	11 16 25.5	+16
CIT				Pmax			
	comp=N,30nm,0.5s						
CIT				Smax			
	comp=N,335nm,0.5s						
ORL	**Orlik**	**4.24**	**273**	*e*PN	Pn	11 15 20.6	+0.3
ORL				*e*		11 15 30.6	
ORL				*e*		11 16 24.4	
ORL				pmax	pmax		
	comp=Z,37nm,0.8s						
ORL				smax			
	comp=N,131nm,0.8s						
ORL	**Orlik**	**4.24**	**273**	*e*Pn	Pn	11 15 21.2	+0.9
ORL				*e*Pg	Pn	11 15 30.2	+10
ORL				*e*Sn	Sn	11 16 08.3	-1.6
ORL				*e*Sg	Sn	11 16 24.1	+14
ORL				Pmax			
	comp=N,35nm,0.8s						
ORL				Smax			
	comp=N,128nm,0.6s						
KMO	**Kumora**	**4.25**	**36**	*e*PN	Pn	11 15 19.6	-0.9
KMO				*e*		11 15 30.2	
KMO				*e*		11 16 25.0	
KMO				pmax	pmax		
	comp=Z,15nm,0.4s						
KMO				smax			
	comp=E,76nm,1.0s						
KMO	**Kumora**	**4.25**	**36**	*e*Pn	Pn	11 15 19.4	-1.1
KMO				*e*Pg	Pn	11 15 30.3	+10
KMO				*e*Sg	Sn	11 16 25.1	+15
KMO				Pmax			
	comp=E,13nm,0.4s						
KMO				Smax			
	comp=E,76nm,1.0s						
KPC	**Khapcheranga**	**4.54**	**126**	*e*PN	Pn	11 15 22.0	-2.6
KPC				*e*		11 15 36.1	
KPC				*e*		11 16 36.6	
KPC				pmax	pmax		
	comp=Z,20nm,0.8s						
KPC				smax			
	comp=E,121nm,0.7s						
KPC	**Khapcheranga**	**4.54**	**126**	*e*Pn	Pn	11 15 22.0	-2.6
KPC				*e*Pg	Pn	11 15 35.6	+11
KPC				*e*Sn	Sn	11 16 16.3	-1.4
KPC				*e*Sg	Sn	11 16 34.7	+17
KPC				Pmax			
	comp=E,36nm,1.0s						
KPC				Smax			
	comp=E,138nm,0.5s						
YOA	**Uoyan**	**4.63**	**37**	*e*Sg	Sn	11 16 39.2	+19
YOA				Smax			
	comp=E,205nm,1.1s						
ULN	**Ulaanbaatar**	**4.68**	**178**	*i* PN	Pn	11 15 25.6	-1.0
NLYR	**Nelyaty**	**6.54**	**49**	*e*PG	Pn	11 16 13.0	+20
NLYR	**Nelyaty**	**6.54**	**49**	*e*Pn	Pn	11 15 52.7	-0.2
NLYR				*e*		11 16 18.7	
NLYR				*e*Sg	Sn	11 17 37.4	+30
NLYR				Smax			
	comp=E,53nm,1.1s						
BOD	**Bodaibo**	**6.72**	**35**	*e*Pn	Pn	11 15 55.0	-0.4
BOD				*e*Sg	Sn	11 17 43.8	+31
BOD				Smax			
	comp=E,32nm,1.4s						
CRS	**Chara**	**7.97**	**52**	*e*PG	Pn	11 16 39.2	+26
CRS	**Chara**	**7.97**	**52**	*e*Sg	Sn	11 18 21.5	+38
CRS				Smax			
	comp=E,35nm,3.0s						
TUP	**Tupik**	**8.10**	**71**	*e*PG	P	11 16 42.4	+28
TUP				*e*		11 18 26.6	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.3s						
TUP				smax			
	comp=N,60nm,1.0s						
TUP	**Tupik**	**8.10**	**71**	*e*Sg	Sn	11 18 26.7	+40
TUP				Smax			
	comp=N,72nm,1.0s						

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*NEIC **24** 11:15:43.4,34.56S×72.22W,h28^{km},ML2.9(GUC),After GUC.*

GUC 24 11:15:43.4±0.6**,34.56S**×**72.22W,h28**^{km}±4^{km}**,MD3.7, ML2.9,2C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	**San Fernando**	**1.00**	**94**	⇑*i*P	Pn	11 16 01.1	-0.5
TACH	**Talagante**	**1.40**	**50**	⇑*i*P	Pn	11 16 07.3	0.0
TACH				*i* S	Sn	11 16 25.6	+0.6
CACH	**El Canelo**	**1.41**	**72**	*i* P	Pn	11 16 08.6	+1.0
CACH				*i* S	Sn	11 16 26.9	+1.5
CHCH	**Chadas Angostu**	**1.44**	**65**	*e*P	Pn	11 16 08.6	+0.6
CHCH				*i* S	Sn	11 16 27.2	+1.1
RCDM	**Rinconada Maip**	**1.59**	**48**	*e*P	Pn	11 16 10.6	+0.5
RCDM				*i* S	Sn	11 16 31.2	+1.3
PCH	**Pirque**	**1.70**	**57**	*e*P	Pn	11 16 12.3	+0.6
PCH				*i* S	Sn	11 16 34.4	+1.7
LMEL	**Las Melosas**	**1.82**	**68**	*e*P	Pn	11 16 14.4	+1.0
LMEL				*i* S	Sn	11 16 38.4	+2.7
LMEL				AMP		11 16 41.3	
	comp=N,294nm,0.2s						
FCH	**Farellones**	**2.02**	**53**	*e*P	Pn	11 16 17.4	+1.1
FCH				*i* S	Sn	11 16 43.9	+2.9
FCH				AMP		11 16 48.8	
	comp=N,98nm,0.1s						

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*BJI **24** 11:36:01.0,6.01S×122.24E,h36^{km},mB5.1,mb4.6,Ms4.0, Msz3.8*

*IDC **24** 11:36:02.1±0.8,5.53S×122.12E,mb4.4/8,mb1 4.5/9, mb1mx4.3/18,mbtmp4.4/9,ML3.8/1,MS4.1/6,Ms1 4.1/6, ms1mx3.6/14,Error ellipse: s-maj=40.8km s-min=15.7km az=49.0*

*NEIC **24** 11:36:03.2±0.2,5.50S×122.13E,h10^{km},mb4.8/17,Error ellipse: s-maj=12.2km s-min=4.6km az=55.0*

*MOS **24** 11:36:04.5±1.1,5.50S×122.13E,h33^{km},mb4.9/15,Error ellipse: s-maj=20.4km s-min=8.1km az=122.7*

ISC 24 11:36:04.4±0.3**,5.51S**±0.06×**122.20E**±0.08**,h33**^{km}**, (h30**^{km}±4.0^{km}**:pP-P),n76,**σ**$0^{s}92$**/73**,mb4.8**/39**,MS4.0**/10**, 1C,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.38**	**126**	*e*P	**P**	**11 39 00.0**	**-1.3**
	14nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.96**	**165**	*e*P	**P**	**11 39 07.8**	**-1.2**
	23nm,0.9s						
WRA	**Warramunga Arr**	**18.58**	**142**	P	**P**	**11 40 19.6**	**-1.6**
	0.3nm,0.3s,baz=317,slow=12,SNR=32						
WRAB	**Tennant Creek**	**18.58**	**142**	*i* P	**P**	**11 40 21.3**	**+0.2**
WRAB	**Tennant Creek**	**18.58**	**142**	*e*P	**P**	**11 40 18.7**	**-2.4**
	57nm,1.2s						
ASPA	**Alice Springs**	**21.28**	**149**	*e*P	**P**	**11 40 51.4**	**+1.0**
ASAR	**Alice Springs**	**21.28**	**149**	P	**P**	**11 40 50.9**	**+0.5**
	11nm,0.8s,mb4.2,baz=331,slow=11,SNR=46						
PMG	**Port Moresby**	**25.04**	**100**	P	**P**	**11 41 28.4**	**+1.0**
	32nm,1.0s,mb4.8,baz=276,slow=8.6,SNR=13						
FORT	**Forrest**	**25.74**	**168**	*e*P	**P**	**11 41 34.9**	**+1.1**
	538nm,0.8s						
CTA	**Charters Tower**	**27.51**	**124**	P	**P**	**11 41 51.4**	**+1.2**
	5.1nm,0.9s,mb4.1,baz=294,slow=8.9,SNR=4.9						
CTA				LR	LR	11 53 12.4	
	comp=Z,254nm,18.4s,MS3.8,baz=142,slow=37						
CTAO	**Charters Tower**	**27.51**	**124**	*e*P	**P**	**11 41 52.4**	**+2.2**
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
CTAO	**Charters Tower**	**27.51**	**124**	*e*P	**P**	**11 41 52.4**	**+2.1**
	comp=Z,10nm,1.0s,mb4.4						
STKA	**Stephens Creek**	**31.90**	**148**	*e*P	**P**	**11 42 29.2**	**0.0**
	comp=Z,2.8nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**31.90**	**148**	P	**P**	**11 42 29.7**	**+0.5**
	comp=Z,4.2nm,0.9s,mb4.3,baz=320,slow=11,SNR=5.1						
STKA				LR	LR	11 56 36.5	
	comp=Z,352nm,19.3s,MS4.1,baz=326,slow=39						
STKA	**Stephens Creek**	**31.90**	**148**	*e*P	**P**	**11 42 28.1**	**-1.1**
CM31	**Chiang Mai Arr**	**33.06**	**317**	P	**P**	**11 42 39.1**	**-0.3**
	comp=Z,3.4nm,0.5s,mb4.5						
CMAR	**Chiang Mai Arr**	**33.06**	**317**	P	**P**	**11 42 38.9**	**-0.5**
	comp=Z,1.5nm,0.6s,mb4.1,baz=143,slow=7.0,SNR=12						
CMAR				LR	LR	11 59 26.6	
	comp=Z,262nm,18.1s,MS4.0,baz=155,slow=42						
SSE	**Sheshan**	**36.41**	**359**	*e*P	**P**	**11 43 07.3**	**-0.6**
SSE				AP	pP	11 43 17.3	-0.3
SSE				S	**S**	**11 48 45.5**	**-1.1**
SSE				SS	SS	11 51 25.0	+12
SSE				AMB	AMB		
	comp=Z,65nm,0.7s,mb5.7						
SSE				AMB	AMB		
	comp=Z,150nm,4.3s						
SSE				LR	LR		
	comp=N,55nm,23.8s,MS3.4						
SSE				LR	LR		
	comp=E,63nm,23.8s,MS3.4						
SSE				LR	LR		
	comp=Z,85nm,30.8s						
SSE	**Sheshan**	**36.41**	**359**	*e*P	**P**	**11 43 07.2**	**-0.7**
	comp=Z,65nm,0.7s,mb5.7						
SSE				pP	pP	11 43 17.2	-0.4
SSE				S	**S**	**11 48 45.5**	**-1.1**
SSE				sS		11 49 00.7	
SSE				SS	SS	11 51 25.0	+12
SSE				LR	LR		
	comp=Z,90nm,30.8s,MS3.4						
NJ2	**Nanjing**	**37.48**	**355**	*e*P	**P**	**11 43 18.1**	**+1.2**
NJ2				AP	pP	11 43 27.9	+1.2
NJ2				XP	sP	11 43 31.9	+1.0
NJ2				PP	PP	11 44 51.5	+6.0
NJ2				S	**S**	**11 49 04.0**	**+1.0**
NJ2				XS		11 49 20.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,1μm,8.4s						
NJ2				LR	LR		
	comp=N,380nm,23.1s,MS4.3						
NJ2				LR	LR		
	comp=E,430nm,24.0s,MS4.3						
NJ2				LR	LR		
	comp=Z,610nm,23.8s,MS4.3						
BJT	**Baijiatuau**	**45.64**	**354**	*e*P	**P**	**11 44 23.3**	**-0.4**
BJT				pmax	pmax		
	comp=Z,30nm,1.2s						
BJT	**Baijiatuau**	**45.64**	**354**	*e*P	**P**	**11 44 23.3**	**-0.5**
	comp=Z,30nm,1.2s,mb5.1						
BJI	**Beijing**	**45.66**	**354**	*e*P	**P**	**11 44 24.3**	**+0.4**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
BJI				LR	LR		
	comp=Z,127nm,23.7s,MS3.8						
BJI	**Beijing**	**45.66**	**354**	*e*P	**P**	**11 44 24.2**	**+0.3**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
BJI				MLR	MLR		
	comp=Z,130nm,23.7s,MS3.8						
BJI	**Beijing**	**45.66**	**354**	*e*P	**P**	**11 44 24.2**	**+0.3**
	comp=Z,10.0nm,0.8s,mb4.8						
BJI				S	**S**	**11 50 51.7**	**-12**
BJI				LR	LR		
	comp=Z,130nm,23.7s,MS3.8						
LSA	**Lhasa**	**45.97**	**321**	P	**P**	**11 44 23.6**	**-3.0**
LSA	**Lhasa**	**45.97**	**321**	*e*P	**P**	**11 44 26.0**	**-0.6**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LSA	**Lhasa**	**45.97**	**321**	*e*P	**P**	**11 44 25.9**	**-0.6**
	comp=Z,8.9nm,0.8s,mb4.8						

HHC	Hu-ho-hao-te	47.15	349	eP	P	11 44 35.5	-0.1
HHC				AMB	AMB		
	comp=Z,8.0nm,1.3s,mb4.5						
JIRN	Jiri	47.92	315	eP	P	11 44 42.4	+0.5
	comp=Z,43nm,1.2s,mb5.4						
GUN	Gumba	48.29	315	eP	P	11 44 45.1	+0.4
	comp=Z,62nm,1.1s,mb5.6						
PKI	Pulchoki	48.41	315	eP	P	11 44 45.6	-0.1
	comp=Z,11nm,0.5s,mb5.1						
KKN	Kakani	48.64	315	eP	P	11 44 47.5	+0.1
	comp=Z,52nm,1.2s,mb5.4						
DMN	Daman	48.65	315	eP	P	11 44 47.6	+0.1
	comp=Z,41nm,1.2s,mb5.3						
HYB	Hyderabad	48.75	299	eP	P	11 44 48.0	-0.4
HYB	Hyderabad	48.75	299	i P	P	11 44 48.0	-0.4
GKN	Gorkha	49.22	315	eP	P	11 44 51.6	-0.3
	comp=Z,70nm,1.4s,mb5.5						
GTA	Gaotai	49.25	337	eP	P	11 44 53.0	+1.0
GTA				AP	pP	11 45 00.6	-1.2
GTA				XP	sP	11 45 04.0	-2.0
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.3						
KOLN	Koldanda	49.82	314	eP	P	11 44 55.9	-0.6
	comp=Z,84nm,1.4s,mb5.6						
MDJ	Mudanjiang	50.33	7	P	P	11 45 00.9	+0.7
MDJ				AMB	AMB		
	comp=Z,12nm,1.4s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,117nm,3.2s						
MDJ	Mudanjiang	50.33	7	eP	P	11 45 00.8	+0.6
	comp=Z,7.6nm,0.9s,mb4.7						
HIA	Hailar	54.59	358	eP	P	11 45 30.2	-1.7
HIA				pmax	pmax		
	comp=Z,15nm,1.3s						
HIA	Hailar	54.59	358	eP	P	11 45 30.2	-1.7
	comp=Z,15nm,1.3s,mb4.8						
ULN	Ulaanbaatar	54.79	348	eP	P	11 45 33.4	0.0
ULN				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
ULN	Ulaanbaatar	54.79	348	eP	P	11 45 33.4	0.0
	comp=Z,13nm,1.0s,mb4.9						
SONM	Songino Array	54.91	347	P	P	11 45 34.8	+0.5
	comp=Z,3.9nm,0.8s,mb4.5,baz=162,slow=8.4,SNR=28						
ZAK	Zakamensk	58.02	346	⇑eP	P	11 45 56.1	-0.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
WMQ	Urumqi	58.13	331	eP	P	11 45 57.5	+0.2
TLY	Talaya	59.14	347	eP	P	11 46 04.4	+0.2
TLY				e		11 54 00.6	
TLY				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6						
TLY				MLR	MLR		
	comp=Z,60nm,22.0s,MS3.7						
TLY	Talaya	59.14	347	eP	P	11 46 04.5	+0.3
	comp=Z,15nm,1.3s,mb4.8						
MOY	Mondy	59.77	345	eP	P	11 46 09.4	+0.8
MOY				pmax	pmax		
	comp=Z,26nm,1.8s,mb5.0						
BOD	Bodaibo	63.46	355	eP	P	11 46 32.2	-1.1
BOD				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.7						
AAK	Ala-Archa	64.53	323	eP	P	11 46 39.7	-0.8
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
AAK	Ala-Archa	64.53	323	eP	P	11 46 39.7	-0.8
	comp=Z,7.7nm,1.1s,mb4.7						
KURK	Kurchatov	67.37	332	i P	P	11 46 58.3	-0.1
KURK	Kurchatov	67.37	332	eP	P	11 46 58.0	-0.4
	comp=Z,19nm,1.0s,mb5.1						
YAK	Yakutsk	67.59	4	i P	P	11 46 59.2	-0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
NVS	Novosibirsk	68.29	337	eP	P	11 47 03.2	-0.9
MA2	Magadan	68.72	15	eP	P	11 47 07.3	+0.6
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
MA2	Magadan	68.72	15	eP	P	11 47 07.3	+0.6
	comp=Z,8.0nm,1.1s,mb4.6						
BVAR	Borovoye Array	72.80	330	P	P	11 47 31.8	+0.4
	comp=Z,1.9nm,0.7s,mb4.1,baz=127,slow=7.4,SNR=14						
CHKZ	Chkalovo	73.06	331	eP	P	11 47 32.6	-0.4
CHKZ				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
CHKZ	Chkalovo	73.06	331	eP	P	11 47 32.6	-0.4
	comp=Z,10nm,1.2s,mb4.6						
MAW	Mawson	73.58	200	LR	LR	12 17 09.2	
	comp=Z,90nm,20.8s,MS4.0,baz=247,slow=34						
VNDA	Vanda	74.94	172	LR	LR	12 20 36.6	
	comp=Z,142nm,18.5s,MS4.3,baz=334,slow=36						
TIXI	Tiksi	77.13	2	eP	P	11 47 57.3	+1.3
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
KMBO	Kilima Mbogo	84.87	269	P	P	11 48 39.9	+1.8
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMBO	Kilima Mbogo	84.87	269	LR	LR	12 23 34.6	
	comp=Z,80nm,19.7s,MS4.1,baz=97,slow=34						
KMBO	Kilima Mbogo	84.87	269	P	P	11 48 39.9	+1.8
	comp=Z,4.5nm,1.2s,mb4.5						
KIV	Kislovodsk	86.28	315	eP	P	11 48 35.9	-8.4
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
KIV				pmax	pmax		
	comp=N,3.0nm,0.6s						
SOC	Sochi	88.33	314	eP	P	11 48 51.9	-2.3
SOC				e	PP	11 52 18.9	-5.4
SOC				eS	SKS	11 59 17.5	-0.7
SOC				eSSS	SSS	12 09 00.3	-0.7
SOC				pmax	pmax		
	comp=Z,43nm,1.6s,mb5.4						
SOC				pmax	pmax		
	comp=N,36nm,1.7s						
SOC				pmax	pmax		
	comp=E,32nm,1.4s						
MATP	Matopo	91.56	249	P	P	11 49 11.4	+1.5
	comp=E,1.2nm,0.5s,mb4.5,baz=104,slow=6.6,SNR=5.6						
NVAR	Mina Array Bea	116.35	50	PKP	PKPdf	11 54 48.8	+3.7
	comp=E,0.6nm,0.8s,baz=236,slow=3.3,SNR=5.2						
PDAR	Pinedale Array	121.21	43	PKP	PKPdf	11 54 58.3	+3.9
	comp=E,0.4nm,1.0s,baz=315,slow=1.3,SNR=2.9						
PDAR	Pinedale Array	121.21	43	PKP	PKPdf	11 54 58.3	+3.9
TXAR	Lajitas Array	130.67	56	PKP	PKPdf	11 55 17.2	+4.2
	comp=E,0.3nm,0.8s,baz=243,slow=2.0,SNR=4.1						

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*CSEM **24** 11:42:50.1±0.2, 63.91N×9.45E, h2^{km}, ML1.7, Error ellipse: s-maj=4.9km s-min=2.8km az=110.0*

*BER **24** 11:42:52.8±4.0, 63.75N×9.59E, MD2.0, ML1.7, ML2.5(NAO), Explosion*

*NAO **24** 11:42:55.5±3.2, 63.56N×9.76E, ML2.5*

ISC 24 11:42:50.3±0.8, 63.81N±0.05×9.6E±0.1, n11, σ0^{s}98/21, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRON	Trondheim	0.51	134	eP	Pg	11 43 01.2	+0.8
TRON				eS	Sg	11 43 07.4	+0.2
NSS	Namsos	1.26	54	eP	Pb	11 43 13.9	-0.6
NSS				eS	Sb	11 43 32.5	+1.3
NSS				AML	AML	11 43 36.8	
	comp=Z,10nm,0.4s						
NSS	Namsos	1.26	54	eP	Pb	11 43 13.9	-0.7
	SNR=70						
NSS				eS	Sb	11 43 32.5	+1.3
	comp=Z,10nm,0.4s,SNR=70						
MOL	Molde	1.56	218	eP	Pn	11 43 19.6	+0.3
MOL				eS	Sb	11 43 40.5	+0.6
MOL				AML	AML	11 43 43.8	
	comp=Z,18nm,0.8s						
MOL	Molde	1.56	218	eP	Pn	11 43 19.6	+0.2
	SNR=50						
MOL				eS	Sb	11 43 40.5	+0.6
	comp=Z,18nm,0.8s,SNR=50						
DOMB	Dombas	1.79	188	eP	Pn	11 43 21.9	-0.7
DOMB				AML	AML	11 43 47.2	
	comp=Z,18nm,0.6s						
NB2	NORSAR Subarra	2.87	164	Pn	Pn	11 43 38.7	+0.5
NB2				Pg	Pg	11 43 43.0	-4.7
NB2				Lg		11 44 16.4	
STOK	Stokkvaagen	2.92	28	eP	Pn	11 43 37.5	-1.3
NC6	NORSAR Subarra	3.19	164	Pn	Pn	11 43 43.2	+0.6
NC6				Pg	Pg	11 43 49.6	-4.3
NC6				Lg		11 44 27.0	
HFS	Hagfors	4.16	151	Pn	Pn	11 43 56.8	+0.4
	baz=341,slow=10						
HFS				Pg	Pg	11 44 06.7	-6.5
	baz=333,slow=18						
HFS				Sn	Sn	11 44 44.0	-2.4
HFS				Lg		11 44 59.4	
	baz=333,slow=37						
HFS	Hagfors	4.16	151	Pg	Pg	11 44 06.7	-6.5
	SNR=90						
HFS				Sn	Sn	11 44 44.0	-2.4
	SNR=50						

IDC 24 11:49:58.4±2.2, 9.88N×93.00E, mb3.5/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=57.8km s-min=23.7km az=67.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.29	33	Pn	P	11 52 27.4	-3.0
	0.2nm,0.3s,baz=226,slow=14,SNR=7.4						
TGY	Tagaytay City	27.64	79	P	P	11 55 48.1	-1.8
	52nm,0.6s,baz=180,slow=2.1,SNR=4.1						
SONM	Songino Array	39.48	14	P	P	11 57 30.1	-2.2
	0.3nm,0.8s,baz=207,slow=6.4,SNR=3.0						
ZAL	Zalesovo	44.43	353	P	P	11 58 11.2	-1.4
	1.0nm,0.3s,baz=324,slow=6.6,SNR=3.5						
WRA	Warramunga Arr	50.34	126	P	P	11 58 57.4	-2.0
	0.3nm,0.7s,baz=305,slow=8.6,SNR=5.6						
ASAR	Alice Springs	52.06	130	P	P	11 59 10.2	-2.2
	0.3nm,0.6s,baz=303,slow=6.9,SNR=5.5						

IDC 24 12:12:03.4±7.3, 2.76N×126.95E, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=142.6km s-min=114.3km az=77.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.70	162	P	P	12 17 16.4	-1.5
	2.7nm,0.4s,baz=343,slow=11,SNR=39						
ASAR	Alice Springs	27.12	166	P	P	12 17 48.3	-1.9
	0.4nm,0.4s,baz=342,slow=8.1,SNR=17						
STKA	Stephens Creek	37.15	159	P	P	12 19 16.6	-1.2
	6.5nm,1.1s,baz=338,slow=8.3,SNR=7.1						

MAN 24 12:17:45.7, 12.66N×123.19E, h14^{km}, mb3.9, ML2.7, MS2.3, Luzon

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IDC 24 12:18:23.2±1.8, 3.56S×141.76E, mb3.3/2, mb1 3.8/4, mb1mx3.6/13, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=57.5km s-min=30.1km az=106.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.91	138	Pn	Pn	12 20 19.9	-2.3
	0.5nm,0.3s,baz=321,slow=14,SNR=3.4						
WRA	Warramunga Arr	17.82	203	P	P	12 22 33.2	-1.2
	0.5nm,0.3s,baz=24,slow=12,SNR=22						
ASAR	Alice Springs	21.38	200	P	P	12 23 12.3	-2.4
	0.7nm,0.7s,baz=39,slow=13,SNR=10						
ILAR	Eielson Array	85.35	24	P	P	12 31 02.0	-1.2
	0.3nm,0.6s,baz=254,slow=4.7,SNR=5.7						

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*IDC **24** 12:39:37.6±0.9, 2.67N×95.78E, mb4.1/11, mb1 4.3/12, mb1mx4.1/20, mbtmp4.1/12, ML4.5/1, MS3.8/4, Ms1 3.8/4, ms1mx3.2/18, Error ellipse: s-maj=47.8km s-min=15.5km az=51.0*

*BJI **24** 12:39:40.4, 2.66N×95.89E, h33^{km}, mB5.0, mb4.7, Ms4.1, Msz3.9*

*MOS **24** 12:39:40.9±1.0, 2.73N×95.89E, h33^{km}, mb4.8/9, Error ellipse: s-maj=20.7km s-min=9.2km az=97.9*

*NEIC **24** 12:39:42.4±0.3, 2.70N×95.89E, h30^{km}, mb4.7/11, Error ellipse: s-maj=11.6km s-min=5.4km az=60.0*

ISC 24 12:39:41.1±0.6, 2.71N±0.07×95.90E±0.09, h33^{km}, (h20^{km}±6.1^{km}:pP-P), n58, σ0^{s}75/54, mb4.5/31, MS3.9/6, 4C, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	Songkhla	6.46	46	P	P	12 41 17.0	+0.6
KKTK	Khon Kaen	15.16	26	P	P	12 43 20.0	+5.4
CM31	Chiang Mai Arr	15.93	11	eP	P	12 43 24.3	-0.3
	18nm,1.0s						
CMAR	Chiang Mai Arr	15.93	11	Pn	P	12 43 23.9	-0.6
	0.6nm,0.3s,baz=197,slow=11,SNR=27						
CMAR				LR	LR	12 49 42.9	
	comp=Z,217nm,19.4s,baz=200,slow=38						
CHG	Chiang Mai	16.28	10	P	P	12 43 28.1	-0.9
KMI	Kunming	23.24	16	⇑P	P	12 44 47.8	+1.3
KMI				AP		12 44 54.8	
KMI				XP		12 44 58.1	
KMI				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.3						
KMI				AMB	AMB		
	comp=Z,39nm,3.2s						
KMI				LR	LR		
	comp=N,378nm,14.6s,MS4.0						
KMI				LR	LR		
	comp=E,301nm,18.2s,MS4.0						
KMI				LR	LR		
	comp=Z,413nm,13.7s,MS4.0						
KMI	Kunming	23.24	16	⇑P	P	12 44 47.8	+1.3
KMI				*SP		12 44 58.1	
KMI						12 45 23.4	
KMI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
KMI				MLR	MLR		
	comp=Z,410nm,13.7s,MS4.0						
KMI	Kunming	23.24	16	⇑P	P	12 44 47.8	+1.3
	comp=Z,14nm,1.1s,mb4.3						
KMI				pP		12 44 54.8	
KMI				sP		12 44 58.1	
KMI				PP	PP	12 45 23.4	+5.7
KMI				S	S	12 49 12.0	+20
KMI				sS		12 49 25.6	
KMI				LR	LR		
	comp=Z,410nm,13.7s,MS4.0						
JIRN	Jiri	26.49	340	eP	P	12 45 18.4	+0.9
	comp=Z,49nm,0.7s,mb5.2						
PKI	Pulchoki	26.68	339	eP	P	12 45 19.6	+0.3
	comp=Z,26nm,0.9s,mb4.7						
DMN	Daman	26.82	338	eP	P	12 45 20.8	+0.2
	comp=Z,19nm,0.8s,mb4.7						
GUN	Gumba	26.83	340	eP	P	12 45 21.3	+0.7
	comp=Z,34nm,0.6s,mb5.0						
KKN	Kakani	26.93	339	eP	P	12 45 21.6	+0.1
	comp=Z,52nm,0.9s,mb5.1						
LSA	Lhasa	27.22	351	P	P	12 45 24.0	-0.2
LSA	Lhasa	27.22	351	eP	P	12 45 23.9	-0.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
LSA	Lhasa	27.22	351	eP	P	12 45 23.9	-0.3
	comp=Z,7.6nm,0.8s,mb4.3						
GKN	Gorkha	27.36	338	eP	P	12 45 25.7	+0.3
	comp=Z,41nm,0.8s,mb5.0						
KOLN	Koldanda	27.55	336	eP	P	12 45 27.3	+0.1
	comp=Z,66nm,1.3s,mb5.1						
LZH	Lanzhou	34.02	12	eP	P	12 46 23.5	-0.6
LZH				AP	pP	12 46 30.0	-3.8
LZH				XP	sP	12 46 33.5	-4.6
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.2						
LZH	Lanzhou	34.02	12	eP	P	12 46 23.5	-0.6
LZH				*SP	sP	12 46 33.5	-4.6
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.2						
LZH	Lanzhou	34.02	12	eP	P	12 46 23.5	-0.6
	comp=Z,42nm,1.5s,mb5.2						
LZH				pP	pP	12 46 30.0	-3.8
LZH				sP	sP	12 46 33.5	-4.6
GTA	Gaotai	36.70	5	⇑P	P	12 46 46.6	-0.4
GTA				AP	pP	12 46 52.0	-4.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GTA				AMB	AMB		
	comp=Z,48nm,5.3s						
GTA				LR	LR		
	comp=N,107nm,15.2s,MS3.9						
GTA				LR	LR		
	comp=E,110nm,13.7s,MS3.9						
GTA				LR	LR		
	comp=Z,197nm,14.8s,MS4.0						
HHC	Hu-ho-hao-te	40.52	18	eP	P	12 47 19.9	+1.1
HHC				AP	pP	12 47 29.4	+0.8
HHC				XP	sP	12 47 34.1	+1.4
HHC				PP	PP	12 48 52.6	-2.8
HHC				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,112nm,5.6s						
BJT	Baijiatuau	41.44	24	eP	P	12 47 27.4	+1.1
BJT				pmax	pmax		
	comp=Z,61nm,1.1s						
BJT	Baijiatuau	41.44	24	eP	P	12 47 27.4	+1.1
	comp=Z,61nm,1.1s,mb5.1						
BJI	Beijing	41.46	24	eP	P	12 47 27.5	+1.0
BJI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.8						
BJI	Beijing	41.46	24	eP	P	12 47 27.5	+1.0
	comp=Z,30nm,1.1s,mb4.8						
WMQ	Urumqi	41.58	351	eP	P	12 47 28.0	+0.5
WMQ				XP	sP	12 47 42.0	+0.5
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.4						
WMQ				LR	LR		
	comp=N,91nm,21.0s,MS3.9						
WMQ				LR	LR		
	comp=E,138nm,22.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,78nm,20.0s,MS3.6						
WRA	Warramunga Arr	43.94	123	P	P	12 47 47.2	+0.1
	comp=Z,0.9nm,0.4s,mb3.9,baz=300,slow=9.3,SNR=19						
WRAB	Tennant Creek	43.94	123	eP	P	12 47 46.7	-0.4
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
WRAB	Tennant Creek	43.94	123	eP	P	12 47 46.7	-0.3
	comp=Z,3.8nm,0.6s,mb4.3						
ASAR	Alice Springs	45.34	127	P	P	12 47 58.3	0.0
	comp=Z,0.5nm,0.5s,mb3.6,baz=300,slow=7.9,SNR=22						
MKAR	Makanchi Array	45.48	347	eP	P	12 47 58.9	-0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM	Songino Array	45.86	10	P	P	12 48 02.0	0.0
	comp=Z,2.9nm,0.5s,mb4.5,baz=191,slow=9.6,SNR=29						
SONM				PcP	PcP	12 49 39.5	+0.1
	comp=Z,0.7nm,0.5s,baz=191,slow=4.2,SNR=6.2						
ULN	Ulaanbaatar	46.00	10	eP	P	12 47 58.3	-4.9
ULN				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
ULN	Ulaanbaatar	46.00	10	eP	P	12 47 58.3	-4.9
	comp=Z,3.2nm,0.4s,mb4.6						
ZAK	Zakamensk	47.91	6	eP	P	12 48 13.0	-5.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.9						
KURK	Kurchatov	50.01	346	eP	P	12 48 34.2	-0.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
KURK	Kurchatov	50.01	346	eP	P	12 48 34.2	-0.2
	comp=Z,3.5nm,0.4s,mb4.7						
ZAL	Zalesovo	51.87	352	P	P	12 48 48.1	-0.2
	comp=Z,3.1nm,0.5s,mb4.5,baz=323,slow=4.8,SNR=13						
ZAL				LR	LR	13 13 26.7	
	comp=Z,65nm,18.1s,MS3.7,baz=97,slow=39						
NVS	Novosibirsk	52.98	351	eP	P	12 48 54.2	-2.5
CTA	Charters Tower	54.34	117	P	P	12 49 07.1	0.0
	comp=Z,2.0nm,0.4s,mb4.4,baz=269,slow=6.1,SNR=2.7						
CHKZ	Chkalovo	54.89	342	eP	P	12 49 09.8	-0.9
CHKZ				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
CHKZ	Chkalovo	54.89	342	eP	P	12 49 09.8	-0.9
	comp=Z,19nm,1.2s,mb5.0						
STKA	Stephens Creek	55.33	132	P	P	12 49 14.1	-0.1
	comp=Z,1.5nm,0.7s,mb4.1,baz=308,slow=8.4,SNR=5.0						
KLR	Kul'dur	55.51	28	eP	P	12 49 12.1	-3.2
BOD	Bodaibo	56.78	11	eP	P	12 49 22.7	-1.6
KMBO	Kilima Mbogo	58.75	267	LR	LR	13 11 46.5	
	comp=Z,146nm,18.8s,MS4.1,baz=86,slow=33						
MLR	Muntele Rosu	74.08	317	P	P	12 51 15.9	+0.2
	comp=Z,1.2nm,0.3s,mb4.2,baz=317,slow=22,SNR=6.1						
FINES	FINESS Array B	78.07	333	P	P	12 51 38.0	0.0
	comp=Z,0.7nm,0.7s,mb3.7,baz=104,slow=7.9,SNR=7.0						
ARCES	ARCESS Array B	80.69	340	P	P	12 51 52.4	+0.4
	comp=Z,1.8nm,0.6s,mb4.2,baz=104,slow=5.0,SNR=12						
ARCES				LR	LR	13 33 24.3	
	comp=Z,61nm,20.9s,MS3.9,baz=17,slow=40						
ARCES	ARCESS Array B	80.69	340	P	P	12 51 52.4	+0.3
ARCES				LR	LR	13 33 24.3	
GERES	GERESS Array B	82.83	319	P	P	12 52 03.9	+0.3
	comp=Z,0.2nm,0.4s,mb3.5,baz=117,slow=12,SNR=4.0						
HFS	Hagfors	83.77	330	P	P	12 52 08.3	+0.2
	comp=Z,0.9nm,0.5s,mb4.1,baz=135,slow=4.2,SNR=5.2						
YKA	Yellowknife Ar	110.98	15	PP	PP	12 58 55.5	+1.8
	comp=Z,0.1nm,0.3s,baz=304,slow=6.6,SNR=3.6						
PDAR	Pinedale Array	129.23	24	PKP	PKPdf	12 58 47.5	+0.9
	comp=Z,0.2nm,0.5s,baz=108,slow=2.0,SNR=4.0						
TXAR	Lajitas Array	143.03	29	PKP	PKPdf	12 59 13.0	+0.8
	comp=Z,0.2nm,0.6s,baz=160,slow=2.8,SNR=4.3						
TXAR	Lajitas Array	143.03	29	PKP	PKPdf	12 59 13.0	+0.7

IDC 24 12:40:55.5±15.0, 35.16S×55.96E, mb3.4/2, mb1 3.7/2, mb1mx3.4/18, mbtmp3.4/2, Error ellipse: s-maj=798.8km s-min=62.8km az=38.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	67.31	104	P	P	12 51 53.0	-1.4
	0.3nm,0.7s,baz=231,slow=5.3,SNR=5.1						
WRA	Warramunga Arr	69.53	100	P	P	12 52 06.0	-2.3
	0.3nm,0.8s,baz=238,slow=5.1,SNR=3.0						
ILAR	Eielson Array	147.30	18	PKPbc	PKPdf	13 00 39.4	-0.1
	0.7nm,1.0s,baz=298,slow=3.9,SNR=6.5						

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*BJI **24** 13:29:16.7, 7.70N×91.89E, h8^{km}, mb4.3*

*NEIC **24** 13:29:17.8±0.5, 7.20N×92.17E, h30^{km}, mb4.6/7, Error ellipse: s-maj=14.5km s-min=7.7km az=63.0*

*IDC **24** 13:29:17.0±0.8, 7.30N×92.26E, h21^{km}±3^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.9/18, mbtmp4.0/8, ML4.2/1, MS3.0/2, Ms1 3.1/2, ms1mx2.6/21, Error ellipse: s-maj=36.9km s-min=13.5km az=57.0*

ISC 24 13:29:14.7±0.7, 7.18N±0.08×92.2E±0.1, h23^{km}, h23^{km}±.7^{km}:pP-P, n31, σ0^{s}78/28, mb4.3/17, MS3.5/1, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	12.99	30	eP	P	13 32 21.5	+0.7
	26nm,1.0s						
CM31				e		13 32 28.3	
CMAR	Chiang Mai Arr	12.99	30	Pn	P	13 32 19.9	-0.9
	0.4nm,0.3s,baz=232,slow=14,SNR=28						
CMAR				LR	LR	13 36 47.6	
	comp=Z,28nm,20.5s,baz=42,slow=35						
CHG	Chiang Mai	13.30	29	⇓P	P	13 32 30.8	+6.0
	10nm,0.9s						
NANT	Nan	14.21	35	P	P	13 32 37.6	+0.7
KMI	Kunming	20.49	28	P	P	13 33 55.3	+1.4
KMI				AMB	AMB		
	comp=Z,14nm,1.0s						
KMI	Kunming	20.49	28	P	P	13 33 55.2	+1.3
	comp=Z,14nm,1.0s						
JIRN	Jiri	21.15	345	eP	P	13 34 01.1	+0.4
	comp=Z,8.8nm,0.5s,mb4.4						
PKI	Pulchoki	21.28	343	eP	P	13 34 02.3	+0.4
DMN	Daman	21.40	343	eP	P	13 34 04.7	+1.5
	comp=Z,9.1nm,0.7s,mb4.2						
GUN	Gumba	21.47	345	eP	P	13 34 03.0	-0.9
	comp=Z,19nm,0.6s,mb4.6						
KKN	Kakani	21.52	343	eP	P	13 34 04.3	-0.1
	comp=Z,6.7nm,0.7s,mb4.2						
GKN	Gorkha	21.91	342	eP	P	13 34 08.5	+0.2
KOLN	Koldanda	22.04	339	eP	P	13 34 10.3	+0.7
LSA	Lhasa	22.42	358	eP	P	13 34 14.0	+0.6
	comp=Z,13nm,1.0s,mb4.3						
CD2	Chengdu	25.97	23	P	P	13 34 53.4	+5.8
GTA	Gaotai	32.81	11	eP	P	13 35 46.8	-1.9
GTA				AP	pP	13 35 54.8	-0.6
GTA				XP	sP	13 35 58.9	+0.6
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
SONM	Songino Array	42.28	14	P	P	13 37 07.0	-1.2
	comp=Z,0.7nm,0.5s,mb3.5,baz=196,slow=9.1,SNR=8.4						
SONM				pP	pP	13 37 14.7	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.3nm,0.7s,baz=197,slow=9.0,SNR=9.1						
KURK	**Kurchatov**	**44.84**	**348**	*e*P	**P**	**13 37 28.1**	**-0.9**
	comp=Z,10nm,1.2s,mb4.5						
ZAL	**Zalesovo**	**47.01**	**354**	P	**P**	**13 37 45.9**	**-0.2**
	comp=Z,0.8nm,0.3s,mb4.1,baz=315,slow=8.1,SNR=4.2						
ZAL				pP	pP	13 37 52.4	-0.5
	comp=Z,1.0nm,0.4s,baz=252,slow=7.0,SNR=2.1						
WRA	**Warramunga Arr**	**49.45**	**124**	P	**P**	**13 38 05.6**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.5,baz=305,slow=8.6,SNR=36						
WRA				pP	pP	13 38 12.3	-0.1
	comp=Z,3.4nm,0.8s,baz=305,slow=8.6,SNR=14						
WRAB	**Tennant Creek**	**49.46**	**124**	*e*P	**P**	**13 38 05.3**	**-0.2**
	comp=Z,9.4nm,0.7s,mb4.9						
CHKZ	**Chkalovo**	**49.55**	**343**	*e*P	**P**	**13 38 05.4**	**-0.4**
	comp=Z,5.5nm,0.5s,mb4.8						
CHKZ				*e*	pP	13 38 11.8	-0.9
ASAR	**Alice Springs**	**50.98**	**128**	P	**P**	**13 38 17.4**	**+0.3**
	comp=Z,2.1nm,0.9s,mb4.1,baz=302,slow=7.2,SNR=32						
ASAR				pP	pP	13 38 24.2	+0.2
	comp=Z,2.4nm,0.7s,baz=303,slow=7.4,SNR=14						
ASAR				PcP	PcP	13 39 34.5	+1.2
	comp=Z,0.6nm,0.7s,baz=307,slow=3.3,SNR=4.0						
ASAR				pPcP		13 39 41.0	
	comp=Z,0.8nm,0.6s,baz=311,slow=3.4,SNR=5.5						
KMBO	**Kilima Mbogo**	**55.43**	**264**	LR	LR	14 02 07.4	
	comp=Z,33nm,18.0s,MS3.5,baz=82,slow=36						
STKA	**Stephens Creek**	**61.04**	**132**	P	**P**	**13 39 29.8**	**+0.5**
	comp=Z,1.3nm,0.4s,mb4.4,baz=280,slow=3.6,SNR=2.9						
STKA				pP	pP	13 39 36.9	+0.5
	comp=Z,1.3nm,0.4s,baz=309,slow=10.0,SNR=2.4						
MA2	**Magadan**	**68.27**	**28**	P	**P**	**13 40 14.7**	**-1.2**
	comp=Z,7.4nm,1.0s,mb4.7						
MA2				*e*	pP	13 40 21.8	-1.1
FINES	**FINESS Array B**	**72.43**	**333**	P	**P**	**13 40 41.1**	**0.0**
	comp=Z,1.3nm,0.6s,mb4.0,baz=76,slow=5.7,SNR=4.1						
FINES				pP	pP	13 40 47.0	-1.1
	comp=Z,1.0nm,0.7s,baz=98,slow=9.8,SNR=1.7						
GERES	**GERESS Array B**	**77.06**	**318**	P	**P**	**13 41 08.2**	**+0.4**
	comp=Z,1.0nm,0.7s,mb3.8,baz=117,slow=3.0,SNR=6.7						
GERES				pP	pP	13 41 15.5	+0.5
	comp=Z,0.4nm,0.5s,baz=90,slow=4.0,SNR=3.5						
CLL	**Collm**	**77.68**	**321**	P	**P**	**13 41 11.0**	**-0.2**
CLL				*e**SP	sP	13 41 25.0	+4.2
NVAR	**Mina Array Bea**	**126.49**	**30**	PKP	PKPdf	13 48 20.1	-0.9
	comp=Z,0.6nm,0.6s,baz=319,slow=2.5,SNR=5.5						
NVAR				pPKP		13 48 27.2	
	comp=Z,0.5nm,0.5s,baz=303,slow=1.9,SNR=4.1						
PDAR	**Pinedale Array**	**126.49**	**20**	PKP	PKPdf	13 48 19.3	-1.5
	comp=Z,0.3nm,0.5s,baz=42,slow=1.6,SNR=4.5						
PDAR				pPKP		13 48 26.1	
	comp=Z,0.4nm,0.5s,baz=27,slow=3.3,SNR=4.2						

*NEIC **24** 13:48:40.5±1.0,21.29S×179.07W,h616^{km}±15^{km},mb4.5/4, Error ellipse: s-maj=14.0km s-min=12.3km az=158.0*

*IDC **24** 13:48:40.9±5.1,21.35S×178.96W,h627^{km}±64^{km},mb3.1/7, mb1 3.3/8,mb1mx3.1/18,mbtmp4.2/8,Error ellipse: s-maj=40.8km s-min=22.2km az=41.0*

ISC 24 13:48:39.5±1.1**,21.36S**±0.09×**179.1W**±0.1**,h613**^{km}±18^{km}**, n43,σ0^{s}81**/41**,mb4.1**/10**,5C-1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.20**	**45**	P	**P**	**13 51 00.8**	**+0.3**
URZ	**Urewera**	**17.15**	**190**	P	**P**	**13 52 07.0**	**-0.6**
	1.6nm,0.3s,baz=266,slow=3.5,SNR=14						
URZ	**Urewera**	**17.15**	**190**	PN	**P**	**13 52 08.0**	**+0.4**
URZ	**Urewera**	**17.15**	**190**	PN	**P**	**13 52 08.0**	**+0.4**
BKZ	**Black Stump Fm**	**18.14**	**191**	*e*PN	**P**	**13 52 16.1**	**-0.8**
BKZ	**Black Stump Fm**	**18.14**	**191**	*e*PN	**P**	**13 52 16.1**	**-0.8**
MRZ	**Mangatainoka R**	**19.76**	**192**	*e*PN	**P**	**13 52 30.9**	**-0.9**
MRZ	**Mangatainoka R**	**19.76**	**192**	*e*PN	**P**	**13 52 30.9**	**-0.9**
QRZ	**Quartz Range**	**20.65**	**198**	PN	**P**	**13 52 41.3**	**+1.3**
QRZ	**Quartz Range**	**20.65**	**198**	PN	**P**	**13 52 41.3**	**+1.3**
NNZ	**Nelson**	**20.79**	**196**	PN	**P**	**13 52 41.6**	**+0.4**
NNZ	**Nelson**	**20.79**	**196**	PN	**P**	**13 52 41.6**	**+0.4**
THZ	**Tophouse**	**21.42**	**196**	PN	**P**	**13 52 46.9**	**0.0**
THZ	**Tophouse**	**21.42**	**196**	PN	**P**	**13 52 46.9**	**0.0**
KHZ	**Kahutara**	**21.88**	**195**	*e*PN	**P**	**13 52 50.1**	**-0.9**
KHZ	**Kahutara**	**21.88**	**195**	*e*PN	**P**	**13 52 50.1**	**-0.9**
RPZ	**Rata Peaks**	**23.74**	**198**	P	**P**	**13 53 07.5**	**-0.2**
	1.2nm,0.3s,mb4.0,baz=41,slow=5.5,SNR=4.7						
FOZ	**Fox Glacier**	**24.02**	**200**	PN	**P**	**13 53 09.0**	**-1.1**
FOZ	**Fox Glacier**	**24.02**	**200**	PN	**P**	**13 53 09.0**	**-1.1**
JCZ	**Jackson Bay**	**24.78**	**201**	*e*PN	**P**	**13 53 17.2**	**+0.4**
JCZ	**Jackson Bay**	**24.78**	**201**	*e*PN	**P**	**13 53 17.2**	**+0.4**
CTA	**Charters Tower**	**32.36**	**266**	P	**P**	**13 54 23.0**	**+1.0**
	2.6nm,0.4s,mb4.2,baz=87,slow=11,SNR=3.3						
PMG	**Port Moresby**	**34.52**	**285**	P	**P**	**13 54 40.5**	**+0.5**
	8.8nm,0.7s,mb4.5,baz=84,slow=5.3,SNR=9.2						
PMG	**Port Moresby**	**34.52**	**285**	*e*P	**P**	**13 54 40.3**	**+0.3**
	11nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**36.46**	**245**	*e*P	**P**	**13 54 57.3**	**+1.5**
	1.8nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**36.46**	**245**	P	**P**	**13 54 57.2**	**+1.3**
	2.3nm,0.5s,mb4.0,baz=91,slow=10,SNR=12						
STKA	**Stephens Creek**	**36.46**	**245**	*e*P	**P**	**13 54 57.0**	**+1.1**
ASAR	**Alice Springs**	**43.29**	**258**	P	**P**	**13 55 50.9**	**+0.2**
	2.8nm,0.6s,mb4.0,baz=97,slow=7.5,SNR=77						
ASPA	**Alice Springs**	**43.30**	**258**	*e*P	**P**	**13 55 50.8**	**+0.1**
WRAB	**Tennant Creek**	**43.43**	**263**	*e*P	**P**	**13 55 51.3**	**-0.5**
	5.1nm,1.1s,mb4.0						
WRA	**Warramunga Arr**	**43.44**	**263**	P	**P**	**13 55 51.3**	**-0.5**
	0.7nm,0.6s,mb3.4,baz=99,slow=8.6,SNR=12						
MBWA	**Marble Bar**	**56.63**	**258**	*e*P	**P**	**13 57 26.1**	**-1.9**
QSPA	**South Pole Qui**	**68.71**	**180**	*e*P	**P**	**13 58 45.4**	**+1.2**
	11nm,0.7s,mb4.4						
PMSA	**Palmer Station**	**80.92**	**157**	*e*P	**P**	**13 59 52.1**	**+0.3**
	84nm,1.1s,mb5.1						
SNAA	**Sanae**	**87.18**	**179**	⇑*i*	**P**	**14 00 22.3**	**0.0**
SNAA	**Sanae**	**87.18**	**179**	⇑*i*	**P**	**14 00 30.2**	**+7.9**
VNA3	**Neumayer Olymp**	**87.35**	**177**	⇑*i*	**P**	**14 00 23.1**	**0.0**
VNA3	**Neumayer Olymp**	**87.35**	**177**	⇓*i*	**P**	**14 00 36.1**	**+13**
VNA2	**Neumayer--Watz**	**87.78**	**177**	⇑*i*	**P**	**14 00 26.2**	**+1.1**
VNA2	**Neumayer--Watz**	**87.78**	**177**	⇑*i*	**P**	**14 00 35.3**	**+10**
ILAR	**Eielson Array**	**89.39**	**13**	P	**P**	**14 00 31.9**	**-0.9**
	0.4nm,0.6s,mb3.5,baz=213,slow=5.1,SNR=9.0						
BVAR	**Borovoye Array**	**119.05**	**320**	PKP	PKPdf	14 06 19.6	+0.2
	0.3nm,0.3s,baz=124,slow=3.3,SNR=5.2						
AKASG	**Malin Array Be**	**143.24**	**330**	PKP	PKPdf	14 07 03.5	-1.1
	1.5nm,0.5s,baz=42,slow=4.3,SNR=6.7						

*IDC **24** 13:53:17.2±1.0,5.49S×122.09E,mb4.1/7,mb1 4.3/8, mb1mx4.1/18,mbtmp4.2/8,ML3.4/1,MS3.3/2,Ms1 3.4/2, ms1mx2.6/24,Error ellipse: s-maj=57.4km s-min=16.4km az=52.0*

*NEIC **24** 13:53:18.3±0.4,5.42S×122.14E,h10^{km},mb4.4/7,Error ellipse: s-maj=30.4km s-min=7.2km az=51.0*

ISC 24 13:53:16.4±0.5**,5.5S**±0.2×**122.1E**±0.2**,h10**^{km}**,n21, σ0^{s}90**/21**,mb4.3**/13**,MS3.1**/2**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.67**	**142**	P	**P**	**13 57 35.3**	**-1.5**
	0.1nm,0.3s,baz=317,slow=13,SNR=23						
WRAB	**Tennant Creek**	**18.67**	**141**	*e*P	**P**	**13 57 35.6**	**-1.2**
	11nm,0.8s						
ASPA	**Alice Springs**	**21.36**	**149**	*e*P	**P**	**13 58 08.5**	**+2.2**
ASAR	**Alice Springs**	**21.37**	**149**	P	**P**	**13 58 06.2**	**-0.1**
	5.0nm,0.8s,mb3.9,baz=327,slow=12,SNR=31						
ASAR				LR	LR	14 06 47.3	
	comp=Z,75nm,19.0s,MS3.1,baz=313,slow=38						
PMG	**Port Moresby**	**25.13**	**100**	P	**P**	**13 58 45.0**	**+1.6**
	8.5nm,0.9s,mb4.3,baz=250,slow=5.9,SNR=6.6						
PMG	**Port Moresby**	**25.13**	**100**	*e*P	**P**	**13 58 43.8**	**+0.4**
	14nm,1.1s,mb4.4						
CMAR	**Chiang Mai Arr**	**32.97**	**317**	P	**P**	**13 59 54.5**	**+0.8**
	0.8nm,0.6s,mb3.9,baz=140,slow=7.0,SNR=7.5						
CMAR				LR	LR	14 15 15.8	
	comp=Z,47nm,20.4s,MS3.2,baz=145,slow=40						
LSA	**Lhasa**	**45.88**	**321**	P	**P**	**14 01 40.4**	**-0.7**
	2.5nm,0.6s,mb4.3						
JIRN	**Jiri**	**47.83**	**315**	*e*P	**P**	**14 01 57.2**	**+0.7**
	3.5nm,0.6s,mb4.6						
GUN	**Gumba**	**48.20**	**315**	*e*P	**P**	**14 02 00.2**	**+0.9**
PKI	**Pulchoki**	**48.32**	**315**	*e*P	**P**	**14 02 00.7**	**+0.4**
KKN	**Kakani**	**48.54**	**315**	*e*P	**P**	**14 02 02.0**	**0.0**
DMN	**Daman**	**48.56**	**315**	*e*P	**P**	**14 02 01.0**	**-1.1**
KOLN	**Koldanda**	**49.73**	**314**	*e*P	**P**	**14 02 11.2**	**+0.1**
	7.4nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**54.73**	**348**	*e*P	**P**	**14 02 47.5**	**-0.8**
	2.2nm,0.7s,mb4.3						
SONM	**Songino Array**	**54.85**	**347**	P	**P**	**14 02 49.7**	**+0.5**
	1.7nm,0.7s,mb4.2,baz=162,slow=7.8,SNR=15						
RPZ	**Rata Peaks**	**57.37**	**140**	P	**P**	**14 03 08.1**	**+0.8**
	7.0nm,1.1s,mb4.6,baz=295,slow=5.8,SNR=5.6						
AAK	**Ala-Archa**	**64.45**	**323**	P	**P**	**14 03 54.8**	**-0.6**
	6.8nm,1.3s,mb4.5						
ZAL	**Zalesovo**	**66.93**	**337**	P	**P**	**14 04 10.7**	**-0.5**
	1.8nm,0.8s,mb4.2,baz=329,slow=6.3,SNR=10						
KURK	**Kurchatov**	**67.29**	**332**	*e*P	**P**	**14 04 12.6**	**-0.9**
	3.9nm,0.8s,mb4.5						
BVAR	**Borovoye Array**	**72.72**	**330**	P	**P**	**14 04 47.0**	**+0.4**
	2.3nm,1.0s,mb4.0,baz=127,slow=7.2,SNR=11						

*NEIC **24** 14:02:03.4±0.9,35.98N×141.52E,h35^{km},Error ellipse: s-maj=23.9km s-min=13.4km az=50.0*

*IDC **24** 14:02:08.8±2.6,35.81N×140.87E,h70^{km}±21^{km},mb3.6/6, mb1 3.7/8,mb1mx3.4/23,mbtmp3.9/8,Error ellipse: s-maj=40.7km s-min=13.6km az=87.0*

*JMA **24** 14:02:09.5±0.1,35.91N×140.85E,h79^{km}±1^{km},M3.4 Broadband fault plane solution: P waves. NP1:ϕ_s345°, δ34°,λ-174°. NP2:ϕ_s250°,δ87°,λ-56°. Principal axes: T Plg33°, Azm312°; N Plg34°, Azm68°; P Plg39°, Azm191°;*

ISC 24 14:02:08.4±0.6**,35.86N**±0.05×**140.86E**±0.09**,h86**^{km}±4^{km}**, n24,σ0^{s}82**/28**,mb3.8**/6**,4C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.15**	**179**	⇑P	**P**	**14 02 21.2**	**+0.4**
CHOJ				S	**S**	**14 02 29.7**	**-0.4**
JYT	**Yasato**	**0.65**	**305**	⇓P	**P**	**14 02 24.5**	**+0.1**
JYT				*i* S	**S**	**14 02 35.5**	**-0.7**
JHO	**Hitachi**	**0.79**	**343**	⇓P	**P**	**14 02 25.5**	**-0.3**
BSO3	**Boso 3**	**1.09**	**195**	⇑P	**P**	**14 02 29.9**	**+0.7**
BSO3				S	**S**	**14 02 46.3**	**+1.5**
BSO1	**Boso 1**	**1.21**	**175**	P	**P**	**14 02 30.9**	**+0.2**
JAG	**Ashikaga**	**1.27**	**297**	⇑P	**P**	**14 02 31.9**	**+0.4**
JOD2	**Odawara 2**	**1.56**	**248**	⇓P	**P**	**14 02 35.2**	**0.0**
JKT	**Katashina**	**1.58**	**305**	P	**P**	**14 02 36.4**	**+0.8**
JRY	**Ryogami san**	**1.59**	**276**	⇑P	**P**	**14 02 36.1**	**+0.4**
MAJO	**Matsushiro**	**2.25**	**288**	*e*P	**P**	**14 02 44.9**	**+0.4**
MAT	**Matsushiro**	**2.25**	**288**	*e*P	**P**	**14 02 45.0**	**+0.5**
MAT				*e*S	**S**	**14 03 10.0**	**-1.3**
MAT	**Matsushiro**	**2.25**	**288**	P	**P**	**14 02 44.8**	**+0.3**
MAT				S	**S**	**14 03 10.0**	**-1.3**
JHJ	**Hachijo jima 2**	**2.87**	**198**	P	**P**	**14 02 52.8**	**-0.4**
	87nm,0.3s,baz=279,slow=17,SNR=34						
JHJ				S	**S**	**14 03 24.8**	**-2.0**
	138nm,0.3s,baz=89,slow=22,SNR=18						
ASAJ	**Asahikawa**	**8.36**	**9**	P	**P**	**14 04 06.9**	**-1.8**
	0.5nm,0.3s,baz=270,slow=25,SNR=5.4						
SONM	**Songino Array**	**28.09**	**306**	P	**P**	**14 07 54.2**	**+0.4**
	0.5nm,0.4s,mb3.4,baz=101,slow=7.4,SNR=11						
ZAL	**Zalesovo**	**42.40**	**313**	P	**P**	**14 09 56.5**	**+0.9**
	1.2nm,0.5s,mb3.9,baz=2.5,slow=8.8,SNR=4.1						
ZAL	**Zalesovo**	**42.40**	**313**	P	**P**	**14 09 56.5**	**+0.9**
ILAR	**Eielson Array**	**50.73**	**32**	pP	pP	14 11 21.9	-0.4
	1.1nm,0.8s,baz=272,slow=6.1,SNR=11						
BVAR	**Borovoye Array**	**51.04**	**313**	P	**P**	**14 11 04.3**	**+0.8**
	0.7nm,0.4s,mb4.0,baz=95,slow=7.2,SNR=12						
INK	**Inuvik**	**55.64**	**27**	pP	pP	14 11 58.8	-0.1
	0.5nm,0.6s,baz=258,slow=7.3,SNR=2.2						
WRA	**Warramunga Arr**	**55.84**	**187**	P	**P**	**14 11 38.1**	**-1.2**
	0.5nm,0.3s,mb4.0,baz=2.3,slow=7.6,SNR=19						
WRA				pP	pP	14 11 59.9	-1.1
	0.2nm,0.5s,baz=2.8,slow=7.5,SNR=2.4						
WRA	**Warramunga Arr**	**55.84**	**187**	P	**P**	**14 11 38.1**	**-1.2**
WRA				pP	pP	14 11 59.9	-1.1
ASAR	**Alice Springs**	**59.56**	**187**	P	**P**	**14 12 05.3**	**0.0**
	0.4nm,0.6s,mb3.6,baz=18,slow=9.8,SNR=9.1						
FINES	**FINESS Array B**	**69.64**	**332**	P	**P**	**14 13 10.2**	**+0.2**
	3.6nm,1.2s,mb4.1,baz=56,slow=6.9,SNR=3.5						

IDC 24 14:07:11.0±0.9**,21.84N**×**143.03E,mb3.8**/6**,mb1 4.0**/6**, mb1mx3.7**/21**,mbtmp3.8**/6**,MS3.0**/1**,Ms1 3.0**/1**, ms1mx2.3**/29**,Error ellipse: s-maj=65.1km s-min=20.9km az=101.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.29**	**352**	LR	LR	14 10 24.1	
	comp=Z,163nm,19.9s,baz=158,slow=36						
WRA	**Warramunga Arr**	**42.39**	**192**	P	P	14 15 07.6	-1.5
	0.3nm,0.3s,baz=14,slow=8.4,SNR=29						
ASAR	**Alice Springs**	**46.10**	**192**	P	P	14 15 36.6	-2.3
	0.1nm,0.3s,baz=16,slow=6.7,SNR=5.8						
ILAR	**Eielson Array**	**61.98**	**27**	P	P	14 17 32.7	-2.2
	0.5nm,0.8s,baz=263,slow=5.5,SNR=5.5						
YKA	**Yellowknife Ar**	**76.40**	**28**	P	P	14 19 01.9	-1.7
	0.6nm,0.4s,baz=290,slow=5.7,SNR=13						
ARCES	**ARCESS Array B**	**78.74**	**341**	P	P	14 19 16.0	-0.5
	1.3nm,0.5s,baz=72,slow=8.5,SNR=7.7						
FINES	**FINESS Array B**	**82.99**	**334**	P	P	14 19 36.9	-2.2
	0.6nm,0.5s,baz=76,slow=5.7,SNR=6.4						

*NIED **24** 14:11:00,37.30N×139.00E,h14^{km},Mw3.3 Best double couple: $M_0$8.6×10^{13} NP1:ϕ_s214°,δ48°,λ-76°. NP2:ϕ_s14°, δ44°,λ-105°.*

JMA 24 14:11:03.2,37.29N×**138.97E,h12**^{km}±1^{km}**,M3.2,4D,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.06**	**138**	P	Pg	14 11 05.5	-0.1
JHK				S	Sg	14 11 07.3	+0.1
JIZZ	**Izumozaki**	**0.32**	**319**	⇓P	Pg	14 11 10.0	+0.1
JIZZ				S	Sg	14 11 15.4	+1.0
JKT	**Katashina**	**0.57**	**157**	⇓P	Pb	14 11 14.2	-0.4
JNS	**Sasagawa**	**0.59**	**28**	P	Pb	14 11 14.3	-0.7
JSD	**Sado**	**0.93**	**323**	⇓P	Pb	14 11 19.3	-1.6
JAG	**Ashikaga**	**0.95**	**156**	⇓P	Pb	14 11 21.2	+0.1
MAT	**Matsushiro**	**0.96**	**220**	P	Pb	14 11 20.2	-1.2
MAT				S	Sb	14 11 32.7	-1.1
MAT	**Matsushiro**	**0.96**	**220**	P	Pb	14 11 20.3	-1.1

*IDC **24** 14:16:25.0±1.0,22.73S×169.06E,mb4.1/8,mb1 4.3/9, mb1mx4.3/15,mbtmp4.1/9,MS3.8/8,Ms1 3.8/8, ms1mx3.5/21,Error ellipse: s-maj=29.0km s-min=25.5km az=144.0*

*NEIC **24** 14:16:26.6±0.6,22.79S×169.06E,h10^{km},mb4.8/1,Error ellipse: s-maj=16.7km s-min=11.5km az=215.0*

ISC 24 14:16:24.9±0.7**,22.8S**±0.1×**169.22E**±0.08**,h10**^{km}**,n22, σ1^{s}32**/19**,mb4.1**/8**,MS3.8**/7**,1C,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.68**	**286**	*e*P	**Pn**	**14 17 08.9**	**0.0**
DZM				*e*S	**Sn**	**14 17 43.3**	**+1.6**
DZM	**Mont Dzumac**	**2.68**	**286**	*e*P	**Pn**	**14 17 08.9**	**0.0**
DZM				*e*S	**Sn**	**14 17 43.3**	**+1.6**
NOUC	**Port Laguerre**	**2.80**	**284**	*e*P	**Pn**	**14 17 10.3**	**-0.3**
NOUC				*e*S	**Sn**	**14 17 45.7**	**+0.9**
NOUC	**Port Laguerre**	**2.80**	**284**	*e*P	**Pn**	**14 17 10.3**	**-0.3**
NOUC				*e*S	**Sn**	**14 17 45.7**	**+0.9**
URZ	**Urewera**	**16.80**	**158**	Pn	**P**	**14 20 23.4**	**+1.5**
	baz=353,slow=18,SNR=3.6						
URZ				LR	LR	14 25 44.0	
	comp=Z,357nm,19.9s,baz=6.7,slow=33						
RPZ	**Rata Peaks**	**20.89**	**176**	P	**P**	**14 21 10.7**	**+0.9**
	8.1nm,1.0s,baz=74,slow=3.2,SNR=5.8						
RPZ				LR	LR	14 28 17.6	
	comp=Z,601nm,18.2s,MS4.0,baz=17,slow=34						
CTA	**Charters Tower**	**21.55**	**273**	LR	LR	14 27 33.3	
	comp=Z,74nm,19.3s,MS3.1,baz=270,slow=31						
STKA	**Stephens Creek**	**26.09**	**244**	P	**P**	**14 22 00.8**	**+0.2**
	11nm,1.3s,mb4.2,baz=59,slow=14,SNR=3.5						
STKA				LR	LR	14 31 07.9	
	comp=Z,188nm,20.4s,MS3.6,baz=309,slow=34						
STKA	**Stephens Creek**	**26.09**	**244**	*e*P	**P**	**14 21 57.9**	**-2.7**
STKA				LR	LR	14 31 07.9	
ASAR	**Alice Springs**	**32.41**	**261**	P	**P**	**14 22 54.8**	**-2.6**
	0.9nm,0.7s,mb3.7,baz=84,slow=9.0,SNR=9.4						
ASAR				PcP	PcP	14 25 42.0	-2.9
	0.5nm,0.9s,baz=117,slow=2.5,SNR=4.8						
ASAR				LR	LR	14 34 11.9	
	comp=Z,97nm,19.5s,MS3.5,baz=97,slow=33						
WRA	**Warramunga Arr**	**32.57**	**268**	P	**P**	**14 22 56.2**	**-2.4**
	3.4nm,1.4s,mb4.1,baz=98,slow=8.3,SNR=7.4						
MBWA	**Marble Bar**	**45.75**	**262**	*e*P	**P**	**14 24 46.4**	**-2.1**
	14nm,1.1s,mb4.8						
VNDA	**Vanda**	**54.86**	**182**	LR	LR	14 43 46.0	
	comp=Z,139nm,21.3s,MS4.0,baz=10,slow=30						
CMAR	**Chiang Mai Arr**	**79.97**	**295**	P	**P**	**14 28 37.0**	**+0.6**
	1.3nm,0.9s,mb3.9,baz=120,slow=4.0,SNR=8.2						
SONM	**Songino Array**	**90.07**	**323**	P	**P**	**14 29 26.8**	**+0.6**
	0.9nm,0.9s,mb4.1,baz=146,slow=4.5,SNR=6.1						
NVAR	**Mina Array Bea**	**91.17**	**49**	P	**P**	**14 29 32.5**	**+1.0**
	1.0nm,0.8s,mb4.2,baz=216,slow=7.3,SNR=8.6						
ILAR	**Eielson Array**	**93.64**	**17**	P	**P**	**14 29 41.6**	**-0.7**
	0.5nm,0.8s,mb4.0,baz=273,slow=11,SNR=5.8						
TXAR	**Lajitas Array**	**98.47**	**62**	LR	LR	15 04 40.8	
	comp=Z,60nm,19.4s,MS4.1,baz=165,slow=29						
PDAR	**Pinedale Array**	**99.05**	**47**	LR	LR	15 04 02.0	
	comp=Z,65nm,21.2s,MS4.1,baz=70,slow=29						
BRG	**Berggiesshubel**	**146.04**	**332**	*e*P	PKPbc	14 36 06.5	+1.5
CLL	**Collm**	**146.12**	**333**	⇑*i*PKP1	PKPbc	14 36 07.2	+2.0
GERES	**GERESS Array B**	**147.59**	**329**	PKPbc	PKPdf	14 36 10.3	+0.6
	2.7nm,1.0s,baz=53,slow=6.7,SNR=10						

*IDC **24** 14:43:48.0±0.7,1.86N×92.17E,mb4.4/13,mb1 4.5/14, mb1mx4.3/21,mbtmp4.4/14,ML3.9/1,MS4.0/11,Ms1 4.1/11, ms1mx3.7/25,Error ellipse: s-maj=26.3km s-min=17.1km az=47.0*

*BJI **24** 14:43:48.9,1.33N×91.92E,h47^{km},mB4.9,mb4.7,Ms4.5, Msz4.0*

*MOS **24** 14:43:50.8±1.0,1.93N×92.18E,h33^{km},mb4.8/13,Error ellipse: s-maj=19.5km s-min=11.1km az=105.2*

*NEIC **24** 14:43:52.8±0.4,1.90N×92.18E,h30^{km},mb4.7/21,Error ellipse: s-maj=10.3km s-min=7.7km az=76.0*

ISC 24 14:43:47.8±1.3**,1.90N**±0.05×**92.20E**±0.05**,h8**^{km}±8^{km}**, h30**^{km}±1.4^{km}**:pP-P,n97,σ1^{s}29**/110**,mb4.6**/53**,MS4.1**/22**,2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**9.20**	**73**	P	**P**	**14 46 03.3**	**-0.5**
SNG	**Songkhla**	**9.89**	**58**	P	**P**	**14 46 12.0**	**-1.5**
	282nm,0.9s						
KGM	**Kluang**	**11.11**	**89**	P	**P**	**14 46 29.1**	**-1.1**
COCO	**West Island**	**14.73**	**162**	P	**P**	**14 47 21.0**	**+2.4**
	48nm,0.8s						
NST	**Nakhon Sawan**	**15.76**	**29**	P	**P**	**14 47 30.2**	**-1.8**
MDRS	**Chennai**	**16.23**	**314**	*e*	**P**	**14 47 54.0**	**+16**
MDRS				*e*		14 52 07.0	
BDT	**Bhumibol Dam**	**16.65**	**23**	P	**P**	**14 47 40.0**	**-3.3**
CM31	**Chiang Mai Arr**	**17.74**	**21**	*e*P	**P**	**14 47 55.8**	**-1.1**
	24nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.74**	**21**	Pn	**P**	**14 47 56.1**	**-0.8**
	0.1nm,0.3s,baz=219,slow=14,SNR=43						
CMAR				LR	LR	14 55 39.4	
	comp=Z,347nm,18.2s,baz=225,slow=40						
KKTK	**Khon Kaen**	**17.76**	**35**	P	**P**	**14 48 00.0**	**+2.8**
VIS	**Vishakhapatnam**	**17.98**	**332**	*i* P	**P**	**14 47 57.0**	**-2.9**
CHG	**Chiang Mai**	**18.06**	**21**	P	**P**	**14 47 59.7**	**-1.3**
NANT	**Nan**	**18.75**	**26**	P	**P**	**14 48 10.5**	**+1.0**
HYB	**Hyderabad**	**20.44**	**320**	*e*P	**P**	**14 48 30.0**	**+1.5**
HYB				*e*S	**S**	**14 52 23.0**	**+11**
HYB	**Hyderabad**	**20.44**	**320**	*i* P	**P**	**14 48 30.0**	**+1.5**
HYB				*e*S	**S**	**14 52 13.0**	**+0.7**
HYB				*e*		14 52 23.0	
CAL	**Calcutta**	**20.86**	**350**	*e*P	**P**	**14 48 37.3**	**+4.5**
CAL				*e*		14 53 40.6	
KAD	**Karad**	**23.41**	**312**	*e*P	**P**	**14 49 00.1**	**+1.7**
KAD				*e*S	**S**	**14 53 09.3**	**+1.5**
QIZ	**Qiongzhong**	**24.26**	**44**	P	**P**	**14 49 08.5**	**+1.9**
	17nm,0.9s,mb4.5						
KKM	**Kota Kinabalu**	**24.30**	**80**	P	**P**	**14 49 11.7**	**+4.6**
POO	**Poona**	**24.43**	**314**	*e*P	**P**	**14 49 26.0**	**+18**
POO				*i* S	**S**	**14 53 35.0**	**+10**
KMI	**Kunming**	**25.23**	**23**	P	**P**	**14 49 18.3**	**+2.4**
KMI				AP	pP	14 49 26.1	+7.8
KMI				PP	PP	14 50 00.0	+5.9
KMI				S	**S**	**14 53 46.5**	**+7.7**
KMI				XS		14 53 59.4	
KMI				SS	SS	14 54 54.0	+15
KMI				AMB	AMB		
	comp=Z,21nm,1.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,112nm,3.9s						
KMI				LR	LR		
	comp=N,434nm,12.4s,MS4.3						
KMI				LR	LR		
	comp=E,410nm,12.4s,MS4.3						
KMI				LR	LR		
	comp=Z,426nm,13.0s,MS4.1						
KMI	**Kunming**	**25.23**	**23**	P	**P**	**14 49 18.3**	**+2.4**
	comp=Z,21nm,1.0s,mb4.6						
KMI				pP	pP	14 49 26.1	+7.8
KMI				sP	sP	14 49 29.1	+10
KMI				PP	PP	14 50 00.0	+5.9
KMI				S	**S**	**14 53 46.5**	**+7.7**
KMI				sS		14 53 59.4	
KMI				SS	SS	14 54 54.0	+15
KMI				LR	LR		
	comp=Z,430nm,13.0s,MS4.2						
JIRN	**Jiri**	**26.26**	**348**	*e*P	**P**	**14 49 26.1**	**+0.7**
	comp=Z,26nm,0.8s,mb4.8						
PKI	**Pulchoki**	**26.34**	**346**	*e*P	**P**	**14 49 26.7**	**+0.5**
	comp=Z,14nm,0.8s,mb4.6						
DMN	**Daman**	**26.45**	**346**	*e*P	**P**	**14 49 27.6**	**+0.3**
	comp=Z,22nm,0.9s,mb4.7						
GUN	**Gumba**	**26.57**	**347**	*e*P	**P**	**14 49 28.7**	**+0.4**
	comp=Z,36nm,0.9s,mb4.9						
KKN	**Kakani**	**26.59**	**346**	*e*P	**P**	**14 49 28.5**	**0.0**
	comp=Z,38nm,1.2s,mb4.8						
GKN	**Gorkha**	**26.95**	**345**	*e*P	**P**	**14 49 32.1**	**+0.3**
	comp=Z,28nm,0.8s,mb4.8						
KOLN	**Koldanda**	**27.01**	**343**	*e*P	**P**	**14 49 32.6**	**+0.2**
	comp=Z,10nm,0.7s,mb4.5						
LSA	**Lhasa**	**27.67**	**358**	P	**P**	**14 49 40.0**	**+1.7**
LSA	**Lhasa**	**27.67**	**358**	*e*P	**P**	**14 49 39.5**	**+1.1**
	comp=Z,22nm,0.7s,mb4.9						
CD2	**Chengdu**	**30.86**	**20**	*e*P	**P**	**14 50 08.0**	**+1.1**
ENH	**Enshi**	**32.64**	**28**	*e*P	**P**	**14 50 21.9**	**-0.5**
	comp=Z,12nm,0.8s,mb4.9						
ENH				*e*		14 50 35.3	
WHN	**Wuhan**	**35.39**	**34**	P	**P**	**14 50 47.3**	**+1.1**
XAN	**Xi’an**	**35.59**	**24**	P	**P**	**14 50 48.3**	**+0.4**
XAN				S	**S**	**14 56 22.0**	**-1.3**
XAN				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
XAN				LR	LR		
	comp=N,207nm,15.7s,MS4.3						
XAN				LR	LR		
	comp=E,356nm,17.1s,MS4.3						
XAN				LR	LR		
	comp=Z,430nm,13.9s,MS4.4						
GTA	**Gaotai**	**37.98**	**10**	*e*P	**P**	**14 51 08.8**	**+0.9**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.5s,mb4.3						
GTA				AMB	AMB		
	comp=Z,40nm,4.6s						
GTA				LR	LR		
	comp=N,146nm,18.6s,MS4.1						
GTA				LR	LR		
	comp=E,168nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=Z,152nm,18.6s,MS3.8						
NJ2	**Nanjing**	**39.11**	**37**	*e*P	**P**	**14 51 19.3**	**+1.8**
NJ2				AP	pP	14 51 29.1	+9.1
NJ2				XP	sP	14 51 33.1	+12
NJ2				PP	PP	14 52 54.5	+3.3
NJ2				S	**S**	**14 57 16.0**	**-1.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,1µm,7.2s						
NJ2				LR	LR		
	comp=N,420nm,13.6s						
NJ2				LR	LR		
	comp=E,3µm,22.5s						
NJ2				LR	LR		
	comp=Z,510nm,18.6s,MS4.4						
SSE	**Sheshan**	**39.92**	**40**	*e*P	**P**	**14 51 23.8**	**-0.5**
SSE				S	**S**	**14 57 26.8**	**-2.4**
SSE				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,76nm,3.1s						
SSE				LR	LR		
	comp=N,239nm,19.0s,MS4.1						
SSE				LR	LR		
	comp=E,93nm,19.0s,MS4.1						

SSE				LR	LR		
	comp=Z,140nm,17.7s,MS3.9						
SSE	Sheshan	39.92	40	eP	P	14 51 23.7	-0.6
	comp=Z,18nm,0.7s,mb4.9						
SSE				pP	pP	14 51 32.5	+5.8
SSE				S	S	14 57 26.8	-2.4
SSE				sS		14 57 43.9	
SSE				SS	SS	15 00 38.7	+20
SSE				LR	LR		
	comp=Z,140nm,17.7s,MS3.9						
WMQ	Urumqi	41.94	355	eP	P	14 51 41.5	+0.8
WMQ				XP	sP	14 51 55.0	+11
WMQ				PP	PP	14 53 23.0	+2.0
WMQ				S	S	14 58 00.0	+1.0
WMQ				SS	SS	15 01 02.0	+1.9
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.5						
WMQ				LR	LR		
	comp=N,175nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=E,132nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,176nm,20.0s,MS3.9						
HHC	Hu-ho-hao-te	42.55	22	⇓P	P	14 51 47.3	+1.6
HHC				AP	pP	14 51 56.4	+8.2
HHC				XP	sP	14 52 00.9	+12
HHC				PP	PP	14 53 25.8	-1.4
HHC				PCP	PcP	14 53 40.0	+1.1
HHC				SCP		14 57 26.9	
HHC				S	S	14 58 08.5	+0.5
HHC				SCS	ScS	15 01 41.3	-4.3
HHC				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.6						
HHC				AMB	AMB		
	comp=Z,118nm,5.9s						
HHC				LR	LR		
	comp=N,184nm,13.1s,MS4.6						
HHC				LR	LR		
	comp=E,514nm,14.3s,MS4.6						
HHC				LR	LR		
	comp=Z,269nm,17.8s,MS4.2						
BJT	Baijiatuau	43.74	27	P	P	14 51 57.8	+2.3
	comp=Z,19nm,1.0s,mb4.8						
BJT				e		14 52 04.9	
BJI	Beijing	43.77	27	eP	P	14 51 57.8	+2.2
BJI				S	S	14 58 34.4	+8.6
BJI				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.8						
BJI				LR	LR		
	comp=N,207nm,18.0s,MS4.3						
BJI				LR	LR		
	comp=E,195nm,15.4s,MS4.3						
BJI				LR	LR		
	comp=Z,111nm,24.1s						
BJI	Beijing	43.77	27	eP	P	14 51 57.8	+2.2
	comp=Z,15nm,0.8s,mb4.8						
BJI				S	S	14 58 34.4	+8.6
BJI				SS	SS	15 01 55.2	+21
BJI				LR	LR		
	comp=Z,110nm,24.1s,MS3.7						
WRA	Warramunga Arr	46.68	120	P	P	14 52 18.2	-0.9
	comp=Z,1.5nm,0.5s,mb4.2,baz=298,slow=8.6,SNR=39						
WRAB	Tennant Creek	46.68	120	i P	P	14 52 19.0	-0.2
WRAB	Tennant Creek	46.68	120	eP	P	14 52 18.5	-0.7
	comp=Z,9.0nm,0.8s,mb4.8						
SONM	Songino Array	47.38	13	P	P	14 52 25.1	+0.8
	comp=Z,2.9nm,0.5s,mb4.5,baz=195,slow=8.1,SNR=53						
ULN	Ulaanbaatar	47.56	14	eP	P	14 52 25.2	-0.6
ULN				e		14 52 33.9	
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ULN	Ulaanbaatar	47.56	14	eP	P	14 52 25.2	-0.5
	comp=Z,3.2nm,0.8s,mb4.4						
ULN				e		14 52 33.9	
ASAR	Alice Springs	47.85	125	P	P	14 52 27.6	-0.8
	comp=Z,1.8nm,1.2s,mb4.0,baz=297,slow=7.8,SNR=7.8						
ASAR				LR	LR	15 13 36.1	
	comp=Z,92nm,18.8s,MS3.8,baz=189,slow=37						
ZAK	Zakamensk	49.22	9	eP	P	14 52 38.0	-0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.6						
KURK	Kurchatov	49.98	349	eP	P	14 52 43.1	-1.4
KURK				e		14 52 52.1	
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
KURK	Kurchatov	49.98	349	eP	P	14 52 43.1	-1.4
	comp=Z,6.6nm,1.1s,mb4.6						
KURK				e		14 52 52.1	
TLY	Talaya	50.53	9	i P	P	14 52 48.8	+0.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CN2	Changchun	51.10	31	eP	P	14 52 54.3	+1.2
ZAL	Zalesovo	52.23	354	P	P	14 52 59.5	-1.9
	comp=Z,2.2nm,0.5s,mb4.3,baz=310,slow=4.9,SNR=12						
ZAL				LR	LR	15 17 40.7	
	comp=Z,268nm,20.3s,MS4.3,baz=281,slow=39						
HIA	Hailar	52.74	22	eP	P	14 53 06.3	+0.9
HIA				e		14 53 13.3	
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HIA	Hailar	52.74	22	eP	P	14 53 06.2	+0.9
	comp=Z,5.7nm,0.7s,mb4.6						
HIA				e		14 53 13.3	
NVS	Novosibirsk	53.28	354	eP	P	14 53 06.9	-2.4
NVS				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
NVS				pmax	pmax		
	comp=E,5.0nm,1.6s						
MDJ	Mudanjiang	53.83	32	P	P	14 53 14.3	+0.9
MDJ				PP	PP	14 55 13.6	-2.6
MDJ				S	S	15 00 48.3	+1.5
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,71nm,3.4s						
MDJ				LR	LR		
	comp=N,26nm,17.5s,MS4.1						
MDJ				LR	LR		
	comp=E,133nm,16.0s,MS4.1						
MDJ				LR	LR		
	comp=Z,112nm,19.0s,MS3.9						
CHKZ	Chkalovo	54.60	344	eP	P	14 53 17.1	-1.8
CHKZ				e		14 53 26.8	
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
CHKZ	Chkalovo	54.60	344	eP	P	14 53 17.1	-1.8
	comp=Z,3.8nm,0.7s,mb4.5						
CHKZ				e		14 53 26.8	
KMBO	Kilima Mbogo	55.02	267	LR	LR	15 14 05.2	
	comp=Z,239nm,19.4s,MS4.3,baz=91,slow=33						
GNI	Garni	57.38	318	i P	P	14 53 37.4	-1.8
GNI				pmax	pmax		
	comp=Z,13nm,1.5s						
GNI	Garni	57.38	318	P	P	14 53 37.1	-2.1
	comp=Z,20nm,1.3s,mb5.0						
STKA	Stephens Creek	57.58	130	P	P	14 53 40.8	+0.1
	comp=Z,1.4nm,0.4s,mb4.4,baz=284,slow=4.1,SNR=2.8						
STKA				LR	LR	15 17 55.2	
	comp=Z,113nm,18.3s,MS4.0,baz=248,slow=36						
KLR	Kul'dur	57.99	29	eP	P	14 53 41.4	-1.9
BOD	Bodaibo	58.37	13	eP	P	14 53 44.3	-1.6
KIV	Kislovodsk	60.57	321	eP	P	14 53 58.5	-2.7
KIV				e		14 54 42.7	
KIV				eS	S	15 02 13.6	-2.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
KIV				MLR	MLR		
	comp=N,63nm,22.0s,MS3.9						
KIV				MLR	MLR		
	comp=Z,51nm,22.0s,MS3.6						
KIV				MLR	MLR		
	comp=E,50nm,19.0s,MS3.9						
EIL	Elat	60.87	303	eP	P	14 54 02.4	-1.1
	comp=E,5.8nm,0.9s,mb4.7						
MALT	Malatya	60.99	313	eP	P	14 54 04.2	0.0
MALT				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.6						
MALT	Malatya	60.99	313	eP	P	14 54 04.2	0.0
	comp=Z,6.3nm,1.1s,mb4.7						
SOC	Sochi	62.30	319	eP	P	14 54 08.5	-4.4
SOC				e		14 54 47.3	
SOC				e		14 56 32.4	
SOC				eS	S	15 02 32.2	-5.4
SOC				e		15 03 53.7	
SOC				eSS	SS	15 06 35.2	-7.5
SOC				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.4						
SOC				pmax	pmax		
	comp=N,13nm,0.8s						
SOC				pmax	pmax		
	comp=E,32nm,1.1s						
BRTR	Keskin Array B	64.98	313	P	P	14 54 29.8	-0.8
	comp=E,3.0nm,1.1s,mb4.3,baz=143,slow=6.2,SNR=7.3						
LSZ	Lusaka	65.54	252	eP	P	14 54 33.3	-1.3
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
LSZ	Lusaka	65.54	252	eP	P	14 54 33.2	-1.4
	comp=Z,6.6nm,1.0s,mb4.6						
MATP	Matopo	66.18	247	P	P	14 54 37.8	-0.8
	comp=Z,9.8nm,1.0s,mb4.8,baz=73,slow=7.3,SNR=14						
MATP				LR	LR	15 22 09.5	
	comp=Z,90nm,18.2s,MS4.0,baz=85,slow=35						
YAK	Yakutsk	66.24	18	eP	P	14 54 36.8	-1.5
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
YAK	Yakutsk	66.24	18	eP	P	14 54 36.8	-1.5
	comp=Z,10nm,0.8s,mb4.9						
OBN	Obninsk	69.45	330	eP	P	14 54 57.7	-0.8
OBN				i		14 55 17.3	
OBN				eSS	SS	15 08 30.5	-3.0
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
MLR	Muntele Rosu	72.16	317	P	P	14 55 15.5	+0.4
	comp=Z,6.0nm,0.7s,mb4.6,baz=132,slow=3.9,SNR=10.0						
MLR				LR	LR	15 28 42.6	
	comp=Z,77nm,19.4s,MS4.0,baz=102,slow=37						
MLR	Muntele Rosu	72.16	317	P	P	14 55 15.5	+0.4
MLR				LR	LR	15 28 42.6	
TIXI	Tiksi	73.43	11	eP	P	14 55 20.7	-1.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
TSUM	Tsumeb	76.13	250	eP	P	14 55 37.8	-0.8
	comp=Z,4.6nm,1.0s,mb4.4						
FINES	FINESS Array B	77.10	333	P	P	14 55 42.2	-0.9
	comp=Z,1.8nm,0.6s,mb4.2,baz=104,slow=7.9,SNR=7.9						
FINES				LR	LR	15 32 37.4	
	comp=Z,97nm,18.2s,MS4.2,baz=289,slow=38						
SYO	Syowa Base	79.16	197	⇓P	P	14 55 55.8	+1.4
ARCES	ARCESS Array B	80.22	341	P	P	14 56 02.2	+2.2
	comp=Z,3.4nm,0.8s,mb4.3,baz=90,slow=8.5,SNR=4.1						
ARCES				LR	LR	15 33 11.2	
	comp=Z,140nm,18.7s,MS4.3,baz=189,slow=37						
GERES	GERESS Array B	81.01	319	P	P	14 56 05.0	+0.4
	comp=Z,2.9nm,0.8s,mb4.3,baz=108,slow=4.2,SNR=19						
BILL	Bilibino	82.32	21	eP	P	14 56 12.0	+0.9
BILL				eS	S	15 06 26.2	+0.5
BILL				eSS	SS	15 11 45.2	-4.2
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.3						
HFS	Hagfors	82.64	330	P	P	14 56 12.6	-0.3
HFS	Hagfors	82.64	330	P	P	14 56 12.5	-0.3
	comp=Z,1.8nm,0.8s,mb4.2,baz=97,slow=12,SNR=3.6						
DAVOX	Davos	83.36	317	P	P	14 56 17.7	+0.8
	comp=Z,3.6nm,0.6s,mb4.6,baz=130,slow=11,SNR=4.4						
NOA	NORSAR Array B	83.98	331	LR	LR	15 35 26.2	
	comp=Z,48nm,19.6s,MS3.9,baz=50,slow=37						
VNDA	Vanda	87.51	168	LR	LR	15 28 18.7	
	comp=Z,168nm,19.6s,MS4.5,baz=228,slow=30						
QSPA	South Pole Qui	91.84	180	eP	P	14 56 58.5	+1.4
	comp=Z,4.8nm,1.0s,mb4.8						
TXAR	Lajitas Array	145.43	25	PKPbc	PKPbc	15 03 28.6	+0.9
	comp=Z,2.3nm,0.7s,baz=294,slow=2.1,SNR=11						

IDC 24 14:51:10.8±1.9,6.27S×145.23E,mb3.4/2,mb1 3.8/3, mb1mx3.6/11,mbtmp3.5/3,ML2.9/2,Error ellipse: s-maj=43.0km s-min=30.0km az=95.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	149	Pn	Pn	14 52 08.1	-1.7
	0.4nm,0.3s,baz=328,slow=13,SNR=2.8						
PMG				Sn	Sn	14 52 55.6	+1.2
	2.1nm,0.3s,baz=181,slow=22,SNR=24						
WRA	Warramunga Arr	17.23	217	P	P	14 55 14.6	0.0
	0.3nm,0.3s,baz=37,slow=11,SNR=12						
ASAR	Alice Springs	20.44	211	P	P	14 55 48.9	-3.7
	0.7nm,0.4s,baz=45,slow=7.9,SNR=12						
ILAR	Eielson Array	86.42	23	P	P	15 03 55.1	-1.0
	0.7nm,1.1s,baz=270,slow=4.5,SNR=4.1						

IDC 24 14:53:26.5±2.0,10.43N×124.23E,mb4.1/3,mb1 4.3/3, mb1mx3.7/18,mbtmp4.1/3,MS3.6/1,Ms1 3.6/1, ms1mx2.7/24,Error ellipse: s-maj=219.9km s-min=32.4km az=69.0,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.78	162	P	P	14 59 52.6	-2.4
	1.4nm,0.2s,baz=342,slow=9.0,SNR=93						
ASAR	Alice Springs	35.18	164	P	P	15 00 22.5	-1.9
	1.0nm,0.4s,baz=343,slow=7.4,SNR=30						
CTA	Charters Tower	37.28	144	LR	LR	15 16 09.1	
	comp=Z,88nm,19.1s,baz=59,slow=37						
FINES	FINESS Array B	84.80	331	P	P	15 06 02.6	-1.1
	0.8nm,0.8s,baz=80,slow=8.5,SNR=3.4						

KRSC 24 14:55:41.0±0.3,51.16N×161.46E,h40^{km}±14^{km},ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	2.13	336	eP	P	14 56 14.2	-0.7
SPN				eS	S	14 56 38.7	-1.7
RUS	Russkaya	2.23	306	eP	P	14 56 15.9	-0.4
RUS				eS	S	14 56 41.2	-1.6
NLC	Nalytchevo	2.40	328	eP	P	14 56 18.5	-0.2
NLC				eS	S	14 56 45.9	-1.2
GRL	Gorelyy	2.52	305	eP	P	14 56 20.7	+0.3
GRL				eS	S	14 56 49.7	-0.5
PET	Petropavlovsk	2.55	318	eP	P	14 56 20.7	-0.1
PET				eS	S	14 56 49.6	-1.2
UGLR	Uglovaya	2.62	323	eP	P	14 56 22.3	+0.5
SDLR	Sedlovina	2.65	324	eP	P	14 56 22.6	+0.3
SMAR	Somma	2.67	323	eP	P	14 56 23.4	+0.9
AVH	Avacha	2.69	323	eP	P	14 56 23.1	+0.2
AVH				eS	S	14 56 53.9	-0.7
KOK	Koryaka	2.75	322	eP	P	14 56 24.4	+0.6
PAU	Pauzhetka	2.93	278	P	P	14 56 26.1	-0.2
PAU				eS	S	14 56 58.1	-2.6
KII	Karymskiy	3.13	338	eP	P	14 56 29.5	+0.4
KII				eS	S	14 57 05.0	-0.7
APC	Apacha	3.19	305	eP	P	14 56 31.4	+1.4
APC				eS	S	14 57 07.7	+0.5
GNL	Ganaly	3.33	321	i P	P	14 56 32.8	+0.9
GNL				eS	S	14 57 10.8	+0.1
SKR	Severo-Kuril's	3.42	264	eP	P	14 56 31.7	-1.5
TUMR	Tumrok	4.21	350	eP	P	14 56 44.9	+0.5
TUMR				eS	S	14 57 31.6	-1.3
KMNR	Kamenistaya	4.66	351	eP	P	14 56 51.8	+1.0
KPT	Kopyto	4.87	352	eP	P	14 56 54.2	+0.4
KOZ	Kozyrevsk	5.00	350	eP	P	14 56 56.5	+0.9
KBTR	Krutoberegovo	5.12	9	eP	P	14 56 56.4	-0.9
KBTR				eS	S	14 57 51.7	-4.3
KBG	Krutoberegovo	5.16	8	eP	P	14 56 57.2	-0.6
KBG				eS	S	14 57 52.9	-4.0
KLY	Klyuchi	5.18	355	eP	P	14 56 58.3	+0.1
SRDR	Sredinnyy	5.27	349	eP	P	14 56 59.5	+0.2
SVLR	Shiveluch	5.43	359	eP	P	14 57 02.0	+0.4

BJI **24** *14:59:15.1,7.10N×92.10E,h21^{km},mB5.3,mb4.3,Ms4.6, Msz4.2*

MOS **24** *14:59:16.5±1.0,7.20N×92.35E,h33^{km},mb4.7/13,Error ellipse: s-maj=19.4km s-min=8.6km az=95.9*

NEIC **24** *14:59:17.1±0.4,7.15N×92.10E,mb4.7/7,Error ellipse: s-maj=11.5km s-min=6.8km az=62.0*

IDC **24** *14:59:17.4±0.7,7.29N×92.23E,h20^{km}±3^{km},mb4.1/11, mb1 4.3/12,mb1mx4.1/21,mbtmp4.2/12,ML4.3/1,Error ellipse: s-maj=28.9km s-min=11.8km az=55.0*

ISC 24 14:59:15.3±0.5,7.23N±0.06×92.29E±0.07,h22^{km}, h22^{km}±1.0^{km}:pP-P,n59,σ1^{s}00/61,mb4.5/32,MS4.3/2,1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	12.90	30	eP	P	15 02 21.9	+1.6
	19nm,0.8s						
CM31				epP		15 02 28.8	
CMAR	Chiang Mai Arr	12.90	30	Pn	P	15 02 21.2	+0.8
	0.6nm,0.3s,baz=231,slow=14,SNR=44						
CMAR				Sn	S	15 04 43.2	-1.1
	0.3nm,0.3s,baz=336,slow=28,SNR=5.1						
CMAR	Chiang Mai Arr	12.90	30	Pn	P	15 02 21.2	+0.8
CMAR				Sn	S	15 04 43.2	-1.1
CHG	Chiang Mai	13.21	29	P	P	15 02 25.3	+0.9
VIS	Vishakhapatnam	13.60	321	eP	P	15 02 25.5	-4.1
NANT	Nan	14.12	35	P	P	15 02 37.0	+0.6
KMI	Kunming	20.41	28	P	P	15 03 56.3	+2.5
KMI				AP		15 04 00.4	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s						
KMI	Kunming	20.41	28	P	P	15 03 56.3	+2.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI	Kunming	20.41	28	P	P	15 03 56.3	+2.5
	comp=Z,10.0nm,0.7s						
KMI				pP		15 04 00.4	
JIRN	Jiri	21.12	345	eP	P	15 04 01.2	+0.1
	comp=Z,24nm,0.7s,mb4.7						
PKI	Pulchoki	21.25	343	eP	P	15 04 03.2	+0.8
DMN	Daman	21.38	342	eP	P	15 04 04.0	+0.3
	comp=Z,53nm,0.7s,mb5.0						
GUN	Gumba	21.44	344	eP	P	15 04 04.6	+0.3
	comp=Z,26nm,0.6s,mb4.8						
KKN	Kakani	21.50	343	eP	P	15 04 05.5	+0.6
GKN	Gorkha	21.89	342	eP	P	15 04 09.3	+0.5
KOLN	Koldanda	22.02	339	eP	P	15 04 10.8	+0.6
	comp=Z,13nm,0.6s,mb4.5						
LSA	Lhasa	22.38	357	P	P	15 04 16.0	+2.3
LSA	Lhasa	22.38	357	eP	P	15 04 15.9	+2.2
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.3						
LSA	Lhasa	22.38	357	eP	P	15 04 15.8	+2.2
	comp=Z,9.6nm,0.7s,mb4.3						
GYA	Guiyang	23.51	34	⇓iP	P	15 04 25.1	+0.2
GYA				AP		15 04 32.1	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
CD2	Chengdu	25.89	23	eP	P	15 04 53.4	+5.8
WHN	Wuhan	31.07	39	eP	P	15 05 34.8	+0.5
GTA	Gaotai	32.75	11	eP	P	15 05 48.8	0.0
GTA				AP	pP	15 05 54.0	-1.4
GTA				XP	sP	15 05 57.0	-1.2
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,86nm,4.7s						
GTA				LR	LR		
	comp=N,201nm,15.6s,MS4.0						
GTA				LR	LR		
	comp=E,140nm,14.1s,MS4.0						
GTA				LR	LR		
	comp=Z,145nm,12.5s,MS3.9						
NJ2	Nanjing	34.96	42	eP	P	15 06 06.4	-1.6
NJ2				AP	pP	15 06 16.1	+1.5
NJ2				XP	sP	15 06 20.0	+2.6
NJ2				PP	PP	15 07 23.3	-3.0
NJ2				S	S	15 11 31.0	-6.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,1μm,5.6s						
NJ2				LR	LR		
	comp=N,630nm,12.2s,MS4.8						
NJ2				LR	LR		
	comp=E,1μm,17.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,700nm,16.0s,MS4.5						
SSE	Sheshan	35.97	45	eP	P	15 06 12.6	-4.0
	comp=Z,23nm,0.7s,mb5.2						
AAK	Ala-Archa	38.60	339	i P	P	15 06 39.1	+0.5
AAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.3						
MKAR	Makanchi Array	40.34	349	i P	P	15 06 52.8	-0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	Songino Array	42.21	14	P	P	15 07 08.4	0.0
	comp=Z,1.3nm,0.7s,mb3.7,baz=196,slow=8.6,SNR=14						
SONM				pP	pP	15 07 15.0	0.0
	comp=Z,1.7nm,0.6s,baz=193,slow=8.4,SNR=11						
ULN	Ulaanbaatar	42.40	15	i P	P	15 07 08.0	-1.9
ZAK	Zakamensk	43.98	10	eP	P	15 07 22.4	-0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
KURK	Kurchatov	44.81	348	i P	P	15 07 29.1	-0.4
KURK				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.2						
KURK	Kurchatov	44.81	348	eP	P	15 07 29.2	-0.3
	comp=Z,16nm,1.3s,mb4.7						
TLY	Talaya	45.29	10	i P	P	15 07 31.6	-1.7
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
ZAL	Zalesovo	46.96	354	P	P	15 07 46.3	-0.1
	comp=Z,1.0nm,0.3s,mb4.2,baz=295,slow=6.9,SNR=5.9						
ZAL				pP	pP	15 07 52.3	-0.7
	comp=Z,1.2nm,0.4s,baz=237,slow=9.6,SNR=2.6						
BVAR	Borovoye Array	49.02	343	P	P	15 08 01.4	-1.1
	comp=Z,4.8nm,1.1s,mb4.5,baz=143,slow=7.4,SNR=14						
BVAR				pP	pP	15 08 08.3	-0.9
	comp=Z,1.8nm,0.6s,baz=141,slow=9.2,SNR=9.9						
WRA	Warramunga Arr	49.41	124	P	P	15 08 06.1	+0.2
	comp=Z,4.9nm,0.8s,mb4.6,baz=306,slow=8.6,SNR=43						
WRA				pP	pP	15 08 12.8	+0.2
	comp=Z,5.0nm,0.8s,baz=302,slow=8.8,SNR=17						
WRAB	Tennant Creek	49.41	124	eP	P	15 08 05.8	-0.1
WRAB				e*PP	pP	15 08 12.9	+0.2
WRAB				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
WRAB	Tennant Creek	49.41	124	eP	P	15 08 05.8	-0.2
	comp=Z,12nm,0.8s,mb5.0						
WRAB				epP	pP	15 08 12.9	+0.2
CHKZ	Chkalovo	49.53	343	eP	P	15 08 05.8	-0.6
CHKZ				e*PP	pP	15 08 12.5	-0.6
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.0						
CHKZ	Chkalovo	49.53	343	eP	P	15 08 05.8	-0.6
	comp=Z,6.3nm,0.4s,mb5.0						
CHKZ				epP	pP	15 08 12.5	-0.6
ASAR	Alice Springs	50.94	128	P	P	15 08 17.9	+0.4
	comp=Z,2.3nm,0.8s,mb4.2,baz=300,slow=7.4,SNR=35						
ASAR				pP	pP	15 08 24.4	+0.2
	comp=Z,3.2nm,0.7s,baz=300,slow=7.9,SNR=18						
ASAR				PcP	PcP	15 09 35.0	+1.1
	comp=Z,0.7nm,0.7s,baz=305,slow=3.5,SNR=4.0						
ASAR				pPcP		15 09 41.5	
	comp=Z,1.1nm,0.6s,baz=313,slow=3.4,SNR=6.4						
BOD	Bodaibo	53.21	14	eP	P	15 08 31.9	-2.2
BOD				e	pP	15 08 38.9	-2.0
GNI	Garni	53.58	315	i P	P	15 08 38.9	+1.8
GNI				pmax	pmax		
	comp=Z,13nm,2.1s						
SOC	Sochi	58.39	317	eP	P	15 09 10.4	-1.2
SOC				e		15 10 00.3	
SOC				e		15 11 16.4	
SOC				eS	S	15 17 11.6	+0.2
SOC				eSS	SS	15 20 59.9	-5.5
SOC				eSSS	SSS	15 23 34.0	+7.1
SOC				pmax	pmax		
	comp=N,10.0nm,1.0s						
SOC				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
SOC				pmax	pmax		
	comp=E,18nm,1.1s						
STKA	Stephens Creek	61.01	132	P	P	15 09 30.9	+1.1
	comp=E,1.7nm,0.6s,mb4.4,baz=296,slow=9.8,SNR=4.9						
STKA				pP	pP	15 09 37.0	+0.3
	comp=E,2.5nm,0.5s,baz=291,slow=5.8,SNR=4.3						
YAK	Yakutsk	61.19	19	i P	P	15 09 29.2	-1.4
YAK				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.9						
BRTR	Keskin Array B	61.46	311	P	P	15 09 32.5	-0.3
	comp=Z,0.4nm,0.4s,mb3.9,baz=90,slow=5.8,SNR=3.5						
OBN	Obninsk	64.95	328	eP	P	15 09 59.6	+4.1
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						

MA2	Magadan	68.19	28	*i* P	P	15 10 15.4	-0.6
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TIXI	Tiksi	68.22	12	*e*P	P	15 10 15.0	-1.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MLR	Muntele Rosu	68.35	316	P	P	15 10 16.7	-0.6
	comp=Z,3.4nm,0.8s,mb4.4,baz=51,slow=4.5,SNR=5.2						
ARCES	ARCESS Array B	75.25	340	P	P	15 10 58.2	+0.3
	comp=Z,4.1nm,1.0s,mb4.3,baz=121,slow=10,SNR=3.5						
GERES	GERESS Array B	77.08	318	P	P	15 11 09.3	+0.6
	comp=Z,1.1nm,0.7s,mb3.9,baz=90,slow=5.3,SNR=9.3						
GERES				pP	pP	15 11 16.0	+0.3
	comp=Z,1.9nm,0.9s,baz=90,slow=5.3,SNR=5.5						
BILL	Bilibino	77.36	22	*e*P	P	15 11 08.8	-1.0
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
HFS	Hagfors	78.08	330	P	P	15 11 13.6	-0.3
HFS	Hagfors	78.08	330	P	P	15 11 13.5	-0.4
	comp=Z,1.8nm,0.8s,mb4.1,baz=90,slow=13,SNR=4.2						
SML	Sawmill	96.96	25	*e*P	P	15 12 47.3	+1.1
NVAR	Mina Array Bea	126.40	30	PKP	PKPdf	15 18 21.2	-0.2
	comp=Z,0.9nm,0.6s,baz=312,slow=1.2,SNR=3.6						
NVAR				pPKP		15 18 27.2	
	comp=Z,0.6nm,0.5s,baz=297,slow=2.0,SNR=2.2						
PDAR	Pinedale Array	126.41	20	PKP	PKPdf	15 18 19.8	-1.5
	comp=Z,0.6nm,0.7s,baz=45,slow=2.1,SNR=6.0						
PDAR				pPKP		15 18 26.2	
	comp=Z,1.5nm,1.1s,SNR=5.0						

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*BJI **24** 15:06:43.9, 8.13N×93.60E, h45^{km}, mB5.0, mb4.6, Ms4.5, Msz4.2*

*MOS **24** 15:06:46.1±1.0, 8.62N×93.70E, h33^{km}, mb5.1/29, Error ellipse: s-maj=10.7km s-min=5.9km az=106.0*

*NEIC **24** 15:06:47.5±0.2, 8.63N×93.77E, h30^{km}, mb4.9/29, Error ellipse: s-maj=6.8km s-min=5.0km az=61.0*

*HRVD **24** 15:06:47.5±0.7, 8.68N×93.76E, h28^{km}±1^{km}, MW4.8/34, Centroid moment Tensor Solution. LP body waves: s13,c21;Mantle waves: s34,c52; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.62±.14; M$_{\theta\theta}$-0.27±.08; M$_{\phi\phi}$1.89±.09; M$_{r\theta}$-0.47±.18; M$_{\theta\phi}$-0.28±.07; M$_{\phi r}$0.13±.15; Best double couple: M$_0$1.851×10^{16} NP1:φ$_s$9°,δ45°,λ-65°. NP2:φ$_s$157°,δ50°,λ-112°. Principal axes: T 1.935, Plg3°, Azm262°; N -.167, Plg17°, Azm171°; P -1.767, Plg73°, Azm2°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **24** 15:06:48.8±2.5, 8.73N×93.82E, h37^{km}±19^{km}, mb4.3/22, mb1 4.4/23, mb1mx4.4/27, mbtmp4.5/23, ML4.9/1, MS3.9/5, Ms1 3.9/5, ms1mx3.5/22 Error ellipse: s-maj=21.1km s-min=11.5km az=54.0*

ISC 24 15:06:46.1±0.3, **8.58N**±0.04×**93.68E**±0.03, **h33**^{km}, **(h33**^{km}±1.8^{km}**:pP-P), n160,** σ1^{s}**08**/164, **mb4.7**/68, **MS4.1**/18, **3C-4D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	7.01	101	P	P	15 08 35.5	+6.4
NNT	Nongplab	7.16	56	P	P	15 08 31.5	+0.3
NST	Nakhon Sawan	9.46	41	P	P	15 09 03.0	-0.1
BDT	Bhumibol Dam	10.05	31	P	P	15 09 13.0	+1.6
	13nm,0.8s						
CM31	Chiang Mai Arr	11.07	27	P	P	15 09 24.0	-1.3
	7.0nm,0.3s						
CMAR	Chiang Mai Arr	11.07	27	Pn	P	15 09 26.9	+1.6
	2.4nm,0.3s,baz=219,slow=14,SNR=34						
CMAR				LR	LR	15 13 33.0	
	comp=Z,598nm,20.2s,baz=210,slow=37						
NANT	Nan	12.23	33	P	P	15 09 45.0	+4.0
VIS	Vishakhapatnam	13.56	313	*e*P	P	15 09 56.9	-1.8
VIS				AMb	AMB	15 09 59.8	
	comp=Z,32nm,1.0s						
VIS				*e*		15 12 13.9	
VIS				*e*		15 12 23.7	
	comp=E,140nm,0.4s						
VIS				*e*		15 12 25.0	
	comp=N,141nm,0.8s						
BWNR	Bhubaneshwar	13.91	328	*e*P	P	15 10 01.6	-1.8
BWNR				AMb	AMB	15 10 03.3	
	comp=Z,27nm,0.7s						
BWNR				*e*		15 12 24.4	
SHL	Shillong	16.98	354	*e*P	P	15 10 44.0	+1.2
HYB	Hyderabad	17.14	302	*e*P	P	15 10 45.0	+0.1
HYB				*e*S	S	15 13 52.0	-1.0
HYB	Hyderabad	17.14	302	*i* P	P	15 10 45.0	+0.1
HYB				*e*S	S	15 13 52.0	-1.0
BLSP	Bilaspur	17.46	322	*e*P	P	15 10 48.8	0.0
BLSP				AMb	AMB	15 10 53.9	
	comp=Z,48nm,0.7s						
BLSP				*e*		15 13 52.0	
KMI	Kunming	18.58	27	P	P	15 11 05.3	+2.5
KMI				AP		15 11 11.5	
KMI				XP		15 11 15.8	
KMI				S	S	15 14 32.3	+6.8
KMI				XS		15 14 48.0	
KMI				PS		15 14 57.4	
KMI				AMB	AMB		
	comp=Z,19nm,0.9s						
KMI				AMB	AMB		
	comp=Z,61nm,3.9s						
KMI				LR	LR		
	comp=N,396nm,17.0s						
KMI				LR	LR		
	comp=E,377nm,13.4s						
KMI				LR	LR		
	comp=Z,453nm,21.9s						
KMI	Kunming	18.58	27	P	P	15 11 05.3	+2.5
KMI				S	S	15 14 32.2	+6.7
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
KMI	Kunming	18.58	27	P	P	15 11 05.3	+2.5
	comp=Z,19nm,0.9s						
KMI				pP		15 11 11.5	
KMI				sP		15 11 15.7	
KMI				S	S	15 14 32.2	+6.7
KMI				sS		15 14 48.0	
KMI				PS		15 14 57.4	
QIZ	Qiongzhong	18.80	55	P	P	15 11 07.8	+2.2
QIZ				S	S	15 14 31.9	+1.4
QIZ				XS		15 14 46.3	
QIZ				AMB	AMB		
	comp=Z,53nm,1.3s						
QIZ				AMB	AMB		
	comp=Z,269nm,10.4s						
QIZ				LR	LR		
	comp=N,1µm,13.6s						
QIZ				LR	LR		
	comp=E,619nm,14.1s						
QIZ				LR	LR		
	comp=Z,1µm,14.0s						
QIZ	Qiongzhong	18.80	55	*e*P	P	15 11 07.7	+2.1
	comp=Z,209nm,1.7s						
JIRN	Jiri	20.25	340	*e*P	P	15 11 21.8	+0.3
	comp=Z,166nm,1.0s						
PKI	Pulchoki	20.44	339	*e*P	P	15 11 23.5	0.0
	comp=Z,137nm,1.1s						
DMN	Daman	20.59	338	*e*P	P	15 11 24.9	-0.1
	comp=Z,88nm,0.9s						
GUN	Gumba	20.59	340	*e*P	P	15 11 25.2	+0.2
	comp=Z,93nm,0.6s						
KKN	Kakani	20.69	339	*e*P	P	15 11 25.9	-0.1
	comp=Z,64nm,0.9s						
KAD	Karad	20.87	296	*e*P	P	15 11 29.3	+1.4
KAD				*i* S	S	15 15 15.3	+1.4
GKN	Gorkha	21.12	337	*e*P	P	15 11 30.7	+0.3
	comp=Z,114nm,0.9s,mb5.2						
LSA	Lhasa	21.14	354	P	P	15 11 30.3	-0.4
LSA				S	S	15 15 13.8	-5.2
LSA				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.8						
LSA	Lhasa	21.14	354	*e*P	P	15 11 29.9	-0.8
LSA				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.8						
LSA	Lhasa	21.14	354	*e*P	P	15 11 29.9	-0.7
	comp=Z,40nm,0.8s,mb4.8						
KOLN	Koldanda	21.33	335	*e*P	P	15 11 33.1	+0.6
	comp=Z,139nm,1.2s,mb5.2						
BHPL	Bhopal	21.34	315	*e*P	P	15 11 33.9	+1.3
BHPL				AMb	AMB	15 11 39.6	
	comp=Z,43nm,1.2s,mb4.7						
GYA	Guiyang	21.63	33	⇑*i*P	P	15 11 37.3	+1.7
GYA				AP		15 11 48.0	
GYA				XP		15 11 52.4	
GYA				PP	PP	15 12 02.3	+1.7
GYA				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.6						
GYA				AMB	AMB		
	comp=Z,140nm,3.3s						
GYA				LR	LR		
	comp=N,930nm,15.8s,MS4.5						
GYA				LR	LR		
	comp=E,850nm,12.9s,MS4.5						
GYA				LR	LR		
	comp=Z,610nm,15.9s,MS4.1						
POO	Poona	21.64	299	*e*P	P	15 11 37.0	+1.3
	comp=Z,20nm,1.0s,mb4.5						
POO				*i*		15 15 38.0	
CD2	Chengdu	24.13	22	P	P	15 12 00.0	-0.1
CD2				LR	LR		
	comp=Z,620nm,13.7s,MS4.2						
NDI	New Delhi	25.30	324	*e*P	P	15 12 11.5	+0.1
ENH	Enshi	26.16	32	*e*P	P	15 12 19.0	-0.5
	comp=Z,13nm,0.9s,mb4.5						
LZH	Lanzhou	28.91	17	P	P	15 12 44.6	+0.3
LZH				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
LZH				LR	LR		
	comp=E,740nm,14.8s						
LZH				LR	LR		
	comp=Z,720nm,15.8s,MS4.4						
LZH	Lanzhou	28.91	17	P	P	15 12 44.6	+0.3
	comp=Z,40nm,1.3s,mb5.0						
LZH				pP	pP	15 12 50.6	-3.3
LZH				sP	sP	15 12 54.0	-4.2
LZH				LR	LR		
	comp=Z,720nm,15.8s,MS4.4						
XAN	Xi'an	28.96	27	P	P	15 12 43.9	-0.9
XAN				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
WHN	Wuhan	29.16	39	*e*P	P	15 12 44.6	-2.0
GTA	Gaotai	31.19	9	⇓*e*P	P	15 13 04.8	+0.3
GTA				AP	pP	15 13 14.5	+0.3
GTA				XP	sP	15 13 17.4	-1.1
GTA				PP	PP	15 14 09.8	+2.1
GTA				PPP	PPP	15 14 23.5	+0.8
GTA				S	S	15 18 09.3	+2.2
GTA				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,142nm,5.3s						
GTA				LR	LR		
	comp=N,201nm,16.0s,MS4.0						
GTA				LR	LR		
	comp=E,140nm,14.1s,MS4.0						
GTA				LR	LR		
	comp=Z,146nm,13.3s,MS3.8						
NJ2	Nanjing	33.04	41	*e*P	P	15 13 20.6	-0.2
NJ2				AP	pP	15 13 30.3	-0.2
NJ2				XP	sP	15 13 34.1	-0.7
NJ2				PP	PP	15 14 31.5	-0.3
NJ2				S	S	15 18 35.0	-1.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,340nm,3.9s						
NJ2				LR	LR		
	comp=N,370nm,15.2s,MS4.5						
NJ2				LR	LR		
	comp=E,580nm,11.6s,MS4.5						
NJ2				LR	LR		
	comp=Z,700nm,16.0s,MS4.5						
SSE	Sheshan	34.04	45	*e*P	P	15 13 28.3	-1.1
SSE				AP	pP	15 13 37.1	-2.0
SSE				S	S	15 18 52.8	+1.1
SSE				XS		15 19 09.4	
SSE				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,108nm,3.7s						
SSE				LR	LR		
	comp=N,46nm,28.8s,MS3.4						
SSE				LR	LR		
	comp=E,99nm,28.8s,MS3.4						
SSE				LR	LR		
	comp=Z,123nm,17.5s						
SSE	Sheshan	34.04	45	*e*P	P	15 13 28.2	-1.2
	comp=Z,26nm,0.7s,mb5.3						
SSE				pP	pP	15 13 37.1	-2.0
SSE				S	S	15 18 52.7	+1.0
SSE				sS		15 19 09.4	
SSE				SS	SS	15 21 18.1	+18
SSE				LR	LR		
	comp=Z,120nm,17.5s,MS3.7						
KSH	Kashi	34.65	336	*e*P	P	15 13 36.0	+1.5
KSH				*e*AP	pP	15 13 46.3	+2.1
KSH				*e*XP	sP	15 13 50.8	+2.3
KSH				*e*PP	PP	15 14 54.3	+2.6
KSH				*e*PCP	PcP	15 16 09.0	+0.4
KSH				*e*S	S	15 19 03.0	+2.0
KSH				*e*PS		15 19 09.6	
KSH				*e*XS		15 19 19.0	
KSH				*e*SS	SS	15 21 18.1	+4.0
KSH				*e*SCS	ScS	15 23 53.0	+1.3
KSH				AMB	AMB		
	comp=Z,70nm,4.4s						
KSH				LR	LR		
	comp=N,180nm,5.0s						
KSH				LR	LR		
	comp=E,200nm,5.0s						
WMQ	Urumqi	35.49	353	*e*P	P	15 13 42.0	+0.3
WMQ				XP	sP	15 13 56.0	+0.3
WMQ				PP	PP	15 15 03.0	+0.9
WMQ				S	S	15 19 14.0	0.0
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,108nm,16.0s,MS3.9						
WMQ				LR	LR		
	comp=E,125nm,17.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,98nm,18.0s,MS3.6						
HHC	Hu-ho-hao-te	35.85	23	*e*P	P	15 13 46.8	+2.0
HHC				AP	pP	15 13 55.0	+0.5
HHC				XP	sP	15 13 59.8	+1.0
HHC				S	S	15 19 27.8	+8.2
HHC				XS		15 19 39.6	
HHC				SCS	ScS	15 23 59.8	+1.6
HHC				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.7						
HHC				LR	LR		
	comp=N,208nm,16.6s,MS4.2						
HHC				LR	LR		
	comp=E,310nm,16.6s,MS4.2						
HHC				LR	LR		
	comp=Z,250nm,20.2s,MS4.0						
BJT	Baijiatuau	37.19	29	P	P	15 13 56.6	+0.5
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BJT	Baijiatuau	37.19	29	P	P	15 13 56.6	+0.5
	comp=Z,10.0nm,0.8s,mb4.7						
BJI	Beijing	37.21	29	*e*P	P	15 13 57.1	+0.9
BJI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.5						
BJI				LR	LR		
	comp=N,342nm,15.8s,MS4.3						
BJI				LR	LR		
	comp=E,162nm,16.6s,MS4.3						
BJI				LR	LR		
	comp=Z,182nm,23.9s						
BJI	Beijing	37.21	29	*e*P	P	15 13 57.1	+0.9
	comp=Z,6.0nm,0.7s,mb4.5						
BJI				LR	LR		
	comp=Z,180nm,23.9s,MS3.8						
JOW	Kunigami	37.44	57	LR	LR	15 31 00.7	
	comp=Z,379nm,20.0s,MS4.2,baz=258,slow=39						
AAK	Ala-Archa	37.88	337	*i* P	P	15 14 01.5	-0.3
AAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
AAK	Ala-Archa	37.88	337	*e*P	P	15 14 01.0	-0.9
	comp=Z,30nm,1.2s,mb4.9						
MKAR	Makanchi Array	39.30	348	*i* P	P	15 14 13.0	-0.6
MKAR				pmax	pmax		
	comp=Z,11nm,1.0s						
SONM	Songino Array	40.58	13	P	P	15 14 24.3	0.0
	comp=Z,5.2nm,0.9s,mb4.2,baz=195,slow=6.8,SNR=37						
SONM				PcP	PcP	15 16 26.5	-0.1
	comp=Z,2.9nm,0.8s,baz=195,slow=3.0,SNR=9.1						
SONM				ScP		15 20 13.4	
	comp=Z,0.5nm,0.8s,baz=180,slow=4.9,SNR=4.1						
ULN	Ulaanbaatar	40.76	14	*e*P	P	15 14 24.1	-1.6
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ULN	Ulaanbaatar	40.76	14	*e*P	P	15 14 24.1	-1.6
	comp=Z,5.9nm,0.9s,mb4.2						
ZAK	Zakamensk	42.43	9	*e*P	P	15 14 39.7	+0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.9						
TLY	Talaya	43.74	9	*e*P	P	15 14 50.5	+0.4
TLY				*e*		15 24 44.8	
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
TLY				MLR	MLR		
	comp=Z,89nm,16.0s,MS3.8						
KURK	Kurchatov	43.82	346	*d i*P	P	15 14 50.2	-0.5
KURK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.3						
KURK	Kurchatov	43.82	346	*e*P	P	15 14 49.9	-0.8
	comp=Z,8.1nm,0.8s,mb4.5						
CN2	Changchun	44.68	33	⇑P	P	15 14 58.6	+0.9
CN2				*e*AP	pP	15 15 08.0	+0.4
CN2				*e*S	S	15 21 32.3	+0.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,12.0s,MS4.5						
CN2				LR	LR		
	comp=Z,500nm,13.0s,MS4.6						
MUN	Mundaring	45.72	153	*e*P	P	15 15 07.5	+1.3
	comp=Z,25nm,0.9s,mb5.1						
MUN	Mundaring	45.72	153	*e*P	P	15 15 07.5	+1.3
MUN				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
ZAL	Zalesovo	45.79	353	P	P	15 15 06.5	0.0
	comp=Z,12nm,0.8s,mb4.8,baz=296,slow=6.9,SNR=70						
ZAL				LR	LR	15 35 06.8	
	comp=Z,68nm,18.9s,MS3.6,baz=104,slow=37						
HIA	Hailar	46.06	24	*e*P	P	15 15 06.7	-1.9
HIA				pmax	pmax		
	comp=Z,24nm,0.9s						
HIA	Hailar	46.06	24	*e*P	P	15 15 06.7	-2.0
	comp=Z,24nm,0.9s,mb5.1						
KLBR	Kellerberrin	46.11	151	*e*P	P	15 15 10.0	+0.7
	comp=Z,329nm,0.9s						
NVS	Novosibirsk	46.88	352	*e*P	P	15 15 13.7	-1.3
NVS				*e*		15 17 02.5	
NVS				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
NVS				pmax	pmax		
	comp=N,13nm,0.8s						
NWAO	Narrogin (SRO)	46.98	153	*e*P	P	15 15 15.5	-0.6
NWAO				pmax	pmax		
	comp=Z,29nm,1.0s						
NWAO	Narrogin (SRO)	46.98	153	P	P	15 15 16.6	+0.6
	comp=Z,24nm,0.8s,mb5.2,baz=315,slow=9.1,SNR=14						
NWAO	Narrogin (SRO)	46.98	153	*e*P	P	15 15 15.5	-0.6
	comp=Z,29nm,1.0s,mb5.2						
MDJ	Mudanjiang	47.48	35	P	P	15 15 17.8	-2.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,76nm,4.0s						
BVAR	Borovoye Array	48.18	341	P	P	15 15 24.1	-1.1
	comp=Z,12nm,1.2s,mb4.8,baz=141,slow=9.5,SNR=21						
BVAR				PcP	PcP	15 16 53.2	+0.6
	comp=Z,1.2nm,0.7s,baz=104,slow=5.9,SNR=3.0						
RAYN	Ar Rayn	48.38	294	P	P	15 15 29.6	+2.4
	comp=Z,131nm,0.7s,SNR=13						
CHKZ	Chkalovo	48.66	342	*e*P	P	15 15 28.1	-0.8
CHKZ				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
CHKZ	Chkalovo	48.66	342	*e*P	P	15 15 28.1	-0.9
	comp=Z,12nm,0.8s,mb5.0						
MAT	Matsushiro	49.03	48	PCP	PcP	15 16 55.7	-0.2
WRA	Warramunga Arr	49.04	126	P	P	15 15 31.6	-0.7
	comp=Z,6.0nm,0.9s,mb4.6,baz=304,slow=8.6,SNR=11						
WRA				ScP		15 20 46.1	
	comp=Z,1.0nm,1.0s,baz=307,slow=3.9,SNR=4.7						
WRAB	Tennant Creek	49.05	126	P	P	15 15 30.8	-1.5
ASAR	Alice Springs	50.72	130	P	P	15 15 44.1	-1.0
	comp=Z,3.4nm,0.6s,mb4.5,baz=309,slow=7.2,SNR=26						
ASAR				PcP	PcP	15 17 02.6	+0.4
	comp=Z,4.3nm,1.0s,baz=305,slow=3.5,SNR=8.2						
ASAR				ScP		15 20 54.1	
	comp=Z,0.8nm,1.0s,baz=307,slow=3.0,SNR=3.9						
ASAR				LR	LR	15 39 21.6	
	comp=Z,75nm,18.4s,MS3.7,baz=38,slow=38						
BOD	Bodaibo	51.57	14	*e*P	P	15 15 49.9	-1.2
BOD				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
GNI	Garni	53.62	314	*i* P	P	15 16 07.4	+0.8
GNI				pmax	pmax		
	comp=Z,16nm,1.3s						
GNI	Garni	53.62	314	P	P	15 16 07.6	+1.0
	comp=Z,3.1nm,0.5s,mb4.5,baz=303,slow=18,SNR=3.0						
CLNS	Chul'man	53.94	21	*e*P	P	15 16 08.3	-0.4
CLNS				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
SVE	Sverdlovsk	54.58	338	*e*P	P	15 16 11.0	-2.4
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.2						
PMG	Port Moresby	56.18	107	*d i*P	P	15 16 26.4	+0.9
KIV	Kislovodsk	56.49	318	*e*P	P	15 16 27.4	0.0
KIV				pmax	pmax		
	comp=N,10.0nm,1.1s						
KIV				pmax	pmax		
	comp=E,8.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
KIV	Kislovodsk	56.49	318	*e*P	P	15 16 25.8	-1.6
	comp=Z,26nm,1.2s,mb5.1						
YSS	Yuzh-Sakhalins	56.51	38	*e*P	P	15 16 26.2	-1.3
YSS				*e*		15 24 16.0	
KMBO	Kilima Mbogo	57.05	263	P	P	15 16 34.1	+2.3
	comp=Z,1.1nm,0.6s,mb4.1,baz=45,slow=23,SNR=4.1						
KMBO				LR	LR	15 36 33.4	
	comp=Z,182nm,21.5s,MS4.1,baz=94,slow=31						
SOC	Sochi	58.36	316	*e*P	P	15 16 37.9	-2.7
SOC				*e*		15 17 29.0	
SOC				*e*		15 18 45.9	
SOC				*e*S	S	15 24 38.9	-0.3
SOC				*e*		15 26 26.5	
SOC				*e*SS	SS	15 28 30.8	-2.2
SOC				*e*SSS	SSS	15 31 00.7	+5.7
SOC				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2						
SOC				pmax	pmax		
	comp=N,15nm,0.9s						
SOC				pmax	pmax		
	comp=E,24nm,1.0s						
YAK	Yakutsk	59.48	19	*e*P	P	15 16 46.2	-1.9
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK	Yakutsk	59.48	19	*e*P	P	15 16 45.3	-2.8
	comp=E,42nm,0.8s,mb5.5						
STKA	Stephens Creek	60.92	134	P	P	15 16 57.4	-1.0
	comp=E,2.0nm,0.6s,mb4.4,baz=301,slow=4.7,SNR=6.1						
STKA	Stephens Creek	60.92	134	*e*P	P	15 16 57.0	-1.4
BRTR	Keskin Array B	61.62	311	P	P	15 17 01.5	-1.5
	comp=E,6.2nm,0.8s,mb4.8,baz=123,slow=7.6,SNR=26						
MOS	Moscow	64.24	329	*e*P	P	15 17 12.3	-7.8
MOS				*e*	pP	15 17 21.0	-9.3
MOS				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.7						
OBN	Obninsk	64.54	328	*i* P	P	15 17 21.7	-0.3
OBN				*i*	pP	15 17 32.8	+0.5
OBN				*e*		15 17 54.8	
OBN				*e*S	S	15 25 58.2	+0.7
OBN				pmax	pmax		
	comp=Z,34nm,1.9s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						

MA2	**Magadan**	**66.36**	**28**	*e*P	**P**	**15 17 32.8**	**-0.8**
MA2				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
MA2	**Magadan**	**66.36**	**28**	*e*P	**P**	**15 17 32.8**	**-0.8**
	comp=Z,28nm,1.0s,mb5.2						
TIXI	**Tiksi**	**66.63**	**11**	⇓*i*P	**P**	**15 17 33.9**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,69nm,17.0s,MS3.9						
AKASG	**Malin Array Be**	**67.32**	**322**	P	**P**	**15 17 37.9**	**-2.0**
	comp=Z,4.0nm,0.8s,mb4.5,baz=86,slow=5.3,SNR=13						
IDI	**Anoyia**	**67.79**	**305**	P	**P**	**15 17 43.5**	**+0.4**
	comp=Z,6.5nm,0.7s,mb4.8,baz=353,slow=12,SNR=4.2						
MLR	**Muntele Rosu**	**68.35**	**316**	P	**P**	**15 17 46.5**	**+0.1**
	comp=Z,22nm,1.2s,mb5.0,baz=173,slow=6.7,SNR=12						
LSZ	**Lusaka**	**69.08**	**250**	*e*P	**P**	**15 17 52.8**	**+1.5**
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
LSZ	**Lusaka**	**69.08**	**250**	*e*P	**P**	**15 17 52.8**	**+1.5**
	comp=Z,2.2nm,0.7s,mb4.2						
JOF	**Joensuu**	**70.02**	**334**	*e*p	**P**	**15 17 55.2**	**-1.1**
MATP	**Matopo**	**70.25**	**245**	P	**P**	**15 18 00.4**	**+2.0**
	comp=Z,2.7nm,0.6s,mb4.4,baz=101,slow=5.5,SNR=11						
KWP	**Kalwaria**	**71.20**	**320**	*e*P	**P**	**15 18 03.5**	**-0.2**
KOLS	**Kolonicke sedl**	**71.38**	**319**	*e*P	**P**	**15 18 04.5**	**-0.3**
SUW	**Suwalki**	**71.67**	**324**	*e*P	**P**	**15 18 05.7**	**-0.7**
FINES	**FINESS Array B**	**71.88**	**332**	P	**P**	**15 18 07.1**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.4,baz=90,slow=5.1,SNR=15						
CRVS	**Cervenica-Dubn**	**71.90**	**319**	*i* P	**P**	**15 18 07.9**	**+0.1**
CRVS				*i* sP	sP	15 18 20.3	-1.5
KAF	**Kangasniemi**	**71.96**	**333**	*e*p	**P**	**15 18 07.1**	**-0.8**
	comp=Z,4.6nm,0.7s,mb4.5,baz=104,slow=5.2						
KAF	**Kangasniemi**	**71.96**	**333**	*e*P	**P**	**15 18 07.1**	**-0.8**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
OJC	**Ojcow**	**73.14**	**320**	*e*P	**P**	**15 18 15.0**	**-0.3**
ARCES	**ARCESS Array B**	**74.45**	**340**	P	**P**	**15 18 21.8**	**-0.7**
	comp=Z,7.9nm,1.0s,mb4.6,baz=104,slow=5.0,SNR=7.9						
MORC	**Moravsky Berou**	**74.55**	**319**	*e*P	**P**	**15 18 23.3**	**-0.1**
MORC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
MORC	**Moravsky Berou**	**74.55**	**319**	*e*P	**P**	**15 18 23.3**	**0.0**
	comp=Z,13nm,1.1s,mb4.8						
KSP	**Ksiaz**	**75.43**	**320**	*e*P	**P**	**15 18 28.8**	**+0.3**
BILL	**Bilibino**	**75.60**	**22***c*	*i*P	**P**	**15 18 28.9**	**-0.2**
BILL				*e*	pP	15 18 40.5	+1.1
BILL				*e*S	S	15 28 06.2	-0.3
BILL				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.6						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
BILL	**Bilibino**	**75.60**	**22**	*e*P	**P**	**15 18 28.6**	**-0.5**
	comp=Z,3.5nm,0.8s,mb4.3						
BRG	**Berggiesshubel**	**76.92**	**320**	*e*P	**P**	**15 18 37.3**	**+0.4**
BRG				*e*	pP	15 18 48.5	+1.2
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
BRG	**Berggiesshubel**	**76.92**	**320**	*e*P	**P**	**15 18 37.3**	**+0.4**
	comp=Z,7.9nm,1.1s,mb4.6						
BRG				*e*	pP	15 18 48.5	+1.2
GERES	**GERESS Array B**	**77.00**	**318**	P	**P**	**15 18 37.2**	**-0.2**
	comp=Z,7.2nm,1.0s,mb4.5,baz=90,slow=5.3,SNR=26						
KHC	**Kasperske Hory**	**77.09**	**318**	*e*P	**P**	**15 18 38.0**	**+0.1**
CLL	**Collm**	**77.53**	**321**	*e*P	**P**	**15 18 41.0**	**+0.7**
CLL	**Collm**	**77.53**	**321**	P	**P**	**15 18 41.0**	**+0.7**
HFS	**Hagfors**	**77.62**	**330**	P	**P**	**15 18 40.7**	**0.0**
	comp=Z,24nm,1.2s,mb5.0,baz=104,slow=6.1,SNR=24						
GRA1	**Grafenberg Arr**	**78.64**	**319**	*e*P	**P**	**15 18 46.8**	**+0.4**
GRA1				*e*pP	pP	15 18 58.5	+1.7
GRF	**Grafenberg Arr**	**78.64**	**319**	*e*P	**P**	**15 18 46.8**	**+0.4**
GRF				*e**PP	pP	15 18 58.5	+1.7
NB2	**NORSAR Subarra**	**78.89**	**331**	P	**P**	**15 18 47.2**	**-0.4**
	comp=Z,3.0nm,0.7s,mb4.3,baz=95,slow=5.3						
NB2	**NORSAR Subarra**	**78.89**	**331**	P	**P**	**15 18 47.2**	**-0.4**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NOA	**NORSAR Array B**	**78.89**	**331**	P	**P**	**15 18 47.4**	**-0.2**
	comp=Z,3.2nm,0.6s,mb4.4,baz=93,slow=5.6,SNR=14						
DAVOX	**Davos**	**79.57**	**316**	P	**P**	**15 18 52.5**	**+0.9**
	comp=Z,4.8nm,0.7s,mb4.6,baz=138,slow=23,SNR=6.0						
LPG	**La Plagne**	**81.80**	**315**	*e*P	**P**	**15 19 04.5**	**+1.1**
	comp=Z,22nm,0.8s,mb4.8						
LPG	**La Plagne**	**81.80**	**315**	*e*P	**P**	**15 19 04.5**	**+1.1**
LPG				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
TNA	**Tin City**	**85.72**	**24**	*e*P	**P**	**15 19 22.4**	**-0.3**
	comp=Z,7.1nm,1.0s,mb4.8						
EKA	**Eskdalemuir Ar**	**86.88**	**325**	P	**P**	**15 19 29.9**	**+1.3**
	comp=Z,4.7nm,0.8s,mb4.8,baz=99,slow=5.0,SNR=4.9						
ESDC	**Sonseca Array**	**90.42**	**310**	P	**P**	**15 19 47.0**	**+1.1**
	comp=Z,0.7nm,0.5s,mb4.3,baz=63,slow=3.3,SNR=4.0						
IMA	**Indian Mountai**	**91.14**	**22**	*e*P	**P**	**15 19 49.1**	**+0.5**
IMA				pmax	pmax		
	comp=Z,236nm,1.8s						
IMA	**Indian Mountai**	**91.14**	**22**	*e*P	**P**	**15 19 49.1**	**+0.5**
	comp=Z,236nm,1.8s						
COLA	**College**	**93.86**	**22**	*i* P	**P**	**15 20 02.2**	**+1.2**
INK	**Inuvik**	**96.44**	**16**	*e*P	**P**	**15 20 12.4**	**-0.3**
INK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
INK	**Inuvik**	**96.44**	**16**	*e*P	**P**	**15 20 12.4**	**-0.3**
	comp=Z,5.8nm,1.0s,mb5.0						
RES	**Resolute Bay**	**96.72**	**2**	*e*P	**P**	**15 20 14.3**	**+0.4**
RES				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
RES	**Resolute Bay**	**96.72**	**2**	*e*P	**P**	**15 20 14.3**	**+0.4**
	comp=Z,5.1nm,0.9s,mb5.0						
YKA	**Yellowknife Ar**	**105.85**	**13**	PP	PP	15 25 15.5	-5.3
	comp=Z,0.4nm,0.8s,baz=334,slow=8.4,SNR=5.9						
ULM	**Lac du Bonnet**	**120.83**	**7**	PKP	PKPdf	15 25 36.7	+1.5
	comp=Z,0.9nm,0.4s,baz=276,slow=3.9,SNR=3.3						
ULM	**Lac du Bonnet**	**120.83**	**7**	PKP	PKPdf	15 25 36.7	+1.5
ELK	**Elko**	**124.15**	**26**	PKP	PKPdf	15 25 44.4	+2.6
	comp=Z,0.6nm,0.6s,baz=85,slow=7.8,SNR=3.8						
ELK	**Elko**	**124.15**	**26**	PKP	PKPdf	15 25 44.4	+2.6
NVAR	**Mina Array Bea**	**124.55**	**30**	PKP	PKPdf	15 25 45.8	+3.1
	comp=Z,1.2nm,0.7s,baz=328,slow=1.1,SNR=8.1						
PDAR	**Pinedale Array**	**124.67**	**21**	PKP	PKPdf	15 25 45.0	+2.2
	comp=Z,1.6nm,1.0s,baz=24,slow=1.0,SNR=10						
MSU	**Marysvale**	**127.32**	**25**	*e*PKP	PKPdf	15 25 49.9	+1.8
TXAR	**Lajitas Array**	**138.77**	**23**	SKPbc		15 29 45.0	
	comp=Z,0.4nm,0.5s,baz=315,slow=1.3,SNR=4.4						
PLCA	**Paso Flores**	**145.04**	**201**	PKPbc	PKPbc	15 26 23.1	+2.4
	comp=Z,4.7nm,0.8s,baz=196,slow=3.1,SNR=13						
PLCA	**Paso Flores**	**145.04**	**201**	*e*PKP	PKPdf	15 26 22.0	+1.5
LPAZ	**La Paz**	**160.67**	**245**	PKPab	PKPab	15 27 29.5	+2.0
	comp=Z,1.6nm,0.9s,baz=77,slow=4.8,SNR=6.5						

JMA ***24*** *15:28:48.0±0.2, 33.66N×141.12E, h55^{km}, M3.4*
IDC ***24*** *15:28:49.8±1.1, 32.73N×138.92E, mb3.8/3, mb1 4.1/3, mb1mx3.5/20, mbtmp3.8/3, Error ellipse: s-maj=23.7km s-min=16.5km az=138.0*
ISC 24 15:28:47.9±1.0**, 33.61N**±0.04×**141.07E**±0.10**, h61**^{km}±10^{km}**, n14,** σ**0**^{s}**60**/21**, mb3.8**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.04**	**356**	P	**P**	**15 29 06.0**	**-0.8**
JHJ2	**Mitsune**	**1.16**	**245**	P	**P**	**15 29 09.2**	**+0.8**
JHJ2				S	**S**	**15 29 24.1**	**+0.5**
JHJ	**Hachijo jima 2**	**1.18**	**246**	Pn	**P**	**15 29 09.1**	**+0.5**
	218nm,0.3s,baz=257,slow=23,SNR=30						
JHJ				Sn	**S**	**15 29 22.6**	**-1.6**
	252nm,0.3s,baz=244,slow=20,SNR=8.4						
BSO3	**Boso 3**	**1.27**	**339**	P	**P**	**15 29 09.8**	**-0.2**
BSO3				S	**S**	**15 29 26.7**	**+0.3**
BSO4	**Boso 4**	**1.50**	**337**	P	**P**	**15 29 13.7**	**+0.5**
KTR	**Katsuura**	**1.65**	**338**	S	**S**	**15 29 35.0**	**-0.5**
JKO	**Kozu shima**	**1.70**	**290**	P	**P**	**15 29 16.4**	**+0.4**
KTJJ	**Kamata 2**	**2.11**	**309**	P	**P**	**15 29 21.4**	**-0.3**
KTJJ				*e*S	**S**	**15 29 46.2**	**-0.5**
JIZS	**Izushimoda**	**2.12**	**302**	P	**P**	**15 29 22.3**	**+0.5**
JIZS				*e*S	**S**	**15 29 47.2**	**+0.2**
JOD2	**Odawara 2**	**2.32**	**316**	P	**P**	**15 29 24.4**	**-0.2**
JOD2				*e*S	**S**	**15 29 51.3**	**-0.7**
MAT	**Matsushiro**	**3.75**	**322**	P	**P**	**15 29 45.5**	**+0.8**
MAT				S	**S**	**15 30 28.4**	**+0.5**
SONM	**Songino Array**	**29.59**	**309**	P	**P**	**15 34 49.6**	**+0.4**
	0.2nm,0.5s,mb3.1,baz=101,slow=7.3,SNR=3.3						
WRA	**Warramunga Arr**	**53.64**	**188**	P	**P**	**15 38 05.2**	**-0.4**
	2.5nm,0.5s,mb4.4,baz=2.1,slow=7.6,SNR=124						
ASAR	**Alice Springs**	**57.37**	**188**	P	**P**	**15 38 31.9**	**-0.4**
	0.5nm,0.4s,mb3.9,baz=2.1,slow=6.2,SNR=23						

IDC ***24*** *15:28:57.7±13.0, 36.34N×70.94E, h226^{km}±115^{km}, mb3.3/5, mb1 3.4/6, mb1mx3.0/20, mbtmp3.8/6, Error ellipse: s-maj=88.6km s-min=29.5km az=49.0*
ISC 24 15:28:53.1±5.1**, 36.3N**±0.3×**70.8E**±0.5**, h198**^{km}±36^{km}**, n13,** σ**0**^{s}**25**/13**, mb3.3**/4**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.29**	**20**	P	**P**	**15 30 24.5**	**-0.2**
	SNR=60						
UCH	**Uchtor**	**6.62**	**25**	P	**P**	**15 30 29.2**	**+0.1**
	SNR=23						
EKS2	**Erkin-Say**	**6.80**	**19**	P	**P**	**15 30 31.7**	**+0.2**
	SNR=12						
AAK	**Ala-Archa**	**6.98**	**23**	P	**P**	**15 30 33.6**	**-0.2**
	SNR=11						
KBK	**Karagaybulak**	**7.15**	**25**	P	**P**	**15 30 36.2**	**+0.2**
	SNR=9.2						
CHMS	**Chumysh**	**7.39**	**23**	P	**P**	**15 30 39.0**	**-0.2**
	SNR=6.1						
TKM2	**Tokmak 2**	**7.62**	**28**	P	**P**	**15 30 42.2**	**0.0**
	SNR=7.7						
BVAR	**Borovoye Array**	**16.77**	**359**	P	**P**	**15 32 38.4**	**+0.6**
	0.1nm,0.3s,baz=168,slow=14,SNR=4.1						
ZAL	**Zalesovo**	**20.19**	**24**	P	**P**	**15 33 13.5**	**-0.2**
	2.7nm,0.3s,baz=247,slow=6.3,SNR=8.5						
ARCES	**ARCESS Array B**	**41.31**	**338**	P	**P**	**15 36 19.9**	**-0.4**
	4.2nm,0.8s,mb3.9,baz=117,slow=6.0,SNR=3.6						
YKA	**Yellowknife Ar**	**81.50**	**3**	P	**P**	**15 40 49.0**	**+0.1**
	0.2nm,0.4s,mb3.1,baz=349,slow=5.1,SNR=6.6						
WRA	**Warramunga Arr**	**82.00**	**122**	P	**P**	**15 40 52.4**	**0.0**
	0.2nm,0.4s,mb3.1,baz=324,slow=4.9,SNR=6.9						
ASAR	**Alice Springs**	**84.24**	**125**	P	**P**	**15 41 03.8**	**+0.1**
	0.4nm,0.8s,mb3.2,baz=319,slow=4.7,SNR=4.7						

NEIC ***24*** *15:44:01.7±0.5, 12.48N×143.30E, h10^{km}, mb4.4/9, MS3.8/2, Error ellipse: s-maj=16.1km s-min=12.1km az=99.0*
IDC ***24*** *15:44:01.3±0.7, 12.50N×143.40E, mb3.9/10, mb1 4.2/10, mb1mx4.1/20, mbtmp4.0/10, MS4.1/12, Ms1 4.1/12, ms1mx3.9/21, Error ellipse: s-maj=30.3km s-min=16.5km az=95.0*
BJI ***24*** *15:44:02.2, 12.89N×142.97E, h10^{km}, mB5.4, mb4.3, Ms4.4, Msz4.1*
ISC 24 15:44:00.0±0.4**, 12.53N**±0.06×**143.09E**±0.08**, h10**^{km}**, (h13**^{km}±1.0^{km}**:pP-P), n44,** σ**1**^{s}**20**/42**, mb4.2**/20**, MS4.1**/15**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.03**	**58**	*e*P	**Pn**	**15 44 34.6**	**-0.1**
JOW	**Kunigami**	**19.90**	**318**	LR	LR	15 54 56.1	
	comp=Z,353nm,18.9s,baz=105,slow=33						
JHJ	**Hachijo jima 2**	**20.72**	**352**	LR	LR	15 55 11.2	
	comp=Z,520nm,18.2s,MS3.9,baz=167,slow=32						
PMG	**Port Moresby**	**22.16**	**169**	P	**P**	**15 48 58.3**	**+0.3**
	2.7nm,0.6s,mb3.9,baz=345,slow=6.7,SNR=4.0						
PMG	**Port Moresby**	**22.16**	**169**	*e*P	**P**	**15 48 55.2**	**-2.7**
	16nm,1.0s,mb4.4						
MAJO	**Matsushiro**	**24.31**	**350**	P	**P**	**15 49 18.8**	**-0.1**
SSE	**Sheshan**	**27.38**	**316**	*e*P	**P**	**15 49 46.5**	**-1.2**
SSE				S	**S**	**15 54 27.8**	**+1.9**
SSE				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
SSE				LR	LR		
	comp=N,65nm,22.5s,MS3.5						
SSE				LR	LR		
	comp=E,147nm,22.7s,MS3.5						
SSE				LR	LR		
	comp=Z,142nm,21.0s,MS3.5						
SSE	**Sheshan**	**27.38**	**316**	*e*P	**P**	**15 49 46.5**	**-1.2**
	comp=Z,27nm,0.7s,mb4.9						
SSE				pP	pP	15 49 49.7	-0.9
SSE				S	**S**	**15 54 27.7**	**+1.8**
SSE				sS		15 54 33.4	
SSE				LR	LR		
	comp=Z,140nm,21.0s,MS3.5						
NJ2	**Nanjing**	**29.55**	**315**	*e*P	**P**	**15 50 07.4**	**+0.2**
NJ2				AP	pP	15 50 11.8	+1.6
NJ2				XP	sP	15 50 15.4	+3.9
NJ2				PP	PP	15 51 04.5	+1.3
NJ2				S	**S**	**15 55 01.0**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,320nm,4.3s						
NJ2				LR	LR		
	comp=N,820nm,21.6s						
NJ2				LR	LR		
	comp=E,440nm,13.4s						
NJ2				LR	LR		
	comp=Z,930nm,23.1s,MS4.3						
WRAB	**Tennant Creek**	**33.38**	**195**	*e*P	**P**	**15 50 40.8**	**-0.2**
	comp=Z,14nm,0.9s,mb4.9						
WRA	**Warramunga Arr**	**33.40**	**195**	P	**P**	**15 50 41.7**	**+0.6**
	comp=Z,2.1nm,0.6s,mb4.3,baz=19,slow=9.6,SNR=34						
MDJ	**Mudanjiang**	**34.01**	**343**	P	**P**	**15 50 44.8**	**-1.4**
MDJ				AP	pP	15 50 48.9	-0.2
MDJ				S	**S**	**15 56 12.9**	**+2.6**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,21nm,3.2s						
MDJ				LR	LR		
	comp=N,103nm,21.9s,MS3.6						
MDJ				LR	LR		
	comp=E,83nm,21.2s,MS3.6						
MDJ				LR	LR		
	comp=Z,171nm,23.3s,MS3.7						
CN2	**Changchun**	**34.67**	**337**	*e*P	**P**	**15 50 53.3**	**+1.4**
BJI	**Beijing**	**36.24**	**324**	*e*P	**P**	**15 51 00.3**	**-5.0**
BJI				S	**S**	**15 56 42.3**	**-2.6**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.5						
BJI				LR	LR		
	comp=N,332nm,17.8s,MS4.3						
BJI				LR	LR		
	comp=E,324nm,21.6s,MS4.3						
BJI				LR	LR		
	comp=Z,272nm,20.1s,MS4.0						
BJI	**Beijing**	**36.24**	**324**	*e*P	**P**	**15 51 00.3**	**-5.0**
	comp=Z,5.0nm,0.7s,mb4.5						
BJI				S	**S**	**15 56 42.3**	**-2.6**
BJI				LR	LR		
	comp=Z,270nm,20.1s,MS4.0						
ASAR	**Alice Springs**	**37.08**	**194**	P	**P**	**15 51 13.4**	**+1.0**
	comp=Z,1.5nm,0.6s,mb4.0,baz=18,slow=9.5,SNR=29						
ASAR				LR	LR	16 06 34.3	
	comp=Z,106nm,20.2s,MS3.6,baz=18,slow=36						
KMI	**Kunming**	**40.04**	**294**	P	**P**	**15 51 40.0**	**+2.8**
KMI				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.1						
KMI	**Kunming**	**40.04**	**294**	P	**P**	**15 51 40.0**	**+2.8**
	comp=Z,4.0nm,1.1s,mb4.1						
CMAR	**Chiang Mai Arr**	**42.87**	**284**	P	**P**	**15 52 04.8**	**+4.2**
	comp=Z,0.7nm,0.8s,mb3.5,baz=84,slow=6.4,SNR=5.1						
CMAR				LR	LR	16 08 32.7	
	comp=Z,116nm,18.2s,MS3.8,baz=86,slow=34						
STKA	**Stephens Creek**	**44.17**	**182**	P	**P**	**15 52 11.7**	**+0.7**
	comp=Z,0.8nm,0.3s,mb3.9,baz=328,slow=13,SNR=2.9						
STKA	**Stephens Creek**	**44.17**	**182**	P	**P**	**15 52 08.1**	**-2.9**
ULN	**Ulaanbaatar**	**46.29**	**327**	P	**P**	**15 52 27.1**	**-0.6**
SONM	**Songino Array**	**46.63**	**326**	P	**P**	**15 52 33.4**	**+3.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=139,slow=5.0,SNR=3.0						
WMQ	**Urumqi**	**56.63**	**314**	*e*P	**P**	**15 53 45.0**	**-0.7**
ZAL	**Zalesovo**	**61.50**	**325**	LR	LR	16 22 01.3	
	comp=Z,222nm,19.3s,MS4.3,baz=185,slow=37						
KURK	**Kurchatov**	**64.29**	**320**	*e*P	**P**	**15 54 37.5**	**-0.4**
	comp=Z,3.3nm,1.2s,mb4.2						
KSH	**Kashi**	**64.52**	**308**	*e*P	**P**	**15 54 37.0**	**-2.5**
KSH				AMB	AMB		
	comp=Z,70nm,5.4s						
AAK	**Ala-Archa**	**65.90**	**311**	P	**P**	**15 54 46.5**	**-1.9**
ILAR	**Eielson Array**	**70.26**	**25**	P	**P**	**15 55 15.1**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.8,baz=247,slow=6.2,SNR=14						
ILAR				LR	LR	16 21 25.8	
	comp=Z,118nm,19.9s,MS4.1,baz=94,slow=32						
ILAR	**Eielson Array**	**70.26**	**25**	P	**P**	**15 55 15.1**	**-0.1**
ILAR				LR	LR	16 21 25.8	
INK	**Inuvik**	**76.00**	**22**	*e*P	**P**	**15 55 49.3**	**+0.5**
	comp=Z,1.1nm,0.8s,mb3.8						
YKA	**Yellowknife Ar**	**84.59**	**27**	P	**P**	**15 56 34.6**	**0.0**
	comp=Z,0.6nm,0.4s,mb4.1,baz=284,slow=4.8,SNR=5.8						
YKA				LR	LR	16 33 59.0	
	comp=Z,128nm,18.3s,MS4.3,baz=300,slow=36						
ARCES	**ARCESS Array B**	**87.55**	**342**	LR	LR	16 35 36.2	
	comp=Z,88nm,20.0s,MS4.2,baz=15,slow=35						
BMO	**Blue Mountains**	**87.96**	**45**	P	**P**	**15 56 52.2**	**+0.7**
	comp=Z,5.1nm,1.2s,mb4.6						
NVAR	**Mina Array Bea**	**88.93**	**51**	P	**P**	**15 56 58.0**	**+1.5**
	comp=Z,0.9nm,0.5s,mb4.4,baz=265,slow=7.0,SNR=13						
HLID	**Hailey**	**90.32**	**45**	*e*P	**P**	**15 57 03.0**	**+0.3**
	comp=Z,0.5nm,0.7s,mb4.0						
VNDA	**Vanda**	**90.53**	**176**	LR	LR	16 36 16.4	
	comp=Z,115nm,20.2s,MS4.3,baz=80,slow=35						
ELK	**Elko**	**90.57**	**48**	P	**P**	**15 57 03.9**	**-0.1**
FINES	**FINESS Array B**	**91.38**	**335**	P	**P**	**15 57 08.6**	**+1.4**
	comp=Z,0.8nm,0.8s,mb4.1,baz=123,slow=39,SNR=3.0						
FINES				LR	LR	16 43 43.7	
	comp=Z,72nm,19.7s,MS4.1,baz=312,slow=39						
BW06	**Boulder Array**	**93.94**	**45**	P	**P**	**15 57 18.3**	**-1.1**
PDAR	**Pinedale Array**	**93.94**	**45**	LR	LR	16 32 34.2	
	comp=Z,89nm,19.9s,MS4.2,baz=280,slow=31						
SDCO	**Great Sand Dun**	**98.69**	**48**	P	**P**	**15 57 40.4**	**-0.8**
ULM	**Lac du Bonnet**	**99.09**	**34**	LR	LR	16 39 07.4	
	comp=Z,80nm,20.3s,MS4.2,baz=40,slow=33						
LPAZ	**La Paz**	**149.54**	**101**	PKPbc	PKPdf	16 03 55.1	+6.0
	comp=Z,0.7nm,0.5s,baz=315,slow=7.1,SNR=2.5						

IDC ***24*** *15:55:55.5±1.5, 7.67N×93.46E, mb3.9/6, mb1 4.1/7, mb1mx3.8/19, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=72.6km s-min=20.1km az=59.0*
NEIC ***24*** *15:55:58.9±1.0, 7.32N×93.22E, h30^{km}, mb4.2/4, Error ellipse: s-maj=26.6km s-min=13.3km az=60.0*
ISC 24 15:55:57.7±0.8**, 7.4N**±0.1×**93.3E**±0.1**, h33**^{km}**, n18,** σ**1**^{s}**27**/18**, mb4.1**/16**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**12.31**	**26**	*e*P	**P**	**15 58 54.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**12.31**	**26**	Pn	**P**	**15 58 53.6**	**-0.1**
	0.3nm,0.3s,baz=211,slow=15,SNR=23						
JIRN	**Jiri**	**21.28**	**342**	*e*P	**P**	**16 00 45.3**	**+1.7**
	10nm,0.6s,mb4.3						
PKI	**Pulchoki**	**21.45**	**341**	*e*P	**P**	**16 00 47.1**	**+1.8**
	6.8nm,0.4s,mb4.3						
DMN	**Daman**	**21.58**	**340**	*e*P	**P**	**16 00 48.5**	**+1.8**
	5.1nm,0.6s,mb4.1						
GUN	**Gumba**	**21.61**	**342**	*e*P	**P**	**16 00 46.0**	**-0.9**
	10nm,0.5s,mb4.5						
KKN	**Kakani**	**21.69**	**340**	*e*P	**P**	**16 00 48.7**	**+1.0**
	8.3nm,0.6s,mb4.3						
GKN	**Gorkha**	**22.11**	**339**	*e*P	**P**	**16 00 51.1**	**-0.8**
	12nm,0.8s,mb4.4						
KOLN	**Koldanda**	**22.28**	**337**	*e*P	**P**	**16 00 53.7**	**+0.1**
	2.2nm,0.4s,mb4.0						
LSA	**Lhasa**	**22.31**	**355**	*e*P	**P**	**16 00 52.1**	**-1.7**
	3.1nm,0.5s,mb4.0						
AAK	**Ala-Archa**	**38.85**	**338**	P	**P**	**16 03 18.5**	**-3.0**
	8.9nm,1.4s,mb4.3						
SONM	**Songino Array**	**41.84**	**13**	P	**P**	**16 03 44.7**	**-1.5**
	0.2nm,0.4s,mb3.1,baz=198,slow=9.1,SNR=4.2						
ZAL	**Zalesovo**	**46.94**	**353**	P	**P**	**16 04 25.6**	**-1.5**
	0.8nm,0.4s,mb4.0,baz=77,slow=3.8,SNR=3.0						
WRA	**Warramunga Arr**	**48.65**	**125**	P	**P**	**16 04 41.4**	**+0.5**
	0.9nm,0.4s,mb4.2,baz=304,slow=8.7,SNR=56						
WRAB	**Tennant Creek**	**48.65**	**125**	*e*P	**P**	**16 04 39.6**	**-1.3**
	3.6nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**50.23**	**129**	P	**P**	**16 04 54.4**	**+1.3**
	0.4nm,0.4s,mb3.8,baz=305,slow=7.6,SNR=22						
ASAR				PcP	PcP	16 06 13.7	+1.6
	0.2nm,0.7s,baz=317,slow=3.4,SNR=4.1						
ARCES	**ARCESS Array B**	**75.46**	**340**	P	**P**	**16 07 39.6**	**-0.3**
	3.5nm,0.9s,mb4.3,baz=90,slow=4.5,SNR=5.3						
HFS	**Hagfors**	**78.48**	**330**	P	**P**	**16 07 57.2**	**+0.2**
	2.0nm,0.8s,mb4.1,baz=127,slow=7.2,SNR=4.1						

IDC 24 16:05:20.8±10.0**, 19.99S**×**175.96W, h192**^{km}±95^{km}**, mb3.4**/4**, mb1 3.7**/5**, mb1mx3.4**/17**, mbtmp4.0**/5**, Error ellipse: s-maj=45.7km s-min=32.2km az=12.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**19.18**	**197**	P	P	16 09 28.2	-3.5
	3.2nm,0.3s,baz=343,slow=2.7,SNR=25						
RPZ	**Rata Peaks**	**26.04**	**202**	P	P	16 10 37.1	-0.8
	4.4nm,0.7s,baz=355,slow=4.7,SNR=10						
ASAR	**Alice Springs**	**46.50**	**256**	P	P	16 13 29.5	-1.1
	1.4nm,0.9s,baz=86,slow=8.8,SNR=17						
ASAR				PcP	PcP	16 14 59.8	-2.5
	0.8nm,0.6s,baz=106,slow=3.9,SNR=8.6						
WRA	**Warramunga Arr**	**46.57**	**261**	P	P	16 13 29.4	-1.8
	0.3nm,0.3s,baz=96,slow=7.6,SNR=34						
WRA				PcP	PcP	16 15 00.1	-2.4
	0.4nm,0.5s,baz=103,slow=3.1,SNR=6.5						
YKA	**Yellowknife Ar**	**95.25**	**24**	P	P	16 18 23.2	0.0
	0.1nm,0.3s,baz=227,slow=4.6,SNR=2.9						
GERES	**GERESS Array B**	**150.18**	**347**	PKPbc	PKPdf	16 24 47.3	+4.1
	0.6nm,0.6s,baz=45,slow=3.8,SNR=5.4						

IGQ 24 16:09:55.8, 1.31S×**81.43W, h9**^{km}±5^{km}**, mb4.3, 1C-2D, Error ellipse: s-maj=7.5km s-min=4.6km az=9.6, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOJA	**Cerro de Hojas**	**0.92**	**74**	⇑P	Pb	16 10 12.8	-0.5
SALI	**Salinas**	**0.98**	**154**	P	Pb	16 10 14.5	+0.1
IGUA	**Igualata**	**2.79**	**94**	P	Pn	16 10 42.4	+0.9
IGUA				S	Sn	16 11 16.9	+1.3
ARRY	**Arrayan**	**2.98**	**94**	⇓P	Pn	16 10 45.0	+0.9
ARRY				S	Sn	16 11 19.8	-0.5
RUN2	**Runtun**	**3.02**	**92**	P	Pn	16 10 46.0	+1.4
ULBA	**Ulba**	**3.02**	**93**	P	Pn	16 10 46.3	+1.6
JUA2	**San Juan 2**	**3.02**	**69**	P	Pn	16 10 45.8	+1.1
JUA2				S	Sn	16 11 24.3	+2.9
TERV	**Terraza Guagua**	**3.04**	**68**	P	Pn	16 10 46.5	+1.6
PINO	**Pino**	**3.04**	**68**	P	Pn	16 10 45.7	+0.7
PISA	**Pisayambo**	**3.05**	**85**	P	Pn	16 10 47.8	+2.7
YANA	**Yana**	**3.09**	**68**	P	Pn	16 10 45.9	+0.2
VC1	**Cotopaxi 1**	**3.10**	**78**	P	Pn	16 10 48.2	+2.5
TAMB	**Tambo**	**3.12**	**79**	P	Pn	16 10 48.9	+2.9
ANTI	**Antisana**	**3.38**	**75**	⇓P	Pn	16 10 52.0	+2.3
COTA	**Cotacachi**	**3.49**	**62**	P	Pn	16 10 51.5	+0.1
CAYR	**Refugio Cayamb**	**3.66**	**69**	P	Pn	16 10 56.4	+2.6
CAYA	**Cayambe**	**3.70**	**68**	P	Pn	16 10 56.8	+2.5
ECEN	**Cerro Negro**	**4.05**	**59**	P	Pn	16 11 01.5	+2.1

DJA 24 16:48:44.0±0.9**, 9.58S**×**113.31E, h33**^{km}**, ML3.9**/3**, 2C-4D, Error ellipse: s-maj=18.5km s-min=17.2km az=47.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	**Scrawed**	**1.37**	**37**	*e*Pn	Pn	16 49 05.3	-1.9
	121nm,0.2s						
SRDI				⇑*e*Sn	Sn	16 49 20.5	-3.8
KELI	**Kelakatan**	**1.79**	**41**	⇑*e*Pn	Pn	16 49 11.9	-1.3
	45nm,0.2s						
KELI				⇓*e*Sn	Sn	16 49 33.0	-2.0
RATI	**Rata**	**2.36**	**69**	⇓*e*Pn	Pn	16 49 19.8	-1.5
	96nm,0.2s						
RATI				⇓*e*Sn	Sn	16 49 44.3	-5.1
KEDI	**Kedomdong**	**2.98**	**69**	⇓*e*Pn	Pn	16 49 28.3	-1.8
KEDI				*e*Sn	Sn	16 50 01.8	-3.3

IDC ***24*** *17:03:34.6±8.9, 6.28S×150.68E, h66^{km}±64^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.7/13, mbtmp4.2/4, ML2.9/1, Error ellipse: s-maj=84.4km s-min=60.6km az=145.0*
ISC 24 17:03:31.1±5.7**, 6.4S**±0.4×**150.9E**±0.3**, h46**^{km}±39^{km}**, n6,** σ**1**^{s}**16**/7**, mb4.1**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.75**	**230**	P	**P**	**17 04 42.2**	**+0.2**
	3.5nm,0.3s,baz=36,slow=7.3,SNR=17						
PMG				S	**S**	**17 05 36.4**	**-0.2**
	3.7nm,0.3s,baz=49,slow=18,SNR=3.6						
WRA	**Warramunga Arr**	**20.97**	**228**	P	**P**	**17 08 12.0**	**-0.7**
	4.7nm,0.5s,baz=53,slow=11,SNR=109						
ASAR	**Alice Springs**	**23.70**	**222**	P	**P**	**17 08 40.6**	**+0.9**
	2.8nm,0.4s,mb4.0,baz=55,slow=9.0,SNR=108						

ASPA	**Alice Springs**	23.70	222	*e*P	P	17 08 41.2	+1.5
STKA	**Stephens Creek**	26.82	198	P	P	17 09 08.3	-0.9
	3.3nm,0.7s,mb4.0,baz=8.5,slow=8.3,SNR=7.2						
FITZ	**Fitzroy Crossi**	27.22	242	*e*P	P	17 09 12.3	-0.7
	3.3nm,0.4s,mb4.2						

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*IDC **24** 17:05:15.3±0.8, 1.77N×92.21E, mb3.9/10, mb1 4.0/11, mb1mx3.9/20, mbtmp3.8/11, ML3.0/1, Error ellipse: s-maj=27.9km s-min=19.9km az=47.0*

*NEIC **24** 17:05:19.9±0.5, 1.81N×92.29E, h30^{km}, mb4.3/4, Error ellipse: s-maj=15.6km s-min=11.4km az=63.0*

ISC 24 17:05:18.4±0.7**, 1.8N**±0.1×**92.3E**±0.1**, h33^{km}, n19, σ0^{s}88**/16**, mb4.0**/14**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	17.78	21	P	P	17 09 24.1	-0.9
	0.0nm,0.3s,baz=217,slow=13,SNR=12						
LSA	**Lhasa**	27.75	358	*e*P	P	17 11 08.0	+1.6
	3.7nm,0.8s,mb4.1						
ENH	**Enshi**	32.66	28	P	P	17 11 49.9	+0.1
	2.7nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	46.55	120	P	P	17 13 46.1	+0.9
	1.5nm,0.9s,mb3.9,baz=298,slow=8.6,SNR=7.8						
WRAB	**Tennant Creek**	46.56	120	*e*P	P	17 13 45.6	+0.4
WRAB				*e*	pP	17 13 54.1	-1.0
SONM	**Songino Array**	47.44	13	P	P	17 13 53.0	+1.2
	1.2nm,0.7s,mb3.9,baz=191,slow=8.5,SNR=15						
SONM				PcP	PcP	17 15 23.2	+0.9
	0.5nm,0.6s,baz=201,slow=2.2,SNR=3.1						
ULN	**Ulaanbaatar**	47.62	13	P	P	17 13 52.7	-0.5
	6.5nm,1.6s,mb4.4						
ASAR	**Alice Springs**	47.72	125	P	P	17 13 53.0	-1.4
	0.8nm,0.6s,mb3.9,baz=284,slow=6.8,SNR=6.7						
KURK	**Kurchatov**	50.08	349	P	P	17 14 06.7	-5.5
	2.5nm,1.1s,mb4.2						
ZAL	**Zalesovo**	52.32	354	P	P	17 14 28.9	-0.1
	0.5nm,0.8s,mb3.5,baz=160,slow=8.1,SNR=3.1						
BVAR	**Borovoye Array**	54.18	344	P	P	17 14 41.3	-1.6
	0.5nm,0.6s,mb3.6,baz=143,slow=7.4,SNR=4.6						
BRTR	**Keskin Array B**	65.11	313	P	P	17 15 57.8	-0.5
	1.5nm,1.2s,mb3.9,baz=90,slow=1.4,SNR=3.7						
MATP	**Matopo**	66.24	247	P	P	17 16 05.7	-0.1
	1.2nm,1.1s,mb3.8,baz=86,slow=11,SNR=6.1						
MLR	**Muntele Rosu**	72.28	317	P	P	17 16 42.9	+0.4
	2.6nm,0.8s,mb4.2,baz=183,slow=9.2						
FINES	**FINESS Array B**	77.22	333	P	P	17 17 10.3	-0.4
	2.0nm,1.1s,mb4.0,baz=124,slow=10.0,SNR=4.3						
GERES	**GERESS Array B**	81.13	319	P	P	17 17 32.9	+0.8
	1.5nm,0.8s,mb4.0,baz=117,slow=6.0,SNR=12						
PDAR	**Pinedale Array**	131.44	21	PKP	PKPdf	17 24 30.9	+2.9
	0.3nm,1.0s,baz=321,slow=5.8,SNR=2.4						
TXAR	**Lajitas Array**	145.46	25	PKPbc	PKPbc	17 24 57.0	+2.6
	1.9nm,0.8s,baz=243,slow=2.8,SNR=12						
TXAR	**Lajitas Array**	145.46	25	PKPbc	PKPbc	17 24 57.0	+2.6

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*ISK **24** 17:50:17.7, 38.11N×26.68E, h5^{km}, MD3.2*

*CSEM **24** 17:50:19.5±0.1, 38.12N×26.79E, h10^{km}, MD3.2, Error ellipse: s-maj=2.5km s-min=1.8km az=101.0*

*ATH **24** 17:50:20.0, 38.12N×26.84E, h35^{km}, MD3.1/3*

ISC 24 17:50:20.3±0.6**, 38.13N**±0.03×**26.75E**±0.05**, h10^{km}, n21, σ0^{s}86**/29**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	0.34	42	PG	Pg	17 50 26.5	-0.8
SMG	**Samos**	0.43	171	*e*PB	Pb	17 50 29.5	0.0
SMG				*e*SB	Sb	17 50 36.8	+1.1
IZM	**Izmir**	0.48	57	*i* PG	Pg	17 50 29.4	-0.6
KDAG	**Bornova**	0.48	56	*i* P	Pg	17 50 29.4	-0.7
KDAG				*i* S	Sg	17 50 35.7	-1.0
AYDN	**Tasoluk**	1.01	118	*i* P	Pb	17 50 39.8	+0.5
AYDN				*i* S	Sb	17 50 53.2	+0.7
AKS	**Akhisar**	1.11	48	PN	Pn	17 50 40.8	-1.1
BODT	**Bodrum**	1.16	157	PN	Pn	17 50 41.2	-1.3
BODT				SN	Sn	17 50 58.4	-0.1
AYVA	**Ayvalik**	1.17	358	*i* P	Pb	17 50 42.5	+0.3
AYVA				*i* S	Sb	17 50 59.2	+1.9
PRK	**Paraskevi**	1.17	341	*e*PN	Pn	17 50 42.3	-0.4
APE	**Apeiranthos**	1.44	223	*e*PN	Pn	17 50 44.9	-1.7
APE	**Apeiranthos**	1.44	223	*e*Pn	Pn	17 50 45.9	-0.7
MANT	**Manisa**	1.46	75	*i* P	Pn	17 50 47.6	+0.7
MANT				*i* S	Sb	17 51 05.6	-0.1
YER	**Yerkesik**	1.57	129	PN	Pn	17 50 47.8	-0.6
EZN	**Ezine**	1.72	349	*e*PN	Pn	17 50 50.6	0.0
BALB	**Balikesir**	1.74	30	*e*PN	Pn	17 50 51.4	+0.5
DENT	**Denizli**	1.84	101	*e*PN	Pn	17 50 52.5	+0.2
DNZL	**Cakiroluk**	1.87	103	*i* P	Pn	17 50 55.5	+2.9
DNZL				*i* S	Sn	17 51 21.2	+4.7
DST	**Dursunbey**	2.07	44	*e*PN	Pn	17 50 56.2	+0.6
BNT	**Bandirma**	2.40	22	*e*PN	Pn	17 51 00.1	-0.2
KCT	**Karacabey**	2.47	30	*e*PN	Pn	17 51 01.4	+0.2
ULDT	**Uludag**	2.73	42	*i* P	Pn	17 51 10.4	+5.4
ULDT				*i* S	Sn	17 51 45.0	+6.6

IDC 24 18:04:18.9±6.0**, 4.68N×92.52E, mb3.2**/3**, mb1 3.5**/4**, mb1mx3.4**/18**, mbtmp3.3**/4**, ML3.5**/1**, MS2.8**/1**, Ms1 3.0**/1**, ms1mx2.8**/4**, Error ellipse: s-maj=176.9km s-min=29.7km az=73.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	15.06	24	Pn	P	18 07 54.4	-0.5
	0.1nm,0.3s,baz=212,slow=12,SNR=5.8						
CMAR				LR	LR	18 14 18.8	
	comp=Z,31nm,18.7s,baz=185,slow=40						
SONM	**Songino Array**	44.61	13	P	P	18 12 32.8	-2.0
	0.2nm,0.7s,baz=202,slow=7.8,SNR=3.1						
WRA	**Warramunga Arr**	47.83	122	P	P	18 12 58.0	-2.7
	0.3nm,0.4s,baz=300,slow=10,SNR=7.7						
ASAR	**Alice Springs**	49.21	127	P	P	18 13 10.1	-1.2
	0.2nm,0.6s,baz=303,slow=7.5,SNR=5.2						

IDC 24 18:06:50.8±3.5**, 12.09N×92.23E, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.5**/18**, mbtmp3.5**/4**, ML3.3**/1**, Error ellipse: s-maj=95.4km s-min=28.8km az=82.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	9.06	45	Pn	P	18 09 02.6	-3.1
	0.1nm,0.3s,baz=235,slow=14,SNR=5.8						
SONM	**Songino Array**	37.56	16	P	P	18 14 06.9	-1.7
	0.6nm,0.9s,baz=200,slow=7.1,SNR=5.3						
WRA	**Warramunga Arr**	52.26	127	P	P	18 16 04.1	-2.3
	0.7nm,0.5s,baz=306,slow=8.3,SNR=17						
ASAR	**Alice Springs**	54.06	131	P	P	18 16 17.6	-2.1
	0.5nm,0.5s,baz=306,slow=6.7,SNR=20						

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*NEIC **24** 18:11:31.6±0.7, 21.25S×67.86W, h157^{km}±8^{km}, mb4.2/2, Error ellipse: s-maj=13.4km s-min=9.0km az=76.0*

*IDC **24** 18:11:31.7±1.1, 21.26S×67.83W, h155^{km}±13^{km}, mb3.9/3, mb1 3.8/6, mb1mx3.5/16, mbtmp4.2/6, Error ellipse: s-maj=23.5km s-min=18.2km az=113.0*

ISC 24 18:11:30.6±0.7**, 21.26S**±0.06×**67.9W**±0.1**, h163^{km}**±10^{km}**, n15, σ1^{s}00**/16**, mb4.0**/3**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	1.65	215	P	P	18 12 04.2	+1.2
	41nm,0.3s,baz=17,slow=8.2,SNR=341						
LVC				S	S	18 12 28.4	+0.3
	36nm,0.3s,baz=329,slow=12,SNR=3.7						
LVC	**Limon Verde**	1.65	215	P	P	18 12 04.2	+1.2
LVC				*e*Sn	S	18 12 26.6	-1.4
LPAZ	**La Paz**	4.95	357	P	P	18 12 45.9	+1.5
	10nm,0.3s,baz=175,slow=8.4,SNR=150						
ARE	**Arequipa**	5.86	324	*e*P	P	18 12 56.0	-0.4
ARE				*e*S	S	18 14 02.0	-1.0
CPUP	**Villa Florida**	10.91	120	P	P	18 14 02.6	-0.5
	0.0nm,0.3s,baz=220,slow=16,SNR=2.4						
TRQA	**Tornquist**	17.50	164	*e*P	P	18 15 25.7	-0.2
	4.9nm,0.6s						
PLCA	**Paso Flores**	19.55	186	P	P	18 15 48.1	+0.5
	0.2nm,0.3s,baz=348,slow=9.5,SNR=4.1						
PLCA	**Paso Flores**	19.55	186	*e*P	P	18 15 46.3	-1.3
BDFB	**Brasilia**	19.66	77	P	P	18 15 48.3	-0.7
	1.0nm,0.3s,baz=273,slow=6.4,SNR=4.4						
DBIC	**Dimbokro**	67.76	73	P	P	18 22 12.2	-1.0
	2.6nm,0.5s,mb4.2,baz=189,slow=6.9,SNR=4.7						
DBIC	**Dimbokro**	67.76	73	*e*P	P	18 22 11.8	-1.4
	3.9nm,0.6s,mb4.3						
MATP	**Matopo**	88.42	111	P	P	18 24 07.3	+1.6
	1.1nm,0.7s,mb3.8,baz=270,slow=8.0,SNR=3.9						
YKA	**Yellowknife Ar**	91.28	340	P	P	18 24 19.0	+0.8
	1.5nm,0.8s,mb4.1,baz=133,slow=4.5,SNR=27						
WRA	**Warramunga Arr**	133.64	209	PKP	PKPdf	18 30 30.9	+2.4
	0.4nm,0.8s,baz=149,slow=1.7,SNR=5.5						
SONM	**Songino Array**	153.09	9	PKPbc	PKPdf	18 31 10.3	+9.5
	0.3nm,0.5s,baz=334,slow=2.0,SNR=6.0						

IDC 24 18:36:56.0±3.9**, 64.99S×142.85E, mb3.3**/2**, mb1 3.7**/3**, mb1mx3.5**/12**, mbtmp3.4**/3**, ML3.4**/1**, Error ellipse: s-maj=924.4km s-min=31.6km az=75.0, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	**Vanda**	13.86	163	Pn	P	18 40 14.3	-1.2
	0.2nm,0.3s,baz=309,slow=15,SNR=6.7						
VNDA				Sn	S	18 42 46.3	-5.0
	0.1nm,0.3s,baz=45,slow=8.6,SNR=7.0						
ASAR	**Alice Springs**	41.73	348	P	P	18 44 46.4	-1.6
	0.3nm,0.8s,baz=168,slow=8.3,SNR=4.2						
WRA	**Warramunga Arr**	45.38	349	P	P	18 45 15.8	-1.9
	0.5nm,0.8s,baz=185,slow=6.6,SNR=6.3						

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*ATH **24** 18:46:50.8, 37.72N×22.43E, h70^{km}±4^{km}, ML3.0*

*NEIC **24** 18:46:50.8, 37.72N×22.43E, h70^{km}, After ATH.*

*CSEM **24** 18:46:51.4±0.1, 37.72N×22.43E, h49^{km}±2^{km}, ML3.1, Error ellipse: s-maj=1.9km s-min=1.6km az=130.0*

*THE **24** 18:46:52.4, 37.84N×22.45E, h15^{km}, ML3.1*

*HLW **24** 18:46:54.5, 37.29N×22.64E, h33^{km}, Mb3.3*

ISC 24 18:46:49.6±0.6**, 37.66N**±0.03×**22.42E**±0.06**, h92^{km}**±8^{km}**, n25, σ0^{s}85**/32**, 3C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	0.62	220	*e*P	P	18 47 06.4	+0.7
ITM				*e*S	S	18 47 17.1	-0.5
MGER	**Gerania Oros**	0.74	63	*e*P	P	18 47 06.5	-0.4
NAIG	**Nisos Aigina**	0.85	83	*e*P	P	18 47 07.5	-0.5
RLS	**Riolos of Patr**	0.85	298	*e*P	P	18 47 07.9	-0.1
VLI	**Veliai**	1.02	156	*e*P	P	18 47 10.6	+0.7
ATH	**Athens Observa**	1.07	72	*e*P	P	18 47 11.2	+0.7
ATH				*e*S	S	18 47 25.0	-1.2
LKR	**Lokris**	1.09	24	*e*P	P	18 47 10.6	-0.2
MPAR	**Parnis Oros**	1.15	64	*e*P	P	18 47 12.0	+0.5
PTL	**Penteli**	1.21	71	*e*P	P	18 47 13.1	+0.8
EVR	**Evrytania**	1.35	339	*e*P	P	18 47 14.2	+0.2
AGG	**Agios Georgios**	1.37	357	*e*Pb	P	18 47 14.0	-0.2
AGG				*e*Sb	S	18 47 30.2	-2.2
KYTH	**Kithira**	1.46	160	*e*P	P	18 47 17.5	+2.2
VLS	**Valsamata**	1.54	290	*e*P	P	18 47 17.0	+0.6
NEO	**Neokhori**	1.76	21	*e*P	P	18 47 19.5	+0.2
XOR	**Xorichti**	1.81	19	*e*Pb	P	18 47 20.2	+0.4
AOS	**Alonnisos**	1.90	37	*e*Pb	P	18 47 21.4	+0.4
LIT	**Litokhoron**	2.44	1	*e*Pn	P	18 47 28.4	-0.1
LIT				*e*Sn	S	18 47 56.8	-0.7
APE	**Apeiranthos**	2.55	102	*e*P	P	18 47 31.1	+1.2
OUR	**Ouranopolis**	2.94	24	*e*Pn	P	18 47 35.5	+0.1
FNA	**Florina**	3.23	346	*e*Pn	P	18 47 39.8	+0.5
KNT	**Kendrikon**	3.52	6	*e*Pn	P	18 47 43.9	+0.6
SRS	**Serrai**	3.57	14	*e*Pn	P	18 47 44.4	+0.3
SRS				*e*Sn	S	18 48 25.5	+0.1
SLUM		6.57	159	⇑P	P	18 48 23.7	-1.5
SWA2		8.76	162	⇑P	P	18 48 53.8	-1.4
SWA2				S	S	18 50 21.9	-11
SWA1		8.81	161	⇑P	P	18 48 54.5	-1.3
SWA1				S	S	18 50 22.5	-12

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*BJI **24** 18:47:13.3, 56.80S×25.20W, h31^{km}, mB5.1, Msz4.9*

*NEIC **24** 18:47:13.4±3.6, 56.76S×25.20W, h31^{km}±25^{km}, mb4.8/14, Error ellipse: s-maj=11.9km s-min=8.7km az=208.0*

*IDC **24** 18:47:15.2±4.8, 56.83S×25.23W, h43^{km}±43^{km}, mb4.2/8, mb1 4.3/9, mb1mx4.0/17, mbtmp4.4/9, ML4.1/1, MS3.9/5, Ms1 3.8/5, ms1mx3.3/13, Error ellipse: s-maj=20.1km s-min=18.6km az=6.0*

ISC 24 18:47:11.8±4.1**, 56.76S**±0.09×**25.3W**±0.1**, h33^{km}**±30^{km}**, n53, σ1^{s}05**/35**, mb4.6**/19**, MS4.0**/6**, 7C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	6.83	287	Pn	Pn	18 48 52.2	-0.3
	369nm,0.6s,SNR=17						
VNA1	**Neumayer--Stat**	15.74	159	⇑*i*P	P	18 50 52.5	0.0
VNA3	**Neumayer Olymp**	15.97	162	⇑*i*P	P	18 50 52.3	-3.1
VNA3	**Neumayer Olymp**	15.97	162	⇑*i*	P	18 50 55.0	-0.4
VNA3	**Neumayer Olymp**	15.97	162	⇑*i*P	P	18 50 55.0	-0.4
VNA2	**Neumayer--Watz**	16.14	159	⇑*i*P	P	18 50 56.5	-1.0
VNA2	**Neumayer--Watz**	16.14	159	⇑*i*	P	18 50 58.4	+0.9
SNAA	**Sanae**	17.66	157	⇑*i*P	P	18 51 17.4	+0.8
SNAA	**Sanae**	17.66	157	P	P	18 51 16.9	+0.2
	0.6nm,0.3s,baz=326,slow=14,SNR=34						
PMSA	**Palmer Station**	20.26	231	*e*P	P	18 51 47.2	+0.3
	77nm,1.3s						
USHA	**Ushuaia**	24.05	256	P	P	18 52 24.8	+0.3
	16nm,0.7s,mb4.5,baz=69,slow=11,SNR=5.8						
TRQA	**Tornquist**	30.58	292	*e*P	P	18 53 22.3	-2.3
	3.7nm,0.6s,mb4.4						
PLCA	**Paso Flores**	33.17	279	LR	LR	19 07 29.0	
	comp=Z,136nm,18.8s,MS3.7,baz=150,slow=37						
PLCA	**Paso Flores**	33.17	279	*e*P	P	18 53 48.5	+1.3
	4.3nm,1.2s,mb4.2						
QSPA	**South Pole Qui**	33.49	180	*e*P	P	18 53 49.3	-0.3
	16nm,0.6s,mb5.1						
MAW	**Mawson**	38.94	142	LR	LR	19 08 11.1	
	comp=Z,126nm,19.3s,MS3.8,baz=109,slow=32						
MAW	**Mawson**	38.94	142	P	P	18 54 32.2	-3.7
SUR	**Sutherland**	39.82	72	*e*P	P	18 54 46.8	+3.3
	12nm,0.9s,mb4.6						
BDFB	**Brasilia**	44.52	328	P	P	18 55 24.0	+2.0
	2.7nm,0.5s,mb4.3,baz=82,slow=4.1,SNR=5.9						
BDFB				LR	LR	19 13 07.7	
	comp=Z,123nm,18.6s,MS3.9,baz=171,slow=35						
VNDA	**Vanda**	45.91	182	P	P	18 55 32.7	+0.4
	3.7nm,0.5s,mb4.5,baz=187,slow=7.0,SNR=27						
VNDA				LR	LR	19 13 44.6	
	comp=Z,128nm,18.8s,MS3.9,baz=267,slow=35						
VNDA	**Vanda**	45.91	182	P	P	18 55 32.7	+0.4
LBTB	**Lobatse**	48.21	71	P	P	18 55 51.2	+0.1
	4.7nm,1.0s,mb4.5,baz=254,slow=10,SNR=3.9						
LBTB	**Lobatse**	48.21	71	*e*P	P	18 55 50.9	-0.2
	7.5nm,1.0s,mb4.7						
TSUM	**Tsumeb**	49.12	58	P	P	18 55 58.9	+0.7
	4.4nm,0.8s,mb4.5,baz=235,slow=8.0,SNR=5.7						
TSUM	**Tsumeb**	49.12	58	*e*P	P	18 55 58.1	-0.1
	6.1nm,1.0s,mb4.6						
LPAZ	**La Paz**	51.66	304	P	P	18 56 18.5	+1.0
	62nm,0.6s,mb5.7,baz=143,slow=6.2,SNR=226						
LPAZ	**La Paz**	51.66	304	*e*P	P	18 56 18.2	+0.7
	65nm,0.6s,mb5.7						
MATP	**Matopo**	53.50	70	P	P	18 56 31.0	-0.2
	5.1nm,1.1s,mb4.4,baz=210,slow=6.0,SNR=6.2						
SAML	**Samuel**	56.06	313	*e*P	P	18 56 49.0	-1.0
	13nm,0.8s,mb5.0						
NNA	**Nana**	59.52	297	P	P	18 57 13.0	-1.3
	16nm,1.0s,mb5.0						
DBIC	**Dimbokro**	65.39	22	P	P	18 57 52.5	-0.8
	2.0nm,0.7s,mb4.3,baz=174,slow=13,SNR=3.9						
DBIC	**Dimbokro**	65.39	22	*e*P	P	18 57 51.3	-2.0
OTAV	**Otavalo**	70.94	302	*e*P	P	18 58 29.2	+1.3
	20nm,1.1s,mb5.0						
KMBO	**Kilima Mbogo**	74.31	67	LR	LR	19 30 44.1	
	comp=Z,83nm,19.9s,MS4.0,baz=338,slow=35						
KMBO	**Kilima Mbogo**	74.31	67	P	P	18 58 48.7	+0.9
	4.4nm,1.0s,mb4.3						
SDV	**Santo Domingo**	75.27	313	*e*P	P	18 58 53.5	+0.2
	7.8nm,0.7s,mb4.8						
ESLA	**Sonseca Array**	97.74	16	P	P	19 00 42.8	-1.4
	1.0nm,0.9s,mb4.3						
ASAR	**Alice Springs**	97.98	161	P	P	19 00 45.4	-0.3
	1.3nm,0.8s,mb4.5,baz=191,slow=4.2,SNR=20						
WRA	**Warramunga Arr**	101.69	160	P	P	19 01 01.8	-0.7
	0.5nm,0.6s,baz=196,slow=4.2,SNR=7.1						
SCHQ	**Schefferville**	116.25	335	PKP	PKPdf	19 05 51.4	-4.9
	0.5nm,0.5s,baz=338,slow=3.1,SNR=5.2						
PDAR	**Pinedale Array**	121.62	301	PKP	PKPdf	19 06 01.8	-5.2
	0.3nm,0.4s,baz=135,slow=4.2,SNR=5.8						
PDAR				PP	PP	19 07 37.4	-1.1
	1.0nm,1.1s,baz=106,slow=6.6,SNR=3.9						
NVAR	**Mina Array Bea**	122.65	291	PKP	PKPdf	19 06 07.3	-1.7
	0.3nm,0.4s,baz=90,slow=2.7,SNR=3.3						
CMAR	**Chiang Mai Arr**	123.82	109	PKP	PKPdf	19 06 07.8	-4.0
	1.4nm,0.7s,baz=232,slow=3.5,SNR=11						
FINES	**FINESS Array B**	124.52	27	PKP	PKPdf	19 06 07.8	-4.2
	0.8nm,0.5s,baz=112,slow=2.3,SNR=9.9						
WVOR	**Wild Horse Val**	125.81	294	*e*PKPdf	PKPdf	19 06 12.1	-2.8
MOD	**Modoc**	126.26	293	*e*PKPdf	PKPdf	19 06 12.4	-3.4
CHMT	**Chamberlain Mo**	126.47	302	*e*PKPdf	PKPdf	19 06 13.0	-3.1
BMO	**Blue Mountains**	126.91	297	*e*PKPdf	PKPdf	19 06 12.6	-4.3
NJ2	**Nanjing**	145.06	120	*e*PKP	PKPdf	19 06 46.6	-4.0
INK	**Inuvik**	147.03	320	PKPbc	PKPdf	19 06 51.6	-1.1
	4.8nm,0.6s,baz=55,slow=4.9,SNR=4.1						
HHC	**Hu-ho-hao-te**	148.06	101	*e*PKP	PKPdf	19 06 48.3	-7.0
HHC				LR	LR		
	comp=Z,102nm,19.0s,MS4.6						
SONM	**Songino Array**	149.71	86	PKPbc	PKPdf	19 06 59.2	+1.5
	comp=Z,5.6nm,0.6s,baz=224,slow=3.3,SNR=13						
ILAR	**Eielson Array**	151.38	310	PKPbc	PKPdf	19 07 02.5	+2.9
	comp=Z,15nm,1.0s,baz=139,slow=1.6,SNR=33						

DJA 24 18:52:11.1±1.0**, 8.72S×117.14E, h190^{km}**±6^{km}**, ML3.6**/2**, 8D, Error ellipse: s-maj=80.7km s-min=20.7km az=178.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	**Kedomdong**	1.05	283	⇓*e*Pg	P	18 52 40.4	0.0
	63nm,0.2s						
KEDI	**Kedomdong**	1.05	283	⇓*e*Pn	P	18 52 40.8	+0.4
KEDI				⇓*e*Sg	S	18 53 01.7	-1.3
RATI	**Rata**	1.59	270	⇓*e*Pn	P	18 52 45.4	+0.2
	79nm,0.2s						
RATI				⇓*e*Sn	S	18 53 09.8	-1.7
KELI	**Kelakatan**	2.67	281	⇓*e*Pn	P	18 52 57.2	+0.3
SRDI	**Scrawed**	2.98	274	⇓*e*Pn	P	18 53 00.2	-0.3
SRDI				⇓*e*Sn	S	18 53 37.4	-1.3

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*KRSC **24** 18:58:07.9±0.9, 49.86N×153.36E, h285^{km}±6^{km}, ML5.3*

*SKHL **24** 18:58:08.5±0.6, 50.07N×153.47E, h308^{km}±11^{km}, mb6.4/4, mbh6.2/2, Ms4.1/1, msh5.8/4*

*MOS **24** 18:58:09.2±0.9, 50.25N×153.07E, h267^{km}, mb5.2/99, Error ellipse: s-maj=6.3km s-min=3.6km az=96.3*

*BJI **24** 18:58:10.1, 50.24N×153.15E, h283^{km}, mB5.0, mb4.8*

*BGS **24** 18:58:11.5±2.1, 50.34N×152.99E, h270^{km}, mb5.3*

*HRVD **24** 18:58:11.0±0.4, 50.14N×153.62E, h280^{km}±2^{km}, MW5.0/58, Centroid moment Tensor Solution. LP body waves: s33,c47; Mantle waves: s58,c83; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.49±.15; M$_{\theta\theta}$-0.14±.17; M$_{\phi\phi}$2.63±.14; M$_{r\theta}$-2.09±.16; M$_{\theta\phi}$-0.86±.14; M$_{\phi r}$-2.91±.14; Best double couple: M$_0$4.415×10^{16} NP1: φ$_s$143°, δ29°, λ-143°. NP2: φ$_s$20°, δ73°, λ-66°. Principal axes: T 3.948, Plg25°, Azm91°; N .934, Plg22°, Azm192°; P -4.882, Plg56°, Azm319°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **24** 18:58:11.0±0.1, 50.34N×152.99E, mb5.0/184 Error ellipse: s-maj=3.9km s-min=2.5km az=168.0*

*IDC **24** 18:58:12.4±0.5, 50.35N×153.02E, h281^{km}±4^{km}, mb4.5/32, mb1 4.7/34, mb1mx4.7/36, mbtmp5.2/34, Error ellipse: s-maj=8.8km s-min=6.3km az=154.0*

ISC 24 18:58:09.9±0.2**, 50.27N**±0.02×**153.08E**±0.03**, h272^{km}**±1^{km}**, h271^{km}**±1.2^{km}**:pP-P, n784, σ0^{s}92**/849**, mb5.0**/246**, 33C-69D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	**Alaid**	1.68	68	*e*P	P	18 58 51.7	-0.3
ALID				*e*S	S	18 59 24.2	-0.5
SKR	**Severo-Kuril's**	1.98	77	⇓*i*PN	P	18 58 52.0	-2.3
SKR				*i* S	S	18 59 25.5	-3.4
SKR				pmax	pmax		
	comp=E,4μm,1.0s						
SKR				pmax	pmax		
	comp=Z,10μm,1.0s						
SKR				pmax	pmax		
	comp=Z,3μm,0.8s						
SKR				pmax	pmax		
	comp=E,330nm,0.4s						
SKR				smax			
	comp=E,5μm,0.9s						
SKR				smax			
	comp=N,5μm,0.8s						
SKR				smax			
	comp=N,23μm,6.0s						
SKR				smax			
	comp=E,26μm,4.0s						
SKR	**Severo-Kuril's**	1.98	77	*i* P	P	18 58 52.0	-2.3
SKR				*i* P		18 58 52.0	
SKR				AMB	AMB	18 58 52.4	
	comp=E,4μm,1.0s						
SKR				AMB	AMB	18 58 52.4	
	comp=E,10μm,1.0s						
SKR				AMB	AMB	18 58 52.4	
	comp=E,4μm,1.0s						
SKR				AMB	AMB	18 58 52.4	
	comp=E,9μm,1.0s						
SKR				AMB	AMB	18 58 52.9	
	comp=E,330nm,0.6s						
SKR				AMB	AMB	18 58 52.9	
	comp=E,820nm,0.6s						
SKR				AMB	AMB	18 58 52.9	
	comp=E,3μm,0.6s						
SKR				⇓*i*S	S	18 59 25.5	-3.4
SKR				A		18 59 27.5	
	comp=E,5μm,0.9s						
SKR				A		18 59 27.5	
	comp=E,5μm,0.9s						
SKR				A		18 59 27.5	
	comp=E,720nm,0.9s						
SKR				A		18 59 28.0	
	comp=E,22μm,5.0s						
SKR				A		18 59 28.0	
	comp=E,26μm,5.0s						
SKR				A		18 59 28.0	
	comp=E,8μm,5.0s						
SKR				A		18 59 28.0	
	comp=E,23μm,5.0s						
SKR				A		18 59 28.0	
	comp=E,26μm,5.0s						
SKR				A		18 59 28.0	
	comp=E,8μm,5.0s						
SKR	**Severo-Kuril's**	1.98	77	*i* P	P	18 58 52.0	-2.3
SKR				*i* S	S	18 59 25.5	-3.4
PAU	**Pauzhetka**	2.65	62	*i* P	P	18 59 01.5	+0.9
PAU				*i* S	S	18 59 43.3	+3.3
PAU	**Pauzhetka**	2.65	62	*i* P	P	18 59 01.7	+1.1
PAU				*e*S	S	18 59 39.3	-0.7
PAU				Smax			
	comp=E,4μm,1.0s						
APC	**Apacha**	3.68	42	*i* P	P	18 59 12.3	+0.7
APC				*i* S	S	18 59 58.9	-0.7
APC				Smax			
	comp=E,890nm,1.4s						
GRL	**Gorelyy**	3.87	52	*i* P	P	18 59 14.4	+0.7
GRL				*e*S	S	19 00 02.3	-1.2
RUS	**Russkaya**	4.03	56	P	P	18 59 15.5	-0.1
RUS				S	S	19 00 02.9	-3.9
RUS	**Russkaya**	4.03	56	*e*P	P	18 59 15.5	-0.1
RUS				*e*S	S	19 00 04.5	-2.3
KRMR	**Karymshinskiy**	4.06	49	*e*P	P	18 59 15.6	-0.3
KRMR				*e*S	S	19 00 05.1	-2.2
PET	**Petropavlovsk**	4.43	49	⇑*i*Pn	P	18 59 19.9	-0.3
PET				*e*Sn	S	19 00 14.4	-0.6
PET	**Petropavlovsk**	4.43	49	⇑*i*P	P	18 59 20.1	-0.1
PET				AMB	AMB	18 59 20.9	
	comp=E,800nm,1.0s						
PET				*e*S	S	19 00 12.8	-2.3
PET				*i* S	S	19 00 12.8	-2.3
PET				A		19 00 14.6	
	comp=E,4μm,8.6s						
PET				A		19 00 16.3	
	comp=E,4μm,7.7s						
PET				A		19 00 16.4	
	comp=E,460nm,0.8s						
PET				A		19 00 18.3	
	comp=E,610nm,0.9s						

PET				AMS	AMS	19 00 25.7	
	comp=E,2µm,13.0s						
PET				AMS	AMS	19 00 27.1	
	comp=E,2µm,13.0s						
PET				AMS	AMS	19 00 29.7	
	comp=E,2µm,14.0s						
PET	**Petropavlovsk**	**4.43**	**49**	*e*P	**P**	**18 59 20.4**	**+0.2**
PET				*e*S	**S**	**19 00 13.0**	**-2.1**
GNL	**Ganaly**	**4.56**	**39**	*i* P	**P**	**18 59 22.2**	**+0.5**
KOK	**Koryaka**	**4.59**	**47**	*i* P	**P**	**18 59 23.1**	**+1.1**
KOK				*i* S	**S**	**19 00 17.9**	**-0.4**
AVH	**Avacha**	**4.62**	**47**	*e*P	**P**	**18 59 23.3**	**+0.9**
AVH				*e*S	**S**	**19 00 17.9**	**-1.1**
UGLR	**Uglovaya**	**4.62**	**48**	*i* P	**P**	**18 59 23.7**	**+1.3**
UGLR				*i* S	**S**	**19 00 18.8**	**-0.3**
SMAR	**Somma**	**4.65**	**48**	*i* P	**P**	**18 59 23.6**	**+0.9**
SDLR	**Sedlovina**	**4.69**	**48**	*i* P	**P**	**18 59 23.7**	**+0.4**
NLC	**Nalytchevo**	**4.86**	**51**	P	**P**	**18 59 24.3**	**-0.9**
NLC				S	**S**	**19 00 18.8**	**-5.3**
NLC	**Nalytchevo**	**4.86**	**51**	*i* P	**P**	**18 59 24.3**	**-0.9**
NLC				*e*S	**S**	**19 00 19.6**	**-4.5**
SPN	**Mys Shipunski**	**5.16**	**54**	P	**P**	**18 59 27.7**	**-1.2**
SPN				S	**S**	**19 00 24.2**	**-6.4**
SPN	**Mys Shipunski**	**5.16**	**54**	*e*P	**P**	**18 59 27.8**	**-1.1**
SPN				*e*S	**S**	**19 00 25.9**	**-4.7**
KII	**Karymskiy**	**5.44**	**44**	P	**P**	**18 59 33.3**	**+1.1**
KII				S	**S**	**19 00 33.6**	**-3.0**
KII	**Karymskiy**	**5.44**	**44**	*e*P	**P**	**18 59 33.1**	**+0.9**
KII				*e*S	**S**	**19 00 34.7**	**-1.9**
KUR	**Kuril'sk**	**6.15**	**217**	*i* P	**P**	**18 59 38.6**	**-2.3**
KUR				AMB	AMB	18 59 39.2	
	comp=E,70nm,0.6s						
KUR				AMB	AMB	18 59 39.2	
	comp=E,300nm,0.6s						
KUR				A		19 00 58.4	
	comp=E,380nm,0.6s						
KUR				A		19 00 58.4	
	comp=E,340nm,0.6s						
ESO	**Esso**	**6.59**	**29**	*i* P	**P**	**18 59 48.1**	**+1.7**
ESO				*e*S	**S**	**19 01 01.7**	**-0.4**
ESO				Smax			
	comp=E,110nm,1.2s						
TUMR	**Tumrok**	**6.60**	**38**	*i* P	**P**	**18 59 48.0**	**+1.5**
TUMR				*e*S	**S**	**19 01 02.1**	**-0.1**
TYV	**Tymovskoe**	**6.67**	**279**	⇑*i*PN	**P**	**18 59 48.5**	**+1.2**
TYV				*e*S	**S**	**19 01 07.0**	**+3.3**
TYV				pmax	pmax		
	comp=Z,120nm,0.8s						
TYV				pmax	pmax		
	comp=Z,1µm,2.0s						
TYV				smax			
	comp=N,2µm,5.0s						
TYV				smax			
	comp=E,3µm,5.0s						
TYV				smax			
	comp=Z,4µm,5.0s						
KMNR	**Kamenistaya**	**6.98**	**35**	*i* P	**P**	**18 59 52.7**	**+1.4**
KMNR				*i* S	**S**	**19 01 08.8**	**-2.0**
OKH	**Okha**	**7.08**	**301**	*i* PN	**P**	**18 59 53.8**	**+1.3**
OKH				pmax	pmax		
	comp=Z,1µm,2.0s						
KOZ	**Kozyrevsk**	**7.09**	**33**	P	**P**	**18 59 54.3**	**+1.7**
KOZ	**Kozyrevsk**	**7.09**	**33**	*i* P	**P**	**18 59 54.2**	**+1.6**
KOZR	**Kozyr**	**7.10**	**33**	PN	**P**	**18 59 54.3**	**+1.6**
KPT	**Kopyto**	**7.14**	**34**	*e*P	**P**	**18 59 53.2**	**0.0**
SRDR	**Sredinnyy**	**7.24**	**31**	*e*P	**P**	**18 59 56.5**	**+2.0**
SRDR				*e*S	**S**	**19 01 16.3**	**-0.2**
UGL				*i* P	**P**	**18 59 55.8**	**+1.2**
UGL				*i* P		18 59 55.8	
UGL				AMB	AMB	18 59 56.5	
	comp=Z,2µm,2.0s						
UGL				AMB	AMB	18 59 56.5	
	comp=Z,1µm,2.0s						
UGL				AMB	AMB	18 59 56.5	
	comp=Z,190nm,0.6s						
ZLN	**Zelenaya**	**7.39**	**36**	*i* P	**P**	**18 59 57.8**	**+1.4**
KRSR	**Krestovskiy**	**7.45**	**34**	*e*P	**P**	**18 59 58.0**	**+0.8**
YSS	**Yuzh-Sakhalins**	**7.61**	**248**	⇑*i*Pn	**P**	**19 00 01.9**	**+2.8**
YSS				*e*Sn	**S**	**19 01 31.9**	**+7.1**
YUK	**Yuzh-Kuril'sk**	**7.94**	**221**	*e*PN	**P**	**19 00 02.1**	**-1.2**
YUK				*e*S	**S**	**19 01 28.3**	**-4.0**
YUK				pmax	pmax		
	comp=Z,6µm,0.2s						
YUK				pmax	pmax		
	comp=N,710nm,0.4s						
YUK				pmax	pmax		
	comp=E,1µm,0.5s						
YUK				smax			
	comp=N,420nm,0.5s						
YUK				smax			
	comp=E,770nm,0.5s						
YUK				smax			
	comp=E,2µm,1.0s						
YUK	**Yuzh-Kuril'sk**	**7.94**	**221**	*e*P	**P**	**19 00 02.1**	**-1.2**
YUK				AMB	AMB	19 00 03.6	
	comp=E,1µm,1.0s						
YUK				AMB	AMB	19 00 03.6	
	comp=E,6µm,1.0s						
YUK				AMB	AMB	19 00 03.6	
	comp=E,710nm,0.5s						
YUK				AMB	AMB	19 00 03.6	
	comp=E,1µm,0.5s						
YUK				AMB	AMB	19 00 03.6	
	comp=E,4µm,0.5s						
YUK				*e*S	**S**	**19 01 28.3**	**-4.0**
YUK				A		19 01 33.6	
	comp=E,420nm,0.5s						
YUK				A		19 01 33.6	
	comp=E,770nm,0.5s						
YUK				A		19 01 33.6	
	comp=E,2µm,1.0s						
SVLR	**Shiveluch**	**7.96**	**34**	*i* P	**P**	**19 00 04.7**	**+1.1**
SVLR				*e*S	**S**	**19 01 29.8**	**-3.0**
KBG	**Krutoberegovo**	**8.31**	**40**	*i* P	**P**	**19 00 07.4**	**-0.5**
KBG				Smax			
	comp=E,1µm,0.8s						
KBG	**Krutoberegovo**	**8.31**	**40**	*i* P	**P**	**19 00 07.8**	**-0.1**
KBG				*i* S	**S**	**19 01 35.8**	**-4.8**
KBG				Smax			
	comp=E,870nm,0.7s						
KBTR	**Krutoberegovo**	**8.33**	**41**	P	**P**	**19 00 07.6**	**-0.5**
KBTR				S	**S**	**19 01 35.4**	**-5.5**
KBTR	**Krutoberegovo**	**8.33**	**41**	*i* P	**P**	**19 00 08.3**	**+0.2**
KBTR				*i* S	**S**	**19 01 36.8**	**-4.1**
JWK2	**Keihoku**	**9.01**	**241**	P	**P**	**19 00 20.6**	**+4.0**
BKI	**Bering**	**9.24**	**53**	*i* P	**P**	**19 00 17.6**	**-2.0**
MA2	**Magadan**	**9.42**	**353**	*de*PN	**P**	**19 00 23.4**	**+1.7**
MA2				*e*S	**S**	**19 02 07.6**	**+2.2**
MA2				pmax	pmax		
	comp=Z,30nm,0.9s						
MA2				pmax	pmax		
	comp=N,20nm,1.0s						
MA2	**Magadan**	**9.42**	**353**	⇓*i*Pn	**P**	**19 00 23.3**	**+1.6**
	comp=N,42nm,0.7s						
MA2				*e*Sn	**S**	**19 02 11.2**	**+5.7**
ASAJ	**Asahikawa**	**9.42**	**233**	PN	**P**	**19 00 24.0**	**+2.2**
ASAJ				S	**S**	**19 02 09.5**	**+4.0**
ASAJ				pmax	pmax		
	comp=Z,34nm,0.3s						
ASAJ	**Asahikawa**	**9.42**	**233**	P	**P**	**19 00 23.9**	**+2.2**
	comp=Z,34nm,0.3s,baz=75,slow=12,SNR=325						
ASAJ				S	**S**	**19 02 09.5**	**+4.0**
	baz=143,slow=15,SNR=2.3						
OSSR	**Ossora**	**10.67**	**29**	P	**P**	**19 00 35.0**	**-2.2**
JEM	**Erimo**	**10.74**	**224**	P	**P**	**19 00 34.7**	**-3.5**
JEM				S	**S**	**19 02 26.8**	**-8.5**
JEW	**Eniwo**	**10.92**	**232**	P	**P**	**19 00 40.7**	**+0.3**
JEW				S	**S**	**19 02 36.6**	**-2.6**
JSH	**Shimam**	**11.78**	**235**	P	**P**	**19 00 50.9**	**-0.2**
JOT	**Ohata**	**12.21**	**228**	P	**P**	**19 00 52.1**	**-4.4**
JOT				S	**S**	**19 02 57.7**	**-11**
TEY	**Ternei**	**12.28**	**251**	*e*P	**P**	**19 00 58.0**	**+0.7**
TEY				*e*S	**S**	**19 03 16.0**	**+6.4**
TEY				A		19 03 20.0	
	comp=Z,110nm,1.3s						
TEY				A		19 03 20.0	
	comp=Z,260nm,1.3s						
TEY				A		19 03 23.0	
	comp=Z,2µm,5.0s						
TEY				A		19 03 23.0	
	comp=Z,1µm,5.0s						
JTM	**Tenmabayashi**	**12.67**	**226**	P	**P**	**19 00 57.0**	**-5.1**
JTM				S	**S**	**19 03 06.4**	**-12**
SEY	**Seymchan**	**12.70**	**359**	*e*PN	**P**	**19 01 06.3**	**+3.9**
SEY				*e*S	**S**	**19 03 25.3**	**+6.3**
SEY				pmax	pmax		
	comp=Z,70nm,0.7s						
SEY				pmax	pmax		
	comp=N,50nm,0.8s						
SEY				pmax	pmax		
	comp=E,40nm,0.8s						
SEY				smax			
	comp=N,300nm,5.9s						
SEY				smax			
	comp=E,300nm,4.9s						
FX1	**Attu Island--F**	**12.76**	**70**	PN	**P**	**19 01 03.7**	**+0.6**
FX1				S	**S**	**19 03 21.8**	**+1.5**
FX1				pmax	pmax		
	comp=Z,26nm,0.3s						
FX1	**Attu Island--F**	**12.76**	**70**	P	**P**	**19 01 03.7**	**+0.6**
	comp=Z,26nm,0.3s,baz=111,slow=21,SNR=71						
FX1				S	**S**	**19 03 21.8**	**+1.5**
	comp=Z,40nm,0.3s,baz=88,slow=18,SNR=8.5						
SMY	**Shemya**	**13.32**	**71**	*e*PN	**P**	**19 01 10.1**	**+0.1**
SMY				pmax	pmax		
	comp=Z,637nm,0.9s						
SMY	**Shemya**	**13.32**	**71**	*e*P	**P**	**19 01 10.1**	**+0.1**
	comp=Z,637nm,0.9s						
KLR	**Kul'dur**	**13.83**	**274**	⇓*i*P	**P**	**19 01 17.7**	**+1.6**
KLR				*e*S	**S**	**19 03 52.3**	**+8.5**
KLR				pmax	pmax		
	comp=N,28nm,1.4s						
KLR				pmax	pmax		
	comp=E,52nm,1.4s						
KLR				pmax	pmax		
	comp=Z,70nm,1.4s						
KLR				smax			
	comp=N,1µm,9.5s						
KLR				smax			
	comp=E,1µm,9.5s						
KLR	**Kul'dur**	**13.83**	**274**	*e*P	**P**	**19 01 17.5**	**+1.4**
KLR				*i* P		19 01 17.7	
KLR				AMB	AMB	19 01 18.9	
	comp=E,28nm,1.4s						
KLR				AMB	AMB	19 01 18.9	
	comp=E,52nm,1.4s						
KLR				AMB	AMB	19 01 18.9	
	comp=E,70nm,1.4s						
KLR				*e*S	**S**	**19 03 52.3**	**+8.5**
KLR				*e*S	**S**	**19 03 53.0**	**+9.2**
KLR				A		19 03 57.5	
	comp=E,1µm,9.5s						
KLR				A		19 03 57.5	
	comp=E,1µm,9.5s						
KAMR	**Kamenskoye**	**14.17**	**26**	*e*P	**P**	**19 01 22.2**	**+2.0**
JYA	**Atsumi**	**15.05**	**224**	P	**P**	**19 01 29.1**	**-2.0**
JMM	**Marumori**	**15.20**	**220**	P	**P**	**19 01 31.0**	**-1.7**
JMM				S	**S**	**19 04 08.3**	**-5.9**
BMKR	**Bomnak**	**15.38**	**296**	*i* P	**P**	**19 01 33.5**	**-1.3**
BMKR				AMB	AMB	19 01 34.8	
	comp=E,100nm,0.7s						
BMKR				AMB	AMB	19 01 34.8	
	comp=E,138nm,0.7s						
BMKR				AMB	AMB	19 01 34.8	
	comp=E,258nm,0.7s						
YASR	**Yasnyy**	**15.80**	**291**	*e*P	**P**	**19 01 38.3**	**-1.1**
YASR				AMB	AMB	19 01 39.1	
	comp=E,8.0nm,0.7s						
YASR				AMB	AMB	19 01 39.1	
	comp=E,24nm,0.7s						
YASR				AMB	AMB	19 01 39.1	
	comp=E,42nm,0.7s						
JSD	**Sado**	**16.17**	**226**	P	**P**	**19 01 42.2**	**-1.5**
ZEA	**Zeya**	**16.24**	**292**	*e*P	**P**	**19 01 41.6**	**-2.7**
ZEA				AMB	AMB	19 01 42.9	
	comp=E,93nm,1.4s						
ZEA				AMB	AMB	19 01 42.9	
	comp=E,58nm,1.2s						
ZEA				AMB	AMB	19 01 45.0	
	comp=E,300nm,2.0s						
ZEA				AMB	AMB	19 01 45.0	
	comp=E,200nm,2.0s						
ZEA				*e*S	**S**	**19 04 39.0**	**+2.7**
ZEA				A		19 04 42.0	
	comp=E,700nm,6.0s						
ZEA				AMS	AMS	19 07 32.0	
	comp=E,200nm,12.0s						
MDJ	**Mudanjiang**	**16.83**	**259**	P	**P**	**19 01 50.1**	**-0.6**
MDJ				XP		19 03 03.3	
MDJ				S	**S**	**19 04 48.0**	**-0.1**
MDJ				PCS		19 09 56.4	
MDJ				SCS	ScS	19 13 05.5	-3.1
MDJ				AMB	AMB		
	comp=Z,106nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,43nm,3.2s						
MDJ	**Mudanjiang**	**16.83**	**259**	*e*P	**P**	**19 01 49.5**	**-1.2**
	comp=Z,78nm,0.8s						
JYT	**Yasato**	**16.85**	**218**	P	**P**	**19 01 50.1**	**-0.9**
JYT				S	**S**	**19 04 47.7**	**-0.8**
MAJO	**Matsushiro**	**17.42**	**224**	⇑*e*P	**P**	**19 01 56.3**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,284nm,0.6s						
MAJO	**Matsushiro**	**17.42**	**224**	⇑*e*P	**P**	**19 01 56.3**	**-0.7**
	comp=Z,284nm,0.6s						
MAT	**Matsushiro**	**17.42**	**224**	*e*P	**P**	**19 01 56.0**	**-1.0**
MAT				*e*S	**S**	**19 05 08.0**	**+8.4**
MAT				pmax	pmax		
	comp=Z,232nm,0.7s						
MAT	**Matsushiro**	**17.42**	**224**	*e*P	**P**	**19 01 56.0**	**-1.0**
	comp=Z,232nm,0.7s						
MAT				*e*S	**S**	**19 05 08.0**	**+8.4**
MAT	**Matsushiro**	**17.42**	**224**	P	**P**	**19 01 56.1**	**-0.9**
MAT				S	**S**	**19 05 03.9**	**+4.3**
MAT	**Matsushiro**	**17.42**	**224**	P	**P**	**19 01 56.4**	**-0.6**
YAK	**Yakutsk**	**17.44**	**321**	*d* *i*P	**P**	**19 01 56.9**	**-0.1**
YAK				*e*S	**S**	**19 05 03.5**	**+3.7**
YAK				pmax	pmax		
	comp=E,59nm,0.8s						
YAK				pmax	pmax		
	comp=Z,241nm,0.8s						
YAK				pmax	pmax		
	comp=N,39nm,1.1s						
YAK				smax			
	comp=N,117nm,1.1s						
YAK				smax			
	comp=E,48nm,0.9s						
YAK	**Yakutsk**	**17.44**	**321**	⇓*i*P	**P**	**19 01 56.7**	**-0.3**
	comp=E,872nm,0.9s						
YAK				*e*S	**S**	**19 05 03.5**	**+3.7**
JRY	**Ryogami san**	**17.56**	**221**	P	**P**	**19 01 58.4**	**0.0**
CLNS	**Chul'man**	**17.90**	**302**	⇓*i*P	**P**	**19 02 03.6**	**+1.9**
CLNS				*e*S	**S**	**19 05 17.9**	**+9.3**
CLNS				pmax	pmax		
	comp=Z,101nm,0.7s						
CLNS				pmax	pmax		
	comp=N,73nm,0.8s						
CLNS				pmax	pmax		
	comp=E,143nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,66nm,0.8s						
CLNS				pmax	pmax		
	comp=N,50nm,0.7s						
CLNS				pmax	pmax		
	comp=E,49nm,0.7s						
CLNS				smax			
	comp=N,113nm,1.6s						
CLNS				smax			
	comp=Z,28nm,1.4s						
CLNS				smax			
	comp=E,48nm,1.3s						
CLNS				MLR	MLR		
	comp=Z,100nm,12.0s						
CLNS				MLR	MLR		
	comp=N,100nm,14.0s						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s						
JGF	**Kuroka**	**18.58**	**224**	P	**P**	**19 02 09.2**	**+0.3**
KIWB	**Kanaga Island**	**18.72**	**74**	*e*P	**P**	**19 02 08.1**	**-2.0**
BILL	**Bilibino**	**18.98**	**15**	⇑*i*P	**P**	**19 02 12.2**	**-0.4**
BILL				*e*S	**S**	**19 05 32.2**	**+3.4**
BILL				pmax	pmax		
	comp=Z,29nm,0.9s						
BILL	**Bilibino**	**18.98**	**15**	*e*P	**P**	**19 02 11.8**	**-0.8**
	comp=Z,34nm,0.8s						
BILL				*e*S	**S**	**19 05 34.0**	**+5.1**
JWT	**Wachi**	**19.74**	**227**	P	**P**	**19 02 21.2**	**+0.7**
CN2	**Changchun**	**19.84**	**262**	⇑P	**P**	**19 02 20.8**	**-0.6**
CN2				*e*XP		19 03 38.1	
CN2				*e*S	**S**	**19 05 42.8**	**-2.0**
CN2				AMB	AMB		
	comp=Z,40nm,1.0s						
CN2				AMB	AMB		
	comp=Z,900nm,4.0s						
JAD	**Aida**	**20.61**	**229**	P	**P**	**19 02 30.8**	**+1.8**
JWZ	**Kozaga**	**21.05**	**224**	P	**P**	**19 02 35.6**	**+2.2**
JHS	**Saijyo**	**21.08**	**231**	P	**P**	**19 02 35.7**	**+2.1**
HIA	**Hailar**	**21.46**	**280**	*e*P	**P**	**19 02 38.0**	**+0.8**
HIA				pmax	pmax		
	comp=Z,107nm,0.8s						
HIA	**Hailar**	**21.46**	**280**	*e*P	**P**	**19 02 38.0**	**+0.8**
	comp=Z,107nm,0.8s,mb5.2						
SNY	**Shenyang**	**22.03**	**259**	⇑P	**P**	**19 02 44.4**	**+1.6**
SNY				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.6						
KS15	**Wonju Array Si**	**22.11**	**244**	*e*P	**P**	**19 02 45.8**	**+2.2**
JNU	**Nakatsue**	**23.70**	**232**	P	**P**	**19 02 59.8**	**+1.2**
BOD	**Bodaibo**	**23.87**	**304**	*e*P	**P**	**19 02 58.8**	**-1.1**
BOD				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.3						
TIXI	**Tiksi**	**24.10**	**341**	⇓*i*P	**P**	**19 03 02.1**	**+0.2**
TIXI				*e*S	**S**	**19 07 01.2**	**+3.8**
TIXI				pmax	pmax		
	comp=Z,147nm,1.1s,mb5.2						
TNA	**Tin City**	**25.19**	**38**	⇓*i*P	**P**	**19 03 12.1**	**+0.2**
	comp=Z,17nm,0.9s,mb4.5						
BJI	**Beijing**	**27.70**	**263**	*e*P	**P**	**19 03 33.5**	**-1.5**
BJI				AP	pP	19 04 31.4	+4.0
BJI				S	**S**	**19 07 59.4**	**+3.6**
BJI				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.2						
BJI	**Beijing**	**27.70**	**263**	*e*P	**P**	**19 03 33.5**	**-1.5**
BJI				S	**S**	**19 07 59.4**	**+3.6**
BJI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.2						
BJI	**Beijing**	**27.70**	**263**	*e*P	**P**	**19 03 33.5**	**-1.5**
	comp=Z,12nm,1.3s,mb4.2						
BJI				pP	pP	19 04 31.4	+4.0
BJI				S	**S**	**19 07 59.4**	**+3.6**
BJI				sS		19 09 38.3	
BJT	**Baijiatuau**	**27.72**	**263**	*e*P	**P**	**19 03 33.1**	**-2.0**
BJT				pmax	pmax		
	comp=Z,16nm,1.0s						
BJT	**Baijiatuau**	**27.72**	**263**	*e*P	**P**	**19 03 33.1**	**-2.0**
	comp=Z,16nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**29.88**	**283**	⇓*i*P	**P**	**19 03 54.1**	**-0.1**
ULN				*e*		19 06 49.3	
ULN				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**29.88**	**283**	⇓*i*P	**P**	**19 03 54.1**	**0.0**
	comp=Z,47nm,0.9s,mb5.0						
ULN				*e*PcP	PcP	19 06 49.3	-0.6
ULN				*e*ScP		19 10 04.1	
SVW2	**Sparrevohn**	**30.10**	**49**	*e*P	**P**	**19 03 56.2**	**+0.2**
IRK	**Irkutsk**	**30.15**	**293**	*e*P	**P**	**19 03 56.0**	**-0.5**
IRK				*e*		19 05 13.9	
HHC	**Hu-ho-hao-te**	**30.21**	**268**	*e*P	**P**	**19 03 56.8**	**-0.3**
HHC				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
HHC				LR	LR		
	comp=N,473nm,19.0s						
HHC				LR	LR		
	comp=E,457nm,20.2s						
HHC				LR	LR		
	comp=Z,171nm,14.3s						
SONM	**Songino Array**	**30.30**	**284**	P	**P**	**19 03 57.9**	**0.0**
	comp=Z,5.7nm,0.4s,mb4.4,baz=71,slow=7.7,SNR=108						
SONM				PcP	PcP	19 06 50.0	-1.1
	comp=Z,5.3nm,0.5s,baz=92,slow=2.0,SNR=12						
SONM				ScP		19 10 05.7	
	comp=Z,5.4nm,0.9s,baz=65,slow=2.8,SNR=17						
SSE	**Sheshan**	**30.51**	**243**	*e*P	**P**	**19 03 59.8**	**-0.1**
SSE				AP	pP	19 04 54.8	+1.4
SSE				XP	sP	19 05 25.3	+0.3
SSE				S	**S**	**19 08 41.3**	**+1.1**
SSE				XS		19 10 15.8	
SSE				AMB	AMB		
	comp=Z,35nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,184nm,4.1s						
SSE				LR	LR		
	comp=N,30nm,21.7s						
SSE				LR	LR		
	comp=E,51nm,21.6s						
SSE				LR	LR		
	comp=Z,33nm,24.2s						
SSE	**Sheshan**	**30.51**	**243**	*e*P	**P**	**19 03 59.7**	**-0.2**
	comp=Z,35nm,0.7s,mb5.0						
SSE				pP	pP	19 04 54.8	+1.4
SSE				sP	sP	19 05 25.3	+0.3
SSE				S	**S**	**19 08 41.2**	**+1.0**
SSE				sS		19 10 15.8	
SSE				SS	SS	19 10 58.0	+11
TLY	**Talaya**	**30.68**	**292**	P	**P**	**19 04 02.3**	**+1.2**
	comp=Z,858nm,0.8s,SNR=43						
TLY	**Talaya**	**30.68**	**292**	*e*P	**P**	**19 04 01.9**	**+0.8**
TLY				*e*	pP	19 04 51.8	-3.0
TLY				pmax	pmax		
	comp=Z,107nm,0.9s,mb5.4						
IMA	**Indian Mountai**	**31.03**	**39**	*e*P	**P**	**19 04 03.8**	**-0.2**
IMA				*e*		19 06 52.3	
IMA				pmax	pmax		
	comp=Z,46nm,0.6s,mb5.2						
IMA	**Indian Mountai**	**31.03**	**39**	*e*P	**P**	**19 04 03.8**	**-0.1**
	comp=Z,46nm,0.6s,mb5.2						
IMA				*e*PcP	PcP	19 06 52.3	-0.4
NJ2	**Nanjing**	**31.18**	**247**	*e*P	**P**	**19 04 06.3**	**+0.7**
NJ2				AP	pP	19 05 02.4	+3.0
NJ2				PP	PP	19 05 23.1	+2.4
NJ2				XP	sP	19 05 35.4	+4.6
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
NJ2				LR	LR		
	comp=N,170nm,12.2s						
NJ2				LR	LR		
	comp=E,1µm,18.9s						
NJ2				LR	LR		
	comp=Z,530nm,15.0s						
ZAK	**Zakamensk**	**31.31**	**290**	⇑*i*P	**P**	**19 04 07.4**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,78nm,1.0s,mb5.2						
BTO	**Baotou**	**31.33**	**269**	*e*P	**P**	**19 04 05.3**	**-1.5**
MOY	**Mondy**	**32.26**	**293**	⇓*e*P	**P**	**19 04 15.9**	**+1.2**
MOY				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.0						
MCK	**McKinley**	**33.05**	**44**	⇑*i*P	**P**	**19 04 21.4**	**0.0**
MCK				*e*		19 07 04.3	
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
MCK	**McKinley**	**33.05**	**44**	⇑*i*P	**P**	**19 04 21.4**	**0.0**
	comp=Z,9.2nm,0.8s,mb4.4						
MCK				*e*PcP	PcP	19 07 04.3	+6.0
COLA	**College**	**33.45**	**42**	*e*P	**P**	**19 04 24.9**	**+0.1**
SML	**Sawmill**	**33.51**	**47**	*e*P	**P**	**19 04 25.1**	**-0.2**
SML				*e*		19 06 57.8	
ILAR	**Eielson Array**	**33.87**	**42**	P	**P**	**19 04 27.9**	**-0.5**
	comp=Z,5.2nm,0.4s,mb4.4,baz=273,slow=5.7,SNR=120						
ILAR				pP	pP	19 05 24.1	+1.3
	comp=Z,4.4nm,0.8s,baz=264,slow=8.6,SNR=4.0						
ILAR				PcP	PcP	19 06 58.0	-2.6
	comp=Z,1.6nm,0.5s,baz=291,slow=3.7,SNR=4.8						
ILAR				S	**S**	**19 09 27.1**	**-4.7**
	comp=Z,2.7nm,1.1s,baz=267,slow=13,SNR=6.7						
ILAR				ScP		19 10 17.1	
	comp=Z,1.0nm,0.8s,baz=274,slow=3.5,SNR=5.2						
THY	**Trims Highway**	**34.49**	**44**	*e*P	**P**	**19 04 33.1**	**-0.5**
THY				*e*PcP	PcP	19 07 01.5	-1.0
WHN	**Wuhan**	**34.95**	**250**	*e*P	**P**	**19 04 38.8**	**+1.0**
XAN	**Xi'an**	**35.94**	**260**	P	**P**	**19 04 46.1**	**0.0**
XAN				AMB	AMB		
	comp=Z,14nm,1.3s,mb4.3						
DAWY	**Dawson**	**37.18**	**42**	*e*P	**P**	**19 04 56.3**	**+0.1**
DAWY				*e*		19 06 53.8	
GUMO	**Guam**	**37.19**	**193**	*e*P	**P**	**19 04 58.1**	**+1.3**
GUMO				pmax	pmax		
	comp=Z,367nm,1.3s,mb5.7						
GUMO	**Guam**	**37.19**	**193**	*e*P	**P**	**19 04 58.1**	**+1.3**
	comp=Z,367nm,1.3s,mb5.7						
LZH	**Lanzhou**	**37.89**	**267**	⇓P	**P**	**19 05 03.6**	**+1.2**
LZH				AP	pP	19 06 00.3	+2.4
LZH				XP	sP	19 06 30.4	+1.4
LZH				PCP	PcP	19 07 13.0	0.0
LZH				S	**S**	**19 10 33.0**	**-0.3**
LZH				PCS		19 11 01.6	

LZH				AMB	AMB		
	comp=Z,180nm,1.1s,mb5.4						
LZH				AMB	AMB		
	comp=Z,380nm,4.0s						
LZH				LR	LR		
	comp=N,420nm,17.6s						
LZH				LR	LR		
	comp=Z,350nm,18.9s						
LZH	**Lanzhou**	**37.89**	**267**	⇓P	**P**	**19 05 03.6**	**+1.2**
LZH				*PP	pP	19 06 00.2	+2.3
LZH				*SP	sP	19 06 30.4	+1.4
LZH						19 07 13.0	
LZH				S	**S**	**19 10 33.0**	**-0.3**
LZH				*SS		19 12 12.0	
LZH				SS	SS	19 13 33.4	+6.3
LZH						19 14 46.9	
LZH				pmax	pmax		
	comp=Z,180nm,1.1s,mb5.4						
LZH	**Lanzhou**	**37.89**	**267**	⇓P	**P**	**19 05 03.6**	**+1.2**
	comp=Z,180nm,1.1s,mb5.4						
LZH				pP	pP	19 06 00.2	+2.3
LZH				sP	sP	19 06 30.4	+1.4
LZH				PcP	PcP	19 07 13.0	0.0
LZH				S	**S**	**19 10 33.0**	**-0.3**
LZH				ScP		19 10 43.1	
LZH				PcS		19 11 01.6	
LZH				sS		19 12 12.0	
LZH				SS	SS	19 13 33.4	+6.3
LZH				ScS	ScS	19 14 46.9	+5.2
ENH	**Enshi**	**38.12**	**255**	*e*P	**P**	**19 05 03.6**	**-0.7**
	comp=Z,34nm,0.8s,mb4.8						
ENH				*e*PcP	PcP	19 07 13.3	-0.4
GTA	**Gaotai**	**38.53**	**275**	⇓*i*P	**P**	**19 05 08.8**	**+1.2**
GTA				AP	pP	19 06 04.3	+1.1
GTA				XP	sP	19 06 35.5	+1.2
GTA				PP	PP	19 06 47.3	+3.8
GTA				PCP	PcP	19 07 14.8	-0.1
GTA				SCP		19 10 35.6	
GTA				S	**S**	**19 10 43.3**	**+0.5**
GTA				PCS		19 10 59.6	
GTA				SS	SS	19 13 37.5	-1.6
GTA				SCS	ScS	19 14 46.3	+1.0
GTA				AMB	AMB		
	comp=Z,52nm,1.0s,mb4.9						
GTA				AMB	AMB		
	comp=Z,114nm,4.6s						
GTA				LR	LR		
	comp=N,116nm,16.7s						
GTA				LR	LR		
	comp=E,81nm,13.3s						
GTA				LR	LR		
	comp=Z,101nm,16.7s						
INK	**Inuvik**	**38.73**	**35**	P	**P**	**19 05 09.7**	**+0.8**
INK				S	**S**	**19 10 44.8**	**-0.6**
INK				pmax	pmax		
	comp=Z,24nm,0.3s						
INK	**Inuvik**	**38.73**	**35**	P	**P**	**19 05 09.7**	**+0.8**
	comp=Z,24nm,0.3s,mb5.1,baz=299,slow=6.9,SNR=275						
INK				S	**S**	**19 10 44.8**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=3.5,slow=19,SNR=4.4						
INK	**Inuvik**	**38.73**	**35**	⇓*i*P	**P**	**19 05 09.7**	**+0.7**
	comp=Z,37nm,0.5s,mb5.1						
INK				*e*PP	PP	19 06 48.4	+3.1
ZAL	**Zalesovo**	**40.63**	**302**	*i* P	**P**	**19 05 24.7**	**0.0**
ZAL				pmax	pmax		
	comp=Z,28nm,0.4s						
ZAL	**Zalesovo**	**40.63**	**302**	P	**P**	**19 05 24.7**	**0.0**
	comp=Z,28nm,0.4s,mb4.8,baz=49,slow=6.8,SNR=107						
ZAL				PcP	PcP	19 07 20.5	-1.0
	comp=Z,14nm,0.8s,baz=41,slow=3.0,SNR=13						
ZAL				S	**S**	**19 11 10.2**	**-3.6**
	comp=Z,2.6nm,1.0s,baz=186,slow=23,SNR=13						
NVS	**Novosibirsk**	**41.10**	**304**	⇓*i*P	**P**	**19 05 28.2**	**-0.3**
NVS				*e*		19 07 21.1	
NVS				*e*S	**S**	**19 11 11.1**	**-10**
NVS				pmax	pmax		
	comp=Z,133nm,1.3s,mb5.0						
NVS				pmax	pmax		
	comp=N,62nm,1.5s						
NVS				pmax	pmax		
	comp=E,102nm,1.5s						
NVS				smax			
	comp=E,24nm,1.6s						
CD2	**Chengdu**	**41.28**	**261**	P	**P**	**19 05 31.9**	**+1.7**
GYA	**Guiyang**	**42.57**	**254**	⇑*i*P	**P**	**19 05 40.3**	**-0.3**
GYA				PP	PP	19 07 24.4	-0.7
GYA				S	**S**	**19 11 38.1**	**-4.2**
GYA				SCS	ScS	19 15 11.3	+1.7
GYA				AMB	AMB		
	comp=Z,30nm,0.6s,mb4.7						
GYA				AMB	AMB		
	comp=Z,250nm,3.6s						
DLBC	**Dease Lake**	**43.21**	**48**	P	**P**	**19 05 47.2**	**+1.9**
	comp=Z,7.4nm,0.7s,mb4.0,baz=305,slow=7.4,SNR=9.9						
DLBC	**Dease Lake**	**43.21**	**48**	*e*P	**P**	**19 05 46.1**	**+0.7**
WMQ	**Urumqi**	**43.73**	**288**	⇓P	**P**	**19 05 50.6**	**+0.9**
WMQ				S	**S**	**19 11 55.0**	**-3.7**
WMQ				AMB	AMB		
	comp=Z,58nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,584nm,18.0s						
WMQ				LR	LR		
	comp=E,798nm,18.0s						
WMQ				LR	LR		
	comp=Z,617nm,18.0s						
MKAR	**Makanchi Array**	**45.38**	**294**	*i* P	**P**	**19 06 02.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,163nm,1.0s						
KURK	**Kurchatov**	**45.47**	**301**	⇓*i*P	**P**	**19 06 03.5**	**+0.2**
KURK				*e**PP	pP	19 07 03.6	+3.2
KURK				*e*		19 07 36.6	
KURK				pmax	pmax		
	comp=Z,285nm,1.0s,mb5.5						
KURK	**Kurchatov**	**45.47**	**301**	⇓*i*P	**P**	**19 06 03.5**	**+0.2**
	comp=Z,285nm,1.0s,mb5.5						
KURK				*e*pP	pP	19 07 03.6	+3.2
KURK				*e*PcP	PcP	19 07 36.6	-1.2
KMI	**Kunming**	**45.97**	**256**	P	**P**	**19 06 07.5**	**-0.1**
KMI				AP	pP	19 07 06.5	+1.7
KMI				XP	sP	19 07 40.3	+4.7
KMI				PP	PP	19 08 01.3	+2.9
KMI				S	**S**	**19 12 29.4**	**-1.5**
KMI				XS		19 14 15.3	
KMI				AMB	AMB		
	comp=Z,34nm,0.9s,mb4.7						
KMI				AMB	AMB		
	comp=Z,77nm,3.2s						
KMI				LR	LR		
	comp=N,77nm,14.2s						
KMI				LR	LR		
	comp=E,107nm,15.3s						
KMI				LR	LR		
	comp=Z,53nm,12.7s						
KMI	**Kunming**	**45.97**	**256**	P	**P**	**19 06 07.5**	**-0.1**
KMI				*PP	pP	19 07 06.5	+1.7
KMI				*SP	sP	19 07 40.2	+4.6
KMI						19 08 01.2	
KMI				pmax	pmax		
	comp=Z,34nm,0.9s,mb4.7						
KMI	**Kunming**	**45.97**	**256**	P	**P**	**19 06 07.5**	**-0.1**
	comp=Z,34nm,0.9s,mb4.7						
KMI				pP	pP	19 07 06.5	+1.7
KMI				sP	sP	19 07 40.2	+4.6
KMI				PP	PP	19 08 01.2	+2.8
KMI				S	**S**	**19 12 29.4**	**-1.5**
KMI				sS		19 14 15.3	
QIZ	**Qiongzhong**	**46.30**	**244**	P	**P**	**19 06 10.8**	**+0.5**
QIZ				XP	sP	19 07 45.3	+6.9
QIZ				S	**S**	**19 12 37.9**	**+2.2**
QIZ				XS		19 14 21.5	
QIZ				AMB	AMB		
	comp=Z,35nm,1.3s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,121nm,3.7s						
RES	**Resolute Bay**	**47.51**	**20**	⇓*i*P	**P**	**19 06 18.5**	**-0.4**
RES				*e*		19 07 43.9	
RES				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.0						
RES	**Resolute Bay**	**47.51**	**20**	⇓*i*P	**P**	**19 06 18.5**	**-0.4**
	comp=Z,66nm,0.8s,mb5.0						
RES				*e*PcP	PcP	19 07 43.9	-0.9
YKW3	**Yellowknife Ar**	**48.10**	**38**	⇓*i*P	**P**	**19 06 23.8**	**+0.2**
YKW3				*e*PcP	PcP	19 07 41.9	-5.1
YKA	**Yellowknife Ar**	**48.14**	**39**	P	**P**	**19 06 24.2**	**+0.3**
YKA				*PP	pP	19 07 22.5	+0.7
YKA						19 07 46.2	
YKA				S	**S**	**19 13 02.9**	**+2.1**
YKA	**Yellowknife Ar**	**48.14**	**39**	P	**P**	**19 06 24.1**	**+0.2**
	comp=Z,21nm,0.7s,mb4.6,baz=300,slow=7.3,SNR=250						
YKA				pP	pP	19 07 22.4	+0.6
	comp=Z,2.0nm,0.8s,baz=300,slow=7.4,SNR=1.7						
YKA				PcP	PcP	19 07 46.1	-1.1
	comp=Z,1.8nm,0.4s,baz=306,slow=3.6,SNR=8.9						
YKA				ScP		19 11 14.0	
	comp=Z,0.5nm,0.7s,baz=295,slow=4.6,SNR=4.5						
YKA				S	**S**	**19 13 02.8**	**+2.0**
	comp=Z,1.9nm,1.1s,baz=302,slow=13,SNR=6.4						
BVA0	**Borovoye Array**	**48.66**	**307**	P	**P**	**19 06 27.9**	**0.0**
BVA0				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.1						
BVAR	**Borovoye Array**	**48.66**	**307**	P	**P**	**19 06 27.9**	**0.0**
	comp=Z,35nm,0.4s,mb5.0,baz=56,slow=8.1,SNR=415						
BVAR				PcP	PcP	19 07 48.2	-1.0
	comp=Z,23nm,0.4s,baz=84,slow=3.1,SNR=18						
BVAR				ScP		19 11 16.8	
	comp=Z,1.3nm,0.6s,baz=34,slow=5.2,SNR=3.2						
BVAR				S	**S**	**19 13 07.1**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=56,slow=16,SNR=7.6						
LSA	**Lhasa**	**50.15**	**270**	P	**P**	**19 06 41.4**	**+1.9**
LSA				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.8						
LSA	**Lhasa**	**50.15**	**270**	*e*P	**P**	**19 06 40.8**	**+1.3**
LSA				*e*		19 07 54.1	
LSA				pmax	pmax		
	comp=Z,31nm,0.8s,mb4.7						
LSA	**Lhasa**	**50.15**	**270**	*e*P	**P**	**19 06 40.8**	**+1.3**
	comp=Z,31nm,0.8s,mb4.7						
LSA				*e*PcP	PcP	19 07 54.0	-1.0
SVE	**Sverdlovsk**	**51.27**	**315**	⇓*i*P	**P**	**19 06 45.2**	**-2.2**
SVE				*e*		19 07 55.9	
SVE				*e*		19 08 45.0	
SVE				pmax	pmax		
	comp=Z,180nm,1.8s,mb5.1						
TKM2	**Tokmak 2**	**51.50**	**294**	P	**P**	**19 06 49.9**	**+0.6**
	SNR=9.3						
ULHL	**Ulahol**	**51.52**	**293**	P	**P**	**19 06 50.2**	**+0.7**
	SNR=23						
NANT	**Nan**	**51.92**	**252**	P	**P**	**19 06 53.0**	**+0.3**
USP	**Ospenovka**	**51.93**	**295**	P	**P**	**19 06 53.1**	**+0.6**
	SNR=24						
CHMS	**Chumysh**	**51.95**	**294**	P	**P**	**19 06 52.9**	**+0.3**
	SNR=14						
KBK	**Karagaybulak**	**52.04**	**294**	P	**P**	**19 06 53.6**	**+0.3**
	SNR=16						
KZA	**Kyzart**	**52.21**	**293**	P	**P**	**19 06 55.8**	**+1.3**
	SNR=16						
AAK	**Ala-Archa**	**52.32**	**294**	P	**P**	**19 06 55.8**	**+0.5**
	SNR=19						
AAK	**Ala-Archa**	**52.32**	**294**	*e*P	**P**	**19 06 54.0**	**-1.3**
AAK				*e*		19 08 01.3	
AAK				pmax	pmax		
	comp=Z,28nm,0.6s,mb4.8						
AAK	**Ala-Archa**	**52.32**	**294**	*e*P	**P**	**19 06 54.0**	**-1.4**
	comp=Z,28nm,0.6s,mb4.8						
AAK				*e*pP	pP	19 07 57.5	+3.0
AAK				*e*PcP	PcP	19 08 01.2	-1.6
EKS2	**Erkin-Say**	**52.72**	**294**	P	**P**	**19 06 58.8**	**+0.5**
	SNR=6.5						
CHG	**Chiang Mai**	**52.99**	**254**	⇓P	**P**	**19 07 00.9**	**+0.3**
	comp=Z,17nm,0.8s,mb4.4						
AML	**Almayashu**	**53.09**	**294**	P	**P**	**19 07 02.1**	**+1.1**
	SNR=6.7						
CM31	**Chiang Mai Arr**	**53.26**	**254**	⇓*i*P	**P**	**19 07 02.9**	**+0.3**
	comp=Z,7.6nm,0.6s,mb4.2						
CM31				*e*PcP	PcP	19 08 07.1	+0.4
CMAR	**Chiang Mai Arr**	**53.26**	**254**	*i* P	**P**	**19 07 03.2**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**53.26**	**254**	P	**P**	**19 07 03.1**	**+0.6**
	comp=Z,7.6nm,0.6s,mb4.2,baz=34,slow=6.8,SNR=64						
CMAR				PcP	PcP	19 08 07.0	+0.3
	comp=Z,4.4nm,0.7s,baz=20,slow=3.4,SNR=8.1						
CMAR				ScP		19 11 37.5	
	comp=Z,1.2nm,0.9s,baz=7.9,slow=3.8,SNR=3.9						
NLW	**Nelson Butte**	**53.52**	**56**	P	**P**	**19 07 04.5**	**+0.5**
EDM	**Edmonton**	**53.93**	**48**	⇓*e*P	**P**	**19 07 06.7**	**-0.2**
EDM				*e**PP	pP	19 08 05.4	-1.0
EDM				*e*	pP	19 08 07.8	+1.4
TBM	**Table Mountain**	**53.93**	**57**	P	**P**	**19 07 07.2**	**+0.3**
KEV	**Kevo**	**54.02**	**340**	*e*p	**P**	**19 07 05.2**	**-2.1**
ARCES	**ARCESS Array B**	**54.52**	**340**	P	**P**	**19 07 09.9**	**-1.1**
ARCES					pP	19 08 09.7	-1.0
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ARCES	**ARCESS Array B**	**54.52**	**340**	P	**P**	**19 07 09.8**	**-1.1**
	comp=Z,5.1nm,0.3s,mb4.4,baz=45,slow=7.9,SNR=56						
ARCES				PcP	PcP	19 08 09.7	-1.2
	comp=Z,6.3nm,0.6s,baz=34,slow=4.4,SNR=5.4						
ARE0	**ARCESS Array S**	**54.52**	**340**	*e*P	**P**	**19 07 09.7**	**-1.3**
VFP	**Flag Point**	**54.59**	**60**	P	**P**	**19 07 12.7**	**+0.9**
NST	**Nakhon Sawan**	**54.66**	**250**	P	**P**	**19 07 12.2**	**-0.5**
JIRN	**Jiri**	**54.72**	**272**	*e*P	**P**	**19 07 13.4**	**+0.5**
	comp=Z,92nm,0.7s,mb5.3						
GUN	**Gumba**	**54.75**	**273**	*e*P	**P**	**19 07 13.4**	**+0.3**
	comp=Z,83nm,0.5s,mb5.4						
OD2	**Odessa Site #2**	**54.80**	**56**	P	**P**	**19 07 13.0**	**-0.3**
NEW	**Newport**	**55.10**	**55**	*e*P	**P**	**19 07 14.4**	**-1.0**
NEW				*e*	pP	19 08 13.2	-2.0
NEW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NEW	**Newport**	**55.10**	**55**	*e*P	**P**	**19 07 14.4**	**-1.0**
	comp=Z,8.4nm,0.9s,mb4.2						
NEW				*e*PcP	PcP	19 08 13.2	-0.2
KKN	**Kakani**	**55.21**	**273**	*e*P	**P**	**19 07 16.6**	**+0.1**
	comp=Z,81nm,0.6s,mb5.3						
PKI	**Pulchoki**	**55.28**	**273**	*e*P	**P**	**19 07 17.0**	**0.0**
	comp=Z,114nm,1.0s,mb5.2						
BBOR	**Butler Butte**	**55.43**	**63**	P	**P**	**19 07 19.2**	**+1.4**
KTK1	**Kautokeino**	**55.43**	**340**	*e*P	**P**	**19 07 17.2**	**-0.3**
	comp=Z,60nm,1.8s,mb4.7						
KTK1	**Kautokeino**	**55.43**	**340**	*e*P	**P**	**19 07 17.2**	**-0.3**
KTK1				AMb	AMB	19 07 20.3	
	comp=Z,60nm,1.8s,mb4.7						
DMN	**Daman**	**55.45**	**273**	*e*P	**P**	**19 07 18.7**	**+0.5**
	comp=Z,251nm,1.0s,mb5.6						
GKN	**Gorkha**	**55.48**	**274**	*e*P	**P**	**19 07 18.6**	**+0.2**
	comp=Z,208nm,0.7s,mb5.7						
VIPM	**Ingram Point**	**55.57**	**60**	P	**P**	**19 07 19.6**	**+0.8**
YBH	**Yreka Blue Hor**	**56.15**	**64**	*e*P	**P**	**19 07 23.5**	**+0.6**
YBH				*e*		19 08 18.2	
YBH				*e**PP	pP	19 08 23.5	+0.5
YBH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YBH	**Yreka Blue Hor**	**56.15**	**64**	*e*P	**P**	**19 07 23.5**	**+0.6**
	comp=Z,8.1nm,0.8s,mb4.2						
YBH				*e*PcP	PcP	19 08 18.2	+0.6
YBH				*e*pP	pP	19 08 23.5	+0.5
WALA	**Waterton Lakes**	**56.25**	**52**	⇓*i*P	**P**	**19 07 23.3**	**-0.2**
	comp=Z,20nm,0.7s,mb4.7						
WALA				*e*pP	pP	19 08 23.7	0.0
KOLN	**Koldanda**	**56.30**	**274**	*e*P	**P**	**19 07 24.4**	**+0.2**
	comp=Z,98nm,0.6s,mb5.4						
WDC	**Whiskeytown Da**	**56.98**	**65**	*e*P	**P**	**19 07 29.3**	**+0.5**
WDC				*e*		19 08 19.5	
WDC				*e**PP	pP	19 08 28.8	-0.3
WDC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
WDC	**Whiskeytown Da**	**56.98**	**65**	*e*P	**P**	**19 07 29.3**	**+0.5**
	comp=Z,10nm,0.9s,mb4.3						
WDC				*e*PcP	PcP	19 08 19.5	-1.4
WDC				*e*pP	pP	19 08 28.8	-0.3
BMO	**Blue Mountains**	**57.17**	**58**	*e*P	**P**	**19 07 30.2**	**+0.2**
	comp=Z,14nm,1.0s,mb4.3						
BMO				*e*PcP	PcP	19 08 20.3	-1.2
BMO				*e*pP	pP	19 08 29.8	-0.6
SUMG	**Summit**	**57.19**	**4**	⇓*e*P	**P**	**19 07 29.1**	**-0.7**
	comp=Z,56nm,1.1s,mb4.9						
MOD	**Modoc**	**57.41**	**62**	⇓*e*P	**P**	**19 07 32.4**	**+0.6**
	comp=Z,16nm,0.8s,mb4.5						
MOD				*e*PcP	PcP	19 08 22.3	-0.3
MOD				*e*pP	pP	19 08 32.2	0.0
MSO	**Missoula**	**57.68**	**54**	*e*P	**P**	**19 07 33.0**	**-0.5**
	comp=Z,12nm,0.9s,mb4.3						
SDNR	**Sundarnagar**	**57.97**	**282**	*e*P	**P**	**19 07 35.8**	**0.0**
CHMT	**Chamberlain Mo**	**57.98**	**54**	*e*P	**P**	**19 07 35.4**	**-0.3**
CHMT				*e*PcP	PcP	19 08 23.0	-1.7
CHMT				*e*pP	pP	19 08 34.9	-1.4
WVOR	**Wild Horse Val**	**58.01**	**61**	⇓*e*P	**P**	**19 07 36.5**	**+0.6**
WVOR				*e**PP	pP	19 08 35.8	-0.7
WVOR				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
WVOR	**Wild Horse Val**	**58.01**	**61**	⇓*e*P	**P**	**19 07 36.5**	**+0.6**
	comp=Z,16nm,0.8s,mb4.5						
WVOR				*e*pP	pP	19 08 35.8	-0.7
FFC	**Flin Flon**	**58.08**	**41**	P	**P**	**19 07 36.7**	**+0.5**
	comp=Z,230nm,0.8s,mb5.7,SNR=34						
LOF	**Lofoten**	**58.12**	**343**	*e*P	**P**	**19 07 36.9**	**+0.6**
JOF	**Joensuu**	**58.18**	**333**	*e*p	**P**	**19 07 35.9**	**-0.9**
FCC	**Fort Churchill**	**58.34**	**34**	⇓*i*P	**P**	**19 07 37.6**	**-0.4**
FCC				pmax	pmax		
	comp=Z,42nm,0.6s,mb5.0						
FCC	**Fort Churchill**	**58.34**	**34**	⇓*i*P	**P**	**19 07 37.6**	**-0.5**
	comp=Z,42nm,0.6s,mb5.0						
OHCM	**Honcut**	**58.41**	**65**	*e*P	**P**	**19 07 38.6**	**-0.2**
OHCM				*e*pP	pP	19 08 37.9	-1.5
OHCM				*e*		19 08 52.0	
WCN	**Washoe City**	**59.44**	**64**	*e*P	**P**	**19 07 46.0**	**+0.2**
WCN				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.5						
WCN	**Washoe City**	**59.44**	**64**	*e*P	**P**	**19 07 46.0**	**+0.2**
	comp=Z,17nm,0.9s,mb4.5						
MCMT	**McKenzie Canyo**	**59.57**	**55**	*e*P	**P**	**19 07 46.9**	**+0.3**
HLID	**Hailey**	**59.58**	**57**	*e*P	**P**	**19 07 47.3**	**+0.6**
	comp=Z,8.0nm,0.9s,mb4.2						
HLID				*e*PcP	PcP	19 08 31.7	+0.6
MOR8	**Moi Rana**	**59.66**	**342**	*e*P	**P**	**19 07 44.0**	**-3.0**
	comp=Z,58nm,0.5s,mb5.4						
MOR8	**Moi Rana**	**59.66**	**342**	*e*P	**P**	**19 07 44.0**	**-3.0**
MOR8				AMb	AMB	19 07 46.1	
	comp=Z,58nm,0.5s,mb5.4						
BOZ	**Bozeman (W)**	**59.66**	**54**	⇓*i*P	**P**	**19 07 47.9**	**+0.6**
BOZ				*e*		19 08 31.0	
BOZ				*e**PP	pP	19 08 47.7	-0.5
BOZ				*e**SP	sP	19 09 18.2	+0.3
BOZ				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.0						
BOZ	**Bozeman (W)**	**59.66**	**54**	⇓*i*P	**P**	**19 07 47.9**	**+0.6**
	comp=Z,32nm,0.7s,mb5.0						
BOZ				*e*PcP	PcP	19 08 31.0	-0.3
BOZ				*e*pP	pP	19 08 47.7	-0.5
BOZ				*e*sP	sP	19 09 18.2	+0.3
CMB	**Columbia Colle**	**59.92**	**66**	*e*P	**P**	**19 07 49.3**	**+0.2**
CMB				*e*		19 08 31.8	
CMB				*e**PP	pP	19 08 48.8	-1.4
CMB				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.5						
CMB	**Columbia Colle**	**59.92**	**66**	*e*P	**P**	**19 07 49.3**	**+0.2**
	comp=Z,15nm,1.0s,mb4.5						
CMB				*e*PcP	PcP	19 08 31.8	-0.7
CMB				*e*pP	pP	19 08 48.8	-1.3
KAF	**Kangasniemi**	**60.24**	**334**	*e*p	**P**	**19 07 49.9**	**-1.1**
	comp=Z,32nm,0.7s,mb5.0,baz=36,slow=6.3						
KAF	**Kangasniemi**	**60.24**	**334**	*e*P	**P**	**19 07 49.9**	**-1.1**
KAF				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.0						
QLMT	**Earthquake Lak**	**60.32**	**55**	*e*P	**P**	**19 07 52.4**	**+0.7**
QLMT				*e*PcP	PcP	19 08 31.5	-2.5
QLMT				*e*pP	pP	19 08 51.8	-1.0
GCMT	**Greycliff**	**60.58**	**53**	*e*P	**P**	**19 07 54.1**	**+0.7**
YMR	**Madison River**	**60.67**	**54**	*e*P	**P**	**19 07 55.0**	**+1.0**
YMR				*e*pP	pP	19 08 54.5	-0.7
FINES	**FINESS Array B**	**60.85**	**334**	*i* P	**P**	**19 07 53.9**	**-1.1**
FINES				pmax	pmax		
	comp=Z,30nm,0.4s						
FINES	**FINESS Array B**	**60.85**	**334**	P	**P**	**19 07 53.9**	**-1.2**
	comp=Z,30nm,0.4s,mb5.2,baz=35,slow=8.1,SNR=277						
FINES				PcP	PcP	19 08 34.5	-1.4
	comp=Z,11nm,0.6s,baz=45,slow=5.4,SNR=7.9						
NVAR	**Mina Array Bea**	**60.86**	**64**	P	**P**	**19 07 56.1**	**+0.7**
	comp=Z,8.7nm,0.8s,mb4.3,baz=306,slow=5.7,SNR=59						
NVAR				PcP	PcP	19 08 35.8	-0.5
	comp=Z,2.9nm,0.7s,baz=286,slow=5.4,SNR=6.6						
NVAR				pP	pP	19 08 55.8	-0.9
	comp=Z,3.1nm,0.9s,baz=301,slow=5.5,SNR=3.5						
YFT	**Old Faithful**	**60.88**	**55**	*e*P	**P**	**19 07 57.2**	**+1.7**
MNV	**Mina**	**60.95**	**64**	*e*P	**P**	**19 07 56.5**	**+0.5**
MNV				*e**PP	pP	19 08 56.0	-1.3
MNV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.4						
MNV	**Mina**	**60.95**	**64**	*e*P	**P**	**19 07 56.5**	**+0.5**
	comp=Z,12nm,1.0s,mb4.4						
MNV				*e*pP	pP	19 08 56.0	-1.3
ELK	**Elko**	**61.03**	**60**	*e*P	**P**	**19 07 57.1**	**+0.6**
ELK				*e*		19 08 37.0	
ELK				*e**PP	pP	19 08 56.9	-0.9
ELK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ELK	**Elko**	**61.03**	**60**	*e*P	**P**	**19 07 57.1**	**+0.5**
	comp=Z,6.6nm,0.7s,mb4.3						
ELK				*e*PcP	PcP	19 08 37.0	+0.1
ELK				*e*pP	pP	19 08 56.9	-0.9
LKWY	**Lake**	**61.03**	**54**	*e*P	**P**	**19 07 58.3**	**+1.8**
LKWY				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
LKWY	**Lake**	**61.03**	**54**	*e*P	**P**	**19 07 58.3**	**+1.8**
	comp=Z,16nm,0.9s,mb4.5						
IMW	**Indian Meadow**	**61.21**	**55**	*e*P	**P**	**19 07 58.7**	**+1.0**
IMW				*e*pP	pP	19 08 58.7	-0.3
MOOW	**Moose Ponds**	**61.41**	**55**	*e*P	**P**	**19 07 59.9**	**+0.9**
MOOW				*e*pP	pP	19 09 01.0	+0.6
DGMT	**Dagmar**	**61.42**	**48**	*e*P	**P**	**19 07 58.8**	**-0.2**
	comp=Z,65nm,0.9s,mb5.2						
MTUM	**Tungsten Hills**	**61.44**	**65**	*e*P	**P**	**19 08 00.0**	**+0.7**
MTUM				*e*PcP	PcP	19 08 37.2	-1.4
TPAW	**Teton Pass**	**61.48**	**55**	*e*P	**P**	**19 08 00.8**	**+1.4**
TPAW				*e*PcP	PcP	19 08 38.4	-0.3
TPAW				*e*pP	pP	19 09 01.5	+0.6
MOS	**Moscow**	**61.54**	**324**	*e*P	**P**	**19 07 59.1**	**-0.6**
MOS				pmax	pmax		
	comp=Z,54nm,0.6s,mb5.3						
LOHW	**Long Hollow**	**61.58**	**55**	*e*P	**P**	**19 08 00.8**	**+0.6**
LOHW				*e*pP	pP	19 09 00.9	-0.6
NSS	**Namsos**	**61.60**	**342**	*e*P	**P**	**19 07 57.4**	**-2.5**
	comp=Z,28nm,1.5s,mb4.7						
NSS	**Namsos**	**61.60**	**342**	*e*P	**P**	**19 07 57.4**	**-2.5**
NSS				AMb	AMB	19 08 02.5	
	comp=Z,28nm,1.6s,mb4.7						
HVU	**Hansel Valley**	**61.68**	**58**	*e*P	**P**	**19 08 01.6**	**+0.8**
HVU				*e*	PcP	19 08 39.9	+0.4
TPH	**Tonopah**	**61.73**	**64**	*e*P	**P**	**19 08 01.2**	**0.0**
TPH				*e*	PcP	19 08 40.2	+0.4
TPH				*e**PP	pP	19 09 02.3	-0.4
TPH				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.6						
TPH	**Tonopah**	**61.73**	**64**	*e*P	**P**	**19 08 01.2**	**0.0**
	comp=Z,14nm,0.9s,mb4.6						
TPH				*e*PcP	PcP	19 08 40.1	+0.4
TPH				*e*pP	pP	19 09 02.3	-0.4
AHID	**Auburn Hatcher**	**61.90**	**56**	*e*P	**P**	**19 08 02.6**	**+0.3**
	comp=Z,17nm,1.1s,mb4.6						
AHID				*e*pP	pP	19 09 04.1	+0.3
BGU	**Big Grassy Mou**	**62.13**	**59**	*e*P	**P**	**19 08 03.7**	**-0.1**
OBN	**Obninsk**	**62.41**	**325**	*d* *i*P	**P**	**19 08 04.3**	**-1.1**
OBN				*i*	PcP	19 08 40.8	-1.5
OBN				*i*		19 10 24.5	
OBN				pmax	pmax		
	comp=Z,181nm,2.6s,mb5.2						
OBN	**Obninsk**	**62.41**	**325**	*e*P	**P**	**19 08 03.9**	**-1.5**
	comp=Z,40nm,0.7s,mb5.2						
OBN				*e*PcP	PcP	19 08 40.4	-1.9
HWUT	**Hardware Ranch**	**62.45**	**57**	*e*P	**P**	**19 08 06.6**	**+0.7**
	comp=Z,20nm,0.9s,mb4.7						
HWUT				*e*PcP	PcP	19 08 41.9	-0.8
HWUT				*e*pP	pP	19 09 07.5	-0.1
BW06	**Boulder Array**	**62.72**	**55**	*e*P	**P**	**19 08 08.0**	**+0.3**
	comp=Z,24nm,0.8s,mb4.9						
BW06				*e*PcP	PcP	19 08 43.0	-0.7
BW06				*e*pP	pP	19 09 08.5	-0.8
PDAR	**Pinedale Array**	**62.72**	**55**	P	**P**	**19 08 08.0**	**+0.4**
	comp=Z,20nm,0.7s,mb4.8,baz=315,slow=1.7,SNR=153						
PDAR				pP	pP	19 09 09.3	0.0
	comp=Z,3.7nm,0.8s,baz=315,slow=4.2,SNR=4.0						
DUG	**Dugway**	**62.75**	**59**	*e*P	**P**	**19 08 08.5**	**+0.6**
	comp=Z,262nm,0.8s,mb5.9						
DUG				*e*pP	pP	19 09 09.8	+0.3
NOQ	**North Oquirrh**	**62.81**	**58**	*e*P	**P**	**19 08 08.9**	**+0.6**
TCUT	**Toone Canyon**	**62.88**	**58**	*e*P	**P**	**19 08 09.5**	**+0.8**
NLU	**North Lily Min**	**63.33**	**59**	*e*P	**P**	**19 08 12.2**	**+0.6**
NLU				*e*PcP	PcP	19 08 45.6	-0.7
NLU				*e*pP	pP	19 09 12.0	-1.4
BHPL	**Bhopal**	**63.44**	**275**	*e*P	**P**	**19 08 11.8**	**-0.7**
BHPL				AMb	AMB	19 08 13.5	
	comp=Z,40nm,0.9s,mb5.1						

DAU	**Daniels Canyon**	63.45	58	eP	P	19 08 13.3	+0.9
DAU				e		19 08 47.1	
MPU	**Maple Canyon**	63.52	59	eP	P	19 08 13.4	+0.6
ULM	**Lac du Bonnet**	63.89	42	P	P	19 08 14.5	-0.5
	comp=Z,14nm,0.9s,mb4.6,baz=314,slow=7.0,SNR=18						
ULM	**Lac du Bonnet**	63.89	42	eP	P	19 08 13.6	-1.4
	comp=Z,15nm,0.7s,mb4.7						
ARUT	**Antelope Range**	64.08	62	eP	P	19 08 15.6	-0.9
ARUT				e*PP	pP	19 09 18.3	-0.2
MOL	**Molde**	64.23	343	eP	P	19 08 18.2	+1.2
	comp=Z,35nm,1.3s,mb4.8						
MOL	**Molde**	64.23	343	eP	P	19 08 18.2	+1.2
MOL				AMb	AMB	19 08 20.9	
	comp=Z,35nm,1.3s,mb4.8						
TMUT	**Trail Mountain**	64.26	59	eP	P	19 08 18.4	+0.8
MVU	**Marysvale**	64.27	60	eP	P	19 08 18.2	+0.6
	comp=Z,10.0nm,0.9s,mb4.5						
MVU				ePcP	PcP	19 08 50.6	+0.5
MVU				epP	pP	19 09 19.7	0.0
MSU	**Marysvale**	64.28	60	eP	P	19 08 18.7	+1.0
MSU				e		19 08 50.5	
MSU				e*PP	pP	19 09 20.2	+0.4
MSU				e*SP	sP	19 09 47.8	-1.0
DOMB	**Dombas**	64.42	342	eP	P	19 08 17.6	-0.6
	comp=Z,45nm,1.7s,mb4.8						
DOMB	**Dombas**	64.42	342	eP	P	19 08 17.6	-0.6
DOMB				AMb	AMB	19 08 20.2	
	comp=Z,45nm,1.7s,mb4.8						
SRU	**San Rafael**	64.77	59	eP	P	19 08 21.4	+0.5
SRU				e*PP	pP	19 09 22.4	-0.7
NB2	**NORSAR Subarra**	64.89	341	P	P	19 08 20.3	-0.9
	comp=Z,37nm,0.7s,mb5.1,baz=25,slow=6.2						
NB2	**NORSAR Subarra**	64.89	341	P	P	19 08 20.3	-0.9
NB2				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.1						
NB2	**NORSAR Subarra**	64.89	341	P	P	19 08 20.3	-0.9
	baz=25,slow=6.5						
NOA	**NORSAR Array B**	64.89	341	P	P	19 08 20.0	-1.2
NOA					PcP	19 08 50.8	-1.5
NOA				pmax	pmax		
	comp=Z,30nm,0.7s						
NOA	**NORSAR Array B**	64.89	341	P	P	19 08 20.0	-1.2
	comp=Z,30nm,0.7s,mb5.0,baz=25,slow=6.4,SNR=107						
NOA				PcP	PcP	19 08 50.8	-1.5
	comp=Z,7.3nm,0.9s,baz=27,slow=3.2,SNR=5.6						
NOA	**NORSAR Array B**	64.89	341	P	P	19 08 20.0	-1.2
NOA				PcP	PcP	19 08 50.8	-1.5
NAO01	**NORSAR Array S**	65.14	341	eP	P	19 08 21.2	-1.6
	comp=Z,65nm,1.1s,mb5.2						
NAO01				ePcP	PcP	19 08 51.5	-1.9
HFS	**Hagfors**	65.15	339	P	P	19 08 21.9	-1.0
HFS				pmax	pmax		
	comp=Z,17nm,0.4s						
HFS	**Hagfors**	65.15	339	P	P	19 08 21.9	-1.0
	comp=Z,17nm,0.4s,mb5.1,baz=45,slow=2.1,SNR=136						
BORG	**Borgarnes**	65.24	357	P	P	19 08 23.7	+0.4
	comp=Z,18nm,0.6s,mb4.9,baz=7.3,slow=5.1,SNR=13						
BORG				PcP	PcP	19 08 54.3	+0.7
	comp=Z,20nm,0.8s,baz=4.2,slow=3.9,SNR=7.6						
BORG	**Borgarnes**	65.24	357	eP	P	19 08 23.5	+0.1
	comp=Z,21nm,0.7s,mb4.9						
BORG				ePcP	PcP	19 08 54.3	+0.7
FOO	**Floro**	65.58	344	eP	P	19 08 25.9	+0.2
ODD1	**Odda**	66.86	342	eP	P	19 08 32.3	-1.3
	comp=Z,67nm,1.6s,mb5.1						
ODD1	**Odda**	66.86	342	eP	P	19 08 32.3	-1.3
ODD1				AMb	AMB	19 08 35.5	
	comp=Z,67nm,1.6s,mb5.1						
ISCO	**Idaho Springs**	66.92	55	eP	P	19 08 34.5	+0.1
ISCO				e*PP	pP	19 09 37.0	0.0
ISCO				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
ISCO	**Idaho Springs**	66.92	55	eP	P	19 08 34.5	+0.1
	comp=Z,21nm,1.0s,mb4.8						
ISCO				epP	pP	19 09 37.0	0.0
HYB	**Hyderabad**	66.94	270	eP	P	19 08 33.5	-1.4
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.2						
HYB	**Hyderabad**	66.94	270	eP	P	19 08 33.5	-1.4
	comp=Z,50nm,1.0s,mb5.2						
HYB	**Hyderabad**	66.94	270	i P	P	19 08 33.5	-1.4
	comp=Z,50nm,1.0s,mb5.2						
HYB				ePcP	PcP	19 09 01.0	-0.6
GOF	**Gofitskoye**	67.35	314	⇑iP	P	19 08 37.0	0.0
GOF				pmax	pmax		
	comp=Z,100nm,1.4s,mb5.3						
EYMN	**Ely**	67.51	41	eP	P	19 08 37.1	-0.8
	comp=Z,29nm,0.9s,mb5.0						
EYMN				epP	pP	19 09 40.1	-0.5
SUW	**Suwalki**	67.90	331	eP	P	19 08 39.1	-1.1
KIV	**Kislovodsk**	68.34	313	P	P	19 08 43.0	-0.2
	comp=Z,252nm,0.8s,mb6.0,SNR=7.7						
KIV	**Kislovodsk**	68.34	313	i P	P	19 08 43.5	+0.3
KIV				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.1						
KIV	**Kislovodsk**	68.34	313	eP	P	19 08 43.6	+0.4
	comp=Z,70nm,1.1s,mb5.3						
SDCO	**Great Sand Dun**	68.48	57	eP	P	19 08 44.5	+0.4
	comp=Z,15nm,1.1s,mb4.6						
SDCO				epP	pP	19 09 46.7	-0.2
AKASG	**Malin Array Be**	68.62	325	P	P	19 08 43.4	-1.3
AKASG				pmax	pmax		
	comp=Z,59nm,0.8s						
AKASG	**Malin Array Be**	68.62	325	P	P	19 08 43.4	-1.3
	comp=Z,59nm,0.8s,mb5.4,baz=33,slow=6.3,SNR=130						
ONI	**Oni**	69.03	312	P	P	19 08 47.9	+0.5
TI2	**Plekhanov**	69.05	310	⇓iP	P	19 08 48.4	+0.9
MTA	**Mtatsminda**	69.06	310	P	P	19 08 47.9	+0.3
POO	**Poona**	69.14	274	i P	P	19 08 47.8	-0.7
POO				AMb	AMB	19 08 49.3	
	comp=Z,16nm,0.6s,mb4.9						
KAD	**Karad**	69.83	273	⇓iP	P	19 08 52.0	-0.6
SOC	**Sochi**	70.00	315	eP	P	19 08 51.4	-1.9
SOC				e		19 09 13.2	
SOC				e		19 11 28.0	
SOC				ePPP	PPP	19 13 14.1	-0.7
SOC				eS	S	19 17 35.4	-5.1
SOC				e		19 18 26.0	
SOC				eSS	SS	19 22 15.4	-1.6
SOC				pmax	pmax		
	comp=E,12nm,0.7s						
SOC				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.2						
SOC				pmax	pmax		
	comp=N,5.0nm,0.6s						
ANMO	**Albuquerque**	70.02	59	eP	P	19 08 54.3	+0.8
ANMO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANMO	**Albuquerque**	70.02	59	eP	P	19 08 54.3	+0.7
	comp=Z,7.7nm,0.8s,mb4.5						
SCHQ	**Schefferville**	70.07	23	P	P	19 08 53.2	-0.3
	comp=Z,23nm,0.4s,mb5.3,baz=358,slow=6.1,SNR=241						
SCHQ	**Schefferville**	70.07	23	eP	P	19 08 53.2	-0.3
	comp=Z,35nm,0.4s,mb5.4						
GNI	**Garni**	70.25	309	P	P	19 08 56.3	+1.4
GNI				pmax	pmax		
	comp=Z,16nm,0.9s						
GNI	**Garni**	70.25	309	P	P	19 08 56.3	+1.4
	comp=Z,16nm,0.9s,mb4.8,baz=7.5,slow=3.3,SNR=11						
GNI	**Garni**	70.25	309	eP	P	19 08 55.9	+1.0
	comp=Z,34nm,1.0s,mb5.0						
GNI				epP	PP	19 11 35.6	-0.3
CTA	**Charters Tower**	70.31	187	⇑iP	P	19 08 54.8	-0.7
	comp=Z,7.2nm,0.8s,mb4.5						
CTA	**Charters Tower**	70.31	187	P	P	19 08 54.8	-0.7
CTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CTA	**Charters Tower**	70.31	187	P	P	19 08 54.8	-0.8
	comp=Z,7.8nm,0.7s,mb4.5,baz=338,slow=6.3,SNR=8.0						
CTAO	**Charters Tower**	70.31	187	eP	P	19 08 54.3	-1.2
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
CTAO	**Charters Tower**	70.31	187	eP	P	19 08 54.3	-1.2
	comp=Z,13nm,0.9s,mb4.7						
GKP	**Gorka Klasztor**	70.32	334	eP	P	19 08 54.7	-0.3
LVV	**L’vov**	71.19	328	eP	P	19 09 01.6	+1.3
LVV				e		19 09 21.8	
LVV				e*PP	pP	19 10 01.8	-1.6
LVV				e		19 11 44.6	
LVV				ePPP	PPP	19 13 25.8	-0.5
LVV				eS	S	19 17 56.4	+2.4
BSEG	**Bad Segeberg**	71.55	338	eP	P	19 09 01.9	-0.5
BSEG				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.1						
KWP	**Kalwaria**	71.79	329	eP	P	19 09 04.0	+0.1
KWP	**Kalwaria**	71.79	329	eP	P	19 09 04.0	+0.1
KIS	**Kishinev**	71.83	323	eP	P	19 09 03.0	-1.2
WRAB	**Tennant Creek**	71.83	199	i P	P	19 09 03.6	-1.0
WRAB				i *PP	pP	19 10 09.7	+1.8
WRAB	**Tennant Creek**	71.83	199	eP	P	19 09 03.6	-1.0
	comp=Z,17nm,0.9s,mb4.7						
WRAB				epP	pP	19 10 06.5	-1.4
WRA	**Warramunga Arr**	71.84	199	i P	P	19 09 04.0	-0.7
WRA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WRA	**Warramunga Arr**	71.84	199	P	P	19 09 04.0	-0.7
	comp=Z,6.0nm,0.6s,mb4.4,baz=16,slow=6.3,SNR=70						
WRA				pP	pP	19 10 06.3	-1.7
	comp=Z,5.6nm,0.6s,baz=47,slow=10,SNR=24						
RUE	**Ruedersdorf**	71.98	335	eP	P	19 09 05.2	+0.2
	comp=Z,98nm,0.9s,mb5.4						
ERZM	**Erzurum**	72.09	311	i P	P	19 09 07.0	+1.1
OJC	**Ojcow**	72.23	331	⇓eP	P	19 09 06.1	-0.4
FITZ	**Fitzroy Crossi**	72.25	207	eP	P	19 09 07.0	-0.2
	comp=Z,19nm,0.9s,mb4.7						
PCOU	**Corrie**	72.42	347	eP	P	19 09 07.3	-0.2
PCOU				AMb	AMB	19 09 09.5	
	comp=Z,61nm,0.8s,mb5.3						
KOLS	**Kolonicke sedl**	72.54	328	i P	P	19 09 10.5	+2.2
PMSU	**Muirshiel**	72.65	347	eP	P	19 09 08.6	-0.2
PCA1	**Carrot**	72.72	347	eP	P	19 09 09.3	+0.1
PCA1				AMb	AMB	19 09 11.0	
	comp=Z,118nm,0.9s,mb5.5						
KSP	**Ksiaz**	72.75	333	eP	P	19 09 09.1	-0.3
NIE	**Niedzica**	72.76	330	eP	P	19 09 07.9	-1.7
CRVS	**Cervenica-Dubn**	72.84	329	i P	P	19 09 09.8	-0.2
EKA	**Eskdalemuir Ar**	72.91	346	P	P	19 09 09.8	-0.5
EKA				pmax	pmax		
	comp=Z,21nm,0.5s						
EKA	**Eskdalemuir Ar**	72.91	346	P	P	19 09 09.8	-0.6
	comp=Z,21nm,0.5s,mb5.0,baz=17,slow=4.9,SNR=63						
MNTX	**Cornudas Mount**	73.04	61	eP	P	19 09 11.2	-0.4
	comp=Z,6.5nm,0.7s,mb4.4						
MNTX				epP	pP	19 10 15.1	+0.1
OKC	**Ostrava-Krasne**	73.08	331	eP	P	19 09 10.6	-0.8
UPC	**Upice**	73.12	333	eP	P	19 09 11.2	-0.5
DPC	**Dobruska-Polom**	73.17	333	eP	P	19 09 12.1	+0.1
CLL	**Collm**	73.25	335	⇓iP	P	19 09 11.7	-0.7
CLL				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.3						
CLL	**Collm**	73.25	335	⇓iP	P	19 09 11.7	-0.7
	comp=Z,83nm,1.0s,mb5.3						
CLL	**Collm**	73.25	335	⇓P	P	19 09 11.7	-0.7
	comp=Z,logA/T=1.9,mb5.3						
CLL				e		19 09 47.0	
MORC	**Moravsky Berou**	73.32	332	eP	P	19 09 12.3	-0.5
MORC				e*PP	pP	19 10 17.1	+0.9
MORC				pmax	pmax		
	comp=Z,63nm,0.8s,mb5.3						
MORC	**Moravsky Berou**	73.32	332	eP	P	19 09 12.3	-0.5
	comp=Z,63nm,0.8s,mb5.3						
MORC				epP	pP	19 10 17.1	+0.9
BRG	**Berggiesshubel**	73.39	334	eP	P	19 09 12.8	-0.4
BRG				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.9						
BRG	**Berggiesshubel**	73.39	334	eP	P	19 09 12.8	-0.4
	comp=Z,40nm,1.2s,mb4.9						
BRG				e	PP	19 11 54.1	-8.1
CLZ	**Clausthal**	73.45	337	eP	P	19 09 13.4	-0.1
	comp=Z,92nm,1.2s,mb5.3						
LIKS	**Likavka**	73.47	330	eP	P	19 09 14.8	+1.1
PVCC	**Panska Ves**	73.52	334	eP	P	19 09 13.5	-0.5
KECS	**Kecovo**	73.52	329	i P	P	19 09 14.7	+0.7
GCL	**Cushendall**	73.59	348	eP	P	19 09 14.8	+0.5
GAL1	**Galloway**	73.59	347	eP	P	19 09 14.2	0.0
CFR	**Carcaliu**	73.61	323	⇓P	P	19 09 14.4	-0.2
BEST	**Besiri**	73.71	310	i P	P	19 09 15.9	+0.6
BOYT	**Boyabat**	73.88	316	i P	P	19 09 17.1	+0.8
PRU	**Pruhonice**	74.01	334	eP	P	19 09 16.7	-0.1
VRAC	**Vranov**	74.02	332	P	P	19 09 17.1	+0.2
	comp=Z,40nm,0.6s,mb5.2,baz=31,slow=6.6,SNR=48						
VRAC	**Vranov**	74.02	332	⇓P	P	19 09 17.2	+0.3
VYHS	**Vyhne**	74.05	330	i P	P	19 09 17.2	+0.2
MLR	**Muntele Rosu**	74.18	324	P	P	19 09 18.3	+0.4
MLR				pmax	pmax		
	comp=Z,22nm,0.5s						
MLR	**Muntele Rosu**	74.18	324	P	P	19 09 18.3	+0.4
	comp=Z,22nm,0.5s,mb5.0,baz=329,slow=1.8,SNR=67						
MLR	**Muntele Rosu**	74.18	324	⇑P	P	19 09 18.1	+0.2
MLR	**Muntele Rosu**	74.18	324	⇑P	P	19 09 18.1	+0.2
WTSB	**Winterswijk**	74.20	339	eP	P	19 09 18.7	+0.9
	comp=Z,66nm,0.9s,mb5.2						
PSZ	**Piszkesteto**	74.21	329	eP	P	19 09 15.3	-2.7
PSZ				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
PSZ	**Piszkesteto**	74.21	329	eP	P	19 09 15.3	-2.7
	comp=Z,23nm,0.9s,mb4.8						
MOX	**Moxa**	74.22	336	eP	P	19 09 17.6	-0.4
MOX				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.0						
MOX	**Moxa**	74.22	336	eP	P	19 09 17.6	-0.4
	comp=Z,39nm,1.1s,mb5.0						
MOX	**Moxa**	74.22	336	i P	P	19 09 17.6	-0.4
	comp=Z,logA/T=1.6,mb5.0						
ISR	**Istrita**	74.27	324	P	P	19 09 19.2	+0.8
WMOK	**Wichita Mounta**	74.30	54	eP	P	19 09 18.5	-0.3
WMOK				e*PP	pP	19 10 21.4	-0.9
WMOK				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
WMOK	**Wichita Mounta**	74.30	54	eP	P	19 09 18.5	-0.4
	comp=Z,20nm,0.8s,mb4.8						
WMOK				epP	pP	19 10 21.4	-0.9
NKC	**Novy Kostel**	74.38	335	eP	P	19 09 18.0	-0.9
GMM	**Mts of Mourne**	74.38	347	eP	P	19 09 18.7	-0.1
GMM				AMb	AMB	19 09 20.3	
	comp=Z,78nm,1.0s,mb5.3						
SNX	**Sinaia**	74.45	325	⇓P	P	19 09 20.3	+0.9
BALT	**Daday**	74.45	317	i P	P	19 09 19.7	+0.2
SMOL	**Smolenice**	74.47	331	i P	P	19 09 20.2	+0.7
CTKT	**Corum**	74.58	316	i P	P	19 09 20.6	+0.4
BANOM	**Banah**	74.62	292	⇓P	P	19 09 19.2	-1.5
MALT	**Malatya**	74.75	312	eP	P	19 09 21.7	+0.4
MALT				e		19 12 11.8	
MALT				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
MALT	**Malatya**	74.75	312	eP	P	19 09 21.7	+0.4
	comp=Z,13nm,0.8s,mb4.6						
MALT				ePP	PP	19 12 11.8	-2.2
ZST	**Bratislava**	74.85	331	i P	P	19 09 22.7	+1.1
SRO1	**Iza**	74.88	330	i P	P	19 09 22.7	+0.9
KHC	**Kasperske Hory**	75.06	334	eP	P	19 09 22.8	0.0
KHC				ex	x	19 09 30.0	
GRA1	**Grafenberg Arr**	75.20	335	eP	P	19 09 23.5	-0.1
	comp=Z,99nm,0.9s,mb5.4						
GRF	**Grafenberg Arr**	75.20	335	eP	P	19 09 23.5	-0.1
GRF				pmax	pmax		
	comp=Z,99nm,0.9s,mb5.4						
WET	**Wettzell**	75.24	334	eP	P	19 09 23.8	0.0
WET				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.2						
WET	**Wettzell**	75.24	334	eP	P	19 09 23.8	0.0
	comp=Z,56nm,1.0s,mb5.2						
GEC2	**GERESS Array S**	75.28	334	eP	P	19 09 23.5	-0.6
GEC2				pmax	pmax		
	comp=Z,21nm,0.6s,mb4.9						
GEC2	**GERESS Array S**	75.28	334	eP	P	19 09 23.5	-0.6
	comp=Z,21nm,0.6s,mb4.9						
GERES	**GERESS Array B**	75.28	334	P	P	19 09 23.8	-0.3
GERES					PP	19 12 16.7	-1.5
GERES				pmax	pmax		
	comp=Z,15nm,0.4s						
GERES				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GERES	**GERESS Array B**	75.28	334	P	P	19 09 23.8	-0.2
	comp=Z,15nm,0.4s,mb5.0,baz=35,slow=5.2,SNR=150						
GERES				PP	PP	19 12 16.7	-1.5
	comp=Z,4.2nm,1.1s,baz=45,slow=9.4,SNR=6.7						
ELDT	**Eldivan**	75.29	317	i P	P	19 09 24.9	+0.6
DLF	**Lyons Farm**	75.38	348	eP	P	19 09 25.2	+0.7
TNS	**Taunus Mts**	75.42	337	eP	P	19 09 24.4	-0.4
TNS				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.1						
TNS	**Taunus Mts**	75.42	337	eP	P	19 09 24.4	-0.4
	comp=Z,42nm,0.8s,mb5.1						
DCN	**Croghan**	75.44	348	eP	P	19 09 25.3	+0.5
CCM	**Cathedral Cave**	75.44	47	eP	P	19 09 24.0	-1.2
CCM				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
CCM	**Cathedral Cave**	75.44	47	eP	P	19 09 24.0	-1.2
	comp=Z,12nm,0.8s,mb4.6						
HGN	**Heimansgroeve**	75.52	339	⇓eP	P	19 09 24.8	-0.5
	comp=Z,55nm,1.3s,mb5.0						
ASAR	**Alice Springs**	75.55	198	P	P	19 09 26.2	+0.2
	comp=Z,9.3nm,0.8s,mb4.5,baz=12,slow=5.5,SNR=88						
ASAR				pP	pP	19 10 33.1	+3.4
	comp=Z,5.0nm,0.9s,baz=9.8,slow=4.8,SNR=4.9						
ASPA	**Alice Springs**	75.55	198	⇓iP	P	19 09 26.0	-0.1
PRD	**Provadia**	75.55	322	eP	P	19 09 26.0	+0.3
BZS	**Buzias**	75.63	327	P	P	19 09 25.8	-0.3
BZS	**Buzias**	75.63	327	⇑P	P	19 09 25.5	-0.6
BZS	**Buzias**	75.63	327	⇑P	P	19 09 25.5	-0.6
ASHO	**Ashiyiah**	75.69	291	⇓P	P	19 09 26.3	-0.5
SMDO	**Samad**	75.71	289	⇓P	P	19 09 26.9	-0.1
HOQ	**Hoqain**	75.76	290	⇓P	P	19 09 26.9	-0.4
	SNR=7.6						
LTX	**Lajitas**	75.80	61	eP	P	19 09 27.8	+0.4
LTX				e*PP	pP	19 10 32.5	+1.4
LTX				pmax	pmax		
	comp=Z,27nm,0.9s,mb4.9						
LTX	**Lajitas**	75.80	61	eP	P	19 09 27.8	+0.4
	comp=Z,26nm,0.9s,mb4.9						
LTX				epP	pP	19 10 32.5	+1.5
TXAR	**Lajitas Array**	75.80	61	P	P	19 09 27.9	+0.5
	comp=Z,21nm,0.8s,mb4.8,baz=294,slow=4.5,SNR=69						
TXAR				pP	pP	19 10 31.6	+0.6
	comp=Z,4.3nm,0.8s,baz=304,slow=4.5,SNR=6.4						
BRTR	**Keskin Array B**	75.82	316	P	P	19 09 27.3	0.0
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRTR	**Keskin Array B**	75.82	316	P	P	19 09 27.2	0.0
	comp=Z,8.0nm,0.7s,mb4.5,baz=60,slow=4.2,SNR=36						
FVM	**French Village**	75.89	47	eP	P	19 09 27.1	-0.6
FVM				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.0						
FVM	**French Village**	75.89	47	eP	P	19 09 27.1	-0.6
	comp=Z,27nm,0.6s,mb5.0						
TOD	**Tromm**	75.90	337	eP	P	19 09 27.9	+0.4
TOD	**Tromm**	75.90	337	eP	P	19 09 27.3	-0.2
SIND	**Sindeldorf**	75.94	336	eP	P	19 09 27.5	-0.2
ABH	**Alteburg**	75.96	338	eP	P	19 09 28.0	+0.2
ABH	**Alteburg**	75.96	338	eP	P	19 09 27.6	-0.2
MOA	**Molln**	76.02	333	⇓iP	P	19 09 28.3	+0.1
	comp=Z,33nm,1.1s,mb4.9						
SWS	**Schriesheim**	76.04	337	eP	P	19 09 28.5	+0.2
AVNT	**Avonos**	76.04	315	i P	P	19 09 29.0	+0.5
SZH	**Strazhica**	76.07	323	i P	P	19 09 28.0	-0.6
ARSA	**Arzberg**	76.18	332	⇓iP	P	19 09 29.5	+0.4
	comp=Z,147nm,3.0s						
JMDO	**Jabal Madar**	76.19	288	P	P	19 09 29.6	-0.1
	SNR=15						
RUP	**Ruppelstein**	76.24	338	eP	P	19 09 27.2	-2.2
RUP	**Ruppelstein**	76.24	338	eP	P	19 09 29.2	-0.2
MSNY	**Massena**	76.38	33	eP	P	19 09 29.6	-0.6
GIVF	**Givet**	76.39	340	eP	P	19 09 29.1	-1.1
	comp=Z,89nm,1.0s,mb5.0						
GIVF	**Givet**	76.39	340	eP	P	19 09 29.1	-1.1
GIVF				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.0						
ARQ	**Araqi**	76.42	290	⇑P	P	19 09 30.6	-0.4
BSY	**Bisya**	76.46	289	P	P	19 09 31.1	-0.1
	SNR=22						
HDH	**Heidenheim**	76.48	336	eP	P	19 09 30.1	-0.6
WLF	**Walferdange**	76.49	339	eP	P	19 09 30.8	0.0
WLF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
WLF	**Walferdange**	76.49	339	eP	P	19 09 30.8	+0.1
	comp=Z,16nm,0.8s,mb4.7						
BAIF	**Baives**	76.56	340	eP	P	19 09 30.4	-0.7
	comp=Z,57nm,0.9s,mb5.0						
BAIF	**Baives**	76.56	340	eP	P	19 09 30.4	-0.7
BAIF				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
STU	**Stuttgart**	76.57	336	eP	P	19 09 31.3	+0.1
STU				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.2						
STU	**Stuttgart**	76.57	336	eP	P	19 09 31.3	+0.1
	comp=Z,45nm,0.9s,mb5.2						
FUR	**Furstenfeldbru**	76.58	335	eP	P	19 09 31.2	-0.1
FUR				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.3						
FUR	**Furstenfeldbru**	76.58	335	eP	P	19 09 31.2	-0.1
	comp=Z,55nm,0.9s,mb5.3						
BEO	**Belgrade**	76.73	327	eP	P	19 09 32.0	-0.2
LBG	**Lerchenberg**	76.77	337	eP	P	19 09 32.2	-0.1
BUCH	**Bad Urach**	76.83	336	eP	P	19 09 32.1	-0.5
PERS	**Pernice**	76.85	332	i P	P	19 09 32.9	+0.1
ERPA	**Erie**	76.96	38	eP	P	19 09 33.4	-0.1
	comp=Z,56nm,0.9s,mb5.3						
KBA	**Koelnbreinsper**	76.98	333	⇑iP	P	19 09 34.5	+1.0
	comp=Z,116nm,1.2s,mb5.5						
KBA	**Koelnbreinsper**	76.98	333	⇑iP	P	19 09 34.5	+1.0
KBA				pmax	pmax		
	comp=Z,116nm,1.2s,mb5.5						
MBWA	**Marble Bar**	76.99	212	eP	P	19 09 33.4	-0.7
	comp=Z,24nm,1.1s,mb4.8						
JCT	**Junction City**	77.05	58	eP	P	19 09 34.0	-0.3
JCT				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.8						
JCT	**Junction City**	77.05	58	eP	P	19 09 34.0	-0.3
	comp=Z,13nm,0.7s,mb4.8						
MIAR	**Mount Ida**	77.11	51	eP	P	19 09 34.2	-0.3
MIAR				e*PP	pP	19 10 38.3	-0.1
MIAR				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.9						
MIAR	**Mount Ida**	77.11	51	eP	P	19 09 34.2	-0.3
	comp=Z,18nm,0.7s,mb4.9						
MIAR				epP	pP	19 10 38.3	-0.1
OBKA	**Obir**	77.14	332	⇓iP	P	19 09 34.6	+0.2
	comp=Z,81nm,2.0s,mb5.1						
BFO	**Black Forest**	77.20	337	eP	P	19 09 34.3	-0.4
BFO				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.0						
BFO	**Black Forest**	77.20	337	eP	P	19 09 34.3	-0.4
	comp=Z,40nm,1.2s,mb5.0						
ESKT	**Eskisehir**	77.21	318	i P	P	19 09 34.5	-0.4
COBT	**Iskenderun**	77.22	313	i P	P	19 09 35.9	+0.8
GUT	**Gutenstein**	77.24	336	⇓eP	P	19 09 34.8	-0.1
WATA	**Walderalm**	77.25	334	⇓iP	P	19 09 35.6	+0.6
	comp=Z,71nm,1.4s,mb5.2						
WATA	**Walderalm**	77.25	334	⇓iP	P	19 09 35.6	+0.6
WATA				pmax	pmax		
	comp=Z,71nm,1.4s,mb5.2						
DIM	**Dimitrovgrad**	77.26	323	eP	P	19 09 36.0	+0.9
SPAK	**Spaichingen**	77.30	336	eP	P	19 09 35.1	-0.1
ALLY	**Alegheny Colle**	77.30	38	eP	P	19 09 35.2	-0.2
WTTA	**Wattenberg**	77.30	334	⇑iP	P	19 09 36.1	+0.8
	comp=Z,128nm,1.4s,mb5.5						
WTTA	**Wattenberg**	77.30	334	⇑iP	P	19 09 36.1	+0.8
WTTA				pmax	pmax		
	comp=Z,128nm,1.4s,mb5.5						
UBR	**Uberruh**	77.34	335	eP	P	19 09 35.3	-0.1
UGL	**Uglegorsk**	77.34	335	eS		19 01 23.0	
UGL				A		19 01 28.0	
	comp=Z,2µm,5.0s						
UGL				A		19 01 28.0	
	comp=Z,5µm,5.0s						
UGL				A		19 01 28.0	
	comp=Z,2µm,5.0s						
ACSO	**Alum Creek Sta**	77.34	41	eP	P	19 09 35.4	-0.3
	comp=Z,21nm,0.7s,mb5.0						
PGB	**Panagyurishte**	77.35	324	eP	P	19 09 36.0	+0.3
WLS	**Welschbruch**	77.37	337	eP	P	19 09 35.4	-0.2
MOTA	**Moosalm**	77.38	335	⇓iP	P	19 09 36.0	+0.3
	comp=Z,27nm,1.1s,mb4.9						
MOTA	**Moosalm**	77.38	335	⇓iP	P	19 09 36.0	+0.3
MOTA				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
CDF	**Champ du Feu**	77.39	337	eP	P	19 09 35.0	-0.7
	comp=Z,111nm,1.0s,mb5.2						
CDF	**Champ du Feu**	77.39	337	eP	P	19 09 35.0	-0.7
CDF				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.2						
ULDT	**Uludag**	77.42	319	i P	P	19 09 36.2	+0.1
GRUS	**Gruza**	77.45	327	eP	P	19 09 35.4	-0.8
SQTA	**Sankt Quirin**	77.46	334	⇑iP	P	19 09 36.8	+0.7
	comp=Z,62nm,1.2s,mb5.2						
SQTA	**Sankt Quirin**	77.46	334	⇑iP	P	19 09 36.8	+0.7
SQTA				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.2						
DIVS	**Divcibare**	77.52	327	⇑iP	P	19 09 35.7	-0.9
LIBD	**Limburg**	77.55	337	eP	P	19 09 36.6	0.0
LJU	**Ljubljana**	77.57	332	i P	P	19 09 36.2	-0.6
LJU				i		19 09 37.4	
WCI	**Wyandotte Cave**	77.57	44	eP	P	19 09 36.7	-0.3

WCI				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.2						
WCI	Wyandotte Cave	77.57	44	eP	P	19 09 36.7	-0.3
	comp=Z,39nm,0.8s,mb5.2						
FVI	Forni Avoltri	77.58	333	eP	P	19 09 36.6	-0.2
PTCC	Patocco-Chiusa	77.59	333	eP	P	19 09 36.2	-0.7
ECH	Echery	77.60	337	eP	P	19 09 37.1	+0.2
KIZ	Kirchzarten	77.65	337	⇓eP	P	19 09 36.9	-0.3
VTS	Vitosha	77.68	325	⇑P	P	19 09 37.5	+0.1
VTS	Vitosha	77.68	325	i P	P	19 09 37.0	-0.4
VTS	Vitosha	77.68	325	⇓P	P	19 09 37.5	+0.1
FELD	Feldberg	77.70	337	eP	P	19 09 37.3	-0.2
GMNA	Gemona	77.74	333	eP	P	19 09 36.8	-0.9
DAVA	Damuels	77.76	335	⇓iP	P	19 09 38.0	+0.2
	comp=Z,50nm,1.4s,mb5.0						
BOJS	Bojanci	77.83	331	i P	P	19 09 37.8	-0.4
MEZF	Maizieres J'vi	77.84	339	eP	P	19 09 37.7	-0.5
	comp=Z,134nm,1.0s,mb5.3						
JAVS	Javornik	77.84	332	i P	P	19 09 37.2	-1.0
THEF	They Montfort	77.87	338	eP	P	19 09 37.2	-1.2
RZN	Rozhen	77.88	323	eP	P	19 09 38.0	-0.6
MOF	Molkenrain	77.94	337	eP	P	19 09 38.3	-0.5
HAU	Haudompre	77.99	338	eP	P	19 09 38.2	-0.9
	comp=Z,69nm,0.9s,mb5.1						
HAU	Haudompre	77.99	338	eP	P	19 09 38.2	-0.9
HAU				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.1						
ALN	Alexandroupoli	78.04	322	eP	P	19 09 39.5	+0.1
HINF	Hinteralfeld	78.05	337	eP	P	19 09 38.3	-1.1
	comp=Z,41nm,1.1s,mb4.8						
HINF	Hinteralfeld	78.05	337	eP	P	19 09 38.3	-1.1
HINF				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
MEST	Erdemli	78.15	314	i P	P	19 09 39.4	-0.7
BTOK	Tokmak	78.20	320	i P	P	19 09 40.2	-0.2
ACCN	Adirondack Com	78.21	33	eP	P	19 09 39.9	-0.4
BBS	Basel-Blauen	78.21	337	eP	P	19 09 41.1	+0.9
BBS	Basel-Blauen	78.21	337	⇓eP	P	19 09 40.3	+0.1
DAVOX	Davos	78.23	335	P	P	19 09 41.0	+0.7
	comp=Z,28nm,0.5s,mb5.3,baz=164,slow=0.9,SNR=40						
MMB	Musomiste	78.35	324	i P	P	19 09 41.0	-0.1
KKB	Krupnik	78.35	324	eP	P	19 09 42.0	+0.9
BRMO	Bormio	78.37	335	eP	P	19 09 41.5	+0.4
CTI	Castel Tesino	78.41	334	eP	P	19 09 40.2	-1.1
LOMF	Lomont	78.49	337	eP	P	19 09 42.4	+0.7
JLP	Les Platons	78.60	344	eP	P	19 09 42.3	0.0
JLP				AMb	AMB	19 09 44.2	
	comp=Z,150nm,0.9s,mb5.7						
JQE	Queens East	78.63	344	eP	P	19 09 42.1	-0.3
JVM	Valle D.L. Mar	78.65	344	eP	P	19 09 42.6	0.0
JVM				AMb	AMB	19 09 44.4	
	comp=Z,112nm,1.0s,mb5.5						
JRS	Jersey	78.65	344	eP	P	19 09 42.6	0.0
FLN	La Foliniere	78.76	343	eP	P	19 09 42.4	-0.7
	comp=Z,1.7nm,0.2s,mb4.1						
FLN	La Foliniere	78.76	343	eP	P	19 09 42.4	-0.7
FLN				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.2						
SRS	Serrai	78.81	324	eP	P	19 09 43.1	-0.5
LDF	La Druitiere	78.85	342	eP	P	19 09 42.9	-0.7
SKO	Skopje	78.87	325	i P	P	19 09 45.7	+1.9
KNT	Kendrikon	79.03	324	eP	P	19 09 44.4	-0.3
MANT	Manisa	79.05	319	i P	P	19 09 44.4	-0.5
GRR	Gorron	79.19	343	eP	P	19 09 45.0	-0.4
	comp=Z,166nm,0.8s,mb5.5						
GRR	Gorron	79.19	343	eP	P	19 09 45.0	-0.4
GRR				pmax	pmax		
	comp=Z,83nm,0.8s,mb5.5						
CABF	La Chapelle	79.36	338	eP	P	19 09 46.1	-0.2
	comp=Z,79nm,1.0s,mb5.1						
CABF	La Chapelle	79.36	338	eP	P	19 09 46.1	-0.2
CABF				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.1						
VAI	Varese	79.37	335	eP	P	19 09 46.2	-0.2
OG01	Vacheresse	79.47	337	eP	P	19 09 43.1	-3.9
MCGN	Macugnaga	79.49	336	eP	P	19 09 47.1	0.0
HYF	Humbligny	79.54	340	eP	P	19 09 47.2	-0.1
SSF	Saint Saulge	79.55	339	eP	P	19 09 46.8	-0.5
	comp=Z,57nm,0.9s,mb5.0						
SSF	Saint Saulge	79.55	339	eP	P	19 09 46.8	-0.5
SSF				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
SGMF	Saint Gilles	79.64	344	eP	P	19 09 47.5	-0.3
	comp=Z,201nm,0.9s,mb5.6						
SGMF	Saint Gilles	79.64	344	eP	P	19 09 47.5	-0.3
SGMF				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.5						
ROSF	Rostrenen	79.69	344	eP	P	19 09 47.8	-0.2
	comp=Z,266nm,1.0s,mb5.6						
ROSF	Rostrenen	79.69	344	eP	P	19 09 47.8	-0.2
ROSF				pmax	pmax		
	comp=Z,133nm,1.0s,mb5.6						
ORX	Oropa	79.79	336	P	P	19 09 49.3	+0.6
ORO	Oropa	79.80	336	eP	P	19 09 49.5	+0.8
PAIG	Paliouri	79.80	323	eP	P	19 09 48.1	-0.8
AVF	Avril sur Loir	79.84	339	eP	P	19 09 48.4	-0.5
	comp=Z,65nm,0.7s,mb5.2						
AVF	Avril sur Loir	79.84	339	eP	P	19 09 48.4	-0.5
AVF				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.2						
SMF	Signal de Mont	79.86	339	eP	P	19 09 48.7	-0.3
	comp=Z,325nm,1.3s,mb5.6						
SMF	Signal de Mont	79.86	339	eP	P	19 09 48.7	-0.3
SMF				pmax	pmax		
	comp=Z,162nm,1.3s,mb5.6						
CSS	Prodhromos	79.86	314	eP	P	19 09 49.0	-0.3
	comp=Z,17nm,0.6s,mb5.0						
WES	Weston	79.89	32	eP	P	19 09 49.5	+0.2
WES				pmax	pmax		
	comp=Z,73nm,1.1s,mb5.3						
WES	Weston	79.89	32	eP	P	19 09 49.5	+0.2
	comp=Z,73nm,1.1s,mb5.3						
FNA	Florina	79.93	325	eP	P	19 09 48.7	-0.7
TRAV		79.96	336	P	P	19 09 49.5	-0.1
AYDN	Tasoluk	80.03	319	i P	P	19 09 50.3	+0.2
QUIF	Quistinic	80.07	344	eP	P	19 09 49.6	-0.5
	comp=Z,122nm,1.0s,mb5.3						
QUIF	Quistinic	80.07	344	eP	P	19 09 49.6	-0.5
QUIF				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.3						
RSL	Roselend	80.09	337	eP	P	19 09 51.3	+1.1
LIT	Litokhoron	80.10	324	eP	P	19 09 49.4	-1.1
RSM	Repubblica di	80.11	332	eP	P	19 09 50.8	+0.5
LSD	Ceresole Reale	80.17	336	P	P	19 09 51.6	+1.0
BGF	Bois d'Agland	80.17	340	eP	P	19 09 50.3	-0.3
BOB	Bobbio (Coli)	80.20	335	eP	P	19 09 52.5	+1.7
LPL	La Plagne	80.22	337	eP	P	19 09 51.4	+0.5
	comp=Z,118nm,0.7s,mb5.4						
LPL	La Plagne	80.22	337	eP	P	19 09 51.4	+0.5
LPL				pmax	pmax		
	comp=Z,59nm,0.7s,mb5.4						
FSSB	Fossombrone	80.22	332	eP	P	19 09 51.3	+0.3
LPG	La Plagne	80.23	337	eP	P	19 09 51.6	+0.6
	comp=Z,136nm,0.7s,mb5.5						
LPG	La Plagne	80.23	337	eP	P	19 09 51.6	+0.6
LPG				pmax	pmax		
	comp=Z,68nm,0.7s,mb5.5						
ERBM	Eremo	80.25	334	eP	P	19 09 52.9	+1.8
GSCL	Gusciola	80.26	334	eP	P	19 09 52.0	+0.8
SFI	Santa Sofia	80.31	333	eP	P	19 09 52.3	+0.9
VMG	Vicchio	80.34	333	eP	P	19 09 52.9	+1.3
ARMA	Armidale	80.34	181	eP	P	19 09 52.6	+0.7
ARV	Arcevia	80.35	332	eP	P	19 09 51.6	0.0
PGD	Poggio Sodo	80.37	333	eP	P	19 09 52.8	+1.1
ASF	Jabal al Asfar	80.43	309	P	P	19 09 53.2	+0.9
	comp=Z,14nm,0.9s,mb4.7,baz=356,slow=1.6,SNR=20						
RSP	Reno Superiore	80.43	336	P	P	19 09 51.3	-0.7
CODM		80.43	334	P	P	19 09 52.2	+0.1
XOR	Xorichti	80.47	323	eP	P	19 09 51.3	-1.1
BDI	Bagni Di Lucca	80.53	334	eP	P	19 09 53.5	+1.0
CRE	Caprese Michel	80.54	332	eP	P	19 09 53.3	+0.7
PLDF	La Plantade	80.55	339	eP	P	19 09 53.7	+1.1
TCF	Toulx Ste Croi	80.57	340	eP	P	19 09 52.7	0.0
	comp=Z,106nm,1.0s,mb5.2						
TCF	Toulx Ste Croi	80.57	340	eP	P	19 09 52.7	0.0
TCF				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.2						
VINC	Vinca	80.58	334	P	P	19 09 52.2	-0.6
AGO	Saint Agoulin	80.58	339	eP	P	19 09 54.1	+1.3
FENE	Fenestrelle	80.59	336	P	P	19 09 53.3	+0.4
PCP	Pian Castagno	80.65	335	P	P	19 09 53.7	+0.5
GENL	Genova Univers	80.66	335	P	P	19 09 52.6	-0.6
BNI	Bardonecchia	80.67	337	eP	P	19 09 53.8	+0.5
BNI				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.3						
BNI	Bardonecchia	80.67	337	eP	P	19 09 53.8	+0.5
	comp=Z,47nm,0.7s,mb5.3						
GDM	Grand'Maison	80.67	337	eP	P	19 09 54.6	+1.3
BHB	Bricherasio	80.71	336	P	P	19 09 52.8	-0.7
MFF	Saint Martin d	80.76	342	eP	P	19 09 53.7	0.0
	comp=Z,76nm,0.8s,mb5.2						
MFF	Saint Martin d	80.76	342	eP	P	19 09 53.7	0.0
MFF				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.2						
RRL	Cesana Torines	80.76	336	P	P	19 09 54.6	+0.8
OG22	Abries	80.81	336	eP	P	19 09 56.6	+2.6
LCHF	La Chataignera	80.82	342	eP	P	19 09 54.8	+0.8
PYM	Petit Puy Mans	80.90	339	eP	P	19 09 55.5	+1.1
NRCA	Norcia	80.90	331	eP	P	19 09 55.1	+0.6
MBDF	Montbardon	80.95	336	eP	P	19 09 54.5	-0.2
	comp=Z,47nm,0.6s,mb5.1						
MBDF	Montbardon	80.95	336	eP	P	19 09 54.5	-0.2
MBDF				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.1						
COLF	Collangettes	80.96	339	eP	P	19 09 55.4	+0.6
ORIF	Oris-en-Rattie	81.00	337	eP	P	19 09 55.3	+0.3
	comp=Z,105nm,0.8s,mb5.3						
ORIF	Oris-en-Rattie	81.00	337	eP	P	19 09 55.3	+0.3
ORIF				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.3						
DOI	San Damiano	81.03	336	eP	P	19 09 54.0	-1.2
FIN	Finale Ligure	81.05	335	P	P	19 09 54.6	-0.7
LRYF	La Roche-sur-Y	81.06	343	eP	P	19 09 55.1	-0.2
ROB	Roburent	81.06	335	P	P	19 09 54.7	-0.6
PZZ	Prazzo	81.07	336	P	P	19 09 54.6	-0.8
AGG	Agios Georgios	81.10	323	eP	P	19 09 54.8	-0.9
SURF	Saint Ours	81.17	336	eP	P	19 09 57.3	+1.4
ENR	Entracque	81.25	336	P	P	19 09 54.9	-1.4
AQU	L'Aquila	81.25	331	eP	P	19 09 58.8	+2.5
STV2	Anna di Valdie	81.25	336	P	P	19 09 55.0	-1.4
STV	Sta Anna Valdi	81.25	336	P	P	19 09 54.9	-1.4
MONE	Monesi	81.29	335	P	P	19 09 56.5	0.0
FRNF	Fournols	81.34	339	eP	P	19 09 57.9	+1.1
VIVF	Saint-Julien-l	81.35	338	eP	P	19 09 57.0	+0.2
	comp=Z,76nm,0.8s,mb5.2						
VIVF	Saint-Julien-l	81.35	338	eP	P	19 09 57.0	+0.2
VIVF				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.2						
IGT	Igoumenitsa	81.41	325	eP	P	19 09 57.0	-0.2
IMI	Imperia	81.42	335	P	P	19 09 57.1	-0.1
SAOF	Saorge	81.43	336	eP	P	19 09 57.0	-0.3
OCF	Saint Nazaire	81.46	337	eP	P	19 09 58.8	+1.4
OG26	St.-Nazaire-De	81.46	337	eP	P	19 09 58.8	+1.4
AUTN	L'Aution	81.46	336	eP	P	19 09 59.1	+1.7
OG25	Le Caire	81.46	337	eP	P	19 09 58.6	+1.2
TOUF	Mont Tournerai	81.49	336	eP	P	19 09 58.3	+0.8
NEGI	Negi	81.52	335	P	P	19 09 56.9	-0.8
SBF	Sospel	81.58	336	eP	P	19 09 57.3	-0.7
	comp=Z,122nm,0.8s,mb5.4						
SBF	Sospel	81.58	336	eP	P	19 09 57.3	-0.7
SBF				pmax	pmax		
	comp=Z,61nm,0.8s,mb5.4						
MVIF	Mont Vial	81.62	336	eP	P	19 09 58.9	+0.7
RJF	Les Rejaudoux	81.65	340	eP	P	19 09 58.5	+0.1
	comp=Z,74nm,1.0s,mb5.1						
RJF	Les Rejaudoux	81.65	340	eP	P	19 09 58.5	+0.1
RJF				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.1						
FG4	Candela	81.67	329	eP	P	19 09 58.6	0.0
REVF	Revere	81.71	336	eP	P	19 09 58.4	-0.3
STOF	St-Etienne Org	81.85	337	eP	P	19 10 00.8	+1.4
CAF	Calviac	81.89	340	eP	P	19 09 59.3	-0.3
	comp=Z,86nm,0.9s,mb5.2						
CAF	Calviac	81.89	340	eP	P	19 09 59.3	-0.3
CAF				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.2						
SMRF	Simiane la Rot	81.95	337	eP	P	19 10 00.5	+0.5
	comp=Z,41nm,0.9s,mb4.8						
FRF	La Foret Royal	82.07	336	eP	P	19 09 59.9	-0.7
	comp=Z,60nm,1.0s,mb5.0						
FRF	La Foret Royal	82.07	336	eP	P	19 09 59.9	-0.7
FRF				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
LFF	La Frestale	82.17	341	eP	P	19 10 01.4	+0.4
	comp=Z,182nm,1.1s,mb5.4						
LFF	La Frestale	82.17	341	eP	P	19 10 01.4	+0.4
LFF				pmax	pmax		
	comp=Z,91nm,1.1s,mb5.4						
TAVF	Tavernes	82.17	336	eP	P	19 10 01.2	+0.1
WHFO	Wadi Hawf	82.20	288	P	P	19 10 01.1	-0.7
	SNR=30						
PRAF	Pradon	82.22	337	eP	P	19 10 00.8	-0.5
LASF	Ste Croix	82.28	338	eP	P	19 10 02.3	+0.7
	comp=Z,97nm,1.2s,mb5.1						
LMR	La Mourre	82.32	336	eP	P	19 10 01.5	-0.3
	comp=Z,105nm,0.9s,mb5.2						
LMR	La Mourre	82.32	336	eP	P	19 10 01.5	-0.3
LMR				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.3						
TREF	Trevaresse	82.33	337	eP	P	19 10 00.8	-1.1
PUYF	Puyloubier	82.34	337	eP	P	19 10 01.0	-0.9
PGF	Pioggiola	82.37	334	eP	P	19 10 02.7	+0.6
	comp=Z,101nm,1.0s,mb5.2						
PGF	Pioggiola	82.37	334	eP	P	19 10 02.7	+0.6
PGF				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.2						
STKA	Stephens Creek	82.42	190	eP	P	19 10 02.6	0.0
	comp=Z,3.9nm,0.9s,mb4.1						
GELF	Grande-Etoile	82.55	337	eP	P	19 10 02.9	-0.1
RAYN	Ar Rayn	82.73	298	P	P	19 10 04.5	+0.1
	comp=Z,151nm,1.1s,mb5.7,SNR=19						
ABTO	Aybut	82.92	288	P	P	19 10 05.2	-0.2
	SNR=11						
IDI	Anoyia	83.31	320	P	P	19 10 06.7	-0.4
	comp=Z,5.6nm,0.4s,mb4.7,baz=2.8,slow=12,SNR=8.8						
MTLF	Montolieu	83.36	339	eP	P	19 10 07.6	+0.5
	comp=Z,106nm,1.0s,mb5.3						
MTLF	Montolieu	83.36	339	eP	P	19 10 07.6	+0.5
MTLF				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.3						
EIL	Elat	83.43	309	eP	P	19 10 07.9	+0.1
	comp=Z,32nm,0.9s,mb5.2						
LRDF	Laroque-de-Fa	83.67	339	eP	P	19 10 10.0	+1.4
FORT	Forrest	83.69	201	⇓iP	P	19 10 09.2	+0.2
	comp=Z,626nm,0.6s						
LPEF	Le Peyrat	83.80	339	eP	P	19 10 09.9	+0.6
LPEF	Le Peyrat	83.80	339	eP	P	19 10 10.7	+1.4
MLS	Moulis	83.98	340	eP	P	19 10 10.4	+0.3
SJAF	Saint Jean de	84.02	338	eP	P	19 10 11.6	+1.2
SJAF	Saint Jean de	84.02	338	eP	P	19 10 11.6	+1.2
FILF	Fillols	84.02	339	eP	P	19 10 12.0	+1.6
FILF	Fillols	84.02	339	eP	P	19 10 12.0	+1.6
EJON	La Jonquera	84.05	338	P	P	19 10 10.9	+0.4
	comp=Z,44nm,1.1s,mb5.2						
EPF	Esparros	84.08	340	eP	P	19 10 10.7	+0.1
	comp=Z,52nm,0.9s,mb5.1						
EPF	Esparros	84.08	340	eP	P	19 10 10.7	+0.1
EPF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.1						
SOI	Samo	84.23	327	eP	P	19 10 11.1	-0.5
EALK	Alkurruntz	84.28	342	P	P	19 10 12.2	+0.6
	comp=Z,23nm,0.8s,mb5.1						
VIEF	Viey	84.28	340	eP	P	19 10 13.3	+1.6
RESF	Ens	84.29	340	eP	P	19 10 13.2	+1.5
RESF	Ens	84.29	340	eP	P	19 10 13.7	+2.0
SJPF	Ste Jean	84.33	341	eP	P	19 10 12.1	+0.2
	comp=Z,18nm,1.0s,mb4.5						
SJPF	Ste Jean	84.33	341	eP	P	19 10 12.1	+0.2
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
ETSF	Etsaut	84.39	341	eP	P	19 10 12.9	+0.7
	comp=Z,22nm,0.6s,mb4.9						
ETSF	Etsaut	84.39	341	eP	P	19 10 12.9	+0.7
ETSF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
EBIE	Bielsa	84.45	340	P	P	19 10 13.0	+0.5
	comp=Z,37nm,0.9s,mb5.2						
ELAN	Lanestosa	84.64	343	P	P	19 10 12.5	-1.0
	comp=Z,38nm,0.8s,mb5.3						
VSL	Villasalto	85.08	333	eP	P	19 10 16.3	+0.5
	comp=Z,52nm,1.1s,mb5.3						
EPON	Pontenova	85.20	346	P	P	19 10 15.6	-0.6
	comp=Z,29nm,0.7s,mb5.2						
ESAC	San Caprasio	85.50	340	P	P	19 10 17.9	+0.1
	comp=Z,74nm,1.0s,mb5.5						
EPOB	Poblet	85.51	339	P	P	19 10 17.1	-0.8
	comp=Z,16nm,0.9s,mb4.8						
STS	Santiago	85.84	347	P	P	19 10 17.7	-1.7
STS				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
STS	Santiago	85.84	347	P	P	19 10 17.7	-1.7
	comp=Z,5.5nm,0.6s,mb4.6						
EMAZ	Mazaricos	85.84	347	P	P	19 10 17.0	-2.4
	comp=Z,130nm,1.9s,mb5.4						
EINC	Incio	85.88	346	P	P	19 10 19.4	-0.2
	comp=Z,12nm,0.6s,mb4.9						
ERTA	Horta de San J	86.06	340	P	P	19 10 19.3	-1.2
	comp=Z,12nm,0.8s,mb4.8						
ERUA	La Rua	86.11	345	P	P	19 10 20.5	-0.2
ERUA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
ERUA	La Rua	86.11	345	P	P	19 10 20.5	-0.2
	comp=Z,9.0nm,0.7s,mb4.7						
ECAL	Calabor	86.48	345	P	P	19 10 21.5	-1.0
	comp=Z,32nm,1.4s,mb5.0						
PBRG	Braganca	86.61	345	eP	P	19 10 22.9	-0.3
	comp=Z,24nm,1.3s,mb4.9						
ELOB	Lobios	86.77	346	P	P	19 10 20.9	-3.0
	comp=Z,28nm,1.1s,mb5.0						
EMOS	Mosqueruela	86.80	340	P	P	19 10 23.1	-1.0
	comp=Z,36nm,1.4s,mb5.0						
KLBR	Kellerberrin	87.31	210	⇓iP	P	19 10 26.4	-0.3
	comp=Z,185nm,0.8s,mb6.0						
PVIS	Viseu	87.86	346	eP	P	19 10 28.6	-0.5
	comp=Z,39nm,1.8s,mb4.9						
MTE	Manteigas	88.12	345	eP	P	19 10 29.0	-1.3
	comp=Z,32nm,1.1s,mb5.1						
ESDC	Sonseca Array	88.18	342	P	P	19 10 30.2	-0.4
	comp=Z,13nm,0.8s,mb4.8,baz=7.7,slow=4.2,SNR=46						
ESDC	Sonseca Array	88.18	342	P	P	19 10 30.0	-0.6
	comp=Z,21nm,0.9s,mb5.0						
ESLA	Sonseca Array	88.18	342	eP	P	19 10 30.2	-0.4
	comp=Z,8.4nm,1.1s,mb4.5						
PCBR	Castelo Branco	88.65	345	eP	P	19 10 32.1	-0.7
	comp=Z,27nm,1.3s,mb4.9						
ETOB	Tobarra	88.68	340	P	P	19 10 32.1	-0.8
	comp=Z,64nm,1.7s,mb5.2						
NWAO	Narrogin (SRO)	88.71	210	P	P	19 10 33.3	0.0
NWAO				pmax	pmax		
	comp=Z,14nm,1.0s						
NWAO	Narrogin (SRO)	88.71	210	pP	pP	19 11 38.1	-0.8
	comp=Z,10.0nm,1.0s,baz=26,slow=6.8,SNR=2.8						
NWAO	Narrogin (SRO)	88.71	210	P	P	19 10 33.3	+0.1
	comp=Z,14nm,1.0s,mb4.8						
EVIA	Vianos	88.89	341	P	P	19 10 34.2	+0.2
EVIA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
EVIA	Vianos	88.89	341	P	P	19 10 34.2	+0.3
	comp=Z,7.2nm,0.6s,mb4.7						
EBAN	Banos Encina	89.61	342	P	P	19 10 36.3	-1.1
EBAN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
EBAN	Banos Encina	89.61	342	P	P	19 10 36.3	-1.1
	comp=Z,7.8nm,0.6s,mb4.7						
EBAD	Badajoz	89.63	345	P	P	19 10 35.7	-1.7
	comp=Z,62nm,1.6s,mb5.2						
EHUE	Huescar	89.70	341	P	P	19 10 37.2	-0.6
EHUE				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
EHUE	Huescar	89.70	341	P	P	19 10 37.2	-0.6
	comp=Z,12nm,1.0s,mb4.7						
EADA	Adamuz	89.76	343	P	P	19 10 36.7	-1.4
	comp=Z,27nm,1.1s,mb5.0						
EQES	Quesada	89.81	341	P	P	19 10 37.3	-1.0
	comp=Z,28nm,1.1s,mb5.0						
EVO	Evora	90.02	345	eP	P	19 10 38.1	-1.2
	comp=Z,42nm,1.3s,mb4.8						
ELUQ	Luque	90.29	342	P	P	19 10 39.9	-0.6
ELUQ				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
ELUQ	Luque	90.29	342	P	P	19 10 39.9	-0.7
	comp=Z,19nm,1.0s,mb4.9						
ENIJ	Nijar	90.43	340	P	P	19 10 39.7	-1.5
ENIJ				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
ENIJ	Nijar	90.43	340	P	P	19 10 39.6	-1.6
	comp=Z,14nm,0.9s,mb4.8						
PBEJ	Beja	90.49	345	eP	P	19 10 40.8	-0.6
	comp=Z,32nm,1.4s,mb5.0						
EMIN	Mina Concepcio	90.53	344	P	P	19 10 40.3	-1.4
	comp=Z,23nm,0.9s,mb5.0						
EBER	Berja	90.65	341	P	P	19 10 42.0	-0.2
	comp=Z,9.0nm,0.8s,mb4.7						
ELOJ	Sierra Loja	90.66	342	P	P	19 10 41.0	-1.3
ELOJ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
ELOJ	Sierra Loja	90.66	342	P	P	19 10 41.0	-1.3
	comp=Z,11nm,0.9s,mb4.7						
PALC	Alcoutim	90.97	345	eP	P	19 10 43.1	-0.6
	comp=Z,34nm,1.8s,mb4.9						
PTEO	Sao Teotonio	91.09	346	eP	P	19 10 43.7	-0.6
	comp=Z,46nm,1.3s,mb5.2						
ESPR	Espera	91.26	343	P	P	19 10 44.1	-0.9
	comp=Z,24nm,0.9s,mb5.0						
EMIJ	Mijas	91.35	342	P	P	19 10 44.0	-1.4
	comp=Z,5.6nm,0.6s,mb4.6						
EJIF	Jimena Fronter	91.59	343	P	P	19 10 46.2	-0.4
EJIF				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
EJIF	Jimena Fronter	91.59	343	P	P	19 10 46.2	-0.4
	comp=Z,24nm,0.7s,mb5.2						
TAU	Tasmania Unive	92.94	184	eP	P	19 10 50.3	-2.4
TAU				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.3						
TAU	Tasmania Unive	92.94	184	eP	P	19 10 50.3	-2.4
	comp=Z,42nm,1.1s,mb5.3						
DBIC	Dimbokro	120.15	334	PKIKP	PKPdf	19 16 29.1	+0.7
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.5s						
DBIC	Dimbokro	120.15	334	PKP	PKPdf	19 16 29.1	+0.7
	comp=Z,4.8nm,0.5s,baz=47,slow=1.4,SNR=22						
VNDA	Vanda	127.64	178	PKIKP	PKPdf	19 16 41.7	+0.4
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VNDA	Vanda	127.64	178	PKP	PKPdf	19 16 41.7	+0.3
	comp=Z,2.6nm,1.1s,slow=5.1,SNR=4.9						
VNDA	Vanda	127.64	178	PKP	PKPdf	19 16 41.7	+0.3
SAML	Samuel	129.03	49	ePKPdf	PKPdf	19 16 46.3	+0.7
LPAZ	La Paz	132.64	59	ePKIKP	PKPdf	19 16 53.4	+1.1
LPAZ	La Paz	132.64	59	PKP	PKPdf	19 16 54.5	+2.2
	comp=Z,1.4nm,0.7s,baz=11,slow=7.0,SNR=6.0						
LPAZ				SKPbc		19 19 52.6	
	comp=Z,1.6nm,0.8s,baz=315,slow=1.4,SNR=3.8						
LVC	Limon Verde	137.22	66	ePKPdf	PKPdf	19 17 02.8	+2.2
QSPA	South Pole Qui	140.01	180	⇑iP	PKPdf	19 17 07.1	+2.9
BDFB	Brasilia	141.47	34	i PKHKP		19 17 04.4	
BDFB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BDFB	Brasilia	141.47	34	PKhKP		19 17 04.4	
	comp=Z,10nm,0.9s,baz=323,slow=4.0,SNR=9.1						
PLCA	Paso Flores	148.37	89	ePKIKP	PKPdf	19 17 22.4	+3.0
PLCA				e		19 17 28.9	
PLCA				e		19 18 33.6	
PLCA	Paso Flores	148.37	89	PKPbc	PKPdf	19 17 25.1	+5.7
	comp=Z,12nm,0.7s,baz=298,slow=3.3,SNR=37						
PLCA				pPKPbc		19 18 34.9	
	comp=Z,6.6nm,0.9s,baz=348,slow=6.0,SNR=4.6						
PLCA	Paso Flores	148.37	89	ePKPdf	PKPdf	19 17 22.4	+3.0
PLCA				ePKPbc	PKPdf	19 17 24.6	+5.2
PLCA				ePKPab	PKPab	19 17 28.9	-0.7
PLCA				epPKPdf		19 18 33.6	
CAM4	Nova Friburgo	149.55	30	⇓iP	PKPdf	19 17 28.4	+6.6
CAM4				i		19 17 30.0	
CAM4				i		19 17 33.9	
TRQA	Tornquist	152.31	77	ePKPbc	PKPdf	19 17 33.6	+8.1
TRQA				epPKP		19 18 43.9	
SNAA	Sanae	155.91	198	⇑i	PKPdf	19 17 44.7	+15
VNA2	Neumayer--Watz	157.40	197	⇑i	PKPdf	19 17 44.1	+13
VNA3	Neumayer Olymp	157.52	195	⇑i	PKPdf	19 17 41.7	+10
VNA1	Neumayer--Stat	157.78	196	⇑i	PKPdf	19 17 40.6	+8.8

IDC 24 19:08:51.0±1.0**, 11.94N**×**143.23E, mb3.5**/6**, mb1 3.8**/6**, mb1mx3.6**/20**, mbtmp3.5**/6**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.9**/16**, Error ellipse: s-maj=57.8km s-min=22.4km az=106.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	Kunigami	20.42	319	LR	LR	19 19 17.3	
	comp=Z,304nm,21.1s,baz=162,slow=31						
WRA	Warramunga Arr	32.87	196	P	P	19 15 25.6	-3.4
	0.4nm,1.1s,baz=21,slow=9.6,SNR=2.9						
ASAR	Alice Springs	36.55	194	P	P	19 15 59.5	-1.0

	0.2nm,0.7s,baz=23,slow=12,SNR=2.5						
BVAR	**Borovoye Array**	**70.23**	**322**	P	P	19 20 06.2	-1.6
	0.3nm,0.4s,baz=109,slow=6.9,SNR=4.2						
ILAR	**Eielson Array**	**70.73**	**25**	P	P	19 20 07.5	-3.2
	0.3nm,0.7s,baz=249,slow=6.1,SNR=5.3						
YKA	**Yellowknife Ar**	**85.05**	**27**	P	P	19 21 28.5	-1.0
	0.2nm,0.6s,baz=290,slow=5.4,SNR=3.7						
NVAR	**Mina Array Bea**	**89.19**	**51**	P	P	19 21 50.8	+0.5
	0.7nm,0.6s,baz=259,slow=5.9,SNR=5.8						

DJA 24 19:32:31.1±1.0**, 9.53S×113.91E, h33^{km}, ML3.7**/4**, 4C-3D, Error ellipse: s-maj=22.7km s-min=12.3km az=46.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	**Scrawed**	**1.07**	**12**	⇓*e*Pg	P	19 32 48.1	-1.7
	77nm,0.2s						
SRDI				⇓*e*Sg	S	19 33 01.0	-2.7
KELI	**Kelakatan**	**1.43**	**24**	⇑*e*Pn	Pn	19 32 53.9	-1.2
	52nm,0.3s						
KELI				⇓*e*Sn	Sn	19 33 10.6	-2.3
RATI	**Rata**	**1.79**	**63**	⇑*e*Pn	Pn	19 32 58.5	-1.8
	152nm,0.2s						
RATI				⇑*e*Sn	Sn	19 33 17.6	-4.5
KEDI	**Kedomdong**	**2.41**	**65**	⇑*e*Pn	Pn	19 33 07.0	-2.2
	18nm,0.2s						

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*JMA **24** 19:37:15.4±0.3, 24.96N×122.74E, h121^{km}, M2.2*
*TAP **24** 19:37:15.6, 24.87N×122.72E, h116^{km}±1^{km}, ML3.5*
ISC 24 19:37:15.6±2.5**, 25.0N**±0.3×**122.8E**±0.2**, h116^{km}**±41^{km}**, n6, σ0^{s}29**/9**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.57**	**155**	P	**P**	**19 37 33.9**	**+0.1**
IRIF	**Iriomote-Funau**	**1.10**	**126**	P	**P**	**19 37 38.3**	**-0.4**
IRIF				*e*S	**S**	**19 37 56.0**	**0.0**
HATJ	**Hateruma jima**	**1.33**	**134**	S	**S**	**19 38 01.1**	**+0.4**
JKRS	**Kuro-shima**	**1.36**	**123**	P	**P**	**19 37 41.7**	**0.0**
JIJ	**Ishigaki jima**	**1.41**	**116**	P	**P**	**19 37 42.2**	**0.0**
JIJ				S	**S**	**19 38 01.7**	**-0.6**
JTJ	**Tarama**	**1.81**	**100**	P	**P**	**19 37 47.1**	**+0.2**
JTJ				S	**S**	**19 38 10.8**	**+0.3**

IGQ 24 20:26:10.8, 1.32S×81.74W, h12^{km}±10^{km}**, mb4.1, 4D, Error ellipse: s-maj=11.6km s-min=6.9km az=174.6, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALI	**Salinas**	**1.14**	**139**	P	Pb	20 26 32.7	+0.7
HOJA	**Cerro de Hojas**	**1.22**	**77**	⇓P	Pb	20 26 30.9	-2.5
IGUA	**Igualata**	**3.10**	**93**	P	Pn	20 27 00.7	+0.1
IGUA				S	Sn	20 27 36.9	-1.1
ARRY	**Arrayan**	**3.29**	**93**	⇓P	Pn	20 27 03.9	+0.7
RETU	**Refugio**	**3.29**	**92**	P	Pn	20 27 05.9	+2.6
JUA2	**San Juan 2**	**3.32**	**71**	P	Pn	20 27 03.4	-0.3
NAS1	**Nasa**	**3.33**	**78**	P	Pn	20 27 03.8	0.0
ULBA	**Ulba**	**3.33**	**92**	P	Pn	20 27 05.8	+2.0
ULBA				S	Sn	20 27 46.2	+2.5
TERV	**Terraza Guagua**	**3.33**	**70**	P	Pn	20 27 06.6	+2.8
PINO	**Pino**	**3.33**	**70**	P	Pn	20 27 03.0	-0.8
PISA	**Pisayambo**	**3.36**	**86**	P	Pn	20 27 05.5	+1.3
PISA				S	Sn	20 27 43.4	-1.1
JOR1	**San Jorge 1**	**3.36**	**67**	P	Pn	20 27 00.9	-3.4
JOR1				S	Sn	20 27 39.7	-4.8
YANA	**Yana**	**3.38**	**69**	P	Pn	20 27 07.4	+2.8
VC1	**Cotopaxi 1**	**3.40**	**79**	P	Pn	20 27 06.5	+1.6
TAMB	**Tambo**	**3.42**	**80**	P	Pn	20 27 06.9	+1.7
TAMB				S	Sn	20 27 45.7	-0.4
ANTI	**Antisana**	**3.68**	**76**	⇓P	Pn	20 27 10.2	+1.4
COTA	**Cotacachi**	**3.77**	**64**	P	Pn	20 27 13.0	+2.8
COTA				S	Sn	20 27 57.4	+2.4
CAYR	**Refugio Cayamb**	**3.96**	**70**	⇓P	Pn	20 27 14.9	+2.2
CAYA	**Cayambe**	**3.99**	**70**	P	Pn	20 27 14.8	+1.6
ECEN	**Cerro Negro**	**4.33**	**61**	P	Pn	20 27 21.2	+3.2

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*NEIC **24** 20:31:37.5, 16.97N×100.21W, h5^{km}, MD3.5(MEX), After MEX.*
MEX 24 20:31:37.1±1.2**, 17.07N×100.17W, h8^{km}**±13^{km}**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.09**	**259**	*i* P	Pg	20 31 38.6	-0.7
CAIG				*i* S	Sg	20 31 40.4	-0.5
ACX	**Acapulco**	**0.32**	**129**	*i* P	Pg	20 31 42.8	-0.7
ACX				*i* S	Sg	20 31 47.7	-0.1
ZIIG	**Zihuatanejo**	**1.35**	**294**	*i* P	Pb	20 31 59.7	-2.5
ZIIG				*i* S	Sb	20 32 18.1	-1.4
ZIIG	**Zihuatanejo**	**1.35**	**294**	*i* P	Pb	20 31 59.7	-2.5
ZIIG				*i* S	Sb	20 32 14.1	-5.4
PLIG	**Platanillo**	**1.47**	**26**	*i* P	Pn	20 32 02.3	-1.7
PLIG				*i* S	Sb	20 32 22.2	-0.7
PLIG	**Platanillo**	**1.47**	**26**	*i* P	Pn	20 32 00.4	-3.6
PLIG				*i* S	Sb	20 32 19.0	-3.9
YAIG	**Yautepec**	**2.07**	**30**	*i* P	Pn	20 32 09.6	-3.1
YAIG				*i* S	Sn	20 32 31.9	-7.1
PPM	**Popocatepetl**	**2.48**	**36**	*e*P	Pn	20 32 22.0	+3.5
PPM				*i* S	Sn	20 32 52.0	+2.8
IIB	**San Bernardino**	**2.57**	**42**	*e*P	Pn	20 32 25.0	+5.2

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*IDC **24** 20:31:37.3±1.7, 22.51S×169.23E, mb4.1/7, mb1 4.3/7, mb1mx4.2/14, mbtmp4.1/7, MS3.2/1, Ms1 3.2/1, ms1mx2.6/16, Error ellipse: s-maj=81.2km s-min=25.1km az=152.0*
ISC 24 20:31:38.9±4.9**, 22.8S**±0.2×**169.2E**±0.1**, h23^{km}**±34^{km}**, n18, σ0^{s}87**/12**, mb4.1**/7**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.68**	**285**	*e*P	**Pn**	**20 32 22.0**	**+0.3**
NOUC	**Port Laguerre**	**2.80**	**283**	*e*P	**Pn**	**20 32 23.4**	**+0.1**
NOUC				*e*S	**Sn**	**20 32 56.7**	**-0.1**
URZ	**Urewera**	**16.85**	**158**	LR	LR	20 40 32.8	
	comp=Z,72nm,18.9s,baz=232,slow=31						
ARMA	**Armidale**	**17.48**	**240**	*e*P	**P**	**20 35 42.3**	**-0.7**
STKA	**Stephens Creek**	**26.12**	**244**	*e*P	**P**	**20 37 15.2**	**+2.1**
	1.9nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**26.12**	**244**	P	**P**	**20 37 15.2**	**+2.1**
	3.5nm,0.9s,mb3.9,baz=75,slow=7.9,SNR=8.1						
ASAR	**Alice Springs**	**32.44**	**261**	P	**P**	**20 38 07.8**	**-1.9**
	0.9nm,0.7s,mb3.7,baz=81,slow=8.8,SNR=5.5						
CMAR	**Chiang Mai Arr**	**79.96**	**295**	P	**P**	**20 43 49.0**	**+0.6**
	1.5nm,0.7s,mb4.0,baz=142,slow=4.0,SNR=8.8						
YBH	**Yreka Blue Hor**	**89.83**	**44**	P	**P**	**20 44 37.3**	**0.0**
	0.4nm,0.4s,mb4.1,baz=158,slow=4.3,SNR=4.2						
SONM	**Songino Array**	**90.03**	**323**	P	**P**	**20 44 38.3**	**+0.2**
	1.2nm,0.9s,mb4.2,baz=147,slow=2.9,SNR=9.4						
NVAR	**Mina Array Bea**	**91.13**	**49**	P	**P**	**20 44 43.4**	**0.0**
	1.3nm,0.7s,mb4.4,baz=218,slow=6.9,SNR=8.8						
ILAR	**Eielson Array**	**93.59**	**17**	P	**P**	**20 44 53.5**	**-0.6**
	1.4nm,1.2s,mb4.3,baz=233,slow=6.8,SNR=4.2						
CLL	**Collm**	**146.08**	**333**	P	PKPbc	20 51 19.0	+1.9
PRU	**Pruhonice**	**146.36**	**330**	*e*P	PKPbc	20 51 19.0	+1.2
EKA	**Eskdalemuir Ar**	**146.99**	**352**	PKPbc	PKPbc	20 51 19.9	+0.8
	8.2nm,1.0s,baz=336,slow=2.8,SNR=6.3						
KHC	**Kasperske Hory**	**147.41**	**330**	*e*P	PKPdf	20 51 20.0	-2.7
GERES	**GERESS Array B**	**147.56**	**329**	PKPbc	PKPdf	20 51 22.1	-0.8
	7.1nm,1.2s,baz=45,slow=1.9,SNR=12						
DAVOX	**Davos**	**150.83**	**330**	PKPbc	PKPdf	20 51 30.4	+2.3
	4.6nm,0.8s,baz=194,slow=5.7,SNR=5.5						

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*IDC **24** 20:33:44.6±0.5, 65.77S×133.85E, mb4.6/10, mb1 4.7/11, mb1mx4.5/17, mbtmp4.6/11, ML4.8/1, MS3.8/5, Ms1 3.8/5, ms1mx3.2/21, Error ellipse: s-maj=25.9km s-min=16.0km az=93.0*
*BJI **24** 20:33:45.6, 65.83S×133.31E, h18^{km}, mB5.0, mb4.7, Ms4.4, Msz4.3*
*NEIC **24** 20:33:46.0±0.2, 65.75S×133.46E, h10^{km}, mb4.9/18, Error ellipse: s-maj=11.3km s-min=7.3km az=107.0*
*CSEM **24** 20:33:48.1, 65.78S×134.28E, h33^{km}, mb5.5*
ISC 24 20:33:44.4±0.4**, 65.78S**±0.06×**133.8E**±0.3**, h10^{km}, n113, σ1^{s}14**/44**, mb4.7**/23**, MS3.7**/5**, 9C-3D, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CASY	**Casey**	**9.47**	**256**	*e*Pn	**P**	**20 35 58.9**	**-5.0**
CASY				*e*Sn	**Sn**	**20 37 32.4**	**-19**
VNDA	**Vanda**	**14.46**	**156**	Pn	**P**	**20 37 07.2**	**-3.4**
	4.0nm,0.3s,baz=306,slow=12,SNR=127						
VNDA				Sn	**S**	**20 39 42.5**	**-9.4**
	3.6nm,0.3s,baz=184,slow=12,SNR=5.6						
VNDA				Lg		20 41 21.4	
	3.3nm,0.3s,baz=196,slow=6.4,SNR=3.4						
VNDA				LR	LR	20 43 05.5	
	comp=Z,740nm,18.9s,baz=326,slow=39						
VNDA	**Vanda**	**14.46**	**156**	Pn	**P**	**20 37 07.2**	**-3.4**
VNDA				Sn	**S**	**20 39 42.5**	**-9.4**
VNDA				Lg		20 41 21.4	
SBA	**Scott Base**	**15.51**	**154**	*e*P	**P**	**20 37 19.7**	**-4.6**
	62nm,0.9s						
SBA				*e*S	**S**	**20 40 07.9**	**-8.8**
QSPA	**South Pole Qui**	**24.30**	**180**	*e*P	**P**	**20 39 03.6**	**+1.4**
	105nm,0.9s,mb5.3						
MAW	**Mawson**	**26.75**	**234**	LR	LR	20 49 44.7	
	comp=Z,338nm,21.3s,MS3.9,baz=298,slow=36						
MAW	**Mawson**	**26.75**	**234**	*e*P	**P**	**20 39 22.2**	**-3.1**
	23nm,1.0s,mb4.7						
SYO	**Syowa Base**	**32.99**	**221**	⇑P	**P**	**20 40 21.0**	**+0.1**
STKA	**Stephens Creek**	**34.26**	**12**	*e*P	**P**	**20 40 32.9**	**+0.6**
	4.1nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**34.26**	**12**	P	**P**	**20 40 32.1**	**-0.2**
	5.3nm,0.9s,mb4.5,baz=143,slow=8.1,SNR=7.6						
NWAO	**Narrogin (SRO)**	**34.37**	**335**	P	**P**	**20 40 30.0**	**-3.3**
	4.1nm,0.8s,mb4.4,baz=270,slow=1.5,SNR=3.8						
NWAO	**Narrogin (SRO)**	**34.37**	**335**	*e*P	**P**	**20 40 29.8**	**-3.4**
	26nm,1.3s,mb5.0						
SNAA	**Sanae**	**39.72**	**200**	⇑*i*	**P**	**20 41 18.1**	**+0.2**
SNAA	**Sanae**	**39.72**	**200**	P	**P**	**20 41 17.9**	**0.0**
	5.3nm,0.8s,mb4.3,baz=176,slow=9.6,SNR=26						
VNA3	**Neumayer Olymp**	**41.01**	**197**	⇑*i*	**P**	**20 41 28.9**	**+0.4**
VNA2	**Neumayer--Watz**	**41.02**	**198**	⇑*i*	**P**	**20 41 29.2**	**+0.6**
VNA2	**Neumayer--Watz**	**41.02**	**198**	⇑*i*	**P**	**20 41 33.2**	**+4.6**
ASAR	**Alice Springs**	**42.11**	**0**	P	**P**	**20 41 38.5**	**+0.5**
	5.4nm,0.7s,mb4.3,baz=175,slow=8.7,SNR=33						
ASAR				LR	LR	20 55 04.5	
	comp=Z,41nm,19.3s,MS3.3,baz=280,slow=30						
ASPA	**Alice Springs**	**42.11**	**0**	*e*P	**P**	**20 41 38.5**	**+0.6**
WB2	**Warramunga Arr**	**45.81**	**1**	*e*P	**P**	**20 42 07.2**	**-0.7**
WRA	**Warramunga Arr**	**45.81**	**1**	P	**P**	**20 42 07.5**	**-0.3**
	6.2nm,0.7s,mb4.7,baz=181,slow=6.8,SNR=34						
WRAB	**Tennant Creek**	**45.82**	**1**	*e*P	**P**	**20 42 06.5**	**-1.4**
	25nm,1.1s,mb5.1						
PMSA	**Palmer Station**	**49.10**	**170**	P	**P**	**20 42 32.3**	**-0.7**
	168nm,1.6s,mb5.8						
KAKA	**Kakadu**	**53.01**	**358**	⇑*i*P	**P**	**20 43 02.9**	**-0.5**
	11nm,0.7s,mb4.9						
PMG	**Port Moresby**	**57.04**	**16**	P	**P**	**20 43 32.2**	**-0.5**
	2.2nm,0.5s,mb4.4,baz=205,slow=12,SNR=3.4						
PMG	**Port Moresby**	**57.04**	**16**	P	**P**	**20 43 32.9**	**+0.2**
	16nm,1.2s,mb4.9						
RAR	**Rarotonga**	**61.20**	**77**	P	**P**	**20 44 00.7**	**-0.7**
	12nm,0.4s,mb5.4,baz=19,slow=20,SNR=3.2						
SUR	**Sutherland**	**69.57**	**236**	*e*P	**P**	**20 44 53.2**	**-1.8**
	22nm,1.2s,mb5.0						
BOSA	**Boshof**	**71.43**	**242**	*e*P	**P**	**20 45 05.9**	**-0.4**
	3.4nm,0.6s,mb4.5						
PLCA	**Paso Flores**	**72.16**	**161**	P	**P**	**20 45 11.9**	**+1.4**
	8.3nm,0.8s,mb4.7,baz=192,slow=6.7,SNR=23						
PLCA	**Paso Flores**	**72.16**	**161**	*e*P	**P**	**20 45 11.8**	**+1.3**
	15nm,1.0s,mb4.9						
LBTB	**Lobatse**	**74.57**	**243**	P	**P**	**20 45 24.4**	**-0.4**
	16nm,1.3s,mb4.8						
TRQA	**Tornquist**	**75.78**	**167**	*e*P	**P**	**20 45 31.6**	**+0.1**
	6.4nm,0.9s,mb4.5						
MATP	**Matopo**	**77.65**	**248**	P	**P**	**20 45 42.6**	**+0.4**
	11nm,1.3s,mb4.6,baz=120,slow=8.4,SNR=5.8						
LSZ	**Lusaka**	**82.46**	**250**	*e*P	**P**	**20 46 08.3**	**+0.3**
	3.0nm,0.9s,mb4.2						
TSUM	**Tsumeb**	**82.79**	**239**	P	**P**	**20 46 10.6**	**+0.9**
	2.0nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**88.01**	**327**	P	**P**	**20 46 35.5**	**0.0**
	1.9nm,0.9s,mb4.3,baz=184,slow=4.3,SNR=10						
CMAR				LR	LR	21 20 38.3	
	comp=Z,32nm,18.5s,MS3.8,baz=200,slow=32						
LVC	**Limon Verde**	**90.20**	**159**	*e*P	**P**	**20 46 48.1**	**+2.2**
	11nm,1.0s,mb5.1						
KMBO	**Kilima Mbogo**	**91.68**	**264**	LR	LR	21 26 25.4	
	comp=Z,47nm,18.2s,MS4.0,baz=88,slow=34						
KMI	**Kunming**	**93.68**	**332**	P	**P**	**20 47 03.3**	**+1.5**
KMI				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.7						
KMI				LR	LR		
	comp=Z,24nm,21.9s,MS3.6						
KMI	**Kunming**	**93.68**	**332**	P	**P**	**20 47 03.2**	**+1.4**
	comp=Z,3.0nm,0.9s,mb4.7						
KMI				sP	sP	20 47 08.5	+2.4
NJ2	**Nanjing**	**98.19**	**347**	*e*P	**P**	**20 47 23.8**	**+1.6**
SANT	**Santorini**	**129.99**	**271**	*e*PKPdf	PKPdf	20 52 58.9	+2.2
NVAR	**Mina Array Bea**	**131.56**	**87**	PKP	PKPdf	20 52 58.4	-1.3
	comp=Z,0.2nm,0.4s,baz=236,slow=3.3,SNR=2.6						
PDAR	**Pinedale Array**	**138.81**	**92**	PKhKP		20 53 05.2	
	comp=Z,0.4nm,0.7s,baz=135,slow=4.2,SNR=3.7						
CRVS	**Cervenica-Dubn**	**142.00**	**278**	*e*PKP	PKPdf	20 53 21.0	+2.7
ILAR	**Eielson Array**	**142.20**	**43**	PKhKP		20 53 11.7	
	comp=Z,0.5nm,0.7s,baz=236,slow=4.1,SNR=6.1						
FRF	**La Foret Royal**	**143.78**	**259**	*e*PKP1	PKPbc	20 53 21.9	+4.6
KBA	**Koelnbreinsper**	**143.90**	**269**	⇓*i*P	PKPbc	20 53 18.2	+0.6
OKC	**Ostrava-Krasne**	**144.08**	**276**	*e*PKP	PKPdf	20 53 25.6	+3.8
WCI	**Wyandotte Cave**	**144.08**	**120**	*e*PKPdf	PKPdf	20 53 18.0	-4.1
MOA	**Molln**	**144.13**	**270**	⇑*i*P	PKPbc	20 53 18.7	+0.5
SMRF	**Simiane la Rot**	**144.55**	**258**	*e*PKP1	PKPbc	20 53 21.1	+1.5
	comp=Z,29nm,1.1s						
ESDC	**Sonseca Array**	**144.59**	**244**	PKP	PKPdf	20 53 20.4	-2.6
	comp=Z,1.4nm,0.6s,baz=164,slow=2.4,SNR=12						
ESLA	**Sonseca Array**	**144.59**	**244**	*e*PKPdf	PKPdf	20 53 21.4	-1.6
MBDF	**Montbardon**	**144.69**	**260**	*e*PKP1	PKPbc	20 53 21.5	+1.6
	comp=Z,49nm,0.8s						
BBSR	**BB Station**	**144.73**	**152**	PKPdf	PKPdf	20 53 20.7	-2.9
WATA	**Walderalm**	**144.83**	**267**	⇑*i*P	PKPbc	20 53 20.7	+0.5
SQTA	**Sankt Quirin**	**144.89**	**267**	⇑*i*P	PKPbc	20 53 21.2	+0.8
BNI	**Bardonecchia**	**144.99**	**260**	*e*PKPdf	PKPdf	20 53 21.9	-1.6
MOTA	**Moosalm**	**145.03**	**267**	⇓*i*P	PKPbc	20 53 21.6	+0.8
EVO	**Evora**	**145.03**	**238**	*e*PKIKP	PKPdf	20 53 22.7	-1.2
	comp=Z,14nm,0.8s						
DAVOX	**Davos**	**145.08**	**265**	PKPbc	PKPbc	20 53 22.4	+1.4
	baz=116,slow=14						
GEC2	**GERESS Array S**	**145.14**	**271**	*e*PKPbc	PKPbc	20 53 21.2	+0.2
GERES	**GERESS Array B**	**145.14**	**271**	PKPbc	PKPbc	20 53 21.8	+0.8
	comp=Z,6.7nm,0.8s,baz=153,slow=3.0,SNR=36						
SUW	**Suwalki**	**145.20**	**285**	*e*PKPdf	PKPdf	20 53 21.2	-2.4
ORIF	**Oris-en-Rattie**	**145.21**	**259**	*e*PKP1	PKPbc	20 53 23.2	+1.9
	comp=Z,17nm,1.0s						
DPC	**Dobruska-Polom**	**145.23**	**275**	*e*PKP	PKPdf	20 53 22.8	-1.0
LASF	**Ste Croix**	**145.33**	**256**	*e*PKP1	PKPbc	20 53 22.9	+1.3
	comp=Z,73nm,1.5s						
LPG	**La Plagne**	**145.33**	**261**	*e*PKP1	PKPbc	20 53 23.0	+1.4
	comp=Z,16nm,0.7s						
LPL	**La Plagne**	**145.35**	**261**	*e*PKP1	PKPbc	20 53 23.0	+1.4
	comp=Z,17nm,0.7s						
MTLF	**Montolieu**	**145.37**	**254**	*e*PKP1	PKPbc	20 53 22.6	+0.9
	comp=Z,9.9nm,0.9s						
KHC	**Kasperske Hory**	**145.42**	**271**	*e*PKP	PKPdf	20 53 22.2	-2.0
KHC				*e*		20 53 27.5	
KHC	**Kasperske Hory**	**145.42**	**271**	*e*PKP	PKPdf	20 53 22.2	-2.0
KHC				pPKP		20 53 27.5	
UPC	**Upice**	**145.48**	**275**	*e*PKP	PKPdf	20 53 23.8	-0.4
DAVA	**Damuels**	**145.49**	**266**	⇓*i*P	PKPbc	20 53 23.7	+1.8
EDM	**Edmonton**	**145.50**	**78**	*e*PKPdf	PKPdf	20 53 23.1	-1.1
KSP	**Ksiaz**	**145.62**	**275**	*e*PKP	PKPdf	20 53 24.1	-0.3
VIVF	**Saint-Julien-l**	**145.64**	**258**	*e*PKP1	PKPbc	20 53 23.7	+1.3
PRU	**Pruhonice**	**145.68**	**273**	*e*PKP	PKPdf	20 53 23.5	-1.1
WET	**Wettzell**	**145.72**	**270**	*e*PKPbc	PKPbc	20 53 23.1	+0.7
EPF	**Esparros**	**145.84**	**251**	*e*PKP1	PKPbc	20 53 24.4	+1.5
	comp=Z,14nm,1.0s						
ETSF	**Etsaut**	**146.08**	**250**	*e*PKP1	PKPbc	20 53 25.7	+2.2
	comp=Z,10nm,0.7s						
PVCC	**Panska Ves**	**146.09**	**273**	*e*PKP	PKPdf	20 53 25.3	0.0
CABF	**La Chapelle**	**146.50**	**261**	*e*PKP1	PKPbc	20 53 26.3	+1.9
	comp=Z,13nm,0.8s						
SJPF	**Ste Jean**	**146.52**	**250**	*e*PKP1	PKPbc	20 53 27.0	+2.5
	comp=Z,21nm,0.9s						
NKC	**Novy Kostel**	**146.74**	**271**	*e*PKP	PKPdf	20 53 27.3	+0.9
CAF	**Calviac**	**146.75**	**255**	*e*PKP1	PKPbc	20 53 27.8	+2.8
GRA1	**Grafenberg Arr**	**146.82**	**269**	*e*PKPbc	PKPbc	20 53 26.4	+1.4
BFO	**Black Forest**	**146.95**	**265**	*e*PKPbc	PKPbc	20 53 27.0	+1.6
CLL	**Collm**	**147.32**	**273**	*e*PKIKP	PKPdf	20 53 28.0	+0.7
MOX	**Moxa**	**147.39**	**271**	*e*PKP	PKPdf	20 53 28.4	+1.0
MOX	**Moxa**	**147.39**	**271**	*i* P	PKPdf	20 53 28.4	+1.0
	comp=Z,logA/T=1.2						
SMF	**Signal de Mont**	**147.44**	**259**	*e*PKP1	PKPdf	20 53 29.2	+1.6
	comp=Z,12nm,0.9s						
CDF	**Champ du Feu**	**147.45**	**264**	*e*PKP1	PKPdf	20 53 29.8	+2.2
AVF	**Avril sur Loir**	**147.76**	**259**	*e*PKP1	PKPdf	20 53 29.5	+1.4
BGF	**Bois d'Agland**	**147.77**	**258**	*e*PKP1	PKPdf	20 53 29.8	+1.6
INK	**Inuvik**	**148.51**	**45**	PKPbc	PKPdf	20 53 30.6	+1.9
	comp=Z,6.4nm,0.9s,baz=212,slow=3.4,SNR=14						
INK	**Inuvik**	**148.51**	**45**	*e*PKPbc	PKPdf	20 53 30.9	+2.2
MVL	**Millersville**	**149.01**	**131**	*e*PKPbc	PKPdf	20 53 32.7	+2.4
FINES	**FINESS Array B**	**149.23**	**297**	PKPbc	PKPdf	20 53 32.8	+2.8
	comp=Z,3.5nm,0.7s,SNR=14						
KAF	**Kangasniemi**	**149.57**	**298**	*e*p	PKPdf	20 53 33.8	+3.2
	comp=Z,6.1nm,0.8s						
GIVF	**Givet**	**149.78**	**264**	*e*PKP1	PKPdf	20 53 35.2	+3.9
BAIF	**Baives**	**150.00**	**263**	*e*PKP1	PKPdf	20 53 35.5	+3.9
EYMN	**Ely**	**150.39**	**105**	*e*PKPbc	PKPdf	20 53 35.0	+2.7
ULM	**Lac du Bonnet**	**150.43**	**97**	PKPbc	PKPdf	20 53 34.0	+1.7
	comp=Z,3.5nm,0.8s,baz=242,slow=3.1,SNR=6.4						
ULM	**Lac du Bonnet**	**150.43**	**97**	*e*PKPbc	PKPdf	20 53 34.8	+2.5
LDF	**La Druitiere**	**150.60**	**257**	*e*PKP1	PKPdf	20 53 36.5	+3.9
	comp=Z,14nm,0.8s						
FLN	**La Foliniere**	**150.88**	**257**	*e*PKP1	PKPdf	20 53 37.1	+4.1
YKA	**Yellowknife Ar**	**151.31**	**64**	PKPbc	PKPdf	20 53 38.2	+5.0
	comp=Z,2.1nm,0.8s,baz=243,slow=2.0,SNR=26						
YKA	**Yellowknife Ar**	**151.31**	**64**	PKPbc	PKPdf	20 53 38.2	+5.0
ARCES	**ARCESS Array B**	**153.93**	**311**	PKPbc	PKPdf	20 53 42.5	+5.7
	comp=Z,4.7nm,0.9s,SNR=3.6						
ARCES				PKPab	PKPab	20 53 57.9	+0.4
	comp=Z,2.9nm,0.9s,baz=135,slow=3.8,SNR=3.6						
SCHQ	**Schefferville**	**165.10**	**128**	PKPab	PKPab	20 54 46.0	0.0
	comp=Z,5.4nm,1.2s,baz=6.0,slow=11,SNR=5.0						

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*MOS **24** 20:37:38.1±1.4, 44.74N×147.10E, h153^{km}, mb4.0/3, Error ellipse: s-maj=34.6km s-min=21.4km az=66.6*
*JMA **24** 20:37:40.0±0.4, 44.34N×147.41E, h125^{km}, M3.3*
*IDC **24** 20:37:41.6±3.0, 45.40N×146.85E, h129^{km}±71^{km}, mb3.4/8, mb1 3.6/8, mb1mx3.3/22, mbtmp3.8/8, Error ellipse: s-maj=155.8km s-min=22.0km az=168.0*
ISC 24 20:37:37.7±0.9**, 44.4N**±0.1×**147.3E**±0.1**, h162^{km}**±8^{km}**, n24, σ1^{s}11**/32**, mb3.5**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.07**	**251**	*e*PN	**P**	**20 38 03.5**	**-0.8**
YUK				*e*S	**S**	**20 38 23.0**	**-1.9**
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				smax			
	comp=E,390nm,0.4s						
YUK				smax			
	comp=N,1µm,0.5s						
YUK				smax			
	comp=N,5µm,0.8s						
NEM2	**Nemuro 2**	**1.50**	**228**	P	**P**	**20 38 08.6**	**+0.1**
NEM2				*e*S	**S**	**20 38 30.4**	**-2.0**
JRA	**Rausu**	**1.61**	**254**	P	**P**	**20 38 10.1**	**+0.5**
JRA				*e*S	**S**	**20 38 33.8**	**-0.5**
JNK	**Nakash**	**2.01**	**247**	P	**P**	**20 38 15.0**	**+1.1**
JAK	**Akkeshi**	**2.33**	**234**	P	**P**	**20 38 18.5**	**+0.7**
JAK				*e*S	**S**	**20 38 47.7**	**-1.0**
JTKR	**Abashiri--Toko**	**2.45**	**261**	P	**P**	**20 38 20.6**	**+1.2**
JTKR				*e*S	**S**	**20 38 51.9**	**+0.5**
JAR	**Ashorobuto**	**2.76**	**248**	P	**P**	**20 38 25.0**	**+1.9**
JOB	**Onbets**	**2.90**	**240**	P	**P**	**20 38 26.4**	**+1.5**
JOB				*e*S	**S**	**20 39 01.2**	**0.0**
JCH	**Churui**	**3.35**	**239**	P	**P**	**20 38 31.6**	**+0.9**
JCH				*e*S	**S**	**20 39 10.6**	**-0.7**
ASAJ	**Asahikawa**	**3.37**	**267**	PN	**P**	**20 38 31.7**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**3.37**	**267**	P	**P**	**20 38 31.7**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=70,slow=15,SNR=4.6						
JFR	**Furan**	**3.60**	**252**	P	**P**	**20 38 36.1**	**+2.2**
JNBK	**Urakawa-nobuka**	**3.91**	**239**	P	**P**	**20 38 38.0**	**+0.1**
JNBK				*e*S	**S**	**20 39 23.1**	**-1.1**
SONM	**Songino Array**	**28.31**	**292**	P	**P**	**20 43 17.7**	**-0.2**
	comp=Z,0.2nm,0.4s,mb3.2,baz=84,slow=7.4,SNR=4.0						
ILAR	**Eielson Array**	**40.92**	**37**	P	**P**	**20 45 05.8**	**+0.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**40.92**	**37**	P	**P**	**20 45 05.8**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.4,baz=274,slow=9.4,SNR=9.6						
INK	**Inuvik**	**45.81**	**31**	P	**P**	**20 45 44.1**	**-0.2**
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK	**Inuvik**	**45.81**	**31**	P	**P**	**20 45 44.0**	**-0.3**
	comp=Z,0.9nm,0.3s,mb3.8,baz=307,slow=6.7,SNR=7.8						
YKA	**Yellowknife Ar**	**55.23**	**34**	P	**P**	**20 46 55.5**	**0.0**
	comp=Z,0.2nm,0.4s,mb3.2,baz=301,slow=6.9,SNR=5.4						
ARCES	**ARCESS Array B**	**58.68**	**340**	P	**P**	**20 47 17.7**	**-2.1**
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARCES	**ARCESS Array B**	**58.68**	**340**	P	**P**	**20 47 17.7**	**-2.1**
	comp=Z,5.0nm,0.9s,mb4.4,baz=22,slow=6.5,SNR=3.0						
FINES	**FINESS Array B**	**64.34**	**333**	P	**P**	**20 47 55.6**	**-2.0**
	comp=Z,0.4nm,0.4s,mb3.6,baz=56,slow=6.9,SNR=6.2						
NOA	**NORSAR Array B**	**69.04**	**339**	P	**P**	**20 48 26.4**	**-0.7**
	comp=Z,0.4nm,0.8s,mb3.2,baz=44,slow=6.4,SNR=2.7						
GERES	**GERESS Array B**	**78.64**	**331**	P	**P**	**20 49 23.4**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.1,baz=17,slow=5.5,SNR=4.5						

MAN 24 20:55:53.9, 11.69N×121.52E, h16^{km}, mb4.4, ML3.2, MS3.0, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTRP	**Odiongan**	**0.83**	**36**	*e*P	Pb	20 56 09.9	+0.4
OTRP				*e*S	Sb	20 56 22.5	+2.3
SJMP	**San Jose**	**0.86**	**333**	*e*P	Pb	20 56 09.9	-0.1
CUYO	**Cuyo Island**	**0.97**	**210**	*e*P	Pb	20 56 10.5	-1.3
RCP	**Roxas**	**1.21**	**96**	⇑*e*P	Pb	20 56 34.4	+18
RCP				*e*S	Sb	20 56 34.4	+3.2
BUSP	**Coron**	**1.33**	**284**	*e*P	Pn	20 56 16.7	-1.2
BUSP				*e*S	Sb	20 56 35.9	+1.3
GUIM	**Jordan**	**1.49**	**135**	*e*P	Pn	20 56 20.1	-0.2
LUBP	**Lubang**	**2.38**	**329**	*e*P	Pn	20 56 33.1	0.0

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*BJI **24** 21:00:18.7, 32.10S×179.70E, h400^{km}, mB4.8, mb4.7*
*NEIC **24** 21:00:18.8±0.3, 32.08S×179.71E, h400^{km}, mb4.7/27, Error ellipse: s-maj=9.1km s-min=4.2km az=102.0*
*IDC **24** 21:00:20.3±1.7, 32.06S×179.50E, h406^{km}±16^{km}, mb3.8/8, mb1 4.0/9, mb1mx4.0/13, mbtmp4.6/9, Error ellipse: s-maj=16.1km s-min=11.2km az=8.0*
ISC 24 21:00:20.4±0.5**, 32.28S**±0.04×**179.44E**±0.07**, h422^{km}**±5^{km}**, n287, σ1^{s}26**/227**, mb4.7**/31**, 9C-13D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.35**	**190**	*e*P	**P**	**21 01 47.9**	**+0.2**
MXZ	**Matakaoa Point**	**5.35**	**190**	PN	**P**	**21 01 47.1**	**-0.5**
MXZ				*e*SN	**S**	**21 02 53.0**	**-3.2**
MXZ				T		21 05 45.1	
MXZ	**Matakaoa Point**	**5.35**	**190**	PN	**P**	**21 01 47.1**	**-0.5**
MXZ				*e*SN	**S**	**21 02 53.0**	**-3.2**
MXZ				T		21 05 45.1	
WIZ	**White Island**	**5.55**	**199**	P	**P**	**21 01 53.0**	**+3.3**
WCZ	**Waipu Caves**	**5.58**	**228**	⇑PN	**P**	**21 01 54.5**	**+4.4**
WCZ	**Waipu Caves**	**5.58**	**228**	⇑PN	**P**	**21 01 54.5**	**+4.4**
MYRZ	**Mayor Island**	**5.64**	**207**	PN	**P**	**21 01 54.3**	**+3.7**
MYRZ	**Mayor Island**	**5.64**	**207**	PN	**P**	**21 01 54.3**	**+3.7**
PUZ	**Puketiti**	**5.86**	**189**	P	**P**	**21 01 53.0**	**+0.1**
PUZ				S	**S**	**21 03 05.7**	**-0.1**
PUZ	**Puketiti**	**5.86**	**189**	⇑PN	**P**	**21 01 52.5**	**-0.5**
PUZ				*e*SN	**S**	**21 03 02.1**	**-3.6**
PUZ	**Puketiti**	**5.86**	**189**	⇑PN	**P**	**21 01 52.5**	**-0.5**
PUZ				*e*SN	**S**	**21 03 02.1**	**-3.6**
MARZ	**Manawahe**	**6.12**	**201**	P	**P**	**21 01 59.4**	**+3.6**
LIRZ	**Lichensteins R**	**6.23**	**203**	P	**P**	**21 02 01.2**	**+4.2**
MWZ	**Matawai**	**6.24**	**194**	P	**P**	**21 01 56.8**	**-0.2**
MWZ	**Matawai**	**6.24**	**194**	PN	**P**	**21 01 56.8**	**-0.3**
MWZ				*e*SN	**S**	**21 03 12.4**	**-0.8**
MWZ	**Matawai**	**6.24**	**194**	PN	**P**	**21 01 56.8**	**-0.3**
MWZ				*e*SN	**S**	**21 03 12.4**	**-0.8**
URZ	**Urewera**	**6.26**	**197**	P	**P**	**21 01 56.7**	**-0.6**
	181nm,0.3s,baz=352,slow=2.2,SNR=108						
URZ				S	**S**	**21 03 14.4**	**+0.7**
	227nm,0.3s,baz=93,slow=21,SNR=18						
URZ	**Urewera**	**6.26**	**197**	P	**P**	**21 01 57.0**	**-0.3**

URZ	Urewera	6.26	197	PN	P	21 01 56.6	-0.6
URZ				eSN	S	21 03 15.0	+1.4
URZ	Urewera	6.26	197	PN	P	21 01 56.6	-0.6
URZ				eSN	S	21 03 15.0	+1.4
TAZ	Tarawera	6.40	201	P	P	21 02 01.9	+3.1
PATZ	Paeroa	6.62	202	P	P	21 02 03.2	+2.0
PATZ	Paeroa	6.62	202	PN	P	21 02 03.1	+1.9
PATZ	Paeroa	6.62	202	PN	P	21 02 03.1	+1.9
KNZ	Kokohu	6.88	192	eP	P	21 02 04.9	+0.9
KNZ	Kokohu	6.88	192	PN	P	21 02 03.9	-0.1
KNZ				eSN	S	21 03 25.5	-0.3
KNZ	Kokohu	6.88	192	PN	P	21 02 03.9	-0.1
KNZ				eSN	S	21 03 25.5	-0.3
RATZ	Rangitukua	7.22	203	P	P	21 02 09.9	+2.0
RATZ	Rangitukua	7.22	203	PN	P	21 02 09.0	+1.1
RATZ	Rangitukua	7.22	203	PN	P	21 02 09.0	+1.1
HIZ	Hauiti	7.26	210	P	P	21 02 12.0	+3.7
HIZ	Hauiti	7.26	210	PN	P	21 02 12.0	+3.8
HIZ	Hauiti	7.26	210	PN	P	21 02 12.0	+3.8
BKZ	Black Stump Fm	7.28	198	eP	P	21 02 08.7	+0.2
BKZ	Black Stump Fm	7.28	198	ePN	P	21 02 07.1	-1.4
BKZ				eSN	S	21 03 33.4	-0.4
BKZ	Black Stump Fm	7.28	198	ePN	P	21 02 07.1	-1.4
BKZ				eSN	S	21 03 33.4	-0.4
KATZ	Kakaramea	7.34	203	P	P	21 02 11.1	+1.9
KATZ	Kakaramea	7.34	203	ePN	P	21 02 10.5	+1.3
KATZ	Kakaramea	7.34	203	ePN	P	21 02 10.5	+1.3
MGZ	Maungaku	7.42	204	P	P	21 02 11.5	+1.4
MGZ	Maungaku	7.42	204	PN	P	21 02 11.4	+1.3
MGZ	Maungaku	7.42	204	PN	P	21 02 11.4	+1.3
WTVZ	West Tongariro	7.50	204	P	P	21 02 11.3	+0.3
WTVZ	West Tongariro	7.50	204	ePN	P	21 02 11.2	+0.2
WTVZ	West Tongariro	7.50	204	ePN	P	21 02 11.2	+0.2
TWVZ	Taurewa	7.52	205	P	P	21 02 11.9	+0.7
TWVZ	Taurewa	7.52	205	PN	P	21 02 11.9	+0.8
TWVZ	Taurewa	7.52	205	PN	P	21 02 11.9	+0.8
OTVZ	Oturere	7.52	203	PN	P	21 02 11.1	-0.1
OTVZ	Oturere	7.52	203	PN	P	21 02 11.1	-0.1
NGZ	Ngauruhoe	7.55	203	P	P	21 02 12.4	+0.8
NGZ	Ngauruhoe	7.55	203	PN	P	21 02 12.4	+0.7
NGZ	Ngauruhoe	7.55	203	PN	P	21 02 12.4	+0.7
CNZ	Chateau	7.59	204	P	P	21 02 14.1	+2.1
CNZ	Chateau	7.59	204	PN	P	21 02 14.1	+2.1
CNZ	Chateau	7.59	204	PN	P	21 02 14.1	+2.1
WPVZ	Whakapapa	7.60	204	P	P	21 02 12.4	+0.3
TUVZ	Tukino	7.62	203	P	P	21 02 12.7	+0.4
FWVZ	Far West T-bar	7.64	203	eP	P	21 02 12.7	+0.1
DRZ	Dome Shelter	7.66	203	P	P	21 02 16.1	+3.3
WNVZ	Wahianoa	7.69	203	P	P	21 02 12.6	-0.6
MOVZ	Moawhango	7.71	202	P	P	21 02 12.6	-0.8
PWZ	Pawanui	8.01	194	eP	P	21 02 11.5	-5.2
RAEZ	Rainy Point	8.10	209	P	P	21 02 22.3	+4.5
NEZ	North Egmont	8.21	210	P	P	21 02 24.0	+5.0
NEZ	North Egmont	8.21	210	ePN	P	21 02 23.9	+4.8
NEZ	North Egmont	8.21	210	ePN	P	21 02 23.9	+4.8
TSZ	Takapari Road	8.26	199	eP	P	21 02 17.4	-2.1
TSZ	Takapari Road	8.26	199	ePN	P	21 02 17.3	-2.2
TSZ				SN	S	21 03 53.9	+0.3
TSZ	Takapari Road	8.26	199	ePN	P	21 02 17.3	-2.2
TSZ				SN	S	21 03 53.9	+0.3
DFE	Dawson Falls	8.26	210	P	P	21 02 21.6	+2.1
WAZ	Wanganui	8.28	205	P	P	21 02 21.4	+1.6
WAZ	Wanganui	8.28	205	PN	P	21 02 21.2	+1.4
WAZ				eSN	S	21 03 57.1	+2.9
WAZ	Wanganui	8.28	205	PN	P	21 02 21.2	+1.4
WAZ				eSN	S	21 03 57.1	+2.9
NRZ	Ngariki Road	8.34	211	P	P	21 02 24.8	+4.3
BFZ	Birch Farm	8.77	196	P	P	21 02 23.7	-1.6
MRZ	Mangatainoka R	8.92	199	eP	P	21 02 25.4	-1.7
MRZ	Mangatainoka R	8.92	199	ePN	P	21 02 25.1	-2.0
MRZ				eSN	S	21 04 07.0	-0.3
MRZ	Mangatainoka R	8.92	199	ePN	P	21 02 25.1	-2.0
MRZ				eSN	S	21 04 07.0	-0.3
KIW	Kapiti Island	9.30	202	P	P	21 02 30.1	-1.3
KIW	Kapiti Island	9.30	202	PN	P	21 02 30.1	-1.3
KIW				SN	S	21 04 15.4	+0.3
KIW	Kapiti Island	9.30	202	PN	P	21 02 30.1	-1.3
KIW				SN	S	21 04 15.4	+0.3
MTW	Mount Morrison	9.40	199	P	P	21 02 32.7	+0.1
CAW	Cannon Point	9.48	200	P	P	21 02 32.8	-0.6
MRW	Makara Radio	9.70	202	P	P	21 02 34.6	-1.3
MRW	Makara Radio	9.70	202	ePN	P	21 02 34.6	-1.3
MRW				eSN	S	21 04 22.0	-1.4
MRW	Makara Radio	9.70	202	ePN	P	21 02 34.6	-1.3
MRW				eSN	S	21 04 22.0	-1.4
MSWZ	Moikau Station	9.71	199	P	P	21 02 34.6	-1.4
BHW	Baring Head	9.81	201	P	P	21 02 35.5	-1.7
TUWZ	Tuamarina	10.13	204	ePN	P	21 02 38.5	-2.3
TUWZ				eSN	S	21 04 31.3	-0.9
TUWZ	Tuamarina	10.13	204	ePN	P	21 02 38.5	-2.3
TUWZ				eSN	S	21 04 31.3	-0.9
NNZ	Nelson	10.15	207	P	P	21 02 39.8	-1.3
NNZ	Nelson	10.15	207	ePN	P	21 02 39.5	-1.7
NNZ				eSN	S	21 04 31.3	-1.4
NNZ	Nelson	10.15	207	ePN	P	21 02 39.5	-1.7
NNZ				eSN	S	21 04 31.3	-1.4
QRZ	Quartz Range	10.18	211	eP	P	21 02 41.0	-0.4
QRZ	Quartz Range	10.18	211	ePN	P	21 02 40.7	-0.7
QRZ				eSN	S	21 04 35.5	+2.4
QRZ	Quartz Range	10.18	211	ePN	P	21 02 40.7	-0.7
QRZ				eSN	S	21 04 35.5	+2.4
BSWZ	Blackbirch Sta	10.41	204	P	P	21 02 44.7	+0.6
BSWZ				S	rx	21 02 49.4	
THZ	Tophouse	10.80	207	P	P	21 02 47.5	-1.1
THZ	Tophouse	10.80	207	PN	P	21 02 47.2	-1.3
THZ	Tophouse	10.80	207	PN	P	21 02 47.2	-1.3
KHZ	Kahutara	11.15	203	eP	P	21 02 51.4	-1.0
KHZ	Kahutara	11.15	203	ePN	P	21 02 50.7	-1.8
KHZ				SN	S	21 04 52.6	-0.7
KHZ	Kahutara	11.15	203	ePN	P	21 02 50.7	-1.8
KHZ				SN	S	21 04 52.6	-0.7
LTZ	Lake Taylor	11.92	206	eP	P	21 03 00.5	-0.5
LTZ	Lake Taylor	11.92	206	PN	P	21 03 00.5	-0.5
LTZ				SN	S	21 05 09.0	-0.3
LTZ	Lake Taylor	11.92	206	PN	P	21 03 00.5	-0.5
LTZ				SN	S	21 05 09.0	-0.3
MQZ	McQueen’s Vall	12.59	203	P	P	21 03 08.0	-0.5
MQZ	McQueen’s Vall	12.59	203	PN	P	21 03 08.0	-0.5
MQZ				SN	S	21 05 22.2	-0.6
MQZ	McQueen’s Vall	12.59	203	PN	P	21 03 08.0	-0.5
MQZ				SN	S	21 05 22.2	-0.6
WVZ	Waitaha Valley	12.78	210	eP	P	21 03 10.6	+0.1
WVZ	Waitaha Valley	12.78	210	ePN	P	21 03 09.4	-1.1
WVZ	Waitaha Valley	12.78	210	ePN	P	21 03 09.4	-1.1
RPZ	Rata Peaks	13.18	208	P	P	21 03 14.8	-0.1
	6.3nm,0.3s,baz=23,slow=1.1,SNR=40						
RPZ				S	S	21 05 35.6	+1.1
	11nm,0.3s,baz=62,slow=13,SNR=12						
RPZ	Rata Peaks	13.18	208	eP	P	21 03 14.7	-0.2
RPZ	Rata Peaks	13.18	208	PN	P	21 03 14.7	-0.2
RPZ				eSN	S	21 05 34.8	+0.3
RPZ	Rata Peaks	13.18	208	PN	P	21 03 14.7	-0.2
RPZ				eSN	S	21 05 34.8	+0.3
FOZ	Fox Glacier	13.63	212	PN	P	21 03 18.1	-1.5
FOZ				eSN	S	21 05 43.5	+0.2
FOZ	Fox Glacier	13.63	212	PN	P	21 03 18.1	-1.5
FOZ				eSN	S	21 05 43.5	+0.2
JCZ	Jackson Bay	14.45	212	eP	P	21 03 27.7	-0.5
JCZ	Jackson Bay	14.45	212	ePN	P	21 03 27.7	-0.5
JCZ	Jackson Bay	14.45	212	ePN	P	21 03 27.7	-0.5
ODZ	Otahua Downs	14.46	206	eP	P	21 03 29.5	+1.1
ODZ	Otahua Downs	14.46	206	ePN	P	21 03 29.3	+0.9
ODZ	Otahua Downs	14.46	206	ePN	P	21 03 29.3	+0.9
MSZ	Milford Sound	15.29	213	ePN	P	21 03 40.2	+3.4
MSZ	Milford Sound	15.29	213	ePN	P	21 03 40.2	+3.4
NOUC	Port Laguerre	15.46	308	eP	P	21 03 38.7	0.0
AFI	Afiamalu	19.98	26	eP	P	21 04 17.5	-6.1
	120nm,1.0s						
RAR	Rarotonga	21.55	64	P	P	21 04 33.7	-5.0
	74nm,1.0s,mb5.1						
CNB	Canberra Magne	25.13	255	⇓iP	P	21 05 15.1	+3.9
	355nm,1.0s						
TAU	Tasmania Unive	27.42	238	eP	P	21 05 33.7	+2.2
	36nm,1.0s,mb4.8						
PPT	Papeete	31.55	70	eLR	LR	21 05 40.8	
	130nm,22.2s						
STKA	Stephens Creek	31.96	260	⇓iP	P	21 06 13.6	+2.6
	16nm,0.5s,mb4.6						
STKA	Stephens Creek	31.96	260	P	P	21 06 13.3	+2.3
	26nm,0.6s,mb4.7,baz=98,slow=9.9,SNR=82						
CTA	Charters Tower	32.03	284	⇓iP	P	21 06 13.2	+1.6
	93nm,0.6s,mb5.3						
CTA	Charters Tower	32.03	284	P	P	21 06 13.2	+1.6
	95nm,0.5s,mb5.4,baz=112,slow=10,SNR=208						
CTAO	Charters Tower	32.03	284	eP	P	21 06 13.1	+1.4
	122nm,0.6s,mb5.4						
PMG	Port Moresby	37.54	300	P	P	21 06 57.0	-0.9
	8.0nm,0.9s,mb4.1,baz=107,slow=2.7,SNR=5.9						
PMG	Port Moresby	37.54	300	eP	P	21 06 56.8	-1.1
	17nm,0.9s,mb4.4						
ASAR	Alice Springs	40.87	270	P	P	21 07 24.6	-0.5
	29nm,0.5s,mb4.8,baz=106,slow=6.9,SNR=7.9						
ASAR				S	S	21 13 06.8	+1.2
	2.3nm,1.0s,baz=112,slow=15,SNR=4.6						
ASPA	Alice Springs	40.88	270	⇓iP	P	21 07 25.9	+0.8
ASPA				eS	S	21 13 05.6	0.0
WB2	Warramunga Arr	42.03	276	⇓iP	P	21 07 34.7	+0.3
WB2				eS	S	21 13 22.2	-0.1
WRAB	Tennant Creek	42.03	276	eP	P	21 07 34.5	0.0
	124nm,0.7s,mb5.3						
WRA	Warramunga Arr	42.04	276	P	P	21 07 34.7	+0.2
	65nm,0.4s,mb5.3,baz=114,slow=7.6,SNR=883						
WRA				S	S	21 13 22.3	-0.1
	1.3nm,0.8s,baz=112,slow=19,SNR=6.0						
FORT	Forrest	43.48	258	⇑iP	P	21 07 46.8	+1.0
	1µm,0.6s						
VNDA	Vanda	46.02	185	P	P	21 08 08.0	+2.9
	2.1nm,1.0s,baz=1.1,slow=5.1,SNR=4.4						
VNDA	Vanda	46.02	185	P	P	21 08 08.0	+2.9
KAKA	Kakadu	47.16	283	⇓iP	P	21 08 13.7	-1.1
	31nm,0.5s,mb4.9						
FITZ	Fitzroy Crossi	50.21	273	⇓iP	P	21 08 37.8	+0.1
	46nm,0.6s,mb5.0						
KLBR	Kellerberrin	51.69	253	⇑iP	P	21 08 48.6	+0.1
	533nm,1.2s,mb5.7						
CASY	Casey	52.45	208	eP	P	21 08 53.1	-0.5
	26nm,1.1s,mb4.4						
MUN	Mundaring	52.82	252	⇑iP	P	21 08 57.0	+0.2
	5.4nm,0.5s,mb4.0						
MBWA	Marble Bar	53.88	266	eP	P	21 09 03.3	-1.2
	53nm,1.0s,mb4.7						
QSPA	South Pole Qui	57.83	180	⇑iP	P	21 09 34.5	+3.2
	14nm,0.9s,mb4.3						
SNAA	Sanae	76.32	179	⇓i	P	21 11 26.9	+1.8
VNA3	Neumayer Olymp	76.56	177	⇓i	P	21 11 29.0	+2.6
VNA2	Neumayer--Watz	76.97	178	⇓i	P	21 11 31.5	+2.8
MAJO	Matsushiro	78.59	327	eP	P	21 11 36.0	-2.0
	18nm,1.0s,mb4.7						
MAT	Matsushiro	78.59	327	eP	P	21 11 36.0	-2.1
	14nm,0.9s,mb4.6						
MAT	Matsushiro	78.59	327	P	P	21 11 35.9	-2.2
PLCA	Paso Flores	82.81	134	P	P	21 12 02.2	+2.4
	2.7nm,0.8s,mb4.0,baz=213,slow=5.9,SNR=6.2						
PLCA	Paso Flores	82.81	134	eP	P	21 12 02.1	+2.2
	4.1nm,0.9s,mb4.2						
SSE	Sheshan	83.73	313	eP	P	21 12 03.0	-1.7
SSE				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.7						
SSE				AMB	AMB		
	comp=Z,78nm,4.3s						
SSE	Sheshan	83.73	313	eP	P	21 12 03.0	-1.7
	comp=Z,13nm,0.8s,mb4.7						
KIWB	Kanaga Island	83.83	2	eP	P	21 12 03.6	-1.0
KS15	Wonju Array Si	84.41	321	eP	P	21 12 07.8	-0.2
YSS	Yuzh-Sakhalins	85.52	336	eP	P	21 12 13.4	+0.4
	comp=Z,35nm,1.0s,mb5.0						
NJ2	Nanjing	85.84	312	eP	P	21 12 16.3	+1.3
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
MDJ	Mudanjiang	88.97	327	P	P	21 12 28.8	-0.7
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,97nm,3.8s						
MDJ	Mudanjiang	88.97	327	P	P	21 12 29.0	-0.5
	comp=Z,6.7nm,0.9s,mb4.4						
CMB	Columbia Colle	89.62	43	eP	P	21 12 31.4	-1.3
	comp=Z,7.7nm,1.0s,mb4.5						
TRQA	Tornquist	89.63	136	P	P	21 12 34.8	+2.1
CN2	Changchun	90.35	324	eP	P	21 12 35.0	-0.8
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA	Guiyang	90.61	301	P	P	21 12 37.9	+0.4
GYA				AP	pP	21 14 06.5	-8.3
GYA				SKS	SKS	21 22 31.3	+4.0
GYA				S	S	21 22 59.9	+5.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,100nm,6.9s						
ENH	Enshi	90.88	306	eP	P	21 12 38.7	+0.1
	comp=Z,7.4nm,0.8s,mb4.6						
NVAR	Mina Array Bea	91.11	44	P	P	21 12 39.9	+0.5
	comp=Z,0.5nm,0.5s,mb3.6,baz=201,slow=5.3,SNR=4.3						
NVAR	Mina Array Bea	91.11	44	P	P	21 12 39.9	+0.5
TPH	Tonopah	91.51	45	eP	P	21 12 40.5	-0.9
	comp=Z,7.6nm,1.1s,mb4.5						
CMAR	Chiang Mai Arr	91.98	290	P	P	21 12 44.8	+0.8
	comp=Z,0.4nm,0.6s,baz=142,slow=5.1,SNR=5.2						
MOD	Modoc	92.29	40	eP	P	21 12 44.5	-0.4
	comp=Z,4.7nm,0.7s,mb4.5						
KMI	Kunming	92.74	298	P	P	21 12 45.3	-2.1
	comp=Z,4.0nm,0.7s,mb4.5						
KMI				LR	LR		
	comp=Z,20nm,24.2s						
TXAR	Lajitas Array	95.24	59	P	P	21 12 59.9	+1.3
	comp=Z,0.3nm,0.5s,mb3.6,slow=5.4,SNR=2.9						
ILAR	Eielson Array	100.26	14	P	P	21 13 19.9	-0.5
	comp=Z,0.8nm,0.9s,baz=237,slow=5.6,SNR=6.0						
ZAL	Zalesovo	117.98	318	PKP	PKPdf	21 18 17.3	-0.1
	comp=Z,2.1nm,0.4s,baz=308,slow=3.0,SNR=12						
ZAL	Zalesovo	117.98	318	PKP	PKPdf	21 18 17.3	-0.1
RES	Resolute Bay	119.69	18	ePKPdf	PKPdf	21 18 19.4	-0.9
KURK	Kurchatov	120.76	313	ePKPdf	PKPdf	21 18 22.6	-0.3
AAK	Ala-Archa	121.33	303	ePKPdf	PKPdf	21 18 24.1	-0.1
BVAR	Borovoye Array	126.20	315	PKP	PKPdf	21 18 33.9	+0.7
	comp=Z,6.9nm,0.4s,baz=90,slow=1.4,SNR=16						
SCHQ	Schefferville	129.10	43	PKP	PKPdf	21 18 38.3	-0.5
	comp=Z,1.3nm,0.8s,baz=246,slow=7.7,SNR=4.3						
KEV	Kevo	139.43	346	epkp	PKPdf	21 18 50.5	-7.0
ARCES	ARCESS Array B	139.92	346	PKhKP		21 18 51.9	
	comp=Z,9.7nm,1.0s,baz=52,slow=1.8,SNR=20						
ARCES				PKP	PKPdf	21 18 58.0	-0.3
	comp=Z,10nm,0.9s,baz=52,slow=0.9,SNR=10						
KTK1	Kautokeino	140.81	347	eP	PKPdf	21 18 56.3	-3.6
KTK1	Kautokeino	140.81	347	e	PKPdf	21 18 56.3	-3.6
GNI	Garni	142.94	295	ePKPdf	PKPdf	21 19 02.3	-2.1
JOF	Joensuu	143.30	336	epkp	PKPdf	21 19 02.2	-2.1
	comp=Z,5.3nm,0.5s						
TVAN	Van	143.89	292	i P	PKPbc	21 19 06.2	+0.6
KIV	Kislovodsk	144.41	302	ePKPdf	PKPdf	21 19 07.6	+0.8
MOR8	Moi Rana	144.89	349	eP	PKPdf	21 19 06.7	-0.3
MOR8	Moi Rana	144.89	349	⇓iP	PKPdf	21 19 06.7	-0.3
MOR8				AMb	AMB	21 19 09.2	
	comp=Z,94nm,1.4s						
STOK	Stokkvaagen	144.95	351	eP	PKPdf	21 19 07.5	+0.4
STOK				AMb	AMB	21 19 08.9	
	comp=Z,136nm,1.0s						
BORG	Borgarnes	145.07	15	PKP	PKPdf	21 19 08.9	+1.6
	comp=Z,42nm,1.1s						
BORG	Borgarnes	145.07	15	ePKPdf	PKPdf	21 19 09.0	+1.7
OBN	Obninsk	145.39	322	ePKPdf	PKPdf	21 19 09.1	+0.9
KAF	Kangasniemi	145.53	338	epkp	PKPdf	21 19 09.3	+1.2
	comp=Z,40nm,0.5s,baz=44,slow=2.9						
ERZM	Erzurum	145.53	295	i P	PKPdf	21 19 11.6	+2.7
BEST	Besiri	145.53	291	i P	PKPdf	21 19 11.5	+2.6
FINES	FINESS Array B	146.09	337	PKPbc	PKPbc	21 19 11.3	+0.7
	comp=Z,51nm,0.4s,baz=52,slow=4.3,SNR=641						
NSS	Namsos	146.81	350	eP	PKPdf	21 19 11.9	+1.7
NSS	Namsos	146.81	350	⇓iP	PKPdf	21 19 11.8	+1.6
NSS				AMb	AMB	21 19 16.4	
	comp=Z,80nm,1.5s						
ELZG	Elazig	147.36	292	i P	PKPdf	21 19 17.5	+5.5
MALT	Malatya	147.79	292	ePKPdf	PKPdf	21 19 14.1	+1.5
MALT				ePKPbc	PKPdf	21 19 17.7	+5.1
ASF	Jabal al Asfar	148.42	280	PKPbc	PKPdf	21 19 20.1	+6.3
	comp=Z,6.9nm,0.7s,baz=351,slow=2.9,SNR=10						
GZT	Gaziantep	148.44	290	i P	PKPdf	21 19 19.4	+5.6
KAHT	Ahir Dag	149.00	290	i P	PKPdf	21 19 20.7	+6.1
MOL	Molde	149.25	353	eP	PKPdf	21 19 22.7	+8.5
COBT	Iskenderun	149.45	288	i P	PKPdf	21 19 22.1	+6.7
EIL	Elat	149.53	275	PKPbc	PKPdf	21 19 22.6	+6.9
	comp=Z,13nm,0.8s,baz=75,slow=0.6,SNR=9.1						
EIL	Elat	149.53	275	ePKPbc	PKPdf	21 19 22.2	+6.5
NB2	NORSAR Subarra	150.22	348	PKP	PKPdf	21 19 21.7	+5.9
	comp=Z,26nm,0.8s,baz=17,slow=2.6						
NB2	NORSAR Subarra	150.22	348	⇑PKPab	PKPab	21 19 21.7	-10
NB2	NORSAR Subarra	150.22	348	PKPa		21 19 21.7	
	baz=17,slow=2.6						
NOA	NORSAR Array B	150.22	348	PKPbc	PKPdf	21 19 22.0	+6.2
	comp=Z,20nm,0.8s,baz=16,slow=4.1,SNR=72						
NOA	NORSAR Array B	150.22	348	PKPbc	PKPdf	21 19 22.0	+6.2
BOYT	Boyabat	150.36	298	i P	PKPdf	21 19 24.0	+7.3
FOO	Floro	150.45	355	eP	PKPdf	21 19 22.8	+6.6
NAO01	NORSAR Array S	150.46	349	ePKPdf	PKPdf	21 19 18.6	+2.4
NAO01				ePKPbc	PKPdf	21 19 22.2	+6.0
NAO01				ePKPab	PKPab	21 19 30.3	-2.4
CTKT	Corum	150.53	296	i P	PKPdf	21 19 24.3	+7.4
HFS	Hagfors	150.58	345	PKPbc	PKPdf	21 19 22.6	+6.2
	comp=Z,32nm,0.7s,baz=180,slow=1.5,SNR=43						
AVNT	Avonos	150.59	293	i P	PKPdf	21 19 24.1	+7.0
MEST	Erdemli	151.15	288	i P	PKPdf	21 19 25.6	+7.6
AKASG	Malin Array Be	151.37	319	PKPbc	PKPdf	21 19 23.6	+5.8
	comp=Z,8.0nm,0.4s,baz=38,slow=2.7,SNR=4.8						
BALT	Daday	151.48	299	i P	PKPdf	21 19 26.6	+8.4
BRTR	Keskin Array B	151.48	295	PKP	PKPdf	21 19 20.9	+2.5
	comp=Z,2.9nm,0.7s,baz=135,slow=1.7,SNR=4.7						
BRTR				PKPbc	PKPdf	21 19 25.9	+7.6
	comp=Z,7.5nm,0.6s,baz=124,slow=4.5,SNR=33						
ELDT	Eldivan	151.57	296	i P	PKPdf	21 19 26.1	+7.7
CSS	Prodhromos	151.73	285	ePKPbc	PKPdf	21 19 26.6	+7.8
CSS				ePKPab	PKPab	21 19 33.7	-5.1
ODD1	Odda	151.95	352	eP	PKPdf	21 19 25.7	+7.4
ODD1	Odda	151.95	352	⇓iP	PKPdf	21 19 25.5	+7.1
ODD1				AMb	AMB	21 19 35.4	
	comp=Z,42nm,1.4s						
SUW	Suwalki	152.46	329	ePKP	PKPdf	21 19 27.4	+8.2
SUW				e		21 19 39.2	
SUW	Suwalki	152.46	329	ePKP	PKPdf	21 19 27.4	+8.2
SUW				e		21 19 39.2	
KMY	Karmoy	152.78	353	eP	PKPdf	21 19 28.3	+8.8
ESKT	Eskisehir	153.65	295	i P	PKPdf	21 19 29.4	+8.1
DBIC	Dimbokro	154.20	170	PKP	PKPdf	21 19 25.7	+2.9
	comp=Z,1.6nm,0.8s,baz=81,slow=9.8,SNR=3.5						
DBIC				PKPbc	PKPdf	21 19 33.8	+11
	comp=Z,1.8nm,0.4s,baz=177,slow=5.0,SNR=9.7						
DBIC				PKPab	PKPab	21 19 50.1	+0.3
	comp=Z,2.3nm,0.6s,baz=180,slow=12,SNR=3.6						
KWP	Kalwaria	155.48	322	ePKP	PKPdf	21 19 34.5	+11
KWP				e		21 19 53.1	
KWP	Kalwaria	155.48	322	ePKP	PKPdf	21 19 34.5	+11
KWP				e		21 19 53.1	
MLR	Muntele Rosu	155.64	310	PKPbc	PKPdf	21 19 35.1	+11
	comp=Z,3.5nm,1.1s,baz=190,slow=12,SNR=4.8						
MLR				PKPab	PKPab	21 19 55.2	+0.2
	comp=Z,2.0nm,0.7s,baz=47,slow=5.1,SNR=6.8						
CRVS	Cervenica-Dubn	156.57	322	i PKP	PKPab	21 19 58.0	-0.8
EKA	Eskdalemuir Ar	156.88	4	PKPab	PKPab	21 19 57.5	-2.4
	comp=Z,3.3nm,0.7s,baz=22,slow=4.5,SNR=5.2						
OKC	Ostrava-Krasne	157.60	327	ePKPab	PKPab	21 20 01.5	-1.7
KSP	Ksiaz	157.67	331	ePKP	PKPab	21 20 02.0	-1.5
DPC	Dobruska-Polom	158.03	330	ePKPab	PKPab	21 20 02.1	-3.0
UPC	Upice	158.04	331	ePKPab	PKPab	21 20 03.6	-1.5
SANT	Santorini	158.15	288	ePKPdf	PKPdf	21 19 26.4	-0.9
VYHS	Vyhne	158.18	324	i PKP	PKPab	21 20 05.2	-0.6
CLL	Collm	158.53	336	i PKP2	PKPab	21 20 05.5	-1.7
PVCC	Panska Ves	158.60	333	ePKPab	PKPab	21 20 05.6	-1.9
SMOL	Smolenice	158.86	325	ePKP	PKPab	21 20 08.2	-0.5
PRU	Pruhonice	159.04	332	ePKPab	PKPab	21 20 08.0	-1.4
NKC	Novy Kostel	159.63	335	ePKPab	PKPab	21 20 10.5	-1.4
KHC	Kasperske Hory	160.10	332	ePKPab	PKPab	21 20 12.1	-1.9
GERES	GERESS Array B	160.28	331	PKP	PKPdf	21 19 29.2	-0.1
	comp=Z,0.6nm,0.8s,baz=72,slow=4.2,SNR=4.7						
GERES				PKPab	PKPab	21 20 12.6	-2.2
	comp=Z,1.6nm,0.8s,baz=45,slow=3.8,SNR=10						
WET	Wettzell	160.37	333	ePKPab	PKPab	21 20 13.4	-1.8
GRA1	Grafenberg Arr	160.51	337	ePKPab	PKPab	21 20 14.6	-1.2
HGN	Heimansgroeve	160.92	347	eP	PKPab	21 20 14.6	-2.9
	comp=Z,28nm,1.0s						
GIVF	Givet	161.75	349	ePKP2	PKPab	21 20 18.7	-2.5
BAIF	Baives	161.89	350	ePKP2	PKPab	21 20 19.4	-2.4
	comp=Z,14nm,0.9s						
BFO	Black Forest	162.62	340	ePKPab	PKPab	21 20 23.2	-1.8
CDF	Champ du Feu	162.83	342	ePKP2	PKPab	21 20 23.9	-2.0
	comp=Z,22nm,1.0s						
MEZF	Maizieres J’vi	163.25	347	ePKP2	PKPab	21 20 25.7	-2.0
	comp=Z,21nm,0.8s						
HAU	Haudompre	163.44	344	ePKP2	PKPab	21 20 26.4	-2.2
	comp=Z,24nm,0.8s						
DAVOX	Davos	163.46	334	PKPab	PKPab	21 20 27.6	-1.1
	comp=Z,4.5nm,0.8s,baz=58,slow=3.9,SNR=4.6						
HINF	Hinteralfeld	163.49	342	ePKP2	PKPab	21 20 26.5	-2.3
CABF	La Chapelle	164.81	342	ePKP2	PKPab	21 20 32.8	-1.7
	comp=Z,14nm,0.9s						
HYF	Humbligny	164.83	352	ePKP2	PKPab	21 20 32.7	-1.9
SSF	Saint Saulge	164.91	349	ePKP2	PKPab	21 20 32.9	-2.1
	comp=Z,38nm,1.0s						
AVF	Avril sur Loir	165.20	349	ePKP2	PKPab	21 20 34.0	-2.3
	comp=Z,33nm,0.9s						
SMF	Signal de Mont	165.26	348	ePKP2	PKPab	21 20 34.5	-2.0
	comp=Z,43nm,0.9s						
BGF	Bois d’Agland	165.50	351	ePKP2	PKPab	21 20 35.3	-2.3
LPL	La Plagne	165.63	339	ePKP2	PKPab	21 20 37.1	-1.1
	comp=Z,12nm,0.9s						
LPG	La Plagne	165.64	339	ePKP2	PKPab	21 20 37.2	-1.0
TCF	Toulx Ste Croi	165.85	352	ePKP2	PKPab	21 20 36.9	-2.2
	comp=Z,19nm,0.8s						
ORIF	Oris-en-Rattie	166.42	340	ePKP2	PKPab	21 20 40.4	-1.2
	comp=Z,60nm,1.3s						
VIVF	Saint-Julien-l	166.80	343	ePKP2	PKPab	21 20 41.7	-1.6
RJF	Les Rejaudoux	166.90	354	ePKP2	PKPab	21 20 41.3	-2.4
	comp=Z,24nm,1.1s						
CAF	Calviac	167.21	352	ePKP2	PKPab	21 20 43.4	-1.7
	comp=Z,24nm,1.0s						
LFF	La Frestale	167.32	356	ePKP2	PKPab	21 20 43.3	-2.2
	comp=Z,20nm,1.0s						

IDC ***24*** *21:10:47.4±1.0, 17.14S×177.66W, mb3.9/8, mb1 4.2/8, mb1mx4.0/16, mbtmp3.9/8, Error ellipse: s-maj=47.9km s-min=19.5km az=142.0*

ISC 24 21:10:50.9±0.8**, 17.2S**±0.2×**177.7W**±0.2**, h33**^{km}**, n8,** σ**0**^{s}**64**/8**, mb3.8**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	21.43	191	P	P	21 15 38.1	-0.1
	5.4nm,0.4s,mb4.2,baz=293,slow=1.4,SNR=3.6						
STKA	Stephens Creek	39.56	241	P	P	21 18 20.9	+0.3
	1.3nm,0.8s,mb3.7,baz=59,slow=5.9,SNR=2.7						
WRA	Warramunga Arr	45.44	259	P	P	21 19 09.0	+0.1
	0.4nm,0.4s,mb3.6,baz=98,slow=6.6,SNR=23						
ASAR	Alice Springs	45.64	254	P	P	21 19 10.2	-0.2
	0.8nm,0.4s,mb4.0,baz=92,slow=7.6,SNR=18						
NVAR	Mina Array Bea	78.47	44	P	P	21 22 52.0	+1.5
	0.4nm,0.8s,mb3.4,baz=216,slow=7.1,SNR=4.3						
TXAR	Lajitas Array	85.06	57	P	P	21 23 24.8	-0.3
	1.4nm,1.0s,mb4.0,baz=214,slow=4.5,SNR=3.7						
ILAR	Eielson Array	85.09	13	P	P	21 23 23.8	-0.5
	0.3nm,0.5s,mb3.7,baz=216,slow=5.2,SNR=14						
PDAR	Pinedale Array	86.39	43	P	P	21 23 30.4	-0.8
	0.4nm,0.7s,mb3.7,baz=243,slow=3.3,SNR=4.0						

IDC ***24*** *21:14:42.3±1.2, 7.27N×80.54W, mb3.7/7, mb1 4.0/10, mb1mx3.8/22, mbtmp3.8/10, ML3.2/3, MS3.2/2, Ms1 3.2/2, ms1mx2.5/21, Error ellipse: s-maj=41.6km s-min=21.3km az=47.0*

NEIC ***24*** *21:14:43.3±0.5, 7.23N×80.37W, h10*^{km}*, mb4.2/6, Error ellipse: s-maj=17.4km s-min=9.5km az=54.0*

ISC 24 21:14:44.7±0.9**, 7.15N**±0.05×**80.19W**±0.04**, h29**^{km}±6^{km}**, n40,** σ**1**^{s}**33**/46**, mb4.0**/12**, 6C-1D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZU2	Pedas	0.41	23	⇑iP	Pb	21 14 53.5	-0.2
AZU2				eS	Sb	21 14 59.4	-0.4
AZU	Azuero	0.64	352	⇑iP	Pb	21 14 55.5	-1.9
UPA	Univ. de Panam	1.93	20	⇓eP	Pn	21 15 17.8	+1.6
UPA				eS	Sn	21 15 42.2	+2.4
ACLA	Agua Clara, Si	2.25	12	⇑eP	Pn	21 15 21.2	+0.4
ACLA				eS	Sn	21 15 48.9	+0.9
PTP1	Petroterminal	2.46	295	eP	Pn	21 15 29.3	+5.5
DVD	David	2.58	300	⇑eP	Pn	21 15 26.2	+0.6
BRU2	Volcan	2.97	304	eP	Pn	21 15 32.1	+1.0
BRU2				eS	Sn	21 16 06.2	0.0
CNI	Changuinola	3.22	314	eP	Pn	21 15 35.5	+0.8
ACR	Cerro Adams	3.31	297	⇑eP	Pn	21 15 35.6	-0.4
BUS	Buena Vista	4.26	304	eP	Pn	21 15 50.0	+0.5
LCR2	La Lucha 2	4.57	305	⇑eP	Pn	21 15 54.6	+0.8

LAJ	Bijagual	4.73	305	eP	Pn	21 16 01.9	+5.7
TRTC	Tortuguero	4.87	315	eP	Pn	21 15 57.0	-1.1
PRS1	Puriscal	4.95	305	eP	Pn	21 16 00.0	+0.7
VPS2	Volcan Poas 2	5.01	307	eP	Pn	21 16 02.3	+2.2
JTS	JuntasAbangare	5.65	304	Pn	Pn	21 16 10.0	+0.9
	1.5nm,0.3s,baz=300,slow=23,SNR=6.7						
JTS				Sn	Sn	21 17 25.7	+12
	baz=349,slow=22,SNR=1.8						
JTS				LR	LR	21 18 16.0	
	comp=Z,276nm,19.6s,baz=125,slow=40						
JTS	JuntasAbangare	5.65	304	ePn	Pn	21 16 07.1	-2.0
JTS				Sn	Sn	21 17 25.7	+12
JTS				LR	LR	21 18 16.0	
VCR	Vista de Mar	6.14	299	eP	Pn	21 16 15.9	-0.1
ROSC	El Rosal	6.26	111	Pn	Pn	21 16 23.2	+5.5
	3.1nm,0.3s,baz=262,slow=18,SNR=3.7						
ROSC				LR	LR	21 18 21.4	
	comp=Z,129nm,18.3s,baz=150,slow=33						
OTAV	Otavalo	7.08	166	eP	Pn	21 16 28.7	-0.5
	7.7nm,0.9s						
SDV	Santo Domingo	9.62	79	Pn	P	21 17 06.8	+2.3
	0.8nm,0.3s,baz=296,slow=9.5,SNR=12						
SDV				Sn	Sn	21 18 51.0	-1.7
	0.8nm,0.3s,baz=144,slow=23,SNR=2.7						
SDV	Santo Domingo	9.62	79	eP	P	21 17 06.2	+1.6
	15nm,0.7s						
SDV				Sn	Sn	21 18 51.0	-1.7
SAML	Samuel	23.30	133	eP	P	21 19 53.8	+2.2
	3.6nm,0.7s,mb3.9						
LPAZ	La Paz	26.17	153	P	P	21 20 20.9	+2.1
	0.4nm,0.3s,mb3.4,baz=338,slow=11,SNR=1.7						
LPAZ	La Paz	26.17	153	P	P	21 20 20.4	+1.5
	1.1nm,0.7s,mb3.5						
SDCO	Great Sand Dun	38.14	327	P	P	21 22 02.5	-0.9
	4.6nm,1.3s,mb4.0						
PDAR	Pinedale Array	43.90	329	P	P	21 22 47.6	-3.1
	0.4nm,0.6s,mb3.3,baz=124,slow=11,SNR=3.7						
ULM	Lac du Bonnet	44.91	346	P	P	21 22 55.6	-3.2
	1.2nm,0.4s,mb4.1,baz=133,slow=6.9,SNR=3.2						
NVAR	Mina Array Bea	46.39	318	P	P	21 23 10.1	-0.6
	0.6nm,0.6s,mb3.7,baz=152,slow=6.5,SNR=5.6						
NVAR	Mina Array Bea	46.39	318	P	P	21 23 10.1	-0.6
SCHQ	Schefferville	48.74	10	P	P	21 23 28.1	-0.7
	1.6nm,0.8s,mb4.1,baz=220,slow=11,SNR=3.6						
FCC	Fort Churchill	52.59	351	P	P	21 23 54.9	-3.1
	5.6nm,1.2s,mb4.4						
YKA	Yellowknife Ar	60.68	342	P	P	21 24 53.7	-2.0
	1.0nm,0.7s,mb4.1,baz=134,slow=7.0,SNR=20						
YKA	Yellowknife Ar	60.68	342	P	P	21 24 53.7	-2.0
RES	Resolute Bay	68.02	356	eP	P	21 25 41.3	-2.0
	2.7nm,1.0s,mb4.2						
SUMG	Summit	70.06	12	P	P	21 25 54.9	-1.0
	7.3nm,1.0s,mb4.6						
ILAR	Eielson Array	73.74	336	P	P	21 26 17.1	-0.7
	0.6nm,0.7s,mb3.6,baz=120,slow=5.7,SNR=4.3						
ESLA	Sonseca Array	74.87	51	P	P	21 26 29.4	+4.5
ASAR	Alice Springs	143.40	240	PKP	PKPdf	21 34 19.5	-2.8
	0.4nm,0.6s,baz=114,slow=2.9,SNR=4.2						
WRA	Warramunga Arr	144.20	246	PKP	PKPdf	21 34 19.2	-4.6
	1.5nm,0.7s,baz=102,slow=3.3,SNR=14						

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*NIED **24** 21:30:00, 35.70N×140.00E, h110^{km}, Mw4.1 Best double couple: $M_0$1.55×10^{15} NP1:ϕ_s137°, δ77°, λ162°. NP2: ϕ_s231°, δ72°, λ13°.*

*MOS **24** 21:30:35.1±1.6, 35.62N×139.96E, h100^{km}, mb4.1/9, Error ellipse: s-maj=13.9km s-min=8.3km az=102.5*

*JMA **24** 21:30:37.9±0.2, 35.67N×139.89E, h106^{km}±2^{km}, M3.9 Broadband fault plane solution: P waves. NP1:ϕ_s48°, δ90°, λ0°. NP2:ϕ_s318°, δ90°, λ180°. Principal axes: T Plg0°, Azm273°; N Plg90°, Azm138°; P Plg0°, Azm3°;*

JMA Felt II J1.

*IDC **24** 21:30:37.1±1.4, 35.65N×140.05E, h94^{km}±14^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.6/25, mbtmp4.2/11 Error ellipse: s-maj=27.7km s-min=10.8km az=91.0*

*NEIC **24** 21:30:38.4±1.2, 35.59N×139.74E, h106^{km}±10^{km}, mb4.4/15, Error ellipse: s-maj=14.3km s-min=9.5km az=86.0*

NEIC Recorded [2 JMA] in Kanagawa, Shizuoka and Tochigi; [1 JMA] in Chiba, Gumma, Ibaraki, Saitama, Tokyo and Yamanashi Prefectures.

*BJI **24** 21:30:42.3, 36.01N×139.04E, h106^{km}, mB4.6, mb4.0*

ISC 24 21:30:37.0±0.3**, 35.60N**±0.03×**139.84E**±0.05**, h115**^{km}±2^{km}**, n70,** σ**0^{s}92**/86**, mb4.2**/22**, 7C-7D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	Tokyo	0.11	321	⇑P	P	21 30 53.2	+0.2
TOK				S	S	21 31 04.5	-0.3
JCN	Nagara	0.34	122	⇑P	P	21 30 54.4	+0.7
JCN				S	S	21 31 06.8	+0.6
JOD2	Odawara 2	0.70	242	⇑P	P	21 30 56.1	+0.1
JOD2				S	S	21 31 09.4	-1.0
JRY	Ryogami san	0.87	299	⇑P	P	21 30 58.3	+0.6
JRY				S	S	21 31 13.7	+0.6
JAG	Ashikaga	0.88	339	⇓P	P	21 30 57.5	-0.3
JAG				S	S	21 31 11.9	-1.4
JIM2	Oshima 3	0.94	201	⇓P	P	21 30 58.2	-0.2
BSO3	Boso 3	0.97	145	⇓P	P	21 30 58.5	-0.1
BSO3				S	S	21 31 14.8	+0.1
JYN	Shimob	1.06	265	⇑P	P	21 31 00.2	+0.6
JYN				S	S	21 31 17.0	+0.5
JIZS	Izushimoda	1.18	222	⇓P	P	21 31 01.4	+0.4
JIZS				S	S	21 31 19.2	+0.4
JKT	Katashina	1.26	338	⇓P	P	21 31 01.6	-0.2
BSO1	Boso 1	1.32	135	⇓P	P	21 31 02.1	-0.5
BSO1				S	S	21 31 21.3	-0.5
MAJO	Matsushiro	1.63	306	eP	P	21 31 06.3	+0.2
MAT	Matsushiro	1.63	306	eP	P	21 31 06.0	-0.1
MAT				eS	S	21 31 28.0	0.0
MAT	Matsushiro	1.63	306	P	P	21 31 06.4	+0.3
MAT				S	S	21 31 28.3	+0.3
MAT	Matsushiro	1.63	306	P	P	21 31 06.5	+0.4
MAT				S	S	21 31 28.3	+0.3
JHJ	Hachijo jima 2	2.48	181	P	P	21 31 17.7	+0.6
	890nm,0.3s,baz=90,slow=1.4,SNR=39						
JHJ				S	S	21 31 47.2	0.0
	223nm,0.3s,baz=62,slow=23,SNR=5.7						
CBIJ	Chichi jima	8.71	166	P	P	21 32 36.9	-4.6
	60nm,0.3s,baz=328,slow=13,SNR=7.5						
CBIJ				S	S	21 34 08.0	-11
	21nm,0.3s,baz=282,slow=22,SNR=3.0						
ASAJ	Asahikawa	8.76	13	P	P	21 32 38.7	-3.5
ASAJ				S	S	21 34 13.4	-6.4
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ	Asahikawa	8.76	13	P	P	21 32 38.7	-3.5
	comp=Z,12nm,0.3s,baz=229,slow=10,SNR=26						
ASAJ				S	S	21 34 13.3	-6.5
	comp=Z,0.8nm,0.3s,baz=271,slow=31,SNR=3.2						
YUK	Yuzh-Kuril'sk	9.61	27	eP	P	21 32 48.4	-5.0
YUK				pmax	pmax		
	comp=Z,220nm,0.5s						
YSS	Yuzh-Sakhalins	11.55	10	⇑eP	P	21 33 15.6	-3.7
YSS				pmax	pmax		
	comp=N,40nm,0.8s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS	Yuzh-Sakhalins	11.55	10	eP	P	21 33 15.4	-3.9
	comp=Z,44nm,0.7s						
BJI	Beijing	19.20	290	eP	P	21 34 51.3	-2.9
BJI				AMB	AMB		
	comp=Z,4.0nm,0.9s						
BJI	Beijing	19.20	290	eP	P	21 34 51.3	-2.9
	comp=Z,4.0nm,0.9s						
BJT	Baijiatuau	19.20	290	eP	P	21 34 51.3	-2.9
BJT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BJT	Baijiatuau	19.20	290	eP	P	21 34 51.2	-3.0
	comp=Z,6.1nm,0.7s						
HIA	Hailar	20.08	319	eP	P	21 35 01.8	-1.6
HIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HIA	Hailar	20.08	319	eP	P	21 35 01.8	-1.6
	comp=Z,7.2nm,1.1s						
MA2	Magadan	25.03	13	eP	P	21 35 52.4	+0.9
MA2				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
MA2	Magadan	25.03	13	eP	P	21 35 52.5	+1.0
	comp=Z,15nm,0.7s,mb4.5						
ENH	Enshi	25.97	267	eP	P	21 35 59.9	-0.7
	comp=Z,11nm,0.7s,mb4.4						
ULN	Ulaanbaatar	27.16	307	eP	P	21 36 10.5	-0.8
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
ULN	Ulaanbaatar	27.16	307	eP	P	21 36 10.5	-0.8
	comp=Z,1.2nm,0.5s,mb3.7						
YAK	Yakutsk	27.22	350	⇓eP	P	21 36 11.2	-0.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
YAK	Yakutsk	27.22	350	P	P	21 36 10.5	-1.2
	comp=Z,13nm,0.6s,mb4.7						
SONM	Songino Array	27.58	307	P	P	21 36 14.9	-0.3
	comp=Z,0.8nm,0.5s,mb3.5,baz=107,slow=8.7,SNR=10						
BOD	Bodaibo	28.11	330	eP	P	21 36 19.6	-0.2
GYA	Guiyang	29.74	261	P	P	21 36 33.5	-1.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
GTA	Gaotai	31.80	289	eP	P	21 36 52.8	+0.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.1						
TIXI	Tiksi	36.57	354	⇑eP	P	21 37 33.0	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
LSA	Lhasa	41.09	276	P	P	21 38 13.0	+2.1
LSA	Lhasa	41.09	276	eP	P	21 38 13.4	+2.5
LSA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
LSA	Lhasa	41.09	276	eP	P	21 38 13.4	+2.5
	comp=Z,5.3nm,0.9s,mb4.4						
ZAL	Zalesovo	41.97	314	i P	P	21 38 19.0	+1.1
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZAL	Zalesovo	41.97	314	P	P	21 38 20.1	+2.2
	comp=Z,1.3nm,0.9s,mb3.6,baz=20,slow=5.3,SNR=6.0						
KURK	Kurchatov	45.83	309	eP	P	21 38 49.8	+0.9
KURK				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
KURK	Kurchatov	45.83	309	eP	P	21 38 49.8	+0.9
	comp=Z,15nm,0.8s,mb4.8						
RSO	Redoubt South	48.81	37	eP	P	21 39 18.7	+6.7
AAK	Ala-Archa	50.06	299	eP	P	21 39 22.0	+0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
AAK	Ala-Archa	50.06	299	eP	P	21 39 22.0	+0.1
	comp=Z,5.5nm,0.9s,mb4.5						
BVAR	Borovoye Array	50.61	313	P	P	21 39 28.0	+2.1
	comp=Z,1.5nm,0.3s,mb4.5,baz=107,slow=8.2,SNR=27						
ILAR	Eielson Array	51.38	32	P	P	21 39 32.1	+0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	51.38	32	P	P	21 39 32.0	+0.5
	comp=Z,0.7nm,0.6s,mb3.9,baz=271,slow=7.2,SNR=9.0						
FITZ	Fitzroy Crossi	55.08	197	eP	P	21 39 59.5	0.0
	comp=Z,3.8nm,0.6s,mb4.6						
WRAB	Tennant Creek	55.47	186	eP	P	21 40 01.0	-1.3
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
WRAB	Tennant Creek	55.47	186	eP	P	21 40 00.9	-1.4
	comp=Z,5.2nm,0.5s,mb4.8						
WB2	Warramunga Arr	55.48	186	eP	P	21 40 01.2	-1.2
WRA	Warramunga Arr	55.48	186	P	P	21 40 01.4	-1.0
WRA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WRA	Warramunga Arr	55.48	186	P	P	21 40 01.4	-1.0
	comp=Z,5.2nm,0.5s,mb4.8,baz=0.3,slow=7.5,SNR=92						
INK	Inuvik	56.24	27	P	P	21 40 07.3	+0.2
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	56.24	27	P	P	21 40 07.3	+0.2
	comp=Z,3.2nm,1.0s,mb4.3						
ASAR	Alice Springs	59.21	186	P	P	21 40 28.7	+0.2
	comp=Z,1.3nm,0.4s,mb4.3,baz=18,slow=10,SNR=23						
ASPA	Alice Springs	59.21	186	eP	P	21 40 30.0	+1.5
MBWA	Marble Bar	59.58	202	eP	P	21 40 30.6	-0.4
RES	Resolute Bay	64.30	14	eP	P	21 41 01.9	+0.2
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
RES	Resolute Bay	64.30	14	eP	P	21 41 01.9	+0.2
	comp=Z,2.3nm,0.9s,mb4.0						
YKA	Yellowknife Ar	65.68	29	i P	P	21 41 11.7	+0.9
FINES	FINESS Array B	69.49	332	P	P	21 41 34.8	+0.2
	comp=Z,0.3nm,0.5s,mb3.4,baz=56,slow=5.0,SNR=5.1						
NOA	NORSAR Array B	75.01	337	P	P	21 42 08.1	+1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NOA	NORSAR Array B	75.01	337	P	P	21 42 08.1	+1.1
	comp=Z,1.1nm,1.0s,mb3.5,baz=36,slow=22,SNR=2.4						

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*PRU **24** 21:36:47.4, 50.33N×18.85E*

WAR 24 21:36:46.6, 50.25N×18.91E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.57	93	ePG	Pg	21 36 59.0	+1.0
OJC				eSG	Sg	21 37 07.0	+1.4
OKC	Ostrava-Krasne	0.64	230	ePG	Pg	21 36 59.9	+0.5
OKC				eSG	Sg	21 37 10.5	+2.5
NIE	Niedzica	1.23	132	ePg	Pg	21 37 09.4	-1.8
NIE				eSg	Sg	21 37 26.8	-0.9
DPC	Dobruska-Polom	1.66	274	ePG	Pg	21 37 17.0	-2.8
DPC				eSG	Sg	21 37 39.4	-2.5
KSP	Ksiaz	1.77	291	ePG	Pg	21 37 20.0	-1.9
KSP				eSG	Sg	21 37 43.0	-2.5
UPC	Upice	1.87	279	eSG	Sg	21 37 45.6	-3.3
PRU	Pruhonice	2.82	266	eSG	Sg	21 38 15.5	-5.1
KHC	Kasperske Hory	3.64	254	eSG	Sg	21 38 40.9	-6.8

CASC 24 21:49:01.8±2.5**, 13.13N×90.46W, h3**^{km}±18^{km}**, MD3.6, ML3.5, 4C-1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.04	0	eP	Pb	21 49 22.2	+0.2
IXG				eS	Sb	21 49 37.1	+1.3
IXG				AML	AML	21 49 45.3	
	comp=N,2µm,0.4s						
SBLS	San Blas	1.08	49	⇑eP	Pb	21 49 22.4	-0.3
SBLS				eS	Sb	21 49 38.5	+1.5
RTR	El Retiro	1.10	46	⇑eP	Pb	21 49 22.9	-0.1
RTR				eS	Sb	21 49 38.7	+1.1
SNJE	San Jose	1.11	48	⇑eP	Pb	21 49 22.9	-0.4
SNJE				eS	Sb	21 49 38.4	+0.5
RBDL	Robledal	1.23	37	⇓eP	Pb	21 49 25.3	0.0
BOQS	Boqueron	1.29	62	eP	Pb	21 49 25.2	-1.2
BOQS				eS	Sb	21 49 43.4	+0.1
LFRS	El Faro	1.45	70	eP	Pn	21 49 26.4	-2.5
LFRS				eS	Sb	21 49 48.6	+1.0
NBG	Las Nubes	1.45	4	eP	Pn	21 49 29.6	+0.6
NBG				eS	Sb	21 49 48.8	+0.8
NBG				AML	AML	21 49 54.6	
	comp=N,936nm,0.5s						
LCBS	La Ceiba	1.53	70	eP	Pn	21 49 28.4	-1.7
LCBS				eS	Sb	21 49 53.5	+3.3
SNVI	San Vicente	1.65	73	eP	Pn	21 49 32.2	+0.5
MTO2	Montecristo 2	1.65	40	⇑eP	Pn	21 49 31.8	0.0
TP2	Tecpan 2	1.73	342	eP	Pn	21 49 32.8	-0.2
TP2				eS	Sn	21 49 57.2	+1.4
TP2				AML	AML	21 50 07.0	
	comp=N,313nm,0.5s						

IDC 24 22:20:14.1±55.0**, 17.35S×178.45W, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.8**/15**, mbtmp4.0**/3**, Error ellipse: s-maj=1016.0km s-min=168.7km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.87	241	P	P	22 27 41.6	-1.4
	0.5nm,0.3s,baz=45,slow=8.6,SNR=3.6						
WB2	Warramunga Arr	44.69	259	eP	P	22 28 29.0	-1.9
WRA	Warramunga Arr	44.70	259	P	P	22 28 29.2	-1.9
	0.7nm,0.3s,baz=96,slow=7.3,SNR=19						
ASAR	Alice Springs	44.91	254	P	P	22 28 30.7	-2.0
	4.4nm,0.7s,baz=87,slow=8.7,SNR=38						
ASPA	Alice Springs	44.91	254	eP	P	22 28 30.8	-1.9

IGQ 24 22:39:46.0, 1.49S×81.14W, h13^{km}±6^{km}, mb4.1, 2C, Error ellipse: s-maj=10.6km s-min=5.1km az=10.4, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SALI	Salinas	0.71	168	P	Pb	22 40 00.5	+0.8
HOJA	Cerro de Hojas	0.73	54	⇑P	Pb	22 39 59.6	-0.5
IGUA	Igualata	2.50	90	P	Pn	22 40 27.3	+0.2
ARRY	Arrayan	2.68	90	P	Pn	22 40 29.6	-0.1
ARRY				S	Sn	22 41 01.7	-0.7
RETU	Refugio	2.69	89	P	Pn	22 40 32.0	+2.1
RUN2	Runtun	2.73	89	P	Pn	22 40 31.3	+1.0
ULBA	Ulba	2.73	89	P	Pn	22 40 32.1	+1.7
ULBA				S	Sn	22 41 04.7	+1.2
PISA	Pisayambo	2.79	81	P	Pn	22 40 33.0	+1.8
NAS1	Nasa	2.79	72	P	Pn	22 40 33.9	+2.6
NAS1				S	Sn	22 41 10.7	+5.6
JUA2	San Juan 2	2.83	64	P	Pn	22 40 31.9	+0.1
TERV	Terraza Guagua	2.85	63	P	Pn	22 40 32.7	+0.6
PINO	Pino	2.85	62	P	Pn	22 40 32.1	0.0
VC1	Cotopaxi 1	2.86	73	P	Pn	22 40 34.9	+2.6
TAMB	Tambo	2.88	74	P	Pn	22 40 34.4	+1.9
YANA	Yana	2.91	62	⇑P	Pn	22 40 33.4	+0.6
ANTI	Antisana	3.15	71	P	Pn	22 40 38.5	+2.1
COTA	Cotacachi	3.33	57	P	Pn	22 40 40.4	+1.5
ELAGU	Cayambe Volc	3.47	65	P	Pn	22 40 44.2	+3.4
CAYR	Refugio Cayamb	3.47	65	P	Pn	22 40 44.0	+3.2
CAYA	Cayambe	3.51	64	P	Pn	22 40 44.5	+3.1
ECEN	Cerro Negro	3.91	54	P	Pn	22 40 49.1	+2.0

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*NIED **24** 22:53:00, 34.10N×141.80E, h14^{km}, Mw4.8 Best double couple: $M_0$1.94×10^{16} NP1:ϕ_s271°, δ61°, λ-107°. NP2: ϕ_s123°, δ33°, λ-63°.*

*JMA **24** 22:53:14.8±0.4, 34.14N×141.80E, h24^{km}±3^{km}, M5.1*

*IDC **24** 22:53:14.2±0.5, 34.16N×141.63E, mb4.3/22, mb1 4.5/24, mb1mx4.5/27, mbtmp4.3/24, ML4.6/2, MS4.4/11, Ms1 4.4/11, ms1mx4.1/24, Error ellipse: s-maj=16.3km s-min=12.2km az=119.0*

*MOS **24** 22:53:17.5±1.0, 34.17N×141.57E, h33^{km}, mb4.8/47, MS4.9/16, Error ellipse: s-maj=10.3km s-min=6.1km az=111.8*

*BJI **24** 22:53:18.7, 34.26N×141.66E, h54^{km}, mB4.9, mb4.5, Ms5.0, Msz4.8*

*NEIC **24** 22:53:20.2±1.0, 34.21N×141.48E, h40^{km}±9^{km}, mb4.6/43, MS4.5/2, MW4.8(NIED), Error ellipse: s-maj=6.5km s-min=5.0km az=125.0*

ISC 24 22:53:18.8±0.6**, 34.17N**±0.03×**141.56E**±0.04**, h43**^{km}±4^{km}**, h43**^{km}±1.7^{km}**: pP-P, n204,** σ**1^{s}06**/230**, mb4.6**/84**, MS4.8**/28**, 7C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.68	315	P	P	22 53 30.5	-1.5
BSO3	Boso 3	1.07	306	P	P	22 53 37.0	-0.5
BSO3				eS	S	22 53 53.0	+1.5
BSO4	Boso 4	1.30	309	P	P	22 53 40.9	+0.1
BSO4				eS	S	22 53 59.8	+2.5
KTR	Katsuura	1.41	314	P	P	22 53 42.7	+0.2
CHOJ	Chosi	1.63	340	P	P	22 53 44.4	-1.2
CHOJ				eS	S	22 54 06.1	+0.6
JHJ2	Mitsune	1.80	234	P	P	22 53 48.3	+0.4
JHJ2				eS	S	22 54 12.5	+2.8
JHJ	Hachijo jima 2	1.82	235	Pn	P	22 53 48.6	+0.4
	295nm,0.3s,baz=108,slow=9.6,SNR=25						
JHJ				Sn	S	22 54 12.3	+2.2
	275nm,0.3s,baz=58,slow=23,SNR=6.2						
JIM2	Oshima 3	1.84	288	P	P	22 53 48.0	-0.5
JIM2				eS	S	22 54 12.7	+2.0
JIZS	Izushimoda	2.28	285	P	P	22 53 54.5	-0.3
JOD2	Odawara 2	2.31	299	P	P	22 53 54.7	-0.5
JYN	Shimob	2.81	299	P	P	22 54 02.3	-0.1
JYN				eS	S	22 54 40.0	+4.7
JAG	Ashikaga	2.83	323	P	P	22 54 01.7	-1.0
JAG				eS	S	22 54 35.8	0.0
MAJO	Matsushiro	3.62	312	eP	P	22 54 13.5	-0.3
MAT	Matsushiro	3.62	312	eP	P	22 54 13.0	-0.8
MAT				eS	S	22 54 56.0	+0.2
MAT	Matsushiro	3.62	312	P	P	22 54 13.3	-0.5
MAT				S	S	22 54 56.3	+0.5
CBIJ	Chichi jima	7.07	175	Pn	P	22 54 57.7	-4.7
	55nm,0.3s,baz=281,slow=21,SNR=7.2						
CBIJ				Sn	S	22 56 13.1	-9.2
	37nm,0.3s,baz=50,slow=22,SNR=3.9						
ASAJ	Asahikawa	9.96	4	P	P	22 55 36.9	-5.4
ASAJ						22 57 26.1	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ	Asahikawa	9.96	4	Pn	P	22 55 36.9	-5.4
	comp=Z,3.3nm,0.3s,baz=234,slow=9.6,SNR=9.3						
ASAJ				Sn	S	22 57 26.1	-7.7
	comp=Z,1.1nm,0.3s,baz=10,slow=18,SNR=3.1						
YUK	Yuzh-Kuril'sk	10.40	17	P	P	22 55 44.9	-3.3
YUK				MLR	MLR		
	comp=N,3µm,14.0s						
YUK				MLR	MLR		
	comp=E,3µm,14.0s						
YUK				MLR	MLR		
	comp=Z,3µm,14.0s						
VLA	Vladivostok	11.69	323	⇑iP	P	22 56 09.0	+3.2
VLA				pmax	pmax		
	comp=Z,500nm,8.0s						
VLA				pmax	pmax		
	comp=N,600nm,6.0s						
YSS	Yuzh-Sakhalins	12.80	4	⇑eP	P	22 56 14.0	-6.6
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=N,3µm,15.0s						
YSS				MLR	MLR		
	comp=E,3µm,15.0s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS	Yuzh-Sakhalins	12.80	4	eP	P	22 56 14.4	-6.2
	comp=Z,16nm,0.5s						
JOW	Kunigami	13.58	241	LR	LR	23 02 08.3	
	comp=Z,3µm,18.0s,baz=114,slow=39						
MDJ	Mudanjiang	13.93	322	P	P	22 56 35.9	+0.6
MDJ				AP		22 56 43.4	
MDJ				XP		22 56 50.3	
MDJ				S	S	22 59 05.0	-4.4
MDJ				SS	SS	22 59 21.0	-5.2
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.5s						
MDJ				AMB	AMB		
	comp=Z,224nm,5.3s						
MDJ				LR	LR		
	comp=N,3µm,15.0s						
MDJ				LR	LR		
	comp=E,5µm,15.2s						
MDJ				LR	LR		
	comp=Z,7µm,14.9s						
MDJ	Mudanjiang	13.93	322	P	P	22 56 33.1	-2.2
CN2	Changchun	15.77	312	eP	P	22 56 58.3	-1.0
CN2				eAP		22 57 08.0	
CN2				eS	S	22 59 49.9	-2.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,400nm,11.0s						
CN2				LR	LR		
	comp=Z,500nm,13.0s						
SNY	Shenyang	16.09	304	PR		22 57 07.6	
SNY				AMB	AMB		
	comp=Z,600nm,11.6s						
SNY				LR	LR		
	comp=N,2µm,13.0s						
SNY				LR	LR		
	comp=E,840nm,13.1s						
SNY				LR	LR		
	comp=Z,2µm,15.4s						
DL2	Dalian	16.69	292	P	P	22 57 14.9	+3.9
DL2				LR	LR		
	comp=N,1µm,14.4s						
DL2				LR	LR		
	comp=E,960nm,15.6s						
DL2				LR	LR		
	comp=Z,1µm,16.8s						
KLR	Kul'dur	16.71	337	eP	P	22 57 16.0	+4.9
KLR				MLR	MLR		
	comp=E,3µm,15.0s						

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KLR                               MLR   MLR
      comp=Z,4µm,15.0s
SSE   Sheshan           17.43 265 eP    P     22 57 21.3 +1.0
SSE                               AP          22 57 31.8
SSE                               XP          22 57 35.3
SSE                               S     S     23 00 32.4 +1.5
SSE                               XS          23 00 53.9
SSE                               AMB   AMB
      comp=Z,26nm,0.8s
SSE                               AMB   AMB
      comp=Z,189nm,3.8s
SSE                               LR    LR
      comp=N,1µm,15.0s
SSE                               LR    LR
      comp=E,4µm,15.0s
SSE                               LR    LR
      comp=Z,4µm,14.7s
SSE   Sheshan           17.43 265 eP    P     22 57 21.2 +0.9
      comp=Z,26nm,0.8s
SSE                               pP          22 57 31.8
SSE                               sP          22 57 35.2
SSE                               S     S     23 00 32.4 +1.5
SSE                               sS          23 00 53.9
NJ2   Nanjing           19.13 270 eP    P     22 57 40.4 -0.6
NJ2                               AP          22 57 56.3
NJ2                               PP    PP    22 57 57.8 -0.4
NJ2                               S     S     23 01 07.0 -2.2
NJ2                               AMB   AMB
      comp=Z,670nm,10.4s
NJ2                               LR    LR
      comp=N,5µm,14.9s
NJ2                               LR    LR
      comp=E,4µm,19.2s
NJ2                               LR    LR
      comp=Z,6µm,17.2s
BJI   Beijing           21.04 294 eP    P     22 57 57.1 -4.1
BJI                               AMB   AMB
      comp=Z,4.0nm,0.6s,mb3.9
BJI                               AMB   AMB
      comp=Z,199nm,5.5s
BJI                               LR    LR
      comp=N,1µm,12.8s,MS4.7
BJI                               LR    LR
      comp=E,2µm,15.1s,MS4.7
BJI                               LR    LR
      comp=Z,813nm,20.4s
BJI   Beijing           21.04 294 eP    P     22 57 57.1 -4.1
      comp=Z,4.0nm,0.6s,mb3.9
BJI                               S     S     23 01 57.8 +10
BJI                               LR    LR
      comp=Z,810nm,20.4s,MS4.1
BJT   Baijiatuau        21.04 293 eP    P     22 57 59.8 -1.4
BJT                               pmax  pmax
      comp=Z,13nm,0.9s
BJT   Baijiatuau        21.04 293 eP    P     22 57 59.8 -1.3
      comp=Z,13nm,0.9s,mb4.2
QZH   Quanzhou          21.95 251 eP    P     22 58 10.8 +0.4
QZH                               S     S     23 02 05.0 -0.1
QZH                               LR    LR
      comp=N,2µm,19.6s
QZH                               LR    LR
      comp=E,1µm,13.4s
QZH                               LR    LR
      comp=Z,2µm,14.1s
HIA   Hailar            22.08 320 i P   P     22 58 10.7 -0.8
PET   Petropavlovsk     22.44  28 eP    P     22 58 14.9 -0.1
PET                               eS    S     23 02 23.1 +9.4
PET                               pmax  pmax
      comp=Z,73nm,1.8s,mb4.8
PET                               pmax  pmax
      comp=Z,200nm,10.7s
PET                               smax
      comp=E,500nm,15.3s
PET                               MLR   MLR
      comp=Z,800nm,21.0s,MS4.1
WHN   Wuhan             23.24 269 ⇑P    P     22 58 23.8 +0.8
WHN                               S     S     23 02 28.0 -0.2
WHN                               LR    LR
      comp=Z,6µm,15.4s,MS5.1
HHC   Hu-ho-hao-te      24.63 295 ⇑P    P     22 58 34.9 -1.5
HHC                               S     S     23 02 54.5 +2.5
HHC                               XS          23 03 11.3
HHC                               SS    SS    23 03 52.0 +2.1
HHC                               AMB   AMB
      comp=Z,5.0nm,1.0s,mb4.0
HHC                               AMB   AMB
      comp=Z,228nm,9.6s
HHC                               LR    LR
      comp=N,1µm,16.8s,MS4.7
HHC                               LR    LR
      comp=E,1µm,13.2s,MS4.7
HHC                               LR    LR
      comp=Z,2µm,12.0s,MS4.8
CLNS  Chul’man          25.36 338 eP    P     22 58 42.6 -0.6
CLNS                              e           23 02 18.3
CLNS                              eS    S     23 02 59.8 -4.2
CLNS                              eSS   SS    23 04 02.6 -5.0
CLNS                              pmax  pmax
      comp=Z,11nm,0.8s,mb4.4
CLNS                              pmax  pmax
      comp=N,9.0nm,0.9s
CLNS                              pmax  pmax
      comp=E,11nm,1.0s
CLNS                              pmax  pmax
      comp=Z,11nm,0.9s,mb4.4
CLNS                              pmax  pmax
      comp=N,16nm,1.0s
CLNS                              pmax  pmax
      comp=E,8.0nm,0.8s
CLNS                              smax
      comp=N,4.0nm,0.7s
CLNS                              smax
      comp=Z,2.0nm,0.6s
CLNS                              smax
      comp=E,4.0nm,0.9s
CLNS                              MLR   MLR
      comp=Z,3µm,17.0s,MS4.8
CLNS                              MLR   MLR
      comp=N,2µm,16.0s,MS4.8
CLNS                              MLR   MLR
      comp=E,300nm,13.0s,MS4.8
BTO   Baotou            25.78 294 eP    P     22 58 47.0 -0.3
BTO                               LR    LR
      comp=N,197nm,5.1s
BTO                               LR    LR
      comp=E,970nm,11.4s
MA2   Magadan           26.13  11 eP    P     22 58 49.0 -1.3
MA2                               pmax  pmax
      comp=Z,15nm,0.9s,mb4.5
MA2   Magadan           26.13  11 eP    P     22 58 49.0 -1.3
      comp=Z,15nm,0.9s,mb4.5
XAN   Xi’an             26.97 279 P     P     22 58 56.8 -1.5
XAN                               S     S     23 03 26.8 -3.8
XAN                               AMB   AMB
      comp=Z,4.0nm,0.8s,mb4.0
XAN                               AMB   AMB
      comp=Z,139nm,10.6s
XAN                               LR    LR
      comp=N,877nm,16.6s,MS4.8
XAN                               LR    LR
      comp=E,2µm,16.8s,MS4.8
XAN                               LR    LR
      comp=Z,3µm,16.5s,MS4.9
ENH   Enshi             27.35 271 eP    P     22 59 00.0 -1.8
      comp=Z,8.7nm,0.7s,mb4.4
YAK   Yakutsk           28.89 348 eP    P     22 59 20.3 +5.0
YAK                               pmax  pmax
      comp=Z,7.0nm,0.8s,mb4.4
YAK                               pmax  pmax
      comp=N,5.0nm,1.2s
YAK                               pmax  pmax
      comp=E,2.0nm,1.1s
YAK   Yakutsk           28.89 348 P     P     22 59 14.5 -0.8
      comp=E,19nm,0.6s,mb5.0
ULN   Ulaanbaatar       29.14 308 eP    P     22 59 18.4 +0.7
ULN                               pmax  pmax
      comp=Z,24nm,1.2s,mb4.8
ULN   Ulaanbaatar       29.14 308 eP    P     22 59 18.4 +0.6
      comp=Z,24nm,1.2s,mb4.8
FX1   Attu Island--F    29.23  41 LR    LR    23 09 56.2
      comp=Z,24nm,19.6s,baz=247,slow=34
SONM  Songino Array     29.56 308 P     P     22 59 22.2 +0.7
      comp=Z,4.1nm,0.6s,mb4.3,baz=104,slow=8.3,SNR=46
SONM                              PcP   PcP   23 02 25.8  0.0
      comp=Z,0.5nm,0.5s,baz=127,slow=2.5,SNR=5.9
BOD   Bodaibo           30.04 330 eP    P     22 59 24.2 -1.4
BOD                               pmax  pmax
      comp=Z,13nm,1.0s,mb4.6
LZH   Lanzhou           30.78 284 eP    P     22 59 35.0 +2.6
LZH                               AP    pP    22 59 46.0 +1.9
LZH                               XP    sP    22 59 50.0 +0.4
LZH                               AMB   AMB
      comp=Z,20nm,1.2s,mb4.8
LZH                               LR    LR
      comp=N,3µm,15.4s
LZH                               LR    LR
      comp=Z,4µm,17.0s,MS5.1
LZH   Lanzhou           30.78 284 eP    P     22 59 35.0 +2.6
      comp=Z,20nm,1.2s,mb4.8
LZH                               pP    pP    22 59 46.0 +1.9
LZH                               sP    sP    22 59 50.0 +0.4
LZH                               PP    tx    23 01 20.0
LZH                               eS    tx    23 06 15.0
LZH                               sS          23 06 29.4
LZH                               SS    tx    23 09 34.0
LZH                               LR    LR
      comp=Z,4µm,17.0s,MS5.1
GYA   Guiyang           30.98 265 P     P     22 59 33.6 -0.7
GYA                               AP    pP    22 59 45.3 -0.6
GYA                               XP    sP    22 59 52.5 +1.1
GYA                               S     S     23 04 35.8 +1.2
GYA                               AMB   AMB
      comp=Z,10.0nm,0.7s,mb4.8
GYA                               AMB   AMB
      comp=Z,80nm,5.1s
GYA                               LR    LR
      comp=N,1µm,15.9s,MS4.8
GYA                               LR    LR
      comp=E,1µm,16.8s,MS4.8
GYA                               LR    LR
      comp=Z,1µm,20.6s,MS4.6
CD2   Chengdu           31.91 275 P     P     22 59 40.6 -1.8
CD2                               AMB   AMB
      comp=Z,17nm,0.6s,mb5.0
IRK   Irkutsk           32.17 316 eP    P     22 59 54.5 +10
ZAK   Zakamensk         32.20 312⇓iP    P     22 59 44.9 +0.1
ZAK                               pmax  pmax
      comp=Z,5.0nm,1.2s,mb4.2
TLY   Talaya            32.35 314 eP    P     22 59 47.8 +1.7
TLY                               e           23 01 05.1
TLY                               eS    S     23 04 57.3 +1.4
TLY                               pmax  pmax
      comp=Z,9.0nm,0.9s,mb4.6
TLY                               MLR   MLR
      comp=Z,3µm,16.0s,MS5.1
GTA   Gaotai            33.62 291 eP    P     22 59 57.3 +0.2
GTA                               PP    PP    23 01 07.3 -3.2
GTA                               S     S     23 05 14.9 -0.8
GTA                               AMB   AMB
      comp=Z,3.0nm,0.9s,mb4.2
GTA                               AMB   AMB
      comp=Z,103nm,5.3s
GTA                               LR    LR
      comp=N,1µm,16.7s,MS4.9
GTA                               LR    LR
      comp=E,1µm,14.1s,MS4.9
GTA                               LR    LR
      comp=Z,1µm,15.2s,MS4.7
MOY   Mondy             33.93 313 eP    P     23 00 02.8 +3.1
MOY                               pmax  pmax
      comp=Z,21nm,2.7s,mb4.6
KMI   Kunming           34.75 265 P     P     23 00 06.4 -0.6
KMI                               XP    sP    23 00 23.3 -1.0
KMI                               S     S     23 05 32.1 -1.3
KMI                               SS    SS    23 07 45.4 -2.7
KMI                               AMB   AMB
      comp=Z,6.0nm,0.7s,mb4.6
KMI                               AMB   AMB
      comp=Z,106nm,5.9s
KMI                               LR    LR
      comp=N,1µm,14.2s,MS5.1
KMI                               LR    LR
      comp=E,2µm,16.6s,MS5.1
KMI                               LR    LR
      comp=Z,3µm,17.5s,MS5.1
KMI   Kunming           34.75 265 P     P     23 00 06.4 -0.6
KMI                               *SP   sP    23 00 23.3 -1.0
KMI                               S     S     23 05 32.1 -1.3
KMI                               *SS         23 05 50.1
KMI                               SS    SS    23 07 45.4 -2.7
KMI                               pmax  pmax
      comp=Z,6.0nm,0.7s,mb4.6
KMI                               MLR   MLR
      comp=Z,3µm,17.5s,MS5.1
KMI   Kunming           34.75 265 P     P     23 00 06.4 -0.6
      comp=Z,6.0nm,0.7s,mb4.6
KMI                               sP    sP    23 00 23.3 -1.0
KMI                               S     S     23 05 32.1 -1.3
KMI                               sS          23 05 50.1
KMI                               SS    SS    23 07 45.4 -2.7
KMI                               LR    LR
      comp=Z,3µm,17.5s,MS5.1
BILL  Bilibino          36.74  15⇑eP    P     23 00 22.7 -0.7
BILL                              eSS   SS    23 08 27.2 -5.4
BILL                              pmax  pmax
      comp=Z,16nm,1.6s,mb4.6
BILL                              MLR   MLR
      comp=Z,800nm,14.0s,MS4.7
BILL  Bilibino          36.74  15 eP    P     23 00 22.6 -0.9
      comp=Z,12nm,1.2s,mb4.6
TIXI  Tiksi             38.14 354 eP    P     23 00 34.4 -0.7
TIXI                              eS    S     23 06 22.6 -2.3
TIXI                              pmax  pmax
      comp=Z,4.0nm,0.8s,mb4.2
TIXI                              MLR   MLR
      comp=Z,2µm,16.0s,MS5.0
CMAR  Chiang Mai Arr    40.97 259 P     P     23 00 58.7 -0.4
CMAR                              pmax  pmax
      comp=Z,2.0nm,0.6s
CMAR                              MLR   MLR
      comp=Z,295nm,18.9s
CMAR  Chiang Mai Arr    40.97 259 P     P     23 00 58.7 -0.4
      comp=Z,1.5nm,0.6s,mb3.8,baz=51,slow=7.8,SNR=14
CMAR                              LR    LR    23 19 02.7
      comp=Z,295nm,18.9s,MS4.2,baz=65,slow=38
WMQ   Urumqi            42.30 300 P     P     23 01 10.6 +0.9
WMQ                               AP    pP    23 01 23.0 +1.3
WMQ                               XP    sP    23 01 29.0 +2.0
WMQ                               PP    PP    23 02 52.0 +1.2
WMQ                               S     S     23 07 27.0 -0.2
WMQ                               SS    SS    23 10 31.0 +0.2
WMQ                               AMB   AMB
      comp=Z,12nm,1.0s,mb4.5
WMQ                               LR    LR
      comp=N,652nm,16.0s,MS4.7
WMQ                               LR    LR
      comp=E,325nm,16.0s,MS4.7
WMQ                               LR    LR
      comp=Z,265nm,16.0s,MS4.2
LSA   Lhasa             42.66 278 P     P     23 01 06.2 -6.8
LSA                               pmax  pmax
      comp=Z,6.0nm,0.8s,mb4.4
LSA   Lhasa             42.66 278 P     P     23 01 06.2 -6.8
      comp=Z,5.7nm,0.8s,mb4.3
TNA   Tin City          43.30  28 eP    P     23 01 17.1 -0.6
      comp=Z,7.1nm,1.2s,mb4.3
PMG   Port Moresby      43.66 172 LR    LR    23 18 01.8
      comp=Z,218nm,20.3s,MS4.0,baz=143,slow=34
ZAL   Zalesovo          43.98 315 P     P     23 01 24.1 +0.8
ZAL                               pmax  pmax
      comp=Z,2.0nm,0.6s
ZAL                               MLR   MLR
      comp=Z,865nm,19.0s
ZAL   Zalesovo          43.98 315 P     P     23 01 24.1 +0.8
      comp=Z,1.9nm,0.6s,mb4.0,baz=15,slow=6.5,SNR=12
ZAL                               LR    LR    23 21 47.3
      comp=Z,865nm,19.0s,MS4.7,baz=19,slow=39
NVS   Novosibirsk       44.94 316 eP    P     23 01 30.3 -0.6
NVS                               pmax  pmax
      comp=Z,9.0nm,1.0s,mb4.5
MKAR  Makanchi Array    45.79 305 i P   P     23 01 37.8  0.0
MKAR                              pmax  pmax
      comp=Z,2.0nm,0.5s
KAKA  Kakadu            47.42 192⇑iP    P     23 01 50.2 -0.9
      comp=Z,22nm,0.7s,mb5.2
JIRN  Jiri              47.46 278 eP    P     23 01 51.5 +0.2
      comp=Z,41nm,0.7s,mb5.5
KURK  Kurchatov         47.83 310 i P   P     23 01 53.2 -0.6
KURK                              pmax  pmax
      comp=Z,5.0nm,0.7s,mb4.7
KURK  Kurchatov         47.83 310 eP    P     23 01 52.0 -1.9
      comp=Z,38nm,1.0s,mb5.4
PKI   Pulchoki          48.14 278 eP    P     23 01 55.9 -0.7
      comp=Z,22nm,0.7s,mb5.3
KKN   Kakani            48.16 278 eP    P     23 01 56.8 +0.1
      comp=Z,33nm,0.8s,mb5.4
DMN   Daman             48.37 278 eP    P     23 01 57.8 -0.6
      comp=Z,20nm,0.9s,mb5.2
GKN   Gorkha            48.61 279 eP    P     23 01 59.8 -0.4
      comp=Z,61nm,0.9s,mb5.6
KOLN  Koldanda          49.54 279 eP    P     23 02 07.2 -0.2
      comp=Z,47nm,1.2s,mb5.4
ILAR  Eielson Array     51.86  31 P     P     23 02 23.9 -0.6
ILAR                              pmax  pmax
      comp=Z,3.0nm,0.7s
ILAR  Eielson Array     51.86  31 P     P     23 02 23.9 -0.6
      comp=Z,2.8nm,0.7s,mb4.3,baz=265,slow=6.1,SNR=35
AAK   Ala-Archa         52.00 300⇓eP    P     23 02 26.8 +1.0
AAK                               pmax  pmax
      comp=Z,7.0nm,1.2s,mb4.5
AAK                               MLR   MLR
      comp=Z,700nm,15.0s,MS4.8
AAK   Ala-Archa         52.00 300 eP    P     23 02 24.3 -1.5
      comp=Z,3.7nm,0.8s,mb4.4
SDNR  Sundarnagar       53.52 286 eP    P     23 02 37.2 -0.1
FITZ  Fitzroy Crossi    54.15 199 eP    P     23 02 41.8 -0.3
      comp=Z,18nm,0.6s,mb5.2
THN   Thein Dam         54.17 288 eP    P     23 02 42.9 +0.8
WRAB  Tennant Creek     54.24 188 eP    P     23 02 41.5 -1.2
WRAB                              pmax  pmax
      comp=Z,18nm,0.7s,mb5.1
WRAB  Tennant Creek     54.24 188 eP    P     23 02 41.5 -1.3
      comp=Z,18nm,0.7s,mb5.1
WB2   Warramunga Arr    54.25 188 eP    P     23 02 41.6 -1.2
WRA   Warramunga Arr    54.25 188 P     P     23 02 41.4 -1.4
WRA                               pmax  pmax
      comp=Z,13nm,0.6s
WRA   Warramunga Arr    54.25 188 P     P     23 02 41.4 -1.4
      comp=Z,12nm,0.6s,mb5.0,baz=6.2,slow=7.6,SNR=72
NDI   New Delhi         54.38 283 e     P     23 02 42.0 -1.7
INK   Inuvik            56.89  26 eP    P     23 03 00.4 -0.8
INK                               pmax  pmax
      comp=Z,4.0nm,0.7s
INK   Inuvik            56.89  26 eP    P     23 03 00.4 -0.8
      comp=Z,3.5nm,0.7s,mb4.5
SVE   Sverdlovsk        57.39 320 eP    P     23 03 05.7 +0.8
SVE                               e           23 03 51.0
SVE                               MLR   MLR
      comp=N,600nm,16.0s,MS5.3
SVE                               MLR   MLR
      comp=E,2µm,16.0s,MS5.3
SVE                               MLR   MLR
      comp=Z,3µm,16.0s,MS5.5
ASAR  Alice Springs     57.98 188 P     P     23 03 08.6 -0.9
      comp=Z,4.7nm,0.6s,mb4.7,baz=16,slow=9.5,SNR=63
ASPA  Alice Springs     57.98 188 eP    P     23 03 09.6 +0.1
HYB   Hyderabad         58.29 270 eP    P     23 03 11.0 -0.7
HYB   Hyderabad         58.29 270 i P   P     23 03 11.0 -0.7
MBWA  Marble Bar        58.82 204 eP    P     23 03 14.7 -0.6
      comp=Z,43nm,1.2s,mb5.4
KAD   Karad             61.97 273 eP    P     23 03 36.0 -0.8
RES   Resolute Bay      65.34  14 eP    P     23 03 57.0 -1.1
RES                               pmax  pmax
      comp=Z,9.0nm,1.0s,mb4.8
RES   Resolute Bay      65.34  14 eP    P     23 03 57.0 -1.1
      comp=Z,8.8nm,1.0s,mb4.7
STKA  Stephens Creek    65.70 180 eP    P     23 04 05.5 +4.4
      comp=Z,3.0nm,0.7s,mb4.4
STKA  Stephens Creek    65.70 180 P     P     23 03 59.9 -1.2
      comp=Z,3.3nm,1.1s,mb4.3,baz=34,slow=3.6,SNR=2.9
STKA  Stephens Creek    65.70 180 eP    P     23 04 00.7 -0.4
FORT  Forrest           65.85 193 eP    P     23 04 02.0 -0.1
      comp=Z,674nm,0.6s
YKA   Yellowknife Ar    66.23  30 i P   P     23 04 02.9 -1.0
YKA                               pmax  pmax
      comp=Z,1.0nm,0.6s
YKA   Yellowknife Ar    66.23  30 P     P     23 04 02.9 -1.0
      comp=Z,0.5nm,0.6s,mb3.8,baz=297,slow=6.3,SNR=12
YKA                               LR    LR    23 32 59.4
      comp=Z,118nm,18.0s,MS4.1,baz=275,slow=36
YKA   Yellowknife Ar    66.23  30 P     P     23 04 02.9 -1.0
YKA                               LR    LR    23 32 59.4
ARCES ARCESS Array B    66.72 340 P     P     23 04 06.1 -0.8
ARCES                             pmax  pmax
      comp=Z,7.0nm,1.0s
ARCES                             MLR   MLR
      comp=Z,751nm,18.2s
ARCES ARCESS Array B    66.72 340 P     P     23 04 06.1 -0.8
      comp=Z,6.5nm,1.0s,mb4.6,baz=50,slow=9.5,SNR=4.3
ARCES                             LR    LR    23 37 03.8
      comp=Z,751nm,18.2s,MS4.9,baz=27,slow=39
JOF   Joensuu           68.55 333 ep    P     23 04 18.1 -0.3
      comp=Z,1.6nm,0.4s,mb4.3
JOF   Joensuu           68.55 333 eP    P     23 04 18.1 -0.3
JOF                               pmax  pmax
      comp=Z,2.0nm,0.4s,mb4.4
OBN   Obninsk           70.47 324⇑eP    P     23 04 30.9 +0.6
OBN                               e           23 04 50.8
OBN                               e           23 07 04.3
OBN                               eS    S     23 13 38.8  0.0
OBN                               eSS   SS    23 18 07.9 -4.2
OBN                               pmax  pmax
      comp=Z,10.0nm,1.1s,mb4.7
OBN                               MLR   MLR
      comp=Z,2µm,17.0s,MS5.3
NWAO  Narrogin (SRO)    70.55 202 eP    P     23 04 30.7 -0.6
NWAO                              pmax  pmax
      comp=Z,10.0nm,0.8s
NWAO  Narrogin (SRO)    70.55 202 eP    P     23 04 30.7 -0.6
      comp=Z,10nm,0.8s,mb4.8
KAF   Kangasniemi       70.91 333 ep    P     23 04 33.4 +0.5
      comp=Z,3.3nm,0.6s,mb4.4,baz=45,slow=6.3
KAF   Kangasniemi       70.91 333 eP    P     23 04 33.4 +0.5
KAF                               pmax  pmax
      comp=Z,3.0nm,0.6s,mb4.4
FINES FINESS Array B    71.40 333 P     P     23 04 35.8 -0.1
FINES                             pmax  pmax
      comp=Z,2.0nm,0.6s
FINES                             MLR   MLR
      comp=Z,782nm,18.1s
FINES FINESS Array B    71.40 333 P     P     23 04 35.8 -0.1
      comp=Z,1.9nm,0.6s,mb4.2,baz=47,slow=7.3,SNR=12
FINES                             LR    LR    23 39 04.2
      comp=Z,782nm,18.1s,MS5.0,baz=239,slow=38
YBH   Yreka Blue Hor    72.01  52 P     P     23 04 39.7 -0.1
YBH                               pmax  pmax
      comp=Z,3.0nm,0.8s
YBH   Yreka Blue Hor    72.01  52 P     P     23 04 39.7 -0.1
      comp=Z,2.6nm,0.8s,mb4.2,baz=337,slow=4.8,SNR=7.1
NEW   Newport           72.11  44 P     P     23 04 40.8 +0.5
NEW                               pmax  pmax
      comp=Z,2.0nm,0.6s
NEW   Newport           72.11  44 P     P     23 04 40.8 +0.5
      comp=Z,2.1nm,0.6s,mb4.3,baz=317,slow=8.8,SNR=4.0
TI2   Plekhanov         72.71 309 eP    P     23 04 49.6 +5.7
KIV   Kislovodsk        72.88 312 eP    P     23 04 45.0 +0.1
KIV                               e           23 05 02.5
KIV                               e           23 07 23.2
KIV                               eS    S     23 14 05.0 -1.8
KIV                               eSS   SS    23 18 46.1 -3.8
KIV                               pmax  pmax
      comp=Z,10.0nm,0.7s,mb4.8
KIV   Kislovodsk        72.88 312 eP    P     23 04 45.7 +0.8
      comp=Z,21nm,0.9s,mb5.1
MOD   Modoc             73.48  50 eP    P     23 04 49.1 +0.7
      comp=Z,3.0nm,0.8s,mb4.3
GNI   Garni             73.52 307 i P   P     23 04 51.2 +2.4
GNI                               pmax  pmax
      comp=Z,13nm,1.9s
SUMG  Summit            73.54   0 eP    P     23 04 47.7 -0.6
      comp=Z,4.2nm,0.8s,mb4.4
BMO   Blue Mountains    73.79  47 eP    P     23 04 50.6 +0.3
      comp=Z,2.7nm,0.8s,mb4.2
SOC   Sochi             74.91 313 eP    P     23 04 55.9 -0.8
SOC                               ePPP  PPP   23 09 36.0 +4.2
SOC                               eS    S     23 14 27.7 -1.7
SOC                               e           23 15 04.3
SOC                               eSS   SS    23 19 16.5 -3.8
SOC                               eSSS  SSS   23 22 36.6 +2.3
SOC                               pmax  pmax
      comp=Z,13nm,1.1s,mb4.8
SOC                               pmax  pmax
      comp=N,9.0nm,0.8s
SOC                               pmax  pmax
      comp=E,5.0nm,0.9s
SOC                               MLR   MLR
      comp=Z,1µm,18.0s,MS5.2
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SOC				MLR	MLR		
	comp=N,513nm,17.0s,MS5.1						
SOC				MLR	MLR		
	comp=E,765nm,19.0s,MS5.1						
CMB	**Columbia Colle**	**75.44**	**54**	*e*P	**P**	**23 05 00.5**	**+0.6**
CMB				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
CMB	**Columbia Colle**	**75.44**	**54**	*e*P	**P**	**23 05 00.5**	**+0.6**
	comp=Z,11nm,1.4s,mb4.6						
HLID	**Hailey**	**76.24**	**47**	*e*P	**P**	**23 05 05.1**	**+0.8**
	comp=Z,4.9nm,1.3s,mb4.3						
FCC	**Fort Churchill**	**76.51**	**26**	*e*P	**P**	**23 05 03.2**	**-2.3**
FCC				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
FCC	**Fort Churchill**	**76.51**	**26**	*e*P	**P**	**23 05 03.2**	**-2.3**
	comp=Z,5.9nm,1.1s,mb4.4						
NVAR	**Mina Array Bea**	**76.62**	**53**	P	**P**	**23 05 08.1**	**+1.5**
	comp=Z,1.3nm,0.7s,mb4.0,baz=302,slow=5.3,SNR=10						
AKASG	**Malin Array Be**	**76.64**	**323**	P	**P**	**23 05 06.4**	**0.0**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	**Malin Array Be**	**76.64**	**323**	P	**P**	**23 05 06.4**	**0.0**
	comp=Z,5.6nm,0.7s,mb4.6,baz=46,slow=6.1,SNR=20						
NB2	**NORSAR Subarra**	**76.87**	**338**	P	**P**	**23 05 07.4**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.3,baz=40,slow=5.6						
NB2	**NORSAR Subarra**	**76.87**	**338**	P	**P**	**23 05 07.4**	**-0.1**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NOA	**NORSAR Array B**	**76.87**	**338**	P	**P**	**23 05 07.7**	**+0.2**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,1μm,18.5s						
NOA	**NORSAR Array B**	**76.87**	**338**	P	**P**	**23 05 07.7**	**+0.2**
	comp=Z,2.8nm,0.6s,mb4.3,baz=39,slow=5.7,SNR=17						
NOA				LR	LR	23 42 44.4	
	comp=Z,1μm,18.5s,MS5.2,baz=15,slow=39						
NOA	**NORSAR Array B**	**76.87**	**338**	P	**P**	**23 05 07.7**	**+0.2**
NOA				LR	LR	23 42 44.4	
ELK	**Elko**	**77.31**	**49**	P	**P**	**23 05 11.7**	**+1.3**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ELK	**Elko**	**77.31**	**49**	P	**P**	**23 05 11.7**	**+1.2**
	comp=Z,0.8nm,0.5s,mb3.9,baz=332,slow=10,SNR=5.0						
IMW	**Indian Meadow**	**78.11**	**45**	*e*P	**P**	**23 05 16.8**	**+2.1**
TPAW	**Teton Pass**	**78.34**	**45**	*e*P	**P**	**23 05 17.6**	**+1.6**
MALT	**Malatya**	**78.64**	**309**	*e*P	**P**	**23 05 18.0**	**+0.2**
MALT				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
MALT	**Malatya**	**78.64**	**309**	*e*P	**P**	**23 05 18.0**	**+0.2**
	comp=Z,8.9nm,1.2s,mb4.6						
HWUT	**Hardware Ranch**	**79.08**	**47**	*e*P	**P**	**23 05 21.6**	**+1.5**
	comp=Z,4.3nm,0.9s,mb4.4						
DUG	**Dugway**	**79.14**	**49**	*e*P	**P**	**23 05 21.1**	**+0.6**
DUG				pmax	pmax		
	comp=Z,51nm,0.7s,mb5.6						
DUG	**Dugway**	**79.14**	**49**	*e*P	**P**	**23 05 21.1**	**+0.6**
	comp=Z,51nm,0.7s,mb5.6						
FRB	**Frobisher Bay**	**79.53**	**13**	P	**P**	**23 05 22.7**	**+0.6**
FRB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FRB	**Frobisher Bay**	**79.53**	**13**	P	**P**	**23 05 22.7**	**+0.6**
	comp=Z,3.1nm,0.8s,mb4.3,baz=333,slow=7.6,SNR=4.3						
FRB	**Frobisher Bay**	**79.53**	**13**	P	**P**	**23 05 22.7**	**+0.6**
PDAR	**Pinedale Array**	**79.59**	**45**	P	**P**	**23 05 23.8**	**+0.9**
	comp=Z,1.4nm,0.7s,mb4.0,baz=258,slow=2.1,SNR=6.9						
DAU	**Daniels Canyon**	**79.98**	**48**	*e*P	**P**	**23 05 27.1**	**+2.1**
MVU	**Marysvale**	**80.51**	**50**	*e*P	**P**	**23 05 28.9**	**+1.0**
	comp=Z,11nm,1.3s,mb4.6						
MSU	**Marysvale**	**80.53**	**50**	*e*P	**P**	**23 05 29.8**	**+1.8**
BRTR	**Keskin Array B**	**80.84**	**312**	P	**P**	**23 05 30.8**	**+1.2**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	**Keskin Array B**	**80.84**	**312**	P	**P**	**23 05 30.8**	**+1.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=119,slow=2.6,SNR=11						
CLL	**Collm**	**83.64**	**330**	P	**P**	**23 05 45.0**	**+1.4**
CLL				*e*		23 06 09.0	
CSS	**Prodhromos**	**83.92**	**308**	*e*P	**P**	**23 05 44.7**	**-0.8**
	comp=Z,19nm,1.0s,mb5.2						
PRU	**Pruhonice**	**83.98**	**329**	*e*P	**P**	**23 05 48.0**	**+2.6**
KHC	**Kasperske Hory**	**85.04**	**329**	*e*P	**P**	**23 05 51.0**	**+0.3**
GERES	**GERESS Array B**	**85.21**	**328**	P	**P**	**23 05 52.2**	**+0.6**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GERES	**GERESS Array B**	**85.21**	**328**	P	**P**	**23 05 52.2**	**+0.7**
	comp=Z,1.7nm,0.6s,mb4.4,baz=33,slow=4.8,SNR=21						
GRA1	**Grafenberg Arr**	**85.61**	**330**	*e*P	**P**	**23 05 54.8**	**+1.3**
GRA1				LR	LR		
	comp=Z,500nm,18.6s,MS4.9						
GRF	**Grafenberg Arr**	**85.61**	**330**	*e*P	**P**	**23 05 54.8**	**+1.3**
GRF				MLR	MLR		
	comp=Z,500nm,18.6s,MS4.9						
SCHQ	**Schefferville**	**88.05**	**16**	P	**P**	**23 06 05.7**	**+0.5**
	comp=Z,0.9nm,0.7s,mb4.1,baz=6.9,slow=9.5,SNR=3.6						
SCHQ				LR	LR	23 46 32.3	
	comp=Z,146nm,19.7s,MS4.4,baz=322,slow=36						
SCHQ	**Schefferville**	**88.05**	**16**	P	**P**	**23 06 06.1**	**+0.9**
	comp=Z,5.4nm,1.1s,mb4.7						
CDF	**Champ du Feu**	**88.21**	**331**	*e*P	**P**	**23 06 06.8**	**+0.6**
	comp=Z,4.1nm,0.8s,mb4.4						
CDF	**Champ du Feu**	**88.21**	**331**	*e*P	**P**	**23 06 06.8**	**+0.6**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
LPL	**La Plagne**	**90.77**	**330**	*e*P	**P**	**23 06 18.5**	**+0.2**
LPG	**La Plagne**	**90.78**	**330**	*e*P	**P**	**23 06 18.7**	**+0.3**
	comp=Z,8.5nm,0.8s,mb4.8						
LPG	**La Plagne**	**90.78**	**330**	*e*P	**P**	**23 06 18.7**	**+0.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
SSF	**Saint Saulge**	**90.78**	**333**	*e*P	**P**	**23 06 18.1**	**-0.2**
	comp=Z,9.0nm,1.0s,mb4.8						
SSF	**Saint Saulge**	**90.78**	**333**	*e*P	**P**	**23 06 18.1**	**-0.2**
SSF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
SMF	**Signal de Mont**	**91.00**	**332**	*e*P	**P**	**23 06 18.8**	**-0.6**
AVF	**Avril sur Loir**	**91.06**	**333**	*e*P	**P**	**23 06 19.8**	**+0.1**
	comp=Z,6.2nm,0.7s,mb4.7						
AVF	**Avril sur Loir**	**91.06**	**333**	*e*P	**P**	**23 06 19.8**	**+0.1**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
MBDF	**Montbardon**	**91.39**	**330**	*e*P	**P**	**23 06 21.2**	**0.0**
	comp=Z,6.0nm,0.8s,mb4.7						
MBDF	**Montbardon**	**91.39**	**330**	*e*P	**P**	**23 06 21.2**	**0.0**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
ORIF	**Oris-en-Rattie**	**91.61**	**330**	*e*P	**P**	**23 06 22.4**	**+0.2**
TXAR	**Lajitas Array**	**91.77**	**52**	P	**P**	**23 06 24.3**	**+1.0**
	comp=Z,0.6nm,0.5s,mb4.2,baz=315,slow=3.5,SNR=3.6						
TXAR				LR	LR	23 50 29.1	
	comp=Z,186nm,18.6s,MS4.6,baz=265,slow=37						
TCF	**Toulx Ste Croi**	**91.91**	**333**	*e*P	**P**	**23 06 22.6**	**-1.0**
VIVF	**Saint-Julien-l**	**92.15**	**331**	*e*P	**P**	**23 06 24.5**	**-0.2**
	comp=Z,6.5nm,0.8s,mb4.7						
VIVF	**Saint-Julien-l**	**92.15**	**331**	*e*P	**P**	**23 06 24.5**	**-0.2**
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
MIV	**Mineville/With**	**95.82**	**25**	P	**P**	**23 06 41.4**	**0.0**
SAML	**Samuel**	**146.13**	**48**	*e*PKPdf	PKPdf	23 12 56.1	+2.3
LPAZ	**La Paz**	**147.95**	**64**	*e*PKP2	PKPdf	23 13 00.7	+4.0

IDC 24 23:15:20.9±15.0**, 7.66S**×**129.15E, h98**^{km}±114^{km}**, mb3.6**/1**, mb1 3.6**/3**, mb1mx3.4**/12**, mbtmp3.8**/3**, ML3.6**/2**, Error ellipse: s-maj=130.3km s-min=101.6km az=95.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.20**	**158**	P	P	23 18 23.5	-2.1
	0.4nm,0.3s,baz=340,slow=13,SNR=8.0						
WRA				S	S	23 20 44.1	-6.4
	1.3nm,0.3s,baz=330,slow=22,SNR=16						
ASAR	**Alice Springs**	**16.55**	**165**	P	P	23 19 09.1	+0.7
	0.3nm,0.3s,baz=341,slow=11,SNR=18						
ASAR				S	S	23 22 11.0	+2.8
	0.4nm,0.3s,baz=341,slow=24,SNR=9.1						
STKA	**Stephens Creek**	**26.73**	**156**	P	P	23 20 51.2	-2.1
	0.7nm,0.3s,baz=322,slow=11,SNR=4.0						

BJI ***24*** *23:21:32.4, 37.39N×71.84E, h186*^{km}
NEIC ***24*** *23:21:32.1±1.6, 37.26N×71.88E, h176*^{km}*±19*^{km}*, mb4.1/7, Error ellipse: s-maj=17.0km s-min=8.0km az=60.0*
MOS ***24*** *23:21:32.2±1.1, 37.32N×71.93E, h186*^{km}*, mb3.8/5, Error ellipse: s-maj=18.0km s-min=11.5km az=105.3*
IDC ***24*** *23:21:35.9±15.0, 37.47N×71.96E, h193*^{km}*±130*^{km}*, mb3.3/5, mb1 3.6/7, mb1mx3.2/20, mbtmp4.1/7, Error ellipse: s-maj=100.3km s-min=22.4km az=7.0*
ISC 24 23:21:32.9±0.4**, 37.27N**±0.03×**71.97E**±0.07**, h199**^{km}±6^{km}**, n54,** σ1§**03**/61**, mb3.6**/7**, 2C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.44**	**181**	⇓P	**P**	**23 22 29.0**	**+0.7**
CEP				S	**S**	**23 23 12.0**	**+0.9**
KSH	**Kashi**	**3.86**	**53**	⇓*i*P	**P**	**23 22 34.9**	**+1.4**
KSH				S	**S**	**23 23 20.6**	**+0.2**
KSH				Smax			
	comp=N,300nm,0.5s						
KSH				Smax			
	comp=E,600nm,0.5s						
THW	**Thamme Wali**	**4.47**	**182**	⇓P	**P**	**23 22 41.4**	**+0.2**
AML	**Almayashu**	**5.03**	**15**	P	**P**	**23 22 48.7**	**+0.3**
	SNR=597						
SBDP	**Sheikh Budin**	**5.05**	**191**	P	**P**	**23 22 48.2**	**-0.4**
UCH	**Uchtor**	**5.32**	**21**	P	**P**	**23 22 52.5**	**+0.4**
	SNR=137						
SARP	**Sargodha**	**5.37**	**174**	⇑P	**P**	**23 22 52.1**	**-0.6**
KZA	**Kyzart**	**5.43**	**27**	P	**P**	**23 22 53.2**	**-0.2**
	SNR=71						
EKS2	**Erkin-Say**	**5.56**	**14**	P	**P**	**23 22 55.4**	**+0.3**
	SNR=198						
AAK	**Ala-Archa**	**5.70**	**19**	*e*PN	**P**	**23 22 56.2**	**-0.7**
AAK				*e*		23 23 59.0	
AAK				pmax	pmax		
	comp=Z,90nm,0.4s						
AAK	**Ala-Archa**	**5.70**	**19**	*e*Pn	**P**	**23 22 56.2**	**-0.8**
	comp=Z,90nm,0.4s						
AAK				*e*Sn	**S**	**23 23 59.0**	**-3.3**
DRP	**Derazinda**	**5.70**	**195**	⇑P	**P**	**23 22 57.3**	**+0.3**
THN	**Thein Dam**	**5.72**	**146**	*e*P	**P**	**23 22 57.2**	**-0.1**
THN				*e*S	**S**	**23 24 00.0**	**-2.9**
DLH	**Dalhousie**	**5.75**	**144**	*e*P	**P**	**23 22 59.0**	**+1.4**
DLH				*e*S	**S**	**23 24 03.0**	**-0.4**
KBK	**Karagaybulak**	**5.84**	**22**	P	**P**	**23 22 59.8**	**+1.0**
	SNR=31						
ULHL	**Ulahol**	**5.96**	**32**	P	**P**	**23 23 00.1**	**-0.3**
	SNR=48						
CHMS	**Chumysh**	**6.11**	**20**	P	**P**	**23 23 02.1**	**-0.1**
	SNR=30						
PONG	**Pong**	**6.24**	**147**	*e*P	**P**	**23 23 05.0**	**+1.1**
PONG				*e*S	**S**	**23 24 12.0**	**-2.8**
TKM2	**Tokmak 2**	**6.29**	**25**	P	**P**	**23 23 04.8**	**+0.2**
	SNR=38						
USP	**Ospenovka**	**6.29**	**17**	P	**P**	**23 23 04.0**	**-0.6**
	SNR=14						
SDNR	**Sundarnagar**	**7.08**	**143**	*e*P	**P**	**23 23 14.8**	**-0.2**
SDNR				*e*S	**S**	**23 24 29.2**	**-5.4**
SMLA	**Simla**	**7.49**	**143**	*e*	**P**	**23 23 19.4**	**-0.8**
SMLA				*i*		23 24 30.4	
DDI	**Dehra Dun**	**8.58**	**142**	*e*	**S**	**23 25 10.0**	**+0.4**
NDI	**New Delhi**	**9.63**	**151**	*e*	**S**	**23 25 28.0**	**-5.9**
KOLN	**Koldanda**	**13.63**	**131**	*e*P	**P**	**23 24 39.0**	**-0.1**
	comp=Z,6.5nm,0.3s						
GKN	**Gorkha**	**14.10**	**127**	*e*P	**P**	**23 24 43.6**	**-1.4**
	comp=Z,39nm,0.5s						
KURK	**Kurchatov**	**14.26**	**17**	P	**P**	**23 24 45.0**	**-1.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KURK	**Kurchatov**	**14.26**	**17**	P	**P**	**23 24 45.0**	**-1.8**
	comp=Z,9.9nm,1.3s						
KKN	**Kakani**	**14.66**	**126**	*e*P	**P**	**23 24 52.2**	**+0.2**
	comp=Z,9.8nm,0.4s						
DMN	**Daman**	**14.68**	**127**	*e*P	**P**	**23 24 52.1**	**0.0**
	comp=Z,10nm,0.4s						
PKI	**Pulchoki**	**14.89**	**127**	*e*P	**P**	**23 24 54.9**	**0.0**
	comp=Z,17nm,0.5s						
JIRN	**Jiri**	**15.34**	**125**	*e*P	**P**	**23 25 03.0**	**+2.6**
	comp=Z,19nm,0.3s						
BVAR	**Borovoye Array**	**15.79**	**356**	P	**P**	**23 25 04.7**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=159,slow=13,SNR=30						
LSA	**Lhasa**	**17.67**	**110**	*e*P	**P**	**23 25 30.2**	**+2.6**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LSA	**Lhasa**	**17.67**	**110**	*e*P	**P**	**23 25 30.2**	**+2.6**
	comp=Z,7.0nm,0.7s						
ZAL	**Zalesovo**	**18.88**	**24**	P	**P**	**23 25 39.9**	**-0.1**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ZAL	**Zalesovo**	**18.88**	**24**	P	**P**	**23 25 39.9**	**-0.1**
	comp=Z,4.7nm,0.3s,baz=253,slow=6.2,SNR=44						
NVS	**Novosibirsk**	**19.19**	**20**	*e*P	**P**	**23 25 44.8**	**+1.6**
KIV	**Kislovodsk**	**23.14**	**296**	*e*P	**P**	**23 26 21.7**	**-0.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
KIV	**Kislovodsk**	**23.14**	**296**	*e*P	**P**	**23 26 21.7**	**-0.5**
	comp=Z,4.1nm,0.8s,mb4.0						
SONM	**Songino Array**	**27.26**	**56**	P	**P**	**23 27 01.3**	**+0.9**
	comp=Z,0.7nm,0.5s,mb3.6,baz=261,slow=9.1,SNR=12						
ULN	**Ulaanbaatar**	**27.70**	**56**	P	**P**	**23 27 02.5**	**-1.9**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
ULN	**Ulaanbaatar**	**27.70**	**56**	P	**P**	**23 27 02.5**	**-1.9**
	comp=Z,1.1nm,0.6s,mb3.7						
AKASG	**Malin Array Be**	**33.08**	**308**	P	**P**	**23 27 52.3**	**+0.8**
	comp=Z,0.2nm,0.3s,mb3.1,baz=190,slow=17,SNR=3.0						
FINES	**FINESS Array B**	**37.29**	**325**	P	**P**	**23 28 27.3**	**+0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**37.29**	**325**	P	**P**	**23 28 27.3**	**+0.4**
	comp=Z,0.5nm,0.4s,mb3.4,baz=120,slow=6.6,SNR=8.0						
GVD	**Gavdhos**	**38.47**	**281**	*e*P	**P**	**23 28 35.2**	**-1.8**
	comp=Z,30nm,0.8s						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**23 28 56.1**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ARCES	**ARCESS Array B**	**40.74**	**337**	P	**P**	**23 28 56.0**	**+0.7**
	comp=Z,9.9nm,1.1s,mb4.1,baz=114,slow=9.4,SNR=10						
NB2	**NORSAR Subarra**	**44.24**	**323**	P	**P**	**23 29 23.6**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.2,baz=93,slow=7.4						
NB2	**NORSAR Subarra**	**44.24**	**323**	P	**P**	**23 29 23.6**	**0.0**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**23 29 23.8**	**+0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**23 29 23.8**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.3,baz=93,slow=7.6,SNR=5.2						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**23 29 23.8**	**+0.2**

OMAN ***24*** *23:26:27.0±0.1, 31.28N×55.70E, h20*^{km}*, Error ellipse: s-maj=31.1km s-min=12.4km az=263.0*
IDC ***24*** *23:26:31.6±1.0, 30.80N×56.73E, mb3.9/13, mb1 4.1/14, mb1mx4.0/23, mbtmp3.9/14, ML3.6/1, MS3.5/3, Ms1 3.6/3, ms1mx3.1/26, Error ellipse: s-maj=22.6km s-min=20.2km az=179.0*
THR ***24*** *23:26:31.9±0.9, 30.78N×56.71E, h14*^{km}*±12*^{km}*, ML3.9*
MOS ***24*** *23:26:32.7±0.8, 31.06N×56.76E, h10*^{km}*, mb4.2/11, Error ellipse: s-maj=15.2km s-min=9.7km az=122.5*
CSEM ***24*** *23:26:32.5±0.1, 30.81N×56.71E, h18*^{km}*, mb4.3/8, ML4.3/1, Error ellipse: s-maj=2.9km s-min=1.8km az=52.0*
NEIC ***24*** *23:26:33.1±0.4, 30.84N×56.74E, h10*^{km}*, mb4.2/11, MN4.1(TEH), Error ellipse: s-maj=10.8km s-min=4.8km az=199.0*
BJI ***24*** *23:26:35.2, 30.90N×56.70E, h10*^{km}*, mB4.6, mb4.3, Ms4.4, Msz4.1*
TEH ***24*** *23:26:37.9, 30.86N×56.45E, h19*^{km}*, Mn4.1*
ISC 24 23:26:30.9±1.3**, 30.84N**±0.03×**56.70E**±0.04**, h4**^{km}±9^{km}**, n97,** σ1§**10**/102**, mb4.2**/23**, MS3.6**/2**, 6C-6D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.85**	**176**	*i* PG	**Pg**	**23 26 46.8**	**-1.2**
IMEH	**Mehriz**	**1.87**	**288**	Pn	**Pn**	**23 27 05.2**	**+1.2**
ICHK	**Chekchek**	**2.41**	**306**	Pn	**Pn**	**23 27 13.6**	**+1.9**
BNDS	**Bandar-Abbas**	**3.46**	**188**	*e*PN	**Pn**	**23 27 27.1**	**+0.4**
BNDS				AML	AML	23 28 34.9	
	comp=N,225nm,0.7s						
BNDS	**Bandar-Abbas**	**3.46**	**188**	*e*Pn	**Pn**	**23 27 27.0**	**+0.3**
	SNR=52						
ZHSF	**Zahedan**	**3.73**	**108**	*e*PN	**Pn**	**23 27 30.6**	**0.0**
ZHSF				*e*SG	**Sg**	**23 28 27.4**	**-7.9**
ZHSF				AML	AML	23 28 39.1	
	comp=N,142nm,0.5s						
ZHSF	**Zahedan**	**3.73**	**108**	*e*Pn	**Pn**	**23 27 30.6**	**0.0**
	SNR=52						
ZHSF				*e*Sg	**Sg**	**23 28 27.4**	**-7.8**
	comp=N,142nm,0.5s,SNR=90						
NASN	**Na'in**	**3.84**	**302**	*e*PN	**Pn**	**23 27 33.8**	**+1.6**
NASN				AML	AML	23 28 40.6	
	comp=N,386nm,0.5s						
IMOK	**Mook**	**3.89**	**244**	Pn	**Pn**	**23 27 39.5**	**+6.7**
GHIR	**Ghir-Karzin**	**4.11**	**233**	*e*PN	**Pn**	**23 27 36.4**	**+0.4**
GHIR				AML	AML	23 29 00.5	
	comp=N,131nm,0.7s						
BANOM	**Banah**	**4.91**	**184**	⇓P	**Pn**	**23 27 47.9**	**+0.7**
BANOM				⇓S	**Sn**	**23 28 48.8**	**+3.4**
IFIR	**Firoozkooh**	**5.82**	**326**	Pn	**Pn**	**23 28 00.4**	**+0.3**
IDMV	**Damavand**	**6.13**	**322**	Pn	**Pn**	**23 28 04.9**	**+0.3**
ASHO	**Ashiyiah**	**6.16**	**185**	⇓P	**Pn**	**23 28 05.5**	**+0.6**
ASHO				⇑S	**Sn**	**23 29 17.1**	**+0.5**
IQOM	**Qom**	**6.19**	**312**	Pn	**Pn**	**23 28 05.4**	**0.0**
IQOM				Sn	**Sn**	**23 29 10.1**	**-7.5**
DAMV	**Damavand**	**6.21**	**322**	*e*PN	**Pn**	**23 28 05.9**	**+0.3**
IAFJ	**Afjeh**	**6.51**	**322**	Pn	**Pn**	**23 28 10.1**	**+0.2**
IMHD	**Mahdasht**	**6.99**	**315**	Pn	**Pn**	**23 28 16.1**	**-0.5**
HOQ	**Hoqain**	**7.25**	**176**	⇓P	**Pn**	**23 28 18.2**	**-2.0**
IRAZ	**Razeghan**	**7.28**	**311**	Pn	**Pn**	**23 28 19.8**	**-0.9**
IRAZ				Lg		23 30 19.2	
ARQ	**Araqi**	**7.47**	**181**	⇑P	**Pn**	**23 28 22.7**	**-0.7**
SMDO	**Samad**	**7.84**	**171**	⇓P	**Pn**	**23 28 28.2**	**-0.3**
BSY	**Bisya**	**8.07**	**177**	⇓P	**P**	**23 28 32.2**	**+0.4**
BSYO	**Bisya**	**8.09**	**176**	P	**P**	**23 28 32.2**	**+0.2**
JMDO	**Jabal Madar**	**8.53**	**171**	⇑P	**P**	**23 28 37.1**	**-1.0**
WHFO	**Wadi Hawf**	**13.13**	**192**	⇑P	**P**	**23 29 37.0**	**-3.9**
GNI	**Garni**	**13.45**	**317**	P	**P**	**23 29 44.3**	**-0.8**
GNI				pmax	pmax		
	comp=Z,34nm,1.5s						
GNI	**Garni**	**13.45**	**317**	P	**P**	**23 29 44.3**	**-0.8**
	comp=Z,34nm,1.5s						
GNI	**Garni**	**13.45**	**317**	P	**P**	**23 29 44.3**	**-0.8**
	comp=Z,34nm,1.5s						
RBK	**Rabkut**	**13.47**	**190**	⇑P	**P**	**23 29 41.3**	**-4.1**
ABTO	**Aybut**	**13.78**	**194**	⇑P	**P**	**23 29 44.4**	**-5.1**
MALT	**Malatya**	**16.78**	**301**	*e*P	**P**	**23 30 29.8**	**+1.5**
MALT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MALT	**Malatya**	**16.78**	**301**	*e*P	**P**	**23 30 29.8**	**+1.4**
	comp=Z,6.7nm,1.1s						
MALT	**Malatya**	**16.78**	**301**	*e*P	**P**	**23 30 29.8**	**+1.5**
	comp=Z,6.7nm,1.1s						
ASF	**Jabal al Asfar**	**16.94**	**280**	Pn	**P**	**23 30 29.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=313,slow=18,SNR=3.0						
ASF				LR	LR	23 38 34.7	
	comp=Z,189nm,19.5s,baz=134,slow=43						
KIV	**Kislovodsk**	**17.15**	**324**	*e*P	**P**	**23 30 32.9**	**-0.1**
KIV				pmax	pmax		
	comp=Z,33nm,1.3s						
KIV	**Kislovodsk**	**17.15**	**324**	*e*P	**P**	**23 30 32.9**	**-0.1**
	comp=Z,33nm,1.3s						
KIV	**Kislovodsk**	**17.15**	**324**	*e*P	**P**	**23 30 32.9**	**-0.1**
	comp=Z,33nm,1.3s						
KSH	**Kashi**	**17.95**	**56**	*e*P	**P**	**23 30 51.0**	**+7.9**
KSH				*e*S	**S**	**23 34 07.6**	**+6.2**
KSH				*e*XS		23 34 15.0	
KSH				*e*PCS		23 38 59.0	
KSH				AMB	AMB		
	comp=Z,190nm,6.4s						
KSH				LR	LR		
	comp=N,670nm,13.0s						
KSH				LR	LR		
	comp=E,540nm,14.0s						
AAK	**Ala-Archa**	**18.45**	**45**	P	**P**	**23 30 49.1**	**-0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AAK	**Ala-Archa**	**18.45**	**45**	P	**P**	**23 30 49.1**	**-0.2**
	comp=Z,3.9nm,0.9s						
AAK	**Ala-Archa**	**18.45**	**45**	P	**P**	**23 30 49.1**	**-0.2**
	comp=Z,3.9nm,0.9s						
EIL	**Elat**	**18.82**	**272**	LR	LR	23 39 26.9	
	comp=Z,186nm,20.9s,baz=110,slow=41						
CSS	**Prodhromos**	**20.04**	**288**	*e*P	**P**	**23 31 08.7**	**+0.9**
	comp=Z,25nm,1.4s						
CSS	**Prodhromos**	**20.04**	**288**	*e*P	**P**	**23 31 08.6**	**+0.8**
	comp=Z,25nm,1.4s						
BRTR	**Keskin Array B**	**20.76**	**302**	P	**P**	**23 31 15.1**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**20.76**	**302**	P	**P**	**23 31 15.1**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=119,slow=12,SNR=11						
KOLN	**Koldanda**	**23.64**	**91**	*e*P	**P**	**23 31 44.4**	**+0.3**
	comp=Z,9.0nm,0.8s,mb4.2						
HYB	**Hyderabad**	**23.95**	**119**	*i* P	**P**	**23 31 48.5**	**+1.3**
BVAR	**Borovoye Array**	**24.32**	**20**	P	**P**	**23 31 51.5**	**+1.1**
	comp=Z,2.6nm,0.7s,mb3.8,baz=202,slow=7.8,SNR=9.6						
GKN	**Gorkha**	**24.48**	**90**	*e*P	**P**	**23 31 51.8**	**-0.4**
	comp=Z,4.2nm,0.4s,mb4.3						
DMN	**Daman**	**24.97**	**90**	*e*P	**P**	**23 31 57.1**	**+0.1**
	comp=Z,17nm,1.2s,mb4.5						
KKN	**Kakani**	**25.08**	**90**	*e*P	**P**	**23 31 58.3**	**+0.3**
	comp=Z,28nm,1.3s,mb4.7						
PKI	**Pulchoki**	**25.24**	**90**	*e*P	**P**	**23 32 00.4**	**+0.8**
	comp=Z,23nm,0.9s,mb4.7						
KURK	**Kurchatov**	**25.71**	**33**	P	**P**	**23 32 01.7**	**-2.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
KURK	**Kurchatov**	**25.71**	**33**	P	**P**	**23 32 01.7**	**-2.0**
	comp=Z,4.5nm,1.1s,mb3.9						
KURK	**Kurchatov**	**25.71**	**33**	P	**P**	**23 32 01.7**	**-2.0**
	comp=Z,4.5nm,1.1s,mb3.9						
WMQ	**Urumqi**	**27.67**	**53**	*e*P	**P**	**23 32 24.4**	**+2.6**
WMQ				PP	PP	23 33 12.0	+1.8
WMQ				S	**S**	**23 37 00.0**	**-2.8**
WMQ				SS	SS	23 38 19.0	-2.3
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.4						
WMQ				LR	LR		
	comp=N,264nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=E,145nm,14.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,107nm,14.0s,MS3.6						
MLR	**Muntele Rosu**	**28.05**	**310**	P	**P**	**23 32 25.5**	**+0.2**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MLR	**Muntele Rosu**	**28.05**	**310**	P	**P**	**23 32 25.5**	**+0.2**
	comp=Z,1.6nm,0.8s,mb3.7,baz=135,slow=5.7						
OBN	**Obninsk**	**28.18**	**335**	P	**P**	**23 32 24.3**	**-2.0**
OBN	**Obninsk**	**28.18**	**335**	P	**P**	**23 32 24.3**	**-2.0**
AKASG	**Malin Array Be**	**28.49**	**322**	P	**P**	**23 32 28.0**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**28.49**	**322**	P	**P**	**23 32 28.0**	**-1.1**
	comp=Z,1.7nm,0.7s,mb3.8,baz=131,slow=8.4,SNR=7.1						
LSA	**Lhasa**	**29.71**	**83**	P	**P**	**23 32 44.4**	**+4.0**
ZAL	**Zalesovo**	**30.69**	**33**	P	**P**	**23 32 47.9**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZAL	**Zalesovo**	**30.69**	**33**	P	**P**	**23 32 47.9**	**-0.8**
	comp=Z,1.8nm,0.6s,mb4.1,baz=242,slow=8.1,SNR=9.0						
SUW	**Suwalki**	**33.38**	**324**	*e*P	**P**	**23 33 11.1**	**-1.2**
SUW				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
SUW	**Suwalki**	**33.38**	**324**	*e*P	**P**	**23 33 11.1**	**-1.2**
	comp=Z,15nm,0.9s,mb4.9						
SUW	**Suwalki**	**33.38**	**324**	*e*P	**P**	**23 33 11.1**	**-1.2**
	comp=Z,15nm,0.9s,mb4.9						
GTA	**Gaotai**	**36.01**	**64**	*e*P	**P**	**23 33 35.8**	**+0.8**
GTA				AP	pP	23 33 41.8	+5.7
GTA				XP	sP	23 33 44.6	+8.0
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s,mb4.3						
FINES	**FINESS Array B**	**36.58**	**336**	P	**P**	**23 33 39.8**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**36.58**	**336**	P	**P**	**23 33 39.8**	**+0.2**
	comp=Z,1.1nm,0.6s,mb3.9,baz=135,slow=11,SNR=7.8						
GERES	**GERESS Array B**	**37.01**	**312**	P	**P**	**23 33 43.9**	**+0.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**37.01**	**312**	P	**P**	**23 33 43.9**	**+0.6**
	comp=Z,0.6nm,0.6s,mb3.6,baz=117,slow=9.0,SNR=5.6						
CMAR	**Chiang Mai Arr**	**40.10**	**98**	LR	LR	23 53 28.7	
	comp=Z,56nm,20.1s,MS3.4,baz=70,slow=40						
SONM	**Songino Array**	**41.26**	**51**	P	**P**	**23 34 19.5**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=276,slow=11,SNR=3.4						
ULN	**Ulaanbaatar**	**41.70**	**51**	P	**P**	**23 34 25.1**	**+2.8**
NB2	**NORSAR Subarra**	**42.35**	**329**	P	**P**	**23 34 26.6**	**-0.8**
	comp=Z,1.0nm,0.7s,mb3.5,baz=112,slow=7.9						
NB2	**NORSAR Subarra**	**42.35**	**329**	P	**P**	**23 34 26.6**	**-0.8**

NB2				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
NOA	NORSAR Array B	42.35	329	P	P	23 34 26.6	-0.8
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	NORSAR Array B	42.35	329	P	P	23 34 26.6	-0.7
	comp=Z,1.9nm,0.9s,mb3.7,baz=114,slow=8.1,SNR=6.0						
NAO01	NORSAR Array S	42.41	329	P	P	23 34 25.8	-2.1
	comp=Z,6.8nm,0.9s,mb4.3						
ARCES	ARCESS Array B	42.59	344	P	P	23 34 28.8	-0.4
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARCES	ARCESS Array B	42.59	344	P	P	23 34 28.8	-0.4
	comp=Z,4.0nm,0.8s,mb4.2,baz=135,slow=6.4,SNR=4.4						
BOD	Bodaibo	47.20	38	*e*P	P	23 35 04.6	-1.7
NJ2	Nanjing	52.37	71	*e*P	P	23 35 49.9	+3.5
CN2	Changchun	54.72	56	*e*P	P	23 36 05.5	+1.9
MATP	Matopo	57.72	212	P	P	23 36 25.0	-0.5
	comp=Z,1.9nm,0.7s,mb4.2,baz=50,slow=7.6,SNR=4.7						
SUMG	Summit	62.41	340	*e*P	P	23 36 55.4	-1.5
	comp=Z,8.0nm,0.9s,mb4.8						
MCK	McKinley	83.59	11	P	P	23 39 02.3	+1.2
MCK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.3						
MCK	McKinley	83.59	11	P	P	23 39 02.2	+1.2
	comp=Z,3.0nm,1.1s,mb4.3						
MCK	McKinley	83.59	11	P	P	23 39 02.3	+1.2
	comp=Z,3.0nm,1.1s,mb4.3						
YKA	Yellowknife Ar	86.73	356	P	P	23 39 16.9	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
YKA	Yellowknife Ar	86.73	356	P	P	23 39 16.9	+0.1
	comp=Z,1.3nm,1.1s,mb4.1,baz=358,slow=5.1,SNR=9.6						
YKA	Yellowknife Ar	86.73	356	P	P	23 39 16.9	+0.1
ASAR	Alice Springs	91.66	117	P	P	23 39 39.4	-1.6
	comp=Z,1.0nm,1.0s,mb4.1,baz=304,slow=3.7,SNR=5.2						

*NIED **24** 23:53:00, 26.80N×126.10E, h145^{km}, Mw4.2 Best double couple: M$_0$1.96×10^{15} NP1:φ$_s$328°, δ54°, λ-71°. NP2: φ$_s$117°, δ41°, λ-114°.*
*IDC **24** 23:53:51.9±1.7, 26.86N×126.08E, h132^{km}±16^{km}, mb3.5/15, mb1 3.7/15, mb1mx3.7/24, mbtmp3.9/15, Error ellipse: s-maj=22.4km s-min=13.1km az=67.0*
*JMA **24** 23:53:53.2±0.3, 26.76N×126.06E, h146^{km}±4^{km}, M3.9*
*BJI **24** 23:53:54.4, 26.70N×126.20E, h158^{km}, mB4.5, mb4.4*
*NEIC **24** 23:53:54.5±0.9, 26.72N×126.17E, h159^{km}±9^{km}, mb4.2/10, Error ellipse: s-maj=12.8km s-min=11.0km az=48.0*
ISC 24 23:53:52.1±0.3**, 26.74N**±0.05×**126.13E**±0.04**, h150**^{km}±4^{km}**, n57, σ1^{s}14**/75**, mb3.9**/23**, 2C, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.72	125	P	P	23 54 16.0	+1.0
JKE				*e*S	S	23 54 33.4	+0.7
JAGN	Aguni-jima	1.01	98	P	P	23 54 18.2	+1.2
JAGN				*e*S	S	23 54 36.3	0.0
NAH1	Naha	1.50	110	P	P	23 54 23.4	+1.5
NAH1				*e*S	S	23 54 44.1	-0.9
JJT2	Tamagusuku 2	1.57	112	P	P	23 54 24.5	+1.8
JJT2				*e*S	S	23 54 47.3	+1.0
JIH	Iheya	1.67	79	P	P	23 54 25.1	+1.3
JIH				S	S	23 54 47.2	-1.0
JOW	Kunigami	1.92	87	P	P	23 54 27.6	+1.0
	104nm,0.3s,baz=277,slow=10,SNR=65						
JOW				S	S	23 54 51.5	-1.6
	358nm,0.3s,baz=118,slow=25,SNR=27						
JOW	Kunigami	1.92	87	P	P	23 54 27.6	+1.0
JOW				S	S	23 54 51.5	-1.6
JOW	Kunigami	1.92	87	P	P	23 54 27.8	+1.2
JOW				*e*S	S	23 54 51.6	-1.6
JMJ	Miyako jima 2	2.06	202	P	P	23 54 28.9	+0.7
JMJ				*e*S	S	23 54 56.0	+0.1
JOGS	Gusukube	2.07	198	P	P	23 54 29.6	+1.2
JOGS				S	S	23 54 56.3	0.0
JTJ	Tarama	2.45	212	P	P	23 54 33.5	+0.4
JTJ				S	S	23 55 02.9	-1.7
JTK	Tokunoshima	2.72	67	P	P	23 54 36.7	+0.1
JTK				S	S	23 55 08.9	-1.7
JIJ	Ishigaki jima	2.97	218	P	P	23 54 39.0	-0.7
JIJ				*e*S	S	23 55 12.8	-3.3
JKRS	Kuro-shima	3.14	218	P	P	23 54 41.4	-0.5
JKRS				*e*S	S	23 55 18.8	-1.3
IRIF	Iriomote-Funau	3.23	223	P	P	23 54 42.7	-0.4
IRIF				*e*S	S	23 55 21.2	-0.9
HATJ	Hateruma jima	3.40	219	P	P	23 54 44.8	-0.5
HATJ				*e*S	S	23 55 25.7	-0.3
JAM	Amami Oshima	3.51	61	P	P	23 54 46.3	-0.4
JAM				*e*S	S	23 55 26.0	-2.7
YOJ	Yonaguni jima	3.61	232	P	P	23 54 49.0	+0.9
JZK	Kikaishima	3.76	64	*e*S	S	23 55 33.6	-0.9
JNN	Nakanoshima	4.53	46	P	P	23 55 00.8	+0.7
TATO	Taipei	4.53	248	*e*P	P	23 55 01.0	+0.8
JMZ	Minamidaito 2	4.66	100	P	P	23 55 01.6	-0.3
JMZ				*e*S	S	23 55 50.8	-4.9
JTN	Tanegashima 3	5.78	46	P	P	23 55 16.1	-0.6
KS15	Wonju Array Si	10.78	8	*e*P	P	23 56 25.3	+2.2
ENH	Enshi	15.05	287	*e*P	P	23 57 21.3	+3.2
	8.5nm,0.8s						
BJT	Baijiatuau	15.62	330	*e*P	P	23 57 28.1	+2.8
	16nm,0.9s						
BJT				*e*		23 57 37.8	
BJI	Beijing	15.64	331	*e*P	P	23 57 29.6	+4.2
BJI				AMB	AMB		
	comp=Z,12nm,0.8s						
BJI	Beijing	15.64	331	*e*P	P	23 57 29.6	+4.2
	comp=Z,12nm,0.8s						
XAN	Xi'an	16.52	300	P	P	23 57 35.1	-1.3
XAN				AMB	AMB		
	comp=Z,8.0nm,2.5s						
HHC	Hu-ho-hao-te	18.53	323	*e*P	P	23 58 00.9	+1.4
HHC				AMB	AMB		
	comp=Z,8.0nm,0.8s						
HHC				AMB	AMB		
	comp=Z,87nm,4.8s						
CD2	Chengdu	20.03	287	*e*P	P	23 58 14.3	-0.8
LZH	Lanzhou	21.14	302	⇑P	P	23 58 26.8	+0.6
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.5						
LZH	Lanzhou	21.14	302	⇑P	P	23 58 26.7	+0.5
	comp=Z,30nm,1.3s,mb4.5						
LZH				pP		23 58 32.5	
LZH				sP		23 58 37.5	
GTA	Gaotai	25.31	307	*e*P	P	23 59 05.5	-0.8
GTA				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.5						
ULN	Ulaanbaatar	25.85	330	*e*P	P	23 59 12.8	+1.6
	comp=Z,3.2nm,0.9s,mb4.0						
SONM	Songino Array	26.13	329	P	P	23 59 12.9	-0.9
	comp=Z,2.7nm,0.4s,mb4.2,baz=144,slow=11,SNR=45						
SONM				PcP	PcP	00 02 37.4	-0.2
	comp=Z,0.9nm,0.7s,baz=154,slow=3.8,SNR=8.1						
ZAL	Zalesovo	40.72	323	P	P	00 01 17.7	-1.6
	comp=Z,2.7nm,0.4s,mb4.3,baz=354,slow=7.2,SNR=10						
KURK	Kurchatov	43.16	317	*e*P	P	00 01 37.6	-1.6
	comp=Z,3.5nm,0.7s,mb4.1						
WRA	Warramunga Arr	47.08	169	P	P	00 02 10.7	0.0
	comp=Z,0.3nm,0.5s,mb3.1,baz=352,slow=8.6,SNR=5.0						
COCO	West Island	48.03	220	P	P	00 02 20.4	+2.2
	comp=Z,130nm,1.1s						
BVAR	Borovoye Array	48.65	318	P	P	00 02 21.7	-0.7
	comp=Z,1.7nm,0.9s,mb3.7,baz=90,slow=5.9,SNR=9.4						
BVAR				PcP	PcP	00 03 44.7	-1.1
	comp=Z,2.0nm,0.8s,baz=111,slow=4.8,SNR=7.4						
ASAR	Alice Springs	50.67	171	P	P	00 02 39.6	+1.4
	comp=Z,0.5nm,0.5s,mb3.4,baz=357,slow=15,SNR=10						
ASAR				PcP	PcP	00 03 52.9	-0.7
	comp=Z,0.5nm,0.8s,baz=1.2,slow=3.1,SNR=4.8						
STKA	Stephens Creek	60.12	165	P	P	00 03 45.6	-0.4
	comp=Z,0.9nm,0.6s,mb3.8,baz=348,slow=18,SNR=3.1						
ILAR	Eielson Array	64.89	28	P	P	00 04 16.1	-0.9
	comp=Z,0.2nm,0.6s,mb3.1,baz=293,slow=9.8,SNR=4.3						
KIV	Kislovodsk	67.46	309	*e*P	P	00 04 33.7	0.0
	comp=Z,9.7nm,1.1s,mb4.5						
INK	Inuvik	69.17	23	P	P	00 04 43.5	-0.2
	comp=Z,0.9nm,0.9s,mb3.5,baz=256,slow=4.6						
FINES	FINESS Array B	71.49	330	P	P	00 04 56.3	-1.6
	comp=Z,1.6nm,0.9s,mb3.7,baz=90,slow=5.7,SNR=7.9						
AKASG	Malin Array Be	73.92	319	P	P	00 05 10.8	-1.5
	comp=Z,0.5nm,0.4s,mb3.6,baz=59,slow=6.3,SNR=4.7						
BRTR	Keskin Array B	75.23	307	P	P	00 05 19.9	-0.1
	comp=Z,0.9nm,0.6s,mb3.5,baz=90,slow=3.7,SNR=6.1						
RES	Resolute Bay	75.40	10	P	P	00 05 19.0	-1.2
	comp=Z,2.9nm,1.3s,mb3.8						
MLR	Muntele Rosu	78.06	315	P	P	00 05 35.9	+0.3
	comp=Z,1.9nm,0.9s,mb3.7,baz=258,slow=19,SNR=3.1						
YKA	Yellowknife Ar	78.85	24	P	P	00 05 39.7	+0.3
	comp=Z,1.0nm,0.5s,mb3.7,baz=298,slow=5.4,SNR=22						
YKA	Yellowknife Ar	78.85	24	P	P	00 05 39.7	+0.2
GERES	GERESS Array B	83.65	322	P	P	00 06 05.2	+0.4
	comp=Z,0.5nm,0.7s,mb3.4,baz=53,slow=6.7,SNR=6.5						
FCC	Fort Churchill	88.51	20	P	P	00 06 28.1	-0.1
	comp=Z,5.8nm,1.0s,mb4.5						
KMBO	Kilima Mbogo	89.50	268	P	P	00 06 34.8	+0.9
	comp=Z,1.7nm,1.0s,mb3.9,baz=46,slow=9.3,SNR=3.8						
HLID	Hailey	90.71	39	P	P	00 06 41.2	+2.2
	comp=Z,0.9nm,0.6s,mb4.0						

*TRN **24** 23:58:13.7, 17.60N×62.64W, h112^{km}, MD3.6, M3.6(FDF)*
TRN Felt (III) in St. Matin & St. Bartholomew.
*RSPR **24** 23:58:16.1, 18.17N×62.58W, h24^{km}±40^{km}, MD3.9/12, MD3.9/12*
*NEIC **24** 23:58:16.4, 17.57N×62.66W, h106^{km}, mb4.0/2, MD3.9(RSPR), MD3.5(TRN), After TRN.*
ISC 24 23:58:14.3±0.6**, 17.54N**±0.09×**62.71W**±0.04**, h118**^{km}±4^{km}**, n27, σ0^{s}91**/45**, mb4.0**/2**, 14C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKDB	Saint Kitts 2	0.17	213	*e*S	S	23 58 42.7	-0.4
SKI	Saint Kitts	0.20	187	*i* P	P	23 58 32.1	+1.3
SKI				*e*S	S	23 58 42.6	-0.6
BSK	Brimstone Hill	0.22	213	*e*P	P	23 58 32.2	+1.4
BSK				*e*S	S	23 58 43.5	+0.1
STAT	Sint Eustatius	0.26	261	*e*P	P	23 58 31.9	+1.0
STAT				*i* S	S	23 58 43.4	-0.2
SKTB	Turtle Beach	0.34	164	*e*P	P	23 58 32.8	+1.5
NVRH	Round Hill, Ne	0.37	163	*e*S	S	23 58 43.8	-0.6
NVBH	Bath Hotel, Ne	0.43	168	*e*S	S	23 58 44.7	-0.3
STMA	St. Maarten, A	0.63	323	⇑*i*P	P	23 58 33.8	+0.8
STMA				*e*S	S	23 58 46.0	-1.3
CPB	Codrington	0.85	83	⇑*i*P	P	23 58 36.3	+1.3
CPB				*e*S	S	23 58 49.2	-1.3
BPA	Boggy Peak	0.95	121	*e*P	P	23 58 36.8	+0.8
BPA				*e*S	S	23 58 51.0	-1.3
CDVI	St. Croix	1.97	277	⇑*e*P	P	23 58 47.8	+0.1
BBL	Barber's Block	2.33	149	*e*P	P	23 58 52.7	+0.2
MTP	Monte Pirata	2.77	282	⇑*e*P	P	23 58 58.1	-0.2
MTP				*e*S	S	23 59 32.7	+1.1
HUMP	Col San Antoni	3.05	282	⇑*e*P	P	23 59 02.0	0.0
HUMP				*e*S	S	23 59 38.0	-0.3
CBYP	Canovanas	3.08	284	⇑*e*P	P	23 59 02.7	+0.2
CBYP				*e*S	S	23 59 37.9	-1.2
SJG	San Juan	3.32	280	⇓*e*P	P	23 59 06.8	+1.0
SJG	San Juan	3.32	280	⇑*e*P	P	23 59 05.9	+0.1
SJG				*e*S	S	23 59 45.1	+0.2
SJG	San Juan	3.32	280	*e*Pn	P	23 59 05.7	-0.1
SJG				⇓*e*P		23 59 06.8	
SJG				*e*S	S	23 59 45.2	+0.3
SJG				*e*S	S	23 59 45.3	+0.3
SJG	San Juan	3.32	280	⇑*e*P	P	23 59 05.9	+0.1
SJG				*e*S	S	23 59 45.1	+0.2
CSB	Colonia Sabana	3.36	283	⇑*e*P	P	23 59 06.4	+0.1
CSB				*e*S	S	23 59 46.5	+0.6
CELP	Cerrillos	3.72	279	⇑*e*P	P	23 59 11.6	+0.4
CELP				*e*S	S	23 59 55.4	+0.8
PORP	Portuguez	3.77	278	⇑*e*P	P	23 59 11.5	-0.3
PORP				*e*S	S	23 59 55.0	-0.8
AOPR	Arecibo Observ	3.93	282	⇑*e*P	P	23 59 14.6	+0.6
AOPR				*e*S	S	23 59 59.1	-0.4
LRS	Lares	4.00	281	⇑*e*P	P	23 59 14.4	-0.6
LRS				*e*S	S	23 59 58.5	-2.9
MGP	Maguayo	4.20	277	⇑*e*P	P	23 59 18.9	+1.3
LPAZ	La Paz	34.03	189	P	P	00 04 47.0	-2.1
	1.9nm,0.9s,mb3.9						
WMOK	Wichita Mounta	36.39	305	P	P	00 05 08.1	-0.9
	2.9nm,1.0s,mb4.2						

*NEIC **25** 00:08:53.8, 36.77N×30.90E, h25^{km}, ML3.7(NIC), After NIC.*
*NIC **25** 00:08:53.8±0.3, 36.77N×30.90E, h25^{km}, mb4.1, ML3.7, MW3.2*
*CSEM **25** 00:08:56.8±0.1, 36.16N×30.80E, h80^{km}, MD3.5, Error ellipse: s-maj=2.4km s-min=2.1km az=61.0*
*ISK **25** 00:08:58.2, 36.03N×30.84E, h50^{km}, MD3.5*
*HLW **25** 00:08:59.0, 36.09N×30.81E, h33^{km}, Mb3.2*
ISC 25 00:08:57.9±0.4**, 36.02N**±0.03×**30.75E**±0.03**, h100**^{km}±10^{km}**, n38, σ1^{s}29**/55**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELL	Elmali	1.00	317	PG	P	00 09 17.7	-0.9
BCK	Bucak	1.44	355	PN	P	00 09 22.7	-1.2
FETY	Fethiye	1.48	295	PN	P	00 09 24.5	+0.1
FETY				SN	S	00 09 43.6	-0.5
AKMC	Akamas	1.62	127	P	P	00 09 25.6	-0.6
HDMB	Hadim	1.68	56	*e*PN	P	00 09 25.6	-1.3
PPCY	Paphos	1.73	131	P	P	00 09 27.8	+0.4
ALFC	Alevga	1.73	119	P	P	00 09 25.8	-1.7
	6.5nm,0.2s						
ALFC				S	S	00 09 51.6	+2.1
DALT	Dalyan (Mudla)	1.86	294	*e*PN	P	00 09 29.0	-0.2
LEF	Lefka	1.96	117	PN	P	00 09 29.6	-0.9
SZAC	Souni-Zanaja	2.15	125	P	P	00 09 34.7	+1.7
	3.6nm,0.4s						
SZAC				S	S	00 10 06.5	+7.4
DNZL	Cakiroluk	2.16	321	*e*P	P	00 09 37.0	+3.9
DNZL				*e*S	S	00 10 06.5	+7.2
MAMC	Mammari	2.18	112	P	P	00 09 31.4	-2.0
DENT	Denizli	2.21	322	*e*PN	P	00 09 33.3	-0.6
YER	Yerkesik	2.28	300	PN	P	00 09 34.7	-0.1
KONT	Konya--Tatoy	2.31	33	PN	P	00 09 34.8	-0.5
CSS	Prodhromos	2.35	116	P	P	00 09 33.7	-2.1
	2.1nm,0.3s						
CSS				S	S	00 10 05.3	+1.2
MEST	Erdemli	2.80	77	*e*P	P	00 09 42.8	+0.9
MEST				*e*S	S	00 10 17.2	+2.2
AYDN	Tasoluk	2.83	306	*e*P	P	00 09 38.1	-4.2
AYDN				*e*S	S	00 10 22.1	+6.5
BDRM	Kayabasi	2.86	292	*e*P	P	00 09 33.6	-9.2
BDRM				*e*S	S	00 10 17.6	+1.1
PHNC	Paralimni	2.86	110	P	P	00 09 43.6	+0.8
PHNC				S	S	00 10 23.8	+7.3
KIZT	Kizilcal	2.99	17	PN	P	00 09 44.6	0.0
MANT	Manisa	3.02	325	*e*P	P	00 09 45.6	+0.6
MANT				*e*S	S	00 10 23.8	+3.3
ESKT	Eskisehir	3.49	1	*e*P	P	00 09 50.2	-1.2
ESKT				*e*S	S	00 10 30.9	-1.1
ESKT	Eskisehir	3.49	1	*e*Pn	P	00 09 51.4	0.0
AKS	Akhisar	3.69	322	*e*PN	P	00 09 54.8	+0.7
NIG	Nigde	3.72	55	*e*PN	P	00 09 54.4	-0.2
BLCB	Balcova	3.79	310	*e*PN	P	00 09 56.2	+0.8
KAMT	Kaman	4.08	34	PN	P	00 09 59.2	-0.3
CEYT	Ceyhan	4.14	75	*e*PN	P	00 09 59.8	-0.5
HTY	Hatay	4.36	87	PN	P	00 10 02.8	-0.5
DABA	Dabaa	5.41	203	P	P	00 10 18.9	+1.4
AMAG	Maghara	5.74	158	P	P	00 10 22.8	+0.7
AMAG				S	S	00 11 24.3	-2.9
HMAT	Matruh	5.78	213	P	P	00 10 23.9	+1.3
HMAT				S	S	00 11 26.2	-2.1
SUZ		6.41	164	P	P	00 10 31.8	+0.5
SUZ				S	S	00 11 40.3	-3.2
SLUM		6.46	227	P	P	00 10 33.3	+1.3
SLUM				S	S	00 11 41.8	-2.9
HNKL	Nakhl	6.65	155	P	P	00 10 35.4	+0.8
HNKL				S	S	00 11 45.9	-3.6
SWA1		7.97	214	P	P	00 10 54.2	+1.6
SWA2		8.10	215	P	P	00 10 55.9	+1.5
SWA2				S	S	00 12 21.8	-3.1

*IDC **25** 00:22:28.6±2.2, 8.61S×124.45E, mb3.9/2, mb1 4.2/4, mb1mx4.0/13, mbtmp4.1/4, ML4.1/2, Error ellipse: s-maj=165.5km s-min=25.4km az=65.0*
*NEIC **25** 00:22:30.6±0.8, 8.69S×124.38E, h15^{km}, mb4.0/2, Error ellipse: s-maj=73.1km s-min=9.0km az=59.0*
ISC 25 00:22:30.6±1.0**, 8.9S**±0.2×**124.0E**±0.3**, h33**^{km}**, n10, σ0^{s}69**/10**, mb3.8**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	9.12	115	*e*P	P	00 24 43.6	+0.8
	12nm,0.4s						
KAKA				*e*S	Sx	00 26 16.3	
WRA	Warramunga Arr	14.83	139	Pn	P	00 25 59.1	-0.7
	1.0nm,0.3s,baz=319,slow=13,SNR=57						
WRA				Sn	Sx	00 28 30.1	
	2.8nm,0.3s,baz=311,slow=24,SNR=12						
WRAB	Tennant Creek	14.83	139	*e*Pn	P	00 25 58.9	-0.9
	13nm,0.4s						
WRAB				*e*Sn	Sx	00 28 27.3	
WB2	Warramunga Arr	14.84	139	*e*P	P	00 25 59.0	-0.9
WB2				*e*S	Sx	00 28 29.0	
ASPA	Alice Springs	17.45	148	*e*P	P	00 26 33.8	+0.6
ASPA				*e*S	Sx	00 29 30.0	
ASAR	Alice Springs	17.45	148	P	P	00 26 33.9	+0.7
	1.4nm,0.3s,baz=318,slow=11,SNR=25						
ASAR				S	Sx	00 29 35.0	
	0.6nm,0.3s,baz=320,slow=22,SNR=12						
STKA	Stephens Creek	28.08	147	*e*P	P	00 28 22.0	+0.6
	2.1nm,1.1s,mb3.7						
STKA	Stephens Creek	28.08	147	P	P	00 28 21.9	+0.5
	1.1nm,0.4s,mb3.9,baz=332,slow=9.5,SNR=7.3						
SONM	Songino Array	58.63	346	P	P	00 32 26.5	-0.4
	0.5nm,0.7s,mb3.6,baz=153,slow=6.4,SNR=6.3						
KURK	Kurchatov	71.20	331	*e*P	P	00 33 48.3	+0.2
	1.8nm,0.9s,mb4.0						

*MOS **25** 00:31:47.7±2.7, 51.90N×105.13E, h33^{km}, mb4.2/1, Error ellipse: s-maj=21.1km s-min=15.0km az=162.6*
MOS Felt (II-III) at Listvyanka.
BYKL 25 00:31:48.4±0.3**, 51.83N×105.14E, h21**^{km}±4^{km}**, 5C-1D, FELT I=III-IV MSK at Listvyanka), Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSTR	Listvyanka	0.20	281	*e*PG	Pb	00 31 53.3	-0.3
LSTR				pmax	pmax		
	comp=Z,144nm,0.1s						
LSTR	Listvyanka	0.20	281	⇑*i*Pg	Pb	00 31 53.5	-0.1
LSTR				*i* Sg	Sb	00 31 57.0	-0.1
BTMB	Babushkin	0.45	107	⇑*i*Pg	Pb	00 31 56.5	-1.1
BTMB				*i* Sg	Sb	00 32 02.7	-1.1
BTMB				Pmax			
	comp=Z,732nm,0.2s						
BTMB				Smax			
	comp=Z,2µm,0.4s						
IRK	Irkutsk	0.68	308	*e*PG	Pb	00 32 00.5	-0.9
IRK				*e*		00 32 10.0	
IRK				pmax	pmax		
	comp=Z,658nm,0.2s						
IRK				smax			
	comp=N,3µm,0.4s						
IRK	Irkutsk	0.68	308	*e*Pg	Pb	00 32 01.7	+0.3
IRK				*i* Sg	Sb	00 32 10.8	+0.5
IRK				Pmax			
	comp=N,696nm,0.2s						
IRK				Smax			
	comp=N,2µm,0.4s						
STDB	Stepnoy Dvoret	0.83	65	⇑*i*Pg	Pb	00 32 05.2	+1.2
STDB				*e*Sg	Sb	00 32 17.7	+2.9
STDB				Pmax			
	comp=N,168nm,0.2s						
STDB				Smax			
	comp=N,4µm,0.2s						
TLY	Talaya	0.94	261	*e*PN	Pn	00 32 06.1	-0.4
TLY				*e*		00 32 19.1	
TLY				pmax	pmax		
	comp=Z,70nm,0.1s						
TLY				smax			
	comp=E,767nm,0.3s						
TLY	Talaya	0.94	261	*e*Pg	Pb	00 32 05.8	-0.1
TLY				*e*Sg	Sb	00 32 18.7	+0.8
TLY				Pmax			
	comp=E,58nm,0.1s						
TLY				Smax			
	comp=E,743nm,0.3s						
KAB	Kabansk	0.96	76	*e*PN	Pn	00 32 06.7	-0.1
KAB				*e*		00 32 19.3	
KAB				pmax	pmax		
	comp=Z,174nm,0.3s						
KAB				smax			
	comp=N,2µm,0.3s						
KAB	Kabansk	0.96	76	*e*Pg	Pb	00 32 06.0	-0.3
KAB				*e*Sg	Sb	00 32 19.3	+0.7
KAB				Pmax			
	comp=N,153nm,0.4s						
KAB				Smax			
	comp=N,2µm,0.2s						
FFNB	Fofonovo	1.03	77	*e*Pg	Pb	00 32 07.1	-0.3
FFNB				*i*		00 32 07.3	
FFNB				*e*Sg	Sb	00 32 20.6	+0.1
FFNB				Pmax			
	comp=N,942nm,0.1s						
FFNB				Smax			
	comp=N,2µm,0.2s						
HRMR	Khuramsha	1.15	99	⇑*i*Pg	Pn	00 32 09.1	-0.3
HRMR				*e*Sg	Sb	00 32 24.4	+0.5
TRG	Tyrgan	1.19	38	*e*PN	Pn	00 32 09.9	-0.1
TRG				*e*		00 32 25.0	
TRG				pmax	pmax		
	comp=Z,113nm,0.2s						
TRG				smax			
	comp=E,2µm,0.4s						
TRG	Tyrgan	1.19	38	*e*Pg	Pn	00 32 09.7	-0.3
TRG				*e*Pb	Pb	00 32 10.7	+0.6
TRG				*e*Sg	Sb	00 32 25.1	0.0
TRG				max			
	comp=E,99nm,0.2s						
TRG				Smax			
	comp=E,2µm,0.3s						
ZRHB	Zarechye	1.44	59	*e*Pg	Pn	00 32 14.3	+0.8
ZRHB				*e*Sg	Sn	00 32 33.2	+1.3
ZRHB				Pmax			
	comp=E,88nm,0.4s						
ZRHB				Smax			
	comp=E,1µm,0.7s						
TRTB	Turuntaevo	1.59	74	*e*Pg	Pn	00 32 16.5	+0.8
TRTB				*e*Sg	Sn	00 32 37.6	+1.8
TRTB				Pmax			
	comp=E,30nm,0.2s						
TRTB				Smax			
	comp=E,374nm,0.3s						
ARS	Arshan	1.69	274	*e*PN	Pn	00 32 18.4	+1.3
ARS				*e*		00 32 40.4	
ARS				pmax	pmax		
	comp=Z,84nm,0.2s						
ARS				smax			
	comp=E,670nm,0.4s						
ARS	Arshan	1.69	274	⇑*i*Pg	Pn	00 32 18.4	+1.3
ARS				*e*Sg	Sn	00 32 40.2	+1.9
ARS				Pmax			
	comp=E,84nm,0.3s						
ARS				Smax			
	comp=E,665nm,0.4s						
ZAK	Zakamensk	1.86	220	*e*Pg	Pn	00 32 23.0	+3.3
ZAK				*e*Sg	Sn	00 32 47.6	+4.8
ZAK				Pmax			
	comp=E,25nm,0.4s						
ZAK				Smax			
	comp=E,109nm,0.2s						
OGRR	Ongureny	2.35	38	⇓*i*Pn	Pn	00 32 27.0	+0.4
OGRR				*e*Pg	Pn	00 32 30.0	+3.4
OGRR				*e*Sg	Sn	00 32 59.6	+4.4
OGRR				Pmax			
	comp=E,14nm,0.3s						
OGRR				Smax			
	comp=E,122nm,0.4s						
MOY	Mondy	2.58	268	*e*PN	Pn	00 32 33.9	+4.0
MOY				*e*		00 33 08.2	
MOY				pmax	pmax		
	comp=Z,49nm,0.3s						
MOY				smax			
	comp=E,290nm,0.5s						
MOY	Mondy	2.58	268	*e*	Pn	00 32 32.4	+2.5
MOY				*e*Pg	Pn	00 32 34.0	+4.1
MOY				*e*Sg	Sn	00 33 08.5	+7.5
MOY				Pmax			
	comp=E,49nm,0.9s						
MOY				Smax			
	comp=E,290nm,0.8s						
MXMB	Maximikha	2.63	55	*e*Pn	Pn	00 32 30.4	-0.2
MXMB				*e*Pg	Pn	00 32 35.5	+4.9
MXMB				*e*Sg	Sn	00 33 09.3	+7.1
MXMB				Pmax			
	comp=E,18nm,0.4s						

MXMB				Smax			
	comp=E,227nm,0.7s						
ORL	**Orlik**	3.36	284	*e*PN	Pn	00 32 47.6	+6.7
ORL				*e*		00 33 32.2	
ORL				pmax	pmax		
	comp=Z,25nm,0.4s						
ORL				smax			
	comp=N,109nm,1.0s						
ORL	**Orlik**	3.36	284	*e*Pn	Pn	00 32 43.1	+2.2
ORL				*e*Pg	Pn	00 32 47.6	+6.7
ORL				*e*Sn	Sn	00 33 21.0	+0.4
ORL				*e*Sg	Sn	00 33 31.1	+10
ORL				Pmax			
	comp=N,24nm,0.4s						
ORL				Smax			
	comp=N,94nm,0.8s						
SYVR	**Suvo**	3.47	56	*e*	Pn	00 32 41.8	-0.8
SYVR				*e*Pg	Pn	00 32 50.6	+8.0
SYVR				*e*Sn	Sn	00 33 21.4	-2.2
SYVR				*e*Sg	Sn	00 33 35.3	+12
SYVR				Pmax			
	comp=N,6.0nm,0.7s						
SYVR				Smax			
	comp=N,38nm,0.4s						
YLYR	**Ulyunkhan**	4.72	47	*e*Pn	Pn	00 32 58.8	-1.6
YLYR				*e*Pg	Pn	00 33 12.4	+12
YLYR				*e*Sg	Sn	00 34 14.3	+19
YLYR				Pmax			
	comp=N,3.0nm,0.6s						
YLYR				Smax			
	comp=N,21nm,0.7s						
NIZ	**Nizh Angarsk**	4.74	32	*e*PN	Pn	00 32 55.6	-4.9
NIZ				*e*		00 33 10.3	
NIZ				*e*		00 34 12.4	
NIZ				pmax	pmax		
	comp=Z,130nm,0.2s						
NIZ				smax			
	comp=N,31nm,0.6s						
NIZ	**Nizh Angarsk**	4.74	32	*e*Pg	Pn	00 33 11.6	+11
NIZ				*e*		00 33 23.6	
NIZ				*e*Sn	Sn	00 33 52.0	-3.5
NIZ				*e*Sg	Sn	00 34 14.8	+19
NIZ				max			
	comp=N,8.0nm,0.5s						
NIZ				Smax			
	comp=N,45nm,0.5s						
KPC	**Khapcheranga**	5.06	112	*e*Pn	Pn	00 33 02.9	-2.2
KPC				*e*Pg	Pn	00 33 19.4	+14
KPC				*e*Sg	Sn	00 34 24.9	+21
KPC				Pmax			
	comp=N,6.0nm,0.6s						
KPC				Smax			
	comp=N,46nm,1.0s						
CIT	**Chita**	5.21	85	*e*Sg	Sn	00 34 30.6	+23
CIT				Smax			
	comp=N,40nm,1.3s						
KMO	**Kumora**	5.42	39	*e*Pn	Pn	00 33 08.5	-1.7
KMO				*e*Sg	Sn	00 34 36.7	+24
KMO				Smax			
	comp=N,35nm,1.1s						
UKT	**Uakit**	6.23	51	*e*Pg	Pn	00 33 40.8	+19
UKT				*e*Sg	Sn	00 35 02.4	+29
UKT				Smax			
	comp=N,15nm,2.3s						
NLYR	**Nelyaty**	7.76	49	*e*Sg	Sn	00 35 51.4	+40
NLYR				Smax			
	comp=N,28nm,2.8s						
SOC	**Sochi**	43.43	286	*e*P	P	00 39 49.7	-1.4

*CSEM **25** 00:42:38.8±0.4, 39.07N×28.39W, h30^{km}, ML2.6, Error ellipse: s-maj=10.3km s-min=4.6km az=151.0*
*PDA **25** 00:42:40.6±1.1, 39.14N×28.45W, MD3.0, ML2.6, Error ellipse: s-maj=7.3km s-min=4.3km az=160.0*
SVSA 25 00:42:40.6±1.1**, 39.14N×28.45W, MD3.0, ML2.6, Error ellipse: s-maj=7.3km s-min=4.3km az=160.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STGR	**Santa Cruz**	0.35	99	*e*P	Pg	00 42 47.5	-0.2
STGR				*i* S	Sg	00 42 52.3	-0.1
	106nm,0.1s						
STGR	**Santa Cruz**	0.35	99	*e*P	Pg	00 42 47.5	-0.2
STGR				*i* S	Sg	00 42 52.3	-0.1
	106nm,0.1s						
ROSA	**Rosais**	0.45	158	*e*P	Pg	00 42 48.8	-0.7
ROSA				*e*S	Sg	00 42 54.8	-0.7
PCED	**Cedros**	0.54	201	*e*P	Pg	00 42 50.1	-1.3
PCED				*e*S	Sg	00 42 57.5	-1.2
	197nm,0.2s						
PCED	**Cedros**	0.54	201	*e*P	Pg	00 42 50.1	-1.3
PCED				*e*S	Sg	00 42 57.5	-1.2
	197nm,0.2s						
PMAN	**Manadas**	0.58	150	*e*P	Pg	00 42 50.5	-1.6
PMAN				*e*S	Sg	00 42 58.5	-1.3
	127nm,0.1s						
PMAN	**Manadas**	0.58	150	*e*P	Pg	00 42 50.5	-1.6
PMAN				*e*S	Sg	00 42 58.5	-1.3
	127nm,0.1s						
CALA	**Caldeira**	0.59	199	*e*P	Pg	00 42 51.3	-1.0
CALA				*e*S	Sg	00 42 59.5	-0.6
HOR	**Horta**	0.62	193	*e*P	Pg	00 42 51.3	-1.8
HOR				*e*S	Sg	00 42 59.9	-1.5
PICO	**Pico**	0.64	178	*e*P	Pg	00 42 52.0	-1.3
PICO				*e*S	Sg	00 43 00.6	-1.1

*IDC **25** 00:43:16.8±0.8, 17.69N×100.83W, h30^{km}±4^{km}, mb4.0/11, mb1 4.1/14, mb1mx4.0/20, mbtmp4.1/14, ML3.6/2, MS3.8/8, Ms1 3.8/8, ms1mx3.4/18, Error ellipse: s-maj=30.3km s-min=14.2km az=64.0, Putative timing error at GERES*
*MEX **25** 00:43:16.9±0.7, 17.44N×101.42W, h44^{km}±5^{km}, MD4.6, MW4.7*
*NEIC **25** 00:43:17.2, 17.44N×101.41W, h42^{km}, mb4.3/25, MD4.7(MEX), After MEX.*
ISC 25 00:43:15.8±0.5**, 17.47N**±0.03×**101.32W**±0.02**, h41**^{km}±4^{km}**, h32**^{km}±1.5^{km}**:pP-P, n102,** σ**1^{s}37**/125**, mb4.3**/29**, MS3.7**/6**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	0.20	314	*e*P	**P**	**00 43 23.0**	**-0.2**
ZIIG				*e*S	**S**	**00 43 27.9**	**-0.5**
CAIG	**El Cayaco**	1.09	113	*e*P	**P**	**00 43 35.3**	**+0.5**
CAIG				*i* S	**S**	**00 43 49.5**	**+0.7**
ACX	**Acapulco**	1.47	114	*e*P	**P**	**00 43 40.6**	**+0.4**
ACX				*i* S	**S**	**00 43 59.4**	**+0.9**
PLIG	**Platanillo**	1.96	62	*e*P	**P**	**00 43 47.1**	**-0.1**
PLIG				*e*S	**S**	**00 44 11.7**	**+1.0**
MOIG	**Morelia**	2.20	3	*e*P	**P**	**00 43 50.5**	**-0.2**
MOIG				*e*S	**S**	**00 44 17.8**	**+0.9**
YAIG	**Yautepec**	2.55	57	*e*P	**P**	**00 43 54.7**	**-0.9**
YAIG				*i* S	**S**	**00 44 26.7**	**+1.0**
IIZ	**Mezontepec**	2.61	49	*i* P	**P**	**00 43 56.0**	**-0.5**
CHVM	**Chichinautzin**	2.62	52	*e*P	**P**	**00 43 57.2**	**+0.6**
CHVM				*i* S	**S**	**00 44 27.8**	**+0.4**
IIJ	**Jocotitlan**	2.71	33	*i* P	**P**	**00 44 03.9**	**+6.0**
IIJ	**Jocotitlan**	2.71	33	*i* P	**P**	**00 44 02.2**	**+4.2**
IIJ				*i* S	**S**	**00 44 36.4**	**+6.7**
UNM	**Universidad Na**	2.75	47	*i* P	**P**	**00 44 00.7**	**+2.2**
UNM				*i* S	**S**	**00 44 43.8**	**+13**
UNM	**Universidad Na**	2.75	47	*e*P	**P**	**00 43 58.2**	**-0.3**
UNM				*i* P		00 43 59.0	
UNM				*i* S	**S**	**00 44 29.0**	**-1.8**
UNM				*i* S	**S**	**00 44 38.3**	**+7.5**
PBVM	**Pinon**	2.89	47	*e*P	**P**	**00 43 59.8**	**-0.7**
PBVM				*i* S	**S**	**00 44 38.4**	**+4.0**
PTVM	**Pico Tres Padr**	2.97	44	*e*P	**P**	**00 43 59.1**	**-2.7**
PTVM	**Pico Tres Padr**	2.97	44	*e*P	**P**	**00 44 01.0**	**-0.8**
PTVM				*i* S	**S**	**00 44 37.2**	**+0.7**
IIC	**Rita Coyotepec**	3.01	40	*e*P	**P**	**00 44 00.6**	**-1.6**
IIC				*i* S	**S**	**00 44 37.0**	**-0.3**
PPM	**Popocatepetl**	3.01	58	*e*P	**P**	**00 44 02.1**	**-0.2**
PPM				*i* S	**S**	**00 44 39.2**	**+1.8**
PPM	**Popocatepetl**	3.01	58	*e*P	**P**	**00 44 01.8**	**-0.4**
PPM				*e*P		00 44 01.9	
PPM				*e*P		00 44 02.1	
PPM				*i* S	**S**	**00 44 38.2**	**+0.8**
PPM				*i* S	**S**	**00 44 39.0**	**+1.6**
PPM				*i* S	**S**	**00 44 39.2**	**+1.8**
CGX	**Ciudad Guzman**	3.04	317	*e*P	**P**	**00 44 00.0**	**-2.6**
CGX				*i* S	**S**	**00 44 35.0**	**-3.1**
IIB	**San Bernardino**	3.19	62	*e*P	**P**	**00 44 04.3**	**-0.5**
IIB				*i* S	**S**	**00 44 42.9**	**+0.9**
PNIG	**Pinotepa**	3.23	109	*i* P	**P**	**00 44 06.1**	**+0.7**
PNIG				*i* S	**S**	**00 44 43.0**	**-0.1**
IIO	**Organos**	3.24	49	*e*P	**P**	**00 44 04.1**	**-1.5**
IIO				*i* S	**S**	**00 44 42.5**	**-0.8**
SFJM	**Santa Fe**	3.42	332	*e*P	**P**	**00 44 09.2**	**+1.1**
SFJM	**Santa Fe**	3.42	332	*e*P	**P**	**00 44 08.0**	**0.0**
SFJM				*i* S	**S**	**00 44 49.3**	**+1.6**
IISM	**Ciudad Serdan**	4.04	67	*e*P	**P**	**00 44 18.2**	**+1.4**
IISM	**Ciudad Serdan**	4.04	67	*e*P	**P**	**00 44 17.5**	**+0.7**
IISM				*i* S	**S**	**00 45 04.3**	**+0.8**
CJM	**Chamela**	4.07	300	*e*P	**P**	**00 44 15.1**	**-2.2**
CJM				*i* S	**S**	**00 45 01.4**	**-2.9**
CJM	**Chamela**	4.07	300	*e*P	**P**	**00 44 15.1**	**-2.2**
CJM				*i* S	**S**	**00 44 58.8**	**-5.6**
VHO	**Vista Hermosa**	4.40	94	*i* P	**P**	**00 44 22.9**	**+1.0**
VHO				*i* S	**S**	**00 45 11.8**	**-0.7**
OXX	**Oaxaca**	4.41	94	*e*P	**P**	**00 44 24.9**	**+2.9**
OXX				*i* S	**S**	**00 45 14.2**	**+1.5**
LVIG	**Laguna Verde**	5.16	63	*i* P	**P**	**00 44 34.8**	**+2.2**
LVIG				*i* S	**S**	**00 45 29.6**	**-2.1**
TUIG	**Tuzandepetl**	6.59	84	*i* P	**P**	**00 44 51.7**	**-1.0**
CCIG	**Comitan**	8.87	96	*e*P	**P**	**00 45 25.6**	**+1.3**
CCIG				*i* S	**S**	**00 47 01.7**	**-2.3**
LTX	**Lajitas**	12.01	350	Pn	**P**	**00 46 12.6**	**+5.4**
	5.2nm,0.9s						
TXAR	**Lajitas Array**	12.01	350	Pn	**P**	**00 46 11.1**	**+3.9**
	0.1nm,0.3s,baz=164,slow=15,SNR=12						
TXAR				Lg		00 49 31.5	
	0.1nm,0.3s,baz=164,slow=25,SNR=4.3						
TXAR				LR	LR	00 51 12.8	
	comp=Z,613nm,19.0s,baz=205,slow=40						
TXAR	**Lajitas Array**	12.01	350	Pn	**P**	**00 46 11.1**	**+3.9**
TXAR				Lg		00 49 31.5	
TXAR				LR	LR	00 51 12.8	
JCT	**Junction City**	13.03	6	Pn	**P**	**00 46 24.2**	**+3.3**
	7.7nm,0.6s						
MNTX	**Cornudas Mount**	14.64	346	*e*Pn	**P**	**00 46 47.0**	**+4.9**
	11nm,1.0s						
NATX	**Nacogdoches**	15.45	22	*e*P	**P**	**00 46 51.5**	**-1.1**
	39nm,1.0s						
AMTX	**Amarillo**	17.35	359	*e*P	**P**	**00 47 15.1**	**-1.4**
	9.4nm,0.6s						
WMOK	**Wichita Mounta**	17.35	7	*e*P	**P**	**00 47 15.4**	**-1.1**
	7.4nm,1.0s						
JTS	**JuntasAbangare**	17.41	112	P	**P**	**00 47 14.6**	**-2.8**
	0.2nm,0.3s,baz=332,slow=18,SNR=2.7						
ANMO	**Albuquerque**	18.01	346	P	**P**	**00 47 25.5**	**+0.8**
	baz=157,slow=12,SNR=15						
ANMO				LR	LR	00 54 58.8	
	comp=Z,613nm,18.8s,slow=39						
MIAR	**Mount Ida**	18.36	21	*e*P	**P**	**00 47 26.2**	**-3.0**
	19nm,1.0s						
WUAZ	**Wupatki**	20.08	335	*e*P	**P**	**00 47 50.0**	**+1.5**
	207nm,0.8s						
LRAL	**Lakeview Retre**	20.16	37	*e*P	**P**	**00 47 45.7**	**-3.7**
	10nm,0.8s						
SDCO	**Great Sand Dun**	20.53	351	*e*P	**P**	**00 47 52.5**	**-0.8**
	12nm,0.8s						
LDFC	**Landfair**	21.42	328	*e*P	**P**	**00 48 04.2**	**+1.9**
KSU1	**Kansas State U**	21.94	10	*e*P	**P**	**00 48 05.2**	**-2.2**
WVT	**Waverly**	22.10	30	*e*P	**P**	**00 48 05.8**	**-3.3**
	12nm,0.5s,mb4.6						
CCM	**Cathedral Cave**	22.33	21	*e*P	**P**	**00 48 08.7**	**-2.7**
	5.1nm,0.6s,mb4.1						
FVM	**French Village**	22.56	23	*e*P	**P**	**00 48 10.3**	**-3.3**
	9.3nm,0.7s,mb4.3						
ISCO	**Idaho Springs**	22.56	351	*e*P	**P**	**00 48 13.6**	**-0.1**
	5.1nm,0.6s,mb4.1						
ARUT	**Antelope Range**	22.87	335	*e*P	**P**	**00 48 18.7**	**+2.0**
SRU	**San Rafael**	23.01	341	*e*P	**P**	**00 48 19.4**	**+1.4**
TMUT	**Trail Mountain**	23.39	340	*e*P	**P**	**00 48 23.6**	**+1.8**
NLU	**North Lily Min**	24.27	340	*e*P	**P**	**00 48 32.2**	**+1.9**
WCI	**Wyandotte Cave**	24.51	29	*e*P	**P**	**00 48 31.0**	**-1.6**
	14nm,0.7s,mb4.6						
DUG	**Dugway**	24.74	339	*e*P	**P**	**00 48 35.7**	**+0.9**
	31nm,0.7s,mb5.0						
BLO	**Bloomington**	25.17	28	P	**P**	**00 48 36.9**	**-2.1**
	26nm,0.8s,mb4.8						
OMM	**Old Mammoth Mi**	25.38	326	*e*P	**P**	**00 48 42.7**	**+1.7**
MNV	**Mina**	25.56	328	*e*P	**P**	**00 48 43.7**	**+1.1**
	9.3nm,0.9s,mb4.3						
HWUT	**Hardware Ranch**	25.61	342	*e*P	**P**	**00 48 43.3**	**+0.2**
	8.2nm,0.9s,mb4.3						
NVAR	**Mina Array Bea**	25.63	328	P	**P**	**00 48 45.2**	**+1.9**
	8.9nm,0.8s,mb4.4,baz=144,slow=11,SNR=50						
NVAR	**Mina Array Bea**	25.63	328	P	**P**	**00 48 45.2**	**+1.9**
ELK	**Elko**	26.12	335	P	**P**	**00 48 49.2**	**+1.3**
	0.3nm,0.4s,mb3.2,baz=147,slow=7.9,SNR=4.2						
ELK				LR	LR	00 58 48.6	
	comp=Z,181nm,21.1s,MS3.6,baz=154,slow=36						
ELK	**Elko**	26.12	335	P	**P**	**00 48 49.2**	**+1.3**
ELK				LR	LR	00 58 48.6	
PDAR	**Pinedale Array**	26.18	346	P	**P**	**00 48 48.5**	**+0.1**
	2.8nm,0.8s,mb3.8,baz=162,slow=9.4,SNR=20						
PDAR				LR	LR	01 00 28.2	
	comp=Z,67nm,18.5s,MS3.2,baz=178,slow=40						
TPAW	**Teton Pass**	27.19	345	*e*P	**P**	**00 48 59.5**	**+1.9**
LOHW	**Long Hollow**	27.22	345	*e*P	**P**	**00 48 58.5**	**+0.6**
MOOW	**Moose Ponds**	27.39	345	*e*P	**P**	**00 49 01.4**	**+1.9**
IMW	**Indian Meadow**	27.57	345	*e*P	**P**	**00 49 01.3**	**+0.2**
MCMT	**McKenzie Canyo**	28.94	343	*e*P	**P**	**00 49 14.5**	**+1.2**
MOD	**Modoc**	29.28	330	*e*P	**P**	**00 49 17.3**	**+1.0**
	4.6nm,0.9s,mb4.2						
CHMT	**Chamberlain Mo**	30.98	344	*e*P	**P**	**00 49 31.1**	**-0.3**
EYMN	**Ely**	31.44	13	*e*P	**P**	**00 49 32.8**	**-2.7**
	6.1nm,1.0s,mb4.4						
ULM	**Lac du Bonnet**	32.99	6	P	**P**	**00 49 45.7**	**-3.3**
	1.6nm,0.5s,mb4.2,baz=182,slow=8.6,SNR=4.2						
ULM				pP	pP	00 49 54.2	-6.1
	5.2nm,0.8s,baz=195,slow=9.3,SNR=5.7						
ULM				LR	LR	01 04 12.4	
	comp=Z,172nm,18.7s,MS3.8,baz=49,slow=38						
ULM	**Lac du Bonnet**	32.99	6	*e*P	**P**	**00 49 46.0**	**-3.0**
	18nm,1.3s,mb4.8						
EDM	**Edmonton**	36.90	348	*e*P	**P**	**00 50 21.4**	**-0.9**
SCHQ	**Schefferville**	45.69	27	P	**P**	**00 51 31.1**	**-3.3**
	1.4nm,0.6s,mb4.1,baz=190,slow=5.7,SNR=9.9						
SCHQ				pP	pP	00 51 40.1	-5.9
	4.2nm,0.7s,baz=242,slow=5.4,SNR=7.6						
SCHQ				LR	LR	01 15 28.4	
	comp=Z,93nm,18.6s,MS3.8,baz=241,slow=43						
SAML	**Samuel**	45.92	122	*e*P	**P**	**00 51 34.5**	**-2.2**
	2.5nm,0.9s,mb4.1						
YKA	**Yellowknife Ar**	45.93	351	P	**P**	**00 51 34.6**	**-1.6**
	0.3nm,0.6s,mb3.4,baz=155,slow=7.4,SNR=7.8						
YKA				pP	pP	00 51 43.2	-4.6
	2.6nm,0.7s,baz=159,slow=7.4,SNR=30						
YKA				PcP	PcP	00 53 12.6	-0.5
	1.0nm,1.1s,baz=159,slow=3.7,SNR=3.9						
YKA				LR	LR	01 12 21.7	
	comp=Z,267nm,18.4s,MS4.2,baz=175,slow=38						
LPAZ	**La Paz**	46.84	134	*e*P	**P**	**00 51 44.7**	**+0.8**
	3.0nm,1.1s,mb4.1						
INK	**Inuvik**	54.74	346	*e*P	**P**	**00 52 42.3**	**-0.9**
	9.7nm,0.9s,mb4.8						
ILAR	**Eielson Array**	56.23	338	P	**P**	**00 52 54.0**	**0.0**
	3.2nm,0.9s,mb4.4,baz=149,slow=4.0,SNR=16						
ILAR				pP	pP	00 53 02.8	-3.1
	3.5nm,0.9s,baz=167,slow=4.1,SNR=2.3						
BDFB	**Brasilia**	61.99	119	P	**P**	**00 53 32.7**	**-1.7**
	2.0nm,0.8s,mb4.3,baz=282,slow=8.0,SNR=3.7						
BDFB				pP	pP	00 53 42.9	-3.6
	1.9nm,0.6s,baz=284,slow=10,SNR=3.0						
PLCA	**Paso Flores**	64.58	155	P	**P**	**00 53 51.1**	**-0.1**
	3.3nm,0.9s,mb4.4,baz=331,slow=6.3,SNR=8.5						
PLCA				LR	LR	01 13 35.6	
	comp=Z,50nm,21.9s,MS3.7,baz=193,slow=28						
PLCA	**Paso Flores**	64.58	155	*e*P	**P**	**00 53 51.8**	**+0.6**
	4.4nm,0.9s,mb4.5						
TNA	**Tin City**	64.60	335	*e*P	**P**	**00 53 51.2**	**+0.2**
	8.7nm,1.7s,mb4.5						
SUMG	**Summit**	65.44	17	*e*P	**P**	**00 53 55.2**	**-1.1**
	4.3nm,0.9s,mb4.5						
NB2	**NORSAR Subarra**	85.26	27	P	**P**	**00 55 50.3**	**+1.2**
	1.8nm,0.8s,mb4.2,baz=297,slow=4.6						
NOA	**NORSAR Array B**	85.26	27	pP	pP	00 55 58.6	-3.1
	1.5nm,0.8s,baz=301,slow=5.0,SNR=5.5						
ARCES	**ARCESS Array B**	85.52	16	P	**P**	**00 55 49.5**	**-0.8**
	9.2nm,1.0s,mb5.0,baz=347,slow=16,SNR=3.2						
ARCES				pP	pP	00 56 00.5	-2.3
	3.6nm,0.6s,baz=315,slow=3.8,SNR=2.7						
ARCES	**ARCESS Array B**	85.52	16	P	**P**	**00 55 49.5**	**-0.8**
ARCES				pP	pP	00 56 00.5	-2.3
FINES	**FINESS Array B**	90.97	22	P	**P**	**00 56 15.5**	**-0.9**
	0.5nm,0.6s,mb4.0,baz=157,slow=39,SNR=2.7						
FINES				pP	pP	00 56 27.1	-2.0
	0.7nm,0.7s,baz=135,slow=5.4,SNR=1.7						
GERES	**GERESS Array B**	92.45	37	P	**P**	**00 56 31.3**	**+7.7**
	0.1nm,0.4s,mb3.5,baz=342,slow=4.2,SNR=3.8						
GERES				pP	pP	00 56 42.2	+6.0
	0.6nm,0.9s,baz=304,slow=4.8,SNR=3.1						
STKA	**Stephens Creek**	121.77	243	*e*P	PKPdf	01 02 08.4	+2.4
	1.8nm,0.8s						
STKA	**Stephens Creek**	121.77	243	PKP	PKPdf	01 02 08.2	+2.2
	1.9nm,0.7s,baz=1.7,slow=1.6,SNR=5.6						
WB2	**Warramunga Arr**	127.42	258	*e*P	PKPdf	01 02 19.6	+2.4
WRA	**Warramunga Arr**	127.43	258	PKP	PKPdf	01 02 19.7	+2.5
	2.7nm,0.8s,baz=82,slow=2.4,SNR=35						
ASAR	**Alice Springs**	128.19	253	PKP	PKPdf	01 02 20.9	+2.3
	1.8nm,0.8s,baz=107,slow=2.0,SNR=17						
CMAR	**Chiang Mai Arr**	139.12	330	PKP	PKPdf	01 02 41.1	+2.0
	1.1nm,0.7s,baz=326,slow=2.1,SNR=5.5						

*JMA **25** 00:49:31.0±0.3, 33.99N×141.88E, h27^{km}±4^{km}, M3.4*
*IDC **25** 00:49:31.5±1.4, 34.19N×141.77E, mb3.7/6, mb1 3.9/6, mb1mx3.7/21, mbtmp3.7/6, MS3.6/1, Ms1 3.7/1, ms1mx2.9/23, Error ellipse: s-maj=34.9km s-min=22.7km az=91.0*
*NEIC **25** 00:49:34.5±11.0, 34.21N×141.82E, h20^{km}±72^{km}, mb4.3/1, Error ellipse: s-maj=86.5km s-min=15.6km az=75.0*
ISC 25 00:49:33.6±1.6**, 34.14N**±0.06×**141.84E**±0.09**, h28**^{km}±10^{km}**, n17,** σ**0^{s}83**/22**, mb3.8**/7**, MS3.7**/1**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	0.88	306	P	**Pb**	**00 49 49.1**	**-1.0**
BSO1				S	**Sb**	**00 50 02.4**	**+0.9**
BSO3	**Boso 3**	1.28	301	P	**Pn**	**00 49 55.5**	**-0.4**
BSO3				S	**Sn**	**00 50 13.3**	**+1.0**
BSO4	**Boso 4**	1.50	305	P	**Pn**	**00 49 59.2**	**+0.1**
BSO4				*e*S	**Sn**	**00 50 18.5**	**+0.6**
CHOJ	**Chosi**	1.75	333	P	**Pn**	**00 50 03.4**	**+0.7**
JHJ2	**Mitsune**	1.98	239	P	**Pn**	**00 50 06.5**	**+0.6**
JHJ	**Hachijo jima 2**	2.00	240	Pn	**Pn**	**00 50 06.6**	**+0.4**
	61nm,0.3s,baz=52,slow=19,SNR=12						
JHJ				Sn	**Sn**	**00 50 29.9**	**-0.5**
	143nm,0.3s,baz=271,slow=23,SNR=6.8						
MAJO	**Matsushiro**	3.81	310	*e*Pn	**Pn**	**00 50 31.5**	**-0.6**
MAT	**Matsushiro**	3.81	310	*e*P	**Pn**	**00 50 31.0**	**-1.1**
MAT				*e*S	**Sn**	**00 51 15.0**	**-1.5**
MAT	**Matsushiro**	3.81	310	P	**Pn**	**00 50 31.4**	**-0.7**
MAT				S	**Sn**	**00 51 14.5**	**-2.0**
SONM	**Songino Array**	29.76	308	P	**P**	**00 55 39.8**	**-0.1**
	1.1nm,0.6s,mb3.7,baz=106,slow=8.6,SNR=14						
ZAL	**Zalesovo**	44.16	315	P	**P**	**00 57 44.7**	**+3.3**
	1.4nm,1.1s,mb3.6,baz=340,slow=7.4,SNR=5.5						
KURK	**Kurchatov**	48.02	310	*e*P	**P**	**00 58 11.1**	**-1.0**
	2.3nm,0.7s,mb4.3						
ILAR	**Eielson Array**	51.77	31	LR	LR	01 18 30.2	
	comp=Z,63nm,19.4s,MS3.7,baz=179,slow=34						
WRA	**Warramunga Arr**	54.26	189	P	**P**	**00 58 59.4**	**-0.2**
	0.9nm,0.6s,mb3.9,baz=4.4,slow=7.6,SNR=18						
ASAR	**Alice Springs**	57.98	189	P	**P**	**00 59 26.2**	**0.0**
	0.5nm,0.8s,mb3.6,baz=2.0,slow=7.1,SNR=4.8						
NOA	**NORSAR Array B**	76.99	338	P	**P**	**01 01 25.3**	**+0.4**
	1.3nm,1.1s,mb3.8,baz=39,slow=5.8,SNR=3.4						
GERES	**GERESS Array B**	85.35	329	P	**P**	**01 02 09.6**	**+0.5**
	0.2nm,0.4s,mb3.6,baz=37,slow=6.7,SNR=3.7						

*NEIC **25** 01:07:18.2±2.3, 6.19S×150.83E, h10^{km}, mb4.0/2, Error ellipse: s-maj=46.1km s-min=21.4km az=177.0*
*IDC **25** 01:07:28.5±8.1, 6.50S×150.57E, h72^{km}±59^{km}, mb3.9/3, mb1 4.1/4, mb1mx3.7/13, mbtmp4.2/4, ML2.8/1, Error ellipse: s-maj=82.7km s-min=55.4km az=142.0*
ISC 25 01:07:22.4±5.1**, 6.3S**±0.3×**150.6E**±0.3**, h44**^{km}±36^{km}**, n12,** σ**0^{s}87**/14**, mb4.0**/2**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.64	227	P	**P**	**01 08 32.8**	**+1.0**
	3.2nm,0.3s,baz=49,slow=7.3,SNR=13						
PMG				S	**S**	**01 09 24.9**	**-0.2**
	6.7nm,0.3s,baz=244,slow=17,SNR=9.4						
PMG	**Port Moresby**	4.64	227	*e*Pn	**P**	**01 08 31.5**	**-0.3**
PMG				*e*Sn	**S**	**01 09 25.3**	**+0.2**
KAKA	**Kakadu**	19.03	249	⇑*i*P	**P**	**01 11 43.2**	**-0.4**
	6.8nm,1.0s						
WRAB	**Tennant Creek**	20.84	228	*e*P	**P**	**01 12 02.2**	**-0.8**
	8.9nm,0.8s						
WB2	**Warramunga Arr**	20.85	228	*e*P	**P**	**01 12 02.3**	**-0.7**
WRA	**Warramunga Arr**	20.86	228	P	**P**	**01 12 02.8**	**-0.2**
	5.5nm,0.6s,baz=53,slow=11,SNR=95						
ASAR	**Alice Springs**	23.62	221	P	**P**	**01 12 32.0**	**+1.5**
	3.7nm,0.7s,mb3.9,baz=53,slow=9.1,SNR=36						
ASPA	**Alice Springs**	23.62	221	*e*P	**P**	**01 12 31.7**	**+1.2**
STKA	**Stephens Creek**	26.85	197	*e*P	**P**	**01 12 59.7**	**-1.3**
	3.5nm,0.8s,mb3.9						
STKA	**Stephens Creek**	26.85	197	P	**P**	**01 12 59.4**	**-1.6**
	5.0nm,0.8s,mb4.1,baz=33,slow=13,SNR=7.6						
STKA	**Stephens Creek**	26.85	197	*e*P	**P**	**01 12 59.8**	**-1.2**
QSPA	**South Pole Qui**	83.72	180	*e*P	**P**	**01 19 47.9**	**+0.4**

*OMAN **25** 01:11:56.4±69.0, 31.14N×56.15E, h20^{km}, Error ellipse: s-maj=19.1km s-min=16.2km az=303.0*
*IDC **25** 01:11:58.7±0.7, 30.61N×56.77E, mb4.1/19, mb1 4.3/21, mb1mx4.3/24, mbtmp4.1/21, ML3.9/1, MS3.4/4, Ms1 3.5/4, ms1mx3.1/20, Error ellipse: s-maj=18.8km s-min=14.7km az=19.0*
*MOS **25** 01:11:59.3±1.3, 30.76N×56.76E, h10^{km}, mb4.4/8, Error ellipse: s-maj=10.7km s-min=8.3km az=118.0*
*THR **25** 01:11:59.8±0.9, 30.79N×56.75E, h14^{km}±9^{km}, ML4.2*
*BJI **25** 01:12:00.6, 30.70N×56.80E, h10^{km}, mB4.9, mb4.6, Ms4.0*
*CSEM **25** 01:12:00.7±0.1, 30.70N×56.69E, h23^{km}, mb4.4/15, Error ellipse: s-maj=1.8km s-min=1.5km az=37.0*
*NEIC **25** 01:12:00.6±0.3, 30.64N×56.74E, h10^{km}, mb4.4/20, MN4.4(TEH), Error ellipse: s-maj=7.7km s-min=4.6km az=193.0*
*TEH **25** 01:12:01.7, 30.54N×56.82E, h20^{km}, Mn4.4*
ISC 25 01:12:01.4±0.9**, 30.77N**±0.02×**56.68E**±0.03**, h25**^{km}±7^{km}**, n119,** σ**1^{s}14**/132**, mb4.3**/39**, MS3.6**/5**, 6C-4D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	0.79	175	*i* PG	**Pb**	**01 12 14.7**	**-1.6**
KRBR				AML	AML	01 12 34.6	
	comp=N,8µm,0.5s						
IMEH	**Mehriz**	1.88	290	Pn	**Pn**	**01 12 34.1**	**+1.6**
ICHK	**Chekchek**	2.44	308	Pn	**Pn**	**01 12 42.2**	**+1.7**
ISRV	**Sarvestan**	3.38	247	Pn	**Pn**	**01 13 02.3**	**+8.3**
BNDS	**Bandar-Abbas**	3.38	188	*e*PN	**Pn**	**01 12 55.2**	**+1.2**
BNDS				AML	AML	01 14 00.9	
	comp=N,430nm,0.6s						
ZHSF	**Zahedan**	3.73	107	*e*PN	**Pn**	**01 12 58.4**	**-0.5**
ZHSF				AML	AML	01 14 05.3	
	comp=N,524nm,0.6s						
IMOK	**Mook**	3.84	245	Pn	**Pn**	**01 13 11.1**	**+11**
NASN	**Na’in**	3.87	303	*e*PN	**Pn**	**01 13 01.8**	**+1.0**
NASN				*e*SG	**Sn**	**01 14 01.1**	**+15**
NASN				AML	AML	01 14 09.7	
	comp=N,488nm,0.6s						
GHIR	**Ghir-Karzin**	4.06	233	*e*PN	**Pn**	**01 13 04.8**	**+1.2**
IBRJ	**Borojen**	4.74	283	Pn	**Pn**	**01 13 15.6**	**+2.3**
BANOM	**Banah**	4.84	184	P	**Pn**	**01 13 15.6**	**+1.0**
	SNR=36						
BANOM				⇑S	**Sn**	**01 14 14.5**	**+3.9**
IFIR	**Firoozkooh**	5.87	327	Pn	**Pn**	**01 13 29.1**	**-0.1**
IFIR				Sn	**Sn**	**01 14 36.0**	**-0.4**
IPAY	**Payeh**	5.99	18	Pn	**Pn**	**01 13 30.8**	**0.0**
MHI	**Mashhad**	6.00	22	Pn	**Pn**	**01 13 32.2**	**+1.2**
ASHO	**Ashiyiah**	6.08	185	P	**Pn**	**01 13 33.1**	**+0.9**
	SNR=11						
ASHO				⇓S	**Sn**	**01 14 42.4**	**+0.6**
IDMV	**Damavand**	6.18	322	Pn	**Pn**	**01 13 34.2**	**+0.7**
IKRD	**Kardeh**	6.18	14	Pn	**Pn**	**01 13 37.0**	**+3.4**
IQOM	**Qom**	6.23	312	Pn	**Pn**	**01 13 34.6**	**+0.4**
IQOM				Sn	**Sn**	**01 14 44.2**	**-1.2**
DAMV	**Damavand**	6.25	322	*e*PN	**Pn**	**01 13 34.4**	**-0.2**
IMYA	**Miamay**	6.25	26	Pn	**Pn**	**01 13 33.9**	**-0.7**

IAFJ	Afjeh	6.56	322	Pn	Pn	01 13 39.5	+0.6
IAFJ				Sn	Sn	01 14 52.3	-1.4
ASAO	Ashtian	6.76	306	ePN	Pn	01 13 41.8	+0.1
IMHD	Mahdasht	7.03	316	Pn	Pn	01 13 45.9	+0.4
IMHD				Sn	Sn	01 15 03.3	-2.1
HOQ	Hoqain	7.18	175	P	Pn	01 13 46.2	-1.4
	SNR=23						
IRAZ	Razeghan	7.31	311	Pn	Pn	01 13 49.7	+0.3
IRAZ				Sn	Sn	01 15 09.8	-2.7
BIDO	Bidbid	7.33	170	P	Pn	01 13 47.9	-1.8
	SNR=7.7						
SMDO	Samad	7.77	171	P	Pn	01 13 54.9	-1.0
	SNR=14						
QRN	Al-Qurain	7.88	257	eP	Pn	01 13 57.3	-0.1
QRN				eS	Sn	01 15 26.7	+0.1
BSY	Bisya	8.00	177	⇓P	P	01 13 59.7	+0.6
	SNR=18						
BSYO	Bisya	8.02	176	P	P	01 13 59.7	+0.4
	SNR=18						
RDF	Al-Radifah	8.14	259	eP	P	01 14 00.3	-0.7
NAY	Al-Naaiem	8.32	262	eP	P	01 14 02.0	-1.5
JMDO	Jabal Madar	8.46	171	⇑P	P	01 14 06.1	+0.6
	SNR=9.7						
SNGE	Sanandaj	8.95	301	ePN	P	01 14 11.6	-0.6
RBK	Rabkut	13.39	190	⇑P	P	01 15 08.9	-3.7
GNI	Garni	13.49	317	Pn	P	01 15 18.4	+4.7
	comp=N,0.1nm,0.3s,baz=126,slow=16,SNR=4.0						
GNI	Garni	13.49	317	Pn	P	01 15 14.8	+1.1
ABTO	Aybut	13.70	194	⇑P	P	01 15 12.7	-4.0
MALT	Malatya	16.80	302	eP	P	01 15 59.5	+2.9
ASF	Jabal al Asfar	16.94	280	P	P	01 15 57.1	-1.3
	comp=N,0.4nm,0.3s,baz=313,slow=14,SNR=6.0						
ASF				LR	LR	01 23 48.3	
	comp=N,136nm,21.6s,baz=322,slow=42						
KIV	Kislovodsk	17.20	324	Pn	P	01 16 04.8	+3.2
	comp=N,133nm,0.8s,SNR=8.9						
KIV	Kislovodsk	17.20	324	eP	P	01 16 04.5	+2.9
KIV				pmax	pmax		
	comp=Z,22nm,0.9s						
KIV	Kislovodsk	17.20	324	eP	P	01 16 04.5	+2.9
	comp=Z,22nm,0.9s						
GOF	Gofitskoye	17.84	327	eP	P	01 16 09.0	-0.5
NDI	New Delhi	17.96	91	e	P	01 16 09.0	-2.2
AAK	Ala-Archa	18.51	45	eP	P	01 16 15.9	-2.1
AAK				pmax	pmax		
	comp=Z,25nm,1.5s						
AAK	Ala-Archa	18.51	45	eP	P	01 16 15.9	-2.1
	comp=Z,25nm,1.5s						
EIL	Elat	18.81	272	eP	P	01 16 20.7	-0.9
	comp=Z,8.0nm,1.0s						
EIL	Elat	18.81	272	eP	P	01 16 20.7	-0.9
	comp=Z,8.0nm,1.0s						
CSS	Prodhromos	20.04	288	eP	P	01 16 34.3	-1.2
	comp=Z,23nm,1.3s						
CSS	Prodhromos	20.04	288	eP	P	01 16 34.3	-1.2
	comp=Z,23nm,1.3s						
BRTR	Keskin Array B	20.79	302	P	P	01 16 43.5	+0.2
	comp=Z,2.9nm,0.7s,baz=119,slow=13,SNR=18						
KOLN	Koldanda	23.66	90	eP	P	01 17 11.7	-0.1
	comp=Z,30nm,1.1s,mb4.6						
HYB	Hyderabad	23.93	119	i P	P	01 17 15.5	+1.0
BVAR	Borovoye Array	24.39	20	P	P	01 17 19.8	+1.1
	comp=Z,4.4nm,0.5s,mb4.1,baz=203,slow=7.7,SNR=43						
GKN	Gorkha	24.49	89	eP	P	01 17 19.7	-0.3
	comp=Z,49nm,1.2s,mb4.8						
DMN	Daman	24.99	90	eP	P	01 17 24.8	+0.1
	comp=Z,23nm,1.0s,mb4.7						
KKN	Kakani	25.10	90	eP	P	01 17 26.2	+0.5
	comp=Z,40nm,0.9s,mb5.0						
PKI	Pulchoki	25.26	90	eP	P	01 17 28.2	+0.9
	comp=Z,49nm,0.9s,mb5.0						
MKAR	Makanchi Array	25.43	44	i P	P	01 17 28.8	+0.2
MKAR				pmax	pmax		
	comp=Z,16nm,1.0s						
KURK	Kurchatov	25.78	33	i P	P	01 17 32.2	+0.3
KURK				pmax	pmax		
	comp=Z,25nm,1.9s,mb4.4						
JIRN	Jiri	25.91	89	eP	P	01 17 35.0	+1.6
	comp=Z,39nm,0.7s,mb5.0						
WMQ	Urumqi	27.73	53	eP	P	01 17 50.0	+0.2
WMQ				PP	PP	01 18 39.0	+0.2
WMQ				S	S	01 22 31.0	+1.9
WMQ				SS	SS	01 23 50.0	+0.7
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
WMQ				LR	LR		
	comp=N,178nm,13.0s,MS4.0						
WMQ				LR	LR		
	comp=E,136nm,12.0s,MS4.0						
WMQ	Urumqi	27.73	53	eP	P	01 17 50.0	+0.2
	comp=E,8.0nm,0.8s,mb4.4						
WMQ				PP	PP	01 18 39.0	+0.2
WMQ				S	S	01 22 31.0	+1.9
WMQ				SS	SS	01 23 50.0	+0.7
MLR	Muntele Rosu	28.09	310	P	P	01 17 54.8	+1.8
	comp=E,2.5nm,0.7s,mb4.0,baz=6.4,slow=7.8,SNR=3.9						
AKASG	Malin Array Be	28.53	322	P	P	01 17 57.0	0.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	28.53	322	P	P	01 17 57.0	0.0
	comp=Z,1.8nm,0.8s,mb3.9,baz=129,slow=8.6,SNR=5.8						
NVS	Novosibirsk	30.62	31	eP	P	01 18 13.8	-1.8
ZAL	Zalesovo	30.75	33	P	P	01 18 16.4	-0.3
	comp=Z,4.4nm,0.9s,mb4.3,baz=231,slow=9.1,SNR=24						
ZAL				LR	LR	01 32 11.6	
	comp=Z,62nm,18.7s,MS3.3,baz=237,slow=39						
MORC	Moravsky Berou	34.88	314	eP	P	01 18 52.9	+0.2
MORC				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
MORC	Moravsky Berou	34.88	314	eP	P	01 18 52.9	+0.2
	comp=Z,1.2nm,0.7s,mb3.9						
MORC	Moravsky Berou	34.88	314	eP	P	01 18 52.9	+0.2
	comp=Z,1.2nm,0.7s,mb3.9						
JOF	Joensuu	36.05	341	ep	P	01 18 55.6	-6.9
	comp=Z,0.3nm,0.3s,mb3.7						
GTA	Gaotai	36.05	64	eP	P	01 19 03.3	+0.5
GTA				AP	pP	01 19 10.4	+0.2
GTA				XP	sP	01 19 13.3	-0.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,44nm,4.9s						
GTA				LR	LR		
	comp=N,79nm,12.2s,MS3.8						
GTA				LR	LR		
	comp=E,59nm,13.3s,MS3.8						
GTA	Gaotai	36.05	64	eP	P	01 19 03.3	+0.5
	comp=E,10.0nm,0.9s,mb4.8						
GTA				pP	pP	01 19 10.4	+0.2
GTA				sP	sP	01 19 13.3	-0.1
AQU	L'Aquila	36.27	301	eP	P	01 19 06.2	+1.6
AQU				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
AQU	L'Aquila	36.27	301	eP	P	01 19 06.2	+1.6
	comp=Z,26nm,1.1s,mb5.1						
AQU	L'Aquila	36.27	301	eP	P	01 19 06.2	+1.6
	comp=Z,26nm,1.1s,mb5.1						
FINES	FINESS Array B	36.64	336	P	P	01 19 07.7	+0.2
	comp=Z,1.9nm,0.5s,mb4.2,baz=127,slow=9.3,SNR=23						
KMBO	Kilima Mbogo	36.71	214	P	P	01 19 10.6	+2.0
	comp=Z,1.1nm,0.8s,mb3.7,baz=321,slow=7.9,SNR=3.3						
KAF	Kangasniemi	37.02	337	ep	P	01 19 09.0	-1.7
	comp=Z,0.3nm,0.4s,mb3.5						
GERES	GERESS Array B	37.05	312	P	P	01 19 10.3	-0.7
	comp=Z,1.3nm,0.8s,mb3.8,baz=108,slow=8.4,SNR=12						
KHC	Kasperske Hory	37.19	312	eP	P	01 19 11.5	-0.8
MOY	Mondy	38.57	44	eP	P	01 19 25.3	+1.4
MOY				pmax	pmax		
	comp=Z,11nm,1.6s,mb4.3						
MOY	Mondy	38.57	44	eP	P	01 19 25.3	+1.4
	comp=Z,11nm,1.6s,mb4.3						
CMAR	Chiang Mai Arr	40.11	98	P	P	01 19 35.1	-1.8
	comp=Z,5.3nm,1.1s,mb4.2,baz=284,slow=8.5,SNR=8.1						
CMAR				LR	LR	01 37 26.8	
	comp=Z,32nm,18.3s,MS3.2,baz=126,slow=38						
BNI	Bardonecchia	41.30	305	eP	P	01 19 46.4	-0.1
BNI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
BNI	Bardonecchia	41.30	305	eP	P	01 19 46.4	0.0
	comp=Z,6.0nm,0.9s,mb4.2						
BNI	Bardonecchia	41.30	305	eP	P	01 19 46.4	-0.1
	comp=Z,6.0nm,0.9s,mb4.2						
SONM	Songino Array	41.31	51	P	P	01 19 47.4	+0.9
	comp=Z,2.3nm,0.8s,mb3.9,baz=267,slow=9.9,SNR=23						
ULN	Ulaanbaatar	41.76	51	eP	P	01 19 50.3	+0.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
ULN	Ulaanbaatar	41.76	51	eP	P	01 19 50.3	+0.1
	comp=Z,1.8nm,0.7s,mb3.8						
ULN	Ulaanbaatar	41.76	51	eP	P	01 19 50.3	+0.2
	comp=Z,1.8nm,0.7s,mb3.8						
NB2	NORSAR Subarra	42.40	329	P	P	01 19 55.1	-0.1
	comp=Z,0.9nm,0.6s,mb3.6,baz=115,slow=7.9						
NB2	NORSAR Subarra	42.40	329	P	P	01 19 55.1	-0.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
NOA	NORSAR Array B	42.40	329	P	P	01 19 55.7	+0.5
	comp=Z,1.4nm,0.8s,mb3.6,baz=114,slow=8.1,SNR=6.9						
HHC	Hu-ho-hao-te	44.99	61	eP	P	01 20 16.9	+0.4
HHC				XP	sP	01 20 24.5	-2.6
HHC				PP	PP	01 22 01.6	-0.9
HHC				PCS		01 25 49.9	
HHC				AMB	AMB		
	comp=Z,12nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,100nm,4.8s						
HHC	Hu-ho-hao-te	44.99	61	eP	P	01 20 16.9	+0.4
	comp=Z,12nm,0.6s,mb4.9						
HHC				sP	sP	01 20 24.5	-2.6
HHC				PP	PP	01 22 01.6	-0.9
HHC				PcS		01 25 49.9	
HHC				S	S	01 26 55.6	+2.8
HHC	Hu-ho-hao-te	44.99	61	eP	P	01 20 16.9	+0.4
HHC				S	S	01 26 55.6	+2.8
BOD	Bodaibo	47.26	38	⇑iP	P	01 20 33.9	-0.3
BOD				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
BOD	Bodaibo	47.26	38	⇑iP	P	01 20 33.9	-0.3
	comp=Z,14nm,0.8s,mb4.9						
ESDC	Sonseca Array	49.51	298	P	P	01 20 53.3	+1.4
	comp=Z,1.0nm,0.8s,mb3.9,baz=54,slow=7.6,SNR=4.2						
MATP	Matopo	57.65	212	P	P	01 21 50.8	-1.5
	comp=Z,2.6nm,0.6s,mb4.4,baz=38,slow=9.7,SNR=14						
DBIC	Dimbokro	62.21	261	P	P	01 22 23.1	-0.6
	comp=Z,5.5nm,0.9s,mb4.7,baz=44,slow=5.8,SNR=4.2						
DBIC	Dimbokro	62.21	261	P	P	01 22 23.0	-0.6
SUMG	Summit	62.47	340	eP	P	01 22 24.9	+0.4
	comp=Z,6.8nm,0.8s,mb4.8						
SUMG	Summit	62.47	340	eP	P	01 22 25.0	+0.4
	comp=Z,6.8nm,0.8s,mb4.8						
BILL	Bilibino	68.71	22	⇓iP	P	01 23 03.6	-1.0
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BILL	Bilibino	68.71	22	⇓iP	P	01 23 03.6	-1.0
	comp=Z,4.0nm,0.8s,mb4.4						
SCHQ	Schefferville	81.94	331	P	P	01 24 21.5	+1.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=63,slow=4.5,SNR=5.7						
SCHQ	Schefferville	81.94	331	P	P	01 24 21.5	+1.5
ILAR	Eielson Array	83.01	10	P	P	01 24 25.2	-0.1
	comp=Z,1.7nm,0.6s,mb4.2,baz=319,slow=4.3,SNR=23						
KAKA	Kakadu	84.53	108	eP	P	01 24 32.7	-1.5
	comp=Z,4.7nm,0.7s,mb4.7						
YKA	Yellowknife Ar	86.80	356	P	P	01 24 45.2	+0.9
	comp=Z,0.6nm,0.5s,mb4.0,baz=1.0,slow=5.1,SNR=20						
YKA				LR	LR	02 05 14.6	
	comp=Z,41nm,19.8s,MS3.8,baz=85,slow=37						
YKA	Yellowknife Ar	86.80	356	P	P	01 24 45.2	+0.9
YKA				LR	LR	02 05 14.6	
WRA	Warramunga Arr	89.97	113	P	P	01 24 59.3	-1.1
	comp=Z,1.3nm,0.7s,mb4.4,baz=315,slow=4.1,SNR=20						
WB2	Warramunga Arr	89.98	113	eP	P	01 24 59.1	-1.4
ASPA	Alice Springs	91.64	117	eP	P	01 25 06.8	-1.2
ASAR	Alice Springs	91.64	117	P	P	01 25 07.2	-0.9
	comp=Z,4.1nm,0.7s,mb4.9,baz=304,slow=4.3,SNR=38						

*IDC **25** 01:18:24.9±0.8,4.23N×93.73E,mb4.2/11,mb1 4.3/12,*
mb1mx4.1/20,mbtmp4.1/12,Error ellipse: s-maj=40.6km
s-min=16.0km az=51.0
*BJI **25** 01:18:31.6,4.23N×93.67E,h66^{km},mb4.7*
*NEIC **25** 01:18:31.9±2.5,4.38N×94.01E,h46^{km}±21^{km},mb4.3/7,*
Error ellipse: s-maj=21.3km s-min=8.5km az=55.0
ISC 25 01:18:28.5±0.6,4.29N±0.09×93.93E±0.09,h33^{km},n26,
σ0ˢ94/26,mb4.2/21,1C-1D,Off west coast of northern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.77	81	ePn	Pn	01 20 07.7	-0.5
CMAR	Chiang Mai Arr	14.91	19	Pn	P	01 21 57.7	-1.0
	baz=214,slow=13,SNR=5.3						
GYA	Guiyang	25.19	28	⇑iP	P	01 23 54.1	+1.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
LSA	Lhasa	25.41	354	P	P	01 23 56.6	+1.8
LSA	Lhasa	25.41	354	eP	P	01 23 56.5	+1.6
	comp=Z,13nm,0.6s,mb4.6						
HHC	Hu-ho-hao-te	39.70	21	eP	P	01 26 01.9	+2.6
HHC				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.6						
BJT	Baijiatuau	40.84	26	P	P	01 26 06.2	-2.6
	comp=Z,2.7nm,0.4s,mb4.2						
AAK	Ala-Archa	41.92	338	eP	P	01 26 18.2	+0.6
	comp=Z,1.2nm,0.6s,mb3.7						
SONM	Songino Array	44.69	12	P	P	01 26 40.1	+0.1
	comp=Z,9.9nm,1.1s,mb4.5,baz=194,slow=8.3,SNR=47						
SONM				PcP	PcP	01 28 23.0	+0.3
	comp=Z,0.8nm,0.5s,baz=200,slow=3.6,SNR=6.7						
WRA	Warramunga Arr	46.43	123	P	P	01 26 54.6	+0.3
	comp=Z,4.6nm,0.7s,mb4.5,baz=300,slow=8.9,SNR=14						
WRAB	Tennant Creek	46.44	123	eP	P	01 26 54.5	+0.2
	comp=Z,9.1nm,0.9s,mb4.7						
WB2	Warramunga Arr	46.44	123	⇓iP	P	01 26 54.4	0.0
ASAR	Alice Springs	47.85	127	P	P	01 27 05.7	+0.2
	comp=Z,1.6nm,0.8s,mb4.1,baz=306,slow=7.6,SNR=14						
ASAR				PcP	PcP	01 28 34.6	+0.5
	comp=Z,1.4nm,0.9s,baz=304,slow=3.2,SNR=6.4						
KURK	Kurchatov	48.02	347	P	P	01 27 06.5	0.0
	comp=Z,2.4nm,0.5s,mb4.5						
ZAL	Zalesovo	50.05	353	P	P	01 27 21.9	-0.1
	comp=Z,2.2nm,0.4s,mb4.6,baz=320,slow=6.0,SNR=8.5						
BVAR	Borovoye Array	52.31	342	P	P	01 27 38.5	-0.5
	comp=Z,1.4nm,0.7s,mb4.0,baz=149,slow=8.4,SNR=9.5						
BVAR				PcP	PcP	01 28 49.2	-0.8
	comp=Z,0.9nm,0.6s,baz=117,slow=6.4,SNR=3.0						
KMBO	Kilima Mbogo	56.89	266	eP	P	01 28 13.7	+0.6
	comp=Z,0.6nm,0.5s,mb3.9						
STKA	Stephens Creek	57.83	132	P	P	01 28 19.1	-0.3
	comp=Z,1.0nm,0.5s,mb4.2,baz=311,slow=9.3,SNR=3.7						
BRTR	Keskin Array B	64.63	312	P	P	01 29 03.7	-1.6
	comp=Z,1.0nm,0.7s,mb4.0,baz=121,slow=6.3,SNR=4.8						
BRTR				PcP	PcP	01 29 37.1	-1.7
	comp=Z,0.6nm,0.8s,baz=135,slow=6.1,SNR=3.8						
MLR	Muntele Rosu	71.59	317	P	P	01 29 47.9	-0.6
	comp=Z,1.2nm,0.6s,mb4.0,baz=105,slow=6.6,SNR=3.1						
MLR	Muntele Rosu	71.59	317	P	P	01 29 47.9	-0.6
JOF	Joensuu	73.98	335	ep	P	01 29 52.2	-10
	comp=Z,0.2nm,0.3s,mb3.5						
FINES	FINESS Array B	75.77	333	P	P	01 30 12.0	-0.6
	comp=Z,1.5nm,0.6s,mb4.1,baz=81,slow=4.8,SNR=11						
KAF	Kangasniemi	75.87	333	ep	P	01 30 05.1	-8.0
	comp=Z,0.4nm,0.4s,mb3.7						
ARCES	ARCESS Array B	78.55	341	P	P	01 30 27.9	0.0
	comp=Z,1.1nm,0.4s,mb4.1,baz=90,slow=6.1,SNR=9.0						
GERES	GERESS Array B	80.35	319	P	P	01 30 38.4	+0.3
	comp=Z,1.6nm,1.0s,mb3.9,baz=117,slow=6.0,SNR=8.1						

CASC 25 01:26:22.8±1.9,11.37N×85.87W,h176^{km}±7^{km},MD3.7,
ML3.2,6C-4D,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CONN	Concepcion	0.31	51	⇑eP	P	01 26 47.4	+0.5
APON	Apoyo	0.58	341	⇓iP	P	01 26 48.3	+0.4
APON				eS	S	01 27 08.2	+1.0
TICN	Ticuantepe	0.75	332	eP	P	01 26 48.9	+0.1
MGAN	Managua	0.86	335	eP	P	01 26 49.4	+0.1
MGAN				eS	S	01 27 10.3	+0.4
MGAN				i		01 27 11.2	
	comp=N,295nm,0.9s						
XAVN	Gruta Xavier	0.89	330	⇑eP	P	01 26 49.5	-0.1
COPN	Copaltepe	1.07	319	eP	P	01 26 50.4	-0.5
VCR	Vista de Mar	1.26	169	⇑iP	P	01 26 53.8	+1.2
VCR				eS	S	01 27 16.3	+0.8
MIRN	Miramar	1.34	322	eP	P	01 26 52.9	-0.4
CNGN	Cerro Negro	1.39	324	eP	P	01 26 53.5	-0.3
LEON	Leon	1.44	316	⇓eP	P	01 26 53.6	-0.7
FORC	Fortuna	1.48	127	⇓iP	P	01 26 56.1	+1.5
CRIN	San Cristobal	1.75	319	⇑eP	P	01 26 57.1	-0.3
CRIN				eS	S	01 27 24.1	0.0
CGA2	Cerro Gallo 2	1.93	134	⇓eP	P	01 27 00.5	+1.3
CGA2				eS	S	01 27 27.9	+0.7
VPS2	Volcan Poas 2	1.99	126	eP	P	01 27 01.9	+2.0
PRS1	Puriscal	2.06	132	⇑eP	P	01 27 02.6	+1.9
LAJ	Bijagual	2.28	131	eP	P	01 27 02.3	-0.9
LAJ				eS	S	01 27 30.2	-4.1
LCR2	La Lucha 2	2.45	131	⇑eP	P	01 27 06.1	+0.9
LCR2				eS	S	01 27 38.2	+0.4
BUS	Buena Vista	2.75	131	eP	P	01 27 10.1	+1.2
BUS				eS	S	01 27 46.2	+1.9

*UAV **25** 01:39:54.4,8.31N×74.39W,h63^{km}*
*NEIC **25** 01:39:57.9±1.4,8.06N×73.96W,h113^{km}±14^{km},mb3.5/1,*
Error ellipse: s-maj=24.1km s-min=13.3km az=112.0
*IDC **25** 01:39:57.4±2.8,8.24N×74.07W,h99^{km}±32^{km},mb3.3/2,*
mb1 3.4/4,mb1mx3.0/21,mbtmp3.7/4,Error ellipse:
s-maj=39.6km s-min=10.1km az=129.0
ISC 25 01:39:57.2±1.3,8.1N±0.1×74.0W±0.1,h132^{km}±16^{km},n13,
σ0ˢ95/19,mb3.5/2,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDMV	Paramo Marino	2.12	85	P	P	01 40 32.5	-0.6
PDMV				S	S	01 41 01.6	+1.1
OSV	Paramo de la O	2.49	78	P	P	01 40 37.8	-0.3
OSV				S	S	01 41 08.1	-1.1
UAV	Universidad de	2.82	80	P	P	01 40 42.3	0.0
UAV				S	S	01 41 17.1	+0.4
CUV	La Culata	2.93	78	P	P	01 40 43.4	-0.3
CUV				S	S	01 41 20.1	+0.9
EAV	Pico El Aguila	3.18	77	P	P	01 40 47.4	+0.3
EAV				S	S	01 41 25.2	+0.1
ROSC	El Rosal	3.29	186	P	P	01 40 47.0	-1.5
	6.6nm,0.3s,baz=296,slow=7.4,SNR=17						
ROSC				S	S	01 41 29.2	+1.6
	33nm,0.3s,baz=256,slow=18,SNR=13						
SDV	Santo Domingo	3.37	77	P	P	01 40 49.7	+0.1
	5.7nm,0.3s,baz=288,slow=5.1,SNR=36						
SDV				S	S	01 41 30.1	+0.5
	20nm,0.3s,baz=288,slow=20,SNR=16						
TORV	Torococo	3.94	69	P	P	01 40 54.8	-2.4
TORV				S	S	01 41 39.0	-4.2
SAML	Samuel	20.09	147	eP	P	01 44 21.5	-1.0
	2.2nm,0.9s						
SCHQ	Schefferville	46.91	6	P	P	01 48 17.1	+1.2
	1.2nm,1.0s,mb3.5,baz=170,slow=6.1,SNR=3.6						
YKA	Yellowknife Ar	61.74	340	P	P	01 50 04.3	+0.6
	0.6nm,0.8s,mb3.5,baz=129,slow=7.3,SNR=14						
ASAR	Alice Springs	149.17	237	PKPbc	PKPdf	01 59 34.4	+8.0
	0.2nm,0.4s,baz=128,slow=4.3,SNR=2.6						
WRA	Warramunga Arr	150.21	244	PKPbc	PKPdf	01 59 37.1	+9.1
	0.2nm,0.4s,baz=105,slow=2.9,SNR=9.9						

*CSEM **25** 01:42:38.2±0.5,38.70N×29.16W,MD2.9,Error ellipse:*
s-maj=30.9km s-min=6.6km az=29.0,After PDA
*PDA **25** 01:42:38.2±0.5,38.70N×29.16W,MD2.9,Error ellipse:*
s-maj=30.9km s-min=6.6km az=29.0
SVSA 25 01:42:38.2±0.5,38.70N×29.16W,MD2.9,Error ellipse:
s-maj=30.9km s-min=6.6km az=29.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	Caldeira	0.38	108	eP	Pg	01 42 45.3	-0.4
CALA				eS	Sg	01 42 50.4	-0.3
HOR	Horta	0.45	112	eP	Pg	01 42 46.4	-0.8
HOR				eS	Sg	01 42 52.6	-0.5
PICO	Pico	0.61	108	eP	Pg	01 42 49.0	-1.3
PICO				eS	Sg	01 42 57.4	-1.0
ROSA	Rosais	0.72	88	erx		01 42 49.0	

*CSEM **25** 01:44:05.0±0.6,38.67N×29.21W,h2^{km},ML2.7,Error*
ellipse: s-maj=10.5km s-min=8.9km az=78.0,After PDA
*PDA **25** 01:44:05.0±1.2,38.67N×29.21W,h2^{km}±8^{km},MD3.0,*
ML2.7,Error ellipse: s-maj=12.0km s-min=6.9km az=61.0
SVSA 25 01:44:05.0±1.2,38.67N×29.21W,h2^{km}±8^{km},MD3.0,
ML2.7,Error ellipse: s-maj=12.0km s-min=6.9km
az=61.0,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	Cedros	0.40	96	i P	Pg	01 44 12.4	-0.6
PCED				eS	Sg	01 44 17.9	-0.5
	772nm,0.2s						
CALA	Caldeira	0.41	102	eP	Pg	01 44 12.5	-0.7
CALA				eS	Sg	01 44 17.9	-0.7
HOR	Horta	0.48	107	eS	Sg	01 44 19.8	-1.1
PICO	Pico	0.64	105	eP	Pg	01 44 16.5	-1.3
PICO				eS	Sg	01 44 24.6	-1.7
ROSA	Rosais	0.76	86	eP	Pg	01 44 18.0	-2.2
ROSA				eS	Sg	01 44 27.9	-2.4
PMAN	Manadas	0.88	92	eS	Sg	01 44 29.8	-4.5
	221nm,0.3s						
PIED	Piedade	0.94	105	eP	Pb	01 44 20.5	-3.2
PIED				i S	Sg	01 44 32.1	-4.3
STGR	Santa Cruz	1.03	66	eP	Pb	01 44 21.4	-3.8
STGR				eS	Sb	01 44 33.5	-5.5
	28nm,0.1s						
ASBA	Santa Barbara	1.48	87	i S	Sb	01 44 45.0	-7.0
	49nm,0.2s						
PSBA	Serra de Santa	1.48	86	eS	Sb	01 44 45.2	-6.9
	40nm,0.2s						
PPAD	Pico dos Padre	1.51	88	eP	Pn	01 44 28.2	-4.9
PPAD				i S	Sb	01 44 45.5	-7.4
	26nm,0.2s						
PBIS	Biscoitos	1.54	86	eS	Sb	01 44 46.5	-7.2
	14nm,0.2s						
RIB2	Ribeirinha	1.60	89	eS	Sb	01 44 47.7	-7.8
	36nm,0.2s						
PVNV	Vila Nova	1.61	86	eS	Sb	01 44 48.1	-7.8
PSCM	Serra do Cume	1.64	88	eS	Sb	01 44 48.8	-7.9
	47nm,0.1s						
PFAV	Pico das Favas	1.67	88	i S	Sb	01 44 49.5	-8.0
	13nm,0.1s						
PSMA	Santa Maria	3.64	116	i P	Pn	01 44 57.1	-6.5

*NEIC **25** 01:48:34.1±6.6,23.67S×179.57E,h468^{km}±64^{km},mb3.9/2,*
Error ellipse: s-maj=73.1km s-min=24.2km az=217.0
*IDC **25** 01:48:38.4±4.7,23.92S×179.39E,h507^{km}±35^{km},mb3.3/4,*
mb1 3.5/5,mb1mx3.2/16,mbtmp4.2/5,Error ellipse:
s-maj=57.8km s-min=26.3km az=54.0
ISC 25 01:48:34.6±4.3,23.7S±0.2×179.7E±0.6,h500^{km},n9,
σ0ˢ60/9,mb3.9/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	14.66	188	P	P	01 51 41.7	+0.1
	1.4nm,0.3s,baz=293,slow=3.5,SNR=6.7						
URZ				S	S	01 54 12.5	0.0
	0.6nm,0.3s,baz=218,slow=23,SNR=6.1						
RPZ	Rata Peaks	21.17	197	P	P	01 52 44.5	-0.2
	2.4nm,0.5s,mb4.0,baz=11,slow=10,SNR=4.7						
CTA	Charters Tower	31.15	270	P	P	01 54 11.9	-1.4
	3.7nm,0.3s,mb4.3,baz=125,slow=12,SNR=16						
ASAR	Alice Springs	41.75	260	P	P	01 55 41.7	+1.0
	0.9nm,0.4s,mb3.5,baz=101,slow=7.1,SNR=15						
ASAR				ScP		02 00 26.8	
	0.6nm,0.7s,baz=112,slow=4.7,SNR=5.0						
WB2	Warramunga Arr	42.09	266	eP	P	01 55 43.8	+0.3
WRAB	Tennant Creek	42.09	266	eP	P	01 55 43.6	+0.1
	2.9nm,0.4s,mb4.1						
WRA	Warramunga Arr	42.10	266	P	P	01 55 44.0	+0.4
	1.6nm,0.3s,mb3.9,baz=95,slow=8.4,SNR=100						
KAKA	Kakadu	45.97	275	eP	P	01 56 13.6	-0.3
	3.2nm,0.9s,mb3.8						
BRTR	Keskin Array B	147.21	307	PKPbc	PKPdf	02 07 24.2	+6.4
	0.5nm,0.5s,baz=72,slow=4.6,SNR=4.3						

*NEIC **25** 02:13:15.9±1.3,50.45N×18.82E,h5^{km},MG2.5(WAR),*
Error ellipse: s-maj=16.4km s-min=7.8km az=187.0
*PRU **25** 02:13:16.9,50.32N×18.85E*
WAR 25 02:13:17.3,50.18N×18.90E,h0^{km},ML2.4,1C,Mining
Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.46	258	ePg	Pg	02 13 27.6	+1.0
RAC				eSg	Sg	02 13 35.0	+2.2
OJC	Ojcow	0.58	86	ePG	Pg	02 13 29.0	+0.1

OJC				eSG	Sg	02 13 37.0	+0.4
OKC	**Ostrava-Krasne**	0.59	235	ePG	Pg	02 13 30.0	+0.8
OKC				eSG	Sg	02 13 40.0	+2.9
MORC	**Moravsky Berou**	0.96	246	ePg	Pg	02 13 36.0	-0.5
MORC				eSg	Sg	02 13 49.3	-0.1
NIE	**Niedzica**	1.19	129	ePG	Pg	02 13 40.0	-1.1
NIE				eSG	Sg	02 13 58.0	+1.0
DPC	**Dobruska-Polom**	1.66	277	ePG	Pg	02 13 46.7	-3.8
DPC				eSG	Sg	02 14 08.4	-4.3
VYHS	**Vyhne**	1.69	181	ePN	Pn	02 13 48.6	+0.4
VYHS				eSN	Sn	02 14 13.5	+2.7
KSP	**Ksiaz**	1.79	293	ePn	Pn	02 13 48.4	-1.3
KSP				ePg	Pg	02 13 50.3	-2.7
KSP				eSn	Sn	02 14 12.4	-1.0
KSP				eSg	Sg	02 14 15.8	-1.1
UPC	**Upice**	1.88	281	ePG	Pg	02 13 49.8	-5.0
UPC				eSG	Sg	02 14 14.6	-5.3
CRVS	**Cervenica-Dubn**	2.10	126	i PB	Pb	02 13 57.8	+1.8
KWP	**Kalwaria**	2.52	101	ePn	Pn	02 14 05.8	+5.7
KWP	**Kalwaria**	2.52	101	ePn	Pn	02 14 05.8	+5.7
KWP				eP*	Pb	02 14 08.3	+5.1
KWP				eSn	Sn	02 14 39.4	+7.5
PRU	**Pruhonice**	2.81	268	ePG	Pg	02 14 08.9	-4.6
KHC	**Kasperske Hory**	3.61	255	ePG	Pg	02 14 21.7	-7.7
KHC				eSG	Sg	02 15 11.7	-5.9
MOA	**Molln**	3.84	234	⇑iPG	Pg	02 14 30.8	-3.1
MOA				i SG	Sg	02 15 21.7	-3.4
	3.8nm,0.6s						
CLL	**Collm**	3.91	289	eSG	Sg	02 15 21.0	-6.5

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*NEIC **25** 02:46:08.8±0.6, 10.06N×93.40E, h30^{km}, mb4.0/2, Error ellipse: s-maj=15.1km s-min=10.5km az=77.0*

*IDC **25** 02:46:10.7±6.5, 10.12N×93.48E, h44^{km}±56^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.5/18, mbtmp3.7/7, ML4.1/1, Error ellipse: s-maj=54.5km s-min=20.4km az=53.0*

ISC 25 02:46:07.3±0.9, **10.1N**±0.1×**93.4E**±0.2, **h33**^{km}**, n11, σ0**^{s}**31**/9, **mb3.8**/7, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	9.90	32	P	P	02 48 30.3	-0.2
	0.5nm,0.3s,baz=229,slow=15,SNR=5.5						
KMI	**Kunming**	17.39	29	P	P	02 50 09.6	+0.5
	11nm,1.4s						
SONM	**Songino Array**	39.20	14	P	P	02 53 33.6	-0.3
	0.7nm,1.0s,mb3.3,baz=194,slow=5.9,SNR=3.1						
ZAL	**Zalesovo**	44.30	353	P	P	02 54 15.3	-0.4
	1.7nm,0.4s,mb4.1,baz=323,slow=4.9,SNR=3.8						
WRA	**Warramunga Arr**	50.10	127	P	P	02 55 01.6	0.0
	0.4nm,0.5s,mb3.7,baz=304,slow=8.6,SNR=9.1						
WRAB	**Tennant Creek**	50.11	127	eP	P	02 55 01.7	0.0
	1.4nm,0.4s,mb4.3						
ASAR	**Alice Springs**	51.85	131	P	P	02 55 14.8	0.0
	0.6nm,0.7s,mb3.6,baz=303,slow=6.7,SNR=6.5						
BRTR	**Keskin Array B**	60.49	310	P	P	02 56 16.4	-0.2
	0.8nm,0.8s,mb3.8,baz=108,slow=7.8,SNR=5.5						
GERES	**GERESS Array B**	75.74	318	P	P	02 57 52.0	+0.6
	0.4nm,0.6s,mb3.5,baz=90,slow=5.3,SNR=4.4						
PDAR	**Pinedale Array**	123.38	20	PKP	PKPdf	03 05 04.1	+2.6
	0.2nm,0.6s,baz=270,slow=1.8,SNR=3.5						
NVAR	**Mina Array Bea**	123.39	30	PKP	PKPdf	03 05 03.6	+2.0
	0.4nm,0.6s,baz=298,slow=1.5,SNR=4.4						

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*BJI **25** 03:20:30.6, 5.60S×122.20E, h10^{km}, mB5.2, mb4.7*

*IDC **25** 03:20:30.1±0.7, 5.60S×122.13E, mb4.5/11, mb1 4.6/12, mb1mx4.4/19, mbtmp4.5/12, ML3.8/1, MS3.7/7, Ms1 3.7/7, ms1mx3.4/16, Error ellipse: s-maj=32.9km s-min=15.5km az=54.0*

*NEIC **25** 03:20:31.6±0.2, 5.59S×122.16E, h10^{km}, mb4.9/13, Error ellipse: s-maj=13.3km s-min=4.7km az=54.0*

*HRVD **25** 03:20:31.6±0.8, 5.62S×122.41E, h20^{km}±2^{km}, MW4.9/36, Centroid moment Tensor Solution. LP body waves: s6,c9; Mantle waves: s36,c45; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.74±.37; $M_{\theta\theta}$-0.40±.18; $M_{\phi\phi}$-2.34±.30; $M_{r\theta}$-0.15±.27; $M_{\theta\phi}$0.69±.10; $M_{\phi r}$0.71±.40; Best double couple: $M_0$2.747×10^{16} NP1:ϕ_s161°,δ37°,λ88°. NP2: ϕ_s344°,δ53°,λ92°. Principal axes: T 2.838, Plg82°, Azm262°; N -.181, Plg1°, Azm163°; P -2.655, Plg8°, Azm73°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **25** 03:20:32.5±0.8, 5.69S×122.13E, h33^{km}, mb5.0/15 Error ellipse: s-maj=23.8km s-min=8.6km az=120.8*

*DJA **25** 03:20:33.1±0.7, 5.36S×121.96E, h33^{km}, mb5.6/4, Error ellipse: s-maj=117.5km s-min=6.2km az=162.0*

ISC 25 03:20:29.1±4.3, **5.60S**±0.08×**122.17E**±0.05, **h7**^{km}±28^{km}, **n74, σ0**^{s}**79**/64, **mb4.8**/34, **MS3.6**/8, **1C-6D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEDI	**Kedomdong**	6.66	244	⇑eP	Pn	03 22 10.6	+0.7
	137nm,0.5s						
RATI	**Rata**	7.28	244	⇓eP	Pn	03 22 18.9	+0.3
	348nm,0.7s						
KELI	**Kelakatan**	8.06	251	⇓eP	P	03 22 29.0	-0.4
	79nm,0.8s						
SRDI	**Scrawed**	8.47	250	⇓eP	P	03 22 34.9	-0.2
	56nm,0.9s						
KAKA	**Kakadu**	12.35	126	eP	P	03 23 27.3	-1.2
	17nm,0.6s						
FITZ	**Fitzroy Crossi**	12.88	165	eP	P	03 23 35.1	-0.4
	6.4nm,0.5s						
MENI	**Mendum Tagoi**	18.45	81	eP	P	03 24 51.2	+3.8
WRA	**Warramunga Arr**	18.53	141	P	P	03 24 47.9	-0.4
	0.3nm,0.3s,baz=318,slow=12,SNR=52						
WRAB	**Tennant Creek**	18.53	141	eP	P	03 24 47.7	-0.6
WRAB				pmax	pmax		
	comp=Z,23nm,0.8s						
WRAB	**Tennant Creek**	18.53	141	eP	P	03 24 47.7	-0.6
	comp=Z,23nm,0.8s						
WB2	**Warramunga Arr**	18.54	141	eP	P	03 24 48.1	-0.2
YOMI	**Yo Moklole**	18.57	82	eP	P	03 24 50.0	+1.2
ASPA	**Alice Springs**	21.22	149	eP	P	03 25 22.7	+4.7
ASAR	**Alice Springs**	21.22	149	P	P	03 25 19.1	+1.1
	comp=Z,21nm,0.6s,mb4.6,baz=329,slow=12,SNR=83						
ASAR				LR	LR	03 34 14.0	
	comp=Z,96nm,18.7s,MS3.2,baz=328,slow=39						
PMG	**Port Moresby**	25.05	100	eP	P	03 25 56.3	+0.5
PMG				pmax	pmax		
	comp=Z,18nm,0.8s						
PMG	**Port Moresby**	25.05	100	P	P	03 25 56.5	+0.7
	comp=Z,20nm,0.8s,mb4.7,baz=290,slow=9.7,SNR=7.2						
PMG	**Port Moresby**	25.05	100	eP	P	03 25 56.3	+0.5
	comp=Z,18nm,0.8s,mb4.6						
STKA	**Stephens Creek**	31.84	148	eP	P	03 26 57.2	+0.2
	comp=Z,4.5nm,0.9s,mb4.3						
STKA	**Stephens Creek**	31.84	148	P	P	03 26 56.0	-1.0
	comp=Z,5.7nm,0.9s,mb4.4,baz=308,slow=10,SNR=9.1						
STKA				LR	LR	03 40 52.5	
	comp=Z,104nm,18.7s,MS3.5,baz=28,slow=38						
JOW	**Kunigami**	32.77	10	LR	LR	03 38 50.3	
	comp=Z,82nm,21.9s,MS3.4,baz=120,slow=34						
CMAR	**Chiang Mai Arr**	33.11	317	P	P	03 27 08.0	-0.2
	comp=Z,4.7nm,0.8s,mb4.4,baz=144,slow=7.4,SNR=19						
CMAR				PcP	PcP	03 29 52.5	+0.9
	comp=Z,1.2nm,0.7s,baz=180,slow=3.0,SNR=4.7						
CMAR				LR	LR	03 42 27.3	
	comp=Z,88nm,18.8s,MS3.5,baz=296,slow=40						
VIS	**Vishakhapatnam**	44.80	302	e	P	03 28 45.0	-0.8
BJT	**Baijiatuau**	45.73	354	eP	P	03 28 52.9	0.0
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
BJT	**Baijiatuau**	45.73	354	eP	P	03 28 52.9	0.0
	comp=Z,12nm,0.8s,mb4.9						
BJI	**Beijing**	45.75	354	eP	P	03 28 53.3	+0.2
BJI				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
BJI				MLR	MLR		
	comp=Z,40nm,25.6s,MS3.2						
BJI	**Beijing**	45.75	354	eP	P	03 28 53.3	+0.2
	comp=Z,17nm,0.8s,mb5.0						
BJI				LR	LR		
	comp=Z,40nm,25.6s,MS3.2						
LSA	**Lhasa**	46.02	321	P	P	03 28 56.6	+1.2
LSA	**Lhasa**	46.02	321	eP	P	03 28 56.5	+1.1
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
LSA	**Lhasa**	46.02	321	eP	P	03 28 56.5	+1.1
	comp=Z,7.8nm,0.6s,mb4.8						
JIRN	**Jiri**	47.96	315	eP	P	03 29 11.3	+0.6
	comp=Z,33nm,0.8s,mb5.4						
PKI	**Pulchoki**	48.46	315	eP	P	03 29 14.5	0.0
	comp=Z,22nm,0.9s,mb5.2						
KKN	**Kakani**	48.68	315	eP	P	03 29 16.5	+0.3
	comp=Z,42nm,1.1s,mb5.4						
DMN	**Daman**	48.69	315	eP	P	03 29 16.6	+0.2
	comp=Z,45nm,0.9s,mb5.5						
HYB	**Hyderabad**	48.77	299	⇓eP	P	03 29 17.0	-0.1
HYB	**Hyderabad**	48.77	299	⇓iP	P	03 29 17.0	-0.1
GKN	**Gorkha**	49.26	315	eP	P	03 29 20.7	0.0
	comp=Z,22nm,0.7s,mb5.3						
GTA	**Gaotai**	49.32	337	eP	P	03 29 22.3	+1.3
GTA				AP	pP	03 29 26.3	+3.1
GTA				XP	sP	03 29 28.8	+4.7
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
KOLN	**Koldanda**	49.86	314	eP	P	03 29 25.6	+0.2
	comp=Z,50nm,0.9s,mb5.5						
ASAJ	**Asahikawa**	52.80	18	P	P	03 29 47.6	+0.3
	comp=Z,5.1nm,0.6s,mb4.6,baz=224,slow=13,SNR=6.2						
HIA	**Hailar**	54.68	358	eP	P	03 30 01.3	+0.2
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HIA	**Hailar**	54.68	358	eP	P	03 30 01.3	+0.2
	comp=Z,9.7nm,0.8s,mb4.9						
ULN	**Ulaanbaatar**	54.88	348	eP	P	03 30 02.2	-0.4
ULN				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
ULN	**Ulaanbaatar**	54.88	348	eP	P	03 30 02.2	-0.4
	comp=Z,11nm,0.9s,mb4.9						
SONM	**Songino Array**	54.99	347	P	P	03 30 03.5	+0.1
	comp=Z,5.3nm,0.6s,mb4.7,baz=161,slow=6.4,SNR=13						
ZAK	**Zakamensk**	58.10	346	eP	P	03 30 25.6	0.0
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
TLY	**Talaya**	59.22	347	eP	P	03 30 33.8	+0.4
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
MOY	**Mondy**	59.85	345	eP	P	03 30 38.7	+0.9
MOY				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.9						
MKAR	**Makanchi Array**	62.98	330	i P	P	03 30 58.8	-0.1
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOD	**Bodaibo**	63.55	355	eP	P	03 31 02.4	-0.1
BOD				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
AAK	**Ala-Archa**	64.59	323	eP	P	03 31 07.9	-1.6
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
AAK	**Ala-Archa**	64.59	323	eP	P	03 31 07.9	-1.7
	comp=Z,6.9nm,0.9s,mb4.7						
ZAL	**Zalesovo**	67.08	337	P	P	03 31 25.0	-0.3
	comp=Z,5.2nm,0.7s,mb4.7,baz=332,slow=4.8,SNR=36						
KURK	**Kurchatov**	67.43	332	i P	P	03 31 27.4	-0.2
KURK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
KURK	**Kurchatov**	67.43	332	eP	P	03 31 27.1	-0.6
	comp=Z,21nm,0.9s,mb5.2						
NVS	**Novosibirsk**	68.36	337	eP	P	03 31 31.3	-2.0
NVS				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.9						
NVS				pmax	pmax		
	comp=N,12nm,1.5s						
BVAR	**Borovoye Array**	72.86	330	P	P	03 32 00.5	-0.1
	comp=N,5.8nm,0.8s,mb4.5,baz=143,slow=7.4,SNR=28						
CHKZ	**Chkalovo**	73.13	331	eP	P	03 32 01.8	-0.3
CHKZ				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.4						
CHKZ	**Chkalovo**	73.13	331	eP	P	03 32 01.8	-0.3
	comp=Z,37nm,0.8s,mb5.4						
MAW	**Mawson**	73.49	200	LR	LR	04 00 13.0	
	comp=Z,109nm,18.0s,MS4.2,baz=246,slow=32						
TIXI	**Tiksi**	77.22	2	eP	P	03 32 24.5	-0.7
TIXI				pmax	pmax		
	comp=Z,15nm,2.3s,mb4.5						
SVE	**Sverdlovsk**	79.64	331	⇓eP	P	03 32 35.5	-3.2
SVE				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
QSPA	**South Pole Qui**	84.37	180	eP	P	03 33 05.0	+2.2
	comp=Z,1.8nm,0.6s,mb4.4						
KMBO	**Kilima Mbogo**	84.84	269	LR	LR	04 06 27.9	
	comp=Z,72nm,20.1s,MS4.0,baz=97,slow=32						
MALT	**Malatya**	88.54	309	eP	P	03 33 24.8	+0.6
MATP	**Matopo**	91.50	249	P	P	03 33 39.3	+0.9
	comp=Z,1.0nm,0.5s,mb4.4,baz=125,slow=4.3,SNR=7.9						
BRTR	**Keskin Array B**	92.41	309	P	P	03 33 41.4	-0.7
	comp=Z,0.7nm,0.8s,mb4.1,baz=135,slow=5.2,SNR=4.1						
ILAR	**Eielson Array**	95.43	25	P	P	03 33 54.5	-0.9
	comp=Z,0.4nm,0.9s,mb3.9,baz=255,slow=5.1,SNR=3.8						
ARCES	**ARCESS Array B**	97.55	339	LR	LR	04 27 08.9	
	comp=Z,40nm,18.3s,MS3.9,baz=42,slow=41						
NOA	**NORSAR Array B**	104.95	332	PP	PP	03 38 58.7	-2.8
	comp=Z,0.7nm,0.8s,baz=16,slow=4.6,SNR=3.3						
YKA	**Yellowknife Ar**	109.82	24	PKiKP		03 39 02.1	
	comp=Z,0.2nm,0.6s,baz=306,slow=2.2,SNR=4.1						
YKA				PKKPbc		03 50 08.3	
	comp=Z,0.1nm,0.3s,baz=115,slow=3.1,SNR=5.2						
NVAR	**Mina Array Bea**	116.44	50	PKP	PKPdf	03 39 18.1	+1.2
	comp=Z,0.6nm,0.7s,baz=290,slow=3.1,SNR=4.3						
PDAR	**Pinedale Array**	121.30	43	PKP	PKPdf	03 39 26.1	-0.1
	comp=Z,0.4nm,0.7s,baz=135,slow=2.1,SNR=3.7						
SCHQ	**Schefferville**	130.38	7	PKP	PKPdf	03 39 43.5	+0.2
	comp=Z,1.0nm,0.6s,baz=304,slow=7.3,SNR=4.3						
TXAR	**Lajitas Array**	130.75	56	PKP	PKPdf	03 39 45.6	+0.8
	comp=Z,0.3nm,0.7s,SNR=3.7						

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*NEIC **25** 03:30:51.6, 28.90S×71.36W, h37^{km}, MD4.3(GUC), After GUC.*

GUC 25 03:30:51.6±0.5, **28.90S**×**71.36W**, **h37**^{km}±3^{km}, **MD4.3, ML4.5, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	1.36	159	eP	P	03 31 15.8	+1.4
TLL				i S	S	03 31 34.1	+2.7
TLL				AMP		03 31 39.1	
	comp=N,11μm,0.5s						
CPCH	**Copiapo**	1.77	30	⇓iP	P	03 31 21.0	+0.7
CPCH				i S	S	03 31 43.5	+1.7
CPCH				AMP		03 31 51.3	
	comp=N,9μm,0.1s						
ILCH	**Illapel**	2.74	177	i S	S	03 32 06.5	+0.2
ILCH				AMP		03 32 18.7	
	comp=E,1μm,0.4s						
ZON	**Zonda**	3.51	139	eP	P	03 31 50.0	+4.8
ZON				eS	S	03 32 40.0	+14
JACH	**Jahuel**	3.83	170	eP	P	03 31 49.6	-0.1
FCH	**Farellones**	4.51	169	eP	P	03 31 59.9	+0.6
FCH				i S	S	03 32 51.1	-0.2
CLCH	**Cerro Calan**	4.54	171	eP	P	03 31 59.4	-0.4
TACH	**Talagante**	4.76	176	eP	P	03 32 01.9	-0.9
LMEL	**Las Melosas**	5.03	169	eP	P	03 32 07.0	+0.3
LVC	**Limon Verde**	6.63	20	ePn	P	03 32 24.3	-4.8
	comp=E,22nm,0.6s						
LPAZ	**La Paz**	12.90	14	Pn	P	03 33 47.5	-7.6

OTT 25 04:09:45.3±0.4, **71.20N**×**62.34W**, **h18**^{km}, **ML3.2**/7, **Baffin Bay. 244km east from Clyde River, Nu Eastern Arctic Background Seismic Zone., Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINU	**Pond Inlet**	5.08	295	PN	Pn	04 11 00.5	-2.1
PINU				SN	Sn	04 11 54.0	-7.6
PINU				SN	Sn	04 11 56.0	-5.6
TULEG	**Thule**	5.66	344	PN	Pn	04 11 05.3	-5.4
FRB	**Frobisher Bay**	7.85	201	PN	Pn	04 11 38.2	-3.3
FRB				SN	Sn	04 12 59.1	-12
FRB				Trac		04 13 39.0	
	comp=Z,1.1nm,0.2s						
RES	**Resolute Bay**	10.07	305	PN	P	04 12 10.5	-1.6
RES				SN	S	04 13 55.0	-11
RES				Trac		04 13 57.5	
	comp=Z,0.4nm,0.3s						
YRTN	**Rankin Inlet**	14.18	249	PN	P	04 13 04.2	-2.7
YRTN				SN	S	04 15 30.2	-14
YRTN				Trac		04 15 44.1	
	comp=Z,0.6nm,0.2s						
SCHQ	**Schefferville**	16.55	189	PN	P	04 13 36.0	-1.6
SCHQ				SN	S	04 16 26.0	-14
SCHQ				Trac		04 16 44.0	
	comp=Z,0.3nm,0.5s						
FCC	**Fort Churchill**	18.00	243	PN	P	04 13 54.8	-1.1
FCC				Trac		04 17 11.3	
	comp=Z,0.5nm,0.1s						
LG4Q	**La Grande 4**	18.39	203	PN	P	04 13 58.6	-2.1
LG4Q				SN	S	04 17 08.6	-14
LG4Q				Trac		04 19 33.8	
	comp=Z,0.2nm,0.3s						
SILO	**Sutton Inlier**	19.45	222	PN	P	04 14 10.9	-2.5
SILO				Trac		04 17 41.2	
	comp=Z,0.2nm,0.3s						

IDC 25 04:17:07.2±4.0, **16.69S**×**176.85W**, **mb4.6**/3, **mb1 4.8**/3, **mb1mx4.0**/15, **mbtmp4.6**/3, **2C-2D, Error ellipse: s-maj=168.4km s-min=47.1km az=139.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	35.13	259	eP	P	04 24 05.9	+1.2
	1.5nm,0.4s						
STKA	**Stephens Creek**	40.52	240	eP	P	04 24 49.0	-0.8
	2.6nm,0.6s						
STKA	**Stephens Creek**	40.52	240	P	P	04 24 48.6	-1.2
	4.7nm,0.7s,baz=92,slow=9.7,SNR=9.7						
WB2	**Warramunga Arr**	46.31	258	⇓iP	P	04 25 34.8	-2.1
WRA	**Warramunga Arr**	46.32	258	P	P	04 25 35.0	-2.0
	2.5nm,0.4s,baz=95,slow=7.1,SNR=125						
ASAR	**Alice Springs**	46.56	253	P	P	04 25 36.8	-2.0
	14nm,0.6s,baz=87,slow=8.7,SNR=194						
ASPA	**Alice Springs**	46.56	253	⇓iP	P	04 25 36.7	-2.1
KAKA	**Kakadu**	49.11	267	⇑iP	P	04 25 57.8	-1.0
	3.4nm,0.4s						
FITZ	**Fitzroy Crossi**	54.70	259	⇑iP	P	04 26 37.5	-3.4
	1.4nm,0.4s						
GERES	**GERESS Array B**	146.79	347	PKPbc	PKPbc	04 36 50.7	-0.3
	0.4nm,0.5s,slow=2.9,SNR=4.8						

IDC 25 04:43:03.8±3.5, **5.58N**×**93.03E**, **mb3.8**/3, **mb1 4.0**/4, **mb1mx3.6**/18, **mbtmp3.8**/4, **Error ellipse: s-maj=109.2km s-min=29.8km az=67.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	14.04	24	Pn	P	04 46 25.6	-0.9
	baz=218,slow=15,SNR=4.3						
SONM	**Songino Array**	43.63	13	P	P	04 51 09.5	-2.2
	0.7nm,0.6s,baz=193,slow=7.5,SNR=9.0						
WRA	**Warramunga Arr**	47.88	123	P	P	04 51 44.1	-1.9
	0.7nm,0.7s,baz=302,slow=9.0,SNR=10						
ZAL	**Zalesovo**	48.68	354	P	P	04 51 50.0	-1.7
	0.6nm,0.6s,baz=239,slow=5.0,SNR=3.3						

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*IDC **25** 04:49:15.4±0.7, 14.02N×93.30E, mb3.9/9, mb1 4.1/10, mb1mx3.9/18, mbtmp3.9/10, ML4.1/1, MS3.3/2, Ms1 3.4/2, ms1mx3.1/20, Error ellipse: s-maj=27.1km s-min=18.2km az=55.0*

*NEIC **25** 04:49:20.1±0.5, 14.05N×93.30E, h30^{km}, mb4.1/5, Error ellipse: s-maj=10.7km s-min=7.5km az=49.0*

ISC 25 04:49:17.9±0.7, **14.02N**±0.09×**93.30E**±0.07, **h30**^{km}**, n31, σ0**^{s}**89**/35, **mb4.0**/12, **MS3.9**/1, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	6.99	50	Pn	Pn	04 51 00.0	-0.9
	1.0nm,0.3s,baz=238,slow=12,SNR=6.4						
CMAR				Sn	Sn	04 52 15.4	-4.7
	0.4nm,0.3s,baz=238,slow=28,SNR=3.8						
CMAR				LR	LR	04 54 13.4	
	comp=Z,75nm,19.7s,baz=238,slow=43						
BWNR	**Bhubaneshwar**	9.50	312	eP	P	04 51 35.0	-0.8
BWNR				eS	Sn	04 53 10.9	-12
BWNR				e		04 53 11.4	
	comp=E,180nm,0.3s						
BWNR				e		04 53 11.6	
	comp=N,124nm,0.3s						
VIS	**Vishakhapatnam**	10.28	292	eP	P	04 51 44.4	-2.2
VIS				e		04 51 48.5	
VIS				eS	S	04 53 30.7	-11
VIS				e		04 53 34.9	
	comp=N,67nm,0.5s						
VIS				e		04 53 35.0	
	comp=E,46nm,0.1s						
BLSP	**Bilaspur**	13.33	309	eP	P	04 52 26.9	-0.9
BLSP				eS	S	04 54 42.2	-14
BLSP				e		04 54 49.8	
	comp=N,29nm,0.1s						
BLSP				e		04 54 50.5	
	comp=E,19nm,0.2s						
HYB	**Hyderabad**	14.60	285	eP	P	04 52 44.0	-0.5
HYB				eS	S	04 55 20.0	-6.0
HYB	**Hyderabad**	14.60	285	i P	P	04 52 44.0	-0.5
HYB				eS	S	04 55 20.0	-6.0
HYB				eS	S	04 55 28.5	+2.5
JIRN	**Jiri**	15.10	335	eP	P	04 52 51.3	+0.2
	comp=E,8.5nm,0.3s						
PKI	**Pulchoki**	15.36	333	eP	P	04 52 54.3	-0.1
	comp=E,7.7nm,0.2s						
DMN	**Daman**	15.53	332	eP	P	04 52 56.9	+0.3
	comp=E,8.5nm,0.5s						
KKN	**Kakani**	15.61	333	eP	P	04 52 57.6	0.0
	comp=E,11nm,0.5s						
GKN	**Gorkha**	16.08	331	eP	P	04 53 03.8	+0.2
	comp=E,8.5nm,0.2s						
KOLN	**Koldanda**	16.40	328	eP	P	04 53 07.2	-0.5
	comp=E,6.5nm,0.2s						
BHPL	**Bhopal**	17.61	304	e	P	04 53 23.8	+0.9
	comp=Z,2.6nm,0.4s						
POO	**Poona**	19.20	286	e	S	04 57 05.0	-6.9
SONM	**Songino Array**	35.43	15	P	P	04 56 14.0	+0.6
	comp=Z,0.9nm,0.7s,mb3.8,baz=202,slow=7.5,SNR=7.5						
KURK	**Kurchatov**	38.49	345	eP	P	04 56 39.5	+0.5
	comp=Z,4.4nm,1.1s,mb4.1						
ZAL	**Zalesovo**	40.38	352	P	P	04 56 55.0	+0.3
	comp=Z,2.2nm,0.5s,mb4.2,baz=304,slow=8.4,SNR=7.8						
CHKZ	**Chkalovo**	43.42	340	eP	P	04 57 20.2	+0.5
	comp=Z,3.6nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	52.62	129	P	P	04 58 31.1	-0.6
	comp=Z,0.8nm,0.9s,mb3.7,baz=312,slow=8.3,SNR=7.1						
WRA				PcP	PcP	04 59 41.3	-0.2
	comp=Z,0.2nm,0.5s,baz=319,slow=3.2,SNR=5.9						
ASAR	**Alice Springs**	54.58	133	P	P	04 58 45.6	-0.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=312,slow=6.7,SNR=7.5						
BRTR	**Keskin Array B**	57.91	308	P	P	04 59 09.5	-0.2
	comp=Z,1.5nm,0.7s,mb4.1,baz=121,slow=7.2,SNR=8.9						
FINES	**FINESS Array B**	66.94	331	P	P	05 00 08.2	-1.3
	comp=Z,0.9nm,0.5s,mb4.1,baz=104,slow=7.9,SNR=9.6						
KAF	**Kangasniemi**	66.99	332	ep	P	05 00 12.0	+2.1
	comp=Z,0.2nm,0.3s,mb3.6						
KEV	**Kevo**	68.81	340	ep	pP	05 00 33.6	+3.1
	comp=Z,6.8nm,0.9s						
MATP	**Matopo**	72.30	243	P	P	05 00 44.5	+1.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=84,slow=6.2,SNR=4.5						
GERES	**GERESS Array B**	72.75	317	P	P	05 00 46.0	+0.8
	comp=Z,1.4nm,0.6s,mb4.1,baz=85,slow=6.4,SNR=17						
NB2	**NORSAR Subarra**	74.02	330	P	P	05 00 52.4	0.0
	comp=Z,0.6nm,0.5s,mb3.8,baz=91,slow=5.8						
NOA	**NORSAR Array B**	74.02	330	P	P	05 00 52.7	+0.3
	comp=Z,0.8nm,0.6s,mb3.8,baz=91,slow=5.7,SNR=4.4						
NOA	**NORSAR Array B**	74.02	330	P	P	05 00 52.7	+0.3
LBTB	**Lobatse**	76.54	240	LR	LR	05 28 00.4	
	comp=Z,71nm,22.0s,MS3.9,baz=231,slow=30						
PLCA	**Paso Flores**	149.88	205	PKPbc	PKPdf	05 09 07.9	+2.3
	comp=Z,0.7nm,0.7s,baz=166,slow=1.5,SNR=4.1						

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*IDC **25** 05:11:58.4±0.5, 48.80S×8.76W, mb4.8/13, mb1 4.8/13, mb1mx4.6/17, mbtmp4.8/13, MS4.4/11, Ms1 4.4/11, ms1mx4.0/15, Error ellipse: s-maj=18.0km s-min=15.5km az=141.0*

*BJI **25** 05:11:59.9, 48.80S×8.60W, h10^{km}, mB5.4, Ms5.4, Msz4.6*

*HRVD **25** 05:11:59.9±0.3, 49.10S×8.36W, h12^{km}, MW5.0/60, Centroid moment Tensor Solution. LP body waves: s33,c45;Mantle waves: s60,c106; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.68±.14; $M_{\theta\theta}$2.56±.15; $M_{\phi\phi}$-4.24±.11; $M_{r\theta}$-0.60±.42; $M_{\theta\phi}$0.36±.12; $M_{\phi r}$2.20±.33; Best double couple: $M_0$3.988×10^{16} NP1:ϕ_s221°,δ49°, λ164°. NP2:ϕ_s322°,δ78°,λ42°. Principal axes: T 2.97, Plg38°, Azm191°; N 2.035, Plg46°, Azm335°; P -5.005, Plg19°, Azm86°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **25** 05:11:59.9±0.2, 48.84S×8.59W, h10^{km}, mb5.0/22 Error*

ellipse: s-maj=7.0km s-min=6.6km az=123.0

ISC 25 05:11:58.7±0.3**,48.82S**±0.07×**8.63W**±0.09**,h10^{km},n109,** σ**0^{s}93**/49**,mb4.9**/29**,MS4.5**/14**,5C,Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	21.90	180	*e*	P	05 17 00.5	+7.1
VNA1	Neumayer--Stat	21.90	180	*e*	P	05 17 02.1	+8.7
VNA1	Neumayer--Stat	21.90	180	⇑*i*P	P	05 16 54.2	+0.8
VNA1				*e*		05 17 00.5	
VNA1				*e*		05 17 02.1	
VNA1				*e*		05 17 16.2	
VNA2	Neumayer--Watz	22.18	179	*e*	P	05 17 02.9	+6.7
VNA2	Neumayer--Watz	22.18	179	⇑*i*P	P	05 16 56.8	+0.6
VNA2				*e*		05 17 02.9	
VNA2				*e*		05 17 19.6	
VNA3	Neumayer Olymp	22.50	181	*e*	P	05 17 05.0	+5.8
VNA3	Neumayer Olymp	22.50	181	*e*	P	05 17 06.5	+7.3
VNA3	Neumayer Olymp	22.50	181	⇑*i*P	P	05 16 58.9	-0.3
VNA3				*e*		05 17 06.5	
VNA3				*e*		05 17 21.8	
SNAA	Sanae	23.08	175	*e*	P	05 17 12.3	+7.4
SNAA	Sanae	23.08	175	*e*	P	05 17 14.4	+10
SNAA	Sanae	23.08	175	P	P	05 17 05.8	+0.9
	13nm,0.9s,mb4.4,baz=345,slow=8.6,SNR=26						
SNAA	Sanae	23.08	175	⇑*i*P	P	05 17 06.0	+1.1
SNAA				*e*		05 17 12.3	
SNAA				*e*		05 17 14.4	
SNAA				*e*		05 17 27.9	
SUR	Sutherland	27.51	64	P	P	05 17 47.3	+0.2
	15nm,0.9s,mb4.6,baz=220,slow=8.9,SNR=6.1						
SUR				LR	LR	05 25 42.5	
	comp=Z,774nm,20.5s,MS4.3,baz=198,slow=30						
SUR	Sutherland	27.51	64	*e*P	P	05 17 46.5	-0.6
	22nm,0.9s,mb4.8						
BOSA	Boshof	32.87	65	*e*P	P	05 18 34.0	-0.8
	13nm,0.9s,mb4.9						
PMSA	Palmer Station	32.98	220	*e*P	P	05 18 36.6	+1.2
	74nm,0.7s,mb5.7						
LBTB	Lobatse	35.77	61	P	P	05 18 59.6	-0.2
	14nm,1.0s,mb4.8,baz=233,slow=10.0,SNR=13						
LBTB	Lobatse	35.77	61	*e*P	P	05 18 59.8	0.0
	17nm,1.0s,mb4.9						
TSUM	Tsumeb	36.32	45	P	P	05 19 05.0	+0.5
	22nm,0.8s,mb5.1,baz=202,slow=8.8,SNR=35						
TSUM	Tsumeb	36.32	45	*e*P	P	05 19 04.8	+0.4
	23nm,0.8s,mb5.2						
USHA	Ushuaia	36.44	237	LR	LR	05 29 41.4	
	comp=Z,332nm,19.1s,MS4.1,baz=86,slow=29						
MAW	Mawson	39.33	145	P	P	05 19 28.9	-0.3
	28nm,1.0s,mb4.9,baz=275,slow=13,SNR=10						
MAW				LR	LR	05 31 55.0	
	comp=Z,448nm,20.3s,MS4.3,baz=267,slow=30						
MAW	Mawson	39.33	145	*e*P	P	05 19 26.9	-2.3
	50nm,1.1s,mb5.2						
TRQA	Tornquist	39.45	265	*e*P	P	05 19 30.4	-0.1
	29nm,1.4s,mb4.8						
MATP	Matopo	41.02	60	P	P	05 19 43.6	+0.1
	14nm,0.7s,mb4.7,baz=216,slow=7.8,SNR=35						
QSPA	South Pole Qui	41.44	180	*e*P	P	05 19 46.9	+0.5
	66nm,1.1s,mb5.2						
PLCA	Paso Flores	43.59	256	P	P	05 20 02.8	-1.6
	5.4nm,0.7s,mb4.4,baz=120,slow=6.6,SNR=20						
PLCA				LR	LR	05 34 55.1	
	comp=Z,470nm,21.7s,MS4.4,baz=118,slow=32						
PLCA	Paso Flores	43.59	256	*e*P	P	05 20 04.0	-0.3
	6.0nm,0.8s,mb4.4						
LSZ	Lusaka	45.00	55	*e*P	P	05 20 16.1	+0.1
	12nm,1.3s,mb4.6						
BAO	Brasilia Array	46.10	302	⇑P	P	05 20 25.1	+0.3
BDFB	Brasilia	46.11	302	P	P	05 20 24.7	-0.2
	44nm,1.3s,mb5.2,baz=141,slow=4.8,SNR=24						
BDFB				LR	LR	05 36 22.0	
	comp=Z,745nm,18.2s,MS4.7,baz=174,slow=32						
RCBR	Riachuelo	48.69	323	*e*P	P	05 20 45.0	-0.1
	19nm,1.0s,mb5.1						
SBA	Scott Base	53.57	179	*e*P	P	05 21 18.7	-2.5
	51nm,1.5s,mb5.2						
VNDA	Vanda	53.80	177	P	P	05 21 23.3	+0.4
	14nm,1.0s,mb4.8,baz=220,slow=8.5,SNR=14						
VNDA				LR	LR	05 42 50.0	
	comp=Z,574nm,18.9s,MS4.7,baz=188,slow=34						
VNDA	Vanda	53.80	177	*e*P	P	05 21 20.2	-2.6
	35nm,1.3s,mb5.1						
VNDA				LR	LR	05 42 50.0	
LVC	Limon Verde	53.87	276	LR	LR	05 42 09.4	
	comp=Z,350nm,18.6s,MS4.5,baz=147,slow=34						
LVC	Limon Verde	53.87	276	*e*P	P	05 21 24.4	+0.3
	38nm,1.0s,mb5.3						
DBIC	Dimbokro	55.35	5	P	P	05 21 34.0	-1.2
	10nm,1.0s,mb4.8,baz=152,slow=7.8,SNR=6.6						
DBIC				LR	LR	05 39 36.0	
	comp=Z,276nm,18.9s,MS4.4,baz=165,slow=30						
DBIC	Dimbokro	55.35	5	*e*P	P	05 21 33.9	-1.2
	23nm,1.4s,mb5.0						
LPAZ	La Paz	57.90	282	*e*P	P	05 21 52.4	-0.8
	6.4nm,0.9s,mb4.7						
MBAR	Mbarara	58.75	48	*e*P	P	05 21 59.5	+0.2
	5.8nm,0.8s,mb4.7						
ARE	Arequipa	59.96	279	*e*P	P	05 22 08.0	+0.5
SAML	Samuel	60.35	292	*e*P	P	05 22 09.0	-1.2
	26nm,0.9s,mb5.3						
KMBO	Kilima Mbogo	61.66	55	LR	LR	05 47 39.7	
	comp=Z,517nm,19.4s,MS4.7,baz=269,slow=35						
NNA	Nana	66.74	279	*e*P	P	05 22 51.4	-0.8
	20nm,0.9s,mb5.2						
OTAV	Otavalo	77.00	286	*e*P	P	05 23 54.2	+0.7
	28nm,1.4s,mb5.0						
ROSC	El Rosal	78.00	292	P	P	05 24 00.5	+1.6
	3.2nm,0.6s,mb4.4,baz=94,slow=16,SNR=4.5						
ROSC				LR	LR	05 56 41.1	
	comp=Z,322nm,18.4s,MS4.7,baz=204,slow=34						
SDV	Santo Domingo	78.96	297	*e*P	P	05 24 03.8	-0.4
	10nm,0.9s,mb4.8						
RAYN	Ar Rayn	86.70	48	P	P	05 24 47.2	+3.3
	58nm,1.0s,mb5.8,SNR=10.0						
ESDC	Sonseca Array	88.21	4	P	P	05 24 50.7	-0.1
	2.6nm,0.9s,mb4.5,baz=182,slow=4.7,SNR=11						
JTS	JuntasAbangare	88.82	287	*e*P	P	05 24 54.8	+0.5
	7.5nm,0.9s,mb5.0						
STKA	Stephens Creek	95.38	155	LR	LR	06 05 45.6	
	comp=Z,135nm,19.2s,MS4.4,baz=206,slow=34						
BRTR	Keskin Array B	95.77	31	P	P	05 25 27.4	+1.5
	1.9nm,1.0s,mb4.5,baz=180,slow=8.6,SNR=7.7						
BRTR				PP	PP	05 29 13.9	-6.0
	0.9nm,0.7s,baz=191,slow=6.3,SNR=5.0						
KOLN	Koldanda	111.75	72	*e*P	PKPdf	05 30 34.5	-1.9
	8.2nm,0.8s						
DMN	Daman	112.59	74	*e*P	PKPdf	05 30 36.6	-1.5
PKI	Pulchoki	112.76	74	*e*P	PKPdf	05 30 36.7	-1.7
	12nm,0.9s						
GUN	Gumba	113.29	74	*e*P	PKPdf	05 30 37.3	-2.2
JIRN	Jiri	113.32	74	*e*P	PKPdf	05 30 37.9	-1.7
	9.9nm,0.8s						
TXAR	Lajitas Array	114.61	287	PKP	PKPdf	05 30 38.5	-3.5
	0.4nm,0.8s,baz=225,slow=1.8,SNR=4.4						
MNTX	Cornudas Mount	117.30	288	*e*PKPdf	PKPdf	05 30 45.3	-1.9
ANMO	Albuquerque	120.12	290	PKP	PKPdf	05 30 48.9	-3.7
	2.6nm,1.0s,baz=213,slow=2.8,SNR=5.0						
TUC	Tucson	121.13	285	*e*PKPdf	PKPdf	05 30 53.0	-1.6
FRB	Frobisher Bay	121.65	333	PKP	PKPdf	05 30 51.5	-3.3
	3.1nm,0.9s,baz=134,slow=5.0,SNR=5.8						
CHKZ	Chkalovo	122.00	44	*e*PKPdf	PKPdf	05 30 53.5	-2.2
KMI	Kunming	122.36	88	PKP	PKPdf	05 30 54.3	-2.8
KMI				XPKP		05 31 02.0	
KMI				PP	PP	05 32 32.9	-1.7
KMI				SS	SS	05 49 15.8	+4.0
KMI				LR	LR		
	comp=N,140nm,21.9s,MS4.8						
KMI				LR	LR		
	comp=E,165nm,20.9s,MS4.8						
KMI				LR	LR		
	comp=Z,125nm,21.9s,MS4.5						
KMI	Kunming	122.36	88	PKP	PKPdf	05 30 54.2	-2.9
KMI				sPKP		05 31 02.0	
KMI				PP	PP	05 32 32.9	-1.7
KMI				SS	SS	05 49 15.7	+3.9
KMI				LR	LR		
	comp=Z,130nm,21.9s,MS4.5						
ISCO	Idaho Springs	122.71	295	*e*PKPdf	PKPdf	05 30 56.1	-1.3
WMQ	Urumqi	124.79	61	*e*PKP	PKPdf	05 30 58.0	-3.4
SRU	San Rafael	125.27	291	*e*PKPdf	PKPdf	05 31 00.6	-1.8
TMUT	Trail Mountain	125.80	291	*e*PKPdf	PKPdf	05 31 01.2	-2.2
GYA	Guiyang	125.86	90	PKP	PKPdf	05 31 04.4	+0.5
GYA				PP	PP		
	comp=Z,110nm,6.3s						
MSU	Marysvale	125.93	290	*e*PKPdf	PKPdf	05 31 02.4	-1.3
MVU	Marysvale	125.95	290	*e*PKPdf	PKPdf	05 31 02.2	-1.5
DAU	Daniels Canyon	126.50	292	*e*PKPdf	PKPdf	05 31 03.6	-1.0
JLU	Jordanelle	126.74	292	*e*PKPdf	PKPdf	05 31 03.2	-1.9
PDAR	Pinedale Array	126.87	295	PKP	PKPdf	05 31 02.1	-3.1
	comp=Z,2.3nm,0.8s,baz=111,slow=2.8,SNR=20						
BW06	Boulder Array	126.87	295	*e*PKPdf	PKPdf	05 31 02.8	-2.5
HWUT	Hardware Ranch	127.40	293	*e*PKPdf	PKPdf	05 31 04.2	-2.1
LOHW	Long Hollow	127.98	296	*e*PKPdf	PKPdf	05 31 05.5	-2.0
TPAW	Teton Pass	128.12	295	*e*PKPdf	PKPdf	05 31 06.1	-1.7
MOOW	Moose Ponds	128.14	296	*e*PKPdf	PKPdf	05 31 06.2	-1.6
ELK	Elko	129.16	290	PKP	PKPdf	05 31 08.5	-1.3
	comp=Z,3.9nm,0.9s,baz=132,slow=1.9,SNR=17						
ELK	Elko	129.16	290	*e*PKPdf	PKPdf	05 31 08.8	-1.0
GTA	Gaotai	129.53	72	*e*PKP	PKPdf	05 31 09.3	-1.3
MNV	Mina	129.64	286	*e*PKPdf	PKPdf	05 31 10.2	-0.7
BOZ	Bozeman (W)	129.72	297	*e*PKPdf	PKPdf	05 31 09.6	-1.2
NVAR	Mina Array Bea	129.74	286	PKP	PKPdf	05 31 09.8	-1.2
	comp=Z,2.2nm,0.9s,baz=127,slow=3.1,SNR=11						
HLID	Hailey	130.24	294	*e*PKPdf	PKPdf	05 31 10.6	-1.2
BMO	Blue Mountains	132.69	294	*e*PKPdf	PKPdf	05 31 14.5	-2.0
NEW	Newport	134.30	298	PKP	PKPdf	05 31 15.1	-4.2
	comp=Z,1.5nm,0.6s,baz=162,slow=3.2,SNR=3.0						
NJ2	Nanjing	137.55	93	*e*PKP	PKPdf	05 31 21.8	-3.9
NJ2				PP	PP	05 34 13.0	+0.3
NJ2				PKS	PKS	05 34 57.0	-0.7
NJ2				PPP	PPP	05 37 14.0	+0.3
NJ2				SKS	SKS	05 38 27.0	-8.6
NJ2				PP	PP		
	comp=Z,120nm,10.2s						
NJ2				LR	LR		
	comp=N,320nm,25.6s,MS5.1						
NJ2				LR	LR		
	comp=E,330nm,26.7s,MS5.1						
NJ2				LR	LR		
	comp=Z,300nm,28.7s,MS4.9						
HHC	Hu-ho-hao-te	137.83	78	*e*PKP	PKPdf	05 31 23.1	-2.9
HHC				PP	PP	05 34 15.6	+1.2
HHC				PKS	PKS	05 34 59.9	+2.0
HHC				SKS	SKS	05 38 27.1	-8.7
HHC				PP	PP		
	comp=Z,79nm,10.8s						
SONM	Songino Array	137.98	66	PKP	PKPdf	05 31 23.2	-2.9
	comp=Z,3.0nm,1.0s,baz=234,slow=1.1,SNR=17						
YKA	Yellowknife Ar	138.51	318	PKhKP		05 31 11.4	
	comp=Z,0.7nm,0.9s,baz=105,slow=3.0,SNR=4.3						
YKA				PKP	PKPdf	05 31 23.1	-3.5
	comp=Z,1.6nm,0.8s,baz=107,slow=2.2,SNR=15						
YKA				PP	PP	05 34 19.6	+1.6
	comp=Z,0.6nm,0.9s,baz=107,slow=7.4,SNR=5.7						
YKA	Yellowknife Ar	138.51	318	PKP	PKPdf	05 31 23.1	-3.5
YKA				PP	PP	05 34 19.6	+1.6
YKW3	Yellowknife Ar	138.54	318	*e*PKPdf	PKPdf	05 31 24.9	-1.8
BJI	Beijing	140.40	81	PKP	PKPdf	05 31 29.5	-1.2
BJI				LR	LR		
	comp=Z,113nm,26.4s,MS4.5						
DLBC	Dease Lake	145.02	308	PKP	PKPdf	05 31 36.5	-1.6
	comp=Z,33nm,0.9s,baz=94,slow=1.8,SNR=45						
DLBC	Dease Lake	145.02	308	*e*PKPdf	PKPdf	05 31 36.9	-1.1
HIA	Hailar	146.70	69	*e*PKPbc	PKPbc	05 31 41.5	+1.9
INK	Inuvik	146.85	326	PKPbc	PKPbc	05 31 40.4	+1.0
	comp=Z,26nm,1.1s,baz=87,slow=3.6,SNR=57						
INK	Inuvik	146.85	326	*e*PKPdf	PKPdf	05 31 39.8	-1.0
CN2	Changchun	148.27	81	*e*PKP	PKPdf	05 31 40.4	-3.5
DAWY	Dawson	149.74	319	*e*PKPbc	PKPdf	05 31 48.3	+2.7
MDJ	Mudanjiang	151.32	82	PKP	PKPdf	05 31 48.4	-0.2
ILAR	Eielson Array	152.79	321	PKP	PKPdf	05 31 46.7	-3.4
	comp=Z,1.0nm,0.9s,baz=344,slow=0.7,SNR=9.7						
ILAR				PKPbc	PKPdf	05 31 54.8	+4.6
	comp=Z,4.1nm,0.8s,baz=343,slow=1.8,SNR=28						
COLA	College	153.16	322	*e*PKPbc	PKPdf	05 31 56.4	+5.8
COLA				*e*PKPab	PKPab	05 32 08.9	-0.3
IMA	Indian Mountai	154.98	326	*e*PKPab	PKPab	05 32 17.4	+0.6
BILL	Bilibino	160.56	6	*e*PKPdf	PKPdf	05 31 57.2	-2.7
BILL				*e*PKPab	PKPab	05 32 40.4	-0.3

CSEM ***25*** *05:35:26.6±0.1,30.81N×50.32E,h10^{km},ML3.5,Error ellipse: s-maj=5.0km s-min=2.0km az=42.0*

THR ***25*** *05:35:27.0±0.5,30.65N×50.31E,h35^{km}±7^{km},ML3.5*

TEH ***25*** *05:35:29.3,30.85N×50.38E,h10^{km},Mn3.6*

ISC 25 05:35:26.3±0.8**,30.74N**±0.08×**50.22E**±0.09**,h10^{km},n15,** σ**1^{s}10**/16**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBRJ	Borojen	1.35	41	Pn	Pn	05 35 52.1	+0.7
SHGR	Shooshtar-Gavs	1.83	319	*e*PG	Pg	05 36 01.7	-1.2
SHGR				*e*SG	Sg	05 36 27.1	-0.1
SHGR				AML	AML	05 36 45.9	
	comp=N,511nm,0.4s						
SHI	Shiraz	2.27	118	Pn	Pn	05 36 05.8	+1.4
IMOK	Mook	2.75	127	Pn	Pn	05 36 12.5	+1.2
ISRV	Sarvestan	2.85	118	Pn	Pn	05 36 12.4	-0.3
NASN	Na'in	3.01	46	*e*PN	Pn	05 36 14.8	-0.3
GHIR	Ghir-Karzin	3.43	135	*e*PN	Pn	05 36 18.7	-2.4
GHIR				AML	AML	05 37 03.0	
	comp=N,114nm,0.4s						
ASAO	Ashtian	3.80	358	*e*PN	Pn	05 36 27.1	+0.8
ASAO				AML	AML	05 37 19.6	
	comp=N,37nm,0.8s						
ASAO	Ashtian	3.80	358	*e*Pn	Pn	05 36 27.0	+0.7
	SNR=54						
ICHK	Chekchek	3.88	66	Pn	Pn	05 36 26.0	-1.3
IKOM	Komasi	4.12	327	Pn	Pn	05 36 33.4	+2.6
IVIS	Veys	4.72	324	Pn	Pn	05 36 39.8	+0.4
SNGE	Sanandaj	4.97	332	*e*PN	Pn	05 36 43.0	+0.1
SNGE				AML	AML	05 37 44.0	
	comp=N,47nm,0.6s						
DAMV	Damavand	5.09	16	*e*PN	Pn	05 36 44.1	-0.5
IDHR	Dehrash	5.10	322	Pn	Pn	05 36 43.8	-0.9

NEIC ***25*** *06:13:53.6±0.6,51.59N×16.16E,h5^{km},ML3.4(VIE), ML3.3(SZGRF),ML2.9(CLL),ML2.8(BRG),Error ellipse: s-maj=6.5km s-min=4.8km az=216.0*

MOS ***25*** *06:13:53.4±1.0,51.63N×16.07E,h10^{km},mb3.8/1,Error ellipse: s-maj=13.3km s-min=6.1km az=82.1*

IPEC ***25*** *06:13:53.7±0.2,51.60N×16.16E,ML2.6/4,Error ellipse: s-maj=1.6km s-min=1.3km az=11.0*

WAR ***25*** *06:13:55.4,51.54N×16.06E,h1^{km},ML3.2,Mining Induced*

PRU ***25*** *06:13:55.6,51.52N×16.03E*

BGR ***25*** *06:13:55.6±0.8,51.47N×16.05E,h1^{km},ML3.3/5,Error ellipse: s-maj=7.8km s-min=7.8km az=141.0*

IDC ***25*** *06:13:55.3±0.9,51.48N×16.05E,mb1 3.1/4, mb1mx3.1/18,mbtmp3.0/4,ML2.9/4,Error ellipse: s-maj=14.9km s-min=7.7km az=117.0*

CSEM ***25*** *06:13:56.1±0.1,51.48N×16.07E,h2^{km},ML3.5/3,Error ellipse: s-maj=2.5km s-min=1.3km az=18.0*

ISC 25 06:13:53.6±0.5**,51.47N**±0.03×**16.02E**±0.03**,n66,** σ**1^{s}26**/121**,3C-1D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	165	*e*PG	Pg	06 14 08.0	+1.4
KSP				*e*SG	Sg	06 14 18.0	+2.6
KSP	Ksiaz	0.65	165	⇓*i*Pg	Pg	06 14 08.4	+1.8
KSP				*e*Sg	Sg	06 14 17.7	+2.3
UPC	Upice	0.97	180	*e*PG	Pg	06 14 14.2	+1.3
DPC	Dobruska-Polom	1.14	170	*e*P	Pg	06 14 17.0	+0.7
DPC				*e*		06 14 32.4	
DPC				smax			
	comp=N,75nm,0.3s						
DPC	Dobruska-Polom	1.14	170	*e*PG	Pg	06 14 17.0	+0.7
DPC				*e*SG	Sg	06 14 32.4	+0.9
	comp=N,75nm,0.3s						
DPC	Dobruska-Polom	1.14	170	*e*Pg	Pg	06 14 17.1	+0.8
DPC				*e*Sg	Sg	06 14 32.6	+1.1
PVCC	Panska Ves	1.32	225	*e*PG	Pg	06 14 20.5	+0.6
PVCC	Panska Ves	1.32	225	Pg	Pg	06 14 20.5	+0.6
PVCC				*e*Sg	Sg	06 14 39.9	+2.4
BRG	Berggiesshubel	1.44	246	*e*Pg	Pg	06 14 22.9	+0.6
BRG				*e*Sg	Sg	06 14 43.0	+1.5
BRG	Berggiesshubel	1.44	246	*e*P	Pn	06 14 21.5	+0.5
BRG				*i*		06 14 43.0	
BRG	Berggiesshubel	1.44	246	*e*Pn	Pn	06 14 21.5	+0.5
BRG				*i* Pg	Pg	06 14 23.1	+0.8
BRG				*i* Sg	Sg	06 14 43.0	+1.5
BRG	Berggiesshubel	1.44	246	Pg	Pg	06 14 22.9	+0.6
BRG				*i* S	Sg	06 14 43.0	+1.5
PRU	Pruhonice	1.76	213	*e*P	Pn	06 14 26.4	+0.9
PRU				*e*		06 14 52.4	
PRU	Pruhonice	1.76	213	*e*PN	Pn	06 14 26.4	+0.9
PRU				*e*PG	Pg	06 14 28.3	-0.4
PRU				*e*SG	Sg	06 14 52.4	+0.2
PRU	Pruhonice	1.76	213	Pg	Pg	06 14 28.3	-0.4
PRU				Sg	Sg	06 14 52.4	+0.2
CLL	Collm	1.90	266	*e*Pn	Pn	06 14 27.5	-0.1
CLL				*e*Sg	Sg	06 14 57.0	+0.2
CLL	Collm	1.90	266	*i* P	Pn	06 14 27.5	0.0
CLL				*i*		06 14 56.8	
CLL	Collm	1.90	266	*i* Pn	Pn	06 14 27.5	0.0
CLL				*i* Pg	Pg	06 14 30.4	-1.1
CLL				*i* Sg	Sg	06 14 56.8	0.0
CLL	Collm	1.90	266	*i* PN	Pn	06 14 27.5	0.0
CLL				*i* PG	Pg	06 14 30.4	-1.1
CLL				*e*		06 14 34.0	
CLL				*i* SG	Sg	06 14 56.8	0.0
CLL	Collm	1.90	266	*i* Pg	Pg	06 14 30.4	-1.1
CLL				Sg	Sg	06 14 57.0	+0.2
GKP	Gorka Klasztor	1.95	22	*e*Pn	Pn	06 14 35.9	+7.7
GKP				*e*Sg	Sg	06 15 04.4	+6.0
GKP	Gorka Klasztor	1.95	22	*e*Pn	Pn	06 14 35.9	+7.6
GKP				*e*Sg	Sg	06 15 04.4	+6.0
MORC	Moravsky Berou	1.96	150	*e*Pn	Pn	06 14 28.6	+0.3
MORC				*e*Sg	Sg	06 14 57.1	-1.6
	comp=N,33nm,0.3s						
RAC	Raciborz	1.96	134	*e*P	Pn	06 14 32.0	+3.6
RAC				*e*S	Sn	06 14 58.0	+4.0
OKC	Ostrava-Krasne	2.12	140	*e*P	Pg	06 14 34.6	-1.4
OKC				*e*		06 15 01.9	
OKC				smax			
	comp=N,74nm,0.6s						
OKC	Ostrava-Krasne	2.12	140	*e*PG	Pg	06 14 34.6	-1.4
OKC				*e*SG	Sg	06 15 01.9	-2.4
	comp=N,74nm,0.6s						
OKC	Ostrava-Krasne	2.12	140	Pg	Pg	06 14 34.6	-1.4
OKC				*e*S	Sg	06 15 01.9	-2.4
OKC				*e*Sg	Sg	06 15 02.4	-1.9
VRAC	Vranov	2.20	170	P	Pn	06 14 33.0	+1.2
VRAC						06 15 04.9	
VRAC	Vranov	2.20	170	Pn	Pn	06 14 33.0	+1.2
	comp=N,1.0nm,0.3s,baz=346,slow=16,SNR=7.3						
VRAC				Pg	Pg	06 14 36.7	-0.8
	comp=N,2.5nm,0.3s,baz=342,slow=17,SNR=8.0						
VRAC				Lg		06 15 04.9	
	comp=N,5.1nm,0.3s,baz=64,slow=19,SNR=5.3						
VRAC	Vranov	2.20	170	Pg	Pg	06 14 36.7	-0.8
VRAC				S	Sn	06 15 04.9	+4.8
VRAC				*e*Sg	Sg	06 15 05.9	-0.9
	comp=N,43nm,0.3s						
KRUC	Moravsky	2.43	174	*e*Pn	Pn	06 14 36.5	+1.4
KRUC				*e*Sg	Sg	06 15 13.9	-0.4
	comp=N,18nm,0.3s						
TANN	Tannenbergstha	2.49	246	*e*Pn	Pn	06 14 37.2	+1.2
TANN				*e*Sg	Sg	06 15 16.1	-0.3
WERD	Werda	2.56	248	*e*Pn	Pn	06 14 37.4	+0.3
NKC	Novy Kostel	2.58	243	*e*P	Pn	06 14 38.3	+1.0
NKC				*e*		06 15 18.8	
NKC	Novy Kostel	2.58	243	*e*PN	Pn	06 14 38.3	+1.0
NKC				*e*PG	Pg	06 14 44.6	-0.5
NKC				*e*SG	Sg	06 15 18.8	-0.8
NKC	Novy Kostel	2.58	243	Pg	Pg	06 14 44.6	-0.5
NKC				Sg	Sg	06 15 18.8	-0.8
OJC	Ojcow	2.70	116	*e*P	Pn	06 14 36.8	-2.2
OJC				*e*		06 15 22.0	
OJC	Ojcow	2.70	116	*e*Pn	Pn	06 14 36.8	-2.2
OJC				*e*Pg	Pg	06 14 46.9	-0.6
OJC				*e*Sg	Sg	06 15 22.0	-1.6
OJC	Ojcow	2.70	116	*e*Pn	Pn	06 14 37.7	-1.3
KHC	Kasperske Hory	2.82	215	*e*P	Pn	06 14 40.8	+0.1
KHC				*e*		06 15 16.0	
KHC	Kasperske Hory	2.82	215	*e*PN	Pn	06 14 40.8	+0.1
KHC				*e*PG	Pg	06 14 47.4	-2.5
KHC				*e*SN	Sn	06 15 16.0	+0.1
KHC				*e*SG	Sg	06 15 26.0	-1.5
KHC	Kasperske Hory	2.82	215	Pg	Pg	06 14 47.4	-2.5
KHC				*e*S	Sn	06 15 16.0	+0.1
KHC				Sg	Sg	06 15 26.0	-1.5
MOX	Moxa	2.90	255	*e*Pn	Pn	06 14 42.0	+0.1
MOX				*e*Sg	Sg	06 15 29.4	-0.7
MOX	Moxa	2.90	255	*e*Pg	Pg	06 14 50.0	-1.5
MOX				*e*Sg	Sg	06 15 29.1	-1.1
GEC2	GERESS Array S	3.02	210	*e*Sg	Sg	06 15 31.6	-2.7
GERES	GERESS Array B	3.02	210	P	Pn	06 14 44.5	+0.9
GERES						06 15 31.0	
GERES	GERESS Array B	3.02	210	Pn	Pn	06 14 44.5	+0.9
	comp=N,1.6nm,0.3s,baz=28,slow=13,SNR=33						
GERES				Pg	Pg	06 14 51.0	-3.0
	comp=N,3.6nm,0.3s,baz=30,slow=15,SNR=18						
GERES				Lg		06 15 31.0	
	comp=N,7.7nm,0.3s,baz=32,slow=28,SNR=13						
GERES	GERESS Array B	3.02	210	Pg	Pg	06 14 51.0	-3.0
WET	Wettzell	3.08	222	*e*Pn	Pn	06 14 45.3	+0.9
WET				*e*Sg	Sg	06 15 33.8	-2.4
WET	Wettzell	3.08	222	*e*Pn	Pn	06 14 45.3	+0.9
WET				*e*Sg	Sg	06 15 33.8	-2.4
ZST	Bratislava	3.35	168	*e*	Sg	06 15 45.4	+0.1
NIE	Niedzica	3.43	125	*e*P	Pn	06 14 57.8	+8.4
NIE				*e*S	Sn	06 15 44.7	+13
VYHS	Vyhne	3.49	148	*e*Pn	Pn	06 14 53.1	+2.8
VYHS				*e*Pg	Pg	06 15 03.1	-0.2
VYHS				*e*Sg	Sg	06 15 51.9	+2.1
VYHS	Vyhne	3.49	148	*e*	Pn	06 14 53.1	+2.8
VYHS				*e*		06 15 03.1	
VYHS				*e*		06 15 51.9	
GRA1	Grafenberg Arr	3.54	242	*e*Pn	Pn	06 14 51.5	+0.5
GRA1	Grafenberg Arr	3.54	242	Pn	Pn	06 14 51.5	+0.5
GRF	Grafenberg Arr	3.54	242	*e*Pn	Pn	06 14 51.5	+0.5
BSD	Bornholm Skovb	3.71	350	*i* P	Pn	06 14 50.3	-3.0
BSD				*i* S	Sn	06 15 30.4	-8.0
BSD				*i* S	Sn	06 15 32.3	-6.1
BSD	Bornholm Skovb	3.71	350	*i* P	Pn	06 14 50.3	-3.0
BSD				*i* S	Sn	06 15 32.3	-6.1
MOA	Molln	3.80	198	⇑*i*PN	Pn	06 14 55.5	+0.8
MOA				*i* SG	Sg	06 15 59.0	-1.2
	comp=N,29nm,0.5s						
ARSA	Arzberg	4.24	185	⇑*i*PN	Pn	06 15 00.6	-0.3
ARSA				*i* SG	Sg	06 16 10.2	-4.5
	comp=N,16nm,0.5s						
CRVS	Cervenica-Dubn	4.34	124	*e*PG	Pg	06 15 20.6	+0.4
KBA	Koelnbreinsper	4.74	203	⇑*i*PN	Pn	06 15 11.4	+3.5
KBA				*i* SG	Sg	06 16 31.6	+0.4
	comp=N,15nm,0.5s						
AKASG	Malin Array Be	8.35	90	P	P	06 15 53.8	-5.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	8.35	90	Pn	P	06 15 53.8	-5.0
	comp=Z,0.6nm,0.3s,baz=278,slow=12,SNR=8.2						
FINES	FINESS Array B	11.42	25	Pn	P	06 16 34.7	-6.1
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=4.0						
FINES				Sn	S	06 18 36.0	-14
	comp=Z,0.1nm,0.3s,baz=215,slow=22,SNR=2.8						

NEIC ***25*** *06:36:17.2±0.9,3.71N×122.74E,h541^{km}±11^{km},mb4.7/11, Error ellipse: s-maj=15.5km s-min=4.8km az=52.0*

IDC ***25*** *06:36:18.8±1.4,3.63N×122.75E,h563^{km}±17^{km},mb3.5/14, mb1 3.6/14,mb1mx3.5/22,mbtmp4.5/14,Error ellipse: s-maj=25.7km s-min=7.9km az=60.0*

ISC 25 06:36:16.8±0.8**,3.68N**±0.07×**122.75E**±0.09**,h556^{km}**±10^{km}**, n56,** σ**0^{s}91**/61**,mb4.4**/28**,5C-1D,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSM	Tawau	4.90	277	P	P	06 37 46.4	-0.4
KKM	Kota Kinabalu	6.92	290	*e*Pn	P	06 38 04.0	-0.9
KKM	Kota Kinabalu	6.92	290	P	P	06 38 04.3	-0.7
LUBP	Lubang	10.29	346	*e*P	P	06 38 39.3	+0.8
KSM	Kuching	12.62	260	*e*Pn	P	06 39 02.2	+0.2
KAKA	Kakadu	18.92	150	⇑*i*P	P	06 40 03.9	+0.3
	81nm,0.6s						
KAKA				*e*SCP		06 46 46.1	
KGM	Kluang	19.47	266	P	P	06 40 09.8	+1.0
IPM	Ipoh	21.68	273	P	P	06 40 29.6	+0.5
FITZ	Fitzroy Crossi	21.83	173	*e*P	P	06 40 30.1	-0.3
	8.0nm,0.4s,mb4.7						
KULM	Kulim	22.09	275	*e*P	P	06 40 32.1	-0.7
WRAB	Tennant Creek	26.09	155	*e*P	P	06 41 07.3	-1.3
	48nm,0.6s,mb5.3						

WRA	Warramunga Arr	26.09	155	P	P	06 41 07.6	-1.0
	22nm,0.3s,mb5.2,baz=334,slow=9.5,SNR=98						
WRA				S	S	06 44 56.5	-5.3
	2.2nm,0.6s,baz=335,slow=15,SNR=5.8						
WRA				ScP		06 47 04.8	
	2.0nm,0.5s,baz=341,slow=3.0,SNR=15						
WB2	Warramunga Arr	26.10	155	⇑*i*P	P	06 41 07.7	-0.9
WB2				*e*S	S	06 44 57.2	-4.7
WB2				*e*SCP		06 47 04.7	
WB2				*e*SCS	ScS	06 50 53.8	-0.6
CMAR	Chiang Mai Arr	27.53	304	P	P	06 41 20.9	-0.3
	0.8nm,0.3s,mb3.8,baz=122,slow=7.8,SNR=6.6						
CMAR				PcP	PcP	06 44 21.6	+0.5
	0.8nm,0.3s,baz=135,slow=2.0,SNR=4.2						
PMG	Port Moresby	27.59	118	P	P	06 41 21.5	-0.2
	14nm,0.6s,mb4.8,baz=314,slow=8.0,SNR=12						
PMG	Port Moresby	27.59	118	*e*P	P	06 41 20.9	-0.8
	31nm,1.1s,mb4.8						
ENH	Enshi	29.27	336	P	P	06 41 35.1	-1.0
	4.8nm,0.4s,mb4.5						
ASAR	Alice Springs	29.27	159	P	P	06 41 36.2	+0.1
	16nm,0.7s,mb4.8,baz=341,slow=7.3,SNR=110						
ASAR				S	S	06 45 49.1	-2.2
	2.8nm,0.8s,baz=339,slow=15,SNR=7.9						
ASAR				ScP		06 47 14.7	
	1.9nm,0.5s,baz=341,slow=2.7,SNR=13						
ASPA	Alice Springs	29.27	159	⇑*i*P	P	06 41 36.1	-0.1
ASPA				*i* S	S	06 45 48.7	-2.5
ASPA				*e*SCP		06 47 14.4	
ASPA				*e*SCS	ScS	06 51 07.7	-1.4
CTA	Charters Tower	33.03	137	*e*P	P	06 42 09.3	+1.2
	6.1nm,1.0s,mb4.1						
CTA	Charters Tower	33.03	137	P	P	06 42 09.0	+0.9
	4.9nm,0.5s,mb4.3,baz=327,slow=9.2,SNR=8.2						
FORT	Forrest	34.64	172	⇑*i*P	P	06 42 21.8	+0.4
	1µm,0.5s						
NWAO	Narrogin (SRO)	36.78	188	P	P	06 42 39.3	+0.3
	8.3nm,1.1s,mb4.2,baz=26,slow=11,SNR=3.6						
LSA	Lhasa	39.56	314	*e*P	P	06 43 03.6	+2.0
	3.0nm,0.6s,mb4.0						
STKA	Stephens Creek	39.64	154	⇑*i*P	P	06 43 03.4	+1.1
	18nm,0.8s,mb4.6						
STKA	Stephens Creek	39.64	154	P	P	06 43 03.5	+1.1
	12nm,0.4s,mb4.8,baz=327,slow=7.6,SNR=59						
STKA				S	S	06 48 26.7	-0.4
	1.9nm,0.7s,baz=130,slow=8.6,SNR=5.9						
VIS	Vishakhapatnam	41.05	293	*e*P	P	06 43 12.8	-0.9
JIRN	Jiri	42.23	308	*e*P	P	06 43 23.9	+0.8
	26nm,0.4s,mb5.1						
GUN	Gumba	42.59	308	*e*P	P	06 43 26.6	+0.7
	41nm,0.5s,mb5.2						
PKI	Pulchoki	42.80	308	*e*P	P	06 43 28.0	+0.4
	9.0nm,0.3s,mb4.8						
KKN	Kakani	43.00	308	*e*P	P	06 43 29.5	+0.3
	18nm,0.5s,mb4.8						
DMN	Daman	43.06	307	*e*P	P	06 43 30.0	+0.4
	26nm,0.9s,mb4.8						
GKN	Gorkha	43.60	308	*e*P	P	06 43 34.1	+0.2
	24nm,0.8s,mb4.8						
ARMA	Armidale	43.72	143	⇓*i*P	P	06 43 37.5	+2.8
KOLN	Koldanda	44.33	307	*e*P	P	06 43 40.0	+0.5
	53nm,0.7s,mb5.2						
HYB	Hyderabad	45.40	291	*e*P	P	06 43 48.0	+0.1
HYB	Hyderabad	45.40	291	*i* P	P	06 43 48.0	+0.1
CNB	Canberra Magne	46.13	149	*e*P	P	06 43 55.1	+1.8
	112nm,0.4s						
SONM	Songino Array	46.19	345	P	P	06 43 53.6	+0.1
	1.5nm,1.1s,baz=163,slow=9.9,SNR=6.6						
BHPL	Bhopal	47.90	298	*e*P	P	06 44 06.5	-0.4
BHPL				*e*		06 44 07.4	
	comp=Z,23nm,0.5s						
AYAN	Aya Nagar	49.86	305	*e*P	P	06 44 19.7	-1.7
KUDL	Kundal	50.26	304	*e*P	P	06 44 23.1	-1.2
KUDL				*e*		06 44 24.3	
	comp=Z,20nm,0.8s						
KKR	Kurukshetra	50.65	306	*e*P	P	06 44 27.3	+0.1
KKR				AMb	AMB	06 44 28.1	
	comp=Z,210nm,0.3s						
KHET	Khetri	50.81	304	*e*P	P	06 44 27.6	-0.7
KHET				AMb	AMB	06 44 28.9	
	comp=Z,20nm,0.8s,mb4.5						
JASL	Jaisalmer	54.60	301	*e*P	P	06 44 55.1	-0.3
ZAL	Zalesovo	58.89	335	P	P	06 45 23.6	-0.7
	comp=Z,1.3nm,0.4s,mb3.5,baz=307,slow=2.7,SNR=3.1						
KURK	Kurchatov	59.70	329	*e*P	P	06 45 29.2	-0.5
	comp=Z,7.2nm,0.8s,mb4.0						
BVAR	Borovoye Array	65.23	328	P	P	06 46 04.9	-0.4
	comp=Z,2.5nm,1.0s,mb3.6,baz=135,slow=6.3,SNR=7.0						
VNDA	Vanda	83.90	172	P	P	06 47 49.7	+0.9
	comp=Z,0.6nm,0.4s,mb3.5,baz=330,slow=8.1,SNR=4.7						
VNDA	Vanda	83.90	172	P	P	06 47 49.7	+0.9
ASF	Jabal al Asfar	84.55	302	P	P	06 47 54.2	+1.2
	comp=Z,2.3nm,0.8s,mb3.7,baz=126,slow=2.0,SNR=5.5						
KMBO	Kilima Mbogo	85.57	269	P	P	06 47 59.8	+1.4
	comp=Z,2.9nm,0.7s,mb4.0,baz=53,slow=12,SNR=6.4						
JOF	Joensuu	87.41	333	*e*p	P	06 48 04.5	-1.3
	comp=Z,1.1nm,0.2s,mb4.1						
KAF	Kangasniemi	89.79	332	*e*p	P	06 48 08.4	-8.6
	comp=Z,0.7nm,0.4s,mb3.8						
FINES	FINESS Array B	89.99	331	P	P	06 48 17.4	-0.5
	comp=Z,1.7nm,0.7s,mb4.0,baz=72,slow=6.0,SNR=8.3						
FINES	FINESS Array B	89.99	331	P	P	06 48 17.4	-0.5

MOS ***25*** *06:41:22.0±0.9, 6.83N×72.99W, h139^{km}, mb5.1/16, Error ellipse: s-maj=11.6km s-min=6.4km az=109.8*

BJI ***25*** *06:41:25.3, 6.70N×73.10W, h166^{km}, mB5.2*

IDC ***25*** *06:41:25.1±0.4, 6.76N×72.98W, h162^{km}±3^{km}, mb4.6/28, mb1 4.8/32, mb1mx4.7/36, mbtmp5.1/32, MS3.9/11, Ms1 4.0/11, ms1mx3.7/22, Error ellipse: s-maj=8.2km s-min=6.1km az=114.0*

HRVD ***25*** *06:41:25.3±0.2, 6.88N×73.09W, h159^{km}±1^{km}, MW5.3/71, Centroid moment Tensor Solution. LP body waves: s55,c85;Mantle waves: s71,c133; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00±.02; $M_{\theta\theta}$0.92±.02; $M_{\phi\phi}$-0.91±.03; $M_{r\theta}$0.26±.02; $M_{\theta\phi}$-0.31±.02; $M_{\phi r}$-0.69±.02; Best double couple: $M_0$1.209×10^{17} NP1:ϕ_s57°,δ54°, λ-176°. NP2:ϕ_s325°,δ87°,λ-36°. Principal axes: T 1.118, Plg22°, Azm17°; N .183, Plg54°, Azm140°; P -1.301, Plg27°, Azm275°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

FUNV ***25*** *06:41:25.9, 6.91N×73.04W, h171^{km}, MW4.6*

NEIC ***25*** *06:41:25.3±0.3, 6.67N×73.06W, h166^{km}±3^{km}, mb5.1/107, Error ellipse: s-maj=3.3km s-min=2.4km az=202.0*

NEIC Felt at Bogota and Medellin.

UAV ***25*** *06:41:29.7, 7.38N×73.14W, h156^{km}*

ISC 25 06:41:23.7±0.3**, 6.74N**±0.03×**73.00W**±0.02**, h164**^{km}±2^{km}**, h162**^{km}±2.2^{km}**:pP-P, n439,** σ**1^{s}01**/399**, mb5.0**/123**, 24C-20D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.31	31	*e*P	P	06 41 53.7	+0.9
CAPV				*e*S	S	06 42 14.4	-0.9
PDMV	Paramo Marino	1.95	36	P	P	06 42 00.6	+1.1
ROSC	El Rosal	2.29	215	P	P	06 42 05.7	+2.2
	3µm,0.3s,baz=325,slow=2.9						
ROSC				S	S	06 42 36.8	+2.6
	7µm,0.3s,baz=77,slow=21,SNR=16						
ROSC				LR	LR	06 43 02.4	
	comp=Z,4µm,21.4s,baz=3.1,slow=42						
OSV	Paramo de la O	2.41	38	P	P	06 42 05.9	+0.9
UAV	Universidad de	2.61	44	P	P	06 42 08.9	+1.5
UAV				S	S	06 42 37.8	-3.3
SOCV	Socops	2.62	54	*e*P	P	06 42 07.7	+0.1
VIGV	El Vigia	2.64	38	*e*P	P	06 42 08.2	+0.4
VIGV				*e*S	S	06 42 37.8	-3.9
CUV	La Culata	2.77	44	P	P	06 42 10.8	+1.4
EAV	Pico El Aguila	3.01	46	P	P	06 42 13.8	+1.4
SDV	Santo Domingo	3.17	47	P	P	06 42 15.4	+1.0
	baz=230,slow=10						
SDV				S	S	06 42 53.3	-0.1
	2µm,0.3s,baz=278,slow=21,SNR=22						
SDV	Santo Domingo	3.17	47	⇓*e*Pn	P	06 42 15.4	+1.0
SDV				*e*Sn	S	06 42 52.6	-0.8
ELOV	Elorza	3.50	85	*e*P	P	06 42 19.6	+1.0
ELOV				*e*S	S	06 42 59.3	-1.6
VIRV	Villa del Rosa	3.79	9	*e*P	P	06 42 20.1	-2.2
VIRV				*e*S	S	06 43 00.3	-7.2
TORV	Torococo	3.92	44	P	P	06 42 23.4	-0.6
SANV	Sanarito	4.39	51	*e*P	P	06 42 29.9	-0.3
CURV	Curarigua	4.43	42	*e*P	P	06 42 30.8	+0.1
DABV	Dabajuro	4.77	29	*e*P	P	06 42 34.1	-1.0
TEPV	Terepaima	4.95	49	*e*P	P	06 42 37.1	-0.4
UPD1	Univ de Panama	5.29	290	⇑*e*P	P	06 42 39.1	-2.9
BAUV	El Baul	5.38	66	*e*P	P	06 42 41.6	-1.5
BAUV				*e*S	S	06 43 39.4	-5.3
PAYV	Puerto Ayacuch	5.47	104	*e*P	P	06 42 44.6	+0.3
PAYV				*e*S	S	06 43 43.9	-3.0
IMOV	Isla Los Monje	5.96	20	*e*P	P	06 42 48.6	-2.1
MONV	Montecano	5.98	30	*e*P	P	06 42 49.0	-2.1
TURV	Turiamo	6.29	54	*e*P	P	06 42 53.6	-1.6
CAOV	Caicara del Or	6.65	85	*e*P	P	06 42 59.1	-0.9
UPA	Univ. de Panam	6.85	289	⇓*e*P	P	06 43 00.0	-2.7
AZU2	Pedas	7.02	277	⇑*e*P	P	06 43 03.1	-1.9
AZU2				*e*S	S	06 44 20.0	-3.8
MERV	Las Mercedes	7.09	69	*e*P	P	06 43 04.5	-1.3
AZU	Azuero	7.29	279	⇑*e*P	P	06 43 07.5	-1.1
OTAV	Otavalo	8.44	220	*e*Pn	P	06 43 23.4	-0.3
	198nm,0.8s						
OTAV				*e*Sn	S	06 44 57.5	-0.1
PTP1	Petroterminal	9.46	279	⇑*e*P	P	06 43 44.2	+7.0
DVD	David	9.52	281	⇑*e*P	P	06 43 38.5	+0.4
ORIV	Oritupano	9.78	76	*e*P	P	06 43 39.4	-2.0
BRU2	Volcan	9.82	283	*e*P	P	06 43 42.1	+0.1
BRU2	Volcan	9.82	283	⇓*i*P	P	06 43 42.0	0.0
ACR	Cerro Adams	10.26	281	*e*P	P	06 43 47.3	-0.4
ACR	Cerro Adams	10.26	281	⇑*e*P	P	06 43 47.2	-0.5
LIO	Limon	10.45	289	*e*P	P	06 43 49.7	-0.5
LIO	Limon	10.45	289	*e*P	P	06 43 50.2	0.0
BUS	Buena Vista	11.02	285	*e*P	P	06 43 58.1	+0.5
BUS	Buena Vista	11.02	285	⇓*e*P	P	06 43 57.5	-0.2
ICR	Volcan Irazu	11.19	287	*e*P	P	06 44 00.0	+0.1
ICR	Volcan Irazu	11.19	287	⇓*e*P	P	06 44 00.2	+0.3
TRTC	Tortuguero	11.26	291	*e*P	P	06 43 59.1	-1.7
LCR2	La Lucha 2	11.29	286	*e*P	P	06 44 01.5	+0.2
LCR2	La Lucha 2	11.29	286	*e*P	P	06 44 01.3	+0.1
SJS	Escuela Geolog	11.39	287	⇑*e*P	P	06 44 02.5	0.0
SJS	Escuela Geolog	11.39	287	⇑*e*P	P	06 44 03.0	+0.5
LAJ	Bijagual	11.44	287	*e*P	P	06 44 08.5	+5.4
LAJ	Bijagual	11.44	287	*e*P	P	06 44 09.2	+6.1
VPS2	Volcan Poas 2	11.63	288	*e*P	P	06 44 06.3	+0.6
VPS2	Volcan Poas 2	11.63	288	⇑*e*P	P	06 44 05.9	+0.2
PRS1	Puriscal	11.65	287	*e*P	P	06 44 07.7	+1.8
PRS1	Puriscal	11.65	287	*e*P	P	06 44 07.6	+1.8
HOJ	Hope	11.78	342	⇓*e*P	P	06 44 08.7	+1.1
CGA2	Cerro Gallo 2	11.80	287	*e*P	P	06 44 08.0	+0.1
CGA2	Cerro Gallo 2	11.80	287	⇑*e*P	P	06 44 09.1	+1.2
GWJ	Greenwich	11.84	342	⇑*e*P	P	06 44 08.9	+0.6
SIPA	Siparia	11.86	73	*e*P	P	06 44 12.4	+3.8
STH	Stony Hill	11.87	342	⇑*e*P	P	06 44 09.4	+0.7
STH				*e*S	S	06 46 07.9	-10
TPP	Pointe-a-Pierr	11.96	72	*e*P	P	06 44 12.1	+2.2
TPP	Pointe-a-Pierr	11.96	72	*i*	P	06 44 22.5	+13
MCJ	Malvern	12.03	338	*i* P	P	06 44 12.4	+1.7
MCJ				*e*S	S	06 46 11.3	-11
TRN	Trinidad (W)	12.10	70	*e*P	P	06 44 13.8	+2.1
TRN				*i*		06 44 21.1	
TRN	Trinidad (W)	12.10	70	*i*	P	06 44 21.1	+9.5
FORC	Fortuna	12.12	289	*e*P	P	06 44 13.0	+1.1
FORC	Fortuna	12.12	289	⇑*e*P	P	06 44 12.6	+0.7
BNJ	Bonny Gate	12.14	342	⇓*e*P	P	06 44 13.5	+1.3
BBJ	Bamboo Saint A	12.30	341	⇓*e*P	P	06 44 16.3	+2.0
JTS	JuntasAbangare	12.34	287	⇓*i*P	P	06 44 14.7	-0.1
JTS				pmax	pmax		
	comp=Z,373nm,0.6s						
JTS	JuntasAbangare	12.34	287	P	P	06 44 14.9	+0.1
	comp=Z,9.5nm,0.3s,baz=81,slow=10,SNR=78						
JTS				LR	LR	06 49 16.5	
	comp=Z,837nm,18.5s,baz=92,slow=38						
JTS	JuntasAbangare	12.34	287	⇓*i*Pn	P	06 44 14.7	-0.1
	comp=Z,373nm,0.6s						
GRW	Mount Saint Ca	12.41	63	*e*P	P	06 44 22.2	+6.6
GRHS	Sauteurs	12.45	63	*e*P	P	06 44 19.9	+3.6
TPR	Prospect	12.85	69	*e*P	P	06 44 23.9	+2.5
BOT	Bacolet	12.90	69	*e*P	P	06 44 22.8	+0.8
VCR	Vista de Mar	12.94	286	*e*P	P	06 44 23.7	+1.1
VCR	Vista de Mar	12.94	286	*e*P	P	06 44 23.0	+0.5
SJG	San Juan	13.13	30	*e*P	P	06 44 22.0	-2.9
SJG				*e*		06 46 46.6	
SJG				pmax	pmax		
	comp=Z,168nm,0.5s						
SJG	San Juan	13.13	30	P	P	06 44 23.4	-1.5
	comp=Z,68nm,0.3s,baz=216,slow=11,SNR=115						
SJG				S	S	06 46 39.8	-7.8
	comp=Z,4.1nm,0.3s,baz=72,slow=16,SNR=3.1						
SJG				LR	LR	06 49 25.7	
	comp=Z,395nm,18.0s,baz=227,slow=37						
SJG	San Juan	13.13	30	*e*Pn	P	06 44 22.0	-2.9
	comp=Z,168nm,0.5s						
SJG				*e*Sn	S	06 46 46.6	-1.0
CONN	Concepcion	13.36	292	*e*P	P	06 44 28.2	+0.5
CONN				*i*		06 44 35.6	
	comp=Z,724nm,0.6s						
APON	Apoyo	13.88	293	*e*P	P	06 44 37.2	+2.7
MGAN	Managua	14.13	293	⇓*e*P	P	06 44 39.9	+2.2
XAVN	Gruta Xavier	14.20	293	*e*P	P	06 44 40.6	+1.9
MIRN	Miramar	14.66	294	⇓*e*P	P	06 44 47.1	+2.8
CNCH	Conchagua	15.98	295	*e*P	P	06 45 00.3	-0.6
BLLM	Bellamira	16.41	295	*e*P	P	06 45 05.6	-0.5
VSM	San Miguel	16.44	295	*e*P	P	06 45 07.0	+0.5
SNVI	San Vicente	17.02	295	*e*P	P	06 45 12.3	-1.1
LCBS	La Ceiba	17.16	295	*e*P	P	06 45 13.4	-1.7
LFRS	El Faro	17.22	295	*e*P	P	06 45 13.3	-2.6
MTO2	Montecristo 2	17.79	297	*e*P	P	06 45 22.3	-0.1
SNJE	San Jose	17.80	295	*e*P	P	06 45 21.7	-0.8
SBLS	San Blas	17.81	295	*e*P	P	06 45 21.4	-1.1
RTR	El Retiro	17.85	295	*e*P	P	06 45 20.7	-2.3
RBDL	Robledal	17.97	295	*e*P	P	06 45 21.9	-2.4
SAML	Samuel	18.40	148	*e*P	P	06 45 27.7	-1.2
	comp=Z,3.8nm,1.0s						
SAML				*e*S	S	06 48 48.9	+3.6
PAYG	Puerto Ayora	18.76	248	⇓*i*P	P	06 45 33.8	+1.1
	comp=Z,362nm,1.2s						
NNA	Nana	18.99	192	*e*P	P	06 45 34.5	-0.5
	comp=Z,139nm,1.3s						
TEIG	Tepich	19.99	314	*e*P	P	06 45 45.1	-0.2
	comp=Z,42nm,0.7s						
DWPF	Disney	22.71	340	*e*P	P	06 46 13.9	+1.7
	comp=Z,220nm,1.3s,mb5.4						
ARE	Arequipa	23.10	176	*e*P	P	06 46 16.0	0.0
LPAZ	La Paz	23.38	168	*e*P	P	06 46 19.3	+0.6
LPAZ				*e**PP		06 46 52.5	
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
LPAZ	La Paz	23.38	168	*e*P	P	06 46 19.3	+0.6
	comp=Z,1.6nm,0.9s						
LPAZ				*e*pP		06 46 52.5	
RGRS	Roger Stewart	26.89	347	P	P	06 46 52.2	+0.9
NHSC	New Hope	27.07	347	*e*P	P	06 46 53.9	+1.0
COW	Cow Castle Cre	27.46	346	*e*P	P	06 46 57.5	+1.0
GOGA	Godfrey	28.26	341	P	P	06 47 04.3	+0.6
GOGA				pmax	pmax		
	comp=Z,44nm,0.3s,mb5.7						
GOGA	Godfrey	28.26	341	P	P	06 47 04.2	+0.5
	comp=Z,44nm,0.3s,mb5.7						
JSC	Jenkinsville	28.45	346	*e*P	P	06 47 05.7	+0.3
LRAL	Lakeview Retre	29.22	335	*e*P	P	06 47 12.5	+0.2
	comp=Z,69nm,1.0s,mb5.3						
LVC	Limon Verde	29.44	172	P	P	06 47 13.2	-1.1
	comp=Z,4.7nm,0.7s,mb4.3,baz=11,slow=7.2,SNR=10						
LVC				pP	pP	06 47 49.0	+0.4
	comp=Z,15nm,0.8s,baz=357,slow=7.7,SNR=6.9						
LVC	Limon Verde	29.44	172	*e*P	P	06 47 12.9	-1.4
CPCT	Cooper Cave	30.48	341	*e*P	P	06 47 23.9	+0.6
ELN	Prospectdale	31.16	348	*e*P	P	06 47 30.1	+0.8
FWV	Forest Hill	31.52	348	*e*P	P	06 47 33.3	+0.9
OXF	Oxford	31.52	333	*e*P	P	06 47 31.5	-1.0
OXF				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.3						
OXF	Oxford	31.52	333	*e*P	P	06 47 31.5	-1.0
	comp=Z,58nm,0.9s,mb5.3						
HKT	Hockley	31.54	320	*e*P	P	06 47 32.5	-0.2
HKT				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
HKT	Hockley	31.54	320	*e*P	P	06 47 32.5	-0.2
	comp=Z,5.1nm,0.8s,mb4.3						
CBN	Corbin	31.58	353	*e*P	P	06 47 32.8	-0.1
	comp=Z,53nm,0.5s,mb5.5						
NATX	Nacogdoches	32.08	324	*e*P	P	06 47 36.3	-1.1
	comp=Z,152nm,1.1s,mb5.6						
WVT	Waverly	32.26	337	*e*P	P	06 47 38.5	-0.4
WVT				pmax	pmax		
	comp=Z,151nm,1.0s,mb5.7						
WVT	Waverly	32.26	337	*e*P	P	06 47 38.5	-0.3
	comp=Z,150nm,1.0s,mb5.7						
HALT	Halls	32.68	335	*e*P	P	06 47 40.8	-1.7
SDMD	Soldier's Deli	32.71	354	*e*P	P	06 47 42.8	+0.1
UTMT	University of	32.85	336	*e*P	P	06 47 43.2	-0.8
	comp=Z,314nm,1.0s,mb6.0						
HBAR	Harrisburg	32.95	333	*e*P	P	06 47 44.7	-0.1
GLAT	Glass	32.96	335	*e*P	P	06 47 44.9	0.0
GNAR	Gosnell	33.01	334	*e*P	P	06 47 45.6	+0.3
UALR	University of	33.12	330	*e*P	P	06 47 45.8	-0.4
	comp=Z,20nm,0.9s,mb4.8						
MVL	Millersville	33.25	355	*e*P	P	06 47 47.8	+0.5
BDFB	Brasilia	33.27	132	P	P	06 47 48.0	+0.3
	comp=Z,11nm,0.5s,mb4.8,baz=297,slow=10,SNR=42						
BAO	Brasilia Array	33.28	132	⇓*e*P	P	06 47 48.1	+0.3
BAO				*e*	pP	06 48 27.0	+4.1
BAO				*i*		06 48 40.1	
BAO				*i*		06 49 51.0	
MCWV	Mont Chateau	33.35	350	*e*P	P	06 47 49.3	+1.1
	comp=Z,114nm,1.1s,mb5.5						
MIAR	Mount Ida	33.56	328	*e*P	P	06 47 48.9	-1.1
MIAR				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
MIAR	Mount Ida	33.56	328	*e*P	P	06 47 48.9	-1.1
	comp=Z,20nm,0.8s,mb4.9						
WCI	Wyandotte Cave	33.59	341	*e*P	P	06 47 50.3	+0.1
WCI				pmax	pmax		
	comp=Z,89nm,0.7s,mb5.6						
WCI	Wyandotte Cave	33.59	341	*e*P	P	06 47 50.3	+0.1
	comp=Z,89nm,0.7s,mb5.6						
USIN	University of	33.82	339	*e*P	P	06 47 52.1	0.0
	comp=Z,305nm,1.0s,mb6.0						
PAL	Palisades	34.13	359	*e*P	P	06 47 54.8	0.0
PAL				pmax	pmax		
	comp=Z,89nm,1.0s,mb5.5						
PAL	Palisades	34.13	359	*e*P	P	06 47 54.8	0.0
	comp=Z,89nm,1.0s,mb5.5						
JCT	Junction City	34.50	317	*e*P	P	06 47 58.0	-0.1
JCT				pmax	pmax		
	comp=Z,25nm,1.1s,mb4.8						
JCT	Junction City	34.50	317	*e*P	P	06 47 58.0	-0.1
	comp=Z,25nm,1.1s,mb4.8						
BLO	Bloomington	34.52	341	*e*P	P	06 47 58.7	+0.6
BLO				pmax	pmax		
	comp=Z,175nm,0.7s,mb5.8						
BLO	Bloomington	34.52	341	*e*P	P	06 47 58.7	+0.5
	comp=Z,175nm,0.7s,mb5.8						
ACSO	Alum Creek Sta	34.53	346	*e*P	P	06 47 59.1	+0.9
	comp=Z,134nm,1.0s,mb5.5						
FVM	French Village	34.90	336	*e*P	P	06 48 00.9	-0.4
FVM				pmax	pmax		
	comp=Z,216nm,1.0s,mb5.7						
FVM	French Village	34.90	336	*e*P	P	06 48 00.9	-0.4
	comp=Z,216nm,1.0s,mb5.7						
CCM	Cathedral Cave	35.30	335	*e*P	P	06 48 04.5	-0.2
CCM				pmax	pmax		
	comp=Z,209nm,0.8s,mb5.8						
CCM	Cathedral Cave	35.30	335	*e*P	P	06 48 04.5	-0.2
	comp=Z,209nm,0.8s,mb5.8						
ALLY	Alegheny Colle	35.34	351	*e*P	P	06 48 06.4	+1.3
SLM	Saint Louis	35.38	336	*e*P	P	06 48 04.7	-0.7
SLM				pmax	pmax		
	comp=Z,102nm,1.0s,mb5.4						
SLM	Saint Louis	35.38	336	*e*P	P	06 48 04.7	-0.7
	comp=Z,102nm,1.0s,mb5.4						
BINY	Binghamton	35.41	356	*e*P	P	06 48 06.5	+0.8
	comp=Z,71nm,0.7s,mb5.4						
HRV	Harvard--Oak R	35.65	2	*e*P	P	06 48 09.0	+1.4
HRV				pmax	pmax		
	comp=Z,173nm,1.1s,mb5.6						
HRV	Harvard--Oak R	35.65	2	*e*P	P	06 48 09.0	+1.4
	comp=Z,173nm,1.1s,mb5.6						
ERPA	Erie	35.78	351	*e*P	P	06 48 09.9	+1.2
	comp=Z,58nm,0.6s,mb5.4						
GENY	Geneseo	36.13	354	*e*P	P	06 48 12.0	+0.3
ACCN	Adirondack Com	36.51	359	*e*P	P	06 48 15.8	+1.0
LTX	Lajitas	36.61	312	*e*P	P	06 48 15.3	-0.5
LTX				*e*		06 50 36.7	
LTX				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.7						
LTX	Lajitas	36.61	312	*e*P	P	06 48 15.3	-0.6
	comp=Z,13nm,0.6s,mb4.7						
LTX				*e*PcP	PcP	06 50 36.7	+0.9
TXAR	Lajitas Array	36.61	312	P	P	06 48 15.7	-0.2
	comp=Z,10nm,0.6s,mb4.7,baz=127,slow=8.8,SNR=90						
TXAR				pP	pP	06 48 49.8	-1.6
	comp=Z,4.2nm,0.7s,baz=108,slow=7.9,SNR=2.8						
TXAR				PcP	PcP	06 50 37.6	+1.8
	comp=Z,5.4nm,0.7s,baz=141,slow=6.0,SNR=5.1						
TXAR				ScP		06 54 08.4	
	comp=Z,1.5nm,0.8s,baz=101,slow=4.6,SNR=3.3						
WMOK	Wichita Mounta	36.62	323	*e*P	P	06 48 14.6	-1.3
WMOK				*e*S	S	06 53 45.4	-0.5
WMOK				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.1						
WMOK	Wichita Mounta	36.62	323	*e*P	P	06 48 14.6	-1.2
	comp=Z,50nm,1.0s,mb5.1						
WMOK				*e*S	S	06 53 45.4	-0.6
AAM	Ann Arbor	36.66	347	*e*P	P	06 48 17.3	+1.2
	comp=Z,84nm,0.6s,mb5.5						
HNH	Hanover	36.83	1	*e*P	P	06 48 18.2	+0.8
	comp=Z,3.1nm,0.9s,mb3.9						
NCB	Newcomb	37.10	359	*e*P	P	06 48 21.1	+1.3
	comp=Z,96nm,1.1s,mb5.3						
MIV	Mineville/With	37.19	359	*e*P	P	06 48 20.9	+0.3
WVL	Waterville	37.79	4	*e*P	P	06 48 26.9	+1.3
	comp=Z,594nm,1.3s						
EMMW	East Machias	38.13	6	*e*P	P	06 48 29.4	+1.0
	comp=Z,768nm,0.7s						
SADO	Sadowa	38.26	353	P	P	06 48 29.9	+0.4
	comp=Z,103nm,1.0s,mb5.4,baz=181,slow=8.0,SNR=66						
SADO				ScP		06 54 14.7	
	comp=Z,4.2nm,1.0s,baz=137,slow=0.8,SNR=3.2						
AMTX	Amarillo	38.50	321	*e*P	P	06 48 31.5	-0.1
	comp=Z,88nm,1.0s,mb5.3						
KSU1	Kansas State U	38.62	330	*e*P	P	06 48 31.1	-1.4
KSU1				*e*pP	pP	06 49 05.4	-3.0
RCBR	Riachuelo	39.07	108	*e*P	P	06 48 36.4	-0.1
	comp=Z,31nm,1.3s,mb4.8						
JFWS	Jewell Farm	39.12	340	*e*P	P	06 48 36.0	-0.6
	comp=Z,166nm,0.7s,mb5.8						
MNTX	Cornudas Mount	39.12	314	*e*P	P	06 48 36.5	-0.2
	comp=Z,31nm,0.8s,mb5.0						
CBKS	Cedar Bluff	40.03	327	*e*P	P	06 48 43.5	-0.6
	comp=Z,63nm,1.1s,mb5.2						
CAM4	Nova Friburgo	41.52	135	*e*P	pP	06 49 37.9	+5.1
ANMO	Albuquerque	41.66	317	*e*P	P	06 48 58.5	+0.9
ANMO				*e**PP	pP	06 49 32.9	-0.9
ANMO				pmax	pmax		
	comp=Z,17nm,1.1s						
ANMO	Albuquerque	41.66	317	P	P	06 48 58.6	+1.0
	comp=Z,24nm,1.3s,mb4.7,baz=135,slow=8.1,SNR=21						
ANMO				pP	pP	06 49 33.3	-0.5
	comp=Z,25nm,1.4s,baz=131,slow=13,SNR=3.5						
ANMO	Albuquerque	41.66	317	*e*P	P	06 48 58.5	+0.9
	comp=Z,17nm,1.1s,mb4.6						
ANMO				*e*pP	pP	06 49 32.9	-0.9
SDCO	Great Sand Dun	42.69	321	*e*P	P	06 49 06.7	+0.7
	comp=Z,50nm,0.9s,mb5.1						
TUC	Tucson	43.40	311	*e*P	P	06 49 11.8	0.0
	comp=Z,15nm,0.9s,mb4.6						
EYMN	Ely	43.99	342	*e*P	P	06 49 15.6	-0.6
	comp=Z,131nm,0.6s,mb5.7						
ISCO	Idaho Springs	44.05	323	*e*P	P	06 49 17.4	+0.6
ISCO				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.2						
ISCO	Idaho Springs	44.05	323	*e*P	P	06 49 17.4	+0.6
	comp=Z,62nm,1.0s,mb5.2						
PHWY	Pilot Hill	44.93	325	*e*P	P	06 49 23.9	+0.1
WUAZ	Wupatki	45.37	315	*e*P	P	06 49 28.0	+0.6
	comp=Z,976nm,0.9s						
TRQA	Tornquist	45.73	168	P	P	06 49 28.1	-2.1
SRU	San Rafael	46.69	319	*e*P	P	06 49 37.6	-0.1
TMUT	Trail Mountain	47.23	319	*e*P	P	06 49 42.2	+0.2
PLCA	Paso Flores	47.29	177	*e*P	P	06 49 40.7	-1.6
PLCA				pmax	pmax		
	comp=Z,20nm,1.0s						
PLCA	Paso Flores	47.29	177	P	P	06 49 40.6	-1.7
	comp=Z,5.4nm,0.8s,mb4.2,baz=358,slow=7.0,SNR=14						
PLCA				pP	pP	06 50 19.4	+0.2
	comp=Z,15nm,0.8s,baz=357,slow=8.6,SNR=8.2						
PLCA				ScP		06 54 48.5	
	comp=Z,9.0nm,1.2s,baz=0.5,slow=6.2,SNR=5.1						
PLCA	Paso Flores	47.29	177	*e*P	P	06 49 40.7	-1.6
	comp=Z,20nm,1.0s,mb4.7						
PLCA				*e*pP	pP	06 50 19.4	+0.2

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ULM   Lac du Bonnet     47.41 340  P       P        06 49 42.0 -1.1
      comp=Z,97nm,0.8s,mb5.5,baz=145,slow=7.5,SNR=148
ULM                                LR      LR       07 10 05.0
      comp=Z,204nm,21.4s,baz=181,slow=36
ULM   Lac du Bonnet     47.41 340  eP      P        06 49 42.0 -1.2
      comp=Z,120nm,0.8s,mb5.6
MSU   Marysvale         47.45 318  eP      P        06 49 44.2 +0.5
MVU   Marysvale         47.47 318  eP      P        06 49 44.4 +0.6
      comp=Z,60nm,0.9s,mb5.2
MVU                                eScP             06 54 51.9
LDFC  Landfair          47.86 312  eP      P        06 49 47.5 +0.6
DAU   Daniels Canyon    47.88 320  eP      P        06 49 47.6 +0.6
MPU   Maple Canyon      47.90 320  eP      P        06 49 46.2 -0.9
ARUT  Antelope Range    47.94 316  eP      P        06 49 47.5  0.0
JLU   Jordanelle        48.11 320  eP      P        06 49 48.8 +0.1
NLU   North Lily Min    48.15 319  eP      P        06 49 49.3 +0.2
SCHQ  Schefferville     48.21   5  P       P        06 49 49.4 +0.1
      comp=Z,164nm,0.7s,mb5.8,baz=187,slow=6.3,SNR=527
SCHQ                               ScP              06 54 53.5
      comp=Z,15nm,0.8s,baz=187,slow=3.1,SNR=9.8
SCHQ                               LR      LR       07 09 33.8
      comp=Z,178nm,18.7s,baz=182,slow=35
SCHQ  Schefferville     48.21   5  eP      P        06 49 49.5 +0.2
      comp=Z,204nm,0.7s,mb5.9
SCHQ                               eScP             06 54 53.9
PDAR  Pinedale Array    48.22 324  P       P        06 49 49.1 -0.4
      comp=Z,20nm,0.7s,mb4.9,baz=127,slow=9.1,SNR=106
PDAR                               ScP              06 54 54.1
      comp=Z,2.4nm,0.8s,baz=114,slow=5.5,SNR=4.5
TCUT  Toone Canyon      48.37 321  eP      P        06 49 50.9 +0.1
TCUT                               eScP             06 54 56.0
HWUT  Hardware Ranch    48.74 322  eP      P        06 49 52.9 -0.7
      comp=Z,30nm,0.9s,mb4.9
DUG   Dugway            48.76 319  eP      P        06 49 53.8 +0.1
      comp=Z,339nm,0.9s,mb6.0
LAO   LASA Array        48.97 330  eP      P        06 49 54.3 -1.0
      comp=Z,31nm,0.9s,mb4.9
AHID  Auburn Hatcher    49.13 323  eP      P        06 49 55.7 -0.8
      comp=Z,39nm,0.9s,mb5.0
SPUT  South Promonto    49.13 321  eP      P        06 49 56.4 -0.1
DGMT  Dagmar            49.28 333  eP      P        06 49 57.6  0.0
      comp=Z,149nm,0.6s,mb5.8
BGU   Big Grassy Mou    49.29 320  eP      P        06 49 57.5 -0.3
SNOW  Snow King Moun    49.34 324  eP      P        06 49 58.3 +0.2
LOHW  Long Hollow       49.34 324  eP      P        06 49 58.1  0.0
WUWY  Wally Ulrich      49.38 324  eP      P        06 49 58.3 -0.1
TPAW  Teton Pass        49.47 324  eP      P        06 49 58.9 -0.2
MOOW  Moose Ponds       49.50 324  eP      P        06 49 58.6 -0.8
HVU   Hansel Valley     49.59 321  eP      P        06 49 59.5 -0.6
TRCR  Troy Canyon       49.69 316  eP      P        06 50 01.0 +0.1
IMW   Indian Meadow     49.70 324  eP      P        06 50 00.6 -0.3
LKWY  Lake              49.80 325  eP      P        06 50 02.8 +1.2
      comp=Z,11nm,1.0s,mb4.4
YFT   Old Faithful      49.98 325  eP      P        06 50 03.7 +0.7
YMR   Madison River     50.18 325  eP      P        06 50 04.8 +0.3
QLMT  Earthquake Lak    50.55 325  eP      P        06 50 07.8 +0.6
ELK   Elko              50.62 319  P       P        06 50 07.7 -0.2
      comp=Z,8.9nm,0.9s,mb4.4,baz=104,slow=4.8,SNR=34
ELK   Elko              50.62 319  eP      P        06 50 07.6 -0.3
      comp=Z,14nm,0.9s,mb4.6
TPH   Tonopah           50.71 315  eP      P        06 50 08.5 -0.2
      comp=Z,12nm,0.8s,mb4.6
BOZ   Bozeman (W)       51.15 326  eP      P        06 50 11.2 -0.6
      comp=Z,28nm,0.9s,mb4.9
MTUM  Tungsten Hills    51.36 313  eP      P        06 50 13.8 +0.3
MCMT  McKenzie Canyo    51.36 324  eP      P        06 50 13.6 +0.1
MNV   Mina              51.52 315  eP      P        06 50 14.6 -0.2
      comp=Z,13nm,1.0s,mb4.5
MNV                                epP     pP       06 50 51.5 -0.7
HLID  Hailey            51.58 322  eP      P        06 50 14.8 -0.2
      comp=Z,30nm,1.0s,mb4.9
NVAR  Mina Array Bea    51.63 315  P       P        06 50 15.6 +0.1
      comp=Z,11nm,0.8s,mb4.5,baz=113,slow=7.3,SNR=58
NVAR                               pP      pP       06 50 51.7 -1.3
      comp=Z,13nm,1.1s,baz=117,slow=7.5,SNR=3.1
NVAR                               PcP     PcP      06 51 27.8 +0.8
      comp=Z,5.0nm,0.8s,baz=120,slow=4.4,SNR=4.4
NVAR                               LR      LR       07 17 20.4
      comp=Z,114nm,18.1s,baz=30,slow=42
NVAR  Mina Array Bea    51.63 315  P       P        06 50 15.6 +0.1
NVAR                               pP      pP       06 50 51.7 -1.3
NVAR                               PcP     PcP      06 51 27.8 +0.8
NVAR                               LR      LR       07 17 20.4
OMM   Old Mammoth Mi    51.78 313  eP      P        06 50 16.9 +0.2
BMN   Battle Mountai    51.79 317  eP      P        06 50 17.0 +0.3
      comp=Z,26nm,1.1s,mb4.8
BMN                                epP     pP       06 50 53.6 -0.5
LRV   Little Rabbit     52.80 311  eP      P        06 50 24.4 +0.1
CHMT  Chamberlain Mo    52.81 326  eP      P        06 50 23.2 -1.0
CMB   Columbia Colle    52.95 313  eP      P        06 50 25.3 -0.1
      comp=Z,4.2nm,0.9s,mb4.2
WCN   Washoe City       53.03 315  eP      P        06 50 27.0 +1.1
      comp=Z,16nm,1.0s,mb4.7
MSO   Missoula          53.14 326  eP      P        06 50 26.0 -0.7
      comp=Z,13nm,1.0s,mb4.6
FFC   Flin Flon         53.21 339  P       P        06 50 25.8 -1.2
      comp=Z,201nm,0.9s,mb5.8,SNR=44
WVOR  Wild Horse Val    53.67 319  eP      P        06 50 30.0 -0.6
      comp=Z,55nm,1.0s,mb5.2
BMO   Blue Mountains    54.03 322  eP      P        06 50 31.0 -2.1
      comp=Z,10nm,1.1s,mb4.5
OHCM  Honcut            54.26 314  eP      P        06 50 34.2 -0.7
FCC   Fort Churchill    54.38 347  eP      P        06 50 34.0 -1.6
      comp=Z,116nm,1.0s,mb5.6
WALA  Waterton Lakes    54.45 328  eP      P        06 50 35.4 -0.8
      comp=Z,16nm,1.0s,mb4.7
MOD   Modoc             54.53 318  eP      P        06 50 35.6 -1.3
      comp=Z,12nm,0.9s,mb4.6
NSHM  Saint Helena R    54.75 313  eP      P        06 50 38.8 +0.3
LBCM  Butte Creek Ri    54.78 316  P       P        06 50 38.1 -0.6
WDC   Whiskeytown Da    55.50 315  eP      P        06 50 41.1 -2.9
      comp=Z,6.3nm,0.8s,mb4.5
NEW   Newport           55.73 326  P       P        06 50 44.8 -0.7
      comp=Z,12nm,0.7s,mb4.8,baz=140,slow=5.8,SNR=22
NEW                                pP      pP       06 51 19.4 -4.1
      comp=Z,13nm,1.0s,baz=119,slow=2.2,SNR=3.9
NEW   Newport           55.73 326  eP      P        06 50 44.2 -1.2
      comp=Z,30nm,1.1s,mb5.0
NEW                                epP     pP       06 51 19.3 -4.1
VIPM  Ingram Point      55.92 320  P       P        06 50 46.8  0.0
YBH   Yreka Blue Hor    56.09 317  P       P        06 50 46.0 -2.1
      comp=Z,5.6nm,0.5s,mb4.7,baz=130,slow=2.1,SNR=21
YBH                                pP      pP       06 51 23.7 -2.4
      comp=Z,4.9nm,0.6s,baz=126,slow=7.1,SNR=3.1
YBH   Yreka Blue Hor    56.09 317  eP      P        06 50 45.9 -2.2
      comp=Z,11nm,0.9s,mb4.7
KHMM  Horse Mountain    56.45 315  eP      P        06 50 50.5 -0.1
EPH   Ephrata           56.67 324  P       P        06 50 51.8 -0.3
EDM   Edmonton          56.76 332  eP      P        06 50 50.8 -1.8
FRB   Frobisher Bay     56.99   2  P       P        06 50 52.9 -1.2
      comp=Z,38nm,0.5s,mb5.5,baz=190,slow=7.2,SNR=222
FRB                                LR      LR       07 13 03.9
      comp=Z,66nm,21.5s,baz=358,slow=33
FRB   Frobisher Bay     56.99   2  P       P        06 50 52.9 -1.2
FRB                                LR      LR       07 13 03.9
EBG   Ellensburg        57.03 323  P       P        06 50 54.7 +0.1
SSOR  Sweet Springs     57.25 320  P       P        06 50 55.4 -0.8
KBO   Bosley Butte      57.31 317  eP      P        06 50 56.6 -0.1
KEBM  Edson Butte       57.65 317  eP      P        06 50 59.8 +0.8
COR   Corvallis         57.67 319  eP      P        06 50 58.5 -0.6
      comp=Z,32nm,0.9s,mb5.2
OCWA  Octopus Mounta    59.59 322  eP      P        06 51 12.2 -0.2
      comp=Z,16nm,0.8s,mb4.9
USHA  Ushuaia           61.46 177  P       P        06 51 23.5 -1.5
      comp=Z,8.5nm,0.8s,mb4.7,baz=352,slow=9.1,SNR=4.2
SFJ   Sondre            62.09  10  eP      P        06 51 27.8 -1.2
      comp=Z,82nm,1.4s,mb5.4
YKA   Yellowknife Ar    63.38 340  P       P        06 51 36.3 -1.2
      comp=Z,54nm,0.7s,mb5.5,baz=131,slow=6.8,SNR=935
YKA                                LR      LR       07 19 21.0
      comp=Z,118nm,19.1s,baz=185,slow=36
YKW3  Yellowknife Ar    63.43 340  eP      P        06 51 36.5 -1.4
BBB   Bella Bella       63.80 326  P       P        06 51 40.2 -0.2
      comp=Z,24nm,0.9s,mb5.0,baz=137,slow=6.9,SNR=6.9
BBB   Bella Bella       63.80 326  P       P        06 51 40.2 -0.2
EVO   Evora             66.32  51  eP      P        06 51 59.2 +2.4
      comp=Z,7.2nm,0.8s,mb4.2
DLBC  Dease Lake        67.46 331  P       P        06 52 03.9 +0.3
      comp=Z,92nm,1.3s,mb5.4,baz=123,slow=4.3,SNR=34
DLBC  Dease Lake        67.46 331  eP      P        06 52 03.6  0.0
DBIC  Dimbokro          67.62  86  eP      P        06 52 04.6 -0.8
DBIC                               pmax    pmax
      comp=Z,34nm,0.7s
DBIC  Dimbokro          67.62  86  P       P        06 52 04.8 -0.6
      comp=Z,32nm,0.7s,mb5.2,baz=271,slow=6.8,SNR=65
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DBIC                               pP      pP       06 52 44.8  0.0
      comp=Z,30nm,0.8s,baz=256,slow=7.0,SNR=7.9
DBIC  Dimbokro          67.62  86  eP      P        06 52 04.6 -0.8
      comp=Z,34nm,0.7s,mb5.2
DBIC                               epP     pP       06 52 44.4 -0.4
DBIC                               esP     sP       06 53 00.5 -2.1
SUMG  Summit            69.05  11  eP      P        06 52 13.3 +0.1
      comp=Z,188nm,0.7s,mb5.9
RES   Resolute Bay      69.07 354  eP      P        06 52 12.6 -0.7
RES                                pmax    pmax
      comp=Z,15nm,1.0s,mb4.7
RES   Resolute Bay      69.07 354  eP      P        06 52 12.6 -0.7
      comp=Z,15nm,1.0s,mb4.7
ESDC  Sonseca Array     69.61  50  P       P        06 52 15.9 -1.3
      comp=Z,0.6nm,0.5s,baz=270,slow=6.1,SNR=6.2
DCN   Croghan           70.24  36  eP      P        06 52 20.8 +0.1
DCN   Croghan           70.24  36  eP      P        06 52 26.5 +5.8
SCO   Scoresbysund      71.36  16  i P     P        06 52 27.4 +0.2
SCO                                pmax    pmax
      comp=Z,3.0nm,0.6s,mb4.2
SCO   Scoresbysund      71.36  16  i P     P        06 52 27.4 +0.2
      comp=Z,3.3nm,0.6s,mb4.2
SJPF  Ste Jean          72.13  47  eP      P        06 52 32.0 -0.1
      comp=Z,37nm,1.2s,mb4.7
GRR   Gorron            73.15  42  eP      P        06 52 37.4 -0.7
INK   Inuvik            73.15 340  P       P        06 52 37.6 -0.1
      comp=Z,23nm,0.7s,mb5.0,baz=109,slow=6.4,SNR=140
INK   Inuvik            73.15 340  eP      P        06 52 37.4 -0.3
      comp=Z,30nm,0.8s,mb5.1
EPF   Esparros          73.26  47  eP      P        06 52 37.3 -1.5
MFF   Saint Martin d    73.36  43  eP      P        06 52 38.5 -0.8
      comp=Z,9.8nm,0.6s,mb4.4
FLN   La Foliniere      73.45  41  eP      P        06 52 39.4 -0.4
      comp=Z,10nm,0.5s,mb4.5
LDF   La Druitiere      73.66  41  eP      P        06 52 40.0 -1.0
      comp=Z,15nm,0.8s,mb4.5
DAWY  Dawson            73.77 335  eP      P        06 52 41.7 +0.3
MTLF  Montolieu         74.66  47  eP      P        06 52 46.5 -0.4
BGF   Bois d’Agland     75.41  44  eP      P        06 52 49.9 -1.1
      comp=Z,10nm,0.7s,mb4.3
DAG   Danmarks Havn     75.72  11⇓eP     P        06 52 51.8 -0.4
DAG                                pmax    pmax
      comp=Z,35nm,0.6s,mb5.2
DAG   Danmarks Havn     75.72  11⇓eP     P        06 52 51.8 -0.4
      comp=Z,35nm,0.6s,mb5.2
DAG   Danmarks Havn     75.72  11⇓iP     P        06 52 51.8 -0.4
      comp=Z,35nm,0.6s,mb5.2
DIV   Divide            75.84 331  eP      P        06 52 53.4 +0.3
      comp=Z,95nm,1.1s,mb5.3
SMF   Signal de Mont    76.10  44  eP      P        06 52 53.6 -1.3
      comp=Z,6.5nm,0.7s,mb4.0
THY   Trims Highway     76.32 334  eP      P        06 52 56.9 +1.1
GIVF  Givet             77.05  40  eP      P        06 52 59.9 -0.2
MEZF  Maizieres J’vi    77.07  42  eP      P        06 52 59.9 -0.4
ILAR  Eielson Array     77.09 335  P       P        06 52 59.8 -0.3
      comp=Z,12nm,0.8s,mb4.5,baz=111,slow=4.1,SNR=87
ILAR                               pP      pP       06 53 40.5  0.0
      comp=Z,3.7nm,0.6s,baz=111,slow=5.3,SNR=2.6
ILAR                               PP      PP       06 55 54.5 -2.4
      comp=Z,2.1nm,0.9s,baz=102,slow=6.6,SNR=4.0
ILAR                               LR      LR       07 27 06.0
      comp=Z,149nm,21.3s,baz=351,slow=36
SMRF  Simiane la Rot    77.13  47  eP      P        06 52 59.9 -0.8
      comp=Z,25nm,1.1s,mb4.5
ORIF  Oris-en-Rattie    77.40  46  eP      P        06 53 02.3 +0.1
COLA  College           77.52 335d iP      P        06 53 03.0 +0.6
COLA  College           77.52 335  eP      P        06 53 02.8 +0.4
      comp=Z,185nm,0.8s,mb5.8
COLA                               ePP     PP       06 55 59.7 -1.0
MCK   McKinley          77.78 334  eP      P        06 53 04.3 +0.5
      comp=Z,17nm,1.2s,mb4.5
LMR   La Mourre         77.78  47  eP      P        06 53 04.0 -0.3
WLF   Walferdange       77.87  41  eP      P        06 53 04.6 -0.1
      comp=Z,12nm,0.9s,mb4.5
SLKM  Skilak Lake       77.88 330  eP      P        06 53 04.9 +0.5
FIB   Fire Island       77.95 331  eP      P        06 53 06.0 +1.1
LPL   La Plagne         78.03  45  eP      P        06 53 06.0 +0.4
LPG   La Plagne         78.04  45  eP      P        06 53 06.0 +0.3
HINF  Hinteralfeld      78.23  43  eP      P        06 53 06.3 -0.3
      comp=Z,3.9nm,0.5s,mb4.0
CDF   Champ du Feu      78.54  42  eP      P        06 53 08.5 +0.2
      comp=Z,11nm,0.9s,mb4.2
SPU   Mount Spurr       78.86 331  eP      P        06 53 10.1 +0.3
RSO   Redoubt South     79.12 330  eP      P        06 53 12.0 +0.8
IMA   Indian Mountai    80.10 336  eP      P        06 53 17.1 +0.8
      comp=Z,129nm,1.2s,mb5.4
DAVA  Damuels           80.26  43⇓iP     P        06 53 18.1 +0.5
      comp=Z,14nm,0.8s,mb4.7
GRA1  Grafenberg Arr    81.17  41  eP      P        06 53 23.4 +1.1
GRF   Grafenberg Arr    81.17  41  eP      P        06 53 23.4 +1.1
NAO01 NORSAR Array S    81.17  30  eP      P        06 53 23.1 +1.0
      comp=Z,15nm,0.8s,mb4.7
NB2   NORSAR Subarra    81.34  29  P       P        06 53 23.5 +0.5
      comp=Z,17nm,0.8s,mb4.7,baz=268,slow=5.3
NB2   NORSAR Subarra    81.34  29  P       P        06 53 23.5 +0.5
      baz=268,slow=5.6
NOA   NORSAR Array B    81.34  29  P       P        06 53 23.4 +0.4
      comp=Z,10nm,0.7s,mb4.6,baz=268,slow=5.3,SNR=47
NOA                                LR      LR       07 24 55.2
      comp=Z,44nm,18.0s,baz=130,slow=32
WTTA  Wattenberg        81.45  43⇑iP     P        06 53 23.1 -0.8
      comp=Z,7.5nm,0.9s,mb4.3
CLL   Collm             82.29  39  i P     P        06 53 28.9 +0.8
CLL                                pmax    pmax
      comp=Z,11nm,0.9s,mb4.5
CLL   Collm             82.29  39  i P     P        06 53 28.9 +0.8
      comp=Z,11nm,0.9s,mb4.5
CLL   Collm             82.29  39  P       P        06 53 28.9 +0.8
      comp=Z,logA/T=1.1,mb4.5
CLL                                e                06 53 34.0
KBA   Koelnbreinsper    82.62  43⇑iP     P        06 53 31.1 +1.2
      comp=Z,9.0nm,0.8s,mb4.5
KHC   Kasperske Hory    82.71  41  eP      P        06 53 31.5 +1.2
KHC                                e       pP       06 54 11.5 +0.3
KHC   Kasperske Hory    82.71  41  eP      P        06 53 31.5 +1.2
KHC                                pP      pP       06 54 11.5 +0.3
GERES GERESS Array B    82.80  42  P       P        06 53 30.5 -0.2
      comp=Z,1.0nm,0.3s,mb4.0,slow=27,SNR=35
BRG   Berggiesshubel    82.89  40  eP      P        06 53 32.7 +1.5
BRG                                pmax    pmax
      comp=Z,9.0nm,1.2s,mb4.4
BRG   Berggiesshubel    82.89  40  eP      P        06 53 32.7 +1.5
      comp=Z,8.8nm,1.2s,mb4.4
MOA   Molln             83.22  43⇑iP     P        06 53 32.6 -0.3
      comp=Z,4.4nm,0.7s,mb4.3
PVCC  Panska Ves        83.30  40  eP      P        06 53 34.6 +1.3
PRU   Pruhonice         83.31  40  eP      P        06 53 34.6 +1.3
ARSA  Arzberg           84.10  43⇓iP     P        06 53 38.2 +0.9
      comp=Z,6.4nm,0.8s,mb4.4
UPC   Upice             84.22  40  eP      P        06 53 39.4 +1.5
KSP   Ksiaz             84.38  40  eP      P        06 53 40.2 +1.6
KSP                                eS      S        07 03 53.0 +4.0
KSP   Ksiaz             84.38  40  eP      P        06 53 40.0 +1.4
DPC   Dobruska-Polom    84.43  40  eP      P        06 53 40.5 +1.6
ZST   Bratislava        85.10  42  i P     P        06 53 43.7 +1.4
MORC  Moravsky Berou    85.26  41  eP      P        06 53 44.2 +1.1
      comp=Z,4.9nm,0.8s,mb4.3
OJC   Ojcow             86.66  40  eP      P        06 53 43.6 -6.3
UNV   Unalaska Valle    86.68 324  eP      P        06 53 50.9 +1.0
      comp=Z,161nm,0.9s,mb5.8
ARCES ARCESS Array B    86.71  20  P       P        06 53 50.1 +0.5
      comp=Z,26nm,1.0s,mb5.0,baz=275,slow=3.5,SNR=21
KEV   Kevo              87.18  20  ep      P        06 54 02.6  +11
      comp=Z,0.7nm,0.3s,mb4.0
KEV   Kevo              87.18  20  eP      P        06 54 02.6  +11
KEV                                pmax    pmax
      comp=Z,1.0nm,0.3s,mb4.1
VNA3  Neumayer Olymp    88.05 163  e       P        06 53 57.5 +1.5
VNA3  Neumayer Olymp    88.05 163  e       pP       06 54 36.0 -1.4
VNA3  Neumayer Olymp    88.05 163  eS      S        07 04 25.9 +2.3
VNA3  Neumayer Olymp    88.05 163⇑iP     P        06 53 55.7 -0.3
VNA3                               e       pP       06 54 36.0 -1.4
VNA3                               e                06 54 52.5
VNA3                               eS      S        07 04 25.9 +2.3
NIKO  Nikolski          88.19 323  eP      P        06 53 57.6 +0.5
VNA1  Neumayer--Stat    88.20 162  e       P        06 53 59.3 +2.6
VNA1  Neumayer--Stat    88.20 162⇑iP     P        06 53 56.6 -0.1
VNA1                               e                06 58 58.4
VNA1                               e                07 14 52.9
VNA1                               e                07 15 01.3
KAF   Kangasniemi       88.43  28  ep      P        06 53 54.9 -3.1
      comp=Z,4.6nm,0.9s,mb4.3
KAF   Kangasniemi       88.43  28  eP      P        06 53 54.9 -3.1
KAF                                pmax    pmax
      comp=Z,5.0nm,0.9s,mb4.3
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FINES FINESS Array B    88.46  28  eP      P        06 53 59.3 +1.2
FINES FINESS Array B    88.46  28  P       P        06 53 58.7 +0.5
      comp=Z,4.7nm,0.8s,mb4.3,baz=270,slow=3.8,SNR=13
FINES                              pP      pP       06 54 40.6 +1.0
      comp=Z,2.5nm,0.6s,baz=270,slow=1.9,SNR=2.6
FINES                              LR      LR       07 29 16.1
      comp=Z,34nm,19.5s,baz=198,slow=32
FINES FINESS Array B    88.46  28  P       P        06 53 58.7 +0.5
FINES                              pP      pP       06 54 40.6 +1.0
FINES                              LR      LR       07 29 16.1
VNA2  Neumayer--Watz    88.58 163  e       P        06 54 00.0 +1.5
VNA2  Neumayer--Watz    88.58 163  e       pP       06 54 37.8 -2.2
VNA2  Neumayer--Watz    88.58 163  eS      S        07 04 31.8 +3.4
VNA2  Neumayer--Watz    88.58 163⇑iP     P        06 53 57.9 -0.6
VNA2                               e       pP       06 54 37.8 -2.2
VNA2                               e                06 54 55.8
VNA2                               e                06 59 00.1
VNA2                               eS      S        07 04 31.8 +3.4
SNAA  Sanae             90.22 163  e       P        06 54 07.5 +1.3
SNAA  Sanae             90.22 163  eS      S        07 04 45.7 +2.3
SNAA  Sanae             90.22 163⇑iP     P        06 54 06.1 -0.1
SNAA                               eS      S        07 04 45.7 +2.3
SNAA  Sanae             90.22 163⇑iP     P        06 54 06.1 -0.1
SNAA                               e                06 55 12.1
SNAA                               e                06 59 13.3
SNAA                               eS      S        07 04 45.7 +2.3
SNAA                               e                07 14 54.2
SNAA                               e                07 15 03.6
JOF   Joensuu           90.50  26  ep      P        06 54 04.4 -3.3
      comp=Z,0.3nm,0.3s
MLR   Muntele Rosu      91.48  44  P       P        06 54 13.5 +0.8
      comp=Z,5.7nm,0.8s,mb4.7,baz=251,slow=1.3,SNR=7.5
IDI   Anoyia            92.55  54  P       P        06 54 18.4 +0.5
      comp=Z,8.2nm,0.9s,mb4.9,baz=238,slow=12,SNR=3.6
BILL  Bilibino          94.76 341c iP      P        06 54 28.2 +1.1
BILL                               pmax    pmax
      comp=Z,18nm,1.3s,mb5.1
BILL                               MLR     MLR
      comp=Z,100nm,22.0s
BILL  Bilibino          94.76 341  eP      P        06 54 28.1 +1.0
      comp=Z,15nm,1.0s,mb5.2
OBN   Obninsk           95.49  33⇑iP     P        06 54 29.4 -1.3
OBN                                ePS     SP       07 06 53.5 -0.6
OBN                                pmax    pmax
      comp=Z,7.0nm,1.0s,mb4.8
TIXI  Tiksi            100.45 353  i P     P        06 54 53.0 +0.1
TIXI                               pmax    pmax
      comp=Z,2.0nm,1.0s
KIV   Kislovodsk       103.31  42  i P     Pdif     06 55 02.0 -4.2
KIV                                pmax    pmax
      comp=Z,4.0nm,1.3s
ZAL   Zalesovo         116.73  14  PKP     PKPdf    06 59 50.2 +2.0
      comp=Z,6.2nm,0.7s,baz=162,slow=1.5,SNR=36
KURK  Kurchatov        117.75  20  i PKIKP PKPdf    06 59 52.7 +2.4
KURK  Kurchatov        117.75  20  ePKPdf  PKPdf    06 59 51.8 +1.5
MKAR  Makanchi Array   122.36  20  i PKIKP PKPdf    07 00 01.0 +1.6
MKAR                               pmax    pmax
      comp=Z,3.0nm,0.5s
AAK   Ala-Archa        122.65  28  i PKIKP PKPdf    07 00 01.4 +1.4
AAK   Ala-Archa        122.65  28  ePKPdf  PKPdf    07 00 01.6 +1.6
ZAK   Zakamensk        123.03   3  ePKIKP  PKPdf    07 00 02.9 +2.3
ZAK                                pmax    pmax
      comp=Z,2.0nm,1.0s
MDJ   Mudanjiang       124.98 340  PKP     PKPdf    07 00 04.5 -0.1
ULN   Ulaanbaatar      125.64 360  ePKIKP  PKPdf    07 00 07.1 +1.4
SONM  Songino Array    125.66   1  PKP     PKPdf    07 00 08.5 +2.7
      comp=Z,6.0nm,0.8s,baz=338,slow=1.5,SNR=18
KSH   Kashi            125.77  29  ePKP    PKPdf    07 00 10.8 +4.6
WMQ   Urumqi           126.73  17  ePKP    PKPdf    07 00 10.5 +2.6
WMQ                                PP      PP       07 02 14.0 +3.1
WMQ                                SKS     SKS      07 07 05.0 +8.5
CN2   Changchun        127.00 343  ePKP    PKPdf    07 00 06.8 -1.6
HHC   Hu-ho-hao-te     132.47 355  ePKP    PKPdf    07 00 23.5 +4.5
HHC                                PP      PP       07 02 51.5 +3.4
HHC                                PKS     PKS      07 03 58.0 +3.9
HHC                                SKS     SKS      07 07 15.3 +3.8
BJT   Baijiatuau       132.72 350  ePKIKP  PKPdf    07 00 22.6 +3.1
GTA   Gaotai           133.61   8  PKP     PKPdf    07 00 24.5 +3.4
GTA                                XPKP             07 01 26.3
GTA                                PP      PP       07 03 02.5 +7.0
GTA                                PKS     PKS      07 03 59.0 +2.8
GTA                                SKS     SKS      07 07 17.5 +3.5
GTA                                PP      PP
      comp=Z,175nm,7.2s
GTA                                LR      LR
      comp=N,83nm,17.9s
GTA                                LR      LR
      comp=E,109nm,16.7s
GTA                                LR      LR
      comp=Z,77nm,16.4s
LZH   Lanzhou          137.30   4  PKP     PKPdf    07 00 31.5 +3.5
LZH                                sPKP             07 01 37.5
KOLN  Koldanda         138.91  32  eP      PKPdf    07 00 33.0 +1.8
      comp=Z,22nm,1.3s
STKA  Stephens Creek   139.19 228  PKP     PKPdf    07 00 34.2 +2.6
      comp=Z,2.5nm,0.6s,baz=134,slow=1.8,SNR=8.8
STKA  Stephens Creek   139.19 228  ePKPdf  PKPdf    07 00 33.9 +2.3
STKA                               epPKPdf          07 01 16.2
STKA                               eSKPdf           07 03 53.2
GKN   Gorkha           139.26  31  eP      PKPdf    07 00 34.3 +2.5
XAN   Xi’an            139.41 358  PKP     PKPdf    07 00 28.0 -3.9
CTA   Charters Tower   139.70 247  PKP     PKPdf    07 00 34.5 +1.6
      comp=Z,3.7nm,0.7s,baz=121,slow=3.3,SNR=1.4
KKN   Kakani           139.76  31  eP      PKPdf    07 00 35.1 +2.4
      comp=Z,30nm,0.9s
NJ2   Nanjing          139.81 344  ePKP    PKPdf    07 00 32.5 -0.2
NJ2                                XPKP             07 01 32.0
NJ2                                PP      PP       07 03 35.0 +1.3
NJ2                                PKS     PKS      07 04 08.0 +0.6
NJ2                                PPP     PPP      07 06 39.0 -1.3
NJ2                                SKS     SKS      07 07 25.0 +0.5
NJ2                                PP      PP
      comp=Z,170nm,11.3s
NJ2                                LR      LR
      comp=N,390nm,29.6s
NJ2                                LR      LR
      comp=E,530nm,28.7s
NJ2                                LR      LR
      comp=Z,400nm,30.7s
DMN   Daman            139.82  31  eP      PKPdf    07 00 35.3 +2.4
      comp=Z,16nm,0.7s
GUN   Gumba            139.96  30  eP      PKPdf    07 00 35.5 +2.4
      comp=Z,35nm,0.9s
PKI   Pulchoki         140.01  31  eP      PKPdf    07 00 35.4 +2.2
      comp=Z,28nm,1.1s
SSE   Sheshan          140.01 341  ePKP    PKPdf    07 00 33.8 +0.7
SSE   Sheshan          140.01 341  eP      PKPdf    07 00 33.7 +0.6
JIRN  Jiri             140.32  30  eP      PKPdf    07 00 36.1 +2.3
      comp=Z,9.4nm,0.7s
LSA   Lhasa            140.70  22  ePKIKP  PKPdf    07 00 37.8 +3.3
WHN   Wuhan            142.27 350  ePKP    PKPdf    07 00 33.5 -3.6
CD2   Chengdu          142.44   5  PKP     PKPdf    07 00 40.8 +3.4
ENH   Enshi            143.13 356  ePKPdf  PKPdf    07 00 37.8 -0.8
GYA   Guiyang          147.00   1  PKP     PKPdf    07 00 48.5 +3.2
GYA                                APKP             07 01 32.8
GYA                                PP      PP       07 04 15.0 -2.1
GYA                                PP      PP
      comp=Z,100nm,6.9s
KMI   Kunming          148.06   7  PKP     PKPdf    07 00 49.8 +2.7
KMI                                APKP             07 01 28.0
KMI                                LR      LR
      comp=Z,50nm,23.3s
ASAR  Alice Springs    149.16 234  PKP     PKPdf    07 00 50.9 +2.0
      comp=Z,9.2nm,0.8s,baz=116,slow=1.5,SNR=48
ASAR                               PKPbc   PKPdf    07 00 54.4 +5.4
      comp=Z,15nm,0.7s,baz=117,slow=3.4,SNR=121
ASAR                               pPKP             07 01 33.5
      comp=Z,18nm,0.8s,baz=122,slow=2.9,SNR=3.9
ASPA  Alice Springs    149.16 234  ePKP    PKPdf    07 00 50.9 +2.0
ASPA  Alice Springs    149.16 234  ePKP             07 01 35.0
WB2   Warramunga Arr   150.39 241  ePKP    PKPdf    07 00 53.4 +2.6
WRAB  Tennant Creek    150.40 241  ePKPdf  PKPdf    07 00 52.8 +2.0
WRAB                               ePKPbc  PKPdf    07 00 58.2 +7.3
WRA   Warramunga Arr   150.40 241  PKP     PKPdf    07 00 53.7 +2.8
      comp=Z,16nm,0.5s,baz=110,slow=2.4,SNR=111
WRA                                PKPbc   PKPdf    07 00 57.8 +6.9
      comp=Z,16nm,0.5s,baz=108,slow=2.6,SNR=144
WRA                                pPKPbc           07 01 39.3
      comp=Z,14nm,0.5s,baz=107,slow=1.9,SNR=4.3
CHG   Chiang Mai       153.40  17 ⇑P       PKPdf    07 01 05.3  +10
      comp=Z,20nm,0.8s
CM31  Chiang Mai Arr   153.73  18  ePKPbc  PKPdf    07 01 06.1  +10
CMAR  Chiang Mai Arr   153.73  18  PKIKP   PKPdf    07 00 59.3 +3.6
CMAR                                                07 01 49.7
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Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**153.73**	**18**	PKP	PKPdf	07 00 59.3	+3.6
	comp=Z,5.7nm,0.7s,baz=318,slow=1.6,SNR=31						
CMAR				PKPbc	PKPdf	07 01 06.7	+11
	comp=Z,16nm,0.6s,baz=325,slow=3.4,SNR=35						
CMAR				pPKPbc		07 01 49.6	
	comp=Z,6.1nm,0.8s,baz=328,slow=3.5,SNR=2.3						
NANT	**Nan**	**153.88**	**14**	P	PKPdf	07 00 53.0	-2.9
KAKA	**Kakadu**	**154.25**	**255**	*e*PKP	PKPdf	07 01 07.0	+10
	comp=Z,4.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**158.61**	**236**	*e*PKP	PKPdf	07 01 21.1	+19
	comp=Z,2.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**158.61**	**236**	*e*PKP	PKPab	07 01 41.0	+0.5

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*ISK **25** 07:21:45.7,40.98N×43.95E,h5^{km},MD3.4,ML3.2*

*TIF **25** 07:21:45.3,41.01N×43.95E,h7^{km}±1^{km}*

*CSEM **25** 07:21:45.5±0.1,40.96N×43.98E,h2^{km},MD3.4,Error ellipse: s-maj=2.0km s-min=0.8km az=23.0*

ISC 25 07:21:46.8±0.5**,40.99N**±0.03×**43.97E**±0.05**,h5^{km},n9, σ0^{s}62**/15**,1C,Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARS	**Kars**	**0.77**	**241**	*i* PG	**Pg**	**07 22 01.2**	**-0.9**
KARS				*i* SG	**Sg**	**07 22 12.7**	**+0.3**
MTA	**Mtatsminda**	**0.94**	**41**	P	**Pb**	**07 22 04.4**	**-0.7**
MTA				S	**Sb**	**07 22 17.1**	**-0.5**
TI2	**Plekhanov**	**0.95**	**38**	⇑*i*P	**Pb**	**07 22 05.0**	**-0.3**
	60nm,0.4s						
TI2				*i* S	**Sb**	**07 22 17.8**	**-0.1**
	520nm,0.6s						
GNI	**Garni**	**1.02**	**145**	PG	**Pg**	**07 22 06.5**	**-0.7**
GNI				SG	**Sg**	**07 22 21.8**	**+0.9**
DUS	**Dusheti**	**1.23**	**26**	P	**Pb**	**07 22 09.9**	**-0.2**
DUS				S	**Sb**	**07 22 27.6**	**+1.5**
ONI	**Oni**	**1.64**	**346**	P	**Pn**	**07 22 16.3**	**-0.1**
ONI				S	**Sb**	**07 22 38.3**	**+0.3**
BCA	**Borcka**	**1.83**	**285**	PN	**Pn**	**07 22 19.3**	**+0.1**
EZM	**Erzurum**	**2.27**	**242**	*e*PN	**Pn**	**07 22 25.5**	**+0.1**
VRT	**Varto**	**2.64**	**226**	*e*PN	**Pn**	**07 22 31.2**	**+0.4**

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*JMA **25** 07:37:09.6±0.3,23.96N×121.97E,h70^{km},M2.4*

TAP 25 07:37:07.5,23.85N×121.88E,h33^{km},ML3.2,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**1.20**	**59**	P	Pn	07 37 29.3	+1.1
YOJ				*e*S	Sn	07 37 43.4	-0.1
IRIF	**Iriomote-Funau**	**1.76**	**74**	P	Pn	07 37 37.0	+0.8
IRIF				*e*S	Sn	07 37 58.0	+0.3
HATJ	**Hateruma jima**	**1.77**	**83**	P	Pn	07 37 37.3	+0.9
JKRS	**Kuro-shima**	**1.98**	**78**	P	Pn	07 37 40.2	+0.8
JKRS				*e*S	Sn	07 38 03.9	+0.5
JIJ	**Ishigaki jima**	**2.13**	**76**	P	Pn	07 37 41.5	0.0
JIJ				*e*S	Sn	07 38 06.4	-0.7
JTJ	**Tarama**	**2.69**	**72**	P	Pn	07 37 49.8	+0.2
JTJ				*e*S	Sn	07 38 20.7	-0.7

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*IDC **25** 07:47:17.1±0.7,54.04S×6.96E,mb4.3/8,mb1 4.4/9, mb1mx4.1/16,mbtmp4.3/9,ML3.4/1,MS4.5/13,Ms1 4.4/13, ms1mx4.0/23,Error ellipse: s-maj=24.2km s-min=20.5km az=95.0*

*NEIC **25** 07:47:18.8±0.3,54.08S×6.94E,h10^{km},mb5.2/12, MS4.7/6,Error ellipse: s-maj=13.3km s-min=8.9km az=88.0*

*HRVD **25** 07:47:18.8±0.3,54.04S×7.32E,h17^{km},MW5.1/69, Centroid moment Tensor Solution. LP body waves: s22,c29;Mantle waves: s69,c112; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.80±.26; $M_{\theta\theta}$3.20±.20; $M_{\phi\phi}$1.59±.16; $M_{r\theta}$1.03±.45; $M_{\theta\phi}$-1.92±.11; $M_{\phi r}$0.67±.45; Best double couple: $M_0$4.782×10^{16} NP1: ϕ_s135°,δ43°,λ-73°. NP2:ϕ_s292°,δ49°,λ-106°. Principal axes: T 4.503, Plg3°, Azm33°; N .547, Plg12°, Azm302°; P -5.061, Plg78°, Azm137°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 25 07:47:17.3±0.5**,54.04S**±0.08×**7.0E**±0.2**,h10^{km},n74, σ0^{s}97**/33**,mb4.8**/15**,MS4.5**/17**,4C,Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.00**	**196**	*e*	**P**	**07 51 31.4**	**+2.5**
VNA1	**Neumayer--Stat**	**18.00**	**196**	*e*	**P**	**07 51 43.6**	**+15**
VNA1	**Neumayer--Stat**	**18.00**	**196**	⇑*i*P	**P**	**07 51 29.0**	**+0.1**
VNA1				*e*		07 51 31.4	
VNA1				*e*		07 51 43.6	
VNA2	**Neumayer--Watz**	**18.11**	**195**	*e*	**P**	**07 51 33.7**	**+3.6**
VNA2	**Neumayer--Watz**	**18.11**	**195**	*e*	**P**	**07 51 44.7**	**+15**
VNA2	**Neumayer--Watz**	**18.11**	**195**	⇑*i*P	**P**	**07 51 30.0**	**-0.1**
VNA2				*e*		07 51 33.7	
VNA2				*e*		07 51 44.7	
SNAA	**Sanae**	**18.21**	**190**	*e*	**P**	**07 51 34.2**	**+2.8**
SNAA	**Sanae**	**18.21**	**190**	*e*	**P**	**07 51 46.2**	**+15**
SNAA	**Sanae**	**18.21**	**190**	P	**P**	**07 51 31.1**	**-0.3**
	0.1nm,0.3s,baz=15,slow=12,SNR=21						
SNAA	**Sanae**	**18.21**	**190**	⇑*i*P	**P**	**07 51 30.5**	**-0.9**
SNAA				*e*		07 51 34.2	
SNAA				*e*		07 51 46.2	
VNA3	**Neumayer Olymp**	**18.75**	**197**	*e*	**P**	**07 51 38.3**	**+0.2**
VNA3	**Neumayer Olymp**	**18.75**	**197**	⇑*i*P	**P**	**07 51 35.6**	**-2.5**
VNA3				*e*		07 51 38.3	
SUR	**Sutherland**	**23.80**	**30**	LR	LR	07 59 51.9	
	comp=Z,2μm,20.4s,MS4.5,baz=185,slow=32						
MAW	**Mawson**	**29.23**	**139**	LR	LR	08 02 49.0	
	comp=Z,484nm,21.5s,MS4.1,baz=275,slow=32						
MAW	**Mawson**	**29.23**	**139**	P	**P**	**07 53 20.6**	**-0.2**
	11nm,0.8s,mb4.6						
TSUM	**Tsumeb**	**35.72**	**17**	P	**P**	**07 54 18.7**	**+0.8**
	1.4nm,0.7s,mb4.0,baz=188,slow=7.1,SNR=3.4						
TSUM	**Tsumeb**	**35.72**	**17**	*e*P	**P**	**07 54 19.6**	**+1.8**
	6.9nm,1.0s,mb4.5						
TSUM				LR	LR		
	comp=Z,1μm,21.0s,MS4.7						
QSPA	**South Pole Qui**	**36.20**	**180**	*e*P	**P**	**07 54 21.1**	**-0.3**
	comp=Z,58nm,1.2s,mb5.4						
MATP	**Matopo**	**37.36**	**35**	LR	LR	08 07 47.0	
	comp=Z,1μm,21.4s,MS4.7,baz=191,slow=33						
USHA	**Ushuaia**	**41.88**	**237**	LR	LR	08 08 41.4	
	comp=Z,398nm,20.8s,MS4.3,baz=74,slow=31						
VNDA	**Vanda**	**47.78**	**173**	P	**P**	**07 55 56.5**	**+0.8**
	comp=Z,9.6nm,0.9s,mb4.8,baz=230,slow=8.1,SNR=14						
VNDA				LR	LR	08 15 27.1	
	comp=Z,955nm,20.5s,MS4.8,baz=190,slow=35						
VNDA	**Vanda**	**47.78**	**173**	*e*P	**P**	**07 55 56.3**	**+0.6**
	comp=Z,35nm,1.3s,mb5.2						
VNDA				LR	LR		
	comp=Z,1μm,21.0s,MS4.9						
TRQA	**Tornquist**	**48.48**	**260**	*e*P	**P**	**07 56 02.9**	**+1.2**
	comp=Z,44nm,1.3s,mb5.3						
TRQA				LR	LR		
	comp=Z,626nm,21.0s,MS4.6						
PLCA	**Paso Flores**	**51.56**	**251**	P	**P**	**07 56 25.6**	**+0.4**
	comp=Z,2.4nm,1.1s,mb4.0,baz=144,slow=7.7,SNR=4.0						
PLCA				LR	LR	08 15 34.7	
	comp=Z,270nm,20.1s,MS4.3,baz=131,slow=33						
PLCA	**Paso Flores**	**51.56**	**251**	*e*P	**P**	**07 56 25.4**	**+0.2**
	comp=Z,3.7nm,0.9s,mb4.3						
BAO	**Brasilia Array**	**57.15**	**290**	P	**P**	**07 57 05.8**	**-0.7**
BAO				*e*		07 57 12.2	
BAO				*e*		07 57 37.2	
BDFB	**Brasilia**	**57.16**	**290**	P	**P**	**07 57 05.4**	**-1.1**
	comp=Z,7.8nm,0.8s,mb4.8,baz=133,slow=5.0,SNR=17						
BDFB				LR	LR	08 16 38.8	
	comp=Z,182nm,20.6s,MS4.2,baz=166,slow=31						
KMBO	**Kilima Mbogo**	**58.33**	**36**	P	**P**	**07 57 14.3**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.2,baz=233,slow=21,SNR=6.3						
KMBO				LR	LR	08 20 00.6	
	comp=Z,1μm,22.0s,MS4.9,baz=94,slow=34						
KMBO	**Kilima Mbogo**	**58.33**	**36**	*e*P	**P**	**07 57 15.1**	**+0.3**
	comp=Z,2.2nm,0.7s,mb4.3						
KMBO				LR	LR		
	comp=Z,982nm,20.0s,MS4.9						
DBIC	**Dimbokro**	**61.30**	**347**	LR	LR	08 19 02.7	
	comp=Z,150nm,20.9s,MS4.1,baz=95,slow=31						
LVC	**Limon Verde**	**63.80**	**267**	P	**P**	**07 57 50.9**	**-0.8**
	comp=Z,3.6nm,0.8s,mb4.5,baz=128,slow=6.6,SNR=5.6						
LVC	**Limon Verde**	**63.80**	**267**	*e*P	**P**	**07 57 51.1**	**-0.6**
	comp=Z,18nm,1.0s,mb5.1						
LPAZ	**La Paz**	**68.25**	**272**	*e*P	**P**	**07 58 20.6**	**+0.4**
	comp=Z,46nm,1.3s,mb5.3						
LPAZ				LR	LR		
	comp=Z,408nm,22.0s,MS4.6						
SAML	**Samuel**	**71.19**	**281**	*e*P	**P**	**07 58 37.0**	**-1.3**
	comp=Z,59nm,1.5s,mb5.3						
SAML				LR	LR		
	comp=Z,285nm,21.0s,MS4.5						
NNA	**Nana**	**76.78**	**268**	*e*P	**P**	**07 59 10.8**	**+0.1**
	comp=Z,41nm,1.5s,mb5.1						
STKA	**Stephens Creek**	**85.87**	**143**	P	**P**	**07 59 57.8**	**-0.3**
	comp=Z,2.6nm,1.0s,mb4.4,baz=320,slow=5.7,SNR=3.9						
EIL	**Elat**	**86.81**	**24**	LR	LR	08 36 55.0	
	comp=Z,602nm,21.1s,MS5.0,baz=115,slow=34						
OTAV	**Otavalo**	**87.50**	**274**	*e*P	**P**	**08 00 08.1**	**+1.6**
	comp=Z,28nm,1.5s,mb5.3						
ROSC	**El Rosal**	**88.81**	**280**	LR	LR	08 40 55.7	
	comp=Z,118nm,19.5s,MS4.3,baz=183,slow=36						
ASAR	**Alice Springs**	**90.14**	**133**	P	**P**	**08 00 17.8**	**-1.0**
	comp=Z,0.5nm,0.9s,mb3.9,baz=202,slow=3.5,SNR=4.8						
VAE	**Valguarnera**	**91.37**	**6**	LR	LR	08 37 44.2	
	comp=Z,205nm,20.7s,MS4.5,baz=304,slow=33						
RKT	**Rikitea**	**96.45**	**215**	*e*LR	LR	08 32 04.6	
	comp=Z,322nm,29.5s						
GNI	**Garni**	**99.28**	**28**	LR	LR	08 43 40.8	
	comp=Z,196nm,20.0s,MS4.6,baz=332,slow=34						
TBI	**Tubuai**	**100.29**	**202**	*e*LR	LR	08 33 58.2	
	comp=Z,338nm,32.2s						
PPT	**Papeete**	**105.90**	**203**	*e*SS	SS	08 21 07.8	+14
PPT				*e*LR	LR	08 36 27.4	
	comp=Z,487nm,23.2s						
KURK	**Kurchatov**	**120.34**	**44**	*e*PKPdf	PKPdf	08 06 09.8	-1.2
SCHQ	**Schefferville**	**124.30**	**318**	PKP	PKPdf	08 06 15.7	-3.0
	comp=Z,2.4nm,0.9s,baz=45,slow=4.3,SNR=5.3						
TXAR	**Lajitas Array**	**125.12**	**273**	PKP	PKPdf	08 06 19.0	-1.8
	comp=Z,0.4nm,0.8s,baz=344,slow=6.6,SNR=3.1						
SUMG	**Summit**	**130.19**	**344**	*e*PKPdf	PKPdf	08 06 29.9	+0.5
ANMO	**Albuquerque**	**130.79**	**275**	*e*PKPdf	PKPdf	08 06 30.3	-1.3
NLU	**North Lily Min**	**137.46**	**276**	*e*PKPdf	PKPdf	08 06 42.8	-1.0
BW06	**Boulder Array**	**137.77**	**281**	*e*PKPdf	PKPdf	08 06 41.7	-2.6
PDAR	**Pinedale Array**	**137.77**	**281**	PKP	PKPdf	08 06 40.8	-3.5
	comp=Z,1.2nm,1.1s,baz=108,slow=4.7,SNR=5.9						
HWUT	**Hardware Ranch**	**138.21**	**279**	*e*PKPdf	PKPdf	08 06 43.7	-1.4
SNOW	**Snow King Moun**	**138.89**	**281**	*e*PKPdf	PKPdf	08 06 44.2	-2.1
LOHW	**Long Hollow**	**138.89**	**282**	*e*PKPdf	PKPdf	08 06 44.3	-2.0
TPAW	**Teton Pass**	**139.02**	**281**	*e*PKPdf	PKPdf	08 06 44.1	-2.5
MOOW	**Moose Ponds**	**139.06**	**282**	PKPdf	PKPdf	08 06 45.6	-1.0
NVAR	**Mina Array Bea**	**140.13**	**270**	PKP	PKPdf	08 06 46.2	-2.4
	comp=Z,0.6nm,0.7s,baz=133,slow=3.3,SNR=5.6						
HLID	**Hailey**	**141.07**	**279**	*e*PKPdf	PKPdf	08 06 49.5	-0.6
CHMT	**Chamberlain Mo**	**142.33**	**284**	*e*PKPdf	PKPdf	08 06 53.0	+0.9
WVOR	**Wild Horse Val**	**142.86**	**275**	*e*PKPdf	PKPdf	08 06 51.9	-1.3
BMO	**Blue Mountains**	**143.51**	**279**	*e*PKPdf	PKPdf	08 06 51.9	-2.4
WALA	**Waterton Lakes**	**143.85**	**287**	*e*PKPdf	PKPdf	08 06 51.0	-3.7
RES	**Resolute Bay**	**144.17**	**334**	*e*PKPdf	PKPdf	08 06 51.7	-2.9
NEW	**Newport**	**145.26**	**284**	*e*PKPbc	PKPbc	08 06 54.5	-0.1
EDM	**Edmonton**	**145.52**	**294**	*e*PKPbc	PKPbc	08 06 54.9	-0.2
FMW	**Mount Fremont**	**147.20**	**279**	P	PKPdf	08 07 00.8	+0.3
YKA	**Yellowknife Ar**	**149.17**	**309**	PKPbc	PKPdf	08 07 04.7	+1.5
	comp=Z,6.0nm,0.8s,baz=105,slow=2.3,SNR=119						
YKW3	**Yellowknife Ar**	**149.19**	**310**	*e*PKPbc	PKPdf	08 07 04.9	+1.7
YKW3				*e*PKPab	PKPab	08 07 11.9	+0.8
INK	**Inuvik**	**156.76**	**323**	PKPab	PKPab	08 07 41.0	-1.8
	comp=Z,2.5nm,0.9s,baz=41,slow=6.8,SNR=7.8						
INK	**Inuvik**	**156.76**	**323**	*e*PKPab	PKPab	08 07 42.2	-0.6
ILAR	**Eielson Array**	**163.05**	**320**	PKP	PKPdf	08 07 21.4	+0.5
	comp=Z,0.5nm,0.9s,baz=50,slow=0.7,SNR=4.2						
ILAR				PKPab	PKPab	08 08 10.1	+0.1
	comp=Z,3.2nm,0.9s,baz=45,slow=4.0,SNR=21						
COLA	**College**	**163.37**	**321**	*e*PKPab	PKPab	08 08 11.4	0.0

SKHL 25 07:56:48.6±0.3**,51.50N×141.89E,h12^{km}**±2^{km}**,mb3.7**/4**, Sakhalin Island**

CASC 25 08:02:27.8±2.3**,12.18N×87.81W,h25^{km}**±7^{km}**,MD4.0, ML3.4,3C-4D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.91**	**55**	⇑*e*P	Pb	08 02 45.3	+0.6
LEON	**Leon**	**0.93**	**75**	⇓*e*P	Pb	08 02 44.5	-0.6
LEON				*e*S	Sb	08 02 58.6	+1.6
TELN	**Telica**	**1.04**	**66**	*e*S	Sb	08 02 60.0	-0.4
CNCH	**Conchagua**	**1.09**	**359**	*e*P	Pn	08 02 47.2	-0.5
CNCH				*e*S	Sb	08 03 02.6	+0.8
MIRN	**Miramar**	**1.10**	**76**	⇓*e*P	Pn	08 02 47.0	-0.8
MIRN				*e*S	Sb	08 03 03.3	+1.3
CNGN	**Cerro Negro**	**1.13**	**73**	*e*P	Pn	08 02 47.9	-0.4
MOMJ	**Momotombo**	**1.26**	**79**	*e*P	Pn	08 02 49.1	-1.0
MOMJ				*e*S	Sn	08 03 07.3	+0.9
VSM	**San Miguel**	**1.32**	**340**	*e*P	Pn	08 02 50.9	-0.1
BLLM	**Bellamira**	**1.32**	**342**	⇑*e*P	Pn	08 02 51.1	+0.1
BLLM				⇓*e*P		08 02 51.6	
BLLM				*e*S	Sn	08 03 07.6	-0.4
XAVN	**Gruta Xavier**	**1.45**	**91**	⇑*e*P	Pn	08 02 52.1	-0.7
XAVN				*e*S	Sn	08 03 11.9	+0.8
MGAN	**Managua**	**1.53**	**91**	⇓*e*P	Pn	08 02 52.9	-1.0
MGAN				*e*S	Sn	08 03 13.2	+0.1
MGAN				*i*		08 03 14.5	
	comp=N,480nm,0.6s						
TICN	**Ticuantepe**	**1.55**	**95**	*e*P	Pn	08 02 53.5	-0.7
TICN				*e*S	Sn	08 03 14.2	+0.5
WILN	**Americas 2**	**1.59**	**90**	*e*P	Pn	08 02 53.8	-1.0
WILN				*e*S	Sn	08 03 14.3	-0.3
CAHU	**Cacacuatique**	**1.63**	**346**	*e*P	Pn	08 02 55.7	+0.3
APON	**Apoyo**	**1.72**	**98**	*e*P	Pn	08 02 54.7	-2.0
SNVI	**San Vicente**	**1.74**	**325**	*e*P	Pn	08 02 56.9	-0.1
SNVI				*e*S	Sn	08 03 20.6	+1.9
PYTN	**Playitas**	**1.75**	**78**	*e*P	Pn	08 02 59.0	+1.9
PYTN				*e*S	Sn	08 03 18.6	-0.1
LCBS	**La Ceiba**	**1.86**	**322**	*e*P	Pn	08 02 57.8	-0.9
LCBS				*e*S	Sn	08 03 20.5	-1.0
LFRS	**El Faro**	**1.89**	**320**	*e*P	Pn	08 02 58.2	-0.8
LFRS				*e*S	Sn	08 03 21.5	-0.7
LFU	**La Fuente**	**2.01**	**321**	*e*P	Pn	08 03 00.4	-0.5
BOQS	**Boqueron**	**2.11**	**317**	*e*P	Pn	08 03 02.3	+0.1
BOQS				*e*S	Sn	08 03 27.4	-0.5
CONN	**Concepcion**	**2.22**	**106**	*e*P	Pn	08 03 03.7	-0.2
SBLS	**San Blas**	**2.42**	**313**	*e*P	Pn	08 03 07.2	+0.6
RTR	**El Retiro**	**2.48**	**314**	*e*P	Pn	08 03 07.0	-0.4
RBDL	**Robledal**	**2.65**	**317**	*e*P	Pn	08 03 09.9	-0.1

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*NIED **25** 08:09:00,42.90N×139.60E,h195^{km},Mw4.3 Best double couple: $M_0$2.97×10^{15} NP1:ϕ_s233°,δ79°,λ74°. NP2:ϕ_s109°, δ19°,λ145°.*

*SKHL **25** 08:09:48.1±1.2,42.86N×139.38E,h213^{km}±33^{km},mb4.5/1, msh5.8/1*

*MOS **25** 08:09:50.9±1.2,43.02N×139.42E,h187^{km},mb4.4/21, Error ellipse: s-maj=11.1km s-min=6.6km az=97.1*

*IDC **25** 08:09:51.9±1.1,42.93N×139.50E,h181^{km}±9^{km},mb4.0/20, mb1 4.2/20,mb1mx4.1/26,mbtmp4.5/20,Error ellipse: s-maj=11.7km s-min=10.4km az=84.0*

*NEIC **25** 08:09:52.4±0.6,42.96N×139.47E,h186^{km}±6^{km},mb4.3/29, Error ellipse: s-maj=6.0km s-min=4.7km az=118.0*

NEIC Recorded [1 JMA] in eastern Hokkaido.

*BJI **25** 08:09:53.3,43.23N×139.66E,h208^{km},mB4.8,mb4.5*

*JMA **25** 08:09:53.2±0.1,42.94N×139.64E,h188^{km}±1^{km},M4.0*

ISC 25 08:09:51.4±0.2**,42.98N**±0.03×**139.52E**±0.04**,h192^{km}**±2^{km}**, n142,σ1^{s}02**/145**,mb4.1**/53**,9C-9D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSH	**Shimam**	**0.51**	**131**	⇑P	**P**	**08 10 18.6**	**+0.6**
JSH				S	**S**	**08 10 37.9**	**-0.6**
JSK	**Shakotan**	**0.79**	**61**	⇑P	**P**	**08 10 20.1**	**+0.8**
JSK				S	**S**	**08 10 40.7**	**-0.1**
JOSM	**Okushiri--Mats**	**0.89**	**182**	⇓P	**P**	**08 10 21.0**	**+1.2**
JOSM				S	**S**	**08 10 42.4**	**+0.6**
JYM2	**Yakumo 2**	**1.06**	**144**	⇓P	**P**	**08 10 21.6**	**+0.6**
JYM2				S	**S**	**08 10 43.5**	**-0.4**
JNB	**Noboribetsu**	**1.23**	**114**	⇓P	**P**	**08 10 22.6**	**+0.2**
JNB				S	**S**	**08 10 45.8**	**-0.5**
JEW	**Eniwo**	**1.42**	**95**	⇓P	**P**	**08 10 24.7**	**+0.6**
JKB	**Kayabe**	**1.56**	**134**	⇓P	**P**	**08 10 25.4**	**+0.1**
JKB				*e*S	**S**	**08 10 50.5**	**-1.0**
JHR	**Hokuryu**	**1.78**	**64**	⇑P	**P**	**08 10 28.7**	**+1.2**
JHR				*e*S	**S**	**08 10 56.4**	**+1.2**
JOT	**Ohata**	**1.96**	**144**	⇓P	**P**	**08 10 29.0**	**-0.2**
JYG	**Yagishiri**	**2.00**	**43**	⇑P	**P**	**08 10 30.5**	**+0.8**
JFR	**Furan**	**2.26**	**84**	P	**P**	**08 10 32.7**	**+0.2**
JFR				*e*S	**S**	**08 11 03.0**	**-1.3**
JNBK	**Urakawa-nobuka**	**2.48**	**105**	P	**P**	**08 10 34.3**	**-0.8**
ASAJ	**Asahikawa**	**2.51**	**62**	PN	**P**	**08 10 36.3**	**+0.9**
ASAJ				S	**S**	**08 11 09.0**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ	**Asahikawa**	**2.51**	**62**	P	**P**	**08 10 36.2**	**+0.8**
	comp=Z,6.7nm,0.3s,baz=240,slow=11,SNR=26						
ASAJ				S	**S**	**08 11 09.0**	**-0.4**
	comp=Z,5.3nm,0.3s,baz=333,slow=31,SNR=22						
JKK2	**Kamakawa 2**	**2.52**	**68**	⇓P	**P**	**08 10 36.4**	**+0.9**
JKK2				*e*S	**S**	**08 11 09.3**	**-0.2**
JCH	**Churui**	**2.85**	**96**	P	**P**	**08 10 37.9**	**-1.5**
JCH				*e*S	**S**	**08 11 12.5**	**-3.9**
JWK2	**Keihoku**	**2.90**	**35**	P	**P**	**08 10 42.0**	**+2.1**
TEY	**Ternei**	**2.95**	**315**	*e*P	**P**	**08 10 40.0**	**-0.5**
TEY				*e*S	**S**	**08 11 18.0**	**-0.4**
JANG	**Nango**	**3.00**	**149**	P	**P**	**08 10 39.3**	**-1.8**
YSS	**Yuzh-Sakhalins**	**4.59**	**29**	⇓*i*PN	**P**	**08 11 02.0**	**+0.9**
YSS				*e*S	**S**	**08 11 55.0**	**0.0**
YSS				pmax	pmax		
	comp=N,80nm,0.6s						
YSS				pmax	pmax		
	comp=Z,90nm,0.6s						
YSS				smax			
	comp=N,60nm,1.0s						
YSS				smax			
	comp=E,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.59**	**29**	*e*Pn	**P**	**08 11 02.3**	**+1.2**
YUK	**Yuzh-Kuril'sk**	**4.73**	**75**	*e*P	**P**	**08 11 01.6**	**-1.3**
YUK				*i* S	**S**	**08 11 57.6**	**-0.6**
YUK				A		08 12 04.5	
	comp=E,350nm,0.5s						
YUK				A		08 12 04.5	
	comp=E,230nm,0.5s						
UGL	**Uglegorsk**	**6.36**	**15**	*e*P	**P**	**08 11 22.0**	**-1.9**
UGL				AMB	AMB	08 11 26.0	
	comp=E,39nm,0.5s						
MAJO	**Matsushiro**	**6.50**	**189**	*e*PN	**P**	**08 11 26.0**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,48nm,0.8s						
MAJO	**Matsushiro**	**6.50**	**189**	*e*Pn	**P**	**08 11 26.0**	**+0.1**
	comp=Z,48nm,0.8s						
MAT	**Matsushiro**	**6.50**	**189**	*e*PN	**P**	**08 11 26.0**	**+0.1**
MAT				pmax	pmax		
	comp=Z,49nm,0.5s						
MAT	**Matsushiro**	**6.50**	**189**	*e*P	**P**	**08 11 26.0**	**+0.1**
	comp=Z,49nm,0.5s						
MAT	**Matsushiro**	**6.50**	**189**	P	**P**	**08 11 26.0**	**+0.1**
MAT				S	**S**	**08 12 42.2**	**+2.7**
KLR	**Kul'dur**	**8.26**	**322**	*e*P	**P**	**08 11 44.3**	**-4.6**
KLR				*e*rx	rx	08 14 10.0	
EKMR	**Ekimchan**	**11.01**	**339**	*e*P	**P**	**08 12 22.9**	**-1.6**
EKMR				AMB	AMB	08 12 37.6	
	comp=Z,4.0nm,0.6s						
YASR	**Yasnyy**	**12.86**	**327**	*e*P	**P**	**08 12 44.8**	**-3.3**
YASR				AMB	AMB	08 12 51.8	
	comp=Z,7.0nm,0.5s						
ZEA	**Zeya**	**13.49**	**327**	*e*P	**P**	**08 12 56.6**	**+0.6**
BMKR	**Bomnak**	**13.67**	**333**	*e*P	**P**	**08 12 55.5**	**-2.6**
BMKR				*e*P		08 12 59.0	
BMKR				AMB	AMB	08 12 59.5	
	comp=Z,40nm,0.5s						
KROS	**Kirovskiy**	**14.12**	**329**	*e*P	**P**	**08 12 58.9**	**-4.9**
KROS				AMB	AMB	08 13 04.0	
	comp=Z,5.0nm,0.5s						
HIA	**Hailar**	**15.07**	**302**	*e*P	**P**	**08 13 16.5**	**+0.9**
HIA				pmax	pmax		
	comp=Z,13nm,0.6s						
HIA	**Hailar**	**15.07**	**302**	*e*P	**P**	**08 13 16.4**	**+0.8**
	comp=Z,13nm,0.6s						
MA2	**Magadan**	**18.00**	**19**	*e*P	**P**	**08 13 47.5**	**-2.4**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MA2	**Magadan**	**18.00**	**19**	*e*P	**P**	**08 13 47.5**	**-2.4**
	comp=Z,8.9nm,0.6s						
SSE	**Sheshan**	**18.79**	**237**	*e*P	**P**	**08 14 00.8**	**+2.5**
SSE				AMB	AMB		
	comp=Z,31nm,0.7s						
SSE	**Sheshan**	**18.79**	**237**	*e*P	**P**	**08 14 00.7**	**+2.4**
	comp=Z,31nm,0.7s						
NJ2	**Nanjing**	**19.64**	**243**	*e*P	**P**	**08 14 13.3**	**+6.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
YAK	**Yakutsk**	**19.96**	**346**	*e*P	**P**	**08 14 07.4**	**-2.7**
YAK				pmax	pmax		
	comp=Z,72nm,0.7s						
YAK	**Yakutsk**	**19.96**	**346**	*e*P	**P**	**08 14 07.4**	**-2.6**
	comp=Z,72nm,0.7s						
BOD	**Bodaibo**	**21.84**	**322**	*e*P	**P**	**08 14 26.2**	**-2.4**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**23.20**	**293**	*e*P	**P**	**08 14 42.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	**23.20**	**293**	*e*P	**P**	**08 14 42.0**	**+0.2**
	comp=Z,2.3nm,0.6s,mb3.9						
SONM	**Songino Array**	**23.65**	**293**	P	**P**	**08 14 46.3**	**+0.3**
	comp=Z,2.0nm,0.5s,mb4.0,baz=80,slow=8.8,SNR=19						
BILL	**Bilibino**	**28.85**	**21**	*i* P	**P**	**08 15 32.4**	**-1.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
BILL	**Bilibino**	**28.85**	**21**	*e*P	**P**	**08 15 32.6**	**-1.0**
	comp=Z,2.4nm,0.4s,mb4.2						
TIXI	**Tiksi**	**29.22**	**353**	*e*P	**P**	**08 15 32.7**	**-4.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
TNA	**Tin City**	**36.55**	**34**	*e*P	**P**	**08 16 39.6**	**-0.3**
	comp=Z,2.3nm,0.6s,mb3.9						
ZAL	**Zalesovo**	**37.02**	**307**	P	**P**	**08 16 44.6**	**+0.8**
	comp=Z,11nm,0.4s,mb4.7,baz=24,slow=7.7,SNR=30						
NVS	**Novosibirsk**	**37.84**	**308**	*e*P	**P**	**08 16 50.6**	**-0.1**
NVS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
NVS				pmax	pmax		
	comp=E,6.0nm,0.6s						
MKAR	**Makanchi Array**	**39.96**	**296**	*i* P	**P**	**08 17 08.8**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KURK	**Kurchatov**	**41.30**	**303**	P	**P**	**08 17 19.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
KURK	**Kurchatov**	**41.30**	**303**	*e*P	**P**	**08 17 19.5**	**+0.3**
	comp=Z,14nm,0.5s,mb4.7						
IMA	**Indian Mountai**	**42.43**	**34**	*e*P	**P**	**08 17 28.4**	**+0.3**
IMA				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.7						
IMA	**Indian Mountai**	**42.43**	**34**	*e*P	**P**	**08 17 28.4**	**+0.3**
	comp=Z,22nm,0.7s,mb4.7						
MCK	**McKinley**	**44.63**	**37**	*e*P	**P**	**08 17 47.9**	**+2.2**
MCK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.7						
MCK	**McKinley**	**44.63**	**37**	*e*P	**P**	**08 17 47.9**	**+2.1**
	comp=Z,4.3nm,1.0s,mb3.7						
COLA	**College**	**44.95**	**35**	*i* P	**P**	**08 17 49.6**	**+1.4**
COLA	**College**	**44.95**	**35**	*e*P	**P**	**08 17 49.6**	**+1.4**
	comp=Z,7.3nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**45.33**	**309**	*i* P	**P**	**08 17 51.8**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.4s,mb4.6						
ILAR	**Eielson Array**	**45.37**	**35**	P	**P**	**08 17 52.6**	**+1.0**
	comp=Z,4.3nm,0.6s,mb4.0,baz=284,slow=8.2,SNR=54						
JIRN	**Jiri**	**45.38**	**268**	*e*P	**P**	**08 17 52.8**	**+0.6**
	comp=Z,4.5nm,0.3s,mb4.2						
GUN	**Gumba**	**45.47**	**269**	*e*P	**P**	**08 17 53.7**	**+0.8**
	comp=Z,18nm,0.5s,mb4.7						
BVA0	**Borovoye Array**	**45.64**	**308**	P	**P**	**08 17 54.6**	**+0.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
BVAR	**Borovoye Array**	**45.64**	**308**	P	**P**	**08 17 54.6**	**+0.7**
	comp=Z,18nm,0.3s,mb4.8,baz=80,slow=8.5,SNR=98						
KKN	**Kakani**	**45.98**	**269**	*e*P	**P**	**08 17 57.4**	**+0.5**
	comp=Z,8.4nm,0.5s,mb4.3						
DMN	**Daman**	**46.20**	**269**	*e*P	**P**	**08 17 58.9**	**+0.2**
	comp=Z,5.8nm,0.4s,mb4.2						
GKN	**Gorkha**	**46.33**	**270**	*e*P	**P**	**08 17 59.8**	**+0.2**
	comp=Z,6.9nm,0.2s,mb4.6						
AAK	**Ala-Archa**	**46.60**	**293**	*d i*P	**P**	**08 18 01.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb3.6						
AAK	**Ala-Archa**	**46.60**	**293**	*e*P	**P**	**08 18 01.1**	**-0.5**
	comp=Z,2.8nm,0.3s,mb4.1						
KOLN	**Koldanda**	**47.22**	**270**	*e*P	**P**	**08 18 06.5**	**-0.1**
	comp=Z,9.1nm,0.5s,mb4.4						
INK	**Inuvik**	**49.83**	**29**	*e*P	**P**	**08 18 26.2**	**+0.1**
INK				pmax	pmax		
	comp=Z,18nm,0.4s						
INK	**Inuvik**	**49.83**	**29**	P	**P**	**08 18 26.4**	**+0.4**

	comp=Z,15nm,0.3s,mb4.8,baz=292,slow=6.8,SNR=295						
INK	Inuvik	49.83	29	*e*P	P	08 18 26.2	+0.1
	comp=Z,18nm,0.4s,mb4.7						
KAKA	Kakadu	55.79	188	⇑*i*P	P	08 19 09.4	-1.2
	comp=Z,4.7nm,0.6s,mb4.2						
RES	Resolute Bay	57.23	15	*e*P	P	08 19 19.2	-0.8
RES				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
RES	Resolute Bay	57.23	15	*e*P	P	08 19 19.1	-0.9
	comp=Z,7.9nm,0.7s,mb4.5						
KEV	Kevo	57.39	338	*e*p	P	08 19 20.3	-0.9
	comp=Z,0.9nm,0.3s,mb3.9						
KEV	Kevo	57.39	338	*e*P	P	08 19 20.3	-0.9
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
ARCES	ARCESS Array B	57.94	338	P	P	08 19 24.5	-0.6
	comp=Z,5.8nm,0.8s,mb4.2,baz=51,slow=7.8,SNR=8.5						
YKA	Yellowknife Ar	59.45	31	P	P	08 19 35.2	-0.3
YKA					pP	08 20 20.9	+1.0
YKA	Yellowknife Ar	59.45	31	P	P	08 19 35.1	-0.4
	comp=Z,0.7nm,0.4s,mb3.7,baz=305,slow=6.7,SNR=26						
YKA				PcP	PcP	08 20 20.9	-0.1
	comp=Z,0.3nm,0.6s,baz=311,slow=3.9,SNR=6.6						
JOF	Joensuu	60.07	330	*e*p	P	08 19 39.1	-0.7
	comp=Z,5.5nm,0.4s,mb4.5						
JOF	Joensuu	60.07	330	*e*P	P	08 19 39.1	-0.7
JOF				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	62.10	195	*e*P	P	08 19 52.3	-1.7
	comp=Z,4.5nm,1.0s,mb4.0						
KAF	Kangasniemi	62.39	331	*e*p	P	08 19 54.5	-0.9
	comp=Z,2.9nm,0.4s,mb4.3,baz=48,slow=6.3						
KAF	Kangasniemi	62.39	331	*e*P	P	08 19 54.5	-0.9
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.3						
OBN	Obninsk	62.52	321	*e*P	P	08 19 55.5	-0.8
OBN				*e*S	S	08 27 57.2	-9.5
OBN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s						
WRAB	Tennant Creek	62.77	185	*e*P	P	08 19 56.6	-1.8
WRAB				*e*		08 20 34.6	
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
WRAB	Tennant Creek	62.77	185	*e*P	P	08 19 56.6	-1.9
	comp=Z,5.7nm,0.7s,mb4.3						
WRAB				*e*PcP	PcP	08 20 34.6	-0.4
WB2	Warramunga Arr	62.78	185	⇑*i*P	P	08 19 56.7	-1.8
WRA	Warramunga Arr	62.78	185	P	P	08 19 56.9	-1.7
	comp=Z,4.4nm,0.7s,mb4.2,baz=2.3,slow=7.0,SNR=72						
WRA				PcP	PcP	08 20 34.6	-0.4
	comp=Z,1.8nm,0.6s,baz=360,slow=4.6,SNR=12						
FINES	FINESS Array B	62.91	330	*i* P	P	08 19 58.2	-0.6
FINES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FINES	FINESS Array B	62.91	330	P	P	08 19 58.2	-0.6
	comp=Z,5.6nm,0.5s,mb4.5,baz=58,slow=7.7,SNR=84						
FINES	FINESS Array B	62.91	330	P	P	08 19 58.2	-0.6
SUMG	Summit	64.74	359	*e*P	P	08 20 10.9	+0.6
	comp=Z,6.3nm,0.6s,mb4.4						
KIV	Kislovodsk	66.00	308	*i* P	P	08 20 18.9	0.0
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.5						
KIV				MLR	MLR		
	comp=Z,100nm,21.0s						
ASAR	Alice Springs	66.51	186	P	P	08 20 21.7	-0.8
	comp=Z,4.3nm,0.7s,mb4.2,baz=360,slow=4.4,SNR=75						
ASPA	Alice Springs	66.51	186	*e*P	P	08 20 21.8	-0.7
HFS	Hagfors	68.10	334	P	P	08 20 31.4	-0.3
	comp=Z,3.5nm,0.4s,mb4.4,baz=34,slow=5.3,SNR=38						
NB2	NORSAR Subarra	68.17	336	P	P	08 20 31.6	-0.5
	comp=Z,1.4nm,0.5s,mb3.9,baz=38,slow=5.8						
NB2	NORSAR Subarra	68.17	336	P	P	08 20 31.6	-0.5
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NOA	NORSAR Array B	68.17	336	P	P	08 20 32.0	-0.1
	comp=Z,2.5nm,0.6s,mb4.0,baz=39,slow=6.2,SNR=14						
AKASG	Malin Array Be	68.76	320	P	P	08 20 35.8	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	Malin Array Be	68.76	320	P	P	08 20 35.8	-0.2
	comp=Z,1.9nm,0.3s,mb4.1,baz=44,slow=6.4,SNR=20						
BOZ	Bozeman (W)	71.47	44	*e*P	P	08 20 52.7	+0.3
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
BOZ	Bozeman (W)	71.47	44	*e*P	P	08 20 52.7	+0.3
	comp=Z,1.8nm,0.7s,mb3.8						
NVAR	Mina Array Bea	72.61	54	P	P	08 21 00.4	+1.2
	comp=Z,3.1nm,0.7s,mb4.1,baz=314,slow=4.5,SNR=38						
MOOW	Moose Ponds	73.24	45	*e*P	P	08 21 03.6	+0.8
TPAW	Teton Pass	73.31	46	*e*P	P	08 21 04.3	+1.1
OJC	Ojcow	73.33	324	*e*P	P	08 21 02.3	-0.9
STKA	Stephens Creek	74.51	178	⇑*i*P	P	08 21 10.7	+0.3
	comp=Z,2.3nm,0.5s,mb4.1						
STKA	Stephens Creek	74.51	178	P	P	08 21 10.9	+0.5
	comp=Z,2.7nm,0.5s,mb4.2,baz=3.0,slow=5.1,SNR=16						
BW06	Boulder Array	74.54	46	*e*P	P	08 21 10.4	+0.1
	comp=Z,2.4nm,0.6s,mb4.0						
PDAR	Pinedale Array	74.54	46	P	P	08 21 10.8	+0.5
	comp=Z,4.4nm,0.8s,mb4.1,baz=270,slow=1.2,SNR=38						
CTU	Camp Tracy	74.81	48	*e*P	P	08 21 12.5	+0.6
ULM	Lac du Bonnet	75.33	33	P	P	08 21 14.6	-0.1
	comp=Z,2.5nm,0.8s,mb3.9,baz=337,slow=3.6,SNR=4.6						
ULM	Lac du Bonnet	75.33	33	P	P	08 21 14.6	-0.1
MSU	Marysvale	76.09	50	*e*P	P	08 21 20.3	+1.2
SRU	San Rafael	76.59	49	*e*P	P	08 21 22.9	+1.0
EKA	Eskdalemuir Ar	77.06	339	P	P	08 21 24.8	+0.7
	comp=Z,1.1nm,0.5s,mb3.7,baz=15,slow=5.2,SNR=4.4						
SCHQ	Schefferville	80.01	15	P	P	08 21 42.0	+1.9
	comp=Z,1.8nm,1.0s,mb3.7,baz=91,slow=5.7,SNR=3.6						
SDCO	Great Sand Dun	80.31	47	*e*P	P	08 21 43.0	+1.0
	comp=Z,0.9nm,0.8s,mb3.5						
MNTX	Cornudas Mount	84.85	51	*e*P	P	08 22 06.3	+0.9
	comp=Z,0.6nm,0.5s,mb3.6						
TXAR	Lajitas Array	87.59	51	P	P	08 22 19.4	+0.7
	comp=Z,0.4nm,0.5s,mb3.5,baz=285,slow=3.8,SNR=6.2						
SNAA	Sanae	145.91	200	*e*	PKPdf	08 29 11.9	+6.3
SNAA	Sanae	145.91	200	*e*	PKPdf	08 29 13.4	+7.8
SNAA	Sanae	145.91	200	⇑*i*P	PKPdf	08 29 08.2	+2.6
SNAA				*e*		08 29 11.9	
SNAA				*e*		08 29 13.4	
SNAA				*e*		08 30 03.1	
VNA2	Neumayer--Watz	147.53	200	*e*	PKPdf	08 29 16.9	+8.6
VNA2	Neumayer--Watz	147.53	200	*e*	PKPdf	08 29 17.4	+9.1
VNA2	Neumayer--Watz	147.53	200	*e*	PKPdf	08 29 18.6	+10
VNA2	Neumayer--Watz	147.53	200	⇑*i*P	PKPdf	08 29 13.1	+4.8
VNA2				*e*		08 29 16.9	
VNA2				*e*		08 30 05.1	
VNA3	Neumayer Olymp	147.85	198	*e*	PKPdf	08 29 13.5	+4.7
VNA3	Neumayer Olymp	147.85	198	*e*	PKPdf	08 29 16.8	+8.0
VNA3	Neumayer Olymp	147.85	198	*e*	PKPdf	08 29 18.9	+10
VNA1	Neumayer--Stat	147.93	200	*e*	PKPdf	08 29 13.1	+4.1
VNA1	Neumayer--Stat	147.93	200	*e*	PKPdf	08 29 17.2	+8.2
VNA1	Neumayer--Stat	147.93	200	*e*	PKPdf	08 29 18.2	+9.2
VNA1	Neumayer--Stat	147.93	200	*e*	PKPdf	08 29 19.3	+10

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*BJI **25** 08:20:41.6, 15.91N×144.97E, h7^{km}, mB5.0, mb4.8, Ms4.3, Msz3.5*

*IDC **25** 08:20:42.2±0.7, 15.92N×145.11E, mb4.2/14, mb1 4.3/14, mb1mx4.2/21, mbtmp4.2/14, MS3.5/3, Ms1 3.5/3, ms1mx2.9/32, Error ellipse: s-maj=31.2km s-min=14.6km az=82.0*

*NEIC **25** 08:20:43.6±1.6, 15.87N×145.02E, h9^{km}±10^{km}, mb4.6/11, Error ellipse: s-maj=12.3km s-min=6.5km az=88.0*

ISC 25 08:20:42.6±0.4**, 15.86N**±0.05×**144.90E**±0.09**, h10**^{km}**, n38, σ0**^{s}**77**/35**, mb4.4**/25**, MS3.6**/4**, 3C, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	Sarigan	1.18	45	*e*P	Pb	08 21 04.6	0.0
GUMO	Guam	2.26	181	*e*Pn	Pn	08 21 21.0	+0.4
CBIJ	Chichi jima	11.46	348	LR	LR	08 27 02.4	
	comp=Z,171nm,20.1s,baz=336,slow=33						
JOW	Kunigami	18.93	308	LR	LR	08 30 54.2	
	comp=Z,236nm,18.1s,baz=256,slow=32						
PMG	Port Moresby	25.20	175	P	P	08 26 11.1	+0.9
	8.1nm,0.7s,mb4.4,baz=343,slow=5.8,SNR=7.0						
PMG	Port Moresby	25.20	175	*e*P	P	08 26 09.7	-0.5
	13nm,0.8s,mb4.5						
ASAJ	Asahikawa	28.23	356	LR	LR	08 35 37.8	
	comp=Z,63nm,21.7s,MS3.2,baz=203,slow=32						
BJI	Beijing	34.72	320	*e*P	P	08 27 34.0	-0.9
BJI				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.8						
BJI				LR	LR		
	comp=Z,60nm,29.6s,MS3.2						
BJI	Beijing	34.72	320	*e*P	P	08 27 34.1	-0.8
	comp=Z,13nm,1.1s,mb4.8						
BJI				LR	LR		
	comp=Z,60nm,29.6s,MS3.2						
ENH	Enshi	35.44	300	*e*P	P	08 27 40.7	-0.4
	comp=Z,4.1nm,0.7s,mb4.5						
CTA	Charters Tower	35.75	178	P	P	08 27 44.4	+0.6
	comp=Z,9.7nm,1.2s,mb4.6,baz=53,slow=9.0,SNR=3.7						
CTA	Charters Tower	35.75	178	P	P	08 27 44.4	+0.6
WRAB	Tennant Creek	37.05	197	*e*P	P	08 27 53.7	-1.1
	comp=Z,11nm,1.0s,mb4.7						
WB2	Warramunga Arr	37.06	197	*e*P	P	08 27 54.8	0.0
WRA	Warramunga Arr	37.06	197	P	P	08 27 54.7	-0.1
	comp=Z,6.0nm,0.9s,mb4.4,baz=17,slow=9.3,SNR=26						
ASAR	Alice Springs	40.73	196	P	P	08 28 25.2	-0.2
	comp=Z,0.6nm,0.8s,mb3.3,baz=23,slow=7.4,SNR=6.1						
ASAR				PP	PP	08 30 02.1	-0.5
	comp=Z,0.7nm,0.9s,baz=27,slow=8.1,SNR=2.7						
LZH	Lanzhou	41.66	307	⇑P	P	08 28 34.5	+1.5
LZH				AP	pP	08 28 40.0	+4.0
LZH				XP	sP	08 28 44.5	+7.3
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
LZH	Lanzhou	41.66	307	⇑P	P	08 28 34.4	+1.4
	comp=Z,40nm,1.0s,mb5.0						
LZH				pP	pP	08 28 40.1	+4.1
LZH				sP	sP	08 28 44.6	+7.4
CMAR	Chiang Mai Arr	43.90	280	P	P	08 28 52.6	+1.1
	comp=Z,2.5nm,0.5s,mb4.2,baz=71,slow=6.4,SNR=17						
ULN	Ulaanbaatar	44.56	324	*e*P	P	08 28 56.0	-0.5
	comp=Z,3.9nm,1.0s,mb4.2						
SONM	Songino Array	44.92	324	P	P	08 29 00.0	+0.7
	comp=Z,2.1nm,1.0s,mb3.9,baz=141,slow=7.9,SNR=13						
SONM				PcP	PcP	08 30 40.9	-0.3
	comp=Z,0.9nm,0.6s,baz=149,slow=2.1,SNR=5.3						
GTA	Gaotai	45.72	310	*e*P	P	08 29 06.5	+0.7
GTA				AP	pP	08 29 16.5	+7.7
GTA				PCP	PcP	08 30 45.0	+0.8
GTA				PP	PP	08 30 54.0	+0.5
GTA				S	S	08 35 52.5	+4.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.5						
GTA				AMB	AMB		
	comp=Z,58nm,4.6s						
GTA				LR	LR		
	comp=N,193nm,19.4s,MS4.2						
GTA				LR	LR		
	comp=E,222nm,24.3s,MS4.2						
GTA				LR	LR		
	comp=Z,240nm,23.2s,MS4.1						
STKA	Stephens Creek	47.57	184	⇑*i*P	P	08 29 20.4	-0.1
	comp=Z,3.0nm,1.0s,mb4.3						
STKA	Stephens Creek	47.57	184	P	P	08 29 19.6	-0.9
	comp=Z,2.5nm,0.8s,mb4.3,baz=346,slow=10,SNR=5.5						
WMQ	Urumqi	55.62	312	P	P	08 30 21.5	+0.5
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
WMQ				LR	LR		
	comp=N,128nm,22.0s,MS4.1						
WMQ				LR	LR		
	comp=E,123nm,22.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,101nm,22.0s,MS3.9						
ZAL	Zalesovo	59.82	324	P	P	08 30 50.1	-0.3
	comp=Z,2.1nm,1.0s,mb4.1,baz=4.2,slow=5.9,SNR=7.8						
KURK	Kurchatov	62.89	319	*e*P	P	08 31 10.5	-0.6
	comp=Z,16nm,1.1s,mb5.1						
CHKZ	Chkalovo	68.08	322	*e*P	P	08 31 43.5	-1.0
	comp=Z,7.4nm,1.4s,mb4.5						
BVAR	Borovoye Array	68.18	321	P	P	08 31 45.1	0.0
	comp=Z,3.8nm,0.8s,mb4.5,baz=90,slow=7.4,SNR=12						
YKA	Yellowknife Ar	80.84	28	P	P	08 32 56.7	-1.1
	comp=Z,1.2nm,1.2s,mb3.7,baz=291,slow=5.6,SNR=4.3						
YKA	Yellowknife Ar	80.84	28	P	P	08 32 56.7	-1.1
BMO	Blue Mountains	84.37	45	*e*P	P	08 33 17.9	+1.5
	comp=Z,16nm,2.0s,mb4.8						
ARCES	ARCESS Array B	84.95	342	P	P	08 33 19.4	+0.7
	comp=Z,3.7nm,0.8s,mb4.5,baz=63,slow=8.1,SNR=5.7						
NVAR	Mina Array Bea	85.49	51	P	P	08 33 22.2	0.0
	comp=Z,0.5nm,0.8s,mb3.7,baz=291,slow=3.3,SNR=4.9						
ELK	Elko	87.06	49	*e*P	P	08 33 30.6	+0.7
	comp=Z,0.8nm,0.8s,mb4.0						
FINES	FINESS Array B	89.13	335	P	P	08 33 38.1	-1.2
	comp=Z,1.8nm,0.8s,mb4.5,baz=72,slow=6.0,SNR=5.5						
NOA	NORSAR Array B	94.95	339	P	P	08 34 05.3	-0.8
	comp=Z,0.4nm,0.7s,mb4.0,baz=60,slow=3.5,SNR=2.9						
LPAZ	La Paz	148.27	95	*e*PKPbc	PKPdf	08 40 29.8	+0.3

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*DJA **25** 08:23:43.4±0.9, 8.21S×115.49E, h210^{km}±7^{km}, MD4.5/3, ML4.6/2, Error ellipse: s-maj=57.0km s-min=12.2km az=6.0*

*IDC **25** 08:23:48.0±11.0, 7.63S×115.95E, h277^{km}±101^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.1/15, mbtmp3.8/3, Error ellipse: s-maj=96.7km s-min=18.4km az=68.0*

ISC 25 08:23:40.4±0.9**, 7.8S**±0.2×**115.6E**±0.1**, h212**^{km}±7^{km}**, n11, σ1**^{s}**36**/13**, mb3.8**/3**, 1C-7D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEDI	Kedomdong	0.85	139	⇓*e*Pn	P	08 24 12.2	+1.5
	3µm,0.2s						
KEDI				⇓*e*Sn	S	08 24 33.6	-0.7
RATI	Rata	0.88	181	⇓*e*Pn	P	08 24 12.0	+1.1
	3µm,0.2s						
RATI				⇓*e*Sn	S	08 24 32.1	-2.4
KELI	Kelakatan	1.11	250	⇓*e*Pn	P	08 24 14.5	+2.1
	348nm,0.2s						
KELI				⇓*e*Sn	S	08 24 36.6	-0.6
SRDI	Scrawed	1.53	245	⇑*e*Pn	P	08 24 16.8	+1.0
	1µm,0.2s						
SRDI				⇓*e*Sn	S	08 24 42.2	-0.9
FITZ	Fitzroy Crossi	14.16	137	*e*P	P	08 26 56.1	+3.1
	2.5nm,0.3s						
FITZ				*e*S	S	08 29 24.3	-0.8
WRA	Warramunga Arr	21.82	125	P	P	08 28 16.0	-0.3
	1.1nm,0.4s,mb3.8,baz=299,slow=12,SNR=8.8						
ASAR	Alice Springs	23.61	134	P	P	08 28 33.9	+0.4
	0.7nm,0.4s,mb3.6,baz=310,slow=8.8,SNR=12						
ASAR				PcP	PcP	08 32 10.1	-3.3
	0.4nm,0.7s,baz=317,slow=1.4,SNR=3.9						
SONM	Songino Array	56.02	353	P	P	08 32 57.1	-1.9
	3.1nm,0.6s,mb4.0,baz=172,slow=8.9,SNR=28						
YKA	Yellowknife Ar	114.50	23	PKiKP		08 41 53.0	
	0.2nm,0.5s,baz=315,slow=1.9,SNR=5.8						
LVC	Limon Verde	149.42	172	PKPbc	PKPdf	08 43 06.6	+6.4
	2.6nm,0.8s,baz=275,slow=11,SNR=3.4						
BDFB	Brasilia	151.55	215	PKPbc	PKPdf	08 43 10.4	+6.8
	1.9nm,0.4s,baz=167,slow=1.8,SNR=4.7						

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*IDC **25** 08:32:57.1±0.6, 15.97N×145.13E, mb4.3/17, mb1 4.5/18, mb1mx4.4/24, mbtmp4.3/18, ML3.8/1, MS3.9/8, Ms1 3.9/8, ms1mx3.6/26, Error ellipse: s-maj=25.2km s-min=12.8km az=80.0*

*BJI **25** 08:32:59.0, 15.80N×145.01E, h31^{km}, mB5.3, mb4.9, Ms4.2, Msz4.0*

*MOS **25** 08:33:00.7±1.1, 15.92N×144.96E, h33^{km}, mb5.1/15, Error ellipse: s-maj=17.5km s-min=8.6km az=105.0*

*NEIC **25** 08:33:01.2±0.2, 15.91N×144.99E, mb4.9/23, Error ellipse: s-maj=6.7km s-min=4.7km az=96.0*

*HRVD **25** 08:33:01.2±0.5, 15.99N×144.91E, h16^{km}±1^{km}, MW4.9/55, Centroid moment Tensor Solution. LP body waves: s13,c14;Mantle waves: s55,c74; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.99±.18; M$_{\theta\theta}$0.41±.10; M$_{\phi\phi}$1.58±.13; M$_{r\theta}$1.68±.43; M$_{\theta\phi}$-0.26±.07; M$_{\phi r}$-1.11±.33; Best double couple: M$_{0}$2.649×10^{16} NP1:ϕ_{s}176°, δ25°, λ-55°. NP2:ϕ_{s}318°, δ69°, λ-105°. Principal axes: T 2.275, Plg23°, Azm60°; N .746, Plg14°, Azm324°; P -3.023, Plg63°, Azm204°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 25 08:32:58.9±1.2**, 15.89N**±0.04×**144.92E**±0.06**, h21**^{km}±9^{km}**, h26**^{km}±1.9^{km}**:pP-P, n92, σ0**^{s}**94**/92**, mb4.6**/45**, MS4.0**/10**, 2C-3D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANAT	Anatahan	0.85	57	*e*P	Pb	08 33 16.0	+1.1
SARN	Sarigan	1.15	45	*e*P	Pb	08 33 19.9	0.0
GUMO	Guam	2.28	181	*e*Pn	Pn	08 33 36.1	-0.1
JHJ	Hachijo jima 2	17.78	346	LR	LR	08 42 40.7	
	comp=Z,153nm,18.2s,baz=136,slow=33						
JOW	Kunigami	18.92	308	P	P	08 37 21.6	+0.7
	0.5nm,0.3s,baz=187,slow=17,SNR=5.0						
JOW				LR	LR	08 42 59.3	
	comp=Z,545nm,20.9s,baz=300,slow=32						
PMG	Port Moresby	25.23	175	*e*P	P	08 38 25.0	-0.2
PMG				pmax	pmax		
	comp=Z,45nm,1.0s						
PMG	Port Moresby	25.23	175	P	P	08 38 26.3	+1.1
	comp=Z,20nm,1.0s,mb4.6,baz=0.7,slow=10.0,SNR=19						
PMG	Port Moresby	25.23	175	*e*P	P	08 38 25.0	-0.3
	comp=Z,46nm,1.0s,mb5.0						
SSE	Sheshan	26.43	309	*e*P	P	08 38 35.3	-0.9
SSE				AP	pP	08 38 43.5	+1.2
SSE				S	S	08 43 08.8	+2.1
SSE				XS		08 43 23.5	
SSE				AMB	AMB		
	comp=Z,25nm,0.8s,mb4.8						
SSE				LR	LR		
	comp=N,147nm,27.0s,MS3.5						
SSE				LR	LR		
	comp=E,119nm,27.0s,MS3.5						
SSE				LR	LR		
	comp=Z,231nm,29.8s,MS3.5						
SSE	Sheshan	26.43	309	*e*P	P	08 38 35.2	-1.0
	comp=Z,25nm,0.8s,mb4.8						
SSE				pP	pP	08 38 43.6	+1.3
SSE				S	S	08 43 08.8	+2.1
SSE				sS		08 43 23.6	
SSE				LR	LR		
	comp=Z,230nm,29.8s,MS3.5						
ASAJ	Asahikawa	28.21	356	LR	LR	08 50 15.0	
	comp=Z,62nm,18.7s,MS3.2,baz=174,slow=37						
NJ2	Nanjing	28.63	309	*e*P	P	08 38 57.3	+1.1
NJ2				AP	pP	08 39 06.5	+4.2
NJ2				XP	sP	08 39 10.8	+5.8
NJ2				PP	PP	08 39 51.8	+3.0
NJ2				S	S	08 43 45.0	+2.7
NJ2				XS		08 43 59.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,280nm,4.6s						
NJ2				LR	LR		
	comp=N,980nm,25.4s,MS4.5						
NJ2				LR	LR		
	comp=E,1µm,27.0s,MS4.5						
NJ2				LR	LR		
	comp=Z,640nm,21.5s						
KAKA	Kakadu	30.98	204	*e*P	P	08 39 16.0	-1.3
	comp=Z,8.3nm,0.7s,mb4.7						
WHN	Wuhan	31.53	303	P	P	08 39 23.0	+1.0
BJT	Baijiatuau	34.70	320	*e*P	P	08 39 48.1	-1.4
BJT				*e**PP	pP	08 39 56.6	+1.0
BJT				pmax	pmax		
	comp=Z,30nm,1.3s						
BJT	Baijiatuau	34.70	320	*e*P	P	08 39 48.1	-1.3
	comp=Z,30nm,1.3s,mb5.1						
BJT				*e*pP	pP	08 39 56.6	+1.0
BJI	Beijing	34.71	320	*e*P	P	08 39 49.3	-0.2
BJI				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.8						
BJI				LR	LR		
	comp=N,180nm,15.6s,MS3.9						
BJI				LR	LR		
	comp=E,74nm,17.3s,MS3.9						
BJI				LR	LR		
	comp=Z,158nm,23.5s						
BJI	Beijing	34.71	320	*e*P	P	08 39 49.3	-0.2
	comp=Z,14nm,1.2s,mb4.8						
BJI				LR	LR		
	comp=Z,160nm,23.5s,MS3.7						
KLR	Kul'dur	34.95	345	*e*P	P	08 39 48.3	-3.2
ENH	Enshi	35.43	300	*e*P	P	08 39 55.4	-0.5
	comp=Z,51nm,1.5s,mb5.2						
ENH				*e*pP	pP	08 40 02.8	+0.8
CTA	Charters Tower	35.77	178	*e*P	P	08 39 59.9	+1.1
	comp=Z,16nm,1.5s,mb4.7						
CTA	Charters Tower	35.77	178	*e*P	P	08 39 59.9	+1.1
CTA				pmax	pmax		
	comp=Z,16nm,1.5s						
CTA	Charters Tower	35.77	178	P	P	08 39 59.6	+0.8
	comp=Z,27nm,1.3s,mb5.0,baz=350,slow=11,SNR=7.4						
CTAO	Charters Tower	35.77	178	*e*P	P	08 39 59.7	+0.9
CTAO				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.3						
CTAO	Charters Tower	35.77	178	*e*P	P	08 39 59.7	+0.9
	comp=Z,52nm,1.4s,mb5.3						
WRAB	Tennant Creek	37.08	197	*e*P	P	08 40 08.8	-1.0
WRAB				*e**PP	pP	08 40 16.3	+0.4
WRAB				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.1						
WRAB	Tennant Creek	37.08	197	*e*P	P	08 40 08.8	-1.0
	comp=Z,40nm,1.2s,mb5.1						
WRAB				*e*pP	pP	08 40 16.3	+0.4
WB2	Warramunga Arr	37.09	197	⇓*i*P	P	08 40 09.4	-0.4
WRA	Warramunga Arr	37.09	197	P	P	08 40 09.5	-0.3
	comp=Z,10nm,0.9s,mb4.6,baz=16,slow=9.7,SNR=43						
FITZ	Fitzroy Crossi	38.74	210	⇑*i*P	P	08 40 23.8	0.0
	comp=Z,11nm,0.8s,mb4.7						
BTO	Baotou	38.99	316	*e*P	P	08 40 24.5	-1.1
HIA	Hailar	39.10	334	*e*P	P	08 40 27.4	+0.9
HIA				pmax	pmax		
	comp=Z,40nm,1.7s						
HIA	Hailar	39.10	334	*e*P	P	08 40 27.4	+0.9
	comp=Z,40nm,1.7s,mb4.9						
CD2	Chengdu	40.38	299	*e*P	P	08 40 37.5	+0.3
ASAR	Alice Springs	40.76	196	P	P	08 40 40.1	-0.2
	comp=Z,1.1nm,0.9s,baz=29,slow=4.6,SNR=10.0						
ASAR				PP	PP	08 42 12.0	-5.6
	comp=Z,0.5nm,0.8s,baz=20,slow=11,SNR=2.3						
ASAR				LR	LR	08 58 13.7	
	comp=Z,117nm,20.2s,baz=18,slow=37						
ASPA	Alice Springs	40.76	196	*e*P	P	08 40 41.3	+0.9
LZH	Lanzhou	41.66	307	*e*P	P	08 40 48.5	+0.8
LZH				AP	pP	08 40 56.3	+2.4
LZH				XP	sP	08 40 59.5	+3.1
LZH				AMB	AMB		
	comp=Z,78nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,480nm,4.9s						
LZH				LR	LR		
	comp=N,500nm,15.2s						
LZH				LR	LR		
	comp=Z,320nm,15.4s,MS4.3						
LZH	Lanzhou	41.66	307	*e*P	P	08 40 48.6	+0.9
LZH				*SP	sP	08 40 59.6	+3.2
LZH				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.1						
LZH				MLR	MLR		
	comp=Z,320nm,15.4s,MS4.3						
LZH	Lanzhou	41.66	307	*e*P	P	08 40 48.6	+0.9
	comp=Z,78nm,1.5s,mb5.1						
LZH				pP	pP	08 40 56.3	+2.4
LZH				sP	sP	08 40 59.6	+3.2
LZH				LR	LR		
	comp=Z,320nm,15.4s,MS4.3						
MA2	Magadan	43.83	4	*e*P	P	08 41 04.3	-0.8
MA2				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.1						
CMAR	Chiang Mai Arr	43.91	280	P	P	08 41 07.0	+0.8
	comp=Z,3.1nm,0.6s,mb4.2,baz=82,slow=6.5,SNR=17						
CMAR				PcP	PcP	08 42 53.5	+0.8
	comp=Z,1.3nm,0.7s,baz=68,slow=1.3,SNR=4.2						
CMAR				LR	LR	08 56 30.1	
	comp=Z,102nm,20.2s,MS3.7,baz=85,slow=32						
ULN	Ulaanbaatar	44.55	324	*e*P	P	08 41 11.3	+0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
ULN	Ulaanbaatar	44.55	324	*e*P	P	08 41 11.3	+0.2
	comp=Z,3.8nm,0.8s,mb4.3						
SONM	Songino Array	44.91	324	P	P	08 41 14.4	+0.5
	comp=Z,2.2nm,0.8s,mb4.0,baz=137,slow=6.3,SNR=16						
SONM				PcP	PcP	08 42 56.2	+0.5
	comp=Z,1.7nm,0.8s,baz=134,slow=3.9,SNR=6.0						
GTA	Gaotai	45.72	310	*e*P	P	08 41 21.0	+0.5
GTA				AP	pP	08 41 25.8	-0.9
GTA				PCP	PcP	08 43 00.0	+1.3
GTA				PP	PP	08 43 08.3	+0.2
GTA				S	S	08 48 05.3	+3.5
GTA				SS	SS	08 51 19.5	+1.6
GTA				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.5						
GTA				AMB	AMB		

	comp=Z,115nm,5.3s						
GTA				LR	LR		
	comp=N,159nm,12.9s						
GTA				LR	LR		
	comp=E,188nm,19.0s						
GTA				LR	LR		
	comp=Z,245nm,20.5s						
ARMA	Armidale	46.49	172	eP	P	08 41 27.9	+1.2
YAK	Yakutsk	47.34	350	eP	P	08 41 31.7	-1.3
YAK				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
YAK	Yakutsk	47.34	350	eP	P	08 41 31.6	-1.4
	comp=Z,47nm,0.9s,mb5.4						
STKA	Stephens Creek	47.59	184	eP	P	08 41 35.3	-0.2
	comp=Z,4.5nm,0.9s,mb4.5						
STKA	Stephens Creek	47.59	184	P	P	08 41 35.2	-0.2
	comp=Z,4.9nm,1.0s,mb4.5,baz=341,slow=7.7,SNR=7.7						
BOD	Bodaibo	47.81	338	eP	P	08 41 34.4	-2.3
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.3						
ZAK	Zakamensk	47.98	325	⇑iP	P	08 41 37.8	-0.4
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.4						
TLY	Talaya	48.46	327	P	P	08 41 42.8	+0.9
	comp=Z,41nm,1.0s,mb5.4,SNR=9.3						
TLY	Talaya	48.46	327	eP	P	08 41 42.7	+0.8
TLY				pmax	pmax		
	comp=Z,22nm,1.8s,mb4.9						
BILL	Bilibino	53.90	10	⇓iP	P	08 42 16.4	-6.4
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
WMQ	Urumqi	55.61	312	eP	P	08 42 36.0	+0.4
WMQ				XP	sP	08 42 50.0	+5.6
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
WMQ				LR	LR		
	comp=N,118nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=E,126nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,155nm,22.0s,MS4.0						
TIXI	Tiksi	56.57	354	eP	P	08 42 41.4	-0.7
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.0s,mb4.5						
ZAL	Zalesovo	59.81	324	i P	P	08 43 06.9	+1.9
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAL	Zalesovo	59.81	324	P	P	08 43 04.5	-0.5
	comp=Z,1.5nm,0.8s,mb4.1,baz=16,slow=7.4,SNR=9.0						
NVS	Novosibirsk	60.92	324	eP	P	08 43 11.7	-0.9
NVS				pmax	pmax		
	comp=Z,39nm,2.1s,mb5.2						
NVS				pmax	pmax		
	comp=E,30nm,2.0s						
KURK	Kurchatov	62.88	319	i P	P	08 43 25.5	-0.2
KURK	Kurchatov	62.88	319	eP	P	08 43 25.1	-0.6
	comp=E,52nm,1.3s,mb5.5						
RPZ	Rata Peaks	63.95	159	P	P	08 43 32.5	-0.5
	comp=E,9.4nm,1.0s,mb4.8,baz=82,slow=7.0,SNR=5.5						
ILAR	Eielson Array	66.49	26	P	P	08 43 46.7	-2.2
	comp=E,1.2nm,1.1s,mb3.9,baz=225,slow=6.1,SNR=4.4						
CHKZ	Chkalovo	68.06	322	eP	P	08 43 58.1	-1.0
CHKZ				pmax	pmax		
	comp=Z,220nm,1.5s						
CHKZ	Chkalovo	68.06	322	eP	P	08 43 58.1	-1.0
	comp=Z,220nm,1.5s						
BVAR	Borovoye Array	68.17	321	P	P	08 43 59.9	+0.2
	comp=Z,4.8nm,0.8s,mb4.6,baz=90,slow=7.4,SNR=21						
INK	Inuvik	72.24	23	eP	P	08 44 23.2	-1.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	72.24	23	eP	P	08 44 23.2	-1.1
	comp=Z,2.2nm,0.8s,mb4.1						
YKA	Yellowknife Ar	80.81	28	P	P	08 45 12.3	0.0
	comp=Z,0.4nm,0.9s,mb3.4,baz=289,slow=5.8,SNR=6.4						
YKA				LR	LR	09 21 27.5	
	comp=Z,111nm,18.9s,MS4.2,baz=225,slow=36						
WVOR	Wild Horse Val	84.10	48	eP	P	08 45 29.8	0.0
WVOR				pmax	pmax		
	comp=Z,30nm,2.1s,mb5.0						
WVOR	Wild Horse Val	84.10	48	eP	P	08 45 29.8	+0.1
	comp=Z,30nm,2.1s,mb5.0						
BMO	Blue Mountains	84.34	45	eP	P	08 45 31.0	+0.1
BMO				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.8						
BMO	Blue Mountains	84.34	45	eP	P	08 45 31.0	+0.1
	comp=Z,15nm,1.7s,mb4.8						
ARCES	ARCESS Array B	84.93	342	P	P	08 45 34.1	+0.8
	comp=Z,12nm,0.9s,mb5.0,baz=53,slow=6.1,SNR=9.6						
NVAR	Mina Array Bea	85.46	51	P	P	08 45 35.4	-1.3
	comp=Z,0.7nm,0.9s,mb3.8,baz=273,slow=4.5,SNR=5.1						
NVAR				LR	LR	09 17 47.2	
	comp=Z,136nm,18.5s,MS4.4,baz=180,slow=32						
NVAR	Mina Array Bea	85.46	51	P	P	08 45 35.4	-1.3
NVAR				LR	LR	09 17 47.2	
CHMT	Chamberlain Mo	86.40	42	eP	P	08 45 41.0	-0.1
HLID	Hailey	86.72	46	eP	P	08 45 44.1	+1.4
	comp=Z,1.6nm,1.1s,mb4.2						
ELK	Elko	87.03	49	eP	P	08 45 45.2	+0.9
ELK				pmax	pmax		
	comp=Z,16nm,1.8s						
ELK	Elko	87.03	49	eP	P	08 45 45.2	+0.9
	comp=Z,16nm,1.8s,mb5.0						
OBN	Obninsk	87.21	327	⇓eP	P	08 45 45.9	+1.0
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
DUG	Dugway	88.96	48	eP	P	08 45 54.7	+1.1
DUG				pmax	pmax		
	comp=Z,239nm,1.8s						
DUG	Dugway	88.96	48	eP	P	08 45 54.7	+1.1
	comp=Z,240nm,1.8s						
FINES	FINESS Array B	89.11	335	P	P	08 45 53.5	-0.3
	comp=Z,2.6nm,0.8s,mb4.6,baz=45,slow=5.4,SNR=8.0						
MOOW	Moose Ponds	89.16	45	eP	P	08 45 55.0	+0.6
HWUT	Hardware Ranch	89.36	47	eP	P	08 45 56.3	+0.9
	comp=Z,12nm,1.7s,mb5.0						
JLU	Jordanelle	89.79	48	eP	P	08 45 58.6	+1.0
AKASG	Malin Array Be	93.17	325	P	P	08 46 11.9	-0.9
	comp=Z,0.2nm,0.3s,mb4.0,baz=56,slow=6.9,SNR=4.8						
NOA	NORSAR Array B	94.93	339	P	P	08 46 19.8	-0.9
	comp=Z,5.5nm,1.2s,mb4.8,baz=49,slow=4.4,SNR=2.6						
ULM	Lac du Bonnet	95.33	34	LR	LR	09 23 39.2	
	comp=Z,94nm,21.0s,MS4.2,baz=49,slow=32						
LPAZ	La Paz	148.26	95	ePKPbc	PKPdf	08 52 45.3	+0.1

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*CSEM **25** 08:45:17.0±0.1, 36.26N×31.25E, h60^{km}, MD3.2, Error ellipse: s-maj=2.8km s-min=2.0km az=88.0*
*ISK **25** 08:45:18.6, 36.25N×31.34E, h34^{km}, MD3.2*
*HLW **25** 08:45:18.8, 36.24N×31.23E, h33^{km}, Mb3.9*
*NIC **25** 08:45:21.8±0.5, 36.47N×32.07E, h41^{km}, mb4.0, ML3.7, MW3.2*

ISC 25 08:45:18.2±0.3**, 36.24N**±0.03×**31.25E**±0.04**, h79**^{km}±10^{km}**, n45,** σ**1**$\overset{s}{.}$**10**/67**, 2C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	Antalya	0.82	324	PG	P	08 45 34.7	-0.6
ANTB				SG	S	08 45 46.2	-1.8
ELL	Elmali	1.20	296	PN	P	08 45 40.7	+0.8
HDMB	Hadim	1.23	54	PN	P	08 45 39.5	-0.9
BCK	Bucak	1.33	337	i PN	P	08 45 41.0	-0.8
AKMC	Akamas	1.49	144	P	P	08 45 45.5	+1.6
ALFC	Alevga	1.54	134	⇑eP	P	08 45 43.9	-0.6
	18nm,0.2s						
ALFC				S	S	08 46 02.4	-1.5
PPCY	Paphos	1.62	146	P	P	08 45 47.7	+2.1
LEF	Lefka	1.74	129	i PN	P	08 45 46.4	-0.8
KONT	Konya--Tatoy	1.92	27	i PN	P	08 45 50.1	+0.5
SZAC	Souni-Zanaja	1.99	137	P	P	08 45 52.1	+1.6
	9.5nm,0.4s						
SZAC				S	S	08 46 14.4	+0.1
CSS	Prodhromos	2.12	126	⇓P	P	08 45 51.5	-0.8
	5.6nm,0.4s						
CSS				S	S	08 46 13.3	-4.3
DALT	Dalyan (Mudla)	2.17	285	PN	P	08 45 54.7	+1.6
DNZL	Cakiroluk	2.28	310	i P	P	08 45 56.3	+1.7
DNZL				i S	S	08 46 25.2	+3.5
MEST	Erdemli	2.36	81	i P	P	08 45 57.8	+2.1
MEST				i S	S	08 46 28.1	+4.5
KHL	Karahalli	2.50	327	PN	P	08 45 59.2	+1.6
PHNC	Paralimni	2.58	118	P	P	08 45 58.7	-0.1
	3.9nm,0.7s						
PHNC				S	S	08 46 39.0	+10
KIZT	Kizilcal	2.69	11	i PN	P	08 46 00.0	-0.3
AYDN	Tasoluk	3.05	299	i P	P	08 46 06.7	+1.2
AYDN				i S	S	08 46 39.8	-1.1
BDRM	Kayabasi	3.17	286	i P	P	08 46 08.5	+1.4
BDRM				i S	S	08 46 44.7	+0.9
BODT	Bodrum	3.27	286	PN	P	08 46 09.5	+1.0
ESKT	Eskisehir	3.29	355	PN	P	08 46 08.8	+0.1
ESKT	Eskisehir	3.29	355	i P	P	08 46 08.8	0.0
ESKT				i S	S	08 46 44.4	-2.5
KAMT	Kaman	3.69	31	PN	P	08 46 13.8	-0.4
KDAG	Bornova	3.84	305	i P	P	08 46 17.0	+0.6
KDAG				i S	S	08 46 59.0	-1.5
COBT	Iskenderun	4.05	85	i P	P	08 46 20.6	+1.4
COBT				i S	S	08 47 07.0	+1.2
ULDT	Uludag	4.24	338	i P	P	08 46 21.8	-0.1
ULDT				i S	S	08 47 09.1	-1.4
BTOK	Tokmak	4.34	325	i P	P	08 46 23.6	+0.3
SGKT	Sivrigoynuk	4.38	8	i P	P	08 46 23.6	-0.2
SGKT				i S	S	08 46 59.8	-14
ELDT	Eldivan	4.58	21	i P	P	08 46 25.1	-1.5
ELDT				i S	S	08 47 12.4	-6.5
DABA	Dabaa	5.77	206	P	P	08 46 42.5	-0.4
DABA				S	S	08 47 43.4	-5.1
AMAG	Maghara	5.81	163	P	P	08 46 43.3	-0.2
AMAG				S	S	08 47 44.7	-4.9
HMAT	Matruh	6.19	215	⇓P	P	08 46 48.2	-0.6
HMAT				S	S	08 47 53.8	-5.0
SUZ		6.52	168	P	P	08 46 52.3	-1.0
SUZ				S	S	08 48 02.6	-4.3
FYM	Al Fayyum	6.53	182	P	P	08 46 52.7	-0.9
HSAF	As Saff	6.61	178	P	P	08 46 54.6	0.0
HNAT	Natroun	6.61	185	P	P	08 46 54.0	-0.6
HNAT	Natroun	6.61	185	P	P	08 46 54.0	-0.6
GLL	Jalalah	6.65	177	P	P	08 46 55.9	+0.6
GLL	Jalalah	6.65	177	P	P	08 46 55.8	+0.5
HNKL	Nakhl	6.69	159	P	P	08 46 55.0	-0.9
HNKL				S	S	08 48 06.0	-5.3
SLUM		6.90	228	P	P	08 46 58.5	-0.2
AWBH		8.14	195	P	P	08 47 15.1	-0.6
SWA1		8.37	215	P	P	08 47 18.5	-0.4
SWA1				S	S	08 48 46.0	-6.7
SWA2		8.51	217	⇑P	P	08 47 20.2	-0.5
SWA2				S	S	08 48 49.2	-6.8
SWA2		8.51	217	P	P	08 47 20.2	-0.5

IDC 25 08:55:55.1±10.0**, 30.60S**×**178.66W, h114**^{km}±103^{km}**, mb3.2**/2**, mb1 3.4**/3**, mb1mx3.3**/13**, mbtmp3.6**/3**, ML2.8**/1**, Error ellipse: s-maj=86.7km s-min=53.5km az=173.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.40	203	P	P	08 57 54.2	-1.2
	0.1nm,0.3s,baz=343,slow=19,SNR=2.5						
URZ				S	S	08 59 27.1	-2.0
	0.4nm,0.3s,baz=135,slow=20,SNR=4.7						
ASAR	Alice Springs	42.53	267	P	P	09 03 39.8	-1.3
	0.3nm,0.5s,baz=105,slow=7.3,SNR=4.5						
WRA	Warramunga Arr	43.54	273	P	P	09 03 47.4	-1.8
	0.7nm,0.5s,baz=110,slow=8.0,SNR=9.8						
FINES	FINESS Array B	145.14	339	PKPbc	PKPbc	09 15 17.2	-1.4
	0.8nm,0.4s,baz=72,slow=4.4,SNR=12						

MAN 25 08:57:24.4, 12.70N×**123.21E, h17**^{km}**, mb3.8, ML2.6, MS2.2, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.81	320	i P	Pb	08 57 39.9	+0.3
PVCP	Virac	1.28	46	i P	Pn	08 57 47.1	-0.6
BOAC	Boac	1.53	300	eP	Pn	08 57 50.0	-1.2
GUIM	Jordan	2.15	196	eP	Pn	08 57 59.3	-0.8
POLP	Polilio Island	2.37	329	eP	Pn	08 58 06.1	+2.9

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*CSEM **25** 09:03:25.9±0.1, 35.86N×29.55E, h40^{km}, MD3.1, Error ellipse: s-maj=2.3km s-min=1.7km az=89.0*
*ISK **25** 09:03:26.1, 35.81N×29.61E, h33^{km}, MD3.1*
*HLW **25** 09:03:30.3, 35.65N×29.52E, h33^{km}, Mb3.7*

ISC 25 09:03:26.9±0.3**, 35.70N**±0.03×**29.72E**±0.04**, h33**^{km}**, n30,** σ**1**$\overset{s}{.}$**44**/47**, 3C, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELL	Elmali	1.06	8	i PG	P	09 03 43.6	-1.9
FETY	Fethiye	1.07	332	i PG	P	09 03 42.9	-2.7
FETY				i SG	S	09 03 55.2	-4.2
DALT	Dalyan (Mudla)	1.38	321	i PN	Pn	09 03 48.4	-1.8
DNZL	Cakiroluk	2.06	345	i P	P	09 03 59.8	0.0
DNZL				i S	S	09 04 25.0	+0.4
BDRM	Kayabasi	2.29	307	i P	P	09 04 01.0	-2.0
BDRM				i S	S	09 04 33.2	+2.9
BODT	Bodrum	2.37	306	PN	Pn	09 04 02.0	-2.4
AYDN	Tasoluk	2.46	324	i P	P	09 04 06.8	+1.4
AYDN				i S	S	09 04 35.9	+1.3
HDMB	Hadim	2.57	60	PN	Pn	09 04 06.8	-0.4
LEF	Lefka	2.66	102	PN	Pn	09 04 08.8	+0.3
KONT	Konya--Tatoy	3.09	43	PN	Pn	09 04 14.1	-0.5
KIZT	Kizilcal	3.62	28	PN	Pn	09 04 21.0	-1.1
MEST	Erdemli	3.69	75	i P	P	09 04 23.2	+0.2
MEST				i S	S	09 05 07.0	+1.0
ESKT	Eskisehir	3.92	13	i P	P	09 04 26.9	+0.6
ESKT				i S	S	09 05 05.0	-6.8
DABA	Dabaa	4.82	195	P	P	09 04 39.7	+0.6
HMAT	Matruh	5.08	206	P	P	09 04 43.1	+0.3
HMAT				S	S	09 05 35.8	-5.3
HNTI	Hanita	5.21	118	Pn	Pn	09 04 46.7	+2.0
KSDI	Kefar Szold	5.51	115	Pn	Pn	09 04 49.8	+0.9
KSDI				Sn	Sn	09 05 50.5	-1.3
SLTI	Sal’it	5.61	126	Pn	Pn	09 04 51.9	+1.6
SLUM		5.63	223	P	P	09 04 50.2	-0.2
SLUM				S	S	09 05 47.9	-7.0
KSHT	Keshet	5.72	116	Pn	Pn	09 04 53.4	+1.5
MMLI	Mount Malkishu	5.74	123	Pn	Pn	09 04 53.5	+1.3
MMLI				Sn	Sn	09 05 56.1	-1.6
AMAG	Maghara	5.83	149	P	P	09 04 54.4	+1.2
AMAG				S	S	09 05 57.7	-2.0
FYM	Al Fayyum	6.09	169	P	P	09 04 58.4	+1.5
FYM				S	S	09 06 02.6	-3.7
HNAT	Natroun	6.09	173	⇑P	P	09 04 58.3	+1.4
KZIT	Kziot	6.18	139	Pn	Pn	09 04 59.2	+0.9
KZIT				Sn	Sn	09 06 06.1	-2.5
GLL	Jalalah	6.33	164	P	P	09 05 01.8	+1.5
GLL				S	S	09 06 08.8	-3.4
SUZ		6.40	155	⇑P	P	09 05 03.3	+2.1
SUZ				S	S	09 06 11.3	-2.8
HRFI	Mount Harif	7.20	140	Pn	Pn	09 05 13.3	+0.6
HRFI				Sn	Sn	09 06 33.1	-1.1
SWA1		7.25	209	⇑P	P	09 05 12.9	-0.3
SWA1				S	S	09 06 27.8	-7.4
SWA2		7.37	210	P	P	09 05 14.7	-0.1

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*IDC **25** 09:07:41.7±0.8, 54.03S×6.92E, mb4.3/5, mb1 4.3/6, mb1mx4.0/15, mbtmp4.2/6, ML3.1/1, MS3.8/7, Ms1 3.7/7, ms1mx3.4/14, Error ellipse: s-maj=33.3km s-min=24.7km az=96.0*
*NEIC **25** 09:07:43.0±0.3, 53.98S×6.99E, h10^{km}, mb4.8/6, Error ellipse: s-maj=15.3km s-min=8.1km az=97.0*

ISC 25 09:07:42.2±0.6**, 54.04S**±0.08×**6.8E**±0.2**, h10**^{km}**, n44,** σ**1**$\overset{s}{.}$**05**/22**, mb4.5**/10**, MS3.7**/7**, 4C, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.97	196	e	P	09 11 59.2	+5.8
VNA1	Neumayer--Stat	17.97	196	e	P	09 12 03.8	+10
VNA1	Neumayer--Stat	17.97	196	⇑iP	P	09 11 54.2	+0.8
VNA1				e		09 11 59.2	
VNA1				e		09 12 03.8	
VNA1				e		09 13 27.2	
VNA2	Neumayer--Watz	18.08	195	e	P	09 12 00.7	+6.0
VNA2	Neumayer--Watz	18.08	195	e	P	09 12 05.7	+11
VNA2	Neumayer--Watz	18.08	195	⇑iP	P	09 11 56.0	+1.3
VNA2				e		09 12 00.7	
VNA2				e		09 12 05.7	
VNA2				e		09 13 29.8	
SNAA	Sanae	18.19	190	P	P	09 11 56.7	+0.6
	0.1nm,0.3s,baz=19,slow=10,SNR=8.1						
SNAA	Sanae	18.19	190	⇑iP	P	09 11 56.9	+0.8
SNAA				e		09 13 24.9	
VNA3	Neumayer Olymp	18.72	197	e	P	09 12 05.8	+3.2
VNA3	Neumayer Olymp	18.72	197	e	P	09 12 10.0	+7.4
VNA3	Neumayer Olymp	18.72	197	⇑iP	P	09 12 01.7	-0.9
VNA3				e		09 12 05.8	
VNA3				e		09 13 31.9	
SUR	Sutherland	23.85	30	LR	LR	09 20 03.4	
	comp=Z,248nm,18.9s,MS3.7,baz=347,slow=31						
MAW	Mawson	29.30	139	LR	LR	09 23 11.9	
	comp=Z,60nm,18.4s,MS3.2,baz=71,slow=32						
LBTB	Lobatse	32.20	33	LR	LR	09 24 11.6	
	comp=Z,153nm,19.3s,MS3.7,baz=176,slow=31						
LBTB	Lobatse	32.20	33	eP	P	09 14 14.2	+1.8
	22nm,0.7s,mb5.1						
QSPA	South Pole Qui	36.20	180	eP	P	09 14 45.8	-0.5
	16nm,1.1s,mb4.9						
MATP	Matopo	37.42	35	P	P	09 14 56.3	-0.9
	1.2nm,0.8s,mb3.8,baz=204,slow=8.1,SNR=3.2						
MATP				LR	LR	09 28 09.0	
	comp=Z,166nm,18.6s,MS3.9,baz=149,slow=33						
USHA	Ushuaia	41.79	237	LR	LR	09 28 51.4	
	comp=Z,145nm,18.4s,MS3.9,baz=63,slow=30						
VNDA	Vanda	47.79	173	P	P	09 16 20.6	-0.1
	4.4nm,1.0s,mb4.5,baz=225,slow=7.8,SNR=6.9						
VNDA	Vanda	47.79	173	eP	P	09 16 20.0	-0.7
	6.2nm,1.0s,mb4.6						
TRQA	Tornquist	48.38	260	P	P	09 16 26.3	+0.5
	8.7nm,1.1s,mb4.7						
PLCA	Paso Flores	51.47	251	LR	LR	09 36 38.3	
	comp=Z,54nm,21.6s,MS3.5,baz=198,slow=34						
BDFB	Brasilia	57.06	290	P	P	09 17 29.7	-1.1
	5.7nm,0.7s,mb4.7,baz=116,slow=7.3,SNR=8.9						
KMBO	Kilima Mbogo	58.39	36	LR	LR	09 40 33.5	
	comp=Z,130nm,20.4s,MS4.0,baz=81,slow=34						
LPAZ	La Paz	68.15	272	eP	P	09 18 45.0	+0.5
	9.1nm,1.2s,mb4.7						
SAML	Samuel	71.09	281	eP	P	09 19 01.8	-0.7
	7.1nm,0.9s,mb4.6						
ASAR	Alice Springs	90.22	133	P	P	09 20 42.3	-1.7
	2.2nm,1.2s,mb4.4,baz=206,slow=4.5,SNR=5.1						
BRTR	Keskin Array B	96.21	20	P	P	09 21 12.3	+1.1
	0.4nm,0.6s,mb4.0,baz=198,slow=9.5,SNR=2.4						
BVAR	Borovoye Array	119.02	38	PKP	PKPdf	09 26 30.4	-3.0
	0.9nm,0.7s,baz=225,slow=2.1,SNR=4.6						
MDV	Middlebury	119.02	306	eP	Pdif	09 22 54.2	+2.1
SCHQ	Schefferville	124.23	318	PKP	PKPdf	09 26 40.9	-2.5
	2.5nm,1.0s,baz=112,slow=5.4,SNR=3.2						
SCHQ	Schefferville	124.23	318	PKP	PKPdf	09 26 40.9	-2.5
TXAR	Lajitas Array	125.01	273	PKP	PKPdf	09 26 43.9	-1.6
	0.3nm,0.7s,baz=72,slow=20,SNR=4.0						
SUMG	Summit	130.16	344	ePKPdf	PKPdf	09 26 52.5	-1.8
SONM	Songino Array	131.52	63	PKP	PKPdf	09 26 54.7	-2.8
	0.5nm,0.9s,baz=315,slow=1.7,SNR=4.5						
PDAR	Pinedale Array	137.67	282	PKP	PKPdf	09 27 04.8	-4.1
	0.6nm,0.9s,baz=124,slow=5.3,SNR=4.5						
TPAW	Teton Pass	138.92	281	PKPdf	PKPdf	09 27 09.7	-1.6
WVOR	Wild Horse Val	142.76	275	PKPdf	PKPdf	09 27 16.2	-1.7
RES	Resolute Bay	144.13	334	ePKPdf	PKPdf	09 27 16.0	-3.4
NEW	Newport	145.17	284	ePKPdf	PKPdf	09 27 18.4	-3.5
EDM	Edmonton	145.43	294	ePKPbc	PKPbc	09 27 20.0	+0.3
YKA	Yellowknife Ar	149.09	310	PKPbc	PKPdf	09 27 29.6	+1.7
	6.3nm,0.8s,baz=97,slow=2.6,SNR=120						
YKW3	Yellowknife Ar	149.11	310	ePKPbc	PKPdf	09 27 29.7	+1.7
INK	Inuvik	156.70	323	ePKPab	PKPab	09 28 06.2	-1.2

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*IDC **25** 09:12:06.3±1.2, 36.02N×141.28E, mb3.4/4, mb1 3.6/6, mb1mx3.5/23, mbtmp3.5/6, ML3.5/2, Error ellipse: s-maj=47.0km s-min=18.8km az=101.0*
*JMA **25** 09:12:10.4±0.1, 36.03N×141.20E, h42^{km}±2^{km}, M3.2*

ISC 25 09:12:10.4±0.8**, 36.01N**±0.04×**141.18E**±0.10**, h46**^{km}±9^{km}**, n14,** σ**0**$\overset{s}{.}$**79**/21**, mb3.4**/4**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.40	220	P	P	09 12 20.1	-0.1
CHOJ				S	S	09 12 27.1	0.0
JHO	Hitachi	0.77	321	⇓P	P	09 12 24.8	-0.2
JYT	Yasato	0.82	285	⇓P	P	09 12 25.9	+0.2
JYT				S	S	09 12 36.7	-0.3
ONAJ	Iwakimizuishiy	1.13	344	⇓P	P	09 12 29.3	-0.7
ONAJ				S	S	09 12 45.9	+1.3
JFK	Kawauchi	1.37	350	⇓P	P	09 12 32.5	-1.1
JAG	Ashikaga	1.45	287	⇓P	P	09 12 34.9	+0.2
JFT	Otama	1.65	336	⇓P	P	09 12 38.2	+0.8
JFT				S	S	09 12 58.1	+0.6
MAT	Matsushiro	2.46	283	P	P	09 12 50.2	+1.3
MAT				S	S	09 13 15.4	-2.5
JHJ	Hachijo jima 2	3.11	202	Pn	P	09 12 58.1	-0.1
	25nm,0.3s,baz=75,slow=20,SNR=2.3						
JHJ				Sn	S	09 13 34.6	+0.3
	24nm,0.3s,baz=73,slow=19,SNR=3.1						
ASAJ	Asahikawa	8.17	7	Pn	P	09 14 04.1	-4.9
	0.5nm,0.3s,baz=238,slow=19,SNR=2.5						
ASAJ				Sn	S	09 15 39.8	-1.2
	0.6nm,0.3s,baz=215,slow=15,SNR=4.2						
SONM	Songino Array	28.21	306	P	P	09 18 01.5	+0.7
	0.4nm,0.8s,mb3.1,baz=99,slow=8.0,SNR=3.3						
WRA	Warramunga Arr	56.02	188	P	P	09 21 46.5	-0.5
	0.5nm,0.7s,mb3.6,baz=4.6,slow=7.0,SNR=5.5						
ASAR	Alice Springs	59.75	188	P	P	09 22 12.9	-0.2
	0.4nm,1.1s,mb3.4,baz=24,slow=8.9,SNR=2.5						
YKA	Yellowknife Ar	64.79	30	P	P	09 22 46.5	+0.6
	0.8nm,1.1s,mb3.6,baz=301,slow=6.6,SNR=6.2						

IDC 25 09:22:52.0±7.7**, 2.35N**×**125.96E, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.6**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=170.7km s-min=121.0km az=71.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.63	160	P	P	09 28 04.8	-1.1
	0.7nm,0.4s,baz=338,slow=10,SNR=10						
ASAR	Alice Springs	26.99	164	P	P	09 28 36.5	-1.2
	0.2nm,0.4s,baz=343,slow=7.4,SNR=4.5						
STKA	Stephens Creek	37.13	158	P	P	09 30 04.0	-2.4
	1.3nm,0.7s,baz=324,slow=9.0,SNR=3.7						

IDC 25 09:35:07.6±8.7**, 6.11S**×**149.90E, h104**^{km}±54^{km}**, mb3.3**/3**, mb1 3.4**/4**, mb1mx3.2**/13**, mbtmp3.6**/4**, Error ellipse: s-maj=79.8km s-min=65.9km az=138.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.26	220	P	P	09 36 09.2	-2.3
	0.7nm,0.3s,baz=18,slow=3.2,SNR=3.6						
PMG				S	S	09 37 00.1	-0.3
	0.5nm,0.3s,baz=112,slow=18,SNR=2.5						
WB2	Warramunga Arr	20.43	226	eP	P	09 39 38.2	-0.4
WRA	Warramunga Arr	20.44	226	P	P	09 39 37.8	-0.9
	1.4nm,0.6s,baz=51,slow=11,SNR=23						
ASAR	Alice Springs	23.27	220	P	P	09 40 06.8	+0.2
	1.4nm,0.6s,baz=47,slow=9.2,SNR=29						
STKA	Stephens Creek	26.79	196	P	P	09 40 36.2	-3.6
	1.5nm,0.9s,baz=38,slow=12,SNR=3.4						

MAN 25 09:40:53.7, 17.23N×**120.29E, h15**^{km}**, mb3.5, ML2.2, MS1.7, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.58	44	eP	Pb	09 41 05.5	+0.4
BOLP	Bolinao	0.91	203	eP	Pb	09 41 10.9	+0.2
BOLP				eS	Sb	09 41 25.3	+2.9
CAUP	Cauayan	1.50	101	eP	Pn	09 41 19.6	-0.6

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*NEIC **25** 09:43:13.0, 16.05N×98.23W, h5^{km}, MD3.9(MEX), After MEX.*

MEX 25 09:43:13.0±0.7**, 16.16N**×**98.38W, h6**^{km}±6^{km}**, MD3.9, 1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.34	46	⇓iP	Pg	09 43 19.0	-0.9
PNIG				i S	Sg	09 43 24.7	+0.2
ACX	Acapulco	1.63	296	i P	Pn	09 43 39.0	-3.4
ACX				i S	Sb	09 43 57.0	-6.9
VHO	Vista Hermosa	1.83	60	i P	Pn	09 43 41.5	-3.8
VHO				i S	Sn	09 44 02.7	-6.2
VHO	Vista Hermosa	1.83	60	i P	Pn	09 43 41.5	-3.8

VHO				iS	Sn	09 44 04.1	-4.8
OXX	**Oaxaca**	**1.84**	**60**	iP	Pn	09 43 42.7	-2.7
OXX				iS	Sn	09 44 03.2	-6.0
OXX	**Oaxaca**	**1.84**	**60**	iP	Pn	09 43 42.0	-3.4
OXX				iS	Sn	09 44 03.2	-6.0
CAIG	**El Cayaco**	**2.01**	**296**	iP	Pn	09 43 47.2	-0.7
CAIG				iS	Sn	09 44 13.6	0.0
CAIG	**El Cayaco**	**2.01**	**296**	iP	Pn	09 43 44.7	-3.2
CAIG				iS	Sn	09 44 09.2	-4.5
PLIG	**Platanillo**	**2.47**	**335**	iP	Pn	09 43 54.2	-0.2
PLIG				iS	Sn	09 44 24.1	-1.1
PLIG	**Platanillo**	**2.47**	**335**	iP	Pn	09 43 51.2	-3.2
PLIG				iS	Sn	09 44 18.2	-7.0
YAIG	**Yautepec**	**2.77**	**346**	iP	Pn	09 44 00.8	+2.1
YAIG				iS	Sn	09 44 33.6	+0.7
YAIG	**Yautepec**	**2.77**	**346**	eP	Pn	09 43 57.9	-0.8
YAIG				iS	Sn	09 44 26.9	-6.0
IIB	**San Bernardino**	**2.79**	**1**	iP	Pn	09 44 01.8	+2.7
IIB				iS	Sn	09 44 37.5	+4.0
IIB	**San Bernardino**	**2.79**	**1**	iP	Pn	09 43 58.0	-1.1
IIB				iS	Sn	09 44 29.0	-4.5
PPM	**Popocatepetl**	**2.91**	**355**	eP	Pn	09 44 00.6	-0.1
PPM				iS	Sn	09 44 35.7	-0.6
PPM	**Popocatepetl**	**2.91**	**355**	eP	Pn	09 43 57.6	-3.1
PPM				iP		09 43 59.0	
PPM				iS	Sn	09 44 32.5	-3.9
PPM				iS	Sn	09 44 35.0	-1.3
IISM	**Ciudad Serdan**	**2.98**	**19**	eP	Pn	09 44 00.0	-1.7
UNM	**Universidad Na**	**3.25**	**347**	iP	Pn	09 44 18.0	+12

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*THR **25** 09:53:03.8±1.0,30.85N×56.76E,h14^{km}±12^{km},ML3.5*
*CSEM **25** 09:53:04.5±0.1,30.90N×56.81E,h18^{km},ML3.5,Error ellipse: s-maj=4.1km s-min=2.8km az=47.0*
*TEH **25** 09:53:07.1,30.95N×56.69E,h3^{km},Mn3.6*
ISC 25 09:53:03.3±0.7,**30.91N**±0.05×**56.84E**±0.07,**h3^{km},n15, σ0^{s}.87**/17,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.93**	**184**	iPG	**Pg**	**09 53 20.2**	**-1.7**
KRBR				AML	AML	09 53 37.2	
	comp=N,1µm,0.3s						
IBAF	**Bafgh**	**1.28**	**302**	Pg	**Pg**	**09 53 27.8**	**-1.2**
IMEH	**Mehriz**	**1.97**	**285**	Pn	**Pn**	**09 53 38.2**	**+0.2**
ICHK	**Chekchek**	**2.47**	**303**	Pn	**Pn**	**09 53 45.7**	**+0.6**
BNDS	**Bandar-Abbas**	**3.55**	**190**	ePN	**Pn**	**09 54 00.1**	**-0.4**
BNDS				AML	AML	09 54 46.6	
	comp=N,109nm,0.5s						
ISRV	**Sarvestan**	**3.57**	**246**	Pn	**Pn**	**09 54 01.5**	**+0.7**
ZHSF	**Zahedan**	**3.64**	**110**	ePN	**Pn**	**09 54 02.4**	**+0.6**
ZHSF				AML	AML	09 55 09.1	
	comp=N,66nm,0.6s						
NASN	**Na’in**	**3.92**	**300**	ePN	**Pn**	**09 54 06.0**	**+0.3**
NASN				eSG	**Sg**	**09 55 04.4**	**-9.3**
NASN				AML	AML	09 55 15.8	
	comp=N,71nm,0.5s						
SHI	**Shiraz**	**3.95**	**252**	Pn	**Pn**	**09 54 08.2**	**+2.0**
IMOK	**Mook**	**4.04**	**244**	Pn	**Pn**	**09 54 07.7**	**+0.3**
IPAY	**Payeh**	**5.81**	**17**	Pn	**Pn**	**09 54 32.3**	**-0.2**
IFIR	**Firoozkooh**	**5.83**	**325**	Pn	**Pn**	**09 54 32.2**	**-0.6**
IFIR				Sn	**Sn**	**09 55 35.1**	**-5.9**
IMYA	**Miamay**	**6.06**	**26**	Pn	**Pn**	**09 54 36.8**	**+0.8**
IDMV	**Damavand**	**6.16**	**320**	Pn	**Pn**	**09 54 36.3**	**-1.1**
DAMV	**Damavand**	**6.23**	**320**	ePN	**Pn**	**09 54 38.0**	**-0.4**

IDC 25 09:53:10.5±1.3,**3.49N**×**126.74E,mb3.7**/5,**mb1 3.9**/5, **mb1mx3.7**/18,**mbtmp3.7**/5,**Error ellipse: s-maj=146.9km s-min=20.2km az=69.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.45**	**162**	P	P	09 58 31.1	-1.3
	2.1nm,0.6s,baz=342,slow=10,SNR=17						
ASAR	**Alice Springs**	**27.88**	**166**	P	P	09 59 02.2	-2.0
	0.3nm,0.6s,baz=347,slow=7.0,SNR=6.5						
STKA	**Stephens Creek**	**37.90**	**159**	P	P	10 00 30.1	-1.3
	1.0nm,0.5s,baz=343,slow=11,SNR=3.4						
SONM	**Songino Array**	**47.53**	**341**	P	P	10 01 47.7	-1.8
	0.4nm,0.7s,baz=156,slow=5.9,SNR=3.9						
BVAR	**Borovoye Array**	**67.53**	**327**	P	P	10 04 08.4	-2.3
	2.2nm,1.0s,baz=104,slow=5.9,SNR=7.3						

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*IDC **25** 09:56:47.0±1.0,53.88S×7.24E,mb4.3/4,mb1 4.4/5, mb1mx4.0/15,mbtmp4.3/5,ML3.5/1,MS4.2/14,Ms1 4.2/14, ms1mx3.8/20,Error ellipse: s-maj=43.3km s-min=27.5km az=53.0*
*NEIC **25** 09:56:48.4±0.4,53.94S×7.25E,h10^{km},mb4.8/6,Error ellipse: s-maj=16.6km s-min=8.9km az=85.0*
ISC 25 09:56:46.2±1.2,**53.8S**±0.1×**7.3E**±0.3,**h10^{km},n48, σ0^{s}.80**/25,**mb4.6**/8,**MS4.3**/14,**4C,Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**18.28**	**197**	e	**P**	**10 01 04.5**	**+3.3**
VNA1	**Neumayer--Stat**	**18.28**	**197**	e	**P**	**10 01 08.1**	**+6.9**
VNA1	**Neumayer--Stat**	**18.28**	**197**	⇑iP	**P**	**10 01 02.4**	**+1.2**
VNA1				e		10 01 04.5	
VNA1				e		10 01 08.1	
VNA2	**Neumayer--Watz**	**18.38**	**195**	e	**P**	**10 01 03.1**	**+0.7**
VNA2	**Neumayer--Watz**	**18.38**	**195**	e	**P**	**10 01 06.3**	**+3.9**
VNA2	**Neumayer--Watz**	**18.38**	**195**	e	**P**	**10 01 08.9**	**+6.5**
VNA2	**Neumayer--Watz**	**18.38**	**195**	⇑iP	**P**	**10 01 00.3**	**-2.1**
VNA2				e		10 01 03.1	
VNA2				e		10 01 06.3	
VNA2				e		10 01 08.9	
SNAA	**Sanae**	**18.46**	**190**	e	**P**	**10 01 04.5**	**+1.0**
SNAA	**Sanae**	**18.46**	**190**	e	**P**	**10 01 07.8**	**+4.3**
SNAA	**Sanae**	**18.46**	**190**	e	**P**	**10 01 11.8**	**+8.3**
SNAA	**Sanae**	**18.46**	**190**	P	**P**	**10 01 03.3**	**-0.2**
	0.2nm,0.3s,baz=21,slow=9.1,SNR=16						
SNAA	**Sanae**	**18.46**	**190**	⇑iP	**P**	**10 01 02.8**	**-0.7**
SNAA				e		10 01 04.5	
SNAA				e		10 01 07.8	
SNAA				e		10 01 11.8	
VNA3	**Neumayer Olymp**	**19.03**	**197**	e	**P**	**10 01 09.5**	**-0.8**
VNA3	**Neumayer Olymp**	**19.03**	**197**	e	**P**	**10 01 16.3**	**+6.0**
VNA3	**Neumayer Olymp**	**19.03**	**197**	⇑iP	**P**	**10 01 07.4**	**-2.9**
VNA3				e		10 01 09.5	
SUR	**Sutherland**	**23.50**	**30**	LR	LR	10 08 49.2	
	comp=Z,1µm,20.2s,MS4.3,baz=37,slow=31						
MAW	**Mawson**	**29.27**	**140**	LR	LR	10 12 39.2	
	comp=Z,236nm,18.1s,MS3.9,baz=257,slow=32						
QSPA	**South Pole Qui**	**36.42**	**180**	eP	**P**	**10 03 51.5**	**-0.7**
	19nm,1.2s,mb4.9						
VNDA	**Vanda**	**47.97**	**173**	P	**P**	**10 05 26.6**	**+0.3**
	2.8nm,0.7s,mb4.4,baz=203,slow=8.8,SNR=6.8						
VNDA				LR	LR	10 24 55.7	
	comp=Z,401nm,19.1s,MS4.4,baz=190,slow=35						
VNDA	**Vanda**	**47.97**	**173**	eP	**P**	**10 05 25.9**	**-0.3**
	6.9nm,1.1s,mb4.6						
VNDA				LR	LR	10 24 55.7	
TRQA	**Tornquist**	**48.73**	**259**	eP	**P**	**10 05 32.6**	**0.0**
	17nm,1.2s,mb5.0						
PLCA	**Paso Flores**	**51.83**	**251**	LR	LR	10 24 08.1	
	comp=Z,223nm,19.0s,MS4.2,baz=130,slow=32						
BDFB	**Brasilia**	**57.28**	**290**	P	**P**	**10 06 36.1**	**-0.3**
	5.5nm,0.9s,mb4.6,baz=144,slow=4.3,SNR=6.3						
BDFB				LR	LR	10 27 02.8	
	comp=Z,146nm,19.8s,MS4.1,baz=358,slow=32						
KMBO	**Kilima Mbogo**	**58.02**	**36**	LR	LR	10 29 30.4	
	comp=Z,528nm,21.3s,MS4.6,baz=277,slow=34						
DBIC	**Dimbokro**	**61.13**	**346**	LR	LR	10 29 25.4	
	comp=Z,98nm,18.6s,MS4.0,baz=111,slow=32						
LVC	**Limon Verde**	**64.02**	**267**	P	**P**	**10 07 22.0**	**-0.1**
	4.4nm,0.8s,mb4.5,baz=270,slow=2.0,SNR=2.8						
LVC	**Limon Verde**	**64.02**	**267**	eP	**P**	**10 07 21.9**	**-0.1**
	6.5nm,0.9s,mb4.7						
LPAZ	**La Paz**	**68.45**	**272**	eP	**P**	**10 07 50.9**	**+0.5**
	14nm,1.3s,mb4.8						
SAML	**Samuel**	**71.35**	**281**	eP	**P**	**10 08 08.0**	**-0.2**
	6.6nm,0.8s,mb4.6						
RPZ	**Rata Peaks**	**81.85**	**168**	LR	LR	10 43 28.5	
	comp=Z,152nm,18.6s,MS4.4,baz=95,slow=34						
EIL	**Elat**	**86.52**	**24**	LR	LR	10 46 34.5	
	comp=Z,316nm,19.9s,MS4.7,baz=115,slow=34						
ROSC	**El Rosal**	**88.97**	**280**	LR	LR	10 47 21.1	
	comp=Z,124nm,20.1s,MS4.3,baz=165,slow=34						
ASF	**Jabal al Asfar**	**89.39**	**25**	LR	LR	10 49 23.5	
	comp=Z,172nm,19.4s,MS4.5,baz=79,slow=35						
ASAR	**Alice Springs**	**90.14**	**133**	P	**P**	**10 09 48.0**	**+0.4**
	1.1nm,1.0s,mb4.1,baz=204,slow=5.9,SNR=5.0						
ASAR				LR	LR	10 45 58.0	
	comp=Z,62nm,18.1s,MS4.1,baz=197,slow=33						
VAE	**Valguarnera**	**91.13**	**6**	LR	LR	10 46 29.9	
	comp=Z,74nm,21.3s,MS4.1,baz=317,slow=33						
GNI	**Garni**	**98.98**	**28**	LR	LR	10 52 37.1	
	comp=Z,74nm,20.4s,MS4.2,baz=51,slow=34						
SCHQ	**Schefferville**	**124.28**	**318**	PKP	PKPdf	10 15 46.0	-1.6
	2.1nm,0.7s,baz=140,slow=3.4,SNR=7.6						
TXAR	**Lajitas Array**	**125.31**	**273**	PKP	PKPdf	10 15 48.6	-1.5
	0.7nm,1.0s,baz=153,slow=5.6,SNR=4.3						
SONM	**Songino Array**	**131.14**	**62**	PKP	PKPdf	10 16 00.5	-0.2
	0.5nm,0.8s,baz=242,slow=1.6,SNR=4.7						
ULM	**Lac du Bonnet**	**134.78**	**298**	PKP	PKPdf	10 16 07.0	-0.6
	1.2nm,0.5s,baz=82,slow=3.5,SNR=4.4						
PDAR	**Pinedale Array**	**137.93**	**281**	PKP	PKPdf	10 16 12.3	-1.2
	0.6nm,0.7s,baz=118,slow=5.2,SNR=5.6						
NVAR	**Mina Array Bea**	**140.33**	**270**	PKP	PKPdf	10 16 18.6	+0.6
	0.5nm,0.6s,baz=112,slow=2.9,SNR=5.7						
RES	**Resolute Bay**	**144.06**	**334**	ePKPdf	PKPdf	10 16 22.1	-1.2
NEW	**Newport**	**145.41**	**284**	ePKPdf	PKPdf	10 16 25.0	-1.4
EDM	**Edmonton**	**145.62**	**294**	ePKPdf	PKPdf	10 16 25.9	-0.7
YKA	**Yellowknife Ar**	**149.18**	**310**	PKPbc	PKPdf	10 16 35.8	+3.7
	4.8nm,0.6s,baz=102,slow=2.6,SNR=94						
YKA	**Yellowknife Ar**	**149.18**	**310**	PKPbc	PKPdf	10 16 35.8	+3.7
YKW3	**Yellowknife Ar**	**149.20**	**310**	ePKPbc	PKPdf	10 16 35.8	+3.7

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*NAO **25** 10:01:53.2±2.0,64.73N×30.34E,ML2.1*
*HEL **25** 10:01:53.1±0.2,64.74N×30.92E,ML2.2,ML2.1(NAO), Explosion*
*BER **25** 10:01:54.0±2.7,64.69N×30.62E,ML2.1(NAO), Suspected explosion*
*IDC **25** 10:01:54.4±2.0,64.74N×30.90E,mb1 3.1/4, mb1mx2.9/20,mbtmp3.0/4,ML2.7/4,Error ellipse: s-maj=24.7km s-min=8.1km az=102.0*
ISC 25 10:01:51.5±0.6,**64.79N**±0.02×**30.8E**±0.1,**n24,σ1^{s}.45**/47, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSF	**Maaselka**	**1.34**	**328**	eP	**Pb**	**10 02 17.9**	**+0.8**
MSF				eS	**Sb**	**10 02 37.8**	**+3.1**
KJN	**Kajaani**	**1.49**	**243**	eP	**Pn**	**10 02 19.9**	**+0.2**
KJN				eS	**Sb**	**10 02 40.7**	**+1.4**
KU4	**Oulanka**	**1.66**	**343**	eP	**Pn**	**10 02 23.8**	**+1.8**
KU4				eS	**Sb**	**10 02 45.6**	**+1.5**
JOF	**Joensuu**	**1.89**	**172**	eP	**Pn**	**10 02 25.0**	**-0.3**
JOF				eS	**Sn**	**10 02 49.2**	**-1.0**
OUL	**Oulu**	**2.09**	**280**	eP	**Pn**	**10 02 29.8**	**+1.6**
OUL				eS	**Sn**	**10 02 57.9**	**+2.6**
SUF	**Sumiainen**	**2.91**	**227**	eP	**Pn**	**10 02 41.1**	**+1.2**
SUF				eS	**Sn**	**10 03 16.2**	**0.0**
SUF				eSG	**Sg**	**10 03 23.5**	**-4.9**
SUF				MSG		10 03 26.4	
	comp=Z,3.4nm,0.2s						
APA0	**Apatity Array**	**2.98**	**17**	Pn	**Pn**	**10 02 42.7**	**+1.9**
	baz=193,slow=14						
APA0				Lg		10 03 28.5	
	baz=195,slow=28						
APA0	**Apatity Array**	**2.98**	**17**	eP	**Pn**	**10 02 42.7**	**+1.9**
APA0				eSG	**Sg**	**10 03 28.5**	**-2.0**
SGF	**Sodankyl**	**3.17**	**329**	eP	**Pn**	**10 02 45.4**	**+1.7**
SGF				eS	**Sn**	**10 03 23.4**	**+0.6**
SGF				eSG	**Sg**	**10 03 33.8**	**-3.3**
KAF	**Kangasniemi**	**3.34**	**219**	eP	**Pn**	**10 02 46.9**	**+0.8**
KAF				eS	**Sn**	**10 03 25.3**	**-1.8**
KAF				eSG	**Sg**	**10 03 36.1**	**-6.7**
KEF	**Keuruu**	**3.72**	**228**	eP	**Pn**	**10 02 51.6**	**+0.1**
KEF				eS	**Sn**	**10 03 36.3**	**-0.4**
FIA0	**FINESS Array S**	**3.97**	**214**	Pn	**Pn**	**10 02 53.7**	**-1.2**
	baz=31,slow=14						
FIA0				Lg		10 03 52.4	
	baz=45,slow=37						
FIA0	**FINESS Array S**	**3.97**	**214**	eP	**Pn**	**10 02 55.7**	**+0.8**
FIA0				eS	**Sn**	**10 03 41.4**	**-1.5**
FIA0				eSG	**Sg**	**10 03 55.0**	**-8.6**
FINES	**FINESS Array B**	**3.97**	**214**	Pn	**Pn**	**10 02 56.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=31,slow=14,SNR=8.2						
FINES				Sn	**Sn**	**10 03 42.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=36,slow=19,SNR=3.6						
FINES				Lg		10 03 57.0	
	comp=Z,1.3nm,0.3s,baz=36,slow=26,SNR=7.8						
VAF	**Ylistaro**	**3.97**	**248**	eP	**Pn**	**10 02 56.3**	**+1.3**
VAF				eS	**Sn**	**10 03 42.0**	**-1.0**
PVF	**Pernaja**	**4.81**	**210**	eP	**Pn**	**10 03 07.8**	**+0.9**
PVF				eSG	**Sg**	**10 04 20.6**	**-11**
PVF				MSG		10 04 23.4	
	comp=Z,3.7nm,0.3s						
ARA0	**ARCESS Array S**	**5.19**	**339**	Pn	**Pn**	**10 03 11.8**	**-0.4**
	baz=155,slow=14						
ARA0				Sn	**Sn**	**10 04 10.9**	**-2.8**
	baz=164,slow=28						
ARA0				Lg		10 04 35.5	
	baz=147,slow=37						
ARA0	**ARCESS Array S**	**5.19**	**339**	eP	**Pn**	**10 03 11.8**	**-0.4**
ARA0				eS	**Sn**	**10 04 10.9**	**-2.8**
ARA0				eSG	**Sg**	**10 04 35.5**	**-8.7**
ARCES	**ARCESS Array B**	**5.19**	**339**	Pn	**Pn**	**10 03 11.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=153,slow=14,SNR=19						
ARCES				Sn	**Sn**	**10 04 12.3**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=154,slow=25,SNR=3.2						
ARCES				Lg		10 04 36.0	
	comp=Z,0.9nm,0.3s,baz=154,slow=28,SNR=6.4						
KEV	**Kevo**	**5.20**	**345**	eP	**Pn**	**10 03 13.1**	**+0.7**
KEV				eS	**Sn**	**10 04 12.7**	**-1.2**
KEV				eSG	**Sg**	**10 04 33.7**	**-11**
KEV				MSG		10 04 37.7	
	comp=Z,3.0nm,0.3s						
HFS	**Hagfors**	**9.16**	**247**	Lg		10 06 32.8	
	baz=55,slow=28						
HFS	**Hagfors**	**9.16**	**247**	Pn	**P**	**10 04 04.4**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=58,slow=14,SNR=5.9						
HFS	**Hagfors**	**9.16**	**247**	Lg		10 06 32.8	
	baz=55,slow=28						
NOA	**NORSAR Array B**	**9.65**	**256**	Pn	**P**	**10 04 11.7**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=276,slow=18,SNR=2.1						
NOA				Sn	**Sn**	**10 05 55.4**	**-10**
	comp=Z,0.1nm,0.3s,baz=22,slow=15,SNR=2.1						
NOA				Lg		10 06 49.4	
	comp=Z,0.2nm,0.3s,baz=291,slow=11,SNR=3.2						

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*MOS **25** 10:13:56.5±0.9,36.66N×71.18E,h194^{km},mb3.8/1,Error ellipse: s-maj=26.0km s-min=14.5km az=113.6*
*NEIC **25** 10:13:58.0±1.5,36.66N×71.24E,h195^{km}±15^{km},mb3.8/3, Error ellipse: s-maj=21.9km s-min=6.8km az=56.0*
*IDC **25** 10:13:59.0±9.4,36.57N×71.24E,h209^{km}±86^{km},mb3.2/7, mb1 3.5/8,mb1mx3.2/20,mbtmp3.8/8,Error ellipse: s-maj=43.2km s-min=21.0km az=27.0*
ISC 25 10:13:56.4±1.8,**36.61N**±0.10×**71.2E**±0.2,**h193^{km}**±17^{km}, **n29,σ0^{s}.79**/30,**mb3.4**/7,**1D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.86**	**19**	P	**P**	**10 15 22.6**	**+0.2**
	SNR=73						
UCH	**Uchtor**	**6.18**	**24**	P	**P**	**10 15 26.8**	**+0.1**
	SNR=13						
KZA	**Kyzart**	**6.32**	**29**	P	**P**	**10 15 28.2**	**-0.2**
	SNR=7.3						
EKS2	**Erkin-Say**	**6.38**	**18**	P	**P**	**10 15 29.3**	**+0.1**
	SNR=10.0						
AAK	**Ala-Archa**	**6.54**	**22**	P	**P**	**10 15 31.7**	**+0.2**
	SNR=11						
AAK	**Ala-Archa**	**6.54**	**22**	ePN	**P**	**10 15 30.5**	**-1.0**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AAK	**Ala-Archa**	**6.54**	**22**	ePn	**P**	**10 15 30.5**	**-0.9**
	comp=Z,8.5nm,0.6s						
CHMS	**Chumysh**	**6.96**	**22**	P	**P**	**10 15 37.0**	**+0.1**
	SNR=6.3						
SDNR	**Sundarnagar**	**7.01**	**135**	eP	**S**	**10 16 51.8**	**-4.5**
USP	**Ospenovka**	**7.13**	**20**	P	**P**	**10 15 38.4**	**-0.7**
	SNR=9.7						
TKM2	**Tokmak 2**	**7.17**	**27**	P	**P**	**10 15 40.0**	**+0.4**
	SNR=14						
SMLA	**Simla**	**7.40**	**136**	⇓iP	**P**	**10 15 38.3**	**-4.4**
SMLA				iS	**S**	**10 17 02.8**	**-2.7**
	comp=Z,199nm,0.3s						
KOLN	**Koldanda**	**13.72**	**126**	eP	**P**	**10 17 04.6**	**+0.6**
	comp=Z,3.3nm,0.4s						
GKN	**Gorkha**	**14.25**	**123**	eP	**P**	**10 17 11.0**	**+0.4**
	comp=Z,6.4nm,0.3s						
DMN	**Daman**	**14.82**	**123**	eP	**P**	**10 17 19.0**	**+1.3**
	comp=Z,6.1nm,0.4s						
KKN	**Kakani**	**14.82**	**122**	eP	**P**	**10 17 18.1**	**+0.4**
PKI	**Pulchoki**	**15.05**	**123**	eP	**P**	**10 17 21.1**	**+0.5**
	comp=Z,2.9nm,0.2s						
JIRN	**Jiri**	**15.53**	**121**	eP	**P**	**10 17 27.6**	**+1.1**
	comp=Z,12nm,0.4s						
ZAL	**Zalesovo**	**19.75**	**24**	P	**P**	**10 18 13.0**	**0.0**
	comp=Z,0.6nm,0.3s,baz=260,slow=8.8,SNR=4.5						
MLR	**Muntele Rosu**	**34.85**	**299**	P	**P**	**10 20 31.7**	**+1.0**
	comp=Z,2.1nm,0.9s,mb3.7,baz=152,slow=8.7,SNR=3.4						
FINES	**FINESS Array B**	**37.47**	**326**	P	**P**	**10 20 52.2**	**-0.4**
FINES	**FINESS Array B**	**37.47**	**326**	P	**P**	**10 20 52.1**	**-0.4**
	comp=Z,1.2nm,0.8s,mb3.5,baz=126,slow=12,SNR=6.0						
ARCES	**ARCESS Array B**	**41.10**	**338**	P	**P**	**10 21 22.4**	**-0.1**
	comp=Z,5.0nm,0.9s,mb3.9,baz=117,slow=6.0,SNR=4.3						
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**10 21 48.1**	**-0.7**
	comp=Z,0.8nm,0.5s,mb3.3,baz=93,slow=7.9						
NB2	**NORSAR Subarra**	**44.38**	**323**	P	**P**	**10 21 48.1**	**-0.7**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
NOA	**NORSAR Array B**	**44.38**	**323**	P	**P**	**10 21 48.1**	**-0.7**
	comp=Z,1.1nm,0.6s,mb3.4,baz=97,slow=7.9,SNR=5.8						
YKA	**Yellowknife Ar**	**81.14**	**3**	P	**P**	**10 25 51.3**	**+0.3**
	comp=Z,0.1nm,0.3s,mb2.9,baz=352,slow=5.3,SNR=6.5						
WRA	**Warramunga Arr**	**81.93**	**122**	P	**P**	**10 25 55.1**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.1,baz=324,slow=5.0,SNR=9.8						
ASAR	**Alice Springs**	**84.20**	**125**	P	**P**	**10 26 06.7**	**-0.8**
	comp=Z,0.4nm,0.6s,mb3.3,baz=318,slow=4.7,SNR=7.9						

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*TIR **25** 10:29:25.8,41.51N×19.63E,h16^{km},Ml3.4*
*PDG **25** 10:29:28.6±0.1,41.59N×19.63E,h8^{km}*
*NEIC **25** 10:29:28.6,41.59N×19.63E,h8^{km},MD2.5(PDG),After PDG.*
ISC 25 10:29:26.2±0.9,**41.48N**±0.04×**19.56E**±0.05,**h10^{km},n14, σ1^{s}.14**/27,**3C,Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**119**	⇑iPg	**Pg**	**10 29 31.1**	**-0.7**
TIR				iSg	**Sg**	**10 29 35.9**	**+0.4**
QSH	**Qafa e Shtames**	**0.27**	**80**	iPg	**Pg**	**10 29 31.2**	**-0.6**
QSH				iSg	**Sg**	**10 29 36.2**	**+0.7**
ULC	**Ulcinj**	**0.54**	**335**	⇑iPg	**Pg**	**10 29 37.0**	**-0.1**
ULC				eSg	**Sg**	**10 29 44.6**	**+0.3**
PUK	**Puka**	**0.62**	**24**	iPg	**Pg**	**10 29 37.8**	**-0.9**
BUM	**Brajici-Budva**	**0.96**	**329**	⇑iPg	**Pg**	**10 29 45.2**	**-0.2**
BUM				eSg	**Sg**	**10 29 59.0**	**+0.7**
TTG	**Podgorica**	**0.98**	**347**	ePg	**Pg**	**10 29 44.9**	**-0.9**
TTG				eSg	**Sg**	**10 29 59.0**	**+0.1**
PVY	**Plav**	**1.16**	**15**	ePg	**Pg**	**10 29 47.6**	**-1.9**
PVY				eSg	**Sg**	**10 30 04.3**	**-0.6**
HCY	**Herceg Novi**	**1.25**	**321**	ePg	**Pg**	**10 29 50.8**	**-0.4**
HCY				eSg	**Sg**	**10 30 09.2**	**+1.3**
NKY	**Niksic**	**1.40**	**343**	ePg	**Pg**	**10 29 52.8**	**-1.4**
NKY				eSg	**Sg**	**10 30 13.1**	**+0.2**
IVA	**Berane**	**1.42**	**10**	ePg	**Pg**	**10 29 52.8**	**-1.8**
IVA				eSg	**Sg**	**10 30 13.1**	**-0.4**
SKO	**Skopje**	**1.50**	**70**	iPn	**Pn**	**10 29 54.0**	**+0.8**
SKO				iSn	**Sn**	**10 30 15.5**	**+2.6**
BRY	**Bratogost**	**1.61**	**333**	ePg	**Pg**	**10 29 56.6**	**-1.8**
BRY				eSg	**Sg**	**10 30 20.4**	**+0.5**
UPM	**Unac-Piva**	**1.79**	**345**	ePn	**Pn**	**10 29 59.5**	**+2.0**
UPM				eSn	**Sn**	**10 30 24.2**	**+3.8**
PLE	**Pljevlja**	**1.86**	**356**	ePn	**Pn**	**10 30 00.2**	**+1.8**
PLE				eSn	**Sn**	**10 30 25.5**	**+3.4**

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*NEIC **25** 10:44:34.0±2.4,20.74S×179.15W,h600^{km},mb4.3/7, Error ellipse: s-maj=48.0km s-min=27.3km az=93.0*
*IDC **25** 10:44:41.1±25.0,20.64S×179.77W,h646^{km}±207^{km}, mb3.5/6,mb1 3.6/6,mb1mx3.2/16,mbtmp4.6/6,Error ellipse: s-maj=251.4km s-min=52.7km az=86.0*
ISC 25 10:44:38.9±3.9,**20.8S**±0.3×**179.6W**±0.6,**h650^{km},n17, σ0^{s}.41**/17,**mb4.3**/12,**2C-3D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNB	**Canberra Magne**	**30.79**	**235**	eP	**P**	**10 50 06.2**	**-0.1**
	50nm,0.5s,mb5.3						
CTA	**Charters Tower**	**31.95**	**265**	P	**P**	**10 50 16.4**	**+0.2**
	9.5nm,0.9s,mb4.3,baz=110,slow=9.8,SNR=8.4						
CTAO	**Charters Tower**	**31.95**	**265**	eP	**P**	**10 50 16.7**	**+0.5**
	8.5nm,0.7s,mb4.4						
PMG	**Port Moresby**	**33.94**	**285**	P	**P**	**10 50 32.4**	**-0.4**
	4.8nm,0.8s,mb4.1,baz=65,slow=9.5,SNR=4.3						
PMG	**Port Moresby**	**33.94**	**285**	eP	**P**	**10 50 32.5**	**-0.4**
STKA	**Stephens Creek**	**36.28**	**244**	⇓iP	**P**	**10 50 52.2**	**+0.3**
	3.6nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**36.28**	**244**	P	**P**	**10 50 52.4**	**+0.5**
	5.5nm,0.5s,mb4.3,baz=88,slow=9.7,SNR=25						
ASAR	**Alice Springs**	**42.96**	**257**	P	**P**	**10 51 45.8**	**+0.4**
	9.0nm,0.5s,mb4.5,baz=96,slow=7.8,SNR=191						
ASPA	**Alice Springs**	**42.97**	**257**	⇓iP	**P**	**10 51 45.8**	**+0.4**
WB2	**Warramunga Arr**	**43.04**	**263**	⇓iP	**P**	**10 51 45.9**	**-0.1**
WRAB	**Tennant Creek**	**43.04**	**263**	eP	**P**	**10 51 45.6**	**-0.4**
	3.8nm,0.4s,mb4.2						
WRA	**Warramunga Arr**	**43.05**	**263**	P	**P**	**10 51 46.0**	**-0.1**
	3.3nm,0.3s,mb4.3,baz=97,slow=7.4,SNR=175						
KAKA	**Kakadu**	**46.46**	**272**	⇑iP	**P**	**10 52 12.3**	**0.0**
	4.9nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**51.48**	**263**	⇑iP	**P**	**10 52 49.5**	**+0.5**
	5.4nm,0.5s,mb4.0						
MBWA	**Marble Bar**	**56.30**	**258**	eP	**P**	**10 53 21.9**	**-0.7**
	7.3nm,0.6s,mb4.0						
KLBR	**Kellerberrin**	**56.54**	**245**	eP	**P**	**10 53 23.5**	**-0.6**
	100nm,1.0s,mb4.9						
CMAR	**Chiang Mai Arr**	**88.80**	**290**	P	**P**	**10 56 27.7**	**+0.4**
	1.7nm,0.9s,mb3.8,baz=126,slow=2.9,SNR=7.9						

MAN 25 11:09:50.4,10.50N×125.83E,h6^{km},mb4.6,ML3.5,MS3.4, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**1.02**	**250**	eP	Pb	11 10 10.2	+0.1
MSLP				eS	Sb	11 10 27.7	+4.1
BUTP	**Butuan**	**1.53**	**188**	eP	Pn	11 10 17.9	-0.5
BUTP				eS	Sb	11 10 39.8	+1.5
BUKP	**Musuan**	**2.71**	**196**	eP	Pn	11 10 34.6	-0.6

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*IDC **25** 11:11:46.9±1.3,23.10S×66.70W,h214^{km}±19^{km},mb3.2/1, mb1 3.4/4,mb1mx3.2/15,mbtmp3.8/4,Error ellipse: s-maj=29.8km s-min=23.5km az=142.0*
*NEIC **25** 11:11:47.8±1.2,23.05S×66.71W,h222^{km}±17^{km},mb3.6/2, Error ellipse: s-maj=25.8km s-min=18.8km az=99.0*
ISC 25 11:11:46.1±1.1,**22.92S**±0.08×**66.6W**±0.2,**h222^{km}**±19^{km}, **n7,σ1^{s}.14**/10,**mb3.1**/1,**Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.12**	**278**	P	**P**	**11 12 29.2**	**+1.4**
	31nm,0.3s,baz=98,slow=7.3,SNR=462						
LVC				S	**S**	**11 12 59.9**	**0.0**
	11nm,0.3s,baz=61,slow=14,SNR=17						
LVC	**Limon Verde**	**2.12**	**278**	P	**P**	**11 12 29.2**	**+1.4**
LVC				S	**S**	**11 12 59.9**	**0.0**
LPAZ	**La Paz**	**6.75**	**348**	ePn	**P**	**11 13 22.7**	**-1.3**
	3.3nm,0.6s						
LPAZ				eS	**S**	**11 14 39.9**	**-0.4**
TRQA	**Tornquist**	**15.61**	**166**	eP	**P**	**11 15 15.6**	**-0.2**
	1.2nm,0.5s						
PLCA	**Paso Flores**	**18.06**	**190**	P	**P**	**11 15 40.3**	**-3.0**
	0.1nm,0.3s,baz=5.7,slow=10,SNR=2.9						
BDFB	**Brasilia**	**19.01**	**71**	P	**P**	**11 15 54.0**	**+0.8**
	0.4nm,0.3s,baz=244,slow=10,SNR=6.4						
YKA	**Yellowknife Ar**	**93.23**	**340**	P	**P**	**11 24 37.1**	**+1.1**
	0.1nm,0.5s,mb3.1,baz=134,slow=4.5,SNR=5.3						

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*UAV **25** 11:26:47.6,8.09N×71.80W*
*FUNV **25** 11:26:49.4,8.43N×72.00W,MW2.5*
ISC 25 11:26:49.5±0.6,**8.33N**±0.04×**71.90W**±0.04,**h19^{km}**±4^{km}, **n15,σ1^{s}.00**/27,**1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDMV	**Paramo Marino**	**0.07**	**99**	P	**Pb**	**11 26 52.4**	**-0.6**
PDMV				S	**Sb**	**11 26 54.3**	**-1.2**

OSV	**Paramo de la O**	**0.51**	**53**	P	**Pb**	**11 26 58.5**	**-1.1**
OSV				S	**Sb**	**11 27 08.7**	**+2.1**
CAPV	**Capacho**	**0.62**	**222**	⇓*i*P	**Pb**	**11 27 02.1**	**+0.7**
CAPV				*e*S	**Sb**	**11 27 11.4**	**+1.8**
UAV	**Universidad de**	**0.80**	**69**	P	**Pb**	**11 27 04.0**	**-0.5**
UAV				S	**Sb**	**11 27 16.4**	**+1.6**
CUV	**La Culata**	**0.93**	**63**	P	**Pb**	**11 27 06.0**	**-0.7**
CUV				S	**Sb**	**11 27 19.1**	**+0.5**
EAV	**Pico El Aguila**	**1.19**	**64**	P	**Pb**	**11 27 10.8**	**-0.3**
EAV				S	**Sb**	**11 27 30.4**	**+4.4**
TORV	**Torococo**	**2.05**	**53**	P	**Pn**	**11 27 23.9**	**+0.3**
TORV				S	**Sn**	**11 27 49.6**	**+0.7**
VIRV	**Villa del Rosa**	**2.22**	**347**	*i* P	**Pn**	**11 27 24.6**	**-1.4**
VIRV				*e*S	**Sn**	**11 27 52.0**	**-1.0**
CURV	**Curarigua**	**2.54**	**49**	*e*P	**Pn**	**11 27 31.4**	**+0.8**
CURV				*e*S	**Sn**	**11 28 02.1**	**+0.8**
DABV	**Dabajuro**	**2.86**	**26**	*e*S	**Sn**	**11 28 08.8**	**-0.6**
SIQV	**Siquisique**	**3.09**	**42**	*e*P	**Pn**	**11 27 38.7**	**+0.3**
TEPV	**Terepaima**	**3.13**	**59**	*e*S	**Sn**	**11 28 17.1**	**+0.9**
BAUV	**El Baul**	**3.86**	**81**	*e*P	**Pn**	**11 27 50.1**	**+0.8**
BAUV				*e*S	**Sn**	**11 28 34.3**	**-0.4**
PAYV	**Puerto Ayacuch**	**5.11**	**124**	*e*P	**Pn**	**11 28 07.0**	**0.0**
PAYV				*e*S	**Sn**	**11 29 05.4**	**-0.8**
CAOV	**Caicara del Or**	**5.62**	**100**	*e*P	**Pn**	**11 28 13.6**	**-0.6**
CAOV				*e*S	**Sn**	**11 29 16.5**	**-2.4**

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*IDC **25** 12:21:39.2±16.0, 51.74S×159.10E, mb3.8/3, mb1 4.0/4, mb1mx3.8/10, mbtmp3.9/4, ML3.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.8/12, Error ellipse: s-maj=317.0km s-min=43.7km az=172.0*

ISC 25 12:21:34.4±6.7**, 52.5S**±0.8×**159.0E**±0.3**, h10**^{km}**, n13, σ**$0^{s}.64$/14**, mb3.8**/3**, MS3.3**/2**, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**8.85**	**45**	PN	**P**	**12 23 45.1**	**-0.2**
MLZ	**Mavora Lakes**	**9.38**	**44**	PN	**P**	**12 23 51.7**	**-1.0**
TUZ	**Tuapeka**	**9.57**	**51**	PN	**P**	**12 23 56.3**	**+1.1**
MSZ	**Milford Sound**	**9.83**	**41**	PN	**P**	**12 23 58.7**	**0.0**
EAZ	**Earnscleugh**	**9.96**	**47**	PN	**P**	**12 24 00.7**	**+0.1**
JCZ	**Jackson Bay**	**10.66**	**41**	PN	**P**	**12 24 10.4**	**+0.3**
ODZ	**Otahua Downs**	**10.72**	**50**	PN	**P**	**12 24 10.2**	**-0.8**
RPZ	**Rata Peaks**	**11.93**	**47**	Pn	**P**	**12 24 22.8**	**-4.6**
	0.3nm,0.3s,baz=228,slow=8.3,SNR=2.7						
RPZ				Sn	**S**	**12 26 22.3**	**-19**
	0.1nm,0.3s,baz=35,slow=22,SNR=1.8						
RPZ				LR	LR	12 28 20.2	
	comp=Z,207nm,20.4s,baz=39,slow=35						
WVZ	**Waitaha Valley**	**12.30**	**44**	PN	**P**	**12 24 33.5**	**+1.1**
DSZ	**Denniston Nort**	**13.84**	**44**	PN	**P**	**12 24 52.3**	**-0.5**
STKA	**Stephens Creek**	**24.20**	**322**	P	**P**	**12 26 52.2**	**+0.4**
	2.3nm,0.7s,mb3.7,baz=164,slow=12,SNR=6.2						
STKA				LR	LR	12 35 26.8	
	comp=Z,82nm,19.1s,MS3.2,baz=8.6,slow=35						
ASAR	**Alice Springs**	**34.57**	**317**	P	**P**	**12 28 25.1**	**-0.1**
	1.7nm,0.8s,mb4.0,baz=146,slow=8.4,SNR=19						
ASAR				LR	LR	12 42 52.0	
	comp=Z,59nm,18.4s,MS3.4,baz=158,slow=37						
WRA	**Warramunga Arr**	**37.73**	**320**	P	**P**	**12 28 51.7**	**-0.3**
	0.9nm,0.7s,mb3.6,baz=153,slow=7.5,SNR=10						

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*NAO **25** 12:28:11.7±4.4, 56.63N×22.76E, ML2.5*

*BER **25** 12:28:12.5±4.1, 56.51N×22.75E, ML2.5(NAO), Suspected explosion*

HEL 25 12:28:08.4±0.4**, 56.53N×22.19E, ML2.3, ML2.5**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSU	**Vasula**	**3.12**	**50**	Pn	Pn	12 28 58.4	-1.4
VSU				Sn	Sn	12 29 35.7	-2.8
VSU	**Vasula**	**3.12**	**50**	*e*P	Pn	12 28 58.9	-0.9
VSU				*e*S	Sn	12 29 36.1	-2.3
PVF	**Pernaja**	**4.46**	**24**	*e*P	Pn	12 29 17.9	-1.0
PVF				*e*S	Sn	12 30 07.2	-5.1
PVF				*e*SG	Sg	12 30 25.5	-12
VJF	**Virojoki**	**4.91**	**33**	*e*P	Pn	12 29 23.3	-1.8
VJF				*e*SG	Sg	12 30 38.3	-13
FIA0	**FINESS Array S**	**5.32**	**21**	Pn	Pn	12 29 28.7	-2.4
	baz=205,slow=12						
FIA0				Pg	Pg	12 29 42.3	-12
	baz=200,slow=16						
FIA0				Sn	Sn	12 30 27.8	-6.2
	baz=194,slow=22						
FIA0				Lg		12 30 53.8	
	baz=205,slow=28						
FIA0	**FINESS Array S**	**5.32**	**21**	*e*P	Pn	12 29 28.7	-2.4
FIA0				*e*S	Sn	12 30 28.9	-5.2
FIA0				*e*SG	Sg	12 30 52.5	-13
FIA0				MSG		12 30 56.8	
	comp=Z,3.1nm,0.5s						
HFS	**Hagfors**	**5.75**	**312**	Pn	Pn	12 29 39.9	+2.7
	baz=129,slow=12						
HFS				Sn	Sn	12 30 48.2	+3.4
	baz=112,slow=28						
HFS				Lg		12 31 17.7	
	baz=123,slow=37						
HFS	**Hagfors**	**5.75**	**312**	*e*	Pn	12 29 39.9	+2.7
HFS				*e*		12 30 48.2	
HFS				*e*		12 31 17.7	
KEF	**Keuruu**	**5.82**	**12**	*e*P	Pn	12 29 36.0	-2.0
KEF				*e*S	Sn	12 30 41.5	-5.0
KAF	**Kangasniemi**	**5.98**	**19**	*e*P	Pn	12 29 37.5	-2.9
KAF				*e*S	Sn	12 30 43.7	-6.9
KAF				*e*SG	Sg	12 31 12.1	-15

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*IDC **25** 12:35:10.1±1.9, 13.04N×92.87E, mb3.5/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.4/5, ML3.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/13, Error ellipse: s-maj=48.2km s-min=23.7km az=75.0*

ISC 25 12:35:11.2±7.6**, 13.0N**±0.1×**93.0E**±0.2**, h18**^{km}±55^{km}**, n6, σ**$0^{s}.58$/6**, mb3.4**/4**, MS3.6**/1**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.90**	**46**	Pn	**Pn**	**12 37 08.1**	**0.0**
	0.3nm,0.3s,baz=236,slow=15,SNR=12						
CMAR				Sn	**Sn**	**12 38 37.9**	**0.0**
	0.3nm,0.3s,baz=234,slow=30,SNR=4.6						
SONM	**Songino Array**	**36.48**	**15**	P	**P**	**12 42 16.8**	**-0.2**
	0.4nm,1.0s,mb3.3,baz=207,slow=6.4,SNR=2.6						
ZAL	**Zalesovo**	**41.33**	**353**	P	**P**	**12 42 57.5**	**+0.2**
	0.5nm,0.3s,mb3.6,baz=316,slow=8.9,SNR=3.0						
WRA	**Warramunga Arr**	**52.26**	**128**	P	**P**	**12 44 23.4**	**-0.5**
	0.2nm,0.4s,mb3.4,baz=307,slow=7.9,SNR=8.4						
ASAR	**Alice Springs**	**54.15**	**132**	P	**P**	**12 44 38.4**	**+0.6**
	0.2nm,0.4s,mb3.4,baz=318,slow=7.9,SNR=9.1						
KMBO	**Kilima Mbogo**	**57.00**	**260**	LR	LR	13 05 01.6	
	comp=Z,50nm,20.6s,MS3.6,baz=83,slow=32						

MAN 25 12:39:22.6, 12.72N×123.10E, h11^{km}**, mb3.8, ML2.5, MS2.0, 2C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.62**	**125**	*e*P	Pb	12 39 35.0	-0.1
RCP	**Roxas**	**1.21**	**197**	⇑*e*P	Pb	12 39 44.3	-0.7
GQP	**Guinayangan**	**1.34**	**332**	⇑*i*P	Pb	12 39 46.7	-0.6
GQP				*i* S	Sb	12 40 05.4	+1.1
LQP	**Lukban**	**2.06**	**312**	*e*P	Pn	12 40 00.7	+3.1

IDC 25 13:05:47.4±7.0**, 18.81S×177.75W, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=300.1km s-min=39.1km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.09**	**260**	P	P	13 14 05.7	-1.7
	0.2nm,0.3s,baz=97,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**45.16**	**255**	P	P	13 14 05.9	-1.9
	0.4nm,0.7s,baz=87,slow=8.7,SNR=5.7						
ILAR	**Eielson Array**	**86.62**	**13**	P	P	13 18 32.2	-1.3
	0.2nm,0.4s,baz=217,slow=5.1,SNR=4.7						

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*IDC **25** 13:30:04.4±0.4, 7.87N×94.26E, mb4.6/25, mb1 4.7/26, mb1mx4.7/27, mbtmp4.6/26, ML5.2/1, Error ellipse: s-maj=18.7km s-min=11.8km az=54.0*

*BJI **25** 13:30:06.8, 7.63N×93.91E, h32^{km}, mB5.1, mb4.9, Ms5.4, Msz5.0*

*NEIC **25** 13:30:08.0±0.2, 7.73N×94.17E, mb5.1/50, Error ellipse: s-maj=7.1km s-min=4.4km az=47.0*

*MOS **25** 13:30:07.4±1.2, 7.72N×94.11E, h33^{km}, mb5.4/40, MS5.3/6, Error ellipse: s-maj=9.3km s-min=5.3km az=110.0*

ISC 25 13:30:06.0±0.2**, 7.68N**±0.03×**94.16E**±0.03**, h24**^{km}**, h24**^{km}±1.3^{km}**: pP-P, n263, σ**$1^{s}.12$/249**, mb5.0**/93**, MS5.4**/12**, 15C-16D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.42**	**94**	P	**Pn**	**13 31 41.0**	**-0.7**
	494nm,1.0s						
KULM	**Kulim**	**6.87**	**110**	*e*Pn	**Pn**	**13 31 46.2**	**-1.8**
NNT	**Nongplab**	**7.35**	**48**	P	**Pn**	**13 31 53.5**	**-1.1**
IPM	**Ipoh**	**7.49**	**114**	P	**Pn**	**13 31 55.1**	**-1.5**
NST	**Nakhon Sawan**	**9.87**	**36**	P	**P**	**13 32 29.0**	**-0.7**
BDT	**Bhumibol Dam**	**10.62**	**26**	P	**P**	**13 32 39.5**	**-0.5**
	42nm,0.9s						
KGM	**Kluang**	**10.72**	**121**	P	**P**	**13 32 40.8**	**-0.6**
CM31	**Chiang Mai Arr**	**11.68**	**23**	*e*Pn	**P**	**13 32 54.1**	**-0.4**
	43nm,0.6s						
CMAR	**Chiang Mai Arr**	**11.68**	**23**	Pn	**P**	**13 32 56.2**	**+1.7**
	4.8nm,0.3s,baz=212,slow=14,SNR=181						
CHG	**Chiang Mai**	**12.01**	**22**	⇓P	**P**	**13 32 59.8**	**+0.9**
	75nm,0.6s						
KKTK	**Khon Kaen**	**12.07**	**44**	P	**P**	**13 33 01.0**	**+1.2**
NANT	**Nan**	**12.76**	**29**	⇑P	**P**	**13 33 09.0**	**+0.2**
	138nm,1.0s						
UBT	**Ubonrachathani**	**13.03**	**54**	P	**P**	**13 33 13.0**	**+0.5**
CHRT	**Chiangrai**	**13.29**	**24**	⇓P	**P**	**13 33 18.0**	**+2.1**
	547nm,1.0s						
VIS	**Vishakhapatnam**	**14.53**	**314**	*e*P	**P**	**13 33 31.1**	**-1.1**
VIS				*e*		13 33 35.0	
	comp=Z,48nm,0.6s						
VIS				*e*		13 37 12.2	
MDRS	**Chennai**	**14.69**	**293**	*e*P	**P**	**13 33 36.0**	**+1.5**
BWNR	**Bhubaneshwar**	**14.93**	**328**	*e*P	**P**	**13 33 32.0**	**-5.5**
KSM	**Kuching**	**17.23**	**110**	*e*P	**P**	**13 34 08.8**	**+1.8**
BOK	**Bokaro**	**17.88**	**335**	⇓*i*P	**P**	**13 34 14.6**	**-0.4**
HYB	**Hyderabad**	**18.03**	**304**	*e*P	**P**	**13 34 19.0**	**+2.0**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**18.03**	**304**	*e*P	**P**	**13 34 19.0**	**+2.0**
	comp=Z,50nm,1.0s						
HYB	**Hyderabad**	**18.03**	**304**	*i* P	**P**	**13 34 19.0**	**+2.0**
	comp=Z,50nm,1.0s						
BLSP	**Bilaspur**	**18.46**	**322**	*e*P	**P**	**13 34 21.0**	**-1.2**
QIZ	**Qiongzhong**	**18.96**	**52**	*e*P	**P**	**13 34 27.3**	**-0.9**
KMI	**Kunming**	**19.19**	**24**	P	**P**	**13 34 33.0**	**+2.1**
KMI				AP		13 34 39.0	
KMI				XP		13 34 41.8	
KMI				AMB	AMB		
	comp=Z,90nm,1.1s						
KMI				AMB	AMB		
	comp=Z,715nm,5.2s						
KMI				LR	LR		
	comp=N,4μm,13.7s						
KMI				LR	LR		
	comp=E,6μm,16.0s						
KMI				LR	LR		
	comp=Z,4μm,18.4s						
KMI	**Kunming**	**19.19**	**24**	P	**P**	**13 34 33.0**	**+2.1**
KMI				pmax	pmax		
	comp=Z,90nm,1.1s						
KMI	**Kunming**	**19.19**	**24**	P	**P**	**13 34 33.0**	**+2.1**
	comp=Z,90nm,1.1s						
KMI				pP		13 34 39.0	
KMI				sP		13 34 41.7	
KMI				PP	PP	13 34 53.8	+5.9
KMI				S	**S**	**13 38 12.6**	**+12**
KMI				sS		13 38 24.8	
LATR	**Latur**	**20.17**	**304**	*e*P	**P**	**13 34 42.5**	**+0.7**
JIRN	**Jiri**	**21.26**	**340**	*e*P	**P**	**13 34 52.3**	**-0.6**
	comp=Z,348nm,1.1s,mb5.6						
PKI	**Pulchoki**	**21.45**	**338**	*e*P	**P**	**13 34 54.3**	**-0.6**
	comp=Z,484nm,1.2s,mb5.7						
GUN	**Gumba**	**21.60**	**340**	*e*P	**P**	**13 34 55.6**	**-0.7**
	comp=Z,300nm,1.0s,mb5.7						
DMN	**Daman**	**21.60**	**338**	*e*P	**P**	**13 34 55.8**	**-0.6**
	comp=Z,235nm,1.2s,mb5.5						
KKN	**Kakani**	**21.70**	**338**	*e*P	**P**	**13 34 56.4**	**-1.0**
	comp=Z,140nm,1.0s,mb5.3						
KAD	**Karad**	**21.70**	**298**	*e*P	**P**	**13 34 58.8**	**+1.4**
KKM	**Kota Kinabalu**	**21.96**	**93**	*e*P	**P**	**13 35 01.1**	**+1.0**
KKM	**Kota Kinabalu**	**21.96**	**93**	P	**P**	**13 35 04.7**	**+4.7**
LSA	**Lhasa**	**22.09**	**353**	P	**P**	**13 35 01.0**	**-0.3**
LSA				AP		13 35 08.5	
LSA				XP		13 35 13.0	
LSA				S	**S**	**13 39 03.0**	**+4.5**
LSA				LR	LR		
	comp=N,3μm,22.8s						
LSA				LR	LR		
	comp=E,4μm,17.6s						
LSA				LR	LR		
	comp=Z,6μm,21.9s,MS5.0						
LSA	**Lhasa**	**22.09**	**353**	*e*P	**P**	**13 35 00.8**	**-0.5**
LSA				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.4						
LSA	**Lhasa**	**22.09**	**353**	*e*P	**P**	**13 35 00.8**	**-0.5**
	comp=Z,130nm,0.8s,mb5.4						
GKN	**Gorkha**	**22.13**	**337**	*e*P	**P**	**13 35 01.3**	**-0.4**
	comp=Z,241nm,1.0s,mb5.6						
GYA	**Guiyang**	**22.14**	**31**	⇓*i*P	**P**	**13 35 04.3**	**+2.5**
GYA				AP		13 35 10.0	
GYA				XP		13 35 13.5	
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,400nm,5.4s						
GYA				LR	LR		
	comp=N,7μm,13.8s,MS5.7						
GYA				LR	LR		
	comp=E,17μm,13.2s,MS5.7						
GYA				LR	LR		
	comp=Z,12μm,13.2s,MS5.5						
BHPL	**Bhopal**	**22.31**	**316**	*e*P	**P**	**13 35 05.0**	**+1.5**
BHPL				*e*		13 35 11.3	
	comp=Z,123nm,1.2s						
KOLN	**Koldanda**	**22.34**	**335**	*e*P	**P**	**13 35 04.1**	**+0.3**
	comp=Z,256nm,1.1s,mb5.6						
POO	**Poona**	**22.50**	**301**	⇑*i*P	**P**	**13 35 06.0**	**+0.5**
	comp=Z,20nm,1.0s,mb4.5						
BOM	**Bombay**	**23.55**	**300**	*e*P	**P**	**13 35 23.6**	**+8.0**
	comp=Z,868nm,9.2s						
BOM				*e*S	**S**	**13 39 37.4**	**+13**
TSM	**Tawau**	**23.82**	**97**	P	**P**	**13 35 21.1**	**+2.7**
CD2	**Chengdu**	**24.80**	**20**	P	**P**	**13 35 31.0**	**+3.3**
CD2				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.2						
LGTI	**Lohaghat**	**25.31**	**331**	*e*P	**P**	**13 35 33.6**	**+1.0**
PTH	**Pithoragarh**	**25.40**	**331**	*e*P	**P**	**13 35 33.8**	**+0.3**
AYAN	**Aya Nagar**	**26.21**	**324**	*e*P	**P**	**13 35 41.0**	**+0.1**
AYAN				*e*		13 35 43.8	
	comp=Z,20nm,1.0s						
NDI	**New Delhi**	**26.30**	**325**	*e*P	**P**	**13 35 40.5**	**-1.4**
KUDL	**Kundal**	**26.33**	**323**	*e*P	**P**	**13 35 41.8**	**-0.3**
KUDL				*e*		13 35 45.7	
BHGR	**Bahadurgarh**	**26.47**	**324**	*e*P	**P**	**13 35 39.9**	**-3.5**
ENH	**Enshi**	**26.68**	**31**	*e*P	**P**	**13 35 44.7**	**-0.6**
	comp=Z,48nm,1.0s,mb5.0						
KHET	**Khetri**	**26.69**	**322**	*e*P	**P**	**13 35 46.1**	**+0.6**
KHET				*e*	pP	13 35 51.9	-0.5
	comp=Z,92nm,1.4s						
DDI	**Dehra Dun**	**27.12**	**328**	*e*P	**P**	**13 35 49.9**	**+0.6**
KKR	**Kurukshetra**	**27.50**	**326**	*e*P	**P**	**13 35 51.6**	**-1.2**
SMLA	**Simla**	**28.22**	**328**	⇓*i*P	**P**	**13 35 55.7**	**-3.6**
SDNR	**Sundarnagar**	**28.62**	**328**	*e*	**P**	**13 36 04.2**	**+1.3**
XAN	**Xi’an**	**29.56**	**25**	P	**P**	**13 36 10.8**	**-0.6**
XAN				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.7						
XAN				AMB	AMB		
	comp=Z,163nm,6.0s						
XAN				LR	LR		
	comp=N,7μm,14.1s,MS5.6						
XAN				LR	LR		
	comp=E,9μm,15.4s,MS5.6						
XAN				LR	LR		
	comp=Z,10μm,15.9s,MS5.5						
WHN	**Wuhan**	**29.58**	**37**	P	**P**	**13 36 13.0**	**+1.4**
LZH	**Lanzhou**	**29.63**	**16**	⇑P	**P**	**13 36 12.5**	**+0.5**
LZH				AP	pP	13 36 22.0	+3.1
LZH				XP	sP	13 36 26.5	+4.5
LZH				PP	PP	13 37 11.0	+2.5
LZH				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,460nm,5.4s						
LZH				LR	LR		
	comp=E,9μm,12.0s						
LZH				LR	LR		
	comp=Z,10μm,17.6s						
LZH	**Lanzhou**	**29.63**	**16**	⇑P	**P**	**13 36 12.4**	**+0.4**
LZH				*PP	pP	13 36 22.1	+3.2
LZH				*SP	sP	13 36 26.6	+4.6
LZH						13 37 11.0	
LZH				*e*S	**S**	**13 41 08.0**	**+3.4**
LZH				*SS		13 41 24.0	
LZH				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
LZH				MLR	MLR		
	comp=Z,10μm,17.6s,MS5.5						
LZH	**Lanzhou**	**29.63**	**16**	⇑P	**P**	**13 36 12.4**	**+0.4**
	comp=Z,60nm,1.0s,mb5.3						
LZH				pP	pP	13 36 22.1	+3.2
LZH				sP	sP	13 36 26.6	+4.6
LZH				PP	PP	13 37 11.0	+2.5
LZH				*e*S	**S**	**13 41 08.0**	**+3.4**
LZH				sS		13 41 24.0	
LZH				SS	SS	13 42 48.0	+9.0
LZH				LR	LR		
	comp=Z,10μm,17.6s,MS5.5						
GTA	**Gaotai**	**32.00**	**8**	⇓*e*P	**P**	**13 36 33.0**	**+0.2**
GTA				XP	sP	13 36 46.5	+3.6
GTA				PP	PP	13 37 37.5	-1.8
GTA				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.9						
GTA				AMB	AMB		
	comp=Z,178nm,5.0s						
GTA				LR	LR		
	comp=N,2μm,17.5s,MS5.2						
GTA				LR	LR		
	comp=E,3μm,15.6s,MS5.2						
GTA				LR	LR		
	comp=Z,3μm,19.0s,MS5.0						
NJ2	**Nanjing**	**33.41**	**40**	*e*P	**P**	**13 36 46.8**	**+1.7**
NJ2				AP	pP	13 36 56.5	+4.3
NJ2				XP	sP	13 37 00.3	+5.1
NJ2				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,1μm,4.2s						
NJ2				LR	LR		
	comp=N,2μm,16.2s,MS5.2						
NJ2				LR	LR		
	comp=E,3μm,17.2s,MS5.2						
NJ2				LR	LR		
	comp=Z,10μm,16.4s,MS5.6						
KSH	**Kashi**	**35.66**	**336**	*e*P	**P**	**13 37 05.0**	**+0.6**
KSH				*e*AP	pP	13 37 10.5	-0.9
KSH				*e*XP	sP	13 37 13.5	-0.9
KSH				AMB	AMB		
	comp=Z,180nm,4.8s						
BTO	**Baotou**	**35.72**	**21**	*e*P	**P**	**13 37 04.0**	**-0.8**
BTO				LR	LR		
	comp=N,480nm,7.0s						
BTO				LR	LR		
	comp=E,3μm,13.0s						
WMQ	**Urumqi**	**36.44**	**352**	*e*P	**P**	**13 37 11.0**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.3						
HHC	**Hu-ho-hao-te**	**36.49**	**22**	*e*P	**P**	**13 37 12.8**	**+1.4**
HHC				AP	pP	13 37 18.5	0.0
HHC				AMB	AMB		
	comp=Z,31nm,1.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,176nm,6.7s						
HHC				LR	LR		
	comp=N,4μm,15.6s,MS5.5						
HHC				LR	LR		
	comp=E,5μm,14.4s,MS5.5						
HHC				LR	LR		
	comp=Z,4μm,19.2s,MS5.2						
BJT	**Baijiatuau**	**37.75**	**28**	*e*P	**P**	**13 37 22.1**	**+0.2**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJT	**Baijiatuau**	**37.75**	**28**	*e*P	**P**	**13 37 22.1**	**+0.1**
	comp=Z,6.5nm,0.6s,mb4.5						
BJI	**Beijing**	**37.77**	**28**	*e*P	**P**	**13 37 24.0**	**+1.9**
BJI				AMB	AMB		
	comp=Z,19nm,1.2s,mb4.7						
BJI				LR	LR		
	comp=N,2μm,17.6s,MS5.2						
BJI				LR	LR		
	comp=E,3μm,17.7s,MS5.2						
BJI				LR	LR		
	comp=Z,932nm,29.7s						
BJI	**Beijing**	**37.77**	**28**	*e*P	**P**	**13 37 23.9**	**+1.8**
BJI				S	**S**	**13 43 10.4**	**-0.6**
BJI				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7						
BJI				MLR	MLR		
	comp=Z,930nm,29.7s,MS4.4						
BJI	**Beijing**	**37.77**	**28**	*e*P	**P**	**13 37 23.9**	**+1.8**
	comp=Z,19nm,1.2s,mb4.7						
BJI				S	**S**	**13 43 10.4**	**-0.6**
BJI				LR	LR		
	comp=Z,930nm,29.7s,MS4.4						
MBWA	**Marble Bar**	**38.10**	**139**	*e*P	**P**	**13 37 25.1**	**0.0**
	comp=Z,9.4nm,0.8s,mb4.6						
UCH	**Uchtor**	**38.54**	**336**	P	**P**	**13 37 29.0**	**+0.4**
	SNR=20						
KBK	**Karagaybulak**	**38.73**	**337**	P	**P**	**13 37 30.7**	**+0.5**
	SNR=17						
AML	**Almayashu**	**38.79**	**335**	P	**P**	**13 37 31.3**	**+0.6**
	SNR=32						
AAK	**Ala-Archa**	**38.89**	**337**	P	**P**	**13 37 32.4**	**+0.9**
	SNR=23						
AAK	**Ala-Archa**	**38.89**	**337**	*i* P	**P**	**13 37 30.8**	**-0.7**
AAK	**Ala-Archa**	**38.89**	**337**	*e*P	**P**	**13 37 30.7**	**-0.8**
	comp=Z,29nm,1.1s,mb4.9						
FRU	**Bishkek**	**39.01**	**337**	*e*P	**P**	**13 37 32.8**	**+0.3**
FRU				pmax	pmax		
	comp=Z,50nm,2.0s,mb4.9						
FRU				MLR	MLR		
	comp=E,4μm,18.0s						
FRU				MLR	MLR		
	comp=Z,5μm,18.0s,MS5.4						
CHMS	**Chumysh**	**39.10**	**337**	P	**P**	**13 37 33.3**	**+0.1**
	SNR=11						
EKS2	**Erkin-Say**	**39.20**	**336**	P	**P**	**13 37 34.5**	**+0.4**
	SNR=13						
USP	**Ospenovka**	**39.43**	**337**	P	**P**	**13 37 35.7**	**-0.3**
	SNR=26						
FITZ	**Fitzroy Crossi**	**40.27**	**130**	*e*P	**P**	**13 37 42.1**	**-1.1**
	comp=Z,9.5nm,0.6s,mb4.7						
MKAR	**Makanchi Array**	**40.28**	**347**	*i* P	**P**	**13 37 42.3**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,77nm,1.2s						
SONM	**Songino Array**	**41.35**	**12**	P	**P**	**13 37 52.0**	**+0.3**
	comp=Z,18nm,0.9s,mb4.7,baz=198,slow=7.4,SNR=109						
ZAK	**Zakamensk**	**43.24**	**9**	⇑*i*P	**P**	**13 38 06.5**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.5						
MUN	**Mundaring**	**44.70**	**153**	*e*P	**P**	**13 38 22.0**	**+2.7**
	comp=Z,28nm,1.0s,mb5.0						
MUN	**Mundaring**	**44.70**	**153**	*e*P	**P**	**13 38 22.0**	**+2.7**
MUN				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
KURK	**Kurchatov**	**44.80**	**346**	*d i*P	**P**	**13 38 19.2**	**-0.6**
KURK				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.2						
KURK	**Kurchatov**	**44.80**	**346**	*e*P	**P**	**13 38 18.9**	**-0.9**
	comp=Z,79nm,1.1s,mb5.5						
KLBR	**Kellerberrin**	**45.10**	**151**	*e*P	**P**	**13 38 24.1**	**+1.7**
	comp=Z,526nm,1.2s						
CN2	**Changchun**	**45.19**	**32**	*e*P	**P**	**13 38 25.0**	**+2.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
NWAO	**Narrogin (SRO)**	**45.97**	**153**	*e*P	**P**	**13 38 29.4**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,50nm,1.0s						
NWAO	**Narrogin (SRO)**	**45.97**	**153**	P	**P**	**13 38 29.9**	**+0.6**
	comp=Z,18nm,1.1s,mb4.9,baz=318,slow=8.8,SNR=14						

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NWAO  Narrogin (SRO)     45.97 153  eP      P       13 38 29.4 +0.2
      comp=Z,50nm,1.0s,mb5.4
HIA   Hailar             46.70  23  eP      P       13 38 34.8  0.0
HIA                                  pmax   pmax
      comp=Z,26nm,0.9s
HIA   Hailar             46.70  23  eP      P       13 38 34.8  0.0
      comp=Z,26nm,0.9s,mb5.2
ZAL   Zalesovo           46.74 352   P      P       13 38 35.0 -0.2
      comp=Z,22nm,0.6s,mb5.2,baz=295,slow=8.9,SNR=111
NVS   Novosibirsk        47.84 351  eP      P       13 38 42.2 -1.6
NVS                                 eS      S       13 45 36.1 -2.1
NVS                                  pmax   pmax
      comp=N,30nm,1.0s
NVS                                  pmax   pmax
      comp=E,16nm,1.0s
NVS                                  pmax   pmax
      comp=Z,83nm,1.0s,mb5.7
NVS                                  smax
      comp=N,16nm,1.3s
NVS                                  smax
      comp=E,35nm,1.3s
WRA   Warramunga Arr     48.13 125   P      P       13 38 45.5 -1.0
      comp=E,4.8nm,0.8s,mb4.5,baz=304,slow=8.7,SNR=34
WRAB  Tennant Creek      48.14 125  i P     P       13 38 45.8 -0.7
WRAB  Tennant Creek      48.14 125  eP      P       13 38 45.4 -1.2
      comp=E,15nm,0.7s,mb5.1
WB2   Warramunga Arr     48.14 125⇑iP      P       13 38 45.5 -1.1
BVA0  Borovoye Array     49.18 341   P      P       13 38 53.0 -1.1
BVA0                                 pmax   pmax
      comp=Z,4.0nm,1.0s,mb4.4
BVAR  Borovoye Array     49.18 341   P      P       13 38 52.9 -1.2
      comp=Z,17nm,1.0s,mb5.0,baz=143,slow=7.4,SNR=43
RAYN  Ar Rayn            49.18 294   P      P       13 38 56.9 +2.4
      comp=Z,267nm,0.8s,SNR=14
CHKZ  Chkalovo           49.66 342  eP      P       13 38 57.0 -0.8
CHKZ                                 pmax   pmax
      comp=Z,59nm,1.0s,mb5.6
CHKZ  Chkalovo           49.66 342  eP      P       13 38 57.0 -0.9
      comp=Z,59nm,1.0s,mb5.6
ASPA  Alice Springs      49.77 130  eP      P       13 38 57.9 -1.2
ASAR  Alice Springs      49.78 130   P      P       13 38 58.0 -1.1
      comp=Z,2.7nm,0.7s,mb4.4,baz=305,slow=7.1,SNR=33
KLR   Kul'dur            52.04  30  eP      P       13 39 15.7 -0.3
BOD   Bodaibo            52.34  13⇓iP      P       13 39 17.8 -0.3
BOD                                  pmax   pmax
      comp=Z,29nm,1.0s,mb5.2
GNI   Garni              54.59 314  eP      P       13 39 34.3 -0.6
GNI                                  pmax   pmax
      comp=Z,36nm,1.4s
GNI   Garni              54.59 314   P      P       13 39 33.8 -1.1
      comp=Z,5.6nm,0.6s,mb4.8,baz=147,slow=8.0,SNR=7.1
GNI   Garni              54.59 314  eP      P       13 39 34.3 -0.6
      comp=Z,36nm,1.4s,mb5.2
CLNS  Chul'man           54.61  20d iP     P       13 39 34.8 -0.1
CLNS                                e*PP    pP      13 39 42.2 +0.1
CLNS                                ePPP    PPP     13 42 48.5 -1.9
CLNS                                eS      S       13 47 15.9 +4.5
CLNS                                 pmax   pmax
      comp=Z,48nm,1.0s,mb5.5
CLNS                                 pmax   pmax
      comp=N,22nm,1.1s
CLNS                                 pmax   pmax
      comp=E,20nm,1.0s
CLNS                                 pmax   pmax
      comp=Z,13nm,0.8s,mb5.0
CLNS                                 pmax   pmax
      comp=N,6.0nm,0.6s
CLNS                                 smax
      comp=N,80nm,10.9s
CLNS                                 smax
      comp=Z,74nm,11.3s
CLNS                                 smax
      comp=E,17nm,11.8s
CLNS                                 MLR    MLR
      comp=Z,4µm,17.0s,MS5.5
CLNS                                 MLR    MLR
      comp=N,3µm,22.0s,MS5.3
CLNS                                 MLR    MLR
      comp=E,500nm,18.0s,MS5.3
TI2   Plekhanov          55.20 316  eP      P       13 39 39.2 -0.2
TI2                                  pmax   pmax
      comp=Z,870nm,1.2s
TI2                                  MLR    MLR
      comp=Z,1µm,18.0s
PMG   Port Moresby       55.46 107  eP      P       13 39 41.7 +0.1
PMG                                  pmax   pmax
      comp=Z,22nm,0.9s
PMG   Port Moresby       55.46 107   P      P       13 39 42.0 +0.4
      comp=Z,8.4nm,0.8s,mb4.8,baz=273,slow=7.5,SNR=6.1
PMG   Port Moresby       55.46 107  eP      P       13 39 41.7 +0.1
      comp=Z,22nm,0.9s,mb5.2
SVE   Sverdlovsk         55.59 338⇑iP      P       13 39 41.0 -1.0
SVE                                  pmax   pmax
      comp=Z,80nm,1.3s,mb5.6
YSS   Yuzh-Sakhalins     56.93  38  eP      P       13 39 54.4 +2.7
YSS                                 e               13 40 05.0
YSS   Yuzh-Sakhalins     56.93  38   P      P       13 39 50.1 -1.6
      comp=Z,7.3nm,0.4s,mb5.1
KMBO  Kilima Mbogo       57.42 264  eP      P       13 39 56.1 +0.4
KMBO                                e*PP    pP      13 40 04.3 +1.3
KMBO                                 pmax   pmax
      comp=Z,10.0nm,0.9s
KMBO  Kilima Mbogo       57.42 264   P      P       13 39 57.9 +2.2
      comp=Z,4.8nm,0.8s,mb4.6,baz=54,slow=11,SNR=8.2
KMBO  Kilima Mbogo       57.42 264  eP      P       13 39 56.1 +0.4
      comp=Z,9.7nm,0.9s,mb4.8
KMBO                                epP     pP      13 40 04.3 +1.3
KIV   Kislovodsk         57.47 318  i P     P       13 39 54.3 -1.3
KIV                                  pmax   pmax
      comp=Z,19nm,1.3s,mb5.0
KIV   Kislovodsk         57.47 318  eP      P       13 39 54.5 -1.1
      comp=Z,23nm,1.1s,mb5.1
ASF   Jabal al Asfar     58.34 303   P      P       13 40 01.5 -0.3
      comp=Z,3.0nm,0.8s,mb4.4,baz=119,slow=2.7,SNR=3.4
MALT  Malatya            58.60 310  eP      P       13 40 02.5 -1.1
MALT                                 pmax   pmax
      comp=Z,3.0nm,0.8s,mb4.4
MALT  Malatya            58.60 310  eP      P       13 40 02.5 -1.1
      comp=Z,2.8nm,0.8s,mb4.3
MALT  Malatya            58.60 310 ⇓P      P       13 40 02.6 -1.0
SOKR  Solikamsk          58.99 339c iP     P       13 40 06.6 +0.6
SOKR                                 S      S       13 48 19.2  +10
SOKR                                 pmax   pmax
      comp=Z,60nm,1.0s,mb5.6
SOKR                                 MLR    MLR
      comp=Z,5µm,20.0s,MS5.6
EIL   Elat               59.54 300  eP      P       13 40 09.5 -0.7
      comp=Z,17nm,1.0s,mb5.0
STKA  Stephens Creek     59.96 134  eP      P       13 40 12.6 -0.5
      comp=Z,6.3nm,0.9s,mb4.7
STKA  Stephens Creek     59.96 134   P      P       13 40 12.2 -0.8
      comp=Z,8.9nm,0.9s,mb4.8,baz=314,slow=9.4,SNR=5.1
STKA  Stephens Creek     59.96 134  eP      P       13 40 11.9 -1.1
STKA                                epP     pP      13 40 18.9 -1.6
YAK   Yakutsk            60.17  18  eP      P       13 40 12.8 -1.3
YAK                                  pmax   pmax
      comp=N,15nm,1.0s
YAK                                  pmax   pmax
      comp=Z,33nm,1.0s,mb5.3
YAK                                  pmax   pmax
      comp=E,13nm,1.1s
YAK   Yakutsk            60.17  18  eP      P       13 40 13.3 -0.8
      comp=E,64nm,1.0s,mb5.6
BRTR  Keskin Array B     62.57 311   P      P       13 40 28.4 -2.1
      comp=E,3.2nm,0.7s,mb4.6,baz=133,slow=7.5,SNR=14
MBAR  Mbarara            63.76 266  eP      P       13 40 38.9  0.0
MBAR                                 pmax   pmax
      comp=Z,7.0nm,1.3s,mb4.5
MBAR  Mbarara            63.76 266  eP      P       13 40 38.9 -0.1
      comp=Z,6.5nm,1.3s,mb4.5
MOS   Moscow             65.26 329  eP      P       13 40 47.0 -0.9
MOS                                  pmax   pmax
      comp=Z,61nm,0.7s,mb5.7
OBN   Obninsk            65.55 328d iP     P       13 40 48.2 -1.6
OBN                                 e               13 43 09.5
OBN                                 i S     S       13 49 23.7 -8.3
OBN                                  pmax   pmax
      comp=Z,42nm,1.4s,mb5.3
OBN   Obninsk            65.55 328  eP      P       13 40 48.4 -1.4
      comp=Z,131nm,1.6s,mb5.7
MA2   Magadan            66.93  28  eP      P       13 40 58.6  0.0
MA2                                 e*PP    pP      13 41 06.1 +0.1
MA2                                  pmax   pmax
      comp=Z,15nm,0.8s,mb5.1
MA2   Magadan            66.93  28  eP      P       13 40 58.6  0.0
      comp=Z,15nm,0.8s,mb5.1
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MA2                                 epP     pP      13 41 06.1 +0.1
TIRR  Tirgusor           67.41 315 ⇑P      P       13 40 59.9 -1.9
TIXI  Tiksi              67.42  11⇓iP      P       13 41 00.2 -1.3
TIXI                                 pmax   pmax
      comp=Z,55nm,1.1s,mb5.5
KIS   Kishinev           67.68 318  eP      P       13 41 02.0 -1.5
CFR   Carcaliu           67.75 316 ⇑P      P       13 41 02.7 -1.3
CFR   Carcaliu           67.75 316 ⇑P      P       13 41 02.8 -1.2
AKASG Malin Array Be     68.32 322  i P     P       13 41 05.1 -2.3
AKASG                                pmax   pmax
      comp=Z,2.0nm,0.5s
AKASG Malin Array Be     68.32 322   P      P       13 41 05.1 -2.3
      comp=Z,2.1nm,0.5s,mb4.4,baz=88,slow=5.4,SNR=15
VRI   Vrincioaia         68.85 316 ⇓P      P       13 41 10.4 -0.4
SEY   Seymchan           69.10  25  eP      P       13 41 14.4 +2.4
SEY                                 eS      S       13 50 23.1 +8.6
SEY                                  pmax   pmax
      comp=Z,20nm,1.0s,mb5.0
SEY                                  smax
      comp=N,320nm,31.6s
SEY                                  smax
      comp=E,320nm,19.9s
SEY                                  MLR    MLR
      comp=Z,13µm,23.0s,MS6.1
SEY                                  MLR    MLR
      comp=N,7µm,24.0s,MS5.9
SEY                                  MLR    MLR
      comp=E,5µm,22.0s,MS5.9
LSZ   Lusaka             69.22 251  eP      P       13 41 15.3 +1.8
LSZ                                  pmax   pmax
      comp=Z,7.0nm,0.9s,mb4.6
LSZ   Lusaka             69.22 251  eP      P       13 41 15.3 +1.7
      comp=Z,7.4nm,0.9s,mb4.6
MLR   Muntele Rosu       69.32 316   P      P       13 41 13.6 -0.1
      comp=Z,16nm,1.2s,mb4.8,baz=62,slow=3.3,SNR=9.2
MLR   Muntele Rosu       69.32 316 ⇑P      P       13 41 12.7 -1.0
BURAR Bucovina Array     70.20 318 ⇓P      P       13 41 18.2 -0.8
BURAR Bucovina Array     70.20 318 ⇓P      P       13 41 18.2 -0.8
MATP  Matopo             70.30 245   P      P       13 41 21.6 +1.6
      comp=Z,2.6nm,0.8s,mb4.2,baz=84,slow=5.5,SNR=8.4
VTS   Vitosha            70.83 312 ⇑P      P       13 41 29.3 +6.4
JOF   Joensuu            71.03 334  ep      P       13 41 23.3 -0.5
      comp=Z,2.5nm,0.5s,mb4.4
KWP   Kalwaria           72.19 320  eP      P       13 41 30.5 -0.5
KWP                                 epP     pP      13 41 36.7 -1.7
BZS   Buzias             72.35 315 ⇓P      P       13 41 32.8 +0.8
SUW   Suwalki            72.67 324  eP      P       13 41 32.7 -1.0
SUW                                 e*PP    pP      13 41 39.2 -2.0
SUW                                  pmax   pmax
      comp=Z,21nm,0.4s,mb5.4
SUW   Suwalki            72.67 324  eP      P       13 41 32.7 -1.1
      comp=Z,21nm,0.4s,mb5.4
SUW                                 epP     pP      13 41 39.2 -2.0
SUW   Suwalki            72.67 324  eP      P       13 41 32.6 -1.1
SUW                                 epP     pP      13 41 39.2 -2.0
CRVS  Cervenica-Dubn     72.89 319  eP      P       13 41 38.0 +2.9
FINES FINESS Array B     72.89 332   P      P       13 41 34.1 -0.7
      comp=Z,8.5nm,0.7s,mb4.8,baz=94,slow=5.4,SNR=28
NIE   Niedzica           73.70 319  eP      P       13 41 39.5 -0.3
PSZ   Piszkesteto        73.80 318  eP      P       13 41 39.0 -1.4
PSZ                                 e*PP    pP      13 41 45.7 -2.2
PSZ                                  pmax   pmax
      comp=Z,6.0nm,1.0s,mb4.5
PSZ   Piszkesteto        73.80 318  eP      P       13 41 39.0 -1.4
      comp=Z,5.9nm,1.0s,mb4.5
PSZ                                 epP     pP      13 41 45.6 -2.2
OJC   Ojcow              74.14 320  eP      P       13 41 41.6 -0.7
LBTB  Lobatse            74.16 241  eP      P       13 41 45.3 +2.3
LBTB                                 pmax   pmax
      comp=Z,15nm,0.9s,mb4.9
LBTB  Lobatse            74.16 241   P      P       13 41 45.1 +2.1
      comp=Z,6.4nm,0.7s,mb4.7,baz=107,slow=4.1,SNR=14
LBTB  Lobatse            74.16 241  eP      P       13 41 45.3 +2.3
      comp=Z,15nm,0.9s,mb4.9
VYHS  Vyhne              74.56 318  eP      P       13 41 44.6 -0.2
KEV   Kevo               75.03 341  ep      P       13 41 46.5 -0.6
      comp=Z,1.6nm,0.4s,mb4.3
KEV   Kevo               75.03 341  eP      P       13 41 46.5 -0.6
KEV                                  pmax   pmax
      comp=Z,2.0nm,0.4s,mb4.4
ARCES ARCESS Array B     75.46 340   P      P       13 41 49.6 +0.1
      comp=Z,9.5nm,0.9s,mb4.7,baz=102,slow=5.5,SNR=14
BOSA  Boshof             75.49 238  eP      P       13 41 52.4 +1.8
BOSA                                 pmax   pmax
      comp=Z,23nm,1.0s,mb5.1
BOSA  Boshof             75.49 238  eP      P       13 41 52.4 +1.8
      comp=Z,23nm,1.0s,mb5.1
MORC  Moravsky Berou     75.53 319  eP      P       13 41 50.4  0.0
      comp=Z,11nm,1.0s,mb4.8
MORC  Moravsky Berou     75.53 319 ⇑P      P       13 41 50.3 -0.1
ZST   Bratislava         75.69 318  eP      P       13 41 51.7 +0.4
BILL  Bilibino           76.26  22  eP      P       13 41 53.6 -0.5
BILL                                 pmax   pmax
      comp=Z,10.0nm,1.1s,mb4.7
BILL  Bilibino           76.26  22  eP      P       13 41 53.5 -0.6
      comp=Z,10nm,1.1s,mb4.7
KSP   Ksiaz              76.42 320  eP      P       13 41 54.9 -0.5
KSP                                 e       pP      13 42 03.3 +0.4
BRG   Berggiesshubel     77.91 320  eP      P       13 42 05.1 +1.5
BRG                                  pmax   pmax
      comp=Z,42nm,1.9s,mb5.0
BRG   Berggiesshubel     77.91 320  eP      P       13 42 05.1 +1.5
      comp=Z,42nm,1.9s,mb5.0
GERES GERESS Array B     77.98 318   P      P       13 42 04.1 +0.1
      comp=Z,4.3nm,0.9s,mb4.4,baz=90,slow=5.3,SNR=16
KHC   Kasperske Hory     78.08 319  eP      P       13 42 04.0 -0.5
KHC                                 e       pP      13 42 11.0 -1.1
KHC   Kasperske Hory     78.08 319  eP      P       13 42 04.0 -0.5
KHC                                  pP     pP      13 42 11.0 -1.1
PTCC  Patocco-Chiusa     78.15 316  eP      P       13 42 02.1 -2.8
MAW   Mawson             78.34 192   P      P       13 42 09.2 +3.5
      comp=Z,4.4nm,0.6s,mb4.5,baz=34,slow=7.6,SNR=8.8
CLL   Collm              78.52 321  eP      P       13 42 07.0  0.0
CLL                                 i       pP      13 42 15.1 +0.6
CLL                                  pmax   pmax
      comp=Z,31nm,1.8s,mb4.9
CLL   Collm              78.52 321  eP      P       13 42 07.0  0.0
      comp=Z,31nm,1.8s,mb4.9
CLL                                 i       pP      13 42 15.1 +0.6
CLL   Collm              78.52 321   P      P       13 42 07.0  0.0
      comp=Z,logA/T=1.2,mb4.9
CLL                                 i *SP   sP      13 42 15.1 -1.9
SFI   Santa Sofia        79.19 313  eP      P       13 42 13.1 +2.3
PGD   Poggio Sodo        79.28 313  eP      P       13 42 12.7 +1.4
CTI   Castel Tesino      79.33 315  eP      P       13 42 12.6 +1.1
MOX   Moxa               79.38 320  eP      P       13 42 13.1 +1.4
MOX   Moxa               79.38 320  i P     P       13 42 13.1 +1.4
      comp=Z,logA/T=1.6,mb5.3
VMG   Vicchio            79.41 313  eP      P       13 42 13.5 +1.6
GRA1  Grafenberg Arr     79.63 319  eP      P       13 42 11.6 -1.4
      comp=Z,27nm,1.1s,mb5.1
GRF   Grafenberg Arr     79.63 319  eP      P       13 42 11.6 -1.4
GRF                                  pmax   pmax
      comp=Z,27nm,1.1s,mb5.1
GRF   Grafenberg Arr     79.63 319  eP      P       13 42 11.6 -1.4
GRF                                  pmax   pmax
      comp=Z,27nm,1.1s,mb5.1
GRF   Grafenberg Arr     79.63 319  eP      P       13 42 11.6 -1.4
      comp=Z,27nm,1.1s,mb5.1
NB2   NORSAR Subarra     79.91 331   P      P       13 42 13.7 -0.6
      comp=Z,4.6nm,0.6s,mb4.6,baz=97,slow=5.0
NB2   NORSAR Subarra     79.91 331   P      P       13 42 13.7 -0.6
NB2                                  pmax   pmax
      comp=Z,5.0nm,0.6s,mb4.6
NOA   NORSAR Array B     79.91 331   P      P       13 42 13.8 -0.5
      comp=Z,6.0nm,0.7s,mb4.6,baz=93,slow=5.6,SNR=18
NAO01 NORSAR Array S     80.06 330  eP      P       13 42 14.7 -0.4
      comp=Z,11nm,0.8s,mb4.8
GSCL  Gusciola           80.09 314  eP      P       13 42 23.2 +7.6
LPG   La Plagne          82.77 315  eP      P       13 42 30.1 +0.5
      comp=Z,28nm,0.8s,mb5.0
LPG   La Plagne          82.77 315  eP      P       13 42 30.1 +0.5
LPG                                  pmax   pmax
      comp=Z,14nm,0.8s,mb5.0
BNI   Bardonecchia       82.85 314  eP      P       13 42 28.9 -1.1
BNI                                 e*PP    pP      13 42 38.0 +0.4
BNI                                  pmax   pmax
      comp=Z,12nm,0.8s,mb5.0
BNI   Bardonecchia       82.85 314  eP      P       13 42 28.9 -1.1
      comp=Z,12nm,0.8s,mb5.0
BNI                                 epP     pP      13 42 38.0 +0.4
TNA   Tin City           86.34  24  eP      P       13 42 47.3 +0.2
      comp=Z,5.2nm,1.1s,mb4.7
ESK   Eskdalemuir        87.92 325  eP      P       13 42 55.1 +0.1
ESK                                  pmax   pmax
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      comp=Z,13nm,1.0s,mb5.1
ESK   Eskdalemuir        87.92 325  eP      P       13 42 55.1 +0.2
      comp=Z,13nm,1.0s,mb5.1
ESDC  Sonseca Array      91.36 310   P      P       13 43 11.8 +0.4
      comp=Z,0.6nm,0.5s,mb4.2,baz=43,slow=6.3,SNR=5.7
IMA   Indian Mountai     91.80  22  eP      P       13 43 14.2 +1.3
IMA                                 e*PP    pP      13 43 21.5 +1.0
IMA                                  pmax   pmax
      comp=Z,51nm,1.0s,mb5.8
IMA   Indian Mountai     91.80  22  eP      P       13 43 14.2 +1.4
      comp=Z,51nm,1.0s,mb5.8
IMA                                 epP     pP      13 43 21.5 +1.0
VNDA  Vanda              92.73 168   P      P       13 43 15.8 -1.1
      comp=Z,2.7nm,1.2s,mb4.5,baz=39,slow=20,SNR=1.9
SUMG  Summit             94.34 347  eP      P       13 43 25.5 +1.1
      comp=Z,9.7nm,1.3s,mb5.1
COLA  College            94.51  22  i P     P       13 43 25.6 +0.2
ILAR  Eielson Array      94.92  22   P      P       13 43 27.2 -0.1
      comp=Z,1.4nm,1.1s,mb4.3,baz=290,slow=4.7,SNR=5.8
INK   Inuvik             97.18  16  eP      P       13 43 38.0 +0.6
INK                                  pmax   pmax
      comp=Z,11nm,1.3s
INK   Inuvik             97.18  16   P      P       13 43 37.7 +0.3
      comp=Z,6.3nm,1.1s,mb4.9,baz=309,slow=4.4,SNR=11
INK   Inuvik             97.18  16  eP      P       13 43 38.0 +0.5
      comp=Z,11nm,1.3s,mb5.1
RES   Resolute Bay       97.60   2  eP      P       13 43 39.8 +0.6
RES                                 e*PP    pP      13 43 47.1 +0.2
RES                                  pmax   pmax
      comp=Z,7.0nm,1.0s,mb5.2
RES   Resolute Bay       97.60   2  eP      P       13 43 39.8 +0.6
      comp=Z,6.8nm,1.0s,mb5.1
RES                                 epP     pP      13 43 47.1 +0.2
YKA   Yellowknife Ar    106.61  13   Pdiff  Pdif    13 44 21.1 +1.5
      comp=Z,0.1nm,0.6s,baz=325,slow=4.2,SNR=3.9
YKA                                  PP     PP      13 48 41.3 -6.7
      comp=Z,1.2nm,0.9s,baz=333,slow=7.7,SNR=8.9
YKA   Yellowknife Ar    106.61  13   Pdif   Pdif    13 44 21.1 +1.4
YKA                                  PP     PP      13 48 41.4 -6.7
SCHQ  Schefferville     115.72 348   PKP    PKPdf   13 48 49.0 -1.9
      comp=Z,1.3nm,1.0s,baz=115,slow=11,SNR=2.7
ULM   Lac du Bonnet     121.66   8   PKP    PKPdf   13 49 00.5 -2.1
      comp=Z,1.2nm,0.4s,baz=333,slow=1.7,SNR=2.8
ULM   Lac du Bonnet     121.66   8   PKP    PKPdf   13 49 00.5 -2.1
BOZ   Bozeman (W)       122.11  21  ePKPdf  PKPdf   13 49 01.1 -2.5
MCMT  McKenzie Canyo    122.36  22  ePKPdf  PKPdf   13 49 01.7 -2.4
LAO   LASA Array        122.91  17  ePKPdf  PKPdf   13 49 00.5 -4.5
EYMN  Ely               124.39   5  ePKPdf  PKPdf   13 49 05.5 -2.4
ELK   Elko              124.74  27  ePKPdf  PKPdf   13 49 07.8 -1.0
NVAR  Mina Array Bea    125.08  31   PKP    PKPdf   13 49 08.4 -1.1
      comp=Z,1.0nm,0.7s,baz=324,slow=1.6,SNR=8.3
PDAR  Pinedale Array    125.34  21   PKP    PKPdf   13 49 07.7 -2.2
      comp=Z,1.2nm,0.8s,baz=27,slow=3.3,SNR=11
DUG   Dugway            126.25  26  ePKPdf  PKPdf   13 49 10.3 -1.4
MVU   Marysvale         127.91  26  ePKPdf  PKPdf   13 49 13.0 -2.0
MSU   Marysvale         127.92  26  ePKPdf  PKPdf   13 49 14.0 -1.0
ALLY  Alegheny Colle    130.64 354  ePKPdf  PKPdf   13 49 16.8 -3.4
WVT   Waverly           136.39   2  ePKPdf  PKPdf   13 49 28.4 -2.6
MIAR  Mount Ida         137.38   9   PKPdf  PKPdf   13 49 31.2 -1.6
TXAR  Lajitas Array     139.40  24   PKP    PKPdf   13 49 34.2 -2.4
      comp=Z,0.2nm,0.2s,baz=346,slow=32,SNR=7.3
TXAR  Lajitas Array     139.40  24   PKP    PKPdf   13 49 34.2 -2.4
JCT   Junction City     139.77  19  ePKPdf  PKPdf   13 49 34.0 -3.3
BDFB  Brasilia          142.17 254   PKP    PKPdf   13 49 39.2 -2.7
      comp=Z,1.8nm,0.5s,baz=305,slow=3.6,SNR=2.5
PLCA  Paso Flores       144.37 200   PKP    PKPdf   13 49 42.4 -2.7
      comp=Z,3.1nm,0.8s,baz=239,slow=4.2,SNR=12
PLCA  Paso Flores       144.37 200  ePKPdf  PKPdf   13 49 42.1 -2.9
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MOS ***25*** *13:30:15.3±0.9, 49.41N×6.81E, h7^{km}, mb3.8/1, Error ellipse: s-maj=5.6km s-min=4.2km az=91.3*

STR ***25*** *13:30:16.8±0.1, 49.37N×6.86E, h1^{km}±1^{km}, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

NEIC ***25*** *13:30:16.8, 49.37N×6.86E, h1^{km}, ML3.7(LDG), ML3.2(VIE), ML3.2(LEDBW), ML3.1(STR), After STR.*

LDG ***25*** *13:30:17.3±0.1, 49.38N×6.92E, h1^{km}, Md3.6/1, Ml3.7/30, Error ellipse: s-maj=1.0km s-min=0.8km az=178.0, Suspected Mining induced.*

LEDBW ***25*** *13:30:17.2±0.3, 49.38N×6.90E, h1^{km}, ML3.2, Error ellipse: s-maj=8.0km s-min=4.0km az=85.0*

CSEM ***25*** *13:30:17.2±0.0, 49.38N×6.93E, h2^{km}, ML3.8/27, Error ellipse: s-maj=0.7km s-min=0.6km az=142.0*

BGR ***25*** *13:30:17.0±0.3, 49.38N×6.90E, h1^{km}, ML3.2/6, Error ellipse: s-maj=2.2km s-min=1.1km az=105.0*

BNS ***25*** *13:30:19.0±1.4, 49.45N×6.88E, h1^{km}, ML3.3*

ISC 25 13:30:14.7±0.1**, 49.382N**±0.009×**6.87E**±0.01**, n154,**
σ1^{s}**28**/303**, 11C-12D, Germany**

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Code  Station Name        Δ°   AZ°   Phase ID         Time       Res
                                     Op      ISC      h  m  s    ISC
RUP   Ruppelstein        0.34  21⇓ePg     Pg       13 30 24.0 +2.5
RUP                                 P*      Pb       13 30 25.3 +1.9
RUP   Ruppelstein        0.34  21   P       Pg       13 30 25.3 +3.7
RUP   Ruppelstein        0.34  21   P       Pg       13 30 25.3 +3.7
WLF   Walferdange        0.55 302  ePg     Pg       13 30 28.1 +2.5
ABH   Alteburg           0.67  41⇓iPg     Pg       13 30 29.5 +1.5
ABH                                 eSg     Sg       13 30 38.4 +1.5
      SNR=6.1
LANF  Langenberg         0.73 123⇓iPg     Pg       13 30 30.6 +1.2
LANF  Langenberg         0.73 123   Pg      Pg       13 30 30.4 +1.0
KTD   Kalmit             0.80  94   Pg      Pg       13 30 31.7 +1.1
KTD                                 Sg      Sg       13 30 43.5 +2.2
BGG   Burgeitz           0.88  20  ePg     Pg       13 30 34.0 +1.8
BGG                                eSg     Sg       13 30 45.6 +1.6
      1µm,0.3s
CDF   Champ du Feu       1.01 164  ePg     Pg       13 30 35.6 +0.8
CDF                                ePn     Pn       13 30 36.6 +0.7
CDF                                eSg     Sg       13 30 49.2 +1.0
CDF                                eSn     Sn       13 30 50.8 -0.2
      251nm,0.4s
CDF   Champ du Feu       1.01 164  eP      Pg       13 30 35.6 +0.8
CDF                                e                13 30 50.8
WLS   Welschbruch        1.02 162⇓ePg     Pg       13 30 35.9 +0.9
WLS                                eSg     Sg       13 30 49.8 +1.1
      SNR=4.8
WLS   Welschbruch        1.02 162   Pg      Pg       13 30 35.9 +0.8
WLS                                 Sg      Sg       13 30 50.1 +1.4
ECH   Echery             1.18 171  ePg     Pg       13 30 39.0 +0.7
      SNR=40
ECH                               ⇓ePn     Pn       13 30 39.0 +0.6
ECH                                eSg     Sg       13 30 54.5 +0.4
      SNR=5.2
ECH   Echery             1.18 171   Pg      Pg       13 30 38.9 +0.6
ECH                                 Sg      Sg       13 30 55.6 +1.5
ECH   Echery             1.18 171⇓eP      Pn       13 30 39.0 +0.6
ECH   Echery             1.18 171   Pg      Pg       13 30 39.0 +0.7
      SNR=40
ECH                                 Sg      Sg       13 30 54.5 +0.4
      SNR=5.2
RFYF  Reffroy            1.19 231  ePg     Pg       13 30 40.0 +1.6
      baz=47
RFYF                               eSg     Sg       13 30 55.9 +1.7
      400nm,0.3s,baz=55
SWS   Schriesheim        1.20  84⇓iPn     Pn       13 30 38.9 +0.2
SWS                                i Sg    Sg       13 30 55.5 +0.8
SWS   Schriesheim        1.20  84⇓iP      Pb       13 30 38.9 +0.9
SWS                                i Sg    Sg       13 30 55.5 +0.8
SWS   Schriesheim        1.20  84   Pn      Pn       13 30 38.8 +0.1
SWS   Schriesheim        1.20  84⇓iP      Pb       13 30 38.9 +0.9
SWS                                 Sg      Sg       13 30 55.5 +0.8
STB   Steinbach          1.21 359  ePg     Pg       13 30 39.7 +0.8
STB                                eSg     Sg       13 30 55.7 +0.6
      534nm,0.7s
TOD   Tromm              1.28  79⇓ePn     Pn       13 30 40.0 +0.2
TOD                                ePg     Pg       13 30 41.0 +0.7
      SNR=70
TOD                                 PmP              13 30 41.0
TOD                                eSg     Sg       13 30 57.7 +0.3
      SNR=3.9
TOD   Tromm              1.28  79   Pg      Pg       13 30 41.0 +0.7
      SNR=70
TOD                                 Sg      Sg       13 30 58.8 +1.4
THEF  They Montfort      1.29 207  ePg     Pg       13 30 41.1 +0.5
      SNR=38
THEF                                Pn      Pn       13 30 41.1 +1.1
THEF  They Montfort      1.29 207   Pg      Pg       13 30 41.1 +0.6
THEF                                Sg      Sg       13 30 58.3 +0.5
KLL   Kalltalsperre      1.32 344  ePg     Pg       13 30 41.2 +0.2
KLL                                eSg     Sg       13 30 59.2 +0.7
      220nm,0.6s
LIBD  Limburg            1.32 158   Pg      Pg       13 30 42.6 +1.4
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LIBD	**Limburg**	1.32	158	Pg	Pg	13 30 42.3	+1.1
LIBD				Sg	Sg	13 31 00.0	+1.2
TNS	**Taunus Mts**	1.32	50	ePn	Pn	13 30 40.8	+0.3
	SNR=5.7						
TNS				ePg	Pg	13 30 42.1	+0.9
	SNR=12						
TNS				eSg	Sg	13 30 59.2	+0.3
	SNR=6.4						
TNS	**Taunus Mts**	1.32	50	ePn	Pn	13 30 40.8	+0.4
TNS				eSg	Sg	13 31 00.2	+1.4
MEM	**Membach**	1.35	336	P	Pb	13 30 41.9	+1.4
MEM				S	Sb	13 30 58.9	+0.7
HAU	**Haudompre**	1.42	194	ePn	Pn	13 30 42.7	+0.9
HAU				ePg	Pg	13 30 43.8	+0.8
HAU				eSn	Sn	13 31 01.0	-0.5
HAU				eSg	Sg	13 31 02.7	+0.7
	196nm,0.3s						
HAU	**Haudompre**	1.42	194	eP	Pn	13 30 42.7	+0.9
HAU				e		13 31 01.0	
BFO	**Black Forest**	1.43	137	⇓ePn	Pn	13 30 42.2	+0.3
BFO				i Pg	Pg	13 30 44.1	+0.9
BFO				Sg	Sg	13 31 02.2	-0.1
BFO	**Black Forest**	1.43	137	ePn	Pn	13 30 42.1	+0.2
BFO				eSg	Sg	13 31 02.1	-0.2
LBG	**Lerchenberg**	1.46	119	Pg	Pg	13 30 44.3	+0.5
MEZF	**Maizieres J'vi**	1.49	234	ePn	Pn	13 30 43.6	+0.8
	baz=49						
MEZF				ePg	Pg	13 30 45.3	+0.9
	baz=50						
MEZF				eSn	Sn	13 31 03.0	-0.1
MEZF				eSg	Sg	13 31 05.1	+0.9
	315nm,0.5s,baz=60						
MEZF	**Maizieres J'vi**	1.49	234	ePg	Pg	13 30 45.3	+0.9
MEZF				eSn	Sn	13 31 03.0	-0.1
MEZF				eSg	Sg	13 31 05.1	+0.9
	158nm,0.5s						
GIVF	**Givet**	1.51	299	ePn	Pn	13 30 44.1	+1.0
GIVF				ePg	Pg	13 30 46.1	+1.3
GIVF				eSn	Sn	13 31 03.4	-0.3
GIVF				eSg	Sg	13 31 05.6	+0.7
	465nm,0.5s						
GIVF	**Givet**	1.51	299	eP	Pn	13 30 44.1	+1.0
GIVF				e		13 31 03.4	
HGN	**Heimansgroeve**	1.51	337	ePn	Pn	13 30 44.2	+1.1
	30nm,0.9s						
HGN				ePg	Pg	13 30 45.6	+0.7
HGN				eSg	Sg	13 31 04.2	-0.8
HGN				eRg		13 31 28.0	
HGN	**Heimansgroeve**	1.51	337	ePg	Pg	13 30 45.6	+0.8
HGN				eSg	Sg	13 31 04.2	-0.7
MOF	**Molkenrain**	1.54	173	ePn	Pn	13 30 44.3	+0.8
	SNR=1.5						
MOF				ePg	Pg	13 30 46.0	+0.5
MOF				eSg	Sg	13 31 06.3	+0.3
	SNR=4.5						
MOF	**Molkenrain**	1.54	173	Pg	Pg	13 30 45.8	+0.3
MOF				Sg	Sg	13 31 06.3	+0.3
MOF	**Molkenrain**	1.54	173	eP	Pg	13 30 46.0	+0.5
HINF	**Hinteralfeld**	1.57	180	ePn	Pn	13 30 44.6	+0.7
HINF				ePg	Pg	13 30 46.6	+0.6
HINF				eSn	Sn	13 31 04.3	-0.9
HINF				eSg	Sg	13 31 06.9	0.0
	206nm,0.3s						
HINF	**Hinteralfeld**	1.57	180	eP	Pn	13 30 44.6	+0.7
HINF				e		13 31 04.3	
KIZ	**Kirchzarten**	1.59	154	ePg	Pg	13 30 46.8	+0.4
KIZ				Sg	Sg	13 31 07.0	-0.6
BNS	**Bensberg**	1.60	7	ePg	Pg	13 30 46.1	-0.5
BNS				eSg	Sg	13 31 06.0	-1.9
	990nm,0.5s						
DOU	**Dourbes**	1.64	297	P	Pn	13 30 46.5	+1.6
DOU				S	Sb	13 31 06.2	-0.5
STU	**Stuttgart**	1.65	111	ePn	Pn	13 30 45.2	+0.1
FELD	**Feldberg**	1.69	153	ePg	Pg	13 30 48.6	+0.3
FELD				eSg	Sg	13 31 10.1	-0.7
	SNR=5.5						
SFTF	**Sexfontaines**	1.69	226	ePn	Pn	13 30 46.6	+1.0
	baz=42						
SFTF				ePg	Pg	13 30 49.1	+0.7
	baz=44						
SFTF				eSn	Sn	13 31 07.7	-0.6
SFTF				eSg	Sg	13 31 10.9	0.0
	197nm,0.4s,baz=51						
SFTF	**Sexfontaines**	1.69	226	ePg	Pg	13 30 49.1	+0.7
SFTF				eSn	Sn	13 31 07.7	-0.6
SFTF				eSg	Sg	13 31 10.9	0.0
	99nm,0.4s						
TUBL	**Tuebingen Lnz**	1.69	120	Pg	Pg	13 30 48.9	+0.3
SIND	**Sindeldorf**	1.79	90	⇓iPn	Pn	13 30 47.0	-0.1
SPAK	**Spaichingen**	1.80	135	ePg	Pg	13 30 50.9	+0.1
SPAK	**Spaichingen**	1.80	135	Pg	Pg	13 30 50.8	+0.1
BAIF	**Baives**	1.85	292	ePn	Pn	13 30 49.5	+1.5
BAIF				ePg	Pg	13 30 52.4	+0.7
BAIF				eSn	Sn	13 31 11.9	-0.6
BAIF				eSg	Sg	13 31 16.3	-0.1
	200nm,0.5s						
BAIF	**Baives**	1.85	292	eP	Pn	13 30 49.5	+1.5
BAIF				e		13 31 11.9	
BUCH	**Bad Urach**	1.89	119	Pn	Pn	13 30 50.3	+1.8
BBS	**Basel-Blauen**	1.97	167	Pg	Pg	13 30 53.4	-0.6
GUT	**Gutenstein**	1.98	131	Pn	Pn	13 30 50.4	+0.5
SNF	**Seneffe**	2.02	305	P	Pn	13 30 52.4	+2.1
LOMF	**Lomont**	2.03	181	ePn	Pn	13 30 51.2	+0.7
	SNR=3.6						
LOMF				eSg	Sg	13 31 21.8	-0.6
	SNR=3.3						
LOMF	**Lomont**	2.03	181	Pn	Pn	13 30 51.2	+0.6
LOMF				Sg	Sg	13 31 22.8	+0.4
BUG	**Bochum--Univer**	2.08	7	ePg	Pg	13 30 56.3	+0.1
	SNR=3.6						
BUG				eSg	Sg	13 31 22.8	-1.1
	SNR=4.5						
SISB	**Singen-Sch Ber**	2.20	140	Pg	Pg	13 30 58.3	-0.3
HDH	**Heidenheim**	2.34	109	Pg	Pg	13 31 00.1	-1.3
HDH				Sg	Sg	13 31 32.8	+0.2
HDH	**Heidenheim**	2.34	109	S	Sg	13 31 32.8	+0.2
HROE	**Hohe Rhon--Fla**	2.42	60	⇑iPn	Pn	13 30 56.3	+0.2
UBBA	**Unterbreizbach**	2.48	53	ePn	Pn	13 30 57.5	+0.5
	SNR=3.2						
UBBA				ePg	Pg	13 31 03.1	-1.1
	SNR=5.8						
UBBA				eSg	Sg	13 31 34.6	-2.6
	SNR=3.0						
WTSB	**Winterswijk**	2.59	359	ePn	Pn	13 31 05.5	+7.0
WTSB				eSg	Sg	13 31 39.9	-0.9
UBR	**Uberruh**	2.75	127	Pn	Pn	13 31 01.6	+0.9
CABF	**La Chapelle**	2.82	191	ePn	Pn	13 31 01.8	-0.1
CABF				ePg	Pg	13 31 10.2	-0.8
CABF				eSg	Sg	13 31 46.9	-1.7
	135nm,0.6s						
GRF	**Grafenberg Arr**	2.85	82	ePg	Pg	13 31 09.9	-1.8
GRF				eSg	Sg	13 31 48.6	-1.1
DAVA	**Damuels**	2.91	135	⇑iPN	Pn	13 31 04.9	+1.9
DAVA				i SG	Sg	13 31 51.4	0.0
	62nm,0.7s						
IBBN	**Ibbenburen**	2.98	11	eSg	Sg	13 31 51.7	-2.3
	SNR=3.0						
SSF	**Saint Saulge**	3.23	225	ePn	Pn	13 31 06.8	-0.9
SSF				eSn	Sn	13 31 43.9	-3.6
SSF				eSg	Sg	13 31 58.0	-4.3
	30nm,0.4s						
MOX	**Moxa**	3.31	66	ePn	Pn	13 31 08.7	-0.1
	SNR=3.5						
MOX				ePg	Pg	13 31 17.7	-3.1
	SNR=7.8						
MOX				eSn	Sn	13 31 47.5	-2.0
MOX				eSg	Sg	13 32 01.9	-3.1
	SNR=1.8						
MOX	**Moxa**	3.31	66	eP	Pn	13 31 09.1	+0.3
MOX				e		13 31 47.5	
MOX	**Moxa**	3.31	66	ePn	Pn	13 31 09.1	+0.3
MOX				ePg	Pg	13 31 17.7	-3.1
MOX				eSn	Sn	13 31 47.5	-2.0
MOX				eSg	Sg	13 32 01.2	-3.8
MOX	**Moxa**	3.31	66	i P	Pn	13 31 09.1	+0.3
MOX				Pg	Pg	13 31 18.0	-2.8
MOX				S	Sn	13 31 47.0	-2.5
MOX				Sg	Sg	13 32 01.0	-4.0
MOX	**Moxa**	3.31	66	ePg	Pg	13 31 17.7	-3.1
MOX				eS	Sn	13 31 47.5	-2.0
CLZ	**Clausthal**	3.32	41	ePn	Pn	13 31 09.3	+0.3
	SNR=3.2						
CLZ				ePg	Pg	13 31 18.5	-2.6
	SNR=4.3						
CLZ				eSg	Sg	13 32 02.2	-3.1
	SNR=3.4						
CLZ	**Clausthal**	3.32	41	ePn	Pn	13 31 08.2	-0.8
SMF	**Signal de Mont**	3.41	218	ePn	Pn	13 31 09.8	-0.4
SMF				eSn	Sn	13 31 48.6	-3.4
SMF				eSg	Sg	13 32 04.0	-4.2
	86nm,0.7s						
MOTA	**Moosalm**	3.48	124	⇑iPN	Pn	13 31 13.2	+1.9
MOTA				i SG	Sg	13 32 09.6	-1.1
	6.6nm,0.3s						
AVF	**Avril sur Loir**	3.50	224	ePn	Pn	13 31 10.8	-0.7
AVF				ePg	Pg	13 31 22.5	-2.1
AVF				eSn	Sn	13 31 50.5	-3.8
AVF				eSg	Sg	13 32 07.7	-3.6
	54nm,0.5s						
AVF	**Avril sur Loir**	3.50	224	eP	Pn	13 31 10.8	-0.7
AVF				e		13 31 50.5	
MCGN	**Macugnaga**	3.51	167	ePn	Pn	13 31 13.5	+1.9
MCGN	**Macugnaga**	3.51	167	ePn	Pn	13 31 13.5	+1.9
HYF	**Humbligny**	3.53	235	ePn	Pn	13 31 11.6	-0.3
HYF				ePg	Pg	13 31 23.0	-2.1
HYF				eSn	Sn	13 31 51.9	-3.0
HYF				eSg	Sg	13 32 08.9	-3.2
SQTA	**Sankt Quirin**	3.62	125	⇑iPN	Pn	13 31 15.2	+2.1
SQTA				i SG	Sg	13 32 14.4	-0.7
	9.0nm,0.3s						
NEUB	**Neuenburg**	3.64	58	eSg	Sg	13 32 12.3	-3.6
	SNR=3.0						
WERD	**Werda**	3.67	71	ePg	Pg	13 31 25.4	-2.6
	SNR=4.1						
WERD				eSg	Sg	13 32 13.2	-3.8
	SNR=4.4						
NKC	**Novy Kostel**	3.71	75	ePN	Pn	13 31 14.9	+0.4
NKC				ePG	Pg	13 31 25.2	-3.6
	78nm,0.7s						
NKC				eSG	Sg	13 32 12.8	-5.5
NRDL	**Niedersach Rie**	3.73	32	ePn	Pn	13 31 14.5	-0.3
	SNR=1.0						
BRMO	**Bormio**	3.74	140	ePn	Pn	13 31 17.2	+2.3
BRMO	**Bormio**	3.74	140	ePn	Pn	13 31 17.2	+2.3
WATA	**Walderalm**	3.75	121	⇑iPN	Pn	13 31 16.1	+1.1
WATA				i SG	Sg	13 32 18.1	-1.4
	14nm,0.4s						
TANN	**Tannenbergstha**	3.76	72	ePn	Pn	13 31 15.0	-0.2
	SNR=4.3						
TANN				ePg	Pg	13 31 27.8	-2.0
	SNR=3.8						
TANN				eSg	Sg	13 32 15.1	-4.8
	SNR=3.1						
WTTA	**Wattenberg**	3.82	122	⇑iPN	Pn	13 31 17.8	+1.7
WTTA				i SG	Sg	13 32 22.1	+0.1
	6.7nm,0.4s						
LPL	**La Plagne**	3.87	181	ePg	Pg	13 31 29.0	-2.9
LPL				eSg	Sg	13 32 18.9	-4.6
	44nm,0.8s						
LPG	**La Plagne**	3.89	181	ePn	Pn	13 31 17.2	+0.2
LPG				eSg	Sg	13 32 19.8	-4.3
	67nm,1.0s						
BGF	**Bois d'Agland**	3.91	225	ePn	Pn	13 31 16.0	-1.3
BGF				eSn	Sn	13 32 00.6	-4.0
BGF				eSg	Sg	13 32 20.7	-4.1
	190nm,0.4s						
WET	**Wettzell**	3.94	91	ePn	Pn	13 31 17.3	-0.5
	SNR=18						
WET				ePg	Pg	13 31 30.1	-3.4
	SNR=1.7						
WET	**Wettzell**	3.94	91	ePn	Pn	13 31 18.0	+0.2
BNI	**Bardonecchia**	4.33	182	eP	Pn	13 31 27.7	+4.3
CLL	**Collm**	4.38	62	ePg	Pg	13 31 36.0	-6.1
CLL				eSg	Sg	13 32 35.5	-4.9
	SNR=3.7						
CLL	**Collm**	4.38	62	ePG	Pg	13 31 36.0	-6.1
CLL				eSN	Sn	13 32 12.0	-4.4
CLL				eSG	Sg	13 32 35.0	-5.4
KHC	**Kasperske Hory**	4.40	91	eP	Pn	13 31 24.2	-0.1
KHC				e		13 32 13.3	
KHC	**Kasperske Hory**	4.40	91	ePn	Pn	13 31 24.2	-0.1
KHC				e		13 31 45.0	
KHC				eSn	Sn	13 32 13.3	-3.8
KHC				e		13 32 35.5	
KHC				e		13 32 45.5	
KHC	**Kasperske Hory**	4.40	91	ePN	Pn	13 31 24.2	-0.1
KHC				ex	x	13 31 30.6	
KHC				ePG	Pg	13 31 45.0	+2.4
KHC				eSN	Sn	13 32 13.3	-3.8
KHC				eSG	Sg	13 32 35.5	-5.8
KHC				ex	x	13 32 45.5	
KHC	**Kasperske Hory**	4.40	91	Pn	Pn	13 31 24.2	-0.1
KHC				Sn	Sn	13 32 13.3	-3.8
TCF	**Toulx Ste Croi**	4.41	227	ePn	Pn	13 31 23.3	-1.1
TCF				eSn	Sn	13 32 13.5	-3.7
TCF				eSg	Sg	13 32 35.1	-6.3
	22nm,0.4s						
ORIF	**Oris-en-Rattie**	4.52	189	ePn	Pn	13 31 24.9	-1.0
ORIF				eSg	Sg	13 32 38.1	-7.0
	44nm,0.8s						
GEC2	**GERESS Array S**	4.52	94	ePn	Pn	13 31 26.0	0.0
	SNR=58						
GEC2				e(Sn)	Sn	13 32 14.7	-5.4
	SNR=2.9						
GEC2	**GERESS Array S**	4.52	94	ePn	Pn	13 31 26.1	+0.1
MBDF	**Montbardon**	4.66	181	eSg	Sg	13 32 43.2	-6.6
	30nm,0.8s						
LDF	**La Druitiere**	4.67	263	ePn	Pn	13 31 28.4	+0.3
LDF				ePg	Pg	13 31 44.4	-3.5
LDF				eSn	Sn	13 32 19.0	-4.9
LDF				eSg	Sg	13 32 45.1	-5.1
	32nm,0.4s						
LDF	**La Druitiere**	4.67	263	eP	Pn	13 31 28.4	+0.3
LDF				e		13 32 19.0	
VIVF	**Saint-Julien-l**	4.77	199	ePg	Pg	13 31 45.6	-4.3
VIVF				eSn	Sn	13 32 21.1	-5.3
VIVF				eSg	Sg	13 32 47.1	-6.4
	21nm,0.6s						
BRG	**Berggiesshubel**	4.79	69	i Pg	Pg	13 31 44.7	-5.6
BRG				i Sg	Sg	13 32 46.4	-7.8
FLN	**La Foliniere**	4.87	265	ePn	Pn	13 31 30.6	-0.4
	baz=85						
FLN				eSn	Sn	13 32 24.6	-4.3
FLN				eSg	Sg	13 32 51.6	-5.3
	34nm,0.4s						
KBA	**Koelnbreinsper**	4.90	116	⇑iPN	Pn	13 31 32.9	+1.5
KBA				i SN	Sn	13 32 29.5	-0.3
KBA				i SG	Sg	13 32 57.4	-0.6
	7.4nm,0.6s						
PRU	**Pruhonice**	5.02	80	ePN	Pn	13 31 34.3	+1.2
PRU				ePG	Pg	13 31 52.0	-2.9
MOA	**Molln**	5.14	105	⇑iPN	Pn	13 31 35.2	+0.4
MOA				i SN	Sn	13 32 33.4	-2.4
MOA				i SG	Sg	13 33 03.7	-2.2
	6.5nm,0.5s						
MOA	**Molln**	5.14	105	⇑iPn	Pn	13 31 35.2	+0.4
	6.5nm,0.5s						
MOA				i Sn	Sn	13 32 33.4	-2.4
MOA				i Sg	Sg	13 33 03.7	-2.2
GRR	**Gorron**	5.19	262	ePn	Pn	13 31 34.9	-0.6
GRR				ePg	Pg	13 31 54.1	-4.3
GRR				eSn	Sn	13 32 32.1	-5.0
	16nm,0.2s						
GRR	**Gorron**	5.19	262	eP	Pn	13 31 34.9	-0.6
GRR				e		13 32 32.1	
RJF	**Les Rejaudoux**	5.46	224	ePn	Pn	13 31 37.9	-1.4
RJF				eSg	Sg	13 33 09.2	-7.4
	54nm,0.8s						
MFF	**Saint Martin d**	5.47	242	ePn	Pn	13 31 38.4	-1.0
MFF				eSg	Sg	13 33 08.8	-7.9
	58nm,0.9s						
CAF	**Calviac**	5.53	218	eSg	Sg	13 33 11.1	-7.7
	34nm,0.8s						
CAF	**Calviac**	5.53	218	ePn	Pn	13 31 38.4	-1.9
CAF				eSg	Sg	13 33 11.1	-7.7
LASF	**Ste Croix**	5.70	202	eSg	Sg	13 33 16.6	-7.7
	36nm,0.8s						
UPC	**Upice**	6.01	76	eSG	Sg	13 33 25.5	-9.3
LFF	**La Frestale**	6.10	226	eSg	Sg	13 33 29.0	-8.7
	28nm,0.5s						
ARSA	**Arzberg**	6.16	107	⇑iPN	Pn	13 31 49.6	+0.5
ARSA				i SN	Sn	13 32 58.4	-2.8
ARSA				i SG	Sg	13 33 36.2	-3.4
	4.6nm,0.7s						
ARSA	**Arzberg**	6.16	107	⇑iPn	Pn	13 31 49.6	+0.5
	4.6nm,0.7s						
ARSA				i Sn	Sn	13 32 58.4	-2.8
ARSA				i Sg	Sg	13 33 36.2	-3.4
PERS	**Pernice**	6.18	113	ePn	Pn	13 31 50.2	+0.8
DPC	**Dobruska-Polom**	6.19	77	eSG	Sg	13 33 32.6	-8.2
KSP	**Ksiaz**	6.24	73	ePg	Pg	13 32 14.3	-4.9
KSP				eSg	Sg	13 33 33.9	-8.5
SGMF	**Saint Gilles**	6.33	263	ePn	Pn	13 31 49.6	-1.9
SGMF				eSg	Sg	13 33 36.5	-8.8
	59nm,0.7s						
ROSF	**Rostrenen**	6.77	265	ePn	Pn	13 31 55.8	-2.0
QUIF	**Quistinic**	6.81	261	ePn	Pn	13 31 57.1	-1.2
MTLF	**Montolieu**	6.84	210	eSg	Sg	13 33 52.2	-10
	30nm,0.8s						
MORC	**Moravsky Berou**	6.95	83	eP	Pn	13 31 58.1	-2.3
MORC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MORC	**Moravsky Berou**	6.95	83	ePn	Pn	13 31 58.1	-2.2
	comp=Z,3.7nm,0.7s						
VYHS	**Vyhne**	7.93	92	ePg	Pn	13 32 12.5	-1.6
PSZ	**Piszkesteto**	8.75	95	eP	P	13 32 23.6	-1.8
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PSZ	**Piszkesteto**	8.75	95	ePn	P	13 32 23.6	-1.8
	comp=Z,3.5nm,0.6s						

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*IDC **25** 13:31:10.9±0.4, 7.83N×94.22E, mb5.0/27, mb1 5.1/28, mb1mx5.1/29, mbtmp5.0/28, ML5.4/1, MS4.8/2, Ms1 4.8/2, ms1mx4.1/6, Error ellipse: s-maj=17.3km s-min=12.1km az=53.0*

*BJI **25** 13:31:13.7, 7.43N×94.07E, h43^{km}, mB5.6, mb5.2, Ms5.7, Msz5.4*

*NEIC **25** 13:31:14.9±0.1, 7.83N×94.10E, mb5.3/91, MS5.1/9, MW5.5, Error ellipse: s-maj=5.5km s-min=3.5km az=219.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.20; $M_{\theta\theta}$-1.93; $M_{\phi\phi}$2.13; $M_{r\theta}$-0.42; $M_{\theta\phi}$1.16; $M_{\phi r}$-0.22; Best double couple: $M_0$2.4×10^{17} NP1:ϕ_s150°, δ78°, λ-178°. NP2:ϕ_s60°, δ88°, λ-12°. Principal axes: T 2.48, Plg7°, Azm105°; N -.18, Plg78°, Azm231°; P -2.3, Plg9°, Azm14°;*

*HRVD **25** 13:31:14.9±0.2, 7.71N×94.23E, h15^{km}, MW5.6/74, Centroid moment Tensor Solution. LP body waves: s66,c119;Mantle waves: s74,c160; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.75±.04; $M_{\theta\theta}$-1.79±.04; $M_{\phi\phi}$2.54±.05; $M_{r\theta}$-1.16±.14; $M_{\theta\phi}$1.38±.04; $M_{\phi r}$-0.55±.15; Best double couple: $M_0$2.918×10^{17} NP1: ϕ_s153°, δ61°, λ-169°. NP2:ϕ_s58°, δ80°, λ-30°. Principal axes: T 3.136, Plg13°, Azm109°; N -.439, Plg59°, Azm221°; P -2.7, Plg28°, Azm12°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **25** 13:31:15.0±0.9, 7.88N×94.02E, h33^{km}, mb5.7/28, MS5.1/24 Error ellipse: s-maj=15.3km s-min=6.4km az=113.3*

*CSEM **25** 13:31:19.3, 8.51N×93.88E, h33^{km}, mb5.6*

ISC 25 13:31:13.4±0.2**, 7.78N**±0.03×**94.07E**±0.03**, h23**^{km}**, h23**^{km}±.6^{km}**:pP-P, n408,** σ**1**^{s}**04**/372**, mb5.2**/135**, MS5.3**/45**, 12C-27D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	6.99	110	ePn	Pn	13 32 53.0	-4.0
KULM				eS	Sn	13 34 07.9	-8.7
CMAR	**Chiang Mai Arr**	11.63	24	Pn	P	13 34 02.9	+1.6
	8.0nm,0.3s,baz=212,slow=14,SNR=34						
MDRS	**Chennai**	14.57	292	⇑eP	P	13 34 39.0	-1.4
MDRS				e		13 37 49.0	
MDRS				e		13 45 45.0	
BWNR	**Bhubaneshwar**	14.80	328	e	P	13 34 36.0	-7.3
CAL	**Calcutta**	15.68	340	eP	P	13 34 50.3	-4.5
CAL				e		13 38 04.9	
AGT	**Agartala**	16.24	351	i P	P	13 35 03.0	+1.1
TRD	**Trivandrum**	16.95	274	eP	P	13 35 13.1	+2.1
TRD				e		13 35 16.9	
	comp=Z,114nm,1.7s						
BOK	**Bokaro**	17.76	335	i P	P	13 35 22.4	+1.5
HYB	**Hyderabad**	17.91	304	eP	P	13 35 23.0	+0.2
	comp=Z,150nm,1.0s						
HYB				eS	S	13 38 42.0	+2.9
HYB	**Hyderabad**	17.91	304	i P	P	13 35 23.0	+0.2
	comp=Z,150nm,1.0s						
HYB				eS	S	13 38 42.0	+2.9
HYB				LR	LR	13 40 48.0	
	comp=Z,7.7nm,24.0s						
BLSP	**Bilaspur**	18.33	322	eP	P	13 35 27.0	-1.1
QIZ	**Qiongzhong**	18.97	52	P	P	13 35 36.0	+0.2
QIZ				S	S	13 39 02.0	-1.1
QIZ				SS	SS	13 39 26.5	-2.2
QIZ				AMB	AMB		
	comp=Z,1µm,6.8s						
QIZ				LR	LR		
	comp=N,34µm,12.2s						
QIZ				LR	LR		
	comp=E,14µm,13.9s						
QIZ	**Qiongzhong**	18.97	52	eP	P	13 35 35.2	-0.7
	comp=E,548nm,1.8s						
KMI	**Kunming**	19.14	25	⇓P	P	13 35 40.5	+2.7
KMI				AP		13 35 51.0	
KMI				XP		13 35 57.0	
KMI				S	S	13 39 16.0	+9.0
KMI				AMB	AMB		
	comp=Z,192nm,1.1s						
KMI				AMB	AMB		
	comp=Z,2µm,5.7s						
KMI				LR	LR		
	comp=N,5µm,14.0s						
KMI				LR	LR		
	comp=E,9µm,8.3s						
KMI				LR	LR		
	comp=Z,8µm,14.3s						
KMI	**Kunming**	19.14	25	⇓P	P	13 35 40.4	+2.6
	comp=Z,192nm,1.1s						
KMI				pP		13 35 51.0	
KMI				sP		13 35 57.0	
KMI				S	S	13 39 16.1	+9.1
KMI				sS		13 39 33.3	
KMI				SS	SS	13 39 49.2	+16
MNGI	**Mangalore**	19.61	287	i P	P	13 35 43.1	-0.2
	comp=Z,80nm,0.9s						
MNGI				i		13 39 29.3	
COCO	**West Island**	20.02	172	P	P	13 35 48.6	+0.9
	comp=Z,483nm,1.0s						
ALBI	**Allahabad**	21.00	328	e	P	13 35 49.5	-8.3
ALBI				e		13 36 56.0	
KAD	**Karad**	21.58	298	eP	P	13 36 05.3	+1.6
KKM	**Kota Kinabalu**	22.05	93	eP	P	13 36 07.3	-1.1
GYA	**Guiyang**	22.11	31	⇓iP	P	13 36 10.5	+1.6
GYA				AP		13 36 16.3	
GYA				S	S	13 40 13.8	+7.5
GYA				AMB	AMB		
	comp=Z,80nm,1.5s,mb4.9						
GYA				AMB	AMB		
	comp=Z,1µm,5.7s						
GYA				LR	LR		
	comp=N,5µm,10.2s						
GYA				LR	LR		
	comp=E,4µm,9.0s						
GYA				LR	LR		
	comp=Z,6µm,9.6s						
GZH	**Guangzhou**	23.97	48	P	P	13 36 30.8	+3.5
GZH				LR	LR		
	comp=N,19µm,13.7s,MS5.8						
GZH				LR	LR		
	comp=E,14µm,14.6s,MS5.8						
GZH				LR	LR		
	comp=Z,15µm,14.3s,MS5.6						
HKC	**Hong Kong**	24.15	51	⇑iP	P	13 36 34.0	+5.0
HKC				S	S	13 40 52.0	+9.4
CD2	**Chengdu**	24.74	20	P	P	13 36 35.0	+0.4
CD2				S	S	13 41 03.0	+11
CD2				AMB	AMB		
	comp=Z,180nm,0.8s,mb5.7						
CD2				LR	LR		
	comp=N,15µm,12.0s						
CD2				LR	LR		
	comp=Z,15µm,11.4s,MS5.7						
LGTI	**Lohaghat**	25.18	331	eP	P	13 36 41.0	+2.2
AJM	**Ajmer**	26.21	318	i P	P	13 36 50.0	+1.5
BHJ	**Bhuj**	28.04	306	e	P	13 37 09.7	+4.5
QZH	**Quanzhou**	28.98	51	P	P	13 37 13.5	-0.2
QZH				S	S	13 42 07.5	+5.6

QZH				LR	LR		
	comp=N,18µm,13.4s,MS6.0						
QZH				LR	LR		
	comp=E,12µm,13.2s,MS6.0						
QZH				LR	LR		
	comp=Z,18µm,15.2s,MS5.8						
WHN	**Wuhan**	**29.56**	**37**	*e*P	**P**	**13 37 18.5**	**-0.3**
WHN				S	**S**	**13 42 14.0**	**+3.0**
WHN				AMB	AMB		
	comp=Z,204nm,1.6s,mb5.6						
WHN				LR	LR		
	comp=Z,16µm,11.5s,MS5.9						
LZH	**Lanzhou**	**29.56**	**16**	⇑P	**P**	**13 37 19.3**	**+0.5**
LZH				AP	pP	13 37 31.3	+5.6
LZH				XP	sP	13 37 36.5	+7.8
LZH				PP	PP	13 38 17.0	+1.9
LZH				S	**S**	**13 42 13.3**	**+2.2**
LZH				XS		13 42 30.3	
LZH				SS	SS	13 43 54.3	+9.4
LZH				AMB	AMB		
	comp=Z,140nm,1.2s,mb5.6						
LZH				AMB	AMB		
	comp=Z,820nm,4.4s						
LZH				LR	LR		
	comp=E,9µm,12.0s						
LZH				LR	LR		
	comp=Z,10µm,17.6s						
LZH	**Lanzhou**	**29.56**	**16**	⇑P	**P**	**13 37 19.2**	**+0.4**
	comp=Z,140nm,1.2s,mb5.6						
LZH				pP	pP	13 37 31.3	+5.6
LZH				sP	sP	13 37 36.5	+7.8
LZH				PP	PP	13 38 17.0	+1.9
LZH				S	**S**	**13 42 13.2**	**+2.1**
LZH				sS		13 42 30.3	
LZH				SS	SS	13 43 54.3	+9.4
LZH				LR	LR		
	comp=Z,10µm,17.6s,MS5.5						
THN	**Thein Dam**	**29.88**	**328**	*e*P	**P**	**13 37 21.6**	**-0.1**
DAV	**Davao City (W)**	**31.25**	**89**	*e*P	**P**	**13 37 41.0**	**+7.1**
GTA	**Gaotai**	**31.92**	**8**	⇓P	**P**	**13 37 39.5**	**-0.1**
GTA				PP	PP	13 38 46.0	+0.3
GTA				PCP	PcP	13 40 28.5	-1.3
GTA				S	**S**	**13 42 50.5**	**+2.4**
GTA				SCP		13 44 11.0	
GTA				SS	SS	13 44 44.5	+4.1
GTA				SCS	ScS	13 48 08.3	+0.8
GTA				AMB	AMB		
	comp=Z,45nm,1.3s,mb5.1						
GTA				AMB	AMB		
	comp=Z,342nm,5.7s						
GTA				LR	LR		
	comp=N,2µm,17.5s,MS5.2						
GTA				LR	LR		
	comp=E,3µm,13.3s,MS5.2						
GTA				LR	LR		
	comp=Z,2µm,17.9s,MS4.8						
NJ2	**Nanjing**	**33.39**	**40**	*e*P	**P**	**13 37 53.0**	**+0.5**
NJ2				AP	pP	13 37 59.5	+0.2
NJ2				PP	PP	13 39 05.3	+0.8
NJ2				S	**S**	**13 43 14.0**	**+2.9**
NJ2				AMB	AMB		
	comp=Z,140nm,1.1s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,930nm,5.1s						
NJ2				LR	LR		
	comp=N,13µm,14.9s,MS6.0						
NJ2				LR	LR		
	comp=E,14µm,13.2s,MS6.0						
NJ2				LR	LR		
	comp=Z,11µm,16.0s,MS5.7						
SSE	**Sheshan**	**34.34**	**44**	*e*P	**P**	**13 37 55.9**	**-4.8**
SSE				S	**S**	**13 43 23.5**	**-2.3**
SSE				AMB	AMB		
	comp=Z,34nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,95nm,3.2s						
SSE				LR	LR		
	comp=N,8µm,16.2s,MS5.6						
SSE				LR	LR		
	comp=E,5µm,16.3s,MS5.6						
SSE				LR	LR		
	comp=Z,7µm,14.5s,MS5.5						
SSE	**Sheshan**	**34.34**	**44**	*e*P	**P**	**13 37 55.7**	**-5.0**
	comp=Z,34nm,0.7s,mb5.4						
SSE				pP	pP	13 38 05.5	-2.1
SSE				S	**S**	**13 43 23.5**	**-2.3**
SSE				sS		13 43 38.3	
SSE				SS	SS	13 46 01.7	+25
SSE				LR	LR		
	comp=Z,7µm,14.5s,MS5.5						
TIA	**Tai'an**	**35.27**	**33**	*e*P	**P**	**13 38 05.3**	**-3.3**
TIA				*e*S	**S**	**13 43 43.5**	**+3.3**
TIA				LR	LR		
	comp=N,5µm,14.0s,MS5.7						
TIA				LR	LR		
	comp=E,7µm,14.0s,MS5.7						
KSH	**Kashi**	**35.53**	**336**	*e*P	**P**	**13 38 12.0**	**+1.2**
KSH				*e*AP	pP	13 38 18.5	+0.8
KSH				*e*PP	PP	13 39 32.3	+1.2
KSH				*e*PPP	PPP	13 39 51.8	+1.6
KSH				*e*PCP	PcP	13 40 40.3	+0.4
KSH				*e*S	**S**	**13 43 46.0**	**+1.8**
KSH				*e*PS		13 44 05.0	
KSH				*e*SCP		13 44 23.5	
KSH				*e*PCS		13 44 27.3	
KSH				*e*SS	SS	13 46 06.0	+2.4
KSH				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.4						
KSH				LR	LR		
	comp=N,2µm,14.8s,MS5.2						
KSH				LR	LR		
	comp=E,3µm,15.4s,MS5.2						
WMQ	**Urumqi**	**36.34**	**352**	P	**P**	**13 38 18.5**	**+1.0**
WMQ				PP	PP	13 39 41.0	0.0
WMQ				S	**S**	**13 43 57.0**	**+0.5**
WMQ				SS	SS	13 46 21.0	-0.6
WMQ				AMB	AMB		
	comp=Z,82nm,1.0s,mb5.6						
WMQ				LR	LR		
	comp=N,2µm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=E,5µm,20.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
HHC	**Hu-ho-hao-te**	**36.44**	**23**	*e*P	**P**	**13 38 19.0**	**+0.6**
HHC				AP	pP	13 38 28.0	+2.7
HHC				XP	sP	13 38 31.8	+3.5
HHC				PP	PP	13 39 44.3	+1.9
HHC				S	**S**	**13 44 00.5**	**+2.4**
HHC				XS		13 44 17.0	
HHC				SS	SS	13 46 32.0	+8.1
HHC				SCS	ScS	13 48 27.5	-3.9
HHC				AMB	AMB		
	comp=Z,68nm,1.8s,mb5.3						
HHC				AMB	AMB		
	comp=Z,546nm,5.9s						
HHC				LR	LR		
	comp=N,4µm,15.0s,MS5.5						
HHC				LR	LR		
	comp=E,5µm,14.4s,MS5.5						
HHC				LR	LR		
	comp=Z,4µm,23.4s						
BJT	**Baijiatuau**	**37.71**	**28**	*e*P	**P**	**13 38 29.6**	**+0.5**
	comp=Z,69nm,1.3s,mb5.2						
BJI	**Beijing**	**37.73**	**28**	*e*P	**P**	**13 38 30.3**	**+1.1**
BJI				PP	PP	13 39 57.0	-1.4
BJI				S	**S**	**13 44 17.0**	**-0.8**
BJI				AMB	AMB		
	comp=Z,41nm,2.0s,mb4.8						
BJI				AMB	AMB		
	comp=Z,868nm,3.8s						
BJI				LR	LR		
	comp=N,2µm,16.9s,MS5.4						
BJI				LR	LR		
	comp=E,5µm,19.3s,MS5.4						
BJI				LR	LR		
	comp=Z,4µm,18.9s,MS5.2						
BJI	**Beijing**	**37.73**	**28**	*e*P	**P**	**13 38 30.3**	**+1.1**
	comp=Z,41nm,2.0s,mb4.8						
BJI				PP	PP	13 39 56.9	-1.5
BJI				S	**S**	**13 44 17.0**	**-0.8**
BJI				SS	SS	13 47 07.5	+14
BJI				LR	LR		
	comp=Z,4µm,18.9s,MS5.2						
MBWA	**Marble Bar**	**38.24**	**139**	*e*P	**P**	**13 38 35.2**	**+1.5**
	comp=Z,21nm,0.9s,mb4.9						
AAK	**Ala-Archa**	**38.77**	**337**	*d* *i*P	**P**	**13 38 37.3**	**-0.6**
AAK				pmax	pmax		
	comp=Z,94nm,1.7s,mb5.2						
AAK	**Ala-Archa**	**38.77**	**337**	*e*P	**P**	**13 38 37.0**	**-1.0**
	comp=Z,50nm,0.9s,mb5.2						
AAK				*e*pP	pP	13 38 44.7	-0.2
AAK				*e*PP	PP	13 40 06.5	-4.1
FRU	**Bishkek**	**38.89**	**337**	*e*P	**P**	**13 38 39.0**	**+0.1**
FRU				*e*		13 40 11.0	
DL2	**Dalian**	**39.69**	**34**	P	**P**	**13 38 47.0**	**+1.3**
DL2				S	**S**	**13 44 51.0**	**+3.5**
DL2				AMB	AMB		
	comp=Z,40nm,1.5s,mb4.9						
DL2				AMB	AMB		
	comp=Z,290nm,4.4s						
DL2				LR	LR		
	comp=N,870nm,13.2s,MS5.2						
DL2				LR	LR		
	comp=E,2µm,15.0s,MS5.2						
DL2				LR	LR		
	comp=Z,2µm,13.5s,MS5.1						
MKAR	**Makanchi Array**	**40.17**	**347**	*i* P	**P**	**13 38 49.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,40nm,0.6s						
MKAR	**Makanchi Array**	**40.17**	**347**	*i* P	**P**	**13 38 49.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**40.40**	**130**	*e*P	**P**	**13 38 53.8**	**+2.1**
	comp=Z,46nm,0.7s,mb5.3						
SONM	**Songino Array**	**41.27**	**13**	P	**P**	**13 38 58.1**	**-0.4**
	comp=Z,31nm,1.0s,mb4.9,baz=199,slow=8.8,SNR=18						
SONM				PcP	PcP	13 40 57.1	-0.6
	comp=Z,3.1nm,0.6s,baz=213,slow=3.4,SNR=3.8						
SNY	**Shenyang**	**42.79**	**33**	⇓P	**P**	**13 39 10.8**	**-0.3**
SNY				AP	pP	13 39 18.3	+0.2
SNY				SCS	ScS	13 49 02.8	-5.7
SNY				AMB	AMB		
	comp=Z,50nm,1.9s,mb4.9						
SNY				LR	LR		
	comp=N,3µm,14.2s,MS5.5						
SNY				LR	LR		
	comp=E,3µm,14.7s,MS5.5						
SNY				LR	LR		
	comp=Z,4µm,14.0s,MS5.4						
MOY	**Mondy**	**44.13**	**6**	*e*P	**P**	**13 39 22.4**	**+0.6**
MOY				pmax	pmax		
	comp=Z,32nm,2.5s,mb4.6						
TLY	**Talaya**	**44.48**	**9**	P	**P**	**13 39 25.1**	**+0.5**
	comp=Z,108nm,1.0s,mb5.5,SNR=7.7						
TLY	**Talaya**	**44.48**	**9**	*e*P	**P**	**13 39 25.1**	**+0.5**
TLY				*e*PPP	PPP	13 41 52.6	+3.8
TLY				*e*S	**S**	**13 45 57.1**	**-0.7**
TLY				*e*SS	SS	13 49 06.9	-2.1
TLY				*e*SSS	SSS	13 49 59.3	-6.3
TLY				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.9						
TLY				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.0						
KURK	**Kurchatov**	**44.69**	**346**	*d* *i*P	**P**	**13 39 25.9**	**-0.5**
KURK				pmax	pmax		
	comp=Z,97nm,1.1s,mb5.5						
KURK	**Kurchatov**	**44.69**	**346**	*e*P	**P**	**13 39 25.7**	**-0.7**
	comp=Z,273nm,1.2s,mb6.0						
KURK				*e*pP	pP	13 39 32.7	-0.7
MUN	**Mundaring**	**44.83**	**153**	*e*P	**P**	**13 39 27.0**	**-0.8**
	comp=Z,49nm,0.9s,mb5.3						
IRK	**Irkutsk**	**45.12**	**9**	*e*P	**P**	**13 39 30.0**	**+0.2**
IRK				*e*		13 41 11.7	
IRK				pmax	pmax		
	comp=Z,52nm,2.4s,mb4.9						
CN2	**Changchun**	**45.15**	**32**	⇑P	**P**	**13 39 31.0**	**+0.9**
CN2				*e*AP	pP	13 39 38.0	+0.9
CN2				*e*S	**S**	**13 46 08.0**	**+0.4**
CN2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.0						
CN2				AMB	AMB		
	comp=Z,800nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,15.0s,MS5.5						
CN2				LR	LR		
	comp=E,3µm,15.0s,MS5.5						
CN2				LR	LR		
	comp=Z,3µm,17.0s,MS5.3						
KLBR	**Kellerberrin**	**45.22**	**151**	*e*P	**P**	**13 39 31.0**	**+0.1**
	comp=Z,557nm,0.8s						
NWAO	**Narrogin (SRO)**	**46.09**	**153**	P	**P**	**13 39 36.1**	**-1.6**
	comp=Z,54nm,1.0s,mb5.4,baz=322,slow=5.1,SNR=8.8						
NWAO	**Narrogin (SRO)**	**46.09**	**153**	*e*P	**P**	**13 39 36.4**	**-1.4**
	comp=Z,95nm,1.0s,mb5.7						
ZAL	**Zalesovo**	**46.64**	**352**	P	**P**	**13 39 41.5**	**-0.2**
	comp=Z,43nm,0.4s,mb5.7,baz=303,slow=5.1,SNR=17						
ZAL				LR	LR	14 02 23.1	
	comp=Z,1µm,21.1s,MS4.8,baz=290,slow=40						
NVS	**Novosibirsk**	**47.73**	**352**	*e*P	**P**	**13 39 49.0**	**-1.4**
NVS				*e*S	**S**	**13 46 38.3**	**-5.9**
NVS				pmax	pmax		
	comp=N,70nm,1.2s						
NVS				pmax	pmax		
	comp=E,54nm,1.2s						
NVS				pmax	pmax		
	comp=Z,140nm,1.2s,mb5.9						
NVS				smax			
	comp=N,37nm,2.2s						
NVS				smax			
	comp=E,156nm,2.3s						
MDJ	**Mudanjiang**	**47.93**	**34**	P	**P**	**13 39 51.0**	**-1.1**
MDJ				PCP	PcP	13 41 19.0	-1.6
MDJ				PP	PP	13 41 41.0	-2.4
MDJ				SCP		13 45 12.0	
MDJ				PCS		13 45 14.5	
MDJ				S	**S**	**13 46 48.3**	**+1.2**
MDJ				AMB	AMB		
	comp=Z,34nm,1.7s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,216nm,5.2s						
MDJ				LR	LR		
	comp=N,3µm,18.4s,MS5.4						
MDJ				LR	LR		
	comp=E,1µm,17.7s,MS5.4						
MDJ				LR	LR		
	comp=Z,2µm,17.4s,MS5.2						
MDJ	**Mudanjiang**	**47.93**	**34**	*e*P	**P**	**13 39 52.5**	**+0.4**
	comp=Z,104nm,1.7s,mb5.6						
WRA	**Warramunga Arr**	**48.26**	**125**	P	**P**	**13 39 51.9**	**-3.1**
	comp=Z,5.2nm,0.7s,mb4.7,baz=306,slow=8.5,SNR=2.9						
WRA				PcP	PcP	13 41 19.9	-2.2
	comp=Z,3.8nm,0.9s,baz=315,slow=2.5,SNR=3.0						
WRAB	**Tennant Creek**	**48.27**	**125**	*d* *i*P	**P**	**13 39 55.6**	**+0.6**
WRAB	**Tennant Creek**	**48.27**	**125**	P	**P**	**13 39 56.1**	**+1.1**
	comp=Z,72nm,0.8s,mb5.8						
WB2	**Warramunga Arr**	**48.27**	**125**	*e*P	**P**	**13 39 56.5**	**+1.5**
VLA	**Vladivostok**	**48.34**	**37**	*e*P	**P**	**13 40 07.0**	**+12**
VLA				*e*S	**S**	**13 47 03.0**	**+10**
VLA				pmax	pmax		
	comp=Z,550nm,7.0s						
VLA				pmax	pmax		
	comp=Z,550nm,7.0s						
VLA				smax			
	comp=E,600nm,11.0s						
VLA				MLR	MLR		
	comp=Z,6µm,13.0s,MS5.7						
VLA				MLR	MLR		
	comp=N,2µm,14.0s,MS5.7						
VLA				MLR	MLR		
	comp=E,5µm,13.0s,MS5.7						
BVA0	**Borovoye Array**	**49.06**	**341**	*i* P	**P**	**13 40 00.0**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.8						
BVAR	**Borovoye Array**	**49.06**	**341**	P	**P**	**13 39 59.5**	**-1.2**
	comp=Z,23nm,1.0s,mb5.2,baz=143,slow=7.4,SNR=12						
BVAR				PcP	PcP	13 41 22.5	-2.1
	comp=Z,10nm,0.8s,baz=108,slow=4.6,SNR=2.9						
RAYN	**Ar Rayn**	**49.06**	**294**	P	**P**	**13 40 03.9**	**+2.8**
	comp=Z,456nm,0.7s,SNR=12						
MAT	**Matsushiro**	**49.28**	**48**	*e*P	**P**	**13 40 02.0**	**-0.6**
	comp=Z,16nm,0.8s,mb5.1						
MAT				*e*S	**S**	**13 47 07.0**	**+0.8**
MAT	**Matsushiro**	**49.28**	**48**	P	**P**	**13 40 02.4**	**-0.2**
MAT				S	**S**	**13 47 06.6**	**+0.4**
CHKZ	**Chkalovo**	**49.54**	**342**	*i* P	**P**	**13 40 03.9**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,120nm,1.3s,mb5.8						
CHKZ	**Chkalovo**	**49.54**	**342**	*e*P	**P**	**13 40 03.0**	**-1.4**
	comp=Z,94nm,0.9s,mb5.8						
CHKZ				*e*pP	pP	13 40 10.0	-1.5
ASAR	**Alice Springs**	**49.91**	**130**	P	**P**	**13 40 06.7**	**-0.9**
	comp=Z,9.6nm,0.6s,mb5.0,baz=309,slow=7.4,SNR=4.0						
ASAR				PcP	PcP	13 41 29.6	+1.6
	comp=Z,14nm,0.8s,baz=306,slow=4.0,SNR=8.0						
ASAR	**Alice Springs**	**49.91**	**130**	P	**P**	**13 40 06.7**	**-0.9**
ASAR				PcP	PcP	13 41 29.6	+1.6
KLR	**Kul'dur**	**52.01**	**31**	*e*P	**P**	**13 40 20.0**	**-3.2**
KLR				*e*		13 41 40.0	
KLR				*e*S	**S**	**13 47 40.5**	**-3.2**
BOD	**Bodaibo**	**52.26**	**13**	⇓*i*P	**P**	**13 40 24.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.4						
GNI	**Garni**	**54.45**	**314**	*d* *i*P	**P**	**13 40 41.0**	**-0.4**
GNI				pmax	pmax		
	comp=Z,79nm,1.7s						
GNI	**Garni**	**54.45**	**314**	P	**P**	**13 40 41.4**	**0.0**
	comp=Z,8.6nm,0.6s,mb4.9,baz=318,slow=6.9,SNR=8.2						
GNI	**Garni**	**54.45**	**314**	*e*P	**P**	**13 40 40.9**	**-0.5**
	comp=Z,128nm,1.4s,mb5.7						
CLNS	**Chul'man**	**54.55**	**20**	⇓*i*P	**P**	**13 40 42.0**	**+0.1**
CLNS				*e**PP	pP	13 40 48.4	-0.6
CLNS				*e*		13 41 49.1	
CLNS				*e*PPP	PPP	13 43 59.5	+2.4
CLNS				*e*		13 50 18.0	
CLNS				pmax	pmax		
	comp=Z,107nm,1.4s,mb5.7						
CLNS				pmax	pmax		
	comp=N,48nm,1.0s						
CLNS				pmax	pmax		
	comp=E,41nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
TI2	**Plekhanov**	**55.07**	**316**	*i* P	**P**	**13 40 46.4**	**+0.5**
SVE	**Sverdlovsk**	**55.47**	**338**	⇓*i*P	**P**	**13 40 47.0**	**-1.6**
SVE				*e*PS	PS	13 48 44.0	-0.8
SVE				pmax	pmax		
	comp=Z,380nm,1.5s,mb6.2						
SVE				MLR	MLR		
	comp=N,2µm,19.0s,MS5.3						
SVE				MLR	MLR		
	comp=E,2µm,19.0s,MS5.3						
SVE				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.5						
ASAJ	**Asahikawa**	**55.54**	**41**	P	**P**	**13 40 48.0**	**-1.2**
	comp=Z,10nm,1.0s,mb4.8,baz=245,slow=23,SNR=3.9						
PMG	**Port Moresby**	**55.57**	**107**	P	**P**	**13 40 48.2**	**-1.7**
	comp=Z,15nm,0.8s,mb5.1,baz=318,slow=8.2,SNR=4.4						
PMG	**Port Moresby**	**55.57**	**107**	*e*P	**P**	**13 40 48.5**	**-1.4**
	comp=Z,57nm,0.8s,mb5.7						
ERZM	**Erzurum**	**56.79**	**313**	*i* P	**P**	**13 41 01.3**	**+3.0**
YSS	**Yuzh-Sakhalins**	**56.90**	**38**	*e*P	**P**	**13 41 03.0**	**+3.9**
YSS				*e**SP	sP	13 41 12.0	+3.1
YSS				*e*		13 43 14.0	
YSS				*e*S	**S**	**13 48 56.0**	**+6.5**
YSS				*e*SS	SS	13 52 32.0	-7.2
YSS				MLR	MLR		
	comp=N,2µm,15.0s,MS5.5						
YSS				MLR	MLR		
	comp=E,1µm,15.0s,MS5.5						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**56.90**	**38**	*e*P	**P**	**13 40 57.8**	**-1.2**
KMBO	**Kilima Mbogo**	**57.34**	**264**	P	**P**	**13 41 04.1**	**+1.6**
	comp=Z,11nm,0.7s,mb5.0,baz=54,slow=9.7,SNR=10						
KMBO	**Kilima Mbogo**	**57.34**	**264**	*e*P	**P**	**13 41 04.2**	**+1.6**
	comp=Z,36nm,1.1s,mb5.3						
KMBO				*e*pP	pP	13 41 11.2	+1.5
KIV	**Kislovodsk**	**57.34**	**318**	*d* *i*P	**P**	**13 41 01.2**	**-1.0**
KIV				pmax	pmax		
	comp=Z,52nm,1.0s,mb5.5						
KIV				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
KIV	**Kislovodsk**	**57.34**	**318**	*e*P	**P**	**13 41 00.4**	**-1.8**
	comp=Z,32nm,0.6s,mb5.5						
GOF	**Gofitskoye**	**57.56**	**319**	⇑*i*P	**P**	**13 41 02.5**	**-1.2**
GOF				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.4						
ELZG	**Elazig**	**58.10**	**311**	*i* P	**P**	**13 41 06.1**	**-1.5**
ASF	**Jabal al Asfar**	**58.21**	**303**	P	**P**	**13 41 08.3**	**-0.1**
	comp=Z,9.4nm,0.9s,mb4.8,baz=2.3,slow=3.1,SNR=6.6						
MALT	**Malatya**	**58.47**	**310**	*e*P	**P**	**13 41 09.2**	**-1.0**
	comp=Z,17nm,0.9s,mb5.1						
MALT				*e*pP	pP	13 41 16.2	-1.2
GZT	**Gaziantep**	**58.87**	**309**	*i* P	**P**	**13 41 11.9**	**-1.1**
SOC	**Sochi**	**59.20**	**317**	*e*P	**P**	**13 41 12.1**	**-3.1**
SOC				*e*		13 41 58.4	
SOC				*e*		13 43 22.0	
SOC				*e*S	**S**	**13 49 19.5**	**-0.3**
SOC				*e*		13 50 57.5	
SOC				*e*SS	SS	13 53 14.5	-1.4
SOC				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.5						
SOC				pmax	pmax		
	comp=N,20nm,0.9s						
SOC				pmax	pmax		
	comp=E,15nm,0.7s						
SOC				MLR	MLR		
	comp=Z,678nm,17.0s,MS4.8						
SOC				MLR	MLR		
	comp=N,1µm,20.0s,MS5.1						
SOC				MLR	MLR		
	comp=E,810nm,20.0s,MS5.1						
EIL	**Elat**	**59.41**	**300**	P	**P**	**13 41 16.8**	**0.0**
	comp=E,19nm,1.0s,mb5.1,baz=22,slow=5.6,SNR=6.5						
EIL	**Elat**	**59.41**	**300**	*e*P	**P**	**13 41 16.2**	**-0.6**
	comp=E,38nm,1.1s,mb5.3						
EIL				*e*pP	pP	13 41 23.5	-0.6
COBT	**Iskenderun**	**59.68**	**308**	*i* P	**P**	**13 41 18.2**	**-0.4**
STKA	**Stephens Creek**	**60.09**	**134**	*e*P	**P**	**13 41 18.9**	**-2.5**
	comp=E,9.7nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**60.09**	**134**	P	**P**	**13 41 18.2**	**-3.3**
	comp=E,2.5nm,0.5s,mb4.5,baz=242,slow=3.6,SNR=2.5						
YAK	**Yakutsk**	**60.11**	**18**	*d* *i*P	**P**	**13 41 19.3**	**-1.9**
YAK				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.8						
YAK	**Yakutsk**	**60.11**	**18**	*e*P	**P**	**13 41 19.7**	**-1.5**
	comp=Z,227nm,1.3s,mb6.0						
BOYT	**Boyabat**	**61.93**	**313**	*i* P	**P**	**13 41 30.1**	**-3.7**
BRTR	**Keskin Array B**	**62.44**	**311**	P	**P**	**13 41 35.2**	**-2.0**
	comp=Z,7.8nm,0.7s,mb5.0,baz=125,slow=6.9,SNR=8.1						
ELDT	**Eldivan**	**62.78**	**312**	*i* P	**P**	**13 41 37.8**	**-1.7**
BALT	**Daday**	**63.06**	**313**	*i* P	**P**	**13 41 38.7**	**-2.6**
SIM	**Simferopol'**	**63.45**	**317**	P	**P**	**13 41 43.8**	**0.0**
SIM				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.5						
SIM				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.1						
MBAR	**Mbarara**	**63.68**	**265**	*e*P	**P**	**13 41 46.6**	**+0.7**
	comp=Z,30nm,1.2s,mb5.2						
MBAR				*e*pP	pP	13 41 54.5	+1.4
SGKT	**Sivrigoynuk**	**63.81**	**311**	*i* P	**P**	**13 41 44.5**	**-1.8**
ESKT	**Eskisehir**	**64.50**	**310**	*i* P	**P**	**13 41 48.3**	**-2.5**
MOS	**Moscow**	**65.13**	**329**	⇓*i*P	**P**	**13 41 53.7**	**-0.9**
MOS				*e*	pP	13 42 01.0	-0.8
MOS				*e*		13 42 26.7	
MOS				*e*		13 44 16.0	
MOS				*e*PPP	PPP	13 45 49.3	-4.8
MOS				*e*S	S	13 50 33.6	-0.7
MOS				*e*		13 51 46.9	
MOS				pmax	pmax		
	comp=Z,600nm,1.8s,mb6.3						
MOS				pmax	pmax		
	comp=Z,269nm,1.3s,mb6.1						
MOS				pmax	pmax		
	comp=N,70nm,0.9s						
MOS				pmax	pmax		
	comp=E,92nm,0.9s						
MOS				smax			
	comp=E,800nm,4.2s						
MOS				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.5						
MOS				MLR	MLR		
	comp=N,6µm,23.7s,MS5.8						
MOS				MLR	MLR		
	comp=E,3µm,20.1s,MS5.8						
OBN	**Obninsk**	**65.42**	**328**	P	**P**	**13 41 55.8**	**-0.7**
	comp=E,591nm,1.8s,mb6.3,SNR=9.5						
OBN	**Obninsk**	**65.42**	**328**	*d* *i*P	**P**	**13 41 55.1**	**-1.4**
OBN				*e*		13 44 26.0	
OBN				*i* S	S	13 50 39.8	+1.9
OBN				pmax	pmax		
	comp=Z,214nm,1.7s,mb5.9						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3						
OBN	**Obninsk**	**65.42**	**328**	*e*P	**P**	**13 41 55.0**	**-1.4**
	comp=Z,123nm,1.1s,mb5.8						
OBN				*e*pP	pP	13 42 02.7	-1.0

TOO	**Toolangi**	**65.83**	**137**	*e*P	**P**	**13 42 04.4**	**+5.0**
	comp=Z,1.6nm,0.8s						
SKR	**Severo-Kuril's**	**66.47**	**38**	*e*P	**P**	**13 42 02.0**	**-1.3**
BTOK	**Tokmak**	**66.68**	**310**	*i* P	**P**	**13 42 03.6**	**-1.2**
MA2	**Magadan**	**66.89**	**28**	*d* *i*P	**P**	**13 42 05.0**	**-0.7**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
MA2	**Magadan**	**66.89**	**28**	*e*P	**P**	**13 42 05.0**	**-0.8**
	comp=Z,28nm,0.8s,mb5.3						
MA2				*e*pP	pP	13 42 11.8	-1.2
TIXI	**Tiksi**	**67.34**	**11**	⇓*i*P	**P**	**13 42 06.6**	**-1.9**
TIXI				*e*		13 44 35.0	
TIXI				*e*S	S	13 51 20.9	+20
TIXI				pmax	pmax		
	comp=Z,208nm,1.6s,mb5.9						
TIXI				pmax	pmax		
	comp=N,18nm,0.8s						
TIXI				pmax	pmax		
	comp=E,43nm,1.8s						
TIXI				pmax	pmax		
	comp=Z,315nm,1.7s,mb6.1						
TIXI				MLR	MLR		
	comp=Z,2μm,14.0s,MS5.5						
TIXI	**Tiksi**	**67.34**	**11**	*i* P	**P**	**13 42 06.0**	**-2.5**
KIS	**Kishinev**	**67.55**	**318**	⇑*i*P	**P**	**13 42 08.0**	**-2.1**
KIS				*e*		13 51 08.0	
KIS				*e*		13 51 20.0	
KIS				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.1						
KIS				MLR	MLR		
	comp=Z,1μm,17.0s,MS5.1						
HNR	**Honiara**	**67.81**	**103**	*e*P	**P**	**13 42 13.2**	**+0.9**
	comp=Z,170nm,0.8s,mb6.1						
AKASG	**Malin Array Be**	**68.19**	**322**	P	**P**	**13 42 11.6**	**-2.5**
	comp=Z,10nm,0.8s,mb4.9,baz=87,slow=5.2,SNR=15						
PET	**Petropavlovsk**	**68.65**	**36**	*e*P	**P**	**13 42 18.8**	**+1.9**
PET				*e*S	S	13 51 18.0	+1.1
PET				*e*		13 52 13.1	
PET				*e*SS	SS	13 55 44.9	+1.7
PET				pmax	pmax		
	comp=Z,100nm,8.7s						
PET				smax			
	comp=N,100nm,15.6s						
PET				smax			
	comp=E,200nm,21.4s						
PET				MLR	MLR		
	comp=Z,1μm,18.0s,MS5.1						
SEY	**Seymchan**	**69.05**	**25**	*e*P	**P**	**13 42 20.6**	**+1.4**
SEY				S	S	13 51 21.3	-0.1
LSZ	**Lusaka**	**69.17**	**250**	*e*P	**P**	**13 42 21.0**	**+0.3**
	comp=Z,20nm,0.9s,mb5.0						
MLR	**Muntele Rosu**	**69.19**	**316**	P	**P**	**13 42 20.1**	**-0.3**
	comp=Z,37nm,1.1s,mb5.2,baz=44,slow=3.7,SNR=14						
MATP	**Matopo**	**70.26**	**245**	P	**P**	**13 42 27.8**	**+0.5**
	comp=Z,7.1nm,0.5s,mb4.9,baz=69,slow=5.6,SNR=14						
PUL	**Pulkovo**	**70.26**	**331**	*e*P	**P**	**13 42 26.1**	**-0.6**
PUL				*e*S	S	13 51 42.1	+6.3
PUL				pmax	pmax		
	comp=Z,138nm,0.6s,mb6.1						
PUL				pmax	pmax		
	comp=N,67nm,0.5s						
PUL				pmax	pmax		
	comp=E,310nm,1.5s						
PUL				smax			
	comp=Z,69nm,6.1s						
PUL				smax			
	comp=N,228nm,8.5s						
PUL				smax			
	comp=E,73nm,6.8s						
PUL				MLR	MLR		
	comp=Z,1μm,17.0s,MS5.2						
PUL				MLR	MLR		
	comp=N,667nm,15.0s,MS5.1						
PUL				MLR	MLR		
	comp=E,467nm,16.0s,MS5.1						
PUL	**Pulkovo**	**70.26**	**331**	*i* P	**P**	**13 42 26.2**	**-0.5**
JOF	**Joensuu**	**70.91**	**334**	*e*p	**P**	**13 42 28.9**	**-1.6**
	comp=E,4.7nm,0.4s,mb4.8						
JOF	**Joensuu**	**70.91**	**334**	*e*P	**P**	**13 42 28.9**	**-1.6**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
LVV	**L'vov**	**71.25**	**320**	*e*P	**P**	**13 42 30.7**	**-2.1**
LVV				*i*	pP	13 42 39.5	-0.6
LVV				*e*		13 42 55.5	
APA	**Apatity**	**71.92**	**339**	⇑*i*P	**P**	**13 42 35.3**	**-1.2**
APA				*i*		13 42 44.9	
APA				*i*		13 42 55.7	
APA				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.3						
APA				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.6						
SKO	**Skopje**	**71.93**	**312**	*e*P	**P**	**13 42 35.0**	**-2.1**
KWP	**Kalwaria**	**72.06**	**320**	*e*P	**P**	**13 42 37.4**	**-0.3**
KWP				*e*	pP	13 42 45.3	+0.3
KWP	**Kalwaria**	**72.06**	**320**	*e*P	**P**	**13 42 37.4**	**-0.3**
KWP				*e*	pP	13 42 45.4	+0.4
KOLS	**Kolonicke sedl**	**72.23**	**319**	*e*P	**P**	**13 42 38.9**	**+0.2**
KOLS				*e*pP	pP	13 42 45.5	-0.5
SUW	**Suwalki**	**72.54**	**324**	*e*P	**P**	**13 42 39.1**	**-1.3**
SUW				*e*	pP	13 42 47.7	-0.1
CRVS	**Cervenica-Dubn**	**72.76**	**319**	*e*P	**P**	**13 42 44.9**	**+3.1**
CRVS				*e*pP	pP	13 42 51.7	+2.6
CRVS				*e*PP	PP	13 45 26.3	+0.5
FINES	**FINESS Array B**	**72.77**	**332**	P	**P**	**13 42 41.0**	**-0.7**
	comp=Z,13nm,0.5s,mb5.1,baz=109,slow=7.6,SNR=21						
KAF	**Kangasniemi**	**72.85**	**333**	*e*p	**P**	**13 42 41.7**	**-0.4**
	comp=Z,5.4nm,0.5s,mb4.7						
KAF	**Kangasniemi**	**72.85**	**333**	*e*P	**P**	**13 42 41.7**	**-0.4**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
KECS	**Kecovo**	**73.34**	**318**	*e*P	**P**	**13 42 46.2**	**+1.0**
KECS				*e*	pP	13 42 51.6	-1.0
NIE	**Niedzica**	**73.57**	**319**	*e*P	**P**	**13 42 46.7**	**+0.1**
PSZ	**Piszkesteto**	**73.67**	**318**	*e*P	**P**	**13 42 45.6**	**-1.6**
	comp=Z,26nm,1.1s,mb5.1						
PSZ				*e*pP	pP	13 42 52.6	-1.8
OJC	**Ojcow**	**74.00**	**320**	*e*P	**P**	**13 42 48.8**	**-0.2**
LBTB	**Lobatse**	**74.13**	**241**	P	**P**	**13 42 51.3**	**+1.0**
	comp=Z,24nm,0.7s,mb5.2,baz=108,slow=5.8,SNR=14						
LBTB	**Lobatse**	**74.13**	**241**	*e*P	**P**	**13 42 51.1**	**+0.8**
	comp=Z,24nm,0.8s,mb5.2						
VYHS	**Vyhne**	**74.43**	**318**	*e*P	**P**	**13 42 51.6**	**0.0**
SRO2	**Moca**	**74.66**	**317**	P	pP	13 42 59.3	-0.9
SRO2	**Moca**	**74.66**	**317**	*e*pP	pP	13 42 59.3	-0.9
SRO	**Srobarova**	**74.72**	**317**	*e*P	sP	13 43 02.5	-0.6
SRO	**Srobarova**	**74.72**	**317**	*e*sP	sP	13 43 02.5	-0.6
CASY	**Casey**	**74.84**	**173**	*e*P	**P**	**13 42 53.9**	**+0.4**
	comp=Z,26nm,0.9s,mb5.2						
CASY				*e*pP	pP	13 42 58.4	-2.5
KEV	**Kevo**	**74.91**	**341**	*e*p	**P**	**13 42 53.1**	**-0.8**
	comp=Z,2.1nm,0.4s,mb4.4						
KEV	**Kevo**	**74.91**	**341**	*e*P	**P**	**13 42 53.1**	**-0.8**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
OKC	**Ostrava-Krasne**	**75.02**	**319**	*e*P	**P**	**13 42 55.2**	**+0.3**
OKC				*e*pP	pP	13 43 01.7	-0.6
TIP	**Timpagrande**	**75.30**	**308**	*e*P	**P**	**13 42 56.4**	**-0.4**
ARCES	**ARCESS Array B**	**75.33**	**340**	P	**P**	**13 42 56.5**	**+0.2**
	comp=Z,49nm,1.2s,mb5.3,baz=99,slow=6.7,SNR=13						
ARE0	**ARCESS Array S**	**75.33**	**340**	*e*P	**P**	**13 42 56.6**	**+0.2**
MORC	**Moravsky Berou**	**75.40**	**319**	*e*P	**P**	**13 42 56.8**	**-0.3**
	comp=Z,52nm,1.2s,mb5.3						
MORC				*e*pP	pP	13 43 03.1	-1.4
BOSA	**Boshof**	**75.47**	**238**	*e*P	**P**	**13 42 58.7**	**+0.7**
	comp=Z,18nm,0.7s,mb5.1						
ZST	**Bratislava**	**75.56**	**318**	*e*P	**P**	**13 42 57.8**	**-0.2**
ZST				*e*pP	pP	13 43 04.8	-0.6
GKP	**Gorka Klasztor**	**75.93**	**323**	*e*P	**P**	**13 42 59.8**	**-0.2**
GKP				*e*	pP	13 43 08.1	+0.7
KTK1	**Kautokeino**	**75.96**	**339**	*e*P	**P**	**13 43 00.7**	**+0.8**
BILL	**Bilibino**	**76.20**	**22**	*d* *i*P	**P**	**13 43 00.0**	**-1.3**
BILL				pmax	pmax		
	comp=Z,46nm,1.7s,mb5.1						
BILL				MLR	MLR		
	comp=Z,3μm,15.0s,MS5.7						
BILL	**Bilibino**	**76.20**	**22**	*e*P	**P**	**13 43 00.4**	**-0.9**
DPC	**Dobruska-Polom**	**76.24**	**320**	*e*P	**P**	**13 43 02.0**	**+0.2**
DPC				*e*pP	pP	13 43 08.6	-0.6
DPC				AMS	AMS	14 22 30.0	
	comp=Z,800nm,18.3s						
KSP	**Ksiaz**	**76.29**	**320**	*e*P	**P**	**13 43 02.1**	**0.0**
KSP				*e*pP	pP	13 43 09.9	+0.4
KSP				*e*S	S	13 52 43.0	-1.0
KSP				*e*SKS	SKS	13 53 07.0	-7.1
KSP				LR	LR		
	comp=Z,2μm,18.4s,MS5.5						
KSP	**Ksiaz**	**76.29**	**320**	*e*P	**P**	**13 43 02.6**	**+0.5**
KSP				*e*pP	pP	13 43 10.4	+0.9
UPC	**Upice**	**76.44**	**320**	*e*P	**P**	**13 43 03.2**	**+0.2**
UPC				*e*pP	pP	13 43 11.7	+1.3
ARSA	**Arzberg**	**76.56**	**317**	⇓*i*P	**P**	**13 43 03.9**	**+0.2**
	comp=Z,30nm,1.5s,mb5.0						
BOJS	**Bojanci**	**76.66**	**315**	*e*P	**P**	**13 43 04.6**	**+0.3**
PERS	**Pernice**	**76.81**	**316**	*e*P	**P**	**13 43 05.3**	**+0.2**
LJU	**Ljubljana**	**77.19**	**315**	*e*P	**P**	**13 43 08.5**	**+1.3**
PRU	**Pruhonice**	**77.36**	**319**	*e*P	**P**	**13 43 08.2**	**+0.1**
PRU				*e*pP	pP	13 43 14.3	-1.1
PRU				AMS	AMS	14 22 30.0	
	comp=Z,600nm,19.7s						
PVCC	**Panska Ves**	**77.37**	**320**	*e*P	**P**	**13 43 08.3**	**+0.2**
MOA	**Molln**	**77.44**	**317**	⇑*i*P	**P**	**13 43 08.2**	**-0.4**
	comp=Z,28nm,1.1s,mb5.1						
BSD	**Bornholm Skovb**	**77.46**	**325**	*i* P	**P**	**13 43 15.5**	**+7.0**
BSD				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.4						
BSD	**Bornholm Skovb**	**77.46**	**325**	*i* P	**P**	**13 43 15.5**	**+7.0**
	comp=Z,42nm,0.8s,mb5.4						
VOY	**Vojsko**	**77.63**	**315**	*e*P	**P**	**13 43 05.5**	**-4.2**
VOY				*e*		13 43 09.0	
BRG	**Berggiesshubel**	**77.78**	**320**	*i* P	**P**	**13 43 11.0**	**+0.6**
BRG				*e*		13 53 01.0	
BRG				*e*		13 57 58.0	
BRG				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.3						
BRG				MLR	MLR		
	comp=N,750nm,17.2s,MS5.3						
BRG				MLR	MLR		
	comp=E,1μm,17.2s,MS5.3						
BRG				MLR	MLR		
	comp=Z,2μm,17.2s,MS5.4						
BRG	**Berggiesshubel**	**77.78**	**320**	*i* P	**P**	**13 43 11.0**	**+0.6**
	comp=Z,61nm,1.5s,mb5.3						
BRG				*e*		13 53 01.0	
BRG				*e*		13 57 58.0	
BRG				LR	LR		
	comp=Z,2μm,17.2s,MS5.4						
GERES	**GERESS Array B**	**77.85**	**318**	P	**P**	**13 43 11.0**	**+0.2**
	comp=Z,12nm,0.8s,mb4.8,baz=100,slow=5.1,SNR=13						
ROBS	**Robic**	**77.90**	**316**	*e*P	**P**	**13 43 10.1**	**-1.1**
KHC	**Kasperske Hory**	**77.94**	**319**	*e*P	**P**	**13 43 11.1**	**-0.2**
KHC				*e*pP	pP	13 43 17.8	-0.9
KHC				AMS	AMS	14 22 00.0	
	comp=Z,800nm,19.6s						
RUE	**Ruedersdorf**	**77.96**	**322**	*e*P	**P**	**13 43 11.2**	**-0.1**
	comp=Z,22nm,0.5s,mb5.3						
PTCC	**Patocco-Chiusa**	**78.02**	**316**	*e*P	**P**	**13 43 11.8**	**+0.1**
KBA	**Koelnbreinsper**	**78.04**	**316**	⇓*i*P	**P**	**13 43 11.6**	**-0.3**
	comp=Z,23nm,1.1s,mb5.0						
CLL	**Collm**	**78.39**	**321**	⇓*i*P	**P**	**13 43 13.5**	**-0.2**
CLL				*i* *PP	pP	13 43 21.8	+0.7
CLL				*e*S	S	13 53 00.0	-6.7
CLL				pmax	pmax		
	comp=Z,47nm,1.4s,mb5.2						
CLL				MLR	MLR		
	comp=Z,900nm,20.5s,MS5.1						
CLL	**Collm**	**78.39**	**321**	⇓*i*P	**P**	**13 43 13.5**	**-0.2**
	comp=Z,47nm,1.4s,mb5.2						
CLL				*i* pP	pP	13 43 21.8	+0.7
CLL				*e*S	S	13 53 00.0	-6.7
CLL				LR	LR		
	comp=Z,900nm,20.5s,MS5.1						
CLL	**Collm**	**78.39**	**321**	⇓P	**P**	**13 43 13.5**	**-0.2**
	comp=Z,logA/T=1.5,mb5.2						
CLL				*i* *PP	pP	13 43 21.8	+0.7
CLL				*e*		13 43 30.0	
CLL				*e*S	S	13 53 05.0	-1.7
CLL				*e*SS	SS	13 58 18.0	+5.3
FVI	**Forni Avoltri**	**78.42**	**316**	*e*P	**P**	**13 43 14.0**	**0.0**
MAW	**Mawson**	**78.42**	**192**	P	**P**	**13 43 14.6**	**+1.0**
	comp=Z,7.1nm,0.8s,mb4.7,baz=7.9,slow=9.0,SNR=4.0						
MAW				LR	LR	14 13 20.8	
	comp=Z,668nm,19.8s,MS5.0,baz=29,slow=32						
MAW	**Mawson**	**78.42**	**192**	*e*P	**P**	**13 43 14.5**	**+1.0**
	comp=Z,19nm,0.8s,mb5.1						
NKC	**Novy Kostel**	**78.71**	**320**	*e*P	**P**	**13 43 15.2**	**-0.3**
NKC				AMS	AMS	14 24 00.0	
	comp=Z,900nm,16.9s						
MOR8	**Moi Rana**	**78.74**	**336**	*e*P	**P**	**13 43 15.8**	**+0.4**
	comp=Z,62nm,2.6s,mb5.1						
MOR8	**Moi Rana**	**78.74**	**336**	*e*P	**P**	**13 43 15.8**	**+0.4**
MOR8				AMb	AMB	13 43 17.9	
	comp=Z,62nm,2.6s,mb5.1						
COP	**Copenhagen**	**78.91**	**325**	*e*P	**P**	**13 43 22.2**	**+5.7**
COP				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.3						
COP				MLR	MLR		
	comp=Z,530nm,19.0s,MS4.9						
COP	**Copenhagen**	**78.91**	**325**	*e*P	**P**	**13 43 22.2**	**+5.7**
	comp=Z,30nm,0.7s,mb5.3						
COP				LR	LR		
	comp=Z,530nm,19.0s,MS4.9						
COP	**Copenhagen**	**78.91**	**325**	*i* P	**P**	**13 43 22.2**	**+5.7**
	comp=Z,30nm,0.7s,mb5.3						
	comp=Z,530nm,19.0s						
SFI	**Santa Sofia**	**79.06**	**313**	*e*P	**P**	**13 43 18.6**	**+1.1**
PGD	**Poggio Sodo**	**79.15**	**313**	*e*P	**P**	**13 43 19.2**	**+1.1**
CTI	**Castel Tesino**	**79.19**	**315**	*e*P	**P**	**13 43 18.5**	**+0.2**
WTTA	**Wattenberg**	**79.20**	**317**	⇑*i*P	**P**	**13 43 18.6**	**+0.3**
	comp=Z,65nm,1.2s,mb5.4						
WATA	**Walderalm**	**79.25**	**317**	⇑*i*P	**P**	**13 43 18.4**	**-0.1**
	comp=Z,40nm,1.4s,mb5.2						
MOX	**Moxa**	**79.25**	**320**	*e*P	**P**	**13 43 18.8**	**+0.4**
MOX				pmax	pmax		
	comp=Z,77nm,1.8s,mb5.3						
MOX				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
MOX	**Moxa**	**79.25**	**320**	*e*P	**P**	**13 43 18.8**	**+0.4**
	comp=Z,77nm,1.8s,mb5.3						
MOX				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
MOX	**Moxa**	**79.25**	**320**	*i* P	**P**	**13 43 18.8**	**+0.4**
	comp=Z,logA/T=1.6,mb5.3						
VMG	**Vicchio**	**79.28**	**313**	*e*P	**P**	**13 43 19.9**	**+1.2**
GRA1	**Grafenberg Arr**	**79.49**	**319**	*e*P	**P**	**13 43 20.2**	**+0.4**
	comp=Z,65nm,1.2s,mb5.4						
GRA1				*e*pP	pP	13 43 27.3	+0.1
GRA1				LR	LR		
	comp=Z,800nm,21.2s,MS5.0						
GRF	**Grafenberg Arr**	**79.49**	**319**	*e*P	**P**	**13 43 20.2**	**+0.4**
GRF				*e**PP	pP	13 43 27.3	+0.1
GRF				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.4						
GRF				MLR	MLR		
	comp=Z,800nm,21.2s,MS5.0						
GRF	**Grafenberg Arr**	**79.49**	**319**	*e*P	**P**	**13 43 20.2**	**+0.4**
	comp=Z,65nm,1.2s,mb5.4						
GRF				*e*pP	pP	13 43 27.3	+0.1
GRF				LR	LR		
	comp=Z,800nm,21.2s,MS5.0						
SQTA	**Sankt Quirin**	**79.50**	**317**	⇑*i*P	**P**	**13 43 19.1**	**-0.7**
	comp=Z,29nm,1.2s,mb5.1						
MOTA	**Moosalm**	**79.57**	**317**	⇓*i*P	**P**	**13 43 19.3**	**-0.9**
	comp=Z,18nm,1.0s,mb5.0						
NSS	**Namsos**	**79.63**	**334**	*e*P	**P**	**13 43 18.9**	**-1.2**
NSS				AMS	AMS	14 25 11.0	
	comp=Z,2μm,24.2s,MS5.2						
ZCCA	**Zocca**	**79.68**	**314**	*e*P	**P**	**13 43 22.7**	**+1.8**
NB2	**NORSAR Subarra**	**79.78**	**331**	P	**P**	**13 43 20.4**	**-0.7**
	comp=Z,38nm,1.0s,mb5.3,baz=90,slow=5.3						
NB2	**NORSAR Subarra**	**79.78**	**331**	P	**P**	**13 43 20.4**	**-0.7**
	baz=90,slow=5.6						
NOA	**NORSAR Array B**	**79.78**	**331**	P	**P**	**13 43 20.5**	**-0.6**
	comp=Z,13nm,0.7s,mb5.0,baz=92,slow=5.6,SNR=11						
TSUM	**Tsumeb**	**79.92**	**249**	*e*P	**P**	**13 43 24.3**	**+1.6**
	comp=Z,9.9nm,0.9s,mb4.7						
TSUM				*e*pP	pP	13 43 31.8	+1.7
NAO01	**NORSAR Array S**	**79.93**	**330**	*e*P	**P**	**13 43 21.1**	**-0.9**
	comp=Z,11nm,0.6s,mb5.0						
GSCL	**Gusciola**	**79.96**	**314**	*e*P	**P**	**13 43 23.3**	**+0.9**
BRMO	**Bormio**	**80.08**	**316**	*e*P	**P**	**13 43 23.6**	**+0.6**
SUR	**Sutherland**	**80.22**	**235**	*e*P	**P**	**13 43 24.8**	**+0.7**
	comp=Z,17nm,0.8s,mb5.0						
MUD	**Monsted U'grnd**	**80.75**	**326**	*i* P	**P**	**13 43 27.9**	**+1.6**
MUD				*i* S	S	13 53 33.0	+1.7
MUD				pmax	pmax		
	comp=Z,66nm,1.3s,mb5.4						
MUD				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.9						
MUD	**Monsted U'grnd**	**80.75**	**326**	*i* P	**P**	**13 43 27.9**	**+1.6**
	comp=Z,66nm,1.3s,mb5.4						
MUD				*i* S	S	13 53 33.0	+1.7
MUD	**Monsted U'grnd**	**80.75**	**326**	*i* P	**P**	**13 43 27.9**	**+1.6**
	comp=Z,66nm,1.3s,mb5.4						
MUD	**Monsted U'grnd**	**80.75**	**326**	*i* S	S	13 53 33.0	+1.7
	comp=Z,500nm,20.0s						
DOMB	**Dombas**	**80.84**	**332**	*e*P	**P**	**13 43 27.9**	**+1.2**
KBS	**Kingsbay**	**80.90**	**349**	AMS	AMS	14 25 44.8	
	comp=Z,698nm,18.2s,MS5.0						
TOD	**Tromm**	**81.07**	**319**	*e*P	**P**	**13 43 26.6**	**-1.5**
SPAK	**Spaichingen**	**81.12**	**317**	*e*P	**P**	**13 43 27.0**	**-1.5**
PGF	**Pioggiola**	**81.17**	**312**	*e*P	**P**	**13 43 28.8**	**0.0**
VAI	**Varese**	**81.21**	**315**	*e*P	**P**	**13 43 28.4**	**-0.5**
MOL	**Molde**	**81.55**	**332**	*e*P	**P**	**13 43 32.8**	**+2.4**
	comp=Z,76nm,1.8s,mb5.3						
MOL	**Molde**	**81.55**	**332**	*e*P	**P**	**13 43 32.8**	**+2.4**
MOL				AMb	AMB	13 43 36.0	
	comp=Z,76nm,1.8s,mb5.3						
FELD	**Feldberg**	**81.65**	**317**	*e*P	**P**	**13 43 30.6**	**-0.6**
FIN	**Finale Ligure**	**81.67**	**314**	*e*P	**P**	**13 43 31.7**	**+0.3**
LANF	**Langenberg**	**81.74**	**318**	*e*P	**P**	**13 43 30.3**	**-1.4**
MCGN	**Macugnaga**	**81.75**	**315**	*e*P	**P**	**13 43 32.2**	**+0.5**
ABH	**Alteburg**	**81.87**	**319**	*e*P	**P**	**13 43 30.7**	**-1.6**
LIBD	**Limburg**	**81.91**	**318**	*e*P	**P**	**13 43 31.4**	**-1.2**
WLS	**Welschbruch**	**82.06**	**318**	*e*P	**P**	**13 43 32.5**	**-0.8**
CDF	**Champ du Feu**	**82.12**	**318**	*e*P	**P**	**13 43 33.3**	**-0.3**
	comp=Z,86nm,1.6s,mb5.1						
BLS5	**Blasjo**	**82.15**	**329**	*e*P	**P**	**13 43 35.6**	**+2.1**
	comp=Z,37nm,1.6s,mb5.1						
BLS5	**Blasjo**	**82.15**	**329**	*e*P	**P**	**13 43 35.6**	**+2.1**
BLS5				AMb	AMB	13 43 38.5	
	comp=Z,37nm,1.6s,mb5.1						
SAOF	**Saorge**	**82.15**	**313**	*e*P	**P**	**13 43 33.6**	**-0.3**
ECH	**Echery**	**82.20**	**318**	*e*P	**P**	**13 43 33.4**	**-0.7**
MOF	**Molkenrain**	**82.24**	**317**	*e*P	**P**	**13 43 33.4**	**-0.9**
SBF	**Sospel**	**82.25**	**313**	*e*P	**P**	**13 43 34.3**	**-0.1**
	comp=Z,59nm,0.7s,mb5.3						
WTSB	**Winterswijk**	**82.25**	**321**	*e*P	**P**	**13 43 34.2**	**-0.1**
	comp=Z,52nm,1.7s,mb5.2						
HINF	**Hinteralfeld**	**82.43**	**317**	*e*P	**P**	**13 43 35.0**	**-0.3**
MVIF	**Mont Vial**	**82.45**	**313**	*e*P	**P**	**13 43 35.2**	**-0.2**
LOMF	**Lomont**	**82.47**	**317**	*e*P	**P**	**13 43 34.8**	**-0.7**
LPG	**La Plagne**	**82.64**	**315**	*e*P	**P**	**13 43 36.8**	**+0.4**
	comp=Z,48nm,0.7s,mb5.3						
LPL	**La Plagne**	**82.65**	**315**	*e*P	**P**	**13 43 36.8**	**+0.3**
	comp=Z,68nm,0.7s,mb5.5						
MBDF	**Montbardon**	**82.67**	**314**	*e*P	**P**	**13 43 36.0**	**-0.6**
	comp=Z,28nm,0.7s,mb5.1						
BER	**Bergen**	**82.67**	**330**	AMS	AMS	14 25 02.3	
	comp=Z,2μm,19.4s,MS5.5						
BNI	**Bardonecchia**	**82.72**	**314**	*e*P	**P**	**13 43 37.1**	**+0.3**
	comp=Z,26nm,1.0s,mb5.2						
CMAH	**Djebel Manchou**	**82.74**	**306**	P	**P**	**13 43 38.0**	**+0.9**
HAU	**Haudompre**	**82.76**	**317**	*e*P	**P**	**13 43 36.6**	**-0.4**
	comp=Z,57nm,1.0s,mb5.3						
HAU				*e*R			
	comp=Z,638nm,22.5s						
WLF	**Walferdange**	**82.79**	**319**	*e*P	**P**	**13 43 37.0**	**0.0**
FRF	**La Foret Royal**	**82.84**	**313**	*e*P	**P**	**13 43 37.5**	**0.0**
HGN	**Heimansgroeve**	**82.86**	**320**	*e*P	**P**	**13 43 37.1**	**-0.3**
	comp=Z,18nm,1.7s,mb4.8						
HGN	**Heimansgroeve**	**82.86**	**320**	*e*S	S	13 53 55.8	+2.6
LMR	**La Mourre**	**82.95**	**313**	*e*P	**P**	**13 43 38.1**	**0.0**
CABF	**La Chapelle**	**83.03**	**316**	*e*P	**P**	**13 43 38.6**	**+0.2**
	comp=Z,74nm,1.1s,mb5.3						
TAVF	**Tavernes**	**83.26**	**313**	*e*P	**P**	**13 43 40.0**	**+0.4**
ORIF	**Oris-en-Rattie**	**83.29**	**314**	*e*P	**P**	**13 43 40.0**	**+0.2**
	comp=Z,25nm,0.8s,mb5.0						
ORIF				*e*R			
	comp=Z,480nm,20.2s						
CKFL	**Kef-Lekhel**	**83.32**	**306**	P	**P**	**13 43 42.0**	**+1.9**
STOF	**St-Etienne Org**	**83.34**	**313**	*e*P	**P**	**13 43 40.3**	**+0.3**
VILF	**Villemus**	**83.49**	**313**	*e*P	**P**	**13 43 39.9**	**-0.9**
OG05	**Jujurieux**	**83.50**	**316**	*e*P	**P**	**13 43 40.2**	**-0.7**
CASM	**Ain Smara**	**83.51**	**306**	P	**P**	**13 43 43.0**	**+1.8**
PUYF	**Puyloubier**	**83.53**	**313**	*e*P	**P**	**13 43 41.2**	**+0.2**
SMRF	**Simiane la Rot**	**83.58**	**313**	*e*P	**P**	**13 43 41.9**	**+0.6**
MEZF	**Maizieres J'vi**	**83.59**	**318**	*e*P	**P**	**13 43 41.1**	**-0.1**
CTEI	**Djebel Teioual**	**83.60**	**305**	P	**P**	**13 43 43.5**	**+1.9**
GIVF	**Givet**	**83.61**	**320**	*e*P	**P**	**13 43 41.5**	**+0.2**
PRAF	**Pradon**	**83.89**	**313**	*e*P	**P**	**13 43 42.4**	**-0.5**
DFRA	**Djebel Bou Aff**	**83.98**	**306**	P	**P**	**13 43 45.0**	**+1.5**
BAIF	**Baives**	**84.01**	**320**	*e*P	**P**	**13 43 43.6**	**+0.3**
VIVF	**Saint-Julien-l**	**84.15**	**314**	*e*P	**P**	**13 43 44.2**	**0.0**
	comp=Z,39nm,0.9s,mb5.2						
CKHR	**Kef el Ahmar**	**84.32**	**305**	P	**P**	**13 43 46.5**	**+1.2**
SMF	**Signal de Mont**	**84.57**	**316**	*e*P	**P**	**13 43 45.9**	**-0.3**
	comp=Z,56nm,1.1s,mb5.3						
SSF	**Saint Saulge**	**84.75**	**317**	*e*P	**P**	**13 43 47.3**	**+0.2**
PLDF	**La Plantade**	**84.78**	**316**	*e*P	**P**	**13 43 46.6**	**-0.7**
LASF	**Ste Croix**	**84.81**	**314**	*e*P	**P**	**13 43 47.9**	**+0.4**
	comp=Z,85nm,1.4s,mb5.4						
AVF	**Avril sur Loir**	**84.89**	**316**	*e*P	**P**	**13 43 47.6**	**-0.2**
	comp=Z,54nm,1.3s,mb5.2						
AGO	**Saint Agoulin**	**85.11**	**316**	*e*P	**P**	**13 43 48.3**	**-0.7**
LBL	**Lubilhac**	**85.12**	**315**	*e*P	**P**	**13 43 48.3**	**-0.7**
PYM	**Petit Puy Mans**	**85.23**	**315**	*e*P	**P**	**13 43 49.1**	**-0.5**
BGF	**Bois d'Agland**	**85.26**	**316**	*e*P	**P**	**13 43 49.8**	**+0.1**
	comp=Z,102nm,1.4s,mb5.5						
TCF	**Toulx Ste Croi**	**85.72**	**316**	*e*P	**P**	**13 43 52.2**	**+0.2**
CAF	**Calviac**	**85.99**	**315**	*e*P	**P**	**13 43 53.9**	**+0.6**
	comp=Z,46nm,1.2s,mb5.3						
MTLF	**Montolieu**	**86.07**	**313**	*e*P	**P**	**13 43 54.0**	**+0.2**
	comp=Z,33nm,1.0s,mb5.2						
TNA	**Tin City**	**86.29**	**24**	*e*P	**P**	**13 43 54.4**	**+0.1**
	comp=Z,9.3nm,0.8s,mb5.1						
RJF	**Les Rejaudoux**	**86.33**	**315**	*e*P	**P**	**13 43 55.6**	**+0.6**
	comp=Z,72nm,1.2s,mb5.5						
RJF				*e*R			
	comp=Z,767nm,20.0s						
EMHD	**Djebel Mahouad**	**86.36**	**306**	P	**P**	**13 44 00.0**	**+4.6**
JMIC	**Jan Mayen**	**86.78**	**341**	AMS	AMS	14 25 09.0	
	comp=Z,971nm,20.6s,MS5.2						
LFF	**La Frestale**	**86.92**	**315**	*e*P	**P**	**13 43 58.5**	**+0.6**
LDF	**La Druitiere**	**87.00**	**318**	*e*P	**P**	**13 43 58.2**	**0.0**
	comp=Z,56nm,1.2s,mb5.4						
FLN	**La Foliniere**	**87.21**	**319**	*e*P	**P**	**13 43 59.3**	**+0.1**
FLN				*e*R			
	comp=Z,939nm,20.8s						
MFF	**Saint Martin d**	**87.30**	**316**	*e*P	**P**	**13 43 59.8**	**+0.1**
	comp=Z,188nm,1.7s,mb5.7						
EPF	**Esparros**	**87.47**	**313**	*e*P	**P**	**13 44 00.8**	**+0.2**
GRR	**Gorron**	**87.51**	**318**	*e*P	**P**	**13 44 00.9**	**+0.2**
DAG	**Danmarks Havn**	**87.56**	**348**	⇓*i*P	**P**	**13 44 00.3**	**0.0**
DAG				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.2						
DAG	**Danmarks Havn**	**87.56**	**348**	⇓*i*P	**P**	**13 44 00.3**	**0.0**
	comp=Z,8.7nm,0.6s,mb5.2						
EBR	**Ebro Roquetas**	**87.67**	**311**	*e*Ts		13 44 10.5	
ETRT	**Tiaret**	**87.80**	**305**	P	**P**	**13 44 05.0**	**+2.6**
EANR	**'Ain N'Sour**	**87.89**	**306**	P	**P**	**13 44 04.0**	**+1.2**
ETSF	**Etsaut**	**88.14**	**313**	*e*P	**P**	**13 44 04.6**	**+0.8**
	comp=Z,36nm,0.9s,mb5.3						
SJPF	**Ste Jean**	**88.59**	**313**	*e*P	**P**	**13 44 06.0**	**0.0**
	comp=Z,30nm,0.9s,mb5.3						
SGMF	**Saint Gilles**	**88.65**	**318**	*e*P	**P**	**13 44 06.4**	**+0.3**
ROSF	**Rostrenen**	**89.11**	**319**	*e*P	**P**	**13 44 08.6**	**+0.3**
	comp=Z,201nm,1.4s,mb6.0						
QUIF	**Quistinic**	**89.11**	**318**	*e*P	**P**	**13 44 08.2**	**-0.1**
UNV	**Unalaska Valle**	**89.31**	**36**	*e*P	**P**	**13 44 10.1**	**+0.9**
	comp=Z,29nm,0.7s,mb5.7						
SCO	**Scoresbysund**	**91.12**	**342**	*e*P	**P**	**13 44 15.3**	**-1.8**
SCO	**Scoresbysund**	**91.12**	**342**	*i* P	**P**	**13 44 15.3**	**-1.8**
ESDC	**Sonseca Array**	**91.23**	**310**	P	**P**	**13 44 18.8**	**+0.4**
	comp=Z,5.6nm,0.7s,mb5.0,baz=67,slow=3.8,SNR=10						
ESLA	**Sonseca Array**	**91.23**	**310**	*e*P	**P**	**13 44 19.4**	**+1.1**
	comp=Z,2.7nm,1.1s,mb4.5						
ESLA				*e*pP	pP	13 44 26.1	+0.2
VNDA	**Vanda**	**92.85**	**168**	P	**P**	**13 44 24.6**	**-0.4**
	comp=Z,16nm,1.5s,mb5.2,baz=72,slow=7.5,SNR=3.1						
SUMG	**Summit**	**94.22**	**347**	*e*P	**P**	**13 44 31.6**	**+0.2**
	comp=Z,11nm,0.9s,mb5.3						
SUMG				*e*pP	pP	13 44 39.1	+0.3
COLA	**College**	**94.45**	**22**	*i* P	**P**	**13 44 32.7**	**+0.1**
COLA	**College**	**94.45**	**22**	*i* P	**P**	**13 44 32.8**	**+0.2**
MCK	**McKinley**	**94.58**	**23**	*e*P	**P**	**13 44 32.9**	**-0.2**
	comp=Z,4.8nm,0.8s,mb5.0						
ILAR	**Eielson Array**	**94.86**	**22**	P	**P**	**13 44 33.3**	**-1.2**
	comp=Z,1.1nm,0.7s,mb4.4,baz=300,slow=4.8,SNR=5.8						
ILAR				PP	PP	13 48 20.6	-5.0
	comp=Z,0.6nm,0.8s,baz=305,slow=6.4,SNR=3.4						
ILAR				PKKPbc		14 01 34.0	
	comp=Z,0.4nm,0.7s,baz=142,slow=2.3,SNR=4.3						
SLKM	**Skilak Lake**	**95.51**	**27**	*e*P	**P**	**13 44 38.3**	**+0.8**
SML	**Sawmill**	**95.72**	**25**	*e*P	**P**	**13 44 39.2**	**+0.7**
INK	**Inuvik**	**97.11**	**16**	P	**P**	**13 44 44.4**	**-0.2**

	comp=Z,7.6nm,1.0s,mb5.1,baz=311,slow=5.0,SNR=8.6						
INK				PKKPbc		14 01 28.5	
	comp=Z,0.8nm,0.8s,baz=158,slow=7.3,SNR=4.3						
INK	Inuvik	97.11	16	eP	P	13 44 43.7	-0.9
	comp=Z,13nm,1.0s,mb5.3						
RES	Resolute Bay	97.50	2	eP	P	13 44 46.4	+0.1
	comp=Z,13nm,0.9s,mb5.5						
DAWY	Dawson	97.97	21	eP	P	13 44 48.7	+0.1
YKA	Yellowknife Ar	106.54	13	Pdiff	Pdif	13 45 27.5	+0.7
	comp=Z,0.5nm,1.0s,baz=334,slow=4.9,SNR=5.3						
YKA				PKiKP		13 49 40.2	
	comp=Z,0.4nm,0.7s,baz=342,slow=1.9,SNR=3.0						
YKA				PP	PP	13 49 46.9	-8.0
	comp=Z,1.2nm,0.8s,baz=335,slow=7.7,SNR=6.4						
YKA				PKKPbc		14 00 59.4	
	comp=Z,0.6nm,0.7s,baz=152,slow=3.1,SNR=6.5						
YKA				PKKP	PKKP	14 01 12.6	+9.5
	comp=Z,0.4nm,0.6s,baz=143,slow=4.1,SNR=5.1						
YKA	Yellowknife Ar	106.54	13	Pdif	Pdif	13 45 27.6	+0.7
YKA				PKPdf		13 49 40.2	
YKA				PP	PP	13 49 46.9	-8.0
YKA				PKKPbc		14 00 59.4	
YKA				PKKP	PKKP	14 01 12.6	+9.5
SCHQ	Schefferville	115.61	348	PKP	PKPdf	13 49 54.2	-3.9
	comp=Z,1.9nm,0.8s,baz=9.2,slow=5.1,SNR=3.8						
SCHQ	Schefferville	115.61	348	PKP	PKPdf	13 49 54.2	-4.0
TBI	Tubuai	117.32	112	eSS	SS	14 07 35.8	+17
TBI				eLR	LR	14 25 51.0	
	comp=Z,819nm,27.0s						
PPT	Papeete	117.39	106	eLR	LR	14 25 32.0	
	comp=Z,1μm,34.5s						
MSO	Missoula	120.20	22	ePKPdf	PKPdf	13 50 02.8	-4.4
CHMT	Chamberlain Mo	120.38	21	ePKPdf	PKPdf	13 50 04.4	-3.2
WDC	Whiskeytown Da	121.25	32	ePKPdf	PKPdf	13 50 06.0	-3.5
MOD	Modoc	121.41	30	ePKPdf	PKPdf	13 50 06.4	-3.3
ULM	Lac du Bonnet	121.57	7	PKP	PKPdf	13 50 05.2	-4.7
	comp=Z,3.4nm,0.7s,baz=18,slow=1.0,SNR=5.2						
ULM	Lac du Bonnet	121.57	7	ePKPdf	PKPdf	13 50 05.5	-4.3
ULM				epPKPdf		13 50 12.7	
DGMT	Dagmar	121.73	14	ePKPdf	PKPdf	13 50 08.8	-1.4
WVOR	Wild Horse Val	121.80	28	ePKPdf	PKPdf	13 50 07.8	-2.7
BOZ	Bozeman (W)	122.05	21	ePKPdf	PKPdf	13 50 08.6	-2.2
MCMT	McKenzie Canyo	122.30	22	ePKPdf	PKPdf	13 50 08.1	-3.2
MCMT				epPKPdf		13 50 19.6	
HLID	Hailey	122.74	24	ePKPdf	PKPdf	13 50 09.6	-2.7
QLMT	Earthquake Lak	122.82	21	ePKPdf	PKPdf	13 50 09.1	-3.3
LAO	LASA Array	122.84	17	ePKPdf	PKPdf	13 50 09.9	-2.5
YMR	Madison River	123.13	21	ePKPdf	PKPdf	13 50 10.8	-2.1
YFT	Old Faithful	123.36	21	ePKPdf	PKPdf	13 50 11.3	-2.2
WCN	Washoe City	123.64	31	PKPdf	PKPdf	13 50 11.5	-2.7
MOOW	Moose Ponds	124.00	22	ePKPdf	PKPdf	13 50 12.1	-2.6
TPAW	Teton Pass	124.15	22	ePKPdf	PKPdf	13 50 12.4	-2.6
LOHW	Long Hollow	124.17	21	ePKPdf	PKPdf	13 50 11.8	-3.3
WUWY	Wally Ulrich	124.19	22	ePKPdf	PKPdf	13 50 12.3	-2.8
SNOW	Snow King Moun	124.25	22	ePKPdf	PKPdf	13 50 12.9	-2.3
EYMN	Ely	124.31	5	ePKPdf	PKPdf	13 50 11.7	-3.5
ELK	Elko	124.69	27	ePKPdf	PKPdf	13 50 13.1	-3.0
NVAR	Mina Array Bea	125.04	31	PKP	PKPdf	13 50 14.2	-2.7
	comp=Z,1.8nm,0.7s,baz=319,slow=1.0,SNR=5.2						
PDAR	Pinedale Array	125.28	21	PKP	PKPdf	13 50 13.5	-3.8
	comp=Z,3.2nm,0.8s,SNR=9.5						
PDAR				PKKPbc		13 59 58.5	
	comp=Z,0.6nm,0.6s,baz=135,slow=4.2,SNR=4.7						
BGU	Big Grassy Mou	125.50	25	ePKPdf	PKPdf	13 50 15.0	-2.7
HWUT	Hardware Ranch	125.53	23	ePKPdf	PKPdf	13 50 13.7	-4.0
DUG	Dugway	126.20	25	ePKPdf	PKPdf	13 50 16.3	-2.8
TAOE	Nuku Hiva Isla	126.38	95	eLR	LR	14 29 48.6	
TRCR	Troy Canyon	126.45	29	ePKPdf	PKPdf	13 50 17.2	-2.4
NLU	North Lily Min	126.71	25	ePKPdf	PKPdf	13 50 17.1	-2.9
SADO	Sadowa	127.34	354	PKP	PKPdf	13 50 17.2	-3.9
	comp=Z,4.6nm,0.8s,baz=330,slow=7.6,SNR=2.4						
TMUT	Trail Mountain	127.63	25	ePKPdf	PKPdf	13 50 18.7	-3.1
MVU	Marysvale	127.86	26	ePKPdf	PKPdf	13 50 19.8	-2.6
MSU	Marysvale	127.87	26	ePKPdf	PKPdf	13 50 20.0	-2.4
SRU	San Rafael	128.07	24	ePKPdf	PKPdf	13 50 18.5	-4.2
RKT	Rikitea	130.58	114	eSS	SS	14 10 13.1	+6.6
RKT				eLR	LR	14 32 31.1	
	comp=Z,675nm,28.5s						
ANMO	Albuquerque	133.29	23	PKPdf	PKPdf	13 50 30.3	-2.4
WVT	Waverly	136.29	2	ePKPdf	PKPdf	13 50 35.2	-3.0
MIAR	Mount Ida	137.29	9	ePKPdf	PKPdf	13 50 37.4	-2.7
LTX	Lajitas	139.34	24	ePKPdf	PKPdf	13 50 40.8	-3.2
TXAR	Lajitas Array	139.34	24	PKP	PKPdf	13 50 41.6	-2.4
	comp=Z,3.0nm,1.1s,SNR=4.4						
TXAR				PP	PP	13 53 34.5	-3.1
	comp=Z,1.3nm,0.8s,slow=2.7,SNR=4.0						
JCT	Junction City	139.70	19	ePKPdf	PKPdf	13 50 41.6	-3.0
BAO	Brasilia Array	142.09	255	P	PKPdf	13 50 43.2	-6.0
BDFB	Brasilia	142.11	255	PKhKP		13 50 42.6	
	comp=Z,4.4nm,0.6s,baz=150,slow=5.2,SNR=4.4						
BDFB				PKP	PKPdf	13 50 47.6	-1.7
	comp=Z,12nm,0.9s,baz=123,slow=4.8,SNR=8.6						
PLCA	Paso Flores	144.43	200	PKP	PKPdf	13 50 47.6	-5.0
	comp=Z,11nm,0.7s,baz=146,slow=4.1,SNR=8.1						
PLCA	Paso Flores	144.43	200	ePKPdf	PKPdf	13 50 48.4	-4.2
SJG	San Juan	147.70	323	PKPbc	PKPdf	13 50 58.1	-0.6
	comp=Z,18nm,0.5s,baz=136,slow=22,SNR=3.2						
SJG	San Juan	147.70	323	ePKPbc	PKPdf	13 50 58.4	-0.3
TEIG	Tepich	152.08	5	ePKPbc	PKPdf	13 51 10.3	+4.7
SDV	Santo Domingo	157.50	317	PKP	PKPdf	13 51 09.2	-3.8
	comp=Z,1.8nm,0.4s,baz=13,slow=17,SNR=2.1						
SDV				PKPab	PKPab	13 51 42.2	-0.6
	comp=Z,11nm,1.0s,baz=17,slow=6.1,SNR=6.2						
SDV	Santo Domingo	157.50	317	PKP	PKPdf	13 51 09.2	-3.8
SDV				PKPab	PKPab	13 51 42.2	-0.5
SDV				ePKPab	PKPab	13 51 42.6	-0.2
LPAZ	La Paz	160.66	242	ePKPdf	PKPdf	13 51 14.7	-1.9
ROSC	El Rosal	162.93	317	PKP	PKPdf	13 51 17.0	-2.0
	comp=Z,3.8nm,0.4s,baz=102,slow=22,SNR=5.1						

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*CSEM **25** 13:32:53.2±0.1, 30.78N×56.86E, h16^{km}, ML3.7/1, Error ellipse: s-maj=4.8km s-min=2.5km az=48.0*
*THR **25** 13:32:53.0±0.5, 30.81N×56.87E, h14^{km}±6^{km}, ML3.2*
*TEH **25** 13:33:02.1, 30.92N×56.24E, h7^{km}, Mn3.5*
ISC 25 13:32:53.1±0.8**, 30.82N**±0.06×**56.87E**±0.10**, h10^{km}, n16, σ0^{s}97**/18**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.84	186	ePG	Pg	13 33 08.8	-1.2
KRBR				AML	AML	13 33 22.9	
	comp=N,852nm,0.1s						
IBAF	Bafgh	1.35	305	Pg	Pg	13 33 18.0	-2.2
IMEH	Mehriz	2.02	287	Pn	Pn	13 33 28.8	+1.2
ICHK	Chekchek	2.54	305	Pn	Pn	13 33 35.3	+0.2
BNDS	Bandar-Abbas	3.46	190	ePN	Pn	13 33 48.8	+0.6
BNDS				AML	AML	13 34 50.4	
	comp=N,49nm,0.6s						
ISRV	Sarvestan	3.56	247	Pn	Pn	13 33 48.4	-1.2
ZHSF	Zahedan	3.59	109	ePN	Pn	13 33 50.2	+0.2
ZHSF				AML	AML	13 34 56.9	
	comp=N,41nm,0.8s						
ZHSF	Zahedan	3.59	109	ePn	Pn	13 33 50.2	+0.2
	SNR=52						
NASN	Na'in	3.98	301	ePN	Pn	13 33 56.1	+0.5
NASN				eSG	Sg	13 34 57.2	-8.4
NASN				AML	AML	13 35 08.9	
	comp=N,40nm,0.7s						
NASN	Na'in	3.98	301	ePn	Pn	13 33 56.1	+0.5
	SNR=52						
NASN				eSg	Sg	13 34 57.2	-8.4
	comp=N,40nm,0.7s,SNR=90						
IMOK	Mook	4.01	245	Pn	Pn	13 33 57.7	+1.6
IFIR	Firoozkooh	5.92	325	Pn	Pn	13 34 22.3	-0.7
IDMV	Damavand	6.24	321	Pn	Pn	13 34 28.0	+0.5
DAMV	Damavand	6.31	321	ePN	Pn	13 34 28.4	-0.2
IAFJ	Afjeh	6.62	321	Sn	Sn	13 35 40.9	-8.3
IAFJ	Afjeh	6.62	321	Pn	Pn	13 34 33.2	+0.3

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*IDC **25** 13:38:32.6±0.9, 7.48N×94.00E, mb4.0/10, mb1 4.2/11, mb1mx4.1/20, mbtmp4.0/11, ML4.5/1, MS4.9/1, Ms1 4.9/1, ms1mx4.3/17, Error ellipse: s-maj=39.4km s-min=19.3km az=52.0*
*NEIC **25** 13:38:37.1±0.6, 7.46N×94.03E, h30^{km}, mb4.5/5, Error ellipse: s-maj=14.3km s-min=10.0km az=57.0*
ISC 25 13:38:35.5±0.7**, 7.48N**±0.10×**94.1E**±0.1**, h33^{km}, n22, σ0^{s}93**/19**, mb4.1**/14**, MS4.9**/1**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.85	108	ePn	Pn	13 40 15.5	-0.9
CM31	Chiang Mai Arr	11.88	23	ePn	P	13 41 24.8	-0.9
CMAR	Chiang Mai Arr	11.88	23	Pn	P	13 41 25.2	-0.4
	0.9nm,0.3s,baz=212,slow=14,SNR=16						
HYB	Hyderabad	18.11	305	i P	P	13 42 53.0	+6.7
KMI	Kunming	19.39	24	P	P	13 43 03.8	+2.3
	15nm,1.0s						
LSA	Lhasa	22.28	353	eP	P	13 43 33.2	+1.9
	13nm,0.6s,mb4.5						
SONM	Songino Array	41.55	12	P	P	13 46 21.6	-0.1
	1.4nm,0.6s,mb3.8,baz=189,slow=9.5,SNR=5.6						
SONM				PcP	PcP	13 48 19.8	+0.6
	0.5nm,0.6s,baz=214,slow=5.2,SNR=3.1						
KURK	Kurchatov	44.98	346	eP	P	13 46 48.5	-1.0
	9.3nm,1.1s,mb4.5						
ZAL	Zalesovo	46.93	352	P	P	13 47 04.4	-0.3
	3.5nm,0.4s,mb4.6,baz=297,slow=4.7,SNR=6.2						
WRA	Warramunga Arr	48.06	125	P	P	13 47 14.7	+0.6
	2.1nm,0.8s,mb4.2,baz=305,slow=8.4,SNR=5.6						
BVAR	Borovoye Array	49.35	341	P	P	13 47 24.4	+0.8
	2.5nm,0.9s,mb4.2,baz=172,slow=10,SNR=2.3						
ASAR	Alice Springs	49.69	130	P	P	13 47 27.1	+0.5
	1.3nm,1.1s,mb3.9,baz=303,slow=7.8,SNR=6.4						
CHKZ	Chkalovo	49.84	342	eP	P	13 47 26.8	-0.6
	4.5nm,0.6s,mb4.7						
CTA	Charters Tower	58.14	119	LR	LR	14 15 39.0	
	comp=Z,927nm,19.4s,MS4.9,baz=282,slow=38						
BRTR	Keskin Array B	62.66	311	P	P	13 48 58.6	-0.8
	0.4nm,0.4s,mb3.9,baz=108,slow=4.6,SNR=3.0						
FINES	FINESS Array B	73.05	332	P	P	13 50 03.4	-0.5
	1.3nm,0.6s,mb4.0,baz=104,slow=6.6,SNR=6.0						
KAF	Kangasniemi	73.13	333	ep	P	13 50 02.9	-1.4
	0.4nm,0.4s,mb3.7						
GERES	GERESS Array B	78.10	318	P	P	13 50 34.0	+1.2
	0.6nm,0.8s,mb3.6,baz=90,slow=3.9,SNR=3.7						
HFS	Hagfors	78.78	330	P	P	13 50 36.6	+0.2
	1.9nm,0.8s,mb4.1,baz=101,slow=7.3,SNR=5.8						
NOA	NORSAR Array B	80.06	331	P	P	13 50 43.3	0.0
	1.1nm,0.9s,mb3.8,baz=102,slow=5.1,SNR=3.0						
NVAR	Mina Array Bea	125.27	31	PKP	PKPdf	13 57 36.1	+2.7
	0.3nm,0.7s,baz=270,slow=0.9,SNR=2.4						
PLCA	Paso Flores	144.17	200	PKP	PKPdf	13 58 12.2	+4.0
	2.7nm,0.9s,baz=199,slow=6.7,SNR=3.6						

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*IDC **25** 13:42:26.5±9.1, 36.42N×71.07E, h198^{km}±85^{km}, mb3.4/10, mb1 3.6/11, mb1mx3.3/22, mbtmp3.9/11, Error ellipse: s-maj=27.3km s-min=19.5km az=84.0*
*NEIC **25** 13:42:27.5±1.6, 36.52N×71.03E, h204^{km}±15^{km}, mb3.8/3, Error ellipse: s-maj=21.4km s-min=6.6km az=59.0*
*MOS **25** 13:42:28.9±1.7, 36.77N×71.28E, h225^{km}, mb3.4/1, Error ellipse: s-maj=28.4km s-min=13.8km az=108.8*
*NNC **25** 13:42:29.8±17.0, 36.51N×73.01E, mpv4.1, Error ellipse: s-maj=710.9km s-min=205.5km az=98.0*
ISC 25 13:42:26.7±0.5**, 36.54N**±0.03×**71.05E**±0.08**, h209^{km}**±6^{km}**, n47, σ0^{s}94**/54**, mb3.5**/10**, 3C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.80	165	⇑P	P	13 43 15.9	+1.0
CEP				S	S	13 43 45.0	-7.2
THW	Thamme Wali	3.78	171	⇑P	P	13 43 27.2	+0.6
SBDP	Sheikh Budin	4.23	183	P	P	13 43 31.8	-0.4
SBDP				S	S	13 44 20.0	-3.0
DRP	Derazinda	4.83	189	P	P	13 43 40.7	+0.9
THN	Thein Dam	5.62	135	eP	P	13 43 50.6	+0.7
THN				eS	S	13 44 53.8	-0.8
DLH	Dalhousie	5.69	133	eP	P	13 43 52.0	+1.3
DLH				e		13 46 58.0	
AML	Almayashu	5.95	19	P	P	13 43 54.1	0.0
	SNR=38						
UCH	Uchtor	6.29	24	P	P	13 43 58.6	+0.2
	SNR=37						
KZA	Kyzart	6.42	29	P	P	13 43 59.8	-0.4
	SNR=12						
EKS2	Erkin-Say	6.47	18	P	P	13 44 00.9	+0.1
	SNR=9.2						
AAK	Ala-Archa	6.64	23	P	P	13 44 03.3	+0.2
	SNR=10						
AAK	Ala-Archa	6.64	23	⇑P	P	13 44 03.1	0.0
	4.0nm,0.2s,baz=210,slow=12						
AAK				⇓S	S	13 45 16.2	-2.1
	13nm,0.5s,baz=210,slow=12						
AAK	Ala-Archa	6.64	23	ePn	P	13 44 02.1	-1.0
AAK				eSn	S	13 45 15.9	-2.4
KBK	Karagaybulak	6.81	25	P	P	13 44 06.4	+1.1
	SNR=11						
ULHL	Ulahol	6.98	34	P	P	13 44 07.9	+0.6
	SNR=16						
SDNR	Sundarnagar	7.03	134	eS	S	13 45 26.2	-1.0
CHMS	Chumysh	7.05	23	P	P	13 44 08.6	+0.1
	SNR=6.5						
USP	Ospenovka	7.23	20	P	P	13 44 10.1	-0.5
	SNR=9.1						
TKM2	Tokmak 2	7.28	27	P	P	13 44 11.4	+0.1
	SNR=11						
SMLA	Simla	7.41	135	⇓iP	P	13 44 10.7	-2.4
SMLA				i S	S	13 45 32.0	-4.2
	466nm,0.3s						
MK31	Makanchi Array	13.24	36	P	P	13 45 27.8	+0.1
	0.3nm,0.3s,baz=210,slow=12,SNR=18						
KOLN	Koldanda	13.75	126	eP	P	13 45 34.0	-0.1
	5.7nm,0.2s						
GKN	Gorkha	14.29	123	eP	P	13 45 42.9	+2.1
	14nm,0.2s						
DMN	Daman	14.86	123	eP	P	13 45 48.4	+0.5
	11nm,0.4s						
KKN	Kakani	14.86	122	eP	P	13 45 48.4	+0.5
	10nm,0.4s						
PKI	Pulchoki	15.09	122	eP	P	13 45 49.9	-0.8
	9.8nm,0.4s						
KURK	Kurchatov	15.18	19	P	P	13 45 51.4	-0.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	15.18	19	P	P	13 45 51.4	-0.3
	comp=Z,3.8nm,0.9s						
GUN	Gumba	15.20	120	eP	P	13 45 54.2	+2.1
	comp=Z,11nm,0.3s						
JIRN	Jiri	15.57	120	eP	P	13 45 56.6	0.0
	comp=Z,16nm,0.3s						
BVAR	Borovoye Array	16.49	359	P	P	13 46 07.7	+0.1
	comp=Z,0.6nm,0.3s,baz=162,slow=10,SNR=9.4						
HYB	Hyderabad	20.17	159	eP	P	13 46 52.0	+5.5
HYB				eS	S	13 50 02.0	-14
HYB	Hyderabad	20.17	159	i P	P	13 46 49.5	+3.0
FINES	FINESS Array B	37.48	326	P	P	13 49 21.2	-0.1
	comp=Z,0.6nm,0.4s,mb3.4,baz=121,slow=11,SNR=3.7						
ARCES	ARCESS Array B	41.13	338	P	P	13 49 51.7	+0.3
	comp=Z,3.6nm,0.8s,mb3.9,baz=117,slow=8.1,SNR=6.4						
HFS	Hagfors	43.06	322	P	P	13 50 07.1	+0.1
	comp=Z,0.8nm,0.5s,mb3.4,baz=182,slow=40,SNR=3.1						
NB2	NORSAR Subarra	44.38	323	P	P	13 50 16.9	-0.6
	comp=Z,0.8nm,0.6s,mb3.2,baz=96,slow=7.9						
NB2	NORSAR Subarra	44.38	323	P	P	13 50 16.9	-0.6
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.3						
NOA	NORSAR Array B	44.38	323	P	P	13 50 17.4	-0.2
	comp=Z,0.8nm,0.6s,mb3.2,baz=96,slow=7.7,SNR=4.6						
MATP	Matopo	69.46	223	P	P	13 53 13.4	-0.9
	comp=Z,0.9nm,0.4s,mb3.8,baz=52,slow=3.6,SNR=3.8						
INK	Inuvik	73.86	9	P	P	13 53 40.4	+0.8
	comp=Z,0.9nm,0.5s,mb3.6,baz=344,slow=4.4,SNR=10						
ILAR	Eielson Array	74.73	16	P	P	13 53 44.2	-0.3
	comp=Z,0.2nm,0.5s,mb3.0,baz=308,slow=4.7,SNR=6.5						
YKA	Yellowknife Ar	81.21	3	P	P	13 54 20.6	+0.7
	comp=Z,0.6nm,0.4s,mb3.6,baz=351,slow=5.4,SNR=19						
YKA	Yellowknife Ar	81.21	3	P	P	13 54 20.6	+0.7
WRA	Warramunga Arr	81.97	122	P	P	13 54 23.9	-0.7
	comp=Z,0.8nm,0.5s,mb3.6,baz=324,slow=4.9,SNR=30						
WB2	Warramunga Arr	81.98	122	eP	P	13 54 23.8	-0.9
ASAR	Alice Springs	84.24	125	P	P	13 54 35.6	-0.5
	comp=Z,0.8nm,0.5s,mb3.7,baz=313,slow=4.8,SNR=17						

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*IDC **25** 13:42:35.2±0.9, 7.87N×93.89E, mb3.9/10, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, ML4.1/1, Error ellipse: s-maj=48.5km s-min=18.3km az=53.0*
*NEIC **25** 13:42:39.6±0.5, 7.72N×93.84E, h30^{km}, mb4.4/6, Error ellipse: s-maj=13.5km s-min=8.7km az=54.0*
ISC 25 13:42:38.6±0.7**, 7.79N**±0.09×**93.9E**±0.1**, h33^{km}, n26, σ0^{s}92**/24**, mb4.1**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.15	110	ePn	Pn	13 44 15.8	-7.9
CM31	Chiang Mai Arr	11.68	24	ePn	P	13 45 25.2	-0.9
	3.8nm,0.6s						
CMAR	Chiang Mai Arr	11.68	24	Pn	P	13 45 26.1	+0.1
	0.4nm,0.3s,baz=212,slow=14,SNR=19						
KSM	Kuching	17.51	110	eP	P	13 46 41.1	-0.8
KMI	Kunming	19.19	25	P	P	13 47 04.0	+1.5
	12nm,0.9s						
LSA	Lhasa	21.95	354	eP	P	13 47 33.5	+2.4
	30nm,1.1s,mb4.6						
KKM	Kota Kinabalu	22.22	93	eP	P	13 47 33.6	-0.4
SONM	Songino Array	41.30	13	P	P	13 50 22.1	-0.5
	1.4nm,0.8s,mb3.6,baz=192,slow=8.7,SNR=10						
SONM				PcP	PcP	13 52 18.4	-3.1
	0.4nm,0.8s,baz=162,slow=4.6,SNR=3.0						
KURK	Kurchatov	44.63	346	eP	P	13 50 49.5	-0.2
	6.2nm,1.0s,mb4.4						
ZAL	Zalesovo	46.60	353	P	P	13 51 05.2	0.0
	2.1nm,0.7s,mb4.2,baz=299,slow=5.0,SNR=7.2						
WRA	Warramunga Arr	48.41	125	P	P	13 51 20.2	+0.3
	2.2nm,1.0s,mb4.2,baz=305,slow=8.5,SNR=8.4						
WRAB	Tennant Creek	48.41	125	eP	P	13 51 19.8	-0.1
	5.2nm,1.0s,mb4.5						
BVAR	Borovoye Array	48.99	341	P	P	13 51 22.5	-1.4
	1.9nm,1.1s,mb4.1,baz=166,slow=6.1,SNR=4.3						
CHKZ	Chkalovo	49.48	342	eP	P	13 51 27.3	-0.4
	4.4nm,0.9s,mb4.5						
ASAR	Alice Springs	50.05	130	P	P	13 51 33.6	+1.2
	2.8nm,1.1s,mb4.2,baz=303,slow=8.3,SNR=8.3						
ASAR				PcP	PcP	13 52 50.7	-1.4
	0.6nm,0.9s,baz=330,slow=4.8,SNR=2.9						
ASAR	Alice Springs	50.05	130	P	P	13 51 33.6	+1.2
ASAR				PcP	PcP	13 52 50.7	-1.4
BRTR	Keskin Array B	62.30	311	P	P	13 52 59.3	-0.7
	0.3nm,0.4s,mb3.8,baz=112,slow=7.8,SNR=2.8						
FINES	FINESS Array B	72.67	332	P	P	13 54 03.9	-0.7
	1.7nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=4.3						
FINES	FINESS Array B	72.67	332	P	P	13 54 03.9	-0.7
GERES	GERESS Array B	77.73	318	P	P	13 54 34.5	+0.5
	0.3nm,0.4s,mb3.6,baz=63,slow=3.0,SNR=4.7						
HFS	Hagfors	78.41	330	P	P	13 54 38.9	+1.5
	2.9nm,0.9s,mb4.2,baz=117,slow=6.4,SNR=3.5						
NB2	NORSAR Subarra	79.69	331	P	P	13 54 44.0	-0.3
	2.3nm,0.9s,mb4.1,baz=91,slow=4.8						
NOA	NORSAR Array B	79.69	331	P	P	13 54 43.7	-0.6
	0.7nm,0.7s,mb3.7,baz=90,slow=5.9,SNR=4.0						
NOA	NORSAR Array B	79.69	331	P	P	13 54 43.7	-0.6
PDAR	Pinedale Array	125.33	21	PKP	PKPdf	14 01 37.4	+0.9
	0.2nm,0.5s,baz=342,slow=2.9,SNR=2.4						
PLCA	Paso Flores	144.39	200	PKP	PKPdf	14 02 13.6	+1.9
	2.8nm,1.2s,baz=62,slow=5.7,SNR=3.2						

MAN 25 13:49:36.6, 12.66N×123.18E, h24^{km}, mb4.6, ML3.4, MS3.3, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.53	125	i P	Pb	13 49 40.0	-7.3
MMPH				i S	Sb	13 49 55.0	+0.5
RCP	Roxas	1.18	201	⇑eP	Pn	13 49 57.5	-0.3
RCP				eS	Sb	13 50 12.9	-0.1
GQP	Guinayangan	1.43	330	⇓iP	Pn	13 50 00.8	-0.5
GQP				i S	Sn	13 50 20.0	+0.5
LQP	Lukban	2.15	312	eP	Pn	13 50 11.9	+0.1
PLP	Palo	2.31	130	eP	Pn	13 50 13.7	-0.3
PLP				eS	Sn	13 50 42.8	+0.9
LLP	Lapu-Lapu	2.46	162	eP	Pn	13 50 15.2	-1.0
LLP				eS	Sn	13 50 46.4	+0.7
TGY	Tagaytay City	2.61	303	⇓iP	Pn	13 50 22.8	+4.5
TGY				i S	Sn	13 50 49.9	+0.3
TBP	Tagbilaran	3.03	167	eP	Pn	13 50 24.6	+0.3
LUBP	Lubang	3.05	291	eP	Pn	13 50 24.5	0.0
PCPH	Palayan	3.52	325	eP	Pn	13 50 30.2	-1.0

IDC 25 13:53:56.1±2.0**, 7.59N**×**94.02E, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.6**/18**, mbtmp3.6**/5**, Error ellipse: s-maj=87.8km s-min=23.5km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	41.46	13	P	P	14 01 44.8	-1.5
	0.5nm,0.8s,baz=192,slow=7.0,SNR=3.7						
ZAL	Zalesovo	46.81	353	P	P	14 02 27.3	-1.9
	0.6nm,0.4s,baz=333,slow=16,SNR=2.5						
WRA	Warramunga Arr	48.20	125	P	P	14 02 37.7	-2.9
	0.6nm,1.1s,baz=305,slow=8.5,SNR=5.8						
ASAR	Alice Springs	49.83	130	P	P	14 02 52.0	-1.2
	0.6nm,1.2s,baz=303,slow=8.1,SNR=2.9						
HFS	Hagfors	78.64	330	P	P	14 05 59.7	-1.5
	0.7nm,0.4s,baz=100,slow=8.8,SNR=4.5						

CASC 25 13:57:31.3±1.8**, 13.62N**×**90.76W, h35^{km}**±14^{km}**, MD3.9, ML4.1, 4C-4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.63	28	eP	P	13 57 44.4	+0.7
IXG				eS	S	13 57 53.5	+0.8
IXG				AML	AML	13 57 56.6	
	comp=N,7μm,0.4s						
FUG	Fuego 3	0.83	355	⇑eP	P	13 57 47.3	+0.8
NBG	Las Nubes	1.05	23	⇑eP	P	13 57 50.6	+0.9
NBG				eS	S	13 58 05.8	+2.6
NBG				AML	AML	13 58 08.3	
	comp=N,5μm,0.4s						
JAT	Jato	1.10	310	⇓eP	P	13 57 51.0	+0.6
JAT				eS	S	13 58 04.1	-0.5
RTR	El Retiro	1.12	75	⇓eP	P	13 57 50.9	+0.3
RTR				eS	S	13 58 05.9	+0.8
SBLS	San Blas	1.13	78	⇓eP	P	13 57 50.8	0.0
SBLS				eS	S	13 58 05.5	+0.2
SNJE	San Jose	1.15	77	⇓eP	P	13 57 51.1	0.0
SNJE				eS	S	13 58 06.8	+0.9
BOQS	Boqueron	1.44	85	⇑eP	P	13 57 55.4	0.0
BOQS				eS	S	13 58 13.2	-0.1
LFRS	El Faro	1.65	90	eP	P	13 57 58.2	-0.2
LFRS				eS	S	13 58 18.2	-0.4
LCBS	La Ceiba	1.73	88	⇑eP	P	13 57 59.8	+0.3
LCBS				eS	S	13 58 21.7	+1.1
SNVI	San Vicente	1.87	90	eP	P	13 58 01.5	0.0
SNVI				eS	S	13 58 23.7	-0.3
CNCH	Conchagua	2.87	96	eP	P	13 58 15.5	-0.2
CNCH				eS	S	13 58 50.0	+0.6

MAN 25 14:21:00.7, 12.67N×123.19E, h12^{km}, mb3.9, ML2.6, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	San Andres	0.82	322	eP	Pb	14 21 16.9	+0.5
OTRP	Odiongan	1.18	255	eP	Pb	14 21 21.6	-1.0
PVCP	Virac	1.32	46	eP	Pb	14 21 23.8	-1.1
CNP	Catarman	1.45	96	eP	Pn	14 21 26.4	-0.6
BOAC	Boac	1.52	301	eP	Pn	14 21 27.5	-0.5
SJMP	San Jose	2.03	264	eP	Pn	14 21 35.4	+0.1
GUIM	Jordan	2.12	196	eP	Pn	14 21 37.3	+0.8
CUYO	Cuyo Island	2.79	230	eP	Pn	14 21 45.4	-0.7
BUSP	Coron	2.99	257	eP	Pn	14 21 48.6	-0.4
ENPP	El Nido	3.96	249	eP	Pn	14 22 01.7	-1.0

MEX 25 14:32:44.9±0.8**, 18.26N**×**103.05W, h11^{km}**±20^{km}**, MD3.8, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	Colima	1.10	327	eP	Pb	14 33 02.0	-3.4
COLM				i S	Sb	14 33 16.2	-3.4
SFJM	Santa Fe	2.21	0	i P	Pn	14 33 19.0	-3.1
SFJM				i S	Sn	14 33 45.0	-4.7
CJM	Chamela	2.25	303	eP	Pn	14 33 18.9	-3.8
CJM				i S	Sn	14 33 46.3	-4.4
MOIG	Morelia	2.26	51	i P	Pn	14 33 19.8	-2.9
MOIG				i S	Sn	14 33 44.9	-5.8

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*IDC **25** 14:49:36.1±2.7, 51.26N×178.87W, mb3.5/6, mb1 3.7/6, mb1mx3.6/23, mbtmp3.5/6, Error ellipse: s-maj=77.3km s-min=27.0km az=174.0*
*NEIC **25** 14:49:42.9±1.6, 51.37N×178.85W, h47^{km}±11^{km}, ML3.2(AEIC), Error ellipse: s-maj=34.0km s-min=14.7km*

az=174.0

ISC 25 14:49:39.5±1.5,51.1N±0.2×179.0W±0.2,h44^{km}±12^{km},n16, σ0^{s}85/23,mb3.5/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	1.29	60	P	P	14 50 00.9	-0.5
KIWB	Kanaga Island	1.38	57	P	P	14 50 02.3	-0.5
KIWB				S	S	14 50 21.9	+1.8
KIKV	Kanaga Island	1.39	56	P	P	14 50 02.5	-0.4
KIKV				S	S	14 50 19.6	-0.6
KINC	Kanaga Island	1.44	55	P	P	14 50 03.5	-0.1
KINC				S	S	14 50 21.4	0.0
ADAG	Mount Adagdak	1.74	60	P	P	14 50 07.7	-0.2
ADAG				S	S	14 50 29.3	+0.3
GSTD	Great Sitkin T	2.02	61	P	P	14 50 11.9	0.0
GSTD				S	S	14 50 35.7	-0.4
GSMY	Great Sitkin M	2.07	62	P	P	14 50 12.8	+0.2
GSMY				S	S	14 50 37.7	+0.5
GSTR	Great Sitkin T	2.09	61	P	P	14 50 13.0	+0.2
GSIG	Igitkin Island	2.12	65	P	P	14 50 13.6	+0.3
ATKA	Atka Island	3.20	68	P	P	14 50 27.9	-0.7
ATKA				S	S	14 51 06.9	+1.1
ILAR	Eielson Array	21.53	38	P	P	14 54 25.4	-1.0
	5.2nm,1.4s,mb3.8,baz=239,slow=8.3,SNR=5.9						
INK	Inuvik	27.75	35	P	P	14 55 24.2	-1.4
	0.5nm,0.7s,mb3.2,baz=262,slow=7.9,SNR=3.8						
YKA	Yellowknife Ar	35.51	46	P	P	14 56 31.8	-1.8
	0.1nm,0.3s,mb3.2,baz=280,slow=7.4,SNR=4.4						
PDAR	Pinedale Array	46.52	72	P	P	14 58 04.5	+0.4
	1.2nm,0.8s,mb3.9,baz=316,slow=3.8,SNR=12						
SONM	Songino Array	46.63	297	P	P	14 58 06.4	+1.6
	0.1nm,0.4s,mb3.1,baz=66,slow=8.6,SNR=6.3						
BRTR	Keskin Array B	85.12	335	P	P	15 02 12.9	+1.4
	0.7nm,0.8s,mb3.8,baz=34,slow=5.2,SNR=3.5						

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*IDC **25** 14:55:40.0±1.2,1.70N×92.07E,mb3.7/7,mb1 4.0/8, mb1mx3.8/17,mbtmp3.8/8,ML3.7/1,MS3.3/1,Ms1 3.5/1, ms1mx3.1/18,Error ellipse: s-maj=43.9km s-min=21.7km az=50.0*

*BJI **25** 14:55:45.3,1.90N×92.20E,h31^{km},mb4.4,Ms4.2,Msz3.8*

*NEIC **25** 14:55:45.3±0.8,1.86N×92.24E,mb4.4/9,Error ellipse: s-maj=18.2km s-min=10.7km az=218.0*

ISC 25 14:55:43.6±0.8,1.86N±0.10×92.24E±0.09,h33^{km},n31, σ1^{s}24/30,mb4.2/17,MS3.8/1,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	9.06	68	*e*Pn	P	14 57 53.6	-1.4
CM31	Chiang Mai Arr	17.75	21	*e*P	P	14 59 48.5	-1.5
	6.8nm,0.8s						
CMAR	Chiang Mai Arr	17.75	21	P	P	14 59 49.5	-0.5
	0.1nm,0.3s,baz=216,slow=13,SNR=27						
CMAR				LR	LR	15 07 33.8	
	comp=Z,85nm,18.2s,baz=220,slow=40						
KSM	Kuching	18.07	91	*e*P	P	14 59 55.4	+1.5
HYB	Hyderabad	20.49	320	*e*P	P	15 00 23.0	+1.5
HYB	Hyderabad	20.49	320	*i* P	P	15 00 23.0	+1.5
KKM	Kota Kinabalu	24.27	79	*e*P	P	15 00 59.5	+0.3
KMI	Kunming	25.25	23	P	P	15 01 11.0	+2.5
KMI				AP	pP	15 01 20.8	+3.0
KMI				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.2						
KMI				LR	LR		
	comp=N,228nm,14.1s,MS4.0						
KMI				LR	LR		
	comp=E,236nm,11.4s,MS4.0						
KMI				LR	LR		
	comp=Z,189nm,15.2s,MS3.7						
KMI	Kunming	25.25	23	P	P	15 01 11.1	+2.6
	comp=Z,11nm,1.3s,mb4.2						
KMI				pP	pP	15 01 20.7	+2.9
KMI				LR	LR		
	comp=Z,190nm,15.2s,MS3.7						
JIRN	Jiri	26.30	348	*e*P	P	15 01 19.2	+1.0
DMN	Daman	26.50	346	*e*P	P	15 01 19.3	-0.8
	comp=Z,20nm,1.1s,mb4.5						
GUN	Gumba	26.61	347	*e*P	P	15 01 20.6	-0.5
KKN	Kakani	26.63	346	*e*P	P	15 01 19.3	-2.0
GKN	Gorkha	26.99	345	*e*P	P	15 01 19.4	-5.2
	comp=Z,19nm,0.9s,mb4.6						
LSA	Lhasa	27.70	358	P	P	15 01 34.0	+2.9
LSA	Lhasa	27.70	358	*e*P	P	15 01 33.4	+2.3
	comp=Z,17nm,0.6s,mb4.8						
ENH	Enshi	32.65	28	*e*P	P	15 02 13.6	-1.3
	comp=Z,4.9nm,0.7s,mb4.5						
XAN	Xi'an	35.61	24	P	P	15 02 40.5	+0.2
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
BJI	Beijing	43.78	27	*e*P	P	15 03 50.0	+2.0
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.4						
BJI	Beijing	43.78	27	*e*P	P	15 03 50.0	+2.0
	comp=Z,7.0nm,0.9s,mb4.4						
WRA	Warramunga Arr	46.63	120	P	P	15 04 10.3	-0.6
	comp=Z,0.7nm,0.8s,mb3.6,baz=299,slow=8.7,SNR=6.2						
WRAB	Tennant Creek	46.63	120	*e*P	P	15 04 11.0	0.0
	comp=Z,3.4nm,0.8s,mb4.3						
SONM	Songino Array	47.41	13	P	P	15 04 18.2	+1.5
	comp=Z,2.1nm,0.8s,mb4.1,baz=193,slow=8.5,SNR=20						
ASAR	Alice Springs	47.80	125	P	P	15 04 19.8	-0.4
	comp=Z,0.2nm,0.9s,mb3.1,baz=297,slow=7.3,SNR=2.8						
KURK	Kurchatov	50.02	349	*e*P	P	15 04 36.8	-0.2
	comp=Z,1.4nm,0.8s,mb4.0						
ZAL	Zalesovo	52.26	354	P	P	15 04 54.2	+0.4
	comp=Z,1.8nm,0.5s,mb4.3,baz=287,slow=6.8,SNR=3.1						
CHKZ	Chkalovo	54.64	344	*e*P	P	15 05 10.5	-0.9
	comp=Z,3.1nm,0.8s,mb4.4						
CHKZ				*e*pP	pP	15 05 19.3	-2.2
BRTR	Keskin Array B	65.03	313	P	P	15 06 21.3	-1.6
	comp=Z,0.5nm,0.6s,mb3.7,baz=157,slow=9.4,SNR=4.0						
FINES	FINESS Array B	77.15	333	P	P	15 07 34.5	-1.1
	comp=Z,0.2nm,0.4s,mb3.4,baz=90,slow=5.6,SNR=3.7						
GERES	GERESS Array B	81.06	319	P	P	15 07 58.2	+1.3
	comp=Z,1.5nm,0.9s,mb3.9,baz=104,slow=5.5,SNR=9.3						
TXAR	Lajitas Array	145.44	25	PKPbc	PKPbc	15 15 22.1	+2.6
	comp=Z,2.2nm,0.9s,baz=297,slow=2.8,SNR=11						

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*IDC **25** 14:58:58.4±1.4,1.85N×92.34E,mb3.8/5,mb1 4.1/6, mb1mx3.8/17,mbtmp3.8/6,ML3.9/1,Error ellipse: s-maj=54.6km s-min=23.5km az=53.0*

*NEIC **25** 14:59:03.4±1.0,1.98N×92.48E,h30^{km},mb4.2/2,Error ellipse: s-maj=32.7km s-min=14.5km az=62.0*

ISC 25 14:59:02.0±1.1,2.0N±0.1×92.5E±0.2,h33^{km},n10,σ1^{s}01/9, mb3.9/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	17.56	21	P	P	15 03 05.0	-1.0
	0.1nm,0.3s,baz=215,slow=13,SNR=4.8						
LSA	Lhasa	27.60	357	*e*P	P	15 04 49.7	+1.1
WRA	Warramunga Arr	46.47	120	P	P	15 07 26.7	-1.5
	0.7nm,0.5s,mb3.9,baz=298,slow=8.6,SNR=8.2						
WRAB	Tennant Creek	46.48	120	*e*P	P	15 07 28.7	+0.5
	2.1nm,0.6s,mb4.2						
SONM	Songino Array	47.24	13	P	P	15 07 35.4	+1.5
	1.5nm,0.8s,mb4.0,baz=195,slow=8.6,SNR=5.7						
ASAR	Alice Springs	47.66	125	P	P	15 07 38.4	+0.8
	0.3nm,0.7s,mb3.4,baz=302,slow=8.5,SNR=4.5						
KURK	Kurchatov	49.96	349	*e*P	P	15 07 53.7	-1.2
	1.4nm,0.8s,mb4.0						
FINES	FINESS Array B	77.16	333	P	P	15 10 54.2	+0.2
	3.2nm,1.1s,mb4.2,baz=127,slow=8.2,SNR=3.1						
GERES	GERESS Array B	81.13	319	P	P	15 11 15.2	-0.6
	0.4nm,0.6s,mb3.5,baz=104,slow=5.5,SNR=4.5						
TXAR	Lajitas Array	145.24	25	PKPbc	PKPbc	15 18 39.1	+1.6
	0.9nm,0.8s,baz=304,slow=4.5,SNR=4.0						

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*IDC **25** 15:03:13.8±1.2,5.35N×94.83E,mb4.2/8,mb1 4.3/9, mb1mx4.1/18,mbtmp4.1/9,ML4.3/1,Error ellipse: s-maj=54.6km s-min=18.0km az=57.0*

*NEIC **25** 15:03:18.6±0.7,5.39N×94.83E,h30^{km},mb4.3/5,Error ellipse: s-maj=22.3km s-min=10.1km az=53.0*

ISC 25 15:03:16.8±0.8,5.3N±0.1×94.8E±0.2,h33^{km},n18, σ0^{s}72/18,mb4.2/13,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.87	89	*e*Pn	Pn	15 04 45.0	+1.1
CMAR	Chiang Mai Arr	13.75	17	Pn	P	15 06 27.2	-4.7
	0.5nm,0.3s,baz=210,slow=12,SNR=2.3						
LSA	Lhasa	24.56	352	*e*P	P	15 08 34.8	-0.2
	4.2nm,0.6s,mb4.2						
AAK	Ala-Archa	41.34	337	*e*P	P	15 11 02.2	+1.0
	2.6nm,0.8s,mb3.9						
SONM	Songino Array	43.59	11	P	P	15 11 19.2	-0.4
	0.7nm,0.6s,mb3.6,baz=197,slow=7.6,SNR=7.8						
SONM				PcP	PcP	15 13 06.4	-0.9
	0.4nm,0.6s,baz=196,slow=4.1,SNR=8.3						
WRA	Warramunga Arr	46.28	124	P	P	15 11 41.1	-0.4
	2.0nm,0.7s,mb4.2,baz=303,slow=9.3,SNR=20						
WRAB	Tennant Creek	46.28	124	*e*P	P	15 11 40.9	-0.6
	3.1nm,0.6s,mb4.4						
WB2	Warramunga Arr	46.29	124	*e*P	P	15 11 41.1	-0.4
KURK	Kurchatov	47.29	346	*e*P	P	15 11 49.0	0.0
	1.9nm,0.5s,mb4.3						
ASAR	Alice Springs	47.80	129	P	P	15 11 52.9	-0.5
	0.8nm,0.4s,mb4.1,baz=300,slow=8.0,SNR=14						
ZAL	Zalesovo	49.21	352	P	P	15 12 03.7	-0.2
	2.8nm,0.5s,mb4.6,baz=306,slow=5.4,SNR=17						
CHKZ	Chkalovo	52.14	342	*e*P	P	15 12 25.5	-0.6
	10nm,1.3s,mb4.6						
STKA	Stephens Creek	57.88	133	P	P	15 13 08.9	+0.8
	1.3nm,1.0s,mb3.9,baz=305,slow=12,SNR=3.4						
STKA	Stephens Creek	57.88	133	P	P	15 13 08.9	+0.8
FINES	FINESS Array B	75.30	332	P	P	15 14 57.8	-0.4
	6.9nm,1.2s,mb4.4,baz=125,slow=6.2,SNR=5.0						
ARCES	ARCESS Array B	77.92	340	P	P	15 15 13.0	+0.2
	20nm,1.2s,mb4.9,baz=60,slow=7.3,SNR=3.9						
ARCES	ARCESS Array B	77.92	340	P	P	15 15 13.0	+0.2
GERES	GERESS Array B	80.18	319	P	P	15 15 26.5	+1.0
	0.4nm,0.7s,mb3.5,baz=104,slow=5.5,SNR=3.8						

IDC 25 15:09:28.9±14.0,12.14N×89.57E,mb3.4/3,mb1 3.6/3, mb1mx3.4/17,mbtmp3.4/3,MS4.3/1,Ms1 4.3/1, ms1mx2.9/16,Error ellipse: s-maj=469.3km s-min=33.1km az=76.0,Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	38.27	18	P	P	15 16 50.9	-1.7
	0.5nm,0.6s,baz=199,slow=8.1,SNR=7.0						
JHJ	Hachijo jima 2	50.29	57	LR	LR	15 42 06.3	
	comp=Z,354nm,21.7s,baz=74,slow=39						
WRA	Warramunga Arr	54.38	125	P	P	15 18 58.1	-2.0
	0.3nm,0.6s,baz=305,slow=8.3,SNR=4.9						
ASAR	Alice Springs	56.08	129	P	P	15 19 10.1	-2.4
	0.7nm,0.6s,baz=308,slow=6.8,SNR=5.0						

MAN 25 15:29:03.4,12.79N×123.01E,h15^{km},mb3.7,ML2.5, MS2.1,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	San Andres	0.62	329	*e*P	Pb	15 29 15.8	+0.4
OTRP	Odiongan	1.05	246	*e*P	Pb	15 29 21.9	-0.8
BOAC	Boac	1.31	301	*e*P	Pb	15 29 26.0	-1.3

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*NIED **25** 15:33:00,44.10N×147.50E,h86^{km},Mw4.5 Best double couple: M$_0$6.43×10^{15} NP1:ϕ_s261°,δ66°,λ-124°. NP2: ϕ_s140°,δ40°,λ-38°.*

*CSEM **25** 15:33:41.6,44.47N×148.07E,h33^{km},mb5.5*

*BJI **25** 15:33:47.1,44.40N×147.43E,h71^{km},mB5.0,mb4.7, Ms4.5,Msz4.1*

*NEIC **25** 15:33:48.1±0.7,44.39N×147.37E,h68^{km}±6^{km},mb5.1/114, Error ellipse: s-maj=4.3km s-min=3.1km az=148.0*

*HRVD **25** 15:33:48.1±1.0,44.53N×147.46E,h106^{km}±12^{km}, MW4.7/34,Centroid moment Tensor Solution. LP body waves: s4,c4;Mantle waves: s34,c44; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.88±.17; M$_{\theta\theta}$1.24±.18; M$_{\phi\phi}$-0.36±.13; M$_{r\theta}$0.84±.11; M$_{\theta\phi}$-0.24±.17; M$_{\phi r}$0.34±.07; Best double couple: M$_0$1.439×10^{16} NP1: ϕ_s125°,δ33°,λ-46°. NP2:ϕ_s256°,δ67°,λ-114°. Principal axes: T 1.54, Plg19°, Azm4°; N -.207, Plg22°, Azm266°; P -1.337, Plg60°, Azm130°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **25** 15:33:49.6±0.9,44.42N×147.40E,h92^{km},mb5.1/69 Error ellipse: s-maj=7.6km s-min=4.0km az=105.8*

*SKHL **25** 15:33:49.9±1.7,44.37N×147.46E,h95^{km}±13^{km},mb6.2/2, mbh6.3/1,msh5.7/3*

SKHL Felt (III) at Malokurilskoe, (II) at Yushno-Kurilsk.

*JMA **25** 15:33:51.4±0.2,44.07N×147.54E,h91^{km},M4.6*

JMA Felt I J1.

*IDC **25** 15:33:53.8±1.7,44.44N×147.33E,h120^{km}±15^{km}, mb4.4/28,mb1 4.6/31,mb1mx4.6/32,mbtmp4.8/31,MS3.3/2, Ms1 3.5/2,ms1mx2.7/18,Error ellipse: s-maj=11.4km s-min=9.3km az=124.0*

ISC 25 15:33:49.5±0.3,44.36N±0.03×147.50E±0.03,h94^{km}±2^{km}, h79^{km}±4.0^{km}:pP-P,n489,σ1^{s}00/508,mb4.9/152,36C-41D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	0.91	17	κ *i*PN	P	15 34 08.2	-0.6
KUR				*i* S	S	15 34 23.2	0.0
KUR				pmax	pmax		
	comp=N,4µm,1.0s						
KUR				pmax	pmax		
	comp=E,3µm,1.0s						
KUR				pmax	pmax		
	comp=Z,12µm,1.0s						
KUR				pmax	pmax		
	comp=N,2µm,0.5s						
KUR				pmax	pmax		
	comp=E,2µm,0.5s						
KUR				pmax	pmax		
	comp=Z,7µm,0.5s						
KUR				smax			
	comp=N,64µm,1.0s						
KUR				smax			
	comp=E,68µm,1.0s						
KUR				smax			
	comp=N,6µm,0.5s						
KUR				smax			
	comp=E,10µm,0.5s						
KUR	Kuril'sk	0.91	17	*i* P	P	15 34 08.2	-0.6
KUR				*i* P		15 34 08.2	
KUR				AMB	AMB	15 34 08.4	
	comp=E,4µm,1.0s						
KUR				AMB	AMB	15 34 08.4	
	comp=E,3µm,1.0s						
KUR				AMB	AMB	15 34 08.4	
	comp=E,12µm,1.0s						
KUR				AMB	AMB	15 34 09.0	
	comp=E,2µm,0.5s						
KUR				AMB	AMB	15 34 09.0	
	comp=E,2µm,0.5s						
KUR				AMB	AMB	15 34 09.0	
	comp=E,7µm,0.5s						
KUR				*i* S	S	15 34 23.2	0.0
KUR				A		15 34 23.4	
	comp=E,68µm,1.0s						
KUR				A		15 34 23.4	
	comp=E,64µm,1.0s						
YUK	Yuzh-Kuril'sk	1.22	255	⇓*i*PN	P	15 34 13.0	+0.5
YUK				*i* S	S	15 34 29.0	-0.6
YUK				pmax	pmax		
	comp=E,5µm,0.3s						
YUK				pmax	pmax		
	comp=Z,24µm,0.3s						
YUK				pmax	pmax		
	comp=N,7.0nm,0.2s						
YUK				pmax	pmax		
	comp=N,8µm,0.5s						
YUK				pmax	pmax		
	comp=E,8µm,0.5s						
YUK				pmax	pmax		
	comp=Z,25µm,0.5s						
YUK				smax			
	comp=N,75µm,1.0s						
YUK				smax			
	comp=E,63µm,0.8s						
YUK	Yuzh-Kuril'sk	1.22	255	⇓*i*P	P	15 34 13.0	+0.5
YUK				⇓*i*P		15 34 13.0	
YUK				AMB	AMB	15 34 13.9	
	comp=E,8µm,1.0s						
YUK				AMB	AMB	15 34 13.9	
	comp=E,25µm,1.0s						
YUK				AMB	AMB	15 34 13.9	
	comp=E,7µm,0.2s						
YUK				AMB	AMB	15 34 13.9	
	comp=E,5µm,0.2s						
YUK				AMB	AMB	15 34 13.9	
	comp=E,24µm,0.2s						
YUK				*i* S	S	15 34 29.0	-0.6
YUK				A		15 34 31.5	
	comp=E,75µm,1.0s						
YUK				A		15 34 31.5	
	comp=E,63µm,1.0s						
NEM2	Nemuro 2	1.61	232	P	P	15 34 17.3	0.0
NEM2				*e*S	S	15 34 36.2	-1.7
JRA	Rausu	1.76	257	P	P	15 34 20.8	+1.6
JRA				*e*S	S	15 34 42.9	+1.7
JNK	Nakash	2.15	250	P	P	15 34 25.4	+1.0
JNK				*e*S	S	15 34 51.4	+1.1
JAK	Akkeshi	2.45	237	P	P	15 34 28.2	-0.4
JAK				*e*S	S	15 34 55.6	-2.0
JTKR	Abashiri--Toko	2.61	263	P	P	15 34 32.2	+1.4
JTKR				*e*S	S	15 35 02.9	+1.2
JAR	Ashorobuto	2.90	250	P	P	15 34 36.0	+1.2
JAR				*e*S	S	15 35 09.3	+0.5
JMP	Maruseppu	3.00	265	P	P	15 34 37.5	+1.4
JOB	Onbets	3.03	243	P	P	15 34 37.0	+0.4
JOB				*e*S	S	15 35 11.0	-1.0
JKK2	Kamakawa 2	3.45	264	P	P	15 34 43.9	+1.5
JCH	Churui	3.48	241	P	P	15 34 42.3	-0.5
JCH				*e*S	S	15 35 19.9	-3.1
ASAJ	Asahikawa	3.53	268	P	P	15 34 45.2	+1.8
	comp=E,15nm,0.3s,baz=80,slow=17,SNR=110						
ASAJ				S	S	15 35 26.2	+2.0
	comp=E,22nm,0.3s,baz=145,slow=28,SNR=4.2						
JSE	Soyaes	3.56	281	P	P	15 34 45.4	+1.6
JFR	Furan	3.75	253	P	P	15 34 47.8	+1.3
JNBK	Urakawa-nobuka	4.04	241	P	P	15 34 49.4	-1.0
JNBK				*e*S	S	15 35 34.5	-2.3
JWK2	Keihoku	4.09	285	P	P	15 34 54.2	+3.0
JHR	Hokuryu	4.21	264	P	P	15 34 54.8	+2.0
YSS	Yuzh-Sakhalins	4.21	310	α *i*PN	P	15 34 54.1	+1.2
YSS				*i* S	S	15 35 40.4	-0.8
YSS				pmax	pmax		
	comp=N,80nm,0.5s						
YSS				pmax	pmax		
	comp=E,90nm,0.5s						
YSS				pmax	pmax		
	comp=Z,120nm,0.5s						
YSS				pmax	pmax		
	comp=N,130nm,0.4s						
YSS				pmax	pmax		
	comp=E,210nm,0.4s						
YSS				pmax	pmax		
	comp=Z,300nm,0.4s						
YSS				smax			
	comp=N,600nm,1.0s						
YSS				smax			
	comp=E,700nm,1.5s						
YSS				smax			
	comp=N,480nm,0.8s						
YSS				smax			
	comp=E,430nm,0.6s						
YSS	Yuzh-Sakhalins	4.21	310	*e*Pn	P	15 34 54.4	+1.5
YSS				Sn	S	15 35 42.4	+1.2
YSS	Yuzh-Sakhalins	4.21	310	*i* P	P	15 34 54.1	+1.2
YSS				AMB	AMB	15 34 54.8	
	comp=E,80nm,0.5s						
YSS				AMB	AMB	15 34 54.8	
	comp=E,90nm,0.5s						
YSS				AMB	AMB	15 34 54.8	
	comp=E,120nm,0.5s						
YSS				*i* S	S	15 35 40.4	-0.8
YSS				A		15 35 42.8	
	comp=E,600nm,1.0s						
YSS				A		15 35 42.8	
	comp=E,700nm,1.0s						
YSS				A		15 35 43.4	
	comp=E,480nm,0.7s						
YSS				A		15 35 43.4	
	comp=E,430nm,0.7s						
JEW	Eniwo	4.65	253	P	P	15 34 59.9	+1.1
UGL	Uglegorsk	6.01	324	α *i*PN	P	15 35 16.6	-0.9
UGL				*e*S	S	15 36 28.5	+2.9
UGL				pmax	pmax		
	comp=Z,600nm,1.0s						
UGL				pmax	pmax		
	comp=Z,300nm,0.8s						
UGL				pmax	pmax		
	comp=N,132nm,0.9s						
UGL				pmax	pmax		
	comp=E,230nm,0.9s						
UGL				smax			
	comp=N,95nm,0.6s						
UGL				smax			
	comp=E,103nm,0.6s						
UGL				smax			
	comp=Z,156nm,0.9s						
UGL				smax			
	comp=N,2µm,3.0s						
UGL				smax			
	comp=E,700nm,3.0s						
UGL	Uglegorsk	6.01	324	*i* P	P	15 35 16.6	-0.9
UGL				*i* P		15 35 16.6	
UGL				AMB	AMB	15 35 17.0	
	comp=E,600nm,1.0s						
UGL				AMB	AMB	15 35 18.0	
	comp=E,130nm,0.9s						
UGL				AMB	AMB	15 35 18.0	
	comp=E,230nm,0.9s						
UGL				AMB	AMB	15 35 18.0	
	comp=E,300nm,0.9s						
UGL				*e*S	S	15 36 28.5	+2.9
UGL				A		15 36 31.0	
	comp=E,100nm,0.7s						
UGL				A		15 36 31.0	
	comp=E,160nm,0.7s						
UGL				A		15 36 36.0	
	comp=E,2µm,3.0s						
UGL				A		15 36 36.0	
	comp=E,700nm,3.0s						
TYV	Tymovskoe	7.28	335	*e*PN	P	15 35 33.0	-2.0
TYV				*e*S	S	15 36 54.0	-2.7
TYV				pmax	pmax		
	comp=Z,410nm,3.0s						
TYV				pmax	pmax		
	comp=Z,32nm,0.7s						
TYV				smax			
	comp=E,87nm,0.9s						
TEY	Ternei	7.79	279	*e*P	P	15 35 45.0	+3.0
SKR	Severo-Kuril's	8.60	40	*e*P	P	15 35 49.0	-3.9
SKR				AMB	AMB	15 35 50.0	
	comp=E,30nm,0.5s						
SKR				AMB	AMB	15 35 50.0	
	comp=E,60nm,0.5s						
SKR				*e*S	S	15 37 23.0	-6.0
SKR				A		15 37 36.0	
	comp=E,80nm,0.5s						
SKR				A		15 37 36.0	
	comp=E,30nm,0.5s						
PAU	Pauzhetka	9.46	38	*e*P	P	15 36 03.8	-0.8
OKH	Okha	9.67	344	*e*PN	P	15 36 06.0	-1.3
OKH				*e*S	S	15 37 55.0	+0.2
OKH				pmax	pmax		
	comp=Z,1µm,4.0s						
GRNR	Gornyy	9.85	315	*e*P	P	15 36 11.0	+1.3
GRNR				AMB	AMB	15 36 12.0	
	comp=Z,40nm,1.0s						
GRNR				AMB	AMB	15 36 12.0	
	comp=Z,30nm,1.0s						
GRNR				AMB	AMB	15 36 12.0	
	comp=Z,60nm,1.0s						
MAJO	Matsushiro	10.53	225	*e*PN	P	15 36 15.9	-3.0
MAJO				pmax	pmax		
	comp=Z,32nm,0.8s						
MAJO	Matsushiro	10.53	225	*e*Pn	P	15 36 15.9	-3.0
	comp=Z,32nm,0.8s						
MAT	Matsushiro	10.53	225	*e*PN	P	15 36 16.0	-2.9
MAT				pmax	pmax		
	comp=Z,18nm,0.9s						
MAT	Matsushiro	10.53	225	*e*P	P	15 36 16.0	-2.9
	comp=Z,18nm,0.9s						
MAT				*e*S	S	15 38 09.0	-6.6
MAT	Matsushiro	10.53	225	P	P	15 36 15.8	-3.1
MAT				S	S	15 38 08.9	-6.7
PET	Petropavlovsk	11.37	36	*e*PN	P	15 36 29.5	-0.5
PET				pmax	pmax		
	comp=Z,39nm,1.1s						
PET				MLR	MLR		

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      comp=Z,200nm,19.0s
PET   Petropavlovsk     11.37  36  Pn     P      15 36 27.8 -2.2
PET   Petropavlovsk     11.37  36 eP      P      15 36 29.5 -0.5
PET                                AMB    AMB    15 36 39.3
      comp=Z,40nm,1.1s
PET                               eS      S      15 38 31.3 -4.3
PET                                A             15 38 36.8
      comp=Z,30nm,1.1s
PET                                AMS    AMS    15 40 06.4
      comp=Z,230nm,19.0s
KLR   Kul'dur           11.84 300 eP      P      15 36 35.3 -0.9
JHJ   Hachijo jima 2    12.73 211  P      P      15 36 50.1 +2.0
      comp=Z,15nm,0.3s,baz=59,slow=19,SNR=4.2
JHJ                                S      S      15 38 56.7  -11
      comp=Z,69nm,0.3s,baz=75,slow=24,SNR=6.7
MDJ   Mudanjiang        12.79 277  P      P      15 36 45.5 -3.4
MDJ                                AP            15 36 55.5
MDJ                                XP            15 37 07.0
MDJ                                S      S      15 39 06.3 -3.2
MDJ                                PCP    PcP    15 42 16.8 -1.6
MDJ                                SCP           15 45 43.5
MDJ                                PCS           15 45 51.0
MDJ                                SCS    ScS    15 49 19.8 +3.1
MDJ                                AMB    AMB
      comp=Z,7.0nm,1.6s
MDJ                                AMB    AMB
      comp=Z,31nm,3.5s
EKMR  Ekimchan          12.95 317 eP      P      15 36 48.3 -2.6
EKMR                               AMB    AMB    15 36 56.5
      comp=Z,11nm,0.5s
MA2   Magadan           15.37   6 eP      P      15 37 21.6 -0.4
MA2                                pmax   pmax
      comp=Z,17nm,0.6s
MA2   Magadan           15.37   6 eP      P      15 37 21.6 -0.4
      comp=Z,17nm,0.6s
CN2   Changchun         15.85 276 eP      P      15 37 24.8 -3.4
CN2                               eAP            15 37 37.0
CN2                               eS      S      15 40 15.5 -5.3
CN2                                AMB    AMB
      comp=Z,10.0nm,0.5s
CN2                                AMB    AMB
      comp=Z,300nm,3.0s
BMKR  Bomnak            15.88 317 eP      P      15 37 25.9 -2.6
BMKR                               AMB    AMB    15 37 27.0
      comp=Z,12nm,0.7s
ZEA   Zeya              16.20 313 eP      P      15 37 29.2 -3.3
ZEA                                AMB    AMB    15 37 30.7
      comp=Z,36nm,1.2s
KROS  Kirovskiy         16.67 314 eP      P      15 37 35.1 -3.2
KROS                               AMB    AMB    15 37 41.7
      comp=Z,5.0nm,0.6s
KROS                               AMB    AMB    15 37 41.7
      comp=Z,9.0nm,0.6s
SEY   Seymchan          18.82   7 eP      P      15 38 03.3 -0.7
SEY                               eS      S      15 41 24.3 -2.8
SEY                                pmax   pmax
      comp=Z,250nm,1.0s
SEY                                pmax   pmax
      comp=N,170nm,1.1s
SEY                                pmax   pmax
      comp=E,50nm,1.1s
SEY                                smax
      comp=N,260nm,26.5s
SEY                                smax
      comp=E,30nm,13.2s
SEY                                MLR    MLR
      comp=Z,180nm,19.0s
CLNS  Chul'man          18.91 319 eP      P      15 38 02.4 -2.6
CLNS                               pmax   pmax
      comp=Z,28nm,1.1s
CLNS                               pmax   pmax
      comp=N,12nm,0.9s
CLNS                               pmax   pmax
      comp=E,10.0nm,0.9s
FX1   Attu Island--F    18.91  54  P      P      15 38 06.0 +1.0
FX1                                pmax   pmax
      comp=Z,10.0nm,0.3s
FX1   Attu Island--F    18.91  54  P      P      15 38 06.0 +1.0
      comp=Z,10nm,0.3s,baz=282,slow=2.6,SNR=12
HIA   Hailar            19.56 294 eP      P      15 38 07.5 -4.6
HIA                                pmax   pmax
      comp=Z,12nm,0.8s
HIA   Hailar            19.56 294 eP      P      15 38 07.5 -4.5
      comp=Z,12nm,0.8s
YAK   Yakutsk           20.54 336 eP      P      15 38 18.1 -4.0
YAK                               e*PP           15 38 39.5
YAK                               eS      S      15 41 55.0 -6.5
YAK                               e*SS           15 42 29.2
YAK                               e              15 42 32.5
YAK                               e              15 49 33.7
YAK                                pmax   pmax
      comp=Z,17nm,1.3s
YAK                                pmax   pmax
      comp=N,5.0nm,1.2s
YAK                                pmax   pmax
      comp=E,6.0nm,1.0s
YAK                                smax
      comp=N,15nm,1.8s
YAK                                smax
      comp=E,16nm,1.4s
YAK   Yakutsk           20.54 336 eP      P      15 38 17.6 -4.5
      comp=E,75nm,0.6s
BJI   Beijing           23.52 270 eP      P      15 38 51.5  0.0
BJI                                AMB    AMB
      comp=Z,11nm,0.7s,mb4.3
BJI   Beijing           23.52 270 eP      P      15 38 51.5  0.0
      comp=Z,11nm,0.7s,mb4.3
BJI                                pP            15 39 13.4
BJI                                LR     LR
      comp=Z,60nm,37.3s
BJT   Baijiatuau        23.53 270 eP      P      15 38 51.4 -0.2
BJT                                pmax   pmax
      comp=Z,11nm,0.8s
BJT   Baijiatuau        23.53 270 eP      P      15 38 51.4 -0.2
      comp=Z,11nm,0.8s,mb4.2
TIA   Tai'an            24.45 261 eP      P      15 39 03.0 +2.4
SSE   Sheshan           24.54 246 eP      P      15 38 58.8 -2.7
SSE                                AMB    AMB
      comp=Z,36nm,0.7s,mb4.9
SSE                                AMB    AMB
      comp=Z,97nm,5.2s
SSE   Sheshan           24.54 246 eP      P      15 38 58.8 -2.7
      comp=Z,36nm,0.7s,mb4.9
BOD   Bodaibo           24.67 315⇑iP      P      15 38 58.7 -3.7
BOD                                pmax   pmax
      comp=Z,14nm,0.8s,mb4.4
NJ2   Nanjing           25.50 251 eP      P      15 39 10.0 -0.6
NJ2                                AP     pP     15 39 27.3 -4.1
NJ2                                XP     sP     15 39 36.5 -6.4
NJ2                                PP     PP     15 39 52.0 -1.1
NJ2                                S      S      15 43 29.0 +0.4
NJ2                                XS            15 43 59.0
NJ2                                AMB    AMB
      comp=Z,20nm,0.9s,mb4.5
NJ2                                AMB    AMB
      comp=Z,490nm,4.7s
NJ2                                LR     LR
      comp=N,680nm,26.2s
NJ2                                LR     LR
      comp=E,650nm,23.3s
NJ2                                LR     LR
      comp=Z,480nm,24.5s
BILL  Bilibino          25.70  16 eP      P      15 39 08.3 -3.8
BILL                               pmax   pmax
      comp=Z,12nm,0.5s,mb4.6
BILL  Bilibino          25.70  16 eP      P      15 39 08.3 -3.8
      comp=Z,12nm,0.5s,mb4.6
HHC   Hu-ho-hao-te      26.55 275 eP      P      15 39 20.5 +0.4
HHC                                AP     pP     15 39 37.8 -3.2
HHC                                XP     sP     15 39 48.5 -3.8
HHC                                PP     PP     15 40 09.0 +1.9
HHC                                S      S      15 43 47.0 +1.4
HHC                                XS            15 44 15.3
HHC                                SS     SS     15 45 00.8 -2.5
HHC                                SCS    ScS    15 50 05.0 +3.1
HHC                                AMB    AMB
      comp=Z,18nm,1.0s,mb4.6
HHC                                AMB    AMB
      comp=Z,135nm,5.2s
BTO   Baotou            27.73 275 eP      P      15 39 30.5 -0.5
ULN   Ulaanbaatar       28.03 292 eP      P      15 39 31.7 -1.9
ULN                                pmax   pmax
      comp=Z,8.0nm,0.5s,mb4.5
ULN   Ulaanbaatar       28.03 292 eP      P      15 39 31.7 -1.8
      comp=Z,7.6nm,0.5s,mb4.5
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SONM  Songino Array     28.47 292  P      P      15 39 36.7 -0.8
      comp=Z,7.0nm,0.4s,mb4.5,baz=80,slow=8.6,SNR=137
TIXI  Tiksi             28.81 348 eP      P      15 39 35.2 -5.1
TIXI                               pmax   pmax
      comp=Z,10.0nm,0.7s,mb4.5
ZAK   Zakamensk         30.19 297 eP      P      15 39 50.2 -2.5
TNA   Tin City          32.20  33 eP      P      15 40 09.7 -0.5
      comp=Z,9.1nm,0.8s,mb4.6
LZH   Lanzhou           34.01 271 eP      P      15 40 26.0 -0.1
LZH                                AMB    AMB
      comp=Z,26nm,1.0s,mb5.0
LZH   Lanzhou           34.01 271 eP      P      15 40 26.0 -0.1
      comp=Z,26nm,1.0s,mb5.0
LZH                                pP     pP     15 40 32.0  -16
LZH                                sP     sP     15 40 36.5  -23
GTA   Gaotai            35.44 279⇑iP      P      15 40 38.5 +0.2
GTA                                AP     pP     15 40 58.8 -1.5
GTA                                XP     sP     15 41 07.8 -3.8
GTA                                PP     PP     15 42 00.5 -0.3
GTA                                PCP    PcP    15 43 10.0 +3.7
GTA                                S      S      15 46 08.5 +3.0
GTA                                XS            15 46 38.8
GTA                                SS     SS     15 48 28.8 -0.3
GTA                                AMB    AMB
      comp=Z,22nm,0.6s,mb5.2
GTA                                AMB    AMB
      comp=Z,71nm,5.3s
GTA                                LR     LR
      comp=N,71nm,11.8s
GTA                                LR     LR
      comp=E,70nm,11.0s
GTA                                LR     LR
      comp=Z,83nm,10.3s
GYA   Guiyang           37.32 255⇑iP      P      15 40 55.5 +1.3
GYA                                AP     pP     15 41 13.8 -2.5
GYA                                XP     sP     15 41 20.8 -6.7
GYA                                S      S      15 46 34.0 -0.2
GYA                                AMB    AMB
      comp=Z,10.0nm,0.8s,mb4.8
GYA                                AMB    AMB
      comp=Z,100nm,3.6s
GYA                                LR     LR
      comp=N,320nm,15.4s
GYA                                LR     LR
      comp=E,370nm,14.6s
GYA                                LR     LR
      comp=Z,210nm,14.3s
IMA   Indian Mountai    38.04  35 eP      P      15 41 00.3 +0.6
      comp=Z,211nm,0.8s,mb6.0
MCK   McKinley          40.00  38 eP      P      15 41 16.4 +0.3
MCK                                pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.5
MCK   McKinley          40.00  38 eP      P      15 41 16.4 +0.4
      comp=Z,6.9nm,0.8s,mb4.5
SML   Sawmill           40.40  41 eP      P      15 41 18.6 -0.7
COLA  College           40.43  37 eP      P      15 41 19.1 -0.5
COLA                               pmax   pmax
      comp=Z,24nm,0.6s,mb5.2
COLA  College           40.43  37 eP      P      15 41 19.1 -0.5
      comp=Z,24nm,0.6s,mb5.2
ZAL   Zalesovo          40.85 307  P      P      15 41 21.1 -2.1
      comp=Z,2.8nm,0.4s,mb4.5,baz=26,slow=7.1,SNR=12
ILAR  Eielson Array     40.85  37  P      P      15 41 22.9 -0.1
      comp=Z,15nm,0.7s,mb4.9,baz=267,slow=10,SNR=55
KMI   Kunming           40.89 257  P      P      15 41 24.0 +0.2
KMI                                AMB    AMB
      comp=Z,7.0nm,1.2s,mb4.4
KMI   Kunming           40.89 257  P      P      15 41 24.1 +0.3
      comp=Z,7.0nm,1.2s,mb4.4
KMI                                pP     pP     15 41 28.7  -17
THY   Trims Highway     41.44  39 eP      P      15 41 26.6 -1.3
NVS   Novosibirsk       41.53 308 eP      P      15 41 26.1 -2.5
DIV   Divide            41.69  42 eP      P      15 41 30.1 +0.3
      comp=Z,29nm,0.8s,mb5.1
WMQ   Urumqi            42.10 291  P      P      15 41 33.5  0.0
WMQ                                AP     pP     15 41 52.0 -3.8
WMQ                                XP     sP     15 42 01.0 -5.8
WMQ                                PP     PP     15 43 15.0 -0.5
WMQ                                S      S      15 47 47.0 +1.4
WMQ                                SS     SS     15 50 50.0 -0.1
WMQ                                AMB    AMB
      comp=Z,41nm,1.0s,mb5.1
WMQ                                LR     LR
      comp=N,65nm,22.0s
WMQ                                LR     LR
      comp=E,54nm,21.0s
WMQ                                LR     LR
      comp=Z,66nm,20.0s
DAWY  Dawson            44.16  37 eP      P      15 41 50.1 +0.2
MKAR  Makanchi Array    44.53 297 eP      P      15 41 51.8 -1.3
MKAR                               pmax   pmax
      comp=Z,3.0nm,0.4s
KURK  Kurchatov         45.40 304 i P     P      15 41 57.8 -2.1
KURK  Kurchatov         45.40 304 eP      P      15 41 57.6 -2.4
      comp=Z,11nm,0.4s,mb5.0
INK   Inuvik            45.75  31 eP      P      15 42 02.2 -0.3
INK                                pmax   pmax
      comp=Z,35nm,0.5s
INK   Inuvik            45.75  31 eP      P      15 42 02.2 -0.3
      comp=Z,35nm,0.5s,mb5.3
LSA   Lhasa             46.42 271 eP      P      15 42 06.6 -1.8
LSA                                pmax   pmax
      comp=Z,3.0nm,0.8s,mb4.1
LSA   Lhasa             46.42 271 eP      P      15 42 06.6 -1.8
      comp=Z,2.8nm,0.8s,mb4.0
CM31  Chiang Mai Arr    47.94 253 eP      P      15 42 19.6 -0.7
      comp=Z,1.6nm,0.6s,mb4.0
CMAR  Chiang Mai Arr    47.94 253  P      P      15 42 20.4 +0.1
      comp=Z,2.2nm,0.7s,mb4.1,baz=42,slow=7.3,SNR=24
CMAR                               LR     LR     16 04 34.1
      comp=Z,31nm,18.4s,baz=5.0,slow=38
CHKZ  Chkalovo          48.94 310  P      P      15 42 24.7 -2.9
CHKZ                               pmax   pmax
      comp=Z,2.0nm,0.5s,mb4.3
CHKZ  Chkalovo          48.94 310 eP      P      15 42 24.7 -2.8
      comp=Z,5.2nm,0.4s,mb4.8
BVA0  Borovoye Array    49.31 309 eP      P      15 42 28.8 -1.7
DLBC  Dease Lake        50.06  43 eP      P      15 42 37.2 +1.0
ULHL  Ulahol            50.37 294  P      P      15 42 38.9 +0.2
      SNR=14
TKM2  Tokmak 2          50.47 295  P      P      15 42 39.7 +0.2
      SNR=11
CHMS  Chumysh           50.98 296  P      P      15 42 42.9 -0.5
      SNR=7.2
KBK   Karagaybulak      51.02 295  P      P      15 42 43.5 -0.2
      SNR=26
USP   Ospenovka         51.02 296  P      P      15 42 43.2 -0.5
      SNR=46
KZA   Kyzart            51.09 294  P      P      15 42 45.2 +1.0
      SNR=15
JIRN  Jiri              51.15 273 eP      P      15 42 44.8 -0.1
      comp=Z,15nm,0.4s,mb5.3
AAK   Ala-Archa         51.32 295  P      P      15 42 45.8 -0.1
      SNR=8.3
AAK   Ala-Archa         51.32 295 eP      P      15 42 44.1 -1.9
AAK                                pmax   pmax
      comp=Z,10.0nm,0.6s,mb5.0
AAK   Ala-Archa         51.32 295 eP      P      15 42 44.1 -1.9
      comp=Z,9.5nm,0.6s,mb5.0
UCH   Uchtor            51.50 295  P      P      15 42 47.8 +0.5
      SNR=6.8
KKN   Kakani            51.73 273 eP      P      15 42 49.5 +0.3
      comp=Z,9.5nm,0.5s,mb5.1
PKI   Pulchoki          51.77 273 eP      P      15 42 49.6 +0.1
      comp=Z,13nm,0.7s,mb5.1
EKS2  Erkin-Say         51.77 296  P      P      15 42 49.1 -0.2
      SNR=9.0
DMN   Daman             51.96 273 eP      P      15 42 50.6 -0.3
      comp=Z,18nm,0.7s,mb5.2
GKN   Gorkha            52.06 274 eP      P      15 42 51.2 -0.5
      comp=Z,13nm,0.3s,mb5.4
AML   Almayashu         52.08 295  P      P      15 42 52.1 +0.4
      SNR=18
SVE   Sverdlovsk        52.87 316 eP      P      15 42 54.5 -2.8
KOLN  Koldanda          52.94 274 eP      P      15 42 57.9 -0.4
      comp=Z,7.8nm,0.3s,mb5.2
KSM   Kuching           53.91 228 eP      P      15 43 04.9 -0.7
RES   Resolute Bay      54.31  17 eP      P      15 43 05.2 -2.5
RES                                pmax   pmax
      comp=Z,26nm,0.6s,mb5.4
RES   Resolute Bay      54.31  17 eP      P      15 43 05.2 -2.5
      comp=Z,26nm,0.6s,mb5.4
YKW3  Yellowknife Ar    55.12  34 eP      P      15 43 12.8 -0.9
YKA   Yellowknife Ar    55.16  34  P      P      15 43 13.5 -0.5
YKA                                pmax   pmax
      comp=Z,8.0nm,0.7s
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YKA   Yellowknife Ar    55.16  34  P      P      15 43 13.5 -0.4
      comp=Z,8.1nm,0.7s,mb4.9,baz=301,slow=7.0,SNR=104
KEV   Kevo              58.23 339 ep      P      15 43 32.2 -3.5
      comp=Z,7.7nm,0.3s,mb5.2
KEV   Kevo              58.23 339 eP      P      15 43 32.2 -3.5
KEV                                pmax   pmax
      comp=Z,8.0nm,0.3s,mb5.2
KAKA  Kakadu            58.43 197⇓iP      P      15 43 36.0 -1.7
      comp=Z,9.1nm,0.6s,mb5.0
ARCES ARCESS Array B    58.76 340  P      P      15 43 36.4 -3.0
      comp=Z,6.8nm,0.4s,mb5.1,baz=42,slow=7.7,SNR=55
ARE0  ARCESS Array S    58.76 340 eP      P      15 43 36.2 -3.1
EDM   Edmonton          60.78  43 eP      P      15 43 53.0 -0.4
JOF   Joensuu           61.66 332 ep      P      15 43 55.6 -3.6
      comp=Z,6.9nm,0.4s,mb5.0
JOF   Joensuu           61.66 332 eP      P      15 43 55.6 -3.6
JOF                                pmax   pmax
      comp=Z,7.0nm,0.4s,mb5.0
YBH   Yreka Blue Hor    62.36  58  P      P      15 44 05.2 +1.0
      comp=Z,2.2nm,0.8s,mb4.2,baz=346,slow=3.7,SNR=6.8
WALA  Waterton Lakes    62.98  47 eP      P      15 44 08.1 -0.1
      comp=Z,6.3nm,0.7s,mb4.7
SUMG  Summit            63.29   2 eP      P      15 44 08.8 -1.2
      comp=Z,14nm,0.4s,mb5.3
KAF   Kangasniemi       63.88 333 ep      P      15 44 10.5 -3.3
      comp=Z,11nm,0.6s,mb4.9,baz=42,slow=6.3
KAF   Kangasniemi       63.88 333 eP      P      15 44 10.5 -3.3
KAF                                pmax   pmax
      comp=Z,11nm,0.6s,mb4.9
CTA   Charters Tower    64.14 181  P      P      15 44 15.4 -0.8
      comp=Z,7.0nm,1.1s,mb4.4,baz=359,slow=14,SNR=4.2
MSO   Missoula          64.33  49 eP      P      15 44 16.3 -0.7
      comp=Z,3.6nm,0.7s,mb4.3
FINES FINESS Array B    64.44 333  P      P      15 44 14.7 -2.8
      comp=Z,31nm,0.6s,mb5.3,baz=46,slow=7.2,SNR=165
CHMT  Chamberlain Mo    64.65  48 eP      P      15 44 20.1 +1.1
OBN   Obninsk           64.97 324 eP      P      15 44 18.0 -3.0
OBN                                pmax   pmax
      comp=Z,17nm,1.0s,mb4.8
WRAB  Tennant Creek     65.10 194d iP     P      15 44 20.4 -2.0
WRAB  Tennant Creek     65.10 194 eP      P      15 44 20.3 -2.1
      comp=Z,27nm,1.0s,mb5.0
WB2   Warramunga Arr    65.11 194⇓iP      P      15 44 20.4 -2.0
WRA   Warramunga Arr    65.11 194  P      P      15 44 20.9 -1.6
      comp=Z,12nm,0.7s,mb4.8,baz=9.1,slow=6.7,SNR=113
FITZ  Fitzroy Crossi    65.29 203⇓iP      P      15 44 22.4 -1.2
      comp=Z,5.5nm,0.6s,mb4.6
FCC   Fort Churchill    65.37  30 eP      P      15 44 22.6 -0.9
FCC                               e       pP     15 44 46.1 -1.3
FCC                                pmax   pmax
      comp=Z,23nm,0.9s,mb5.0
FCC   Fort Churchill    65.37  30 eP      P      15 44 22.6 -0.9
      comp=Z,23nm,0.9s,mb5.0
FCC                               e       pP     15 44 46.1 -1.3
HLID  Hailey            66.10  52 eP      P      15 44 28.0 -0.4
      comp=Z,3.3nm,0.8s,mb4.2
BOZ   Bozeman (W)       66.32  49 eP      P      15 44 30.1 +0.3
BOZ                                pmax   pmax
      comp=Z,13nm,0.6s,mb4.9
BOZ   Bozeman (W)       66.32  49 eP      P      15 44 30.1 +0.3
      comp=Z,13nm,0.6s,mb4.9
NVAR  Mina Array Bea    67.05  58  P      P      15 44 35.1 +0.7
      comp=Z,4.0nm,0.5s,mb4.5,baz=289,slow=7.8,SNR=38
YMR   Madison River     67.31  49 eP      P      15 44 35.2 -0.8
ELK   Elko              67.41  55  P      P      15 44 37.0 +0.3
      comp=Z,0.8nm,0.5s,mb3.9,baz=320,slow=5.5,SNR=5.1
YFT   Old Faithful      67.52  49 eP      P      15 44 38.4 +1.1
IMW   Indian Meadow     67.82  50 eP      P      15 44 40.1 +0.9
MOOW  Moose Ponds       68.03  50 eP      P      15 44 41.7 +1.3
MOOW                              ePcP    PcP    15 45 06.2 +0.2
TPAW  Teton Pass        68.08  50 eP      P      15 44 41.9 +1.1
HVU   Hansel Valley     68.17  53 eP      P      15 44 41.7 +0.3
LOHW  Long Hollow       68.19  50 eP      P      15 44 42.4 +0.9
LAO   LASA Array        68.47  45 eP      P      15 44 42.7 -0.4
      comp=Z,16nm,1.0s,mb4.8
FRB   Frobisher Bay     68.53  16  P      P      15 44 41.5 -1.7
      comp=Z,9.7nm,0.5s,mb4.9,baz=339,slow=8.4,SNR=10.0
GOF   Gofitskoye        68.62 313⇑iP      P      15 44 43.9 -0.2
GOF                                pmax   pmax
      comp=Z,120nm,1.0s,mb5.7
ASAR  Alice Springs     68.83 193  P      P      15 44 44.9 -0.8
      comp=Z,4.7nm,0.7s,mb4.4,baz=9.8,slow=5.2,SNR=82
ASPA  Alice Springs     68.83 193⇑iP      P      15 44 45.1 -0.6
HWUT  Hardware Ranch    68.97  52 eP      P      15 44 46.8 +0.5
      comp=Z,6.5nm,0.8s,mb4.5
NB2   NORSAR Subarra    69.12 339  P      P      15 44 44.9 -2.0
      comp=Z,37nm,1.1s,mb5.1,baz=29,slow=6.2
NB2   NORSAR Subarra    69.12 339  P      P      15 44 44.9 -2.0
NB2                                pmax   pmax
      comp=Z,37nm,1.1s,mb5.1
NB2   NORSAR Subarra    69.12 339  P      P      15 44 44.9 -2.0
      baz=29,slow=6.2
NOA   NORSAR Array B    69.12 339  P      P      15 44 44.9 -2.0
      comp=Z,14nm,0.7s,mb4.9,baz=33,slow=6.3,SNR=67
NOA                                LR     LR     16 17 23.2
      comp=Z,22nm,18.3s,baz=315,slow=38
NOA   NORSAR Array B    69.12 339  P      P      15 44 44.9 -2.0
NOA                                LR     LR     16 17 23.2
DUG   Dugway            69.18  54 eP      P      15 44 48.2 +0.6
DUG                                pmax   pmax
      comp=Z,39nm,0.8s,mb5.3
DUG   Dugway            69.18  54 eP      P      15 44 48.2 +0.5
      comp=Z,39nm,0.8s,mb5.3
PDAR  Pinedale Array    69.33  50  P      P      15 44 48.9 +0.4
      comp=Z,1.5nm,0.5s,mb4.1,baz=295,slow=1.8,SNR=23
KIV   Kislovodsk        69.54 312  P      P      15 44 50.6 +0.8
      comp=Z,1μm,0.7s,SNR=32
KIV   Kislovodsk        69.54 312c iP     P      15 44 49.9 +0.1
KIV                                pmax   pmax
      comp=Z,101nm,0.6s,mb5.8
KIV   Kislovodsk        69.54 312 eP      P      15 44 49.6 -0.2
      comp=Z,108nm,0.6s,mb5.9
NLU   North Lily Min    69.77  54 eP      P      15 44 51.5 +0.3
TI2   Plekhanov         69.90 309⇑iP      P      15 44 53.0 +1.0
TI2                                pmax   pmax
      comp=Z,80nm,0.8s,mb5.6
MBWA  Marble Bar        69.97 208 eP      P      15 44 51.3 -1.5
      comp=Z,4.8nm,0.5s,mb4.6
ULM   Lac du Bonnet     70.86  37  P      P      15 44 56.9 -0.8
      comp=Z,2.5nm,0.5s,mb4.3,baz=323,slow=7.2,SNR=4.3
ULM   Lac du Bonnet     70.86  37 eP      P      15 44 57.0 -0.6
      comp=Z,7.3nm,0.7s,mb4.6
GNI   Garni             70.97 308 eP      P      15 44 58.5 +0.1
GNI                                pmax   pmax
      comp=Z,24nm,0.8s
GNI   Garni             70.97 308 eP      P      15 44 58.5  0.0
      comp=Z,24nm,0.8s,mb5.1
SUW   Suwalki           71.11 329 eP      P      15 44 58.0 -1.0
SRU   San Rafael        71.22  53 eP      P      15 45 00.3 +0.3
AKASG Malin Array Be    71.24 324  P      P      15 44 58.5 -1.4
AKASG                              pmax   pmax
      comp=Z,11nm,0.3s
AKASG Malin Array Be    71.24 324  P      P      15 44 58.5 -1.4
      comp=Z,11nm,0.3s,mb5.1,baz=39,slow=6.3,SNR=98
SOC   Sochi             71.37 313 eP      P      15 45 00.1 -0.7
SOC                               e       pP     15 45 22.5 -2.7
SOC                               e              15 47 35.9
SOC                               eSS     SS     15 58 42.0 -6.0
SOC                                pmax   pmax
      comp=Z,42nm,0.6s,mb5.5
SOC                                pmax   pmax
      comp=N,11nm,0.7s
SOC                                pmax   pmax
      comp=E,19nm,0.9s
ERZM  Erzurum           73.03 309 i P     P      15 45 11.4 +0.8
SIM   Simferopol'       73.23 317  P      P      15 45 12.0 +0.3
SIM                                pmax   pmax
      comp=Z,35nm,0.8s,mb5.2
ISCO  Idaho Springs     73.52  50 eP      P      15 45 14.7 +1.2
ISCO                               pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.2
ISCO  Idaho Springs     73.52  50 eP      P      15 45 14.7 +1.2
      comp=Z,4.1nm,0.8s,mb4.2
GKP   Gorka Klasztor    73.82 331 eP      P      15 45 14.6 -0.4
LVV   L'vov             74.06 326 eP      P      15 45 15.5 -0.9
KIS   Kishinev          74.20 321⇑iP      P      15 45 15.0 -2.3
KIS                               e              15 45 49.0
KIS                               e              15 54 31.0
KIS                                pmax   pmax
      comp=Z,200nm,1.0s,mb5.8
BEST  Besiri            74.48 308 i P     P      15 45 20.2 +1.1
EYMN  Ely               74.49  37 eP      P      15 45 19.9 +1.0
      comp=Z,6.4nm,0.6s,mb4.5
KWP   Kalwaria          74.74 326 eP      P      15 45 20.5 +0.2
BURAR Bucovina Array    75.29 324  P      P      15 45 23.6 +0.2
BURAR Bucovina Array    75.29 324 ⇑P      P      15 45 23.5  0.0
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ELZG	Elazig	75.33	310	iP	P	15 45 24.4	+0.5
OJC	Ojcow	75.39	328	eP	P	15 45 24.0	0.0
BOYT	Boyabat	75.41	314	iP	P	15 45 24.8	+0.5
KOLS	Kolonicke sedl	75.47	326	iP	P	15 45 24.5	+0.1
KOLS				e		15 45 29.6	
BSEG	Bad Segeberg	75.47	335	eP	P	15 45 24.2	-0.2
TLCR		75.57	320	⇑P	P	15 45 25.6	+0.5
TUC	Tucson	75.69	59	eP	P	15 45 26.3	+0.2
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TUC	Tucson	75.69	59	eP	P	15 45 26.3	+0.2
	comp=Z,2.5nm,0.9s,mb3.9						
MALT	Malatya	75.77	310	P	P	15 45 28.4	+2.0
MALT	Malatya	75.77	310	eP	P	15 45 26.7	+0.3
	comp=Z,28nm,1.1s,mb4.9						
MALT	Malatya	75.77	310	⇓P	P	15 45 28.0	+1.6
CRVS	Cervenica-Dubn	75.81	327	iP	P	15 45 26.5	+0.1
CRVS				e		15 45 32.5	
NIE	Niedzica	75.84	328	eP	P	15 45 25.9	-0.7
CFR	Carcaliu	75.89	321	P	P	15 45 27.3	+0.4
CFR	Carcaliu	75.89	321	⇑P	P	15 45 27.2	+0.3
VRI	Vrincioaia	75.99	322	P	P	15 45 28.2	+0.7
VRI	Vrincioaia	75.99	322	⇑P	P	15 45 28.1	+0.6
CTKT	Corum	76.05	314	iP	P	15 45 28.2	+0.3
STKA	Stephens Creek	76.06	185	⇓iP	P	15 45 28.0	-0.2
	comp=Z,3.1nm,0.8s,mb4.1						
STKA	Stephens Creek	76.06	185	P	P	15 45 28.2	0.0
	comp=Z,3.0nm,0.7s,mb4.1,baz=333,slow=6.8,SNR=11						
BALT	Daday	76.10	315	iP	P	15 45 29.0	+0.8
KSP	Ksiaz	76.16	331	⇑eP	P	15 45 28.2	-0.1
KSP	Ksiaz	76.16	331	eP	P	15 45 28.4	+0.1
TIRR	Tirgusor	76.31	320	⇓P	P	15 45 29.8	+0.4
OKC	Ostrava-Krasne	76.32	329	iP	P	15 45 29.2	-0.1
HARR	Harsova	76.36	320	⇑P	P	15 45 30.3	+0.7
HARR	Harsova	76.36	320	P	P	15 45 30.2	+0.7
HARR	Harsova	76.36	320	⇓P	P	15 45 30.3	+0.7
ANMO	Albuquerque	76.44	54	P	P	15 45 31.4	+1.1
	comp=Z,1.7nm,0.8s,baz=304,slow=8.7,SNR=3.9						
KECS	Kecovo	76.53	327	eP	P	15 45 30.4	-0.1
UPC	Upice	76.54	331	iP	P	15 45 30.3	-0.2
DPC	Dobruska-Polom	76.56	330	iP	P	15 45 31.0	+0.4
MORC	Moravsky Berou	76.59	329	P	P	15 45 31.1	+0.3
MORC	Moravsky Berou	76.59	329	eP	P	15 45 30.7	-0.1
	comp=Z,45nm,0.8s,mb5.2						
MORC	Moravsky Berou	76.59	329	⇓P	P	15 45 30.9	+0.1
MLR	Muntele Rosu	76.63	322	⇑P	P	15 45 31.9	+0.8
MLR	Muntele Rosu	76.63	322	P	P	15 45 31.8	+0.7
	comp=Z,16nm,0.4s,mb5.1,baz=159,slow=2.9,SNR=54						
MLR	Muntele Rosu	76.63	322	P	P	15 45 31.8	+0.6
MLR	Muntele Rosu	76.63	322	⇓P	P	15 45 31.9	+0.8
ELDT	Eldivan	76.85	314	iP	P	15 45 32.4	-0.1
FORT	Forrest	76.86	197	eP	P	15 45 32.2	-0.5
	comp=Z,439nm,0.6s						
CLL	Collm	76.89	333	⇑iP	P	15 45 31.8	-0.6
CLL				e		15 45 48.0	
CLL				pmax	pmax		
	comp=Z,83nm,0.7s,mb5.6						
CLL	Collm	76.89	333	⇑iP	P	15 45 31.8	-0.6
	comp=Z,83nm,0.7s,mb5.6						
CLL				e		15 45 48.0	
CLL	Collm	76.89	333	⇑P	P	15 45 31.8	-0.6
	comp=Z,logA/T=2.1,mb5.6						
CLL				e*PP	pP	15 45 48.0	-9.1
SNX	Sinaia	76.93	322	P	P	15 45 33.7	+0.9
GZT	Gaziantep	76.93	310	iP	P	15 45 34.2	+1.2
BRG	Berggiesshubel	76.94	332	iP	P	15 45 32.5	-0.2
BRG				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
BRG	Berggiesshubel	76.94	332	iP	P	15 45 32.5	-0.2
	comp=Z,20nm,0.9s,mb4.8						
SCHQ	Schefferville	76.96	20	P	P	15 45 32.8	0.0
	comp=Z,3.5nm,0.5s,mb4.4,baz=351,slow=6.4,SNR=26						
SCHQ	Schefferville	76.96	20	eP	P	15 45 32.1	-0.7
	comp=Z,7.0nm,0.8s,mb4.4						
PVCC	Panska Ves	77.02	331	iP	P	15 45 33.1	-0.1
KAHT	Ahir Dag	77.11	310	iP	P	15 45 34.9	+1.0
VYHS	Vyhne	77.16	328	iP	P	15 45 34.1	+0.1
PSZ	Piszkesteto	77.22	327	P	P	15 45 35.3	+0.9
PSZ	Piszkesteto	77.22	327	eP	P	15 45 34.4	+0.1
	comp=Z,23nm,0.8s,mb5.0						
PSZ	Piszkesteto	77.22	327	⇓eP	P	15 45 35.1	+0.7
CLZ	Clausthal	77.27	334	eP	P	15 45 34.6	+0.1
	comp=Z,62nm,0.8s,mb5.4						
BRTR	Keskin Array B	77.30	314	P	P	15 45 35.5	+0.5
	comp=Z,6.4nm,0.9s,mb4.3,baz=73,slow=4.3,SNR=22						
VRAC	Vranov	77.33	330	P	P	15 45 35.6	+0.7
SGKT	Sivrigoynuk	77.48	315	iP	P	15 45 36.0	+0.1
PRU	Pruhonice	77.49	331	iP	P	15 45 35.8	0.0
SMOL	Smolenice	77.68	329	eP	P	15 45 37.6	+0.8
MOX	Moxa	77.91	333	eP	P	15 45 37.7	-0.4
MOX				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.1						
MOX	Moxa	77.91	333	eP	P	15 45 37.7	-0.4
	comp=Z,46nm,1.1s,mb5.1						
MOX	Moxa	77.91	333	iP	P	15 45 37.7	-0.4
	comp=Z,logA/T=1.6,mb5.1						
NKC	Novy Kostel	77.99	332	iP	P	15 45 38.3	-0.2
SRO1	Iza	78.00	328	eP	P	15 45 39.6	+1.0
ZST	Bratislava	78.06	329	eP	P	15 45 40.0	+1.0
ZST				e		15 45 44.5	
COBT	Iskenderun	78.26	310	iP	P	15 45 41.1	+0.8
BZS	Buzias	78.39	325	P	P	15 45 41.1	+0.2
BZS	Buzias	78.39	325	⇓P	P	15 45 40.2	-0.6
KHC	Kasperske Hory	78.55	331	iP	P	15 45 41.8	+0.2
GEC2	GERESS Array S	78.75	331	eP	P	15 45 42.7	0.0
GEC2				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.0						
GEC2	GERESS Array S	78.75	331	eP	P	15 45 42.7	0.0
	comp=Z,24nm,1.0s,mb5.0						
GERES	GERESS Array B	78.75	331	P	P	15 45 42.5	-0.2
	comp=Z,16nm,0.4s,mb5.2,baz=39,slow=5.6,SNR=221						
WET	Wettzell	78.78	332	eP	P	15 45 43.3	+0.4
WET				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
WET	Wettzell	78.78	332	eP	P	15 45 43.3	+0.4
	comp=Z,50nm,1.0s,mb5.3						
GRA1	Grafenberg Arr	78.86	333	eP	P	15 45 43.8	+0.5
	comp=Z,108nm,0.7s,mb5.8						
GRF	Grafenberg Arr	78.86	333	eP	P	15 45 43.8	+0.5
GRF				pmax	pmax		
	comp=Z,108nm,0.7s,mb5.8						
GRF	Grafenberg Arr	78.86	333	eP	P	15 45 43.8	+0.5
GRF				pmax	pmax		
	comp=Z,108nm,0.7s,mb5.8						
GRF	Grafenberg Arr	78.86	333	eP	P	15 45 43.8	+0.5
	comp=Z,108nm,0.7s,mb5.8						
ESKT	Eskisehir	78.89	315	iP	P	15 45 43.9	+0.2
ULDT	Uludag	79.27	317	iP	P	15 45 45.7	-0.1
TNS	Taunus Mts	79.28	335	eP	P	15 45 45.6	0.0
TNS				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.4						
TNS	Taunus Mts	79.28	335	eP	P	15 45 45.6	0.0
	comp=Z,41nm,0.7s,mb5.4						
MEST	Erdemli	79.36	311	iP	P	15 45 46.3	-0.1
MNTX	Cornudas Mount	79.38	56	eP	P	15 45 46.5	-0.1
	comp=Z,23nm,1.8s,mb4.7						
MOA	Molln	79.39	330	⇓iP	P	15 45 46.7	+0.4
	comp=Z,16nm,0.7s,mb5.0						
ARSA	Arzberg	79.44	329	⇑iP	P	15 45 47.2	+0.7
	comp=Z,6.4nm,0.5s,mb4.7						
SIND	Sindeldorf	79.68	334	⇓eP	P	15 45 48.1	+0.3
TOD	Tromm	79.71	334	eP	P	15 45 48.0	+0.1
TOD	Tromm	79.71	334	⇓eP	P	15 45 48.4	+0.5
SWS	Schriesheim	79.85	334	⇓eP	P	15 45 48.9	+0.2
ABH	Alteburg	79.86	335	eP	P	15 45 48.7	0.0
ABH	Alteburg	79.86	335	⇓eP	P	15 45 49.1	+0.4
PERS	Pernice	80.11	329	eP	P	15 45 50.9	+0.8
VTS	Vitosha	80.13	322	P	P	15 45 51.4	+1.1
VTS	Vitosha	80.13	322	⇓P	P	15 45 50.6	+0.3
HDH	Heidenheim	80.16	333	⇓eP	P	15 45 50.6	+0.3
FUR	Furstenfeldbru	80.16	332	eP	P	15 45 50.7	+0.3
FUR				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.4						
FUR	Furstenfeldbru	80.16	332	eP	P	15 45 50.7	+0.3
	comp=Z,57nm,1.0s,mb5.4						
RUP	Ruppelstein	80.16	335	eP	P	15 45 50.1	-0.2
RUP	Ruppelstein	80.16	335	⇓eP	P	15 45 50.7	+0.4
KTD	Kalmit	80.19	334	eP	P	15 45 50.8	+0.3
DIVS	Divcibare	80.30	325	⇑iP	P	15 45 50.8	-0.4
KLBR	Kellerberrin	80.31	205	eP	P	15 45 50.5	-1.0
	comp=Z,60nm,0.8s,mb5.5						
STU	Stuttgart	80.32	333	eP	P	15 45 51.3	+0.1
STU				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.4						
STU	Stuttgart	80.32	333	eP	P	15 45 51.3	+0.1
	comp=Z,40nm,0.6s,mb5.4						
KBA	Koelnbreinsper	80.38	330	⇑iP	P	15 45 52.2	+0.6
	comp=Z,23nm,0.5s,mb5.3						
KBA	Koelnbreinsper	80.38	330	⇑iP	P	15 45 52.2	+0.6
KBA				pmax	pmax		
	comp=Z,23nm,0.5s,mb5.3						
OBKA	Obir	80.43	329	⇑iP	P	15 45 52.2	+0.4
	comp=Z,12nm,0.6s,mb4.9						
GIVF	Givet	80.46	337	eP	P	15 45 51.4	-0.5
	comp=Z,22nm,0.6s,mb4.9						
GIVF	Givet	80.46	337	eP	P	15 45 51.4	-0.5
GIVF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
WLF	Walferdange	80.47	336	eP	P	15 45 51.8	-0.2
WLF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
WLF	Walferdange	80.47	336	eP	P	15 45 51.8	-0.2
	comp=Z,11nm,0.7s,mb4.8						
LBG	Lerchenberg	80.54	334	⇓eP	P	15 45 52.9	+0.5
BUCH	Bad Urach	80.55	333	eP	P	15 45 52.9	+0.5
LANF	Langenberg	80.57	334	eP	P	15 45 52.7	+0.2
BAIF	Baives	80.67	337	eP	P	15 45 52.5	-0.5
	comp=Z,26nm,0.5s,mb5.0						
BAIF	Baives	80.67	337	eP	P	15 45 52.5	-0.5
BAIF				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.0						
WATA	Walderalm	80.78	331	⇑iP	P	15 45 53.9	+0.2
	comp=Z,11nm,0.7s,mb4.8						
WATA	Walderalm	80.78	331	⇑iP	P	15 45 53.9	+0.2
WATA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
WTTA	Wattenberg	80.82	331	⇑iP	P	15 45 54.3	+0.4
	comp=Z,38nm,0.4s,mb5.6						
WTTA	Wattenberg	80.82	331	⇑iP	P	15 45 54.3	+0.4
WTTA				pmax	pmax		
	comp=Z,38nm,0.4s,mb5.6						
VISS	Visnje	80.92	329	eP	P	15 45 54.0	-0.5
MOTA	Moosalm	80.93	332	⇑iP	P	15 45 54.7	+0.2
	comp=Z,9.9nm,0.9s,mb4.6						
MOTA	Moosalm	80.93	332	⇑iP	P	15 45 54.7	+0.2
MOTA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
GUT	Gutenstein	80.96	333	⇓eP	P	15 45 55.2	+0.6
UBR	Uberruh	80.97	332	⇓eP	P	15 45 55.1	+0.4
BFO	Black Forest	80.98	334	eP	P	15 45 54.7	0.0
BFO				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.0						
BFO	Black Forest	80.98	334	eP	P	15 45 54.7	0.0
	comp=Z,24nm,0.9s,mb5.0						
SQTA	Sankt Quirin	81.00	332	⇓iP	P	15 45 55.2	+0.4
	comp=Z,12nm,0.7s,mb4.8						
SQTA	Sankt Quirin	81.00	332	⇓iP	P	15 45 55.2	+0.4
SQTA				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
CSS	Prodhromos	81.01	311	eP	P	15 45 54.5	-0.6
	comp=Z,11nm,0.8s,mb4.7						
BOJS	Bojanci	81.01	328	eP	P	15 45 54.8	-0.2
SPAK	Spaichingen	81.04	333	eP	P	15 45 55.9	+0.9
SPAK	Spaichingen	81.04	333	eP	P	15 45 55.6	+0.6
ASF	Jabal al Asfar	81.07	307	P	P	15 45 56.5	+1.0
	comp=Z,9.6nm,0.7s,mb4.8,baz=292,slow=2.7,SNR=19						
JAVS	Javornik	81.13	329	eP	P	15 45 54.4	-1.1
WLS	Welschbruch	81.22	334	eP	P	15 45 55.6	-0.3
CDF	Champ du Feu	81.24	334	eP	P	15 45 56.4	+0.3
	comp=Z,66nm,0.9s,mb5.2						
CDF	Champ du Feu	81.24	334	eP	P	15 45 56.4	+0.3
CDF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.2						
DAVA	Damuels	81.39	332	⇑iP	P	15 45 57.4	+0.5
	comp=Z,31nm,0.7s,mb5.2						
SKO	Skopje	81.41	322	eP	P	15 45 58.6	+1.5
KIZ	Kirchzarten	81.44	334	⇓eP	P	15 45 57.4	+0.3
ECH	Echery	81.45	334	eP	P	15 45 57.2	0.0
FELD	Feldberg	81.49	334	⇓eP	P	15 45 57.8	+0.4
NWAO	Narrogin (SRO)	81.71	205	P	P	15 45 58.5	-0.4
NWAO				pmax	pmax		
	comp=Z,17nm,0.9s						
NWAO	Narrogin (SRO)	81.71	205	P	P	15 45 58.5	-0.4
	comp=Z,17nm,0.9s,mb4.9,baz=41,slow=4.4,SNR=9.4						
NWAO	Narrogin (SRO)	81.71	205	eP	P	15 45 58.1	-0.8
	comp=Z,14nm,0.9s,mb4.8						
MOF	Molkenrain	81.78	334	eP	P	15 45 58.6	-0.3
THEF	They Montfort	81.80	335	eP	P	15 45 59.1	+0.1
MEZF	Maizieres J’vi	81.83	336	eP	P	15 45 59.0	-0.1
	comp=Z,53nm,0.7s,mb5.2						
HAU	Haudompre	81.89	335	eP	P	15 45 59.3	-0.1
HINF	Hinteralfeld	81.90	334	eP	P	15 45 59.2	-0.3
	comp=Z,23nm,0.7s,mb4.8						
HINF	Hinteralfeld	81.90	334	eP	P	15 45 59.2	-0.3
HINF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
BRMO	Bormio	81.93	332	eP	P	15 46 00.8	+1.0
BBS	Basel-Blauen	82.01	334	eP	P	15 46 00.1	0.0
BBS	Basel-Blauen	82.01	334	⇓eP	P	15 46 00.7	+0.6
LTX	Lajitas	82.11	57	eP	P	15 46 01.5	+0.5
LTX				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
LTX	Lajitas	82.11	57	eP	P	15 46 01.4	+0.5
	comp=Z,15nm,1.1s,mb4.7						
TXAR	Lajitas Array	82.11	57	P	P	15 46 01.7	+0.8
	comp=Z,7.3nm,0.6s,mb4.7,baz=300,slow=4.0,SNR=51						
CCM	Cathedral Cave	82.31	43	eP	P	15 46 02.5	+0.7
CCM				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
CCM	Cathedral Cave	82.31	43	eP	P	15 46 02.5	+0.7
	comp=Z,7.2nm,0.9s,mb4.5						
FLN	La Foliniere	83.11	339	eP	P	15 46 05.7	+0.1
	comp=Z,76nm,0.6s,mb5.4						
FLN	La Foliniere	83.11	339	eP	P	15 46 05.7	+0.1
FLN				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.4						
LDF	La Druitiere	83.17	339	eP	P	15 46 05.8	-0.2
	comp=Z,46nm,0.7s,mb5.1						
LDF	La Druitiere	83.17	339	eP	P	15 46 05.8	-0.2
LDF				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.1						
CABF	La Chapelle	83.21	334	eP	P	15 46 06.9	+0.7
	comp=Z,15nm,0.6s,mb4.7						
CABF	La Chapelle	83.21	334	eP	P	15 46 06.9	+0.7
CABF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
ORX	Oropa	83.47	333	P	P	15 46 07.7	+0.1
GRR	Gorron	83.55	339	eP	P	15 46 08.2	+0.4
	comp=Z,85nm,0.5s,mb5.5						
GRR	Gorron	83.55	339	eP	P	15 46 08.2	+0.4
GRR				pmax	pmax		
	comp=Z,42nm,0.5s,mb5.5						
SSF	Saint Saulge	83.58	336	eP	P	15 46 08.0	0.0
	comp=Z,22nm,0.6s,mb4.9						
SSF	Saint Saulge	83.58	336	eP	P	15 46 08.0	0.0
SSF				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
HYF	Humbligny	83.64	337	eP	P	15 46 08.7	+0.4
SFI	Santa Sofia	83.64	329	eP	P	15 46 10.0	+1.6
TRAV		83.66	333	P	P	15 46 08.4	0.0
GSCL	Gusciola	83.71	330	eP	P	15 46 10.3	+1.6
GRAM		83.77	331	P	P	15 46 09.8	+0.8
SNTG	Esanatoglia	83.80	328	eP	P	15 46 10.2	+1.0
VALM		83.83	331	P	P	15 46 10.2	+1.0
SMF	Signal de Mont	83.86	336	eP	P	15 46 09.5	+0.1
	comp=Z,41nm,0.5s,mb5.2						
SMF	Signal de Mont	83.86	336	eP	P	15 46 09.5	+0.1
SMF				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.2						
MIAR	Mount Ida	83.87	47	eP	P	15 46 10.3	+0.6
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MIAR	Mount Ida	83.87	47	eP	P	15 46 10.3	+0.6
	comp=Z,4.8nm,0.8s,mb4.4						
AVF	Avril sur Loir	83.87	336	eP	P	15 46 09.6	+0.2
	comp=Z,23nm,0.5s,mb5.0						
AVF	Avril sur Loir	83.87	336	eP	P	15 46 09.6	+0.2
AVF				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.0						
LSD	Ceresole Reale	83.90	333	P	P	15 46 10.3	+0.7
LPL	La Plagne	83.98	333	eP	P	15 46 10.6	+0.6
	comp=Z,40nm,0.7s,mb5.0						
LPL	La Plagne	83.98	333	eP	P	15 46 10.6	+0.6
LPL				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
LPG	La Plagne	83.99	333	eP	P	15 46 10.3	+0.2
	comp=Z,46nm,0.7s,mb5.1						
LPG	La Plagne	83.99	333	eP	P	15 46 10.3	+0.2
LPG				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.1						
EIL	Elat	84.04	306	eP	P	15 46 10.7	0.0
	comp=Z,17nm,1.0s,mb4.8						
VINC	Vinca	84.05	331	P	P	15 46 11.4	+1.1
SGMF	Saint Gilles	84.09	340	eP	P	15 46 10.6	+0.1
	comp=Z,28nm,0.5s,mb5.0						
SGMF	Saint Gilles	84.09	340	eP	P	15 46 10.6	+0.1
SGMF				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
RSP	Reno Superiore	84.14	333	P	P	15 46 10.5	-0.3
ROSF	Rostrenen	84.19	341	eP	P	15 46 11.2	+0.2
	comp=Z,81nm,0.9s,mb5.2						
ROSF	Rostrenen	84.19	341	eP	P	15 46 11.2	+0.2
ROSF				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.3						
BGF	Bois d’Agland	84.23	336	eP	P	15 46 12.0	+0.8
	comp=Z,13nm,0.5s,mb4.7						
BGF	Bois d’Agland	84.23	336	eP	P	15 46 12.0	+0.8
BGF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
PCP	Pian Castagno	84.25	332	P	P	15 46 11.1	-0.3
FENE	Fenestrelle	84.31	333	P	P	15 46 12.0	+0.4
BHB	Bricherasio	84.41	333	P	P	15 46 11.8	-0.4
BNI	Bardonecchia	84.41	333	eP	P	15 46 12.1	-0.1
BNI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
BNI	Bardonecchia	84.41	333	eP	P	15 46 12.1	-0.1
	comp=Z,9.9nm,0.6s,mb4.8						
RRL	Cesana Torines	84.50	333	P	P	15 46 12.7	+0.1
PLDF	La Plantade	84.54	336	eP	P	15 46 13.3	+0.5
QUIF	Quistinic	84.55	341	eP	P	15 46 13.2	+0.4
	comp=Z,21nm,0.6s,mb5.0						
QUIF	Quistinic	84.55	341	eP	P	15 46 13.2	+0.4
QUIF				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
AGO	Saint Agoulin	84.61	336	eP	P	15 46 13.3	+0.2
FIN	Finale Ligure	84.66	332	P	P	15 46 13.1	-0.3
TCF	Toulx Ste Croi	84.66	337	eP	P	15 46 14.2	+0.8
	comp=Z,31nm,0.7s,mb5.0						
TCF	Toulx Ste Croi	84.66	337	eP	P	15 46 14.2	+0.8
TCF				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
MBDF	Montbardon	84.67	333	eP	P	15 46 13.6	+0.1
	comp=Z,32nm,0.6s,mb5.1						
MBDF	Montbardon	84.67	333	eP	P	15 46 13.6	+0.1
MBDF				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
ROB	Roburent	84.69	332	P	P	15 46 12.9	-0.7
DOI	San Damiano	84.72	333	eP	P	15 46 12.5	-1.2
PZZ	Prazzo	84.76	333	P	P	15 46 12.7	-1.2
ORIF	Oris-en-Rattie	84.79	334	eP	P	15 46 14.7	+0.6
	comp=Z,48nm,0.6s,mb5.3						
ORIF	Oris-en-Rattie	84.79	334	eP	P	15 46 14.7	+0.6
ORIF				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
ENR	Entracque	84.90	332	P	P	15 46 14.0	-0.7
PYM	Petit Puy Mans	84.92	336	eP	P	15 46 15.2	+0.5
STV2	Anna di Valdie	84.92	332	P	P	15 46 13.4	-1.3
STV	Sta Anna Valdi	84.92	332	P	P	15 46 13.3	-1.4
MONE	Monesi	84.92	332	P	P	15 46 14.9	+0.1
MFF	Saint Martin d	85.02	338	eP	P	15 46 15.9	+0.7
	comp=Z,50nm,0.5s,mb5.4						
MFF	Saint Martin d	85.02	338	eP	P	15 46 15.9	+0.7
MFF				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.4						
IMI	Imperia	85.03	332	eP	P	15 46 15.7	+0.4
SAOF	Saorge	85.07	332	eP	P	15 46 15.0	-0.5
AUTN	L’Aution	85.11	332	eP	P	15 46 15.9	+0.2
TOUF	Mont Tournerai	85.15	332	eP	P	15 46 16.1	+0.2
SBF	Sospel	85.22	332	eP	P	15 46 16.1	-0.1
	comp=Z,47nm,0.7s,mb5.3						
SBF	Sospel	85.22	332	eP	P	15 46 16.1	-0.1
SBF				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.3						
VIVF	Saint-Julien-l	85.22	334	eP	P	15 46 17.0	+0.8
	comp=Z,30nm,0.6s,mb5.1						
VIVF	Saint-Julien-l	85.22	334	eP	P	15 46 17.0	+0.8
VIVF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
MVIF	Mont Vial	85.29	332	eP	P	15 46 16.6	0.0
REVF	Revere	85.35	332	eP	P	15 46 15.3	-1.6
SMRF	Simiane la Rot	85.73	333	eP	P	15 46 19.6	+0.9
	comp=Z,7.6nm,0.7s,mb4.4						
FRF	La Foret Royal	85.75	333	eP	P	15 46 19.6	+0.7
RJF	Les Rejaudoux	85.75	337	eP	P	15 46 19.6	+0.8
	comp=Z,21nm,0.8s,mb4.8						
RJF	Les Rejaudoux	85.75	337	eP	P	15 46 19.6	+0.8
RJF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
PGF	Pioggiola	85.84	331	eP	P	15 46 19.2	-0.1
	comp=Z,16nm,0.7s,mb4.8						
PGF	Pioggiola	85.84	331	eP	P	15 46 19.2	-0.1
PGF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
CAF	Calviac	85.94	336	eP	P	15 46 21.0	+1.3
	comp=Z,22nm,0.6s,mb4.9						
CAF	Calviac	85.94	336	eP	P	15 46 21.0	+1.3
CAF				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
LMR	La Mourre	86.00	333	eP	P	15 46 19.9	-0.2
	comp=Z,32nm,0.8s,mb5.0						
LMR	La Mourre	86.00	333	eP	P	15 46 19.9	-0.2
LMR				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
LASF	Ste Croix	86.18	335	eP	P	15 46 21.5	+0.6
	comp=Z,7.0nm,0.7s,mb4.4						
LFF	La Frestale	86.31	337	eP	P	15 46 22.9	+1.4
	comp=Z,79nm,0.6s,mb5.5						
LFF	La Frestale	86.31	337	eP	P	15 46 22.9	+1.4
LFF				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.5						
MTLF	Montolieu	87.34	335	eP	P	15 46 27.5	+0.9
	comp=Z,28nm,0.9s,mb4.9						
MTLF	Montolieu	87.34	335	eP	P	15 46 27.5	+0.9
MTLF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
EPF	Esparros	88.17	337	eP	P	15 46 31.7	+1.1
	comp=Z,12nm,0.7s,mb4.7						
EPF	Esparros	88.17	337	eP	P	15 46 31.7	+1.1
EPF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
SJPF	Ste Jean	88.54	338	eP	P	15 46 36.0	+3.7
	comp=Z,6.5nm,0.5s,mb4.6						
SJPF	Ste Jean	88.54	338	eP	P	15 46 36.0	+3.7
SJPF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ETSF	Etsaut	88.55	337	eP	P	15 46 34.2	+1.8
	comp=Z,38nm,0.6s,mb5.3						
ETSF	Etsaut	88.55	337	eP	P	15 46 34.2	+1.8
ETSF				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
ESDC	Sonseca Array	92.48	338	P	P	15 46 50.3	-0.4
	comp=Z,0.8nm,0.4s,mb4.3,baz=18,slow=4.2,SNR=4.2						
VNDA	Vanda	121.93	176	PKP	PKPdf	15 52 32.6	+0.9
	comp=Z,2.0nm,0.7s,baz=337,slow=4.5,SNR=9.4						
QSPA	South Pole Qui	134.09	180	ePKPdf	PKPdf	15 52 56.5	+1.8
SYO	Syowa Base	136.84	210	⇓P	PKPdf	15 53 35.0	+35
BDFB	Brasilia	148.50	30	PKPbc	PKPdf	15 53 26.7	+5.1
	comp=Z,2.6nm,0.7s,baz=289,slow=5.9,SNR=5.8						
SNAA	Sanae	149.11	198	⇓i	PKPdf	15 53 26.2	+5.2
SNAA	Sanae	149.11	198	⇓i	PKPdf	15 53 31.4	+10
SNAA	Sanae	149.11	198	PKPbc	PKPdf	15 53 26.5	+5.5
	comp=Z,2.4nm,0.7s,baz=175,slow=6.3,SNR=9.0						
VNA2	Neumayer--Watz	150.64	197	⇓i	PKPdf	15 53 31.3	+7.9
VNA2	Neumayer--Watz	150.64	197	⇑i	PKPdf	15 53 39.1	+16
VNA2	Neumayer--Watz	150.64	197	⇑i	PKPdf	15 53 43.9	+20
VNA2	Neumayer--Watz	150.64	197	⇓i	PKPdf	15 53 59.1	+36
VNA3	Neumayer Olymp	150.83	195	⇓i	PKPdf	15 53 31.4	+7.7
VNA3	Neumayer Olymp	150.83	195	⇓i	PKPdf	15 53 36.6	+13
VNA3	Neumayer Olymp	150.83	195	⇓i	PKPdf	15 54 00.6	+37
PLCA	Paso Flores	151.91	96	PKPbc	PKPdf	15 53 34.5	+8.3
	comp=Z,5.8nm,0.6s,baz=248,slow=2.3,SNR=22						
PLCA	Paso Flores	151.91	96	ePKPbc	PKPdf	15 53 34.4	+8.2
PLCA				ePKPab	PKPab	15 53 45.0	+0.3

CSEM ***25*** *15:36:50.0±0.1, 34.45N×28.06E, h60^{km}, ML3.9, Error ellipse: s-maj=4.0km s-min=2.0km az=40.0*

HLW ***25*** *15:36:51.1, 34.49N×28.04E, h23^{km}, Mb3.9*

ATH ***25*** *15:37:02.4, 35.01N×26.97E, h17^{km}±15^{km}, MD3.3/5*

NEIC ***25*** *15:37:04.3, 35.12N×26.83E, h11^{km}, MD3.3(ATH), After ATH.*

ISC 25 15:36:50.5±0.7, **34.34N**±0.05×**28.01E**±0.07, **h33^{km}, n17,**

σ1^{s}18/22**,5C-2D,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.39**	**330**	*e*PN	**Pn**	**15 37 13.0**	**-1.0**
ARG	**Arkhangelos**	**1.88**	**3**	*e*PN	**Pn**	**15 37 32.0**	**+11**
XRY	**Khrisi**	**1.98**	**286**	*e*PN	**Pn**	**15 37 22.1**	**-0.3**
NPS	**Neapolis**	**2.18**	**296**	*e*PN	**Pn**	**15 37 24.5**	**-0.7**
NPS	**Neapolis**	**2.18**	**296**	*e*Pn	**Pn**	**15 37 25.1**	**-0.1**
VAM	**Vamos**	**3.31**	**290**	*e*PB	**Pb**	**15 37 41.0**	**-7.3**
HMAT	**Matruh**	**3.32**	**194**	⇑P	**P**	**15 37 43.7**	**+2.3**
HMAT				S	**S**	**15 38 20.8**	**+0.5**
DABA	**Dabaa**	**3.32**	**176**	⇑P	**P**	**15 37 42.7**	**+1.3**
SLUM		**3.68**	**220**	⇑P	**P**	**15 37 47.5**	**+1.0**
HNAT	**Natroun**	**5.19**	**154**	P	**P**	**15 38 08.2**	**+0.3**
FYM	**Al Fayyum**	**5.30**	**150**	P	**P**	**15 38 09.8**	**+0.4**
FYM				S	**S**	**15 39 07.5**	**-2.7**
SWA1		**5.42**	**202**	⇑P	**P**	**15 38 12.1**	**+1.0**
SWA1				S	**S**	**15 39 10.8**	**-2.4**
SWA2		**5.52**	**204**	P	**P**	**15 38 13.3**	**+0.8**
SWA2				S	**S**	**15 39 13.5**	**-2.2**
HSAF	**As Saff**	**5.58**	**146**	⇓P	**P**	**15 38 13.7**	**+0.3**
GLL	**Jalalah**	**5.69**	**145**	⇓P	**P**	**15 38 14.8**	**-0.1**
AMAG	**Maghara**	**5.73**	**129**	P	**P**	**15 38 15.2**	**-0.2**
AMAG				S	**S**	**15 39 17.2**	**-3.8**
SUZ		**6.07**	**136**	⇑P	**P**	**15 38 20.1**	**-0.1**

IDC ***25*** *15:39:03.6±4.9,48.97S×161.37E,mb4.1/3,mb1 4.3/4, mb1mx4.0/10,mbtmp4.0/4,ML3.5/1,MS4.5/1,Ms1 4.5/1, ms1mx2.9/15,Error ellipse: s-maj=115.4km s-min=31.7km az=168.0*

ISC 25 15:39:05.5±1.7**,48.7S**±0.3×**161.3E**±0.1**,h10**^{km}**,n14, σ1^{s}43**/17**,mb4.2**/3**,MS4.5**/1**,North of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	**Wether Hill Ro**	**5.35**	**61**	PN	**Pn**	**15 40 28.7**	**+1.3**
WHZ				SN	**Sn**	**15 41 29.5**	**-0.3**
MLZ	**Mavora Lakes**	**5.80**	**57**	PN	**Pn**	**15 40 35.6**	**+1.9**
MLZ				SN	**Sn**	**15 41 41.6**	**+0.6**
MSZ	**Milford Sound**	**6.11**	**51**	PN	**Pn**	**15 40 41.8**	**+3.7**
TUZ	**Tuapeka**	**6.32**	**67**	PN	**Pn**	**15 40 41.0**	**-0.1**
TUZ				SN	**Sn**	**15 41 51.1**	**-3.0**
EAZ	**Earnscleugh**	**6.51**	**61**	PN	**Pn**	**15 40 44.2**	**+0.4**
WKZ	**Wanaka**	**6.59**	**57**	PN	**Pn**	**15 40 47.8**	**+2.9**
JCZ	**Jackson Bay**	**6.95**	**51**	PN	**Pn**	**15 40 54.0**	**+4.0**
ODZ	**Otahua Downs**	**7.40**	**64**	PN	**Pn**	**15 40 54.7**	**-1.6**
RPZ	**Rata Peaks**	**8.43**	**57**	Pn	**P**	**15 41 08.8**	**-1.8**
	0.6nm,0.3s,baz=225,slow=5.7,SNR=4.6						
RPZ				Sn	**Sn**	**15 42 44.8**	**-2.0**
	0.4nm,0.3s,baz=9.3,slow=20,SNR=3.2						
DSZ	**Denniston Nort**	**10.18**	**51**	PN	**P**	**15 41 36.3**	**+1.6**
ASAR	**Alice Springs**	**33.02**	**309**	P	**P**	**15 45 43.0**	**0.0**
	1.8nm,0.6s,mb4.2,baz=144,slow=8.3,SNR=18						
WRA	**Warramunga Arr**	**35.94**	**313**	P	**P**	**15 46 07.3**	**-0.8**
	2.4nm,0.8s,mb4.2,baz=146,slow=8.2,SNR=12						
RAR	**Rarotonga**	**41.41**	**63**	LR	LR	15 59 33.2	
	comp=Z,714nm,21.8s,MS4.5,baz=148,slow=30						
CMAR	**Chiang Mai Arr**	**86.77**	**303**	P	**P**	**15 51 50.3**	**-0.8**
	0.6nm,0.5s,mb4.1,baz=153,slow=3.2,SNR=4.2						

NIED ***25*** *15:39:00,43.00N×142.60E,h145*^{km}*,Mw3.6 Best double couple:* M_0*3.29×10*^{14} *NP1:*ϕ_s*354°,δ54°,λ94°. NP2:*ϕ_s*167°, δ36°,λ85°.*

JMA ***25*** *15:39:43.5±0.2,43.00N×142.59E,h143*^{km}*±2*^{km}*,M3.5*

IDC ***25*** *15:39:45.2±1.1,43.25N×142.44E,h152*^{km}*±7*^{km}*,mb3.2/5, mb1 3.5/5,mb1mx3.2/21,mbtmp3.6/5,Error ellipse: s-maj=31.4km s-min=23.3km az=87.0*

ISC 25 15:39:42.1±0.5**,42.97N**±0.04×**142.56E**±0.06**,h150**^{km}±3^{km}**, n24,σ0^{s}89**/38**,mb3.4**/6**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFR	**Furan**	**0.20**	**7**	P	**P**	**15 40 02.9**	**+0.2**
JBT2	**Biratori 2**	**0.24**	**217**	P	**P**	**15 40 03.3**	**+0.5**
JBT2				*e*S	**S**	**15 40 18.1**	**-0.6**
JAB	**Ashibetsu**	**0.59**	**335**	P	**P**	**15 40 04.5**	**+0.2**
JAB				*e*S	**S**	**15 40 20.7**	**-0.7**
JCH	**Churui**	**0.69**	**121**	P	**P**	**15 40 04.9**	**0.0**
JCH				*e*S	**S**	**15 40 20.6**	**-1.8**
JNBK	**Urakawa-nobuka**	**0.70**	**168**	P	**P**	**15 40 06.4**	**+1.4**
JNBK				*e*S	**S**	**15 40 24.2**	**+1.7**
JEW	**Eniwo**	**0.82**	**261**	P	**P**	**15 40 06.2**	**+0.5**
JEW				*e*S	**S**	**15 40 23.2**	**-0.7**
JKK2	**Kamakawa 2**	**0.91**	**9**	P	**P**	**15 40 07.2**	**+0.9**
JKK2				*e*S	**S**	**15 40 24.7**	**-0.3**
JAR	**Ashorobuto**	**0.94**	**69**	P	**P**	**15 40 07.1**	**+0.6**
JAR				*e*S	**S**	**15 40 24.9**	**-0.5**
JHR	**Hokuryu**	**0.98**	**322**	P	**P**	**15 40 07.7**	**+0.9**
JHR				S	**S**	**15 40 26.2**	**+0.3**
ASAJ	**Asahikawa**	**1.15**	**1**	P	**P**	**15 40 09.2**	**+0.8**
	24nm,0.3s,baz=213,slow=7.4,SNR=48						
ASAJ				S	**S**	**15 40 28.1**	**-0.5**
	7.8nm,0.3s,baz=6.7,slow=29,SNR=6.7						
JTKR	**Abashiri--Toko**	**1.40**	**44**	P	**P**	**15 40 11.6**	**+0.6**
JTKR				*e*S	**S**	**15 40 32.5**	**-0.7**
JKB	**Kayabe**	**1.56**	**227**	P	**P**	**15 40 13.2**	**+0.6**
JKB				*e*S	**S**	**15 40 35.0**	**-1.2**
JAK	**Akkeshi**	**1.57**	**88**	P	**P**	**15 40 12.8**	**+0.1**
JAK				*e*S	**S**	**15 40 34.9**	**-1.4**
JSK	**Shakotan**	**1.57**	**285**	P	**P**	**15 40 13.3**	**+0.6**
JSK				S	**S**	**15 40 36.2**	**-0.1**
JYG	**Yagishiri**	**1.67**	**331**	P	**P**	**15 40 14.3**	**+0.5**
JOT	**Ohata**	**1.94**	**216**	P	**P**	**15 40 16.8**	**0.0**
JOT				*e*S	**S**	**15 40 42.5**	**-1.1**
JSE	**Soyaes**	**1.99**	**1**	P	**P**	**15 40 18.3**	**+0.9**
JRA	**Rausu**	**2.10**	**62**	P	**P**	**15 40 19.7**	**+0.9**
SONM	**Songino Array**	**25.70**	**294**	P	**P**	**15 44 59.6**	**-0.1**
	0.3nm,0.4s,mb3.2,baz=79,slow=9.8,SNR=3.7						
YKA	**Yellowknife Ar**	**58.28**	**32**	P	**P**	**15 49 22.2**	**-0.5**
	0.2nm,0.4s,mb3.3,baz=302,slow=5.8,SNR=5.3						
WRA	**Warramunga Arr**	**63.05**	**189**	P	**P**	**15 49 58.0**	**+2.4**
	0.1nm,0.3s,mb3.1,baz=7.4,slow=6.7,SNR=6.5						
KAF	**Kangasniemi**	**63.47**	**332**	*e*p	**P**	**15 49 56.0**	**-1.8**
	0.2nm,0.3s,mb3.4						
FINES	**FINESS Array B**	**64.00**	**331**	P	**P**	**15 49 59.9**	**-1.2**
	1.1nm,0.4s,mb4.1,baz=49,slow=7.6,SNR=13						
NOA	**NORSAR Array B**	**69.07**	**337**	P	**P**	**15 50 32.1**	**-1.0**
	0.9nm,0.9s,mb3.5,baz=24,slow=8.4,SNR=3.3						

IDC 25 15:45:02.0±1.9**,12.66N×92.08E,mb3.6**/4**,mb1 3.7**/5**, mb1mx3.5**/18**,mbtmp3.5**/5**,ML3.5**/1**,Error ellipse: s-maj=64.6km s-min=23.7km az=76.0,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.77**	**48**	Pn	P	15 47 10.2	-2.9
	0.1nm,0.3s,baz=242,slow=15,SNR=4.1						
SONM	**Songino Array**	**37.05**	**16**	P	P	15 52 14.3	-1.2
	0.6nm,0.6s,baz=204,slow=7.8,SNR=9.0						
ZAL	**Zalesovo**	**41.58**	**354**	P	P	15 52 50.1	-2.9
	0.8nm,0.3s,baz=179,slow=4.0,SNR=3.1						
WRA	**Warramunga Arr**	**52.72**	**127**	P	P	15 54 18.3	-2.8
	0.2nm,0.4s,baz=305,slow=8.5,SNR=6.2						
WRA				PcP	PcP	15 55 29.3	-1.5
	0.4nm,0.5s,baz=315,slow=3.2,SNR=10						
ASAR	**Alice Springs**	**54.56**	**131**	P	P	15 54 31.9	-2.7
	0.2nm,0.4s,baz=312,slow=7.2,SNR=9.4						
ASAR				PcP	PcP	15 55 36.4	-1.4
	0.3nm,0.7s,baz=307,slow=3.4,SNR=4.2						

MAN 25 16:10:03.4,18.28N×120.28E,h7^{km}**,mb3.6,ML2.3,MS1.8, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.75**	**147**	*e*P	Pb	16 10 18.0	-0.4
APYP	**Conner**	**1.01**	**114**	*e*P	Pb	16 10 22.2	-0.6
APYP				*e*S	Sb	16 10 35.0	-1.0
BOLP	**Bolinao**	**1.92**	**191**	*e*P	Pn	16 10 35.7	-1.2
CAUP	**Cauayan**	**1.98**	**132**	*e*P	Pn	16 10 38.6	+0.8
SCZP	**Santa Cruz**	**2.51**	**188**	*e*P	Pn	16 10 46.0	+0.6
BALP	**Baler**	**2.81**	**154**	*e*P	Pn	16 10 49.5	-0.1

HLW ***25*** *16:12:37.9,28.78N×35.28E,h3*^{km}*,Mb3.2*

GII ***25*** *16:12:38.7±0.7,28.86N×35.06E,h5*^{km}*±30*^{km}*,ML2.6/5, Mw2.8/5*

CSEM ***25*** *16:12:39.6±0.8,28.89N×35.04E,h2*^{km}*,Mw2.7,Error ellipse: s-maj=22.7km s-min=6.1km az=108.0*

ISC 25 16:12:37.5±1.1**,28.85N**±0.04×**35.28E**±0.08**,h3**^{km}**,n18, σ0^{s}80**/29**,4C-1D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUB		**0.58**	**288**	⇑P	**Pg**	**16 12 49.5**	**+0.4**
HDHB	**Dhahab**	**0.59**	**258**	⇑P	**Pg**	**16 12 49.9**	**+0.6**
EIL	**Elat**	**0.86**	**341**	Pg	**Pg**	**16 12 54.2**	**-0.6**
EIL				Sg	**Sg**	**16 13 06.4**	**+0.1**
AQBJ	**Aqaba**	**0.90**	**347**	Sg	**Sg**	**16 13 07.7**	**+0.3**
MBH	**Mount Berech**	**0.99**	**341**	Sg	**Sg**	**16 13 10.5**	**0.0**
HKAT	**Jabal Katrina**	**1.18**	**254**	⇑P	**Pb**	**16 12 59.9**	**-0.3**
HKAT				S	**Sb**	**16 13 16.4**	**+0.7**
HRFI	**Mount Harif**	**1.20**	**350**	Pg	**Pg**	**16 13 00.4**	**-1.1**
HRFI				Sg	**Sg**	**16 13 17.2**	**-0.3**
KMTI	**Karmit**	**1.34**	**339**	Pg	**Pg**	**16 13 02.8**	**-1.4**
KMTI				Sg	**Sg**	**16 13 20.6**	**-1.5**
TR1		**1.44**	**235**	P	**Pn**	**16 13 03.6**	**-0.9**
TR2		**1.44**	**252**	⇓P	**Pn**	**16 13 03.8**	**-0.8**
HNKL	**Nakhl**	**1.56**	**314**	⇑P	**Pn**	**16 13 06.6**	**+0.2**
HNKL				S	**Sb**	**16 13 27.7**	**+0.8**
ZFRI	**Zfri**	**1.70**	**357**	Pn	**Pn**	**16 13 09.5**	**+1.2**
ZFRI				Sn	**Sn**	**16 13 32.4**	**+1.5**
ZFRI	**Zfri**	**1.70**	**357**	Pn	**Pn**	**16 13 09.5**	**+1.2**
ZFRI				Sn	**Sn**	**16 13 32.8**	**+2.0**
MASH	**Mash‘abbe Sade**	**2.18**	**349**	Pn	**Pn**	**16 13 15.7**	**+0.5**
MASH				Sn	**Sn**	**16 13 43.2**	**+0.1**
MASH	**Mash‘abbe Sade**	**2.18**	**349**	Pn	**Pn**	**16 13 16.3**	**+1.1**
MASH				Sn	**Sn**	**16 13 43.2**	**+0.2**
KZIT	**Kziot**	**2.19**	**340**	Pn	**Pn**	**16 13 15.4**	**+0.1**
KZIT				Sn	**Sn**	**16 13 42.6**	**-0.6**
KZIT	**Kziot**	**2.19**	**340**	Pn	**Pn**	**16 13 15.4**	**+0.1**
KZIT				Sn	**Sn**	**16 13 42.9**	**-0.3**
MZDA	**Masada**	**2.45**	**2**	Sn	**Sn**	**16 13 50.4**	**+0.5**

IDC ***25*** *16:16:58.6±0.6,12.76N×123.35E,mb4.5/17,mb1 4.6/17, mb1mx4.6/20,mbtmp4.5/17,MS3.9/12,Ms1 3.9/12, ms1mx3.8/18,Error ellipse: s-maj=31.2km s-min=14.6km az=66.0*

BJI ***25*** *16:16:59.9,12.85N×123.40E,h13*^{km}*,mB5.0,mb4.8, Ms4.4,Msz4.0*

MAN ***25*** *16:17:00.4,12.71N×123.22E,h14*^{km}*,mb5.5,ML4.5, MS4.9*

MAN LIGNON HILL LEGASPI CITY INTENSITY I.

NEIC ***25*** *16:17:01.3±3.3,12.71N×123.33E,h18*^{km}*±20*^{km}*,mb4.9/35, Error ellipse: s-maj=7.2km s-min=4.2km az=69.0*

NEIC Felt [I PIVS] at Legaspi, Luzon.

MOS ***25*** *16:17:01.7±1.0,12.72N×123.41E,h33*^{km}*,mb5.1/30,Error ellipse: s-maj=14.1km s-min=5.9km az=117.0*

HRVD ***25*** *16:17:01.3±0.3,12.78N×123.20E,h12*^{km}*,MW4.9/63, Centroid moment Tensor Solution. LP body waves: s24,c32;Mantle waves: s63,c103; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-2.86±.14;* $M_{\theta\theta}$*2.10±.09;* $M_{\phi\phi}$*0.75±.10;* $M_{r\theta}$*-0.21±.22;* $M_{\theta\phi}$*-0.57±.06;* $M_{\phi r}$*0.71±.29; Best double couple:* M_0*2.672×10*^{16} *NP1:* ϕ_s*282°,δ41°,λ-104°. NP2:*ϕ_s*120°,δ51°,λ-78°. Principal axes: T 2.348, Plg5°, Azm202°; N .647, Plg9°, Azm293°; P -2.996, Plg79°, Azm83°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 25 16:17:00.7±0.2**,12.70N**±0.03×**123.30E**±0.04**,h24**^{km}**, h24**^{km}±2.8^{km}**:pP-P,n196,σ1^{s}04**/207**,mb4.8**/77**,MS4.0**/27**, 6C-6D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.87**	**315**	*e*P	**Pb**	**16 17 16.7**	**-0.3**
AUQP				*e*S	**Sb**	**16 17 32.8**	**+4.6**
PVCP	**Virac**	**1.22**	**43**	*e*P	**Pn**	**16 17 23.4**	**+0.9**
OTRP	**Odiongan**	**1.30**	**255**	*e*P	**Pn**	**16 17 22.1**	**-1.5**
OTRP				*e*S	**Sn**	**16 17 36.6**	**-3.7**
BOAC	**Boac**	**1.61**	**298**	*e*P	**Pn**	**16 17 27.4**	**-0.7**
BOAC				*e*S	**Sn**	**16 17 49.6**	**+1.3**
SJMP	**San Jose**	**2.15**	**264**	*e*P	**Pn**	**16 17 35.0**	**-0.7**
GUIM	**Jordan**	**2.17**	**199**	*e*P	**Pn**	**16 17 37.1**	**+1.0**
POLP	**Polilio Island**	**2.41**	**327**	*e*P	**Pn**	**16 17 39.2**	**-0.3**
POLP				*e*S	**Sn**	**16 18 15.8**	**+7.1**
CUYO	**Cuyo Island**	**2.90**	**231**	*e*P	**Pn**	**16 17 45.5**	**-0.9**
MSLP	**Maasin**	**2.97**	**149**	*e*P	**Pn**	**16 17 49.7**	**+2.2**
BUSP	**Coron**	**3.11**	**257**	*e*P	**Pn**	**16 17 48.4**	**-1.1**
LUBP	**Lubang**	**3.15**	**289**	*e*P	**Pn**	**16 17 48.9**	**-1.2**
BALP	**Baler**	**3.46**	**331**	*e*P	**Pn**	**16 17 54.0**	**-0.4**
ENPP	**El Nido**	**4.08**	**249**	*e*P	**Pn**	**16 18 01.8**	**-1.4**
PALP	**Palanan**	**4.42**	**349**	*e*P	**Pn**	**16 18 12.4**	**+4.3**
CAUP	**Cauayan**	**4.46**	**341**	*e*P	**Pn**	**16 18 08.0**	**-0.6**
SCZP	**Santa Cruz**	**4.49**	**313**	*e*P	**Pn**	**16 18 14.6**	**+5.5**
BOLP	**Bolinao**	**4.92**	**319**	*e*P	**Pn**	**16 18 14.6**	**-0.6**
IPIL	**Ipil**	**4.93**	**188**	*e*P	**Pn**	**16 18 17.4**	**+2.0**
APYP	**Conner**	**5.50**	**339**	*e*P	**Pn**	**16 18 22.2**	**-1.2**
ABRA	**Dolores**	**5.52**	**333**	*e*P	**Pn**	**16 18 22.8**	**-0.9**
BATP	**Bataraza**	**6.65**	**235**	*e*P	**Pn**	**16 18 39.2**	**-0.4**
BBP	**Basco**	**7.80**	**351**	*e*P	**Pn**	**16 18 55.5**	**-0.2**
QIZ	**Qiongzhong**	**14.39**	**298**	P	**P**	**16 20 27.8**	**+2.6**
QIZ				*e*S	**S**	**16 23 09.0**	**+4.0**
QIZ				LR	LR		
	comp=E,355nm,14.9s						
QIZ				LR	LR		
	comp=Z,412nm,16.3s						
JOW	**Kunigami**	**14.81**	**18**	LR	LR	16 25 47.4	
	comp=Z,603nm,18.0s,baz=273,slow=36						
KSM	**Kuching**	**17.03**	**230**	*e*P	**P**	**16 21 00.6**	**+1.3**
SSE	**Sheshan**	**18.41**	**354**	*e*P	**P**	**16 21 13.5**	**-2.8**
SSE				AP		16 21 21.8	
SSE				XP		16 21 26.0	
SSE				S	**S**	**16 24 38.0**	**+0.2**
SSE				AMB	AMB		
	comp=Z,45nm,0.7s						
SSE				AMB	AMB		
	comp=Z,83nm,5.5s						
SSE				LR	LR		
	comp=Z,316nm,33.1s						
SSE	**Sheshan**	**18.41**	**354**	*e*P	**P**	**16 21 13.5**	**-2.8**
	comp=Z,45nm,0.7s						
SSE				pP		16 21 21.8	
SSE				sP		16 21 26.1	
SSE				S	**S**	**16 24 38.0**	**+0.2**
SSE				sS		16 24 55.9	
WHN	**Wuhan**	**19.59**	**336**	P	**P**	**16 21 30.0**	**-0.2**
NJ2	**Nanjing**	**19.69**	**349**	*e*P	**P**	**16 21 29.5**	**-1.8**
NJ2				AP		16 21 41.0	
NJ2				PP	PP	16 21 51.0	+1.4
NJ2				S	**S**	**16 25 10.0**	**+3.6**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,540nm,10.2s						
NJ2				LR	LR		
	comp=N,820nm,21.1s						
NJ2				LR	LR		
	comp=E,720nm,20.4s						
NJ2				LR	LR		
	comp=Z,640nm,20.8s						
GYA	**Guiyang**	**20.78**	**314**	P	**P**	**16 21 43.3**	**+0.6**
GYA				AP		16 21 50.3	
GYA				XP		16 21 53.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.5s						
GYA				AMB	AMB		
	comp=Z,140nm,4.2s						
GYA				LR	LR		
	comp=N,860nm,17.7s,MS4.2						
GYA				LR	LR		
	comp=E,420nm,16.8s,MS4.2						
GYA				LR	LR		
	comp=Z,650nm,15.3s,MS4.1						
ENH	**Enshi**	**21.67**	**326**	*e*P	**P**	**16 21 51.1**	**-0.6**
	comp=Z,33nm,0.8s,mb4.8						
NANT	**Nan**	**22.57**	**288**	P	**P**	**16 22 01.0**	**+0.1**
CBIJ	**Chichi jima**	**22.76**	**48**	LR	LR	16 29 54.9	
	comp=Z,123nm,21.0s,MS3.3,baz=202,slow=34						
KMI	**Kunming**	**23.01**	**305**	P	**P**	**16 22 06.3**	**+1.2**
KMI				AP		16 22 12.0	
KMI				S	**S**	**16 26 14.8**	**+4.9**
KMI				XS		16 26 24.3	
KMI				SS	SS	16 26 56.8	+2.0
KMI				AMB	AMB		
	comp=Z,28nm,1.7s,mb4.4						
KMI				AMB	AMB		
	comp=Z,260nm,4.0s						
KMI				LR	LR		
	comp=N,261nm,14.4s,MS3.9						
KMI				LR	LR		
	comp=E,191nm,16.7s,MS3.9						
KMI				LR	LR		
	comp=Z,322nm,17.1s,MS3.8						
KMI	**Kunming**	**23.01**	**305**	P	**P**	**16 22 06.3**	**+1.2**
KMI				*PP		16 22 12.0	
KMI				S	**S**	**16 26 14.7**	**+4.8**
KMI				SS	SS	16 26 56.8	+2.0
KMI				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.4						
KMI				MLR	MLR		
	comp=Z,320nm,17.1s,MS3.8						
KMI	**Kunming**	**23.01**	**305**	P	**P**	**16 22 06.3**	**+1.2**
	comp=Z,28nm,1.7s,mb4.4						
KMI				pP		16 22 12.0	
KMI				S	**S**	**16 26 14.7**	**+4.8**
KMI				sS		16 26 24.3	
KMI				SS	SS	16 26 56.8	+2.0
KMI				LR	LR		
	comp=Z,320nm,17.1s,MS3.8						
KULM	**Kulim**	**23.54**	**254**	*e*P	**P**	**16 22 10.8**	**+0.4**
TIA	**Tai’an**	**24.06**	**348**	P	**P**	**16 22 15.8**	**+0.5**
TIA				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.5						
CM31	**Chiang Mai Arr**	**24.14**	**287**	*e*P	**P**	**16 22 16.9**	**+0.7**
	comp=Z,8.4nm,0.8s,mb4.2						
CMAR	**Chiang Mai Arr**	**24.14**	**287**	P	**P**	**16 22 15.7**	**-0.5**
	comp=Z,4.5nm,0.8s,mb4.0,baz=94,slow=8.0,SNR=28						
CMAR				PcP	PcP	16 25 59.1	+0.7
	comp=Z,1.9nm,0.8s,baz=34,slow=0.6,SNR=13						
CMAR				LR	LR	16 32 40.9	
	comp=Z,128nm,18.9s,MS3.4,baz=108,slow=39						
CHG	**Chiang Mai**	**24.20**	**288**	P	**P**	**16 22 21.5**	**+4.7**
XAN	**Xi’an**	**24.95**	**331**	P	**P**	**16 22 23.5**	**-0.4**
XAN				AMB	AMB		
	comp=Z,22nm,1.2s,mb4.6						
JHJ	**Hachijo jima 2**	**25.30**	**34**	LR	LR	16 30 17.9	
	comp=Z,281nm,21.8s,MS3.7,baz=300,slow=32						
CD2	**Chengdu**	**25.57**	**318**	P	**P**	**16 22 30.0**	**+0.3**
CD2				S	**S**	**16 26 48.5**	**-5.1**
CD2				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
CD2				LR	LR		
	comp=N,700nm,10.2s						
CD2				LR	LR		
	comp=Z,460nm,15.6s						
KAKA	**Kakadu**	**26.82**	**160**	⇑*i*P	**P**	**16 22 44.8**	**+3.4**
	comp=Z,5.6nm,0.6s,mb4.3						
BJT	**Baijiatuau**	**27.93**	**348**	*e*P	**P**	**16 22 50.8**	**-0.5**
BJT				pmax	pmax		
	comp=Z,23nm,1.0s						
BJT	**Baijiatuau**	**27.93**	**348**	*e*P	**P**	**16 22 50.8**	**-0.5**
	comp=Z,23nm,1.0s,mb4.8						
BJI	**Beijing**	**27.95**	**348**	P	**P**	**16 22 50.5**	**-1.0**
BJI				AMB	AMB		
	comp=Z,54nm,1.8s,mb4.9						
BJI				LR	LR		
	comp=N,258nm,26.9s,MS3.9						
BJI				LR	LR		
	comp=E,314nm,25.2s,MS3.9						
BJI				LR	LR		
	comp=Z,319nm,32.3s						
BJI	**Beijing**	**27.95**	**348**	P	**P**	**16 22 50.6**	**-0.9**
BJI				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
BJI				MLR	MLR		
	comp=Z,320nm,32.3s,MS3.7						
BJI	**Beijing**	**27.95**	**348**	P	**P**	**16 22 50.6**	**-0.9**
	comp=Z,17nm,1.0s,mb4.6						
BJI				S	**S**	**16 27 43.4**	**+11**
BJI				LR	LR		
	comp=Z,320nm,32.3s,MS3.7						
LZH	**Lanzhou**	**29.15**	**326**	*e*P	**P**	**16 23 02.8**	**+0.5**
LZH				AP	pP	16 23 08.0	-1.2
LZH				XP	sP	16 23 11.5	-0.8
LZH				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.1						
LZH				LR	LR		
	comp=N,960nm,16.0s						
LZH				LR	LR		
	comp=Z,510nm,16.5s,MS4.2						
LZH	**Lanzhou**	**29.15**	**326**	*e*P	**P**	**16 23 02.7**	**+0.4**
LZH				*SP	sP	16 23 11.5	-0.8
LZH				SS	**S**	**16 27 53.0**	**+1.4**
LZH				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.1						
LZH				MLR	MLR		
	comp=Z,510nm,16.5s,MS4.2						
HHC	**Hu-ho-hao-te**	**29.88**	**342**	*e*P	**P**	**16 23 09.0**	**+0.2**
HHC				AP	pP	16 23 16.5	+0.8
HHC				XP	sP	16 23 19.0	+0.2
HHC				PP	PP	16 24 07.5	+1.2
HHC				PCP	PcP	16 26 11.5	-0.1
HHC				S	**S**	**16 28 04.3**	**+1.1**
HHC				XS		16 28 16.8	
HHC				PCS		16 29 55.5	
HHC				AMB	AMB		
	comp=Z,24nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,143nm,4.1s						
HHC				LR	LR		
	comp=N,261nm,22.8s,MS4.0						
HHC				LR	LR		
	comp=E,260nm,19.8s,MS4.0						
HHC				LR	LR		
	comp=Z,275nm,26.4s						
FITZ	**Fitzroy Crossi**	**30.69**	**176**	*e*P	**P**	**16 23 19.1**	**+2.9**
	comp=Z,11nm,0.9s,mb4.7						
CN2	**Changchun**	**31.05**	**3**	*e*P	**P**	**16 23 21.5**	**+2.4**
CN2				*e*XP	sP	16 23 31.5	+2.4
CN2				*e*S	**S**	**16 28 24.0**	**+2.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=Z,600nm,18.0s,MS4.3						
MDJ	**Mudanjiang**	**32.26**	**8**	P	**P**	**16 23 29.0**	**-0.7**
MDJ				AP	pP	16 23 35.3	-1.3
MDJ				XP	sP	16 23 38.0	-1.7
MDJ				PP	PP	16 24 39.8	+2.5
MDJ				PCP	PcP	16 26 15.8	-2.1
MDJ				S	**S**	**16 28 43.0**	**+2.5**
MDJ				XS		16 28 53.0	
MDJ				SCP		16 29 58.5	
MDJ				PCS		16 30 00.3	
MDJ				SCS	ScS	16 33 56.8	+0.4
MDJ				AMB	AMB		
	comp=Z,27nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,46nm,4.6s						
MDJ				LR	LR		
	comp=N,280nm,31.2s,MS3.8						
MDJ				LR	LR		
	comp=E,107nm,29.4s,MS3.8						
MDJ				LR	LR		
	comp=Z,314nm,31.2s,MS3.8						
MDJ	**Mudanjiang**	**32.26**	**8**	*e*P	**P**	**16 23 29.3**	**-0.4**
	comp=Z,18nm,0.9s,mb4.9						
GTA	**Gaotai**	**33.75**	**326**	*e*P	**P**	**16 23 42.8**	**+0.1**
GTA				AP	pP	16 23 53.3	+3.6
GTA				XP	sP	16 23 58.0	+5.3
GTA				PP	PP	16 24 55.5	-0.4
GTA				PCP	PcP	16 26 22.8	+0.8
GTA				S	**S**	**16 29 01.5**	**-2.2**
GTA				XS		16 29 17.0	
GTA				PCS		16 30 06.5	
GTA				SS	SS	16 31 05.3	-4.5
GTA				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
GTA				AMB	AMB		
	comp=Z,100nm,3.8s						
GTA				LR	LR		
	comp=N,371nm,22.0s,MS4.2						
GTA				LR	LR		
	comp=E,293nm,18.6s,MS4.2						
GTA				LR	LR		
	comp=Z,286nm,18.3s,MS4.0						

MBWA	Marble Bar	33.83	186	P	P	16 23 41.9	-1.6
WRAB	Tennant Creek	34.20	161	eP	P	16 23 46.0	-0.8
WRAB				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
WRAB	Tennant Creek	34.20	161	eP	P	16 23 46.0	-0.7
	comp=Z,20nm,1.3s,mb4.9						
WRA	Warramunga Arr	34.21	161	P	P	16 23 45.1	-1.7
	comp=Z,2.7nm,0.8s,mb4.3,baz=341,slow=9.6,SNR=18						
WB2	Warramunga Arr	34.21	161	eP	P	16 23 47.0	+0.1
LSA	Lhasa	34.26	305	P	P	16 23 47.8	+0.6
LSA	Lhasa	34.26	305	eP	P	16 23 47.4	+0.2
LSA				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.2						
LSA	Lhasa	34.26	305	eP	P	16 23 47.4	+0.2
	comp=Z,45nm,1.4s,mb5.2						
KLR	Kul'dur	37.09	9	eP	P	16 24 08.0	-3.0
ULN	Ulaanbaatar	37.60	342	eP	P	16 24 14.9	-0.4
ULN				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
ULN				MLR	MLR		
	comp=Z,252nm,22.0s,MS4.0						
ULN	Ulaanbaatar	37.60	342	eP	P	16 24 14.9	-0.3
	comp=Z,28nm,1.0s,mb4.9						
ULN				LR	LR		
	comp=Z,252nm,22.0s,MS4.0						
ASPA	Alice Springs	37.60	164	eP	P	16 24 15.3	-0.2
ASAR	Alice Springs	37.60	164	P	P	16 24 14.9	-0.6
	comp=Z,2.4nm,0.8s,mb4.0,baz=345,slow=7.0,SNR=18						
ASAR				LR	LR	16 38 32.5	
	comp=Z,136nm,21.7s,MS3.7,baz=333,slow=34						
JIRN	Jiri	37.71	299	eP	P	16 24 16.4	0.0
	comp=Z,36nm,0.6s,mb5.3						
SONM	Songino Array	37.77	341	P	P	16 24 16.7	0.0
	comp=Z,11nm,0.9s,mb4.6,baz=163,slow=8.6,SNR=66						
SONM				PcP	PcP	16 26 33.5	-0.3
	comp=Z,0.9nm,0.7s,baz=135,slow=4.1,SNR=3.6						
PKI	Pulchoki	38.35	299	eP	P	16 24 20.9	-1.0
	comp=Z,20nm,0.7s,mb5.0						
KKN	Kakani	38.52	299	eP	P	16 24 22.6	-0.7
	comp=Z,30nm,0.9s,mb5.0						
DMN	Daman	38.62	298	eP	P	16 24 23.3	-0.8
	comp=Z,32nm,0.9s,mb5.0						
GKN	Gorkha	39.13	299	eP	P	16 24 27.3	-1.0
	comp=Z,24nm,0.8s,mb5.0						
KOLN	Koldanda	39.96	298	eP	P	16 24 33.8	-1.4
	comp=Z,15nm,0.8s,mb4.8						
ZAK	Zakamensk	40.99	340	eP	P	16 24 43.0	-0.4
ZAK				e		16 26 44.3	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
TLY	Talaya	42.01	342	P	P	16 24 52.1	+0.4
	comp=Z,43nm,0.8s,mb5.1,SNR=7.1						
TLY	Talaya	42.01	342	eP	P	16 24 52.2	+0.5
TLY				eS	S	16 31 10.7	+1.7
TLY				eSS	ScS	16 34 47.1	-3.6
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
TLY				MLR	MLR		
	comp=Z,211nm,24.0s,MS3.9						
MOY	Mondy	42.85	340	eP	P	16 24 58.8	+0.2
MOY				pmax	pmax		
	comp=Z,29nm,1.8s,mb4.7						
WMQ	Urumqi	43.53	322	eP	P	16 25 05.0	+0.7
WMQ				XP	sP	16 25 16.0	+1.7
WMQ				PP	PP	16 26 49.0	+1.5
WMQ				S	S	16 31 33.0	+1.6
WMQ				SS	SS	16 34 41.0	+1.9
WMQ				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,30nm,10.0s						
WMQ				LR	LR		
	comp=N,495nm,20.0s,MS4.5						
WMQ				LR	LR		
	comp=E,264nm,20.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,312nm,20.0s,MS4.2						
KLBR	Kellerberrin	44.36	187	eP	P	16 25 10.4	-0.8
	comp=Z,162nm,1.0s,mb5.7						
BOD	Bodaibo	45.58	353	eP	P	16 25 20.1	-0.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
NWAO	Narrogin (SRO)	45.74	187	eP	P	16 25 21.2	-0.9
NWAO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NWAO	Narrogin (SRO)	45.74	187	eP	P	16 25 21.2	-1.0
	comp=Z,6.4nm,0.5s,mb4.8						
STKA	Stephens Creek	47.66	159	P	P	16 25 38.3	+0.9
	comp=Z,0.9nm,0.4s,mb4.1,baz=333,slow=9.0,SNR=2.7						
STKA	Stephens Creek	47.66	159	P	P	16 25 35.9	-1.5
MKAR	Makanchi Array	48.35	323	iP	P	16 25 42.5	0.0
MKAR				pmax	pmax		
	comp=Z,22nm,0.8s						
KSH	Kashi	49.45	312	eP	P	16 25 54.0	+2.9
KSH				eAP	pP	16 26 00.3	+2.0
KSH				eXP	sP	16 26 03.5	+2.4
KSH				ePP	PP	16 27 42.5	-3.3
KSH				ePCS		16 31 12.3	
KSH				eS	S	16 33 00.0	+4.2
KSH				eXS		16 33 07.3	
KSH				ePS	PS	16 33 15.8	+8.7
KSH				eSCS	ScS	16 35 42.8	+4.3
KSH				eSS	SS	16 36 27.3	+3.4
KSH				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.6						
KSH				AMB	AMB		
	comp=Z,150nm,4.4s						
KSH				LR	LR		
	comp=N,180nm,5.4s						
KSH				LR	LR		
	comp=E,270nm,6.1s						
YAK	Yakutsk	49.47	4	eP	P	16 25 49.4	-1.5
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=N,6.0nm,1.2s						
YAK	Yakutsk	49.47	4	eP	P	16 25 49.7	-1.2
	comp=N,14nm,0.8s,mb5.0						
MA2	Magadan	51.05	18	iP	P	16 26 02.4	-0.6
MA2				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
MA2				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.8						
ZAL	Zalesovo	51.12	332	P	P	16 26 03.4	-0.2
	comp=Z,8.8nm,0.9s,mb4.7,baz=346,slow=6.9,SNR=44						
ZAL				LR	LR	16 48 29.2	
	comp=Z,143nm,19.9s,MS4.0,baz=345,slow=37						
KBK	Karagaybulak	51.26	315	P	P	16 26 05.9	+1.1
	SNR=6.0						
UCH	Uchtor	51.41	314	P	P	16 26 07.5	+1.6
	SNR=14						
AAK	Ala-Archa	51.56	315	eP	P	16 26 05.9	-1.2
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
AAK	Ala-Archa	51.56	315	eP	P	16 26 05.9	-1.2
	comp=Z,10nm,1.3s,mb4.6						
USP	Ospenovka	51.78	316	P	P	16 26 09.1	+0.3
	SNR=5.4						
AML	Almayashu	51.95	314	P	P	16 26 11.3	+1.2
	SNR=9.8						
EKS2	Erkin-Say	52.07	315	P	P	16 26 11.5	+0.5
	SNR=5.6						
NVS	Novosibirsk	52.40	332	eP	P	16 26 11.4	-1.9
NVS				pmax	pmax		
	comp=N,26nm,1.1s						
NVS				pmax	pmax		
	comp=E,36nm,1.1s						
NVS				pmax	pmax		
	comp=Z,73nm,1.1s,mb5.5						
KURK	Kurchatov	52.43	326	eP	P	16 26 13.0	-0.6
KURK				pmax	pmax		
	comp=Z,108nm,0.9s,mb5.8						
KURK	Kurchatov	52.43	326	eP	P	16 26 13.0	-0.6
	comp=Z,108nm,0.9s,mb5.8						
SEY	Seymchan	54.24	16	eP	P	16 26 29.7	+3.0
SEY						16 27 29.4	
SEY				eS	S	16 34 09.8	+8.8
SEY				e		16 36 07.5	
SEY				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
SEY				smax			
	comp=N,1µm,26.0s						
SEY				smax			
	comp=E,920nm,27.5s						
SEY				MLR	MLR		
	comp=Z,220nm,17.0s,MS4.3						
SEY				MLR	MLR		
	comp=N,220nm,18.0s,MS4.3						
SEY				MLR	MLR		
	comp=E,60nm,15.0s,MS4.3						
BVA0	Borovoye Array	58.03	325	iP	P	16 26 53.6	-0.4
BVA0				pmax	pmax		
	comp=Z,12nm,2.0s,mb4.6						
CHKZ	Chkalovo	58.16	326	iP	P	16 26 54.3	-0.7
CHKZ				pmax	pmax		
	comp=Z,25nm,1.8s,mb4.9						
CHKZ	Chkalovo	58.16	326	eP	P	16 26 53.9	-1.1
	comp=Z,7.3nm,0.8s,mb4.8						
TIXI	Tiksi	59.02	2	⇓iP	P	16 26 58.9	-1.8
TIXI				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,131nm,17.0s,MS4.1						
BILL	Bilibino	61.90	17	eP	P	16 27 19.3	-1.2
BILL				pmax	pmax		
	comp=Z,45nm,1.8s,mb5.3						
BILL				MLR	MLR		
	comp=Z,153nm,19.0s,MS4.2						
BILL	Bilibino	61.90	17	eP	P	16 27 19.3	-1.2
	comp=Z,45nm,1.8s,mb5.3						
BILL				LR	LR		
	comp=Z,153nm,19.0s,MS4.2						
SVE	Sverdlovsk	64.61	327	⇑iP	P	16 27 37.0	-1.4
SVE				e		16 28 19.0	
SVE				pmax	pmax		
	comp=Z,720nm,1.5s						
TI2	Plekhanov	73.15	310	eP	P	16 28 33.2	+1.7
GNI	Garni	73.22	308	eP	P	16 28 32.5	+0.6
GNI				pmax	pmax		
	comp=Z,26nm,1.4s						
GNI	Garni	73.22	308	eP	P	16 28 32.5	+0.6
	comp=Z,26nm,1.4s,mb5.0						
RAYN	Ar Rayn	73.98	291	P	P	16 28 37.8	+1.2
	comp=Z,89nm,1.0s,mb5.7,SNR=17						
GOF	Gofitskoye	74.28	313	⇑iP	P	16 28 37.5	-0.4
GOF				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.2						
KIV	Kislovodsk	74.58	312	P	P	16 28 41.8	+2.1
	comp=Z,195nm,0.8s,SNR=8.0						
KIV	Kislovodsk	74.58	312	eP	P	16 28 39.6	-0.1
KIV				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
KIV	Kislovodsk	74.58	312	eP	P	16 28 39.6	-0.1
	comp=Z,21nm,0.8s,mb5.1						
IMA	Indian Mountai	75.65	25	eP	P	16 28 45.4	0.0
IMA				pmax	pmax		
	comp=Z,72nm,1.3s,mb5.4						
IMA	Indian Mountai	75.65	25	eP	P	16 28 45.4	0.0
	comp=Z,72nm,1.3s,mb5.5						
SOC	Sochi	76.75	312	iP	P	16 28 47.3	-4.7
SOC				e		16 29 01.9	
SOC				e		16 31 42.8	
SOC				ePPP	PPP	16 33 27.8	-6.2
SOC				eS	S	16 38 29.1	-7.2
SOC				e		16 39 09.7	
SOC				eSS	SS	16 43 30.4	-4.9
SOC				eSSS	SSS	16 46 54.1	+3.0
SOC				pmax	pmax		
	comp=N,10.0nm,0.9s						
SOC				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
SOC				pmax	pmax		
	comp=E,13nm,0.8s						
MOS	Moscow	77.19	325	eP	P	16 28 54.2	0.0
MOS				pmax	pmax		
	comp=Z,61nm,0.7s,mb5.6						
MCK	McKinley	77.73	27	eP	P	16 28 56.6	-0.4
MCK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
MCK	McKinley	77.73	27	eP	P	16 28 56.6	-0.4
	comp=Z,16nm,1.0s,mb4.9						
OBN	Obninsk	77.84	324	d iP	P	16 28 57.2	-0.6
OBN				pmax	pmax		
	comp=Z,42nm,1.7s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.2						
COLA	College	78.12	26	eP	P	16 28 58.0	-1.1
COLA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
COLA	College	78.12	26	eP	P	16 28 58.0	-1.1
	comp=Z,6.6nm,1.0s,mb4.5						
MALT	Malatya	78.26	307	eP	P	16 29 01.5	+1.0
MALT				pmax	pmax		
	comp=Z,42nm,1.8s,mb5.1						
MALT	Malatya	78.26	307	eP	P	16 29 01.5	+1.0
	comp=Z,42nm,1.8s,mb5.1						
ILAR	Eielson Array	78.54	26	P	P	16 29 00.5	-0.9
	comp=Z,2.0nm,0.8s,mb4.1,baz=248,slow=4.4,SNR=15						
ILAR				LR	LR	17 04 41.0	
	comp=Z,37nm,18.9s,MS3.7,baz=359,slow=36						
ILAR	Eielson Array	78.54	26	P	P	16 29 00.5	-0.9
ILAR				LR	LR	17 04 41.0	
THY	Trims Highway	79.17	27	P	P	16 29 05.0	+0.1
JOF	Joensuu	79.71	332	ep	P	16 29 06.8	-1.0
	comp=Z,0.8nm,0.4s,mb4.0						
ARCES	ARCESS Array B	80.92	339	P	P	16 29 14.3	+0.2
	comp=Z,4.5nm,0.7s,mb4.5,baz=72,slow=3.8,SNR=6.6						
ARCES				LR	LR	17 11 19.5	
	comp=Z,55nm,19.1s,MS3.9,baz=168,slow=40						
ARCES	ARCESS Array B	80.92	339	P	P	16 29 14.3	+0.2
ARCES				LR	LR	17 11 19.5	
BRTR	Keskin Array B	81.75	309	P	P	16 29 19.4	+0.3
	comp=Z,1.6nm,1.0s,mb3.9,baz=104,slow=5.1,SNR=5.9						
DAWY	Dawson	81.86	26	eP	P	16 29 18.2	-0.9
KAF	Kangasniemi	82.13	332	ep	P	16 29 19.6	-1.0
	comp=Z,4.4nm,0.7s,mb4.5						
KAF	Kangasniemi	82.13	332	eP	P	16 29 19.6	-1.0
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FINES	FINESS Array B	82.38	331	P	P	16 29 21.8	-0.1
	comp=Z,4.0nm,0.7s,mb4.5,baz=72,slow=6.0,SNR=14						
FINES				LR	LR	17 06 29.9	
	comp=Z,110nm,18.3s,MS4.3,baz=23,slow=36						
CSS	Prodhromos	82.82	304	eP	P	16 29 24.7	0.0
	comp=Z,12nm,0.7s,mb5.0						
AKASG	Malin Array Be	82.85	320	P	P	16 29 24.3	-0.3
	comp=Z,4.5nm,0.8s,mb4.6,baz=65,slow=5.1,SNR=21						
INK	Inuvik	83.11	21	eP	P	16 29 25.4	-0.1
INK				pmax	pmax		
	comp=Z,15nm,1.1s						
INK	Inuvik	83.11	21	eP	P	16 29 25.4	-0.1
	comp=Z,15nm,1.1s,mb4.9						
KIS	Kishinev	83.86	317	eP	P	16 29 32.0	+2.2
CFR	Carcaliu	84.71	315	⇑P	P	16 29 35.1	+1.0
VRI	Vrincioaia	85.52	316	⇓P	P	16 29 39.1	+0.9
SUW	Suwalki	85.69	324	eP	P	16 29 39.3	+0.4
BURAR	Bucovina Array	86.10	318	⇓P	P	16 29 42.2	+1.2
MLR	Muntele Rosu	86.14	316	⇑P	P	16 29 41.7	+0.4
MLR	Muntele Rosu	86.14	316	P	P	16 29 42.2	+0.9
	comp=Z,9.2nm,0.8s,mb5.1,baz=343,slow=1.8,SNR=21						
KMBO	Kilima Mbogo	86.39	268	iP	P	16 29 46.4	+3.1
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMBO	Kilima Mbogo	86.39	268	P	P	16 29 45.2	+1.9
	comp=Z,4.7nm,1.1s,mb4.6,baz=44,slow=18,SNR=4.5						
KMBO				LR	LR	17 06 50.4	
	comp=Z,61nm,18.4s,MS4.0,baz=88,slow=35						
KMBO	Kilima Mbogo	86.39	268	eP	P	16 29 44.3	+1.0
	comp=Z,13nm,1.4s,mb5.0						
KMBO				LR	LR		
	comp=Z,67nm,20.0s,MS4.0						
KWP	Kalwaria	87.18	320	eP	P	16 29 47.2	+1.0
KOLS	Kolonicke sedl	87.65	320	eP	P	16 29 49.1	+0.6
CRVS	Cervenica-Dubn	88.17	320	eP	P	16 29 52.9	+1.9
HFS	Hagfors	88.56	332	P	P	16 29 52.1	-0.5
	comp=Z,7.1nm,1.0s,mb4.9,baz=76,slow=5.9,SNR=3.0						
NIE	Niedzica	88.73	320	eP	P	16 29 53.4	-0.3
OJC	Ojcow	88.80	321	eP	P	16 29 53.6	-0.4
VTS	Vitosha	88.80	313	⇓P	P	16 29 54.0	-0.2
KECS	Kecovo	88.91	320	eP	P	16 29 55.4	+0.8
NB2	NORSAR Subarra	89.30	333	P	P	16 29 55.3	-0.8
	comp=Z,2.9nm,0.8s,mb4.7,baz=69,slow=4.5						
NB2	NORSAR Subarra	89.30	333	P	P	16 29 55.3	-0.8
NB2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
NB2	NORSAR Subarra	89.30	333	P	P	16 29 55.3	-0.8
	baz=69,slow=4.6						
NOA	NORSAR Array B	89.30	333	P	P	16 29 56.3	+0.2
	comp=Z,2.9nm,0.9s,mb4.6,baz=67,slow=4.8,SNR=7.5						
NOA				LR	LR	17 11 54.4	
	comp=Z,69nm,20.2s,MS4.1,baz=50,slow=37						
RES	Resolute Bay	89.61	9	eP	P	16 29 57.0	-0.3
RES				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
RES	Resolute Bay	89.61	9	eP	P	16 29 57.0	-0.3
	comp=Z,5.8nm,1.0s,mb4.9						
VYHS	Vyhne	89.95	320	eP	P	16 29 59.1	-0.3
MORC	Moravsky Berou	90.32	321	⇓P	P	16 30 02.2	+1.1
MORC	Moravsky Berou	90.32	321	eP	P	16 30 01.8	+0.7
	comp=Z,26nm,2.0s,mb5.2						
KSP	Ksiaz	90.69	323	⇑eP	P	16 30 03.6	+0.8
KSP	Ksiaz	90.69	323	eP	P	16 30 03.6	+0.8
MAW	Mawson	90.99	199	LR	LR	17 09 25.4	
	comp=Z,81nm,19.4s,MS4.2,baz=141,slow=35						
BRG	Berggiesshubel	92.06	323	eP	P	16 30 08.9	-0.2
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.8						
BRG	Berggiesshubel	92.06	323	eP	P	16 30 08.9	-0.2
	comp=Z,3.6nm,0.9s,mb4.7						
CLL	Collm	92.44	324	eP	P	16 30 10.0	-0.8
CLL	Collm	92.44	324	P	P	16 30 10.0	-0.8
YKA	Yellowknife Ar	92.71	23	iP	P	16 30 12.9	+1.1
YKA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YKA	Yellowknife Ar	92.71	23	P	P	16 30 12.3	+0.5
	comp=Z,3.1nm,1.1s,mb4.7,baz=303,slow=4.6,SNR=26						
PERS	Pernice	92.96	319	eP	P	16 30 14.0	+0.7
KHC	Kasperske Hory	92.96	322	eP	P	16 30 14.0	+0.7
GERES	GERESS Array B	93.00	321	P	P	16 30 14.6	+1.1
	comp=Z,2.3nm,0.8s,mb4.7,baz=56,slow=4.8,SNR=16						
BOJS	Bojanci	93.29	318	eP	P	16 30 15.8	+0.9
JAVS	Javornik	93.91	319	eP	P	16 30 18.2	+0.5
ROBS	Robic	94.13	319	eP	P	16 30 18.8	0.0
NVAR	Mina Array Bea	103.25	45	Pdiff	Pdif	16 31 01.6	+1.5
	comp=Z,0.7nm,0.8s,baz=269,slow=4.9,SNR=4.9						
DBIC	Dimbokro	125.01	288	PKP	PKPdf	16 36 01.5	-3.2
	comp=Z,2.8nm,0.8s,baz=29,slow=8.3,SNR=3.7						
DBIC	Dimbokro	125.01	288	PKP	PKPdf	16 36 01.5	-3.2
PLCA	Paso Flores	149.54	159	PKPbc	PKPdf	16 36 51.5	+3.3
	comp=Z,3.3nm,1.0s,baz=217,slow=2.4,SNR=4.3						
SDV	Santo Domingo	154.47	34	ePKPdf	PKPdf	16 36 54.0	-2.2
SDV				ePKPab	PKPab	16 37 16.0	-1.0
LPAZ	La Paz	168.37	109	ePKPdf	PKPdf	16 37 09.7	-0.8
LPAZ				ePKPab	PKPab	16 38 16.2	-0.8
SAML	Samuel	172.62	60	ePKPdf	PKPdf	16 37 09.7	-3.4

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*PRU **25** 16:20:12.9,50.31N×19.17E*
*NEIC **25** 16:20:13.1±0.8,50.17N×19.26E,h5^{km},MG2.5(WAR),*
Error ellipse: s-maj=13.4km s-min=5.6km az=181.0
WAR 25 16:20:12.5,50.16N×19.31E,h0^{km},ML2.5,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	Ojcow	0.32	80	ePg	Pg	16 20 19.7	+0.8
OJC				eSg	Sg	16 20 24.4	+1.3
OKC	Ostrava-Krasne	0.82	247	ePG	Pg	16 20 28.8	0.0
OKC				eSG	Sg	16 20 39.6	-0.1
	20nm,0.3s						
NIE	Niedzica	0.99	139	ePG	Pg	16 20 31.0	-1.3
NIE				eSG	Sg	16 20 46.0	+0.5
LIKS	Likavka	1.12	187	eSG	Sg	16 20 48.5	-1.4
MORC	Moravsky Berou	1.21	252	ePg	Pg	16 20 35.1	-1.5
MORC				eSg	Sg	16 20 51.4	-1.2
VYHS	Vyhne	1.70	191	iPN	Pn	16 20 43.2	-0.4
VYHS				eSN	Sn	16 21 05.9	-0.4
KECS	Kecovo	1.85	155	eSG	Sg	16 21 13.1	-1.0
CRVS	Cervenica-Dubn	1.89	131	ePG	Pg	16 20 49.2	-1.0
CRVS				eSG	Sg	16 21 15.0	-0.3
DPC	Dobruska-Polom	1.93	277	ePG	Pg	16 20 45.9	-5.1
DPC				eSG	Sg	16 21 11.4	-5.2
	22nm,0.4s						
KSP	Ksiaz	2.04	291	ePG	Pg	16 20 50.0	-3.3
KSP				eSG	Sg	16 21 17.0	-3.5
UPC	Upice	2.14	281	eSG	Sg	16 21 17.9	-5.9
PSZ	Piszkesteto	2.28	170	Pn	Pn	16 20 51.6	-0.3
PSZ	Piszkesteto	2.28	170	ePn	Pn	16 20 45.3	-6.6
KOLS	Kolonicke sedl	2.29	121	ePG	Pg	16 20 57.8	-0.4
PRU	Pruhonice	3.08	269	eSG	Sg	16 21 47.4	-7.5
BRG	Berggiesshubel	3.50	284	ePg	Pg	16 21 11.7	-11
BRG				eSg	Sg	16 22 02.2	-6.7
KHC	Kasperske Hory	3.87	257	ePN	Pn	16 21 13.5	-0.9
KHC				ePG	Pg	16 21 27.0	-2.7
KHC				ex	x	16 22 02.0	
KHC				eSG	Sg	16 22 13.5	-7.7
CLL	Collm	4.17	288	eSG	Sg	16 22 26.0	-5.2

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*NAO **25** 16:33:13.8±2.4,67.16N×20.97E,ML2.0*
*IDC **25** 16:33:13.8±0.9,67.10N×21.21E,mb1 3.0/4,*
mb1mx2.9/20,mbtmp2.9/4,ML2.4/4,Error ellipse:
s-maj=17.7km s-min=6.9km az=117.0
*BER **25** 16:33:14.0±3.8,67.21N×20.63E,ML2.0(NAO),*
Suspected explosion
*HEL **25** 16:33:14.0±0.1,67.09N×20.89E,ML1.8,ML2.4(UPP),*
ML2.0(NAO),Explosion
ISC 25 16:33:12.1±0.3**,67.04N**±0.02×**20.93E**±0.06**,n37,**σ**1**^{s}**29**/59**,**
Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	Dundret	0.16	302	iP	Pg	16 33 16.4	+1.1
MASU	Masugnsbyn	0.59	44	iP	Pg	16 33 24.1	+0.1
ERTU	Ertsjaerv	0.70	133	iP	Pg	16 33 26.7	+0.7
PAJU	Pajala	0.86	90	iP	Pg	16 33 29.1	-0.2
KUA	Kurravaara	0.95	346	eP	Pg	16 33 30.1	-0.9
SALU	Saltoluokta	1.00	291	eP	Pb	16 33 31.8	-0.3
LANU	Lannavaara	1.10	21	eP	Pb	16 33 32.5	-1.1
NIKU	Nikkaluokta	1.11	320	eP	Pb	16 33 33.2	-0.7
SJUU	Sjulsmark	1.56	170	eP	Pn	16 33 42.5	+1.3
LILU	Lilltraesk	1.81	194	eP	Pn	16 33 46.5	+1.6
KIF	Kilpisjarvi	1.98	359	eP	Pn	16 33 48.5	+1.4
KIF				eS	Sn	16 34 12.9	-0.2
KTK1	Kautokeino	2.17	23	eP	Pn	16 33 52.2	+2.3
SGF	Sodankyl	2.22	77	eP	Pn	16 33 52.2	+1.6
SGF				eS	Sn	16 34 20.0	+0.9
MOR8	Moi Rana	2.73	254	e	Pn	16 33 59.1	+1.1
OUL	Oulu	2.82	132	ePB	Pb	16 34 04.4	+1.3
OUL				eSB	Sb	16 34 40.9	+2.6
ARA0	ARCESS Array S	3.03	32	Pn	Pn	16 34 01.8	-0.5
	baz=208,slow=16						
ARA0				Lg		16 34 43.6	
	baz=211,slow=28						
ARA0	ARCESS Array S	3.03	32	eP	Pn	16 34 01.8	-0.5
ARA0				eSB	Sb	16 34 43.6	-0.9
ARCES	ARCESS Array B	3.03	32	Pn	Pn	16 34 02.2	-0.1
	0.5nm,0.3s,baz=212,slow=14,SNR=39						
ARCES				Lg		16 34 44.6	
	0.9nm,0.3s,baz=214,slow=26,SNR=7.4						
LOF	Lofoten	3.04	295	e	Sn	16 34 39.4	-0.5
MSF	Maaselka	3.44	105	eP	Pn	16 34 09.9	+1.7
MSF				eS	Sn	16 34 50.7	+0.4
MSF				eSG	Sg	16 35 02.2	-4.5
MSF				MSG		16 35 04.8	
	comp=Z,2.0nm,0.2s						
KU4	Oulanka	3.50	97	eP	Pn	16 34 09.9	+0.9
KU4				eS	Sn	16 34 51.7	0.0
KEV	Kevo	3.54	37	eP	Pn	16 34 09.3	-0.2
KEV				eS	Sn	16 34 50.7	-1.9
KEV				e		16 35 06.5	
VAF	Ylistaro	4.08	169	eP	Pn	16 34 18.4	+1.3
VAF				eS	Sn	16 35 04.7	-1.6
KJN	Kajaani	4.09	133	eP	Pn	16 34 19.0	+1.7
KJN				eS	Sn	16 35 06.1	-0.4
KJN				eSG	Sg	16 35 21.8	-6.5
KJN				MSG		16 35 25.2	
	comp=Z,1.5nm,0.2s						
APA0	Apatity Array	4.71	77	Pn	Pn	16 34 24.5	-1.5
	baz=257,slow=12						
APA0				Sn	Sn	16 35 20.1	-2.1
	baz=283,slow=37						
APA0	Apatity Array	4.71	77	eP	Pn	16 34 24.5	-1.5
APA0				eS	Sn	16 35 20.1	-2.1
SUF	Sumiainen	4.87	150	eP	Pn	16 34 29.4	+1.0
SUF				eS	Sn	16 35 25.4	-1.0
KEF	Keuruu	5.17	159	eP	Pn	16 34 34.2	+1.6
KEF				eS	Sn	16 35 32.7	-1.3
KAF	Kangasniemi	5.46	152	eP	Pn	16 34 37.3	+0.6
KAF				eS	Sn	16 35 38.2	-2.9
JOF	Joensuu	6.04	128	eP	Pn	16 34 45.2	+0.4
JOF				eS	Sn	16 35 52.9	-2.8
FIA0	FINESS Array S	6.05	156	Pn	Pn	16 34 45.1	+0.2
	baz=351,slow=16						

FIA0				Sn	**Sn**	**16 35 53.1**	**-2.7**
	baz=351,slow=22						
FIA0				Lg		16 36 27.7	
	baz=343,slow=28						
FIA0	**FINESS Array S**	**6.05**	**156**	*e*P	**Pn**	**16 34 44.6**	**-0.4**
FIA0				*e*S	**Sn**	**16 35 52.6**	**-3.2**
FINES	**FINESS Array B**	**6.05**	**156**	Pn	**Pn**	**16 34 45.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=342,slow=13,SNR=4.3						
FINES				Sn	**Sn**	**16 35 53.6**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=350,slow=24,SNR=4.6						
NOA	**NORSAR Array B**	**7.37**	**220**	Pn	**Pn**	**16 35 02.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=6.8,SNR=1.8						
NOA				Sn	**Sn**	**16 36 23.9**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=358,slow=12,SNR=2.1						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**16 35 05.5**	**-1.9**
	baz=27,slow=12						
HFS	**Hagfors**	**7.64**	**208**	*e*P	**Pn**	**16 35 05.5**	**-1.9**
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**16 35 05.7**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=19,slow=12,SNR=7.1						
HFS				Sn	**Sn**	**16 36 32.5**	**-3.1**
	comp=Z,0.0nm,0.3s,baz=39,slow=20,SNR=4.4						

MAN 25 16:53:48.8, 12.72N×123.19E, h21^{km}, mb4.0, ML2.8, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.79**	**320**	*e*P	Pb	16 54 06.9	+3.2
AUQP				*e*S	Sb	16 54 18.6	+4.8
OTRP	**Odiongan**	**1.20**	**253**	*e*P	Pn	16 54 09.5	-0.9
PVCP	**Virac**	**1.28**	**47**	*e*P	Pn	16 54 11.3	-0.4
BOAC	**Boac**	**1.51**	**299**	*e*P	Pn	16 54 12.2	-2.7
SJMP	**San Jose**	**2.04**	**263**	*e*P	Pn	16 54 22.7	+0.2
BUSP	**Coron**	**3.01**	**257**	*e*P	Pn	16 54 36.0	-0.4
BALP	**Baler**	**3.39**	**333**	*e*P	Pn	16 54 54.3	+13
ENPP	**El Nido**	**3.98**	**248**	*e*P	Pn	16 54 49.3	-0.8

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*NEIC **25** 16:53:55.6±2.3, 5.83S×150.92E, h10^{km}, mb3.9/2, Error ellipse: s-maj=59.4km s-min=16.5km az=111.0*

*IDC **25** 16:54:02.8±8.3, 5.85S×150.85E, h68^{km}±62^{km}, mb3.1/3, mb1 3.4/4, mb1mx3.3/13, mbtmp3.5/4, ML2.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/6, Error ellipse: s-maj=84.3km s-min=34.9km az=102.0*

ISC 25 16:54:01.1±6.0, **5.8S**±0.3×**150.8E**±0.4, **h70^{km}**±43^{km}, **n8**, σ**0^{s}72**/10, **mb3.4**/4, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.08**	**225**	P	**P**	**16 55 16.6**	**+0.2**
	1.7nm,0.3s,baz=35,slow=12,SNR=8.2						
PMG				S	**S**	**16 56 14.9**	**+0.6**
	5.5nm,0.3s,baz=1.8,slow=23,SNR=7.0						
PMG				LR	LR	16 57 06.3	
	comp=Z,86nm,18.5s,baz=175,slow=36						
PMG	**Port Moresby**	**5.08**	**225**	*e*Pn	**P**	**16 55 12.8**	**-3.6**
PMG				S	**S**	**16 56 14.9**	**+0.6**
PMG				LR	LR	16 57 06.3	
KAKA	**Kakadu**	**19.36**	**248**	*e*P	**P**	**16 58 23.2**	**-0.7**
	2.4nm,0.4s						
WRAB	**Tennant Creek**	**21.28**	**227**	*e*P	**P**	**16 58 43.3**	**-0.4**
	3.7nm,0.5s,mb4.0						
WB2	**Warramunga Arr**	**21.29**	**227**	*e*P	**P**	**16 58 43.2**	**-0.6**
WRA	**Warramunga Arr**	**21.29**	**227**	P	**P**	**16 58 43.5**	**-0.3**
	0.7nm,0.6s,mb3.2,baz=53,slow=10,SNR=17						
WRA				PcP	PcP	17 02 46.2	-0.5
	0.2nm,0.5s,baz=46,slow=2.0,SNR=4.9						
ASAR	**Alice Springs**	**24.08**	**221**	P	**P**	**16 59 12.1**	**+1.0**
	1.2nm,0.8s,mb3.3,baz=57,slow=9.8,SNR=19						
SONM	**Songino Array**	**66.13**	**329**	P	**P**	**17 04 43.9**	**+0.7**
	0.2nm,0.5s,mb3.2,baz=156,slow=5.4,SNR=4.7						

MAN 25 17:00:49.9, 12.90N×123.17E, h58^{km}, mb3.7, ML2.5, MS2.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.64**	**311**	*e*P	P	17 01 04.5	+1.2
PVCP	**Virac**	**1.18**	**54**	*e*P	P	17 01 11.0	+0.4
OTRP	**Odiongan**	**1.24**	**245**	*e*P	P	17 01 10.8	-0.6
BOAC	**Boac**	**1.40**	**293**	*e*P	P	17 01 15.4	+1.7
SJMP	**San Jose**	**2.05**	**258**	*e*P	P	17 01 23.2	+0.6

MAN 25 17:27:48.0, 12.69N×123.25E, h22^{km}, mb3.6, ML2.3, MS1.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.84**	**319**	*e*P	Pb	17 28 03.9	+0.1
OTRP	**Odiongan**	**1.24**	**255**	*e*P	Pn	17 28 09.7	-0.6
PVCP	**Virac**	**1.26**	**44**	*i* P	Pn	17 28 10.0	-0.6
BOAC	**Boac**	**1.56**	**299**	*e*P	Pn	17 28 14.2	-0.8

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*IDC **25** 17:28:07.9±1.3, 30.29S×177.49W, mb4.2/4, mb1 4.4/5, mb1mx4.1/14, mbtmp4.1/5, ML3.4/1, MS3.5/2, Ms1 3.4/2, ms1mx2.7/18, Error ellipse: s-maj=49.4km s-min=23.3km az=142.0*

*NEIC **25** 17:28:12.5±0.8, 29.77S×177.43W, mb4.7/3, Error ellipse: s-maj=21.2km s-min=17.8km az=50.0*

ISC 25 17:28:11.2±1.2, **30.49S**±0.06×**177.5W**±0.2, **h33^{km}**, **n27**, σ**1^{s}11**/27, **mb4.4**/7, **MS3.4**/2, **2C**, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.28**	**344**	*e*Pg	**P**	**17 28 26.3**	**-6.6**
PUZ	**Puketiti**	**8.33**	**204**	PN	**P**	**17 30 11.2**	**-1.3**
PUZ				SN	**Sn**	**17 31 47.5**	**+0.8**
PUZ	**Puketiti**	**8.33**	**204**	PN	**P**	**17 30 11.2**	**-1.3**
PUZ				SN	**Sn**	**17 31 47.5**	**+0.8**
MWZ	**Matawai**	**8.83**	**206**	*e*PN	**P**	**17 30 19.0**	**-0.5**
MWZ				SN	**Sn**	**17 31 59.2**	**+0.2**
MWZ	**Matawai**	**8.83**	**206**	*e*PN	**P**	**17 30 19.0**	**-0.5**
MWZ				SN	**Sn**	**17 31 59.2**	**+0.2**
URZ	**Urewera**	**8.93**	**208**	Pn	**P**	**17 30 19.6**	**-1.3**
	0.4nm,0.3s,baz=307,slow=15,SNR=7.0						
URZ				Sn	**Sn**	**17 32 05.4**	**+4.0**
	1.0nm,0.3s,baz=167,slow=23,SNR=9.0						
URZ	**Urewera**	**8.93**	**208**	PN	**P**	**17 30 19.7**	**-1.1**
URZ				*e*SN	**Sn**	**17 32 04.2**	**+2.7**
URZ	**Urewera**	**8.93**	**208**	PN	**P**	**17 30 19.7**	**-1.1**
URZ				*e*SN	**Sn**	**17 32 04.2**	**+2.7**
THZ	**Tophouse**	**13.64**	**212**	*e*PN	**P**	**17 31 23.1**	**-1.5**
THZ	**Tophouse**	**13.64**	**212**	*e*PN	**P**	**17 31 23.1**	**-1.5**
CTAO	**Charters Tower**	**34.22**	**279**	*e*P	**P**	**17 34 54.9**	**-1.1**
	6.6nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**34.86**	**257**	*e*P	**P**	**17 35 04.1**	**+2.7**
	2.3nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**34.86**	**257**	P	**P**	**17 35 03.2**	**+1.8**
	2.3nm,0.5s,mb4.3,baz=89,slow=8.8,SNR=11						
STKA				LR	LR	17 49 04.0	
	comp=Z,65nm,18.6s,MS3.4,baz=150,slow=36						
STKA	**Stephens Creek**	**34.86**	**257**	*e*P	**P**	**17 35 03.0**	**+1.6**
ASAR	**Alice Springs**	**43.52**	**267**	P	**P**	**17 36 13.3**	**-0.2**
	1.7nm,0.7s,mb3.9,baz=103,slow=7.3,SNR=24						
ASAR				LR	LR	17 53 33.0	
	comp=Z,52nm,20.0s,MS3.4,baz=290,slow=35						
WB2	**Warramunga Arr**	**44.51**	**272**	⇑*i*P	**P**	**17 36 22.3**	**+0.8**
WRAB	**Tennant Creek**	**44.51**	**272**	*e*P	**P**	**17 36 21.5**	**-0.1**
	5.7nm,0.6s,mb4.6						
WRAB				*e*pP	pP	17 36 31.1	-0.4
WRA	**Warramunga Arr**	**44.52**	**272**	P	**P**	**17 36 21.5**	**-0.2**
	3.7nm,0.8s,mb4.3,baz=110,slow=8.1,SNR=58						
QSPA	**South Pole Qui**	**59.62**	**180**	*e*P	**P**	**17 38 18.3**	**+4.5**
	4.9nm,0.4s,mb4.9						
QSPA				*e*pP	pP	17 38 28.6	+4.7
NVAR	**Mina Array Bea**	**88.03**	**42**	P	**P**	**17 41 00.5**	**+1.2**
	1.2nm,0.8s,mb4.2,baz=206,slow=7.5,SNR=8.3						
KAF	**Kangasniemi**	**144.77**	**341**	*e*p	PKPbc	17 47 40.1	-3.8
	0.5nm,0.4s						
FINES	**FINESS Array B**	**145.37**	**340**	PKPbc	PKPbc	17 47 45.2	-0.3
	5.2nm,0.5s,baz=58,slow=3.7,SNR=47						
NB2	**NORSAR Subarra**	**148.90**	**352**	PKP	PKPdf	17 47 55.3	+4.5
	5.9nm,1.2s,baz=21,slow=3.8						
NB2	**NORSAR Subarra**	**148.90**	**352**	⇑PKPab	PKPab	17 47 55.3	-5.7
NOA	**NORSAR Array B**	**148.90**	**352**	PKPbc	PKPdf	17 47 55.9	+5.1
	2.3nm,0.9s,baz=18,slow=2.9,SNR=4.2						
AKASG	**Malin Array Be**	**151.62**	**323**	PKPbc	PKPdf	17 48 02.8	+7.5
	0.3nm,0.3s,baz=41,slow=2.5,SNR=6.9						
AKASG				PKPab	PKPab	17 48 11.9	-0.7
	3.2nm,0.9s,baz=50,slow=3.0,SNR=7.5						
BRTR	**Keskin Array B**	**153.01**	**298**	PKPbc	PKPdf	17 48 06.5	+8.9
	0.5nm,0.4s,baz=117,slow=2.8,SNR=4.5						
BRTR				PKPab	PKPab	17 48 16.2	-2.5
	1.4nm,0.8s,baz=118,slow=4.2,SNR=6.2						

PRE 25 17:34:32.9±2.0, **26.37S×27.43E, h2^{km}, ML3.5, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSR	**Koster**	**0.70**	**317**	*e*P	Pg	17 34 46.9	0.0
KSR				*e*S	Sg	17 34 53.9	-2.4
KSR				*e*		17 34 57.1	
	comp=Z,1μm,0.1s						
SLR	**Silverton**	**0.99**	**51**	*e*P	Pb	17 34 51.1	-1.3
SLR				*e*S	Sb	17 35 03.3	-2.5
SLR				*e*		17 35 10.5	
	comp=Z,1μm,0.3s						
SEK	**Senekal**	**1.96**	**175**	*e*P	Pn	17 35 07.0	-0.4
SEK				*e*S	Sn	17 35 31.1	-1.8
SEK				*e*		17 35 33.2	
	comp=Z,595nm,0.3s						
BOSA	**Boshof**	**2.96**	**220**	*e*P	Pn	17 35 20.4	-1.3
BOSA				*e*S	Sn	17 35 53.9	-4.4

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*IDC **25** 17:35:08.9±1.4, 1.92N×125.00E, mb3.9/4, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, Error ellipse: s-maj=175.7km s-min=22.5km az=71.0*

*DJA **25** 17:35:52.5±1.2, 5.33S×122.96E, h33^{km}, MD4.6/3, ML4.7/3, Error ellipse: s-maj=48.2km s-min=28.1km az=21.0*

ISC 25 17:35:59.4±1.6, **4.6S**±0.3×**122.6E**±0.1, **h33^{km}**, **n7**, σ**0^{s}74**/9, **mb3.5**/2, **5C-1D**, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUNI	**Buntu Taipa**	**2.47**	**292**	⇑*e*Pn	**Pn**	**17 36 38.1**	**-0.2**
	221nm,0.3s						
BUNI				⇓*e*Sn	**Sn**	**17 37 13.3**	**+5.6**
NINI	**Niniconang**	**2.85**	**274**	⇑*e*Pn	**Pn**	**17 36 42.1**	**-1.7**
	479nm,0.5s						
NINI				⇑*e*Sn	**Sn**	**17 37 17.9**	**+0.6**
TANI	**Tanete Lipujan**	**3.42**	**290**	⇑*e*Pn	**Pn**	**17 36 52.8**	**+0.9**
	105nm,0.4s						
WRA	**Warramunga Arr**	**19.05**	**144**	P	**P**	**17 40 21.8**	**+0.1**
	3.5nm,0.4s,baz=336,slow=10,SNR=55						
WB2	**Warramunga Arr**	**19.05**	**144**	⇑*i*P	**P**	**17 40 21.8**	**0.0**
ASAR	**Alice Springs**	**21.86**	**151**	P	**P**	**17 40 51.3**	**+0.2**
	0.3nm,0.4s,mb3.1,baz=331,slow=8.2,SNR=16						
STKA	**Stephens Creek**	**32.45**	**149**	P	**P**	**17 42 21.2**	**-7.8**
	0.5nm,0.3s,mb3.8,baz=335,slow=11,SNR=6.4						

MAN 25 17:39:35.5, 12.64N×123.23E, h21^{km}, mb4.3, ML3.1, MS2.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.86**	**322**	*e*P	Pb	17 39 52.1	+0.4
OTRP	**Odiongan**	**1.21**	**257**	*e*P	Pn	17 39 56.6	-0.7
PVCP	**Virac**	**1.31**	**44**	*e*P	Pn	17 39 58.3	-0.5
BOAC	**Boac**	**1.57**	**301**	*e*P	Pn	17 40 01.1	-1.4
SJMP	**San Jose**	**2.06**	**265**	*e*P	Pn	17 40 09.7	0.0
GUIM	**Jordan**	**2.10**	**197**	*e*P	Pn	17 40 13.1	+3.0
POLP	**Polilio Island**	**2.42**	**329**	*e*P	Pn	17 40 14.8	+0.1
CUYO	**Cuyo Island**	**2.80**	**231**	*e*P	Pn	17 40 19.9	-0.3
MSLP	**Maasin**	**2.96**	**147**	*e*P	Pn	17 40 35.7	+13
BUSP	**Coron**	**3.03**	**258**	*e*P	Pn	17 40 22.9	-0.4
LUBP	**Lubang**	**3.10**	**291**	*e*P	Pn	17 40 27.6	+3.2
ENPP	**El Nido**	**3.98**	**249**	*e*P	Pn	17 40 36.0	-0.9

MAN 25 18:05:38.5, 12.63N×123.21E, h16^{km}, mb4.6, ML3.4, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.87**	**323**	*e*P	Pb	18 05 55.1	+0.4
OTRP	**Odiongan**	**1.19**	**257**	*e*P	Pb	18 05 59.4	-0.9
PVCP	**Virac**	**1.33**	**44**	*e*P	Pn	18 06 01.6	-1.1
PVCP				*e*S	Sb	18 06 19.9	+0.6
BOAC	**Boac**	**1.57**	**302**	*e*P	Pn	18 06 04.6	-1.4
BOAC				*e*S	Sn	18 06 25.5	-0.6
SJMP	**San Jose**	**2.05**	**266**	*e*P	Pn	18 06 13.1	+0.2
GUIM	**Jordan**	**2.08**	**197**	*e*P	Pn	18 06 16.4	+3.1
POLP	**Polilio Island**	**2.43**	**330**	*e*P	Pn	18 06 18.5	+0.2
CUYO	**Cuyo Island**	**2.78**	**231**	*e*P	Pn	18 06 23.3	0.0
BUSP	**Coron**	**3.01**	**258**	*e*P	Pn	18 06 26.2	-0.3
LUBP	**Lubang**	**3.09**	**291**	*e*P	Pn	18 06 27.2	-0.5
ENPP	**El Nido**	**3.96**	**250**	*e*P	Pn	18 06 39.6	-0.6
CAUP	**Cauayan**	**4.50**	**343**	*e*P	Pn	18 06 46.6	-1.1

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*NEIC **25** 18:18:33.4±1.1, 41.11N×127.21W, h10^{km}, mb4.0/3, Error ellipse: s-maj=14.9km s-min=10.1km az=55.0*

*IDC **25** 18:18:34.5±1.8, 41.48N×127.20W, mb3.4/5, mb1 3.7/9, mb1mx3.6/23, mbtmp3.5/9, ML3.1/3, MS3.2/10, Ms1 3.2/10, ms1mx3.1/17, Error ellipse: s-maj=36.4km s-min=15.0km az=30.0*

ISC 25 18:18:31.7±1.0, **41.06N**±0.08×**127.3W**±0.1, **h10^{km}**, **n35**, σ**1^{s}47**/32, **mb3.3**/5, **MS3.0**/4, **Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**2.55**	**62**	*e*P	**Pn**	**18 19 12.2**	**-1.7**
KHMM	**Horse Mountain**	**2.68**	**93**	*e*P	**Pn**	**18 19 16.1**	**+0.4**
YBH	**Yreka Blue Hor**	**3.49**	**77**	Pn	**Pn**	**18 19 28.6**	**+1.4**
	8.5nm,0.3s,baz=254,slow=11,SNR=157						
YBH	**Yreka Blue Hor**	**3.49**	**77**	*e*P	**Pn**	**18 19 27.9**	**+0.7**
HUMO	**Hull Mountain**	**3.57**	**63**	*e*P	**Pn**	**18 19 26.7**	**-1.6**
WDC	**Whiskeytown Da**	**3.62**	**96**	*e*P	**Pn**	**18 19 29.9**	**+1.0**
OHCM	**Honcut**	**4.75**	**109**	P	**Pn**	**18 19 43.8**	**-1.3**
SAC	**San Andreas**	**5.12**	**131**	P	**Pn**	**18 19 49.0**	**-1.2**
MOD	**Modoc**	**5.29**	**79**	*e*P	**Pn**	**18 19 52.2**	**-0.6**
CMB	**Columbia Colle**	**6.11**	**117**	*e*P	**Pn**	**18 20 05.8**	**+1.5**
SAO	**San Andreas Ge**	**6.24**	**132**	*e*P	**Pn**	**18 20 05.0**	**-1.2**
WVOR	**Wild Horse Val**	**6.60**	**75**	*e*P	**Pn**	**18 20 09.3**	**-1.8**
LRV	**Little Rabbit**	**6.73**	**131**	P	**Pn**	**18 20 12.0**	**-1.0**
OMM	**Old Mammoth Mi**	**7.27**	**116**	*e*P	**Pn**	**18 20 24.2**	**+3.6**
NVAR	**Mina Array Bea**	**7.39**	**108**	Pn	**Pn**	**18 20 26.5**	**+4.3**
	0.2nm,0.3s,baz=287,slow=12,SNR=21						
NVAR				LR	LR	18 23 27.1	
	comp=Z,439nm,18.7s,baz=300,slow=39						
MTUM	**Tungsten Hills**	**7.70**	**116**	P	**Pn**	**18 20 28.5**	**+1.8**
ELK	**Elko**	**9.11**	**88**	Pn	**P**	**18 20 49.1**	**+2.9**
	0.1nm,0.3s,baz=273,slow=10.0,SNR=5.0						
ELK				LR	LR	18 24 44.7	
	comp=Z,168nm,20.6s,baz=301,slow=41						
HLID	**Hailey**	**9.84**	**71**	P	**P**	**18 20 53.5**	**-2.7**
NEW	**Newport**	**10.19**	**42**	LR	LR	18 24 53.6	
	comp=Z,147nm,19.0s,baz=234,slow=38						
BGU	**Big Grassy Mou**	**10.76**	**86**	P	**P**	**18 21 09.8**	**+0.9**
BBB	**Bella Bella**	**11.14**	**357**	LR	LR	18 24 31.0	
	comp=Z,48nm,19.8s,baz=177,slow=33						
BW06	**Boulder Array**	**13.30**	**77**	P	**P**	**18 21 43.2**	**+0.2**
PDAR	**Pinedale Array**	**13.30**	**77**	Pn	**P**	**18 21 46.0**	**+2.9**
	0.0nm,0.3s,baz=270,slow=6.3,SNR=3.2						
PDAR				LR	LR	18 27 36.8	
	comp=Z,113nm,19.3s,baz=179,slow=41						
PHWY	**Pilot Hill**	**16.42**	**82**	*e*P	**P**	**18 22 25.0**	**+1.4**
ISCO	**Idaho Springs**	**16.53**	**87**	*e*P	**P**	**18 22 23.6**	**-1.5**
	5.5nm,1.1s						
SDCO	**Great Sand Dun**	**17.14**	**94**	*e*P	**P**	**18 22 33.3**	**+0.6**
	94nm,1.9s						
ANMO	**Albuquerque**	**17.48**	**104**	LR	LR	18 29 56.1	
	comp=Z,216nm,18.3s,slow=39						
MNTX	**Cornudas Mount**	**19.90**	**111**	P	**P**	**18 23 03.7**	**-2.4**
	15nm,1.8s						
TXAR	**Lajitas Array**	**22.48**	**114**	P	**P**	**18 23 38.0**	**+5.5**
	0.4nm,0.8s,mb2.9,baz=319,slow=9.6,SNR=2.3						
TXAR				LR	LR	18 33 32.2	
	comp=Z,79nm,20.1s,MS3.1,baz=320,slow=40						
YKA	**Yellowknife Ar**	**22.76**	**15**	P	**P**	**18 23 34.7**	**-0.2**
	0.6nm,0.7s,mb3.1,baz=205,slow=10,SNR=5.9						
YKA				LR	LR	18 32 23.5	
	comp=Z,45nm,18.2s,MS2.9,baz=265,slow=37						
YKA	**Yellowknife Ar**	**22.76**	**15**	P	**P**	**18 23 34.7**	**-0.2**
YKA				LR	LR	18 32 23.5	
ULM	**Lac du Bonnet**	**23.63**	**57**	P	**P**	**18 23 46.1**	**+2.6**
	1.2nm,0.5s,mb3.6,baz=225,slow=4.3,SNR=2.4						
ULM				LR	LR	18 32 29.4	
	comp=Z,39nm,18.9s,MS2.9,baz=230,slow=36						
ILAR	**Eielson Array**	**26.30**	**341**	P	**P**	**18 24 08.8**	**0.0**
	0.7nm,0.9s,mb3.2,baz=166,slow=8.8,SNR=4.6						
ILAR				LR	LR	18 33 50.1	
	comp=Z,34nm,18.3s,MS2.9,baz=186,slow=35						
FCC	**Fort Churchill**	**27.34**	**38**	P	**P**	**18 24 12.1**	**-6.3**
SONM	**Songino Array**	**79.54**	**327**	P	**P**	**18 30 40.2**	**+0.4**
	1.1nm,1.1s,mb3.7,baz=45,slow=3.5,SNR=6.6						

IDC 25 18:21:21.6±7.5, **16.90S×176.60W, mb3.7**/2, **mb1 3.9**/2, **mb1mx3.6**/15, **mbtmp3.7**/2, **Error ellipse: s-maj=346.2km s-min=114.2km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.52**	**258**	P	P	18 29 52.4	-0.5
	0.7nm,0.7s,baz=91,slow=6.0,SNR=8.8						
ASAR	**Alice Springs**	**46.73**	**253**	P	P	18 29 51.1	-3.4
	0.8nm,0.8s,baz=90,slow=8.3,SNR=6.7						
AKASG	**Malin Array Be**	**140.44**	**334**	PKP	PKPdf	18 40 53.5	-1.1
	0.9nm,0.7s,baz=40,slow=4.6,SNR=5.5						

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*IDC **25** 18:22:39.4±8.4, 6.41S×150.43E, h68^{km}±61^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/13, mbtmp3.7/4, ML2.4/1, MS3.3/1, Ms1 3.2/1, ms1mx2.8/11, Error ellipse: s-maj=88.4km s-min=58.2km az=139.0*

ISC 25 18:22:35.4±5.5, **6.4S**±0.4×**150.6E**±0.3, **h53^{km}**±37^{km}, **n6**, σ**0^{s}77**/7, **mb3.6**/3, **MS3.2**/1, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.52**	**229**	P	**P**	**18 23 43.1**	**+0.1**
	1.3nm,0.3s,baz=39,slow=6.5,SNR=6.6						
PMG				S	**S**	**18 24 34.8**	**-0.1**
	0.8nm,0.3s,baz=130,slow=16,SNR=2.5						
WB2	**Warramunga Arr**	**20.73**	**228**	*e*P	**P**	**18 27 13.6**	**-0.4**
WRA	**Warramunga Arr**	**20.74**	**228**	P	**P**	**18 27 13.8**	**-0.2**
	2.0nm,0.5s,baz=53,slow=11,SNR=44						
ASAR	**Alice Springs**	**23.49**	**221**	P	**P**	**18 27 42.6**	**+1.3**
	1.0nm,0.6s,mb3.4,baz=54,slow=9.1,SNR=20						
STKA	**Stephens Creek**	**26.68**	**197**	P	**P**	**18 28 11.2**	**-0.4**
	0.9nm,0.7s,mb3.4,baz=15,slow=16,SNR=3.0						
STKA				LR	LR	18 38 58.9	
	comp=Z,61nm,18.4s,MS3.2,baz=113,slow=37						
FITZ	**Fitzroy Crossi**	**26.97**	**242**	*e*P	**P**	**18 28 14.1**	**-0.2**
	5.2nm,1.5s,mb3.8						

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*IDC **25** 18:26:56.9±4.0, 52.91N×164.49W, mb3.6/4, mb1 3.7/5, mb1mx3.5/23, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=91.0km s-min=29.2km az=158.0*

*NEIC **25** 18:27:00.4±3.4, 53.34N×164.28W, h8^{km}±17^{km}, ML3.3(AEIC), Error ellipse: s-maj=21.3km s-min=6.1km az=164.0*

ISC 25 18:26:59.6±1.4, **53.22N**±0.06×**164.15W**±0.06, **h19^{km}**±10^{km}, **n30**, σ**0^{s}71**/38, **mb3.6**/3, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESS	**West Dahl Sout**	**1.31**	**345**	P	**Pn**	**18 27 22.9**	**-0.2**
AKA	**Akutan**	**1.33**	**314**	P	**Pn**	**18 27 23.8**	**+0.3**
AKA				S	**Sb**	**18 27 40.6**	**+0.1**
AKUT	**Akutan**	**1.34**	**314**	P	**Pn**	**18 27 23.3**	**-0.2**
AKUT				S	**Sb**	**18 27 40.7**	**+0.2**
AHB	**Akutan Harbor**	**1.34**	**313**	P	**Pn**	**18 27 23.6**	**0.0**
WFAR	**Faris Peak**	**1.38**	**345**	P	**Pn**	**18 27 23.9**	**-0.1**
WFAR				S	**Sn**	**18 27 42.3**	**+0.5**
WESN	**West Dahl Nort**	**1.38**	**349**	P	**Pn**	**18 27 24.0**	**-0.1**
WPOG	**Pogromni**	**1.43**	**346**	P	**Pn**	**18 27 24.5**	**-0.3**
AKLV	**Akutan Long Va**	**1.44**	**312**	P	**Pn**	**18 27 24.6**	**-0.3**
AKLV				S	**Sn**	**18 27 43.3**	**0.0**
LVA	**Lava Point**	**1.47**	**311**	P	**Pn**	**18 27 25.8**	**+0.5**
AKGG	**Akutan Green G**	**1.47**	**313**	P	**Pn**	**18 27 25.3**	**-0.2**
AKGG				S	**Sn**	**18 27 44.1**	**-0.2**
SSLS	**Shishaldin Sou**	**1.50**	**3**	P	**Pn**	**18 27 25.4**	**-0.5**
UNV	**Unalaska Valle**	**1.54**	**295**	P	**Pn**	**18 27 26.5**	**+0.1**
UNV				S	**Sn**	**18 27 46.5**	**+0.5**
SSLW	**Shishaldin Wes**	**1.56**	**1**	P	**Pn**	**18 27 26.4**	**-0.3**
SSLN	**Shishaldin Nor**	**1.60**	**3**	P	**Pn**	**18 27 27.1**	**-0.1**
WTUG	**Tugumak**	**1.64**	**355**	P	**Pn**	**18 27 27.6**	**-0.3**
WTUG				S	**Sn**	**18 27 47.7**	**-0.8**
MTBL	**Makushin Table**	**1.69**	**298**	P	**Pn**	**18 27 29.0**	**+0.5**
FALS	**False Pass**	**1.70**	**14**	P	**Pn**	**18 27 29.0**	**+0.3**
FALS				S	**Sn**	**18 27 50.5**	**+0.4**
MSW	**Makushin Switc**	**1.72**	**295**	P	**Pn**	**18 27 29.5**	**+0.6**
DT1	**Dutton Round H**	**2.19**	**29**	P	**Pn**	**18 27 35.7**	**0.0**
DTNA	**Dutton South F**	**2.24**	**29**	P	**Pn**	**18 27 36.3**	**-0.1**
OKFG	**Magazine Ridge**	**2.27**	**276**	P	**Pn**	**18 27 36.1**	**-0.7**
DOL	**Dolgoi Island**	**2.36**	**34**	P	**Pn**	**18 27 37.6**	**-0.5**
HAG	**Hague Volcano**	**2.48**	**31**	P	**Pn**	**18 27 39.5**	**-0.4**
SDPT	**Sand Point**	**3.03**	**44**	P	**Pn**	**18 27 46.5**	**-1.2**
ILAR	**Eielson Array**	**14.54**	**30**	Pn	**P**	**18 30 28.4**	**+2.5**
	0.0nm,0.3s,baz=219,slow=12,SNR=4.0						
INK	**Inuvik**	**20.92**	**32**	P	**P**	**18 31 45.4**	**+2.2**
	1.3nm,0.5s,baz=243,slow=8.2,SNR=12						
YKA	**Yellowknife Ar**	**27.28**	**50**	P	**P**	**18 32 45.5**	**+1.3**
	0.3nm,0.8s,mb2.9,baz=276,slow=9.6,SNR=6.3						
YKA	**Yellowknife Ar**	**27.28**	**50**	P	**P**	**18 32 45.5**	**+1.3**
SONM	**Songino Array**	**53.54**	**303**	P	**P**	**18 36 20.1**	**-0.8**
	0.7nm,0.7s,mb3.7,baz=37,slow=7.1,SNR=5.8						
FINES	**FINESS Array B**	**65.40**	**355**	P	**P**	**18 37 40.8**	**-1.6**
	2.2nm,0.9s,mb4.2,baz=54,slow=12,SNR=3.6						

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*IDC **25** 19:45:11.9±1.7, 41.16N×109.49W, mb3.2/2, mb1 3.5/4, mb1mx3.3/21, mbtmp3.3/4, ML2.8/2, Error ellipse: s-maj=19.7km s-min=7.4km az=118.0*

*NEIC **25** 19:45:17.2±0.2, 41.70N×110.48W, ML2.4, Error ellipse: s-maj=4.1km s-min=2.7km az=104.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] NE of Evanston.

ISC 25 19:45:16.1±0.4, **41.68N**±0.03×**110.37W**±0.06, **n36**, σ**1^{s}17**/39, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWUT	**Hardware Ranch**	**0.90**	**265**	*e*Pg	**Pg**	**19 45 32.3**	**-1.8**
TCUT	**Toone Canyon**	**0.96**	**234**	*e*Pg	**Pg**	**19 45 35.5**	**+0.2**
AHID	**Auburn Hatcher**	**1.21**	**334**	*e*Pn	**Pn**	**19 45 39.3**	**-0.9**
PDAR	**Pinedale Array**	**1.24**	**29**	Pg	**Pg**	**19 45 42.6**	**+1.8**
	6.8nm,0.3s,baz=223,slow=16,SNR=163						
PDAR				Lg		19 46 03.1	
	4.0nm,0.3s,baz=213,slow=15,SNR=11						
JLU	**Jordanelle**	**1.35**	**217**	*e*Pg	**Pg**	**19 45 41.9**	**-1.3**
DAU	**Daniels Canyon**	**1.44**	**208**	*e*Pn	**Pn**	**19 45 44.8**	**+1.4**
CTU	**Camp Tracy**	**1.44**	**227**	*e*Pn	**Pn**	**19 45 43.9**	**+0.5**
SPUT	**South Promonto**	**1.61**	**257**	*e*Pn	**Pn**	**19 45 45.5**	**-0.3**
NOQ	**North Oquirrh**	**1.68**	**233**	*e*Pn	**Pn**	**19 45 48.0**	**+1.1**
SNOW	**Snow King Moun**	**1.80**	**351**	*e*Pn	**Pn**	**19 45 49.1**	**+0.5**
HVU	**Hansel Valley**	**1.80**	**274**	*e*Pn	**Pn**	**19 45 48.0**	**-0.7**
TPAW	**Teton Pass**	**1.85**	**347**	*e*Pn	**Pn**	**19 45 50.5**	**+1.1**
WUWY	**Wally Ulrich**	**1.87**	**352**	*e*Pn	**Pn**	**19 45 49.8**	**+0.1**
MPU	**Maple Canyon**	**1.92**	**210**	*e*Pn	**Pn**	**19 45 50.5**	**+0.1**
LOHW	**Long Hollow**	**1.94**	**355**	*e*Pn	**Pn**	**19 45 51.6**	**+1.1**
MOOW	**Moose Ponds**	**2.08**	**352**	*e*Pn	**Pn**	**19 45 53.4**	**+0.7**
BGU	**Big Grassy Mou**	**2.14**	**250**	*e*Pn	**Pn**	**19 45 53.4**	**-0.2**
NLU	**North Lily Min**	**2.16**	**217**	*e*Pn	**Pn**	**19 45 53.6**	**-0.2**
IMW	**Indian Meadow**	**2.25**	**349**	*e*Pn	**Pn**	**19 45 56.0**	**+0.9**
DUG	**Dugway**	**2.38**	**232**	*e*Pn	**Pn**	**19 45 57.3**	**+0.4**
TMUT	**Trail Mountain**	**2.47**	**195**	Pn	**Pn**	**19 45 59.5**	**+1.3**
SRU	**San Rafael**	**2.57**	**183**	*e*Pg	**Pg**	**19 46 05.5**	**-2.0**
YFT	**Old Faithful**	**2.79**	**353**	*e*Pg	**Pg**	**19 46 09.7**	**-2.0**
LKWY	**Lake**	**2.88**	**360**	*e*Pg	**Pg**	**19 46 11.5**	**-2.0**
QLMT	**Earthquake Lak**	**3.24**	**347**	*e*Pn	**Pn**	**19 46 08.8**	**-0.4**
MSU	**Marysvale**	**3.46**	**204**	*e*Pn	**Pn**	**19 46 14.5**	**+2.2**
HLID	**Hailey**	**3.53**	**304**	*e*Pn	**Pn**	**19 46 13.0**	**-0.2**
PHWY	**Pilot Hill**	**3.71**	**94**	*e*Pn	**Pn**	**19 46 16.9**	**+1.0**
ELK	**Elko**	**3.79**	**257**	Pn	**Pn**	**19 46 21.2**	**+4.2**
ELK				Sn	**Sn**	**19 47 11.8**	**+8.8**
ELK	**Elko**	**3.79**	**257**	Pn	**Pn**	**19 46 21.2**	**+4.2**
	0.3nm,0.3s,baz=63,slow=14,SNR=9.5						
ELK				Sn	**Sn**	**19 47 11.8**	**+8.8**
	0.4nm,0.3s,baz=180,slow=20,SNR=3.6						
ISCO	**Idaho Springs**	**4.07**	**116**	*e*Pg	**Pg**	**19 46 36.9**	**-0.5**
ARUT	**Antelope Range**	**4.55**	**212**	*e*Pn	**Pn**	**19 46 27.2**	**-0.7**
ARUT				*e*Pg	**Pg**	**19 46 43.1**	**-3.9**
SDCO	**Great Sand Dun**	**5.44**	**135**	*e*Pg	**Pg**	**19 47 02.2**	**-2.5**
	5.5nm,1.1s						
NVAR	**Mina Array Bea**	**6.90**	**244**	Pn	**Pn**	**19 47 02.7**	**+1.7**

	0.3nm,0.3s,baz=61,slow=12,SNR=11						
NVAR				Lg		19 48 59.8	
	0.3nm,0.3s,baz=35,slow=32,SNR=4.8						
YKA	**Yellowknife Ar**	**21.00**	**355**	P	**P**	**19 50 02.1**	**-1.1**
	0.2nm,0.7s,baz=171,slow=10,SNR=6.8						
SADO	**Sadowa**	**22.89**	**72**	P	**P**	**19 50 12.6**	**-10**
	2.2nm,0.5s,baz=292,slow=16,SNR=3.0						

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*IDC **25** 19:47:12.3±9.7, 17.23S×179.03W, h559^{km}±120^{km}, mb3.2/8, mb1 3.5/8, mb1mx3.3/15, mbtmp4.1/8, Error ellipse: s-maj=76.1km s-min=36.6km az=160.0*

*NEIC **25** 19:47:15.2±0.8, 17.43S×179.02W, h600^{km}, mb4.0/2, Error ellipse: s-maj=53.4km s-min=10.0km az=153.0*

ISC 25 19:47:06.5±1.2, **17.3S**±0.5×**178.9W**±0.3, **h500**^{km}, **n15**, σ**0^{s}.37**/14, **mb3.7**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.07**	**260**	P	**P**	**19 53 01.2**	**-0.2**
	6.7nm,1.2s,mb3.9,baz=84,slow=7.9,SNR=3.6						
STKA	**Stephens Creek**	**38.51**	**240**	*e*P	**P**	**19 53 46.7**	**+0.3**
	2.7nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**38.51**	**240**	P	**P**	**19 53 46.5**	**+0.1**
	6.5nm,0.9s,mb4.1,baz=88,slow=10.0,SNR=12						
STKA	**Stephens Creek**	**38.51**	**240**	*e*P	**P**	**19 53 46.3**	**-0.1**
WB2	**Warramunga Arr**	**44.25**	**259**	*e*P	**P**	**19 54 32.0**	**-0.4**
WRAB	**Tennant Creek**	**44.26**	**259**	*e*P	**P**	**19 54 32.3**	**-0.2**
	2.0nm,0.6s,mb3.7						
WRA	**Warramunga Arr**	**44.26**	**259**	P	**P**	**19 54 32.4**	**-0.1**
	1.0nm,0.5s,mb3.5,baz=92,slow=6.9,SNR=28						
ASAR	**Alice Springs**	**44.49**	**254**	P	**P**	**19 54 34.4**	**+0.1**
	13nm,0.5s,mb4.6,baz=89,slow=8.2,SNR=311						
ASPA	**Alice Springs**	**44.49**	**254**	*e*P	**P**	**19 54 34.3**	**0.0**
KAKA	**Kakadu**	**47.10**	**269**	*e*P	**P**	**19 54 55.3**	**+0.8**
	14nm,1.5s,mb4.2						
NVAR	**Mina Array Bea**	**79.30**	**44**	P	**P**	**19 58 21.4**	**+0.6**
	0.3nm,0.6s,mb3.0,baz=231,slow=11,SNR=4.2						
ILAR	**Eielson Array**	**85.36**	**13**	P	**P**	**19 58 50.4**	**-0.3**
	0.3nm,0.4s,mb3.3,baz=220,slow=5.1,SNR=9.5						
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**	**19 58 55.0**	**+0.1**
	0.3nm,0.5s,mb3.1,baz=207,slow=5.6,SNR=6.5						
PDAR	**Pinedale Array**	**87.22**	**44**	P	**P**	**19 58 59.6**	**-0.4**
	0.4nm,0.6s,mb3.4,baz=215,slow=4.7,SNR=4.7						
GERES	**GERESS Array B**	**146.85**	**345**	PKPbc	PKPbc	20 05 51.2	+0.1
	0.4nm,0.5s,baz=27,slow=3.0,SNR=4.9						

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*IDC **25** 19:54:14.6±1.2, 30.71N×56.75E, mb3.9/12, mb1 4.1/13, mb1mx3.9/23, mbtmp3.9/13, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.1/21, Error ellipse: s-maj=26.5km s-min=21.3km az=146.0*

*MOS **25** 19:54:15.5±0.8, 30.85N×56.75E, h10^{km}, mb4.1/3, Error ellipse: s-maj=16.3km s-min=12.5km az=110.9*

*THR **25** 19:54:15.1±0.6, 30.77N×56.86E, h14^{km}±5^{km}, ML3.7*

*NEIC **25** 19:54:16.6±0.5, 30.76N×56.80E, h10^{km}, mb3.8/5, MN4.1(TEH), Error ellipse: s-maj=9.7km s-min=5.1km az=190.0*

*CSEM **25** 19:54:16.2±0.1, 30.75N×56.80E, h16^{km}, mb4.1/2, Error ellipse: s-maj=2.1km s-min=1.8km az=57.0*

*TEH **25** 19:54:24.7, 31.39N×56.68E, h6^{km}, Mn4.1*

ISC 25 19:54:16.6±1.1, **30.76N**±0.04×**56.77E**±0.05, **h20**^{km}±10^{km}, **n51**, σ**1^{s}.09**/54, **mb3.9**/16, **MS3.2**/1, **2D**, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.78**	**181**	*i* PG	**Pb**	**19 54 30.2**	**-1.2**
KRBR				*e*SG	**Sb**	**19 54 41.5**	**0.0**
KRBR				AML	AML	19 54 44.9	
	comp=N,5μm,0.0s						
IMEH	**Mehriz**	**1.96**	**289**	Pn	**Pn**	**19 54 51.2**	**+1.9**
ICHK	**Chekchek**	**2.50**	**307**	Pn	**Pn**	**19 54 58.9**	**+1.8**
BNDS	**Bandar-Abbas**	**3.39**	**189**	*e*PN	**Pn**	**19 55 10.4**	**+0.6**
BNDS				AML	AML	19 56 16.1	
	comp=N,194nm,0.8s						
ISRV	**Sarvestan**	**3.46**	**247**	Pn	**Pn**	**19 55 20.0**	**+9.3**
ZHSF	**Zahedan**	**3.65**	**107**	*e*PN	**Pn**	**19 55 12.3**	**-1.2**
ZHSF				AML	AML	19 56 18.5	
	comp=N,94nm,0.6s						
SHI	**Shiraz**	**3.85**	**254**	Pn	**Pn**	**19 55 25.7**	**+9.4**
IMOK	**Mook**	**3.92**	**245**	Pn	**Pn**	**19 55 27.9**	**+11**
NASN	**Na'in**	**3.94**	**302**	*e*PN	**Pn**	**19 55 18.5**	**+1.0**
NASN				*e*SG	**Sn**	**19 56 19.5**	**+16**
NASN				AML	AML	19 56 30.2	
	comp=N,138nm,0.6s						
GHIR	**Ghir-Karzin**	**4.12**	**234**	*e*PN	**Pn**	**19 55 20.9**	**+0.8**
GHIR				AML	AML	19 56 47.3	
	comp=N,63nm,0.6s						
IBRJ	**Borojen**	**4.82**	**283**	Pn	**Pn**	**19 55 31.9**	**+1.8**
IFIR	**Firoozkooh**	**5.92**	**326**	Pn	**Pn**	**19 55 44.0**	**-1.5**
IFIR				Lg		19 57 11.6	
IPAY	**Payeh**	**5.97**	**18**	Pn	**Pn**	**19 55 45.4**	**-0.8**
MHI	**Mashhad**	**5.97**	**21**	Pn	**Pn**	**19 55 48.4**	**+2.1**
IKRD	**Kardeh**	**6.17**	**13**	Pn	**Pn**	**19 55 51.2**	**+2.2**
IMYA	**Miamay**	**6.22**	**26**	Pn	**Pn**	**19 55 48.3**	**-1.5**
IDMV	**Damavand**	**6.23**	**322**	Pn	**Pn**	**19 55 48.3**	**-1.7**
IQOM	**Qom**	**6.29**	**312**	Pn	**Pn**	**19 55 50.8**	**0.0**
DAMV	**Damavand**	**6.30**	**322**	*e*PN	**Pn**	**19 55 50.7**	**-0.3**
IAFJ	**Afjeh**	**6.61**	**322**	Pn	**Pn**	**19 55 54.1**	**-1.2**
IAFJ				Sn	**Sn**	**19 57 00.6**	**-10**
IRAZ	**Razeghan**	**7.38**	**311**	Pn	**Pn**	**19 56 05.5**	**-0.5**
MALT	**Malatya**	**16.87**	**301**	*e*P	**P**	**19 58 14.6**	**+1.3**
MALT				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MALT	**Malatya**	**16.87**	**301**	*e*P	**P**	**19 58 14.6**	**+1.3**
	comp=Z,7.3nm,1.1s						
MALT	**Malatya**	**16.87**	**301**	*e*P	**P**	**19 58 14.6**	**+1.3**
	comp=Z,7.3nm,1.1s						
ASF	**Jabal al Asfar**	**17.02**	**280**	Pn	**P**	**19 58 13.2**	**-1.9**
	comp=Z,0.2nm,0.3s,slow=9.1,SNR=2.3						
KIV	**Kislovodsk**	**17.25**	**324**	⇓*i*P	**P**	**19 58 21.4**	**+3.4**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	**Kislovodsk**	**17.25**	**324**	⇓*i*P	**P**	**19 58 21.4**	**+3.4**
	comp=Z,7.0nm,1.1s						
AAK	**Ala-Archa**	**18.46**	**45**	*e*P	**P**	**19 58 31.9**	**-1.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AAK	**Ala-Archa**	**18.46**	**45**	*e*P	**P**	**19 58 31.9**	**-1.2**
	comp=Z,5.0nm,1.1s						
KOLN	**Koldanda**	**23.57**	**91**	*e*P	**P**	**19 59 27.8**	**+0.9**
HYB	**Hyderabad**	**23.86**	**119**	*i* P	**P**	**19 59 30.5**	**+0.8**
BVAR	**Borovoye Array**	**24.36**	**20**	P	**P**	**19 59 35.5**	**+1.2**
	comp=Z,2.5nm,0.8s,mb3.7,baz=207,slow=6.6,SNR=15						
GKN	**Gorkha**	**24.41**	**89**	*e*P	**P**	**19 59 35.6**	**+0.6**
	comp=Z,7.4nm,0.8s,mb4.1						
DMN	**Daman**	**24.91**	**90**	*e*P	**P**	**19 59 39.7**	**-0.1**
CHKZ	**Chkalovo**	**25.00**	**20**	*e*P	**P**	**19 59 41.0**	**+0.6**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
KKN	**Kakani**	**25.01**	**90**	*e*P	**P**	**19 59 41.6**	**+0.8**
PKI	**Pulchoki**	**25.18**	**90**	*e*P	**P**	**19 59 43.3**	**+0.9**
	comp=Z,13nm,0.8s,mb4.5						
KURK	**Kurchatov**	**25.74**	**33**	*e*P	**P**	**19 59 47.8**	**+0.4**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
AKASG	**Malin Array Be**	**28.58**	**322**	P	**P**	**20 00 12.8**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**28.58**	**322**	P	**P**	**20 00 12.8**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.1,baz=127,slow=8.6,SNR=10						
ZAL	**Zalesovo**	**30.71**	**33**	P	**P**	**20 00 32.5**	**+0.2**
	comp=Z,1.9nm,0.9s,mb3.9,baz=244,slow=10,SNR=12						
ZAL				LR	LR	20 15 02.6	
	comp=Z,48nm,18.1s,MS3.2,baz=19,slow=41						
FINES	**FINESS Array B**	**36.68**	**336**	P	**P**	**20 01 23.1**	**-0.6**
	comp=Z,1.4nm,0.7s,mb3.9,baz=135,slow=14,SNR=6.0						
GERES	**GERESS Array B**	**37.11**	**312**	P	**P**	**20 01 27.2**	**-0.3**
	comp=Z,0.8nm,0.9s,mb3.5,baz=108,slow=8.4,SNR=6.0						
KHC	**Kasperske Hory**	**37.25**	**312**	*e*P	**P**	**20 01 28.0**	**-0.7**
HFS	**Hagfors**	**40.95**	**329**	P	**P**	**20 01 58.8**	**-0.5**
	comp=Z,6.9nm,1.1s,mb4.2,baz=111,slow=12,SNR=3.5						
SONM	**Songino Array**	**41.25**	**51**	P	**P**	**20 02 01.4**	**-0.5**
	comp=Z,0.5nm,1.0s,mb3.1,baz=247,slow=11,SNR=2.4						
NOA	**NORSAR Array B**	**42.44**	**329**	P	**P**	**20 02 11.3**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.4,baz=114,slow=8.5,SNR=2.7						
EKA	**Eskdalemuir Ar**	**48.39**	**319**	P	**P**	**20 02 57.9**	**-1.0**
	comp=Z,1.9nm,0.9s,mb4.1,baz=108,slow=7.9,SNR=3.7						
MATP	**Matopo**	**57.69**	**212**	P	**P**	**20 04 07.2**	**-1.3**
	comp=Z,1.9nm,0.7s,mb4.3,baz=38,slow=8.0,SNR=10						
ILAR	**Eielson Array**	**83.00**	**10**	P	**P**	**20 06 40.4**	**-0.9**
	comp=Z,0.6nm,0.6s,mb3.8,baz=320,slow=4.5,SNR=9.2						
YKA	**Yellowknife Ar**	**86.81**	**356**	P	**P**	**20 07 00.2**	**-0.1**
	comp=Z,0.6nm,0.6s,mb4.0,baz=1.2,slow=5.2,SNR=20						

IDC 25 20:00:51.1±8.6, **1.35N**×**124.38E**, **mb3.7**/3, **mb1 4.0**/3, **mb1mx3.6**/16, **mbtmp3.8**/3, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.3**/22, **Error ellipse: s-maj=187.7km s-min=134.0km az=65.0**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.31**	**156**	P	P	20 06 00.9	-0.9
	1.1nm,0.7s,baz=333,slow=11,SNR=21						
WB2	**Warramunga Arr**	**23.31**	**156**	*e*P	P	20 06 01.0	-0.9
ASAR	**Alice Springs**	**26.54**	**160**	P	P	20 06 31.4	-1.1
	0.3nm,0.5s,baz=338,slow=7.3,SNR=4.6						
ASAR				LR	LR	20 18 05.7	
	comp=Z,40nm,19.2s,baz=33,slow=39						
STKA	**Stephens Creek**	**36.86**	**155**	P	P	20 08 00.7	-2.5
	3.8nm,0.9s,baz=332,slow=7.2,SNR=7.0						

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*TEH **25** 20:14:24.4, 34.04N×53.47E, h13^{km}, Mn3.7*

*CSEM **25** 20:14:24.5±0.1, 34.21N×53.26E, h5^{km}, ML3.7, Error ellipse: s-maj=3.8km s-min=2.4km az=82.0*

*THR **25** 20:14:25.5±0.4, 34.22N×53.28E, h14^{km}±7^{km}, ML3.0*

ISC 25 20:14:24.8±0.7, **34.16N**±0.03×**53.38E**±0.07, **h10**^{km}, **n14**, σ**0^{s}.92**/17, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAS	**Lasjerd**	**1.27**	**344**	Pg	**Pg**	**20 14 49.7**	**-0.5**
IANJ	**Anjiloo**	**1.38**	**19**	Pg	**Pg**	**20 14 50.9**	**-1.5**
NASN	**Na'in**	**1.44**	**200**	*e*PG	**Pg**	**20 14 52.8**	**-0.7**
NASN				*e*SG	**Sg**	**20 15 12.5**	**-0.3**
NASN				AML	AML	20 15 16.7	
	comp=N,550nm,0.3s						
IFIR	**Firoozkooh**	**1.57**	**341**	Pn	**Pn**	**20 14 52.9**	**0.0**
IDMV	**Damavand**	**1.80**	**322**	Pn	**Pn**	**20 14 56.7**	**+0.5**
DAMV	**Damavand**	**1.87**	**322**	*e*PG	**Pg**	**20 14 57.9**	**-4.3**
DAMV				AML	AML	20 15 34.5	
	comp=N,120nm,0.3s						
IQOM	**Qom**	**2.02**	**290**	Pn	**Pn**	**20 14 59.4**	**-0.1**
ICHK	**Chekchek**	**2.09**	**155**	Pn	**Sg**	**20 15 34.4**	**-0.2**
IAFJ	**Afjeh**	**2.18**	**322**	Pn	**Pn**	**20 15 02.3**	**+0.7**
IAFJ				Sn	**Sn**	**20 15 29.9**	**+1.0**
IMHD	**Mahdasht**	**2.70**	**305**	Pn	**Pn**	**20 15 10.5**	**+1.4**
ASAO	**Ashtian**	**2.80**	**279**	*e*PN	**Pn**	**20 15 10.9**	**+0.4**
ASAO				AML	AML	20 16 01.1	
	comp=N,29nm,0.5s						
IMEH	**Mehriz**	**2.95**	**159**	Pn	**Pn**	**20 15 15.4**	**+2.7**
IRAZ	**Razeghan**	**3.10**	**295**	Pn	**Pn**	**20 15 14.4**	**-0.4**
IRAZ				Sn	**Sn**	**20 15 51.2**	**-1.1**
SNGE	**Sanandaj**	**5.06**	**282**	*e*PN	**Pn**	**20 15 42.1**	**-0.6**

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*ISK **25** 20:15:07.9, 35.96N×31.76E, h56^{km}, MD3.4*

*NEIC **25** 20:15:07.5, 36.00N×31.78E, h84^{km}, MD3.3(ISK), After ISK.*

*CSEM **25** 20:15:08.4±0.1, 36.02N×31.70E, h30^{km}, Mw2.8, Error ellipse: s-maj=3.4km s-min=1.8km az=42.0*

*NIC **25** 20:15:11.2±0.1, 35.92N×31.89E, h40^{km}, ML3.5, MW2.8*

ISC 25 20:15:08.9±0.6, **36.00N**±0.06×**31.75E**±0.06, **h48**^{km}±48^{km}, **n36**, σ**1^{s}.06**/44, **2D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMC	**Akamas**	**1.08**	**154**	⇓*i*P	**P**	**20 15 28.1**	**+0.2**
ALFC	**Alevga**	**1.09**	**140**	⇓*i*P	**P**	**20 15 28.2**	**+0.1**
	28nm,0.1s						
ALFC				S	**S**	**20 15 41.3**	**-1.0**
HDMB	**Hadim**	**1.13**	**32**	*e*PN	**P**	**20 15 29.5**	**+0.9**
HDMB	**Hadim**	**1.13**	**32**	Pn	**P**	**20 15 28.9**	**+0.3**
HDMB	**Hadim**	**1.13**	**32**	Pn	**P**	**20 15 28.9**	**+0.3**
PPCY	**Paphos**	**1.22**	**156**	P	**P**	**20 15 30.2**	**+0.4**
LEF	**Lefka**	**1.28**	**133**	PN	**P**	**20 15 30.7**	**-0.1**
LEF				SN	**S**	**20 15 45.3**	**-1.8**
LEF	**Lefka**	**1.28**	**133**	Pn	**P**	**20 15 30.8**	**0.0**
MAMC	**Mammari**	**1.46**	**124**	P	**P**	**20 15 33.5**	**+0.1**
SZAC	**Souni-Zanaja**	**1.55**	**143**	P	**P**	**20 15 36.4**	**+1.7**
SZAC				S	**S**	**20 15 55.0**	**+1.3**
CSS	**Prodhromos**	**1.66**	**128**	P	**P**	**20 15 35.9**	**-0.2**
	2.5nm,0.2s						
CSS				S	**S**	**20 15 55.3**	**-1.0**
ELL	**Elmali**	**1.66**	**297**	PN	**P**	**20 15 36.5**	**+0.3**
ELL	**Elmali**	**1.66**	**297**	Pn	**P**	**20 15 36.6**	**+0.4**
KONT	**Konya--Tatoy**	**2.00**	**14**	*e*PN	**P**	**20 15 41.2**	**+0.2**
KONT	**Konya--Tatoy**	**2.00**	**14**	Pn	**P**	**20 15 41.3**	**+0.4**
MEST	**Erdemli**	**2.02**	**72**	*i* P	**P**	**20 15 45.4**	**+4.1**
MEST				*i* S	**S**	**20 16 12.0**	**+6.6**
PHNC	**Paralimni**	**2.11**	**117**	P	**P**	**20 15 45.0**	**+2.4**
FETY	**Fethiye**	**2.24**	**287**	*e*PN	**P**	**20 15 43.7**	**-0.7**
DALT	**Dalyan (Mudla)**	**2.62**	**288**	*e*PN	**P**	**20 15 49.7**	**-0.2**
DALT	**Dalyan (Mudla)**	**2.62**	**288**	Pn	**P**	**20 15 49.8**	**-0.1**
DNZL	**Cakiroluk**	**2.74**	**309**	*i* P	**P**	**20 15 53.8**	**+2.2**
DNZL				*i* S	**S**	**20 16 25.4**	**+1.7**
DENT	**Denizli**	**2.79**	**310**	*e*PN	**P**	**20 15 51.4**	**-0.9**
DENT	**Denizli**	**2.79**	**310**	Pn	**P**	**20 15 51.9**	**-0.4**
DENT	**Denizli**	**2.79**	**310**	Pn	**P**	**20 15 51.9**	**-0.4**
KIZT	**Kizilcal**	**2.88**	**2**	*e*PN	**P**	**20 15 52.7**	**-0.8**
KIZT	**Kizilcal**	**2.88**	**2**	Pn	**P**	**20 15 52.8**	**-0.6**
KIZT	**Kizilcal**	**2.88**	**2**	Pn	**P**	**20 15 52.8**	**-0.7**
AYDN	**Tasoluk**	**3.52**	**299**	*i* P	**P**	**20 16 02.4**	**-0.1**
AYDN				*i* S	**S**	**20 16 38.0**	**-5.3**
ESKT	**Eskisehir**	**3.58**	**349**	Pn	**P**	**20 16 02.5**	**-0.9**
ESKT	**Eskisehir**	**3.58**	**349**	*i* P	**P**	**20 16 01.8**	**-1.7**
ESKT	**Eskisehir**	**3.58**	**349**	Pn	**P**	**20 16 02.5**	**-1.0**
BDRM	**Kayabasi**	**3.62**	**288**	*i* P	**P**	**20 16 02.9**	**-1.1**
BDRM				*i* S	**S**	**20 16 41.8**	**-4.1**
BODT	**Bodrum**	**3.73**	**288**	*e*PN	**P**	**20 16 04.2**	**-1.3**
BODT	**Bodrum**	**3.73**	**288**	Pn	**P**	**20 16 04.8**	**-0.7**
BODT	**Bodrum**	**3.73**	**288**	Pn	**P**	**20 16 04.8**	**-0.7**
SGKT	**Sivrigoynuk**	**4.57**	**3**	*i* P	**P**	**20 16 16.9**	**-0.6**

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*IDC **25** 20:18:54.2±0.8, 13.50N×169.23E, mb4.0/9, mb1 4.3/9, mb1mx4.2/16, mbtmp4.0/9, Error ellipse: s-maj=32.9km s-min=18.1km az=140.0*

*NEIC **25** 20:18:59.1±0.4, 13.44N×169.21E, h35^{km}, mb4.2/9, Error ellipse: s-maj=13.7km s-min=7.7km az=125.0*

ISC 25 20:18:53.7±0.5, **13.5N**±0.1×**169.2E**±0.1, **h10**^{km}, **n20**, σ**0^{s}.63**/21, **mb4.1**/18, **Marshall Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KWAJ	**Kwajalein Atol**	**4.92**	**198**	*e*Pn	**Pn**	**20 20 09.5**	**0.0**
KWAJ				*e*Sn	**Sn**	**20 20 58.9**	**-8.2**
WRA	**Warramunga Arr**	**47.75**	**227**	P	**P**	**20 27 32.6**	**-0.6**
	1.4nm,1.1s,mb3.9,baz=48,slow=8.1,SNR=7.2						
WRA				PcP	PcP	20 29 03.3	+0.6
	0.3nm,0.8s,baz=50,slow=4.6,SNR=4.8						
ASAR	**Alice Springs**	**50.54**	**223**	P	**P**	**20 27 54.2**	**-0.4**
	0.6nm,0.8s,mb3.6,baz=57,slow=7.2,SNR=3.9						
ASAR				PcP	PcP	20 29 13.1	+0.3
	0.3nm,0.5s,baz=47,slow=3.5,SNR=5.4						
BILL	**Bilibino**	**54.52**	**359**	*e*P	**P**	**20 28 23.2**	**-0.6**
	9.0nm,1.0s,mb4.8						
MCK	**McKinley**	**58.00**	**21**	*e*P	**P**	**20 28 47.9**	**-0.8**
	2.2nm,0.7s,mb4.3						
ILAR	**Eielson Array**	**59.35**	**20**	P	**P**	**20 28 57.0**	**-1.2**
	0.8nm,0.6s,mb3.9,baz=239,slow=7.2,SNR=27						
ULN	**Ulaanbaatar**	**61.46**	**317**	*e*P	**P**	**20 29 13.2**	**+0.4**
SONM	**Songino Array**	**61.89**	**317**	P	**P**	**20 29 16.3**	**+0.6**
	2.2nm,0.6s,mb4.4,baz=113,slow=5.8,SNR=24						
INK	**Inuvik**	**65.75**	**20**	*e*P	**P**	**20 29 40.0**	**-0.7**
	1.4nm,0.6s,mb4.2						
CMAR	**Chiang Mai Arr**	**67.34**	**285**	P	**P**	**20 29 52.5**	**+0.8**
	4.4nm,1.1s,mb4.4,baz=74,slow=5.2,SNR=18						
WVOR	**Wild Horse Val**	**67.90**	**50**	*e*P	**P**	**20 29 54.6**	**-0.1**
	2.5nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**68.09**	**54**	P	**P**	**20 29 57.4**	**+1.3**
	1.2nm,0.7s,mb4.0,baz=257,slow=7.6,SNR=11						
HLID	**Hailey**	**71.00**	**48**	*e*P	**P**	**20 30 14.7**	**+0.9**
	1.2nm,0.7s,mb3.9						
YKA	**Yellowknife Ar**	**71.76**	**28**	P	**P**	**20 30 17.4**	**-0.6**
	3.0nm,1.1s,mb4.2,baz=263,slow=6.2,SNR=21						
BW06	**Boulder Array**	**74.59**	**49**	*e*P	**P**	**20 30 35.4**	**+0.4**
	0.9nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	**74.59**	**49**	P	**P**	**20 30 35.2**	**+0.3**
	1.5nm,0.9s,mb3.9,baz=268,slow=2.3,SNR=9.6						
ZAL	**Zalesovo**	**75.91**	**323**	P	**P**	**20 30 42.6**	**+0.3**
	2.3nm,1.1s,mb4.0,baz=4.5,slow=7.4,SNR=8.9						
KURK	**Kurchatov**	**80.04**	**320**	*e*P	**P**	**20 31 04.8**	**-0.2**
	4.3nm,0.9s,mb4.4						
FCC	**Fort Churchill**	**82.04**	**32**	*e*P	**P**	**20 31 15.2**	**-0.1**
	1.0nm,0.6s,mb3.9						
CHKZ	**Chkalovo**	**84.25**	**324**	*e*P	**P**	**20 31 27.2**	**+0.4**
	1.5nm,0.8s,mb4.2						

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*IDC **25** 20:40:26.8±0.5, 2.72N×94.16E, mb4.7/17, mb1 4.8/18, mb1mx4.8/20, mbtmp4.7/18, ML4.1/1, Error ellipse: s-maj=23.3km s-min=13.2km az=52.0*

*BJI **25** 20:40:29.3, 2.71N×94.32E, h27^{km}, mB5.4, mb5.0, Ms4.9, Msz4.7*

*MOS **25** 20:40:29.7±0.9, 2.76N×94.36E, h33^{km}, mb5.2/30, Error ellipse: s-maj=14.7km s-min=6.6km az=114.5*

*NEIC **25** 20:40:31.0±0.2, 2.74N×94.26E, mb5.1/43, MS4.3/1, Error ellipse: s-maj=5.6km s-min=4.0km az=215.0*

*HRVD **25** 20:40:31.0±0.6, 2.62N×94.12E, h12^{km}, MW4.7/53, Centroid moment Tensor Solution. LP body waves: s17,c24;Mantle waves: s53,c73; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.61±.07; $M_{\theta\theta}$-0.93±.05; $M_{\phi\phi}$-0.67±.08; $M_{r\theta}$-0.07±.24; $M_{\theta\phi}$0.66±.06; $M_{\phi r}$-0.43±.26; Best double couple: $M_0$1.597×10^{16} NP1:ϕ_s298°, δ42°, λ73°. NP2:ϕ_s141°, δ50°, λ105°. Principal axes: T 1.702, Plg78°, Azm111°; N -.211, Plg11°, Azm311°; P -1.492, Plg4°, Azm221°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 25 20:40:29.2±0.2, **2.72N**±0.04×**94.27E**±0.03, **h28**^{km}, **h28**^{km}±.4^{km}**:pP-P**, **n287**, σ**0^{s}.99**/254, **mb5.0**/92, **MS4.6**/21, **25C-10D**, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.86**	**68**	⇑*i*P	**Pn**	**20 42 10.1**	**-0.5**
IPM	**Ipoh**	**6.99**	**74**	P	**Pn**	**20 42 12.0**	**-0.5**
SNG	**Songkhla**	**7.72**	**55**	P	**Pn**	**20 42 22.0**	**-0.7**
	464nm,1.0s						
KGM	**Kluang**	**9.07**	**94**	P	**P**	**20 42 40.8**	**-0.6**
NNT	**Nongplab**	**11.20**	**29**	P	**P**	**20 43 10.8**	**0.0**
NST	**Nakhon Sawan**	**14.11**	**24**	P	**P**	**20 43 46.1**	**-3.5**
BDT	**Bhumibol Dam**	**15.17**	**18**	P	**P**	**20 44 06.5**	**+3.0**
	16nm,0.9s						
KKTK	**Khon Kaen**	**15.94**	**31**	PN	**P**	**20 44 14.0**	**+0.6**
KKTK				PG	**P**	**20 44 18.0**	**+4.6**
KKTK				SG	rx	20 44 27.0	
KSM	**Kuching**	**16.07**	**94**	*e*P	**P**	**20 44 15.8**	**+0.6**
CM31	**Chiang Mai Arr**	**16.30**	**16**	*e*P	**P**	**20 44 15.7**	**-2.3**
	0.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**16.30**	**16**	P		20 44 27.2	
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**16.30**	**16**	Pn	**P**	**20 44 15.5**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=203,slow=11,SNR=74						
CMAR				ScP		20 52 46.9	
	comp=Z,0.0nm,0.3s,baz=179,slow=3.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**16.30**	**16**	Pn		20 44 27.2	
	comp=Z,5.8nm,0.3s,baz=210,slow=7.6,SNR=42						
CMAR	**Chiang Mai Arr**	**16.30**	**16**	Pn	**P**	**20 44 15.5**	**-2.5**
CMAR				Pn		20 44 27.2	
CMAR				ScP		20 52 46.9	
UBT	**Ubonrachathani**	**16.35**	**40**	P	**P**	**20 44 19.0**	**+0.4**
CHG	**Chiang Mai**	**16.64**	**16**	⇑P	**P**	**20 44 20.2**	**-2.1**
	comp=Z,150nm,1.0s						
NANT	**Nan**	**17.18**	**21**	⇑P	**P**	**20 44 26.5**	**-2.6**
	comp=Z,100nm,1.0s						
MDRS	**Chennai**	**17.27**	**307**	*e*		20 44 38.0	
MDRS				*e*		20 46 39.0	
MDRS				*e*		20 48 08.0	
MDRS				*e*		20 50 39.0	
TRD	**Trivandrum**	**18.16**	**289**	*e*P	**P**	**20 44 42.6**	**+1.2**
TRD				*e*		20 44 56.2	
	comp=Z,87nm,1.7s						
VIS	**Vishakhapatnam**	**18.38**	**325**	*e*P	**P**	**20 44 40.7**	**-3.3**
VIS				*e*		20 44 46.4	
	comp=Z,47nm,0.8s						
VIS				*e*		20 47 55.4	
BWNR	**Bhubaneshwar**	**19.33**	**335**	*e*P	**P**	**20 44 53.8**	**-1.5**
BWNR				*e*		20 44 58.0	
	comp=Z,29nm,0.4s						
BWNR				*e*		20 48 16.4	
CAL	**Calcutta**	**20.53**	**344**	*e*P	**P**	**20 45 07.4**	**-0.8**
CAL				*e*		20 47 02.3	
CAL				*e*		20 49 07.3	
HYB	**Hyderabad**	**21.25**	**314**	*e*P	**P**	**20 45 15.0**	**-0.6**
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*		20 45 24.0	
HYB				*e*S	**S**	**20 49 09.0**	**+3.7**
HYB	**Hyderabad**	**21.25**	**314**	*i* P	**P**	**20 45 15.0**	**-0.6**
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*		20 45 24.0	
HYB				*e*S	**S**	**20 49 09.0**	**+3.7**
IMP	**Imphal**	**21.94**	**359**	*e*P	**P**	**20 45 22.0**	**-0.5**
KKM	**Kota Kinabalu**	**22.12**	**81**	*e*P	**P**	**20 45 25.4**	**+1.0**
KKM	**Kota Kinabalu**	**22.12**	**81**	P	**P**	**20 45 25.6**	**+1.2**
QIZ	**Qiongzhong**	**22.25**	**42**	P	**P**	**20 45 26.5**	**+0.9**
QIZ				XP		20 45 37.0	
QIZ				S	**S**	**20 49 27.0**	**+3.2**
QIZ				XS		20 49 40.0	
QIZ				AMB	AMB		
	comp=Z,47nm,1.4s,mb4.7						
QIZ				LR	LR		
	comp=E,2μm,16.2s						
QIZ				LR	LR		
	comp=Z,1μm,16.0s,MS4.4						
QIZ	**Qiongzhong**	**22.25**	**42**	*e*P	**P**	**20 45 26.3**	**+0.7**
	comp=Z,104nm,1.3s,mb5.1						
BLSP	**Bilaspur**	**22.61**	**330**	*e*P	**P**	**20 45 29.3**	**0.0**
BLSP				*e*		20 45 33.0	
	comp=Z,66nm,0.9s						
BLSP				*e*		20 49 30.7	
SHL	**Shillong**	**22.83**	**354**	⇓*i*P	**P**	**20 45 36.0**	**+4.6**
	comp=Z,110nm,1.0s,mb5.2						
SHL				*e*S	**S**	**20 49 36.5**	**+2.1**
TSM	**Tawau**	**23.61**	**86**	P	**P**	**20 45 40.4**	**+1.4**
KMI	**Kunming**	**23.72**	**19**	⇑P	**P**	**20 45 42.0**	**+2.0**
KMI				AP		20 45 50.0	
KMI				XP		20 45 54.0	
KMI				S	**S**	**20 49 56.5**	**+6.5**
KMI				AMB	AMB		
	comp=Z,45nm,1.5s,mb4.7						
KMI				AMB	AMB		
	comp=Z,321nm,5.5s						
KMI				LR	LR		
	comp=N,2μm,10.6s,MS5.0						
KMI				LR	LR		
	comp=E,1μm,11.0s,MS5.0						
KMI				LR	LR		
	comp=Z,2μm,11.5s,MS4.9						
KMI	**Kunming**	**23.72**	**19**	⇑P	**P**	**20 45 42.0**	**+2.0**
	comp=Z,45nm,1.5s,mb4.7						
KMI				pP		20 45 49.9	
KMI				sP		20 45 54.0	
KMI				S	**S**	**20 49 56.4**	**+6.4**
KMI				sS		20 50 11.2	
KMI				LR	LR		
	comp=Z,2μm,11.5s,MS4.9						
GOA	**Goa**	**23.81**	**303**	*e*		20 45 49.2	
KAD	**Karad**	**24.48**	**308**	*e*P	**P**	**20 45 49.8**	**+2.3**
KAD				*e*S	**S**	**20 50 08.9**	**+5.9**
POO	**Poona**	**25.44**	**310**	⇓*i*P	**P**	**20 45 58.0**	**+1.4**
	comp=Z,30nm,1.0s,mb4.8						
POO				*i*		20 50 41.0	
JIRN	**Jiri**	**25.98**	**343**	*e*P	**P**	**20 46 01.9**	**+0.4**
	comp=Z,70nm,0.8s,mb5.3						
BHPL	**Bhopal**	**26.13**	**323**	*e*P	**P**	**20 46 04.2**	**+1.3**
BHPL				*e*		20 46 05.7	
	comp=Z,40nm,1.0s						
PKI	**Pulchoki**	**26.13**	**342**	*e*P	**P**	**20 46 02.8**	**-0.1**
	comp=Z,85nm,1.2s,mb5.1						
DMN	**Daman**	**26.26**	**341**	*e*P	**P**	**20 46 04.4**	**+0.3**
	comp=Z,66nm,0.8s,mb5.2						
KKN	**Kakani**	**26.37**	**342**	*e*P	**P**	**20 46 05.2**	**0.0**
	comp=Z,85nm,1.0s,mb5.2						
GYA	**Guiyang**	**26.43**	**26**	⇑*i*P	**P**	**20 46 05.8**	**+0.1**
GYA				AP	pP	20 46 14.5	+0.5
GYA				XP	sP	20 46 17.5	-0.3
GYA				S	**S**	**20 50 34.0**	**-1.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
GYA				AMB	AMB		
	comp=Z,190nm,8.5s						

GYA				LR	LR		
	comp=N,1µm,17.4s,MS4.6						
GYA				LR	LR		
	comp=E,920nm,15.3s,MS4.6						
GYA				LR	LR		
	comp=Z,2µm,17.7s,MS4.7						
GKN	**Gorkha**	**26.77**	**341**	*e*P	**P**	**20 46 08.8**	**-0.1**
	comp=Z,95nm,1.0s,mb5.3						
KOLN	**Koldanda**	**26.92**	**339**	*e*P	**P**	**20 46 10.3**	**+0.1**
	comp=Z,145nm,1.3s,mb5.3						
LSA	**Lhasa**	**27.00**	**354**	P	**P**	**20 46 10.3**	**-0.6**
LSA				AP	pP	20 46 23.0	+3.8
LSA				XP	sP	20 46 28.3	+5.4
LSA				S	**S**	**20 50 50.5**	**+5.8**
LSA				PCS		20 53 07.0	
LSA				SCS	ScS	20 56 55.8	-3.1
LSA				LR	LR		
	comp=N,310nm,14.2s,MS4.3						
LSA				LR	LR		
	comp=E,460nm,13.7s,MS4.3						
LSA				LR	LR		
	comp=Z,680nm,14.2s,MS4.4						
LSA	**Lhasa**	**27.00**	**354**	*e*P	**P**	**20 46 12.2**	**+1.3**
	comp=Z,73nm,0.9s,mb5.2						
CD2	**Chengdu**	**29.44**	**17**	P	**P**	**20 46 32.0**	**-0.9**
CD2				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
NDI	**New Delhi**	**30.51**	**329**	*e*P	**P**	**20 46 40.5**	**-1.9**
ENH	**Enshi**	**30.96**	**26**	*e*P	**P**	**20 46 44.7**	**-1.8**
	comp=Z,20nm,0.8s,mb5.0						
DDI	**Dehra Dun**	**31.46**	**332**	*e*	**P**	**20 46 50.9**	**+0.1**
SMLA	**Simla**	**32.55**	**332**⇓	*i*	**P**	**20 46 54.5**	**-5.8**
WHN	**Wuhan**	**33.57**	**32**	*e*P	**P**	**20 47 09.3**	**+0.1**
XAN	**Xi’an**	**34.03**	**22**	P	**P**	**20 47 12.0**	**-1.1**
XAN				AMB	AMB		
	comp=Z,28nm,1.2s,mb5.1						
XAN				LR	LR		
	comp=N,582nm,14.1s,MS4.6						
XAN				LR	LR		
	comp=E,676nm,14.3s,MS4.6						
XAN				LR	LR		
	comp=Z,1µm,16.8s,MS4.7						
LZH	**Lanzhou**	**34.37**	**14**	*e*P	**P**	**20 47 15.3**	**-0.7**
LZH				AP	pP	20 47 28.0	+3.6
LZH				XP	sP	20 47 33.5	+5.5
LZH				PCS		20 53 41.3	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,70nm,4.0s						
LZH				LR	LR		
	comp=E,2µm,14.0s						
LZH				LR	LR		
	comp=Z,1µm,15.0s,MS4.7						
GTA	**Gaotai**	**36.87**	**7**⇑	*i*P	**P**	**20 47 37.5**	**+0.3**
GTA				AP	pP	20 47 46.5	+0.8
GTA				XP	sP	20 47 50.0	+0.8
GTA				PP	PP	20 49 06.5	+3.2
GTA				PCP	PcP	20 49 59.8	+0.9
GTA				S	**S**	**20 53 22.8**	**+3.4**
GTA				XS		20 53 39.5	
GTA				SS	SS	20 55 53.5	+5.1
GTA				AMB	AMB		
	comp=Z,51nm,0.9s,mb5.3						
GTA				AMB	AMB		
	comp=Z,152nm,6.8s						
GTA				LR	LR		
	comp=N,344nm,15.2s,MS4.3						
GTA				LR	LR		
	comp=E,241nm,14.4s,MS4.3						
GTA				LR	LR		
	comp=Z,431nm,11.0s,MS4.5						
FITZ	**Fitzroy Crossi**	**37.19**	**125**⇑	*i*P	**P**	**20 47 39.4**	**-0.6**
FITZ				*i* pP	pP	20 47 48.6	+0.1
NJ2	**Nanjing**	**37.23**	**36**	*e*P	**P**	**20 47 41.8**	**+1.5**
NJ2				AP	pP	20 47 48.0	-0.8
NJ2				XP	sP	20 47 56.3	+4.0
NJ2				PP	PP	20 49 08.5	+0.7
NJ2				S	**S**	**20 53 28.0**	**+3.0**
NJ2				XS		20 53 40.0	
NJ2				AMB	AMB		
	comp=Z,160nm,1.2s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,390nm,8.7s						
NJ2				LR	LR		
	comp=N,840nm,20.1s,MS4.7						
NJ2				LR	LR		
	comp=E,860nm,19.4s,MS4.7						
NJ2				LR	LR		
	comp=Z,980nm,18.7s,MS4.6						
SSE	**Sheshan**	**37.98**	**39**	*e*P	**P**	**20 47 46.0**	**-0.6**
SSE				AP	pP	20 47 56.0	+0.9
SSE				XP	sP	20 47 58.8	+0.2
SSE				S	**S**	**20 53 38.5**	**+2.1**
SSE				XS		20 53 53.5	
SSE				AMB	AMB		
	comp=Z,38nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,122nm,5.8s						
SSE				LR	LR		
	comp=N,843nm,13.3s,MS4.8						
SSE				LR	LR		
	comp=E,484nm,13.3s,MS4.8						
SSE				LR	LR		
	comp=Z,994nm,14.5s,MS4.8						
KSH	**Kashi**	**40.23**	**338**	*e*P	**P**	**20 48 06.0**	**+0.8**
KSH				*e*AP	pP	20 48 13.0	-0.8
KSH				*e*XP	sP	20 48 17.0	-0.3
KSH				AMB	AMB		
	comp=Z,60nm,1.5s,mb5.1						
KSH				LR	LR		
	comp=N,190nm,4.9s						
KSH				LR	LR		
	comp=E,200nm,4.4s						
KAKA	**Kakadu**	**40.88**	**113**	*e*P	**P**	**20 48 10.6**	**-0.2**
	comp=E,19nm,0.9s,mb4.7						
HHC	**Hu-ho-hao-te**	**41.05**	**20**	*e*P	**P**	**20 48 13.3**	**+1.4**
HHC				AP	pP	20 48 22.5	+2.1
HHC				XP	sP	20 48 27.3	+3.3
HHC				PP	PP	20 49 53.0	+3.4
HHC				PCS		20 54 01.0	
HHC				S	**S**	**20 54 25.3**	**+2.9**
HHC				XS		20 54 38.5	
HHC				SCS	ScS	20 58 14.0	+1.7
HHC				AMB	AMB		
	comp=Z,24nm,1.2s,mb4.7						
HHC				AMB	AMB		
	comp=Z,180nm,5.7s						
HHC				LR	LR		
	comp=N,655nm,12.6s,MS4.8						
HHC				LR	LR		
	comp=E,764nm,15.6s,MS4.8						
HHC				LR	LR		
	comp=Z,697nm,16.8s,MS4.6						
WMQ	**Urumqi**	**41.34**	**353**⇑	*i*P	**P**	**20 48 15.3**	**+1.0**
WMQ				XP	sP	20 48 26.0	-0.4
WMQ				PP	PP	20 49 54.0	+1.2
WMQ				S	**S**	**20 54 28.0**	**+1.2**
WMQ				SS	SS	20 57 28.0	+1.7
WMQ				AMB	AMB		
	comp=Z,31nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,178nm,20.0s,MS4.1						
WMQ				LR	LR		
	comp=E,235nm,22.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,122nm,20.0s,MS3.8						
NWAO	**Narrogin (SRO)**	**41.58**	**150**	P	pP	20 48 25.7	+0.7
NWAO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NWAO	**Narrogin (SRO)**	**41.58**	**150**	P	**P**	**20 48 16.5**	**0.0**
	comp=Z,8.3nm,0.9s,mb4.3,baz=331,slow=13,SNR=3.3						
NWAO	**Narrogin (SRO)**	**41.58**	**150**	P	pP	20 48 25.7	+0.7
	comp=Z,5.0nm,0.9s,baz=328,slow=19,SNR=3.2						
NWAO	**Narrogin (SRO)**	**41.58**	**150**	P	**P**	**20 48 16.5**	**0.0**
NWAO				P	pP	20 48 25.7	+0.7
BJT	**Baijiatuau**	**42.10**	**25**	*e*P	**P**	**20 48 21.7**	**+1.1**
	comp=Z,37nm,0.9s,mb5.0						
BJI	**Beijing**	**42.12**	**25**	*e*P	**P**	**20 48 22.0**	**+1.2**
BJI				AP	pP	20 48 31.3	+1.9
BJI				S	**S**	**20 54 40.8**	**+2.4**
BJI				AMB	AMB		
	comp=Z,25nm,1.1s,mb4.8						
BJI				LR	LR		
	comp=N,300nm,19.1s,MS4.6						
BJI				LR	LR		
	comp=E,623nm,15.8s,MS4.6						
BJI				LR	LR		
	comp=Z,431nm,19.1s,MS4.3						
BJI	**Beijing**	**42.12**	**25**	*e*P	**P**	**20 48 22.1**	**+1.3**
	comp=Z,25nm,1.1s,mb4.8						
BJI				pP	pP	20 48 31.3	+1.9
BJI				S	**S**	**20 54 40.7**	**+2.3**
BJI				SS	SS	20 58 10.2	+29
BJI				LR	LR		
	comp=Z,430nm,19.1s,MS4.3						
KZA	**Kyzart**	**42.74**	**339**	P	**P**	**20 48 26.9**	**+1.1**
	SNR=7.0						
UCH	**Uchtor**	**43.13**	**338**	P	**P**	**20 48 30.2**	**+1.2**
	SNR=24						
KBK	**Karagaybulak**	**43.35**	**339**	P	**P**	**20 48 32.1**	**+1.3**
	SNR=29						
AML	**Almayashu**	**43.36**	**338**	P	**P**	**20 48 32.0**	**+1.2**
	SNR=21						
TKM2	**Tokmak 2**	**43.36**	**340**	P	**P**	**20 48 31.7**	**+0.9**
	SNR=14						
AAK	**Ala-Archa**	**43.49**	**339**	P	**P**	**20 48 33.4**	**+1.4**
	SNR=7.3						
AAK	**Ala-Archa**	**43.49**	**339**	*i* P	**P**	**20 48 32.3**	**+0.3**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**43.49**	**339**	*e*P	**P**	**20 48 31.5**	**-0.4**
	comp=Z,28nm,1.3s,mb4.8						
FRU	**Bishkek**	**43.62**	**339**	P	**P**	**20 48 33.8**	**+0.8**
FRU				*e*		20 48 49.0	
EKS2	**Erkin-Say**	**43.78**	**338**	P	**P**	**20 48 35.3**	**+1.0**
	SNR=15						
USP	**Ospenovka**	**44.05**	**339**	P	**P**	**20 48 36.6**	**+0.2**
	SNR=30						
MKAR	**Makanchi Array**	**45.12**	**348**	*i* P	**P**	**20 48 45.4**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,21nm,0.6s						
WRA	**Warramunga Arr**	**45.32**	**122**	P	pP	20 48 55.9	+0.5
WRA				pmax	pmax		
	comp=Z,14nm,1.0s						
WRA	**Warramunga Arr**	**45.32**	**122**	P	**P**	**20 48 47.1**	**+0.2**
	comp=Z,16nm,0.9s,mb4.8,baz=300,slow=9.0,SNR=82						
WRA	**Warramunga Arr**	**45.32**	**122**	P	pP	20 48 55.9	+0.4
	comp=Z,14nm,0.9s,baz=299,slow=9.0,SNR=15						
WRA	**Warramunga Arr**	**45.32**	**122**	P	**P**	**20 48 47.1**	**+0.2**
WRA				P	pP	20 48 55.9	+0.4
WRAB	**Tennant Creek**	**45.32**	**122**	*i* P	**P**	**20 48 47.1**	**+0.1**
WRAB	**Tennant Creek**	**45.32**	**122**	*e*P	**P**	**20 48 46.7**	**-0.3**
	comp=Z,107nm,1.5s,mb5.5						
WRAB				*e*	pP	20 48 55.9	+0.4
WB2	**Warramunga Arr**	**45.33**	**122**⇑	*i*P	**P**	**20 48 47.2**	**+0.2**
WB2				*e*pP	pP	20 48 56.3	+0.8
SONM	**Songino Array**	**46.15**	**11**	P	**P**	**20 48 53.6**	**+0.5**
	comp=Z,18nm,0.9s,mb5.0,baz=193,slow=7.8,SNR=139						
SONM				PcP	PcP	20 50 29.6	+0.3
	comp=Z,4.6nm,0.8s,baz=186,slow=2.9,SNR=4.5						
SONM	**Songino Array**	**46.15**	**11**	P	pP	20 49 02.5	+0.9
	comp=Z,24nm,0.9s,baz=188,slow=9.3,SNR=27						
SONM				PcP	PcP	20 50 38.5	+9.2
	comp=Z,4.5nm,0.7s,baz=186,slow=2.6,SNR=5.7						
SONM	**Songino Array**	**46.15**	**11**	P	**P**	**20 48 53.6**	**+0.5**
SONM				P	pP	20 49 02.5	+0.9
SONM				PcP	PcP	20 50 29.6	+0.3
SONM				PcP	PcP	20 50 38.5	+9.2
ULN	**Ulaanbaatar**	**46.31**	**12**	*e*P	**P**	**20 48 54.0**	**-0.4**
	comp=Z,14nm,0.9s,mb4.9						
ASPA	**Alice Springs**	**46.64**	**126**	*e*P	**P**	**20 48 57.7**	**+0.4**
ASPA				*e*pP	pP	20 49 06.7	+0.8
ASAR	**Alice Springs**	**46.64**	**126**	P	**P**	**20 48 57.6**	**+0.3**
	comp=Z,14nm,1.0s,mb4.9,baz=303,slow=7.5,SNR=77						
ASAR				PcP	PcP	20 50 31.5	+0.2
	comp=Z,4.6nm,0.8s,baz=303,slow=3.6,SNR=9.3						
ASAR	**Alice Springs**	**46.64**	**126**	P	pP	20 49 06.7	+0.8
	comp=Z,9.3nm,0.9s,baz=301,slow=8.0,SNR=13						
ASAR				PcP	PcP	20 50 40.5	+9.2
	comp=Z,3.0nm,0.7s,baz=295,slow=3.3,SNR=6.1						
ASAR	**Alice Springs**	**46.64**	**126**	P	**P**	**20 48 57.6**	**+0.3**
ASAR				P	pP	20 49 06.7	+0.8
ASAR				PcP	PcP	20 50 31.5	+0.2
ASAR				PcP	PcP	20 50 40.5	+9.2
SNY	**Shenyang**	**46.98**	**30**	⇑P	**P**	**20 49 00.0**	**+0.2**
SNY				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
ZAK	**Zakamensk**	**48.10**	**8**⇓	*i*P	**P**	**20 49 08.2**	**-0.3**
ZAK				*e*		20 50 30.3	
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
CN2	**Changchun**	**49.36**	**30**	⇑P	**P**	**20 49 18.5**	**+0.2**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
TLY	**Talaya**	**49.42**	**8**	P	**P**	**20 49 19.2**	**+0.6**
	comp=Z,135nm,0.8s,mb6.0,SNR=12						
TLY	**Talaya**	**49.42**	**8**	*e*P	**P**	**20 49 20.0**	**+1.4**
TLY				*e*	pP	20 49 28.4	+1.1
TLY				*e*S	**S**	**20 56 30.1**	**+7.4**
TLY				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
TLY				MLR	MLR		
	comp=Z,295nm,15.0s,MS4.4						
TLY	**Talaya**	**49.42**	**8**	*e*P	**P**	**20 49 18.6**	**0.0**
	comp=Z,20nm,1.0s,mb5.1						
TLY				*e*pP	pP	20 49 27.8	+0.5
KURK	**Kurchatov**	**49.62**	**347**	*i* P	**P**	**20 49 20.5**	**+0.3**
KURK				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
KURK	**Kurchatov**	**49.62**	**347**	*e*P	**P**	**20 49 19.8**	**-0.4**
	comp=Z,31nm,0.9s,mb5.3						
IRK	**Irkutsk**	**50.06**	**8**	*e*P	**P**	**20 49 23.4**	**-0.1**
IRK				pmax	pmax		
	comp=Z,38nm,1.9s,mb5.1						
HIA	**Hailar**	**51.22**	**21**	*e*P	**P**	**20 49 32.4**	**0.0**
	comp=Z,38nm,0.9s,mb5.3						
RAYN	**Ar Rayn**	**51.47**	**298**	P	**P**	**20 49 34.7**	**+0.1**
	comp=Z,108nm,0.9s,mb5.8,SNR=22						
ZAL	**Zalesovo**	**51.65**	**353**	*i* P	**P**	**20 49 35.7**	**+0.2**
ZAL				pmax	pmax		
	comp=Z,16nm,0.7s						
ZAL	**Zalesovo**	**51.65**	**353**	P	**P**	**20 49 35.6**	**+0.1**
	comp=Z,16nm,0.7s,mb5.0,baz=303,slow=6.1,SNR=89						
ZAL	**Zalesovo**	**51.65**	**353**	P	pP	20 49 44.6	+0.4
	comp=Z,16nm,0.7s,baz=286,slow=7.2,SNR=20						
ZAL				LR	LR	21 17 16.9	
	comp=Z,123nm,18.2s,MS4.0,baz=294,slow=43						
ZAL	**Zalesovo**	**51.65**	**353**	P	**P**	**20 49 35.6**	**+0.1**
ZAL				P	pP	20 49 44.6	+0.4
ZAL				LR	LR	21 17 16.9	
MDJ	**Mudanjiang**	**52.05**	**32**	P	**P**	**20 49 39.5**	**+0.8**
MDJ				AP	pP	20 49 45.5	-1.9
MDJ				XP	sP	20 49 48.5	-2.2
MDJ				PCP	PcP	20 50 50.5	-0.2
MDJ				PP	PP	20 51 38.0	+0.5
MDJ				SCP		20 54 44.8	
MDJ				PCS		20 54 49.0	
MDJ				S	**S**	**20 57 03.8**	**+4.8**
MDJ				XS		20 57 14.5	
MDJ				SCS	ScS	20 59 28.0	+4.6
MDJ				AMB	AMB		
	comp=Z,27nm,1.3s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,251nm,5.4s						
MDJ				LR	LR		
	comp=N,460nm,17.5s,MS4.7						
MDJ				LR	LR		
	comp=E,366nm,19.9s,MS4.7						
MDJ				LR	LR		
	comp=Z,500nm,17.0s,MS4.6						
MDJ	**Mudanjiang**	**52.05**	**32**	*e*P	**P**	**20 49 38.8**	**+0.1**
	comp=Z,51nm,1.3s,mb5.3						
NVS	**Novosibirsk**	**52.73**	**352**	*e*P	**P**	**20 49 42.2**	**-1.5**
NVS				*e**PP	pP	20 49 50.1	-2.3
NVS				*e*S	**S**	**20 57 10.0**	**+1.8**
NVS				pmax	pmax		
	comp=N,55nm,1.2s						
NVS				pmax	pmax		
	comp=E,32nm,1.2s						
NVS				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.5						
NVS				smax			
	comp=N,32nm,1.2s						
NVS				smax			
	comp=E,42nm,2.3s						
BVA0	**Borovoye Array**	**53.90**	**342**	*i* P	**P**	**20 49 51.3**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
PMG	**Port Moresby**	**54.05**	**104**	*i* P	**P**	**20 49 52.0**	**-1.9**
CHKZ	**Chkalovo**	**54.40**	**343**	P	**P**	**20 49 55.3**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
CHKZ	**Chkalovo**	**54.40**	**343**	*e*P	**P**	**20 49 54.9**	**-1.0**
BHD	**Baghdad**	**55.61**	**309**	*e*P	**P**	**20 50 01.0**	**-4.1**
CTA	**Charters Tower**	**55.79**	**116**	*e*P	**P**	**20 50 06.6**	**0.0**
	comp=Z,16nm,0.9s,mb5.0						
CTA				*i* pP	pP	20 50 15.7	+0.4
CTAO	**Charters Tower**	**55.79**	**116**	*e*P	**P**	**20 50 06.1**	**-0.5**
	comp=Z,31nm,1.0s,mb5.3						
KLR	**Kul’dur**	**56.27**	**29**⇓	*i*P	**P**	**20 50 08.0**	**-1.6**
KLR				*e*	pP	20 50 16.3	-2.1
KLR				*e*S	**S**	**20 58 03.5**	**+7.6**
KLR				*e*		21 01 36.0	
KLR				pmax	pmax		
	comp=N,28nm,1.4s						
KLR				pmax	pmax		
	comp=E,38nm,1.4s						
KLR				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.5						
KLR				MLR	MLR		
	comp=N,1µm,12.5s,MS5.2						
KLR				MLR	MLR		
	comp=E,600nm,12.5s,MS5.2						
KLR				MLR	MLR		
	comp=Z,1µm,12.5s,MS5.2						
STKA	**Stephens Creek**	**56.54**	**131**	*e*P	**P**	**20 50 11.7**	**-0.1**
	comp=Z,7.6nm,0.8s,mb4.8						
STKA				*e*pP	pP	20 50 20.7	+0.2
STKA	**Stephens Creek**	**56.54**	**131**	P	**P**	**20 50 12.1**	**+0.3**
	comp=Z,9.0nm,0.8s,mb4.9,baz=306,slow=5.8,SNR=17						
STKA	**Stephens Creek**	**56.54**	**131**	P	pP	20 50 20.7	+0.1
	comp=Z,8.6nm,0.9s,baz=293,slow=6.4,SNR=8.3						
BOD	**Bodaibo**	**57.12**	**12**	*e*P	**P**	**20 50 15.0**	**-0.5**
BOD				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
KMBO	**Kilima Mbogo**	**57.13**	**267**	P	pP	20 50 25.2	+0.2
KMBO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMBO	**Kilima Mbogo**	**57.13**	**267**	P	**P**	**20 50 17.2**	**+1.0**
	comp=Z,8.0nm,0.8s,mb4.8,baz=65,slow=9.5,SNR=21						
KMBO	**Kilima Mbogo**	**57.13**	**267**	P	pP	20 50 25.2	+0.2
	comp=Z,9.7nm,0.9s,baz=61,slow=6.7,SNR=10.0						
KMBO	**Kilima Mbogo**	**57.13**	**267**	*e*P	**P**	**20 50 16.5**	**+0.3**
	comp=Z,16nm,1.0s,mb5.0						
KMBO				*e*	pP	20 50 24.4	-0.6
KMBO				P	pP	20 50 25.2	+0.2
GNI	**Garni**	**58.18**	**317***c*	*i*P	**P**	**20 50 22.9**	**-0.3**
GNI				pmax	pmax		
	comp=Z,20nm,1.7s						
GNI	**Garni**	**58.18**	**317**	*e*P	**P**	**20 50 22.0**	**-1.2**
	comp=Z,22nm,1.0s,mb5.1						
TI2	**Plekhanov**	**58.90**	**318**	*e*P	**P**	**20 50 27.8**	**-0.4**
TI2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
CLNS	**Chul’man**	**59.22**	**19**	*e*P	**P**	**20 50 29.4**	**-0.8**
CLNS				*e**PP	pP	20 50 38.9	-0.2
CLNS				*e*		20 50 47.1	
CLNS				*e*		20 52 47.1	
CLNS				*e*S	**S**	**20 58 50.8**	**+16**
CLNS				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
CLNS				pmax	pmax		
	comp=N,16nm,1.0s						
CLNS				pmax	pmax		
	comp=E,14nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.0						
CLNS				MLR	MLR		
	comp=N,600nm,14.0s,MS4.9						
CLNS				MLR	MLR		
	comp=E,100nm,15.0s,MS4.9						
ASAJ	**Asahikawa**	**59.27**	**39**	P	pP	20 50 40.2	+0.6
ASAJ				pmax	pmax		
	comp=Z,17nm,0.9s						
ASAJ	**Asahikawa**	**59.27**	**39**	P	**P**	**20 50 31.6**	**+0.9**
	comp=Z,11nm,1.0s,mb4.8,baz=247,slow=13						
ASAJ	**Asahikawa**	**59.27**	**39**	P	pP	20 50 40.2	+0.6
	comp=Z,17nm,0.9s,baz=259,slow=10						
SVE	**Sverdlovsk**	**60.23**	**339**⇑	*e*P	**P**	**20 50 35.9**	**-1.3**
SVE				*e*	pP	20 50 45.0	-1.0
SVE				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.4						
SVE				MLR	MLR		
	comp=N,100nm,13.0s,MS4.3						
SVE				MLR	MLR		
	comp=E,100nm,13.0s,MS4.3						
SVE				MLR	MLR		
	comp=Z,200nm,13.0s,MS4.4						
YSS	**Yuzh-Sakhalins**	**60.80**	**36**⇑	*e*P	**P**	**20 50 40.3**	**-0.9**
YSS				*e*	pP	20 50 49.7	-0.3
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**60.80**	**36**	*e*P	**P**	**20 50 40.9**	**-0.3**
	comp=Z,29nm,1.0s,mb5.4						
YSS				*e*	pP	20 50 49.7	-0.3
KIV	**Kislovodsk**	**61.26**	**320***c*	*i*P	**P**	**20 50 43.4**	**-1.0**
KIV	**Kislovodsk**	**61.26**	**320**	*e*P	**P**	**20 50 42.1**	**-2.3**
	comp=Z,24nm,1.1s,mb5.2						
KIV				*e*	pP	20 50 51.2	-2.0
GOF	**Gofitskoye**	**61.55**	**321**	*e*P	**P**	**20 50 52.5**	**+6.2**
GOF				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.2						
ELZG	**Elazig**	**61.61**	**313**	*i* P	**P**	**20 50 46.8**	**0.0**
MALT	**Malatya**	**61.95**	**312**	*e*P	**P**	**20 50 49.1**	**0.0**
	comp=Z,16nm,1.0s,mb5.1						
MALT				*e*pP	pP	20 50 57.6	-0.4
EIL	**Elat**	**62.18**	**302**	*e*P	**P**	**20 50 49.8**	**-0.9**
GZT	**Gaziantep**	**62.27**	**311**	*i* P	**P**	**20 50 51.5**	**+0.2**
KAHT	**Ahir Dag**	**62.88**	**311**	*i* P	**P**	**20 50 54.9**	**-0.4**
COBT	**Iskenderun**	**62.99**	**310**	*i* P	**P**	**20 50 56.5**	**+0.5**
SOC	**Sochi**	**63.05**	**318**	*e*P	**P**	**20 50 53.1**	**-3.2**
SOC				*e*		20 51 29.4	
SOC				*e*		20 53 18.0	
SOC				*e*S	**S**	**20 59 21.1**	**-2.2**
SOC				*e*		21 00 36.9	
SOC				*e*SS	SS	21 03 34.1	+2.9
SOC				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.3						
SOC				pmax	pmax		
	comp=N,27nm,1.3s						
SOC				pmax	pmax		
	comp=E,10.0nm,0.7s						
SOKR	**Solikamsk**	**63.64**	**340**⇓	*i*P	**P**	**20 50 59.3**	**-0.6**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
AVNT	**Avonos**	**64.75**	**312**	*i* P	**P**	**20 51 07.2**	**-0.4**
YAK	**Yakutsk**	**64.83**	**18***c*	*i*P	**P**	**20 51 06.9**	**-0.7**
YAK				*e**PP	pP	20 51 15.3	-1.2
YAK				*e*		20 51 42.3	
YAK				*e*		20 53 27.5	
YAK				*e*S	**S**	**20 59 37.3**	**-7.8**
YAK				*e*		21 00 57.8	
YAK				*e*SS	SS	21 03 50.3	-8.2
YAK				*e*SSS	SSS	21 06 50.0	+0.6
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
YAK				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
YAK				pmax	pmax		
	comp=E,12nm,1.3s						
YAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
YAK				smax			
	comp=N,10.0nm,1.7s						
YAK				MLR	MLR		
	comp=Z,296nm,16.0s,MS4.6						
YAK				MLR	MLR		
	comp=N,144nm,13.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,162nm,15.0s,MS4.5						
YAK	**Yakutsk**	**64.83**	**18**	*e*P	**P**	**20 51 06.6**	**-1.1**
	comp=E,74nm,0.8s,mb5.8						
YAK				*e*pP	pP	20 51 14.7	-1.9
CTKT	**Corum**	**65.38**	**314**	*i* P	**P**	**20 51 11.7**	**+0.2**
BOYT	**Boyabat**	**65.56**	**315**	*i* P	**P**	**20 51 11.1**	**-1.6**
BRTR	**Keskin Array B**	**65.94**	**313**	P	pP	20 51 23.0	-1.0

BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**65.94**	**313**	P	**P**	**20 51 14.1**	**-1.1**
	comp=Z,6.1nm,0.9s,mb4.7,baz=135,slow=7.0,SNR=32						
BRTR	**Keskin Array B**	**65.94**	**313**	P	pP	20 51 23.0	-1.0
	comp=Z,3.5nm,0.8s,baz=124,slow=4.5,SNR=6.8						
BRTR	**Keskin Array B**	**65.94**	**313**	P	**P**	**20 51 14.1**	**-1.1**
BRTR				P	pP	20 51 23.0	-1.0
HNR	**Honiara**	**66.53**	**101**	*e*P	**P**	**20 51 19.5**	**+0.1**
	comp=Z,86nm,1.0s,mb5.7						
BALT	**Daday**	**66.67**	**314**	*i* P	**P**	**20 51 19.8**	**-0.1**
LSZ	**Lusaka**	**67.76**	**252**	*e*P	**P**	**20 51 26.6**	**-0.5**
	comp=Z,12nm,1.2s,mb4.8						
LSZ				*e*pP	pP	20 51 34.8	-1.2
ULDT	**Uludag**	**69.38**	**312**	*i* P	**P**	**20 51 35.6**	**-1.1**
MOS	**Moscow**	**69.55**	**330**	*e*P	**P**	**20 51 34.9**	**-2.6**
MOS				*e*	pP	20 51 45.1	-1.2
MOS				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.3						
OBN	**Obninsk**	**69.81**	**329***c*	*i*P	**P**	**20 51 37.6**	**-1.5**
OBN				*e*		20 54 14.1	
OBN				*e*S	S	21 00 52.1	+7.0
OBN				*e*SS	SS	21 05 08.2	-7.2
OBN				pmax	pmax		
	comp=Z,39nm,1.7s,mb5.1						
BTOK	**Tokmak**	**70.11**	**311**	*i* P	**P**	**20 51 40.8**	**-0.4**
SKR	**Severo-Kuril's**	**70.36**	**37**	*e*P	**P**	**20 51 39.2**	**-3.3**
SKR				*e*	pP	20 51 48.2	-3.2
SKR				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.5						
TIRR	**Tirgusor**	**71.01**	**316**	⇑P	**P**	**20 51 46.0**	**-0.6**
TIRR	**Tirgusor**	**71.01**	**316**	P	**P**	**20 51 46.2**	**-0.4**
MA2	**Magadan**	**71.27**	**27***c*	*i*P	**P**	**20 51 47.9**	**0.0**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
MA2	**Magadan**	**71.27**	**27**	*e*P	**P**	**20 51 47.6**	**-0.3**
	comp=Z,24nm,0.8s,mb5.2						
MA2				*e*pP	pP	20 51 55.9	-0.8
CFR	**Carcaliu**	**71.39**	**317**	⇓P	**P**	**20 51 48.4**	**-0.5**
CFR	**Carcaliu**	**71.39**	**317**	P	**P**	**20 51 48.5**	**-0.4**
KIS	**Kishinev**	**71.44**	**319**	*e*P	**P**	**20 51 48.0**	**-1.1**
KIS				*e*	pP	20 51 56.0	-2.0
LBTB	**Lobatse**	**71.95**	**243**	*e*P	**P**	**20 51 52.3**	**-0.3**
	comp=Z,13nm,0.9s,mb4.9						
TIXI	**Tiksi**	**72.23**	**11**	⇑*i*P	**P**	**20 51 52.6**	**-0.9**
TIXI				*e*	pP	20 52 02.4	0.0
TIXI				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,425nm,15.0s,MS4.8						
AKASG	**Malin Array Be**	**72.28**	**323**	P	pP	20 52 01.4	-1.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**72.28**	**323**	P	**P**	**20 51 52.1**	**-1.9**
	comp=Z,4.6nm,0.7s,mb4.5,baz=87,slow=4.8,SNR=22						
AKASG	**Malin Array Be**	**72.28**	**323**	P	pP	20 52 01.4	-1.6
	comp=Z,2.6nm,0.6s,baz=89,slow=4.6,SNR=4.2						
VRI	**Vrincioaia**	**72.53**	**317**	P	**P**	**20 51 55.8**	**+0.2**
MLR	**Muntele Rosu**	**72.97**	**317**	P	**P**	**20 51 58.8**	**+0.6**
SEY	**Seymchan**	**73.54**	**24**	*e*P	**P**	**20 52 02.8**	**+1.6**
SEY				*e*		20 52 20.2	
SEY				*e*		20 54 49.7	
SEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=E,20nm,1.0s						
SEY				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
BURAR	**Bucovina Array**	**73.96**	**319**	⇓P	**P**	**20 52 04.5**	**+0.6**
VTS	**Vitosha**	**74.27**	**313**	⇓P	**P**	**20 52 05.5**	**-0.4**
LVV	**L'vov**	**75.25**	**321**	*e*P	**P**	**20 52 10.3**	**-1.1**
JOF	**Joensuu**	**75.54**	**335**	*e*p	**P**	**20 52 11.0**	**-1.7**
	comp=Z,6.3nm,0.8s,mb4.6						
JOF	**Joensuu**	**75.54**	**335**	*e*P	**P**	**20 52 11.0**	**-1.7**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BZS	**Buzias**	**75.96**	**316**	P	**P**	**20 52 15.0**	**-0.5**
KWP	**Kalwaria**	**76.05**	**321**	*e*P	**P**	**20 52 15.9**	**0.0**
KOLS	**Kolonicke sedl**	**76.17**	**320**	*i* P	**P**	**20 52 17.0**	**+0.4**
KOLS				*e*pP	pP	20 52 26.1	+0.5
KOLS				*e*		20 52 37.4	
CRVS	**Cervenica-Dubn**	**76.69**	**320**	*e*P	**P**	**20 52 21.0**	**+1.5**
CRVS				*e*		20 52 32.9	
SUW	**Suwalki**	**76.76**	**325**	*e*P	**P**	**20 52 19.3**	**-0.4**
FINES	**FINESS Array B**	**77.32**	**333**	P	pP	20 52 30.9	-0.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**77.32**	**333**	P	**P**	**20 52 22.3**	**-0.4**
	comp=Z,5.5nm,0.7s,mb4.6,baz=104,slow=7.9,SNR=20						
FINES	**FINESS Array B**	**77.32**	**333**	P	pP	20 52 30.9	-0.9
	comp=Z,2.6nm,0.6s,baz=96,slow=5.3,SNR=4.3						
FINES	**FINESS Array B**	**77.32**	**333**	P	**P**	**20 52 22.3**	**-0.4**
FINES				P	pP	20 52 30.9	-0.9
KAF	**Kangasniemi**	**77.42**	**333**	*e*p	**P**	**20 52 21.6**	**-1.7**
	comp=Z,6.2nm,0.7s,mb4.7,baz=105,slow=5.1						
KAF	**Kangasniemi**	**77.42**	**333**	*e*P	**P**	**20 52 21.6**	**-1.7**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
NIE	**Niedzica**	**77.53**	**320**	*e*P	**P**	**20 52 23.3**	**-0.8**
PSZ	**Piszkesteto**	**77.54**	**318**	*e*P	**P**	**20 52 23.2**	**-1.0**
	comp=Z,22nm,1.4s,mb4.9						
PSZ	**Piszkesteto**	**77.54**	**318**	⇑*e*	**P**	**20 52 24.2**	**0.0**
OJC	**Ojcow**	**78.00**	**321**	*e*P	**P**	**20 52 26.6**	**-0.1**
VYHS	**Vyhne**	**78.33**	**319**	*e*P	**P**	**20 52 28.7**	**+0.1**
SRO	**Srobarova**	**78.57**	**318**	*e*P	**P**	**20 52 30.7**	**+0.8**
SRO				*e*pP	pP	20 52 40.6	+1.7
OKC	**Ostrava-Krasne**	**78.99**	**320**	*e*P	**P**	**20 52 32.2**	**0.0**
OKC				*e*pP	pP	20 52 41.7	+0.5
MORC	**Moravsky Berou**	**79.37**	**320**	⇓P	**P**	**20 52 34.9**	**+0.7**
MORC	**Moravsky Berou**	**79.37**	**320**	*e*P	**P**	**20 52 33.9**	**-0.3**
	comp=Z,20nm,1.3s,mb4.9						
MORC				*e*pP	pP	20 52 41.9	-1.3
ZST	**Bratislava**	**79.43**	**318**	*e*P	**P**	**20 52 35.3**	**+0.7**
ZST				*e*	pP	20 52 43.9	+0.3
ARCES	**ARCESS Array B**	**80.14**	**341**	P	pP	20 52 47.0	0.0
ARCES				pmax	pmax		
	comp=Z,13nm,1.1s						
ARCES	**ARCESS Array B**	**80.14**	**341**	P	**P**	**20 52 37.9**	**0.0**
	comp=Z,7.1nm,0.8s,mb4.6,baz=90,slow=8.5,SNR=6.5						
ARCES	**ARCESS Array B**	**80.14**	**341**	P	pP	20 52 47.0	0.0
	comp=Z,13nm,1.1s,baz=180,slow=3.6,SNR=3.9						
ARCES	**ARCESS Array B**	**80.14**	**341**	P	**P**	**20 52 37.9**	**0.0**
ARCES				P	pP	20 52 47.0	0.0
DPC	**Dobruska-Polom**	**80.23**	**321**	*e*P	**P**	**20 52 39.2**	**+0.4**
DPC				*e*pP	pP	20 52 48.5	+0.7
KSP	**Ksiaz**	**80.31**	**321**	*e*P	**P**	**20 52 39.4**	**+0.2**
KSP				*e**PP	pP	20 52 48.0	-0.3
KSP	**Ksiaz**	**80.31**	**321**	*e*P	**P**	**20 52 40.0**	**+0.7**
KSP				*e*	pP	20 52 48.4	+0.2
BOJS	**Bojanci**	**80.37**	**316**	*e*P	**P**	**20 52 40.0**	**+0.4**
BOJS				*e*	pP	20 52 49.7	+1.0
UPC	**Upice**	**80.44**	**321**	*e*P	**P**	**20 52 40.8**	**+0.9**
UPC				*e*pP	pP	20 52 48.9	-0.1
PERS	**Pernice**	**80.58**	**317**	*e*P	**P**	**20 52 41.3**	**+0.5**
PERS				*i*	pP	20 52 50.2	+0.4
VISS	**Visnje**	**80.69**	**316**	*e*P	**P**	**20 52 41.3**	**0.0**
VISS				*e*	pP	20 52 51.5	+1.1
BILL	**Bilibino**	**80.81**	**21**	*e*P	**P**	**20 52 41.4**	**-0.2**
	comp=Z,43nm,0.6s,mb5.6						
PRU	**Pruhonice**	**81.32**	**320**	*e*P	**P**	**20 52 44.7**	**+0.1**
PRU				*e*pP	pP	20 52 52.9	-0.7
PVCC	**Panska Ves**	**81.36**	**321**	*e*P	**P**	**20 52 44.8**	**0.0**
PVCC				*e*pP	pP	20 52 53.5	-0.3
GERES	**GERESS Array B**	**81.75**	**319**	P	pP	20 52 56.2	+0.3
GERES				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GERES	**GERESS Array B**	**81.75**	**319**	P	**P**	**20 52 47.7**	**+0.9**
	comp=Z,9.2nm,0.8s,mb4.7,baz=104,slow=5.5,SNR=83						
GERES	**GERESS Array B**	**81.75**	**319**	P	pP	20 52 56.2	+0.3
	comp=Z,7.6nm,0.8s,baz=90,slow=4.0,SNR=12						
GERES	**GERESS Array B**	**81.75**	**319**	P	**P**	**20 52 47.7**	**+0.9**
GERES				P	pP	20 52 56.2	+0.3
BRG	**Berggiesshubel**	**81.79**	**321**	*e*P	**P**	**20 52 47.6**	**+0.6**
BRG				*e*	pP	20 52 56.5	+0.4
BRG				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
BRG	**Berggiesshubel**	**81.79**	**321**	*e*P	**P**	**20 52 47.6**	**+0.6**
	comp=Z,13nm,1.4s,mb4.7						
BRG				*e*	pP	20 52 56.5	+0.4
ARV	**Arcevia**	**81.84**	**313**	*e*P	**P**	**20 52 48.1**	**+0.7**
KHC	**Kasperske Hory**	**81.86**	**319**	*e*P	**P**	**20 52 47.7**	**+0.3**
KHC				*e*pP	pP	20 52 56.0	-0.4
CLL	**Collm**	**82.42**	**321**	⇑*i*P	**P**	**20 52 50.0**	**-0.3**
CLL				*i*	pP	20 52 59.3	0.0
CLL				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
CLL	**Collm**	**82.42**	**321**	⇑*i*P	**P**	**20 52 50.0**	**-0.3**
	comp=Z,16nm,1.4s,mb4.8						
CLL				*i*	pP	20 52 59.3	0.0
CLL	**Collm**	**82.42**	**321**	⇑P	**P**	**20 52 50.0**	**-0.3**
	comp=Z,logA/T=1.1,mb4.8						
CLL				*i* *SP	sP	20 52 59.3	-3.0
SFI	**Santa Sofia**	**82.66**	**314**	*e*P	**P**	**20 52 53.0**	**+1.4**
NKC	**Novy Kostel**	**82.69**	**320**	*e*P	**P**	**20 52 52.4**	**+0.8**
NKC				*e*pP	pP	20 52 59.4	-1.3
PGD	**Poggio Sodo**	**82.75**	**314**	*e*P	**P**	**20 52 53.5**	**+1.4**
VMG	**Vicchio**	**82.88**	**314**	*e*P	**P**	**20 52 54.0**	**+1.2**
MOX	**Moxa**	**83.25**	**321**	*e*P	**P**	**20 52 53.8**	**-0.7**
MOX				pmax	pmax		
	comp=Z,26nm,2.1s,mb4.9						
MOX	**Moxa**	**83.25**	**321**	*e*P	**P**	**20 52 53.8**	**-0.7**
	comp=Z,26nm,2.1s,mb4.9						
MOX	**Moxa**	**83.25**	**321**	*i* P	**P**	**20 52 53.8**	**-0.7**
	comp=Z,logA/T=1.1,mb4.9						
GRA1	**Grafenberg Arr**	**83.44**	**320**	*e*P	**P**	**20 52 56.2**	**+0.7**
	comp=Z,19nm,1.6s,mb4.9						
GRA1				*e*pP	pP	20 53 05.3	+0.7
GRF	**Grafenberg Arr**	**83.44**	**320**	*e*P	**P**	**20 52 56.2**	**+0.7**
GRF				*e**PP	pP	20 53 05.3	+0.7
GRF				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	**83.44**	**320**	*e*P	**P**	**20 52 56.2**	**+0.7**
	comp=Z,19nm,1.6s,mb4.9						
GRF				*e*pP	pP	20 53 05.3	+0.7
BRMO	**Bormio**	**83.83**	**316**	*e*P	**P**	**20 52 58.7**	**+1.0**
NB2	**NORSAR Subarra**	**84.27**	**331**	P	**P**	**20 52 59.1**	**-0.4**
	comp=Z,8.0nm,0.9s,mb4.8,baz=97,slow=5.3						
NOA	**NORSAR Array B**	**84.27**	**331**	P	pP	20 53 08.1	-0.5
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA	**NORSAR Array B**	**84.27**	**331**	P	**P**	**20 52 59.3**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.6,baz=94,slow=5.5,SNR=13						
NOA	**NORSAR Array B**	**84.27**	**331**	P	pP	20 53 08.1	-0.5
	comp=Z,3.7nm,0.8s,baz=94,slow=5.7,SNR=6.8						
NOA	**NORSAR Array B**	**84.27**	**331**	P	**P**	**20 52 59.3**	**-0.1**
NOA				P	pP	20 53 08.1	-0.5
LPG	**La Plagne**	**86.34**	**315**	*e*P	**P**	**20 53 10.1**	**-0.1**
	comp=Z,22nm,1.0s,mb5.0						
VNDA	**Vanda**	**87.88**	**168**	P	**P**	**20 53 18.0**	**+1.0**
	comp=Z,4.4nm,1.1s,mb4.6,baz=297,slow=9.5,SNR=3.9						
TNA	**Tin City**	**90.78**	**24**	*e*P	**P**	**20 53 30.6**	**-0.2**
	comp=Z,5.7nm,0.9s,mb4.9						
TNA				*e*pP	pP	20 53 38.9	-1.0
ESDC	**Sonseca Array**	**94.62**	**310**	P	**P**	**20 53 50.1**	**+1.0**
	comp=Z,1.2nm,1.0s,mb4.3,baz=82,slow=9.1,SNR=2.9						
ESDC	**Sonseca Array**	**94.62**	**310**	P	pP	20 53 58.6	+0.5
	comp=Z,1.0nm,0.7s,baz=63,slow=3.3,SNR=4.2						
ESDC	**Sonseca Array**	**94.62**	**310**	P	**P**	**20 53 50.1**	**+1.0**
ESDC				P	pP	20 53 58.6	+0.5
ILAR	**Eielson Array**	**99.44**	**22**	P	pP	20 54 19.3	-0.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILAR	**Eielson Array**	**99.44**	**22**	P	**P**	**20 54 10.2**	**-0.1**
	comp=Z,0.4nm,0.9s,mb3.9,baz=304,slow=3.3,SNR=3.8						
ILAR				PP	PP	20 58 12.5	-3.7
	comp=Z,0.8nm,0.9s,baz=304,slow=6.8,SNR=4.9						
ILAR	**Eielson Array**	**99.44**	**22**	P	pP	20 54 19.2	-0.3
	comp=Z,0.6nm,0.9s,baz=293,slow=3.8,SNR=4.6						
ILAR				PP	PP	20 58 32.3	+16
	comp=Z,1.3nm,1.0s,baz=284,slow=6.6,SNR=4.7						
ILAR	**Eielson Array**	**99.44**	**22**	P	**P**	**20 54 10.2**	**-0.1**
ILAR				P	pP	20 54 19.2	-0.3
ILAR				PP	PP	20 58 12.5	-3.7
ILAR				PP		20 58 32.3	
INK	**Inuvik**	**101.88**	**16**	PP	PP	20 58 32.2	-2.5
	comp=Z,1.3nm,1.0s,baz=330,slow=3.1,SNR=2.7						
YKA	**Yellowknife Ar**	**111.37**	**14**	PP	PP	20 59 41.6	-3.8
	comp=Z,0.4nm,0.8s,baz=329,slow=7.2,SNR=5.6						
ELK	**Elko**	**129.04**	**29**	PKP	PKPdf	20 59 38.9	-1.2
	comp=Z,0.2nm,0.3s,baz=314,slow=3.4,SNR=3.7						
ELK	**Elko**	**129.04**	**29**	PKP		20 59 47.3	
	comp=Z,2.8nm,1.1s,baz=165,slow=1.7,SNR=4.6						
ELK	**Elko**	**129.04**	**29**	PKP	PKPdf	20 59 38.9	-1.2
ELK				PKP		20 59 47.3	
NVAR	**Mina Array Bea**	**129.20**	**33**	PKP	PKPdf	20 59 39.2	-1.3
	comp=Z,1.4nm,0.8s,baz=277,slow=1.7,SNR=8.8						
NVAR	**Mina Array Bea**	**129.20**	**33**	PKP		20 59 47.8	
	comp=Z,3.0nm,1.1s,baz=291,slow=1.6,SNR=7.3						
NVAR	**Mina Array Bea**	**129.20**	**33**	PKP	PKPdf	20 59 39.2	-1.3
NVAR				PKP		20 59 47.8	
PDAR	**Pinedale Array**	**129.87**	**23**	PKP	PKPdf	20 59 39.2	-2.4
	comp=Z,2.6nm,1.2s,baz=45,slow=2.1,SNR=7.6						
PDAR				PP	PP	21 01 48.5	-4.0
	comp=Z,0.4nm,0.9s,baz=333,slow=2.0,SNR=2.2						
PDAR	**Pinedale Array**	**129.87**	**23**	PKP		20 59 47.8	
	comp=Z,5.7nm,1.2s,slow=1.5,SNR=10						
PDAR				PP	PP	21 01 59.5	+7.0
	comp=Z,0.5nm,0.8s,slow=4.4,SNR=3.8						
PDAR	**Pinedale Array**	**129.87**	**23**	PKP	PKPdf	20 59 39.2	-2.4
PDAR				PKP		20 59 47.8	
PDAR				PP	PP	21 01 48.5	-4.0
PDAR				PP	PP	21 01 59.5	+7.0
ANMO	**Albuquerque**	**137.78**	**26**	PKP	PKPdf	20 59 54.5	-2.0
	comp=Z,1.7nm,0.8s,baz=211,slow=1.3,SNR=3.7						
ANMO	**Albuquerque**	**137.78**	**26**	PKP		21 00 02.7	
	comp=Z,1.2nm,0.3s,baz=326,slow=5.6,SNR=4.3						
ANMO	**Albuquerque**	**137.78**	**26**	PKP	PKPdf	20 59 54.5	-2.0
ANMO				PKP		21 00 02.7	
BDFB	**Brasilia**	**140.71**	**249**	PKP		21 00 09.9	
	comp=Z,2.3nm,0.6s,baz=162,slow=9.6,SNR=1.9						
MNTX	**Cornudas Mount**	**141.01**	**27**	*e*PKP	PKPdf	20 59 58.4	-4.2
MIAR	**Mount Ida**	**142.21**	**11**	*e*PKP	PKPdf	20 59 56.5	-8.0
TXAR	**Lajitas Array**	**143.79**	**27**	PKP	PKPdf	21 00 02.6	-4.8
	comp=Z,2.8nm,0.7s,baz=270,slow=2.5,SNR=20						
TXAR	**Lajitas Array**	**143.79**	**27**	PKP		21 00 11.8	
	comp=Z,4.6nm,0.9s,baz=297,slow=2.8,SNR=10.0						
JCT	**Junction City**	**144.36**	**21**	*e*PKPdf	PKPdf	21 00 03.7	-4.7
LRAL	**Lakeview Retre**	**144.42**	**2**	*e*PKPdf	PKPdf	21 00 04.3	-4.1
NATX	**Nacogdoches**	**144.68**	**13**	*e*PKP	PKPdf	21 00 04.9	-4.0
LVC	**Limon Verde**	**154.36**	**218**	PKPbc	PKPdf	21 00 27.9	+3.7
	comp=Z,3.8nm,1.1s,baz=124,slow=11,SNR=2.7						
LVC	**Limon Verde**	**154.36**	**218**	PKPbc		21 00 40.4	
	comp=Z,1.6nm,0.7s,baz=18,slow=4.9,SNR=3.5						
LVC	**Limon Verde**	**154.36**	**218**	PKPbc	PKPdf	21 00 27.9	+3.7
LVC				PKPbc		21 00 40.4	
SAML	**Samuel**	**156.74**	**254**	*e*PKPab	PKPab	21 00 53.9	-0.7

CSEM ***25*** *20:40:30.4±0.2, 34.61N×33.95E, h30^{km}, Mw2.8, Error ellipse: s-maj=8.9km s-min=3.6km az=19.0*

NEIC ***25*** *20:40:32.3, 34.60N×33.91E, h25^{km}, ML3.2(NIC), After NIC.*

GRAL ***25*** *20:40:32.3±27.0, 32.91N×36.75E, h18^{km}±999^{km}, MD3.1*

NIC 25 20:40:32.3±0.3**, 34.60N×33.91E, h25**^{km}**, ML3.2, MW2.8, 3C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.41**	**14**	⇑P	Pb	20 40 40.6	-0.4
PHNC				S	Sb	20 40 47.4	+0.4
PHNC	**Paralimni**	**0.41**	**14**	⇑*e*P	Pb	20 40 40.6	-0.4
PHNC				S	Sb	20 40 47.4	+0.4
CSS	**Prodhromos**	**0.59**	**307**	P	Pb	20 40 42.9	-1.1
	6.3nm,0.1s						
CSS				S	Sb	20 40 52.1	+0.1
MAMC	**Mammari**	**0.80**	**315**	P	Pb	20 40 46.5	-1.0
SZAC	**Souni-Zanaja**	**0.86**	**280**	⇓*i*P	Pb	20 40 47.0	-1.4
	11nm,0.2s						
SZAC				S	Sb	20 40 59.0	-0.5
ALFC	**Alevga**	**1.21**	**298**	⇑*i*P	Pn	20 40 51.7	-2.1
	3.7nm,0.2s						
ALFC				S	Sn	20 41 06.7	-2.8
PPCY	**Paphos**	**1.32**	**283**	⇓*i*P	Pn	20 40 53.7	-1.7
AKMC	**Akamas**	**1.36**	**288**	P	Pn	20 40 54.3	-1.8
BHL	**Bhannes**	**1.61**	**115**	*i* PG	Pn	20 40 54.8	-4.7
BHL				*i* SG	Sn	20 41 12.5	-7.1
HWQ	**Hawqa**	**1.72**	**100**	*i* PG	Pn	20 40 57.8	-3.3
	baz=30,slow=3.2						
HWQ				*i* SG	Sn	20 41 17.9	-4.5
MEST	**Erdemli**	**1.99**	**6**	*i* P	Pn	20 41 02.5	-2.5
MEST				*i* S	Sn	20 41 24.6	-4.7
COBT	**Iskenderun**	**2.71**	**44**	*i* P	Pn	20 41 12.1	-3.1
COBT				*i* S	Sn	20 41 41.5	-6.0

MEX 25 20:52:55.8±1.1**, 16.28N×96.05W, h63**^{km}±22^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.51**	**187**	*e*P	P	20 53 06.5	-1.7
HUIG				*e*S	S	20 53 15.7	-1.6
VHO	**Vista Hermosa**	**1.03**	**320**	*e*P	P	20 53 12.6	-1.9
VHO				*i* S	S	20 53 26.5	-2.0
OXX	**Oaxaca**	**1.03**	**321**	*i* P	P	20 53 12.5	-2.1
OXX				*i* S	S	20 53 26.5	-2.0
PNIG	**Pinotepa**	**2.00**	**273**	*e*P	P	20 53 26.0	-2.0
PNIG				*i* S	S	20 53 48.2	-3.5

NEIC ***25*** *21:02:06.0±0.4, 43.75N×105.14W, ML3.6, Error ellipse: s-maj=5.0km s-min=3.9km az=67.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

IDC ***25*** *21:02:05.5±1.0, 43.66N×105.33W, mb3.9/6, mb1 4.0/12, mb1mx3.8/23, mbtmp3.8/12, ML4.2/6, MS2.8/1, Ms1 2.8/1, ms1mx2.1/27, Error ellipse: s-maj=25.0km s-min=8.8km az=151.0*

ISC 25 21:02:03.9±0.4**, 43.76N**±0.03×**105.11W**±0.05**, n56, σ**$1\overset{s}{.}$**31**/72**, mb4.2**/7**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHWY	**Pilot Hill**	**2.47**	**186**	*e*Pn	**Pn**	**21 02 48.0**	**+2.0**
LAO	**LASA Array**	**3.03**	**345**	*e*Pn	**Pn**	**21 02 55.5**	**+1.5**
LAO				*e*Pg	**Pg**	**21 03 04.5**	**+0.2**
PDAR	**Pinedale Array**	**3.40**	**254**	Pn	**Pn**	**21 02 59.4**	**+0.2**
	21nm,0.3s,baz=72,slow=16,SNR=285						
PDAR				Lg		21 03 44.4	
	27nm,0.3s,baz=74,slow=32,SNR=5.9						
BW06	**Boulder Array**	**3.40**	**254**	*e*Pn	**Pn**	**21 02 59.8**	**+0.5**
BW06				*e*Sn	**Sn**	**21 03 39.6**	**-1.3**
GCMT	**Greycliff**	**3.83**	**304**	*e*Pn	**Pn**	**21 03 05.9**	**+0.6**
LKWY	**Lake**	**3.89**	**284**	*e*Pn	**Pn**	**21 03 07.2**	**+1.0**
LKWY				*e*Pg	**Pg**	**21 03 19.4**	**-2.2**
ISCO	**Idaho Springs**	**3.98**	**186**	*e*Pn	**Pn**	**21 03 09.3**	**+1.8**
ISCO				*e*Sg	**Sg**	**21 04 09.0**	**-7.3**
WUWY	**Wally Ulrich**	**4.10**	**269**	P	**Pn**	**21 03 11.1**	**+2.0**
YNR	**Norris Junctio**	**4.12**	**285**	*e*Pn	**Pn**	**21 03 09.6**	**+0.2**
YNR				*e*Pb	**Pb**	**21 03 19.4**	**+2.4**
YFT	**Old Faithful**	**4.18**	**281**	Pn	**Pn**	**21 03 11.3**	**+0.9**
YFT				*e*Pg	**Pg**	**21 03 25.2**	**-2.2**
IMW	**Indian Meadow**	**4.22**	**274**	*e*Pn	**Pn**	**21 03 11.1**	**+0.2**
IMW				*e*Pb	**Pb**	**21 03 19.7**	**+0.8**
YMR	**Madison River**	**4.31**	**284**	*e*Pn	**Pn**	**21 03 12.9**	**+0.8**
YMR				*e*Pb	**Pb**	**21 03 22.4**	**+2.0**
AHID	**Auburn Hatcher**	**4.49**	**259**	*e*Pn	**Pn**	**21 03 15.0**	**+0.3**
AHID				*e*Pb	**Pb**	**21 03 26.1**	**+2.6**
QLMT	**Earthquake Lak**	**4.66**	**285**	*e*Pn	**Pn**	**21 03 18.1**	**+0.9**
QLMT				*e*Pb	**Pb**	**21 03 27.5**	**+1.0**
QLMT				*e*Pg	**Pg**	**21 03 34.4**	**-2.6**
DGMT	**Dagmar**	**4.75**	**7**	*e*Pn	**Pn**	**21 03 20.9**	**+2.4**
DGMT				*e*Pg	**Pg**	**21 03 37.0**	**-1.7**
BOZ	**Bozeman (W)**	**5.02**	**294**	*e*Pn	**Pn**	**21 03 20.8**	**-1.4**
BOZ				*e*Pb	**Pb**	**21 03 34.3**	**+1.8**
HWUT	**Hardware Ranch**	**5.23**	**248**	*e*Pn	**Pn**	**21 03 24.0**	**-1.1**
	29nm,0.4s						
TCUT	**Toone Canyon**	**5.36**	**243**	*e*Pn	**Pn**	**21 03 26.6**	**-0.5**
MCMT	**McKenzie Canyo**	**5.66**	**284**	*e*Pn	**Pn**	**21 03 32.0**	**+0.8**
DAU	**Daniels Canyon**	**5.67**	**236**	*e*Pn	**Pn**	**21 03 31.2**	**-0.2**
JLU	**Jordanelle**	**5.67**	**238**	*e*Pn	**Pn**	**21 03 31.0**	**-0.5**
CTU	**Camp Tracy**	**5.81**	**240**	*e*Pn	**Pn**	**21 03 33.0**	**-0.4**
SPUT	**South Promonto**	**5.95**	**248**	*e*Pn	**Pn**	**21 03 34.8**	**-0.6**
HVU	**Hansel Valley**	**5.98**	**253**	*e*Pn	**Pn**	**21 03 34.8**	**-1.0**
SDCO	**Great Sand Dun**	**6.02**	**183**	*e*Pn	**Pn**	**21 03 37.0**	**+0.7**
	7.5nm,0.6s						
MPU	**Maple Canyon**	**6.14**	**235**	*e*Pn	**Pn**	**21 03 37.8**	**-0.3**
SRU	**San Rafael**	**6.18**	**223**	*e*Pn	**Pn**	**21 03 37.3**	**-1.3**
SRU				*e*Pb	**Pb**	**21 03 54.0**	**+1.7**
CBKS	**Cedar Bluff**	**6.39**	**139**	*e*Pn	**Pn**	**21 03 41.4**	**-0.1**
	35nm,0.4s						
TMUT	**Trail Mountain**	**6.39**	**228**	*e*Pn	**Pn**	**21 03 41.2**	**-0.4**
NLU	**North Lily Min**	**6.45**	**236**	*e*Pn	**Pn**	**21 03 41.2**	**-1.1**
NLU				*e*Pb	**Pb**	**21 03 59.4**	**+2.5**
BGU	**Big Grassy Mou**	**6.52**	**247**	*e*Pn	**Pn**	**21 03 41.6**	**-1.8**
CHMT	**Chamberlain Mo**	**6.55**	**302**	*e*Pn	**Pn**	**21 03 42.9**	**-1.0**
HLID	**Hailey**	**6.75**	**272**	*e*Pn	**Pn**	**21 03 47.5**	**+0.8**
	4.1nm,0.4s						
DUG	**Dugway**	**6.76**	**241**	*e*Pn	**Pn**	**21 03 45.8**	**-1.0**
	17nm,0.4s						
MSO	**Missoula**	**6.94**	**299**	*e*Pn	**Pn**	**21 03 47.7**	**-1.7**
	3.8nm,0.4s						
MSU	**Marysvale**	**7.48**	**228**	*e*Pn	**Pn**	**21 03 55.9**	**-1.0**
MVU	**Marysvale**	**7.51**	**228**	*e*Pn	**Pn**	**21 03 56.5**	**-0.8**
	11nm,0.5s						
MVU				*e*Pb	**Pb**	**21 04 17.4**	**+2.4**
KSU1	**Kansas State U**	**7.90**	**123**	Pn	**Pn**	**21 04 01.9**	**-0.9**
WALA	**Waterton Lakes**	**8.06**	**314**	*e*Pn	**P**	**21 04 02.9**	**-2.2**
	4.8nm,0.5s						
ELK	**Elko**	**8.10**	**252**	*e*Pn	**P**	**21 04 04.4**	**-1.1**
	2.0nm,0.4s						
ELK	**Elko**	**8.10**	**252**	Pn	**P**	**21 04 04.7**	**-0.8**
	0.7nm,0.3s,baz=70,slow=12,SNR=11						
ELK				Lg		21 06 14.7	
	0.1nm,0.3s,baz=135,slow=17,SNR=2.3						
ELK				LR	LR	21 07 01.5	
	comp=Z,69nm,19.5s,baz=318,slow=37						
ARUT	**Antelope Range**	**8.69**	**229**	*e*Pn	**P**	**21 04 12.9**	**-0.9**
NEW	**Newport**	**9.49**	**302**	Pn	**P**	**21 04 23.1**	**-1.8**
	0.5nm,0.3s,baz=84,slow=15,SNR=3.2						
WUAZ	**Wupatki**	**9.55**	**212**	*e*Pn	**P**	**21 04 24.9**	**-0.7**
	219nm,0.4s						
WMOK	**Wichita Mounta**	**10.26**	**149**	*e*Pn	**P**	**21 04 32.7**	**-2.7**
	6.2nm,0.6s						
FFC	**Flin Flon**	**11.16**	**9**	*e*Pn	**P**	**21 04 45.7**	**-1.9**
	5.4nm,0.7s						
NVAR	**Mina Array Bea**	**11.29**	**246**	Pn	**P**	**21 04 48.8**	**-0.7**
	0.4nm,0.3s,baz=53,slow=12,SNR=9.3						
YBH	**Yreka Blue Hor**	**13.10**	**267**	Pn	**P**	**21 05 15.5**	**+1.6**
	0.3nm,0.3s,baz=39,slow=5.3,SNR=8.9						
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**P**	**21 06 33.9**	**-1.8**
	0.3nm,0.3s,baz=160,slow=12,SNR=10						
ILAR	**Eielson Array**	**31.32**	**327**	P	**P**	**21 08 27.5**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=120,slow=7.3,SNR=4.4						
ARCES	**ARCESS Array B**	**61.36**	**18**	P	**P**	**21 12 22.6**	**-0.6**
	24nm,1.3s,mb5.2,baz=336,slow=5.9,SNR=8.9						
FINES	**FINESS Array B**	**67.96**	**23**	P	**P**	**21 13 06.7**	**+0.6**
	2.1nm,1.0s,mb4.3,baz=326,slow=6.6,SNR=11						
ZAL	**Zalesovo**	**82.31**	**354**	P	**P**	**21 14 28.8**	**+0.7**
	1.2nm,0.4s,mb4.4,baz=133,slow=8.0,SNR=5.6						
BVAR	**Borovoye Array**	**83.51**	**3**	P	**P**	**21 14 35.4**	**+1.2**
	0.6nm,0.5s,mb4.1,baz=0.6,slow=5.9,SNR=6.7						
SONM	**Songino Array**	**84.66**	**339**	P	**P**	**21 14 41.7**	**+1.6**
	0.6nm,0.5s,mb4.1,baz=360,slow=3.0,SNR=11						
PLCA	**Paso Flores**	**89.69**	**154**	P	**P**	**21 15 06.2**	**+1.4**
	0.5nm,0.5s,mb4.0,baz=284,slow=8.3,SNR=2.9						

CASC 25 21:34:28.4±1.6**, 12.40N×87.75W, h52**^{km}±37^{km}**, MD3.5, ML3.3, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.87**	**354**	*e*P	P	21 34 44.3	-0.3
CNCH				*e*S	S	21 34 57.4	+0.7
CNGN	**Cerro Negro**	**1.03**	**84**	*e*S	S	21 35 01.1	+0.8
BLLM	**Bellamira**	**1.14**	**335**	*e*P	P	21 34 48.3	0.0
BLLM				*e*S	S	21 35 03.3	+0.2
VSM	**San Miguel**	**1.14**	**333**	*e*P	P	21 34 48.8	+0.4
VSM				*e*S	S	21 35 04.2	+1.1
COPN	**Copaltepe**	**1.15**	**101**	*e*S	S	21 35 03.4	+0.1
MOMJ	**Momotombo**	**1.18**	**90**	*e*S	S	21 35 03.9	-0.1
XAVN	**Gruta Xavier**	**1.41**	**100**	*e*S	S	21 35 08.9	-1.0
CAHU	**Cacacuatique**	**1.43**	**342**	*e*P	P	21 34 53.1	+0.5
CAHU				*e*S	S	21 35 11.8	+1.3
LCBS	**La Ceiba**	**1.73**	**316**	*e*P	P	21 34 56.3	-0.4
LCBS				*e*S	S	21 35 17.3	-0.4
LFRS	**El Faro**	**1.77**	**314**	*e*P	P	21 34 56.6	-0.6
LFRS				*e*S	S	21 35 18.3	-0.3
BOQS	**Boqueron**	**2.00**	**312**	*e*P	P	21 35 00.4	0.0
BOQS				*e*S	S	21 35 25.1	+0.9
SBLS	**San Blas**	**2.32**	**308**	*e*P	P	21 35 04.8	-0.3
SBLS				*e*S	S	21 35 33.3	+0.9
SNJE	**San Jose**	**2.33**	**309**	*e*P	P	21 35 04.9	-0.2
SNJE				*e*S	S	21 35 33.3	+0.8

ISK ***25*** *21:40:47.8, 37.35N×36.19E, h20^{km}, MD3.4*

*CSEM **25** 21:40:47.7±0.1,37.36N×36.23E,h20^{km},MD3.4,Error ellipse: s-maj=2.1km s-min=1.7km az=165.0*

*NEIC **25** 21:40:48.4,37.32N×36.22E,h24^{km},MD3.4(ISK),After ISK.*

ISC 25 21:40:47.4±0.5**,37.38N**±0.04×**36.19E**±0.04**,h6**^{km}**,n27,** σ**0**^{s}**.91**/36**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	Ceyhan	0.51	224	*e*PG	Pg	21 40 57.9	+0.3
CEYT	Ceyhan	0.51	224	Pg	Pg	21 40 58.8	+1.2
CEYT	Ceyhan	0.51	224	Pg	Pg	21 40 58.8	+1.2
KAHT	Ahir Dag	0.60	65	*i* P	Pg	21 40 58.7	-0.7
KAHT				*i* S	Sg	21 41 07.6	+0.2
GAZ	Gaziantep	0.84	104	*e*PG	Pg	21 41 03.8	-0.4
GAZ				*e*SG	Sg	21 41 17.0	+1.6
GAZ	Gaziantep	0.84	104	Pg	Pg	21 41 03.9	-0.3
GAZ	Gaziantep	0.84	104	Pg	Pg	21 41 03.9	-0.3
GAZ				*e*Sg	Sg	21 41 17.0	+1.6
COBT	Iskenderun	0.86	177	*i* P	Pb	21 41 04.1	-0.3
COBT				*i* S	Sb	21 41 16.2	+0.3
GZT	Gaziantep	1.09	91	*i* P	Pb	21 41 07.8	-0.6
GZT				*i* S	Sb	21 41 23.2	+0.5
HTY	Hatay	1.25	182	*e*PN	Pn	21 41 10.4	-1.1
HTY	Hatay	1.25	182	Pn	Pn	21 41 10.5	-1.0
NIG	Nigde	1.45	301	*i* PN	Pn	21 41 14.0	-0.4
BNN	Bunyan	1.50	350	*e*PN	Pn	21 41 14.8	-0.2
BNN	Bunyan	1.50	350	Pn	Pn	21 41 15.4	+0.4
MEST	Erdemli	1.82	245	*i* P	Pn	21 41 18.8	-0.8
MEST				*i* S	Sn	21 41 44.4	+1.2
MALT	Malatya	2.00	61	*e*PN	Pn	21 41 20.9	-1.3
MALT	Malatya	2.00	61	Pn	Pn	21 41 21.0	-1.2
MALT	Malatya	2.00	61	Pn	Pn	21 41 21.0	-1.2
MYA	Malataya	2.01	61	*e*PN	Pn	21 41 21.8	-0.5
MYA	Malataya	2.01	61	Pn	Pn	21 41 22.4	+0.2
URFA	Urfa	2.09	87	*e*PN	Pn	21 41 23.5	0.0
SVST	Sivas	2.46	14	*i* P	Pn	21 41 28.3	-0.6
SVST				*i* S	Sn	21 42 02.6	+2.9
ELZG	Elazig	2.48	62	*i* P	Pn	21 41 32.9	+3.9
ELZG				*i* S	Sn	21 42 07.0	+7.1
PTK	Pertek	2.94	58	*e*PN	Pn	21 41 34.8	-0.9
CTKT	Corum	3.42	342	*i* P	Pn	21 41 42.9	+0.4
ELDT	Eldivan	3.78	326	*i* P	Pn	21 41 52.7	+5.1
BEST	Besiri	4.06	81	*i* P	Pn	21 42 03.8	+12
BEST				*i* S	Sn	21 42 56.0	+16

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*ISK **25** 21:44:17.8,36.97N×27.92E,h15^{km},MD3.4*

*NEIC **25** 21:44:17.8,36.97N×27.92E,h15^{km},MD3.4(ISK), MD3.4(ATH),After ISK.*

*CSEM **25** 21:44:17.7±0.1,36.99N×27.94E,h12^{km},MD3.4,Error ellipse: s-maj=2.6km s-min=1.9km az=8.0*

*ATH **25** 21:44:18.3,36.84N×27.79E,h2^{km},MD3.4/9*

*HLW **25** 21:44:22.1,36.78N×27.91E,h33^{km},Mb3.2*

ISC 25 21:44:17.4±0.4**,36.92N**±0.03×**27.91E**±0.03**,h13**^{km}±4^{km}**, n38,** σ**0**^{s}**.98**/52**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.37	54	*i* PG	Pg	21 44 25.0	-0.1
YER				*i* SG	Sg	21 44 30.2	-0.1
YER	Yerkesik	0.37	54	Pg	Pg	21 44 25.0	-0.1
YER				Sg	Sg	21 44 31.0	+0.7
MLSB	Milas	0.39	344	*i* PG	Pg	21 44 25.2	-0.4
MLSB				*i* SG	Sg	21 44 31.1	0.0
MLSB	Milas	0.39	344	Pg	Pg	21 44 25.2	-0.4
MLSB				Sg	Sg	21 44 31.2	+0.1
BDRM	Kayabasi	0.40	292	*i* P	Pg	21 44 25.8	0.0
BDRM				*i* S	Sg	21 44 31.9	+0.5
BODT	Bodrum	0.50	287	PG	Pg	21 44 27.9	+0.2
BODT				SG	Sg	21 44 35.6	+1.0
BODT	Bodrum	0.50	287	Pg	Pg	21 44 27.9	+0.2
BODT				Sg	Sg	21 44 35.9	+1.3
DALT	Dalyan (Mudla)	0.60	104	*e*PG	Pg	21 44 30.2	+0.6
NISR	Nisiros	0.70	244	*e*PG	Pg	21 44 30.5	-1.1
NISR	Nisiros	0.70	244	*e*Pb	Pb	21 44 31.9	+1.0
ARG	Arkhangelos	0.72	166	*e*PB	Pb	21 44 32.0	+0.7
AYDN	Tasoluk	0.74	358	*i* P	Pb	21 44 31.6	-0.1
AYDN				*i* S	Sb	21 44 40.2	-1.2
FETY	Fethiye	0.98	106	PG	Pg	21 44 37.9	+0.7
SMG	Samos	1.17	313	*e*PB	Pb	21 44 39.3	+0.4
DNZL	Cakiroluk	1.19	49	*i* P	Pb	21 44 39.6	+0.3
DNZL				*i* S	Sb	21 44 55.0	+0.6
DENT	Denizli	1.22	47	PN	Pn	21 44 40.8	+0.6
KARP	Karpathos	1.50	204	*e*PG	Pg	21 44 43.8	-3.5
KSL	Kastellorizon	1.55	119	*e*PG	Pg	21 44 48.1	-0.3
IZM	Izmir	1.57	341	*e*PN	Pn	21 44 45.1	-0.1
KDAG	Bornova	1.57	341	*i* P	Pn	21 44 45.0	-0.2
ELL	Elmali	1.61	95	*e*PN	Pn	21 44 46.4	+0.7
BLCB	Balcova	1.62	335	*e*PN	Pn	21 44 45.5	-0.4
APE	Apeiranthos	1.91	275	*e*PB	Pb	21 44 52.5	+0.8
AKS	Akhisar	1.96	358	*i* PN	Pn	21 44 50.5	-0.3
BCK	Bucak	2.21	75	*e*PN	Pn	21 44 54.5	+0.2
NPS	Neapolis	2.49	229	*e*PN	Pn	21 45 00.2	+1.9
AYVA	Ayvalik	2.58	338	*i* P	Pn	21 45 07.2	+7.6
AYVA				*i* S	Sn	21 45 40.9	+10
PRK	Paraskevi	2.66	331	*e*PG	Pg	21 45 08.5	-2.1
PRK	Paraskevi	2.66	331	*e*Pg	Pg	21 45 08.0	-2.6
XRY	Khrisi	2.72	222	*e*PN	Pn	21 45 04.0	+2.4
BTOK	Tokmak	2.84	2	*i* P	Pg	21 45 12.1	-2.1
BTOK				*i* S	Sg	21 45 53.1	+1.0
ESKT	Eskisehir	3.48	41	*i* P	Pn	21 45 20.9	+8.5
KIZT	Kizilcal	3.70	57	*e*PN	Pn	21 45 15.7	+0.2
MEST	Erdemli	5.02	92	*i* P	Pn	21 45 38.4	+4.1
MEST				*i* S	Sn	21 46 37.0	+4.2
HMAT	Matruh	5.85	187	P	Pn	21 45 44.9	-1.1
SWA1		7.85	194	P	Pn	21 46 12.7	-1.4
SWA1				S	Sn	21 47 34.0	-10
SWA2		7.92	196	P	Pn	21 46 13.5	-1.6
SWA2				S	Sn	21 47 35.7	-10
SUZ		8.17	148	P	P	21 46 17.6	-0.9

IDC 25 21:55:10.4±2.9**,7.67N**×**93.77E,mb3.4**/4**,mb1 3.6**/5**, mb1mx3.5**/18**,mbtmp3.4**/5**,ML3.7**/1**,Error ellipse: s-maj=96.7km s-min=23.9km az=70.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	11.85	25	Pn	P	21 58 01.8	-2.0
	0.1nm,0.3s,baz=222,slow=29,SNR=3.4						
SONM	Songino Array	41.44	13	P	P	22 02 58.2	-2.3
	0.3nm,0.9s,baz=203,slow=11,SNR=2.8						
ZAL	Zalesovo	46.70	353	P	P	22 03 41.4	-1.4
	0.8nm,0.3s,baz=304,slow=6.8,SNR=4.1						
WRA	Warramunga Arr	48.44	125	P	P	22 03 54.9	-2.0
	0.3nm,0.5s,baz=305,slow=8.6,SNR=2.6						
ASAR	Alice Springs	50.07	130	P	P	22 04 07.3	-2.0
	0.3nm,0.8s,baz=300,slow=7.4,SNR=3.4						

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*ATH **25** 22:07:23.6,35.89N×28.73E,h10^{km},MD2.9/3*

*CSEM **25** 22:07:23.5±0.1,36.01N×28.83E,h30^{km},Mw2.9,Error ellipse: s-maj=11.0km s-min=2.4km az=8.0*

*NIC **25** 22:07:27.0±0.3,36.47N×29.18E,h25^{km},ML3.2,MW2.9*

ISC 25 22:07:22.3±0.9**,36.27N**±0.06×**28.82E**±0.07**,h66**^{km}±22^{km}**, n12,** σ**0**^{s}**.99**/18**,2C-1D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	Arkhangelos	0.57	265	*e*PB	P	22 07 35.0	-0.7
KSL	Kastellorizon	0.63	101	*e*PB	P	22 07 37.6	+1.3
BDRM	Kayabasi	1.36	306	*i* P	P	22 07 45.5	-0.4
BDRM				*i* S	S	22 08 01.5	-1.9
DNZL	Cakiroluk	1.43	7	*i* P	P	22 07 47.4	+0.6
DNZL				*i* S	S	22 08 04.4	-0.4
KARP	Karpathos	1.53	242	*e*PB	P	22 07 48.5	+0.3
AYDN	Tasoluk	1.58	332	*i* P	P	22 07 49.3	+0.5
AYDN				*i* S	S	22 08 08.8	+0.5
AKMC	Akamas	3.11	112	⇓*e*P	P	22 08 10.7	+0.4
PPCY	Paphos	3.19	115	P	P	22 08 12.1	+0.8
ALFC	Alevga	3.27	109	⇑*e*P	P	22 08 12.7	+0.3
	2.0nm,0.1s						
ALFC				S	S	22 08 49.1	-1.2
SZAC	Souni-Zanaja	3.64	113	P	P	22 08 18.0	+0.4
	1.8nm,0.2s						
SZAC				S	S	22 08 58.5	-1.1
MAMC	Mammari	3.74	106	P	P	22 08 20.7	+1.7
CSS	Prodhromos	3.90	108	⇑P	P	22 08 21.7	+0.5
CSS				S	S	22 09 03.6	-2.5

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*NEIC **25** 22:30:11.6,44.65N×9.37E,h5^{km},MD3.1(ROM), ML3.2(GEN),ML3.2(STR),ML3.0(LDG),ML2.7(VIE),After ROM.*

*MOS **25** 22:30:11.4±1.2,44.70N×9.35E,h10^{km},mb3.5/1,Error ellipse: s-maj=4.5km s-min=4.3km az=29.9*

*ROM **25** 22:30:11.5±0.1,44.65N×9.37E,h5^{km},MD3.1/13, ML2.3/10,Error ellipse: s-maj=1.5km s-min=1.2km az=0.0*

*CSEM **25** 22:30:11.0±0.0,44.64N×9.38E,h10^{km},ML3.0/6,Error ellipse: s-maj=1.3km s-min=0.9km az=14.0*

*GEN **25** 22:30:12.4,44.71N×9.38E,h4^{km},ML3.2*

*STR **25** 22:30:13.0±0.3,44.74N×9.35E,h10^{km}±1^{km},Ml3.2,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*LDG **25** 22:30:14.2±0.1,44.64N×9.38E,h10^{km},Ml3.0/22,Error ellipse: s-maj=3.6km s-min=2.8km az=132.0*

ISC 25 22:30:11.3±0.3**,44.67N**±0.01×**9.33E**±0.02**,h10**^{km}±2^{km}**, n132,** σ**1**^{s}**.29**/221**,7C-2D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOB	Bobbio (Coli)	0.13	40	*e*PG	Pg	22 30 13.8	-0.6
	344nm,0.3s						
GENL	Genova Univers	0.37	225	P	Pg	22 30 20.1	+1.2
GENL				S	Sg	22 30 26.8	+2.8
GENL	Genova Univers	0.37	225	P	Pg	22 30 20.1	+1.2
CODM		0.46	127	P	Pg	22 30 20.7	-0.1
CODM				S	Sg	22 30 27.7	+0.6
CODM		0.46	127	P	Pg	22 30 20.7	-0.1
GRAM		0.55	108	P	Pg	22 30 22.0	-0.5
GRAM		0.55	108	P	Pg	22 30 22.0	-0.5
PCP	Pian Castagno	0.58	257	P	Pg	22 30 23.5	+0.5
PCP				S	Sg	22 30 31.5	+0.8
VINC	Vinca	0.79	132	P	Pb	22 30 26.4	-0.3
VINC				S	Sb	22 30 36.8	-0.4
VINC	Vinca	0.79	132	P	Pb	22 30 26.4	-0.3
VINC	Vinca	0.79	132	P	Pb	22 30 26.4	-0.3
VINC				S	Sb	22 30 36.8	-0.4
VINC				S	Sb	22 30 36.8	-0.4
ERBM	Eremo	0.81	108	*e*PG	Pg	22 30 27.3	-0.3
ERBM				SG	Sg	22 30 40.3	+1.8
	111nm,0.5s						
ERBM	Eremo	0.81	108	*e*Pg	Pg	22 30 27.3	-0.4
ERBM				*e*Sg	Sg	22 30 40.3	+1.7
ERBM	Eremo	0.81	108	*e*Pg	Pg	22 30 27.3	-0.3
	111nm,0.5s						
ERBM				Sg	Sg	22 30 40.3	+1.8
SARO	Sassorosso	0.91	122	P	Pb	22 30 28.8	+0.1
SARO				S	Sb	22 30 40.0	-0.6
SARO	Sassorosso	0.91	122	P	Pb	22 30 28.8	+0.1
SARO	Sassorosso	0.91	122	P	Pb	22 30 28.8	+0.1
SARO				S	Sb	22 30 40.0	-0.6
SARO				S	Sb	22 30 40.0	-0.6
VLC	Villacollemand	0.91	124	*e*Pg	Pg	22 30 29.4	-0.2
VLC				*e*Sg	Sg	22 30 41.5	-0.3
VLC				*e*Sn	Sn	22 30 45.3	+2.0
VLC	Villacollemand	0.91	124	*e*Pg	Pg	22 30 29.4	-0.2
VLC				*e*Sg	Sg	22 30 41.5	-0.3
FIN	Finale Ligure	0.93	241	*e*PG	Pg	22 30 30.3	+0.4
FIN				SG	Sg	22 30 44.7	+2.4
	68nm,0.3s						
FIN	Finale Ligure	0.93	241	*e*Pg	Pg	22 30 30.3	+0.4
FIN				*e*Sg	Sg	22 30 44.7	+2.4
FIN	Finale Ligure	0.93	241	*e*P	Pg	22 30 30.3	+0.4
FIN				*e*S	Sg	22 30 44.7	+2.4
GSCL	Gusciola	0.95	109	*e*PG	Pg	22 30 30.1	-0.3
GSCL				SG	Sg	22 30 44.7	+1.5
	45nm,0.4s						
GSCL	Gusciola	0.95	109	*e*Pg	Pg	22 30 30.1	-0.3
GSCL				*e*Sg	Sg	22 30 44.7	+1.5
GSCL	Gusciola	0.95	109	*e*Pg	Pg	22 30 30.1	-0.3
	45nm,0.4s						
GSCL				Sg	Sg	22 30 44.7	+1.5
BDI	Bagni Di Lucca	1.09	123	*e*PG	Pg	22 30 33.7	+0.5
BDI				SG	Sb	22 30 46.5	+0.5
	148nm,0.3s						
BDI	Bagni Di Lucca	1.09	123	*e*Pg	Pg	22 30 33.7	+0.5
BDI				*e*Sg	Sg	22 30 46.5	-1.3
BDI	Bagni Di Lucca	1.09	123	*e*Pg	Pg	22 30 33.7	+0.5
	148nm,0.3s						
BDI				*e*S	Sb	22 30 46.5	+0.5
ROB	Roburent	1.11	251	P	Pb	22 30 33.4	+1.2
ROB				S	Sb	22 30 47.8	+1.3
VAI	Varese	1.26	342	*e*PN	Pn	22 30 35.5	+0.4
VAI				SN	Sn	22 30 54.2	+2.0
	47nm,0.4s						
VAI	Varese	1.26	342	*e*Pg	Pg	22 30 35.5	-1.1
VAI				*e*Sg	Sg	22 30 54.2	+0.7
VAI	Varese	1.26	342	*e*P	Pn	22 30 35.5	+0.4
VAI				*e*S	Sn	22 30 54.2	+2.0
SAL	Salo	1.26	42	*e*Pg	Pg	22 30 35.6	-1.0
SAL				*e*Sg	Sg	22 30 54.6	+1.1
SAL	Salo	1.26	42	*e*P	Pb	22 30 35.6	+0.8
SAL				*e*Sg	Sg	22 30 54.6	+1.1
MONE	Monesi	1.27	243	P	Pb	22 30 35.5	+0.5
MONE	Monesi	1.27	243	P	Pb	22 30 35.5	+0.5
PII	Pisa	1.28	137	*e*PN	Pn	22 30 35.5	+0.2
PII				SN	Sn	22 30 52.4	-0.2
	74nm,0.3s						
PII	Pisa	1.28	137	*e*Pg	Pg	22 30 35.5	-1.5
PII				*e*Sg	Sg	22 30 52.4	-1.6
PII	Pisa	1.28	137	*e*P	Pn	22 30 35.5	+0.2
PII				*e*S	Sn	22 30 52.4	-0.2
IMI	Imperia	1.28	234	*e*PN	Pn	22 30 35.8	+0.4
IMI				SN	Sn	22 30 53.4	+0.7
	32nm,0.3s						
IMI	Imperia	1.28	234	*e*Pg	Pg	22 30 35.8	-1.2
IMI				*e*Sg	Sn	22 30 53.4	+0.7
IMI	Imperia	1.28	234	P	Pb	22 30 35.2	0.0
IMI	Imperia	1.28	234	*e*Pg	Pn	22 30 35.8	+0.4
IMI				*e*Sg	Sn	22 30 53.4	+0.7
ORO	Oropa	1.35	316	*e*PN	Pn	22 30 36.8	+0.4
	73nm,0.3s						
ORX	Oropa	1.36	316	P	Pb	22 30 36.8	+0.4
ORX				S	Sb	22 30 52.6	-1.1
TRAV		1.40	307	P	Pn	22 30 37.6	+0.5
TRAV		1.40	307	P	Pn	22 30 37.6	+0.5
NEGI	Negi	1.43	235	P	Pn	22 30 37.8	+0.3
NEGI	Negi	1.43	235	P	Pn	22 30 37.8	+0.3
ENR	Entracque	1.44	253	P	Pn	22 30 38.5	+0.9
ENR				S	Sb	22 30 55.3	-0.7
SAOF	Saorge	1.45	242	Pg	Pg	22 30 39.1	-1.2
SAOF				Sg	Sg	22 31 00.1	+0.5
BHB	Bricherasio	1.48	277	P	Pn	22 30 39.7	+1.5
BHB				S	Sb	22 30 56.5	-0.9
BHB	Bricherasio	1.48	277	P	Pn	22 30 39.7	+1.5
BHB				S	Sb	22 30 56.5	-0.9
STV2	Anna di Valdie	1.50	254	P	Pn	22 30 38.9	+0.5
STV2	Anna di Valdie	1.50	254	P	Pn	22 30 38.9	+0.5
DOI	San Damiano	1.50	264	*e*PN	Pn	22 30 40.7	+2.2
	109nm,0.3s						
STV	Sta Anna Valdi	1.50	254	P	Pn	22 30 39.5	+1.1
AUTN	L’Aution	1.52	244	Pg	Pg	22 30 39.9	-1.9
AUTN				Sg	Sg	22 31 01.7	-0.4
RSP	Reno Superiore	1.55	289	P	Pn	22 30 39.9	+0.7
SBF	Sospel	1.58	240	*e*Pn	Pn	22 30 40.1	+0.4
SBF				*e*Sn	Sn	22 30 59.9	-0.4
	79nm,0.3s						
MCGN	Macugnaga	1.60	324	*e*PN	Pn	22 30 40.9	+1.0
MCGN				SN	Sn	22 31 03.0	+2.3
	24nm,0.3s						
MCGN	Macugnaga	1.60	324	*e*Pg	Pg	22 30 40.9	-2.4
MCGN				*e*Sg	Sg	22 31 03.0	-1.7
MCGN	Macugnaga	1.60	324	*e*Pn	Pn	22 30 40.9	+1.0
	24nm,0.3s						
MCGN				Sn	Sn	22 31 03.0	+2.3
PZZ	Prazzo	1.60	265	P	Pn	22 30 41.1	+1.2
TOUF	Mont Tournerai	1.63	247	Pg	Pg	22 30 41.8	-2.2
FENE	Fenestrelle	1.65	283	P	Pn	22 30 42.2	+1.5
FENE	Fenestrelle	1.65	283	P	Pn	22 30 42.2	+1.5
REVF	Revere	1.69	237	Pg	Pg	22 30 42.3	-2.8
REVF				Sg	Sg	22 31 06.5	-1.2
OG22	Abries	1.71	276	Pn	Pn	22 30 43.2	+1.8
LSD	Ceresole Reale	1.73	298	P	Pn	22 30 42.9	+1.1
MVIF	Mont Vial	1.75	244	Pg	Pg	22 30 43.5	-2.7
MVIF				Sg	Sg	22 31 08.1	-1.4
SURF	Saint Ours	1.81	265	Pn	Pn	22 30 44.7	+1.8
SURF				Sg	Sg	22 31 08.7	-3.0
MBDF	Montbardon	1.83	273	*e*Pn	Pn	22 30 44.8	+1.7
MBDF				*e*Sn	Sn	22 31 09.5	+3.0
	48nm,0.5s						
RRL	Cesana Torines	1.83	279	P	Pn	22 30 46.5	+3.3
BNI	Bardonecchia	1.93	282	*e*Pn	Pn	22 30 46.6	+2.1
BNI				*e*Sn	Sn	22 31 11.6	+2.6
BNI	Bardonecchia	1.93	282	*e*P	Pn	22 30 46.7	+2.2
BNI				*e*S	Sn	22 31 11.6	+2.6
BRMO	Bormio	1.95	22	*e*PN	Pn	22 30 45.3	+0.4
	16nm,0.4s						
BRMO	Bormio	1.95	22	*e*Pg	Pg	22 30 45.3	-5.0
BRMO	Bormio	1.95	22	*e*Pn	Pn	22 30 45.3	+0.4
	16nm,0.4s						
LPG	La Plagne	2.01	295	*e*Pn	Pn	22 30 47.3	+1.6
LPG				*e*Sg	Sg	22 31 18.5	+0.3
	32nm,0.5s						
LPL	La Plagne	2.03	296	*e*Pn	Pn	22 30 47.5	+1.5
LPL				*e*Sg	Sg	22 31 19.1	+0.2
	21nm,0.4s						
PGF	Pioggiola	2.13	187	*e*Pn	Pn	22 30 47.3	-0.2
PGF				*e*Sn	Sn	22 31 12.7	-1.6
	9.4nm,0.4s						
RSL	Roselend	2.17	299	Pn	Pn	22 30 49.0	+1.0
FRF	La Foret Royal	2.23	241	*e*Pn	Pn	22 30 48.7	-0.2
FRF				*e*Sn	Sn	22 31 14.7	-2.0
	13nm,0.3s						
OG25	Le Caire	2.35	264	Pn	Pn	22 30 52.5	+1.9
LMR	La Mourre	2.44	238	*e*Pn	Pn	22 30 51.2	-0.7
LMR				*e*Pg	Pg	22 30 59.9	-0.1
LMR				*e*Sn	Sn	22 31 20.7	-1.3
	18nm,0.4s						
LMR	La Mourre	2.44	238	*e*Pn	Pn	22 30 51.2	-0.7
LMR				*e*Sn	Sn	22 31 20.7	-1.3
	8.9nm,0.4s						
ORIF	Oris-en-Rattie	2.47	277	*e*Pn	Pn	22 30 56.0	+3.7
ORIF				*e*Sg	Sg	22 31 28.0	-5.6
	47nm,0.6s						
STOF	St-Etienne Org	2.55	256	Pg	Pg	22 30 56.3	-5.9
TAVF	Tavernes	2.58	247	Pg	Pg	22 30 54.6	-8.3
DAVA	Damuels	2.65	8	⇑*i*PN	Pn	22 30 55.6	+0.7
DAVA				*i* SN	Sn	22 31 19.9	-7.4
DAVA				*i* SG	Sg	22 31 25.8	-14
	19nm,0.6s						
VILF	Villemus	2.72	254	Pg	Pg	22 30 57.7	-8.0
SMRF	Simiane la Rot	2.78	257	*e*Pn	Pn	22 30 58.2	+1.4
SMRF				*e*Sn	Sn	22 31 28.5	-2.3
	13nm,0.5s						
PUYF	Puyloubier	2.85	248	Pg	Pg	22 30 58.4	-10
SQTA	Sankt Quirin	2.87	27	⇑*i*PN	Pn	22 30 59.1	+1.1
SQTA				*i* SN	Sn	22 31 26.2	-6.8
SQTA				*i* SG	Sg	22 31 33.7	-13
	9.3nm,0.4s						
SQTA	Sankt Quirin	2.87	27	⇑*i*P	Pn	22 30 59.1	+1.1
SQTA				*i*		22 31 33.7	
MOTA	Moosalm	2.95	24	⇓*i*PN	Pn	22 31 00.5	+1.3
MOTA				*i* SN	Sn	22 31 27.7	-7.3
MOTA				*i* SG	Sg	22 31 35.9	-14
	4.9nm,0.3s						
MOTA	Moosalm	2.95	24	⇓*i*P	Pn	22 31 00.5	+1.3
MOTA				*i*		22 31 35.9	
CABF	La Chapelle	2.99	312	*e*Pn	Pn	22 31 00.7	+0.9
CABF				*e*Sn	Sn	22 31 34.9	-1.2
	18nm,0.6s						
WTTA	Wattenberg	3.05	31	⇑*i*PN	Pn	22 31 01.9	+1.3
WTTA				*i* SN	Sn	22 31 31.1	-6.5
WTTA				*i* SG	Sg	22 31 40.3	-13
	7.9nm,0.3s						
WTTA	Wattenberg	3.05	31	⇑*i*P	Pn	22 31 01.9	+1.3
WTTA				*i*		22 31 40.3	
WATA	Walderalm	3.09	30	⇑*i*PN	Pn	22 31 01.9	+0.7
WATA				*i* SN	Sn	22 31 31.7	-6.9
VIVF	Saint-Julien-l	3.32	275	*e*Pn	Pn	22 31 06.6	+2.1
VIVF				*e*Sn	Sn	22 31 43.0	-1.5
	7.5nm,0.4s						
VOY	Vojsko	3.49	65	*e*Pn	Pn	22 31 06.4	-0.5
VOY				*e*Sn	Sn	22 31 45.2	-3.6
MOF	Molkenrain	3.53	335	Pn	Pn	22 31 06.4	-1.0
MOF				Sg	Sg	22 31 50.7	-18
JAVS	Javornik	3.56	68	*i* Pn	Pn	22 31 07.4	-0.4
JAVS				*i* Sn	Sn	22 31 48.1	-2.3
HINF	Hinteralfeld	3.59	332	*e*Pn	Pn	22 31 08.0	-0.2
HINF				*e*Sn	Sn	22 31 49.0	-2.2
	19nm,0.5s						
KBA	Koelnbreinsper	3.70	48	⇑*i*PN	Pn	22 31 12.0	+2.2
KBA				*i* SN	Sn	22 31 50.2	-3.7
KBA				*i* SG	Sg	22 32 05.3	-9.1
	5.2nm,0.4s						
ECH	Echery	3.85	338	Pn	Pn	22 31 12.3	+0.3
ECH				Sg	Sg	22 31 59.1	-21
HAU	Haudompre	3.92	329	*e*Pn	Pn	22 31 12.5	-0.5
HAU				*e*Sn	Sn	22 31 57.9	-1.8
	31nm,0.3s						
LASF	Ste Croix	3.97	263	*e*Pn	Pn	22 31 13.5	-0.2
LASF				*e*Sn	Sn	22 31 58.1	-2.7
	9.3nm,0.6s						
WLS	Welschbruch	3.99	341	Pn	Pn	22 31 13.1	-0.8
CDF	Champ du Feu	4.00	340	*e*Pn	Pn	22 31 13.0	-1.2
CDF				*e*Sn	Sn	22 31 58.8	-2.9
	8.6nm,0.4s						
PLDF	La Plantade	4.23	290	Pn	Pn	22 31 18.0	+0.6
THEF	They Montfort	4.24	328	Pn	Pn	22 31 17.5	-0.1
SMF	Signal de Mont	4.33	299	*e*Pn	Pn	22 31 19.3	+0.5
SMF				*e*Sn	Sn	22 32 06.1	-3.8
	13nm,0.5s						
LBL	Lubilhac	4.36	280	Pn	Pn	22 31 19.2	0.0
PYM	Petit Puy Mans	4.60	286	Pn	Pn	22 31 22.5	-0.1
AVF	Avril sur Loir	4.69	299	*e*Pn	Pn	22 31 23.8	-0.2
AVF				*e*Sn	Sn	22 32 19.6	+0.4
	4.8nm,0.6s						
SSF	Saint Saulge	4.72	303	*e*P	Pn	22 31 24.1	-0.2
SSF				*e*Sn	Sn	22 32 16.8	-3.0
	4.0nm,0.6s						
MEZF	Maizieres J’vi	4.84	324	*e*Pn	Pn	22 31 26.0	0.0
BGF	Bois d’Agland	4.93	295	*e*Pn	Pn	22 31 27.3	0.0
BGF				*e*Sn	Sn	22 32 20.6	-4.4
	15nm,0.5s						
CAF	Calviac	5.18	275	*e*Pn	Pn	22 31 31.9	+1.1
TCF	Toulx Ste Croi	5.26	290	*e*Pn	Pn	22 31 32.3	+0.3
TCF				*e*Sn	Sn	22 32 28.7	-4.8
	4.9nm,0.3s						
MTLF	Montolieu	5.30	258	*e*Pn	Pn	22 31 32.1	-0.4
MTLF				*e*Sn	Sn	22 32 28.1	-6.3
	5.4nm,0.6s						
KHC	Kasperske Hory	5.33	32	*e*PN	Pn	22 31 30.5	-2.4
KHC				*e*SN	Sn	22 32 29.0	-6.1
KHC				*e*x	x	22 33 00.0	
HYF	Humbligny	5.34	301	*e*Pn	Pn	22 31 32.4	-0.7
BAIF	Baives	6.42	329	*e*Pn	Pn	22 31 47.3	-1.0
EPF	Esparros	6.71	259	*e*Pn	Pn	22 31 50.8	-1.5
ETSF	Etsaut	7.37	260	*e*Pn	Pn	22 31 59.7	-2.0
SJPF	Ste Jean	7.78	262	*e*Pn	Pn	22 32 04.8	-2.7
SGMF	Saint Gilles	8.95	298	*e*Pn	P	22 32 21.4	-2.3

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*IDC **25** 22:35:29.7±1.2,2.14S×137.10E,mb3.8/5,mb1 4.2/8, mb1mx4.1/13,mbtmp4.0/8,ML3.8/3,Error ellipse: s-maj=38.1km s-min=15.1km az=79.0*

*NEIC **25** 22:35:30.6±0.8,2.05S×137.31E,h10^{km},mb4.2/4,Error ellipse: s-maj=18.6km s-min=11.8km az=74.0*

ISC 25 22:35:27.7±3.2**,2.08S**±0.07×**137.3E**±0.1**,h3**^{km}±21^{km}**,n16,** σ**1**^{s}**.05**/22**,mb3.8**/6**,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	11.60	204	*e*P	P	22 38 17.7	+0.4
	16nm,0.4s						
KAKA				*e*S	S	22 40 23.5	-4.9
PMG	Port Moresby	12.24	127	Pn	P	22 38 25.5	-0.5
	0.4nm,0.3s,baz=292,slow=18,SNR=3.7						
PMG	Port Moresby	12.24	127	*e*Pn	P	22 38 25.1	-0.9
WRAB	Tennant Creek	17.97	189	*e*Pn	P	22 39 39.1	-1.3
	14nm,0.7s						
WB2	Warramunga Arr	17.98	189	*e*P	P	22 39 39.7	-0.8
WB2				*e*S	S	22 42 50.1	-9.0
WRA	Warramunga Arr	17.98	189	P	P	22 39 39.7	-0.8
	0.9nm,0.3s,baz=13,slow=13,SNR=13						
WRA				S	S	22 42 49.9	-9.3
	0.2nm,0.3s,baz=15,slow=21,SNR=5.7						
FITZ	Fitzroy Crossi	19.59	215	*e*P	P	22 40 01.1	+1.2
	7.3nm,0.6s						
FITZ				*e*S	S	22 43 34.0	-1.4
CTA	Charters Tower	19.94	154	P	P	22 40 03.4	-0.4
	0.2nm,0.3s,baz=315,slow=13,SNR=2.5						
ASAR	Alice Springs	21.71	188	P	P	22 40 23.4	+1.4

	3.2nm,0.4s,mb4.1,baz=17,slow=9.7,SNR=41						
ASAR				S	S	22 44 21.9	+4.0
	7.7nm,0.9s,baz=12,slow=22,SNR=6.5						
ASPA	**Alice Springs**	21.71	188	*e*P	P	22 40 23.3	+1.3
ASPA				*e*S	S	22 44 20.6	+2.7
STKA	**Stephens Creek**	29.92	173	*e*P	P	22 41 39.5	+0.2
	1.7nm,0.4s,mb4.1						
STKA	**Stephens Creek**	29.92	173	P	P	22 41 39.6	+0.3
	2.0nm,0.5s,mb4.1,baz=347,slow=9.3,SNR=12						
CMAR	**Chiang Mai Arr**	42.87	300	P	P	22 43 30.1	+0.7
	1.0nm,0.8s,mb3.6,baz=105,slow=6.5,SNR=6.1						
SONM	**Songino Array**	56.54	336	P	P	22 45 12.5	-1.3
	0.2nm,0.6s,mb3.3,baz=153,slow=6.4,SNR=2.9						
VNDA	**Vanda**	76.53	175	P	P	22 47 21.9	+1.4
	1.4nm,1.1s,mb3.8,baz=340,slow=7.5,SNR=4.1						
CHKZ	**Chkalovo**	78.07	326	*e*P	P	22 47 29.0	-0.4
	0.7nm,0.6s,mb3.8						

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*BUG **25** 22:48:14.2, 51.65N×7.68E, h1^{km}, ML2.2*
*NEIC **25** 22:48:15.2±0.4, 51.56N×7.74E, h10^{km}, ML2.9(LDG), ML2.4(SZGRF), ML2.4(BUG), Error ellipse: s-maj=6.3km s-min=4.0km az=156.0*
*BNS **25** 22:48:15.3±1.4, 51.66N×7.69E, h1^{km}, ML2.5*
*BGR **25** 22:48:15.4±0.2, 51.58N×7.70E, h1^{km}, ML2.4/7, Error ellipse: s-maj=2.2km s-min=2.2km az=21.0*
*LDG **25** 22:48:18.5±0.1, 51.37N×7.67E, h1^{km}, Ml2.9/13, Error ellipse: s-maj=2.8km s-min=2.0km az=93.0, Suspected Mining induced.*
*CSEM **25** 22:48:18.0±0.1, 51.38N×7.73E, h2^{km}, ML2.9/12, Error ellipse: s-maj=2.4km s-min=2.1km az=154.0*
ISC 25 22:48:13.0±0.3**, 51.54N**±0.02×**7.70E**±0.02**, n57, σ1^{s}30**/109**, 1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAHL	**Ahlen**	0.22	20	Pg	Pg	22 48 18.0	+0.7
BAHL				Sg	Sg	22 48 20.7	+0.5
BUG	**Bochum--Univer**	0.29	251	⇓*i*Pg	Pg	22 48 21.4	+2.7
BUG				Sg	Sg	22 48 26.7	+4.1
BUG	**Bochum--Univer**	0.29	251	*e*Pg	Pg	22 48 21.4	+2.7
BUG				*e*Sg	Sg	22 48 26.7	+4.1
BNS	**Bensberg**	0.66	210	*e*Pg	Pg	22 48 30.6	+4.3
BNS				*e*Sg	Sg	22 48 40.6	+5.6
	217nm,0.8s						
WTSB	**Winterswijk**	0.71	308	*e*Pg	Pg	22 48 27.8	+0.6
	SNR=24						
WTSB				*e*Sg	Sg	22 48 37.1	+0.5
	SNR=1.5						
IBBN	**Ibbenburen**	0.78	3	*e*Pg	Pg	22 48 28.9	+0.4
	SNR=12						
IBBN				*e*Sg	Sg	22 48 38.4	-0.4
	SNR=3.9						
IBBN	**Ibbenburen**	0.78	3	*e*Pg	Pg	22 48 28.9	+0.4
IBBN				*e*Sg	Sg	22 48 39.1	+0.3
JUE	**Julich**	1.03	233	*e*Sg	Sg	22 48 51.4	+4.2
STB	**Steinbach**	1.09	210	*e*Pg	Pg	22 48 37.7	+3.0
STB				*e*Sg	Sg	22 48 53.5	+4.3
	106nm,0.6s						
KLL	**Kalltalsperre**	1.25	225	*e*Pg	Pg	22 48 39.4	+1.4
KLL				*e*Sg	Sg	22 48 57.4	+2.8
	47nm,0.4s						
BGG	**Burgeitz**	1.35	190	*e*Pg	Pg	22 48 41.5	+1.5
BGG				*e*Sg	Sg	22 48 59.5	+1.5
	47nm,1.2s						
HGN	**Heimansgroeve**	1.36	236	*e*Pn	Pn	22 48 40.4	+1.1
	SNR=2.1						
HGN				*e*Sg	Sg	22 48 59.2	+1.1
	SNR=4.6						
TNS	**Taunus Mts**	1.40	160	*e*Pn	Pn	22 48 41.8	+2.0
	SNR=1.5						
TNS				*e*Pg	Pg	22 48 42.5	+1.6
	SNR=13						
TNS				*e*Sg	Sg	22 49 00.6	+1.1
	SNR=3.8						
TNS	**Taunus Mts**	1.40	160	*e*Pn	Pn	22 48 41.7	+1.9
TNS				*e*Sg	Sg	22 49 02.0	+2.5
WIT	**Witteveen**	1.43	334	*e*Sg	Sg	22 48 60.0	-0.7
	SNR=4.3						
UBBA	**Unterbreizbach**	1.61	115	*e*Pg	Pg	22 48 45.5	+0.3
	SNR=6.7						
UBBA				*e*Sg	Sg	22 49 07.5	+0.7
	SNR=3.1						
CLZ	**Clausthal**	1.69	78	*e*Pn	Pn	22 48 44.2	+0.2
	SNR=1.7						
CLZ				*e*Pg	Pg	22 48 46.3	-0.5
	SNR=32						
CLZ				*e*Sg	Sg	22 49 09.9	+0.6
	SNR=3.7						
CLZ	**Clausthal**	1.69	78	*e*Pn	Pn	22 48 44.0	0.0
CLZ				*e*Sg	Sg	22 49 09.9	+0.6
WLF	**Walferdange**	2.12	208	*e*Pn	Pn	22 48 51.7	+1.6
WLF				*e*Pg	Pg	22 48 56.3	+1.1
WLF				*e*Sg	Sg	22 49 23.4	-0.1
WLF	**Walferdange**	2.12	208	*e*Pn	Pn	22 48 51.7	+1.6
WLF	**Walferdange**	2.12	208	*e*Pg	Pg	22 48 56.3	+1.0
WLF				S	Sn	22 49 22.6	+5.1
GIVF	**Givet**	2.32	233	*e*Pn	Pn	22 48 54.4	+1.4
GIVF				*e*Sn	Sn	22 49 20.7	-2.0
GIVF				*e*Sg	Sg	22 49 29.0	-1.3
	30nm,0.5s						
DOU	**Dourbes**	2.44	235	P	Pn	22 48 56.2	+1.5
NEUB	**Neuenburg**	2.57	96	*e*Sg	Sg	22 49 37.4	-1.3
	SNR=2.9						
MOX	**Moxa**	2.62	108	*e*Pn	Pn	22 48 58.9	+1.5
	SNR=4.5						
MOX				*e*Pg	Pg	22 49 05.3	-0.1
	SNR=5.1						
MOX				*e*Sg	Sg	22 49 38.5	-1.9
	SNR=3.1						
MOX	**Moxa**	2.62	108	*e*Pn	Pn	22 48 58.8	+1.4
MOX				*e*Pg	Pg	22 49 05.4	0.0
MOX				*e*Sg	Sg	22 49 41.4	+1.0
MOX	**Moxa**	2.62	108	*i* P	Pn	22 48 58.8	+1.4
MOX				Pg	Pg	22 49 05.0	-0.4
MOX				Sg	Sg	22 49 41.0	+0.6
BAIF	**Baives**	2.66	238	*e*Pn	Pn	22 48 59.6	+1.7
BAIF				*e*Sn	Sn	22 49 28.9	-2.5
BAIF				*e*Sg	Sg	22 49 37.5	-4.2
	32nm,0.8s						
WERD	**Werda**	3.11	109	*e*Pn	Pn	22 49 05.4	+1.2
	SNR=2.8						
WERD				*e*Sg	Sg	22 49 53.7	-2.8
	SNR=2.2						
CDF	**Champ du Feu**	3.14	185	*e*Pn	Pn	22 49 04.3	-0.4
CDF				*e*Sg	Sg	22 49 51.6	-5.9
	20nm,0.8s						
TANN	**Tannenbergstha**	3.21	109	*e*Pn	Pn	22 49 06.0	+0.3
	SNR=3.2						
TANN				*e*Pg	Pg	22 49 16.5	-0.7
	SNR=2.5						
BFO	**Black Forest**	3.23	173	*e*Pn	Pn	22 49 07.0	+1.0
	SNR=3.3						
BFO				*e*Sn	Sn	22 49 43.8	-2.1
	SNR=2.0						
RFYF	**Reffroy**	3.24	207	*e*Pn	Pn	22 49 07.4	+1.2
RFYF				*e*Sg	Sg	22 49 55.7	-5.3
	13nm,0.5s						
CLL	**Collm**	3.33	92	*e*Pg	Pg	22 49 17.0	-2.4
CLL				*e*Sg	Sg	22 50 04.0	+0.2
CLL	**Collm**	3.33	92	*e*PN	Pn	22 49 08.0	+0.6
CLL				*e*PG	Pg	22 49 17.0	-2.4
CLL				*e*SG	Sg	22 50 04.0	+0.2
MEZF	**Maizieres J’vi**	3.48	210	*e*Pn	Pn	22 49 09.5	-0.1
MEZF				*e*Sg	Sg	22 50 03.4	-5.6
	21nm,0.9s						
HAU	**Haudompre**	3.64	194	*e*Pn	Pn	22 49 11.5	-0.3
HAU				*e*Sg	Sg	22 50 07.6	-6.6
	10nm,0.6s						
SFTF	**Sexfontaines**	3.75	208	*e*Pn	Pn	22 49 13.3	-0.1
SFTF				*e*Pg	Pg	22 49 25.1	-2.8
SFTF				*e*Sg	Sg	22 50 11.3	-6.6
	7.9nm,0.6s						
HINF	**Hinteralfeld**	3.76	189	*e*Pn	Pn	22 49 13.4	-0.2
HINF				*e*Sg	Sg	22 50 11.4	-6.9
	17nm,0.8s						
BRG	**Berggiesshubel**	3.98	97	*e*Pn	Pn	22 49 18.0	+1.3
BRG				*i* Pg	Pg	22 49 31.1	-1.4
BRG				*i* Sg	Sg	22 50 24.2	-1.4
WET	**Wettzell**	4.09	124	*e*Sg	Sg	22 50 26.2	-3.0
	SNR=1.7						
KHC	**Kasperske Hory**	4.47	120	*e*PN	Pn	22 49 26.5	+2.9
KHC				*e*x	x	22 49 42.0	
KHC				*e*x	x	22 50 36.0	
KHC				*e*SG	Sg	22 50 43.0	+1.2
CABF	**La Chapelle**	5.04	193	*e*Pn	Pn	22 49 31.0	-0.7
SSF	**Saint Saulge**	5.25	213	*e*Pn	Pn	22 49 33.8	-0.9
SSF				*e*Sg	Sg	22 50 57.5	-10
	3.1nm,0.6s						
HYF	**Humbligny**	5.40	220	*e*Pn	Pn	22 49 36.3	-0.4
HYF				*e*Sg	Sg	22 51 03.1	-10
SMF	**Signal de Mont**	5.51	209	*e*Pn	Pn	22 49 36.9	-1.4
SMF				*e*Sg	Sg	22 51 06.3	-10
	2.9nm,0.6s						
AVF	**Avril sur Loir**	5.54	213	*e*Pn	Pn	22 49 37.2	-1.5
AVF				*e*Sg	Sg	22 51 07.1	-10
	3.1nm,0.5s						
LDF	**La Druitiere**	5.83	243	*e*Pn	Pn	22 49 43.1	+0.2
BGF	**Bois d’Agland**	5.92	215	*e*Pn	Pn	22 49 43.2	-0.8
BGF				*e*Sg	Sg	22 51 20.0	-10
	8.8nm,0.5s						
FLN	**La Foliniere**	5.95	245	*e*Pn	Pn	22 49 43.2	-1.3
GRR	**Gorron**	6.36	244	*e*Pn	Pn	22 49 49.6	-0.7
TCF	**Toulx Ste Croi**	6.38	217	*e*Pn	Pn	22 49 49.5	-1.0
VIVF	**Saint-Julien-l**	6.98	198	*e*Pn	Pn	22 49 57.2	-1.9
MFF	**Saint Martin d**	7.13	229	*e*Pn	Pn	22 50 00.1	-1.1
SGMF	**Saint Gilles**	7.39	248	*e*Pn	Pn	22 50 03.9	-1.0
CAF	**Calviac**	7.61	212	*e*Pn	Pn	22 50 06.3	-1.5
QUIF	**Quistinic**	7.92	247	*e*Pn	Pn	22 50 10.9	-1.3

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*ISK **25** 22:59:11.5, 39.45N×25.98E, h16^{km}, MD3.5*
*ATH **25** 22:59:11.9, 39.40N×26.16E, h25^{km}±1^{km}, MD3.5/12, ML3.6*
*NEIC **25** 22:59:11.3, 39.45N×25.96E, h16^{km}, MD3.5(ATH), ML3.6(ISK), After ISK.*
*THE **25** 22:59:12.1, 39.34N×26.20E, h4^{km}, ML3.5*
*CSEM **25** 22:59:12.1±0.1, 39.40N×26.15E, h8^{km}, MD3.5, Error ellipse: s-maj=1.5km s-min=1.3km az=4.0*
*SOF **25** 22:59:15.3, 39.64N×25.96E, h10^{km}, MD3.1*
ISC 25 22:59:11.7±0.7**, 39.39N**±0.02×**26.09E**±0.02**, h6**^{km}±5^{km}**, n96, σ0^{s}76**/109**, 2C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.20	135	*e*PB	Pb	22 59 17.4	0.0
EZN	**Ezine**	0.47	23	*i* PG	Pg	22 59 21.1	-0.2
EZN				*i* SG	Sg	22 59 27.8	+0.2
EZN	**Ezine**	0.47	23	Pg	Pg	22 59 21.1	-0.1
EZN				Sg	Sg	22 59 28.1	+0.5
EZN	**Ezine**	0.47	23	*i* Pg	Pg	22 59 21.1	-0.2
EZN				Sg	Sg	22 59 28.1	+0.5
AYVA	**Ayvalik**	0.48	100	*i* P	Pg	22 59 21.7	+0.4
AYVA				*i* S	Sg	22 59 28.5	+0.8
LIA	**Limnos Island**	0.86	306	*e*PN	Pn	22 59 29.1	-1.1
LIA				*e*SN	Sn	22 59 42.3	-0.8
LOS	**Limnos**	0.95	305	*e*Pg	Pg	22 59 31.5	+0.8
CANB	**Canakkale**	0.98	50	PG	Pg	22 59 32.3	+1.0
CANB	**Canakkale**	0.98	50	Pg	Pg	22 59 32.1	+0.8
CANB	**Canakkale**	0.98	50	Pg	Pg	22 59 32.2	+0.9
LPK	**Lapseki**	1.11	28	PN	Pn	22 59 32.8	-0.9
LPK	**Lapseki**	1.11	28	Pn	Pn	22 59 32.8	-0.9
BLCB	**Balcova**	1.25	143	PN	Pn	22 59 36.1	+0.4
BLCB	**Balcova**	1.25	143	Pn	Pn	22 59 36.2	+0.4
KDAG	**Bornova**	1.35	137	*i* P	Pb	22 59 37.8	+0.8
IZM	**Izmir**	1.35	137	PN	Pn	22 59 37.9	+0.7
IZM	**Izmir**	1.35	137	Pn	Pn	22 59 38.0	+0.8
BALB	**Balikesir**	1.41	79	PN	Pn	22 59 38.2	+0.2
BALB	**Balikesir**	1.41	79	Pn	Pn	22 59 38.3	+0.2
AKS	**Akhisar**	1.44	110	PN	Pn	22 59 38.9	+0.5
AKS	**Akhisar**	1.44	110	Pn	Pn	22 59 39.0	+0.6
ALN	**Alexandroupoli**	1.51	359	*e*Pb	Pb	22 59 39.7	0.0
ALN				*e*Sb	Sb	23 00 00.1	+1.2
SART	**Tekirdag**	1.55	33	*i* P	Pn	22 59 39.9	0.0
SART				*i* S	Sb	23 00 01.0	+0.9
BTOK	**Tokmak**	1.55	76	*i* P	Pn	22 59 40.1	+0.1
BTOK				*i* S	Sb	23 00 00.0	-0.2
MFT	**Murefte**	1.67	33	PN	Pn	22 59 41.5	-0.2
MFT	**Murefte**	1.67	33	Pn	Pn	22 59 41.8	+0.1
MRMT	**Marmara Adasi**	1.68	43	PN	Pn	22 59 40.4	-1.5
MRMT	**Marmara Adasi**	1.68	43	Pn	Pn	22 59 40.5	-1.4
MRMT	**Marmara Adasi**	1.68	43	Pn	Pn	22 59 40.5	-1.4
BNT	**Bandirma**	1.71	55	PN	Pn	22 59 42.2	-0.1
AOS	**Alonnisos**	1.73	263	*e*Pb	Pb	22 59 42.9	-0.5
SMG	**Samos**	1.78	160	*e*PN	Pn	22 59 43.2	-0.1
RDO	**Rodhopi**	1.80	347	*e*PN	Pn	22 59 43.7	+0.1
OUR	**Ouranopolis**	1.87	301	*e*Pb	Pb	22 59 45.5	-0.6
PAIG	**Paliouri**	1.93	287	*e*Pn	Pn	22 59 45.4	-0.1
PAIG				*e*Sn	Sn	23 00 12.4	+2.0
KCT	**Karacabey**	1.96	63	PN	Pn	22 59 45.9	+0.1
KCT	**Karacabey**	1.96	63	Pn	Pn	22 59 46.0	+0.2
DST	**Dursunbey**	1.98	83	PN	Pn	22 59 46.5	+0.3
DST	**Dursunbey**	1.98	83	Pn	Pn	22 59 46.5	+0.4
PTL	**Penteli**	2.19	233	*e*PN	Pn	22 59 48.9	-0.3
MPAR	**Parnis Oros**	2.21	237	*e*PB	Pb	22 59 51.0	-0.8
MPAR	**Parnis Oros**	2.21	237	*e*Pb	Pb	22 59 51.5	-0.3
NEO	**Neokhori**	2.22	269	*e*PN	Pn	22 59 49.5	-0.1
XOR	**Xorichti**	2.24	270	*e*Pn	Pn	22 59 49.7	-0.2
PLG	**Polygyros**	2.26	297	*e*PB	Pb	22 59 51.5	-1.0
ORLT	**Orhaneli**	2.27	72	*e*PN	Pn	22 59 50.8	+0.5
KDZ	**Kurdzhali**	2.31	348	P	Pn	22 59 52.0	+1.0
ATH	**Athens Observa**	2.33	233	*e*PB	Pb	22 59 52.5	-1.3
APE	**Apeiranthos**	2.36	191	*e*PN	Pn	22 59 51.1	-0.5
APE	**Apeiranthos**	2.36	191	*e*PN	Pn	22 59 51.0	-0.6
ULDT	**Uludag**	2.47	71	*i* P	Pn	22 59 53.0	-0.2
EDRB	**Edirne**	2.50	11	*e*PN	Pn	22 59 52.0	-1.7
CTT	**Catalca**	2.51	45	*e*PN	Pn	22 59 52.6	-1.2
CTT	**Catalca**	2.51	45	Pn	Pn	22 59 52.6	-1.1
LKR	**Lokris**	2.51	254	*e*PN	Pn	22 59 53.4	-0.4
BODT	**Bodrum**	2.52	157	*e*PN	Pn	22 59 53.8	-0.1
BODT	**Bodrum**	2.52	157	Pn	Pn	22 59 53.8	0.0
RZN	**Rozhen**	2.52	336	*i* P	Pn	22 59 54.0	+0.1
RZN				Sg	Sg	23 00 32.0	-3.7
NSAL	**Nisos Salamina**	2.53	235	*e*PN	Pn	22 59 54.5	+0.4
SRS	**Serrai**	2.57	313	*e*Pn	Pn	22 59 54.3	-0.3
NVR	**Nevrokopi**	2.59	320	*e*PN	Pn	22 59 54.6	-0.3
NAIG	**Nisos Aigina**	2.61	232	*e*PN	Pn	22 59 55.0	-0.1
DIM	**Dimitrovgrad**	2.69	351	P	Pn	22 59 57.0	+0.7
BADT	**Buyukada**	2.75	57	*e*PN	Pn	22 59 56.2	-0.9
BADT	**Buyukada**	2.75	57	Pn	Pn	22 59 56.3	-0.9
BADT	**Buyukada**	2.75	57	Pn	Pn	22 59 56.3	-0.8
YLV	**Yalova**	2.79	64	*e*PN	Pn	22 59 56.8	-0.9
YLV	**Yalova**	2.79	64	Pn	Pn	22 59 56.9	-0.8
YLV	**Yalova**	2.79	64	Pn	Pn	22 59 56.9	-0.8
ISK	**Istanbul-Kandi**	2.83	53	*e*PN	Pn	22 59 58.1	-0.2
ISK	**Istanbul-Kandi**	2.83	53	Pn	Pn	22 59 58.1	-0.2
MMB	**Musomiste**	2.84	321	*i* P	Pn	22 59 58.0	-0.4
LIT	**Litokhoron**	2.86	286	*e*Pn	Pn	22 59 59.2	+0.4
LIT				*e*Sn	Sn	23 00 36.0	+2.1
KNT	**Kendrikon**	3.01	307	*e*Pn	Pn	23 00 01.2	+0.3
HRT	**Hereke**	3.10	61	*e*PN	Pn	23 00 01.1	-1.0
HRT	**Hereke**	3.10	61	Pn	Pn	23 00 01.7	-0.4
HRT	**Hereke**	3.10	61	Pn	Pn	23 00 01.7	-0.4
ALT	**Altintas**	3.15	95	*e*PN	Pn	23 00 03.5	+0.7
ALT	**Altintas**	3.15	95	Pn	Pn	23 00 03.6	+0.8
GRG	**Griva**	3.23	300	*e*Pn	Pn	23 00 04.5	+0.5
EVR	**Evrytania**	3.36	263	*e*PN	Pn	23 00 06.7	+0.9
KKB	**Krupnik**	3.37	318	P	Pn	23 00 06.7	+0.7
KKB				Sg	Sg	23 00 58.0	-5.9
PGB	**Panagyurishte**	3.48	336	P	Pn	23 00 06.0	-1.5
ESKT	**Eskisehir**	3.69	86	*e*PN	Pn	23 00 10.2	-0.4
ESKT	**Eskisehir**	3.69	86	Pn	Pn	23 00 10.3	-0.3
ESKT	**Eskisehir**	3.69	86	Pn	Pn	23 00 10.3	-0.3
VTS	**Vitosha**	3.87	327	⇓P	Pn	23 00 13.9	+0.8
VTS	**Vitosha**	3.87	327	*i* P	Pn	23 00 13.0	-0.1
VTS				Sg	Sg	23 01 12.5	-8.1
FNA	**Florina**	3.87	293	*e*Pn	Pn	23 00 13.9	+0.7
KIZT	**Kizilcal**	4.54	95	Pn	Pn	23 00 22.5	-0.1
KIZT	**Kizilcal**	4.54	95	Pn	Pn	23 00 22.5	-0.1
TIRR	**Tirgusor**	5.35	18	⇓P	Pn	23 00 32.3	-1.8
MLR	**Muntele Rosu**	6.10	359	⇓P	Pn	23 00 45.1	+0.5
VRI	**Vrincioaia**	6.49	4	⇑P	Pn	23 00 50.3	+0.1
BZS	**Buzias**	7.04	334	⇓P	Pn	23 00 58.4	+0.5
BURAR	**Bucovina Array**	8.25	356	⇑P	P	23 01 15.5	+0.7

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*BGS **25** 23:03:59.2, 37.54N×73.00E, h115^{km}, mb5.8*
*MOS **25** 23:04:00.4±1.0, 38.14N×72.70E, h95^{km}, mb6.2/105, Error ellipse: s-maj=5.5km s-min=2.7km az=42.0*
MOS Felt (IV) at Dushanbe; (III) at Andizhan, Tashkent.
*BJI **25** 23:04:02.1, 38.18N×72.71E, h107^{km}, mB5.4, mb5.5*
*IDC **25** 23:04:03.8±0.6, 38.11N×72.71E, h110^{km}±5^{km}, mb5.4/28, mb1 5.5/29, mb1mx5.5/30, mbtmp5.8/29, MS4.6/13, Ms1 4.6/13, ms1mx4.4/22, Error ellipse: s-maj=13.3km s-min=8.5km az=30.0*
*NEIC **25** 23:04:04.0±0.1, 38.11N×72.71E, mb6.1/218, ME5.5, MW5.7, Error ellipse: s-maj=3.5km s-min=1.9km az=188.0 Broadband fault plane solution: P waves. NP1:ϕ_s100°, δ65°, λ-90°. NP2:ϕ_s280°, δ25°, λ-90°. Principal axes: T Plg20°, Azm190°; N Plg0°, Azm0°; P Plg70°, Azm10°; Moment Tensor Solution. s27 Moment tensor: Scale 10^{17} Nm; M_{rr}-3.01; $M_{\theta\theta}$1.81; $M_{\phi\phi}$1.20; $M_{r\theta}$-1.96; $M_{\theta\phi}$-2.56; $M_{\phi r}$-0.89; Best double couple: $M_0$4.3×10^{17} NP1:ϕ_s339°, δ46°, λ-45°. NP2:ϕ_s104°, δ60°, λ-126°. Principal axes: T 4.2, Plg8°, Azm219°; N .1, Plg31°, Azm124°; P -4.3, Plg58°, Azm321°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [IV] at Dushanbe. Felt [III] at Andijon and Tashkent, Uzbekistan.
*HRVD **25** 23:04:04.0±0.2, 38.18N×72.40E, h134^{km}, MW5.7/71, Centroid moment Tensor Solution. LP body waves: s70,c143;Mantle waves: s71,c190; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.31±.05; $M_{\theta\theta}$1.34±.06; $M_{\phi\phi}$0.97±.06; $M_{r\theta}$-2.30±.05; $M_{\theta\phi}$-2.33±.06; $M_{\phi r}$-0.86±.04; Best double couple: $M_0$3.924×10^{17} NP1: ϕ_s343°, δ45°, λ-36°. NP2:ϕ_s100°, δ66°, λ-129°. Principal axes: T 3.736, Plg12°, Azm217°; N .384, Plg35°, Azm119°; P -4.112, Plg53°, Azm324°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NNC **25** 23:04:10.1±4.3, 38.78N×72.40E, h196^{km}±38^{km}, mpv6.4 Error ellipse: s-maj=64.0km s-min=34.3km az=85.0*
ISC 25 23:04:01.4±0.3**, 38.08N**±0.02×**72.69E**±0.02**, h107**^{km}±2^{km}**, h113**^{km}±1.2^{km}**:pP-P, n1176, σ0^{s}98**/1213**, mb6.0**/299**, 68C-403D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	2.94	60	⇑P	P	23 04 50.3	+2.8
KSH				*e*XP		23 05 15.0	
KSH				S	S	23 05 25.8	+3.5
KSH				*e*SS	SS	23 05 33.0	-2.8
KSH				LR	LR		
	comp=N,173μm,3.8s						
AML	**Almayashu**	4.12	10	P	P	23 05 04.0	+0.4
	SNR=6913						
CEP	**Cherat**	4.29	189	⇑P	P	23 05 07.9	+2.0
UCH	**Uchtor**	4.37	18	P	P	23 05 08.0	+0.9
	SNR=2802						
KZA	**Kyzart**	4.45	25	P	P	23 05 08.8	+0.7
	SNR=5128						
EKS2	**Erkin-Say**	4.65	10	P	P	23 05 11.3	+0.5
	SNR=5659						
AAK	**Ala-Archa**	4.75	16	⇑P	P	23 05 13.3	+1.2
	comp=N,6μm,0.7s						
AAK				⇑S	S	23 06 04.8	-1.7
	comp=N,33μm,1.1s						
AAK	**Ala-Archa**	4.75	16	PN	P	23 05 13.3	+1.1
AAK						23 06 05.3	
AAK				pmax	pmax		
	comp=Z,4μm,0.7s						
AAK				smax			
	comp=E,36μm,1.1s						
AAK	**Ala-Archa**	4.75	16	⇑*i*Pn	P	23 05 12.2	0.0
AAK				*e*Sn	S	23 06 04.5	-2.0
KBK	**Karagaybulak**	4.89	20	P	P	23 05 15.0	+1.0
	SNR=2443						
FRU	**Bishkek**	4.97	17	α*i*PN	P	23 05 16.4	+1.3
FRU				*i*		23 06 10.2	
FRU				pmax	pmax		
	comp=Z,16nm,3.0s						
FRU				smax			
	comp=N,61μm,4.0s						
ULHL	**Ulahol**	4.97	32	P	P	23 05 15.7	+0.6
	SNR=733						
CHMS	**Chumysh**	5.16	17	P	P	23 05 18.4	+0.7
	SNR=938						
TKM2	**Tokmak 2**	5.32	24	P	P	23 05 20.2	+0.4
	SNR=1626						
THW	**Thamme Wali**	5.33	189	⇑P	P	23 05 20.8	+0.9
USP	**Ospenovka**	5.36	14	P	P	23 05 20.6	+0.2
	SNR=392						
JMU	**Jammu**	5.65	161	⇓*i*P	P	23 05 26.5	+2.3
JMU				*i*		23 06 27.0	
SBDP	**Sheikh Budin**	5.97	196	⇓P	P	23 05 28.7	+0.1
AAA	**Alma-Ata**	6.11	31	*i* PN	P	23 05 30.5	-0.2
AAA				*e*S	S	23 06 38.0	-1.8
AAA				pmax	pmax		
	comp=Z,8μm,2.0s						
AAA				smax			
	comp=E,13μm,2.0s						
AAA				MLR	MLR		
	comp=Z,40μm,5.0s						
DLH	**Dalhousie**	6.14	153	*e*P	P	23 05 33.0	+2.0
DLH				*e*S	S	23 06 38.0	-2.4
SARP	**Sargodha**	6.14	180	⇑P	P	23 05 30.9	-0.1
THN	**Thein Dam**	6.15	155	*e*P	P	23 05 31.7	+0.5
THN				*e*S	S	23 06 35.0	-5.8
DRP	**Derazinda**	6.64	199	⇑P	P	23 05 38.5	+0.6
PONG	**Pong**	6.67	155	*e*P	P	23 05 39.0	+0.6
PONG				*e*S	S	23 06 47.0	-6.4
BHK	**Bhakra**	7.32	154	*e*P	P	23 05 46.5	-0.7
BHK				*e*		23 06 49.1	
SDNR	**Sundarnagar**	7.45	151	*e*P	P	23 05 48.2	-0.8
SDNR				*e*S	S	23 07 05.0	-7.4
SMLA	**Simla**	7.85	151	⇓*i*P	P	23 05 52.3	-2.2
SMLA				*i*		23 07 12.1	
KKR	**Kurukshetra**	8.79	156	*e*P	P	23 06 07.5	+0.4
KKR				*e*		23 07 33.7	
DDI	**Dehra Dun**	8.92	149	*e*P	P	23 06 07.3	-1.5
DDI				*e*		23 07 24.9	
BHGR	**Bahadurgarh**	10.02	158	*e*P	P	23 06 22.4	-1.1
NDI	**New Delhi**	10.10	157	*e*P	P	23 06 22.8	-1.9
	comp=Z,967nm,0.6s						
NDI				*e*S	S	23 08 04.5	-12
ASOR	**Ausora**	10.22	154	*e*P	P	23 06 25.4	-0.9
AYAN	**Aya Nagar**	10.26	158	*e*P	P	23 06 26.6	-0.3
AYAN				*e*		23 08 07.6	
KHET	**Khetri**	10.31	164	*e*P	P	23 06 25.1	-2.4
KHET				*e*		23 08 07.3	
KHET				*e*		23 08 20.0	
	comp=N,1μm,0.4s						
KHET				*e*		23 08 20.1	
	comp=E,3μm,0.5s						
KUDL	**Kundal**	10.40	161	*e*P	P	23 06 27.2	-1.6
KUDL				*e*		23 08 09.1	
PTH	**Pithoragarh**	10.56	141	*e*P	P	23 06 31.5	+0.7
PTH				*e*S	S	23 08 20.1	-7.4
LGTI	**Lohaghat**	10.65	142	*e*P	P	23 06 30.0	-2.1
LGTI				*e*S	S	23 08 16.5	-13
JASL	**Jaisalmer**	11.22	188	*e*P	P	23 06 38.1	-1.6
MK31	**Makanchi Array**	11.22	36	⇑P	P	23 06 39.3	-0.3
	comp=E,478nm,0.8s,baz=225,slow=17,SNR=2933						
MKAR	**Makanchi Array**	11.22	36	*i* P	P	23 06 38.7	-0.9
MKAR				pmax	pmax		
	comp=Z,859nm,1.0s						
AJM	**Ajmer**	11.68	171	⇑*i*P	P	23 06 43.0	-2.7
WMQ	**Urumqi**	12.71	58	⇑*i*P	P	23 06 58.0	-1.2
WMQ				XP		23 07 28.0	
WMQ				S	S	23 09 17.0	-1.6
WMQ				PCP	PcP	23 12 27.0	-1.6
WMQ				SCS	ScS	23 19 24.0	-1.6
WMQ				AMB	AMB		
	comp=Z,167nm,1.0s						
WMQ				AMB	AMB		
	comp=Z,312nm,8.0s						
WMQ				LR	LR		
	comp=N,5μm,14.0s						
WMQ				LR	LR		
	comp=E,3μm,12.0s						
WMQ				LR	LR		
	comp=Z,3μm,12.0s						
KURK	**Kurchatov**	13.32	17	⇓P	P	23 07 03.5	-3.6
	comp=Z,231nm,1.5s,baz=200,slow=11,SNR=510						
KURK				⇓S	S	23 09 27.9	-5.1
	comp=Z,309nm,1.7s,baz=324,slow=15,SNR=5.6						
KURK	**Kurchatov**	13.32	17	⇑*e*P	P	23 07 04.0	-3.2
KURK				*e*		23 09 26.3	
KURK				pmax	pmax		
	comp=Z,280nm,1.0s						

KURK	**Kurchatov**	**13.32**	**17**	⇑*e*Pn	**P**	**23 07 04.0**	**-3.2**
	comp=Z,279nm,1.0s						
KURK				*e*Sn	**S**	**23 09 26.3**	**-6.7**
JHNI	**Jhansi**	**13.52**	**157**	⇑*i*P	**P**	**23 07 07.0**	**-2.8**
JHNI				*i* S	**S**	**23 09 31.0**	**-6.7**
JHNI	**Jhansi**	**13.52**	**157**	*i* P	**P**	**23 07 07.0**	**-2.8**
JHNI				*i*		23 09 31.0	
KOLN	**Koldanda**	**13.76**	**135**	*e*P	**P**	**23 07 09.4**	**-3.5**
	comp=Z,277nm,0.4s						
KOLN				*e*S	**S**	**23 09 35.9**	**-7.5**
GKN	**Gorkha**	**14.18**	**132**	*e*P	**P**	**23 07 13.5**	**-4.8**
	comp=Z,797nm,0.6s						
GKN				*e*S	**S**	**23 09 44.3**	**-8.9**
VLK	**Valmikinagar**	**14.26**	**136**	*i*	**P**	**23 07 16.0**	**-3.4**
VLK				*i*		23 07 25.0	
KKN	**Kakani**	**14.72**	**131**	*e*P	**P**	**23 07 20.8**	**-4.4**
	comp=Z,468nm,0.5s						
KKN				*e*S	**S**	**23 09 56.8**	**-9.0**
DMN	**Daman**	**14.75**	**131**	*e*P	**P**	**23 07 21.4**	**-4.2**
	comp=Z,333nm,0.4s						
DMN				*e*S	**S**	**23 09 57.6**	**-8.9**
ALBI	**Allahabad**	**14.90**	**146**	⇑*i*	**P**	**23 07 22.0**	**-5.6**
PKI	**Pulchoki**	**14.96**	**131**	*e*P	**P**	**23 07 24.0**	**-4.3**
	comp=Z,369nm,0.6s						
PKI				*e*S	**S**	**23 10 02.8**	**-8.6**
BHJ	**Bhuj**	**15.00**	**191**	⇑*e*	**P**	**23 07 18.8**	**-10**
BHJ				*e*		23 09 58.4	
BVA0	**Borovoye Array**	**15.03**	**355**	⇑P	**P**	**23 07 25.9**	**-3.2**
	comp=Z,86nm,0.8s,baz=161,slow=12,SNR=1418						
BVA0				⇑S	**S**	**23 09 59.0**	**-14**
	comp=Z,78nm,1.3s,baz=164,slow=24,SNR=6.5						
BVA0	**Borovoye Array**	**15.03**	**355**	*i* P	**P**	**23 07 25.8**	**-3.3**
BVA0				pmax	pmax		
	comp=Z,65nm,0.8s						
BVAR	**Borovoye Array**	**15.03**	**355**	P	**P**	**23 07 26.0**	**-3.1**
	comp=Z,26nm,0.3s,baz=161,slow=12,SNR=320						
BVAR				S	**S**	**23 10 06.8**	**-6.2**
	comp=Z,14nm,0.3s,baz=158,slow=24,SNR=6.7						
BHPL	**Bhopal**	**15.34**	**163**	*e*P	**P**	**23 07 31.4**	**-1.7**
BHPL				*i*		23 10 09.1	
JIRN	**Jiri**	**15.37**	**129**	*e*P	**P**	**23 07 29.8**	**-3.7**
	comp=Z,772nm,0.4s						
JIRN				*e*S	**S**	**23 10 12.7**	**-8.0**
CHKZ	**Chkalovo**	**15.67**	**355**	⇓P	**P**	**23 07 33.4**	**-3.7**
	comp=Z,566nm,1.6s						
CHKZ				⇑S	**S**	**23 10 16.4**	**-11**
	comp=Z,1µm,2.5s						
CHKZ	**Chkalovo**	**15.67**	**355**	P	**P**	**23 07 33.5**	**-3.5**
CHKZ						23 10 16.4	
CHKZ				pmax	pmax		
	comp=Z,877nm,1.6s						
CHKZ				smax			
	comp=E,3µm,2.5s						
CHKZ	**Chkalovo**	**15.67**	**355**	⇓*e*Pn	**P**	**23 07 34.3**	**-2.7**
	comp=E,427nm,1.1s						
BHV	**Bhavnagar**	**16.28**	**182**	*e*P	**P**	**23 07 44.5**	**-0.4**
GTK	**Gangtok**	**17.14**	**124**	*e*	**P**	**23 07 51.0**	**-4.5**
LSA	**Lhasa**	**17.44**	**113**	P	**P**	**23 07 57.8**	**-1.5**
LSA				S	**S**	**23 11 02.8**	**-4.8**
LSA				LR	LR		
	comp=N,4µm,14.5s						
LSA				LR	LR		
	comp=E,3µm,14.5s						
LSA	**Lhasa**	**17.44**	**113**	*e*P	**P**	**23 07 59.6**	**+0.3**
LSA				pmax	pmax		
	comp=Z,279nm,0.9s						
LSA	**Lhasa**	**17.44**	**113**	*e*P	**P**	**23 07 59.5**	**+0.3**
	comp=Z,279nm,0.9s						
BLSP	**Bilaspur**	**17.85**	**150**	*i*	**P**	**23 08 04.0**	**-0.3**
BLSP				*e*		23 11 02.0	
NVS	**Novosibirsk**	**18.24**	**20**	*e*P	**P**	**23 08 06.2**	**-2.3**
NVS				*e*S	**S**	**23 11 20.9**	**-4.2**
NVS				pmax	pmax		
	comp=N,585nm,1.6s						
NVS				pmax	pmax		
	comp=E,254nm,1.6s						
NVS				pmax	pmax		
	comp=Z,862nm,1.6s						
NVS				smax			
	comp=N,5µm,1.6s						
NVS				smax			
	comp=E,4µm,1.6s						
BANOM	**Banah**	**18.41**	**234**	⇓P	**P**	**23 08 08.6**	**-2.0**
	SNR=62						
BANOM				⇓S	**S**	**23 11 27.9**	**-1.2**
BOM	**Bombay**	**19.11**	**180**	*e*	**P**	**23 08 19.3**	**+0.9**
	comp=E,1µm,1.1s						
BOM				*e*S	**S**	**23 11 37.4**	**-6.7**
BIDO	**Bidbid**	**19.12**	**225**	⇑P	**P**	**23 08 17.1**	**-1.4**
	SNR=56						
WBK	**Wadi Bani Khal**	**19.40**	**221**	⇑P	**P**	**23 08 21.8**	**+0.4**
	SNR=147						
ASHO	**Ashiyiah**	**19.45**	**231**	⇑P	**P**	**23 08 21.3**	**-0.7**
	SNR=274						
POO	**Poona**	**19.50**	**177**	*e*	**P**	**23 08 23.4**	**+0.9**
POO				*e*		23 11 52.7	
SMDO	**Samad**	**19.53**	**224**	P	**P**	**23 08 22.5**	**-0.3**
	SNR=92						
HOQ	**Hoqain**	**19.53**	**227**	⇑P	**P**	**23 08 21.4**	**-1.4**
	SNR=109						
MAK	**Makhachkala**	**19.73**	**292**	*c* *i*P	**P**	**23 08 24.0**	**-0.7**
MAK				*i* S	**S**	**23 11 57.0**	**+0.9**
MAK				pmax	pmax		
	comp=N,400nm,1.5s						
MAK				pmax	pmax		
	comp=E,1µm,1.5s						
MAK				pmax	pmax		
	comp=Z,2µm,1.5s						
MAK				pmax	pmax		
	comp=Z,5µm,8.0s						
MAK				pmax	pmax		
	comp=N,2µm,2.0s						
MAK				pmax	pmax		
	comp=E,2µm,2.0s						
MAK				smax			
	comp=N,13µm,10.0s						
MAK				smax			
	comp=E,4µm,10.0s						
MAK				smax			
	comp=N,1µm,1.0s						
MAK				smax			
	comp=E,2µm,1.0s						
MAK				MLR	MLR		
	comp=N,1µm,6.0s						
MAK				MLR	MLR		
	comp=E,5µm,14.0s						
MAK				MLR	MLR		
	comp=Z,7µm,14.0s						
LATR	**Latur**	**19.88**	**169**	*e*	**P**	**23 08 27.5**	**+1.0**
LATR				*e*S	**S**	**23 11 54.5**	**-4.8**
JMDO	**Jabal Madar**	**20.05**	**223**	P	**P**	**23 08 28.5**	**+0.2**
	SNR=325						
ARQ	**Araqi**	**20.18**	**228**	⇓P	**P**	**23 08 29.3**	**-0.3**
	SNR=172						
BSY	**Bisya**	**20.25**	**225**	P	**P**	**23 08 30.4**	**+0.1**
	SNR=207						
SVE	**Sverdlovsk**	**20.39**	**341**	⇓*i*P	**P**	**23 08 30.4**	**-1.1**
SVE				*e*PPP	PPP	23 09 07.0	+0.5
SVE				*e*SS	SS	23 12 12.0	-34
SVE				*e*SSS	SSS	23 12 40.0	-24
SVE				pmax	pmax		
	comp=Z,2µm,2.5s						
SVE				pmax	pmax		
	comp=N,2µm,2.0s						
SVE				pmax	pmax		
	comp=E,800nm,2.0s						
SVE				pmax	pmax		
	comp=Z,2µm,2.0s						
SVE				MLR	MLR		
	comp=N,4µm,7.0s						
SVE				MLR	MLR		
	comp=E,4µm,7.0s						
SVE				MLR	MLR		
	comp=Z,6µm,7.0s						
SHL	**Shillong**	**20.48**	**122**	⇓*i*	**P**	**23 08 34.0**	**+1.3**
	comp=Z,2µm,1.2s						
SHL				*e*S	**S**	**23 12 06.0**	**-4.8**
CAL	**Calcutta**	**20.50**	**135**	*e*	**P**	**23 08 34.8**	**+1.9**
	comp=Z,555nm,0.3s						
CAL				*e*		23 12 27.4	
KAD	**Karad**	**20.73**	**176**	*e*	**P**	**23 08 35.9**	**+0.7**
BWNR	**Bhubaneshwar**	**21.06**	**144**	*e*	**P**	**23 08 35.0**	**-3.5**
BWNR				*e*		23 12 15.0	
GTA	**Gaotai**	**21.18**	**78**	*e*P	**P**	**23 08 40.8**	**+1.3**
GTA				AP		23 09 03.8	
GTA				PP	PP	23 09 10.5	+4.3
GTA				XP		23 09 17.8	
GTA				S	**S**	**23 12 29.0**	**+5.4**
GTA				PCP	PcP	23 12 41.5	-0.4
GTA				XS		23 13 03.3	
GTA				SS	SS	23 13 09.0	+3.7
GTA				AMB	AMB		
	comp=Z,916nm,6.9s						
GTA				LR	LR		
	comp=N,3µm,7.6s						
GTA				LR	LR		
	comp=E,2µm,6.5s						
GTA				LR	LR		
	comp=Z,1µm,8.4s						
HYB	**Hyderabad**	**21.22**	**164**	⇑*i*P	**P**	**23 08 41.0**	**+0.9**
HYB				*e*		23 09 04.0	
HYB				*e*		23 09 26.0	
HYB				*e*S	**S**	**23 12 31.0**	**+6.5**
HYB				pmax	pmax		
	comp=Z,750nm,1.0s,mb6.0						
HYB	**Hyderabad**	**21.22**	**164**	⇑*i*P	**P**	**23 08 41.0**	**+0.9**
	comp=Z,750nm,1.0s,mb6.0						
HYB				*e*		23 09 04.0	
HYB				*e*		23 09 26.0	
HYB				*e*S	**S**	**23 12 31.0**	**+6.5**
HYB	**Hyderabad**	**21.22**	**164**	⇑*i*P	**P**	**23 08 41.0**	**+0.9**
	comp=Z,750nm,1.0s,mb6.0						
HYB				*e*pP		23 09 04.0	
HYB				*e*PP	PP	23 09 09.5	+2.7
HYB				*e*sP		23 09 21.0	
HYB				*e*		23 12 20.0	
HYB				*e*S	**S**	**23 12 29.0**	**+4.5**
AGT	**Agartala**	**21.24**	**126**	⇓*i*	**P**	**23 08 42.0**	**+1.7**
AGT				*i*		23 10 28.0	
MTA	**Mtatsminda**	**21.67**	**288**	P	**P**	**23 08 45.0**	**+0.6**
MTA				S	**S**	**23 12 35.1**	**+2.6**
TI2	**Plekhanov**	**21.70**	**288**	⇓*i*P	**P**	**23 08 45.8**	**+1.1**
TI2				*i* S	**S**	**23 12 37.0**	**+3.9**
TI2				pmax	pmax		
	comp=Z,590nm,1.2s,mb5.8						
TI2				pmax	pmax		
	comp=Z,6µm,2.8s,mb6.4						
DUS	**Dusheti**	**21.74**	**289**	P	**P**	**23 08 45.6**	**+0.5**
GNI	**Garni**	**21.75**	**284**	*d* *i*P	**P**	**23 08 47.5**	**+2.3**
GNI				pmax	pmax		
	comp=Z,3µm,1.7s						
GNI	**Garni**	**21.75**	**284**	P	**P**	**23 08 47.6**	**+2.4**
	comp=Z,483nm,0.8s,mb5.9,baz=67,slow=1.8,SNR=372						
GNI	**Garni**	**21.75**	**284**	⇓*i*P	**P**	**23 08 47.5**	**+2.3**
	comp=Z,2µm,1.3s,mb6.3						
VIS	**Vishakhapatnam**	**22.32**	**152**	*i*	**P**	**23 08 51.0**	**+0.1**
VIS				*i*		23 12 49.4	
IMP	**Imphal**	**22.39**	**120**	⇓*i*	**P**	**23 08 54.0**	**+2.4**
GOA	**Goa**	**22.52**	**177**	⇓*e*	**P**	**23 09 03.0**	**+10**
	comp=Z,515nm,0.6s,mb6.0						
GOA				*e*		23 13 01.6	
VANB	**Van**	**22.95**	**280**	P	**P**	**23 08 59.8**	**+3.0**
KARS	**Kars**	**22.98**	**286**	P	**P**	**23 09 01.6**	**+4.5**
GOF	**Gofitskoye**	**23.17**	**297**	⇓*i*P	**P**	**23 09 00.0**	**+1.1**
GOF				*i* *PP		23 09 21.0	
GOF				*i* S	**S**	**23 13 05.0**	**+6.2**
GOF				pmax	pmax		
	comp=Z,2µm,1.7s,mb6.2						
GOF				smax			
	comp=N,3µm,2.5s						
KIV	**Kislovodsk**	**23.31**	**294**	P	**P**	**23 09 00.1**	**-0.1**
	comp=N,5µm,0.6s,mb7.0						
KIV	**Kislovodsk**	**23.31**	**294**	*d* *i*P	**P**	**23 09 00.6**	**+0.4**
KIV				pmax	pmax		
	comp=Z,495nm,1.0s,mb5.8						
KIV				MLR	MLR		
	comp=Z,1µm,19.0s						
KIV	**Kislovodsk**	**23.31**	**294**	⇓*e*P	**P**	**23 09 00.6**	**+0.4**
	comp=Z,494nm,0.6s,mb6.0						
KIV				*e*S	**S**	**23 13 05.9**	**+4.6**
BHD	**Baghdad**	**23.45**	**267**	*i* P	**P**	**23 09 01.0**	**-0.7**
BHD				*i* PcP	PcP	23 12 49.0	+2.5
BHD				*i* S	**S**	**23 13 07.0**	**+3.3**
BHD				*i* SS	SS	23 13 47.0	-13
MSL	**Mosul**	**23.61**	**275**	*e*P	**P**	**23 09 06.5**	**+3.3**
MSL				*e*pP		23 09 30.5	
MSL				*e*sP		23 09 43.0	
MSL				*e*PP	PP	23 09 57.0	+18
MSL				*e*PPP	PPP	23 10 08.0	+17
MSL				*e*S	**S**	**23 13 13.0**	**+6.6**
MSL				*e*sS		23 13 46.5	
SOKR	**Solikamsk**	**23.80**	**340**	*d* *i*P	**P**	**23 09 05.8**	**+1.1**
SOKR				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.2						
SOKR				MLR	MLR		
	comp=Z,2µm,15.0s						
MOY	**Mondy**	**24.04**	**46**	*e*P	**P**	**23 09 10.4**	**+3.2**
MOY				*e*		23 09 48.9	
MOY				*e*		23 13 21.5	
MOY				pmax	pmax		
	comp=Z,234nm,1.7s,mb5.2						
BCA	**Borcka**	**24.05**	**288**	P	**P**	**23 09 10.0**	**+2.6**
VRT	**Varto**	**24.32**	**282**	P	**P**	**23 09 13.6**	**+3.6**
EZM	**Erzurum**	**24.36**	**284**	P	**P**	**23 09 13.9**	**+3.5**
BTMT	**Batman**	**24.49**	**280**	P	**P**	**23 09 14.7**	**+3.0**
LZH	**Lanzhou**	**24.88**	**85**	⇓P	**P**	**23 09 17.8**	**+2.3**
LZH				AP		23 09 43.8	
LZH				PCP	PcP	23 12 50.5	+1.0
LZH				S	**S**	**23 13 35.0**	**+7.0**
LZH				SCP		23 16 20.3	
LZH				PCS		23 16 25.5	
LZH				SCS	ScS	23 20 07.8	+3.6
LZH				AMB	AMB		
	comp=Z,360nm,1.4s,mb5.6						
LZH				AMB	AMB		
	comp=Z,670nm,4.2s						
LZH				LR	LR		
	comp=E,3µm,10.6s						
LZH				LR	LR		
	comp=Z,3µm,12.6s						
LZH	**Lanzhou**	**24.88**	**85**	⇓P	**P**	**23 09 17.7**	**+2.2**
LZH				*SP		23 09 58.4	
LZH						23 12 50.6	
LZH				S	**S**	**23 13 35.0**	**+7.0**
LZH				SS	SS	23 14 54.0	+19
LZH						23 20 07.7	
LZH				pmax	pmax		
	comp=Z,360nm,1.4s,mb5.6						
LZH				MLR	MLR		
	comp=Z,3µm,12.6s						
LZH	**Lanzhou**	**24.88**	**85**	⇓P	**P**	**23 09 17.7**	**+2.2**
	comp=Z,360nm,1.4s,mb5.6						
LZH				pP		23 09 43.8	
LZH				sP		23 09 58.4	
LZH				PcP	PcP	23 12 50.6	+1.1
LZH				S	**S**	**23 13 35.0**	**+7.0**
LZH				sS		23 14 22.1	
LZH				SS	SS	23 14 54.0	+19
LZH				ScP		23 16 20.2	
LZH				PcS		23 16 25.6	
LZH				ScS	ScS	23 20 07.7	+3.5
LZH				LR	LR		
	comp=Z,3µm,12.6s						
ZAK	**Zakamensk**	**24.95**	**51**	⇑*i*P	**P**	**23 09 17.4**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.2						
MNGI	**Mangalore**	**25.11**	**175**	*i*	**P**	**23 09 16.8**	**-1.0**
	comp=Z,329nm,0.3s,mb6.2						
MNGI				*i*		23 13 47.8	
BINT	**Bingol**	**25.15**	**282**	P	**P**	**23 09 20.7**	**+2.7**
SOC	**Sochi**	**25.44**	**293**	*i* P	**P**	**23 09 20.7**	**+0.1**
SOC				*e*S	**S**	**23 13 39.5**	**+2.3**
SOC				pmax	pmax		
	comp=Z,865nm,1.0s,mb6.1						
SOC				pmax	pmax		
	comp=N,103nm,0.8s						
SOC				pmax	pmax		
	comp=E,267nm,0.9s						
SOC				MLR	MLR		
	comp=N,1µm,16.0s						
SOC				MLR	MLR		
	comp=Z,1µm,16.0s						
SOC				MLR	MLR		
	comp=E,861nm,15.0s						
SOC	**Sochi**	**25.44**	**293**	⇓*i*P	**P**	**23 09 20.6**	**0.0**
DIY	**Diyarbakir**	**25.52**	**280**	P	**P**	**23 09 23.9**	**+2.4**
EZC	**Erzincan**	**25.56**	**284**	P	**P**	**23 09 28.0**	**+6.3**
TLY	**Talaya**	**25.58**	**48**	P	**P**	**23 09 23.3**	**+1.4**
	comp=E,541nm,0.9s,mb6.0						
TLY	**Talaya**	**25.58**	**48**	*d* *i*P	**P**	**23 09 23.7**	**+1.8**
TLY				*e*PPP	PPP	23 09 56.8	-21
TLY				*e*		23 10 00.7	
TLY				*e*		23 10 23.4	
TLY				*e*S	**S**	**23 13 42.4**	**+2.9**
TLY				pmax	pmax		
	comp=Z,106nm,1.0s,mb5.2						
TLY				MLR	MLR		
	comp=Z,700nm,15.0s						
GUMT	**Gumushane**	**25.74**	**286**	P	**P**	**23 09 25.9**	**+2.4**
MDRS	**Chennai**	**25.80**	**163**	*e*	**P**	**23 09 25.0**	**+0.7**
MDRS				*i*	pP	23 09 51.0	+3.6
MDRS				*e*		23 13 37.0	
MDRS				*e*		23 13 46.0	
PTK	**Pertek**	**26.00**	**282**	P	**P**	**23 09 28.2**	**+2.4**
WHFO	**Wadi Hawf**	**26.02**	**225**	⇑P	**P**	**23 09 26.3**	**0.0**
	SNR=233						
RBK	**Rabkut**	**26.12**	**223**	⇑P	**P**	**23 09 27.3**	**0.0**
	SNR=152						
IRK	**Irkutsk**	**26.14**	**47**	*e*P	**P**	**23 09 27.8**	**+0.8**
IRK				*e*		23 10 30.6	
IRK				*e*S	**S**	**23 13 38.8**	**-10**
IRK				pmax	pmax		
	comp=Z,224nm,1.5s,mb5.4						
SONM	**Songino Array**	**26.34**	**57**	P	**P**	**23 09 30.4**	**+1.4**
	comp=Z,78nm,0.9s,mb5.1,baz=256,slow=7.8,SNR=510						
SONM				PcP	PcP	23 12 52.4	-0.2
	comp=Z,21nm,0.9s,baz=222,slow=3.6,SNR=4.3						
SONM				P3KPbc		23 42 13.5	
	comp=Z,0.4nm,0.8s,baz=86,slow=3.0,SNR=3.8						
SONM	**Songino Array**	**26.34**	**57**	P	**P**	**23 09 30.4**	**+1.4**
SONM				PcP	PcP	23 12 52.4	-0.2
SONM				*e*		23 42 13.5	
PECR	**Pechory**	**26.36**	**323**	⇓*i*P	**P**	**23 09 28.6**	**-0.4**
PECR				*e*		23 10 06.0	
PECR				*e*		23 10 16.6	
PECR				pmax	pmax		
	comp=Z,5µm,1.2s,mb6.8						
PECR				pmax	pmax		
	comp=Z,3µm,2.2s,mb6.3						
PECR				MLR	MLR		
	comp=Z,2µm,8.0s						
PECR				MLR	MLR		
	comp=N,2µm,10.0s						
CD2	**Chengdu**	**26.50**	**96**	P	**P**	**23 09 32.3**	**+1.7**
CD2				S	**S**	**23 14 01.0**	**+6.2**
CD2				LR	LR		
	comp=N,2µm,9.6s						
CD2				LR	LR		
	comp=Z,2µm,9.6s						
URFA	**Urfa**	**26.70**	**279**	P	**P**	**23 09 34.0**	**+1.6**
ABTO	**Aybut**	**26.75**	**225**	⇑P	**P**	**23 09 32.8**	**-0.2**
	SNR=295						
ULN	**Ulaanbaatar**	**26.79**	**58**	⇓*i*P	**P**	**23 09 34.1**	**+1.1**
ULN				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.3						
ULN	**Ulaanbaatar**	**26.79**	**58**	⇓*i*P	**P**	**23 09 34.1**	**+1.1**
	comp=Z,99nm,1.0s,mb5.3						
MYA	**Malataya**	**26.84**	**281**	P	**P**	**23 09 36.0**	**+2.4**
MALT	**Malatya**	**26.84**	**281**	P	**P**	**23 09 32.3**	**-1.3**
MALT	**Malatya**	**26.84**	**281**	⇓*i*P	**P**	**23 09 35.6**	**+2.0**
MALT				pmax	pmax		
	comp=Z,320nm,1.1s,mb5.8						
VOR	**Voronezh**	**27.09**	**311**	*e*P	**P**	**23 09 39.0**	**+3.2**
VOR				pmax	pmax		
	comp=Z,2µm,2.0s,mb6.2						
RAYN	**Ar Rayn**	**27.36**	**246**	P	**P**	**23 09 37.6**	**-1.0**
	comp=Z,254nm,0.8s,mb5.8,SNR=33						
TOKT	**Tokat**	**27.98**	**286**	P	**P**	**23 09 45.3**	**+1.3**
GAZ	**Gaziantep**	**28.01**	**279**	P	**P**	**23 09 45.9**	**+1.6**
KVT	**Kavak**	**28.27**	**288**	P	**P**	**23 09 47.6**	**+1.1**
KMI	**Kunming**	**28.54**	**108**	⇑P	**P**	**23 09 49.8**	**+0.7**
KMI				AP	pP	23 10 15.0	+2.4
KMI				XP	sP	23 10 28.5	+3.4
KMI				S	**S**	**23 14 32.3**	**+4.7**
KMI				XS		23 15 15.0	
KMI				SCP		23 16 31.5	
KMI				SCS	ScS	23 20 23.8	+3.7
KMI				AMB	AMB		
	comp=Z,159nm,3.6s						
KMI				LR	LR		
	comp=N,1µm,13.2s						
KMI				LR	LR		
	comp=E,854nm,12.2s						
KMI				LR	LR		
	comp=Z,938nm,18.6s						
KMI	**Kunming**	**28.54**	**108**	⇑P	**P**	**23 09 49.8**	**+0.7**
KMI				*PP	pP	23 10 14.9	+2.3
KMI						23 10 57.3	
KMI				S	**S**	**23 14 32.3**	**+4.7**
KMI						23 20 23.7	
KMI	**Kunming**	**28.54**	**108**	⇑P	**P**	**23 09 49.8**	**+0.7**
	comp=Z,20nm,1.8s						
KMI				pP	pP	23 10 14.9	+2.3
KMI				sP	sP	23 10 28.4	+3.3
KMI				PP	PP	23 10 57.3	+12
KMI				S	**S**	**23 14 32.3**	**+4.7**
KMI				sS		23 15 15.0	
KMI				ScP		23 16 31.5	
KMI				ScS	ScS	23 20 23.7	+3.6
KMI				LR	LR		
	comp=Z,940nm,18.6s						
BNN	**Bunyan**	**28.73**	**283**	P	**P**	**23 09 52.4**	**+1.7**
BTO	**Baotou**	**28.84**	**73**	*e*P	**P**	**23 09 52.5**	**+0.8**
BTO				S	**S**	**23 14 34.8**	**+2.4**
BTO				AMB	AMB		
	comp=Z,46nm,1.0s,mb5.1						
BTO				LR	LR		
	comp=E,1µm,6.5s						
YOZ	**Yozgat**	**29.01**	**285**	P	**P**	**23 09 54.6**	**+1.5**
HTY	**Hatay**	**29.10**	**278**	P	**P**	**23 09 54.5**	**+0.5**
BYBT	**Boyabat**	**29.19**	**289**	P	**P**	**23 09 55.7**	**+1.0**
CEYT	**Ceyhan**	**29.19**	**279**	P	**P**	**23 09 56.6**	**+1.8**
MOS	**Moscow**	**29.33**	**318**	κ *i*P	**P**	**23 09 55.3**	**-0.5**
MOS				*e**PP	pP	23 10 15.5	-4.0
MOS				*e*		23 10 31.4	
MOS				*e*		23 10 53.6	
MOS				*e*S	**S**	**23 14 42.1**	**+2.2**
MOS				*e**SS		23 15 19.6	
MOS				*e*SS	SS	23 16 16.8	-2.7
MOS				pmax	pmax		
	comp=Z,4µm,2.3s,mb6.7						
MOS				pmax	pmax		
	comp=Z,2µm,1.3s,mb6.5						
MOS				MLR	MLR		
	comp=Z,2µm,11.1s						
MOS				MLR	MLR		
	comp=N,1µm,9.8s						
MOS				MLR	MLR		
	comp=E,1µm,8.2s						
FKH	**Fakeheh**	**29.43**	**274**	*e*P	**P**	**23 09 58.5**	**+1.5**
XAN	**Xi’an**	**29.45**	**87**	P	**P**	**23 09 57.3**	**+0.2**
XAN				LR	LR		
	comp=N,780nm,10.8s						
XAN				LR	LR		
	comp=E,1µm,12.9s						
XAN				LR	LR		
	comp=Z,1µm,17.7s						
CORM	**Corum**	**29.45**	**286**	P	**P**	**23 09 57.1**	**0.0**
SIM	**Simferopol’**	**29.48**	**296**	*d* *i*P	**P**	**23 09 58.1**	**+0.8**
SIM				*e**PP	pP	23 10 16.0	-4.9
SIM				*e*S	**S**	**23 14 44.0**	**+1.7**
SIM				pmax	pmax		
	comp=Z,452nm,0.7s,mb6.2						
OBN	**Obninsk**	**29.66**	**317**	P	**P**	**23 09 58.6**	**-0.2**
	comp=Z,8µm,0.5s						
OBN	**Obninsk**	**29.66**	**317**	*d* *i*P	**P**	**23 09 57.9**	**-0.9**
OBN				*e*		23 10 56.5	
OBN				*i* S	**S**	**23 14 47.8**	**+2.6**
OBN				*e*SS	SS	23 16 32.3	+4.8
OBN				pmax	pmax		
	comp=Z,1µm,1.2s,mb6.5						
OBN				MLR	MLR		
	comp=Z,1µm,12.0s						
OBN	**Obninsk**	**29.66**	**317**	⇓*i*P	**P**	**23 09 57.9**	**-0.9**
	comp=Z,827nm,0.6s,mb6.5						
CHRT	**Chiangrai**	**29.68**	**120**	⇓P	**P**	**23 09 59.0**	**-0.4**
	comp=Z,784nm,0.9s,mb6.3						
TRD	**Trivandrum**	**29.69**	**171**	*e*	**P**	**23 09 59.7**	**+0.2**
BZK	**Bozkurt**	**29.71**	**290**	P	**P**	**23 10 00.0**	**+0.7**
ASF	**Jabal al Asfar**	**29.73**	**270**	P	**P**	**23 10 00.6**	**+0.9**
	comp=Z,36nm,0.9s,mb5.0,baz=307,slow=5.3,SNR=57						
ASF				ScP		23 16 33.7	
	comp=Z,7.1nm,0.9s,baz=302,slow=2.5,SNR=3.0						

ASF				LR	LR	23 24 33.2	
	comp=Z,932nm,19.8s,baz=143,slow=41						
HWQ	**Hawqa**	**29.77**	**274**	*e*P	**P**	**23 10 01.4**	**+1.4**
TOS	**Tosya**	**29.79**	**288**	P	**P**	**23 10 01.1**	**+1.0**
NIG	**Nigde**	**29.83**	**282**	P	**P**	**23 09 57.9**	**-2.6**
CHG	**Chiang Mai**	**29.86**	**123**	⇓P	**P**	**23 10 00.0**	**-0.9**
	comp=Z,15nm,1.0s						
HHC	**Hu-ho-hao-te**	**29.98**	**72**	*e*P	**P**	**23 10 02.8**	**+1.0**
HHC				AP	pP	23 10 28.0	+2.5
HHC				XP	sP	23 10 40.0	+2.1
HHC				PP	PP	23 11 07.0	+3.5
HHC				S	**S**	**23 14 47.0**	**-3.3**
HHC				XS		23 15 37.5	
HHC				SCS	ScS	23 20 29.0	+2.3
HHC				AMB	AMB		
	comp=Z,258nm,1.8s,mb5.6						
CMAR	**Chiang Mai Arr**	**30.11**	**123**	P	**P**	**23 10 03.1**	**0.0**
	comp=Z,16nm,0.8s,baz=314,slow=8.8,SNR=74						
CMAR				pP	pP	23 10 28.4	+1.5
	comp=Z,22nm,1.0s,baz=314,slow=9.9,SNR=4.5						
CMAR				ScP		23 16 36.0	
	comp=Z,26nm,1.1s,baz=308,slow=4.3,SNR=16						
CMAR				PKiKP		23 20 33.6	
	comp=Z,0.9nm,0.4s,baz=289,slow=1.7,SNR=4.8						
CMAR				P3KPbc		23 41 57.1	
	comp=Z,10nm,0.7s,baz=157,slow=3.2,SNR=54						
BHL	**Bhannes**	**30.12**	**273**	*e*P	**P**	**23 10 04.6**	**+1.5**
CANT	**Cankiri**	**30.15**	**287**	P	**P**	**23 10 04.7**	**+1.4**
BRTR	**Keskin Array B**	**30.27**	**285**	P	**P**	**23 10 04.8**	**+0.4**
	comp=Z,169nm,0.8s,mb5.7,baz=100,slow=7.5,SNR=842						
BRTR				PKiKP		23 20 32.6	
	comp=Z,1.5nm,1.0s,baz=40,slow=1.7,SNR=4.0						
KAMT	**Kaman**	**30.28**	**285**	P	**P**	**23 10 05.0**	**+0.5**
MATL	**Matirih**	**30.51**	**273**	*e*P	**P**	**23 10 08.1**	**+1.6**
SAFT	**Safranbolu**	**30.77**	**289**	P	**P**	**23 10 09.5**	**+0.7**
GYA	**Guiyang**	**30.81**	**102**	⇓*i*P	**P**	**23 10 09.8**	**+0.5**
GYA				AP	pP	23 10 37.0	+3.8
GYA				XP	sP	23 10 45.3	-0.3
GYA				PP	PP	23 11 13.8	-0.4
GYA				PCP	PcP	23 13 05.0	+1.1
GYA				S	**S**	**23 15 06.5**	**+2.9**
GYA				XS		23 15 45.5	
GYA				SCP		23 16 38.0	
GYA				PCS		23 16 48.0	
GYA				SCS	ScS	23 20 33.0	+2.2
GYA				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.1						
GYA				AMB	AMB		
	comp=Z,250nm,3.3s						
GYA				LR	LR		
	comp=N,2µm,14.4s						
GYA				LR	LR		
	comp=E,1µm,14.4s						
GYA				LR	LR		
	comp=Z,910nm,15.0s						
ANTO	**Ankara**	**30.89**	**286**	P	**P**	**23 10 10.5**	**+0.7**
ANTO	**Ankara**	**30.89**	**286**	P	**P**	**23 10 10.6**	**+0.8**
ANTO				S	**S**	**23 15 07.8**	**+3.1**
ANTO				ScP		23 18 12.5	
LOD	**Lodumlu**	**30.91**	**286**	P	**P**	**23 10 00.4**	**-10**
BDT	**Bhumibol Dam**	**31.02**	**125**	P	**P**	**23 10 11.0**	**-0.2**
	comp=Z,13nm,1.0s						
NANT	**Nan**	**31.05**	**120**	⇑P	**P**	**23 10 09.5**	**-1.9**
	comp=Z,94nm,0.5s,mb5.8						
PHNC	**Paralimni**	**31.06**	**276**	⇓P	**P**	**23 10 11.4**	**0.0**
PHNC	**Paralimni**	**31.06**	**276**	P	PcP	23 13 04.4	-0.1
PHNC	**Paralimni**	**31.06**	**276**	⇓*i*P	**P**	**23 10 11.4**	**0.0**
ENH	**Enshi**	**31.27**	**93**	*e*P	**P**	**23 10 13.3**	**0.0**
	comp=Z,76nm,1.1s,mb5.3						
MUKL	**Al Mukalla**	**31.48**	**228**	⇑*e*P	**P**	**23 10 15.4**	**+0.2**
KONT	**Konya--Tatoy**	**31.60**	**282**	P	**P**	**23 10 17.6**	**+1.6**
CSS	**Prodhromos**	**31.62**	**277**	P	**P**	**23 10 16.0**	**-0.2**
CSS	**Prodhromos**	**31.62**	**277**	P	PcP	23 13 06.1	+0.1
MAMC	**Mammari**	**31.65**	**277**	⇓P	**P**	**23 10 16.4**	**-0.1**
MAMC	**Mammari**	**31.65**	**277**	P	PcP	23 13 05.9	-0.2
MAMC	**Mammari**	**31.65**	**277**	⇓*i*P	**P**	**23 10 16.4**	**-0.1**
HDMB	**Hadim**	**31.73**	**281**	P	**P**	**23 10 17.7**	**+0.5**
KIZT	**Kizilcal**	**31.77**	**284**	P	**P**	**23 10 17.9**	**+0.4**
LEF	**Lefka**	**31.92**	**277**	P	**P**	**23 10 20.0**	**+1.1**
MDU	**Mudurnu**	**31.99**	**287**	P	**P**	**23 10 18.4**	**-0.9**
SZAC	**Souni-Zanaja**	**32.03**	**276**	⇓P	**P**	**23 10 20.3**	**+0.5**
SZAC	**Souni-Zanaja**	**32.03**	**276**	P	PcP	23 13 06.2	-1.0
SZAC	**Souni-Zanaja**	**32.03**	**276**	⇓*e*P	**P**	**23 10 20.3**	**+0.5**
ALFC	**Alevga**	**32.14**	**277**	⇓P	**P**	**23 10 20.4**	**-0.3**
	comp=Z,5.7nm,0.9s						
ALFC	**Alevga**	**32.14**	**277**	P	PcP	23 13 06.9	-0.5
	comp=Z,1.3nm,0.9s						
ALFC	**Alevga**	**32.14**	**277**	⇓*e*P	**P**	**23 10 20.4**	**-0.3**
EIL	**Elat**	**32.26**	**266**	P	**P**	**23 10 22.5**	**+0.7**
	comp=Z,47nm,1.0s,mb5.2,baz=35,slow=5.9,SNR=30						
EIL				PcP	PcP	23 13 08.5	+0.7
	comp=Z,39nm,0.9s,baz=344,slow=7.9,SNR=5.2						
EIL				LR	LR	23 26 17.5	
	comp=Z,2µm,19.1s,baz=69,slow=41						
EIL	**Elat**	**32.26**	**266**	*e*P	**P**	**23 10 22.6**	**+0.8**
	comp=Z,525nm,1.0s,mb6.2						
EIL				*e*PcP	PcP	23 13 07.8	-0.1
AKMC	**Akamas**	**32.39**	**277**	⇓P	**P**	**23 10 22.8**	**-0.1**
AKMC	**Akamas**	**32.39**	**277**	⇓*i*P	**P**	**23 10 22.8**	**-0.1**
PPCY	**Paphos**	**32.42**	**277**	⇓P	**P**	**23 10 23.0**	**-0.2**
PPCY	**Paphos**	**32.42**	**277**	P	PcP	23 13 06.7	-1.5
PPCY	**Paphos**	**32.42**	**277**	⇓*i*P	**P**	**23 10 23.0**	**-0.2**
ESKT	**Eskisehir**	**32.43**	**286**	P	**P**	**23 10 23.5**	**+0.3**
NST	**Nakhon Sawan**	**32.91**	**125**	⇑P	**P**	**23 10 28.7**	**+1.1**
	comp=Z,83nm,0.8s,mb5.6						
NST	**Nakhon Sawan**	**32.91**	**125**	⇑P	**P**	**23 10 28.7**	**+1.1**
	comp=Z,83nm,0.8s,mb5.6						
AKASG	**Malin Array Be**	**33.05**	**307**	P	**P**	**23 10 27.0**	**-1.4**
AKASG						23 11 43.0	
AKASG						23 13 08.9	
AKASG				pmax	pmax		
	comp=Z,323nm,0.7s						
AKASG				pmax	pmax		
	comp=Z,84nm,0.9s						
AKASG	**Malin Array Be**	**33.05**	**307**	P	**P**	**23 10 27.0**	**-1.4**
	comp=Z,323nm,0.7s,mb6.3,baz=76,slow=8.2,SNR=1005						
AKASG				PP	PP	23 11 43.0	+0.7
	comp=Z,84nm,0.9s,baz=93,slow=10,SNR=6.1						
AKASG				PcP	PcP	23 13 08.8	-0.9
	comp=Z,26nm,0.7s,baz=71,slow=3.1,SNR=4.5						
ISP	**Isparta**	**33.05**	**283**	⇓*i*P	**P**	**23 10 28.6**	**0.0**
ISP				pmax	pmax		
	comp=Z,181nm,1.0s,mb5.9						
ISP	**Isparta**	**33.05**	**283**	⇓*i*P	**P**	**23 10 28.6**	**0.0**
	comp=Z,181nm,1.0s,mb5.9						
BCK	**Bucak**	**33.08**	**282**	P	**P**	**23 10 28.6**	**-0.3**
ALT	**Altintas**	**33.09**	**285**	P	**P**	**23 10 29.6**	**+0.7**
HRT	**Hereke**	**33.09**	**288**	P	**P**	**23 10 28.9**	**0.0**
KIS	**Kishinev**	**33.16**	**300**	α*i*P	**P**	**23 10 27.0**	**-2.4**
KIS				*e**PP	pP	23 11 02.0	+8.4
KIS				*i*		23 11 42.0	
KIS				*i* S	**S**	**23 15 36.0**	**-3.9**
KIS				pmax	pmax		
	comp=E,100nm,1.0s						
KIS				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.8						
KIS				pmax	pmax		
	comp=Z,3µm,2.0s,mb6.8						
KIS				pmax	pmax		
	comp=Z,900nm,3.0s						
KIS				smax			
	comp=N,2µm,5.0s						
KIS				MLR	MLR		
	comp=Z,900nm,12.0s						
KIS				MLR	MLR		
	comp=E,500nm,14.0s						
TLCR		**33.22**	**297**	⇓P	**P**	**23 10 30.0**	**0.0**
GBZT	**Gebze**	**33.26**	**288**	P	**P**	**23 10 29.9**	**-0.5**
BOD	**Bodaibo**	**33.28**	**40**	*e*P	**P**	**23 10 30.0**	**-0.3**
BOD				*e*	pP	23 10 52.5	-2.1
BOD				pmax	pmax		
	comp=Z,152nm,1.2s,mb5.7						
YLV	**Yalova**	**33.35**	**288**	P	**P**	**23 10 30.6**	**-0.6**
BADT	**Buyukada**	**33.50**	**289**	P	**P**	**23 10 33.6**	**+1.2**
ISK	**Istanbul-Kandi**	**33.50**	**289**	P	**P**	**23 10 33.8**	**+1.3**
TIRR	**Tirgusor**	**33.56**	**295**	⇑P	**P**	**23 10 32.7**	**-0.2**
TIRR	**Tirgusor**	**33.56**	**295**	P	**P**	**23 10 33.1**	**+0.2**
BJT	**Baijiatuau**	**33.58**	**73**	*e*P	**P**	**23 10 32.5**	**-0.6**
BJT				*e*		23 13 11.1	
BJT				pmax	pmax		
	comp=Z,27nm,0.8s						
BJT	**Baijiatuau**	**33.58**	**73**	*e*P	**P**	**23 10 32.5**	**-0.7**
	comp=Z,27nm,0.8s,mb5.1						
BJT				*e*PcP	PcP	23 13 11.1	-0.2
BJI	**Beijing**	**33.58**	**73**	*e*P	**P**	**23 10 34.3**	**+1.2**
BJI				AP	pP	23 11 00.5	+3.1
BJI				XP	sP	23 11 12.5	+2.4
BJI				PCP	PcP	23 13 11.0	-0.3
BJI				S	**S**	**23 15 44.5**	**-2.0**
BJI				XS		23 16 35.0	
BJI				AMB	AMB		
	comp=Z,38nm,0.9s,mb5.2						
BJI	**Beijing**	**33.58**	**73**	*e*P	**P**	**23 10 34.2**	**+1.1**
BJI				*PP	pP	23 11 00.5	+3.1
BJI						23 13 11.0	
BJI				S	**S**	**23 15 44.5**	**-2.0**
BJI				pmax	pmax		
	comp=Z,38nm,0.9s,mb5.2						
BJI	**Beijing**	**33.58**	**73**	*e*P	**P**	**23 10 34.2**	**+1.1**
	comp=Z,38nm,0.9s,mb5.2						
BJI				pP	pP	23 11 00.5	+3.1
BJI				sP	sP	23 11 12.5	+2.4
BJI				PcP	PcP	23 13 11.0	-0.3
BJI				S	**S**	**23 15 44.5**	**-2.0**
BJI				sS		23 16 35.0	
KHL	**Karahalli**	**33.69**	**284**	P	**P**	**23 10 35.3**	**+1.2**
CFR	**Carcaliu**	**33.70**	**297**	P	pP	23 10 54.0	-4.4
ELL	**Elmali**	**33.79**	**281**	P	**P**	**23 10 36.0**	**+1.0**
PSN	**Preselentsi**	**33.80**	**294**	*i* P	**P**	**23 10 36.0**	**+1.1**
ORLT	**Orhaneli**	**33.81**	**287**	P	**P**	**23 10 36.0**	**+0.9**
HARR	**Harsova**	**33.88**	**296**	⇓P	**P**	**23 10 36.2**	**+0.5**
HARR	**Harsova**	**33.88**	**296**	P	**P**	**23 10 36.0**	**+0.3**
CTT	**Catalca**	**33.96**	**289**	P	**P**	**23 10 37.2**	**+0.8**
DST	**Dursunbey**	**34.10**	**287**	P	**P**	**23 10 38.1**	**+0.5**
DENT	**Denizli**	**34.20**	**283**	P	**P**	**23 10 39.0**	**+0.5**
KKTK	**Khon Kaen**	**34.21**	**121**	PN	**P**	**23 10 39.8**	**+1.1**
KKTK				PG	**P**	**23 10 40.0**	**+1.3**
KKTK				SG	pP	23 11 06.0	+2.9
LBOS		**34.25**	**233**	⇑*e*P	**P**	**23 10 39.6**	**+0.5**
MNK	**Minsk**	**34.39**	**313**	⇑*i*P	**P**	**23 10 36.0**	**-3.9**
PRD	**Provadia**	**34.42**	**293**	*i* P	**P**	**23 10 41.0**	**+0.7**
PUL	**Pulkovo**	**34.44**	**323**	*de*P	**P**	**23 10 39.0**	**-1.2**
PUL				*i* *PP	pP	23 11 04.7	+0.1
PUL				*i* *SP	sP	23 11 16.4	-0.9
PUL	**Pulkovo**	**34.44**	**323**	*i* Pr		23 10 39.9	
FETY	**Fethiye**	**34.46**	**281**	P	**P**	**23 10 39.6**	**-1.0**
BNT	**Bandirma**	**34.48**	**288**	P	**P**	**23 10 41.7**	**+0.9**
VRI	**Vrincioaia**	**34.65**	**298**	P	**P**	**23 10 43.2**	**+1.0**
BALB	**Balikesir**	**34.66**	**287**	P	**P**	**23 10 43.0**	**+0.7**
MRMT	**Marmara Adasi**	**34.68**	**289**	P	**P**	**23 10 42.0**	**-0.5**
DALT	**Dalyan (Mudla)**	**34.77**	**282**	P	**P**	**23 10 42.7**	**-0.6**
ISR	**Istrita**	**34.83**	**297**	P	**P**	**23 10 46.1**	**+2.4**
AKS	**Akhisar**	**34.87**	**286**	P	**P**	**23 10 44.6**	**+0.5**
MFT	**Murefte**	**34.88**	**289**	P	**P**	**23 10 43.9**	**-0.3**
WHN	**Wuhan**	**34.99**	**90**	⇑P	**P**	**23 10 46.5**	**+1.2**
WHN				AP	pP	23 11 12.0	+2.3
WHN				S	**S**	**23 16 00.0**	**-8.5**
WHN				LR	LR		
	comp=Z,2µm,12.3s						
EDRB	**Edirne**	**35.09**	**291**	P	**P**	**23 10 46.5**	**+0.5**
JMB	**Yambol**	**35.11**	**292**	*i* P	**P**	**23 10 47.5**	**+1.3**
IDID	**Didziasalis**	**35.16**	**314**	⇓*i*P	**P**	**23 10 46.3**	**-0.1**
IDID				AMPb	AMB	23 10 47.2	
	comp=Z,7µm,0.6s						
IDID				*e*PP	PP	23 12 06.0	-2.5
CANB	**Canakkale**	**35.19**	**288**	P	**P**	**23 10 44.9**	**-1.9**
JOF	**Joensuu**	**35.20**	**328**	*e*p	**P**	**23 10 46.5**	**-0.2**
	comp=Z,1µm,0.9s,mb6.7						
JOF	**Joensuu**	**35.20**	**328**	*e*P	**P**	**23 10 46.5**	**-0.2**
JOF				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.7						
TIA	**Tai'an**	**35.22**	**79**	P	**P**	**23 10 48.5**	**+1.4**
TIA				PCP	PcP	23 13 15.8	-0.3
TIA				AMB	AMB		
	comp=Z,259nm,2.4s,mb5.6						
MLR	**Muntele Rosu**	**35.22**	**297**	P	**P**	**23 10 48.5**	**+1.5**
MLR						23 12 11.4	
MLR				pmax	pmax		
	comp=Z,538nm,1.0s						
MLR				pmax	pmax		
	comp=Z,157nm,1.0s						
MLR				MLR	MLR		
	comp=Z,433nm,18.9s						
MLR	**Muntele Rosu**	**35.22**	**297**	P	**P**	**23 10 48.5**	**+1.4**
	comp=Z,538nm,1.0s,mb6.3,baz=22,slow=2.9,SNR=689						
MLR				PP	PP	23 12 11.4	+2.1
	comp=Z,157nm,1.0s,baz=5.6,slow=3.9,SNR=3.7						
MLR				LR	LR	23 27 44.7	
	comp=Z,433nm,18.9s,baz=76,slow=40						
MLR	**Muntele Rosu**	**35.22**	**297**	P	**P**	**23 10 48.8**	**+1.8**
BUC1	**Bucharest**	**35.27**	**295**	P	**P**	**23 10 48.7**	**+1.2**
HIA	**Hailar**	**35.29**	**56**	*e*P	**P**	**23 10 48.2**	**+0.6**
HIA				*e*		23 13 16.1	
HIA				pmax	pmax		
	comp=Z,324nm,2.0s						
HIA	**Hailar**	**35.29**	**56**	*e*P	**P**	**23 10 48.1**	**+0.6**
	comp=Z,324nm,2.0s,mb5.8						
HIA				*e*PcP	PcP	23 13 16.1	-0.1
IZM	**Izmir**	**35.40**	**285**	P	**P**	**23 10 49.0**	**+0.3**
IIGN	**Ignalina**	**35.45**	**314**	⇓*i*P	**P**	**23 10 49.0**	**+0.1**
IIGN				AMPb	AMB	23 10 49.9	
	comp=Z,9µm,0.5s						
SZH	**Strazhica**	**35.47**	**294**	*i* P	**P**	**23 10 49.3**	**+0.1**
IZAR	**Zarasai**	**35.51**	**315**	⇓*i*P	**P**	**23 10 49.4**	**+0.1**
IZAR				AMPb	AMB	23 10 50.4	
	comp=Z,14µm,0.7s						
IZAR				*e*PP	PP	23 12 11.9	-0.7
SNX	**Sinaia**	**35.53**	**297**	P	**P**	**23 10 50.6**	**+0.9**
ISAL	**Salakas**	**35.54**	**315**	⇓*i*P	**P**	**23 10 49.8**	**+0.1**
ISAL				AMPb	AMB	23 10 50.7	
	comp=Z,7µm,0.7s						
BLCB	**Balcova**	**35.57**	**285**	P	**P**	**23 10 50.9**	**+0.8**
BURAR	**Bucovina Array**	**35.59**	**301**	⇓P	**P**	**23 10 50.6**	**+0.4**
EZN	**Ezine**	**35.79**	**288**	P	**P**	**23 10 52.9**	**+1.0**
VSU	**Vasula**	**35.82**	**320**	*d i*P	**P**	**23 10 51.4**	**-0.6**
PVL	**Pavlikeni**	**35.91**	**294**	*i* P	**P**	**23 10 55.7**	**+2.8**
RDO	**Rodhopi**	**36.11**	**290**	P	**P**	**23 10 55.2**	**+0.6**
LVV	**L'vov**	**36.33**	**305**	*e*P	**P**	**23 10 54.3**	**-2.1**
LVV				*i* S	**S**	**23 16 29.6**	**+0.8**
LVV	**L'vov**	**36.33**	**305**	*i* P	**P**	**23 10 56.5**	**+0.1**
LVZ	**Lovozero**	**36.51**	**337**	P	**P**	**23 10 57.7**	**0.0**
	comp=Z,2µm,0.9s,mb7.0,SNR=17						
LVZ	**Lovozero**	**36.51**	**337**	*de*P	**P**	**23 10 57.2**	**-0.5**
LVZ				*i* *PP	pP	23 11 20.7	-1.6
LVZ				*e**SP	sP	23 11 34.8	-0.2
LVZ				*i*		23 12 23.9	
LVZ				*i*		23 13 18.8	
LVZ				*e*S	**S**	**23 16 29.0**	**-2.4**
LVZ				*i* SS	SS	23 18 59.7	-3.8
LVZ				*e*		23 21 01.1	
LVZ				pmax	pmax		
	comp=Z,240nm,0.8s,mb6.2						
LVZ				pmax	pmax		
	comp=N,62nm,0.7s						
LVZ				pmax	pmax		
	comp=E,139nm,1.1s						
LVZ				smax			
	comp=E,428nm,14.0s						
LVZ				smax			
	comp=Z,44nm,6.0s						
LVZ				smax			
	comp=N,193nm,8.9s						
LVZ	**Lovozero**	**36.51**	**337**	*i* Pr		23 10 57.4	
PLD	**Plovdiv**	**36.55**	**292**	P	**P**	**23 10 58.7**	**+0.4**
RZN	**Rozhen**	**36.62**	**291**	*i* P	**P**	**23 11 00.0**	**+1.1**
APA	**Apatity**	**36.72**	**336**	⇑*i*P	**P**	**23 10 58.9**	**-0.6**
APA				*i*		23 12 21.8	
APA				*e*S	**S**	**23 16 33.0**	**-1.5**
APA				*i* SS	SS	23 19 04.0	-4.0
APA				pmax	pmax		
	comp=Z,160nm,1.2s,mb5.8						
APA				MLR	MLR		
	comp=Z,2µm,20.0s						
PGB	**Panagyurishte**	**36.87**	**293**	*i* P	**P**	**23 11 02.5**	**+1.6**
FINES	**FINESS Array B**	**36.95**	**324**	P	**P**	**23 11 01.3**	**-0.2**
	comp=Z,379nm,0.5s,mb6.6,baz=110,slow=10.0,SNR=2711						
FINES				LR	LR	23 26 41.6	
	comp=Z,1µm,19.1s,baz=104,slow=37						
FINES	**FINESS Array B**	**36.95**	**324**	P	**P**	**23 11 01.3**	**-0.2**
FINES				LR	LR	23 26 41.6	
SUW	**Suwalki**	**37.04**	**312**	⇓*i*P	**P**	**23 11 01.8**	**-0.5**
SUW				*e**PP	pP	23 11 22.2	-4.6
SUW				*e*		23 12 25.8	
SUW				*e*S	**S**	**23 16 37.4**	**-2.0**
SUW				pmax	pmax		
	comp=Z,3µm,2.4s,mb6.8						
SUW				MLR	MLR		
	comp=Z,1µm,26.9s						
SUW	**Suwalki**	**37.04**	**312**	⇓*i*P	**P**	**23 11 01.8**	**-0.5**
	comp=Z,3µm,2.4s,mb6.8						
SUW				*e*pP	pP	23 11 22.2	-4.7
SUW				*e*PP	PP	23 12 25.8	-5.1
SUW				*e*S	**S**	**23 16 37.4**	**-2.0**
SUW				MLR	MLR	23 25 46.8	
	comp=Z,1µm,26.9s						
KAF	**Kangasniemi**	**37.06**	**326**	*e*p	**P**	**23 11 02.1**	**-0.3**
	comp=Z,311nm,0.7s,mb6.3,baz=108,slow=8.4						
KAF	**Kangasniemi**	**37.06**	**326**	*e*P	**P**	**23 11 02.1**	**-0.3**
KAF				pmax	pmax		
	comp=Z,311nm,0.7s,mb6.3						
APE	**Apeiranthos**	**37.08**	**283**	P	**P**	**23 11 02.0**	**-0.7**
ZKR	**Zakros**	**37.13**	**280**	P	**P**	**23 11 04.2**	**+1.0**
KWP	**Kalwaria**	**37.20**	**305**	⇓*i*P	**P**	**23 11 04.4**	**+0.8**
KWP				*e*		23 12 29.1	
KWP				*e*S	**S**	**23 16 40.9**	**-1.0**
KWP				pmax	pmax		
	comp=Z,3µm,1.8s,mb7.0						
KWP				MLR	MLR		
	comp=Z,800nm,25.6s						
KWP	**Kalwaria**	**37.20**	**305**	⇓*i*P	**P**	**23 11 04.4**	**+0.8**
	comp=Z,3µm,1.8s,mb7.0						
KWP				*e*PP	PP	23 12 29.1	-3.5
KWP				*e*S	**S**	**23 16 40.9**	**-1.0**
KWP				MLR	MLR	23 26 31.5	
	comp=Z,800nm,25.6s						
SANT	**Santorini**	**37.33**	**282**	⇓*e*P	**P**	**23 11 04.3**	**-0.6**
MMB	**Musomiste**	**37.36**	**291**	*i* P	**P**	**23 11 06.0**	**+0.9**
QIZ	**Qiongzhong**	**37.43**	**110**	P	**P**	**23 11 07.5**	**+1.6**
QIZ				AP	pP	23 11 32.5	+2.0
QIZ				S	**S**	**23 16 48.3**	**+2.5**
QIZ				XS		23 17 29.5	
QIZ				AMB	AMB		
	comp=Z,130nm,6.3s						
QIZ				LR	LR		
	comp=E,1µm,14.1s						
QIZ	**Qiongzhong**	**37.43**	**110**	*e*P	**P**	**23 11 06.8**	**+0.9**
	comp=E,15nm,0.7s,mb5.0						
QIZ				*e*pP	pP	23 11 31.4	+0.9
KOLS	**Kolonicke sedl**	**37.50**	**303**	*i* P	**P**	**23 11 06.5**	**+0.3**
KOLS				*e*PP	PP	23 12 30.3	-5.7
UZH	**Uzhgorod**	**37.50**	**303**	⇓*i*P	**P**	**23 11 06.0**	**-0.2**
UZH	**Uzhgorod**	**37.50**	**303**	*i* Pr		23 11 06.0	
VTS	**Vitosha**	**37.55**	**293**	⇓P	**P**	**23 11 08.0**	**+1.3**
VTS	**Vitosha**	**37.55**	**293**	P	**P**	**23 11 07.8**	**+1.1**
KKB	**Krupnik**	**37.78**	**292**	*i* P	**P**	**23 11 09.3**	**+0.7**
DL2	**Dalian**	**37.95**	**73**	P	**P**	**23 11 11.5**	**+1.5**
DL2				AP	pP	23 11 38.0	+3.4
DL2				S	**S**	**23 16 57.3**	**+3.9**
DL2				XS		23 17 41.8	
DL2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
DL2				AMB	AMB		
	comp=Z,200nm,5.8s						
NJ2	**Nanjing**	**37.96**	**85**	*e*P	**P**	**23 11 12.0**	**+1.8**
NJ2				AP	pP	23 11 36.5	+1.7
NJ2				XP	sP	23 11 49.5	+2.0
NJ2				PP	PP	23 12 43.8	+2.7
NJ2				S	**S**	**23 16 54.0**	**+0.3**
NJ2				XS		23 17 36.0	
NJ2				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,430nm,9.0s						
NJ2				LR	LR		
	comp=N,1µm,13.4s						
NJ2				LR	LR		
	comp=E,2µm,13.6s						
NJ2				LR	LR		
	comp=Z,2µm,13.2s						
CRVS	**Cervenica-Dubn**	**38.04**	**303**	*e*P	**P**	**23 11 11.0**	**+0.3**
CRVS				*e*S	**S**	**23 16 52.5**	**-2.2**
CRVS				*e*SS	SS	23 19 27.8	-10
IDI	**Anoyia**	**38.10**	**281**	P	**P**	**23 11 10.9**	**-0.4**
	comp=Z,56nm,0.7s,mb5.5,baz=288,slow=9.7,SNR=34						
BZS	**Buzias**	**38.23**	**298**	⇓P	**P**	**23 11 13.6**	**+1.3**
BZS	**Buzias**	**38.23**	**298**	P	**P**	**23 11 13.6**	**+1.3**
BOLS	**Boljevac**	**38.25**	**295**	⇓*i*P	**P**	**23 11 13.2**	**+0.7**
WAR	**Warsaw**	**38.25**	**309**	⇓*i*P	**P**	**23 11 12.8**	**+0.4**
	comp=Z,2.4nm,0.9s						
WAR				*e*PP	PP	23 12 41.9	-2.5
WAR				*e*PcP	PcP	23 13 24.4	-0.7
WAR				*e*S	**S**	**23 16 58.9**	**+1.0**
WAR	**Warsaw**	**38.25**	**309**	⇓*i*P	**P**	**23 11 12.8**	**+0.4**
	comp=Z,2µm,0.9s,mb7.0						
WAR				*e*PP	PP	23 12 41.9	-2.5
WAR				*e*PcP	PcP	23 13 24.4	-0.7
WAR				*e*S	**S**	**23 16 58.9**	**+1.1**
WAR				MLR	MLR	23 27 06.3	
	comp=Z,1µm,27.2s						
WAR	**Warsaw**	**38.25**	**309**	*e*PcP	PcP	23 13 24.4	-0.7
SVIS	**Svilajnac**	**38.70**	**296**	⇓*i*P	**P**	**23 11 16.9**	**+0.7**
KECS	**Kecovo**	**38.71**	**303**	*e*P	**P**	**23 11 17.0**	**+0.7**
KECS				*e*PP	PP	23 12 44.9	-5.0
SNY	**Shenyang**	**38.73**	**68**	⇓P	**P**	**23 11 17.0**	**+0.5**
SNY				PP	PP	23 12 46.0	-4.2
SNY				PCP	PcP	23 13 27.0	+0.3
SNY				S	**S**	**23 17 03.5**	**-1.7**
SNY				XS		23 17 50.8	
SNY				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
SNY				LR	LR		
	comp=N,2µm,17.0s						
SNY				LR	LR		
	comp=Z,870nm,18.9s						
CLNS	**Chul'man**	**38.84**	**44**	*e*P	**P**	**23 11 16.4**	**-0.8**
CLNS				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.7						
CLNS				pmax	pmax		
	comp=E,84nm,1.0s						
GVD	**Gavdhos**	**38.87**	**281**	*e*P	**P**	**23 11 17.4**	**-0.3**
	comp=E,149nm,0.6s,mb6.0						
SKO	**Skopje**	**38.96**	**292**	⇓*i*P	**P**	**23 11 19.1**	**+0.7**
	comp=Z,0.1nm,0.8s						
OJC	**Ojcow**	**39.05**	**306**	⇓*i*P	**P**	**23 11 19.3**	**+0.2**
OJC				*i* S	**S**	**23 17 08.7**	**-1.3**
OJC				MLR	MLR		
	comp=Z,700nm,19.2s						
OJC	**Ojcow**	**39.05**	**306**	⇓*i*P	**P**	**23 11 19.3**	**+0.2**
OJC				*e*PP	PP	23 12 45.0	-8.9
OJC				*i* S	**S**	**23 17 08.7**	**-1.3**
OJC				MLR	MLR	23 30 01.7	
	comp=Z,700nm,19.2s						
GRUS	**Gruza**	**39.12**	**295**	⇑*i*P	**P**	**23 11 20.6**	**+0.8**
PSZ	**Piszkesteto**	**39.15**	**302**	P	**P**	**23 11 20.8**	**+0.9**
PSZ				pmax	pmax		
	comp=Z,540nm,1.3s,mb6.2						
PSZ	**Piszkesteto**	**39.15**	**302**	⇓*e*P	**P**	**23 11 20.8**	**+0.9**
	comp=Z,539nm,1.4s,mb6.2						
PSZ				*e*PP	PP	23 12 52.5	-2.6
PSZ	**Piszkesteto**	**39.15**	**302**	⇓*i*P	**P**	**23 11 20.9**	**+1.0**
PSZ				*i* PP	PP	23 12 47.5	-7.5
BEO	**Belgrade**	**39.16**	**297**	⇑*i*P	**P**	**23 11 20.8**	**+0.9**
LIKS	**Likavka**	**39.58**	**304**	*e*P	**P**	**23 11 23.3**	**-0.1**
LIKS				*e*PP	PP	23 12 54.7	-4.9
DIVS	**Divcibare**	**39.60**	**296**	⇑*i*P	**P**	**23 11 24.6**	**+0.9**
OHR	**Ohrid**	**39.62**	**291**	⇓*i*P	**P**	**23 11 23.1**	**-0.7**
CN2	**Changchun**	**39.70**	**64**	⇓P	**P**	**23 11 25.5**	**+1.0**
CN2				*e*AP	pP	23 11 50.8	+1.5
CN2				PCP	PcP	23 13 30.0	+0.2
CN2				S	**S**	**23 17 20.8**	**+1.0**
CN2				SS	SS	23 20 13.0	-0.5
CN2				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.1						
CN2				AMB	AMB		
	comp=Z,500nm,5.0s						
ITM	**Ithomi**	**39.80**	**285**	P	**P**	**23 11 24.8**	**-0.6**
VYHS	**Vyhne**	**39.80**	**303**	*i* P	**P**	**23 11 26.2**	**+0.9**
VYHS				*e*PP	PP	23 12 55.2	-6.9
SNG	**Songkhla**	**39.82**	**133**	P	**P**	**23 11 25.0**	**-0.8**
	comp=Z,276nm,0.9s,mb6.1						
KEV	**Kevo**	**39.85**	**337**	*e*p	**P**	**23 11 24.6**	**-0.9**
	comp=Z,16nm,0.3s,mb5.3						
KEV	**Kevo**	**39.85**	**337**	*e*P	**P**	**23 11 24.6**	**-0.9**
KEV				pmax	pmax		
	comp=Z,16nm,0.3s,mb5.3						
IVA	**Berane**	**39.90**	**294**	⇓*i*P	**P**	**23 11 26.3**	**+0.1**
PVY	**Plav**	**39.90**	**294**	⇓*i*P	**P**	**23 11 26.8**	**+0.6**
NVSS	**Nova Varos 2**	**39.92**	**295**	⇑*i*P	sP	23 11 58.6	-5.1
PUK	**Puka**	**40.07**	**293**	*i* p	**P**	**23 11 27.9**	**+0.3**
RAC	**Raciborz**	**40.09**	**305**	*e*P	**P**	**23 11 28.5**	**+0.8**

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RAC                                 eS     S      23 17 26.6 +1.1
RAC                                  MLR   MLR    23 30 41.2
      comp=Z,1µm,16.9s
OKC   Ostrava-Krasne   40.14 305⇓iP     P      23 11 28.5 +0.4
OKC                                 ePP    PP     23 12 58.8 -6.8
SSE   Sheshan          40.16  85 eP     P      23 11 25.3 -3.1
SSE                                  S     S      23 17 25.0 -1.8
SSE                                  XS           23 18 07.0
SSE                                  SS    SS     23 20 20.5 -2.8
SSE                                  AMB   AMB
      comp=Z,92nm,3.5s
SSE                                  LR    LR
      comp=N,1µm,18.5s
SSE                                  LR    LR
      comp=E,690nm,18.5s
SSE                                  LR    LR
      comp=Z,710nm,14.1s
SSE   Sheshan          40.16  85 eP     P      23 11 25.3 -3.1
      comp=Z,17nm,1.3s
SSE                                  sP    sP     23 11 58.6 -7.2
SSE                                  S     S      23 17 24.9 -1.9
SSE                                  sS           23 18 07.0
SSE                                  SS    SS     23 20 20.5 -2.8
SSE                                  LR    LR
      comp=Z,710nm,14.1s
PLE   Pljevlja         40.17 295⇓iP     P      23 11 29.8 +1.5
SRO2  Moca             40.18 302 eP     P      23 11 29.9 +1.5
QSH   Qafa e Shtames   40.18 292 i p    P      23 11 28.0 -0.5
PKSM  Moragy           40.21 299  P     P      23 11 29.1 +0.4
ARCES ARCESS Array B   40.22 336  P     P      23 11 28.6 +0.1
      comp=Z,219nm,0.7s,mb6.1,baz=110,slow=8.3,SNR=609
ARCES                                pP    pP     23 11 54.4 +1.1
      comp=Z,73nm,1.0s,baz=100,slow=7.4,SNR=2.7
ARCES                                LR    LR     23 28 53.9
      comp=Z,2µm,21.4s,baz=185,slow=37
ARCES ARCESS Array B   40.22 336  P     P      23 11 28.6 +0.1
ARCES                                pP    pP     23 11 54.4 +1.1
ARCES                                LR    LR     23 28 53.9
ARE0  ARCESS Array S   40.22 336 eP     P      23 11 26.6 -1.9
SRO   Srobarova        40.22 302 eP     P      23 11 30.2 +1.4
TIR   Tirane           40.25 292  P     P      23 11 28.6 -0.4
TTG   Podgorica        40.45 294⇓iP     P      23 11 29.5 -1.1
MORC  Moravsky Berou   40.53 305⇓eP     P      23 11 32.0 +0.7
MORC                                e             23 13 04.5
MORC                                 pmax  pmax
      comp=Z,449nm,1.1s,mb6.2
MORC  Moravsky Berou   40.53 305⇓eP     P      23 11 32.0 +0.7
      comp=Z,449nm,1.1s,mb6.2
MORC                                ePP    PP     23 13 04.5 -5.1
JAVC  Velka Javorina   40.54 304  P     P      23 11 32.8 +1.5
UPM   Unac-Piva        40.54 295⇓iP     P      23 11 30.3 -1.1
GKP   Gorka Klasztor   40.55 310⇓iP     P      23 11 31.8 +0.4
GKP                                 e             23 13 05.9
GKP                                 eS     S      23 17 31.6 -0.7
GKP                                  pmax  pmax
      comp=Z,2µm,0.7s,mb7.0
GKP                                  MLR   MLR
      comp=Z,1µm,27.5s
GKP   Gorka Klasztor   40.55 310⇓iP     P      23 11 31.8 +0.4
      comp=Z,1.7nm,0.7s
GKP                                 ePP    PP     23 13 05.9 -3.8
GKP                                 eS     S      23 17 31.6 -0.7
GKP                                  LR    LR
      comp=Z,1µm,27.5s
GKP   Gorka Klasztor   40.55 310⇓iP     P      23 11 31.8 +0.4
      comp=Z,2µm,0.7s,mb7.0
GKP                                 ePP    PP     23 13 06.0 -3.8
GKP                                 eS     S      23 17 31.6 -0.7
GKP                                  MLR   MLR    23 26 56.6
      comp=Z,1µm,27.5s
NKY   Niksic           40.56 294 eP     P      23 11 31.5  0.0
ULC   Ulcinj           40.56 293⇓iP     P      23 11 31.4 -0.2
KTK1  Kautokeino       40.73 335⇓iP     P      23 11 33.0 +0.3
      comp=Z,327nm,1.9s,mb5.8
KTK1  Kautokeino       40.73 335⇓iP     P      23 11 33.0 +0.3
KTK1                                 AMb   AMB    23 11 36.4
      comp=Z,327nm,1.9s,mb5.8
SMOL  Smolenice        40.73 303 i P    P      23 11 33.9 +1.0
SMOL                                ePP    PP     23 13 09.5 -2.1
BUM   Brajici-Budva    40.74 293⇓iP     P      23 11 33.4 +0.3
BRY   Bratogost        40.87 294⇓iP     P      23 11 34.2 +0.1
ZST   Bratislava       40.99 303 i P    P      23 11 35.9 +0.9
ZST                                 ePP    PP     23 13 12.0 -2.1
ZST                                 eSS    SS     23 20 28.7  -12
HCY   Herceg Novi      41.00 294 eP     P      23 11 34.8 -0.4
VRAC  Vranov           41.20 304  P     P      23 11 37.9 +1.2
VRAC                                 pmax  pmax
      comp=Z,416nm,0.8s
VRAC  Vranov           41.20 304  P     P      23 11 37.9 +1.1
      comp=Z,416nm,0.8s,mb6.3,baz=80,slow=9.7,SNR=530
VRAC  Vranov           41.20 304  P     P      23 11 38.0 +1.2
KSP   Ksiaz            41.25 307⇓iP     P      23 11 37.6 +0.5
KSP                                 e             23 13 11.5
KSP                                 eS     S      23 17 41.0 -1.6
KSP                                 eSS    SS     23 20 43.0 -1.9
KSP   Ksiaz            41.25 307⇓iP     P      23 11 37.6 +0.5
KSP                                 epP    pP     23 12 05.4 +3.5
KSP                                 ePP    PP     23 13 11.5 -5.5
KSP                                 eS     S      23 17 41.0 -1.6
KSP                                 eSS    SS     23 20 43.0 -1.9
KSP   Ksiaz            41.25 307⇓iP     P      23 11 37.8 +0.7
      comp=Z,1µm,1.4s,mb6.6
KSP                                 ePP    PP     23 13 12.5 -4.4
KSP                                 eS     S      23 17 41.1 -1.5
KSP                                  MLR   MLR    23 28 17.6
      comp=Z,2µm,23.9s
DPC   Dobruska-Polom   41.27 306⇓iP     P      23 11 38.4 +1.1
DPC                                 ePP    PP     23 13 12.9 -4.3
DPC                                 ex     x      23 20 45.9
KRUC  Moravsky         41.35 304  P     P      23 11 38.7 +0.7
KULM  Kulim            41.38 135 eP     P      23 11 38.8 +0.2
SOP   Sopron           41.41 302  P     P      23 11 39.1 +0.6
SOP   Sopron           41.41 302⇓iP     P      23 11 39.4 +0.9
SOP                                 i PP   PP     23 13 19.4 +0.6
UPC   Upice            41.45 306⇓iP     P      23 11 39.7 +0.9
UPC                                 ex     x      23 13 05.2
VKA   Vienna           41.50 303⇓iP     P      23 11 40.1 +0.9
VKA                                 i             23 13 16.8
VKA                                  pmax  pmax
      comp=Z,672nm,1.5s,mb6.2
VKA   Vienna           41.50 303⇓iP     P      23 11 40.1 +0.9
      comp=Z,672nm,1.5s,mb6.2
VKA                                 i             23 13 16.8
LCI   Lecce            41.79 291 eP     P      23 11 40.5 -1.1
BSD   Bornholm Skovb   41.89 313⇓iP     P      23 11 41.2 -1.0
BSD                                 i             23 17 53.8
BSD                                  pmax  pmax
      comp=Z,240nm,0.8s,mb6.0
BSD                                  MLR   MLR
      comp=Z,990nm,16.0s
BSD   Bornholm Skovb   41.89 313⇓iP     P      23 11 41.2 -1.0
      comp=Z,238nm,0.8s,mb6.0
BSD                                 i             23 17 53.8
      comp=Z,990nm,16.0s
SISC  Sisak            41.90 299 i P    P      23 11 43.4 +0.9
YAK   Yakutsk          41.90  36diP     P      23 11 42.3  0.0
YAK                                 e*PP   pP     23 12 05.7 -1.4
YAK                                 e             23 13 19.7
YAK                                 e             23 13 35.3
YAK                                 ePPP   PPP    23 13 51.1 -6.1
YAK                                 i S    S      23 17 50.6 -1.5
YAK                                 e             23 21 29.7
YAK                                  pmax  pmax
      comp=N,26nm,1.1s
YAK                                  pmax  pmax
      comp=Z,139nm,1.1s,mb5.6
YAK                                  pmax  pmax
      comp=E,90nm,1.2s
YAK                                  pmax  pmax
      comp=N,9.0nm,0.9s
YAK                                  pmax  pmax
      comp=Z,42nm,0.9s,mb5.2
YAK                                  pmax  pmax
      comp=E,25nm,1.0s
YAK                                  smax
      comp=N,67nm,1.0s
YAK                                  smax
      comp=E,58nm,1.0s
YAK                                  smax
      comp=Z,13nm,0.8s
YAK   Yakutsk          41.90  36 eP     P      23 11 42.0 -0.2
      comp=Z,658nm,1.4s,mb6.2
INCN  Inchon           42.13  73 eP     P      23 11 45.4 +0.9
      comp=Z,26nm,0.6s,mb5.1
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IPM   Ipoh             42.17 135  P     P      23 11 46.1 +0.9
ARSA  Arzberg          42.17 302⇑iP     P      23 11 45.3 +0.6
      comp=Z,442nm,1.4s,mb6.0
PVCC  Panska Ves       42.37 306⇓eP     P      23 11 47.1 +0.8
PVCC                                ePP    PP     23 13 25.3 -3.6
TRO   Tromso           42.38 335 eP     P      23 11 45.7 -0.5
PRU   Pruhonice        42.45 306⇓iP     P      23 11 47.7 +0.8
PRU                                 ePP    PP     23 13 24.1 -5.5
PRU                                 ex     x      23 21 09.4
PRU                                 ex     x      23 22 45.5
MDJ   Mudanjiang       42.47  62  P     P      23 11 46.8 -0.4
MDJ                                  AP    pP     23 12 12.0 -0.1
MDJ                                  XP    sP     23 12 25.0 +0.5
MDJ                                  PP    PP     23 13 27.5 -2.5
MDJ                                  PCP   PcP    23 13 38.5 -0.3
MDJ                                  SCP          23 17 17.8
MDJ                                  PCS          23 17 29.5
MDJ                                  S     S      23 18 01.3 +0.7
MDJ                                  XS           23 18 44.5
MDJ                                  SCS   ScS    23 21 36.5 +1.2
MDJ                                  AMB   AMB
      comp=Z,52nm,1.4s,mb5.1
MDJ                                  LR    LR
      comp=N,845nm,30.3s
MDJ                                  LR    LR
      comp=E,470nm,32.9s
MDJ                                  LR    LR
      comp=Z,579nm,40.2s
MDJ   Mudanjiang       42.47  62 eP     P      23 11 47.6 +0.4
      comp=Z,113nm,1.4s,mb5.4
MDJ                                 ePcP   PcP    23 13 38.4 -0.4
PRA   Prague           42.51 306 ⇓P     P      23 11 49.0 +1.6
BOJS  Bojanci          42.66 299⇓eP     P      23 11 49.6 +0.8
BOJS                                e             23 12 01.3
BOJS                                ePP    PP     23 13 39.5 +7.6
LTRZ  Laterza          42.67 292 eP     P      23 11 48.6 -0.3
HFS   Hagfors          42.68 321  P     P      23 11 48.4 -0.2
      comp=Z,516nm,0.6s,mb6.4,baz=98,slow=10,SNR=1141
HFS                                  PP    PP     23 13 27.6 -4.2
      comp=Z,60nm,0.6s,baz=102,slow=13,SNR=3.9
RUE   Ruedersdorf      42.68 309 eP     P      23 11 48.6 -0.2
      comp=Z,495nm,1.1s,mb6.2
BRG   Berggiesshubel   42.73 307⇓iP     P      23 11 50.0 +0.8
BRG                                 e*PP   pP     23 12 08.9 -5.2
BRG                                 e*SP   sP     23 12 22.0 -4.5
BRG                                 e             23 13 31.6
BRG                                 i             23 13 40.0
BRG                                 i S    S      23 18 00.0 -4.3
BRG                                 i SS   SS     23 21 13.0 +1.6
BRG                                  pmax  pmax
      comp=Z,938nm,1.3s,mb6.4
BRG                                  MLR   MLR
      comp=N,1µm,16.2s
BRG                                  MLR   MLR
      comp=E,570nm,16.2s
BRG                                  MLR   MLR
      comp=Z,1µm,16.2s
BRG   Berggiesshubel   42.73 307⇓iP     P      23 11 50.0 +0.8
      comp=Z,938nm,1.3s,mb6.4
BRG                                 epP    pP     23 12 08.9 -5.2
BRG                                 esP    sP     23 12 22.0 -4.5
BRG                                 ePP    PP     23 13 26.0 -6.4
BRG                                 e             23 13 31.6
BRG                                 i PcP  PcP    23 13 40.0 +0.5
BRG                                 eScP          23 16 36.9
BRG                                 i S    S      23 18 00.0 -4.3
BRG                                 i SS   SS     23 21 13.0 +1.6
BRG                                  LR    LR
      comp=Z,1µm,16.2s
RGN   Rugen            42.82 312⇓eP     P      23 11 50.5 +0.5
      comp=Z,3µm,1.4s,mb6.8
MOA   Molln            42.92 303⇑iP     P      23 11 51.1 +0.3
      comp=Z,718nm,1.4s,mb6.2
OBKA  Obir             42.96 301⇑iP     P      23 11 52.0 +0.9
      comp=Z,1µm,1.5s,mb6.4
FGMS  Monte Sant'Ang   43.01 293 eP     P      23 11 51.5 -0.2
LJU   Ljubljana        43.06 300⇓eP     P      23 11 53.0 +1.0
LJU                                 i PP   PP     23 13 41.1 +5.3
LJU                                 eS     S      23 18 09.8 +0.6
LJU                                 i             23 18 57.8
LJU                                 eSS    SS     23 21 39.9  +22
ORI   Oriolo Calabro   43.09 291 eP     P      23 11 52.8 +0.5
KS15  Wonju Array Si   43.09  73 eP     P      23 11 52.3  0.0
KS15                                ePcP   PcP    23 13 40.8 -0.1
TIP   Timpagrande      43.11 290⇓eP     P      23 11 52.2 -0.2
MOR8  Moi Rana         43.12 330⇓iP     P      23 11 51.3 -0.9
      comp=Z,960nm,0.8s,mb6.6
MOR8  Moi Rana         43.12 330⇓iP     P      23 11 51.3 -0.9
MOR8                                 AMb   AMB    23 11 52.8
      comp=Z,960nm,0.8s,mb6.6
MOR8                                epP    pP     23 12 18.1 +1.0
KLR   Kul'dur          43.13  55αiP     P      23 11 50.7 -1.8
KLR                                 e*PP   pP     23 12 18.4 +1.0
KLR                                 e*SP   sP     23 12 26.5 -3.4
KLR                                 e             23 13 37.8
KLR                                 ePPP   PPP    23 14 07.0 -6.4
KLR                                 eSS    SS     23 21 24.0 +5.1
KLR                                  pmax  pmax
      comp=N,110nm,1.4s
KLR                                  pmax  pmax
      comp=E,160nm,1.4s
KLR                                  pmax  pmax
      comp=Z,180nm,1.4s,mb5.6
GEC2  GERESS Array S   43.14 304 eP     P      23 11 53.5 +0.9
GEC2                                 pmax  pmax
      comp=Z,395nm,1.2s,mb6.0
GEC2  GERESS Array S   43.14 304 eP     P      23 11 53.5 +0.9
      comp=Z,395nm,1.2s,mb6.0
GERES GERESS Array B   43.14 304  P     P      23 11 53.2 +0.6
      comp=Z,86nm,0.7s,mb5.6,baz=73,slow=6.6,SNR=404
GERES                                PP    PP     23 13 31.6 -5.0
      comp=Z,17nm,0.8s,baz=82,slow=9.4,SNR=3.5
KHC   Kasperske Hory   43.18 305⇓iP     P      23 11 53.5 +0.6
KHC                                 ex     x      23 12 04.5
KHC                                 ePP    PP     23 13 32.4 -4.6
KHC                                 ex     x      23 21 12.7
KHC                                 ex     x      23 21 58.7
CLL   Collm            43.27 308⇓iP     P      23 11 53.8 +0.2
CLL                                 e*PP   pP     23 12 14.0 -4.5
CLL                                 eS     S      23 18 10.0 -2.2
CLL                                  pmax  pmax
      comp=Z,753nm,1.4s,mb6.2
CLL   Collm            43.27 308⇓iP     P      23 11 53.8 +0.2
      comp=Z,753nm,1.4s,mb6.2
CLL                                 epP    pP     23 12 14.0 -4.5
CLL                                 eScP          23 17 23.0
CLL                                 eS     S      23 18 10.0 -2.2
CLL   Collm            43.27 308 ⇓P     P      23 11 53.8 +0.2
      comp=Z,logA/T=2.7,mb6.2
CLL                                 e*SP   sP     23 12 31.0 +0.1
CLL                                 e             23 13 34.0
CLL                                 e             23 13 40.0
CLL                                 e*PPP         23 13 54.0
CLL                                 ePPP   PPP    23 14 13.0 -2.2
CLL                                 eSCP          23 17 23.0
CLL                                 eS     S      23 18 10.0 -2.2
CLL                                 eSS    SS     23 21 28.0 +6.7
RGNG  Rignano Grg      43.29 293 eP     P      23 11 54.0 +0.1
COP   Copenhagen       43.29 314⇓iP     P      23 11 54.2 +0.5
COP                                 e             23 12 31.6
COP                                 i             23 13 34.4
COP                                 i S    S      23 18 10.5 -1.9
COP                                  pmax  pmax
      comp=Z,300nm,0.7s,mb6.1
COP                                  MLR   MLR
      comp=Z,430nm,16.0s
COP   Copenhagen       43.29 314⇓iP     P      23 11 54.2 +0.5
      comp=Z,295nm,0.7s,mb6.1
COP                                 e             23 12 31.6
COP                                 i             23 13 34.4
COP                                 i S    S      23 18 10.5 -1.9
      comp=Z,420nm,16.0s
JAVS  Javornik         43.40 300⇓eP     P      23 11 55.3 +0.6
GRI   Girifalco        43.47 289 eP     P      23 11 55.8 +0.4
FG4   Candela          43.48 293 eP     P      23 11 56.3 +0.9
VOY   Vojsko           43.49 300⇓iP     P      23 11 55.8 +0.3
MRLC  Muro Lucano      43.60 292 eP     P      23 11 57.3 +0.9
FG5   Orsara di Pugl   43.62 293 eP     P      23 11 58.0 +1.4
WET   Wettzell         43.63 305 eP     P      23 11 57.2 +0.7
WET                                  pmax  pmax
      comp=Z,454nm,1.3s,mb6.0
WET   Wettzell         43.63 305 eP     P      23 11 57.2 +0.7
      comp=Z,454nm,1.3s,mb6.0
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TRI   Trieste          43.65 300 eP     P      23 11 57.0 +0.3
KBA   Koelnbreinsper   43.67 302⇑iP     P      23 11 57.2 +0.3
      comp=Z,661nm,1.7s,mb6.1
KBA   Koelnbreinsper   43.67 302⇑iP     P      23 11 57.2 +0.3
KBA                                  pmax  pmax
      comp=Z,661nm,1.7s,mb6.1
ROBS  Robic            43.71 300⇓eP     P      23 11 57.4 +0.1
      comp=Z,899nm,0.9s,mb6.5
MGR   Morigerati       43.73 291 eP     P      23 11 57.7 +0.3
NKC   Novy Kostel      43.75 306⇓iP     P      23 11 58.1 +0.6
CIGN  Sant'Elia a Pi   43.78 294  P     P      23 11 58.9 +1.0
SGO   Sicignano        43.79 292 eP     P      23 11 58.8 +0.9
PTCC  Patocco-Chiusa   43.79 301 eP     P      23 11 57.9  0.0
TIXI  Tiksi            43.81  22⇓iP     P      23 11 57.8 +0.1
TIXI                                e*PP   pP     23 12 25.1 +2.5
TIXI                                e*SP   sP     23 12 36.1 +1.1
TIXI                                e             23 13 40.0
TIXI                                eS     S      23 18 19.2 -0.5
TIXI                                eS            23 19 01.4
TIXI                                eSS    SS     23 21 37.4 +6.9
TIXI                                 pmax  pmax
      comp=N,14nm,0.9s
TIXI                                 pmax  pmax
      comp=E,141nm,0.9s
TIXI                                 pmax  pmax
      comp=Z,490nm,0.9s,mb6.2
TIXI                                 MLR   MLR
      comp=Z,2µm,16.0s
TIXI  Tiksi            43.81  22 i Pr         23 11 57.6
LOF   Lofoten          43.86 332 eP     P      23 11 58.9 +0.8
      comp=Z,313nm,2.5s,mb5.6
LOF   Lofoten          43.86 332 eP     P      23 11 58.9 +0.8
LOF                                  AMb   AMB    23 12 02.6
      comp=Z,313nm,2.5s,mb5.6
MRB1  Monte Rocchett   43.88 293  P     P      23 11 59.8 +1.2
NSS   Namsos           43.89 327 eP     P      23 11 56.7 -1.8
NSS                                 eSS    SS     23 21 22.9 -9.1
NSS                                  AMS   AMS    23 31 17.4
      comp=Z,510nm,19.4s
GMNA  Gemona           43.89 301 eP     P      23 11 59.1 +0.4
CSSN  Cassano Irpino   43.91 292 eP     P      23 11 59.7 +0.8
NB2   NORSAR Subarra   43.95 322  P     P      23 11 58.2 -0.7
      comp=Z,405nm,0.6s,mb6.3,baz=92,slow=7.9
NB2   NORSAR Subarra   43.95 322  P     P      23 11 58.2 -0.7
NB2                                  pmax  pmax
      comp=Z,405nm,0.6s,mb6.3
NB2   NORSAR Subarra   43.95 322  P     P      23 11 58.2 -0.7
      baz=92,slow=7.9
NOA   NORSAR Array B   43.95 322  P     P      23 11 58.3 -0.7
      comp=Z,275nm,0.6s,mb6.2,baz=92,slow=7.7,SNR=1087
NOA                                  PP    PP     23 13 42.3 -2.3
      comp=Z,21nm,0.7s,baz=94,slow=10,SNR=4.4
NOA                                  LR    LR     23 30 59.1
      comp=Z,767nm,19.1s,baz=70,slow=37
PSB1  Pescosannita     43.97 293  P     P      23 12 00.3 +0.9
SOI   Samo             43.97 288 eP     P      23 11 59.3 -0.1
CEL   Celeste          44.03 289  P     P      23 12 00.2 +0.3
NAO01 NORSAR Array S   44.10 322 eP     P      23 11 59.3 -0.9
      comp=Z,443nm,0.9s,mb6.2
FVI   Forni Avoltri    44.14 301 eP     P      23 12 00.4 -0.3
OSL   Oslo             44.16 320 eP     P      23 11 60.0 -0.7
      comp=Z,64nm,1.0s,mb5.3
OSL   Oslo             44.16 320 eP     P      23 11 60.0 -0.7
OSL                                  AMb   AMB    23 12 01.4
      comp=Z,64nm,1.0s,mb5.3
SCLL  Scilla           44.17 289 eP     P      23 12 01.1 +0.1
CII   Carovilli        44.20 294 eP     P      23 12 02.0 +0.8
MOX   Moxa             44.22 307⇓iP     P      23 12 01.8 +0.5
MOX                                 e             23 13 39.1
MOX                                  pmax  pmax
      comp=Z,554nm,1.4s,mb6.1
MOX                                  MLR   MLR
      comp=Z,400nm,22.0s
MOX   Moxa             44.22 307⇓iP     P      23 12 01.8 +0.5
      comp=Z,554nm,1.4s,mb6.1
MOX                                 e             23 13 39.1
MOX                                  LR    LR
      comp=Z,400nm,22.0s
MOX   Moxa             44.22 307⇓iP     P      23 12 01.8 +0.5
      comp=Z,logA/T=2.6,mb6.1
MOX                                  PP    PP     23 13 39.0 -8.4
MOX                                  SS    SS     23 21 44.0 +5.7
MOX                                  L            23 31 55.0
AOI   Ancona           44.24 297  P     P      23 12 02.0 +0.5
MIDA  Miranda          44.26 294  P     P      23 11 59.9 -1.8
MTTG  Motta San Giov   44.26 288 eP     P      23 12 02.1 +0.3
MSI   Messina ING      44.30 289 eP     P      23 12 02.2 +0.1
RNI2  Rionero Sannit   44.31 294  P     P      23 12 03.2 +1.0
INTR  Introdacqua      44.41 294  P     P      23 12 03.2 +0.3
TRON  Trondheim        44.46 325⇓iP     P      23 12 02.5 -0.5
TERO  Teramo           44.47 295  P     P      23 12 03.9 +0.5
SEST  Monte Rota       44.49 301  P     P      23 12 03.0 -0.5
RFI   Roccamonfina     44.55 293 eP     P      23 12 04.5 +0.5
SDI   San Donato       44.56 294 eP     P      23 12 04.0 -0.1
CING  Cingoli          44.57 296  P     P      23 12 04.8 +0.6
GRA1  Grafenberg Arr   44.62 306 eP     P      23 12 05.8 +1.4
      comp=Z,1µm,1.3s,mb6.4
GRA1                                eSS    SS     23 21 57.8  +12
GRF   Grafenberg Arr   44.62 306 eP     P      23 12 05.8 +1.4
GRF                                  pmax  pmax
      comp=Z,1µm,1.3s,mb6.4
GRF   Grafenberg Arr   44.62 306 eP     P      23 12 05.8 +1.4
GRF                                  pmax  pmax
      comp=Z,1µm,1.3s,mb6.4
GRF   Grafenberg Arr   44.62 306 eP     P      23 12 05.8 +1.4
      comp=Z,1µm,1.3s,mb6.4
GRF                                 eSS    SS     23 21 57.8  +12
BSEG  Bad Segeberg     44.63 312 eP     P      23 12 05.1 +0.6
PESA  Pesaro           44.68 297  P     P      23 12 05.7 +0.7
AQU   L'Aquila         44.68 295  P     P      23 12 05.7 +0.6
AQU                                  pmax  pmax
      comp=Z,230nm,0.9s,mb5.9
AQU   L'Aquila         44.68 295 eP     P      23 12 06.0 +1.0
ARV   Arcevia          44.72 297 eP     P      23 12 06.0 +0.6
KONO  Kongsberg        44.73 320 i P    P      23 12 04.9 -0.3
SLNA  Salina           44.73 289 eP     P      23 12 05.1 -0.4
NRCA  Norcia           44.76 296 eP     P      23 12 06.4 +0.7
PTQR  Pietraquaria     44.77 295 eP     P      23 12 07.0 +1.3
WTTA  Wattenberg       44.78 302⇑iP     P      23 12 05.6 -0.2
      comp=Z,775nm,1.3s,mb6.3
WTTA  Wattenberg       44.78 302⇑iP     P      23 12 05.6 -0.2
WTTA                                 pmax  pmax
      comp=Z,775nm,1.3s,mb6.3
SNTG  Esanatoglia      44.78 296 eP     P      23 12 06.7 +0.9
FSSB  Fossombrone      44.78 297 eP     P      23 12 06.4 +0.5
WATA  Walderalm        44.80 302⇓iP     P      23 12 05.6 -0.4
      comp=Z,332nm,1.2s,mb5.9
WATA  Walderalm        44.80 302⇓iP     P      23 12 05.6 -0.4
WATA                                 pmax  pmax
      comp=Z,332nm,1.2s,mb5.9
BRES  Bressanone       44.83 301  P     P      23 12 05.8 -0.4
CLZ   Clausthal        44.83 309 eP     P      23 12 06.7 +0.5
      comp=Z,708nm,1.4s,mb6.2
FUR   Furstenfeldbru   44.84 304 eP     P      23 12 07.1 +0.8
FUR                                  pmax  pmax
      comp=Z,1µm,1.2s,mb6.5
FUR   Furstenfeldbru   44.84 304 eP     P      23 12 07.1 +0.8
      comp=Z,1µm,1.2s,mb6.5
GUAR  Guarcino         44.90 294  P     P      23 12 07.2 +0.4
FIAM  Fiamignano       44.91 295  P     P      23 12 07.7 +0.8
RSM   Repubblica di    44.96 297 eP     P      23 12 08.0 +0.8
SSY   Sortino          45.01 287  P     P      23 12 07.7  0.0
DOMB  Dombas           45.02 323⇓iP     P      23 12 07.1 -0.3
      comp=Z,668nm,1.0s,mb6.3
DOMB  Dombas           45.02 323⇓iP     P      23 12 07.1 -0.3
DOMB                                 AMb   AMB    23 12 08.8
      comp=Z,668nm,1.0s,mb6.3
CTI   Castel Tesino    45.02 301 eP     P      23 12 07.6 -0.1
MNO   Monte Soro       45.03 289 eP     P      23 12 08.7 +0.8
MURB  Monte Urbino     45.07 296  P     P      23 12 09.6 +1.4
SQTA  Sankt Quirin     45.07 302⇑iP     P      23 12 07.7 -0.4
      comp=Z,360nm,1.2s,mb6.0
SQTA  Sankt Quirin     45.07 302⇑iP     P      23 12 07.7 -0.4
SQTA                                 pmax  pmax
      comp=Z,360nm,1.2s,mb6.0
MUD   Monsted U'grnd   45.07 315⇓iP     P      23 12 08.4 +0.4
MUD                                 e             23 13 52.7
MUD                                  pmax  pmax
      comp=Z,260nm,1.0s,mb5.9
MUD                                  MLR   MLR
      comp=Z,570nm,18.0s
MUD   Monsted U'grnd   45.07 315⇓iP     P      23 12 08.4 +0.4
      comp=Z,264nm,1.0s,mb5.9
MUD                                 i             23 12 22.5
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MUD				*e*		23 13 52.7	
MUD				*i* S	S	23 18 33.8	-4.3
MUD				*i*		23 19 30.1	
	comp=Z,560nm,18.0s						
CERT	Cerreto	45.09	295	P	P	23 12 08.6	+0.3
VENT	Ventotene	45.10	293	P	P	23 12 07.2	-1.2
MOTA	Moosalm	45.12	302	⇑*i*P	P	23 12 08.0	-0.5
	comp=Z,116nm,0.9s,mb5.6						
MOTA	Moosalm	45.12	302	⇑*i*P	P	23 12 08.0	-0.5
MOTA				pmax	pmax		
	comp=Z,116nm,0.9s,mb5.6						
PZI	Palazzolo	45.13	287	*e*P	P	23 12 09.4	+0.7
MNS	Montasola	45.19	295	*e*P	P	23 12 09.4	+0.3
BADI	Badiali	45.20	297	P	P	23 12 10.6	+1.4
APPI	Appiano	45.21	301	P	P	23 12 07.9	-1.3
LAV9	Lanuvio	45.37	294	*e*P	P	23 12 11.0	+0.4
MA9	Marino	45.37	294	*e*P	P	23 12 10.9	+0.3
CRE	Caprese Michel	45.38	297	*e*P	P	23 12 11.6	+1.0
SFI	Santa Sofia	45.38	298	*e*P	P	23 12 11.9	+1.3
VAE	Valguarnera	45.39	288	P	P	23 12 11.9	+1.1
	comp=Z,93nm,0.8s,mb5.5,baz=26,slow=4.2,SNR=25						
ROM9	Roma	45.46	295	P	P	23 12 12.1	+0.8
HDH	Heidenheim	45.47	304	P	P	23 12 11.6	+0.4
HDH	Heidenheim	45.47	304	⇓*e*P	P	23 12 11.5	+0.3
PGD	Poggio Sodo	45.48	298	*e*P	P	23 12 13.0	+1.6
CSLB	Castelbuono	45.51	289	*e*P	P	23 12 11.2	-0.5
GIB	Gibilmanna	45.51	289	*e*P	P	23 12 11.2	-0.5
KGM	Kluang	45.56	135	P	P	23 12 14.1	+1.6
VMG	Vicchio	45.58	298	*e*P	P	23 12 13.8	+1.6
RAVA	Ravarino	45.68	299	P	P	23 12 14.6	+1.6
SEI	Scarperia	45.69	298	*e*P	P	23 12 14.3	+1.3
UBR	Uberruh	45.71	303	P	P	23 12 13.4	+0.3
UBR	Uberruh	45.71	303	⇓*e*P	P	23 12 13.5	+0.4
SIND	Sindeldorf	45.71	305	⇓*e*P	P	23 12 13.6	+0.5
MOL	Molde	45.73	324	⇓*i*P	P	23 12 14.5	+1.4
	comp=Z,675nm,1.7s,mb6.1						
MOL	Molde	45.73	324	⇓*i*P	P	23 12 14.5	+1.4
MOL				AMb	AMB	23 12 18.1	
	comp=Z,675nm,1.7s,mb6.1						
TOLF	Tolfa	45.76	295	P	P	23 12 13.6	-0.1
MABI	Malga Bissina	45.79	301	P	P	23 12 13.1	-0.7
BRMO	Bormio	45.79	301	*e*P	P	23 12 13.7	-0.1
FNVD	Fontana Vidola	45.82	298	P	P	23 12 15.5	+1.4
FUORN	Ofenpass	45.83	302	⇓*i*P	P	23 12 13.9	-0.2
ZCCA	Zocca	45.88	298	*e*P	P	23 12 16.1	+1.6
SAL	Salo	45.88	300	*e*P	P	23 12 14.9	+0.3
MCT	Mte Cammarata	45.92	289	P	P	23 12 16.5	+1.5
DAVA	Damuels	45.94	303	⇑*i*P	P	23 12 15.0	0.0
	comp=Z,996nm,1.1s,mb6.5						
HSP	Hornsund	45.96	345	*e*P	P	23 12 15.4	+0.6
SNART	Snartemo	46.01	318	*e*P	P	23 12 15.4	0.0
	comp=Z,744nm,1.8s,mb6.1						
SNART	Snartemo	46.01	318	*e*P	P	23 12 15.4	0.0
SNART				AMb	AMB	23 12 18.6	
	comp=Z,744nm,1.8s,mb6.1						
FAVR	Favara	46.02	288	*e*P	P	23 12 17.3	+1.5
BERNI	Berninapass	46.04	301	⇓*i*P	P	23 12 15.6	-0.2
BUCH	Bad Urach	46.05	304	⇓*e*P	P	23 12 16.4	+0.6
DAVOX	Davos	46.05	302	P	P	23 12 15.7	-0.2
	comp=Z,466nm,0.7s,mb6.3,baz=97,slow=6.0,SNR=787						
DAVOX				PcP	PcP	23 13 51.1	+0.1
	comp=Z,49nm,0.6s,baz=151,slow=3.3,SNR=4.0						
DAVOX	Davos	46.05	302	⇓*i*P	P	23 12 15.7	-0.2
STU	Stuttgart	46.09	305	*e*P	P	23 12 16.4	+0.3
STU				*e*		23 13 50.4	
STU				pmax	pmax		
	comp=Z,445nm,1.1s,mb6.1						
STU	Stuttgart	46.09	305	*e*P	P	23 12 16.4	+0.3
	comp=Z,446nm,1.1s,mb6.1						
STU				*e*PcP	PcP	23 13 50.4	-0.7
GSCL	Gusciola	46.15	298	*e*P	P	23 12 18.1	+1.4
TOD	Tromm	46.18	306	*e*P	P	23 12 16.7	-0.1
TOD	Tromm	46.18	306	⇓*e*P	P	23 12 17.2	+0.4
BDI	Bagni Di Lucca	46.22	298	*e*P	P	23 12 17.3	+0.1
ODD1	Odda	46.22	320	⇓*i*P	P	23 12 16.1	-0.9
	comp=Z,398nm,1.4s,mb6.0						
ODD1	Odda	46.22	320	⇓*i*P	P	23 12 16.1	-0.9
ODD1				AMb	AMB	23 12 18.0	
	comp=Z,398nm,1.4s,mb5.9						
ERBM	Eremo	46.25	299	*e*P	P	23 12 19.4	+1.9
SWS	Schriesheim	46.27	306	P	P	23 12 18.0	+0.5
SWS	Schriesheim	46.27	306	⇓*e*P	P	23 12 17.8	+0.3
MAON	Monte Argentar	46.28	296	P	P	23 12 17.5	-0.2
GUT	Gutenstein	46.28	304	P	P	23 12 17.9	+0.2
GUT	Gutenstein	46.28	304	⇓*e*P	P	23 12 17.8	+0.1
TNS	Taunus Mts	46.29	307	*e*P	P	23 12 18.1	+0.4
TNS				pmax	pmax		
	comp=Z,177nm,1.0s,mb5.8						
TNS	Taunus Mts	46.29	307	*e*P	P	23 12 18.1	+0.4
	comp=Z,177nm,1.0s,mb5.8						
SARO	Sassorosso	46.32	298	P	P	23 12 18.7	+0.7
PLONS	Plons	46.33	302	⇓*i*P	P	23 12 17.7	-0.3
BLS5	Blasjo	46.34	320	⇓*i*P	P	23 12 19.5	+1.6
	comp=Z,290nm,1.1s,mb5.9						
BLS5	Blasjo	46.34	320	⇓*i*P	P	23 12 19.5	+1.6
BLS5				AMb	AMB	23 12 21.2	
	comp=Z,290nm,1.1s,mb5.9						
BLS5				*e*PP	PP	23 14 08.5	+0.4
VLC	Villacollemand	46.34	298	*e*P	P	23 12 18.7	+0.5
	comp=Z,546nm,0.8s,mb6.3						
PII	Pisa	46.36	298	*e*P	P	23 12 17.9	-0.4
LBG	Lerchenberg	46.37	305	⇓*e*P	P	23 12 18.9	+0.6
VALM		46.39	299	P	P	23 12 19.9	+1.4
VDL	Val di Lei	46.40	302	⇓*i*P	P	23 12 18.4	-0.2
SISB	Singen-Sch Ber	46.46	303	P	P	23 12 19.0	-0.1
GRAM		46.48	299	P	P	23 12 20.3	+1.0
WEIN	Weingarten	46.48	303	⇓*i*P	P	23 12 18.9	-0.4
SPAK	Spaichingen	46.49	304	*e*P	P	23 12 19.3	0.0
SPAK	Spaichingen	46.49	304	⇓*e*P	P	23 12 19.7	+0.4
VINC	Vinca	46.51	298	P	P	23 12 19.4	-0.1
STEIN	Stein am Rhein	46.53	303	⇓*i*P	P	23 12 19.3	-0.3
WILA	Wila	46.56	303	⇓*e*P	P	23 12 19.4	-0.5
LLS	Linth-Limmern	46.62	302	⇓*i*P	P	23 12 19.9	-0.5
CODM		46.65	299	P	P	23 12 21.7	+1.1
TRULL	Truellikon	46.66	303	⇓*i*P	P	23 12 19.6	-1.0
KTD	Kalmit	46.69	306	*e*P	P	23 12 21.2	+0.3
KTD	Kalmit	46.69	306	⇓*e*P	P	23 12 21.3	+0.4
BFO	Black Forest	46.74	304	*e*P	P	23 12 21.2	-0.1
BFO				pmax	pmax		
	comp=Z,454nm,1.5s,mb6.0						
BFO	Black Forest	46.74	304	*e*P	P	23 12 21.2	-0.1
	comp=Z,454nm,1.5s,mb6.0						
STAV	Stavanger	46.75	319	⇓*i*P	P	23 12 21.0	-0.2
	comp=Z,484nm,1.3s,mb6.1						
STAV	Stavanger	46.75	319	⇓*i*P	P	23 12 21.0	-0.2
STAV				AMb	AMB	23 12 22.6	
	comp=Z,484nm,1.3s,mb6.1						
SLE	Schleitheim	46.76	304	⇓*i*P	P	23 12 21.0	-0.4
ZUR	Zurich	46.79	303	⇓*i*P	P	23 12 21.1	-0.6
MUGIO	Muggio	46.82	301	⇓*i*P	P	23 12 20.6	-1.3
BOB	Bobbio (Coli)	46.83	299	*e*P	P	23 12 23.3	+1.3
MUO	Muotathal	46.84	302	⇓*i*P	P	23 12 22.0	-0.1
BER	Bergen	46.84	321	⇓*i*P	P	23 12 21.7	-0.2
BER				LR	LR		
	comp=Z,701µm,18.2s						
BER	Bergen	46.84	321	*e*P	P	23 12 21.6	-0.4
BER				⇓*i*P		23 12 21.7	
BER				AMb	AMB	23 12 23.2	
	comp=Z,414nm,1.4s,mb6.0						
BER				*e*PP	PP	23 14 13.5	+0.4
BER				*e*SS	SS	23 22 26.7	+2.1
BER				AMS	AMS	23 32 56.5	
	comp=Z,701nm,18.2s						
EGD	Espegrend	46.91	321	*e*P	P	23 12 22.0	-0.4
	comp=Z,551nm,1.4s,mb6.1						
EGD	Espegrend	46.91	321	*e*P	P	23 12 22.0	-0.4
EGD				AMb	AMB	23 12 24.0	
	comp=Z,551nm,1.4s,mb6.1						
ASK	Askoy	46.91	321	*e*P	P	23 12 22.1	-0.3
	comp=Z,672nm,1.2s,mb6.2						
ASK	Askoy	46.91	321	*e*P	P	23 12 22.1	-0.3
ASK				AMb	AMB	23 12 23.9	
	comp=Z,672nm,1.2s,mb6.2						
ABH	Alteburg	46.92	307	*e*P	P	23 12 22.6	-0.1
ABH	Alteburg	46.92	307	⇓*e*P	P	23 12 23.1	+0.4
FOO	Floro	46.93	323	⇓*i*P	P	23 12 22.4	-0.2
	comp=Z,505nm,1.4s,mb6.1						
FOO	Floro	46.93	323	⇓*i*P	P	23 12 22.4	-0.2
FOO				AMb	AMB	23 12 23.9	
	comp=Z,505nm,1.4s,mb6.0						
WIT	Witteveen	46.94	311	⇓*i*P	P	23 12 23.3	+0.5
	comp=Z,1µm,1.3s,mb6.5						
WIT				*e*PP	PP	23 14 13.5	-0.7
LANF	Langenberg	46.94	305	*e*P	P	23 12 23.4	+0.5
FUSIO	Fusio	46.95	302	⇓*i*P	P	23 12 22.3	-0.6
KMY	Karmoy	46.97	319	⇓*i*P	P	23 12 22.7	-0.2
	comp=Z,390nm,1.3s,mb6.0						
KMY	Karmoy	46.97	319	⇓*i*P	P	23 12 22.7	-0.2
KMY				AMb	AMB	23 12 24.3	
	comp=Z,390nm,1.3s,mb6.0						
WTSB	Winterswijk	47.00	309	⇓*i*P	P	23 12 23.6	+0.3
	comp=Z,274nm,1.6s,mb5.7						
WTSB				*i* PP	PP	23 14 13.8	-1.0
BNALP	Bannalp	47.01	302	⇓*i*P	P	23 12 23.0	-0.4
VAI	Varese	47.02	301	*e*P	P	23 12 22.5	-1.0
STR	Strasbourg	47.05	305	*e*P	P	23 12 24.0	+0.3
FELD	Feldberg	47.05	304	⇓*e*P	P	23 12 23.7	0.0
SULZ	Sulz-Cheisache	47.06	303	⇓*i*P	P	23 12 23.3	-0.5
SUE	Sulen	47.09	322	*e*P	P	23 12 23.5	-0.3
	comp=Z,339nm,1.4s,mb5.9						
SUE	Sulen	47.09	322	*e*P	P	23 12 23.5	-0.3
SUE				AMb	AMB	23 12 25.0	
	comp=Z,339nm,1.4s,mb5.9						
KIZ	Kirchzarten	47.09	304	P	P	23 12 23.8	-0.2
KIZ	Kirchzarten	47.09	304	⇓*e*P	P	23 12 23.6	-0.4
HASLI	Hasliberg	47.22	302	⇓*i*P	P	23 12 24.5	-0.5
LIBD	Limburg	47.25	304	*e*P	P	23 12 25.2	-0.1
LIBD	Limburg	47.25	304	*e*P	P	23 12 25.5	+0.2
GENL	Genova Univers	47.26	299	P	P	23 12 24.6	-0.7
RUP	Ruppelstein	47.27	306	*e*P	P	23 12 25.6	+0.2
RUP	Ruppelstein	47.27	306	⇓*e*P	P	23 12 25.9	+0.5
WLS	Welschbruch	47.36	305	*e*P	P	23 12 26.0	-0.1
BALST	Balsthal	47.38	303	⇓*e*P	P	23 12 25.6	-0.7
KBS	Kingsbay	47.38	347	*e*P	P	23 12 26.1	+0.1
	comp=Z,591nm,0.9s,mb6.3						
KBS	Kingsbay	47.38	347	*e*P	P	23 12 26.1	+0.1
KBS				AMb	AMB	23 12 28.1	
	comp=Z,591nm,0.9s,mb6.3						
KBS				*e*SS	SS	23 22 38.2	+4.5
CDF	Champ du Feu	47.41	305	⇓*i*P	P	23 12 26.2	-0.3
	comp=Z,507nm,1.2s,mb5.8						
CDF	Champ du Feu	47.41	305	⇓*i*P	P	23 12 26.2	-0.3
CDF				pmax	pmax		
	comp=Z,253nm,1.2s,mb5.8						
BBS	Basel-Blauen	47.47	303	*e*P	P	23 12 26.1	-0.9
BBS	Basel-Blauen	47.47	303	⇓*e*P	P	23 12 26.5	-0.5
PCP	Pian Castagno	47.51	299	P	P	23 12 26.9	-0.5
MMK	Mattmark	47.51	301	⇓*i*P	P	23 12 26.5	-0.9
MCGN	Macugnaga	47.52	301	*e*P	P	23 12 25.9	-1.5
ECH	Echery	47.53	304	*e*P	P	23 12 26.9	-0.6
WIMIS	Wimmis	47.59	302	⇓*i*P	P	23 12 27.4	-0.5
ORX	Oropa	47.61	301	P	P	23 12 26.2	-1.9
MOF	Molkenrain	47.63	304	*e*P	P	23 12 27.9	-0.3
LKBD	Leukerbad	47.66	302	⇓*i*P	P	23 12 28.1	-0.4
BOURR	Bourrignon	47.67	303	⇓*i*P	P	23 12 28.0	-0.6
PGF	Pioggiola	47.76	297	⇓*i*P	P	23 12 29.0	-0.3
	comp=Z,633nm,0.9s,mb6.2						
PGF	Pioggiola	47.76	297	⇓*i*P	P	23 12 29.0	-0.3
PGF				pmax	pmax		
	comp=Z,316nm,0.9s,mb6.2						
HGN	Heimansgroeve	47.76	308	⇓*i*P	P	23 12 28.9	-0.4
	comp=Z,173nm,0.8s,mb5.9						
HGN				*i* PP	PP	23 14 20.7	-0.8
TRAV		47.80	301	P	P	23 12 27.6	-2.0
HINF	Hinteralfeld	47.82	304	⇓*i*P	P	23 12 29.3	-0.4
	comp=Z,792nm,1.1s,mb6.2						
HINF	Hinteralfeld	47.82	304	⇓*i*P	P	23 12 29.3	-0.4
HINF				pmax	pmax		
	comp=Z,396nm,1.1s,mb6.2						
FIN	Finale Ligure	47.84	299	*e*P	P	23 12 28.8	-1.1
WLF	Walferdange	47.85	306	⇓*i*P	P	23 12 30.4	+0.4
WLF				*e*		23 14 21.3	
WLF				pmax	pmax		
	comp=Z,400nm,0.9s,mb6.2						
WLF	Walferdange	47.85	306	⇓*i*P	P	23 12 30.4	+0.4
	comp=Z,404nm,0.9s,mb6.2						
WLF				*e*PP	PP	23 14 21.3	-1.0
DIX	Grande Dixence	47.88	302	⇓*i*P	P	23 12 30.3	+0.1
SENIN	Lac Senin	47.88	302	⇓*i*P	P	23 12 30.0	-0.2
OSPF	L'Ospedale	47.89	295	*e*P	P	23 12 29.2	-1.1
LOMF	Lomont	47.95	303	*e*P	P	23 12 30.2	-0.5
TORNY	Torny	48.01	303	⇓*i*P	P	23 12 30.9	-0.3
GRYON	Gryon	48.04	302	⇓*i*P	P	23 12 31.1	-0.3
ROB	Roburent	48.04	299	P	P	23 12 30.6	-0.9
HAU	Haudompre	48.11	304	⇓*i*P	P	23 12 31.6	-0.3
	comp=Z,738nm,1.0s,mb6.2						
HAU				*e*R			
	comp=Z,430nm,23.0s						
HAU	Haudompre	48.11	304	⇓*i*P	P	23 12 31.6	-0.3
HAU				pmax	pmax		
	comp=Z,369nm,1.0s,mb6.2						
HAU				MLR	MLR		
	comp=Z,430nm,23.0s						
AIGLE	Aigle	48.12	302	⇓*i*P	P	23 12 31.7	-0.4
IMI	Imperia	48.14	299	*e*P	P	23 12 32.6	+0.3
SALAN	Lac Salanfe	48.16	302	⇓*i*P	P	23 12 32.4	0.0
MONE	Monesi	48.18	299	P	P	23 12 32.5	-0.2
LSD	Ceresole Reale	48.22	301	P	P	23 12 32.8	0.0
EMV	Vieux Emosson	48.23	302	⇓*i*P	P	23 12 32.9	0.0
RSP	Reno Superiore	48.23	300	P	P	23 12 30.8	-2.1
NEGI	Negi	48.29	299	P	P	23 12 33.5	+0.2
BRANT	Les Verrieres	48.29	303	⇓*e*P	P	23 12 32.9	-0.4
THEF	They Montfort	48.29	305	*e*P	P	23 12 33.0	-0.3
BHB	Bricherasio	48.31	300	P	P	23 12 31.7	-1.9
SAOF	Saorge	48.35	299	*e*P	P	23 12 34.2	+0.3
ENR	Entracque	48.37	299	P	P	23 12 33.5	-0.6
FENE	Fenestrelle	48.39	300	P	P	23 12 32.8	-1.4
DOI	San Damiano	48.41	300	*e*P	P	23 12 32.6	-1.8
STV2	Anna di Valdie	48.43	299	P	P	23 12 33.3	-1.2
AUTN	L'Aution	48.44	299	*e*P	P	23 12 35.3	+0.8
STV	Sta Anna Valdi	48.44	299	P	P	23 12 33.4	-1.1
VSL	Villasalto	48.45	293	⇓*e*P	P	23 12 33.8	-0.9
	comp=Z,148nm,0.9s,mb5.8						
VSL				*e*PcP	PcP	23 13 58.2	-1.4
SBF	Sospel	48.47	299	⇓*i*P	P	23 12 34.9	+0.1
	comp=Z,3µm,1.0s,mb6.7						
SBF	Sospel	48.47	299	⇓*i*P	P	23 12 34.9	+0.1
SBF				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.7						
LPG	La Plagne	48.48	301	⇓*i*P	P	23 12 35.2	+0.4
	comp=Z,553nm,0.8s,mb6.1						
LPG	La Plagne	48.48	301	⇓*i*P	P	23 12 35.2	+0.4
LPG				pmax	pmax		
	comp=Z,277nm,0.8s,mb6.1						
LPL	La Plagne	48.49	301	⇓*i*P	P	23 12 35.1	+0.2
	comp=Z,1µm,1.0s,mb6.3						
LPL	La Plagne	48.49	301	⇓*i*P	P	23 12 35.1	+0.2
LPL				pmax	pmax		
	comp=Z,572nm,1.0s,mb6.4						
RSL	Roselend	48.51	301	*e*P	P	23 12 35.5	+0.4
MON	Monaco	48.51	298	P	P	23 12 35.0	-0.1
PZZ	Prazzo	48.51	300	P	P	23 12 33.4	-1.7
LUBP	Lubang	48.52	107	*e*P	P	23 12 39.1	+3.6
GIMEL	Gimel	48.53	302	⇓*i*P	P	23 12 35.2	0.0
OG22	Abries	48.53	300	*e*P	P	23 12 35.1	-0.2
REVF	Revere	48.55	299	*e*P	P	23 12 35.1	-0.3
TOUF	Mont Tournerai	48.55	299	*e*P	P	23 12 35.9	+0.5
GIVF	Givet	48.60	307	⇓*i*P	P	23 12 35.9	+0.2
	comp=Z,863nm,1.2s,mb6.2						
GIVF	Givet	48.60	307	⇓*i*P	P	23 12 35.9	+0.2
GIVF				pmax	pmax		
	comp=Z,431nm,1.2s,mb6.3						
RRL	Cesana Torines	48.62	300	P	P	23 12 36.0	+0.1
CABF	La Chapelle	48.63	303	⇓*i*P	P	23 12 35.8	-0.2
	comp=Z,369nm,0.7s,mb6.1						
CABF	La Chapelle	48.63	303	⇓*i*P	P	23 12 35.8	-0.2
CABF				pmax	pmax		
	comp=Z,184nm,0.7s,mb6.1						
BNI	Bardonecchia	48.65	300	⇓*i*P	P	23 12 36.0	-0.2
BNI				pmax	pmax		
	comp=Z,540nm,1.2s,mb6.3						
BNI	Bardonecchia	48.65	300	⇓*i*P	P	23 12 36.0	-0.1
	comp=Z,545nm,1.2s,mb6.4						
MVIF	Mont Vial	48.65	299	*e*P	P	23 12 36.1	-0.1
MBDF	Montbardon	48.68	300	⇓*i*P	P	23 12 35.9	-0.5
	comp=Z,300nm,0.7s,mb6.0						
MBDF	Montbardon	48.68	300	⇓*i*P	P	23 12 35.9	-0.5
MBDF				pmax	pmax		
	comp=Z,150nm,0.7s,mb6.0						
SURF	Saint Ours	48.72	300	*e*P	P	23 12 37.0	+0.3
MEZF	Maizieres J'vi	48.83	305	⇓*i*P	P	23 12 37.6	+0.1
	comp=Z,1µm,1.1s,mb6.5						
GDM	Grand'Maison	48.99	301	*e*P	P	23 12 38.7	-0.1
BAIF	Baives	48.99	307	⇓*i*P	P	23 12 39.1	+0.4
	comp=Z,963nm,1.1s,mb6.3						
BAIF	Baives	48.99	307	⇓*i*P	P	23 12 39.1	+0.4
BAIF				pmax	pmax		
	comp=Z,482nm,1.1s,mb6.3						
FRF	La Foret Royal	49.10	298	⇓*i*P	P	23 12 39.3	-0.4
	comp=Z,964nm,0.9s,mb6.4						
FRF	La Foret Royal	49.10	298	⇓*i*P	P	23 12 39.3	-0.4
FRF				pmax	pmax		
	comp=Z,482nm,0.9s,mb6.4						
OG05	Jujurieux	49.20	302	*e*P	P	23 12 40.2	-0.2
GRN	Grenoble	49.23	301	*e*P	P	23 12 40.9	+0.3
ORIF	Oris-en-Rattie	49.23	300	⇓*i*P	P	23 12 39.9	-0.8
	comp=Z,260nm,0.9s,mb5.9						
ORIF				*e*R			
	comp=Z,666nm,20.5s						
LMR	La Mourre	49.27	298	⇓*i*P	P	23 12 40.5	-0.5
	comp=Z,480nm,1.2s,mb6.0						
LMR	La Mourre	49.27	298	⇓*i*P	P	23 12 40.5	-0.5
LMR				pmax	pmax		
	comp=Z,240nm,1.2s,mb6.0						
STOF	St-Etienne Org	49.48	299	*e*P	P	23 12 42.7	+0.1
TAVF	Tavernes	49.49	299	*e*P	P	23 12 42.5	-0.2
VILF	Villemus	49.66	299	*e*P	P	23 12 43.6	-0.4
SMRF	Simiane la Rot	49.72	299	⇓*i*P	P	23 12 44.3	-0.1
	comp=Z,379nm,0.9s,mb6.0						
OCF	Saint Nazaire	49.73	300	*e*P	P	23 12 44.2	-0.2
OG26	St.-Nazaire-De	49.73	300	*e*P	P	23 12 44.2	-0.2
TYV	Tymovskoe	49.73	51	*e*P	P	23 12 42.3	-2.1
TYV				pmax	pmax		
	comp=Z,101nm,1.1s,mb5.7						
TYV				pmax	pmax		
	comp=Z,1µm,3.0s						
PUYF	Puyloubier	49.77	299	*e*P	P	23 12 44.8	0.0
BERF	Bertagne	49.84	298	*e*P	P	23 12 45.3	-0.1
TREF	Trevaresse	49.96	299	*e*P	P	23 12 46.2	0.0
GELF	Grande-Etoile	50.00	299	*e*P	P	23 12 46.7	+0.1
PRAF	Pradon	50.05	299	*e*P	P	23 12 46.7	-0.2
VIVF	Saint-Julien-l	50.07	301	⇓*i*P	P	23 12 46.9	-0.2
	comp=Z,824nm,1.2s,mb6.2						
VIVF	Saint-Julien-l	50.07	301	⇓*i*P	P	23 12 46.9	-0.2
VIVF				pmax	pmax		
	comp=Z,412nm,1.2s,mb6.2						
LRW	Lerwick	50.10	321	⇓*e*P	P	23 12 46.4	-0.7
SMF	Signal de Mont	50.11	303	⇓*i*P	P	23 12 46.7	-0.6
	comp=Z,1µm,1.1s,mb6.3						
SMF	Signal de Mont	50.11	303	⇓*i*P	P	23 12 46.7	-0.6
SMF				pmax	pmax		
	comp=Z,513nm,1.1s,mb6.4						
SAN1	Sandwick	50.15	321	⇓*e*P	P	23 12 46.6	-0.9
KSM	Kuching	50.17	127	⇓*i*P	P	23 12 48.5	+0.3
KSM				*e*pP	pP	23 13 16.7	+3.0
SSF	Saint Saulge	50.21	304	⇓*i*P	P	23 12 47.3	-0.8
	comp=Z,528nm,1.1s,mb6.1						
SSF	Saint Saulge	50.21	304	⇓*i*P	P	23 12 47.3	-0.8
SSF				pmax	pmax		
	comp=Z,264nm,1.1s,mb6.1						
WAL1	Walls	50.30	321	⇓*e*P	P	23 12 47.6	-1.0
AVF	Avril sur Loir	50.39	303	⇓*i*P	P	23 12 48.9	-0.6
	comp=Z,1µm,0.9s,mb6.4						
AVF	Avril sur Loir	50.39	303	⇓*i*P	P	23 12 48.9	-0.6
AVF				pmax	pmax		
	comp=Z,511nm,0.9s,mb6.5						
PLDF	La Plantade	50.45	302	*e*P	P	23 12 49.5	-0.4
COLF	Collangettes	50.53	302	*e*P	P	23 12 50.5	-0.1
KKM	Kota Kinabalu	50.71	118	*e*P	P	23 12 54.0	+1.7
KKM				*e*pP	pP	23 13 21.0	+3.1
KKM	Kota Kinabalu	50.71	118	P	P	23 12 53.6	+1.2
HYF	Humbligny	50.72	304	⇓*i*P	P	23 12 51.7	-0.3
AGO	Saint Agoulin	50.75	303	*e*P	P	23 12 52.1	-0.1
BGF	Bois d'Agland	50.79	303	⇓*i*P	P	23 12 51.7	-0.8
	comp=Z,417nm,1.0s,mb6.1						
BGF	Bois d'Agland	50.79	303	⇓*i*P	P	23 12 51.7	-0.8
BGF				pmax	pmax		
	comp=Z,208nm,1.0s,mb6.1						
YSS	Yuzh-Sakhalins	50.82	56	κ *i*P	P	23 12 52.5	-0.3
YSS				*i* *PP	pP	23 13 19.5	+1.2
YSS				*e*		23 14 07.7	
YSS				*e*S	S	23 19 57.0	-1.9
YSS				pmax	pmax		
	comp=E,80nm,1.1s						
YSS				pmax	pmax		
	comp=Z,310nm,1.1s,mb6.2						
YSS				pmax	pmax		
	comp=Z,300nm,2.0s,mb6.0						
YSS				smax			
	comp=N,700nm,12.0s						
YSS				smax			
	comp=E,1µm,12.0s						
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS	Yuzh-Sakhalins	50.82	56	⇓*i*P	P	23 12 52.9	+0.1
	comp=Z,402nm,1.1s,mb6.4						
YSS				*e*pP	pP	23 13 19.9	+1.6
LASF	Ste Croix	50.87	300	⇓*i*P	P	23 12 53.2	0.0
	comp=Z,1µm,1.2s,mb6.5						
KMBO	Kilima Mbogo	50.88	228	P	P	23 12 53.5	-0.2
	comp=Z,5.8nm,0.9s,baz=36,slow=11,SNR=22						
KMBO				pP	pP	23 13 21.0	+1.8
	comp=Z,38nm,1.2s,baz=24,slow=9.9,SNR=6.8						
KMBO	Kilima Mbogo	50.88	228	*e*P	P	23 12 53.2	-0.5
	comp=Z,194nm,1.8s,mb5.8						
KMBO				*e*pP	pP	23 13 21.0	+1.8
CMAH	Djebel Manchou	50.92	290	P	P	23 12 53.5	-0.2
LBL	Lubilhac	50.92	302	*e*P	P	23 12 53.8	+0.3
PYM	Petit Puy Mans	50.92	302	*e*P	P	23 12 53.5	-0.1
LWH	Whinny Nab	50.94	314	⇓*e*P	P	23 12 53.0	-0.6
LMK	Market Rasen	50.94	313	⇓*e*P	P	23 12 53.0	-0.6
ABSA	Djebel Ababsia	51.01	289	P	P	23 12 54.5	+0.1
MAJO	Matsushiro	51.14	70	*e*P	P	23 12 54.5	-0.8
MAJO				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.4						
MAJO	Matsushiro	51.14	70	*e*P	P	23 12 54.5	-0.8
	comp=Z,34nm,0.8s,mb5.4						
MAT	Matsushiro	51.14	70	*e*P	P	23 12 55.0	-0.3
MAT				*e*S	S	23 20 01.0	-2.4
MAT				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.5						
MAT	Matsushiro	51.14	70	*e*P	P	23 12 55.0	-0.3
	comp=Z,56nm,1.0s,mb5.5						
MAT				*e*S	S	23 20 01.0	-2.4
MAT	Matsushiro	51.14	70	P	P	23 12 54.8	-0.5
MAT				S	S	23 20 01.0	-2.4
CAEH	'Ain El Ouahch	51.28	290	P	P	23 12 55.0	-1.4
TCF	Toulx Ste Croi	51.29	303	⇓*i*P	P	23 12 56.0	-0.3
	comp=Z,868nm,1.1s,mb6.4						
TCF	Toulx Ste Croi	51.29	303	⇓*i*P	P	23 12 56.0	-0.3
TCF				pmax	pmax		
	comp=Z,434nm,1.1s,mb6.4						
LCP	Cassop	51.30	314	⇓*e*P	P	23 12 55.5	-0.8
FRNF	Fournols	51.33	302	*e*P	P	23 12 56.4	-0.2
CKFL	Kef-Lekhel	51.53	290	P	P	23 12 57.5	-0.7
MLA1	Latheron	51.54	319	⇓*e*P	P	23 12 57.0	-1.0
MME1	Meikle Cairn	51.54	318	⇓*e*P	P	23 12 57.0	-1.0
HPK	Haverah Park	51.57	313	⇓*e*P	P	23 12 57.6	-0.7
MCD	Coleburn Disti	51.63	318	⇓*e*P	P	23 12 58.0	-0.7
SKP1	Kophill	51.66	310	⇓*e*P	P	23 12 58.1	-1.0
KBI1	Birley Grange	51.69	313	⇓*e*P	P	23 12 58.0	-1.3
JMIC	Jan Mayen	51.70	336	P	P	23 12 59.3	+0.2
	comp=Z,98nm,0.8s,mb5.9,baz=119,slow=6.3,SNR=6.5						
JMIC				LR	LR	23 35 08.1	
	comp=Z,640nm,20.7s,baz=91,slow=36						
JMIC	Jan Mayen	51.70	336	*e*P	P	23 12 59.4	+0.4
CASM	Ain Smara	51.75	290	P	P	23 13 00.0	+0.1
LHO	Holmfirth	51.81	313	⇓*e*P	P	23 12 59.0	-1.1
CAF	Calviac	51.81	302	⇓*i*P	P	23 13 00.1	-0.2
	comp=Z,562nm,1.1s,mb6.2						
CAF	Calviac	51.81	302	⇓*i*P	P	23 13 00.1	-0.2
CAF				pmax	pmax		
	comp=Z,281nm,1.1s,mb6.2						
CTEI	Djebel Teioual	51.89	289	P	P	23 13 03.5	+2.5
KWE	Weaver Farm	51.93	312	⇓*e*P	P	23 12 59.7	-1.4
BTA	Talkin	51.94	315	⇓*e*P	P	23 13 00.1	-1.0
EDI	Edinburgh	51.97	316	⇓*e*P	P	23 13 00.2	-1.1
BBH	Bruntsheil	52.02	315	⇓*e*P	P	23 13 00.4	-1.3
MVH1	Achvaich	52.04	319	*e*P	P	23 13 00.3	-1.5
RJF	Les Rejaudoux	52.06	302	⇓*i*P	P	23 13 02.1	0.0
	comp=Z,632nm,1.2s,mb6.2						
RJF				*e*R			
	comp=Z,358nm,19.8s						
RJF	Les Rejaudoux	52.06	302	⇓*i*P	P	23 13 02.1	0.0
RJF				pmax	pmax		
	comp=Z,316nm,1.2s,mb6.2						
RJF				MLR	MLR		
	comp=Z,360nm,19.8s						
SJAF	Saint Jean de	52.06	298	*e*P	P	23 13 01.4	-0.8
EJON	La Jonquera	52.07	298	P	P	23 13 01.6	-0.6

	comp=Z,510nm,1.6s,mb6.3						
DFRA	**Djebel Bou Aff**	**52.09**	**290**	P	**P**	**23 13 02.0**	**-0.5**
EKA	**Eskdalemuir Ar**	**52.10**	**315**	P	**P**	**23 13 01.2**	**-1.0**
	comp=Z,115nm,0.8s,mb6.0,baz=92,slow=7.8,SNR=175						
EKA				PcP	PcP	23 14 13.3	+0.5
	comp=Z,43nm,0.9s,baz=86,slow=5.1,SNR=7.3						
EKA				PP	PP	23 14 58.0	-4.1
	comp=Z,32nm,0.8s,baz=89,slow=8.6,SNR=4.0						
BDL	**Dobcross Hall**	**52.11**	**315**⇓	*e*P	**P**	**23 13 01.5**	**-0.9**
LDF	**La Druitiere**	**52.11**	**307**⇓	*i*P	**P**	**23 13 01.4**	**-1.0**
	comp=Z,634nm,0.9s,mb6.3						
LDF	**La Druitiere**	**52.11**	**307**⇓	*i*P	**P**	**23 13 01.4**	**-1.0**
LDF				pmax	pmax		
	comp=Z,317nm,0.9s,mb6.3						
ESK	**Eskdalemuir**	**52.13**	**315**	*e*P	**P**	**23 13 01.0**	**-1.5**
ESK				*e*		23 14 12.7	
ESK				*e*		23 14 57.6	
ESK				pmax	pmax		
	comp=Z,254nm,1.2s,mb6.1						
ESK	**Eskdalemuir**	**52.13**	**315**	*e*P	**P**	**23 13 01.0**	**-1.5**
	comp=Z,254nm,1.2s,mb6.1						
ESK				*e*PcP	PcP	23 14 12.7	-0.2
ESK				*e*PP	PP	23 14 57.6	-4.8
ESK	**Eskdalemuir**	**52.13**	**315**⇓	*e*P	**P**	**23 13 01.0**	**-1.5**
ESK				AMb	AMB	23 13 02.9	
	comp=Z,356nm,1.4s,mb6.2						
EAU	**Auchinoon**	**52.13**	**316**⇓	*e*P	**P**	**23 13 01.3**	**-1.2**
EAU				AMb	AMB	23 13 03.9	
	comp=Z,535nm,1.4s,mb6.4						
LRDF	**Laroque-de-Fa**	**52.15**	**299**	*e*P	**P**	**23 13 02.3**	**-0.5**
BHH	**Howats Hill**	**52.19**	**315**⇓	*e*P	**P**	**23 13 01.6**	**-1.3**
MTLF	**Montolieu**	**52.23**	**300**⇓	*i*P	**P**	**23 13 03.0**	**-0.4**
	comp=Z,426nm,1.0s,mb6.1						
MTLF	**Montolieu**	**52.23**	**300**⇓	*i*P	**P**	**23 13 03.0**	**-0.4**
MTLF				pmax	pmax		
	comp=Z,213nm,1.0s,mb6.1						
MDO	**Dochfour**	**52.25**	**318**⇓	*e*P	**P**	**23 13 02.2**	**-1.1**
FILF	**Fillols**	**52.26**	**299**	*e*P	**P**	**23 13 03.5**	**-0.1**
FLN	**La Foliniere**	**52.29**	**307**⇓	*i*P	**P**	**23 13 02.6**	**-1.2**
	comp=Z,416nm,0.9s,mb6.2						
FLN				*e*R			
	comp=Z,380nm,17.5s						
FLN	**La Foliniere**	**52.29**	**307**⇓	*i*P	**P**	**23 13 02.6**	**-1.2**
FLN				pmax	pmax		
	comp=Z,208nm,0.9s,mb6.2						
FLN				MLR	MLR		
	comp=Z,380nm,17.5s						
MA2	**Magadan**	**52.29**	**39***d*	*i*P	**P**	**23 13 03.3**	**-0.3**
MA2				*i* *PP	pP	23 13 31.3	+2.0
MA2				pmax	pmax		
	comp=Z,139nm,1.3s,mb5.8						
MA2	**Magadan**	**52.29**	**39**	*e*P	**P**	**23 13 03.2**	**-0.5**
	comp=Z,132nm,1.3s,mb5.8						
MA2				*e*PcP	PcP	23 14 13.2	-0.3
SWN1	**Swindon**	**52.31**	**310**⇓	*e*P	**P**	**23 13 02.8**	**-1.1**
SEY	**Seymchan**	**52.36**	**35**	*e*P	**P**	**23 13 04.1**	**0.0**
SEY				*e*		23 13 40.0	
SEY						23 14 13.4	
SEY				*e*		23 14 58.5	
SEY				*e*S	**S**	**23 20 20.7**	**+1.0**
SEY				*SS		23 21 03.7	
SEY						23 22 43.3	
SEY				SS	SS	23 24 02.2	+4.8
SEY				*e*SSS	SSS	23 25 40.2	-7.2
SEY				pmax	pmax		
	comp=N,30nm,1.0s						
SEY				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
SEY				pmax	pmax		
	comp=E,90nm,1.5s						
SEY				smax			
	comp=N,2µm,23.4s						
SEY				smax			
	comp=E,4µm,29.3s						
SEY				MLR	MLR		
	comp=Z,3µm,23.0s						
SEY				MLR	MLR		
	comp=N,1µm,18.0s						
SEY				MLR	MLR		
	comp=E,730nm,19.0s						
BWH	**Wardlaw**	**52.41**	**315**⇓	*e*P	**P**	**23 13 03.6**	**-1.0**
CMER	**Merouana**	**52.45**	**289**	P	**P**	**23 13 05.5**	**+0.4**
PCOU	**Corrie**	**52.46**	**316**⇓	*e*P	**P**	**23 13 04.0**	**-1.0**
PCOU				AMb	AMB	23 13 06.2	
	comp=Z,249nm,1.3s,mb6.1						
CARF	**Carcanieres**	**52.52**	**299**	*e*P	**P**	**23 13 05.0**	**-0.6**
EAB	**Aberfoyle**	**52.54**	**317**⇓	*e*P	**P**	**23 13 04.3**	**-1.2**
EAB				AMb	AMB	23 13 05.9	
	comp=Z,271nm,1.6s,mb6.0						
CKHR	**Kef el Ahmar**	**52.57**	**290**	P	**P**	**23 13 05.5**	**-0.6**
SET	**Setif**	**52.58**	**290**	P	**P**	**23 13 06.0**	**-0.2**
HAE	**Alders End**	**52.61**	**311**⇓	*e*P	**P**	**23 13 05.1**	**-1.0**
HAE				AMb	AMB	23 13 06.6	
	comp=Z,918nm,1.5s,mb6.6						
PCA1	**Carrot**	**52.61**	**316**⇓	*e*P	**P**	**23 13 05.2**	**-0.8**
PCA1				AMb	AMB	23 13 06.8	
	comp=Z,593nm,1.3s,mb6.5						
GRR	**Gorron**	**52.64**	**306**⇓	*i*P	**P**	**23 13 05.4**	**-1.0**
	comp=Z,990nm,1.0s,mb6.5						
GRR	**Gorron**	**52.64**	**306**⇓	*i*P	**P**	**23 13 05.4**	**-1.0**
GRR				pmax	pmax		
	comp=Z,495nm,1.0s,mb6.5						
POB1	**Observatory**	**52.67**	**316**⇓	*e*P	**P**	**23 13 05.6**	**-0.9**
HLM1	**Long Mynd**	**52.67**	**312**⇓	*e*P	**P**	**23 13 05.6**	**-1.0**
HLM1				AMb	AMB	23 13 07.9	
	comp=Z,332nm,1.6s,mb6.1						
LFF	**La Frestale**	**52.70**	**302**⇓	*i*P	**P**	**23 13 06.6**	**-0.3**
	comp=Z,650nm,1.0s,mb6.3						
LFF	**La Frestale**	**52.70**	**302**⇓	*i*P	**P**	**23 13 06.6**	**-0.3**
LFF				pmax	pmax		
	comp=Z,325nm,1.0s,mb6.3						
MFF	**Saint Martin d**	**52.74**	**304**⇓	*i*P	**P**	**23 13 06.1**	**-1.1**
	comp=Z,530nm,1.1s,mb6.2						
SBD1	**Bryn Du**	**52.79**	**312**⇓	*e*P	**P**	**23 13 06.6**	**-0.8**
SBD1				AMb	AMB	23 13 09.0	
	comp=Z,386nm,1.8s,mb6.1						
SSP1	**Stoney Pound**	**52.84**	**312**⇓	*e*P	**P**	**23 13 06.9**	**-0.9**
PMSU	**Muirshiel**	**52.84**	**316**⇓	*e*P	**P**	**23 13 06.9**	**-0.9**
HGH	**Gray Hill**	**52.88**	**311**⇓	*e*P	**P**	**23 13 06.7**	**-1.5**
HGH				AMb	AMB	23 13 09.2	
	comp=Z,846nm,1.4s,mb6.6						
MCH1	**Michaelchurch**	**52.89**	**311**⇓	*e*P	**P**	**23 13 07.1**	**-1.1**
MCH1				AMb	AMB	23 13 08.6	
	comp=Z,714nm,1.4s,mb6.5						
SMD	**Mendips**	**52.92**	**310**⇓	*e*P	**P**	**23 13 07.0**	**-1.5**
HTR	**Trewern Hill**	**53.03**	**311**⇓	*e*P	**P**	**23 13 08.1**	**-1.2**
GAL1	**Galloway**	**53.08**	**315**⇓	*e*P	**P**	**23 13 08.6**	**-1.0**
TSM	**Tawau**	**53.10**	**118**	P	**P**	**23 13 11.2**	**+0.9**
LCHF	**La Chataignera**	**53.11**	**304**	*e*P	**P**	**23 13 09.7**	**-0.2**
MLS	**Moulis**	**53.13**	**299**	*e*P	**P**	**23 13 09.2**	**-1.0**
JQE	**Queens East**	**53.13**	**308**⇓	*e*P	**P**	**23 13 08.5**	**-1.6**
SALF	**Salau**	**53.14**	**299**	*e*P	**P**	**23 13 08.7**	**-1.5**
JLP	**Les Platons**	**53.16**	**308**⇓	*e*P	**P**	**23 13 08.8**	**-1.5**
JRS	**Jersey**	**53.17**	**308**⇓	*e*P	**P**	**23 13 08.5**	**-1.8**
EMIR	**Miracle**	**53.21**	**298**	P	**P**	**23 13 10.7**	**-0.1**
	comp=Z,794nm,1.4s,mb6.5						
JVM	**Valle D.L. Mar**	**53.23**	**308**⇓	*e*P	**P**	**23 13 08.7**	**-2.1**
YLL	**Llanberis**	**53.25**	**313**⇓	*e*P	**P**	**23 13 09.8**	**-1.1**
YLL				AMb	AMB	23 13 11.3	
	comp=Z,329nm,1.6s,mb6.1						
WME	**Myndd Eilian**	**53.26**	**313**⇓	*e*P	**P**	**23 13 09.8**	**-1.1**
WME				AMb	AMB	23 13 12.4	
	comp=Z,156nm,1.5s,mb5.8						
WIM	**Isle of Man**	**53.26**	**314**	*e*P	**P**	**23 13 10.2**	**-0.7**
WIM				AMb	AMB	23 13 12.4	
	comp=Z,449nm,1.5s,mb6.3						
WLF1	**Llynfaes**	**53.34**	**313**⇓	*e*P	**P**	**23 13 10.6**	**-0.9**
WCB1	**Church Bay**	**53.40**	**313**⇓	*e*P	**P**	**23 13 10.6**	**-1.4**
WCB1				AMb	AMB	23 13 12.5	
	comp=Z,315nm,1.6s,mb6.1						
GMK	**Mull of Kintyr**	**53.44**	**316**⇓	*e*P	**P**	**23 13 11.2**	**-1.0**
YRE	**Yr Eifl**	**53.45**	**313**⇓	*e*P	**P**	**23 13 11.2**	**-1.1**
YRE				AMb	AMB	23 13 12.3	
	comp=Z,312nm,1.1s,mb6.3						
YRC	**Rhoscolyn**	**53.45**	**313**⇓	*e*P	**P**	**23 13 11.4**	**-0.9**
YRC				AMb	AMB	23 13 12.5	
	comp=Z,349nm,0.9s,mb6.4						
DAG	**Danmarks Havn**	**53.60**	**343**⇑	*i*P	**P**	**23 13 11.6**	**-1.6**
	comp=Z,3µm,0.8s						
EPF	**Esparros**	**53.62**	**300**⇓	*i*P	**P**	**23 13 12.2**	**-1.6**
	comp=Z,266nm,1.2s,mb5.8						
EPF	**Esparros**	**53.62**	**300**⇓	*i*P	**P**	**23 13 12.2**	**-1.6**
EPF				pmax	pmax		
	comp=Z,133nm,1.2s,mb5.8						
HEX	**Exmoor**	**53.64**	**310**⇓	*e*P	**P**	**23 13 12.0**	**-1.8**
HSA	**Swansea**	**53.65**	**311**⇓	*e*P	**P**	**23 13 12.4**	**-1.4**
RESF	**Ens**	**53.71**	**300**	*e*P	**P**	**23 13 14.2**	**-0.1**
EPOB	**Poblet**	**53.72**	**298**	P	**P**	**23 13 13.9**	**-0.6**
	comp=Z,556nm,1.3s,mb6.4						
SGMF	**Saint Gilles**	**53.76**	**307**⇓	*i*P	**P**	**23 13 13.8**	**-0.8**
	comp=Z,657nm,0.9s,mb6.3						
SGMF	**Saint Gilles**	**53.76**	**307**⇓	*i*P	**P**	**23 13 13.8**	**-0.8**
SGMF				pmax	pmax		
	comp=Z,328nm,0.9s,mb6.4						
LABF	**Labassere**	**53.80**	**300**	*e*P	**P**	**23 13 13.5**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**53.83**	**59**⇓	*i*P	**P**	**23 13 14.0**	**-1.2**
YUK				*e*		23 14 13.0	
YUK				*e*		23 15 15.0	
YUK				*e*S	**S**	**23 20 40.0**	**+0.1**
YUK				*e*PS	PS	23 20 58.5	-10
YUK				*e*		23 22 49.0	
YUK				pmax	pmax		
	comp=Z,3µm,1.3s						
YUK				pmax	pmax		
	comp=Z,820nm,1.0s						
YUK				smax			
	comp=E,2µm,3.0s						
YUK				smax			
	comp=N,2µm,4.0s						
EBIE	**Bielsa**	**53.88**	**299**	P	**P**	**23 13 15.4**	**-0.3**
	comp=N,264nm,1.1s,mb6.2						
VIEF	**Viey**	**53.90**	**300**	*e*P	**P**	**23 13 15.3**	**-0.4**
GMM	**Mts of Mourne**	**53.95**	**315**⇓	*e*P	**P**	**23 13 14.8**	**-1.2**
HPE	**Pembroke**	**53.96**	**312**⇓	*e*P	**P**	**23 13 14.8**	**-1.3**
HTL	**Hartland**	**54.08**	**310**⇓	*e*P	**P**	**23 13 15.4**	**-1.5**
ABA	**Alger-Bouzarea**	**54.09**	**292**	P	**P**	**23 13 16.0**	**-1.2**
REYF	**Montagne du Re**	**54.11**	**300**	*e*P	**P**	**23 13 16.1**	**-1.2**
ROSF	**Rostrenen**	**54.18**	**307**⇓	*i*P	**P**	**23 13 16.7**	**-1.0**
	comp=N,609nm,0.9s,mb6.3						
ROSF	**Rostrenen**	**54.18**	**307**⇓	*i*P	**P**	**23 13 16.7**	**-1.0**
ROSF				pmax	pmax		
	comp=Z,305nm,0.9s,mb6.3						
QUIF	**Quistinic**	**54.26**	**307**⇓	*i*P	**P**	**23 13 17.1**	**-1.2**
	comp=Z,525nm,0.9s,mb6.3						
QUIF	**Quistinic**	**54.26**	**307**⇓	*i*P	**P**	**23 13 17.1**	**-1.2**
QUIF				pmax	pmax		
	comp=Z,263nm,0.9s,mb6.3						
ETSF	**Etsaut**	**54.29**	**300**⇓	*i*P	**P**	**23 13 18.2**	**-0.4**
	comp=Z,402nm,1.1s,mb6.1						
ETSF	**Etsaut**	**54.29**	**300**⇓	*i*P	**P**	**23 13 18.2**	**-0.4**
ETSF				pmax	pmax		
	comp=Z,201nm,1.1s,mb6.1						
EBR	**Ebro Roquetas**	**54.33**	**297**	*e*P	**P**	**23 13 17.5**	**-1.4**
EMHD	**Djebel Mahouad**	**54.39**	**291**	P	**P**	**23 13 19.0**	**-0.4**
ERTA	**Horta de San J**	**54.39**	**297**	P	**P**	**23 13 18.8**	**-0.5**
	comp=Z,781nm,1.2s,mb6.6						
EIBI	**Ibiza**	**54.42**	**295**	P	**P**	**23 13 19.5**	**-0.1**
	comp=Z,691nm,1.1s,mb6.6						
MBAR	**Mbarara**	**54.51**	**235**	*e*P	**P**	**23 13 19.2**	**-1.4**
MBAR				*e**PP	pP	23 13 46.9	+0.4
MBAR				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.3						
MBAR	**Mbarara**	**54.51**	**235**	*e*P	**P**	**23 13 19.2**	**-1.4**
	comp=Z,28nm,0.8s,mb5.3						
MBAR				*e*pP	pP	23 13 46.9	+0.4
LARF	**Larrau**	**54.53**	**300**	*e*P	**P**	**23 13 19.6**	**-0.7**
DLF	**Lyons Farm**	**54.56**	**314**⇓	*i*P	**P**	**23 13 19.3**	**-1.1**
DMUB	**Kingscourt**	**54.59**	**314**⇓	*i*P	**P**	**23 13 19.8**	**-0.8**
OSSF	**Osses**	**54.64**	**301**	*e*P	**P**	**23 13 19.6**	**-1.5**
ESAC	**San Caprasio**	**54.66**	**299**	P	**P**	**23 13 21.0**	**-0.4**
	comp=Z,1µm,1.6s,mb6.7						
SJPF	**Ste Jean**	**54.66**	**300**⇓	*i*P	**P**	**23 13 22.1**	**+0.8**
	comp=Z,181nm,1.2s,mb5.7						
SJPF	**Ste Jean**	**54.66**	**300**⇓	*i*P	**P**	**23 13 22.1**	**+0.8**
SJPF				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.7						
CRQ2	**Rosemanowes 2**	**54.76**	**310**⇓	*e*P	**P**	**23 13 20.2**	**-1.7**
CRQ2				AMb	AMB	23 13 21.5	
	comp=Z,386nm,1.0s,mb6.4						
CMA1	**Manaccan**	**54.76**	**310**⇓	*e*P	**P**	**23 13 20.7**	**-1.2**
CCA1	**Carnmenellis**	**54.78**	**310**⇓	*e*P	**P**	**23 13 20.6**	**-1.4**
CGH1	**Goonhilly**	**54.79**	**310**⇓	*e*P	**P**	**23 13 21.0**	**-1.1**
CGW	**Gweek**	**54.81**	**310**⇓	*e*P	**P**	**23 13 21.0**	**-1.3**
EALK	**Alkurruntz**	**54.82**	**301**	P	**P**	**23 13 21.8**	**-0.6**
	comp=Z,367nm,1.2s,mb6.3						
DCN	**Croghan**	**54.97**	**314**⇓	*i*P	**P**	**23 13 22.7**	**-0.7**
EMOS	**Mosqueruela**	**55.19**	**297**	P	**P**	**23 13 25.3**	**+0.1**
	comp=Z,676nm,1.5s,mb6.5						
EBNR	**Beni Rached**	**55.40**	**292**	P	**P**	**23 13 27.0**	**+0.2**
ECHA	**Ech Chlef**	**55.58**	**292**	P	**P**	**23 13 27.5**	**-0.6**
EBEN	**Beniarda**	**55.67**	**295**	P	**P**	**23 13 28.8**	**0.0**
	comp=Z,323nm,1.5s,mb6.1						
EANR	**'Ain N'Sour**	**55.86**	**292**	P	**P**	**23 13 27.0**	**-3.1**
ETRT	**Tiaret**	**55.95**	**291**	P	**P**	**23 13 30.5**	**-0.2**
ELAN	**Lanestosa**	**56.12**	**301**	P	**P**	**23 13 31.5**	**-0.3**
	comp=Z,1µm,1.3s,mb6.7						
SCO	**Scoresbysund**	**56.15**	**336**	*i* P	**P**	**23 13 31.9**	**+0.2**
SCO				*i* S	**S**	**23 21 19.9**	**+9.3**
SCO				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
SCO	**Scoresbysund**	**56.15**	**336**	*i* P	**P**	**23 13 31.9**	**+0.2**
	comp=Z,30nm,0.9s,mb5.3						
SCO				*i* S	**S**	**23 21 19.9**	**+9.3**
ETOB	**Tobarra**	**56.64**	**296**	P	**P**	**23 13 35.8**	**+0.2**
	comp=Z,293nm,1.2s,mb6.2						
CART	**Cartagena**	**56.69**	**294**⇓	*i*P	**P**	**23 13 35.1**	**-0.9**
	comp=Z,399nm,0.8s,mb6.5						
EMUR	**La Murta**	**56.76**	**295**	P	**P**	**23 13 35.9**	**-0.5**
	comp=Z,732nm,1.7s,mb6.4						
VAL	**Valentia**	**57.15**	**313**	*e*P	**P**	**23 13 36.6**	**-2.4**
EARI	**Arriondas**	**57.28**	**302**	P	**P**	**23 13 39.4**	**-0.7**
	comp=Z,529nm,1.7s,mb6.3						
EVIA	**Vianos**	**57.32**	**296**	P	**P**	**23 13 40.4**	**0.0**
EVIA				pmax	pmax		
	comp=Z,155nm,0.7s,mb6.2						
EVIA	**Vianos**	**57.32**	**296**	P	**P**	**23 13 40.4**	**0.0**
	comp=Z,155nm,0.7s,mb6.2						
EHUE	**Huescar**	**57.74**	**295**	P	**P**	**23 13 43.1**	**-0.2**
EHUE				pmax	pmax		
	comp=Z,86nm,0.7s,mb5.9						
EHUE	**Huescar**	**57.74**	**295**	P	**P**	**23 13 43.1**	**-0.2**
	comp=Z,86nm,0.7s,mb5.9						
ENIJ	**Nijar**	**57.83**	**294**	P	**P**	**23 13 43.4**	**-0.5**
ENIJ				pmax	pmax		
	comp=Z,583nm,1.2s,mb6.5						
ENIJ	**Nijar**	**57.83**	**294**	P	**P**	**23 13 43.4**	**-0.6**
	comp=Z,583nm,1.2s,mb6.5						
SKR	**Severo-Kuril's**	**57.91**	**48**	*e*P	**P**	**23 13 39.0**	**-5.3**
SKR				pmax	pmax		
	comp=Z,90nm,0.7s,mb5.9						
ESDC	**Sonseca Array**	**57.92**	**298**	P	**P**	**23 13 43.7**	**-0.8**
	comp=Z,77nm,0.7s,mb5.9,baz=56,slow=7.3,SNR=438						
ESDC				PP	PP	23 15 50.7	-4.9
	comp=Z,10nm,0.7s,baz=56,slow=8.8,SNR=4.8						
ESLA	**Sonseca Array**	**57.92**	**298**⇓	*e*P	**P**	**23 13 43.7**	**-0.8**
	comp=Z,70nm,1.1s,mb5.6						
ESLA				*e*PP	PP	23 15 50.8	-4.8
BORG	**Borgarnes**	**57.92**	**330**	P	**P**	**23 13 45.3**	**+1.1**
	comp=Z,117nm,1.0s,mb5.9,baz=83,slow=4.8,SNR=33						
BORG				PP	PP	23 15 52.5	-2.8
	comp=Z,18nm,0.9s,baz=104,slow=2.8,SNR=4.8						
BORG	**Borgarnes**	**57.92**	**330**	*e*P	**P**	**23 13 43.6**	**-0.6**
	comp=Z,238nm,1.4s,mb6.0						
BORG				*e*PP	PP	23 15 52.0	-3.2
EQES	**Quesada**	**58.09**	**295**	P	**P**	**23 13 45.4**	**-0.3**
	comp=Z,384nm,1.2s,mb6.3						
EBER	**Berja**	**58.35**	**294**	P	**P**	**23 13 46.8**	**-0.8**
	comp=Z,228nm,0.7s,mb6.3						
EBAN	**Banos Encina**	**58.44**	**296**	P	**P**	**23 13 47.8**	**-0.4**
EBAN				pmax	pmax		
	comp=Z,189nm,0.6s,mb6.3						
EBAN	**Banos Encina**	**58.44**	**296**	P	**P**	**23 13 47.8**	**-0.4**
	comp=Z,188nm,0.6s,mb6.3						
PET	**Petropavlovsk**	**58.47**	**45**	*e*P	**P**	**23 13 46.4**	**-1.8**
PET				*e*S	**S**	**23 21 44.4**	**+3.3**
PET				pmax	pmax		
	comp=Z,113nm,1.1s,mb5.8						
PET				pmax	pmax		
	comp=Z,200nm,15.8s						
PET				MLR	MLR		
	comp=Z,800nm,18.0s						
PET	**Petropavlovsk**	**58.47**	**45**	*e*P	**P**	**23 13 46.0**	**-2.2**
	comp=Z,109nm,1.0s,mb5.8						
PET				*e*PcP	PcP	23 14 35.9	-1.4
EPON	**Pontenova**	**58.56**	**303**	P	**P**	**23 13 48.3**	**-0.7**
	comp=Z,482nm,1.4s,mb6.3						
ECOG	**Cogollos-Vega**	**58.67**	**295**	P	**P**	**23 13 48.6**	**-1.2**
ECOG				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.7						
ECOG	**Cogollos-Vega**	**58.67**	**295**	P	**P**	**23 13 48.6**	**-1.2**
	comp=Z,56nm,0.8s,mb5.6						
ECAL	**Calabor**	**58.87**	**301**	P	**P**	**23 13 50.6**	**-0.5**
	comp=Z,405nm,1.2s,mb6.3						
EALB	**Alboran**	**58.88**	**293**	P	**P**	**23 13 50.1**	**-1.1**
	comp=Z,333nm,1.1s,mb6.3						
PBRG	**Braganca**	**58.93**	**301**	*e*P	**P**	**23 13 50.1**	**-1.4**
	comp=Z,86nm,1.3s,mb5.6						
PBRG	**Braganca**	**58.93**	**301**	*e*P	**P**	**23 13 50.6**	**-0.9**
ERUA	**La Rua**	**58.95**	**302**	P	**P**	**23 13 51.2**	**-0.5**
ERUA				pmax	pmax		
	comp=Z,75nm,0.7s,mb5.8						
ERUA	**La Rua**	**58.95**	**302**	P	**P**	**23 13 51.2**	**-0.4**
	comp=Z,75nm,0.7s,mb5.8						
ERON	**Agron**	**58.95**	**295**	P	**P**	**23 13 50.6**	**-1.1**
	comp=Z,118nm,0.8s,mb6.0						
EINC	**Incio**	**58.98**	**302**	P	**P**	**23 13 51.8**	**0.0**
	comp=Z,642nm,1.5s,mb6.4						
EADA	**Adamuz**	**59.00**	**296**	P	**P**	**23 13 51.5**	**-0.6**
	comp=Z,455nm,1.4s,mb6.3						
ELOJ	**Sierra Loja**	**59.15**	**295**	P	**P**	**23 13 51.6**	**-1.5**
ELOJ				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.7						
ELOJ	**Sierra Loja**	**59.15**	**295**	P	**P**	**23 13 51.6**	**-1.5**
	comp=Z,50nm,0.7s,mb5.7						
STS	**Santiago**	**59.68**	**303**	P	**P**	**23 13 56.3**	**-0.4**
STS				pmax	pmax		
	comp=Z,80nm,0.7s,mb5.9						
STS	**Santiago**	**59.68**	**303**	P	**P**	**23 13 56.3**	**-0.4**
	comp=Z,80nm,0.7s,mb5.9						
ELOB	**Lobios**	**59.79**	**301**	P	**P**	**23 13 57.3**	**-0.1**
	comp=Z,795nm,1.5s,mb6.5						
PVRL	**Vila Real**	**59.82**	**301**	*e*P	**P**	**23 13 56.9**	**-0.7**
	comp=Z,106nm,1.4s,mb5.7						
PVRL				*i* -		23 14 42.6	
PVRL	**Vila Real**	**59.82**	**301**	*e*P	**P**	**23 13 57.1**	**-0.5**
EMIJ	**Mijas**	**59.85**	**295**	P	**P**	**23 13 55.8**	**-2.2**
	comp=Z,107nm,0.6s,mb6.0						
EMAZ	**Mazaricos**	**59.94**	**303**	P	**P**	**23 13 57.7**	**-0.7**
	comp=Z,546nm,1.6s,mb6.3						
SUMG	**Summit**	**60.01**	**341**⇓	*i*P	**P**	**23 13 58.7**	**+0.2**
	comp=Z,542nm,1.0s,mb6.5						
MTE	**Manteigas**	**60.08**	**300**	*i* P	**P**	**23 13 58.9**	**-0.6**
	comp=Z,198nm,1.4s,mb6.0						
MTE				*i* -		23 14 44.7	
MTE				*e*S	**S**	**23 22 02.9**	**+0.7**
MTE				*e*LQ		23 28 49.8	
MTE				*e*LR	LR	23 33 29.6	
MTE	**Manteigas**	**60.08**	**300**⇓	*i*P	**P**	**23 13 59.0**	**-0.4**
	comp=Z,220nm,1.1s,mb6.1						
MTE				*e*PcP	PcP	23 14 44.3	+0.3
EZAM	**Zamans**	**60.10**	**302**	P	**P**	**23 13 57.8**	**-1.7**
EZAM				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.7						
EZAM	**Zamans**	**60.10**	**302**	P	**P**	**23 13 57.8**	**-1.8**
	comp=Z,64nm,0.8s,mb5.7						
PVIS	**Viseu**	**60.18**	**300**	*e*P	**P**	**23 13 59.4**	**-0.7**
	comp=Z,204nm,1.2s,mb6.0						
PVIS				*i* -		23 14 45.0	
PCBR	**Castelo Branco**	**60.28**	**299**	*e*P	**P**	**23 13 59.7**	**-1.2**
	comp=Z,65nm,1.2s,mb5.5						
PCBR				*i* -		23 14 45.1	
PCBR	**Castelo Branco**	**60.28**	**299**	*e*P	**P**	**23 14 00.0**	**-0.9**
EJIF	**Jimena Fronter**	**60.40**	**295**	P	**P**	**23 14 00.1**	**-1.6**
EJIF				pmax	pmax		
	comp=Z,108nm,0.8s,mb5.9						
EJIF	**Jimena Fronter**	**60.40**	**295**	P	**P**	**23 14 00.1**	**-1.6**
	comp=Z,108nm,0.8s,mb5.9						
ESPR	**Espera**	**60.49**	**295**	P	**P**	**23 14 01.1**	**-1.2**
	comp=Z,283nm,0.9s,mb6.3						
EMIN	**Mina Concepcio**	**60.66**	**297**	P	**P**	**23 14 02.8**	**-0.7**
	comp=Z,291nm,1.0s,mb6.3						
EVO	**Evora**	**61.25**	**298**⇓	*i*P	**P**	**23 14 07.2**	**-0.2**
	comp=Z,224nm,1.3s,mb5.7						
EVO				*e*R			
	comp=Z,255nm,21.8s						
PALC	**Alcoutim**	**61.36**	**297**	*i* P	**P**	**23 14 07.5**	**-0.7**
	comp=Z,338nm,1.4s,mb6.2						
PALC				*i* -		23 14 39.5	
PALC	**Alcoutim**	**61.36**	**297**	*e*P	**P**	**23 14 07.4**	**-0.8**
PBEJ	**Beja**	**61.38**	**297**	*e*P	**P**	**23 14 07.0**	**-1.3**
	comp=Z,144nm,1.3s,mb5.8						
PBEJ				*i* -		23 14 49.7	
PBEJ	**Beja**	**61.38**	**297**	*e*P	**P**	**23 14 07.7**	**-0.6**
MOE	**Montemor**	**61.49**	**298**	*e*P	**P**	**23 14 08.1**	**-0.9**
MOE	**Montemor**	**61.49**	**298**	*e*P	**P**	**23 14 07.7**	**-1.3**
PLOU	**Loures**	**61.88**	**299**	*e*P	**P**	**23 14 11.0**	**-0.6**
	comp=Z,216nm,0.8s,mb6.2						
PLOU				*i* -		23 14 51.8	
PTEO	**Sao Teotonio**	**62.20**	**297**	*e*P	**P**	**23 14 13.3**	**-0.5**
	comp=Z,158nm,1.2s,mb5.9						
FX1	**Attu Island--F**	**66.33**	**41**⇓	*i*P	**P**	**23 14 39.9**	**-0.4**
TNA	**Tin City**	**66.59**	**23**⇓	*i*P	**P**	**23 14 41.9**	**+0.1**
	comp=Z,123nm,1.2s,mb5.6						
TNA				*e*	pP	23 15 10.0	+1.5
SFJ	**Sondre**	**66.77**	**339**⇓	*i*P	**P**	**23 14 42.0**	**-0.9**
	comp=Z,282nm,1.3s,mb5.9						
RES	**Resolute Bay**	**67.22**	**356**	P	**P**	**23 14 38.6**	**-7.0**
RES				pmax	pmax		
	comp=Z,99nm,1.1s,mb5.5						
RES	**Resolute Bay**	**67.22**	**356**⇓	*i*P	**P**	**23 14 45.1**	**-0.5**
	comp=Z,99nm,1.1s,mb5.5						
LSZ	**Lusaka**	**67.51**	**227**	*e*P	**P**	**23 14 47.1**	**-1.2**
	comp=Z,7.1nm,0.6s						
EFAM	**Famara**	**69.94**	**292**	P	**P**	**23 15 03.1**	**0.0**
	comp=Z,367nm,1.0s,mb6.2						
IMA	**Indian Mountai**	**70.21**	**18**⇓	*i*P	**P**	**23 15 04.2**	**+0.1**
IMA				pmax	pmax		
	comp=Z,872nm,1.1s,mb6.5						
IMA	**Indian Mountai**	**70.21**	**18**⇓	*i*P	**P**	**23 15 04.2**	**+0.2**
	comp=Z,872nm,1.1s,mb6.5						
CFTV	**Fuerteventura**	**70.74**	**291**	P	**P**	**23 15 08.0**	**+0.1**
	comp=Z,114nm,1.2s,mb5.6						
EOSO	**Osorio**	**72.01**	**292**	P	**P**	**23 15 15.7**	**+0.2**
	comp=Z,590nm,1.1s,mb6.3						
INK	**Inuvik**	**72.13**	**10**⇓	*e*P	**P**	**23 15 15.6**	**+0.1**
INK				pmax	pmax		
	comp=Z,296nm,1.1s						
INK	**Inuvik**	**72.13**	**10**⇓	*e*P	**P**	**23 15 15.6**	**+0.1**
	comp=Z,296nm,1.1s,mb6.0						
EBAJ	**Bajamar**	**72.32**	**293**	P	**P**	**23 15 17.5**	**+0.2**
	comp=Z,512nm,1.1s,mb6.3						
COLA	**College**	**72.58**	**17**	P	**P**	**23 15 18.5**	**+0.4**
COLA				pmax	pmax		
	comp=Z,260nm,1.0s,mb6.0						
COLA	**College**	**72.58**	**17**⇓	*e*P	**P**	**23 15 18.2**	**+0.1**
	comp=Z,259nm,0.9s,mb6.1						
CCAN	**Las Canadas**	**72.69**	**292**	P	**P**	**23 15 20.2**	**+0.7**
	comp=Z,77nm,0.8s,mb5.6						
ILAR	**Eielson Array**	**72.89**	**17**	LR	LR	23 50 20.9	
	comp=Z,377nm,21.9s,baz=9.8,slow=38						
EGOM	**La Gomera**	**73.17**	**293**	P	**P**	**23 15 22.5**	**+0.3**
	comp=Z,535nm,1.3s,mb6.2						
MCK	**McKinley**	**73.29**	**18**	*e*P	**P**	**23 15 21.4**	**-0.8**
MCK				*e*		23 15 37.9	
MCK				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.2						
MCK	**McKinley**	**73.29**	**18**	*e*P	**P**	**23 15 21.4**	**-0.8**
	comp=Z,43nm,1.1s,mb5.2						
MCK				*e*PcP	PcP	23 15 37.9	-0.4
EHIG	**Higuera**	**73.38**	**293**	P	**P**	**23 15 24.4**	**+0.9**
	comp=Z,847nm,1.3s,mb6.4						
MBWA	**Marble Bar**	**73.65**	**135**	*e*P	**P**	**23 15 25.2**	**+0.1**
	comp=Z,95nm,1.3s,mb5.4						
MBWA				*e*pP	pP	23 15 54.0	+1.5
CHIE	**El Hierro**	**73.96**	**293**	P	**P**	**23 15 27.7**	**+0.8**
	comp=Z,135nm,1.1s,mb5.6						
THY	**Trims Highway**	**74.31**	**17**	*e*P	**P**	**23 15 27.9**	**-0.3**
SPU	**Mount Spurr**	**74.59**	**21**	*e*P	**P**	**23 15 29.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**74.78**	**128**⇓	*i*P	**P**	**23 15 31.7**	**0.0**
	comp=Z,39nm,1.2s,mb5.0						
FITZ				*e*pP	pP	23 16 00.7	+1.5
FITZ				*e*S	S	23 24 54.9	-3.1
RSO	**Redoubt South**	**74.98**	**21**	*e*P	**P**	**23 15 32.9**	**+0.8**
SML	**Sawmill**	**75.07**	**19**⇓	*e*P	**P**	**23 15 32.6**	**+0.1**
DAWY	**Dawson**	**75.08**	**14**⇓	*e*P	**P**	**23 15 32.6**	**+0.1**
FIB	**Fire Island**	**75.12**	**20**	*e*P	**P**	**23 15 33.0**	**+0.2**
UNV	**Unalaska Valle**	**75.21**	**32**	*e*P	**P**	**23 15 32.7**	**-0.8**
	comp=Z,192nm,1.0s,mb5.8						
UNV				*e*PP	PP	23 18 23.3	-1.8
KAKA	**Kakadu**	**75.31**	**119**⇓	*i*P	**P**	**23 15 34.5**	**-0.3**
	comp=Z,78nm,1.6s,mb5.2						
KAKA				*e*pP	pP	23 16 04.4	+2.1
SLKM	**Skilak Lake**	**75.66**	**20**	*e*P	**P**	**23 15 35.7**	**-0.2**
DBIC	**Dimbokro**	**76.12**	**268**⇓	*i*P	**P**	**23 15 38.7**	**-0.7**
DBIC				pmax	pmax		
	comp=Z,80nm,1.0s						

DBIC	Dimbokro	76.12	268	P	P	23 15 38.9	-0.6
	comp=Z,54nm,0.9s,mb5.3,baz=34,slow=7.2,SNR=42						
DBIC	Dimbokro	76.12	268	⇓*i*P	P	23 15 38.7	-0.7
	comp=Z,80nm,1.0s,mb5.4						
DIV	Divide	76.29	18	⇓*i*P	P	23 15 39.7	+0.3
	comp=Z,341nm,0.9s,mb6.1						
LBTB	Lobatse	76.75	223	*e*P	P	23 15 41.7	-1.1
LBTB				pmax	pmax		
	comp=Z,27nm,1.1s						
LBTB	Lobatse	76.75	223	*e*P	P	23 15 41.7	-1.0
	comp=Z,27nm,1.1s						
EYAK	Cordova Ski Ar	76.80	18	⇓*i*P	P	23 15 42.5	+0.2
TSUM	Tsumeb	76.94	233	*e*P	P	23 15 42.9	-1.0
	comp=Z,19nm,1.2s						
KDAK	Kodiak Island	77.23	23	⇓*i*P	P	23 15 45.1	+0.4
	comp=Z,335nm,1.0s,mb6.0						
YKW3	Yellowknife Ar	79.53	3	⇓*i*P	P	23 15 57.5	+0.2
YKW3				*e*PP	PP	23 18 57.5	-2.6
YKA	Yellowknife Ar	79.60	3	P	P	23 15 58.0	+0.4
	comp=Z,142nm,0.9s,mb5.8,baz=347,slow=5.4,SNR=1562						
YKA				PP	PP	23 18 58.5	-2.2
	comp=Z,19nm,1.1s,baz=352,slow=7.4,SNR=4.5						
YKA				PKKPbc		23 34 43.4	
	comp=Z,1.0nm,0.8s,baz=163,slow=2.5,SNR=18						
YKA				PKP2bc		23 42 41.1	
	comp=Z,0.1nm,0.5s,baz=133,slow=3.0,SNR=3.9						
YKA				LR	LR	23 56 35.1	
	comp=Z,253nm,18.0s,baz=345,slow=40						
YKA	Yellowknife Ar	79.60	3	P	P	23 15 58.0	+0.4
YKA				PP	PP	23 18 58.5	-2.2
YKA				PKKPbc		23 34 43.4	
YKA				⇑*e*		23 42 41.1	
YKA				LR	LR	23 56 35.1	
BOSA	Boshof	79.82	221	*e*P	P	23 15 58.0	-1.5
BOSA				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.1						
BOSA	Boshof	79.82	221	*e*P	P	23 15 58.0	-1.5
	comp=Z,29nm,1.0s,mb5.1						
MUN	Mundaring	80.64	144	*e*P	P	23 16 02.9	-0.9
	comp=Z,30nm,1.7s						
MUN				*i* pP	pP	23 16 33.2	+1.7
MUN				*i* S	S	23 25 58.9	-1.7
MUN	Mundaring	80.64	144	*e*P	P	23 16 02.9	-0.9
MUN				*i* S	S	23 25 58.9	-1.7
MUN				pmax	pmax		
	comp=Z,30nm,1.7s						
KLBR	Kellerberrin	81.05	142	⇓*i*P	P	23 16 05.1	-0.9
	comp=Z,273nm,1.3s,mb5.9						
KLBR				*i* pP	pP	23 16 35.1	+1.4
SCHQ	Schefferville	81.16	338	P	P	23 16 06.3	+0.2
	comp=Z,104nm,0.8s,mb5.7,baz=34,slow=5.3,SNR=191						
SCHQ				PKKPbc		23 34 40.4	
	comp=Z,0.7nm,0.8s,baz=78,slow=14,SNR=3.5						
SCHQ				LR	LR	23 51 26.1	
	comp=Z,533nm,21.8s,baz=259,slow=35						
SCHQ	Schefferville	81.16	338	⇓*i*P	P	23 16 06.2	+0.2
	comp=Z,194nm,0.9s,mb5.9						
WRA	Warramunga Arr	81.70	123	P	P	23 16 09.5	-0.1
	comp=Z,32nm,0.9s,mb5.2,baz=324,slow=5.0,SNR=176						
WRA				pP	pP	23 16 37.8	+0.4
	comp=Z,11nm,0.7s,baz=324,slow=4.8,SNR=3.2						
WRA				PKKPbc		23 34 41.7	
	comp=Z,7.9nm,0.8s,baz=135,slow=2.1,SNR=25						
WRAB	Tennant Creek	81.70	123	P	P	23 16 09.5	-0.1
WRAB				pmax	pmax		
	comp=Z,77nm,0.9s,mb5.5						
WRAB	Tennant Creek	81.70	123	⇓*i*P	P	23 16 09.3	-0.3
	comp=Z,77nm,0.9s,mb5.5						
WRAB				*e*pP	pP	23 16 37.3	-0.1
WRAB				sP	sP	23 16 49.9	+0.7
WB2	Warramunga Arr	81.71	123	⇓*i*P	P	23 16 09.5	-0.1
NWAO	Narrogin (SRO)	81.91	143	*e*P	P	23 16 09.5	-0.9
NWAO				*e**PP	pP	23 16 38.8	+0.6
NWAO				pmax	pmax		
	comp=Z,98nm,1.4s						
NWAO	Narrogin (SRO)	81.91	143	*e*P	P	23 16 09.5	-0.9
	comp=Z,98nm,1.4s,mb5.5						
NWAO				*e*pP	pP	23 16 38.8	+0.6
DLBC	Dease Lake	81.99	12	⇓*i*P	P	23 16 11.1	+0.8
SIT	Sitka	82.32	15	⇓*i*P	P	23 16 13.4	+1.4
SIT				pmax	pmax		
	comp=Z,372nm,1.4s,mb6.0						
SIT	Sitka	82.32	15	⇓*i*P	P	23 16 13.4	+1.4
	comp=Z,372nm,1.4s,mb6.0						
FCC	Fort Churchill	82.89	353	⇓*i*P	P	23 16 15.6	+0.7
FCC				pmax	pmax		
	comp=Z,358nm,1.1s,mb6.1						
FCC	Fort Churchill	82.89	353	⇓*i*P	P	23 16 15.6	+0.7
	comp=Z,358nm,1.1s,mb6.1						
PMG	Port Moresby	83.76	107	⇓*i*P	P	23 16 20.8	+0.6
PMG				*e**PP	pP	23 16 49.7	+1.6
PMG				pmax	pmax		
	comp=Z,43nm,0.9s						
PMG	Port Moresby	83.76	107	⇓*i*P	P	23 16 20.8	+0.6
	comp=Z,42nm,0.9s,mb5.3						
PMG				*e*pP	pP	23 16 49.7	+1.6
ASPA	Alice Springs	84.07	126	⇓*i*P	P	23 16 21.4	-0.2
ASPA				*e*pP	pP	23 16 51.3	+1.8
ASAR	Alice Springs	84.07	126	P	P	23 16 21.4	-0.1
	comp=Z,13nm,0.9s,baz=320,slow=5.2,SNR=72						
ASAR				pP	pP	23 16 50.0	+0.5
	comp=Z,5.1nm,0.7s,baz=312,slow=5.1,SNR=3.2						
ASAR				PKKPbc		23 34 35.9	
	comp=Z,4.6nm,0.8s,baz=123,slow=2.4,SNR=26						
ASAR				LR	LR	23 56 43.3	
	comp=Z,99nm,21.2s,baz=315,slow=38						
FORT	Forrest	85.80	135	*e*P	P	23 16 30.2	+0.2
	comp=Z,2µm,1.8s,mb6.8						
FFC	Flin Flon	87.45	357	P	P	23 16 38.8	+1.4
	comp=Z,1µm,1.0s,mb6.8						
FFC	Flin Flon	87.45	357	⇓*i*P	P	23 16 38.3	+0.9
FFC				pmax	pmax		
	comp=Z,259nm,1.0s,mb6.1						
FFC	Flin Flon	87.45	357	⇓*i*P	P	23 16 38.3	+0.9
	comp=Z,259nm,1.0s,mb6.1						
EDM	Edmonton	88.92	4	⇓*i*P	P	23 16 45.6	+1.2
CTA	Charters Tower	89.99	116	⇓*i*P	P	23 16 50.9	+0.7
CTA				*i* S	S	23 27 12.6	-19
CTA				pmax	pmax		
	comp=Z,13nm,0.9s						
CTA	Charters Tower	89.99	116	⇓*i*P	P	23 16 50.9	+0.7
	comp=Z,13nm,0.9s,mb5.0						
CTA				*i* S	S	23 27 12.6	-19
CTAO	Charters Tower	89.99	116	*e*P	P	23 16 51.0	+0.8
CTAO				*e**PP	pP	23 17 18.4	-0.1
CTAO				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.5						
CTAO	Charters Tower	89.99	116	*e*P	P	23 16 51.0	+0.8
	comp=Z,55nm,1.3s,mb5.5						
CTAO				*e*pP	pP	23 17 18.4	-0.1
ULM	Lac du Bonnet	91.47	353	P	P	23 16 56.1	-0.3
	comp=Z,45nm,0.9s,mb5.6						
ULM	Lac du Bonnet	91.47	353	⇓*e*P	P	23 16 56.1	-0.3
	comp=Z,121nm,1.1s,mb5.9						
MSNY	Massena	92.28	338	P	P	23 17 01.4	+1.1
PNT	Penticton	92.30	8	P	P	23 17 01.6	+1.3
PGC	Sidney	92.47	11	⇓*i*P	P	23 17 02.3	+1.2
	comp=Z,202nm,1.4s,mb6.2						
NCB	Newcomb	93.01	337	*e*P	P	23 17 04.4	+0.8
	comp=Z,46nm,1.4s,mb5.6						
WALA	Waterton Lakes	93.05	4	⇓*i*P	P	23 17 04.1	+0.5
WALA				*e*PP	PP	23 20 44.1	-6.2
JCW	Jim Creek	93.13	10	P	P	23 17 05.3	+1.2
EYMN	Ely	93.20	349	⇓*i*P	P	23 17 04.8	+0.4
	comp=Z,123nm,1.0s,mb6.2						
EYMN				*e*PP	PP	23 20 48.3	-3.3
OCWA	Octopus Mounta	93.24	11	⇓*i*P	P	23 17 06.8	+2.2
	comp=Z,121nm,1.2s,mb6.1						
OCWA				*e*PP	PP	23 20 52.8	+0.9
OOW	Octopus West	93.25	11	P	P	23 17 07.0	+2.4
OSR	Olympics--Salm	93.51	11	P	P	23 17 08.1	+2.3
NEW	Newport	93.59	7	⇓*i*P	P	23 17 07.3	+1.1
NEW				*e*PP	PP	23 20 49.9	-4.8
DGMT	Dagmar	93.79	358	⇓*i*P	P	23 17 08.6	+1.6
	comp=Z,191nm,1.1s,mb6.3						
STKA	Stephens Creek	94.65	127	P	P	23 17 10.9	-0.5
	comp=Z,3.5nm,1.0s,baz=306,slow=9.7,SNR=3.4						
STKA				LR	LR	00 02 47.2	
	comp=Z,259nm,18.9s,baz=16,slow=37						
GENY	Geneseo	95.18	339	*e*P	P	23 17 13.9	+0.4
CHMT	Chamberlain Mo	95.22	4	*e*P	P	23 17 14.7	+1.1
MSO	Missoula	95.27	5	*e*P	P	23 17 14.3	+0.5
	comp=Z,48nm,1.5s,mb5.7						
LAO	LASA Array	95.61	359	*e*P	P	23 17 17.4	+2.0
	comp=Z,156nm,1.0s,mb6.4						
LAO				*e*PP	PP	23 21 08.6	-1.2
BOZ	Bozeman (W)	96.56	3	*e*P	P	23 17 21.0	+1.2
	comp=Z,51nm,1.2s,mb5.8						
BMO	Blue Mountains	96.96	7	*e*P	P	23 17 21.4	-0.2
	comp=Z,20nm,1.6s,mb5.3						
BMO				*e*PP	PP	23 21 19.0	-1.7
SSPA	Standing Stone	97.16	338	*e*P	P	23 17 23.0	+0.3
	comp=Z,35nm,1.1s,mb5.7						
MCMT	McKenzie Canyo	97.32	4	*e*P	P	23 17 24.4	+1.1
QLMT	Earthquake Lak	97.39	3	*e*P	P	23 17 25.2	+1.7
LKWY	Lake	97.69	2	⇓*i*P	P	23 17 27.9	+3.0
LKWY				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.7						
LKWY	Lake	97.69	2	⇓*i*P	P	23 17 27.9	+3.0
	comp=Z,26nm,1.1s,mb5.7						
JFWS	Jewell Farm	97.91	347	⇓*i*P	P	23 17 26.0	0.0
	comp=Z,121nm,1.3s,mb6.3						
SDMD	Soldier’s Deli	97.97	337	*e*P	P	23 17 26.5	+0.2
IMW	Indian Meadow	98.34	3	⇓*i*P	P	23 17 29.9	+2.1
HLID	Hailey	98.48	5	*e*P	P	23 17 29.5	+0.9
	comp=Z,53nm,1.9s,mb5.7						
MOOW	Moose Ponds	98.49	3	⇓*e*P	P	23 17 30.6	+2.0
LOHW	Long Hollow	98.64	2	*e*P	P	23 17 31.3	+2.1
SNOW	Snow King Moun	98.78	3	*e*P	P	23 17 31.8	+1.9
RRI2	Red Ridge	98.87	3	*e*P	P	23 17 31.9	+1.6
ACSO	Alum Creek Sta	98.94	341	*e*P	P	23 17 30.9	+0.1
	comp=Z,36nm,1.0s,mb5.9						
AHID	Auburn Hatcher	99.46	3	*e*Pdif	P	23 17 34.2	+1.2
	comp=Z,20nm,1.0s,mb5.6						
BW06	Boulder Array	99.51	2	*e*Pdif	P	23 17 34.0	+0.7
	comp=Z,7.5nm,1.2s,mb5.2						
PDAR	Pinedale Array	99.51	2	P	P	23 17 34.1	+0.9
	comp=Z,2.4nm,0.8s,baz=41,slow=3.1,SNR=16						
PDAR				PP	PP	23 21 35.2	-4.9
	comp=Z,2.5nm,1.0s,baz=315,slow=4.2,SNR=4.1						
PDAR				PKiKP		23 22 02.9	
	comp=Z,2.3nm,0.9s,baz=64,slow=3.3,SNR=5.0						
PDAR				LR	LR	00 05 15.4	
	comp=Z,385nm,21.9s,baz=9.3,slow=37						
ARMA	Armidale	100.29	120	*e*P	P	23 17 25.2	-12
HWUT	Hardware Ranch	100.60	3	*e*Pdif	P	23 17 39.6	+1.5
	comp=Z,72nm,1.6s						
PHWY	Pilot Hill	100.98	359	*e*Pdif	P	23 17 40.5	+0.6
ELK	Elko	101.22	6	*e*Pdif	P	23 17 42.0	+1.1
	comp=Z,28nm,1.7s						
ELK				*e*PP	PP	23 21 50.3	-3.3
WCI	Wyandotte Cave	101.64	343	*e*P	P	23 17 42.8	-0.1
WCI				pmax	pmax		
	comp=Z,14nm,0.8s						
WCI	Wyandotte Cave	101.64	343	*e*Pdif	P	23 17 42.8	-0.1
	comp=Z,14nm,0.8s						
DAU	Daniels Canyon	101.80	3	P	P	23 17 46.4	+2.9
DAU	Daniels Canyon	101.80	3	*e*Pdif	P	23 17 45.9	+2.4
DUG	Dugway	101.94	4	*e*P	P	23 17 45.5	+1.3
DUG				pmax	pmax		
	comp=Z,76nm,0.9s						
DUG	Dugway	101.94	4	*e*Pdif	P	23 17 45.5	+1.3
	comp=Z,76nm,0.9s						
ISCO	Idaho Springs	102.48	359	*e*P	Pdif	23 17 47.9	+1.3
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ISCO	Idaho Springs	102.48	359	*e*Pdif	Pdif	23 17 47.9	+1.3
	comp=Z,6.9nm,1.0s						
KSU1	Kansas State U	102.57	351	*e*Pdif	Pdif	23 17 47.3	+0.4
SRU	San Rafael	103.13	3	*e*Pdif	Pdif	23 17 50.8	+1.3
CBKS	Cedar Bluff	103.17	354	*e*Pdif	Pdif	23 17 50.0	+0.4
	comp=Z,37nm,1.4s						
NVAR	Mina Array Bea	103.20	9	Pdiff	Pdif	23 17 51.2	+1.5
	comp=Z,2.9nm,0.8s,baz=17,slow=3.8,SNR=12						
NVAR				PP	PP	23 22 05.6	-2.9
	comp=Z,2.3nm,0.9s,baz=5.3,slow=4.8,SNR=5.4						
NVAR	Mina Array Bea	103.20	9	Pdif	Pdif	23 17 51.2	+1.5
NVAR				PP	PP	23 22 05.6	-2.9
MSU	Marysvale	103.65	4	*e*Pdif	Pdif	23 17 53.0	+1.2
PV10	Paradox Valley	103.90	1	*e*Pdif	Pdif	23 17 53.6	+0.8
WVT	Waverly	103.99	344	*e*P	Pdif	23 17 53.5	+0.2
WVT				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WVT	Waverly	103.99	344	*e*Pdif	Pdif	23 17 53.5	+0.2
	comp=Z,3.6nm,0.9s						
RW3	Ridgway	104.05	0	*e*P	Pdif	23 17 55.1	+1.6
SDCO	Great Sand Dun	104.53	359	*e*Pdif	Pdif	23 17 56.9	+1.3
MAW	Mawson	105.62	184	*e*PKP		23 22 12.9	
WMOK	Wichita Mounta	107.12	353	*e*PKP		23 22 16.4	
TUC	Tucson	109.90	3	*e*PKP		23 22 21.8	
MNTX	Cornudas Mount	110.56	358	*e*PKP	PKPdf	23 22 23.2	+2.1
JCT	Junction City	111.44	353	*e*PKIKP	PKPdf	23 22 24.6	+1.8
HKT	Hockley	111.48	349	*e*PKIKP	PKPdf	23 22 25.3	+2.4
LTX	Lajitas	112.85	357	*e*PKIKP	PKPdf	23 22 27.6	+2.0
TXAR	Lajitas Array	112.85	357	PKiKP		23 22 28.1	
	comp=Z,2.2nm,0.7s,baz=90,slow=1.3,SNR=5.2						
TXAR				PP	PP	23 23 15.1	-5.1
	comp=Z,8.8nm,1.1s,baz=18,slow=4.0,SNR=6.4						
TEIG	Tepich	119.31	339	*e*PKPdf	PKPdf	23 22 40.3	+1.9
SNAA	Sanae	121.34	201	*e*PKIKP	PKPdf	23 22 42.7	+1.5
SDV	Santo Domingo	122.08	316	*e*PKPdf	PKPdf	23 22 44.6	+0.7
URZ	Urewera	122.24	116	PKP	PKPdf	23 22 43.1	-0.6
	comp=Z,16nm,0.8s,baz=234,slow=2.4						
VNA2	Neumayer--Watz	122.36	203	⇑*i*	PKPdf	23 22 50.8	+7.7
VNA2	Neumayer--Watz	122.36	203	⇑*i*	PKPdf	23 22 55.1	+12
CAM4	Nova Friburgo	122.95	266	(P)	PKPdf	23 22 45.9	+0.6
BAO	Brasilia Array	123.53	276	P	PKPdf	23 22 47.8	+1.2
BAO				*e*		23 24 29.1	
BDFB	Brasilia	123.56	276	PKP	PKPdf	23 22 48.7	+2.0
	comp=Z,25nm,1.2s,baz=33,slow=4.5,SNR=13						
BDFB				PP	PP	23 24 30.2	-4.3
	comp=Z,8.5nm,0.9s,baz=108,slow=3.1,SNR=6.0						
VNDA	Vanda	126.65	164	*e*PKIKP	PKPdf	23 22 52.3	+1.2
VNDA	Vanda	126.65	164	PKP	PKPdf	23 22 52.3	+1.2
	comp=Z,7.9nm,0.9s,baz=295,slow=4.3,SNR=14						
ROSC	El Rosal	127.45	317	PKP	PKPdf	23 22 56.0	+1.6
	comp=Z,77nm,0.8s,baz=106,slow=4.2,SNR=32						
JTS	JuntasAbangare	127.54	332	*i* PKIKP	PKPdf	23 22 54.9	+0.4
SAML	Samuel	130.89	295	*e*PKPdf	PKPdf	23 23 02.6	+1.7
PPT	Papeete	137.85	73	*e*LR	LR	00 07 29.1	
	comp=Z,337nm,30.5s						
LPAZ	La Paz	139.35	291	*e*PKIKP	PKPdf	23 23 18.8	+2.4
PAYG	Puerto Ayora	139.62	333	*e*PKPpre		23 23 14.2	
PAYG				*e*PKPdf	PKPdf	23 23 19.9	+2.9
TBI	Tubuai	141.24	80	*e*LR	LR	00 09 39.3	
	comp=Z,288nm,33.5s						
NNA	Nana	142.40	306	*e*PKPpre		23 23 18.7	
NNA				*e*PKPdf	PKPdf	23 23 23.9	+2.0
LVC	Limon Verde	143.73	284	*e*PKPdf	PKPdf	23 23 23.4	-0.5
TRQA	Tornquist	144.58	256	*e*PKPdf	PKPdf	23 23 25.9	+0.9
ZON	Zonda	147.79	270	*e*PKHKP		23 23 29.0	
USHA	Ushuaia	148.91	225	PKPbc	PKPdf	23 23 38.8	+7.1
	comp=Z,34nm,0.7s,baz=90,slow=4.9,SNR=18						
FCH	Farellones	149.70	268	*i* P	PKPdf	23 23 37.0	+3.4
CLCH	Cerro Calan	149.91	268	⇓*i*P	PKPdf	23 23 36.6	+2.6
PLCA	Paso Flores	151.60	253	PKP	PKPdf	23 23 39.1	+2.8
	comp=Z,20nm,1.1s,baz=142,slow=0.8,SNR=17						
PLCA				PKPbc	PKPdf	23 23 45.7	+9.4
	comp=Z,144nm,1.1s,baz=122,slow=2.2,SNR=57						
PLCA	Paso Flores	151.60	253	*e*PKPdf	PKPdf	23 23 38.9	+2.7
PLCA				*e*PKPbc	PKPdf	23 23 45.4	+9.1
RKT	Rikitea	152.04	66	*e*PKPbc	PKPdf	23 23 46.0	+8.6
	comp=Z,158nm,1.0s						
RKT	Rikitea	152.04	66	*e*LR	LR	00 14 43.6	
	comp=Z,422nm,35.8s						
RPN	Rapa Nui	168.95	9	PKP	PKPdf	23 23 59.6	+4.3
	comp=Z,48nm,0.7s,baz=295,slow=1.7,SNR=4.3						

NEIC ***25*** *23:04:41.9, 36.02N×23.92E, h9^{km}, MD3.0(ATH), After ATH.*
CSEM ***25*** *23:04:42.6±0.2, 35.99N×23.81E, h12^{km}, MD3.0, Error ellipse: s-maj=7.2km s-min=4.7km az=36.0*
ATH 25 23:04:41.8, 35.89N×23.72E, h39^{km}±1^{km}, MD3.0/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAM	Vamos	0.62	141	*e*PN	P	23 04 55.0	+0.9
KYTH	Kithira	0.68	305	*e*PN	P	23 04 56.0	+1.1
VLI	Veliai	1.04	323	*e*PN	P	23 05 01.1	+1.0
NPS	Neapolis	1.67	112	*e*PN	P	23 05 09.3	+0.3
APE	Apeiranthos	1.87	51	*e*PB	P	23 05 14.0	+2.0
APE	Apeiranthos	1.87	51	*e*Pb	P	23 05 15.3	+3.3

NEIC ***25*** *23:28:57.8, 37.09S×177.00E, h236^{km}, After WEL.*
WEL 25 23:28:57.5±0.5, 37.06S×176.96E, h236^{km}±4^{km}, ML3.5/9, 1D, Error ellipse: s-maj=5.6km s-min=4.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.19	115	P	P	23 29 32.1	-0.4
MXZ				S	S	23 29 58.9	-0.7
MXZ	Matakaoa Point	1.19	115	PN	P	23 29 32.1	-0.4
MXZ				SN	S	23 29 58.9	-0.7
URZ	Urewera	1.20	174	P	P	23 29 32.2	-0.4
URZ	Urewera	1.20	174	PN	P	23 29 32.2	-0.4
URZ				SN	S	23 29 59.1	-0.7
MWZ	Matawai	1.35	160	P	P	23 29 33.7	0.0
MWZ				S	S	23 30 01.6	-0.1
MWZ	Matawai	1.35	160	⇓PN	P	23 29 33.7	0.0
MWZ				SN	S	23 30 01.6	-0.1
PUZ	Puketiti	1.44	135	P	P	23 29 34.2	-0.2
PUZ	Puketiti	1.44	135	PN	P	23 29 34.2	-0.2
PUZ				SN	S	23 30 02.9	0.0
KNZ	Kokohu	2.04	164	P	P	23 29 39.2	-0.3
KNZ	Kokohu	2.04	164	PN	P	23 29 39.2	-0.3
KNZ				SN	S	23 30 10.8	-1.1
BKZ	Black Stump Fm	2.13	190	P	P	23 29 39.9	-0.5
BKZ	Black Stump Fm	2.13	190	PN	P	23 29 39.9	-0.5
BKZ				SN	S	23 30 12.7	-0.9
MGZ	Maungaku	2.23	210	P	P	23 29 41.9	+0.4
MGZ	Maungaku	2.23	210	PN	P	23 29 41.9	+0.4
NGZ	Ngauruhoe	2.37	206	P	P	23 29 43.2	+0.4
NGZ	Ngauruhoe	2.37	206	PN	P	23 29 43.2	+0.4
TUVZ	Tukino	2.43	205	P	P	23 29 43.5	0.0
TUVZ	Tukino	2.43	205	PN	P	23 29 43.5	0.0
WNVZ	Wahianoa	2.50	205	P	P	23 29 44.1	-0.1
WNVZ	Wahianoa	2.50	205	PN	P	23 29 44.1	-0.1
TSZ	Takapari Road	3.09	194	*e*P	P	23 29 49.4	-1.2
TSZ	Takapari Road	3.09	194	PN	P	23 29 49.4	-1.2
WAZ	Wanganui	3.10	209	PN	P	23 29 50.3	-0.5
BFZ	Birch Farm	3.66	188	*e*P	P	23 29 55.0	-2.2
BFZ	Birch Farm	3.66	188	PN	P	23 29 55.0	-2.1
BFZ				SN	S	23 30 41.4	-2.0
MRZ	Mangatainoka R	3.75	196	*e*P	P	23 29 56.3	-2.0
MRZ	Mangatainoka R	3.75	196	PN	P	23 29 56.3	-2.0
MRZ				SN	S	23 30 43.0	-2.5
KIW	Kapiti Island	4.12	202	P	P	23 30 00.6	-2.0
KIW	Kapiti Island	4.12	202	PN	P	23 30 00.6	-2.1
MTW	Mount Morrison	4.24	195	P	P	23 30 02.0	-2.2
MTW	Mount Morrison	4.24	195	PN	P	23 30 02.0	-2.2
CAW	Cannon Point	4.30	199	P	P	23 30 02.5	-2.3
CAW	Cannon Point	4.30	199	PN	P	23 30 02.5	-2.4
MSWZ	Moikau Station	4.54	196	P	P	23 30 05.3	-2.5
MSWZ	Moikau Station	4.54	196	PN	P	23 30 05.3	-2.5
TUWZ	Tuamarina	4.95	207	*e*PN	P	23 30 12.5	-0.4
NNZ	Nelson	4.99	213	*e*PN	P	23 30 10.8	-2.6
QRZ	Quartz Range	5.10	221	*e*PN	P	23 30 13.8	-0.9
THZ	Tophouse	5.64	213	*e*P	P	23 30 21.3	-0.2
THZ	Tophouse	5.64	213	PN	P	23 30 19.7	-1.8

ISK ***25*** *23:32:25.4, 37.02N×28.34E, h18^{km}, MD3.1*
NEIC ***25*** *23:32:25.4, 37.01N×28.34E, h18^{km}, MD3.1(ISK), MD3.1(ATH), After ISK.*
CSEM ***25*** *23:32:25.4±0.1, 37.02N×28.35E, h16^{km}, MD3.1, Error ellipse: s-maj=2.4km s-min=1.3km az=54.0*
ATH ***25*** *23:32:28.7, 36.79N×28.04E, h56^{km}, MD3.1/4*
ISC 25 23:32:26.2±0.5, 37.02N±0.05×28.32E±0.06, h17^{km}±6^{km}, n20, σ0.^{s}91/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	344	*e*PG	Pb	23 32 29.5	-0.5
YER				*e*SG	Sb	23 32 32.8	+0.2
YER	Yerkesik	0.12	344	Pg	Pb	23 32 29.5	-0.5
YER				Sg	Sb	23 32 32.5	0.0
YER	Yerkesik	0.12	344	*e*Pg	Pb	23 32 29.5	-0.5
YER				Sg	Sb	23 32 32.5	-0.1
DALT	Dalyan (Mudla)	0.36	135	PG	Pb	23 32 33.0	-0.6
DALT	Dalyan (Mudla)	0.36	135	Pg	Pb	23 32 33.0	-0.7
MLSB	Milas	0.52	302	*e*PG	Pb	23 32 37.2	+0.9
MLSB	Milas	0.52	302	Pg	Pb	23 32 37.2	+0.8
FETY	Fethiye	0.72	122	*e*PG	Pb	23 32 39.5	-0.4
FETY				*e*SG	Sb	23 32 49.8	+0.5
BODT	Bodrum	0.81	273	*e*PG	Pb	23 32 41.4	-0.1
ARG	Arkhangelos	0.82	191	*e*P	Pb	23 32 42.0	+0.4
DENT	Denizli	0.92	37	*i* PG	Pb	23 32 43.6	+0.3
ELL	Elmali	1.30	102	*e*PN	Pn	23 32 49.6	-0.1
KSL	Kastellorizon	1.34	130	*e*P	Pn	23 32 53.0	+2.8
SMG	Samos	1.37	301	*e*P	Pn	23 32 52.0	+1.4
BLCB	Balcova	1.70	324	*e*PN	Pn	23 32 55.5	+0.1
KARP	Karpathos	1.75	213	*e*P	Pn	23 32 53.5	-2.5
BCK	Bucak	1.86	76	*e*PN	Pn	23 32 57.3	-0.3
AKS	Akhisar	1.90	348	*e*PN	Pn	23 32 57.8	-0.4
BALB	Balikesir	2.64	353	*e*PN	Pn	23 33 07.8	-1.0
BALB	Balikesir	2.64	353	*e*Pn	Pn	23 33 07.8	-1.0

ATH ***25*** *23:38:27.5, 37.64N×27.18E, h21^{km}±2^{km}, MD3.2/4*
NEIC ***25*** *23:38:27.5, 37.64N×27.18E, h21^{km}, MD3.2(ATH), After ATH.*
ISK ***25*** *23:38:30.6, 37.81N×26.94E, h29^{km}, MD3.0*
CSEM ***25*** *23:38:30.3±0.1, 37.78N×26.98E, h15^{km}, MD3.0, Error ellipse: s-maj=4.2km s-min=2.5km az=96.0*
ISC 25 23:38:30.7±0.8, 37.77N±0.04×26.98E±0.10, h13^{km}±8^{km}, n10, σ0.^{s}92/13, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.13	243	*e*PB	Pb	23 38 33.9	-0.5
BLCB	Balcova	0.62	5	PG	Pg	23 38 42.8	-0.4
BLCB				SG	Sg	23 38 52.0	+0.4
IZM	Izmir	0.67	20	PG	Pg	23 38 43.8	-0.4
BODT	Bodrum	0.75	159	PG	Pg	23 38 45.8	0.0
BODT				SG	Sg	23 38 57.4	+1.4
AKS	Akhisar	1.29	30	*e*PN	Pn	23 38 53.5	-1.0
APE	Apeiranthos	1.35	239	*e*PN	Pn	23 38 54.3	-1.0
APE	Apeiranthos	1.35	239	*e*Pn	Pn	23 38 54.6	-0.7
PRK	Paraskevi	1.58	340	*e*PN	Pn	23 38 59.1	+0.5
PRK				*e*SN	Sn	23 39 21.4	+2.4
DENT	Denizli	1.63	90	*e*PN	Pn	23 38 58.8	-0.5
ARG	Arkhangelos	1.80	149	*e*PN	Pn	23 38 57.0	-4.8

IDC 25 23:41:41.6±4.5, 25.53S×176.27W, mb4.0/3, mb1 4.3/3, mb1mx4.0/12, mbtmp4.0/3, Error ellipse: s-maj=273.7km s-min=34.0km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.13	261	P	P	23 49 58.6	-3.2
	0.5nm,0.5s,baz=91,slow=7.5,SNR=8.9						
WB2	Warramunga Arr	45.68	266	*e*P	P	23 50 05.7	-0.5
WRA	Warramunga Arr	45.69	266	P	P	23 50 05.8	-0.5
	2.9nm,0.6s,baz=106,slow=7.5,SNR=12						
NVAR	Mina Array Bea	83.62	42	P	P	23 54 12.3	-1.0
	0.8nm,0.6s,baz=210,slow=6.4,SNR=4.8						

MAN 25 23:49:43.5, 10.80N×124.99E, h6^{km}, mb4.0, ML2.8, MS2.4, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.67	191	*e*P	Pg	23 49 57.1	+0.2

MAN 25 23:50:52.2, 6.32N×125.79E, h8^{km}, mb4.4, ML3.3, MS3.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.78	37	*e*P	Pb	23 51 08.1	+0.6
MATI				*e*S	Sb	23 51 18.6	+0.7
MATI	Mati	0.78	37	*e*P	Pb	23 51 08.1	+0.6
BUKP	Musuan	1.71	335	*e*P	Pn	23 51 22.3	-0.2
BUKP				*e*S	Sn	23 51 47.4	+2.7
BUKP	Musuan	1.71	335	*e*P	Pn	23 51 21.6	-0.9
BUTP	Butuan	2.63	356	*e*P	Pn	23 51 35.8	0.0

IDC 26 00:12:37.6±4.6, 7.74N×90.41E, mb3.3/3, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=125.3km s-min=32.2km az=79.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.51**	**37**	Pn	P	00 15 49.6	-3.6
	0.2nm,0.3s,baz=231,slow=14,SNR=14						
SONM	**Songino Array**	**42.21**	**16**	P	P	00 20 32.7	-1.2
	0.4nm,0.9s,baz=191,slow=7.7,SNR=4.1						
WRA	**Warramunga Arr**	**51.24**	**123**	P	P	00 21 44.5	-1.0
	0.3nm,0.3s,baz=303,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**52.72**	**128**	P	P	00 21 53.1	-3.5
	0.4nm,0.7s,baz=292,slow=6.9,SNR=4.4						

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*NEIC **26** 00:31:38.6, 16.98N×100.20W, h5^{km}, MD3.6(MEX), After MEX.*

MEX 26 00:31:38.4±0.8**, 16.99N×100.21W, h6^{km}**±4^{km}**, MD3.8, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.08**	**314**	⇑*i*P	Pg	00 31 39.7	-0.7
CAIG				*i* S	Sg	00 31 41.3	-0.3
ACX	**Acapulco**	**0.30**	**114**	*e*P	Pg	00 31 43.8	-0.7
ACX				*e*S	Sg	00 31 48.5	-0.1
ZIIG	**Zihuatanejo**	**1.35**	**297**	*e*P	Pb	00 32 00.8	-2.9
ZIIG				*e*S	Sb	00 32 18.7	-2.4
ZIIG	**Zihuatanejo**	**1.35**	**297**	*e*P	Pb	00 32 00.8	-2.9
ZIIG				*i* S	Sb	00 32 16.0	-5.1
PLIG	**Platanillo**	**1.55**	**26**	*e*P	Pn	00 32 03.7	-3.0
PLIG				*e*S	Sb	00 32 23.1	-3.7
PLIG	**Platanillo**	**1.55**	**26**	*e*P	Pn	00 32 03.7	-3.0
PLIG				*e*S	Sb	00 32 20.7	-6.1
YAIG	**Yautepec**	**2.15**	**30**	*e*P	Pn	00 32 11.9	-3.4
YAIG				*e*S	Sn	00 32 38.9	-3.8
YAIG	**Yautepec**	**2.15**	**30**	*e*P	Pn	00 32 11.9	-3.4
YAIG				*e*S	Sn	00 32 36.2	-6.4
PPM	**Popocatepetl**	**2.55**	**36**	*e*P	Pn	00 32 19.6	-1.5
PPM				*e*P		00 32 20.5	
PPM				*e*S	Sn	00 32 46.5	-6.3
PPM				*e*S	Sn	00 32 49.1	-3.7
PPM	**Popocatepetl**	**2.55**	**36**	*e*P	Pn	00 32 18.0	-3.1
PPM				*e*P		00 32 18.2	
PPM				*e*S	Sn	00 32 49.1	-3.7
PPM				*e*S	Sn	00 32 51.0	-1.8

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*NEIC **26** 00:41:28.9, 35.55S×71.49W, h121^{km}, MD3.0(GUC), After GUC.*

GUC 26 00:41:28.9±0.8**, 35.55S×71.49W, h121^{km}**±5^{km}**, MD3.0, ML3.5, 4C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNCH	**Linares**	**0.31**	**197**	*i* P	P	00 41 46.5	+0.4
LNCH				*i* S	S	00 41 58.9	-0.2
LNCH				AMP		00 41 59.6	
	comp=N,3μm,0.2s						
SFDO	**San Fernando**	**1.01**	**23**	⇑*i*P	P	00 41 51.1	-0.3
SFDO				*i* S	S	00 42 08.2	-0.1
CACH	**El Canelo**	**1.61**	**27**	*e*P	P	00 41 57.7	-0.4
CACH				*i* S	S	00 42 20.6	+0.5
CHCH	**Chadas Angostu**	**1.76**	**23**	*i* P	P	00 41 59.7	-0.2
CHCH				*i* S	S	00 42 22.7	-0.5
TACH	**Talagante**	**1.95**	**14**	⇑*i*P	P	00 42 02.2	0.0
TACH				*i* S	S	00 42 27.1	-0.2
LMEL	**Las Melosas**	**2.00**	**32**	⇓*i*P	P	00 42 02.8	0.0
LMEL				*i* S	S	00 42 29.7	+1.1
LMEL				AMP		00 42 32.4	
	comp=N,283nm,0.1s						
LCCH	**Las Cruces**	**2.07**	**358**	*e*P	P	00 42 04.0	+0.2
PCH	**Pirque**	**2.09**	**23**	⇓*i*P	P	00 42 04.1	+0.1
PCH				*i* S	S	00 42 30.9	+0.4
RCDM	**Rinconada Maip**	**2.13**	**16**	⇑*i*P	P	00 42 04.4	-0.2
RCDM				*i* S	S	00 42 31.3	-0.2
RCDM				AMP		00 42 32.5	
	comp=E,400nm,0.1s						
CLCH	**Cerro Calan**	**2.29**	**20**	⇑*i*P	P	00 42 06.5	-0.2
CLCH				*i* S	S	00 42 35.4	+0.2
CLCH				AMP		00 42 37.4	
	comp=E,194nm,0.2s						
FCH	**Farellones**	**2.43**	**24**	*e*P	P	00 42 08.0	-0.6
FCH				*i* S	S	00 42 38.6	+0.2
FCH				AMP		00 42 41.5	
	comp=E,250nm,0.2s						

MAN 26 01:27:35.5, 8.78N×126.52E, h1^{km}, mb2.9, ML2.5, MS4.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.62**	**195**	⇓*e*P	Pg	01 27 47.5	-0.4
BUTP	**Butuan**	**0.91**	**282**	*e*P	Pg	01 27 53.1	-0.6
BUTP				*e*S	Sg	01 28 06.3	+0.5
SCPH	**Surigao**	**1.42**	**314**	*e*P	Pb	01 28 02.2	-0.4
SCPH				*e*S	Sb	01 28 19.7	-1.4
BUKP	**Musuan**	**1.70**	**238**	*e*P	Pn	01 28 06.3	-0.3
BUKP				*e*S	Sb	01 28 29.7	+0.5

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*NEIC **26** 01:38:04.1±0.5, 6.94S×155.56E, mb4.1/1, Error ellipse: s-maj=14.9km s-min=9.9km az=169.0*

*IDC **26** 01:38:04.3±1.3, 6.93S×155.54E, h30^{km}±6^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.9/12, mbtmp3.9/6, MS3.0/1, Ms1 3.0/1, ms1mx2.6/13, Error ellipse: s-maj=37.0km s-min=20.0km az=120.0*

ISC 26 01:38:02.5±0.7**, 6.9S**±0.1×**155.54E**±0.09**, h31^{km}, h31^{km}**±.5^{km}**:pP-P, n13, σ0^{s}61**/10**, mb3.8**/7**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.02**	**120**	P	**Pn**	**01 39 17.4**	**-0.3**
PMG	**Port Moresby**	**8.65**	**253**	LR	LR	01 43 17.1	
	comp=Z,95nm,19.9s,baz=83,slow=36						
PMG	**Port Moresby**	**8.65**	**253**	P	**P**	**01 40 08.2**	**-0.4**
WRAB	**Tennant Creek**	**24.28**	**236**	P	**P**	**01 43 17.6**	**-0.8**
	4.3nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**24.28**	**236**	*e*P	**P**	**01 43 19.2**	**+0.8**
WRA	**Warramunga Arr**	**24.29**	**236**	P	**P**	**01 43 19.5**	**+1.0**
	1.7nm,0.5s,mb3.7,baz=60,slow=9.5,SNR=11						
WRA				pP		01 43 27.5	
	2.6nm,0.9s,baz=60,slow=9.5,SNR=6.9						
ASAR	**Alice Springs**	**26.61**	**229**	P	**P**	**01 43 40.0**	**-0.3**
	0.6nm,0.5s,mb3.4,baz=62,slow=9.2,SNR=14						
ASAR				pP	pP	01 43 49.4	-0.1
	1.0nm,0.6s,baz=61,slow=8.9,SNR=8.2						
ASAR				PcP	PcP	01 47 03.9	-0.4
	0.4nm,0.6s,baz=64,slow=2.3,SNR=6.5						
CMAR	**Chiang Mai Arr**	**61.25**	**295**	P	**P**	**01 48 17.4**	**-0.1**
	2.6nm,0.6s,mb4.6,baz=124,slow=5.5,SNR=8.0						
CMAR				pP	pP	01 48 26.8	-0.4
	1.1nm,0.4s,baz=333,slow=28,SNR=2.4						
SONM	**Songino Array**	**69.58**	**327**	P	**P**	**01 49 10.2**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=139,slow=5.0,SNR=5.7						
SONM				pP	pP	01 49 20.2	-0.3
	0.4nm,0.5s,baz=137,slow=6.0,SNR=3.8						
ILAR	**Eielson Array**	**83.12**	**21**	P	**P**	**01 50 26.1**	**-0.4**
	0.3nm,0.4s,mb3.6,baz=250,slow=5.1,SNR=7.4						
YKA	**Yellowknife Ar**	**96.03**	**28**	P	**P**	**01 51 28.7**	**+0.9**
	0.4nm,0.5s,mb4.1,baz=266,slow=4.6,SNR=12						
BDFB	**Brasilia**	**147.63**	**134**	PKPbc	PKPdf	01 57 46.5	-0.8
	4.8nm,0.8s,baz=293,slow=2.5,SNR=8.5						
BAO	**Brasilia Array**	**147.65**	**134**	P	PKPdf	01 57 46.9	-0.5

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*IDC **26** 01:42:15.2±4.3, 7.68N×91.32E, mb3.5/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.5/4, ML4.3/1, Error ellipse: s-maj=119.5km s-min=29.7km az=77.0*

*NEIC **26** 01:42:19.9±1.0, 7.71N×91.45E, h30^{km}, mb4.3/1, Error ellipse: s-maj=26.9km s-min=13.1km az=68.0*

ISC 26 01:42:23.1±3.8**, 7.9N**±0.2×**91.8E**±0.1**, h67^{km}**±36^{km}**, n9, σ0^{s}68**/9**, mb3.6**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.64**	**33**	Pn	**P**	**01 45 21.9**	**0.0**
	0.5nm,0.3s,baz=227,slow=14,SNR=6.1						
NANT	**Nan**	**13.92**	**38**	P	**P**	**01 45 38.5**	**-0.2**
HYB	**Hyderabad**	**15.98**	**308**	*e*P	**P**	**01 46 05.5**	**+0.3**
AAK	**Ala-Archa**	**37.82**	**339**	P	**P**	**01 49 34.9**	**+0.2**
SONM	**Songino Array**	**41.73**	**15**	P	**P**	**01 50 08.3**	**+1.2**
	0.4nm,0.8s,mb3.2,baz=207,slow=7.8,SNR=3.2						
CHKZ	**Chkalovo**	**48.77**	**343**	P	**P**	**01 51 01.7**	**-1.4**
WRA	**Warramunga Arr**	**50.20**	**124**	P	**P**	**01 51 14.7**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=304,slow=8.5,SNR=5.3						
WRAB	**Tennant Creek**	**50.21**	**124**	*e*P	**P**	**01 51 14.0**	**-0.6**
	2.4nm,0.8s,mb4.2						
ASAR	**Alice Springs**	**51.75**	**128**	P	**P**	**01 51 26.8**	**+0.5**
	0.5nm,0.8s,mb3.6,baz=298,slow=6.6,SNR=5.5						

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*IDC **26** 01:57:12.9±5.0, 45.86N×146.17E, mb3.6/5, mb1 3.9/5, mb1mx3.5/20, mbtmp3.6/5, Error ellipse: s-maj=132.5km s-min=39.2km az=10.0*

ISC 26 01:58:17.2±4.7**, 48.5N**±0.9×**147.0E**±0.5**, h500^{km}, n5, σ0^{s}39**/5**, mb3.1**/5**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**37.81**	**40**	P	**P**	**02 04 50.6**	**0.0**
	0.3nm,0.7s,mb2.8,baz=276,slow=9.4,SNR=5.8						
FINES	**FINESS Array B**	**60.58**	**332**	P	**P**	**02 07 39.3**	**-0.4**
	1.4nm,1.0s,mb3.4,baz=37,slow=9.5,SNR=5.9						
NOA	**NORSAR Array B**	**65.11**	**338**	P	**P**	**02 08 09.2**	**+0.5**
	0.6nm,0.8s,mb3.3,baz=42,slow=6.5,SNR=2.6						
PDAR	**Pinedale Array**	**66.97**	**51**	P	**P**	**02 08 20.7**	**0.0**
	0.3nm,0.6s,mb3.1,SNR=3.7						
TXAR	**Lajitas Array**	**80.13**	**57**	P	**P**	**02 09 35.3**	**0.0**
	0.3nm,0.7s,mb2.9,baz=286,slow=4.4,SNR=3.6						

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*IDC **26** 02:10:35.6±1.4, 18.08N×120.93E, mb3.6/4, mb1 3.9/4, mb1mx3.6/17, mbtmp3.6/4, Error ellipse: s-maj=122.8km s-min=23.3km az=76.0*

*MAN **26** 02:10:45.9, 18.37N×120.77E, h48^{km}, mb4.6, ML3.5, MS3.4*

ISC 26 02:10:45.8±0.7**, 18.34N**±0.05×**120.80E**±0.08**, h80^{km}**±9^{km}**, n15, σ0^{s}97**/24**, mb3.6**/4**, 2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	**Conner**	**0.63**	**138**	*e*P	**P**	**02 11 00.8**	**-0.2**
APYP				*e*S	**S**	**02 11 11.7**	**-0.4**
ABRA	**Dolores**	**0.69**	**187**	*e*P	**P**	**02 11 01.4**	**-0.1**
CVP	**Callao Caves**	**1.16**	**123**	⇓*i*P	**P**	**02 11 06.5**	**-0.5**
CVP				*e*S	**S**	**02 11 22.0**	**-0.9**
SGCP	**Mt. Cagua**	**1.18**	**94**	*e*P	**P**	**02 11 08.1**	**+0.8**
SGCP				*e*S	**S**	**02 11 23.6**	**+0.1**
CAUP	**Cauayan**	**1.69**	**145**	*e*P	**P**	**02 11 15.0**	**+0.9**
CAUP				*e*S	**S**	**02 11 37.6**	**+2.6**
BCPH	**Baguio City Da**	**1.96**	**186**	⇑*i*P	**P**	**02 11 16.9**	**-0.8**
BCPH				*i* S	**S**	**02 11 39.6**	**-1.5**
PALP	**Palanan**	**2.00**	**129**	*e*P	**P**	**02 11 18.6**	**+0.4**
BOLP	**Bolinao**	**2.12**	**204**	*e*P	**P**	**02 11 19.7**	**-0.3**
BOLP				*e*S	**S**	**02 11 47.4**	**+2.2**
BBP	**Basco**	**2.36**	**27**	*e*P	**P**	**02 11 23.8**	**+0.5**
BBP				*e*S	**S**	**02 11 50.9**	**-0.4**
BALP	**Baler**	**2.68**	**164**	*e*P	**P**	**02 11 27.2**	**-0.6**
BALP				*e*S	**S**	**02 11 58.9**	**-0.4**
PCPH	**Palayan**	**2.77**	**174**	⇑*i*P	**P**	**02 11 29.1**	**0.0**
PCPH				*i* S	**S**	**02 12 05.0**	**+3.5**
SONM	**Songino Array**	**31.69**	**341**	P	**P**	**02 17 03.6**	**-0.2**
	0.6nm,0.7s,mb3.5,baz=168,slow=9.4,SNR=5.9						
WRA	**Warramunga Arr**	**40.29**	**160**	P	**P**	**02 18 11.8**	**-5.0**
	0.3nm,0.3s,mb3.5,baz=340,slow=9.2,SNR=3.1						
ASAR	**Alice Springs**	**43.66**	**162**	P	**P**	**02 18 40.4**	**-4.1**
	0.5nm,0.4s,mb3.6,baz=338,slow=7.0,SNR=10						
YKA	**Yellowknife Ar**	**88.48**	**22**	P	**P**	**02 23 30.4**	**+0.4**
	0.4nm,0.6s,mb3.6,baz=312,slow=4.5,SNR=11						

MAN 26 02:23:19.0, 9.86N×125.66E, h25^{km}, mb4.2, ML3.0, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.18**	**246**	⇓*e*P	Pb	02 23 24.8	+0.4
SCPH				*e*S	Sb	02 23 33.2	+5.1
MSLP	**Maasin**	**0.83**	**289**	*e*P	Pb	02 23 34.5	-0.3
MSLP				*e*S	Sb	02 23 52.6	+7.1
BUTP	**Butuan**	**0.88**	**182**	*e*P	Pb	02 23 36.1	+0.5
BUTP				*e*S	Sb	02 23 48.6	+1.6
PLP	**Palo**	**1.46**	**333**	*e*P	Pn	02 23 39.9	-4.4
PLP				*e*S	Sn	02 24 02.1	-0.6
TBP	**Tagbilaran**	**1.78**	**265**	*e*P	Pn	02 23 48.2	-0.4
TBP				*e*S	Sn	02 24 14.6	+3.9
BUKP	**Musuan**	**2.05**	**197**	*e*P	Pn	02 23 41.4	-11
PAGZ	**Pagadian**	**3.00**	**229**	*e*P	Pn	02 24 06.2	0.0
PVCP	**Virac**	**4.00**	**339**	*e*P	Pn	02 24 20.5	+0.1

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*IDC **26** 02:40:31.7±0.6, 8.00N×94.38E, mb4.3/20, mb1 4.4/21, mb1mx4.4/24, mbtmp4.3/21, ML4.7/1, MS4.0/8, Ms1 4.0/8, ms1mx3.7/24, Error ellipse: s-maj=28.7km s-min=15.1km az=45.0*

*BJI **26** 02:40:32.7, 7.35N×93.84E, h35^{km}, mB4.8, mb4.6, Ms4.6, Msz4.1*

*NEIC **26** 02:40:33.4±3.9, 7.64N×94.11E, h16^{km}±24^{km}, mb4.8/18, Error ellipse: s-maj=13.3km s-min=5.2km az=48.0*

*MOS **26** 02:40:35.9±0.8, 7.78N×93.76E, h33^{km}, mb5.0/17, Error ellipse: s-maj=16.4km s-min=7.4km az=100.1*

ISC 26 02:40:32.0±1.5**, 7.59N**±0.05×**94.05E**±0.04**, h18^{km}**±11^{km}**, h22^{km}**±5.1^{km}**:pP-P, n122, σ1^{s}09**/114**, mb4.6**/51**, MS4.1**/13**, 5C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**6.52**	**93**	P	**Pn**	**02 42 09.0**	**-0.5**
	296nm,0.8s						
KULM	**Kulim**	**6.94**	**109**	*e*P	**Pn**	**02 42 13.3**	**-2.1**
NNT	**Nongplab**	**7.48**	**48**	P	**Pn**	**02 42 21.4**	**-1.5**
CM31	**Chiang Mai Arr**	**11.80**	**23**	*e*P	**P**	**02 43 20.3**	**-2.3**
CMAR	**Chiang Mai Arr**	**11.80**	**23**	Pn	**P**	**02 43 23.6**	**+1.0**
	1.4nm,0.3s,baz=211,slow=14,SNR=53						
CMAR				LR	LR	02 48 00.9	
	comp=Z,505nm,18.2s,baz=205,slow=40						
CMAR	**Chiang Mai Arr**	**11.80**	**23**	Pn	**P**	**02 43 23.6**	**+1.0**
CMAR				LR	LR	02 48 00.9	
CHG	**Chiang Mai**	**12.12**	**23**	⇑P	**P**	**02 43 27.7**	**+0.8**
	26nm,0.8s						
CHG	**Chiang Mai**	**12.12**	**23**	⇑P	**P**	**02 43 27.7**	**+0.8**
	26nm,0.8s						
NANT	**Nan**	**12.88**	**29**	P	**P**	**02 43 37.5**	**+0.5**
NANT	**Nan**	**12.88**	**29**	P	**P**	**02 43 37.5**	**+0.5**
VIS	**Vishakhapatnam**	**14.51**	**315**	*i* P	**P**	**02 43 58.2**	**-0.4**
VIS	**Vishakhapatnam**	**14.51**	**315**	*e*P	**P**	**02 43 57.5**	**-1.1**
VIS				*e*		02 44 08.5	
	comp=Z,23nm,0.4s						
VIS				*e*S	**S**	**02 46 35.3**	**-4.6**
BWNR	**Bhubaneshwar**	**14.94**	**329**	*e*P	**P**	**02 44 02.6**	**-1.7**
BWNR				*e*		02 44 04.3	
	comp=Z,13nm,0.1s						
BWNR				*e*S	**S**	**02 46 47.7**	**-2.3**
KSM	**Kuching**	**17.30**	**110**	P	**P**	**02 44 34.3**	**-0.1**
HYB	**Hyderabad**	**17.99**	**304**	*e*P	**P**	**02 44 47.0**	**+4.0**
HYB	**Hyderabad**	**17.99**	**304**	*i* P	**P**	**02 44 47.0**	**+4.0**
BLSP	**Bilaspur**	**18.46**	**323**	*e*P	**P**	**02 44 49.6**	**+0.8**
BLSP				*e*		02 44 53.7	
	comp=Z,31nm,0.9s						
QIZ	**Qiongzhong**	**19.09**	**52**	P	**P**	**02 45 00.3**	**+3.9**
QIZ				S	**S**	**02 48 28.0**	**+2.6**
QIZ				LR	LR		
	comp=N,2μm,12.1s						
QIZ				LR	LR		
	comp=E,861nm,14.5s						
KMI	**Kunming**	**19.31**	**24**	⇑P	**P**	**02 45 02.3**	**+3.4**
KMI				XP		02 45 11.5	
KMI				AMB	AMB		
	comp=Z,32nm,1.3s						
KMI				AMB	AMB		
	comp=Z,204nm,4.4s						
KMI				LR	LR		
	comp=N,373nm,11.8s						
KMI				LR	LR		
	comp=E,521nm,15.0s						
KMI				LR	LR		
	comp=Z,494nm,15.4s						
KMI	**Kunming**	**19.31**	**24**	⇑P	**P**	**02 45 02.2**	**+3.3**
KMI				pmax	pmax		
	comp=Z,32nm,1.3s						
JIRN	**Jiri**	**21.30**	**340**	*e*P	**P**	**02 45 20.1**	**0.0**
	comp=Z,117nm,1.0s,mb5.2						
PKI	**Pulchoki**	**21.49**	**339**	*e*P	**P**	**02 45 21.6**	**-0.4**
	comp=Z,74nm,0.8s,mb5.0						
DMN	**Daman**	**21.64**	**338**	*e*P	**P**	**02 45 23.4**	**0.0**
	comp=Z,121nm,0.8s,mb5.4						
KAD	**Karad**	**21.65**	**298**	*e*P	**P**	**02 45 25.9**	**+2.3**
KAD				*e*		02 45 29.6	
	comp=Z,19nm,0.8s						
KKN	**Kakani**	**21.74**	**339**	*e*P	**P**	**02 45 24.3**	**-0.1**
	comp=Z,73nm,0.9s,mb5.1						
KKM	**Kota Kinabalu**	**22.06**	**93**	*e*P	**P**	**02 45 28.5**	**+0.8**
LSA	**Lhasa**	**22.16**	**353**	*e*P	**P**	**02 45 28.8**	**+0.2**
LSA	**Lhasa**	**22.16**	**353**	*e*P	**P**	**02 45 28.4**	**-0.2**
LSA				pmax	pmax		
	comp=Z,56nm,0.7s,mb5.1						
LSA	**Lhasa**	**22.16**	**353**	*e*P	**P**	**02 45 28.4**	**-0.2**
	comp=Z,56nm,0.7s,mb5.1						
GKN	**Gorkha**	**22.17**	**337**	*e*P	**P**	**02 45 28.9**	**+0.2**
	comp=Z,89nm,1.0s,mb5.2						
GYA	**Guiyang**	**22.27**	**31**	⇑*i*P	**P**	**02 45 32.0**	**+2.3**
GYA				AP		02 45 41.3	
GYA				XP		02 45 45.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
GYA				AMB	AMB		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,840nm,13.8s,MS4.5						
GYA				LR	LR		
	comp=E,1μm,14.4s,MS4.5						
GYA				LR	LR		
	comp=Z,810nm,13.8s,MS4.3						
BHPL	**Bhopal**	**22.30**	**316**	*e*P	**P**	**02 45 30.0**	**0.0**
BHPL				*e*		02 45 38.4	
	comp=Z,51nm,1.3s						
KOLN	**Koldanda**	**22.38**	**335**	*e*P	**P**	**02 45 31.5**	**+0.7**
	comp=Z,63nm,0.9s,mb5.1						
POO	**Poona**	**22.46**	**301**	*e*	**P**	**02 45 42.0**	**+10**
AYAN	**Aya Nagar**	**26.21**	**325**	*e*P	**P**	**02 46 08.3**	**+0.6**
AYAN				*e*		02 46 16.4	
	comp=Z,8.9nm,1.0s						
NDI	**New Delhi**	**26.32**	**325**	*e*P	**P**	**02 46 08.5**	**-0.2**
KHET	**Khetri**	**26.70**	**322**	*e*P	**P**	**02 46 14.3**	**+2.1**
KHET				*e*	pP	02 46 18.9	+1.5
	comp=Z,30nm,1.5s						
ENH	**Enshi**	**26.81**	**31**	*e*P	**P**	**02 46 13.2**	**0.0**
	comp=Z,20nm,1.0s,mb4.6						
DDI	**Dehra Dun**	**27.14**	**328**	*e*P	**P**	**02 46 17.0**	**+0.8**
DDI				*e*		02 46 46.4	
DDI				*e*		02 54 04.0	
XAN	**Xi’an**	**29.68**	**25**	P	**P**	**02 46 38.8**	**-0.3**
XAN				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.3						
LZH	**Lanzhou**	**29.74**	**16**	*e*P	**P**	**02 46 39.8**	**+0.1**
LZH				AP	pP	02 46 49.5	+4.5
LZH				XP	sP	02 46 54.0	+6.6
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,106nm,6.1s						
LZH	**Lanzhou**	**29.74**	**16**	*e*P	**P**	**02 46 39.8**	**+0.1**
LZH				*PP	pP	02 46 49.4	+4.4
LZH				*SP	sP	02 46 54.1	+6.7
LZH				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.8						
LZH	**Lanzhou**	**29.74**	**16**	*e*P	**P**	**02 46 39.8**	**+0.1**
	comp=Z,30nm,1.4s,mb4.8						
LZH				pP	pP	02 46 49.4	+4.4
LZH				sP	sP	02 46 54.1	+6.7
GTA	**Gaotai**	**32.10**	**8**	*e*P	**P**	**02 47 00.3**	**-0.1**
GTA				AP	pP	02 47 07.0	+1.3
GTA				PP	PP	02 48 07.8	+0.6
GTA				S	**S**	**02 52 10.8**	**+0.2**
GTA				SCP		02 53 31.8	
GTA				SS	SS	02 54 04.8	+0.7
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,54nm,4.2s						
GTA				LR	LR		
	comp=N,179nm,16.7s,MS4.0						
GTA				LR	LR		
	comp=E,174nm,14.8s,MS4.0						
GTA				LR	LR		
	comp=Z,196nm,17.1s,MS3.9						
WMQ	**Urumqi**	**36.51**	**352**	P	**P**	**02 47 38.5**	**+0.3**
WMQ				XP	sP	02 47 52.0	+6.0
WMQ				PP	PP	02 49 03.0	+0.5
WMQ				S	**S**	**02 53 18.0**	**-0.9**
WMQ				SS	SS	02 55 44.0	-1.1
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.7						
WMQ				LR	LR		
	comp=N,78nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=E,254nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,108nm,18.0s,MS3.7						
BJI	**Beijing**	**37.89**	**28**	*e*P	**P**	**02 47 52.5**	**+2.6**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.4						
BJI				LR	LR		
	comp=N,321nm,15.7s,MS4.4						
BJI				LR	LR		
	comp=E,274nm,15.3s,MS4.4						
BJI				LR	LR		
	comp=Z,128nm,25.5s						
BJI	**Beijing**	**37.89**	**28**	*e*P	**P**	**02 47 52.5**	**+2.6**
	comp=Z,6.0nm,0.7s,mb4.4						
BJI				S	**S**	**02 53 22.8**	**-17**
BJI				LR	LR		
	comp=Z,130nm,25.5s,MS3.6						
AAK	**Ala-Archa**	**38.93**	**337**	*e*P	**P**	**02 47 58.7**	**+0.2**
AAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**38.93**	**337**	*e*P	**P**	**02 47 58.7**	**+0.2**
	comp=Z,13nm,1.1s,mb4.6						
MKAR	**Makanchi Array**	**40.34**	**348**	*i* P	**P**	**02 48 09.9**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	**Songino Array**	**41.45**	**13**	P	**P**	**02 48 19.8**	**+0.5**
	comp=Z,5.2nm,0.8s,mb4.2,baz=196,slow=8.6,SNR=46						
ULN	**Ulaanbaatar**	**41.63**	**13**	*e*P	**P**	**02 48 20.3**	**-0.4**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
ULN	**Ulaanbaatar**	**41.63**	**13**	*e*P	**P**	**02 48 20.3**	**-0.4**
	comp=Z,3.4nm,0.9s,mb4.0						
KS15	**Wonju Array Si**	**42.70**	**41**	P	**P**	**02 48 30.9**	**+1.2**
ZAK	**Zakamensk**	**43.34**	**9**	*e*P	**P**	**02 48 35.0**	**+0.3**
ZAK				*e*		02 50 24.5	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
TLY	**Talaya**	**44.66**	**8**	*e*P	**P**	**02 48 45.7**	**+0.3**
TLY				*e*		02 55 23.2	
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
TLY				MLR	MLR		
	comp=Z,154nm,23.0s,MS3.9						
KURK	**Kurchatov**	**44.86**	**346**	*i* P	**P**	**02 48 47.1**	**+0.1**
KURK				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.8						
KURK	**Kurchatov**	**44.86**	**346**	*e*P	**P**	**02 48 46.2**	**-0.8**
	comp=Z,16nm,0.9s,mb4.8						
NVS	**Novosibirsk**	**47.91**	**352**	*e*P	**P**	**02 49 09.6**	**-1.4**
NVS				*e**PP	pP	02 49 15.1	-1.5
NVS				*e*S	**S**	**02 56 04.9**	**-1.5**
NVS				pmax	pmax		
	comp=N,8.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.1						
NVS				smax			
	comp=N,13nm,1.6s						
NVS				smax			
	comp=E,11nm,1.4s						
WRA	**Warramunga Arr**	**48.17**	**125**	P	**P**	**02 49 13.9**	**+0.4**
	comp=E,4.9nm,1.2s,mb4.4,baz=302,slow=7.8,SNR=5.6						
WRAB	**Tennant Creek**	**48.17**	**125**	*e*P	**P**	**02 49 11.5**	**-2.1**
WB2	**Warramunga Arr**	**48.18**	**125**	*e*P	**P**	**02 49 12.8**	**-0.8**
RAYN	**Ar Rayn**	**49.12**	**295**	P	**P**	**02 49 23.6**	**+2.8**
	comp=E,71nm,1.0s,SNR=10						
BVA0	**Borovoye Array**	**49.23**	**341**	*i* P	**P**	**02 49 20.8**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
BVAR	**Borovoye Array**	**49.23**	**341**	P	**P**	**02 49 21.1**	**-0.2**
	comp=Z,4.1nm,1.0s,mb4.4,baz=143,slow=7.4,SNR=11						
CHKZ	**Chkalovo**	**49.71**	**342**	*e*P	**P**	**02 49 24.4**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CHKZ				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
CHKZ	Chkalovo	49.71	342	*e*P	P	02 49 24.4	-0.5
	comp=Z,19nm,0.9s,mb5.1						
ASAR	Alice Springs	49.80	130	P	P	02 49 25.7	-0.4
	comp=Z,0.8nm,0.8s,mb3.8,baz=301,slow=7.3,SNR=9.9						
BOD	Bodaibo	52.44	13	*e*P	P	02 49 44.8	-0.8
BOD				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
GNI	Garni	54.57	314	P	P	02 50 03.4	+1.8
	comp=Z,2.0nm,0.4s,mb4.5,baz=194,slow=1.3,SNR=3.7						
SVE	Sverdlovsk	55.63	338	*e*P	P	02 50 09.4	+0.4
KMBO	Kilima Mbogo	57.31	264	*e*P	P	02 50 22.3	+0.7
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMBO	Kilima Mbogo	57.31	264	P	P	02 50 26.2	+4.6
	comp=Z,2.5nm,0.8s,mb4.3,baz=54,slow=10,SNR=9.6						
KMBO				LR	LR	03 12 04.3	
	comp=Z,146nm,19.2s,MS4.1,baz=92,slow=33						
KMBO	Kilima Mbogo	57.31	264	*e*P	P	02 50 22.3	+0.6
	comp=Z,2.6nm,0.8s,mb4.3						
KMBO				LR	LR	03 12 04.3	
KIV	Kislovodsk	57.47	318	*e*P	P	02 50 20.8	-1.6
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
KIV	Kislovodsk	57.47	318	*e*P	P	02 50 21.6	-0.7
	comp=Z,13nm,1.1s,mb4.9						
CTA	Charters Tower	58.25	119	LR	LR	03 15 57.4	
	comp=Z,142nm,18.2s,MS4.1,baz=46,slow=36						
SOKR	Solikamsk	59.03	339	⇓*i*P	P	02 50 39.0	+6.0
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,270nm,22.0s,MS4.3						
STKA	Stephens Creek	59.98	134	P	P	02 50 41.0	+1.0
	comp=Z,2.3nm,0.9s,mb4.2,baz=326,slow=11,SNR=2.6						
STKA				LR	LR	03 21 32.1	
	comp=Z,114nm,18.1s,MS4.0,baz=243,slow=41						
BRTR	Keskin Array B	62.55	311	P	P	02 50 56.2	-1.0
	comp=Z,1.7nm,0.7s,mb4.3,baz=131,slow=6.7,SNR=11						
OBN	Obninsk	65.57	328	*e*P	P	02 51 15.9	-0.8
OBN				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.2						
AKASG	Malin Array Be	68.32	322	P	P	02 51 33.0	-1.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=89,slow=4.6,SNR=7.8						
IDI	Anoyia	68.66	305	P	P	02 51 36.1	-0.5
	comp=Z,7.6nm,0.9s,mb4.6,baz=86,slow=19,SNR=4.9						
MLR	Muntele Rosu	69.31	316	P	P	02 51 40.1	-0.3
	comp=Z,2.9nm,0.7s,mb4.3,baz=170,slow=4.4,SNR=7.4						
MATP	Matopo	70.17	245	P	P	02 51 49.7	+3.6
	comp=Z,3.1nm,1.0s,mb4.2,baz=57,slow=6.4,SNR=3.9						
MATP	Matopo	70.17	245	P	P	02 51 49.7	+3.6
JOF	Joensuu	71.06	335	*e*p	P	02 51 46.5	-4.3
SUW	Suwalki	72.68	324	*e*P	P	02 51 59.6	-1.0
SUW				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
SUW	Suwalki	72.68	324	*e*P	P	02 51 59.6	-1.0
	comp=Z,38nm,1.1s,mb5.2						
FINES	FINESS Array B	72.92	332	P	P	02 52 01.8	-0.1
	comp=Z,4.0nm,0.7s,mb4.5,baz=105,slow=5.5,SNR=21						
FINES				LR	LR	03 28 44.4	
	comp=Z,72nm,18.7s,MS4.0,baz=119,slow=40						
KAF	Kangasniemi	73.00	333	*e*p	P	02 51 58.9	-3.4
	comp=Z,5.4nm,0.6s,mb4.7,baz=104,slow=5.6						
KAF	Kangasniemi	73.00	333	*e*P	P	02 51 58.9	-3.4
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
OKC	Ostrava-Krasne	75.15	319	*e*P	P	02 52 15.6	+0.6
ARCES	ARCESS Array B	75.50	340	P	P	02 52 16.0	-0.6
	comp=Z,4.0nm,0.9s,mb4.3,baz=90,slow=8.5,SNR=6.9						
ARCES				LR	LR	03 28 31.1	
	comp=Z,228nm,18.0s,MS4.5,baz=182,slow=38						
ARCES	ARCESS Array B	75.50	340	P	P	02 52 16.0	-0.6
ARCES				LR	LR	03 28 31.1	
MORC	Moravsky Berou	75.53	319	*e*P	P	02 52 16.7	-0.5
MORC				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
MORC	Moravsky Berou	75.53	319	*e*P	P	02 52 16.7	-0.5
	comp=Z,9.0nm,1.2s,mb4.6						
DPC	Dobruska-Polom	76.36	320	*e*P	P	02 52 22.0	+0.1
PRU	Pruhonice	77.48	319	*e*P	pP	02 52 35.2	+1.4
PRU	Pruhonice	77.48	319	*e*pP	pP	02 52 35.2	+1.4
BRG	Berggiesshubel	77.91	320	*e*P	pP	02 52 37.6	+1.4
BRG				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
BRG	Berggiesshubel	77.91	320	*e*P	pP	02 52 37.6	+1.4
	comp=Z,10nm,1.4s						
GERES	GERESS Array B	77.98	318	P	P	02 52 31.4	+0.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=89,slow=4.6,SNR=16						
KHC	Kasperske Hory	78.07	319	*e*P	pP	02 52 38.1	+1.0
KHC	Kasperske Hory	78.07	319	*e*pP	pP	02 52 38.1	+1.0
CLL	Collm	78.52	321	P	sP	02 52 41.0	-0.5
CLL	Collm	78.52	321	*e**SP	sP	02 52 41.0	-0.5
HFS	Hagfors	78.65	330	P	P	02 52 35.0	+0.7
	comp=Z,5.7nm,0.8s,mb4.6,baz=101,slow=7.6,SNR=17						
NKC	Novy Kostel	78.84	320	*e*P	P	02 52 34.5	-1.0
NB2	NORSAR Subarra	79.93	331	P	P	02 52 41.2	0.0
	comp=Z,4.0nm,0.8s,mb4.4,baz=92,slow=5.6						
NB2	NORSAR Subarra	79.93	331	P	P	02 52 41.2	0.0
NB2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
NOA	NORSAR Array B	79.93	331	P	P	02 52 41.6	+0.4
	comp=Z,3.2nm,0.8s,mb4.3,baz=91,slow=5.8,SNR=9.8						
NOA				LR	LR	03 33 15.2	
	comp=Z,50nm,18.9s,MS3.9,baz=215,slow=40						
JMIC	Jan Mayen	86.94	341	LR	LR	03 33 52.1	
	comp=Z,62nm,19.4s,MS4.0,baz=263,slow=37						
EKA	Eskdalemuir Ar	87.90	325	P	P	02 53 23.1	+1.4
	comp=Z,1.3nm,0.6s,mb4.3,baz=90,slow=6.4,SNR=3.1						
ESDC	Sonseca Array	91.33	310	P	P	02 53 40.0	+1.8
	comp=Z,1.0nm,0.7s,mb4.3,baz=65,slow=4.2,SNR=4.5						
IMA	Indian Mountai	91.91	22	*e*P	P	02 53 40.0	-0.2
	comp=Z,5.3nm,0.5s,mb5.1						
ILAR	Eielson Array	95.04	22	P	P	02 53 52.7	-1.9
	comp=Z,0.3nm,0.3s,mb4.2,baz=324,slow=15,SNR=8.3						
YKA	Yellowknife Ar	106.72	13	PP	PP	02 59 09.7	-6.0
	comp=Z,0.4nm,0.8s,baz=332,slow=7.6,SNR=4.9						
NVAR	Mina Array Bea	125.20	31	PKP	PKPdf	02 59 35.6	-0.5
	comp=Z,0.4nm,0.7s,baz=280,slow=1.8,SNR=3.4						
PDAR	Pinedale Array	125.46	21	PKP	PKPdf	02 59 34.8	-1.7
	comp=Z,0.6nm,0.9s,slow=3.0,SNR=4.2						
BDFB	Brasilia	142.04	254	PKP	PKPdf	03 00 08.6	+0.5
	comp=Z,2.0nm,0.9s,baz=266,slow=3.4,SNR=3.8						
PLCA	Paso Flores	144.26	200	PKP	PKPdf	03 00 10.0	-1.2
	comp=Z,4.2nm,1.0s,baz=158,slow=4.1,SNR=7.6						

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*IDC **26** 03:02:30.4±1.2, 13.69N×92.82E, mb3.7/5, mb1 3.9/6, mb1mx3.7/17, mbtmp3.7/6, Error ellipse: s-maj=42.1km s-min=23.9km az=51.0*

*NEIC **26** 03:02:34.8±0.8, 13.74N×92.91E, h30^{km}, mb4.0/2, Error ellipse: s-maj=20.2km s-min=13.9km az=58.0*

ISC 26 03:02:32.8±0.9**, 13.8N**±0.1×**93.0E**±0.2**, h30^{km}, n9, σ0^{s}70**/9**, mb3.8**/7**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.41	50	Pn	Pn	03 04 21.4	-0.4
	baz=233,slow=16,SNR=9.1						
CMAR	Chiang Mai Arr	7.41	50	Pn	Pn	03 04 21.4	-0.4
SONM	Songino Array	35.78	16	P	P	03 09 32.4	+1.1
	0.2nm,0.5s,mb3.3,baz=207,slow=7.2,SNR=3.5						
CHKZ	Chkalovo	43.57	341	*e*P	P	03 10 34.9	-0.9
	1.6nm,0.6s,mb3.9						
WRA	Warramunga Arr	52.70	129	P	P	03 11 48.3	+1.0
	0.6nm,0.6s,mb3.7,baz=308,slow=8.1,SNR=5.7						
WRAB	Tennant Creek	52.71	129	*e*P	P	03 11 46.6	-0.7
	1.0nm,0.5s,mb4.0						
ASAR	Alice Springs	54.64	133	P	P	03 12 01.1	-0.3
	0.4nm,0.5s,mb3.7,baz=308,slow=6.7,SNR=4.6						
FINES	FINESS Array B	67.02	331	P	P	03 13 24.9	-0.1
	2.7nm,1.0s,mb4.2,baz=153,slow=4.3,SNR=4.6						
GERES	GERESS Array B	72.73	317	P	P	03 14 00.3	+0.2
	0.4nm,0.5s,mb3.6,baz=90,slow=6.4,SNR=8.4						

NEIC 26 03:16:55.6, 48.07S×166.15E, h149^{km}, MG4.2(WEL)**, After WEL., Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	2.50	30	P	P	03 17 35.7	-1.5
WHZ				S	S	03 18 06.4	-2.7
WHZ	Wether Hill Ro	2.50	30	PN	P	03 17 35.7	-1.6
WHZ				SN	S	03 18 06.4	-2.7
MLZ	Mavora Lakes	3.06	28	P	P	03 17 43.2	-1.2
MLZ				S	S	03 18 19.2	-2.5
MLZ	Mavora Lakes	3.06	28	PN	P	03 17 43.2	-1.2
MLZ				SN	S	03 18 19.1	-2.6
TUZ	Tuapeka	3.19	50	P	P	03 17 46.7	+0.7
TUZ	Tuapeka	3.19	50	PN	P	03 17 46.6	+0.6
TUZ				SN	S	03 18 24.6	0.0
EAZ	Earnscleugh	3.58	39	*e*P	P	03 17 50.6	-0.5
EAZ	Earnscleugh	3.58	39	PN	P	03 17 50.3	-0.8
EAZ				SN	S	03 18 33.5	-0.2
MSZ	Milford Sound	3.61	21	PN	P	03 17 50.7	-0.9
MSZ				*e*SN	S	03 18 33.6	-1.0
WKZ	Wanaka	3.80	32	*e*P	P	03 17 54.7	+0.6
WKZ	Wanaka	3.80	32	PN	P	03 17 54.5	+0.4
WKZ				*e*SN	S	03 18 37.9	-1.1
ODZ	Otahua Downs	4.33	47	*e*P	P	03 18 00.5	-0.5
ODZ	Otahua Downs	4.33	47	PN	P	03 18 00.5	-0.6
ODZ				*e*SN	S	03 18 51.8	+0.4
JCZ	Jackson Bay	4.39	25	*e*P	P	03 18 03.0	+1.2
JCZ	Jackson Bay	4.39	25	*e*PN	P	03 18 02.6	+0.8
JCZ				*e*SN	S	03 18 54.2	+1.5
LBZ	Lake Benmore	4.63	39	*e*P	P	03 18 03.3	-1.6
LBZ	Lake Benmore	4.63	39	*e*PN	P	03 18 03.0	-2.0
LBZ				*e*SN	S	03 18 57.7	-0.7
FOZ	Fox Glacier	5.14	30	*e*PN	P	03 18 12.9	+1.2
DSZ	Denniston Nort	7.49	34	*e*P	P	03 18 43.1	-0.1
DSZ	Denniston Nort	7.49	34	*e*PN	P	03 18 42.6	-0.6

IDC 26 03:26:04.0±5.5**, 16.44N×93.38E, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, ML3.8**/1**, MS2.9**/1**, Ms1 3.1**/1**, ms1mx2.6**/17**, 1C-1D, Error ellipse: s-maj=136.5km s-min=37.5km az=172.0, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDT	Bhumibol Dam	5.45	81	P	Pn	03 27 19.0	-9.4
	24nm,0.6s						
CMAR	Chiang Mai Arr	5.68	68	Pn	Pn	03 27 29.6	-2.0
	0.8nm,0.3s,baz=242,slow=15,SNR=25						
CMAR				LR	LR	03 30 25.0	
	comp=Z,115nm,18.7s,baz=234,slow=46						
CHG	Chiang Mai	5.81	65	⇓P	Pn	03 27 34.2	+0.7
	88nm,0.7s						
CHRT	Chiangrai	6.98	60	⇑PN	Pn	03 27 53.0	+3.0
CHRT				SG	rx	03 28 24.0	
NANT	Nan	7.37	70	PN	Pn	03 28 01.0	+5.5
NANT				PG	Pg	03 28 11.5	-20
NANT				SG	rx	03 28 31.0	
VIS	Vishakhapatnam	9.70	279	*e*	Sn	03 30 05.0	-14
SONM	Songino Array	33.09	16	P	P	03 32 41.8	-1.9
	0.5nm,0.8s,baz=190,slow=7.5,SNR=3.7						
GERES	GERESS Array B	71.05	317	P	P	03 37 24.2	-1.7
	0.9nm,0.8s,baz=90,slow=5.3,SNR=7.9						
NOA	NORSAR Array B	71.98	330	P	P	03 37 29.4	-1.8
	0.6nm,0.7s,baz=89,slow=6.4,SNR=3.3						

MAN 26 03:58:32.8, 9.87N×125.17E, h35^{km}, mb4.3, ML3.1, MS2.9, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.33	105	*e*P	P	03 58 42.9	+1.9
SCPH				*e*S	S	03 58 48.7	+1.9
MSLP	Maasin	0.40	311	*e*P	P	03 58 43.1	+1.2
MSLP				*e*S	S	03 58 50.0	+1.6
PLP	Palo	1.30	352	*e*P	P	03 58 55.3	+0.5
PLP				*e*S	S	03 59 10.9	-0.4

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*NEIC **26** 04:15:03.7±2.2, 4.55S×144.02E, h47^{km}±20^{km}, mb4.1/2, Error ellipse: s-maj=22.5km s-min=14.1km az=166.0*

*IDC **26** 04:15:06.4±7.4, 4.74S×144.36E, h69^{km}±70^{km}, mb3.9/3, mb1 4.2/6, mb1mx4.1/11, mbtmp4.3/6, ML4.1/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/15, Error ellipse: s-maj=51.5km s-min=29.3km az=135.0*

ISC 26 04:15:02.1±4.0**, 4.6S**±0.2×**144.1E**±0.1**, h45^{km}**±35^{km}**, n15, σ0^{s}50**/14**, mb4.0**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.68	147	P	P	04 16 25.8	-0.2
	22nm,0.3s,baz=357,slow=6.2,SNR=45						
PMG				S	S	04 17 24.9	-5.9
	12nm,0.3s,baz=308,slow=22,SNR=16						
PMG	Port Moresby	5.68	147	*e*P	P	04 16 26.3	+0.2
	117nm,0.5s						
KAKA	Kakadu	14.03	234	*e*P	P	04 18 20.8	+0.5
	12nm,0.5s						
CTA	Charters Tower	15.54	172	P	P	04 18 45.0	+5.1
	0.7nm,0.3s,baz=353,slow=16,SNR=6.7						
CTAO	Charters Tower	15.54	172	*e*P	P	04 18 44.3	+4.4
WRAB	Tennant Creek	17.94	211	*e*P	P	04 19 09.6	-0.5
	14nm,0.8s						
WB2	Warramunga Arr	17.95	211	*e*P	P	04 19 10.1	-0.1
WRA	Warramunga Arr	17.95	211	P	P	04 19 10.0	-0.3
	0.9nm,0.3s,baz=36,slow=13,SNR=31						
ASAR	Alice Springs	21.34	206	P	P	04 19 48.2	+0.6
	27nm,0.8s,mb4.7,baz=32,slow=11,SNR=60						
ASAR				LR	LR	04 28 21.6	
	comp=Z,11nm,18.8s,baz=225,slow=37						
ASPA	Alice Springs	21.34	206	*e*P	P	04 19 51.5	+3.9
FITZ	Fitzroy Crossi	22.47	232	*e*P	P	04 19 58.3	-0.5
	7.2nm,1.0s,mb4.1						
STKA	Stephens Creek	27.24	185	P	P	04 20 44.2	0.0
	1.9nm,0.8s,mb3.6,baz=350,slow=8.2,SNR=3.2						
CMAR	Chiang Mai Arr	50.02	299	sP	sP	04 24 23.4	+11
	1.1nm,0.4s,baz=114,slow=6.6,SNR=2.3						
SONM	Songino Array	61.79	332	pP	pP	04 25 33.6	+2.1
	0.3nm,0.8s,baz=149,slow=7.2,SNR=3.0						
SONM				sP	sP	04 25 48.9	+12
	0.4nm,0.8s,baz=124,slow=5.2,SNR=2.9						
ILAR	Eielson Array	85.36	24	P	P	04 27 35.5	0.0
	0.5nm,0.6s,mb3.8,baz=256,slow=4.9,SNR=11						
ILAR				pP	pP	04 27 57.8	+8.8
	0.4nm,0.7s,baz=253,slow=4.9,SNR=2.7						

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*ATH **26** 04:26:16.3, 38.37N×21.78E, h11^{km}±3^{km}, MD3.3/14, ML3.1*

*NEIC **26** 04:26:16.4, 38.36N×21.76E, h12^{km}, ML3.1(ATH), After ATH.*

*CSEM **26** 04:26:17.5±0.2, 38.33N×21.76E, h2^{km}, ML3.1, Error ellipse: s-maj=4.7km s-min=2.9km az=87.0*

*THE **26** 04:26:19.9, 38.48N×21.94E, h1^{km}, ML3.3*

ISC 26 04:26:17.1±0.5**, 38.36N**±0.03×**21.79E**±0.05**, h10^{km}, n29, σ1^{s}13**/36**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.55	2	*e*PG	Pg	04 26 26.7	-1.6
AGG	Agios Georgios	0.78	33	*e*Pg	Pg	04 26 31.6	-1.3
VLS	Valsamata	0.96	259	*e*PB	Pb	04 26 33.3	-2.2
VLS				*e*SB	Sb	04 26 48.6	+0.6
LKR	Lokris	0.99	73	*e*PG	Pg	04 26 34.9	-2.1
ITM	Ithomi	1.19	175	*e*PG	Pg	04 26 38.7	-2.2
MGER	Gerania Oros	1.22	108	*e*PB	Pb	04 26 40.5	+0.6
MGER	Gerania Oros	1.22	108	*e*Pb	Pb	04 26 41.0	+1.1
NSAL	Nisos Salamina	1.40	109	*e*PB	Pb	04 26 43.4	+0.5
NEO	Neokhori	1.46	50	*e*PG	Pg	04 26 43.5	-2.9
NAIG	Nisos Aigina	1.47	114	*e*PB	Pb	04 26 45.0	+0.8
JAN	Janina	1.48	331	*e*PB	Pb	04 26 44.5	+0.1
JAN	Janina	1.48	331	*e*Pb	Pb	04 26 45.1	+0.7
XOR	Xorichti	1.48	47	*e*Pb	Pb	04 26 45.3	+0.9
MPAR	Parnis Oros	1.55	97	*e*PB	Pb	04 26 45.7	+0.2
MPAR	Parnis Oros	1.55	97	*e*Pb	Pb	04 26 47.0	+1.5
ATH	Athens Observa	1.57	104	*e*PB	Pb	04 26 46.0	+0.2
ATH	Athens Observa	1.57	104	*e*Pb	Pb	04 26 47.5	+1.7
PTL	Penteli	1.67	100	*e*PB	Pb	04 26 47.1	-0.4
LIT	Litokhoron	1.82	17	*e*Pb	Pb	04 26 49.4	-0.7
LIT				*e*Sb	Sb	04 27 12.8	0.0
VLI	Veliai	1.88	151	*e*PN	Pn	04 26 50.8	+1.1
KZN	Kozani	1.94	360	*e*PN	Pn	04 26 51.7	+1.1
PAIG	Paliouri	2.15	43	*e*Pn	Pn	04 26 53.7	+0.2
PLG	Polygyros	2.38	32	*e*PB	Pb	04 26 56.1	-3.7
FNA	Florina	2.44	353	*e*Pn	Pn	04 26 59.1	+1.4
FNA				*e*Sn	Sn	04 27 29.4	+1.6
OUR	Ouranopolis	2.60	40	*e*Pn	Pn	04 27 00.5	+0.5
GRG	Griva	2.63	10	*e*Pn	Pn	04 27 00.9	+0.4
GRG				*e*Sn	Sn	04 27 33.3	+0.5
KNT	Kendrikon	2.92	17	*e*Pn	Pn	04 27 04.5	-0.1
KNT				*e*Sn	Sn	04 27 40.2	0.0
SRS	Serrai	3.08	26	*e*Pn	Pn	04 27 06.2	-0.6
SRS				*e*Sn	Sn	04 27 43.4	-0.8
SRS	Serrai	3.08	26	*e*Pn	Pn	04 27 06.2	-0.7
SRS				*e*Sn	Sn	04 27 43.4	-0.8

MAN 26 04:33:47.9, 12.21N×122.24E, h145^{km}, mb4.5, ML3.4, MS3.2, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCP	Roxas	0.81	142	⇓*e*P	P	04 34 10.4	-0.6
RCP				*e*S	S	04 34 29.7	+1.1
GQP	Guinayangan	1.70	7	⇓*e*P	P	04 34 21.9	+2.3
LQP	Lukban	2.02	340	⇑*e*P	P	04 34 22.6	-0.7
SNPH	Sibulan	3.01	161	*e*P	P	04 34 36.0	+0.1
PPR	Puerto Princes	4.21	235	⇑*i*P	P	04 34 52.1	+0.4

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*IDC **26** 04:35:08.7±2.7, 17.55S×174.22W, mb3.8/4, mb1 4.1/4, mb1mx3.8/14, mbtmp3.8/4, Error ellipse: s-maj=150.9km s-min=25.4km az=144.0*

*NEIC **26** 04:35:12.0±6.1, 17.47S×174.29W, h21^{km}±39^{km}, mb4.3/3, Error ellipse: s-maj=75.9km s-min=11.2km az=144.0*

ISC 26 04:35:12.9±2.0**, 17.3S**±0.5×**174.5W**±0.4**, h33^{km}, n12, σ0^{s}57**/11**, mb4.2**/8**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.23	38	P	P	04 36 15.9	-0.8
STKA	Stephens Creek	42.23	241	P	P	04 43 04.5	-0.2
	1.0nm,0.6s,mb3.7,baz=84,slow=10,SNR=2.5						
WB2	Warramunga Arr	48.43	258	*e*P	P	04 43 54.1	-0.2
WRAB	Tennant Creek	48.43	258	*e*P	P	04 43 53.5	-0.8
	3.2nm,0.5s,mb4.6						
WRA	Warramunga Arr	48.44	258	P	P	04 43 54.3	-0.1
	1.6nm,0.5s,mb4.3,baz=96,slow=6.0,SNR=26						
ASAR	Alice Springs	48.57	253	P	P	04 43 55.5	0.0
	15nm,0.6s,mb5.2,baz=90,slow=8.4,SNR=302						
ASPA	Alice Springs	48.58	253	*e*P	P	04 43 55.7	+0.3
KAKA	Kakadu	51.36	267	*e*P	P	04 44 17.3	+0.5
	1.4nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	56.84	259	*e*P	P	04 44 56.8	-0.2
	1.9nm,0.6s,mb4.3						
PDAR	Pinedale Array	84.34	42	P	P	04 47 43.4	+0.2
	0.2nm,0.5s,mb3.5,baz=207,slow=2.0,SNR=2.7						
ILAR	Eielson Array	84.47	12	P	P	04 47 44.6	+1.3
	0.3nm,0.7s,mb3.5,baz=218,slow=7.3,SNR=7.4						
GERES	GERESS Array B	147.81	350	PKPbc	PKPdf	04 54 54.7	+3.3
	0.2nm,0.5s,slow=2.0,SNR=3.9						

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*NEIC **26** 04:39:09.3±0.4, 40.50S×173.50E, h191^{km}±5^{km}, MG4.2(WEL), Error ellipse: s-maj=5.0km s-min=2.1km az=126.0*

*WEL **26** 04:39:13.5±0.2, 40.52S×173.55E, h145^{km}±2^{km}, ML4.1/13, Error ellipse: s-maj=1.3km s-min=0.8km az=90.0*

ISC 26 04:39:10.5±0.5**, 40.58S**±0.03×**173.55E**±0.04**, h161^{km}**±4^{km}**, n103, σ1^{s}16**/131**, 17C-13D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	Nelson	0.66	192	P	P	04 39 35.5	+1.2
NNZ				S	S	04 39 52.2	-0.4
NNZ	Nelson	0.66	192	⇑PN	P	04 39 35.6	+1.3
NNZ				SN	S	04 39 52.2	-0.3
QRZ	Quartz Range	0.82	252	P	P	04 39 36.0	+0.8
QRZ	Quartz Range	0.82	252	⇑PN	P	04 39 36.0	+0.8
QRZ				SN	S	04 39 53.2	-1.1
TUWZ	Tuamarina	0.90	161	⇑PN	P	04 39 37.6	+1.8
TUWZ				SN	S	04 39 55.3	+0.1
KIW	Kapiti Island	1.07	106	P	P	04 39 38.7	+1.6
KIW				S	S	04 39 56.5	-1.1
KIW	Kapiti Island	1.07	106	⇑PN	P	04 39 38.6	+1.6
KIW				SN	S	04 39 56.5	-1.0
MRW	Makara Radio	1.09	127	P	P	04 39 39.1	+1.9
MRW	Makara Radio	1.09	127	⇑PN	P	04 39 39.1	+1.9
MRW				SN	S	04 39 57.5	-0.3
WEL	Wellington	1.16	128	P	P	04 39 39.7	+1.8
WEL	Wellington	1.16	128	PN	P	04 39 39.7	+1.8
WEL				SN	S	04 39 58.6	-0.5
BSWZ	Blackbirch Sta	1.16	168	P	P	04 39 40.0	+2.1
BSWZ	Blackbirch Sta	1.16	168	⇑PN	P	04 39 40.0	+2.1
BSWZ				SN	S	04 39 59.5	+0.4
CAW	Cannon Point	1.27	115	P	P	04 39 40.5	+1.6
CAW	Cannon Point	1.27	115	PN	P	04 39 40.5	+1.6
CAW				SN	S	04 40 00.1	-0.7
NRZ	Ngariki Road	1.27	13	P	P	04 39 39.6	+0.6
NRZ	Ngariki Road	1.27	13	⇑PN	P	04 39 39.6	+0.7
CMWZ	Cape Campbell	1.27	157	PN	P	04 39 41.4	+2.4
THZ	Tophouse	1.28	202	*e*P	P	04 39 36.2	-2.9
THZ	Tophouse	1.28	202	⇑PN	P	04 39 40.6	+1.5
THZ				SN	S	04 40 01.0	-0.2
BHW	Baring Head	1.30	130	P	P	04 39 40.8	+1.6
BHW	Baring Head	1.30	130	⇑PN	P	04 39 40.8	+1.6
BHW				SN	S	04 40 00.5	-0.9
DFE	Dawson Falls	1.32	19	P	P	04 39 40.2	+0.8
DFE	Dawson Falls	1.32	19	PN	P	04 39 40.1	+0.7
NWEZ	Newall Road	1.32	11	P	P	04 39 40.2	+0.8
NWEZ	Newall Road	1.32	11	⇓PN	P	04 39 40.1	+0.7
NEZ	North Egmont	1.37	18	P	P	04 39 40.3	+0.4
NEZ	North Egmont	1.37	18	PN	P	04 39 40.3	+0.4
WAZ	Wanganui	1.37	54	P	P	04 39 41.4	+1.5
WAZ	Wanganui	1.37	54	⇓PN	P	04 39 41.4	+1.5
WAZ				SN	S	04 40 03.6	+1.0
PKE	Pukeiti	1.42	14	P	P	04 39 41.0	+0.6
PKE	Pukeiti	1.42	14	⇓PN	P	04 39 41.0	+0.6
PKE				SN	S	04 40 01.9	-1.7
RAEZ	Rainy Point	1.44	27	P	P	04 39 41.3	+0.7
RAEZ	Rainy Point	1.44	27	⇓PN	P	04 39 41.3	+0.7
MSWZ	Moikau Station	1.53	124	P	P	04 39 43.2	+1.6
MSWZ	Moikau Station	1.53	124	⇑PN	P	04 39 43.2	+1.7
MSWZ				SN	S	04 40 04.8	-0.8
MRZ	Mangatainoka R	1.54	94	P	P	04 39 43.0	+1.3
MRZ	Mangatainoka R	1.54	94	⇑PN	P	04 39 42.9	+1.3
MRZ				SN	S	04 40 04.2	-1.6
MTW	Mount Morrison	1.59	112	⇑PN	P	04 39 43.7	+1.6
MTW				SN	S	04 40 05.6	-1.0
PAWZ	Paruwai Farm	1.63	120	⇑PN	P	04 39 44.2	+1.6
PAWZ				SN	S	04 40 06.7	-0.7
VRZ	Vera Road	1.72	33	P	P	04 39 43.7	+0.2
VRZ	Vera Road	1.72	33	PN	P	04 39 43.7	+0.1
VRZ				SN	S	04 40 08.1	-0.9
DSZ	Denniston Nort	1.77	228	P	P	04 39 45.0	+1.0
DSZ	Denniston Nort	1.77	228	⇑PN	P	04 39 45.1	+1.1
DSZ				SN	S	04 40 08.2	-1.7
KHZ	Kahutara	1.84	180	P	P	04 39 46.7	+1.9
KHZ	Kahutara	1.84	180	⇑PN	P	04 39 46.7	+1.9
KHZ				SN	S	04 40 10.7	-0.7
TSZ	Takapari Road	1.91	75	P	P	04 39 46.5	+0.9
TSZ	Takapari Road	1.91	75	⇓PN	P	04 39 46.5	+0.9
WNVZ	Wahianoa	2.00	52	P	P	04 39 47.3	+0.7
WNVZ	Wahianoa	2.00	52	PN	P	04 39 47.3	+0.6
FWVZ	Far West T-bar	2.02	50	P	P	04 39 47.4	+0.5
FWVZ	Far West T-bar	2.02	50	PN	P	04 39 47.3	+0.4
BFZ	Birch Farm	2.05	94	P	P	04 39 48.5	+1.3
BFZ	Birch Farm	2.05	94	⇓PN	P	04 39 48.6	+1.4
BFZ				SN	S	04 40 14.1	-1.4
MOVZ	Moawhango	2.05	56	P	P	04 39 47.4	+0.2
MOVZ	Moawhango	2.05	56	⇓PN	P	04 39 47.4	+0.2
MOVZ				SN	S	04 40 14.4	-1.2
WPVZ	Whakapapa	2.05	49	P	P	04 39 47.6	+0.4
WPVZ	Whakapapa	2.05	49	⇓PN	P	04 39 47.6	+0.3
CNZ	Chateau	2.06	49	P	P	04 39 47.6	+0.3
CNZ	Chateau	2.06	49	⇑PN	P	04 39 47.6	+0.3
TUVZ	Tukino	2.08	52	P	P	04 39 48.0	+0.5
TUVZ	Tukino	2.08	52	PN	P	04 39 48.1	+0.6
TWVZ	Taurewa	2.09	45	P	P	04 39 47.7	+0.1
TWVZ	Taurewa	2.09	45	PN	P	04 39 47.7	+0.1
NGZ	Ngauruhoe	2.11	49	P	P	04 39 48.1	+0.2
NGZ	Ngauruhoe	2.11	49	⇓PN	P	04 39 48.1	+0.3
WTVZ	West Tongariro	2.14	48	P	P	04 39 48.4	+0.1
WTVZ	West Tongariro	2.14	48	⇓PN	P	04 39 48.4	+0.1
OTVZ	Oturere	2.15	50	⇓PN	P	04 39 48.8	+0.4
MGZ	Maungaku	2.19	45	P	P	04 39 49.2	+0.3
MGZ	Maungaku	2.19	45	⇑PN	P	04 39 49.1	+0.2
HIZ	Hauiti	2.29	26	P	P	04 39 49.7	-0.4
HIZ	Hauiti	2.29	26	⇓PN	P	04 39 49.8	-0.4
HIZ				SN	S	04 40 18.0	-2.6
LTZ	Lake Taylor	2.41	203	P	P	04 39 52.5	+1.0
LTZ	Lake Taylor	2.41	203	PN	P	04 39 52.5	+0.9

LTZ				SN	S	04 40 20.9	-2.2
RATZ	Rangitukua	2.42	46	P	P	04 39 52.0	+0.4
RATZ	Rangitukua	2.42	46	PN	P	04 39 52.0	+0.3
WATZ	Wairara	2.51	43	P	P	04 39 52.9	+0.1
WATZ	Wairara	2.51	43	PN	P	04 39 52.9	+0.1
HATZ	Hinemaiaia	2.58	50	P	P	04 39 53.0	-0.7
HATZ	Hinemaiaia	2.58	50	PN	P	04 39 53.0	-0.7
PWZ	Pawanui	2.59	79	P	P	04 39 54.4	+0.6
PWZ	Pawanui	2.59	79	PN	P	04 39 54.3	+0.5
BKZ	Black Stump Fm	2.66	59	eP	P	04 39 54.3	-0.4
BKZ	Black Stump Fm	2.66	59	⇓PN	P	04 39 54.3	-0.4
BKZ				SN	S	04 40 26.4	-2.3
CRLZ	Canterbury Las	3.08	193	P	P	04 39 59.9	0.0
CRLZ	Canterbury Las	3.08	193	PN	P	04 39 59.9	-0.1
CRLZ				SN	S	04 40 34.7	-3.1
MQZ	McQueen's Vall	3.20	192	P	P	04 40 01.1	-0.4
MQZ	McQueen's Vall	3.20	192	PN	P	04 40 01.0	-0.5
MQZ				SN	S	04 40 36.9	-3.8
WVZ	Waitaha Valley	3.27	219	eP	P	04 40 02.2	-0.2
WVZ	Waitaha Valley	3.27	219	PN	P	04 40 02.2	-0.2
KNZ	Kokohu	3.53	65	P	P	04 40 04.8	-1.0
URZ	Urewera	3.60	51	P	P	04 40 04.7	-1.9
RPZ	Rata Peaks	3.65	210	eP	P	04 40 07.3	+0.1
MWZ	Matawai	3.80	55	P	P	04 40 07.7	-1.6
PUZ	Puketiti	4.42	57	PN	P	04 40 15.4	-1.9
LBZ	Lake Benmore	4.55	212	P	P	04 40 18.3	-0.7
MXZ	Matakaoa Point	4.77	52	P	P	04 40 20.1	-1.7
ODZ	Otahua Downs	4.95	205	eP	P	04 40 23.9	-0.4
JCZ	Jackson Bay	4.99	224	eP	P	04 40 23.5	-1.2
WKZ	Wanaka	5.41	217	eP	P	04 40 28.8	-1.4
EAZ	Earnscleugh	5.60	212	eP	P	04 40 31.2	-1.6
TUZ	Tuapeka	6.09	207	eP	P	04 40 38.9	-0.4

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*NEIC **26** 04:47:54.2±1.8, 51.52N×16.09E, h5^{km}, ML2.5(VIE), ML2.4(BRG), Error ellipse: s-maj=19.2km s-min=7.2km az=205.0*

*PRU **26** 04:47:55.8, 51.47N×16.06E*

*CSEM **26** 04:47:55.3±0.1, 51.49N×16.10E, h2^{km}, ML2.9/3, Error ellipse: s-maj=2.5km s-min=1.5km az=17.0*

*WAR **26** 04:47:56, 51.49N×16.06E, h1^{km}, ML2.6, Mining Induced*

*IPEC **26** 04:47:56.5±0.2, 51.45N×16.07E, h11^{km}±1^{km}, ML1.8/2, Error ellipse: s-maj=1.3km s-min=0.8km az=33.0*

ISC 26 04:47:53.3±0.7, **51.47N**±0.03×**16.08E**±0.04, **n23**, σ1^{s}**29**/42, **1C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.64	168	⇓iPg	Pg	04 48 08.0	+1.9
KSP				e		04 48 09.1	
KSP				eSg	Sg	04 48 16.8	+2.2
KSP	Ksiaz	0.64	168	ePG	Pg	04 48 08.0	+1.9
KSP				eSG	Sg	04 48 17.0	+2.4
KSP	Ksiaz	0.64	168	⇓iPg	Pg	04 48 08.0	+1.9
KSP				eSg	Sg	04 48 16.8	+2.2
UPC	Upice	0.96	183	ePG	Pg	04 48 13.9	+1.4
DPC	Dobruska-Polom	1.13	172	ePG	Pg	04 48 16.6	+0.7
DPC				eSG	Sg	04 48 31.6	+0.7
	11nm,0.2s						
PVCC	Panska Ves	1.34	226	ePG	Pg	04 48 21.0	+0.9
PVCC	Panska Ves	1.34	226	ePn	Pn	04 48 21.1	+1.8
PVCC				eSg	Sg	04 48 39.1	+1.1
BRG	Berggiesshubel	1.47	247	ePn	Pn	04 48 22.2	+1.0
BRG				i Pg	Pg	04 48 22.8	+0.1
BRG				i Sg	Sg	04 48 42.9	+0.5
BRG	Berggiesshubel	1.47	247	i Pg	Pg	04 48 22.8	+0.1
RUE	Ruedersdorf	1.75	306	eSg	Sg	04 48 51.0	-0.6
PRU	Pruhonice	1.78	214	ePG	Pg	04 48 27.7	-1.1
PRU				eSG	Sg	04 48 51.5	-0.9
PRU	Pruhonice	1.78	214	ePn	Pn	04 48 27.3	+1.8
PRU	Pruhonice	1.78	214	Pg	Pg	04 48 27.7	-1.1
PRU				Sg	Sg	04 48 51.5	-0.9
MORC	Moravsky Berou	1.93	151	eP	Pn	04 48 28.4	+0.6
MORC	Moravsky Berou	1.93	151	ePn	Pn	04 48 28.8	+1.1
MORC				eSg	Sg	04 48 56.4	-1.2
	6.4nm,0.2s						
CLL	Collm	1.94	266	ePG	Pg	04 48 30.0	-2.0
CLL				i SG	Sg	04 48 56.6	-1.2
OKC	Ostrava-Krasne	2.10	140	ePG	Pg	04 48 34.3	-0.8
OKC				eSG	Sg	04 49 03.5	+0.4
VRAC	Vranov	2.19	171	ePn	Pn	04 48 32.6	+1.2
VRAC				eSg	Sg	04 49 04.5	-1.6
	4.1nm,0.2s						
NKC	Novy Kostel	2.62	243	ePN	Pn	04 48 38.7	+1.2
NKC				ePG	Pg	04 48 45.1	-0.4
NKC	Novy Kostel	2.62	243	ePn	Pn	04 48 38.4	+0.9
OJC	Ojcow	2.67	117	ePG	Pg	04 48 45.0	-1.5
OJC				eSG	Sg	04 49 20.0	-2.1
KHC	Kasperske Hory	2.84	215	ePN	Pn	04 48 41.2	+0.5
KHC				ePG	Pg	04 48 47.1	-2.9
KHC				eSN	Sn	04 49 15.5	-0.6
KHC				eSG	Sg	04 49 25.0	-2.8
MOA	Molln	3.81	199	⇑iPN	Pn	04 48 55.0	+0.5
MOA				i SG	Sg	04 49 58.6	-1.5
	5.2nm,0.7s						

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*NIED **26** 05:00:00, 34.80N×137.00E, h400^{km}, Mw3.9 Best double couple: $M_0$8.86×10^{14} NP1:ϕ_s10°, δ72°, λ-117°. NP2: ϕ_s249°, δ32°, λ-35°.*

*BJI **26** 05:00:55.0, 34.95N×137.29E, h329^{km}, mB4.7, mb4.2*

*NEIC **26** 05:00:57.0±1.4, 34.47N×137.00E, h323^{km}±9^{km}, mb4.1/2, Error ellipse: s-maj=38.4km s-min=15.4km az=152.0*

*JMA **26** 05:00:58.0±0.2, 34.81N×136.96E, h337^{km}±2^{km}, M3.6*

*IDC **26** 05:00:59.4±1.1, 34.92N×136.91E, h327^{km}±13^{km}, mb3.2/10, mb1 3.4/11, mb1mx3.3/21, mbtmp3.9/11, Error ellipse: s-maj=22.4km s-min=18.1km az=60.0*

ISC 26 05:00:58.3±0.3, **34.89N**±0.07×**136.90E**±0.06, **h333**^{km}±3^{km}, **n40**, σ0^{s}**79**/51, **mb3.7**/17, **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAO	Obara	0.48	38	P	P	05 01 41.3	+0.5
JAO				S	S	05 02 14.6	+0.5
JIE	Ise	0.52	198	P	P	05 01 41.2	+0.3
JIE				S	S	05 02 13.9	-0.3
JGM	Miyama	0.82	350	P	P	05 01 42.6	+0.9
JGM				S	S	05 02 16.3	+0.5
TK01	Tokai 1	1.26	153	P	P	05 01 43.5	-0.2
JWT	Wachi	1.29	288	P	P	05 01 44.3	+0.5
JWT				S	S	05 02 19.1	-0.4
JKG	Kaga	1.46	342	P	P	05 01 45.1	+0.3
JYN	Shimob	1.48	65	P	P	05 01 44.9	0.0
JWZ	Kozaga	1.67	216	P	P	05 01 45.6	-0.5
JOD2	Odawara 2	1.84	78	P	P	05 01 47.1	-0.1
MAJO	Matsushiro	1.97	32	eP	P	05 01 48.1	0.0
MAT	Matsushiro	1.97	32	eP	P	05 01 48.0	-0.1
MAT				eS	S	05 02 27.0	0.0
MAT	Matsushiro	1.97	32	P	P	05 01 48.1	0.0
MAT				S	S	05 02 26.9	-0.1
MAT	Matsushiro	1.97	32	P	P	05 01 48.4	+0.3
MAT				eS	S	05 02 27.5	+0.5
JRY	Ryogami san	1.99	55	P	P	05 01 48.7	+0.5
JRY				eS	S	05 02 27.9	+0.6
JIM2	Oshima 3	2.09	94	P	P	05 01 48.6	-0.4
JAI	Aioi	2.30	242	P	P	05 01 50.4	-0.3
JAG	Ashikaga	2.59	53	P	P	05 01 52.0	-1.1
JAG				eS	S	05 02 33.4	-2.5
JHJ	Hachijo jima 2	2.98	126	P	P	05 01 56.7	+0.2
	18nm,0.3s,baz=264,slow=19,SNR=3.4						
JHJ				S	S	05 02 43.7	+1.6
	9.8nm,0.3s,baz=90,slow=23,SNR=2.9						
JHS	Saijyo	3.11	273	P	P	05 01 58.3	+0.5
BSO1	Boso 1	3.37	93	P	P	05 01 58.0	-2.3
BSO1				eS	S	05 02 45.4	-3.5
CN2	Changchun	12.55	319	eP	P	05 03 47.8	-0.2
HHC	Hu-ho-hao-te	20.83	294	eP	P	05 05 11.8	-3.6
HHC				AMB	AMB		
	comp=Z,6.0nm,0.9s						
HHC				AMB	AMB		
	comp=Z,163nm,6.0s						
ENH	Enshi	23.52	266	P	P	05 05 39.5	-1.4
	comp=Z,9.1nm,0.8s,mb4.1						
ULN	Ulaanbaatar	25.70	309	eP	P	05 06 01.4	+0.8
	comp=Z,7.2nm,1.0s,mb3.9						
SONM	Songino Array	26.11	309	P	P	05 06 05.4	+1.1
	comp=Z,3.0nm,0.7s,mb3.6,baz=114,slow=9.0,SNR=28						
JIRN	Jiri	43.56	275	eP	P	05 08 31.9	+0.2
	comp=Z,14nm,0.4s,mb4.4						
GUN	Gumba	43.72	275	eP	P	05 08 33.1	+0.1
	comp=Z,12nm,0.7s,mb4.1						
PKI	Pulchoki	44.23	275	eP	P	05 08 36.3	-0.8
	comp=Z,6.7nm,0.6s,mb3.9						
KKN	Kakani	44.25	276	eP	P	05 08 36.7	-0.6
	comp=Z,8.0nm,0.6s,mb4.0						
DMN	Daman	44.46	275	eP	P	05 08 38.4	-0.6
KOLN	Koldanda	45.63	276	eP	P	05 08 47.8	-0.3
	comp=Z,8.5nm,0.9s,mb3.9						
ILAR	Eielson Array	53.25	31	P	P	05 09 45.0	+0.1
	comp=Z,0.5nm,0.6s,mb3.0,baz=263,slow=5.1,SNR=11						
ASAR	Alice Springs	58.30	183	P	P	05 10 21.4	+0.4
	comp=Z,0.2nm,0.6s,mb2.6,baz=17,slow=12,SNR=3.1						
ARCES	ARCESS Array B	64.69	339	P	P	05 11 02.9	+0.5
	comp=Z,3.2nm,0.9s,mb3.9,baz=104,slow=5.0,SNR=3.5						
FINES	FINESS Array B	68.97	331	P	P	05 11 29.1	0.0
	comp=Z,0.8nm,0.4s,mb3.8,baz=54,slow=7.1,SNR=17						
AKASG	Malin Array Be	73.70	321	P	P	05 11 56.6	-0.8
	comp=Z,1.3nm,0.6s,mb3.9,baz=45,slow=6.3,SNR=6.7						
NOA	NORSAR Array B	74.69	336	P	P	05 12 03.0	+0.1
	comp=Z,0.5nm,0.7s,mb3.4,baz=48,slow=4.9,SNR=2.5						
PDAR	Pinedale Array	81.76	43	P	P	05 12 42.1	+0.8
	comp=Z,0.5nm,0.8s,mb3.4,baz=333,slow=3.3,SNR=4.5						
GERES	GERESS Array B	82.53	326	P	P	05 12 45.3	+0.2
	comp=Z,0.6nm,0.6s,mb3.6,baz=34,slow=4.8,SNR=6.3						
TXAR	Lajitas Array	94.32	50	P	P	05 13 42.8	+1.3
	comp=Z,0.4nm,0.8s,mb3.5,baz=270,slow=2.5,SNR=3.9						

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*IDC **26** 05:12:33.8±1.0, 9.35N×93.75E, mb3.7/6, mb1 4.0/7, mb1mx3.8/16, mbtmp3.7/7, ML4.3/1, MS2.5/1, Ms1 2.7/1, ms1mx2.6/18, Error ellipse: s-maj=47.8km s-min=23.0km az=58.0*

*NEIC **26** 05:12:38.3±0.6, 9.14N×93.59E, h30^{km}, mb4.3/3, Error ellipse: s-maj=20.1km s-min=9.9km az=61.0*

ISC 26 05:12:36.3±0.9, **9.1N**±0.1×**93.6E**±0.2, **h33**^{km}, **n20**, σ**0**^{s}**38**/17, **mb3.9**/8, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	10.62	29	Pn	P	05 15 09.7	+0.3
	0.6nm,0.3s,baz=215,slow=14,SNR=6.1						
CMAR				LR	LR	05 19 10.9	
	comp=Z,25nm,21.1s,baz=200,slow=38						
JIRN	Jiri	19.71	340	eP	P	05 17 06.0	+0.1
	21nm,0.9s						
PKI	Pulchoki	19.90	338	eP	P	05 17 08.5	+0.5
	12nm,0.4s						
GUN	Gumba	20.04	340	eP	P	05 17 09.5	0.0
	34nm,0.8s						
DMN	Daman	20.05	338	eP	P	05 17 09.9	+0.4
KKN	Kakani	20.15	338	eP	P	05 17 10.2	-0.4
	31nm,1.0s						
GKN	Gorkha	20.58	337	eP	P	05 17 14.6	-0.5
	29nm,0.7s						
LSA	Lhasa	20.59	354	P	P	05 17 08.9	-6.2
KOLN	Koldanda	20.80	334	eP	P	05 17 17.7	+0.4
	20nm,0.9s						
AAK	Ala-Archa	37.34	337	eP	P	05 19 47.4	-0.2
	4.4nm,0.9s,mb4.3						
SONM	Songino Array	40.06	13	P	P	05 20 09.3	-0.9
	0.3nm,0.8s,mb3.1,baz=191,slow=7.3,SNR=3.3						
CHKZ	Chkalovo	48.11	342	eP	P	05 21 14.4	-0.5
	2.8nm,0.7s,mb4.4						
WRA	Warramunga Arr	49.43	126	P	P	05 21 25.7	+0.2
	0.4nm,0.5s,mb3.7,baz=306,slow=8.8,SNR=4.1						
ASAR	Alice Springs	51.14	130	P	P	05 21 38.4	-0.1
	0.3nm,0.6s,mb3.4,baz=305,slow=6.6,SNR=5.2						
ARCES	ARCESS Array B	73.90	340	P	P	05 24 09.8	+0.3
	4.7nm,1.0s,mb4.4,baz=90,slow=3.6,SNR=4.4						
GERES	GERESS Array B	76.53	318	P	P	05 24 25.0	+0.1
	1.2nm,0.7s,mb3.9,baz=76,slow=5.5,SNR=13						
ILAR	Eielson Array	93.79	22	P	P	05 25 51.2	+0.3
	0.3nm,0.7s,mb3.8,baz=299,slow=3.7,SNR=4.6						
TXAR	Lajitas Array	138.29	23	PKP	PKPdf	05 32 03.0	+3.9
	1.0nm,1.2s,baz=315,slow=1.8,SNR=3.8						
TXAR	Lajitas Array	138.29	23	PKP	PKPdf	05 32 03.0	+3.9
PLCA	Paso Flores	145.53	202	PKPbc	PKPbc	05 32 15.6	+3.6
	2.7nm,0.8s,baz=76,slow=3.3,SNR=8.2						

IDC 26 05:24:00.5±6.0, **20.83S**×**112.22W**, **mb3.5**/3, **mb1 3.9**/3, **mb1mx3.5**/15, **mbtmp3.5**/3, **MS3.6**/4, **Ms1 3.6**/4, **ms1mx3.1**/14, **Error ellipse: s-maj=356.2km s-min=57.1km az=110.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	40.47	129	LR	LR	05 43 43.7	
	comp=Z,95nm,18.3s,baz=291,slow=29						
TXAR	Lajitas Array	50.55	10	LR	LR	05 50 15.7	
	comp=Z,70nm,21.5s,baz=170,slow=31						
NVAR	Mina Array Bea	59.22	354	P	P	05 34 04.2	-1.7
	0.8nm,0.9s,baz=180,slow=9.9,SNR=4.9						
NVAR				LR	LR	05 54 06.6	
	comp=Z,31nm,20.2s,baz=130,slow=30						
BDFB	Brasilia	60.87	97	LR	LR	05 57 52.0	
	comp=Z,89nm,20.1s,baz=358,slow=33						
PDAR	Pinedale Array	63.32	2	P	P	05 34 31.1	-2.5
	0.5nm,0.8s,baz=180,slow=3.6,SNR=4.6						
YKA	Yellowknife Ar	83.06	359	P	P	05 36 27.3	-1.5
	0.2nm,0.7s,baz=175,slow=5.9,SNR=5.4						
CMAR	Chiang Mai Arr	150.58	271	PKPbc	PKPdf	05 43 54.8	+3.4
	1.5nm,0.4s,baz=90,slow=1.8,SNR=6.6						

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*IDC **26** 05:26:29.4±0.8, 1.78N×92.12E, mb4.1/7, mb1 4.3/8, mb1mx4.1/16, mbtmp4.2/8, ML4.1/1, MS3.9/11, Ms1 4.0/11, ms1mx3.7/22, Error ellipse: s-maj=30.1km s-min=21.0km az=52.0*

*BJI **26** 05:26:30.7, 1.55N×92.39E, h27^{km}, mB4.7, mb4.9, Ms4.6, Msz4.1*

*MOS **26** 05:26:32.7±1.4, 1.75N×92.16E, h33^{km}, mb4.8/14, Error ellipse: s-maj=20.3km s-min=8.9km az=90.1*

*NEIC **26** 05:26:33.2±4.2, 1.74N×92.22E, h22^{km}±28^{km}, mb4.7/12, MS3.9/1, Error ellipse: s-maj=15.7km s-min=8.0km az=225.0*

ISC 26 05:26:32.2±0.6, **1.78N**±0.08×**92.25E**±0.06, **h28**^{km}, **h28**^{km}±4.2^{km}**:pP-P**, **n79**, σ1^{s}**17**/74, **mb4.5**/34, **MS4.0**/16, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	9.08	67	eP	P	05 28 42.5	-2.0
SNG	Songkhla	9.92	57	P	P	05 28 54.0	-2.1
	404nm,0.9s						
MDRS	Chennai	16.34	314	eP	P	05 30 20.6	-0.9
MDRS				e		05 30 26.9	
	comp=Z,88nm,1.2s						
MDRS				e		05 34 36.0	
CMAR	Chiang Mai Arr	17.83	21	P	P	05 30 38.3	-1.8
	comp=Z,0.3nm,0.3s,baz=216,slow=13,SNR=68						
CMAR				LR	LR	05 38 22.8	
	comp=Z,241nm,19.1s,baz=215,slow=40						
KSM	Kuching	18.06	91	eP	P	05 30 44.6	+1.6
VIS	Vishakhapatnam	18.11	332	eP	P	05 30 41.2	-2.4
VIS				e		05 30 52.5	
	comp=Z,62nm,0.5s						
VIS				e		05 33 43.9	
HYB	Hyderabad	20.56	320	eP	P	05 31 12.0	+0.5
HYB				eS	S	05 34 56.5	+1.6
HYB				pmax	pmax		
	comp=Z,57nm,1.2s						
HYB	Hyderabad	20.56	320	eP	P	05 31 12.0	+0.5
	comp=Z,57nm,1.2s						
HYB				eS	S	05 34 56.5	+1.6
HYB	Hyderabad	20.56	320	i P	P	05 31 12.0	+0.5
	comp=Z,57nm,1.2s						
HYB				eS	S	05 34 56.5	+1.6
KAD	Karad	23.53	312	eP	P	05 31 41.5	+0.3
KAD				e		05 31 43.3	
	comp=Z,10.0nm,1.2s						
KKM	Kota Kinabalu	24.28	79	eP	P	05 31 50.1	+1.6
KKM				epP		05 32 00.3	
POO	Poona	24.55	314	eP	P	05 31 51.0	-0.1
POO				i		05 36 29.0	
KMI	Kunming	25.32	23	P	P	05 32 00.3	+1.9
KMI				AP	pP	05 32 10.8	+4.2
KMI				AMB	AMB		
	comp=Z,35nm,1.2s,mb4.8						
KMI				AMB	AMB		
	comp=Z,138nm,3.3s						
KMI				LR	LR		
	comp=N,565nm,14.6s,MS4.3						
KMI				LR	LR		
	comp=E,545nm,17.6s,MS4.3						
KMI				LR	LR		
	comp=Z,506nm,12.7s,MS4.2						
KMI	Kunming	25.32	23	P	P	05 32 00.2	+1.8
KMI				*PP	pP	05 32 10.8	+4.2
KMI				S	tx	05 37 25.9	
KMI				*SS		05 37 45.3	
KMI				pmax	pmax		
	comp=Z,35nm,1.2s,mb4.8						
KMI				MLR	MLR		
	comp=Z,510nm,12.7s,MS4.2						
KMI	Kunming	25.32	23	P	P	05 32 00.2	+1.8
	comp=Z,35nm,1.2s,mb4.8						
KMI				pP	pP	05 32 10.8	+4.2
KMI				PP	Px	05 33 22.5	
KMI				S	tx	05 37 25.9	
KMI				sS		05 37 45.3	
KMI				SS	tx	05 39 38.7	
KMI				LR	LR		
	comp=Z,510nm,12.7s,MS4.2						
JIRN	Jiri	26.38	348	eP	P	05 32 09.5	+1.3
	comp=Z,55nm,1.2s,mb5.0						
PKI	Pulchoki	26.47	346	eP	P	05 32 10.5	+1.5
	comp=Z,28nm,1.1s,mb4.7						
DMN	Daman	26.58	346	eP	P	05 32 10.7	+0.7
GUN	Gumba	26.69	347	eP	P	05 32 11.2	+0.2
KKN	Kakani	26.71	346	eP	P	05 32 12.6	+1.4
	comp=Z,54nm,1.3s,mb4.9						
GKN	Gorkha	27.08	345	eP	P	05 32 15.5	+1.0
	comp=Z,14nm,0.5s,mb4.7						
KOLN	Koldanda	27.14	343	eP	P	05 32 16.6	+1.5
	comp=Z,61nm,1.4s,mb4.9						
LSA	Lhasa	27.79	358	P	P	05 32 21.3	+0.3
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
LSA	Lhasa	27.79	358	eP	P	05 32 22.4	+1.4
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
LSA	Lhasa	27.79	358	eP	P	05 32 22.4	+1.4
	comp=Z,15nm,0.8s,mb4.7						
GYA	Guiyang	28.18	28	P	P	05 32 25.3	+0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
CD2	Chengdu	30.96	19	P	P	05 32 48.8	-0.5
CD2				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.9						
ENH	Enshi	32.72	28	eP	P	05 33 03.8	-1.0
	comp=Z,12nm,0.9s,mb4.8						
XAN	Xi'an	35.68	24	P	P	05 33 29.3	-0.9
XAN				AP	pP	05 33 38.0	-0.6
XAN				AMB	AMB		
	comp=Z,27nm,1.0s,mb5.1						
GTA	Gaotai	38.09	10	eP	P	05 33 51.0	+0.7
GTA				AP	pP	05 33 59.5	+0.6
GTA				XP	sP	05 34 03.0	+0.6
GTA				PP	PP	05 35 21.3	+0.4
GTA				S	S	05 39 39.0	-1.9
GTA				XS		05 39 54.3	
GTA				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.4						
GTA				AMB	AMB		
	comp=Z,61nm,4.6s						
GTA				LR	LR		
	comp=N,149nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=E,174nm,14.1s,MS4.1						
GTA				LR	LR		
	comp=Z,158nm,15.6s,MS3.9						
WMQ	Urumqi	42.06	355	eP	P	05 34 24.3	+1.1
WMQ				XP	sP	05 34 38.0	+2.8
WMQ				PP	PP	05 36 01.0	-2.6
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.4						
WMQ				LR	LR		
	comp=N,116nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=E,174nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,103nm,18.0s,MS3.8						
HHC	Hu-ho-hao-te	42.64	22	eP	P	05 34 27.0	-1.0
HHC				AP	pP	05 34 33.0	-3.5
HHC				XP	sP	05 34 39.0	-1.0
HHC				PP	PP	05 36 15.0	+5.6
HHC				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,94nm,3.2s						
HHC				LR	LR		
	comp=N,344nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=E,402nm,16.2s,MS4.5						
HHC				LR	LR		
	comp=Z,307nm,18.0s,MS4.2						
AAK	Ala-Archa	43.67	341	i P	P	05 34 36.1	-0.2
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.9						
BJT	Baijiatuau	43.83	27	eP	P	05 34 39.1	+1.5
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJT	Baijiatuau	43.83	27	eP	P	05 34 39.0	+1.4
	comp=Z,6.3nm,0.6s,mb4.5						
BJI	Beijing	43.85	27	eP	P	05 34 39.0	+1.2
BJI				S	S	05 41 13.8	+7.3
BJI				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.8						
BJI				LR	LR		
	comp=N,207nm,14.6s,MS4.4						
BJI				LR	LR		
	comp=E,333nm,15.5s,MS4.4						
BJI				LR	LR		
	comp=Z,178nm,21.9s						
BJI	Beijing	43.85	27	eP	P	05 34 39.1	+1.3
BJI				S	S	05 41 13.7	+7.2
BJI				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
BJI				MLR	MLR		
	comp=Z,180nm,21.9s,MS3.9						
BJI	Beijing	43.85	27	eP	P	05 34 39.1	+1.3
	comp=Z,21nm,1.1s,mb4.8						
BJI				S	S	05 41 13.7	+7.2
BJI				SS	SS	05 44 40.7	+26
BJI				LR	LR		
	comp=Z,180nm,21.9s,MS3.9						
WRA	Warramunga Arr	46.58	120	P	P	05 35 00.4	+0.6
	comp=Z,2.3nm,0.8s,mb4.2,baz=300,slow=8.3,SNR=7.5						
SONM	Songino Array	47.49	13	P	P	05 35 06.2	-0.4
	comp=Z,7.0nm,0.8s,mb4.6,baz=194,slow=8.9,SNR=61						
SONM				PcP	PcP	05 36 37.3	+0.3
	comp=Z,2.2nm,0.7s,baz=193,slow=4.9,SNR=2.6						
ULN	Ulaanbaatar	47.66	13	eP	P	05 35 08.1	+0.1
ULN				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
ULN	Ulaanbaatar	47.66	13	eP	P	05 35 08.1	+0.1
	comp=Z,5.6nm,1.1s,mb4.5						
ASAR	Alice Springs	47.74	125	P	P	05 35 08.8	-0.2
	comp=Z,0.9nm,1.0s,mb3.7,baz=305,slow=6.3,SNR=4.4						
ASAR				LR	LR	05 58 03.0	
	comp=Z,92nm,18.1s,MS3.8,baz=302,slow=40						
ZAK	Zakamensk	49.33	9	eP	P	05 35 21.0	+0.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
KURK	Kurchatov	50.11	349	eP	P	05 35 25.6	-1.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
KURK	Kurchatov	50.11	349	eP	P	05 35 25.6	-1.2
	comp=Z,3.2nm,0.9s,mb4.3						
HIA	Hailar	52.84	22	eP	P	05 35 47.6	+0.1
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HIA	Hailar	52.84	22	eP	P	05 35 47.6	+0.1
	comp=Z,10nm,0.9s,mb4.8						
NVS	Novosibirsk	53.41	354	eP	P	05 35 48.8	-2.8
CBIJ	Chichi jima	54.02	57	LR	LR	05 58 33.0	
	comp=Z,105nm,20.7s,MS3.9,baz=144,slow=36						
CHKZ	Chkalovo	54.72	344	eP	P	05 35 59.6	-1.7
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
CHKZ	Chkalovo	54.72	344	eP	P	05 35 59.6	-1.7
	comp=Z,1.9nm,0.5s,mb4.4						
KMBO	Kilima Mbogo	55.06	267	LR	LR	05 57 17.4	
	comp=Z,119nm,18.1s,MS4.0,baz=91,slow=34						
PMG	Port Moresby	55.81	103	LR	LR	06 00 40.3	
	comp=Z,63nm,18.9s,MS3.7,baz=256,slow=37						
STKA	Stephens Creek	57.47	130	P	P	05 36 21.1	-0.2
	comp=Z,1.3nm,0.7s,mb4.1,baz=315,slow=4.3,SNR=3.5						

STKA				LR	LR	06 01 55.8	
	comp=Z,123nm,18.8s,MS4.0,baz=205,slow=37						
STKA	**Stephens Creek**	**57.47**	**130**	P	**P**	**05 36 21.1**	**-0.2**
STKA				LR	LR	06 01 55.8	
GNI	**Garni**	**57.50**	**318**	*i* P	**P**	**05 36 09.4**	**-12**
GNI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KLR	**Kul'dur**	**58.07**	**29**	*e*P	**P**	**05 36 27.2**	**+1.9**
TI2	**Plekhanov**	**58.27**	**320**	*e*P	**P**	**05 36 22.0**	**-4.8**
BOD	**Bodaibo**	**58.48**	**13**	*e*P	**P**	**05 36 27.5**	**-0.5**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
SVE	**Sverdlovsk**	**60.42**	**341**	*e*P	**P**	**05 36 41.0**	**-0.4**
KIV	**Kislovodsk**	**60.69**	**321**	*i* P	**P**	**05 36 42.9**	**-0.5**
MATP	**Matopo**	**66.17**	**247**	P	**P**	**05 37 18.4**	**-1.5**
	comp=Z,2.9nm,0.8s,mb4.3,baz=73,slow=4.6,SNR=5.4						
YAK	**Yakutsk**	**66.34**	**18**	*e*P	**P**	**05 37 18.7**	**-1.5**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
OBN	**Obninsk**	**69.57**	**330**	*e*P	**P**	**05 37 28.8**	**-12**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
TIXI	**Tiksi**	**73.54**	**11**	*e*P	**P**	**05 38 02.9**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
FINES	**FINESS Array B**	**77.23**	**333**	P	**P**	**05 38 24.7**	**-0.4**
	comp=Z,0.9nm,0.5s,mb3.9,baz=90,slow=7.6,SNR=8.5						
FINES				LR	LR	06 14 10.2	
	comp=Z,77nm,19.7s,MS4.0,baz=134,slow=37						
KAF	**Kangasniemi**	**77.36**	**334**	*e*p	**P**	**05 38 31.2**	**+5.3**
	comp=Z,1.9nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**77.36**	**334**	*e*P	**P**	**05 38 31.2**	**+5.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
ARCES	**ARCESS Array B**	**80.35**	**341**	LR	LR	06 16 50.1	
	comp=Z,117nm,18.3s,MS4.3,baz=129,slow=38						
GERES	**GERESS Array B**	**81.13**	**319**	P	**P**	**05 38 46.8**	**+0.3**
	comp=Z,1.3nm,0.8s,mb3.9,baz=108,slow=4.2,SNR=11						
NOA	**NORSAR Array B**	**84.10**	**331**	LR	LR	06 18 09.8	
	comp=Z,56nm,19.1s,MS4.0,baz=240,slow=37						
VNDA	**Vanda**	**87.38**	**168**	LR	LR	06 10 11.0	
	comp=Z,100nm,18.5s,MS4.3,baz=304,slow=30						
JMIC	**Jan Mayen**	**91.84**	**341**	LR	LR	06 22 55.9	
	comp=Z,58nm,19.9s,MS4.0,baz=222,slow=37						
NVAR	**Mina Array Bea**	**131.07**	**32**	PKP	PKPdf	05 45 44.6	-2.4
	comp=Z,0.5nm,0.8s,baz=342,slow=2.9,SNR=3.6						
PDAR	**Pinedale Array**	**131.50**	**21**	PKP	PKPdf	05 45 44.5	-3.1
	comp=Z,0.3nm,0.7s,baz=270,slow=2.7,SNR=2.6						
LTX	**Lajitas**	**145.52**	**25**	*e*P	PKPbc	05 46 11.1	+2.1
TXAR	**Lajitas Array**	**145.52**	**25**	PKPbc	PKPbc	05 46 10.3	+1.3
	comp=Z,6.8nm,0.9s,baz=299,slow=1.8,SNR=54						
JCT	**Junction City**	**145.93**	**19**	*e*P	PKPbc	05 46 11.4	+1.4

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*THR **26** 05:44:55.8±0.8,30.77N×56.78E,h14^{km}±11^{km},ML3.2*

*CSEM **26** 05:44:56.1±0.1,30.76N×56.77E,h16^{km},ML4.2/2,Error ellipse: s-maj=2.9km s-min=1.5km az=61.0*

*TEH **26** 05:45:06.5,31.03N×56.00E,h11^{km},Mn3.2*

ISC 26 05:44:56.0±0.8,**30.77N**±0.05×**56.8E**±0.1,**h14**^{km}**,n16,** σ**0**^{s}**80**/20,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**0.79**	**181**	*e*PG	**Pg**	**05 45 10.5**	**-1.4**
KRBR				*e*SG	**Sg**	**05 45 22.0**	**-0.5**
KRBR				AML	AML	05 45 27.7	
	comp=N,1μm,0.3s						
KRBR	**Kerman**	**0.79**	**181**	*e*Pg	**Pg**	**05 45 10.5**	**-1.4**
	SNR=90						
KRBR				*e*Sg	**Sg**	**05 45 22.0**	**-0.5**
	comp=N,1μm,0.3s,SNR=90						
IBAF	**Bafgh**	**1.31**	**309**	Pg	**Pg**	**05 45 18.5**	**-3.9**
IMEH	**Mehriz**	**1.95**	**289**	Pn	**Pn**	**05 45 29.7**	**+0.6**
ICHK	**Chekchek**	**2.50**	**307**	Pn	**Pn**	**05 45 36.7**	**-0.2**
BNDS	**Bandar-Abbas**	**3.40**	**189**	*e*PN	**Pn**	**05 45 50.9**	**+1.2**
BNDS				*e*SG	**Sg**	**05 46 41.7**	**-7.6**
BNDS				AML	AML	05 46 56.6	
	comp=N,70nm,0.5s						
BNDS	**Bandar-Abbas**	**3.40**	**189**	*e*Pn	**Pn**	**05 45 50.9**	**+1.1**
	SNR=52						
BNDS				*e*Sg	**Sg**	**05 46 41.7**	**-7.6**
	comp=N,70nm,0.5s,SNR=90						
ZHSF	**Zahedan**	**3.66**	**107**	*e*PN	**Pn**	**05 45 54.0**	**+0.6**
ZHSF				AML	AML	05 47 03.3	
	comp=N,37nm,0.6s						
NASN	**Na'in**	**3.93**	**302**	*e*PN	**Pn**	**05 45 58.0**	**+0.7**
NASN				AML	AML	05 47 06.7	
	comp=N,52nm,0.6s						
GHIR	**Ghir-Karzin**	**4.12**	**234**	*e*PN	**Pn**	**05 46 01.0**	**+1.0**
GHIR				AML	AML	05 47 29.3	
	comp=N,21nm,0.6s						
ISFB	**Sefidab**	**5.23**	**314**	Pn	**Pn**	**05 46 15.8**	**0.0**
IFIR	**Firoozkooh**	**5.91**	**326**	Pn	**Pn**	**05 46 25.3**	**0.0**
IFIR	**Firoozkooh**	**5.91**	**326**	Sn	**Sn**	**05 47 23.9**	**-10**
IDMV	**Damavand**	**6.22**	**322**	Pn	**Pn**	**05 46 29.2**	**-0.5**
DAMV	**Damavand**	**6.30**	**322**	*e*PN	**Pn**	**05 46 30.6**	**-0.2**
IAFJ	**Afjeh**	**6.60**	**321**	Pn	**Pn**	**05 46 34.1**	**-1.0**

IDC 26 05:48:12.9±4.3,**3.17N**×**91.39E,mb3.4**/1,**mb1 3.8**/2, **mb1mx3.4**/15,**mbtmp3.6**/2,**ML4.1**/1,**Error ellipse: s-maj=287.3km s-min=78.7km az=112.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.90**	**25**	Pn	P	05 52 12.1	-0.6
	0.2nm,0.3s,baz=216,slow=14,SNR=8.7						
SONM	**Songino Array**	**46.34**	**14**	P	P	05 56 40.3	-2.2
	0.8nm,1.0s,baz=190,slow=8.8,SNR=4.3						
TXAR	**Lajitas Array**	**144.61**	**23**	PKP	PKPdf	06 07 52.3	-1.7
	0.4nm,0.7s,baz=309,slow=3.8,SNR=4.4						

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*NIED **26** 05:49:00,47.10N×153.10E,h68^{km},Mw4.2 Best double couple: M$_0$2.43×10^{15} NP1:φ$_s$245°,δ85°,λ-96°. NP2: φ$_s$114°,δ8°,λ-40°.*

*MOS **26** 05:49:36.5±1.5,46.67N×153.27E,h33^{km},mb4.4/5,Error ellipse: s-maj=23.3km s-min=16.3km az=51.9*

*IDC **26** 05:49:44.6±4.2,46.93N×152.78E,h83^{km}±39^{km},mb3.5/11, mb1 3.8/12,mb1mx3.7/21,mbtmp3.8/12,Error ellipse: s-maj=25.9km s-min=18.0km az=158.0*

ISC 26 05:49:40.3±1.7,**47.0N**±0.1×**152.9E**±0.2,**h57**^{km}±14^{km}**,n25,** σ**0**^{s}**88**/26,**mb3.7**/11,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.93**	**245**	*e*PN	**P**	**05 50 35.5**	**-4.2**
KUR				*e*S	**S**	**05 51 25.5**	**+0.5**
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
KUR				smax			
	comp=N,300nm,0.6s						
KUR				smax			
	comp=E,270nm,0.6s						
SKR	**Severo-Kuril's**	**4.24**	**29**	*e*PN	**P**	**05 50 42.9**	**-1.1**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.94**	**273**	*e*PN	**P**	**05 51 25.0**	**+3.2**
ASAJ	**Asahikawa**	**7.79**	**252**	PN	**P**	**05 51 33.7**	**+0.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.79**	**252**	P	**P**	**05 51 33.7**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=105,slow=19,SNR=5.3						
SONM	**Songino Array**	**31.11**	**289**	P	**P**	**05 55 53.5**	**-1.7**
	comp=Z,0.2nm,0.5s,mb3.2,baz=101,slow=7.3,SNR=2.9						
ILAR	**Eielson Array**	**36.43**	**39**	P	**P**	**05 56 42.4**	**+1.5**
	comp=Z,0.4nm,0.9s,mb3.3,baz=280,slow=8.9,SNR=4.1						
YKA	**Yellowknife Ar**	**50.80**	**37**	P	**P**	**05 58 37.1**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**50.80**	**37**	P	**P**	**05 58 37.1**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.5,baz=296,slow=7.1,SNR=10.0						
CMAR	**Chiang Mai Arr**	**52.29**	**256**	P	**P**	**05 58 47.9**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**52.29**	**256**	P	**P**	**05 58 47.9**	**-0.4**
	comp=Z,0.6nm,0.4s,mb3.9,baz=30,slow=7.7,SNR=5.2						
FINES	**FINESS Array B**	**63.73**	**335**	P	**P**	**06 00 07.2**	**-0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.73**	**335**	P	**P**	**06 00 07.2**	**-0.5**
	comp=Z,1.0nm,0.4s,mb4.2,baz=43,slow=7.1,SNR=15						
PDAR	**Pinedale Array**	**64.70**	**54**	P	**P**	**06 00 14.8**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.5,baz=353,slow=7.3,SNR=3.4						
NB2	**NORSAR Subarra**	**67.92**	**341**	P	**P**	**06 00 34.5**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.2,baz=27,slow=6.2						
NOA	**NORSAR Array B**	**67.92**	**341**	P	**P**	**06 00 34.5**	**+0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NOA	**NORSAR Array B**	**67.92**	**341**	P	**P**	**06 00 34.5**	**+0.1**
	comp=Z,1.6nm,0.5s,mb4.3,baz=27,slow=6.4,SNR=8.1						
HFS	**Hagfors**	**68.15**	**339**	P	**P**	**06 00 36.3**	**+0.5**
	baz=56,slow=5.2						
AKASG	**Malin Array Be**	**71.24**	**326**	P	**P**	**06 00 54.6**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.24**	**326**	P	**P**	**06 00 54.6**	**-0.3**
	comp=Z,1.4nm,0.4s,mb4.2,baz=33,slow=6.2,SNR=6.5						
ASAR	**Alice Springs**	**72.42**	**198**	P	**P**	**06 01 01.2**	**-1.1**
	comp=Z,0.2nm,0.7s,mb3.1,baz=14,slow=6.8,SNR=4.4						
ASPA	**Alice Springs**	**72.42**	**198**	*e*P	**P**	**06 01 09.6**	**+7.3**
MLR	**Muntele Rosu**	**76.76**	**325**	P	**P**	**06 01 27.3**	**+0.4**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MLR	**Muntele Rosu**	**76.76**	**325**	P	**P**	**06 01 27.2**	**+0.4**
	comp=Z,2.1nm,0.8s,mb4.1,baz=148,slow=4.9,SNR=4.5						
TXAR	**Lajitas Array**	**77.49**	**60**	P	**P**	**06 01 31.3**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=303,slow=4.5,SNR=9.4						

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*IDC **26** 06:30:49.2±3.7,5.75S×148.39E,h94^{km}±34^{km},mb4.0/7, mb1 4.3/10,mb1mx4.2/16,mbtmp4.5/10,MS2.9/1, Ms1 2.9/1,ms1mx2.5/19,Error ellipse: s-maj=35.6km s-min=21.9km az=86.0*

*NEIC **26** 06:30:51.4±2.1,5.72S×148.27E,h111^{km}±19^{km},mb4.9/9, Error ellipse: s-maj=18.5km s-min=14.3km az=107.0*

ISC 26 06:30:48.0±1.7,**5.71S**±0.09×**148.34E**±0.10,**h94**^{km}±16^{km}, **n21,**σ**1**^{s}**03**/26,**mb4.5**/11,**1C-2D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.86**	**198**	P	**P**	**06 31 48.0**	**+1.5**
	96nm,0.3s,baz=2.7,slow=6.6,SNR=106						
PMG				S	**S**	**06 32 29.6**	**-1.3**
	192nm,0.3s,baz=181,slow=21,SNR=10						
CTA	**Charters Tower**	**14.44**	**188**	*e*P	**P**	**06 34 11.5**	**+2.4**
	13nm,0.8s						
CTA	**Charters Tower**	**14.44**	**188**	P	**P**	**06 34 10.6**	**+1.5**
	1.9nm,0.3s,baz=355,slow=15,SNR=19						
CTA				LR	LR	06 39 26.2	
	comp=Z,45nm,20.3s,baz=46,slow=36						
CTAO	**Charters Tower**	**14.44**	**188**	*e*P	**P**	**06 34 10.4**	**+1.3**
	20nm,0.8s						
KAKA	**Kakadu**	**17.16**	**245**	*e*P	**P**	**06 34 41.5**	**-1.9**
	45nm,0.6s						
KAKA				*e*S	**S**	**06 37 50.0**	**+0.6**
WRAB	**Tennant Creek**	**19.62**	**223**	*e*P	**P**	**06 35 11.3**	**-0.3**
	99nm,0.6s						
WB2	**Warramunga Arr**	**19.63**	**223**	⇓*i*P	**P**	**06 35 11.6**	**-0.1**
WB2				*e*S	**S**	**06 38 42.6**	**-0.2**
WRA	**Warramunga Arr**	**19.64**	**223**	P	**P**	**06 35 10.7**	**-1.1**
	8.0nm,0.3s,baz=48,slow=11,SNR=219						
ASAR	**Alice Springs**	**22.63**	**216**	P	**P**	**06 35 43.4**	**+1.5**
	11nm,0.5s,mb4.5,baz=53,slow=9.1,SNR=251						
ASPA	**Alice Springs**	**22.63**	**216**	⇑*i*P	**P**	**06 35 43.3**	**+1.4**
ASPA				*e*S	**S**	**06 39 43.5**	**+5.0**
FITZ	**Fitzroy Crossi**	**25.36**	**239**	⇓*i*P	**P**	**06 36 08.5**	**+0.4**
	211nm,0.7s,mb5.7						
FITZ				*e*S	**S**	**06 40 28.5**	**+3.5**
STKA	**Stephens Creek**	**26.79**	**193**	*e*P	**P**	**06 36 20.7**	**-0.6**
	13nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**26.79**	**193**	P	**P**	**06 36 20.2**	**-1.0**
	11nm,0.5s,mb4.6,baz=357,slow=8.0,SNR=29						
MBWA	**Marble Bar**	**31.69**	**238**	*e*P	**P**	**06 37 04.1**	**-1.0**
	18nm,0.8s,mb4.8						
KLBR	**Kellerberrin**	**38.51**	**224**	*e*P	**P**	**06 38 02.7**	**-0.1**
	76nm,0.7s,mb5.6						
RPZ	**Rata Peaks**	**42.81**	**156**	P	**P**	**06 38 37.5**	**-0.6**
	6.8nm,0.7s,mb4.5,baz=30,slow=15,SNR=5.1						
HIA	**Hailar**	**60.15**	**339**	P	**P**	**06 40 49.0**	**+0.9**
	5.2nm,0.7s,mb4.7						
SONM	**Songino Array**	**64.81**	**330**	P	**P**	**06 41 19.6**	**+0.5**
	0.8nm,0.6s,mb3.7,baz=136,slow=4.5,SNR=6.9						
ZAL	**Zalesovo**	**79.48**	**327**	P	**P**	**06 42 44.9**	**-0.8**
	0.5nm,0.5s,mb3.6,baz=30,slow=8.5,SNR=3.9						
ILAR	**Eielson Array**	**84.69**	**23**	P	**P**	**06 43 11.9**	**-0.3**
	1.5nm,0.7s,mb4.0,baz=253,slow=5.0,SNR=20						
BVAR	**Borovoye Array**	**87.32**	**324**	P	**P**	**06 43 25.0**	**-0.5**
	0.7nm,0.6s,mb3.8,baz=100,slow=8.8,SNR=5.3						

CASC 26 06:39:16.4±1.4,**13.67N**×**90.77W,h34**^{km}±6^{km}**,MD3.6, 2C-2D,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.59**	**31**	⇑*e*P	P	06 39 28.5	+0.3
IXG				*e*S	S	06 39 38.0	+1.2
NBG	**Las Nubes**	**1.00**	**24**	⇓*e*P	P	06 39 34.1	-0.1
NBG				*e*S	S	06 39 48.5	+1.3
JAT	**Jato**	**1.07**	**308**	*e*P	P	06 39 35.0	0.0
RTR	**El Retiro**	**1.11**	**78**	*e*P	P	06 39 36.1	+0.4
RTR				*e*S	S	06 39 51.7	+1.7
SBLS	**San Blas**	**1.12**	**81**	*e*P	P	06 39 36.1	+0.2
SBLS				*e*S	S	06 39 51.0	+0.6
RBDL	**Robledal**	**1.14**	**67**	⇓*e*P	P	06 39 36.0	-0.1
RBDL				*e*S	S	06 39 52.7	+2.0
SNJE	**San Jose**	**1.15**	**80**	⇑*e*P	P	06 39 36.6	+0.4
SNJE				*e*S	S	06 39 51.9	+1.0
LFU	**La Fuente**	**1.61**	**87**	*e*P	P	06 39 42.5	-0.2
LFRS	**El Faro**	**1.66**	**91**	*e*P	P	06 39 43.4	-0.1
LFRS				*e*S	S	06 40 04.9	+1.1
LCBS	**La Ceiba**	**1.74**	**90**	*e*P	P	06 39 44.9	+0.2
LCBS				*e*S	S	06 40 04.7	-1.1

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*DJA **26** 06:44:26.8±0.3,8.41S×128.56E,h300^{km},ML6.2/5,Error ellipse: s-maj=22.8km s-min=4.9km az=169.0*

*BJI **26** 06:44:32.6,7.31S×128.88E,h170^{km},mB5.1,mb4.9*

*IDC **26** 06:44:34.0±0.7,7.35S×128.56E,h161^{km}±5^{km},mb4.6/15, mb1 4.7/18,mb1mx4.6/20,mbtmp5.1/18,MS4.2/2, Ms1 4.1/2,ms1mx3.0/17,Error ellipse: s-maj=16.0km s-min=9.4km az=77.0*

*NEIC **26** 06:44:34.1±0.1,7.40S×128.43E,mb5.0/34,Error ellipse: s-maj=5.0km s-min=4.0km az=55.0*

*HRVD **26** 06:44:34.1±0.4,7.55S×128.49E,h165^{km}±3^{km},MW5.0/56, Centroid moment Tensor Solution. LP body waves: s32,c36;Mantle waves: s56,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.24±.21; M$_{\theta\theta}$-0.53±.25; M$_{\phi\phi}$-1.72±.28; M$_{r\theta}$-2.30±.16; M$_{\theta\phi}$-2.41±.33; M$_{\phi r}$-2.18±.20; Best double couple: M$_0$4.328×10^{16} NP1:φ$_s$22°,δ23°,λ66°. NP2:φ$_s$227°,δ69°,λ100°. Principal axes: T 3.682, Plg65°, Azm153°; N 1.284, Plg9°, Azm44°; P -4.975, Plg24°, Azm310°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **26** 06:44:34.9±1.3,7.33S×128.41E,h174^{km},mb4.9/31 Error ellipse: s-maj=9.4km s-min=6.6km az=118.0*

ISC 26 06:44:32.8±0.2,**7.46S**±0.03×**128.47E**±0.04,**h166**^{km}, **h166**^{km}±4.1^{km}**:pP-P,n223,**σ**1**^{s}**15**/161,**mb4.8**/64,**19C-20D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.52**	**143**	⇓*i*P	**P**	**06 46 07.1**	**-0.2**
KAKA				*e*S	**S**	**06 47 13.3**	**-7.6**
BUNI	**Buntu Taipa**	**8.94**	**295**	⇓*e*Pn	**P**	**06 46 43.4**	**+3.9**
NINI	**Niniconang**	**9.18**	**289**	⇓*e*P	**P**	**06 46 45.9**	**+3.4**
NINI				pmax	pmax		
	comp=Z,245nm,0.7s						
NINI	**Niniconang**	**9.18**	**289**	⇓*e*Pn	**P**	**06 46 45.9**	**+3.4**
	comp=Z,490nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.93**	**194**	⇓*i*P	**P**	**06 47 03.7**	**-1.8**
	comp=Z,234nm,0.8s						
FITZ				*e*S	**S**	**06 49 00.0**	**-5.3**
KEDI	**Kedomdong**	**12.28**	**264**	⇓*e*P	**P**	**06 47 22.0**	**-1.0**
KEDI				pmax	pmax		
	comp=Z,90nm,0.3s						
KEDI	**Kedomdong**	**12.28**	**264**	⇓*e*Pn	**P**	**06 47 22.0**	**-1.0**
	comp=Z,179nm,0.2s						
KEDI				*e*Sn	**S**	**06 49 27.9**	**-8.9**
RATI	**Rata**	**12.87**	**264**	⇓*e*Pn	**P**	**06 47 28.8**	**-1.8**
	comp=Z,355nm,0.2s						
RATI				*e*Sn	**S**	**06 49 45.8**	**-4.8**
MENI	**Mendum Tagoi**	**12.88**	**68**	⇓*e*Pn	**P**	**06 47 32.4**	**+1.7**
YOMI	**Yo Moklole**	**12.96**	**69**	⇓*e*Pn	**P**	**06 47 34.2**	**+2.4**
	comp=Z,197nm,0.7s						
YOMI				*e*Sn	**S**	**06 49 53.3**	**+0.7**
WRAB	**Tennant Creek**	**13.65**	**156**	*e*P	**P**	**06 47 37.8**	**-2.8**
WRAB				pmax	pmax		
	comp=Z,342nm,0.6s						
WRAB	**Tennant Creek**	**13.65**	**156**	*e*P	**P**	**06 47 37.8**	**-2.8**
	comp=Z,342nm,0.6s						
WRA	**Warramunga Arr**	**13.65**	**156**	P	**P**	**06 47 37.4**	**-3.2**
	comp=Z,11nm,0.3s,baz=330,slow=12,SNR=78						
WRA				S	**S**	**06 50 01.0**	**-7.6**
	comp=Z,68nm,0.3s,baz=331,slow=22,SNR=21						
WB2	**Warramunga Arr**	**13.65**	**156**	⇓*i*P	**P**	**06 47 37.7**	**-3.0**
WB2				*e*S	**S**	**06 50 02.9**	**-5.8**
KELI	**Kelakatan**	**13.87**	**266**	⇓*e*Pn	**P**	**06 47 43.4**	**0.0**
SRDI	**Scrawed**	**14.22**	**265**	⇓*e*Pn	**P**	**06 47 46.8**	**-1.1**
	comp=Z,197nm,0.2s						
SRDI				*e*Sn	**S**	**06 50 13.6**	**-8.2**
MBWA	**Marble Bar**	**16.02**	**211**	*e*P	**P**	**06 48 10.3**	**0.0**
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**16.93**	**163**	P	**P**	**06 48 20.2**	**-1.2**
	comp=Z,21nm,0.3s,baz=336,slow=10,SNR=1054						
ASAR				pP		06 48 49.3	
	comp=Z,9.6nm,0.3s,baz=339,slow=10.0,SNR=5.9						
ASAR				sP		06 49 06.1	
	comp=Z,8.2nm,0.3s,baz=337,slow=11,SNR=1.7						
ASAR				S	**S**	**06 51 21.5**	**-1.3**
	comp=Z,25nm,0.3s,baz=340,slow=22,SNR=9.8						
ASPA	**Alice Springs**	**16.93**	**163**	⇓*i*P	**P**	**06 48 22.1**	**+0.7**
ASPA				*e*S	**S**	**06 51 17.7**	**-5.1**
KKM	**Kota Kinabalu**	**18.15**	**317**	*e*P	**P**	**06 48 35.7**	**+0.4**
PMG	**Port Moresby**	**18.59**	**97**	*e*P	**P**	**06 48 38.6**	**-1.3**
PMG				pmax	pmax		
	comp=Z,94nm,0.9s						
PMG	**Port Moresby**	**18.59**	**97**	P	**P**	**06 48 38.4**	**-1.4**
	comp=Z,8.7nm,0.3s,baz=267,slow=6.5,SNR=12						
PMG	**Port Moresby**	**18.59**	**97**	*e*P	**P**	**06 48 38.6**	**-1.2**
	comp=Z,94nm,0.9s						
KSM	**Kuching**	**20.18**	**295**	*e*P	**P**	**06 48 56.8**	**+0.6**
CTA	**Charters Tower**	**21.32**	**128**	⇑*i*P	**P**	**06 49 09.6**	**+2.1**
	comp=Z,25nm,0.6s,mb4.7						
CTA	**Charters Tower**	**21.32**	**128**	⇑*i*P	**P**	**06 49 09.6**	**+2.1**
CTA				pmax	pmax		
	comp=Z,25nm,0.6s						
CTA	**Charters Tower**	**21.32**	**128**	P	**P**	**06 49 08.0**	**+0.5**
	comp=Z,43nm,0.8s,mb4.8,baz=303,slow=11,SNR=30						
CTA				LR	LR	06 58 25.3	
	comp=Z,699nm,18.9s,baz=128,slow=39						
CTAO	**Charters Tower**	**21.32**	**128**	*e*P	**P**	**06 49 09.4**	**+1.9**
CTAO				pmax	pmax		
	comp=Z,61nm,0.9s,mb4.9						
CTAO	**Charters Tower**	**21.32**	**128**	*e*P	**P**	**06 49 09.4**	**+1.9**
	comp=Z,61nm,0.9s,mb4.9						
FORT	**Forrest**	**23.20**	**181**	⇑*i*P	**P**	**06 49 27.6**	**+1.8**
	comp=Z,3μm,0.8s						
FORT				*e*S	S	06 53 44.0	+22
KLBR	**Kellerberrin**	**26.01**	**201**	⇑*i*P	**P**	**06 49 53.0**	**+0.8**
	comp=Z,360nm,0.6s						
KLBR				*e*S	tx	06 54 51.6	
MUN	**Mundaring**	**26.93**	**203**	⇑*i*P	**P**	**06 50 01.1**	**+0.4**
	comp=Z,14nm,0.5s,mb4.8						
MUN				*e*S		06 55 15.1	
MUN	**Mundaring**	**26.93**	**203**	⇑*i*P	**P**	**06 50 01.1**	**+0.4**
MUN				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.8						
STKA	**Stephens Creek**	**27.20**	**155**	⇑*i*P	**P**	**06 50 03.7**	**+0.6**
	comp=Z,48nm,0.6s,mb5.3						
STKA				*e*S		06 55 22.4	
STKA	**Stephens Creek**	**27.20**	**155**	P	**P**	**06 50 03.4**	**+0.3**
	comp=Z,64nm,0.6s,mb5.5,baz=326,slow=8.9,SNR=220						
STKA				LR	LR	07 02 17.8	
	comp=Z,341nm,19.5s,baz=213,slow=39						
NWAO	**Narrogin (SRO)**	**27.40**	**201**	*e*P	**P**	**06 50 05.3**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,31nm,0.7s						
NWAO	**Narrogin (SRO)**	**27.40**	**201**	P	**P**	**06 50 05.3**	**+0.4**
	comp=Z,25nm,0.4s,mb5.2,baz=31,slow=8.0,SNR=54						
NWAO				pP	pP	06 50 40.8	+1.8
	comp=Z,17nm,0.6s,baz=33,slow=16,SNR=2.3						
NWAO	**Narrogin (SRO)**	**27.40**	**201**	*e*P	**P**	**06 50 05.3**	**+0.4**
	comp=Z,31nm,0.7s,mb5.0						
KULM	**Kulim**	**30.51**	**294**	*e*P	**P**	**06 50 33.0**	**+0.2**
CNB	**Canberra Magne**	**33.70**	**148**	*e*P	**P**	**06 51 01.7**	**+1.5**
	comp=Z,96nm,0.8s,mb5.6						
TOO	**Toolangi**	**33.72**	**155**	⇑*i*P	**P**	**06 51 02.7**	**+2.4**
	comp=Z,1.6nm,0.5s,mb4.0						
TOO	**Toolangi**	**33.72**	**155**	⇑*i*P	**P**	**06 51 02.7**	**+2.4**
TOO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
JOW	**Kunigami**	**34.09**	**360**	P	**P**	**06 51 01.4**	**-2.1**
	comp=Z,27nm,0.7s,mb5.1,baz=152,slow=13						
CMAR	**Chiang Mai Arr**	**38.88**	**312**	P	**P**	**06 51 44.8**	**+0.9**
	comp=Z,17nm,1.1s,mb4.6,baz=142,slow=7.2,SNR=36						
CMAR				PcP	PcP	06 53 52.6	+0.8
	comp=Z,3.8nm,0.5s,baz=168,slow=2.6,SNR=7.7						
SSE	**Sheshan**	**38.97**	**350**	P	**P**	**06 51 40.8**	**-3.6**
SSE				S	**S**	**06 57 33.0**	**+2.8**
SSE				AMB	AMB		
	comp=Z,28nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,204nm,4.5s						
SSE				LR	LR		
	comp=N,1μm,19.6s						
SSE				LR	LR		
	comp=E,783nm,19.6s						
SSE				LR	LR		
	comp=Z,372nm,20.2s						
SSE	**Sheshan**	**38.97**	**350**	P	**P**	**06 51 40.8**	**-3.6**
	comp=Z,28nm,0.7s,mb5.0						
SSE				pP	pP	06 52 00.2	-20
SSE				sP	sP	06 52 10.0	-30
SSE				S	**S**	**06 57 33.0**	**+2.8**
SSE				sS		06 58 05.9	
SSE				SS	SS	07 00 28.5	+5.8
SSE				LR	LR		
	comp=Z,370nm,20.2s						
GYA	**Guiyang**	**39.81**	**329**	⇓*i*P	**P**	**06 51 52.3**	**+0.9**
GYA				PCP	PcP	06 53 55.8	+1.1
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,180nm,4.2s						
WHN	**Wuhan**	**40.14**	**341**	⇓P	**P**	**06 51 54.5**	**+0.4**
WHN				AMB	AMB		
	comp=Z,29nm,1.0s,mb4.9						
NJ2	**Nanjing**	**40.35**	**347**	*e*P	**P**	**06 51 56.0**	**+0.2**
NJ2				PP	PP	06 53 33.5	-0.5
NJ2				S	**S**	**06 57 58.0**	**+7.2**
NJ2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,1μm,4.2s						
NJ2				LR	LR		
	comp=N,1μm,18.2s						
NJ2				LR	LR		
	comp=E,5μm,16.4s						
NJ2				LR	LR		
	comp=Z,10μm,18.8s						
KMI	**Kunming**	**40.95**	**323**	P	**P**	**06 52 02.8**	**+2.1**
KMI				AMB	AMB		
	comp=Z,19nm,1.0s,mb4.7						
KMI				AMB	AMB		
	comp=Z,159nm,4.7s						
KMI				LR	LR		
	comp=N,3μm,14.6s						
KMI				LR	LR		
	comp=E,2μm,15.8s						
KMI				LR	LR		
	comp=Z,3μm,14.6s						
KMI	**Kunming**	**40.95**	**323**	P	**P**	**06 52 02.7**	**+2.0**
KMI				S	**S**	**06 58 04.7**	**+5.0**
KMI				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
KMI				MLR	MLR		
	comp=Z,3μm,14.6s						
KMI	**Kunming**	**40.95**	**323**	P	**P**	**06 52 02.7**	**+2.0**
	comp=Z,19nm,1.0s,mb4.7						
KMI				sP	sP	06 52 50.3	-6.4
KMI				S	**S**	**06 58 04.7**	**+5.0**
KMI				sS		06 58 59.6	
KMI				LR	LR		

	comp=Z,3µm,14.6s						
ENH	**Enshi**	41.71	335	*e*P	P	06 52 06.5	-0.5
	comp=Z,13nm,0.8s,mb4.6						
MAT	**Matsushiro**	44.72	11	*e*P	P	06 52 29.0	-2.1
MAT				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
MAT	**Matsushiro**	44.72	11	*e*P	P	06 52 29.0	-2.1
	comp=Z,11nm,0.8s,mb4.5						
MAT	**Matsushiro**	44.72	11	P	P	06 52 28.7	-2.4
CD2	**Chengdu**	44.90	329	P	P	06 52 32.3	-0.4
XAN	**Xi’an**	45.24	337	P	P	06 52 34.5	-0.9
XAN				AMB	AMB		
	comp=Z,36nm,0.8s,mb5.0						
BJT	**Baijiatuau**	48.59	347	*e*P	P	06 53 00.6	-0.8
BJT				pmax	pmax		
	comp=Z,36nm,0.8s						
BJT	**Baijiatuau**	48.59	347	*e*P	P	06 53 00.6	-0.8
	comp=Z,36nm,0.8s,mb5.1						
BJI	**Beijing**	48.61	347	*e*P	P	06 53 00.5	-1.0
BJI				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.2						
BJI	**Beijing**	48.61	347	*e*P	P	06 53 00.4	-1.1
BJI				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.2						
BJI	**Beijing**	48.61	347	*e*P	P	06 53 00.4	-1.1
	comp=Z,50nm,0.8s,mb5.2						
LZH	**Lanzhou**	49.12	333	⇓P	P	06 53 06.0	+0.5
LZH				AP	pP	06 53 47.5	+4.6
LZH				AMB	AMB		
	comp=Z,53nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,146nm,5.9s						
LZH				LR	LR		
	comp=E,2µm,15.3s						
LZH				LR	LR		
	comp=Z,2µm,16.3s						
LZH	**Lanzhou**	49.12	333	⇓P	P	06 53 06.1	+0.6
	comp=Z,53nm,1.3s,mb5.0						
LZH				pP	pP	06 53 47.5	+4.6
LZH				sP	sP	06 54 13.2	+12
LZH				ScP		06 59 55.5	
LZH				LR	LR		
	comp=Z,2µm,16.3s						
HHC	**Hu-ho-hao-te**	50.53	343	*e*P	P	06 53 16.0	-0.1
HHC				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,129nm,7.6s						
HHC				LR	LR		
	comp=N,2µm,14.4s						
HHC				LR	LR		
	comp=E,847nm,16.2s						
HHC				LR	LR		
	comp=Z,1µm,13.2s						
CN2	**Changchun**	51.09	357	*e*P	P	06 53 20.5	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
CN2				AMB	AMB		
	comp=Z,240nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,12.0s						
CN2				LR	LR		
	comp=E,700nm,12.0s						
CN2				LR	LR		
	comp=Z,650nm,13.0s						
LSA	**Lhasa**	51.50	318	*e*P	P	06 53 24.5	+0.9
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
LSA	**Lhasa**	51.50	318	*e*P	P	06 53 24.5	+0.9
	comp=Z,15nm,0.8s,mb4.7						
ASAJ	**Asahikawa**	52.91	13	P	P	06 53 31.9	-2.0
	comp=Z,11nm,0.6s,mb4.8,baz=235,slow=9.3,SNR=8.7						
GTA	**Gaotai**	53.66	333	*e*P	P	06 53 39.8	+0.3
GTA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
GTA				AMB	AMB		
	comp=Z,125nm,4.6s						
GTA				LR	LR		
	comp=N,153nm,12.5s						
GTA				LR	LR		
	comp=E,128nm,12.5s						
GTA				LR	LR		
	comp=Z,128nm,11.4s						
JIRN	**Jiri**	53.76	312	*e*P	P	06 53 40.1	-0.2
	comp=Z,11nm,0.4s,mb4.9						
GUN	**Gumba**	54.12	312	*e*P	P	06 53 42.8	-0.2
	comp=Z,38nm,0.5s,mb5.4						
PKI	**Pulchoki**	54.28	312	*e*P	P	06 53 43.7	-0.4
	comp=Z,18nm,0.5s,mb5.0						
KKN	**Kakani**	54.50	312	*e*P	P	06 53 45.3	-0.4
	comp=Z,19nm,0.5s,mb5.1						
DMN	**Daman**	54.53	312	*e*P	P	06 53 45.6	-0.3
	comp=Z,14nm,0.4s,mb5.0						
GKN	**Gorkha**	55.09	312	*e*P	P	06 53 49.5	-0.5
	comp=Z,46nm,0.5s,mb5.5						
HYB	**Hyderabad**	55.16	297	*e*P	P	06 53 50.0	-0.7
HYB				*e*	pP	06 54 32.0	+3.1
HYB	**Hyderabad**	55.16	297	*i* P	P	06 53 50.0	-0.7
HYB				*e*pP	pP	06 54 32.0	+3.1
YSS	**Yuzh-Sakhalins**	55.65	12	*e*P	P	06 53 51.5	-2.2
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.1						
YSS	**Yuzh-Sakhalins**	55.65	12	*e*P	P	06 53 52.6	-1.2
	comp=Z,20nm,0.6s,mb5.1						
KOLN	**Koldanda**	55.74	311	*e*P	P	06 53 54.4	-0.3
	comp=Z,27nm,0.5s,mb5.3						
HIA	**Hailar**	57.00	353	P	P	06 54 03.6	+0.3
ULN	**Ulaanbaatar**	58.25	343	*e*P	P	06 54 12.0	0.0
ULN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.9						
ULN	**Ulaanbaatar**	58.25	343	*e*P	P	06 54 11.9	-0.1
	comp=Z,14nm,0.7s,mb4.9						
SONM	**Songino Array**	58.41	343	P	P	06 54 12.9	-0.3
	comp=Z,14nm,0.8s,mb4.8,baz=162,slow=7.8,SNR=59						
SONM				pP	pP	06 54 49.9	-2.0
	comp=Z,4.0nm,0.9s,baz=172,slow=8.7,SNR=2.4						
POO	**Poona**	59.73	296	*e*P	P	06 54 21.0	-1.7
NDI	**New Delhi**	61.07	308	*e*	P	06 54 22.3	-9.3
ZAK	**Zakamensk**	61.62	342	⇑*i*P	P	06 54 34.6	-0.4
ZAK				*e*	pP	06 55 11.5	-2.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
TLY	**Talaya**	62.65	343	*e*P	P	06 54 41.5	-0.3
TLY				*e*		07 02 55.7	
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,719nm,17.0s						
WMQ	**Urumqi**	62.96	328	P	P	06 54 44.3	+0.3
WMQ				AMB	AMB		
	comp=Z,41nm,1.0s,mb5.2						
WMQ				LR	LR		
	comp=N,254nm,18.0s						
WMQ				LR	LR		
	comp=E,365nm,17.0s						
WMQ				LR	LR		
	comp=Z,279nm,18.0s						
MOY	**Mondy**	63.45	341	*e*P	P	06 54 47.4	+0.4
MOY				pmax	pmax		
	comp=Z,28nm,1.8s,mb4.8						
CLNS	**Chul’man**	64.14	358	*e*P	P	06 54 48.3	-3.1
CLNS				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.8s						
PET	**Petropavlovsk**	65.48	20	*e*P	P	06 54 58.9	-1.3
PET				*e*	pP	06 55 37.1	-2.6
PET				*e*		07 03 50.7	
BOD	**Bodaibo**	66.12	352	*e*P	P	06 55 03.4	-0.7
BOD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	67.79	328	*i* P	P	06 55 14.7	-0.1
MKAR				pmax	pmax		
	comp=Z,11nm,0.5s						
KZA	**Kyzart**	69.15	320	P	P	06 55 24.9	+1.7
	SNR=8.3						
MA2	**Magadan**	69.15	12	*e*P	P	06 55 22.5	-0.4
MA2				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
MA2	**Magadan**	69.15	12	*e*P	P	06 55 22.5	-0.4
	comp=Z,17nm,0.8s,mb4.8						
YAK	**Yakutsk**	69.29	1	*e*P	P	06 55 22.7	-1.0
YAK				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.4						
YAK	**Yakutsk**	69.29	1	*e*P	P	06 55 22.7	-1.0
	comp=Z,60nm,0.8s,mb5.4						
TKM2	**Tokmak 2**	69.38	321	P	P	06 55 25.4	+0.8
	SNR=15						
UCH	**Uchtor**	69.70	320	P	P	06 55 28.2	+1.7
	SNR=14						
AAK	**Ala-Archa**	69.92	321	P	P	06 55 29.0	+1.1
	SNR=13						
AAK	**Ala-Archa**	69.92	321	*i* P	P	06 55 27.6	-0.3
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
AAK	**Ala-Archa**	69.92	321	*e*P	P	06 55 27.7	-0.2
	comp=Z,8.0nm,0.8s,mb4.5						
FRU	**Bishkek**	69.95	321	*e*P	P	06 55 29.0	+1.0
FRU				*e*	pP	06 56 10.0	+1.9
AML	**Almayashu**	70.17	320	P	P	06 55 30.6	+1.2
	SNR=16						
USP	**Ospenovka**	70.25	321	P	P	06 55 30.2	+0.4
	SNR=25						
EKS2	**Erkin-Say**	70.39	320	P	P	06 55 32.1	+1.4
	SNR=14						
FX1	**Attu Island--F**	71.06	27	P	P	06 55 33.9	-0.6
	comp=Z,24nm,0.5s,mb5.2,baz=292,slow=2.0,SNR=8.1						
KURK	**Kurchatov**	72.13	329*c*	*i*P	P	06 55 40.9	0.0
KURK	**Kurchatov**	72.13	329	*e*P	P	06 55 40.8	-0.1
	comp=Z,14nm,0.5s,mb4.9						
VNDA	**Vanda**	72.18	173	*e*P	P	06 55 41.1	+0.3
VNDA				pmax	pmax		
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	72.18	173	P	P	06 55 41.3	+0.5
	comp=Z,9.8nm,0.6s,mb4.7,baz=319,slow=6.3,SNR=65						
VNDA	**Vanda**	72.18	173	*e*P	P	06 55 41.1	+0.3
	comp=Z,11nm,0.8s,mb4.7						
SEY	**Seymchan**	72.54	11	*e*P	P	06 55 43.2	+0.1
SEY				*e*	pP	06 56 20.9	-2.5
SEY				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
NVS	**Novosibirsk**	72.62	335	*e*P	P	06 55 40.9	-2.8
NVS				*e*	pP	06 56 24.0	0.0
NVS				*e*S	S	07 04 51.4	-2.0
NVS				pmax	pmax		
	comp=N,6.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.0						
NVS				smax			
	comp=N,17nm,2.2s						
NVS				smax			
	comp=E,94nm,2.2s						
SBA	**Scott Base**	73.08	172	*e*P	P	06 55 47.9	+1.8
SBA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
SBA	**Scott Base**	73.08	172	*e*P	P	06 55 47.9	+1.8
	comp=Z,13nm,0.8s,mb4.7						
MAW	**Mawson**	73.97	201	P	P	06 55 51.3	-0.1
	comp=Z,9.2nm,0.6s,mb4.7,baz=49,slow=9.3,SNR=4.8						
BVA0	**Borovoye Array**	77.65	328	P	P	06 56 12.3	0.0
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	77.65	328	P	P	06 56 12.1	-0.1
	comp=Z,4.7nm,0.5s,mb4.4,baz=120,slow=8.6,SNR=45						
BVAR				pP	pP	06 56 50.9	-2.2
	comp=Z,2.8nm,0.7s,baz=135,slow=4.2,SNR=2.4						
CHKZ	**Chkalovo**	77.86	329	*i* P	P	06 56 13.1	-0.3
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
TIXI	**Tiksi**	78.95	0	*e*P	P	06 56 17.9	-1.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
BILL	**Bilibino**	79.91	14	*i* P	P	06 56 24.8	+0.6
QSPA	**South Pole Qui**	82.52	180	⇑*i*P	P	06 56 39.2	+1.6
	comp=Z,34nm,0.5s,mb5.3						
SYO	**Syowa Base**	82.68	201	⇓P	P	06 56 40.5	+1.8
SYO	**Syowa Base**	82.68	201	⇓PcP	PcP	06 56 43.0	-0.5
TNA	**Tin City**	86.21	22	*e*P	P	06 56 56.1	-0.1
	comp=Z,2.7nm,0.8s,mb4.0						
GNI	**Garni**	89.99	310	*e*P	P	06 57 16.1	+1.4
GNI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
IMA	**Indian Mountai**	91.87	24	*e*P	P	06 57 24.1	+1.2
MCK	**McKinley**	93.36	26	*e*P	P	06 57 28.4	-1.4
MCK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
MCK	**McKinley**	93.36	26	*e*P	P	06 57 28.4	-1.4
	comp=Z,4.8nm,0.9s,mb4.6						
SOC	**Sochi**	94.18	313	*e*P	P	06 57 33.7	-0.2
SOC				*e*PPP	PPP	07 03 26.8	-3.2
SOC				*e*SS	SS	07 15 00.9	+4.8
SOC				pmax	pmax		
	comp=N,16nm,0.9s						
SOC				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.2						
SOC				pmax	pmax		
	comp=E,8.0nm,0.8s						
ILAR	**Eielson Array**	94.41	25	P	P	06 57 32.6	-1.8
	comp=E,2.4nm,0.8s,mb4.3,baz=270,slow=4.5,SNR=25						
ILAR				pP	pP	06 58 14.3	-2.2
	comp=E,0.7nm,0.8s,baz=259,slow=5.0,SNR=2.2						
ILAR				PKiKP		07 02 16.1	
	comp=E,0.7nm,1.0s,baz=261,slow=3.2,SNR=4.3						
ILAR				PKKPbc		07 14 34.4	
	comp=E,0.9nm,0.8s,baz=22,slow=1.5,SNR=8.8						
MATP	**Matopo**	96.67	248	P	P	06 57 46.7	+0.9
	comp=E,1.9nm,0.5s,mb4.7,baz=108,slow=6.7,SNR=7.6						
EIL	**Elat**	96.69	299	P	P	06 57 45.9	+0.2
	comp=E,6.2nm,1.1s,mb4.9,baz=86,slow=15,SNR=2.4						
OBN	**Obninsk**	97.15	325	*e*P	P	06 57 46.8	-0.4
OBN				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.2						
OBN				MLR	MLR		
	comp=Z,200nm,21.0s						
DAWY	**Dawson**	97.59	26	*e*P	P	06 57 49.2	+0.2
BOSA	**Boshof**	97.92	240	*e*P	P	06 57 53.1	+1.8
BOSA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
BOSA	**Boshof**	97.92	240	*e*P	P	06 57 53.1	+1.8
	comp=Z,9.2nm,1.1s,mb5.1						
LBTB	**Lobatse**	98.41	243	P	P	06 57 55.4	+1.8
LBTB				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
LBTB	**Lobatse**	98.41	243	P	P	06 57 55.4	+1.7
	comp=Z,4.5nm,1.0s,mb4.8						
INK	**Inuvik**	99.86	22	*e*P	P	06 57 58.8	-0.4
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	99.86	22	P	P	06 57 58.1	-1.1
	comp=Z,0.7nm,0.4s,mb4.4,baz=283,slow=3.0,SNR=9.6						
INK				PKiKP		07 02 26.7	
	comp=Z,0.5nm,0.3s,baz=285,slow=2.5,SNR=13						
INK				PKKPbc		07 14 19.4	
	comp=Z,1.1nm,0.5s,baz=92,slow=3.2,SNR=12						
INK	**Inuvik**	99.86	22	*e*P	P	06 57 58.8	-0.4
	comp=Z,1.3nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	101.48	340	P	P	06 58 05.1	-1.4
	comp=Z,10.0nm,1.0s,baz=22,slow=6.5,SNR=4.6						
ARCES				PKiKP		07 02 29.9	
	comp=Z,4.2nm,0.9s,baz=101,slow=1.8,SNR=9.1						
ARCES				PKKPbc		07 14 14.2	
	comp=Z,7.5nm,1.1s,baz=346,slow=5.0,SNR=4.6						
AKASG	**Malin Array Be**	101.59	320	PKiKP		07 02 29.9	
	comp=Z,0.6nm,0.4s,baz=66,slow=1.9,SNR=4.6						
FINES	**FINESS Array B**	102.44	331	P	Pdif	06 58 11.1	+0.3
	comp=Z,4.2nm,1.3s,baz=108,slow=4.4,SNR=3.5						
FINES				PKiKP		07 02 31.8	
	comp=Z,1.3nm,0.5s,baz=110,slow=3.9,SNR=17						
IDI	**Anoyia**	105.35	304	PKiKP		07 02 37.4	
	comp=Z,2.0nm,0.3s,baz=346,slow=4.2,SNR=2.7						
RES	**Resolute Bay**	108.42	11	*e*P		07 02 41.6	
YKA	**Yellowknife Ar**	108.83	26	Pdiff	Pdif	06 58 38.3	-0.6
	comp=Z,0.4nm,0.8s,baz=288,slow=5.0,SNR=7.9						
YKA				PKiKP		07 02 43.2	
	comp=Z,1.6nm,0.6s,baz=293,slow=1.6,SNR=43						
YKA				PKKPbc		07 13 52.0	
	comp=Z,1.2nm,0.6s,baz=112,slow=3.5,SNR=20						
YKA				PKKPab		07 14 04.7	
	comp=Z,0.4nm,0.6s,baz=108,slow=5.0,SNR=7.0						
YKA	**Yellowknife Ar**	108.83	26	Pdif	Pdif	06 58 38.3	-0.6
YKA				PKPdf		07 02 43.2	
YKA				PKKPbc		07 13 52.0	
YKA				PKKPab		07 14 04.7	
NOA	**NORSAR Array B**	109.50	333	PKiKP		07 02 44.5	
	comp=Z,1.0nm,0.6s,baz=263,slow=3.1,SNR=4.5						
GERES	**GERESS Array B**	111.80	320	PKiKP		07 02 49.4	
	comp=Z,2.7nm,0.5s,baz=61,slow=1.8,SNR=36						
NVAR	**Mina Array Bea**	112.77	52	PKiKP		07 02 52.2	
	comp=Z,0.6nm,0.6s,baz=230,slow=2.3,SNR=5.4						
NVAR				PKKPab		07 13 50.3	
	comp=Z,0.6nm,0.7s,baz=105,slow=6.0,SNR=4.4						
CHMT	**Chamberlain Mo**	114.58	42	*e*P	PKPdf	07 02 54.7	+1.5
HLID	**Hailey**	114.66	45	*e*P	PKPdf	07 02 56.5	+3.1
ELK	**Elko**	114.69	49	*e*PKIKP	PKPdf	07 02 56.4	+2.8
CDF	**Champ du Feu**	116.00	321	*e*PKP1	PKPdf	07 02 57.0	+1.0
	comp=Z,6.7nm,0.7s						
HINF	**Hinteralfeld**	116.47	320	⇑*i*PKP1	PKPdf	07 02 58.2	+1.4
	comp=Z,13nm,0.6s						
PGF	**Pioggiola**	116.58	314	*e*PKP1	PKPdf	07 02 59.0	+1.8
	comp=Z,35nm,1.0s						
DUG	**Dugway**	116.61	49	*e*PKIKP	PKPdf	07 03 00.2	+2.9
HAU	**Haudompre**	116.72	320	*e*PKP1	PKPdf	07 02 58.4	+1.1
RRI2	**Red Ridge**	116.89	45	*e*P	PKPdf	07 02 59.8	+2.0
IMW	**Indian Meadow**	117.00	44	*e*P	PKPdf	07 03 01.1	+3.1
TPAW	**Teton Pass**	117.11	45	*e*P	PKPdf	07 03 01.3	+3.1
WUWY	**Wally Ulrich**	117.24	45	*e*P	PKPdf	07 03 01.5	+3.0
SNOW	**Snow King Moun**	117.25	45	*e*P	PKPdf	07 03 01.6	+3.2
LPG	**La Plagne**	117.28	318	*e*PKP1	PKPdf	07 03 00.7	+2.2
	comp=Z,8.9nm,0.6s						
BAIF	**Baives**	117.29	323	*e*PKP1	PKPdf	07 03 00.4	+2.1
LPL	**La Plagne**	117.29	318	⇑*i*PKP1	PKPdf	07 03 00.6	+2.1
	comp=Z,11nm,0.5s						
LOHW	**Long Hollow**	117.31	45	*e*P	PKPdf	07 03 01.4	+2.8
MEZF	**Maizieres J’vi**	117.36	321	*e*PKP1	PKPdf	07 03 00.2	+1.7
	comp=Z,3.8nm,0.4s						
CABF	**La Chapelle**	117.36	319	⇑*i*PKP1	PKPdf	07 03 00.7	+2.1
	comp=Z,20nm,0.5s						
MSU	**Marysvale**	117.48	50	*e*PKIKP	PKPdf	07 03 02.8	+3.8
MBDF	**Montbardon**	117.51	317	*e*PKP1	PKPdf	07 03 01.7	+2.8
FRF	**La Foret Royal**	117.95	316	*e*PKP1	PKPdf	07 03 01.5	+1.7
	comp=Z,1.6nm,0.3s						
ORIF	**Oris-en-Rattie**	118.05	317	⇑*i*PKP1	PKPdf	07 03 01.8	+1.9
	comp=Z,7.9nm,0.5s						
LMR	**La Mourre**	118.11	315	*e*PKP1	PKPdf	07 03 01.9	+1.8
PDAR	**Pinedale Array**	118.29	45	PKP	PKPdf	07 03 02.8	+2.3
	comp=Z,2.8nm,0.8s,baz=304,slow=1.1,SNR=26						
PDAR				PKKPbc		07 13 22.4	
	comp=Z,0.8nm,0.6s,baz=116,slow=6.2,SNR=7.2						
SMRF	**Simiane la Rot**	118.56	316	*e*PKP1	PKPdf	07 03 03.2	+2.2
WUAZ	**Wupatki**	118.75	54	*e*P	PKPdf	07 03 04.7	+3.1
SMF	**Signal de Mont**	118.80	320	*e*PKP1	PKPdf	07 03 02.6	+1.2
	comp=Z,3.0nm,0.4s						
EKA	**Eskdalemuir Ar**	118.83	331	PKP	PKPdf	07 03 03.0	+1.8
	comp=Z,2.4nm,0.5s,baz=37,slow=3.5,SNR=15						
SSF	**Saint Saulge**	118.86	320	⇑*i*PKP1	PKPdf	07 03 03.3	+1.8
	comp=Z,15nm,0.6s						
VIVF	**Saint-Julien-l**	118.88	318	⇑*i*PKP1	PKPdf	07 03 03.4	+1.8
	comp=Z,6.1nm,0.6s						
AVF	**Avril sur Loir**	119.06	320	*e*PKP1	PKPdf	07 03 03.3	+1.4
	comp=Z,9.8nm,0.6s						
LAO	**LASA Array**	119.22	40	*e*P	PKPdf	07 03 04.8	+2.5
FCC	**Fort Churchill**	119.39	24	*e*PKIKP	PKPdf	07 03 02.9	+0.7
BGF	**Bois d’Agland**	119.47	320	*e*PKP1	PKPdf	07 03 04.7	+2.0
	comp=Z,21nm,0.5s						
LASF	**Ste Croix**	119.70	317	*e*PKP1	PKPdf	07 03 05.1	+1.9
TUC	**Tucson**	119.86	57	*e*PKIKP	PKPdf	07 03 06.3	+2.5
TCF	**Toulx Ste Croi**	119.98	320	*e*PKP1	PKPdf	07 03 05.6	+1.9
	comp=Z,8.3nm,0.6s						
CAF	**Calviac**	120.59	318	*e*PKP1	PKPdf	07 03 07.2	+2.3
	comp=Z,9.0nm,0.6s						
GRR	**Gorron**	121.00	323	*e*PKP1	PKPdf	07 03 08.3	+2.6
MTLF	**Montolieu**	121.07	317	*e*PKP1	PKPdf	07 03 07.6	+1.7
	comp=Z,6.1nm,0.5s						
MFF	**Saint Martin d**	121.34	321	*e*PKP1	PKPdf	07 03 08.1	+1.8
	comp=Z,12nm,0.5s						
EPF	**Esparros**	122.46	317	⇑*i*PKP1	PKPdf	07 03 11.1	+2.6
	comp=Z,6.3nm,0.5s						
FRB	**Frobisher Bay**	122.50	9	PKP	PKPdf	07 03 09.0	+0.9
	comp=Z,10.0nm,0.7s,baz=26,slow=1.8,SNR=36						
QUIF	**Quistinic**	122.59	323	*e*PKP1	PKPdf	07 03 10.2	+1.5
ETSF	**Etsaut**	123.12	317	*e*PKP1	PKPdf	07 03 12.5	+2.7
	comp=Z,15nm,0.7s						
ULM	**Lac du Bonnet**	123.66	33	PKP	PKPdf	07 03 11.2	+0.4
	comp=Z,4.5nm,0.6s,baz=272,slow=2.1,SNR=9.1						
MNTX	**Cornudas Mount**	124.48	57	*e*P	PKPdf	07 03 15.3	+2.5
TXAR	**Lajitas Array**	126.47	59	PKP	PKPdf	07 03 19.3	+2.6
	comp=Z,1.7nm,0.4s,baz=176,slow=2.8,SNR=54						
TXAR				SKPbc		07 06 21.7	
	comp=Z,0.3nm,0.6s,baz=297,slow=2.0,SNR=3.5						
TXAR	**Lajitas Array**	126.47	59	PKP	PKPdf	07 03 19.3	+2.6
TXAR				SKPbc		07 06 21.7	
ESDC	**Sonseca Array**	126.76	315	PKP	PKPdf	07 03 19.4	+2.5
	comp=Z,0.3nm,0.5s,baz=18,slow=4.7,SNR=4.8						
PLCA	**Paso Flores**	128.94	161	PKP	PKPdf	07 03 23.8	+2.6
	comp=Z,4.6nm,0.7s,baz=205,slow=1.6,SNR=14						
PLCA				SKPbc		07 06 29.0	
	comp=Z,1.3nm,0.8s,baz=128,slow=1.1,SNR=3.5						
JCT	**Junction City**	129.42	57	*e*PKIKP	PKPdf	07 03 23.5	+1.1
SCHQ	**Schefferville**	131.20	12	PKP	PKPdf	07 03 26.8	+1.8
	comp=Z,3.4nm,0.4s,baz=358,slow=3.1,SNR=22						
SCHQ				SKPbc		07 06 35.0	
	comp=Z,6.3nm,0.6s,baz=354,slow=4.6,SNR=21						
CCM	**Cathedral Cave**	132.95	44	*e*PKIKP	PKPdf	07 03 30.0	+1.1
FVM	**French Village**	133.55	43	PKIKP	PKPdf	07 03 32.6	+2.6
DBIC	**Dimbokro**	133.69	272	PKP	PKPdf	07 03 33.9	+3.1
	comp=Z,4.9nm,0.7s,baz=141,slow=2.3,SNR=10						
DBIC				SKPbc		07 06 44.8	
	comp=Z,2.7nm,0.6s,baz=33,slow=3.9,SNR=8.9						
BLO	**Bloomington**	135.45	39	*e*PKIKP	PKPdf	07 03 37.0	+3.5
ELN	**Prospectdale**	140.22	38	*e*PKPdf	PKPdf	07 03 35.7	-6.5
LVC	**Limon Verde**	145.60	151	*e*PKPdf	PKPdf	07 03 56.6	+4.6
JTS	**JuntasAbangare**	146.87	83	*e*PKP2	PKPab	07 03 59.2	-1.2
NNA	**Nana**	148.27	127	*e*PKPbc	PKPdf	07 04 02.9	+6.3
CAM4	**Nova Friburgo**	149.09	196	*e*P	PKPdf	07 04 05.6	+7.8
CAM4				*i*		07 04 07.0	
LPAZ	**La Paz**	151.25	145	*e*PKPdf	PKPdf	07 04 05.0	+3.9
LPAZ				*e*PKPbc	PKPdf	07 04 11.0	+10
BDFB	**Brasilia**	156.78	189	PKP	PKPdf	07 04 10.9	+2.2
	comp=Z,3.3nm,0.8s,baz=216,slow=3.4,SNR=6.9						
BDFB				PKPab	PKPab	07 04 41.5	-0.1
	comp=Z,3.1nm,0.7s,baz=197,slow=7.6,SNR=4.6						
ROSC	**El Rosal**	157.19	95	PKP	PKPdf	07 04 12.6	+3.3
	comp=Z,3.0nm,0.9s,baz=95,slow=19,SNR=3.2						
ROSC				PKPab	PKPab	07 04 45.3	+1.8
	comp=Z,5.5nm,0.7s,baz=167,slow=3.2,SNR=5.3						

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*IDC **26** 06:52:46.4±0.5, 3.60N×98.06E, mb4.6/16, mb1 4.7/17, mb1mx4.6/21, mbtmp4.5/17, ML4.3/1, MS4.3/17, Ms1 4.3/17, ms1mx4.2/23, Error ellipse: s-maj=28.8km s-min=13.9km az=43.0*

*DJA **26** 06:52:48.3±0.3, 2.85N×97.69E, h6^{km}, mb5.1/4, Error ellipse: s-maj=20.0km s-min=6.9km az=40.0*

*BJI **26** 06:52:52.9, 3.20N×98.21E, h51^{km}, mB4.8, mb4.5, Ms5.0, Msz4.5*

*NEIC **26** 06:52:52.7±1.7, 3.40N×97.92E, h42^{km}±15^{km}, mb4.8/24, Error ellipse: s-maj=14.4km s-min=8.2km az=52.0*

NEIC Felt at Medan and Tapaktuan.

ISC 26 06:52:52.0±0.8**, 3.26N**±0.04×**97.96E**±0.05**, h54**^{km}±7^{km}**, n109,** σ1^{s}**40**/89**, mb4.7**/37**, MS4.4**/21**, 7C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	1.11	120	*e*P	P	06 53 11.5	-0.1
KULM	**Kulim**	3.35	53	*e*P	P	06 53 41.3	-2.0
BSI	**Banda Aceh**	3.46	310	*e*P	P	06 53 45.0	+0.2
PPI	**Padang Panjang**	4.42	147	*e*P	P	06 54 02.0	+3.7
SNG	**Songkhla**	4.71	34	P	P	06 53 59.0	-3.3
	610nm,1.0s						
KGM	**Kluang**	5.49	103	P	P	06 54 12.5	-0.7
NNT	**Nongplab**	9.44	11	P	P	06 55 18.5	+11
PULI	**Pulasari**	12.45	140	*e*P	P	06 55 48.0	-0.8
PASI	**Pasiripis**	12.47	142	*e*P	P	06 55 44.2	-5.0
NST	**Nakhon Sawan**	12.52	10	P	P	06 55 48.0	-1.7
KKTK	**Khon Kaen**	13.85	20	⇑P	P	06 56 16.6	+9.3
	401nm,1.0s						
BDT	**Bhumibol Dam**	13.94	4	P	P	06 56 16.0	+7.6
SINI	**Singah**	13.96	137	*e*P	P	06 56 06.7	-2.0
CM31	**Chiang Mai Arr**	15.14	4	P	P	06 56 26.1	+2.0
	76nm,0.9s						
CMAR	**Chiang Mai Arr**	15.14	4	Pn	P	06 56 23.5	-0.6
	0.4nm,0.3s,baz=196,slow=13,SNR=5.9						
CMAR				Sn	S	06 59 12.6	+2.0
	0.6nm,0.3s,baz=191,slow=23,SNR=2.4						
CMAR				Lg		07 00 40.6	
	baz=195,slow=33,SNR=4.8						
CMAR				LR	LR	07 02 36.4	
	comp=Z,2µm,18.6s,baz=190,slow=40						
CHG	**Chiang Mai**	15.49	3	⇑P	P	06 56 29.3	+0.7
	65nm,1.2s						

NANT	Nan	15.68	10	⇑P	P	06 56 31.5	+0.5
	125nm,1.0s						
CHRT	Chiangrai	16.61	6	⇓P	P	06 56 43.0	+0.3
	316nm,1.3s						
KKM	Kota Kinabalu	18.40	81	eP	P	06 57 08.0	+3.0
KKM	Kota Kinabalu	18.40	81	P	P	06 57 11.6	+6.6
QIZ	Qiongzhong	19.51	36	P	P	06 57 18.0	+0.3
QIZ				eS	S	07 00 48.5	-1.1
QIZ				AMB	AMB		
	comp=Z,53nm,2.0s						
QIZ				LR	LR		
	comp=N,2µm,18.3s						
QIZ				LR	LR		
	comp=E,2µm,17.6s						
QIZ				LR	LR		
	comp=Z,1µm,13.7s						
QIZ	Qiongzhong	19.51	36	eP	P	06 57 18.3	+0.6
	comp=Z,212nm,1.9s						
TSM	Tawau	19.89	86	P	P	06 57 23.9	+2.1
KELI	Kelakatan	20.04	125	⇑iP	P	06 57 29.4	+6.0
	comp=Z,133nm,1.0s						
VIS	Vishakhapatnam	20.31	316	eP	P	06 57 23.0	-3.2
AGT	Agartala	21.50	343	eP	P	06 57 42.0	+3.7
KMI	Kunming	22.22	12	P	P	06 57 48.8	+3.5
KMI				AP		06 58 01.5	
KMI				AMB	AMB		
	comp=Z,29nm,1.4s,mb4.5						
KMI				AMB	AMB		
	comp=Z,135nm,3.1s						
KMI				LR	LR		
	comp=N,3µm,14.1s,MS4.9						
KMI				LR	LR		
	comp=E,2µm,16.2s,MS4.9						
KMI				LR	LR		
	comp=Z,3µm,13.7s,MS4.9						
KMI	Kunming	22.22	12	P	P	06 57 48.7	+3.4
	comp=Z,29nm,1.4s,mb4.5						
KMI				pP		06 58 01.6	
KMI				PP	PP	06 58 23.0	+10
KMI				S	S	07 01 54.0	+13
KMI				sS		07 02 16.9	
KMI				SS	SS	07 02 41.7	+17
KMI				LR	LR		
	comp=Z,3µm,13.7s,MS4.9						
TANI	Tanete Lipujan	22.42	107	⇑iP	P	06 57 51.3	+3.9
	comp=Z,98nm,0.7s,mb5.0						
NINI	Niniconang	23.07	109	⇓iP	P	06 57 57.2	+3.3
	comp=Z,551nm,0.8s,mb5.7						
BUNI	Buntu Taipa	23.38	107	⇑iP	P	06 58 00.5	+3.6
	comp=Z,80nm,0.5s,mb5.4						
BUNI				i pP		06 58 02.2	
BUNI	Buntu Taipa	23.38	107	⇓ipP		06 58 02.2	
HYB	Hyderabad	23.68	308	eP	P	06 58 00.5	+0.8
	comp=Z,40nm,1.0s,mb4.8						
HYB				e		06 58 09.5	
HYB	Hyderabad	23.68	308	i P	P	06 58 00.5	+0.8
	comp=Z,40nm,1.0s,mb4.8						
HYB				e		06 58 09.5	
GYA	Guiyang	24.53	19	P	P	06 58 10.5	+2.5
GYA				AP		06 58 17.3	
GYA				XP		06 58 22.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,120nm,2.7s,mb5.0						
GYA				LR	LR		
	comp=N,3µm,12.9s,MS5.0						
GYA				LR	LR		
	comp=E,1µm,12.1s,MS5.0						
GYA				LR	LR		
	comp=Z,4µm,13.5s,MS5.0						
LSA	Lhasa	27.08	347	P	P	06 58 32.8	+1.1
LSA				XS		07 03 25.0	
LSA				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
LSA				AMB	AMB		
	comp=Z,30nm,5.0s						
LSA				LR	LR		
	comp=N,250nm,21.6s,MS4.0						
LSA				LR	LR		
	comp=E,330nm,17.0s,MS4.0						
LSA				LR	LR		
	comp=Z,480nm,21.6s,MS4.0						
LSA	Lhasa	27.08	347	P	P	06 58 32.2	+0.5
	comp=Z,4.0nm,0.6s,mb4.1						
ENH	Enshi	29.00	21	eP	P	06 58 48.7	-0.3
	comp=Z,8.7nm,0.7s,mb4.6						
HHC	Hu-ho-hao-te	39.38	16	eP	P	07 00 20.5	+2.5
HHC				AP	pP	07 00 30.5	-1.7
HHC				XP	sP	07 00 35.3	-3.4
HHC				PP	PP	07 01 55.5	+2.6
HHC				S	S	07 06 23.0	+7.7
HHC				XS		07 06 35.0	
HHC				AMB	AMB		
	comp=Z,75nm,4.9s						
HHC				LR	LR		
	comp=N,214nm,21.6s,MS4.2						
HHC				LR	LR		
	comp=E,298nm,22.8s,MS4.2						
HHC				LR	LR		
	comp=Z,190nm,28.2s						
BJT	Baijiatuau	40.13	22	P	P	07 00 22.2	-2.1
BJI	Beijing	40.16	22	eP	P	07 00 25.8	+1.3
BJI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.6						
BJI				LR	LR		
	comp=N,598nm,17.1s,MS4.7						
BJI				LR	LR		
	comp=E,544nm,15.8s,MS4.7						
BJI				LR	LR		
	comp=Z,245nm,21.0s						
BJI	Beijing	40.16	22	eP	P	07 00 25.7	+1.2
	comp=Z,8.0nm,0.7s,mb4.6						
BJI				S	S	07 06 49.8	+23
BJI				SS	tx	07 10 07.0	
BJI				LR	LR		
	comp=Z,250nm,21.0s,MS4.0						
NWAO	Narrogin (SRO)	40.35	155	LR	LR	07 16 23.9	
	comp=Z,5.2nm,19.0s,baz=155,slow=35						
WRA	Warramunga Arr	42.52	124	P	P	07 00 44.1	-0.1
	comp=Z,27nm,0.6s,mb5.2,baz=300,slow=9.3,SNR=25						
WRAB	Tennant Creek	42.52	124	eP	P	07 00 44.5	+0.3
	comp=Z,45nm,0.7s,mb5.3						
WB2	Warramunga Arr	42.52	124	eP	P	07 00 44.3	+0.1
WB2				eS	S	07 07 01.6	-0.7
ASAR	Alice Springs	44.06	129	P	P	07 00 56.3	-0.4
	comp=Z,7.8nm,0.7s,mb4.5,baz=303,slow=7.7,SNR=11						
ASAR				LR	LR	07 18 58.6	
	comp=Z,307nm,20.1s,MS4.2,baz=294,slow=36						
SONM	Songino Array	45.00	8	P	P	07 01 02.3	-1.5
	comp=Z,1.7nm,0.6s,mb4.1,baz=189,slow=8.4,SNR=7.9						
SONM				PcP	PcP	07 02 44.1	-0.6
	comp=Z,1.7nm,0.9s,baz=166,slow=5.9,SNR=2.1						
KURK	Kurchatov	50.02	344	eP	P	07 01 41.6	-1.5
	comp=Z,5.7nm,1.0s,mb4.6						
PMG	Port Moresby	50.61	105	P	P	07 01 48.7	+0.7
	comp=Z,34nm,0.8s,mb5.3,baz=277,slow=3.1,SNR=15						
PMG	Port Moresby	50.61	105	eP	P	07 01 48.6	+0.6
	comp=Z,42nm,0.9s,mb5.4						
ZAL	Zalesovo	51.66	350	LR	LR	07 28 41.9	
	comp=Z,194nm,18.4s,MS4.2,baz=292,slow=42						
CTA	Charters Tower	52.77	118	LR	LR	07 26 47.8	
	comp=Z,304nm,19.8s,MS4.3,baz=296,slow=39						
STKA	Stephens Creek	54.19	134	eP	P	07 02 14.9	+0.4
	comp=Z,24nm,0.8s,mb5.2						
STKA	Stephens Creek	54.19	134	P	P	07 02 14.4	-0.1
	comp=Z,28nm,0.7s,mb5.3,baz=308,slow=8.1,SNR=13						
STKA				LR	LR	07 26 03.6	
	comp=Z,376nm,21.6s,MS4.4,baz=113,slow=37						
RAYN	Ar Rayn	54.49	297	P	P	07 02 17.4	+0.6
	comp=Z,78nm,0.8s,mb5.7,SNR=13						
BVAR	Borovoye Array	54.58	340	P	P	07 02 13.5	-3.5
	comp=Z,2.2nm,0.6s,mb4.4,baz=144,slow=9.3,SNR=12						
ASAJ	Asahikawa	56.57	37	LR	LR	07 26 06.5	
	comp=Z,207nm,19.4s,MS4.2,baz=311,slow=36						
GNI	Garni	60.37	315	P	P	07 02 57.8	-0.2
	comp=Z,2.3nm,0.4s,mb4.6,baz=42,slow=4.4,SNR=3.3						
GNI	Garni	60.37	315	P	P	07 02 57.8	-0.2
KMBO	Kilima Mbogo	60.84	267	P	P	07 03 03.9	+2.3
	comp=Z,4.0nm,1.0s,mb4.5,baz=53,slow=20,SNR=4.5						
KMBO				LR	LR	07 25 40.0	
	comp=Z,238nm,20.2s,MS4.3,baz=96,slow=32						
KMBO	Kilima Mbogo	60.84	267	eP	P	07 03 03.7	+2.0
	comp=Z,8.5nm,1.3s,mb4.7						
KIV	Kislovodsk	63.27	318	eP	P	07 03 16.1	-1.4
	comp=Z,12nm,0.9s,mb5.0						
MALT	Malatya	64.34	311	eP	P	07 03 24.0	-0.5
	comp=Z,8.4nm,1.1s,mb4.7						
MATP	Matopo	72.01	247	P	P	07 04 14.7	+2.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=108,slow=19,SNR=3.8						
MATP				LR	LR	07 33 38.9	
	comp=Z,104nm,19.0s,MS4.1,baz=254,slow=34						
AKASG	Malin Array Be	74.11	322	P	P	07 04 21.4	-2.9
	comp=Z,2.0nm,0.6s,mb4.2,baz=85,slow=4.5,SNR=14						
MAW	Mawson	74.88	193	LR	LR	07 31 30.6	
	comp=Z,248nm,18.8s,MS4.5,baz=168,slow=31						
MLR	Muntele Rosu	75.11	316	P	P	07 04 29.6	-0.6
	comp=Z,9.4nm,0.9s,mb4.7,baz=54,slow=3.4,SNR=7.3						
LBTB	Lobatse	75.48	243	eP	P	07 04 34.9	+2.2
	comp=Z,9.0nm,0.9s,mb4.7						
BOSA	Boshof	76.46	240	eP	P	07 04 40.5	+2.2
	comp=Z,3.1nm,0.8s,mb4.3						
JOF	Joensuu	76.62	334	ep	P	07 04 36.5	-1.9
	comp=Z,4.2nm,0.8s,mb4.4						
KWP	Kalwaria	77.99	320	eP	P	07 04 45.7	-0.5
	comp=Z,12nm,1.0s,mb4.8						
KOLS	Kolonicke sedl	78.16	319	eP	P	07 04 48.4	+1.2
KOLS				e		07 04 57.9	
FINES	FINESS Array B	78.54	332	P	P	07 04 47.4	-1.7
	comp=Z,1.6nm,0.5s,mb4.2,baz=108,slow=5.9,SNR=10						
FINES				LR	LR	07 45 58.7	
	comp=Z,150nm,18.5s,MS4.4,baz=113,slow=41						
FINES	FINESS Array B	78.54	332	P	P	07 04 47.4	-1.7
FINES				LR	LR	07 45 58.7	
KAF	Kangasniemi	78.61	333	ep	P	07 04 47.0	-2.4
	comp=Z,3.7nm,0.7s,mb4.4,baz=102,slow=5.1						
VYHS	Vyhne	80.36	318	eP	P	07 04 59.0	-0.2
ARCES	ARCESS Array B	80.87	340	P	P	07 04 59.5	-1.9
	comp=Z,10nm,1.1s,mb4.7,baz=67,slow=9.2,SNR=9.4						
ARCES				LR	LR	07 43 36.9	
	comp=Z,463nm,18.2s,MS4.9,baz=2.7,slow=38						
MORC	Moravsky Berou	81.33	320	eP	P	07 05 04.4	+0.2
	comp=Z,14nm,1.5s,mb4.7						
ZST	Bratislava	81.48	318	eP	P	07 05 05.6	+0.5
DPC	Dobruska-Polom	82.16	320	ePKP	P	07 05 08.1	-0.4
DPC	Dobruska-Polom	82.16	320	ePKP	P	07 05 08.1	-0.4
SYO	Syowa Base	82.18	198	⇑pP	pP	07 05 21.4	-2.4
VAE	Valguarnera	82.91	307	LR	LR	07 43 21.6	
	comp=Z,92nm,20.3s,MS4.1,baz=310,slow=37						
PRU	Pruhonice	83.28	320	ePKP	P	07 05 13.4	-0.8
URZ	Urewera	83.50	129	LR	LR	07 40 45.4	
	comp=Z,328nm,20.3s,MS4.7,baz=336,slow=34						
GERES	GERESS Array B	83.78	319	P	P	07 05 16.9	+0.1
	comp=Z,3.1nm,1.0s,mb4.4,baz=90,slow=5.3,SNR=15						
KHC	Kasperske Hory	83.87	319	ePKP	P	07 05 16.9	-0.4
CLL	Collm	84.32	321	eP	P	07 05 19.0	-0.4
	comp=Z,9.0nm,1.3s,mb4.7						
CLL	Collm	84.32	321	P	P	07 05 19.0	-0.4
	comp=Z,logA/T=0.8,mb4.7						
HFS	Hagfors	84.33	330	P	P	07 05 18.7	-0.6
	comp=Z,2.2nm,0.6s,mb4.5,baz=124,slow=5.3,SNR=10						
NB2	NORSAR Subarra	85.59	331	P	P	07 05 24.6	-0.9
	comp=Z,2.9nm,0.9s,mb4.5,baz=93,slow=5.0						
NOA	NORSAR Array B	85.59	331	P	P	07 05 24.9	-0.6
	comp=Z,2.0nm,0.9s,mb4.3,baz=93,slow=5.3,SNR=3.4						
NOA				LR	LR	07 49 06.0	
	comp=Z,121nm,19.2s,MS4.3,baz=90,slow=40						
VNDA	Vanda	87.68	169	LR	LR	07 40 50.9	
	comp=Z,173nm,19.5s,MS4.5,baz=312,slow=33						
JMIC	Jan Mayen	92.26	342	LR	LR	07 49 07.2	
	comp=Z,194nm,22.0s,MS4.5,baz=236,slow=37						
ILAR	Eielson Array	97.52	23	LR	LR	07 54 20.8	
	comp=Z,126nm,18.2s,MS4.4,baz=177,slow=38						
SCHQ	Schefferville	120.76	350	PKP	PKPdf	07 11 39.3	+1.2
	comp=Z,3.5nm,1.1s,baz=288,slow=3.2,SNR=3.7						
ULM	Lac du Bonnet	125.39	11	PKP	PKPdf	07 11 49.1	+2.0
	comp=Z,1.3nm,0.6s,baz=233,slow=2.2,SNR=3.5						
NVAR	Mina Array Bea	126.68	35	PKP	PKPdf	07 11 53.5	+3.5
	comp=Z,2.3nm,0.8s,baz=302,slow=0.5,SNR=17						
ELK	Elko	126.73	31	PKP	PKPdf	07 11 52.8	+2.7
	comp=Z,1.0nm,0.7s,baz=230,slow=4.3,SNR=5.3						
PDAR	Pinedale Array	127.87	26	PKP	PKPdf	07 11 55.2	+3.0
	comp=Z,0.4nm,0.5s,baz=105,slow=2.7,SNR=6.0						
PV10	Paradox Valley	131.63	29	ePKPdf	PKPdf	07 12 04.5	+5.0
ANMO	Albuquerque	135.61	29	PKP	PKPdf	07 12 10.7	+3.7
	comp=Z,0.6nm,0.5s,baz=238,slow=4.8,SNR=5.5						
ANMO				SKPbc		07 15 40.9	
	comp=Z,1.0nm,0.8s,baz=0.1,slow=2.2,SNR=5.2						
PLCA	Paso Flores	141.28	194	PKP	PKPdf	07 12 19.9	+2.7
	comp=Z,0.9nm,1.0s,baz=244,slow=16,SNR=3.1						
TXAR	Lajitas Array	141.53	31	PKP	PKPdf	07 12 17.9	0.0
	comp=Z,0.4nm,0.6s,baz=249,slow=1.3,SNR=6.8						
TXAR				SKP		07 15 55.1	
	comp=Z,0.6nm,0.8s,baz=225,slow=1.8,SNR=6.0						
TXAR	Lajitas Array	141.53	31	PKP	PKPdf	07 12 17.9	0.0
TXAR				SKP		07 15 55.1	
JCT	Junction City	142.40	26	ePKPpre		07 12 17.2	
BDFB	Brasilia	144.33	248	PKP	PKPdf	07 12 25.6	+2.5
	comp=Z,3.0nm,0.7s,baz=158,slow=6.5,SNR=5.7						
LPAZ	La Paz	161.17	226	ePKPdf	PKPdf	07 12 52.1	+5.1

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*KRSC **26** 07:07:41.9±1.7, 53.29N×152.46E, h498^{km}±15^{km}, ML4.1*

*MOS **26** 07:07:46.9±1.4, 53.01N×154.65E, h539^{km}, mb3.5/4, Error ellipse: s-maj=23.3km s-min=15.1km az=84.6*

*BJI **26** 07:07:49.0, 53.00N×153.70E, h476^{km}, mB4.9, mb4.2*

*NEIC **26** 07:07:49.7±0.5, 53.50N×153.77E, h492^{km}±6^{km}, mb4.0/6, Error ellipse: s-maj=10.6km s-min=8.1km az=152.0*

*IDC **26** 07:07:50.4±2.0, 53.49N×153.69E, h501^{km}±25^{km}, mb3.0/14, mb1 3.2/16, mb1mx3.1/24, mbtmp4.0/16, Error ellipse: s-maj=14.8km s-min=11.6km az=147.0*

ISC 26 07:07:48.3±0.3**, 53.45N**±0.07×**153.8E**±0.1**, h491**^{km}±5^{km}**, n61, $\sigma 0^{s}85$**/75**, mb3.5**/18**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	Apacha	2.08	103	i P	P	07 08 53.8	+0.4
GNL	Ganaly	2.47	83	eP	P	07 08 56.5	+0.8
GNL				eS	S	07 09 50.2	+1.2
KRMR	Karymshinskiy	2.67	102	eP	P	07 08 57.1	+0.1
PAU	Pauzhetka	2.70	136	i P	P	07 08 57.5	+0.3
GRL	Gorelyy	2.72	108	eP	P	07 08 56.5	-0.8
KOK	Koryaka	2.89	91	eP	P	07 08 59.0	+0.6
PET	Petropavlovsk	2.94	96	P	P	07 08 58.9	+0.2
PET				S	S	07 09 54.3	-0.1
PET	Petropavlovsk	2.94	96	eP	P	07 08 58.2	-0.5
PET	Petropavlovsk	2.94	96	i P	P	07 08 58.8	+0.1
PET				eS	S	07 09 54.3	-0.1
AVH	Avacha	2.95	92	i P	P	07 08 59.4	+0.6
SMAR	Somma	2.99	92	eP	P	07 08 59.7	+0.6
UGLR	Uglovaya	3.01	93	i P	P	07 09 00.0	+0.8
RUS	Russkaya	3.02	108	P	P	07 08 58.5	-0.8
RUS				S	S	07 09 53.0	-2.3
RUS	Russkaya	3.02	108	i P	P	07 08 58.3	-1.0
RUS				i S	S	07 09 53.6	-1.7
SDLR	Sedlovina	3.04	91	i P	P	07 08 59.5	+0.1
SKR	Severo-Kuril's	3.11	152	eP	P	07 08 55.5	-4.4
SKR				eS	S	07 09 52.5	-4.0
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR	Severo-Kuril's	3.11	152	i P	P	07 08 55.5	-4.4
SKR				eS	S	07 09 52.5	-4.0
NLC	Nalytchevo	3.33	93	P	P	07 09 01.0	-0.5
NLC				S	S	07 09 57.6	-1.8
NLC	Nalytchevo	3.33	93	eP	P	07 09 00.9	-0.6
NLC				eS	S	07 09 58.7	-0.7
KII	Karymskiy	3.39	78	P	P	07 09 02.7	+0.7
KII	Karymskiy	3.39	78	eP	P	07 09 01.3	-0.7
SPN	Mys Shipunski	3.74	93	P	P	07 09 03.1	-1.5
SPN				S	S	07 10 00.2	-4.9
SPN	Mys Shipunski	3.74	93	eP	P	07 09 03.1	-1.5
SPN				eS	S	07 10 04.1	-1.0
ESO	Esso	3.77	47	eP	P	07 09 04.9	0.0
ESO				eS	S	07 10 05.0	-0.5
ESO				Smax			
	comp=N,30nm,1.5s						
TUMR	Tumrok	4.13	61	eP	P	07 09 08.7	+0.8
TUMR				eS	S	07 10 12.1	+1.3
KBTR	Krutoberegovo	5.89	58	P	P	07 09 21.2	-2.9
KBTR				S	S	07 10 33.2	-6.7
MA2	Magadan	6.37	346	eP	P	07 09 29.3	+0.4
MA2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MA2	Magadan	6.37	346	eP	P	07 09 29.3	+0.4
	comp=Z,7.6nm,0.7s						
YSS	Yuzh-Sakhalins	9.61	232	eP	P	07 10 03.8	+1.1
YSS				pmax	pmax		
	comp=Z,15nm,0.7s						
YSS	Yuzh-Sakhalins	9.61	232	eP	P	07 10 03.8	+1.1
	comp=Z,15nm,0.7s						
KAMR	Kamenskoye	11.15	31	eP	P	07 10 19.9	+1.0
FX1	Attu Island--F	11.62	85	P	P	07 10 24.6	+0.8
	comp=Z,5.2nm,0.3s,baz=65,slow=13,SNR=16						
FX1				S	S	07 12 52.7	+24
	comp=Z,2.3nm,0.3s,baz=341,slow=23,SNR=4.7						
FX1	Attu Island--F	11.62	85	eP	P	07 10 24.9	+1.0
ASAJ	Asahikawa	11.90	223	P	P	07 10 27.2	+0.4
	comp=Z,0.3nm,0.3s,baz=359,slow=14,SNR=4.4						
BILL	Bilibino	15.80	17	eP	P	07 11 07.1	+0.5
BILL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BILL	Bilibino	15.80	17	eP	P	07 11 07.1	+0.5
	comp=Z,4.3nm,0.7s						
BOD	Bodaibo	22.66	297	eP	P	07 12 12.0	-0.1
BOD				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
SONM	Songino Array	30.14	279	P	P	07 13 18.8	+0.5
	comp=Z,0.5nm,0.5s,mb3.2,baz=70,slow=7.9,SNR=6.1						
ILAR	Eielson Array	31.25	45	P	P	07 13 28.2	+0.5
	comp=Z,0.9nm,0.5s,mb3.5,baz=260,slow=6.1,SNR=16						
INK	Inuvik	35.88	37	eP	P	07 14 07.3	+0.8
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	Inuvik	35.88	37	P	P	07 14 07.2	+0.7
	comp=Z,1.0nm,0.3s,mb3.7,baz=280,slow=7.4,SNR=24						
INK				PcP	PcP	07 16 20.2	-1.0
	comp=Z,0.8nm,1.1s,baz=281,slow=3.0,SNR=4.3						
INK	Inuvik	35.88	37	eP	P	07 14 07.3	+0.7
	comp=Z,1.2nm,0.4s,mb3.7						
ZAL	Zalesovo	39.38	300	P	P	07 14 35.0	-0.3
	comp=Z,1.0nm,0.3s,mb3.7						
GYA	Guiyang	43.97	251	P	P	07 15 12.3	+0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
KURK	Kurchatov	44.30	298	eP	P	07 15 14.3	-0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
KURK	Kurchatov	44.30	298	eP	P	07 15 14.3	-0.2
	comp=Z,3.4nm,0.4s,mb4.1						
RES	Resolute Bay	44.37	21	eP	P	07 15 14.5	-0.2
RES				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.3						
RES	Resolute Bay	44.37	21	eP	P	07 15 14.5	-0.2
	comp=Z,0.6nm,0.8s,mb3.1						
YKA	Yellowknife Ar	45.40	41	P	P	07 15 23.0	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	45.40	41	P	P	07 15 23.0	+0.2
	comp=Z,0.5nm,0.7s,mb3.0,baz=301,slow=7.1,SNR=8.5						
BVAR	Borovoye Array	47.16	305	P	P	07 15 36.1	-0.4
	comp=Z,3.4nm,0.4s,mb4.1,baz=56,slow=7.4,SNR=35						
ARCES	ARCESS Array B	51.70	339	P	P	07 16 08.8	-1.4
	comp=Z,10nm,1.0s,mb4.1,baz=37,slow=6.9,SNR=6.5						
FINES	FINESS Array B	58.21	333	P	P	07 16 54.4	-1.4
	comp=Z,0.6nm,0.5s,mb3.2,baz=53,slow=9.5,SNR=4.8						
NOA	NORSAR Array B	62.05	340	P	P	07 17 20.1	-1.1
	comp=Z,1.3nm,1.1s,mb3.3,baz=19,slow=5.2,SNR=2.8						
SCHQ	Schefferville	66.98	24	P	P	07 17 51.5	-0.9
	comp=Z,0.8nm,0.6s,mb3.5,baz=5.2,slow=11,SNR=5.2						
SCHQ	Schefferville	66.98	24	P	P	07 17 51.5	-0.9
GERES	GERESS Array B	72.64	334	P	P	07 18 25.7	-0.2
	comp=Z,0.3nm,0.5s,mb3.1,baz=27,slow=6.6,SNR=3.9						
TXAR	Lajitas Array	73.89	63	P	P	07 18 35.0	+1.5
	comp=Z,0.2nm,0.4s,mb3.0,baz=304,slow=6.2,SNR=4.7						
TXAR	Lajitas Array	73.89	63	P	P	07 18 35.0	+1.5
WRA	Warramunga Arr	75.00	199	P	P	07 18 39.4	-0.5
	comp=Z,0.8nm,0.7s,mb3.4,baz=19,slow=4.9,SNR=6.6						
ASAR	Alice Springs	78.71	199	P	P	07 19 00.5	+0.6
	comp=Z,1.6nm,0.9s,mb3.5,baz=14,slow=5.3,SNR=14						

DJA 26 07:09:39.2±1.0**, 8.22S×117.58E, h33**^{km}**, MD4.6**/3**, ML4.1**/3**, 3C-3D, Error ellipse: s-maj=71.5km s-min=20.5km az=172.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEDI	Kedomdong	1.48	259	ePn	Pn	07 10 02.6	-1.4
	214nm,0.2s						
KEDI				⇑iSn	Sn	07 10 19.4	-2.9
RATI	Rata	2.09	256	⇓iPn	Pn	07 10 11.2	-1.5
	382nm,0.2s						
RATI	Rata	2.09	256	⇑iP	P	07 10 12.5	0.0
RATI				⇓iSn	Sn	07 10 36.2	-1.7
SRDI	Scrawed	3.42	265	⇓iPn	Pn	07 10 30.6	-1.0
	14nm,0.2s						
SRDI				⇑iSn	Sn	07 11 06.6	-4.8

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*IDC **26** 07:10:50.4±1.1, 4.73N×94.67E, mb4.1/9, mb1 4.2/10, mb1mx4.1/18, mbtmp4.1/10, ML4.2/1, MS3.0/1, Ms1 3.2/1, ms1mx2.8/14, Error ellipse: s-maj=56.1km s-min=18.9km az=51.0*

*NEIC **26** 07:10:54.8±0.6, 4.59N×94.58E, h30^{km}, mb4.4/3, Error ellipse: s-maj=17.5km s-min=8.0km az=49.0*

ISC 26 07:10:53.1±0.7**, 4.6N**±0.1×**94.6E**±0.1**, h30**^{km}**, n21, $\sigma 0^{s}96$**/21**, mb4.2**/17**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	6.04	83	eP	Pn	07 12 22.3	-0.6
CMAR	Chiang Mai Arr	14.41	17	Pn	P	07 14 18.9	+1.6
	0.4nm,0.3s,baz=197,slow=12,SNR=5.8						
CMAR				LR	LR	07 20 24.0	
	comp=Z,63nm,20.3s,baz=140,slow=40						
JIRN	Jiri	24.31	342	eP	P	07 16 10.5	+1.1
	4.9nm,0.3s,mb4.4						
PKI	Pulchoki	24.48	340	eP	P	07 16 11.2	+0.1
	5.4nm,0.5s,mb4.2						
GUN	Gumba	24.64	341	eP	P	07 16 13.4	+0.8
	7.2nm,0.5s,mb4.5						
KKN	Kakani	24.73	340	eP	P	07 16 13.2	-0.3
	6.7nm,0.5s,mb4.4						
GKN	Gorkha	25.15	339	eP	P	07 16 17.8	+0.3
	5.7nm,0.3s,mb4.5						
LSA	Lhasa	25.19	353	P	P	07 16 19.2	+1.4
KOLN	Koldanda	25.33	337	eP	P	07 16 19.8	+0.6
	17nm,0.8s,mb4.6						
SONM	Songino Array	44.25	11	P	P	07 18 59.9	-1.9
	1.4nm,0.8s,mb3.7,baz=192,slow=8.3,SNR=12						
SONM				PcP	PcP	07 20 45.4	-1.0
	0.5nm,0.4s,baz=198,slow=3.6,SNR=7.3						
WRA	Warramunga Arr	46.02	123	P	P	07 19 16.0	-0.2
	2.0nm,0.6s,mb4.2,baz=302,slow=9.1,SNR=16						
WRAB	Tennant Creek	46.02	123	eP	P	07 19 17.0	+0.8
	5.3nm,0.8s,mb4.5						
WB2	Warramunga Arr	46.03	123	eP	P	07 19 16.8	+0.6
ASAR	Alice Springs	47.49	128	P	P	07 19 28.4	+0.6
	0.8nm,0.6s,mb3.8,baz=300,slow=8.1,SNR=9.2						
HIA	Hailar	49.36	21	P	P	07 19 40.4	-1.5
	2.7nm,0.7s,mb4.4						
ZAL	Zalesovo	49.84	352	P	P	07 19 44.6	-0.9
	2.3nm,0.4s,mb4.6,baz=302,slow=6.3,SNR=12						
BVAR	Borovoye Array	52.23	342	P	P	07 20 02.9	-0.8
	1.2nm,0.3s,mb4.2,baz=144,slow=8.8,SNR=15						
AKASG	Malin Array Be	71.02	322	P	P	07 22 08.8	-1.4
	1.1nm,0.6s,mb4.0,baz=89,slow=4.6,SNR=6.4						
FINES	FINESS Array B	75.82	333	P	P	07 22 36.8	-1.2
	1.9nm,0.9s,mb4.0,baz=90,slow=9.5,SNR=6.0						
ARCES	ARCESS Array B	78.50	340	P	P	07 22 52.6	-0.2
	4.2nm,0.9s,mb4.3,baz=76,slow=5.0,SNR=8.1						
GERES	GERESS Array B	80.58	319	P	P	07 23 05.2	+0.8
	0.8nm,0.7s,mb3.8,baz=101,slow=6.8,SNR=8.7						

CASC 26 07:41:56.3±1.9**, 7.82N×82.52W, h13**^{km}±15^{km}**, MD3.9, MW4.3, 1C-1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.98	350	eP	Pb	07 42 15.3	+0.6
BRU2				eS	Sb	07 42 29.7	+2.3
ACR	Cerro Adams	1.05	322	eP	Pb	07 42 14.6	-1.2
ACR				eS	Sb	07 42 29.0	-0.2
BUS	Buena Vista	2.12	325	eP	Pn	07 42 32.0	+0.2
BUS				eS	Sn	07 42 59.0	+0.8
LCR2	La Lucha 2	2.41	323	⇑eP	Pn	07 42 35.6	-0.4
AZU2	Pedas	2.49	96	eP	Pn	07 42 36.1	-1.2
PRS1	Puriscal	2.79	321	⇓eP	Pn	07 42 39.7	-1.8

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*NEIC **26** 07:47:08.0±0.5, 19.19S×70.01W, mb4.4/3, Error ellipse:*

s-maj=16.0km s-min=8.5km az=79.0

*IDC **26** 07:47:08.6±0.6, 19.04S×69.90W, h78km±5km, mb3.7/8, mb1 3.9/9, mb1mx3.8/16, mbtmp4.1/9, MS2.9/1, Ms1 2.9/1, ms1mx2.4/17, Error ellipse: s-maj=23.4km s-min=10.1km az=73.0*

ISC 26 07:47:06.5±0.6**, 19.11S**±0.07×**69.8W**±0.1**, h73km, h73km**±1.1km**:pP-P, n19, σ1^{s}21**/18**, mb4.0**/9**, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	Arequipa	3.09	328	*e*P	P	07 47 55.0	+0.9
ARE				*i*		07 47 58.7	
ARE				*i*		07 48 22.6	
ARE				*i* S	S	07 48 36.8	+6.8
LPAZ	La Paz	3.22	30	*e*P	P	07 48 00.9	+5.0
LVC	Limon Verde	3.58	167	P	P	07 48 02.1	+1.1
	18nm,0.3s,baz=338,slow=10,SNR=212						
LVC				S	S	07 48 47.4	+5.0
	76nm,0.3s,baz=252,slow=20,SNR=7.9						
LVC				LR	LR	07 49 01.4	
	comp=Z,165nm,21.2s,baz=250,slow=31						
SAML	Samuel	11.96	33	*e*P	P	07 49 54.3	-1.6
	6.9nm,0.6s						
TRQA	Tornquist	20.07	162	*e*P	P	07 51 34.6	-1.8
	17nm,0.8s						
BDFB	Brasilia	21.06	84	P	P	07 51 48.4	+1.7
	6.6nm,0.4s,mb4.3,baz=266,slow=9.3,SNR=29						
PLCA	Paso Flores	21.57	182	P	P	07 51 50.9	-0.6
	8.9nm,0.9s,mb4.1,baz=358,slow=11,SNR=18						
PLCA	Paso Flores	21.57	182	*e*P	P	07 51 51.0	-0.5
	17nm,1.1s,mb4.3						
ROSC	El Rosal	24.23	349	P	P	07 52 19.3	+1.7
	3.4nm,0.3s,mb4.1,baz=104,slow=21,SNR=4.4						
SDV	Santo Domingo	27.83	358	P	P	07 52 49.1	-2.1
	1.3nm,0.5s,mb3.7,baz=234,slow=16,SNR=3.2						
TXAR	Lajitas Array	58.20	325	P	P	07 56 54.8	-0.8
	0.5nm,1.1s,mb3.5,baz=117,slow=8.1,SNR=2.4						
TXAR				pP	pP	07 57 13.3	-1.2
	1.6nm,1.2s,baz=146,slow=9.8,SNR=2.7						
TXAR	Lajitas Array	58.20	325	P	P	07 56 54.8	-0.8
TXAR				pP	pP	07 57 13.3	-1.2
DBIC	Dimbokro	68.88	75	P	P	07 58 06.3	+0.4
	2.4nm,0.8s,mb4.1,baz=233,slow=7.8,SNR=5.9						
DBIC				pP	pP	07 58 25.6	+0.2
	2.7nm,0.7s,baz=212,slow=6.8,SNR=1.9						
QSPA	South Pole Qui	71.07	180	⇓*i*P	P	07 58 18.3	+0.2
	4.0nm,0.7s,mb4.4						
NVAR	Mina Array Bea	73.11	322	P	P	07 58 31.5	+0.7
	0.5nm,0.8s,mb3.4,baz=150,slow=7.3,SNR=3.1						
NVAR				pP	pP	07 58 51.1	+0.6
	0.5nm,0.7s,baz=158,slow=11,SNR=3.7						
YKA	Yellowknife Ar	88.67	341	P	P	07 59 51.8	-0.6
	3.4nm,1.1s,mb4.3,baz=133,slow=4.8,SNR=25						
YKA				pP	pP	08 00 12.9	+0.1
	1.2nm,0.6s,baz=134,slow=4.9,SNR=8.1						
ASAR	Alice Springs	131.61	210	PKP	PKPdf	08 06 12.2	+0.5
	0.7nm,0.7s,baz=134,slow=1.7,SNR=10.0						
WRA	Warramunga Arr	134.55	213	PKP	PKPdf	08 06 18.0	+0.8
	0.9nm,0.7s,baz=150,slow=1.8,SNR=7.3						
SONM	Songino Array	151.18	5	PKPbc	PKPdf	08 06 52.4	+7.2
	1.4nm,0.8s,baz=320,slow=1.2,SNR=13						
SONM				pPKPbc		08 07 15.4	
	1.5nm,0.8s,baz=320,slow=1.3,SNR=6.0						

CASC 26 07:47:17.3±1.5**, 7.89N×82.29W, h28km**±14km**, MD4.0, MW4.2, 1D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	0.98	336	*e*P	Pn	07 47 38.5	+3.1
BRU2				*e*S	Sb	07 47 50.7	+2.5
BUS	Buena Vista	2.20	319	*e*P	Pn	07 47 53.1	+0.3
BUS				*e*S	Sn	07 48 20.4	+1.0
LCR2	La Lucha 2	2.50	317	*e*P	Pn	07 47 56.9	-0.2
ICR	Volcan Irazu	2.58	324	*e*P	Pn	07 47 58.3	+0.1
PRS1	Puriscal	2.89	316	⇓*e*P	Pn	07 48 00.6	-2.0

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*NEIC **26** 08:11:33.5±1.1, 38.15S×176.06E, h216km±8km, MG3.9(WEL), Error ellipse: s-maj=13.5km s-min=6.2km az=149.0*

WEL 26 08:11:39.1±0.3**, 38.24S×176.19E, h162km**±2km**, ML3.8**/12**, 8C-1D, Error ellipse: s-maj=2.6km s-min=2.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.72	92	P	P	08 12 02.9	-0.5
URZ	Urewera	0.72	92	PN	P	08 12 02.9	-0.5
URZ				SN	S	08 12 20.9	-1.2
MGZ	Maungaku	0.92	214	P	P	08 12 04.8	+0.1
MGZ	Maungaku	0.92	214	⇑PN	P	08 12 04.8	+0.1
BKZ	Black Stump Fm	0.96	166	P	P	08 12 05.0	+0.1
BKZ				S	S	08 12 24.0	-0.8
BKZ	Black Stump Fm	0.96	166	⇑PN	P	08 12 05.1	+0.1
BKZ				SN	S	08 12 24.3	-0.5
WTVZ	West Tongariro	1.00	208	PN	P	08 12 05.2	0.0
OTVZ	Oturere	1.01	204	⇑PN	P	08 12 05.8	+0.4
TWVZ	Taurewa	1.02	215	P	P	08 12 05.4	0.0
TWVZ	Taurewa	1.02	215	⇑PN	P	08 12 05.4	-0.1
NGZ	Ngauruhoe	1.05	206	P	P	08 12 05.8	+0.1
NGZ	Ngauruhoe	1.05	206	PN	P	08 12 05.8	+0.2
MWZ	Matawai	1.05	96	P	P	08 12 05.8	+0.1
MWZ	Matawai	1.05	96	⇓PN	P	08 12 05.8	+0.1
MWZ				SN	S	08 12 26.0	-0.2
CNZ	Chateau	1.09	207	P	P	08 12 05.9	-0.1
CNZ	Chateau	1.09	207	PN	P	08 12 05.9	-0.1
WPVZ	Whakapapa	1.09	207	P	P	08 12 06.0	-0.1
WPVZ	Whakapapa	1.09	207	PN	P	08 12 06.0	0.0
TUVZ	Tukino	1.11	202	P	P	08 12 06.3	0.0
TUVZ	Tukino	1.11	202	PN	P	08 12 06.3	+0.1
WNVZ	Wahianoa	1.19	203	PN	P	08 12 06.8	-0.1
MOVZ	Moawhango	1.22	196	P	P	08 12 06.7	-0.6
MOVZ	Moawhango	1.22	196	PN	P	08 12 06.7	-0.6
MOVZ				SN	S	08 12 27.9	-1.0
KNZ	Kokohu	1.40	125	*e*PN	P	08 12 09.0	0.0
KNZ				SN	S	08 12 31.4	-0.6
VRZ	Vera Road	1.43	231	P	P	08 12 08.8	-0.5
VRZ	Vera Road	1.43	231	⇑PN	P	08 12 08.8	-0.5
VRZ				SN	S	08 12 32.6	0.0
PUZ	Puketiti	1.64	85	P	P	08 12 10.8	-0.6
PUZ	Puketiti	1.64	85	PN	P	08 12 10.8	-0.6
PUZ				SN	S	08 12 34.6	-1.7
WAZ	Wanganui	1.79	211	P	P	08 12 12.1	-0.9
WAZ	Wanganui	1.79	211	PN	P	08 12 12.1	-0.9
WAZ				*e*SN	S	08 12 38.6	-0.5
MXZ	Matakaoa Point	1.80	69	P	P	08 12 12.8	-0.4
MXZ	Matakaoa Point	1.80	69	PN	P	08 12 12.7	-0.4
TSZ	Takapari Road	1.83	186	P	P	08 12 12.6	-0.9
TSZ	Takapari Road	1.83	186	⇑PN	P	08 12 12.6	-0.9
TSZ				SN	S	08 12 38.5	-1.5
PWZ	Pawanui	1.86	164	P	P	08 12 13.5	-0.3
PWZ	Pawanui	1.86	164	⇑PN	P	08 12 13.6	-0.3
PWZ				SN	S	08 12 39.5	-1.1
BFZ	Birch Farm	2.44	179	P	P	08 12 19.0	-1.7
BFZ	Birch Farm	2.44	179	PN	P	08 12 19.0	-1.8
MRZ	Mangatainoka R	2.47	191	P	P	08 12 18.9	-2.1
MRZ	Mangatainoka R	2.47	191	PN	P	08 12 18.9	-2.2
MRZ				SN	S	08 12 49.7	-3.6
KIW	Kapiti Island	2.80	200	P	P	08 12 22.3	-2.9
KIW	Kapiti Island	2.80	200	PN	P	08 12 22.3	-2.9
KIW				SN	S	08 12 55.6	-5.0
MTW	Mount Morrison	2.97	190	P	P	08 12 24.1	-3.1
MTW	Mount Morrison	2.97	190	PN	P	08 12 24.1	-3.2
CAW	Cannon Point	3.00	196	P	P	08 12 24.7	-2.9
CAW	Cannon Point	3.00	196	PN	P	08 12 24.6	-3.0
CAW				SN	S	08 12 59.6	-5.2
PAWZ	Paruwai Farm	3.20	190	SN	S	08 13 03.9	-5.4
MRW	Makara Radio	3.20	201	P	P	08 12 27.2	-3.1
MRW	Makara Radio	3.20	201	PN	P	08 12 26.7	-3.6
MRW				SN	S	08 13 03.9	-5.6
MSWZ	Moikau Station	3.26	193	P	P	08 12 27.4	-3.5
MSWZ	Moikau Station	3.26	193	⇑PN	P	08 12 27.4	-3.6
MSWZ				SN	S	08 13 05.2	-5.5
TUWZ	Tuamarina	3.63	208	PN	P	08 12 31.7	-4.1
TUWZ				SN	S	08 13 13.7	-5.6
NNZ	Nelson	3.69	215	*e*P	P	08 12 32.2	-4.2
NNZ	Nelson	3.69	215	PN	P	08 12 32.1	-4.3
NNZ				SN	S	08 13 15.5	-5.0
QRZ	Quartz Range	3.84	226	P	P	08 12 33.3	-5.1
QRZ	Quartz Range	3.84	226	PN	P	08 12 33.2	-5.2
QRZ				SN	S	08 13 18.3	-5.8
THZ	Tophouse	4.33	215	P	P	08 12 40.3	-4.6
THZ	Tophouse	4.33	215	PN	P	08 12 40.2	-4.7
THZ				SN	S	08 13 29.4	-6.2
KHZ	Kahutara	4.64	205	*e*P	P	08 12 44.5	-4.4
KHZ	Kahutara	4.64	205	PN	P	08 12 44.6	-4.3
DSZ	Denniston Nort	4.86	223	*e*P	P	08 12 46.0	-5.8
DSZ	Denniston Nort	4.86	223	PN	P	08 12 46.0	-5.8
DSZ				SN	S	08 13 40.3	-7.6
LTZ	Lake Taylor	5.44	212	*e*P	P	08 12 54.1	-5.2
LTZ	Lake Taylor	5.44	212	PN	P	08 12 54.1	-5.3
LTZ				*e*SN	S	08 13 52.1	-9.4
MQZ	McQueen's Vall	6.09	205	SN	S	08 14 06.6	-10
WVZ	Waitaha Valley	6.37	219	*e*PN	P	08 13 06.5	-5.2
FOZ	Fox Glacier	7.25	221	PN	P	08 13 16.5	-7.0
ODZ	Otahua Downs	7.97	210	*e*PN	P	08 13 26.2	-6.8

WEL 26 08:55:21.3±0.3**, 38.40S×175.93E, h159km**±3km**, ML3.5**/11**, 6C-1D, Error ellipse: s-maj=2.4km s-min=2.3km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGZ	Maungaku	0.68	207	PN	P	08 55 44.9	0.0
NGZ	Ngauruhoe	0.82	198	⇓PN	P	08 55 45.7	0.0
CNZ	Chateau	0.86	200	PN	P	08 55 45.8	-0.2
WPVZ	Whakapapa	0.86	200	⇑PN	P	08 55 45.9	-0.1
BKZ	Black Stump Fm	0.89	150	⇑PN	P	08 55 46.2	-0.1
BKZ				SN	S	08 56 04.9	-0.5
TUVZ	Tukino	0.90	194	PN	P	08 55 46.2	-0.1
URZ	Urewera	0.94	82	PN	P	08 55 46.0	-0.5
URZ				SN	S	08 56 05.2	-0.8
URZ				SN	S	08 56 05.3	-0.7
MOVZ	Moawhango	1.02	188	⇑PN	P	08 55 46.7	-0.5
MOVZ				SN	S	08 56 05.8	-1.4
MWZ	Matawai	1.26	88	⇑PN	P	08 55 49.7	+0.3
MWZ				SN	S	08 56 10.3	-0.9
KNZ	Kokohu	1.50	115	PN	P	08 55 51.6	-0.2
KNZ				SN	S	08 56 14.8	-0.7
TSZ	Takapari Road	1.66	179	⇑PN	P	08 55 52.6	-0.9
TSZ				SN	S	08 56 18.0	-0.5
PWZ	Pawanui	1.79	156	PN	P	08 55 54.3	-0.6
PWZ				SN	S	08 56 20.2	-0.6
PUZ	Puketiti	1.86	81	PN	P	08 55 54.9	-0.8
PUZ				SN	S	08 56 20.3	-1.9
MXZ	Matakaoa Point	2.05	67	⇑PN	P	08 55 57.3	-0.6
MXZ				SN	S	08 56 25.7	-0.5
MRZ	Mangatainoka R	2.28	187	PN	P	08 55 58.4	-2.3
MRZ				SN	S	08 56 27.2	-3.8
BFZ	Birch Farm	2.30	174	PN	P	08 55 59.2	-1.7
KIW	Kapiti Island	2.59	197	PN	P	08 56 01.4	-3.0
MTW	Mount Morrison	2.78	187	PN	P	08 56 03.5	-3.4
CAW	Cannon Point	2.79	193	PN	P	08 56 03.8	-3.2
MRW	Makara Radio	2.98	198	SN	S	08 56 41.5	-4.9
MSWZ	Moikau Station	3.06	190	SN	S	08 56 42.1	-6.0
NNZ	Nelson	3.44	214	PN	P	08 56 10.7	-4.6
NNZ				SN	S	08 56 50.9	-5.8
QRZ	Quartz Range	3.58	226	PN	P	08 56 11.8	-5.3
QRZ				SN	S	08 56 54.2	-5.8
THZ	Tophouse	4.09	214	*e*PN	P	08 56 19.5	-4.2
THZ				SN	S	08 57 05.9	-5.8
KHZ	Kahutara	4.41	204	PN	P	08 56 23.2	-4.8
KHZ				SN	S	08 57 13.2	-6.2
LTZ	Lake Taylor	5.19	211	SN	S	08 57 28.1	-10
MQZ	McQueen's Vall	5.86	204	SN	S	08 57 41.9	-12

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*MOS **26** 09:09:53.1±0.9, 30.72N×57.03E, h10km, mb4.1/1, Error ellipse: s-maj=23.0km s-min=15.7km az=95.3*

*IDC **26** 09:09:53.0±0.9, 30.69N×56.89E, mb3.8/11, mb1 4.0/12, mb1mx3.9/21, mbtmp3.8/12, ML3.7/1, Error ellipse: s-maj=23.2km s-min=22.2km az=70.0*

*THR **26** 09:09:53.9±0.9, 30.81N×56.91E, h14km±11km, ML3.7*

*NEIC **26** 09:09:55.0±0.7, 30.68N×56.89E, h10km, mb3.8/2, MN4.1(TEH), Error ellipse: s-maj=12.7km s-min=8.6km az=160.0*

*CSEM **26** 09:09:55.2±0.1, 30.79N×56.92E, h25km, ML4.3/1, Error ellipse: s-maj=2.9km s-min=2.0km az=17.0*

*TEH **26** 09:09:58.7, 30.83N×56.66E, h8km, Mn4.1*

ISC 26 09:09:53.8±0.4**, 30.76N**±0.05×**56.92E**±0.05**, h10km, n38, σ1^{s}16**/40**, mb3.7**/11**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.79	190	*i* PG	Pg	09 10 09.9	+0.2
KRBR				AML	AML	09 10 24.9	
	comp=N,4µm,0.2s						
IBAF	Bafgh	1.42	306	Pn	Pn	09 10 19.4	-0.5
IMEH	Mehriz	2.08	288	Pn	Pn	09 10 30.5	+1.3
ICHK	Chekchek	2.61	305	Pn	Pn	09 10 37.5	+0.7
ZHSF	Zahedan	3.53	108	*e*PN	Pn	09 10 50.6	+0.7
ZHSF				AML	AML	09 11 56.6	
	comp=N,97nm,0.5s						
ISRV	Sarvestan	3.58	248	Pn	Pn	09 10 52.1	+1.5
IMOK	Mook	4.03	246	Pn	Pn	09 10 57.8	+0.7
NASN	Na'in	4.05	301	*e*PN	Pn	09 10 57.7	+0.4
NASN				*e*SG	Sg	09 11 58.2	-10
NASN				AML	AML	09 12 10.6	
	comp=N,103nm,0.5s						
NASN	Na'in	4.05	301	*e*Pn	Pn	09 10 57.7	+0.4
	SNR=52						
NASN				*e*Sg	Sg	09 11 58.2	-10
	comp=N,103nm,0.5s,SNR=90						
GHIR	Ghir-Karzin	4.22	235	*e*PN	Pn	09 11 00.4	+0.7
QAM	Qamsar	5.34	307	Pn	Pn	09 11 20.0	+4.4
IMOG	Moghan	5.70	20	Pn	Pn	09 11 23.2	+2.5
MHI	Mashhad	5.93	20	Pn	Pn	09 11 26.8	+3.0
IFIR	Firoozkooh	5.99	325	Pn	Pn	09 11 24.3	-0.4
IFIR				Sn	Sn	09 12 27.8	-6.4
IMYA	Miamay	6.17	25	Pn	Pn	09 11 29.5	+2.3
IDMV	Damavand	6.31	321	Pn	Pn	09 11 28.5	-0.8
DAMV	Damavand	6.38	321	*e*PN	Pn	09 11 30.0	-0.4
IAFJ	Afjeh	6.69	321	Sn	Sn	09 12 44.2	-7.6
IRAZ	Razeghan	7.47	310	Pn	Pn	09 11 43.9	-1.7
IRAZ				Lg		09 13 44.7	
MALT	Malatya	16.98	301	P	P	09 13 54.5	+1.5
MALT				pmax	pmax		
	comp=Z,9.0nm,1.3s						
MALT	Malatya	16.98	301	P	P	09 13 54.5	+1.5
	comp=Z,8.6nm,1.3s						
MALT	Malatya	16.98	301	P	P	09 13 54.5	+1.5
	comp=Z,8.6nm,1.3s						
ASF	Jabal al Asfar	17.14	280	P	P	09 13 53.5	-1.6
	comp=Z,0.3nm,0.3s,baz=300,slow=8.6,SNR=2.5						
AAK	Ala-Archa	18.37	45	P	P	09 14 08.2	-2.1
AAK				pmax	pmax		
	comp=Z,16nm,1.8s						
AAK	Ala-Archa	18.37	45	P	P	09 14 08.2	-2.1
	comp=Z,16nm,1.8s						
BVAR	Borovoye Array	24.32	20	P	P	09 15 11.7	-0.7
	comp=Z,1.4nm,0.6s,mb3.6,baz=188,slow=10,SNR=5.3						
KURK	Kurchatov	25.67	33	P	P	09 15 25.3	0.0
AKASG	Malin Array Be	28.66	322	P	P	09 15 51.2	-1.5
	comp=Z,0.4nm,0.3s,mb3.6,baz=123,slow=8.0,SNR=6.2						
ZAL	Zalesovo	30.64	33	P	P	09 16 09.9	-0.4
	comp=Z,1.2nm,0.9s,mb3.7,baz=225,slow=12,SNR=5.0						
FINES	FINESS Array B	36.73	336	P	P	09 17 02.9	+0.1
	comp=Z,1.2nm,0.8s,mb3.8,baz=169,slow=7.1,SNR=3.0						
GERES	GERESS Array B	37.21	312	P	P	09 17 06.4	-0.6
	comp=Z,1.1nm,0.9s,mb3.7,baz=101,slow=6.8,SNR=6.3						
SONM	Songino Array	41.16	51	P	P	09 17 41.2	+1.4
	comp=Z,0.5nm,0.8s,mb3.2,baz=258,slow=11,SNR=3.8						
ARCES	ARCESS Array B	42.71	344	LR	LR	09 37 11.9	
	comp=Z,2.4nm,20.8s,baz=328,slow=38						
MATP	Matopo	57.76	212	P	P	09 19 46.0	-1.6
	comp=Z,2.7nm,0.7s,mb4.4,baz=23,slow=9.7,SNR=7.8						
ILAR	Eielson Array	82.98	10	P	P	09 22 19.3	-0.6
	comp=Z,0.5nm,0.7s,mb3.7,baz=325,slow=4.3,SNR=7.1						
YKA	Yellowknife Ar	86.82	356	P	P	09 22 39.4	+0.3
	comp=Z,0.6nm,0.7s,mb4.0,baz=0.6,slow=5.0,SNR=22						
WRA	Warramunga Arr	89.78	113	P	P	09 22 53.3	-1.0
	comp=Z,0.2nm,0.8s,mb3.5,baz=318,slow=3.7,SNR=4.2						
ASAR	Alice Springs	91.45	117	P	P	09 23 01.1	-0.8
	comp=Z,0.6nm,0.9s,mb3.9,baz=297,slow=4.0,SNR=4.3						

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*BJI **26** 09:34:07.6, 2.51N×95.74E, h28km, mB5.0, mb4.8, Ms4.6, Msz4.4*

*NEIC **26** 09:34:09.8±0.4, 2.61N×95.52E, mb4.8/17, Error ellipse: s-maj=9.7km s-min=6.3km az=54.0*

*MOS **26** 09:34:09.8±1.9, 2.78N×96.06E, h33km, mb5.1/21, MS3.8/4, Error ellipse: s-maj=14.6km s-min=7.5km az=100.2*

*IDC **26** 09:34:09.4±0.5, 2.65N×95.56E, h24km±2km, mb4.2/14, mb1 4.4/15, mb1mx4.3/20, mbtmp4.4/15, ML4.7/1, MS3.6/3, Ms1 3.7/3, ms1mx3.2/19, Error ellipse: s-maj=19.2km s-min=10.3km az=46.0*

ISC 26 09:34:07.9±0.4**, 2.62N**±0.05×**95.59E**±0.06**, h26km, h26km**±1.1km**:pP-P, n94, σ1^{s}07**/96**, mb4.7**/53**, MS4.0**/12**, 3C-5D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.71	62	*e*P	Pn	09 35 34.4	+1.2
KSM	Kuching	14.75	94	*e*P	P	09 37 41.1	+4.1
CM31	Chiang Mai Arr	16.08	12	*e*P	P	09 37 56.6	+2.4
	16nm,0.6s						
CMAR	Chiang Mai Arr	16.08	12	*i* P	P	09 37 53.9	-0.3
CMAR				pmax	pmax		
	comp=Z,28nm,0.8s						
CMAR	Chiang Mai Arr	16.08	12	Pn	P	09 37 52.3	-1.9
	comp=Z,1.0nm,0.3s,baz=201,slow=11,SNR=38						
CMAR				LR	LR	09 43 43.1	
	comp=Z,146nm,20.4s,baz=200,slow=36						
KKM	Kota Kinabalu	20.84	80	*e*P	P	09 38 51.2	+0.8
QIZ	Qiongzhong	21.46	40	P	P	09 38 56.8	+0.1
HYB	Hyderabad	22.27	312	*e*P	P	09 39 08.0	+3.2
HYB	Hyderabad	22.27	312	*i* P	P	09 39 08.0	+3.2
KMI	Kunming	23.42	16	P	P	09 39 17.3	+1.3
KMI				AP		09 39 25.5	
KMI				XP		09 39 29.5	
KMI				AMB	AMB		
	comp=Z,38nm,1.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,292nm,3.8s						
KMI				LR	LR		
	comp=N,759nm,12.9s,MS4.4						
KMI				LR	LR		
	comp=E,371nm,12.5s,MS4.4						
KMI				LR	LR		
	comp=Z,839nm,14.6s,MS4.3						
KMI	Kunming	23.42	16	P	P	09 39 17.2	+1.2
KMI				*PP		09 39 25.5	
KMI				*SP		09 39 29.5	
KMI						09 40 00.3	
KMI				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.8						
KMI				MLR	MLR		
	comp=Z,840nm,14.6s,MS4.3						
KMI	Kunming	23.42	16	P	P	09 39 17.2	+1.2
	comp=Z,38nm,1.0s,mb4.8						
KMI				pP		09 39 25.5	
KMI				sP		09 39 29.5	
KMI				PP	PP	09 40 00.3	+12
KMI				S	S	09 43 40.2	+16
KMI				sS		09 43 53.9	
KMI				SS	SS	09 44 40.6	+29
KMI				LR	LR		
	comp=Z,840nm,14.6s,MS4.3						
JIRN	Jiri	26.48	341	*e*P	P	09 39 45.5	+0.4
	comp=Z,50nm,0.8s,mb5.1						
PKI	Pulchoki	26.66	340	*e*P	P	09 39 47.5	+0.8
	comp=Z,47nm,1.0s,mb5.0						
DMN	Daman	26.80	339	*e*P	P	09 39 49.1	+1.1
	comp=Z,15nm,0.7s,mb4.7						
GUN	Gumba	26.81	341	*e*P	P	09 39 48.4	+0.3
	comp=Z,49nm,0.6s,mb5.2						
KKN	Kakani	26.90	339	*e*P	P	09 39 48.8	-0.2
	comp=Z,30nm,0.8s,mb4.9						
LSA	Lhasa	27.27	352	P	P	09 39 52.8	+0.5
LSA				AP	pP	09 40 04.3	+4.4
LSA				*e*S	S	09 44 24.5	-3.6
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
LSA				LR	LR		
	comp=N,70nm,16.0s						
LSA				LR	LR		
	comp=E,190nm,22.0s						
LSA				LR	LR		
	comp=Z,240nm,20.0s,MS3.8						
LSA	Lhasa	27.27	352	*e*P	P	09 39 52.5	+0.2
LSA				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.8						
LSA	Lhasa	27.27	352	*e*P	P	09 39 52.5	+0.2
	comp=Z,21nm,0.7s,mb4.8						
GKN	Gorkha	27.33	339	*e*P	P	09 39 52.8	0.0
	comp=Z,96nm,1.0s,mb5.3						
KOLN	Koldanda	27.51	337	*e*P	P	09 39 54.5	0.0
	comp=Z,47nm,0.8s,mb5.2						
CD2	Chengdu	29.18	15	P	P	09 40 08.5	-1.1
CD2				AMB	AMB		
	comp=Z,33nm,0.8s,mb5.1						
ENH	Enshi	30.50	24	*e*P	P	09 40 18.8	-2.4
	comp=Z,20nm,0.9s,mb4.8						
WHN	Wuhan	32.97	31	⇓P	P	09 40 43.0	+0.1
XAN	Xi'an	33.65	20	P	P	09 40 47.8	-1.0
XAN				AP	pP	09 40 54.0	-2.6
XAN				AMB	AMB		
	comp=Z,69nm,0.8s,mb5.6						
LZH	Lanzhou	34.17	12	*e*P	P	09 40 52.5	-0.8
LZH				AP	pP	09 41 00.0	-1.0
LZH				XP	sP	09 41 02.8	-1.6
LZH				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.2						
LZH				AMB	AMB		
	comp=Z,126nm,5.5s						
LZH	Lanzhou	34.17	12	*e*P	P	09 40 52.5	-0.8
LZH				*SP	sP	09 41 02.7	-1.7
LZH				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
LZH	Lanzhou	34.17	12	*e*P	P	09 40 52.5	-0.8
	comp=Z,40nm,1.3s,mb5.2						
LZH				pP	pP	09 40 59.9	-1.1
LZH				sP	sP	09 41 02.7	-1.7
FITZ	Fitzroy Crossi	36.06	126	*e*P	P	09 41 09.4	-0.1
	comp=Z,6.0nm,0.9s,mb4.5						
NJ2	Nanjing	36.56	34	*e*P	P	09 41 08.8	-4.8
NJ2				XS		09 47 13.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,820nm,3.8s						
NJ2				LR	LR		
	comp=N,480nm,12.7s,MS4.7						
NJ2				LR	LR		
	comp=E,740nm,12.8s,MS4.7						
NJ2				LR	LR		
	comp=Z,830nm,14.4s,MS4.7						
GTA	Gaotai	36.83	5	*e*P	P	09 41 15.5	-0.3
GTA				AP	pP	09 41 23.3	-0.3
GTA				XP	sP	09 41 27.0	+0.1
GTA				AMB	AMB		
	comp=Z,16nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,59nm,5.3s						
GTA				LR	LR		
	comp=N,175nm,14.1s,MS4.1						
GTA				LR	LR		
	comp=E,136nm,14.5s,MS4.1						
GTA				LR	LR		
	comp=Z,219nm,12.2s,MS4.2						
KAKA	Kakadu	39.63	113	*e*P	P	09 41 39.2	-0.3
	comp=Z,3.5nm,0.6s,mb4.3						
HHC	Hu-ho-hao-te	40.70	19	⇑P	P	09 41 49.5	+1.4
HHC				AP	pP	09 41 59.0	+3.1
HHC				XP	sP	09 42 03.5	+4.3
HHC				PP	PP	09 43 27.0	+1.9
HHC				PCP	PcP	09 43 52.3	+2.3
HHC				SCP		09 47 35.5	
HHC				S	S	09 47 56.3	-0.2
HHC				XS		09 48 11.5	
HHC				SS	SS	09 50 54.3	+1.7
HHC				SCS	ScS	09 51 48.0	-1.6
HHC				AMB	AMB		
	comp=Z,23nm,1.6s,mb4.6						
HHC				AMB	AMB		
	comp=Z,144nm,8.8s						
HHC				LR	LR		
	comp=N,188nm,16.5s,MS4.4						
HHC				LR	LR		
	comp=E,472nm,18.7s,MS4.4						
HHC				LR	LR		
	comp=Z,108nm,15.4s,MS3.8						

WMQ	Urumqi	41.62	351	P	P	09 41 57.0	+1.4
WMQ				XP	sP	09 42 11.0	+4.3
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.4						
WMQ				LR	LR		
	comp=N,58nm,20.0s,MS3.8						
WMQ				LR	LR		
	comp=E,134nm,21.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,65nm,20.0s,MS3.5						
BJT	Baijiatuau	41.65	24	*e*P	P	09 41 55.9	0.0
BJT				pmax	pmax		
	comp=Z,23nm,0.7s						
BJT	Baijiatuau	41.65	24	*e*P	P	09 41 55.9	0.0
	comp=Z,23nm,0.7s,mb4.9						
BJI	Beijing	41.67	24	*e*P	P	09 41 58.0	+1.9
BJI				AMB	AMB		
	comp=Z,35nm,0.7s,mb5.1						
BJI				LR	LR		
	comp=Z,56nm,21.3s,MS3.4						
BJI	Beijing	41.67	24	*e*P	P	09 41 58.0	+1.9
	comp=Z,35nm,0.7s,mb5.1						
BJI				S	S	09 48 23.9	+13
BJI				LR	LR		
	comp=Z,60nm,21.3s,MS3.4						
ULHL	Ulahol	43.09	339	P	P	09 42 08.2	+0.5
	SNR=8.5						
UCH	Uchtor	43.72	337	P	P	09 42 14.2	+1.4
	SNR=12						
TKM2	Tokmak 2	43.92	339	P	P	09 42 15.1	+0.8
	SNR=7.2						
AML	Almayashu	43.96	336	P	P	09 42 16.0	+1.3
	SNR=19						
AAK	Ala-Archa	44.08	338	*i* P	P	09 42 17.4	+1.7
AAK				pmax	pmax		
	comp=Z,12nm,2.0s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.8						
AAK	Ala-Archa	44.08	338	*e*P	P	09 42 15.7	0.0
	comp=Z,10.0nm,0.9s,mb4.5						
WRA	Warramunga Arr	44.15	122	P	P	09 42 16.8	+0.2
	comp=Z,7.2nm,0.7s,mb4.5,baz=299,slow=9.4,SNR=53						
WRA				pP	pP	09 42 24.3	-0.1
	comp=Z,6.0nm,0.7s,baz=301,slow=8.9,SNR=20						
WRAB	Tennant Creek	44.15	122	*e*P	P	09 42 17.2	+0.6
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
WRAB	Tennant Creek	44.15	122	*e*P	P	09 42 17.2	+0.7
	comp=Z,9.8nm,0.9s,mb4.5						
WB2	Warramunga Arr	44.16	122⇑	*i*P	P	09 42 17.1	+0.5
EKS2	Erkin-Say	44.38	337	P	P	09 42 18.9	+0.7
	SNR=9.7						
USP	Ospenovka	44.62	338	P	P	09 42 20.6	+0.6
	SNR=18						
MKAR	Makanchi Array	45.50	347	*i* P	P	09 42 27.1	+0.1
MKAR				pmax	pmax		
	comp=Z,24nm,0.7s						
ASPA	Alice Springs	45.52	127	*e*P	P	09 42 28.5	+1.0
ASAR	Alice Springs	45.53	127	P	P	09 42 28.1	+0.6
	comp=Z,3.7nm,0.8s,mb4.3,baz=299,slow=7.9,SNR=32						
ASAR				pP	pP	09 42 34.9	-0.5
	comp=Z,3.4nm,0.7s,baz=304,slow=7.4,SNR=18						
ASAR				PcP	PcP	09 44 06.8	+0.4
	comp=Z,0.6nm,0.7s,baz=304,slow=3.3,SNR=3.8						
ASAR				pPcP		09 44 14.2	
	comp=Z,1.5nm,0.9s,baz=309,slow=3.2,SNR=4.9						
SONM	Songino Array	46.00	10	P	P	09 42 31.0	0.0
	comp=Z,3.8nm,0.6s,mb4.5,baz=190,slow=9.4,SNR=41						
SONM				PcP	PcP	09 44 08.2	+0.4
	comp=Z,1.7nm,0.6s,baz=194,slow=3.3,SNR=6.7						
SONM				pPcP		09 44 15.9	
	comp=Z,3.6nm,0.8s,baz=192,slow=3.3,SNR=7.6						
ZAK	Zakamensk	48.04	7	*e*P	P	09 42 46.9	-0.1
ZAK				*e*		09 44 20.2	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
CN2	Changchun	48.81	29	*e*P	P	09 42 52.3	-0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				LR	LR		
	comp=N,300nm,14.0s,MS4.7						
CN2				LR	LR		
	comp=E,400nm,14.0s,MS4.7						
CN2				LR	LR		
	comp=Z,300nm,15.0s,MS4.4						
KURK	Kurchatov	50.03	346	*e*P	P	09 43 02.0	-0.3
KURK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
KURK	Kurchatov	50.03	346	*e*P	P	09 43 02.0	-0.3
	comp=Z,18nm,0.9s,mb5.1						
HIA	Hailar	50.85	20	P	P	09 43 05.1	-3.4
HIA				pmax	pmax		
	comp=Z,4.0nm,0.3s						
HIA	Hailar	50.85	20	P	P	09 43 05.1	-3.4
	comp=Z,4.1nm,0.3s,mb4.8						
ZAL	Zalesovo	51.92	352	P	P	09 43 16.4	-0.2
	comp=Z,9.8nm,0.7s,mb4.8,baz=299,slow=6.9,SNR=49						
ZAL				pP	pP	09 43 23.9	-0.6
	comp=Z,12nm,0.6s,baz=304,slow=6.7,SNR=18						
NVS	Novosibirsk	53.03	351	*e*P	P	09 43 23.2	-1.7
NVS				*e*S	S	09 50 49.9	-1.4
NVS				pmax	pmax		
	comp=N,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
NVS				smax			
	comp=N,13nm,2.2s						
NVS				smax			
	comp=E,5.0nm,1.1s						
BVA0	Borovoye Array	54.40	342	P	P	09 43 34.1	-0.8
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BVAR	Borovoye Array	54.40	342	P	P	09 43 34.0	-0.9
	comp=Z,9.3nm,0.6s,mb4.9,baz=144,slow=9.2,SNR=62						
BVAR				pP	pP	09 43 41.1	-1.8
	comp=Z,13nm,0.7s,baz=135,slow=8.2,SNR=24						
CTA	Charters Tower	54.57	117	P	P	09 43 35.6	-1.0
	comp=Z,6.6nm,0.8s,mb4.7,baz=253,slow=6.0,SNR=5.3						
CTA				pP	pP	09 43 43.8	-0.9
	comp=Z,7.7nm,0.8s,baz=348,slow=2.6,SNR=3.6						
CHKZ	Chkalovo	54.89	342	*e*P	P	09 43 37.9	-0.6
CHKZ				*e**PP	pP	09 43 44.8	-1.8
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CHKZ	Chkalovo	54.89	342	*e*P	P	09 43 37.9	-0.6
	comp=Z,10.0nm,0.6s,mb5.0						
CHKZ				*e*pP	pP	09 43 44.8	-1.8
STKA	Stephens Creek	55.49	132	*e*P	P	09 43 44.2	+1.0
	comp=Z,4.4nm,0.9s,mb4.5						
STKA	Stephens Creek	55.49	132	P	P	09 43 42.5	-0.7
	comp=Z,3.1nm,0.8s,mb4.4,baz=337,slow=4.9,SNR=5.6						
STKA				pP	pP	09 43 50.3	-1.0
	comp=Z,6.1nm,0.9s,baz=320,slow=8.3,SNR=5.8						
KLR	Kul'dur	55.74	28	*e*P	P	09 43 41.4	-3.4
BOD	Bodaibo	56.94	12	*e*P	P	09 43 52.7	-0.6
BOD				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
KMBO	Kilima Mbogo	58.44	267	P	P	09 44 02.2	-2.1
	comp=Z,1.3nm,0.8s,mb4.0,baz=54,slow=21,SNR=3.1						
KMBO				pP	pP	09 44 12.9	+0.4
	comp=Z,5.1nm,1.2s,baz=63,slow=20,SNR=4.0						
GNI	Garni	59.16	316⇓	*e*P	P	09 44 15.1	+6.0
GNI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GNI	Garni	59.16	316	LR	LR	10 11 22.3	
	comp=Z,36nm,18.5s,MS3.5,baz=348,slow=38						
YSS	Yuzh-Sakhalins	60.12	35⇓	*i*P	P	09 44 10.0	-5.5
YSS				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
KIV	Kislovodsk	62.19	319⇑	*i*P	P	09 44 34.8	+5.2
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
ASF	Jabal al Asfar	62.34	305	P	P	09 44 31.8	+1.1
	comp=Z,0.8nm,0.3s,mb4.3,baz=355,slow=4.0,SNR=1.7						
ASF				pP	pP	09 44 39.2	+0.3
	comp=Z,2.7nm,0.7s,baz=345,slow=7.6,SNR=3.3						
SOC	Sochi	64.00	318	*e*P	P	09 44 45.5	+3.9
SOC				*e*		09 45 19.0	
SOC				*e*		09 47 07.1	
SOC				*e*S	S	09 53 16.3	+1.9
SOC				*e*		09 54 29.6	
SOC				*e*SSS	SSS	10 00 20.6	+7.1
SOC				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.4						
SOC				pmax	pmax		
	comp=N,23nm,0.9s						
SOC				pmax	pmax		
	comp=E,31nm,1.1s						
YAK	Yakutsk	64.53	17*d*	*i*P	P	09 44 43.5	-1.2
YAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
MATP	Matopo	69.57	247	P	P	09 45 17.1	-0.1
	comp=Z,1.8nm,0.7s,mb4.1,baz=71,slow=5.4,SNR=5.5						
MATP				LR	LR	10 12 22.0	
	comp=Z,71nm,18.3s,MS4.0,baz=28,slow=33						
OBN	Obninsk	70.58	329	*e*P	P	09 45 27.3	+4.5
OBN				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.9						
MA2	Magadan	70.77	26	*e*P	P	09 45 22.5	-1.4
MA2				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
TIXI	Tiksi	72.09	11	*e*P	P	09 45 29.8	-1.8
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,71nm,16.0s,MS4.0						
LBTB	Lobatse	73.08	243	*e*P	P	09 45 38.3	0.0
LBTB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LBTB	Lobatse	73.08	243	P	P	09 45 38.3	0.0
	comp=Z,3.5nm,0.8s,mb4.3,baz=84,slow=4.7,SNR=4.8						
LBTB	Lobatse	73.08	243	*e*P	P	09 45 38.3	0.0
	comp=Z,3.6nm,0.8s,mb4.3						
AKASG	Malin Array Be	73.16	323	P	P	09 45 37.2	-1.0
	comp=Z,0.2nm,0.3s,mb3.5,baz=146,slow=22,SNR=5.2						
AKASG				pP	pP	09 45 44.3	-2.2
	comp=Z,1.2nm,0.5s,baz=96,slow=4.4,SNR=5.7						
FINES	FINESS Array B	78.01	333	P	P	09 46 04.0	-1.5
	comp=Z,2.0nm,0.9s,mb4.0,baz=342,slow=12,SNR=4.5						
FINES				pP	pP	09 46 13.2	-0.6
	comp=Z,2.2nm,0.6s,baz=104,slow=7.9,SNR=5.3						
ARCES	ARCESS Array B	80.67	340	P	P	09 46 18.2	-1.6
	comp=Z,6.1nm,0.9s,mb4.5,slow=2.4,SNR=5.0						
ARCES				pP	pP	09 46 27.7	-0.4
	comp=Z,6.5nm,0.9s,baz=79,slow=6.2,SNR=2.5						
SYO	Syowa Base	80.85	198	⇓X		09 46 17.0	
GERES	GERESS Array B	82.69	319	P	P	09 46 31.4	+0.7
	comp=Z,0.2nm,0.3s,mb3.6,baz=124,slow=4.8,SNR=3.8						
GERES				pP	pP	09 46 39.0	-0.1
	comp=Z,1.4nm,0.8s,baz=108,slow=4.2,SNR=6.8						
HFS	Hagfors	83.70	330	pP	pP	09 46 43.5	-0.5
	comp=Z,5.0nm,0.9s,baz=104,slow=6.1,SNR=3.3						
YKA	Yellowknife Ar	111.15	14	PP	PP	09 53 20.8	-1.9
	comp=Z,0.3nm,0.9s,baz=322,slow=9.0,SNR=5.2						

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*CASC **26** 09:46:15.0±1.9, 14.07N×91.79W, h70^{km}, MD4.9, ML5.2, mb4.6(NEIC)*

*IDC **26** 09:46:15.8±0.6, 14.33N×91.25W, h60^{km}±4^{km}, mb4.2/13, mb1 4.4/16, mb1mx4.2/23, mbtmp4.5/16, MS3.7/16, Ms1 3.7/16, ms1mx3.5/24, Error ellipse: s-maj=24.5km s-min=13.5km az=62.0*

*NEIC **26** 09:46:16.3±0.3, 14.19N×91.40W, mb4.6/47, Error ellipse: s-maj=7.8km s-min=5.5km az=42.0*

NEIC Felt at Guatemala, Palencia and Quetzaltenango.

*MEX **26** 09:46:21.7±1.2, 14.42N×92.08W, h127^{km}±35^{km}, MD4.8*

ISC 26 09:46:15.1±0.2**, 14.18N**±0.03×**91.71W**±0.03**, h66**^{km}**, h66**^{km}±2.4^{km}**:pP-P, n192,** σ1^{s}**27**/194**, mb4.5**/47**, 9C-13D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.16	28⇓	*e*P	P	09 46 26.1	+1.1
JAT				*e*S	S	09 46 35.5	+3.1
FUG	Fuego 3	0.88	72⇑	*i*P	P	09 46 32.7	+0.6
PCG	Pacaya	1.09	79⇑	*e*P	P	09 46 35.8	+0.9
IXG	Ixpaco	1.22	90⇑	*e*P	P	09 46 36.4	-0.2
IXG				*e*S	S	09 46 55.2	+2.6
IXG				AML	AML	09 46 55.7	
	comp=E,184μm,0.3s						
NBG	Las Nubes	1.38	73⇑	*e*P	P	09 46 40.8	+1.8
NBG				*e*S	S	09 47 02.0	+5.4
RBDL	Robledal	1.97	92⇓	*e*P	P	09 46 47.6	+0.8
RTR	El Retiro	2.02	98⇓	*e*P	P	09 46 48.1	+0.5
SBLS	San Blas	2.06	99⇓	*e*P	P	09 46 48.1	0.0
SNJE	San Jose	2.07	98⇓	*e*P	P	09 46 48.5	+0.3
SNJE				*e*S	S	09 47 17.1	+4.3
CCIG	Comitan	2.13	349⇑	*i*P	P	09 46 52.7	+3.5
CCIG				*i* S	S	09 47 16.3	+1.9
MTO2	Montecristo 2	2.29	84	*e*P	P	09 46 51.4	0.0
BOQS	Boqueron	2.40	100⇓	*e*P	P	09 46 53.2	+0.2
BOQS				*e*S	S	09 47 21.7	+0.5
SNET	Serv Nac Est T	2.46	101	*e*P	P	09 46 53.8	0.0
SNET				*e*S	S	09 47 23.4	+0.7
SNET				*i*		09 47 26.4	
	comp=Z,8μm,0.3s						
LFU	La Fuente	2.56	99⇓	*e*P	P	09 46 55.8	+0.6
LFU				*e*S	S	09 47 28.5	+3.3
LBRS	Las Brisas	2.63	99⇑	*e*P	P	09 46 56.2	0.0
LFRS	El Faro	2.63	102⇓	*e*P	P	09 46 56.0	-0.2
SCX	San Cristobal	2.69	341	*e*P	P	09 47 00.0	+2.9
SCX				*e*S	S	09 47 30.5	+1.9
LCBS	La Ceiba	2.71	101⇓	*e*P	P	09 46 57.1	-0.2
SNVI	San Vicente	2.85	101	*e*P	P	09 46 59.4	+0.1
SNVI				*e*S	S	09 47 34.8	+2.3
VSM	San Miguel	3.42	102⇓	*e*P	P	09 47 07.2	-0.1
CAHU	Cacacuatique	3.42	96⇓	*e*P	P	09 47 07.0	-0.4
CAHU				*e*S	S	09 47 47.4	+0.5
BLLM	Bellamira	3.45	102	*e*P	P	09 47 07.5	-0.3
CNCH	Conchagua	3.87	103⇑	*e*P	P	09 47 13.2	-0.5
CNCH				*e*S	S	09 47 56.9	-1.3
HUIG	Huatulco	4.53	291	*i* P	P	09 47 20.4	-2.5
HUIG				*e*S	S	09 48 07.2	-7.6
HUIG	Huatulco	4.53	291	*i* P	P	09 47 20.4	-2.5
HUIG				*i* S	S	09 48 07.5	-7.3
TUIG	Tuzandepetl	4.63	326	*e*P	P	09 47 24.1	-0.2
TUIG				*e*S	S	09 48 16.4	-0.9
TUIG	Tuzandepetl	4.63	326	*e*P	P	09 47 23.3	-1.0
TUIG				*i* S	S	09 48 12.8	-4.5
CRIN	San Cristobal	4.77	107	*e*P	P	09 47 28.5	+2.3
SCIG		4.79	6⇑	*i*P	P	09 47 26.9	+0.5
SCIG				*i* S	S	09 48 20.6	-0.6
LEON	Leon	5.01	110	*e*P	P	09 47 29.1	-0.4
CNGN	Cerro Negro	5.16	108	*e*P	P	09 47 33.2	+1.7
CNGN				*e*S	S	09 48 32.4	+2.0
MIRN	Miramar	5.17	109	*e*P	P	09 47 31.3	-0.3
MOMJ	Momotombo	5.33	109	*e*P	P	09 47 33.6	-0.3
MOMJ				*e*S	S	09 48 33.9	-0.9
XAVN	Gruta Xavier	5.62	110	*e*P	P	09 47 37.2	-0.7
OXX	Oaxaca	5.62	302	*e*P	P	09 47 38.0	0.0
OXX				*e*S	S	09 48 37.0	-5.0
VHO	Vista Hermosa	5.63	301	*e*P	P	09 47 38.2	+0.2
VHO				*e*S	S	09 48 37.1	-5.0
VHO	Vista Hermosa	5.63	301	*e*P	P	09 47 36.2	-1.8
VHO				*i* S	S	09 48 35.9	-6.2
MGAN	Managua	5.69	110	*e*P	P	09 47 39.5	+0.6
PYTN	Playitas	5.74	106	*e*P	P	09 47 38.9	-0.7
WILN	Americas 2	5.74	110	*e*P	P	09 47 39.6	0.0
TICN	Ticuantepe	5.75	111	*e*P	P	09 47 40.6	+0.9
TICN				*e*S	S	09 48 41.8	-3.3
APON	Apoyo	5.94	112	*e*P	P	09 47 41.9	-0.5
CONN	Concepcion	6.48	113	*e*P	P	09 47 51.6	+1.7
TEIG	Tepich	6.85	28	*e*P	P	09 47 54.6	-0.5
	comp=Z,320nm,0.3s						
VCR	Vista de Mar	7.18	123⇓	*e*P	P	09 47 58.4	-1.3
IISM	Ciudad Serdan	7.24	312	*e*P	P	09 48 00.0	-0.4
JTS	JuntasAbangare	7.65	120	P	P	09 48 04.3	-1.9
	comp=Z,3.1nm,0.3s,baz=317,slow=17,SNR=23						
JTS				S	S	09 49 31.2	-1.0
	comp=Z,3.6nm,0.3s,baz=309,slow=18,SNR=2.1						
JTS	JuntasAbangare	7.65	120	*e*P	P	09 48 04.1	-2.1
	comp=Z,27nm,0.7s						
IIB	San Bernardino	7.94	308	*e*P	P	09 48 13.0	+2.9
CGA2	Cerro Gallo 2	8.21	119	*e*P	P	09 48 14.8	+1.0
PPM	Popocatepetl	8.22	307	*e*P	P	09 48 15.5	+1.6
PPM				*i* P		09 48 15.6	
PPM				*i* S	S	09 49 41.0	-5.2
VPS2	Volcan Poas 2	8.31	118	*e*P	P	09 48 15.2	0.0
ACX	Acapulco	8.35	290	*e*P	P	09 48 13.5	-2.2
PRS1	Puriscal	8.35	119	*e*P	P	09 48 15.8	0.0
PRS1				*e*S	S	09 49 50.1	+0.6
YAIG	Yautepec	8.45	304	*i* P	P	09 48 17.8	+0.7
YAIG				*i* S	S	09 49 43.6	-8.3
PLIG	Platanillo	8.57	300	*e*P	P	09 48 20.6	+1.8
PLIG				*e*S	S	09 49 58.2	+3.2
PLIG	Platanillo	8.57	300	*e*P	P	09 48 19.3	+0.5
PLIG				*e*S	S	09 49 49.2	-5.7
LAJ	Bijagual	8.57	119	*e*P	P	09 48 14.6	-4.2
SJS	Escuela Geolog	8.59	119	*e*P	P	09 48 21.0	+1.9
TRTC	Tortuguero	8.60	114	*e*P	P	09 48 17.1	-1.9
LCR2	La Lucha 2	8.74	119	*e*P	P	09 48 20.2	-0.8
ICR	Volcan Irazu	8.76	118	*e*P	P	09 48 20.7	-0.7
UNM	Universidad Na	8.79	307	*e*P	P	09 48 20.0	-1.8
BUS	Buena Vista	9.04	120⇑	*e*P	P	09 48 25.3	+0.2
ZIIG	Zihuatanejo	9.98	291	*i* P	P	09 48 38.1	0.0
ACR	Cerro Adams	10.01	122	*e*P	P	09 48 39.6	+1.0
MOIG	Morelia	10.59	302	*i* P	P	09 48 48.3	+1.9
HKT	Hockley	16.15	347	*e*P	P	09 50 01.4	+2.0
	comp=Z,38nm,1.7s						
DWPF	Disney	16.84	33	*e*P	P	09 50 11.2	+3.2
	comp=Z,94nm,0.9s						
NATX	Nacogdoches	17.71	352	*e*P	P	09 50 18.7	-0.1
	comp=Z,33nm,0.7s						
JCT	Junction City	17.85	337	*e*P	P	09 50 22.4	+1.8
	comp=Z,6.3nm,0.6s						
LTX	Lajitas	18.70	326	*e*P	P	09 50 31.9	+1.2
	comp=Z,19nm,1.0s						
TXAR	Lajitas Array	18.70	326	P	P	09 50 32.0	+1.3
	comp=Z,0.5nm,0.3s,baz=155,slow=11,SNR=122						
TXAR				PcP	PcP	09 54 55.4	-1.0
	comp=Z,0.2nm,0.3s,baz=158,slow=3.5,SNR=6.4						
TXAR				pPcP		09 55 14.5	
	comp=Z,0.1nm,0.3s,baz=180,slow=3.8,SNR=3.8						
TXAR				ScP		09 58 28.0	
	comp=Z,0.0nm,0.3s,baz=146,slow=3.3,SNR=12						
TXAR				LR	LR	09 58 45.4	
	comp=Z,74nm,20.2s,baz=190,slow=40						
TXAR				pScP		09 59 05.3	
	comp=Z,0.0nm,0.3s,baz=153,slow=8.4,SNR=3.4						
TXAR	Lajitas Array	18.70	326	P	P	09 50 32.0	+1.3
TXAR				PcP	PcP	09 54 55.4	-1.0
TXAR				pPcP		09 55 14.5	
TXAR				ScP		09 58 28.0	
TXAR				LR	LR	09 58 45.4	
TXAR				pScP		09 59 05.3	
LRAL	Lakeview Retre	19.25	12	*e*P	P	09 50 36.3	-0.6
	comp=Z,85nm,1.4s						
ROSC	El Rosal	19.47	117	P	P	09 50 39.7	+0.3
	comp=Z,1.3nm,0.3s,baz=104,slow=18,SNR=10						
MIAR	Mount Ida	20.35	356	*e*P	P	09 50 46.5	-2.0
	comp=Z,17nm,0.8s						
OXF	Oxford	20.35	5	*e*P	P	09 50 47.3	-1.2
	comp=Z,83nm,1.0s						
OXF				*e*		09 50 54.3	
UALR	University of	20.52	359	*e*P	P	09 50 48.8	-1.4
	comp=Z,14nm,0.4s						
UALR				*e*pP		09 51 05.8	
GOGA	Godfrey	20.56	20	*e*P	P	09 50 50.0	-0.8
	comp=Z,73nm,0.7s						
GOGA				*e*pP		09 51 07.2	
HBAR	Harrisburg	21.31	2	*e*P	P	09 50 57.4	-0.8
HBAR				pP		09 51 14.0	
SDV	Santo Domingo	21.31	102	P	P	09 50 54.3	-4.0
	comp=Z,5.8nm,0.3s,mb4.3,baz=311,slow=3.5,SNR=31						
SDV				LR	LR	09 59 51.1	
	comp=Z,77nm,19.6s,baz=310,slow=39						
SDV	Santo Domingo	21.31	102	*e*P	P	09 50 54.1	-4.2
	comp=Z,12nm,0.8s,mb4.3						
SDV				*e*pP		09 51 13.1	
WMOK	Wichita Mounta	21.44	344	*e*P	P	09 50 58.3	-1.3
	comp=Z,19nm,0.9s,mb4.4						
MNTX	Cornudas Mount	21.47	327	*e*P	P	09 51 00.2	+0.4
	comp=Z,22nm,0.7s,mb4.6						
NHSC	New Hope	21.57	27	*e*P	P	09 51 01.8	+0.9
	comp=Z,67nm,1.1s,mb4.9						
WVT	Waverly	22.13	8	*e*P	P	09 51 04.8	-1.6
	comp=Z,11nm,0.5s,mb4.5						
CPCT	Cooper Cave	22.15	16	*e*P	P	09 51 06.2	-0.3
UTMT	University of	22.22	6	*e*P	P	09 51 05.9	-1.3
	comp=Z,96nm,1.0s,mb5.1						
AMTX	Amarillo	22.49	338	*e*P	P	09 51 09.8	-0.1
	comp=Z,36nm,0.6s,mb4.9						
TZTN	Tazewell	23.44	17	*e*P	P	09 51 18.5	-0.6
TZTN				*e*pP		09 51 34.6	
TZTN				*e*sP		09 51 41.9	
FVM	French Village	23.74	3	*e*P	P	09 51 20.1	-1.9
	comp=Z,12nm,0.7s,mb4.3						
CCM	Cathedral Cave	23.78	1	*e*P	P	09 51 21.3	-1.1
	comp=Z,36nm,0.9s,mb4.7						
CCM				*e*pP		09 51 38.0	
USIN	University of	23.96	8	*e*P	P	09 51 23.8	-0.4
	comp=Z,27nm,0.6s,mb4.8						
USIN				*e*pP		09 51 39.2	
SLM	Saint Louis	24.39	3	*e*P	P	09 51 26.9	-1.6
	comp=Z,93nm,0.7s,mb5.2						
WCI	Wyandotte Cave	24.43	10	*e*P	P	09 51 27.2	-1.6
	comp=Z,27nm,0.6s,mb4.8						
ANMO	Albuquerque	24.59	330	P	P	09 51 32.1	+1.8
	comp=Z,4.4nm,0.6s,mb4.1,baz=145,slow=11,SNR=34						
ANMO				PcP	PcP	09 55 08.1	+0.2
	comp=Z,2.6nm,1.1s,baz=199,slow=6.1,SNR=3.5						
ANMO				pPcP		09 55 25.4	
	comp=Z,2.3nm,1.1s,baz=200,slow=7.6,SNR=2.7						
ANMO				ScP		09 58 43.0	
	comp=Z,1.9nm,0.8s,baz=198,slow=2.4,SNR=5.1						
ANMO	Albuquerque	24.59	330	*e*P	P	09 51 31.8	+1.5
	comp=Z,5.2nm,0.7s,mb4.1						
SJG	San Juan	24.85	78	LR	LR	10 00 33.6	
	comp=Z,125nm,21.0s,baz=266,slow=35						
ELN	Prospectdale	24.95	21	*e*P	P	09 51 32.8	-1.0
TUC	Tucson	25.08	319	*e*P	P	09 51 36.6	+1.5
	comp=Z,9.8nm,1.0s,mb4.2						
KSU1	Kansas State U	25.20	351	*e*P	P	09 51 35.2	-0.9
KSU1				*e*pP	pP	09 51 51.3	-0.4
FWV	Forest Hill	25.25	21	*e*P	P	09 51 34.9	-1.7
FWV				*e*pP	pP	09 51 51.2	-0.9
BLO	Bloomington	25.31	9	*e*P	P	09 51 34.7	-2.5
	comp=Z,13nm,0.6s,mb4.5						
BLO				*e*pP	pP	09 51 52.7	-0.1
SDCO	Great Sand Dun	26.48	335	*e*P	P	09 51 48.3	+0.2
	comp=Z,6.6nm,1.3s,mb3.9						
SDCO				*e*pP	pP	09 52 03.5	-0.3
ACSO	Alum Creek Sta	27.06	15	*e*P	P	09 51 50.4	-2.9
ACSO				*e*pP	pP	09 52 07.2	-1.9
WUAZ	Wupatki	27.64	324	*e*P	P	09 52 00.1	+1.4
	comp=Z,149nm,1.0s,mb5.5						
PV10	Paradox Valley	28.57	331	*e*P	P	09 52 07.4	+0.4
LDFC	Landfair	29.62	319	*e*P	P	09 52 18.4	+2.0
MSU	Marysvale	30.25	327	*e*P	P	09 52 23.3	+1.3
ARUT	Antelope Range	30.42	325	*e*P	P	09 52 24.4	+1.0
MPU	Maple Canyon	31.11	330	*e*P	P	09 52 29.7	+0.2
DAU	Daniels Canyon	31.23	330	*e*P	P	09 52 31.8	+1.3
DUG	Dugway	31.83	328	*e*P	P	09 52 36.8	+1.0
	comp=Z,49nm,0.9s,mb5.2						
HWUT	Hardware Ranch	32.31	332	*e*P	P	09 52 41.1	+1.2
	comp=Z,3.4nm,0.7s,mb4.2						
SADO	Sadowa	32.31	17	P	P	09 52 37.1	-2.8
	comp=Z,7.6nm,0.7s,mb4.5,baz=224,slow=6.8,SNR=7.0						
SADO				LR	LR	10 06 36.1	
	comp=Z,249nm,19.9s,baz=24,slow=38						
PDAR	Pinedale Array	32.38	335	P	P	09 52 39.3	-1.2
	comp=Z,0.9nm,0.6s,mb3.7,baz=128,slow=7.6,SNR=11						
PDAR				PcP	PcP	09 55 26.6	-0.3
	comp=Z,1.3nm,0.7s,baz=153,slow=3.3,SNR=6.2						
PDAR				pPcP		09 55 43.9	
	comp=Z,3.1nm,1.0s,baz=144,slow=5.1,SNR=8.5						
PDAR				ScP		09 59 07.2	
	comp=Z,1.3nm,0.9s,baz=225,slow=2.1,SNR=8.5						
PDAR				pScP		09 59 41.4	
	comp=Z,1.6nm,1.1s,baz=146,slow=5.3,SNR=4.9						
PDAR				LR	LR	10 07 04.0	
	comp=Z,62nm,20.0s,baz=250,slow=38						
BGU	Big Grassy Mou	32.49	329	*e*P	P	09 52 41.5	0.0
AHID	Auburn Hatcher	33.02	333	*e*P	P	09 52 44.4	-1.8
	comp=Z,2.4nm,0.6s,mb4.2						
SNOW	Snow King Moun	33.44	334	*e*P	P	09 52 49.6	-0.2
ELK	Elko	33.49	327	PcP	PcP	09 55 30.1	0.0
	comp=Z,3.3nm,0.8s,baz=85,slow=1.1,SNR=9.4						
ELK				pPcP		09 55 48.6	
	comp=Z,1.5nm,0.6s,baz=202,slow=2.4,SNR=6.0						
ELK				ScP		09 59 11.4	
	comp=Z,1.3nm,0.7s,baz=107,slow=5.7,SNR=7.7						
ELK	Elko	33.49	327	*e*P	P	09 52 51.5	+1.3
	comp=Z,5.9nm,0.8s,mb4.5						
WUWY	Wally Ulrich	33.50	335	*e*P	P	09 52 50.0	-0.3
LOHW	Long Hollow	33.50	335	*e*P	P	09 52 49.7	-0.6
TPAW	Teton Pass	33.55	334	*e*P	P	09 52 50.3	-0.4
RRI2	Red Ridge	33.59	334	*e*P	P	09 52 51.0	0.0
MNV	Mina	33.62	321	*e*P	P	09 52 53.2	+1.8
	comp=Z,17nm,1.0s,mb4.8						

MNV				*e*pP	pP	09 53 09.5	+1.8
NVAR	**Mina Array Bea**	**33.71**	**321**	P	**P**	**09 52 53.9**	**+1.7**
	comp=Z,12nm,0.7s,mb4.8,baz=140,slow=7.6,SNR=72						
NVAR				pP	pP	09 53 07.8	-0.7
	comp=Z,27nm,1.0s,baz=124,slow=9.9,SNR=15						
NVAR				PcP	PcP	09 55 30.4	-0.3
	comp=Z,3.8nm,0.7s,baz=140,slow=3.3,SNR=10.0						
NVAR				pPcP		09 55 49.2	
	comp=Z,2.7nm,0.6s,baz=137,slow=2.1,SNR=6.8						
NVAR				ScP		09 59 11.7	
	comp=Z,1.7nm,0.9s,baz=124,slow=3.3,SNR=7.5						
NVAR				pScP		09 59 49.0	
	comp=Z,1.8nm,0.9s,baz=146,slow=3.8,SNR=7.0						
NVAR	**Mina Array Bea**	**33.71**	**321**	P	**P**	**09 52 53.9**	**+1.7**
NVAR				pP	pP	09 53 07.8	-0.7
NVAR				PcP	PcP	09 55 30.4	-0.3
NVAR				pPcP		09 55 49.2	
NVAR				ScP		09 59 11.7	
NVAR				pScP		09 59 49.0	
IMW	**Indian Meadow**	**33.88**	**335**	*e*P	**P**	**09 52 53.1**	**-0.4**
HLID	**Hailey**	**35.16**	**331**	*e*P	**P**	**09 53 04.8**	**+0.4**
	comp=Z,9.5nm,1.1s,mb4.5						
MCMT	**McKenzie Canyo**	**35.44**	**334**	*e*P	**P**	**09 53 07.5**	**+0.7**
BOZ	**Bozeman (W)**	**35.59**	**336**	*e*P	**P**	**09 53 07.3**	**-0.9**
	comp=Z,3.9nm,1.1s,mb4.2						
ULM	**Lac du Bonnet**	**36.13**	**355**	P	**P**	**09 53 10.0**	**-2.7**
	comp=Z,5.1nm,0.9s,mb4.5,baz=176,slow=6.9,SNR=7.0						
OHCM	**Honcut**	**36.24**	**319**	*e*P	**P**	**09 53 14.2**	**+0.6**
SAML	**Samuel**	**36.46**	**127**	*e*P	**P**	**09 53 12.0**	**-3.8**
	comp=Z,8.0nm,1.0s,mb4.6						
WVOR	**Wild Horse Val**	**36.50**	**326**	*e*P	**P**	**09 53 17.1**	**+1.3**
	comp=Z,21nm,1.1s,mb5.0						
MOD	**Modoc**	**37.09**	**324**	*e*P	**P**	**09 53 22.0**	**+1.3**
	comp=Z,9.3nm,1.1s,mb4.6						
BMO	**Blue Mountains**	**37.51**	**330**	*e*P	**P**	**09 53 24.3**	**+0.1**
	comp=Z,3.7nm,0.8s,mb4.3						
YBH	**Yreka Blue Hor**	**38.40**	**322**	PcP	PcP	09 55 43.8	-0.8
	comp=Z,1.2nm,0.8s,baz=88,slow=5.5,SNR=5.0						
IRO	**Indian Ridge**	**39.53**	**325**	P	**P**	**09 53 42.8**	**+1.7**
NEW	**Newport**	**39.96**	**333**	LR	LR	10 13 09.0	
	comp=Z,100nm,19.4s,baz=242,slow=40						
NEW	**Newport**	**39.96**	**333**	*e*P	**P**	**09 53 44.1**	**-0.5**
	comp=Z,2.7nm,0.7s,mb4.2						
OD2	**Odessa Site #2**	**40.02**	**331**	P	**P**	**09 53 45.9**	**+0.8**
KEBM	**Edson Butte**	**40.04**	**322**	*e*P	**P**	**09 53 47.4**	**+2.1**
EBG	**Ellensburg**	**40.57**	**329**	P	**P**	**09 53 51.3**	**+1.7**
WPW	**White Pass**	**40.91**	**328**	P	**P**	**09 53 54.1**	**+1.6**
CPW	**Capitol Peak**	**41.91**	**328**	P	**P**	**09 54 02.0**	**+1.3**
CMW	**Cultus Mountai**	**42.37**	**330**	P	**P**	**09 54 04.6**	**+0.2**
EDM	**Edmonton**	**42.56**	**341**	*e*P	**P**	**09 54 04.3**	**-1.6**
LVC	**Limon Verde**	**42.85**	**148**	P	**P**	**09 54 08.1**	**-0.5**
	comp=Z,2.4nm,0.8s,mb4.0,baz=266,slow=8.1,SNR=3.7						
PGC	**Sidney**	**43.18**	**329**	*e*P	**P**	**09 54 11.0**	**0.0**
	comp=Z,42nm,1.0s,mb5.1						
FCC	**Fort Churchill**	**44.54**	**358**	*e*P	**P**	**09 54 18.9**	**-2.9**
	comp=Z,7.7nm,0.7s,mb4.5						
SCHQ	**Schefferville**	**44.96**	**20**	P	**P**	**09 54 22.1**	**-3.1**
	comp=Z,19nm,0.8s,mb4.9,baz=214,slow=6.4,SNR=52						
SCHQ				LR	LR	10 14 09.7	
	comp=Z,302nm,20.2s,baz=194,slow=38						
SCHQ	**Schefferville**	**44.96**	**20**	*e*P	**P**	**09 54 21.7**	**-3.5**
	comp=Z,23nm,0.8s,mb5.0						
BBB	**Bella Bella**	**47.74**	**330**	LR	LR	10 18 25.4	
	comp=Z,61nm,18.2s,baz=340,slow=40						
YKA	**Yellowknife Ar**	**50.92**	**347**	P	**P**	**09 55 09.4**	**-2.1**
	comp=Z,4.3nm,0.6s,mb4.6,baz=148,slow=7.7,SNR=129						
YKA				pP	pP	09 55 25.8	-2.7
	comp=Z,2.5nm,0.6s,baz=149,slow=7.4,SNR=9.4						
YKA				PcP	PcP	09 56 27.5	+0.2
	comp=Z,2.5nm,0.8s,baz=154,slow=3.7,SNR=14						
YKA				pPcP		09 56 43.4	
	comp=Z,1.8nm,0.7s,baz=153,slow=3.8,SNR=8.6						
YKA				LR	LR	10 20 10.4	
	comp=Z,73nm,21.6s,baz=260,slow=40						
YKA	**Yellowknife Ar**	**50.92**	**347**	P	**P**	**09 55 09.4**	**-2.1**
YKA				pP	pP	09 55 25.8	-2.7
YKA				PcP	PcP	09 56 27.5	+0.2
YKA				pPcP		09 56 43.4	
YKA				LR	LR	10 20 10.4	
YKW3	**Yellowknife Ar**	**50.98**	**347**	*e*P	**P**	**09 55 09.7**	**-2.3**
BDFB	**Brasilia**	**52.38**	**123**	LR	LR	10 17 52.3	
	comp=Z,70nm,20.8s,baz=331,slow=36						
DLBC	**Dease Lake**	**52.60**	**336**	LR	LR	10 23 47.2	
	comp=Z,63nm,18.4s,baz=266,slow=43						
DLBC	**Dease Lake**	**52.60**	**336**	*e*P	**P**	**09 55 24.9**	**+0.7**
RKT	**Rikitea**	**56.27**	**229**	*e*LR	LR	10 12 00.2	
	comp=Z,192nm,26.2s						
PLCA	**Paso Flores**	**58.05**	**161**	P	**P**	**09 56 01.3**	**-2.5**
	comp=Z,1.5nm,0.7s,mb4.1,baz=11,slow=9.3,SNR=3.4						
INK	**Inuvik**	**60.35**	**343**	*e*P	**P**	**09 56 17.1**	**-2.2**
	comp=Z,6.8nm,1.0s,mb4.6						
INK				*e*pP	pP	09 56 35.5	-1.3
ILAR	**Eielson Array**	**62.79**	**337**	P	**P**	**09 56 34.0**	**-1.8**
	comp=Z,5.2nm,0.8s,mb4.5,baz=114,slow=5.5,SNR=36						
ILAR				pP	pP	09 56 52.1	-1.2
	comp=Z,3.6nm,0.7s,baz=130,slow=4.3,SNR=8.2						
ILAR				LR	LR	10 26 26.9	
	comp=Z,67nm,19.3s,baz=0.5,slow=38						
MCK	**McKinley**	**63.15**	**335**	*e*P	**P**	**09 56 36.7**	**-1.4**
	comp=Z,3.8nm,0.9s,mb4.3						
COLA	**College**	**63.20**	**337**	*e*P	**P**	**09 56 36.3**	**-2.2**
	comp=Z,4.4nm,0.8s,mb4.4						
RSO	**Redoubt South**	**63.63**	**331**	*e*P	**P**	**09 56 40.7**	**-0.6**
PPT	**Papeete**	**65.22**	**243**	*e*LR	LR	10 16 12.2	
	comp=Z,220nm,26.2s						
TBI	**Tubuai**	**67.68**	**237**	*e*LR	LR	10 17 19.3	
	comp=Z,162nm,27.8s						
TNA	**Tin City**	**71.49**	**335**	*e*P	**P**	**09 57 30.4**	**+0.1**
	comp=Z,5.2nm,1.1s,mb4.3						
ESDC	**Sonseca Array**	**79.39**	**52**	pP	pP	09 58 29.3	-4.7
	comp=Z,0.3nm,0.2s,baz=279,slow=6.0,SNR=2.2						
BILL	**Bilibino**	**81.40**	**338**	*e*P	**P**	**09 58 25.4**	**-0.5**
	comp=Z,5.0nm,0.6s,mb4.5						
NOA	**NORSAR Array B**	**83.86**	**28**	P	**P**	**09 58 36.7**	**-1.8**
	comp=Z,0.7nm,0.7s,mb3.6,baz=277,slow=6.8,SNR=3.3						
NOA				LR	LR	10 34 01.0	
	comp=Z,39nm,19.8s,baz=75,slow=34						
DBIC	**Dimbokro**	**85.36**	**84**	LR	LR	10 30 38.3	
	comp=Z,68nm,21.3s,baz=199,slow=31						
ARCES	**ARCESS Array B**	**85.88**	**18**	P	**P**	**09 58 47.5**	**-0.8**
	comp=Z,6.1nm,1.0s,mb4.5,baz=281,slow=5.2,SNR=5.3						
ARCES				pP	pP	09 59 03.7	-3.2
	comp=Z,3.9nm,0.8s,baz=9.5,slow=7.4,SNR=1.7						
ARCES				LR	LR	10 35 56.4	
	comp=Z,125nm,22.0s,baz=198,slow=35						
FINES	**FINESS Array B**	**90.22**	**25**	LR	LR	10 38 59.5	
	comp=Z,26nm,18.1s,baz=347,slow=35						
SONM	**Songino Array**	**116.19**	**347**	PKP	PKPdf	10 04 52.1	+1.2
	comp=Z,0.3nm,0.7s,baz=360,slow=1.2,SNR=6.1						
SONM				pPKP		10 05 10.2	
	comp=Z,0.4nm,0.6s,baz=347,slow=1.2,SNR=3.5						
MATP	**Matopo**	**122.83**	**105**	PKP	PKPdf	10 05 05.5	+1.1
	comp=Z,2.8nm,0.8s,baz=236,slow=6.9,SNR=5.6						
MATP				pPKP		10 05 22.9	
	comp=Z,1.2nm,0.5s,baz=248,slow=3.6,SNR=2.9						
STKA	**Stephens Creek**	**128.39**	**240**	PKP	PKPdf	10 05 15.5	+0.5
	comp=Z,1.4nm,0.5s,baz=260,slow=4.2,SNR=4.5						
STKA				pPKP		10 05 33.6	
	comp=Z,1.8nm,0.7s,baz=5.8,slow=4.3,SNR=2.3						
STKA	**Stephens Creek**	**128.39**	**240**	PKP	PKPdf	10 05 15.5	+0.5
STKA				pPKP		10 05 33.6	
WRA	**Warramunga Arr**	**135.71**	**256**	PKP	PKPdf	10 05 29.5	+0.5
	comp=Z,1.1nm,0.7s,baz=88,slow=2.1,SNR=11						
WRA				pPKP		10 05 48.4	
	comp=Z,1.6nm,0.6s,baz=84,slow=2.5,SNR=3.9						
ASAR	**Alice Springs**	**135.99**	**251**	PKP	PKPdf	10 05 29.9	+0.5
	comp=Z,0.6nm,0.9s,baz=110,slow=3.6,SNR=5.3						
ASAR				pPKP		10 05 48.6	
	comp=Z,0.9nm,0.7s,baz=94,slow=1.9,SNR=5.0						
FITZ	**Fitzroy Crossi**	**143.95**	**259**	*e*P	PKPbc	10 05 42.6	-0.4
	comp=Z,6.0nm,0.9s						
POO	**Poona**	**144.52**	**24**	*e*	PKPbc	10 05 57.0	+12
NANT	**Nan**	**145.02**	**339**	P	PKPdf	10 05 46.0	+0.3
CHG	**Chiang Mai**	**145.58**	**342**	⇓P	PKPdf	10 05 50.1	+3.5
	comp=Z,14nm,0.8s						
KAD	**Karad**	**145.76**	**24**	*e*	PKPdf	10 05 47.0	0.0
CM31	**Chiang Mai Arr**	**145.91**	**342**	*e*PKPdf	PKPdf	10 05 49.5	+2.3
CMAR	**Chiang Mai Arr**	**145.91**	**342**	PKPbc	PKPbc	10 05 48.4	+0.1
	comp=Z,18nm,0.6s,baz=339,slow=3.4,SNR=37						
CMAR				pPKPbc		10 06 06.9	
	comp=Z,22nm,0.9s,baz=336,slow=3.7,SNR=9.8						
BDT	**Bhumibol Dam**	**147.03**	**341**	P	PKPdf	10 05 52.0	+2.8

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*IDC **26** 09:58:59.5±0.8, 11.96N×92.18E, mb4.2/14, mb1 4.4/15, mb1mx4.3/21, mbtmp4.2/15, ML4.2/1, MS2.6/1, Ms1 2.8/1, ms1mx2.7/16, Error ellipse: s-maj=33.4km s-min=14.9km az=51.0*

*BJI **26** 09:59:00.9, 11.99N×92.08E, h4^{km}, mb4.6*

*NEIC **26** 09:59:00.0±4.0, 11.95N×92.18E, h4^{km}±24^{km}, mb4.5/8, Error ellipse: s-maj=14.1km s-min=6.1km az=222.0*

ISC 26 09:59:02.4±0.6**, 11.89N**±0.08×**92.08E**±0.08**, h33**^{km}**, n39, σ1**^{s}**01**/41**, mb4.3**/21**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.30**	**45**	Pn	**P**	**10 01 14.3**	**-2.8**
	0.7nm,0.3s,baz=234,slow=15,SNR=9.0						
CMAR				Sn	**Sn**	**10 03 07.2**	**+5.4**
	0.5nm,0.3s,baz=236,slow=29,SNR=4.4						
CMAR				LR	LR	10 05 32.2	
	comp=Z,34nm,18.3s,baz=220,slow=43						
VIS	**Vishakhapatnam**	**10.26**	**305**	*e*P	**P**	**10 01 23.6**	**-6.8**
VIS				*e*S	**S**	**10 03 25.6**	**+0.2**
VIS				*e*		10 11 10.1	
JIRN	**Jiri**	**16.63**	**341**	*e*P	**P**	**10 02 53.8**	**-0.8**
	22nm,0.6s						
PKI	**Pulchoki**	**16.81**	**339**	*e*P	**P**	**10 02 56.1**	**-0.7**
	19nm,0.4s						
DMN	**Daman**	**16.95**	**338**	*e*P	**P**	**10 02 57.6**	**-1.0**
	30nm,0.6s						
GUN	**Gumba**	**16.96**	**341**	*e*P	**P**	**10 02 58.0**	**-0.8**
	22nm,0.7s						
KKN	**Kakani**	**17.05**	**339**	*e*P	**P**	**10 02 58.4**	**-1.5**
	13nm,0.6s						
GKN	**Gorkha**	**17.48**	**338**	*e*P	**P**	**10 03 04.6**	**-0.7**
	34nm,0.6s						
KOLN	**Koldanda**	**17.68**	**335**	*e*P	**P**	**10 03 07.8**	**0.0**
	30nm,0.7s						
LSA	**Lhasa**	**17.74**	**357**	*e*P	**P**	**10 03 10.0**	**+1.5**
LSA	**Lhasa**	**17.74**	**357**	*e*P	**P**	**10 03 08.2**	**-0.4**
	14nm,0.8s						
CD2	**Chengdu**	**21.79**	**28**	P	**P**	**10 03 55.8**	**+2.4**
ENH	**Enshi**	**24.40**	**39**	*e*P	**P**	**10 04 18.3**	**-0.7**
	8.6nm,0.5s,mb4.4						
LZH	**Lanzhou**	**26.33**	**22**	*e*P	**P**	**10 04 36.0**	**-1.2**
LZH				AMB	AMB		
	comp=Z,33nm,1.5s,mb4.6						
LZH	**Lanzhou**	**26.33**	**22**	*e*P	**P**	**10 04 36.0**	**-1.2**
	comp=Z,33nm,1.5s,mb4.6						
LZH				pP	pP	10 05 15.0	+28
XAN	**Xi’an**	**26.87**	**32**	P	**P**	**10 04 43.0**	**+0.8**
XAN				AP	pP	10 04 49.8	-1.8
XAN				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.6						
GTA	**Gaotai**	**28.25**	**13**	*e*P	**P**	**10 04 56.0**	**+1.3**
GTA				AP	pP	10 05 01.3	-2.9
GTA				XP	sP	10 05 04.5	-3.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
SONM	**Songino Array**	**37.79**	**16**	P	**P**	**10 06 16.9**	**-0.3**
	comp=Z,3.1nm,0.9s,mb4.0,baz=202,slow=7.1,SNR=20						
KURK	**Kurchatov**	**40.25**	**347**	*e*P	**P**	**10 06 38.5**	**+0.8**
	comp=Z,4.0nm,0.7s,mb4.3						
ZAL	**Zalesovo**	**42.34**	**354**	P	**P**	**10 06 54.8**	**-0.1**
	comp=Z,2.6nm,0.8s,mb3.9,baz=300,slow=8.2,SNR=13						
CN2	**Changchun**	**42.85**	**36**	*e*P	**P**	**10 07 02.3**	**+3.1**
BVAR	**Borovoye Array**	**44.56**	**341**	P	**P**	**10 07 12.5**	**-0.4**
	comp=Z,2.1nm,0.5s,mb4.2,baz=162,slow=9.1,SNR=4.5						
CHKZ	**Chkalovo**	**45.05**	**342**	*e*P	**P**	**10 07 17.3**	**+0.5**
	comp=Z,47nm,0.8s,mb5.4						
GNI	**Garni**	**50.22**	**313**	P	**P**	**10 07 58.8**	**+1.5**
	comp=Z,1.6nm,0.3s,mb4.5,baz=158,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**52.26**	**127**	P	**P**	**10 08 12.5**	**-0.5**
	comp=Z,6.5nm,1.1s,mb4.5,baz=306,slow=8.3,SNR=35						
WRAB	**Tennant Creek**	**52.26**	**127**	*e*P	**P**	**10 08 12.2**	**-0.8**
	comp=Z,7.0nm,0.4s,mb4.9						
WB2	**Warramunga Arr**	**52.27**	**127**	*e*P	**P**	**10 08 12.4**	**-0.6**
ASAR	**Alice Springs**	**54.05**	**131**	P	**P**	**10 08 25.8**	**-0.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=312,slow=6.8,SNR=18						
AKASG	**Malin Array Be**	**63.77**	**321**	P	**P**	**10 09 32.8**	**-0.6**
	comp=Z,0.4nm,0.4s,mb3.8,baz=86,slow=4.8,SNR=7.1						
STKA	**Stephens Creek**	**64.34**	**134**	P	**P**	**10 09 37.5**	**+0.2**
	comp=Z,1.3nm,0.3s,mb4.4,baz=315,slow=8.6,SNR=2.7						
MLR	**Muntele Rosu**	**64.91**	**315**	P	**P**	**10 09 42.3**	**+1.5**
	comp=Z,3.0nm,0.8s,mb4.4,baz=326,slow=22,SNR=5.3						
FINES	**FINESS Array B**	**68.23**	**332**	P	**P**	**10 10 01.9**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.3,baz=90,slow=7.6,SNR=6.9						
ARCES	**ARCESS Array B**	**70.82**	**340**	P	**P**	**10 10 16.6**	**-0.7**
	comp=Z,8.1nm,1.0s,mb4.6,baz=56,slow=8.7,SNR=3.8						
GERES	**GERESS Array B**	**73.50**	**318**	P	**P**	**10 10 34.5**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=90,slow=5.3,SNR=7.2						
HFS	**Hagfors**	**73.99**	**329**	P	**P**	**10 10 36.3**	**+0.2**
	comp=Z,2.3nm,0.7s,mb4.2,baz=108,slow=4.7,SNR=7.5						
HFS	**Hagfors**	**73.99**	**329**	P	**P**	**10 10 36.3**	**+0.2**
NB2	**NORSAR Subarra**	**75.26**	**330**	P	**P**	**10 10 43.7**	**+0.2**
	comp=Z,1.0nm,0.6s,mb3.9,baz=94,slow=5.3						
NOA	**NORSAR Array B**	**75.26**	**330**	P	**P**	**10 10 43.2**	**-0.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=93,slow=5.6,SNR=4.0						
NOA	**NORSAR Array B**	**75.26**	**330**	P	**P**	**10 10 43.2**	**-0.3**

IDC 26 10:31:31.7±2.7**, 18.54S×176.97E, mb3.7**/5**, mb1 4.0**/5**, mb1mx3.8**/14**, mbtmp3.7**/5**, MS3.8**/6**, Ms1 3.8**/6**, ms1mx3.4**/23**, Error ellipse: s-maj=131.7km s-min=29.9km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**19.65**	**180**	LR	LR	10 42 21.1	
	comp=Z,158nm,20.0s,baz=273,slow=33						
RAR	**Rarotonga**	**22.03**	**101**	LR	LR	10 43 39.3	
	comp=Z,245nm,18.7s,baz=273,slow=33						
CTA	**Charters Tower**	**29.01**	**262**	LR	LR	10 47 13.0	
	comp=Z,201nm,18.9s,baz=48,slow=32						
TBI	**Tubuai**	**31.68**	**105**	*e*LR	LR	10 46 48.2	
	256nm,31.2s						
PPT	**Papeete**	**31.80**	**94**	*e*LR	LR	10 46 27.1	
	459nm,26.0s						
STKA	**Stephens Creek**	**34.49**	**240**	LR	LR	10 50 40.9	
	comp=Z,112nm,18.9s,baz=28,slow=33						
WRA	**Warramunga Arr**	**40.19**	**261**	P	P	10 39 09.2	-2.5
	0.5nm,0.8s,baz=90,slow=9.0,SNR=5.3						
ASAR	**Alice Springs**	**40.39**	**255**	P	P	10 39 11.8	-1.5
	1.2nm,0.9s,baz=70,slow=9.9,SNR=6.0						
ASAR				LR	LR	10 54 45.3	
	comp=Z,114nm,19.8s,baz=81,slow=34						
RKT	**Rikitea**	**45.00**	**104**	*e*LR	LR	10 52 37.5	
	246nm,34.0s						
NVAR	**Mina Array Bea**	**82.96**	**46**	P	P	10 43 58.6	-1.5
	0.3nm,0.8s,baz=243,slow=2.0,SNR=3.2						
CMAR	**Chiang Mai Arr**	**84.98**	**291**	P	P	10 44 11.2	+0.4
	0.5nm,0.4s,baz=68,slow=4.9,SNR=3.3						
ELK	**Elko**	**86.16**	**45**	LR	LR	11 17 47.7	
	comp=Z,84nm,19.9s,baz=276,slow=32						
SONM	**Songino Array**	**91.19**	**321**	P	P	10 44 37.5	-2.4
	0.5nm,1.1s,baz=117,slow=3.2,SNR=3.1						
KHC	**Kasperske Hory**	**146.66**	**340**	*e*P	PKPbc	10 51 15.5	+0.5
GERES	**GERESS Array B**	**146.87**	**340**	PKPbc	PKPbc	10 51 16.5	+1.0
	1.0nm,0.7s,baz=45,slow=3.8,SNR=8.8						

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*IDC **26** 10:50:52.4±1.6, 14.27N×54.81E, mb3.7/7, mb1 4.0/7, mb1mx3.8/17, mbtmp3.7/7, MS3.0/1, Ms1 3.0/1, ms1mx2.5/21, Error ellipse: s-maj=47.1km s-min=26.9km az=42.0*

ISC 26 10:50:52.2±1.5**, 14.3N**±0.2×**54.8E**±0.2**, h10**^{km}**, n9, σ0**^{s}**74**/7**, mb3.7**/7**, MS2.9**/1**, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNI	**Garni**	**27.18**	**343**	LR	LR	11 07 13.0	
	comp=Z,34nm,19.2s,MS2.9,baz=354,slow=36						
CMAR	**Chiang Mai Arr**	**42.51**	**78**	P	**P**	**10 58 49.5**	**-0.2**
	3.0nm,1.0s,mb4.0,baz=275,slow=8.5,SNR=12						
ZAL	**Zalesovo**	**46.01**	**24**	P	**P**	**10 59 18.9**	**+1.5**
	0.9nm,0.8s,mb3.8,baz=208,slow=6.1,SNR=5.6						
GERES	**GERESS Array B**	**48.13**	**324**	P	**P**	**10 59 34.5**	**+0.3**
	0.2nm,0.7s,mb3.3,baz=158,slow=7.2,SNR=4.1						
FINES	**FINESS Array B**	**51.37**	**343**	P	**P**	**10 59 58.0**	**-0.8**
	0.9nm,0.6s,mb3.9,baz=130,slow=15,SNR=4.2						
SONM	**Songino Array**	**54.05**	**41**	P	**P**	**11 00 18.1**	**-0.9**
	0.6nm,0.7s,mb3.6,baz=264,slow=7.3,SNR=5.7						
WRA	**Warramunga Arr**	**85.32**	**112**	P	**P**	**11 03 31.3**	**-0.1**
	0.6nm,1.0s,mb3.7,baz=296,slow=4.0,SNR=5.5						
ASAR	**Alice Springs**	**86.03**	**115**	P	**P**	**11 03 35.2**	**+0.4**
	0.8nm,0.8s,mb4.0,baz=287,slow=4.5,SNR=6.5						
NVAR	**Mina Array Bea**	**127.12**	**353**	PKP	PKPdf	11 10 00.5	+0.2
	0.5nm,0.8s,baz=118,slow=1.6,SNR=4.1						

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*NEIC **26** 10:56:38.2, 16.72N×101.06W, h16^{km}, mb4.6/2, MD4.5(MEX), After MEX.*

*MEX **26** 10:56:39.4±1.1, 16.82N×100.96W, h16^{km}±14^{km}, MD4.5*

*IDC **26** 10:56:51.5±6.6, 17.10N×100.77W, h119^{km}±55^{km}, mb3.6/5, mb1 3.7/8, mb1mx3.5/21, mbtmp3.9/8, Error ellipse: s-maj=53.2km s-min=29.0km az=51.0*

ISC 26 10:56:37.1±1.0**, 16.85N**±0.06×**100.95W**±0.03**, h20**^{km}±6^{km}**, n39, σ1**^{s}**10**/53**, mb4.0**/5**, 4C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.68**	**73**	⇑*i*P	**Pb**	**10 56 50.8**	**+0.6**
CAIG				*i* S	**Sb**	**10 57 01.2**	**+2.0**
CAIG	**El Cayaco**	**0.68**	**73**	⇑*i*P	**Pb**	**10 56 50.8**	**+0.6**
CAIG				*i* S	**Sb**	**10 56 58.2**	**-0.9**
ZIIG	**Zihuatanejo**	**0.90**	**327**	⇑*i*P	**Pb**	**10 56 53.0**	**-0.8**
ZIIG				*i* S	**Sb**	**10 57 05.0**	**-0.4**
ACX	**Acapulco**	**0.99**	**89**	*i* P	**Pb**	**10 56 55.7**	**+0.3**
ACX				*e*S	**Sb**	**10 57 08.0**	**-0.1**
PLIG	**Platanillo**	**2.06**	**42**	⇑*i*P	**Pn**	**10 57 12.0**	**+0.7**
PLIG				*i* S	**Sn**	**10 57 38.7**	**+2.0**
PLIG	**Platanillo**	**2.06**	**42**	*i* P	**Pn**	**10 57 10.9**	**-0.4**
PLIG				*i* S	**Sn**	**10 57 35.1**	**-1.6**
YAIG	**Yautepec**	**2.69**	**42**	*e*P	**Pn**	**10 57 20.4**	**+0.2**
YAIG				*i* S	**Sn**	**10 57 51.8**	**-0.7**
PNIG	**Pinotepa**	**2.75**	**99**	*e*P	**Pn**	**10 57 19.7**	**-1.4**
PNIG				*i* S	**Sn**	**10 57 49.6**	**-4.4**
CRX	**Cerrillo**	**2.81**	**25**	*e*P	**Pn**	**10 57 24.0**	**+2.0**
MOIG	**Morelia**	**2.82**	**355**	*e*P	**Pn**	**10 57 23.1**	**+1.0**
MOIG	**Morelia**	**2.82**	**355**	*e*P	**Pn**	**10 57 21.6**	**-0.5**
MOIG				*i* S	**Sn**	**10 57 54.5**	**-1.4**
UNM	**Universidad Na**	**2.99**	**34**	*e*P	**Pn**	**10 57 33.5**	**+9.0**
UNM	**Universidad Na**	**2.99**	**34**	*e*P	**Pn**	**10 57 25.0**	**+0.5**
UNM				*i* S	**Sn**	**10 58 04.0**	**+3.9**
PPM	**Popocatepetl**	**3.12**	**45**	*i* P	**Pn**	**10 57 26.9**	**+0.5**
PPM	**Popocatepetl**	**3.12**	**45**	*e*P	**Pn**	**10 57 26.5**	**+0.1**
PPM				*i* P		10 57 26.9	
PPM				*i* S	**Sn**	**10 58 05.0**	**+1.5**
PPM				*i* S	**Sn**	**10 58 07.6**	**+4.1**
IIB	**San Bernardino**	**3.25**	**49**	*e*P	**Pn**	**10 57 28.0**	**-0.2**
IIB				*i* S	**Sn**	**10 58 06.0**	**-0.8**
COLM	**Colima**	**3.49**	**312**	*e*P	**Pn**	**10 57 30.5**	**-1.1**
COLM				*i* S	**Sn**	**10 58 11.2**	**-1.6**
IISM	**Ciudad Serdan**	**4.01**	**57**	*e*P	**Pn**	**10 57 35.0**	**-4.1**
VHO	**Vista Hermosa**	**4.04**	**86**	*e*P	**Pn**	**10 57 39.2**	**-0.2**
VHO	**Vista Hermosa**	**4.04**	**86**	*e*P	**Pn**	**10 57 38.2**	**-1.2**
VHO				*i* S	**Sn**	**10 58 23.4**	**-3.4**
OXX	**Oaxaca**	**4.05**	**86**	*e*P	**Pn**	**10 57 39.0**	**-0.6**
OXX				*i* S	**Sn**	**10 58 27.0**	**-0.1**
SFJM	**Santa Fe**	**4.12**	**332**	*i* P	**Pn**	**10 57 41.0**	**+0.4**
TXAR	**Lajitas Array**	**12.67**	**349**	P	**P**	**10 59 44.8**	**+5.5**
	0.0nm,0.3s,baz=170,slow=10,SNR=2.6						
MNTX	**Cornudas Mount**	**15.32**	**346**	*e*P	**P**	**11 00 18.1**	**+4.0**
	4.4nm,1.0s						
JTS	**JuntasAbangare**	**16.86**	**111**	P	**P**	**11 00 40.2**	**+6.4**
	0.4nm,0.3s,baz=221,slow=1.0,SNR=4.7						
ANMO	**Albuquerque**	**18.69**	**346**	P	**P**	**11 00 57.9**	**+1.5**
	baz=161,slow=14,SNR=7.1						
ANMO	**Albuquerque**	**18.69**	**346**	P	**P**	**11 00 57.9**	**+1.5**
WUAZ	**Wupatki**	**20.78**	**335**	*e*P	**P**	**11 01 21.5**	**+1.9**
	273nm,1.1s						
PV10	**Paradox Valley**	**22.59**	**343**	*e*P	**P**	**11 01 38.7**	**+0.9**
ARUT	**Antelope Range**	**23.58**	**335**	*e*P	**P**	**11 01 50.8**	**+3.4**
PDAR	**Pinedale Array**	**26.86**	**346**	P	**P**	**11 02 19.6**	**+1.2**
	2.6nm,0.9s,mb3.8,baz=149,slow=8.6,SNR=19						
ULM	**Lac du Bonnet**	**33.57**	**6**	P	**P**	**11 03 16.6**	**-1.3**
	1.4nm,0.6s,mb4.0,baz=172,slow=7.5,SNR=3.4						
EDM	**Edmonton**	**37.57**	**348**	*e*P	**P**	**11 03 51.9**	**0.0**
SCHQ	**Schefferville**	**46.08**	**27**	P	**P**	**11 05 01.1**	**-0.3**
	1.6nm,0.7s,mb4.0,baz=224,slow=7.1,SNR=5.9						
YKA	**Yellowknife Ar**	**46.59**	**351**	P	**P**	**11 05 05.2**	**-0.1**
	1.5nm,0.7s,mb4.0,baz=160,slow=7.4,SNR=38						
YKA	**Yellowknife Ar**	**46.59**	**351**	P	**P**	**11 05 05.2**	**-0.1**
ILAR	**Eielson Array**	**56.93**	**338**	P	**P**	**11 06 23.6**	**+0.5**
	2.3nm,1.1s,mb4.1,baz=160,slow=4.6,SNR=10.0						
WB2	**Warramunga Arr**	**127.63**	**258**	*e*P	PKPdf	11 15 58.7	+13
WRA	**Warramunga Arr**	**127.64**	**258**	PKP	PKPdf	11 15 43.0	-3.2
	0.5nm,0.8s,baz=89,slow=2.0,SNR=5.5						

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*IDC **26** 11:04:38.7±2.0, 34.10N×141.68E, mb3.4/3, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, Error ellipse: s-maj=36.7km s-min=32.1km az=62.0*

*JMA **26** 11:04:40.1±0.5, 34.16N×141.79E, h39^{km}, M3.3*

ISC 26 11:04:39.2±3.6**, 34.14N**±0.07×**141.8E**±0.1**, h22**^{km}±27^{km}**, n9, σ0**^{s}**52**/11**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**1.25**	**302**	P	**Pn**	**11 05 01.5**	**-0.1**
BSO4	**Boso 4**	**1.47**	**305**	P	**Pn**	**11 05 05.3**	**+0.5**
JHJ2	**Mitsune**	**1.95**	**239**	P	**Pn**	**11 05 12.3**	**+0.7**
JHJ	**Hachijo jima 2**	**1.97**	**239**	Pn	**Pn**	**11 05 12.1**	**+0.2**
	50nm,0.3s,baz=81,slow=7.0,SNR=15						
JHJ				Sn	**Sn**	**11 05 35.7**	**-0.4**
	85nm,0.3s,baz=63,slow=23,SNR=9.9						
JOD2	**Odawara 2**	**2.50**	**297**	P	**Pn**	**11 05 18.9**	**-0.6**
MAT	**Matsushiro**	**3.79**	**310**	P	**Pn**	**11 05 37.1**	**-0.7**
MAT				S	**Sn**	**11 06 22.6**	**+0.4**
SONM	**Songino Array**	**29.74**	**308**	P	**P**	**11 10 46.2**	**+0.2**
	0.4nm,0.6s,mb3.3,baz=108,slow=8.1,SNR=5.2						
WRA	**Warramunga Arr**	**54.25**	**189**	P	**P**	**11 14 05.1**	**-0.8**
	0.6nm,0.9s,mb3.5,baz=5.1,slow=7.6,SNR=5.2						
ASAR	**Alice Springs**	**57.98**	**189**	P	**P**	**11 14 33.2**	**+0.6**
	0.3nm,0.9s,mb3.3,baz=6.5,slow=7.2,SNR=3.0						

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*BJI **26** 11:13:10.3, 24.50S×179.90E, h518^{km}, mB4.9, mb4.6*

*IDC **26** 11:13:10.6±1.1, 24.45S×179.86E, h506^{km}±10^{km}, mb4.1/17, mb1 4.2/19, mb1mx4.2/21, mbtmp4.9/19, Error ellipse: s-maj=14.4km s-min=9.6km az=152.0*

*NEIC **26** 11:13:11.3±0.8, 24.46S×179.94E, h519^{km}±8^{km}, mb4.6/30, Error ellipse: s-maj=8.8km s-min=6.7km az=162.0*

ISC 26 11:13:09.9±0.6**, 24.57S**±0.03×**179.97E**±0.04**, h513**^{km}±8^{km}**, n256, σ1**^{s}**06**/169**, mb4.6**/48**, 12C-18D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.03**	**158**	*e*P	**P**	**11 14 39.3**	**+0.6**
	1µm,0.4s						
WCZ	**Waipu Caves**	**12.33**	**202**	PN	**P**	**11 15 55.4**	**+2.8**
WCZ	**Waipu Caves**	**12.33**	**202**	PN	**P**	**11 15 55.4**	**+2.8**
DZM	**Mont Dzumac**	**12.67**	**279**	*e*P	**P**	**11 15 56.9**	**+0.7**
DZM				*e*S	**S**	**11 18 11.0**	**+1.1**
DZM	**Mont Dzumac**	**12.67**	**279**	*e*P	**P**	**11 15 56.9**	**+0.7**
DZM				*e*S	**S**	**11 18 11.0**	**+1.1**
NOUC	**Port Laguerre**	**12.79**	**278**	*e*P	**P**	**11 15 59.3**	**+1.9**
NOUC	**Port Laguerre**	**12.79**	**278**	*e*P	**P**	**11 15 59.3**	**+1.9**
MXZ	**Matakaoa Point**	**13.03**	**186**	PN	**P**	**11 16 00.6**	**+0.7**
MXZ				*e*SN	**S**	**11 18 20.4**	**+3.8**
MXZ	**Matakaoa Point**	**13.03**	**186**	PN	**P**	**11 16 00.6**	**+0.7**
MXZ				*e*SN	**S**	**11 18 20.4**	**+3.8**
AFI	**Afiamalu**	**13.15**	**38**	*e*P	**P**	**11 15 55.1**	**-6.0**
	184nm,0.8s						
PUZ	**Puketiti**	**13.54**	**186**	*e*PN	**P**	**11 16 04.5**	**-0.6**
PUZ				*e*SN	**S**	**11 18 25.0**	**-1.2**
PUZ	**Puketiti**	**13.54**	**186**	*e*PN	**P**	**11 16 04.5**	**-0.6**
PUZ				*e*SN	**S**	**11 18 25.0**	**-1.2**
URZ	**Urewera**	**13.87**	**189**	P	**P**	**11 16 06.5**	**-1.9**
	7.6nm,0.3s,baz=22,slow=3.9,SNR=37						
URZ				S	**S**	**11 18 37.4**	**+5.2**
	8.2nm,0.3s,baz=49,slow=23,SNR=16						
URZ	**Urewera**	**13.87**	**189**	*e*PN	**P**	**11 16 06.8**	**-1.6**
URZ				*e*SN	**S**	**11 18 32.4**	**+0.2**
URZ	**Urewera**	**13.87**	**189**	*e*PN	**P**	**11 16 06.8**	**-1.6**
URZ				*e*SN	**S**	**11 18 32.4**	**+0.2**
MWZ	**Matawai**	**13.88**	**188**	*e*PN	**P**	**11 16 07.3**	**-1.3**
MWZ				*e*SN	**S**	**11 18 36.7**	**+4.2**
MWZ	**Matawai**	**13.88**	**188**	*e*PN	**P**	**11 16 07.3**	**-1.3**
MWZ				*e*SN	**S**	**11 18 36.7**	**+4.2**
BKZ	**Black Stump Fm**	**14.85**	**191**	PN	**P**	**11 16 16.4**	**-1.9**
BKZ				*e*SN	**S**	**11 18 50.1**	**-0.4**
BKZ	**Black Stump Fm**	**14.85**	**191**	PN	**P**	**11 16 16.4**	**-1.9**
BKZ				*e*SN	**S**	**11 18 50.1**	**-0.4**
MGZ	**Maungaku**	**14.87**	**194**	*e*PN	**P**	**11 16 19.5**	**+0.9**
MGZ	**Maungaku**	**14.87**	**194**	*e*PN	**P**	**11 16 19.5**	**+0.9**
OTVZ	**Oturere**	**15.00**	**193**	*e*PN	**P**	**11 16 20.4**	**+0.5**
OTVZ	**Oturere**	**15.00**	**193**	*e*PN	**P**	**11 16 20.4**	**+0.5**
NGZ	**Ngauruhoe**	**15.03**	**193**	PN	**P**	**11 16 21.4**	**+1.2**
NGZ	**Ngauruhoe**	**15.03**	**193**	PN	**P**	**11 16 21.4**	**+1.2**
TUVZ	**Tukino**	**15.10**	**193**	PN	**P**	**11 16 22.0**	**+1.1**
TUVZ	**Tukino**	**15.10**	**193**	PN	**P**	**11 16 22.0**	**+1.1**
PWZ	**Pawanui**	**15.64**	**189**	*e*PN	**P**	**11 16 25.5**	**-0.7**

PWZ				SN	S	11 19 03.9	-0.9
PWZ	Pawanui	15.64	189	ePN	P	11 16 25.5	-0.7
PWZ				SN	S	11 19 03.9	-0.9
TSZ	Takapari Road	15.81	191	SN	S	11 19 09.2	+1.1
TSZ	Takapari Road	15.81	191	SN	S	11 19 09.2	+1.1
BFZ	Birch Farm	16.37	190	ePN	P	11 16 33.0	-0.4
BFZ				eSN	S	11 19 20.8	+2.8
BFZ	Birch Farm	16.37	190	ePN	P	11 16 33.0	-0.4
BFZ				eSN	S	11 19 20.8	+2.8
MRZ	Mangatainoka R	16.46	192	ePN	P	11 16 32.7	-1.7
MRZ	Mangatainoka R	16.46	192	ePN	P	11 16 32.7	-1.7
KIW	Kapiti Island	16.79	193	ePN	P	11 16 36.3	-1.3
KIW	Kapiti Island	16.79	193	ePN	P	11 16 36.3	-1.3
MTW	Mount Morrison	16.96	192	PN	P	11 16 39.3	0.0
MTW	Mount Morrison	16.96	192	PN	P	11 16 39.3	0.0
CAW	Cannon Point	17.00	193	PN	P	11 16 39.9	+0.4
CAW	Cannon Point	17.00	193	PN	P	11 16 39.9	+0.4
MRW	Makara Radio	17.19	194	ePN	P	11 16 41.7	+0.3
MRW	Makara Radio	17.19	194	ePN	P	11 16 41.7	+0.3
QRZ	Quartz Range	17.37	199	PN	P	11 16 44.4	+1.2
QRZ	Quartz Range	17.37	199	PN	P	11 16 44.4	+1.2
NNZ	Nelson	17.49	197	PN	P	11 16 43.4	-1.1
NNZ				eSN	S	11 19 37.3	-0.5
NNZ	Nelson	17.49	197	PN	P	11 16 43.4	-1.1
NNZ				eSN	S	11 19 37.3	-0.5
TUWZ	Tuamarina	17.55	195	ePN	P	11 16 44.6	-0.4
TUWZ	Tuamarina	17.55	195	ePN	P	11 16 44.6	-0.4
THZ	Tophouse	18.13	197	PN	P	11 16 51.5	+0.9
THZ				SN	S	11 19 48.6	-0.1
THZ	Tophouse	18.13	197	PN	P	11 16 51.5	+0.9
THZ				SN	S	11 19 48.6	-0.1
DSZ	Denniston Nort	18.43	200	PN	P	11 16 54.5	+1.0
DSZ				eSN	S	11 19 55.1	+1.2
DSZ	Denniston Nort	18.43	200	PN	P	11 16 54.5	+1.0
DSZ				eSN	S	11 19 55.1	+1.2
KHZ	Kahutara	18.58	195	ePN	P	11 16 55.2	+0.2
KHZ	Kahutara	18.58	195	ePN	P	11 16 55.2	+0.2
RAR	Rarotonga	18.96	84	P	P	11 16 57.2	-1.6
	4.1nm,0.3s,baz=218,slow=8.7,SNR=5.2						
LTZ	Lake Taylor	19.25	197	PN	P	11 17 00.7	-0.6
LTZ	Lake Taylor	19.25	197	PN	P	11 17 00.7	-0.6
WVZ	Waitaha Valley	19.97	200	ePN	P	11 17 07.7	-0.4
WVZ				eSN	S	11 20 17.2	-2.7
WVZ	Waitaha Valley	19.97	200	ePN	P	11 17 07.7	-0.4
WVZ				eSN	S	11 20 17.2	-2.7
RPZ	Rata Peaks	20.45	199	P	P	11 17 11.6	-1.0
	35nm,0.8s,baz=248,slow=2.0,SNR=20						
FOZ	Fox Glacier	20.74	201	PN	P	11 17 14.4	-0.9
FOZ	Fox Glacier	20.74	201	PN	P	11 17 14.4	-0.9
ARMA	Armidale	25.77	251	eP	P	11 18 02.2	+1.4
TBI	Tubuai	27.94	94	eP	P	11 18 20.1	0.0
	153nm,0.9s,mb5.7						
CNB	Canberra Magne	28.50	241	eP	P	11 18 26.0	+1.2
	2µm,1.8s						
PAE	Paea	29.19	82	eP	P	11 18 30.3	-0.6
	78nm,1.1s,mb5.3						
PPT	Papeete	29.22	82	eP	P	11 18 30.8	-0.4
	88nm,1.3s,mb5.2						
TIAR	Tiarei	29.43	82	eP	P	11 18 32.7	-0.3
	427nm,1.2s						
TIAR				epP		11 19 56.8	
	168nm,1.1s						
TVO	Taravao	29.44	83	eP	P	11 18 32.6	-0.5
	95nm,0.8s,mb5.5						
CTA	Charters Tower	31.45	271	P	P	11 18 50.3	0.0
	135nm,0.7s,mb5.6,baz=96,slow=11,SNR=135						
CTAO	Charters Tower	31.45	271	eP	P	11 18 50.5	+0.2
	95nm,0.6s,mb5.5						
PMOR	Pomariorio Ree	31.64	79	eP	P	11 18 51.4	-0.5
	100nm,1.1s,mb5.3						
TOO	Toolangi	32.06	238	eP	P	11 18 56.1	+0.8
	1.1nm,0.5s,mb3.6						
STKA	Stephens Creek	34.45	249	⇓iP	P	11 19 16.0	+0.6
	28nm,0.6s,mb5.0						
STKA	Stephens Creek	34.45	249	P	P	11 19 16.1	+0.7
	60nm,0.9s,mb5.1,baz=93,slow=9.8,SNR=73						
PMG	Port Moresby	34.69	290	eP	P	11 19 16.6	-0.9
	40nm,0.8s,mb5.0						
RKT	Rikitea	41.10	98	eP	P	11 20 09.9	+0.1
	92nm,1.3s,mb5.2						
ASAR	Alice Springs	41.90	261	P	P	11 20 16.4	+0.2
	21nm,0.6s,mb4.8,baz=93,slow=6.8,SNR=228						
ASAR				ScP		11 25 04.4	
	2.1nm,0.6s,baz=111,slow=4.7,SNR=6.1						
ASAR				S	S	11 25 55.3	-2.5
	1.0nm,0.9s,baz=166,slow=34,SNR=3.8						
ASPA	Alice Springs	41.90	261	⇓iP	P	11 20 15.9	-0.4
ASPA				eSCP		11 25 04.2	
ASPA				eS	S	11 25 52.1	-5.7
WB2	Warramunga Arr	42.32	267	⇓iP	P	11 20 18.8	-0.9
WB2				i SCP		11 25 06.3	
WB2				eS	S	11 25 59.8	-4.1
WRAB	Tennant Creek	42.33	267	eP	P	11 20 18.7	-1.0
	73nm,0.8s,mb5.3						
WRA	Warramunga Arr	42.34	267	P	P	11 20 19.2	-0.6
	28nm,0.5s,mb5.0,baz=98,slow=6.8,SNR=342						
WRA				ScP		11 25 06.0	
	6.8nm,0.6s,baz=100,slow=3.8,SNR=22						
WRA				S	S	11 26 00.3	-3.7
	2.8nm,0.9s,baz=99,slow=14,SNR=4.3						
FORT	Forrest	46.05	250	⇓iP	P	11 20 47.4	-1.3
	3µm,0.6s						
KAKA	Kakadu	46.34	276	⇓iP	P	11 20 49.4	-1.6
	36nm,0.8s,mb5.0						
FITZ	Fitzroy Crossi	50.75	266	⇓iP	P	11 21 23.2	-0.9
	86nm,0.8s,mb5.1						
FITZ				i S	S	11 28 00.7	+0.1
VNDA	Vanda	53.71	185	P	P	11 21 45.8	+1.1
	1.3nm,0.6s,baz=6.8,slow=10,SNR=8.8						
VNDA				ScP		11 25 51.5	
	1.9nm,0.7s,baz=17,slow=5.4,SNR=8.8						
VNDA	Vanda	53.71	185	eP	P	11 21 45.2	+0.5
	1.0nm,0.5s						
KLBR	Kellerberrin	54.70	248	⇓iP	P	11 21 51.0	-1.3
	391nm,0.7s						
NWAO	Narrogin (SRO)	54.93	246	P	P	11 21 52.8	-1.1
	13nm,0.8s,mb4.2,baz=137,slow=11,SNR=8.1						
NWAO	Narrogin (SRO)	54.93	246	eP	P	11 21 52.6	-1.2
	4.3nm,0.6s,mb3.9						
MBWA	Marble Bar	55.23	261	eP	P	11 21 54.7	-1.4
	21nm,0.5s,mb4.6						
MUN	Mundaring	55.94	247	⇓iP	P	11 21 59.9	-1.0
	7.5nm,0.4s,mb4.3						
QSPA	South Pole Qui	65.52	180	⇓iP	P	11 23 04.9	+1.8
	21nm,0.8s,mb4.7						
JOW	Kunigami	71.41	312	P	P	11 23 39.3	-0.2
	20nm,0.4s,mb5.0,baz=122,slow=18,SNR=9.1						
KSM	Kuching	72.19	280	eP	P	11 23 43.3	-0.8
FX1	Attu Island--F	77.35	356	P	P	11 24 11.1	-1.0
	15nm,0.5s,mb4.7,baz=82,slow=19,SNR=7.4						
YSS	Yuzh-Sakhalins	78.72	335	eP	P	11 24 20.0	+0.4
	36nm,0.9s,mb4.7						
KULM	Kulim	82.52	279	eP	P	11 24 39.6	-0.2
MDJ	Mudanjiang	82.80	326	P	P	11 24 41.0	+0.3
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,195nm,5.0s						
MDJ	Mudanjiang	82.80	326	eP	P	11 24 41.0	+0.4
	comp=Z,18nm,1.1s,mb4.5						
WHN	Wuhan	83.38	308	⇑P	P	11 24 45.3	+1.4
CMB	Columbia Colle	83.70	43	eP	P	11 24 45.8	+0.4
	comp=Z,2.4nm,0.6s,mb3.9						
OHCM	Honcut	83.83	42	eP	P	11 24 46.1	+0.2
WDC	Whiskeytown Da	83.98	40	eP	P	11 24 46.9	+0.3
	comp=Z,5.2nm,1.0s,mb4.0						
SNAA	Sanae	84.00	179	e	P	11 24 49.6	+3.6
SNAA	Sanae	84.00	179	⇑iP	P	11 24 46.7	+0.7
SNAA				e		11 24 49.6	
SNY	Shenyang	84.14	321	⇓P	P	11 24 47.0	-0.4
VNA3	Neumayer Olymp	84.21	177	e	P	11 24 52.3	+5.3
VNA3	Neumayer Olymp	84.21	177	⇑iP	P	11 24 48.7	+1.7
VNA3				e		11 24 52.3	
CN2	Changchun	84.40	324	eP	P	11 24 49.0	+0.4
CN2				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.6						
VNA2	Neumayer--Watz	84.63	178	e	P	11 24 53.5	+4.4
VNA2	Neumayer--Watz	84.63	178	⇑iP	P	11 24 50.4	+1.3
VNA2				e		11 24 53.5	
HUMO	Hull Mountain	85.04	38	eP	P	11 24 52.7	+0.9
	comp=Z,7.0nm,1.1s,mb4.1						
NVAR	Mina Array Bea	85.25	44	P	P	11 24 53.5	+0.6
	comp=Z,1.2nm,0.6s,mb3.6,baz=231,slow=9.8,SNR=12						
MNV	Mina	85.35	44	eP	P	11 24 53.7	+0.3
	comp=Z,2.0nm,0.8s,mb3.7						
ENH	Enshi	86.80	305	eP	P	11 25 01.5	+1.1
	comp=Z,27nm,1.0s,mb4.8						
TUC	Tucson	86.95	52	eP	P	11 25 02.0	+0.9
	comp=Z,3.2nm,0.8s,mb4.0						
MA2	Magadan	87.21	346	eP	P	11 24 60.0	-1.7
	comp=Z,23nm,1.0s,mb4.8						
WVOR	Wild Horse Val	87.44	41	eP	P	11 25 03.6	+0.5
	comp=Z,3.1nm,0.7s,mb4.0						
BJT	Baijiatuau	87.48	316	eP	P	11 25 03.4	0.0
	comp=Z,3.1nm,0.4s,mb4.3						
PLCA	Paso Flores	87.82	134	P	P	11 25 06.9	+1.9
	comp=Z,3.6nm,1.0s,mb4.1,baz=241,slow=7.9,SNR=8.7						
ELK	Elko	88.52	43	P	P	11 25 09.2	+0.9
	comp=Z,1.4nm,0.7s,mb3.9,baz=239,slow=3.9,SNR=7.7						
ELK	Elko	88.52	43	eP	P	11 25 08.7	+0.4
	comp=Z,1.6nm,0.6s,mb4.0						
XAN	Xi’an	89.13	308	P	P	11 25 12.0	+0.7
XAN				AMB	AMB		
	comp=Z,18nm,1.1s,mb4.8						
BMO	Blue Mountains	89.65	39	eP	P	11 25 13.5	+0.1
	comp=Z,1.2nm,0.7s,mb3.8						
CM31	Chiang Mai Arr	89.73	290	eP	P	11 25 15.8	+1.4
	comp=Z,5.3nm,0.7s,mb4.5						
CMAR	Chiang Mai Arr	89.73	290	P	P	11 25 16.1	+1.7
	comp=Z,7.1nm,0.8s,mb4.5,baz=138,slow=3.2,SNR=36						
CMAR				PP	PP	11 28 56.6	-0.4
	comp=Z,0.8nm,0.9s,baz=124,slow=6.1,SNR=4.2						
TMUT	Trail Mountain	90.32	46	eP	P	11 25 18.1	+1.5
TNA	Tin City	90.32	5	eP	P	11 25 15.6	-0.4
	comp=Z,11nm,1.1s,mb4.6						
TXAR	Lajitas Array	90.81	58	P	P	11 25 20.1	+1.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=212,slow=6.1,SNR=22						
PV10	Paradox Valley	91.29	48	eP	P	11 25 21.1	-0.1
MCK	McKinley	91.34	13	eP	P	11 25 19.1	-1.6
	comp=Z,2.6nm,0.8s,mb4.2						
CD2	Chengdu	91.42	303	P	P	11 25 24.3	+2.4
ILAR	Eielson Array	92.68	14	P	P	11 25 25.2	-1.7
	comp=Z,2.0nm,0.8s,mb4.2,baz=225,slow=5.3,SNR=29						
ILAR				PP	PP	11 29 14.0	-5.2
	comp=Z,1.4nm,1.0s,baz=213,slow=8.8,SNR=4.5						
ILAR				PKiKP		11 30 10.7	
	comp=Z,0.4nm,0.9s,baz=279,slow=3.0,SNR=4.4						
BILL	Bilibino	92.89	355	eP	P	11 25 26.6	-1.1
	comp=Z,9.5nm,0.9s,mb4.8						
PDAR	Pinedale Array	93.19	44	P	P	11 25 30.4	+0.6
	comp=Z,0.6nm,0.6s,mb3.8,baz=150,slow=1.9,SNR=8.1						
SONM	Songino Array	97.59	319	P	P	11 25 49.4	-0.2
	comp=Z,0.5nm,0.4s,mb4.2,baz=146,slow=6.4,SNR=6.8						
INK	Inuvik	98.68	16	ePdif	P	11 25 51.8	-2.2
	comp=Z,2.1nm,0.8s,mb4.5						
YKA	Yellowknife Ar	100.98	25	P	P	11 26 05.0	+0.6
	comp=Z,0.3nm,0.7s,baz=243,slow=4.4,SNR=6.5						
YKA	Yellowknife Ar	100.98	25	P	P	11 26 05.0	+0.6
RES	Resolute Bay	112.21	17	ePKPdf	PKPdf	11 30 45.2	-0.5
BVAR	Borovoye Array	120.92	318	PKP	PKPdf	11 31 03.2	+0.1
	comp=Z,7.2nm,0.8s,baz=112,slow=2.8,SNR=33						
BVAR	Borovoye Array	120.92	318	PKP	PKPdf	11 31 03.2	+0.1
BOSA	Boshof	121.79	206	ePKPdf	PKPdf	11 31 07.2	+1.7
ARCES	ARCESS Array B	132.53	348	PKhKP		11 31 16.9	
	comp=Z,10nm,1.1s,baz=63,slow=3.1,SNR=6.2						
ARCES				PKP	PKPdf	11 31 24.4	-0.5
	comp=Z,2.5nm,0.5s,baz=85,slow=2.1,SNR=14						
ARCES				SKPbc		11 34 05.2	
	comp=Z,3.7nm,0.7s,baz=25,slow=2.6,SNR=6.3						
ARCES	ARCESS Array B	132.53	348	PKP	PKPdf	11 31 16.9	-8.0
ARCES				PKP	PKPdf	11 31 24.4	-0.5
ARCES				SKPbc		11 34 05.2	
KAF	Kangasniemi	138.47	342	ep	PKPdf	11 31 26.8	-9.2
	comp=Z,0.8nm,0.3s						
FINES	FINESS Array B	139.07	341	PKhKP		11 31 28.8	
	comp=Z,1.4nm,0.3s,baz=64,slow=3.1,SNR=25						
FINES				PKP	PKPdf	11 31 38.9	+1.7
	comp=Z,2.8nm,0.4s,baz=92,slow=3.8,SNR=23						
FINES				SKPbc		11 34 25.3	
	comp=Z,4.1nm,0.5s,baz=58,slow=3.6,SNR=14						
FINES	FINESS Array B	139.07	341	PKP	PKPdf	11 31 28.8	-8.3
FINES				PKP	PKPdf	11 31 38.9	+1.7
FINES				SKPbc		11 34 25.3	
VRT	Varto	142.16	303	eP	PKPdf	11 31 42.6	-0.6
VRT	Varto	142.16	303	P	PKPdf	11 31 43.0	-0.2
NB2	NORSAR Subarra	142.73	351	PKP	PKPdf	11 31 40.4	-3.0
	comp=Z,13nm,1.2s,baz=10.0,slow=3.1						
NB2	NORSAR Subarra	142.73	351	⇑PKPab	PKPdf	11 31 40.4	-3.0
NOA	NORSAR Array B	142.73	351	PKhKP		11 31 40.9	
	comp=Z,5.0nm,0.7s,baz=16,slow=4.7,SNR=17						
NOA				SKPbc		11 34 34.7	
	comp=Z,1.8nm,0.8s,baz=18,slow=4.2,SNR=3.7						
NOA	NORSAR Array B	142.73	351	PKP	PKPdf	11 31 40.9	-2.5
NOA				SKPbc		11 34 34.7	
NAO01	NORSAR Array S	142.97	351	ePKPpre		11 31 41.8	
HFS	Hagfors	143.19	349	PKhKP		11 31 42.2	
	comp=Z,21nm,0.4s,baz=63,slow=3.3,SNR=239						
EZC	Erzincan	143.35	304	eP	PKPbc	11 31 46.6	+2.5
EZC	Erzincan	143.35	304	P	PKPbc	11 31 46.8	+2.7
GUMT	Gumushane	143.44	305	eP	PKPbc	11 31 45.5	+1.2
GUMT	Gumushane	143.44	305	P	PKPbc	11 31 45.7	+1.3
PTK	Pertek	143.84	303	eP	PKPbc	11 31 47.4	+1.8
MALT	Malatya	144.70	302	ePKPdf	PKPdf	11 31 49.6	+2.0
MALT	Malatya	144.70	302	⇑P	PKPdf	11 31 50.2	+2.6
AKASG	Malin Array Be	145.51	327	PKPbc	PKPbc	11 31 49.9	+0.1
	comp=Z,7.6nm,0.4s,baz=44,slow=4.1,SNR=59						
AKASG				SKPbc		11 34 40.8	
	comp=Z,3.9nm,0.7s,baz=35,slow=2.5,SNR=9.1						
SUW	Suwalki	145.86	336	ePKPdf	PKPdf	11 31 49.1	0.0
GAZ	Gaziantep	145.87	301	eP	PKPdf	11 31 52.7	+3.1
GAZ	Gaziantep	145.87	301	P	PKPdf	11 31 53.1	+3.5
ASF	Jabal al Asfar	146.75	292	PKPbc	PKPbc	11 31 55.9	+2.5
	comp=Z,13nm,0.8s,baz=312,slow=1.6,SNR=9.9						
BZK	Bozkurt	146.95	310	eP	PKPdf	11 31 55.1	+3.9
BZK	Bozkurt	146.95	310	P	PKPdf	11 31 55.1	+3.9
CEYT	Ceyhan	147.04	301	eP	PKPdf	11 31 56.3	+4.8
CEYT	Ceyhan	147.04	301	P	PKPdf	11 31 56.6	+5.1
CORM	Corum	147.09	307	eP	PKPdf	11 31 56.2	+4.7
TOS	Tosya	147.25	308	eP	PKPdf	11 31 56.3	+4.6
TOS	Tosya	147.25	308	P	PKPdf	11 31 56.7	+4.9
EIL	Elat	148.53	287	PKPbc	PKPdf	11 32 00.2	+6.1
	comp=Z,12nm,0.6s,baz=340,slow=6.6,SNR=16						
EIL	Elat	148.53	287	ePKPbc	PKPdf	11 31 59.9	+5.7
CFR	Carcaliu	149.32	319	P	PKPdf	11 32 01.5	+6.6
CFR	Carcaliu	149.32	319	⇓P	PKPdf	11 32 01.4	+6.5
CSS	Prodhromos	149.37	298	ePKPbc	PKPdf	11 32 01.1	+5.7
MDU	Mudurnu	149.45	309	eP	PKPdf	11 32 01.4	+6.1
MDU	Mudurnu	149.45	309	P	PKPdf	11 32 01.5	+6.2
BURAR	Bucovina Array	149.50	325	P	PKPdf	11 32 03.0	+7.8
BURAR	Bucovina Array	149.50	325	⇑P	PKPdf	11 32 02.7	+7.6
KIZT	Kizilcal	149.51	306	eP	PKPdf	11 32 01.9	+6.4
TIRR	Tirgusor	149.53	318	⇓P	PKPdf	11 32 02.0	+6.7
TIRR	Tirgusor	149.53	318	⇓P	PKPdf	11 32 02.0	+6.7
BSEG	Bad Segeberg	149.66	348	ePKPbc	PKPdf	11 32 01.5	+6.3
BSEG				ePKPab	PKPab	11 32 09.0	-1.1
HARR	Harsova	149.70	318	P	PKPdf	11 32 02.3	+6.7
HARR	Harsova	149.70	318	⇑P	PKPdf	11 32 02.5	+7.0
VRI	Vrincioaia	149.75	321	⇑P	PKPdf	11 32 02.6	+7.0
VRI	Vrincioaia	149.75	321	⇑P	PKPdf	11 32 02.6	+7.0
KOLS	Kolonicke sedl	150.03	330	ePKP	PKPdf	11 32 03.1	+7.2
KOLS				e		11 32 10.5	
HRT	Hereke	150.40	310	P	PKPdf	11 32 03.4	+6.7
MLR	Muntele Rosu	150.42	321	PKPbc	PKPdf	11 32 03.6	+7.0
	comp=Z,5.7nm,0.4s,baz=325,slow=5.3,SNR=16						
MLR	Muntele Rosu	150.42	321	P	PKPdf	11 32 03.7	+7.1
MLR	Muntele Rosu	150.42	321	⇓P	PKPdf	11 32 03.8	+7.2
CRVS	Cervenica-Dubn	150.42	331	ePKP	PKPdf	11 32 05.4	+8.9
KSP	Ksiaz	150.90	339	eP	PKPdf	11 32 04.5	+7.3
KSP				epP		11 32 14.4	
OKC	Ostrava-Krasne	151.07	335	ePKPbc	PKPdf	11 32 04.9	+7.5
OKC				ePKPab	PKPab	11 32 13.5	-2.7
UPC	Upice	151.28	338	ePKPbc	PKPdf	11 32 05.6	+7.9
UPC				ePKPab	PKPab	11 32 16.1	-0.9
DPC	Dobruska-Polom	151.30	338	ePKPbc	PKPdf	11 32 05.7	+7.9
DPC				ePKPab	PKPab	11 32 16.4	-0.7
MORC	Moravsky Berou	151.35	336	ePKPbc	PKPdf	11 32 06.0	+8.1
MORC	Moravsky Berou	151.35	336	⇑P	PKPdf	11 32 06.1	+8.3
CLL	Collm	151.48	343	⇓iPKP1	PKPdf	11 32 05.7	+7.7
CLL				i PKP2	PKPab	11 32 16.0	-1.8
CLL				i		11 32 25.7	
CLL				e*PPKP		11 34 07.0	
BRG	Berggiesshubel	151.61	341	i P	PKPdf	11 32 06.4	+8.2
BRG				i		11 32 17.7	
CLZ	Clausthal	151.63	346	ePKPbc	PKPdf	11 32 06.6	+8.4
CLZ				ePKPab	PKPab	11 32 17.5	-0.9
PVCC	Panska Ves	151.72	340	ePKPbc	PKPdf	11 32 06.5	+8.2
PVCC				ePKPab	PKPab	11 32 18.2	-0.7
VYHS	Vyhne	151.87	333	ePKP	PKPdf	11 32 06.9	+8.3
VYHS				e		11 32 19.1	
VRAC	Vranov	152.08	336	PKPab	PKPab	11 32 19.7	-0.7
	comp=Z,10nm,0.8s,baz=46,slow=4.4,SNR=8.7						
VRAC	Vranov	152.08	336	⇓P	PKPab	11 32 19.9	-0.5
VRAC	Vranov	152.08	336	⇓P	PKPab	11 32 19.9	-0.5
PRU	Pruhonice	152.20	340	ePKPbc	PKPdf	11 32 07.4	+8.4
PRU				ePKPab	PKPab	11 32 20.6	-0.3
NKC	Novy Kostel	152.60	342	ePKPbc	PKPdf	11 32 09.2	+10
NKC				ePKPab	PKPab	11 32 21.1	-1.5
BZS	Buzias	152.68	326	P	PKPdf	11 32 08.4	+8.6
BZS	Buzias	152.68	326	⇑P	PKPdf	11 32 08.5	+8.7
KHC	Kasperske Hory	153.26	340	ePKPbc	PKPdf	11 32 09.8	+9.3
KHC				ePKPab	PKPab	11 32 24.4	-1.0
GRA1	Grafenberg Arr	153.43	344	ePKPab	PKPab	11 32 25.2	-0.9
GRF	Grafenberg Arr	153.43	344	ePKP	PKPab	11 32 25.2	-0.9
WET	Wettzell	153.46	341	ePKPab	PKPab	11 32 25.9	-0.3
GERES	GERESS Array B	153.47	339	PKP	PKPdf	11 32 02.3	+1.5
	comp=Z,0.5nm,0.9s,slow=1.0,SNR=2.7						
GERES				PKPbc	PKPdf	11 32 09.9	+9.1
	comp=Z,1.3nm,0.8s,baz=63,slow=3.0,SNR=7.8						
GERES				PKPab	PKPab	11 32 25.2	-1.1
	comp=Z,4.6nm,1.0s,baz=18,slow=4.2,SNR=8.2						
VTS	Vitosha	153.72	319	P	PKPab	11 32 27.8	+0.3
VTS	Vitosha	153.72	319	⇓P	PKPab	11 32 27.9	+0.4
GIVF	Givet	154.23	353	ePKP2	PKPab	11 32 28.3	-1.1
BAIF	Baives	154.34	354	ePKP2	PKPab	11 32 28.2	-1.7
	comp=Z,22nm,1.1s						
SKO	Skopje	155.14	320	i PKP	PKPab	11 32 33.6	+0.1
	comp=Z,0.0nm,0.8s						
BFO	Black Forest	155.38	347	ePKPab	PKPab	11 32 33.0	-1.3
CDF	Champ du Feu	155.51	348	ePKP2	PKPab	11 32 33.3	-1.6
	comp=Z,17nm,0.8s						
MEZF	Maizieres J’vi	155.78	352	ePKP2	PKPab	11 32 34.6	-1.4
	comp=Z,16nm,0.7s						
FLN	La Foliniere	155.85	1	ePKP2	PKPab	11 32 33.3	-3.0
LDF	La Druitiere	156.02	0	ePKP2	PKPab	11 32 33.7	-3.4
	comp=Z,22nm,1.0s						
HAU	Haudompre	156.07	349	ePKP2	PKPab	11 32 35.6	-1.7
	comp=Z,31nm,0.9s						
HINF	Hinteralfeld	156.16	348	ePKP2	PKPab	11 32 35.9	-1.8
	comp=Z,12nm,0.9s						
DAVOX	Davos	156.46	343	PKPab	PKPab	11 32 38.6	-0.4
	comp=Z,8.0nm,0.7s,baz=81,slow=3.3,SNR=9.8						
SSF	Saint Saulge	157.38	354	ePKP2	PKPab	11 32 41.4	-1.6
	comp=Z,42nm,1.1s						
CABF	La Chapelle	157.46	349	ePKP2	PKPab	11 32 42.1	-1.3
	comp=Z,30nm,1.0s						
AVF	Avril sur Loir	157.66	354	ePKP2	PKPab	11 32 42.4	-1.8
	comp=Z,13nm,1.0s						
SMF	Signal de Mont	157.75	353	ePKP2	PKPab	11 32 43.1	-1.5
	comp=Z,31nm,0.9s						
BGF	Bois d’Agland	157.94	355	ePKP2	PKPab	11 32 43.6	-1.8
MFF	Saint Martin d	158.01	0	ePKP2	PKPab	11 32 42.7	-3.0
LPL	La Plagne	158.39	347	ePKP2	PKPab	11 32 46.9	-0.5
LPG	La Plagne	158.41	347	ePKP2	PKPab	11 32 47.0	-0.5
	comp=Z,38nm,1.2s						
ORIF	Oris-en-Rattie	159.14	348	ePKP2	PKPab	11 32 49.7	-0.9
	comp=Z,30nm,0.9s						
MBDF	Montbardon	159.14	346	ePKP2	PKPab	11 32 49.6	-1.0
	comp=Z,17nm,1.0s						
RJF	Les Rejaudoux	159.27	357	ePKP2	PKPab	11 32 48.4	-2.8
VIVF	Saint-Julien-l	159.40	350	ePKP2	PKPab	11 32 49.9	-1.9
CAF	Calviac	159.62	356	ePKP2	PKPab	11 32 48.4	-4.3
LFF	La Frestale	159.67	358	ePKP2	PKPab	11 32 49.1	-3.8
SBF	Sospel	159.80	344	ePKP2	PKPab	11 32 51.4	-2.1
	comp=Z,43nm,0.8s						
SMRF	Simiane la Rot	160.10	348	ePKP2	PKPab	11 32 54.1	-0.7
	comp=Z,11nm,0.9s						
LMR	La Mourre	160.52	346	ePKP2	PKPab	11 32 55.4	-1.2
	comp=Z,40nm,1.2s						
MTLF	Montolieu	161.18	355	ePKP2	PKPab	11 32 58.5	-1.0
SJPF	Ste Jean	161.48	3	ePKP2	PKPab	11 32 56.3	-4.5
ESDC	Sonseca Array	164.58	11	PKPab	PKPab	11 33 12.6	-1.8
	comp=Z,3.0nm,0.8s,baz=346,slow=4.8,SNR=8.9						

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*NIED **26** 11:21:00,34.10N×141.80E,h8^{km},Mw4.2 Best double couple: M$_0$2.59×10^{15} NP1:φ$_s$25°,δ58°,λ96°. NP2:φ$_s$194°, δ33°,λ81°.*

*IDC **26** 11:21:43.4±0.6,34.13N×141.68E,mb4.1/16,mb1 4.3/18, mb1mx4.3/24,mbtmp4.2/18,ML4.0/2,MS3.9/2,Ms1 3.9/2, ms1mx3.3/22,Error ellipse: s-maj=18.8km s-min=13.3km az=104.0*

*JMA **26** 11:21:44.9±0.4,34.12N×141.83E,h39^{km}±4^{km},M4.1*

*MOS **26** 11:21:46.4±1.2,34.24N×141.73E,h33^{km},mb4.6/11,Error ellipse: s-maj=14.0km s-min=7.7km az=117.0*

*NEIC **26** 11:21:48.3±3.7,34.10N×141.52E,h30^{km}±25^{km},mb4.5/12, MW4.2(NIED),Error ellipse: s-maj=9.5km s-min=7.7km az=126.0*

*BJI **26** 11:21:51.1,34.05N×140.76E,h30^{km},mB4.5,mb4.3, Ms4.3,Msz4.1*

ISC 26 11:21:45.7±1.3**,34.15N**±0.04×**141.71E**±0.05**,h29**^{km}±9^{km}**, n88,**σ1^{s}**21**/97**,mb4.4**/39**,MS3.9**/8**,6C-2D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.79	310	⇑P	Pb	11 22 01.1	+0.3
BSO3	Boso 3	1.19	304	⇑P	Pn	11 22 07.3	+0.7
BSO3				eS	Sn	11 22 25.3	+3.4
BSO4	Boso 4	1.41	307	⇑P	Pn	11 22 11.1	+1.3
CHOJ	Chosi	1.70	336	P	Pn	11 22 14.1	+0.1
CHOJ				eS	Sn	11 22 35.3	+0.3
JMY	Miyakejima3	1.82	268	P	Pn	11 22 16.1	+0.4
JHJ2	Mitsune	1.88	237	P	Pn	11 22 18.1	+1.5
JHJ2				eS	Sn	11 22 41.1	+1.5
JHJ	Hachijo jima 2	1.90	238	Pn	Pn	11 22 18.3	+1.4
	189nm,0.3s,baz=164,slow=8.1,SNR=56						
JHJ				Sn	Sn	11 22 41.0	+0.9
	437nm,0.3s,baz=73,slow=22,SNR=13						
JIM2	Oshima 3	1.97	288	P	Pn	11 22 17.6	-0.2
JIZS	Izushimoda	2.41	285	P	Pn	11 22 24.1	0.0
JOD2	Odawara 2	2.43	298	P	Pn	11 22 24.0	-0.4
JAG	Ashikaga	2.93	322	⇑P	Pn	11 22 31.7	+0.2
JRY	Ryogami san	2.96	310	P	Pn	11 22 32.2	+0.2
MAJO	Matsushiro	3.73	311	eP	Pn	11 22 42.9	0.0
MAT	Matsushiro	3.73	311	eP	Pn	11 22 43.0	+0.1
MAT				eS	Sn	11 23 27.0	+0.6
MAT	Matsushiro	3.73	311	P	Pn	11 22 42.9	0.0
MAT				S	Sn	11 23 26.9	+0.5
CBIJ	Chichi jima	7.04	177	Pn	Pn	11 23 28.6	-1.0
	9.1nm,0.3s,baz=306,slow=19,SNR=2.1						
CBIJ				Sn	Sn	11 24 41.4	-8.1
	5.9nm,0.3s,baz=268,slow=22,SNR=4.1						
ASAJ	Asahikawa	9.98	4	P	P	11 24 07.6	-2.8
ASAJ						11 25 53.4	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	9.98	4	Pn	P	11 24 07.6	-2.8
	comp=Z,1.6nm,0.3s,baz=248,slow=8.8,SNR=12						
ASAJ				Sn	Sn	11 25 53.4	-9.1
	comp=Z,0.7nm,0.3s,baz=28,slow=24,SNR=7.6						
YSS	Yuzh-Sakhalins	12.82	3	eP	P	11 24 45.9	-2.9
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS	Yuzh-Sakhalins	12.82	3	eP	P	11 24 45.9	-2.9
	comp=Z,10nm,0.6s						
YSS				e		11 25 00.2	
BJI	Beijing	21.16	294	eP	P	11 26 30.3	-0.6
BJI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.0						
BJI				LR	LR		
	comp=N,387nm,13.3s,MS4.0						
BJI				LR	LR		
	comp=E,268nm,14.0s,MS4.0						
BJI				LR	LR		
	comp=Z,131nm,18.6s,MS3.4						
BJI	Beijing	21.16	294	eP	P	11 26 30.2	-0.7
BJI				S	S	11 30 15.5	-4.3
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
BJI				MLR	MLR		
	comp=Z,130nm,18.6s,MS3.3						
BJI	Beijing	21.16	294	eP	P	11 26 30.2	-0.7
	comp=Z,7.0nm,0.8s,mb4.0						
BJI				S	S	11 30 15.5	-4.3
BJI				LR	LR		
	comp=Z,130nm,18.6s,MS3.3						
BJT	Baijiatuau	21.17	294	P	P	11 26 30.5	-0.4
HIA	Hailar	22.18	320	eP	P	11 26 38.6	-2.4
HIA				pmax	pmax		
	comp=Z,14nm,0.9s						

HIA	Hailar	22.18	320	eP	P	11 26 38.5	-2.5
	comp=Z,14nm,0.9s,mb4.4						
HHC	Hu-ho-hao-te	24.76	295	⇓P	P	11 27 06.5	+0.3
HHC				AP		11 27 15.0	
HHC				XP		11 27 21.0	
HHC				AMB	AMB		
	comp=Z,16nm,1.7s,mb4.3						
HHC				AMB	AMB		
	comp=Z,158nm,9.6s						
HHC				LR	LR		
	comp=N,345nm,15.6s,MS4.1						
HHC				LR	LR		
	comp=E,312nm,14.4s,MS4.1						
HHC				LR	LR		
	comp=Z,364nm,10.8s,MS4.1						
CLNS	Chul'man	25.43	338	eP	P	11 27 12.1	-0.3
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.6s						
CLNS				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.9						
CLNS				MLR	MLR		
	comp=N,200nm,12.0s,MS3.9						
CLNS				MLR	MLR		
	comp=E,100nm,13.0s,MS3.9						
XAN	Xi'an	27.09	279	P	P	11 27 25.8	-2.1
XAN				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.0						
ENH	Enshi	27.47	271	eP	P	11 27 28.8	-2.7
ULN	Ulaanbaatar	29.26	308	eP	P	11 27 47.7	+0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
ULN	Ulaanbaatar	29.26	308	eP	P	11 27 47.6	+0.3
	comp=Z,9.0nm,1.0s,mb4.5						
SONM	Songino Array	29.68	308	P	P	11 27 52.1	+0.9
	comp=Z,4.8nm,0.6s,mb4.4,baz=106,slow=8.9,SNR=34						
BOD	Bodaibo	30.13	330	eP	P	11 27 53.4	-1.6
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
GYA	Guiyang	31.10	265	⇑iP	P	11 28 02.0	-1.9
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
CD2	Chengdu	32.04	275	P	P	11 28 10.0	-2.1
ZAK	Zakamensk	32.31	312	⇑iP	P	11 28 14.9	+0.6
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
TLY	Talaya	32.46	314	eP	P	11 28 10.9	-4.7
TLY				e		11 29 34.2	
TLY				eSS	SS	11 35 50.5	+27
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
TLY				MLR	MLR		
	comp=Z,561nm,16.0s,MS4.3						
CMAR	Chiang Mai Arr	41.08	259	P	P	11 29 27.6	-1.0
	comp=Z,2.8nm,0.9s,mb3.9,baz=49,slow=7.2,SNR=11						
WMQ	Urumqi	42.42	300	eP	P	11 29 41.5	+2.1
WMQ				XP	sP	11 29 55.0	+3.4
WMQ				PP	PP	11 31 18.0	-2.4
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.5						
WMQ				LR	LR		
	comp=N,174nm,18.0s,MS4.0						
WMQ				LR	LR		
	comp=E,87nm,17.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,54nm,17.0s,MS3.5						
ZAL	Zalesovo	44.09	315	P	P	11 29 52.8	0.0
	comp=Z,2.0nm,0.8s,mb3.9,baz=15,slow=9.7,SNR=12						
ZAL				LR	LR	11 50 15.9	
	comp=Z,110nm,19.6s,MS3.8,baz=187,slow=39						
ZAL	Zalesovo	44.09	315	P	P	11 29 52.8	0.0
ZAL				LR	LR	11 50 15.9	
NVS	Novosibirsk	45.04	316	eP	P	11 30 00.0	-0.5
JIRN	Jiri	47.59	278	eP	P	11 30 21.1	+0.1
	comp=Z,51nm,1.0s,mb5.5						
GUN	Gumba	47.75	278	eP	P	11 30 22.1	-0.1
	comp=Z,52nm,1.0s,mb5.5						
KURK	Kurchatov	47.94	310	i P	P	11 30 22.7	-0.7
KURK	Kurchatov	47.94	310	eP	P	11 30 23.0	-0.4
	comp=Z,23nm,1.0s,mb5.2						
PKI	Pulchoki	48.26	278	eP	P	11 30 25.6	-0.6
	comp=Z,26nm,1.0s,mb5.2						
KKN	Kakani	48.28	279	eP	P	11 30 25.9	-0.5
	comp=Z,31nm,0.8s,mb5.4						
DMN	Daman	48.49	278	eP	P	11 30 27.6	-0.4
	comp=Z,28nm,1.1s,mb5.2						
GKN	Gorkha	48.73	279	eP	P	11 30 29.4	-0.4
	comp=Z,69nm,1.0s						
ILAR	Eielson Array	51.82	31	P	P	11 30 53.2	+0.3
	comp=Z,1.1nm,0.8s,mb3.9,baz=258,slow=5.8,SNR=13						
AAK	Ala-Archa	52.12	300	⇓iP	P	11 30 55.1	-0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.0						
AAK	Ala-Archa	52.12	300	eP	P	11 30 54.5	-1.0
	comp=Z,7.0nm,1.4s,mb4.4						
CHKZ	Chkalovo	52.49	315	eP	P	11 30 56.9	-1.2
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
CHKZ	Chkalovo	52.49	315	eP	P	11 30 56.9	-1.2
	comp=Z,7.2nm,0.8s,mb4.7						
BVAR	Borovoye Array	52.72	314	P	P	11 30 59.8	0.0
	comp=Z,7.5nm,0.8s,mb4.7,baz=100,slow=8.8,SNR=13						
BVAR	Borovoye Array	52.72	314	P	P	11 30 59.8	0.0
WRAB	Tennant Creek	54.23	189	eP	P	11 31 11.8	+0.5
WRAB	Tennant Creek	54.23	189	eP	P	11 31 11.2	-0.1
	comp=Z,6.5nm,0.6s,mb4.7						
WRA	Warramunga Arr	54.24	189	P	P	11 31 11.1	-0.3
	comp=Z,2.2nm,0.5s,mb4.3,baz=4.8,slow=7.5,SNR=52						
NDI	New Delhi	54.51	283	eP	P	11 31 12.5	-0.8
INK	Inuvik	56.86	26	eP	P	11 31 29.7	0.0
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
INK	Inuvik	56.86	26	eP	P	11 31 29.7	0.0
	comp=Z,4.6nm,1.2s,mb4.4						
ASAR	Alice Springs	57.97	188	P	P	11 31 37.9	-0.3
	comp=Z,2.3nm,0.8s,mb4.3,baz=12,slow=6.4,SNR=13						
HYB	Hyderabad	58.41	270	i P	P	11 31 40.5	-0.8
MBWA	Marble Bar	58.84	204	eP	P	11 31 43.5	-0.8
	comp=Z,7.9nm,0.9s,mb4.7						
RES	Resolute Bay	65.34	14	P	P	11 32 23.8	-3.1
STKA	Stephens Creek	65.67	180	P	P	11 32 27.9	-1.9
	comp=Z,1.4nm,0.8s,mb4.1,baz=338,slow=19,SNR=2.2						
YKA	Yellowknife Ar	66.19	30	P	P	11 32 32.5	+0.1
	comp=Z,0.2nm,0.8s,baz=278,slow=5.3,SNR=5.5						
EDM	Edmonton	71.47	38	P	P	11 33 02.7	-2.6
FINES	FINESS Array B	71.48	333	P	P	11 33 04.6	-0.7
	comp=Z,8.6nm,1.2s,mb4.6,baz=63,slow=9.3,SNR=3.9						
FINES				LR	LR	12 07 33.2	
	comp=Z,84nm,18.7s,MS4.0,baz=6.3,slow=38						
KIV	Kislovodsk	72.99	312	i P	P	11 33 16.3	+1.8
HLID	Hailey	76.17	47	eP	P	11 33 35.1	+2.3
	comp=Z,2.3nm,1.1s,mb4.0						
AKASG	Malin Array Be	76.73	323	P	P	11 33 35.6	-0.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	76.73	323	P	P	11 33 35.6	-0.2
	comp=Z,1.7nm,0.5s,mb4.2,baz=51,slow=5.7,SNR=5.0						
HFS	Hagfors	76.82	336	P	P	11 33 37.1	+1.0
	comp=Z,4.8nm,1.0s,mb4.4,baz=108,slow=9.1,SNR=2.9						
NOA	NORSAR Array B	76.94	338	P	P	11 33 37.5	+0.8
	comp=Z,2.4nm,0.9s,mb4.1,baz=39,slow=5.6,SNR=4.3						
QLMT	Earthquake Lak	77.21	44	P	P	11 33 40.1	+1.6
HWUT	Hardware Ranch	79.01	47	eP	P	11 33 49.8	+1.3
	comp=Z,2.5nm,0.8s,mb4.2						
DUG	Dugway	79.07	49	P	P	11 33 54.6	+5.7
PDAR	Pinedale Array	79.52	45	P	P	11 33 53.3	+2.0
	comp=Z,0.9nm,0.7s,mb3.8,baz=294,slow=3.5,SNR=7.6						
DAU	Daniels Canyon	79.91	48	eP	P	11 33 56.0	+2.6
PV10	Paradox Valley	82.50	48	eP	P	11 34 10.3	+3.3
PV01	Paradox Valley	82.94	48	eP	P	11 34 12.0	+2.7
GERES	GERESS Array B	85.29	329	P	P	11 34 22.1	+1.2
	comp=Z,1.3nm,0.8s,mb4.1,baz=34,slow=4.8,SNR=4.7						
TXAR	Lajitas Array	91.69	53	P	P	11 34 53.9	+2.1
	comp=Z,0.4nm,0.9s,mb3.8,baz=288,slow=4.0,SNR=3.8						
LPAZ	La Paz	147.85	64	ePKP2	PKPab	11 41 33.3	+0.2

IDC 26 11:33:45.5±7.4**,8.31S**×**148.84E,mb3.2**/2**,mb1 3.3**/3**, mb1mx3.3**/11**,mbtmp3.1**/3**,ML2.8**/1**,Error ellipse: s-maj=218.7km s-min=34.7km az=110.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.19	229	P	P	11 37 58.0	-3.3
	0.0nm,0.3s,baz=42,slow=11,SNR=4.2						
ASAR	Alice Springs	20.93	221	P	P	11 38 30.4	-2.0
	0.5nm,1.0s,baz=53,slow=8.8,SNR=4.0						
SONM	Songino Array	67.30	330	P	P	11 44 42.6	-1.7
	0.5nm,0.7s,baz=117,slow=6.4,SNR=4.6						

*IDC **26** 11:50:21.3±1.4,1.79N×92.41E,mb3.9/5,mb1 4.2/6, mb1mx3.9/17,mbtmp3.9/6,MS3.5/1,Ms1 3.5/1, ms1mx3.0/20,Error ellipse: s-maj=48.5km s-min=28.7km az=46.0*

*NEIC **26** 11:50:25.4±1.0,1.73N×92.42E,h30^{km},Error ellipse: s-maj=22.6km s-min=17.1km az=218.0*

ISC 26 11:50:24.3±1.0**,1.8N**±0.1×**92.5E**±0.1**,h33^{km},n11,**σ**0^{s}98**/9**, mb3.8**/5**,MS3.6**/1**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	8.87	67	eP	P	11 52 33.9	+0.8
CMAR	Chiang Mai Arr	17.76	20	P	P	11 54 29.9	-0.8
	baz=212,slow=14,SNR=9.7						
LSA	Lhasa	27.81	358	P	P	11 56 12.4	-0.3
WRA	Warramunga Arr	46.37	120	P	P	11 58 50.5	+0.9
	0.7nm,0.7s,mb3.7,baz=297,slow=8.7,SNR=8.0						
WRAB	Tennant Creek	46.37	120	P	P	11 58 48.0	-1.7
SONM	Songino Array	47.45	13	P	P	11 58 57.7	0.0
	0.9nm,0.8s,mb3.8,baz=200,slow=6.6,SNR=10						
SONM				PcP	PcP	12 00 26.9	-1.3
	0.2nm,0.6s,baz=153,slow=3.2,SNR=2.2						
ZAL	Zalesovo	52.38	354	LR	LR	12 22 41.3	
	comp=Z,51nm,19.7s,MS3.6,baz=143,slow=37						
MLR	Muntele Rosu	72.44	317	P	P	12 01 50.0	+0.7
	1.6nm,0.7s,mb4.0,baz=112,slow=4.7,SNR=3.1						
FINES	FINESS Array B	77.35	333	P	P	12 02 18.7	+1.4
	1.0nm,0.8s,mb3.8,baz=45,slow=9.8,SNR=2.8						
GERES	GERESS Array B	81.29	319	P	P	12 02 37.8	-1.0
	0.8nm,0.8s,mb3.7,baz=90,slow=5.3,SNR=4.6						
TXAR	Lajitas Array	145.43	25	PKPbc	PKPbc	12 10 01.2	+1.0
	0.5nm,0.7s,baz=333,slow=2.8,SNR=5.6						

*NIED **26** 12:37:00,40.70N×142.50E,h56^{km},Mw5.7 Best double couple: $M_0$3.74×10^{17} NP1:ϕ_s24°,δ48°,λ99°. NP2:ϕ_s191°, δ43°,λ80°.*

*BJI **26** 12:37:37.4,40.72N×142.35E,h62^{km},mB5.9,mb5.6, Ms5.2,Msz5.0*

*MOS **26** 12:37:38.2±0.8,40.73N×142.36E,h59^{km},mb6.1/104, Error ellipse: s-maj=6.1km s-min=3.3km az=104.1*

*JMA **26** 12:37:38.4±0.1,40.69N×142.60E,h45^{km}±4^{km},M5.7 Broadband fault plane solution: P waves. NP1:ϕ_s193°, δ31°,λ94°. NP2:ϕ_s8°,δ59°,λ88°. Principal axes: T Plg76°, Azm271°; N Plg2°, Azm9°; P Plg14°, Azm100°;*

JMA Felt IV J1.

*GUC **26** 12:37:40.4±0.0,40.74N×142.35E,h64^{km},MW5.7(NEIC), MW5.7(HRVD)*

*HRVD **26** 12:37:40.7±0.2,40.79N×142.62E,h47^{km},MW5.7/60, Centroid moment Tensor Solution. LP body waves: s60,c129;Mantle waves: s57,c156; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}3.61±.07; $M_{\theta\theta}$0.19±.06; $M_{\phi\phi}$-3.80±.06; $M_{r\theta}$0.57±.06; $M_{\theta\phi}$-0.81±.05; $M_{\phi r}$-0.48±.06; Best double couple: $M_0$3.865×10^{17} NP1:ϕ_s22°,δ43°,λ106°. NP2:ϕ_s180°,δ49°,λ76°. Principal axes: T 3.753, Plg79°, Azm25°; N .229, Plg11°, Azm190°; P -3.978, Plg3°, Azm281°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **26** 12:37:40.7±0.1,40.73N×142.38E,mb5.8/211,MW5.7, MW5.6(NIED) Error ellipse: s-maj=2.8km s-min=2.0km az=162.0,Moment Tensor Solution. s53 Moment tensor: Scale 10^{17}Nm; M_{rr}3.84; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$-3.77; $M_{r\theta}$-0.10; $M_{\theta\phi}$-1.70; $M_{\phi r}$-0.64; Best double couple: $M_0$4.2×10^{17} NP1:ϕ_s24°,δ41°,λ94°. NP2:ϕ_s199°,δ49°,λ87°. Principal axes: T 3.89, Plg85°, Azm83°; N .59, Plg2°, Azm201°; P -4.48, Plg4°, Azm291°;*

NEIC Felt at Hachinohe and Misawa. Recorded [4 JMA] in Aomori and Iwate; [3 JMA] in Miyagi; [2 JMA] in Akita and Yamagata; [1 JMA] in Fukushima Prefectures. Also recorded [2 JMA] in much of southern Hokkaido and [1 JMA] in eastern Hokkaido.

*IDC **26** 12:37:40.7±0.3,40.72N×142.35E,h67^{km}±2^{km},mb5.2/40, mb1 5.3/43,mb1mx5.3/44,mbtmp5.5/43,MS4.8/2, Ms1 4.8/2,ms1mx3.8/26 Error ellipse: s-maj=9.0km s-min=7.4km az=110.0*

*BGS **26** 12:37:47.2,41.39N×139.96E,h66^{km},mb5.7*

ISC 26 12:37:38.9±0.2**,40.73N**±0.02×**142.41E**±0.02**,h64**^{km}±2^{km}**, h67**^{km}±.5^{km}**:pP-P,n1112,**σ**0^{s}84**/1124**,mb5.8**/299**, 291C-47D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JANG	Nango	0.77	243	⇓P	P	12 37 54.8	+0.4
JANG				eS	S	12 38 06.3	+0.4
JTH	Tanohata	0.90	208	⇑P	P	12 37 55.1	-0.9
JTM	Tenmabayashi	1.02	274	⇓P	P	12 37 58.2	+0.5
JTM				eS	S	12 38 12.8	+1.3
JKZ	Kuzumaki	1.11	228	⇓P	P	12 37 59.4	+0.5
JOT	Ohata	1.22	303	⇓P	P	12 38 00.7	+0.4
JOT				S	S	12 38 17.6	+1.4
MIYJ	Miyakonagasawa	1.24	202	P	P	12 38 00.0	-0.6
JEM	Erimo	1.40	23	P	P	12 38 02.5	-0.4
JEM				eS	S	12 38 18.9	-1.7
JAH	Hinai	1.46	249	⇓P	P	12 38 04.3	+0.6
JAH				eS	S	12 38 24.0	+2.0
JOM	Ohasama	1.52	215	P	P	12 38 04.4	-0.1
JOM				eS	S	12 38 23.9	+0.4
JSI2	Shiura 2	1.55	283	⇓P	P	12 38 05.7	+0.8
JKB	Kayabe	1.55	318	⇓P	P	12 38 05.2	+0.2
JKB				eS	S	12 38 24.8	+0.6
JNBK	Urakawa-nobuka	1.57	9	⇑P	P	12 38 05.8	+0.6
JNBK				eS	S	12 38 26.8	+2.3
JSR	Shiriuchi	1.70	299	⇓P	P	12 38 07.7	+0.7
JMK	Ichinoseki	2.00	208	⇓P	P	12 38 10.8	-0.3
JNB	Noboribetsu	2.02	330	⇓P	P	12 38 10.9	-0.4
JYW	Yuwa	2.06	236	⇓P	P	12 38 13.0	+1.0
JYM2	Yakumo 2	2.07	313	⇓P	P	12 38 12.5	+0.5
JEW	Eniwo	2.23	341	⇓P	P	12 38 14.5	+0.2
JYK	Kaneyama	2.40	222	⇓P	P	12 38 16.9	+0.1
JIO	Ouri	2.42	200	⇑P	P	12 38 16.0	-1.0
JSH	Shimam	2.60	318	⇓P	P	12 38 19.6	-0.1
JAK	Akkeshi	2.83	36	P	P	12 38 20.7	-2.2
JKK2	Kamakawa 2	3.15	4	⇑P	P	12 38 27.0	-0.3
JNK	Nakash	3.33	30	⇓P	P	12 38 27.0	-2.8
JAW	Awa shima	3.34	228	P	P	12 38 30.7	+0.7
ASAJ	Asahikawa	3.38	2	P	P	12 38 30.5	-0.1
ASAJ				S	S	12 39 09.4	-0.4
ASAJ				pmax	pmax		
	comp=Z,169nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,22µm,18.2s						
ASAJ	Asahikawa	3.38	2	P	P	12 38 30.4	-0.2
	comp=Z,169nm,0.3s,baz=222,slow=8.4,SNR=495						
ASAJ				S	S	12 39 09.3	-0.5
	comp=Z,304nm,0.3s,baz=336,slow=27,SNR=8.1						
ASAJ				LR	LR	12 40 37.9	
	comp=Z,22µm,18.2s,baz=197,slow=52						
JNS	Sasagawa	3.77	221	P	P	12 38 36.4	+0.4
YUK	Yuzh-Kuril'sk	4.17	37	⇓iP	P	12 38 38.5	-3.2
YUK				i S	S	12 39 23.0	-6.6
YUK				pmax	pmax		
	comp=Z,9µm,1.5s						
YUK				pmax	pmax		
	comp=N,10µm,3.0s						
YUK				pmax	pmax		
	comp=E,6µm,3.0s						
YUK				pmax	pmax		
	comp=N,2µm,0.5s						
YUK				pmax	pmax		
	comp=E,3µm,0.5s						
YUK				pmax	pmax		
	comp=Z,6µm,0.5s						
YUK				smax			
	comp=E,117nm,2.0s						
YUK				MLR	MLR		
	comp=Z,27µm,19.0s						
JSD	Sado	4.19	231	P	P	12 38 41.9	0.0
JSB	Shiboa	4.23	208	P	P	12 38 42.8	+0.3
JIZZ	Izumozaki	4.30	223	P	P	12 38 44.8	+1.4
JHK	Hiroka	4.37	218	P	P	12 38 44.6	+0.2
JKT	Katashina	4.67	213	P	P	12 38 49.1	+0.5
JAG	Ashikaga	4.88	209	P	P	12 38 50.7	-0.9
JGK	Kuni	5.10	217	P	P	12 38 55.6	+1.0
JSZ	Suzu	5.12	232	P	P	12 38 55.5	+0.7
JHG	Hegura jima	5.14	238	P	P	12 38 56.3	+1.2
MAJO	Matsushiro	5.32	220	eP	P	12 38 58.0	+0.4
MAJO				pmax	pmax		
	comp=Z,1µm,0.6s						
MAJO	Matsushiro	5.32	220	ePn	P	12 38 58.0	+0.4
	comp=Z,1µm,0.6s						
MAT	Matsushiro	5.32	220	eP	P	12 38 57.0	-0.6
MAT				eS	S	12 39 58.0	-0.3
MAT	Matsushiro	5.32	220	P	P	12 38 57.3	-0.3
MAT				S	S	12 39 58.1	-0.2
MAT	Matsushiro	5.32	220	P	P	12 38 58.0	+0.4
JNG	Nsakai	5.48	219	P	P	12 39 00.3	+0.5
JTT	Ttatey	5.72	226	P	P	12 39 04.8	+1.6
JJH	Hakui	5.81	231	P	P	12 39 05.6	+1.2
JNT	Takato	5.90	216	P	P	12 39 06.0	+0.4
JGN	Niukaw	6.02	223	P	P	12 39 08.3	+1.0
KUR	Kuril'sk	6.02	40	⇓iP	P	12 39 02.0	-5.3
KUR				eS	S	12 40 07.5	-8.2
KUR				pmax	pmax		
	comp=Z,10µm,1.0s						
KUR				pmax	pmax		
	comp=N,900nm,0.8s						
KUR				pmax	pmax		
	comp=E,1µm,0.8s						
KUR				pmax	pmax		
	comp=Z,4µm,0.8s						
KUR				smax			
	comp=N,8µm,0.8s						
KUR				smax			
	comp=E,10µm,0.8s						
YSS	Yuzh-Sakhalins	6.22	2	αiP	P	12 39 09.0	-1.2
YSS				i S	S	12 40 18.0	-2.8
YSS				pmax	pmax		
	comp=N,2µm,3.0s						
YSS				pmax	pmax		
	comp=Z,2µm,3.0s						
YSS				pmax	pmax		
	comp=N,1µm,1.0s						
YSS				pmax	pmax		
	comp=Z,870nm,1.0s						
YSS				pmax	pmax		
	comp=E,270nm,0.9s						
YSS				pmax	pmax		
	comp=E,2µm,2.0s						
YSS				pmax	pmax		
	comp=Z,5µm,2.0s						
YSS				pmax	pmax		
	comp=N,6µm,3.0s						
YSS				pmax	pmax		
	comp=Z,1µm,1.1s						
YSS				pmax	pmax		
	comp=N,810nm,1.0s						
YSS				pmax	pmax		
	comp=E,1µm,1.0s						
YSS				smax			
	comp=N,6µm,3.0s						
YSS				smax			
	comp=E,4µm,4.0s						
YSS				smax			
	comp=N,1µm,1.0s						
YSS				smax			
	comp=E,500nm,1.0s						
YSS				MLR	MLR		
	comp=Z,12µm,18.0s						
YSS				MLR	MLR		
	comp=N,11µm,19.0s						
YSS	Yuzh-Sakhalins	6.22	2	⇑ePn	P	12 39 09.2	-0.9
	comp=N,919nm,0.9s						
JNY	Yasuok	6.45	215	P	P	12 39 13.4	0.0
JGF	Kuroka	6.49	219	P	P	12 39 14.3	+0.4
JAO	Obara	6.80	218	P	P	12 39 18.0	-0.3
JKY	Yasaka	7.68	231	P	P	12 39 31.5	+1.0
JHJ	Hachijo jima 2	7.88	196	P	P	12 39 28.9	-4.4
	comp=N,100nm,0.3s,baz=77,slow=7.2,SNR=31						
JHJ				S	S	12 40 51.9	-10
	comp=N,305nm,0.3s,baz=239,slow=23,SNR=8.6						
VLA	Vladivostok	8.20	290	⇑iP	P	12 39 36.0	-1.5
VLA				i S	S	12 41 13.0	+3.5
VLA				pmax	pmax		
	comp=N,6µm,5.0s						
VLA				pmax	pmax		
	comp=E,8µm,5.0s						
VLA				pmax	pmax		
	comp=Z,6µm,5.0s						
VLA				MLR	MLR		
	comp=N,4µm,13.0s						
VLA				MLR	MLR		
	comp=E,4µm,14.0s						
VLA				MLR	MLR		
	comp=Z,7µm,14.0s						
UGL	Uglegorsk	8.35	358	eP	P	12 39 34.4	-5.2
UGL				S	S	12 41 03.2	-10
UGL				pmax	pmax		
	comp=Z,80nm,0.6s						
UGL				smax			
	comp=N,280nm,0.9s						
UGL				smax			
	comp=E,1µm,1.5s						
UGL				smax			
	comp=N,2µm,2.0s						
UGL				smax			
	comp=E,2µm,2.0s						
UGL				MLR	MLR		
	comp=N,14µm,22.0s						
UGL				MLR	MLR		
	comp=Z,14µm,22.0s						
UGL				MLR	MLR		
	comp=E,9µm,16.0s						
TYV	Tymovskoe	10.13	1	eP	P	12 39 58.3	-5.6
TYV				eS	S	12 42 02.0	+5.1
TYV				pmax	pmax		
	comp=Z,63nm,0.7s						
TYV				pmax	pmax		
	comp=Z,100nm,0.7s						
TYV				smax			
	comp=N,4µm,8.0s						
TYV				smax			
	comp=E,6µm,8.0s						
TYV				MLR	MLR		
	comp=Z,16µm,20.0s						
MDJ	Mudanjiang	10.21	297	P	P	12 40 05.3	+0.4
MDJ				S	S	12 41 57.5	-1.2
MDJ				PCP	PcP	12 46 07.8	-1.0
MDJ				SCP		12 49 36.5	
MDJ				PCS		12 49 43.5	
MDJ				AMB	AMB		
	comp=Z,390nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,3µm,5.9s						
MDJ				LR	LR		
	comp=N,3µm,17.0s						
MDJ				LR	LR		
	comp=E,10µm,25.9s						
MDJ				LR	LR		
	comp=Z,14µm,18.9s						
MDJ	Mudanjiang	10.21	297	eP	P	12 40 05.2	+0.3
	comp=Z,1µm,1.4s						
KLR	Kul'dur	11.36	322	eP	P	12 40 16.8	-3.6
KLR				eS	S	12 42 24.5	-2.0
KLR				pmax	pmax		
	comp=N,100nm,1.4s						
KLR				pmax	pmax		
	comp=E,120nm,1.4s						
KLR				pmax	pmax		
	comp=Z,67nm,1.4s						
KS15	Wonju Array Si	11.76	258	⇓ePn	P	12 40 25.9	+0.1
INCN	Inchon	12.68	260	eP	P	12 40 38.6	+0.5
	comp=Z,181nm,0.9s						
OKH	Okha	12.83	1	eP	P	12 40 34.2	-5.9
OKH				pmax	pmax		
	comp=Z,2µm,4.4s						
CN2	Changchun	12.93	289	eP	P	12 40 40.0	-1.5
CN2				XP		12 40 57.3	
CN2				eS	S	12 43 05.3	+1.0
CN2				PCP	PcP	12 46 12.5	+0.7
CN2				AMB	AMB		
	comp=Z,130nm,1.5s						
CN2				AMB	AMB		

	comp=Z,3µm,6.0s						
CN2				LR	LR		
	comp=N,3µm,19.0s						
CN2				LR	LR		
	comp=E,2µm,19.0s						
CN2				LR	LR		
	comp=Z,3µm,21.0s						
CBIJ	**Chichi jima**	**13.60**	**181**	P	**P**	**12 40 45.8**	**-4.6**
	comp=Z,43nm,0.3s,baz=323,slow=11,SNR=10						
CBIJ				S	**S**	**12 43 05.8**	**-15**
	comp=Z,108nm,0.3s,baz=277,slow=21,SNR=8.7						
SKR	**Severo-Kuril's**	**13.79**	**39**	*e*P	**P**	**12 40 47.0**	**-5.5**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				pmax	pmax		
	comp=N,3µm,4.0s						
SKR				pmax	pmax		
	comp=Z,4µm,4.0s						
SNY	**Shenyang**	**14.21**	**281**	⇓P	**P**	**12 40 58.3**	**+0.2**
SNY				S	**S**	**12 43 39.3**	**+4.7**
SNY				AMB	AMB		
	comp=Z,110nm,1.5s						
SNY				LR	LR		
	comp=E,6µm,15.6s						
SNY				LR	LR		
	comp=Z,5µm,15.0s						
DL2	**Dalian**	**16.07**	**270**	PR		12 41 22.0	
DL2				AP		12 41 33.8	
DL2				S	**S**	**12 44 20.0**	**+2.1**
DL2				PCS		12 49 49.3	
DL2				AMB	AMB		
	comp=Z,420nm,1.1s						
DL2				AMB	AMB		
	comp=Z,2µm,3.7s						
DL2				LR	LR		
	comp=E,2µm,26.8s						
DL2				LR	LR		
	comp=Z,4µm,30.5s						
PET	**Petropavlovsk**	**16.52**	**36**	*e*P	**P**	**12 41 29.2**	**+1.7**
PET				*e*S	**S**	**12 44 31.8**	**+3.7**
PET				pmax	pmax		
	comp=Z,96nm,1.3s						
PET				smax			
	comp=E,500nm,13.5s						
PET				MLR	MLR		
	comp=Z,4µm,15.0s						
PET	**Petropavlovsk**	**16.52**	**36**	⇓*i*P	**P**	**12 41 25.7**	**-1.8**
HIA	**Hailar**	**18.11**	**306**	*e*P	**P**	**12 41 44.5**	**-2.9**
HIA				pmax	pmax		
	comp=Z,106nm,0.4s						
HIA	**Hailar**	**18.11**	**306**	*e*P	**P**	**12 41 44.5**	**-2.9**
	comp=Z,106nm,0.4s						
JOW	**Kunigami**	**18.14**	**225**	P	**P**	**12 41 43.0**	**-4.9**
	comp=Z,3.9nm,0.3s,baz=73,slow=12,SNR=4.4						
JOW				LR	LR	12 49 06.8	
	comp=Z,2µm,19.8s,baz=240,slow=38						
MA2	**Magadan**	**19.58**	**13***c*	*i*P	**P**	**12 42 00.2**	**-3.9**
MA2				*i* S	**S**	**12 45 34.9**	**-1.4**
MA2				pmax	pmax		
	comp=Z,200nm,1.1s						
MA2				MLR	MLR		
	comp=Z,6µm,13.0s						
MA2	**Magadan**	**19.58**	**13**	*e*P	**P**	**12 42 00.1**	**-3.9**
	comp=Z,305nm,1.1s						
SSE	**Sheshan**	**19.66**	**247**	P	**P**	**12 42 03.0**	**-2.1**
SSE				AP		12 42 17.3	
SSE				XP		12 42 26.3	
SSE				S	**S**	**12 45 37.8**	**-0.2**
SSE				AMB	AMB		
	comp=Z,131nm,1.0s						
SSE				LR	LR		
	comp=N,2µm,30.6s						
SSE				LR	LR		
	comp=E,3µm,30.7s						
SSE				LR	LR		
	comp=Z,5µm,28.5s						
SSE	**Sheshan**	**19.66**	**247**	P	**P**	**12 42 02.9**	**-2.2**
	comp=Z,131nm,1.0s						
SSE				pP		12 42 17.2	
SSE				sP		12 42 26.3	
SSE				S	**S**	**12 45 37.8**	**-0.2**
SSE				sS		12 46 02.8	
CLNS	**Chul'man**	**19.73**	**331**	*e*P	**P**	**12 42 03.4**	**-2.2**
CLNS				*e*S	**S**	**12 45 35.0**	**-4.3**
CLNS				pmax	pmax		
	comp=Z,289nm,1.2s						
CLNS				pmax	pmax		
	comp=N,252nm,1.1s						
CLNS				pmax	pmax		
	comp=E,83nm,1.0s						
CLNS				pmax	pmax		
	comp=E,200nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,200nm,0.9s						
CLNS				pmax	pmax		
	comp=N,224nm,1.3s						
CLNS				smax			
	comp=N,137nm,1.2s						
CLNS				smax			
	comp=E,123nm,1.3s						
CLNS				smax			
	comp=Z,67nm,1.3s						
CLNS				MLR	MLR		
	comp=Z,4µm,13.0s						
CLNS				MLR	MLR		
	comp=N,4µm,16.0s						
CLNS				MLR	MLR		
	comp=E,600nm,14.0s						
BJI	**Beijing**	**19.98**	**277**	*e*P	**P**	**12 42 05.5**	**-2.9**
BJI				XP		12 42 26.5	
BJI				S	**S**	**12 45 41.0**	**-3.6**
BJI				SCS	ScS	12 53 34.3	+1.4
BJI				AMB	AMB		
	comp=Z,325nm,1.0s						
BJI				LR	LR		
	comp=N,2µm,22.7s						
BJI				LR	LR		
	comp=E,5µm,21.4s						
BJI				LR	LR		
	comp=Z,9µm,26.1s						
BJI	**Beijing**	**19.98**	**277**	*e*P	**P**	**12 42 05.5**	**-2.9**
BJI				S	**S**	**12 45 41.1**	**-3.5**
BJI				pmax	pmax		
	comp=Z,325nm,1.0s						
BJI	**Beijing**	**19.98**	**277**	*e*P	**P**	**12 42 05.5**	**-2.9**
	comp=Z,325nm,1.0s						
BJI				sP		12 42 26.6	
BJI				S	**S**	**12 45 41.1**	**-3.5**
BJI				sS		12 46 11.5	
BJI				ScS	ScS	12 53 34.2	+1.3
BJT	**Baijiatuau**	**19.99**	**277**	*e*P	**P**	**12 42 05.3**	**-3.2**
BJT				pmax	pmax		
	comp=Z,247nm,0.7s						
BJT	**Baijiatuau**	**19.99**	**277**	*e*P	**P**	**12 42 05.3**	**-3.2**
	comp=Z,247nm,0.7s						
TIA	**Tai'an**	**20.28**	**265**	P	**P**	**12 42 09.5**	**-2.1**
TIA				S	**S**	**12 45 47.5**	**-3.0**
TIA				AMB	AMB		
	comp=Z,373nm,1.5s						
TIA				LR	LR		
	comp=N,3µm,15.0s						
TIA				LR	LR		
	comp=E,2µm,6.7s						
NJ2	**Nanjing**	**20.80**	**253**	*e*P	**P**	**12 42 14.5**	**-2.5**
NJ2				AP		12 42 28.3	
NJ2				XP		12 42 35.3	
NJ2				PP	PP	12 42 39.3	-1.4
NJ2				PPP	PPP	12 42 48.3	-2.3
NJ2				S	**S**	**12 45 55.0**	**-5.5**
NJ2				XS		12 46 16.0	
NJ2				AMB	AMB		
	comp=Z,2µm,0.8s						
NJ2				AMB	AMB		
	comp=Z,2µm,9.0s						
NJ2				LR	LR		
	comp=N,7µm,17.5s						
NJ2				LR	LR		
	comp=E,10µm,19.9s						
NJ2				LR	LR		
	comp=Z,20µm,14.5s						
YAK	**Yakutsk**	**22.68**	**344***c*	*i*P	**P**	**12 42 32.1**	**-3.2**
YAK				*e*		12 42 51.9	
YAK				*e*S	**S**	**12 46 29.3**	**-5.2**
YAK				*e*SS	SS	12 46 52.1	-29
YAK				pmax	pmax		
	comp=E,39nm,0.9s						
YAK				pmax	pmax		
	comp=Z,321nm,0.9s,mb5.8						
YAK				pmax	pmax		
	comp=N,121nm,1.0s						
YAK				smax			
	comp=E,335nm,1.0s						
YAK				smax			
	comp=Z,42nm,0.8s						
YAK				smax			
	comp=N,298nm,0.9s						
YAK				MLR	MLR		
	comp=Z,3µm,26.0s						
YAK				MLR	MLR		
	comp=N,2µm,20.0s						
YAK				MLR	MLR		
	comp=E,656nm,11.0s						
YAK	**Yakutsk**	**22.68**	**344**	⇑*e*P	**P**	**12 42 32.0**	**-3.3**
	comp=E,396nm,0.7s,mb6.0						
YAK				LR	LR		
	comp=Z,3µm,22.0s						
SEY	**Seymchan**	**23.02**	**12**	*e*P	**P**	**12 42 39.4**	**+0.8**
SEY				*e*		12 43 01.9	
SEY				*e*PPP	PPP	12 43 27.8	+6.8
SEY				*e*S	**S**	**12 46 42.9**	**+2.4**
SEY				*SS		12 47 08.2	
SEY				*e*SS	SS	12 47 30.0	+0.8
SEY				pmax	pmax		
	comp=N,100nm,1.1s						
SEY				pmax	pmax		
	comp=Z,220nm,1.1s,mb5.5						
SEY				pmax	pmax		
	comp=E,70nm,1.4s						
SEY				smax			
	comp=N,1µm,4.2s						
SEY				smax			
	comp=E,400nm,2.9s						
HHC	**Hu-ho-hao-te**	**23.30**	**280**	⇓P	**P**	**12 42 39.5**	**-2.0**
HHC				AP		12 42 56.3	
HHC				XP		12 43 06.0	
HHC				PP	PP	12 43 14.5	0.0
HHC				PCP	PcP	12 46 23.5	-5.5
HHC				S	**S**	**12 46 47.3**	**+1.6**
HHC				XS		12 47 12.0	
HHC				AMB	AMB		
	comp=Z,78nm,1.8s,mb4.8						
HHC				LR	LR		
	comp=N,2µm,18.3s						
HHC				LR	LR		
	comp=E,4µm,22.7s						
HHC				LR	LR		
	comp=Z,7µm,24.8s						
TATO	**Taipei**	**23.49**	**234**	*e*P	**P**	**12 42 41.8**	**-1.7**
	comp=Z,606nm,1.2s,mb5.9						
TATO				LR	LR		
	comp=Z,4µm,19.0s						
NACB	**Ninganchiao**	**24.01**	**233**	*e*P	**P**	**12 42 45.0**	**-3.6**
FX1	**Attu Island--F**	**24.10**	**49**	P	**P**	**12 42 51.3**	**+2.1**
FX1						12 46 29.3	
FX1				pmax	pmax		
	comp=Z,116nm,0.9s						
FX1	**Attu Island--F**	**24.10**	**49**	P	**P**	**12 42 51.3**	**+2.1**
	comp=Z,116nm,0.9s,mb5.3,baz=331,slow=1.2,SNR=15						
FX1				PcP	PcP	12 46 29.3	-1.2
	comp=Z,26nm,0.6s,baz=333,slow=2.3,SNR=5.4						
FX1	**Attu Island--F**	**24.10**	**49**	⇑*e*P	**P**	**12 42 50.8**	**+1.6**
BTO	**Baotou**	**24.50**	**280**	*e*P	**P**	**12 42 51.3**	**-1.9**
BTO				S	**S**	**12 46 59.5**	**-6.7**
SMY	**Shemya**	**24.60**	**50**	*e*P	**P**	**12 42 53.6**	**-0.5**
SMY				pmax	pmax		
	comp=Z,1µm,1.4s,mb6.3						
SMY				MLR	MLR		
	comp=Z,6µm,22.0s						
SMY	**Shemya**	**24.60**	**50**	*e*P	**P**	**12 42 53.6**	**-0.5**
	comp=Z,1µm,1.4s,mb6.3						
SMY				LR	LR		
	comp=Z,6µm,22.0s						
WHN	**Wuhan**	**24.87**	**255**	⇑P	**P**	**12 42 54.5**	**-2.5**
WHN				LR	LR		
	comp=Z,12µm,17.5s						
BOD	**Bodaibo**	**24.93**	**323**	*e*P	**P**	**12 42 56.3**	**-0.9**
BOD				pmax	pmax		
	comp=Z,250nm,1.0s,mb5.7						
QZH	**Quanzhou**	**25.35**	**239**	⇓*i*P	**P**	**12 43 01.3**	**-0.2**
QZH				XP	sP	12 43 22.8	-1.7
QZH				S	**S**	**12 47 20.8**	**+0.2**
QZH				XS		12 47 44.5	
QZH				AMB	AMB		
	comp=Z,450nm,1.2s,mb5.9						
QZH				LR	LR		
	comp=N,2µm,12.3s						
QZH				LR	LR		
	comp=E,4µm,17.6s						
QZH				LR	LR		
	comp=Z,6µm,24.3s						
ULN	**Ulaanbaatar**	**26.12**	**298**	*e*P	**P**	**12 43 07.2**	**-1.2**
ULN				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.3						
ULN				MLR	MLR		
	comp=Z,5µm,20.0s						
ULN	**Ulaanbaatar**	**26.12**	**298**	*e*P	**P**	**12 43 07.2**	**-1.2**
	comp=Z,74nm,0.8s,mb5.3						
ULN				LR	LR		
	comp=Z,5µm,20.0s						
SONM	**Songino Array**	**26.56**	**298**	P	**P**	**12 43 12.3**	**-0.2**
	comp=Z,38nm,0.5s,mb5.2,baz=104,slow=10,SNR=150						
XAN	**Xi'an**	**27.32**	**267**	P	**P**	**12 43 17.8**	**-1.8**
XAN				PP	PP	12 44 04.8	-3.8
XAN				AMB	AMB		
	comp=Z,118nm,0.8s,mb5.5						
XAN				LR	LR		
	comp=N,1µm,25.4s						
XAN				LR	LR		
	comp=E,2µm,31.1s						
XAN				LR	LR		
	comp=Z,4µm,32.7s						
IRK	**Irkutsk**	**28.34**	**307**	*e*P	**P**	**12 43 27.9**	**-0.7**
IRK				*e*		12 46 39.7	
IRK				*e*S	**S**	**12 48 10.1**	**+1.0**
IRK				pmax	pmax		
	comp=Z,316nm,1.6s,mb5.7						
ENH	**Enshi**	**28.61**	**259**	*e*P	**P**	**12 43 29.2**	**-2.1**
	comp=Z,77nm,0.5s,mb5.7						
TLY	**Talaya**	**28.65**	**306**	P	**P**	**12 43 31.9**	**+0.5**
	comp=Z,336nm,0.8s,mb6.1,SNR=17						
TLY	**Talaya**	**28.65**	**306**	*e*P	**P**	**12 43 30.7**	**-0.7**
TLY				*e*		12 44 33.4	
TLY				*e*S	**S**	**12 48 09.6**	**-4.4**
TLY				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.2						
TLY				MLR	MLR		
	comp=Z,3µm,17.0s						
ZAK	**Zakamensk**	**28.75**	**303**	⇑*i*P	**P**	**12 43 31.6**	**-0.7**
ZAK				*e*		12 43 55.3	
ZAK				*e*		12 50 08.2	
ZAK				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.9						
CVP	**Callao Caves**	**29.00**	**224**	*i* P	**P**	**12 43 33.0**	**-1.9**
GZH	**Guangzhou**	**30.11**	**243**	P	**P**	**12 43 40.0**	**-4.6**
GZH				S	**S**	**12 48 29.5**	**-7.9**
GZH				LR	LR		
	comp=N,3µm,25.2s						
GZH				LR	LR		
	comp=E,2µm,25.3s						
GZH				LR	LR		
	comp=Z,4µm,19.0s						
BILL	**Bilibino**	**30.27**	**18**	*e*P	**P**	**12 43 44.1**	**-1.5**
BILL				*e**PP	pP	12 44 02.9	+1.7
BILL				pmax	pmax		
	comp=Z,433nm,1.3s,mb6.0						
BILL	**Bilibino**	**30.27**	**18**	*e*P	**P**	**12 43 44.1**	**-1.5**
	comp=Z,433nm,1.3s,mb6.0						
BILL				*e*pP	pP	12 44 02.9	+1.7
MOY	**Mondy**	**30.29**	**305**	*e*P	**P**	**12 43 45.9**	**-0.1**
MOY				pmax	pmax		
	comp=Z,189nm,2.1s,mb5.5						
LZH	**Lanzhou**	**30.41**	**274**	⇑P	**P**	**12 43 46.5**	**-0.6**
LZH				AP	pP	12 44 02.3	-0.5
LZH				XP	sP	12 44 09.3	-1.2
LZH				PCP	PcP	12 46 45.5	-0.1
LZH				S	**S**	**12 48 42.0**	**0.0**
LZH				XS		12 49 07.0	
LZH				SS	SS	12 50 22.0	-3.6
LZH				AMB	AMB		
	comp=Z,155nm,1.8s,mb5.4						
LZH				AMB	AMB		
	comp=Z,333nm,4.1s						
LZH				LR	LR		
	comp=E,4µm,12.6s						
LZH				LR	LR		
	comp=Z,5µm,14.2s						
LZH	**Lanzhou**	**30.41**	**274**	⇑P	**P**	**12 43 46.4**	**-0.7**
LZH				*PP	pP	12 44 02.2	-0.6
LZH				*SP	sP	12 44 09.3	-1.2
LZH						12 46 45.6	
LZH				S	**S**	**12 48 42.0**	**0.0**
LZH				*SS		12 49 07.0	
LZH				SS	SS	12 50 22.0	-3.6
LZH				pmax	pmax		
	comp=Z,155nm,1.8s,mb5.4						
LZH				MLR	MLR		
	comp=Z,5µm,14.2s						
LZH	**Lanzhou**	**30.41**	**274**	⇑P	**P**	**12 43 46.4**	**-0.7**
	comp=Z,155nm,1.8s,mb5.4						
LZH				pP	pP	12 44 02.2	-0.6
LZH				sP	sP	12 44 09.3	-1.2
LZH				PP	PP	12 45 46.7	+58
LZH				PcP	PcP	12 46 45.6	0.0
LZH				S	**S**	**12 48 42.0**	**0.0**
LZH				sS		12 49 07.0	
LZH				SS	SS	12 50 22.0	-3.6
LZH				LR	LR		
	comp=Z,5µm,14.2s						
TIXI	**Tiksi**	**31.73**	**352**	⇑*i*P	**P**	**12 43 55.9**	**-2.5**
TIXI				*e*		12 45 20.9	
TIXI				pmax	pmax		
	comp=Z,103nm,2.0s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,1µm,15.0s						
TIXI	**Tiksi**	**31.73**	**352**	⇑*i*P	**P**	**12 43 56.1**	**-2.3**
GTA	**Gaotai**	**32.39**	**282**	*e*P	**P**	**12 44 03.8**	**-0.7**
GTA				AP	pP	12 44 20.5	+0.2
GTA				XP	sP	12 44 27.5	-0.7
GTA				PP	PP	12 45 13.3	-0.7
GTA				PPP	PPP	12 45 29.0	-0.7
GTA				PCP	PcP	12 46 51.3	+0.4
GTA				S	**S**	**12 49 11.0**	**-2.1**
GTA				XS		12 49 38.3	
GTA				SCP		12 50 28.8	
GTA				PCS		12 50 35.8	
GTA				SS	SS	12 51 10.8	-1.1
GTA				SCS	ScS	12 54 27.0	+1.4
GTA				AMB	AMB		
	comp=Z,91nm,0.9s,mb5.6						
GTA				AMB	AMB		
	comp=Z,233nm,4.6s						
GTA				LR	LR		
	comp=N,2µm,23.6s						
GTA				LR	LR		
	comp=E,4µm,21.7s						
GTA				LR	LR		
	comp=Z,6µm,25.5s						
CD2	**Chengdu**	**32.61**	**265**	P	**P**	**12 44 03.8**	**-2.7**
CD2				AP	pP	12 44 18.8	-3.6
CD2				XP	sP	12 44 26.5	-3.7
CD2				PP	PP	12 45 12.0	-4.9
CD2				S	**S**	**12 49 06.0**	**-11**
CD2				AMB	AMB		
	comp=Z,150nm,0.7s,mb6.0						
CD2				LR	LR		
	comp=N,3µm,15.6s						
CD2				LR	LR		
	comp=Z,3µm,23.4s						
GYA	**Guiyang**	**32.76**	**255**	⇓*i*P	**P**	**12 44 07.0**	**-0.8**
GYA				PCP	PcP	12 46 52.0	0.0
GYA				S	**S**	**12 49 13.0**	**-5.9**
GYA				AMB	AMB		
	comp=Z,100nm,0.8s,mb5.8						
GYA				AMB	AMB		
	comp=Z,310nm,4.0s						
GYA				LR	LR		
	comp=N,3µm,19.8s						
GYA				LR	LR		
	comp=E,2µm,19.5s						
GYA				LR	LR		
	comp=Z,4µm,20.4s						
QIZ	**Qiongzhong**	**35.26**	**242**	P	**P**	**12 44 31.0**	**+1.6**
QIZ				PP	PP	12 45 52.0	+1.8
QIZ				S	**S**	**12 49 59.5**	**+1.8**
QIZ				XS		12 50 25.0	
QIZ				SS	SS	12 52 18.8	+1.0
QIZ				LR	LR		
	comp=N,1µm,17.7s						
QIZ				LR	LR		
	comp=E,2µm,21.3s						
QIZ				LR	LR		
	comp=Z,2µm,23.2s						
QIZ	**Qiongzhong**	**35.26**	**242**	*e*P	**P**	**12 44 28.9**	**-0.5**
KMI	**Kunming**	**36.42**	**257**	⇓P	**P**	**12 44 39.3**	**+0.2**
KMI				AP	pP	12 44 55.0	-0.2
KMI				XP	sP	12 45 03.3	+0.3
KMI				PP	PP	12 45 59.8	-4.5
KMI				S	**S**	**12 50 10.0**	**-5.4**
KMI				XS		12 50 36.5	
KMI				SS	SS	12 52 38.0	-5.8
KMI				AMB	AMB		
	comp=Z,63nm,1.0s,mb5.5						
KMI				AMB	AMB		
	comp=Z,446nm,3.2s						
KMI				LR	LR		
	comp=N,2µm,22.1s						
KMI				LR	LR		
	comp=E,3µm,22.1s						
KMI				LR	LR		
	comp=Z,4µm,25.9s						
KMI	**Kunming**	**36.42**	**257**	⇓P	**P**	**12 44 39.2**	**+0.1**
KMI				*PP	pP	12 44 55.1	-0.1
KMI				*SP	sP	12 45 03.2	+0.2
KMI						12 45 59.7	
KMI				S	**S**	**12 50 10.0**	**-5.4**
KMI				*SS		12 50 36.6	
KMI				SS	SS	12 52 38.1	-5.7
KMI				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.5						
KMI				MLR	MLR		
	comp=Z,4µm,25.9s						
KMI	**Kunming**	**36.42**	**257**	⇓P	**P**	**12 44 39.2**	**+0.1**
	comp=Z,63nm,1.0s,mb5.5						
KMI				pP	pP	12 44 55.1	-0.1
KMI				sP	sP	12 45 03.2	+0.2
KMI				PP	PP	12 45 59.7	-4.5
KMI				S	**S**	**12 50 10.0**	**-5.4**
KMI				sS		12 50 36.6	
KMI				SS	SS	12 52 38.1	-5.7
KMI				LR	LR		
	comp=Z,4µm,25.9s						
TNA	**Tin City**	**37.28**	**32**	⇑*i*P	**P**	**12 44 45.7**	**-0.2**
	comp=Z,110nm,1.2s,mb5.6						
WMQ	**Urumqi**	**39.98**	**293**	P	**P**	**12 45 09.0**	**+0.4**
WMQ				AP	pP	12 45 24.0	-0.8
WMQ				XP	sP	12 45 32.0	-0.4
WMQ				PP	PP	12 46 46.0	+0.8
WMQ				S	**S**	**12 51 10.0**	**+0.8**
WMQ				SS	SS	12 54 03.0	+0.5
WMQ				AMB	AMB		
	comp=Z,125nm,1.0s,mb5.6						
WMQ				LR	LR		
	comp=N,1µm,18.0s						
WMQ				LR	LR		
	comp=E,2µm,18.0s						
WMQ				LR	LR		
	comp=Z,2µm,19.0s						
ZAL	**Zalesovo**	**40.10**	**309**	P	**P**	**12 45 09.6**	**+0.1**
	comp=Z,72nm,0.8s,mb5.5,baz=24,slow=9.0,SNR=83						
ZAL				PcP	PcP	12 47 13.1	-0.6
	comp=Z,23nm,0.6s,baz=63,slow=2.5,SNR=4.0						
NVS	**Novosibirsk**	**40.94**	**311**	*i* P	**P**	**12 45 14.9**	**-1.4**
NVS				*i*		12 45 38.7	
NVS				*i* S	**S**	**12 51 21.8**	**-1.4**
NVS				pmax	pmax		
	comp=N,19nm,1.4s						
NVS				pmax	pmax		
	comp=E,174nm,1.4s						
NVS				pmax	pmax		
	comp=Z,227nm,1.4s,mb5.6						
NVS				smax			

	comp=N,76nm,1.6s						
NVS				smax			
	comp=E,125nm,1.5s						
UBT	**Ubonrachathani**	**41.18**	**243**	P	**P**	**12 45 19.0**	**+0.3**
KKM	**Kota Kinabalu**	**41.74**	**221**	*e*P	**P**	**12 45 22.4**	**-1.1**
KKM	**Kota Kinabalu**	**41.74**	**221**	P	**P**	**12 45 24.3**	**+0.8**
CHRT	**Chiangrai**	**41.77**	**253**	⇑P	**P**	**12 45 24.0**	**+0.5**
	comp=E,2µm,1.2s,mb6.6						
KKTK	**Khon Kaen**	**41.93**	**246**	P	**P**	**12 45 25.5**	**+0.6**
TSM	**Tawau**	**42.46**	**218**	P	**P**	**12 45 30.1**	**+0.8**
LSA	**Lhasa**	**42.76**	**272**	P	**P**	**12 45 32.8**	**+1.2**
LSA				AP	pP	12 45 46.8	-1.0
LSA				XP	sP	12 45 51.0	-4.4
LSA				AMB	AMB		
	comp=Z,100nm,1.4s,mb5.3						
LSA				AMB	AMB		
	comp=Z,270nm,3.0s						
LSA				LR	LR		
	comp=N,700nm,30.0s						
LSA				LR	LR		
	comp=E,4µm,30.0s						
LSA				LR	LR		
	comp=Z,3µm,29.0s						
LSA	**Lhasa**	**42.76**	**272**	*e*P	**P**	**12 45 33.2**	**+1.6**
LSA				pmax	pmax		
	comp=Z,105nm,0.8s,mb5.6						
LSA	**Lhasa**	**42.76**	**272**	*e*P	**P**	**12 45 33.2**	**+1.6**
	comp=Z,105nm,0.8s,mb5.6						
MKAR	**Makanchi Array**	**42.91**	**299**	*i* P	**P**	**12 45 32.3**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,140nm,0.6s						
MKAR	**Makanchi Array**	**42.91**	**299**	*i* P	**P**	**12 45 32.4**	**-0.2**
CHG	**Chiang Mai**	**43.05**	**253**	⇑P	**P**	**12 45 34.0**	**-0.1**
	comp=Z,126nm,0.7s,mb5.8						
MENI	**Mendum Tagoi**	**43.07**	**183**	⇑*i*P	**P**	**12 45 34.8**	**+0.4**
MENI				pmax	pmax		
	comp=Z,14nm,1.0s						
MENI	**Mendum Tagoi**	**43.07**	**183**	⇑*i*P	**P**	**12 45 34.8**	**+0.4**
	comp=Z,14nm,1.0s						
IMA	**Indian Mountai**	**43.13**	**32**	*e*P	**P**	**12 45 34.7**	**+0.6**
	comp=Z,1µm,0.7s,mb6.8						
IMA				*e*pP	pP	12 45 54.2	+3.9
YOMI	**Yo Moklole**	**43.20**	**183**	⇑*i*P	**P**	**12 45 35.1**	**-0.3**
	comp=Z,204nm,1.4s,mb5.7						
IMP	**Imphal**	**43.21**	**264**	*e*P	**P**	**12 45 35.0**	**-0.3**
CM31	**Chiang Mai Arr**	**43.28**	**252**	*e*P	**P**	**12 45 35.9**	**-0.1**
	comp=Z,38nm,0.7s,mb5.2						
CMAR	**Chiang Mai Arr**	**43.28**	**252**	P	**P**	**12 45 36.0**	**+0.1**
	comp=Z,25nm,0.8s,mb5.0,baz=42,slow=8.0,SNR=54						
CMAR				PcP	PcP	12 47 24.7	+0.2
	comp=Z,20nm,0.9s,baz=360,slow=2.4,SNR=5.4						
RSO	**Redoubt South**	**43.56**	**41**	*e*P	**P**	**12 45 38.3**	**+0.7**
KDAK	**Kodiak Island**	**43.87**	**44**	*e*P	**P**	**12 45 39.2**	**-1.0**
	comp=Z,215nm,1.1s,mb5.8						
KDAK				LR	LR		
	comp=Z,768nm,22.0s						
NST	**Nakhon Sawan**	**44.26**	**248**	P	**P**	**12 45 44.0**	**+0.1**
KURK	**Kurchatov**	**44.35**	**305**	*e*P	**P**	**12 45 43.4**	**-0.8**
KURK				pmax	pmax		
	comp=Z,565nm,0.9s,mb6.3						
KURK	**Kurchatov**	**44.35**	**305**	*e*P	**P**	**12 45 43.4**	**-0.8**
	comp=Z,565nm,0.9s,mb6.3						
FIB	**Fire Island**	**44.77**	**39**	*e*P	**P**	**12 45 47.8**	**+0.5**
SLKM	**Skilak Lake**	**44.80**	**40**	*e*P	**P**	**12 45 46.9**	**-0.8**
MCK	**McKinley**	**45.16**	**36**	*e*P	**P**	**12 45 50.1**	**-0.3**
MCK				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.4						
MCK	**McKinley**	**45.16**	**36**	*e*P	**P**	**12 45 50.1**	**-0.3**
	comp=Z,72nm,1.1s,mb5.4						
COLA	**College**	**45.56**	**34**	*e*P	**P**	**12 45 53.6**	**0.0**
COLA				pmax	pmax		
	comp=Z,108nm,0.8s,mb5.8						
COLA	**College**	**45.56**	**34**	*e*P	**P**	**12 45 53.6**	**0.0**
	comp=Z,108nm,0.8s,mb5.8						
SML	**Sawmill**	**45.59**	**38**	⇑*i*P	**P**	**12 45 53.4**	**-0.5**
AGT	**Agartala**	**45.74**	**265**	⇑*i*	**P**	**12 45 59.0**	**+3.4**
AGT				*i*		12 46 29.0	
ILAR	**Eielson Array**	**45.98**	**34**	P	**P**	**12 45 56.8**	**-0.2**
	comp=Z,51nm,0.8s,mb5.5,baz=269,slow=6.0,SNR=417						
ILAR				pP	pP	12 46 15.8	+2.5
	comp=Z,112nm,1.1s,baz=258,slow=5.2,SNR=8.0						
ILAR				S	**S**	**12 52 37.7**	**+1.3**
	comp=Z,1.3nm,1.0s,baz=295,slow=5.8,SNR=2.9						
THY	**Trims Highway**	**46.60**	**36**	*e*P	**P**	**12 46 01.4**	**-0.5**
NNT	**Nongplab**	**46.67**	**245**	P	**P**	**12 46 07.9**	**+4.9**
DIV	**Divide**	**46.89**	**39**	*e*P	**P**	**12 46 04.1**	**-0.1**
	comp=Z,1µm,1.6s,mb6.6						
EYAK	**Cordova Ski Ar**	**46.99**	**40**	*e*P	**P**	**12 46 05.4**	**+0.4**
JIRN	**Jiri**	**47.55**	**272**	*e*P	**P**	**12 46 10.2**	**+0.4**
	comp=Z,472nm,0.7s,mb6.6						
AAA	**Alma-Ata**	**47.59**	**296**	*e*P	**P**	**12 46 09.5**	**-0.4**
AAA				*e*S	**S**	**12 52 53.0**	**-6.4**
AAA				smax			
	comp=E,700nm,9.0s						
GUN	**Gumba**	**47.66**	**273**	*e*P	**P**	**12 46 10.7**	**0.0**
	comp=E,1µm,0.8s						
KKN	**Kakani**	**48.17**	**273**	*e*P	**P**	**12 46 14.8**	**+0.1**
	comp=E,1µm,0.8s,mb6.9						
PKI	**Pulchoki**	**48.19**	**273**	*e*P	**P**	**12 46 14.4**	**-0.4**
	comp=E,619nm,1.1s,mb6.5						
DMN	**Daman**	**48.40**	**273**	*e*P	**P**	**12 46 16.2**	**-0.2**
	comp=E,487nm,0.8s,mb6.6						
CHKZ	**Chkalovo**	**48.42**	**311**	*i* P	**P**	**12 46 15.1**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,110nm,0.6s,mb6.1						
ULHL	**Ulahol**	**48.44**	**295**	P	**P**	**12 46 16.4**	**-0.1**
	SNR=29						
GKN	**Gorkha**	**48.55**	**274**	*e*P	**P**	**12 46 17.3**	**-0.3**
	comp=Z,638nm,0.8s,mb6.7						
TKM2	**Tokmak 2**	**48.64**	**296**	P	**P**	**12 46 18.1**	**+0.1**
	SNR=130						
KSM	**Kuching**	**48.69**	**225**	*e*P	**P**	**12 46 18.8**	**-0.1**
BVA0	**Borovoye Array**	**48.72**	**310**	*i* P	**P**	**12 46 17.7**	**-0.9**
BVAR	**Borovoye Array**	**48.72**	**310**	P	**P**	**12 46 17.9**	**-0.6**
	comp=Z,22nm,0.3s,mb5.6,baz=78,slow=9.4,SNR=110						
BVAR				PcP	PcP	12 47 42.5	-0.7
	comp=Z,26nm,0.6s,baz=90,slow=1.5,SNR=3.5						
BVAR				S	**S**	**12 53 14.7**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=75,slow=16,SNR=3.7						
KBK	**Karagaybulak**	**49.18**	**296**	P	**P**	**12 46 22.1**	**-0.2**
	SNR=95						
CHMS	**Chumysh**	**49.19**	**296**	P	**P**	**12 46 21.8**	**-0.4**
	SNR=24						
KZA	**Kyzart**	**49.19**	**295**	P	**P**	**12 46 23.0**	**+0.7**
	SNR=54						
USP	**Ospenovka**	**49.26**	**297**	P	**P**	**12 46 22.1**	**-0.7**
	SNR=57						
DAWY	**Dawson**	**49.30**	**35**	*e*P	**P**	**12 46 22.6**	**-0.2**
FRU	**Bishkek**	**49.34**	**296**	⇑*e*P	**P**	**12 46 23.0**	**-0.5**
FRU				*i*	pP	12 46 39.0	-0.9
FRU				*e*S	**S**	**12 53 25.0**	**+1.1**
FRU				*e*		12 53 53.0	
FRU				pmax	pmax		
	comp=Z,280nm,1.7s,mb6.0						
KOLN	**Koldanda**	**49.46**	**274**	*e*P	**P**	**12 46 24.6**	**0.0**
	comp=Z,929nm,1.1s,mb6.7						
AAK	**Ala-Archa**	**49.50**	**296**	P	**P**	**12 46 24.0**	**-0.7**
	SNR=50						
AAK	**Ala-Archa**	**49.50**	**296**	*c* *i*P	**P**	**12 46 23.2**	**-1.5**
AAK				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.8						
AAK	**Ala-Archa**	**49.50**	**296**	*e*P	**P**	**12 46 22.8**	**-1.9**
	comp=Z,116nm,0.9s,mb5.9						
NINI	**Niniconang**	**49.50**	**210**	⇑*e*P	**P**	**12 46 24.3**	**-0.8**
NINI				pmax	pmax		
	comp=Z,270nm,1.4s,mb6.1						
NINI	**Niniconang**	**49.50**	**210**	⇑*e*P	**P**	**12 46 24.3**	**-0.8**
	comp=Z,270nm,1.4s,mb6.1						
UCH	**Uchtor**	**49.64**	**295**	P	**P**	**12 46 25.5**	**-0.3**
	SNR=36						
KSH	**Kashi**	**49.69**	**292**	⇑P	**P**	**12 46 27.5**	**+1.3**
KSH				*e*AP	pP	12 46 44.5	+1.8
KSH				*e*XP	sP	12 46 51.0	+1.0
KSH				*e*PCP	PcP	12 47 48.5	+1.6
KSH				*e*PP	PP	12 48 24.0	+2.2
KSH				*e*SCP		12 51 37.8	
KSH				*e*S	**S**	**12 53 30.0**	**+1.1**
KSH				*e*PS	PS	12 53 39.3	-8.2
KSH				*e*XS		12 53 56.5	
KSH				*e*SCS	ScS	12 56 11.5	+2.9
KSH				*e*SS	SS	12 56 58.5	+0.3
KSH				AMB	AMB		
	comp=Z,210nm,1.1s,mb6.1						
KSH				AMB	AMB		
	comp=Z,390nm,3.6s						
KSH				LR	LR		
	comp=N,6µm,7.9s						
KSH				LR	LR		
	comp=E,8µm,13.3s						
EKS2	**Erkin-Say**	**49.98**	**296**	P	**P**	**12 46 28.2**	**-0.2**
	SNR=19						
SNG	**Songkhla**	**49.99**	**240**	P	**P**	**12 46 29.0**	**+0.1**
	comp=E,206nm,0.8s,mb6.2						
PMG	**Port Moresby**	**50.08**	**174**	*e*P	**P**	**12 46 28.2**	**-1.3**
PMG				pmax	pmax		
	comp=Z,86nm,1.1s						
PMG	**Port Moresby**	**50.08**	**174**	*e*P	**P**	**12 46 28.2**	**-1.3**
	comp=Z,86nm,1.1s,mb5.7						
AML	**Almayashu**	**50.24**	**296**	P	**P**	**12 46 30.3**	**-0.1**
	SNR=80						
INK	**Inuvik**	**50.76**	**29**	*e*P	**P**	**12 46 33.7**	**-0.3**
INK				*e**PP	pP	12 46 52.5	+2.0
INK				pmax	pmax		
	comp=Z,208nm,0.9s						
INK	**Inuvik**	**50.76**	**29**	P	**P**	**12 46 33.6**	**-0.4**
	comp=Z,83nm,0.6s,mb5.9,baz=296,slow=6.8,SNR=248						
INK	**Inuvik**	**50.76**	**29**	*e*P	**P**	**12 46 33.7**	**-0.3**
	comp=Z,208nm,0.9s,mb6.1						
INK				*e*pP	pP	12 46 52.5	+2.0
PTH	**Pithoragarh**	**51.11**	**278**	*e*	**P**	**12 46 40.8**	**+3.6**
PTH				*e*S	**S**	**12 53 50.2**	**+1.6**
LGTI	**Lohaghat**	**51.14**	**278**	*e*P	**P**	**12 46 38.0**	**+0.6**
KULM	**Kulim**	**51.39**	**238**	*e*P	**P**	**12 46 39.3**	**-0.2**
ALBI	**Allahabad**	**52.12**	**272**	*e*P	**P**	**12 46 45.0**	**+0.2**
KGM	**Kluang**	**52.25**	**233**	P	**P**	**12 46 46.0**	**+0.1**
HNR	**Honiara**	**52.47**	**158**	*e*P	**P**	**12 46 47.0**	**-0.6**
HNR				pmax	pmax		
	comp=Z,200nm,1.2s,mb5.9						
HNR	**Honiara**	**52.47**	**158**	*e*P	**P**	**12 46 47.0**	**-0.6**
	comp=Z,200nm,1.2s,mb5.9						
SDNR	**Sundarnagar**	**52.57**	**282**	*e*P	**P**	**12 46 47.3**	**-0.8**
DLH	**Dalhousie**	**52.81**	**284**	*e*P	**P**	**12 46 50.0**	**+0.1**
DLH				*e*	pP	12 47 02.0	-4.5
SVE	**Sverdlovsk**	**52.93**	**317**	⇑*i*P	**P**	**12 46 51.0**	**+0.5**
SVE				*e*S	**S**	**12 54 10.0**	**-3.2**
SVE				*e*PS	PS	12 54 30.0	-3.3
SVE				pmax	pmax		
	comp=Z,520nm,2.0s,mb6.1						
SVE				MLR	MLR		
	comp=N,1µm,16.0s						
SVE				MLR	MLR		
	comp=E,2µm,16.0s						
SVE				MLR	MLR		
	comp=Z,4µm,16.0s						
BHK	**Bhakra**	**53.02**	**282**	*e*	**P**	**12 46 55.0**	**+3.5**
THN	**Thein Dam**	**53.05**	**284**	*e*P	**P**	**12 46 49.9**	**-1.7**
PONG	**Pong**	**53.11**	**283**	*e*P	**P**	**12 46 51.0**	**-1.1**
PONG				*e*S	**S**	**12 54 20.0**	**+4.1**
NDI	**New Delhi**	**53.81**	**279**	⇑*i*P	**P**	**12 46 54.5**	**-2.8**
NDI				*e*pP	pP	12 47 12.0	-2.0
NDI				*e*		12 54 23.0	
SOKR	**Solikamsk**	**53.91**	**321**	*c* *i*P	**P**	**12 46 56.8**	**-0.8**
SOKR				pmax	pmax		
	comp=Z,150nm,1.1s,mb5.8						
KAKA	**Kakadu**	**53.97**	**192**	⇑*i*P	**P**	**12 46 57.0**	**-1.6**
	comp=Z,113nm,0.9s,mb5.8						
KAKA				*i* pP	pP	12 47 14.5	-0.8
JHNI	**Jhansi**	**54.52**	**275**	*e*P	**P**	**12 47 01.0**	**-1.5**
JHNI				*e*		12 47 25.0	
KEDI	**Kedomdong**	**54.65**	**213**	⇑*i*P	**P**	**12 47 00.8**	**-2.8**
KEDI				pmax	pmax		
	comp=Z,117nm,1.5s,mb5.7						
KEDI	**Kedomdong**	**54.65**	**213**	⇑*i*P	**P**	**12 47 00.8**	**-2.8**
	comp=Z,117nm,1.5s,mb5.7						
DLBC	**Dease Lake**	**55.26**	**40**	P	**P**	**12 47 08.3**	**+0.9**
	comp=Z,39nm,1.0s,mb5.4,baz=289,slow=7.8,SNR=40						
DLBC	**Dease Lake**	**55.26**	**40**	*e*P	**P**	**12 47 08.4**	**+0.9**
VIS	**Vishakhapatnam**	**55.33**	**264**	*i* P	**P**	**12 47 07.2**	**-1.3**
BHPL	**Bhopal**	**56.59**	**273**	*e*P	**P**	**12 47 15.8**	**-1.7**
BHPL				*e*		12 47 22.6	
	comp=Z,199nm,1.4s						
KBS	**Kingsbay**	**57.16**	**350**	*e*P	**P**	**12 47 20.0**	**-0.8**
KBS				*e**PP	pP	12 47 36.0	-1.7
KBS				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.8						
KBS	**Kingsbay**	**57.16**	**350**	⇑*i*P	**P**	**12 47 20.4**	**-0.4**
	comp=Z,200nm,1.5s,mb5.9						
KBS	**Kingsbay**	**57.16**	**350**	⇑*i*P	**P**	**12 47 20.4**	**-0.4**
KBS				AMb	AMB	12 47 22.9	
	comp=Z,200nm,1.6s,mb5.9						
HSP	**Hornsund**	**57.99**	**348**	*e*P	**P**	**12 47 26.0**	**-0.7**
RES	**Resolute Bay**	**58.83**	**15**	*e*P	**P**	**12 47 30.5**	**-2.0**
RES				*e**PP	pP	12 47 50.1	+0.6
RES				pmax	pmax		
	comp=Z,190nm,0.9s,mb6.1						
RES	**Resolute Bay**	**58.83**	**15**	*e*P	**P**	**12 47 30.5**	**-2.0**
	comp=Z,190nm,0.9s,mb6.1						
RES				*e*pP	pP	12 47 50.1	+0.6
BBB	**Bella Bella**	**58.91**	**46**	P	**P**	**12 47 32.3**	**-1.0**
	comp=Z,34nm,0.8s,mb5.4,baz=288,slow=5.2,SNR=11						
HYB	**Hyderabad**	**59.13**	**267**	⇑*e*P	**P**	**12 47 34.0**	**-1.3**
HYB				*e*S	**S**	**12 55 36.0**	**0.0**
HYB				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.8						
HYB	**Hyderabad**	**59.13**	**267**	⇑*e*P	**P**	**12 47 34.0**	**-1.3**
	comp=Z,100nm,1.0s,mb5.8						
HYB				*e*S	**S**	**12 55 36.0**	**0.0**
HYB	**Hyderabad**	**59.13**	**267**	⇑*i*P	**P**	**12 47 34.0**	**-1.3**
	comp=Z,100nm,1.0s,mb5.8						
HYB				*e*S	**S**	**12 55 36.0**	**0.0**
APA	**Apatity**	**59.65**	**335**	⇑*i*P	**P**	**12 47 37.2**	**-1.1**
APA				*i*	pP	12 47 54.5	-0.7
APA				*e*S	**S**	**12 55 47.0**	**+5.0**
APA				*i* SS	SS	12 59 36.0	-3.8
APA				pmax	pmax		
	comp=Z,91nm,1.0s,mb5.8						
APA				MLR	MLR		
	comp=Z,34µm,22.0s						
YKW3	**Yellowknife Ar**	**60.20**	**31**	*e*P	**P**	**12 47 40.5**	**-1.5**
YKW3				*e*pP	pP	12 47 60.0	+0.9
YKA	**Yellowknife Ar**	**60.24**	**31**	P	**P**	**12 47 41.1**	**-1.2**
YKA				*PP	pP	12 48 00.1	+0.8
YKA	**Yellowknife Ar**	**60.24**	**31**	P	**P**	**12 47 41.1**	**-1.2**
	comp=Z,21nm,0.7s,mb5.3,baz=302,slow=6.6,SNR=410						
YKA				pP	pP	12 48 00.0	+0.7
	comp=Z,13nm,0.7s,baz=304,slow=6.6,SNR=6.4						
KEV	**Kevo**	**60.27**	**339**	*e*p	**P**	**12 47 39.6**	**-2.9**
CTA	**Charters Tower**	**60.61**	**176**	*e*P	**P**	**12 47 43.9**	**-1.5**
	comp=Z,26nm,1.2s,mb5.2						
CTA	**Charters Tower**	**60.61**	**176**	*e*P	**P**	**12 47 43.9**	**-1.5**
CTA				pmax	pmax		
	comp=Z,26nm,1.2s						
CTAO	**Charters Tower**	**60.61**	**176**	*e*P	**P**	**12 47 43.4**	**-2.0**
CTAO				pmax	pmax		
	comp=Z,111nm,1.4s,mb5.8						
CTAO	**Charters Tower**	**60.61**	**176**	*e*P	**P**	**12 47 43.4**	**-2.1**
	comp=Z,111nm,1.4s,mb5.8						
WRAB	**Tennant Creek**	**60.81**	**189**	*e*P	**P**	**12 47 44.4**	**-2.4**
WRAB				*e**PP	pP	12 48 01.3	-2.6
WRAB				pmax	pmax		
	comp=Z,265nm,0.9s,mb6.4						
WRAB	**Tennant Creek**	**60.81**	**189**	*e*P	**P**	**12 47 44.4**	**-2.4**
	comp=Z,266nm,0.9s,mb6.4						
WRAB				*e*pP	pP	12 48 01.3	-2.6
ARCES	**ARCESS Array B**	**60.82**	**339**	P	**P**	**12 47 45.2**	**-1.0**
	comp=Z,23nm,0.6s,mb5.5,baz=49,slow=8.1,SNR=101						
ARE0	**ARCESS Array S**	**60.82**	**339**	*e*P	**P**	**12 47 45.1**	**-1.2**
WB2	**Warramunga Arr**	**60.83**	**189**	⇑*i*P	**P**	**12 47 43.7**	**-3.2**
WB2				*e*pP	pP	12 48 02.3	-1.6
WB2				*e*PNS		12 56 25.9	
WRA	**Warramunga Arr**	**60.83**	**189**	P	**P**	**12 47 44.7**	**-2.2**
	comp=Z,67nm,0.8s,mb5.8,baz=7.4,slow=6.9,SNR=218						
WRA				pP	pP	12 48 02.3	-1.7
	comp=Z,161nm,0.9s,baz=5.3,slow=7.2,SNR=21						
WRA				PKP2bc		13 17 11.7	
	comp=Z,9.9nm,1.0s,baz=197,slow=2.0,SNR=12						
WRA	**Warramunga Arr**	**60.83**	**189**	P	**P**	**12 47 44.7**	**-2.2**
WRA				pP	pP	12 48 02.3	-1.7
WRA				⇑*e*		13 17 11.7	
PECR	**Pechory**	**61.42**	**321**	⇑*i*P	**P**	**12 47 49.2**	**-1.2**
PECR				pmax	pmax		
	comp=Z,900nm,5.0s						
BHV	**Bhavnagar**	**61.45**	**275**	*e*P	**P**	**12 47 50.0**	**-1.1**
KTK1	**Kautokeino**	**61.78**	**339**	*e*P	**P**	**12 47 51.8**	**-0.9**
	comp=Z,222nm,1.3s,mb6.1						
KTK1	**Kautokeino**	**61.78**	**339**	*e*P	**P**	**12 47 51.8**	**-0.9**
KTK1				AMb	AMB	12 47 53.7	
	comp=Z,222nm,1.3s,mb6.1						
KTK1				*e*pP	pP	12 48 10.4	+0.6
POO	**Poona**	**62.04**	**271**	*e*P	**P**	**12 47 53.3**	**-1.8**
POO				*e*		12 48 01.5	
	comp=Z,192nm,1.4s						
DAG	**Danmarks Havn**	**62.16**	**355**	⇓*e*P	**P**	**12 47 54.3**	**-0.9**
DAG				pmax	pmax		
	comp=Z,955nm,0.9s,mb6.9						
DAG				MLR	MLR		
	comp=Z,53µm,24.0s						
DAG	**Danmarks Havn**	**62.16**	**355**	⇓*e*P	**P**	**12 47 54.3**	**-0.9**
	comp=Z,955nm,0.9s,mb6.9						
DAG				LR	LR		
	comp=Z,53µm,24.0s						
DAG	**Danmarks Havn**	**62.16**	**355**	⇓*i*P	**P**	**12 47 54.3**	**-0.9**
	comp=Z,954nm,0.9s,mb6.9						
	comp=Z,53µm,24.0s						
TRO	**Tromso**	**62.48**	**341**	⇑*i*P	**P**	**12 47 56.0**	**-1.3**
KAD	**Karad**	**62.52**	**270**	*e*P	**P**	**12 47 56.9**	**-1.4**
KAD				*e*		12 48 03.6	
	comp=Z,178nm,1.4s						
BOM	**Bombay**	**62.61**	**272**	*e*P	**P**	**12 47 56.7**	**-2.1**
JOF	**Joensuu**	**63.08**	**331**	*e*p	**P**	**12 47 58.6**	**-2.9**
PGC	**Sidney**	**63.25**	**48**	*e*P	**P**	**12 48 01.8**	**-0.9**
	comp=Z,56nm,0.8s,mb5.7						
OCWA	**Octopus Mounta**	**63.31**	**49**	*e*P	**P**	**12 48 03.3**	**+0.1**
	comp=Z,115nm,1.6s,mb5.8						
OSR	**Olympics--Salm**	**63.56**	**49**	P	**P**	**12 48 05.3**	**+0.5**
GOA	**Goa**	**63.89**	**268**	⇓*e*	**P**	**12 48 14.8**	**+7.4**
PALK	**Pallekele**	**63.96**	**256**	*e*P	**P**	**12 48 06.8**	**-1.1**
	comp=Z,119nm,1.7s,mb5.6						
ON2	**Olympics--Nort**	**64.00**	**50**	P	**P**	**12 48 08.3**	**+0.7**
ASAR	**Alice Springs**	**64.55**	**189**	P	**P**	**12 48 09.5**	**-2.1**
	comp=Z,77nm,0.8s,mb5.8,baz=9.8,slow=5.9,SNR=432						
ASAR				pP	pP	12 48 28.0	-0.8
	comp=Z,104nm,0.8s,baz=3.0,slow=4.6,SNR=18						
ASAR				PKPPKP		13 16 57.2	
	comp=Z,3.0nm,1.0s,baz=179,slow=4.0,SNR=5.0						
ASAR				PKP2bc		13 17 01.6	
	comp=Z,7.8nm,0.9s,baz=184,slow=2.5,SNR=14						
ASAR	**Alice Springs**	**64.55**	**189**	P	**P**	**12 48 09.5**	**-2.1**
ASAR				pP	pP	12 48 28.0	-0.8
ASAR				P’P’		13 16 57.2	
ASAR				⇑*e*		13 17 01.6	
ASPA	**Alice Springs**	**64.55**	**189**	⇑*i*P	**P**	**12 48 10.1**	**-1.5**
ASPA				*e*pP	pP	12 48 27.9	-0.9
MNGI	**Mangalore**	**64.72**	**265**	*i* P	**P**	**12 48 11.1**	**-1.7**
MNGI				*i* S	**S**	**12 56 47.8**	**+1.3**
TTW	**Tolt Reservoir**	**64.76**	**48**	P	**P**	**12 48 12.0**	**-0.5**
MOS	**Moscow**	**64.76**	**323**	α *i*P	**P**	**12 48 11.7**	**-0.7**
MOS				*i*	pP	12 48 30.3	+0.7
MOS				*i*		12 48 44.4	
MOS				*e*		12 50 31.4	
MOS				*e*S	**S**	**12 56 45.8**	**-0.6**
MOS				pmax	pmax		
	comp=Z,700nm,2.0s,mb6.3						
MOS				pmax	pmax		
	comp=N,143nm,1.5s						
MOS				pmax	pmax		
	comp=Z,301nm,1.5s,mb6.1						
LOF	**Lofoten**	**64.91**	**341**	*e*P	**P**	**12 48 14.8**	**+1.7**
MBWA	**Marble Bar**	**65.09**	**203**	*e*P	**P**	**12 48 13.2**	**-1.9**
	comp=Z,200nm,1.1s,mb6.1						
MBWA				*e*pP	pP	12 48 29.9	-2.4
LON	**Longmire**	**65.21**	**49**	P	**P**	**12 48 15.3**	**-0.1**
LVP	**Lakeview Peak**	**65.24**	**50**	P	**P**	**12 48 16.1**	**+0.5**
NLW	**Nelson Butte**	**65.30**	**47**	P	**P**	**12 48 16.1**	**+0.1**
KAF	**Kangasniemi**	**65.39**	**332**	*e*p	**P**	**12 48 13.5**	**-2.8**
	comp=Z,66nm,0.6s,mb5.8,baz=47,slow=6.1						
KAF	**Kangasniemi**	**65.39**	**332**	*e*P	**P**	**12 48 13.5**	**-2.8**
KAF				pmax	pmax		
	comp=Z,66nm,0.6s,mb5.8						
PUL	**Pulkovo**	**65.42**	**329**	*e*P	**P**	**12 48 14.9**	**-1.6**
PUL				pmax	pmax		
	comp=Z,249nm,0.9s,mb6.2						
PUL				pmax	pmax		
	comp=N,370nm,1.5s						
PUL				pmax	pmax		
	comp=E,291nm,1.0s						
PUL	**Pulkovo**	**65.42**	**329**	*i* Pr		12 48 16.2	
COR	**Corvallis**	**65.54**	**52**	*e*P	**P**	**12 48 18.1**	**+0.5**
COR				pmax	pmax		
	comp=Z,127nm,1.0s,mb5.9						
COR	**Corvallis**	**65.54**	**52**	*e*P	**P**	**12 48 18.1**	**+0.5**
	comp=Z,128nm,1.0s,mb5.9						
OBN	**Obninsk**	**65.62**	**323**	P	**P**	**12 48 17.1**	**-0.8**
	comp=Z,907nm,1.2s,mb6.7,SNR=24						
OBN	**Obninsk**	**65.62**	**323**	*c* *i*P	**P**	**12 48 16.7**	**-1.2**
OBN				*i*	pP	12 48 36.7	+1.5
OBN				*i* S	S	12 56 56.8	-0.1
OBN				pmax	pmax		
	comp=Z,276nm,1.3s,mb6.1						
OBN	**Obninsk**	**65.62**	**323**	*e*P	**P**	**12 48 16.1**	**-1.8**
	comp=Z,153nm,0.8s,mb6.1						
TBM	**Table Mountain**	**65.66**	**48**	P	**P**	**12 48 18.3**	**0.0**
NAC	**Naches**	**65.78**	**49**	P	**P**	**12 48 19.3**	**+0.2**
KEBM	**Edson Butte**	**65.86**	**54**	*e*P	**P**	**12 48 20.4**	**+0.7**
FINES	**FINESS Array B**	**65.92**	**332**	P	**P**	**12 48 18.8**	**-0.9**
	comp=Z,455nm,1.2s,mb6.4,baz=50,slow=8.0,SNR=488						
FINES				pP	pP	12 48 36.1	-0.9
	comp=Z,36nm,0.5s,baz=56,slow=6.9,SNR=5.5						
EUO	**Eugene**	**65.98**	**52**	P	**P**	**12 48 21.0**	**+0.6**
EDM	**Edmonton**	**65.99**	**40**	*e*P	**P**	**12 48 19.1**	**-1.2**
EDM				*e**PP	pP	12 48 37.8	+0.3
EPH	**Ephrata**	**66.12**	**47**	P	**P**	**12 48 20.9**	**-0.4**
MOR8	**Moi Rana**	**66.17**	**340**	⇑*i*P	**P**	**12 48 19.1**	**-2.1**
	comp=Z,296nm,1.2s,mb6.2						
MOR8	**Moi Rana**	**66.17**	**340**	⇑*i*P	**P**	**12 48 19.1**	**-2.1**
MOR8				AMb	AMB	12 48 21.1	
	comp=Z,296nm,1.2s,mb6.2						
MOR8				*e*pP	pP	12 48 37.9	-0.7
NOUC	**Port Laguerre**	**66.34**	**156**	*e*P	**P**	**12 48 23.0**	**-0.1**
DZM	**Mont Dzumac**	**66.36**	**156**	*e*P	**P**	**12 48 23.6**	**+0.4**
STOK	**Stokkvaagen**	**66.42**	**340**	*e*P	**P**	**12 48 21.4**	**-1.4**
JMIC	**Jan Mayen**	**66.65**	**350**	P	**P**	**12 48 23.2**	**-1.0**
	comp=Z,36nm,0.9s,mb5.4,baz=88,slow=5.0,SNR=3.4						
WRD	**Warden**	**66.69**	**48**	P	**P**	**12 48 24.1**	**-0.7**
KSXB	**Camp Six Broad**	**66.73**	**54**	P	**P**	**12 48 25.9**	**+0.8**
MAK	**Makhachkala**	**66.82**	**307**	*e*P	**P**	**12 48 25.0**	**-0.7**
MAK				*e*S	S	12 57 11.0	-0.7
MAK				*i* PS	PS	12 57 35.0	-8.3
MAK				*i*		12 58 16.0	
MAK				smax			
	comp=N,900nm,7.0s						
MAK				smax			
	comp=E,2µm,7.0s						
HUMO	**Hull Mountain**	**66.85**	**53**	*e*P	**P**	**12 48 26.2**	**+0.2**
	comp=E,41nm,1.1s,mb5.4						
NEW	**Newport**	**66.96**	**46**	*e*P	**P**	**12 48 26.0**	**-0.5**
NEW				*e**PP	pP	12 48 45.7	+1.9
NEW				pmax	pmax		
	comp=Z,93nm,1.1s						
NEW	**Newport**	**66.96**	**46**	P	**P**	**12 48 26.3**	**-0.2**
	comp=Z,40nm,0.9s,mb5.5,baz=305,slow=5.6,SNR=72						
NEW				pP	pP	12 48 44.6	+0.8
	comp=Z,28nm,0.9s,baz=314,slow=6.3,SNR=9.0						
NEW	**Newport**	**66.96**	**46**	*e*P	**P**	**12 48 26.0**	**-0.6**
	comp=Z,93nm,1.1s,mb5.7						
NEW				*e*pP	pP	12 48 45.7	+1.8
SUMG	**Summit**	**66.99**	**0**	*e*P	**P**	**12 48 26.3**	**0.0**
	comp=Z,244nm,1.0s,mb6.2						
KHMM	**Horse Mountain**	**67.36**	**55**	*e*P	**P**	**12 48 29.7**	**+0.6**
COCO	**West Island**	**67.44**	**229**	*e*P	**P**	**12 48 30.1**	**+0.1**
	comp=Z,375nm,1.5s,mb6.2						
YBH	**Yreka Blue Hor**	**67.50**	**54**	*e*P	**P**	**12 48 30.3**	**+0.3**
YBH				pmax	pmax		
	comp=Z,54nm,1.0s						
YBH	**Yreka Blue Hor**	**67.50**	**54**	P	**P**	**12 48 30.8**	**+0.8**
	comp=Z,48nm,0.8s,mb5.6,baz=2.5,slow=3.7,SNR=148						
YBH	**Yreka Blue Hor**	**67.50**	**54**	*e*P	**P**	**12 48 30.3**	**+0.3**
	comp=Z,54nm,1.0s,mb5.5						
VSU	**Vasula**	**67.67**	**329**	⇑*i*P	**P**	**12 48 30.1**	**-0.7**
WALA	**Waterton Lakes**	**68.20**	**44**	*e*P	**P**	**12 48 33.7**	**-0.5**
	comp=Z,87nm,1.1s,mb5.7						
GOF	**Gofitskoye**	**68.24**	**311**	⇑*i*P	**P**	**12 48 33.9**	**-0.6**
GOF				*e*PPP	PPP	12 52 48.5	+3.3
GOF				*i* S	S	12 57 28.9	+0.2
GOF				pmax	pmax		
	comp=Z,450nm,1.1s,mb6.4						
GOF				smax			
	comp=E,450nm,2.5s						
WDC	**Whiskeytown Da**	**68.27**	**55**	*e*P	**P**	**12 48 34.3**	**-0.5**
WDC				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.6						
WDC	**Whiskeytown Da**	**68.27**	**55**	*e*P	**P**	**12 48 34.3**	**-0.5**
	comp=Z,77nm,1.2s,mb5.6						
SCO	**Scoresbysund**	**68.52**	**354**	*i* P	**P**	**12 48 35.8**	**0.0**
SCO				pmax	pmax		

	comp=Z,15nm,0.9s,mb4.9						
SCO	**Scoresbysund**	**68.52**	**354**	*i* P	**P**	**12 48 35.8**	**0.0**
	comp=Z,15nm,0.9s,mb4.9						
HOPS	**Hopland**	**68.86**	**56**	*e*P	**P**	**12 48 38.4**	**-0.1**
	comp=Z,102nm,1.7s,mb5.5						
MOD	**Modoc**	**68.87**	**53**	*e*P	**P**	**12 48 38.5**	**0.0**
	comp=Z,62nm,0.8s,mb5.6						
BMO	**Blue Mountains**	**68.88**	**49**	*e*P	**P**	**12 48 38.0**	**-0.5**
	comp=Z,93nm,1.3s,mb5.5						
DUS	**Dusheti**	**69.01**	**308**	P	**P**	**12 48 39.2**	**-0.1**
KIV	**Kislovodsk**	**69.09**	**310**	P	**P**	**12 48 40.8**	**+1.0**
	comp=Z,2µm,1.0s,SNR=77						
KIV	**Kislovodsk**	**69.09**	**310***c*	*i*P	**P**	**12 48 39.4**	**-0.4**
KIV				pmax	pmax		
	comp=Z,533nm,1.3s,mb6.3						
KIV				MLR	MLR		
	comp=Z,6µm,19.0s						
KIV	**Kislovodsk**	**69.09**	**310**	*e*P	**P**	**12 48 39.8**	**-0.1**
	comp=Z,448nm,1.1s,mb6.3						
MTA	**Mtatsminda**	**69.19**	**307**	P	**P**	**12 48 40.8**	**+0.3**
TI2	**Plekhanov**	**69.19**	**307**	⇑*i*P	**P**	**12 48 39.6**	**-0.9**
TI2				*i*		12 49 03.6	
TI2				*i* S	S	12 57 40.4	+0.3
TI2				pmax	pmax		
	comp=Z,190nm,1.0s,mb6.0						
TRON	**Trondheim**	**69.37**	**339**	*e*P	**P**	**12 48 40.7**	**-0.5**
MSO	**Missoula**	**69.55**	**45**	*e*P	**P**	**12 48 41.8**	**-0.8**
	comp=Z,56nm,1.1s,mb5.4						
WVOR	**Wild Horse Val**	**69.55**	**51**	*e*P	**P**	**12 48 42.4**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,94nm,1.1s,mb5.6						
WVOR	**Wild Horse Val**	**69.55**	**51**	*e*P	**P**	**12 48 42.4**	**-0.2**
	comp=Z,94nm,1.1s,mb5.6						
OHCM	**Honcut**	**69.66**	**55**	*e*P	**P**	**12 48 42.7**	**-0.7**
IZAR	**Zarasai**	**69.72**	**327**	*e*P	**P**	**12 48 43.1**	**-0.3**
IZAR				AMPb	AMB	12 48 45.8	
	comp=Z,33nm,1.5s,mb5.0						
IZAR				*e*sP	sP	12 49 06.5	-1.1
IDID	**Didziasalis**	**69.81**	**327**	⇑*i*P	**P**	**12 48 43.9**	**-0.2**
IDID				AMPb	AMB	12 48 46.3	
	comp=Z,59nm,1.3s,mb5.3						
IDID				*e*pP	pP	12 49 01.0	-0.5
IDID				*e*sP	sP	12 49 07.0	-1.3
CHMT	**Chamberlain Mo**	**69.87**	**45**	*e*P	**P**	**12 48 43.8**	**-0.8**
ISAL	**Salakas**	**69.89**	**327**	*e*P	**P**	**12 48 44.3**	**-0.2**
ISAL				AMPb	AMB	12 48 46.8	
	comp=Z,85nm,1.4s,mb5.5						
ISAL				*e*pP	pP	12 49 00.9	-1.0
ISAL				*e*sP	sP	12 49 07.5	-1.2
MNK	**Minsk**	**69.90**	**326**	⇓*i*P	**P**	**12 48 42.0**	**-2.6**
IIGN	**Ignalina**	**70.00**	**327**	*e*P	**P**	**12 48 45.0**	**-0.2**
IIGN				AMPb	AMB	12 48 46.9	
	comp=Z,77nm,1.1s,mb5.5						
IIGN				*e*pP	pP	12 49 02.4	-0.3
IIGN				*e*sP	sP	12 49 08.6	-0.9
GNI	**Garni**	**70.14**	**306**	P	**P**	**12 48 46.3**	**0.0**
GNI	**Garni**	**70.14**	**306***c*	*i*P	**P**	**12 48 46.5**	**+0.2**
GNI				pmax	pmax		
	comp=Z,139nm,1.3s						
GNI	**Garni**	**70.14**	**306**	P	**P**	**12 48 47.3**	**+1.0**
	comp=Z,13nm,0.5s,mb5.1,baz=312,slow=2.4,SNR=37						
GNI	**Garni**	**70.14**	**306**	P	**P**	**12 48 46.8**	**+0.4**
FFC	**Flin Flon**	**70.19**	**34**	P	**P**	**12 48 45.3**	**-1.0**
	comp=Z,886nm,0.9s,mb6.7						
FCC	**Fort Churchill**	**70.36**	**27**	*e*P	**P**	**12 48 46.1**	**-1.2**
FCC				pmax	pmax		
	comp=Z,179nm,1.1s,mb5.9						
FCC	**Fort Churchill**	**70.36**	**27**	*e*P	**P**	**12 48 46.1**	**-1.2**
	comp=Z,179nm,1.1s,mb5.9						
PAHR	**Pah Rah Range**	**70.74**	**54**	*e*P	**P**	**12 48 50.1**	**+0.2**
	comp=Z,97nm,1.3s,mb5.6						
WCN	**Washoe City**	**70.75**	**55**	*e*P	**P**	**12 48 50.4**	**+0.4**
WCN				pmax	pmax		
	comp=Z,116nm,1.2s,mb5.7						
WCN	**Washoe City**	**70.75**	**55**	*e*P	**P**	**12 48 50.4**	**+0.4**
	comp=Z,116nm,1.2s,mb5.7						
BANOM	**Banah**	**70.79**	**288**	P	**P**	**12 48 51.0**	**+0.5**
	SNR=8.1						
WBK	**Wadi Bani Khal**	**70.81**	**284**	P	**P**	**12 48 51.4**	**+0.8**
	SNR=18						
MOL	**Molde**	**70.86**	**340**	⇑*i*P	**P**	**12 48 50.1**	**-0.1**
	comp=Z,180nm,1.4s,mb5.8						
MOL	**Molde**	**70.86**	**340**	⇑*i*P	**P**	**12 48 50.1**	**-0.1**
MOL				AMb	AMB	12 48 52.5	
	comp=Z,180nm,1.4s,mb5.8						
MOL				*e*pP	pP	12 49 09.2	+1.4
DOMB	**Dombas**	**70.89**	**339**	⇑*i*P	**P**	**12 48 49.8**	**-0.6**
	comp=Z,209nm,1.5s,mb5.8						
DOMB	**Dombas**	**70.89**	**339**	⇑*i*P	**P**	**12 48 49.8**	**-0.6**
DOMB				AMb	AMB	12 48 52.1	
	comp=Z,209nm,1.5s,mb5.8						
DOMB				*e*pP	pP	12 49 08.4	+0.5
SOC	**Sochi**	**71.02**	**311**	*i* P	**P**	**12 48 50.7**	**-0.9**
SOC				*e*	pP	12 49 08.8	-0.3
SOC				*e*		12 51 30.5	
SOC				*e*S	S	12 58 01.4	+0.1
SOC				*e*		12 58 47.7	
SOC				*e*SS	SS	13 02 33.1	-4.5
SOC				pmax	pmax		
	comp=N,19nm,0.8s						
SOC				pmax	pmax		
	comp=Z,106nm,0.8s,mb5.8						
SOC				pmax	pmax		
	comp=E,35nm,1.2s						
SOC				MLR	MLR		
	comp=Z,12µm,21.0s						
SOC				MLR	MLR		
	comp=N,29µm,20.0s						
SOC				MLR	MLR		
	comp=E,19µm,22.0s						
HFS	**Hagfors**	**71.05**	**336**	P	**P**	**12 48 50.5**	**-0.9**
	comp=E,41nm,0.5s,mb5.6,baz=34,slow=6.1,SNR=350						
HFS				pP	pP	12 49 09.7	+0.8
	comp=E,45nm,0.7s,baz=79,slow=7.6,SNR=5.6						
NB2	**NORSAR Subarra**	**71.08**	**337**	P	**P**	**12 48 50.9**	**-0.7**
	comp=E,248nm,1.1s,mb6.0,baz=37,slow=6.2						
NB2	**NORSAR Subarra**	**71.08**	**337**	P	**P**	**12 48 50.9**	**-0.7**
NB2				pmax	pmax		
	comp=Z,248nm,1.1s,mb6.0						
NB2	**NORSAR Subarra**	**71.08**	**337**	P	**P**	**12 48 50.9**	**-0.7**
	baz=37,slow=6.2						
NOA	**NORSAR Array B**	**71.08**	**337**	P	**P**	**12 48 50.7**	**-0.9**
	comp=Z,106nm,0.9s,mb5.8,baz=37,slow=6.0,SNR=142						
NOA				pP	pP	12 49 09.4	+0.3
	comp=Z,27nm,0.7s,baz=42,slow=5.7,SNR=5.5						
CMB	**Columbia Colle**	**71.12**	**56**	P	**P**	**12 48 52.2**	**-0.1**
CMB				S	S	12 58 04.7	+2.1
CMB	**Columbia Colle**	**71.12**	**56**	*e*P	**P**	**12 48 51.8**	**-0.5**
CMB				pmax	pmax		
	comp=Z,97nm,1.3s,mb5.6						
CMB	**Columbia Colle**	**71.12**	**56**	*e*P	**P**	**12 48 51.8**	**-0.5**
	comp=Z,97nm,1.3s,mb5.6						
SAO	**San Andreas Ge**	**71.21**	**57**	P	**P**	**12 48 52.6**	**-0.2**
SAO				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
SAO	**San Andreas Ge**	**71.21**	**57**	*e*P	**P**	**12 48 51.8**	**-1.1**
	comp=Z,8.7nm,0.8s						
SMDO	**Samad**	**71.22**	**285**	⇑P	**P**	**12 48 53.5**	**+0.4**
	SNR=11						
HLID	**Hailey**	**71.31**	**48**	*e*P	**P**	**12 48 53.6**	**+0.3**
	comp=Z,122nm,1.5s,mb5.6						
HLID				*e*pP	pP	12 49 11.2	+0.4
NAO01	**NORSAR Array S**	**71.34**	**337**	*e*P	**P**	**12 48 52.0**	**-1.1**
	comp=Z,77nm,1.0s,mb5.6						
MCMT	**McKenzie Canyo**	**71.39**	**47**	*e*P	**P**	**12 48 53.5**	**-0.3**
HOQ	**Hoqain**	**71.45**	**285**	P	**P**	**12 48 54.6**	**+0.1**
	SNR=17						
BOZ	**Bozeman (W)**	**71.54**	**45**	*e*P	**P**	**12 48 54.4**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,151nm,0.9s,mb5.9						
BOZ	**Bozeman (W)**	**71.54**	**45**	*e*P	**P**	**12 48 54.4**	**-0.2**
	comp=Z,151nm,0.9s,mb5.9						
JMDO	**Jabal Madar**	**71.59**	**284**	P	**P**	**12 48 55.3**	**0.0**
	SNR=23						
BMN	**Battle Mountai**	**71.61**	**52**	*e*P	**P**	**12 48 55.5**	**+0.4**
BMN				e*PP	pP	12 49 15.3	+2.7
BMN				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.7						
BMN	**Battle Mountai**	**71.61**	**52**	*e*P	**P**	**12 48 55.5**	**+0.3**
	comp=Z,92nm,1.0s,mb5.7						
BMN				*e*pP	pP	12 49 15.3	+2.7
LRV	**Little Rabbit**	**71.69**	**58**	*e*P	**P**	**12 48 55.8**	**+0.1**
ASHO	**Ashiyiah**	**71.70**	**287**	P	**P**	**12 48 56.4**	**+0.5**
	SNR=22						
AKASG	**Malin Array Be**	**71.86**	**322**	P	**P**	**12 48 55.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,19nm,0.4s						
AKASG	**Malin Array Be**	**71.86**	**322**	P	**P**	**12 48 55.5**	**-1.0**
	comp=Z,19nm,0.3s,mb5.4,baz=41,slow=6.1,SNR=221						
VANB	**Van**	**71.92**	**305**	P	**P**	**12 48 57.5**	**+0.5**
VANB	**Van**	**71.92**	**305**	P	**P**	**12 48 58.5**	**+1.6**
TVAN	**Van**	**71.94**	**305**	*i* P	**P**	**12 48 57.7**	**+0.5**
BSY	**Bisya**	**72.03**	**285**	P	**P**	**12 48 58.1**	**+0.2**
	SNR=24						
OSL	**Oslo**	**72.11**	**337**	*e*P	**P**	**12 48 58.0**	**+0.2**
SFJ	**Sondre**	**72.14**	**5**	*e*P	**P**	**12 48 56.9**	**-1.0**
	comp=Z,138nm,1.0s,mb5.8						
QLMT	**Earthquake Lak**	**72.17**	**46**	*e*P	**P**	**12 48 58.9**	**+0.5**
ARQ	**Araqi**	**72.18**	**286**	P	**P**	**12 48 59.0**	**+0.3**
	SNR=39						
NVAR	**Mina Array Bea**	**72.18**	**55**	P	**P**	**12 48 59.3**	**+0.7**
	comp=Z,40nm,0.9s,mb5.4,baz=301,slow=4.5,SNR=234						
SUW	**Suwalki**	**72.20**	**327**	P	**P**	**12 48 58.2**	**-0.2**
SUW				pmax	pmax		
	comp=Z,140nm,0.8s,mb5.9						
SUW	**Suwalki**	**72.20**	**327**	*e*P	**P**	**12 48 58.0**	**-0.4**
SUW	**Suwalki**	**72.20**	**327**	*e*P	**P**	**12 48 58.0**	**-0.4**
STKA	**Stephens Creek**	**72.25**	**181**	⇑*i*P	**P**	**12 48 58.3**	**-0.8**
	comp=Z,19nm,0.9s,mb5.0						
STKA				*e*pP	pP	12 49 17.0	+0.4
STKA	**Stephens Creek**	**72.25**	**181**	P	**P**	**12 48 58.4**	**-0.7**
	comp=Z,18nm,0.7s,mb5.1,baz=342,slow=7.0,SNR=31						
STKA				pP	pP	12 49 16.4	-0.2
	comp=Z,12nm,0.7s,baz=348,slow=7.2,SNR=5.2						
OMM	**Old Mammoth Mi**	**72.25**	**56**	*e*P	**P**	**12 48 59.6**	**+0.6**
MNV	**Mina**	**72.27**	**54**	*e*P	**P**	**12 48 59.0**	**-0.1**
MNV				pmax	pmax		
	comp=Z,97nm,1.3s,mb5.6						
MNV	**Mina**	**72.27**	**54**	*e*P	**P**	**12 48 59.0**	**-0.1**
	comp=Z,97nm,1.3s,mb5.6						
ERZM	**Erzurum**	**72.34**	**308**	*i* P	**P**	**12 49 00.6**	**+1.1**
EZM	**Erzurum**	**72.34**	**308**	P	**P**	**12 49 00.7**	**+1.2**
FORT	**Forrest**	**72.38**	**193**	*e*P	**P**	**12 48 58.7**	**-1.2**
	comp=Z,2µm,0.8s						
FORT				*e*pP	pP	12 49 16.8	-0.6
YMR	**Madison River**	**72.53**	**46**	*e*P	**P**	**12 49 00.8**	**+0.3**
ELK	**Elko**	**72.60**	**51**	P	**P**	**12 49 01.3**	**+0.4**
ELK				*PP	pP	12 49 19.9	+1.4
ELK				pmax	pmax		
	comp=Z,18nm,0.8s						
ELK	**Elko**	**72.60**	**51**	P	**P**	**12 49 01.3**	**+0.4**
	comp=Z,18nm,0.8s,mb5.1,baz=307,slow=5.3,SNR=91						
ELK				pP	pP	12 49 19.9	+1.4
	comp=Z,17nm,1.0s,baz=288,slow=4.5,SNR=5.8						
ELK	**Elko**	**72.60**	**51**	*e*P	**P**	**12 49 01.6**	**+0.7**
	comp=Z,161nm,1.7s,mb5.7						
YNR	**Norris Junctio**	**72.65**	**46**	*e*P	**P**	**12 49 02.6**	**+1.4**
MTUM	**Tungsten Hills**	**72.68**	**56**	*e*P	**P**	**12 49 02.1**	**+0.6**
VRT	**Varto**	**72.72**	**307**	P	**P**	**12 49 03.3**	**+1.6**
VRT	**Varto**	**72.72**	**307**	P	**P**	**12 49 03.6**	**+1.9**
YFT	**Old Faithful**	**72.74**	**46**	*e*P	**P**	**12 49 03.9**	**+2.2**
LKWY	**Lake**	**72.90**	**46**	*e*P	**P**	**12 49 04.8**	**+2.2**
LKWY				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
LKWY	**Lake**	**72.90**	**46**	*e*P	**P**	**12 49 04.8**	**+2.2**
	comp=Z,100nm,1.1s,mb5.7						
FRB	**Frobisher Bay**	**73.00**	**14**	P	**P**	**12 49 01.9**	**-0.9**
	comp=Z,123nm,0.6s,mb6.0,baz=333,slow=6.0,SNR=251						
FRB				pP	pP	12 49 20.1	-0.3
	comp=Z,109nm,0.8s,baz=340,slow=7.6,SNR=9.3						
IMW	**Indian Meadow**	**73.04**	**46**	*e*P	**P**	**12 49 04.4**	**+1.0**
TPH	**Tonopah**	**73.07**	**54**	*e*P	**P**	**12 49 04.3**	**+0.6**
TPH				pmax	pmax		
	comp=Z,223nm,1.5s,mb5.9						
TPH	**Tonopah**	**73.07**	**54**	*e*P	**P**	**12 49 04.3**	**+0.6**
	comp=Z,223nm,1.5s,mb5.9						
GUMT	**Gumushane**	**73.12**	**309**	P	**P**	**12 49 05.0**	**+1.0**
GUMT	**Gumushane**	**73.12**	**309**	P	**P**	**12 49 05.4**	**+1.4**
RRI2	**Red Ridge**	**73.19**	**47**	⇑*i*P	**P**	**12 49 05.0**	**+0.7**
RRI2				*e*	pP	12 49 21.2	-0.7
ASK	**Askoy**	**73.23**	**339**	*e*P	**P**	**12 49 04.4**	**+0.2**
ASK				*e*pP	pP	12 49 23.1	+1.3
MOOW	**Moose Ponds**	**73.24**	**46**	⇑*i*P	**P**	**12 49 05.3**	**+0.6**
MOOW				*e*	pP	12 49 22.4	+0.2
RUND	**Rundenannen**	**73.24**	**339**	⇑*i*P	**P**	**12 49 04.7**	**+0.4**
RUND				AMb	AMB	12 49 06.7	
	comp=Z,162nm,1.3s,mb5.8						
RUND				*e*pP	pP	12 49 23.4	+1.5
SIM	**Simferopol’**	**73.25**	**315***d*	*e*P	**P**	**12 49 04.6**	**0.0**
SIM				*e*S	S	12 58 28.0	+1.4
SIM				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
BER	**Bergen**	**73.28**	**339**	*e*P	**P**	**12 49 04.9**	**+0.4**
BER				*e*pP	pP	12 49 23.4	+1.3
TPAW	**Teton Pass**	**73.30**	**47**	⇑*i*P	**P**	**12 49 05.8**	**+0.8**
ODD1	**Odda**	**73.32**	**338**	⇑*i*P	**P**	**12 49 03.9**	**-0.9**
	comp=Z,177nm,1.3s,mb5.8						
ODD1	**Odda**	**73.32**	**338**	⇑*i*P	**P**	**12 49 03.9**	**-0.9**
ODD1				AMb	AMB	12 49 06.1	
	comp=Z,177nm,1.2s,mb5.8						
ODD1				*e*pP	pP	12 49 22.9	+0.6
BTMT	**Batman**	**73.34**	**306**	P	**P**	**12 49 06.1**	**+0.8**
EZC	**Erzincan**	**73.37**	**308**	P	**P**	**12 49 08.2**	**+2.8**
EZC	**Erzincan**	**73.37**	**308**	P	**P**	**12 49 08.5**	**+3.0**
HVU	**Hansel Valley**	**73.38**	**49**	⇑*i*P	**P**	**12 49 05.9**	**+0.4**
HVU				*e*	pP	12 49 22.9	-0.1
WUWY	**Wally Ulrich**	**73.38**	**47**	*e*P	**P**	**12 49 06.6**	**+1.1**
EGD	**Espegrend**	**73.40**	**339**	*e*P	**P**	**12 49 05.5**	**+0.2**
LOHW	**Long Hollow**	**73.41**	**46**	⇑*i*P	**P**	**12 49 06.2**	**+0.5**
SNOW	**Snow King Moun**	**73.42**	**47**	*e*P	**P**	**12 49 06.4**	**+0.7**
DGMT	**Dagmar**	**73.48**	**40**	⇑*i*P	**P**	**12 49 05.2**	**-0.8**
	comp=Z,173nm,1.0s,mb5.9						
BINT	**Bingol**	**73.52**	**307**	P	**P**	**12 49 07.3**	**+1.0**
BINT	**Bingol**	**73.52**	**307**	P	**P**	**12 49 08.0**	**+1.6**
MSL	**Mosul**	**73.53**	**304**	*e*P	**P**	**12 49 07.5**	**+1.0**
MSL				*e*S	S	12 58 47.5	+18
BEST	**Besiri**	**73.66**	**306**	*i* P	**P**	**12 49 08.5**	**+1.3**
AHID	**Auburn Hatcher**	**73.69**	**47**	*e*P	**P**	**12 49 07.8**	**+0.5**
	comp=Z,92nm,1.4s,mb5.5						
LAO	**LASA Array**	**73.69**	**42**	*e*P	**P**	**12 49 07.3**	**+0.1**
	comp=Z,187nm,1.1s,mb5.9						
BGU	**Big Grassy Mou**	**73.78**	**50**	*e*P	**P**	**12 49 08.0**	**+0.1**
BLS5	**Blasjo**	**73.78**	**338**	⇑*i*P	**P**	**12 49 08.3**	**+0.9**
	comp=Z,76nm,1.4s,mb5.4						
BLS5	**Blasjo**	**73.78**	**338**	⇑*i*P	**P**	**12 49 08.3**	**+0.9**
BLS5				AMb	AMB	12 49 10.5	
	comp=Z,76nm,1.4s,mb5.4						
SPUT	**South Promonto**	**73.86**	**49**	*e*P	**P**	**12 49 08.8**	**+0.4**
TRCR	**Troy Canyon**	**73.90**	**53**	*e*P	**P**	**12 49 08.8**	**+0.2**
BORG	**Borgarnes**	**74.08**	**353**	P	**P**	**12 49 10.8**	**+1.6**
	comp=Z,65nm,0.7s,mb5.7,baz=17,slow=2.9,SNR=34						
BORG	**Borgarnes**	**74.08**	**353**	*e*P	**P**	**12 49 10.7**	**+1.6**
	comp=Z,90nm,0.8s,mb5.8						
PTK	**Pertek**	**74.17**	**308**	P	**P**	**12 49 10.1**	**-0.1**
HWUT	**Hardware Ranch**	**74.18**	**49**	⇑*i*P	**P**	**12 49 10.3**	**+0.1**
	comp=Z,97nm,0.6s,mb5.9						
DUG	**Dugway**	**74.37**	**50**	*e*P	**P**	**12 49 11.7**	**+0.4**
DUG				pmax	pmax		
	comp=Z,437nm,0.7s,mb6.5						
DUG	**Dugway**	**74.37**	**50**	*e*P	**P**	**12 49 11.7**	**+0.3**
	comp=Z,437nm,0.7s,mb6.5						
WAR	**Warsaw**	**74.38**	**327**	*e*P	**P**	**12 49 12.1**	**+1.0**
NOQ	**North Oquirrh**	**74.48**	**50**	*e*P	**P**	**12 49 12.8**	**+0.8**
BW06	**Boulder Array**	**74.54**	**47**	*e*P	**P**	**12 49 11.8**	**-0.4**
	comp=Z,25nm,0.7s,mb5.3						
PDAR	**Pinedale Array**	**74.54**	**47**	P	**P**	**12 49 12.0**	**-0.2**
	comp=Z,23nm,0.7s,mb5.2,baz=267,slow=1.7,SNR=210						
BSD	**Bornholm Skovb**	**74.56**	**332**	⇑*i*P	**P**	**12 49 11.8**	**-0.3**
BSD				*i*	pP	12 49 30.2	+0.5
BSD				*e*S	S	12 58 42.1	+1.1
BSD				pmax	pmax		
	comp=Z,170nm,1.2s,mb5.8						
BSD	**Bornholm Skovb**	**74.56**	**332**	⇑*i*P	**P**	**12 49 11.8**	**-0.3**
	comp=Z,170nm,1.2s,mb5.8						
BSD				*i*	pP	12 49 30.2	+0.5
BSD				*e*S	S	12 58 42.1	+1.1
BHD	**Baghdad**	**74.58**	**301**	*e*P	**P**	**12 49 09.5**	**-3.1**
BHD				*e*S	S	12 58 36.0	-5.7
TCUT	**Toone Canyon**	**74.59**	**49**	*e*P	**P**	**12 49 13.4**	**+0.9**
KIS	**Kishinev**	**74.59**	**319**α	*i*P	**P**	**12 49 11.0**	**-1.4**
KIS				*e*		12 49 34.0	
KIS				*e*		12 52 06.0	
KIS				*e*		12 53 50.0	
KIS				*e*PS	PS	12 58 40.0	-46
KIS				pmax	pmax		
	comp=Z,400nm,1.0s,mb6.3						
KIS				pmax	pmax		
	comp=Z,900nm,2.5s,mb6.3						
ELZG	**Elazig**	**74.66**	**308**	*i* P	**P**	**12 49 13.9**	**+0.8**
KVT	**Kavak**	**74.72**	**311**	P	**P**	**12 49 14.5**	**+1.2**
LVV	**L’vov**	**74.86**	**324**	*i* P	**P**	**12 49 12.4**	**-1.5**
JLU	**Jordanelle**	**74.90**	**49**	*e*P	**P**	**12 49 14.9**	**+0.6**
TOKT	**Tokat**	**74.92**	**310**	P	**P**	**12 49 15.3**	**+0.8**
MWC	**Mount Wilson**	**74.95**	**58**	*e*P	**P**	**12 49 15.0**	**+0.2**
NLU	**North Lily Min**	**74.96**	**50**	*e*P	**P**	**12 49 14.9**	**+0.2**
COP	**Copenhagen**	**74.98**	**333**	⇑*i*P	**P**	**12 49 14.7**	**+0.3**
COP				*i* S	S	12 58 46.6	+0.9
COP				pmax	pmax		
	comp=Z,143nm,0.9s,mb5.9						
COP	**Copenhagen**	**74.98**	**333**	⇑*i*P	**P**	**12 49 14.7**	**+0.3**
	comp=Z,143nm,0.9s,mb5.9						
COP				*i*		12 49 20.4	
COP				*i* S	S	12 58 46.6	+0.9
IAS	**Iasi**	**75.07**	**320**	P	**P**	**12 49 15.4**	**+0.2**
MALT	**Malatya**	**75.12**	**308**	*e*P	**P**	**12 49 16.7**	**+1.1**
MALT				pmax	pmax		
	comp=Z,172nm,1.3s,mb5.8						
MALT	**Malatya**	**75.12**	**308**	*e*P	**P**	**12 49 16.7**	**+1.1**
	comp=Z,172nm,1.3s,mb5.8						
GKP	**Gorka Klasztor**	**75.12**	**329**	*e*P	**P**	**12 49 15.8**	**+0.5**
DAU	**Daniels Canyon**	**75.14**	**49**	*e*P	**P**	**12 49 16.6**	**+0.9**
BOYT	**Boyabat**	**75.14**	**312**	*i* P	**P**	**12 49 16.6**	**+1.0**
MPU	**Maple Canyon**	**75.18**	**50**	*e*P	**P**	**12 49 16.4**	**+0.4**
BYBT	**Boyabat**	**75.19**	**312**	P	**P**	**12 49 17.0**	**+1.1**
BZK	**Bozkurt**	**75.29**	**313**	P	**P**	**12 49 17.2**	**+0.7**
MUD	**Monsted U’grnd**	**75.43**	**335**	⇑*i*P	**P**	**12 49 17.2**	**+0.2**
MUD				pmax	pmax		
	comp=Z,84nm,1.1s,mb5.6						
MUD	**Monsted U’grnd**	**75.43**	**335**	⇑*i*P	**P**	**12 49 17.2**	**+0.2**
	comp=Z,84nm,1.1s,mb5.6						
MUD				*i* S	S	12 58 43.2	-7.4
MUD				*i*		13 03 29.3	
URFA	**Urfa**	**75.44**	**307**	P	**P**	**12 49 18.9**	**+1.5**
KLBR	**Kellerberrin**	**75.49**	**202**	⇓*i*P	**P**	**12 49 17.0**	**-0.9**
	comp=Z,924nm,1.0s,mb6.7						
KLBR				*e*pP	pP	12 49 34.8	-0.7
ARUT	**Antelope Range**	**75.56**	**52**	*e*P	**P**	**12 49 18.8**	**+0.7**
KWP	**Kalwaria**	**75.58**	**324**	*e*P	**P**	**12 49 19.2**	**+1.2**
CTKT	**Corum**	**75.73**	**312**	*i* P	**P**	**12 49 20.0**	**+0.9**
MVU	**Marysvale**	**75.83**	**51**	*e*P	**P**	**12 49 20.6**	**+0.9**
	comp=Z,90nm,1.5s,mb5.5						
MSU	**Marysvale**	**75.84**	**51**	*e*P	**P**	**12 49 20.5**	**+0.8**
TOS	**Tosya**	**75.89**	**312**	P	**P**	**12 49 21.7**	**+1.7**
TMUT	**Trail Mountain**	**75.90**	**50**	*e*P	**P**	**12 49 20.8**	**+0.7**
BURAR	**Bucovina Array**	**75.90**	**322**	P	**P**	**12 49 20.0**	**+0.1**
BALT	**Daday**	**75.91**	**313**	*i* P	**P**	**12 49 21.4**	**+1.2**
ULM	**Lac du Bonnet**	**76.00**	**34**	P	**P**	**12 49 19.6**	**-0.8**
	comp=Z,36nm,0.8s,mb5.4,baz=314,slow=6.6,SNR=65						
ULM				pP	pP	12 49 39.5	+1.5
	comp=Z,41nm,1.1s,baz=340,slow=9.2,SNR=6.5						
CORM	**Corum**	**76.12**	**311**	P	**P**	**12 49 22.8**	**+1.5**
CFR	**Carcaliu**	**76.20**	**318**	⇓P	**P**	**12 49 21.7**	**+0.1**
CFR	**Carcaliu**	**76.20**	**318**	P	**P**	**12 49 21.8**	**+0.2**
GZT	**Gaziantep**	**76.26**	**308**	*i* P	**P**	**12 49 22.5**	**+0.4**
LDFC	**Landfair**	**76.28**	**56**	*e*P	**P**	**12 49 22.0**	**-0.4**
KOLS	**Kolonicke sedl**	**76.29**	**324**	*i* P	**P**	**12 49 21.9**	**-0.2**
KOLS				*e*PP	PP	12 52 04.4	-11
BNN	**Bunyan**	**76.30**	**310**	P	**P**	**12 49 23.7**	**+1.4**
MUN	**Mundaring**	**76.30**	**203**	*e*P	**P**	**12 49 21.8**	**-0.7**
	comp=Z,34nm,1.1s,mb5.2						
MUN	**Mundaring**	**76.30**	**203**	*e*P	**P**	**12 49 21.8**	**-0.7**
MUN				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
CANT	**Cankiri**	**76.41**	**312**	P	**P**	**12 49 24.2**	**+1.3**
OJC	**Ojcow**	**76.41**	**326**	⇑*i*P	**P**	**12 49 22.6**	**-0.1**
OJC				*e*PcP	PcP	12 49 39.3	+4.7
SRU	**San Rafael**	**76.42**	**50**	*e*P	**P**	**12 49 23.1**	**+0.1**
VRI	**Vrincioaia**	**76.42**	**320**	⇓P	**P**	**12 49 23.5**	**+0.6**
KAHT	**Ahir Dag**	**76.49**	**308**	*i* P	**P**	**12 49 24.1**	**+0.6**
SAFT	**Safranbolu**	**76.50**	**313**	P	**P**	**12 49 24.8**	**+1.4**
TIRR	**Tirgusor**	**76.56**	**318**	⇑P	**P**	**12 49 24.0**	**+0.3**
TIRR	**Tirgusor**	**76.56**	**318**	P	**P**	**12 49 24.2**	**+0.5**
GAZ	**Gaziantep**	**76.59**	**308**	P	**P**	**12 49 25.8**	**+1.7**
ELDT	**Eldivan**	**76.59**	**312**	*i* P	**P**	**12 49 24.5**	**+0.6**
HARR	**Harsova**	**76.65**	**318**	⇑P	**P**	**12 49 24.5**	**+0.3**
HARR	**Harsova**	**76.65**	**318**	P	**P**	**12 49 24.8**	**+0.7**
CRVS	**Cervenica-Dubn**	**76.67**	**324**	*e*P	**P**	**12 49 24.9**	**+0.7**
CRVS				*e*	pP	12 49 44.5	+2.6
CRVS				*e*S	S	12 59 03.6	-0.8
NIE	**Niedzica**	**76.79**	**325**	*e*P	**P**	**12 49 24.3**	**-0.6**
BAR	**Barrett**	**76.83**	**58**	*e*P	**P**	**12 49 25.3**	**-0.2**
NWAO	**Narrogin (SRO)**	**76.89**	**202**	⇑*i*P	**P**	**12 49 24.8**	**-1.0**
NWAO				e*PP	pP	12 49 42.2	-1.3
NWAO				pmax	pmax		
	comp=Z,87nm,1.0s						
NWAO	**Narrogin (SRO)**	**76.89**	**202**	⇑*i*P	**P**	**12 49 24.8**	**-1.0**
	comp=Z,87nm,1.0s,mb5.6						
NWAO				*e*pP	pP	12 49 42.2	-1.3
AVNT	**Avonos**	**76.92**	**310**	*i* P	**P**	**12 49 25.8**	**-0.1**
ISR	**Istrita**	**77.04**	**319**	⇑P	**P**	**12 49 27.3**	**+0.9**
ISR	**Istrita**	**77.04**	**319**	P	**P**	**12 49 27.6**	**+1.2**
RUE	**Ruedersdorf**	**77.05**	**331**	*e*P	**P**	**12 49 26.0**	**-0.3**
	comp=Z,254nm,1.3s,mb6.0						
RUE				*e*pP	pP	12 49 44.2	+0.3
MLR	**Muntele Rosu**	**77.07**	**320**	P	**P**	**12 49 26.9**	**+0.4**
MLR				*PP	pP	12 49 45.0	+0.8
MLR				pmax	pmax		
	comp=Z,119nm,1.3s						
MLR	**Muntele Rosu**	**77.07**	**320**	P	**P**	**12 49 26.9**	**+0.4**
	comp=Z,119nm,1.3s,mb5.7,baz=4.9,slow=5.3,SNR=36						
MLR				pP	pP	12 49 45.0	+0.8
	comp=Z,35nm,1.1s,baz=283,slow=7.7,SNR=5.6						
MLR	**Muntele Rosu**	**77.07**	**320**	P	**P**	**12 49 27.1**	**+0.5**
BSEG	**Bad Segeberg**	**77.12**	**333**	*e*P	**P**	**12 49 26.5**	**-0.1**
RAC	**Raciborz**	**77.18**	**327**	*e*P	**P**	**12 49 27.7**	**+0.7**
KAMT	**Kaman**	**77.19**	**311**	P	**P**	**12 49 27.9**	**+0.6**
PSN	**Preselentsi**	**77.23**	**317**	*i* P	**P**	**12 49 28.0**	**+0.6**
SGKT	**Sivrigoynuk**	**77.30**	**313**	*i* P	**P**	**12 49 27.7**	**-0.2**
ANTO	**Ankara**	**77.37**	**312**	P	**P**	**12 49 26.5**	**-1.8**
KSP	**Ksiaz**	**77.37**	**328**	⇑*e*P	**P**	**12 49 28.2**	**+0.1**
KSP				e*PP	pP	12 49 46.0	+0.3
KSP				*e*		12 52 20.0	
KSP				*e*S	S	12 59 09.0	-2.9
KSP	**Ksiaz**	**77.37**	**328**	⇑*i*P	**P**	**12 49 28.3**	**+0.3**
KSP				*e*S	S	12 59 11.0	-0.9
KSP				MLR	MLR	13 29 60.0	
	comp=Z,16µm,23.6s						
OKC	**Ostrava-Krasne**	**77.39**	**327**	⇑*i*P	**P**	**12 49 28.3**	**+0.1**
OKC				*e*pP	pP	12 49 47.1	+1.2
OKC				*e*S	S	12 59 12.1	0.0
OKC				*e*x	x	12 59 40.5	
KECS	**Kecovo**	**77.42**	**325**	*e*P	**P**	**12 49 28.5**	**+0.1**
KECS				*e*	pP	12 49 44.9	-1.1
RBK	**Rabkut**	**77.47**	**282**	P	**P**	**12 49 28.4**	**-0.8**
	SNR=19						
NIG	**Nigde**	**77.51**	**310**	P	**P**	**12 49 30.8**	**+1.7**
WHFO	**Wadi Hawf**	**77.53**	**283**	P	**P**	**12 49 28.3**	**-1.3**
	SNR=31						
CEYT	**Ceyhan**	**77.58**	**308**	P	**P**	**12 49 30.9**	**+1.4**
LIKS	**Likavka**	**77.59**	**326**	*e*P	**P**	**12 49 30.1**	**+0.8**
COBT	**Iskenderun**	**77.60**	**308**	*i* P	**P**	**12 49 30.1**	**+0.5**
MORC	**Moravsky Berou**	**77.69**	**327**	*e*P	**P**	**12 49 30.0**	**+0.2**
MORC				pmax	pmax		
	comp=Z,178nm,1.2s,mb5.9						
MORC	**Moravsky Berou**	**77.69**	**327**	*e*P	**P**	**12 49 30.0**	**+0.1**
	comp=Z,178nm,1.2s,mb5.9						
DPC	**Dobruska-Polom**	**77.74**	**328**	⇑*i*P	**P**	**12 49 30.7**	**+0.6**
DPC				*e*S	S	12 59 16.0	+0.1
DPC				*e*x	x	12 59 45.1	
UPC	**Upice**	**77.74**	**328**	⇑*i*P	**P**	**12 49 30.3**	**+0.2**
UPC				*e*pP	pP	12 49 49.2	+1.4
PV10	**Paradox Valley**	**77.77**	**50**	*e*P	**P**	**12 49 31.4**	**+0.8**
HENT	**Hendek**	**77.77**	**314**	*i* P	**P**	**12 49 30.5**	**0.0**
PHWY	**Pilot Hill**	**77.78**	**46**	*e*P	**P**	**12 49 30.4**	**-0.1**
MDU	**Mudurnu**	**77.84**	**313**	P	**P**	**12 49 31.7**	**+0.8**
HTY	**Hatay**	**77.93**	**307**	P	**P**	**12 49 31.9**	**+0.4**
TOO	**Toolangi**	**77.98**	**177**	*e*P	**P**	**12 49 32.3**	**+0.6**
	comp=Z,2.5nm,1.0s						
TOO				*e*pP	pP	12 49 50.1	+0.7
PSZ	**Piszkesteto**	**78.10**	**325**	⇓P	**P**	**12 49 32.9**	**+0.8**
PSZ	**Piszkesteto**	**78.10**	**325**	⇑*e*P	**P**	**12 49 32.7**	**+0.6**
VYHS	**Vyhne**	**78.13**	**326**	*i* P	**P**	**12 49 33.0**	**+0.7**
VYHS				*e*	pP	12 49 49.8	-0.2
VYHS				*e*S	S	12 59 15.7	-4.4
PV01	**Paradox Valley**	**78.21**	**50**	*e*P	**P**	**12 49 33.5**	**+0.6**
ABTO	**Aybut**	**78.23**	**283**	P	**P**	**12 49 32.9**	**-0.6**
	SNR=30						
BRG	**Berggiesshubel**	**78.27**	**330**	⇑*i*P	**P**	**12 49 33.3**	**+0.3**
BRG				*i*		12 49 38.9	
BRG				*i*	pP	12 49 51.8	+1.1
BRG				*i*		12 52 29.7	
BRG				pmax	pmax		

	comp=Z,90nm,1.2s,mb5.6						
BRG	Berggiesshubel	78.27	330	⇑iP	P	12 49 33.3	+0.3
	comp=Z,90nm,1.2s,mb5.6						
BRG				i		12 49 38.9	
BRG				i	pP	12 49 51.8	+1.1
BRG				i		12 52 29.7	
CLL	Collm	78.28	330	⇑iP	P	12 49 32.6	-0.4
CLL				i		12 49 38.7	
CLL				e*PP	pP	12 49 52.0	+1.3
CLL				eS	S	12 59 21.0	-0.6
CLL				pmax	pmax		
	comp=Z,270nm,1.1s,mb6.1						
CLL	Collm	78.28	330	⇑iP	P	12 49 32.6	-0.4
	comp=Z,270nm,1.1s,mb6.1						
CLL				i		12 49 38.7	
CLL				epP	pP	12 49 52.0	+1.3
CLL				eS	S	12 59 21.0	-0.6
CLL	Collm	78.28	330	⇑P	P	12 49 32.6	-0.4
	comp=Z,logA/T=2.2,mb5.9						
CLL				i		12 49 38.7	
CLL				e*PP	pP	12 49 52.0	+1.3
CLL				i		12 50 08.9	
CLL				ePP	PP	12 52 36.0	+3.7
CLL				eS	S	12 59 21.0	-0.6
CLL				eSCS	ScS	12 59 47.0	+2.7
CLL				ePS	PS	13 00 16.0	+3.8
PVCC	Panska Ves	78.30	329	⇑iP	P	12 49 33.4	+0.2
PVCC				epP	pP	12 49 51.8	+0.9
WUAZ	Wupatki	78.30	53	eP	P	12 49 34.0	+0.5
	comp=Z,1µm,1.0s,mb6.8						
VRAC	Vranov	78.44	327	P	P	12 49 34.5	+0.5
VRAC				*PP	pP	12 49 53.1	+1.4
VRAC				pmax	pmax		
	comp=Z,58nm,0.9s						
VRAC	Vranov	78.44	327	P	P	12 49 34.5	+0.5
	comp=Z,58nm,0.9s,mb5.5,baz=44,slow=6.4,SNR=80						
VRAC				pP	pP	12 49 53.1	+1.4
	comp=Z,49nm,1.0s,baz=50,slow=3.3,SNR=5.6						
VRAC	Vranov	78.44	327	P	P	12 49 34.6	+0.6
HRT	Hereke	78.44	314	P	P	12 49 33.8	-0.4
KIZT	Kizilcal	78.56	312	eP	P	12 49 35.4	+0.5
GBZT	Gebze	78.59	315	P	P	12 49 33.7	-1.3
SZH	Strazhica	78.67	318	i P	P	12 49 35.5	+0.1
ESKT	Eskisehir	78.70	313	eP	P	12 49 36.2	+0.6
ESKT	Eskisehir	78.70	313	i P	P	12 49 35.9	+0.2
SMOL	Smolenice	78.71	326	eP	P	12 49 36.2	+0.7
SMOL				epP	pP	12 49 55.0	+1.8
PRU	Pruhonice	78.74	329	⇑iP	P	12 49 35.8	+0.2
PRU				epP	pP	12 49 53.1	-0.2
PRU				eS	S	12 59 36.7	+10
ISCO	Idaho Springs	78.74	47	eP	P	12 49 36.3	+0.5
ISCO				pmax	pmax		
	comp=Z,91nm,1.4s,mb5.5						
ISCO	Idaho Springs	78.74	47	eP	P	12 49 36.3	+0.5
	comp=Z,91nm,1.4s,mb5.5						
YLV	Yalova	78.78	314	eP	P	12 49 35.8	-0.3
CLZ	Clausthal	78.81	332	eP	P	12 49 36.0	0.0
	comp=Z,236nm,1.2s,mb6.0						
MEST	Erdemli	78.81	309	i P	P	12 49 36.3	0.0
SRO	Srobarova	78.87	325	eP	P	12 49 37.4	+1.0
SRO				e	pP	12 49 54.4	+0.3
SRO2	Moca	78.88	325	eP	P	12 49 37.6	+1.2
CTT	Catalca	78.88	315	eP	P	12 49 37.1	+0.5
JMB	Yambol	78.92	317	i P	P	12 49 37.0	+0.2
KONT	Konya--Tatoy	78.93	311	eP	P	12 49 37.5	+0.6
SRO1	Iza	78.95	325	eP	P	12 49 37.8	+1.0
SRO1				epP	pP	12 49 56.4	+1.9
BZS	Buzias	79.05	322	P	P	12 49 37.5	+0.1
ZST	Bratislava	79.09	326	eP	P	12 49 38.5	+0.9
ZST				e	pP	12 49 57.5	+2.2
ZST				eS	S	12 59 32.6	+2.2
ULDT	Uludag	79.21	314	i P	P	12 49 38.8	+0.4
WIT	Witteveen	79.27	334	i P	P	12 49 39.3	+0.8
	comp=Z,933nm,1.4s,mb6.5						
WIT				ex	x	12 49 57.4	
EDRB	Edirne	79.28	317	eP	P	12 49 39.3	+0.6
HWQ	Hawqa	79.28	306	eP	P	12 49 39.1	+0.2
MOX	Moxa	79.33	331	eP	P	12 49 39.0	+0.2
MOX				e*PP	pP	12 49 57.8	+1.2
MOX				eS	S	12 59 35.0	+2.2
MOX				pmax	pmax		
	comp=Z,143nm,1.5s,mb5.7						
MOX	Moxa	79.33	331	eP	P	12 49 39.0	+0.2
	comp=Z,143nm,1.5s,mb5.7						
MOX				epP	pP	12 49 57.8	+1.2
MOX				eS	S	12 59 35.0	+2.2
MOX	Moxa	79.33	331	i P	P	12 49 39.0	+0.2
	comp=Z,logA/T=2.0,mb5.7						
MOX				pP	pP	12 49 58.0	+1.4
MOX				S	S	12 59 35.0	+2.2
NKC	Novy Kostel	79.35	330	⇑iP	P	12 49 39.0	0.0
NKC				epP	pP	12 49 56.8	+0.1
VKA	Vienna	79.37	327	⇑iP	P	12 49 38.4	-0.7
VKA				pmax	pmax		
	comp=Z,746nm,4.0s						
VKA	Vienna	79.37	327	⇑iP	P	12 49 38.4	-0.7
	comp=Z,746nm,4.0s						
EAB	Aberfoyle	79.42	342	⇑eP	P	12 49 38.8	-0.4
EAB				AMb	AMB	12 49 41.6	
	comp=Z,310nm,1.3s,mb6.1						
ALT	Altintas	79.44	313	eP	P	12 49 40.7	+1.1
EAU	Auchinoon	79.51	341	eP	P	12 49 39.0	-0.7
EAU				AMb	AMB	12 49 42.0	
	comp=Z,282nm,1.5s,mb6.0						
HDMB	Hadim	79.53	310	eP	P	12 49 40.2	0.0
PCOU	Corrie	79.54	342	⇑eP	P	12 49 40.3	+0.4
PCOU				AMb	AMB	12 49 41.5	
	comp=Z,93nm,1.1s,mb5.6						
EYMN	Ely	79.62	34	eP	P	12 49 39.2	-1.2
	comp=Z,140nm,1.0s,mb5.8						
BHL	Bhannes	79.71	306	eP	P	12 49 41.5	+0.2
MRMT	Marmara Adasi	79.72	315	eP	P	12 49 41.3	+0.2
BNT	Bandirma	79.72	315	eP	P	12 49 42.3	+1.1
MFT	Murefte	79.75	316	eP	P	12 49 42.0	+0.7
DIM	Dimitrovgrad	79.75	318	i P	P	12 49 42.0	+0.7
KHC	Kasperske Hory	79.80	329	⇑iP	P	12 49 41.5	+0.1
KHC				epP	pP	12 50 00.5	+1.4
KHC				ex	x	13 00 09.6	
PMSU	Muirshiel	79.83	342	⇑eP	P	12 49 40.7	-0.7
PCA1	Carrot	79.84	342	⇑eP	P	12 49 41.6	+0.2
SART	Tekirdag	79.88	316	i P	P	12 49 42.5	+0.6
EKA	Eskdalemuir Ar	79.91	341	P	P	12 49 41.6	-0.2
	comp=Z,24nm,0.8s,mb5.2,baz=19,slow=5.1,SNR=27						
EKA				pP	pP	12 50 00.2	+0.6
	comp=Z,45nm,0.7s,baz=26,slow=4.6,SNR=14						
DGAR	Diego Garcia	79.92	251	eP	P	12 49 41.5	-1.3
DGAR				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.9						
DGAR	Diego Garcia	79.92	251	eP	P	12 49 41.5	-1.3
	comp=Z,170nm,1.0s,mb5.9						
ESK	Eskdalemuir	79.93	341	eP	P	12 49 42.0	0.0
ESK				pmax	pmax		
	comp=Z,85nm,0.9s,mb5.7						
ESK	Eskdalemuir	79.93	341	eP	P	12 49 42.0	+0.1
	comp=Z,85nm,0.9s,mb5.7						
ESK	Eskdalemuir	79.93	341	⇑eP	P	12 49 41.4	-0.6
ESK				AMb	AMB	12 49 46.4	
	comp=Z,98nm,1.5s,mb5.5						
WTSB	Winterswijk	79.94	334	⇑iP	P	12 49 41.5	-0.5
	comp=Z,160nm,1.6s,mb5.7						
RAYN	Ar Rayn	79.98	292	P	P	12 49 42.2	-0.7
	comp=Z,507nm,1.4s,mb6.3,SNR=73						
GEC2	GERESS Array S	79.98	328	eP	P	12 49 42.1	-0.3
GEC2				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
GEC2	GERESS Array S	79.98	328	eP	P	12 49 42.1	-0.3
	comp=Z,80nm,1.2s,mb5.5						
GERES	GERESS Array B	79.98	328	P	P	12 49 42.0	-0.3
	comp=Z,37nm,0.9s,mb5.3,baz=45,slow=3.8,SNR=125						
GERES				pP	pP	12 50 00.6	+0.5
	comp=Z,11nm,0.6s,baz=37,slow=5.1,SNR=5.8						
LCP	Cassop	80.01	340	⇑eP	P	12 49 41.8	-0.6
WET	Wettzell	80.06	329	i P	P	12 49 43.0	+0.2
WET				pmax	pmax		
	comp=Z,181nm,1.2s,mb5.9						
WET	Wettzell	80.06	329	i P	P	12 49 43.0	+0.2
	comp=Z,181nm,1.2s,mb5.9						
PGB	Panagyurishte	80.08	319	i P	P	12 49 44.0	+0.9
ASF	Jabal al Asfar	80.09	304	P	P	12 49 43.7	+0.4
	comp=Z,23nm,0.8s,mb5.2,baz=273,slow=1.7,SNR=47						
BTA	Talkin	80.17	340	eP	P	12 49 42.9	-0.3
MATL	Matirih	80.19	306	eP	P	12 49 44.5	+0.7
BEO	Belgrade	80.19	322	⇑iP	P	12 49 43.7	+0.1
BOLS	Boljevac	80.22	321	⇑iP	P	12 49 42.3	-1.4
SVIS	Svilajnac	80.23	321	⇑iP	P	12 49 43.3	-0.5
SDCO	Great Sand Dun	80.23	48	eP	P	12 49 44.2	+0.3
	comp=Z,71nm,1.3s,mb5.4						
GRA1	Grafenberg Arr	80.25	330	eP	P	12 49 44.2	+0.4
	comp=Z,358nm,1.2s,mb6.2						
GRA1				e	pP	12 50 03.2	+1.6
GRA1				e		12 50 19.1	
GRF	Grafenberg Arr	80.25	330	eP	P	12 49 44.2	+0.4
GRF				e	pP	12 50 03.2	+1.6
GRF				pmax	pmax		
	comp=Z,358nm,1.2s,mb6.2						
GRF	Grafenberg Arr	80.25	330	eP	P	12 49 44.2	+0.4
GRF				e	pP	12 50 03.2	+1.6
GRF				pmax	pmax		
	comp=Z,358nm,1.2s,mb6.2						
GRF	Grafenberg Arr	80.25	330	eP	P	12 49 44.2	+0.4
	comp=Z,358nm,1.2s,mb6.2						
GRF				e	pP	12 50 03.2	+1.6
GRF				e		12 50 19.1	
KHL	Karahalli	80.28	313	eP	P	12 49 44.5	+0.4
ALN	Alexandroupoli	80.32	316	eP	P	12 49 44.9	+0.5
CSS	Prodhromos	80.40	308	⇑P	P	12 49 45.2	+0.3
	comp=Z,1.4nm,0.8s						
CSS	Prodhromos	80.40	308	⇑iP	P	12 49 45.2	+0.3
RZN	Rozhen	80.44	318	i P	P	12 49 45.0	0.0
GMK	Mull of Kintyr	80.48	342	⇑eP	P	12 49 44.8	-0.1
ARSA	Arzberg	80.50	326	⇑iP	P	12 49 45.5	+0.3
	comp=Z,270nm,1.7s,mb5.9						
VTS	Vitosha	80.53	319	P	P	12 49 45.8	+0.3
VTS	Vitosha	80.53	319	i P	P	12 49 46.0	+0.5
MOA	Molln	80.55	328	⇑iP	P	12 49 45.4	0.0
	comp=Z,321nm,2.1s,mb5.9						
LEF	Lefka	80.56	308	eP	P	12 49 45.9	+0.1
ALFC	Alevga	80.70	309	⇑P	P	12 49 45.8	-0.7
ALFC	Alevga	80.70	309	⇑iP	P	12 49 45.8	-0.7
GAL1	Galloway	80.71	341	⇑eP	P	12 49 46.2	+0.1
HPK	Haverah Park	80.74	339	⇑eP	P	12 49 46.0	-0.3
GRUS	Gruza	80.77	321	⇓iP	P	12 49 46.3	-0.4
TUC	Tucson	80.81	55	P	P	12 49 47.5	+0.4
TUC	Tucson	80.81	55	eP	P	12 49 47.8	+0.7
TUC				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.2						
TUC	Tucson	80.81	55	eP	P	12 49 47.8	+0.6
	comp=Z,44nm,1.3s,mb5.2						
AKS	Akhisar	80.83	314	P	P	12 49 47.6	+0.5
TNS	Taunus Mts	80.83	332	eP	P	12 49 46.7	-0.2
TNS				pmax	pmax		
	comp=Z,115nm,1.2s,mb5.7						
TNS	Taunus Mts	80.83	332	eP	P	12 49 46.7	-0.2
	comp=Z,115nm,1.2s,mb5.7						
GCL	Cushendall	80.85	342	⇑eP	P	12 49 47.2	+0.3
AKMC	Akamas	80.95	309	⇑P	P	12 49 47.5	-0.3
AKMC	Akamas	80.95	309	⇑iP	P	12 49 47.5	-0.3
DIVS	Divcibare	80.95	322	⇓iP	P	12 49 47.6	0.0
DNZL	Cakiroluk	80.99	312	i P	P	12 49 48.0	+0.1
MMB	Musomiste	81.01	318	i P	P	12 49 48.0	0.0
PPCY	Paphos	81.04	309	⇑P	P	12 49 48.1	-0.2
PPCY	Paphos	81.04	309	⇑eP	P	12 49 48.1	-0.2
BARS	Barje	81.04	320	⇓iP	P	12 49 47.0	-1.1
GROS	Grobnik	81.13	326	i P	P	12 49 48.3	-0.2
KKB	Krupnik	81.13	319	i P	P	12 49 48.0	-0.6
SIND	Sindeldorf	81.14	331	⇑eP	P	12 49 48.5	0.0
PERS	Pernice	81.16	326	eP	P	12 49 48.7	0.0
ELL	Elmali	81.16	311	P	P	12 49 49.7	+0.8
LHO	Holmfirth	81.17	339	⇑eP	P	12 49 48.7	+0.1
TOD	Tromm	81.22	332	eP	P	12 49 49.1	+0.2
TOD	Tromm	81.22	332	⇑eP	P	12 49 49.2	+0.3
HGN	Heimansgroeve	81.25	334	⇑iP	P	12 49 48.5	-0.5
	comp=Z,130nm,1.3s,mb5.7						
HGN				ex	x	12 50 07.0	
HGN				eS	S	12 59 54.4	+1.6
HGN				eSS	SS	13 05 04.0	-8.4
HGN				eP		13 09 35.9	
	comp=Z,37nm,3.2s						
KBI1	Birley Grange	81.35	339	⇑eP	P	12 49 49.0	-0.4
SWS	Schriesheim	81.36	332	⇑eP	P	12 49 49.7	+0.1
SRS	Serrai	81.43	318	eP	P	12 49 49.9	-0.3
ABH	Alteburg	81.44	332	eP	P	12 49 50.1	+0.1
ABH	Alteburg	81.44	332	⇑eP	P	12 49 50.3	+0.3
KDAG	Bornova	81.47	314	i P	P	12 49 49.9	-0.6
IZM	Izmir	81.47	314	i P	P	12 49 50.9	+0.4
FUR	Furstenfeldbru	81.48	329	eP	P	12 49 50.4	+0.1
FUR				pmax	pmax		
	comp=Z,324nm,1.2s,mb6.1						
FUR	Furstenfeldbru	81.48	329	eP	P	12 49 50.4	+0.1
	comp=Z,324nm,1.2s,mb6.1						
OBKA	Obir	81.50	327	⇑iP	P	12 49 50.2	-0.2
	comp=Z,702nm,3.9s						
KBA	Koelnbreinsper	81.54	328	⇑iP	P	12 49 50.9	+0.3
	comp=Z,380nm,1.6s,mb6.1						
KBA	Koelnbreinsper	81.54	328	⇑iP	P	12 49 50.9	+0.3
KBA				pmax	pmax		
	comp=Z,380nm,1.6s,mb6.1						
HDH	Heidenheim	81.55	330	⇑eP	P	12 49 50.6	0.0
SCHQ	Schefferville	81.58	17	P	P	12 49 50.7	+0.1
	comp=Z,44nm,0.9s,mb5.4,baz=354,slow=5.9,SNR=55						
SCHQ				pP	pP	12 50 08.9	+0.5
	comp=Z,43nm,0.8s,baz=13,slow=8.9,SNR=11						
SCHQ	Schefferville	81.58	17	eP	P	12 49 50.7	0.0
	comp=Z,146nm,1.3s,mb5.8						
GMM	Mts of Mourne	81.58	342	⇑eP	P	12 49 50.9	+0.2
ANMO	Albuquerque	81.63	51	S	P	12 49 52.5	+1.1
ANMO	Albuquerque	81.63	51	⇑iP	P	12 49 52.0	+0.7
ANMO				e*PP	pP	12 50 09.3	+0.2
ANMO				pmax	pmax		
	comp=Z,147nm,1.4s						
ANMO	Albuquerque	81.63	51	P	P	12 49 51.9	+0.5
	comp=Z,49nm,1.0s,mb5.4,baz=312,slow=6.6,SNR=110						
ANMO	Albuquerque	81.63	51	⇑iP	P	12 49 52.0	+0.7
	comp=Z,147nm,1.4s,mb5.7						
ANMO				epP	pP	12 50 09.3	+0.2
KWE	Weaver Farm	81.64	339	⇑eP	P	12 49 51.1	+0.1
CRES	Cresnjev	81.65	326	P	P	12 49 50.4	-0.9
KTD	Kalmit	81.72	332	eP	P	12 49 51.9	+0.4
KTD	Kalmit	81.72	332	eP	P	12 49 51.7	+0.2
KNT	Kendrikon	81.75	318	eP	P	12 49 52.2	+0.3
RUP	Ruppelstein	81.76	333	eP	P	12 49 51.7	0.0
RUP	Ruppelstein	81.76	333	⇑eP	P	12 49 52.1	+0.4
STU	Stuttgart	81.77	331	eP	P	12 49 51.9	+0.1
STU				pmax	pmax		
	comp=Z,195nm,1.1s,mb6.0						
STU	Stuttgart	81.77	331	eP	P	12 49 51.9	+0.1
	comp=Z,195nm,1.1s,mb6.0						
OUR	Ouranopolis	81.81	317	eP	P	12 49 51.4	-0.8
PLE	Pljevlja	81.82	322	⇑iP	P	12 49 52.8	+0.6
SKO	Skopje	81.87	320	⇑iP	P	12 49 53.2	+0.7
SKO				i	pP	12 50 12.3	+2.0
SKO				pmax	pmax		
	comp=Z,173nm,1.1s,mb5.9						
SKO	Skopje	81.87	320	⇑iP	P	12 49 53.2	+0.7
	comp=Z,0.2nm,1.1s						
SKO				⇓i	pP	12 50 12.3	+2.0
SKO				⇓i		12 50 28.2	
LJU	Ljubljana	81.87	326	eP	P	12 49 51.5	-0.8
LJU				e	pP	12 50 09.5	-0.7
LJU				e		12 50 27.0	
IVA	Berane	81.93	321	⇑iP	P	12 49 53.0	+0.3
WME	Myndd Eilian	81.95	341	eP	P	12 49 52.6	0.0
WME				AMb	AMB	12 49 54.9	
	comp=Z,129nm,1.3s,mb5.7						
BUCH	Bad Urach	81.98	331	⇑eP	P	12 49 53.0	+0.1
BOJS	Bojanci	81.99	326	eP	P	12 49 52.7	-0.3
BOJS				e	pP	12 50 11.8	+1.0
BOJS				e		12 50 28.1	
LBG	Lerchenberg	82.00	331	⇑eP	P	12 49 53.3	+0.3
WATA	Walderalm	82.04	329	⇑iP	P	12 49 53.7	+0.5
	comp=Z,146nm,1.4s,mb5.7						
WATA	Walderalm	82.04	329	⇑iP	P	12 49 53.7	+0.5
WATA				pmax	pmax		
	comp=Z,146nm,1.4s,mb5.7						
PTCC	Patocco-Chiusa	82.07	327	eP	P	12 49 52.5	-0.9
WTTA	Wattenberg	82.07	329	⇑iP	P	12 49 53.6	+0.2
	comp=Z,494nm,2.2s,mb6.0						
WTTA	Wattenberg	82.07	329	⇑iP	P	12 49 53.6	+0.2
WTTA				pmax	pmax		
	comp=Z,494nm,2.2s,mb6.0						
LANF	Langenberg	82.10	332	eP	P	12 49 53.7	+0.2
PVY	Plav	82.11	321	⇑iP	P	12 49 53.0	-0.6
THE	Thessaloniki	82.11	318	eP	P	12 49 49.8	-4.0
WLF	Walferdange	82.11	333	⇑iP	P	12 49 53.7	+0.2
WLF				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
WLF	Walferdange	82.11	333	⇑iP	P	12 49 53.7	+0.2
	comp=Z,30nm,0.8s,mb5.3						
DMUB	Kingscourt	82.11	342	eP	P	12 49 54.1	+0.6
SBD1	Bryn Du	82.12	340	⇑eP	P	12 49 54.1	+0.6
SBD1				AMb	AMB	12 49 56.2	
	comp=Z,341nm,1.2s,mb6.2						
ROBS	Robic	82.14	327	eP	P	12 49 52.9	-0.9
UPM	Unac-Piva	82.14	322	⇑iP	P	12 49 53.4	-0.4
YLL	Llanberis	82.14	340	eP	P	12 49 54.0	+0.4
YRC	Rhoscolyn	82.15	341	eP	P	12 49 53.4	-0.3
YRC				AMb	AMB	12 49 55.2	
	comp=Z,73nm,1.2s,mb5.5						
VOY	Vojsko	82.15	327	eP	P	12 49 52.8	-1.0
VOY				e	pP	12 50 12.1	+0.5
GRG	Griva	82.15	319	eP	P	12 49 54.0	+0.1
FVI	Forni Avoltri	82.16	328	eP	P	12 49 52.5	-1.3
GIVF	Givet	82.19	334	⇑iP	P	12 49 53.4	-0.5
	comp=Z,339nm,1.6s,mb5.7						
GIVF	Givet	82.19	334	⇑iP	P	12 49 53.4	-0.5
GIVF				pmax	pmax		
	comp=Z,169nm,1.6s,mb5.7						
MOTA	Moosalm	82.22	329	⇑iP	P	12 49 54.8	+0.7
	comp=Z,95nm,1.2s,mb5.6						
MOTA	Moosalm	82.22	329	⇑iP	P	12 49 54.8	+0.7
MOTA				pmax	pmax		
	comp=Z,95nm,1.2s,mb5.6						
GMNA	Gemona	82.23	327	eP	P	12 49 53.5	-0.7
SQTA	Sankt Quirin	82.28	329	⇑iP	P	12 49 55.1	+0.7
	comp=Z,135nm,1.3s,mb5.7						
SQTA	Sankt Quirin	82.28	329	⇑iP	P	12 49 55.1	+0.7
SQTA				pmax	pmax		
	comp=Z,135nm,1.3s,mb5.7						
UBR	Uberruh	82.33	330	⇑eP	P	12 49 54.9	+0.2
BDRM	Kayabasi	82.33	313	i P	P	12 49 55.0	0.0
GUT	Gutenstein	82.38	330	⇑eP	P	12 49 55.3	+0.4
NKY	Niksic	82.40	322	⇑iP	P	12 49 54.6	-0.6
BAIF	Baives	82.43	334	⇑iP	P	12 49 54.8	-0.3
	comp=Z,173nm,1.3s,mb5.5						
BAIF	Baives	82.43	334	⇑iP	P	12 49 54.8	-0.3
BAIF				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.5						
STR	Strasbourg	82.45	332	eP	P	12 49 55.7	+0.4
BFO	Black Forest	82.46	331	eP	P	12 49 55.2	-0.1
BFO				pmax	pmax		
	comp=Z,159nm,1.2s,mb5.8						
BFO	Black Forest	82.46	331	eP	P	12 49 55.2	-0.1
	comp=Z,159nm,1.2s,mb5.8						
TRI	Trieste	82.46	326	eP	P	12 49 54.6	-0.8
SPAK	Spaichingen	82.48	331	eP	P	12 49 55.7	+0.3
SPAK	Spaichingen	82.48	331	⇑eP	P	12 49 55.9	+0.5
SSP1	Stoney Pound	82.52	340	⇑eP	P	12 49 55.6	0.0
BRY	Bratogost	82.55	322	⇑iP	P	12 49 55.7	-0.3
TTG	Podgorica	82.57	321	⇑iP	P	12 49 56.0	0.0
DLF	Lyons Farm	82.58	342	eP	P	12 49 56.5	+0.6
DLF	Lyons Farm	82.58	342	eP	pP	12 50 14.1	+0.4
DSB	Dublin	82.59	342	eP	P	12 49 56.1	+0.2
	comp=Z,202nm,1.6s,mb5.9						
CBKS	Cedar Bluff	82.62	44	⇑iP	P	12 49 55.3	-1.1
CBKS				e*PP	pP	12 50 15.0	+0.8
CBKS				pmax	pmax		
	comp=Z,170nm,1.3s,mb5.9						
CBKS	Cedar Bluff	82.62	44	⇑iP	P	12 49 55.2	-1.1
	comp=Z,170nm,1.3s,mb5.9						
CBKS				epP	pP	12 50 15.0	+0.8
DCN	Croghan	82.71	342	eP	P	12 49 57.3	+0.8
DCN	Croghan	82.71	342	eP	pP	12 50 14.8	+0.4
HAE	Alders End	82.72	339	⇑eP	P	12 49 56.5	-0.1
HAE				AMb	AMB	12 50 03.8	
	comp=Z,214nm,1.4s,mb6.0						
AOS	Alonnisos	82.72	316	eP	P	12 49 56.2	-0.6
DAVA	Damuels	82.74	330	⇑iP	P	12 49 57.1	+0.3
	comp=Z,339nm,1.5s,mb6.2						
WLS	Welschbruch	82.74	332	eP	P	12 49 57.0	+0.2
LIT	Litokhoron	82.75	318	eP	P	12 49 52.3	-4.6
CDF	Champ du Feu	82.77	332	⇑iP	P	12 49 56.9	0.0
	comp=Z,259nm,1.2s,mb5.8						
CDF	Champ du Feu	82.77	332	⇑iP	P	12 49 56.9	0.0
CDF				pmax	pmax		
	comp=Z,129nm,1.2s,mb5.8						
FNA	Florina	82.79	319	eP	P	12 49 56.6	-0.6
STEIN	Stein am Rhein	82.81	330	⇑iP	P	12 49 57.2	+0.1
OHR	Ohrid	82.83	320	⇑iP	P	12 49 57.2	-0.2
BUM	Brajici-Budva	82.84	321	⇑iP	P	12 49 57.4	-0.1
SLE	Schleitheim	82.87	331	⇑iP	P	12 49 56.8	-0.6
LIBD	Limburg	82.87	331	eP	P	12 49 57.7	+0.3
LIBD	Limburg	82.87	331	⇑eP	P	12 49 58.0	+0.6
MCH1	Michaelchurch	82.87	339	P	P	12 49 57.8	+0.4
MCH1	Michaelchurch	82.87	339	eP	P	12 49 57.7	+0.4
MCH1				⇑eP		12 49 57.8	
LIENZ	Alp Oberkamor	82.88	330	⇑iP	P	12 49 57.1	-0.4
WEIN	Weingarten	82.88	330	⇑iP	P	12 49 56.8	-0.7
TRULL	Truellikon	82.89	331	⇑iP	P	12 49 57.2	-0.4
HCY	Herceg Novi	82.92	322	⇑iP	P	12 49 57.2	-0.6
KIZ	Kirchzarten	82.92	331	⇑eP	P	12 49 57.8	+0.1
XOR	Xorichti	82.93	317	eP	P	12 49 57.9	0.0
ULC	Ulcinj	82.94	321	⇑iP	P	12 49 58.0	+0.1
FELD	Feldberg	82.96	331	⇑eP	P	12 49 58.2	+0.3
QSH	Qafa e Shtames	82.96	320	i p	P	12 49 58.4	+0.4
STON	Ston	82.96	322	i P	P	12 49 57.1	-0.9
ECH	Echery	82.98	332	eP	P	12 49 57.7	-0.3
WILA	Wila	83.00	330	⇑iP	P	12 49 57.7	-0.4
EIL	Elat	83.01	303	P	P	12 49 59.0	+0.5
	comp=Z,123nm,1.1s,mb5.8,baz=34,slow=4.4,SNR=90						
EIL	Elat	83.01	303	⇑iP	P	12 49 58.5	0.0
	comp=Z,236nm,1.3s,mb6.1						
PLONS	Plons	83.13	330	⇑eP	P	12 49 58.4	-0.4
FUORN	Ofenpass	83.14	329	⇑iP	P	12 49 59.5	+0.7
HGH	Gray Hill	83.14	339	⇑eP	P	12 49 58.5	-0.2
HGH				AMb	AMB	12 50 00.4	
	comp=Z,163nm,1.0s,mb6.0						
DAVOX	Davos	83.16	329	P	P	12 49 59.7	+0.8
	comp=Z,62nm,1.1s,mb5.6,baz=18,slow=3.5,SNR=46						
DAVOX	Davos	83.16	329	⇑iP	P	12 49 59.2	+0.3
DAVOX	Davos	83.16	329	⇑iP	P	12 49 59.3	+0.4
ZUR	Zurich	83.17	330	⇑iP	P	12 49 58.7	-0.2
SULZ	Sulz-Cheisache	83.21	331	⇑iP	P	12 49 59.1	-0.1
BRMO	Bormio	83.22	329	eP	P	12 49 59.5	+0.3
MOF	Molkenrain	83.30	331	eP	P	12 49 59.6	0.0
APE	Apeiranthos	83.38	314	⇓eP	P	12 49 59.5	-0.8
THEF	They Montfort	83.39	332	eP	P	12 50 00.1	+0.1
BERNI	Berninapass	83.41	329	⇑iP	P	12 50 00.9	+0.7
HINF	Hinteralfeld	83.43	332	⇑iP	P	12 49 59.8	-0.5
LLS	Linth-Limmern	83.44	330	⇑eP	P	12 50 00.4	+0.1
LLS	Linth-Limmern	83.44	330	⇑eP	P	12 50 00.3	0.0
HAU	Haudompre	83.45	332	⇑iP	P	12 50 00.0	-0.4
	comp=Z,93nm,1.0s,mb5.5						
HAU				epP	pP	12 50 18.3	+0.1
HAU	Haudompre	83.45	332	⇑iP	P	12 50 00.0	-0.4
HAU				e*PP	pP	12 50 18.3	+0.1
HAU				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.5						
MEZF	Maizieres J'vi	83.48	333	⇑iP	P	12 50 00.7	+0.2
	comp=Z,356nm,1.2s,mb6.0						
MUO	Muotathal	83.48	330	⇑iP	P	12 50 00.6	+0.1
BBS	Basel-Blauen	83.48	331	eP	P	12 50 00.6	0.0
BBS	Basel-Blauen	83.48	331	⇑eP	P	12 50 00.7	+0.1
BALST	Balsthal	83.52	331	⇑iP	P	12 50 00.5	-0.2
VDL	Val di Lei	83.56	329	⇑iP	P	12 50 01.2	+0.3
AGG	Agios Georgios	83.63	317	eP	P	12 50 01.0	-0.5
BNALP	Bannalp	83.64	330	⇑iP	P	12 50 01.5	+0.2
BOURR	Bourrignon	83.64	331	⇑iP	P	12 50 01.3	0.0
LOMF	Lomont	83.83	331	eP	P	12 50 02.6	+0.4
HASLI	Hasliberg	83.84	330	⇑iP	P	12 50 01.5	-0.8
SAL	Salo	83.87	328	eP	P	12 50 02.4	-0.1
FUSIO	Fusio	83.90	330	⇑iP	P	12 50 02.9	+0.3
HEX	Exmoor	83.93	339	⇑eP	P	12 50 02.7	+0.1
KSU1	Kansas State U	84.04	42	⇑iP	P	12 50 02.8	-0.7
WIMIS	Wimmis	84.11	331	⇑iP	P	12 50 03.6	-0.1
JFWS	Jewell Farm	84.13	36	eP	P	12 50 02.9	-0.9
JFWS				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.4						
JFWS	Jewell Farm	84.13	36	eP	P	12 50 02.9	-1.0
	comp=Z,25nm,0.8s,mb5.4						
MUGIO	Muggio	84.19	329	⇑iP	P	12 50 03.4	-0.7
TORNY	Torny	84.27	331	⇑eP	P	12 50 04.0	-0.4
BRANT	Les Verrieres	84.31	331	⇑eP	P	12 50 04.3	-0.3
LKBD	Leukerbad	84.34	330	⇑iP	P	12 50 04.9	+0.1
VAI	Varese	84.35	329	eP	P	12 50 04.4	-0.5
AMTX	Amarillo	84.43	48	eP	P	12 50 05.7	+0.2
	comp=Z,113nm,1.1s,mb5.9						
RSM	Repubblica di	84.45	326	eP	P	12 50 06.2	+0.8
SENIN	Lac Senin	84.49	331	⇑iP	P	12 50 05.8	+0.2

Code	Station	Δ	AZ	Op	ISC	Time	Res
MMK	Mattmark	84.50	330	⇑*i*P	P	12 50 05.9	+0.3
FSSB	Fossombrone	84.50	326	*e*P	P	12 50 05.3	-0.4
MNTX	Cornudas Mount	84.55	52	*e*P	P	12 50 06.5	+0.3
	comp=Z,85nm,1.3s,mb5.7						
MCGN	Macugnaga	84.57	330	*e*P	P	12 50 06.1	+0.1
AIGLE	Aigle	84.64	331	⇑*e*P	P	12 50 05.7	-0.6
AIGLE	Aigle	84.64	331	⇑*e*P	P	12 50 05.8	-0.5
GRYON	Gryon	84.65	331	⇑*i*P	P	12 50 06.5	+0.1
DIX	Grande Dixence	84.69	330	⇑*i*P	P	12 50 07.2	+0.7
ZCCA	Zocca	84.72	327	*e*P	P	12 50 08.2	+1.4
SFI	Santa Sofia	84.72	327	*e*P	P	12 50 07.3	+0.5
CABF	La Chapelle	84.72	331	⇑*i*P	P	12 50 06.8	+0.1
	comp=Z,425nm,1.6s,mb6.0						
CABF	La Chapelle	84.72	331	⇑*i*P	P	12 50 06.8	+0.1
CABF				pmax	pmax		
	comp=Z,213nm,1.6s,mb6.0						
SNTG	Esanatoglia	84.79	326	*e*P	P	12 50 06.8	-0.3
SALAN	Lac Salanfe	84.80	331	⇑*i*P	P	12 50 07.2	+0.1
PGD	Poggio Sodo	84.80	327	*e*P	P	12 50 08.5	+1.3
VMG	Vicchio	84.80	327	*e*P	P	12 50 08.8	+1.6
SEI	Scarperia	84.81	327	*e*P	P	12 50 09.0	+1.8
ORX	Oropa	84.84	330	P	P	12 50 06.7	-0.7
ORO	Oropa	84.85	330	*e*P	P	12 50 06.7	-0.7
RGNG	Rignano Grg	84.88	323	*e*P	P	12 50 07.3	-0.3
GSCL	Gusciola	84.88	328	*e*P	P	12 50 08.6	+1.1
EMV	Vieux Emosson	84.89	331	⇑*i*P	P	12 50 07.7	+0.1
ERBM	Eremo	84.89	328	*e*P	P	12 50 08.6	+1.0
CRE	Caprese Michel	84.91	326	*e*P	P	12 50 08.2	+0.5
GRAM		84.97	328	P	P	12 50 08.4	+0.3
MWZ	Matawai	84.99	153	pP	pP	12 50 25.7	-0.5
MWZ	Matawai	84.99	153	pP	pP	12 50 25.7	-0.5
BOB	Bobbio (Coli)	85.00	328	*e*P	P	12 50 08.6	+0.5
VALM		85.02	328	P	P	12 50 09.0	+0.7
TRAV		85.03	330	P	P	12 50 07.6	-0.7
IDI	Anoyia	85.04	313	P	P	12 50 08.2	-0.4
	comp=Z,165nm,1.0s,mb6.1,baz=25,slow=7.3,SNR=28						
FLN	La Foliniere	85.05	336	⇑*i*P	P	12 50 08.3	0.0
	comp=Z,278nm,1.3s,mb5.9						
FLN	La Foliniere	85.05	336	⇑*i*P	P	12 50 08.3	0.0
FLN				pmax	pmax		
	comp=Z,139nm,1.3s,mb5.9						
NRCA	Norcia	85.05	325	*e*P	P	12 50 09.0	+0.5
LDF	La Druitiere	85.09	336	⇑*i*P	P	12 50 08.4	-0.1
	comp=Z,385nm,1.6s,mb6.0						
LDF				*e*pP	pP	12 50 27.2	+0.8
LDF	La Druitiere	85.09	336	⇑*i*P	P	12 50 08.4	-0.1
LDF				*e**PP	pP	12 50 27.2	+0.8
LDF				pmax	pmax		
	comp=Z,193nm,1.6s,mb6.0						
JLP	Les Platons	85.10	338	⇑*e*P	P	12 50 08.7	+0.2
BDI	Bagni Di Lucca	85.11	327	*e*P	P	12 50 08.5	-0.2
JQE	Queens East	85.12	337	⇑*e*P	P	12 50 08.9	+0.3
JVM	Valle D.L. Mar	85.15	338	⇑*e*P	P	12 50 08.3	-0.5
VINC	Vinca	85.23	328	P	P	12 50 08.5	-0.8
SSF	Saint Saulge	85.25	333	⇑*i*P	P	12 50 09.5	+0.2
	comp=Z,219nm,1.1s,mb5.9						
SSF				*e*pP	pP	12 50 27.7	+0.4
SSF	Saint Saulge	85.25	333	⇑*i*P	P	12 50 09.5	+0.2
SSF				*e**PP	pP	12 50 27.7	+0.4
SSF				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.9						
LSD	Ceresole Reale	85.31	330	P	P	12 50 10.9	+1.3
RSL	Roselend	85.31	331	*e*P	P	12 50 09.9	+0.2
AQU	L'Aquila	85.31	325	*e*P	P	12 50 10.9	+1.1
FG5	Orsara di Pugl	85.33	323	*e*P	P	12 50 10.7	+0.8
FG4	Candela	85.34	323	*e*P	P	12 50 10.1	+0.2
HYF	Humbligny	85.36	334	⇑*i*P	P	12 50 10.4	+0.5
LPL	La Plagne	85.42	330	⇑*i*P	P	12 50 10.8	+0.6
	comp=Z,330nm,1.1s,mb6.1						
LPL	La Plagne	85.42	330	⇑*i*P	P	12 50 10.8	+0.6
LPL				pmax	pmax		
	comp=Z,165nm,1.1s,mb6.1						
PII	Pisa	85.42	327	*e*P	P	12 50 09.6	-0.7
LPG	La Plagne	85.42	330	⇑*i*P	P	12 50 11.0	+0.8
	comp=Z,407nm,1.1s,mb6.2						
LPG				*e*pP	pP	12 50 29.3	+1.1
LPG	La Plagne	85.42	330	⇑*i*P	P	12 50 11.0	+0.8
LPG				*e**PP	pP	12 50 29.3	+1.1
LPG				pmax	pmax		
	comp=Z,203nm,1.1s,mb6.2						
OG05	Jujurieux	85.44	332	*e*P	P	12 50 10.8	+0.5
GENL	Genova Univers	85.48	329	P	P	12 50 11.4	+0.8
SMF	Signal de Mont	85.49	333	⇑*i*P	P	12 50 10.8	+0.3
	comp=Z,639nm,1.2s,mb6.3						
SMF				*e*pP	pP	12 50 29.1	+0.6
SMF	Signal de Mont	85.49	333	⇑*i*P	P	12 50 10.8	+0.3
SMF				*e**PP	pP	12 50 29.1	+0.6
SMF				pmax	pmax		
	comp=Z,320nm,1.2s,mb6.3						
GRR	Gorron	85.50	336	⇑*i*P	P	12 50 10.8	+0.3
	comp=Z,408nm,1.2s,mb6.1						
GRR	Gorron	85.50	336	⇑*i*P	P	12 50 10.8	+0.3
GRR				pmax	pmax		
	comp=Z,204nm,1.2s,mb6.1						
RSP	Reno Superiore	85.53	330	P	P	12 50 09.7	-1.0
AVF	Avril sur Loir	85.54	333	⇑*i*P	P	12 50 11.0	+0.3
	comp=Z,701nm,1.1s,mb6.5						
AVF	Avril sur Loir	85.54	333	⇑*i*P	P	12 50 11.0	+0.3
AVF				pmax	pmax		
	comp=Z,350nm,1.1s,mb6.5						
PCP	Pian Castagno	85.54	329	P	P	12 50 09.9	-0.9
PTQR	Pietraquaria	85.58	324	*e*P	P	12 50 11.3	+0.2
MNS	Montasola	85.60	325	*e*P	P	12 50 10.7	-0.5
MRLC	Muro Lucano	85.65	322	*e*P	P	12 50 11.0	-0.4
SDI	San Donato	85.65	324	*e*P	P	12 50 11.5	+0.1
FENE	Fenestrelle	85.70	330	P	P	12 50 10.8	-0.8
ORI	Oriolo Calabro	85.74	321	*e*P	P	12 50 12.7	+0.8
BHB	Bricherasio	85.78	330	P	P	12 50 10.8	-1.2
GVD	Gavdhos	85.81	313	*e*P	P	12 50 13.0	+0.6
	comp=Z,158nm,0.9s,mb6.2						
BNI	Bardonecchia	85.83	330	*e*P	P	12 50 13.0	+0.8
BNI				pmax	pmax		
	comp=Z,83nm,1.0s,mb5.9						
BNI	Bardonecchia	85.83	330	*e*P	P	12 50 13.0	+0.8
	comp=Z,83nm,1.0s,mb5.9						
SGO	Sicignano	85.89	322	*e*P	P	12 50 12.5	-0.1
RFI	Roccamonfina	85.90	324	*e*P	P	12 50 14.0	+1.4
RRL	Cesana Torines	85.90	330	P	P	12 50 13.4	+0.8
GDM	Grand'Maison	85.91	331	*e*P	P	12 50 13.2	+0.6
BGF	Bois d'Agland	85.91	333	⇑*i*P	P	12 50 12.9	+0.3
	comp=Z,410nm,1.5s,mb6.1						
BGF	Bois d'Agland	85.91	333	⇑*i*P	P	12 50 12.9	+0.3
BGF				pmax	pmax		
	comp=Z,205nm,1.5s,mb6.1						
OG22	Abries	85.92	330	*e*P	P	12 50 13.0	+0.3
FIN	Finale Ligure	85.95	329	*e*P	P	12 50 12.3	-0.5
ROB	Roburent	86.01	329	P	P	12 50 12.2	-0.9
GRN	Grenoble	86.02	331	*e*P	P	12 50 13.9	+0.8
MBDF	Montbardon	86.07	330	⇑*i*P	P	12 50 13.3	-0.1
	comp=Z,96nm,0.9s,mb5.7						
MBDF	Montbardon	86.07	330	⇑*i*P	P	12 50 13.3	-0.1
MBDF				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.7						
BDHA	Al Bayda'	86.10	285	*e*P	P	12 50 15.4	+1.2
SGMF	Saint Gilles	86.12	337	⇑*i*P	P	12 50 14.1	+0.5
	comp=Z,500nm,1.2s,mb6.3						
PZZ	Prazzo	86.13	330	P	P	12 50 12.9	-0.8
WMOK	Wichita Mounta	86.15	46	*e*P	P	12 50 13.8	-0.3
WMOK				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.8						
WMOK	Wichita Mounta	86.15	46	*e*P	P	12 50 13.8	-0.2
	comp=Z,71nm,1.1s,mb5.8						
PLDF	La Plantade	86.15	333	*e*P	P	12 50 14.4	+0.6
MONE	Monesi	86.24	329	P	P	12 50 12.6	-1.6
ORIF	Oris-en-Rattie	86.24	331	⇑*i*P	P	12 50 14.7	+0.5
	comp=Z,184nm,1.1s,mb5.9						
ENR	Entracque	86.24	329	P	P	12 50 12.8	-1.5
AGO	Saint Agoulin	86.25	333	*e*P	P	12 50 15.2	+0.9
ROSF	Rostrenen	86.25	338	⇑*i*P	P	12 50 14.9	+0.7
	comp=Z,762nm,1.2s,mb6.5						
SURF	Saint Ours	86.26	330	*e*P	P	12 50 14.9	+0.6
STV2	Anna di Valdie	86.26	329	P	P	12 50 11.2	-3.1
STV	Sta Anna Valdi	86.27	329	P	P	12 50 12.6	-1.8
NNZ	Nelson	86.28	157	pP	pP	12 50 33.8	+1.3
NNZ	Nelson	86.28	157	pP	pP	12 50 33.8	+1.3
TIP	Timpagrande	86.29	321	*e*P	P	12 50 14.7	0.0
IMI	Imperia	86.33	329	P	P	12 50 14.0	-0.7
TCF	Toulx Ste Croi	86.36	334	⇑*i*P	P	12 50 15.3	+0.5
	comp=Z,417nm,1.3s,mb6.2						
SAOF	Saorge	86.39	329	*e*P	P	12 50 14.5	-0.5
LBOS		86.40	285	⇑*e*P	P	12 50 16.0	+0.3
AUTN	L'Aution	86.43	329	*e*P	P	12 50 15.0	-0.2
TOUF	Mont Tournerai	86.49	329	*e*P	P	12 50 15.3	-0.2
COLF	Collangettes	86.52	332	*e*P	P	12 50 16.5	+0.9
SBF	Sospel	86.54	329	⇑*i*P	P	12 50 15.1	-0.6
	comp=Z,322nm,1.5s,mb6.0						
PYM	Petit Puy Mans	86.56	333	*e*P	P	12 50 16.6	+0.8
QUIF	Quistinic	86.60	338	⇑*i*P	P	12 50 16.3	+0.4
	comp=Z,238nm,1.1s,mb6.0						
MVIF	Mont Vial	86.62	329	*e*P	P	12 50 15.6	-0.5
THZ	Tophouse	86.64	158	*e*PN	P	12 50 13.5	-2.8
THZ				pP	pP	12 50 34.9	+0.6
THZ	Tophouse	86.64	158	*e*PN	P	12 50 13.5	-2.8
THZ				pP	pP	12 50 34.9	+0.6
REVF	Revere	86.67	329	*e*P	P	12 50 16.0	-0.4
VIVF	Saint-Julien-l	86.74	331	⇑*i*P	P	12 50 17.1	+0.4
	comp=Z,362nm,1.2s,mb6.2						
VIVF				*e*pP	pP	12 50 35.6	+0.9
OCF	Saint Nazaire	86.75	331	*e*P	P	12 50 17.4	+0.7
OG26	St.-Nazaire-De	86.75	331	*e*P	P	12 50 17.4	+0.7
MFF	Saint Martin d	86.86	335	⇑*i*P	P	12 50 17.9	+0.7
	comp=Z,520nm,1.2s,mb6.3						
MFF				*e*pP	pP	12 50 33.9	-1.3
LBL	Lubilhac	86.92	332	*e*P	P	12 50 18.7	+1.1
LCHF	La Chataignera	86.99	336	*e*P	P	12 50 19.5	+1.6
FRNF	Fournols	87.03	333	*e*P	P	12 50 18.8	+0.7
FRF	La Foret Royal	87.10	329	⇑*i*P	P	12 50 18.1	-0.4
	comp=Z,252nm,1.6s,mb5.9						
SMRF	Simiane la Rot	87.16	330	*e*P	P	12 50 19.1	+0.3
	comp=Z,190nm,1.4s,mb5.8						
VILF	Villemus	87.21	330	*e*P	P	12 50 19.6	+0.6
LTX	Lajitas	87.27	53	*e*P	P	12 50 20.4	+0.7
	comp=Z,116nm,1.4s,mb5.9						
TXAR	Lajitas Array	87.27	53	P	P	12 50 20.3	+0.7
	comp=Z,27nm,0.9s,mb5.5,baz=292,slow=3.2,SNR=174						
TXAR				pP	pP	12 50 39.8	+2.1
	comp=Z,27nm,1.1s,baz=288,slow=4.0,SNR=5.8						
TXAR				PKKPbc		13 08 10.9	
	comp=Z,1.2nm,0.7s,baz=161,slow=6.4,SNR=11						
TAVF	Tavernes	87.28	330	*e*P	P	12 50 19.6	+0.2
LMR	La Mourre	87.35	329	⇑*i*P	P	12 50 19.4	-0.3
	comp=Z,289nm,1.5s,mb6.0						
LMR				*e*pP	pP	12 50 37.9	+0.2
AAM	Ann Arbor	87.44	32	*e*P	P	12 50 20.6	+0.4
	comp=Z,64nm,1.0s,mb5.8						
PRAF	Pradon	87.46	331	*e*P	P	12 50 21.0	+0.8
RJF	Les Rejaudoux	87.46	334	⇑*i*P	P	12 50 20.9	+0.7
	comp=Z,445nm,1.3s,mb6.2						
PUYF	Puyloubier	87.49	330	*e*P	P	12 50 19.4	-1.0
CCM	Cathedral Cave	87.51	40	*e*P	P	12 50 20.5	-0.1
	comp=Z,149nm,1.3s,mb6.1						
TREF	Trevaresse	87.53	330	*e*P	P	12 50 21.3	+0.7
SLM	Saint Louis	87.53	39	*e*P	P	12 50 20.4	-0.3
	comp=Z,43nm,0.7s,mb5.8						
CAF	Calviac	87.60	333	⇑*i*P	P	12 50 22.0	+1.1
	comp=Z,565nm,1.3s,mb6.3						
LASF	Ste Croix	87.71	331	⇑*i*P	P	12 50 22.0	+0.6
	comp=Z,179nm,1.3s,mb5.8						
GELF	Grande-Etoile	87.72	330	*e*P	P	12 50 22.0	+0.5
FVM	French Village	87.96	39	*e*P	P	12 50 22.7	-0.1
	comp=Z,152nm,1.5s,mb6.0						
LFF	La Frestale	88.04	334	⇑*i*P	P	12 50 23.9	+0.9
	comp=Z,579nm,1.3s,mb6.4						
MSNY	Massena	88.34	25	*e*P	P	12 50 24.1	-0.3
JCT	Junction City	88.73	50	*e*P	P	12 50 26.4	-0.2
	comp=Z,118nm,1.1s,mb6.1						
BLO	Bloomington	88.81	36	*e*P	P	12 50 26.8	+0.1
	comp=Z,150nm,1.6s,mb6.1						
MTLF	Montolieu	88.93	332	⇑*i*P	P	12 50 27.8	+0.6
	comp=Z,74nm,1.1s,mb5.7						
ERPA	Erie	89.04	30	*e*P	P	12 50 28.2	+0.4
	comp=Z,97nm,0.8s,mb6.2						
ODZ	Otahua Downs	89.07	160	pP	pP	12 50 44.6	-1.3
ODZ	Otahua Downs	89.07	160	pP	pP	12 50 44.6	-1.3
MIAR	Mount Ida	89.08	43	*e*P	P	12 50 28.5	+0.3
	comp=Z,114nm,1.1s,mb6.1						
USIN	University of	89.27	37	*e*P	P	12 50 28.8	-0.1
	comp=Z,95nm,1.4s,mb5.9						
GENY	Geneseo	89.28	28	*e*P	P	12 50 28.7	-0.2
ALLY	Alegheny Colle	89.38	30	*e*P	P	12 50 29.9	+0.5
VSL	Villasalto	89.40	326	P	P	12 50 29.2	-0.3
	comp=Z,32nm,1.1s,mb5.6						
ACSO	Alum Creek Sta	89.45	33	*e*P	P	12 50 20.8	-9.0
	comp=Z,82nm,0.9s,mb6.1						
ACSO				*e*pP	pP	12 50 49.6	+1.7
NCB	Newcomb	89.46	26	*e*P	P	12 50 29.8	0.0
	comp=Z,141nm,1.6s,mb6.0						
NCB				*e*pP	pP	12 50 49.5	+1.7
UALR	University of	89.54	42	*e*P	P	12 50 30.8	+0.5
	comp=Z,167nm,1.7s,mb6.1						
MIV	Mineville/With	89.59	25	*e*P	P	12 50 30.1	-0.2
MLS	Moulis	89.67	333	*e*P	P	12 50 31.4	+0.7
WCI	Wyandotte Cave	89.68	36	*e*P	P	12 50 30.8	-0.1
	comp=Z,43nm,1.0s,mb5.7						
GNAR	Gosnell	89.76	40	*e*P	P	12 50 31.8	+0.5
HBAR	Harrisburg	89.78	41	*e*P	P	12 50 32.0	+0.6
EPF	Esparros	89.86	333	⇑*i*P	P	12 50 31.8	+0.2
	comp=Z,71nm,1.1s,mb5.6						
GLAT	Glass	89.88	39	*e*P	P	12 50 32.8	+1.0
RESF	Ens	90.06	333	*e*P	P	12 50 33.9	+1.4
VIEF	Viey	90.10	333	*e*P	P	12 50 33.9	+1.2
ACCN	Adirondack Com	90.17	25	*e*P	P	12 50 33.2	+0.2
ACCN				*e*pP	pP	12 50 50.0	-1.2
EBIE	Bielsa	90.23	333	P	P	12 50 35.0	+1.6
	comp=Z,148nm,1.4s,mb6.1						
ETSF	Etsaut	90.28	334	⇑*i*P	P	12 50 34.5	+0.9
	comp=Z,66nm,1.0s,mb5.6						
EALK	Alkurruntz	90.31	334	P	P	12 50 34.2	+0.5
	comp=Z,220nm,1.5s,mb6.3						
SJPF	Ste Jean	90.31	334	⇑*i*P	P	12 50 35.9	+2.2
	comp=Z,123nm,1.2s,mb5.8						
HNH	Hanover	90.32	24	*e*P	P	12 50 33.9	+0.2
	comp=Z,5.2nm,1.1s,mb4.8						
EMIR	Miracle	90.43	332	P	P	12 50 34.7	+0.4
	comp=Z,98nm,1.2s,mb6.0						
BINY	Binghamton	90.43	27	*e*P	P	12 50 34.1	-0.2
	comp=Z,35nm,0.8s,mb5.7						
NATX	Nacogdoches	90.66	46	*e*P	P	12 50 35.5	-0.1
	comp=Z,35nm,1.0s,mb5.6						
WVT	Waverly	90.68	38	*e*P	P	12 50 35.8	+0.2
	comp=Z,106nm,1.6s,mb5.9						
WVT				*e*pP	pP	12 50 53.7	-0.1
FFD	Franklin Falls	90.73	24	*e*P	P	12 50 36.8	+1.1
	comp=Z,88nm,1.1s,mb6.0						
ELAN	Lanestosa	90.92	336	P	P	12 50 36.9	+0.4
	comp=Z,204nm,1.2s,mb6.3						
EPOB	Poblet	91.08	332	P	P	12 50 36.5	-0.9
	comp=Z,138nm,1.4s,mb6.1						
OXF	Oxford	91.22	40	*e*P	P	12 50 38.4	+0.2
	comp=Z,192nm,1.3s,mb6.3						
ESAC	San Caprasio	91.30	333	P	P	12 50 39.5	+1.1
	comp=Z,392nm,2.4s,mb6.3						
HKT	Hockley	91.39	48	*e*P	P	12 50 39.2	+0.1
	comp=Z,50nm,1.5s,mb5.6						
EARI	Arriondas	91.39	337	P	P	12 50 39.5	+0.7
	comp=Z,454nm,2.3s,mb6.4						
HRV	Harvard--Oak R	91.63	24	*e*P	P	12 50 40.9	+1.0
	comp=Z,199nm,1.8s,mb6.1						
HRV				*e*pP	pP	12 50 58.0	-0.1
ERTA	Horta de San J	91.70	332	P	P	12 50 40.6	+0.3
	comp=Z,67nm,1.0s,mb5.9						
EBR	Ebro Roquetas	91.76	332	*e*PCP	PcP	12 50 41.3	-0.2
WES	Weston	91.82	24	*e*P	P	12 50 41.4	+0.7
	comp=Z,107nm,1.1s,mb6.1						
WES				*e*pP	pP	12 51 01.2	+2.3
EPON	Pontenova	91.93	338	P	P	12 50 40.6	-0.7
	comp=Z,306nm,1.7s,mb6.4						
PAL	Palisades	92.21	27	*e*P	P	12 50 42.7	+0.2
	comp=Z,117nm,1.8s,mb5.9						
TZTN	Tazewell	92.30	35	*e*P	P	12 50 43.1	+0.1
EMOS	Mosqueruela	92.50	333	P	P	12 50 43.9	0.0
	comp=Z,63nm,1.2s,mb5.9						
FWV	Forest Hill	92.59	33	*e*P	P	12 50 44.5	+0.1
FWV				*e*pP	pP	12 51 04.3	+1.7
EINC	Incio	92.61	338	P	P	12 50 44.2	-0.2
	comp=Z,147nm,1.4s,mb6.2						
CPCT	Cooper Cave	92.77	37	*e*P	P	12 50 44.9	-0.4
ERUA	La Rua	92.79	338	P	P	12 50 45.0	-0.3
	comp=Z,26nm,1.0s,mb5.6						
ELN	Prospectdale	92.92	33	*e*P	P	12 50 45.8	-0.2
PBRG	Braganca	93.22	337	*e*P	P	12 50 47.1	-0.1
	comp=Z,28nm,1.1s,mb5.6						
PBRG				*e*pP	pP	12 51 06.5	+1.1
LRAL	Lakeview Retre	93.59	40	*e*P	P	12 50 48.1	-1.0
	comp=Z,34nm,1.4s,mb5.6						
PVRL	Vila Real	93.99	338	*e*P	P	12 50 51.0	+0.4
	comp=Z,17nm,0.9s,mb5.5						
PVRL				*e*pP	pP	12 51 10.0	+1.1
ESDC	Sonseca Array	94.31	335	P	P	12 50 52.4	+0.3
	comp=Z,5.0nm,0.6s,mb5.1,baz=19,slow=4.4,SNR=27						
ESDC				pP	pP	12 51 10.6	+0.2
	comp=Z,3.5nm,0.5s,baz=16,slow=4.3,SNR=6.1						
ESDC	Sonseca Array	94.31	335	P	P	12 50 52.5	+0.4
	comp=Z,5.7nm,0.6s,mb5.2						
ESLA	Sonseca Array	94.31	335	*e*P	P	12 50 52.3	+0.2
	comp=Z,1.1nm,0.6s						
ETOB	Tobarra	94.41	332	P	P	12 50 54.0	+1.4
PVIS	Viseu	94.56	338	*e*P	P	12 50 53.4	+0.1
	comp=Z,24nm,1.1s,mb5.5						
PVIS				*e*pP	pP	12 51 12.0	+0.5
MTE	Manteigas	94.75	337	*e*P	P	12 50 54.5	+0.4
	comp=Z,45nm,1.4s,mb5.7						
MTE				*e*pP	pP	12 51 13.4	+1.0
EVIA	Vianos	94.75	333	P	P	12 50 54.8	+0.6
	comp=Z,55nm,1.0s,mb5.9						
EHUE	Huescar	95.52	333	P	P	12 50 58.4	+0.7
EBAN	Banos Encina	95.61	334	P	P	12 50 58.7	+0.5
	comp=Z,9.7nm,0.6s,mb5.4						
EQES	Quesada	95.70	333	P	P	12 50 58.6	+0.1
EADA	Adamuz	95.87	334	P	P	12 50 58.5	-0.8
ELUQ	Luque	96.32	334	P	P	12 51 01.7	+0.4
	comp=Z,21nm,0.9s,mb5.6						
ECOG	Cogollos-Vega	96.34	333	P	P	12 51 01.1	-0.4
ERON	Agron	96.65	333	P	P	12 51 02.4	-0.5
ELOJ	Sierra Loja	96.66	334	P	P	12 51 02.9	0.0
	comp=Z,15nm,0.8s,mb5.5						
EMIN	Mina Concepcio	96.91	336	P	P	12 51 03.9	-0.1
PBEJ	Beja	97.03	337	*e*P	P	12 51 04.5	-0.1
	comp=Z,23nm,1.5s,mb5.4						
PALC	Alcoutim	97.43	336	*e*P	P	12 51 05.3	-1.2
	comp=Z,38nm,1.6s,mb5.6						
EJIF	Jimena Fronter	97.73	334	P	P	12 51 07.5	-0.3
PTEO	Sao Teotonio	97.73	337	*e*P	P	12 51 07.3	-0.5
	comp=Z,45nm,1.4s,mb5.8						
KMBO	Kilima Mbogo	102.20	279	P	Pdif	12 51 29.2	+0.7
	comp=Z,10nm,1.1s,baz=39,slow=9.3,SNR=15						
KMBO	Kilima Mbogo	102.20	279	*e*P	Pdif	12 51 28.7	+0.2
	comp=Z,17nm,1.2s						
LSZ	Lusaka	118.11	274	*e*P	PKPdf	12 56 20.2	+1.3
VNDA	Vanda	118.59	175	PKP	PKPdf	12 56 18.4	-0.2
	comp=Z,7.0nm,0.9s,baz=303,slow=5.2,SNR=13						
VNDA				PKKPbc		13 06 37.4	
	comp=Z,1.8nm,0.9s,baz=157,slow=4.7,SNR=4.2						
VNDA	Vanda	118.59	175	*e*PKPdf	PKPdf	12 56 18.9	+0.4
MATP	Matopo	120.96	269	PKP	PKPdf	12 56 25.4	+1.0
	comp=Z,17nm,0.5s,baz=35,slow=0.8,SNR=78						
MATP				PKKPab		13 06 30.2	
	comp=Z,2.6nm,0.7s,baz=177,slow=2.9,SNR=5.9						
MATP	Matopo	120.96	269	PKP	PKPdf	12 56 25.4	+1.0
MATP				PKKPab		13 06 30.2	
SDV	Santo Domingo	121.99	39	*e*P	PKPdf	12 56 26.5	0.0
ROSC	El Rosal	123.52	46	PKP	PKPdf	12 56 31.1	+1.6
	comp=Z,14nm,0.5s,baz=87,slow=19,SNR=15						
DBIC	Dimbokro	124.06	320	PKP	PKPdf	12 56 31.0	+0.5
	comp=Z,18nm,0.7s,baz=12,slow=2.3,SNR=39						
DBIC				pPKP		12 56 50.0	
	comp=Z,21nm,0.7s,baz=29,slow=2.9,SNR=9.1						
DBIC	Dimbokro	124.06	320	*e*P	PKPdf	12 56 31.0	+0.5
DBIC				*e*pPKPdf		12 56 49.8	
LBTB	Lobatse	125.76	266	PKP	PKPdf	12 56 35.3	+1.8
	comp=Z,54nm,0.8s,baz=116,slow=1.7,SNR=80						
LBTB	Lobatse	125.76	266	*e*PKPdf	PKPdf	12 56 34.8	+1.3
TSUM	Tsumeb	128.51	278	PKP	PKPdf	12 56 40.8	+1.8
	comp=Z,16nm,0.9s,baz=87,slow=4.4,SNR=16						
TSUM	Tsumeb	128.51	278	*e*P	PKPdf	12 56 40.3	+1.3
QSPA	South Pole Qui	130.47	180	*e*P	PKPdf	12 56 41.7	+0.5
NNA	Nana	135.23	62	*e*P	PKPdf	12 56 53.0	+1.3
SAML	Samuel	141.04	43	*e*P	PKPdf	12 56 57.3	-5.1
ARE	Arequipa	142.02	60	*e*P	PKPdf	12 57 02.0	-1.9
LPAZ	La Paz	144.07	56	*e*P	PKPbc	12 57 07.0	+0.3
SNAA	Sanae	144.50	198	⇑*i*P	PKPbc	12 57 06.2	-0.2
SNAA	Sanae	144.50	198	⇑*i*	PKPbc	12 57 23.1	+17
SNAA	Sanae	144.50	198	PKP	PKPdf	12 57 06.4	-0.2
	comp=Z,35nm,0.8s,baz=158,slow=3.3,SNR=103						
RCBR	Riachuelo	145.22	357	*e*P	PKPdf	12 57 10.4	+0.8
VNA2	Neumayer--Watz	146.08	197	⇓*i*P	PKPdf	12 57 11.5	+2.1
VNA2	Neumayer--Watz	146.08	197	⇑*i*	PKPdf	12 57 16.9	+7.5
VNA2	Neumayer--Watz	146.08	197	⇑*i*	PKPdf	12 57 32.2	+23
VNA2	Neumayer--Watz	146.08	197	⇓*i*	PKPdf	12 57 39.9	+31
VNA3	Neumayer Olymp	146.33	196	⇓*i*P	PKPdf	12 57 11.6	+1.8
VNA3	Neumayer Olymp	146.33	196	⇑*i*	PKPdf	12 57 17.3	+7.5
VNA3	Neumayer Olymp	146.33	196	⇑*i*	PKPdf	12 57 32.8	+23
VNA3	Neumayer Olymp	146.33	196	⇑*i*	PKPdf	12 57 39.4	+30
VNA1	Neumayer--Stat	146.48	197	⇓*i*P	PKPdf	12 57 13.8	+3.7
VNA1	Neumayer--Stat	146.48	197	⇑*i*	PKPdf	12 57 32.7	+23
LVC	Limon Verde	148.03	65	PKPbc	PKPdf	12 57 17.6	+3.5
	comp=Z,45nm,0.8s,baz=290,slow=2.8,SNR=20						
LVC	Limon Verde	148.03	65	*e*P	PKPdf	12 57 17.0	+2.9
TLL	Tololo Astrono	151.12	79	*e*P	PKPdf	12 57 26.1	+7.5
FCH	Farellones	152.98	85	⇑*i*P	PKPdf	12 57 30.8	+10
BDFB	Brasilia	153.41	23	PKP	PKPdf	12 57 25.0	+2.7
	comp=Z,10.0nm,0.9s,baz=352,slow=2.0,SNR=12						
BDFB				PKPbc	PKPdf	12 57 31.6	+9.3
	comp=Z,38nm,1.0s,baz=298,slow=0.8,SNR=22						
BDFB				pPKP		12 57 43.4	
	comp=Z,25nm,0.8s,baz=345,slow=6.2,SNR=6.8						
BAO	Brasilia Array	153.41	23	P	PKPdf	12 57 22.8	+0.5
BAO				*i*		12 57 30.1	
BAO				*i*		12 57 42.9	
BAO				*e*		12 58 02.8	
BAO				*e*		13 01 13.2	
PLCA	Paso Flores	155.10	101	PKP	PKPdf	12 57 25.6	+1.8
	comp=Z,11nm,1.0s,baz=256,slow=3.8,SNR=13						
PLCA	Paso Flores	155.10	101	*e*P	PKPdf	12 57 25.7	+1.8
USHA	Ushuaia	155.18	135	PKPbc	PKPdf	12 57 33.1	+10
	comp=Z,18nm,0.8s,baz=268,slow=3.5,SNR=4.3						
CPUP	Villa Florida	158.23	55	PKPdf	PKPdf	12 57 29.5	+1.1
TRQA	Tornquist	160.97	90	*e*P	PKPdf	12 57 31.3	+0.3
CAM4	Nova Friburgo	161.20	14	*e*P	PKPdf	12 57 33.8	+2.1
CAM4				*i*		12 57 34.9	
CAM4				*i*		12 58 16.8	
CAM4				*i*		12 58 37.1	

NIED ***26*** *12:53:00, 37.80N×138.20E, h11^{km}, Mw4.1 Best double couple: $M_0$1.47×10^{15} NP1:ϕ_s220°, δ61°, λ111°. NP2:ϕ_s2°, δ36°, λ57°.*

IDC ***26*** *12:53:17.4±0.7, 37.82N×137.99E, mb3.8/9, mb1 4.1/10, mb1mx4.0/22, mbtmp3.9/10, ML4.2/1, Error ellipse: s-maj=29.1km s-min=17.3km az=97.0*

NEIC ***26*** *12:53:18.3±1.9, 37.78N×138.06E, h6^{km}±12^{km}, mb4.6/1, MW4.1(NIED), Error ellipse: s-maj=19.3km s-min=12.8km az=98.0*

NEIC Felt on Sadoga-shima. Recorded [3 JMA] on Sadoga-shima and [1 JMA] in Ishikawa, Nagano and Niigata Prefectures.

JMA ***26*** *12:53:20.5, 37.80N×138.16E, h18^{km}±1^{km}, M4.3*

JMA Felt III J1.

ISC 26 12:53:20.1±0.4**, 37.81N**±0.03×**138.16E**±0.04**, h28**^{km}±3^{km}**, n25,** σ**0^{s}85**/34**, mb3.8**/10**, 2C-4D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSD	Sado	0.24	19	⇑P	Pb	12 53 26.1	-0.6
JSD				S	Sb	12 53 29.9	-1.2
JIZZ	Izumozaki	0.51	122	⇓P	Pb	12 53 30.7	0.0
JIZZ				S	Sb	12 53 38.5	+0.6
JJN	Nakama	0.70	180	⇑P	Pb	12 53 34.2	+0.4
JJN				S	Sb	12 53 44.2	+1.0
JSZ	Suzu	0.73	241	⇓P	Pb	12 53 34.2	0.0
JSZ				S	Sb	12 53 44.3	+0.4
JHK	Hiroka	0.88	129	⇓P	Pn	12 53 36.0	-0.7
JHK				S	Sb	12 53 47.5	-0.7
JNS	Sasagawa	0.91	89	⇓P	Pn	12 53 37.0	-0.2
JNS				S	Sb	12 53 49.3	+0.2
JHG	Hegura jima	0.98	273	P	Pn	12 53 38.5	+0.3
JHG				S	Sb	12 53 52.0	+0.8
JAW	Awa shima	1.07	53	P	Pn	12 53 39.9	+0.5
JAW				S	Sn	12 53 54.8	+1.3
MAJO	Matsushiro	1.26	178	*e*P	Pn	12 53 42.2	0.0
MAT	Matsushiro	1.26	178	*e*P	Pn	12 53 42.0	-0.2
MAT				*e*S	Sn	12 53 59.0	+0.7
MAT	Matsushiro	1.26	178	P	Pn	12 53 42.2	0.0
MAT				S	Sn	12 53 58.8	+0.5
JHJ	Hachijo jima 2	4.86	164	Pn	Pn	12 54 32.4	-1.0
	25nm,0.3s,baz=220,slow=14,SNR=4.4						
SONM	Songino Array	25.20	304	P	P	12 58 45.2	+0.5
	0.8nm,0.7s,mb3.4,baz=104,slow=9.2,SNR=5.5						
UBT	Ubonrachathani	36.90	242	P	P	13 00 27.0	-1.3
	3μm,0.8s						

BVAR	Borovoye Array	48.13	311	PcP	PcP	13 03 24.7	-2.1
	0.6nm,0.6s,baz=90,slow=1.5,SNR=3.8						
ILAR	Eielson Array	50.23	33	P	P	13 02 15.4	+0.2
	0.8nm,0.7s,mb3.9,baz=303,slow=6.2,SNR=7.7						
WRAB	Tennant Creek	57.54	184	*e*P	P	13 03 08.2	-1.4
	4.6nm,0.7s,mb4.6						
WRA	Warramunga Arr	57.55	184	P	P	13 03 08.4	-1.3
	4.5nm,0.6s,mb4.7,baz=0.2,slow=7.5,SNR=89						
WRA				PcP	PcP	13 04 02.2	-0.5
	0.8nm,0.6s,baz=358,slow=4.5,SNR=8.0						
ASAR	Alice Springs	61.28	184	P	P	13 03 34.6	-0.7
	1.7nm,0.6s,mb4.3,baz=12,slow=10,SNR=20						
YKA	Yellowknife Ar	64.42	29	P	P	13 03 55.5	0.0
	0.3nm,0.6s,mb3.5,baz=308,slow=6.9,SNR=8.1						
YKA	Yellowknife Ar	64.42	29	P	P	13 03 55.5	0.0
NOA	NORSAR Array B	72.45	336	P	P	13 04 43.8	-1.7
	0.8nm,0.9s,mb3.7,baz=69,slow=6.5,SNR=2.8						
NVAR	Mina Array Bea	76.57	52	P	P	13 05 10.6	+1.1
	0.6nm,0.8s,mb3.6,baz=297,slow=3.3,SNR=5.0						
PDAR	Pinedale Array	78.94	44	P	P	13 05 23.6	+1.1
	0.4nm,0.8s,mb3.4,baz=270,slow=3.6,SNR=3.3						
TXAR	Lajitas Array	91.66	50	P	P	13 06 27.8	+1.7
	0.1nm,0.5s,mb3.4,baz=307,slow=4.5,SNR=3.5						

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*IDC **26** 12:56:47.2±0.3, 2.92N×95.60E, mb5.4/30, mb1 5.4/31, mb1mx5.4/31, mbtmp5.4/31, ML5.3/1, MS6.6/16, Ms1 6.7/16, ms1mx6.4/24, Error ellipse: s-maj=13.1km s-min=10.4km az=40.0*

*BJI **26** 12:56:50.8, 2.93N×95.62E, h33^{km}, mB6.6, mb6.1, Ms7.0, Msz6.9*

*MOS **26** 12:56:50.7±1.0, 2.91N×95.59E, h33^{km}, mb6.1/104, MS6.6/67, Error ellipse: s-maj=7.0km s-min=3.5km az=124.7*

*NEIC **26** 12:56:52.6±0.7, 2.91N×95.59E, h36^{km}±6^{km}, mb6.0/142, ME6.2, MS6.7/133, MW6.8, Error ellipse: s-maj=4.6km s-min=2.9km az=218.0 Broadband fault plane solution: P waves. NP1:ϕ_s135°,δ75°,λ90°. NP2:ϕ_s315°,δ15°,λ90°. Principal axes: T Plg60°, Azm45°; N Plg0°, Azm0°; P Plg30°, Azm225°; Moment Tensor Solution. s37 Moment tensor: Scale 10^{19} Nm; M_{rr}0.41; $M_{\theta\theta}$-0.88; $M_{\phi\phi}$0.47; $M_{r\theta}$1.10; $M_{\theta\phi}$0.22; $M_{\phi r}$-1.05; Best double couple: $M_0$1.7×10^{19} NP1:ϕ_s241°,δ24°,λ20°. NP2:ϕ_s132°,δ82°, λ112°. Principal axes: T 1.67, Plg48°, Azm66°; N .1, Plg22°, Azm309°; P -1.77, Plg33°, Azm203°; Two events about 3 seconds apart. Depth and focal mechanism from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*

NEIC Felt on Simeulue and at Banda Aceh and Meulaboh, Sumatra.

*HRVD **26** 12:56:52.6±0.1, 2.80N×95.40E, h12^{km}, MW6.7/79, Centroid moment Tensor Solution. LP body waves: s79,c173;Mantle waves: s69,c231; Half duration: 5^{s}9 Moment tensor: Scale 10^{19}Nm; M_{rr}0.27±.00; $M_{\theta\theta}$-0.18±.00; $M_{\phi\phi}$-0.09±.00; $M_{r\theta}$0.93±.01; $M_{\theta\phi}$0.17±.00; $M_{\phi r}$-1.06±.01; Best double couple: $M_0$1.441×10^{19} NP1: ϕ_s294°,δ6°,λ66°. NP2:ϕ_s139°,δ84°,λ93°. Principal axes: T 1.424, Plg51°, Azm51°; N .033, Plg3°, Azm318°; P -1.458, Plg39°, Azm226°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s.*

*BGS **26** 12:56:53.4, 2.91N×95.59E, h33^{km}*

ISC 26 12:56:50.0±0.1, **2.90N**±0.02×**95.60E**±0.02, **h29**^{km}, **h29**^{km}±1.1^{km}**:pP-P, n987, σ1^{s}06**/825, **mb5.9**/206, **MS6.7**/183, **126C-44D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.57	65	⇑*i*Pn	Pn	12 58 14.5	+1.4
PPI	Padang Panjang	5.84	125	*e*P	Pn	12 58 18.0	+1.0
SNG	Songkhla	6.56	49	P	Pn	12 58 27.0	-0.1
	998nm,1.0s						
KGM	Kluang	7.76	96	P	Pn	12 58 44.3	+0.3
PBA	Port Blair	9.15	342	*e*P	P	12 59 00.7	-2.5
PBA				*e*		13 01 01.5	
NNT	Nongplab	10.46	23	P	P	12 59 23.0	+1.6
NST	Nakhon Sawan	13.45	19	P	P	13 00 03.0	+1.4
	208nm,0.8s						
PULI	Pulasari	13.85	132	*e*P	P	13 00 04.1	-2.8
BDT	Bhumibol Dam	14.64	13	P	P	13 00 17.0	-0.3
	82nm,0.8s						
PACI	Pancar Gunung	14.71	130	*e*P	P	13 00 15.0	-3.3
KSM	Kuching	14.77	95	⇑*i*Pn	P	13 00 19.3	+0.4
COCO	West Island	15.04	175	P	P	13 00 28.3	+5.7
	4μm,1.0s,SNR=11						
COCO	West Island	15.04	175	*e*Pn	P	13 00 24.3	+1.7
	756nm,1.0s						
CM31	Chiang Mai Arr	15.80	12	*e*P	P	13 00 31.5	-0.9
	1μm,0.9s						
CMAR	Chiang Mai Arr	15.80	12	Pn	P	13 00 36.0	+3.7
	3.7nm,0.3s,baz=202,slow=14,SNR=131						
CMAR				LR	LR	13 07 33.8	
	comp=Z,306μm,18.9s,baz=195,slow=41						
CHG	Chiang Mai	16.15	11	⇑P	P	13 00 36.5	-0.3
	150nm,0.9s						
CHRT	Chiangrai	17.35	13	⇑P	P	13 00 52.0	0.0
	758nm,0.9s						
MDRS	Chennai	18.24	304	*e*	P	13 01 10.2	+7.2
MDRS				*i*		13 06 11.9	
MDRS				*e*		13 07 49.8	
	comp=Z,297μm,22.4s						
VIS	Vishakhapatnam	19.02	322	*e*P	P	13 01 10.5	-2.0
VIS				*i*		13 06 60.0	
VIS				*e*		13 08 52.7	
	comp=Z,167μm,17.7s						
BWNR	Bhubaneshwar	19.75	332	*e*P	P	13 01 19.1	-1.6
BWNR				*e*		13 04 46.4	
BWNR				*i*		13 07 08.8	
BWNR				*e*		13 09 55.1	
	comp=Z,204μm,18.6s						
CAL	Calcutta	20.75	341	*e*	P	13 01 26.7	-4.5
	comp=Z,620nm,0.3s						
CAL				*e*		13 05 26.0	
KKM	Kota Kinabalu	20.79	81	⇑*e*P	P	13 01 32.0	+0.4
KKM	Kota Kinabalu	20.79	81	P	P	13 01 32.4	+0.8
QIZ	Qiongzhong	21.24	40	⇑P	P	13 01 36.0	-0.1
QIZ				AP		13 01 42.3	
QIZ				XP		13 01 46.3	
QIZ				PP	PP	13 01 59.3	-0.5
QIZ				S	S	13 05 29.0	+3.3
QIZ				SS	SS	13 06 02.3	+2.4
QIZ				LR	LR		
	comp=N,272μm,17.5s						
QIZ				LR	LR		
	comp=Z,291μm,18.5s,MS6.7						
QIZ	Qiongzhong	21.24	40	⇑*i*P	P	13 01 36.0	-0.2
	comp=Z,1μm,1.3s,mb6.1						
AGT	Agartala	21.28	349	⇓*i*P	P	13 01 37.0	+0.5
AGT				*i*		13 03 03.0	
SRDI	Scrawed	21.67	122	⇑*i*P	P	13 01 39.9	-0.6
SRDI				pmax	pmax		
	comp=Z,179nm,0.9s,mb5.5						
SRDI	Scrawed	21.67	122	⇑*i*P	P	13 01 39.9	-0.6
	comp=Z,179nm,0.9s,mb5.5						
IMP	Imphal	21.81	356	⇓*i*P	P	13 01 39.0	-2.9
HYB	Hyderabad	22.09	312	⇑*e*P	P	13 01 45.0	+0.3
HYB				*e*S	S	13 05 48.0	+6.5
HYB				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.1						
HYB	Hyderabad	22.09	312	⇑*e*P	P	13 01 45.0	+0.3
	comp=Z,1μm,1.2s,mb6.1						
HYB				*e*S	S	13 05 48.0	+6.5
HYB	Hyderabad	22.09	312	⇑*i*P	P	13 01 45.0	+0.3
	comp=Z,1μm,1.2s,mb6.1						
HYB				*e*S	S	13 05 42.5	+1.0
HYB				LR	LR	13 09 38.0	
	comp=Z,223nm,22.0s						
TSM	Tawau	22.27	86	P	P	13 01 47.3	+0.8
BOK	Bokaro	22.80	336	⇑*i*P	P	13 01 50.5	-1.2
BOK				*i* S	S	13 06 02.5	+8.2
SHL	Shillong	22.82	351	*e*P	P	13 01 49.0	-2.9
SHL				*e*		13 05 45.0	
MNGI	Mangalore	22.84	297	*i* P	P	13 01 53.7	+1.4
	comp=Z,747nm,0.0s						
MNGI				*e*S	S	13 06 00.1	+4.8
RATI	Rata	22.98	120	⇓*i*P	P	13 01 51.0	-2.7
KMI	Kunming	23.14	17	⇑P	P	13 01 56.8	+1.7
KMI				AP		13 02 07.3	
KMI				XP		13 02 11.5	
KMI				PP	PP	13 02 30.0	+4.3
KMI				S	S	13 06 06.5	+6.1
KMI				XS		13 06 20.3	
KMI				AMB	AMB		
	comp=Z,372nm,1.5s,mb5.6						
KMI				AMB	AMB		
	comp=Z,14μm,5.8s						
KMI				LR	LR		
	comp=N,334μm,15.8s						
KMI				LR	LR		
	comp=E,259μm,22.2s						
KMI				LR	LR		
	comp=Z,366μm,15.8s,MS6.9						
KMI	Kunming	23.14	17	⇑P	P	13 01 56.7	+1.6
KMI				*PP		13 02 07.3	
KMI				*SP		13 02 11.4	
KMI						13 02 30.0	
KMI				S	S	13 06 06.6	+6.2
KMI				*SS		13 06 20.3	
KMI				SS	SS	13 06 53.1	+6.8
KMI				pmax	pmax		
	comp=Z,372nm,1.5s,mb5.6						
KMI				MLR	MLR		
	comp=Z,366μm,15.8s,MS6.9						
KMI	Kunming	23.14	17	⇑P	P	13 01 56.7	+1.6
	comp=Z,372nm,1.5s,mb5.6						
KMI				pP		13 02 07.3	
KMI				sP		13 02 11.4	
KMI				PP	PP	13 02 30.0	+4.3
KMI				S	S	13 06 06.6	+6.2
KMI				sS		13 06 20.3	
KMI				SS	SS	13 06 53.1	+6.8
KMI				LR	LR		
	comp=Z,366μm,15.8s,MS6.9						
BLSP	Bilaspur	23.16	327	*e*P	P	13 01 56.0	+0.7
BLSP				*e*		13 06 28.0	
KEDI	Kedomdong	23.38	119	⇑*e*P	P	13 01 54.7	-2.7
KEDI				pmax	pmax		
	comp=Z,338nm,1.0s,mb5.7						
KEDI	Kedomdong	23.38	119	⇑*e*P	P	13 01 54.7	-2.7
	comp=Z,338nm,1.0s,mb5.7						
PPR	Puerto Princes	23.97	72	*e*P	P	13 02 04.3	+1.1
LATR	Latur	24.20	311	*e*P	P	13 02 07.1	+1.7
TANI	Tanete Lipujan	24.59	105	⇑*i*P	P	13 02 09.6	+0.3
TANI				pmax	pmax		
	comp=Z,261nm,0.7s,mb5.9						
TANI	Tanete Lipujan	24.59	105	⇑*i*P	P	13 02 09.6	+0.3
	comp=Z,261nm,0.7s,mb5.9						
SLGI	Shiliguri	24.64	344	*e*P	P	13 02 12.8	+3.1
GOA	Goa	24.83	302	⇓*e*	P	13 02 21.2	+10
	comp=Z,471nm,0.3s,mb6.5						
GOA				*e*		13 06 42.6	
GTK	Gangtok	25.20	345	*e*	P	13 02 09.0	-5.9
NINI	Niniconang	25.21	107	⇑*i*P	P	13 02 15.9	+0.7
NINI				pmax	pmax		
	comp=Z,2μm,1.0s,mb6.7						
NINI	Niniconang	25.21	107	⇑*i*P	P	13 02 15.9	+0.7
	comp=Z,2μm,1.0s,mb6.7						
DGAR	Diego Garcia	25.27	246	*e*P	P	13 02 14.0	-1.7
DGAR				pmax	pmax		
	comp=Z,3μm,1.6s,mb6.5						
DGAR				MLR	MLR		
	comp=Z,52μm,21.0s,MS6.0						
DGAR	Diego Garcia	25.27	246	*e*P	P	13 02 14.0	-1.7
	comp=Z,3μm,1.6s,mb6.5						
DGAR				LR	LR		
	comp=Z,52μm,21.0s,MS6.0						
KAD	Karad	25.43	306	*e*P	P	13 02 18.6	+1.4
KAD				*e*		13 02 36.1	
	comp=Z,708nm,0.8s						
BUNI	Buntu Taipa	25.55	105	⇓*i*P	P	13 02 19.6	+1.2
	comp=Z,278nm,0.6s,mb6.0						
GYA	Guiyang	25.72	23	⇑*i*P	P	13 02 20.0	+0.2
GYA				AP	pP	13 02 29.3	+1.0
GYA				XP	sP	13 02 32.5	+0.2
GYA				PP	PP	13 03 04.5	+4.4
GYA				S	S	13 06 45.3	+1.1
GYA				AMB	AMB		
	comp=Z,260nm,1.4s,mb5.6						
GYA				AMB	AMB		
	comp=Z,10μm,9.9s						
GYA				LR	LR		
	comp=N,231μm,15.8s,MS6.8						
GYA				LR	LR		
	comp=E,78μm,16.4s,MS6.8						
GYA				LR	LR		
	comp=Z,358μm,17.6s,MS7.0						
ALBI	Allahabad	25.93	330	*e*P	P	13 02 21.0	-0.8
JIRN	Jiri	26.21	341	*e*P	P	13 02 23.2	-1.2
	comp=Z,2μm,0.7s,mb6.6						
POO	Poona	26.36	308	*e*P	P	13 02 27.0	+1.2
POO				*e*		13 02 43.3	
	comp=Z,445nm,0.9s						
PKI	Pulchoki	26.39	339	*e*P	P	13 02 25.2	-0.8
	comp=Z,1μm,0.8s,mb6.5						
HKC	Hong Kong	26.40	42	⇓*i*P	P	13 02 34.0	+7.9
HKC				*i* S	S	13 06 56.0	+0.4
GZH	Guangzhou	26.42	39	P	P	13 02 30.3	+4.0
GZH				LR	LR		
	comp=N,189μm,17.7s,MS6.7						
GZH				LR	LR		
	comp=E,110μm,19.9s,MS6.7						
GZH				LR	LR		
	comp=Z,312μm,18.6s,MS6.9						
DMN	Daman	26.54	339	*e*P	P	13 02 26.6	-0.8
	comp=Z,894nm,0.8s,mb6.3						
GUN	Gumba	26.55	340	*e*P	P	13 02 26.4	-1.0
	comp=Z,1μm,0.7s,mb6.6						
KKN	Kakani	26.64	339	*e*P	P	13 02 27.7	-0.6
	comp=Z,2μm,1.0s,mb6.6						
VLK	Valmikinagar	26.75	336	*i* P	P	13 02 31.0	+1.7
VLK				*i*		13 02 43.0	
BHPL	Bhopal	26.80	320	*e*P	P	13 02 30.5	+0.7
BHPL				*e*	pP	13 02 38.4	0.0
	comp=Z,208nm,1.9s						
BHPL				*i*		13 11 37.7	
LSA	Lhasa	26.98	351	P	P	13 02 32.5	+1.1
LSA				S	S	13 07 08.0	+2.9
LSA				AMB	AMB		
	comp=Z,400nm,0.9s,mb6.0						
LSA				AMB	AMB		
	comp=Z,9μm,10.0s						
LSA				LR	LR		
	comp=N,213μm,25.0s,MS6.7						
LSA				LR	LR		
	comp=E,187μm,29.0s,MS6.7						
LSA				LR	LR		
	comp=Z,193μm,23.0s						
LSA	Lhasa	26.98	351	⇑*e*P	P	13 02 31.6	+0.2
LSA				pmax	pmax		
	comp=Z,574nm,0.7s,mb6.2						
LSA	Lhasa	26.98	351	⇑*e*P	P	13 02 31.6	+0.2
	comp=Z,574nm,0.7s,mb6.2						
GKN	Gorkha	27.07	338	*e*P	P	13 02 31.4	-0.8
	comp=Z,2μm,0.9s,mb6.6						
AAP	Anini-y	27.19	73	*e*P	P	13 02 30.0	-3.5
KOLN	Koldanda	27.26	336	*e*P	P	13 02 32.7	-1.2
	comp=Z,2μm,0.9s,mb6.7						
TGY	Tagaytay City	27.38	65	⇑*e*P	P	13 02 34.8	-0.3
BOM	Bombay	27.38	307	*e*	P	13 02 44.5	+9.3
BOM				*e*		13 07 19.7	
JHNI	Jhansi	27.80	325	*e*P	P	13 02 39.0	+0.1
JHNI				*e*		13 04 21.0	
BCPH	Baguio City Da	27.98	60	⇓*i*P	P	13 02 39.4	-1.2
PCPH	Palayan	28.09	62	⇑*e*P	P	13 02 39.5	-2.0
SNPH	Sibulan	28.20	76	⇑*e*P	P	13 02 43.9	+1.3
RCP	Roxas	28.24	71	⇑*e*P	P	13 02 43.6	+0.6
TBP	Tagbilaran	28.87	75	*e*P	P	13 02 48.9	+0.2
CD2	Chengdu	28.91	15	⇑*i*P	P	13 02 48.0	-0.8
CD2				AP	pP	13 02 57.8	+0.4
CD2				PP	PP	13 03 45.3	+2.8
CD2				S	S	13 07 36.0	0.0
CD2				XS		13 07 50.0	
CD2				SS	SS	13 09 05.0	+0.2
CD2				AMB	AMB		
	comp=Z,830nm,0.6s,mb6.6						
CD2				LR	LR		
	comp=E,282μm,15.6s						
CD2				LR	LR		
	comp=Z,261μm,15.6s,MS7.0						
LLP	Lapu-Lapu	29.10	74	⇑*e*P	P	13 02 50.9	+0.2
	comp=Z,972μm,1.0s						
CGP	Cagayan de Oro	29.46	78	⇓*e*P	P	13 02 58.1	+4.1
BHV	Bhavnagar	29.51	311	*e*P	P	13 02 55.0	+0.7
CVP	Callao Caves	29.63	58	*e*P	P	13 02 54.2	-1.2
KCP	Kidapawan	29.66	81	⇓*e*P	P	13 02 58.5	+2.8
DAV	Davao City (W)	30.14	81	*e*P	P	13 03 02.0	+2.0
DAV	Davao City (W)	30.14	81	*e*S	S	13 08 06.0	+10
LGTI	Lohaghat	30.16	333	*e*P	P	13 03 00.0	-0.1
ENH	Enshi	30.23	24	*e*P	P	13 02 59.3	-1.4
	comp=Z,282nm,0.8s,mb6.0						
PTH	Pithoragarh	30.26	333	*e*	P	13 03 07.0	+6.1
PTH				*e*S	S	13 08 01.0	+3.5
PLP	Palo	30.27	73	*e*P	P	13 03 02.4	+1.3
AJM	Ajmer	30.88	321	⇑*i*P	P	13 03 06.0	-0.4
NDI	New Delhi	31.05	328	*e*P	P	13 03 06.0	-1.8
	comp=Z,13nm,1.0s						
NDI				*e*S	S	13 08 08.0	-1.9
QZH	Quanzhou	31.16	43	⇑*i*P	P	13 03 09.0	+0.1
QZH				AP	pP	13 03 18.5	+1.0
QZH				S	S	13 08 17.8	+6.1
QZH				AMB	AMB		
	comp=Z,1μm,1.4s,mb6.6						
QZH				AMB	AMB		
	comp=Z,10μm,5.2s						
QZH				LR	LR		
	comp=N,70μm,15.4s,MS6.9						
QZH				LR	LR		
	comp=E,187μm,15.4s,MS6.9						
QZH				LR	LR		
	comp=Z,262μm,22.4s						
DDI	Dehra Dun	31.93	330	⇑*i*P	P	13 03 15.0	-0.6
DDI				*e*S	S	13 08 27.8	+4.1
BHJ	Bhuj	32.25	311	⇑*e*P	P	13 03 19.6	+1.2
	comp=Z,118μm,20.2s						
BHJ				*e*		13 08 33.6	
WHN	Wuhan	32.72	31	⇑P	P	13 03 22.5	+0.1
WHN				S	S	13 08 41.0	+5.1
WHN				AMB	AMB		
	comp=Z,1μm,1.7s,mb6.5						
WHN				LR	LR		
	comp=Z,502μm,15.2s,MS7.3						
NACB	Ninganchiao	32.82	48	*e*P	P	13 03 22.7	-0.7
TATO	Taipei	33.22	46	PFAKE		13 03 40.0	+13
TATO				LR	LR		
	comp=Z,66μm,21.0s,MS6.3						
XAN	Xi’an	33.38	20	P	P	13 03 27.5	-0.7
XAN				AP	pP	13 03 38.0	+1.1
XAN				S	S	13 08 43.5	-2.7
XAN				AMB	AMB		
	comp=Z,510nm,0.9s,mb6.5						
XAN				LR	LR		
	comp=N,72μm,21.2s,MS6.6						
XAN				LR	LR		
	comp=E,109μm,18.7s,MS6.6						
XAN				LR	LR		
	comp=Z,157μm,17.9s,MS6.8						
SDNR	Sundarnagar	33.43	330	*e*P	P	13 03 28.5	-0.1
MBWA	Marble Bar	33.62	136	*e*P	P	13 03 29.5	-0.9
	comp=Z,152nm,1.0s,mb5.9						
MBWA				LR	LR		
	comp=Z,84μm,21.0s,MS6.4						
BHK	Bhakra	33.64	330	*e*P	P	13 03 28.9	-1.6
BHK				*e*S	S	13 08 51.7	+1.5
LZH	Lanzhou	33.89	12	⇑*i*P	P	13 03 32.0	-0.6
LZH				AP	pP	13 03 40.5	-0.8
LZH				XP	sP	13 03 44.3	-0.7
LZH				S	S	13 08 55.0	+0.9
LZH				XS		13 09 10.0	
LZH				SS	SS	13 11 00.0	-1.4
LZH				AMB	AMB		
	comp=Z,632nm,1.7s,mb6.3						
LZH				AMB	AMB		
	comp=Z,3μm,4.5s						
LZH				LR	LR		
	comp=E,139μm,18.0s						
LZH				LR	LR		
	comp=Z,143μm,18.9s,MS6.7						
LZH	Lanzhou	33.89	12	⇑*i*P	P	13 03 32.1	-0.5
LZH				*PP	pP	13 03 40.6	-0.7
LZH				*SP	sP	13 03 44.3	-0.7
LZH				S	S	13 08 55.0	+0.9
LZH				*SS		13 09 10.0	
LZH				SS	SS	13 11 00.0	-1.4
LZH				pmax	pmax		
	comp=Z,632nm,1.7s,mb6.3						
LZH				MLR	MLR		
	comp=Z,143μm,18.9s,MS6.7						
LZH	Lanzhou	33.89	12	⇑*i*P	P	13 03 32.1	-0.5
	comp=Z,632nm,1.7s,mb6.3						
LZH				pP	pP	13 03 40.6	-0.7
LZH				sP	sP	13 03 44.3	-0.7
LZH				PP	PP	13 04 55.5	+9.1
LZH				S	S	13 08 55.0	+0.9
LZH				sS		13 09 10.0	
LZH				SS	SS	13 11 00.0	-1.4
LZH				LR	LR		
	comp=Z,143μm,18.9s,MS6.7						
PONG	Pong	34.31	330	*e*P	P	13 03 36.0	-0.2
PONG				*e*		13 09 11.0	
DLH	Dalhousie	34.77	330	*e*P	P	13 03 39.0	-1.2
DLH				*e*		13 04 03.0	
THN	Thein Dam	34.81	330	*e*P	P	13 03 39.8	-0.7
THN				*e*S	S	13 09 11.3	+3.0
NJ2	Nanjing	36.32	34	*e*P	P	13 03 54.0	+0.7
NJ2				AP	pP	13 04 04.0	+1.9
NJ2				XP	sP	13 04 08.5	+2.7
NJ2				PP	PP	13 05 15.8	-1.0
NJ2				PPP	PPP	13 05 35.3	-1.5
NJ2				S	S	13 09 33.0	+1.4
NJ2				XS		13 09 49.0	
NJ2				AMB	AMB		
	comp=Z,1μm,1.0s,mb6.7						
NJ2				AMB	AMB		
	comp=Z,26μm,10.2s						
NJ2				LR	LR		
	comp=N,255μm,18.3s,MS7.1						
NJ2				LR	LR		
	comp=E,219μm,20.6s,MS7.1						
NJ2				LR	LR		
	comp=Z,666μm,19.8s,MS7.4						
GTA	Gaotai	36.54	5	⇑P	P	13 03 55.0	-0.1
GTA				AP	pP	13 04 04.3	+0.4
GTA				XP	sP	13 04 07.5	-0.1
GTA				PP	PP	13 05 19.8	+0.1
GTA				PPP	PPP	13 05 40.3	+0.6
GTA				PCP	PcP	13 06 18.5	-0.1
GTA				S	S	13 09 35.3	+0.3
GTA				XS		13 09 51.5	
GTA				SCP		13 10 02.8	
GTA				PCS		13 10 06.0	
GTA				SS	SS	13 12 01.0	-0.8
GTA				SCS	ScS	13 14 08.0	+1.1
GTA				AMB	AMB		
	comp=Z,253nm,1.5s,mb5.8						
GTA				AMB	AMB		
	comp=Z,6μm,5.7s						
GTA				LR	LR		
	comp=N,62μm,14.1s,MS6.6						
GTA				LR	LR		
	comp=E,53μm,18.3s,MS6.6						
GTA				LR	LR		
	comp=Z,79μm,13.7s,MS6.7						
SSE	Sheshan	37.01	38	P	P	13 03 59.5	+0.4
SSE				XP	sP	13 04 10.8	-0.8
SSE				PP	PP	13 05 24.0	-1.8
SSE				S	S	13 09 43.0	+0.8
SSE				XS		13 09 58.5	
SSE				AMB	AMB		
	comp=Z,112nm,1.1s,mb5.6						
SSE				AMB	AMB		
	comp=Z,4μm,10.9s						
SSE				LR	LR		
	comp=N,60μm,18.0s,MS6.7						
SSE				LR	LR		
	comp=E,106μm,18.0s,MS6.7						
SSE				LR	LR		
	comp=Z,171μm,17.8s,MS6.9						
SSE	Sheshan	37.01	38	P	P	13 03 59.6	+0.5
	comp=Z,112nm,1.1s,mb5.6						
SSE				sP	sP	13 04 10.7	-0.9
SSE				PP	PP	13 05 24.1	-1.7
SSE				S	S	13 09 42.9	+0.7
SSE				sS		13 09 58.5	
SSE				SS	SS	13 12 25.5	+13
SSE				LR	LR		
	comp=Z,171μm,17.8s,MS6.9						
TIA	Tai’an	38.65	28	P	P	13 04 13.0	+0.1
TIA				S	S	13 10 08.8	+1.7

TIA				AMB	AMB		
	comp=Z,275nm,1.3s,mb5.8						
TIA				AMB	AMB		
	comp=Z,3µm,6.0s						
TIA				LR	LR		
	comp=N,48µm,15.6s,MS6.6						
TIA				LR	LR		
	comp=E,50µm,14.4s,MS6.6						
JOW	**Kunigami**	**39.31**	**50**	P	**P**	**13 04 18.9**	**+0.5**
	comp=E,134nm,0.6s,mb5.8,baz=234,slow=8.1,SNR=18						
BTO	**Baotou**	**39.73**	**17**	*e*P	**P**	**13 04 22.3**	**+0.5**
BTO				S	**S**	**13 10 19.8**	**-3.6**
BTO				AMB	AMB		
	comp=Z,487nm,1.7s,mb6.0						
BTO				LR	LR		
	comp=N,21µm,12.8s						
BTO				LR	LR		
	comp=E,103µm,18.6s						
KAKA	**Kakadu**	**39.74**	**114**	⇑*i*P	**P**	**13 04 20.5**	**-1.6**
	comp=E,177nm,0.7s,mb5.9						
MUN	**Mundaring**	**39.83**	**152**	⇓*i*P	**P**	**13 04 23.9**	**+1.2**
	comp=E,54nm,0.6s,mb5.5						
MUN				*e*S	**S**	**13 10 31.3**	**+6.3**
MUN	**Mundaring**	**39.83**	**152**	⇓*i*P	**P**	**13 04 23.9**	**+1.2**
MUN				*e*S	**S**	**13 10 31.3**	**+6.3**
MUN				pmax	pmax		
	comp=Z,54nm,0.6s,mb5.5						
KLBR	**Kellerberrin**	**40.26**	**150**	*e*P	**P**	**13 04 27.0**	**+0.8**
	comp=Z,2µm,1.2s,mb6.7						
KLBR				*e*S	**S**	**13 10 36.0**	**+4.6**
HHC	**Hu-ho-hao-te**	**40.43**	**19**	⇑P	**P**	**13 04 29.3**	**+1.8**
HHC				AP	pP	13 04 35.5	-0.9
HHC				XP	sP	13 04 38.0	-2.0
HHC				PCP	PcP	13 06 31.8	+1.0
HHC				SCP		13 10 18.5	
HHC				PCS		13 10 22.0	
HHC				S	**S**	**13 10 38.8**	**+4.9**
HHC				XS		13 10 47.0	
HHC				SS	SS	13 13 32.5	+4.3
HHC				SCS	ScS	13 14 31.3	+2.1
HHC				AMB	AMB		
	comp=Z,663nm,1.8s,mb6.1						
HHC				AMB	AMB		
	comp=Z,10µm,10.8s						
HHC				LR	LR		
	comp=N,226µm,16.8s,MS7.2						
HHC				LR	LR		
	comp=E,220µm,18.0s,MS7.2						
HHC				LR	LR		
	comp=Z,225µm,18.0s,MS7.1						
WBK	**Wadi Bani Khal**	**40.55**	**302**	⇑P	**P**	**13 04 36.6**	**+7.9**
KSH	**Kashi**	**40.58**	**336**	⇑P	**P**	**13 04 30.0**	**+1.2**
KSH				*e*AP	pP	13 04 40.3	+2.7
KSH				*e*XP	sP	13 04 44.5	+3.3
KSH				*e*PP	PP	13 06 07.5	+2.0
KSH				*e*SCP		13 10 19.5	
KSH				*e*S	**S**	**13 10 36.0**	**0.0**
KSH				*e*SS	SS	13 13 27.0	-4.3
KSH				*e*SCS	ScS	13 14 32.3	+2.2
KSH				AMB	AMB		
	comp=Z,220nm,0.6s,mb6.0						
KSH				AMB	AMB		
	comp=Z,2µm,4.1s						
KSH				LR	LR		
	comp=N,79µm,17.9s,MS6.8						
KSH				LR	LR		
	comp=E,99µm,18.1s,MS6.8						
NWAO	**Narrogin (SRO)**	**41.10**	**152**	*e*P	**P**	**13 04 33.3**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,304nm,1.3s						
NWAO				MLR	MLR		
	comp=Z,41µm,20.0s						
NWAO	**Narrogin (SRO)**	**41.10**	**152**	P	**P**	**13 04 34.0**	**+0.9**
	comp=Z,25nm,0.5s,baz=305,slow=10,SNR=13						
NWAO				LR	LR	13 21 37.0	
	comp=Z,308nm,18.3s,baz=332,slow=36						
NWAO	**Narrogin (SRO)**	**41.10**	**152**	*e*P	**P**	**13 04 33.3**	**+0.2**
	comp=Z,304nm,1.3s,mb5.8						
NWAO				LR	LR		
	comp=Z,41µm,20.0s,MS6.3						
JMDO	**Jabal Madar**	**41.19**	**301**	⇑P	**P**	**13 04 35.9**	**+1.9**
WMQ	**Urumqi**	**41.34**	**351**	⇑*i*P	**P**	**13 04 35.8**	**+0.8**
WMQ				AP	pP	13 04 46.0	+2.2
WMQ				XP	sP	13 04 50.0	+2.5
WMQ				PP	PP	13 06 15.0	+1.5
WMQ				PCP	PcP	13 06 35.0	+1.3
WMQ				SCP		13 10 21.0	
WMQ				S	**S**	**13 10 48.0**	**+0.6**
WMQ				XS		13 11 04.0	
WMQ				SS	SS	13 13 48.0	+1.1
WMQ				SCS	ScS	13 14 35.0	+0.4
WMQ				AMB	AMB		
	comp=Z,475nm,1.3s,mb6.0						
WMQ				AMB	AMB		
	comp=Z,7µm,10.0s						
WMQ				LR	LR		
	comp=N,74µm,22.0s,MS6.8						
WMQ				LR	LR		
	comp=E,129µm,22.0s,MS6.8						
WMQ				LR	LR		
	comp=Z,70µm,22.0s,MS6.5						
BJT	**Baijiatuau**	**41.38**	**24**	⇑*e*P	**P**	**13 04 36.8**	**+1.4**
BJT				pmax	pmax		
	comp=Z,1µm,0.8s						
BJT	**Baijiatuau**	**41.38**	**24**	⇑*e*P	**P**	**13 04 36.8**	**+1.5**
	comp=Z,1µm,0.8s,mb6.5						
BJI	**Beijing**	**41.40**	**24**	*e*P	**P**	**13 04 37.0**	**+1.5**
BJI				XP	sP	13 04 50.0	+2.0
BJI				PP	PP	13 06 19.5	+5.3
BJI				S	**S**	**13 10 49.0**	**+0.7**
BJI				SCS	ScS	13 14 38.0	+3.0
BJI				AMB	AMB		
	comp=Z,1µm,1.0s,mb6.5						
BJI				AMB	AMB		
	comp=Z,6µm,3.2s						
BJI				LR	LR		
	comp=N,50µm,22.1s,MS6.8						
BJI				LR	LR		
	comp=E,133µm,18.5s,MS6.8						
BJI				LR	LR		
	comp=Z,82µm,22.1s,MS6.5						
BJI	**Beijing**	**41.40**	**24**	*e*P	**P**	**13 04 36.9**	**+1.4**
BJI				*SP	sP	13 04 50.0	+2.0
BJI						13 06 19.6	
BJI				S	**S**	**13 10 48.9**	**+0.6**
BJI						13 14 38.1	
BJI				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.5						
BJI				MLR	MLR		
	comp=Z,82µm,22.1s,MS6.5						
BJI	**Beijing**	**41.40**	**24**	*e*P	**P**	**13 04 36.9**	**+1.4**
	comp=Z,1µm,1.0s,mb6.5						
BJI				sP	sP	13 04 50.0	+2.0
BJI				PP	PP	13 06 19.6	+5.4
BJI				S	**S**	**13 10 48.9**	**+0.6**
BJI				ScS	ScS	13 14 38.1	+3.1
BJI				LR	LR		
	comp=Z,82µm,22.1s,MS6.5						
SMDO	**Samad**	**41.51**	**302**	⇓P	**P**	**13 04 38.4**	**+1.8**
	SNR=11						
BIDO	**Bidbid**	**41.62**	**303**	⇑P	**P**	**13 04 39.7**	**+2.1**
BSY	**Bisya**	**42.11**	**301**	⇑P	**P**	**13 04 47.1**	**+5.5**
HOQ	**Hoqain**	**42.34**	**302**	⇑P	**P**	**13 04 49.8**	**+6.3**
ULHL	**Ulahol**	**42.83**	**339**	P	**P**	**13 04 48.2**	**+0.9**
	SNR=79						
ARQ	**Araqi**	**42.91**	**302**	⇑P	**P**	**13 04 53.3**	**+5.2**
DL2	**Dalian**	**42.97**	**30**	⇑*i*P	**P**	**13 04 49.5**	**+1.0**
DL2				PP	PP	13 06 35.8	+5.2
DL2				S	**S**	**13 11 15.3**	**+3.8**
DL2				AMB	AMB		
	comp=Z,530nm,1.2s,mb6.2						
DL2				AMB	AMB		
	comp=Z,7µm,12.6s						
DL2				LR	LR		
	comp=N,56µm,17.1s						
DL2				LR	LR		
	comp=Z,70µm,17.5s,MS6.6						
KZA	**Kyzart**	**43.05**	**338**	P	**P**	**13 04 50.2**	**+1.1**
	SNR=90						
UCH	**Uchtor**	**43.47**	**337**	P	**P**	**13 04 53.8**	**+1.3**
	SNR=205						
AAA	**Alma-Ata**	**43.49**	**340**	*c i*P	**P**	**13 04 54.0**	**+1.4**
AAA				*i* S	**S**	**13 11 22.0**	**+3.1**
AAA				pmax	pmax		
	comp=Z,4µm,4.0s						
AAA				pmax	pmax		
	comp=Z,8µm,6.0s						
AAA				MLR	MLR		
	comp=Z,46µm,17.0s,MS6.5						
WHFO	**Wadi Hawf**	**43.62**	**293**	⇓P	**P**	**13 04 54.8**	**+0.9**
TKM2	**Tokmak 2**	**43.66**	**339**	P	**P**	**13 04 54.8**	**+0.9**
	SNR=154						
KBK	**Karagaybulak**	**43.67**	**338**	P	**P**	**13 04 55.5**	**+1.4**
	SNR=162						
AML	**Almayashu**	**43.71**	**336**	P	**P**	**13 04 55.8**	**+1.4**
	SNR=275						
AAK	**Ala-Archa**	**43.82**	**337**	P	**P**	**13 04 56.4**	**+1.2**
	SNR=113						
AAK	**Ala-Archa**	**43.82**	**337**	*i* P	**P**	**13 04 56.1**	**+0.8**
AAK				pmax	pmax		
	comp=Z,822nm,2.0s,mb6.1						
AAK				MLR	MLR		
	comp=Z,88µm,21.0s,MS6.7						
AAK	**Ala-Archa**	**43.82**	**337**	*e*P	**P**	**13 04 54.8**	**-0.5**
	comp=Z,2µm,1.9s,mb6.4						
AAK				LR	LR		
	comp=Z,23µm,21.0s,MS6.1						
ASHO	**Ashiyiah**	**43.82**	**303**	⇑P	**P**	**13 04 59.1**	**+3.6**
	SNR=23						
FRU	**Bishkek**	**43.94**	**338**	*i* P	**P**	**13 04 57.0**	**+0.7**
FRU				pmax	pmax		
	comp=Z,1µm,2.0s,mb6.2						
FRU				MLR	MLR		
	comp=Z,80µm,20.0s,MS6.6						
CHMS	**Chumysh**	**44.03**	**338**	P	**P**	**13 04 58.5**	**+1.4**
	SNR=45						
EKS2	**Erkin-Say**	**44.12**	**337**	P	**P**	**13 04 59.0**	**+1.3**
	SNR=115						
BANOM	**Banah**	**44.12**	**305**	⇑P	**P**	**13 05 01.2**	**+3.2**
WRA	**Warramunga Arr**	**44.29**	**123**	P	**P**	**13 04 58.7**	**-0.7**
	comp=Z,138nm,0.9s,mb5.7,baz=300,slow=8.8,SNR=154						
WRAB	**Tennant Creek**	**44.29**	**123**	*e*P	**P**	**13 04 58.7**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,681nm,1.1s,mb6.3						
WRAB				MLR	MLR		
	comp=Z,36µm,21.0s,MS6.3						
WRAB	**Tennant Creek**	**44.29**	**123**	*e*P	**P**	**13 04 58.7**	**-0.7**
	comp=Z,681nm,1.1s,mb6.3						
WRAB				LR	LR		
	comp=Z,36µm,21.0s,MS6.3						
WB2	**Warramunga Arr**	**44.30**	**123**	⇑*i*P	**P**	**13 04 58.7**	**-0.8**
WB2				*e*S	**S**	**13 11 27.6**	**-3.4**
USP	**Ospenovka**	**44.36**	**338**	P	**P**	**13 05 00.5**	**+0.8**
	SNR=21						
INCN	**Inchon**	**44.66**	**36**	*e*P	**P**	**13 05 01.3**	**-0.9**
	comp=Z,760nm,1.6s,mb6.3						
INCN				LR	LR		
	comp=Z,91µm,20.0s,MS6.7						
MENI	**Mendum Tagoi**	**45.12**	**96**	⇑*i*P	**P**	**13 05 04.6**	**-1.6**
MENI				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.5						
MENI	**Mendum Tagoi**	**45.12**	**96**	⇑*i*P	**P**	**13 05 04.6**	**-1.6**
	comp=Z,63nm,0.9s,mb5.5						
MKAR	**Makanchi Array**	**45.23**	**347**	*i* P	**P**	**13 05 06.6**	**+0.1**
YOMI	**Yo Moklole**	**45.28**	**97**	⇑*i*P	**P**	**13 05 05.1**	**-2.3**
	comp=Z,238nm,0.9s,mb6.0						
YOMI				⇑*i*pP	pP	13 05 08.7	-7.5
KS15	**Wonju Array Si**	**45.37**	**37**	*e*P	**P**	**13 05 06.8**	**-1.0**
FORT	**Forrest**	**45.60**	**140**	⇑*i*P	**P**	**13 05 10.1**	**+0.4**
	comp=Z,8µm,0.8s						
FORT				*e*S	**S**	**13 12 03.1**	**+14**
ASPA	**Alice Springs**	**45.69**	**127**	⇑*i*P	**P**	**13 05 09.8**	**-0.7**
ASPA				*e*SCS	ScS	13 15 02.5	+0.6
ASAR	**Alice Springs**	**45.69**	**127**	P	**P**	**13 05 09.9**	**-0.6**
	comp=Z,55nm,1.0s,mb5.4,baz=299,slow=6.8,SNR=99						
SONM	**Songino Array**	**45.72**	**10**	P	**P**	**13 05 10.6**	**+0.2**
	comp=Z,153nm,0.7s,mb6.0,baz=192,slow=7.2,SNR=412						
ULN	**Ulaanbaatar**	**45.87**	**11**	*e*P	**P**	**13 05 11.4**	**-0.2**
ULN				pmax	pmax		
	comp=Z,115nm,0.8s,mb5.9						
ULN				MLR	MLR		
	comp=Z,142µm,20.0s,MS6.9						
ULN	**Ulaanbaatar**	**45.87**	**11**	*e*P	**P**	**13 05 11.3**	**-0.2**
	comp=Z,115nm,0.8s,mb5.9						
ULN				LR	LR		
	comp=Z,142µm,20.0s,MS6.9						
SNY	**Shenyang**	**46.16**	**29**	⇑P	**P**	**13 05 13.5**	**-0.5**
SNY				AP	pP	13 05 25.0	+2.1
SNY				XP	sP	13 05 33.5	+7.0
SNY				PP	PP	13 07 05.8	+3.4
SNY				S	**S**	**13 11 56.5**	**-0.9**
SNY				XS		13 12 10.0	
SNY				AMB	AMB		
	comp=Z,330nm,1.9s,mb5.9						
SNY				LR	LR		
	comp=N,118µm,18.9s						
SNY				LR	LR		
	comp=Z,129µm,18.6s,MS6.9						
ZAK	**Zakamensk**	**47.76**	**7**	⇓*i*P	**P**	**13 05 26.3**	**-0.2**
ZAK				*e*		13 15 13.9	
ZAK				pmax	pmax		
	comp=Z,109nm,1.7s,mb5.6						
CN2	**Changchun**	**48.55**	**29**	*e*P	**P**	**13 05 32.0**	**-0.7**
CN2				*e*AP	pP	13 05 42.8	+1.1
CN2				*e*XP	sP	13 05 46.0	+0.8
CN2				PCP	PcP	13 07 02.5	+3.9
CN2				PP	PP	13 07 25.3	0.0
CN2				*e*S	**S**	**13 12 30.5**	**-0.8**
CN2				AMB	AMB		
	comp=Z,220nm,0.8s,mb6.2						
CN2				LR	LR		
	comp=N,76µm,17.0s,MS7.0						
CN2				LR	LR		
	comp=E,106µm,17.0s,MS7.0						
MOY	**Mondy**	**48.81**	**4**	*e*P	**P**	**13 05 34.7**	**+0.1**
MOY				pmax	pmax		
	comp=Z,443nm,4.3s						
TLY	**Talaya**	**49.08**	**7**	P	**P**	**13 05 37.2**	**+0.6**
	comp=Z,1µm,0.8s,mb7.0						
TLY	**Talaya**	**49.08**	**7**	*e*P	**P**	**13 05 36.8**	**+0.2**
TLY				*e*		13 07 30.4	
TLY				*e*S	**S**	**13 12 40.7**	**+2.3**
TLY				*e*SS	ScS	13 15 29.4	+5.8
TLY				pmax	pmax		
	comp=Z,181nm,1.0s,mb6.1						
TLY				MLR	MLR		
	comp=Z,191µm,19.0s,MS7.1						
IRK	**Irkutsk**	**49.70**	**7**	⇑*i*P	**P**	**13 05 41.2**	**-0.3**
IRK				*e*		13 07 29.7	
IRK				*e*		13 12 44.7	
IRK				pmax	pmax		
	comp=Z,646nm,3.9s						
KURK	**Kurchatov**	**49.75**	**346**	⇑*i*P	**P**	**13 05 41.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,373nm,0.8s,mb6.5						
KURK				MLR	MLR		
	comp=Z,32µm,22.0s,MS6.3						
KURK	**Kurchatov**	**49.75**	**346**	⇑*i*P	**P**	**13 05 41.8**	**0.0**
	comp=Z,372nm,0.8s,mb6.5						
KURK				LR	LR		
	comp=Z,32µm,22.0s,MS6.3						
HIA	**Hailar**	**50.58**	**20**	*e*P	**P**	**13 05 47.4**	**-0.8**
HIA				pmax	pmax		
	comp=Z,194nm,1.0s						
HIA	**Hailar**	**50.58**	**20**	*e*P	**P**	**13 05 47.4**	**-0.8**
	comp=Z,194nm,1.0s,mb6.0						
CBIJ	**Chichi jima**	**50.60**	**57**	P	**P**	**13 05 46.9**	**-1.8**
	comp=Z,73nm,0.6s,mb5.8,baz=294,slow=20,SNR=2.4						
CBIJ				LR	LR	13 25 01.1	
	comp=Z,30µm,21.9s,MS6.3,baz=206,slow=34						
LBOS		**50.88**	**285**	*e*P	**P**	**13 05 51.2**	**+0.3**
JHJ	**Hachijo jima 2**	**51.07**	**49**	P	**P**	**13 05 50.5**	**-1.7**
	comp=Z,79nm,0.6s,mb5.8,baz=246,slow=20,SNR=1.8						
SARN	**Sarigan**	**51.14**	**71**	*e*P	**P**	**13 05 54.5**	**+1.6**
MDJ	**Mudanjiang**	**51.20**	**31**	P	**P**	**13 05 53.3**	**+0.3**
MDJ				AP	pP	13 06 02.5	+0.5
MDJ				XP	sP	13 06 06.3	+0.9
MDJ				PP	PP	13 07 50.3	-0.2
MDJ				SCP		13 11 02.5	
MDJ				PCS		13 11 06.0	
MDJ				S	**S**	**13 13 11.0**	**+3.1**
MDJ				AMB	AMB		
	comp=Z,199nm,1.1s,mb6.0						
MDJ				AMB	AMB		
	comp=Z,6µm,6.8s						
MDJ				LR	LR		
	comp=N,28µm,14.9s,MS6.8						
MDJ				LR	LR		
	comp=E,69µm,16.9s,MS6.8						
MDJ				LR	LR		
	comp=Z,79µm,18.8s,MS6.8						
MDJ	**Mudanjiang**	**51.20**	**31**	*e*P	**P**	**13 05 53.0**	**0.0**
	comp=Z,331nm,1.1s,mb6.2						
VLA	**Vladivostok**	**51.42**	**34**	⇓*i*P	**P**	**13 05 55.0**	**+0.4**
VLA				*i*		13 13 24.0	
VLA				*i*		13 16 43.0	
VLA				pmax	pmax		
	comp=Z,7µm,6.4s						
VLA				pmax	pmax		
	comp=N,3µm,5.0s						
VLA				pmax	pmax		
	comp=E,2µm,4.0s						
MAJO	**Matsushiro**	**51.55**	**44**	*e*P	**P**	**13 05 55.2**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,292nm,1.4s,mb6.0						
MAJO				MLR	MLR		
	comp=Z,102µm,22.0s,MS6.8						
MAJO	**Matsushiro**	**51.55**	**44**	*e*P	**P**	**13 05 55.2**	**-0.6**
	comp=Z,292nm,1.4s,mb6.0						
MAJO				LR	LR		
	comp=Z,102µm,22.0s,MS6.8						
MAT	**Matsushiro**	**51.55**	**44**	*e*P	**P**	**13 05 54.0**	**-1.8**
MAT				*e*S	**S**	**13 13 26.0**	**+13**
MAT				pmax	pmax		
	comp=Z,464nm,1.8s,mb6.1						
MAT	**Matsushiro**	**51.55**	**44**	*e*P	**P**	**13 05 54.0**	**-1.8**
	comp=Z,464nm,1.8s,mb6.1						
MAT				*e*S	**S**	**13 13 26.0**	**+13**
MAT	**Matsushiro**	**51.55**	**44**	P	**P**	**13 05 54.3**	**-1.5**
MAT				S	**S**	**13 13 26.0**	**+13**
ZAL	**Zalesovo**	**51.64**	**352**	P	**P**	**13 05 56.1**	**-0.1**
	comp=Z,196nm,0.6s,mb6.2,baz=303,slow=6.3,SNR=446						
RAYN	**Ar Rayn**	**52.55**	**298**	P	**P**	**13 06 03.2**	**-0.3**
	comp=Z,906nm,0.9s,mb6.7,SNR=44						
NVS	**Novosibirsk**	**52.75**	**351**	*i* P	**P**	**13 06 03.0**	**-1.5**
NVS				*i* S	**S**	**13 13 27.7**	**-1.3**
NVS				pmax	pmax		
	comp=N,256nm,0.8s						
NVS				pmax	pmax		
	comp=E,203nm,0.8s						
NVS				pmax	pmax		
	comp=Z,331nm,0.8s,mb6.3						
NVS				smax			
	comp=N,1µm,2.3s						
NVS				smax			
	comp=E,734nm,2.3s						
PMG	**Port Moresby**	**52.81**	**104**	⇑*e*P	**P**	**13 06 04.6**	**-0.9**
PMG				pmax	pmax		
	comp=Z,200nm,0.9s						
PMG				MLR	MLR		
	comp=Z,35µm,19.0s						
PMG	**Port Moresby**	**52.81**	**104**	P	**P**	**13 06 04.8**	**-0.7**
	comp=Z,155nm,0.8s,mb6.0,baz=267,slow=2.9,SNR=18						
PMG	**Port Moresby**	**52.81**	**104**	⇑*e*P	**P**	**13 06 04.6**	**-0.9**
	comp=Z,200nm,0.9s,mb6.0						
PMG				LR	LR		
	comp=Z,35µm,19.0s,MS6.4						
BVA0	**Borovoye Array**	**54.13**	**341**	*i* P	**P**	**13 06 13.8**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.3						
BVAR	**Borovoye Array**	**54.13**	**341**	P	**P**	**13 06 13.9**	**-0.8**
	comp=Z,162nm,0.8s,mb6.0,baz=143,slow=7.4,SNR=410						
CHKZ	**Chkalovo**	**54.62**	**342**	⇑*i*P	**P**	**13 06 17.8**	**-0.5**
CTA	**Charters Tower**	**54.69**	**117**	⇑*i*P	**P**	**13 06 18.7**	**-0.5**
	comp=Z,153nm,0.9s,mb6.0						
CTA				*e*S	**S**	**13 13 57.5**	**+1.8**
CTA	**Charters Tower**	**54.69**	**117**	⇑*i*P	**P**	**13 06 18.7**	**-0.5**
CTA				*e*S	**S**	**13 13 57.5**	**+1.8**
CTA				pmax	pmax		
	comp=Z,153nm,0.9s						
CTA	**Charters Tower**	**54.69**	**117**	P	**P**	**13 06 18.9**	**-0.4**
	comp=Z,179nm,1.0s,mb6.1,baz=294,slow=8.8,SNR=19						
CTA				LR	LR	13 32 59.3	
	comp=Z,47µm,20.7s,MS6.5,baz=27,slow=40						
CTAO	**Charters Tower**	**54.69**	**117**	⇑*e*P	**P**	**13 06 18.7**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,278nm,1.1s,mb6.2						
CTAO	**Charters Tower**	**54.69**	**117**	⇑*e*P	**P**	**13 06 18.7**	**-0.5**
	comp=Z,278nm,1.1s,mb6.2						
KLR	**Kul’dur**	**55.48**	**28**	κ *i*P	**P**	**13 06 22.0**	**-2.6**
KLR				*e*		13 08 34.5	
KLR				*e*S	**S**	**13 14 08.0**	**+2.1**
KLR				pmax	pmax		
	comp=N,480nm,2.6s						
KLR				pmax	pmax		
	comp=E,760nm,2.6s						
KLR				pmax	pmax		
	comp=Z,1µm,2.6s,mb6.4						
KLR				smax			
	comp=N,460nm,3.0s						
KLR				smax			
	comp=E,550nm,3.0s						
KLR				MLR	MLR		
	comp=Z,86µm,15.0s,MS7.0						
STKA	**Stephens Creek**	**55.68**	**132**	⇑*i*P	**P**	**13 06 25.2**	**-1.1**
	comp=Z,56nm,0.8s,mb5.6						
STKA				*e*S	**S**	**13 14 09.2**	**+0.4**
STKA	**Stephens Creek**	**55.68**	**132**	P	**P**	**13 06 25.3**	**-0.9**
	comp=Z,33nm,1.1s,mb5.3,baz=305,slow=6.6,SNR=26						
STKA				LR	LR	13 33 29.0	
	comp=Z,36µm,20.6s,MS6.4,baz=302,slow=40						
BHD	**Baghdad**	**56.53**	**308**	*i* P	**P**	**13 06 29.0**	**-3.4**
BHD				*i* S	**S**	**13 14 15.5**	**-4.6**
BHD				*e*ScS	ScS	13 15 42.0	-34
BOD	**Bodaibo**	**56.66**	**12**	*e*P	**P**	**13 06 32.0**	**-0.9**
BOD				*e*		13 14 20.3	
BOD				pmax	pmax		
	comp=Z,171nm,1.5s,mb5.9						
ASAJ	**Asahikawa**	**58.30**	**38**	LR	LR	13 34 13.4	
	comp=Z,67µm,18.9s,MS6.8,baz=245,slow=38						
MAK	**Makhachkala**	**58.41**	**320**	*e*P	**P**	**13 06 44.0**	**-1.5**
MAK				*i*		13 07 35.0	
MAK				*e*		13 08 59.0	
MAK				*e*PPP	PPP	13 10 21.0	+1.0
MAK				S	**S**	**13 14 43.0**	**-1.7**
MAK				*e*PS	PS	13 15 09.0	+6.7
MAK				*i*		13 16 24.0	
MAK				pmax	pmax		
	comp=E,3µm,16.0s						
MAK				pmax	pmax		
	comp=Z,5µm,16.0s						
MAK				smax			
	comp=N,22µm,16.0s						
KMBO	**Kilima Mbogo**	**58.47**	**267**	⇓*e*P	**P**	**13 06 45.9**	**-0.3**
KMBO				pmax	pmax		
	comp=Z,230nm,1.5s						
KMBO				MLR	MLR		
	comp=Z,149µm,20.0s						
KMBO	**Kilima Mbogo**	**58.47**	**267**	P	**P**	**13 06 46.3**	**0.0**
	comp=Z,14nm,0.9s,mb5.0,baz=65,slow=8.9,SNR=37						
KMBO				LR	LR	13 29 23.7	
	comp=Z,152µm,19.3s,MS7.1,baz=78,slow=34						
KMBO	**Kilima Mbogo**	**58.47**	**267**	⇓*e*P	**P**	**13 06 45.9**	**-0.3**
	comp=Z,230nm,1.5s,mb6.0						
KMBO				LR	LR		
	comp=Z,149µm,20.0s,MS7.1						
MSL	**Mosul**	**58.62**	**311**	*e*P	**P**	**13 06 47.5**	**+0.5**
MSL				*i* pP	pP	13 07 03.5	+7.4
MSL				*e*sP	PcP	13 07 29.5	-7.2
MSL				*e*S	**S**	**13 14 47.0**	**-0.5**
MSL				*e*sS		13 15 26.5	
MSL				*e*ScS	ScS	13 16 35.0	+4.1
CLNS	**Chul’man**	**58.62**	**18**	*e*P	**P**	**13 06 46.3**	**-0.4**
CLNS				*e**PP	pP	13 06 54.6	-1.2
CLNS				*e*		13 07 35.7	
CLNS				*e*		13 08 53.5	
CLNS				*e*S	**S**	**13 14 46.9**	**-0.3**
CLNS				pmax	pmax		
	comp=Z,166nm,0.9s,mb6.1						
CLNS				pmax	pmax		
	comp=N,79nm,0.8s						
CLNS				pmax	pmax		
	comp=E,50nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.6						
CLNS				pmax	pmax		
	comp=N,62nm,0.9s						
CLNS				pmax	pmax		
	comp=E,50nm,0.9s						
CLNS				smax			
	comp=N,5µm,16.1s						
CLNS				smax			
	comp=Z,2µm,12.5s						
CLNS				smax			
	comp=E,1µm,14.2s						
CLNS				MLR	MLR		
	comp=Z,222µm,14.0s,MS7.4						

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CLNS                              MLR     MLR
       comp=N,199µm,17.0s,MS7.4
CLNS                              MLR     MLR
       comp=E,97µm,16.0s,MS7.4
HKR   Hakkari          58.63 313  eP      Px      13 05 46.0
HKR   Hakkari          58.63 313   P      P       13 06 47.0  -0.1
GNI   Garni            58.97 316d iP      P       13 06 49.5  +0.1
GNI                               pmax    pmax
       comp=Z,116nm,1.7s
GNI                               MLR     MLR
       comp=Z,26µm,19.0s
GNI   Garni            58.97 316   P      P       13 06 49.3  -0.1
       comp=Z,3.8nm,0.5s,baz=154,slow=13,SNR=18
GNI                               LR      LR      13 35 39.6
       comp=Z,27µm,20.4s,baz=228,slow=40
GNI   Garni            58.97 316   P      P       13 06 48.6  -0.8
TVAN  Van              59.24 314  i P     P       13 07 00.4  +9.1
VANB  Van              59.28 314  eP      Px      13 05 46.1
VANB  Van              59.28 314   P      P       13 06 48.9  -2.7
MTA   Mtatsminda       59.60 318   P      P       13 06 52.3  -1.4
MTA                                S      S       13 15 01.8  +1.6
TI2   Plekhanov        59.65 318  i P     P       13 06 52.4  -1.7
TI2                               i S     S       13 15 02.0  +1.2
TI2                               pmax    pmax
       comp=Z,90nm,1.0s,mb5.8
TI2                               MLR     MLR
       comp=N,14µm,28.0s,MS6.0
TI2                               MLR     MLR
       comp=E,9µm,28.0s,MS6.0
TI2                               MLR     MLR
       comp=Z,16µm,28.0s,MS6.0
DUS   Dusheti          59.84 318   P      P       13 06 54.8  -0.6
YSS   Yuzh-Sakhalins   59.88  36α iP      P       13 06 54.6  -1.0
YSS                               e*PP    pP      13 07 04.0  -0.7
YSS                               e*SP    sP      13 07 09.0  +1.0
YSS                               e               13 09 15.0
YSS                               eS      S       13 15 04.0  +0.4
YSS                               ePPS    PPS     13 15 32.0  +1.3
YSS                               pmax    pmax
       comp=N,100nm,0.9s
YSS                               pmax    pmax
       comp=Z,240nm,0.9s,mb6.2
YSS                               pmax    pmax
       comp=E,140nm,1.0s
YSS                               pmax    pmax
       comp=Z,4µm,6.0s
YSS                               pmax    pmax
       comp=N,1µm,5.0s
YSS                               pmax    pmax
       comp=E,2µm,5.0s
YSS                               pmax    pmax
       comp=N,2µm,18.0s
YSS                               pmax    pmax
       comp=Z,4µm,18.0s
YSS                               MLR     MLR
       comp=Z,57µm,18.0s,MS6.8
YSS   Yuzh-Sakhalins   59.88  36  eP      P       13 06 55.0  -0.6
       comp=Z,748nm,1.2s,mb6.6
YSS                               LR      LR
       comp=Z,63µm,20.0s,MS6.8
KARS  Kars             60.30 316  eP      Px      13 05 58.7
KARS  Kars             60.30 316   P      P       13 06 59.4  +0.8
YUK   Yuzh-Kuril'sk    60.31  40⇑iP      P       13 06 56.0  -2.6
YUK                               e               13 07 40.0
YUK                               ePPP    PPP     13 10 36.0  -4.1
YUK                               eS      S       13 15 17.0  +7.8
YUK                               ePS     PS      13 15 37.0  +8.5
YUK                               e               13 16 40.0
YUK                               eSSS    SSS     13 21 45.0  +3.3
YUK                               pmax    pmax
       comp=N,5µm,4.0s
YUK                               pmax    pmax
       comp=Z,5µm,4.0s
YUK                               pmax    pmax
       comp=E,5µm,3.0s
YUK                               pmax    pmax
       comp=Z,850nm,1.0s,mb6.7
YUK                               smax
       comp=N,3µm,6.0s
YUK                               smax
       comp=E,3µm,5.0s
YUK                               MLR     MLR
       comp=Z,78µm,21.0s,MS6.8
YUK                               MLR     MLR
       comp=N,32µm,22.0s,MS6.8
YUK                               MLR     MLR
       comp=E,65µm,22.0s,MS6.8
BTMT  Batman           60.51 313  eP      Px      13 05 59.8
SVE   Sverdlovsk       60.53 339c iP      P       13 06 58.0  -1.9
SVE                               e               13 07 04.0
SVE                               e               13 09 20.0
SVE                               ePS     PS      13 15 16.0   -15
SVE                               MLR     MLR
       comp=Z,46µm,10.0s,MS6.9
SVE                               MLR     MLR
       comp=N,44µm,20.0s
SVE                               MLR     MLR
       comp=E,1µm,20.0s
BEST  Besiri           60.56 312  i P     P       13 06 59.9  -0.5
ERZM  Erzurum          61.24 315  i P     P       13 07 05.6  +0.7
EZM   Erzurum          61.24 315  eP      Px      13 06 05.5
TOO   Toolangi         61.27 136  eP      P       13 07 05.3  +0.1
       comp=E,4.5nm,1.1s
TOO                               eS      S       13 15 35.3   +14
BINT  Bingol           61.49 313  eP      Px      13 06 05.4
BINT  Bingol           61.49 313   P      P       13 07 06.6   0.0
BCA   Borcka           61.66 316  eP      Px      13 06 07.2
BCA   Borcka           61.66 316   P      P       13 07 07.5  -0.2
KIV   Kislovodsk       61.98 319   P      P       13 07 09.9   0.0
       comp=E,603nm,1.1s,mb6.6,SNR=11
KIV   Kislovodsk       61.98 319  eP      P       13 07 08.7  -1.2
KIV                               pmax    pmax
       comp=Z,254nm,1.2s,mb6.2
KIV   Kislovodsk       61.98 319  eP      P       13 07 08.7  -1.2
       comp=Z,254nm,1.2s,mb6.2
KIV                               LR      LR
       comp=Z,7µm,21.0s,MS5.8
ASF   Jabal al Asfar   62.18 305   P      P       13 07 11.7  +0.2
       comp=Z,13nm,0.8s,mb5.1,baz=348,slow=4.1,SNR=20
URFA  Urfa             62.23 311  eP      Px      13 06 11.7
GOF   Gofitskoye       62.24 321  i P     P       13 07 10.3  -1.3
GOF                               i S     ScS     13 17 00.7  +3.0
GOF                               pmax    pmax
       comp=Z,140nm,1.8s,mb5.8
PTK   Pertek           62.29 313  eP      Px      13 06 11.9
ELZG  Elazig           62.46 312  i P     P       13 07 12.8  -0.3
GUMT  Gumushane        62.79 315  eP      Px      13 06 15.9
GUMT  Gumushane        62.79 315   P      P       13 07 15.9  +0.7
MALT  Malatya          62.81 312  ⇑P      P       13 07 15.4  -0.1
MALT  Malatya          62.81 312  eP      P       13 07 15.1  -0.3
CNB   Canberra Magne   63.01 132  eP      P       13 07 16.1  -0.7
       comp=Z,487nm,1.1s,mb6.5
GZT   Gaziantep        63.15 311  i P     P       13 07 18.3  +0.6
EIL   Elat             63.20 302   P      P       13 07 18.5  +0.3
       comp=Z,21nm,0.8s,mb5.3,baz=119,slow=2.3,SNR=32
EIL   Elat             63.20 302  eP      P       13 07 17.4  -0.7
       comp=Z,137nm,1.0s,mb6.0
GAZ   Gaziantep        63.36 310  eP      Px      13 06 19.8
GAZ   Gaziantep        63.36 310   P      P       13 07 19.8  +0.7
BHL   Bhannes          63.65 307  eP      P       13 07 21.8  +0.7
KAHT  Ahir Dag         63.76 311  i P     P       13 07 21.9  +0.2
SOC   Sochi            63.79 318  i P     P       13 07 20.2  -1.7
SOC                               e               13 07 56.1
SOC                               e               13 09 41.8
SOC                               eS      S       13 15 47.0  -6.3
SOC                               e               13 17 14.8
SOC                               pmax    pmax
       comp=E,87nm,1.1s
COBT  Iskenderun       63.90 309  i P     P       13 07 22.1  -0.6
SOKR  Solikamsk        63.93 339c iP      P       13 07 21.7  -0.8
SOKR                                              13 09 48.1
SOKR                              pmax    pmax
       comp=Z,340nm,0.8s,mb6.4
SOKR                              MLR     MLR
       comp=Z,63µm,24.0s,MS6.7
YAK   Yakutsk          64.26  17c iP      P       13 07 23.6  -1.0
YAK                               e*PP    pP      13 07 32.8  -1.0
YAK                               i               13 07 55.5
YAK                               e               13 09 49.7
YAK                               ePPP    PPP     13 11 14.9  -5.4
YAK                               eS      S       13 15 57.0  -1.7
YAK                               e               13 17 14.2
YAK                               pmax    pmax
       comp=N,138nm,1.1s
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YAK                               pmax    pmax
       comp=E,127nm,1.1s
YAK                               pmax    pmax
       comp=Z,373nm,1.1s,mb6.3
YAK                               pmax    pmax
       comp=E,18nm,1.0s
YAK                               pmax    pmax
       comp=Z,25nm,1.0s,mb5.2
YAK                               pmax    pmax
       comp=N,17nm,0.8s
YAK                               smax
       comp=N,43nm,1.3s
YAK                               smax
       comp=Z,8.0nm,1.2s
YAK                               smax
       comp=E,30nm,1.9s
YAK                               MLR     MLR
       comp=N,67µm,18.0s,MS7.0
YAK                               MLR     MLR
       comp=E,49µm,18.0s,MS7.0
YAK                               MLR     MLR
       comp=Z,105µm,18.0s,MS7.1
YAK   Yakutsk          64.26  17  eP      P       13 07 22.8  -1.9
       comp=Z,508nm,0.8s,mb6.6
YAK                               LR      LR
       comp=Z,189µm,19.0s,MS7.3
CEYT  Ceyhan           64.43 310  eP      Px      13 06 26.8
CEYT  Ceyhan           64.43 310   P      P       13 07 26.8  +0.6
TOKT  Tokat            64.84 314  eP      Px      13 06 29.1
TOKT  Tokat            64.84 314   P      P       13 07 29.1  +0.3
BNN   Bunyan           64.90 312  eP      Px      13 06 29.2
BNN   Bunyan           64.90 312   P      P       13 07 29.2   0.0
MBAR  Mbarara          64.93 268  eP      P       13 07 28.6  -1.2
MBAR                              pmax    pmax
       comp=Z,339nm,1.6s,mb6.1
MBAR                              MLR     MLR
       comp=Z,18µm,20.0s,MS6.3
MBAR  Mbarara          64.93 268  eP      P       13 07 28.6  -1.3
       comp=Z,339nm,1.6s,mb6.1
MBAR                              LR      LR
       comp=Z,18µm,20.0s,MS6.3
TAU   Tasmania Unive   65.14 141   PFAKE          13 07 40.0  +9.3
TAU                               LR      LR
       comp=Z,8µm,19.0s,MS5.9
HNR   Honiara          65.27 102  eP      P       13 07 29.0  -3.0
HNR                               pmax    pmax
       comp=Z,685nm,1.0s,mb6.6
HNR                               MLR     MLR
       comp=Z,11µm,21.0s,MS6.0
HNR   Honiara          65.27 102  eP      P       13 07 29.0  -2.9
       comp=Z,685nm,1.0s,mb6.6
HNR                               LR      LR
       comp=Z,11µm,21.0s,MS6.0
KVT   Kavak            65.45 314   P      P       13 07 32.5  -0.2
MEST  Erdemli          65.55 309  i P     P       13 07 31.4  -2.0
AVNT  Avonos           65.61 312  i P     P       13 07 33.7  -0.1
CSS   Prodhromos       65.77 307  eP      P       13 07 33.3  -1.6
       comp=Z,231nm,1.3s,mb6.0
CTKT  Corum            66.21 313  i P     P       13 07 36.9  -0.6
BOYT  Boyabat          66.37 314  i P     P       13 07 37.8  -0.7
KAMT  Kaman            66.64 312  eP      Px      13 06 39.2
KAMT  Kaman            66.64 312   P      P       13 07 39.2  -1.1
BR131 Keskin Array S   66.79 312   PFAKE          13 07 50.0  +8.7
BR131                             LR      LR
       comp=Z,15µm,19.0s,MS6.2
TOS   Tosya            66.89 314  eP      Px      13 06 41.7
TOS   Tosya            66.89 314   P      P       13 07 41.7  -0.2
HDMB  Hadim            66.93 309  eP      Px      13 06 41.0
HDMB  Hadim            66.93 309   P      P       13 07 41.0  -1.2
CANT  Cankiri          67.06 313   P      Px      13 06 42.8
CANT  Cankiri          67.06 313   P      P       13 07 42.8  -0.1
ELDT  Eldivan          67.16 313  i P     P       13 07 42.4  -1.2
PECR  Pechory          67.17 332⇑iP      P       13 07 42.0  -1.4
PECR                              e               13 10 16.0
PECR                              eS      S       13 16 32.4  -1.9
PECR                              pmax    pmax
       comp=Z,4µm,2.0s
PECR                              pmax    pmax
       comp=Z,5µm,13.0s
PECR                              MLR     MLR
       comp=Z,39µm,23.0s
PECR                              MLR     MLR
       comp=Z,37µm,21.0s
BZK   Bozkurt          67.18 315   P      Px      13 06 43.4
BZK   Bozkurt          67.18 315   P      P       13 07 43.4  -0.4
KONT  Konya--Tatoy     67.27 310  eP      Px      13 06 44.9
KONT  Konya--Tatoy     67.27 310   P      P       13 07 44.9  +0.5
ANTO  Ankara           67.46 312  eP      Px      13 06 44.2
ANTO  Ankara           67.46 312   P      P       13 07 44.2  -1.3
VOR   Voronezh         67.47 326  eP      P       13 07 43.0  -2.4
VOR                               pmax    pmax
       comp=Z,875nm,3.0s
LOD   Lodumlu          67.48 312  eP      Px      13 06 45.1
LOD   Lodumlu          67.48 312   P      P       13 07 45.1  -0.6
BALT  Daday            67.50 314  i P     P       13 07 45.4  -0.3
KIZT  Kizilcal         67.88 311  eP      Px      13 06 45.6
KIZT  Kizilcal         67.88 311   P      P       13 07 45.6  -2.6
SAFT  Safranbolu       67.91 314  eP      Px      13 06 48.0
SAFT  Safranbolu       67.91 314   P      P       13 07 48.0  -0.3
SIM   Simferopol'      68.04 318  eP      P       13 07 47.6  -1.5
SIM                               eS      S       13 16 35.0   -10
SIM                               pmax    pmax
       comp=Z,50nm,0.6s,mb5.7
SIM   Simferopol'      68.04 318  ePr     P       13 07 49.3  +0.2
SGKT  Sivrigoynuk      68.19 313  i P     P       13 07 49.1  -1.0
MDU   Mudurnu          68.78 312  eP      Px      13 06 53.0
MDU   Mudurnu          68.78 312   P      P       13 07 53.0  -0.8
ESKT  Eskisehir        68.81 311  i P     P       13 07 52.1  -1.9
LSZ   Lusaka           69.08 253  eP      P       13 07 54.2  -1.8
LSZ                               pmax    pmax
       comp=Z,193nm,1.4s,mb5.8
LSZ                               MLR     MLR
       comp=Z,74µm,19.0s,MS6.9
LSZ   Lusaka           69.08 253  eP      P       13 07 54.2  -1.7
       comp=Z,192nm,1.4s,mb5.8
LSZ                               LR      LR
       comp=Z,74µm,19.0s,MS6.9
HENT  Hendek           69.11 313  i P     P       13 07 54.7  -1.1
ALT   Altintas         69.26 311  eP      Px      13 06 56.1
ALT   Altintas         69.26 311   P      P       13 07 56.1  -0.6
SKR   Severo-Kuril's   69.42  36  eP      P       13 07 53.0  -4.5
SKR                               e       pP      13 08 03.5  -3.2
SKR                               e               13 08 23.0
SKR                               ePPP    PPP     13 12 13.0  +1.1
SKR                               eS      S       13 17 07.0  +5.8
SKR                               e               13 17 50.0
SKR                               eSS     SS      13 21 27.0  -3.3
SKR                               pmax    pmax
       comp=N,400nm,1.0s
SKR                               pmax    pmax
       comp=Z,850nm,1.0s,mb6.6
SKR                               pmax    pmax
       comp=E,160nm,0.8s
SKR                               smax
       comp=Z,13µm,20.0s
SKR                               smax
       comp=E,18µm,18.0s
SKR                               MLR     MLR
       comp=Z,54µm,18.0s,MS6.8
SKR                               MLR     MLR
       comp=N,38µm,20.0s,MS6.7
SKR                               MLR     MLR
       comp=E,11µm,20.0s,MS6.7
FETY  Fethiye          69.51 308  eP      Px      13 06 54.5
MATP  Matopo           69.69 247   P      P       13 07 59.0  -0.6
       comp=E,69nm,1.2s,mb5.5,baz=78,slow=6.6,SNR=39
MATP                              LR      LR      13 36 00.5
       comp=E,57µm,18.8s,MS6.8,baz=80,slow=34
HRT   Hereke           70.01 312  eP      Px      13 07 00.1
HRT   Hereke           70.01 312   P      P       13 08 00.1  -1.1
MOS   Moscow           70.06 329α iP      P       13 08 01.0  -0.3
MOS                               e               13 08 25.1
MOS                               e               13 10 39.8
MOS                               ePPP    PPP     13 12 19.3  +1.1
MOS                               eS      S       13 17 05.6  -3.1
MOS                               e               13 17 59.3
MOS                               pmax    pmax
       comp=Z,1µm,2.2s,mb6.5
MOS                               pmax    pmax
       comp=Z,418nm,1.6s,mb6.1
MOS                               smax
       comp=N,7µm,5.0s
MOS                               smax
       comp=E,7µm,4.8s
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MOS                               MLR     MLR
       comp=Z,64µm,20.8s,MS6.8
MOS                               MLR     MLR
       comp=E,62µm,21.6s
MOS   Moscow           70.06 329⇑iP      P       13 08 00.1  -1.2
GBZT  Gebze            70.17 312   P      P       13 08 00.8  -1.4
YLV   Yalova           70.17 312  eP      Px      13 07 00.4
YLV   Yalova           70.17 312   P      P       13 08 00.4  -1.8
OBN   Obninsk          70.34 328   P      P       13 08 02.2  -0.8
       comp=E,1µm,1.0s,mb6.8,SNR=51
OBN   Obninsk          70.34 328c iP      P       13 08 01.8  -1.2
OBN                               i               13 08 19.4
OBN                               i               13 08 23.9
OBN                               i S     S       13 17 07.5  -4.5
OBN                               i SS    SS      13 21 50.6  +6.2
OBN                               pmax    pmax
       comp=Z,321nm,1.6s,mb6.0
OBN                               pmax    pmax
       comp=Z,2µm,2.3s,mb6.6
OBN   Obninsk          70.34 328  eP      P       13 08 01.4  -1.6
       comp=Z,418nm,1.0s,mb6.3
OBN                               LR      LR
       comp=Z,9µm,22.0s,MS6.0
BADT  Buyukada         70.42 312  eP      Px      13 07 05.3
BADT  Buyukada         70.42 312   P      P       13 08 05.3  +1.6
MA2   Magadan          70.51  26c iP      P       13 08 03.7  -0.3
MA2                               i S     S       13 17 13.6  -0.3
MA2                               pmax    pmax
       comp=Z,100nm,0.8s,mb5.8
MA2                               pmax    pmax
       comp=E,70nm,1.3s
MA2                               pmax    pmax
       comp=N,100nm,1.5s
MA2                               MLR     MLR
       comp=Z,64µm,20.0s,MS6.9
MA2   Magadan          70.51  26⇑eP      P       13 08 03.3  -0.7
       comp=Z,186nm,0.8s,mb6.1
MA2                               LR      LR
       comp=Z,40µm,20.0s,MS6.7
ISK   Istanbul-Kandi   70.52 313  eP      Px      13 07 03.1
ISK   Istanbul-Kandi   70.52 313   P      P       13 08 03.1  -1.2
AKS   Akhisar          70.97 310  eP      Px      13 07 06.2
AKS   Akhisar          70.97 310   P      P       13 08 06.2  -0.9
BALB  Balikesir        71.07 311  eP      Px      13 07 07.1
BALB  Balikesir        71.07 311   P      P       13 08 07.1  -0.6
BNT   Bandirma         71.20 312  eP      Px      13 07 08.8
BNT   Bandirma         71.20 312   P      P       13 08 08.8  +0.3
KDAG  Bornova          71.29 310  i P     P       13 08 07.5  -1.5
MRMT  Marmara Adasi    71.49 312  eP      Px      13 07 08.5
MRMT  Marmara Adasi    71.49 312   P      P       13 08 08.5  -1.8
PET   Petropavlovsk    71.73  35  eP      P       13 08 12.4  +1.0
PET                               e               13 08 31.4
PET                               ePPP    PPP     13 12 36.4  +2.2
PET                               eS      S       13 17 31.6  +3.5
PET                               eSP     SP      13 17 55.7  -2.5
PET                               pmax    pmax
       comp=Z,4µm,5.5s
PET                               pmax    pmax
       comp=Z,10µm,19.4s
PET                               smax
       comp=N,11µm,24.9s
PET                               smax
       comp=N,7µm,16.0s
PET                               MLR     MLR
       comp=Z,48µm,18.0s,MS6.8
PET                               MLR     MLR
       comp=Z,43µm,18.0s
PET                               MLR     MLR
       comp=Z,49µm,17.3s
PET                               MLR     MLR
       comp=Z,44µm,17.2s
PET   Petropavlovsk    71.73  35  eP      P       13 08 10.1  -1.3
       comp=Z,222nm,0.9s,mb6.1
PET                               LR      LR
       comp=Z,53µm,21.0s,MS6.8
MFT   Murefte          71.77 312  eP      Px      13 07 11.2
MFT   Murefte          71.77 312   P      P       13 08 11.2  -0.7
CANB  Canakkale        71.77 311  eP      Px      13 07 11.2
CANB  Canakkale        71.77 311   P      P       13 08 11.2  -0.7
KWAJ  Kwajalein Atol   71.79  82   P      P       13 08 11.9  -0.5
KWAJ                              LR      LR
       comp=Z,3µm,21.0s
TIRR  Tirgusor         71.80 316  ⇑P      P       13 08 11.0  -1.0
TIRR  Tirgusor         71.80 316   P      P       13 08 11.3  -0.7
TIXI  Tiksi            71.81  11⇑iP      P       13 08 10.4  -1.2
TIXI                              e               13 10 49.7
TIXI                              eS      S       13 17 27.9  -0.8
TIXI                              pmax    pmax
       comp=E,75nm,1.7s
TIXI                              pmax    pmax
       comp=Z,543nm,1.7s,mb6.2
TIXI                              pmax    pmax
       comp=N,1.0nm,1.3s
TIXI                              pmax    pmax
       comp=Z,5µm,6.4s
TIXI                              MLR     MLR
       comp=Z,73µm,17.0s,MS7.0
TIXI                              MLR     MLR
       comp=E,30µm,15.0s
TIXI  Tiksi            71.81  11⇑iP      P       13 08 10.3  -1.3
TIXI                              LR      LR
       comp=Z,59µm,21.0s,MS6.8
CFR   Carcaliu         72.16 317   P      P       13 08 13.3  -0.9
KIS   Kishinev         72.17 319  eP      P       13 08 12.0  -2.2
KIS                               e               13 08 32.0
KIS                               e               13 12 36.0
KIS                               eS      S       13 17 32.0  -1.2
KIS                               MLR     MLR
       comp=N,15µm,19.0s,MS6.5
KIS                               MLR     MLR
       comp=Z,25µm,19.0s,MS6.5
KIS                               MLR     MLR
       comp=E,18µm,20.0s,MS6.5
HARR  Harsova          72.19 316  ⇑P      P       13 08 13.9  -0.4
HARR  Harsova          72.19 316   P      P       13 08 14.0  -0.3
SANT  Santorini        72.33 307   P      P       13 08 14.4  -0.9
       comp=E,198nm,1.0s,mb6.0
EDRB  Edirne           72.39 313  eP      Px      13 07 14.3
EDRB  Edirne           72.39 313   P      P       13 08 14.3  -1.2
JMB   Yambol           72.64 314  i P     P       13 08 17.0   0.0
ALN   Alexandroupoli   72.71 312  eP      P       13 08 18.0  +0.6
SEY   Seymchan         72.84  24  eP      P       13 08 18.5  +0.7
SEY                                               13 08 40.3
SEY                                               13 11 01.6
SEY                               ePPP    PPP     13 12 52.2  +7.4
SEY                               eS      S       13 17 42.7  +2.1
SEY                               e               13 18 32.4
SEY                                SS     SS      13 22 29.2  +6.0
SEY                               eSSS    SSS     13 25 39.4  +6.3
SEY                               pmax    pmax
       comp=Z,600nm,1.2s,mb6.4
SEY                               pmax    pmax
       comp=N,200nm,1.3s
SEY                               smax
       comp=N,87µm,21.6s
SEY                               smax
       comp=E,48µm,18.7s
SEY                               MLR     MLR
       comp=Z,267µm,26.0s,MS7.4
SEY                               MLR     MLR
       comp=N,218µm,24.0s,MS7.5
SEY                               MLR     MLR
       comp=E,209µm,24.0s,MS7.5
AKASG Malin Array Be   72.94 322   P      P       13 08 17.0  -1.6
       comp=E,7.0nm,0.5s,mb4.9,baz=91,slow=4.5,SNR=93
GVD   Gavdhos          73.20 305   P      P       13 08 17.9  -2.6
       comp=E,169nm,1.0s,mb5.9
LBTB  Lobatse          73.22 243   P      P       13 08 20.3  -0.5
LBTB                              pmax    pmax
       comp=Z,230nm,1.0s,mb6.1
LBTB  Lobatse          73.22 243   P      P       13 08 20.1  -0.7
       comp=Z,40nm,0.9s,mb5.4,baz=101,slow=6.6,SNR=37
LBTB                              LR      LR      13 37 02.9
       comp=Z,109µm,19.4s,MS7.1,baz=74,slow=33
LBTB  Lobatse          73.22 243  eP      P       13 08 20.0  -0.8
       comp=Z,233nm,1.0s,mb6.1
LBTB                              LR      LR
       comp=Z,107µm,19.0s,MS7.2
LOS   Limnos           73.25 311  eP      PcP     13 08 36.3  -0.9
VRI   Vrincioaia       73.29 317  ⇓P      P       13 08 20.8   0.0
NOUC  Port Laguerre    73.31 114  eP      P       13 08 21.3   0.0
DIM   Dimitrovgrad     73.31 313  i P     P       13 08 20.0  -1.0
DZM   Mont Dzumac      73.43 114  eP      P       13 08 21.7  -0.3
BUC1  Bucharest        73.43 315   P      P       13 08 22.6  +0.9
MLR   Muntele Rosu     73.74 317  ⇓P      P       13 08 23.6  +0.2
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MLR	**Muntele Rosu**	**73.74**	**317**	P	**P**	**13 08 23.5**	**+0.1**
	comp=Z,28nm,0.9s,mb5.2,baz=114,slow=2.5,SNR=36						
MLR	**Muntele Rosu**	**73.74**	**317**	P	**P**	**13 08 24.2**	**+0.8**
RZN	**Rozhen**	**73.84**	**313**	*i* P	**P**	**13 08 23.0**	**-1.1**
MAW	**Mawson**	**74.01**	**192**	P	**P**	**13 08 24.5**	**0.0**
	comp=Z,38nm,1.0s,mb5.3,baz=220,slow=3.6,SNR=4.1						
MAW				LR	LR	13 35 08.4	
	comp=Z,27µm,21.5s,MS6.5,baz=29,slow=31						
BOSA	**Boshof**	**74.25**	**239**	*e*P	**P**	**13 08 25.5**	**-1.2**
BOSA				pmax	pmax		
	comp=Z,201nm,1.3s,mb5.9						
BOSA				MLR	MLR		
	comp=Z,83µm,19.0s,MS7.0						
BOSA	**Boshof**	**74.25**	**239**	*e*P	**P**	**13 08 25.5**	**-1.3**
	comp=Z,201nm,1.3s,mb5.9						
BOSA				LR	LR		
	comp=Z,83µm,19.0s,MS7.0						
PGB	**Panagyurishte**	**74.40**	**313**	*i* P	**P**	**13 08 26.0**	**-1.3**
MMB	**Musomiste**	**74.55**	**312**	*i* P	**P**	**13 08 27.0**	**-1.2**
SRS	**Serrai**	**74.57**	**312**	*e*P	**P**	**13 08 27.1**	**-1.2**
BURAR	**Bucovina Array**	**74.70**	**319**	P	**P**	**13 08 29.2**	**+0.3**
SOH	**Sokhos**	**74.70**	**311**	*e*P	**P**	**13 08 28.5**	**-0.6**
MNK	**Minsk**	**74.85**	**326**	*e*P	**P**	**13 08 26.0**	**-3.7**
MNK				*e*S	S	13 18 00.0	-3.3
THE	**Thessaloniki**	**74.96**	**311**	*e*P	**P**	**13 08 29.9**	**-0.7**
KKB	**Krupnik**	**75.08**	**312**	*i* P	**P**	**13 08 30.0**	**-1.2**
KNT	**Kendrikon**	**75.10**	**312**	*e*P	**P**	**13 08 30.3**	**-1.0**
VTS	**Vitosha**	**75.11**	**313**	⇑P	**P**	**13 08 30.2**	**-1.2**
VTS	**Vitosha**	**75.11**	**313**	P	**P**	**13 08 31.7**	**+0.3**
VTS	**Vitosha**	**75.11**	**313**	*i* P	**P**	**13 08 30.0**	**-1.4**
AGG	**Agios Georgios**	**75.20**	**310**	*e*P	**P**	**13 08 29.2**	**-2.8**
LIT	**Litokhoron**	**75.24**	**311**	*e*P	**P**	**13 08 30.7**	**-1.5**
PUL	**Pulkovo**	**75.24**	**332**	*e*P	**P**	**13 08 32.3**	**+0.5**
PUL				*i* PPP	PPP	13 13 14.5	+6.6
PUL				*e*S	S	13 18 09.2	+1.7
PUL				pmax	pmax		
	comp=N,137nm,0.7s						
PUL				pmax	pmax		
	comp=Z,337nm,0.7s,mb6.4						
PUL				pmax	pmax		
	comp=E,673nm,0.9s						
PUL				smax			
	comp=E,2µm,1.9s						
PUL				MLR	MLR		
	comp=Z,54µm,21.0s,MS6.8						
PUL				MLR	MLR		
	comp=N,23µm,24.0s,MS6.8						
PUL				MLR	MLR		
	comp=E,52µm,20.0s,MS6.8						
PUL	**Pulkovo**	**75.24**	**332**	⇓*i*P	**P**	**13 08 31.9**	**+0.1**
GRG	**Griva**	**75.43**	**311**	*e*P	**P**	**13 08 32.0**	**-1.2**
IDID	**Didziasalis**	**75.69**	**327**	*e*P	**P**	**13 08 34.0**	**-0.4**
IDID				*e*pP	pP	13 08 43.1	-0.6
IDID				AMPb	AMB	13 08 44.6	
	comp=Z,74nm,1.0s,mb5.5						
JOF	**Joensuu**	**75.93**	**335**	*e*p	**P**	**13 08 33.6**	**-2.0**
LVV	**L’vov**	**75.94**	**321**	*i* P	**P**	**13 08 34.6**	**-1.4**
LVV				*e*S	S	13 18 10.6	-4.8
LVV				*e*SS	SS	13 23 12.0	+0.8
IIGN	**Ignalina**	**75.98**	**327**	*e*P	**P**	**13 08 35.8**	**-0.3**
IIGN				*e*pP	pP	13 08 45.3	-0.1
IIGN				AMPb	AMB	13 08 46.3	
	comp=Z,81nm,1.0s,mb5.6						
IZAR	**Zarasai**	**76.08**	**327**	*e*P	**P**	**13 08 36.1**	**-0.5**
IZAR				*e*pP	pP	13 08 45.2	-0.7
IZAR				AMPb	AMB	13 08 46.7	
	comp=Z,62nm,1.1s,mb5.4						
ISAL	**Salakas**	**76.10**	**327**	*e*P	**P**	**13 08 36.2**	**-0.5**
ISAL				*e*pP	pP	13 08 45.3	-0.7
ISAL				AMPb	AMB	13 08 46.9	
	comp=Z,57nm,1.0s,mb5.4						
BARS	**Barje**	**76.15**	**313**	⇓*i*P	**P**	**13 08 35.8**	**-1.5**
FNA	**Florina**	**76.18**	**311**	*e*P	**P**	**13 08 36.1**	**-1.4**
BOLS	**Boljevac**	**76.21**	**314**	⇓*i*P	**P**	**13 08 36.8**	**-0.8**
DRV	**Dumont d’Urvil**	**76.23**	**163**	P	PcP	13 08 53.0	+3.5
DRV				S	S	13 18 18.0	-0.1
DRV				SS	SS	13 23 11.0	-4.1
DRV				L		13 28 00.0	
SKO	**Skopje**	**76.30**	**312**	*e*P	**P**	**13 08 42.6**	**+4.4**
SKO				*i*		13 08 56.4	
SKO				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4						
SKO	**Skopje**	**76.30**	**312**	*e*P	**P**	**13 08 42.6**	**+4.4**
	comp=Z,51nm,1.0s,mb5.4						
SKO				*i*		13 08 56.4	
SKO	**Skopje**	**76.30**	**312**	*e*P	**P**	**13 08 42.6**	**+4.4**
SKO				*i*		13 08 56.4	
	comp=Z,0.1nm,1.0s						
OHR	**Ohrid**	**76.66**	**311**	*i* P	**P**	**13 08 44.6**	**+4.4**
LVZ	**Lovozero**	**76.70**	**340**	P	**P**	**13 08 40.1**	**+0.3**
	comp=Z,981nm,0.8s,mb6.8,SNR=9.5						
LVZ	**Lovozero**	**76.70**	**340**	*e*P	**P**	**13 08 40.3**	**+0.5**
LVZ				*i*	pP	13 08 50.6	+1.5
LVZ				*i*		13 11 41.5	
LVZ				*e*S	S	13 18 27.8	+4.5
LVZ				*i*		13 18 48.6	
LVZ				*i* SS	SS	13 23 25.2	+3.1
LVZ				*i* SSS	SSS	13 26 41.5	+3.7
LVZ				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.7						
LVZ				pmax	pmax		
	comp=E,42nm,1.2s						
LVZ				smax			
	comp=Z,1µm,4.0s						
LVZ				smax			
	comp=N,5µm,6.2s						
LVZ				smax			
	comp=E,3µm,4.2s						
LVZ				MLR	MLR		
	comp=Z,79µm,20.0s,MS7.0						
LVZ				MLR	MLR		
	comp=N,24µm,22.0s,MS6.9						
LVZ				MLR	MLR		
	comp=E,59µm,22.0s,MS6.9						
BZS	**Buzias**	**76.75**	**316**	⇑P	**P**	**13 08 39.1**	**-1.5**
BZS	**Buzias**	**76.75**	**316**	P	**P**	**13 08 41.1**	**+0.5**
KWP	**Kalwaria**	**76.75**	**320**	*e*P	**P**	**13 08 41.0**	**+0.5**
KWP				*e*pP	pP	13 08 47.6	-2.2
KWP				*e*PcP	PcP	13 08 51.7	-0.3
KWP				*e*S	S	13 18 27.5	+3.4
KWP				*e*SS	SKS	13 18 41.9	-12
KWP	**Kalwaria**	**76.75**	**320**	*e*P	**P**	**13 08 41.0**	**+0.5**
KWP				*e*pP	pP	13 08 47.6	-2.1
KWP				*e*PcP	PcP	13 08 51.7	-0.3
KWP				*e*S	S	13 18 27.5	+3.4
KWP				*e*sS		13 18 41.9	
KWP				MLR	MLR	13 51 06.4	
	comp=E,20µm,21.5s,MS6.4						
SVIS	**Svilajnac**	**76.81**	**315**	⇑*i*P	**P**	**13 08 40.6**	**-0.4**
UZH	**Uzhgorod**	**76.82**	**319**	*e*P	**P**	**13 08 40.0**	**-0.9**
UZH				*e*S	S	13 18 22.0	-3.0
KOLS	**Kolonicke sedl**	**76.89**	**320**	*e*P	**P**	**13 08 42.7**	**+1.4**
KOLS				*e*		13 08 48.0	
APA	**Apatity**	**76.98**	**340**	⇑*i*P	**P**	**13 08 42.0**	**+0.6**
APA				*i*		13 08 58.0	
APA				*i*		13 11 40.0	
APA				*i* S	S	13 18 26.0	-0.4
APA				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.7						
SUW	**Suwalki**	**77.37**	**325**	*e*P	**P**	**13 08 43.3**	**-0.5**
SUW				*e*pP	pP	13 08 50.3	-2.9
SUW				*e*PcP	PcP	13 08 53.2	-1.5
SUW				*e*S	S	13 18 29.1	-1.8
SUW				*e*sS		13 18 48.6	
SUW				MLR	MLR	13 49 02.1	
	comp=Z,30µm,20.4s,MS6.6						
CRVS	**Cervenica-Dubn**	**77.41**	**319**	*e*P	**P**	**13 08 48.0**	**+3.8**
CRVS				*e*		13 08 55.0	
CRVS				*e*S	S	13 18 31.6	+0.2
PVY	**Plav**	**77.47**	**313**	⇓*i*P	**P**	**13 08 44.6**	**-0.1**
IVA	**Berane**	**77.56**	**313**	⇓*i*P	**P**	**13 08 46.4**	**+1.2**
DIVS	**Divcibare**	**77.66**	**314**	⇓*i*P	**P**	**13 08 43.0**	**-2.7**
FINES	**FINESS Array B**	**77.76**	**333**	P	**P**	**13 08 45.4**	**-0.5**
	comp=Z,22nm,0.6s,mb5.2,baz=101,slow=6.0,SNR=102						
FINES				LR	LR	13 48 28.1	
	comp=Z,52µm,20.9s,MS6.8,baz=296,slow=40						
KAF	**Kangasniemi**	**77.85**	**333**	*e*p	**P**	**13 08 44.4**	**-1.9**
	comp=Z,101nm,0.9s,mb5.8,baz=104,slow=5.2						
KAF	**Kangasniemi**	**77.85**	**333**	*e*P	**P**	**13 08 44.4**	**-1.9**
KAF				pmax	pmax		
	comp=Z,101nm,0.9s,mb5.8						
ULC	**Ulcinj**	**77.92**	**312**	⇑*i*P	**P**	**13 08 47.3**	**+0.1**
TTG	**Podgorica**	**77.97**	**313**	⇓*i*P	**P**	**13 08 46.8**	**-0.6**

KECS	**Kecovo**	**77.98**	**319**	*e*P	**P**	**13 08 47.7**	**+0.4**
KECS				*e*		13 08 54.7	
PLE	**Pljevlja**	**77.99**	**314**	⇑*i*P	**P**	**13 08 47.4**	**-0.1**
NKY	**Niksic**	**78.21**	**313**	⇓*i*P	**P**	**13 08 48.7**	**0.0**
BUM	**Brajici-Budva**	**78.22**	**312**	⇑*i*P	**P**	**13 08 48.8**	**+0.1**
NIE	**Niedzica**	**78.25**	**320**	*e*P	**P**	**13 08 48.3**	**-0.4**
PSZ	**Piszkesteto**	**78.28**	**318**	⇑*e*P	**P**	**13 08 48.8**	**-0.2**
PSZ				pmax	pmax		
	comp=Z,89nm,0.9s,mb5.7						
PSZ	**Piszkesteto**	**78.28**	**318**	⇑*e*P	**P**	**13 08 48.8**	**-0.1**
	comp=Z,90nm,0.9s,mb5.7						
PSZ	**Piszkesteto**	**78.28**	**318**	⇑*e*P	**P**	**13 08 49.4**	**+0.4**
WAR	**Warsaw**	**78.29**	**323**	*e*P	**P**	**13 08 50.1**	**+1.2**
WAR				*e*	pP	13 08 57.8	-0.4
WAR				*e*		13 11 43.9	
WAR				*e*S	S	13 18 42.1	+1.4
WAR				*e*SS	SKS	13 18 59.0	-5.5
WAR				MLR	MLR		
	comp=Z,22µm,21.3s,MS6.5						
WAR	**Warsaw**	**78.29**	**323**	*e*P	**P**	**13 08 50.1**	**+1.2**
WAR				*e*pP	pP	13 08 55.1	-3.1
WAR				*e*PcP	PcP	13 08 57.8	-0.8
WAR				*e*PP	PP	13 11 43.9	-4.0
WAR				*e*S	S	13 18 42.1	+1.4
WAR				*e*SS	SKS	13 18 59.0	-5.5
WAR				LR	LR		
	comp=Z,22µm,21.3s,MS6.5						
WAR	**Warsaw**	**78.29**	**323**	*e*P	**P**	**13 08 50.1**	**+1.2**
WAR				*e*pP	pP	13 08 55.1	-3.2
WAR				*e*PcP	PcP	13 08 57.8	-0.8
WAR				*e*PP	PP	13 11 43.9	-4.0
WAR				*e*S	S	13 18 42.1	+1.4
WAR				*e*sS		13 18 59.0	
WAR				MLR	MLR	13 48 00.3	
	comp=Z,22µm,21.3s,MS6.5						
UPM	**Unac-Piva**	**78.32**	**313**	⇑*i*P	**P**	**13 08 48.7**	**-0.6**
HCY	**Herceg Novi**	**78.53**	**313**	⇑*i*P	**P**	**13 08 50.7**	**+0.2**
BRY	**Bratogost**	**78.55**	**313**	⇑*i*P	**P**	**13 08 50.2**	**-0.4**
OJC	**Ojcow**	**78.70**	**321**	⇑*e*P	**P**	**13 08 50.4**	**-0.8**
OJC				*e*PP	PP	13 11 45.3	-6.0
OJC				*e*S	S	13 18 43.8	-1.4
OJC				*e*SS	SS	13 23 52.7	+0.2
OJC				MLR	MLR	13 48 49.8	
	comp=Z,19µm,21.3s,MS6.4						
SUR	**Sutherland**	**78.76**	**236**	P	**P**	**13 08 53.3**	**+1.3**
	comp=Z,46nm,1.0s,mb5.3,baz=113,slow=3.3,SNR=9.0						
SUR	**Sutherland**	**78.76**	**236**	*e*P	**P**	**13 08 53.0**	**+1.1**
	comp=Z,278nm,1.1s,mb6.1						
SUR				LR	LR		
	comp=Z,17µm,19.0s,MS6.4						
VYHS	**Vyhne**	**79.07**	**319**	*e*P	**P**	**13 08 53.8**	**+0.5**
VYHS				*e*S	S	13 18 49.4	+0.3
VYHS	**Vyhne**	**79.07**	**319**	*e*P	**P**	**13 08 53.8**	**+0.5**
VYHS				*e*		13 09 19.5	
VYHS				*e*S	S	13 18 49.4	+0.3
STON	**Ston**	**79.16**	**313**	*i* P	**P**	**13 08 52.7**	**-1.2**
SRO2	**Moca**	**79.26**	**318**	*e*P	**P**	**13 08 56.1**	**+1.8**
SRO	**Srobarova**	**79.32**	**318**	*e*P	**P**	**13 08 56.2**	**+1.5**
SRO1	**Iza**	**79.37**	**318**	*e*P	**P**	**13 08 56.5**	**+1.6**
TIP	**Timpagrande**	**79.52**	**309**	⇑*e*P	**P**	**13 08 55.4**	**-0.6**
LTRZ	**Laterza**	**79.60**	**311**	*e*P	**P**	**13 08 56.2**	**-0.1**
TSUM	**Tsumeb**	**79.66**	**250**	P	**P**	**13 08 57.6**	**+0.5**
	comp=Z,8.7nm,0.9s,baz=77,slow=6.0,SNR=7.4						
TSUM	**Tsumeb**	**79.66**	**250**	*e*P	**P**	**13 08 57.4**	**+0.4**
	comp=Z,64nm,1.0s,mb5.5						
TSUM				LR	LR		
	comp=Z,30µm,19.0s,MS6.7						
OKC	**Ostrava-Krasne**	**79.70**	**320**	*e*P	**P**	**13 08 57.4**	**+0.7**
OKC				*e*S	S	13 18 54.9	-0.8
OKC				AMS	AMS	13 54 50.0	
	comp=Z,10µm,16.3s						
RAC	**Raciborz**	**79.70**	**320**	*e*P	**P**	**13 08 57.5**	**+0.8**
RAC				*e*S	S	13 18 57.0	+1.3
RAC				MLR	MLR		
	comp=Z,20µm,19.6s,MS6.5						
RAC	**Raciborz**	**79.70**	**320**	*e*P	**P**	**13 08 57.5**	**+0.8**
RAC				*e*S	S	13 18 57.0	+1.3
RAC				LME		13 48 41.3	
RAC				LMN		13 49 19.2	
RAC				MLR	MLR	13 51 10.2	
	comp=Z,20µm,19.6s,MS6.5						
GRI	**Girifalco**	**79.75**	**309**	*e*P	**P**	**13 08 58.2**	**+1.0**
ORI	**Oriolo Calabro**	**79.83**	**310**	*e*P	**P**	**13 08 58.8**	**+1.2**
KEV	**Kevo**	**79.98**	**341**	*e*p	**P**	**13 08 57.9**	**+0.1**
SOI	**Samo**	**79.98**	**308**	*e*P	**P**	**13 08 58.2**	**-0.2**
SMOL	**Smolenice**	**80.00**	**319**	*e*P	**P**	**13 08 58.5**	**+0.2**
MORC	**Moravsky Berou**	**80.08**	**320**	*e*P	**P**	**13 08 58.5**	**-0.2**
BILL	**Bilibino**	**80.16**	**21*c***	*i*P	**P**	**13 08 58.2**	**-0.5**
BILL				pmax	pmax		
	comp=Z,118nm,1.7s,mb5.5						
BILL				MLR	MLR		
	comp=Z,97µm,18.0s,MS7.2						
BILL	**Bilibino**	**80.16**	**21**	*e*P	**P**	**13 08 57.7**	**-1.1**
	comp=Z,92nm,1.0s,mb5.7						
BILL				LR	LR		
	comp=Z,111µm,19.0s,MS7.2						
ZST	**Bratislava**	**80.18**	**318**	*e*S	S	13 19 02.8	+2.1
FX1	**Attu Island--F**	**80.19**	**37**	P	**P**	**13 08 59.8**	**+0.6**
	comp=Z,71nm,0.5s,baz=29,slow=4.8,SNR=23						
FX1				LR	LR	13 46 30.8	
	comp=Z,757nm,20.1s,baz=288,slow=37						
FX1	**Attu Island--F**	**80.19**	**37**	*e*P	**P**	**13 08 59.5**	**+0.2**
MTTG	**Motta San Giov**	**80.26**	**308**	*e*P	**P**	**13 09 01.7**	**+1.8**
SCLL	**Scilla**	**80.27**	**308**	*e*P	**P**	**13 09 00.6**	**+0.6**
SISC	**Sisak**	**80.38**	**315**	*i* P	**P**	**13 09 00.2**	**-0.2**
ARCES	**ARCESS Array B**	**80.41**	**340**	P	**P**	**13 09 00.3**	**+0.3**
	comp=Z,17nm,0.6s,mb5.2,baz=94,slow=5.6,SNR=59						
ARCES				LR	LR	13 50 17.1	
	comp=Z,72µm,20.6s,MS7.0,baz=117,slow=40						
ARE0	**ARCESS Array S**	**80.41**	**340**	*e*P	**P**	**13 08 59.8**	**-0.3**
MGR	**Morigerati**	**80.52**	**310**	*e*P	**P**	**13 09 00.8**	**-0.5**
FG4	**Candela**	**80.62**	**311**	*e*P	**P**	**13 09 02.6**	**+0.8**
VRAC	**Vranov**	**80.64**	**319**	⇑P	**P**	**13 09 01.6**	**-0.1**
VRAC	**Vranov**	**80.64**	**319**	P	**P**	**13 09 03.0**	**+1.3**
VKA	**Vienna**	**80.70**	**318**	⇑*i*P	**P**	**13 09 02.7**	**+0.7**
VKA				pmax	pmax		
	comp=Z,1µm,3.5s						
VKA				MLR	MLR		
	comp=Z,8µm,17.0s,MS6.2						
VKA	**Vienna**	**80.70**	**318**	⇑*i*P	**P**	**13 09 02.7**	**+0.7**
	comp=Z,1µm,3.5s						
VKA				LR	LR		
	comp=Z,8µm,17.0s,MS6.2						
GKP	**Gorka Klasztor**	**80.72**	**323**	*e*P	**P**	**13 09 02.1**	**+0.1**
GKP				*e**PP	pP	13 09 12.3	+0.9
GKP				*e*S	S	13 19 04.6	-1.7
GKP				MLR	MLR		
	comp=Z,19µm,24.1s,MS6.4						
GKP	**Gorka Klasztor**	**80.72**	**323**	*e*P	**P**	**13 09 02.1**	**+0.1**
GKP				*e*PcP	PcP	13 09 08.4	-0.7
GKP				*e*pP	pP	13 09 12.3	+0.9
GKP				*e*S	S	13 19 04.6	-1.7
GKP				*e*SS	SKS	13 19 22.0	+0.1
GKP				LR	LR		
	comp=Z,19µm,24.1s,MS6.4						
GKP	**Gorka Klasztor**	**80.72**	**323**	*e*P	**P**	**13 09 02.1**	**0.0**
GKP				*e*PcP	PcP	13 09 08.4	-0.6
GKP				*e*pP	pP	13 09 12.3	+1.0
GKP				*e*S	S	13 19 04.6	-1.7
GKP				*e*sS		13 19 22.0	
GKP				MLR	MLR	13 45 21.1	
	comp=Z,19µm,24.1s,MS6.4						
SMY	**Shemya**	**80.73**	**37**	PFAKE		13 09 10.0	+7.9
SMY				LR	LR		
	comp=Z,36µm,20.0s,MS6.7						
SGO	**Sicignano**	**80.74**	**310**	*e*P	**P**	**13 09 02.7**	**+0.3**
FG5	**Orsara di Pugl**	**80.82**	**311**	*e*P	**P**	**13 09 07.8**	**+5.0**
DPC	**Dobruska-Polom**	**80.93**	**320**	*e*P	**P**	**13 09 04.1**	**+0.9**
DPC				*e*S	S	13 19 09.0	+0.5
DPC				AMS	AMS	13 51 40.0	
	comp=Z,24µm,19.8s						
CSSN	**Cassano Irpino**	**80.98**	**311**	*e*P	**P**	**13 09 04.0**	**+0.3**
KSP	**Ksiaz**	**81.00**	**321**	*e*P	**P**	**13 09 03.9**	**+0.3**
KSP				*e**PP	pP	13 09 11.3	-1.6
KSP				*e*		13 12 07.0	
KSP				*e*S	S	13 19 08.7	-0.5
KSP				*e*SS	SS	13 24 28.0	+1.0
KSP				MLR	MLR		
	comp=Z,40µm,24.6s,MS6.7						
KSP	**Ksiaz**	**81.00**	**321**	*e*P	**P**	**13 09 03.9**	**+0.3**
KSP				*e*PcP	PcP	13 09 09.4	-0.9
KSP				*e*pP	pP	13 09 11.3	-1.6
KSP				*e*PP	PP	13 12 07.0	-3.7

KSP				*e*S	S	13 19 08.7	-0.5
KSP				*e*SS	SS	13 24 28.0	+1.0
KSP				LR	LR		
	comp=Z,40µm,24.6s,MS6.7						
KSP	**Ksiaz**	**81.00**	**321**	*e*P	**P**	**13 09 03.8**	**+0.3**
KSP				*e*pP	pP	13 09 10.9	-2.0
KSP				*e*S	S	13 19 11.3	+2.1
KSP				*e*sS		13 19 28.1	
KSP				MLR	MLR	13 45 31.6	
	comp=Z,35µm,24.6s,MS6.6						
KTK1	**Kautokeino**	**81.03**	**340**	*e*P	**P**	**13 09 03.6**	**+0.3**
	comp=Z,301nm,1.6s,mb6.0						
KTK1	**Kautokeino**	**81.03**	**340**	*e*P	**P**	**13 09 03.6**	**+0.3**
KTK1				AMb	AMB	13 09 08.0	
	comp=Z,301nm,1.6s,mb6.0						
SYO	**Syowa Base**	**81.12**	**198**	⇓P	**P**	**13 09 06.1**	**+2.3**
ARSA	**Arzberg**	**81.14**	**317**	⇑*i*P	**P**	**13 09 04.6**	**+0.3**
	comp=Z,966nm,2.8s,mb6.2						
UPC	**Upice**	**81.14**	**321**	*e*P	**P**	**13 09 04.9**	**+0.6**
UPC				*e*S	S	13 19 12.2	+1.5
BOJS	**Bojanci**	**81.17**	**315**	*e*P	**P**	**13 09 04.5**	**0.0**
BOJS				*e*PcP	PcP	13 09 11.1	-0.1
PERS	**Pernice**	**81.36**	**317**	*e*P	**P**	**13 09 05.7**	**+0.2**
RPZ	**Rata Peaks**	**81.53**	**135**	LR	LR	13 48 11.4	
	comp=Z,31µm,19.7s,MS6.7,baz=288,slow=38						
RPZ	**Rata Peaks**	**81.53**	**135**	*e*PN	**P**	**13 09 07.0**	**+0.5**
RPZ	**Rata Peaks**	**81.53**	**135**	*e*PN	**P**	**13 09 07.0**	**+0.5**
DSZ	**Denniston Nort**	**81.67**	**133**	*e*PN	**P**	**13 09 12.6**	**+5.4**
DSZ	**Denniston Nort**	**81.67**	**133**	*e*PN	**P**	**13 09 12.6**	**+5.4**
LJU	**Ljubljana**	**81.72**	**316**	*e*P	**P**	**13 09 07.7**	**+0.3**
LJU				*e*PcP	PcP	13 09 14.4	+0.8
OBKA	**Obir**	**81.74**	**316**	⇑*i*P	**P**	**13 09 07.9**	**+0.4**
	comp=Z,1µm,2.8s,mb6.3						
RFI	**Roccamonfina**	**81.79**	**311**	*e*P	**P**	**13 09 07.9**	**0.0**
SDI	**San Donato**	**81.94**	**312**	*e*P	**P**	**13 09 08.7**	**+0.1**
QRZ	**Quartz Range**	**82.03**	**132**	*e*PN	**P**	**13 09 13.4**	**+4.3**
PRU	**Pruhonice**	**82.03**	**320**	*e*P	**P**	**13 09 10.0**	**+1.1**
PRU				*e*S	S	13 19 21.0	+1.1
PRU				AMS	AMS	13 52 30.0	
	comp=Z,21µm,18.7s						
MOA	**Molln**	**82.04**	**318**	⇑*i*P	**P**	**13 09 09.0**	**0.0**
	comp=Z,924nm,4.6s						
PVCC	**Panska Ves**	**82.06**	**320**	*e*P	**P**	**13 09 10.4**	**+1.3**
PVCC				*e*S	S	13 19 19.5	-0.7
PVCC				AMS	AMS	13 52 20.0	
	comp=Z,22µm,20.7s						
PRA	**Prague**	**82.11**	**320**	P	**P**	**13 09 13.0**	**+3.7**
PRA				AMS	AMS	13 53 00.0	
VOY	**Vojsko**	**82.16**	**316**	*e*P	**P**	**13 09 09.8**	**+0.1**
VOY				*e*		13 09 14.8	
VOY				*e*		13 09 26.0	
PTQR	**Pietraquaria**	**82.27**	**312**	*e*P	**P**	**13 09 10.8**	**+0.5**
AQU	**L’Aquila**	**82.28**	**312**	P	**P**	**13 09 10.8**	**+0.4**
AQU				pmax	pmax		
	comp=Z,510nm,1.3s,mb6.3						
AQU	**L’Aquila**	**82.28**	**312**	*e*P	**P**	**13 09 11.4**	**+1.1**
BSD	**Bornholm Skovb**	**82.30**	**325**	⇑*i*P	**P**	**13 09 10.1**	**-0.1**
BSD				*i* S	S	13 19 15.7	-6.8
BSD				pmax	pmax		
	comp=Z,108nm,0.9s,mb5.8						
BSD	**Bornholm Skovb**	**82.30**	**325**	⇑*i*P	**P**	**13 09 10.1**	**-0.1**
	comp=Z,108nm,0.9s,mb5.8						
BSD				*i* S	S	13 19 15.7	-6.8
BSD	**Bornholm Skovb**	**82.30**	**325**	⇑*i*P	**P**	**13 09 10.1**	**-0.1**
	comp=Z,108nm,0.9s,mb5.8						
BSD	**Bornholm Skovb**	**82.30**	**325**	*i* S	S	13 19 15.7	-6.8
	comp=Z,23µm,20.0s						
ROBS	**Robic**	**82.44**	**316**	*e*P	**P**	**13 09 10.8**	**-0.4**
ROBS				*e*PcP	PcP	13 09 17.4	+0.7
THZ	**Tophouse**	**82.48**	**133**	*e*PN	**P**	**13 09 14.0**	**+2.5**
THZ	**Tophouse**	**82.48**	**133**	*e*PN	**P**	**13 09 14.0**	**+2.5**
GEC2	**GERESS Array S**	**82.49**	**319**	*e*P	**P**	**13 09 11.7**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,390nm,1.9s,mb6.0						
GEC2	**GERESS Array S**	**82.49**	**319**	*e*P	**P**	**13 09 11.7**	**+0.4**
	comp=Z,390nm,1.9s,mb6.0						
GERES	**GERESS Array B**	**82.49**	**319**	P	**P**	**13 09 11.6**	**+0.3**
	comp=Z,18nm,0.9s,mb5.0,baz=104,slow=5.5,SNR=50						
BRG	**Berggiesshubel**	**82.49**	**321**	*i* P	**P**	**13 09 12.3**	**+1.0**
BRG				*i*	pP	13 09 20.3	-0.4
BRG				*e*		13 19 28.0	
BRG				*i* S	S	13 19 30.0	+5.5
BRG				*i* SS	SS	13 24 50.0	+0.7
BRG				pmax	pmax		
	comp=Z,140nm,1.8s,mb5.6						
BRG				MLR	MLR		
	comp=Z,17µm,25.8s,MS6.3						
BRG	**Berggiesshubel**	**82.49**	**321**	*i* P	**P**	**13 09 12.3**	**+1.0**
	comp=Z,140nm,1.8s,mb5.6						
BRG				*i*	pP	13 09 20.3	-0.4
BRG				*i*		13 09 49.0	
BRG				*e*		13 19 28.0	
BRG				*i* S	S	13 19 30.0	+5.5
BRG				*i* SS	SS	13 24 50.0	+0.7
BRG				LR	LR		
	comp=Z,17µm,25.8s,MS6.3						
NRCA	**Norcia**	**82.52**	**313**	*e*P	**P**	**13 09 12.3**	**+0.7**
PTCC	**Patocco-Chiusa**	**82.56**	**316**	*e*P	**P**	**13 09 12.0**	**+0.3**
KHC	**Kasperske Hory**	**82.59**	**319**	*e*P	**P**	**13 09 12.4**	**+0.6**
KHC				*e*		13 19 27.0	
KHC				MLR	MLR		
	comp=Z,17µm,19.4s,MS6.4						
KHC	**Kasperske Hory**	**82.59**	**319**	*e*P	**P**	**13 09 12.4**	**+0.6**
KHC				*e*		13 09 17.0	
KHC				*e*SKS	SKS	13 19 27.0	-8.0
KHC				LR	LR		
	comp=Z,17µm,19.4s,MS6.4						
KHC	**Kasperske Hory**	**82.59**	**319**	*e*P	**P**	**13 09 12.4**	**+0.6**
KHC				PCP	PcP	13 09 17.0	-0.3
KHC				*e*S	S	13 19 27.0	+1.4
KHC				AMS	AMS	13 52 30.0	
	comp=Z,17µm,19.4s						
WCZ	**Waipu Caves**	**82.60**	**127**	*e*PN	**P**	**13 09 16.8**	**+4.7**
WCZ	**Waipu Caves**	**82.60**	**127**	*e*PN	**P**	**13 09 16.8**	**+4.7**
KBA	**Koelnbreinsper**	**82.61**	**317**	⇑*i*P	**P**	**13 09 11.5**	**-0.5**
	comp=Z,393nm,2.6s,mb6.0						
KBA	**Koelnbreinsper**	**82.61**	**317**	⇑*i*P	**P**	**13 09 11.5**	**-0.5**
KBA				pmax	pmax		
	comp=Z,393nm,2.6s,mb6.0						
GMNA	**Gemona**	**82.63**	**316**	*e*P	**P**	**13 09 12.7**	**+0.6**
TRO	**Tromso**	**82.66**	**340**	*e*P	**P**	**13 09 12.5**	**+0.7**
SNTG	**Esanatoglia**	**82.67**	**313**	*e*P	**P**	**13 09 12.1**	**-0.3**
ARV	**Arcevia**	**82.68**	**313**	*e*P	**P**	**13 09 13.4**	**+1.0**
RUE	**Ruedersdorf**	**82.72**	**322**	*e*P	**P**	**13 09 12.6**	**+0.2**
	comp=Z,208nm,1.0s,mb6.1						
FSSB	**Fossombrone**	**82.81**	**313**	*e*P	**P**	**13 09 14.2**	**+1.1**
MNS	**Montasola**	**82.82**	**312**	*e*P	**P**	**13 09 12.9**	**-0.3**
FVI	**Forni Avoltri**	**82.96**	**316**	*e*P	**P**	**13 09 14.1**	**+0.3**
WET	**Wettzell**	**83.05**	**319**	*e*P	**P**	**13 09 14.5**	**+0.3**
WET				pmax	pmax		
	comp=Z,212nm,1.7s,mb5.9						
WET	**Wettzell**	**83.05**	**319**	*e*P	**P**	**13 09 14.5**	**+0.3**
	comp=Z,212nm,1.7s,mb5.9						
RSM	**Repubblica di**	**83.06**	**314**	*e*P	**P**	**13 09 16.2**	**+1.8**
KHZ	**Kahutara**	**83.07**	**133**	*e*PN	**P**	**13 09 17.4**	**+2.9**
KHZ	**Kahutara**	**83.07**	**133**	*e*PN	**P**	**13 09 17.4**	**+2.9**
CLL	**Collm**	**83.11**	**321**	⇓*i*P	**P**	**13 09 15.1**	**+0.6**
CLL				*e*S	S	13 19 33.0	+2.2
CLL				pmax	pmax		
	comp=Z,101nm,1.7s,mb5.6						
CLL				MLR	MLR		
	comp=Z,21µm,17.4s,MS6.6						
CLL	**Collm**	**83.11**	**321**	⇓*i*P	**P**	**13 09 15.1**	**+0.6**
	comp=Z,101nm,1.7s,mb5.6						
CLL				*i*		13 09 40.2	
CLL				*e*S	S	13 19 33.0	+2.2
CLL				LR	LR		
	comp=Z,21µm,17.4s,MS6.6						
CLL	**Collm**	**83.11**	**321**	⇓P	**P**	**13 09 15.1**	**+0.6**
	comp=Z,logA/T=1.8,mb5.6						
CLL				*e*		13 09 21.0	
CLL				*e**PP	pP	13 09 25.0	+1.1
CLL				*e**SP	sP	13 09 30.0	+3.0
CLL				*i*		13 09 40.2	
CLL				*i*		13 09 56.4	
CLL				*e*PP	PP	13 12 30.0	+2.4
CLL				*e*S	S	13 19 33.0	+2.2
CLL				*e*PPS	PPS	13 20 38.0	-11
CLL				*e*		13 21 24.0	
CLL				*e*		13 21 47.0	
CLL				*e*SS	SS	13 25 03.0	+4.4
CLL				*e*SSS	SSS	13 28 27.0	+3.2
NKC	**Novy Kostel**	**83.39**	**320**	*e*P	**P**	**13 09 16.4**	**+0.4**

NKC				*e*S	S	13 19 39.5	+5.8
NKC				AMS	AMS	13 53 00.0	
	comp=Z,23µm,20.8s						
HIZ	Hauiti	83.40	129	*e*PN	P	13 09 19.8	+3.5
HIZ	Hauiti	83.40	129	*e*PN	P	13 09 19.8	+3.5
CRE	Caprese Michel	83.41	313	*e*P	P	13 09 16.6	+0.4
SFI	Santa Sofia	83.49	314	*e*P	P	13 09 18.3	+1.7
PGD	Poggio Sodo	83.58	314	*e*P	P	13 09 18.8	+1.7
VMG	Vicchio	83.72	314	*e*P	P	13 09 19.0	+1.2
COP	Copenhagen	83.76	326	*i* P	P	13 09 25.3	+7.6
COP				*i* S	S	13 19 35.2	-2.0
COP				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.7						
COP				MLR	MLR		
	comp=Z,13µm,19.0s,MS6.3						
COP	Copenhagen	83.76	326	*i* P	P	13 09 25.3	+7.6
	comp=Z,56nm,0.9s,mb5.7						
COP	Copenhagen	83.76	326	*i* S	S	13 19 35.2	-2.0
	comp=Z,13µm,19.0s						
WTTA	Wattenberg	83.78	317	⇑*i*P	P	13 09 17.7	-0.3
	comp=Z,744nm,3.1s						
WTTA	Wattenberg	83.78	317	⇑*i*P	P	13 09 17.7	-0.3
WTTA				pmax	pmax		
	comp=Z,744nm,3.1s						
MOR8	Moi Rana	83.78	336	*e*P	P	13 09 17.1	-0.5
	comp=Z,250nm,1.4s,mb6.2						
MOR8	Moi Rana	83.78	336	*e*P	P	13 09 17.1	-0.5
MOR8				AMb	AMB	13 09 27.6	
	comp=Z,250nm,1.4s,mb6.1						
MOX	Moxa	83.95	320	⇓*e*P	P	13 09 19.8	+1.0
MOX				*e*S	S	13 19 43.0	+3.8
MOX				pmax	pmax		
	comp=Z,132nm,1.8s,mb5.8						
MOX	Moxa	83.95	320	⇓*e*P	P	13 09 19.8	+1.0
	comp=Z,132nm,1.8s,mb5.8						
MOX				*e*pP	pP	13 09 44.9	+17
MOX				*e*S	S	13 19 43.0	+3.8
MOX	Moxa	83.95	320	⇓*i*P	P	13 09 19.8	+1.0
	comp=Z,logA/T=1.9,mb5.8						
MOX				pP	pP	13 09 45.0	+17
MOX				S	S	13 19 43.0	+3.8
MOX				L		13 55 12.0	
FUR	Furstenfeldbru	84.06	318	*e*P	P	13 09 19.1	-0.3
SQTA	Sankt Quirin	84.07	317	⇓*i*P	P	13 09 19.7	+0.2
	comp=Z,108nm,1.2s,mb5.8						
SQTA	Sankt Quirin	84.07	317	⇓*i*P	P	13 09 19.7	+0.2
SQTA				pmax	pmax		
	comp=Z,108nm,1.2s,mb5.8						
ZCCA	Zocca	84.14	314	*e*P	P	13 09 22.1	+2.2
MOTA	Moosalm	84.14	317	⇓*i*P	P	13 09 19.9	0.0
	comp=Z,43nm,1.0s,mb5.5						
MOTA	Moosalm	84.14	317	⇓*i*P	P	13 09 19.9	0.0
MOTA				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.5						
GRA1	Grafenberg Arr	84.16	319	*e*P	P	13 09 20.7	+0.8
	comp=Z,246nm,1.7s,mb6.1						
GRA1				*e*S	S	13 19 39.8	-1.5
GRA1				LR	LR		
	comp=Z,26µm,19.8s,MS6.6						
GRF	Grafenberg Arr	84.16	319	*e*P	P	13 09 20.7	+0.8
GRF				*e*S	S	13 19 39.8	-1.5
GRF				pmax	pmax		
	comp=Z,246nm,1.7s,mb6.1						
GRF				MLR	MLR		
	comp=Z,26µm,19.8s,MS6.6						
GRF	Grafenberg Arr	84.16	319	*e*P	P	13 09 20.7	+0.8
GRF				*e*S	S	13 19 39.8	-1.5
GRF				pmax	pmax		
	comp=Z,246nm,1.7s,mb6.1						
GRF				MLR	MLR		
	comp=Z,26µm,19.8s,MS6.6						
GRF	Grafenberg Arr	84.16	319	*e*P	P	13 09 20.7	+0.8
	comp=Z,246nm,1.7s,mb6.1						
GRF				*e*S	S	13 19 39.8	-1.5
GRF				LR	LR		
	comp=Z,26µm,19.8s,MS6.6						
LOF	Lofoten	84.36	338	*e*P	P	13 09 23.6	+3.1
LOF				AMb	AMB	13 09 27.1	
	comp=Z,255nm,1.7s,mb6.1						
BDI	Bagni Di Lucca	84.40	314	*e*P	P	13 09 20.8	-0.4
GSCL	Gusciola	84.42	314	*e*P	P	13 09 23.0	+1.8
PII	Pisa	84.44	313	*e*P	P	13 09 23.2	+1.7
TSZ	Takapari Road	84.48	131	*e*PN	P	13 09 21.5	-0.2
TSZ	Takapari Road	84.48	131	*e*PN	P	13 09 21.5	-0.2
SAL	Salo	84.49	315	*e*P	P	13 09 23.2	+1.6
ERBM	Eremo	84.54	314	*e*P	P	13 09 23.8	+1.9
VLC	Villacollemand	84.56	314	*e*P	P	13 09 22.2	+0.2
	comp=Z,178nm,1.4s,mb6.0						
BRMO	Bormio	84.62	316	*e*P	P	13 09 23.0	+0.8
NSS	Namsos	84.65	334	*e*P	P	13 09 21.6	-0.4
NSS				*e*SKSa		13 19 44.0	
NSS				AMS	AMS	13 53 17.8	
	comp=Z,39µm,21.0s,MS6.8						
VALM		84.66	314	P	P	13 09 22.7	+0.2
VINC	Vinca	84.72	314	P	P	13 09 21.9	-0.9
NB2	NORSAR Subarra	84.75	331	P	P	13 09 22.4	-0.1
	comp=Z,13nm,0.8s,mb5.1,baz=97,slow=5.0						
NB2	NORSAR Subarra	84.75	331	P	P	13 09 22.4	-0.1
NB2				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.1						
NB2	NORSAR Subarra	84.75	331	P	P	13 09 22.4	-0.1
	baz=96,slow=5.1						
NOA	NORSAR Array B	84.75	331	P	P	13 09 22.4	-0.1
	comp=Z,14nm,0.9s,mb5.1,baz=95,slow=4.9,SNR=25						
NOA				LR	LR	13 51 05.0	
	comp=Z,23µm,20.9s,MS6.5,baz=95,slow=38						
NOA	NORSAR Array B	84.75	331	P	P	13 09 22.4	-0.1
NOA				LR	LR	13 51 05.0	
CLZ	Clausthal	84.78	322	*e*P	P	13 09 23.2	+0.3
	comp=Z,93nm,1.3s,mb5.8						
GRAM		84.79	314	P	P	13 09 24.2	+1.0
BSEG	Bad Segeberg	84.89	324	*e*P	P	13 09 23.9	+0.5
NAO01	NORSAR Array S	84.90	331	*e*P	P	13 09 23.2	-0.1
	comp=Z,50nm,0.9s,mb5.6						
NAO01				LR	LR		
	comp=Z,33µm,19.0s,MS6.7						
OSL	Oslo	84.93	330	*e*P	P	13 09 25.0	+1.5
HSP	Hornsund	84.95	347	*e*P	P	13 09 23.4	+0.1
DAVA	Damuels	84.97	317	⇑*i*P	P	13 09 24.4	+0.4
	comp=Z,784nm,3.1s						
BOB	Bobbio (Coli)	85.24	315	*e*P	P	13 09 26.7	+1.3
VSL	Villasalto	85.25	309	*e*P	P	13 09 25.2	-0.3
	comp=Z,114nm,1.1s,mb5.9						
MWZ	Matawai	85.46	129	*e*PN	P	13 09 25.7	-0.9
MWZ	Matawai	85.46	129	*e*PN	P	13 09 25.7	-0.9
STU	Stuttgart	85.46	319	*e*P	P	13 09 26.3	-0.1
STU				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.5						
STU	Stuttgart	85.46	319	*e*P	P	13 09 26.3	-0.1
	comp=Z,33nm,0.9s,mb5.5						
KONO	Kongsberg	85.49	329	PFAKE		13 09 40.0	+14
KONO				LR	LR		
	comp=Z,29µm,20.0s,MS6.7						
PGF	Pioggiola	85.55	312	*e*P	P	13 09 27.0	0.0
	comp=Z,271nm,1.4s,mb6.0						
PGF	Pioggiola	85.55	312	*e*P	P	13 09 27.0	0.0
PGF				pmax	pmax		
	comp=Z,136nm,1.4s,mb6.0						
GENL	Genova Univers	85.58	314	P	P	13 09 27.2	+0.2
MUD	Monsted U’grnd	85.62	326	⇑*i*P	P	13 09 28.1	+1.1
MUD				*i* S	S	13 19 58.1	+2.6
MUD				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.6						
MUD	Monsted U’grnd	85.62	326	⇑*i*P	P	13 09 28.1	+1.1
	comp=Z,39nm,1.0s,mb5.6						
MUD				*i* S	S	13 19 58.1	+2.6
MUD	Monsted U’grnd	85.62	326	⇑*i*P	P	13 09 28.1	+1.1
	comp=Z,39nm,1.0s,mb5.6						
MUD	Monsted U’grnd	85.62	326	*i* S	S	13 19 58.1	+2.6
	comp=Z,18µm,19.0s						
VAI	Varese	85.72	316	*e*P	P	13 09 26.8	-1.0
PCP	Pian Castagno	85.88	314	P	P	13 09 29.5	+0.9
KBS	Kingsbay	85.95	349	P	P	13 09 27.6	-0.6
KBS				pmax	pmax		
	comp=Z,82nm,1.1s,mb5.9						
KBS	Kingsbay	85.95	349	*e*P	P	13 09 24.8	-3.4
KBS	Kingsbay	85.95	349	*e*P	P	13 09 30.0	+1.8
KBS				*e*S	S	13 20 00.1	+1.9
KBS				AMS	AMS	13 54 20.4	
	comp=Z,25µm,18.4s,MS6.7						
TNS	Taunus Mts	85.96	320	*e*P	P	13 09 29.2	+0.3
PUZ	Puketiti	85.99	128	*e*PN	P	13 09 30.8	+1.4
PUZ	Puketiti	85.99	128	*e*PN	P	13 09 30.8	+1.4
BFO	Black Forest	86.03	318	*e*P	P	13 09 28.9	-0.3
BFO				pmax	pmax		
	comp=Z,83nm,1.5s,mb5.7						
BFO	Black Forest	86.03	318	*e*P	P	13 09 28.9	-0.3
	comp=Z,83nm,1.5s,mb5.7						
KIWB	Kanaga Island	86.03	38	*e*P	P	13 09 29.4	+0.3
FIN	Finale Ligure	86.12	314	*e*P	P	13 09 30.5	+0.7
MCGN	Macugnaga	86.27	316	*e*P	P	13 09 30.7	+0.3
ORX	Oropa	86.28	315	P	P	13 09 30.1	-0.4
IMI	Imperia	86.35	314	P	P	13 09 30.4	-0.5
ROB	Roburent	86.36	314	P	P	13 09 30.4	-0.6
TRAV		86.44	315	P	P	13 09 29.9	-1.5
MONE	Monesi	86.45	314	P	P	13 09 31.7	+0.3
MOL	Molde	86.54	332	*e*P	P	13 09 33.1	+1.6
SBF	Sospel	86.68	314	*e*P	P	13 09 32.2	-0.4
	comp=Z,246nm,1.1s,mb6.1						
SBF	Sospel	86.68	314	*e*P	P	13 09 32.2	-0.4
SBF				pmax	pmax		
	comp=Z,123nm,1.1s,mb6.0						
ENR	Entracque	86.69	314	P	P	13 09 32.9	+0.3
CDF	Champ du Feu	86.73	318	*e*P	P	13 09 32.0	-0.7
	comp=Z,57nm,1.0s,mb5.5						
CDF	Champ du Feu	86.73	318	*e*P	P	13 09 32.0	-0.7
CDF				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.5						
STV2	Anna di Valdie	86.76	314	P	P	13 09 31.6	-1.3
STV	Sta Anna Valdi	86.76	314	P	P	13 09 32.8	-0.1
RSP	Reno Superiore	86.79	315	P	P	13 09 32.8	-0.3
BHB	Bricherasio	86.79	315	P	P	13 09 32.9	-0.1
CMAH	Djebel Manchou	86.83	306	P	P	13 09 41.0	+7.6
CGMA	Guelma	86.84	306	P	P	13 09 42.0	+8.5
LSD	Ceresole Reale	86.86	315	P	P	13 09 34.5	+1.1
PZZ	Prazzo	86.91	314	P	P	13 09 34.6	+0.9
FENE	Fenestrelle	86.93	315	P	P	13 09 32.9	-0.8
WTSB	Winterswijk	86.99	322	*e*P	P	13 09 33.3	-0.5
	comp=Z,64nm,4.5s						
HINF	Hinteralfeld	87.03	318	*e*P	P	13 09 33.4	-0.7
	comp=Z,49nm,1.1s,mb5.4						
HINF	Hinteralfeld	87.03	318	*e*P	P	13 09 33.4	-0.7
HINF				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.3						
WIT	Witteveen	87.06	323	*e*P	P	13 09 40.4	+6.2
BLS5	Blasjo	87.08	329	*e*P	P	13 09 36.5	+2.3
BLS5				*e*pP	pP	13 09 44.6	+1.0
RRL	Cesana Torines	87.13	315	P	P	13 09 35.3	+0.6
LPG	La Plagne	87.14	315	*e*P	P	13 09 34.7	0.0
	comp=Z,144nm,0.8s,mb6.0						
LPG	La Plagne	87.14	315	*e*P	P	13 09 34.7	0.0
LPG				pmax	pmax		
	comp=Z,72nm,0.8s,mb6.0						
MBDF	Montbardon	87.14	314	*e*P	P	13 09 33.8	-1.0
	comp=Z,75nm,1.0s,mb5.6						
MBDF	Montbardon	87.14	314	*e*P	P	13 09 33.8	-1.0
MBDF				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.6						
LPL	La Plagne	87.16	315	*e*P	P	13 09 34.7	-0.1
	comp=Z,272nm,1.0s,mb6.1						
LPL	La Plagne	87.16	315	*e*P	P	13 09 34.7	-0.1
LPL				pmax	pmax		
	comp=Z,136nm,1.0s,mb6.1						
BNI	Bardonecchia	87.20	315	*e*P	P	13 09 34.6	-0.4
BNI				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.8						
BNI	Bardonecchia	87.20	315	*e*P	P	13 09 34.6	-0.5
	comp=Z,64nm,0.9s,mb5.8						
FRF	La Foret Royal	87.26	313	*e*P	P	13 09 35.1	-0.3
	comp=Z,178nm,1.1s,mb5.9						
FRF	La Foret Royal	87.26	313	*e*P	P	13 09 35.1	-0.3
FRF				pmax	pmax		
	comp=Z,89nm,1.1s,mb5.9						
CAEH	’Ain El Ouahch	87.28	307	P	P	13 09 42.0	+6.4
HAU	Haudompre	87.36	318	*e*P	P	13 09 34.0	-1.7
	comp=Z,165nm,1.0s,mb5.9						
HAU				*e*R			
	comp=Z,18µm,21.2s						
HAU	Haudompre	87.36	318	*e*P	P	13 09 34.0	-1.7
HAU				pmax	pmax		
	comp=Z,82nm,1.0s,mb5.9						
HAU				MLR	MLR		
	comp=Z,18µm,21.3s,MS6.5						
LMR	La Mourre	87.37	313	*e*P	P	13 09 35.7	-0.2
	comp=Z,87nm,1.1s,mb5.6						
LMR	La Mourre	87.37	313	*e*P	P	13 09 35.7	-0.2
LMR				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.6						
CKFL	Kef-Lekhel	87.39	306	P	P	13 09 42.0	+5.8
WLF	Walferdange	87.45	319	P	P	13 09 36.7	+0.6
WLF				pmax	pmax		
	comp=Z,170nm,1.4s,mb6.1						
WLF	Walferdange	87.45	319	*e*P	P	13 09 35.0	-1.1
	comp=Z,173nm,1.4s,mb6.1						
STAV	Stavanger	87.48	329	*e*P	P	13 09 33.4	-2.6
STAV	Stavanger	87.48	329	*e*	P	13 09 33.4	-2.6
CABF	La Chapelle	87.58	316	*e*P	P	13 09 36.9	+0.1
	comp=Z,112nm,0.9s,mb5.8						
CABF	La Chapelle	87.58	316	*e*P	P	13 09 36.9	+0.1
CABF				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.8						
CASM	Ain Smara	87.58	306	P	P	13 09 42.0	+4.9
BER	Bergen	87.63	330	*e*P	P	13 09 38.5	+1.8
BER				LR	LR		
	comp=Z,27812µm,20.9s						
BER	Bergen	87.63	330	*e*P	P	13 09 38.9	+2.2
BER				*e*SS	SS	13 25 59.9	-4.4
BER				AMS	AMS	13 53 19.9	
	comp=Z,28µm,19.4s,MS6.7						
ORIF	Oris-en-Rattie	87.77	315	*e*P	P	13 09 37.8	0.0
	comp=Z,59nm,0.8s,mb5.6						
ORIF				*e*R			
	comp=Z,27µm,21.8s						
VNDA	Vanda	87.80	169	*e*P	P	13 09 37.4	+0.2
VNDA				pmax	pmax		
	comp=Z,75nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,26µm,21.0s						
VNDA	Vanda	87.80	169	P	P	13 09 37.7	+0.5
	comp=Z,1.6nm,0.8s,baz=304,slow=5.4,SNR=4.6						
VNDA				LR	LR	13 43 37.2	
	comp=Z,26µm,20.7s,baz=299,slow=32						
VNDA	Vanda	87.80	169	*e*P	P	13 09 37.4	+0.2
	comp=Z,75nm,1.4s,mb5.7						
VNDA				LR	LR		
	comp=Z,26µm,21.0s,MS6.6						
SMRF	Simiane la Rot	88.02	314	*e*P	P	13 09 39.5	+0.5
	comp=Z,164nm,1.3s,mb5.8						
DFRA	Djebel Bou Aff	88.07	306	P	P	13 09 43.0	+3.6
CMER	Merouana	88.08	305	P	P	13 09 43.0	+3.5
MEZF	Maizieres J’vi	88.21	318	*e*P	P	13 09 39.5	-0.3
	comp=Z,72nm,0.9s,mb5.6						
GIVF	Givet	88.30	320	*e*P	P	13 09 40.1	0.0
	comp=Z,68nm,1.0s,mb5.5						
GIVF	Givet	88.30	320	*e*P	P	13 09 40.1	0.0
GIVF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.5						
RAO	Raoul Island	88.33	119	PFAKE		13 09 50.0	+9.1
RAO				LR	LR		
	comp=Z,22µm,22.0s,MS6.5						
VIVF	Saint-Julien-l	88.63	315	*e*P	P	13 09 41.8	-0.1
	comp=Z,105nm,1.2s,mb5.8						
VIVF	Saint-Julien-l	88.63	315	*e*P	P	13 09 41.8	-0.1
VIVF				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.8						
BAIF	Baives	88.69	320	*e*P	P	13 09 42.2	+0.1
	comp=Z,101nm,0.9s,mb5.8						
BAIF	Baives	88.69	320	*e*P	P	13 09 42.2	+0.1
BAIF				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.8						
SBA	Scott Base	88.90	168	*e*P	P	13 09 43.1	+0.6
SBA				pmax	pmax		
	comp=Z,106nm,1.2s,mb6.0						
SBA				MLR	MLR		
	comp=Z,16µm,19.0s,MS6.5						
SBA	Scott Base	88.90	168	*e*P	P	13 09 43.1	+0.6
	comp=Z,106nm,1.2s,mb6.0						
SBA				LR	LR		
	comp=Z,16µm,19.0s,MS6.5						
SMF	Signal de Mont	89.12	316	*e*P	P	13 09 43.7	-0.5
	comp=Z,130nm,1.0s,mb5.9						
SMF	Signal de Mont	89.12	316	*e*P	P	13 09 43.7	-0.5
SMF				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.9						
LASF	Ste Croix	89.26	314	*e*P	P	13 09 45.2	+0.3
	comp=Z,138nm,1.2s,mb5.8						
SSF	Saint Saulge	89.33	317	*e*P	P	13 09 45.2	0.0
	comp=Z,147nm,1.3s,mb5.8						
SSF	Saint Saulge	89.33	317	*e*P	P	13 09 45.2	0.0
SSF				pmax	pmax		
	comp=Z,74nm,1.3s,mb5.9						
AVF	Avril sur Loir	89.45	317	*e*P	P	13 09 45.4	-0.3
	comp=Z,80nm,1.0s,mb5.7						
AVF	Avril sur Loir	89.45	317	*e*P	P	13 09 45.4	-0.3
AVF				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.7						
BGF	Bois d’Agland	89.81	316	*e*P	P	13 09 47.6	+0.2
	comp=Z,325nm,1.4s,mb6.2						
BGF	Bois d’Agland	89.81	316	*e*P	P	13 09 47.6	+0.2
BGF				pmax	pmax		
	comp=Z,162nm,1.4s,mb6.2						
HYF	Humbligny	89.90	317	*e*P	P	13 09 48.3	+0.5
ADJB	Djebel Djouab	90.05	306	P	P	13 09 49.8	+1.0
TNA	Tin City	90.06	24	*e*P	P	13 09 47.7	-0.5
	comp=Z,17nm,0.8s,mb5.4						
TCF	Toulx Ste Croi	90.27	316	*e*P	P	13 09 49.8	+0.2
	comp=Z,210nm,1.6s,mb5.9						
TCF	Toulx Ste Croi	90.27	316	*e*P	P	13 09 49.8	+0.2
TCF				pmax	pmax		
	comp=Z,105nm,1.6s,mb5.9						
ABA	Alger-Bouzarea	90.34	307	P	P	13 09 55.0	+4.9
CAF	Calviac	90.48	315	*e*P	P	13 09 51.0	+0.4
	comp=Z,222nm,1.6s,mb5.9						
CAF	Calviac	90.48	315	*e*P	P	13 09 51.0	+0.4
CAF				pmax	pmax		
	comp=Z,111nm,1.6s,mb5.9						
MTLF	Montolieu	90.49	313	*e*P	P	13 09 50.6	-0.1
	comp=Z,175nm,1.1s,mb6.0						
MTLF	Montolieu	90.49	313	*e*P	P	13 09 50.6	-0.1
MTLF				pmax	pmax		
	comp=Z,88nm,1.1s,mb6.0						
NVL	N’lazarevskaya	90.66	199	⇓*e*P	P	13 09 59.0	+8.2
NVL				pmax	pmax		
	comp=Z,2µm,4.3s						
NVL				MLR	MLR		
	comp=Z,30µm,18.0s,MS6.8						
RJF	Les Rejaudoux	90.83	315	*e*P	P	13 09 52.8	+0.6
RJF				*e*R			
	comp=Z,27µm,21.8s						
EMIR	Miracle	91.12	312	P	P	13 09 54.8	+1.2
LFF	La Frestale	91.42	315	*e*P	P	13 09 55.5	+0.6
	comp=Z,297nm,1.4s,mb6.1						
LFF	La Frestale	91.42	315	*e*P	P	13 09 55.5	+0.6
LFF				pmax	pmax		
	comp=Z,148nm,1.4s,mb6.1						
EPOB	Poblet	91.50	311	P	P	13 09 56.8	+1.4
	comp=Z,288nm,1.8s,mb6.3						
LDF	La Druitiere	91.63	319	*e*P	P	13 09 55.9	+0.1
	comp=Z,138nm,0.9s,mb6.0						
LDF	La Druitiere	91.63	319	*e*P	P	13 09 55.9	+0.1
LDF				pmax	pmax		
	comp=Z,69nm,0.9s,mb6.0						
LCP	Cassop	91.74	325	*e*P	P	13 09 56.7	+0.6
FLN	La Foliniere	91.85	319	*e*P	P	13 09 56.9	+0.1
	comp=Z,171nm,1.0s,mb6.0						
FLN				*e*R			
	comp=Z,29µm,21.5s						
FLN	La Foliniere	91.85	319	*e*P	P	13 09 56.9	+0.1
FLN				pmax	pmax		
	comp=Z,86nm,1.0s,mb6.0						
FLN				MLR	MLR		
	comp=Z,29µm,21.5s,MS6.7						
JMIC	Jan Mayen	91.85	341	*e*P	P	13 09 59.5	+3.2
JMIC				LR	LR		
	comp=Z,37213µm,21.8s						
JMIC	Jan Mayen	91.85	341	*e*P	P	13 09 53.8	-2.5
JMIC				*e*SKSa		13 20 29.0	
JMIC				*e*SS	SS	13 27 03.4	-1.1
JMIC				AMS	AMS	13 56 37.5	
	comp=Z,37µm,18.9s,MS6.8						
MFF	Saint Martin d	91.86	317	*e*P	P	13 09 57.0	+0.1
	comp=Z,272nm,1.4s,mb6.1						
MFF	Saint Martin d	91.86	317	*e*P	P	13 09 57.0	+0.1
MFF				pmax	pmax		
	comp=Z,136nm,1.4s,mb6.1						
EPF	Esparros	91.89	313	*e*P	P	13 09 56.9	-0.2
	comp=Z,86nm,1.4s,mb5.6						
EPF	Esparros	91.89	313	*e*P	P	13 09 56.9	-0.2
EPF				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.6						
HPK	Haverah Park	91.93	324	*e*P	P	13 09 59.6	+2.6
KBI1	Birley Grange	91.96	323	*e*P	P	13 09 58.4	+1.2
EBR	Ebro Roquetas	91.99	311	*e*P	P	13 09 59.5	+1.9
EBIE	Bielsa	92.07	313	P	P	13 10 00.1	+2.2
	comp=Z,127nm,1.7s,mb6.0						
ERTA	Horta de San J	92.10	311	P	P	13 10 00.1	+2.0
	comp=Z,67nm,1.2s,mb5.8						
LHO	Holmfirth	92.12	324	*e*P	P	13 09 58.8	+0.9
GRR	Gorron	92.14	318	*e*P	P	13 09 58.3	+0.2
	comp=Z,166nm,1.1s,mb6.0						
GRR	Gorron	92.14	318	*e*P	P	13 09 58.3	+0.2
GRR				pmax	pmax		
	comp=Z,83nm,1.1s,mb6.0						
KWE	Weaver Farm	92.18	323	*e*P	P	13 09 59.8	+1.6
UNV	Unalaska Valle	92.34	36	*e*P	P	13 09 58.0	-0.8
	comp=Z,118nm,0.8s,mb6.3						
ETSF	Etsaut	92.56	313	*e*P	P	13 10 00.7	+0.5
	comp=Z,114nm,1.0s,mb6.0						
ETSF	Etsaut	92.56	313	*e*P	P	13 10 00.7	+0.5
ETSF				pmax	pmax		
	comp=Z,57nm,1.0s,mb6.0						
DAG	Danmarks Havn	92.61	348	⇓*i*P	P	13 09 59.6	-0.1
DAG				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.8						
DAG	Danmarks Havn	92.61	348	⇓*i*P	P	13 09 59.6	-0.1
	comp=Z,40nm,1.1s,mb5.8						
EKA	Eskdalemuir Ar	92.62	326	P	P	13 10 00.7	+0.6
	comp=Z,13nm,1.0s,mb5.3,baz=94,slow=4.8,SNR=8.4						
ESAC	San Caprasio	92.62	312	P	P	13 10 01.6	+1.1
	comp=Z,60nm,1.2s,mb5.9						
ESK	Eskdalemuir	92.64	326	PFAKE		13 10 10.0	+10
ESK				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
ESK	Eskdalemuir	92.64	326	*e*P	P	13 10 00.9	+0.7
EAU	Auchinoon	92.70	326	*e*P	P	13 10 03.2	+2.7
EMOS	Mosqueruela	92.77	310	P	P	13 10 03.1	+1.9
	comp=Z,131nm,1.7s,mb6.1						
QSPA	South Pole Qui	92.83	180	*e*P	P	13 10 01.2	+0.6
	comp=Z,28nm,0.8s,mb5.7						
QSPA				LR	LR		
	comp=Z,74µm,21.0s,MS7.1						
SJPF	Ste Jean	93.02	313	*e*P	P	13 10 01.9	-0.4
	comp=Z,86nm,1.0s,mb5.8						
SJPF	Ste Jean	93.02	313	*e*P	P	13 10 01.9	-0.4
SJPF				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.8						
EAB	Aberfoyle	93.14	327	*e*P	P	13 10 06.5	+4.1
EALK	Alkurruntz	93.21	313	P	P	13 10 08.5	+5.3
	comp=Z,155nm,2.0s,mb6.1						
AFI	Afiamalu	93.23	104	PFAKE		13 10 20.0	+16
AFI				LR	LR		
	comp=Z,12µm,20.0s,MS6.3						
SGMF	Saint Gilles	93.28	318	*e*P	P	13 10 03.6	+0.2
	comp=Z,111nm,1.1s,mb5.9						
SGMF	Saint Gilles	93.28	318	*e*P	P	13 10 03.6	+0.2
SGMF				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.9						
QUIF	Quistinic	93.74	318	*e*P	P	13 10 05.2	-0.3
	comp=Z,132nm,1.2s,mb5.9						
QUIF	Quistinic	93.74	318	*e*P	P	13 10 05.2	-0.3
QUIF				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.9						
ROSF	Rostrenen	93.75	319	*e*P	P	13 10 05.7	+0.2
	comp=Z,150nm,1.3s,mb6.0						
ROSF	Rostrenen	93.75	319	*e*P	P	13 10 05.7	+0.2
ROSF				pmax	pmax		
	comp=Z,75nm,1.3s,mb6.0						
ETOB	Tobarra	93.79	309	P	P	13 10 13.3	+7.3
	comp=Z,225nm,2.1s,mb6.2						
EVIA	Vianos	94.53	309	P	P	13 10 11.1	+1.7
EVIA				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.8						
EVIA	Vianos	94.53	309	P	P	13 10 11.1	+1.8
	comp=Z,47nm,1.2s,mb5.8						
EHUE	Huescar	94.70	308	P	P	13 10 12.3	+2.1
EBER	Berja	95.06	307	P	P	13 10 20.3	+8.5
SNAA	Sanae	95.40	198	⇑*i*	P	13 10 14.0	+1.4
SNAA	Sanae	95.40	198	⇑*i*	P	13 10 22.8	+10
SNAA	Sanae	95.40	198	P	P	13 10 11.9	-0.7
	comp=Z,1.0nm,0.8s,baz=186,slow=9.2,SNR=3.5						
ESDC	Sonseca Array	95.51	310	P	P	13 10 13.9	+0.1
	comp=Z,0.5nm,0.4s,baz=36,slow=5.6,SNR=6.7						
ESDC				PP	PP	13 14 06.8	-0.3
	comp=Z,3.9nm,0.9s,baz=73,slow=7.2,SNR=4.5						
ESLA	Sonseca Array	95.51	310	P	P	13 10 13.9	0.0

	comp=Z,4.9nm,1.0s,mb4.9						
ESLA				LR	LR		
	comp=Z,114µm,20.0s,MS7.3						
IMA	**Indian Mountai**	**95.64**	**23**	*e*P	**P**	**13 10 14.5**	**+0.7**
	comp=Z,552nm,1.5s,mb6.8						
SCO	**Scoresbysund**	**96.19**	**343**	*i* P	**P**	**13 10 18.1**	**+1.9**
	comp=Z,2.7nm,0.8s						
SCO				*i* S	S	13 21 10.9	-19
VNA2	**Neumayer--Watz**	**96.97**	**199**		**P**	**13 10 18.7**	**-1.0**
VNA2	**Neumayer--Watz**	**96.97**	**199**	⇑*i*	**P**	**13 10 28.1**	**+8.4**
EJIF	**Jimena Fronter**	**97.17**	**307**	P	**P**	**13 10 30.7**	**+9.3**
EMIN	**Mina Concepcio**	**97.91**	**309**	P	**P**	**13 10 37.2**	**+12**
MTE	**Manteigas**	**98.11**	**311**	*e*P	**P**	**13 10 26.8**	**+1.3**
MTE				*e*PP	PP	13 14 41.3	+14
MTE				*e*SKS	SKS	13 21 50.0	+42
MTE				*i* -		13 28 49.0	
MTE				*e*LQ		13 38 46.3	
MTE				*e*LR	LR	13 43 56.2	
	comp=Z,17µm,19.4s						
COLA	**College**	**98.34**	**23**	*e*P	**P**	**13 10 26.1**	**+0.1**
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.1						
COLA				MLR	MLR		
	comp=Z,23µm,20.0s,MS6.7						
COLA	**College**	**98.34**	**23**	*e*P	**P**	**13 10 26.1**	**+0.1**
	comp=Z,6.2nm,1.0s,mb5.1						
COLA				LR	LR		
	comp=Z,23µm,20.0s,MS6.7						
MCK	**McKinley**	**98.40**	**24**	*e*P	**P**	**13 10 25.6**	**-0.7**
MCK				pmax	pmax		
	comp=Z,50nm,1.6s,mb5.8						
MCK				MLR	MLR		
	comp=Z,18µm,20.0s,MS6.5						
MCK	**McKinley**	**98.40**	**24**	*e*P	**P**	**13 10 25.6**	**-0.7**
	comp=Z,50nm,1.6s,mb5.8						
MCK				LR	LR		
	comp=Z,18µm,20.0s,MS6.5						
BORG	**Borgarnes**	**98.55**	**337**	PFAKE		13 10 40.0	+13
BORG				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
ILAR	**Eielson Array**	**98.76**	**23**	P	**P**	**13 10 27.5**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=302,slow=4.8,SNR=9.2						
ILAR				PP	PP	13 14 21.7	-10
	comp=Z,6.6nm,1.0s,baz=293,slow=7.9,SNR=4.9						
ILAR				PKKP	PKKP	13 27 05.1	+13
	comp=Z,2.1nm,0.8s,baz=160,slow=2.2,SNR=9.8						
ILAR				LR	LR	14 04 11.3	
	comp=Z,28µm,20.8s,baz=334,slow=41						
EVO	**Evora**	**98.81**	**310**	*e*P	**P**	**13 10 30.2**	**+1.4**
	comp=Z,90nm,1.8s,mb5.7						
EVO				*e*R			
	comp=Z,35µm,23.0s						
FIB	**Fire Island**	**98.90**	**27**	PFAKE		13 10 40.0	+11
FIB				LR	LR		
	comp=Z,14µm,20.0s,MS6.5						
KDAK	**Kodiak Island**	**99.00**	**30**	PFAKE		13 10 40.0	+11
KDAK				LR	LR		
	comp=Z,8µm,19.0s,MS6.2						
SLKM	**Skilak Lake**	**99.13**	**27**	*e*P	**P**	**13 10 28.5**	**-1.2**
SUMG	**Summit**	**99.28**	**347**	*e*P	**P**	**13 10 29.6**	**-0.5**
	comp=Z,32nm,1.1s,mb5.8						
SML	**Sawmill**	**99.45**	**26**	*e*P	**P**	**13 10 29.9**	**-1.2**
THY	**Trims Highway**	**99.82**	**24**	*e*P	**P**	**13 10 33.4**	**+0.6**
DBIC	**Dimbokro**	**100.03**	**277**	P	P	13 10 34.3	-0.6
DBIC				MLR	MLR		
	comp=Z,37µm,21.0s						
DBIC	**Dimbokro**	**100.03**	**277**	P	P	13 10 34.2	-0.7
	comp=Z,3.0nm,1.0s,baz=217,slow=20,SNR=1.7						
INK	**Inuvik**	**101.32**	**17**	*e*P	P	13 10 38.4	-1.1
INK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	**Inuvik**	**101.32**	**17**	*e*Pdif	P	13 10 38.4	-1.1
	comp=Z,10nm,0.8s						
DAWY	**Dawson**	**101.94**	**22**	*e*Pdif	P	13 10 42.1	-0.2
RES	**Resolute Bay**	**102.27**	**3**	*e*P	Pdif	13 10 44.0	+0.5
RES				pmax	pmax		
	comp=Z,21nm,1.0s						
RES	**Resolute Bay**	**102.27**	**3**	*e*Pdif	Pdif	13 10 44.0	+0.5
	comp=Z,22nm,1.0s						
KIP	**Kipapa**	**104.14**	**67**	PFAKE		13 11 00.0	+7.1
KIP				LR	LR		
	comp=Z,14µm,20.0s,MS6.5						
RAR	**Rarotonga**	**104.68**	**111**	PFAKE		13 11 10.0	+15
RAR				LR	LR		
	comp=Z,12µm,22.0s,MS6.4						
TRIS	**Tristan da Cun**	**106.02**	**232**	PFAKE		13 15 20.0	
TRIS				LR	LR		
	comp=Z,24µm,19.0s,MS6.8						
SFJ	**Sondre**	**106.26**	**347**	*e*PKiKP		13 15 12.2	
SFJ				LR	LR		
	comp=Z,35µm,22.0s,MS6.9						
POHA	**Pohakuloa**	**106.70**	**69**	PFAKE		13 15 30.0	
POHA				LR	LR		
	comp=Z,87µm,22.0s,MS7.3						
SIT	**Sitka**	**107.57**	**26**	PFAKE		13 15 30.0	
SIT				LR	LR		
	comp=Z,40µm,19.0s,MS7.0						
YKA	**Yellowknife Ar**	**110.87**	**14**	P	Pdif	13 11 24.3	+2.7
YKA						13 15 22.3	
YKA						13 26 25.7	
YKA	**Yellowknife Ar**	**110.87**	**14**	Pdiff	Pdif	13 11 24.2	+2.7
	comp=Z,0.2nm,0.7s,baz=330,slow=5.2,SNR=3.9						
YKA				PKiKP		13 15 22.3	
	comp=Z,1.0nm,1.0s,baz=356,slow=2.3,SNR=5.2						
YKA				PP	PP	13 15 51.4	-11
	comp=Z,5.1nm,0.8s,baz=328,slow=7.6,SNR=11						
YKA				PKKPbc		13 26 18.8	
	comp=Z,0.3nm,0.7s,baz=146,slow=3.4,SNR=7.7						
YKA				PKKPab		13 26 25.7	
	comp=Z,2.3nm,0.9s,baz=148,slow=3.2,SNR=12						
YKA	**Yellowknife Ar**	**110.87**	**14**	Pdif	Pdif	13 11 24.2	+2.7
YKA				PKPdf	PKPdf	13 15 22.3	-2.7
YKA				PP	PP	13 15 51.4	-11
YKA				PKKPbc		13 26 18.8	
YKA				PKKPab		13 26 25.7	
TBI	**Tubuai**	**114.01**	**114**	*e*PP	PP	13 16 24.7	-1.7
TBI				*e*SP	SP	13 26 06.0	+11
TBI				*e*SS	SS	13 32 10.4	-0.4
TBI				*e*LR	LR	13 49 38.4	
	comp=Z,30µm,27.5s						
PPT	**Papeete**	**114.52**	**108**	*e*PP	PP	13 16 26.2	-3.9
PPT				*e*SP	SP	13 26 06.4	+6.3
PPT				*e*SS	SS	13 32 26.9	+9.3
PPT				*e*LR	LR	13 49 51.7	
	comp=Z,30µm,27.2s						
PMSA	**Palmer Station**	**116.53**	**190**	PFAKE		13 15 40.0	+3.9
PMSA				LR	LR		
	comp=Z,14µm,20.0s,MS6.6						
FCC	**Fort Churchill**	**118.05**	**6**	*e*PKIKP	PKPdf	13 15 32.6	-6.5
OCWA	**Octopus Mounta**	**118.74**	**30**	PFAKE		13 15 50.0	+9.3
OCWA				LR	LR		
	comp=Z,20µm,19.0s,MS6.8						
EDM	**Edmonton**	**119.03**	**19**	*e*PKIKP	PKPdf	13 15 36.6	-4.6
SCHQ	**Schefferville**	**120.66**	**348**	PKP	PKPdf	13 15 40.1	-4.2
	comp=Z,4.9nm,1.0s,baz=50,slow=6.7,SNR=7.6						
SCHQ				PKKPbc		13 25 46.1	
	comp=Z,1.4nm,0.8s,baz=224,slow=9.6,SNR=5.6						
SCHQ	**Schefferville**	**120.66**	**348**	*e*PKPdf	PKPdf	13 15 40.4	-3.9
SCHQ				LR	LR		
	comp=Z,32µm,22.0s,MS6.9						
COR	**Corvallis**	**121.35**	**32**	PFAKE		13 15 50.0	+4.1
COR				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
NEW	**Newport**	**121.60**	**25**	*e*PKIKP	PKPdf	13 15 42.3	-4.0
NEW				MLR	MLR		
	comp=Z,29µm,21.0s						
KEBM	**Edson Butte**	**121.93**	**34**	*e*PKPdf	PKPdf	13 15 45.0	-2.0
WALA	**Waterton Lakes**	**122.27**	**23**	*e*PKPdf	PKPdf	13 15 43.4	-4.1
HUMO	**Hull Mountain**	**122.87**	**33**	*e*PKPdf	PKPdf	13 15 45.5	-3.3
HUMO				LR	LR		
	comp=Z,15µm,20.0s,MS6.7						
KHMM	**Horse Mountain**	**123.58**	**35**	*e*PKPdf	PKPdf	13 15 48.1	-2.2
YBH	**Yreka Blue Hor**	**123.59**	**34**	*e*PKIKP	PKPdf	13 15 47.1	-3.2
YBH				MLR	MLR		
	comp=Z,18µm,21.0s						
MSO	**Missoula**	**124.06**	**24**	*e*PKPdf	PKPdf	13 15 46.5	-4.6
MSO				LR	LR		
	comp=Z,22µm,20.0s,MS6.8						
BMO	**Blue Mountains**	**124.13**	**28**	*e*PKIKP	PKPdf	13 15 47.7	-3.6
BMO				MLR	MLR		
	comp=Z,25µm,20.0s,MS6.9						
TAOE	**Nuku Hiva Isla**	**124.28**	**99**	*e*PP	PP	13 17 30.9	-6.3
TAOE				*e*SP	SP	13 27 42.5	+15
TAOE				*e*SS	SS	13 34 25.7	+2.2
TAOE				*e*LR	LR	13 54 25.4	
WDC	**Whiskeytown Da**	**124.45**	**35**	*e*PKIKP	PKPdf	13 15 48.6	-3.4
WDC				MLR	MLR		
	comp=Z,17µm,22.0s,MS6.7						
MOD	**Modoc**	**124.78**	**32**	*e*PKPdf	PKPdf	13 15 49.5	-3.2
MOD				LR	LR		
	comp=Z,17µm,21.0s,MS6.7						
HOPS	**Hopland**	**125.18**	**37**	*e*PKPdf	PKPdf	13 15 50.3	-3.2
HOPS				LR	LR		
	comp=Z,14µm,19.0s,MS6.7						
WVOR	**Wild Horse Val**	**125.27**	**31**	*e*PKIKP	PKPdf	13 15 50.8	-2.8
WVOR				MLR	MLR		
	comp=Z,22µm,21.0s,MS6.8						
OHCM	**Honcut**	**125.89**	**35**	*e*PKPdf	PKPdf	13 15 51.5	-3.3
BOZ	**Bozeman (W)**	**125.95**	**23**	*e*PKIKP	PKPdf	13 15 50.9	-3.8
BOZ				MLR	MLR		
	comp=Z,39µm,20.0s,MS7.1						
DGMT	**Dagmar**	**126.00**	**16**	*e*PKPdf	PKPdf	13 15 51.2	-3.6
DGMT				LR	LR		
	comp=Z,34µm,19.0s,MS7.0						
ULM	**Lac du Bonnet**	**126.14**	**9**	PKP	PKPdf	13 15 51.1	-3.8
	comp=Z,16nm,0.9s,baz=331,slow=2.6,SNR=12						
ULM	**Lac du Bonnet**	**126.14**	**9**	*e*PKPdf	PKPdf	13 15 50.3	-4.7
HLID	**Hailey**	**126.45**	**27**	*e*PKPdf	PKPdf	13 15 52.8	-2.9
HLID				LR	LR		
	comp=Z,22µm,19.0s,MS6.9						
WCN	**Washoe City**	**126.89**	**34**	*e*PKIKP	PKPdf	13 15 54.0	-2.7
LAO	**LASA Array**	**127.00**	**19**	*e*PKPdf	PKPdf	13 15 54.0	-2.7
LAO				LR	LR		
	comp=Z,32µm,20.0s,MS7.0						
YMR	**Madison River**	**127.03**	**24**	*e*PKPdf	PKPdf	13 15 54.1	-2.7
YNR	**Norris Junctio**	**127.10**	**23**	*e*PKPdf	PKPdf	13 15 55.3	-1.6
RKT	**Rikitea**	**127.13**	**117**	*e*PP	PP	13 17 55.4	0.0
RKT				*e*SP	SP	13 28 03.1	+10
RKT				*e*SS	SS	13 35 15.0	+16
RKT				*e*LR	LR	13 55 40.3	
	comp=Z,22µm,23.5s						
YFT	**Old Faithful**	**127.26**	**24**	*e*PKPdf	PKPdf	13 15 56.7	-0.6
LKWY	**Lake**	**127.34**	**23**	*e*PKIKP	PKPdf	13 15 55.3	-2.1
LKWY	**Lake**	**127.34**	**23**	PFAKE		13 16 10.0	+13
LKWY				LR	LR		
	comp=Z,56µm,19.0s,MS7.3						
CMB	**Columbia Colle**	**127.39**	**36**	*e*PKIKP	PKPdf	13 15 53.0	-4.8
CMB				MLR	MLR		
	comp=Z,16µm,22.0s,MS6.7						
BMN	**Battle Mountai**	**127.46**	**31**	PFAKE		13 16 10.0	+12
BMN				LR	LR		
	comp=Z,15µm,21.0s,MS6.7						
SAO	**San Andreas Ge**	**127.60**	**38**	PFAKE		13 16 10.0	+12
SAO				LR	LR		
	comp=Z,9µm,21.0s,MS6.4						
IMW	**Indian Meadow**	**127.67**	**24**	*e*PKPdf	PKPdf	13 15 54.5	-3.7
MOOW	**Moose Ponds**	**127.88**	**24**	*e*PKPdf	PKPdf	13 15 55.8	-2.8
RRI2	**Red Ridge**	**127.97**	**25**	*e*PKPdf	PKPdf	13 15 56.1	-2.6
TPAW	**Teton Pass**	**128.01**	**24**	*e*PKPdf	PKPdf	13 15 56.1	-2.8
LOHW	**Long Hollow**	**128.05**	**24**	*e*PKPdf	PKPdf	13 15 55.2	-3.6
WUWY	**Wally Ulrich**	**128.05**	**24**	*e*PKPdf	PKPdf	13 15 56.2	-2.7
LRV	**Little Rabbit**	**128.08**	**38**	*e*PKPdf	PKPdf	13 15 57.5	-1.7
SNOW	**Snow King Moun**	**128.11**	**24**	*e*PKPdf	PKPdf	13 15 56.4	-2.6
ELK	**Elko**	**128.23**	**30**	*e*PKIKP	PKPdf	13 15 56.4	-2.9
ELK				MLR	MLR		
	comp=Z,18µm,21.0s						
NVAR	**Mina Array Bea**	**128.31**	**34**	PKP	PKPdf	13 15 56.5	-3.1
	comp=Z,9.3nm,1.0s,baz=251,slow=1.1,SNR=20						
NVAR	**Mina Array Bea**	**128.31**	**34**	PKP	PKPdf	13 15 56.5	-3.1
MNV	**Mina**	**128.39**	**34**	*e*PKIKP	PKPdf	13 15 57.3	-2.4
MNV				MLR	MLR		
	comp=Z,20µm,20.0s,MS6.8						
OMM	**Old Mammoth Mi**	**128.49**	**35**	*e*PKPdf	PKPdf	13 15 56.9	-3.0
AHID	**Auburn Hatcher**	**128.54**	**25**	*e*PKPdf	PKPdf	13 15 57.3	-2.5
AHID				LR	LR		
	comp=Z,27µm,20.0s,MS6.9						
HVU	**Hansel Valley**	**128.60**	**27**	*e*PKIKP	PKPdf	13 15 57.9	-2.1
MTUM	**Tungsten Hills**	**128.91**	**35**	*e*PKPdf	PKPdf	13 15 59.3	-1.4
EYMN	**Ely**	**128.98**	**6**	*e*PKPdf	PKPdf	13 15 57.0	-3.5
EYMN				LR	LR		
	comp=Z,49µm,20.0s,MS7.2						
BGU	**Big Grassy Mou**	**129.16**	**28**	*e*PKPdf	PKPdf	13 15 57.6	-3.5
TPH	**Tonopah**	**129.16**	**33**	*e*PKIKP	PKPdf	13 15 57.8	-3.4
TPH				MLR	MLR		
	comp=Z,14µm,20.0s,MS6.7						
BW06	**Boulder Array**	**129.17**	**24**	PFAKE		13 16 10.0	+8.9
BW06				LR	LR		
	comp=Z,24µm,19.0s,MS6.9						
PDAR	**Pinedale Array**	**129.18**	**24**	PKhKP		13 15 55.1	
	comp=Z,5.1nm,0.7s,baz=147,slow=0.9,SNR=13						
HWUT	**Hardware Ranch**	**129.28**	**26**	*e*PKPdf	PKPdf	13 15 58.0	-3.3
HWUT				LR	LR		
	comp=Z,35µm,22.0s,MS7.0						
TCUT	**Toone Canyon**	**129.74**	**27**	*e*PKPdf	PKPdf	13 16 00.3	-1.9
NOQ	**North Oquirrh**	**129.79**	**27**	*e*PKPdf	PKPdf	13 15 59.3	-3.0
DUG	**Dugway**	**129.83**	**28**	*e*PKIKP	PKPdf	13 15 59.2	-3.2
DUG				MLR	MLR		
	comp=Z,338µm,21.0s						
TRCR	**Troy Canyon**	**129.85**	**32**	*e*PKPdf	PKPdf	13 15 59.8	-2.7
JLU	**Jordanelle**	**130.14**	**27**	*e*PKPdf	PKPdf	13 15 59.6	-3.3
DAC	**Darwin (Calif)**	**130.22**	**35**	PFAKE		13 16 10.0	+6.8
DAC				LR	LR		
	comp=Z,11µm,21.0s,MS6.5						
NLU	**North Lily Min**	**130.37**	**28**	*e*PKPdf	PKPdf	13 16 00.1	-3.3
DAU	**Daniels Canyon**	**130.38**	**27**	PKIKP	PKPdf	13 16 00.9	-2.5
DAU	**Daniels Canyon**	**130.38**	**27**	*e*PKPdf	PKPdf	13 16 00.7	-2.7
MPU	**Maple Canyon**	**130.53**	**28**	*e*PKPdf	PKPdf	13 16 00.6	-3.1
PTCN	**Pitcairn Islan**	**130.83**	**121**	PFAKE		13 16 10.0	+5.3
PTCN				LR	LR		
	comp=Z,13µm,20.0s,MS6.6						
TMUT	**Trail Mountain**	**131.30**	**28**	*e*PKPdf	PKPdf	13 16 02.2	-3.0
MWC	**Mount Wilson**	**131.35**	**38**	PKIKP	PKPdf	13 15 56.4	-9.0
MWC	**Mount Wilson**	**131.35**	**38**	*e*PKPdf	PKPdf	13 16 03.7	-1.7
ARUT	**Antelope Range**	**131.38**	**31**	*e*PKPdf	PKPdf	13 16 03.8	-1.6
MVU	**Marysvale**	**131.45**	**29**	*e*PKPdf	PKPdf	13 16 02.2	-3.3
MVU				LR	LR		
	comp=Z,14µm,20.0s,MS6.7						
MSU	**Marysvale**	**131.46**	**29**	*e*PKPdf	PKPdf	13 16 02.1	-3.4
MSNY	**Massena**	**131.56**	**351**	*e*PKPdf	PKPdf	13 16 01.6	-3.9
RCBR	**Riachuelo**	**131.57**	**265**	PFAKE		13 16 10.0	+3.6
RCBR				LR	LR		
	comp=Z,23µm,19.0s,MS6.9						
SRU	**San Rafael**	**131.76**	**27**	*e*PKPdf	PKPdf	13 16 02.2	-3.9
PHWY	**Pilot Hill**	**132.00**	**21**	*e*PKPdf	PKPdf	13 16 03.4	-3.1
NCB	**Newcomb**	**132.45**	**350**	*e*PKPdf	PKPdf	13 16 05.0	-2.3
NCB				LR	LR		
	comp=Z,28µm,22.0s,MS6.9						
LDFC	**Landfair**	**132.49**	**35**	*e*PKPpre		13 15 52.8	
PV10	**Paradox Valley**	**133.03**	**27**	*e*PKPdf	PKPdf	13 16 05.5	-3.1
BAR	**Barrett**	**133.25**	**38**	PKPdf	PKPdf	13 16 05.3	-3.7
ISCO	**Idaho Springs**	**133.25**	**23**	PKIKP	PKPdf	13 16 00.7	-8.2
ISCO	**Idaho Springs**	**133.25**	**23**	*e*PKPdf	PKPdf	13 16 06.9	-1.9
ISCO				LR	LR		
	comp=Z,29µm,20.0s,MS7.0						
HRV	**Harvard--Oak R**	**133.33**	**347**	PFAKE		13 16 20.0	+11
HRV				LR	LR		
	comp=Z,25µm,19.0s,MS6.9						
PV01	**Paradox Valley**	**133.44**	**26**	*e*PKPdf	PKPdf	13 16 05.9	-3.3
JFWS	**Jewell Farm**	**134.09**	**6**	PFAKE		13 16 20.0	+10
JFWS				LR	LR		
	comp=Z,33µm,20.0s,MS7.0						
WUAZ	**Wupatki**	**134.19**	**31**	*e*PKPdf	PKPdf	13 16 08.6	-2.1
WUAZ				LR	LR		
	comp=Z,359µm,22.0s						
BINY	**Binghamton**	**134.47**	**351**	*e*PKPdf	PKPdf	13 16 08.8	-2.3
BINY				LR	LR		
	comp=Z,36µm,22.0s,MS7.0						
AAM	**Ann Arbor**	**135.00**	**359**	PFAKE		13 16 20.0	+8.0
AAM				LR	LR		
	comp=Z,33µm,22.0s,MS7.0						
ERPA	**Erie**	**135.01**	**355**	PFAKE		13 16 20.0	+7.9
ERPA				LR	LR		
	comp=Z,46µm,21.0s,MS7.2						
CAM4	**Nova Friburgo**	**135.06**	**241**	(P)	PKPdf	13 16 13.3	+0.6
SDCO	**Great Sand Dun**	**135.07**	**24**	*e*PKPpre		13 15 59.9	
SDCO				LR	LR		
	comp=Z,25µm,21.0s,MS6.9						
CBKS	**Cedar Bluff**	**136.14**	**17**	*e*PKPpre		13 16 02.4	
CBKS				LR	LR		
	comp=Z,31µm,22.0s,MS7.0						
SSPA	**Standing Stone**	**136.26**	**353**	PKPdf	PKPdf	13 16 12.0	-2.3
SSPA				LR	LR		
	comp=Z,6µm,22.0s,MS6.3						
MVL	**Millersville**	**136.67**	**351**	*e*PKPdf	PKPdf	13 16 12.7	-2.4
KSU1	**Kansas State U**	**136.72**	**14**	*e*PKPdf	PKPdf	13 16 15.6	+0.4
TUC	**Tucson**	**136.96**	**33**	PP	PP	13 18 60.0	+1.9
TUC				SKPdf		13 19 54.4	
TUC	**Tucson**	**136.96**	**33**	*e*PKPdf	PKPdf	13 16 14.4	-1.4
TUC				LR	LR		
	comp=Z,11µm,22.0s,MS6.5						
ANMO	**Albuquerque**	**137.03**	**27**	*e*PKPpre		13 16 01.3	
ANMO				LR	LR		
	comp=Z,14µm,21.0s,MS6.7						
ACSO	**Alum Creek Sta**	**137.06**	**358**	*e*PKPdf	PKPdf	13 16 11.1	-4.7
ACSO				LR	LR		
	comp=Z,35µm,21.0s,MS7.1						
CBN	**Corbin**	**138.59**	**352**	PFAKE		13 16 30.0	+11
CBN				LR	LR		
	comp=Z,42µm,21.0s,MS7.2						
CCM	**Cathedral Cave**	**138.76**	**8**	*e*PKPpre		13 16 08.0	
CCM				LR	LR		
	comp=Z,7µm,21.0s,MS6.4						
FVM	**French Village**	**138.94**	**7**	*e*PKPpre		13 16 10.1	
WCI	**Wyandotte Cave**	**139.04**	**2**	*e*PKPdf	PKPdf	13 16 15.9	-3.6
WCI				LR	LR		
	comp=Z,7µm,22.0s,MS6.3						
AMTX	**Amarillo**	**139.06**	**22**	*e*PKPpre		13 16 12.3	
AMTX				LR	LR		
	comp=Z,23µm,21.0s,MS6.9						
TRQA	**Tornquist**	**139.44**	**208**	*e*PKPdf	PKPdf	13 16 14.6	-5.7
TRQA				LR	LR		
	comp=Z,26µm,22.0s,MS6.9						
FWV	**Forest Hill**	**139.59**	**356**	PKPdf	PKPdf	13 16 16.9	-3.6
ELN	**Prospectdale**	**139.93**	**355**	PKPdf	PKPdf	13 16 16.3	-4.8
WMOK	**Wichita Mounta**	**140.19**	**19**	*e*PKPpre		13 16 10.2	
WMOK				LR	LR		
	comp=Z,33µm,19.0s,MS7.1						
MNTX	**Cornudas Mount**	**140.23**	**28**	*e*PKPpre		13 16 12.8	
MNTX				LR	LR		
	comp=Z,21µm,21.0s,MS6.9						
BBSR	**BB Station**	**140.25**	**333**	PFAKE		13 16 30.0	+8.1
BBSR				LR	LR		
	comp=Z,19µm,19.0s,MS6.9						
PLCA	**Paso Flores**	**140.32**	**197**	PKhKP		13 16 10.9	
	comp=Z,1.3nm,0.7s,baz=350,slow=5.0,SNR=3.0						
PLCA				PKP	PKPdf	13 16 17.0	-4.7
	comp=Z,7.3nm,1.1s,baz=173,slow=8.1,SNR=4.6						
PLCA	**Paso Flores**	**140.32**	**197**	*e*PKPdf	PKPdf	13 16 17.1	-4.7
TZTN	**Tazewell**	**140.75**	**359**	*e*PKPdf	PKPdf	13 16 20.1	-2.7
GLAT	**Glass**	**140.77**	**6**	*e*PKPdf	PKPdf	13 16 20.3	-2.4
GNAR	**Gosnell**	**140.98**	**7**	PKPdf	PKPdf	13 16 17.1	-6.1
WVT	**Waverly**	**141.04**	**4**	*e*PKPpre		13 16 13.1	
WVT				LR	LR		
	comp=Z,44µm,22.0s,MS7.2						
MIAR	**Mount Ida**	**141.76**	**12**	*e*PKPpre		13 16 15.8	
MIAR				LR	LR		
	comp=Z,34µm,20.0s,MS7.1						
UALR	**University of**	**141.79**	**11**	*e*PKPdf	PKPdf	13 16 16.4	-8.2
CPCT	**Cooper Cave**	**141.85**	**0**	*e*PKPpre		13 16 17.1	
BAO	**Brasilia Array**	**141.99**	**248**	P	PKPdf	13 16 21.0	-4.4
BAO				*e*		13 16 32.5	
BAO				*e*		13 19 43.0	
BDFB	**Brasilia**	**142.01**	**248**	PKP	PKPdf	13 16 22.3	-3.1
	comp=Z,6.9nm,0.8s,baz=113,slow=2.3,SNR=7.8						
OXF	**Oxford**	**142.49**	**7**	*e*PKPdf	PKPdf	13 16 20.5	-5.3
OXF				LR	LR		
	comp=Z,33µm,21.0s,MS7.1						
JSC	**Jenkinsville**	**142.90**	**356**	*e*PKPpre		13 16 20.0	
LTX	**Lajitas**	**143.01**	**29**	*e*PKPpre		13 16 20.9	
LTX				LR	LR		
	comp=Z,17µm,21.0s,MS6.8						
TXAR	**Lajitas Array**	**143.01**	**29**	PKhKP		13 16 20.6	
	comp=Z,6.7nm,0.7s,baz=267,slow=2.7,SNR=29						
JCT	**Junction City**	**143.69**	**23**	*e*PKPpre		13 16 21.1	
JCT				LR	LR		
	comp=Z,22µm,22.0s,MS6.9						
GOGA	**Godfrey**	**143.87**	**359**	PFAKE		13 16 40.0	+18
GOGA				LR	LR		
	comp=Z,27µm,22.0s,MS7.0						
NHSC	**New Hope**	**143.97**	**354**	PFAKE		13 16 40.0	+18
NHSC				LR	LR		
	comp=Z,24µm,20.0s,MS7.0						
LRAL	**Lakeview Retre**	**144.18**	**4**	*e*PKPpre		13 16 22.5	
LRAL				LR	LR		
	comp=Z,33µm,20.0s,MS7.1						
NATX	**Nacogdoches**	**144.18**	**15**	*e*PKPpre		13 16 23.2	
NATX				LR	LR		
	comp=Z,47µm,22.0s,MS7.2						
CPUP	**Villa Florida**	**145.11**	**226**	PKPbc	PKPbc	13 16 26.4	+0.6
HKT	**Hockley**	**145.55**	**18**	PKPdf	PKPdf	13 16 28.0	-3.2
HKT				PP	PP	13 19 47.1	-3.6
HKT	**Hockley**	**145.55**	**18**	*e*PKPdf	PKPdf	13 16 28.0	-3.2
HKT				LR	LR		
	comp=Z,9µm,22.0s,MS6.5						
RPN	**Rapa Nui**	**146.09**	**138**	PKPbc	PKPbc	13 16 31.3	+3.1
	comp=Z,72nm,0.9s,baz=301,slow=5.9,SNR=2.6						
LMEL	**Las Melosas**	**146.48**	**202**	*e*P	PKPbc	13 16 37.9	+8.9
CLCH	**Cerro Calan**	**147.01**	**202**	*e*P	PKPdf	13 16 36.0	+2.4
ZON	**Zonda**	**147.89**	**206**	*e*P	PKPdf	13 16 32.0	-3.0
DWPF	**Disney**	**149.04**	**355**	PFAKE		13 16 40.0	+3.0
DWPF				LR	LR		
	comp=Z,7µm,19.0s,MS6.5						
TLL	**Tololo Astrono**	**149.98**	**204**	*e*P	PKPdf	13 16 36.7	-1.7
SJG	**San Juan**	**152.44**	**320**	PKP	PKPdf	13 16 37.0	-5.4
	comp=Z,3.8nm,0.3s,baz=337,slow=23,SNR=3.3						
SJG				PKPbc	PKPdf	13 16 46.6	+4.2
	comp=Z,16nm,0.6s,baz=321,slow=19,SNR=4.5						
SJG				PKPab	PKPab	13 16 58.3	+1.5
	comp=Z,42nm,0.7s,baz=4.4,slow=12,SNR=7.5						
SJG	**San Juan**	**152.44**	**320**	PKP	PKPdf	13 16 37.0	-5.4
SJG				PKPbc	PKPdf	13 16 46.6	+4.2
SJG				*e*PKPbc	PKPdf	13 16 48.4	+6.0
SJG				PKPab	PKPab	13 16 58.3	+1.5
SJG				LR	LR		
	comp=Z,16µm,20.0s,MS6.8						
LVC	**Limon Verde**	**155.31**	**216**	PKP	PKPdf	13 16 43.9	-2.3
	comp=Z,8.3nm,1.1s,baz=252,slow=7.2,SNR=4.4						
LVC	**Limon Verde**	**155.31**	**216**	PKPdf	PKPdf	13 16 44.3	-1.9
LVC				LR	LR		
	comp=Z,14µm,19.0s,MS6.8						
TEIG	**Tepich**	**156.70**	**9**	*e*PKPbc	PKPdf	13 16 54.4	+6.3
TEIG				LR	LR		
	comp=Z,17µm,21.0s,MS6.8						
SAML	**Samuel**	**158.07**	**253**	*e*PKPdf	PKPdf	13 16 46.4	-3.7
SAML				LR	LR		
	comp=Z,39µm,20.0s,MS7.2						
LPAZ	**La Paz**	**159.19**	**229**	*e*PKPdf	PKPdf	13 16 48.8	-2.5
LPAZ				LR	LR		
	comp=Z,35µm,21.0s,MS7.2						
SDV	**Santo Domingo**	**161.96**	**311**	PKP	PKPdf	13 16 51.4	-2.8
	comp=Z,1.6nm,0.4s,baz=106,slow=21,SNR=4.0						
SDV				PKPab	PKPab	13 17 36.0	-1.7
	comp=Z,14nm,0.8s,baz=287,slow=9.9,SNR=3.2						
SDV	**Santo Domingo**	**161.96**	**311**	*e*PKPdf	PKPdf	13 16 51.8	-2.5
ROSC	**El Rosal**	**167.33**	**307**	PKP	PKPdf	13 16 54.2	-4.9
	comp=Z,5.3nm,0.4s,baz=293,slow=23,SNR=5.7						

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*PRU **26** 13:06:09.9, 50.31N×18.74E*

WAR 26 13:06:08.1, 50.26N×18.86E, h0^{km}, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.47**	**248**	*e*PG	Pg	13 06 18.0	+0.6
RAC				*e*SG	Sg	13 06 24.0	+0.4
OJC	**Ojcow**	**0.60**	**93**	*e*PG	Pg	13 06 21.0	+0.9
OJC				*e*SG	Sg	13 06 29.0	+0.9
OKC	**Ostrava-Krasne**	**0.63**	**228**	*e*PG	Pg	13 06 21.1	+0.5
OKC				*e*SG	Sg	13 06 31.0	+2.1
NIE	**Niedzica**	**1.26**	**131**	*e*PG	Pg	13 06 32.0	-1.3
NIE				*e*SG	Sg	13 06 50.0	0.0
DPC	**Dobruska-Polom**	**1.63**	**274**	*e*PG	Pg	13 06 37.9	-2.8
DPC				*e*SG	Sg	13 06 59.1	-3.3
	57nm,0.6s						
KSP	**Ksiaz**	**1.74**	**291**	*e*Pg	Pg	13 06 41.3	-1.5
KSP				*e*Sn	Sn	13 07 04.1	+1.1
KSP				*e*Sg	Sg	13 07 06.1	0.0
VYHS	**Vyhne**	**1.77**	**181**	*e*PN	Pn	13 06 42.9	+2.8
VYHS				*e*SN	Sn	13 07 05.0	+1.4
UPC	**Upice**	**1.84**	**279**	*e*SG	Sg	13 07 05.3	-4.1
CRVS	**Cervenica-Dubn**	**2.17**	**128**	*e*PN	Pn	13 06 49.1	+3.2
CRVS				*e*SN	Sn	13 07 17.4	+3.6
PRU	**Pruhonice**	**2.79**	**266**	*e*SG	Sg	13 07 34.2	-6.9
PRU	**Pruhonice**	**2.79**	**266**	*e*Sg	Sg	13 07 34.2	-6.9
KHC	**Kasperske Hory**	**3.61**	**254**	*e*PN	Pn	13 07 04.0	-2.4
KHC				x	x	13 07 12.0	
KHC				*e*SG	Sg	13 08 02.6	-5.8
CLL	**Collm**	**3.87**	**288**	*e*SG	Sg	13 08 12.0	-4.8
CLL	**Collm**	**3.87**	**288**	*e*Sg	Sg	13 08 12.0	-4.8

*NEIC **26** 13:26:36.9±2.5, 40.65N×142.46E, h64^{km}±28^{km}, mb4.0/1, Error ellipse: s-maj=26.5km s-min=18.0km az=151.0*
NEIC Recorded [1 JMA] in Aomori and Iwate Prefectures.
*JMA **26** 13:26:36.3±0.1, 40.70N×142.59E, h46^{km}±4^{km}, M4.2*
JMA Felt I J1.
*IDC **26** 13:26:37.2±4.4, 40.72N×142.42E, h63^{km}±33^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.4/23, mbtmp3.7/8, ML3.2/1, Error ellipse: s-maj=34.5km s-min=21.3km az=137.0*
ISC 26 13:26:35.9±0.6**, 40.71N**±0.04×**142.48E**±0.08**, h71**^{km}±5^{km}**, n21, σ0ˢ61**/29**, mb3.6**/8**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JANG	Nango	0.81	246	P	P	13 26 52.7	+0.5
JANG				S	S	13 27 04.3	0.0
JTH	Tanohata	0.90	211	⇑P	P	13 26 53.1	-0.2
JTM	Tenmabayashi	1.07	275	⇓P	P	13 26 56.1	+0.5
JTM				S	S	13 27 10.2	0.0
JOT	Ohata	1.27	302	⇓P	P	13 26 58.4	+0.2
JOT				*e*S	S	13 27 14.6	-0.2
JEM	Erimo	1.40	21	P	P	13 27 00.2	+0.1
JEM				*e*S	S	13 27 17.5	-0.5
JOM	Ohasama	1.53	217	⇓P	P	13 27 02.5	+0.7
JOM				S	S	13 27 21.1	+0.1
JNBK	Urakawa-nobuka	1.58	7	P	P	13 27 02.4	-0.1
JKB	Kayabe	1.60	318	⇓P	P	13 27 02.8	+0.1
JKB				*e*S	S	13 27 22.3	-0.3
JCH	Churui	2.02	19	P	P	13 27 08.7	+0.3
JCH				*e*S	S	13 27 32.2	-0.1
ASAJ	Asahikawa	3.41	1	P	P	13 27 28.1	+0.3
	1.7nm,0.3s,baz=160,slow=13,SNR=13						
ASAJ				S	S	13 28 07.0	-0.3
	3.0nm,0.3s,baz=351,slow=33,SNR=4.4						
MAJO	Matsushiro	5.34	220	P	P	13 27 53.0	-1.7
	10nm,0.8s						
SONM	Songino Array	26.61	298	P	P	13 32 09.8	+0.5
	0.5nm,0.6s,mb3.3,baz=95,slow=8.4,SNR=6.4						
TGY	Tagaytay City	32.50	222	P	P	13 33 01.3	-0.7
	16nm,0.3s,baz=270,slow=20,SNR=3.0						
ZAL	Zalesovo	40.16	309	P	P	13 34 07.4	+1.3
	0.9nm,0.5s,mb3.9,baz=18,slow=5.6,SNR=3.7						
ILAR	Eielson Array	45.97	34	P	P	13 34 54.5	+1.4
	0.4nm,0.7s,mb3.2,baz=282,slow=7.2,SNR=5.0						
BVAR	Borovoye Array	48.77	310	P	P	13 35 14.2	-1.0
	0.2nm,0.3s,mb3.5,baz=90,slow=5.8,SNR=3.8						
RES	Resolute Bay	58.84	15	*e*P	P	13 36 27.9	-0.9
	0.6nm,0.6s,mb3.8						
YKA	Yellowknife Ar	60.23	31	P	P	13 36 38.6	+0.1
	0.1nm,0.6s,mb3.1,baz=303,slow=6.4,SNR=4.1						
FINES	FINESS Array B	65.96	332	P	P	13 37 16.3	+0.2
	1.1nm,0.7s,mb3.8,baz=56,slow=6.9,SNR=8.6						
FRB	Frobisher Bay	73.01	14	P	P	13 37 58.7	-0.3
	3.3nm,0.8s,mb4.2,baz=12,slow=8.0,SNR=5.5						
FRB	Frobisher Bay	73.01	14	P	P	13 37 58.7	-0.3

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*MOS **26** 13:27:09.6±0.8, 2.83N×95.64E, h33^{km}, mb5.0/17, Error ellipse: s-maj=14.8km s-min=7.8km az=96.9*
*BJI **26** 13:27:12.1, 2.96N×95.89E, h42^{km}, mB5.8, mb5.1, Ms5.8, Msz5.7*
*IDC **26** 13:27:12.7±3.5, 2.87N×95.65E, h41^{km}±30^{km}, mb4.3/17, mb1 4.4/18, mb1mx4.3/24, mbtmp4.6/18, ML4.8/1, Error ellipse: s-maj=23.5km s-min=13.1km az=54.0*
*NEIC **26** 13:27:13.8±1.5, 2.87N×95.68E, h51^{km}±13^{km}, mb4.8/16, Error ellipse: s-maj=11.9km s-min=4.7km az=54.0*
ISC 26 13:27:13.7±1.4**, 2.92N**±0.05×**95.79E**±0.06**, h64**^{km}±12^{km}**, h39**^{km}±5.6^{km}**:pP-P, n107, σ1ˢ02**/104**, mb4.8**/56**, 6C-4D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.39	64	*e*P	P	13 28 33.1	-0.2
KGM	Kluang	7.58	97	P	P	13 29 03.6	-0.2
KSM	Kuching	14.58	95	*e*P	P	13 30 40.4	+2.3
CM31	Chiang Mai Arr	15.75	11	*e*P	P	13 30 52.6	-0.5
	81nm,1.0s						
CMAR	Chiang Mai Arr	15.75	11	P	P	13 30 52.0	-1.1
	1.2nm,0.3s,baz=200,slow=11,SNR=68						
KKM	Kota Kinabalu	20.60	81	*e*P	P	13 31 50.4	+0.4
KKM	Kota Kinabalu	20.60	81	P	P	13 31 50.7	+0.7
QIZ	Qiongzhong	21.10	40	⇓P	P	13 31 55.3	+0.2
TSM	Tawau	22.08	86	P	P	13 32 06.4	+1.5
HYB	Hyderabad	22.22	312	*e*P	P	13 32 10.0	+3.8
HYB	Hyderabad	22.22	312	*i* P	P	13 32 10.0	+3.8
KMI	Kunming	23.07	16	⇑P	P	13 32 16.0	+1.4
KMI				AP		13 32 22.5	
KMI				AMB	AMB		
	comp=Z,41nm,1.3s,mb4.7						
KMI	Kunming	23.07	16	⇑P	P	13 32 16.1	+1.5
	comp=Z,41nm,1.3s,mb4.7						
KMI				pP		13 32 22.5	
GYA	Guiyang	25.62	23	⇑*i*P	P	13 32 39.5	+0.4
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
JIRN	Jiri	26.26	340	*e*P	P	13 32 45.2	+0.2
	comp=Z,125nm,0.8s,mb5.5						
PKI	Pulchoki	26.45	339	*e*P	P	13 32 46.7	0.0
	comp=Z,99nm,1.3s,mb5.2						
DMN	Daman	26.59	338	*e*P	P	13 32 48.2	+0.2
	comp=Z,131nm,1.4s,mb5.3						
GUN	Gumba	26.59	340	*e*P	P	13 32 48.2	+0.1
	comp=Z,90nm,0.8s,mb5.3						
KKN	Kakani	26.69	339	*e*P	P	13 32 48.6	-0.4
	comp=Z,66nm,0.9s,mb5.2						
LSA	Lhasa	27.00	351	P	P	13 32 51.0	-0.7
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
LSA	Lhasa	27.00	351	*e*P	P	13 32 51.6	-0.1
LSA				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.8						
LSA	Lhasa	27.00	351	*e*P	P	13 32 51.6	-0.1
	comp=Z,20nm,0.7s,mb4.8						
GKN	Gorkha	27.12	338	*e*P	P	13 32 52.6	-0.3
	comp=Z,216nm,1.3s,mb5.5						
KOLN	Koldanda	27.32	336	*e*P	P	13 32 54.1	-0.6
	comp=Z,116nm,1.0s,mb5.3						
CD2	Chengdu	28.84	14	⇑*i*P	P	13 33 07.3	-1.1
CD2				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.0						
ENH	Enshi	30.14	24	*e*P	P	13 33 18.7	-1.3
	comp=Z,25nm,1.0s,mb4.9						
WHN	Wuhan	32.61	31	⇓P	P	13 33 42.0	+0.5
WHN				AMB	AMB		
	comp=Z,36nm,1.2s,mb5.2						
MBWA	Marble Bar	33.51	137	P	P	13 33 49.6	+0.1
NJ2	Nanjing	36.20	34	*e*P	P	13 34 10.8	-1.5
NJ2				AP	pP	13 34 20.5	-7.8
NJ2				XP	sP	13 34 23.5	-13
NJ2				PP	PP	13 35 36.8	+0.3
NJ2				PPP	PPP	13 35 56.5	-0.2
NJ2				S	S	13 39 45.0	-2.0
NJ2				XS		13 40 02.0	
NJ2				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,1µm,4.4s						
NJ2				LR	LR		
	comp=N,4µm,15.0s						
NJ2				LR	LR		
	comp=E,5µm,18.2s						
NJ2				LR	LR		
	comp=Z,16µm,17.4s						
SSE	Sheshan	36.88	38	P	P	13 34 14.5	-3.5
SSE				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.9						
SSE	Sheshan	36.88	38	P	P	13 34 14.5	-3.5
	comp=Z,15nm,0.8s,mb4.9						
JOW	Kunigami	39.15	49	P	P	13 34 34.8	-2.2
	comp=Z,14nm,0.4s,mb5.1,baz=118,slow=26,SNR=7.2						
KAKA	Kakadu	39.57	114	*e*P	P	13 34 39.4	-1.2
	comp=Z,9.5nm,0.6s,mb4.7						
HHC	Hu-ho-hao-te	40.35	19	⇑P	P	13 34 48.5	+1.7
HHC				AP	pP	13 34 58.3	-4.6
HHC				XP	sP	13 35 02.0	-8.5
HHC				S	S	13 40 53.3	+3.5
HHC				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.2						
HHC				LR	LR		
	comp=N,9µm,16.8s						
HHC				LR	LR		
	comp=E,7µm,18.0s						
HHC				LR	LR		
	comp=Z,9µm,18.0s						
NWAO	Narrogin (SRO)	41.02	152	*e*P	P	13 34 55.3	+2.9
NWAO				pmax	pmax		
	comp=Z,12nm,1.0s						
NWAO	Narrogin (SRO)	41.02	152	P	P	13 34 53.0	+0.7
	comp=Z,15nm,1.2s,mb4.5,baz=299,slow=19,SNR=2.2						
NWAO	Narrogin (SRO)	41.02	152	*e*P	P	13 34 55.3	+2.9
	comp=Z,12nm,1.0s,mb4.5						
BJT	Baijiatuau	41.29	24	*e*P	P	13 34 55.8	+1.3
BJT				pmax	pmax		
	comp=Z,73nm,0.9s						
BJT	Baijiatuau	41.29	24	*e*P	P	13 34 55.8	+1.4
	comp=Z,72nm,0.9s,mb5.3						
BJI	Beijing	41.31	24	*e*P	P	13 34 56.3	+1.6
BJI				AMB	AMB		
	comp=Z,87nm,0.9s,mb5.4						
BJI	Beijing	41.31	24	*e*P	P	13 34 56.2	+1.5
BJI				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.4						
BJI	Beijing	41.31	24	*e*P	P	13 34 56.2	+1.5
	comp=Z,87nm,0.9s,mb5.4						
WMQ	Urumqi	41.36	351	⇓P	P	13 34 56.0	+1.0
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.6						
DL2	Dalian	42.86	30	P	P	13 35 08.5	+1.0
DL2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.3						
KZA	Kyzart	43.11	338	P	P	13 35 10.5	+1.1
	SNR=6.8						
UCH	Uchtor	43.52	337	P	P	13 35 13.8	+1.0
	SNR=12						
TKM2	Tokmak 2	43.71	338	P	P	13 35 14.7	+0.4
	SNR=8.9						
KBK	Karagaybulak	43.72	338	P	P	13 35 15.8	+1.4
	SNR=11						
AML	Almayashu	43.77	336	P	P	13 35 15.8	+1.0
	SNR=17						
AAK	Ala-Archa	43.88	337	P	P	13 35 17.0	+1.4
	SNR=5.9						
AAK	Ala-Archa	43.88	337	*i* P	P	13 35 14.7	-0.9
AAK				pmax	pmax		
	comp=Z,18nm,2.5s,mb4.4						
WRA	Warramunga Arr	44.14	123	P	P	13 35 17.6	-0.5
	comp=Z,11nm,0.8s,mb4.7,baz=301,slow=9.0,SNR=67						
WRAB	Tennant Creek	44.15	123	⇓*i*P	P	13 35 18.3	+0.2
WRAB	Tennant Creek	44.15	123	*e*P	P	13 35 16.9	-1.2
	comp=Z,37nm,1.1s,mb5.0						
WB2	Warramunga Arr	44.15	123	*e*P	P	13 35 18.1	-0.1
EKS2	Erkin-Say	44.18	337	P	P	13 35 19.1	+1.0
	SNR=11						
USP	Ospenovka	44.41	338	P	P	13 35 20.1	+0.2
	SNR=9.0						
MKAR	Makanchi Array	45.25	347	*i* P	P	13 35 26.5	-0.1
MKAR				pmax	pmax		
	comp=Z,15nm,0.5s						
ASPA	Alice Springs	45.55	128	*e*P	P	13 35 29.4	+0.1
ASAR	Alice Springs	45.55	128	P	P	13 35 29.1	-0.2
	comp=Z,3.5nm,0.8s,mb4.3,baz=302,slow=7.5,SNR=26						
ASAR				ScP		13 40 56.6	
	comp=Z,0.8nm,0.9s,baz=302,slow=3.0,SNR=4.4						
SONM	Songino Array	45.67	10	P	P	13 35 30.2	+0.3
	comp=Z,15nm,0.8s,mb5.0,baz=190,slow=8.4,SNR=127						
SONM				PcP	PcP	13 37 08.0	+0.5
	comp=Z,3.8nm,0.8s,baz=203,slow=3.8,SNR=4.3						
ZAK	Zakamensk	47.72	6	⇑*i*P	P	13 35 46.0	0.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
CN2	Changchun	48.45	29	*e*P	P	13 35 52.0	+0.3
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
TLY	Talaya	49.04	6	P	P	13 35 57.6	+1.4
	comp=Z,76nm,0.9s,mb5.7,SNR=8.7						
TLY	Talaya	49.04	6	*e*P	P	13 35 56.6	+0.5
TLY				*e*	pP	13 36 10.5	-2.1
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
IRK	Irkutsk	49.66	7	*e*P	P	13 36 01.2	+0.2
IRK				*e*		13 37 52.3	
IRK				pmax	pmax		
	comp=Z,37nm,2.0s,mb5.1						
KURK	Kurchatov	49.78	346	*i* P	P	13 36 01.9	0.0
KURK				pmax	pmax		
	comp=Z,28nm,1.6s,mb5.0						
KURK	Kurchatov	49.78	346	*e*P	P	13 36 01.6	-0.4
	comp=Z,7.4nm,0.7s,mb4.8						
HIA	Hailar	50.50	20	*e*P	P	13 36 08.0	+0.6
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HIA	Hailar	50.50	20	*e*P	P	13 36 08.0	+0.6
	comp=Z,3.6nm,0.5s,mb4.7						
ZAL	Zalesovo	51.65	352	P	P	13 36 15.8	-0.2
	comp=Z,12nm,0.9s,mb4.8,baz=308,slow=5.9,SNR=44						
PMG	Port Moresby	52.63	104	P	P	13 36 23.7	-0.2
	comp=Z,8.2nm,0.8s,mb4.7,baz=308,slow=7.6,SNR=6.0						
NVS	Novosibirsk	52.76	351	*e*P	P	13 36 22.6	-1.7
NVS				*i* S	S	13 43 48.1	+2.1
NVS				pmax	pmax		
	comp=N,47nm,2.1s						
NVS				pmax	pmax		
	comp=Z,59nm,2.1s,mb5.2						
NVS				pmax	pmax		
	comp=E,15nm,1.5s						
NVS				smax			
	comp=N,14nm,1.5s						
NVS				smax			
	comp=E,25nm,1.5s						
BVA0	Borovoye Array	54.18	341	*i* P	P	13 36 33.3	-1.5
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BVAR	Borovoye Array	54.18	341	P	P	13 36 33.8	-1.0
	comp=Z,13nm,0.9s,mb4.8,baz=143,slow=7.4,SNR=40						
CTA	Charters Tower	54.53	117	*e*P	P	13 36 38.2	+0.4
	comp=Z,3.8nm,0.9s,mb4.4						
CTA	Charters Tower	54.53	117	*e*P	P	13 36 38.2	+0.4
CTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CTA	Charters Tower	54.53	117	P	P	13 36 38.0	+0.1
	comp=Z,6.4nm,1.0s,mb4.6,baz=260,slow=15,SNR=4.1						
CTAO	Charters Tower	54.53	117	*e*P	P	13 36 37.3	-0.5
CTAO				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
CTAO	Charters Tower	54.53	117	*e*P	P	13 36 37.3	-0.6
	comp=Z,16nm,1.1s,mb5.0						
CHKZ	Chkalovo	54.66	342	*i* P	P	13 36 37.5	-0.8
CHKZ				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
KLR	Kul'dur	55.38	28	*e*P	P	13 36 41.2	-2.4
STKA	Stephens Creek	55.55	132	P	P	13 36 45.1	0.0
	comp=Z,5.6nm,1.0s,mb4.5,baz=348,slow=4.4,SNR=4.8						
STKA	Stephens Creek	55.55	132	*e*P	P	13 36 44.5	-0.5
BOD	Bodaibo	56.60	12	*e*P	P	13 36 51.9	-0.4
ASAJ	Asahikawa	58.17	38	P	P	13 37 03.0	-0.5
	comp=Z,5.4nm,0.8s,mb4.6,baz=113,slow=7.7,SNR=3.1						
GNI	Garni	59.08	316	*i* P	P	13 37 11.7	+1.8
YSS	Yuzh-Sakhalins	59.75	35	*e*P	P	13 37 14.0	-0.4
KIV	Kislovodsk	62.09	319	*e*P	P	13 37 34.3	+4.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
YAK	Yakutsk	64.19	17	*e*P	P	13 37 41.8	-2.0
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.4						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
MATP	Matopo	69.87	247	P	P	13 38 19.2	-1.0
	comp=E,4.9nm,1.1s,mb4.3,baz=66,slow=8.9,SNR=3.8						
MA2	Magadan	70.41	26	*e*P	P	13 38 23.2	+0.3
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
OBN	Obninsk	70.42	328	*e*P	P	13 38 22.7	-0.3
OBN				pmax	pmax		
	comp=Z,38nm,2.1s,mb5.0						
TIXI	Tiksi	71.76	10	*e*P	P	13 38 30.0	-0.7
TIXI				pmax	pmax		
	comp=Z,33nm,1.7s,mb5.0						
AKASG	Malin Array Be	73.04	322	P	P	13 38 37.2	-1.5
	comp=Z,0.3nm,0.2s,mb3.8,baz=92,slow=4.9,SNR=3.6						
LBTB	Lobatse	73.39	243	P	P	13 38 40.3	-0.9
	comp=Z,2.7nm,0.8s,mb4.2,baz=129,slow=7.5,SNR=4.6						
FINES	FINESS Array B	77.83	333	P	P	13 39 04.8	-1.0
	comp=Z,0.8nm,0.6s,mb3.8,baz=92,slow=6.0,SNR=5.0						
BILL	Bilibino	80.07	21	*e*P	P	13 39 13.6	-4.2
BILL				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.6						
ARCES	ARCESS Array B	80.45	340	P	P	13 39 20.4	+0.6
	comp=Z,6.9nm,1.1s,mb4.5,baz=72,slow=3.8,SNR=6.7						
GERES	GERESS Array B	82.60	319	P	P	13 39 31.3	0.0
	comp=Z,0.8nm,0.8s,mb3.8,baz=104,slow=5.5,SNR=5.9						
QSPA	South Pole Qui	92.85	180	*e*P	P	13 40 21.6	+1.5
	comp=Z,3.2nm,1.1s,mb4.7						
NVAR	Mina Array Bea	128.19	34	PKhKP		13 46 12.2	
	comp=Z,0.3nm,0.6s,baz=90,slow=13,SNR=3.0						
NVAR				PKP	PKPdf	13 46 16.6	+3.1
	comp=Z,0.6nm,0.8s,baz=244,slow=1.2,SNR=4.9						
PDAR	Pinedale Array	129.08	24	PKP	PKPdf	13 46 15.7	+0.7
	comp=Z,0.5nm,1.1s,baz=301,slow=10,SNR=3.1						
PV10	Paradox Valley	132.93	27	*e*PKPdf	PKPdf	13 46 25.8	+3.3
TXAR	Lajitas Array	142.90	29	PKP	PKPdf	13 46 40.2	-0.5
	comp=Z,0.6nm,0.8s,baz=315,slow=3.5,SNR=5.3						
TXAR	Lajitas Array	142.90	29	PKP	PKPdf	13 46 40.2	-0.5
JCT	Junction City	143.60	23	*e*PKPpre		13 46 42.1	

MAN 26 13:47:52.2, 12.82N×123.35E, h8^{km}**, mb3.8, ML2.6, MS2.1, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.83	307	*e*P	Pb	13 48 08.0	-0.5
AUQP				*e*S	Sb	13 48 25.4	+5.8
PVCP	Virac	1.10	45	*e*P	Pb	13 48 14.5	+1.5
PVCP				*e*S	Sb	13 48 31.1	+3.8
BOAC	Boac	1.60	294	*e*P	Pn	13 48 34.6	+14

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*IDC **26** 13:51:29.8±5.2, 9.47S×118.35E, mb3.2/2, mb1 3.4/3, mb1mx3.4/13, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=246.2km s-min=28.3km az=56.0*
*DJA **26** 13:51:37.7±1.1, 9.43S×118.31E, h130^{km}±16^{km}, mb4.2/3, Error ellipse: s-maj=38.5km s-min=8.8km az=147.0*
ISC 26 13:51:36.7±1.3**, 9.6S**±0.1×**118.44E**±0.07**, h81**^{km}±22^{km}**, n10, σ0ˢ79**/13**, mb3.6**/1**, 8C-2D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	2.53	295	⇓*i*P	P	13 52 17.5	+0.9
KEDI				⇑*i*S	S	13 52 47.9	+1.6
RATI	Rata	2.98	286	⇑*i*P	P	13 52 22.9	0.0
RATI				⇓*i*S	S	13 52 57.5	-0.2
KELI	Kelakatan	4.12	288	⇑*i*P	P	13 52 38.6	0.0
SRDI	Scrawed	4.37	284	⇑*i*P	P	13 52 41.4	-0.8
SRDI				⇑*i*S	S	13 53 30.9	-1.4
NINI	Niniconang	5.26	15	⇑*i*P	P	13 52 54.5	+0.1
	160nm,0.3s						
TANI	Tanete Lipujan	6.15	9	⇑*i*P	P	13 53 05.4	-1.2
	35nm,0.3s						
BUNI	Buntu Taipa	6.15	18	⇑*i*P	P	13 53 07.0	+0.4
	16nm,0.2s						
WRA	Warramunga Arr	18.51	126	P	P	13 55 48.7	-0.4
	0.1nm,0.3s,baz=302,slow=14,SNR=6.6						
ASAR	Alice Springs	20.38	135	P	P	13 56 09.8	+0.6
	0.4nm,0.7s,baz=309,slow=9.7,SNR=7.5						
SONM	Songino Array	58.12	350	P	P	14 01 24.6	+0.4
	0.3nm,0.4s,mb3.6,baz=170,slow=8.3,SNR=7.3						

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*JMA **26** 14:14:15.1, 37.17N×138.80E, h9^{km}±1^{km}, M4.0*
JMA Felt III J1.
*NEIC **26** 14:14:16.0±2.2, 37.10N×138.74E, h22^{km}±15^{km}, mb4.4/4, Error ellipse: s-maj=16.1km s-min=12.8km az=61.0*
NEIC Recorded [3 JMA] in Niigata and [1 JMA] in Gumma, Nagano and Saitama Prefectures.
*IDC **26** 14:14:20.4±2.5, 37.16N×138.55E, h56^{km}±25^{km}, mb3.6/9, mb1 3.8/11, mb1mx3.6/23, mbtmp3.9/11, ML3.4/2, Error ellipse: s-maj=26.7km s-min=13.8km az=87.0*
ISC 26 14:14:14.5±0.4**, 37.17N**±0.03×**138.80E**±0.06**, h25**^{km}±3^{km}**, n32, σ1ˢ09**/38**, mb4.0**/12**, 5D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	Hiroka	0.19	66	⇓P	Pb	14 14 19.0	-1.0
JHK				S	Sb	14 14 22.1	-1.7
JIZZ	Izumozaki	0.37	349	⇓P	Pb	14 14 22.9	+0.4
JIZZ				S	Sb	14 14 29.3	+1.3
JKT	Katashina	0.54	138	⇓P	Pb	14 14 25.4	+0.1
JKT				S	Sb	14 14 33.3	+0.6
JGK	Kuni	0.62	192	P	Pb	14 14 27.2	+0.6
JNS	Sasagawa	0.77	32	⇓P	Pb	14 14 28.9	-0.2
MAJO	Matsushiro	0.79	217	*e*P	Pb	14 14 29.4	0.0
MAT	Matsushiro	0.79	217	*e*P	Pb	14 14 29.0	-0.4
MAT				*e*S	Sb	14 14 40.0	+0.3
MAT	Matsushiro	0.79	217	P	Pb	14 14 29.4	0.0
MAT				S	Sb	14 14 40.0	+0.3
JAG	Ashikaga	0.91	145	⇓P	Pb	14 14 32.3	+0.8
JSD	Sado	0.96	334	P	Pb	14 14 31.9	-0.5
JHJ	Hachijo jima 2	4.12	168	P	Pn	14 15 20.9	+3.3
	19nm,0.3s,baz=62,slow=16,SNR=3.3						
JHJ				S	Sn	14 16 09.7	+4.1
	16nm,0.3s,baz=78,slow=22,SNR=2.9						
ASAJ	Asahikawa	7.51	21	P	Pn	14 16 08.7	+3.4
	0.4nm,0.3s,baz=233,slow=10,SNR=4.3						
KS15	Wonju Array Si	8.70	275	*e*P	P	14 16 20.0	-1.9
BJT	Baijiatuau	17.91	286	P	P	14 18 25.6	+2.1
HIA	Hailar	18.35	317	*e*P	P	14 18 30.6	+1.7
	2.0nm,0.7s						
ENH	Enshi	25.27	263	*e*P	P	14 19 40.1	-0.2
	8.8nm,0.8s,mb4.3						
SONM	Songino Array	25.98	304	P	P	14 19 46.4	-0.3
	1.5nm,1.0s,mb3.5,baz=108,slow=7.8,SNR=8.4						
CM31	Chiang Mai Arr	39.52	253	P	P	14 21 44.5	-0.6
	5.2nm,0.6s,mb4.4						
CHKZ	Chkalovo	48.69	313	*e*P	P	14 22 55.6	-2.7
	3.5nm,1.1s,mb4.3						
ILAR	Eielson Array	50.50	32	P	P	14 23 12.7	+0.6
	0.7nm,1.0s,mb3.7,baz=272,slow=6.8,SNR=5.8						
HYB	Hyderabad	56.12	267	*e*P	P	14 23 54.0	-0.3
HYB	Hyderabad	56.12	267	*i* P	P	14 23 54.0	-0.3
WRAB	Tennant Creek	56.95	185	P	P	14 23 59.0	-1.2
WRA	Warramunga Arr	56.96	185	P	P	14 23 59.5	-0.8
	2.5nm,0.7s,mb4.4,baz=0.5,slow=7.6,SNR=16						
ASAR	Alice Springs	60.69	185	P	P	14 24 25.7	-0.4
	0.4nm,0.7s,mb3.7,baz=16,slow=10,SNR=4.5						
YKA	Yellowknife Ar	64.73	29	P	P	14 24 52.2	-0.1
	0.3nm,0.7s,mb3.4,baz=306,slow=6.9,SNR=7.8						
YKA	Yellowknife Ar	64.73	29	P	P	14 24 52.2	-0.1
FINES	FINESS Array B	67.71	331	P	P	14 25 11.2	-0.1
	1.1nm,0.7s,mb4.0,baz=63,slow=4.3,SNR=4.1						
AKASG	Malin Array Be	72.90	321	P	P	14 25 42.6	-0.4
	5.5nm,1.1s,mb4.4,baz=52,slow=5.9,SNR=5.6						
NOA	NORSAR Array B	73.24	336	P	P	14 25 44.7	0.0
	1.0nm,0.8s,mb3.8,baz=233,slow=12,SNR=2.5						
NOA	NORSAR Array B	73.24	336	P	P	14 25 44.7	0.0
NVAR	Mina Array Bea	76.56	52	P	P	14 26 07.2	+2.9
	0.8nm,0.9s,mb3.6,baz=300,slow=5.5,SNR=4.8						

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*NEIC **26** 14:19:55.2±4.7, 11.92N×93.60E, h42^{km}±39^{km}, mb4.3/3, Error ellipse: s-maj=41.8km s-min=14.8km az=57.0*
*IDC **26** 14:20:01.0±0.8, 12.19N×93.98E, h91^{km}±6^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.6/17, mbtmp3.9/9, Error ellipse: s-maj=23.8km s-min=14.9km az=62.0*
ISC 26 14:19:58.9±0.7**, 12.21N**±0.09×**94.0E**±0.1**, h88**^{km}**, h88**^{km}±4.8^{km}**:pP-P, n12, σ1ˢ13**/13**, mb4.0**/10**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.83	37	P	P	14 21 53.0	+1.1
	0.2nm,0.3s,baz=240,slow=15,SNR=12						
CMAR				S	S	14 23 19.1	-0.6
	0.7nm,0.3s,baz=13,slow=19,SNR=5.8						
LSA	Lhasa	17.60	352	*e*P	P	14 23 50.9	-9.1
	6.8nm,1.0s						
ENH	Enshi	23.00	36	*e*P	P	14 25 02.1	+5.3
	12nm,0.9s,mb4.2						
SONM	Songino Array	37.00	14	P	P	14 27 03.2	+1.6
	0.9nm,1.0s,mb3.7,baz=201,slow=9.4,SNR=6.4						
SONM				sP	sP	14 27 38.2	+5.3
	1.8nm,0.6s,baz=199,slow=8.4,SNR=12						
ZAL	Zalesovo	42.26	352	P	P	14 27 42.7	-2.3
	1.0nm,0.4s,mb3.9,baz=275,slow=7.1,SNR=4.9						
ZAL				sP	sP	14 28 16.8	+0.5
	0.9nm,0.3s,baz=303,slow=8.5,SNR=2.6						
WRA	Warramunga Arr	50.96	128	P	P	14 28 54.4	+0.5
	0.9nm,0.4s,mb4.1,baz=304,slow=8.6,SNR=31						

WRA				pP	pP	14 29 15.2	-0.4
	0.9nm,0.4s,baz=297,slow=9.7,SNR=6.8						
WRA				pPcP		14 30 26.7	
	0.6nm,0.5s,baz=319,slow=3.1,SNR=9.3						
WRAB	**Tennant Creek**	**50.97**	**128**	*e*P	**P**	**14 28 54.4**	**+0.4**
	2.3nm,0.6s,mb4.4						
ASAR	**Alice Springs**	**52.86**	**132**	P	**P**	**14 29 06.6**	**-1.5**
	1.2nm,0.6s,mb4.1,baz=304,slow=6.8,SNR=24						
ASAR				pP	pP	14 29 30.9	+1.0
	0.9nm,0.5s,baz=307,slow=6.8,SNR=6.4						
ASAR				sP	sP	14 29 41.3	+1.6
	0.6nm,0.6s,baz=315,slow=7.3,SNR=2.8						
FINES	**FINESS Array B**	**68.85**	**331**	P	**P**	**14 30 54.5**	**-1.2**
	1.0nm,0.7s,mb3.7,baz=90,slow=9.5,SNR=4.3						
ARCES	**ARCESS Array B**	**71.17**	**340**	P	**P**	**14 31 09.4**	**-0.2**
	4.3nm,0.8s,mb4.3,slow=15,SNR=5.2						
GERES	**GERESS Array B**	**74.54**	**317**	P	**P**	**14 31 30.7**	**+0.9**
	0.6nm,0.6s,mb3.5,baz=90,slow=4.0,SNR=6.0						
GERES				pP	pP	14 31 52.6	-0.4
	0.9nm,0.8s,baz=90,slow=5.3,SNR=3.2						
NOA	**NORSAR Array B**	**75.92**	**330**	P	**P**	**14 31 38.3**	**+0.9**
	0.9nm,0.7s,mb3.6,baz=258,slow=20,SNR=2.8						

*BJI **26** 14:24:56.5, 9.12N×93.05E, h47^{km}, mB5.5, mb5.1, Ms5.1, Msz4.9*

*MOS **26** 14:24:57.1±0.9, 9.48N×93.23E, h33^{km}, mb5.3/21, Error ellipse: s-maj=15.5km s-min=6.9km az=112.3*

*NEIC **26** 14:24:58.3±0.2, 9.38N×93.11E, h30^{km}, mb5.1/41, Error ellipse: s-maj=7.2km s-min=4.7km az=224.0*

*IDC **26** 14:25:02.1±1.6, 9.46N×93.34E, h62^{km}±13^{km}, mb4.5/21, mb1 4.6/22, mb1mx4.6/25, mbtmp4.8/22, Error ellipse: s-maj=21.5km s-min=8.8km az=55.0*

ISC 26 14:24:57.2±0.2, **9.32N**±0.03×**93.12E**±0.03, **h36^{km}, h36^{km}**±1.1^{km}**:pP-P, n228,** σ1^{s}**13**/235, **mb5.0**/81, **MS5.0**/8, **25C-11D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNT	**Nongplab**	**7.26**	**63**	P	**P**	**14 26 46.3**	**+2.7**
SNG	**Songkhla**	**7.72**	**105**	P	**P**	**14 26 54.0**	**+4.0**
	504nm,1.0s						
KULM	**Kulim**	**8.47**	**118**	*e*P	**P**	**14 27 02.5**	**+2.1**
NST	**Nakhon Sawan**	**9.32**	**47**	P	**P**	**14 27 15.0**	**+2.9**
	167nm,0.5s						
BDT	**Bhumibol Dam**	**9.74**	**35**	P	**P**	**14 27 21.0**	**+3.0**
	38nm,0.8s						
CM31	**Chiang Mai Arr**	**10.70**	**31**	*e*P	**P**	**14 27 32.6**	**+1.4**
	48nm,0.6s						
CMAR	**Chiang Mai Arr**	**10.70**	**31**	*i* P	**P**	**14 27 33.3**	**+2.1**
CMAR				pmax	pmax		
	comp=Z,29nm,0.8s						
CMAR	**Chiang Mai Arr**	**10.70**	**31**	P	**P**	**14 27 30.9**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=221,slow=14,SNR=43						
CMAR				ScP		14 36 59.8	
	comp=Z,0.2nm,0.3s,baz=243,slow=3.3,SNR=13						
KKTK	**Khon Kaen**	**11.75**	**53**	P	**P**	**14 27 49.3**	**+3.8**
	comp=Z,556nm,0.8s						
NANT	**Nan**	**11.95**	**37**	P	**P**	**14 27 51.0**	**+2.9**
CHRT	**Chiangrai**	**12.31**	**31**	⇑P	**P**	**14 27 54.0**	**+1.0**
	comp=Z,276nm,1.0s						
KGM	**Kluang**	**12.47**	**125**	P	**P**	**14 28 00.4**	**+5.3**
VIS	**Vishakhapatnam**	**12.66**	**312**	*e*P	**P**	**14 27 56.4**	**-1.2**
VIS				AMb	AMB	14 27 58.9	
	comp=Z,53nm,0.9s						
VIS				*e*S	**S**	**14 30 02.3**	**-16**
VIS				*e*		14 30 08.7	
	comp=N,131nm,0.2s						
VIS				*e*		14 30 09.8	
	comp=E,165nm,0.7s						
BWNR	**Bhubaneshwar**	**13.00**	**328**	*e*P	**P**	**14 28 03.8**	**+1.7**
BWNR				AMb	AMB	14 28 05.9	
	comp=Z,48nm,1.5s						
BWNR				*e*S	**S**	**14 30 11.6**	**-15**
BWNR				*e*		14 30 15.7	
	comp=N,247nm,0.5s						
BWNR				*e*		14 30 16.0	
	comp=E,461nm,0.6s						
IMP	**Imphal**	**15.40**	**3**	*e*P	**P**	**14 28 34.0**	**+0.4**
HYB	**Hyderabad**	**16.29**	**301**	*e*P	**P**	**14 28 42.0**	**-3.0**
HYB				*e*S	**S**	**14 31 44.0**	**0.0**
HYB	**Hyderabad**	**16.29**	**301**	*i* P	**P**	**14 28 42.0**	**-3.0**
HYB				*e*S	**S**	**14 31 44.0**	**0.0**
BLSP	**Bilaspur**	**16.54**	**322**	*e*P	**P**	**14 28 50.0**	**+1.8**
BLSP				*e*		14 31 38.0	
KMI	**Kunming**	**18.19**	**29**	P	**P**	**14 29 11.0**	**+2.1**
KMI				AP		14 29 18.0	
KMI				XP		14 29 22.5	
KMI				S	**S**	**14 32 32.5**	**+5.1**
KMI				AMB	AMB		
	comp=Z,19nm,1.3s						
KMI				LR	LR		
	comp=N,2μm,27.8s						
KMI				LR	LR		
	comp=E,2μm,26.1s						
KMI				LR	LR		
	comp=Z,2μm,19.1s						
KMI	**Kunming**	**18.19**	**29**	P	**P**	**14 29 11.0**	**+2.1**
	comp=Z,19nm,1.3s						
KMI				pP		14 29 17.9	
KMI				sP		14 29 22.6	
KMI				S	**S**	**14 32 32.5**	**+5.1**
KSM	**Kuching**	**18.79**	**113**	*e*P	**P**	**14 29 17.1**	**+0.8**
QIZ	**Qiongzhong**	**18.86**	**57**	⇓P	**P**	**14 29 18.8**	**+1.8**
QIZ	**Qiongzhong**	**18.86**	**57**	*e*P	**P**	**14 29 15.5**	**-1.5**
	comp=Z,131nm,1.5s						
JIRN	**Jiri**	**19.38**	**341**	*e*P	**P**	**14 29 22.7**	**-0.2**
	comp=Z,45nm,0.4s						
PKI	**Pulchoki**	**19.56**	**339**	*e*P	**P**	**14 29 25.2**	**+0.3**
	comp=Z,245nm,1.1s						
DMN	**Daman**	**19.70**	**338**	*e*P	**P**	**14 29 26.4**	**0.0**
	comp=Z,153nm,0.8s						
GUN	**Gumba**	**19.71**	**341**	*e*P	**P**	**14 29 26.7**	**+0.2**
	comp=Z,301nm,0.8s						
KKN	**Kakani**	**19.80**	**339**	*e*P	**P**	**14 29 27.4**	**-0.1**
	comp=Z,98nm,0.7s						
KAD	**Karad**	**20.05**	**295**	*e*P	**P**	**14 29 32.4**	**+2.2**
KAD				AMb	AMB	14 29 35.3	
	comp=Z,39nm,1.4s						
KAD				*e*		14 32 56.3	
GKN	**Gorkha**	**20.23**	**338**	*e*P	**P**	**14 29 32.2**	**+0.1**
	comp=Z,144nm,0.5s						
LSA	**Lhasa**	**20.36**	**355**	*e*P	**P**	**14 29 32.2**	**-1.2**
	comp=Z,48nm,0.6s						
BHPL	**Bhopal**	**20.43**	**315**	*i* P	**P**	**14 29 36.9**	**+2.8**
BHPL				*i*		14 33 12.3	
KOLN	**Koldanda**	**20.43**	**335**	*e*P	**P**	**14 29 34.5**	**+0.3**
	comp=Z,107nm,0.7s						
POO	**Poona**	**20.80**	**298**	⇑*i*P	**P**	**14 29 41.0**	**+2.9**
POO				*i*		14 33 18.0	
GYA	**Guiyang**	**21.34**	**35**	⇑*i*P	**P**	**14 29 43.8**	**+0.4**
GYA				AP		14 29 52.5	
GYA				XP		14 29 57.0	
GYA				PP	PP	14 30 04.8	-2.9
GYA				S	**S**	**14 33 33.5**	**+0.2**
GYA				AMB	AMB		
	comp=Z,60nm,1.1s,mb4.8						
GYA				AMB	AMB		
	comp=Z,2μm,12.0s						
GYA				LR	LR		
	comp=N,1μm,17.9s,MS4.6						
GYA				LR	LR		
	comp=E,2μm,19.1s,MS4.6						
GYA				LR	LR		
	comp=Z,3μm,15.2s,MS4.8						
KKM	**Kota Kinabalu**	**23.12**	**96**	*e*P	**P**	**14 30 03.2**	**+1.9**
KKM	**Kota Kinabalu**	**23.12**	**96**	P	**P**	**14 30 04.2**	**+2.9**
LGTI	**Lohaghat**	**23.38**	**331**	*e*P	**P**	**14 30 06.7**	**+3.0**
PTH	**Pithoragarh**	**23.48**	**331**	*e*P	**P**	**14 30 07.8**	**+3.2**
PTH				*e*		14 34 33.2	
CD2	**Chengdu**	**23.66**	**23**	P	**P**	**14 30 06.3**	**-0.1**
CD2				S	**S**	**14 34 13.0**	**-2.4**
CD2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.0						
NDI	**New Delhi**	**24.38**	**324**	*e*P	**P**	**14 30 13.5**	**+0.1**
NDI				*e*		14 34 36.5	
TSM	**Tawau**	**25.07**	**100**	P	**P**	**14 30 24.0**	**+3.8**
DDI	**Dehra Dun**	**25.19**	**328**	*e*P	**P**	**14 30 23.2**	**+2.0**
DDI				*e*S	**S**	**14 34 45.4**	**+4.0**
ENH	**Enshi**	**25.85**	**34**	*e*P	**P**	**14 30 25.4**	**-1.9**
	comp=Z,36nm,0.6s,mb5.1						
SDNR	**Sundarnagar**	**26.69**	**328**	*e*P	**P**	**14 30 36.7**	**+1.6**
LZH	**Lanzhou**	**28.38**	**18**	*e*P	**P**	**14 30 49.8**	**-0.6**
LZH				AP	pP	14 30 58.3	-2.2
LZH				XP	sP	14 31 03.0	-2.0
LZH				PP	PP	14 31 42.0	-0.2
LZH				*e*S	**S**	**14 35 33.0**	**-0.3**
LZH				SS	SS	14 36 59.8	+0.9
LZH				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.4						
LZH				AMB	AMB		
	comp=Z,290nm,4.0s						
LZH				LR	LR		
	comp=E,2μm,14.5s						
LZH				LR	LR		
	comp=Z,3μm,15.8s,MS5.0						
LZH	**Lanzhou**	**28.38**	**18**	*e*P	**P**	**14 30 49.7**	**-0.7**
	comp=Z,120nm,1.2s,mb5.4						
LZH				pP	pP	14 30 58.3	-2.2
LZH				sP	sP	14 31 03.0	-2.0
LZH				PP	PP	14 31 42.0	-0.2
LZH				*e*S	**S**	**14 35 33.0**	**-0.3**
LZH				sS		14 35 48.0	
LZH				SS	SS	14 36 59.8	+0.9
LZH				LR	LR		
	comp=Z,3μm,15.8s,MS5.0						
WHN	**Wuhan**	**28.95**	**40**	⇑P	**P**	**14 30 59.3**	**+3.8**
GTA	**Gaotai**	**30.56**	**10**	⇑*i*P	**P**	**14 31 09.5**	**-0.2**
GTA				AP	pP	14 31 18.8	-1.1
GTA				PCP	PcP	14 34 08.8	+0.8
GTA				S	**S**	**14 36 09.3**	**+1.5**
GTA				XS		14 36 26.0	
GTA				SCP		14 37 45.8	
GTA				PCS		14 37 51.5	
GTA				SS	SS	14 37 53.8	+3.9
GTA				SCS	ScS	14 41 40.3	-1.0
GTA				AMB	AMB		
	comp=Z,57nm,0.9s,mb5.4						
GTA				AMB	AMB		
	comp=Z,621nm,6.5s						
GTA				LR	LR		
	comp=N,2μm,14.5s,MS5.0						
GTA				LR	LR		
	comp=E,2μm,15.2s,MS5.0						
GTA				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
NJ2	**Nanjing**	**32.87**	**43**	*e*P	**P**	**14 31 28.3**	**-1.8**
NJ2				AP	pP	14 31 39.0	-1.3
NJ2				XP	sP	14 31 42.8	-2.2
NJ2				PP	PP	14 32 39.0	-1.5
NJ2				PPP	PPP	14 32 56.3	-0.1
NJ2				S	**S**	**14 36 40.0**	**-4.1**
NJ2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,1μm,5.2s						
NJ2				LR	LR		
	comp=N,1μm,16.7s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,16.0s,MS5.0						
NJ2				LR	LR		
	comp=Z,4μm,14.2s,MS5.3						
KSH	**Kashi**	**33.75**	**336**	*e*P	**P**	**14 31 38.0**	**+0.4**
KSH				*e*AP	pP	14 31 48.0	+0.1
KSH				*e*XP	sP	14 31 52.5	0.0
KSH				*e*PP	PP	14 32 51.0	-0.1
KSH				*e*PCP	PcP	14 34 17.0	+0.3
KSH				*e*S	**S**	**14 36 59.0**	**+1.4**
KSH				*e*PS		14 37 08.0	
KSH				*e*SS	SS	14 39 05.0	+0.7
KSH				*e*SCS	ScS	14 41 58.3	+0.9
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				AMB	AMB		
	comp=Z,520nm,10.6s						
KSH				LR	LR		
	comp=N,3μm,13.4s,MS5.2						
KSH				LR	LR		
	comp=E,2μm,14.8s,MS5.2						
SSE	**Sheshan**	**33.93**	**46**	P	**P**	**14 31 36.3**	**-2.9**
SSE				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,2μm,11.0s						
SSE	**Sheshan**	**33.93**	**46**	P	**P**	**14 31 36.2**	**-3.0**
	comp=Z,33nm,0.7s,mb5.4						
TIA	**Tai'an**	**34.54**	**35**	*e*P	**P**	**14 31 43.3**	**-1.1**
BTO	**Baotou**	**34.59**	**23**	*e*P	**P**	**14 31 41.5**	**-3.3**
WMQ	**Urumqi**	**34.69**	**353**	*e*P	**P**	**14 31 45.5**	**-0.2**
WMQ				AP	pP	14 31 55.0	-1.0
WMQ				XP	sP	14 31 59.0	-1.6
WMQ				PP	PP	14 33 03.0	-0.1
WMQ				S	**S**	**14 37 12.0**	**-0.3**
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.7						
HHC	**Hu-ho-hao-te**	**35.41**	**24**	⇑P	**P**	**14 31 51.5**	**-0.3**
HHC				AP	pP	14 32 00.8	-1.3
HHC				XP	sP	14 32 05.5	-1.2
HHC				PP	PP	14 33 17.5	+5.5
HHC				PCP	PcP	14 34 15.0	-6.5
HHC				S	**S**	**14 37 26.8**	**+3.5**
HHC				XS		14 37 42.5	
HHC				SCP		14 38 00.5	
HHC				SCS	ScS	14 42 03.8	-2.4
HHC				LR	LR		
	comp=N,2μm,16.2s,MS5.1						
HHC				LR	LR		
	comp=E,2μm,16.2s,MS5.1						
HHC				LR	LR		
	comp=Z,2μm,16.8s,MS4.9						
ULHL	**Ulahol**	**36.00**	**338**	P	**P**	**14 31 57.3**	**+0.5**
	SNR=12						
KZA	**Kyzart**	**36.22**	**337**	P	**P**	**14 31 59.8**	**+1.1**
	SNR=35						
UCH	**Uchtor**	**36.63**	**337**	P	**P**	**14 32 03.3**	**+1.2**
	SNR=32						
TKM2	**Tokmak 2**	**36.82**	**338**	P	**P**	**14 32 04.2**	**+0.5**
	SNR=32						
BJT	**Baijiatuau**	**36.82**	**30**	*e*P	**P**	**14 32 04.2**	**+0.4**
	comp=Z,25nm,0.6s,mb5.2						
KBK	**Karagaybulak**	**36.83**	**337**	P	**P**	**14 32 05.2**	**+1.4**
	SNR=69						
BJI	**Beijing**	**36.84**	**30**	*e*P	**P**	**14 32 04.5**	**+0.6**
BJI				AMB	AMB		
	comp=Z,39nm,0.9s,mb5.2						
BJI	**Beijing**	**36.84**	**30**	*e*P	**P**	**14 32 04.5**	**+0.6**
	comp=Z,39nm,0.9s,mb5.2						
AML	**Almayashu**	**36.88**	**336**	P	**P**	**14 32 05.7**	**+1.5**
	SNR=146						
AAK	**Ala-Archa**	**36.99**	**337**	P	**P**	**14 32 06.4**	**+1.3**
	SNR=50						
AAK	**Ala-Archa**	**36.99**	**337**	*i* P	**P**	**14 32 05.7**	**+0.6**
AAK				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.3						
AAK	**Ala-Archa**	**36.99**	**337**	*e*P	**P**	**14 32 05.0**	**-0.1**
	comp=Z,60nm,1.1s,mb5.3						
FRU	**Bishkek**	**37.11**	**337**	⇑*i*P	**P**	**14 32 07.0**	**+0.9**
FRU				*e*		14 37 48.0	
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.1						
CHMS	**Chumysh**	**37.20**	**338**	P	**P**	**14 32 07.4**	**+0.5**
	SNR=23						
EKS2	**Erkin-Say**	**37.29**	**336**	P	**P**	**14 32 09.1**	**+1.4**
	SNR=68						
USP	**Ospenovka**	**37.52**	**337**	P	**P**	**14 32 10.3**	**+0.7**
	SNR=78						
MKAR	**Makanchi Array**	**38.47**	**348**	*i* P	**P**	**14 32 16.6**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MKAR	**Makanchi Array**	**38.47**	**348**	*i* P	**P**	**14 32 16.7**	**-0.8**
DL2	**Dalian**	**38.99**	**36**	P	**P**	**14 32 22.8**	**+1.0**
DL2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
SONM	**Songino Array**	**40.00**	**14**	P	**P**	**14 32 29.7**	**-0.4**
	comp=Z,21nm,0.7s,mb5.0,baz=195,slow=11,SNR=18						
SONM				PcP	PcP	14 34 35.0	-0.5
	comp=Z,4.0nm,0.7s,baz=194,slow=3.3,SNR=9.9						
SONM				ScP		14 38 18.5	
	comp=Z,1.9nm,0.9s,baz=208,slow=3.4,SNR=7.0						
ULN	**Ulaanbaatar**	**40.19**	**15**	*e*P	**P**	**14 32 30.7**	**-1.0**
	comp=Z,29nm,0.9s,mb5.0						
ZAK	**Zakamensk**	**41.80**	**10**	⇑*i*P	**P**	**14 32 44.9**	**0.0**
ZAK				*e*		14 34 24.3	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.8						
KS15	**Wonju Array Si**	**42.04**	**43**	*e*P	**P**	**14 32 46.5**	**-0.7**
SNY	**Shenyang**	**42.04**	**34**	⇑P	**P**	**14 32 46.8**	**-0.3**
SNY				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.8						
MOY	**Mondy**	**42.71**	**7**	*e*P	**P**	**14 32 52.7**	**+0.2**
MOY				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.6						
KURK	**Kurchatov**	**42.98**	**346**	*i* P	**P**	**14 32 54.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
KURK	**Kurchatov**	**42.98**	**346**	*e*P	**P**	**14 32 53.8**	**-0.9**
	comp=Z,42nm,1.2s,mb5.0						
TLY	**Talaya**	**43.11**	**10**	P	**P**	**14 32 56.5**	**+0.8**
	comp=Z,96nm,1.1s,mb5.4,SNR=12						
TLY	**Talaya**	**43.11**	**10**	*e*P	**P**	**14 32 55.9**	**+0.2**
TLY				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
IRK	**Irkutsk**	**43.76**	**10**	*e*P	**P**	**14 33 00.5**	**-0.5**
IRK				*e*		14 34 47.5	
IRK				pmax	pmax		
	comp=Z,26nm,2.1s,mb4.6						
CN2	**Changchun**	**44.37**	**34**	*e*P	**P**	**14 33 06.0**	**0.0**
CN2				*e*AP	pP	14 33 14.5	-2.0
CN2				PCP	PcP	14 34 49.5	-0.5
CN2				*e*S	**S**	**14 39 37.5**	**0.0**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
CN2				LR	LR		
	comp=N,2μm,15.0s,MS5.2						
CN2				LR	LR		
	comp=E,2μm,15.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2μm,17.0s,MS5.2						
KAKA	**Kakadu**	**44.77**	**119**	*e*P	**P**	**14 33 08.7**	**-0.9**
	comp=Z,3.5nm,0.4s,mb4.5						
ZAL	**Zalesovo**	**45.00**	**353**	P	**P**	**14 33 10.2**	**-0.6**
	comp=Z,6.1nm,0.4s,mb4.8,baz=307,slow=5.9,SNR=44						
ZAL				S	**S**	**14 39 45.5**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=171,slow=19,SNR=2.6						
HIA	**Hailar**	**45.61**	**24**	*e*P	**P**	**14 33 14.8**	**-1.0**
	comp=Z,61nm,1.1s,mb5.4						
NVS	**Novosibirsk**	**46.08**	**352**	*i* P	**P**	**14 33 17.1**	**-2.4**
NVS				*i*		14 33 36.1	
NVS				*i*		14 43 03.9	
NVS				pmax	pmax		
	comp=N,15nm,1.1s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
MUN	**Mundaring**	**46.62**	**153**	⇑*i*P	**P**	**14 33 24.9**	**+0.9**
	comp=Z,9.3nm,1.0s,mb4.7						
KLBR	**Kellerberrin**	**47.02**	**151**	⇓*i*P	**P**	**14 33 27.8**	**+0.6**
	comp=Z,454nm,1.1s						
MDJ	**Mudanjiang**	**47.20**	**35**	P	**P**	**14 33 28.3**	**-0.1**
MDJ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,934nm,12.1s						
BVA0	**Borovoye Array**	**47.31**	**341**	*i* P	**P**	**14 33 28.1**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BVAR	**Borovoye Array**	**47.31**	**341**	P	**P**	**14 33 28.1**	**-1.0**
	comp=Z,5.0nm,0.6s,mb4.6,baz=145,slow=8.3,SNR=44						
RAYN	**Ar Rayn**	**47.58**	**293**	P	**P**	**14 33 34.8**	**+3.1**
	comp=Z,84nm,0.8s,mb5.8,SNR=13						
CHKZ	**Chkalovo**	**47.80**	**342**	*i* P	**P**	**14 33 31.9**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
CHKZ	**Chkalovo**	**47.80**	**342**	*e*P	**P**	**14 33 31.7**	**-1.2**
	comp=Z,41nm,0.9s,mb5.5						
NWAO	**Narrogin (SRO)**	**47.89**	**152**	P	**P**	**14 33 34.7**	**+0.7**
	comp=Z,13nm,0.5s,mb5.3,baz=314,slow=9.6,SNR=30						
MAT	**Matsushiro**	**48.97**	**49**	*e*P	**P**	**14 33 43.0**	**+0.7**
MAT	**Matsushiro**	**48.97**	**49**	P	**P**	**14 33 43.0**	**+0.7**
WRA	**Warramunga Arr**	**49.92**	**126**	P	**P**	**14 33 49.4**	**-0.4**
	comp=Z,15nm,0.5s,mb5.3,baz=306,slow=8.3,SNR=212						
WRA				PcP	PcP	14 35 10.3	+0.3
	comp=Z,2.9nm,0.6s,baz=319,slow=2.9,SNR=8.5						
WRA				ScP		14 38 59.6	
	comp=Z,3.2nm,1.1s,baz=316,slow=3.9,SNR=9.3						
WRA				S	**S**	**14 40 52.2**	**-4.1**
	comp=Z,4.2nm,1.1s,baz=299,slow=16,SNR=11						
WRA	**Warramunga Arr**	**49.92**	**126**	P	**P**	**14 33 49.4**	**-0.4**
WRA				PcP	PcP	14 35 10.3	+0.3
WRA				ScP		14 38 59.6	
WRA				S	**S**	**14 40 52.2**	**-4.1**
WRAB	**Tennant Creek**	**49.92**	**126**	⇓*i*P	**P**	**14 33 49.9**	**0.0**
WRAB	**Tennant Creek**	**49.92**	**126**	*e*P	**P**	**14 33 49.3**	**-0.6**
	comp=Z,48nm,0.8s,mb5.6						
WB2	**Warramunga Arr**	**49.93**	**126**	⇑*i*P	**P**	**14 33 49.4**	**-0.5**
WB2				*e*PCP	PcP	14 35 09.8	-0.2
BOD	**Bodaibo**	**51.00**	**14**	*e*P	**P**	**14 33 56.3**	**-1.2**
BOD				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
KLR	**Kul'dur**	**51.18**	**32**	*e*P	**P**	**14 33 54.9**	**-4.1**
ASPA	**Alice Springs**	**51.61**	**130**	⇑*i*P	**P**	**14 34 01.7**	**-0.9**
ASPA				*e*PCP	PcP	14 35 16.8	+0.6
ASAR	**Alice Springs**	**51.61**	**130**	P	**P**	**14 34 01.8**	**-0.9**
	comp=Z,12nm,0.7s,mb4.9,baz=301,slow=8.0,SNR=158						
ASAR				PcP	PcP	14 35 16.4	+0.2
	comp=Z,4.4nm,0.5s,baz=308,slow=3.9,SNR=8.7						
ASAR				ScP		14 39 07.0	
	comp=Z,3.1nm,0.9s,baz=302,slow=4.3,SNR=10						
ASAR				S	**S**	**14 41 17.5**	**-2.1**
	comp=Z,0.7nm,0.8s,baz=298,slow=13,SNR=5.6						
ASAR	**Alice Springs**	**51.61**	**130**	P	**P**	**14 34 01.8**	**-0.9**
ASAR				PcP	PcP	14 35 16.4	+0.2
ASAR				ScP		14 39 07.0	
ASAR				S	**S**	**14 41 17.5**	**-2.1**
GNI	**Garni**	**52.71**	**314**	⇓*i*P	**P**	**14 34 11.7**	**+1.1**
GNI				pmax	pmax		
	comp=Z,21nm,1.0s						
GNI	**Garni**	**52.71**	**314**	P	**P**	**14 34 10.8**	**+0.2**
	comp=Z,3.0nm,0.4s,mb4.6,baz=72,slow=3.2,SNR=11						
CLNS	**Chul'man**	**53.45**	**21**	*e*P	**P**	**14 34 13.5**	**-2.4**
CLNS				*e*		14 35 21.3	
CLNS				*e*PPP	PPP	14 37 18.9	-6.9
CLNS				*e*S	**S**	**14 41 42.9**	**-1.3**
CLNS				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.5						
CLNS				pmax	pmax		
	comp=N,37nm,1.0s						
CLNS				pmax	pmax		
	comp=E,33nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CLNS				pmax	pmax		
	comp=N,4.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.9s						
CLNS				smax			
	comp=N,2μm,14.7s						
CLNS				smax			
	comp=Z,922nm,13.9s						
CLNS				smax			
	comp=E,166nm,13.3s						
CLNS				MLR	MLR		
	comp=Z,2μm,18.0s,MS5.2						
CLNS				MLR	MLR		
	comp=N,2μm,16.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,200nm,13.0s,MS5.2						
SVE	**Sverdlovsk**	**53.70**	**339**	⇑*i*P	**P**	**14 34 17.0**	**-0.7**
SVE				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.6						
KIV	**Kislovodsk**	**55.58**	**318**	*c* *i*P	**P**	**14 34 31.5**	**-0.1**
KIV				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.4						
KIV	**Kislovodsk**	**55.58**	**318**	*e*P	**P**	**14 34 30.6**	**-0.9**
	comp=Z,31nm,0.8s,mb5.4						
YSS	**Yuzh-Sakhalins**	**56.29**	**39**	⇑*e*P	**P**	**14 34 35.8**	**-0.8**
YSS				*e*	pP	14 34 45.0	-2.4
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=E,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8						
YSS	**Yuzh-Sakhalins**	**56.29**	**39**	*e*P	**P**	**14 34 35.8**	**-0.9**
	comp=Z,71nm,0.8s,mb5.8						
ASF	**Jabal al Asfar**	**56.59**	**302**	P	**P**	**14 34 40.9**	**+1.8**
	comp=Z,6.1nm,1.0s,mb4.6,baz=342,slow=2.2,SNR=6.6						
KMBO	**Kilima Mbogo**	**56.59**	**262**	P	**P**	**14 34 43.8**	**+4.5**
	comp=Z,1.2nm,0.6s,mb4.1,baz=59,slow=12,SNR=3.3						
MALT	**Malatya**	**56.77**	**310**	⇓P	**P**	**14 34 41.4**	**+1.2**

PMG	Port Moresby	56.92	108	⇓iP	P	14 34 42.2	+0.5
GZT	Gaziantep	57.18	309	i P	P	14 34 43.0	-0.2
EIL	Elat	57.84	299	P	P	14 34 48.4	+0.5
	comp=Z,4.5nm,0.8s,mb4.5,baz=109,slow=6.3,SNR=6.1						
COBT	Iskenderun	58.00	307	i P	P	14 34 48.5	-0.4
YAK	Yakutsk	58.96	19	eP	P	14 34 53.4	-1.9
YAK				e		14 35 40.7	
YAK				e		14 37 05.0	
YAK				eS	S	14 42 53.1	-4.2
YAK				e		14 44 34.5	
YAK				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.4						
YAK				pmax	pmax		
	comp=N,19nm,1.2s						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
YAK				smax			
	comp=N,3.0nm,1.0s						
YAK				smax			
	comp=E,5.0nm,1.0s						
YAK	Yakutsk	58.96	19	eP	P	14 34 52.8	-2.5
	comp=E,68nm,0.9s,mb5.7						
MEST	Erdemli	59.67	307	i P	P	14 34 59.6	-0.9
CTA	Charters Tower	59.90	120	⇑iP	P	14 35 02.9	+0.6
	comp=E,28nm,1.0s,mb5.2						
CTAO	Charters Tower	59.90	120	eP	P	14 35 02.0	-0.3
	comp=E,56nm,1.1s,mb5.5						
BOYT	Boyabat	60.20	313	i P	P	14 35 04.2	+0.1
ELDT	Eldivan	61.06	311	i P	P	14 35 09.1	-0.9
BALT	Daday	61.33	312	i P	P	14 35 10.2	-1.5
STKA	Stephens Creek	61.83	134	⇑iP	P	14 35 14.9	-0.3
	comp=E,5.8nm,0.9s,mb4.7						
STKA	Stephens Creek	61.83	134	P	P	14 35 14.4	-0.8
	comp=E,35nm,1.3s,mb5.3,baz=316,slow=6.8,SNR=18						
MOS	Moscow	63.33	329	eP	P	14 35 23.8	-1.1
MOS				pmax	pmax		
	comp=Z,56nm,1.2s,mb5.6						
OBN	Obninsk	63.62	328	⇑iP	P	14 35 25.3	-1.5
OBN				i		14 35 33.1	
OBN				i		14 35 41.1	
OBN				i S	S	14 43 52.4	-4.2
OBN				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
OBN	Obninsk	63.62	328	⇑iP	P	14 35 25.4	-1.4
CFR	Carcaliu	65.86	315	⇑P	P	14 35 40.7	-0.7
MA2	Magadan	65.97	28	⇑iP	P	14 35 40.5	-1.4
MA2				pmax	pmax		
	comp=Z,56nm,1.7s,mb5.3						
MA2	Magadan	65.97	28	eP	P	14 35 40.3	-1.6
	comp=Z,33nm,1.0s,mb5.3						
TIXI	Tiksi	66.03	12c	iP	P	14 35 40.5	-1.6
TIXI				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.8						
TIXI	Tiksi	66.03	12	⇑iP	P	14 35 40.5	-1.6
AKASG	Malin Array Be	66.40	321	P	P	14 35 42.9	-1.9
	comp=Z,1.7nm,0.5s,mb4.4,baz=88,slow=5.2,SNR=16						
VRI	Vrincioaia	66.97	316	⇓P	P	14 35 48.6	+0.2
MLR	Muntele Rosu	67.44	315	P	P	14 35 51.1	-0.3
	comp=Z,15nm,1.1s,mb5.0,baz=27,slow=4.8,SNR=10						
JOF	Joensuu	69.12	334	ep	P	14 35 59.9	-1.6
	comp=Z,3.7nm,0.5s,mb4.6						
JOF	Joensuu	69.12	334	eP	P	14 35 59.9	-1.6
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
KOLS	Kolonicke sedl	70.46	319	eP	P	14 36 10.2	+0.3
KOLS				e		14 36 32.0	
KOLS				ePP	PP	14 38 41.8	-6.3
FINES	FINESS Array B	70.97	332	i P	P	14 36 11.7	-1.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	70.97	332	P	P	14 36 11.7	-1.2
	comp=Z,2.0nm,0.6s,mb4.2,baz=92,slow=5.8,SNR=23						
CRVS	Cervenica-Dubn	70.98	319	eP	P	14 36 14.9	+1.8
CRVS				e		14 36 35.0	
KAF	Kangasniemi	71.05	333	ep	P	14 36 11.6	-1.7
	comp=Z,4.5nm,0.6s,mb4.6,baz=105,slow=5.8						
KAF	Kangasniemi	71.05	333	eP	P	14 36 11.6	-1.7
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
KECS	Kecovo	71.57	318	epP	pP	14 36 27.2	-0.4
KECS				e		14 36 36.3	
NIE	Niedzica	71.80	319	eP	P	14 36 17.5	-0.5
PSZ	Piszkesteto	71.90	317	eP	P	14 36 17.8	-0.8
	comp=Z,14nm,1.0s,mb4.8						
OJC	Ojcow	72.22	320	eP	P	14 36 20.0	-0.5
VYHS	Vyhne	72.66	318	eP	P	14 36 23.2	+0.1
VYHS				e	pP	14 36 34.1	0.0
OKC	Ostrava-Krasne	73.24	319	eP	P	14 36 26.2	-0.4
OKC				epP	pP	14 36 38.1	+0.6
ARCES	ARCESS Array B	73.57	340	P	P	14 36 27.7	-0.4
	comp=Z,14nm,1.1s,mb4.8,baz=99,slow=5.1,SNR=12						
MORC	Moravsky Berou	73.63	319	⇓P	P	14 36 28.9	+0.1
MORC	Moravsky Berou	73.63	319	eP	P	14 36 27.8	-1.1
	comp=Z,16nm,1.1s,mb4.9						
ZST	Bratislava	73.79	317	eP	P	14 36 30.0	+0.2
ZST				e	pP	14 36 42.0	+1.2
ZST				e		14 36 49.8	
LBTB	Lobatse	74.05	241	eP	P	14 36 33.5	+1.7
	comp=Z,2.4nm,0.6s,mb4.3						
DPC	Dobruska-Polom	74.46	320	eP	P	14 36 34.0	+0.4
DPC				epP	pP	14 36 45.7	+1.1
KSP	Ksiaz	74.51	320	eP	P	14 36 34.0	+0.1
KSP				e*PP	pP	14 36 44.7	-0.2
KSP	Ksiaz	74.51	320	eP	P	14 36 34.1	+0.2
UPC	Upice	74.67	320	eP	P	14 36 34.7	-0.1
BOJS	Bojanci	74.91	315	eP	P	14 36 36.0	-0.4
PERS	Pernice	75.05	316	eP	P	14 36 37.0	-0.1
PERS				i	pP	14 36 49.6	+1.6
BILL	Bilibino	75.13	22	⇓eP	P	14 36 36.3	-0.8
BILL				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.8						
BILL	Bilibino	75.13	22	⇓eP	P	14 36 36.4	-0.7
BOSA	Boshof	75.50	237	eP	P	14 36 41.6	+1.6
	comp=Z,3.7nm,0.8s,mb4.4						
PRU	Pruhonice	75.58	319	eP	P	14 36 40.2	+0.2
PRU				epP	pP	14 36 52.0	+1.0
PVCC	Panska Ves	75.59	320	e*PP	P	14 36 40.9	+0.8
PVCC	Panska Ves	75.59	320	eP	P	14 36 40.9	+0.8
BRG	Berggiesshubel	76.00	320	eP	P	14 36 43.2	+0.8
BRG				e	pP	14 36 54.8	+1.4
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
BRG	Berggiesshubel	76.00	320	eP	P	14 36 43.2	+0.8
	comp=Z,9.4nm,1.2s,mb4.6						
BRG				e	pP	14 36 54.8	+1.4
GERES	GERESS Array B	76.08	318	P	P	14 36 42.9	0.0
	comp=Z,3.1nm,0.6s,mb4.4,baz=90,slow=5.3,SNR=29						
KHC	Kasperske Hory	76.17	318	eP	P	14 36 42.4	-1.0
KHC				epP	pP	14 36 53.4	-1.0
CLL	Collm	76.61	321	eP	P	14 36 46.0	+0.1
CLL	Collm	76.61	321	P	P	14 36 46.0	+0.1
CLL				i		14 37 04.7	
FX1	Attu Island--F	76.62	38	P	P	14 36 45.9	0.0
	comp=Z,34nm,0.7s,mb5.4,baz=247,slow=7.0,SNR=5.0						
NKC	Novy Kostel	76.93	319	eP	P	14 36 48.5	+0.8
WTTA	Wattenberg	77.45	316	⇑iP	P	14 36 49.8	-0.9
	comp=Z,21nm,1.2s,mb5.0						
MOX	Moxa	77.47	320	eP	P	14 36 50.0	-0.7
MOX				epP	pP	14 37 10.0	+8.2
MOX	Moxa	77.47	320	eP	P	14 36 50.0	-0.7
MOX				pP	pP	14 37 10.0	+8.2
GRA1	Grafenberg Arr	77.72	319	eP	P	14 36 52.6	+0.5
	comp=Z,21nm,1.3s,mb4.9						
GRA1				epP	pP	14 37 04.0	+0.9
GRA1				e		14 37 12.4	
GRF	Grafenberg Arr	77.72	319	eP	P	14 36 52.6	+0.5
GRF				e*PP	pP	14 37 04.0	+0.9
GRF				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
GRF	Grafenberg Arr	77.72	319	eP	P	14 36 52.6	+0.5
	comp=Z,21nm,1.3s,mb4.9						
GRF				epP	pP	14 37 04.0	+0.9
GRF				e		14 37 12.4	
SQTA	Sankt Quirin	77.74	316	⇑iP	P	14 36 51.5	-0.8
	comp=Z,6.4nm,1.1s,mb4.5						
MOTA	Moosalm	77.81	316	⇓iP	P	14 36 51.7	-0.9
	comp=Z,5.0nm,1.1s,mb4.4						
NB2	NORSAR Subarra	77.98	330	P	P	14 36 52.3	-1.0
	comp=Z,3.5nm,1.0s,mb4.2,baz=95,slow=7.9						
NOA	NORSAR Array B	77.98	330	P	P	14 36 52.1	-1.2
	comp=Z,5.2nm,1.1s,mb4.4,baz=93,slow=5.6,SNR=5.3						
LPG	La Plagne	80.89	315	eP	P	14 37 09.8	+0.5
	comp=Z,35nm,1.0s,mb5.0						
BNI	Bardonecchia	80.97	314	eP	P	14 37 08.0	-1.8
	comp=Z,23nm,0.9s,mb5.1						
UNV	Unalaska Valle	88.61	36	P	P	14 37 47.4	-0.3
IMA	Indian Mountai	90.67	22	eP	P	14 37 57.8	+0.6
	comp=Z,42nm,0.7s,mb5.9						
SUMG	Summit	92.52	347	eP	P	14 38 05.3	-0.2
	comp=Z,8.6nm,0.2s,mb5.8						
MCK	McKinley	93.54	23	eP	P	14 38 10.0	-0.4
	comp=Z,10nm,0.9s,mb5.3						
ILAR	Eielson Array	93.79	22	P	P	14 38 10.6	-0.9
	comp=Z,3.7nm,0.6s,mb5.0,baz=285,slow=4.6,SNR=50						
ILAR				PKKPbc		14 55 16.8	
	comp=Z,1.3nm,1.2s,baz=142,slow=1.6,SNR=5.4						
VNDA	Vanda	94.54	168	P	P	14 38 16.6	+2.0
	comp=Z,3.9nm,1.1s,mb4.8,baz=253,slow=7.1,SNR=8.1						
SLKM	Skilak Lake	94.55	26	eP	P	14 38 14.4	-0.6
INK	Inuvik	95.89	16	P	P	14 38 21.5	+0.5
	comp=Z,11nm,0.8s,mb5.3,baz=299,slow=4.3,SNR=23						
INK	Inuvik	95.89	16	eP	P	14 38 20.7	-0.2
	comp=Z,20nm,1.0s,mb5.5						
RES	Resolute Bay	96.01	2	eP	P	14 38 21.7	+0.3
	comp=Z,11nm,0.9s,mb5.3						
DAWY	Dawson	96.87	21	eP	P	14 38 26.0	+0.5
YKA	Yellowknife Ar	105.26	13	Pdiff	Pdif	14 39 02.9	-0.1
	comp=Z,1.0nm,1.0s,baz=328,slow=4.2,SNR=9.4						
YKA				PP	PP	14 43 21.2	-6.2
	comp=Z,3.4nm,0.9s,baz=334,slow=7.6,SNR=26						
YKA				PKKPbc		14 54 43.9	
	comp=Z,0.1nm,0.6s,baz=150,slow=3.1,SNR=4.4						
YKA	Yellowknife Ar	105.26	13	Pdif	Pdif	14 39 02.9	-0.1
YKA				PP	PP	14 43 21.2	-6.2
YKA				PKKPbc		14 54 43.9	
PPT	Papeete	118.70	105	PKP	PKPdf	14 43 43.3	+0.8
	comp=Z,27nm,0.8s,baz=209,slow=2.0,SNR=2.1						
ULM	Lac du Bonnet	120.17	7	PKP	PKPdf	14 43 45.1	+0.5
	comp=Z,1.1nm,0.4s,baz=351,slow=5.1,SNR=3.3						
ELK	Elko	123.73	26	ePKPdf	PKPdf	14 43 54.1	+2.4
PDAR	Pinedale Array	124.18	20	PKP	PKPdf	14 43 53.8	+1.3
	comp=Z,3.8nm,1.1s,baz=358,slow=1.6,SNR=17						
NVAR	Mina Array Bea	124.19	30	PKP	PKPdf	14 43 55.1	+2.5
	comp=Z,5.8nm,1.1s,baz=274,slow=1.7,SNR=15						
MNV	Mina	124.26	30	ePKPdf	PKPdf	14 43 55.1	+2.3
DUG	Dugway	125.20	24	ePKPdf	PKPdf	14 43 55.7	+1.1
MSU	Marysvale	126.89	25	ePKPdf	PKPdf	14 44 01.0	+3.1
PV10	Paradox Valley	128.24	22	ePKPdf	PKPdf	14 44 02.4	+1.9
TUC	Tucson	132.73	28	ePKPdf	PKPdf	14 44 11.8	+2.5
TZTN	Tazewell	134.28	356	eP	Pdif	14 41 15.3	+3.8
TXAR	Lajitas Array	138.31	22	PKhKP		14 44 11.6	
	comp=Z,0.6nm,0.9s,baz=51,slow=1.5,SNR=5.2						
TXAR				PKP	PKPdf	14 44 21.9	+2.3
	comp=Z,1.5nm,0.9s,slow=2.5,SNR=8.8						
TXAR				PP	PP	14 47 12.1	-1.3
	comp=Z,1.5nm,1.1s,slow=1.3,SNR=4.3						
TXAR				SKPbc		14 47 49.9	
	comp=Z,5.8nm,1.1s,baz=280,slow=1.6,SNR=12						
TXAR	Lajitas Array	138.31	22	PKP	PKPdf	14 44 11.6	-7.9
TXAR				PKP	PKPdf	14 44 21.9	+2.3
TXAR				PP	PP	14 47 12.1	-1.3
TXAR				SKPbc		14 47 49.9	
PLCA	Paso Flores	145.52	202	PKPbc	PKPbc	14 44 35.4	+2.8
	comp=Z,22nm,1.1s,baz=147,slow=4.3,SNR=22						
LVC	Limon Verde	158.28	230	PKPab	PKPab	14 45 28.9	+1.1
	comp=Z,2.6nm,0.5s,baz=289,slow=3.7,SNR=4.3						

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*IDC **26** 14:33:46.1±1.2, 5.61N×92.21E, mb3.9/7, mb1 4.2/8, mb1mx4.0/18, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=53.2km s-min=19.7km az=57.0*

*NEIC **26** 14:33:51.7±0.7, 5.69N×92.47E, h30^{km}, mb4.7/3, Error ellipse: s-maj=22.7km s-min=9.6km az=56.0*

ISC 26 14:33:50.6±0.8, **5.7N**±0.1×**92.5E**±0.1, **h33**^{km}, **n19**, σ**0^{s}93**/21, **mb4.4**/14, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.18	26	Pn	P	14 37 12.1	+0.8
	0.3nm,0.3s,baz=228,slow=14,SNR=10						
HYB	Hyderabad	17.98	312	eP	P	14 38 01.0	+1.2
HYB				eS	S	14 41 02.0	-14
HYB	Hyderabad	17.98	312	i P	P	14 38 01.0	+1.2
HYB				eS	S	14 41 02.0	-14
JIRN	Jiri	22.70	345	eP	P	14 38 50.7	0.0
	87nm,1.1s,mb5.1						
PKI	Pulchoki	22.82	344	eP	P	14 38 53.3	+1.4
DMN	Daman	22.95	343	eP	P	14 38 54.0	+0.9
	45nm,0.9s,mb4.9						
GUN	Gumba	23.02	345	eP	P	14 38 53.6	-0.2
	53nm,0.9s,mb5.0						
KKN	Kakani	23.07	343	eP	P	14 38 54.7	+0.4
	35nm,1.1s,mb4.7						
GKN	Gorkha	23.45	342	eP	P	14 38 57.6	-0.5
	32nm,0.7s,mb4.9						
KOLN	Koldanda	23.57	340	eP	P	14 38 59.8	+0.6
LSA	Lhasa	23.95	357	P	P	14 39 01.6	-1.3
	5.6nm,0.6s,mb4.2						
SONM	Songino Array	43.67	14	P	P	14 41 52.9	-1.1
	0.8nm,0.9s,mb3.5,baz=194,slow=10,SNR=4.2						
WRA	Warramunga Arr	48.35	123	P	P	14 42 31.8	+0.3
	3.3nm,0.8s,mb4.4,baz=300,slow=8.9,SNR=13						
WRA				PcP	PcP	14 43 56.9	-1.2
	0.3nm,0.5s,baz=312,slow=2.7,SNR=5.2						
WRAB	Tennant Creek	48.35	123	eP	P	14 42 32.2	+0.7
	5.9nm,0.7s,mb4.7						
ZAL	Zalesovo	48.55	354	P	P	14 42 39.1	+6.6
	1.1nm,0.5s,mb4.2,baz=303,slow=4.2,SNR=5.2						
ASAR	Alice Springs	49.79	127	P	P	14 42 43.0	+0.5
	1.9nm,0.8s,mb4.2,baz=304,slow=7.7,SNR=11						
ASAR				PcP	PcP	14 44 02.2	-1.1
	1.0nm,0.9s,baz=298,slow=3.6,SNR=4.7						
BVAR	Borovoye Array	50.59	343	P	P	14 42 46.4	-1.8
	0.7nm,0.9s,mb3.6,baz=153,slow=9.7,SNR=3.9						
STKA	Stephens Creek	59.79	132	P	P	14 43 54.6	-0.6
	1.5nm,0.6s,mb4.2,baz=312,slow=9.6,SNR=5.2						
GERES	GERESS Array B	78.41	319	P	P	14 45 48.2	-1.5
	1.1nm,0.8s,mb3.8,baz=76,slow=5.5,SNR=7.5						

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*FUNV **26** 14:40:42.9, 9.30N×70.27W, MW2.6*

*UAV **26** 14:40:44.3, 9.27N×70.31W*

ISC 26 14:40:42.8±0.7, **9.27N**±0.03×**70.23W**±0.03, **h5**^{km}±5^{km}, **n16**, σ**0^{s}90**/30, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORV	Torococo	0.28	359	P	Pg	14 40 49.9	+1.3
TORV				S	Sg	14 40 54.2	+1.7
SANV	Sanarito	0.72	72	eP	Pg	14 40 57.0	-0.2
EAV	Pico El Aguila	0.72	235	P	Pg	14 40 56.5	-0.8
EAV				S	Sg	14 41 06.5	-0.4
CURV	Curarigua	0.78	20	eP	Pg	14 40 57.5	-0.9
CURV				eS	Sg	14 41 08.2	-0.7
CUV	La Culata	0.97	238	P	Pb	14 41 01.9	+0.1
CUV				S	Sb	14 41 13.7	-1.0
UAV	Universidad de	1.12	234	P	Pb	14 41 03.8	-0.5
UAV				S	Sb	14 41 18.4	-0.6
SOCV	Socops	1.16	212	eP	Pb	14 41 04.5	-0.5
SOCV				eS	Sb	14 41 21.1	+0.9
VIGV	El Vigia	1.20	249	eP	Pb	14 41 05.1	-0.6
VIGV				eS	Sb	14 41 20.9	-0.5
TEPV	Terepaima	1.23	56	eP	Pb	14 41 06.2	0.0
OSV	Paramo de la O	1.40	243	P	Pb	14 41 09.2	+0.2
OSV				S	Sb	14 41 27.3	+0.4
SIQV	Siquisique	1.43	17	eP	Pn	14 41 09.3	-0.1
SIQV				eS	Sb	14 41 29.0	+1.1
DABV	Dabajuro	1.69	346	eP	Pn	14 41 13.1	-0.1
DABV				eS	Sn	14 41 35.3	0.0
PDMV	Paramo Marino	1.84	239	P	Pn	14 41 17.0	+1.6
PDMV				S	Sn	14 41 41.8	+2.4
BAUV	El Baul	2.18	98	eP	Pn	14 41 20.4	+0.1
BAUV				eS	Sn	14 41 48.7	+0.8
TURV	Turiamo	2.63	63	eP	Pn	14 41 26.6	0.0
TURV				eS	Sn	14 41 58.5	-0.7
MONV	Montecano	2.68	5	eP	Pn	14 41 26.5	-0.8
MONV				eS	Sn	14 41 57.8	-2.7

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*NEIC **26** 14:45:58.4±1.0, 3.24N×95.26E, mb4.3/6, Error ellipse: s-maj=33.5km s-min=13.5km az=57.0*

*IDC **26** 14:46:05.6±14.0, 3.33N×95.29E, h87^{km}±125^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.6/18, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=85.1km s-min=17.5km az=57.0*

ISC 26 14:45:56.6±0.9, **3.2N**±0.1×**95.3E**±0.2, **h23**^{km}, **n19**, σ**1^{s}24**/19, **mb4.2**/17, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	15.55	13	P	P	14 49 38.1	+1.8
	0.1nm,0.3s,baz=201,slow=11,SNR=18						
JIRN	Jiri	25.78	341	eP	P	14 51 29.2	+1.4
	12nm,0.7s,mb4.5						
GUN	Gumba	26.11	341	eP	P	14 51 32.3	+1.4
	14nm,0.7s,mb4.6						
KKN	Kakani	26.21	340	eP	P	14 51 31.0	-0.7
	15nm,0.8s,mb4.6						
LSA	Lhasa	26.60	352	eP	P	14 51 33.3	-2.0
	7.0nm,0.7s,mb4.3						
GKN	Gorkha	26.63	339	eP	P	14 51 36.5	+0.9
	7.1nm,0.5s,mb4.5						
KOLN	Koldanda	26.81	337	eP	P	14 51 39.8	+2.5
	11nm,0.9s,mb4.4						
BJI	Beijing	41.24	25	eP	P	14 53 39.6	-2.1
	9.0nm,1.0s,mb4.3						
WRA	Warramunga Arr	44.76	123	P	P	14 54 10.7	+0.1
	1.2nm,0.5s,mb4.0,baz=300,slow=9.2,SNR=17						
WRAB	Tennant Creek	44.76	123	eP	P	14 54 11.4	+0.7
	2.8nm,0.7s,mb4.2						
SONM	Songino Array	45.45	11	P	P	14 54 15.0	-0.8
	1.1nm,0.7s,mb3.8,baz=192,slow=10,SNR=12						
ASAR	Alice Springs	46.17	127	P	P	14 54 22.2	+0.5
	0.8nm,0.9s,mb3.6,baz=304,slow=8.1,SNR=6.0						
KURK	Kurchatov	49.35	346	eP	P	14 54 46.9	+0.7
	1.5nm,0.6s,mb4.2						
KURK				epP	pP	14 54 53.7	+0.5
ZAL	Zalesovo	51.26	352	P	P	14 55 00.3	-0.4
	3.0nm,0.5s,mb4.5,baz=304,slow=5.0,SNR=18						
ZAL	Zalesovo	51.26	352	P	P	14 55 00.3	-0.4
BVAR	Borovoye Array	53.71	342	P	P	14 55 18.0	-1.1
	0.3nm,0.4s,mb3.6,baz=149,slow=8.4,SNR=3.6						
CHKZ	Chkalovo	54.20	342	eP	P	14 55 21.9	-0.8
	3.2nm,0.8s,mb4.3						
CHKZ				epP	pP	14 55 28.9	-0.7
FINES	FINESS Array B	77.31	333	P	P	14 57 49.0	-1.9
	2.4nm,1.0s,mb4.1,baz=108,slow=6.0,SNR=6.4						
GERES	GERESS Array B	82.01	319	P	P	14 58 16.6	+0.2
	0.3nm,0.5s,mb3.5,baz=141,slow=38,SNR=2.7						

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*CSEM **26** 14:47:08.1±0.5, 63.81N×9.21E, h2^{km}, ML2.5, Error ellipse: s-maj=15.2km s-min=6.7km az=106.0*

*BER **26** 14:47:09.7±4.3, 63.79N×9.12E, MD2.3, ML2.5(NAO), Explosion*

*NAO **26** 14:47:09.9±2.7, 63.69N×9.13E, ML2.5*

*NEIC **26** 14:47:10.3, 63.81N×9.30E, MD2.3(BER), ML2.5(NAO), After BER.*

ISC 26 14:47:07.3±0.8, **63.81N**±0.04×**9.2E**±0.1, **n14**, σ**0^{s}99**/22, **Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRON	Trondheim	0.66	122	eP	Pg	14 47 20.2	-0.4
TRON				eS	Sg	14 47 30.0	+0.6
RORSS	Ber_school_1	1.39	39	eP	Pb	14 47 34.3	+0.4
RORSS				eS	Sb	14 47 54.1	+2.1
NSS	Namsos	1.42	58	eP	Pb	14 47 32.4	-1.9
NSS				eS	Sb	14 47 53.3	+0.4
MOL	Molde	1.45	212	eP	Pn	14 47 35.4	+0.6
DOMB	Dombas	1.77	182	eP	Pn	14 47 39.2	-0.3
DOMB				eS	Sn	14 48 03.7	+0.6
NB2	NORSAR Subarra	2.94	160	Pn	Pn	14 47 56.5	+0.4
NB2				Sg	Sg	14 48 40.0	-5.0
NB2	NORSAR Subarra	2.94	160	Pn	Pn	14 47 56.5	+0.4
	SNR=50						
NB2				Sg	Sg	14 48 40.0	-5.0
	SNR=90						
STOK	Stokkvaagen	3.01	31	eP	Pn	14 47 57.9	+0.8
NC6	NORSAR Subarra	3.25	160	Pn	Pn	14 48 00.5	-0.1
NC6				Sg	Sg	14 48 47.2	-8.3
NC6	NORSAR Subarra	3.25	160	Pn	Pn	14 48 00.4	-0.2
	SNR=50						
NC6				Sg	Sg	14 48 47.2	-8.4
	SNR=90						
MOR8	Moi Rana	3.26	41	eS	Sn	14 48 40.6	-0.1
HFS	Hagfors	4.26	148	Pn	Pn	14 48 15.0	+0.2
	baz=342,slow=12						
HFS				Lg		14 49 20.6	
	baz=326,slow=28						
FIA0	FINESS Array S	8.13	99	Pn	P	14 49 07.8	-1.7
	baz=288,slow=11						
FIA0				Lg		14 51 26.6	
	baz=298,slow=37						
ARA0	ARCESS Array S	8.63	41	Pn	P	14 49 14.6	-1.8
	baz=227,slow=12						

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*CSEM **26** 14:55:03.2±0.1, 63.77N×9.38E, h2^{km}, ML2.6, Error ellipse: s-maj=6.1km s-min=2.7km az=123.0*

*NAO **26** 14:55:04.6±2.8, 63.82N×9.66E, ML2.6*

*BER **26** 14:55:05.5±4.9, 63.79N×9.34E, MD2.4, ML2.6(NAO), Explosion*

*NEIC **26** 14:55:05.5, 63.80N×9.35E, MD2.4(BER), ML2.6(NAO), After BER.*

ISC 26 14:55:02.9±0.8, **63.79N**±0.04×**9.3E**±0.1, **n11**, σ**0^{s}93**/17, **Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRON	Trondheim	0.62	123	eP	Pg	14 55 15.4	+0.1
TRON				eS	Sg	14 55 24.0	+0.4
RORSS	Ber_school_1	1.38	37	eP	Pb	14 55 28.7	-0.6
RORSS				eS	Sb	14 55 49.3	+2.0
NSS	Namsos	1.39	57	eP	Pb	14 55 27.4	-2.1
NSS				eS	Sb	14 55 48.2	+0.5
MOL	Molde	1.46	213	eP	Pn	14 55 30.9	+0.4
MOL				eS	Sb	14 55 50.1	+0.5
DOMB	Dombas	1.76	183	eP	Pn	14 55 34.8	-0.1
DOMB				eS	Sn	14 55 58.3	0.0
NB2	NORSAR Subarra	2.91	161	Pn	Pn	14 55 52.0	+0.7
NB2				Lg		14 56 36.4	
STOK	Stokkvaagen	3.00	30	eP	Pn	14 55 52.9	+0.2
NC6	NORSAR Subarra	3.22	161	Pn	Pn	14 55 55.5	-0.3
NC6				Lg		14 56 44.9	
HFS	Hagfors	4.22	148	Pn	Pn	14 56 09.0	-1.0
	baz=338,slow=14						
HFS				Pg	Pg	14 56 17.8	-9.4
	baz=291,slow=11						
HFS				Lg		14 57 15.2	
	baz=332,slow=28						
HFS	Hagfors	4.22	148	Pg	Pg	14 56 17.8	-9.4
	SNR=8.9						
ARA0	ARCESS Array S	8.62	41	Pn	P	14 57 08.2	-3.6
	baz=231,slow=14						

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*IDC **26** 15:02:00.7±1.8, 63.88N×9.08E, mb1 3.1/4, mb1mx3.0/19, mbtmp3.1/4, ML2.9/4, Error ellipse: s-maj=19.4km s-min=11.4km az=100.0*

*NAO **26** 15:02:01.0±2.3, 63.79N×9.28E, ML2.7*

*CSEM **26** 15:02:01.1±0.1, 63.87N×8.82E, h15^{km}, ML1.9, Error ellipse: s-maj=5.6km s-min=1.4km az=109.0*

*BER **26** 15:02:02.7±4.2, 63.79N×9.18E, MD2.5, ML1.9, ML2.7(NAO), Suspected explosion*

*NEIC **26** 15:02:02.8, 63.77N×9.26E, h0^{km}, MD2.5(BER), ML2.7(NAO), After BER.*

ISC 26 15:01:58.8±0.7, **63.86N**±0.04×**9.1E**±0.2, **n25**, σ**1^{s}15**/39, **Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRON	Trondheim	0.71	125	eP	Pg	15 02 13.0	+0.1
RORSS	Ber_school_1	1.36	41	eP	Pb	15 02 26.9	+2.0
NSS	Namsos	1.41	60	eP	Pb	15 02 24.8	-0.9
NSS				AML	AML	15 02 49.5	
	comp=Z,20nm,0.7s						
MOL	Molde	1.48	210	eP	Pn	15 02 27.4	+0.6
MOL				eS	Sb	15 02 45.3	-0.9
MOL				AML	AML	15 02 51.0	
	comp=Z,22nm,0.2s						
MOL	Molde	1.48	210	eP	Pn	15 02 27.4	+0.6
	SNR=50						
MOL				eS	Sb	15 02 45.3	-0.9
	comp=Z,22nm,0.2s,SNR=50						
DOMB	Dombas	1.82	181	eP	Pn	15 02 31.4	-0.3
DOMB				eS	Sn	15 02 56.0	+0.1

DOMB				AML	AML	15 03 00.8	
	comp=Z,26nm,0.5s						
DOMB	Dombas	1.82	181	eP	Pn	15 02 31.4	-0.3
	SNR=50						
DOMB				eS	Sn	15 02 56.0	+0.1
	comp=Z,26nm,0.5s,SNR=50						
FOO	Floro	2.95	222	eP	Pn	15 02 48.3	+0.5
STOK	Stokkvaagen	2.98	32	eP	Pn	15 02 49.1	+0.9
STOK				eS	Sn	15 03 26.3	+1.2
STOK				AML	AML	15 03 34.9	
	comp=Z,7.2nm,0.4s						
STOK	Stokkvaagen	2.98	32	eP	Pn	15 02 49.1	+0.9
	SNR=50						
STOK				eS	Sn	15 03 26.3	+1.2
	comp=Z,7.2nm,0.4s,SNR=50						
NB2	NORSAR Subarra	2.99	160	Pn	Pn	15 02 48.8	+0.4
NB2				Lg		15 03 33.2	
NOA	NORSAR Array B	2.99	160	Pn	Pn	15 02 48.5	+0.1
	comp=Z,1.1nm,0.3s,baz=345,slow=17,SNR=7.6						
NOA				Sn	Sn	15 03 28.5	+3.0
	comp=Z,1.8nm,0.3s,baz=109,slow=24,SNR=4.8						
HYA	Hoyanger	3.03	208	eP	Pn	15 02 54.0	+5.1
HYA				eSg	Sg	15 03 33.6	-6.1
HYA	Hoyanger	3.03	208	eP	Pn	15 02 53.8	+4.9
HYA				eSg	Sg	15 03 33.6	-6.1
HYA				AML	AML	15 03 39.5	
	comp=Z,12nm,0.4s						
NAO01	NORSAR Array S	3.13	164	ePn	Pn	15 02 51.2	+0.8
NAO01	NORSAR Array S	3.13	164	ePn	Pn	15 02 51.2	+0.8
MOR8	Moi Rana	3.23	42	eP	Pn	15 02 57.0	+5.1
MOR8				AML	AML	15 03 58.0	
	comp=Z,9.3nm,0.2s						
NC6	NORSAR Subarra	3.31	160	Pn	Pn	15 02 51.8	-1.1
NC6				Lg		15 03 41.1	
HFS	Hagfors	4.31	148	Pn	Pn	15 03 07.0	-0.1
	baz=338,slow=10						
HFS				Pg	Pg	15 03 16.0	-8.9
	baz=338,slow=11						
HFS				Lg		15 04 15.2	
	baz=334,slow=37						
HFS	Hagfors	4.31	148	Pn	Pn	15 03 07.1	-0.1
	comp=Z,0.2nm,0.3s,baz=333,slow=13,SNR=20						
HFS				Sn	Sn	15 04 02.1	+3.2
	comp=Z,0.1nm,0.3s,baz=317,slow=26,SNR=3.2						
HFS				Lg		15 04 16.3	
	comp=Z,0.2nm,0.3s,baz=339,slow=29,SNR=5.6						
FIA0	FINESS Array S	8.16	100	Pn	P	15 04 00.3	-1.0
	baz=299,slow=10						
FIA0				Sn	Sn	15 05 30.2	-5.2
	baz=303,slow=22						
FIA0				Lg		15 06 12.4	
	baz=297,slow=28						
FIA0	FINESS Array S	8.16	100	Pn	P	15 04 00.3	-1.1
	SNR=0.1						
FINES	FINESS Array B	8.16	100	Pn	P	15 04 00.4	-0.9
	comp=Z,0.2nm,0.3s,baz=292,slow=15,SNR=8.0						
FINES				Sn	Sn	15 05 29.5	-6.0
	comp=Z,0.1nm,0.3s,baz=261,slow=27,SNR=4.2						
FINES				Lg		15 06 16.5	
	comp=Z,0.2nm,0.3s,baz=291,slow=27,SNR=3.4						
ARA0	ARCESS Array S	8.61	41	Pn	P	15 04 05.0	-2.6
	baz=233,slow=14						
ARCES	ARCESS Array B	8.61	41	Pn	P	15 04 04.8	-2.8
	comp=Z,0.2nm,0.3s,baz=234,slow=13,SNR=9.5						
ARCES				Sn	Sn	15 05 46.2	-0.3
	comp=Z,0.1nm,0.3s,baz=230,slow=22,SNR=2.6						
ARCES				Lg		15 06 31.1	
	comp=Z,0.1nm,0.3s,baz=236,slow=34,SNR=2.8						

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*NEIC **26** 15:06:28.6±4.7, 6.59S×150.19E, h62^{km}±31^{km}, mb4.1/1, Error ellipse: s-maj=60.2km s-min=36.2km az=113.0*

IDC 26 15:06:29.0±7.2**, 6.39S×149.98E, h61**^{km}±57^{km}**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.5**/13**, mbtmp3.9**/4**, ML3.1**/1**, MS4.6**/1**, Ms1 4.5**/1**, ms1mx3.9**/10**, Error ellipse: s-maj=70.2km s-min=43.7km az=116.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.10	223	P	P	15 07 28.9	-1.8
	7.8nm,0.3s,baz=38,slow=9.7,SNR=26						
PMG				S	S	15 08 17.0	-0.9
	27nm,0.3s,baz=95,slow=19,SNR=10.0						
WRAB	Tennant Creek	20.29	227	eP	P	15 10 58.5	-3.9
	7.2nm,0.8s						
WB2	Warramunga Arr	20.30	227	eP	P	15 11 00.4	-2.1
WRA	Warramunga Arr	20.31	227	P	P	15 11 00.6	-2.0
	3.9nm,0.6s,baz=52,slow=11,SNR=60						
ASAR	Alice Springs	23.11	220	P	P	15 11 29.5	-1.1
	1.5nm,0.9s,baz=56,slow=9.4,SNR=13						
STKA	Stephens Creek	26.54	196	P	P	15 12 01.0	-2.1
	2.0nm,0.8s,baz=25,slow=11,SNR=6.2						
STKA				LR	LR	15 23 18.8	
	comp=Z,1μm,18.2s,baz=111,slow=38						
STKA	Stephens Creek	26.54	196	P	P	15 11 59.5	-3.6
GERES	GERESS Array B	123.88	327	PKP	PKPdf	15 25 20.5	0.0
	0.4nm,0.5s,baz=45,slow=3.8,SNR=4.7						

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*NAO **26** 15:08:23.4±3.0, 63.80N×9.20E, ML2.4*

*BER **26** 15:08:24.2±4.1, 63.84N×9.13E, ML1.9, ML2.4(NAO), Suspected explosion*

*IDC **26** 15:08:24.1±1.7, 63.84N×9.30E, mb1 3.1/4, mb1mx3.0/19, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=20.9km s-min=7.6km az=96.0*

ISC 26 15:08:21.1±0.8**, 63.86N**±0.04×**9.3E**±0.2**, n17,** σ**1^{s}10**/22**, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRON	Trondheim	0.66	128	eP	Pg	15 08 35.3	+1.1
RORSS	Ber_school_1	1.32	39	eP	Pb	15 08 47.8	+1.3
NSS	Namsos	1.35	59	eP	Pb	15 08 46.9	-0.1
NSS				AML	AML	15 09 13.0	
	comp=Z,23nm,0.4s						
MOL	Molde	1.51	212	eP	Pn	15 08 50.0	+0.5
MOL				AML	AML	15 10 19.2	
	comp=Z,29nm,0.6s						
DOMB	Dombas	1.82	183	eP	Pn	15 08 54.2	+0.2
STOK	Stokkvaagen	2.95	31	eP	Pn	15 09 11.5	+1.5
NB2	NORSAR Subarra	2.97	162	Pn	Pn	15 09 11.1	+0.7
NOA	NORSAR Array B	2.97	162	Pn	Pn	15 09 12.1	+1.8
	comp=Z,1.1nm,0.3s,baz=345,slow=17,SNR=9.9						
NOA				Pg	Pg	15 09 15.6	-4.8
	comp=Z,1.2nm,0.3s,baz=341,slow=16,SNR=6.1						
NOA				Sn	Sn	15 09 46.5	-0.6
	comp=Z,1.9nm,0.3s,baz=285,slow=17,SNR=5.7						
NOA				Lg		15 09 56.0	
	comp=Z,2.3nm,0.3s,baz=220,slow=29,SNR=6.0						
FOO	Floro	2.99	223	eP	Pn	15 09 09.7	-1.0
FOO				AML	AML	15 11 06.3	
	comp=Z,13nm,0.5s						
MOR8	Moi Rana	3.19	41	eP	Pn	15 09 18.3	+4.8
NC6	NORSAR Subarra	3.28	161	Pn	Pn	15 09 14.9	+0.1
HFS	Hagfors	4.28	149	Pn	Pn	15 09 29.2	+0.3
	baz=336,slow=14						
HFS				Lg		15 10 37.4	
	baz=308,slow=37						
HFS	Hagfors	4.28	149	Pn	Pn	15 09 29.7	+0.8
	comp=Z,0.1nm,0.3s,baz=338,slow=7.8,SNR=28						
HFS				Pg	Pg	15 09 38.3	-8.2
	comp=Z,0.1nm,0.3s,baz=333,slow=13,SNR=6.7						
HFS				Sn	Sn	15 10 19.2	-1.1
	comp=Z,0.1nm,0.3s,baz=348,slow=29,SNR=5.3						
HFS				Lg		15 10 36.7	
	comp=Z,0.3nm,0.3s,baz=339,slow=25,SNR=8.0						
FIA0	FINESS Array S	8.10	100	Pn	P	15 10 22.6	-0.2
	baz=278,slow=10						
FIA0				Lg		15 12 36.0	
	baz=287,slow=28						
FINES	FINESS Array B	8.10	100	Pn	P	15 10 22.5	-0.3
	comp=Z,0.1nm,0.3s,baz=288,slow=9.9,SNR=8.3						
FINES				Lg		15 12 38.9	
	comp=Z,0.4nm,0.3s,baz=278,slow=28,SNR=6.4						
ARA0	ARCESS Array S	8.57	41	Pn	P	15 10 27.1	-2.2
	baz=229,slow=12						
ARCES	ARCESS Array B	8.57	41	Pn	P	15 10 27.2	-2.1
	comp=Z,0.2nm,0.3s,baz=232,slow=13,SNR=13						
ARCES				Sn	Sn	15 12 02.6	-5.2
	comp=Z,0.1nm,0.3s,baz=224,slow=27,SNR=2.5						

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*IDC **26** 15:12:30.6±2.5, 9.80N×91.81E, mb3.8/5, mb1 3.9/6, mb1mx3.7/17, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=80.2km s-min=22.1km az=74.0*

*BJI **26** 15:12:33.6, 9.66N×92.03E, h41^{km}, mb4.1*

*NEIC **26** 15:12:35.0±1.0, 9.82N×91.96E, h30^{km}, mb3.9/4, Error ellipse: s-maj=28.0km s-min=11.3km az=74.0*

ISC 26 15:12:34.1±7.3**, 9.9N**±0.2×**92.1E**±0.3**, h35**^{km}±58^{km}**, n14,** σ**0^{s}68**/14**, mb3.9**/9**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.86	37	Pn	P	15 15 10.2	0.0
	0.1nm,0.3s,baz=232,slow=15,SNR=7.2						
LSA	Lhasa	19.77	358	eP	P	15 17 04.5	+0.4
LSA	Lhasa	19.77	358	eP	P	15 17 04.2	+0.1
	6.7nm,0.7s						
GYA	Guiyang	21.54	38	P	P	15 17 22.8	+0.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
ENH	Enshi	26.03	36	eP	P	15 18 05.2	-0.7
	comp=Z,12nm,0.7s,mb4.5						
SONM	Songino Array	39.75	15	P	P	15 20 06.0	+1.0
	comp=Z,1.1nm,0.7s,mb3.7,baz=198,slow=8.9,SNR=13						
ULN	Ulaanbaatar	39.95	16	eP	P	15 20 06.8	0.0
	comp=Z,1.0nm,0.8s,mb3.6						
KURK	Kurchatov	42.22	347	P	P	15 20 25.0	-0.5
	comp=Z,1.8nm,1.1s,mb3.6						
ZAL	Zalesovo	44.35	354	P	P	15 20 42.3	-0.4
	comp=Z,0.4nm,0.6s,mb3.3,baz=90,slow=8.1,SNR=3.0						
WRA	Warramunga Arr	51.08	126	P	P	15 21 36.1	+0.4
	comp=Z,0.8nm,0.5s,mb3.9,baz=305,slow=8.4,SNR=12						
WRAB	Tennant Creek	51.09	126	eP	P	15 21 34.1	-1.6
ASAR	Alice Springs	52.76	130	P	P	15 21 48.3	+0.1
	comp=Z,1.0nm,0.8s,mb3.8,baz=308,slow=6.7,SNR=9.2						
STKA	Stephens Creek	62.95	133	P	P	15 23 00.9	+1.1
	comp=Z,1.6nm,0.9s,mb4.1,baz=315,slow=11,SNR=3.3						
STKA	Stephens Creek	62.95	133	P	P	15 23 00.7	+0.9

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*IDC **26** 15:12:46.1±4.0, 5.09S×151.38E, h164^{km}±37^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.6/15, mbtmp3.9/9, Error ellipse: s-maj=44.7km s-min=24.7km az=120.0*

ISC 26 15:12:46.0±3.1**, 5.0S**±0.2×**151.2E**±0.3**, h170**^{km}±29^{km}**, n10,** σ**0^{s}67**/11**, mb3.7**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.98	222	P	P	15 14 13.2	-0.2
	2.3nm,0.3s,baz=42,slow=7.6,SNR=9.5						
PMG				S	S	15 15 21.5	+0.2
	7.7nm,0.3s,baz=32,slow=16,SNR=12						
WB2	Warramunga Arr	22.17	226	eP	P	15 17 28.9	+0.1
WRA	Warramunga Arr	22.18	226	P	P	15 17 28.7	-0.1
	2.4nm,0.7s,mb3.8,baz=48,slow=9.9,SNR=40						
ASAR	Alice Springs	24.99	220	P	P	15 17 55.5	-0.3
	2.4nm,0.6s,mb3.9,baz=57,slow=8.5,SNR=21						
SONM	Songino Array	65.64	329	P	P	15 23 15.2	+1.1
	0.7nm,0.6s,mb3.6,baz=148,slow=6.4,SNR=6.3						
ZAL	Zalesovo	80.44	327	P	P	15 24 39.9	-0.2
	0.5nm,0.3s,mb3.6,baz=355,slow=8.1,SNR=3.5						
ILAR	Eielson Array	82.91	22	P	P	15 24 51.3	-1.4
	0.7nm,0.6s,mb3.6,baz=249,slow=5.4,SNR=20						
BVAR	Borovoye Array	88.44	323	P	P	15 25 19.5	-0.4
	0.7nm,0.8s,mb3.6,baz=104,slow=5.9,SNR=3.7						
INK	Inuvik	89.17	21	P	P	15 25 23.0	-0.1
	0.5nm,0.8s,mb3.5,baz=252,slow=3.2,SNR=3.5						
NVAR	Mina Array Bea	93.42	52	P	P	15 25 44.8	+1.3
	0.5nm,0.6s,mb3.8,baz=248,slow=3.7,SNR=5.2						

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*TAP **26** 15:14:24.2, 24.02N×122.30E, h22^{km}±1^{km}, ML3.0*

JMA 26 15:14:24.2±0.3**, 24.19N×122.26E, h66**^{km}**, M2.3, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.74	68	P	P	15 14 39.2	-0.2
YOJ				eS	S	15 14 50.6	-0.1
IRIF	Iriomote-Funau	1.35	84	P	P	15 14 47.2	-0.4
IRIF				eS	S	15 15 03.8	-1.1
HATJ	Hateruma jima	1.42	95	eS	S	15 15 06.2	-0.2
JKRS	Kuro-shima	1.60	88	P	P	15 14 51.1	+0.2
JKRS				eS	S	15 15 10.1	-0.5
JIJ	Ishigaki jima	1.73	84	P	P	15 14 52.2	-0.5
JIJ				eS	S	15 15 11.8	-1.8
JTJ	Tarama	2.27	78	P	P	15 15 00.6	+0.4
JTJ				eS	S	15 15 27.4	+0.4

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*MOS **26** 15:41:54.5±1.1, 81.68N×7.51W, h10^{km}, mb4.3/5, Error ellipse: s-maj=91.2km s-min=13.2km az=91.6*

*IDC **26** 15:41:56.0±1.3, 81.91N×8.24W, mb3.6/13, mb1 3.9/13, mb1mx3.8/23, mbtmp3.7/13, Error ellipse: s-maj=44.8km s-min=19.2km az=46.0*

*NEIC **26** 15:41:57.6±0.5, 81.78N×8.71W, h10^{km}, mb4.1/10, Error ellipse: s-maj=10.4km s-min=7.9km az=65.0*

ISC 26 15:41:54.5±0.5**, 81.72N**±0.07×**7.6W**±0.4**, h10**^{km}**, n38,** σ**1^{s}18**/39**, mb3.8**/22**, 2D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	4.30	120	eP	Pn	15 43 00.5	-1.0
DAG	Danmarks Havn	5.37	208	⇓iP	Pn	15 43 17.4	+0.7
DAG				pmax	pmax		
	comp=Z,32nm,0.3s						
DAG	Danmarks Havn	5.37	208	⇓iP	Pn	15 43 17.4	+0.7
	comp=Z,32nm,0.3s						
HSP	Hornsund	6.31	126	eP	Pn	15 43 28.9	-1.0
HOPEN	Hopen	7.92	113	eP	Pn	15 43 50.7	-1.8
HOPEN				eS	Sn	15 45 11.8	-11
HOPEN				AML	AML	15 45 24.9	
	comp=Z,12nm,0.9s						
SUMG	Summit	11.20	233	eP	P	15 44 35.7	-1.8
	comp=Z,15nm,0.4s						
SCO	Scoresbysund	11.74	204	i P	P	15 44 44.8	0.0
RES	Resolute Bay	17.13	296	eP	P	15 45 48.7	-6.3
RES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RES	Resolute Bay	17.13	296	eP	P	15 45 48.7	-6.3
	comp=Z,5.9nm,0.8s						
NOA	NORSAR Array B	21.38	155	P	P	15 46 46.0	+2.1
	comp=Z,1.1nm,0.9s,mb3.2,baz=54,slow=10,SNR=3.2						
FINES	FINESS Array B	22.22	135	P	P	15 46 56.6	+4.3
	comp=Z,1.4nm,0.8s,mb3.4,slow=11,SNR=4.2						
HFS	Hagfors	22.45	152	P	P	15 47 02.2	+7.6
	comp=Z,2.7nm,0.7s,mb3.8,slow=2.9,SNR=3.2						
FRB	Frobisher Bay	23.44	258	P	P	15 47 06.2	+2.2
	comp=Z,6.1nm,1.2s,mb3.9,baz=29,slow=9.5,SNR=2.5						
INK	Inuvik	27.52	319	P	P	15 47 41.2	-1.2
	comp=Z,1.0nm,0.8s,mb3.5,baz=30,slow=9.1,SNR=5.6						
BILL	Bilibino	30.40	5	eP	P	15 48 09.8	+1.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
BILL	Bilibino	30.40	5	eP	P	15 48 09.8	+1.5
	comp=Z,2.3nm,1.0s,mb3.9						
YKA	Yellowknife Ar	31.07	301	P	P	15 48 12.6	-1.5
	comp=Z,0.4nm,0.8s,mb3.3,baz=13,slow=8.9,SNR=12						
ILAR	Eielson Array	32.13	328	P	P	15 48 23.1	-0.5
	comp=Z,0.4nm,0.7s,mb3.3,baz=359,slow=8.8,SNR=6.1						
GERES	GERESS Array B	33.69	154	P	P	15 48 45.2	+8.0
	comp=Z,0.4nm,0.7s,mb3.4,slow=9.3,SNR=4.3						
ZAL	Zalesovo	37.40	77	P	P	15 49 19.6	+11
	comp=Z,0.9nm,0.5s,mb3.9,baz=308,slow=8.5,SNR=4.7						
NEW	Newport	45.28	298	eP	P	15 50 14.5	+1.2
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NEW	Newport	45.28	298	eP	P	15 50 14.5	+1.2
	comp=Z,4.5nm,1.0s,mb4.2						
AAK	Ala-Archa	46.96	90	eP	P	15 50 28.0	+1.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AAK	Ala-Archa	46.96	90	eP	P	15 50 28.0	+1.3
	comp=Z,1.2nm,0.7s,mb3.9						
BOZ	Bozeman (W)	47.12	292	P	P	15 50 27.7	-0.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BOZ	Bozeman (W)	47.12	292	P	P	15 50 27.7	-0.3
	comp=Z,1.8nm,0.9s,mb4.0						
BMO	Blue Mountains	48.65	297	eP	P	15 50 39.8	-0.1
	comp=Z,2.8nm,0.8s,mb4.3						
HLID	Hailey	49.54	294	eP	P	15 50 46.6	-0.2
	comp=Z,1.8nm,1.0s,mb4.1						
BW06	Boulder Array	49.67	289	P	P	15 50 47.0	-0.8
	comp=Z,3.3nm,1.3s,mb4.2						
PDAR	Pinedale Array	49.67	289	P	P	15 50 48.5	+0.7
	comp=Z,0.8nm,0.7s,mb3.9,baz=23,slow=5.2,SNR=6.7						
ELK	Elko	52.42	294	P	P	15 51 08.4	-0.3
	comp=Z,1.3nm,0.9s,mb3.9,baz=41,slow=9.3,SNR=5.2						
PV10	Paradox Valley	53.91	288	eP	P	15 51 20.8	+1.1
SDCO	Great Sand Dun	54.04	284	P	P	15 51 18.6	-2.0
	comp=Z,1.9nm,0.8s,mb4.1						
PV01	Paradox Valley	54.08	287	eP	P	15 51 21.8	+0.8
NVAR	Mina Array Bea	55.10	296	P	P	15 51 28.2	-0.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=26,slow=5.6,SNR=4.6						
WMOK	Wichita Mounta	56.03	277	eP	P	15 51 35.3	+0.1
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
WMOK	Wichita Mounta	56.03	277	eP	P	15 51 35.3	+0.1
	comp=Z,1.8nm,0.8s,mb4.2						
TXAR	Lajitas Array	62.05	281	P	P	15 52 17.1	+0.1
	comp=Z,0.5nm,0.6s,mb3.8,baz=36,slow=3.9,SNR=5.9						

IDC 26 15:46:00.6±6.8**, 17.60S×176.96W, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.6**/15**, mbtmp3.8**/2**, Error ellipse: s-maj=346.7km s-min=52.2km az=146.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.05	259	P	P	15 54 25.4	-2.8
	0.5nm,0.8s,baz=96,slow=7.5,SNR=5.6						
ASAR	Alice Springs	46.20	254	P	P	15 54 28.4	-1.0
	2.3nm,0.5s,baz=89,slow=7.9,SNR=83						
GERES	GERESS Array B	147.65	347	PKPbc	PKPdf	16 05 46.5	+0.4
	0.6nm,0.7s,slow=1.3,SNR=4.7						

IDC 26 16:02:54.4±4.4**, 45.24S×15.93W, mb4.3**/1**, mb1 4.6**/1**, mb1mx3.5**/10**, mbtmp4.3**/1**, MS4.5**/3**, Ms1 4.4**/3**, ms1mx3.5**/14**, Error ellipse: s-maj=247.8km s-min=119.7km az=127.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	85.21	9	P	P	16 15 32.3	-1.3
	0.1nm,0.3s,baz=207,slow=3.3,SNR=4.3						
YKA	Yellowknife Ar	132.55	321	PKP	PKPdf	16 22 09.4	-2.6
	0.1nm,0.3s,baz=113,slow=1.7,SNR=4.9						
SONM	Songino Array	141.03	65	PKP	PKPdf	16 22 25.3	-2.5
	0.5nm,0.9s,baz=270,slow=2.9,SNR=4.1						
ILAR	Eielson Array	146.92	324	PKPbc	PKPbc	16 22 36.7	-0.4
	2.2nm,0.8s,baz=90,slow=2.7,SNR=25						

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*NEIC **26** 16:11:29.2±0.8, 49.90N×18.50E, h5^{km}, ML2.5(VIE), Error ellipse: s-maj=12.6km s-min=6.6km az=191.0*

*PRU **26** 16:11:30.7, 49.87N×18.47E*

*CSEM **26** 16:11:30.5±0.2, 49.87N×18.51E, h2^{km}, ML3.0/2, Error ellipse: s-maj=4.0km s-min=2.3km az=3.0*

*IPEC **26** 16:11:30.3±0.1, 49.85N×18.53E, h8^{km}±1^{km}, ML1.9/3, Error ellipse: s-maj=1.3km s-min=0.9km az=13.0*

ISC 26 16:11:28.4±0.4**, 49.84N**±0.03×**18.47E**±0.03**, n24,** σ**1^{s}29**/44**, 2C, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.21	269	ePG	Pg	16 11 35.4	+2.9
OKC				eSG	Sg	16 11 39.3	+4.0
	164nm,0.6s						
MORC	Moravsky Berou	0.60	264	ePg	Pg	16 11 42.7	+2.3
MORC				eSg	Sg	16 11 50.7	+2.3
MORC	Moravsky Berou	0.60	264	ePg	Pg	16 11 42.2	+1.8
MORC				eSg	Sg	16 11 50.7	+2.3
OJC	Ojcow	0.94	66	ePg	Pg	16 11 47.5	+0.3
OJC				eSg	Sg	16 11 59.9	+0.2
JAVC	Velka Javorina	1.11	208	ePg	Pg	16 11 52.5	+1.9
NIE	Niedzica	1.27	109	ePg	Pg	16 11 52.3	-1.6
NIE				eSg	Sg	16 12 11.1	+0.3
VRAC	Vranov	1.33	247	ePn	Pn	16 11 54.9	+0.7
VRAC				eSg	Sg	16 12 13.5	+0.8
	18nm,0.3s						
VYHS	Vyhne	1.37	170	ePn	Pn	16 11 55.1	+0.3
VYHS				eSn	Sn	16 12 12.5	-1.4
VYHS				eSg	Sg	16 12 13.6	-0.5
DPC	Dobruska-Polom	1.47	291	ePG	Pg	16 11 57.8	0.0
DPC				eSG	Sg	16 12 17.9	+0.5
	18nm,0.5s						
DPC	Dobruska-Polom	1.47	291	Pg	Pg	16 11 57.8	0.0
DPC				eSg	Sg	16 12 17.8	+0.4
SMOL	Smolenice	1.49	207	ePN	Pn	16 11 57.7	+1.1
SMOL				eSN	Sn	16 12 17.7	+0.7
KRUC	Moravsky	1.56	241	ePn	Pn	16 11 58.8	+1.3
KRUC				eSg	Sg	16 12 19.4	-1.0
	9.7nm,0.3s						
UPC	Upice	1.71	294	ePG	Pg	16 12 02.0	-0.6
UPC				eSG	Sg	16 12 25.9	+0.5
KECS	Kecovo	1.90	135	eSN	Sn	16 12 28.1	+0.7
PSZ	Piszkesteto	2.14	153	eP	Pn	16 12 09.6	+3.7
PSZ	Piszkesteto	2.14	153	⇑ePn	Pn	16 12 06.4	+0.5
CRVS	Cervenica-Dubn	2.17	115	ePB	Pb	16 12 09.8	+1.4
CRVS				eSG	Sg	16 12 39.2	-1.6
PRU	Pruhonice	2.54	275	ePG	Pg	16 12 15.8	-3.3
PRU				eSG	Sg	16 12 51.6	-1.4
KOLS	Kolonicke sedl	2.65	109	ePG	Pg	16 12 20.0	-1.3
BRG	Berggiesshubel	3.07	291	ePg	Pg	16 12 26.7	-3.1
BRG				eSg	Sg	16 13 10.2	-0.6
KHC	Kasperske Hory	3.27	259	ePN	Pn	16 12 22.5	+0.6
KHC				ePG	Pg	16 12 29.2	-4.4
KHC				eSG	Sg	16 13 14.7	-2.4
KHC	Kasperske Hory	3.27	259	Pg	Pg	16 12 29.2	-4.4
KHC				Sg	Sg	16 13 14.7	-2.4
MOA	Molln	3.42	236	⇑iPN	Pn	16 12 23.8	-0.2
MOA				i SG	Sg	16 13 19.8	-2.3
	3.2nm,0.5s						
CLL	Collm	3.78	295	eSG	Sg	16 13 33.0	-1.2

IDC 26 16:12:37.9±9.7**, 14.29N×92.65W, mb3.5**/2**, mb1 3.9**/3**, mb1mx3.5**/19**, mbtmp3.4**/3**, ML3.5**/1**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.6**/23**, Error ellipse: s-maj=195.2km s-min=109.6km az=14.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	18.11	328	P	P	16 16 50.5	-2.1
	0.0nm,0.3s,baz=156,slow=12,SNR=6.9						
SJG	San Juan	25.72	78	LR	LR	16 27 37.3	
	comp=Z,218nm,21.0s,baz=274,slow=35						
NVAR	Mina Array Bea	33.05	321	P	P	16 19 15.7	-1.6
	0.8nm,0.7s,baz=135,slow=8.9,SNR=3.8						
YKA	Yellowknife Ar	50.60	347	P	P	16 21 38.0	-2.3
	0.2nm,0.6s,baz=154,slow=7.6,SNR=5.0						

MEX 26 16:20:07.9±0.7**, 15.60N×93.43W, h70**^{km}**, MD4.1, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCX	San Cristobal	1.36	34	eP	P	16 20 30.0	-1.6
SCX				eS	S	16 20 46.5	-2.6
HUIG	Huatulco	2.59	274	⇑iP	P	16 20 46.2	-2.3
HUIG				eS	S	16 21 15.4	-3.4
OXX	Oaxaca	3.49	295	eP	P	16 21 00.0	-1.1
VHO	Vista Hermosa	3.50	295	eP	P	16 21 00.3	-0.9
VHO				eS	S	16 21 39.2	-2.4

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*IDC **26** 16:21:53.6±0.8, 10.73N×91.59E, mb4.1/10, mb1 4.2/11, mb1mx4.0/19, mbtmp4.0/11, ML3.6/1, Error ellipse: s-maj=34.4km s-min=16.3km az=50.0*

*NEIC **26** 16:21:57.8±0.5, 10.81N×91.63E, h30^{km}, mb4.2/7, Error ellipse: s-maj=12.2km s-min=8.4km az=58.0*

ISC 26 16:21:56.2±0.6**, 10.85N**±0.08×**91.74E**±0.08**, h30**^{km}**, n29,** σ**0^{s}80**/31**, mb4.1**/16**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.28	42	Pn	P	16 24 24.6	-0.3
	0.1nm,0.3s,baz=239,slow=15,SNR=4.5						
VIS	Vishakhapatnam	10.63	311	i P	P	16 24 23.0	-6.8
VIS				i S	S	16 26 13.0	-16
VIS				e		16 34 49.0	
PALK	Pallekele	11.47	253	P	P	16 24 36.3	-4.9
HYB	Hyderabad	14.36	299	eP	P	16 25 28.0	+8.4
HYB				eS	S	16 27 58.0	-0.6
JIRN	Jiri	17.52	343	eP	P	16 25 58.2	-1.8
	8.6nm,0.4s						
PKI	Pulchoki	17.67	341	eP	P	16 26 00.8	-1.1
	10nm,0.5s						

DMN	**Daman**	**17.80**	**340**	*e*P	**P**	**16 26 03.5**	**0.0**
	12nm,0.6s						
KKN	**Kakani**	**17.91**	**341**	*e*P	**P**	**16 26 04.8**	**-0.1**
GKN	**Gorkha**	**18.32**	**340**	*e*P	**P**	**16 26 09.8**	**-0.2**
	6.5nm,0.3s						
KOLN	**Koldanda**	**18.49**	**337**	*e*P	**P**	**16 26 14.3**	**+2.2**
	7.3nm,0.3s						
LSA	**Lhasa**	**18.76**	**358**	*e*P	**P**	**16 26 15.3**	**-0.1**
	10nm,1.2s						
ENH	**Enshi**	**25.41**	**38**	*e*P	**P**	**16 27 21.6**	**-1.4**
	9.5nm,0.5s,mb4.6						
AAK	**Ala-Archa**	**35.06**	**338**	*e*P	**P**	**16 28 49.0**	**+0.5**
	2.2nm,0.9s,mb4.1						
SONM	**Songino Array**	**38.87**	**16**	P	**P**	**16 29 22.1**	**+1.5**
	0.6nm,0.9s,mb3.3,baz=200,slow=8.8,SNR=2.6						
SONM				PcP	PcP	16 31 32.4	+0.7
	0.2nm,0.5s,baz=180,slow=2.9,SNR=3.4						
KURK	**Kurchatov**	**41.19**	**347**	*e*P	**P**	**16 29 40.2**	**+0.6**
	5.7nm,1.1s,mb4.1						
KURK				*e*	pP	16 29 48.3	-0.3
ZAL	**Zalesovo**	**43.33**	**354**	P	**P**	**16 29 57.7**	**+0.6**
	0.9nm,0.4s,mb3.9,baz=299,slow=11,SNR=3.5						
ZAL	**Zalesovo**	**43.33**	**354**	P	**P**	**16 29 57.7**	**+0.6**
BVAR	**Borovoye Array**	**45.44**	**342**	P	**P**	**16 30 14.3**	**+0.2**
	0.6nm,0.7s,mb3.6,baz=137,slow=8.4,SNR=5.0						
CHKZ	**Chkalovo**	**45.93**	**343**	*e*P	**P**	**16 30 18.4**	**+0.3**
	2.4nm,0.6s,mb4.3						
CHKZ				*e*	pP	16 30 26.4	-0.6
WRA	**Warramunga Arr**	**51.91**	**126**	P	**P**	**16 31 04.6**	**-0.1**
	0.6nm,0.3s,mb4.0,baz=300,slow=10.0,SNR=24						
WRAB	**Tennant Creek**	**51.91**	**126**	*e*P	**P**	**16 31 04.5**	**-0.3**
	6.4nm,0.9s,mb4.5						
WB2	**Warramunga Arr**	**51.92**	**126**	*e*P	**P**	**16 31 04.5**	**-0.3**
ASAR	**Alice Springs**	**53.63**	**130**	P	**P**	**16 31 17.6**	**+0.1**
	0.6nm,0.6s,mb3.7,baz=304,slow=6.7,SNR=17						
STKA	**Stephens Creek**	**63.86**	**134**	P	**P**	**16 32 28.4**	**-0.2**
	0.7nm,0.5s,mb4.0,baz=321,slow=13,SNR=3.7						
IDI	**Anoyia**	**64.95**	**304**	P	**P**	**16 32 34.4**	**-1.2**
	12nm,0.9s,mb4.9,baz=135,slow=5.7,SNR=2.7						
MLR	**Muntele Rosu**	**65.40**	**315**	P	**P**	**16 32 38.9**	**+0.6**
	2.8nm,0.8s,mb4.3,baz=70,slow=0.5,SNR=6.1						
FINES	**FINESS Array B**	**68.99**	**332**	P	**P**	**16 33 00.8**	**+0.2**
	1.9nm,0.8s,mb4.0,baz=22,slow=10,SNR=4.5						
ARCES	**ARCESS Array B**	**71.68**	**340**	P	**P**	**16 33 17.6**	**+0.7**
	24nm,1.3s,mb5.0,baz=76,slow=3.7,SNR=4.1						
GERES	**GERESS Array B**	**74.05**	**318**	P	**P**	**16 33 31.6**	**+0.5**
	0.7nm,0.7s,mb3.7,baz=90,slow=4.0,SNR=6.0						

MAN 26 16:47:10.8, 6.68N×127.42E, h6^{km}, mb4.3, ML3.1, MS2.9, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.19**	**283**	*e*P	Pb	16 47 33.1	-0.2
MATI				*e*S	Sb	16 47 42.9	-5.8
BIPH	**Bislig**	**1.83**	**325**	⇑*i*P	Pn	16 47 42.3	-0.8
BIPH				*i* S	Sn	16 47 58.0	-8.8
BUKP	**Musuan**	**2.63**	**297**	*e*P	Pn	16 47 55.0	+0.5
BUKP				*e*S	Sn	16 48 28.2	+1.2
BUTP	**Butuan**	**2.89**	**322**	*e*P	Pn	16 47 59.1	+0.9
BUTP				*e*S	Sn	16 48 34.5	+0.7

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*BJI **26** 17:00:56.6, 20.53S×179.80W, h546^{km}, mB4.8, mb4.3*

*NEIC **26** 17:00:56.3±0.9, 21.02S×178.99W, h575^{km}±10^{km}, mb4.2/21, Error ellipse: s-maj=10.4km s-min=5.9km az=142.0*

*IDC **26** 17:01:00.4±1.5, 20.98S×179.09W, h619^{km}±17^{km}, mb3.6/19, mb1 3.8/20, mb1mx3.8/24, mbtmp4.6/20, Error ellipse: s-maj=18.8km s-min=9.5km az=155.0*

ISC 26 17:00:53.7±0.9**, 21.12S**±0.06×**178.98W**±0.07**, h556**^{km}±11^{km}**, n141, $\sigma 0^{s}86$**/88**, mb4.1**/36**, 4C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.92**	**45**	*e*P	**P**	**17 03 12.1**	**+0.5**
AFI				*e*S	**S**	**17 05 00.7**	**-1.4**
PUZ	**Puketiti**	**17.07**	**187**	*e*PN	**P**	**17 04 23.8**	**+1.2**
PUZ				SN	**S**	**17 07 07.3**	**-4.0**
PUZ	**Puketiti**	**17.07**	**187**	*e*PN	**P**	**17 04 23.8**	**+1.2**
PUZ				SN	**S**	**17 07 07.3**	**-4.0**
URZ	**Urewera**	**17.42**	**190**	P	**P**	**17 04 26.3**	**+0.3**
	4.9nm,0.3s,baz=340,slow=1.9,SNR=48						
URZ				S	**S**	**17 07 15.8**	**-1.4**
	0.8nm,0.3s,baz=228,slow=22,SNR=7.1						
URZ	**Urewera**	**17.42**	**190**	PN	**P**	**17 04 25.8**	**-0.2**
URZ	**Urewera**	**17.42**	**190**	PN	**P**	**17 04 25.8**	**-0.2**
NNZ	**Nelson**	**21.06**	**196**	*e*PN	**P**	**17 04 58.9**	**-1.3**
NNZ	**Nelson**	**21.06**	**196**	*e*PN	**P**	**17 04 58.9**	**-1.3**
THZ	**Tophouse**	**21.70**	**197**	*e*PN	**P**	**17 05 05.6**	**-0.4**
THZ	**Tophouse**	**21.70**	**197**	*e*PN	**P**	**17 05 05.6**	**-0.4**
KHZ	**Kahutara**	**22.15**	**195**	*e*PN	**P**	**17 05 09.3**	**-0.8**
KHZ	**Kahutara**	**22.15**	**195**	*e*PN	**P**	**17 05 09.3**	**-0.8**
CTA	**Charters Tower**	**32.53**	**265**	*e*P	**P**	**17 06 42.2**	**+1.5**
	2.1nm,0.4s,mb4.0						
CTA	**Charters Tower**	**32.53**	**265**	P	**P**	**17 06 42.3**	**+1.6**
	3.3nm,0.4s,mb4.2,baz=92,slow=11,SNR=15						
CTAO	**Charters Tower**	**32.53**	**265**	*e*P	**P**	**17 06 42.1**	**+1.4**
STKA	**Stephens Creek**	**36.70**	**245**	*e*P	**P**	**17 07 16.7**	**+1.4**
	3.5nm,1.5s,mb3.7						
STKA	**Stephens Creek**	**36.70**	**245**	P	**P**	**17 07 17.1**	**+1.8**
	4.0nm,0.6s,mb4.1,baz=90,slow=11,SNR=22						
ASAR	**Alice Springs**	**43.49**	**257**	P	**P**	**17 08 10.4**	**+0.5**
	2.6nm,0.5s,mb4.0,baz=95,slow=7.8,SNR=114						
ASAR				S	**S**	**17 13 55.3**	**-3.8**
	1.3nm,1.0s,baz=91,slow=17,SNR=6.1						
ASPA	**Alice Springs**	**43.49**	**257**	*e*P	**P**	**17 08 11.0**	**+1.1**
WB2	**Warramunga Arr**	**43.60**	**263**	*e*P	**P**	**17 08 10.8**	**0.0**
WRAB	**Tennant Creek**	**43.61**	**263**	*e*P	**P**	**17 08 09.9**	**-0.9**
	3.8nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**43.62**	**263**	P	**P**	**17 08 10.8**	**-0.1**
	1.0nm,0.3s,mb3.8,baz=97,slow=7.7,SNR=91						
WRA				S	**S**	**17 13 57.7**	**-3.1**
	0.6nm,1.1s,baz=99,slow=13,SNR=3.4						
MBWA	**Marble Bar**	**56.83**	**258**	*e*P	**P**	**17 09 46.9**	**-0.8**
	4.2nm,0.6s,mb3.9						
SBA	**Scott Base**	**57.20**	**184**	*e*P	**P**	**17 09 51.6**	**+2.1**
	14nm,0.8s,mb4.2						
VNDA	**Vanda**	**57.22**	**185**	P	**P**	**17 09 50.8**	**+1.1**
	1.9nm,0.5s,mb3.6,baz=354,slow=8.0,SNR=16						
VNDA	**Vanda**	**57.22**	**185**	*e*P	**P**	**17 09 50.7**	**+1.0**
	3.2nm,0.6s,mb3.7						
QSPA	**South Pole Qui**	**68.96**	**180**	⇑*i*P	**P**	**17 11 05.5**	**+1.1**
	13nm,0.7s,mb4.6						
ASAJ	**Asahikawa**	**73.84**	**332**	P	**P**	**17 11 33.6**	**+0.4**
	8.4nm,0.9s,mb4.2,baz=223,slow=12,SNR=4.4						
MDJ	**Mudanjiang**	**80.50**	**326**	P	**P**	**17 12 09.3**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,120nm,5.3s						
CMB	**Columbia Colle**	**80.53**	**43**	*e*P	**P**	**17 12 08.9**	**-0.5**
	comp=Z,12nm,1.2s,mb4.2						
OHCM	**Honcut**	**80.61**	**42**	*e*P	**P**	**17 12 09.7**	**-0.1**
MTUM	**Tungsten Hills**	**81.31**	**45**	*e*P	**P**	**17 12 14.0**	**+0.5**
YBH	**Yreka Blue Hor**	**81.34**	**39**	P	**P**	**17 12 14.2**	**+0.7**
	comp=Z,9.9nm,0.8s,mb4.3,baz=169,slow=0.8,SNR=29						
YBH	**Yreka Blue Hor**	**81.34**	**39**	*e*P	**P**	**17 12 14.2**	**+0.7**
	comp=Z,7.0nm,0.8s,mb4.1						
HUMO	**Hull Mountain**	**81.74**	**38**	*e*P	**P**	**17 12 16.4**	**+0.9**
	comp=Z,13nm,1.1s,mb4.3						
NVAR	**Mina Array Bea**	**82.10**	**44**	P	**P**	**17 12 17.8**	**+0.5**
	comp=Z,6.1nm,0.8s,mb4.1,baz=208,slow=6.6,SNR=34						
MNV	**Mina**	**82.19**	**44**	*e*P	**P**	**17 12 17.8**	**-0.1**
	comp=Z,9.6nm,1.1s,mb4.1						
TPH	**Tonopah**	**82.60**	**45**	*e*P	**P**	**17 12 20.0**	**+0.1**
	comp=Z,10nm,1.1s,mb4.3						
MOD	**Modoc**	**82.87**	**40**	*e*P	**P**	**17 12 21.4**	**+0.2**
	comp=Z,15nm,1.2s,mb4.4						
FRIS	**Frissel Point**	**83.22**	**37**	P	**P**	**17 12 23.5**	**+0.6**
MA2	**Magadan**	**84.14**	**345**	*e*P	**P**	**17 12 25.8**	**-1.2**
	comp=Z,3.3nm,0.8s,mb3.9						
WVOR	**Wild Horse Val**	**84.19**	**40**	*e*P	**P**	**17 12 27.5**	**-0.2**
	comp=Z,12nm,1.2s,mb4.3						
VIPM	**Ingram Point**	**84.24**	**38**	P	**P**	**17 12 28.4**	**+0.5**
CROR	**Criterion Ridg**	**84.32**	**37**	P	**P**	**17 12 28.8**	**+0.5**
OCWA	**Octopus Mounta**	**84.32**	**34**	*e*P	**P**	**17 12 29.3**	**+1.1**
	comp=Z,22nm,1.3s,mb4.5						
ELK	**Elko**	**85.35**	**43**	P	**P**	**17 12 33.1**	**-0.3**
	comp=Z,1.9nm,0.8s,mb3.7,baz=224,slow=4.4,SNR=8.3						
BBB	**Bella Bella**	**85.37**	**29**	P	**P**	**17 12 33.1**	**-0.1**
	comp=Z,6.8nm,0.8s,mb4.2,baz=308,slow=8.2,SNR=2.9						
ENH	**Enshi**	**85.63**	**305**	*e*P	**P**	**17 12 35.0**	**+0.1**
	comp=Z,9.0nm,1.4s,mb4.2						
BJT	**Baijiatuau**	**85.68**	**316**	P	**P**	**17 12 29.6**	**-5.4**
SYO	**Syowa Base**	**85.93**	**193**	⇑P	**P**	**17 12 33.2**	**-2.3**
GBL	**Gable Mountain**	**86.14**	**37**	P	**P**	**17 12 37.5**	**+0.5**
ETW	**Entiat**	**86.27**	**35**	P	**P**	**17 12 37.9**	**+0.3**
BMO	**Blue Mountains**	**86.36**	**39**	*e*P	**P**	**17 12 37.5**	**-0.7**
	comp=Z,2.1nm,0.7s,mb3.9						
OD2	**Odessa Site #2**	**87.03**	**36**	P	**P**	**17 12 41.5**	**+0.4**
SNAA	**Sanae**	**87.42**	**179**	⇑*i*	**P**	**17 12 41.7**	**-0.8**
VNA3	**Neumayer Olymp**	**87.59**	**177**	⇑*i*	**P**	**17 12 43.3**	**0.0**
VNA2	**Neumayer--Watz**	**88.02**	**177**		**P**	**17 12 44.7**	**-0.6**
TXAR	**Lajitas Array**	**88.15**	**58**	P	**P**	**17 12 47.8**	**+0.9**
	comp=Z,4.5nm,0.8s,mb4.2,baz=217,slow=5.8,SNR=46						
HWUT	**Hardware Ranch**	**88.16**	**44**	*e*P	**P**	**17 12 46.0**	**-0.7**
	comp=Z,3.6nm,0.9s,mb4.1						
PV10	**Paradox Valley**	**88.26**	**48**	*e*P	**P**	**17 12 46.9**	**-0.3**
NEW	**Newport**	**88.40**	**36**	P	**P**	**17 12 47.0**	**-0.7**
	comp=Z,0.5nm,0.3s,mb3.6,baz=213,slow=6.4,SNR=4.1						
NEW	**Newport**	**88.40**	**36**	*e*P	**P**	**17 12 47.0**	**-0.6**
PV01	**Paradox Valley**	**88.47**	**48**	*e*P	**P**	**17 12 47.9**	**-0.3**
ANMO	**Albuquerque**	**88.50**	**52**	P	**P**	**17 12 48.8**	**+0.4**
	comp=Z,2.9nm,0.8s,mb4.0						
ANMO	**Albuquerque**	**88.50**	**52**	*e*P	**P**	**17 12 48.4**	**0.0**
	comp=Z,4.6nm,1.1s,mb4.1						
DLBC	**Dease Lake**	**88.97**	**23**	P	**P**	**17 12 50.0**	**0.0**
	comp=Z,1.7nm,0.9s,mb3.9,baz=228,slow=6.7,SNR=5.4						
MCMT	**McKenzie Canyo**	**89.01**	**41**	*e*P	**P**	**17 12 51.0**	**+0.5**
RRI2	**Red Ridge**	**89.20**	**42**	*e*P	**P**	**17 12 51.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**89.46**	**290**	P	**P**	**17 12 54.1**	**+0.9**
	comp=Z,3.2nm,0.9s,mb4.1,baz=122,slow=3.2,SNR=17						
PLCA	**Paso Flores**	**89.51**	**134**	P	**P**	**17 12 53.9**	**+0.9**
	comp=Z,1.2nm,0.7s,mb3.9,baz=221,slow=12,SNR=5.6						
BILL	**Bilibino**	**89.55**	**355**	*e*P	**P**	**17 12 51.5**	**-1.0**
SNOW	**Snow King Moun**	**89.61**	**43**	*e*P	**P**	**17 12 53.7**	**+0.4**
IMW	**Indian Meadow**	**89.71**	**42**	*e*P	**P**	**17 12 54.2**	**+0.4**
QLMT	**Earthquake Lak**	**89.88**	**41**	*e*P	**P**	**17 12 55.5**	**+1.0**
PDAR	**Pinedale Array**	**90.03**	**44**	P	**P**	**17 12 55.1**	**-0.2**
	comp=Z,3.9nm,0.8s,mb4.3,baz=221,slow=2.8,SNR=35						
DAWY	**Dawson**	**90.30**	**16**	*e*P	**P**	**17 12 55.3**	**-0.7**
SDCO	**Great Sand Dun**	**90.44**	**49**	*e*P	**P**	**17 12 57.4**	**+0.1**
	comp=Z,23nm,2.2s,mb4.6						
WALA	**Waterton Lakes**	**90.62**	**37**	*e*P	**P**	**17 12 56.9**	**-0.9**
YAK	**Yakutsk**	**92.34**	**338**	P	**P**	**17 13 03.9**	**-1.6**
INK	**Inuvik**	**95.10**	**15**	P	**P**	**17 13 16.1**	**-1.7**
	comp=Z,1.8nm,0.9s,mb4.2,baz=209,slow=4.7,SNR=5.7						
INK	**Inuvik**	**95.10**	**15**	*e*P	**P**	**17 13 15.8**	**-2.0**
YKA	**Yellowknife Ar**	**97.45**	**25**	P	**P**	**17 13 27.5**	**-1.1**
	comp=Z,0.6nm,0.8s,mb3.9,baz=245,slow=4.4,SNR=12						
ARCES	**ARCESS Array B**	**129.35**	**349**	PKP	PKPdf	17 18 58.0	-0.5
	comp=Z,5.6nm,1.0s,baz=90,slow=0.9,SNR=5.9						
MATP	**Matopo**	**130.74**	**215**	SKPbc		17 21 33.2	
	comp=Z,4.4nm,0.7s,baz=155,slow=3.0,SNR=18						
FINES	**FINESS Array B**	**136.10**	**343**	PKP	PKPdf	17 19 12.1	+0.8
	comp=Z,1.8nm,0.9s,baz=90,slow=2.8,SNR=4.7						
FINES				SKP		17 21 48.5	
	comp=Z,2.4nm,0.7s,baz=45,slow=3.9,SNR=19						
FINES	**FINESS Array B**	**136.10**	**343**	PKP	PKPdf	17 19 12.1	+0.8
FINES				SKP		17 21 48.5	
GNI	**Garni**	**138.35**	**307**	*e*PKPdf	PKPdf	17 19 12.2	-3.8
ELZG	**Elazig**	**143.10**	**307**	*i* P	PKPbc	17 19 24.0	+0.9
AKASG	**Malin Array Be**	**143.10**	**330**	PKP	PKPdf	17 19 21.7	-2.3
	comp=Z,16nm,0.7s,baz=42,slow=4.4,SNR=61						
MALT	**Malatya**	**143.57**	**306**	*e*PKPdf	PKPdf	17 19 25.3	+0.1
MUD	**Monsted U'grnd**	**144.19**	**352**	*e*P	PKPdf	17 19 26.7	+1.0
MUD	**Monsted U'grnd**	**144.19**	**352**	*i* P	PKPdf	17 19 26.7	+1.0
	comp=Z,34nm,1.1s						
GZT	**Gaziantep**	**144.50**	**305**	*i* P	PKPdf	17 19 27.8	+0.9
KAHT	**Ahir Dag**	**144.94**	**306**	*i* P	PKPdf	17 19 29.2	+1.5
BOYT	**Boyabat**	**144.99**	**313**	*i* P	PKPdf	17 19 28.6	+1.1
COBT	**Iskenderun**	**145.75**	**304**	*i* P	PKPdf	17 19 31.6	+2.6
AVNT	**Avonos**	**146.06**	**309**	*i* P	PKPdf	17 19 31.7	+2.3
ELDT	**Eldivan**	**146.39**	**312**	*i* P	PKPdf	17 19 32.9	+2.9
BSEG	**Bad Segeberg**	**146.47**	**350**	*e*PKPbc	PKPbc	17 19 32.8	+1.2
BSEG				*e*PKPab	PKPab	17 19 35.4	-1.9
KWP	**Kalwaria**	**146.75**	**334**	*e*PKP	PKPdf	17 19 33.5	+3.2
KOLS	**Kolonicke sedl**	**147.47**	**334**	*e*PKP	PKPdf	17 19 32.9	+1.5
CRVS	**Cervenica-Dubn**	**147.82**	**334**	*e*PKP	PKPdf	17 19 39.0	+7.0
CRVS				*e*		17 19 58.6	
NIE	**Niedzica**	**147.86**	**336**	*e*PKP	PKPdf	17 19 36.0	+3.9
KSP	**Ksiaz**	**148.00**	**342**	*e*PKP	PKPdf	17 19 36.9	+4.7
KSP				*e*		17 19 42.2	
KSP	**Ksiaz**	**148.00**	**342**	*e*PKP	PKPdf	17 19 37.2	+5.0
KSP				*e*		17 19 42.5	
OKC	**Ostrava-Krasne**	**148.28**	**339**	*e*PKPbc	PKPdf	17 19 37.1	+4.4
OKC				*e*PKPab	PKPab	17 19 43.4	-1.2
UPC	**Upice**	**148.38**	**342**	*e*PKPbc	PKPdf	17 19 37.6	+4.8
UPC				*e*PKPab	PKPab	17 19 43.9	-1.1
DPC	**Dobruska-Polom**	**148.42**	**341**	*e*PKPbc	PKPdf	17 19 38.0	+5.1
DPC				*e*PKPab	PKPab	17 19 44.3	-0.8
CLL	**Collm**	**148.44**	**346**	*i* PKP1	PKPdf	17 19 37.6	+4.7
CLL				*e*PKP2	PKPab	17 19 43.0	-2.2
CLZ	**Clausthal**	**148.48**	**349**	*e*PKPbc	PKPdf	17 19 38.1	+5.2
CSS	**Prodhromos**	**148.48**	**303**	*e*PKPbc	PKPdf	17 19 37.7	+4.2
MORC	**Moravsky Berou**	**148.54**	**339**	*e*PKPbc	PKPdf	17 19 37.1	+4.0
BRG	**Berggiesshubel**	**148.61**	**344**	*e*P	PKPdf	17 19 37.9	+4.7
PVCC	**Panska Ves**	**148.76**	**343**	*e*PKPbc	PKPdf	17 19 38.8	+5.4
VYHS	**Vyhne**	**149.17**	**337**	*e*PKP	PKPdf	17 19 39.9	+5.7
VYHS				*e*		17 19 46.8	
PRU	**Pruhonice**	**149.26**	**343**	*e*PKPbc	PKPdf	17 19 39.6	+5.4
PRU				*e*PKPab	PKPab	17 19 47.5	-1.1
MOX	**Moxa**	**149.37**	**347**	*e*PKP	PKPdf	17 19 40.2	+5.8
NKC	**Novy Kostel**	**149.57**	**345**	*e*PKPbc	PKPdf	17 19 40.6	+5.9
NKC				*e*PKPab	PKPab	17 19 47.6	-2.3
SMOL	**Smolenice**	**149.66**	**338**	*e*PKP	PKPdf	17 19 41.1	+6.2
SMOL				*e*		17 19 49.7	
SRO	**Srobarova**	**149.93**	**336**	*e*PKP	PKPdf	17 19 41.5	+6.1
SRO				*e*		17 19 50.4	
SRO2	**Moca**	**149.94**	**336**	*e*PKP	PKPdf	17 19 41.6	+6.2
ZST	**Bratislava**	**150.05**	**338**	*e*PKP	PKPdf	17 19 41.7	+6.1
ZST				*e*		17 19 50.9	
ZST	**Bratislava**	**150.05**	**338**	*e*	PKPdf	17 19 41.7	+6.1
ZST	**Bratislava**	**150.05**	**338**	*e*PKP	PKPdf	17 19 50.9	+15
KHC	**Kasperske Hory**	**150.30**	**343**	*e*PKPbc	PKPdf	17 19 41.8	+5.9
KHC				*e*PKPab	PKPab	17 19 52.2	-0.7
GRF	**Grafenberg Arr**	**150.35**	**347**	*e*PKP	PKPdf	17 19 42.9	+6.9
GRF				*e*PKP	PKPab	17 19 52.1	-1.0
TNS	**Taunus Mts**	**150.37**	**350**	*e*PKPbc	PKPdf	17 19 42.7	+6.7
TNS				*e*PKPab	PKPab	17 19 51.2	-2.0
WET	**Wettzell**	**150.47**	**344**	*e*PKPbc	PKPdf	17 19 43.0	+6.8
WET				*e*PKPab	PKPab	17 19 52.6	-1.0
GERES	**GERESS Array B**	**150.53**	**343**	PKPbc	PKPdf	17 19 42.7	+6.4
	comp=Z,3.7nm,0.8s,baz=45,slow=1.9,SNR=34						
GERES				SKP		17 22 03.8	
	comp=Z,0.4nm,0.6s,baz=37,slow=4.9,SNR=3.6						
GIVF	**Givet**	**150.92**	**355**	*e*PKIKP	PKPdf	17 19 43.4	+6.6
	comp=Z,29nm,0.9s						
BAIF	**Baives**	**151.01**	**356**	*e*PKIKP	PKPdf	17 19 43.7	+6.8
	comp=Z,17nm,1.0s						
PERS	**Pernice**	**152.07**	**339**	*e*PKPbc	PKPdf	17 19 45.5	+7.0
BFO	**Black Forest**	**152.22**	**350**	*e*PKPbc	PKPdf	17 19 46.6	+7.9
CDF	**Champ du Feu**	**152.31**	**351**	*e*PKIKP	PKPdf	17 19 46.4	+7.6
	comp=Z,18nm,1.1s						
MEZF	**Maizieres J'vi**	**152.49**	**354**	*e*PKIKP	PKPdf	17 19 47.1	+8.0
LJU	**Ljubljana**	**152.79**	**339**	*e*PKPbc	PKPdf	17 19 47.7	+8.1
HAU	**Haudompre**	**152.83**	**352**	*e*PKIKP	PKPdf	17 19 47.4	+7.8
	comp=Z,6.4nm,0.7s						
VISS	**Visnje**	**152.89**	**338**	*e*PKPbc	PKPdf	17 19 48.1	+8.4
HINF	**Hinteralfeld**	**152.95**	**351**	*e*PKIKP	PKPdf	17 19 47.6	+7.9
BOJS	**Bojanci**	**153.01**	**338**	*e*PKPdf	PKPdf	17 19 43.9	+4.0
BOJS				*e*PKPbc	PKPdf	17 19 48.7	+8.8
ESDC	**Sonseca Array**	**161.01**	**12**	PKPab	PKPab	17 20 36.5	-2.3
	comp=Z,1.3nm,0.8s,baz=341,slow=4.1,SNR=5.1						

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*IDC **26** 17:01:13.5±0.9, 2.88N×95.36E, mb4.1/8, mb1 4.3/9, mb1mx4.1/18, mbtmp4.1/9, ML4.4/1, MS4.0/2, Ms1 4.1/2, ms1mx3.2/24, Error ellipse: s-maj=47.1km s-min=17.6km az=60.0*

*BJI **26** 17:01:16.6, 2.88N×95.59E, h30^{km}, mB5.2, mb4.9, Ms4.2, Msz4.0*

*MOS **26** 17:01:16.5±1.2, 2.84N×95.37E, h33^{km}, mb5.0/16, Error ellipse: s-maj=19.1km s-min=8.3km az=91.3*

*NEIC **26** 17:01:18.3±0.5, 2.87N×95.44E, h30^{km}, mb4.8/17, Error ellipse: s-maj=12.1km s-min=8.6km az=62.0*

ISC 26 17:01:17.7±1.9**, 2.89N**±0.07×**95.49E**±0.09**, h41**^{km}±15^{km}**, h27**^{km}±3.9^{km}**:pP-P, n80, $\sigma 1^{s}03$**/78**, mb4.7**/41**, MS4.0**/4**, 2C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.67**	**65**	*e*P	**P**	**17 02 41.6**	**0.0**
SNG	**Songkhla**	**6.65**	**50**	P	**P**	**17 02 55.0**	**-0.4**
KKTK	**Khon Kaen**	**15.19**	**28**	P	**P**	**17 04 56.0**	**+4.8**
	802nm,0.8s						
CM31	**Chiang Mai Arr**	**15.84**	**12**	*e*P	**P**	**17 04 58.6**	**-1.0**
	36nm,1.0s						
CM31				*e*		17 05 14.6	
CMAR	**Chiang Mai Arr**	**15.84**	**12**	Pn	**P**	**17 04 58.9**	**-0.6**
	0.5nm,0.3s,baz=202,slow=11,SNR=93						
CMAR				LR	LR	17 12 03.8	
	comp=Z,429nm,18.7s,baz=200,slow=41						
NANT	**Nan**	**16.62**	**17**	P	**P**	**17 05 10.0**	**+0.6**
CHRT	**Chiangrai**	**17.39**	**14**	⇑P	**P**	**17 05 05.6**	**-14**
	160nm,1.1s						
QIZ	**Qiongzhong**	**21.32**	**40**	P	**P**	**17 06 02.2**	**-1.2**
HYB	**Hyderabad**	**22.02**	**312**	*i* P	**P**	**17 06 19.0**	**+8.6**
KMI	**Kunming**	**23.19**	**17**	P	**P**	**17 06 24.0**	**+2.1**
KMI				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.3						
KMI				LR	LR		
	comp=N,551nm,14.2s,MS4.2						
KMI				LR	LR		
	comp=E,332nm,17.9s,MS4.2						
KMI				LR	LR		
	comp=Z,580nm,14.6s,MS4.2						
KMI	**Kunming**	**23.19**	**17**	P	**P**	**17 06 24.0**	**+2.1**
	comp=Z,14nm,1.1s,mb4.3						
GYA	**Guiyang**	**25.77**	**24**	⇓*i*P	**P**	**17 06 47.0**	**+0.3**
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.5						
JIRN	**Jiri**	**26.19**	**341**	*e*P	**P**	**17 06 51.3**	**+0.7**
	comp=Z,45nm,0.8s,mb5.0						
PKI	**Pulchoki**	**26.37**	**340**	*e*P	**P**	**17 06 53.8**	**+1.5**
	comp=Z,20nm,0.7s,mb4.8						
DMN	**Daman**	**26.51**	**339**	*e*P	**P**	**17 06 54.3**	**+0.7**
	comp=Z,22nm,0.8s,mb4.7						
GUN	**Gumba**	**26.52**	**341**	*e*P	**P**	**17 06 54.4**	**+0.7**
	comp=Z,49nm,0.7s,mb5.1						
KKN	**Kakani**	**26.62**	**339**	*e*P	**P**	**17 06 54.6**	**+0.1**
	comp=Z,40nm,0.9s,mb5.0						
LSA	**Lhasa**	**26.98**	**352**	P	**P**	**17 06 59.8**	**+1.9**
LSA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**17 06 58.9**	**+1.0**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.9						
LSA	**Lhasa**	**26.98**	**352**	*e*P	**P**	**17 06 58.9**	**+1.0**
	comp=Z,30nm,0.8s,mb4.9						
GKN	**Gorkha**	**27.04**	**339**	*e*P	**P**	**17 06 58.9**	**+0.5**
	comp=Z,59nm,0.9s,mb5.1						
KOLN	**Koldanda**	**27.23**	**336**	*e*P	**P**	**17 07 01.8**	**+1.7**
	comp=Z,45nm,0.8s,mb5.0						
ENH	**Enshi**	**30.29**	**25**	*e*P	**P**	**17 07 22.1**	**-5.4**
	comp=Z,6.4nm,0.7s,mb4.5						
WHN	**Wuhan**	**32.79**	**31**	⇑P	**P**	**17 07 50.0**	**+0.6**
XAN	**Xi'an**	**33.43**	**20**	P	**P**	**17 07 53.3**	**-1.7**
XAN				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.7						
NJ2	**Nanjing**	**36.39**	**35**	*e*P	**P**	**17 08 21.0**	**+0.8**
NJ2				AP	pP	17 08 30.8	-0.8
NJ2				XP	sP	17 08 34.8	-1.9
NJ2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,410nm,5.2s						
GTA	**Gaotai**	**36.57**	**6**	P	**P**	**17 08 21.5**	**-0.1**
GTA				AP	pP	17 08 28.5	-4.5
GTA				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.6						
GTA				AMB	AMB		
	comp=Z,164nm,5.1s						
GTA				LR	LR		
	comp=N,139nm,13.2s,MS4.1						
GTA				LR	LR		
	comp=E,144nm,14.4s,MS4.1						
GTA				LR	LR		
	comp=Z,180nm,14.7s,MS4.0						
SSE	**Sheshan**	**37.09**	**38**	P	**P**	**17 08 29.5**	**+3.4**
SSE				AP	pP	17 08 38.3	+0.9
SSE				AMB	AMB		
	comp=Z,42nm,0.7s,mb5.4						
SSE				LR	LR		
	comp=N,62nm,30.1s,MS3.5						
SSE				LR	LR		
	comp=E,97nm,30.1s,MS3.5						
SSE				LR	LR		
	comp=Z,124nm,21.4s						
SSE	**Sheshan**	**37.09**	**38**	P	**P**	**17 08 29.5**	**+3.4**
	comp=Z,42nm,0.7s,mb5.4						
SSE				pP	pP	17 08 38.3	+0.9
SSE				S	tx	17 14 38.1	
SSE				sS		17 14 53.2	
SSE				SS	tx	17 17 32.7	
BTO	**Baotou**	**39.78**	**17**	*e*P	**P**	**17 08 47.3**	**-1.1**
HHC	**Hu-ho-hao-te**	**40.48**	**19**	*e*P	**P**	**17 08 54.8**	**+0.6**
HHC				AMB	AMB		
	comp=Z,25nm,1.3s,mb4.8						
HHC				AMB	AMB		
	comp=Z,125nm,4.4s						
NWAO	**Narrogin (SRO)**	**41.13**	**152**	*e*P	**P**	**17 09 00.6**	**+0.9**
NWAO	**Narrogin (SRO)**	**41.13**	**152**	P	**P**	**17 09 00.8**	**+1.1**
	comp=Z,2.5nm,0.4s,mb4.2,baz=321,slow=9.3,SNR=8.8						
WMQ	**Urumqi**	**41.35**	**351**	*e*P	**P**	**17 09 02.3**	**+1.0**
BJT	**Baijiatuau**	**41.44**	**24**	*e*P	**P**	**17 09 03.7**	**+1.5**
BJT				*e*		17 09 11.1	
BJT				pmax	pmax		
	comp=Z,32nm,0.9s						
BJT	**Baijiatuau**	**41.44**	**24**	*e*P	**P**	**17 09 03.7**	**+1.5**
	comp=Z,32nm,0.9s,mb5.0						
BJT				*e*		17 09 11.1	
BJI	**Beijing**	**41.46**	**24**	*e*P	**P**	**17 09 03.8**	**+1.5**
BJI				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.0						
BJI	**Beijing**	**41.46**	**24**	*e*P	**P**	**17 09 03.7**	**+1.4**
BJI				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.0						
BJI	**Beijing**	**41.46**	**24**	*e*P	**P**	**17 09 03.7**	**+1.4**
	comp=Z,40nm,1.1s,mb5.0						
AAK	**Ala-Archa**	**43.79**	**338**	*e*P	**P**	**17 09 21.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
AAK	**Ala-Archa**	**43.79**	**338**	*e*P	**P**	**17 09 18.6**	**-2.7**
	comp=Z,5.0nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**44.37**	**122**	P	**P**	**17 09 26.0**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.7,baz=299,slow=9.3,SNR=3.9						
WRAB	**Tennant Creek**	**44.38**	**122**	P	**P**	**17 09 27.4**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**44.38**	**122**	P	**P**	**17 09 27.4**	**+1.0**
	comp=Z,5.0nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**45.22**	**347**	*i* P	**P**	**17 09 33.1**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SONM	**Songino Array**	**45.76**	**10**	P	**P**	**17 09 37.0**	**0.0**
	comp=Z,6.3nm,0.8s,mb4.6,baz=191,slow=8.0,SNR=61						
SONM				PcP	PcP	17 11 14.8	+0.1
	comp=Z,1.7nm,1.0s,baz=194,slow=3.4,SNR=4.1						
ASAR	**Alice Springs**	**45.77**	**127**	P	**P**	**17 09 38.1**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.9,baz=290,slow=6.4,SNR=4.3						
ULN	**Ulaanbaatar**	**45.91**	**11**	*e*P	**P**	**17 09 37.8**	**-0.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**45.91**	**11**	*e*P	**P**	**17 09 37.8**	**-0.4**
	comp=Z,6.6nm,1.1s,mb4.5						
SNY	**Shenyang**	**46.23**	**29**	⇓P	**P**	**17 09 41.0**	**+0.2**
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
ZAK	**Zakamensk**	**47.78**	**7**	*e*P	**P**	**17 09 52.0**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
CN2	**Changchun**	**48.62**	**29**	*e*P	**P**	**17 09 58.8**	**-0.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
TLY	**Talaya**	**49.10**	**7**	*e*P	**P**	**17 10 03.3**	**+0.2**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
TLY	**Talaya**	**49.10**	**7**	*e*P	**P**	**17 10 03.3**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.5						
KURK	**Kurchatov**	**49.74**	**346**	P	**P**	**17 10 08.1**	**0.0**
	comp=Z,45nm,1.2s,mb5.4,SNR=10						
KURK	**Kurchatov**	**49.74**	**346**	*e*P	**P**	**17 10 08.3**	**+0.2**
KURK				*e*		17 10 16.3	
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
KURK	**Kurchatov**	**49.74**	**346**	*e*P	**P**	**17 10 08.2**	**+0.2**
	comp=Z,5.4nm,0.6s,mb4.8						
KURK				*e*		17 10 16.3	

HIA	Hailar	50.63	20	P	P	17 10 14.2	-0.7
JHJ	Hachijo jima 2	51.16	49	LR	LR	17 30 58.5	
	comp=Z,202nm,20.2s,MS4.1,baz=107,slow=35						
MDJ	Mudanjiang	51.27	31	P	P	17 10 20.6	+0.8
ZAL	Zalesovo	51.64	352	P	P	17 10 22.5	+0.1
	comp=Z,10.0nm,0.6s,mb5.0,baz=307,slow=6.1,SNR=48						
NVS	Novosibirsk	52.75	351	eP	P	17 10 29.2	-1.5
NVS				eS	S	17 17 55.0	+0.7
NVS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
NVS				smax			
	comp=N,4.0nm,1.4s						
NVS				smax			
	comp=E,9.0nm,1.4s						
CHKZ	Chkalovo	54.60	342	eP	P	17 10 44.0	-0.4
CHKZ				e		17 10 52.0	
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
CHKZ	Chkalovo	54.60	342	eP	P	17 10 44.0	-0.4
	comp=Z,7.8nm,0.7s,mb4.8						
CHKZ				e		17 10 52.0	
KLR	Kul'dur	55.55	28	eP	P	17 10 48.0	-3.3
BOD	Bodaibo	56.70	12	eP	P	17 10 57.9	-1.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
YSS	Yuzh-Sakhalins	59.95	36	eP	P	17 11 21.7	-0.6
YSS				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1						
YSS	Yuzh-Sakhalins	59.95	36	eP	P	17 11 21.7	-0.7
	comp=Z,23nm,1.2s,mb5.1						
SVE	Sverdlovsk	60.51	339	eP	P	17 11 24.0	-2.0
SVE				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.1						
YAK	Yakutsk	64.31	17	P	P	17 11 49.3	-1.8
YAK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
YAK	Yakutsk	64.31	17	P	P	17 11 49.3	-1.8
	comp=Z,24nm,0.8s,mb5.3						
MA2	Magadan	70.58	26	eP	P	17 12 26.1	-4.3
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TIXI	Tiksi	71.84	11	eP	P	17 12 37.1	-0.8
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
AKASG	Malin Array Be	72.89	322	P	P	17 12 43.5	-0.9
	comp=Z,0.2nm,0.4s,baz=85,slow=5.8,SNR=5.0						
LBTB	Lobatse	73.11	243	P	P	17 12 44.4	-1.9
LBTB				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.9						
LBTB	Lobatse	73.11	243	P	P	17 12 44.4	-1.8
	comp=Z,23nm,1.6s,mb4.9						
FINES	FINESS Array B	77.73	333	P	P	17 13 11.5	-0.4
	comp=Z,1.7nm,0.9s,mb4.0,baz=90,slow=5.7,SNR=10.0						
GERES	GERESS Array B	82.43	319	P	P	17 13 38.0	+0.8
	comp=Z,0.4nm,0.7s,baz=121,slow=5.7,SNR=5.9						
PDAR	Pinedale Array	129.23	24	PKP	PKPdf	17 20 23.0	+0.8
	comp=Z,0.6nm,1.1s,baz=270,slow=1.8,SNR=3.1						
TXAR	Lajitas Array	143.07	28	PKP	PKPdf	17 20 51.8	+3.8
	comp=Z,0.1nm,0.3s,baz=124,slow=23,SNR=5.1						

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*THE **26** 17:10:01.1,37.56N×21.10E,h10^{km},ML3.5*

*NEIC **26** 17:10:01.9,37.68N×21.27E,h14^{km},ML3.3(ATH),After ATH.*

*CSEM **26** 17:10:01.6±0.3,37.58N×21.18E,h2^{km},ML3.3,Error ellipse: s-maj=6.5km s-min=3.2km az=40.0*

ATH 26 17:10:01.8,37.71N×21.30E,h11^{km}±1^{km},MD3.5/11, ML3.3,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.37	21	ePB	Pb	17 10 09.4	-0.5
ITM	Ithomi	0.73	137	ePB	Pb	17 10 15.7	-0.3
VLS	Valsamata	0.73	310	ePB	Pb	17 10 16.0	0.0
EVR	Evrytania	1.27	18	ePG	Pg	17 10 25.7	-1.5
AGG	Agios Georgios	1.54	31	ePb	Pb	17 10 31.7	+1.8
AGG				eSb	Sb	17 10 56.2	+6.9
MGER	Gerania Oros	1.58	79	ePB	Pb	17 10 31.9	+1.4
LKR	Lokris	1.64	54	ePB	Pb	17 10 32.9	+1.4
VLI	Veliai	1.64	127	ePB	Pb	17 10 33.0	+1.4
VLI	Veliai	1.64	127	ePg	Pg	17 10 33.8	-0.8
NSAL	Nisos Salamina	1.73	83	ePG	Pn	17 10 34.0	+2.0
NAIG	Nisos Aigina	1.74	88	ePG	Pn	17 10 34.3	+2.1
ATH	Athens Observa	1.93	81	ePN	Pn	17 10 36.1	+1.1
IGT	Igoumenitsa	1.97	338	ePn	Pn	17 10 36.9	+1.4
MPAR	Parnis Oros	1.98	76	ePB	Pb	17 10 35.3	-2.1
PTL	Penteli	2.06	80	ePN	Pn	17 10 38.1	+1.3
NEO	Neokhori	2.19	43	ePN	Pn	17 10 40.9	+2.1
XOR	Xorichti	2.22	41	ePn	Pn	17 10 41.6	+2.5
LIT	Litokhoron	2.56	21	ePn	Pn	17 10 46.4	+2.4
LIT				eSn	Sn	17 11 21.1	+5.7
FNA	Florina	3.07	1	ePn	Pn	17 10 53.5	+2.3
FNA				eSn	Sn	17 11 32.2	+3.8
GRG	Griva	3.35	14	ePn	Pn	17 10 55.8	+0.6
KNT	Kendrikon	3.66	19	ePn	Pn	17 11 01.2	+1.5
SRS	Serrai	3.84	27	ePn	Pn	17 11 03.6	+1.4
SRS				eSn	Sn	17 11 53.9	+6.1

DJA 26 17:16:48.1±0.9,9.28S×113.58E,h80^{km},MD4.7/4, ML3.8/4,2C-7D,Error ellipse: s-maj=20.4km s-min=13.6km az=34.0,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	0.97	35	⇑iPn	P	17 17 06.1	-0.9
	83nm,0.3s						
SRDI	Scrawed	0.97	35	⇓iP	P	17 17 06.4	-0.6
SRDI				⇓iSn	S	17 17 19.8	-1.4
KELI	Kelakatan	1.39	40	⇑iPn	P	17 17 12.3	-0.2
	67nm,0.2s						
KELI				⇓iSn	S	17 17 31.2	+0.7
RATI	Rata	2.00	74	⇓iPn	P	17 17 20.2	-0.4
	200nm,0.2s						
RATI				⇓iSn	S	17 17 42.3	-2.3
KEDI	Kedomdong	2.62	73	⇓iPn	P	17 17 28.4	-0.9
	27nm,0.2s						
KEDI				⇓iSn	S	17 17 55.8	-4.3

DJA 26 17:19:06.9±1.2,3.93S×119.75E,h61^{km}±13^{km},MD4.7/2, 3C-2D,Error ellipse: s-maj=12.1km s-min=8.8km az=43.0,Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NINI	Niniconang	0.49	179	ePn	P	17 19 18.6	-0.3
	14nm,0.8s						
TANI	Tanete Lipujan	0.61	323	⇑iPn	P	17 19 20.8	+0.5
	23nm,0.2s						
TANI	Tanete Lipujan	0.61	323	⇓iP	P	17 19 21.2	+0.9
TANI				⇑iSn	S	17 19 28.9	-1.3
BUNI	Buntu Taipa	0.63	65	⇑iPn	P	17 19 19.9	-0.6
BUNI				⇓iSn	S	17 19 29.9	-0.7

IDC 26 17:43:36.3±1.9,4.24N×128.32E,mb3.2/3,mb1 3.4/3, mb1mx3.3/16,mbtmp3.2/3,Error ellipse: s-maj=303.1km s-min=25.4km az=74.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.75	166	P	P	17 48 58.4	-2.6
	0.4nm,0.5s,baz=345,slow=9.9,SNR=19						
ASAR	Alice Springs	28.26	169	P	P	17 49 33.3	-0.2
	0.2nm,0.6s,baz=350,slow=11,SNR=4.4						
SONM	Songino Array	47.35	340	P	P	17 52 12.0	-1.9
	0.2nm,0.5s,baz=166,slow=8.1,SNR=3.3						

IDC 26 17:51:23.6±10.0,7.85N×94.50E,h90^{km}±81^{km},mb3.3/4, mb1 3.5/5,mb1mx3.3/17,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=101.9km s-min=24.1km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.39	22	P	P	17 54 03.3	-1.5
	0.1nm,0.3s,baz=210,slow=14,SNR=9.2						
SONM	Songino Array	41.11	12	P	P	17 58 58.8	-1.3
	0.3nm,0.8s,baz=191,slow=7.3,SNR=3.1						
WRA	Warramunga Arr	47.95	126	P	P	17 59 53.2	-2.1
	0.6nm,1.1s,baz=305,slow=8.4,SNR=7.0						
ASAR	Alice Springs	49.62	130	P	P	18 00 06.5	-1.7
	0.4nm,1.0s,baz=303,slow=8.1,SNR=3.4						
FINES	FINESS Array B	72.90	332	P	P	18 02 42.7	-1.8
	6.0nm,1.3s,baz=217,slow=9.5,SNR=4.5						

MAN 26 17:53:44.7,15.97N×121.73E,h48^{km},mb4.1,ML2.9, MS2.7,2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCPH	Palayan	0.73	237	⇓iP	P	17 53 00.2	-59
PCPH				eS	S	17 53 11.8	-57
BCPH	Baguio City Da	1.18	291	⇓iP	P	17 54 05.8	+0.8
BCPH				i S	S	17 54 21.0	+0.8
CVP	Callao Caves	1.73	3	i P	P	17 54 12.0	-0.9
CVP				eS	S	17 54 33.5	-0.3

WEL 26 18:31:20.7±0.2,40.49S×174.35E,h94^{km}±2^{km},ML3.6/11, 8C-3D,Error ellipse: s-maj=1.1km s-min=0.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIW	Kapiti Island	0.57	131	⇑PN	P	18 31 36.3	-0.3
KIW				SN	S	18 31 47.0	-1.3
MRW	Makara Radio	0.79	160	⇑PN	P	18 31 38.6	0.0
MRW				SN	S	18 31 50.9	-1.0
CAW	Cannon Point	0.82	139	⇑PN	P	18 31 39.0	-0.1
CAW				SN	S	18 31 52.2	-0.4
CAW				SN	S	18 31 52.3	-0.3
WEL	Wellington	0.86	158	PN	P	18 31 39.3	0.0
WAZ	Wanganui	0.88	34	⇑PN	P	18 31 39.8	+0.1
WAZ				SN	S	18 31 53.3	-0.4
MRZ	Mangatainoka R	0.95	101	⇑PN	P	18 31 40.0	-0.4
MRZ				SN	S	18 31 53.8	-1.4
TUWZ	Tuamarina	0.99	198	PN	P	18 31 40.4	-0.3
TUWZ				SN	S	18 31 54.3	-1.5
BHW	Baring Head	1.00	157	PN	P	18 31 40.6	-0.3
BHW				SN	S	18 31 54.6	-1.4
NNZ	Nelson	1.03	225	⇓PN	P	18 31 40.6	-0.7
NNZ				SN	S	18 31 55.5	-1.3
MTW	Mount Morrison	1.10	128	PN	P	18 31 41.7	-0.5
MTW				SN	S	18 31 56.7	-1.6
MSWZ	Moikau Station	1.15	144	⇑PN	P	18 31 42.5	-0.3
MSWZ				SN	S	18 31 58.2	-1.1
DFE	Dawson Falls	1.18	351	PN	P	18 31 42.9	-0.3
NRZ	Ngariki Road	1.20	344	PN	P	18 31 42.8	-0.6
RAEZ	Rainy Point	1.20	2	PN	P	18 31 43.2	-0.3
PAWZ	Paruwai Farm	1.21	138	PN	P	18 31 43.1	-0.4
PAWZ				SN	S	18 31 58.9	-1.7
NEZ	North Egmont	1.23	351	PN	P	18 31 43.2	-0.7
NWEZ	Newall Road	1.27	343	PN	P	18 31 43.6	-0.7
BSWZ	Blackbirch Sta	1.27	196	PN	P	18 31 44.0	-0.3
BSWZ				SN	S	18 32 00.4	-1.5
TSZ	Takapari Road	1.31	71	PN	P	18 31 43.7	-1.0
TSZ				SN	S	18 32 01.1	-1.4
PKE	Pukeiti	1.32	348	PN	P	18 31 44.2	-0.7
VRZ	Vera Road	1.40	13	⇑PN	P	18 31 45.3	-0.5
VRZ				SN	S	18 32 04.3	-0.1
QRZ	Quartz Range	1.42	256	⇓PN	P	18 31 44.4	-1.7
QRZ				SN	S	18 32 05.6	+0.7
WNVZ	Wahianoa	1.51	40	PN	P	18 31 46.6	-0.6
WNVZ				SN	S	18 32 07.0	+0.2
MOVZ	Moawhango	1.53	45	PN	P	18 31 46.3	-1.1
MOVZ				SN	S	18 32 06.5	-0.8
FWVZ	Far West T-bar	1.54	37	PN	P	18 31 47.0	-0.7
FWVZ				SN	S	18 32 05.9	-1.7
TUVZ	Tukino	1.58	40	PN	P	18 31 47.4	-0.7
TUVZ				SN	S	18 32 08.4	0.0
WPVZ	Whakapapa	1.58	36	PN	P	18 31 47.3	-0.8
CNZ	Chateau	1.59	36	⇑PN	P	18 31 47.4	-0.8
NGZ	Ngauruhoe	1.63	37	PN	P	18 31 47.9	-0.9
TWVZ	Taurewa	1.65	31	PN	P	18 31 47.9	-1.1
TWVZ				SN	S	18 32 08.3	-1.5
OTVZ	Oturere	1.67	38	PN	P	18 31 48.6	-0.6
OTVZ				SN	S	18 32 09.5	-0.8
THZ	Tophouse	1.67	220	PN	P	18 31 48.6	-0.7
THZ				eSN	S	18 32 10.0	-0.4
WTVZ	West Tongariro	1.67	35	PN	P	18 31 48.3	-1.0
WTVZ				SN	S	18 32 10.0	-0.4
MGZ	Maungaku	1.75	32	PN	P	18 31 49.1	-1.2
HIZ	Hauiti	2.01	11	PN	P	18 31 52.7	-1.0
HIZ				SN	S	18 32 16.4	-1.7
KHZ	Kahutara	2.02	197	⇓PN	P	18 31 53.1	-0.7
BKZ	Black Stump Fm	2.12	52	PN	P	18 31 53.3	-1.8
BKZ				SN	S	18 32 19.6	-1.1
DSZ	Denniston Nort	2.29	236	PN	P	18 31 55.8	-1.9
DSZ				SN	S	18 32 22.3	-2.8
LTZ	Lake Taylor	2.77	214	SN	S	18 32 31.9	-4.8
KNZ	Kokohu	2.96	61	PN	P	18 32 03.1	-3.7
URZ	Urewera	3.09	45	PN	P	18 32 04.6	-4.0
URZ				eSN	S	18 32 39.9	-4.8
MWZ	Matawai	3.27	50	PN	P	18 32 06.9	-4.2
MWZ				SN	S	18 32 44.9	-4.3
CRLZ	Canterbury Las	3.34	202	PN	P	18 32 08.5	-3.6
MQZ	McQueen's Vall	3.45	201	PN	P	18 32 09.8	-3.8
MQZ				SN	S	18 32 46.0	-7.6
WVZ	Waitaha Valley	3.74	225	PN	P	18 32 14.7	-2.8

IDC 26 18:45:29.5±26.0,22.07S×173.01W,mb4.0/4,mb1 4.2/4, mb1mx3.8/16,mbtmp4.0/4,Error ellipse: s-maj=490.1km s-min=156.5km az=76.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.98	265	P	P	18 52 49.9	-1.1
	2.5nm,0.4s,baz=100,slow=11,SNR=13						
STKA	Stephens Creek	41.36	246	P	P	18 53 16.3	-2.6
	1.7nm,0.9s,baz=100,slow=6.1,SNR=3.7						
ASAR	Alice Springs	48.70	257	P	P	18 54 15.8	-2.0
	0.5nm,0.5s,baz=96,slow=7.1,SNR=19						
WRA	Warramunga Arr	49.00	262	P	P	18 54 18.4	-1.7
	0.8nm,0.3s,baz=97,slow=8.3,SNR=42						

JMA 26 18:53:51.8±0.1,33.02N×135.86E,h457^{km},M3.7,Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWZ	Kozaga	0.52	347	P	P	18 54 47.9	-0.2
JNY	Yasuok	2.86	35	P	P	18 54 59.2	+0.3
JRY	Ryogami san	3.90	39	P	P	18 55 08.5	+1.3
JRY				S	S	18 56 06.8	+0.1
JHU	Hanno	4.00	44	P	P	18 55 08.4	+0.4
JHU				S	S	18 56 06.6	-1.5
JAG	Ashikaga	4.50	40	P	P	18 55 12.2	-0.4
JAG				S	S	18 56 13.3	-3.1
JYT	Yasato	4.80	47	P	P	18 55 13.7	-1.6
JYT				S	S	18 56 15.9	-5.4
JHO	Hitachi	5.28	46	P	P	18 55 18.7	-1.3
JHO				S	S	18 56 25.4	-4.2

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*IDC **26** 19:06:12.7±2.5,14.50N×90.61W,mb3.8/2,mb1 4.1/4, mb1mx3.6/18,mbtmp3.7/4,ML3.9/2,Error ellipse: s-maj=127.2km s-min=24.9km az=43.0*

*CASC **26** 19:06:14.5±2.2,13.67N×91.19W,h32^{km}±17^{km},MD4.1, ML4.3,mb4.5(NEIC)*

*NEIC **26** 19:06:14.3±0.9,13.61N×91.31W,h35^{km},mb4.5/3,Error ellipse: s-maj=25.6km s-min=12.4km az=50.0*

ISC 26 19:06:13.6±0.8,13.60N±0.06×91.25W±0.04,h53^{km}±9^{km}, n34,σ0^{s}84/50,mb4.2/5,8C-2D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.80	332	⇓eP	P	19 06 28.9	0.0
JAT				eS	S	19 06 41.8	+1.6
FUG	Fuego 3	0.93	25	⇑eP	P	19 06 29.8	-0.7
IXG	Ixpaco	0.96	54	⇑eP	P	19 06 30.0	-1.0
IXG				eS	S	19 06 43.3	-0.6
IXG				AML	AML	19 06 58.2	
	comp=N,14μm,0.4s						
PCG	Pacaya	1.00	38	⇑eP	P	19 06 31.0	-0.6
PCG				eS	S	19 06 46.4	+1.4
TP2	Tecpan 2	1.19	11	eP	P	19 06 34.2	0.0
TP2				eS	S	19 06 50.1	+0.4
TP2				AML	AML	19 06 50.8	
	comp=E,11μm,0.3s						
NBG	Las Nubes	1.31	42	⇑eP	P	19 06 36.0	-0.1
NBG				eS	S	19 06 52.7	-0.1
NBG				AML	AML	19 06 59.4	
	comp=E,9μm,0.3s						
RTR	El Retiro	1.58	79	eP	P	19 06 39.5	-0.3
RTR				eS	S	19 06 58.0	-1.3
SBLS	San Blas	1.60	81	⇑eP	P	19 06 39.4	-0.6
SBLS				eS	S	19 06 58.4	-1.1
RBDL	Robledal	1.60	71	⇓eP	P	19 06 39.9	-0.1
SNJE	San Jose	1.62	80	⇑eP	P	19 06 39.9	-0.4
SNJE				eS	S	19 06 59.4	-0.7
BOQS	Boqueron	1.92	86	eP	P	19 06 44.3	-0.1
BOQS				eS	S	19 07 07.7	+0.4
SNET	Serv Nac Est T	1.96	87	eP	P	19 06 44.5	-0.6
SNET				eS	S	19 07 07.1	-1.3
SNET				i		19 07 15.0	
	comp=Z,1μm,0.4s						
MTO2	Montecristo 2	2.00	66	⇑eP	P	19 06 45.4	-0.1
MTO2				eS	S	19 07 10.9	+1.6
LFU	La Fuente	2.08	86	eP	P	19 06 46.9	+0.2
LFRS	El Faro	2.13	89	eP	P	19 06 47.4	0.0
LFRS				eS	S	19 07 13.0	+0.4
LBRS	Las Brisas	2.15	86	eP	P	19 06 47.6	-0.1
LCBS	La Ceiba	2.21	88	⇑eP	P	19 06 48.5	-0.1
LCBS				eS	S	19 07 14.8	+0.1
SNVI	San Vicente	2.34	90	eP	P	19 06 51.1	+0.6
SNVI				eS	S	19 07 18.6	+0.5
VSM	San Miguel	2.90	93	eP	P	19 06 58.7	+0.3
VSM				eS	S	19 07 34.4	+2.2
BLLM	Bellamira	2.93	93	eP	P	19 06 58.8	-0.1
CAHU	Cacacuatique	2.96	86	eP	P	19 06 59.6	+0.3
CNCH	Conchagua	3.34	95	eP	P	19 07 04.1	-0.5
CNCH				eS	S	19 07 44.8	+1.5
JTS	JuntasAbangare	6.98	117	Pn	P	19 07 56.0	+0.3
	comp=Z,1.2nm,0.3s,baz=300,slow=20,SNR=3.9						
JTS				Sn	S	19 09 18.8	+4.3
	comp=Z,0.5nm,0.3s,baz=324,slow=21,SNR=1.8						
JTS	JuntasAbangare	6.98	117	ePn	P	19 07 55.5	-0.2
JTS				eSn	S	19 09 17.5	+2.9
TEIG	Tepich	7.17	23	ePn	P	19 07 57.1	-1.2
	comp=Z,14nm,0.5s						
TXAR	Lajitas Array	19.43	326	P	P	19 10 38.7	+0.3
	comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=16						
TXAR	Lajitas Array	19.43	326	P	P	19 10 38.7	+0.3
MNTX	Cornudas Mount	22.19	327	eP	P	19 11 06.1	-0.6
	comp=Z,4.6nm,0.8s,mb4.0						
NNA	Nana	29.16	150	P	P	19 12 12.4	+0.1
	comp=Z,19nm,1.2s,mb4.7						
ELK	Elko	34.22	327	eP	P	19 12 48.2	-8.1
	comp=Z,9.6nm,1.2s,mb4.6						
NVAR	Mina Array Bea	34.44	321	P	P	19 12 59.9	+1.7
	comp=Z,2.5nm,0.8s,mb4.2,baz=128,slow=8.9,SNR=12						
YKA	Yellowknife Ar	51.58	346	P	P	19 15 14.8	-1.5
	comp=Z,0.3nm,0.7s,mb3.3,baz=145,slow=7.8,SNR=6.8						
CMAR	Chiang Mai Arr	146.60	342	PKPbc	PKPbc	19 25 52.9	+3.0
	comp=Z,0.2nm,0.4s,baz=343,slow=4.0,SNR=2.3						
CMAR	Chiang Mai Arr	146.60	342	PKPbc	PKPbc	19 25 52.9	+3.0

IDC 26 19:10:07.6±24.0,17.21S×175.26W,mb4.2/4,mb1 4.4/4, mb1mx3.9/15,mbtmp4.3/4,Error ellipse: s-maj=469.2km s-min=49.1km az=62.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	22.02	196	P	P	19 15 03.6	-1.8
	4.5nm,0.5s,baz=0.4,slow=4.9,SNR=12						
STKA	Stephens Creek	41.60	241	P	P	19 17 58.2	-0.9
	1.5nm,0.6s,baz=100,slow=6.1,SNR=3.8						
WRA	Warramunga Arr	47.72	258	P	P	19 18 46.1	-2.3
	1.5nm,0.9s,baz=97,slow=7.0,SNR=35						
ASAR	Alice Springs	47.87	253	P	P	19 18 47.6	-2.0
	11nm,0.5s,baz=88,slow=8.7,SNR=434						
ASPA	Alice Springs	47.88	253	eP	P	19 18 47.5	-2.1

CASC 26 19:21:10.9±2.8,12.74N×88.63W,h35^{km}±999^{km},MD3.7, 3C-3D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.77	26	eP	P	19 21 26.1	+0.9
VSM				eS	S	19 21 36.7	+1.0
BLLM	Bellamira	0.80	28	⇓eP	P	19 21 26.1	+0.5
BLLM				eS	S	19 21 37.5	+1.0
SNVI	San Vicente	0.89	347	⇑eP	P	19 21 27.3	+0.3
SNVI				eS	S	19 21 39.6	+0.6
CNCH	Conchagua	0.94	55	eP	P	19 21 28.2	+0.5
CNCH				eS	S	19 21 41.6	+1.5
LCBS	La Ceiba	0.97	339	⇓eP	P	19 21 28.4	+0.2
LCBS				eS	S	19 21 40.7	-0.3
LFRS	El Faro	0.98	334	⇓eP	P	19 21 28.5	+0.3
LFRS				eS	S	19 21 41.2	+0.1
LBRS	Las Brisas	1.07	338	eP	P	19 21 30.1	+0.5
LBRS				eS	S	19 21 43.7	+0.1
CAHU	Cacacuatique	1.10	21	⇑eP	P	19 21 30.7	+0.7
CAHU				eS	S	19 21 45.4	+1.1
LFU	La Fuente	1.11	335	eP	P	19 21 30.2	+0.1
LFU				eS	S	19 21 44.8	+0.3
PICS	Picacho	1.17	328	eP	P	19 21 27.6	-3.4
BOQS	Boqueron	1.18	327	eP	P	19 21 31.5	+0.4
BOQS				eS	S	19 21 46.7	+0.4
SBLS	San Blas	1.46	319	eP	P	19 21 35.3	+0.1
SBLS				eS	S	19 21 54.5	+1.1
SNJE	San Jose	1.47	320	eP	P	19 21 39.4	+4.0
RBDL	Robledal	1.71	323	eP	P	19 21 39.0	+0.2
RBDL				eS	S	19 21 59.5	-0.2
LEON	Leon	1.72	101	⇑eP	P	19 21 38.5	-0.5
LEON				eS	S	19 21 58.6	-1.3
MTO2	Montecristo 2	1.80	337	eP	P	19 21 39.5	-0.5
MIRN	Miramar	1.89	99	eP	P	19 21 41.4	0.0
MIRN				eS	S	19 22 03.3	-0.9
COPN	Copaltepe	2.06	105	eP	P	19 21 43.4	-0.4
COPN				eS	S	19 22 07.4	-1.2
MOMJ	Momotombo	2.06	99	eP	P	19 21 44.2	+0.4
MOMJ				eS	S	19 22 07.5	-1.0

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*NEIC **26** 19:34:09.5±2.3,52.19N×175.08E,h50^{km}±14^{km},mb3.8/1, Error ellipse: s-maj=45.5km s-min=14.0km az=186.0*

*IDC **26** 19:34:11.0±3.4,52.24N×175.13E,h61^{km}±21^{km},mb3.4/7, mb1 3.6/7,mb1mx3.4/22,mbtmp3.7/7,Error ellipse: s-maj=57.9km s-min=19.2km az=9.0*

ISC 26 19:34:09.5±2.6,52.2N±0.4×175.1E±0.2,h65^{km}±15^{km},n12, σ0^{s}64/13,mb3.6/8,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.80	309	eP	P	19 34 25.5	+0.1
FX1	Attu Island--F	1.36	299	P	P	19 34 33.2	+0.3
	baz=212,slow=8.2						
FX1				S	S	19 34 50.8	+0.4
	baz=150,slow=20						
FX1	Attu Island--F	1.36	299	eP	P	19 34 30.8	-2.2
YKA	Yellowknife Ar	37.37	46	P	P	19 41 17.8	+0.8
	0.3nm,0.8s,mb3.3,baz=286,slow=7.9,SNR=6.7						
SONM	Songino Array	42.86	293	P	P	19 42 03.4	+1.0
	1.0nm,0.5s,mb3.8,baz=58,slow=8.0,SNR=13						
FCC	Fort Churchill	48.05	44	P	P	19 42 43.4	-0.2
BW06	Boulder Array	49.59	69	P	P	19 42 56.1	+0.4
	0.3nm,0.3s,mb3.7						
PDAR	Pinedale Array	49.59	69	P	P	19 42 55.6	-0.1
	0.5nm,0.9s,mb3.4,baz=311,slow=9.6,SNR=3.1						
BVAR	Borovoye Array	57.73	316	P	P	19 43 54.7	-0.7
	1.1nm,0.3s,mb4.3,baz=54,slow=7.3,SNR=16						
TXAR	Lajitas Array	62.20	77	P	P	19 44 26.0	-0.3
	0.2nm,0.7s,mb3.3,baz=288,slow=4.0,SNR=3.4						
NOA	NORSAR Array B	66.35	352	P	P	19 44 52.6	-0.1
	0.3nm,0.5s,mb3.4,baz=354,slow=4.5,SNR=2.7						
HFS	Hagfors	67.00	350	P	P	19 44 56.1	-0.6
	1.4nm,0.6s,mb4.0,baz=333,slow=3.3,SNR=5.7						

IDC 26 19:42:17.6±26.0,20.67S×173.55W,mb4.0/4,mb1 4.2/4, mb1mx3.8/15,mbtmp4.0/4,Error ellipse: s-maj=491.4km s-min=161.0km az=74.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	37.62	264	P	P	19 49 35.0	-1.0
	3.9nm,0.4s,baz=100,slow=12,SNR=14						
STKA	Stephens Creek	41.48	245	P	P	19 50 05.5	-2.4
	1.6nm,0.8s,baz=94,slow=7.6,SNR=3.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ASAR	Alice Springs	48.53	256	P	P	19 51 02.5	-2.1
	2.4nm,1.2s,baz=91,slow=7.6,SNR=12						
WRA	Warramunga Arr	48.70	261	P	P	19 51 04.1	-1.8
	0.4nm,0.3s,baz=96,slow=8.3,SNR=52						

NEIC ***26*** *19:50:01.7±2.1, 3.63S×138.47E, h96^{km}±19^{km}, mb4.0/2, Error ellipse: s-maj=22.1km s-min=15.6km az=183.0*

IDC ***26*** *19:50:17.7±4.9, 4.58S×138.41E, h178^{km}±70^{km}, mb3.4/1, mb1 3.7/3, mb1mx3.3/9, mbtmp4.1/3, Error ellipse: s-maj=118.7km s-min=44.4km az=119.0*

ISC 26 19:50:04.0±2.0**, 3.8S**±0.1×**138.5E**±0.1**, h140**^{km}±23^{km}**, n9, σ1^{s}01**/12**, mb3.8**/1**, 1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	10.26	123	P	P	19 52 27.6	-0.9
	5.8nm,0.7s						
KAKA	Kakadu	10.69	214	⇑*i*P	P	19 52 33.9	-0.4
	9.9nm,0.4s						
WRAB	Tennant Creek	16.54	194	*e*P	P	19 53 49.5	+0.2
	10nm,0.7s						
WRA	Warramunga Arr	16.55	194	P	P	19 53 48.9	-0.5
	1.0nm,0.3s,baz=15,slow=11,SNR=64						
WRA				S	S	19 56 47.7	0.0
	0.1nm,0.3s,baz=15,slow=24,SNR=3.9						
FITZ	Fitzroy Crossi	18.99	221	*e*P	P	19 54 18.1	+0.8
	3.4nm,0.6s						
ASAR	Alice Springs	20.25	192	P	P	19 54 31.6	+1.3
	0.7nm,0.3s,baz=9.6,slow=11,SNR=55						
ASAR				S	S	19 58 02.0	-2.4
	0.2nm,0.3s,baz=18,slow=23,SNR=6.1						
ASPA	Alice Springs	20.25	192	*e*P	P	19 54 31.4	+1.1
ASPA				*e*S	S	19 58 02.1	-2.3
STKA	Stephens Creek	28.09	174	P	P	19 55 45.8	+1.0
	1.6nm,0.9s,mb3.8,baz=339,slow=8.6,SNR=2.4						
KSM	Kuching	28.65	280	P	P	19 55 48.8	-1.2

IDC ***26*** *20:04:16.5±1.1, 10.84N×91.77E, mb3.7/6, mb1 3.8/7, mb1mx3.7/17, mbtmp3.5/7, ML3.3/1, Error ellipse: s-maj=43.8km s-min=19.1km az=60.0*

NEIC ***26*** *20:04:20.6±0.7, 10.80N×91.81E, h30^{km}, mb4.3/6, Error ellipse: s-maj=16.8km s-min=9.4km az=68.0*

ISC 26 20:04:18.9±0.8**, 10.84N**±0.08×**91.9E**±0.1**, h30**^{km}**, n17, σ0^{s}87**/17**, mb4.0**/11**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	Chiang Mai Arr	10.17	41	P	P	20 06 47.5	+1.3
CMAR	Chiang Mai Arr	10.17	41	Pn	P	20 06 45.9	-0.2
	0.1nm,0.3s,baz=232,slow=15,SNR=3.5						
CMAR	Chiang Mai Arr	10.17	41	Pn	P	20 06 45.9	-0.2
LSA	Lhasa	18.78	358	*e*P	P	20 08 39.4	+1.1
	2.6nm,0.7s						
KSM	Kuching	20.49	116	*e*P	P	20 08 57.0	-0.3
ENH	Enshi	25.31	38	*e*P	P	20 09 43.3	-1.4
	4.1nm,0.5s,mb4.2						
SONM	Songino Array	38.83	16	P	P	20 11 43.1	+0.1
	0.3nm,0.5s,mb3.3,baz=207,slow=8.6,SNR=5.8						
KURK	Kurchatov	41.24	347	*e*P	P	20 12 02.2	-0.6
	2.2nm,1.0s,mb3.7						
ZAL	Zalesovo	43.36	354	P	P	20 12 20.4	+0.3
	0.8nm,0.4s,mb3.9,baz=307,slow=5.1,SNR=3.0						
FITZ	Fitzroy Crossi	43.98	131	*e*P	P	20 12 26.3	+0.7
	2.8nm,0.4s,mb4.3						
BVAR	Borovoye Array	45.50	342	P	P	20 12 37.4	+0.1
	0.3nm,0.6s,mb3.4,baz=135,slow=6.1,SNR=2.7						
MDJ	Mudanjiang	46.67	37	P	P	20 12 43.8	-2.9
	13nm,1.3s,mb4.7						
WRA	Warramunga Arr	51.76	126	P	P	20 13 26.7	+0.5
	0.6nm,0.3s,mb4.0,baz=300,slow=10.0,SNR=19						
WRAB	Tennant Creek	51.76	126	*e*P	P	20 13 26.3	0.0
	5.8nm,0.8s,mb4.6						
ASAR	Alice Springs	53.48	130	P	P	20 13 40.0	+0.9
	2.4nm,0.9s,mb4.1,baz=305,slow=6.9,SNR=24						
ASAR				PcP	PcP	20 14 46.6	+0.9
	0.7nm,0.7s,baz=311,slow=3.5,SNR=5.4						
STKA	Stephens Creek	63.72	134	P	P	20 14 49.4	-1.0
GERES	GERESS Array B	74.17	318	P	P	20 15 54.5	0.0
	0.5nm,0.8s,mb3.5,baz=69,slow=8.4,SNR=3.5						

CSEM ***26*** *20:20:13.8±0.1, 32.01N×56.39E, h10^{km}, mb4.3/4, Ms3.6, Error ellipse: s-maj=2.3km s-min=1.7km az=165.0*

THR ***26*** *20:20:13.4±0.9, 32.13N×56.51E, h14^{km}±14^{km}, ML4.5*

MOS ***26*** *20:20:14.5±1.2, 31.92N×56.55E, h10^{km}, mb4.4/6, Error ellipse: s-maj=13.3km s-min=7.5km az=126.6*

IDC ***26*** *20:20:14.8±0.8, 32.09N×56.66E, mb4.0/14, mb1 4.2/17, mb1mx4.1/23, mbtmp4.0/17, ML3.8/1, MS3.6/8, Ms1 3.7/8, ms1mx3.4/25, Error ellipse: s-maj=22.9km s-min=16.0km az=25.0*

TEH ***26*** *20:20:16.8, 32.05N×56.32E, h10^{km}, Mn4.8*

NEIC ***26*** *20:20:16.8, 32.05N×56.32E, h10^{km}, mb4.3/13, MS3.6/2, MN4.8(TEH), After TEH.*

BJI ***26*** *20:20:21.0, 31.52N×57.48E, h10^{km}, mB5.1, mb4.5, Ms4.6, Msz4.1*

ISC 26 20:20:14.4±0.3**, 32.01N**±0.03×**56.41E**±0.03**, h10**^{km}**, n119, σ1^{s}43**/119**, mb4.1**/28**, MS3.6**/9**, 6C-4D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.83	240	Pg	Pg	20 20 30.0	-1.0
IMEH	Mehriz	1.65	249	Pn	Pn	20 20 45.1	+1.5
ICHK	Chekchek	1.72	279	Pn	Pn	20 20 45.2	+0.6
KRBR	Kerman	2.04	171	*e*PG	Pg	20 20 52.3	-2.8
KRBR				*e*SG	Sg	20 21 21.6	-0.7
KRBR				AML	AML	20 21 28.4	
	comp=N,9µm,0.4s						
NASN	Na'in	3.15	286	*e*PN	Pn	20 21 05.7	+0.7
NASN				AML	AML	20 21 56.9	
	comp=N,1µm,0.6s						
ISRV	Sarvestan	3.86	228	Pn	Pn	20 21 17.3	+2.1
IANJ	Anjiloo	4.03	330	Pn	Pn	20 21 16.4	-1.2
SHI	Shiraz	4.10	236	Pn	Pn	20 21 24.5	+6.0
SHI	Shiraz	4.10	236	Pn	Pn	20 21 24.6	+6.1
ISFB	Sefidab	4.21	305	Pn	Pn	20 21 18.7	-1.5
IMOK	Mook	4.34	228	Pn	Pn	20 21 22.9	+0.9
IBRJ	Borojen	4.38	268	Pn	Pn	20 21 24.3	+1.7
ILAS	Lasjerd	4.43	320	Pn	Pn	20 21 22.5	-0.8
BNDS	Bandar-Abbas	4.59	183	*e*PN	Pn	20 21 27.0	+1.4
BNDS				AML	AML	20 22 58.0	
	comp=N,254nm,0.6s						
IFIR	Firoozkooh	4.74	321	Pn	Pn	20 21 26.0	-1.6
IFIR				Lg		20 22 41.5	
GHIR	Ghir-Karzin	4.75	220	*e*PN	Pn	20 21 28.4	+0.7
GHIR				AML	AML	20 22 59.6	
	comp=N,190nm,0.6s						
IMOG	Moghan	4.76	30	Pn	Pn	20 21 27.7	-0.2
IVRN	Varamin	4.92	309	Pn	Pn	20 21 28.8	-1.4
IPAY	Payeh	4.92	25	Pn	Pn	20 21 30.1	-0.2
IGLO	Galoogah	4.93	331	Pn	Pn	20 21 30.7	+0.4
MHI	Mashhad	4.99	30	Pn	Pn	20 21 31.5	+0.4
IKRD	Kardeh	5.07	20	Pn	Pn	20 21 36.8	+4.6
IDMV	Damavand	5.10	316	Pn	Pn	20 21 31.4	-1.3
DAMV	Damavand	5.17	316	*e*PN	Pn	20 21 32.5	-1.3
DAMV				AML	AML	20 23 10.1	
	comp=E,383nm,0.7s						
ISFR	Esferayen	5.20	14	Pn	Pn	20 21 35.8	+1.7
IMYA	Miamay	5.30	34	Pn	Pn	20 21 35.3	-0.2
IQHU	Quchan	5.35	19	Pn	Pn	20 21 35.1	-1.1
IPRN	Paran-Amol	5.46	322	Pn	Pn	20 21 36.6	-1.2
IAFJ	Afjeh	5.48	316	Pn	Pn	20 21 37.3	-0.8
IAFJ				Lg		20 23 05.4	
ISHV	Shirvan	5.62	10	Pn	Pn	20 21 39.4	-0.6
ASAO	Ashtian	5.92	297	*e*PN	Pn	20 21 43.0	-1.2
ASAO				AML	AML	20 23 44.3	
	comp=N,166nm,0.7s						
ASAO	Ashtian	5.92	297	*e*Pn	Pn	20 21 43.0	-1.3
	SNR=52						
IMHD	Mahdasht	6.03	309	Pn	Pn	20 21 44.0	-1.8
IMHD				Lg		20 23 22.4	
IRAZ	Razeghan	6.38	304	Pn	Pn	20 21 49.1	-1.7
SHGR	Shooshtar-Gavs	6.46	273	*e*PN	Pn	20 21 51.4	-0.6
SHGR	Shooshtar-Gavs	6.46	273	*e*Pn	Pn	20 21 51.3	-0.6
	SNR=52						
IKOM	Komasi	7.77	289	Pn	Pn	20 22 07.2	-3.1
QRN	Al-Qurain	8.02	248	*e*P	P	20 22 12.1	-1.7
SNGE	Sanandaj	8.17	295	*e*PN	P	20 22 14.7	-1.1
RDF	Al-Radifah	8.24	250	*e*P	P	20 22 14.7	-2.2
NAY	Al-Naaiem	8.36	253	*e*P	P	20 22 16.2	-2.4
IVIS	Veys	8.39	290	Pn	P	20 22 15.4	-3.5
IGHG	Ghaleghazi	8.57	288	Pn	P	20 22 17.8	-3.7
IDHR	Dehrash	8.80	290	Pn	P	20 22 21.0	-3.7
MSL	Mosul	11.83	295	*e*P	P	20 23 10.5	+4.3
MSL				*e*S	S	20 25 26.0	+6.6
MSL				*e*LR1		20 26 26.5	
MSL				*e*LR2		20 27 28.5	
GNI	Garni	12.45	314	Pn	P	20 23 15.2	+0.8
	comp=N,0.3nm,0.3s,baz=45,slow=13,SNR=2.5						
GNI				LR	LR	20 28 19.5	
	comp=N,279nm,20.3s,baz=295,slow=39						
RAYN	Ar Rayn	12.82	231	Pn	P	20 23 14.0	-5.6
	comp=N,102nm,1.1s,SNR=16						
RAYN	Ar Rayn	12.82	231	Pn	P	20 23 14.5	-5.0
RAYN	Ar Rayn	12.82	231	Pn	P	20 23 14.5	-5.1
MALT	Malatya	15.99	298	*e*P	P	20 24 03.2	+2.2
MALT				pmax	pmax		
	comp=Z,22nm,1.2s						
MALT	Malatya	15.99	298	*e*P	P	20 24 03.1	+2.2
	comp=Z,22nm,1.2s						
KIV	Kislovodsk	16.08	322	*e*P	P	20 24 04.4	+2.3
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV	Kislovodsk	16.08	322	*e*P	P	20 24 04.4	+2.3
	comp=Z,12nm,1.1s						
ASF	Jabal al Asfar	16.54	276	Pn	P	20 24 05.6	-2.5
	comp=Z,2.6nm,0.3s,baz=314,slow=12,SNR=9.2						
BHD				*e*		20 24 22.0	
GOF	Gofitskoye	16.68	325	*e*P	P	20 24 26.0	+16
SOC	Sochi	17.50	316	*e*P	P	20 24 22.4	+2.3
SOC				*e*SS	SS	20 27 42.3	-13
SOC				pmax	pmax		
	comp=Z,38nm,1.0s						
SOC				pmax	pmax		
	comp=N,28nm,1.1s						
SOC				pmax	pmax		
	comp=E,19nm,0.9s						
SOC				MLR	MLR		
	comp=Z,212nm,14.0s						
SOC				MLR	MLR		
	comp=N,139nm,13.0s						
SOC				MLR	MLR		
	comp=E,201nm,14.0s						
SOC	Sochi	17.50	316	*e*P	P	20 24 22.4	+2.3
	comp=E,38nm,1.0s						
SOC				*e*SS	SS	20 27 42.3	-13
AAK	Ala-Archa	17.84	48	⇓*i*P	P	20 24 22.8	-1.4
AAK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
AAK				MLR	MLR		
	comp=Z,200nm,17.0s						
AAK	Ala-Archa	17.84	48	⇓*i*P	P	20 24 22.8	-1.4
	comp=Z,6.0nm,1.7s						
FRU	Bishkek	18.02	48	*e*P	P	20 24 34.0	+7.5
EIL	Elat	18.57	268	P	P	20 24 34.1	+0.6
	comp=Z,0.2nm,0.3s,baz=65,slow=12,SNR=13						
EIL				LR	LR	20 33 01.2	
	comp=Z,233nm,18.7s,baz=82,slow=41						
EIL	Elat	18.57	268	*e*P	P	20 24 32.8	-0.7
	comp=Z,41nm,1.0s						
EIL	Elat	18.57	268	*e*P	P	20 24 32.8	-0.7
	comp=Z,41nm,1.0s						
SIM	Simferopol'	21.63	313	*e*P	P	20 25 09.3	+2.6
SIM				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.6						
SIM	Simferopol'	21.63	313	*e*P	P	20 25 09.3	+2.6
	comp=Z,26nm,1.0s,mb4.6						
BVAR	Borovoye Array	23.32	22	P	P	20 25 22.9	-0.3
	comp=Z,3.0nm,0.7s,mb3.8,baz=208,slow=7.7,SNR=25						
KOLN	Koldanda	23.92	93	*e*P	P	20 25 29.8	+0.4
	comp=Z,8.3nm,0.8s,mb4.2						
CHKZ	Chkalovo	23.95	21	*e*P	P	20 25 28.3	-1.0
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
GKN	Gorkha	24.74	92	*e*P	P	20 25 36.8	-0.5
	comp=Z,12nm,0.9s,mb4.4						
KURK	Kurchatov	24.88	35	⇓*i*P	P	20 25 40.0	+1.6
SVE	Sverdlovsk	24.99	6	*e*P	P	20 25 41.8	+2.4
SVE				MLR	MLR		
	comp=N,100nm,14.0s,MS3.6						
SVE				MLR	MLR		
	comp=E,100nm,14.0s,MS3.6						
SVE				MLR	MLR		
	comp=Z,200nm,14.0s,MS3.8						
TIRR	Tirgusor	25.13	308	⇓P	P	20 25 43.5	+2.6
DMN	Daman	25.25	93	*e*P	P	20 25 41.9	-0.2
	comp=Z,15nm,1.0s,mb4.5						
KKN	Kakani	25.34	92	*e*P	P	20 25 41.7	-1.3
	comp=Z,17nm,0.9s,mb4.6						
PKI	Pulchoki	25.52	92	*e*P	P	20 25 44.6	-0.1
	comp=Z,25nm,0.9s,mb4.7						
CFR	Carcaliu	25.57	309	⇑P	P	20 25 44.5	-0.5
KIS	Kishinev	25.86	313	*e*P	P	20 25 48.0	+0.4
JIRN	Jiri	26.15	92	*e*P	P	20 25 50.4	-0.2
	comp=Z,8.2nm,0.5s,mb4.5						
IDI	Anoyia	26.39	286	P	P	20 25 56.2	+3.5
	comp=Z,12nm,0.9s,mb4.4,baz=110,slow=18,SNR=3.6						
VRI	Vrincioaia	26.74	310	⇑P	P	20 25 47.6	-8.2
OBN	Obninsk	27.02	335	⇑*i*P	P	20 26 01.5	+3.2
OBN				*i*		20 26 50.1	
OBN				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.4						
OBN	Obninsk	27.02	335	⇑*i*P	P	20 26 01.5	+3.2
	comp=Z,15nm,1.1s,mb4.4						
OBN				*i*		20 26 50.1	
OBN				LR	LR		
	comp=Z,100nm,18.0s,MS3.4						
MLR	Muntele Rosu	27.13	309	P	P	20 26 01.7	+2.3
MLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MLR	Muntele Rosu	27.13	309	P	P	20 26 01.7	+2.3
	comp=Z,4.0nm,1.0s,mb3.9,baz=85,slow=11,SNR=4.6						
MLR	Muntele Rosu	27.13	309	⇑P	P	20 26 03.5	+4.1
WMQ	Urumqi	27.19	55	*e*P	P	20 25 59.3	-0.7
WMQ				XP	sP	20 26 06.5	+2.3
WMQ				PP	PP	20 26 46.0	-0.6
WMQ				S	S	20 30 36.0	-0.9
WMQ				SS	SS	20 31 51.0	-1.2
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.4						
WMQ				LR	LR		
	comp=N,754nm,20.0s,MS4.3						
WMQ				LR	LR		
	comp=E,325nm,18.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,254nm,18.0s,MS3.8						
WMQ	Urumqi	27.19	55	*e*P	P	20 25 59.3	-0.7
	comp=Z,8.0nm,0.7s,mb4.4						
WMQ				sP	sP	20 26 06.5	+2.3
WMQ				PP	PP	20 26 46.0	-0.6
WMQ				S	S	20 30 36.0	-0.9
WMQ				SS	SS	20 31 51.0	-1.2
WMQ				LR	LR		
	comp=Z,250nm,18.0s,MS3.8						
AKASG	Malin Array Be	27.42	321	P	P	20 26 03.1	+1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	Malin Array Be	27.42	321	P	P	20 26 03.1	+1.1
	comp=Z,2.9nm,0.7s,mb3.9,baz=124,slow=8.8,SNR=12						
BURAR	Bucovina Array	28.35	312	⇑P	P	20 26 13.2	+2.8
KWP	Kalwaria	30.65	315	P	P	20 26 28.2	-2.8
KWP				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.7						
KWP	Kalwaria	30.65	315	P	P	20 26 28.2	-2.8
	comp=Z,17nm,1.3s,mb4.7						
KWP	Kalwaria	30.65	315	P	P	20 26 28.2	-2.8
	comp=Z,17nm,1.3s,mb4.7						
OJC	Ojcow	32.62	315	*e*P	P	20 26 48.7	+0.5
MORC	Moravsky Berou	33.86	313	*e*P	P	20 27 01.8	+2.8
MORC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
MORC	Moravsky Berou	33.86	313	*e*P	P	20 27 01.8	+2.8
	comp=Z,2.7nm,1.0s,mb4.1						
FINES	FINESS Array B	35.42	335	P	P	20 27 12.6	+0.3
	comp=Z,1.9nm,0.7s,mb4.1,baz=135,slow=5.4,SNR=6.8						
FINES				LR	LR	20 43 57.4	
	comp=Z,76nm,18.3s,MS3.5,baz=143,slow=40						
GERES	GERESS Array B	36.06	310	P	P	20 27 16.9	-0.9
	comp=Z,2.7nm,1.1s,mb4.1,baz=112,slow=7.2,SNR=10						
KHC	Kasperske Hory	36.20	311	*e*P	P	20 27 20.5	+1.5
CLL	Collm	37.06	314	*e*P	P	20 27 29.0	+2.8
CLL	Collm	37.06	314	P	P	20 27 29.0	+2.8
CLL				*e*PPP	PPP	20 29 07.0	-5.9
KMBO	Kilima Mbogo	37.62	213	LR	LR	20 45 56.5	
	comp=Z,101nm,18.3s,MS3.7,baz=88,slow=41						
ZAK	Zakamensk	39.01	48	*e*P	P	20 27 46.6	+4.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.9s,mb3.2						
ZAK	Zakamensk	39.01	48	*e*P	P	20 27 46.6	+4.0
	comp=Z,1.0nm,1.9s,mb3.2						
CMAR	Chiang Mai Arr	40.52	99	P	P	20 27 54.8	-0.5
	comp=Z,1.1nm,0.8s,mb3.6,baz=293,slow=8.0,SNR=5.0						
CMAR				LR	LR	20 47 60.0	
	comp=Z,70nm,19.3s,MS3.5,baz=305,slow=41						
MBAR	Mbarara	40.52	222	P	P	20 27 56.5	+1.1
MBAR				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.3						
MBAR	Mbarara	40.52	222	P	P	20 27 56.5	+1.1
	comp=Z,12nm,1.4s,mb4.3						
MBAR	Mbarara	40.52	222	P	P	20 27 56.5	+1.1
	comp=Z,12nm,1.4s,mb4.3						
SONM	Songino Array	40.73	52	P	P	20 27 57.0	+0.2
	comp=Z,0.4nm,0.8s,mb3.1,baz=270,slow=7.2,SNR=2.8						
NOA	NORSAR Array B	41.23	328	P	P	20 28 01.6	+0.9
	comp=Z,1.3nm,0.8s,mb3.6,baz=120,slow=7.8,SNR=3.3						
NOA				LR	LR	20 47 54.9	
	comp=Z,23nm,20.2s,MS3.0,baz=315,slow=40						
ARCES	ARCESS Array B	41.40	344	LR	LR	20 47 34.8	
	comp=Z,116nm,20.6s,MS3.7,baz=16,slow=40						
ESDC	Sonseca Array	48.74	297	P	P	20 29 02.3	+1.2
	comp=Z,1.7nm,0.8s,mb4.1,baz=61,slow=8.6,SNR=4.3						
YAK	Yakutsk	54.52	34	*i* P	P	20 29 46.6	+2.3
MATP	Matopo	58.59	211	P	P	20 30 16.3	+2.4
	comp=Z,2.9nm,0.8s,mb4.3,baz=39,slow=8.5,SNR=5.0						
YKA	Yellowknife Ar	85.56	356	P	P	20 32 53.5	+0.1
	comp=Z,0.3nm,0.7s,mb3.6,baz=358,slow=5.0,SNR=4.1						
WRA	Warramunga Arr	90.67	113	P	P	20 33 17.2	-1.7
	comp=Z,0.4nm,0.6s,mb4.0,baz=317,slow=4.1,SNR=12						
ASAR	Alice Springs	92.40	116	P	P	20 33 25.8	-1.0
	comp=Z,0.3nm,0.7s,mb3.8,baz=302,slow=4.4,SNR=5.2						
NEW	Newport	99.89	356	LR	LR	21 28 24.2	
	comp=Z,63nm,19.1s,MS4.1,baz=357,slow=41						

STR ***26*** *20:33:25.0±0.2, 42.61N×0.83E, h5^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG ***26*** *20:33:25.3±0.1, 42.62N×0.83E, h4^{km}, Md2.5/2, Ml2.3/11, Error ellipse: s-maj=1.1km s-min=0.9km az=40.0*

CSEM ***26*** *20:33:25.4±0.1, 42.62N×0.82E, h5^{km}, ML2.4/10, Error ellipse: s-maj=1.4km s-min=0.9km az=3.0*

MDD 26 20:33:25.5±0.2**, 42.62N×0.83E, h7**^{km}±5^{km}**, mbLg1.9**/21**, 1C, Error ellipse: s-maj=2.1km s-min=1.4km az=23.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALF	Salau	0.30	62	Pg	Pg	20 33 31.4	-0.2
SALF				Sg	Sg	20 33 35.4	-0.3
SALF	Salau	0.30	62	P	Pg	20 33 31.4	-0.2
SALF				S	Sg	20 33 35.4	-0.3
CSOR	Sort	0.33	137	Pg	Pg	20 33 31.6	-0.6
CSOR				Lg		20 33 36.1	
	36nm,0.1s						
MLS	Moulis	0.39	30	Pg	Pg	20 33 33.0	-0.4
MLS				Sg	Sg	20 33 38.4	-0.3
MLS	Moulis	0.39	30	P	Pg	20 33 33.2	-0.2
MLS				S	Sg	20 33 37.9	-0.8
RESF	Ens	0.41	298	Pg	Pg	20 33 33.2	-0.6
RESF				Sg	Sg	20 33 39.0	-0.3
RESF	Ens	0.41	298	P	Pg	20 33 33.3	-0.4
RESF				S	Sg	20 33 38.9	-0.4
EBIE	Bielsa	0.51	278	⇑Pg	Pg	20 33 34.9	-0.8
	4.5nm,0.1s,SNR=18						
EBIE				Lg		20 33 41.7	
	12nm,0.1s,SNR=6.8						
EBIE	Bielsa	0.51	278	Pg	Pg	20 33 34.9	-0.9
	4.5nm,0.1s,SNR=20						
CORG	Organya	0.53	137	Pg	Pg	20 33 35.1	-1.0
CORG				Lg		20 33 42.2	
	9.8nm,0.1s						
PAND	Andorre	0.54	100	P	Pg	20 33 35.2	-1.1
PAND				S	Sg	20 33 41.7	-1.8
EPF	Esparros	0.55	319	*e*Pg	Pg	20 33 35.8	-0.7
EPF				*e*Sg	Sg	20 33 42.2	-1.6
	14nm,0.2s						
GRBF	Gourbit	0.56	67	Pg	Pg	20 33 36.2	-0.6
GRBF				Lg		20 33 43.6	
VIEF	Viey	0.65	294	Pg	Pg	20 33 37.3	-1.2
VIEF				Sg	Sg	20 33 46.2	-1.1
VIEF	Viey	0.65	294	P	Pg	20 33 37.4	-1.1
VIEF				S	Sg	20 33 46.1	-1.2
LABF	Labassere	0.70	308	Pg	Pg	20 33 38.7	-0.9
LABF				Sg	Sg	20 33 48.3	-0.7
LABF	Labassere	0.70	308	P	Pg	20 33 38.8	-0.8
LABF				S	Sg	20 33 48.4	-0.6
CAVN	Les Avellanes	0.74	185	Pg	Pg	20 33 39.6	-0.7
CAVN				Lg		20 33 50.0	
	4.7nm,0.1s						
CLLI	Llivia	0.86	99	Pg	Pg	20 33 40.7	-1.9
CLLI				Lg		20 33 52.3	
	0.9nm,0.0s						
EMIR	Miracle	0.87	144	Pg	Pg	20 33 41.7	-1.3
	2.5nm,0.1s,SNR=8.4						
EMIR				Lg		20 33 53.5	
	7.7nm,0.1s,SNR=7.2						
EMIR	Miracle	0.87	144	Pg	Pg	20 33 41.7	-1.2
	2.5nm,0.1s,SNR=8.4						
CARF	Carcanieres	0.94	84	Pg	Pg	20 33 43.1	-1.3
CARF				Sg	Sg	20 33 55.6	-1.4
CARF	Carcanieres	0.94	84	P	Pb	20 33 43.2	-0.6
CARF				S	Sb	20 33 55.4	-0.9
CBRU	Bruguera	1.05	108	Pg	Pg	20 33 44.7	-1.8
ETSF	Etsaut	1.06	286	*e*Pg	Pg	20 33 44.6	-2.1
ETSF				*e*Sg	Sg	20 33 58.9	-2.0
	15nm,0.2s						
ATE	Arette	1.22	293	S	Sb	20 34 03.8	-0.4
MTLF	Montolieu	1.25	54	*e*Pn	Pn	20 33 48.1	-1.2
MTLF				*e*Pg	Pg	20 33 49.0	-1.4
MTLF				*e*Sg	Sg	20 34 04.7	-2.4
	3.1nm,0.2s						
EPOB	Poblet	1.28	172	Pg	Pg	20 33 48.8	-2.2
	1.9nm,0.1s,SNR=8.4						
EPOB				Lg		20 34 06.4	
	6.9nm,0.2s,SNR=8.9						
EPOB	Poblet	1.28	172	Pg	Pg	20 33 48.8	-2.2
	1.9nm,0.1s,SNR=8.4						
ESAC	San Caprasio	1.32	228	Pg	Pg	20 33 50.2	-1.6
	6.8nm,0.1s,SNR=11						
ESAC				Lg		20 34 08.2	
	86nm,0.2s,SNR=5.3						
ESAC	San Caprasio	1.32	228	Pg	Pg	20 33 50.2	-1.6
	6.8nm,0.1s,SNR=11						
CGAR	Garraf	1.34	170	Lg		20 34 14.5	
	1.1nm,0.1s						
CFON	Fontmartina	1.47	125	Pg	Pg	20 33 52.6	-2.2
CFON				Lg		20 34 11.7	
	27nm,0.2s						
EJON	La Jonquera	1.53	96	Pg	Pg	20 33 54.3	-1.8
	0.8nm,0.1s,SNR=7.1						
EJON				Lg		20 34 14.7	
	4.4nm,0.2s,SNR=4.7						
EJON	La Jonquera	1.53	96	Pg	Pg	20 33 54.3	-1.8
	0.8nm,0.1s,SNR=7.1						
SJPF	Ste Jean	1.59	289	*e*Pg	Pg	20 33 57.2	-0.1
SJPF				*e*Sg	Sg	20 34 15.9	-2.6
	14nm,0.4s						
ERTA	Horta de San J	1.70	193	Pg	Pg	20 33 57.5	-2.0
	3.2nm,0.2s,SNR=7.2						
ERTA				Lg		20 34 19.7	
	3.1nm,0.3s,SNR=6.0						
ERTA	Horta de San J	1.70	193	Pg	Pg	20 33 57.5	-2.0
	3.2nm,0.2s,SNR=7.2						
EALK	Alkurruntz	1.82	290	Pg	Pg	20 33 59.3	-2.5
	0.5nm,0.1s,SNR=7.9						
EALK				Lg		20 34 23.7	
	5.5nm,0.2s,SNR=13						
LFF	La Frestale	2.32	358	*e*Pn	Pn	20 34 03.0	-1.7
LFF				*e*Sg	Sg	20 34 36.2	-6.6
	5.9nm,0.4s						
EMOS	Mosqueruela	2.46	204	Pg	Pg	20 34 09.5	-5.1
	2.7nm,0.4s,SNR=7.9						
EMOS				Lg		20 34 43.5	
	1.6nm,0.2s,SNR=7.0						
EMOS	Mosqueruela	2.46	204	Pg	Pg	20 34 09.5	-5.0
	2.7nm,0.4s,SNR=7.9						
CAF	Calviac	2.47	21	*e*Pn	Pn	20 34 04.4	-2.5
CAF				*e*Pg	Pg	20 34 11.4	-3.5
CAF				*e*Sg	Sg	20 34 42.8	-5.0
	2.8nm,0.2s						

LASF	**Ste Croix**	**2.64**	**56**	*e*Pn	Pn	20 34 06.6	-2.7
LASF				*e*Pg	Pg	20 34 14.1	-4.2
LASF				*e*Sg	Sg	20 34 49.0	-4.5
	1.7nm,0.3s						
RJF	**Les Rejaudoux**	**2.73**	**10**	*e*Pn	Pn	20 34 07.8	-2.7
RJF				*e*Pg	Pg	20 34 16.5	-3.5
RJF				*e*Sg	Sg	20 34 51.7	-4.7
	1.6nm,0.2s						
VIVF	**Saint-Julien-l**	**3.57**	**50**	*e*Pg	Pg	20 34 31.4	-5.4
VIVF				*e*Sg	Sg	20 35 19.4	-5.0
	2.0nm,0.4s						
MFF	**Saint Martin d**	**4.04**	**350**	*e*Pn	Pn	20 34 26.0	-3.2
BGF	**Bois d'Agland**	**4.19**	**19**	*e*Sg	Sg	20 35 36.7	-8.4
	6.3nm,0.5s						
AVF	**Avril sur Loir**	**4.54**	**22**	*e*Sg	Sg	20 35 47.5	-9.2
	0.7nm,0.2s						

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*STR **26** 20:36:49.3±0.2,42.58N×0.82E,h5^{km}±1^{km},Ml3.7,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **26** 20:36:49.2,42.56N×0.80E,h10^{km},ML3.8(STR), ML3.7(LDG),ML3.4(MRB),MN3.3(MDD),After STR.*

NEIC Felt [II] at Barruera, Benasque and Vilaller, Spain.

*MOS **26** 20:36:49.5±1.2,42.81N×0.84E,h10^{km},mb3.8/1,Error ellipse: s-maj=6.8km s-min=4.1km az=64.1*

*LDG **26** 20:36:50.0±0.1,42.61N×0.83E,h4^{km},Md3.4/2,Ml3.7/41, Error ellipse: s-maj=1.1km s-min=0.9km az=23.0*

*MRB **26** 20:36:50.2,42.60N×0.86E,h4^{km}±3^{km},ML3.4/8*

*CSEM **26** 20:36:50.1±0.0,42.61N×0.84E,h10^{km},ML3.7/47,Error ellipse: s-maj=0.7km s-min=0.6km az=150.0*

MDD 26 20:36:50.2±0.2,**42.61N×0.83E,h6^{km}±2^{km},mbLg3.2**/53, **2C-2D,Error ellipse: s-maj=1.7km s-min=1.2km az=16.0, PRXIMO II-III ANETO SENET II BARRUERA VILALLER EL PONT DE SUERT BENASQUE,Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SALF	**Salau**	**0.30**	**61**	Pg	Pg	20 36 56.1	-0.2
SALF	**Salau**	**0.30**	**61**	P	Pg	20 36 56.1	-0.1
SALF				S	Sg	20 37 00.2	-0.2
CSOR	**Sort**	**0.33**	**137**	Pg	Pg	20 36 56.3	-0.5
CSOR				Sg	Sg	20 37 00.8	-0.4
CSOR	**Sort**	**0.33**	**137**	Pg	Pg	20 36 56.3	-0.5
CSOR				Lg		20 37 00.7	
	249nm,0.2s						
CSOR	**Sort**	**0.33**	**137**	Pg	Pg	20 36 56.3	-0.5
CSOR				Sg	Sg	20 37 00.8	-0.4
MLS	**Moulis**	**0.40**	**29**	Pg	Pg	20 36 57.7	-0.4
MLS	**Moulis**	**0.40**	**29**	Pg	Pg	20 36 57.8	-0.3
MLS	**Moulis**	**0.40**	**29**	P	Pg	20 36 57.9	-0.2
MLS				S	Sg	20 37 02.8	-0.7
RESF	**Ens**	**0.41**	**298**	Pg	Pg	20 36 58.0	-0.4
RESF	**Ens**	**0.41**	**298**	P	Pg	20 36 58.1	-0.3
RESF				S	Sg	20 37 03.6	-0.4
EBIE	**Bielsa**	**0.51**	**278**	⇑Pg	Pg	20 36 59.7	-0.8
	189nm,0.3s,SNR=18						
EBIE				Lg		20 37 06.5	
	364nm,0.1s,SNR=90						
EBIE	**Bielsa**	**0.51**	**278**	Pg	Pg	20 36 59.7	-0.7
	189nm,0.3s,SNR=18						
CORG	**Organya**	**0.53**	**137**	Pg	Pg	20 36 59.8	-0.9
CORG				Sg	Sg	20 37 07.0	-0.8
CORG	**Organya**	**0.53**	**137**	Pg	Pg	20 36 59.8	-0.9
CORG				Lg		20 37 06.9	
	228nm,0.1s						
CORG	**Organya**	**0.53**	**137**	Pg	Pg	20 36 59.8	-0.9
CORG				Sg	Sg	20 37 07.0	-0.8
PAND	**Andorre**	**0.54**	**99**	P	Pg	20 36 59.8	-1.1
PAND				S	Sg	20 37 06.5	-1.6
EPF	**Esparros**	**0.55**	**319**	*e*Pg	Pg	20 37 00.5	-0.7
EPF				*e*Sg	Sg	20 37 06.9	-1.7
	835nm,0.2s						
GRBF	**Gourbit**	**0.57**	**66**	Pg	Pg	20 37 00.9	-0.7
GRBF				Sg	Sg	20 37 08.4	-0.7
GRBF	**Gourbit**	**0.57**	**66**	Pg	Pg	20 37 00.8	-0.8
GRBF				Lg		20 37 08.4	
GRBF	**Gourbit**	**0.57**	**66**	Pg	Pg	20 37 00.9	-0.7
GRBF				Sg	Sg	20 37 08.4	-0.8
VIEF	**Viey**	**0.65**	**295**	Pg	Pg	20 37 02.2	-1.0
VIEF	**Viey**	**0.65**	**295**	P	Pg	20 37 02.2	-1.1
VIEF				S	Sg	20 37 10.4	-1.5
LABF	**Labassere**	**0.71**	**308**	Pg	Pg	20 37 03.4	-0.9
LABF				Sg	Sg	20 37 13.1	-0.6
LABF	**Labassere**	**0.71**	**308**	P	Pg	20 37 03.3	-1.0
LABF				S	Sg	20 37 12.9	-0.8
CAVN	**Les Avellanes**	**0.73**	**185**	Pg	Pg	20 37 03.8	-1.0
CAVN				Sg	Sg	20 37 14.3	-0.3
CAVN	**Les Avellanes**	**0.73**	**185**	Pg	Pg	20 37 03.7	-1.1
CAVN				Lg		20 37 14.3	
	190nm,0.1s						
CAVN	**Les Avellanes**	**0.73**	**185**	Pg	Pg	20 37 03.8	-1.0
CAVN				Sg	Sg	20 37 14.3	-0.3
CLLI	**Llivia**	**0.86**	**99**	Pg	Pg	20 37 05.5	-1.8
CLLI				Sg	Sg	20 37 16.8	-1.9
CLLI	**Llivia**	**0.86**	**99**	Pg	Pg	20 37 05.5	-1.8
CLLI				Lg		20 37 16.8	
	64nm,0.1s						
CLLI	**Llivia**	**0.86**	**99**	Pg	Pg	20 37 05.5	-1.8
CLLI				Sg	Sg	20 37 16.8	-1.9
LPEF	**Le Peyrat**	**0.86**	**67**	Pg	Pg	20 37 06.5	-0.9
LPEF	**Le Peyrat**	**0.86**	**67**	P	Pb	20 37 06.5	-0.6
LPEF				S	Sb	20 37 18.0	-0.7
EMIR	**Miracle**	**0.87**	**143**	⇑Pg	Pg	20 37 06.3	-1.2
	54nm,0.3s,SNR=18						
EMIR				Lg		20 37 18.2	
	310nm,0.1s,SNR=18						
EMIR	**Miracle**	**0.87**	**143**	Pg	Pg	20 37 06.3	-1.2
	54nm,0.3s,SNR=18						
VALF	**Valcebollere**	**0.90**	**103**	Pg	Pg	20 37 06.5	-1.7
VALF	**Valcebollere**	**0.90**	**103**	P	Pb	20 37 06.4	-1.5
VALF				S	Sb	20 37 17.9	-2.0
CARF	**Carcanieres**	**0.95**	**83**	Pg	Pg	20 37 07.7	-1.4
CARF	**Carcanieres**	**0.95**	**83**	P	Pb	20 37 07.7	-0.9
CARF				S	Sb	20 37 20.3	-0.9
REYF	**Montagne du Re**	**1.01**	**297**	Pg	Pg	20 37 08.8	-1.5
REYF				Sg	Sg	20 37 21.8	-2.0
REYF	**Montagne du Re**	**1.01**	**297**	Pg	Pg	20 37 08.7	-1.6
REYF				Sg	Sg	20 37 21.9	-1.9
REYF	**Montagne du Re**	**1.01**	**297**	P	Pb	20 37 08.6	-1.0
REYF				S	Sb	20 37 22.0	-1.0
REYF	**Montagne du Re**	**1.01**	**297**	Pg	Pg	20 37 08.8	-1.5
REYF				Sg	Sg	20 37 21.9	-1.9
CBRU	**Bruguera**	**1.05**	**108**	Pn	Pn	20 37 09.2	-2.1
CBRU				Sn	Sn	20 37 23.7	-2.7
CBRU	**Bruguera**	**1.05**	**108**	Pn	Pn	20 37 09.2	-2.1
CBRU				Sn	Sn	20 37 23.6	-2.8
	206nm,0.2s						
CBRU	**Bruguera**	**1.05**	**108**	Pn	Pn	20 37 09.2	-2.1
CBRU				Sn	Sn	20 37 23.7	-2.7
ETSF	**Etsaut**	**1.06**	**286**	*e*Pg	Pg	20 37 09.3	-2.1
ETSF				*e*Sg	Sg	20 37 23.6	-2.0
	701nm,0.2s						
ATE	**Arette**	**1.22**	**293**	P	Pb	20 37 12.3	-1.0
ATE				S	Sb	20 37 28.5	-0.6
MTLF	**Montolieu**	**1.25**	**54**	*e*Pn	Pn	20 37 12.6	-1.6
MTLF				*e*Pg	Pg	20 37 13.4	-1.8
MTLF				*e*Sg	Sg	20 37 29.6	-2.3
	275nm,0.2s						
MTLF	**Montolieu**	**1.25**	**54**	*e*P	Pb	20 37 12.6	-1.2
MTLF				*e*		20 37 29.6	
MTLF	**Montolieu**	**1.25**	**54**	Pn	Pn	20 37 12.6	-1.6
MTLF				Pg	Pg	20 37 13.4	-1.8
MTLF				Sn	Sn	20 37 26.7	-4.8
MTLF				Lg		20 37 29.5	
	137nm,0.2s						
EPOB	**Poblet**	**1.27**	**172**	Pg	Pg	20 37 13.2	-2.3
EPOB				Lg		20 37 30.4	
EPOB	**Poblet**	**1.27**	**172**	⇓Pg	Pg	20 37 13.3	-2.3
	62nm,0.4s,SNR=18						
EPOB				Lg		20 37 30.4	
	394nm,0.2s,SNR=22						
EPOB	**Poblet**	**1.27**	**172**	Pg	Pg	20 37 13.2	-2.4
	62nm,0.4s,SNR=248						
FILF	**Fillols**	**1.28**	**92**	Pg	Pg	20 37 11.5	-4.2
FILF				Sg	Sg	20 37 27.3	-5.5
FILF	**Fillols**	**1.28**	**92**	P	Pb	20 37 11.6	-2.7
FILF				S	Sb	20 37 26.6	-4.2
LRDF	**Laroque-de-Fa**	**1.30**	**75**	Pg	Pg	20 37 14.3	-1.8
LRDF	**Laroque-de-Fa**	**1.30**	**75**	P	Pb	20 37 13.7	-0.9
LRDF				S	Sb	20 37 30.8	-0.6
ESAC	**San Caprasio**	**1.31**	**228**	⇓Pg	Pg	20 37 14.6	-1.8
	772nm,0.3s,SNR=18						
ESAC				Lg		20 37 32.4	
	4µm,0.3s,SNR=54						
ESAC	**San Caprasio**	**1.31**	**228**	Pg	Pg	20 37 14.6	-1.8
	772nm,0.3s,SNR=18						
CGAR	**Garraf**	**1.34**	**170**	Pg	Pg	20 37 18.5	+1.6
CGAR				Sg	Sg	20 37 39.0	+4.3
CGAR	**Garraf**	**1.34**	**170**	Pg	Pg	20 37 18.5	+1.6
CGAR				Lg		20 37 38.9	
	106nm,0.2s						
LARF	**Larrau**	**1.40**	**288**	Pg	Pg	20 37 15.6	-2.6
LARF				Sg	Sg	20 37 35.3	-1.6
LARF	**Larrau**	**1.40**	**288**	P	Pn	20 37 15.6	-0.8
LARF				S	Sb	20 37 34.3	-0.1
ORDF	**Ordiarp**	**1.43**	**295**	Pg	Pg	20 37 16.8	-1.9
ORDF				Sg	Sg	20 37 36.2	-1.6
ORDF	**Ordiarp**	**1.43**	**295**	P	Pn	20 37 16.5	-0.3
ORDF				S	Sb	20 37 35.0	-0.1
CFON	**Fontmartina**	**1.47**	**125**	Pn	Pn	20 37 17.0	-0.3
CFON				Sn	Sn	20 37 36.0	-0.9
CFON	**Fontmartina**	**1.47**	**125**	Pn	Pn	20 37 16.9	-0.3
CFON				Sn	Sn	20 37 36.0	-0.9
	153nm,0.2s						
CFON	**Fontmartina**	**1.47**	**125**	Pn	Pn	20 37 17.0	-0.2
CFON				Sn	Sn	20 37 36.0	-0.9
SJAF	**Saint Jean de**	**1.52**	**94**	Pg	Pg	20 37 18.4	-2.2
SJAF				Sg	Sg	20 37 38.7	-2.1
SJAF	**Saint Jean de**	**1.52**	**94**	P	Pn	20 37 17.8	-0.3
SJAF				S	Sb	20 37 38.6	+0.8
SJAF	**Saint Jean de**	**1.52**	**94**	Pg	Pg	20 37 18.3	-2.3
SJAF				Sg	Sg	20 37 38.7	-2.1
EJON	**La Jonquera**	**1.53**	**95**	Pn	Pn	20 37 18.1	-0.1
	176nm,0.3s,SNR=367						
EJON				Lg		20 37 38.7	
	257nm,0.2s,SNR=16						
EJON	**La Jonquera**	**1.53**	**95**	Pn	Pn	20 37 18.1	-0.1
	176nm,0.3s,SNR=367						
SJPF	**Ste Jean**	**1.59**	**289**	*e*Pg	Pg	20 37 20.0	-2.0
SJPF				*e*Sg	Sg	20 37 40.7	-2.5
	853nm,0.3s						
SJPF	**Ste Jean**	**1.59**	**289**	Pg	Pg	20 37 22.0	0.0
SJPF				Lg		20 37 40.7	
	426nm,0.3s						
OSSF	**Osses**	**1.67**	**293**	Pg	Pg	20 37 20.5	-2.9
OSSF				Sg	Sg	20 37 43.5	-2.1
OSSF	**Osses**	**1.67**	**293**	P	Pn	20 37 20.2	+0.1
OSSF				S	Sn	20 37 41.9	-0.2
ERTA	**Horta de San J**	**1.70**	**193**	Pn	Pn	20 37 18.6	-1.9
	33nm,0.3s,SNR=104						
ERTA				Pg	Pg	20 37 21.5	-2.6
	19nm,0.1s,SNR=7.9						
ERTA				Lg		20 37 42.7	
	264nm,0.2s,SNR=21						
ERTA	**Horta de San J**	**1.70**	**193**	Pn	Pn	20 37 18.6	-2.0
	33nm,0.3s,SNR=104						
ERTA	**Horta de San J**	**1.70**	**193**	Pg	Pg	20 37 21.5	-2.5
	19nm,0.1s,SNR=7.9						
EBR	**Ebro Roquetas**	**1.81**	**188**	*e*PG	Pg	20 37 23.5	-2.8
EBR				*i* S*	Sb	20 37 47.0	+0.8
EALK	**Alkurruntz**	**1.82**	**290**	Pg	Pg	20 37 23.2	-3.4
	63nm,0.3s,SNR=104						
EALK				Lg		20 37 48.5	
	353nm,0.3s,SNR=21						
LFF	**La Frestale**	**2.33**	**358**	*e*Pn	Pn	20 37 27.7	-1.9
LFF				*e*P		20 37 30.4	
LFF				*e*Sn	Sn	20 37 54.4	-4.4
LFF				*e*Sg	Sg	20 38 03.0	-4.6
	322nm,0.5s						
LFF	**La Frestale**	**2.33**	**358**	Pn	Pn	20 37 27.7	-1.9
LFF				P		20 37 30.4	
LFF				Sn	Sn	20 37 54.4	-4.4
LFF				Lg		20 38 01.1	
	161nm,0.5s						
LFF	**La Frestale**	**2.33**	**358**	*e*Pn	Pn	20 37 27.7	-1.9
LFF				*e*Sn	Sn	20 37 54.4	-4.4
LFF				*e*Sg	Sg	20 38 03.0	-4.6
	161nm,0.5s						
EMOS	**Mosqueruela**	**2.45**	**204**	Pn	Pn	20 37 32.1	+0.8
	13nm,0.2s,SNR=63						
EMOS				Pg	Pg	20 37 34.3	-4.8
	SNR=7.9						
EMOS				Sn	Sn	20 37 56.3	-5.7
	26nm,0.3s,SNR=4.0						
EMOS				Lg		20 38 06.1	
	63nm,0.4s,SNR=13						
EMOS	**Mosqueruela**	**2.45**	**204**	Pn	Pn	20 37 32.1	+0.7
	13nm,0.2s,SNR=63						
EMOS	**Mosqueruela**	**2.45**	**204**	Pg	Pg	20 37 34.3	-4.8
	SNR=7.9						
EMOS				Sn	Sn	20 37 56.3	-5.7
	26nm,0.3s,SNR=4.0						
CAF	**Calviac**	**2.48**	**21**	*e*Pn	Pn	20 37 29.2	-2.6
CAF				*e*Pg	Pg	20 37 36.1	-3.6
CAF				*e*Sn	Sn	20 37 58.9	-3.8
CAF				*e*Sg	Sg	20 38 07.9	-4.8
	114nm,0.2s						
CAF	**Calviac**	**2.48**	**21**	*e*P	Pn	20 37 29.2	-2.6
CAF				*e*		20 37 58.9	
LASF	**Ste Croix**	**2.65**	**55**	*e*Pn	Pn	20 37 31.4	-2.8
LASF				*e*Pg	Pg	20 37 38.8	-4.2
LASF				*e*Sn	Sn	20 38 01.6	-5.4
LASF				*e*Sg	Sg	20 38 13.8	-4.5
	168nm,0.5s						
LASF	**Ste Croix**	**2.65**	**55**	Pn	Pn	20 37 31.4	-2.8
LASF				Pg	Pg	20 37 38.8	-4.2
LASF				Sn	Sn	20 38 01.4	-5.6
LASF				Lg		20 38 13.8	
	84nm,0.5s						
RJF	**Les Rejaudoux**	**2.74**	**10**	*e*Pn	Pn	20 37 32.7	-2.7
RJF				*e*Pg	Pg	20 37 41.0	-3.8
RJF				*e*Sn	Sn	20 38 03.4	-5.8
RJF				*e*Sg	Sg	20 38 16.0	-5.3
	80nm,0.2s						
RJF	**Les Rejaudoux**	**2.74**	**10**	*e*P	Pn	20 37 32.7	-2.7
RJF				*e*		20 38 03.4	
FRNF	**Fournols**	**3.04**	**24**	Pn	Pn	20 37 37.7	-2.1
FRNF				Pg	Pg	20 37 46.9	-4.0
LBL	**Lubilhac**	**3.15**	**33**	Pn	Pn	20 37 38.5	-2.8
ELAN	**Lanestosa**	**3.19**	**283**	Pn	Pn	20 37 41.3	-0.6
	3.1nm,0.3s,SNR=18						
ELAN				Sn	Sn	20 38 19.5	-1.3
	17nm,0.3s,SNR=4.7						
ELAN				Lg		20 38 28.3	
	37nm,0.4s,SNR=4.0						
ELAN	**Lanestosa**	**3.19**	**283**	Pn	Pn	20 37 41.3	-0.6
	3.1nm,0.3s,SNR=18						
COLF	**Collangettes**	**3.56**	**34**	Pn	Pn	20 37 43.6	-3.6
VIVF	**Saint-Julien-l**	**3.58**	**50**	*e*Pn	Pn	20 37 43.7	-3.7
VIVF				*e*Pg	Pg	20 37 56.0	-5.5
VIVF				*e*Sg	Sg	20 38 44.1	-5.1
	69nm,0.4s						
EIBI	**Ibiza**	**3.60**	**174**	Pn	Pn	20 37 44.7	-3.0
	10nm,0.8s,SNR=12						
EIBI				Sn	Sn	20 38 24.1	-7.1
	14nm,0.7s,SNR=6.7						
EIBI	**Ibiza**	**3.60**	**174**	Pn	Pn	20 37 44.7	-3.1
	10nm,0.8s,SNR=12						
EIBI				Sn	Sn	20 38 24.1	-7.1
	14nm,0.7s,SNR=6.7						
SMRF	**Simiane la Rot**	**3.72**	**67**	*e*Pn	Pn	20 37 47.0	-2.4
SMRF				*e*Pg	Pg	20 37 59.0	-5.5
SMRF				*e*Sg	Sg	20 38 46.7	-7.4
	29nm,0.5s						
TCF	**Toulx Ste Croi**	**3.81**	**15**	*e*Pn	Pn	20 37 47.1	-3.5
TCF				*e*Pg	Pg	20 38 00.8	-5.3
TCF				*e*Sn	Sn	20 38 29.9	-6.4
TCF				*e*Sg	Sg	20 38 49.1	-7.7
	25nm,0.2s						
TCF	**Toulx Ste Croi**	**3.81**	**15**	*e*P	Pn	20 37 47.1	-3.5
TCF				*e*		20 38 29.9	
AGO	**Saint Agoulin**	**3.81**	**25**	Pn	Pn	20 37 47.9	-2.8
PLDF	**La Plantade**	**3.91**	**30**	Pn	Pn	20 37 48.4	-3.7
EBEN	**Beniarda**	**3.99**	**192**	Pn	Pn	20 37 50.4	-2.8
	6.6nm,0.7s,SNR=16						
EBEN				Sn	Sn	20 38 34.9	-5.9
	5.4nm,0.6s,SNR=8.7						
EBEN				Lg		20 38 56.4	
	48nm,1.0s,SNR=4.0						
EBEN	**Beniarda**	**3.99**	**192**	Pn	Pn	20 37 50.4	-2.8
	6.6nm,0.7s,SNR=16						
EBEN				Sn	Sn	20 38 34.9	-6.0
	5.4nm,0.6s,SNR=8.7						
MFF	**Saint Martin d**	**4.05**	**350**	*e*Pn	Pn	20 37 50.8	-3.3
MFF				*e*Sn	Sn	20 38 36.0	-6.5
MFF				*e*Sg	Sg	20 38 59.1	-5.9
	22nm,0.3s						
BGF	**Bois d'Agland**	**4.20**	**19**	*e*Pn	Pn	20 37 52.8	-3.4
BGF				*e*Pg	Pg	20 38 07.0	-7.0
BGF				*e*Sn	Sn	20 38 39.5	-6.8
BGF				*e*Sg	Sg	20 39 01.5	-8.5
	157nm,0.4s						
BGF	**Bois d'Agland**	**4.20**	**19**	*e*P	Pn	20 37 52.8	-3.4
BGF				*e*		20 38 39.5	
LMR	**La Mourre**	**4.23**	**78**	*e*Pn	Pn	20 37 53.8	-2.9
LMR				*e*Pg	Pg	20 38 08.4	-6.2
LMR				*e*Sn	Sn	20 38 42.0	-5.0
LMR				*e*Sg	Sg	20 39 03.6	-7.4
	7.4nm,0.2s						
LMR	**La Mourre**	**4.23**	**78**	*e*P	Pn	20 37 53.8	-2.9
LMR				*e*		20 38 42.0	
ORIF	**Oris-en-Rattie**	**4.32**	**56**	*e*Pn	Pn	20 37 54.5	-3.5
ORIF				*e*Pg	Pg	20 38 09.8	-6.7
ORIF				*e*Sg	Sg	20 39 07.3	-6.8
	26nm,0.8s						
ETOB	**Tobarra**	**4.36**	**205**	Pn	Pn	20 37 56.1	-2.4
	3.2nm,0.8s,SNR=9.1						
ETOB				Lg		20 39 04.6	
	8.2nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.36**	**205**	Pn	Pn	20 37 56.1	-2.4
	3.2nm,0.8s,SNR=9.1						
FRF	**La Foret Royal**	**4.36**	**75**	*e*Pn	Pn	20 37 55.6	-3.0
FRF				*e*Pg	Pg	20 38 10.6	-6.7
FRF				*e*Sn	Sn	20 38 44.5	-5.9
FRF				*e*Sg	Sg	20 39 07.6	-7.9
	14nm,0.3s						
FRF	**La Foret Royal**	**4.36**	**75**	*e*P	Pn	20 37 55.6	-3.0
FRF				*e*		20 38 44.5	
EARI	**Arriondas**	**4.49**	**281**	Pn	Pn	20 37 58.6	-1.7
	8.6nm,0.7s,SNR=35						
EARI				Sn	Sn	20 38 50.8	-2.8
	19nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**4.49**	**281**	Pn	Pn	20 37 58.6	-1.7
	8.6nm,0.7s,SNR=35						
AVF	**Avril sur Loir**	**4.55**	**22**	*e*Pn	Pn	20 37 57.5	-3.7
AVF				*e*Pg	Pg	20 38 14.3	-6.6
AVF				*e*Sn	Sn	20 38 46.1	-9.0
AVF				*e*Sg	Sg	20 39 12.4	-9.2
	37nm,0.4s						
AVF	**Avril sur Loir**	**4.55**	**22**	*e*P	Pn	20 37 57.5	-3.7
AVF				*e*		20 38 46.1	
SMF	**Signal de Mont**	**4.57**	**27**	*e*Pn	Pn	20 37 58.9	-2.6
SMF				*e*Pg	Pg	20 38 14.5	-6.9
SMF				*e*Sg	Sg	20 39 13.4	-8.9
	22nm,0.3s						
ESDC	**Sonseca Array**	**4.66**	**233**	Pn	Pn	20 37 59.5	-3.3
	3.3nm,0.2s,baz=51,slow=13,SNR=64						
ESDC				Sn	Sn	20 38 50.3	-7.7
	5.1nm,0.2s,baz=50,slow=24,SNR=8.8						
ESDC				Lg		20 39 14.6	
	12nm,0.3s,baz=48,slow=30,SNR=4.9						
ESDC	**Sonseca Array**	**4.66**	**233**	Pn	Pn	20 37 59.5	-3.3
	3.3nm,0.2s,SNR=64						
ESDC				Sn	Sn	20 38 50.3	-7.6
	5.1nm,0.2s,SNR=8.8						
ESLA	**Sonseca Array**	**4.66**	**233**	*e*Pn	Pn	20 37 59.1	-3.6
ESLA				*e*Sn	Sn	20 38 51.2	-6.7
ESLA	**Sonseca Array**	**4.66**	**233**	*e*Pn	Pn	20 37 59.2	-3.6
ESLA				*e*Sn	Sn	20 38 51.2	-6.7
EVIA	**Vianos**	**4.71**	**214**	Lg		20 39 18.6	
	44nm,1.0s,SNR=4.0						
MBDF	**Montbardon**	**4.80**	**62**	*e*Pn	Pn	20 38 02.3	-2.4
MBDF				*e*Pg	Pg	20 38 18.3	-7.7
HYF	**Humbligny**	**4.83**	**15**	*e*Pn	Pn	20 38 01.6	-3.6
HYF				*e*Sn	Sn	20 38 54.5	-7.7
HYF				*e*Sg	Sg	20 39 21.1	-10
SSF	**Saint Saulge**	**4.84**	**22**	*e*Pn	Pn	20 38 01.7	-3.6
SSF				*e*Pg	Pg	20 38 19.6	-7.1
SSF				*e*Sn	Sn	20 38 54.1	-8.3
SSF				*e*Sg	Sg	20 39 20.7	-11
	24nm,0.4s						
SSF	**Saint Saulge**	**4.84**	**22**	*e*P	Pn	20 38 01.7	-3.6
SSF				*e*		20 38 54.1	
PZZ	**Prazzo**	**4.93**	**65**	P	Pn	20 38 06.2	-0.5
SBF	**Sospel**	**4.98**	**73**	*e*Pn	Pn	20 38 04.9	-2.5
SBF				*e*Sn	Sn	20 38 59.3	-6.8
SBF				*e*Sg	Sg	20 39 26.1	-10
	168nm,1.3s						
STV	**Sta Anna Valdi**	**5.00**	**69**	P	Pn	20 38 06.1	-1.5
STV2	**Anna di Valdie**	**5.00**	**69**	P	Pn	20 38 06.0	-1.6
STV2	**Anna di Valdie**	**5.00**	**69**	P	Pn	20 38 06.0	-1.6
ENR	**Entracque**	**5.06**	**69**	P	Pn	20 38 06.9	-1.6
LPL	**La Plagne**	**5.15**	**54**	*e*Pn	Pn	20 38 08.3	-1.4
LPL				*e*Sg	Sg	20 39 31.3	-10
	16nm,0.8s						
LPG	**La Plagne**	**5.15**	**54**	*e*Pn	Pn	20 38 06.6	-3.1
LPG				*e*Sg	Sg	20 39 31.7	-10
	16nm,0.7s						
BHB	**Bricherasio**	**5.17**	**62**	P	Pn	20 38 09.7	-0.3
BHB	**Bricherasio**	**5.17**	**62**	P	Pn	20 38 09.7	-0.2
NEGI	**Negi**	**5.17**	**74**	P	Pn	20 38 08.4	-1.6
NEGI	**Negi**	**5.17**	**74**	P	Pn	20 38 08.4	-1.6
MONE	**Monesi**	**5.26**	**71**	P	Pn	20 38 09.4	-1.8
MONE	**Monesi**	**5.26**	**71**	P	Pn	20 38 09.4	-1.8
RSP	**Reno Superiore**	**5.29**	**59**	P	Pn	20 38 10.5	-1.2
IMI	**Imperia**	**5.32**	**73**	P	Pn	20 38 10.6	-1.4
IMI	**Imperia**	**5.32**	**73**	P	Pn	20 38 10.6	-1.4
LSD	**Ceresole Reale**	**5.37**	**56**	P	Pn	20 38 13.0	+0.2
ROB	**Roburent**	**5.39**	**69**	P	Pn	20 38 12.6	-0.5
CABF	**La Chapelle**	**5.48**	**41**	*e*Pn	Pn	20 38 09.3	-5.1
CABF				*e*Pg	Pg	20 38 31.8	-7.8
CABF				*e*Sg	Sg	20 39 41.8	-11
	46nm,0.7s						
FIN	**Finale Ligure**	**5.61**	**71**	P	Pn	20 38 15.0	-1.1
ECAL	**Calabor**	**5.65**	**266**	Pn	Pn	20 38 14.0	-2.8
	5.3nm,0.3s,SNR=23						
ECAL				Sn	Sn	20 39 15.2	-7.7
	3.5nm,0.7s,SNR=5.2						
ECAL				Lg		20 39 46.5	
	20nm,0.3s,SNR=4.0						
ECAL	**Calabor**	**5.65**	**266**	Pn	Pn	20 38 14.0	-2.8
	5.3nm,0.3s,SNR=23						
ECAL				Sn	Sn	20 39 15.2	-7.7
	3.5nm,0.7s,SNR=5.2						
EQES	**Quesada**	**5.66**	**213**	Pn	Pn	20 38 14.5	-2.3
	2.2nm,0.5s,SNR=8.2						
EQES				Sn	Sn	20 39 14.3	-8.6
	5.3nm,0.4s,SNR=4.0						
EQES				Lg		20 39 48.8	
	3.2nm,0.2s,SNR=4.0						
EQES	**Quesada**	**5.66**	**213**	Pn	Pn	20 38 14.5	-2.3
	2.2nm,0.5s,SNR=8.2						
EQES				Sn	Sn	20 39 14.3	-8.7
	5.3nm,0.4s,SNR=4.0						
EBAN	**Banos Encina**	**5.67**	**220**	Sn	Sn	20 39 13.9	-9.4
	SNR=4.0						
EBAN				Lg		20 39 47.7	
	5.1nm,0.3s,SNR=4.0						
GRR	**Gorron**	**5.90**	**349**	*e*Pn	Pn	20 38 16.0	-4.2
GRR				*e*Sn	Sn	20 39 18.8	-10
GRR				*e*Sg	Sg	20 39 54.5	-12
	21nm,0.5s						
EPON	**Pontenova**	**5.90**	**280**	Pn	Pn	20 38 18.1	-2.2
	36nm,1.1s,SNR=12						
EPON				Sn	Sn	20 39 22.4	-6.7
	3.2nm,0.4s,SNR=4.0						
EPON	**Pontenova**	**5.90**	**280**	Pn	Pn	20 38 18.1	-2.1
	36nm,1.1s,SNR=12						
EPON				Sn	Sn	20 39 22.4	-6.6
	3.2nm,0.4s,SNR=4.0						
ERUA	**La Rua**	**5.90**	**271**	Pn	Pn	20 38 17.2	-3.0
	6.0nm,0.5s,SNR=16						
ERUA				Sn	Sn	20 39 20.9	-8.1
	13nm,0.3s,SNR=7.3						
PCP	**Pian Castagno**	**5.93**	**68**	P	Pn	20 38 19.9	-0.7
ORX	**Oropa**	**5.97**	**57**	P	Pn	20 38 17.4	-3.8
QUIF	**Quistinic**	**6.01**	**333**	*e*Pn	Pn	20 38 17.9	-3.9
QUIF				*e*Sn	Sn	20 39 23.7	-8.0
	12nm,0.2s						
QUIF				*e*Sg	Sg	20 39 57.9	-12
	15nm,0.4s						
QUIF	**Quistinic**	**6.01**	**333**	*e*Pn	Pn	20 38 17.9	-3.9
QUIF				*e*Sg	Sg	20 39 57.9	-12
	7.6nm,0.4s						
LDF	**La Druitiere**	**6.02**	**354**	*e*Pn	Pn	20 38 18.2	-3.7
LDF				*e*Sn	Sn	20 39 20.7	-11
	7.7nm,0.3s						
LDF				*e*Sg	Sg	20 39 58.3	-12
	14nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGF	Pioggiola	6.03	88	*e*Pn	Pn	20 38 18.1	-4.0
PGF				*e*Sn	Sn	20 39 23.0	-9.4
	18nm,0.4s						
PGF	Pioggiola	6.03	88	Pn	Pn	20 38 18.1	-4.0
PGF				Sn	Sn	20 39 24.7	-7.7
	9.1nm,0.4s						
EINC	Incio	6.04	273	Pn	Pn	20 38 19.6	-2.6
	14nm,0.9s,SNR=22						
EINC				Sn	Sn	20 39 25.0	-7.5
	1.5nm,0.2s,SNR=7.9						
EINC	Incio	6.04	273	Pn	Pn	20 38 19.6	-2.6
	14nm,0.9s,SNR=22						
EINC				Sn	Sn	20 39 25.0	-7.5
	1.5nm,0.2s,SNR=7.9						
EADA	Adamuz	6.06	225	Pn	Pn	20 38 18.7	-3.9
	1.3nm,0.3s,SNR=16						
EADA				Sn	Sn	20 39 23.0	-10
	1.2nm,0.2s,SNR=7.9						
EADA				Lg		20 40 00.2	
	4.9nm,0.2s,SNR=7.9						
EADA	Adamuz	6.06	225	Pn	Pn	20 38 18.7	-3.9
	1.3nm,0.3s,SNR=16						
SGMF	Saint Gilles	6.12	338	*e*Pn	Pn	20 38 19.0	-4.4
SGMF				*e*Sn	Sn	20 39 24.5	-10
	8.6nm,0.3s						
SGMF				*e*Sg	Sg	20 40 01.3	-13
	10nm,0.4s						
FLN	La Foliniere	6.22	352	*e*Pn	Pn	20 38 20.4	-4.4
FLN				*e*Sn	Sn	20 39 27.3	-10
FLN				*e*Sg	Sg	20 40 04.6	-13
	16nm,0.4s						
SFTF	Sexfontaines	6.33	26	*e*Pn	Pn	20 38 22.7	-3.6
SFTF				*e*Sg	Sg	20 40 07.5	-13
	28nm,0.7s						
EBER	Berja	6.39	208	Pn	Pn	20 38 23.8	-3.3
	0.1nm,0.4s,SNR=7.9						
EBER	Berja	6.39	208	Pn	Pn	20 38 23.8	-3.3
	0.1nm,0.4s,SNR=7.9						
ROSF	Rostrenen	6.41	335	*e*Pn	Pn	20 38 23.5	-4.0
ROSF				*e*Sn	Sn	20 39 32.1	-10
	7.3nm,0.2s						
MEZF	Maizieres J'vi	6.59	25	*e*Pn	Pn	20 38 26.5	-3.5
MEZF				*e*Pg	Pg	20 38 53.3	-8.5
MEZF				*e*Sg	Sg	20 40 15.7	-14
	42nm,0.7s						
ELOB	Lobios	6.64	267	Pn	Pn	20 38 27.4	-3.4
	8.6nm,0.8s,SNR=8.5						
ELOB				Sn	Sn	20 39 38.0	-10
	6.0nm,0.2s,SNR=4.7						
ELOB				Lg		20 40 15.9	
	7.5nm,0.4s,SNR=4.0						
ELOB	Lobios	6.64	267	Pn	Pn	20 38 27.4	-3.3
ELOB				Sn	Sn	20 39 38.0	-10
MTE	Manteigas	6.66	253	*e*Pn	Pn	20 38 22.9	-8.1
MTE				*e*Sn	Sn	20 39 38.1	-10
MTE	Manteigas	6.66	253	*e*Pn	Pn	20 38 22.9	-8.2
MTE				*e*Sn	Sn	20 39 38.1	-10
HINF	Hinteralfeld	6.72	37	*e*Pn	Pn	20 38 27.2	-4.6
HINF				*e*Pg	Pg	20 38 54.5	-10
HINF				*e*Sg	Sg	20 40 20.0	-14
	12nm,0.6s						
CODM		6.79	72	P	Pn	20 38 29.9	-3.0
CODM		6.79	72	P	Pn	20 38 29.9	-3.0
RFYF	Reffroy	6.84	27	*e*Pn	Pn	20 38 28.7	-4.8
RFYF				*e*Pg	Pg	20 38 55.9	-11
RFYF				*e*Sg	Sg	20 40 24.6	-13
	8.0nm,0.3s						
EBAD	Badajoz	7.10	240	Pn	Pn	20 38 32.8	-4.4
	1.0nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	20 39 47.0	-12
	5.7nm,0.3s,SNR=7.9						
EBAD	Badajoz	7.10	240	Pn	Pn	20 38 32.8	-4.3
EMAZ	Mazaricos	7.22	276	Pn	Pn	20 38 35.3	-3.6
	3.9nm,0.3s,SNR=5.9						
EMAZ				Sn	Sn	20 39 52.1	-10
	2.0nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	7.22	276	Pn	Pn	20 38 35.3	-3.6
EMAZ				Sn	Sn	20 39 52.1	-10
CDF	Champ du Feu	7.36	36	*e*Pn	Pn	20 38 36.1	-4.7
CDF				*e*Sg	Sg	20 40 40.1	-15
	9.3nm,0.6s						
EMIN	Mina Concepcio	7.51	232	Pn	Pn	20 38 37.7	-5.2
EMIN				Sn	Sn	20 39 58.8	-10
EMIN				Lg		20 40 46.1	
EMIN	Mina Concepcio	7.51	232	Pn	Pn	20 38 37.7	-5.2
	0.5nm,0.3s,SNR=7.9						
EMIN				Sn	Sn	20 39 58.8	-10
	0.1nm,0.1s,SNR=7.9						
EMIN				Lg		20 40 46.1	
	1.7nm,0.3s,SNR=4.0						
EMIN	Mina Concepcio	7.51	232	Pn	Pn	20 38 37.7	-5.2
EMIN				Sn	Sn	20 39 58.8	-11
ESPR	Espera	7.71	224	Pn	Pn	20 38 42.3	-3.4
	1.4nm,0.2s,SNR=4.0						
ESPR	Espera	7.71	224	Pn	Pn	20 38 42.3	-3.4
BAIF	Baives	7.80	16	*e*Pn	Pn	20 38 42.8	-4.3
BAIF				*e*Sn	Sn	20 40 05.9	-11
	4.4nm,0.4s						
GIVF	Givet	7.98	19	*e*Pn	Pn	20 38 45.1	-4.4
ESK	Eskdalemuir	12.98	350	*e*P	P	20 39 53.3	-4.5

*JMA **26** 20:37:38.3±0.3,23.28N×121.84E,h10^{km},M2.9*
*TAP **26** 20:37:39.0,23.38N×121.66E,h14^{km},ML3.5*
TAP Felt II J at Chenggung.
ISC 26 20:37:38.0±0.6,**23.32N**±0.02×**121.76E**±0.02,**h13**^{km}±4^{km},**n51,**σ**0^{s}.79**/76,**4C-4D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	Yuli	0.42	274	⇑*i*P	Pg	20 37 46.3	-0.4
CHKT	Chengkung	0.42	238	⇓*i*P	Pg	20 37 46.8	+0.1
CHKT				S	Sg	20 37 52.7	+0.1
EHY	Hungye	0.44	294	⇑*i*P	Pg	20 37 46.3	-0.7
EHY				S	Sg	20 37 53.4	+0.4
ESL	Shilin	0.57	329	⇓*i*P	Pb	20 37 48.9	-0.4
ESL				S	Sb	20 37 56.2	-0.9
HWA	Hwalien	0.67	348	P	Pb	20 37 51.4	+0.5
ELDTW	Lidau	0.69	259	⇓*i*P	Pb	20 37 50.9	-0.6
YUS	Yu-Shan	0.76	283	⇑*i*P	Pb	20 37 52.6	+0.1
YUS				S	Sb	20 38 02.4	-0.1
TWD	Chiawan	0.77	349	P	Pb	20 37 52.9	+0.2
TWD				S	Sb	20 38 03.2	+0.4
TTN	Taitung	0.80	225	*e*P	Pb	20 37 52.2	-1.0
TTN				S	Sb	20 38 04.1	+0.4
TWG	Pinlang	0.81	232	*e*P	Pb	20 37 52.8	-0.6
TWG				S	Sb	20 38 03.6	-0.3
ALS	Alishan	0.89	282	*e*P	Pb	20 37 54.9	+0.1
ALS				S	Sb	20 38 06.4	-0.1
STYT	Tauyuan	0.93	260	P	Pb	20 37 55.3	-0.2
STYT				S	Sb	20 38 06.8	-0.8
SMLT	Sun Moon Lake	0.96	305	*e*P	Pb	20 37 55.8	-0.2
SMLT				S	Sb	20 38 07.3	-1.2
TYC	Yuchr	1.01	305	*e*P	Pb	20 37 56.4	-0.4
CHN5	Tsauling	1.03	286	⇑*i*P	Pb	20 37 57.5	+0.3
ECL	Taimali	1.04	226	*e*P	Pb	20 37 55.8	-1.5
WTP	Ta-pu	1.05	266	⇓*i*P	Pb	20 37 57.9	+0.3
WTP				S	Sb	20 38 11.5	+0.4
TWT	Tachien	1.07	330	*e*P	Pb	20 37 57.9	+0.1
TWT				S	Sb	20 38 10.1	-1.4
CHN4	Tsaushan	1.07	272	*e*P	Pb	20 37 58.5	+0.6
CHN4				S	Sb	20 38 13.1	+1.5
ENA	Nanau	1.10	359	*e*P	Pb	20 37 58.1	-0.2
ENA				S	Sb	20 38 12.1	-0.4
SGST	Jiashian	1.11	258	*e*P	Pb	20 37 58.3	-0.2
CHN1	Nanshi	1.14	263	*e*P	Pb	20 37 59.5	+0.4
CHN1				S	Sb	20 38 14.8	+1.3
WGK	Gukeng	1.16	288	*e*P	Pb	20 38 00.1	+0.7
NNS	Nan Shan	1.17	342	*e*P	Pb	20 37 59.5	0.0
NNS				S	Sb	20 38 13.6	-0.7
TWK	Hsinying	1.17	267	*e*P	Pb	20 37 59.9	+0.3
SSD	Sandimen	1.19	241	*e*P	Pb	20 37 58.6	-1.3
CHY	Chiayi	1.24	278	*e*P	Pb	20 38 01.5	+0.8
EAST	Anshuo	1.26	222	*e*P	Pb	20 37 59.2	-1.9
TWC	Suao	1.28	4	*e*P	Pb	20 38 01.4	-0.1
LAY	Lan-yu	1.29	189	*e*P	Pb	20 37 59.6	-2.1
CHN3	Shinhua	1.30	259	*e*P	Pb	20 38 02.7	+0.8
CHN3				S	Sb	20 38 22.4	+4.0
SGLT	Jiouru	1.31	243	*e*P	Pb	20 38 01.7	-0.3
ENTT	Nioudou	1.32	352	*e*P	Pb	20 38 02.2	+0.1
TWM1	Shoushan	1.33	248	*e*P	Pb	20 38 03.1	+0.9
TWQ1	Liyutan	1.36	319	*e*P	Pn	20 38 03.9	+1.1
TWE	Neicheng	1.39	357	*e*P	Pn	20 38 03.2	-0.1
NSK	Sanguang	1.39	345	*e*P	Pn	20 38 02.6	-0.6
NSK				S	Sb	20 38 20.0	-1.0
SCZT	Fangliau	1.41	228	*e*P	Pn	20 38 03.3	-0.3
NSY	Sanyi	1.42	320	*e*P	Pn	20 38 04.0	+0.3
CHN8	Yiju	1.42	271	*e*P	Pn	20 38 04.2	+0.6
SCLT	Jiali	1.45	264	*e*P	Pn	20 38 06.8	+2.7
NSTT	Nanjuang	1.47	332	*e*P	Pn	20 38 04.9	+0.5
NSTT				S	Sb	20 38 22.5	-0.8
YOJ	Yonaguni jima	1.61	45	P	Pn	20 38 06.9	+0.5
YOJ				S	Sn	20 38 27.5	+0.3
HEN	Hengchun	1.61	216	*e*P	Pn	20 38 07.6	+1.2
NWF	Wu-fen Shan	1.74	1	*e*P	Pn	20 38 09.7	+1.5
TWS1	Kuangyinshan	1.80	350	*e*P	Pn	20 38 11.0	+2.0
HATJ	Hateruma jima	2.01	68	P	Pn	20 38 12.3	+0.2
HATJ				*e*S	Sn	20 38 37.0	-0.4
IRIF	Iriomote-Funau	2.07	60	P	Pn	20 38 13.3	+0.4
IRIF				S	Sn	20 38 39.5	+0.8
JKRS	Kuro-shima	2.25	66	P	Pn	20 38 16.1	+0.5
JKRS				*e*S	Sn	20 38 43.8	+0.3
JIJ	Ishigaki jima	2.42	64	P	Pn	20 38 18.0	+0.1
JIJ				S	Sn	20 38 46.1	-1.5
JTJ	Tarama	3.00	63	P	Pn	20 38 26.1	-0.1
JTJ				*e*S	Sn	20 39 02.3	0.0

*IDC **26** 20:45:36.6±12.0,13.79N×144.96E,h63^{km}±112^{km}, mb3.8/9,mb1 3.9/9,mb1mx3.7/21,mbtmp4.0/9,Error ellipse: s-maj=47.2km s-min=21.5km az=79.0*
*NEIC **26** 20:45:42.3±0.6,13.73N×144.82E,h118^{km}±5^{km},mb4.2/7, Error ellipse: s-maj=19.4km s-min=7.2km az=95.0*
ISC 26 20:45:40.8±0.6,**13.70N**±0.06×**144.8E**±0.2,**h118**^{km}±5^{km}, **n23,**σ**0^{s}.88**/22,**mb4.0**/14,**1C,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.15	138	*e*Pn	P	20 45 57.7	+0.6
GUMO				*e*Sn	S	20 46 08.1	-1.2
ANAT	Anatahan	2.77	18	*e*P	P	20 46 25.8	+0.9
SARN	Sarigan	3.13	18	⇑*e*P	P	20 46 30.2	+0.5
PMG	Port Moresby	23.08	174	P	P	20 50 38.2	+1.3
	7.4nm,0.7s,mb4.1,baz=333,slow=9.0,SNR=3.7						
PMG	Port Moresby	23.08	174	*e*P	P	20 50 37.8	+0.9
	41nm,1.2s,mb4.6						
MAJO	Matsushiro	23.49	347	*e*P	P	20 50 41.2	+0.5
	7.6nm,0.9s,mb4.0						
CTA	Charters Tower	33.61	177	P	P	20 52 12.6	+0.5
	8.2nm,1.1s,mb4.5,baz=353,slow=8.1,SNR=3.4						
CTAO	Charters Tower	33.61	177	P	P	20 52 12.2	+0.1
	13nm,1.1s,mb4.7						
WRAB	Tennant Creek	34.96	197	*e*P	P	20 52 23.5	-0.1
	4.3nm,0.7s,mb4.4						
WRA	Warramunga Arr	34.97	197	P	P	20 52 23.7	0.0
	1.3nm,0.6s,mb3.9,baz=20,slow=9.0,SNR=18						
ASAR	Alice Springs	38.63	196	P	P	20 52 54.9	+0.6
	0.9nm,0.5s,mb3.9,baz=17,slow=13,SNR=21						
STKA	Stephens Creek	45.42	184	P	P	20 53 49.3	-0.3
	3.1nm,0.9s,mb4.0,baz=5.1,slow=10.0,SNR=3.9						
STKA	Stephens Creek	45.42	184	*e*P	P	20 53 49.1	-0.5
SONM	Songino Array	46.58	325	P	P	20 53 59.3	+0.7
	0.4nm,0.4s,mb3.5,baz=124,slow=5.6,SNR=14						
TLY	Talaya	50.20	328	*e*P	P	20 54 26.8	+0.3
	0.7nm,0.6s,mb3.8						
TAU	Tasmania Unive	56.38	178	P	P	20 55 06.2	-6.0
KURK	Kurchatov	64.43	320	*e*P	P	20 56 05.1	-1.6
	2.8nm,1.0s,mb4.0						
INK	Inuvik	74.30	22	P	P	20 57 04.3	-2.3
	1.6nm,1.0s,mb3.7						
YKA	Yellowknife Ar	82.81	27	P	P	20 57 51.8	-1.1
	0.4nm,0.7s,mb3.4,baz=289,slow=5.6,SNR=7.0						
YBH	Yreka Blue Hor	82.88	49	P	P	20 57 54.2	+0.5
	1.9nm,0.9s,mb3.9,baz=308,slow=3.6,SNR=4.2						
ELK	Elko	88.58	48	P	P	20 58 21.8	+0.1
	1.5nm,0.9s,mb4.0,baz=304,slow=2.0,SNR=6.0						
LVC	Limon Verde	146.86	110	PKPbc	PKPbc	21 05 13.0	+3.4
	3.9nm,0.6s,baz=266,slow=5.0,SNR=12						
LVC	Limon Verde	146.86	110	PKPbc	PKPbc	21 05 13.0	+3.4

IDC 26 20:53:43.4±9.3,**6.29S**×**150.66E,h65**^{km}±66^{km},**mb3.5**/3, **mb1 3.7**/4,**mb1mx3.5**/12,**mbtmp3.8**/4,**ML2.5**/1,**Error ellipse: s-maj=91.1km s-min=63.0km az=143.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.64	228	P	P	20 54 50.7	-2.0
	1.6nm,0.3s,baz=18,slow=3.9,SNR=6.7						
PMG				S	S	20 55 44.6	-1.2
	2.3nm,0.3s,baz=149,slow=12,SNR=5.6						
WRA	Warramunga Arr	20.86	228	P	P	20 58 20.5	-1.8
	2.3nm,0.7s,baz=53,slow=11,SNR=19						
ASAR	Alice Springs	23.62	221	P	P	20 58 49.2	-0.2
	1.5nm,0.8s,baz=53,slow=9.1,SNR=13						
STKA	Stephens Creek	26.82	197	P	P	20 59 17.0	-2.7
	2.9nm,1.1s,baz=356,slow=13,SNR=3.4						

*IDC **26** 20:59:53.6±5.3,22.94S×168.98E,mb3.9/4,mb1 4.1/4, mb1mx3.9/12,mbtmp3.9/4,MS3.4/3,Ms1 3.4/3, ms1mx3.2/14,Error ellipse: s-maj=186.7km s-min=45.9km az=149.0*
ISC 26 20:59:56.0±2.3,**23.5S**±0.3×**169.0E**±0.3,**h33**^{km},**n9,** σ**1^{s}.31**/5,**mb3.8**/4,**MS3.3**/2,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.74	299	*e*P	P	21 00 38.8	+0.1
URZ	Urewera	16.30	157	LR	LR	21 09 01.0	
	comp=Z,150nm,21.7s,baz=329,slow=33						
RPZ	Rata Peaks	20.29	176	LR	LR	21 11 46.4	
	comp=Z,157nm,18.5s,MS3.4,baz=198,slow=34						
PMG	Port Moresby	25.14	300	LR	LR	21 12 36.3	
	comp=Z,62nm,18.1s,MS3.2,baz=207,slow=31						
ASAR	Alice Springs	32.14	262	P	P	21 06 23.6	+0.7
	1.5nm,1.0s,mb3.8,baz=89,slow=7.0,SNR=8.2						
WRA	Warramunga Arr	32.37	269	P	P	21 06 23.5	-1.3
	1.0nm,1.0s,mb3.6,baz=97,slow=8.2,SNR=4.2						
CMAR	Chiang Mai Arr	80.06	295	P	P	21 12 05.7	+1.2
	1.6nm,0.9s,mb4.0,baz=128,slow=3.1,SNR=8.0						
SONM	Songino Array	90.45	323	P	P	21 12 54.7	-0.7
	0.6nm,0.8s,mb4.0,baz=122,slow=3.8,SNR=4.9						
GERES	GERESS Array B	148.03	329	PKPbc	PKPdf	21 19 38.5	+3.7
	1.5nm,0.9s,baz=45,slow=1.4,SNR=8.4						

IDC 26 21:00:40.6±7.4,**15.65N**×**92.89E,mb3.5**/2,**mb1 3.6**/3, **mb1mx3.3**/16,**mbtmp3.4**/3,**ML3.5**/1,**Error ellipse: s-maj=124.9km s-min=42.5km az=5.0,Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.43	63	Pn	Pn	21 02 17.1	-1.9
	0.2nm,0.3s,baz=248,slow=15,SNR=11						
CMAR				Sn	Sn	21 03 30.9	-3.1
	0.3nm,0.3s,baz=258,slow=33,SNR=5.1						
SONM	Songino Array	33.98	16	P	P	21 07 26.3	-1.7
	0.2nm,0.4s,baz=206,slow=6.9,SNR=6.0						
ZAL	Zalesovo	38.73	352	P	P	21 08 05.9	-2.2
	0.5nm,0.5s,baz=252,slow=3.2,SNR=3.0						

*LDG **26** 21:17:42.9±0.1,50.91N×6.61E,h13^{km},Ml2.4/8,Error ellipse: s-maj=3.2km s-min=2.5km az=80.0*
*CSEM **26** 21:17:42.5±0.2,50.90N×6.65E,h8^{km},ML2.5/8,Error ellipse: s-maj=4.0km s-min=2.5km az=51.0*
*BNS **26** 21:17:43.2±0.9,50.99N×6.66E,h14^{km}±2^{km},ML1.7*
*UCC **26** 21:17:43.3±0.2,50.97N×6.64E,h17^{km}±1^{km},ML1.5*
ISC 26 21:17:42.9±0.8,**50.95N**±0.06×**6.63E**±0.04,**h14**^{km},**n18,** σ**1^{s}.09**/32,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JUE	Julich	0.15	254	*e*Pg	Pg	21 17 47.3	+0.6
BNS	Bensberg	0.35	87	*e*Pg	Pg	21 17 50.4	+0.1
BNS				*e*Sg	Sg	21 17 54.9	-0.2
	145nm,0.1s						
KLL	Kalltalsperre	0.36	214	*e*Pg	Pg	21 17 50.8	+0.3
STB	Steinbach	0.38	159	*e*Pg	Pg	21 17 51.6	+0.7
STB				*e*Sg	Sg	21 17 56.7	+0.5
	18nm,0.6s						
MEM	Membach	0.52	229	P	Pb	21 17 53.4	+0.1
MEM				S	Sb	21 18 01.4	+1.0
BEBN	Eben Emael	0.62	256	P	Pb	21 17 55.3	+0.3
BEBN				S	Sb	21 18 03.3	0.0
BGG	Burgeitz	0.87	149	*e*Pg	Pg	21 18 00.1	-0.3
BGG				*e*Sg	Sg	21 18 11.5	-0.7
	16nm,0.1s						
GIVF	Givet	1.43	234	*e*Pg	Pg	21 18 09.2	-2.4
GIVF				*e*Sg	Sg	21 18 27.9	-2.8
	13nm,0.2s						
DOU	Dourbes	1.55	237	P	Pn	21 18 10.1	-0.3
DOU				S	Sn	21 18 30.2	-0.2
BAIF	Baives	1.79	241	*e*Pg	Pn	21 18 14.5	+0.9
BAIF				*e*Sg	Sn	21 18 38.0	+1.8
	8.2nm,0.2s						
RFYF	Reffroy	2.44	198	*e*Pg	Pn	21 18 27.0	+4.0
RFYF				*e*Sg	Sn	21 18 58.4	+5.5
	3.2nm,0.3s						
CDF	Champ du Feu	2.57	170	*e*Pg	Pn	21 18 29.5	+4.5
CDF				*e*Sg	Sn	21 19 02.3	+6.0
	1.9nm,0.3s						
MEZF	Maizieres J'vi	2.66	203	*e*Pg	Pn	21 18 30.7	+4.6
MEZF				*e*Sg	Sn	21 19 03.9	+5.5
SFTF	Sexfontaines	2.94	201	*e*Pg	Pn	21 18 36.0	+5.9
SFTF				*e*Sg	Sn	21 19 13.6	+8.1
	1.8nm,0.2s						
HINF	Hinteralfeld	3.14	177	*e*Sg	Sg	21 19 18.9	-8.6
	1.1nm,0.3s						
LDF	La Druitiere	4.97	244	*e*Pn	Pn	21 18 55.3	-3.7
FLN	La Foliniere	5.09	247	*e*Pn	Pn	21 18 57.1	-3.6
FLN				*e*Sg	Sg	21 20 21.4	-11
	1.5nm,0.3s						
GRR	Gorron	5.50	245	*e*Pn	Pn	21 19 02.4	-4.0
GRR				*e*Sn	Sn	21 20 02.4	-7.7
	1.8nm,0.3s						

IGQ 26 21:34:00.1,0.65S×**81.46W,h12**^{km}±10^{km},**mb4.1,2C-4D, Error ellipse: s-maj=10.7km s-min=5.5km az=178.5,Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	Cerro de Hojas	0.99	114	⇓P	Pb	21 34 17.6	-1.2
SALI	Salinas	1.59	163	P	Pn	21 34 30.3	+2.0
JUA2	San Juan 2	2.88	81	P	Pn	21 34 47.5	+0.7
PINO	Pino	2.89	80	P	Pn	21 34 47.0	+0.2
TERV	Terraza Guagua	2.89	81	P	Pn	21 34 48.2	+1.3
TERV				S	Sn	21 35 24.0	+2.1
YANA	Yana	2.93	80	P	Pn	21 34 47.7	+0.2
IGUA	Igualata	2.94	107	P	Pn	21 34 48.8	+1.2
NAS1	Nasa	2.98	90	⇑P	Pn	21 34 50.0	+1.8
VC1	Cotopaxi 1	3.05	90	⇓P	Pn	21 34 51.2	+2.0
TAMB	Tambo	3.09	91	⇓P	Pn	21 34 51.5	+1.8
PISA	Pisayambo	3.10	98	P	Pn	21 34 51.9	+2.1
ARRY	Arrayan	3.12	106	P	Pn	21 34 49.7	-0.5
ULBA	Ulba	3.15	105	P	Pn	21 34 52.9	+2.3
ULBA				S	Sn	21 35 30.1	+1.6
COTA	Cotacachi	3.27	73	P	Pn	21 34 54.1	+1.9
ANTI	Antisana	3.30	87	⇓P	Pn	21 34 54.6	+1.9
CAYR	Refugio Cayamb	3.51	79	⇑P	Pn	21 34 58.4	+2.7
ELAGU	Cayambe Volc	3.52	80	P	Pn	21 34 58.4	+2.6
CAYA	Cayambe	3.54	78	P	Pn	21 34 58.5	+2.4
ECEN	Cerro Negro	3.78	67	P	Pn	21 35 02.7	+3.2

*IDC **26** 21:35:01.2±3.6,8.55S×111.65E,mb3.5/3,mb1 3.7/3, mb1mx3.5/14,mbtmp3.5/3,Error ellipse: s-maj=131.5km s-min=29.0km az=58.0*
*DJA **26** 21:35:06.9±0.8,9.54S×111.59E,h33^{km},MD4.8/4, ML5.2/4,Error ellipse: s-maj=39.6km s-min=16.2km az=165.0*
ISC 26 21:35:12.8±2.7,**8.4S**±0.2×**111.9E**±0.2,**h110**^{km}±21^{km},**n9,** σ**0^{s}.99**/13,**mb3.5**/3,**2C-7D,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	2.18	92	⇓*i*Pn	P	21 35 47.7	-1.0
	3μm,0.2s						
SRDI	Scrawed	2.18	92	⇓*i*P	P	21 35 48.8	+0.1
SRDI				⇓*i*Sn	S	21 36 16.8	+1.2
KELI	Kelakatan	2.53	86	⇓*i*Pn	P	21 35 54.4	+1.0
	870nm,0.2s						
KELI	Kelakatan	2.53	86	⇓*i*P	P	21 35 55.5	+2.1
KELI				⇓*i*Sn	S	21 36 30.2	+6.2
RATI	Rata	3.57	96	⇑*i*Pn	P	21 36 06.4	-1.1
	653nm,0.3s						
RATI				⇑*i*Sn	S	21 36 49.6	+0.5
KEDI	Kedomdong	4.13	92	*e*Pn	P	21 36 13.5	-1.6
	134nm,0.2s						
KEDI				⇓*i*Sn	S	21 37 01.8	-0.9
WRA	Warramunga Arr	24.53	120	P	P	21 40 24.5	+0.9
	1.5nm,0.7s,mb3.5,baz=293,slow=12,SNR=18						
ASAR	Alice Springs	25.95	128	P	P	21 40 36.7	-0.2
	0.7nm,0.6s,mb3.3,baz=303,slow=8.8,SNR=17						
SONM	Songino Array	56.19	356	P	P	21 44 43.9	+0.2
	0.4nm,0.7s,mb3.6,baz=168,slow=7.3,SNR=4.6						

IDC 26 21:54:41.0±7.5,**19.45S**×**175.96W,mb3.6**/2,**mb1 3.9**/2, **mb1mx3.6**/14,**mbtmp3.6**/2,**Error ellipse: s-maj=420.3km s-min=104.7km az=154.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.63	255	P	P	22 03 11.2	-1.9
	0.9nm,0.8s,baz=91,slow=8.0,SNR=6.8						
WRA	Warramunga Arr	46.65	261	P	P	22 03 11.6	-1.7
	0.8nm,0.8s,baz=98,slow=7.6,SNR=6.2						
AKASG	Malin Array Be	142.99	333	PKP	PKPdf	22 14 16.0	-2.4
	0.4nm,0.4s,baz=40,slow=4.3,SNR=4.8						

*DJA **26** 22:14:41.3±1.0,5.72S×122.77E,h23^{km}±5^{km},MD4.7/2, ML5.1/3,Error ellipse: s-maj=43.2km s-min=21.5km az=33.0*
*IDC **26** 22:14:46.4±1.5,5.24S×122.90E,mb3.6/3,mb1 3.9/4, mb1mx3.6/14,mbtmp3.6/4,ML3.6/1,Error ellipse: s-maj=109.7km s-min=23.4km az=58.0*
*NEIC **26** 22:14:48.8±0.8,5.57S×122.19E,h30^{km},mb3.9/2,Error ellipse: s-maj=44.5km s-min=9.6km az=46.0*
ISC 26 22:14:48.2±0.7,**5.7S**±0.2×**122.2E**±0.1,**h33**^{km},**n11,** σ**1^{s}.23**/15,**mb3.7**/4,**3C-4D,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NINI	Niniconang	2.77	297	⇓*i*Pn	Pn	22 15 30.5	-0.9
	903nm,0.3s						
NINI				⇑*i*Sn	Sn	22 16 05.1	+1.1
BUNI	Buntu Taipa	2.77	317	*e*Pn	Pn	22 15 28.0	-3.5
BUNI				⇓*i*P		22 15 31.2	
BUNI				*e*Sn	Sn	22 16 05.3	+1.1
BUNI	Buntu Taipa	2.77	317	*e*Pn	Pn	22 15 28.0	-3.5
	595nm,0.2s						
BUNI	Buntu Taipa	2.77	317	⇓*i*P	P	22 15 31.2	-0.1
BUNI				⇑*e*Sn	Sn	22 16 05.3	+1.1
TANI	Tanete Lipujan	3.62	308	⇑*e*Pn	Pn	22 15 41.8	-1.6
	230nm,0.3s						
TANI				⇓*i*Sn	Sn	22 16 24.3	-1.1
WRA	Warramunga Arr	18.42	141	P	P	22 19 02.9	-0.1
	0.2nm,0.3s,baz=318,slow=12,SNR=9.5						
WRAB	Tennant Creek	18.42	141	*e*P	P	22 19 02.1	-0.9
	6.9nm,1.0s						
ASAR	Alice Springs	21.11	149	P	P	22 19 33.5	+1.0
	2.5nm,0.6s,mb3.7,baz=334,slow=12,SNR=32						
CMAR	Chiang Mai Arr	33.21	317	P	P	22 21 26.4	+1.9
	0.6nm,0.8s,mb3.6,baz=150,slow=7.7,SNR=4.5						
SONM	Songino Array	55.09	347	P	P	22 24 18.3	-1.1
	0.4nm,0.6s,mb3.6,baz=154,slow=7.6,SNR=3.6						
KURK	Kurchatov	67.54	332	P	P	22 25 45.0	+1.7
	1.1nm,0.7s,mb4.0						

*HLW **26** 22:57:25.6,28.80N×35.29E,h4^{km},Mb3.8*
*IDC **26** 22:57:26.3±1.7,28.92N×35.35E,mb3.5/5,mb1 3.7/6, mb1mx3.6/17,mbtmp3.5/6,ML2.9/1,Error ellipse: s-maj=23.2km s-min=14.6km az=55.0*
*GII **26** 22:57:26.4±0.4,28.87N×35.19E,h5^{km}±30^{km},mb4.3/6, ML4.2/7,Mw3.8/5*
*CSEM **26** 22:57:27.1±0.1,28.76N×35.34E,h35^{km},Mw3.8,Error ellipse: s-maj=1.8km s-min=1.3km az=113.0*
*NEIC **26** 22:57:29.2±1.2,29.05N×35.22E,h10^{km},ML4.1(GII), Error ellipse: s-maj=15.8km s-min=10.7km az=47.0*
ISC 26 22:57:24.2±0.4,**28.81N**±0.02×**35.33E**±0.04,**h4**^{km},**n54,**

σ0^{s}74/68, mb3.7/5, 5C-5D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HDHB	Dhahab	0.63	262	⇑P	Pg	22 57 37.8	+1.0
NUB		0.64	290	⇑P	Pg	22 57 37.2	+0.3
HBST	Basata	0.66	308	⇓P	Pg	22 57 37.9	+0.5
EIL	Elat	0.92	339	Pg	Pg	22 57 42.0	-0.5
	100nm,0.3s,baz=155,slow=16,SNR=1058						
EIL				Lg		22 57 54.4	
	253nm,0.3s,baz=67,slow=15,SNR=40						
EIL	Elat	0.92	339	Pg	Pg	22 57 42.0	-0.5
AQBJ	Aqaba	0.95	345	Pg	Pg	22 57 42.5	-0.6
MBH	Mount Berech	1.04	340	Pg	Pg	22 57 44.4	-0.7
HKAT	Jabal Katrina	1.21	257	⇓P	Pb	22 57 47.8	+0.5
HRFI	Mount Harif	1.25	348	Pg	Pg	22 57 47.7	-1.4
HRFI				Sg	Sg	22 58 05.2	-0.6
KMTI	Karmit	1.39	338	P	Pb	22 57 50.3	-0.1
KMTI				S	Sb	22 58 08.9	+0.5
KMTI	Karmit	1.39	338	Pg	Pg	22 57 50.2	-1.8
KMTI				Sg	Sg	22 58 08.8	-1.7
KMTI	Karmit	1.39	338	Pg	Pg	22 57 50.2	-1.8
KMTI				Sg	Sg	22 58 08.8	-1.8
SHRM		1.40	229	⇑P	Pb	22 57 50.7	+0.2
TR1		1.45	237	⇑P	Pn	22 57 51.3	0.0
TR2		1.48	254	⇓P	Pn	22 57 51.7	+0.1
PRNI	Paran	1.56	350	Pn	Pn	22 57 53.3	+0.5
HNKL	Nakhl	1.62	314	⇓P	Pn	22 57 54.0	+0.3
HNKL				S	Sb	22 58 14.8	-0.2
ZFRI	Zfri	1.74	356	P	Pn	22 57 56.0	+0.6
ZFRI				Sn	Sn	22 58 19.2	+0.8
ZFRI	Zfri	1.74	356	Pn	Pn	22 57 55.9	+0.5
ZFRI				Sn	Sn	22 58 19.2	+0.9
HRDS	Abu Rudays	1.79	267	P	Pn	22 57 56.4	+0.3
HRDS	Abu Rudays	1.79	267	P	Pn	22 57 56.3	+0.2
ZEIT		1.84	240	P	Pn	22 57 56.4	-0.4
RMNI	Mount Ramon	1.85	345	Pn	Pn	22 57 57.8	+0.8
HHRG	Al Ghardaqah	2.22	225	⇓P	Pn	22 58 01.6	-0.7
MASH	Mash‘abbe Sade	2.23	348	Pn	Pn	22 58 03.5	+1.0
KZIT	Kziot	2.24	339	Pn	Pn	22 58 02.9	+0.3
KZIT				Sn	Sn	22 58 31.4	+0.4
KZIT				S	Sn	22 58 31.9	+0.9
KZIT	Kziot	2.24	339	Pn	Pn	22 58 02.9	+0.3
KZIT				Sn	Sn	22 58 31.2	+0.2
RTMM	Retamin	2.30	346	Pn	Pn	22 58 04.1	+0.6
ZAF		2.48	282	P	Pn	22 58 05.6	-0.4
MZDA	Masada	2.49	1	P	Pn	22 58 06.6	+0.4
MZDA				Sn	Sn	22 58 38.1	+0.7
MZDA				S	Sn	22 58 42.8	+5.4
MZDA	Masada	2.49	1	Pn	Pn	22 58 06.5	+0.3
MZDA				Sn	Sn	22 58 38.1	+0.7
YTIR	Yattir	2.55	356	Pn	Pn	22 58 07.4	+0.4
HSFG		2.56	209	P	Pn	22 58 06.4	-0.7
AMAG	Maghara	2.60	315	⇑P	Pn	22 58 07.6	-0.1
AMZI	Amatzia	2.67	352	Pn	Pn	22 58 09.6	+1.0
AMZI	Amatzia	2.67	352	Pn	Pn	22 58 09.6	+0.9
MKRJ	Makawir	2.75	6	Pn	Pn	22 58 10.0	+0.2
DRGI	Dragot	2.77	1	Pn	Pn	22 58 10.4	+0.2
SLTI	Sal’it	3.43	356	Pn	Pn	22 58 19.7	+0.2
ASF	Jabal al Asfar	3.61	22	Pn	Pn	22 58 22.6	+0.4
	1.2nm,0.3s,baz=97,slow=6.2,SNR=9.9						
ASF				Pg	Pg	22 58 30.0	-6.3
	9.1nm,0.3s,baz=76,slow=9.2,SNR=37						
ASF				Lg		22 59 17.4	
	17nm,0.3s,baz=246,slow=21,SNR=20						
MMLI	Mount Malkishu	3.62	1	Pn	Pn	22 58 22.5	+0.3
EMRS	Mersa Alam	3.81	187	P	Pn	22 58 24.6	-0.3
OFRI	‘Ofer	3.81	356	Pn	Pn	22 58 25.7	+0.8
CSS	Prodhromos	6.37	345	*e*Pn	Pn	22 58 58.2	-2.8
CSS	Prodhromos	6.37	345	*e*Pn	Pn	22 58 58.2	-2.9
NAY	Al-Naaiem	10.44	85	*e*P	P	22 59 57.6	-0.1
RDF	Al-Radifah	10.71	86	*e*P	P	23 00 00.9	-0.6
QRN	Al-Qurain	11.04	87	*e*P	P	23 00 05.6	-0.5
AQU	L’Aquila	22.29	313	P	P	23 02 30.3	+6.3
AKASG	Malin Array Be	22.35	350	P	P	23 02 22.6	-1.9
	1.1nm,0.6s,mb3.5,baz=177,slow=8.4,SNR=6.1						
GERES	GERESS Array B	25.99	326	P	P	23 03 00.4	+0.8
	0.7nm,0.7s,mb3.3,baz=141,slow=8.5,SNR=7.3						
FINES	FINESS Array B	33.21	352	P	P	23 04 03.4	-0.6
	5.0nm,1.2s,mb4.3,baz=166,slow=7.9,SNR=5.0						
NOA	NORSAR Array B	36.04	340	P	P	23 04 28.1	-0.1
	1.0nm,0.9s,mb3.7,baz=125,slow=9.2,SNR=2.6						
SONM	Songino Array	56.90	50	P	P	23 07 13.3	+0.8
	0.6nm,0.9s,mb3.6,baz=278,slow=10,SNR=5.4						

IDC 26 23:09:48.0±10.0, 15.75S×172.40W, mb4.2/4, mb1 4.4/4, mb1mx4.0/15, mbtmp4.2/4, 2D, Error ellipse: s-maj=235.8km s-min=48.1km az=34.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	44.70	240	⇓*i*P	P	23 18 03.2	-1.6
	1.3nm,0.6s						
STKA	Stephens Creek	44.70	240	P	P	23 18 03.5	-1.3
	1.4nm,0.5s,baz=81,slow=10,SNR=9.0						
WRA	Warramunga Arr	50.71	257	P	P	23 18 49.6	-2.2
	1.0nm,0.6s,baz=96,slow=6.9,SNR=11						
ASAR	Alice Springs	50.92	252	P	P	23 18 51.1	-2.3
	7.0nm,0.5s,baz=88,slow=8.3,SNR=176						
ASPA	Alice Springs	50.92	252	⇓*i*P	P	23 18 51.1	-2.3
VNDA	Vanda	63.13	186	P	P	23 20 17.1	-2.4
	0.9nm,0.6s,baz=45,slow=5.7,SNR=5.2						

IDC 26 23:19:41.2±8.6, 5.77S×150.84E, mb3.5/3, mb1 3.8/3, mb1mx3.6/11, mbtmp3.6/3, Error ellipse: s-maj=134.7km s-min=82.8km az=19.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.35	227	P	P	23 24 30.4	-2.0
	0.7nm,0.4s,baz=53,slow=11,SNR=7.8						
ASAR	Alice Springs	24.13	221	P	P	23 24 59.1	-0.8
	0.7nm,0.4s,baz=56,slow=9.0,SNR=19						
STKA	Stephens Creek	27.38	197	P	P	23 25 28.1	-2.1
	0.6nm,0.6s,baz=34,slow=11,SNR=2.6						

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*TAP **26** 23:28:38.9, 24.24N×122.89E, h21^{km}±1^{km}, ML2.9*

JMA 26 23:28:38.9±0.1, 24.43N×123.00E, h50^{km}±1^{km}, M2.4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.03	17	P	P	23 28 46.6	+0.1
YOJ				S	S	23 28 52.0	0.0
IRIF	Iriomote-Funau	0.67	98	P	P	23 28 52.1	-0.2
IRIF				S	S	23 29 02.3	+0.1
HATJ	Hateruma jima	0.82	117	P	P	23 28 54.3	-0.1
HATJ				*e*S	S	23 29 06.3	+0.5
JKRS	Kuro-shima	0.94	102	P	P	23 28 56.2	+0.2
JKRS				S	S	23 29 08.9	+0.3
JIJ	Ishigaki jima	1.04	93	P	P	23 28 57.3	-0.1
JIJ				*e*S	S	23 29 10.3	-0.9
JTJ	Tarama	1.56	82	*e*S	S	23 29 24.4	+0.3

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*ATH **26** 23:30:48.6, 38.30N×21.97E, h20^{km}±3^{km}, MD3.2/11, ML3.0*

*NEIC **26** 23:30:48.7, 38.32N×21.93E, h26^{km}, ML3.0(ATH), After ATH.*

*CSEM **26** 23:30:49.7±0.1, 38.21N×22.00E, h2^{km}, ML3.0, Error ellipse: s-maj=2.2km s-min=2.0km az=121.0*

*THE **26** 23:30:51.3, 38.36N×22.08E, h10^{km}, ML3.1*

ISC 26 23:30:50.0±0.5, 38.26N±0.03×21.97E±0.05, h20^{km}, n23, σ1^{s}19/28, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.45	244	*e*PB	Pb	23 30 58.1	-1.0
RLS				*e*SB	Sb	23 31 05.7	+0.4
EVR	Evrytania	0.67	349	*e*PN	Pn	23 31 01.0	-3.3
AGG	Agios Georgios	0.81	20	*e*Pg	Pb	23 31 02.8	-2.6
AGG				*e*Sg	Sb	23 31 14.3	-1.6
LKR	Lokris	0.90	64	*e*PB	Pb	23 31 05.0	-1.7
MGER	Gerania Oros	1.05	105	*e*PN	Pn	23 31 09.5	-0.2
MGER	Gerania Oros	1.05	105	*e*Pn	Pn	23 31 11.0	+1.3
ITM	Ithomi	1.08	182	*e*PB	Pb	23 31 09.0	-0.8
VLS	Valsamata	1.09	266	*e*PN	Pn	23 31 09.4	-0.9
NSAL	Nisos Salamina	1.23	106	*e*PN	Pn	23 31 12.5	+0.2
NSAL	Nisos Salamina	1.23	106	*e*Pn	Pn	23 31 13.5	+1.2
NAIG	Nisos Aigina	1.30	112	*e*PN	Pn	23 31 14.2	+0.9
MPAR	Parnis Oros	1.39	94	*e*PB	Pb	23 31 13.5	-1.7
ATH	Athens Observa	1.40	101	*e*PN	Pn	23 31 14.5	-0.3
NEO	Neokhori	1.43	43	*e*PN	Pn	23 31 15.3	+0.1
XOR	Xorichti	1.46	40	*e*Pb	Pb	23 31 15.8	-0.6
XOR				*e*Sb	Sb	23 31 36.2	+1.7
PTL	Penteli	1.50	97	*e*PN	Pn	23 31 17.2	+1.0
VLI	Veliai	1.72	153	*e*PN	Pn	23 31 20.9	+1.6
IGT	Igoumenitsa	1.81	315	*e*Pb	Pb	23 31 22.9	+0.7
LIT	Litokhoron	1.89	12	*e*Pb	Pb	23 31 22.4	-1.2
LIT				*e*Sb	Sb	23 31 47.1	+0.2
FNA	Florina	2.57	350	*e*Pn	Pn	23 31 32.5	+1.1
FNA				*e*Sn	Sn	23 32 04.2	+1.9
GRG	Griva	2.72	7	*e*Pn	Pn	23 31 34.7	+1.1
KNT	Kendrikon	2.99	14	*e*Pn	Pn	23 31 38.2	+0.7
SRS	Serrai	3.12	23	*e*Pn	Pn	23 31 39.1	-0.1

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*IDC **26** 23:32:57.9±1.3, 6.81N×73.01W, h155^{km}±38^{km}, mb2.9/2, mb1 3.4/4, mb1mx3.1/19, mbtmp3.6/4, Error ellipse: s-maj=101.8km s-min=8.0km az=133.0*

*FUNV **26** 23:32:57.0, 6.72N×73.19W, h169^{km}, MW2.9*

*UAV **26** 23:32:58.8, 7.26N×73.42W, h167^{km}*

ISC 26 23:32:57.8±0.7, 6.80N±0.07×72.88W±0.06, h176^{km}±6^{km}, n21, σ1^{s}01/37, mb3.2/2, 4C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.20	28	⇑*i*P	P	23 33 27.2	+0.2
CAPV				*e*S	S	23 33 48.8	-0.7
PDMV	Paramo Marino	1.84	35	P	P	23 33 33.6	+0.5
PDMV				S	S	23 33 59.0	-1.5
OSV	Paramo de la O	2.29	37	P	P	23 33 39.1	+0.8
OSV				S	S	23 34 08.5	-1.0
ROSC	El Rosal	2.41	217	P	P	23 33 39.3	-0.3
	22nm,0.3s,baz=64,slow=2.9,SNR=63						
ROSC				S	S	23 34 08.7	-3.2
	19nm,0.3s,baz=79,slow=20,SNR=7.3						
UAV	Universidad de	2.49	44	P	P	23 33 41.9	+1.3
UAV				S	S	23 34 15.0	+1.3
SOCV	Socops	2.49	54	⇑*i*P	P	23 33 42.0	+1.3
SOCV				*i* S	S	23 34 14.4	+0.7
VIGV	El Vigia	2.52	36	⇑*i*P	P	23 33 41.6	+0.6
VIGV				*e*S	S	23 34 14.4	0.0
CUV	La Culata	2.65	43	P	P	23 33 44.0	+1.4
CUV				S	S	23 34 17.2	+0.2
EAV	Pico El Aguila	2.89	45	P	P	23 33 47.0	+1.6
EAV				S	S	23 34 22.3	+0.2
SDV	Santo Domingo	3.04	47	P	P	23 33 48.7	+1.3
	17nm,0.3s,baz=252,slow=3.0,SNR=111						
SDV				S	S	23 34 25.5	0.0
	13nm,0.3s,baz=74,slow=22,SNR=24						
VIRV	Villa del Rosa	3.71	7	*e*P	P	23 33 54.1	-1.7
VIRV				*e*S	S	23 34 36.2	-4.3
TORV	Torococo	3.80	44	P	P	23 33 56.6	-0.3
SANV	Sanarito	4.26	51	⇓*i*P	P	23 34 03.5	+0.6
SANV				*e*S	S	23 34 53.0	-0.2
CURV	Curarigua	4.31	42	⇑*i*P	P	23 34 03.8	+0.4
CURV				*e*S	S	23 34 53.4	-0.7
DABV	Dabajuro	4.66	28	*e*P	P	23 34 08.0	+0.1
DABV				*e*S	S	23 35 00.1	-2.1
TEPV	Terepaima	4.82	49	⇓*i*P	P	23 34 10.8	+0.8
BAUV	El Baul	5.25	66	⇓*i*P	P	23 34 15.4	-0.2
BAUV				*e*S	S	23 35 14.3	-1.7
TURV	Turiamo	6.17	54	*e*P	P	23 34 28.1	+0.4
CAOV	Caicara del Or	6.53	85	⇓*i*P	P	23 34 32.4	-0.1
CAOV				*e*S	S	23 35 44.1	-2.1
TXAR	Lajitas Array	36.66	312	P	P	23 39 49.2	0.0
	0.2nm,0.5s,mb3.0,baz=132,slow=11,SNR=3.2						
YKA	Yellowknife Ar	63.37	340	P	P	23 43 09.7	-0.5
	0.4nm,0.6s,mb3.4,baz=132,slow=6.6,SNR=13						

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*NEIC **26** 23:35:36.7±1.1, 6.45S×148.58E, mb4.7/3, Error ellipse: s-maj=23.1km s-min=13.3km az=95.0*

*IDC **26** 23:35:37.1±1.6, 6.48S×148.63E, h63^{km}±10^{km}, mb3.7/2, mb1 4.0/5, mb1mx3.7/13, mbtmp4.1/5, MS3.7/8, Ms1 3.7/8, ms1mx3.5/16, Error ellipse: s-maj=41.8km s-min=13.7km az=122.0*

ISC 26 23:35:34.0±1.5, 6.4S±0.1×148.7E±0.2, h63^{km}, n20, σ0^{s}98/21, mb4.4/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.38	207	P	P	23 36 25.4	-0.2
	66nm,0.3s,baz=32,slow=5.3,SNR=68						
PMG				S	S	23 37 04.2	-0.6
	175nm,0.3s,baz=156,slow=21,SNR=20						
PMG				LR	LR	23 37 50.7	
	comp=Z,658nm,21.1s,baz=16,slow=41						
PMG	Port Moresby	3.38	207	P	P	23 36 25.4	-0.2
PMG				S	S	23 37 04.2	-0.6
PMG				LR	LR	23 37 50.7	
CTA	Charters Tower	13.83	190	P	P	23 38 48.7	0.0
	0.2nm,0.3s,baz=34,slow=11,SNR=3.3						
CTA				LR	LR	23 44 04.1	
	comp=Z,251nm,19.8s,baz=32,slow=37						
CTA	Charters Tower	13.83	190	P	P	23 38 48.7	0.0
CTA				LR	LR	23 44 04.1	
CTAO	Charters Tower	13.83	190	*e*P	P	23 38 48.8	+0.2
	26nm,1.3s						
WRAB	Tennant Creek	19.40	225	*e*P	P	23 39 56.0	-1.8
	11nm,0.6s						
WRAB				*e*S	S	23 43 29.2	+0.9
WRA	Warramunga Arr	19.42	225	P	P	23 39 57.0	-1.0
	0.7nm,0.3s,baz=51,slow=11,SNR=12						
WRA				pP		23 40 09.6	
	1.3nm,0.3s,baz=52,slow=11,SNR=11						
WRA				S	S	23 43 33.0	+4.5
	baz=47,slow=22,SNR=9.2						
ASAR	Alice Springs	22.33	218	P	P	23 40 27.6	-0.1
	3.9nm,0.5s,mb4.1,baz=54,slow=9.4,SNR=69						
ASAR				pP		23 40 41.6	
	14nm,0.9s,baz=56,slow=9.5,SNR=15						
ASAR				S	S	23 44 29.0	+4.9
	2.2nm,0.8s,baz=34,slow=20,SNR=10						
ASAR				LR	LR	23 49 55.6	
	comp=Z,149nm,18.9s,baz=38,slow=39						
ASPA	Alice Springs	22.33	218	*e*P	P	23 40 27.6	-0.1
ASPA				*e*S	S	23 44 29.5	+5.4
FITZ	Fitzroy Crossi	25.36	241	*e*P	P	23 40 57.6	+0.5
	33nm,0.6s,mb5.0						
FITZ				*e*S	S	23 45 20.9	+4.5
STKA	Stephens Creek	26.22	194	*e*P	P	23 41 07.2	+2.2
	3.3nm,1.4s,mb3.7						
STKA	Stephens Creek	26.22	194	P	P	23 41 06.5	+1.5
	1.3nm,0.5s,mb3.7,baz=32,slow=13,SNR=7.0						
STKA				pP	pP	23 41 20.4	+0.3
	2.6nm,0.6s,baz=17,slow=10,SNR=3.6						
STKA				LR	LR	23 52 34.5	
	comp=Z,257nm,18.1s,baz=22,slow=39						
STKA	Stephens Creek	26.22	194	*e*P	P	23 41 06.4	+1.4
MBWA	Marble Bar	31.68	240	*e*P	P	23 41 54.0	+0.1
	15nm,1.1s,mb4.7						
JHJ	Hachijo jima 2	40.20	348	LR	LR	23 57 19.9	
	comp=Z,211nm,20.8s,baz=225,slow=32						
CMAR	Chiang Mai Arr	54.95	298	LR	LR	00 07 06.4	
	comp=Z,39nm,21.0s,baz=115,slow=34						
ZAL	Zalesovo	80.27	327	LR	LR	00 23 20.2	
	comp=Z,77nm,20.6s,baz=358,slow=36						
YKA	Yellowknife Ar	98.71	28	LR	LR	00 34 32.5	
	comp=Z,48nm,18.7s,baz=270,slow=36						
GERES	GERESS Array B	123.20	326	PKP	PKPdf	23 54 26.5	+2.5
	0.3nm,0.5s,slow=4.0,SNR=4.9						
DBIC	Dimbokro	153.76	272	PKPbc	PKPdf	23 55 30.5	+12
	1.9nm,0.7s,baz=90,slow=7.1,SNR=3.7						

IDC 27 00:18:57.6±4.4, 2.31N×124.85E, h61^{km}±40^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.9/5, Error ellipse: s-maj=154.0km s-min=17.8km az=69.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.99	158	P	P	00 24 06.0	-1.6
	2.2nm,0.5s,baz=335,slow=11,SNR=28						
WRA				S	S	00 28 20.3	+3.1
	0.5nm,0.8s,baz=330,slow=19,SNR=5.1						
ASAR	Alice Springs	27.28	162	P	P	00 24 36.9	-1.7
	0.5nm,0.4s,baz=348,slow=7.3,SNR=12						
STKA	Stephens Creek	37.53	156	P	P	00 26 06.1	-1.5
	1.3nm,0.3s,baz=331,slow=10,SNR=3.6						
SONM	Songino Array	48.08	343	P	P	00 27 30.7	-2.3
	0.5nm,0.6s,baz=154,slow=8.9,SNR=5.4						
SONM				pP	pP	00 27 46.5	-2.3
	0.4nm,0.7s,baz=169,slow=6.3,SNR=3.9						
SONM				sP	sP	00 27 52.9	-3.0
	0.5nm,0.6s,baz=199,slow=9.4,SNR=4.1						
FINES	FINESS Array B	92.19	332	P	P	00 32 00.8	-0.8
	2.1nm,1.0s,baz=90,slow=4.2,SNR=5.6						

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*PGC **27** 00:31:33.9, 48.07N×128.86W, h10^{km}, MLSn2.9/1, Mw3.5, Northern Juan de Fuca ridge.*

*NEIC **27** 00:31:34.0, 48.07N×128.86W, h10^{km}, mb3.6/1, ML3.5(PGC), After PGC.*

*IDC **27** 00:31:37.3±1.9, 48.33N×128.51W, mb3.3/3, mb1 3.8/11, mb1mx3.6/24, mbtmp3.5/11, ML3.5/8, MS3.1/3, Ms1 3.0/3, ms1mx2.7/17, Error ellipse: s-maj=38.1km s-min=13.4km az=68.0*

ISC 27 00:31:36.4±1.5, 48.37N±0.05×128.46W±0.09, h4^{km}±13^{km}, n33, σ0^{s}98/42, mb3.3/2, MS2.8/2, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	Eliza Dome	1.74	30	Pn	Pn	00 32 07.2	-0.5
OZB	Mount Ozzard	2.05	72	Pn	Pn	00 32 11.4	-0.6
OZB				Sn	Sn	00 32 39.2	+0.8
OZB				Trac		00 32 39.7	
	comp=Z,9.0nm,0.3s						
GDR	Gold River	2.13	48	Pn	Pn	00 32 13.0	-0.2
WOSB	Woss	2.17	34	Pn	Pn	00 32 14.1	+0.2
MAYB	Maynard	2.20	22	Pn	Pn	00 32 13.9	-0.2
BTB	Buttle Lake	2.22	59	Pn	Pn	00 32 15.8	+1.2
BTB				Sn	Sn	00 32 45.4	+2.6
	comp=Z,11nm,0.3s						
BTB				Trac		00 32 47.8	
	comp=Z,11nm,0.3s						
HOLB	Holberg	2.28	5	Pn	Pn	00 32 15.3	0.0
NCRB	Newcastle Ridg	2.57	37	Pn	Pn	00 32 20.0	+0.5
MGB	Mount Grey	2.57	74	Pn	Pn	00 32 18.5	-1.1
MGB				Sn	Sn	00 32 51.6	-0.1
	comp=Z,4.0nm,0.3s						
MGB				Trac		00 32 53.7	
	comp=Z,4.0nm,0.3s						
CBB	Campbell River	2.62	49	Pn	Pn	00 32 21.1	+0.9
PFB	Port Renfrew	2.68	84	Pn	Pn	00 32 19.8	-1.3
PFB				Sn	Sn	00 32 53.4	-1.0
PFB				Trac		00 32 58.1	
	comp=Z,3.0nm,0.4s						
OCWA	Octopus Mounta	2.94	101	*e*P	Pn	00 32 23.2	-1.5
TXB	Texada	2.96	62	Pn	Pn	00 32 25.4	+0.3
TXB				Sn	Sn	00 33 00.6	-0.9
	comp=Z,6.0nm,0.5s						
TXB				Trac		00 33 07.3	
	comp=Z,6.0nm,0.5s						
LZB	Mount Lazard	3.09	84	Pn	Pn	00 32 25.8	-1.1
LZB				Sn	Sn	00 33 05.4	+0.6
LZB				Trac		00 33 15.9	
	comp=Z,1.0nm,0.3s						
SHB	Sechelt	3.26	66	Pn	Pn	00 32 29.1	-0.1
SHB				Sn	Sn	00 33 05.5	-3.5
SHB				Trac		00 33 22.6	
	comp=Z,6.1nm,0.3s						
BBB	Bella Bella	3.82	3	Pn	Pn	00 32 36.5	-0.9
	15nm,0.3s,baz=195,slow=9.5,SNR=115						
BBB				Sn	Sn	00 33 22.8	-0.6
	baz=173,slow=10,SNR=3.4						
BBB	Bella Bella	3.82	3	Pn	Pn	00 32 36.4	-0.9
BBB				Sn	Sn	00 33 22.0	-1.4
BBB				Trac		00 33 28.2	
	comp=Z,7.0nm,0.3s						
WSLR	Whistler	4.03	62	Pn	Pn	00 32 41.4	+1.2
HOPB	Hope	4.75	75	Pn	Pn	00 32 50.0	-0.5
LLLB	Lillooet	4.83	60	Pn	Pn	00 32 52.2	+0.6
NEW	Newport	7.56	87	Pn	Pn	00 33 29.9	-0.2
	0.3nm,0.3s,baz=244,slow=17,SNR=3.9						
NEW				LR	LR	00 36 37.2	
	comp=Z,138nm,19.4s,baz=96,slow=40						
YBH	Yreka Blue Hor	7.78	146	Pn	Pn	00 33 33.9	+0.7
	0.1nm,0.3s,baz=351,slow=13,SNR=3.8						
DLBC	Dease Lake	10.13	355	Pn	P	00 34 01.6	-4.0
	0.1nm,0.3s,baz=19,slow=12,SNR=3.2						
DLBC				Sn	S	00 35 55.6	-5.2
	0.1nm,0.3s,baz=123,slow=27,SNR=3.2						
NVAR	Mina Array Bea	12.37	140	Pn	P	00 34 36.5	+0.5
	0.1nm,0.3s,baz=325,slow=11,SNR=4.7						
PDAR	Pinedale Array	14.36	106	Pn	P	00 35 11.1	+8.7
	0.1nm,0.3s,baz=292,slow=8.0,SNR=5.2						
YKA	Yellowknife Ar	16.13	24	Pn	P	00 35 29.4	+4.2
	0.1nm,0.3s,baz=216,slow=11,SNR=13						
FFC	Flin Flon	17.59	59	*e*P	P	00 35 45.8	+2.1
	3.9nm,0.8s						
PV01	Paradox Valley	17.68	118	*e*P	P	00 35 45.1	0.0
ILAR	Eielson Array	19.19	336	P	P	00 36 03.4	+0.1
	0.0nm,0.3s,baz=157,slow=12,SNR=3.9						
INK	Inuvik	20.16	355	P	P	00 36 14.7	+0.6
	0.5nm,0.5s,baz=148,slow=9.5,SNR=5.4						
ANMO	Albuquerque	21.11	121	LR	LR	00 43 40.2	
	comp=Z,40nm,19.9s,MS2.8,slow=34						
ULM	Lac du Bonnet	21.23	73	P	P	00 36 28.6	+3.2
	1.7nm,0.7s,mb3.5,baz=267,slow=17						
ULM				LR	LR	00 44 18.5	
	comp=Z,43nm,18.2s,MS2.9,baz=249,slow=36						
TXAR	Lajitas Array	26.90	126	P	P	00 37 19.4	-0.8
	0.7nm,1.1s,mb3.1,baz=309,slow=5.8,SNR=3.2						

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*BER **27** 00:41:25.6±8.9, 73.50N×8.62E, ML2.5(NAO)*

NAO 27 00:41:31.1±4.6, 73.78N×10.98E, ML2.5, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPA0	Spitsbergen Ar	4.62	14	Pn	Pn	00 42 40.6	-3.1
	baz=196,slow=18						
SPA0				Sn	Sn	00 43 36.7	-2.2
	baz=158,slow=28						
ARA0	ARCESS Array S	6.24	126	Pn	Pn	00 43 03.2	-3.5
	baz=329,slow=11						
ARA0				Sn	Sn	00 44 16.1	-3.6
	baz=312,slow=22						
FIA0	FINESS Array S	13.58	148	Pn	P	00 44 37.7	-9.3
	baz=1.1,slow=18						

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*IDC **27** 00:45:06.2±2.7, 23.57S×179.94E, h525^{km}±30^{km}, mb3.5/11, mb1 3.7/11, mb1mx3.6/16, mbtmp4.3/11, Error ellipse: s-maj=20.5km s-min=17.6km az=19.0*

*NEIC **27** 00:45:08.0±4.0, 23.60S×179.89E, h551^{km}±49^{km}, mb4.3/6, Error ellipse: s-maj=20.8km s-min=13.8km az=48.0*

ISC 27 00:45:07.0±0.6, 23.7S±0.1×179.9E±0.1, h550^{km}, n21, σ0^{s}64/21, mb4.0/15, 1C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	Rata Peaks	21.28	198	P	P	00 49 16.5	+0.8
	3.8nm,0.5s,mb4.3,baz=158,slow=24,SNR=2.7						
RPZ	Rata Peaks	21.28	198	P	P	00 49 16.5	+0.8
CTA	Charters Tower	31.34	270	P	P	00 50 45.0	+0.7
	18nm,0.3s,mb5.0,baz=97,slow=12,SNR=61						
CTAO	Charters Tower	31.34	270	⇓*i*P	P	00 50 44.9	+0.6
	20nm,0.4s,mb5.0						
PMG	Port Moresby	34.29	289	P	P	00 51 09.5	+0.4
	11nm,0.8s,mb4.5,baz=125,slow=11,SNR=3.2						
PMG	Port Moresby	34.29	289	*e*P	P	00 51 09.2	+0.1
	4.6nm,0.5s,mb4.3						
STKA	Stephens Creek	34.69	248	P	P	00 51 13.0	+0.7
	1.7nm,0.5s,mb3.9,baz=98,slow=11,SNR=5.1						
STKA	Stephens Creek	34.69	248	*e*P	P	00 51 12.7	+0.4
ASAR	Alice Springs	41.94	260	P	P	00 52 11.2	-0.1
	3.5nm,0.5s,mb4.2,baz=94,slow=7.5,SNR=22						
ASAR				ScP		00 56 55.1	
	1.9nm,0.9s,baz=106,slow=4.3,SNR=12						
WRAB	Tennant Creek	42.28	266	*e*P	P	00 52 13.4	-0.7
	8.7nm,0.8s,mb4.3						
WRA	Warramunga Arr	42.29	266	P	P	00 52 13.4	-0.7
	3.9nm,0.3s,mb4.4,baz=92,slow=8.3,SNR=94						
KAKA	Kakadu	46.16	275	⇓*i*P	P	00 52 43.0	-1.2
FITZ	Fitzroy Crossi	50.72	265	*e*P	P	00 53 18.4	+0.1
	6.3nm,0.8s,mb4.0						
VNDA	Vanda	54.61	185	P	P	00 53 44.9	-0.5
	0.9nm,1.0s,mb3.0,baz=23,slow=7.7,SNR=3.0						
QSPA	South Pole Qui	66.43	180	⇑*i*P	P	00 55 02.5	-0.4
	6.6nm,0.6s,mb4.3						
NVAR	Mina Array Bea	84.67	44	P	P	00 56 43.9	0.0
	0.7nm,0.7s,mb3.3,baz=214,slow=5.3,SNR=4.3						

CMAR	**Chiang Mai Arr**	89.32	290	P	P	00 57 07.8	+1.4
	0.4nm,0.4s,mb3.6,baz=135,slow=2.6,SNR=3.3						
HLID	**Hailey**	90.00	42	P	P	00 57 08.8	-0.1
MNTX	**Cornudas Mount**	90.18	55	*e*P	P	00 57 09.4	-0.7
	0.7nm,0.6s,mb3.7						
TXAR	**Lajitas Array**	90.41	58	P	P	00 57 11.3	+0.1
	0.9nm,0.7s,mb3.7,baz=214,slow=6.6,SNR=15						
PDAR	**Pinedale Array**	92.61	44	P	P	00 57 21.4	+0.5
	0.6nm,0.9s,mb3.6,baz=225,slow=2.1,SNR=4.0						

IDC 27 00:53:32.7±16.0,**18.57S**×**175.31W**,**mb3.6**/3,**mb1 3.8**/3, **mb1mx3.6**/15,**mbtmp3.6**/3,**Error ellipse: s-maj=394.7km s-min=46.3km az=37.0**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	47.41	260	P	P	01 02 08.6	-2.4
	0.2nm,0.6s,baz=97,slow=6.6,SNR=2.8						
ASAR	**Alice Springs**	47.45	255	P	P	01 02 09.9	-1.4
	0.7nm,0.5s,baz=90,slow=8.4,SNR=9.5						
VNDA	**Vanda**	60.06	186	P	P	01 03 41.0	-2.4
	1.8nm,1.2s,baz=45,slow=5.7,SNR=5.8						

*MOS **27** 01:34:15.8±1.4,32.34N×49.27E,h10^{km},mb4.5/23,Error ellipse: s-maj=10.7km s-min=5.0km az=125.3*

*BJI **27** 01:34:17.9,32.40N×49.30E,h10^{km},mB5.0,mb4.4,Ms4.1, Msz3.7*

*TEH **27** 01:34:20.0,32.20N×49.30E,h10^{km},Mn4.2*

*NEIC **27** 01:34:20.0,32.20N×49.30E,h10^{km},mb4.4/38, MN4.2(TEH),After TEH.*

NEIC Felt at Dasht-e Lali.

*THR **27** 01:34:20.2±1.0,32.46N×49.37E,h14^{km}±8^{km},ML4.1*

*IDC **27** 01:34:22.4±3.6,32.48N×49.30E,h37^{km}±29^{km},mb3.9/21, mb1 4.0/25,mb1mx4.0/29,mbtmp4.1/25,ML3.5/2,Error ellipse: s-maj=20.0km s-min=15.6km az=159.0*

*CSEM **27** 01:34:22.3±0.1,32.39N×49.31E,h60^{km},mb4.4/31,Error ellipse: s-maj=2.1km s-min=1.4km az=129.0*

ISC 27 01:34:22.2±0.3,**32.38N**±0.03×**49.24E**±0.03,**h56**^{km}±3^{km}, **n180**,σ**1**$\overset{s}{.}$**22**/195,**mb4.3**/57,**MS3.4**/3,**14C-6D**,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	0.46	234	*e*PG	P	01 34 31.2	-2.4
SHGR				*e*SG	S	01 34 40.6	-1.3
SHGR				AML	AML	01 34 45.4	
	comp=N,15µm,0.5s						
IBRJ	**Borojen**	1.82	109	Pn	P	01 34 52.1	+0.3
ASAO	**Ashtian**	2.26	17	*e*PG	P	01 34 59.1	+1.1
ASAO				*e*SG	S	01 35 28.3	+3.7
ASAO				AML	AML	01 35 38.1	
	comp=N,1µm,0.6s						
IKOM	**Komasi**	2.30	322	Pn	P	01 35 00.8	+2.2
IQOM	**Qom**	2.89	31	Pn	P	01 35 04.6	-2.4
IVIS	**Veys**	2.93	318	Pn	P	01 35 08.6	+1.1
IGHG	**Ghaleghazi**	2.97	312	Pn	P	01 35 08.4	+0.4
NASN	**Na'in**	3.04	81	*e*PN	P	01 35 08.6	-0.4
IRAZ	**Razeghan**	3.07	11	Pn	P	01 35 10.6	+1.1
IRAZ				Sn	S	01 35 48.7	+3.5
SNGE	**Sanandaj**	3.13	330	*e*PN	P	01 35 11.3	+0.9
ISFB	**Sefidab**	3.19	51	Pn	P	01 35 10.7	-0.4
ISFB				Sn	S	01 35 49.7	+1.6
IDHR	**Dehrash**	3.32	315	Pn	P	01 35 13.6	+0.5
IVRN	**Varamin**	3.33	38	Pn	P	01 35 13.1	-0.1
IVRN				Sn	S	01 35 52.8	+1.0
IMHD	**Mahdasht**	3.50	19	Pn	P	01 35 15.6	0.0
IMHD				Sn	S	01 35 57.7	+1.6
NAY	**Al-Naaiem**	3.56	209	*e*P	P	01 35 16.9	+0.5
NAY				*e*S	S	01 35 59.2	+1.6
RDF	**Al-Radifah**	3.74	203	*e*P	P	01 35 19.8	+0.9
RDF				*e*S	S	01 36 02.8	+0.7
QRN	**Al-Qurain**	3.80	198	*e*P	P	01 35 20.3	+0.6
QRN				*e*S	S	01 36 04.7	+1.1
IDMV	**Damavand**	3.94	35	Pn	P	01 35 21.4	-0.4
DAMV	**Damavand**	3.96	34	*e*PN	P	01 35 21.4	-0.6
DAMV				AML	AML	01 36 26.7	
	comp=N,136nm,0.7s						
IAFJ	**Afjeh**	4.03	30	Pn	P	01 35 22.9	-0.1
IAFJ				Lg		01 36 29.6	
BHD	**Baghdad**	4.19	284	*e*Pn	P	01 35 41.0	+16
BHD				*e*Sn	S	01 36 41.0	+28
IFIR	**Firoozkooh**	4.37	41	Pn	P	01 35 27.2	-0.6
IFIR				Sn	S	01 36 17.4	-0.5
IMOK	**Mook**	4.47	137	Pn	P	01 35 25.2	-4.0
ISRV	**Sarvestan**	4.47	131	Pn	P	01 35 26.0	-3.2
MSL	**Mosul**	6.41	309	*e*Pn	P	01 35 56.5	+0.2
MSL				*e*Sn	S	01 37 07.5	-1.4
GRMI	**Germi**	6.51	351	*e*PN	P	01 35 56.7	-1.0
GNI	**Garni**	8.56	336	P	P	01 36 18.6	-7.4
GNI	**Garni**	8.56	336	Pn	P	01 36 24.5	-1.5
	comp=N,0.3nm,0.3s,baz=36,slow=17,SNR=2.7						
RAYN	**Ar Rayn**	9.42	201	Pn	P	01 36 33.9	-3.9
	comp=N,237nm,0.4s						
RAYN	**Ar Rayn**	9.42	201	Pn	P	01 36 33.5	-4.3
TI2	**Plekhanov**	10.00	340	*e*P	P	01 36 56.4	+11
ASF	**Jabal al Asfar**	10.46	272	Pn	P	01 36 50.0	-2.0
	comp=N,1.7nm,0.3s,baz=322,slow=6.4,SNR=10						
ASF				Sn	S	01 38 38.9	-10
	comp=N,0.7nm,0.3s,baz=343,slow=10,SNR=3.2						
MALT	**Malatya**	10.63	307	*e*P	P	01 36 51.8	-2.5
MALT				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MALT	**Malatya**	10.63	307	*e*P	P	01 36 51.8	-2.5
	comp=Z,3.8nm,0.6s						
EIL	**Elat**	12.55	261	Pn	P	01 37 18.2	-2.0
	comp=Z,0.3nm,0.3s,baz=38,slow=30,SNR=3.3						
EIL				Sn	S	01 39 31.3	-7.8
	comp=Z,0.5nm,0.3s,baz=2.8,slow=16,SNR=2.7						
EIL	**Elat**	12.55	261	*e*P	P	01 37 17.2	-3.0
KIV	**Kislovodsk**	12.65	338	P	P	01 37 17.1	-4.4
SOC	**Sochi**	13.46	329	*e*P	P	01 37 38.5	+6.4
SOC				pmax	pmax		
	comp=Z,14nm,0.6s						
SOC				pmax	pmax		
	comp=N,6.0nm,0.7s						
SOC				pmax	pmax		
	comp=E,7.0nm,0.5s						
SOC				MLR	MLR		
	comp=Z,426nm,22.0s						
SOC				MLR	MLR		
	comp=N,472nm,20.0s						
SOC				MLR	MLR		
	comp=E,131nm,18.0s						
SOC	**Sochi**	13.46	329	*e*P	P	01 37 38.5	+6.4
	comp=E,14nm,0.6s						
GOF	**Gofitskoye**	13.55	341	*e*P	P	01 37 43.2	+10
BRTR	**Keskin Array B**	14.59	305	Pn	P	01 37 46.6	-0.2
	comp=E,0.1nm,0.3s,baz=135,slow=12,SNR=7.9						
IDI	**Anoyia**	20.43	285	P	P	01 38 57.7	+0.5
	comp=E,12nm,0.6s,baz=54,slow=6.5,SNR=16						
CFR	**Carcaliu**	20.76	314	⇓P	P	01 38 59.5	-1.0
VRI	**Vrincioaia**	21.96	314	⇑P	P	01 39 13.4	+0.8
MLR	**Muntele Rosu**	22.26	313	⇑P	P	01 39 17.7	+2.2
MLR	**Muntele Rosu**	22.26	313	P	P	01 39 17.6	+2.1
	comp=E,14nm,0.7s,mb4.5						
MLR	**Muntele Rosu**	22.26	313	⇑P	P	01 39 17.6	+2.1
AAK	**Ala-Archa**	22.42	56	⇑*i*P	P	01 39 17.4	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
AAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS3.6						
AAK	**Ala-Archa**	22.42	56	⇑*i*P	P	01 39 17.4	+0.3
	comp=Z,2.0nm,0.8s,mb3.6						
AAK				LR	LR		
	comp=Z,200nm,19.0s,MS3.6						
AAK	**Ala-Archa**	22.42	56	⇑*i*P	P	01 39 17.4	+0.3
	comp=Z,2.0nm,0.8s,mb3.6						
KSH	**Kashi**	22.73	64	*e*P	P	01 39 24.0	+3.9
KSH				*e*AP		01 39 28.0	
KSH				*e*XP		01 39 32.5	
KSH				*e*PCP	PcP	01 43 15.5	+3.4
KSH				*e*S	S	01 43 30.5	+10
KSH				*e*XS		01 43 37.5	
KSH				LR	LR		
	comp=N,230nm,5.4s						
KSH				LR	LR		
	comp=E,260nm,6.3s						
VTS	**Vitosha**	22.96	304	⇑P	P	01 39 25.2	+2.9
AKASG	**Malin Array Be**	23.53	327	P	P	01 39 28.4	+0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	23.53	327	P	P	01 39 28.4	+0.7
	comp=Z,1.6nm,0.4s,mb3.9,baz=138,slow=8.9,SNR=23						
BURAR	**Bucovina Array**	23.75	317	⇓P	P	01 39 32.6	+2.7
BURAR	**Bucovina Array**	23.75	317	⇓P	P	01 39 32.6	+2.7
OBN	**Obninsk**	24.43	342	*e*P	P	01 39 38.2	+1.8
OBN						01 40 11.0	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.4						
OBN	**Obninsk**	24.43	342	*e*P	P	01 39 38.2	+1.8
	comp=Z,9.0nm,0.8s,mb4.2						
OBN				*e*		01 40 11.0	
OBN				LR	LR		
	comp=Z,100nm,17.0s,MS3.4						
MOS	**Moscow**	24.73	344	*e*P	P	01 39 40.7	+1.3
BZS	**Buzias**	25.07	310	⇓P	P	01 39 44.1	+1.3
BVAR	**Borovoye Array**	25.65	30	P	P	01 39 47.7	-0.4
	comp=Z,2.8nm,0.6s,mb4.0,baz=227,slow=9.6,SNR=14						
KOLS	**Kolonicke sedl**	26.11	317	*i*P	P	01 39 54.3	+1.9
CHKZ	**Chkalovo**	26.21	29	*e*P	P	01 39 53.7	+0.4
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
KWP	**Kalwaria**	26.22	319	*e*P	P	01 39 54.2	+0.8
CRVS	**Cervenica-Dubn**	26.57	317	*e*P	P	01 40 02.7	+6.1
OJC	**Ojcow**	28.14	318	*e*P	P	01 40 11.1	+0.1
KURK	**Kurchatov**	28.34	41	*e*P	P	01 40 10.5	-2.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
SUW	**Suwalki**	28.50	327	*e*P	P	01 40 13.6	-0.5
KOGS	**Kog**	28.87	309	*e*P	P	01 40 18.4	+0.9
KOGS	**Kog**	28.87	309	*e*P	P	01 40 18.4	+0.9
OKC	**Ostrava-Krasne**	28.92	316	*e*P	P	01 40 18.1	+0.2
BOJS	**Bojanci**	29.28	306	*e*P	P	01 40 23.0	+1.9
VRAC	**Vranov**	29.63	314	P	P	01 40 24.4	+0.2
	comp=Z,3.5nm,0.9s,mb4.1,baz=96,slow=9.0,SNR=5.7						
DPC	**Dobruska-Polom**	30.20	316	*e*P	P	01 40 29.3	0.0
GERES	**GERESS Array B**	31.25	312	P	P	01 40 37.9	-0.6
	comp=Z,0.8nm,0.5s,mb3.8,baz=114,slow=8.2,SNR=12						
GERES						01 43 31.9	-0.1
	comp=Z,0.5nm,0.5s,baz=153,slow=3.0,SNR=5.7						
GERES	**GERESS Array B**	31.25	312	PcP	PcP	01 43 31.9	-0.1
KHC	**Kasperske Hory**	31.42	313	*e*P	P	01 40 40.0	0.0
WMQ	**Urumqi**	32.07	58	*e*P	P	01 40 46.3	+0.5
WMQ				XP	sP	01 40 54.0	-13
WMQ				PP	PP	01 41 53.0	-0.6
WMQ				S	S	01 45 57.0	+4.2
WMQ				SS	SS	01 47 49.0	+0.4
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.7						
WMQ				LR	LR		
	comp=N,48nm,16.0s,MS3.3						
WMQ				LR	LR		
	comp=E,15nm,16.0s,MS3.3						
WMQ				LR	LR		
	comp=Z,39nm,16.0s,MS3.2						
WMQ	**Urumqi**	32.07	58	*e*P	P	01 40 46.3	+0.5
	comp=Z,9.0nm,0.7s,mb4.7						
WMQ				sP	sP	01 40 54.0	-13
WMQ				PP	PP	01 41 53.0	-0.6
WMQ				S	S	01 45 57.0	+4.2
WMQ				SS	SS	01 47 49.0	+0.4
WMQ				LR	LR		
	comp=Z,40nm,16.0s,MS3.2						
WTTA	**Wattenberg**	32.14	309	⇑*i*P	P	01 40 45.9	-0.5
	comp=Z,6.6nm,0.9s,mb4.5						
WTTA	**Wattenberg**	32.14	309	⇑*i*P	P	01 40 45.9	-0.5
WTTA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
WATA	**Walderalm**	32.19	309	⇑*i*P	P	01 40 46.3	-0.5
	comp=Z,6.4nm,1.1s,mb4.4						
WATA	**Walderalm**	32.19	309	⇑*i*P	P	01 40 46.3	-0.5
WATA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.3						
SQTA	**Sankt Quirin**	32.41	308	⇓*i*P	P	01 40 48.3	-0.4
	comp=Z,1.6nm,0.6s,mb4.0						
SQTA	**Sankt Quirin**	32.41	308	⇓*i*P	P	01 40 48.3	-0.4
SQTA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
MOTA	**Moosalm**	32.51	309	⇑*i*P	P	01 40 49.0	-0.6
	comp=Z,3.1nm,1.0s,mb4.2						
MOTA	**Moosalm**	32.51	309	⇑*i*P	P	01 40 49.0	-0.6
MOTA				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
CLL	**Collm**	32.52	316	*e*P	P	01 40 50.0	+0.4
JOF	**Joensuu**	32.62	345	*e*p	P	01 40 49.0	-1.4
FINES	**FINESS Array B**	32.73	340	P	P	01 40 50.3	-1.1
	comp=Z,0.9nm,0.4s,mb4.1,baz=141,slow=8.6,SNR=20						
GRA1	**Grafenberg Arr**	33.05	313	*e*P	P	01 40 54.8	+0.5
	comp=Z,20nm,1.2s,mb4.9						
GRF	**Grafenberg Arr**	33.05	313	*e*P	P	01 40 54.8	+0.5
GRF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
GRF	**Grafenberg Arr**	33.05	313	*e*P	P	01 40 54.8	+0.5
GRF				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
GRF	**Grafenberg Arr**	33.05	313	*e*P	P	01 40 54.8	+0.5
	comp=Z,20nm,1.2s,mb4.9						
BSD	**Bornholm Skovb**	33.10	324	*i*P	P	01 40 54.1	-0.6
BSD				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.4						
BSD	**Bornholm Skovb**	33.10	324	*i*P	P	01 40 54.1	-0.6
	comp=Z,38nm,0.7s,mb5.4						
ZAL	**Zalesovo**	33.19	39	P	P	01 40 54.7	-0.8
	comp=Z,1.6nm,0.3s,mb4.4,baz=232,slow=4.3,SNR=8.2						
KAF	**Kangasniemi**	33.20	340	*e*p	P	01 40 55.0	-0.4
	comp=Z,0.5nm,0.3s,mb3.9						
KAF	**Kangasniemi**	33.20	340	*e*P	P	01 40 55.0	-0.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
PGF	**Pioggiola**	33.24	299	*e*P	P	01 40 53.5	-2.5
	comp=Z,151nm,1.4s,mb5.4						
PGF	**Pioggiola**	33.24	299	*e*P	P	01 40 53.5	-2.5
PGF				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.4						
DAVA	**Damuels**	33.31	308	⇑*i*P	P	01 40 56.0	-0.5
	comp=Z,7.4nm,0.5s,mb4.9						
MBDF	**Montbardon**	35.05	303	*e*P	P	01 41 09.4	-2.1
	comp=Z,4.2nm,0.5s,mb4.3						
MBDF	**Montbardon**	35.05	303	*e*P	P	01 41 09.4	-2.1
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
LPG	**La Plagne**	35.15	304	*e*P	P	01 41 09.8	-2.5
	comp=Z,5.8nm,0.6s,mb4.4						
LPG	**La Plagne**	35.15	304	*e*P	P	01 41 09.8	-2.5
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
LPL	**La Plagne**	35.16	304	*e*P	P	01 41 09.9	-2.5
	comp=Z,3.6nm,0.6s,mb4.2						
LPL	**La Plagne**	35.16	304	*e*P	P	01 41 09.9	-2.5
LPL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ORIF	**Oris-en-Rattie**	35.70	303	*e*P	P	01 41 14.6	-2.4
	comp=Z,16nm,1.1s,mb4.5						
ORIF	**Oris-en-Rattie**	35.70	303	*e*P	P	01 41 14.6	-2.4
ORIF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
CABF	**La Chapelle**	35.75	306	*e*P	P	01 41 15.1	-2.3
	comp=Z,13nm,0.7s,mb4.7						
CABF	**La Chapelle**	35.75	306	*e*P	P	01 41 15.1	-2.3
CABF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
LASF	**Ste Croix**	37.08	302	*e*P	P	01 41 26.1	-2.6
SMF	**Signal de Mont**	37.29	306	*e*P	P	01 41 27.6	-2.8
	comp=Z,8.6nm,0.8s,mb4.3						
SMF	**Signal de Mont**	37.29	306	*e*P	P	01 41 27.6	-2.8
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
NB2	**NORSAR Subarra**	37.82	331	P	P	01 41 34.0	-0.6
	comp=Z,5.3nm,0.8s,mb4.3,baz=123,slow=8.6						
NB2	**NORSAR Subarra**	37.82	331	P	P	01 41 34.0	-0.6
NB2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
NOA	**NORSAR Array B**	37.82	331	P	P	01 41 34.1	-0.5
	comp=Z,3.8nm,0.7s,mb4.2,baz=122,slow=8.4,SNR=15						
BGF	**Bois d'Agland**	37.96	306	*e*P	P	01 41 33.6	-2.4
	comp=Z,36nm,1.2s,mb4.7						
BGF	**Bois d'Agland**	37.96	306	*e*P	P	01 41 33.6	-2.4
BGF				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.6						
RJF	**Les Rejaudoux**	38.81	304	*e*P	P	01 41 40.2	-2.8
ARCES	**ARCESS Array B**	39.53	347	P	P	01 41 48.5	-0.2
	comp=Z,6.8nm,1.1s,mb4.3,baz=149,slow=9.8,SNR=6.5						
ERTA	**Horta de San J**	39.72	297	P	P	01 41 51.8	+1.2
	comp=Z,30nm,0.9s,mb5.0						
ERTA	**Horta de San J**	39.72	297	P	P	01 41 51.8	+1.2
	comp=Z,30nm,0.9s,mb5.0,SNR=7.9						
EMOS	**Mosqueruela**	40.37	296	P	P	01 41 57.7	+1.7
	comp=Z,16nm,0.6s,mb4.9						
EMOS	**Mosqueruela**	40.37	296	P	P	01 41 57.7	+1.7
	comp=Z,16nm,0.6s,mb4.9,SNR=8.9						
ETOB	**Tobarra**	41.38	293	P	P	01 42 05.2	+0.8
	comp=Z,4.5nm,0.8s,mb4.2						
ETOB	**Tobarra**	41.38	293	P	P	01 42 05.2	+0.8
	comp=Z,4.5nm,0.8s,mb4.2,SNR=5.2						
EVIA	**Vianos**	42.12	294	P	P	01 42 12.1	+1.6
EVIA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.5						
EVIA	**Vianos**	42.12	294	P	P	01 42 12.1	+1.6
	comp=Z,5.7nm,0.5s,mb4.5						
EVIA	**Vianos**	42.12	294	P	P	01 42 12.1	+1.6
	comp=Z,5.7nm,0.5s,mb4.5,SNR=7.9						
ENIJ	**Nijar**	42.14	291	P	P	01 42 10.7	0.0
ENIJ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
ENIJ	**Nijar**	42.14	291	P	P	01 42 10.7	0.0
	comp=Z,3.4nm,0.5s,mb4.2						
ENIJ	**Nijar**	42.14	291	P	P	01 42 10.7	0.0
	comp=Z,3.4nm,0.5s,mb4.2,SNR=7.9						
EHUE	**Huescar**	42.31	292	P	P	01 42 13.2	+1.2
EHUE				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
EHUE	**Huescar**	42.31	292	P	P	01 42 13.2	+1.1
	comp=Z,0.6nm,0.3s,mb3.7						
EHUE	**Huescar**	42.31	292	P	P	01 42 13.2	+1.2
	comp=Z,0.6nm,0.3s,mb3.7,SNR=7.9						
EQES	**Quesada**	42.69	292	P	P	01 42 15.8	+0.7
	comp=Z,4.3nm,0.4s,mb4.5						
EQES	**Quesada**	42.69	292	P	P	01 42 15.8	+0.7
	comp=Z,4.3nm,0.4s,mb4.5,SNR=13						
EBER	**Berja**	42.70	291	P	P	01 42 17.0	+1.8
	comp=Z,3.2nm,0.4s,mb4.4						
EBER	**Berja**	42.70	291	P	P	01 42 17.0	+1.8
	comp=Z,3.2nm,0.4s,mb4.4,SNR=8.4						
EKA	**Eskdalemuir Ar**	42.92	318	P	P	01 42 17.6	+0.9
	comp=Z,3.1nm,1.1s,mb4.0,baz=103,slow=7.6,SNR=4.0						
EKA	**Eskdalemuir Ar**	42.92	318	P	P	01 42 17.6	+0.9
EALB	**Alboran**	42.98	290	P	P	01 42 17.7	+0.1
	comp=Z,9.6nm,0.2s,mb5.2						
EALB	**Alboran**	42.98	290	P	P	01 42 17.7	+0.1
	comp=Z,9.6nm,0.2s,mb5.1,SNR=7.9						
ESDC	**Sonseca Array**	43.11	295	P	P	01 42 18.6	0.0
	comp=Z,1.0nm,0.6s,mb3.7,baz=73,slow=7.7,SNR=6.3						
ESDC	**Sonseca Array**	43.11	295	P	P	01 42 20.5	+1.9
	comp=Z,0.7nm,0.6s,mb3.6						
ESDC	**Sonseca Array**	43.11	295	P	P	01 42 20.5	+2.0
	comp=Z,0.7nm,0.6s,mb3.6,SNR=5.9						
ECOG	**Cogollos-Vega**	43.16	292	P	P	01 42 19.4	+0.4
ECOG				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
ECOG	**Cogollos-Vega**	43.16	292	P	P	01 42 19.4	+0.4
	comp=Z,1.0nm,0.3s,mb4.0,SNR=7.9						
EADA	**Adamuz**	43.81	293	P	P	01 42 24.0	-0.2
	comp=Z,1.5nm,0.6s,mb3.9						
EADA	**Adamuz**	43.81	293	P	P	01 42 24.0	-0.2
	comp=Z,1.5nm,0.6s,mb3.9,SNR=4.9						
EMIJ	**Mijas**	44.24	291	P	P	01 42 27.9	+0.2
	comp=Z,9.6nm,0.6s,mb4.7						
EMIJ	**Mijas**	44.24	291	P	P	01 42 28.0	+0.3
	comp=Z,9.6nm,0.6s,mb4.7						
EJIF	**Jimena Fronter**	44.82	291	P	P	01 42 31.5	-0.8
EJIF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
EJIF	**Jimena Fronter**	44.82	291	P	P	01 42 31.5	-0.8
	comp=Z,2.0nm,0.4s,mb4.3,SNR=7.9						
ESPR	**Espera**	45.04	292	P	P	01 42 33.7	-0.4
	SNR=7.9						
SONM	**Songino Array**	45.33	53	P	P	01 42 36.4	+0.2
	comp=Z,0.2nm,0.5s,baz=264,slow=7.0,SNR=5.6						
EMIN	**Mina Concepcio**	45.51	293	P	P	01 42 38.9	+1.0
	comp=Z,3.7nm,0.9s,mb4.3						
EMIN	**Mina Concepcio**	45.51	293	P	P	01 42 38.8	+1.0
	comp=Z,3.7nm,0.9s,mb4.3,SNR=6.8						
ULN	**Ulaanbaatar**	45.77	53	*e*P	P	01 42 40.0	+0.3
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
ULN	**Ulaanbaatar**	45.77	53	*e*P	P	01 42 40.0	+0.3
	comp=Z,3.1nm,1.1s,mb4.2						
ULN	**Ulaanbaatar**	45.77	53	*e*P	P	01 42 40.0	+0.3
	comp=Z,3.1nm,1.1s,mb4.2						
CMAR	**Chiang Mai Arr**	46.59	95	P	P	01 42 46.5	-0.1
	comp=Z,0.6nm,0.3s,mb4.0,baz=270,slow=7.1,SNR=4.4						
CMAR	**Chiang Mai Arr**	46.59	95	P	P	01 42 46.5	-0.1
MATP	**Matopo**	56.13	204	P	P	01 43 59.3	+0.8
	comp=Z,1.9nm,0.8s,mb4.2,baz=348,slow=16,SNR=4.4						
DBIC	**Dimbokro**	56.34	255	P	P	01 44 00.2	+0.2
	comp=Z,2.5nm,0.9s,mb4.2,baz=275,slow=0.8,SNR=6.4						
TIXI	**Tiksi**	56.37	22	*e*P	P	01 43 58.1	-1.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.3						
TIXI	**Tiksi**	56.37	22	*e*P	P	01 43 58.1	-1.4
	comp=Z,4.0nm,1.4s,mb4.3						
YAK	**Yakutsk**	57.57	33	*i*P	P	01 44 07.0	-1.1
CN2	**Changchun**	59.09	55	*e*P	P	01 44 18.0	-0.9
SSE	**Sheshan**	60.07	70	P	P	01 44 19.1	-6.8
	comp=Z,39nm,0.7s						
MDJ	**Mudanjiang**	61.68	53	P	P	01 44 34.5	-2.1
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,111nm,5.3s						
MDJ	**Mudanjiang**	61.68	53	P	P	01 44 34.5	-2.1
	comp=Z,6.0nm,1.5s,mb4.5						
BILL	**Bilibino**	69.56	21	P	P	01 45 27.0	+0.4
SCHQ	**Schefferville**	77.32	328	P	P	01 46 12.2	+0.1
	comp=Z,1.6nm,0.5s,mb4.2,baz=68,slow=12,SNR=2.5						
INK	**Inuvik**	79.60	1	P	P	01 46 24.2	-0.1
	comp=Z,0.3nm,0.5s,mb3.5,baz=300,slow=11,SNR=3.2						
ILAR	**Eielson Array**	82.35	7	P	P	01 46 39.1	+0.3
	comp=Z,1.5nm,0.7s,mb4.0,baz=318,slow=3.8,SNR=15						
YKA	**Yellowknife Ar**	84.57	353	P	P	01 46 50.6	+0.6
	comp=Z,1.0nm,1.0s,mb3.9,baz=8.7,slow=4.9,SNR=11						
DLBC	**Dease Lake**	89.53	360	P	P	01 47 15.3	+1.2
	comp=Z,0.9nm,0.5s,mb4.4,baz=244,slow=14,SNR=3.2						

*MOS **27** 01:38:53.4±1.0,32.38N×49.33E,h10^{km},mb4.8/29,Error ellipse: s-maj=9.8km s-min=4.3km az=125.7*

*CSEM **27** 01:38:54.5±0.1,32.40N×49.16E,h16^{km},mb4.8/49, ML5.0/1,Error ellipse: s-maj=2.3km s-min=1.5km az=17.0*

*BJI **27** 01:38:55.4,32.40N×49.40E,h10^{km},mB5.0,mb4.4,Ms4.4, Msz4.3*

*THR **27** 01:38:57.3±0.9,32.44N×49.37E,h14^{km}±8^{km},ML4.1*

*TEH **27** 01:38:58.6,32.32N×49.33E,h9^{km},Mn4.4*

*NEIC **27** 01:38:58.6,32.32N×49.33E,h9^{km},mb4.7/47, MN4.4(TEH),After TEH.*

NEIC Felt at Dasht-e Lali.

*IDC **27** 01:38:59.7±2.6,32.42N×49.35E,h40^{km}±22^{km},mb4.1/23, mb1 4.2/27,mb1mx4.2/30,mbtmp4.3/27,ML3.6/2,MS3.5/2, Ms1 3.5/2,ms1mx2.9/21,Error ellipse: s-maj=17.7km s-min=14.3km az=172.0*

ISC 27 01:38:58.8±0.3,**32.33N**±0.03×**49.28E**±0.03,**h51**^{km}±3^{km}, **n224**,σ**1**$\overset{s}{.}$**01**/233,**mb4.5**/71,**MS3.8**/4,**10C-5D**,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGO	**Shushtar**	0.46	242	*i* PG	P	01 39 08.4	-1.3
SHGO				AML	AML	01 39 32.3	
	comp=N,8µm,0.6s						
SHGR	**Shooshtar-Gavs**	0.46	242	*i* PG	P	01 39 08.4	-1.3
SHGR				*e*SG	S	01 39 17.0	-0.6
SHGR				AML	AML	01 39 25.9	
	comp=E,15µm,0.5s						
IBRJ	**Borojen**	1.78	108	Pn	P	01 39 29.3	+1.6
ASAO	**Ashtian**	2.30	16	*e*PG	P	01 39 36.5	+1.4
ASAO				*e*SG	S	01 40 06.2	+4.0
ASAO				AML	AML	01 40 19.5	
	comp=N,2µm,0.6s						
ASAO	**Ashtian**	2.30	16	*e*Pg	P	01 39 36.5	+1.4
	SNR=90						
ASAO				*e*Sg	S	01 40 06.2	+4.0
	comp=N,2µm,0.6s,SNR=90						
IKOM	**Komasi**	2.36	322	Pn	P	01 39 37.9	+1.9
IQOM	**Qom**	2.92	30	Pn	P	01 39 42.2	-1.7
IQOM				Sn	S	01 40 18.4	+0.5
IVIS	**Veys**	2.99	318	Pn	P	01 39 46.0	+1.1
NASN	**Na'in**	3.02	80	*e*PN	P	01 39 45.9	+0.6
NASN				AML	AML	01 40 32.7	

	comp=N,492nm,0.4s						
IGHG	Ghaleghazi	3.02	312	Pn	P	01 39 46.1	+0.7
IRAZ	Razeghan	3.11	10	Pn	P	01 39 47.8	+1.1
IRAZ				Sn	S	01 40 23.8	+0.9
SNGE	Sanandaj	3.19	330	*e*PN	P	01 39 48.8	+1.0
SNGE				AML	AML	01 40 58.9	
	comp=E,457nm,0.8s						
ISFB	Sefidab	3.19	50	Pn	P	01 39 47.7	-0.1
ISFB				Sn	S	01 40 25.2	+0.3
IVRN	Varamin	3.35	37	Pn	P	01 39 50.3	+0.3
IVRN				Sn	S	01 40 27.3	-1.6
IVRN				Lg		01 40 42.2	
IDHR	Dehrash	3.38	315	Pn	P	01 39 51.1	+0.7
IMHD	Mahdasht	3.54	19	Pn	P	01 39 52.9	+0.2
IMHD				Sn	S	01 40 34.1	+0.4
RDF	Al-Radifah	3.71	204	*e*S	S	01 40 41.0	+3.1
QRN	Al-Qurain	3.76	199	*e*S	S	01 40 41.4	+2.1
IDMV	Damavand	3.96	34	Pn	P	01 39 58.6	-0.1
DAMV	Damavand	3.98	33	*e*PN	P	01 39 58.7	-0.2
DAMV				AML	AML	01 41 13.4	
	comp=N,272nm,0.6s						
IAFJ	Afjeh	4.05	29	Pn	P	01 40 00.1	+0.2
IAFJ				Lg		01 41 04.8	
BHD	Baghdad	4.23	284	*e*Pn	P	01 40 20.0	+18
BHD				*e*Sn	S	01 41 17.5	+26
ICHK	Chekchek	4.34	90	Pn	P	01 40 03.4	-0.6
IFIR	Firoozkooh	4.39	40	Pn	P	01 40 04.5	-0.1
IMOK	Mook	4.41	137	Pn	P	01 40 04.7	-0.3
ISRV	Sarvestan	4.42	131	Pn	P	01 40 04.8	-0.2
IMEH	Mehriz	4.63	100	Pn	P	01 40 07.5	-0.6
IBAF	Bafgh	5.39	96	Pn	P	01 40 18.1	-0.6
MSL	Mosul	6.47	309	*e*Pn	P	01 40 33.5	-0.2
MSL				*e*Sn	S	01 41 45.5	-1.5
GNI	Garni	8.62	336	P	P	01 40 58.5	-5.0
	comp=N,0.3nm,0.3s,baz=335,slow=23,SNR=3.1						
GNI	Garni	8.62	336	P	P	01 40 58.0	-5.5
RAYN	Ar Rayn	9.39	202	Pn	P	01 41 11.9	-2.2
	comp=N,398nm,0.8s,SNR=32						
RAYN	Ar Rayn	9.39	202	Pn	P	01 41 11.4	-2.7
RAYN	Ar Rayn	9.39	202	Pn	P	01 41 11.4	-2.7
ASF	Jabal al Asfar	10.49	272	P	P	01 41 27.9	-1.3
	comp=N,2.8nm,0.3s,baz=228,slow=3.5,SNR=17						
ASF				S	S	01 43 18.5	-7.7
	comp=N,1.8nm,0.3s,baz=68,slow=13,SNR=3.2						
EIL	Elat	12.58	262	P	P	01 41 55.6	-1.7
	comp=N,0.5nm,0.3s,baz=252,slow=35,SNR=4.8						
EIL				S	S	01 44 12.2	-4.5
	comp=N,0.7nm,0.3s,baz=1.1,slow=34,SNR=2.5						
KIV	Kislovodsk	12.71	338	P	P	01 41 54.5	-4.5
SOC	Sochi	13.52	329	*e*P	P	01 42 07.7	-2.0
SOC				*e*		01 44 41.0	
SOC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SOC				pmax	pmax		
	comp=N,37nm,1.6s						
SOC				pmax	pmax		
	comp=E,26nm,1.3s						
SOC				MLR	MLR		
	comp=Z,323nm,21.0s						
SOC				MLR	MLR		
	comp=N,301nm,15.0s						
SOC				MLR	MLR		
	comp=E,105nm,10.0s						
SOC	Sochi	13.52	329	*e*P	P	01 42 07.7	-2.0
	comp=E,6.0nm,0.6s						
SOC				*e*		01 44 41.0	
GOF	Gofitskoye	13.61	341	*e*P	P	01 42 11.6	+0.8
BRTR	Keskin Array B	14.64	305	P	P	01 42 24.2	-0.1
	comp=E,0.0nm,0.3s,baz=126,slow=11,SNR=10.0						
IDI	Anoyia	20.47	285	P	P	01 43 34.9	+0.3
	comp=E,12nm,0.3s,baz=266,slow=19,SNR=24						
MLR	Muntele Rosu	22.32	313	P	P	01 43 55.0	+1.9
	comp=E,23nm,0.7s,mb4.7,baz=129,slow=1.3,SNR=28						
AAK	Ala-Archa	22.42	56	*e*P	P	01 43 54.6	+0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
AAK	Ala-Archa	22.42	56	*e*P	P	01 43 54.6	+0.4
	comp=Z,3.0nm,0.9s,mb3.7						
KSH	Kashi	22.72	64	*e*P	P	01 44 00.0	+2.9
KSH				*e*AP		01 44 08.5	
KSH				AMB	AMB		
	comp=Z,60nm,2.3s,mb4.6						
KSH	Kashi	22.72	64	*e*P	P	01 44 00.0	+2.9
	comp=Z,60nm,2.3s,mb4.6						
KSH				*e*pP		01 44 08.5	
AKASG	Malin Array Be	23.59	327	P	P	01 44 06.2	+0.8
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	23.59	327	P	P	01 44 06.2	+0.8
	comp=Z,2.9nm,0.3s,mb4.1,baz=139,slow=8.8,SNR=32						
OBN	Obninsk	24.48	342⇓	*i*P	P	01 44 14.0	-0.1
OBN				*e*		01 44 44.8	
OBN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.4						
OBN	Obninsk	24.48	342⇓	*i*P	P	01 44 14.0	-0.1
	comp=Z,13nm,0.8s,mb4.4						
OBN				*e*		01 44 44.8	
OBN				LR	LR		
	comp=Z,100nm,16.0s,MS3.4						
MOS	Moscow	24.79	344	*e*P	P	01 44 17.6	+0.6
MOS				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.0						
MOS	Moscow	24.79	344	*e*P	P	01 44 17.6	+0.6
	comp=Z,41nm,0.9s,mb5.0						
LVV	L'vov	25.65	320	*e*P	P	01 44 26.7	+1.5
BVAR	Borovoye Array	25.68	30	P	P	01 44 25.0	-0.4
	comp=Z,3.0nm,0.5s,mb4.0,baz=228,slow=9.8,SNR=14						
BVAR				ScP		01 51 30.7	
	comp=Z,0.8nm,0.8s,baz=225,slow=4.2,SNR=4.4						
KOLS	Kolonicke sedl	26.17	317	*e*P	P	01 44 31.6	+1.5
CHKZ	Chkalovo	26.24	29	*e*P	P	01 44 30.6	-0.1
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
KWP	Kalwaria	26.27	319	*e*P	P	01 44 32.1	+1.1
CRVS	Cervenica-Dubn	26.62	317	*e*P	P	01 44 35.5	+1.3
PKSM	Moragy	27.28	309⇑	*e*P	P	01 44 41.3	+1.0
KURK	Kurchatov	28.36	41⇓	*i*P	P	01 44 50.3	+0.3
SUW	Suwalki	28.56	327	*e*P	P	01 44 51.1	-0.6
OKC	Ostrava-Krasne	28.98	316	*e*P	P	01 44 55.6	+0.1
MORC	Moravsky Berou	29.31	316	*e*P	P	01 44 58.3	-0.1
MORC				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
MORC	Moravsky Berou	29.31	316	*e*P	P	01 44 58.3	-0.2
	comp=Z,3.9nm,0.6s,mb4.3						
MORC	Moravsky Berou	29.31	316	*e*P	P	01 44 58.3	-0.1
	comp=Z,3.9nm,0.6s,mb4.3						
BOJS	Bojanci	29.33	307	*e*P	P	01 44 59.6	+1.0
VRAC	Vranov	29.69	314	P	P	01 45 01.7	-0.1
	comp=Z,2.8nm,0.5s,mb4.2,baz=88,slow=11,SNR=7.5						
JAVS	Javornik	30.23	307	*e*P	P	01 45 07.6	+0.9
DPC	Dobruska-Polom	30.26	316	*e*P	P	01 45 06.5	-0.4
KSP	Ksiaz	30.48	317	*e*P	P	01 45 08.7	-0.1
PRU	Pruhonice	31.18	315	*e*P	P	01 45 16.6	+1.6
GERES	GERESS Array B	31.30	312	P	P	01 45 15.7	-0.4
	comp=Z,1.1nm,0.5s,mb4.0,baz=117,slow=8.3,SNR=19						
GERES				PcP	PcP	01 48 09.7	+0.3
	comp=Z,0.8nm,0.5s,baz=118,slow=1.9,SNR=8.5						
GERES	GERESS Array B	31.30	312	PcP	PcP	01 48 09.7	+0.3
KHC	Kasperske Hory	31.47	313	*e*P	P	01 45 17.5	-0.1
WTTA	Wattenberg	32.19	309⇑	*i*P	P	01 45 23.6	-0.3
	comp=Z,5.0nm,0.4s,mb4.7						
WTTA	Wattenberg	32.19	309⇑	*i*P	P	01 45 23.6	-0.3
WTTA				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.7						
WATA	Walderalm	32.25	309⇑	*i*P	P	01 45 23.7	-0.7
	comp=Z,10nm,1.1s,mb4.6						
WATA	Walderalm	32.25	309⇑	*i*P	P	01 45 23.7	-0.7
WATA				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
SQTA	Sankt Quirin	32.47	308⇑	*i*P	P	01 45 25.7	-0.6
	comp=Z,2.3nm,0.6s,mb4.2						
SQTA	Sankt Quirin	32.47	308⇑	*i*P	P	01 45 25.7	-0.6
SQTA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
MOTA	Moosalm	32.56	309⇑	*i*P	P	01 45 26.3	-0.9
	comp=Z,2.0nm,1.0s,mb4.0						
MOTA	Moosalm	32.56	309⇑	*i*P	P	01 45 26.3	-0.9
MOTA				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
CLL	Collm	32.57	316	*i* P	P	01 45 27.0	-0.2
JOF	Joensuu	32.67	345	*e*p	P	01 45 27.0	-0.9
	comp=Z,0.7nm,0.3s,mb4.1						
FINES	FINESS Array B	32.79	340	P	P	01 45 28.0	-1.0
	comp=Z,2.2nm,0.3s,mb4.5,baz=142,slow=8.2,SNR=24						
FINES				PcP	PcP	01 48 12.3	-1.0
	comp=Z,1.9nm,0.9s,baz=126,slow=7.2,SNR=3.8						
FINES	FINESS Array B	32.79	340	PcP	PcP	01 48 12.3	-1.0
GRA1	Grafenberg Arr	33.11	313	*e*P	P	01 45 32.5	+0.6
	comp=Z,13nm,0.9s,mb4.9						
GRF	Grafenberg Arr	33.11	313	*e*P	P	01 45 32.5	+0.6
GRF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
GRF	Grafenberg Arr	33.11	313	*e*P	P	01 45 32.5	+0.6
GRF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
GRF	Grafenberg Arr	33.11	313	*e*P	P	01 45 32.5	+0.6
	comp=Z,13nm,0.9s,mb4.9						
BSD	Bornholm Skovb	33.16	324⇓	*i*P	P	01 45 31.1	-1.2
BSD				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.5						
BSD	Bornholm Skovb	33.16	324⇓	*i*P	P	01 45 31.1	-1.2
	comp=Z,38nm,0.6s,mb5.5						
ZAL	Zalesovo	33.21	39	P	P	01 45 31.5	-1.2
	comp=Z,2.9nm,0.4s,mb4.6,baz=204,slow=3.7,SNR=14						
KAF	Kangasniemi	33.26	340	*e*p	P	01 45 31.9	-1.1
	comp=Z,0.9nm,0.3s,mb4.2						
KAF	Kangasniemi	33.26	340	*e*P	P	01 45 31.9	-1.1
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
PGF	Pioggiola	33.30	300	*e*P	P	01 45 32.3	-1.3
DAVA	Damuels	33.36	308⇑	*i*P	P	01 45 33.5	-0.6
	comp=Z,13nm,0.5s,mb5.1						
SBF	Sospel	34.55	302	*e*P	P	01 45 43.7	-0.6
COP	Copenhagen	34.68	323	*i* P	P	01 45 46.8	+1.5
MBDF	Montbardon	35.10	303	*e*P	P	01 45 47.7	-1.3
	comp=Z,5.4nm,0.5s,mb4.4						
MBDF	Montbardon	35.10	303	*e*P	P	01 45 47.7	-1.3
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
LMR	La Mourre	35.17	301	*e*P	P	01 45 48.7	-1.0
LPG	La Plagne	35.20	304	*e*P	P	01 45 49.6	-0.3
	comp=Z,12nm,0.7s,mb4.7						
LPG	La Plagne	35.20	304	*e*P	P	01 45 49.6	-0.3
LPG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
LPL	La Plagne	35.22	304	*e*P	P	01 45 49.6	-0.4
	comp=Z,5.7nm,0.5s,mb4.5						
LPL	La Plagne	35.22	304	*e*P	P	01 45 49.6	-0.4
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
CDF	Champ du Feu	35.31	310	*e*P	P	01 45 49.8	-1.0
HINF	Hinteralfeld	35.48	308	*e*P	P	01 45 50.8	-1.4
	comp=Z,3.6nm,0.6s,mb4.2						
HINF	Hinteralfeld	35.48	308	*e*P	P	01 45 50.8	-1.4
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ORIF	Oris-en-Rattie	35.75	303	*e*P	P	01 45 53.3	-1.3
CABF	La Chapelle	35.80	306	*e*P	P	01 45 54.6	-0.4
	comp=Z,29nm,0.9s,mb4.9						
CABF	La Chapelle	35.80	306	*e*P	P	01 45 54.6	-0.4
CABF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
SMRF	Simiane la Rot	35.89	302	*e*P	P	01 45 54.2	-1.6
MUD	Monsted U'grnd	36.66	323	*i* P	P	01 46 02.9	+0.8
MUD				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
MUD	Monsted U'grnd	36.66	323	*i* P	P	01 46 02.9	+0.8
	comp=Z,10.0nm,0.6s,mb4.8						
MEZF	Maizieres J'vi	36.78	309	*e*P	P	01 46 02.1	-1.1
SMF	Signal de Mont	37.34	306	*e*P	P	01 46 07.1	-0.8
BAIF	Baives	37.60	312	*e*P	P	01 46 10.0	0.0
	comp=Z,45nm,1.3s,mb4.8						
BAIF	Baives	37.60	312	*e*P	P	01 46 10.0	0.0
BAIF				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.7						
SSF	Saint Saulge	37.62	307	*e*P	P	01 46 09.3	-0.9
SSF				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.6						
SSF	Saint Saulge	37.62	307	*e*P	P	01 46 09.3	-0.9
	comp=Z,16nm,1.3s,mb4.6						
AVF	Avril sur Loir	37.69	306	*e*P	P	01 46 10.8	0.0
NB2	NORSAR Subarra	37.88	331	P	P	01 46 11.0	-1.2
	comp=Z,4.3nm,0.5s,mb4.4,baz=122,slow=7.9						
NB2	NORSAR Subarra	37.88	331	P	P	01 46 11.0	-1.2
NB2				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
NOA	NORSAR Array B	37.88	331	P	P	01 46 10.9	-1.3
	comp=Z,3.8nm,0.5s,mb4.4,baz=122,slow=8.4,SNR=18						
NOA				LR	LR	02 03 15.2	
	comp=Z,39nm,19.3s,MS3.2,baz=250,slow=38						
BGF	Bois d'Agland	38.02	306	*e*P	P	01 46 12.2	-1.3
CAF	Calviac	38.46	303	*e*P	P	01 46 16.9	-0.3
RJF	Les Rejaudoux	38.86	304	*e*P	P	01 46 19.3	-1.3
LFF	La Frestale	39.40	303	*e*P	P	01 46 23.7	-1.3
	comp=Z,49nm,1.2s,mb4.8						
LFF	La Frestale	39.40	303	*e*P	P	01 46 23.7	-1.3
LFF				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.8						
ARCES	ARCESS Array B	39.58	347	P	P	01 46 25.8	-0.6
	comp=Z,3.9nm,0.9s,mb4.1,baz=145,slow=9.7,SNR=11						
ERTA	Horta de San J	39.77	297	P	P	01 46 29.1	+1.0
	comp=Z,142nm,2.0s,mb5.3						
ERTA	Horta de San J	39.77	297	P	P	01 46 29.1	+0.9
	comp=Z,142nm,2.0s,mb5.4,SNR=5.8						
LDF	La Druitiere	40.20	309	*e*P	P	01 46 30.6	-1.1
EBEN	Beniarda	40.40	293	P	P	01 46 34.9	+1.5
	comp=Z,129nm,1.9s,mb5.3,SNR=7.9						
EMOS	Mosqueruela	40.42	296	P	P	01 46 35.8	+2.2
	comp=Z,196nm,2.1s,mb5.5						
FLN	La Foliniere	40.46	309	*e*P	P	01 46 32.9	-0.9
GRR	Gorron	40.67	308	*e*P	P	01 46 34.4	-1.2
GTA	Gaotai	41.11	65	*e*P	P	01 46 40.3	+1.0
GTA				AP	pP	01 46 45.0	-7.8
GTA				XP	sP	01 46 47.5	-11
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.1						
GTA	Gaotai	41.11	65	*e*P	P	01 46 40.3	+1.0
	comp=Z,4.0nm,0.8s,mb4.1						
GTA				pP	pP	01 46 45.0	-7.8
GTA				sP	sP	01 46 47.5	-11
ETOB	Tobarra	41.43	293	P	P	01 46 43.6	+1.7
	comp=Z,228nm,3.2s						
ETOB	Tobarra	41.43	293	P	P	01 46 43.6	+1.7
	comp=Z,228nm,3.2s,SNR=12						
SGMF	Saint Gilles	41.80	308	*e*P	P	01 46 43.8	-1.0
	comp=Z,66nm,1.3s,mb4.8						
SGMF	Saint Gilles	41.80	308	*e*P	P	01 46 43.8	-1.0
SGMF				pmax	pmax		
	comp=Z,33nm,1.3s,mb4.8						
EVIA	Vianos	42.17	294	P	P	01 46 49.7	+1.7
EVIA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.6						
EVIA	Vianos	42.17	294	P	P	01 46 49.7	+1.8
	comp=Z,10nm,0.6s,mb4.6						
EVIA	Vianos	42.17	294	P	P	01 46 49.7	+1.7
	comp=Z,10nm,0.6s,mb4.6,SNR=7.0						
ENIJ	Nijar	42.19	291	P	P	01 46 49.2	+1.0
ENIJ				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
ENIJ	Nijar	42.19	291	P	P	01 46 49.2	+1.0
	comp=Z,8.8nm,0.5s,mb4.7						
ENIJ	Nijar	42.19	291	P	P	01 46 49.2	+1.0
	comp=Z,8.8nm,0.5s,mb4.6,SNR=7.9						
ROSF	Rostrenen	42.28	308	*e*P	P	01 46 47.6	-1.1
	comp=Z,159nm,1.5s,mb5.1						
ROSF	Rostrenen	42.28	308	*e*P	P	01 46 47.6	-1.1
ROSF				pmax	pmax		
	comp=Z,80nm,1.5s,mb5.1						
EHUE	Huescar	42.36	292	P	P	01 46 50.9	+1.3
EHUE				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
EHUE	Huescar	42.36	292	P	P	01 46 50.9	+1.3
	comp=Z,7.7nm,1.2s,mb4.2,SNR=7.9						
EQES	Quesada	42.74	292	P	P	01 46 53.6	+0.9
	comp=Z,568nm,3.6s						
EQES	Quesada	42.74	292	P	P	01 46 53.6	+1.0
	comp=Z,568nm,3.6s,SNR=21						
EBER	Berja	42.74	291	P	P	01 46 54.7	+2.0
	comp=Z,50nm,1.4s,mb5.1						
EKA	Eskdalemuir Ar	42.97	318	P	P	01 46 54.5	+0.1
	comp=Z,1.4nm,0.7s,mb3.8,baz=99,slow=8.1,SNR=5.7						
EKA				PcP	PcP	01 48 44.5	-0.1
	comp=Z,1.6nm,0.9s,baz=90,slow=0.8,SNR=3.8						
EKA	Eskdalemuir Ar	42.97	318	PcP	PcP	01 48 44.5	-0.1
ESDC	Sonseca Array	43.16	295	P	P	01 46 56.8	+0.8
	comp=Z,1.2nm,0.5s,mb3.9,baz=75,slow=8.0,SNR=11						
ESDC	Sonseca Array	43.16	295	P	P	01 46 56.9	+0.8
	comp=Z,2.2nm,1.2s,mb3.8						
ESDC	Sonseca Array	43.16	295	P	P	01 46 56.9	+0.8
	comp=Z,2.2nm,1.2s,mb3.8,SNR=7.9						
ECOG	Cogollos-Vega	43.21	292	P	P	01 46 57.1	+0.6
ECOG				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.5						
ECOG	Cogollos-Vega	43.21	292	P	P	01 46 57.1	+0.6
	comp=Z,2.7nm,0.3s,mb4.5						
ECOG	Cogollos-Vega	43.21	292	P	P	01 46 57.1	+0.6
	comp=Z,2.7nm,0.3s,mb4.4,SNR=7.1						
EBAN	Banos Encina	43.24	293	P	P	01 46 57.8	+1.1
EBAN				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
EBAN	Banos Encina	43.24	293	P	P	01 46 57.8	+1.1
	comp=Z,16nm,1.0s,mb4.7						
EBAN	Banos Encina	43.24	293	P	P	01 46 57.8	+1.1
	comp=Z,16nm,1.0s,mb4.7,SNR=5.5						
EARI	Arriondas	43.72	301	P	P	01 47 00.1	-0.4
	comp=Z,788nm,3.3s						
EARI	Arriondas	43.72	301	P	P	01 47 00.1	-0.5
	comp=Z,788nm,3.3s,SNR=7.9						
EADA	Adamuz	43.85	293	P	P	01 47 02.5	+0.8
	comp=Z,699nm,5.0s						
EADA	Adamuz	43.85	293	P	P	01 47 02.5	+0.8
	comp=Z,699nm,5.0s						
EMIJ	Mijas	44.29	291	P	P	01 47 05.1	-0.2
	comp=Z,332nm,4.1s						
EMIJ	Mijas	44.29	291	P	P	01 47 05.1	-0.1
	comp=Z,332nm,4.1s,SNR=13						
EJIF	Jimena Fronter	44.86	291	P	P	01 47 09.9	+0.1
EJIF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
EJIF	Jimena Fronter	44.86	291	P	P	01 47 09.9	+0.1
	comp=Z,8.4nm,0.8s,mb4.6						
EJIF	Jimena Fronter	44.86	291	P	P	01 47 09.9	+0.1
	comp=Z,8.4nm,0.8s,mb4.6,SNR=7.9						
PBRG	Braganca	44.99	299	*e*P	P	01 47 19.1	+8.3
ESPR	Espera	45.09	292	P	P	01 47 12.1	+0.5
	comp=Z,124nm,2.6s,mb5.3						
ESPR	Espera	45.09	292	P	P	01 47 12.1	+0.5
	comp=Z,124nm,2.6s,mb5.3,SNR=7.9						
SONM	Songino Array	45.33	53	P	P	01 47 13.4	0.0
	comp=Z,0.4nm,0.5s,mb3.5,baz=271,slow=8.8,SNR=8.1						
EINC	Incio	45.34	300	P	P	01 47 14.3	+0.7
	comp=Z,834nm,3.5s						
EINC	Incio	45.34	300	P	P	01 47 14.3	+0.7
	comp=Z,834nm,3.5s,SNR=7.9						
EMIN	Mina Concepcio	45.55	293	P	P	01 47 15.9	+0.6
	comp=Z,260nm,3.9s						
EMIN	Mina Concepcio	45.55	293	P	P	01 47 15.9	+0.6
	comp=Z,260nm,3.9s,SNR=16						
ULN	Ulaanbaatar	45.77	53	*e*P	P	01 47 16.5	-0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
ULN	Ulaanbaatar	45.77	53	*e*P	P	01 47 16.5	-0.4
	comp=Z,4.0nm,1.1s,mb4.3						
ULN	Ulaanbaatar	45.77	53	*e*P	P	01 47 16.5	-0.4
	comp=Z,4.0nm,1.1s,mb4.3						
MTE	Manteigas	45.78	297	*e*P	P	01 47 10.0	-7.1
	comp=Z,34nm,2.3s,mb4.9						
PCBR	Castelo Branco	45.82	296	*e*P	P	01 47 18.3	+0.9
	comp=Z,9.4nm,0.7s,mb4.8						
ELOB	Lobios	45.96	299	P	P	01 47 19.4	+0.8
	comp=Z,377nm,2.9s						
ELOB	Lobios	45.96	299	P	P	01 47 19.4	+0.9
	comp=Z,377nm,2.9s						
PALC	Alcoutim	46.24	293	*e*P	P	01 47 19.9	-0.8
	comp=Z,2.7nm,0.6s,mb4.3						
PBEJ	Beja	46.43	294	*i* P	P	01 47 23.1	+0.8
	comp=Z,3.6nm,0.7s,mb4.4						
CMAR	Chiang Mai Arr	46.56	95	*i* P	P	01 47 23.5	0.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	Chiang Mai Arr	46.56	95	P	P	01 47 23.4	-0.1
	comp=Z,1.6nm,0.5s,mb4.2,baz=291,slow=7.7,SNR=9.4						
CMAR	Chiang Mai Arr	46.56	95	*i* P	P	01 47 23.5	0.0
	comp=Z,2.0nm,0.5s,mb4.3						
BOD	Bodaibo	49.98	39	*e*P	P	01 47 47.8	-1.7
LSZ	Lusaka	51.47	206	P	P	01 48 01.9	+0.6
LSZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
LSZ	Lusaka	51.47	206	P	P	01 48 01.9	+0.6
	comp=Z,3.6nm,1.1s,mb4.2						
LSZ	Lusaka	51.47	206	P	P	01 48 01.9	+0.6
	comp=Z,3.6nm,1.1s,mb4.2						
WHN	Wuhan	54.76	73	*e*P	P	01 48 26.3	+0.7
MATP	Matopo	56.10	204	P	P	01 48 35.8	+0.4
	comp=Z,1.6nm,0.7s,mb4.2,baz=50,slow=5.6,SNR=4.9						
DBIC	Dimbokro	56.35	255	P	P	01 48 37.5	+0.2
	comp=Z,1.0nm,0.4s,mb4.2,baz=44,slow=6.0,SNR=14						
DBIC				LR	LR	02 15 53.7	
	comp=Z,69nm,19.5s,MS3.8,baz=23,slow=39						
TIXI	Tiksi	56.41	22	*e*P	P	01 48 35.4	-1.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
TIXI	Tiksi	56.41	22	*e*P	P	01 48 35.4	-1.5
	comp=Z,5.0nm,1.1s,mb4.5						
NJ2	Nanjing	57.86	70	*e*P	P	01 48 47.5	-0.2
NJ2				AP	pP	01 48 56.8	-5.0
NJ2				XP	sP	01 49 00.0	-7.7
NJ2				PP	PP	01 50 58.5	+0.6
NJ2				S	S	01 56 48.0	+6.3
NJ2				AMB	AMB		
	comp=Z,430nm,4.7s						
NJ2				LR	LR		
	comp=N,300nm,11.5s						
NJ2				LR	LR		
	comp=E,330nm,25.3s						
NJ2				LR	LR		
	comp=Z,480nm,14.1s,MS4.8						
CN2	Changchun	59.09	55	*e*P	P	01 48 55.0	-1.1
SSE	Sheshan	60.06	70	P	P	01 48 58.8	-4.2
	comp=Z,29nm,0.7s,mb5.4						
MDJ	Mudanjiang	61.69	53	P	P	01 49 11.8	-2.0
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.7s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,95nm,4.7s						
MDJ	Mudanjiang	61.69	53	P	P	01 49 11.8	-2.0
	comp=Z,5.0nm,1.7s,mb4.4						
BILL	Bilibino	69.60	21	P	P	01 50 04.0	0.0
FRB	Frobisher Bay	72.49	336	P	P	01 50 21.0	-0.4
	comp=Z,4.4nm,0.6s,mb4.6,baz=57,slow=6.1,SNR=15						
SCHQ	Schefferville	77.38	328	P	P	01 50 49.7	+0.1
	comp=Z,1.4nm,0.3s,mb4.3,baz=53,slow=9.8,SNR=5.6						
INK	Inuvik	79.65	1	P	P	01 51 01.4	-0.3
	comp=Z,1.6nm,0.9s,mb4.0,baz=310,slow=6.0,SNR=6.6						
IMA	Indian Mountai	80.33	9	*e*P	P	01 51 06.2	+0.7
IMA				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.4						
IMA	Indian Mountai	80.33	9	*e*P	P	01 51 06.2	+0.8
	comp=Z,38nm,0.8s,mb5.4						
IMA	Indian Mountai	80.33	9	*e*P	P	01 51 06.2	+0.7
	comp=Z,38nm,0.8s,mb5.4						
ILAR	Eielson Array	82.39	7	P	P	01 51 16.1	-0.1
	comp=Z,2.3nm,0.7s,mb4.2,baz=319,slow=3.7,SNR=26						
YKA	Yellowknife Ar	84.62	353	P	P	01 51 27.4	0.0
	comp=Z,1.4nm,1.0s,mb4.0,baz=8.5,slow=5.1,SNR=15						
DIV	Divide	86.07	7	*e*P	P	01 51 35.9	+1.3
	comp=Z,21nm,0.5s,mb5.6						
DLBC	Dease Lake	89.58	360	P	P	01 51 54.0	+2.4
	comp=Z,5.2nm,1.2s,mb4.7,baz=11,slow=22,SNR=2.7						
WRA	Warramunga Arr	96.42	109	P	P	01 52 23.4	-0.5
	comp=Z,0.3nm,0.8s,mb3.8,baz=313,slow=4.2,SNR=4.7						

IDC ***27*** *01:55:17.6±2.3, 33.49N×13.24E, mb3.4/5, mb1 3.7/13, mb1mx3.6/28, mbtmp3.6/13, ML3.6/8, MS3.0/2, Ms1 3.0/2, ms1mx2.6/19, Error ellipse: s-maj=42.0km s-min=32.2km az=41.0*

NEIC ***27*** *01:55:21.2±1.3, 33.64N×13.60E, h10^{km}, mb3.5/1, Error ellipse: s-maj=21.9km s-min=11.2km az=201.0*

CSEM ***27*** *01:55:23.1±0.1, 33.79N×13.61E, h30^{km}, mb3.5/1, Error ellipse: s-maj=2.6km s-min=1.3km az=10.0*

ISC 27 01:55:19.5±1.2**, 33.6N**±0.1×**13.5E**±0.1**, h10^{km}, n21, σ1^{s}23**/21**, mb3.3**/4**, MS3.0**/2**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAE	Valguarnera	3.92	10	Pn	Pn	01 56 21.1	+0.1
	9.6nm,0.3s,baz=264,slow=6.3,SNR=16						
VAE				Sn	Sn	01 57 12.0	+4.4
	12nm,0.3s,baz=58,slow=12,SNR=3.4						
TIP	Timpagrande	6.12	24	*e*P	Pn	01 56 51.5	-0.9
TIP	Timpagrande	6.12	24	*e*P	Pn	01 56 51.5	-0.8
VSL	Villasalto	6.75	331	*e*P	Pn	01 57 00.3	-0.9
VSL	Villasalto	6.75	331	*e*P	Pn	01 57 00.3	-0.9
IDI	Anoyia	9.52	77	Pn	P	01 57 35.9	-3.8

	0.3nm,0.3s,baz=347,slow=23,SNR=2.2						
IDI				Sn	**Sn**	**01 59 21.9**	**-6.0**
	0.5nm,0.3s,baz=237,slow=21,SNR=3.0						
DAVOX	**Davos**	**13.44**	**349**	Pn	**P**	**01 58 44.4**	**+12**
	0.2nm,0.3s,baz=132,slow=15,SNR=3.5						
MLR	**Muntele Rosu**	**15.21**	**35**	Pn	**P**	**01 59 11.2**	**+15**
	0.1nm,0.3s,baz=230,slow=7.9,SNR=2.6						
GERES	**GERESS Array B**	**15.21**	**0**	Pn	**P**	**01 58 56.5**	**+0.6**
	0.1nm,0.3s,baz=180,slow=20,SNR=3.4						
ESDC	**Sonseca Array**	**15.29**	**298**	Pn	**P**	**01 58 58.1**	**+1.2**
	0.1nm,0.3s,baz=112,slow=12,SNR=6.9						
BRTR	**Keskin Array B**	**17.22**	**64**	P	**P**	**01 59 21.8**	**+0.1**
	0.0nm,0.3s,baz=256,slow=12,SNR=4.0						
EIL	**Elat**	**18.64**	**96**	P	**P**	**01 59 40.2**	**+0.8**
	0.2nm,0.3s,baz=279,slow=21,SNR=3.9						
EIL	**Elat**	**18.64**	**96**	P	**P**	**01 59 40.0**	**+0.5**
	2.6nm,0.7s						
EIL	**Elat**	**18.64**	**96**	P	**P**	**01 59 40.0**	**+0.6**
	2.6nm,0.7s						
AKASG	**Malin Array Be**	**20.58**	**29**	P	**P**	**02 00 00.3**	**-0.7**
	1.6nm,0.7s,baz=223,slow=10,SNR=6.1						
GNI	**Garni**	**25.71**	**66**	LR	LR	02 13 14.0	
	comp=Z,23nm,19.2s,MS2.7,baz=155,slow=41						
KMBO	**Kilima Mbogo**	**41.14**	**142**	LR	LR	02 22 24.2	
	comp=Z,35nm,21.4s,MS3.2,baz=125,slow=40						
BVAR	**Borovoye Array**	**44.37**	**46**	P	**P**	**02 03 30.5**	**-1.0**
	0.2nm,0.4s,mb3.2,baz=270,slow=2.9,SNR=3.3						
ZAL	**Zalesovo**	**52.92**	**45**	P	**P**	**02 04 40.1**	**+2.3**
	0.9nm,0.9s,mb3.7,baz=204,slow=7.0,SNR=4.9						
SONM	**Songino Array**	**67.72**	**47**	P	**P**	**02 06 19.6**	**+0.6**
	0.4nm,0.8s,mb3.5,baz=295,slow=6.0,SNR=4.6						
YKA	**Yellowknife Ar**	**75.60**	**338**	P	**P**	**02 07 03.8**	**-1.9**
	0.1nm,0.6s,mb2.9,baz=44,slow=5.9,SNR=3.8						

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*IDC **27** 02:13:47.6±0.9, 16.20N×144.70E, mb3.7/7, mb1 4.0/7, mb1mx3.8/18, mbtmp3.7/7, Error ellipse: s-maj=44.2km s-min=20.7km az=104.0*

*NEIC **27** 02:14:06.0±0.9, 15.63N×145.56E, h149^{km}±8^{km}, mb3.9/3, Error ellipse: s-maj=32.2km s-min=11.9km az=104.0*

ISC 27 02:14:05.3±0.9**, 15.7N**±0.1×**145.5E**±0.3**, h156**^{km}±8^{km}**, n16, σ0$\overset{s}{.}$98**/15**, mb3.6**/10**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	**Sarigan**	**1.08**	**15**	*e*P	**P**	**02 14 31.8**	**+0.3**
GUMO	**Guam**	**2.13**	**196**	*e*P	**P**	**02 14 42.2**	**-0.5**
WRAB	**Tennant Creek**	**37.02**	**198**	*e*P	**P**	**02 21 01.5**	**-0.2**
	1.0nm,0.5s,mb3.7						
WRA	**Warramunga Arr**	**37.03**	**198**	P	**P**	**02 21 01.3**	**-0.4**
	1.1nm,0.9s,mb3.5,baz=15,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**40.68**	**196**	P	**P**	**02 21 33.2**	**+1.2**
	0.2nm,0.4s,mb3.1,baz=18,slow=13,SNR=4.8						
SONM	**Songino Array**	**45.42**	**323**	P	**P**	**02 22 00.4**	**-10**
	0.8nm,1.2s,mb3.2,baz=121,slow=8.4,SNR=3.4						
KURK	**Kurchatov**	**63.41**	**319**	*e*P	**P**	**02 24 21.5**	**+1.1**
	7.2nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**66.46**	**26**	P	**P**	**02 24 37.9**	**-1.9**
	0.6nm,0.5s,mb3.7,baz=252,slow=5.8,SNR=26						
CHKZ	**Chkalovo**	**68.58**	**322**	*e*P	**P**	**02 24 53.3**	**+0.2**
	0.6nm,0.5s,mb3.6						
INK	**Inuvik**	**72.25**	**23**	*e*P	**P**	**02 25 15.3**	**+0.4**
YKA	**Yellowknife Ar**	**80.77**	**28**	P	**P**	**02 26 02.2**	**-0.2**
	0.4nm,0.8s,mb3.1,baz=286,slow=5.4,SNR=7.0						
YKA	**Yellowknife Ar**	**80.77**	**28**	P	**P**	**02 26 02.2**	**-0.2**
NVAR	**Mina Array Bea**	**85.18**	**52**	P	**P**	**02 26 26.8**	**+1.4**
	0.5nm,0.5s,mb3.5,baz=266,slow=7.0,SNR=6.0						
NVAR	**Mina Array Bea**	**85.18**	**52**	P	**P**	**02 26 26.8**	**+1.4**
FINES	**FINESS Array B**	**89.55**	**335**	P	**P**	**02 26 44.0**	**-1.8**
	1.5nm,0.8s,mb4.0,baz=135,slow=3.9,SNR=3.4						
LPAZ	**La Paz**	**147.70**	**96**	*e*PKPbc	PKPdf	02 33 34.6	+5.4

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*CSEM **27** 02:28:37.1±0.1, 73.36N×7.43E, h10^{km}, ML2.6, Error ellipse: s-maj=3.6km s-min=2.7km az=82.0*

*MOS **27** 02:28:38.0±1.4, 73.31N×7.37E, h10^{km}, mb4.4/5, Error ellipse: s-maj=34.9km s-min=8.6km az=95.5*

*IDC **27** 02:28:39.9±0.9, 73.33N×7.60E, mb3.6/7, mb1 3.8/13, mb1mx3.7/25, mbtmp3.7/13, ML3.5/6, MS3.7/16, Ms1 3.7/16, ms1mx3.7/21, Error ellipse: s-maj=19.9km s-min=12.9km az=44.0*

*NEIC **27** 02:28:40.4±0.4, 73.37N×7.38E, h10^{km}, mb3.9/4, Error ellipse: s-maj=7.8km s-min=6.1km az=55.0*

*NAO **27** 02:28:43.6±4.1, 73.54N×9.22E, ML2.6*

*BER **27** 02:28:44.7±5.6, 73.42N×8.16E, h22^{km}±54^{km}, MD3.3, ML2.4*

*HEL **27** 02:28:45.5±0.5, 73.14N×8.28E, h10^{km}, ML3.3, mb3.9(NEIC), ML2.4(BER)*

ISC 27 02:28:38.3±0.5**, 73.36N**±0.04×**7.8E**±0.2**, h10**^{km}**, n68, σ1$\overset{s}{.}$36**/71**, mb3.7**/11**, MS3.8**/14**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSP	**Hornsund**	**4.17**	**25**	*e*P	**Pn**	**02 29 43.0**	**-0.4**
SPA0	**Spitsbergen Ar**	**5.28**	**19**	Pn	**Pn**	**02 29 58.8**	**-0.3**
	baz=202,slow=16						
SPA0	**Spitsbergen Ar**	**5.28**	**19**	*e*	**Pn**	**02 29 58.8**	**-0.3**
HOPEN	**Hopen**	**5.47**	**47**	*e*P	**Pn**	**02 30 01.1**	**-0.8**
HOPEN				*e*S	**Sn**	**02 30 58.5**	**-7.1**
HOPEN				AML	AML	02 31 02.7	
	comp=Z,14nm,0.6s						
JMIC	**Jan Mayen**	**5.54**	**253**	Pn	**Pn**	**02 30 00.5**	**-2.4**
	comp=Z,3.8nm,0.3s,baz=114,slow=6.5,SNR=3.6						
JMIC				LR	LR	02 31 42.7	
	comp=Z,561nm,19.6s,baz=238,slow=33						
JMIC	**Jan Mayen**	**5.54**	**253**	P	**Pn**	**02 30 00.4**	**-2.5**
LOF	**Lofoten**	**5.58**	**157**	*e*P	**Pn**	**02 30 05.6**	**+2.2**
LOF				*e*S	**Sn**	**02 31 03.9**	**-4.5**
LOF				AML	AML	02 31 05.1	
	comp=Z,9.9nm,0.2s						
LOF	**Lofoten**	**5.58**	**157**	P	**Pn**	**02 30 05.5**	**+2.1**
KBS	**Kingsbay**	**5.69**	**8**	*e*P	**Pn**	**02 30 03.8**	**-1.1**
KBS				pmax	pmax		
	comp=Z,12nm,0.8s						
KBS	**Kingsbay**	**5.69**	**8**	*e*P	**Pn**	**02 30 03.8**	**-1.1**
	comp=Z,12nm,0.8s						
KBS	**Kingsbay**	**5.69**	**8**	*e*P	**Pn**	**02 30 03.8**	**-1.1**
	comp=Z,12nm,0.8s						
KIF	**Kilpisjarvi**	**6.05**	**130**	*e*P	**Pn**	**02 30 10.8**	**+0.8**
KIF				*e*S	**Sn**	**02 31 15.3**	**-4.8**
KTK1	**Kautokeino**	**6.61**	**124**	*e*P	**Pn**	**02 30 19.0**	**+1.2**
ARA0	**ARCESS Array S**	**6.80**	**116**	Pn	**Pn**	**02 30 20.3**	**-0.4**
	baz=314,slow=12						
ARA0				Sn	**Sn**	**02 31 33.8**	**-5.2**
	baz=315,slow=22						
ARA0	**ARCESS Array S**	**6.80**	**116**	*e*P	**Pn**	**02 30 20.3**	**-0.4**
ARA0				*e*S	**Sn**	**02 31 33.8**	**-5.2**
ARA0	**ARCESS Array S**	**6.80**	**116**	P	**Pn**	**02 30 20.2**	**-0.4**
ARA0				S	**Sn**	**02 31 33.8**	**-5.1**
	SNR=1.6						
ARCES	**ARCESS Array B**	**6.80**	**116**	Pn	**Pn**	**02 30 21.1**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=323,slow=10,SNR=27						
ARCES				Sn	**Sn**	**02 31 35.3**	**-3.6**
	comp=Z,1.3nm,0.3s,baz=315,slow=22,SNR=7.8						
ARCES				LR	LR	02 33 17.0	
	comp=Z,424nm,20.2s,baz=20,slow=40						
KEV	**Kevo**	**7.05**	**111**	*e*p	**Pn**	**02 30 25.2**	**+1.0**
KEV	**Kevo**	**7.05**	**111**	*e*P	**Pn**	**02 30 24.7**	**+0.6**
KEV				MPN		02 30 25.7	
	comp=Z,1.2nm,0.2s						
KEV				*e*S	**Sn**	**02 31 39.7**	**-5.5**
KEV	**Kevo**	**7.05**	**111**	P	**Pn**	**02 30 24.7**	**+0.5**
	comp=Z,1.2nm,0.2s						
STOK	**Stokkvaagen**	**7.28**	**163**	*e*P	**Pn**	**02 30 27.1**	**-0.2**
STOK				*e*S	**Sn**	**02 31 40.6**	**-10**
MOR8	**Moi Rana**	**7.57**	**159**	*e*P	**Pn**	**02 30 30.2**	**-1.2**
MOR8				*e*S	**Sn**	**02 31 49.5**	**-8.6**
MOR8				AML	AML	02 31 54.2	
	comp=Z,4.9nm,0.7s						
SGF	**Sodankyl**	**8.60**	**124**	*e*P	**P**	**02 30 45.8**	**0.0**
SGF				MPN		02 30 49.1	
	comp=Z,0.9nm,0.2s						
SGF				*e*S	**Sn**	**02 32 16.6**	**-7.3**
SGF	**Sodankyl**	**8.60**	**124**	P	**P**	**02 30 45.8**	**0.0**
	comp=Z,0.9nm,0.2s						
NSS	**Namsos**	**8.99**	**168**	*e*P	**P**	**02 30 50.1**	**-1.0**
SCO	**Scoresbysund**	**9.62**	**267**	*i* P	**P**	**02 30 55.5**	**-4.1**
SCO	**Scoresbysund**	**9.62**	**267**	*e*P	**P**	**02 30 55.5**	**-4.1**
APA0	**Apatity Array**	**10.12**	**112**	Pn	**P**	**02 31 05.6**	**-1.0**
	baz=307,slow=14						
APA0				Sn	**S**	**02 32 49.9**	**-11**
	baz=286,slow=28						
APA0	**Apatity Array**	**10.12**	**112**	*e*P	**P**	**02 31 05.6**	**-1.0**
APA0				*e*S	**S**	**02 32 49.9**	**-11**
KU4	**Oulanka**	**10.20**	**122**	*e*P	**P**	**02 31 07.5**	**-0.1**
KU4				MPN		02 31 10.0	
	comp=Z,2.4nm,0.5s						
KU4				*e*S	**S**	**02 32 54.6**	**-8.4**
MSF	**Maaselka**	**10.44**	**125**	*e*P	**P**	**02 31 10.2**	**-0.6**
MSF				MPN		02 31 11.9	
	comp=Z,1.0nm,0.4s						
NOA	**NORSAR Array B**	**12.44**	**172**	Pn	**P**	**02 31 38.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=355,slow=13,SNR=3.0						
NOA				LR	LR	02 36 07.4	
	comp=Z,186nm,18.4s,baz=345,slow=36						
HFS	**Hagfors**	**13.47**	**167**	Pn	**P**	**02 31 51.1**	**-0.6**
	baz=27,slow=12						
HFS	**Hagfors**	**13.47**	**167**	*e*P	**P**	**02 31 51.1**	**-0.6**
HFS	**Hagfors**	**13.47**	**167**	Pn	**P**	**02 31 51.2**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=34,slow=11,SNR=4.6						
FIA0	**FINESS Array S**	**13.76**	**141**	P	**P**	**02 31 55.3**	**-0.1**
	baz=335,slow=12						
FIA0	**FINESS Array S**	**13.76**	**141**	*e*P	**P**	**02 31 55.3**	**-0.1**
FINES	**FINESS Array B**	**13.76**	**141**	Pn	**P**	**02 31 55.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=335,slow=12,SNR=9.1						
FINES				LR	LR	02 36 57.3	
	comp=Z,290nm,20.5s,baz=325,slow=36						
EKA	**Eskdalemuir Ar**	**18.65**	**200**	P	**P**	**02 32 58.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=104,slow=3.4,SNR=3.9						
ESK	**Eskdalemuir**	**18.67**	**200**	P	**P**	**02 32 57.4**	**-0.6**
SFJ	**Sondre**	**19.98**	**281**	P	**P**	**02 33 10.3**	**-2.9**
	comp=Z,3.3nm,0.7s						
OBN	**Obninsk**	**21.73**	**132**	*e*P	**P**	**02 33 34.9**	**+3.7**
OBN				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.3						
VRAC	**Vranov**	**24.44**	**166**	P	**P**	**02 34 00.2**	**+2.6**
	comp=Z,5.5nm,1.0s,mb3.9,baz=345,slow=8.3,SNR=4.2						
AKASG	**Malin Array Be**	**24.55**	**146**	P	**P**	**02 34 01.0**	**+2.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**24.55**	**146**	P	**P**	**02 34 00.9**	**+2.3**
	comp=Z,1.1nm,0.6s,mb3.5,baz=345,slow=9.4,SNR=5.7						
GERES	**GERESS Array B**	**24.73**	**171**	P	**P**	**02 34 04.1**	**+3.6**
	comp=Z,1.2nm,0.9s,mb3.4,baz=315,slow=1.9,SNR=7.9						
FRB	**Frobisher Bay**	**27.39**	**290**	LR	LR	02 44 58.0	
	comp=Z,91nm,18.6s,MS3.4,baz=335,slow=36						
MLR	**Muntele Rosu**	**29.16**	**153**	LR	LR	02 46 36.1	
	comp=Z,263nm,19.8s,MS3.9,baz=170,slow=37						
CHKZ	**Chkalovo**	**32.00**	**93**	*e*P	**P**	**02 35 08.6**	**+2.3**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
CHKZ	**Chkalovo**	**32.00**	**93**	*e*P	**P**	**02 35 08.6**	**+2.4**
	comp=Z,3.8nm,1.1s,mb4.1						
SCHQ	**Schefferville**	**34.40**	**279**	LR	LR	02 48 20.8	
	comp=Z,153nm,18.1s,MS3.8,baz=320,slow=34						
ZAL	**Zalesovo**	**35.84**	**80**	LR	LR	02 53 59.2	
	comp=Z,142nm,19.6s,MS3.7,baz=141,slow=42						
BRTR	**Keskin Array B**	**35.94**	**145**	P	**P**	**02 35 43.8**	**+3.4**
	comp=Z,0.5nm,0.7s,mb3.5,slow=7.4,SNR=3.8						
VAE	**Valguarnera**	**36.11**	**171**	LR	LR	02 52 23.7	
	comp=Z,175nm,18.8s,MS3.9,baz=118,slow=39						
INK	**Inuvik**	**36.36**	**337**	P	**P**	**02 35 43.4**	**-0.3**
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	**Inuvik**	**36.36**	**337**	P	**P**	**02 35 43.4**	**-0.2**
	comp=Z,1.4nm,1.0s,mb3.9						
KURK	**Kurchatov**	**36.93**	**88**	P	**P**	**02 35 51.1**	**+2.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
KURK	**Kurchatov**	**36.93**	**88**	P	**P**	**02 35 51.0**	**+2.5**
	comp=Z,3.3nm,1.3s,mb4.0						
BILL	**Bilibino**	**38.15**	**13**	P	**P**	**02 35 58.0**	**-0.7**
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.7						
YKA	**Yellowknife Ar**	**39.07**	**322**	P	**P**	**02 36 06.8**	**+0.3**
	comp=Z,0.3nm,0.8s,mb3.1,baz=13,slow=8.4,SNR=7.1						
YKA				LR	LR	02 52 19.8	
	comp=Z,124nm,18.7s,MS3.8,baz=5.0,slow=36						
ILAR	**Eielson Array**	**41.11**	**344**	P	**P**	**02 36 24.6**	**+1.4**
	comp=Z,0.7nm,0.9s,mb3.3,baz=24,slow=6.7,SNR=6.5						
ULM	**Lac du Bonnet**	**46.34**	**300**	LR	LR	02 56 12.7	
	comp=Z,138nm,18.9s,MS3.9,baz=49,slow=36						
SONM	**Songino Array**	**47.26**	**65**	P	**P**	**02 37 15.5**	**+2.7**
	comp=Z,0.4nm,0.8s,mb3.4,baz=315,slow=5.2,SNR=4.3						
PDAR	**Pinedale Array**	**56.62**	**308**	LR	LR	03 02 53.2	
	comp=Z,73nm,19.8s,MS3.8,baz=213,slow=36						
NVAR	**Mina Array Bea**	**62.66**	**314**	LR	LR	03 08 22.0	
	comp=Z,54nm,18.9s,MS3.7,baz=350,slow=38						
ANMO	**Albuquerque**	**63.34**	**303**	LR	LR	03 04 35.4	
	comp=Z,72nm,20.0s,MS3.9,slow=34						
TXAR	**Lajitas Array**	**68.00**	**299**	LR	LR	03 09 19.5	
	comp=Z,84nm,18.0s,MS4.0,baz=185,slow=36						
ROSC	**El Rosal**	**83.12**	**264**	LR	LR	03 16 00.4	
	comp=Z,56nm,19.8s,MS3.9,baz=22,slow=34						

IGQ 27 02:32:23.8, 1.45S×81.01W, h10^{km}±4^{km}, mb4.0, 1C-2D, Error ellipse: s-maj=8.8km s-min=2.7km az=25.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOJA	**Cerro de Hojas**	**0.61**	**49**	⇑P	Pg	02 32 35.3	-0.7
HOJA				S	Sg	02 32 43.0	-1.1
SALI	**Salinas**	**0.73**	**179**	⇓P	Pb	02 32 38.3	+0.1
IGUA	**Igualata**	**2.37**	**91**	P	Pn	02 33 04.7	+1.3
JUIV	**Juive**	**2.54**	**89**	P	Pn	02 33 07.2	+1.3
ARRY	**Arrayan**	**2.55**	**91**	P	Pn	02 33 06.3	+0.3
ARRY				S	Sn	02 33 38.1	+0.7
RETU	**Refugio**	**2.56**	**90**	P	Pn	02 33 07.5	+1.4
RUN2	**Runtun**	**2.59**	**89**	P	Pn	02 33 08.8	+2.2
ULBA	**Ulba**	**2.60**	**90**	P	Pn	02 33 07.2	+0.6
PISA	**Pisayambo**	**2.65**	**82**	P	Pn	02 33 09.5	+2.1
PISA				S	Sn	02 33 42.5	+2.6
NAS1	**Nasa**	**2.65**	**72**	P	Pn	02 33 08.7	+1.2
JUA2	**San Juan 2**	**2.69**	**63**	P	Pn	02 33 07.9	-0.1
TERV	**Terraza Guagua**	**2.71**	**62**	P	Pn	02 33 10.7	+2.4
PINO	**Pino**	**2.72**	**62**	⇓P	Pn	02 33 08.3	-0.1
VC1	**Cotopaxi 1**	**2.72**	**73**	P	Pn	02 33 11.0	+2.5
TAMB	**Tambo**	**2.74**	**74**	P	Pn	02 33 11.8	+3.1
YANA	**Yana**	**2.77**	**62**	P	Pn	02 33 08.6	-0.5
ANTI	**Antisana**	**3.01**	**71**	P	Pn	02 33 14.0	+1.4
COTA	**Cotacachi**	**3.20**	**56**	P	Pn	02 33 16.0	+0.8
CAYR	**Refugio Cayamb**	**3.33**	**64**	P	Pn	02 33 20.3	+3.2
CAYR				S	Sn	02 34 02.3	+5.1
CAYA	**Cayambe**	**3.37**	**63**	P	Pn	02 33 20.7	+3.0
ECEN	**Cerro Negro**	**3.78**	**53**	P	Pn	02 33 25.7	+2.2

IDC 27 03:04:42.0±63.0**, 21.13S×178.73W, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/14**, mbtmp4.0**/3**, Error ellipse: s-maj=1153.0km s-min=164.0km az=84.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.91**	**245**	P	P	03 11 52.0	-2.5
	9.4nm,1.4s,baz=72,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**43.72**	**257**	P	P	03 12 49.0	-1.8
	0.9nm,0.8s,baz=96,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**43.85**	**263**	P	P	03 12 50.8	-1.2
	0.4nm,0.3s,baz=97,slow=7.7,SNR=29						

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*IDC **27** 03:21:38.0±4.3, 2.56N×95.66E, mb3.5/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML4.4/1, Error ellipse: s-maj=143.5km s-min=32.8km az=64.0*

*NEIC **27** 03:21:42.9±1.1, 2.56N×95.76E, h30^{km}, Error ellipse: s-maj=32.0km s-min=14.7km az=55.0*

ISC 27 03:21:41.0±1.5**, 2.6N**±0.2×**95.8E**±0.3**, h30**^{km}**, n10, σ0$\overset{s}{.}$58**/10**, mb4.0**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.11**	**11**	Pn	**P**	**03 25 27.9**	**+0.6**
	0.6nm,0.3s,baz=209,slow=9.3,SNR=3.1						
JIRN	**Jiri**	**26.59**	**341**	*e*P	**P**	**03 27 18.6**	**-0.1**
	17nm,0.9s,mb4.6						
PKI	**Pulchoki**	**26.77**	**339**	*e*P	**P**	**03 27 20.8**	**+0.4**
DMN	**Daman**	**26.92**	**339**	*e*P	**P**	**03 27 21.8**	**+0.1**
KKN	**Kakani**	**27.02**	**339**	*e*P	**P**	**03 27 22.1**	**-0.6**
	2.9nm,0.2s,mb4.5						
GKN	**Gorkha**	**27.45**	**338**	*e*P	**P**	**03 27 26.6**	**0.0**
	7.0nm,0.6s,mb4.4						
KOLN	**Koldanda**	**27.64**	**336**	*e*P	**P**	**03 27 29.3**	**+1.0**
	6.6nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**43.98**	**122**	P	**P**	**03 29 48.0**	**+0.3**
	0.2nm,0.5s,mb3.1,baz=302,slow=9.1,SNR=3.5						
SONM	**Songino Array**	**46.04**	**10**	P	**P**	**03 30 02.9**	**-1.0**
	0.5nm,0.6s,mb3.6,baz=190,slow=9.6,SNR=6.6						
ZAL	**Zalesovo**	**52.00**	**352**	P	**P**	**03 30 49.1**	**-0.7**
	0.5nm,0.4s,mb3.8,baz=311,slow=10,SNR=3.5						

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*IDC **27** 03:26:59.8±4.8, 19.30N×122.04E, mb3.5/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.5/3, MS2.7/2, Ms1 2.8/2, ms1mx2.5/30, Error ellipse: s-maj=320.2km s-min=32.9km az=88.0*

*MAN **27** 03:27:22.8, 17.60N×121.24E, h5^{km}, mb4.5, ML3.4, MS3.3*

ISC 27 03:27:07.2±2.4**, 19.1N**±0.2×**121.1E**±0.2**, h79**^{km}±18^{km}**, n10, σ0$\overset{s}{.}$93**/10**, mb3.4**/3**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	**Conner**	**1.23**	**174**	*e*P	**P**	**03 27 28.4**	**-0.9**
APYP				*e*S	**S**	**03 27 51.5**	**+5.7**
ABRA	**Dolores**	**1.49**	**195**	*e*P	**P**	**03 27 33.1**	**+0.3**
CVP	**Callao Caves**	**1.54**	**154**	*e*P	**P**	**03 27 33.0**	**-0.4**
CVP				*i* S	**S**	**03 27 52.0**	**-0.8**
CAUP	**Cauayan**	**2.24**	**162**	*e*P	**P**	**03 27 46.2**	**+3.2**
PALP	**Palanan**	**2.37**	**148**	*e*P	**P**	**03 27 46.1**	**+1.2**
JOW	**Kunigami**	**10.14**	**39**	LR	LR	03 33 14.8	
	comp=Z,39nm,20.0s,baz=123,slow=40						
CMAR	**Chiang Mai Arr**	**21.00**	**272**	LR	LR	03 40 57.1	
	comp=Z,23nm,18.6s,baz=337,slow=38						
WRA	**Warramunga Arr**	**40.90**	**161**	P	**P**	**03 34 42.8**	**-0.6**
	0.6nm,0.6s,mb3.6,baz=342,slow=9.1,SNR=18						
ASAR	**Alice Springs**	**44.29**	**163**	P	**P**	**03 35 11.6**	**+0.5**
	0.4nm,0.4s,mb3.5,baz=346,slow=6.8,SNR=4.8						
YKA	**Yellowknife Ar**	**87.67**	**23**	P	**P**	**03 39 47.4**	**-0.3**
	0.1nm,0.5s,mb3.1,baz=310,slow=4.6,SNR=3.1						

CASC 27 03:43:58.8±3.7**, 15.24N×90.71W, MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TP2	**Tecpan 2**	**0.55**	**214**	*e*P	Pg	03 44 09.5	-0.3
TP2				*e*S	Sg	03 44 19.5	+2.4
IXG	**Ixpaco**	**1.09**	**167**	*e*P	Pb	03 44 18.3	-1.9
IXG				*e*S	Sb	03 44 35.0	+0.2
JAT	**Jato**	**1.29**	**224**	*e*P	Pb	03 44 23.9	+0.4
JAT				*e*S	Sb	03 44 45.1	+4.6
RTR	**El Retiro**	**1.69**	**142**	*e*P	Pn	03 44 28.5	-1.2
RTR				*e*S	Sb	03 44 54.3	+2.1
SNJE	**San Jose**	**1.73**	**142**	*e*P	Pn	03 44 29.5	-0.9
SNJE				*e*S	Sb	03 44 54.7	+1.1
SBLS	**San Blas**	**1.75**	**143**	*e*P	Pn	03 44 29.5	-1.1
BOQS	**Boqueron**	**2.04**	**137**	*e*P	Pn	03 44 34.7	-0.1
BOQS				*e*S	Sn	03 45 04.0	+2.7
LBRS	**Las Brisas**	**2.20**	**133**	*e*P	Pn	03 44 37.0	0.0
LFRS	**El Faro**	**2.27**	**135**	*e*P	Pn	03 44 37.5	-0.6
LCBS	**La Ceiba**	**2.30**	**133**	*e*P	Pn	03 44 37.8	-0.7
LCBS				*e*S	Sn	03 45 10.4	+2.4
SNVI	**San Vicente**	**2.43**	**132**	*e*P	Pn	03 44 40.0	-0.4
SNVI				*e*S	Sn	03 45 13.8	+2.5

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*NEIC **27** 04:08:37.6±0.6, 5.29N×93.24E, h30^{km}, mb4.3/2, Error ellipse: s-maj=19.9km s-min=9.6km az=64.0*

*IDC **27** 04:08:40.5±11.0, 5.37N×93.34E, h52^{km}±100^{km}, mb3.7/7, mb1 3.9/8, mb1mx3.7/19, mbtmp4.0/8, ML4.1/1, Error ellipse: s-maj=74.0km s-min=18.1km az=55.0*

ISC 27 04:08:35.9±0.9**, 5.3N**±0.1×**93.3E**±0.2**, h30**^{km}**, n10, σ0$\overset{s}{.}$46**/10**, mb4.1**/9**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.19**	**22**	P	**P**	**04 11 57.6**	**+0.5**
	0.3nm,0.3s,baz=222,slow=13,SNR=9.8						
SONM	**Songino Array**	**43.84**	**13**	P	**P**	**04 16 40.6**	**-0.5**
	1.3nm,0.8s,mb3.7,baz=203,slow=9.4,SNR=8.2						
WRA	**Warramunga Arr**	**47.51**	**123**	P	**P**	**04 17 11.0**	**+0.3**
	3.2nm,0.7s,mb4.5,baz=301,slow=9.1,SNR=32						
WRAB	**Tennant Creek**	**47.52**	**123**	*e*P	**P**	**04 17 10.8**	**0.0**
	5.1nm,0.7s,mb4.7						
ASAR	**Alice Springs**	**48.96**	**128**	P	**P**	**04 17 22.1**	**+0.2**
	0.5nm,0.5s,mb3.8,baz=300,slow=7.8,SNR=8.4						
ZAL	**Zalesovo**	**48.98**	**353**	P	**P**	**04 17 21.6**	**0.0**
	1.2nm,0.5s,mb4.2,baz=272,slow=2.2,SNR=5.7						
CHKZ	**Chkalovo**	**51.65**	**343**	*e*P	**P**	**04 17 41.1**	**-0.9**
	1.4nm,1.0s,mb3.9						
STKA	**Stephens Creek**	**58.98**	**132**	P	**P**	**04 18 34.8**	**-0.6**
	2.7nm,1.0s,mb4.2,baz=336,slow=12,SNR=3.1						
GERES	**GERESS Array B**	**79.18**	**319**	P	**P**	**04 20 40.1**	**+0.5**
	0.7nm,0.8s,mb3.6,baz=117,slow=3.0,SNR=6.9						
DAVOX	**Davos**	**81.66**	**316**	P	**P**	**04 20 53.3**	**+0.5**
	1.1nm,0.6s,mb3.9,baz=196,slow=19,SNR=3.7						

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*MEX **27** 04:10:27.7±0.5, 17.76N×101.69W, h41^{km}±14^{km}, MD3.8*

*NEIC **27** 04:10:28.1, 17.66N×101.11W, h0^{km}, MD3.8(MEX), After MEX.*

ISC 27 04:10:25.9±2.0**, 17.7N**±0.1×**101.7W**±0.2**, h46**^{km}±12^{km}**, n7, σ0$\overset{s}{.}$82**/12**, 2D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.23**	**118**	⇓*i*P	**P**	**04 10 34.2**	**+0.2**
ZIIG				*e*S	**S**	**04 10 40.0**	**+0.3**
ZIIG	**Zihuatanejo**	**0.23**	**118**	⇓*i*P	**P**	**04 10 34.2**	**+0.2**
ZIIG				*i* S	**S**	**04 10 39.3**	**-0.4**
ACX	**Acapulco**	**1.88**	**116**	*e*P	**P**	**04 11 00.0**	**+3.8**
ACX	**Acapulco**	**1.88**	**116**	*e*P	**P**	**04 10 55.0**	**-1.2**
ACX				*i* S	**S**	**04 11 19.0**	**+0.3**
MOIG	**Morelia**	**2.01**	**13**	*e*P	**P**	**04 10 58.6**	**+0.5**
MOIG				*e*S	**S**	**04 11 23.6**	**+1.6**
MOIG	**Morelia**	**2.01**	**13**	*e*P	**P**	**04 10 57.1**	**-0.9**
MOIG				*i* S	**S**	**04 11 20.5**	**-1.5**
SFJM	**Santa Fe**	**3.05**	**335**	*e*P	**P**	**04 11 13.0**	**+0.2**

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*IDC **27** 04:10:52.6±1.2, 5.22N×93.09E, mb3.8/6, mb1 4.0/7, mb1mx3.7/19, mbtmp3.8/7, ML4.0/1, Error ellipse: s-maj=48.4km s-min=21.7km az=54.0*

*NEIC **27** 04:10:57.4±0.7, 5.29N×93.20E, h30^{km}, mb4.0/2, Error ellipse: s-maj=21.4km s-min=11.3km az=64.0*

ISC 27 04:10:55.7±1.0**, 5.3N**±0.1×**93.3E**±0.2**, h30**^{km}**, n9, σ0$\overset{s}{.}$42**/9**, mb3.8**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.19**	**23**	Pn	**P**	**04 14 17.0**	**0.0**
	0.3nm,0.3s,baz=222,slow=13,SNR=7.0						
SONM	**Songino Array**	**43.83**	**13**	P	**P**	**04 19 01.0**	**+0.2**
	0.7nm,0.8s,mb3.5,baz=192,slow=8.4,SNR=5.8						
WRA	**Warramunga Arr**	**47.55**	**123**	P	**P**	**04 19 30.6**	**-0.3**
	2.3nm,0.7s,mb4.3,baz=301,slow=9.0,SNR=13						
WRAB	**Tennant Creek**	**47.56**	**123**	*e*P	**P**	**04 19 30.8**	**-0.1**
	3.6nm,0.7s,mb4.5						
ZAL	**Zalesovo**	**48.96**	**353**	P	**P**	**04 19 41.7**	**+0.4**
	0.4nm,0.6s,mb3.6,baz=144,slow=22,SNR=3.2						
ASAR	**Alice Springs**	**49.01**	**128**	P	**P**	**04 19 42.4**	**+0.3**
	0.7nm,1.0s,mb3.6,baz=300,slow=7.3,SNR=3.5						
CHKZ	**Chkalovo**	**51.63**	**343**	P	**P**	**04 20 00.9**	**-0.7**
	0.7nm,0.9s,mb3.6						
GERES	**GERESS Array B**	**79.14**	**319**	P	**P**	**04 22 59.9**	**+0.7**
	0.1nm,0.3s,mb3.2,baz=121,slow=5.7,SNR=4.2						
DAVOX	**Davos**	**81.62**	**316**	P	**P**	**04 23 11.9**	**-0.4**
	2.6nm,0.9s,mb4.2,baz=359,slow=13,SNR=3.4						

WEL 27 04:31:28.7±0.4**, 36.24S×177.08E, h142**^{km}±9^{km}**, ML3.5**/1**, Error ellipse: s-maj=6.7km s-min=6.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.65**	**144**	*e*PN	P	04 31 59.6	-0.1
MXZ				SN	S	04 32 22.6	-0.8
PUZ	**Puketiti**	**2.06**	**153**	PN	P	04 32 04.0	-0.4
PUZ				SN	S	04 32 30.1	-1.7
PUZ				SN	S	04 32 30.7	-1.1
MWZ	**Matawai**	**2.12**	**170**	PN	P	04 32 05.0	-0.3
MWZ				SN	S	04 32 32.8	-0.4
MWZ				SN	S	04 32 32.9	-0.3

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*BJI **27** 04:35:34.5, 2.69S×141.99E, h38^{km}, mB5.5, mb5.0, Ms4.9,* *Msz4.7*

MOS **27** *04:35:34.8±1.1, 2.71S×141.58E, h33^{km}, mb5.3/16, Error ellipse: s-maj=23.2km s-min=10.4km az=110.1*

NEIC **27** *04:35:36.0±2.5, 2.78S×141.62E, h32^{km}±17^{km}, mb5.2/35, MS4.4/7, Error ellipse: s-maj=6.8km s-min=5.2km az=61.0*

HRVD **27** *04:35:36.0±0.2, 2.78S×141.76E, h12^{km}, MW5.1/73, Centroid moment Tensor Solution. LP body waves: s58,c92;Mantle waves: s73,c119; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-6.97±.18; M$_{\theta\theta}$3.17±.16; M$_{\phi\phi}$3.79±.21; M$_{r\theta}$-2.57±.46; M$_{\theta\phi}$1.35±.15; M$_{\phi r}$1.82±.50; Best double couple: M$_0$6.412×10^{16} NP1: φ$_s$203°,δ46°,λ-114°. NP2:φ$_s$56°,δ49°,λ-67°. Principal axes: T 4.869, Plg1°, Azm130°; N 3.077, Plg17°, Azm220°; P -7.956, Plg73°, Azm36°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC **27** *04:35:38.2±2.5, 2.85S×141.59E, h48^{km}±24^{km}, mb4.6/16, mb1 4.7/19, mb1mx4.7/21, mbtmp4.8/19, ML4.4/3, MS4.4/15, Ms1 4.4/15, ms1mx4.4/21 Error ellipse: s-maj=18.3km s-min=10.4km az=96.0*

ISC 27 04:35:34.6±0.2**, 2.81S**±0.03×**141.65E**±0.04**, h33^{km}, (h25^{km}**±6.4^{km}**:pP-P), n171,** σ1^{s}**11**/169**, mb5.1**/67**, MS4.5**/34**, 7C-8D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.54	140	*e*P	P	04 37 42.0	+3.2
PMG	Port Moresby	8.54	140	P	P	04 37 39.1	+0.2
	3.5nm,0.3s,baz=299,slow=4.5,SNR=13						
PMG				LR	LR	04 41 20.7	
	comp=Z,4μm,20.8s,baz=336,slow=40						
PMG	Port Moresby	8.54	140	*e*P	P	04 37 38.8	0.0
	112nm,1.1s						
KAKA	Kakadu	13.41	222	*e*P	P	04 38 42.3	-2.8
	123nm,0.5s						
KAKA				*e*S	S	04 41 12.8	-1.2
CTA	Charters Tower	17.75	166	P	P	04 39 42.9	+1.9
	0.5nm,0.3s,baz=354,slow=14,SNR=5.9						
CTA				LR	LR	04 46 28.5	
	comp=Z,1μm,21.0s,baz=359,slow=37						
CTAO	Charters Tower	17.75	166	*e*P	P	04 39 42.5	+1.6
	47nm,1.3s						
WRAB	Tennant Creek	18.45	202	⇑*i*P	P	04 39 49.0	-0.8
WRAB	Tennant Creek	18.45	202	*e*P	P	04 39 49.0	-0.8
	100nm,0.6s						
WRA	Warramunga Arr	18.46	202	P	P	04 39 49.2	-0.7
	7.5nm,0.3s,baz=17,slow=13,SNR=122						
WRA				S	S	04 43 15.3	+4.0
	baz=21,slow=20,SNR=5.6						
DAV	Davao City (W)	18.80	302	*e*P	P	04 39 56.0	+1.9
HNR	Honiara	19.34	111	*e*P	P	04 39 59.1	-1.1
	307nm,0.7s						
FITZ	Fitzroy Crossi	21.85	225	⇑*i*P	P	04 40 25.7	-0.5
FITZ				*e*S	S	04 44 25.8	+5.1
SNPH	Sibulan	21.96	304	⇑*e*P	P	04 40 26.0	-1.5
ASAR	Alice Springs	22.05	199	P	P	04 40 27.6	-0.6
	31nm,0.9s,mb4.7,baz=25,slow=11,SNR=75						
ASAR				S	S	04 44 27.3	+2.9
	3.6nm,1.0s,baz=24,slow=16,SNR=2.4						
ASAR				LR	LR	04 50 21.6	
	comp=Z,326nm,19.1s,MS3.8,baz=22,slow=40						
ASPA	Alice Springs	22.05	199	⇑*i*P	P	04 40 27.9	-0.3
ASPA				*e*S	S	04 44 24.0	-0.4
KKM	Kota Kinabalu	26.88	289	*e*P	P	04 41 13.8	-0.9
MBWA	Marble Bar	28.07	228	*e*P	P	04 41 24.5	-1.0
	39nm,0.8s,mb5.1						
MBWA				LR	LR		
	comp=Z,686nm,19.0s,MS4.3						
STKA	Stephens Creek	28.91	180	⇑*i*P	P	04 41 32.0	-0.9
	comp=Z,10nm,0.9s,mb4.5						
STKA	Stephens Creek	28.91	180	P	P	04 41 32.8	-0.1
	comp=Z,6.9nm,0.5s,mb4.6,baz=352,slow=8.3,SNR=23						
STKA				LR	LR	04 53 44.5	
	comp=Z,1μm,18.4s,MS4.6,baz=356,slow=38						
CBIJ	Chichi jima	29.73	1	LR	LR	04 52 11.0	
	comp=Z,371nm,18.2s,MS4.0,baz=268,slow=33						
FORT	Forrest	30.64	203	⇑*i*P	P	04 41 47.9	-0.4
	comp=Z,2μm,0.5s						
KSM	Kuching	31.62	277	*e*P	P	04 41 54.4	-2.7
CNB	Canberra Magne	33.12	168	*e*P	P	04 42 11.0	+1.0
	comp=Z,359nm,1.4s,mb6.1						
TOO	Toolangi	34.77	175	*e*P	P	04 42 27.3	+3.1
	comp=Z,1.3nm,1.1s						
JHJ	Hachijo jima 2	35.78	357	LR	LR	04 53 46.6	
	comp=Z,602nm,21.7s,MS4.3,baz=88,slow=30						
KLBR	Kellerberrin	36.42	216	*e*P	P	04 42 39.1	+0.9
	comp=Z,1μm,1.4s						
MUN	Mundaring	37.61	217	*e*P	P	04 42 48.6	+0.4
	comp=Z,16nm,0.7s,mb4.8						
NWAO	Narrogin (SRO)	37.70	215	*e*P	P	04 42 49.5	+0.6
	comp=Z,24nm,1.0s,mb4.9						
QIZ	Qiongzhong	38.07	306	P	P	04 42 53.8	+1.6
QIZ				S	S	04 48 42.8	+0.5
QIZ				LR	LR		
	comp=Z,800nm,15.6s,MS4.6						
SSE	Sheshan	38.95	332	P	P	04 42 59.0	-0.3
SSE				S	S	04 48 52.0	-3.5
SSE				AMB	AMB		
	comp=Z,34nm,1.0s,mb5.0						
SSE				AMB	AMB		
	comp=Z,284nm,8.1s						
SSE				LR	LR		
	comp=N,239nm,21.1s,MS4.0						
SSE				LR	LR		
	comp=E,108nm,21.1s,MS4.0						
SSE				LR	LR		
	comp=Z,362nm,18.3s,MS4.2						
SSE	Sheshan	38.95	332	P	P	04 42 59.0	-0.3
	comp=Z,34nm,1.0s,mb5.0						
SSE				pP	tx	04 43 22.5	
SSE				sP	tx	04 43 34.4	
SSE				S	S	04 48 51.9	-3.6
SSE				sS		04 49 32.3	
SSE				SS	SS	04 51 49.8	+10
SSE				LR	LR		
	comp=Z,360nm,18.3s,MS4.2						
MAT	Matsushiro	39.28	356	*e*P	P	04 43 00.0	-2.1
MAT	Matsushiro	39.28	356	P	P	04 43 00.1	-2.0
NJ2	Nanjing	40.87	330	*e*P	P	04 43 16.3	+1.0
NJ2				PP	PP	04 44 56.3	+3.7
NJ2				S	S	04 49 23.0	-1.2
NJ2				AMB	AMB		
	comp=Z,430nm,5.2s						
NJ2				LR	LR		
	comp=N,1μm,20.6s,MS4.9						
NJ2				LR	LR		
	comp=E,910nm,16.3s,MS4.9						
NJ2				LR	LR		
	comp=Z,900nm,15.5s,MS4.7						
KULM	Kulim	41.74	281	*e*P	P	04 43 21.6	-1.2
SNG	Songkhla	42.13	284	P	P	04 43 25.0	-1.0
WHN	Wuhan	42.17	324	P	P	04 43 27.5	+1.4
WHN				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
NNT	Nongplab	44.35	291	P	P	04 43 46.7	+2.7
GYA	Guiyang	44.60	313	⇑*i*P	P	04 43 47.3	+1.5
GYA				AP	pP	04 43 56.5	+0.8
GYA				XP	sP	04 44 01.3	+1.5
GYA				S	S	04 50 25.5	+6.5
GYA				AMB	AMB		
	comp=Z,30nm,1.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,300nm,7.2s						
GYA				LR	LR		
	comp=N,440nm,14.7s,MS4.6						
GYA				LR	LR		
	comp=E,280nm,15.8s,MS4.6						
GYA				LR	LR		
	comp=Z,600nm,15.6s,MS4.6						
ENH	Enshi	45.00	319	*e*P	P	04 43 48.4	-0.7
	comp=Z,50nm,1.3s,mb5.2						
TIA	Tai'an	45.07	332	P	P	04 43 48.5	-1.0
NANT	Nan	45.65	300	P	P	04 43 53.7	-0.6
VLA	Vladivostok	46.56	350	*e*P	P	04 44 07.0	+5.8
VLA				*i*		04 51 00.0	
VLA				*i*		04 54 05.0	
VLA				pmax	pmax		
	comp=Z,500nm,7.0s						
VLA				pmax	pmax		
	comp=N,500nm,8.0s						
ASAJ	Asahikawa	46.72	1	P	P	04 44 02.2	-0.2
	comp=N,7.9nm,0.7s,mb4.8,baz=232,slow=11,SNR=7.3						
ASAJ				LR	LR	05 02 06.8	
	comp=N,180nm,19.5s,MS4.0,baz=336,slow=34						
KMI	Kunming	46.84	309	P	P	04 44 05.5	+1.9
KMI				AP	pP	04 44 10.8	-2.7
KMI				PP	PP	04 45 56.5	+3.0
KMI				S	S	04 50 52.5	+1.5
KMI				AMB	AMB		
	comp=Z,25nm,1.7s,mb4.9						
KMI				AMB	AMB		
	comp=Z,275nm,5.4s						
KMI				LR	LR		
	comp=N,379nm,15.7s,MS4.5						
KMI				LR	LR		
	comp=E,347nm,18.4s,MS4.5						
KMI				LR	LR		
	comp=Z,567nm,29.4s						
KMI	Kunming	46.84	309	P	P	04 44 05.6	+2.0
	comp=Z,25nm,1.7s,mb4.9						
KMI				pP	pP	04 44 10.7	-2.8
KMI				sP	sP	04 44 12.8	-4.8
KMI				PP	PP	04 45 56.5	+3.0
KMI				S	S	04 50 52.5	+1.5
KMI				sS		04 51 01.2	
KMI				SS	SS	04 54 17.2	+6.8
KMI				LR	LR		
	comp=Z,570nm,29.4s,MS4.4						
CMAR	Chiang Mai Arr	47.05	298	*i* P	P	04 44 06.1	+0.8
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	Chiang Mai Arr	47.05	298	P	P	04 44 06.1	+0.8
	comp=Z,5.2nm,0.9s,mb4.4,baz=115,slow=7.0,SNR=7.8						
CMAR				PcP	PcP	04 45 39.1	+1.6
	comp=Z,20nm,1.4s,baz=135,slow=1.3,SNR=4.4						
CMAR				LR	LR	05 03 46.5	
	comp=Z,114nm,18.3s,MS3.9,baz=115,slow=36						
CHG	Chiang Mai	47.19	299	P	P	04 44 11.2	+4.8
SNY	Shenyang	47.37	342	⇓P	P	04 44 07.5	0.0
SNY				S	S	04 51 02.0	+3.8
SNY				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
SNY				AMB	AMB		
	comp=Z,450nm,5.4s						
SNY				LR	LR		
	comp=N,470nm,18.6s,MS4.6						
SNY				LR	LR		
	comp=E,310nm,16.2s,MS4.6						
SNY				LR	LR		
	comp=Z,470nm,17.6s,MS4.5						
XAN	Xi'an	47.89	323	P	P	04 44 12.0	+0.3
XAN				AMB	AMB		
	comp=Z,23nm,2.2s,mb4.8						
URZ	Urewera	47.90	142	P	P	04 44 12.7	+0.9
	comp=Z,9.8nm,0.4s,mb5.2,baz=257,slow=4.8,SNR=15						
URZ				LR	LR	05 02 45.6	
	comp=Z,890nm,19.8s,MS4.7,baz=198,slow=34						
RPZ	Rata Peaks	48.36	152	P	P	04 44 15.7	+0.4
	comp=Z,12nm,0.5s,mb5.2,baz=127,slow=3.6,SNR=6.7						
RPZ				LR	LR	05 02 03.8	
	comp=Z,781nm,21.7s,MS4.7,baz=288,slow=33						
MDJ	Mudanjiang	48.43	348	P	P	04 44 15.0	-0.8
MDJ				XP	sP	04 44 27.0	-2.8
MDJ				PP	PP	04 46 05.3	-2.8
MDJ				S	S	04 51 15.5	+2.3
MDJ				XS		04 51 29.0	
MDJ				AMB	AMB		
	comp=Z,11nm,1.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,311nm,11.0s						
MDJ				LR	LR		
	comp=N,327nm,33.1s,MS4.2						
MDJ				LR	LR		
	comp=E,175nm,33.1s,MS4.2						
MDJ				LR	LR		
	comp=Z,408nm,31.3s,MS4.2						
BJT	Baijiatuau	48.60	334	*e*P	P	04 44 16.3	-0.9
	comp=Z,106nm,1.7s,mb5.6						
BJT				LR	LR		
	comp=Z,752nm,19.0s,MS4.7						
BJI	Beijing	48.62	334	P	P	04 44 17.0	-0.3
BJI				PP	PP	04 46 10.8	+0.8
BJI				S	S	04 51 17.3	+1.4
BJI				XS		04 51 32.0	
BJI				AMB	AMB		
	comp=Z,32nm,1.7s,mb5.1						
BJI				LR	LR		
	comp=N,644nm,15.5s,MS4.8						
BJI				LR	LR		
	comp=E,453nm,17.1s,MS4.8						
BJI				LR	LR		
	comp=Z,511nm,20.5s,MS4.5						
BJI	Beijing	48.62	334	P	P	04 44 17.1	-0.2
	comp=Z,32nm,1.7s,mb5.1						
BJI				sP	sP	04 44 26.0	-5.3
BJI				PP	PP	04 46 10.7	+0.7
BJI				S	S	04 51 17.2	+1.3
BJI				sS		04 51 31.9	
BJI				SS	SS	04 54 55.3	+14
BJI				LR	LR		
	comp=Z,510nm,20.5s,MS4.5						
CN2	Changchun	48.63	344	*e*P	P	04 44 17.0	-0.4
CN2				*e*AP	pP	04 44 27.0	-0.2
CN2				*e*S	S	04 51 16.8	+0.8
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
CN2				AMB	AMB		
	comp=Z,420nm,6.0s						
CN2				LR	LR		
	comp=N,600nm,15.0s,MS4.8						
CN2				LR	LR		
	comp=E,500nm,15.0s,MS4.8						
CN2				LR	LR		
	comp=Z,700nm,18.0s,MS4.7						
CD2	Chengdu	49.26	316	P	P	04 44 22.5	+0.1
YSS	Yuzh-Sakhalins	49.56	1	*e*P	P	04 44 22.4	-2.1
YSS				*e*		04 51 40.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
YSS	Yuzh-Sakhalins	49.56	1	*e*P	P	04 44 23.5	-1.0
	comp=Z,20nm,0.9s,mb5.2						
HHC	Hu-ho-hao-te	51.40	331	*e*P	P	04 44 39.3	+0.8
HHC				PCP	PcP	04 45 53.5	+0.5
HHC				PP	PP	04 46 36.3	-0.1
HHC				SCP		04 49 49.0	
HHC				S	S	04 52 00.0	+5.6
HHC				SCS	ScS	04 54 25.8	+2.7
HHC				SS	SS	04 55 31.0	+2.8
HHC				AMB	AMB		
	comp=Z,19nm,2.4s,mb4.6						
HHC				AMB	AMB		
	comp=Z,356nm,5.8s						
HHC				LR	LR		
	comp=N,340nm,19.6s,MS4.7						
HHC				LR	LR		
	comp=E,509nm,18.1s,MS4.7						
HHC				LR	LR		
	comp=Z,561nm,18.4s,MS4.6						
BTO	Baotou	51.98	330	*e*P	P	04 44 40.0	-2.9
LZH	Lanzhou	52.36	321	⇓P	P	04 44 47.3	+1.5
LZH				PP	PP	04 46 47.5	+2.0
LZH				S	S	04 52 12.3	+4.5
LZH				AMB	AMB		
	comp=Z,113nm,1.8s,mb5.5						
LZH				AMB	AMB		
	comp=Z,311nm,4.5s						
LZH				LR	LR		
	comp=E,645nm,14.1s						
LZH				LR	LR		
	comp=Z,969nm,15.7s,MS4.9						
LZH	Lanzhou	52.36	321	⇓P	P	04 44 47.3	+1.5
	comp=Z,113nm,1.8s,mb5.5						
LZH				pP	pP	04 44 50.2	-5.6
LZH				sP	sP	04 44 51.5	-8.3
LZH				PP	PP	04 46 47.5	+2.0
LZH				S	S	04 52 12.2	+4.4
LZH				sS		04 52 18.3	
LZH				SS	SS	04 55 50.0	+5.9
LZH				LR	LR		
	comp=Z,970nm,15.7s,MS4.9						
KLR	Kul'dur	52.54	352	*e*P	P	04 44 43.2	-3.7
KLR				*e*S	S	04 52 13.5	+3.6
KLR				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
HIA	Hailar	55.23	343	*e*P	P	04 45 05.5	-1.3
	comp=Z,20nm,1.1s,mb5.0						
GTA	Gaotai	56.92	322	*e*P	P	04 45 19.8	+0.7
GTA				PCP	PcP	04 46 15.0	+0.9
GTA				PP	PP	04 47 28.0	+0.8
GTA				S	S	04 53 16.3	+7.3
GTA				XS		04 53 25.3	
GTA				AMB	AMB		
	comp=Z,21nm,1.6s,mb4.9						
GTA				AMB	AMB		
	comp=Z,412nm,5.3s						
GTA				LR	LR		
	comp=N,212nm,13.3s,MS4.6						
GTA				LR	LR		
	comp=E,347nm,17.1s,MS4.6						
GTA				LR	LR		
	comp=Z,400nm,16.7s,MS4.6						
PET	Petropavlovsk	57.44	12	*e*P	P	04 45 26.7	+4.1
PET				*e*S	S	04 53 29.0	+13
PET				pmax	pmax		
	comp=Z,200nm,11.9s						
PET				smax			
	comp=N,500nm,14.0s						
PET				smax			
	comp=N,400nm,16.1s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.0						
LSA	Lhasa	58.08	308	*e*P	P	04 45 26.7	-0.6
	comp=Z,91nm,1.5s,mb5.6						
ULN	Ulaanbaatar	58.83	333	*e*P	P	04 45 31.9	-0.4
	comp=Z,19nm,1.3s,mb5.0						
ULN				LR	LR		
	comp=Z,399nm,19.0s,MS4.6						
SONM	Songino Array	59.10	333	P	P	04 45 34.4	+0.2
	comp=Z,16nm,1.4s,mb4.9,baz=152,slow=7.3,SNR=24						
VIS	Vishakhapatnam	60.97	292	*e*	P	04 45 44.0	-3.4
CLNS	Chul'man	60.99	350	*e*P	P	04 45 46.4	-0.6
CLNS				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
JIRN	Jiri	61.33	304	*e*P	P	04 45 49.8	+0.1
	comp=E,127nm,1.4s,mb5.9						
FX1	Attu Island--F	61.49	21	P	P	04 45 49.7	-0.7
	comp=E,26nm,0.6s,mb5.6,baz=77,slow=2.8,SNR=12						
FX1				LR	LR	05 11 53.2	
	comp=E,13nm,18.2s,baz=184,slow=35						
FX1	Attu Island--F	61.49	21	*e*P	P	04 45 49.6	-0.8
PKI	Pulchoki	61.95	303	*e*P	P	04 45 53.5	-0.4
	comp=E,136nm,1.6s,mb5.8						
KKN	Kakani	62.13	303	*e*P	P	04 45 55.1	0.0
	comp=E,208nm,1.5s,mb6.0						
DMN	Daman	62.21	303	*e*P	P	04 45 55.8	+0.2
	comp=E,249nm,1.5s,mb6.1						
ZAK	Zakamensk	62.36	333	⇓*i*P	P	04 45 55.8	-0.5
ZAK				pmax	pmax		
	comp=Z,18nm,1.6s,mb5.0						
MA2	Magadan	62.61	5	⇓*i*P	P	04 45 57.1	-0.8
MA2				pmax	pmax		
	comp=Z,71nm,2.5s,mb5.3						
MA2	Magadan	62.61	5	*e*P	P	04 45 57.0	-0.9
	comp=Z,58nm,1.6s,mb5.5						
GKN	Gorkha	62.73	303	*e*P	P	04 45 59.0	-0.1
	comp=Z,68nm,0.8s,mb5.8						
TLY	Talaya	63.13	335	P	P	04 46 01.6	+0.1
	comp=Z,68nm,1.5s,mb5.6,SNR=11						
TLY	Talaya	63.13	335	*e*P	P	04 46 02.3	+0.8
TLY				*e*S	S	04 54 36.2	+7.6
TLY				*e*PS	PS	04 55 01.8	+11
TLY				pmax	pmax		
	comp=Z,41nm,2.0s,mb5.2						
TLY				MLR	MLR		
	comp=Z,372nm,19.0s,MS4.6						
IRK	Irkutsk	63.28	335	*e*P	P	04 46 02.4	0.0
IRK				pmax	pmax		
	comp=Z,50nm,3.6s						
KOLN	Koldanda	63.53	303	*e*P	P	04 46 04.3	-0.2
	comp=Z,164nm,1.5s,mb5.8						
MOY	Mondy	64.29	333	*e*P	P	04 46 09.6	+0.6
MOY				pmax	pmax		
	comp=Z,84nm,2.4s,mb5.3						
BOD	Bodaibo	64.38	344	*e*P	P	04 46 07.0	-2.5
BOD				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.7						
YAK	Yakutsk	65.31	354	*e*P	P	04 46 13.6	-1.8
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
YAK	Yakutsk	65.31	354	P	P	04 46 14.7	-0.7
	comp=Z,80nm,1.4s,mb5.6						
YAK				LR	LR		
	comp=Z,346nm,21.0s,MS4.5						
HYB	Hyderabad	65.35	290	*e*P	P	04 46 15.0	-1.4
HYB	Hyderabad	65.35	290	*i* P	P	04 46 15.0	-1.4
SEY	Seymchan	66.07	5	*e*P	P	04 46 21.1	+0.9
SEY						04 48 43.7	
SEY				*e*PPP	PPP	04 50 21.8	-1.4
SEY				*e*S	S	04 55 03.3	-1.2
SEY				*e*		04 56 05.9	
SEY				*e*SS	SS	04 59 21.9	+0.3
SEY				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
SEY				pmax	pmax		
	comp=N,30nm,1.4s						
SEY				MLR	MLR		
	comp=Z,430nm,23.0s,MS4.6						
SEY				MLR	MLR		
	comp=N,420nm,22.0s,MS4.7						
SEY				MLR	MLR		
	comp=E,200nm,22.0s,MS4.7						
WMQ	Urumqi	66.93	320	P	P	04 46 26.8	+0.8
WMQ				XP	sP	04 46 41.0	+1.0
WMQ				PP	PP	04 48 56.0	+0.7
WMQ				S	S	04 55 16.0	+0.7
WMQ				SS	SS	04 59 35.0	-0.8
WMQ				AMB	AMB		
	comp=Z,32nm,1.3s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,59nm,9.0s						
DDI	Dehra Dun	68.92	304	*e*	P	04 46 38.5	-0.2
PPT	Papeete	68.93	108	*e*S	S	04 55 40.8	+1.2
PPT				*e*SS	SS	04 59 41.9	-25
PPT				*e*LR	LR	05 07 40.5	
	comp=Z,537nm,29.2s						
TBI	Tubuai	69.52	114	*e*S	S	04 55 51.4	+4.8
TBI				*e*SS	SS	04 59 47.0	-29
TBI				*e*LR	LR	05 07 57.9	
	comp=Z,459nm,32.0s						
POO	Poona	69.96	291	*e*P	P	04 46 44.5	-0.7
MKAR	Makanchi Array	71.68	321	*i* P	P	04 46 55.3	+0.2
MKAR				pmax	pmax		
	comp=Z,127nm,1.6s						
BILL	Bilibino	72.76	9	⇓*i*P	P	04 47 00.8	-0.3
BILL				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
BILL	Bilibino	72.76	9	*e*P	P	04 46 59.6	-1.5
	comp=Z,16nm,1.2s,mb4.8						
KSH	Kashi	73.30	313	*e*P	P	04 47 08.0	+3.1
KSH				*e*AP	pP	04 47 18.0	+2.8
KSH				*e*XP	sP	04 47 22.3	+3.4
KSH				*e*PP	PP	04 49 54.3	+3.9
KSH				*e*S	S	04 56 33.5	+3.6
KSH				*e*XS		04 56 50.0	
KSH				*e*SKS	SKS	04 57 05.5	+1.8
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
KSH				LR	LR		
	comp=N,210nm,5.8s						
KSH				LR	LR		
	comp=E,240nm,6.7s						
ZAL	Zalesovo	73.52	329	P	P	04 47 05.0	-0.9
	comp=E,3.2nm,0.7s,mb4.4,baz=360,slow=5.9,SNR=21						
ULHL	Ulahol	73.98	315	P	P	04 47 09.5	+0.8
	SNR=6.1						
KZA	Kyzart	74.62	315	P	P	04 47 14.5	+2.0
	SNR=41						
TKM2	Tokmak 2	74.65	316	P	P	04 47 13.1	+0.5
	SNR=22						
NVS	Novosibirsk	74.76	329	*e*P	P	04 47 11.6	-1.4
NVS				pmax	pmax		
	comp=N,53nm,1.8s						
NVS				pmax	pmax		
	comp=Z,79nm,1.8s,mb5.3						
NVS				pmax	pmax		
	comp=E,56nm,1.7s						
UCH	Uchtor	75.19	315	P	P	04 47 17.6	+1.8
	SNR=22						
CHMS	Chumysh	75.26	316	P	P	04 47 16.6	+0.4

	SNR=11						
FRU	Bishkek	75.30	316	*e*P	P	04 47 18.0	+1.6
FRU				*e*		04 47 23.0	
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.2						
AAK	Ala-Archa	75.33	315	P	P	04 47 18.1	+1.5
	SNR=11						
AAK	Ala-Archa	75.33	315	*i* P	P	04 47 16.9	+0.3
AAK				pmax	pmax		
	comp=Z,39nm,1.5s,mb5.1						
AAK	Ala-Archa	75.33	315	*e*P	P	04 47 16.3	-0.2
	comp=Z,43nm,1.4s,mb5.2						
VNDA	Vanda	75.44	176	P	P	04 47 16.7	+0.1
	comp=Z,4.7nm,0.9s,mb4.4,baz=320,slow=6.8,SNR=22						
VNDA				LR	LR	05 23 46.0	
	comp=Z,488nm,18.2s,MS4.8,baz=4.5,slow=38						
VNDA	Vanda	75.44	176	*e*P	P	04 47 16.5	0.0
	comp=Z,10nm,1.1s,mb4.7						
KURK	Kurchatov	75.50	324	P	P	04 47 17.6	+0.2
	comp=Z,128nm,1.2s,mb5.7,SNR=31						
KURK	Kurchatov	75.50	324	*d i*P	P	04 47 17.7	+0.3
KURK	Kurchatov	75.50	324	*e*P	P	04 47 17.2	-0.2
	comp=Z,123nm,1.8s,mb5.5						
KURK				LR	LR		
	comp=Z,56nm,19.0s,MS3.9						
USP	Ospenovka	75.52	316	P	P	04 47 18.2	+0.5
	SNR=18						
AML	Almayashu	75.74	315	P	P	04 47 20.8	+1.8
	SNR=29						
EKS2	Erkin-Say	75.84	315	P	P	04 47 20.6	+1.1
	SNR=16						
SBA	Scott Base	76.16	175	P	P	04 47 19.0	-1.7
	comp=Z,1.3nm,0.6s						
TAOE	Nuku Hiva Isla	77.92	98	*e*LR	LR	05 11 38.7	
BVAR	Borovoye Array	81.08	325	P	P	04 47 48.3	+0.3
	comp=Z,7.5nm,0.6s,mb4.8,baz=110,slow=7.3,SNR=65						
CHKZ	Chkalovo	81.14	325	*e*P	P	04 47 48.2	-0.1
	comp=Z,22nm,1.1s,mb5.0						
SLKM	Skilak Lake	81.85	28	*e*P	P	04 47 51.0	-0.8
IMA	Indian Mountai	82.54	22	*e*P	P	04 47 56.0	+0.7
	comp=Z,135nm,1.4s,mb5.8						
RKT	Rikitea	82.82	113	*e*LR	LR	05 13 56.8	
	comp=Z,437nm,26.2s						
MAW	Mawson	83.14	202	LR	LR	05 23 32.8	
	comp=Z,358nm,18.3s,MS4.8,baz=194,slow=35						
SML	Sawmill	83.15	27	*e*P	P	04 47 58.3	-0.1
MCK	McKinley	83.53	25	*e*P	P	04 47 59.6	-0.7
	comp=Z,63nm,1.6s,mb5.5						
COLA	College	84.36	24	*e*P	P	04 48 04.0	-0.5
COLA	College	84.36	24	*e*P	P	04 48 03.9	-0.6
	comp=Z,14nm,1.1s,mb5.0						
ILAR	Eielson Array	84.72	24	P	P	04 48 05.2	-1.1
	comp=Z,5.6nm,0.6s,mb4.8,baz=271,slow=4.3,SNR=66						
THY	Trims Highway	84.78	26	*e*P	P	04 48 07.2	+0.6
QSPA	South Pole Qui	87.14	180	*e*P	P	04 48 19.2	+1.3
	comp=Z,85nm,1.3s,mb5.8						
SVE	Sverdlovsk	87.42	327	*e*P	P	04 48 19.0	-0.7
INK	Inuvik	90.67	22	*e*P	P	04 48 34.3	-0.6
	comp=Z,19nm,1.3s,mb5.3						
DLBC	Dease Lake	91.49	32	P	P	04 48 39.2	+0.3
	comp=Z,3.3nm,1.0s,mb4.6,baz=202,slow=5.4,SNR=3.3						
DLBC	Dease Lake	91.49	32	P	P	04 48 39.2	+0.3
SYO	Syowa Base	91.70	201	⇓P	P	04 48 41.8	+2.1
BBB	Bella Bella	92.35	38	LR	LR	05 29 12.4	
	comp=Z,195nm,19.0s,MS4.6,baz=66,slow=35						
YBH	Yreka Blue Hor	96.07	49	P	P	04 48 58.2	-2.0
	comp=Z,3.5nm,0.8s,mb4.8,baz=359,slow=9.7,SNR=6.1						
YBH	Yreka Blue Hor	96.07	49	*e*P	P	04 48 57.3	-2.9
	comp=Z,15nm,1.4s,mb5.2						
KIV	Kislovodsk	98.40	314	*i* P	P	04 49 09.7	-1.0
YKA	Yellowknife Ar	98.82	27	P	P	04 49 11.9	-0.2
	comp=Z,1.7nm,0.7s,mb4.7,baz=281,slow=4.7,SNR=32						
YKA				PP	PP	04 53 18.6	+2.4
	comp=Z,3.8nm,1.4s,baz=281,slow=6.6,SNR=4.3						
YKA				PKKPbc		05 05 38.7	
	comp=Z,0.1nm,0.5s,baz=93,slow=2.7,SNR=4.5						
YKA				LR	LR	05 29 40.9	
	comp=Z,157nm,21.6s,MS4.5,baz=275,slow=33						
YKA	Yellowknife Ar	98.82	27	P	P	04 49 11.9	-0.2
YKA				PP	PP	04 53 18.6	+2.4
YKA				PKKPbc		05 05 38.7	
YKA				LR	LR	05 29 40.9	
WVOR	Wild Horse Val	99.06	48	*e*P	P	04 49 15.0	+1.2
	comp=Z,5.1nm,0.9s,mb5.0						
NEW	Newport	99.57	42	LR	LR	05 31 12.2	
	comp=Z,162nm,18.8s,MS4.5,baz=351,slow=34						
NVAR	Mina Array Bea	99.61	52	P	P	04 49 17.4	+1.1
	comp=Z,0.8nm,0.9s,mb4.1,baz=281,slow=3.8,SNR=5.0						
NVAR	Mina Array Bea	99.61	52	P	P	04 49 17.4	+1.1
BMO	Blue Mountains	99.81	45	*e*P	P	04 49 17.8	+0.7
	comp=Z,9.1nm,1.7s,mb4.9						
OBN	Obninsk	100.90	326	P	P	04 49 18.0	-3.8
OBN				*e*PS	PS	05 02 31.2	-1.4
OBN				SS	SS	05 08 04.0	+7.7
RES	Resolute Bay	101.14	13	*e*P	P	04 49 21.4	-1.1
	comp=Z,13nm,1.5s						
ELK	Elko	101.76	49	P	P	04 49 26.8	+0.8
	comp=Z,0.6nm,0.7s,baz=253,slow=5.5,SNR=4.0						
FINES	FINESS Array B	104.47	333	Pdiff	Pdif	04 49 36.6	-0.9
	comp=Z,2.5nm,0.9s,baz=60,slow=11,SNR=4.4						
FINES				PKKP	PKKP	05 05 43.5	+18
	comp=Z,1.5nm,1.1s,baz=146,slow=5.0,SNR=7.0						
TXAR	Lajitas Array	112.83	59	PKiKP		04 54 10.8	
	comp=Z,1.4nm,1.2s,baz=270,slow=2.7,SNR=3.7						
TXAR	Lajitas Array	112.83	59	PKPdf	PKPdf	04 54 10.8	+2.1
JCT	Junction City	115.89	57	PKPdf	PKPdf	04 54 15.5	+0.9
GERES	GERESS Array B	116.25	324	PKP	PKPdf	04 54 17.1	+2.2
	comp=Z,0.3nm,0.5s,baz=45,slow=1.9,SNR=4.5						
PLCA	Paso Flores	127.64	149	PKP	PKPdf	04 54 38.1	+1.0
	comp=Z,1.1nm,0.8s,baz=243,slow=4.4,SNR=4.3						
ROSC	El Rosal	144.05	86	PKP	PKPdf	04 55 08.4	+0.4
	comp=Z,13nm,0.8s,baz=233,slow=5.1,SNR=24						
LPAZ	La Paz	144.98	124	*e*PKPbc	PKPbc	04 55 11.7	+2.0
DBIC	Dimbokro	146.41	278	PKPbc	PKPbc	04 55 15.2	+1.9
	comp=Z,19nm,0.8s,baz=68,slow=4.1,SNR=44						
DBIC	Dimbokro	146.41	278	*e*PKPbc	PKPbc	04 55 14.8	+1.5
SDV	Santo Domingo	147.34	78	*e*PKPdf	PKPdf	04 55 15.0	+1.4
SJG	San Juan	148.80	59	*e*PKPdf	PKPdf	04 55 19.7	+3.9
SAML	Samuel	152.63	116	PKPdf	PKPdf	04 55 23.4	+1.7
SAML				*e*PKPbc	PKPdf	04 55 30.0	+8.3
BDFB	Brasilia	159.32	153	PKPab	PKPab	04 56 10.2	-0.1
	comp=Z,7.0nm,1.1s,baz=202,slow=15,SNR=4.1						

NEIC ***27*** *04:46:59.0, 48.10N×128.81W, h10^{km}, mb3.9/1, ML3.8(PGC), After PGC.*

PGC 27 04:46:58.6, 48.10N×128.81W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge., Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.09	32	Pn	Pn	04 47 31.4	-2.8
OZB	Mount Ozzard	2.37	68	Pn	Pn	04 47 36.0	-2.2
OZB				Sn	Sn	04 48 03.5	-4.0
OZB				Trac		04 48 06.0	
	comp=Z,14nm,0.5s						
GDR	Gold River	2.49	46	Pn	Pn	04 47 37.8	-2.0
GDR				Sn	Sn	04 48 05.6	-5.0
	comp=Z,13nm,0.7s						
GDR				Trac		04 48 08.6	
	comp=Z,13nm,0.7s						
WOSB	Woss	2.53	35	Pn	Pn	04 47 38.5	-2.0
MAYB	Maynard	2.54	24	Pn	Pn	04 47 38.2	-2.5
MAYB				Sn	Sn	04 48 08.0	-4.0
	comp=Z,18nm,0.6s						
MAYB				Trac		04 48 08.8	
	comp=Z,18nm,0.6s						
BTB	Buttle Lake	2.57	57	Pn	Pn	04 47 39.7	-1.4
BTB				Sn	Sn	04 48 08.2	-4.5
	comp=Z,23nm,0.5s						
BTB				Trac		04 48 13.0	
	comp=Z,23nm,0.5s						
HOLB	Holberg	2.58	10	Pn	Pn	04 47 38.7	-2.5
HOLB				Sn	Sn	04 48 09.8	-3.1
	comp=Z,8.0nm,0.4s						
HOLB				Trac		04 48 12.2	
	comp=Z,8.0nm,0.4s						
PHC	Port Hardy	2.76	19	Pn	Pn	04 47 41.6	-2.2
MGB	Mount Grey	2.88	70	Pn	Pn	04 47 43.1	-2.4
MGB				Sn	Sn	04 48 15.6	-5.0
	comp=Z,13nm,0.5s						
MGB				Trac		04 48 19.1	
	comp=Z,13nm,0.5s						
ALB	Alberni	2.89	65	Trac		04 48 30.3	
	comp=Z,3.0nm,0.2s						
NCRB	Newcastle Ridg	2.93	37	Pn	Pn	04 47 44.2	-2.0
NCRB				Sn	Sn	04 48 18.8	-3.0
	comp=Z,4.0nm,0.3s						
NCRB				Trac		04 48 20.2	
	comp=Z,4.0nm,0.3s						
PFB	Port Renfrew	2.96	79	Pn	Pn	04 47 43.7	-2.9
PFB				Sn	Sn	04 48 17.3	-5.2
PFB				Trac		04 48 21.9	
	comp=Z,5.0nm,0.5s						
CBB	Campbell River	2.98	48	Pn	Pn	04 47 45.2	-1.7
CBB				Sn	Sn	04 48 19.9	-3.1
CBB				Trac		04 48 25.7	
	comp=Z,9.0nm,0.5s						
OCWA	Octopus Mounta	3.14	95	*e*P	Pn	04 47 48.0	-1.2
TXB	Texada	3.30	59	Pn	Pn	04 47 49.5	-1.9
TXB				Sn	Sn	04 48 30.3	-0.8
	comp=Z,9.0nm,0.5s						
TXB				Trac		04 48 32.5	
	comp=Z,9.0nm,0.5s						
LZB	Mount Lazard	3.37	79	Pn	Pn	04 47 50.0	-2.3
LZB				Sn	Sn	04 48 29.5	-3.4
LZB				Trac		04 48 32.5	
	comp=Z,1.0nm,0.5s						
NLLB	Nanaimo Lost L	3.39	69	Pn	Pn	04 47 51.8	-1.0
NLLB				Sn	Sn	04 48 30.7	-2.7
NLLB				Trac		04 48 46.5	
	comp=Z,12nm,0.9s						
SHB	Sechelt	3.59	64	Pn	Pn	04 47 53.7	-1.8
SHB				Sn	Sn	04 48 34.2	-4.2
SHB				Trac		04 48 49.6	
	comp=Z,7.9nm,0.6s						
PGC	Sidney	3.62	79	*e*P	Pn	04 47 53.4	-2.6
PGC	Sidney	3.62	79	Pn	Pn	04 47 53.9	-2.0
PGC				Sn	Sn	04 48 35.7	-3.5
PGC				Trac		04 48 39.2	
	comp=Z,4.0nm,0.6s						
GOBB	Galiano Island	3.62	75	Pn	Pn	04 47 54.5	-1.6
VGZ	Gonzales	3.68	83	Pn	Pn	04 47 53.5	-3.3
VGZ				Sn	Sn	04 48 35.8	-5.1
VGZ				Trac		04 48 39.3	
	comp=Z,6.0nm,0.5s						
SNB	Saturna Island	3.82	78	Pn	Pn	04 47 57.6	-1.2
WPB	Watts Point	4.01	65	Pn	Pn	04 48 00.1	-1.4
BBB	Bella Bella	4.11	6	Pn	Pn	04 48 00.8	-2.2
BBB				Sn	Sn	04 48 46.2	-5.5
BBB				Trac		04 48 48.4	
	comp=Z,17nm,0.7s						
WSLR	Whistler	4.37	60	Pn	Pn	04 48 05.9	-0.8
WSLR				Trac		04 49 05.5	
	comp=Z,5.0nm,0.7s						
LLLB	Lillooet	5.18	58	Pn	Pn	04 48 16.2	-1.9
PV01	Paradox Valley	17.77	117	P	P	04 51 08.0	+0.4
FFC	Flin Flon	17.93	58	*e*P	P	04 51 10.1	+0.6
	12nm,1.4s						
FCC	Fort Churchill	23.01	49	P	P	04 52 04.1	-0.2

BJI ***27*** *04:54:50.0, 17.20S×178.78W, h531^{km}, mB5.1, mb5.0*

NEIC ***27*** *04:54:50.6±0.1, 17.72S×178.59W, mb5.1/79, Error ellipse: s-maj=5.9km s-min=3.4km az=149.0*

MOS ***27*** *04:54:50.0±0.9, 17.59S×178.68W, h553^{km}, mb5.1/40, Error ellipse: s-maj=10.0km s-min=7.5km az=50.8*

HRVD ***27*** *04:54:50.6±0.3, 17.66S×178.52W, h581^{km}±1^{km}, MW5.7/67, Centroid moment Tensor Solution. LP body waves: s67,c117; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.66±.08; $M_{\theta\theta}$-0.42±.14; $M_{\phi\phi}$1.07±.12; $M_{r\theta}$-0.16±.14; $M_{\theta\phi}$1.02±.12; $M_{\phi r}$-4.24±.10; Best double couple: $M_0$4.442×10^{17} NP1:ϕ_s247°,δ14°,λ-25°. NP2:ϕ_s1°, δ84°,λ-103°. Principal axes: T 4.69, Plg38°, Azm103°; N -.499, Plg13°, Azm3°; P -4.194, Plg49°, Azm258°; nsta1 refers to body waves, cutoff=40s.*

IDC ***27*** *04:54:50.8±0.4, 17.82S×178.55W, h556^{km}±3^{km}, mb4.6/33, mb1 4.7/34, mb1mx4.7/34, mbtmp5.5/34 Error ellipse: s-maj=8.2km s-min=6.4km az=147.0*

BGS ***27*** *04:54:52.7±5.1, 17.72S×178.59W, h555^{km}*

ISC 27 04:54:49.5±0.1**, 17.81S**±0.03×**178.57W**±0.03**, h555**^{km}**, h555**^{km}±.9^{km}**:pP-P, n548,** σ**0^{s}91**/311**, mb5.1**/122**, 26C-92D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AFI	Afiamalu	7.60	60	*e*P	P	04 56 40.9	-3.2
	1µm,0.8s						
RAO	Raoul Island	11.41	177	*e*P	P	04 57 17.1	-5.2
	593nm,0.3s						
DZM	Mont Dzumac	14.72	251	*e*P	P	04 57 56.1	+0.4
DZM				*e*S	S	05 00 28.1	+2.4
DZM	Mont Dzumac	14.72	251	*e*P	P	04 57 56.0	+0.4
DZM				*e*S	S	05 00 28.1	+2.4
NOUC	Port Laguerre	14.85	251	*e*P	P	04 57 58.1	+1.1
NOUC	Port Laguerre	14.85	251	*e*S	S	05 00 32.6	+4.5
NOUC	Port Laguerre	14.85	251	*e*P	P	04 57 58.1	+1.1
NOUC				*e*S	S	05 00 32.6	+4.5
RAR	Rarotonga	18.04	104	P	P	04 58 28.2	+0.3
	5.3nm,0.3s,baz=246,slow=6.9,SNR=23						
RAR	Rarotonga	18.04	104	*e*P	P	04 58 28.2	+0.4
	919nm,1.5s						
URZ	Urewera	20.73	190	P	P	04 58 51.1	-1.7
	38nm,0.3s,baz=342,slow=1.9,SNR=39						
URZ				S	S	05 02 06.8	-1.7
	38nm,0.9s,baz=140,slow=11,SNR=4.9						
BKZ	Black Stump Fm	21.71	190	*e*PN	P	04 58 59.1	-2.8
HNR	Honiara	22.46	289	P	P	04 59 10.0	+1.1
	596nm,1.3s,mb6.1						
QRZ	Quartz Range	24.19	197	*e*PN	P	04 59 24.7	+0.5
NNZ	Nelson	24.34	195	*e*PN	P	04 59 23.7	-1.8
NNZ				*e*SN	S	05 03 04.1	-2.6
NNZ				SN	S	05 03 04.1	-2.5
THZ	Tophouse	24.97	195	PN	P	04 59 30.2	-0.9
KHZ	Kahutara	25.44	194	PN	P	04 59 33.7	-1.6
WVZ	Waitaha Valley	26.77	198	PN	P	04 59 45.4	-1.6
RPZ	Rata Peaks	27.28	197	P	P	04 59 49.1	-2.3
	15nm,0.3s,mb5.0,baz=327,slow=0.3,SNR=12						
PAE	Paea	27.60	94	*e*P	P	04 59 53.4	-1.1
	914nm,1.3s,mb6.2						
PPT	Papeete	27.61	94	*e*P	P	04 59 53.7	-0.9
	422nm,1.6s,mb5.8						
PPT				*e*pP		05 01 23.8	
	184nm,1.5s						
PPT	Papeete	27.61	94	P	P	04 59 53.4	-1.2
	234nm,1.0s,mb5.8,baz=238,slow=5.5,SNR=13						
TBI	Tubuai	27.77	106	*e*P	P	04 59 55.7	-0.2
	266nm,0.8s,mb5.9						
TIAR	Tiarei	27.83	94	*e*P	P	04 59 55.6	-0.9
	660nm,1.1s,mb6.2						
TVO	Taravao	27.90	94	*e*P	P	04 59 56.3	-0.8
	425nm,0.8s,mb6.1						
JCZ	Jackson Bay	28.28	199	PN	P	04 59 59.4	-0.7
MEH	Mehetia	29.02	95	*e*P	P	05 00 05.7	-1.0
	138nm,1.3s,mb5.4						
MSZ	Milford Sound	29.08	200	*e*PN	P	05 00 07.7	+0.7
PMOR	Pomariorio Ree	29.54	89	*e*P	P	05 00 10.4	-0.8
	721nm,1.4s,mb6.0						
MLZ	Mavora Lakes	29.61	199	PN	P	05 00 11.4	-0.1
KWAJ	Kwajalein Atol	29.75	332	*e*P	P	05 00 12.4	-0.6
	170nm,0.6s,mb5.8						
RIV	Riverview	31.43	234	*e*P	P	05 00 28.3	+1.2
CTA	Charters Tower	33.31	260	P	P	05 00 43.4	+0.3
	182nm,0.8s,mb5.6,baz=90,slow=10,SNR=149						
CTA				ScP		05 06 03.1	
	22nm,0.9s,baz=57,slow=3.8,SNR=11						
CTAO	Charters Tower	33.31	260	*e*P	P	05 00 43.3	+0.2
CTAO				pmax	pmax		
	comp=Z,132nm,0.7s,mb5.6						
CTAO	Charters Tower	33.31	260	*e*P	P	05 00 43.2	+0.1
	comp=Z,132nm,0.7s,mb5.6						
CTAO				*e*ScP		05 06 02.9	
CNB	Canberra Magne	33.37	232	⇓*i*P	P	05 00 44.8	+1.4
	comp=Z,5µm,0.6s						
CNB				*e*S	S	05 05 27.7	+0.9
CNB				*e*SCP		05 06 04.7	
CNB				*e*SCS	ScS	05 10 09.7	+7.1
PMG	Port Moresby	34.29	280	*e*P	P	05 00 52.5	+1.2
PMG				pmax	pmax		
	comp=Z,672nm,1.0s						
PMG	Port Moresby	34.29	280	P	P	05 00 52.6	+1.3
	comp=Z,557nm,1.0s,mb6.0,baz=95,slow=4.9,SNR=65						
PMG				S	S	05 05 42.0	+1.0
	comp=Z,9.4nm,1.0s,baz=257,slow=18,SNR=4.2						
PMG	Port Moresby	34.29	280	*e*P	P	05 00 52.5	+1.1
	comp=Z,672nm,1.0s,mb6.1						
TOO	Toolangi	37.12	231	⇓*i*P	P	05 01 15.7	+1.3
	comp=Z,15nm,0.7s,mb4.6						
TOO				*e*S	S	05 06 23.0	+0.1
TOO	Toolangi	37.12	231	⇓*i*P	P	05 01 15.7	+1.3
TOO				*e*S	S	05 06 23.0	+0.1
TOO				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.6						
TAU	Tasmania Unive	38.21	222	*e*P	P	05 01 24.0	+0.7
TAU				pmax	pmax		
	comp=Z,226nm,1.2s,mb5.6						
TAU	Tasmania Unive	38.21	222	*e*P	P	05 01 24.0	+0.8
	comp=Z,226nm,1.2s,mb5.6						
TAOE	Nuku Hiva Isla	38.36	82	*e*P	P	05 01 23.5	-1.3
STKA	Stephens Creek	38.55	241	⇓*i*P	P	05 01 27.4	+1.3
	comp=Z,275nm,0.6s,mb6.0						
STKA				*e*SCP		05 06 23.3	
STKA				*e*S	S	05 06 43.4	-0.5
STKA				*e*SCS	ScS	05 10 35.9	+4.3
STKA	Stephens Creek	38.55	241	P	P	05 01 27.4	+1.4
	comp=Z,286nm,0.6s,mb6.0,baz=88,slow=8.7,SNR=502						
STKA				ScP		05 06 23.5	
	comp=Z,8.9nm,0.7s,baz=42,slow=0.8,SNR=3.8						
RKT	Rikitea	41.07	105	*e*P	P	05 01 46.6	+0.1
	comp=Z,387nm,1.3s,mb5.8						
WRAB	Tennant Creek	44.49	259	⇓*i*P	P	05 02 12.7	-0.8
WRAB				pmax	pmax		
	comp=Z,649nm,1.1s,mb6.1						
WRAB	Tennant Creek	44.49	259	⇓*i*P	P	05 02 12.7	-0.9
	comp=Z,649nm,1.1s,mb6.1						
WRA	Warramunga Arr	44.50	259	P	P	05 02 12.7	-0.9
WRA						05 03 44.8	
WRA				S	S	05 08 06.7	-2.5
WRA	Warramunga Arr	44.50	259	P	P	05 02 12.7	-0.9
	comp=Z,98nm,0.4s,mb5.7,baz=91,slow=7.0,SNR=604						
WRA				PcP	PcP	05 03 44.8	-0.4
	comp=Z,23nm,0.9s,baz=91,slow=4.0,SNR=6.2						
WRA				ScP		05 06 43.7	
	comp=Z,9.0nm,0.8s,baz=92,slow=3.9,SNR=12						
WRA				S	S	05 08 06.7	-2.4
	comp=Z,7.9nm,1.1s,baz=97,slow=13,SNR=5.0						
ASAR	Alice Springs	44.67	254	P	P	05 02 14.9	+0.1
	comp=Z,1µm,0.6s,baz=89,slow=8.2,SNR=5023						
ASAR				PcP	PcP	05 03 44.8	-1.0
	comp=Z,9.1nm,0.6s,baz=99,slow=3.7,SNR=4.1						
ASAR				ScP		05 06 47.5	
	comp=Z,8.2nm,0.6s,baz=99,slow=4.1,SNR=5.8						
ASAR				S	S	05 08 09.2	-2.4
	comp=Z,10nm,0.8s,baz=89,slow=15,SNR=7.1						
ASPA	Alice Springs	44.67	254	⇓*i*P	P	05 02 14.9	0.0
ASPA				*e*SCP		05 06 47.3	
ASPA				*e*PCS		05 07 38.8	
ASPA				*e*S	S	05 08 09.3	-2.2
ASPA				*e*SCS	ScS	05 11 11.9	+2.4
ASPA	Alice Springs	44.67	254	⇓*i*P	P	05 02 14.9	0.0
ASPA				*e*S	S	05 08 09.3	-2.2
ASPA				*e*		05 11 11.9	
KAKA	Kakadu	47.43	269	*e*P	P	05 02 35.3	-0.8
	comp=Z,313nm,0.5s,mb6.1						
KAKA				*e*SCP		05 06 56.7	
KAKA				*e*S	S	05 08 49.1	-0.8
GUMO	Guam	47.69	308	*e*P	P	05 02 37.0	-1.1
GUMO				pmax	pmax		
	comp=Z,829nm,1.4s,mb6.1						
GUMO	Guam	47.69	308	*e*P	P	05 02 37.0	-1.0
	comp=Z,829nm,1.4s,mb6.1						
FORT	Forrest	49.91	245	⇓*i*P	P	05 02 53.5	-0.9
	comp=Z,7µm,0.5s						
FORT				*e*S	S	05 09 24.7	+1.2
FITZ	Fitzroy Crossi	52.90	260	⇓*i*P	P	05 03 15.8	-0.3
	comp=Z,126nm,0.9s,mb5.2						
FITZ				*e*S	S	05 10 03.7	+0.2
MBWA	Marble Bar	57.95	256	⇓*i*P	P	05 03 50.2	-0.9
	comp=Z,156nm,0.7s,mb5.3						
CBIJ	Chichi jima	58.67	319	P	P	05 03 56.1	+0.2
	comp=Z,68nm,0.6s,mb5.1,baz=286,slow=22,SNR=2.7						
KLBR	Kellerberrin	58.74	243	⇓*i*P	P	05 03 55.4	-0.9
	comp=Z,2µm,0.6s						
NWAO	Narrogin (SRO)	59.12	242	*e*P	P	05 03 58.3	-0.6
NWAO				pmax	pmax		
	comp=Z,210nm,1.4s						
NWAO	Narrogin (SRO)	59.12	242	P	P	05 03 58.6	-0.2
	comp=Z,60nm,0.7s,mb4.9,baz=106,slow=5.2,SNR=63						
NWAO	Narrogin (SRO)	59.12	242	*e*P	P	05 03 58.3	-0.6
	comp=Z,210nm,1.4s,mb5.2						
MUN	Mundaring	60.03	243	⇑*i*P	P	05 04 04.8	-0.1
	comp=Z,59nm,0.8s,mb5.0						
MUN	Mundaring	60.03	243	⇑*i*P	P	05 04 04.8	-0.1
MUN				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.0						
SBA	Scott Base	60.51	184	*e*P	P	05 04 09.3	+1.8
SBA				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.3						
SBA	Scott Base	60.51	184	*e*P	P	05 04 09.3	+1.9
	comp=Z,12nm,0.7s,mb4.3						
VNDA	Vanda	60.53	185	*e*P	P	05 04 08.6	+1.0
VNDA				pmax	pmax		
	comp=Z,36nm,1.4s						
VNDA	Vanda	60.53	185	P	P	05 04 08.7	+1.1
	comp=Z,4.8nm,0.6s,baz=2.7,slow=6.8,SNR=24						
VNDA	Vanda	60.53	185	*e*P	P	05 04 08.6	+1.0
	comp=Z,36nm,1.4s,mb4.5						
RPN	Rapa Nui	63.97	112	P	P	05 04 31.3	+0.9
	comp=Z,78nm,0.9s,mb5.2,baz=350,slow=12,SNR=3.1						
KEDI	Kedomdong	64.02	269	*e*P	P	05 04 29.6	-1.4
KEDI				pmax	pmax		
	comp=Z,364nm,0.7s,mb5.9						
KEDI	Kedomdong	64.02	269	*e*P	P	05 04 29.6	-1.4
	comp=Z,364nm,0.7s,mb5.9						
JHJ	Hachijo jima 2	64.40	322	P	P	05 04 32.8	-0.3
	comp=Z,151nm,0.3s,mb5.9,baz=83,slow=8.1,SNR=11						
KELI	Kelakatan	65.64	269	⇓*e*P	P	05 04 40.0	-1.1
	comp=Z,398nm,0.5s,mb6.2						
SRDI	Scrawed	65.90	269	⇓*e*P	P	05 04 41.0	-1.7
SRDI				pmax	pmax		
	comp=Z,170nm,0.5s,mb5.8						
SRDI	Scrawed	65.90	269	⇓*e*P	P	05 04 41.0	-1.7
	comp=Z,170nm,0.5s,mb5.8						
CASY	Casey	66.17	205	*e*P	P	05 04 44.2	+0.7
TSM	Tawau	66.39	283	P	P	05 04 46.0	+0.2
MAJO	Matsushiro	67.74	323	*e*P	P	05 04 52.1	-1.6
MAJO				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.2						
MAJO	Matsushiro	67.74	323	*e*P	P	05 04 52.1	-1.5
	comp=Z,64nm,0.9s,mb5.2						
MAT	Matsushiro	67.74	323	*e*P	P	05 04 53.0	-0.7
MAT				pmax	pmax		
	comp=Z,140nm,1.4s,mb5.3						
MAT	Matsushiro	67.74	323	*e*P	P	05 04 53.0	-0.7
	comp=Z,140nm,1.4s,mb5.3						
MAT	Matsushiro	67.74	323	P	P	05 04 52.5	-1.2
JOW	Kunigami	68.04	310	P	P	05 04 56.2	+0.6
	comp=Z,15nm,0.4s,mb4.9,baz=121,slow=7.5,SNR=7.8						
CVP	Callao Caves	68.44	298	⇓*e*P	P	05 04 58.0	-0.1
	comp=Z,120µm,1.2s						
KKM	Kota Kinabalu	68.57	284	*e*P	P	05 04 58.6	-0.5
KKM	Kota Kinabalu	68.57	284	P	P	05 04 59.0	0.0
FX1	Attu Island--F	70.75	355	P	P	05 05 09.9	-1.3
	comp=Z,41nm,0.5s,mb5.2,baz=92,slow=2.6,SNR=20						
ASAJ	Asahikawa	71.11	331	P	P	05 05 14.1	+0.5
	comp=Z,31nm,0.5s,mb5.1,baz=222,slow=5.6,SNR=46						
NACB	Ninganchiao	71.73	304	*e*P	P	05 05 16.0	-1.5
QSPA	South Pole Qui	72.25	180	*e*P	P	05 05 19.9	+0.3
	comp=Z,49nm,0.7s,mb5.0						
KSM	Kuching	72.52	277	⇓*i*P	P	05 05 22.5	+0.2
PET	Petropavlovsk	73.24	346	⇓*i*P	P	05 05 24.1	-1.5
PET				*e*S	S	05 14 04.0	-5.4
PET				pmax	pmax		
	comp=Z,53nm,1.3s,mb4.8						
PET				pmax	pmax		
	comp=Z,100nm,13.3s						
PET				pmax	pmax		
	comp=Z,35nm,1.5s,mb4.6						
PET				smax			
	comp=E,500nm,13.5s						
YSS	Yuzh-Sakhalins	73.26	333	⇓*i*P	P	05 05 25.0	-0.8
YSS				*e*		05 05 36.0	
YSS				*e*S	S	05 14 12.0	+2.3
YSS				*e*		05 14 52.0	
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0						
YSS				pmax	pmax		
	comp=Z,500nm,2.5s,mb5.5						
YSS				smax			
	comp=N,400nm,9.0s						
YSS				smax			
	comp=E,400nm,9.0s						
YSS	Yuzh-Sakhalins	73.26	333	*e*P	P	05 05 25.5	-0.3
	comp=E,130nm,1.4s,mb5.2						

QZH	Quanzhou	74.49	303	⇓iP	P	05 05 33.0	-0.2
QZH				AMB	AMB		
	comp=Z,830nm,1.8s,mb5.9						
KS15	Wonju Array Si	74.54	318	eP	P	05 05 33.2	0.0
KS15				ePcP	PcP	05 05 44.1	-0.8
SSE	Sheshan	75.56	310	P	P	05 05 37.5	-1.5
SSE				XP	sP	05 08 29.8	-2.7
SSE				S	S	05 14 34.0	-0.9
SSE				SS	SS	05 19 41.0	-3.6
SSE				AMB	AMB		
	comp=Z,52nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,196nm,4.9s						
SSE	Sheshan	75.56	310	P	P	05 05 37.4	-1.6
	comp=Z,52nm,0.9s,mb5.0						
SSE				sP	sP	05 08 29.7	-2.8
SSE				S	S	05 14 34.1	-0.8
SSE				sS		05 18 00.2	
SSE				SS	SS	05 19 41.1	-3.5
SSE				LR	LR		
	comp=Z,350nm,26.7s						
SAO	San Andreas Ge	76.46	44	eP	P	05 05 43.8	0.0
SAO				e*PP	pP	05 07 41.4	-0.3
SAO				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.2						
SAO	San Andreas Ge	76.46	44	eP	P	05 05 43.8	0.0
	comp=Z,84nm,0.9s,mb5.2						
SAO				epP	pP	05 07 41.4	-0.4
LRV	Little Rabbit	76.55	44	eP	P	05 05 44.6	+0.3
LRV				pP	pP	05 07 39.7	-2.6
MWC	Mount Wilson	77.38	48	eP	P	05 05 48.8	0.0
MWC				e*PP	pP	05 07 46.5	-0.6
BAR	Barrett	77.58	50	eP	P	05 05 49.6	-0.3
NJ2	Nanjing	77.76	310	eP	P	05 05 51.3	+0.4
NJ2				AMB	AMB		
	comp=Z,170nm,1.0s,mb5.3						
CMB	Columbia Colle	77.87	43	eP	P	05 05 51.2	-0.1
CMB				*PP	pP	05 07 45.0	-4.8
CMB				pmax	pmax		
	comp=Z,68nm,1.0s,mb4.9						
CMB	Columbia Colle	77.87	43	eP	P	05 05 51.2	-0.2
	comp=Z,68nm,1.0s,mb4.9						
CMB				pP	pP	05 07 45.0	-4.9
OHCM	Honcut	77.90	42	eP	P	05 05 50.8	-0.7
OHCM				pP	pP	05 07 46.5	-3.5
WDC	Whiskeytown Da	77.96	40	eP	P	05 05 51.8	0.0
WDC				e*PP	pP	05 07 50.9	+0.6
WDC				pmax	pmax		
	comp=Z,72nm,1.4s,mb4.8						
WDC	Whiskeytown Da	77.96	40	eP	P	05 05 51.8	0.0
	comp=Z,72nm,1.4s,mb4.8						
WDC				epP	pP	05 07 50.9	+0.6
MDJ	Mudanjiang	78.02	325	P	P	05 05 52.5	+0.5
MDJ				S	S	05 15 04.8	+4.3
MDJ				SS	SS	05 20 20.0	-0.9
MDJ				AMB	AMB		
	comp=Z,93nm,1.3s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,331nm,5.6s						
MDJ	Mudanjiang	78.02	325	eP	P	05 05 52.4	+0.5
	comp=Z,89nm,0.9s,mb5.1						
MDJ				epP	pP	05 07 52.0	+1.5
KDAK	Kodiak Island	78.34	14	eP	P	05 05 52.6	-0.8
	comp=Z,34nm,0.8s,mb4.7						
YBH	Yreka Blue Hor	78.54	39	eP	P	05 05 55.3	+0.5
YBH				e*PP	pP	05 07 53.1	-0.5
YBH				pmax	pmax		
	comp=Z,44nm,1.0s						
YBH	Yreka Blue Hor	78.54	39	P	P	05 05 55.5	+0.7
	comp=Z,33nm,0.8s,mb4.7,baz=228,slow=0.3,SNR=56						
YBH				pP	pP	05 07 54.0	+0.5
	comp=Z,20nm,1.1s,baz=198,slow=9.5,SNR=8.7						
YBH	Yreka Blue Hor	78.54	39	eP	P	05 05 55.3	+0.5
	comp=Z,44nm,1.0s,mb4.7						
YBH				epP	pP	05 07 53.1	-0.5
OMM	Old Mammoth Mi	78.56	44	eP	P	05 05 55.3	+0.3
OMM				epP	pP	05 07 53.0	-0.8
MTUM	Tungsten Hills	78.70	45	eP	P	05 05 56.2	+0.5
MTUM				epP	pP	05 07 53.6	-0.9
LBCM	Butte Creek Ri	78.85	41	P	P	05 05 56.8	+0.3
HUMO	Hull Mountain	78.92	38	eP	P	05 05 57.2	+0.4
	comp=Z,45nm,1.0s,mb4.8						
HUMO				epP	pP	05 07 55.2	-0.5
WCN	Washoe City	78.99	43	eP	P	05 05 57.6	+0.4
WCN				e*PP	pP	05 07 55.7	-0.4
WCN				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.0						
WCN	Washoe City	78.99	43	eP	P	05 05 57.6	+0.3
	comp=Z,66nm,0.9s,mb5.0						
WCN				epP	pP	05 07 55.7	-0.4
PAHR	Pah Rah Range	79.45	42	eP	P	05 06 00.0	+0.4
	comp=Z,4.7nm,0.5s,mb4.1						
NVAR	Mina Array Bea	79.46	44	P	P	05 06 00.2	+0.5
	comp=Z,35nm,0.8s,mb4.8,baz=215,slow=7.1,SNR=212						
NVAR				pP	pP	05 07 59.0	+0.2
	comp=Z,13nm,1.1s,baz=236,slow=6.5,SNR=6.3						
NVAR				PKKPbc		05 24 46.6	
	comp=Z,0.4nm,0.7s,baz=64,slow=5.2,SNR=4.1						
NVAR	Mina Array Bea	79.46	44	P	P	05 06 00.2	+0.5
NVAR				pP	pP	05 07 59.0	+0.2
NVAR				PKKPbc		05 24 46.6	
MNV	Mina	79.56	44	⇑eP	P	05 06 00.3	+0.1
MNV				e*PP	pP	05 07 57.9	-1.4
MNV				pmax	pmax		
	comp=Z,79nm,1.1s,mb5.0						
MNV	Mina	79.56	44	⇑eP	P	05 06 00.3	+0.1
	comp=Z,79nm,1.1s,mb5.0						
MNV				epP	pP	05 07 57.9	-1.5
MPOR	Mary’s Peak	79.72	37	P	P	05 06 01.6	+0.7
CN2	Changchun	79.85	322	⇓P	P	05 06 02.0	+0.4
CN2				eAP	pP	05 08 01.8	+1.0
CN2				eS	S	05 15 21.3	+1.9
CN2				AMB	AMB		
	comp=Z,110nm,1.3s,mb5.0						
LDFC	Landfair	79.91	48	eP	P	05 06 02.5	+0.4
LDFC				epP	pP	05 08 02.0	+0.7
COR	Corvallis	79.91	37	eP	P	05 06 01.3	-0.6
COR				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.5						
COR	Corvallis	79.91	37	eP	P	05 06 01.3	-0.6
	comp=Z,20nm,0.8s,mb4.5						
KLR	Kul’dur	79.95	329	eP	P	05 05 58.2	-3.8
TPH	Tonopah	79.99	45	eP	P	05 06 02.8	+0.3
TPH				e*PP	pP	05 08 01.6	-0.1
TPH				pmax	pmax		
	comp=Z,74nm,1.3s,mb4.9						
TPH	Tonopah	79.99	45	eP	P	05 06 02.8	+0.3
	comp=Z,74nm,1.3s,mb4.9						
TPH				epP	pP	05 08 01.6	-0.1
HBO	Huckleberry Mo	80.03	38	P	P	05 06 02.7	+0.2
MOD	Modoc	80.11	40	⇑iP	P	05 06 03.2	+0.3
	comp=Z,53nm,0.9s,mb4.9						
MOD				epP	pP	05 07 58.0	-4.3
WHN	Wuhan	80.42	306	⇓P	P	05 06 05.5	+0.6
WHN				AMB	AMB		
	comp=Z,330nm,1.6s,mb5.4						
RSO	Redoubt South	80.74	13	eP	P	05 06 04.2	-1.7
MA2	Magadan	81.06	345	eP	P	05 06 06.1	-1.4
MA2				*PP	pP	05 08 05.3	-1.9
MA2				pmax	pmax		
	comp=Z,52nm,1.1s,mb4.9						
MA2	Magadan	81.06	345	eP	P	05 06 06.1	-1.4
	comp=Z,52nm,1.1s,mb4.9						
MA2				pP	pP	05 08 05.3	-1.9
TRCR	Troy Canyon	81.23	45	eP	P	05 06 08.9	+0.1
TRCR				pP	pP	05 08 06.8	-1.7
BMN	Battle Mountai	81.24	43	eP	P	05 06 09.2	+0.3
BMN				pmax	pmax		
	comp=Z,78nm,1.1s,mb5.0						
BMN	Battle Mountai	81.24	43	eP	P	05 06 09.2	+0.3
	comp=Z,78nm,1.1s,mb5.0						
SLKM	Skilak Lake	81.33	14	eP	P	05 06 07.8	-1.1
OOW	Octopus West	81.36	34	P	P	05 06 10.1	+0.8
OCWA	Octopus Mounta	81.37	34	eP	P	05 06 09.6	+0.2
	comp=Z,69nm,0.9s,mb5.1						
VFP	Flag Point	81.39	37	P	P	05 06 09.8	+0.2
WVOR	Wild Horse Val	81.43	40	eP	P	05 06 10.2	+0.4
WVOR				e*PP	pP	05 08 09.7	+0.2
WVOR				pmax	pmax		
	comp=Z,81nm,1.0s,mb5.1						
WVOR	Wild Horse Val	81.43	40	eP	P	05 06 10.2	+0.4
	comp=Z,81nm,1.0s,mb5.1						
WVOR				epP	pP	05 08 09.7	+0.2
TUC	Tucson	81.76	52	eP	P	05 06 12.8	+1.1
TUC				e*PP	pP	05 08 10.0	-1.5
TUC				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.0						
TUC	Tucson	81.76	52	eP	P	05 06 12.8	+1.1
	comp=Z,66nm,1.1s,mb5.0						
TUC				epP	pP	05 08 10.0	-1.5
FIB	Fire Island	81.93	13	eP	P	05 06 10.9	-1.0
WPW	White Pass	82.16	36	P	P	05 06 13.5	+0.2
BBB	Bella Bella	82.30	29	P	P	05 06 13.6	-0.3
	comp=Z,29nm,1.0s,mb4.7,baz=233,slow=20,SNR=5.3						
PGC	Sidney	82.31	33	eP	P	05 06 13.8	-0.3
	comp=Z,84nm,1.2s,mb5.0						
PGC				epP	pP	05 08 13.7	-0.4
ARUT	Antelope Range	82.42	46	eP	P	05 06 15.5	+0.7
ARUT				e*PP	pP	05 08 14.4	-0.5
ELK	Elko	82.69	43	eP	P	05 06 16.2	0.0
ELK				e*PP	pP	05 08 16.0	-0.3
ELK				pmax	pmax		
	comp=Z,56nm,1.0s						
ELK	Elko	82.69	43	P	P	05 06 16.8	+0.6
	comp=Z,33nm,0.9s,mb4.9,baz=244,slow=4.9,SNR=110						
ELK				pP	pP	05 08 16.8	+0.4
	comp=Z,3.2nm,0.9s,baz=246,slow=9.1,SNR=3.2						
ELK	Elko	82.69	43	eP	P	05 06 16.2	0.0
	comp=Z,56nm,1.0s,mb5.0						
ELK				epP	pP	05 08 16.0	-0.4
WUAZ	Wupatki	82.79	49	eP	P	05 06 17.5	+0.7
	comp=Z,1µm,1.1s						
WUAZ				epP	pP	05 08 17.7	+0.7
EBG	Ellensburg	82.83	36	P	P	05 06 17.0	+0.3
KULM	Kulim	82.87	278	eP	P	05 06 18.2	+0.6
SML	Sawmill	82.91	14	eP	P	05 06 15.4	-1.4
SML				e*PP	pP	05 08 16.7	-0.4
DIV	Divide	82.94	15	eP	P	05 06 15.8	-1.2
	comp=Z,112nm,0.7s,mb5.5						
DIV				epP	pP	05 08 16.3	-1.0
TBM	Table Mountain	82.96	36	P	P	05 06 17.5	+0.1
SNG	Songkhla	83.50	280	P	P	05 06 20.0	-0.9
TNA	Tin City	83.50	4	eP	P	05 06 19.1	-0.6
	comp=Z,8.9nm,0.8s,mb4.3						
TNA				epP	pP	05 08 21.7	+1.6
BMO	Blue Mountains	83.56	39	eP	P	05 06 20.2	-0.2
	comp=Z,26nm,1.0s,mb4.7						
BMO				epP	pP	05 08 20.1	-0.8
BJT	Baijiatuau	83.60	315	eP	P	05 06 20.8	0.0
BJT				pmax	pmax		
	comp=Z,161nm,1.4s						
BJT	Baijiatuau	83.60	315	eP	P	05 06 20.8	0.0
	comp=Z,161nm,1.4s,mb5.4						
BJI	Beijing	83.61	315	P	P	05 06 21.3	+0.5
BJI				S	S	05 15 47.3	-9.3
BJI				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.1						
BJI				AMB	AMB		
	comp=Z,884nm,3.1s						
BJI	Beijing	83.61	315	P	P	05 06 21.2	+0.4
BJI						05 09 15.0	
BJI				S	S	05 15 47.2	-9.4
BJI				pmax	pmax		
	comp=Z,80nm,1.4s,mb5.1						
BJI				MLR	MLR		
	comp=Z,190nm,26.7s						
BJI	Beijing	83.61	315	P	P	05 06 21.2	+0.4
	comp=Z,80nm,1.4s,mb5.1						
BJI				PP	PP	05 09 15.0	-29
BJI				S	S	05 15 47.2	-9.4
BJI				LR	LR		
	comp=Z,190nm,26.7s						
MVU	Marysvale	83.61	46	eP	P	05 06 21.8	+1.0
	comp=Z,53nm,1.1s,mb5.0						
MVU				epP	pP	05 08 22.4	+1.1
MSU	Marysvale	83.64	46	eP	P	05 06 21.9	+0.9
MSU				e*PP	pP	05 08 22.8	+1.3
MAW	Mawson	83.90	200	eP	P	05 06 22.8	+1.2
	comp=Z,24nm,0.7s,mb4.8						
MAW	Mawson	83.90	200	eP	P	05 06 22.8	+1.2
MAW				pmax	pmax		
	comp=Z,24nm,0.7s						
MAW	Mawson	83.90	200	P	P	05 06 22.8	+1.3
	comp=Z,28nm,0.7s,mb4.9,baz=116,slow=3.0,SNR=17						
DUG	Dugway	84.02	45	eP	P	05 06 22.4	-0.4
DUG				e*PP	pP	05 08 23.5	+0.1
DUG				pmax	pmax		
	comp=Z,322nm,1.3s,mb5.7						
DUG	Dugway	84.02	45	eP	P	05 06 22.4	-0.4
	comp=Z,322nm,1.3s,mb5.7						
DUG				epP	pP	05 08 23.5	+0.1
ENH	Enshi	84.09	304	⇓eP	P	05 06 23.8	+0.5
	comp=Z,316nm,1.3s,mb5.7						
ENH				epP	pP	05 08 26.2	+2.2
OD2	Odessa Site #2	84.14	36	P	P	05 06 23.2	0.0
MCK	McKinley	84.47	13	eP	P	05 06 23.1	-1.3
MCK				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
MCK	McKinley	84.47	13	eP	P	05 06 23.1	-1.4
	comp=Z,17nm,0.8s,mb4.6						
HLID	Hailey	84.65	41	eP	P	05 06 26.5	+0.7
	comp=Z,31nm,0.9s,mb4.8						
HLID				epP	pP	05 08 27.4	+0.8
HLID				ePP	PP	05 09 49.8	-2.6
TMUT	Trail Mountain	84.67	46	eP	P	05 06 26.6	+0.5
TMUT				epP	pP	05 08 26.1	-0.7
NOQ	North Oquirrh	84.70	44	eP	P	05 06 26.0	-0.1
MPU	Maple Canyon	84.72	45	eP	P	05 06 26.5	+0.3
MPU				pP	pP	05 08 27.1	0.0
MPU				ePP	PP	05 09 50.9	-2.1
SPUT	South Promonto	84.80	44	eP	P	05 06 26.7	+0.1
SPUT				epP	pP	05 08 27.9	+0.4
SPUT				ePP	PP	05 09 48.0	-5.6
HVU	Hansel Valley	84.81	43	eP	P	05 06 27.1	+0.5
HVU				e*PP	pP	05 08 27.5	0.0
HVU				e		05 09 51.2	
GYA	Guiyang	84.85	300	⇓iP	P	05 06 28.0	+0.8
GYA				AMB	AMB		
	comp=Z,50nm,1.3s,mb4.9						
GYA				AMB	AMB		
	comp=Z,490nm,8.4s						
THY	Trims Highway	84.91	14	eP	P	05 06 25.8	-0.8
THY				epP	pP	05 08 28.6	+1.2
SRU	San Rafael	85.06	46	⇑eP	P	05 06 28.0	+0.1
SRU				e*PP	pP	05 08 29.5	+0.7
DAU	Daniels Canyon	85.17	45	eP	P	05 06 29.4	+1.0
DAU				e*PP	pP	05 08 29.8	+0.4
DAU				e		05 09 54.7	
TCUT	Toone Canyon	85.39	44	eP	P	05 06 29.6	+0.2
TCUT				epP	pP	05 08 31.6	+1.1
TCUT				ePP	PP	05 09 54.9	-3.5
NEW	Newport	85.52	36	eP	P	05 06 29.3	-0.6
NEW				pmax	pmax		
	comp=Z,21nm,0.9s						
NEW	Newport	85.52	36	P	P	05 06 29.5	-0.4
	comp=Z,17nm,0.8s,mb4.7,baz=232,slow=4.1,SNR=36						
NEW				pP	pP	05 08 30.4	-0.5
	comp=Z,1.4nm,0.7s,baz=226,slow=6.2,SNR=1.9						
NEW	Newport	85.52	36	eP	P	05 06 29.3	-0.6
	comp=Z,21nm,0.9s,mb4.8						
HWUT	Hardware Ranch	85.52	44	eP	P	05 06 29.9	-0.2
	comp=Z,16nm,1.0s,mb4.6						
HWUT				epP	pP	05 08 30.7	-0.4
HWUT				ePP	PP	05 09 56.4	-2.9
MNTX	Cornudas Mount	85.64	55	eP	P	05 06 31.2	+0.3
	comp=Z,46nm,1.2s,mb5.0						
MNTX				epP	pP	05 08 30.2	-1.9
IMA	Indian Mountai	85.70	10	eP	P	05 06 30.0	-0.3
IMA				e*PP	pP	05 08 32.4	+0.9
IMA				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.0						
IMA	Indian Mountai	85.70	10	eP	P	05 06 30.0	-0.4
	comp=Z,43nm,1.0s,mb5.0						
IMA				epP	pP	05 08 32.4	+0.9
COLA	College	85.71	13	eP	P	05 06 28.7	-1.7
COLA				e*PP	pP	05 08 32.4	+0.9
COLA				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
COLA	College	85.71	13	eP	P	05 06 28.7	-1.7
	comp=Z,22nm,1.0s,mb4.7						
COLA				epP	pP	05 08 32.4	+0.8
PV10	Paradox Valley	85.76	48	eP	P	05 06 31.3	0.0
PV10				epP	pP	05 08 33.2	+0.8
DLBC	Dease Lake	85.80	23	P	P	05 06 31.3	+0.3
	comp=Z,12nm,0.8s,mb4.6,baz=240,slow=5.9,SNR=21						
DLBC				pP	pP	05 08 33.4	+1.2
	comp=Z,3.4nm,0.8s,baz=209,slow=5.5,SNR=3.1						
DLBC	Dease Lake	85.80	23	eP	P	05 06 30.9	-0.1
DLBC				epP	pP	05 08 32.4	+0.2
ILAR	Eielson Array	85.82	13	P	P	05 06 29.4	-1.6
	comp=Z,11nm,0.8s,mb4.5,baz=231,slow=5.8,SNR=71						
ILAR				pP	pP	05 08 31.1	-1.0
	comp=Z,8.4nm,1.1s,baz=241,slow=5.4,SNR=4.0						
ILAR				PKKP		05 24 25.9	
	comp=Z,0.3nm,0.6s,baz=0.2,slow=2.5,SNR=6.9						
PV01	Paradox Valley	85.98	48	eP	P	05 06 32.5	+0.1
PV01				epP	pP	05 08 34.6	+1.1
LTX	Lajitas	86.07	58	eP	P	05 06 33.9	+0.9
LTX				e*PP	pP	05 08 35.2	+1.0
LTX				pmax	pmax		
	comp=Z,109nm,1.2s,mb5.4						
LTX	Lajitas	86.07	58	eP	P	05 06 33.9	+0.9
	comp=Z,109nm,1.2s,mb5.4						
LTX				epP	pP	05 08 35.2	+1.0
TXAR	Lajitas Array	86.07	58	P	P	05 06 34.4	+1.4
	comp=Z,42nm,0.9s,mb5.1,baz=224,slow=5.4,SNR=250						
TXAR				pP	pP	05 08 34.7	+0.5
	comp=Z,3.3nm,1.1s,baz=243,slow=4.0,SNR=3.2						
TXAR				PP	PP	05 10 02.1	-1.9
	comp=Z,0.6nm,0.8s,baz=235,slow=11,SNR=2.2						
TXAR				PKKP		05 24 23.4	
	comp=Z,0.3nm,0.8s,baz=101,slow=4.6,SNR=2.9						
XAN	Xi’an	86.08	307	P	P	05 06 33.8	+0.9
XAN				AMB	AMB		
	comp=Z,134nm,1.5s,mb5.3						
ANMO	Albuquerque	86.15	52	eP	P	05 06 33.2	-0.1
ANMO				e*PP	pP	05 08 34.7	+0.2
ANMO				pmax	pmax		
	comp=Z,26nm,1.0s						
ANMO	Albuquerque	86.15	52	P	P	05 06 33.7	+0.4
	comp=Z,28nm,1.1s,mb4.8,baz=228,slow=5.4,SNR=35						
ANMO				pP	pP	05 08 34.9	+0.3
	comp=Z,23nm,1.2s,baz=236,slow=4.9,SNR=13						
ANMO	Albuquerque	86.15	52	eP	P	05 06 33.2	-0.1
	comp=Z,26nm,1.0s,mb4.8						
ANMO				epP	pP	05 08 34.7	+0.1
HIA	Hailar	86.20	325	eP	P	05 06 33.1	0.0
HIA				pmax	pmax		
	comp=Z,189nm,1.9s						
HIA	Hailar	86.20	325	eP	P	05 06 33.1	0.0
	comp=Z,189nm,1.9s,mb5.4						
MCMT	McKenzie Canyo	86.26	41	eP	P	05 06 34.2	+0.7
MCMT				epP	pP	05 08 35.6	+0.8
BILL	Bilibino	86.32	354	eP	P	05 06 32.5	-0.7
BILL				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
BILL	Bilibino	86.32	354	eP	P	05 06 32.5	-0.8
	comp=Z,15nm,0.8s,mb4.7						
AHID	Auburn Hatcher	86.38	43	eP	P	05 06 34.6	+0.5
	comp=Z,24nm,1.0s,mb4.8						
AHID				epP	pP	05 08 35.9	+0.4
RRI2	Red Ridge	86.51	42	⇑eP	P	05 06 35.3	+0.5
RRI2				epP	pP	05 08 37.2	+1.1
RRI2				ePP	PP	05 10 04.4	-3.2
MSO	Missoula	86.60	38	eP	P	05 06 34.2	-0.9
	comp=Z,6.1nm,0.8s,mb4.3						
MSO				epP	pP	05 08 35.7	-0.8
USHA	Ushuaia	86.67	147	P	P	05 06 37.1	+2.0
	comp=Z,19nm,1.0s,mb4.7,baz=267,slow=9.8,SNR=2.5						
TPAW	Teton Pass	86.81	42	eP	P	05 06 36.8	+0.6
TPAW				epP	pP	05 08 38.6	+1.0
TPAW				ePP	PP	05 10 06.6	-3.7
SNOW	Snow King Moun	86.93	42	eP	P	05 06 37.4	+0.7
SNOW				epP	pP	05 08 39.1	+0.9
WUWY	Wally Ulrich	86.97	42	eP	P	05 06 37.0	+0.1
WUWY				epP	pP	05 08 38.9	+0.5
WUWY				ePP	PP	05 10 08.1	-3.6
IMW	Indian Meadow	87.01	42	eP	P	05 06 37.9	+0.8
IMW				epP	pP	05 08 39.6	+1.1
IMW				ePP	PP	05 10 05.9	-6.2
CHMT	Chamberlain Mo	87.05	39	eP	P	05 06 36.9	-0.3
CHMT				epP	pP	05 08 37.2	-1.5
MOOW	Moose Ponds	87.07	42	eP	P	05 06 37.4	+0.1
MOOW				epP	pP	05 08 39.3	+0.4
MOOW				ePP	PP	05 10 08.4	-4.1
HHC	Hu-ho-hao-te	87.09	315	eP	P	05 06 38.3	+0.8
HHC				AP	pP	05 08 37.3	-1.8
HHC				XP	sP	05 09 28.5	-5.5
HHC				PP	PP	05 10 05.5	-7.3
HHC				SKS	SKS	05 16 13.3	+2.2
HHC				S	S	05 16 19.8	-10
HHC				AMB	AMB		
	comp=Z,70nm,1.4s,mb5.1						
LOHW	Long Hollow	87.09	42	eP	P	05 06 37.9	+0.4
LOHW				epP	pP	05 08 39.3	+0.3
LOHW				ePP	PP	05 10 07.9	-4.8
QLMT	Earthquake Lak	87.14	41	eP	P	05 06 38.8	+1.1
QLMT				epP	pP	05 08 40.9	+1.6
NANT	Nan	87.25	291	P	P	05 06 39.5	+0.8
YFT	Old Faithful	87.34	42	eP	P	05 06 40.3	+1.7
YMR	Madison River	87.36	41	eP	P	05 06 39.8	+1.1
YMR				epP	pP	05 08 41.3	+1.0
PDAR	Pinedale Array	87.38	43	P	P	05 06 38.9	+0.1
	comp=Z,15nm,0.6s,mb4.8,baz=206,slow=2.9,SNR=129						
PDAR				pP	pP	05 08 40.1	-0.4
	comp=Z,6.5nm,1.1s,baz=225,slow=4.2,SNR=8.8						
PDAR				PP	PP	05 10 10.4	-4.6
	comp=Z,6.7nm,1.1s,baz=236,slow=5.3,SNR=8.5						
PDAR				PKKPbc		05 24 24.5	
	comp=Z,0.4nm,0.8s,baz=63,slow=3.3,SNR=3.7						
BOZ	Bozeman (W)	87.41	40	eP	P	05 06 38.8	-0.1
BOZ				e*PP	pP	05 08 40.9	+0.4
BOZ				pmax	pmax		
	comp=Z,34nm,1.2s,mb4.8						
BOZ	Bozeman (W)	87.41	40	eP	P	05 06 38.8	-0.1
	comp=Z,34nm,1.2s,mb4.8						
BOZ				epP	pP	05 08 40.9	+0.4
YNR	Norris Junctio	87.56	41	eP	P	05 06 41.1	+1.5
YNR				epP	pP	05 08 43.5	+2.2
KMI	Kunming	87.65	297	P	P	05 06 42.3	+1.8
KMI				S	S	05 16 39.5	+4.7
KMI				AMB	AMB		
	comp=Z,57nm,1.6s,mb5.0						
KMI				AMB	AMB		
	comp=Z,419nm,6.2s						
KMI	Kunming	87.65	297	P	P	05 06 42.2	+1.7
KMI				*PP	pP	05 08 44.2	+2.0
KMI				S	S	05 16 39.6	+4.8
KMI				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.0						
KMI				MLR	MLR		
	comp=Z,250nm,28.3s						
KMI	Kunming	87.65	297	P	P	05 06 42.2	+1.7
	comp=Z,57nm,1.6s,mb5.0						
KMI				pP	pP	05 08 44.2	+2.0
KMI				S	S	05 16 39.6	+4.8
KMI				LR	LR		
	comp=Z,250nm,28.3s						
LKWY	Lake	87.67	42	eP	P	05 06 42.2	+2.1
LKWY				e*PP	pP	05 08 44.3	+2.5
LKWY				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
LKWY	Lake	87.67	42	eP	P	05 06 42.2	+2.0
	comp=Z,40nm,1.0s,mb5.1						
LKWY				epP	pP	05 08 44.3	+2.5
WALA	Waterton Lakes	87.75	37	eP	P	05 06 40.3	-0.1
	comp=Z,22nm,0.9s,mb4.9						
WALA				epP	pP	05 08 41.1	-1.0
CLNS	Chul’man	88.01	333	eP	P	05 06 41.2	-0.2
CLNS				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.3						
CLNS				pmax	pmax		
	comp=N,41nm,1.3s						
CLNS				pmax	pmax		
	comp=E,24nm,1.4s						
SDCO	Great Sand Dun	88.01	49	eP	P	05 06 41.9	-0.1
	comp=E,21nm,1.3s,mb4.7						
BTO	Baotou	88.04	314	eP	P	05 06 41.8	-0.2
BDT	Bhumibol Dam	88.26	289	P	P	05 06 45.0	+1.5
CHRT	Chiangrai	88.42	291	⇓P	P	05 06 45.0	+0.8
	comp=E,200nm,1.5s,mb5.6						
CM31	Chiang Mai Arr	88.71	290	eP	P	05 06 47.1	+1.5
	comp=E,36nm,0.9s,mb5.2						
CMAR	Chiang Mai Arr	88.71	290	P	P	05 06 46.9	+1.2
	comp=E,21nm,1.0s,mb4.9,baz=110,slow=2.9,SNR=92						
CMAR				pP	pP	05 08 49.9	+2.3
	comp=E,1.4nm,0.5s,baz=112,slow=2.8,SNR=4.1						
CMAR				PP	PP	05 10 21.1	-5.0
	comp=E,1.3nm,0.5s,baz=117,slow=4.0,SNR=3.8						
CMAR				PKKPbc		05 24 23.5	
	comp=E,2.0nm,1.0s,baz=286,slow=4.6,SNR=6.7						
ISCO	Idaho Springs	88.78	47	epP	pP	05 08 48.7	+1.3

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       comp=E,14nm,1.5s
CHG    Chiang Mai         88.82 290 ⇓P      P        05 06 47.1 +1.0
       comp=E,44nm,0.9s,mb5.3
CD2    Chengdu            88.89 303  P      P        05 06 47.5 +1.3
SYO    Syowa Base         89.22 193 ⇓P      P        05 06 47.0 +0.1
YAK    Yakutsk            89.43 338 eP      P        05 06 46.2 -1.7
YAK                                  pmax   pmax
       comp=Z,16nm,0.8s,mb4.9
YAK                                  pmax   pmax
       comp=E,9.0nm,1.5s
PHWY   Pilot Hill         89.50  46 eP      P        05 06 49.0 +0.1
PHWY                                ePP     PP       05 10 26.5 -5.3
JCT    Junction City      89.61  58 eP      P        05 06 49.2 -0.4
JCT                                  pmax   pmax
       comp=Z,22nm,0.9s,mb5.0
JCT    Junction City      89.61  58 eP      P        05 06 49.2 -0.3
       comp=Z,22nm,0.9s,mb5.0
EDM    Edmonton           90.16  33 eP      P        05 06 50.7 -0.8
EDM                                 e*PP    pP       05 08 53.7 -0.1
SNAA   Sanae              90.70 179⇓iP      P        05 06 53.6  0.0
SNAA   Sanae              90.70 179 eP      P        05 06 54.6 +1.0
LZH    Lanzhou            90.71 308 ⇓P      P        05 06 55.8 +1.3
LZH                                  PP     PP       05 10 44.0 +2.6
LZH                                  SKS    SKS      05 16 35.0 +2.2
LZH                                  S      S        05 17 08.3 +6.5
LZH                                  AMB    AMB
       comp=Z,130nm,1.5s,mb5.6
LZH                                  AMB    AMB
       comp=Z,370nm,4.0s
LZH    Lanzhou            90.71 308 ⇓P      P        05 06 55.8 +1.3
LZH                                  *PP    pP       05 09 00.5 +3.6
LZH                                  *SP    sP       05 09 54.0 +2.2
LZH                                                  05 10 44.0
LZH                                                  05 16 35.0
LZH                                  S      S        05 17 08.3 +6.5
LZH                                  pmax   pmax
       comp=Z,130nm,1.5s,mb5.6
LZH    Lanzhou            90.71 308 ⇓P      P        05 06 55.8 +1.3
       comp=Z,130nm,1.5s,mb5.6
LZH                                  pP     pP       05 09 00.5 +3.6
LZH                                  sP     sP       05 09 54.0 +2.2
LZH                                  PP     PP       05 10 44.0 +2.6
LZH                                  SKS    SKS      05 16 35.0 +2.2
LZH                                  S      S        05 17 08.3 +6.5
LZH                                  sS              05 20 58.0
LZH                                  SS     SS       05 23 38.0  +13
VNA3   Neumayer Olymp     90.85 176⇑iP      P        05 06 55.1 +0.8
VNA3                                e                05 07 10.5
LAO    LASA Array         91.23  41 eP      P        05 06 57.4 +0.7
       comp=Z,59nm,1.0s,mb5.5
LAO                                 epP     pP       05 09 00.4 +1.3
VNA2   Neumayer--Watz     91.29 177 e       P        05 06 58.0 +1.7
VNA2   Neumayer--Watz     91.29 177 e       P        05 07 13.6  +17
VNA2   Neumayer--Watz     91.29 177⇑iP      P        05 06 57.3 +1.0
VNA2                                e                05 07 13.6
PLCA   Paso Flores        91.51 134  P      P        05 07 00.1 +2.0
       comp=Z,4.5nm,0.7s,mb4.6,baz=244,slow=3.9,SNR=16
PLCA                                 pP     pP       05 08 59.3 -1.3
       comp=Z,1.2nm,0.8s,baz=230,slow=16,SNR=1.8
INK    Inuvik             91.83  15 eP      P        05 06 57.6 -1.2
INK                                  pmax   pmax
       comp=Z,16nm,0.9s
INK    Inuvik             91.83  15  P      P        05 06 57.8 -1.1
       comp=Z,15nm,0.9s,mb5.0,baz=223,slow=4.5,SNR=63
INK                                  pP     pP       05 09 03.5 +2.1
       comp=Z,2.2nm,1.0s,baz=174,slow=3.8,SNR=2.7
INK                                  PKKP   PKKP     05 24 12.1  +59
       comp=Z,0.7nm,0.7s,baz=4.9,slow=3.6,SNR=5.6
INK    Inuvik             91.83  15 eP      P        05 06 57.6 -1.2
       comp=Z,16nm,0.9s,mb5.0
HKT    Hockley            92.66  60  pP     pP       05 09 06.6 +0.3
       comp=Z,106nm,2.1s
ULN    Ulaanbaatar        92.98 320 eP      P        05 07 04.3 -0.3
ULN                                 e*PP    pP       05 09 08.2 +0.9
ULN                                  pmax   pmax
       comp=Z,46nm,1.4s,mb5.3
ULN    Ulaanbaatar        92.98 320 eP      P        05 07 04.3 -0.3
       comp=Z,46nm,1.4s,mb5.3
ULN                                 epP     pP       05 09 08.2 +0.9
DGMT   Dagmar             93.21  40 eP      P        05 07 05.7 +0.1
       comp=Z,78nm,0.9s,mb5.7
DGMT                                epP     pP       05 09 09.3 +0.9
DGMT                                ePP     PP       05 10 56.0 -4.6
SONM   Songino Array      93.37 319  P      P        05 07 06.4  0.0
       comp=Z,3.1nm,0.6s,mb4.5,baz=128,slow=3.8,SNR=40
SONM                                 pP     pP       05 09 10.0 +0.9
       comp=Z,0.1nm,0.4s,baz=41,slow=38,SNR=2.1
SONM                                 PP     PP       05 10 50.8  -11
       comp=Z,1.4nm,1.1s,baz=143,slow=7.2,SNR=3.8
SONM                                 PKiKP           05 11 48.9
       comp=Z,0.3nm,0.4s,baz=44,slow=1.5,SNR=6.4
BOD    Bodaibo            93.50 330 eP      P        05 07 02.8 -3.9
BOD                                  pmax   pmax
       comp=Z,9.0nm,1.7s,mb4.5
YKA    Yellowknife Ar     94.30  25  P      P        05 07 09.3 -1.0
       comp=Z,8.5nm,0.8s,mb4.9,baz=245,slow=4.5,SNR=129
YKA                                  pP     pP       05 09 13.5 +0.5
       comp=Z,0.9nm,1.0s,baz=244,slow=4.2,SNR=3.0
YKA                                  PP     PP       05 10 59.4 -9.1
       comp=Z,1.2nm,0.9s,baz=240,slow=7.0,SNR=6.0
YKA                                  PKKP   PKKP     05 24 00.2  +51
       comp=Z,0.2nm,0.5s,baz=34,slow=2.6,SNR=3.2
YKA                                  PKPPKP          05 32 21.4
       comp=Z,0.2nm,0.4s,baz=14,slow=2.5,SNR=3.9
YKA    Yellowknife Ar     94.30  25  P      P        05 07 09.3 -0.9
YKA                                  pP     pP       05 09 13.6 +0.5
YKA                                  PP     PP       05 10 59.4 -9.1
YKA                                  PKKP   PKKP     05 24 00.2  +51
YKA                                  P'P'            05 32 21.4
YKW3   Yellowknife Ar     94.33  25 eP      P        05 07 09.2 -1.2
GTA    Gaotai             94.85 310 eP      P        05 07 13.5 +0.2
GTA                                  AMB    AMB
       comp=Z,15nm,1.2s,mb5.0
GTA                                  AMB    AMB
       comp=Z,182nm,4.6s
KSU1   Kansas State U     95.00  51 eP      P        05 07 14.1 +0.2
ZAK    Zakamensk          96.21 321 eP      P        05 07 18.3 -0.8
ZAK                                 e       pP       05 09 23.1 +1.1
ZAK                                  pmax   pmax
       comp=Z,5.0nm,1.3s,mb4.6
ZAK                                  pmax   pmax
       comp=Z,3.0nm,2.0s,mb4.2
TLY    Talaya             96.45 322 eP      P        05 07 19.3 -0.9
TLY                                  pmax   pmax
       comp=Z,8.0nm,1.2s,mb4.8
ULM    Lac du Bonnet      98.93  40  P      P        05 07 30.4 -1.0
       comp=Z,1.0nm,0.4s,mb4.5,baz=302,slow=3.9,SNR=3.7
LVC    Limon Verde       100.37 118  P      P        05 07 39.6 +1.0
       comp=Z,18nm,1.5s,baz=220,slow=13,SNR=3.4
LVC                                  PKKPbc          05 23 52.7
       comp=Z,1.3nm,0.4s,baz=172,slow=3.4,SNR=7.0
ZAL    Zalesovo          108.07 322  P      Pdif     05 08 11.1 -0.6
ZAL                                                  05 12 45.8
ZAL    Zalesovo          108.07 322  Pdiff  Pdif     05 08 11.1 -0.6
       comp=Z,0.4nm,0.5s,baz=318,slow=6.8,SNR=3.3
ZAL                                  PKiKP           05 12 13.6
       comp=Z,2.3nm,0.9s,baz=327,slow=5.2,SNR=14
ZAL                                  PP     PP       05 12 45.8 -5.1
       comp=Z,0.9nm,0.9s,baz=18,slow=7.3,SNR=4.2
ZAL    Zalesovo          108.07 322  Pdif   Pdif     05 08 11.1 -0.7
ZAL                                  PKPdf           05 12 13.6
ZAL                                  PP     PP       05 12 45.8 -5.1
SDV    Santo Domingo     109.67  87  PKKP            05 23 38.9
       baz=34,slow=3.6
KURK   Kurchatov         111.65 318⇑iPKIKP  PKPdf    05 12 20.9 +0.2
KURK   Kurchatov         111.65 318 ePKiKP           05 12 20.5
POO    Poona             111.66 283 e       PP       05 13 01.5  -16
TKM2   Tokmak 2          113.40 310  P      PKPdf    05 12 24.7 +0.4
       SNR=11
CHMS   Chumysh           114.03 310  P      PKPdf    05 12 26.0 +0.4
       SNR=5.5
FRU    Bishkek           114.12 310 ePKIKP  PKPdf    05 12 26.0 +0.2
FRU                                 e                05 13 30.0
UCH    Uchtor            114.17 309  P      PKPdf    05 12 27.4 +1.6
       SNR=8.7
AAK    Ala-Archa         114.20 309⇑iPKIKP  PKPdf    05 12 25.5 -0.4
USP    Ospenovka         114.22 310  P      PKPdf    05 12 26.4 +0.4
       SNR=8.5
FRB    Frobisher Bay     114.66  27  PKP    PKPdf    05 12 27.2 +0.9
       comp=Z,3.3nm,1.0s,baz=207,slow=5.8,SNR=3.8
EKS2   Erkin-Say         114.73 309  P      PKPdf    05 12 27.6 +0.6
       SNR=5.6
AML    Almayashu         114.77 309  P      PKPdf    05 12 28.3 +1.3
       SNR=10
SJG    San Juan          116.07  78  PKP    PKPdf    05 12 30.2 +0.2
       comp=Z,8.5nm,0.8s,baz=292,slow=3.8,SNR=2.9
CHKZ   Chkalovo          116.47 322 ePKIKP  PKPdf    05 12 29.6 -0.4
BVAR   Borovoye Array    116.67 321  PKP    PKPdf    05 12 30.6 +0.1
       comp=Z,6.2nm,0.4s,baz=111,slow=2.6,SNR=66
BVAR                                 PP     PP       05 13 51.7  0.0
       comp=Z,1.6nm,0.7s,baz=101,slow=7.6,SNR=3.6
BDFB   Brasilia          121.02 121  PKP    PKPdf    05 12 40.5 +0.9
       comp=Z,6.6nm,1.2s,baz=149,slow=5.6,SNR=4.2
BDFB                                 PKKPbc          05 22 46.6
       comp=Z,2.3nm,0.6s,baz=120,slow=3.1,SNR=5.8
SVE    Sverdlovsk        121.47 326 ePKIKP  PKPdf    05 12 36.0 -3.6
SVE                                  pmax   pmax
       comp=Z,50nm,1.8s
SOKR   Solikamsk         122.50 330c iPKIKP PKPdf    05 12 41.5 -0.1
SOKR                                 pmax   pmax
       comp=Z,20nm,0.8s
ARCES  ARCESS Array B    126.19 350  PKP    PKPdf    05 12 48.5 +0.1
       comp=Z,7.8nm,0.7s,baz=40,slow=1.4,SNR=18
SUR    Sutherland        126.76 201  PKP    PKPdf    05 12 52.4 +1.8
       comp=Z,11nm,1.1s,baz=113,slow=3.3,SNR=6.5
ASHO   Ashiyiah          128.90 288 ⇑P      PKPdf    05 12 55.8 +0.9
       SNR=7.0
RBK    Rabkut            129.86 278 ⇑P      PKPdf    05 12 58.1 +1.3
       SNR=8.8
WHFO   Wadi Hawf         130.33 279 ⇑P      PKPdf    05 12 58.4 +0.7
       SNR=7.7
JOF    Joensuu           130.41 343 ep      PKPdf    05 12 56.0 -0.7
ABTO   Aybut             130.69 278 ⇑P      PKPdf    05 12 59.7 +1.3
LBTB   Lobatse           131.36 210  PKP    PKPdf    05 13 00.2 +0.7
       comp=Z,3.5nm,0.7s,baz=167,slow=2.3,SNR=7.2
LBTB                                 SKPab           05 15 37.4
       comp=Z,4.1nm,0.8s,baz=150,slow=6.3,SNR=6.0
KAF    Kangasniemi       132.43 344 ep      PKPdf    05 13 00.4  0.0
FINES  FINESS Array B    133.05 344  PKhKP           05 12 47.5
       comp=Z,1.5nm,0.8s,baz=60,slow=5.5,SNR=6.9
FINES                                PKP    PKPdf    05 13 00.5 -1.1
       comp=Z,4.6nm,0.8s,baz=85,slow=2.6,SNR=15
FINES                                SKPbc           05 15 39.5
       comp=Z,3.8nm,0.5s,baz=67,slow=3.7,SNR=16
MATP   Matopo            133.65 216  PKP    PKPdf    05 13 05.2 +1.4
       comp=Z,6.0nm,0.6s,baz=124,slow=1.5,SNR=21
MATP                                 SKPab           05 15 44.2
       comp=Z,7.4nm,0.8s,baz=143,slow=4.0,SNR=9.3
OBN    Obninsk           134.14 333α iPKIKP PKPdf    05 13 05.4 +1.6
OBN                                 i                05 15 43.0
OBN                                  pmax   pmax
       comp=Z,58nm,1.9s
GOF    Gofitskoye        136.00 317 ePKIKP  PKPdf    05 13 21.0  +14
TI2    Plekhanov         136.08 312 ePKIKP  PKPdf    05 13 08.4 +0.7
NB2    NORSAR Subarra    136.26 353  PKP    PKPdf    05 12 56.7  -11
       comp=Z,8.1nm,1.4s,baz=17,slow=2.6
NOA    NORSAR Array B    136.26 353  PKHKP           05 12 56.8
NOA                                                  05 13 08.6
NOA                                                  05 15 56.0
NOA    NORSAR Array B    136.26 353  PKhKP           05 12 56.8
       comp=Z,1.4nm,0.7s,baz=16,slow=4.9,SNR=5.5
NOA                                  PKP    PKPdf    05 13 08.6 +1.1
       comp=Z,2.7nm,0.7s,baz=14,slow=4.1,SNR=9.8
NOA                                  SKP             05 15 49.7
       comp=Z,21nm,1.4s,baz=14,slow=4.5,SNR=3.3
NOA                                  SKPab           05 15 56.0
       comp=Z,2.2nm,0.9s,baz=7.0,slow=3.0,SNR=3.5
GNI    Garni             136.60 310  PKhKP           05 13 06.5
       comp=Z,7.5nm,0.8s,baz=16,slow=6.5,SNR=5.9
GNI                                  PKP    PKPdf    05 13 10.8 +2.1
       comp=Z,7.2nm,0.8s,baz=352,slow=7.1,SNR=5.8
GNI                                  SKP             05 15 53.1
       comp=Z,2.3nm,0.4s,baz=197,slow=16,SNR=7.0
GNI    Garni             136.60 310 ePKPpre          05 13 04.8
GNI                                  PKP    PKPdf    05 13 10.8 +2.1
GNI                                  SKP             05 15 53.1
KIV    Kislovodsk        136.68 316⇓iPKIKP  PKPdf    05 13 09.7 +0.9
KIV                                 i                05 15 16.6
KIV    Kislovodsk        136.68 316  PKPdf  PKPdf    05 13 10.4 +1.7
BHD    Baghdad           138.60 300 ePKP    PKPdf    05 13 10.0 -2.6
BHD                                 e                05 15 54.0
ERZM   Erzurum           139.12 311 i P     PKPdf    05 13 08.2 -5.2
TSUM   Tsumeb            139.94 204  PKhKP           05 13 11.7
       comp=Z,3.0nm,0.7s,baz=156,slow=4.4,SNR=8.9
KMBO   Kilima Mbogo      140.03 246  PKhKP           05 13 11.7
       comp=Z,2.3nm,0.6s,baz=87,slow=6.8,SNR=11
KMBO                                 PKP    PKPdf    05 13 16.8 +1.1
       comp=Z,4.3nm,0.7s,baz=68,slow=4.2,SNR=9.8
KMBO                                 SKPbc           05 16 01.8
       comp=Z,7.1nm,1.1s,baz=74,slow=4.3,SNR=9.7
KMBO   Kilima Mbogo      140.03 246 ePKPpre          05 13 11.6
KMBO                                 PKP    PKPdf    05 13 16.8 +1.1
KMBO                                 SKPbc           05 16 01.8
SUW    Suwalki           140.14 340 ePKP    PKPdf    05 13 11.2 -3.6
SUW                                 e                05 13 11.8
SUW    Suwalki           140.14 340 ePKP    PKPdf    05 13 11.2 -3.5
SUW                                 e                05 13 11.8
AKASG  Malin Array Be    140.40 332 i PKHKP          05 13 08.9
AKASG                                pmax   pmax
       comp=Z,3.0nm,0.3s
AKASG  Malin Array Be    140.40 332  PKhKP           05 13 08.9
       comp=Z,2.6nm,0.3s,baz=42,slow=4.1,SNR=26
AKASG                                PKP    PKPdf    05 13 15.4 +0.1
       comp=Z,9.4nm,0.8s,baz=39,slow=3.4,SNR=15
AKASG                                SKPbc           05 16 01.3
       comp=Z,3.4nm,0.8s,baz=34,slow=2.9,SNR=9.7
ELZG   Elazig            141.36 310 i P     PKPdf    05 13 14.9 -2.4
MALT   Malatya           141.83 310 ePKHKP           05 13 16.0
EKA    Eskdalemuir Ar    142.38   4  PKhKP           05 13 13.8
       comp=Z,5.6nm,0.7s,baz=346,slow=2.9,SNR=5.6
GKP    Gorka Klasztor    142.52 344 ePKP    PKPdf    05 13 17.3 -1.6
BOYT   Boyabat           142.94 317 i P     PKPdf    05 13 20.1 +0.2
GAZ    Gaziantep         143.15 309 eP      PKPbc    05 13 20.7 +1.5
KIS    Kishinev          143.19 328⇓ePKHKP           05 13 18.0
KIS                                  pmax   pmax
       comp=Z,150nm,1.0s
KAHT   Ahir Dag          143.23 310 i P     PKPbc    05 13 20.6 +1.2
BZK    Bozkurt           143.25 318 eP      PKPbc    05 13 17.3 -2.0
LVV    L'vov             143.25 335 ePKIKP  PKPdf    05 13 19.0 -1.2
BSEG   Bad Segeberg      143.29 351 ePKIKP  PKPdf    05 13 19.2 -0.9
DMUB   Kingscourt        143.40   8⇓iP      PKPbc    05 13 19.2 -0.2
BNN    Bunyan            143.47 312 eP      PKPbc    05 13 21.6 +1.5
TOS    Tosya             143.71 316 eP      PKPbc    05 13 22.5 +1.8
BALT   Daday             143.87 318 i P     PKPbc    05 13 22.6 +1.4
DCN    Croghan           143.89   9⇓iP      PKPbc    05 13 21.0 +0.1
KWP    Kalwaria          143.92 336 ePKP    PKPdf    05 13 22.0 +0.7
DLF    Lyons Farm        144.04   8⇓iP      PKPbc    05 13 21.3  0.0
RUE    Ruedersdorf       144.06 347 ePKP    PKPdf    05 13 21.9 +0.4
COBT   Iskenderun        144.10 308 i P     PKPbc    05 13 23.6 +1.6
CANT   Cankiri           144.19 316 eP      PKPdf    05 13 24.3 +2.2
CEYT   Ceyhan            144.29 309 eP      PKPdf    05 13 24.6 +2.1
ELDT   Eldivan           144.37 316 i P     PKPdf    05 13 23.9 +1.5
TLCR                     144.40 326 ⇓PKIKP  PKPdf    05 13 24.3 +1.9
BURAR  Bucovina Array    144.45 332 ⇑P      PKPdf    05 13 24.2 +1.8
OJC    Ojcow             144.47 340 ePKP    PKPdf    05 13 22.9 +0.6
SAFT   Safranbolu        144.47 318 eP      PKPdf    05 13 24.4 +1.8
BRTR   Keskin Array B    144.60 315  PKP    PKPdf    05 13 23.7 +0.8
       comp=Z,39nm,0.7s,baz=143,slow=4.5,SNR=218
BRTR                                 pPKP            05 15 34.7
       comp=Z,1.6nm,1.0s,baz=90,slow=1.4,SNR=1.1
KOLS   Kolonicke sedl    144.65 336 i PKP   PKPdf    05 13 24.4 +1.7
KOLS                                e                05 16 02.8
NIG    Nigde             144.67 312 eP      PKPdf    05 13 25.5 +2.5
SBD1   Bryn Du           144.78   5⇓eP      PKPdf    05 13 23.0 +0.2
WIT    Witteveen         144.83 354 ePKP    PKPdf    05 13 25.2 +2.3
KSP    Ksiaz             144.97 344 ePKP    PKPdf    05 13 24.6 +1.4
KSP                                 epPKP            05 15 37.3
KSP    Ksiaz             144.97 344 ePKP    PKPdf    05 13 25.5 +2.3
CRVS   Cervenica-Dubn    144.99 337 ePKP    PKPdf    05 13 25.7 +2.5
ASF    Jabal al Asfar    144.99 301  PKPbc  PKPbc    05 13 25.5 +0.9
       comp=Z,45nm,0.8s,baz=340,slow=1.6,SNR=34
ASF                                  pPKP            05 15 37.8
       comp=Z,1.4nm,0.4s,baz=184,slow=10,SNR=1.4
ASF                                  SKPbc           05 16 14.0
       comp=Z,5.2nm,0.9s,baz=338,slow=3.0,SNR=4.7
VRI    Vrincioaia        145.01 329 ⇓PKIKP  PKPdf    05 13 25.5 +2.1
TIRR   Tirgusor          145.10 325 ⇑PKIKP  PKPdf    05 13 25.7 +2.1
RAC    Raciborz          145.10 341 ePKPdf  PKPdf    05 13 26.1 +2.7
LOD    Lodumlu           145.11 316 eP      PKPdf    05 13 26.8 +3.0
HWQ    Hawqa             145.13 305 eP      PKPdf    05 13 26.1 +2.1
HLM1   Long Mynd         145.20   5⇓eP      PKPdf    05 13 25.1 +1.6
HLM1                                 AMb    AMB      05 13 28.2
       comp=Z,98nm,2.0s
HARR   Harsova           145.20 326 ⇑PKIKP  PKPdf    05 13 26.6 +2.8
SSP1   Stoney Pound      145.28   5⇓eP      PKPdf    05 13 25.5 +1.9
SSP1                                 AMb    AMB      05 13 26.4
       comp=Z,131nm,0.9s
OKC    Ostrava-Krasne    145.33 341 ePKP    PKPdf    05 13 25.8 +2.0
CLL    Collm             145.33 347⇓iPKP1   PKPbc    05 13 26.0 +1.1
CLL                                 e*PPKP           05 15 41.0
CLL                                 e                05 17 11.0
UPC    Upice             145.35 344 ePKP    PKPdf    05 13 25.4 +1.6
UPC                                 epPKP            05 15 38.4
DPC    Dobruska-Polom    145.41 343 ePKP    PKPdf    05 13 25.3 +1.4
DPC                                 ex      x        05 13 26.9
DPC                                 epPKP            05 15 37.7
BHL    Bhannes           145.48 304 eP      PKPdf    05 13 27.6 +3.0
BRG    Berggiesshubel    145.53 346 i PKIKP PKPdf    05 13 25.5 +1.4
BRG                                  MLR    MLR
       comp=Z,290nm,20.6s
BRG    Berggiesshubel    145.53 346 i PKP   PKPdf    05 13 25.5 +1.4
BRG                                 e                05 15 39.9
BRG                                  LR     LR
       comp=Z,290nm,20.6s
MORC   Moravsky Berou    145.57 341 ePKIKP  PKPdf    05 13 25.4 +1.2
MORC                                e                05 13 27.0
HTR    Trewern Hill      145.60   5 eP      PKPdf    05 13 26.1 +1.9
MEST   Erdemli           145.64 310 i P     PKPdf    05 13 27.5 +2.7
WTSB   Winterswijk       145.65 354 ePKP    PKPdf    05 13 26.0 +1.7
MLR    Muntele Rosu      145.67 329 ⇓PKP2   PKPab    05 13 27.9 -2.5
MLR    Muntele Rosu      145.67 329  PKPbc  PKPbc    05 13 27.6 +1.7
       comp=Z,40nm,1.0s,baz=357,slow=3.4,SNR=34
MLR                                  pPKPbc          05 15 39.5
       comp=Z,8.5nm,1.2s,baz=114,slow=15,SNR=1.8
KECS   Kecovo            145.69 337 ePKP    PKPdf    05 13 27.3 +2.8
KECS                                e                05 15 48.6
HAE    Alders End        145.70   4⇓eP      PKPdf    05 13 26.6 +2.3
HAE                                  AMb    AMB      05 13 28.1
       comp=Z,154nm,1.1s
LIKS   Likavka           145.70 339 ePKP    PKPdf    05 13 28.6 +4.1
PVCC   Panska Ves        145.70 345 ePKP    PKPdf    05 13 25.6 +1.2
PVCC                                ex      x        05 13 27.6
MCH1   Michaelchurch     145.71   5⇓eP      PKPdf    05 13 26.2 +1.9
MDU    Mudurnu           145.83 318 eP      PKPdf    05 13 28.4 +3.4
HENT   Hendek            145.83 318 i P     PKPdf    05 13 25.2 +0.2
MBAR   Mbarara           145.85 241 ePKPdf  PKPdf    05 13 27.6 +1.7
MBAR                                ePKPbc  PKPbc    05 13 29.0 +1.7
HGH    Gray Hill         146.08   5 eP      PKPdf    05 13 27.4 +2.4
HGH                                  AMb    AMB      05 13 28.4
       comp=Z,101nm,0.8s
KIZT   Kizilcal          146.21 315 eP      PKPdf    05 13 29.3 +3.6
PRU    Pruhonice         146.21 345 ePKP    PKPdf    05 13 28.6 +3.3
PRU                                 epPKP            05 15 39.9
MOX    Moxa              146.24 348 ePKIKP  PKPdf    05 13 26.7 +1.4
MOX                                  MLR    MLR
       comp=Z,300nm,19.0s
MOX    Moxa              146.24 348 i P     PKPdf    05 13 26.7 +1.4
       comp=Z,logA/T=1.8
MOX                                  L               05 49 47.0
VRAC   Vranov            146.27 342  PKP    PKPdf    05 13 24.9 -0.5
       comp=Z,18nm,0.9s,baz=8.9,slow=6.1
VRAC                                 PKPbc  PKPbc    05 13 29.2 +2.0
       baz=42,slow=5.5
VRAC                                 pPKPbc          05 15 39.9
       comp=Z,3.1nm,0.7s,baz=23,slow=3.3,SNR=1.6
VRAC   Vranov            146.27 342 ⇑P      PKPdf    05 13 29.0 +3.6
VRAC                                 PKPbc  PKPbc    05 13 29.2 +2.0
VRAC                                 pPKPbc          05 15 39.9
VYHS   Vyhne             146.27 339 ePKP    PKPdf    05 13 29.1 +3.7
VYHS                                e                05 15 43.4
KONT   Konya--Tatoy      146.33 313 eP      PKPdf    05 13 29.4 +3.6
PSZ    Piszkesteto       146.38 337 ePKIKP  PKPdf    05 13 25.9 +0.3
PSZ                                 e                05 13 28.8
PSZ    Piszkesteto       146.38 337⇓ePKP/p           05 13 29.2
NKC    Novy Kostel       146.46 347 ePKP    PKPdf    05 13 26.1 +0.4
NKC                                 ex      x        05 13 29.5
NKC                                 epPKP            05 15 39.7
SMOL   Smolenice         146.72 340 ePKP    PKPdf    05 13 31.1 +4.9
CSS    Prodhromos        146.90 307 ⇓P      PKPdf    05 13 30.8 +3.9
CSS    Prodhromos        146.90 307 ePKPdf  PKPdf    05 13 27.6 +0.7
CSS                                 ePKPbc  PKPbc    05 13 30.6 +1.4
CSS                                ⇓iP               05 13 30.8
CSS                                 ePKPab  PKPab    05 13 34.7 -0.9
MAMC   Mammari           146.90 308  P      PKPdf    05 13 30.8 +3.9
HGN    Heimansgroeve     146.92 355 ePKP    PKPdf    05 13 27.0 +0.6
       comp=Z,31nm,0.7s
SRO    Srobarova         147.03 339 ePKP    PKPdf    05 13 31.3 +4.6
SRO                                 e                05 15 47.3
SRO2   Moca              147.05 339 ePKP    PKPdf    05 13 31.0 +4.3
BUD    Budapest          147.07 338⇓ePKP/p           05 13 30.9
ZST    Bratislava        147.10 341 ePKP    PKPdf    05 13 31.6 +4.8
ZST                                 e                05 15 47.7
SRO1   Iza               147.11 339 ePKP    PKPdf    05 13 31.5 +4.7
LEF    Lefka             147.17 308 eP      PKPdf    05 13 31.7 +4.3
TNS    Taunus Mts        147.18 352 ePKP2   PKPab    05 13 31.4 -4.7
GRF    Grafenberg Arr    147.23 348 ePKP2   PKPab    05 13 35.0 -1.3
GRF    Grafenberg Arr    147.23 348 ePKP2   PKPab    05 13 31.2 -5.1
GRF    Grafenberg Arr    147.23 348 ePKP    PKPdf    05 13 31.2 +4.2
GRF                                 ePKP    PKPdf    05 13 35.0 +8.0
GRF                                  pPKPbc          05 15 42.6
EIL    Elat              147.24 297  PKP    PKPdf    05 13 28.5 +0.9
       comp=Z,30nm,0.8s,baz=135,slow=5.3,SNR=11
EIL                                  PKPbc  PKPdf    05 13 32.2 +4.6
       comp=Z,35nm,0.9s,baz=51,slow=1.0,SNR=36
EIL                                  pPKPbc          05 15 45.6
       comp=Z,12nm,1.0s,baz=330,slow=8.3,SNR=3.9
EIL    Elat              147.24 297 ePKPdf  PKPdf    05 13 28.7 +1.0
EIL                                 ePKPbc  PKPdf    05 13 31.8 +4.2
KHC    Kasperske Hory    147.24 345 ePKP    PKPdf    05 13 27.9 +0.9
KHC                                 ex      x        05 13 31.8
KHC                                 epPKP            05 15 42.5
VKA    Vienna            147.28 341 ePKIKP  PKPdf    05 13 28.0 +0.9
VKA                                 i                05 13 32.1
ALT    Altintas          147.30 316 eP      PKPdf    05 13 31.6 +4.2
SZAC   Souni-Zanaja      147.32 307 ⇓P      PKPdf    05 13 31.8 +4.2
SZAC   Souni-Zanaja      147.32 307⇓iP      PKPdf    05 13 31.8 +4.2
ALFC   Alevga            147.37 308 ⇓P      PKPdf    05 13 31.5 +3.8
       comp=Z,2.9nm,0.8s
ALFC   Alevga            147.37 308⇓iP      PKPdf    05 13 31.5 +3.8
WET    Wettzell          147.39 346 ePKP2   PKPab    05 13 35.5 -1.5
JMB    Yambol            147.41 324 eP      PKPdf    05 13 32.0 +4.5
GEC2   GERESS Array S    147.47 345 ePKP2   PKPab    05 13 32.2 -5.1
GERES  GERESS Array B    147.47 345  PKP    PKPdf    05 13 28.5 +1.1
       comp=Z,30nm,0.7s,slow=1.0,SNR=87
GERES                                PKPbc  PKPdf    05 13 32.1 +4.7
       comp=Z,30nm,0.7s,baz=19,slow=1.3,SNR=164
GERES                                pPKPbc          05 15 43.6
       comp=Z,8.5nm,1.2s,baz=270,slow=1.3,SNR=3.1
BZS    Buzias            147.57 333 ⇑P      PKPdf    05 13 28.5 +0.8
BZS                                 ⇓P               05 13 32.3
AKMC   Akamas            147.62 308 ⇓P      PKPdf    05 13 31.8 +3.7
AKMC   Akamas            147.62 308⇓iP      PKPdf    05 13 31.8 +3.7
ABH    Alteburg          147.63 353  PKP    PKPdf    05 13 28.7 +1.1
GIVF   Givet             147.67 356⇓iPKP1   PKPdf    05 13 32.4 +4.7
       comp=Z,131nm,0.8s
PPCY   Paphos            147.67 308 ⇓P      PKPdf    05 13 32.0 +3.8
PPCY   Paphos            147.67 308⇓iP      PKPdf    05 13 32.0 +3.8
TOD    Tromm             147.73 351  PKIKP  PKPdf    05 13 29.0 +1.2
BAIF   Baives            147.75 357⇓iPKP1   PKPdf    05 13 32.8 +5.0
       comp=Z,105nm,0.9s
RUP    Ruppelstein       147.86 353  PKIKP  PKPdf    05 13 29.7 +1.7
WLF    Walferdange       147.99 354 ePKP2   PKPab    05 13 33.9 -5.4
BALB   Balikesir         148.41 319 eP      PKPdf    05 13 31.8 +2.6
STU    Stuttgart         148.48 350 ePKPdf  PKPdf    05 13 30.3 +1.4
STU                                 ePKPbc  PKPdf    05 13 34.9 +5.9
LANF   Langenberg        148.48 352  PKP    PKPdf    05 13 29.5 +0.5
JLP    Les Platons       148.51   4⇓eP      PKPdf    05 13 34.2 +5.2
JVM    Valle D.L. Mar    148.53   5⇓eP      PKPdf    05 13 34.3 +5.3
JSA    Saint Aubin       148.56   5⇓eP      PKPdf    05 13 34.4 +5.4
JRS    Jersey            148.56   4 eP      PKPdf    05 13 34.3 +5.2
PGB    Panagyurishte     148.66 327 eP      PKPdf    05 13 35.0 +5.5
FUR    Furstenfeldbru    148.67 347 ePKP2   PKPab    05 13 35.2 -6.9
DNZL   Cakiroluk         148.73 315 i P     PKPdf    05 13 36.2 +6.5
SVIS   Svilajnac         148.79 332⇓iP      PKPdf    05 13 34.9 +5.3
RZN    Rozhen            148.96 325 eP      PKPdf    05 13 35.0 +5.0
BFO    Black Forest      149.04 351 ePKHKP           05 13 35.8
BFO    Black Forest      149.04 351 ePKP2   PKPab    05 13 42.0 -1.7
FLN    La Foliniere      149.09   2⇓iPKP1   PKPdf    05 13 35.7 +5.8
       comp=Z,230nm,1.0s
WLS    Welschbruch       149.09 352  PKP    PKPdf    05 13 30.7 +0.8
CDF    Champ du Feu      149.10 352⇓iPKP1   PKPdf    05 13 36.0 +6.0
       comp=Z,104nm,1.0s
PERS   Pernice           149.10 341 ePKPdf  PKPdf    05 13 30.3 +0.3
PERS                                ePKPbc  PKPdf    05 13 35.6 +5.6
VTS    Vitosha           149.12 328 ⇓PKHKP           05 13 36.7
VTS    Vitosha           149.12 328 eP      PKPdf    05 13 36.0 +5.8
KBA    Koelnbreinsper    149.20 344⇑iP      PKPdf    05 13 35.4 +5.2
MEZF   Maizieres J'vi    149.24 355⇓iPKP1   PKPdf    05 13 36.5 +6.3
       comp=Z,81nm,0.8s
LDF    La Druitiere      149.27   2⇓iPKP1   PKPdf    05 13 36.1 +5.9
       comp=Z,68nm,0.8s
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ROSF	Rostrenen	149.31	6	⇓iPKP1	PKPdf	05 13 35.9	+5.6
	comp=Z,90nm,1.0s						
LIBD	Limburg	149.32	352	PKHKP		05 13 31.7	
GRUS	Gruza	149.33	332	⇓iP	PKPdf	05 13 36.8	+6.3
THEF	They Montfort	149.43	354	PKP	PKPdf	05 13 31.7	+1.2
GRR	Gorron	149.44	3	⇓iPKP1	PKPdf	05 13 36.6	+6.1
	comp=Z,105nm,0.9s						
SGMF	Saint Gilles	149.46	5	⇓iPKP1	PKPdf	05 13 36.3	+5.8
	comp=Z,139nm,0.9s						
DIVS	Divcibare	149.48	333	⇑iP	PKPdf	05 13 37.1	+6.4
KDAG	Bornova	149.51	318	i P	PKPdf	05 13 37.0	+6.1
FELD	Feldberg	149.53	351	PKP	PKPdf	05 13 31.2	+0.5
MMB	Musomiste	149.57	326	eP	PKPdf	05 13 37.0	+6.1
HAU	Haudompre	149.61	353	⇓iPKP1	PKPdf	05 13 37.1	+6.3
	comp=Z,76nm,0.8s						
BARS	Barje	149.64	330	⇓iP	PKPdf	05 13 36.5	+5.5
MOF	Molkenrain	149.67	352	PKP	PKPdf	05 13 31.7	+0.8
KKB	Krupnik	149.71	327	eP	PKPdf	05 13 37.0	+5.8
QUIF	Quistinic	149.74	6	⇓iPKP1	PKPdf	05 13 36.9	+5.9
	comp=Z,56nm,1.0s						
HINF	Hinteralfeld	149.74	353	⇓iPKP1	PKPdf	05 13 37.2	+6.2
	comp=Z,52nm,0.9s						
FVI	Forni Avoltri	149.79	344	ePKP	PKPdf	05 13 36.7	+5.5
LJU	Ljubljana	149.81	342	ePKIKP	PKPdf	05 13 28.9	-2.3
LJU				e		05 13 44.9	
LJU	Ljubljana	149.81	342	ePKPdf	PKPdf	05 13 28.9	-2.3
LJU				i PKPbc	PKPdf	05 13 37.6	+6.4
LJU				ePKPab	PKPab	05 13 44.9	-2.1
PTCC	Patocco-Chiusa	149.82	343	ePKP	PKPdf	05 13 36.5	+5.3
VISS	Visnje	149.94	341	ePKPbc	PKPdf	05 13 38.0	+6.6
VISS				ePKPab	PKPab	05 13 45.2	-2.2
SRS	Serrai	149.97	325	eP	PKPdf	05 13 37.2	+5.6
BBS	Basel-Blauen	150.00	352	PKIKP	PKPdf	05 13 31.2	-0.2
VOY	Vojsko	150.01	342	ePKPdf	PKPdf	05 13 32.1	+0.6
VOY				ePKPbc	PKPdf	05 13 37.6	+6.1
VOY				ePKPab	PKPab	05 13 45.6	-2.1
BOJS	Bojanci	150.07	340	i PKPbc	PKPdf	05 13 38.7	+7.1
JAVS	Javornik	150.09	342	ePKPbc	PKPdf	05 13 38.0	+6.4
JAVS				ePKPab	PKPab	05 13 45.1	-2.9
DAVOX	Davos	150.28	348	PKP	PKPdf	05 13 33.7	+1.8
	comp=Z,6.8nm,0.7s,baz=43,slow=11						
DAVOX				PKPbc	PKPdf	05 13 39.8	+7.9
	baz=358,slow=12						
DAVOX				pPKPbc		05 15 47.3	
	comp=Z,1.6nm,0.6s,baz=248,slow=16,SNR=1.1						
KNT	Kendrikon	150.31	326	eP	PKPdf	05 13 38.4	+6.3
SKO	Skopje	150.47	329	⇓iPKHKP		05 13 39.3	
	comp=Z,0.0nm,0.8s						
SKO				⇑iPKP2	PKPab	05 13 49.4	-0.4
BRMO	Bormio	150.47	347	ePKP	PKPdf	05 13 38.9	+6.7
CTI	Castel Tesino	150.59	345	ePKIKP	PKPdf	05 13 33.6	+1.2
HYF	Humbligny	150.60	358	ePKP1	PKPdf	05 13 39.8	+7.4
GRG	Griva	150.72	326	eP	PKPdf	05 13 39.2	+6.5
SSF	Saint Saulge	150.78	357	⇓iPKP1	PKPdf	05 13 40.0	+7.4
	comp=Z,66nm,0.7s						
CABF	La Chapelle	151.02	353	⇓iPKP1	PKPdf	05 13 41.1	+8.1
	comp=Z,127nm,1.0s						
AVF	Avril sur Loir	151.05	357	⇓iPKP1	PKPdf	05 13 40.1	+7.1
	comp=Z,33nm,0.9s						
SMF	Signal de Mont	151.17	357	ePKP1	PKPdf	05 13 40.5	+7.3
MFF	Saint Martin d	151.26	2	⇓iPKP1	PKPdf	05 13 40.9	+7.6
	comp=Z,104nm,0.9s						
LIT	Litokhoron	151.28	325	eP	PKPdf	05 13 40.3	+6.7
BGF	Bois d'Agland	151.31	358	⇓iPKP1	PKPdf	05 13 41.1	+7.7
	comp=Z,92nm,0.9s						
VAI	Varese	151.36	349	ePKIKP	PKPdf	05 13 34.0	+0.5
FNA	Florina	151.38	327	eP	PKPdf	05 13 41.3	+7.6
MCGN	Macugnaga	151.41	350	ePKP	PKPdf	05 13 35.4	+1.9
TCF	Toulx Ste Croi	151.59	359	⇓iPKP1	PKPdf	05 13 41.5	+7.7
	comp=Z,76nm,1.0s						
PLDF	La Plantade	151.86	357	PKP	PKPdf	05 13 35.6	+1.4
LPL	La Plagne	152.02	352	⇓iPKP1	PKPdf	05 13 43.5	+9.1
	comp=Z,27nm,0.9s						
LPG	La Plagne	152.03	352	⇓iPKP1	PKPdf	05 13 43.6	+9.2
	comp=Z,43nm,1.0s						
PYM	Petit Puy Mans	152.11	358	PKP	PKPdf	05 13 37.3	+2.8
AGG	Agios Georgios	152.12	324	eP	PKPdf	05 13 42.3	+7.5
BNI	Bardonecchia	152.48	352	ePKPdf	PKPdf	05 13 37.2	+2.1
BNI				ePKPbc	PKPdf	05 13 44.5	+9.4
RJF	Les Rejaudoux	152.58	360	⇓iPKP1	PKPdf	05 13 43.7	+8.5
	comp=Z,32nm,0.8s						
LBL	Lubilhac	152.61	357	PKP	PKPdf	05 13 39.0	+3.7
ORIF	Oris-en-Rattie	152.71	353	⇓iPKP1	PKPdf	05 13 44.5	+9.1
	comp=Z,31nm,0.9s						
MBDF	Montbardon	152.79	352	⇓iPKP1	PKPdf	05 13 44.7	+9.2
	comp=Z,39nm,0.7s						
VIVF	Saint-Julien-l	152.90	355	⇓iPKP1	PKPdf	05 13 44.9	+9.2
	comp=Z,18nm,0.8s						
LFF	La Frestale	152.94	1	⇓iPKP1	PKPdf	05 13 44.4	+8.7
	comp=Z,44nm,1.1s						
CAF	Calviac	152.96	359	ePKP1	PKPdf	05 13 44.8	+9.0
	comp=Z,26nm,0.9s						
SBF	Sospel	153.53	350	⇓iPKP1	PKPdf	05 13 45.6	+9.0
	comp=Z,50nm,0.9s						
SMRF	Simiane la Rot	153.68	353	ePKP1	PKPdf	05 13 47.0	+10
LASF	Ste Croix	153.73	356	ePKP1	PKPdf	05 13 46.8	+10
ESDC	Sonseca Array	157.71	11	PKP	PKPdf	05 13 44.0	+1.8
	comp=Z,1.1nm,0.7s,baz=348,slow=3.4,SNR=5.5						
ESDC				PKPab	PKPab	05 14 19.1	-1.4
	comp=Z,7.0nm,1.1s,baz=341,slow=4.4,SNR=10						
DBIC	Dimbokro	167.34	150	PKP	PKPdf	05 13 53.2	+1.0
	comp=Z,4.5nm,0.8s,baz=66,slow=3.6,SNR=6.8						
DBIC				PKPab	PKPab	05 15 04.1	+1.0
	comp=Z,1.3nm,0.4s,baz=157,slow=7.2,SNR=6.9						

IDC 27 05:03:16.7±10.0**, 17.68S**×**178.88E, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.9**/14**, mbtmp4.0**/3**, Error ellipse: s-maj=479.0km s-min=38.9km az=144.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.13	260	P	P	05 11 11.0	-1.7
	2.9nm,1.1s,baz=91,slow=6.0,SNR=4.7						
ASAR	Alice Springs	42.37	254	P	P	05 11 12.8	-1.8
	3.1nm,1.0s,baz=84,slow=6.6,SNR=4.6						
ILAR	Eielson Array	86.27	14	P	P	05 16 00.1	-1.1
	1.0nm,1.1s,baz=201,slow=7.7,SNR=4.8						

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*IDC **27** 05:10:45.0±15.0, 12.31S×166.71E, h99^{km}±132^{km}, mb3.7/9, mb1 3.8/9, mb1mx3.8/16, mbtmp4.0/9, Error ellipse: s-maj=51.4km s-min=28.2km az=71.0*

*NEIC **27** 05:10:46.6±3.0, 12.36S×166.68E, h115^{km}±28^{km}, mb3.8/2, Error ellipse: s-maj=25.7km s-min=19.2km az=153.0*

ISC 27 05:10:46.4±4.5**, 12.4S**±0.2×**166.6E**±0.2**, h125**^{km}±42^{km}**, n18, $\sigma 0^{s}.94$**/18**, mb3.8**/10**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	9.60	181	eP	P	05 13 02.8	+0.1
DZM				eS	S	05 14 42.5	-6.6
DZM	Mont Dzumac	9.60	181	eP	P	05 13 02.8	+0.1
DZM				eS	S	05 14 42.5	-6.6
CTA	Charters Tower	20.96	246	P	P	05 15 22.7	+1.6
	5.0nm,0.8s,baz=34,slow=10,SNR=3.5						
CTA	Charters Tower	20.96	246	P	P	05 15 22.7	+1.6
STKA	Stephens Creek	30.06	226	P	P	05 16 46.9	+0.7
	2.3nm,0.6s,mb4.0,baz=60,slow=8.4,SNR=8.7						
STKA	Stephens Creek	30.06	226	eP	P	05 16 46.5	+0.3
WRAB	Tennant Creek	31.83	252	eP	P	05 16 59.9	-1.8
	0.7nm,0.5s,mb3.6						
WRA	Warramunga Arr	31.84	252	P	P	05 17 00.6	-1.2
	0.4nm,0.4s,mb3.5,baz=85,slow=9.0,SNR=8.4						
ASAR	Alice Springs	32.96	246	P	P	05 17 11.0	-0.5
	2.2nm,0.7s,mb4.1,baz=69,slow=9.7,SNR=22						
NWAO	Narrogin (SRO)	49.42	237	P	P	05 19 25.6	-0.1
	5.0nm,0.8s,mb4.5,baz=100,slow=11,SNR=2.5						
VNDA	Vanda	65.15	181	P	P	05 21 16.0	+0.2
	0.7nm,0.7s,mb3.6,slow=7.1,SNR=3.2						
VNDA	Vanda	65.15	181	eP	P	05 21 15.9	0.0
CMAR	Chiang Mai Arr	73.43	294	P	P	05 22 08.8	+1.4
	2.1nm,0.9s,mb4.0,baz=122,slow=4.4,SNR=6.3						
ULN	Ulaanbaatar	79.90	324	eP	P	05 22 43.3	+0.4
	1.8nm,0.6s,mb4.1						
SONM	Songino Array	80.26	324	P	P	05 22 45.2	+0.4
	0.8nm,0.7s,mb3.7,baz=140,slow=5.9,SNR=12						
ILAR	Eielson Array	84.54	18	P	P	05 23 05.4	-0.9
	0.3nm,0.7s,mb3.3,baz=243,slow=4.9,SNR=4.3						
ARCES	ARCESS Array B	117.86	346	PKP	PKPdf	05 29 18.2	+0.5
	8.1nm,1.1s,baz=53,slow=2.6,SNR=7.7						
ARCES	ARCESS Array B	117.86	346	PKP	PKPdf	05 29 18.2	+0.5

IDC 27 05:17:10.5±25.0**, 24.21S**×**179.71W, h646**^{km}±250^{km}**, mb2.9**/4**, mb1 3.0**/4**, mb1mx2.9**/14**, mbtmp4.0**/4**, Error ellipse: s-maj=199.0km s-min=94.2km az=88.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	31.75	271	P	P	05 22 45.3	-1.0
	3.2nm,0.4s,baz=108,slow=14,SNR=7.7						
STKA	Stephens Creek	34.86	249	P	P	05 23 10.1	-1.9
	0.6nm,0.3s,baz=105,slow=16,SNR=5.2						
ASAR	Alice Springs	42.25	261	P	P	05 24 10.3	-1.3
	0.7nm,0.6s,baz=92,slow=7.2,SNR=16						
WRA	Warramunga Arr	42.66	266	P	P	05 24 13.1	-1.7
	0.7nm,0.5s,baz=102,slow=8.5,SNR=21						
AKASG	Malin Array Be	145.38	327	PKPbc	PKPbc	05 35 37.0	-0.3
	1.0nm,0.5s,baz=47,slow=4.2,SNR=6.0						

DJA 27 05:30:28.6±0.8**, 8.90S**×**115.65E, h50**^{km}±5^{km}**, MD4.7**/3**, ML3.7**/2**, 5C-3D, Error ellipse: s-maj=30.1km s-min=7.8km az=175.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATI	Rata	0.20	327	⇓iPg	P	05 30 36.7	-0.2
	378nm,0.2s						
RATI				⇓iSg	S	05 30 41.8	-1.1
KEDI	Kedomdong	0.61	49	ePg	P	05 30 40.7	-0.6
	244nm,0.1s						
KEDI				⇑iSg	S	05 30 48.8	-1.8
KELI	Kelakatan	1.32	300	⇓iPn	P	05 30 49.4	-1.8
	41nm,0.2s						
KELI	Kelakatan	1.32	300	⇑iPg	P	05 30 50.3	-0.9
KELI				⇑iSn	S	05 31 06.6	-1.4
SRDI	Scrawed	1.54	285	⇑iPn	P	05 30 53.1	-1.1
	128nm,0.2s						
SRDI				⇑iSn	S	05 31 11.3	-1.9

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*IDC **27** 05:36:47.0±6.2, 30.37N×57.09E, mb3.5/6, mb1 3.7/6, mb1mx3.5/20, mbtmp3.5/6, Error ellipse: s-maj=129.2km s-min=33.8km az=171.0*

*CSEM **27** 05:36:50.9±0.2, 30.79N×56.92E, h20^{km}, mb3.5/1, ML4.3/2, Error ellipse: s-maj=6.4km s-min=4.6km az=98.0*

*THR **27** 05:36:51.6±0.8, 30.73N×56.68E, h14^{km}±10^{km}, ML3.3*

*NEIC **27** 05:36:52.2±1.1, 30.87N×56.85E, h10^{km}, mb3.4/1, MN3.4(TEH), Error ellipse: s-maj=15.3km s-min=10.8km az=156.0*

*TEH **27** 05:37:01.9, 30.96N×55.92E, h8^{km}, Mn3.4*

ISC 27 05:36:49.9±0.7**, 30.80N**±0.04×**56.95E**±0.09**, h10**^{km}**, n24, $\sigma 0^{s}.71$**/29**, mb3.4**/6**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.83	192	i PG	Pg	05 37 05.7	-0.8
KRBR				eSG	Sg	05 37 16.9	-0.7
KRBR				AML	AML	05 37 20.6	
	comp=N,1μm,0.2s						
KRBR	Kerman	0.83	192	i Pg	Pg	05 37 05.7	-0.8
	SNR=90						
KRBR				eSg	Sg	05 37 17.0	-0.6
	comp=N,1μm,0.2s,SNR=90						
IBAF	Bafgh	1.43	304	Pg	Pg	05 37 14.5	-3.9
IMEH	Mehriz	2.09	287	Pn	Pn	05 37 25.7	+0.2
ICHK	Chekchek	2.61	304	Pn	Pn	05 37 33.2	+0.3
BNDS	Bandar-Abbas	3.45	192	ePN	Pn	05 37 46.1	+1.2
BNDS				AML	AML	05 38 48.1	
	comp=N,48nm,0.6s						
ISRV	Sarvestan	3.61	248	Pn	Pn	05 37 47.9	+0.7
NASN	Na'in	4.05	301	ePN	Pn	05 37 53.4	-0.1
NASN				eSG	Sg	05 38 52.4	-12
NASN				AML	AML	05 39 03.7	
	comp=N,55nm,0.5s						
NASN	Na'in	4.05	301	ePn	Pn	05 37 53.4	-0.1
	SNR=52						
NASN				eSg	Sg	05 38 52.4	-13
	comp=N,55nm,0.5s,SNR=90						
IMOK	Mook	4.07	246	Pn	Pn	05 37 54.4	+0.7
ISFB	Sefidab	5.33	313	Pn	Pn	05 38 10.9	-0.6
IVRN	Varamin	6.07	315	Pn	Pn	05 38 21.2	-0.8
IDMV	Damavand	6.30	320	Pn	Pn	05 38 25.1	-0.2
DAMV	Damavand	6.38	320	ePN	Pn	05 38 26.4	+0.1
IAFJ	Afjeh	6.68	320	Pn	Pn	05 38 30.4	-0.2
IAFJ				Sn	Sn	05 39 36.0	-12
BRTR	Keskin Array B	20.97	301	P	P	05 41 36.1	+0.5
	comp=N,0.3nm,0.7s,baz=112,slow=13,SNR=2.9						
BVAR	Borovoye Array	24.28	20	P	P	05 42 09.5	+1.4
	comp=N,1.0nm,0.6s,mb3.4,baz=199,slow=7.3,SNR=9.9						
CHKZ	Chkalovo	24.91	19	eP	P	05 42 14.6	+0.3
	comp=N,0.6nm,0.6s,mb3.3						
CHKZ	Chkalovo	24.91	19	eP	P	05 42 14.6	+0.3
	comp=N,0.6nm,0.6s,mb3.3						
ZAL	Zalesovo	30.60	33	P	P	05 43 05.2	-0.9
	comp=N,0.7nm,0.4s,mb3.8,baz=187,slow=6.5,SNR=3.3						
FINES	FINESS Array B	36.71	336	P	P	05 43 58.2	-0.5
	comp=N,0.9nm,0.7s,mb3.7,baz=135,slow=5.4,SNR=4.9						
GERES	GERESS Array B	37.20	312	P	P	05 44 03.2	+0.2
	comp=N,0.3nm,0.8s,mb3.2,baz=104,slow=8.1,SNR=2.3						
YKA	Yellowknife Ar	86.79	356	P	P	05 49 34.7	-0.4
	comp=N,0.1nm,0.7s,mb3.2,baz=6.8,slow=5.2,SNR=5.6						
YKA	Yellowknife Ar	86.79	356	P	P	05 49 34.7	-0.4

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*NEIC **27** 06:11:47.0, 48.08N×128.88W, h10^{km}, ML3.6(PGC), After PGC.*

*PGC **27** 06:11:47.2, 48.08N×128.88W, h10^{km}, MLSn2.9/1, Mw3.6, Northern Juan de Fuca ridge.*

*IDC **27** 06:11:51.2±1.9, 48.34N×128.31W, mb3.1/2, mb1 3.4/9, mb1mx3.3/25, mbtmp3.2/9, ML3.4/6, MS3.2/4, Ms1 3.2/4, ms1mx2.9/15, Error ellipse: s-maj=33.5km s-min=12.8km az=66.0*

ISC 27 06:11:49.1±1.3**, 48.33N**±0.05×**128.45W**±0.09**, h2**^{km}±12^{km}**, n38, $\sigma 1^{s}.05$**/49**, mb2.9**/1**, MS3.0**/2**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	Eliza Dome	1.77	29	Pn	Pn	06 12 20.4	-0.5
OZB	Mount Ozzard	2.06	71	Pn	Pn	06 12 24.5	-0.5
OZB				Sn	Sn	06 12 52.9	+1.3
OZB				Trac		06 13 01.5	
	comp=Z,13nm,0.6s						
GDR	Gold River	2.15	47	Pn	Pn	06 12 27.0	+0.6
WOSB	Woss	2.20	33	Pn	Pn	06 12 27.5	+0.4
MAYB	Maynard	2.23	21	Pn	Pn	06 12 27.2	-0.3
MAYB				Sn	Sn	06 12 55.9	-0.1
	comp=Z,4.0nm,0.3s						
MAYB				Trac		06 12 58.0	
	comp=Z,4.0nm,0.3s						
BTB	Buttle Lake	2.24	58	Pn	Pn	06 12 28.6	+1.0
BTB				Sn	Sn	06 12 59.6	+3.4
	comp=Z,8.0nm,0.3s						
BTB				Trac		06 13 06.2	
	comp=Z,8.0nm,0.3s						
HOLB	Holberg	2.32	5	Pn	Pn	06 12 28.2	-0.6
HOLB				Sn	Sn	06 12 58.4	+0.2
	comp=Z,3.0nm,0.2s						
HOLB				Trac		06 12 59.7	
	comp=Z,3.0nm,0.2s						
PHC	Port Hardy	2.47	15	Pn	Pn	06 12 30.5	-0.4
MGB	Mount Grey	2.58	74	Pn	Pn	06 12 32.1	-0.4
MGB				Sn	Sn	06 13 04.9	+0.1
	comp=Z,1.0nm,0.2s						
MGB				Trac		06 13 12.0	
	comp=Z,1.0nm,0.2s						
NCRB	Newcastle Ridg	2.59	36	Pn	Pn	06 12 33.3	+0.6
CBB	Campbell River	2.64	49	Pn	Pn	06 12 34.2	+0.8
CBB				Sn	Sn	06 13 08.4	+2.0
CBB				Trac		06 13 10.5	
	comp=Z,12nm,0.7s						
PFB	Port Renfrew	2.68	83	Pn	Pn	06 12 32.9	-1.0
PFB				Sn	Sn	06 13 06.6	-0.7
PFB				Trac		06 13 09.6	
	comp=Z,1.0nm,0.2s						
TXB	Texada	2.97	61	Pn	Pn	06 12 38.6	+0.5
NLLB	Nanaimo Lost L	3.08	71	Pn	Pn	06 12 40.0	+0.3
NLLB				Sn	Sn	06 13 17.3	-0.2
NLLB				Trac		06 13 28.6	
	comp=Z,1.0nm,0.2s						
LZB	Mount Lazard	3.09	83	Pn	Pn	06 12 39.0	-0.7
LZB				Sn	Sn	06 13 15.0	-2.7
LZB				Trac		06 13 26.6	
	comp=Z,1.0nm,0.7s						
SHB	Sechelt	3.27	66	Pn	Pn	06 12 43.2	+0.9
GOBB	Galiano Island	3.33	77	Pn	Pn	06 12 41.4	-1.8
PGC	Sidney	3.34	83	eP	Pn	06 12 42.1	-1.2
PGC	Sidney	3.34	83	Pn	Pn	06 12 42.1	-1.2
PGC				Trac		06 13 25.8	
	comp=Z,2.0nm,0.5s						
VGZ	Gonzales	3.42	87	Pn	Pn	06 12 43.5	-0.9
VGZ				Sn	Sn	06 13 25.1	-0.9
VGZ				Sn	Sn	06 13 25.7	-0.4
VGZ				Trac		06 13 33.8	
	comp=Z,3.0nm,0.5s						
BIB	Bowen Island	3.56	71	Pn	Pn	06 12 46.4	0.0
WPB	Watts Point	3.69	67	Pn	Pn	06 12 50.3	+2.0
BBB	Bella Bella	3.86	3	Pn	Pn	06 12 50.0	-0.8
	9.3nm,0.3s,baz=192,slow=5.9,SNR=116						
BBB				Sn	Sn	06 13 35.2	-2.1
	baz=149,slow=5.9,SNR=2.2						
BBB	Bella Bella	3.86	3	Pn	Pn	06 12 49.6	-1.1
BBB				Sn	Sn	06 13 35.4	-1.9
BBB				Trac		06 13 37.0	
	comp=Z,15nm,1.0s						
WSLR	Whistler	4.04	62	Pn	Pn	06 12 55.0	+1.7
LLLB	Lillooet	4.85	60	Pn	Pn	06 13 05.3	+0.5
NEW	Newport	7.55	86	Pn	Pn	06 13 41.5	-1.4
	0.2nm,0.3s,baz=277,slow=12,SNR=2.5						
NEW				LR	LR	06 16 48.0	
	comp=Z,182nm,18.8s,baz=303,slow=40						
YBH	Yreka Blue Hor	7.75	146	Pn	Pn	06 13 46.5	+0.9
	0.1nm,0.3s,baz=316,slow=8.4,SNR=3.6						
ELK	Elko	12.09	124	LR	LR	06 19 39.8	
	comp=Z,104nm,19.4s,baz=299,slow=39						
NVAR	Mina Array Bea	12.33	140	Pn	P	06 14 48.6	+0.1
	0.0nm,0.3s,baz=326,slow=11,SNR=5.3						
PDAR	Pinedale Array	14.34	106	Pn	P	06 15 21.9	+6.8
	0.1nm,0.3s,baz=329,slow=5.3,SNR=2.3						
YKA	Yellowknife Ar	16.16	24	Pn	P	06 15 36.8	-1.8
	baz=215,slow=11,SNR=2.9						
YKA	Yellowknife Ar	16.16	24	Pn	P	06 15 36.8	-1.8
ILAR	Eielson Array	19.23	336	P	P	06 16 17.3	+0.7
	0.0nm,0.3s,baz=139,slow=9.6,SNR=5.0						
INK	Inuvik	20.20	355	P	P	06 16 28.8	+1.3
	1.0nm,0.9s,baz=185,slow=6.5,SNR=3.8						
INK				LR	LR	06 24 19.3	
	comp=Z,50nm,21.0s,MS2.8,baz=55,slow=37						
INK	Inuvik	20.20	355	P	P	06 16 28.8	+1.3
INK				LR	LR	06 24 19.3	
ANMO	Albuquerque	21.09	121	P	P	06 16 37.9	+1.0
	0.5nm,0.8s,mb2.9,baz=311,slow=7.3,SNR=3.4						
TXAR	Lajitas Array	26.87	126	LR	LR	06 27 53.0	
	comp=Z,71nm,18.5s,MS3.3,baz=145,slow=36						

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*NEIC **27** 06:17:35.0, 33.61S×118.28E, ML3.6(AUST), After AUST.*

AUST 27 06:17:36.0, 33.61S×118.28E, ML3.6, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	Narrogin (SRO)	1.11	307	eP	Pb	06 17 55.7	-2.0
NWAO				eS	Sb	06 18 10.1	-2.5
	399nm,0.4s						
RKGY	Rocky Gully	1.47	227	eP	Pn	06 18 02.2	-1.7
RKGY				eS	Sb	06 18 21.1	-2.1
	42nm,0.2s						
KLBR	Kellerberrin	2.06	347	eP	Pn	06 18 10.3	-1.9
KLBR				eS	Sn	06 18 35.2	-3.7
	342nm,0.3s						
MUN	Mundaring	2.38	312	eP	Pn	06 18 16.4	-0.5
MUN				eS	Sn	06 18 43.8	-3.5
	17nm,0.2s						
BLDU	Ballidu	3.27	335	eP	Pn	06 18 34.4	+4.9
BLDU				eS	Sn	06 19 12.6	+2.9
	46nm,0.3s						
MORW	Morawa	4.91	336	eP	Pn	06 18 48.7	-4.2
MORW				eS	Sn	06 19 42.5	-8.8
	34nm,0.2s						
MEEK	Meekatharra	6.95	2	eP	Pn	06 19 16.7	-4.9
MEEK				eS	Sn	06 20 27.4	-15
	29nm,0.3s						
MEEK	Meekatharra	6.95	2	eP	Pn	06 19 16.7	-4.9
	29nm,0.3s						
MEEK				eS	Sn	06 20 27.4	-15

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*CSEM **27** 06:20:20.6±0.2, 30.97N×56.75E, h20^{km}, ML3.7, Error ellipse: s-maj=7.1km s-min=2.4km az=73.0*

*THR **27** 06:20:20.6±0.9, 30.92N×56.57E, h14^{km}±11^{km}, ML3.4*

*TEH **27** 06:20:28.7, 31.03N×56.02E, h4^{km}, Mn3.7*

ISC 27 06:20:19.3±1.5**, 30.96N**±0.05×**56.9E**±0.2**, h10**^{km}**, n22, $\sigma 0^{s}.81$**/25**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.98	185	ePG	Pg	06 20 38.1	-0.8
KRBR				eSG	Sg	06 20 51.8	-0.3
KRBR				AML	AML	06 20 56.8	
	comp=E,1μm,0.2s						
IBAF	Bafgh	1.26	300	Pg	Pg	06 20 40.6	-4.0
IMEH	Mehriz	1.96	283	Pn	Pn	06 20 53.0	-0.1
ICHK	Chekchek	2.44	302	Pn	Pn	06 21 00.0	0.0
ISRV	Sarvestan	3.60	245	Pn	Pn	06 21 16.6	+0.2
BNDS	Bandar-Abbas	3.60	190	ePN	Pn	06 21 17.4	+1.0
BNDS				AML	AML	06 22 18.9	
	comp=N,46nm,0.4s						
NASN	Na'in	3.89	299	ePN	Pn	06 21 20.3	-0.3
NASN				eSG	Sg	06 22 16.1	-13
NASN				AML	AML	06 22 25.4	
	comp=E,102nm,0.6s						
NASN	Na'in	3.89	299	ePn	Pn	06 21 20.3	-0.3
	SNR=52						
NASN				eSg	Sg	06 22 16.0	-13
	SNR=90						
SHI	Shiraz	3.97	252	Pn	Pn	06 21 22.4	+0.7
IMOK	Mook	4.06	243	Pn	Pn	06 21 23.2	+0.2
ISFB	Sefidab	5.15	312	Pn	Pn	06 21 39.6	+1.2
QAM	Qamsar	5.18	306	Pn	Pn	06 21 34.0	-4.8
IFIR	Firoozkooh	5.79	325	Pn	Pn	06 21 48.5	+1.1
IFIR				Sn	Sn	06 22 47.8	-6.9
IVRN	Varamin	5.89	314	Pn	Pn	06 21 52.8	+4.0
IDMV	Damavand	6.12	320	Pn	Pn	06 21 52.5	+0.4
DAMV	Damavand	6.19	320	ePN	Pn	06 21 52.4	-0.7
DAMV	Damavand	6.19	320	ePn	Pn	06 21 52.3	-0.8
	SNR=52						
IQOM	Qom	6.21	310	Lg		06 23 24.4	
IQOM	Qom	6.21	310	Pn	Pn	06 21 52.4	-1.0
IAFJ	Afjeh	6.50	320	Sn	Sn	06 23 03.5	-8.9
IAFJ	Afjeh	6.50	320	Pn	Pn	06 21 57.4	0.0
IRAZ	Razeghan	7.30	309	Pn	Pn	06 22 07.1	-1.5

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*CSEM **27** 06:28:53.6±0.1, 30.83N×56.81E, h20^{km}, mb3.8/2, ML4.7/2, Error ellipse: s-maj=2.6km s-min=1.6km az=57.0*

*TEH **27** 06:28:54.7, 30.80N×56.86E, h10^{km}, Mn3.8*

*NEIC **27** 06:28:54.3±0.7, 30.86N×56.74E, h10^{km}, mb3.6/3, MN3.8(TEH), Error ellipse: s-maj=12.2km s-min=8.2km az=16.0*

*THR **27** 06:28:54.9±1.0, 30.76N×56.56E, h14^{km}±11^{km}, ML3.6*

*IDC **27** 06:28:57.9±8.0, 30.66N×56.69E, h46^{km}±77^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.5/21, mbtmp3.8/10, ML4.4/1, Error ellipse: s-maj=36.1km s-min=24.4km az=166.0*

ISC 27 06:28:51.6±1.5**, 30.89N**±0.05×**56.85E**±0.08**, h1**^{km}±11^{km}**, n35, $\sigma 0^{s}.95$**/41**, mb3.8**/10**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.90	185	i PG	Pg	06 29 09.7	0.0
KRBR				eSG	Sg	06 29 21.4	-0.3
KRBR				AML	AML	06 29 23.7	
	comp=N,2μm,0.2s						
KRBR	Kerman	0.90	185	i Pg	Pg	06 29 09.7	0.0
	SNR=90						
KRBR				eSg	Sg	06 29 21.4	-0.3
	comp=N,2μm,0.2s,SNR=90						
IBAF	Bafgh	1.30	303	Pg	Pg	06 29 17.0	-0.6
IMEH	Mehriz	1.98	285	Pn	Pn	06 29 28.3	+1.6
ICHK	Chekchek	2.48	304	Pn	Pn	06 29 34.9	+1.0
BNDS	Bandar-Abbas	3.52	190	ePN	Pn	06 29 49.5	+0.8
BNDS				AML	AML	06 30 35.8	
	comp=N,141nm,0.6s						
ISRV	Sarvestan	3.56	246	Pn	Pn	06 29 50.4	+1.1
NASN	Na'in	3.93	300	ePN	Pn	06 29 55.6	+1.2
NASN				eSG	Sg	06 30 52.6	-10

NASN				AML	AML	06 31 06.2	
	comp=E,102nm,0.4s						
NASN	Na'in	3.93	300	*e*Pn	Pn	06 29 55.6	+1.1
	SNR=52						
NASN				*e*Sg	Sg	06 30 52.6	-10
	comp=E,102nm,0.4s,SNR=90						
IMOK	Mook	4.03	244	Pn	Pn	06 29 55.6	-0.2
ISFB	Sefidab	5.21	313	Pn	Pn	06 30 10.5	-2.0
IFIR	Firoozkooh	5.85	325	Pn	Pn	06 30 21.6	-0.1
IVRN	Varamin	5.94	315	Pn	Pn	06 30 22.8	-0.2
IDMV	Damavand	6.18	321	Pn	Pn	06 30 26.0	-0.3
DAMV	Damavand	6.25	320	*e*PN	Pn	06 30 28.4	+1.1
IQOM	Qom	6.26	311	Pn	Pn	06 30 27.1	-0.3
IAFJ	Afjeh	6.56	320	Pn	Pn	06 30 31.2	-0.4
IAFJ				Sn	Sn	06 31 42.8	-5.3
IMHD	Mahdasht	7.05	314	Pn	Pn	06 30 37.8	-0.7
IRAZ	Razeghan	7.34	310	Pn	Pn	06 30 41.9	-0.8
IRAZ				Sn	Sn	06 32 01.3	-6.4
EIL	Elat	18.95	272	P	P	06 33 11.9	-4.6
	comp=E,0.9nm,0.3s,baz=72,slow=9.6,SNR=2.3						
BRTR	Keskin Array B	20.85	301	P	P	06 33 36.8	-0.6
	comp=E,0.5nm,0.6s,baz=120,slow=12,SNR=3.1						
BVAR	Borovoye Array	24.23	20	P	P	06 34 12.4	+1.7
	comp=E,2.8nm,0.6s,mb4.0,baz=200,slow=7.7,SNR=22						
KURK	Kurchatov	25.60	33	*e*P	P	06 34 25.2	+1.3
	comp=E,1.1nm,0.5s,mb3.7						
KURK	Kurchatov	25.60	33	*e*P	P	06 34 25.2	+1.3
	comp=E,1.0nm,0.5s,mb3.7						
ZAL	Zalesovo	30.58	33	P	P	06 35 08.8	-0.2
	comp=E,2.4nm,0.5s,mb4.4,baz=229,slow=7.0,SNR=9.2						
ZAL	Zalesovo	30.58	33	P	P	06 35 08.8	-0.2
FINES	FINESS Array B	36.59	336	P	P	06 36 01.0	+0.1
	comp=E,1.6nm,0.8s,mb3.8,baz=117,slow=9.3,SNR=3.7						
GERES	GERESS Array B	37.08	311	P	P	06 36 04.9	-0.1
	comp=E,0.3nm,0.7s,mb3.2,baz=113,slow=13,SNR=2.4						
SONM	Songino Array	41.13	51	P	P	06 36 39.9	+1.2
	comp=E,0.5nm,0.7s,mb3.3,baz=262,slow=8.7,SNR=5.4						
ULN	Ulaanbaatar	41.57	51	*e*P	P	06 36 42.3	-0.1
	comp=E,1.0nm,0.4s,mb3.9						
ULN	Ulaanbaatar	41.57	51	*e*P	P	06 36 42.3	-0.1
	comp=E,1.0nm,0.4s,mb3.9						
YKA	Yellowknife Ar	86.70	356	P	P	06 41 36.3	-1.6
	comp=E,0.4nm,0.6s,mb3.8,baz=1.0,slow=5.2,SNR=14						
YKA	Yellowknife Ar	86.70	356	P	P	06 41 36.3	-1.6
WRA	Warramunga Arr	89.89	113	P	P	06 41 52.9	-1.3
	comp=E,0.7nm,1.1s,mb3.8,baz=312,slow=3.9,SNR=4.2						
ASAR	Alice Springs	91.56	117	P	P	06 42 00.4	-1.4
	comp=E,0.5nm,0.8s,mb3.9,baz=293,slow=5.4,SNR=4.6						

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*IDC **27** 06:47:18.6±5.8, 22.59N×93.37E, mb3.3/2, mb1 3.6/3, mb1mx3.2/18, mbtmp3.3/3, ML3.9/1, Error ellipse: s-maj=126.9km s-min=97.3km az=17.0*

ISC 27 06:47:23.7±1.7**, 24.4N**±0.3×**96.7E**±0.3**, h10**^{km}**, n10, σ1**^{s}**00**/10**, mb3.5**/2**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.21	160	Pn	Pn	06 48 58.0	+0.1
	0.6nm,0.3s,baz=302,slow=13,SNR=9.9						
JIRN	Jiri	10.04	291	*e*P	P	06 49 54.0	+2.9
	14nm,0.2s						
GUN	Gumba	10.37	292	*e*P	P	06 50 00.1	+4.4
	15nm,0.2s						
PKI	Pulchoki	10.68	290	*e*P	P	06 49 59.4	-0.5
	4.3nm,0.2s						
KKN	Kakani	10.85	291	*e*P	P	06 50 03.0	+0.8
DMN	Daman	10.95	290	*e*P	P	06 50 02.8	-0.8
GKN	Gorkha	11.45	291	*e*P	P	06 50 10.8	+0.3
	11nm,0.2s						
KOLN	Koldanda	12.28	289	*e*P	P	06 50 20.2	-1.5
	3.7nm,0.3s						
WRA	Warramunga Arr	57.27	137	P	P	06 57 13.8	-0.4
	0.8nm,1.2s,mb3.6,baz=318,slow=7.5,SNR=5.1						
ASAR	Alice Springs	59.82	140	P	P	06 57 32.1	+0.2
	0.2nm,0.6s,mb3.3,baz=329,slow=7.6,SNR=4.4						

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*NEIC **27** 06:57:36.2±0.6, 37.08S×176.45E, h442^{km}±10^{km}, MG4.3(WEL), Error ellipse: s-maj=21.5km s-min=8.7km az=117.0*

*IDC **27** 06:57:38.0±3.0, 36.63S×175.36E, h359^{km}±164^{km}, mb3.1/3, mb1 3.3/5, mb1mx3.2/11, mbtmp3.8/5, Error ellipse: s-maj=278.7km s-min=29.5km az=117.0*

*WEL **27** 06:57:37.8±0.3, 36.88S×176.25E, h406^{km}±3^{km}, ML4.3/10, Error ellipse: s-maj=6.7km s-min=5.9km az=90.0*

ISC 27 06:57:35.8±0.8**, 37.0S**±0.1×**176.3E**±0.2**, h428**^{km}±13^{km}**, n63, σ0**^{s}**79**/76**, mb3.4**/3**, 1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.41	154	P	P	06 58 32.2	+0.5
	6.3nm,0.3s,baz=292,slow=5.4,SNR=50						
URZ				S	S	06 59 13.9	-1.8
	12nm,0.3s,baz=156,slow=22,SNR=24						
URZ	Urewera	1.41	154	P	P	06 58 32.1	+0.4
URZ	Urewera	1.41	154	PN	P	06 58 32.0	+0.3
URZ				SN	S	06 59 13.7	-2.0
MWZ	Matawai	1.64	145	P	P	06 58 33.5	+0.7
MWZ	Matawai	1.64	145	PN	P	06 58 33.5	+0.7
MWZ				SN	S	06 59 16.9	-0.8
MXZ	Matakaoa Point	1.68	110	P	P	06 58 33.5	+0.5
MXZ	Matakaoa Point	1.68	110	PN	P	06 58 33.0	0.0
MXZ				SN	S	06 59 16.9	-1.1
PUZ	Puketiti	1.88	125	P	P	06 58 34.3	+0.3
PUZ	Puketiti	1.88	125	PN	P	06 58 34.2	+0.2
PUZ				SN	S	06 59 17.9	-1.9
MGZ	Maungaku	2.09	197	P	P	06 58 36.9	+1.6
MGZ	Maungaku	2.09	197	PN	P	06 58 36.5	+1.2
BKZ	Black Stump Fm	2.17	176	P	P	06 58 36.5	+0.7
BKZ				S	S	06 59 22.4	-0.6
BKZ	Black Stump Fm	2.17	176	⇓PN	P	06 58 36.5	+0.7
BKZ				SN	S	06 59 22.3	-0.7
WTVZ	West Tongariro	2.19	195	PN	P	06 58 37.0	+1.2
NGZ	Ngauruhoe	2.25	194	P	P	06 58 37.4	+1.2
NGZ	Ngauruhoe	2.25	194	PN	P	06 58 37.4	+1.1
CNZ	Chateau	2.28	195	P	P	06 58 37.7	+1.2
CNZ	Chateau	2.28	195	PN	P	06 58 37.4	+0.9
WPVZ	Whakapapa	2.29	195	P	P	06 58 37.5	+1.0
WPVZ	Whakapapa	2.29	195	PN	P	06 58 37.5	+1.1
KNZ	Kokohu	2.29	152	P	P	06 58 37.3	+0.8
KNZ	Kokohu	2.29	152	PN	P	06 58 37.3	+0.8
KNZ				SN	S	06 59 24.2	-0.1
TUVZ	Tukino	2.33	193	P	P	06 58 37.8	+1.0
TUVZ	Tukino	2.33	193	PN	P	06 58 37.7	+1.0
WNVZ	Wahianoa	2.39	193	P	P	06 58 38.2	+1.0
WNVZ	Wahianoa	2.39	193	PN	P	06 58 38.2	+1.0
MOVZ	Moawhango	2.45	190	P	P	06 58 38.1	+0.5
MOVZ	Moawhango	2.45	190	PN	P	06 58 38.1	+0.5
WAZ	Wanganui	2.94	200	*e*P	P	06 58 42.2	+1.1
WAZ	Wanganui	2.94	200	PN	P	06 58 41.9	+0.7
TSZ	Takapari Road	3.07	185	P	P	06 58 42.4	+0.3
TSZ	Takapari Road	3.07	185	PN	P	06 58 42.7	+0.6
MRZ	Mangatainoka R	3.70	189	P	P	06 58 47.5	0.0
MRZ	Mangatainoka R	3.70	189	PN	P	06 58 47.4	0.0
MRZ				SN	S	06 59 43.9	0.0
KIW	Kapiti Island	4.01	195	P	P	06 58 50.1	-0.1
KIW	Kapiti Island	4.01	195	PN	P	06 58 50.0	-0.2
KIW				SN	S	06 59 48.7	-0.1
MTW	Mount Morrison	4.20	188	P	P	06 58 52.0	0.0
MTW	Mount Morrison	4.20	188	PN	P	06 58 51.9	-0.2
CAW	Cannon Point	4.22	193	P	P	06 58 52.1	-0.1
CAW	Cannon Point	4.22	193	PN	P	06 58 52.0	-0.1
MRW	Makara Radio	4.41	196	P	P	06 58 54.5	+0.5
MRW	Makara Radio	4.41	196	PN	P	06 58 53.6	-0.4
BHW	Baring Head	4.54	194	P	P	06 58 55.3	0.0
BHW	Baring Head	4.54	194	PN	P	06 58 55.2	-0.1
NNZ	Nelson	4.79	208	P	P	06 58 57.5	-0.3
NNZ	Nelson	4.79	208	PN	P	06 58 57.3	-0.5
NNZ				SN	S	07 00 01.7	-0.5
TUWZ	Tuamarina	4.79	202	PN	P	06 58 57.4	-0.4
QRZ	Quartz Range	4.83	217	*e*P	P	06 58 57.9	-0.2
QRZ	Quartz Range	4.83	217	*e*PN	P	06 58 57.8	-0.4
BSWZ	Blackbirch Sta	5.08	201	P	P	06 59 00.8	+0.2
BSWZ	Blackbirch Sta	5.08	201	*e*PN	P	06 59 00.5	0.0
THZ	Tophouse	5.44	208	*e*P	P	06 59 04.1	-0.2
THZ	Tophouse	5.44	208	*e*PN	P	06 59 03.8	-0.5
THZ				SN	S	07 00 13.0	-0.8
KHZ	Kahutara	5.82	201	*e*P	P	06 59 08.2	0.0
KHZ	Kahutara	5.82	201	PN	P	06 59 08.0	-0.1
DSZ	Denniston Nort	5.89	215	*e*P	P	06 59 08.2	-0.7
DSZ	Denniston Nort	5.89	215	*e*PN	P	06 59 07.8	-1.2
RPZ	Rata Peaks	7.82	209	P	P	06 59 29.3	-0.8
	0.6nm,0.3s,baz=354,slow=15,SNR=3.0						
RPZ				S	S	07 01 01.0	+0.6
	0.3nm,0.3s,baz=158,slow=20,SNR=2.3						
STKA	Stephens Creek	28.99	270	P	P	07 03 00.6	+0.3
	0.5nm,0.3s,mb3.2,baz=126,slow=8.7,SNR=3.0						
STKA	Stephens Creek	28.99	270	*e*P	P	07 03 00.7	+0.4
ASAR	Alice Springs	38.64	278	P	P	07 04 21.4	-0.4
	1.1nm,0.5s,mb3.5,baz=120,slow=7.1,SNR=30						
WRAB	Tennant Creek	40.26	283	*e*P	P	07 04 33.8	-1.2
WRA	Warramunga Arr	40.26	283	P	P	07 04 33.8	-1.3
	0.6nm,0.3s,mb3.4,baz=122,slow=7.7,SNR=25						

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*MOS **27** 07:08:25.4±1.1, 36.53N×71.06E, h214^{km}, mb4.1/1, Error ellipse: s-maj=22.6km s-min=14.2km az=104.1*

*IDC **27** 07:08:25.9±5.3, 36.44N×71.14E, h209^{km}±50^{km}, mb3.3/7, mb1 3.4/9, mb1mx3.1/22, mbtmp3.8/9, Error ellipse: s-maj=23.7km s-min=18.8km az=143.0*

*NEIC **27** 07:08:26.2±1.4, 36.51N×71.02E, h206^{km}±16^{km}, mb4.0/4, Error ellipse: s-maj=15.7km s-min=6.5km az=59.0*

ISC 27 07:08:26.1±0.7**, 36.54N**±0.06×**71.06E**±0.09**, h219**^{km}±9^{km}**, n29, σ0**^{s}**76**/33**, mb3.3**/6**, 2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.79	165	⇑P	P	07 09 15.3	+0.4
CEP				S	S	07 09 52.0	-0.7
THW	Thamme Wali	3.78	171	⇓P	P	07 09 26.3	-0.2
THN	Thein Dam	5.62	135	*e*P	P	07 09 50.1	+0.6
THN				*e*S	S	07 10 53.3	-1.0
DLH	Dalhousie	5.68	133	*e*P	P	07 09 52.0	+1.7
DLH				*e*S	S	07 10 56.0	+0.2
AAK	Ala-Archa	6.64	22	*e*PN	P	07 10 00.6	-2.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AAK	Ala-Archa	6.64	22	*e*Pn	P	07 10 00.6	-2.0
	comp=Z,2.0nm,0.4s						
SDNR	Sundarnagar	7.02	134	*e*P	P	07 10 08.0	+0.5
SDNR				*e*S	S	07 11 23.0	-3.7
SMLA	Simla	7.41	135	⇑*i*	P	07 10 29.0	+17
SMLA				*i*		07 11 49.8	
	comp=Z,211nm,0.3s						
KOLN	Koldanda	13.75	126	*e*P	P	07 11 33.7	+0.5
	comp=Z,7.5nm,0.3s						
GKN	Gorkha	14.28	123	*e*P	P	07 11 40.3	+0.5
	comp=Z,18nm,0.4s						
DMN	Daman	14.85	123	*e*P	P	07 11 46.8	0.0
	comp=Z,17nm,0.5s						
KKN	Kakani	14.86	122	*e*P	P	07 11 46.5	-0.4
	comp=Z,18nm,0.6s						
PKI	Pulchoki	15.08	122	*e*P	P	07 11 49.3	-0.4
	comp=Z,11nm,0.3s						
KURK	Kurchatov	15.18	19	P	P	07 11 51.9	+1.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	15.18	19	P	P	07 11 51.9	+1.2
	comp=Z,0.8nm,0.6s						
GUN	Gumba	15.19	120	*e*P	P	07 11 51.3	+0.3
	comp=Z,10nm,0.4s						
JIRN	Jiri	15.56	120	*e*P	P	07 11 56.1	+0.5
	comp=Z,22nm,0.4s						
BVAR	Borovoye Array	16.49	359	P	P	07 12 06.4	-0.1
	comp=Z,0.2nm,0.3s,baz=162,slow=10.0,SNR=4.6						
ZAL	Zalesovo	19.84	24	P	P	07 12 41.4	-0.3
	comp=Z,0.4nm,0.3s,baz=220,slow=9.4,SNR=2.9						
GNI	Garni	20.93	288	P	P	07 12 53.1	+0.6
GNI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GNI	Garni	20.93	288	P	P	07 12 53.3	+0.8
	comp=Z,6.5nm,0.3s,baz=169,slow=4.2,SNR=3.3						
GNI	Garni	20.93	288	P	P	07 12 53.1	+0.6
	comp=Z,5.5nm,0.5s						
FINES	FINESS Array B	37.48	326	P	P	07 15 19.9	0.0
	comp=Z,1.0nm,0.5s,mb3.6,baz=121,slow=11,SNR=11						
ARCES	ARCESS Array B	41.13	338	P	P	07 15 50.0	+0.1
	comp=Z,4.1nm,0.9s,mb3.9,baz=114,slow=8.9,SNR=5.8						
NOA	NORSAR Array B	44.38	323	P	P	07 16 15.7	-0.4
	comp=Z,0.3nm,0.6s,mb2.8,baz=91,slow=7.1,SNR=3.2						
MATP	Matopo	69.47	223	P	P	07 19 12.0	-0.6
	comp=Z,0.8nm,0.4s,mb3.7,baz=27,slow=11,SNR=3.7						
MATP	Matopo	69.47	223	P	P	07 19 12.0	-0.6
YKA	Yellowknife Ar	81.21	3	P	P	07 20 18.5	+0.3
	comp=Z,0.2nm,0.4s,mb3.1,baz=352,slow=5.4,SNR=10.0						
WRA	Warramunga Arr	81.97	122	P	P	07 20 21.8	-1.1
	comp=Z,0.3nm,1.0s,mb2.9,baz=324,slow=4.8,SNR=3.8						

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*CSEM **27** 07:10:38.9±0.5, 30.87N×56.80E, h16^{km}, ML4.2/2, Error ellipse: s-maj=15.5km s-min=4.9km az=73.0*

*THR **27** 07:10:38.6±1.1, 30.84N×56.82E, h14^{km}±11^{km}, ML3.2*

*TEH **27** 07:10:41.6, 30.65N×56.43E, h10^{km}, Mn3.7*

ISC 27 07:10:40.1±0.9**, 30.72N**±0.07×**56.4E**±0.1**, h10**^{km}**, n15, σ1**^{s}**27**/19**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.81	155	*i* PG	Pg	07 10 54.6	-1.7
KRBR				*e*SG	Sg	07 11 06.8	-0.4
KRBR				AML	AML	07 11 09.5	
	comp=N,950nm,0.4s						
KRBR	Kerman	0.81	155	*i* Pg	Pg	07 10 54.6	-1.7
	SNR=90						
KRBR				*e*Sg	Sg	07 11 06.8	-0.3
	comp=N,950nm,0.4s,SNR=90						
IBAF	Bafgh	1.11	322	Pg	Pg	07 11 02.0	-0.3
IMEH	Mehriz	1.65	294	Pn	Pn	07 11 13.1	+3.7
ICHK	Chekchek	2.26	313	Pn	Pn	07 11 19.9	+1.7
ISRV	Sarvestan	3.12	246	Pn	Pn	07 11 30.8	+0.4
BNDS	Bandar-Abbas	3.31	183	*e*PN	Pn	07 11 34.9	+1.9
BNDS				AML	AML	07 12 23.4	
	comp=N,42nm,0.6s						
IMOK	Mook	3.58	243	Pn	Pn	07 11 36.1	-0.9
NASN	Na'in	3.67	305	*e*PN	Pn	07 11 40.7	+2.4
NASN				*e*SG	Sg	07 12 40.9	-1.6
NASN				AML	AML	07 12 48.2	
	comp=N,51nm,0.4s						
NASN	Na'in	3.67	305	*e*Pn	Pn	07 11 40.7	+2.5
	SNR=52						
NASN				*e*Sg	Sg	07 12 40.9	-1.6
	comp=N,51nm,0.4s,SNR=90						
GHIR	Ghir-Karzin	3.82	231	*e*PN	Pn	07 11 44.9	+4.6
GHIR				AML	AML	07 12 59.9	
	comp=N,22nm,0.6s						
IFIR	Firoozkooh	5.77	329	Pn	Pn	07 12 07.5	-0.4
IDMV	Damavand	6.06	324	Pn	Pn	07 12 11.6	-0.4
IQOM	Qom	6.07	314	Pn	Pn	07 12 11.7	-0.4
IAFJ	Afjeh	6.44	324	Sn	Sn	07 13 27.3	-4.4

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*NEIC **27** 07:13:13.5±0.7, 13.30N×92.53E, mb4.1/2, Error ellipse: s-maj=20.0km s-min=13.2km az=48.0*

*IDC **27** 07:13:14.0±0.9, 13.54N×92.83E, h32^{km}±5^{km}, mb3.7/10, mb1 3.8/11, mb1mx3.7/19, mbtmp3.8/11, ML3.8/1, MS2.6/1, Ms1 2.8/1, ms1mx2.6/16, Error ellipse: s-maj=44.8km s-min=14.4km az=51.0*

ISC 27 07:13:10.8±3.7**, 13.3N**±0.1×**92.54E**±0.09**, h28**^{km}±27^{km}**, h32**^{km}±.1^{km}**:pP-P, n20, σ1**^{s}**04**/23**, mb3.9**/12**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.02	49	Pn	P	07 15 09.7	+1.3
	0.4nm,0.3s,baz=240,slow=15,SNR=3.3						
CMAR				Sn	Sn	07 16 24.8	-14
	0.6nm,0.3s,baz=239,slow=28,SNR=11						
CMAR				LR	LR	07 17 56.2	
	comp=Z,40nm,19.3s,baz=317,slow=37						
CMAR	Chiang Mai Arr	8.02	49	Pn	P	07 15 09.7	+1.3
CMAR				Sn	Sn	07 16 24.8	-14
CMAR				LR	LR	07 17 56.2	
BWNR	Bhubaneshwar	9.48	318	*e*P	P	07 15 26.8	-1.8
BWNR				AMb	AMB	07 15 27.8	
	comp=Z,27nm,0.1s						
BWNR				*e*S	Sn	07 17 02.6	-13
BWNR				AML	AML	07 17 08.9	
	comp=E,220nm,0.1s						
BWNR				AML	AML	07 17 09.0	
	comp=N,91nm,0.1s						
VIS	Vishakhapatnam	9.90	298	*e*P	P	07 15 35.8	+1.3
VIS				*e*S	Sn	07 17 16.3	-10
VIS				AML	AML	07 17 22.3	
	comp=N,64nm,0.4s						
VIS				AML	AML	07 17 23.6	
	comp=E,40nm,0.5s						
BHPL	Bhopal	17.41	307	*e*P	P	07 17 14.4	+0.8
BHPL				AMb	AMB	07 17 14.7	
	comp=Z,5.0nm,0.2s						
POO	Poona	18.70	289	*e*P	P	07 17 28.0	-1.6
SONM	Songino Array	36.32	16	P	P	07 20 12.3	-1.7
	comp=Z,0.5nm,0.8s,mb3.5,baz=198,slow=7.8,SNR=4.6						
KURK	Kurchatov	39.00	346	P	P	07 20 36.8	+0.3
	comp=Z,4.2nm,1.3s,mb4.0						
ZAL	Zalesovo	41.00	353	P	P	07 20 52.0	-0.9
	comp=Z,1.2nm,0.5s,mb3.8,baz=301,slow=4.7,SNR=5.0						
BVAR	Borovoye Array	43.38	341	P	P	07 21 12.2	-0.2
	comp=Z,0.4nm,0.6s,mb3.4,baz=127,slow=7.2,SNR=3.5						
WRA	Warramunga Arr	52.75	128	P	P	07 22 25.4	-0.4
	comp=Z,0.5nm,0.5s,mb3.7,baz=296,slow=9.5,SNR=23						
WRA				pP	pP	07 22 35.4	+0.9
	comp=Z,0.3nm,0.5s,baz=314,slow=8.1,SNR=8.9						
WRA				PcP	PcP	07 23 35.1	0.0
	comp=Z,0.4nm,0.5s,baz=315,slow=3.3,SNR=8.1						
WRAB	Tennant Creek	52.76	128	*e*P	P	07 22 25.4	-0.5
	comp=Z,1.4nm,0.5s,mb4.2						
ASAR	Alice Springs	54.64	132	P	P	07 22 39.7	0.0
	comp=Z,0.5nm,0.4s,mb3.9,baz=307,slow=6.5,SNR=14						
ASAR				pP	pP	07 22 49.6	+1.3
	comp=Z,0.5nm,0.5s,baz=312,slow=6.9,SNR=6.4						
BRTR	Keskin Array B	57.77	309	P	P	07 23 03.0	+1.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=121,slow=7.2,SNR=4.7						
STKA	Stephens Creek	65.00	135	pP	pP	07 24 01.4	+1.7
	comp=Z,0.6nm,0.5s,baz=315,slow=8.6,SNR=4.1						
FINES	FINESS Array B	67.22	331	P	P	07 24 03.9	-0.5
	comp=Z,1.5nm,0.9s,mb4.0,baz=121,slow=11,SNR=4.1						
FINES				pP	pP	07 24 13.9	+0.7
	comp=Z,3.7nm,1.1s,baz=166,slow=7.9,SNR=4.3						
ARCES	ARCESS Array B	69.66	340	P	P	07 24 19.5	0.0
	comp=Z,10nm,1.2s,mb4.6,baz=76,slow=5.0,SNR=4.7						
GERES	GERESS Array B	72.78	317	P	P	07 24 39.9	+1.4
	comp=Z,0.3nm,0.5s,mb3.5,baz=79,slow=5.0,SNR=2.5						
DAVOX	Davos	75.43	315	P	P	07 24 55.2	+1.3
	comp=Z,1.3nm,0.5s,mb4.2,baz=195,slow=7.7,SNR=2.3						
DAVOX	Davos	75.43	315	P	P	07 24 55.2	+1.2

IDC 27 07:22:52.8±27.0**, 23.75S**×**179.60E, h637**^{km}±342^{km}**, mb2.7**/4**, mb1 3.0**/4**, mb1mx2.8**/14**, mbtmp3.8**/4**, Error ellipse: s-maj=329.5km s-min=81.2km az=150.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.11	270	P	P	07 28 22.3	-1.3
	2.0nm,0.4s,baz=85,slow=14,SNR=5.1						
ASAR	Alice Springs	41.70	261	P	P	07 29 48.7	-1.4
	0.2nm,0.4s,baz=100,slow=7.3,SNR=4.4						
WRA	Warramunga Arr	42.05	266	P	P	07 29 51.3	-1.6
	0.5nm,0.3s,baz=103,slow=8.3,SNR=19						
TXAR	Lajitas Array	90.67	58	P	P	07 34 49.6	-1.1
	0.2nm,0.7s,baz=225,slow=5.3,SNR=3.9						

IGQ 27 07:31:28.4, 1.16S×**81.65W, h12**^{km}±31^{km}**, mb4.3, 1C-5D, Error ellipse: s-maj=30.3km s-min=5.1km az=169.5, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALI	Salinas	1.22	147	⇓P	Pb	07 31 51.9	+1.0
IGUA	Igualata	3.02	96	P	Pn	07 32 17.0	-0.1
CUSU	Cusua	3.18	95	P	Pn	07 32 19.8	+0.6
JUA2	San Juan 2	3.18	73	⇓P	Pn	07 32 21.1	+1.8
JUIV	Juive	3.19	95	P	Pn	07 32 20.8	+1.4
TERV	Terraza Guagua	3.19	72	P	Pn	07 32 22.2	+2.7
PINO	Pino	3.19	72	P	Pn	07 32 21.4	+1.9
ARRY	Arrayan	3.21	96	⇓P	Pn	07 32 19.3	-0.4
ARRY				S	Sn	07 32 51.6	-6.7
NAS1	Nasa	3.21	81	P	Pn	07 32 21.4	+1.6
NAS1				S	Sn	07 32 59.1	+0.9
RETU	Refugio	3.21	95	P	Pn	07 32 20.6	+0.9
RUN2	Runtun	3.24	95	P	Pn	07 32 20.8	+0.6
YANA	Yana	3.24	71	⇑P	Pn	07 32 21.9	+1.7
ULBA	Ulba	3.25	95	P	Pn	07 32 21.1	+0.8
ULBA				S	Sn	07 32 56.5	-2.8
PISA	Pisayambo	3.26	88	P	Pn	07 32 22.7	+2.2
VC1	Cotopaxi 1	3.28	81	P	Pn	07 32 23.2	+2.4
VC1				S	Sn	07 33 01.6	+1.5
TAMB	Tambo	3.31	82	P	Pn	07 32 23.3	+2.2
ANTI	Antisana	3.55	79	P	Pn	07 32 27.2	+2.6
COTA	Cotacachi	3.62	66	⇓P	Pn	07 32 29.9	+4.3
COTA				S	Sn	07 33 12.9	+4.2
CAYR	Refugio Cayamb	3.82	72	P	Pn	07 32 33.0	+4.7
ELAGU	Cayambe Volc	3.82	73	P	Pn	07 32 33.8	+5.3
CAYA	Cayambe	3.85	72	P	Pn	07 32 33.5	+4.6
ECEN	Cerro Negro	4.17	62	⇓P	Pn	07 32 38.0	+4.7
ECEN				S	Sn	07 33 29.0	+6.5

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*NEIC **27** 07:46:40.9±1.2, 8.74S×74.68W, h126^{km}±13^{km}, mb3.8/3, Error ellipse: s-maj=13.7km s-min=12.7km az=58.0*

*IDC **27** 07:46:50.1±4.9, 8.70S×74.66W, h216^{km}±47^{km}, mb3.2/6, mb1 3.3/8, mb1mx3.1/19, mbtmp3.8/8, MS2.8/1, Ms1 2.8/1, ms1mx1.9/12, Error ellipse: s-maj=32.9km s-min=17.2km az=56.0*

ISC 27 07:46:39.2±1.4**, 8.79S**±0.10×**74.69W**±0.09**, h128**^{km}±18^{km}**, n17, σ1**^{s}**10**/17**, mb3.5**/7**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.82	214	*e*Pn	P	07 47 38.8	+1.3
NNA				*e*Sn	S	07 48 20.8	-1.3
SAML	Samuel	11.37	92	*e*Pn	P	07 49 18.4	-0.4
	4.0nm,0.5s						
SAML				*e*Sn	S	07 51 19.5	-4.2
ROSC	El Rosal	13.56	2	P	P	07 49 55.2	+7.8
	0.3nm,0.3s,baz=102,slow=18,SNR=3.3						
SDV	Santo Domingo	18.02	13	P	P	07 50 43.8	+0.9
	0.6nm,0.3s,baz=342,slow=17,SNR=11						
SDV				LR	LR	07 57 22.3	
	comp=Z,30nm,19.9s,baz=227,slow=35						
SDV	Santo Domingo	18.02	13	*e*P	P	07 50 43.7	+0.9
	1.8nm,0.4s						
SDV				LR	LR	07 57 22.3	
JTS	JuntasAbangare	21.53	331	P	P	07 51 19.9	+0.6
	1.2nm,0.5s,mb3.6						
BDFB	Brasilia	26.93	107	P	P	07 52 11.7	+1.1
	1.4nm,0.7s,mb3.7,baz=290,slow=13,SNR=4.5						
PLCA	Paso Flores	32.02	174	P	P	07 52 56.9	+1.2
	2.1nm,1.0s,mb3.8,baz=337,slow=7.7,SNR=2.9						
TXAR	Lajitas Array	47.08	325	P	P	07 54 59.9	-0.1
	0.2nm,0.6s,mb2.9,baz=152,slow=8.9,SNR=5.7						
TXAR	Lajitas Array	47.08	325	P	P	07 54 59.9	-0.1
PDAR	Pinedale Array	60.37	331	P	P	07 56 35.6	-1.6
	0.4nm,0.9s,mb3.3,baz=104,slow=3.7,SNR=2.6						
DBIC	Dimbokro	71.28	80	P	P	07 57 46.5	-0.6
	1.0nm,0.5s,mb3.8,baz=234,slow=8.7,SNR=4.6						
DBIC	Dimbokro	71.28	80	P	P	07 57 46.5	-0.6
YKA	Yellowknife Ar	77.44	342	P	P	07 58 20.9	-0.6
	0.3nm,0.5s,mb3.2,baz=143,slow=5.8,SNR=12						
YKA	Yellowknife Ar	77.44	342	P	P	07 58 20.9	-0.6
ASAR	Alice Springs	137.32	220	PKP	PKPdf	08 05 50.7	+2.4
	0.2nm,0.6s,baz=135,slow=3.8,SNR=3.8						
WRA	Warramunga Arr	139.60	225	PKP	PKPdf	08 05 54.3	+1.7
	0.3nm,0.5s,baz=127,slow=2.0,SNR=5.8						

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*UCC **27** 08:16:06.6±0.7, 50.66N×2.78E, h9^{km}±4^{km}, ML2.2*

*CSEM **27** 08:16:08.6±0.1, 50.56N×3.03E, h5^{km}, ML3.1/28, Error ellipse: s-maj=2.9km s-min=1.8km az=164.0*

*LDG **27** 08:16:09.7±0.1, 50.50N×3.00E, h4^{km}, Md3.1/2, Ml3.1/34, Error ellipse: s-maj=2.6km s-min=1.3km az=176.0*

*NEIC **27** 08:16:09.7, 50.50N×3.00E, h4^{km}, ML3.1(LDG), After LDG.*

ISC 27 08:16:07.3±0.4**, 50.33N**±0.02×**2.94E**±0.02**, h5**^{km}±2^{km}**, n41, σ1**^{s}**36**/110**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MENF	Mencas	0.55	295	Pg	Pg	08 16 18.6	+0.3
MENF				Sg	Sg	08 16 26.5	+0.9
BAIF	Baives	0.86	108	*e*Pn	Pn	08 16 26.1	+0.3
BAIF				*e*Pg	Pg	08 16 28.0	+3.6
BAIF				*e*Sg	Sg	08 16 39.1	+3.2
	133nm,0.4s						

SNF	Seneffe	0.88	78	P	Pb	08 16 24.1	-0.5
SNF				S	Sb	08 16 35.5	-0.9
UCC	Uccle	1.02	62	P	Pb	08 16 26.1	-0.9
UCC				S	Sb	08 16 38.8	-1.7
DOU	Dourbes	1.09	102	P	Pb	08 16 29.4	+1.2
DOU	Dourbes	1.09	102	Pg	Pg	08 16 31.0	+2.0
DOU				S	Sb	08 16 47.7	+5.1
GIVF	Givet	1.23	100	ePn	Pn	08 16 31.9	+0.8
GIVF				ePg	Pg	08 16 32.4	+0.5
GIVF				eSg	Sg	08 16 49.9	+1.6
	60nm,0.4s						
BEBN	Eben Emael	1.81	74	Pn	Pn	08 16 36.8	-2.5
BEBN	Eben Emael	1.81	74	P	Pn	08 16 40.3	+1.0
HGN	Heimansgroeve	1.96	76	ePg	Pg	08 16 42.9	-3.5
HGN				eSg	Sg	08 17 12.2	-0.3
MEM	Membach	1.98	81	P	Pn	08 16 42.3	+0.5
MEM				S	Sn	08 17 08.0	+0.7
WLF	Walferdange	2.18	107	S	Sn	08 17 14.4	+2.1
MEZF	Maizieres J'vi	2.29	142	ePn	Pn	08 16 47.8	+1.5
	baz=317						
MEZF				ePg	Pg	08 16 52.6	-0.4
MEZF				eSg	Sg	08 17 23.2	-0.4
	29nm,0.5s,baz=323						
RFYF	Reffroy	2.37	135	ePg	Pg	08 16 56.0	+1.3
	baz=313						
RFYF				eSg	Sg	08 17 25.5	-0.8
	24nm,0.3s,baz=321						
SFTF	Sexfontaines	2.53	146	ePn	Pn	08 16 51.9	+2.2
	baz=323						
SFTF				ePg	Pg	08 16 57.1	-0.7
SFTF				eSn	Sn	08 17 21.9	+0.6
SFTF				eSg	Sg	08 17 32.0	+0.4
	16nm,0.2s,baz=317						
LDF	La Druitiere	2.65	230	ePn	Pn	08 16 53.2	+1.8
LDF				ePg	Pg	08 17 01.9	+1.8
LDF				eSn	Sn	08 17 25.1	+0.9
LDF				eSg	Sg	08 17 36.2	+0.8
	16nm,0.4s						
FLN	La Foliniere	2.73	236	ePn	Pn	08 16 54.2	+1.7
	baz=54						
FLN				ePg	Pg	08 17 03.0	+1.3
FLN				eSg	Sg	08 17 38.5	+0.5
	42nm,0.7s,baz=65						
WTSB	Winterswijk	2.93	55	ePg	Pg	08 17 03.5	-2.2
WTSB				eSg	Sn	08 17 29.3	-2.1
HYF	Humbligny	3.07	184	ePg	Pg	08 17 09.6	+1.0
HYF				eSg	Sg	08 17 51.3	+1.8
	99nm,0.3s						
GRR	Gorron	3.15	233	ePn	Pn	08 16 59.9	+1.3
GRR				ePg	Pg	08 17 10.4	+0.2
GRR				eSn	Sn	08 17 38.1	+1.1
GRR				eSg	Sg	08 17 51.6	-0.6
	14nm,0.3s						
HAU	Haudompre	3.23	135	ePn	Pn	08 17 00.8	+1.2
HAU				ePg	Pg	08 17 10.0	-1.7
HAU				eSg	Sg	08 17 51.7	-3.0
	27nm,0.6s						
SSF	Saint Saulge	3.29	173	ePn	Pn	08 17 02.9	+2.4
SSF				ePg	Pg	08 17 15.0	+2.0
SSF				eSn	Sn	08 17 41.6	+1.0
	8.5nm,0.4s						
SSF				eSg	Sg	08 17 58.2	+1.3
	9.9nm,0.5s						
CDF	Champ du Feu	3.42	122	ePn	Pn	08 17 02.6	+0.2
CDF				ePg	Pg	08 17 13.8	-1.8
CDF				eSn	Sn	08 17 42.7	-1.2
CDF				eSg	Sg	08 17 58.8	-2.4
	12nm,0.6s						
AVF	Avril sur Loir	3.55	175	ePn	Pn	08 17 06.2	+2.0
AVF				ePg	Pg	08 17 19.1	+0.9
AVF				eSg	Sg	08 18 06.3	+0.7
	10nm,0.7s						
HINF	Hinteralfeld	3.60	133	ePn	Pn	08 17 06.1	+1.2
HINF				ePg	Pg	08 17 17.3	-1.8
HINF				eSn	Sn	08 17 47.2	-1.1
HINF				eSg	Sg	08 18 05.0	-2.1
	11nm,0.4s						
SMF	Signal de Mont	3.74	170	ePn	Pn	08 17 08.5	+1.7
SMF				ePg	Pg	08 17 22.0	+0.1
SMF				eSn	Sn	08 17 51.7	-0.1
SMF				eSg	Sg	08 18 11.8	+0.1
	7.5nm,0.4s						
BGF	Bois d'Agland	3.78	181	ePn	Pn	08 17 09.3	+1.9
BGF				ePg	Pg	08 17 22.9	+0.3
BGF				eSn	Sn	08 17 52.2	-0.6
BGF				eSg	Sg	08 18 13.8	+0.8
	29nm,0.5s						
TCF	Toulx Ste Croi	4.07	187	ePn	Pn	08 17 12.5	+0.8
TCF				ePg	Pg	08 17 29.1	+0.5
TCF				eSn	Sn	08 18 00.3	-0.1
TCF				eSg	Sg	08 18 22.9	0.0
	6.9nm,0.4s						
SGMF	Saint Gilles	4.15	242	ePn	Pn	08 17 12.8	0.0
SGMF				ePg	Pg	08 17 28.5	-1.7
SGMF				eSn	Sn	08 18 00.1	-2.3
	9.6nm,0.6s						
SGMF				eSg	Sg	08 18 23.0	-2.5
	12nm,0.5s						
MFF	Saint Martin d	4.26	210	ePn	Pn	08 17 15.0	+0.7
MFF				ePg	Pg	08 17 31.8	-0.5
MFF				eSn	Sn	08 18 05.0	0.0
MFF				eSg	Sg	08 18 27.5	-1.5
	5.9nm,0.5s						
CABF	La Chapelle	4.27	149	ePn	Pn	08 17 15.5	+1.1
CABF				ePg	Pg	08 17 31.1	-1.4
CABF				eSn	Sn	08 18 04.5	-0.8
CABF				eSg	Sg	08 18 27.5	-1.9
	23nm,0.8s						
ROSF	Rostrenen	4.53	246	ePn	Pn	08 17 17.3	-0.8
ROSF				ePg	Pg	08 17 35.6	-2.0
ROSF				eSn	Sn	08 18 09.7	-2.1
ROSF				eSg	Sg	08 18 35.0	-2.9
	184nm,1.6s						
QUIF	Quistinic	4.68	241	ePn	Pn	08 17 19.6	-0.6
QUIF				eSn	Sn	08 18 13.8	-1.9
QUIF				eSg	Sg	08 18 39.5	-3.5
	12nm,0.5s						
RJF	Les Rejaudoux	5.12	191	ePn	Pn	08 17 26.7	+0.2
RJF				eSn	Sn	08 18 24.1	-2.7
RJF				eSg	Sg	08 18 55.4	-2.3
	7.0nm,0.6s						
CAF	Calviac	5.44	187	ePn	Pn	08 17 30.8	-0.2
CAF				eSn	Sn	08 18 30.9	-3.9
LFF	La Frestale	5.59	196	ePn	Pn	08 17 33.4	+0.2
LFF				eSg	Sg	08 19 10.1	-3.4
	9.3nm,0.5s						
VIVF	Saint-Julien-l	5.60	167	ePn	Pn	08 17 34.2	+0.9
VIVF				eSn	Sn	08 18 35.2	-3.7
	3.3nm,0.4s						
ORIF	Oris-en-Rattie	5.77	159	eSn	Sn	08 18 40.0	-3.1
	2.5nm,0.5s						
LASF	Ste Croix	6.29	174	ePn	Pn	08 17 43.4	+0.4
LASF				eSn	Sn	08 18 51.5	-4.6
	2.6nm,0.3s						
EPF	Esparros	7.52	195	ePn	Pn	08 17 59.1	-1.1
EPF				eSn	Sn	08 19 22.9	-3.9
	1.3nm,0.3s						
ETSF	Etsaut	7.81	199	ePn	Pn	08 18 04.3	-0.1

ZUR **27** *08:20:15.9,47.35N×9.83E,h1*^{km}*,ML2.5/2*

NEIC **27** *08:20:16.2±0.2,47.34N×9.88E,h8*^{km}*±2*^{km}*,ML2.7(LDG), ML2.6(ZUR),ML2.5(VIE),ML2.5(STR),Error ellipse: s-maj=3.2km s-min=2.1km az=180.0*

CSEM **27** *08:20:16.4±0.0,47.28N×9.91E,h5*^{km}*,ML2.7/16,Error ellipse: s-maj=1.4km s-min=0.7km az=6.0*

LDG **27** *08:20:17.5±0.1,47.32N×9.85E,h3*^{km}*,Ml2.7/20,Error ellipse: s-maj=1.7km s-min=1.0km az=75.0*

STR **27** *08:20:18.7±0.3,47.23N×9.57E,h5*^{km}*±1*^{km}*,Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

BGR **27** *08:20:18.7±0.9,47.38N×9.86E,h10*^{km}*,ML2.6,Error ellipse: s-maj=13.3km s-min=6.7km az=5.0*

ISC 27 08:20:14.9±0.2,**47.33N**±0.02×**9.87E**±0.02,**h12**^{km}±2^{km}, **n78,**σ**1§48**/139,**18C-2D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	Damuels	0.05	167	⇑iPG	Pg	08 20 17.7	+0.4
DAVA				i SG	Sg	08 20 18.8	-0.1
	741nm,0.1s						
LIENZ	Alp Oberkamor	0.26	262	⇑iPg	Pg	08 20 21.2	+0.7
LIENZ				eSg	Sg	08 20 26.1	+1.9
PLONS	Plons	0.44	229	⇑eP	Pg	08 20 24.7	+0.8
PLONS	Plons	0.44	229	ePg	Pg	08 20 25.0	+1.1
PLONS				eSg	Sg	08 20 31.8	+1.9
DAVOX	Davos	0.55	179	⇓iPg	Pg	08 20 27.3	+1.1
WEIN	Weingarten	0.63	288	⇑iPg	Pg	08 20 29.1	+1.4
WILA	Wila	0.66	277	⇑iPg	Pg	08 20 29.6	+1.4
STEIN	Stein am Rhein	0.75	297	⇑iPg	Pg	08 20 31.6	+1.4
STEIN				eSg	Sg	08 20 42.7	+2.4
FUORN	Ofenpass	0.76	159	⇑iPg	Pg	08 20 31.3	+1.0
MOTA	Moosalm	0.84	89	⇑iPG	Pg	08 20 31.7	-0.2
MOTA				i SG	Sg	08 20 43.3	+0.1
	9.0nm,0.3s						
TRULL	Truellikon	0.86	292	eP	Pb	08 20 32.9	+1.6
ZUR	Zurich	0.87	273	ePmP		08 20 35.6	
ZUR				eSg	Sg	08 20 46.3	+2.0
ZUR				eSmS		08 20 49.4	
ZUR	Zurich	0.87	273	eP	Pb	08 20 33.6	+2.1
ZUR				eSg	Sg	08 20 46.3	+2.0
FLACH	Flaach	0.91	286	⇑iP	Pb	08 20 34.3	+2.1
SQTA	Sankt Quirin	0.92	97	⇑iPG	Pg	08 20 33.5	0.0
SQTA				i SG	Sg	08 20 45.9	+0.1
	27nm,0.2s						
BRMO	Bormio	0.93	158	ePg	Pg	08 20 35.1	+1.6
BRMO	Bormio	0.93	158	ePg	Pg	08 20 35.1	+1.6
SLE	Schleitheim	1.02	295	eP	Pb	08 20 36.3	+2.2
SLE	Schleitheim	1.02	295	ePg	Pg	08 20 36.2	+0.7
SPAK	Spaichingen	1.06	317	Pg	Pg	08 20 38.2	+2.0
SPAK				Sg	Sg	08 20 51.9	+1.5
BNALP	Bannalp	1.09	245	⇑iP	Pb	08 20 37.9	+2.7
WATA	Walderalm	1.16	89	⇓iPG	Pg	08 20 37.7	-0.6
WATA				i SG	Sg	08 20 53.6	-0.3
	12nm,0.2s						
SULZ	Sulz-Cheisache	1.20	280	⇑iPg	Pg	08 20 39.8	+0.7
WTTA	Wattenberg	1.21	93	⇑iPG	Pg	08 20 39.0	-0.1
WTTA				i SG	Sg	08 20 54.8	-0.5
	12nm,0.3s						
FUR	Furstenfeldbru	1.27	48	ePn	Pn	08 20 41.9	+3.5
FUR				eSg	Sg	08 20 59.1	+1.9
FUR	Furstenfeldbru	1.27	48	ePn	Pn	08 20 41.9	+3.5
FUR				eSg	Sg	08 20 59.1	+1.9
HASLI	Hasliberg	1.31	244	eP	Pb	08 20 41.8	+2.9
HASLI	Hasliberg	1.31	244	eP	Pb	08 20 41.7	+2.8
FELD	Feldberg	1.37	294	Pg	Pg	08 20 41.9	-0.5
FELD				Sg	Sg	08 20 59.6	-1.1
BFO	Black Forest	1.44	315	ePn	Pn	08 20 43.9	+3.0
BFO				eSg	Sg	08 21 03.1	+0.2
BFO	Black Forest	1.44	315	ePn	Pn	08 20 43.9	+3.0
BFO				eSg	Sg	08 21 03.1	+0.2
BALST	Balsthal	1.48	271	⇑iPn	Pn	08 20 43.5	+2.0
BALST	Balsthal	1.48	271	⇑iP	Pn	08 20 43.6	+2.1
STU	Stuttgart	1.51	343	eSg	Sg	08 21 05.9	+0.7
BBS	Basel-Blauen	1.61	276	Pg	Pg	08 20 45.3	-1.8
VAI	Varese	1.65	208	ePg	Pg	08 20 48.3	+0.4
CTI	Castel Tesino	1.78	136	ePg	Pg	08 20 51.4	+0.9
BOURR	Bourrignon	1.79	273	⇑iPn	Pn	08 20 47.9	+1.9
MCGN	Macugnaga	1.89	224	ePg	Pg	08 20 52.1	-0.6
MOF	Molkenrain	1.92	287	Pn	Pn	08 20 48.6	+0.8
ECH	Echery	2.03	297	Pn	Pn	08 20 50.5	+1.1
CDF	Champ du Feu	2.05	303	ePn	Pn	08 20 50.9	+1.2
CDF				ePg	Pg	08 20 56.0	+0.1
CDF				eSg	Sg	08 21 21.3	-2.0
	29nm,0.5s						
HINF	Hinteralfeld	2.10	284	ePn	Pn	08 20 51.3	+1.0
HINF				ePg	Pg	08 20 56.4	-0.4
HINF				eSn	Sn	08 21 16.5	0.0
HINF				eSg	Sg	08 21 23.3	-1.5
	21nm,0.3s						
KBA	Koelnbreinsper	2.39	95	⇑iPG	Pg	08 21 00.7	-1.9
KBA				i SG	Sg	08 21 33.2	-1.3
	4.4nm,0.3s						
HAU	Haudompre	2.47	287	ePn	Pn	08 20 57.0	+1.3
HAU				ePg	Pg	08 21 02.9	-1.4
HAU				eSn	Sn	08 21 25.8	-0.2
HAU				eSg	Sg	08 21 34.5	-2.7
	18nm,0.4s						
GRA1	Grafenberg Arr	2.53	20	ePn	Pn	08 20 56.3	-0.2
GRA1	Grafenberg Arr	2.53	20	Pn	Pn	08 20 56.3	-0.2
GRF	Grafenberg Arr	2.53	20	ePn	Pn	08 20 56.3	-0.2
CABF	La Chapelle	2.69	256	ePn	Pn	08 20 59.7	+0.9
CABF				ePg	Pg	08 21 07.0	-1.6
CABF				eSg	Sg	08 21 41.4	-3.0
	21nm,0.6s						
CABF	La Chapelle	2.69	256	ePg	Pg	08 21 07.0	-1.6
CABF				eSg	Sg	08 21 41.4	-3.0
	11nm,0.6s						
WET	Wettzell	2.71	47	ePn	Pn	08 21 00.2	+1.1
WET				eSg	Sg	08 21 43.1	-2.1
WET	Wettzell	2.71	47	ePn	Pn	08 21 00.2	+1.1
WET				eSg	Sg	08 21 43.1	-2.1
LPL	La Plagne	2.83	231	ePg	Pg	08 21 10.1	-1.3
LPG	La Plagne	2.83	231	ePg	Pg	08 21 09.7	-1.8
LPG				eSg	Sg	08 21 45.9	-3.3
	4.4nm,0.3s						
MOA	Molln	3.02	79	⇑iPG	Pg	08 21 13.1	-2.2
MOA				i SG	Sg	08 21 54.8	-0.8
	2.6nm,0.3s						
KHC	Kasperske Hory	3.06	53	ePn	Pn	08 21 05.2	+1.0
KHC				ePg	Pg	08 21 13.7	-2.5
KHC				eSn	Sn	08 21 40.5	-0.6
KHC				e		08 21 52.8	
KHC				e		08 21 59.0	
KHC	Kasperske Hory	3.06	53	ePN	Pn	08 21 05.2	+1.0
KHC				ePG	Pg	08 21 13.7	-2.5
KHC				eSN	Sn	08 21 40.5	-0.6
KHC				ex	x	08 21 52.8	
KHC				SG	Sg	08 21 59.0	+2.0
KHC	Kasperske Hory	3.06	53	ePg	Pg	08 21 13.7	-2.5
KHC				Sn	Sn	08 21 40.5	-0.6
RFYF	Reffroy	3.22	295	eSg	Sg	08 21 58.5	-3.7
	4.9nm,0.2s						
NKC	Novy Kostel	3.37	30	eSG	Sg	08 22 04.9	-2.2
SFTF	Sexfontaines	3.37	287	ePn	Pn	08 21 08.6	+0.1
SFTF				eSn	Sn	08 21 46.5	-2.3
SFTF				eSg	Sg	08 22 03.2	-4.0
	4.9nm,0.3s						
MBDF	Montbardon	3.38	221	ePn	Pn	08 21 09.9	+1.2
MEZF	Maizieres J'vi	3.44	292	ePn	Pn	08 21 09.8	+0.3
MEZF				eSn	Sn	08 21 48.9	-1.7
MEZF				eSg	Sg	08 22 05.3	-4.3
	4.9nm,0.4s						
ORIF	Oris-en-Rattie	3.68	230	ePn	Pn	08 21 12.8	0.0
ORIF				ePg	Pg	08 21 25.1	-3.2
ORIF				eSn	Sn	08 21 54.5	-2.0
	4.6nm,0.5s						
PRU	Pruhonice	4.08	48	eSG	Sg	08 22 27.0	-3.9
SMF	Signal de Mont	4.18	263	ePn	Pn	08 21 20.1	+0.1
SMF				ePg	Pg	08 21 33.9	-4.5
SMF				eSn	Sn	08 22 05.3	-4.0
SMF				eSg	Sg	08 22 28.3	-5.8
	3.8nm,0.3s						
SSF	Saint Saulge	4.34	269	ePn	Pn	08 21 23.5	+1.2
SSF				ePg	Pg	08 21 38.0	-3.7
SSF				eSg	Sg	08 22 33.1	-6.5
	2.1nm,0.3s						
VIVF	Saint-Julien-l	4.38	237	ePn	Pn	08 21 24.1	+1.3
VIVF				eSn	Sn	08 22 10.0	-4.4
VIVF				eSg	Sg	08 22 32.0	-8.8
	1.8nm,0.3s						
CLL	Collm	4.48	26	eSG	Sg	08 22 42.0	-2.0
AVF	Avril sur Loir	4.48	265	ePn	Pn	08 21 24.2	-0.1
AVF				ePg	Pg	08 21 41.1	-3.4
AVF				eSg	Sg	08 22 37.5	-6.8
	1.7nm,0.5s						
BAIF	Baives	4.63	308	ePn	Pn	08 21 27.7	+1.3
BAIF				eSn	Sn	08 22 17.5	-3.3
BAIF				eSg	Sg	08 22 42.6	-6.6
	2.4nm,0.4s						
BGF	Bois d'Agland	4.87	263	ePn	Pn	08 21 29.4	-0.4
BGF				eSn	Sn	08 22 23.2	-3.5
BGF				eSg	Sg	08 22 50.0	-7.1
	5.9nm,0.5s						
HYF	Humbligny	4.92	272	ePn	Pn	08 21 30.0	-0.4
HYF				eSn	Sn	08 22 24.2	-3.7
LASF	Ste Croix	5.32	234	ePn	Pn	08 21 35.5	-0.6
LASF				eSn	Sn	08 22 33.4	-4.7
	4.4nm,0.3s						
TCF	Toulx Ste Croi	5.36	262	ePn	Pn	08 21 36.1	-0.6
TCF				ePg	Pg	08 21 56.7	-5.2
TCF				eSn	Sn	08 22 34.1	-4.9
TCF				eSg	Sg	08 23 04.9	-8.5
	1.2nm,0.3s						
CAF	Calviac	5.93	249	ePn	Pn	08 21 44.0	-0.8
MFF	Saint Martin d	6.89	268	ePn	Pn	08 21 57.6	-0.7
FLN	La Foliniere	7.08	285	ePn	Pn	08 21 59.6	-1.4

BJI **27** *08:24:03.7,51.42N×179.65W,h13*^{km}*,mB5.2,mb4.9, Ms4.7,Msz4.1*

MOS **27** *08:24:05.5±0.8,51.36N×179.09W,h33*^{km}*,mb5.0/58, Error ellipse: s-maj=8.4km s-min=5.4km az=87.5*

NEIC **27** *08:24:06.3±0.2,51.30N×179.19W,mb4.9/88, ML4.7(AEIC),Error ellipse: s-maj=5.7km s-min=2.5km az=180.0*

HRVD **27** *08:24:06.3±1.4,51.27N×179.06W,h34*^{km}*±2*^{km}*,MW4.7/29, Centroid moment Tensor Solution. LP body waves: s18,c20;Mantle waves: s29,c38; Half duration: 0 Moment tensor: Scale* 10^{16}*Nm;* M_{rr}*1.32±.14;* $M_{\theta\theta}$*-0.95±.10;* $M_{\phi\phi}$*-0.37±.09;* $M_{r\theta}$*0.73±.13;* $M_{\theta\phi}$*-0.41±.07;* $M_{\phi r}$*0.51±.09; Best double couple:* M_0*1.526×*10^{16} *NP1:*ϕ_s*246°,δ27°,λ96°. NP2:*ϕ_s*59°,δ63°,λ87°. Principal axes: T 1.61, Plg72°, Azm321°; N -.17, Plg3°, Azm60°; P -1.442, Plg18°, Azm151°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC **27** *08:24:08.7±2.0,51.35N×179.11W,h48*^{km}*±17*^{km}*,mb4.4/33, mb1 4.5/34,mb1mx4.5/36,mbtmp4.6/34,ML3.7/1,MS3.7/15, Ms1 3.7/15,ms1mx3.5/35 Error ellipse: s-maj=15.7km s-min=9.5km az=169.0*

ISC 27 08:24:04.4±0.2,**51.28N**±0.05×**179.19W**±0.03,**h27**^{km}, **h27**^{km}±1.3^{km}**:pP-P,n316,**σ**1§05**/317,**mb4.8**/126,**MS3.7**/21, **6C-2D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	Kanaga Island	1.31	67	P	Pn	08 24 28.8	+1.6
KIKV	Kanaga Island	1.40	64	P	Pn	08 24 30.5	+2.1
KIWB	Kanaga Island	1.40	65	P	Pn	08 24 30.3	+1.9
KIWB				S	Sn	08 24 51.6	+5.5
ADAG	Mount Adagdak	1.76	65	P	Pn	08 24 36.0	+2.4
GSTD	Great Sitkin T	2.05	66	P	Pn	08 24 40.5	+2.7
GSMY	Great Sitkin M	2.10	67	P	Pn	08 24 40.8	+2.3
GSTR	Great Sitkin T	2.11	66	P	Pn	08 24 41.4	+2.8
GSIG	Igitkin Island	2.15	69	P	Pn	08 24 41.1	+1.9
GSIG				S	Sn	08 25 08.5	+3.1
ATKA	Atka Island	3.24	71	P	Pn	08 24 56.7	+2.0
ATKA				S	Sn	08 25 35.4	+2.6
SMY	Shemya	4.40	292	P	Pn	08 25 12.4	+1.3
FX1	Attu Island--F	4.98	292	P	Pn	08 25 20.6	+1.2
FX1				S	Sn	08 26 20.2	+3.3
FX1				pmax	pmax		
	comp=Z,11nm,0.3s						
FX1	Attu Island--F	4.98	292	P	Pn	08 25 20.6	+1.2
	comp=Z,11nm,0.3s,baz=143,slow=4.0,SNR=65						
FX1				S	Sn	08 26 20.2	+3.3
	baz=277,slow=18,SNR=1.0						
FX1	Attu Island--F	4.98	292	P	Pn	08 25 21.0	+1.6
NIKO	Nikolski	6.59	71	P	Pn	08 25 40.9	-1.1
SPIA	Saint Paul Isl	7.90	38	P	Pn	08 25 59.8	-0.5
PET	Petropavlovsk	13.71	286	eP	P	08 27 28.9	+10
PET				pmax	pmax		
	comp=Z,22nm,1.2s						
PET				pmax	pmax		
	comp=Z,6.0nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
RSO	Redoubt South	17.34	48	eP	P	08 28 07.2	+1.5
SPU	Mount Spurr	17.91	46	P	P	08 28 14.7	+1.7
BILL	Bilibino	18.26	342	eP	P	08 28 16.1	-1.1
BILL				pmax	pmax		
	comp=Z,40nm,1.0s						
BILL	Bilibino	18.26	342	eP	P	08 28 16.1	-1.1
	comp=Z,40nm,1.0s						
SLKM	Skilak Lake	18.54	49	eP	P	08 28 20.0	-0.7
SEY	Seymchan	19.16	318	eP	P	08 28 31.3	+3.2
SEY				e		08 32 02.1	
SEY				pmax	pmax		
	comp=E,20nm,1.2s						
SEY				pmax	pmax		
	comp=Z,30nm,1.2s						
IMA	Indian Mountai	19.67	31	eP	P	08 28 33.4	-0.4
IMA				pmax	pmax		
	comp=Z,234nm,1.0s						
IMA	Indian Mountai	19.67	31	eP	P	08 28 33.4	-0.4
	comp=Z,234nm,1.0s						
SML	Sawmill	19.81	46	eP	P	08 28 33.5	-1.9
MCK	McKinley	20.24	40	eP	P	08 28 38.1	-1.8
MCK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MCK	McKinley	20.24	40	eP	P	08 28 38.1	-1.8
	comp=Z,7.9nm,0.6s						
DIV	Divide	20.81	49	eP	P	08 28 43.7	-2.1
	comp=Z,49nm,0.6s						
COLA	College	21.14	38	eP	P	08 28 48.6	-0.6
COLA				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
COLA	College	21.14	38	eP	P	08 28 48.6	-0.6
	comp=Z,20nm,0.8s,mb4.5						
THY	Trims Highway	21.45	43	eP	P	08 28 52.1	-0.2
ILAR	Eielson Array	21.48	39	P	P	08 28 50.7	-1.9
	comp=Z,3.2nm,0.5s,mb3.9,baz=244,slow=7.5,SNR=113						
ILAR				PcP	PcP	08 32 52.9	-2.5
	comp=Z,1.1nm,0.5s,baz=292,slow=3.5,SNR=13						
ILAR				LR	LR	08 38 01.7	
	comp=Z,108nm,19.2s,MS3.3,baz=99,slow=39						
DAWY	Dawson	24.35	43	eP	P	08 29 19.4	-1.2
YSS	Yuzh-Sakhalins	25.09	275	⇑eP	P	08 29 29.0	+1.1
YSS				e		08 29 34.0	
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.9						
YSS	Yuzh-Sakhalins	25.09	275	eP	P	08 29 28.8	+0.9
	comp=Z,46nm,1.0s,mb5.0						
ASAJ	Asahikawa	26.46	269	P	P	08 29 42.0	+1.3
ASAJ				pmax	pmax		
	comp=Z,24nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,93nm,18.0s						
ASAJ	Asahikawa	26.46	269	P	P	08 29 42.0	+1.3
	comp=Z,24nm,0.9s,mb4.7,baz=121,slow=8.6,SNR=9.2						
ASAJ				LR	LR	08 40 08.6	
	comp=Z,93nm,18.0s,MS3.4,baz=150,slow=36						
INK	Inuvik	27.68	35	P	P	08 29 51.1	-0.5
INK						08 33 07.0	
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK				MLR	MLR		
	comp=Z,123nm,19.7s						
INK	Inuvik	27.68	35	P	P	08 29 51.1	-0.5
	comp=Z,3.2nm,0.5s,mb4.2,baz=244,slow=9.8,SNR=42						
INK				PcP	PcP	08 33 07.0	-1.6
	comp=Z,2.8nm,0.7s,baz=279,slow=2.3,SNR=8.6						
INK				LR	LR	08 41 21.1	
	comp=Z,122nm,19.7s,MS3.5,baz=66,slow=37						
INK	Inuvik	27.68	35	eP	P	08 29 50.4	-1.2
	comp=Z,8.7nm,1.0s,mb4.3						
DLBC	Dease Lake	28.62	56	P	P	08 30 00.3	+0.2
	comp=Z,0.9nm,0.7s,baz=117,slow=14,SNR=3.7						
DLBC				LR	LR	08 39 44.3	
	comp=Z,159nm,19.8s,MS3.6,baz=260,slow=33						
YAK	Yakutsk	29.30	311	i P	P	08 30 07.2	+0.9
TIXI	Tiksi	30.61	331	eP	P	08 30 20.5	+2.8
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KLR	Kul'dur	30.97	286	eP	P	08 30 17.8	-3.4
KLR				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.0						
BBB	Bella Bella	31.12	68	LR	LR	08 41 42.1	
	comp=Z,45nm,18.5s,MS3.2,baz=272,slow=34						
MDJ	Mudanjiang	34.35	279	P	P	08 30 49.5	-1.2
MDJ				XP	sP	08 30 58.5	-3.7
MDJ				S	S	08 36 15.3	-0.2
MDJ				XS		08 36 26.0	
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,98nm,5.0s						
YKW3	Yellowknife Ar	35.46	46	eP	P	08 30 58.4	-1.5
YKA	Yellowknife Ar	35.48	46	P	P	08 30 59.2	-0.9
	comp=Z,7.1nm,0.7s,mb4.7,baz=282,slow=8.1,SNR=113						
YKA				PcP	PcP	08 33 28.7	-0.8
	comp=Z,1.6nm,0.7s,baz=285,slow=2.9,SNR=14						
YKA				ScP		08 37 11.4	
	comp=Z,0.6nm,0.8s,baz=292,slow=3.1,SNR=11						
YKA				LR	LR	08 46 48.7	

	comp=Z,158nm,18.7s,MS3.8,baz=280,slow=38						
YKA	**Yellowknife Ar**	35.48	46	P	P	08 30 59.2	-0.9
YKA				PcP	PcP	08 33 28.8	-0.7
YKA				ScP		08 37 11.4	
YKA				LR	LR	08 46 48.7	
VDB	**Vedder Mountai**	35.86	71	P	P	08 31 04.1	+0.6
CN2	**Changchun**	37.33	281	*e*P	P	08 31 16.0	+0.1
ASR	**Mount Adams--S**	37.50	75	P	P	08 31 18.5	+1.2
TBM	**Table Mountain**	37.61	73	P	P	08 31 19.0	+0.8
EBG	**Ellensburg**	37.75	73	P	P	08 31 20.6	+1.2
BOD	**Bodaibo**	37.84	307	⇓*i*P	P	08 31 18.7	-1.4
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
BROR	**Big Rock Looko**	37.93	78	P	P	08 31 22.5	+1.5
VFP	**Flag Point**	37.99	76	P	P	08 31 22.7	+1.2
HIA	**Hailar**	38.10	292	*e*P	P	08 31 21.4	-0.9
HIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HIA	**Hailar**	38.10	292	*e*P	P	08 31 21.4	-0.9
	comp=Z,7.6nm,0.5s,mb4.7						
EDM	**Edmonton**	39.08	61	*e*P	P	08 31 28.7	-1.7
YBH	**Yreka Blue Hor**	39.14	81	*e*P	P	08 31 31.8	+0.7
YBH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YBH	**Yreka Blue Hor**	39.14	81	P	P	08 31 33.2	+2.2
	comp=Z,8.5nm,0.9s,mb4.5,baz=311,slow=4.3,SNR=12						
YBH	**Yreka Blue Hor**	39.14	81	*e*P	P	08 31 31.8	+0.7
	comp=Z,6.4nm,0.9s,mb4.3						
NEW	**Newport**	39.15	69	*e*P	P	08 31 30.7	-0.4
NEW				pmax	pmax		
	comp=Z,22nm,0.9s						
NEW	**Newport**	39.15	69	P	P	08 31 31.3	+0.2
	comp=Z,18nm,0.7s,mb4.9,baz=301,slow=7.3,SNR=50						
NEW	**Newport**	39.15	69	*e*P	P	08 31 30.7	-0.4
	comp=Z,22nm,0.9s,mb4.9						
MOD	**Modoc**	40.53	80	*e*P	P	08 31 43.2	+0.6
	comp=Z,7.9nm,0.6s,mb4.5						
WALA	**Waterton Lakes**	40.64	67	*e*P	P	08 31 43.0	-0.3
	comp=Z,13nm,0.9s,mb4.6						
BMO	**Blue Mountains**	40.76	74	*e*P	P	08 31 44.4	0.0
	comp=Z,5.6nm,0.7s,mb4.3						
WVOR	**Wild Horse Val**	41.26	78	*e*P	P	08 31 49.1	+0.5
WVOR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
WVOR	**Wild Horse Val**	41.26	78	*e*P	P	08 31 49.1	+0.6
	comp=Z,8.4nm,0.6s,mb4.5						
OHCM	**Honcut**	41.28	84	*e*P	P	08 31 48.5	-0.2
MSO	**Missoula**	41.73	70	*e*P	P	08 31 51.8	-0.5
	comp=Z,19nm,1.2s,mb4.6						
CHMT	**Chamberlain Mo**	42.09	69	*e*P	P	08 31 54.7	-0.5
WCN	**Washoe City**	42.38	82	*e*P	P	08 31 59.0	+1.3
WCN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
WCN	**Washoe City**	42.38	82	*e*P	P	08 31 59.0	+1.3
	comp=Z,5.3nm,0.9s,mb4.2						
HLID	**Hailey**	43.20	74	*e*P	P	08 32 04.5	+0.1
	comp=Z,10nm,0.8s,mb4.6						
MCMT	**McKenzie Canyo**	43.44	71	*e*P	P	08 32 06.0	-0.2
BOZ	**Bozeman (W)**	43.72	70	*e*P	P	08 32 08.2	-0.3
BOZ				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
BOZ	**Bozeman (W)**	43.72	70	*e*P	P	08 32 08.2	-0.3
	comp=Z,28nm,0.9s,mb5.0						
NVAR	**Mina Array Bea**	43.81	82	P	P	08 32 10.8	+1.5
	comp=Z,3.9nm,0.7s,mb4.2,baz=297,slow=7.2,SNR=32						
NVAR				LR	LR	08 50 04.6	
	comp=Z,76nm,18.4s,MS3.6,baz=330,slow=36						
MNV	**Mina**	43.90	82	*e*P	P	08 32 09.5	-0.6
MNV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
MNV	**Mina**	43.90	82	*e*P	P	08 32 09.5	-0.6
	comp=Z,3.8nm,1.0s,mb4.1						
QLMT	**Earthquake Lak**	44.28	71	*e*P	P	08 32 13.1	0.0
ELK	**Elko**	44.32	78	*e*P	P	08 32 14.0	+0.6
ELK				pmax	pmax		
	comp=Z,12nm,0.8s						
ELK	**Elko**	44.32	78	*e*P	P	08 32 14.0	+0.5
	comp=Z,12nm,0.8s,mb4.7						
YMR	**Madison River**	44.65	71	*e*P	P	08 32 15.8	-0.3
TPH	**Tonopah**	44.70	82	*e*P	P	08 32 18.1	+1.6
TPH				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
TPH	**Tonopah**	44.70	82	*e*P	P	08 32 18.1	+1.6
	comp=Z,9.6nm,1.0s,mb4.6						
YNR	**Norris Junctio**	44.79	70	*e*P	P	08 32 17.6	+0.4
YFT	**Old Faithful**	44.85	71	*e*P	P	08 32 18.5	+0.8
LKWY	**Lake**	45.04	70	*e*P	P	08 32 20.0	+0.8
	comp=Z,20nm,0.9s,mb4.9						
IMW	**Indian Meadow**	45.10	71	*e*P	P	08 32 19.8	+0.1
BJI	**Beijing**	45.16	282	*e*P	P	08 32 20.8	+0.6
BJI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
BJI				LR	LR		
	comp=Z,83nm,22.6s,MS3.6						
BJI	**Beijing**	45.16	282	*e*P	P	08 32 20.7	+0.5
BJI				S	S	08 39 08.4	+11
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
BJI				MLR	MLR		
	comp=Z,80nm,22.6s,MS3.6						
BJI	**Beijing**	45.16	282	*e*P	P	08 32 20.7	+0.5
	comp=Z,10.0nm,1.0s,mb4.6						
BJI				S	S	08 39 08.4	+11
BJI				LR	LR		
	comp=Z,80nm,22.6s,MS3.6						
RRI2	**Red Ridge**	45.18	72	*e*P	P	08 32 20.2	-0.1
HVU	**Hansel Valley**	45.21	75	*e*P	P	08 32 20.6	0.0
TPAW	**Teton Pass**	45.32	72	*e*P	P	08 32 21.3	-0.2
SNOW	**Snow King Moun**	45.46	72	*e*P	P	08 32 22.8	+0.3
LOHW	**Long Hollow**	45.46	72	*e*P	P	08 32 22.1	-0.5
TRCR	**Troy Canyon**	45.55	81	*e*P	P	08 32 23.7	+0.4
BGU	**Big Grassy Mou**	45.56	76	*e*P	P	08 32 23.5	+0.1
SPUT	**South Promonto**	45.69	75	*e*P	P	08 32 24.0	-0.3
TLY	**Talaya**	45.91	302	*e*P	P	08 32 26.4	+0.4
TLY				*e*		08 34 02.8	
TLY				*e*S	S	08 39 05.4	-2.6
TLY				*e*SS	SS	08 42 22.5	-2.2
TLY				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
TLY				MLR	MLR		
	comp=Z,101nm,18.0s,MS3.8						
HWUT	**Hardware Ranch**	46.05	74	*e*P	P	08 32 26.7	-0.5
	comp=Z,10nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	46.09	296	*e*P	P	08 32 27.5	+0.1
ULN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	46.09	296	*e*P	P	08 32 27.5	+0.1
	comp=Z,6.3nm,0.8s,mb4.6						
DUG	**Dugway**	46.13	77	*e*P	P	08 32 27.9	0.0
DUG				pmax	pmax		
	comp=Z,365nm,1.0s						
DUG	**Dugway**	46.13	77	*e*P	P	08 32 27.9	0.0
	comp=Z,366nm,1.0s						
FCC	**Fort Churchill**	46.21	46	*e*P	P	08 32 24.6	-3.6
FCC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
FCC	**Fort Churchill**	46.21	46	*e*P	P	08 32 24.6	-3.6
	comp=Z,6.0nm,1.0s,mb4.5						
LAO	**LASA Array**	46.29	66	*e*P	P	08 32 28.2	-0.7
	comp=Z,16nm,0.6s,mb5.1						
JOW	**Kunigami**	46.31	259	P	P	08 32 30.1	+0.7
	comp=Z,22nm,1.0s,mb5.0,baz=238,slow=14,SNR=3.6						
TCUT	**Toone Canyon**	46.43	75	*e*P	P	08 32 30.4	+0.2
SONM	**Songino Array**	46.48	296	P	P	08 32 31.1	+0.6
	comp=Z,6.8nm,0.8s,mb4.6,baz=57,slow=8.4,SNR=62						
SONM				PcP	PcP	08 34 05.6	+0.4
	comp=Z,0.9nm,0.7s,baz=51,slow=3.2,SNR=3.2						
BW06	**Boulder Array**	46.57	72	*e*P	P	08 32 31.1	-0.2
	comp=Z,17nm,0.6s,mb5.1						
PDAR	**Pinedale Array**	46.57	72	P	P	08 32 31.5	+0.2
	comp=Z,20nm,0.5s,mb5.3,baz=303,slow=3.6,SNR=257						
NLU	**North Lily Min**	46.73	77	*e*P	P	08 32 32.4	-0.1
ZAK	**Zakamensk**	46.80	301	*e*P	P	08 32 33.7	+0.7
ZAK				*e*		08 34 05.4	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
DAU	**Daniels Canyon**	46.95	76	*e*P	P	08 32 34.9	+0.6
MPU	**Maple Canyon**	46.96	76	*e*P	P	08 32 34.0	-0.4
MVU	**Marysvale**	47.53	78	*e*P	P	08 32 39.3	+0.3
	comp=Z,8.2nm,0.9s,mb4.8						
MSU	**Marysvale**	47.55	78	*e*P	P	08 32 39.0	-0.1
TMUT	**Trail Mountain**	47.66	77	*e*P	P	08 32 40.3	+0.3
SSE	**Sheshan**	47.75	269	P	P	08 32 38.8	-2.0
SSE				AMB	AMB		
	comp=Z,28nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,70nm,7.3s						
SSE	**Sheshan**	47.75	269	P	P	08 32 38.8	-2.0
	comp=Z,28nm,0.7s,mb5.4						
LDFC	**Landfair**	47.91	84	*e*P	P	08 32 42.9	+0.9
SRU	**San Rafael**	48.19	76	*e*P	P	08 32 44.0	-0.1
NJ2	**Nanjing**	48.57	272	*e*P	P	08 32 45.3	-1.8
NJ2				AP	pP	08 32 54.0	-1.4
NJ2				XP	sP	08 32 57.5	-1.2
NJ2				PP	PP	08 34 38.3	-1.4
NJ2				S	S	08 39 44.0	-1.9
NJ2				XS		08 40 02.0	
NJ2				AMB	AMB		
	comp=Z,730nm,4.5s						
NJ2				LR	LR		
	comp=N,1µm,19.2s						
NJ2				LR	LR		
	comp=E,1µm,27.0s						
PV10	**Paradox Valley**	49.56	76	*e*P	P	08 32 54.7	0.0
ULM	**Lac du Bonnet**	49.95	56	P	P	08 32 55.6	-1.8
	comp=E,1.5nm,0.5s,mb4.3,baz=335,slow=8.4,SNR=3.8						
WUAZ	**Wupatki**	49.95	81	*e*P	P	08 32 57.7	0.0
	comp=E,85nm,0.7s,mb5.9						
PV01	**Paradox Valley**	49.99	76	*e*P	P	08 32 57.5	-0.4
ISCO	**Idaho Springs**	50.73	73	*e*P	P	08 33 03.1	-0.5
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ISCO	**Idaho Springs**	50.73	73	*e*P	P	08 33 03.1	-0.5
	comp=Z,5.3nm,0.8s,mb4.5						
SDCO	**Great Sand Dun**	52.11	75	*e*P	P	08 33 13.4	-0.7
	comp=Z,13nm,1.0s,mb4.8						
WHN	**Wuhan**	52.42	274	*e*P	P	08 33 15.3	-1.2
ANMO	**Albuquerque**	53.35	78	*i* P	P	08 33 22.8	-0.5
SUMG	**Summit**	53.46	14	*e*P	P	08 33 22.0	-1.6
	comp=Z,12nm,0.9s,mb4.8						
ZAL	**Zalesovo**	53.94	313	P	P	08 33 27.8	+0.5
	comp=Z,0.6nm,0.5s,mb3.8,baz=82,slow=7.1,SNR=2.4						
ZAL				PcP	PcP	08 34 32.6	+0.2
	comp=Z,3.2nm,0.7s,baz=68,slow=4.3,SNR=17						
ZAL				LR	LR	08 58 31.3	
	comp=Z,102nm,19.2s,MS3.9,baz=176,slow=38						
LZH	**Lanzhou**	55.18	286	*e*P	P	08 33 37.0	+0.3
LZH				AP	pP	08 33 45.8	+0.7
LZH				XP	sP	08 33 50.8	+2.5
LZH				PCP	PcP	08 34 38.0	+0.6
LZH				PP	PP	08 35 42.0	+0.4
LZH				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.4						
LZH				AMB	AMB		
	comp=Z,156nm,4.0s						
LZH	**Lanzhou**	55.18	286	*e*P	P	08 33 37.0	+0.3
LZH				*PP	pP	08 33 45.8	+0.7
LZH				*SP	sP	08 33 50.7	+2.4
LZH						08 34 38.0	
LZH						08 35 42.0	
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.4						
LZH	**Lanzhou**	55.18	286	*e*P	P	08 33 37.0	+0.3
	comp=Z,38nm,1.0s,mb5.4						
LZH				pP	pP	08 33 45.8	+0.7
LZH				sP	sP	08 33 50.7	+2.4
LZH				PcP	PcP	08 34 38.0	+0.6
LZH				PP	PP	08 35 42.0	+0.4
GTA	**Gaotai**	55.38	292	P	P	08 33 38.5	+0.4
GTA				AP	pP	08 33 45.5	-1.0
GTA				XP	sP	08 33 48.0	-1.7
GTA				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
MNTX	**Cornudas Mount**	56.21	80	*e*P	P	08 33 42.8	-1.3
	comp=Z,12nm,1.0s,mb4.9						
AMTX	**Amarillo**	56.31	75	*e*P	P	08 33 45.0	+0.1
	comp=Z,7.3nm,0.8s,mb4.8						
KSU1	**Kansas State U**	56.51	68	*e*P	P	08 33 43.8	-2.4
JMIC	**Jan Mayen**	57.86	4	P	P	08 33 54.9	-0.4
	comp=Z,21nm,0.7s,mb5.3,baz=181,slow=9.1,SNR=2.5						
ARCES	**ARCESS Array B**	58.15	350	P	P	08 33 55.8	-1.6
	comp=Z,4.1nm,0.6s,mb4.7,baz=59,slow=7.1,SNR=20						
ARCES				LR	LR	09 01 52.5	
	comp=Z,69nm,19.4s,MS3.8,baz=14,slow=39						
WMOK	**Wichita Mounta**	58.16	73	*e*P	P	08 33 56.3	-1.6
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
WMOK	**Wichita Mounta**	58.16	73	*e*P	P	08 33 56.3	-1.6
	comp=Z,5.7nm,0.8s,mb4.7						
LTX	**Lajitas**	58.91	81	*e*P	P	08 34 02.9	-0.4
LTX				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
LTX	**Lajitas**	58.91	81	*e*P	P	08 34 02.9	-0.3
	comp=Z,10nm,1.1s,mb4.8						
TXAR	**Lajitas Array**	58.91	81	P	P	08 34 02.6	-0.7
	comp=Z,4.7nm,0.7s,mb4.7,baz=303,slow=4.7,SNR=27						
TXAR				LR	LR	08 56 02.7	
	comp=Z,57nm,21.2s,MS3.7,baz=350,slow=32						
KURK	**Kurchatov**	58.92	313	P	P	08 34 01.6	-1.4
	comp=Z,47nm,1.2s,mb5.4,SNR=8.6						
KURK	**Kurchatov**	58.92	313	*i* P	P	08 34 01.8	-1.2
KURK	**Kurchatov**	58.92	313	*e*P	P	08 34 00.5	-2.4
	comp=Z,10.0nm,1.0s,mb4.8						
WMQ	**Urumqi**	59.19	303	P	P	08 34 05.3	+0.3
WMQ				XP	sP	08 34 20.0	+3.4
WMQ				PP	PP	08 36 18.0	+0.4
WMQ				S	S	08 42 09.0	-0.2
WMQ				SS	SS	08 46 05.0	-0.3
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,112nm,19.0s,MS4.1						
WMQ				LR	LR		
	comp=E,89nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,118nm,20.0s,MS4.0						
SCHQ	**Schefferville**	60.24	38	P	P	08 34 09.6	-2.5
	comp=Z,7.9nm,0.7s,mb4.9,baz=325,slow=6.9,SNR=11						
CCM	**Cathedral Cave**	60.30	65	*e*P	P	08 34 10.2	-2.5
CCM				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
CCM	**Cathedral Cave**	60.30	65	*e*P	P	08 34 10.2	-2.5
	comp=Z,6.0nm,0.6s,mb4.8						
JCT	**Junction City**	60.49	77	*e*P	P	08 34 14.5	+0.4
JCT				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
JCT	**Junction City**	60.49	77	*e*P	P	08 34 14.4	+0.4
	comp=Z,9.8nm,0.7s,mb5.0						
BVAR	**Borovoye Array**	60.81	320	P	P	08 34 14.4	-1.5
	comp=Z,4.5nm,0.6s,mb4.8,baz=46,slow=7.0,SNR=22						
BVAR				PcP	PcP	08 34 58.7	-0.7
	comp=Z,4.3nm,0.6s,baz=48,slow=3.0,SNR=9.9						
FVM	**French Village**	60.82	65	*e*P	P	08 34 14.1	-2.1
FVM				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2						
FVM	**French Village**	60.82	65	*e*P	P	08 34 14.1	-2.1
	comp=Z,12nm,0.6s,mb5.2						
MIAR	**Mount Ida**	61.39	70	*e*P	P	08 34 18.3	-1.8
MIAR				*e**PP	pP	08 34 28.1	-0.5
MIAR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
MIAR	**Mount Ida**	61.39	70	*e*P	P	08 34 18.3	-1.8
	comp=Z,9.6nm,0.9s,mb4.9						
MIAR				*e*pP	pP	08 34 28.1	-0.6
BLO	**Bloomington**	62.17	61	*e*P	P	08 34 23.5	-1.9
BLO				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.3						
BLO	**Bloomington**	62.17	61	*e*P	P	08 34 23.5	-1.9
	comp=Z,15nm,0.6s,mb5.3						
USIN	**University of**	62.39	63	*e*P	P	08 34 25.1	-1.7
	comp=Z,63nm,0.6s,mb5.9						
UTMT	**University of**	62.86	65	*e*P	P	08 34 28.2	-1.7
	comp=Z,70nm,1.0s,mb5.7						
WCI	**Wyandotte Cave**	62.97	62	*e*P	P	08 34 28.5	-2.1
WCI				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
WCI	**Wyandotte Cave**	62.97	62	*e*P	P	08 34 28.5	-2.1
	comp=Z,26nm,0.9s,mb5.4						
KMI	**Kunming**	63.50	278	P	P	08 34 34.8	+0.5
KMI				XP	sP	08 34 47.3	+1.5
KMI				AMB	AMB		
	comp=Z,13nm,1.1s,mb5.0						
KMI	**Kunming**	63.50	278	P	P	08 34 34.7	+0.4
KMI				*SP	sP	08 34 47.3	+1.5
KMI				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
KMI				MLR	MLR		
	comp=Z,40nm,39.5s,MS3.3						
KMI	**Kunming**	63.50	278	P	P	08 34 34.7	+0.4
	comp=Z,13nm,1.1s,mb5.0						
KMI				sP	sP	08 34 47.3	+1.5
KMI				LR	LR		
	comp=Z,40nm,39.5s,MS3.3						
WVT	**Waverly**	63.60	65	*e*P	P	08 34 33.0	-1.7
WVT				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
WVT	**Waverly**	63.60	65	*e*P	P	08 34 33.0	-1.8
	comp=Z,16nm,0.8s,mb5.1						
JOF	**Joensuu**	63.63	345	*e*p	P	08 34 33.8	-0.7
	comp=Z,2.9nm,0.4s,mb4.7						
OXF	**Oxford**	63.84	67	*e*P	P	08 34 34.8	-1.6
OXF				*e**PP	pP	08 34 43.9	-1.0
OXF				pmax	pmax		
	comp=Z,89nm,1.2s,mb5.7						
OXF	**Oxford**	63.84	67	*e*P	P	08 34 34.8	-1.6
	comp=Z,89nm,1.2s,mb5.7						
OXF				*e*pP	pP	08 34 43.9	-1.0
KAF	**Kangasniemi**	65.16	347	*e*p	P	08 34 42.6	-1.8
	comp=Z,1.3nm,0.4s,mb4.3,baz=14,slow=5.8						
KAF	**Kangasniemi**	65.16	347	*e*P	P	08 34 42.6	-1.8
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
SSPA	**Standing Stone**	65.73	55	*e*P	P	08 34 46.1	-2.3
	comp=Z,5.6nm,0.7s,mb4.7						
FINES	**FINESS Array B**	65.83	347	P	P	08 34 47.3	-1.4
	comp=Z,5.1nm,0.7s,mb4.7,baz=18,slow=9.6,SNR=26						
FINES				LR	LR	09 09 22.7	
	comp=Z,62nm,18.4s,MS3.9,baz=338,slow=41						
LRAL	**Lakeview Retre**	66.30	66	*e*P	P	08 34 49.9	-2.3
	comp=Z,5.7nm,0.6s,mb4.8						
LRAL				*e*pP	pP	08 34 58.7	-2.0
ELN	**Prospectdale**	66.72	59	P	P	08 34 52.6	-2.3
AAK	**Ala-Archa**	66.74	310	⇑*i*P	P	08 34 54.5	-0.4
AAK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
AAK				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.0						
AAK	**Ala-Archa**	66.74	310	*e*P	P	08 34 52.9	-2.1
	comp=Z,10nm,0.8s,mb4.9						
PMG	**Port Moresby**	67.07	216	LR	LR	09 01 46.8	
	comp=Z,58nm,18.6s,MS3.8,baz=270,slow=34						
LSA	**Lhasa**	67.25	289	*e*P	P	08 34 59.1	+0.8
LSA				pmax	pmax		
	comp=Z,22nm,0.3s,mb5.7						
LSA	**Lhasa**	67.25	289	*e*P	P	08 34 59.1	+0.8
	comp=Z,22nm,0.3s,mb5.7						
NB2	**NORSAR Subarra**	67.73	355	P	P	08 34 59.8	-1.0
	comp=Z,2.9nm,0.6s,mb4.5,baz=6.0,slow=6.2						
NB2	**NORSAR Subarra**	67.73	355	P	P	08 34 59.8	-1.0
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
NOA	**NORSAR Array B**	67.73	355	P	P	08 35 00.3	-0.5
	comp=Z,3.6nm,0.6s,mb4.6,baz=7.0,slow=6.3,SNR=15						
KSH	**Kashi**	68.37	306	*e*P	P	08 35 07.3	+2.1
KSH				*e*AP	pP	08 35 16.3	+2.6
KSH				*e*PCP	PcP	08 35 33.5	+3.0
HFS	**Hagfors**	68.46	353	P	P	08 35 04.6	-0.8
	comp=Z,3.6nm,0.5s,mb4.7,baz=45,slow=4.2,SNR=23						
JSC	**Jenkinsville**	68.62	62	*e*P	P	08 35 05.8	-1.0
OBN	**Obninsk**	69.88	339	*e*P	P	08 35 14.0	-0.2
OBN				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
CMAR	**Chiang Mai Arr**	70.78	276	P	P	08 35 20.1	-0.2
	comp=Z,1.0nm,0.5s,mb4.0,baz=5.0,slow=33,SNR=4.7						
GUN	**Gumba**	71.67	292	*e*P	P	08 35 26.4	+0.9
	comp=Z,82nm,0.5s						
JIRN	**Jiri**	71.67	291	*e*P	P	08 35 26.6	+1.1
	comp=Z,44nm,0.7s,mb5.5						
KKN	**Kakani**	72.11	292	*e*P	P	08 35 28.8	+0.7
	comp=Z,41nm,0.5s,mb5.6						
PKI	**Pulchoki**	72.20	292	*e*P	P	08 35 29.2	+0.6
	comp=Z,22nm,0.5s,mb5.4						
GKN	**Gorkha**	72.32	293	*e*P	P	08 35 29.8	+0.4
	comp=Z,44nm,0.5s,mb5.6						
DMN	**Daman**	72.35	292	*e*P	P	08 35 29.9	+0.4
	comp=Z,20nm,0.7s,mb5.1						
KOLN	**Koldanda**	73.10	293	*e*P	P	08 35 34.4	+0.5
	comp=Z,17nm,0.7s,mb5.1						
EKA	**Eskdalemuir Ar**	73.71	2	P	P	08 35 36.6	-0.2
	comp=Z,1.9nm,0.7s,mb4.1,baz=353,slow=4.3,SNR=5.4						
SDNR	**Sundarnagar**	73.97	300	*e*P	P	08 35 39.5	+0.7
AKASG	**Malin Array Be**	75.57	342	P	P	08 35 47.1	-0.6
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AKASG	**Malin Array Be**	75.57	342	P	P	08 35 47.1	-0.6
	comp=Z,3.8nm,0.5s,mb4.6,baz=18,slow=5.7,SNR=26						
CTA	**Charters Tower**	77.26	213	LR	LR	09 04 08.3	
	comp=Z,49nm,19.9s,MS3.8,baz=223,slow=31						
CLL	**Collm**	77.27	352	*e*P	P	08 35 57.0	-0.2
CLL				*e*	pP	08 36 04.0	-1.8
CLL	**Collm**	77.27	352	P	P	08 35 57.0	-0.2
CLL				*e**PP	pP	08 36 04.0	-1.8
GOF	**Gofitskoye**	77.34	331	*e*P	P	08 35 57.0	-0.7
OJC	**Ojcow**	77.60	348	*e*P	P	08 35 59.0	0.0
BRG	**Berggiesshubel**	77.62	352	P	P	08 35 59.1	0.0
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
BRG	**Berggiesshubel**	77.62	352	P	P	08 35 59.1	0.0
	comp=Z,8.6nm,1.4s,mb4.5						
KWP	**Kalwaria**	77.75	346	*e*P	P	08 36 00.2	+0.4
DPC	**Dobruska-Polom**	77.90	350	*e*P	P	08 36 00.8	+0.2
OKC	**Ostrava-Krasne**	78.19	349	*e*P	P	08 36 01.8	-0.5
NKC	**Novy Kostel**	78.39	352	*e*P	P	08 36 03.4	+0.1
PRU	**Pruhonice**	78.44	351	*e*P	P	08 36 03.4	-0.2
KOLS	**Kolonicke sedl**	78.50	346	*e*P	P	08 36 03.2	-0.8
KOLS				*e*	pP	08 36 11.3	-1.3
VRAC	**Vranov**	78.89	350	P	P	08 36 06.8	+0.7
	comp=Z,6.6nm,1.1s,mb4.5,baz=8.7,slow=6.9,SNR=5.4						
GIVF	**Givet**	78.94	357	*e*P	P	08 36 07.5	+1.1
BAIF	**Baives**	79.00	358	*e*P	P	08 36 07.1	+0.4
	comp=Z,20nm,1.0s,mb4.7						
BAIF	**Baives**	79.00	358	*e*P	P	08 36 07.1	+0.4
BAIF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GRA1	**Grafenberg Arr**	79.02	353	*e*P	P	08 36 06.9	+0.1
	comp=Z,13nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	79.02	353	*e*P	P	08 36 06.9	+0.1
GRF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	79.02	353	*e*P	P	08 36 06.9	+0.1
GRF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
GRF	**Grafenberg Arr**	79.02	353	*e*P	P	08 36 06.9	+0.1
	comp=Z,13nm,1.0s,mb4.8						
KHC	**Kasperske Hory**	79.38	352	*e*P	P	08 36 09.0	+0.2
VYHS	**Vyhne**	79.42	348	*e*P	P	08 36 09.1	+0.1
GERES	**GERESS Array B**	79.65	351	P	P	08 36 10.1	-0.2
	comp=Z,1.8nm,0.6s,mb4.2,slow=4.0,SNR=8.1						
ZST	**Bratislava**	79.93	349	*e*P	P	08 36 12.7	+0.9
FLN	**La Foliniere**	80.34	1	*e*P	P	08 36 13.7	-0.2
	comp=Z,71nm,1.2s,mb5.2						
FLN	**La Foliniere**	80.34	1	*e*P	P	08 36 13.7	-0.2
FLN				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.2						
LDF	**La Druitiere**	80.51	1	*e*P	P	08 36 14.3	-0.5
	comp=Z,32nm,0.9s,mb5.0						
LDF	**La Druitiere**	80.51	1	*e*P	P	08 36 14.3	-0.5
LDF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
MEZF	**Maizieres J'vi**	80.54	357	*e*P	P	08 36 15.3	+0.3
	comp=Z,35nm,1.2s,mb4.9						
CDF	**Champ du Feu**	80.54	356	*e*P	P	08 36 15.0	0.0
	comp=Z,6.4nm,0.7s,mb4.3						
CDF	**Champ du Feu**	80.54	356	*e*P	P	08 36 15.0	0.0
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
GRR	**Gorron**	80.71	1	*e*P	P	08 36 15.9	0.0
	comp=Z,40nm,0.9s,mb5.1						
GRR	**Gorron**	80.71	1	*e*P	P	08 36 15.9	0.0
GRR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
SGMF	**Saint Gilles**	80.81	2	*e*P	P	08 36 16.7	+0.3
	comp=Z,24nm,0.7s,mb4.9						
SGMF	**Saint Gilles**	80.81	2	*e*P	P	08 36 16.7	+0.3
SGMF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
HAU	**Haudompre**	80.99	356	*e*P	P	08 36 17.4	0.0
QUIF	**Quistinic**	81.13	3	*e*P	P	08 36 19.1	+1.0
HINF	**Hinteralfeld**	81.15	356	*e*P	P	08 36 18.1	-0.1
MLR	**Muntele Rosu**	81.20	342	P	P	08 36 19.5	+1.0
	comp=Z,10nm,0.6s,mb4.9,baz=207,slow=1.9,SNR=20						
WTTA	**Wattenberg**	81.40	353	⇑*i*P	P	08 36 20.1	+0.5

	comp=Z,16nm,1.3s,mb4.8						
WTTA	Wattenberg	81.40	353 ⇑	*i*P	P	08 36 20.1	+0.5
WTTA				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
KBA	Koelnbreinsper	81.44	351 ⇑	*i*P	P	08 36 20.6	+0.9
	comp=Z,18nm,1.1s,mb4.9						
KBA	Koelnbreinsper	81.44	351 ⇑	*i*P	P	08 36 20.6	+0.9
KBA				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
WRA	Warramunga Arr	81.77	224	P	P	08 36 21.1	-0.9
	comp=Z,2.8nm,0.7s,mb4.3,baz=32,slow=6.2,SNR=33						
DAVOX	Davos	82.01	354	P	P	08 36 23.8	+1.0
	comp=Z,5.3nm,0.8s,mb4.5,baz=355,slow=6.4,SNR=7.1						
SSF	Saint Saulge	82.02	358	*e*P	P	08 36 22.9	+0.1
	comp=Z,4.3nm,0.6s,mb4.3						
SSF	Saint Saulge	82.02	358	*e*P	P	08 36 22.9	+0.1
SSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AVF	Avril sur Loir	82.29	358	*e*P	P	08 36 24.3	+0.1
	comp=Z,18nm,1.0s,mb4.7						
AVF	Avril sur Loir	82.29	358	*e*P	P	08 36 24.3	+0.1
AVF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CABF	La Chapelle	82.39	356	*e*P	P	08 36 25.3	+0.6
	comp=Z,20nm,1.0s,mb4.7						
CABF	La Chapelle	82.39	356	*e*P	P	08 36 25.3	+0.6
CABF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
SMF	Signal de Mont	82.43	358	*e*P	P	08 36 25.0	+0.1
	comp=Z,56nm,1.2s,mb5.1						
SMF	Signal de Mont	82.43	358	*e*P	P	08 36 25.0	+0.1
SMF				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
MFF	Saint Martin d	82.50	1	*e*P	P	08 36 25.6	+0.3
	comp=Z,16nm,0.7s,mb4.8						
MFF	Saint Martin d	82.50	1	*e*P	P	08 36 25.6	+0.3
MFF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
BGF	Bois d'Agland	82.53	359	*e*P	P	08 36 25.4	0.0
	comp=Z,19nm,0.9s,mb4.8						
BGF	Bois d'Agland	82.53	359	*e*P	P	08 36 25.4	0.0
BGF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
TCF	Toulx Ste Croi	82.81	359	*e*P	P	08 36 27.0	+0.1
	comp=Z,23nm,1.1s,mb4.8						
TCF	Toulx Ste Croi	82.81	359	*e*P	P	08 36 27.0	+0.1
TCF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
LPG	La Plagne	83.47	356	*e*P	P	08 36 31.7	+1.4
DIVS	Divcibare	83.56	346 ⇓	*i*P	P	08 36 30.7	0.0
RJF	Les Rejaudoux	83.80	360	*e*P	P	08 36 32.4	+0.5
	comp=Z,6.9nm,0.7s,mb4.6						
RJF	Les Rejaudoux	83.80	360	*e*P	P	08 36 32.4	+0.5
RJF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
HYB	Hyderabad	84.02	290	*e*P	P	08 36 33.0	-0.6
HYB	Hyderabad	84.02	290	*i* P	P	08 36 33.0	-0.6
ORIF	Oris-en-Rattie	84.09	356	*e*P	P	08 36 34.4	+1.1
	comp=Z,17nm,1.0s,mb4.8						
ORIF	Oris-en-Rattie	84.09	356	*e*P	P	08 36 34.4	+1.1
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
LFF	La Frestale	84.17	0	*e*P	P	08 36 34.3	+0.6
	comp=Z,28nm,0.8s,mb5.2						
LFF	La Frestale	84.17	0	*e*P	P	08 36 34.3	+0.6
LFF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.1						
CAF	Calviac	84.17	359	*e*P	P	08 36 34.6	+0.8
	comp=Z,10nm,0.8s,mb4.7						
CAF	Calviac	84.17	359	*e*P	P	08 36 34.6	+0.8
CAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
VIVF	Saint-Julien-l	84.19	357	*e*P	P	08 36 34.6	+0.7
	comp=Z,25nm,1.2s,mb4.9						
VIVF	Saint-Julien-l	84.19	357	*e*P	P	08 36 34.6	+0.7
VIVF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.9						
FITZ	Fitzroy Crossi	84.21	232	*e*P	P	08 36 34.9	+0.3
	comp=Z,16nm,0.8s,mb5.2						
MBDF	Montbardon	84.24	356	*e*P	P	08 36 35.3	+1.2
	comp=Z,14nm,0.7s,mb4.9						
MBDF	Montbardon	84.24	356	*e*P	P	08 36 35.3	+1.2
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.9						
BRTR	Keskin Array B	84.94	335	P	P	08 36 38.3	+0.6
	comp=Z,5.5nm,0.7s,mb4.8,baz=40,slow=3.0,SNR=24						
LASF	Ste Croix	84.99	358	*e*P	P	08 36 38.7	+0.8
SMRF	Simiane la Rot	85.04	357	*e*P	P	08 36 39.4	+1.3
	comp=Z,22nm,0.8s,mb5.0						
SBF	Sospel	85.07	355	*e*P	P	08 36 38.7	+0.4
	comp=Z,69nm,0.9s,mb5.5						
SBF	Sospel	85.07	355	*e*P	P	08 36 38.7	+0.4
SBF				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.5						
ASAR	Alice Springs	85.25	222	P	P	08 36 40.0	+0.3
	comp=Z,3.6nm,0.8s,mb4.5,baz=25,slow=5.4,SNR=38						
ASPA	Alice Springs	85.25	222	*e*P	P	08 36 39.8	+0.2
FRF	La Foret Royal	85.41	356	*e*P	P	08 36 40.4	+0.4
LMR	La Mourre	85.64	356	*e*P	P	08 36 41.6	+0.4
	comp=Z,19nm,0.7s,mb5.1						
LMR	La Mourre	85.64	356	*e*P	P	08 36 41.6	+0.4
LMR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
MTLF	Montolieu	85.76	359	*e*P	P	08 36 42.4	+0.7
EPF	Esparros	86.08	0	*e*P	P	08 36 43.8	+0.5
ETSF	Etsaut	86.20	1	*e*P	P	08 36 44.9	+1.0
	comp=Z,15nm,0.7s,mb5.0						
ETSF	Etsaut	86.20	1	*e*P	P	08 36 44.9	+1.0
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.1						
PGF	Pioggiola	86.29	354	*e*P	P	08 36 44.7	+0.3
	comp=Z,67nm,0.9s,mb5.6						
PGF	Pioggiola	86.29	354	*e*P	P	08 36 44.7	+0.3
PGF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.6						
ESDC	Sonseca Array	89.33	4	P	P	08 36 58.6	-0.5
	comp=Z,1.9nm,0.5s,mb4.7,baz=346,slow=4.4,SNR=8.9						
STKA	Stephens Creek	89.71	213	P	P	08 37 01.7	+0.6
	comp=Z,8.6nm,0.8s,mb5.2,baz=348,slow=6.3,SNR=20						
STKA				LR	LR	09 14 40.9	
	comp=Z,78nm,18.9s,MS4.2,baz=197,slow=34						
STKA	Stephens Creek	89.71	213	P	P	08 37 01.7	+0.6
STKA				LR	LR	09 14 40.9	
ASF	Jabal al Asfar	91.04	330	LR	LR	09 23 34.0	
	comp=Z,95nm,18.2s,MS4.3,baz=30,slow=39						
DBIC	Dimbokro	122.08	7	PKP	PKPdf	08 42 57.5	-4.1
	comp=Z,3.0nm,0.7s,baz=345,slow=3.2,SNR=12						
PLCA	Paso Flores	131.17	107	PKP	PKPdf	08 43 15.2	-3.2
	comp=Z,3.3nm,0.9s,baz=20,slow=1.6,SNR=6.3						
MATP	Matopo	142.34	315	PKhKP		08 43 31.4	
	baz=37,slow=1.9						
MATP	Matopo	142.34	315	PKP	PKPdf	08 43 31.4	-7.7
LBTB	Lobatse	147.63	315	*e*PKP2	PKPab	08 43 47.7	-2.6
BOSA	Boshof	150.87	312	*e*PKIKP	PKPdf	08 43 55.2	+2.1
BOSA				*e*		08 44 02.8	

NEIC ***27*** *08:37:55.5±2.1, 14.46N×93.16E, h36^{km}±19^{km}, mb3.7/1, Error ellipse: s-maj=25.6km s-min=9.9km az=212.0*

IDC ***27*** *08:37:57.2±9.5, 14.47N×93.28E, h48^{km}±80^{km}, mb3.0/3, mb1 3.3/4, mb1mx3.1/18, mbtmp3.3/4, ML3.6/1, Error ellipse: s-maj=76.7km s-min=33.0km az=72.0*

ISC 27 08:37:53.9±3.3**, 14.5N**±0.2×**93.24E**±0.08**, h39**^{km}±31^{km}**, n12,** σ**0**^{s}**55**/13**, mb3.4**/4**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.75	53	P	P	08 39 33.2	+0.1
	0.3nm,0.3s,baz=234,slow=15,SNR=9.4						
CMAR				S	S	08 40 49.5	-0.1
	0.3nm,0.3s,baz=241,slow=28,SNR=4.6						
JIRN	Jiri	14.67	335	*e*P	P	08 41 20.6	-0.1
	8.5nm,0.3s						
PKI	Pulchoki	14.93	332	*e*P	P	08 41 24.4	+0.3
	7.4nm,0.3s						
GUN	Gumba	15.02	334	*e*P	P	08 41 25.3	+0.1
DMN	Daman	15.11	331	*e*P	P	08 41 26.5	+0.2
KKN	Kakani	15.18	332	*e*P	P	08 41 26.4	-0.9
GKN	Gorkha	15.66	331	*e*P	P	08 41 33.1	-0.4
	10nm,0.3s						
KOLN	Koldanda	15.98	327	*e*P	P	08 41 38.2	+0.6
	6.6nm,0.3s						
SONM	Songino Array	35.01	16	P	P	08 44 44.8	+0.1
	0.3nm,0.6s,mb3.4,baz=191,slow=7.3,SNR=2.9						
CHKZ	Chkalovo	42.98	340	*e*P	P	08 45 51.1	+0.1
	1.0nm,0.6s,mb3.7						
WRA	Warramunga Arr	52.95	129	P	P	08 47 10.1	+1.1
	0.3nm,0.7s,mb3.3,baz=313,slow=8.1,SNR=4.2						
ASAR	Alice Springs	54.93	133	P	P	08 47 22.4	-1.2
	0.2nm,0.5s,mb3.4,baz=309,slow=6.6,SNR=6.2						

BJI ***27*** *09:00:42.8, 4.84N×94.49E, h44^{km}, mB5.1, mb4.7, Ms4.2, Msz3.8*

MOS ***27*** *09:00:43.2±1.1, 5.07N×94.56E, h33^{km}, mb4.7/14, Error ellipse: s-maj=15.7km s-min=8.3km az=106.8*

NEIC ***27*** *09:00:45.0±0.4, 5.11N×94.47E, h30^{km}, mb4.6/11, Error ellipse: s-maj=10.3km s-min=7.3km az=217.0*

IDC ***27*** *09:00:46.8±3.5, 5.15N×94.59E, h45^{km}±32^{km}, mb4.1/22, mb1 4.2/23, mb1mx4.1/29, mbtmp4.4/23, ML4.8/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/19, Error ellipse: s-maj=18.0km s-min=12.9km az=39.0*

ISC 27 09:00:44.1±0.4**, 5.07N**±0.06×**94.51E**±0.04**, h39**^{km}**, h39**^{km}±6.9^{km}**:pP-P, n93,** σ**1**^{s}**16**/95**, mb4.5**/46**, MS3.7**/10**, 2C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.12	88	*e*P	P	09 02 15.1	+0.7
KULM				*e*S	S	09 03 24.2	+0.2
SNG	Songkhla	6.42	71	P	P	09 02 20.0	+1.4
	180nm,1.0s						
CM31	Chiang Mai Arr	13.99	18	P	P	09 04 06.7	+4.6
	4.9nm,0.3s						
CMAR	Chiang Mai Arr	13.99	18	P	P	09 04 05.2	+3.1
	1.4nm,0.3s,baz=213,slow=12,SNR=60						
CMAR				LR	LR	09 09 12.8	
	comp=Z,50nm,21.2s,baz=205,slow=36						
CMAR				ScP		09 12 51.5	
	0.2nm,0.3s,baz=220,slow=4.0,SNR=5.3						
CHG	Chiang Mai	14.33	17 ⇓	P	P	09 04 12.5	+6.0
	29nm,0.8s						
NANT	Nan	14.92	23	P	P	09 04 21.0	+6.8
KSM	Kuching	16.17	102	*e*P	P	09 04 33.0	+2.8
KMI	Kunming	21.45	21	P	P	09 05 33.8	+2.6
KMI				XP		09 05 47.0	
KMI				S	S	09 09 25.3	+3.5
KMI				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.4						
KMI				LR	LR		
	comp=Z,132nm,19.5s,MS3.3						
KMI	Kunming	21.45	21	P	P	09 05 33.7	+2.5
KMI				*SP		09 05 46.9	
KMI				S	S	09 09 25.3	+3.5
KMI				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.4						
KMI				MLR	MLR		
	comp=Z,130nm,19.5s,MS3.3						
KMI	Kunming	21.45	21	P	P	09 05 33.7	+2.5
	comp=Z,17nm,0.9s,mb4.4						
KMI				sP		09 05 46.9	
KMI				S	S	09 09 25.3	+3.5
KMI				LR	LR		
	comp=Z,130nm,19.5s,MS3.3						
JIRN	Jiri	23.82	341	*e*P	P	09 05 54.0	-0.6
	comp=Z,43nm,0.8s,mb4.9						
PKI	Pulchoki	24.00	340	*e*P	P	09 05 56.0	-0.3
GUN	Gumba	24.15	341	*e*P	P	09 05 57.6	-0.2
	comp=Z,37nm,0.7s,mb5.0						
GYA	Guiyang	24.23	27 ⇑	*i*P	P	09 05 59.8	+1.2
GYA				AP		09 06 08.5	
GYA				XP		09 06 12.5	
GYA				PP	PP	09 06 34.3	+0.1
GYA				S	S	09 10 11.5	-0.2
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
GYA				AMB	AMB		
	comp=Z,140nm,3.9s						
GYA				LR	LR		
	comp=N,140nm,15.6s,MS3.8						
GYA				LR	LR		
	comp=E,210nm,15.0s,MS3.8						
GYA				LR	LR		
	comp=Z,130nm,15.9s,MS3.5						
KKN	Kakani	24.24	340	*e*P	P	09 05 58.4	-0.3
	comp=Z,34nm,0.7s,mb4.9						
GKN	Gorkha	24.66	339	*e*P	P	09 06 03.0	+0.2
	comp=Z,61nm,0.9s,mb5.1						
LSA	Lhasa	24.70	353	*e*P	P	09 06 04.1	+0.9
LSA				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.8						
LSA	Lhasa	24.70	353	*e*P	P	09 06 04.1	+1.0
	comp=Z,18nm,0.6s,mb4.8						
KOLN	Koldanda	24.85	336	*e*P	P	09 06 04.9	+0.3
	comp=Z,39nm,0.8s,mb5.0						
ENH	Enshi	28.77	28	*e*P	P	09 06 38.8	-1.8
	comp=Z,8.0nm,0.6s,mb4.6						
WHN	Wuhan	31.48	34	*e*P	P	09 07 04.3	-0.3
XAN	Xi'an	31.78	23	P	P	09 07 05.3	-1.9
XAN				AP	pP	09 07 14.5	-3.5
XAN				AMB	AMB		
	comp=Z,31nm,0.7s,mb5.2						
GTA	Gaotai	34.52	7	P	P	09 07 30.0	-0.9
GTA				AMB	AMB		
	comp=Z,14nm,0.7s,mb5.0						
NJ2	Nanjing	35.21	37	*e*P	P	09 07 35.3	-1.5
NJ2				AP	pP	09 07 45.0	-2.7
NJ2				XP	sP	09 07 49.0	-3.7
NJ2				S	S	09 12 58.0	-8.7
NJ2				AMB	AMB		
	comp=Z,630nm,4.4s						
NJ2				LR	LR		
	comp=N,1μm,17.2s,MS4.8						
NJ2				LR	LR		
	comp=E,860nm,13.2s,MS4.8						
NJ2				LR	LR		
	comp=Z,570nm,14.6s,MS4.5						
JOW	Kunigami	38.79	52	P	P	09 08 07.5	+0.5
	comp=Z,17nm,0.6s,mb4.9,baz=53,slow=10,SNR=4.7						
WMQ	Urumqi	39.06	352	*e*P	P	09 08 09.5	+0.5
WMQ				XP	sP	09 08 24.0	-0.8
WMQ				S	S	09 14 06.0	+0.6
WMQ				SS	SS	09 16 50.0	-0.8
WMQ				LR	LR		
	comp=N,75nm,18.0s,MS3.6						
WMQ				LR	LR		
	comp=E,25nm,18.0s,MS3.6						
WMQ				LR	LR		
	comp=Z,27nm,18.0s,MS3.1						
BJT	Baijiatuau	39.89	26	*e*P	P	09 08 17.0	+1.0
BJT				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJT	Baijiatuau	39.89	26	*e*P	P	09 08 17.0	+1.1
	comp=Z,8.0nm,0.6s,mb4.6						
BJI	Beijing	39.91	26	*e*P	P	09 08 16.8	+0.7
BJI				LR	LR		
	comp=Z,62nm,24.1s,MS3.4						
UCH	Uchtor	41.06	337	P	P	09 08 28.5	+2.9
	SNR=8.6						
KBK	Karagaybulak	41.26	338	P	P	09 08 28.7	+1.4
	SNR=6.1						
AML	Almayashu	41.30	336	P	P	09 08 30.7	+3.1
	SNR=18						
AAK	Ala-Archa	41.41	338	*i* P	P	09 08 31.1	+2.6
AAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.2						
AAK	Ala-Archa	41.41	338	*e*P	P	09 08 30.5	+2.0
	comp=Z,5.4nm,0.8s,mb4.2						
EKS2	Erkin-Say	41.71	337	P	P	09 08 33.8	+2.8
	SNR=7.0						
USP	Ospenovka	41.95	338	P	P	09 08 33.3	+0.3
	SNR=9.9						
MKAR	Makanchi Array	42.89	348	*i* P	P	09 08 40.3	-0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SONM	Songino Array	43.81	12	P	P	09 08 47.1	-1.0
	comp=Z,5.3nm,0.7s,mb4.4,baz=192,slow=8.1,SNR=68						
SONM				PcP	PcP	09 10 34.1	-0.6
	comp=Z,1.8nm,0.5s,baz=202,slow=3.6,SNR=10						
SONM				ScP		09 14 21.9	
	comp=Z,0.4nm,0.9s,baz=198,slow=3.4,SNR=3.4						
ULN	Ulaanbaatar	43.97	12	*e*P	P	09 08 48.2	-1.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ULN	Ulaanbaatar	43.97	12	*e*P	P	09 08 48.2	-1.2
	comp=Z,2.8nm,0.7s,mb4.1						
ZAK	Zakamensk	45.76	8	*e*P	P	09 08 58.2	-5.4
ZAK				*e*		09 10 39.8	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
WRA	Warramunga Arr	46.37	124	P	P	09 09 08.5	-0.4
	comp=Z,12nm,0.6s,mb5.0,baz=303,slow=9.2,SNR=123						
TLY	Talaya	47.07	8	*e*P	P	09 09 13.7	-0.2
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
CN2	Changchun	47.22	30	*e*P	P	09 09 16.5	+1.3
KURK	Kurchatov	47.40	346	*i* P	P	09 09 15.8	-0.8
KURK	Kurchatov	47.40	346	*e*P	P	09 09 16.1	-0.5
	comp=Z,9.0nm,0.9s,mb4.7						
ASPA	Alice Springs	47.87	128	*e*P	P	09 09 20.2	-0.4
ASAR	Alice Springs	47.87	128	P	P	09 09 20.1	-0.5
	comp=Z,2.7nm,0.6s,mb4.4,baz=300,slow=7.8,SNR=40						
ASAR				PcP	PcP	09 10 48.8	-0.4
	comp=Z,2.7nm,1.1s,baz=308,slow=4.6,SNR=4.4						
ASAR				LR	LR	09 29 23.2	
	comp=Z,49nm,19.1s,MS3.5,baz=250,slow=36						
ZAL	Zalesovo	49.36	352	P	P	09 09 31.1	-0.5
	comp=Z,3.8nm,0.3s,mb4.9,baz=308,slow=6.1,SNR=23						
MDJ	Mudanjiang	49.94	32	P	P	09 09 36.0	-0.2
MDJ				XP	sP	09 09 48.8	-3.3
MDJ				PP	PP	09 11 31.0	-1.1
MDJ				SCP		09 14 49.0	
MDJ				XS		09 17 00.5	
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.4s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,102nm,5.8s						
MDJ				LR	LR		
	comp=N,20nm,21.7s,MS3.1						
MDJ				LR	LR		
	comp=E,11nm,23.6s,MS3.1						
MDJ				LR	LR		
	comp=Z,28nm,23.1s,MS3.2						
NVS	Novosibirsk	50.45	352	*i* P	P	09 09 38.1	-1.9
BVA0	Borovoye Array	51.75	342	*i* P	P	09 09 48.8	-1.0
BVAR	Borovoye Array	51.75	342	P	P	09 09 49.0	-0.8
	comp=Z,2.1nm,0.7s,mb4.2,baz=149,slow=8.6,SNR=17						
CHKZ	Chkalovo	52.24	342	*i* P	P	09 09 52.8	-0.7
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
CHKZ	Chkalovo	52.24	342	*e*P	P	09 09 52.7	-0.8
	comp=Z,12nm,0.7s,mb4.9						
PMG	Port Moresby	54.40	105	P	P	09 10 08.9	-1.2
	comp=Z,5.9nm,0.6s,mb4.7,baz=357,slow=24,SNR=3.6						
BOD	Bodaibo	54.78	13	*e*P	P	09 10 08.3	-3.9
BOD				*e*		09 10 25.9	
CTA	Charters Tower	56.65	118	LR	LR	09 37 44.9	
	comp=Z,55nm,18.8s,MS3.7,baz=49,slow=39						
ASAJ	Asahikawa	57.30	40	P	P	09 10 29.8	-0.8
	comp=Z,2.1nm,0.4s,mb4.5,baz=20,slow=26,SNR=3.8						
KMBO	Kilima Mbogo	57.53	265	P	P	09 10 34.0	+1.5
KMBO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KMBO	Kilima Mbogo	57.53	265	P	P	09 10 33.9	+1.4
	comp=Z,1.3nm,0.7s,mb4.1,baz=58,slow=21,SNR=4.0						
KMBO	Kilima Mbogo	57.53	265	P	P	09 10 34.0	+1.4
	comp=Z,2.8nm,1.0s,mb4.2						
STKA	Stephens Creek	57.93	133	P	P	09 10 34.9	-0.2
	comp=Z,0.7nm,0.4s,mb4.1,baz=334,slow=19,SNR=3.2						
KIV	Kislovodsk	59.65	319	*e*P	P	09 11 01.8	+15
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ASF	Jabal al Asfar	60.07	304	P	P	09 10 51.6	+1.7
	comp=Z,1.5nm,0.3s,mb4.4,baz=183,slow=3.4,SNR=2.5						
YAK	Yakutsk	62.53	18	*e*P	P	09 11 02.8	-3.3
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
BRTR	Keskin Array B	64.54	312	P	P	09 11 18.7	-1.0
	comp=Z,1.1nm,0.8s,mb4.0,baz=117,slow=8.3,SNR=4.6						
OBN	Obninsk	67.94	328	P	P	09 11 39.0	-1.9
LSZ	Lusaka	68.71	252	P	P	09 11 46.0	-0.4
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.5s,mb4.3						
LSZ	Lusaka	68.71	252	P	P	09 11 46.0	-0.5
	comp=Z,6.1nm,1.5s,mb4.3						
MA2	Magadan	69.07	27	*e*P	P	09 11 46.7	-1.2
MA2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MATP	Matopo	69.55	246	P	P	09 11 52.8	+1.2
	comp=Z,1.1nm,0.7s,mb3.9,baz=51,slow=7.3,SNR=3.6						
TIXI	Tiksi	69.89	11 ⇑	*i*P	P	09 11 50.6	-2.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
AKASG	Malin Array Be	70.58	322	P	P	09 11 55.6	-1.7
	comp=Z,0.5nm,0.5s,mb3.7,baz=133,slow=42,SNR=5.1						
LBTB	Lobatse	73.25	242	P	P	09 12 14.6	+0.8
	comp=Z,1.9nm,0.9s,mb4.0,baz=171,slow=16,SNR=3.0						
KOLS	Kolonicke sedl	74.55	319	*e*P	P	09 12 21.2	+0.4
FINES	FINESS Array B	75.35	332	P	P	09 12 24.7	-0.4
	comp=Z,1.2nm,0.6s,mb4.0,baz=94,slow=5.7,SNR=15						
OJC	Ojcow	76.35	320	*e*P	P	09 12 30.4	-0.6
ARCES	ARCESS Array B	78.01	340	P	P	09 12 41.4	+1.5
	comp=Z,2.4nm,0.7s,mb4.2,baz=76,slow=5.0,SNR=5.2						
VRAC	Vranov	78.30	319	P	P	09 12 41.4	-0.5
	comp=Z,1.2nm,0.5s,mb4.1,baz=132,slow=17,SNR=2.7						
BILL	Bilibino	78.54	21	P	P	09 12 42.0	-0.9
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
DPC	Dobruska-Polom	78.58	320	*e*P	P	09 12 44.3	+0.9
GERES	GERESS Array B	80.16	319	P	P	09 12 52.9	+0.9
	comp=Z,3.3nm,0.7s,mb4.3,baz=117,slow=3.0,SNR=13						
KHC	Kasperske Hory	80.25	319	*e*P	P	09 12 52.1	-0.4
KHC				*e*	pP	09 13 06.5	+2.2
KHC	Kasperske Hory	80.25	319	*e*P	P	09 12 52.1	-0.4
KHC				x	pP	09 13 06.5	+2.2
HFS	Hagfors	81.05	330	P	P	09 12 56.1	-0.4
	comp=Z,2.0nm,0.8s,mb4.1,baz=90,slow=4.4,SNR=5.3						
JMIC	Jan Mayen	89.47	341	P	P	09 13 38.0	0.0
	comp=Z,41nm,1.0s,baz=125,slow=5.2,SNR=3.5						
EKA	Eskdalemuir Ar	90.23	326	P	P	09 13 42.5	+0.7
	comp=Z,2.4nm,0.9s,mb4.5,baz=90,slow=5.0,SNR=4.9						
ILAR	Eielson Array	97.18	22	LR	LR	10 01 18.4	
	comp=Z,97nm,18.2s,MS4.3,baz=173,slow=37						
INK	Inuvik	99.56	16	P	P	09 14 24.0	-0.2
	comp=Z,0.4nm,0.6s,mb4.0,baz=299,slow=11,SNR=6.0						
NVAR	Mina Array Bea	127.10	32	PKP	PKPdf	09 19 47.3	+2.4
	comp=Z,0.4nm,0.5s,baz=300,slow=2.9,SNR=5.5						
PDAR	Pinedale Array	127.62	22	PKP	PKPdf	09 19 46.9	+1.1
	comp=Z,0.3nm,0.5s,baz=54,slow=2.5,SNR=4.2						
TXAR	Lajitas Array	141.59	26	PKhKP		09 20 07.5	
	comp=Z,0.4nm,0.7s,baz=157,slow=1.2,SNR=7.5						

BJI ***27*** *09:03:10.1, 1.20S×24.60W, h10^{km}, mB5.0, Ms4.9, Msz4.5*

IDC ***27*** *09:03:10.8±0.5, 1.14S×24.57W, mb4.3/25, mb1 4.4/25, mb1mx4.3/32, mbtmp4.3/25, MS4.4/16, Ms1 4.4/16, ms1mx4.1/20, Error ellipse: s-maj=17.8km s-min=13.6km az=17.0*

NEIC ***27*** *09:03:12.2±0.3, 1.20S×24.60W, h10^{km}, mb4.7/12, MS4.6/5, Error ellipse: s-maj=11.2km s-min=7.8km az=181.0*

ISC 27 09:03:10.8±0.4**, 1.10S**±0.09×**24.48W**±0.06**, h10**^{km}**, n64,** σ**0**^{s}**98**/48**, mb4.4**/33**, MS4.4**/19**, 1D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	12.33	247	*e*P	P	09 06 03.9	-5.6
	8.6nm,0.5s						
DBIC	Dimbokro	21.05	68	P	P	09 07 56.8	-0.8
	23nm,0.8s,mb4.5,baz=236,slow=12,SNR=29						
DBIC				LR	LR	09 14 17.0	
	comp=Z,2μm,21.0s,MS4.4,baz=239,slow=32						
DBIC	Dimbokro	21.05	68	*e*P	P	09 07 57.0	-0.6
	36nm,1.0s,mb4.7						
DBIC				LR	LR		
	comp=Z,2μm,22.0s,MS4.4						
BDFB	Brasilia	27.35	237	P	P	09 09 00.4	+2.1
	comp=Z,2.0nm,0.7s,mb3.8,baz=67,slow=13,SNR=3.0						
BDFB				LR	LR	09 19 12.6	
	comp=Z,2μm,18.2s,MS4.8,baz=61,slow=35						
SAML	Samuel	39.30	257	*e*P	P	09 10 41.7	-0.3
	comp=Z,8.6nm,1.3s,mb4.3						
SAML				LR	LR		
	comp=Z,2μm,21.0s,MS4.9						
ESDC	Sonseca Array	44.71	23	P	P	09 11 27.6	+1.5
	comp=Z,5.4nm,1.0s,mb4.3,baz=211,slow=8.1,SNR=13						
TSUM	Tsumeb	44.95	116	P	P	09 11 29.7	+1.5
	comp=Z,4.3nm,0.8s,mb4.4,baz=280,slow=10.0,SNR=9.7						
TSUM				LR	LR	09 25 46.1	
	comp=Z,412nm,20.8s,MS4.3,baz=321,slow=30						
TSUM	Tsumeb	44.95	116	P	P	09 11 29.4	+1.2
	comp=Z,4.6nm,0.8s,mb4.4						

SJG	San Juan	45.22	297	P	P	09 11 30.1	-0.2
	comp=Z,2.2nm,0.3s,mb4.5,baz=283,slow=17,SNR=2.8						
LPAZ	La Paz	45.57	248	P	P	09 11 34.0	+0.9
	comp=Z,1.7nm,0.7s,mb4.1,baz=168,slow=3.0,SNR=5.9						
LPAZ				LR	LR	09 30 08.4	
	comp=Z,405nm,19.2s,MS4.4,baz=50,slow=36						
LPAZ	La Paz	45.57	248	eP	P	09 11 33.5	+0.3
	comp=Z,5.8nm,1.0s,mb4.5						
LPAZ				LR	LR		
	comp=Z,623nm,21.0s,MS4.5						
SDV	Santo Domingo	47.04	283	P	P	09 11 44.7	-0.2
	comp=Z,4.9nm,1.1s,mb4.3,baz=346,slow=2.0,SNR=3.0						
SDV	Santo Domingo	47.04	283	eP	P	09 11 44.4	-0.5
	comp=Z,3.4nm,0.9s,mb4.3						
SDV				LR	LR		
	comp=Z,252nm,22.0s,MS4.1						
ROSC	El Rosal	50.15	277	LR	LR	09 32 38.0	
	comp=Z,446nm,18.8s,MS4.5,baz=156,slow=35						
SUR	Sutherland	52.75	131	P	P	09 12 29.2	+0.8
	comp=Z,4.1nm,0.6s,mb4.5,baz=166,slow=19,SNR=6.3						
LBTB	Lobatse	53.83	120	P	P	09 12 36.3	-0.2
	comp=Z,2.5nm,0.7s,mb4.3,baz=306,slow=6.0,SNR=3.6						
LSZ	Lusaka	53.83	108	eP	P	09 12 35.0	-1.6
	comp=Z,5.3nm,0.8s,mb4.5						
MATP	Matopo	55.17	114	P	P	09 12 45.0	-1.4
	comp=Z,4.1nm,0.7s,mb4.6,baz=276,slow=8.1,SNR=12						
PLCA	Paso Flores	57.35	221	LR	LR	09 39 15.9	
	comp=Z,303nm,19.3s,MS4.4,baz=51,slow=38						
EKA	Eskdalemuir Ar	58.90	14	P	P	09 13 12.2	-0.1
	comp=Z,2.1nm,0.8s,mb4.2,baz=212,slow=7.9,SNR=4.4						
GERES	GERESS Array B	59.67	28	P	P	09 13 17.9	+0.1
	comp=Z,1.9nm,0.7s,mb4.2,baz=225,slow=5.7,SNR=5.3						
CLL	Collm	61.10	26	eP	P	09 13 27.0	-0.5
CLL	Collm	61.10	26	P	P	09 13 27.0	-0.5
VRAC	Vranov	61.38	29	P	P	09 13 28.1	-1.3
	comp=Z,1.9nm,0.5s,mb4.5,baz=6.9,slow=18,SNR=3.7						
KMBO	Kilima Mbogo	61.72	91	P	P	09 13 33.1	+0.9
	comp=Z,1.8nm,0.8s,mb4.3,baz=281,slow=8.6,SNR=5.5						
KMBO				LR	LR	09 37 46.6	
	comp=Z,950nm,18.7s,MS5.0,baz=99,slow=34						
SCHQ	Schefferville	65.67	335	LR	LR	09 36 56.3	
	comp=Z,187nm,18.2s,MS4.3,baz=62,slow=31						
ASF	Jabal al Asfar	66.66	54	P	P	09 14 06.0	+1.7
	comp=Z,1.2nm,0.3s,mb4.3,baz=152,slow=1.4,SNR=2.5						
BRTR	Keskin Array B	66.72	45	P	P	09 14 04.5	0.0
	comp=Z,1.8nm,0.9s,mb4.1,baz=252,slow=3.9,SNR=5.8						
NOA	NORSAR Array B	67.75	18	P	P	09 14 10.0	-0.6
	comp=Z,2.0nm,0.9s,mb4.1,baz=214,slow=6.3,SNR=3.8						
NOA				LR	LR	09 43 18.5	
	comp=Z,48nm,19.2s,MS3.7,baz=245,slow=36						
NOA	NORSAR Array B	67.75	18	P	P	09 14 10.0	-0.6
NOA				LR	LR	09 43 18.5	
AKASG	Malin Array Be	68.80	33	P	P	09 14 16.6	-0.8
	comp=Z,10nm,1.1s,mb4.7,baz=238,slow=6.7,SNR=14						
HBAR	Harrisburg	71.44	308	eP	P	09 14 33.6	-0.1
FRB	Frobisher Bay	72.39	341	P	P	09 14 39.3	+0.5
	comp=Z,3.5nm,0.8s,mb4.3,baz=146,slow=5.1,SNR=4.3						
CCM	Cathedral Cave	72.56	311	eP	P	09 14 38.7	-1.7
	comp=Z,13nm,1.0s,mb4.8						
CCM				LR	LR		
	comp=Z,532nm,21.0s,MS4.8						
FINES	FINESS Array B	73.23	23	P	P	09 14 44.2	+0.4
	comp=Z,2.1nm,0.8s,mb4.1,baz=252,slow=6.0,SNR=3.7						
FINES				LR	LR	09 48 53.6	
	comp=Z,76nm,18.3s,MS4.0,baz=209,slow=37						
SUMG	Summit	74.09	356	eP	P	09 14 49.0	+0.4
	comp=Z,9.8nm,1.1s,mb4.7						
GNI	Garni	74.95	48	P	P	09 14 55.9	+1.7
	comp=Z,2.1nm,0.3s,mb4.5,baz=138,slow=7.3,SNR=4.1						
GNI				LR	LR	09 49 07.9	
	comp=Z,109nm,20.4s,MS4.1,baz=70,slow=37						
ULM	Lac du Bonnet	79.03	322	P	P	09 15 16.2	-0.5
	comp=Z,2.4nm,1.0s,mb4.1,baz=92,slow=6.1,SNR=3.0						
ULM				LR	LR	09 43 24.2	
	comp=Z,196nm,21.7s,MS4.4,baz=46,slow=30						
ULM	Lac du Bonnet	79.03	322	P	P	09 15 16.2	-0.5
ULM				LR	LR	09 43 24.2	
SYO	Syowa Base	79.91	161	⇓P	P	09 15 18.6	-2.5
FCC	Fort Churchill	80.48	330	eP	P	09 15 23.7	-0.7
	comp=Z,16nm,1.3s,mb4.8						
TXAR	Lajitas Array	81.11	300	P	P	09 15 27.9	-0.4
	comp=Z,0.8nm,0.8s,mb3.7,baz=104,slow=5.4,SNR=11						
TXAR				LR	LR	09 50 52.1	
	comp=Z,85nm,18.2s,MS4.1,baz=85,slow=35						
MNTX	Cornudas Mount	82.83	302	eP	P	09 15 35.6	-1.5
SDCO	Great Sand Dun	83.56	308	eP	P	09 15 40.7	-0.2
	comp=Z,10nm,1.4s,mb4.8						
LAO	LASA Array	85.12	317	eP	P	09 15 48.9	+0.4
	comp=Z,17nm,1.0s,mb5.1						
RES	Resolute Bay	85.94	345	eP	P	09 15 52.6	+0.7
	comp=Z,6.0nm,1.0s,mb4.8						
PV10	Paradox Valley	86.40	308	eP	P	09 15 56.3	+1.2
PDAR	Pinedale Array	87.12	313	P	P	09 15 58.5	+0.1
	comp=Z,0.8nm,0.8s,mb4.0,baz=90,slow=4.4,SNR=6.6						
PDAR				LR	LR	09 49 46.0	
	comp=Z,227nm,18.5s,MS4.6,baz=118,slow=32						
QLMT	Earthquake Lak	88.60	315	P	P	09 16 06.6	+1.1
YKA	Yellowknife Ar	91.02	332	P	P	09 16 16.0	-0.4
	comp=Z,1.9nm,0.7s,mb4.6,baz=96,slow=5.0,SNR=28						
YKA				LR	LR	09 51 32.3	
	comp=Z,309nm,19.7s,MS4.8,baz=85,slow=32						
YKA	Yellowknife Ar	91.02	332	P	P	09 16 16.0	-0.4
YKA				LR	LR	09 51 32.3	
NVAR	Mina Array Bea	93.68	308	LR	LR	09 53 12.8	
	comp=Z,152nm,21.6s,MS4.4,baz=90,slow=32						
RKT	Rikitea	108.35	245	eLR	LR	09 53 22.8	
	comp=Z,189nm,40.0s						
TAOE	Nuku Hiva Isla	115.16	260	eLR	LR	09 56 29.5	
SONM	Songino Array	117.06	35	PKP	PKPdf	09 21 57.6	-1.7
	comp=Z,0.6nm,0.7s,baz=265,slow=1.2,SNR=6.6						
LZH	Lanzhou	120.89	48	ePKP	PKPdf	09 22 00.5	-6.6
LZH				XPKP		09 22 05.3	
TBI	Tubuai	121.29	242	eSS	SS	09 40 25.9	+15
TBI				eLR	LR	09 59 20.2	
	comp=Z,138nm,38.8s						
CMAR	Chiang Mai Arr	121.92	69	PKP	PKPdf	09 22 11.0	+1.6
	comp=Z,0.5nm,0.3s,baz=284,slow=3.7,SNR=3.5						
PPT	Papeete	122.87	248	eLR	LR	10 00 05.6	
	comp=Z,349nm,26.0s						
STKA	Stephens Creek	144.65	159	PKP	PKPdf	09 22 48.8	-2.7
	comp=Z,5.9nm,0.7s,baz=187,slow=2.7,SNR=12						
STKA	Stephens Creek	144.65	159	ePKPdf	PKPdf	09 22 48.5	-3.0
ASPA	Alice Springs	147.63	141	eP	PKPdf	09 22 57.2	+0.5
ASAR	Alice Springs	147.64	141	PKPbc	PKPdf	09 22 57.4	+0.7
	comp=Z,5.0nm,0.6s,baz=210,slow=2.1,SNR=44						
WRA	Warramunga Arr	150.53	136	PKPbc	PKPdf	09 23 04.2	+2.8
	comp=Z,3.2nm,0.9s,baz=246,slow=2.7,SNR=18						

CSEM ***27*** *09:05:29.4±0.3, 30.85N×56.75E, h16^{km}, ML4.3/2, Error ellipse: s-maj=10.2km s-min=2.9km az=69.0*
THR ***27*** *09:05:29.2±0.7, 30.83N×56.78E, h14^{km}±9^{km}, ML3.4*
TEH ***27*** *09:05:32.3, 30.88N×56.73E, h10^{km}, Mn3.9*
NEIC ***27*** *09:05:32.2, 30.88N×56.73E, h10^{km}, MN3.9(TEH), After TEH.*
ISC 27 09:05:27.9±1.9**, 30.87N**±0.06×**56.9E**±0.2**, h10^{km}, n14, σ1^{s}02**/19**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.90	188	i PG	Pg	09 05 45.0	-0.8
KRBR				eSG	Sg	09 05 57.2	-0.6
KRBR				AML	AML	09 05 59.9	
	comp=N,2µm,0.3s						
KRBR	Kerman	0.90	188	i Pg	Pg	09 05 45.0	-0.8
	SNR=90						
KRBR				eSg	Sg	09 05 57.2	-0.6
	comp=N,2µm,0.3s,SNR=90						
IBAF	Bafgh	1.35	302	Pg	Pg	09 05 52.3	-2.6
IMEH	Mehriz	2.03	285	Pn	Pn	09 06 03.5	+0.9
ICHK	Chekchek	2.53	303	Pn	Pn	09 06 10.5	+0.7
BNDS	Bandar-Abbas	3.52	191	ePN	Pn	09 06 25.1	+1.2
BNDS				AML	AML	09 07 23.0	
	comp=N,56nm,0.6s						
ISRV	Sarvestan	3.60	247	Pn	Pn	09 06 30.8	+5.8
NASN	Na'in	3.98	300	ePN	Pn	09 06 31.3	+0.9
NASN				eSG	Sg	09 07 30.9	-10
NASN				AML	AML	09 07 45.7	
	comp=N,64nm,0.4s						
NASN	Na'in	3.98	300	ePn	Pn	09 06 31.3	+0.9
	SNR=52						
NASN				eSg	Sg	09 07 30.9	-10
	comp=N,64nm,0.4s,SNR=90						
IMOK	Mook	4.07	244	Pn	Pn	09 06 32.3	+0.7
IFIR	Firoozkooh	5.89	325	Pn	Pn	09 06 57.5	+0.1
IDMV	Damavand	6.22	320	Pn	Pn	09 07 01.8	-0.2
IAFJ	Afjeh	6.60	320	Sn	Sn	09 08 17.3	-6.2
IRAZ	Razeghan	7.39	310	Pn	Pn	09 07 17.5	-1.0
IRAZ				Sn	Sn	09 08 35.7	-7.6

NAO ***27*** *09:19:15.7±2.4, 67.68N×33.60E, ML2.8*
IDC ***27*** *09:19:15.2±2.4, 67.73N×34.00E, mb1 3.5/4, mb1mx3.2/20, mbtmp3.4/4, ML3.1/4, Error ellipse: s-maj=23.6km s-min=9.2km az=76.0*
CSEM ***27*** *09:19:15.2±0.3, 67.76N×33.57E, h0^{km}, ML2.8, Error ellipse: s-maj=5.5km s-min=2.5km az=99.0*
HEL 27 09:19:15.4±0.3**, 67.70N×33.77E, ML2.7, ML2.8**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	Apatity Array	0.31	252	Pg	Pg	09 19 20.6	-1.0
	baz=86,slow=16						
APA0				Lg		09 19 24.9	
	baz=43,slow=37						
APA0	Apatity Array	0.31	252	i P	Pg	09 19 20.6	-1.0
APA0				i S	Sg	09 19 24.9	-0.9
APA0	Apatity Array	0.31	252	Pg	Pg	09 19 20.6	-1.0
	SNR=933						
KU4	Oulanka	2.12	233	eP	Pn	09 19 52.4	-0.2
KU4				eS	Sn	09 20 19.5	-0.5
MSF	Maaselka	2.60	228	eP	Pn	09 19 59.0	-0.3
MSF				eS	Sn	09 20 31.5	-0.5
SGF	Sodankyl	2.79	268	eP	Pn	09 20 00.9	-1.2
SGF				eS	Sn	09 20 35.6	-1.3
SGF				MSG		09 20 48.5	
	comp=Z,24nm,0.3s						
SGF	Sodankyl	2.79	268	P	Pn	09 20 00.8	-1.3
SGF				S	Sn	09 20 35.6	-1.4
	comp=Z,24nm,0.3s						
KEV	Kevo	3.21	313	eP	Pn	09 20 07.5	-0.6
KEV				eS	Sn	09 20 45.4	-2.3
KEV				MSG		09 21 00.2	
	comp=Z,52nm,0.4s						
KEV	Kevo	3.21	313	P	Pn	09 20 07.5	-0.6
KEV				S	Sn	09 20 45.3	-2.4
	comp=Z,52nm,0.4s						
ARA0	ARCESS Array S	3.54	305	Pn	Pn	09 20 11.4	-1.3
	baz=122,slow=16						
ARA0				Pg	Pg	09 20 19.8	-6.3
	baz=115,slow=16						
ARA0				Sn	Sn	09 20 52.8	-3.2
	baz=121,slow=28						
ARA0				Lg		09 21 04.2	
	baz=119,slow=37						
ARA0	ARCESS Array S	3.54	305	eP	Pn	09 20 11.4	-1.3
ARA0				ePG	Pg	09 20 19.8	-6.3
ARA0				eS	Sn	09 20 52.8	-3.2
ARA0				eSG	Sg	09 21 04.2	-9.1
ARA0	ARCESS Array S	3.54	305	P	Pn	09 20 11.4	-1.4
ARCES	ARCESS Array B	3.54	305	Pn	Pn	09 20 11.4	-1.4
	comp=Z,5.5nm,0.3s,baz=122,slow=14,SNR=239						
ARCES				Pg	Pg	09 20 19.8	-6.3
	comp=Z,5.1nm,0.3s,baz=111,slow=15,SNR=21						
ARCES				Sn	Sn	09 20 52.7	-3.3
	comp=Z,5.9nm,0.3s,baz=123,slow=27,SNR=17						
ARCES				Lg		09 21 07.9	
	comp=Z,15nm,0.3s,baz=112,slow=29,SNR=10						
OUL	Oulu	4.11	234	ePB	Pb	09 20 24.9	-3.6
OUL				eSG	Sg	09 21 22.2	-10
OUL				MSG		09 21 24.1	
	comp=Z,13nm,0.4s						
KTK1	Kautokeino	4.12	293	eP	Pn	09 20 19.5	-1.4
KIF	Kilpisjarvi	4.97	291	eS	Sn	09 21 26.4	-5.9
FIA0	FINESS Array S	7.10	211	Pn	Pn	09 20 59.0	-4.1
	baz=33,slow=16						
FIA0				Sn	Sn	09 22 19.0	-6.4
	baz=27,slow=28						
FIA0				Lg		09 22 50.7	
	baz=35,slow=28						
FIA0	FINESS Array S	7.10	211	eP	Pn	09 20 59.0	-4.1
FIA0				eS	Sn	09 22 19.0	-6.4
FIA0				eSG	Sg	09 22 50.7	-21
FINES	FINESS Array B	7.10	211	Pn	Pn	09 20 58.9	-4.2
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=7.6						
FINES				Pg	Pg	09 21 18.1	-19
	comp=Z,0.2nm,0.3s,baz=43,slow=13,SNR=3.9						
FINES				Sn	Sn	09 22 16.4	-9.1
	comp=Z,0.5nm,0.3s,baz=22,slow=21,SNR=8.3						
FINES				Lg		09 22 51.7	
	comp=Z,1.5nm,0.3s,baz=27,slow=27,SNR=8.8						
HFS	Hagfors	11.59	239	Pn	P	09 21 57.5	-7.4
	baz=54,slow=16						
HFS	Hagfors	11.59	239	eP	P	09 21 57.5	-7.4
HFS	Hagfors	11.59	239	Pn	P	09 21 59.7	-5.2
	comp=Z,0.0nm,0.3s,baz=30,slow=12,SNR=4.7						
HFS				Sn	S	09 24 05.0	-11
	comp=Z,0.1nm,0.3s,baz=70,slow=22,SNR=4.9						
SPA0	Spitsbergen Ar	11.61	342	Pn	P	09 21 58.5	-6.7
	baz=144,slow=8.6						
SPA0	Spitsbergen Ar	11.61	342	eP	P	09 21 58.5	-6.7
NOA	NORSAR Array B	11.77	246	Pn	P	09 22 01.3	-6.0
	comp=Z,0.2nm,0.3s,baz=43,slow=11,SNR=3.0						
NOA				Sn	S	09 24 08.3	-12
	comp=Z,0.2nm,0.3s,baz=39,slow=17,SNR=2.9						

MAN 27 09:21:27.3, 11.95N×121.39E, h2^{km}, mb3.7, ML2.5, MS2.0, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJMP	San Jose	0.57	332	eP	Pg	09 21 39.0	+0.2
OTRP	Odiongan	0.74	56	eP	Pg	09 21 41.8	-0.2
CUYO	Cuyo Island	1.15	199	eP	Pb	09 21 49.2	-0.3
RCP	Roxas	1.38	106	⇑eP	Pb	09 21 53.1	-0.4
LUBP	Lubang	2.10	328	eP	Pn	09 22 03.5	-0.3

IDC ***27*** *09:55:15.2±1.5, 17.74S×177.51W, mb4.0/6, mb1 4.4/6, mb1mx4.0/15, mbtmp4.0/6, Error ellipse: s-maj=104.3km s-min=20.3km az=150.0*
NEIC ***27*** *09:55:22.2±0.9, 17.79S×177.56W, h50^{km}, mb4.1/4, Error ellipse: s-maj=63.2km s-min=10.7km az=151.0*
ISC 27 09:55:18.9±1.4**, 17.7S**±0.6×**177.6W**±0.3**, h33^{km}, n11, σ0^{s}33**/11**, mb4.0**/9**, 2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.37	241	⇓iP	P	10 02 47.4	+0.3
	2.1nm,0.8s,mb3.9						
STKA	Stephens Creek	39.37	241	P	P	10 02 47.5	+0.3
	2.6nm,0.6s,mb4.1,baz=98,slow=8.1,SNR=10						
WRAB	Tennant Creek	45.39	259	eP	P	10 03 36.5	0.0
	1.5nm,0.5s,mb4.1						
WRA	Warramunga Arr	45.40	259	P	P	10 03 36.7	+0.2
	1.2nm,0.7s,mb3.8,baz=96,slow=6.8,SNR=20						
ASAR	Alice Springs	45.56	254	P	P	10 03 37.8	0.0
	6.8nm,0.5s,mb4.8,baz=90,slow=8.4,SNR=191						
ASPA	Alice Springs	45.56	254	⇓iP	P	10 03 37.7	-0.1
FITZ	Fitzroy Crossi	53.80	260	eP	P	10 04 40.7	-0.3
	3.4nm,0.5s,mb4.5						
NVAR	Mina Array Bea	78.78	44	P	P	10 07 20.8	+0.6
	0.7nm,0.6s,mb3.7,baz=226,slow=10,SNR=7.4						
HLID	Hailey	84.00	41	eP	P	10 07 47.6	+0.2
	0.5nm,0.7s,mb3.8						
TXAR	Lajitas Array	85.27	57	P	P	10 07 53.4	-0.7
	1.0nm,0.7s,mb4.0,baz=224,slow=7.1,SNR=15						
ILAR	Eielson Array	85.54	13	P	P	10 07 54.4	-0.2
	0.2nm,0.7s,mb3.5,baz=225,slow=4.9,SNR=7.5						

NEIC ***27*** *10:20:09.7, 32.52S×71.47W, h33^{km}, ML2.7(GUC), After GUC.*
GUC 27 10:20:09.7±0.8**, 32.52S×71.47W, h33^{km}**±3^{km}**, MD3.5, ML2.7, 8C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	Papudo	0.03	121	⇑iP	P	10 20 15.3	+0.1
PACH				i S	S	10 20 19.0	0.0
IHA	Instituto Hidr	0.52	196	⇑iP	P	10 20 20.2	-0.3
IHA				i S	S	10 20 27.6	-0.8
ROCH	El Roble	0.59	139	⇑iP	P	10 20 22.1	+0.6
ROCH				i S	S	10 20 31.0	+0.8
JACH	Jahuel	0.76	103	⇑iP	P	10 20 24.5	+0.6
JACH				i S	S	10 20 35.3	+1.0
PEL	Peldehue	0.91	133	eP	P	10 20 26.8	+0.7
PEL				i S	S	10 20 39.4	+1.3
ILCH	Illapel	0.92	16	⇑iP	P	10 20 26.7	+0.5
ILCH				i S	S	10 20 39.1	+0.8
ILCH				AMP		10 20 43.2	
	comp=N,395nm,0.2s						
LCCH	Las Cruces	0.96	185	⇑iP	P	10 20 27.1	+0.3
RCDM	Rinconada Maip	1.12	150	⇑iP	P	10 20 29.4	+0.4
RCDM				i S	S	10 20 44.5	+1.1
RCDM				AMP		10 20 44.8	
	comp=E,709nm,0.2s						
CLCH	Cerro Calan	1.18	138	⇓iP	P	10 20 30.8	+0.9
CLCH				i S	S	10 20 46.1	+1.1
CLCH				AMP		10 20 50.1	
	comp=E,154nm,0.4s						
TACH	Talagante	1.22	159	eP	P	10 20 31.2	+0.8
TACH				i S	S	10 20 48.8	+2.8
FCH	Farellones	1.28	129	⇓iP	P	10 20 32.5	+1.2
FCH				i S	S	10 20 49.8	+2.2
FCH				AMP		10 20 50.7	
	comp=N,129nm,0.1s						
PCH	Pirque	1.36	144	i P	P	10 20 34.1	+1.6
CHCH	Chadas Angostu	1.57	154	eP	P	10 20 36.4	+0.9
CHCH				i S	S	10 20 56.8	+2.0
LMEL	Las Melosas	1.70	142	⇑iP	P	10 20 38.8	+1.4
LMEL				i S	S	10 21 00.4	+2.3
LMEL				AMP		10 21 07.1	
	comp=N,169nm,0.2s						

IDC 27 10:21:50.4±5.1**, 28.86S×177.97W, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.8**/12**, mbtmp3.8**/3**, Error ellipse: s-maj=174.6km s-min=80.5km az=156.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.88	255	P	P	10 28 43.5	-2.1
	0.7nm,0.3s,baz=98,slow=12,SNR=3.9						
ASAR	Alice Springs	43.24	265	P	P	10 29 53.5	-1.8
	0.4nm,0.5s,baz=105,slow=7.6,SNR=3.7						
WRA	Warramunga Arr	44.09	271	P	P	10 30 00.8	-1.4
	0.6nm,0.3s,baz=110,slow=7.9,SNR=14						
FINES	FINESS Array B	143.71	341	PKP	PKPdf	10 41 25.9	-2.6
	1.1nm,0.4s,baz=52,slow=5.0,SNR=26						

IDC ***27*** *10:51:21.8±2.1, 48.26N×128.65W, mb3.4/3, mb1 3.6/10, mb1mx3.5/25, mbtmp3.4/10, ML3.5/6, MS2.8/1, Ms1 2.8/1, ms1mx2.5/17, Error ellipse: s-maj=36.7km s-min=13.7km az=70.0*
NEIC ***27*** *10:51:23.6±1.1, 48.39N×128.52W, h10^{km}, mb3.1/1, Error ellipse: s-maj=20.2km s-min=9.2km az=63.0*
ISC 27 10:51:21.6±1.2**, 48.37N**±0.07×**128.6W**±0.2**, h10^{km}, n15, σ1^{s}09**/17**, mb3.4**/3**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGC	Sidney	3.42	83	eP	Pn	10 52 14.8	-1.3
BBB	Bella Bella	3.83	4	Pn	Pn	10 52 22.8	+0.9
	7.3nm,0.3s,baz=194,slow=12,SNR=5.6						
BBB				Sn	Sn	10 53 07.7	+0.2
	baz=231,slow=20,SNR=1.3						
BBB	Bella Bella	3.83	4	Pn	Pn	10 52 22.8	+0.8
BBB				Sn	Sn	10 53 07.7	+0.2
NEW	Newport	7.64	87	Pn	Pn	10 53 14.0	-1.7
	0.4nm,0.3s,baz=289,slow=15,SNR=3.2						
NEW				LR	LR	10 56 20.1	
	comp=Z,65nm,18.9s,baz=325,slow=39						
YBH	Yreka Blue Hor	7.83	146	Pn	Pn	10 53 17.1	-1.2
	0.1nm,0.3s,baz=328,slow=15,SNR=3.3						
NVAR	Mina Array Bea	12.42	139	Pn	P	10 54 22.3	+1.1
	0.0nm,0.3s,baz=321,slow=11,SNR=3.3						
NVAR	Mina Array Bea	12.42	139	Pn	P	10 54 22.3	+1.1
PDAR	Pinedale Array	14.44	106	Pn	P	10 54 51.1	+3.3
	0.0nm,0.3s,baz=328,slow=8.5,SNR=2.7						
YKA	Yellowknife Ar	16.16	24	Pn	P	10 55 09.9	-0.2
	baz=210,slow=13,SNR=4.5						
PV01	Paradox Valley	17.75	118	eP	P	10 55 31.8	+1.5
ILAR	Eielson Array	19.16	336	P	P	10 55 46.3	-1.0
	0.0nm,0.3s,baz=148,slow=8.5,SNR=2.1						
SDCO	Great Sand Dun	19.85	114	P	P	10 55 55.1	-0.3
	0.8nm,0.8s						
ANMO	Albuquerque	21.18	121	P	P	10 56 08.9	-0.4
	1.2nm,1.1s,mb3.2,baz=317,slow=8.5,SNR=3.4						
ULM	Lac du Bonnet	21.31	73	P	P	10 56 11.9	+1.4
	10nm,1.4s,mb4.0,baz=305,slow=7.5,SNR=2.5						
TXAR	Lajitas Array	26.96	126	P	P	10 57 05.0	0.0
	0.4nm,0.9s,mb2.9,baz=339,slow=7.7,SNR=3.2						

RSPR ***27*** *10:56:56.3, 19.04N×68.83W, h146^{km}±3^{km}, MD4.1/14, MD4.1/14*
NEIC ***27*** *10:56:59.1±0.8, 18.50N×68.72W, h144^{km}±18^{km}, MD4.1(RSPR), Error ellipse: s-maj=25.4km s-min=10.5km az=121.0*
IDC ***27*** *10:56:59.9±3.3, 18.44N×68.67W, h158^{km}±72^{km}, mb3.3/4, mb1 3.7/6, mb1mx3.3/22, mbtmp3.9/6, Error ellipse: s-maj=81.5km s-min=22.7km az=134.0*
ISC 27 10:56:57.2±0.9**, 18.6N**±0.1×**68.92W**±0.10**, h136^{km}**±14^{km}**, n21, σ0^{s}86**/35**, mb3.5**/4**, 14C, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.72	95	⇑eP	P	10 57 28.4	-0.3
AGPR				eS	S	10 57 52.5	-0.2
MPR	Mayaguez	1.74	103	⇑eP	P	10 57 29.1	+0.3
MPR				eS	S	10 57 54.1	+1.1
LSP	Las Mesas	1.80	104	⇑eP	P	10 57 29.0	-0.5
MGP	Maguayo	1.84	109	⇑eP	P	10 57 29.0	-1.0
MGP				eS	S	10 57 57.6	+2.5
LRS	Lares	2.00	99	⇑eP	P	10 57 31.7	-0.1
LRS				eS	S	10 57 59.2	+0.9
AOPR	Arecibo Observ	2.08	97	⇑eP	P	10 57 32.0	-0.9
AOPR				eS	S	10 57 59.7	-0.3
PORP	Portuguez	2.24	104	⇑eP	P	10 57 34.5	-0.4
PORP				eS	S	10 58 04.4	+0.6
OBIP	Obispado Ponce	2.27	104	⇑eP	P	10 57 34.9	-0.4
OBIP				eS	S	10 58 05.0	+0.6
CELP	Cerrillos	2.29	103	⇑eP	P	10 57 35.1	-0.5
CELP				eS	S	10 58 06.0	+1.2
CSB	Colonia Sabana	2.64	97	⇑eP	P	10 57 39.3	-0.9
CSB				eS	S	10 58 12.8	-0.1
SJG	San Juan	2.68	100	⇑eP	P	10 57 39.9	-0.7
SJG				eS	S	10 58 13.4	-0.3
SJG	San Juan	2.68	100	P	P	10 57 39.4	-1.3
	34nm,0.3s,baz=310,slow=12,SNR=70						
SJG				S	S	10 58 12.3	-1.4
	120nm,0.3s,baz=18,slow=21,SNR=20						
SJG	San Juan	2.68	100	⇑eP	P	10 57 39.8	-0.9
SJG				eS	S	10 58 13.9	+0.2
HUMP	Col San Antoni	2.95	99	⇑eP	P	10 57 43.0	-1.2
HUMP				eS	S	10 58 19.5	-0.6
CDVI	St. Croix	4.04	102	⇑eP	P	10 57 58.1	-0.6
CDVI	St. Croix	4.04	102	eS	S	10 58 46.7	+0.9
SDV	Santo Domingo	9.81	190	P	P	10 59 15.7	-0.2
	4.0nm,0.3s,baz=54,slow=6.8,SNR=27						
SDV				S	S	11 00 54.5	-10
	0.5nm,0.3s,baz=6.1,slow=18,SNR=3.4						
TXAR	Lajitas Array	33.38	295	P	P	11 03 25.5	+0.7
	0.2nm,0.4s,mb3.2,baz=116,slow=8.5,SNR=12						
SCHQ	Schefferville	36.19	2	P	P	11 03 48.1	-0.1
	2.8nm,0.7s,mb4.0,baz=195,slow=8.6,SNR=3.1						
NVAR	Mina Array Bea	47.06	305	P	P	11 05 19.3	+2.3
	0.5nm,0.6s,mb3.3,baz=90,slow=7.2,SNR=5.1						
YKA	Yellowknife Ar	53.94	336	P	P	11 06 08.7	0.0
	0.6nm,0.5s,mb3.6,baz=111,slow=7.3,SNR=18						

IDC 27 11:02:26.7±18.0**, 6.96S×155.45E, h166^{km}**±114^{km}**, mb3.0**/3**, mb1 3.3**/4**, mb1mx3.1**/14**, mbtmp3.6**/4**, Error ellipse: s-maj=206.8km s-min=33.7km az=102.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.56	253	P	P	11 04 27.5	-0.8
	2.0nm,0.3s,baz=64,slow=8.8,SNR=7.4						
WRA	Warramunga Arr	24.21	236	P	P	11 07 28.6	-0.9
	0.6nm,0.7s,baz=63,slow=8.7,SNR=6.8						
ASAR	Alice Springs	26.53	229	P	P	11 07 48.8	-2.2
	0.2nm,0.4s,baz=58,slow=9.7,SNR=4.4						
SONM	Songino Array	69.55	327	P	P	11 13 17.7	-1.8
	0.5nm,0.7s,baz=142,slow=6.9,SNR=6.5						

IDC 27 11:21:54.5±1.4**, 2.66N×127.81E, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/15**, mbtmp3.5**/4**, Error ellipse: s-maj=139.5km s-min=23.3km az=73.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	164	P	P	11 27 04.5	-1.2
	0.9nm,0.4s,baz=345,slow=11,SNR=33						
ASAR	Alice Springs	26.83	168	P	P	11 27 36.4	-2.3
	0.2nm,0.4s,baz=343,slow=7.6,SNR=5.8						
STKA	Stephens Creek	36.76	160	P	P	11 29 04.5	-1.2
	0.7nm,0.4s,baz=314,slow=11,SNR=4.7						
SONM	Songino Array	48.66	341	P	P	11 30 40.4	-1.9
	0.3nm,0.9s,baz=153,slow=6.4,SNR=2.6						

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*INET **27** 11:46:35.4, 12.86N×88.76W, h15^{km}, MD3.7*
*SSS **27** 11:46:40.4, 11.86N×88.31W, h50^{km}, MD4.2*
*CASC **27** 11:46:41.8±2.5, 12.16N×88.22W, h115^{km}±61^{km}, MD4.0*
*IDC **27** 11:46:41.7±2.1, 13.00N×87.28W, mb3.2/2, mb1 3.6/3, mb1mx3.3/20, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=153.3km s-min=24.0km az=52.0*
*UCR **27** 11:46:43.0, 14.14N×86.12W, h35^{km}, MD4.8*
ISC 27 11:46:39.4±1.6**, 11.94N**±0.08×**88.32W**±0.07**, h10**^{km}±11^{km}**, n21,** σ**0**^{s}**83**/27**, mb3.2**/2**, 4C-5D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.41	19	⇑eP	Pn	11 47 05.0	-0.3
LEON	Leon	1.47	71	eP	Pn	11 47 05.5	-0.7
BLLM	Bellamira	1.50	3	⇓eP	Pn	11 47 06.3	-0.2
SNVI	San Vicente	1.74	343	eP	Pn	11 47 10.6	+0.6
SNVI				eS	Sn	11 47 33.1	+0.7
MOMJ	Momotombo	1.80	75	⇓eP	Pn	11 47 10.2	-0.6
LCBS	La Ceiba	1.82	339	⇑eP	Pn	11 47 10.5	-0.7
LFRS	El Faro	1.83	337	eP	Pn	11 47 10.7	-0.6
LFRS				eS	Sn	11 47 34.7	+0.1
XAVN	Gruta Xavier	1.96	84	eP	Pn	11 47 12.4	-0.6
BOQS	Boqueron	2.02	332	eP	Pn	11 47 13.8	-0.1
MGAN	Managua	2.03	84	eP	Pn	11 47 13.7	-0.5
MGAN				eS	Sn	11 47 42.2	+2.4
SBLS	San Blas	2.28	326	⇑eP	Pn	11 47 17.5	-0.2
SBLS				eS	Sn	11 47 46.1	0.0
SNJE	San Jose	2.29	327	⇑eP	Pn	11 47 18.3	+0.3
RTR	El Retiro	2.34	326	eP	Pn	11 47 18.7	+0.1
RTR				eS	Sn	11 47 47.4	-0.2
RBDL	Robledal	2.54	328	⇓eP	Pn	11 47 22.2	+0.8
MTO2	Montecristo 2	2.65	338	eP	Pn	11 47 22.5	-0.6
JTS	JuntasAbangare	3.68	116	Pn	Pn	11 47 38.3	+0.6
	1.8nm,0.3s,baz=312,slow=20,SNR=7.8						
JTS				Sn	Sn	11 48 21.0	-0.7
	1.5nm,0.3s,baz=62,slow=21,SNR=3.9						
JTS				Lg		11 48 42.2	
	0.1nm,0.3s,baz=290,slow=22,SNR=2.1						
LCR2	La Lucha 2	4.76	117	⇓eP	Pn	11 47 54.5	+1.5
BUS	Buena Vista	5.07	117	⇓eP	Pn	11 47 58.8	+1.5
BUS				eS	Sn	11 48 55.2	-1.4
TXAR	Lajitas Array	22.45	323	P	P	11 51 40.2	+0.2
	0.7nm,0.7s,mb3.2,baz=132,slow=11,SNR=10						
YKA	Yellowknife Ar	53.88	345	P	P	11 56 01.4	-3.4
	0.2nm,0.6s,mb3.2,baz=137,slow=7.9,SNR=7.5						
CMAR	Chiang Mai Arr	148.96	347	PKPbc	PKPdf	12 06 29.0	+1.5
	0.3nm,0.4s,baz=343,slow=3.7,SNR=4.1						

IDC 27 11:49:01.0±6.2**, 61.86S×150.40E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/10**, mbtmp3.6**/3**, MS3.3**/2**, Ms1 3.4**/2**, ms1mx2.6**/12**, Error ellipse: s-maj=293.0km s-min=96.4km az=58.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	21.87	43	LR	LR	12 01 14.7	
	comp=Z,54nm,21.7s,baz=196,slow=34						
STKA	Stephens Creek	30.54	345	P	P	11 55 15.9	-2.0
	0.7nm,0.4s,baz=153,slow=11,SNR=3.1						
ASAR	Alice Springs	39.80	336	P	P	11 56 35.4	-1.9
	0.2nm,0.9s,baz=168,slow=9.0,SNR=2.9						
WRA	Warramunga Arr	43.35	338	P	P	11 57 04.6	-1.7
	0.8nm,0.8s,baz=164,slow=7.3,SNR=4.6						
CMAR	Chiang Mai Arr	89.81	312	LR	LR	12 38 28.1	
	comp=Z,22nm,19.4s,baz=334,slow=33						
YKA	Yellowknife Ar	143.03	50	PKP	PKPdf	12 08 34.4	-2.4
	0.0nm,0.4s,baz=234,slow=8.4,SNR=3.5						

IDC 27 11:55:52.2±17.0**, 10.29N×91.38E, h118**^{km}±133^{km}**, mb3.2**/4**, mb1 3.3**/5**, mb1mx3.2**/18**, mbtmp3.5**/5**, ML3.2**/1**, Error ellipse: s-maj=161.8km s-min=23.3km az=65.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.94	41	P	P	11 58 26.0	-0.3
	0.1nm,0.3s,baz=234,slow=17,SNR=3.0						
SONM	Songino Array	39.51	16	P	P	12 03 10.7	-2.0
	0.1nm,0.5s,baz=198,slow=9.1,SNR=2.1						
ZAL	Zalesovo	43.85	354	P	P	12 03 46.5	-1.7
	0.6nm,0.3s,baz=334,slow=7.5,SNR=2.9						
WRA	Warramunga Arr	51.88	125	P	P	12 04 48.4	-2.6
	0.3nm,0.3s,baz=300,slow=10,SNR=15						
ASAR	Alice Springs	53.55	130	P	P	12 05 01.1	-2.3
	0.6nm,0.6s,baz=305,slow=6.9,SNR=16						
ASAR				PcP	PcP	12 06 07.6	-0.8
	0.1nm,0.5s,baz=317,slow=3.2,SNR=3.9						

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*CSEM **27** 12:11:30.5±0.1, 30.79N×56.73E, h16^{km}, ML3.1, Error ellipse: s-maj=5.4km s-min=2.4km az=54.0*
*THR **27** 12:11:30.5±0.7, 30.78N×56.74E, h14^{km}±8^{km}, ML3.1*
*TEH **27** 12:11:41.7, 30.66N×55.77E, h10^{km}, Mn3.0*
ISC 27 12:11:31.1±0.9**, 30.74N**±0.06×**56.7E**±0.1**, h10**^{km}**, n11,** σ**1**^{s}**19**/14**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.76	178	ePG	Pg	12 11 46.0	-0.4
KRBR				eSG	Sg	12 11 56.8	+0.2
KRBR				AML	AML	12 12 00.6	
	comp=N,878nm,0.2s						
IBAF	Bafgh	1.30	311	Pg	Pg	12 11 53.9	-3.3
IMEH	Mehriz	1.93	290	Pn	Pn	12 12 04.9	+0.6
ICHK	Chekchek	2.48	308	Pn	Pn	12 12 11.2	-1.1
BNDS	Bandar-Abbas	3.37	188	ePN	Pn	12 12 25.1	+0.2
BNDS				AML	AML	12 13 33.0	
	comp=N,37nm,0.8s						
ZHSF	Zahedan	3.68	107	ePN	Pn	12 12 29.0	-0.4
NASN	Na’in	3.92	303	ePN	Pn	12 12 32.9	+0.1
NASN				eSG	Sg	12 13 31.9	-10
NASN				AML	AML	12 13 37.6	
	comp=N,26nm,0.2s						
NASN	Na’in	3.92	303	ePn	Pn	12 12 32.8	+0.1
	SNR=52						
NASN				eSg	Sg	12 13 31.9	-10
	SNR=90						
IFIR	Firoozkooh	5.91	327	Pn	Pn	12 13 03.8	+2.8
IAFJ	Afjeh	6.60	322	Pn	Pn	12 13 12.3	+1.6
IAFJ	Afjeh	6.60	322	Sn	Sn	12 14 19.6	-7.3

MAN 27 12:18:47.3, 12.47N×122.95E, h30^{km}**, mb4.0, ML2.8, MS2.5, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.66	99	eP	Pb	12 18 42.0	-18
MMPH				eS	Sb	12 19 00.5	-8.8
AUQP	San Andres	0.89	342	eP	Pn	12 19 04.0	+0.1
OTRP	Odiongan	0.92	263	eP	Pn	12 19 21.8	+18
RCP	Roxas	0.93	193	i P	Pn	12 19 04.1	-0.2
BOAC	Boac	1.46	312	eP	Pn	12 19 11.4	-0.6
SJMP	San Jose	1.79	270	eP	Pn	12 19 16.9	+0.2
GUIM	Jordan	1.87	191	eP	Pn	12 19 21.3	+3.5

IDC 27 12:25:41.1±11.0**, 5.19N×94.40E, h158**^{km}±99^{km}**, mb3.3**/6**, mb1 3.4**/7**, mb1mx3.3**/18**, mbtmp3.7**/7**, Error ellipse: s-maj=72.3km s-min=18.2km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.92	18	P	P	12 28 51.8	-0.9
	0.3nm,0.3s,baz=210,slow=11,SNR=16						
SONM	Songino Array	43.72	12	P	P	12 33 29.8	-2.3
	0.3nm,0.6s,baz=198,slow=8.6,SNR=3.4						
WRA	Warramunga Arr	46.53	124	P	P	12 33 53.7	-1.0
	0.7nm,0.8s,baz=304,slow=9.0,SNR=5.1						
ASAR	Alice Springs	48.03	128	P	P	12 34 04.0	-2.5
	0.5nm,0.6s,baz=296,slow=7.6,SNR=6.4						
ZAL	Zalesovo	49.23	353	P	P	12 34 13.9	-1.3
	1.2nm,0.3s,baz=323,slow=5.5,SNR=3.5						
BRTR	Keskin Array B	64.38	312	P	P	12 36 00.2	-2.3
	0.5nm,0.6s,baz=121,slow=8.4,SNR=2.6						
FINES	FINESS Array B	75.20	332	P	P	12 37 06.1	-1.5
	1.5nm,0.8s,baz=107,slow=5.5,SNR=11						

IDC 27 12:35:53.7±16.0**, 1.08N×126.97E, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/15**, mbtmp3.5**/3**, Error ellipse: s-maj=253.0km s-min=159.3km az=160.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.11	161	P	P	12 40 50.8	-1.7
	0.8nm,0.5s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	25.51	165	P	P	12 41 24.3	-1.3
	0.4nm,0.3s,baz=346,slow=12,SNR=12						
STKA	Stephens Creek	35.59	158	P	P	12 42 52.8	-2.3
	0.5nm,0.5s,baz=319,slow=11,SNR=2.9						

IDC 27 12:40:30.9±2.4**, 8.24S×119.26E, mb3.6**/2**, mb1 3.8**/3**, mb1mx3.6**/15**, mbtmp3.6**/3**, ML3.9**/1**, Error ellipse: s-maj=94.2km s-min=15.9km az=52.0, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.67	130	P	P	12 44 51.7	-0.9
	0.4nm,0.3s,baz=302,slow=13,SNR=36						
WRA				S	S	12 48 20.7	+2.2
	0.1nm,0.3s,baz=301,slow=20,SNR=4.9						
ASAR	Alice Springs	20.79	139	P	P	12 45 13.4	-2.9
	1.5nm,0.4s,baz=310,slow=9.0,SNR=69						
ASAR				S	S	12 49 08.9	+4.6
	0.6nm,0.7s,baz=318,slow=23,SNR=7.1						
SONM	Songino Array	56.98	350	P	P	12 50 17.9	-2.6
	0.3nm,0.7s,baz=180,slow=8.6,SNR=3.5						

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*MOS **27** 12:56:45.1±1.2, 30.79N×56.82E, h10^{km}, mb4.3/4, Error ellipse: s-maj=12.1km s-min=9.6km az=104.0*
*CSEM **27** 12:56:45.5±0.1, 30.88N×56.82E, h10^{km}, mb4.2/4, Error ellipse: s-maj=3.6km s-min=2.7km az=7.0*
*NEIC **27** 12:56:46.8±0.3, 30.76N×56.84E, h10^{km}, mb3.9/9, MN4.0(TEH), Error ellipse: s-maj=8.4km s-min=5.1km az=11.0*
*THR **27** 12:56:46.7±0.8, 30.80N×56.88E, h14^{km}±10^{km}, ML3.9*
*TEH **27** 12:56:48.7, 30.67N×57.01E, h24^{km}, Mn4.0*
*IDC **27** 12:56:50.2±5.5, 30.65N×56.84E, h41^{km}±50^{km}, mb3.8/19, mb1 4.0/21, mb1mx3.9/24, mbtmp4.0/21, ML4.2/2, Error ellipse: s-maj=19.3km s-min=16.3km az=166.0*
ISC 27 12:56:45.8±0.3**, 30.82N**±0.04×**56.84E**±0.04**, h10**^{km}**, n63,** σ**1**^{s}**20**/64**, mb4.1**/28**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.83	185	i PG	Pg	12 57 02.0	-0.5
KRBR				AML	AML	12 57 18.3	
	comp=N,4μm,0.2s						
IBAF	Bafgh	1.34	306	Pg	Pg	12 57 11.1	-1.4
IMEH	Mehriz	2.00	287	Pn	Pn	12 57 21.3	+1.3
ICHK	Chekchek	2.52	305	Pn	Pn	12 57 27.8	+0.3
BNDS	Bandar-Abbas	3.45	190	ePN	Pn	12 57 42.5	+1.7
BNDS				AML	AML	12 58 50.4	
	comp=N,222nm,0.6s						
ISRV	Sarvestan	3.53	247	Pn	Pn	12 57 42.4	+0.5
ZHSF	Zahedan	3.61	108	ePN	Pn	12 57 43.8	+0.8
NASN	Na’in	3.96	301	ePN	Pn	12 57 49.8	+1.8
NASN				eSG	Sg	12 58 51.0	-6.8
NASN				AML	AML	12 58 55.8	
	comp=N,189nm,0.5s						
IMOK	Mook	3.99	245	Pn	Pn	12 57 49.1	+0.7
IFIR	Firoozkooh	5.91	326	Pn	Pn	12 58 16.4	+0.9
IFIR				Lg		12 59 58.9	
DAMV	Damavand	6.30	321	ePN	Pn	12 58 22.3	+1.2
IQOM	Qom	6.30	311	Pn	Pn	12 58 21.8	+0.7
IAFJ	Afjeh	6.61	321	Pn	Pn	12 58 26.1	+0.7
IMHD	Mahdasht	7.09	315	Pn	Pn	12 58 34.1	+1.9
IMHD				Sn	Sn	12 59 50.0	-3.7
MALT	Malatya	16.89	301	P	P	13 00 42.4	-1.5
MALT				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MALT	Malatya	16.89	301	P	P	13 00 42.4	-1.5
	comp=Z,3.1nm,0.8s						
MALT	Malatya	16.89	301	P	P	13 00 42.4	-1.5
	comp=Z,3.1nm,0.8s						
ASF	Jabal al Asfar	17.07	280	P	P	13 00 44.7	-1.4
	comp=Z,0.4nm,0.3s,baz=146,slow=3.6,SNR=2.4						
KIV	Kislovodsk	17.25	323	eP	P	13 00 49.6	+1.3
KIV				pmax	pmax		
	comp=Z,14nm,1.0s						
KIV	Kislovodsk	17.25	323	eP	P	13 00 49.6	+1.3
	comp=Z,14nm,1.0s						
AAK	Ala-Archa	18.38	45	eP	P	13 01 01.4	-1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK	Ala-Archa	18.38	45	eP	P	13 01 01.4	-1.0
	comp=Z,5.0nm,0.9s						
EIL	Elat	18.95	272	P	P	13 01 08.0	-1.4
	comp=Z,0.7nm,0.3s,baz=64,slow=14,SNR=4.0						
EIL	Elat	18.95	272	P	P	13 01 11.2	+1.8
	comp=Z,3.3nm,0.6s						
EIL	Elat	18.95	272	P	P	13 01 11.2	+1.8
	comp=Z,3.3nm,0.6s						
BRTR	Keskin Array B	20.88	302	P	P	13 01 29.8	-0.7
	comp=Z,1.3nm,0.6s,baz=116,slow=13,SNR=8.9						
KOLN	Koldanda	23.52	91	eP	P	13 01 56.6	-0.2
	comp=Z,5.5nm,0.6s,mb4.1						
HYB	Hyderabad	23.83	119	i P	P	13 02 01.5	+1.5
BVAR	Borovoye Array	24.29	20	P	P	13 02 05.0	+0.9
	comp=Z,2.5nm,0.6s,mb3.8,baz=200,slow=7.7,SNR=19						
BVAR				PcP	PcP	13 05 42.0	-3.6
	comp=Z,0.5nm,0.7s,baz=194,slow=5.9,SNR=3.7						
BVAR	Borovoye Array	24.29	20	PcP	PcP	13 05 42.0	-3.5
DMN	Daman	24.85	90	eP	P	13 02 10.2	+0.4
	comp=Z,7.0nm,0.7s,mb4.3						
CHKZ	Chkalovo	24.93	20	eP	P	13 02 11.4	+1.1
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
KKN	Kakani	24.96	90	eP	P	13 02 11.8	+1.0
	comp=Z,10nm,0.7s,mb4.5						
PKI	Pulchoki	25.12	90	eP	P	13 02 13.5	+1.1
	comp=Z,14nm,0.7s,mb4.6						
GUN	Gumba	25.44	89	eP	P	13 02 16.5	+1.1
	comp=Z,23nm,1.0s,mb4.7						
KURK	Kurchatov	25.66	33	eP	P	13 02 17.6	+0.4
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
JIRN	Jiri	25.77	90	eP	P	13 02 20.4	+1.9
	comp=Z,16nm,0.8s,mb4.6						
AKASG	Malin Array Be	28.58	322	P	P	13 02 43.4	-0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	28.58	322	P	P	13 02 43.4	-0.5
	comp=Z,2.9nm,0.6s,mb4.2,baz=127,slow=8.7,SNR=9.3						
ZAL	Zalesovo	30.64	33	P	P	13 03 01.3	-0.9
	comp=Z,2.3nm,0.5s,mb4.3,baz=235,slow=9.7,SNR=16						
FINES	FINESS Array B	36.65	336	P	P	13 03 54.0	-0.1
	comp=Z,2.2nm,0.6s,mb4.2,baz=127,slow=12,SNR=12						
KMBO	Kilima Mbogo	36.83	214	P	P	13 03 56.9	+0.8
	comp=Z,0.9nm,0.5s,mb3.9,baz=221,slow=24,SNR=2.6						
KMBO	Kilima Mbogo	36.83	214	P	P	13 03 56.8	+0.7
GERES	GERESS Array B	37.12	312	P	P	13 03 58.1	-0.1
	comp=Z,1.0nm,0.6s,mb3.8,baz=117,slow=11,SNR=3.7						
KHC	Kasperske Hory	37.26	312	eP	P	13 03 58.5	-0.9
LZH	Lanzhou	39.27	69	eP	P	13 04 15.0	-1.4
	comp=Z,13nm,1.5s,mb4.4						
LZH				pP	pP	13 04 18.0	-1.4
LZH				sP	sP	13 04 19.6	-1.0
ZAK	Zakamensk	39.54	47	eP	P	13 04 18.7	+0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
ZAK	Zakamensk	39.54	47	eP	P	13 04 18.7	+0.2
	comp=Z,5.0nm,1.4s,mb4.0						
CMAR	Chiang Mai Arr	39.98	98	P	P	13 04 20.6	-1.8
	comp=Z,0.4nm,0.7s,mb3.3,baz=290,slow=9.0,SNR=4.3						
SONM	Songino Array	41.17	51	P	P	13 04 31.9	0.0
	comp=Z,0.7nm,0.7s,mb3.4,baz=268,slow=9.6,SNR=7.2						
NB2	NORSAR Subarra	42.43	329	P	P	13 04 41.4	-0.6
	comp=Z,1.5nm,0.8s,mb3.7,baz=118,slow=7.9						
NOA	NORSAR Array B	42.43	329	P	P	13 04 41.7	-0.3
	comp=Z,1.4nm,0.8s,mb3.6,baz=116,slow=7.9,SNR=4.7						
ARCES	ARCESS Array B	42.64	344	P	P	13 04 44.4	+0.7
	comp=Z,2.7nm,0.8s,mb4.0,baz=143,slow=4.5,SNR=2.6						
ARCES	ARCESS Array B	42.64	344	P	P	13 04 44.3	+0.7
BOD	Bodaibo	47.14	38	eP	P	13 05 17.4	-2.4
ESDC	Sonseca Array	49.61	298	P	P	13 05 37.4	-1.8
	comp=Z,1.5nm,0.9s,mb4.0,baz=65,slow=8.7,SNR=5.0						
MATP	Matopo	57.77	212	P	P	13 06 37.1	-2.6
	comp=Z,1.2nm,0.5s,mb4.2,baz=29,slow=8.8,SNR=6.3						
DBIC	Dimbokro	62.35	261	P	P	13 07 08.6	-2.6
	comp=Z,4.9nm,1.1s,mb4.6,baz=68,slow=7.8,SNR=3.8						
INK	Inuvik	80.88	4	P	P	13 09 00.1	-0.8
	comp=Z,1.2nm,0.8s,mb3.9,baz=1.4,slow=6.7,SNR=5.9						
ILAR	Eielson Array	82.94	10	P	P	13 09 11.1	-0.6
	comp=Z,0.4nm,0.6s,mb3.6,baz=324,slow=3.5,SNR=4.5						
YKA	Yellowknife Ar	86.77	356	P	P	13 09 30.7	-0.1
	comp=Z,1.2nm,0.7s,mb4.2,baz=0.2,slow=5.1,SNR=36						
WRA	Warramunga Arr	89.86	113	P	P	13 09 44.3	-2.4
	comp=Z,0.5nm,0.8s,mb3.9,baz=316,slow=4.0,SNR=15						
ASAR	Alice Springs	91.54	117	P	P	13 09 52.9	-1.4
	comp=Z,0.9nm,0.7s,mb4.2,baz=303,slow=4.7,SNR=11						

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*OMAN **27** 13:20:41.4±0.0, 31.09N×55.84E, h20^{km}, Error ellipse: s-maj=10.6km s-min=7.9km az=264.0*
*MOS **27** 13:20:43.3±1.0, 30.87N×56.77E, h10^{km}, mb4.2/5, Error ellipse: s-maj=12.7km s-min=10.0km az=82.9*
*TEH **27** 13:20:44.2, 30.57N×56.91E, h10^{km}, Mn4.3*
*BJI **27** 13:20:44.0, 30.80N×56.90E, h10^{km}, mb4.4, Ms4.5, Msz4.6*
*THR **27** 13:20:44.6±0.8, 30.83N×56.80E, h14^{km}±8^{km}, ML4.2*
*CSEM **27** 13:20:44.3±0.1, 30.81N×56.72E, h19^{km}, mb4.2/6, Error ellipse: s-maj=2.0km s-min=1.7km az=22.0*
*NEIC **27** 13:20:44.8±0.3, 30.77N×56.79E, h10^{km}, mb4.0/11, MN4.3(TEH), Error ellipse: s-maj=7.2km s-min=4.5km az=6.0*
*IDC **27** 13:20:51.5±5.5, 30.87N×56.87E, h65^{km}±51^{km}, mb3.8/19, mb1 3.9/21, mb1mx3.9/25, mbtmp4.1/21, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/18, Error ellipse: s-maj=16.6km s-min=12.7km az=127.0*
ISC 27 13:20:43.9±1.0**, 30.83N**±0.03×**56.77E**±0.03**, h12**^{km}±7^{km}**, n89,** σ**1**^{s}**07**/93**, mb4.2**/31**, 9C-3D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.84	181	i PG	Pg	13 21 00.5	-0.4
KRBR				AML	AML	13 21 17.6	
	comp=N,10μm,0.3s						
IBAF	Bafgh	1.28	307	Pg	Pg	13 21 07.8	-1.8
IMEH	Mehriz	1.93	287	Pn	Pn	13 21 19.1	+2.1
ICHK	Chekchek	2.46	306	Pn	Pn	13 21 25.5	+0.9
BNDS	Bandar-Abbas	3.46	189	ePN	Pn	13 21 40.8	+2.1
BNDS				AML	AML	13 22 27.3	
	comp=N,442nm,0.6s						
ISRV	Sarvestan	3.48	246	Pn	Pn	13 21 38.1	-1.0
ZHSF	Zahedan	3.67	108	ePN	Pn	13 21 42.8	+1.0
SHI	Shiraz	3.87	253	Pn	Pn	13 21 43.1	-1.5
NASN	Na’in	3.91	301	ePN	Pn	13 21 46.6	+1.4
NASN				eSG	Sg	13 22 46.5	-7.5
NASN				AML	AML	13 22 58.1	
	comp=N,298nm,0.4s						
IMOK	Mook	3.94	244	Pn	Pn	13 21 44.8	-0.9
GHIR	Ghir-Karzin	4.16	233	ePN	Pn	13 21 50.2	+1.5
GHIR				AML	AML	13 23 14.2	
	comp=N,205nm,0.6s						
BANOM	Banah	4.90	185	⇑P	Pn	13 22 01.0	+1.7
	SNR=15						
BANOM				⇑S	Sn	13 22 58.1	+1.4
IFIR	Firoozkooh	5.86	326	Pn	Pn	13 22 13.9	+1.1
ASHO	Ashiyiah	6.15	186	⇑P	Pn	13 22 17.7	+0.8
	SNR=19						
ASHO				⇑S	Sn	13 23 28.0	0.0
IDMV	Damavand	6.18	321	Pn	Pn	13 22 18.3	+1.0
IQOM	Qom	6.25	311	Pn	Pn	13 22 19.0	+0.7
IQOM				Lg		13 24 06.8	
DAMV	Damavand	6.25	321	ePN	Pn	13 22 19.1	+0.8
IAFJ	Afjeh	6.56	321	Pn	Pn	13 22 23.3	+0.6
IMHD	Mahdasht	7.04	315	Pn	Pn	13 22 29.9	+0.5
HOQ	Hoqain	7.23	176	⇓P	Pn	13 22 31.2	-0.9
IRAZ	Razeghan	7.33	310	Pn	Pn	13 22 33.8	+0.3
BIDO	Bidbid	7.38	170	⇑P	Pn	13 22 33.2	-1.0
ARQ	Araqi	7.46	182	⇓P	Pn	13 22 34.9	-0.5
SMDO	Samad	7.82	171	⇑P	Pn	13 22 40.4	+0.1
	SNR=6.5						
QRN	Al-Qurain	7.97	257	eP	Pn	13 22 41.5	-0.9
RDF	Al-Radifah	8.23	259	eP	P	13 22 45.8	-0.2
NAY	Al-Naaiem	8.41	262	eP	P	13 22 47.4	-1.1
JMDO	Jabal Madar	8.51	172	⇑P	P	13 22 50.5	+0.6
WHFO	Wadi Hawf	13.14	193	⇓P	P	13 23 49.3	-3.8
	SNR=10						
RBK	Rabkut	13.47	191	⇑P	P	13 23 54.0	-3.4
	SNR=6.5						
GNI	Garni	13.50	317	LR	LR	13 29 57.9	
	comp=N,50nm,21.9s,baz=158,slow=40						
ABTO	Aybut	13.78	194	⇑P	P	13 23 57.5	-4.1
	SNR=9.6						
MALT	Malatya	16.84	301	eP	P	13 24 44.1	+3.0
MALT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MALT	Malatya	16.84	301	eP	P	13 24 44.1	+3.0
	comp=Z,6.3nm,1.0s						
ASF	Jabal al Asfar	17.00	280	P	P	13 24 42.2	-1.0
	comp=Z,0.6nm,0.3s,baz=327,slow=9.3,SNR=5.3						
KIV	Kislovodsk	17.20	324	eP	P	13 24 49.0	+3.4
KIV				pmax	pmax		
	comp=E,10.0nm,1.1s						
KIV				pmax	pmax		
	comp=Z,17nm,1.1s						
KIV	Kislovodsk	17.20	324	eP	P	13 24 49.0	+3.4
	comp=Z,17nm,1.1s						
KSH	Kashi	17.91	56	eP	P	13 24 54.8	+0.4
KSH				eAP		13 24 59.3	
KSH				ePP	PP	13 25 10.0	+0.7
KSH				eS	S	13 28 11.3	-0.2
KSH				AMB	AMB		
	comp=Z,10.0nm,1.8s						
KSH				LR	LR		
	comp=N,270nm,5.4s						
KSH				LR	LR		
	comp=E,230nm,4.9s						
KSH	Kashi	17.91	56	eP	P	13 24 54.8	+0.4
	comp=E,10.0nm,1.8s						
KSH				epP		13 24 59.3	
KSH				ePP	PP	13 25 10.0	+0.7
KSH				eS	S	13 28 11.3	-0.2
KSH	Kashi	17.91	56	eP	P	13 24 54.8	+0.4
	comp=E,10.0nm,1.8s						
KSH				epP		13 24 59.3	
KSH				eS	S	13 28 11.3	-0.2
AAK	Ala-Archa	18.41	45	eP	P	13 24 59.2	-1.6
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
AAK	Ala-Archa	18.41	45	eP	P	13 24 59.2	-1.6
	comp=Z,8.0nm,1.1s						
EIL	Elat	18.89	272	P	P	13 25 07.1	+0.6
	comp=Z,0.2nm,0.3s,baz=20,slow=33,SNR=2.8						
EIL	Elat	18.89	272	eP	P	13 25 07.2	+0.6
	comp=Z,4.2nm,0.8s						
EIL	Elat	18.89	272	eP	P	13 25 07.2	+0.6
	comp=Z,4.2nm,0.8s						
BRTR	Keskin Array B	20.82	302	P	P	13 25 27.1	-0.7
	comp=Z,2.1nm,0.7s,baz=112,slow=12,SNR=12						
KOLN	Koldanda	23.57	91	eP	P	13 25 55.8	+0.5
	comp=Z,10nm,1.0s,mb4.2						
HYB	Hyderabad	23.89	119	i P	P	13 25 59.5	+1.1
BVAR	Borovoye Array	24.30	20	P	P	13 26 03.1	+1.0
	comp=Z,5.1nm,0.6s,mb4.2,baz=201,slow=7.6,SNR=52						
BVAR				PcP	PcP	13 29 39.3	-4.1
	comp=Z,0.9nm,0.7s,baz=180,slow=1.5,SNR=3.6						
BVAR	Borovoye Array	24.30	20	PcP	PcP	13 29 39.3	-4.1
GKN	Gorkha	24.41	90	eP	P	13 26 03.7	+0.3
	comp=Z,17nm,0.9s,mb4.5						
DMN	Daman	24.91	90	eP	P	13 26 08.3	+0.1

	comp=Z,12nm,0.9s,mb4.4						
CHKZ	Chkalovo	24.94	20	eP	P	13 26 08.5	+0.3
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
KKN	Kakani	25.02	90	eP	P	13 26 10.3	+1.1
	comp=Z,16nm,0.8s,mb4.6						
PKI	Pulchoki	25.18	90	eP	P	13 26 10.7	-0.1
	comp=Z,42nm,1.1s,mb4.9						
GUN	Gumba	25.50	89	eP	P	13 26 14.4	+0.6
	comp=Z,25nm,1.1s,mb4.7						
KURK	Kurchatov	25.68	33	eP	P	13 26 14.1	-1.2
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
JIRN	Jiri	25.83	90	eP	P	13 26 17.0	+0.1
	comp=Z,30nm,1.1s,mb4.7						
AKASG	Malin Array Be	28.53	322	P	P	13 26 40.8	-0.5
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	28.53	322	P	P	13 26 40.8	-0.5
	comp=Z,2.9nm,0.8s,mb4.0,baz=126,slow=8.5,SNR=7.1						
ZAL	Zalesovo	30.66	33	P	P	13 26 59.7	-0.6
	comp=Z,4.2nm,0.5s,mb4.5,baz=239,slow=8.3,SNR=26						
GTA	Gaotai	35.96	64	eP	P	13 27 47.3	+1.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.4						
GTA	Gaotai	35.96	64	eP	P	13 27 47.3	+1.0
	comp=Z,5.0nm,0.9s,mb4.4						
FINES	FINESS Array B	36.62	336	P	P	13 27 51.6	-0.1
	comp=Z,1.7nm,0.6s,mb4.0,baz=121,slow=11,SNR=11						
KMBO	Kilima Mbogo	36.80	214	P	P	13 27 55.2	+1.5
	comp=Z,0.6nm,0.4s,mb3.8,baz=60,slow=22,SNR=2.9						
GERES	GERESS Array B	37.07	312	P	P	13 27 55.1	-0.5
	comp=Z,1.2nm,0.8s,mb3.8,baz=119,slow=10,SNR=3.2						
KHC	Kasperske Hory	37.21	312	eP	P	13 27 56.0	-0.8
CLL	Collm	38.11	315	eP	P	13 28 05.0	+0.7
MOY	Mondy	38.48	44	eP	P	13 28 08.9	+1.5
LZH	Lanzhou	39.32	69	eP	P	13 28 14.8	+0.2
LZH				AMB	AMB		
	comp=Z,14nm,1.5s,mb4.5						
LZH	Lanzhou	39.32	69	eP	P	13 28 14.8	+0.2
	comp=Z,14nm,1.5s,mb4.5						
ZAK	Zakamensk	39.58	47	eP	P	13 28 17.1	+0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.5						
ZAK	Zakamensk	39.58	47	eP	P	13 28 17.1	+0.5
	comp=Z,1.0nm,1.1s,mb3.5						
CMAR	Chiang Mai Arr	40.04	98	P	P	13 28 18.9	-1.8
	comp=Z,2.1nm,1.0s,mb3.8,baz=301,slow=7.9,SNR=11						
SONM	Songino Array	41.22	51	P	P	13 28 28.2	-1.9
	comp=Z,1.5nm,0.8s,mb3.7,baz=278,slow=10,SNR=15						
NOA	NORSAR Array B	42.39	329	P	P	13 28 39.0	-0.5
	comp=Z,0.7nm,0.9s,mb3.3,baz=117,slow=7.4,SNR=3.0						
ARCES	ARCESS Array B	42.61	344	P	P	13 28 41.1	-0.1
	comp=Z,3.6nm,0.9s,mb4.1,baz=127,slow=9.0,SNR=3.5						
BOD	Bodaibo	47.16	38	eP	P	13 29 17.1	-0.7
BOD				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
BOD	Bodaibo	47.16	38	eP	P	13 29 17.1	-0.7
	comp=Z,8.0nm,0.8s,mb4.7						
MDJ	Mudanjiang	57.43	54	P	P	13 30 31.3	-3.5
MATP	Matopo	57.75	212	P	P	13 30 36.0	-1.3
	comp=Z,1.4nm,0.5s,mb4.2,baz=23,slow=5.7,SNR=5.6						
DBIC	Dimbokro	62.30	261	P	P	13 31 06.6	-2.1
	comp=Z,0.8nm,0.4s,mb4.2,baz=27,slow=8.4,SNR=3.8						
TSUM	Tsumeb	62.39	222	P	P	13 31 08.2	-0.9
	comp=Z,3.1nm,0.8s,mb4.5,baz=10,slow=8.2,SNR=5.2						
TSUM	Tsumeb	62.39	222	P	P	13 31 08.2	-1.0
LBTB	Lobatse	63.04	212	P	P	13 31 14.0	+0.6
	comp=Z,2.5nm,1.0s,mb4.3,baz=94,slow=8.9,SNR=2.3						
ILAR	Eielson Array	82.94	10	P	P	13 33 08.9	-0.6
	comp=Z,1.0nm,0.7s,mb3.9,baz=322,slow=4.3,SNR=13						
YKA	Yellowknife Ar	86.75	356	P	P	13 33 28.2	-0.4
	comp=Z,1.0nm,0.6s,mb4.2,baz=0.3,slow=5.0,SNR=30						
WRA	Warramunga Arr	89.92	113	P	P	13 33 43.2	-1.5
	comp=Z,0.6nm,0.7s,mb4.0,baz=315,slow=4.1,SNR=10						
ASAR	Alice Springs	91.60	117	P	P	13 33 51.2	-1.1
	comp=Z,2.0nm,0.9s,mb4.5,baz=296,slow=4.5,SNR=14						

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*IDC **27** 13:23:56.1±0.8, 5.13N×77.73W, mb3.6/9, mb1 3.9/12, mb1mx3.8/23, mbtmp3.7/12, ML3.4/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/21, Error ellipse: s-maj=28.1km s-min=20.0km az=63.0*

*NEIC **27** 13:24:06.3±2.7, 5.13N×77.47W, h82^{km}±26^{km}, mb4.2/4, Error ellipse: s-maj=30.8km s-min=11.8km az=63.0*

ISC 27 13:24:05.5±2.4**, 5.19N**±0.09×**77.5W**±0.1**, h87**^{km}±24^{km}**, n21, σ1^{s}17**/21**, mb3.5**/10**, Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	3.15	96	Pn	P	13 24 54.7	+0.5
	17nm,0.3s,baz=43,slow=1.1,SNR=19						
ROSC				Sn	S	13 25 34.3	+3.6
	0.7nm,0.3s,baz=94,slow=21,SNR=2.6						
SDV	Santo Domingo	7.72	61	Pn	P	13 25 55.5	-1.6
	2.2nm,0.3s,baz=247,slow=8.4,SNR=16						
SDV				Sn	S	13 27 23.8	+0.2
	1.3nm,0.3s,baz=297,slow=17,SNR=2.8						
SDV				LR	LR	13 29 07.2	
	comp=Z,141nm,21.1s,baz=186,slow=39						
SDV	Santo Domingo	7.72	61	eP	P	13 25 55.2	-1.9
SDV				Sn	S	13 27 23.8	+0.1
SDV				LR	LR	13 29 07.2	
JTS	JuntasAbangare	8.98	305	Pn	P	13 26 00.9	-13
	0.6nm,0.3s,baz=119,slow=19,SNR=2.5						
JTS				LR	LR	13 29 22.6	
	comp=Z,120nm,18.2s,baz=217,slow=37						
SAML	Samuel	20.00	135	eP	P	13 28 31.4	-2.3
	9.8nm,0.7s						
LPAZ	La Paz	23.25	157	P	P	13 29 06.7	+0.6
	1.6nm,0.7s,mb3.5,baz=334,slow=14,SNR=6.4						
LPAZ	La Paz	23.25	157	eP	P	13 29 06.7	+0.6
	1.4nm,0.6s,mb3.5						
TXAR	Lajitas Array	34.50	317	P	P	13 30 48.1	+0.7
	0.3nm,0.8s,mb3.1,baz=131,slow=8.3,SNR=2.7						
TXAR				PcP	PcP	13 33 21.8	+0.9
	0.5nm,0.8s,baz=127,slow=6.3,SNR=4.4						
CCM	Cathedral Cave	35.04	341	eP	P	13 30 52.8	+0.9
	3.1nm,0.8s,mb4.2						
ANMO	Albuquerque	39.93	322	P	P	13 31 40.2	+7.5
	0.7nm,0.6s,mb3.7,baz=135,slow=5.7,SNR=2.8						
PLCA	Paso Flores	46.13	173	P	P	13 32 22.9	-0.2
	1.8nm,1.0s,mb3.8,baz=282,slow=7.9,SNR=2.6						
PLCA	Paso Flores	46.13	173	P	P	13 32 23.1	+0.1
PDAR	Pinedale Array	46.99	328	P	P	13 32 30.4	+0.6
	0.3nm,0.7s,mb3.1,baz=121,slow=5.3,SNR=2.6						
NVAR	Mina Array Bea	49.65	318	P	P	13 32 50.6	+0.1
	0.3nm,0.7s,mb3.3,baz=117,slow=2.0,SNR=2.4						
YKA	Yellowknife Ar	63.37	342	P	P	13 34 26.0	-1.8
	0.7nm,0.8s,mb3.7,baz=133,slow=6.5,SNR=13						
DBIC	Dimbokro	72.19	85	P	P	13 35 25.2	+1.7
	1.4nm,0.6s,mb4.0,baz=260,slow=7.5,SNR=4.4						
DBIC	Dimbokro	72.19	85	eP	P	13 35 25.1	+1.6
	1.7nm,0.6s,mb4.0						
ILAR	Eielson Array	76.63	336	P	P	13 35 47.3	-0.8
	0.2nm,0.6s,mb3.0,baz=117,slow=4.0,SNR=7.7						
STKA	Stephens Creek	134.83	229	PKP	PKPdf	13 43 16.1	+1.1
	0.8nm,0.7s,baz=144,slow=18,SNR=3.3						
ASAR	Alice Springs	144.63	236	PKP	PKPdf	13 43 32.6	-0.2
	2.8nm,0.5s,baz=120,slow=3.7,SNR=58						
WRA	Warramunga Arr	145.76	242	PKPbc	PKPbc	13 43 36.4	+0.6
	2.4nm,0.7s,baz=107,slow=3.0,SNR=25						

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*IDC **27** 13:27:35.4±1.0, 40.81N×107.91E, mb3.5/7, mb1 3.7/8, mb1mx3.6/21, mbtmp3.5/8, ML3.9/1, MS3.6/5, Ms1 3.7/5, ms1mx3.3/15, Error ellipse: s-maj=41.1km s-min=19.3km az=70.0*

*NEIC **27** 13:27:36.6±0.4, 40.74N×107.91E, h10^{km}, mb4.0/2, ML4.4(BJI), Error ellipse: s-maj=7.8km s-min=7.1km az=162.0*

*BJI **27** 13:27:37.2, 40.90N×107.75E, h11^{km}, mB4.3, mb4.2, ML4.4, Ms4.5, Msz4.4*

ISC 27 13:27:33.8±0.5**, 40.61N**±0.04×**107.82E**±0.05**, h10**^{km}**, n27, σ1^{s}39**/33**, mb3.5**/8**, MS3.6**/5**, 1C, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	Baotou	1.68	89	ePG	Pg	13 28 07.5	+0.2
BTO				SG	Sg	13 28 31.0	+1.3
BTO				Smax			
	comp=N,2µm,1.1s						
BTO				Smax			
	comp=E,719nm,1.1s						
HHC	Hu-ho-hao-te	2.86	84	ePG	Pg	13 28 28.5	-2.4
HHC				SG	Sg	13 29 13.3	+4.3
HHC				Smax			
	comp=N,2µm,0.8s						
HHC				Smax			
	comp=E,2µm,0.8s						
TIY	Taiyuan	4.61	127	⇑PG	Pg	13 28 59.0	-6.8
TIY				SG	Sg	13 30 02.0	-5.3
TIY				Smax			
	comp=N,761nm,1.0s						
TIY				Smax			
	comp=E,612nm,1.0s						
LZH	Lanzhou	5.49	216	ePG	Pg	13 29 22.0	-1.4
LZH				SG	Sg	13 30 37.5	+0.9
LZH				Smax			
	comp=N,421nm,1.2s						
LZH				Smax			
	comp=E,171nm,1.1s						
LZH				LR	LR		
	comp=N,2µm,4.7s						
LZH				LR	LR		
	comp=Z,2µm,6.8s						
GTA	Gaotai	6.26	262	P	Pn	13 29 11.0	+2.5
GTA				AP		13 29 14.0	
GTA				XP		13 29 17.0	
GTA				S	Sn	13 30 20.0	-0.9
GTA				AMB	AMB		
	comp=Z,16nm,0.5s						
GTA				AMB	AMB		
	comp=Z,62nm,4.6s						
GTA				LR	LR		
	comp=N,3µm,6.8s						
GTA				LR	LR		
	comp=E,1µm,5.7s						
GTA				LR	LR		
	comp=Z,1µm,6.8s						
GTA	Gaotai	6.26	262	Pn	Pn	13 29 11.0	+2.5
	comp=Z,16nm,0.5s						
GTA				pP		13 29 14.0	
GTA				sP		13 29 17.0	
GTA				S	Sn	13 30 20.0	-0.9
BJT	Baijiatuau	6.41	93	eP	Px	13 29 32.8	
BJI	Beijing	6.41	92	PG	Pg	13 29 32.0	-10
BJI				SG	Sg	13 30 57.3	-10
BJI				Smax			
	comp=N,221nm,0.9s						
BJI				Smax			
	comp=E,245nm,1.1s						
XAN	Xi'an	6.62	172	PG	Pg	13 29 34.5	-11
XAN				S	Sn	13 30 40.3	+10
XAN				SG	Sg	13 31 11.8	-2.3
XAN				Smax			
	comp=N,178nm,1.6s						
XAN				Smax			
	comp=E,167nm,1.8s						
XAN				LR	LR		
	comp=N,9µm,5.2s						
XAN				LR	LR		
	comp=E,1µm,6.0s						
XAN				LR	LR		
	comp=Z,1µm,5.0s						
ULN	Ulaanbaatar	7.27	356	eP	Pn	13 29 21.6	-1.2
	comp=Z,13nm,0.9s						
SONM	Songino Array	7.29	352	Pn	Pn	13 29 20.7	-2.3
	comp=Z,0.5nm,0.3s,baz=169,slow=13,SNR=7.7						
SONM				Sn	Sn	13 30 39.1	-7.6
	comp=Z,1.1nm,0.3s,baz=166,slow=20,SNR=4.4						
SONM				Lg		13 31 12.6	
	comp=Z,1.1nm,0.3s,baz=165,slow=24,SNR=3.3						
ZAL	Zalesovo	20.41	318	P	P	13 32 12.9	-0.6
	comp=Z,0.5nm,0.5s,baz=358,slow=8.3,SNR=2.7						
JOW	Kunigami	21.80	123	LR	LR	13 40 37.8	
	comp=Z,132nm,20.8s,MS3.3,baz=57,slow=36						
KURK	Kurchatov	22.63	306	eP	P	13 32 36.8	+1.0
	comp=Z,4.2nm,0.8s,mb3.9						
CM31	Chiang Mai Arr	23.36	202	eP	P	13 32 48.0	+4.7
	comp=Z,5.6nm,1.2s,mb3.9						
CMAR	Chiang Mai Arr	23.36	202	P	P	13 32 47.6	+4.3
	comp=Z,0.4nm,0.5s,mb3.1,baz=357,slow=9.3,SNR=5.0						
CMAR				LR	LR	13 43 05.2	
	comp=Z,70nm,19.7s,MS3.1,baz=25,slow=40						
BVAR	Borovoye Array	28.12	309	P	P	13 33 28.4	+0.7
	comp=Z,0.2nm,0.5s,mb3.0,baz=102,slow=12,SNR=2.9						
ARCES	ARCESS Array B	50.00	333	LR	LR	14 00 00.6	
	comp=Z,142nm,18.9s,MS4.0,baz=22,slow=39						
FINES	FINESS Array B	51.60	323	P	P	13 36 41.9	0.0
	comp=Z,1.8nm,1.0s,mb4.0,baz=68,slow=7.5,SNR=4.2						
FINES				LR	LR	14 01 36.0	
	comp=Z,38nm,21.0s,MS3.4,baz=225,slow=40						
FINES	FINESS Array B	51.60	323	P	P	13 36 41.9	0.0
FINES				LR	LR	14 01 36.0	
NOA	NORSAR Array B	58.41	325	LR	LR	14 04 33.0	
	comp=Z,109nm,19.2s,MS4.0,baz=45,slow=38						
INK	Inuvik	62.22	22	eP	P	13 37 57.7	+0.3
WRA	Warramunga Arr	65.10	152	P	P	13 38 18.5	+1.5
	comp=Z,0.4nm,0.9s,mb3.5,baz=347,slow=6.4,SNR=3.7						
WRA	Warramunga Arr	65.10	152	P	P	13 38 18.4	+1.5
ASAR	Alice Springs	68.40	154	P	P	13 38 40.1	+2.3
	comp=Z,0.6nm,1.0s,mb3.6,baz=340,slow=6.2,SNR=5.5						
YKA	Yellowknife Ar	71.74	19	P	P	13 38 57.8	+0.3
	comp=Z,0.3nm,0.9s,mb3.2,baz=323,slow=5.7,SNR=4.3						
YKA	Yellowknife Ar	71.74	19	P	P	13 38 57.8	+0.3

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*CASC **27** 13:31:25.2±1.8, 13.01N×88.77W, h53^{km}±24^{km}, MD4.0, ML4.2*

*NEIC **27** 13:31:25.3, 13.07N×88.78W, h58^{km}, MD4.2(SNET), After SNET.*

NEIC Felt [II] at San Salvador.

*IDC **27** 13:31:26.9±3.4, 13.21N×88.39W, h85^{km}±43^{km}, mb3.1/5, mb1 3.6/7, mb1mx3.3/21, mbtmp3.5/7, MS3.1/1, Ms1 3.1/1, ms1mx2.5/15, Error ellipse: s-maj=79.0km s-min=24.1km az=41.0*

ISC 27 13:31:24.0±0.6**, 13.01N**±0.08×**88.75W**±0.05**, h74**^{km}±5^{km}**, n38, σ0^{s}88**/54**, mb3.5**/5**, 11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNVI	San Vicente	0.61	352	⇓eP	P	13 31 38.3	-0.1
SNVI				eS	S	13 31 48.6	-0.4
SNVI	San Vicente	0.61	352	eP	P	13 31 38.5	0.0
SNVI				eS	S	13 31 48.3	-0.7
VSM	San Miguel	0.63	48	eP	P	13 31 38.8	+0.2
VSM	San Miguel	0.63	48	eP	P	13 31 38.8	+0.1
BLLM	Bellamira	0.66	49	⇓eP	P	13 31 39.0	0.0
BLLM				eS	S	13 31 49.9	-0.1
BLLM	Bellamira	0.66	49	⇓eP	P	13 31 39.0	0.0
BLLM				eS	S	13 31 50.0	0.0
LCBS	La Ceiba	0.68	341	⇓iP	P	13 31 39.0	-0.2
LFRS	El Faro	0.68	334	⇓iP	P	13 31 38.9	-0.3
LBRS	Las Brisas	0.78	339	eP	P	13 31 40.4	+0.1
LBRS				eS	S	13 31 51.2	-1.2
SNET	Serv Nac Est T	0.82	325	eP	P	13 31 40.5	-0.3
SNET				eS	S	13 31 52.2	-1.1
SNET	Serv Nac Est T	0.82	325	eP	P	13 31 40.5	-0.3
SNET				eS	S	13 31 52.4	-0.9
SNET				i		13 31 55.8	
	comp=Z,7µm,0.4s						
BOQS	Boqueron	0.89	325	⇓iP	P	13 31 41.8	+0.2
BOQS				eS	S	13 31 54.4	-0.2
BOQS	Boqueron	0.89	325	⇓iP	P	13 31 41.8	+0.2
BOQS				eS	S	13 31 54.0	-0.6
CAHU	Cacacuatique	0.93	35	⇓eP	P	13 31 42.7	+0.7
CNCH	Conchagua	0.94	73	⇓eP	P	13 31 42.2	+0.1
CNCH				eS	S	13 31 56.6	+0.9
CNCH	Conchagua	0.94	73	⇓eP	P	13 31 42.2	+0.1
CNCH				eS	S	13 31 56.1	+0.4
SBLS	San Blas	1.19	314	eP	P	13 31 45.8	+0.5
SBLS				eS	S	13 32 01.4	+0.1
SNJE	San Jose	1.19	316	eP	P	13 31 45.8	+0.4
SNJE				eS	S	13 32 01.3	-0.2
SNJE	San Jose	1.19	316	eP	P	13 31 45.8	+0.4
SNJE				eS	S	13 32 01.5	0.0
RTR	El Retiro	1.24	316	eP	P	13 31 46.7	+0.6
RTR				eS	S	13 32 02.4	-0.1
RTR	El Retiro	1.24	316	eP	P	13 31 46.7	+0.6
RTR				eS	S	13 32 02.7	+0.1
RBDL	Robledal	1.43	321	eP	P	13 31 49.0	+0.3
MTO2	Montecristo 2	1.51	337	⇓eP	P	13 31 50.4	+0.7
MTO2				eS	S	13 32 09.1	+0.4
COPN	Copaltepe	2.26	111	eP	P	13 32 00.8	+0.8
MGAN	Managua	2.59	109	eP	P	13 32 07.2	+2.5
JTS	JuntasAbangare	4.60	126	P	P	13 32 32.1	-0.5
	comp=Z,1.7nm,0.3s,baz=315,slow=17,SNR=8.2						
JTS				S	S	13 33 22.7	-2.5
	comp=Z,2.1nm,0.3s,baz=339,slow=20,SNR=3.7						
JTS	JuntasAbangare	4.60	126	ePn	P	13 32 33.7	+1.0
JTS				e		13 32 39.6	
JTS				eSn	S	13 33 23.5	-1.7
SDV	Santo Domingo	18.25	101	P	P	13 35 32.1	-1.9
	comp=Z,0.4nm,0.3s,baz=309,slow=6.5,SNR=3.0						
TXAR	Lajitas Array	21.35	322	P	P	13 36 07.6	+0.7
	comp=Z,0.5nm,0.5s,mb3.1,baz=138,slow=11,SNR=9.3						
SJG	San Juan	22.35	74	LR	LR	13 43 46.7	
	comp=Z,50nm,18.1s,baz=87,slow=34						
PDAR	Pinedale Array	34.69	333	P	P	13 38 09.8	+1.1
	comp=Z,0.2nm,0.4s,mb3.3,baz=132,slow=11,SNR=3.5						
NVAR	Mina Array Bea	36.45	319	P	P	13 38 25.1	+1.5
	comp=Z,0.6nm,1.0s,mb3.5,baz=162,slow=5.8,SNR=3.9						
EDM	Edmonton	44.64	339	eP	P	13 39 30.6	-0.3
YKA	Yellowknife Ar	52.75	345	P	P	13 40 31.6	-1.8
	comp=Z,1.1nm,0.7s,mb4.0,baz=140,slow=7.8,SNR=36						
YKA	Yellowknife Ar	52.75	345	P	P	13 40 31.6	-1.8
ILAR	Eielson Array	65.00	336	P	P	13 41 56.5	-1.7
	comp=Z,0.7nm,1.0s,mb3.4,baz=148,slow=4.4,SNR=5.8						
WRA	Warramunga Arr	138.20	255	PKP	PKPdf	13 50 43.4	+1.8
	comp=Z,0.3nm,0.6s,baz=88,slow=2.7,SNR=7.9						
ASAR	Alice Springs	138.29	249	PKP	PKPdf	13 50 44.0	+2.3
	comp=Z,0.9nm,1.3s,baz=107,slow=3.4,SNR=2.7						

IDC 27 13:37:51.1±4.9**, 13.33N**×**92.59E, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.4**/17**, mbtmp3.4**/3**, ML3.5**/1**, Error ellipse: s-maj=113.2km s-min=47.8km az=108.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.95	49	Pn	Pn	13 39 47.3	-3.4
	0.2nm,0.3s,baz=239,slow=16,SNR=5.1						
LUBP	Lubang	26.88	86	eP	P	13 44 28.1	+52
WRA	Warramunga Arr	52.73	128	P	P	13 47 07.7	-2.6
	0.2nm,0.3s,baz=301,slow=9.4,SNR=7.4						
WRA				PcP	PcP	13 48 18.1	-1.9
	0.2nm,0.6s,baz=315,slow=3.3,SNR=4.7						
ASAR	Alice Springs	54.63	132	P	P	13 47 22.0	-2.1
	0.4nm,0.5s,baz=310,slow=7.1,SNR=18						

GUC 27 14:03:04.6±0.7**, 33.58S**×**68.27W, h10**^{km}**, MD3.6, ML2.7, 2C-3D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMEL	Las Melosas	1.63	260	i P	Pn	14 03 32.5	-1.1
LMEL				i S	Sn	14 03 54.9	+0.1
LMEL				AMP		14 03 57.0	
	comp=E,166nm,0.5s						
FCH	Farellones	1.70	278	⇓iP	Pn	14 03 34.7	0.0
FCH				i S	Sn	14 03 57.7	+1.0
FCH				AMP		14 03 59.6	
	comp=N,103nm,0.2s						
CLCH	Cerro Calan	1.90	275	⇓iP	Pn	14 03 37.6	+0.2
CLCH				i S	Sn	14 04 02.0	+0.4
CLCH				AMP		14 04 08.9	
	comp=E,172nm,0.5s						
CICH	Cipreses	1.93	247	⇑iP	Pn	14 03 37.9	0.0
CICH				i S	Sn	14 04 03.1	+0.7
CACH	El Canelo	2.01	254	⇑iP	Pn	14 03 39.2	+0.2
CACH				i S	Sn	14 04 05.4	+1.0
CHCH	Chadas Angostu	2.01	259	⇓iP	Pn	14 03 39.2	+0.2

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*CSEM **27** 14:04:06.6±0.2, 51.53N×16.16E, h1^{km}, ML3.1/3, Error ellipse: s-maj=4.0km s-min=1.9km az=15.0*

*IPEC **27** 14:04:06.5±3.4, 51.53N×16.45E, ML2.1/3, Error ellipse: s-maj=39.4km s-min=20.5km az=88.0*

*WAR **27** 14:04:07.3, 51.51N×16.12E, h1^{km}, ML2.9, Mining Induced*

*NEIC **27** 14:04:07.2±1.5, 51.45N×16.21E, h5^{km}, ML3.1(VIE), ML2.8(SZGRF), ML2.4(CLL), ML2.3(BRG), Error ellipse: s-maj=16.4km s-min=6.7km az=210.0*

*PRU **27** 14:04:07.2, 51.48N×16.16E*

ISC 27 14:04:05.4±0.8**, 51.45N**±0.04×**16.13E**±0.04**, n23, σ1^{s}33**/47**, 1C, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	170	ePg	Pg	14 04 19.6	+1.9
KSP				eSg	Sg	14 04 29.1	+3.2
KSP	Ksiaz	0.61	170	ePg	Pg	14 04 19.7	+2.0
KSP				eSg	Sg	14 04 28.9	+3.0
UPC	Upice	0.94	184	ePG	Pg	14 04 25.7	+1.4
DPC	Dobruska-Polom	1.11	174	ePG	Pg	14 04 28.4	+0.9
DPC				eSG	Sg	14 04 44.1	+1.8
	20nm,0.2s						
PVCC	Panska Ves	1.35	228	ePG	Pg	14 04 32.9	+0.6
BRG	Berggiesshubel	1.49	248	ePn	Pn	14 04 34.4	+0.9
BRG				i Pg	Pg	14 04 35.3	+0.1
BRG				i Sg	Sg	14 04 55.7	+0.6
BRG	Berggiesshubel	1.49	248	i Pg	Pg	14 04 35.3	+0.1
PRU	Pruhonice	1.77	215	ePN	Pn	14 04 38.9	+1.3
PRU				ePG	Pg	14 04 40.3	-0.6
PRU				eSG	Sg	14 05 05.2	+0.7
PRU	Pruhonice	1.77	215	Pg	Pg	14 04 40.3	-0.6
PRU				Sg	Sg	14 05 05.2	+0.7
MORC	Moravsky Berou	1.90	151	ePn	Pn	14 04 39.7	+0.3
MORC				eS	Sn	14 05 08.3	+3.9
MORC	Moravsky Berou	1.90	151	ePn	Pn	14 04 39.7	+0.3
MORC				eSg	Sg	14 05 05.4	-3.3
	13nm,0.3s						
MORC				eS	Sn	14 05 08.3	+3.9
CLL	Collm	1.96	267	ePG	Pg	14 04 43.0	-1.6
CLL				i		14 04 46.8	
CLL				i SG	Sg	14 05 09.7	-1.1
CLL	Collm	1.96	267	ePg	Pg	14 04 43.0	-1.6
CLL				i Sg	Sg	14 05 09.7	-1.1
OKC	Ostrava-Krasne	2.06	141	ePG	Pg	14 04 45.7	-0.9
OKC				eSG	Sg	14 05 13.0	-1.1
VRAC	Vranov	2.16	172	ePn	Pn	14 04 44.9	+1.7
VRAC				eSg	Sg	14 05 16.0	-1.4
	16nm,0.5s						
KRUC	Moravsky	2.40	176	ePn	Pn	14 04 48.1	+1.6
KRUC				eSg	Sg	14 05 24.0	-1.2
	5.0nm,0.2s						
NKC	Novy Kostel	2.63	244	ePN	Pn	14 04 50.6	+0.7
NKC				eSG	Sg	14 05 32.5	-0.5
OJC	Ojcow	2.63	116	ePG	Pg	14 04 56.0	-2.0
OJC				eSG	Sg	14 05 32.0	-1.1
OJC	Ojcow	2.63	116	ePg	Pg	14 04 56.5	-1.5
OJC				eSg	Sg	14 05 31.6	-1.5
KHC	Kasperske Hory	2.84	216	ePN	Pn	14 04 53.8	+1.0
KHC				ePG	Pg	14 04 59.2	-2.9
KHC				eSN	Sn	14 05 29.5	+1.3
KHC				eSG	Sg	14 05 38.5	-1.4
MOX	Moxa	2.96	256	ePg	Pg	14 05 02.7	-1.8
MOX				eSg	Sg	14 05 42.8	-1.1
GEC2	GERESS Array S	3.04	212	ePn	Pn	14 04 57.1	+1.4
MOA	Molln	3.80	199	⇑iPN	Pn	14 05 06.9	+0.4
MOA				i SG	Sg	14 06 10.2	-1.7
	8.5nm,0.4s						

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*IDC **27** 14:34:37.4±24.0, 46.55N×153.02E, h218^{km}±230^{km}, mb2.9/7, mb1 3.1/7, mb1mx3.0/21, mbtmp3.4/7, Error ellipse: s-maj=31.1km s-min=19.9km az=102.0*

ISC 27 14:34:22.8±0.9**, 46.5N**±0.2×**153.0E**±0.3**, h100**^{km}**, n7, σ0^{s}56**/7**, mb3.3**/7**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BVAR	Borovoye Array	50.95	310	P	P	14 43 15.6	-0.1
	0.2nm,0.3s,mb3.6,baz=65,slow=7.3,SNR=5.6						
YKA	Yellowknife Ar	51.16	37	P	P	14 43 17.8	+0.7
	0.2nm,0.4s,mb3.5,baz=299,slow=7.7,SNR=1.7						
FINES	FINESS Array B	64.23	335	P	P	14 44 47.9	-0.7
	0.4nm,0.4s,mb3.6,baz=35,slow=6.9,SNR=13						
WRA	Warramunga Arr	68.26	199	P	P	14 45 14.9	0.0
	0.3nm,0.9s,mb3.1,baz=13,slow=6.6,SNR=2.9						
NOA	NORSAR Array B	68.43	341	P	P	14 45 15.9	+0.7
	0.2nm,0.5s,mb3.2,baz=30,slow=3.1,SNR=2.6						
ASAR	Alice Springs	71.96	198	P	P	14 45 37.5	+0.2
	0.2nm,0.7s,mb3.1,baz=12,slow=4.8,SNR=4.8						
TXAR	Lajitas Array	77.67	60	P	P	14 46 08.9	-0.8
	0.3nm,0.7s,mb3.1,baz=302,slow=4.3,SNR=3.6						

*BJI **27** 14:37:46.4, 40.24N×77.52E, h12^{km}, ML3.7*

*NNC **27** 14:37:51.0±3.0, 40.52N×77.51E, mpv3.6, Error ellipse: s-maj=31.6km s-min=17.5km az=2.0*

ISC 27 14:37:44.2±0.5**, 39.94N**±0.04×**77.71E**±0.06**, h10**^{km}**, n21, σ0**^{s}**59**/20**, 6C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.40**	**253**	⇓*i*PG	**Pg**	**14 38 11.5**	**-0.8**
KSH				SG	**Sg**	**14 38 31.5**	**+0.5**
KSH				Smax			
	comp=N,2µm,0.6s						
KSH				Smax			
	comp=E,3µm,0.4s						
ULHL	**Ulahol**	**2.56**	**335**	P	**Pn**	**14 38 26.9**	**+0.4**
	SNR=115						
KZA	**Kyzart**	**2.83**	**320**	P	**Pn**	**14 38 29.3**	**-1.1**
	SNR=44						
UCH	**Uchtor**	**3.33**	**314**	P	**Pn**	**14 38 37.2**	**-0.2**
	SNR=64						
TKM2	**Tokmak 2**	**3.38**	**333**	P	**Pn**	**14 38 38.5**	**+0.3**
	SNR=15						
KBK	**Karagaybulak**	**3.42**	**323**	P	**Pn**	**14 38 39.1**	**+0.4**
	SNR=42						
AAK	**Ala-Archa**	**3.62**	**319**	P	**Pn**	**14 38 41.5**	**-0.1**
	SNR=23						
AAK	**Ala-Archa**	**3.62**	**319**	⇑Pn	**Pn**	**14 38 41.4**	**-0.3**
	comp=E,22nm,0.5s						
AAK				⇑Lg		14 39 29.6	
	comp=E,130nm,0.8s						
AML	**Almayashu**	**3.74**	**307**	P	**Pn**	**14 38 43.4**	**0.0**
	SNR=64						
CHMS	**Chumysh**	**3.78**	**325**	P	**Pn**	**14 38 43.5**	**-0.4**
	SNR=14						
EKS2	**Erkin-Say**	**4.02**	**314**	P	**Pn**	**14 38 47.7**	**+0.4**
	SNR=14						
USP	**Ospenovka**	**4.10**	**325**	P	**Pn**	**14 38 48.8**	**+0.3**
	SNR=14						
MK31	**Makanchi Array**	**7.62**	**24**	⇑Pn	**Pn**	**14 39 38.0**	**-0.1**
	comp=E,1.2nm,0.6s,baz=200,slow=12,SNR=20						
MK31				⇑Lg		14 41 39.0	
	comp=E,6.0nm,0.9s,baz=201,slow=27,SNR=4.8						
KURK	**Kurchatov**	**10.80**	**3**	⇓Pn	**P**	**14 40 16.7**	**-5.2**
	comp=E,12nm,3.6s						
KURK				⇓Lg		14 43 17.0	
	comp=E,7.0nm,1.1s						
KOLN	**Koldanda**	**13.08**	**156**	*e*P	**P**	**14 40 51.9**	**-0.9**
	comp=E,4.9nm,0.5s						
GKN	**Gorkha**	**13.21**	**152**	*e*P	**P**	**14 40 55.8**	**+1.2**
	comp=E,5.9nm,0.4s						
KKN	**Kakani**	**13.64**	**150**	*e*P	**P**	**14 41 00.7**	**+0.4**
	comp=E,4.3nm,0.5s						
DMN	**Daman**	**13.74**	**151**	*e*P	**P**	**14 41 00.7**	**-0.8**
	comp=E,4.5nm,0.5s						
BVA0	**Borovoye Array**	**14.02**	**341**	⇑Lg		14 44 56.2	
	comp=E,1.6nm,1.4s,baz=139,slow=27,SNR=5.1						
JIRN	**Jiri**	**14.12**	**148**	*e*P	**P**	**14 41 06.8**	**+0.3**
	comp=E,6.3nm,0.4s						
CHKZ	**Chkalovo**	**14.56**	**343**	⇑Lg		14 45 14.6	
	comp=E,24nm,2.3s						

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*NEIC **27** 15:01:23.1±0.7, 16.45S×69.47W, h207^{km}±8^{km}, mb4.0/3, Error ellipse: s-maj=13.4km s-min=12.8km az=132.0*

*IDC **27** 15:01:25.7±1.0, 16.73S×69.11W, h212^{km}±6^{km}, mb3.6/3, mb1 3.7/4, mb1mx3.3/17, mbtmp4.2/4, Error ellipse: s-maj=24.1km s-min=14.6km az=120.0*

ISC 27 15:01:22.4±0.6**, 16.45S**±0.08×**69.50W**±0.07**, h218**^{km}±6^{km}**, n14, σ0**^{s}**88**/19**, mb4.4**/3**, 1C-1D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.32**	**83**	P	**P**	**15 01 57.9**	**+1.3**
LPAZ				S	**S**	**15 02 22.7**	**-0.4**
	24nm,0.3s,baz=64,slow=22,SNR=9.2						
LPAZ	**La Paz**	**1.32**	**83**	⇓*i*Pn	**P**	**15 01 57.9**	**+1.3**
LPAZ				*e*Sn	**S**	**15 02 23.4**	**+0.3**
ARE	**Arequipa**	**1.91**	**269**	⇑*i*P	**P**	**15 02 02.2**	**+0.5**
ARE				*i* S	**S**	**15 02 32.0**	**-0.1**
LVC	**Limon Verde**	**6.16**	**175**	P	**P**	**15 02 52.2**	**-0.4**
	5.7nm,0.3s,baz=351,slow=10,SNR=59						
LVC				S	**S**	**15 03 58.9**	**-4.0**
	13nm,0.3s,baz=88,slow=21,SNR=24						
LVC	**Limon Verde**	**6.16**	**175**	*e*Pn	**P**	**15 02 51.7**	**-0.9**
LVC				*e*S	Px	15 03 46.5	
LVC				*e*S	**S**	**15 04 00.7**	**-2.2**
NNA	**Nana**	**8.39**	**301**	*e*Pn	**P**	**15 03 21.0**	**-0.4**
	20nm,0.8s						
NNA				*e*S	**S**	**15 04 48.4**	**-6.1**
SAML	**Samuel**	**9.67**	**40**	*e*Pn	**P**	**15 03 36.8**	**-1.2**
	2.7nm,0.5s						
BDFB	**Brasilia**	**20.66**	**91**	P	**P**	**15 05 46.7**	**+0.3**
	4.4nm,0.5s,baz=268,slow=10,SNR=9.4						
TRQA	**Tornquist**	**22.52**	**164**	P	**P**	**15 06 04.9**	**+0.4**
PLCA	**Paso Flores**	**24.21**	**182**	P	**P**	**15 06 23.8**	**+3.3**
	4.0nm,1.2s,mb3.9,baz=348,slow=19,SNR=4.8						
PLCA	**Paso Flores**	**24.21**	**182**	*e*P	**P**	**15 06 21.6**	**+1.1**
	4.9nm,1.2s,mb4.0						
RPN	**Rapa Nui**	**38.34**	**247**	P	**P**	**15 08 29.1**	**+5.2**
	90nm,1.1s,mb5.2,baz=350,slow=6.1,SNR=2.4						
DBIC	**Dimbokro**	**67.93**	**76**	P	**P**	**15 11 59.8**	**-0.2**
	1.8nm,0.5s,mb4.0,baz=241,slow=7.2,SNR=7.0						
SONM	**Songino Array**	**148.52**	**5**	PKPbc	PKPdf	15 20 47.1	+7.9
	0.2nm,0.3s,baz=328,slow=1.0,SNR=5.9						

IDC 27 15:02:38.9±9.7**, 12.61N**×**92.37E, mb3.7**/2**, mb1 3.8**/3**, mb1mx3.5**/16**, mbtmp3.5**/3**, ML3.6**/1**, MS2.5**/1**, Ms1 2.7**/1**, ms1mx2.5**/14**, Error ellipse: s-maj=206.2km s-min=47.7km az=106.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.59**	**47**	Pn	P	15 04 44.5	-2.9
	0.2nm,0.3s,baz=237,slow=14,SNR=4.6						
CMAR				LR	LR	15 08 18.0	
	comp=Z,33nm,20.5s,baz=145,slow=40						
WRA	**Warramunga Arr**	**52.46**	**128**	P	P	15 11 53.5	-2.5
	0.8nm,0.6s,baz=307,slow=8.2,SNR=31						
WB2	**Warramunga Arr**	**52.47**	**127**	*e*P	P	15 11 53.7	-2.4
ASAR	**Alice Springs**	**54.30**	**132**	P	P	15 12 07.6	-1.9
	0.5nm,0.6s,baz=308,slow=6.9,SNR=22						

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*NEIC **27** 15:28:48.8±0.6, 8.35N×93.66E, h30^{km}, mb4.1/3, Error ellipse: s-maj=18.0km s-min=7.6km az=51.0*

*IDC **27** 15:28:51.6±6.0, 8.41N×93.81E, h50^{km}±55^{km}, mb3.4/10, mb1 3.6/11, mb1mx3.5/17, mbtmp3.7/11, ML4.7/1, Error ellipse: s-maj=35.6km s-min=18.5km az=56.0*

ISC 27 15:28:46.3±6.2**, 8.4N**±0.1×**93.7E**±0.2**, h24**^{km}±44^{km}**, n21, σ0**^{s}**79**/21**, mb3.9**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.53**	**114**	*e*P	**Pn**	**15 30 37.4**	**0.0**
CMAR	**Chiang Mai Arr**	**11.20**	**26**	P	**P**	**15 31 29.4**	**+1.2**
	1.5nm,0.3s,baz=213,slow=15,SNR=59						
JIRN	**Jiri**	**20.44**	**341**	*e*P	**P**	**15 33 24.0**	**-0.7**
DMN	**Daman**	**20.77**	**338**	*e*P	**P**	**15 33 28.7**	**+0.5**
	11nm,0.7s						
KKN	**Kakani**	**20.87**	**339**	*e*P	**P**	**15 33 28.9**	**-0.3**
	10nm,0.7s						
GKN	**Gorkha**	**21.30**	**337**	*e*P	**P**	**15 33 33.4**	**-0.2**
	20nm,0.6s,mb4.6						
LSA	**Lhasa**	**21.32**	**354**	*e*P	**P**	**15 33 32.8**	**-1.0**
	3.6nm,0.4s,mb4.0						
KOLN	**Koldanda**	**21.51**	**335**	*e*P	**P**	**15 33 35.8**	**+0.1**
	12nm,0.7s,mb4.4						
AAK	**Ala-Archa**	**38.06**	**337**	*e*P	**P**	**15 36 04.0**	**-0.8**
SONM	**Songino Array**	**40.74**	**13**	P	**P**	**15 36 27.5**	**+0.6**
	0.3nm,0.7s,mb3.0,baz=209,slow=6.4,SNR=3.5						
BVAR	**Borovoye Array**	**48.36**	**341**	P	**P**	**15 37 26.9**	**-1.1**
	0.3nm,0.5s,mb3.6,baz=117,slow=6.6,SNR=3.2						
CHKZ	**Chkalovo**	**48.85**	**342**	*e*P	**P**	**15 37 30.9**	**-0.9**
	5.1nm,1.1s,mb4.5						
CHKZ				*e*	pP	15 37 38.4	-0.7
WRA	**Warramunga Arr**	**48.89**	**126**	P	**P**	**15 37 32.2**	**-0.4**
	0.4nm,0.5s,mb3.7,baz=306,slow=8.4,SNR=5.6						
WRAB	**Tennant Creek**	**48.90**	**126**	*e*P	**P**	**15 37 32.3**	**-0.3**
ASAR	**Alice Springs**	**50.56**	**130**	P	**P**	**15 37 44.9**	**-0.5**
	0.2nm,0.5s,mb3.3,baz=301,slow=7.0,SNR=8.4						
BRTR	**Keskin Array B**	**61.78**	**311**	P	**P**	**15 39 05.3**	**-0.2**
	0.3nm,0.3s,mb3.9,baz=30,slow=24,SNR=3.2						
MATP	**Matopo**	**70.23**	**245**	P	**P**	**15 40 00.5**	**+0.7**
	1.2nm,0.8s,mb3.9,baz=98,slow=5.7,SNR=2.3						
FINES	**FINESS Array B**	**72.06**	**332**	P	**P**	**15 40 09.9**	**-0.2**
	0.6nm,0.7s,mb3.6,baz=124,slow=10.0,SNR=2.9						
ARCES	**ARCESS Array B**	**74.63**	**340**	P	**P**	**15 40 25.4**	**+0.3**
	3.8nm,0.9s,mb4.3,baz=34,slow=22,SNR=2.9						
GERES	**GERESS Array B**	**77.17**	**318**	P	**P**	**15 40 41.4**	**+1.7**
	0.4nm,0.7s,mb3.5,baz=90,slow=2.9,SNR=2.8						
NOA	**NORSAR Array B**	**79.07**	**331**	P	**P**	**15 40 51.8**	**+1.8**
	0.4nm,0.7s,mb3.5,baz=98,slow=4.6,SNR=2.5						

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*IDC **27** 15:31:54.6±0.6, 10.00N×91.55E, mb4.1/11, mb1 4.2/12, mb1mx4.2/17, mbtmp4.1/12, ML3.7/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/22, Error ellipse: s-maj=21.6km s-min=16.7km az=51.0*

*BJI **27** 15:31:57.6, 9.85N×91.57E, h40^{km}, mB4.9, mb4.4, Ms4.2, Msz3.8*

*MOS **27** 15:31:57.8±0.7, 10.06N×91.60E, h33^{km}, mb4.9/14, Error ellipse: s-maj=14.0km s-min=8.6km az=95.1*

*NEIC **27** 15:31:59.1±0.3, 10.04N×91.57E, h30^{km}, mb4.7/17, Error ellipse: s-maj=7.4km s-min=5.8km az=70.0*

ISC 27 15:31:56.3±1.7**, 9.99N**±0.04×**91.57E**±0.05**, h24**^{km}±11^{km}**, h38**^{km}±3.7^{km}**:pP-P, n91, σ1**^{s}**01**/99**, mb4.5**/35**, MS3.8**/13**, 5C-2D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**11.04**	**40**	*e*P	**P**	**15 34 36.0**	**-0.1**
	3.8nm,0.5s						
CMAR	**Chiang Mai Arr**	**11.04**	**40**	Pn	**P**	**15 34 35.6**	**-0.5**
	0.2nm,0.3s,baz=235,slow=14,SNR=9.3						
CMAR				Sn	**S**	**15 36 41.2**	**+1.4**
	0.1nm,0.3s,baz=237,slow=28,SNR=2.6						
CMAR				LR	LR	15 39 23.7	
	comp=Z,185nm,20.6s,baz=220,slow=41						
VIS	**Vishakhapatnam**	**11.09**	**315**	*i* P	**P**	**15 34 33.2**	**-3.6**
VIS				*i* S	**S**	**15 36 26.2**	**-15**
HYB	**Hyderabad**	**14.64**	**302**	*e*P	**P**	**15 35 31.0**	**+6.9**
HYB				*e*S	**S**	**15 37 57.0**	**-9.4**
HYB	**Hyderabad**	**14.64**	**302**	*i* P	**P**	**15 35 31.0**	**+6.9**
HYB				*e*		15 37 57.0	
HYB				*e*S	**S**	**15 38 12.0**	**+5.6**
JIRN	**Jiri**	**18.29**	**345**	*e*P	**P**	**15 36 09.9**	**-0.6**
	62nm,1.4s						
KAD	**Karad**	**18.39**	**295**	*e*P	**P**	**15 36 12.0**	**+0.3**
KMI	**Kunming**	**18.42**	**34**	P	**P**	**15 36 10.5**	**-1.6**
KMI				PP	PP	15 36 26.3	-1.2
KMI				S	**S**	**15 39 33.5**	**-0.1**
KMI				SS	SS	15 39 58.3	+0.5
KMI				AMB	AMB		
	comp=Z,11nm,1.6s						
KMI				AMB	AMB		
	comp=Z,156nm,4.5s						
KMI				LR	LR		
	comp=N,263nm,14.3s						
KMI				LR	LR		
	comp=E,178nm,13.5s						
KMI				LR	LR		
	comp=Z,212nm,20.6s						
KMI	**Kunming**	**18.42**	**34**	P	**P**	**15 36 10.6**	**-1.5**
KMI				S	**S**	**15 39 33.4**	**-0.2**
KMI				pmax	pmax		
	comp=Z,11nm,1.6s						
KMI	**Kunming**	**18.42**	**34**	P	**P**	**15 36 10.6**	**-1.5**
	comp=Z,11nm,1.6s						
KMI				sP		15 36 22.5	
KMI				PP	PP	15 36 26.2	-1.3
KMI				S	**S**	**15 39 33.4**	**-0.2**
KMI				SS	SS	15 39 58.3	+0.5
PKI	**Pulchoki**	**18.43**	**342**	*e*P	**P**	**15 36 12.1**	**-0.1**
	comp=Z,62nm,1.0s						
DMN	**Daman**	**18.55**	**342**	*e*P	**P**	**15 36 13.5**	**-0.2**
	comp=Z,30nm,1.0s						
KKN	**Kakani**	**18.67**	**342**	*e*P	**P**	**15 36 13.7**	**-1.4**
	comp=Z,11nm,0.8s						
GKN	**Gorkha**	**19.07**	**341**	*e*P	**P**	**15 36 18.4**	**-1.5**
	comp=Z,12nm,0.7s						
KOLN	**Koldanda**	**19.21**	**338**	*e*P	**P**	**15 36 21.1**	**-0.5**
	comp=Z,8.1nm,0.6s						
LSA	**Lhasa**	**19.61**	**359**	P	**P**	**15 36 25.5**	**-0.6**
LSA				AP		15 36 34.5	
LSA				*e*S	**S**	**15 39 53.8**	**-6.6**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
LSA				LR	LR		
	comp=N,90nm,17.0s						
LSA				LR	LR		
	comp=E,120nm,14.0s						
LSA				LR	LR		
	comp=Z,160nm,15.0s						
LSA	**Lhasa**	**19.61**	**359**	*e*P	**P**	**15 36 26.0**	**-0.1**
LSA				pmax	pmax		
	comp=Z,29nm,0.9s						
LSA	**Lhasa**	**19.61**	**359**	*e*P	**P**	**15 36 26.0**	**-0.1**
	comp=Z,28nm,0.9s						
KSM	**Kuching**	**20.46**	**113**	*e*P	**P**	**15 36 35.3**	**+0.1**
GYA	**Guiyang**	**21.73**	**39**	⇑*i*P	**P**	**15 36 49.0**	**+1.0**
GYA				AP		15 37 01.8	
GYA				XP		15 37 06.0	
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
GYA				AMB	AMB		
	comp=Z,270nm,3.3s						
GYA				LR	LR		
	comp=N,290nm,13.2s,MS4.0						
GYA				LR	LR		
	comp=E,340nm,14.0s,MS4.0						
GYA				LR	LR		
	comp=Z,270nm,15.4s,MS3.8						
NDI	**New Delhi**	**22.96**	**326**	*e*P	**P**	**15 37 01.0**	**+0.7**
NDI				*e*		15 41 20.0	
CD2	**Chengdu**	**23.70**	**27**	P	**P**	**15 37 09.8**	**+2.3**
CD2				S	**S**	**15 41 23.0**	**+5.4**
CD2				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.4						
ENH	**Enshi**	**26.20**	**37**	*e*P	**P**	**15 37 30.4**	**-0.8**
	comp=Z,18nm,0.7s,mb4.7						
LZH	**Lanzhou**	**28.27**	**21**	⇑P	**P**	**15 37 50.0**	**0.0**
LZH				AP	pP	15 38 03.5	+6.5
LZH				XP	sP	15 38 08.5	+8.4
LZH				PP	PP	15 38 41.0	-0.2
LZH				AMB	AMB		
	comp=Z,18nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,83nm,4.0s						
LZH	**Lanzhou**	**28.27**	**21**	⇑P	**P**	**15 37 49.9**	**-0.1**
LZH				*PP	pP	15 38 03.5	+6.5
LZH						15 38 41.0	
LZH				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
LZH	**Lanzhou**	**28.27**	**21**	⇑P	**P**	**15 37 49.9**	**-0.1**
	comp=Z,18nm,1.0s,mb4.7						
LZH				pP	pP	15 38 03.5	+6.5
LZH				sP	sP	15 38 08.4	+8.3
LZH				PP	PP	15 38 41.0	-0.2
XAN	**Xi'an**	**28.74**	**31**	P	**P**	**15 37 53.0**	**-1.3**
WHN	**Wuhan**	**29.46**	**43**	*e*P	**P**	**15 38 01.5**	**+0.7**
GTA	**Gaotai**	**30.21**	**13**	*e*P	**P**	**15 38 08.3**	**+0.9**
GTA				AP	pP	15 38 17.5	+3.2
GTA				XP	sP	15 38 21.3	+3.9
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.1						
GTA				AMB	AMB		
	comp=Z,67nm,5.0s						
GTA				LR	LR		
	comp=N,120nm,11.1s,MS3.9						
GTA				LR	LR		
	comp=E,91nm,11.5s,MS3.9						
GTA				LR	LR		
	comp=Z,86nm,14.1s,MS3.5						
KSH	**Kashi**	**32.53**	**337**	*e*P	**P**	**15 38 29.0**	**+1.3**
KSH				*e*AP	pP	15 38 41.0	+6.3
KSH				*e*XP	sP	15 38 46.3	+8.5
KSH				*e*PP	PP	15 39 37.0	+0.5
KSH				*e*S	**S**	**15 43 38.8**	**-1.6**
KSH				*e*PS		15 43 46.8	
KSH				*e*XS		15 43 57.3	
KSH				*e*SCS	ScS	15 48 53.0	-0.4
KSH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
KSH				LR	LR		
	comp=N,150nm,5.2s						
KSH				LR	LR		
	comp=E,190nm,4.7s						
NJ2	**Nanjing**	**33.44**	**45**	*e*P	**P**	**15 38 35.5**	**-0.3**
NJ2				AP	pP	15 38 45.5	+2.7
NJ2				XP	sP	15 38 51.3	+5.5
NJ2				PP	PP	15 39 47.8	-0.2
NJ2				S	**S**	**15 43 59.0**	**+4.3**
NJ2				XS		15 44 16.0	
NJ2				AMB	AMB		
	comp=Z,430nm,4.7s						
NJ2				LR	LR		
	comp=N,2µm,11.9s,MS5.1						
NJ2				LR	LR		
	comp=E,1µm,12.1s,MS5.1						
NJ2				LR	LR		
	comp=Z,1µm,15.9s,MS4.8						
WMQ	**Urumqi**	**33.87**	**355**	*e*P	**P**	**15 38 40.0**	**+0.6**
WMQ				PP	PP	15 39 54.0	+1.0
WMQ				S	**S**	**15 44 00.0**	**-1.2**
WMQ				SS	SS	15 46 08.0	-0.2
WMQ				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.9						
WMQ				LR	LR		
	comp=N,28nm,16.0s,MS3.5						
WMQ				LR	LR		
	comp=E,68nm,16.0s,MS3.5						
WMQ				LR	LR		
	comp=Z,27nm,16.0s,MS3.1						
SSE	**Sheshan**	**34.60**	**48**	P	**P**	**15 38 43.0**	**-2.7**
SSE				S	**S**	**15 44 10.0**	**-2.6**
SSE				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,70nm,3.8s						
SSE				LR	LR		
	comp=N,48nm,19.6s,MS3.4						
SSE				LR	LR		
	comp=E,57nm,19.6s,MS3.4						
SSE				LR	LR		
	comp=Z,65nm,18.6s,MS3.4						
SSE	**Sheshan**	**34.60**	**48**	P	**P**	**15 38 43.1**	**-2.6**
	comp=Z,19nm,0.7s,mb5.1						
SSE				sP	sP	15 38 55.7	-0.1
SSE				S	**S**	**15 44 10.1**	**-2.5**
SSE				sS		15 44 25.4	
SSE				SS	SS	15 46 40.6	+16
SSE				LR	LR		
	comp=Z,70nm,18.6s,MS3.4						
HHC	**Hu-ho-hao-te**	**35.46**	**27**	*e*P	**P**	**15 38 54.0**	**+1.0**
HHC				AP	pP	15 39 04.0	+3.9
HHC				XP	sP	15 39 07.5	+4.4
HHC				S	**S**	**15 44 27.5**	**+1.6**
HHC				AMB	AMB		
	comp=Z,14nm,1.6s,mb4.6						
HHC				AMB	AMB		
	comp=Z,120nm,4.8s						
HHC				LR	LR		
	comp=N,128nm,19.2s,MS3.9						
HHC				LR	LR		
	comp=E,166nm,16.8s,MS3.9						
HHC				LR	LR		
	comp=Z,161nm,26.0s						
KBK	**Karagaybulak**	**35.64**	**339**	P	**P**	**15 38 56.2**	**+1.6**
	SNR=7.9						
TKM2	**Tokmak 2**	**35.65**	**340**	P	**P**	**15 38 55.3**	**+0.7**
	SNR=6.0						
AML	**Almayashu**	**35.66**	**337**	P	**P**	**15 38 56.4**	**+1.7**
	SNR=18						
AAK	**Ala-Archa**	**35.79**	**338**	P	**P**	**15 38 57.4**	**+1.7**
	SNR=8.2						
AAK	**Ala-Archa**	**35.79**	**338**	*c i*P	**P**	**15 38 55.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,19nm,1.7s,mb4.8						
AAK	**Ala-Archa**	**35.79**	**338**	*e*P	**P**	**15 38 55.9**	**+0.1**
	comp=Z,20nm,1.4s,mb4.9						
EKS2	**Erkin-Say**	**36.08**	**337**	P	**P**	**15 38 59.9**	**+1.7**
	SNR=8.4						
USP	**Ospenovka**	**36.34**	**339**	P	**P**	**15 39 01.4**	**+1.0**
	SNR=12						
BJI	**Beijing**	**37.06**	**32**	*e*P	**P**	**15 39 07.3**	**+0.8**
BJI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
BJI				LR	LR		
	comp=N,217nm,10.6s						
BJI				LR	LR		
	comp=E,193nm,8.9s						
BJI				LR	LR		
	comp=Z,147nm,20.7s						
BJI	**Beijing**	**37.06**	**32**	*e*P	**P**	**15 39 07.3**	**+0.8**
	comp=Z,7.0nm,1.0s,mb4.5						
BJI				S	rx	15 44 21.6	
BJI				LR	LR		
	comp=Z,150nm,20.7s,MS3.8						
SONM	**Songino Array**	**39.74**	**16**	P	**P**	**15 39 29.5**	**+0.6**
	comp=Z,3.6nm,1.1s,mb4.0,baz=202,slow=8.3,SNR=20						
ULN	**Ulaanbaatar**	**39.95**	**16**	*e*P	**P**	**15 39 30.3**	**-0.3**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**39.95**	**16**	*e*P	**P**	**15 39 30.3**	**-0.2**
	comp=Z,5.0nm,1.0s,mb4.2						
ZAK	**Zakamensk**	**41.42**	**11**	*e*P	**P**	**15 39 39.3**	**-3.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,2.0s,mb3.6						
KURK	**Kurchatov**	**41.98**	**348**	*i* P	**P**	**15 39 47.6**	**+0.4**
KURK	**Kurchatov**	**41.98**	**348**	*e*P	**P**	**15 39 46.9**	**-0.3**
	comp=Z,7.1nm,1.2s,mb4.2						
CN2	**Changchun**	**44.68**	**35**	*e*P	**P**	**15 40 11.5**	**+2.2**
NVS	**Novosibirsk**	**45.22**	**353**	*e*P	**P**	**15 40 12.1**	**-1.3**
NVS				*e**PP	pP	15 40 25.7	+5.2
NVS				*e*PPP	PPP	15 42 43.9	+2.6
NVS				*e*S	**S**	**15 46 41.4**	**-10**
NVS				pmax	pmax		
	comp=Z,13nm,1.8s,mb4.5						
NVS				pmax	pmax		
	comp=N,17nm,1.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.2s						
NVS				smax			
	comp=N,22nm,2.7s						
NVS				smax			
	comp=E,17nm,3.1s						
BVAR	**Borovoye Array**	**46.20**	**342**	P	**P**	**15 40 21.0**	**-0.1**
	comp=E,2.2nm,1.0s,mb4.0,baz=153,slow=6.6,SNR=9.6						
CHKZ	**Chkalovo**	**46.70**	**343**	*e*P	**P**	**15 40 24.9**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
CHKZ	**Chkalovo**	**46.70**	**343**	*e*P	**P**	**15 40 24.9**	**-0.2**
	comp=Z,12nm,1.3s,mb4.7						
MDJ	**Mudanjiang**	**47.56**	**37**	P	**P**	**15 40 32.3**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,105nm,5.5s						
MDJ				LR	LR		
	comp=N,23nm,32.9s,MS3.1						
MDJ				LR	LR		
	comp=E,30nm,34.9s,MS3.1						
MDJ				LR	LR		
	comp=Z,41nm,38.7s,MS3.1						
NWAO	**Narrogin (SRO)**	**49.20**	**151**	*e*P	**P**	**15 40 45.2**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,24nm,1.2s						
NWAO	**Narrogin (SRO)**	**49.20**	**151**	*e*P	**P**	**15 40 45.2**	**+0.3**
	comp=Z,24nm,1.2s,mb5.1						
BOD	**Bodaibo**	**50.74**	**15**	*e*P	**P**	**15 40 50.5**	**-5.8**
BOD				*e*		15 41 06.9	
WRA	**Warramunga Arr**	**51.55**	**125**	P	**P**	**15 41 02.6**	**-0.4**
	comp=Z,7.7nm,0.8s,mb4.7,baz=306,slow=8.3,SNR=58						
WB2	**Warramunga Arr**	**51.56**	**125**	*e*P	**P**	**15 41 02.1**	**-1.0**
TI2	**Plekhanov**	**51.77**	**316**	*e*P	**P**	**15 41 05.0**	**+0.6**
ASAR	**Alice Springs**	**53.21**	**130**	P	**P**	**15 41 14.7**	**-0.7**
	comp=Z,2.9nm,0.7s,mb4.3,baz=306,slow=7.0,SNR=25						
KIV	**Kislovodsk**	**54.05**	**318**	*i* P	**P**	**15 41 21.1**	**-0.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
KIV	**Kislovodsk**	**54.05**	**318**	*e*P	**P**	**15 41 21.3**	**0.0**
	comp=Z,16nm,1.3s,mb4.8						
ASF	**Jabal al Asfar**	**54.94**	**302**	LR	LR	16 07 30.8	
	comp=Z,31nm,20.2s,MS3.4,baz=203,slow=39						
KMBO	**Kilima Mbogo**	**55.17**	**262**	P	**P**	**15 41 31.1**	**+1.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=224,slow=24,SNR=2.6						
KMBO				LR	LR	16 02 32.0	
	comp=Z,89nm,20.8s,MS3.8,baz=88,slow=33						
YAK	**Yakutsk**	**58.84**	**20**	*i* P	**P**	**15 41 54.9**	**-0.4**
YAK				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
BRTR	**Keskin Array B**	**59.13**	**310**	P	**P**	**15 41 56.3**	**-1.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=117,slow=8.3,SNR=6.9						
CTAO	**Charters Tower**	**61.55**	**119**	*e*P	**P**	**15 42 15.2**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.2						

CTAO	**Charters Tower**	61.55	119	*e*P	P	15 42 15.2	+0.8
	comp=Z,24nm,1.3s,mb5.2						
OBN	**Obninsk**	62.25	328	*e*P	P	15 42 18.2	-0.4
OBN				pmax	pmax		
	comp=Z,18nm,1.4s,mb5.0						
STKA	**Stephens Creek**	63.40	133	⇓*i*P	P	15 42 26.6	+0.1
	comp=Z,2.2nm,0.6s,mb4.5						
STKA	**Stephens Creek**	63.40	133	P	P	15 42 26.7	+0.2
	comp=Z,2.9nm,0.7s,mb4.5,baz=304,slow=6.7,SNR=10						
STKA				LR	LR	16 10 56.5	
	comp=Z,92nm,18.2s,MS4.0,baz=104,slow=37						
TIXI	**Tiksi**	65.69	12	⇓*i*P	P	15 42 39.5	-1.3
TIXI				pmax	pmax		
	comp=Z,15nm,1.9s,mb4.7						
LSZ	**Lusaka**	67.62	249	*e*P	P	15 42 53.2	-0.8
LSZ				pmax	pmax		
	comp=Z,15nm,1.8s,mb4.7						
LSZ	**Lusaka**	67.62	249	*e*P	P	15 42 53.2	-0.8
	comp=Z,15nm,1.8s,mb4.7						
MATP	**Matopo**	68.98	244	P	P	15 43 01.9	-0.6
	comp=Z,0.8nm,0.5s,mb3.9,baz=114,slow=3.9,SNR=3.7						
FINES	**FINESS Array B**	69.67	332	P	P	15 43 05.3	-0.5
	comp=Z,4.1nm,1.2s,mb4.2,baz=113,slow=14,SNR=2.6						
ARCES	**ARCESS Array B**	72.43	340	LR	LR	16 15 59.6	
	comp=Z,48nm,20.2s,MS3.8,baz=190,slow=36						
LBTB	**Lobatse**	73.06	240	P	P	15 43 27.8	+0.9
LBTB				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
LBTB	**Lobatse**	73.06	240	P	P	15 43 27.8	+0.9
	comp=Z,8.8nm,1.3s,mb4.5						
GERES	**GERESS Array B**	74.56	318	P	P	15 43 35.3	+0.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=153,slow=6.0,SNR=4.0						
ILAR	**Eielson Array**	93.73	21	P	P	15 45 11.3	-0.8
	comp=Z,0.6nm,0.9s,mb4.0,baz=295,slow=5.1,SNR=4.5						
DBIC	**Dimbokro**	95.14	278	LR	LR	16 24 34.7	
	comp=Z,48nm,19.0s,MS4.0,baz=322,slow=33						
PDAR	**Pinedale Array**	124.06	19	PKP	PKPdf	15 50 55.2	-2.5
	comp=Z,0.3nm,0.6s,slow=1.5,SNR=3.5						
NVAR	**Mina Array Bea**	124.34	28	PKP	PKPdf	15 50 56.0	-2.5
	comp=Z,0.4nm,0.7s,baz=167,slow=0.9,SNR=3.7						
TXAR	**Lajitas Array**	138.24	20	PKP	PKPdf	15 51 24.0	-0.9
	comp=Z,0.6nm,1.1s,baz=180,slow=2.5,SNR=3.5						
TXAR	**Lajitas Array**	138.24	20	PKP	PKPdf	15 51 24.0	-0.9
PLCA	**Paso Flores**	145.53	204	PKPbc	PKPbc	15 51 35.3	+1.7
	comp=Z,2.0nm,0.8s,baz=173,slow=11,SNR=3.9						

NEIC ***27*** *16:14:46.4±0.7, 12.85N×93.17E, h30^{km}, mb4.3/2, Error ellipse: s-maj=15.5km s-min=11.8km az=77.0*

IDC ***27*** *16:14:50.1±7.6, 12.97N×93.41E, h56^{km}±64^{km}, mb3.2/6, mb1 3.4/7, mb1mx3.4/16, mbtmp3.5/7, ML3.8/1, Error ellipse: s-maj=53.0km s-min=20.8km az=62.0*

ISC 27 16:14:49.3±3.9**, 13.0N**±0.1×**93.5E**±0.2**, h64**^{km}±33^{km}**, n11, σ0^{s}87**/12**, mb3.6**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	7.55	43	*e*P	P	16 16 39.1	+0.1
	1.6nm,0.4s						
CMAR	**Chiang Mai Arr**	7.55	43	P	P	16 16 40.0	+1.0
	0.4nm,0.3s,baz=235,slow=15,SNR=22						
CMAR				S	S	16 18 02.8	-1.2
	0.0nm,0.3s,baz=219,slow=28,SNR=2.4						
ENH	**Enshi**	22.68	38	*e*P	P	16 19 47.2	+0.9
	25nm,1.4s,mb4.5						
ENH				*e*		16 19 53.3	
SONM	**Songino Array**	36.36	15	P	P	16 21 49.6	+0.6
	0.4nm,0.9s,mb3.4,baz=180,slow=5.8,SNR=4.0						
BVAR	**Borovoye Array**	43.96	340	P	P	16 22 51.2	-0.5
	0.2nm,0.5s,mb3.1,baz=144,slow=11,SNR=3.9						
CHKZ	**Chkalovo**	44.43	341	*e*P	P	16 22 54.8	-0.7
	1.2nm,0.5s,mb3.9						
WRA	**Warramunga Arr**	51.86	128	P	P	16 23 52.9	-0.6
	0.2nm,0.5s,mb3.3,baz=314,slow=8.1,SNR=6.4						
WRAB	**Tennant Creek**	51.86	128	*e*P	P	16 23 53.6	0.0
ASAR	**Alice Springs**	53.77	133	P	P	16 24 07.3	-0.4
	0.1nm,0.4s,mb3.1,baz=308,slow=7.0,SNR=12						
FINES	**FINESS Array B**	67.91	331	P	P	16 25 42.0	-0.9
	3.8nm,1.1s,mb4.3,baz=90,slow=1.9,SNR=3.4						
ILAR	**Eielson Array**	90.26	22	P	P	16 27 45.7	+1.9
	0.2nm,0.7s,mb3.6,baz=292,slow=4.9,SNR=3.1						

IDC 27 16:34:49.3±4.1**, 9.86S×109.48E, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.4**/11**, mbtmp3.3**/3**, Error ellipse: s-maj=142.7km s-min=29.7km az=56.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	26.00	116	P	P	16 40 23.6	-2.2
	0.2nm,0.6s,baz=286,slow=12,SNR=4.9						
ASAR	**Alice Springs**	27.06	124	P	P	16 40 34.5	-1.1
	0.4nm,0.7s,baz=302,slow=8.8,SNR=4.1						
SONM	**Songino Array**	57.51	358	P	P	16 44 40.4	-2.4
	0.4nm,0.5s,baz=173,slow=8.5,SNR=7.3						

BJI ***27*** *16:38:28.0, 13.71N×92.97E, h43^{km}, mB4.9, mb4.5, Ms3.9, Msz3.5*

MOS ***27*** *16:38:28.9±1.2, 13.99N×92.76E, h33^{km}, mb4.6/8, Error ellipse: s-maj=15.8km s-min=9.3km az=105.8*

NEIC ***27*** *16:38:29.0±0.5, 13.95N×92.98E, h30^{km}, mb4.4/12, Error ellipse: s-maj=10.4km s-min=8.6km az=221.0*

IDC ***27*** *16:38:31.1±4.1, 13.90N×93.08E, h46^{km}±40^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.9/17, mbtmp4.0/14, ML3.6/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/18, Error ellipse: s-maj=24.0km s-min=15.1km az=56.0*

ISC 27 16:38:27.5±0.4**, 13.92N**±0.05×**92.98E**±0.04**, h33**^{km}**, (h30**^{km}±5.3^{km}**:pP-P), n69, σ1^{s}29**/81**, mb4.3**/29**, MS3.6**/13**, 3C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDT	**Bhumibol Dam**	6.68	60	P	P	16 40 10.0	+4.2
	20nm,0.6s						
CM31	**Chiang Mai Arr**	7.29	51	*e*P	P	16 40 13.8	-0.5
	13nm,0.6s						
CMAR	**Chiang Mai Arr**	7.29	51	P	P	16 40 13.4	-0.9
	0.2nm,0.3s,baz=241,slow=15,SNR=24						
CMAR				S	S	16 41 35.9	-1.0
	baz=60,slow=16,SNR=2.6						
CMAR				LR	LR	16 43 52.9	
	comp=Z,264nm,18.8s,baz=235,slow=44						
CHG	**Chiang Mai**	7.51	49	P	P	16 40 22.0	+4.6
CHRT	**Chiangrai**	8.79	47	P	P	16 40 39.6	+4.3
	116nm,0.9s						
NANT	**Nan**	8.85	56	P	P	16 40 41.5	+5.4
BWNR	**Bhubaneshwar**	9.34	314	*e*	P	16 40 50.0	+7.2
BWNR				*e*S	Sx	16 42 08.0	
VIS	**Vishakhapatnam**	10.03	293	*i* P	P	16 40 49.5	-3.0
VIS				*i* S	S	16 42 33.2	-12
VIS				*e*		16 50 19.4	
HYB	**Hyderabad**	14.32	286	*e*P	P	16 41 48.0	-2.1
HYB				*e*S	S	16 44 27.0	-1.7
HYB	**Hyderabad**	14.32	286	*i* P	P	16 41 48.0	-2.1
HYB				*e*S	S	16 44 27.0	-1.7
JIRN	**Jiri**	15.07	336	*e*P	P	16 41 56.4	-3.4
	57nm,0.9s						
PKI	**Pulchoki**	15.31	334	*e*P	P	16 42 01.4	-1.5
	24nm,0.5s						
DMN	**Daman**	15.48	333	*e*P	P	16 42 04.0	-1.1
	42nm,0.8s						
LSA	**Lhasa**	15.80	354	P	P	16 42 11.0	+1.8
LSA				AMB	AMB		
	comp=Z,20nm,0.9s						
LSA				LR	LR		
	comp=N,120nm,16.0s						
LSA				LR	LR		
	comp=E,260nm,16.0s						
LSA				LR	LR		
	comp=Z,120nm,14.0s						
LSA	**Lhasa**	15.80	354	*e*P	P	16 42 08.9	-0.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	**Lhasa**	15.80	354	*e*P	P	16 42 08.9	-0.2
	comp=Z,8.4nm,0.6s						
GKN	**Gorkha**	16.02	332	*e*P	P	16 42 08.0	-4.1
KOLN	**Koldanda**	16.32	329	*e*P	P	16 42 14.1	-1.8
	comp=Z,29nm,0.5s						
KAD	**Karad**	18.42	283	*e*P	P	16 42 46.0	+3.8
KAD				*e*		16 55 14.0	
POO	**Poona**	18.93	287	*e*P	P	16 42 49.0	+0.6
POO				*e*		16 46 10.0	
POO				*e*		16 55 40.0	
CD2	**Chengdu**	19.60	29	*e*P	P	16 42 55.5	-0.4
NDI	**New Delhi**	20.74	318	*e*P	P	16 43 10.0	+2.1
NDI				*e*		16 46 41.0	
DDI	**Dehra Dun**	21.35	322	*e*	P	16 43 21.1	+7.0
DDI				*e*S	S	16 47 08.2	+3.8
ENH	**Enshi**	22.28	40	*e*P	P	16 43 23.5	+0.1
	comp=Z,19nm,1.0s,mb4.5						
LZH	**Lanzhou**	24.13	22	⇑P	P	16 43 43.8	+2.3
LZH				AP		16 43 51.0	
LZH				XP		16 43 54.8	
LZH				PP	PP	16 44 18.8	+2.4
LZH				AMB	AMB		
	comp=Z,41nm,1.4s,mb4.7						
LZH				AMB	AMB		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=E,176nm,15.8s						
LZH				LR	LR		
	comp=Z,223nm,17.0s,MS3.7						
LZH	**Lanzhou**	24.13	22	⇑P	P	16 43 43.7	+2.2
LZH				*PP		16 43 51.0	
LZH				*SP		16 43 54.8	
LZH						16 44 18.8	
LZH				pmax	pmax		
	comp=Z,41nm,1.4s,mb4.7						
LZH				MLR	MLR		
	comp=Z,220nm,17.0s,MS3.7						
LZH	**Lanzhou**	24.13	22	⇑P	P	16 43 43.7	+2.2
	comp=Z,41nm,1.4s,mb4.7						
LZH				pP		16 43 51.0	
LZH				sP		16 43 54.8	
LZH				PP	PP	16 44 18.8	+2.4
LZH				LR	LR		
	comp=Z,220nm,17.0s,MS3.7						
XAN	**Xi'an**	24.70	33	P	P	16 43 47.5	+0.5
XAN				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.5						
GTA	**Gaotai**	26.10	12	*e*P	P	16 44 02.3	+2.2
GTA				AP	pP	16 44 10.3	+0.8
GTA				XP	sP	16 44 14.8	+1.3
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb3.9						
GTA				AMB	AMB		
	comp=Z,53nm,3.8s						
GTA				LR	LR		
	comp=N,88nm,15.3s,MS3.6						
GTA				LR	LR		
	comp=E,117nm,14.9s,MS3.6						
GTA				LR	LR		
	comp=Z,85nm,14.5s,MS3.4						
NJ2	**Nanjing**	29.75	48	*e*P	P	16 44 32.0	-1.3
NJ2				AP	pP	16 44 42.5	-0.3
NJ2				XP	sP	16 44 48.3	+1.1
NJ2				PP	PP	16 45 31.5	+0.9
NJ2				S	S	16 49 26.0	-0.1
NJ2				XS		16 49 43.0	
NJ2				AMB	AMB		
	comp=Z,680nm,4.0s						
NJ2				LR	LR		
	comp=N,490nm,20.4s						
NJ2				LR	LR		
	comp=E,470nm,10.7s						
WMQ	**Urumqi**	30.14	352	*e*P	P	16 44 38.3	+1.7
WMQ				XP	sP	16 44 52.0	+1.4
WMQ				PP	PP	16 45 37.0	+1.6
WMQ				S	S	16 49 33.0	+1.0
WMQ				SS	SS	16 51 11.0	+0.1
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
WMQ				LR	LR		
	comp=N,98nm,20.0s,MS3.6						
WMQ				LR	LR		
	comp=E,118nm,21.0s,MS3.6						
WMQ				LR	LR		
	comp=Z,87nm,20.0s,MS3.4						
SSE	**Sheshan**	31.03	52	P	P	16 44 42.3	-2.3
SSE				AP	pP	16 44 54.8	+0.6
SSE				S	S	16 49 44.8	-1.3
SSE				AMB	AMB		
	comp=Z,36nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,53nm,3.1s						
SSE				LR	LR		
	comp=N,170nm,19.7s,MS3.8						
SSE				LR	LR		
	comp=E,73nm,19.7s,MS3.8						
SSE				LR	LR		
	comp=Z,67nm,16.2s,MS3.4						
SSE	**Sheshan**	31.03	52	P	P	16 44 42.2	-2.4
	comp=Z,36nm,0.8s,mb5.2						
SSE				pP	pP	16 44 50.4	-3.8
SSE				sP	sP	16 44 54.8	-3.8
SSE				S	S	16 49 44.8	-1.3
SSE				sS		16 49 58.8	
SSE				SS	SS	16 51 57.3	+26
SSE				LR	LR		
	comp=Z,70nm,16.2s,MS3.4						
AAK	**Ala-Archa**	32.76	334	*i* P	P	16 45 01.0	+1.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
AAK				MLR	MLR		
	comp=Z,100nm,21.0s,MS3.5						
AAK	**Ala-Archa**	32.76	334	*e*P	P	16 45 00.9	+1.3
	comp=Z,2.1nm,0.9s,mb4.1						
BJI	**Beijing**	33.03	34	*e*P	P	16 45 06.3	+4.3
BJI				S	S	16 50 10.8	-6.5
BJI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
BJI				LR	LR		
	comp=N,263nm,18.0s,MS4.1						
BJI				LR	LR		
	comp=E,310nm,20.7s,MS4.1						
BJI				LR	LR		
	comp=Z,101nm,26.7s						
BJI	**Beijing**	33.03	34	*e*P	P	16 45 06.2	+4.2
BJI				S	S	16 50 10.7	-6.6
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BJI				MLR	MLR		
	comp=Z,100nm,26.7s,MS3.4						
BJI	**Beijing**	33.03	34	*e*P	P	16 45 06.2	+4.2
	comp=Z,7.0nm,0.8s,mb4.6						
BJI				S	S	16 50 10.7	-6.6
BJI				LR	LR		
	comp=Z,100nm,26.7s,MS3.4						
JOW	**Kunigami**	35.36	63	LR	LR	17 01 55.9	
	comp=Z,202nm,19.5s,MS3.9,baz=296,slow=40						
SONM	**Songino Array**	35.61	16	P	P	16 45 25.7	+1.7
	comp=Z,2.2nm,0.9s,mb4.1,baz=199,slow=5.6,SNR=16						
ULN	**Ulaanbaatar**	35.81	16	*e*P	P	16 45 25.9	+0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	35.81	16	*e*P	P	16 45 25.9	+0.1
	comp=Z,1.0nm,0.8s,mb3.8						
KURK	**Kurchatov**	38.51	345	*i* P	P	16 45 48.9	+0.6
KURK	**Kurchatov**	38.51	345	*e*P	P	16 45 48.3	0.0
	comp=Z,6.9nm,1.1s,mb4.3						
CHKZ	**Chkalovo**	43.42	341	*e*P	P	16 46 29.4	+0.6
CHKZ				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.1						
CHKZ	**Chkalovo**	43.42	341	*e*P	P	16 46 29.4	+0.6
	comp=Z,25nm,0.6s,mb5.1						
MDJ	**Mudanjiang**	43.62	38	P	P	16 46 31.0	+0.5
MDJ				AP	pP	16 46 39.0	-1.4
MDJ				PCS		16 52 11.3	
MDJ				S	S	16 53 00.0	+2.7
MDJ				XS		16 53 14.0	
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.9s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,119nm,4.4s						
MDJ				LR	LR		
	comp=N,54nm,35.2s,MS3.3						
MDJ				LR	LR		
	comp=E,35nm,35.2s,MS3.3						
MDJ				LR	LR		
	comp=Z,42nm,27.2s						
BOD	**Bodaibo**	46.61	15	*e*P	P	16 46 54.7	+0.5
BOD				*e*		16 47 01.9	
NWAO	**Narrogin (SRO)**	52.03	154	P	P	16 47 37.0	+0.8
	comp=Z,7.6nm,0.8s,mb4.7,baz=325,slow=22,SNR=1.9						
KIV	**Kislovodsk**	52.17	315	*i* P	P	16 47 36.1	-1.0
KIV				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
WRA	**Warramunga Arr**	52.80	129	P	P	16 47 41.1	-1.0
	comp=Z,2.2nm,0.8s,mb4.1,baz=307,slow=8.0,SNR=16						
WB2	**Warramunga Arr**	52.81	129	*e*P	P	16 47 41.1	-1.1
YAK	**Yakutsk**	54.70	20	*i* P	P	16 47 55.2	-0.4
YAK				pmax	pmax		
	comp=Z,18nm,2.1s,mb4.7						
YAK				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.9						
ASPA	**Alice Springs**	54.74	133	*e*P	P	16 48 00.0	+3.6
ASAR	**Alice Springs**	54.74	133	P	P	16 47 55.0	-1.4
	comp=Z,0.8nm,0.6s,mb4.0,baz=309,slow=7.0,SNR=22						
ASAR				LR	LR	17 16 08.3	
	comp=Z,48nm,18.9s,MS3.6,baz=297,slow=41						
KMBO	**Kilima Mbogo**	57.18	259	P	P	16 48 15.3	+1.2
	comp=Z,2.2nm,1.1s,mb4.1,baz=50,slow=24,SNR=2.4						
BRTR	**Keskin Array B**	57.72	308	P	P	16 48 17.8	+0.2
	comp=Z,1.3nm,0.7s,mb4.0,baz=123,slow=5.4,SNR=5.0						
TIXI	**Tiksi**	61.58	12	⇓*i*P	P	16 48 43.1	-0.6
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
STKA	**Stephens Creek**	65.13	135	P	P	16 49 06.4	-1.2
	comp=Z,1.4nm,0.9s,mb4.0,baz=8.7,slow=13,SNR=2.6						
STKA				LR	LR	17 21 04.2	
	comp=Z,76nm,19.0s,MS3.9,baz=24,slow=39						
FINES	**FINESS Array B**	66.88	331	P	P	16 49 18.4	+0.2
	comp=Z,1.7nm,0.8s,mb4.1,baz=297,slow=6.2,SNR=3.2						
FINES				LR	LR	17 22 44.3	
	comp=Z,52nm,18.6s,MS3.8,baz=186,slow=40						
ARCES	**ARCESS Array B**	69.23	340	P	P	16 49 32.4	-0.3
	comp=Z,2.8nm,0.8s,mb4.2,baz=90,slow=7.2,SNR=2.7						
ARCES				LR	LR	17 22 02.1	
	comp=Z,52nm,20.6s,MS3.8,baz=191,slow=38						
MATP	**Matopo**	71.98	243	P	P	16 49 50.9	+0.7
	comp=Z,3.4nm,1.1s,mb4.2,baz=247,slow=3.2,SNR=3.4						
GERES	**GERESS Array B**	72.62	317	P	P	16 49 53.9	+0.4
	comp=Z,0.7nm,0.6s,mb3.7,baz=90,slow=5.3,SNR=4.8						
NB2	**NORSAR Subarra**	73.95	330	P	P	16 50 03.4	+2.4
	comp=Z,1.6nm,0.7s,mb4.1,baz=91,slow=4.8						
NB2	**NORSAR Subarra**	73.95	330	P	P	16 50 03.4	+2.4
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NOA	**NORSAR Array B**	73.95	330	P	P	16 50 01.9	+0.9
	comp=Z,0.9nm,0.9s,mb3.7,baz=316,slow=30,SNR=3.2						
LBTB	**Lobatse**	76.22	240	*e*P	P	16 50 16.3	+1.5
LBTB				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
LBTB	**Lobatse**	76.22	240	*e*P	P	16 50 16.3	+1.5
	comp=Z,0.7nm,0.5s,mb3.9						
ILAR	**Eielson Array**	89.59	22	P	P	16 51 23.4	+0.7
	comp=Z,0.4nm,1.0s,mb3.7,baz=302,slow=4.8,SNR=4.5						

MAN 27 17:29:11.0, 18.14N×120.78E, h1^{km}**, mb3.8, ML2.5, MS2.0, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	**Dolores**	0.49	187	*e*P	Pg	17 29 20.3	-0.5
ABRA				*e*S	Sg	17 29 26.8	-0.6
APYP	**Conner**	0.52	122	*e*P	Pg	17 29 20.9	-0.5
APYP				*e*S	Sg	17 29 35.0	+6.6
CVP	**Callao Caves**	1.08	113	⇓*e*P	Pb	17 29 32.0	-0.2
CVP				*i* S	Sb	17 29 49.0	+2.3
CAUP	**Cauayan**	1.55	140	*e*P	Pn	17 29 37.9	-2.0

IDC ***27*** *17:34:24.8±2.2, 35.64N×67.97E, mb3.8/6, mb1 3.9/8, mb1mx3.7/20, mbtmp3.8/8, MS2.8/2, Ms1 2.8/2, ms1mx2.5/28, Error ellipse: s-maj=50.1km s-min=24.9km az=167.0*

NEIC ***27*** *17:34:29.7±0.8, 36.23N×67.83E, h20^{km}, Error ellipse: s-maj=20.0km s-min=9.8km az=37.0*

NNC ***27*** *17:34:37.4±5.0, 36.33N×68.91E, h111^{km}±64^{km}, mpv3.9, Error ellipse: s-maj=90.1km s-min=40.5km az=122.0*

ISC 27 17:34:33.4±0.8**, 36.55N**±0.06×**68.4E**±0.1**, h33**^{km}**, n26, σ1^{s}02**/26**, mb3.6**/6**, MS2.8**/2**, 2C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	6.91	35	P	P	17 36 15.6	+0.6
	SNR=8.7						
UCH	**Uchtor**	7.38	38	P	P	17 36 21.8	+0.4
	SNR=13						
KZA	**Kyzart**	7.65	42	P	P	17 36 25.4	+0.2
	SNR=11						
AAK	**Ala-Archa**	7.67	36	P	P	17 36 25.9	+0.3
	SNR=6.7						
AAK	**Ala-Archa**	7.67	36	⇑P	P	17 36 25.9	+0.3
	5.8nm,0.9s						
AAK				⇓S	S	17 37 51.4	-0.9
	11nm,0.9s						
AAK	**Ala-Archa**	7.67	36	*e*P	P	17 36 24.4	-1.1
KBK	**Karagaybulak**	7.91	38	P	P	17 36 29.4	+0.6
	SNR=10						
MK31	**Makanchi Array**	14.55	41	⇑P	P	17 37 56.7	-1.9
	1.8nm,0.8s,baz=227,slow=12,SNR=13						
KOLN	**Koldanda**	15.54	120	*e*P	P	17 38 12.7	+1.1
	3.3nm,0.5s						
GKN	**Gorkha**	16.13	117	*e*P	P	17 38 20.9	+1.7
	11nm,0.4s						
BVA0	**Borovoye Array**	16.53	4	⇓P	P	17 38 25.5	+1.4
	1.4nm,2.3s,baz=179,slow=11,SNR=13						
BVAR	**Borovoye Array**	16.53	4	Pn	P	17 38 25.3	+1.2
	0.3nm,0.3s,baz=188,slow=10,SNR=12						
DMN	**Daman**	16.70	118	*e*P	P	17 38 25.2	-1.2
	7.4nm,0.6s						
KKN	**Kakani**	16.72	117	*e*P	P	17 38 26.7	+0.1
	16nm,0.9s						
PKI	**Pulchoki**	16.94	117	*e*P	P	17 38 28.1	-1.3
	5.8nm,0.5s						
CHKZ	**Chkalovo**	17.20	4	⇓P	P	17 38 31.8	-0.6
	2.0nm,1.0s						
CHKZ	**Chkalovo**	17.20	4	*e*P	P	17 38 30.9	-1.5
	1.1nm,0.7s						
JIRN	**Jiri**	17.45	115	*e*P	P	17 38 35.1	-0.7
	12nm,0.6s						
GNI	**Garni**	18.90	288	P	P	17 38 44.6	-9.1
	0.7nm,0.3s,baz=85,slow=12,SNR=3.0						
EIL	**Elat**	28.76	266	P	P	17 40 20.8	-9.3
	4.0nm,0.9s,mb4.2,baz=16,slow=15,SNR=2.5						
SONM	**Songino Array**	30.02	56	P	P	17 40 42.1	+0.9
	0.5nm,0.5s,mb3.5,baz=270,slow=9.2,SNR=16						
FINES	**FINESS Array B**	36.29	327	P	P	17 41 34.5	-0.8
	0.7nm,0.8s,mb3.7,baz=131,slow=13,SNR=3.1						
FINES				LR	LR	17 59 38.8	
	comp=Z,30nm,18.0s,MS3.1,baz=332,slow=41						
NOA	**NORSAR Array B**	43.09	323	P	P	17 42 30.3	-1.4
	0.9nm,0.9s,mb3.5,baz=97,slow=9.5,SNR=2.5						
JNU	**Nakatsue**	50.59	74	LR	LR	18 08 06.3	
	comp=Z,4.7nm,21.3s,MS2.5,baz=72,slow=40						
ILAR	**Eielson Array**	75.28	15	P	P	17 46 14.4	+0.3
	0.3nm,0.7s,mb3.3,baz=318,slow=5.2,SNR=5.7						
YKA	**Yellowknife Ar**	81.27	1	P	P	17 46 48.1	+1.0
	0.5nm,0.6s,mb3.6,baz=351,slow=5.4,SNR=13						

IDC 27 17:41:46.3±9.9**, 7.01S×156.72E, h296**^{km}±97^{km}**, mb2.9**/4**, mb1 3.1**/5**, mb1mx3.0**/12**, mbtmp3.6**/5**, Error ellipse: s-maj=71.8km s-min=38.5km az=121.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	16.49	217	P	P	17 45 21.4	-1.1
	0.2nm,0.3s,baz=42,slow=15,SNR=3.3						
WRA	**Warramunga Arr**	25.23	237	P	P	17 46 46.5	-1.1
	0.4nm,0.4s,baz=62,slow=8.9,SNR=6.9						
WRA				PcP	PcP	17 50 11.2	-1.9
	0.2nm,0.6s,baz=64,slow=2.9,SNR=4.1						
ASAR	**Alice Springs**	27.46	230	P	P	17 47 05.4	-2.4
	0.2nm,0.3s,baz=59,slow=9.7,SNR=4.6						
STKA	**Stephens Creek**	28.48	208	P	P	17 47 14.1	-2.7
	0.9nm,0.8s,baz=345,slow=21,SNR=3.4						
ILAR	**Eielson Array**	82.77	21	P	P	17 53 37.1	-1.2
	0.1nm,0.4s,baz=256,slow=5.4,SNR=5.5						

IDC ***27*** *17:42:40.6±1.6, 2.40N×95.57E, mb4.0/6, mb1 4.1/7, mb1mx3.9/15, mbtmp4.0/7, ML4.1/1, Error ellipse: s-maj=66.9km s-min=20.3km az=56.0*

NEIC ***27*** *17:42:44.0±0.6, 2.43N×95.72E, mb4.4/8, Error ellipse: s-maj=14.4km s-min=8.4km az=50.0*

BJI ***27*** *17:42:46.4, 3.01N×96.06E, h20^{km}, mB4.7, mb4.2*

ISC 27 17:42:42.0±0.8**, 2.44N**±0.10×**95.7E**±0.1**, h18**^{km}**, h18**^{km}±1.5^{km}**:pP-P, n27, σ0^{s}85**/27**, mb4.3**/19**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.67**	**60**	*e*P	**Pn**	**17 44 06.8**	**-0.7**
CM31	**Chiang Mai Arr**	**16.23**	**11**	*e*P	**P**	**17 46 31.6**	**+0.6**
	4.5nm,0.9s						
CM31				*e*		17 46 38.0	
CMAR	**Chiang Mai Arr**	**16.23**	**11**	Pn	**P**	**17 46 32.6**	**+1.7**
	0.3nm,0.3s,baz=200,slow=11,SNR=15						
JIRN	**Jiri**	**26.69**	**341**	*e*P	**P**	**17 48 22.7**	**+0.5**
	30nm,0.7s,mb5.0						
PKI	**Pulchoki**	**26.88**	**339**	*e*P	**P**	**17 48 24.4**	**+0.5**
	5.6nm,0.5s,mb4.3						
DMN	**Daman**	**27.02**	**339**	*e*P	**P**	**17 48 26.1**	**+0.9**
	13nm,1.1s,mb4.4						
KKN	**Kakani**	**27.12**	**339**	*e*P	**P**	**17 48 26.5**	**+0.4**
	26nm,1.2s,mb4.6						
LSA	**Lhasa**	**27.46**	**351**	*e*P	**P**	**17 48 30.0**	**+0.8**
LSA	**Lhasa**	**27.46**	**351**	*e*P	**P**	**17 48 29.2**	**0.0**
	4.5nm,0.9s,mb4.0						
GKN	**Gorkha**	**27.55**	**338**	*e*P	**P**	**17 48 30.5**	**+0.5**
	16nm,0.8s,mb4.7						
KOLN	**Koldanda**	**27.74**	**336**	*e*P	**P**	**17 48 32.0**	**+0.3**
	12nm,0.7s,mb4.6						
GTA	**Gaotai**	**36.99**	**5**	*e*P	**P**	**17 49 51.8**	**-0.5**
GTA				AP	pP	17 49 55.8	-2.0
GTA				XP	sP	17 49 58.0	-2.1
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
BJT	**Baijiatuau**	**41.75**	**24**	*e*P	**P**	**17 50 32.4**	**+0.5**
	comp=Z,4.8nm,0.5s,mb4.4						
BJT				*e*	pP	17 50 38.5	+1.1
BJI	**Beijing**	**41.77**	**24**	*e*P	**P**	**17 50 33.0**	**+0.9**
BJI	**Beijing**	**41.77**	**24**	*e*P	**P**	**17 50 32.9**	**+0.8**
BJI				*e*	pP	17 50 38.5	+0.9
WRA	**Warramunga Arr**	**43.93**	**122**	P	**P**	**17 50 50.2**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.7,baz=299,slow=9.4,SNR=15						
WRAB	**Tennant Creek**	**43.93**	**122**	*e*P	**P**	**17 50 50.5**	**+0.6**
	comp=Z,1.9nm,0.6s,mb4.0						
ASAR	**Alice Springs**	**45.30**	**127**	P	**P**	**17 51 01.7**	**+0.8**
	comp=Z,0.5nm,0.5s,mb3.6,baz=300,slow=8.1,SNR=10						
SONM	**Songino Array**	**46.15**	**10**	P	**P**	**17 51 06.9**	**-0.4**
	comp=Z,1.8nm,0.7s,mb4.1,baz=190,slow=9.2,SNR=26						
ULN	**Ulaanbaatar**	**46.30**	**11**	*e*P	**P**	**17 51 07.7**	**-0.8**
ULN				*e*	pP	17 51 13.9	-0.1
CN2	**Changchun**	**48.90**	**28**	*e*P	**P**	**17 51 28.0**	**-0.9**
KURK	**Kurchatov**	**50.24**	**346**	*e*P	**P**	**17 51 36.9**	**-2.1**
	comp=Z,2.6nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**54.62**	**342**	P	**P**	**17 52 11.1**	**-0.7**
	comp=Z,1.3nm,0.6s,mb4.2,baz=146,slow=8.5,SNR=8.5						
CHKZ	**Chkalovo**	**55.10**	**342**	*e*P	**P**	**17 52 14.6**	**-0.7**
	comp=Z,3.4nm,0.8s,mb4.4						
YAK	**Yakutsk**	**64.66**	**17**	*e*P	**P**	**17 53 18.6**	**-2.1**
	comp=Z,4.7nm,0.5s,mb4.8						
FINES	**FINESS Array B**	**78.23**	**333**	P	**P**	**17 54 41.7**	**-0.3**
	comp=Z,1.4nm,1.0s,mb3.9,baz=84,slow=17,SNR=2.7						
ARCES	**ARCESS Array B**	**80.89**	**340**	P	**P**	**17 54 56.1**	**-0.1**
	comp=Z,4.1nm,0.9s,mb4.3,baz=90,slow=5.4,SNR=4.1						

IDC 27 18:13:20.3±55.0**, 19.35S**×**178.03W, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/14**, mbtmp3.8**/3**, Error ellipse: s-maj=1002.0km s-min=161.1km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.27**	**243**	P	P	18 20 42.7	-1.4
	0.4nm,0.4s,baz=80,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**44.74**	**261**	P	P	18 21 35.6	-1.9
	0.7nm,0.6s,baz=98,slow=8.4,SNR=27						
ASAR	**Alice Springs**	**44.76**	**256**	P	P	18 21 35.7	-1.9
	1.6nm,0.6s,baz=92,slow=7.4,SNR=56						

IDC ***27*** *18:32:10.6±1.0, 25.44N×91.60E, mb3.8/8, mb1 3.9/9, mb1mx3.8/17, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=47.2km s-min=18.5km az=53.0*

BJI ***27*** *18:32:11.8, 25.48N×91.62E, h18^{km}, mb3.8, ML3.9*

NEIC ***27*** *18:32:14.2±4.3, 25.37N×91.55E, h25^{km}±31^{km}, mb4.2/1, Error ellipse: s-maj=23.1km s-min=9.3km az=59.0*

ISC 27 18:32:10.0±0.5**, 25.40N**±0.05×**91.60E**±0.04**, h10**^{km}**, n22, σ0**^{s}**98**/28**, mb3.9**/8**, 1C, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**0.30**	**56**	*i* P	**Pg**	**18 32 16.5**	**+0.1**
SHL				*e*S	**Sg**	**18 32 19.2**	**-1.4**
SHL				*e*		18 32 20.6	
	comp=E,142μm,0.2s						
SHL				*e*		18 32 20.9	
	comp=N,83μm,0.3s						
AGT	**Agartala**	**1.54**	**192**⇑	*i*P	**Pn**	**18 32 45.0**	**+7.2**
AGT				*i*		18 34 14.0	
IMP	**Imphal**	**2.20**	**106**	*e*P	**Pn**	**18 32 51.0**	**+3.8**
GTK	**Gangtok**	**3.30**	**306**	*e*P	**Pn**	**18 33 02.0**	**-0.9**
GTK				*e*		18 33 49.0	
LSA	**Lhasa**	**4.30**	**355**	P	**Pn**	**18 33 19.0**	**+1.8**
LSA				PG	**Pg**	**18 33 31.8**	**-4.2**
LSA				S	**Sn**	**18 34 08.5**	**+0.4**
LSA				Smax			
	comp=N,50nm,0.7s						
LSA				Smax			
	comp=E,110nm,0.6s						
LSA	**Lhasa**	**4.30**	**355**	*e*Pn	**Pn**	**18 33 19.3**	**+2.1**
LSA				*e*Pg	**Pg**	**18 33 31.5**	**-4.5**
BWNR	**Bhubaneshwar**	**7.37**	**228**	*e*P	**Pn**	**18 34 05.0**	**+4.6**
BWNR				*i* S	**Sn**	**18 35 25.6**	**+0.7**
BWNR				*e*		18 35 32.5	
	comp=E,33nm,0.3s						
BWNR				*e*		18 35 33.4	
	comp=N,26nm,0.3s						
CMAR	**Chiang Mai Arr**	**9.70**	**134**	Pn	**P**	**18 34 32.0**	**-0.8**
	comp=N,0.1nm,0.3s,baz=306,slow=13,SNR=2.9						
JOSI	**Joshimath**	**11.82**	**298**	*e*	**P**	**18 34 51.3**	**-10**
JOSI				*e*		18 36 22.4	
BHPL	**Bhopal**	**13.11**	**264**	*e*P	**P**	**18 35 17.6**	**-1.4**
BHPL				*e*S	**S**	**18 37 37.2**	**-8.6**
BHPL				*e*		18 39 15.8	
	comp=N,17nm,0.4s						
BHPL				*e*		18 39 18.5	
	comp=E,7.0nm,0.9s						
KLP	**Kalpa**	**13.24**	**301**	*e*P	**P**	**18 35 20.4**	**-0.3**
KUDL	**Kundal**	**13.78**	**285**	*e*P	**P**	**18 35 27.5**	**-0.4**
KUDL				*e*		18 35 29.5	
	comp=Z,2.7nm,0.7s						
KUDL				*e*		18 39 35.0	
KHET	**Khetri**	**14.37**	**284**	*i* P	**P**	**18 35 36.8**	**+1.2**
KHET				AMb	AMB	18 35 37.4	
	comp=Z,5.1nm,0.3s						
KHET				*e*		18 38 06.0	
ENH	**Enshi**	**16.54**	**69**	*e*P	**P**	**18 36 05.7**	**+1.9**
	comp=Z,11nm,0.5s						
SONM	**Songino Array**	**25.26**	**24**	P	**P**	**18 37 37.8**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.3,baz=207,slow=7.7,SNR=13						
FINES	**FINESS Array B**	**56.35**	**328**	P	**P**	**18 41 52.9**	**-0.5**
	comp=Z,0.7nm,0.8s,mb3.7,baz=108,slow=12,SNR=2.7						
ARCES	**ARCESS Array B**	**58.12**	**338**	P	**P**	**18 42 05.9**	**+0.1**
	comp=Z,3.9nm,1.0s,mb4.4,baz=80,slow=5.5,SNR=2.5						
WRA	**Warramunga Arr**	**61.29**	**133**	P	**P**	**18 42 28.5**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.8,baz=321,slow=6.9,SNR=3.2						
NOA	**NORSAR Array B**	**63.51**	**328**	P	**P**	**18 42 41.9**	**-0.5**
	comp=Z,0.6nm,0.7s,mb3.7,baz=95,slow=6.7,SNR=3.0						
GERES	**GERESS Array B**	**63.55**	**314**	P	**P**	**18 42 42.4**	**-0.5**
	comp=Z,0.7nm,0.5s,mb4.0,baz=68,slow=7.2,SNR=6.1						
ASAR	**Alice Springs**	**63.70**	**136**	P	**P**	**18 42 44.2**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.9,baz=318,slow=6.8,SNR=9.2						
STKA	**Stephens Creek**	**74.30**	**137**	P	**P**	**18 43 55.1**	**+5.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=333,slow=5.8,SNR=4.9						

IDC 27 18:52:13.6±9.1**, 6.61N**×**96.56E, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.6**/13**, mbtmp3.5**/3**, Error ellipse: s-maj=316.1km s-min=29.2km az=70.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**41.92**	**10**	P	P	19 00 06.0	-1.6
	0.1nm,0.6s,baz=194,slow=5.9,SNR=2.8						
WRA	**Warramunga Arr**	**45.58**	**126**	P	P	19 00 35.5	-2.1
	0.4nm,0.4s,baz=300,slow=10,SNR=16						
ASAR	**Alice Springs**	**47.28**	**131**	P	P	19 00 49.2	-1.7
	0.9nm,0.4s,baz=309,slow=6.9,SNR=50						

IDC ***27*** *18:53:35.3±0.7, 6.81N×94.18E, mb4.0/13, mb1 4.1/14, mb1mx4.1/19, mbtmp4.0/14, ML3.9/1, Error ellipse: s-maj=27.9km s-min=16.3km az=51.0*

NEIC ***27*** *18:53:39.5±0.6, 7.00N×94.25E, h30^{km}, mb4.2/9, Error ellipse: s-maj=26.1km s-min=10.9km az=60.0*

ISC 27 18:53:37.8±0.5**, 6.86N**±0.07×**94.12E**±0.10**, h33**^{km}**, n39, σ1**^{s}**31**/36**, mb4.2**/26**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.68**	**103**	P	**P**	**18 55 28.3**	**+12**
CM31	**Chiang Mai Arr**	**12.44**	**22**	*e*P	**P**	**18 56 38.4**	**+3.0**
	9.1nm,0.3s						
CMAR	**Chiang Mai Arr**	**12.44**	**22**	Pn	**P**	**18 56 36.2**	**+0.8**
	0.2nm,0.3s,baz=215,slow=14,SNR=9.2						
HYB	**Hyderabad**	**18.47**	**306**	*i* P	**P**	**18 57 53.0**	**-0.1**
JIRN	**Jiri**	**22.01**	**341**	*e*P	**P**	**18 58 30.1**	**-0.9**
	24nm,0.8s,mb4.7						
PKI	**Pulchoki**	**22.19**	**339**	*e*P	**P**	**18 58 30.6**	**-2.2**
DMN	**Daman**	**22.34**	**339**	*e*P	**P**	**18 58 32.3**	**-1.9**
	22nm,0.7s,mb4.7						
KKN	**Kakani**	**22.44**	**339**	*e*P	**P**	**18 58 33.9**	**-1.3**
	17nm,0.7s,mb4.6						
GKN	**Gorkha**	**22.86**	**338**	*e*P	**P**	**18 58 37.7**	**-1.9**
	22nm,0.4s,mb4.9						
LSA	**Lhasa**	**22.89**	**353**	*e*P	**P**	**18 58 38.1**	**-1.7**
	8.9nm,0.7s,mb4.3						
KOLN	**Koldanda**	**23.06**	**336**	*e*P	**P**	**18 58 40.1**	**-1.4**
	12nm,0.6s,mb4.5						
AAK	**Ala-Archa**	**39.62**	**337**	*e*P	**P**	**19 01 07.5**	**-0.5**
	2.3nm,0.8s,mb4.0						
SONM	**Songino Array**	**42.15**	**12**	P	**P**	**19 01 29.7**	**+0.9**
	1.2nm,0.6s,mb3.7,baz=196,slow=8.6,SNR=14						
SONM				PcP	PcP	19 03 26.0	+2.6
	0.7nm,0.5s,baz=186,slow=3.5,SNR=7.0						
ULN	**Ulaanbaatar**	**42.32**	**13**	*e*P	**P**	**19 01 31.0**	**+0.8**
	1.4nm,0.7s,mb3.7						
NWAO	**Narrogin (SRO)**	**45.27**	**152**	*e*P	**P**	**19 01 52.7**	**-1.6**
KURK	**Kurchatov**	**45.58**	**346**	*e*P	**P**	**19 01 56.1**	**-0.4**
	1.4nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**47.70**	**125**	P	**P**	**19 02 13.0**	**-0.6**
	0.5nm,0.6s,mb3.8,baz=304,slow=8.4,SNR=6.8						
WRAB	**Tennant Creek**	**47.70**	**125**	*e*P	**P**	**19 02 12.9**	**-0.7**
	4.2nm,0.5s,mb4.7						
ASAR	**Alice Springs**	**49.29**	**129**	P	**P**	**19 02 26.2**	**+0.4**
	2.7nm,1.1s,mb4.2,baz=306,slow=6.6,SNR=11						
BVAR	**Borovoye Array**	**49.93**	**341**	P	**P**	**19 02 29.7**	**-0.7**
	1.0nm,0.9s,mb3.8,baz=135,slow=8.4,SNR=4.7						
BVAR				PcP	PcP	19 03 51.2	+0.6
	0.5nm,0.6s,baz=171,slow=3.5,SNR=5.0						
CHKZ	**Chkalovo**	**50.42**	**342**	*e*P	**P**	**19 02 33.3**	**-0.8**
	4.6nm,1.0s,mb4.5						
STKA	**Stephens Creek**	**59.43**	**133**	P	**P**	**19 03 38.4**	**-1.5**
	1.2nm,0.8s,mb4.0,baz=323,slow=10,SNR=3.1						
YAK	**Yakutsk**	**60.95**	**18**	*e*P	**P**	**19 03 50.9**	**+1.0**
	3.4nm,0.6s,mb4.7						
BRTR	**Keskin Array B**	**63.07**	**311**	P	**P**	**19 04 04.0**	**-0.4**
	0.7nm,0.6s,mb4.0,baz=132,slow=8.4,SNR=5.6						
IDI	**Anoyia**	**69.13**	**305**	P	**P**	**19 04 44.6**	**+1.6**
	5.8nm,0.7s,mb4.6,baz=242,slow=15,SNR=2.5						
MATP	**Matopo**	**69.93**	**245**	P	**P**	**19 04 50.0**	**+1.8**
	1.6nm,0.9s,mb4.0,baz=187,slow=9.4,SNR=2.9						
MATP	**Matopo**	**69.93**	**245**	P	**P**	**19 04 50.0**	**+1.8**
JOF	**Joensuu**	**71.75**	**335**	*e*p	**P**	**19 04 59.0**	**+0.6**
	1.7nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**73.59**	**332**	P	**P**	**19 05 10.1**	**+0.8**
	2.7nm,0.8s,mb4.2,baz=90,slow=5.7,SNR=12						
FINES	**FINESS Array B**	**73.59**	**332**	P	**P**	**19 05 10.1**	**+0.8**
KAF	**Kangasniemi**	**73.68**	**333**	*e*p	**P**	**19 05 10.6**	**+0.8**
	baz=105,slow=5.2						
ARCES	**ARCESS Array B**	**76.20**	**340**	P	**P**	**19 05 26.2**	**+2.0**
	1.8nm,0.5s,mb4.2,baz=90,slow=6.1,SNR=7.8						
GERES	**GERESS Array B**	**78.56**	**318**	P	**P**	**19 05 40.0**	**+2.3**
	0.7nm,0.5s,mb3.8,baz=79,slow=6.8,SNR=6.3						
HFS	**Hagfors**	**79.31**	**330**	P	**P**	**19 05 43.2**	**+1.6**
	1.8nm,0.5s,mb4.2,baz=104,slow=6.1,SNR=8.0						
NB2	**NORSAR Subarra**	**80.60**	**331**	P	**P**	**19 05 49.8**	**+1.4**
	1.7nm,1.0s,mb3.9,baz=93,slow=5.6						
NOA	**NORSAR Array B**	**80.60**	**331**	P	**P**	**19 05 50.5**	**+2.1**
	0.5nm,0.8s,mb3.5,baz=89,slow=7.0,SNR=3.1						
PDAR	**Pinedale Array**	**126.11**	**21**	PKP	PKPdf	19 12 44.1	+6.8
	0.4nm,0.8s,baz=304,slow=3.3,SNR=3.2						
PDAR	**Pinedale Array**	**126.11**	**21**	PKP	PKPdf	19 12 44.1	+6.8
TXAR	**Lajitas Array**	**140.15**	**25**	PKP	PKPdf	19 13 13.2	+9.4
	0.1nm,0.4s,baz=342,slow=2.9,SNR=2.7						

IDC 27 19:14:05.8±30.0**, 3.57N**×**122.56E, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/13**, mbtmp3.9**/3**, Error ellipse: s-maj=504.9km s-min=317.1km az=152.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.08**	**154**	P	P	19 19 41.6	-1.4
	1.2nm,0.5s,baz=335,slow=9.5,SNR=37						
ASAR	**Alice Springs**	**29.24**	**158**	P	P	19 20 08.6	-3.2
	0.5nm,0.4s,baz=337,slow=11,SNR=23						
STKA	**Stephens Creek**	**39.63**	**154**	P	P	19 21 40.4	-0.6
	1.6nm,0.9s,baz=348,slow=9.3,SNR=3.2						

IDC 27 19:18:27.4±1.6**, 5.48S**×**150.84E, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.7**/11**, mbtmp3.7**/5**, ML1.9**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.2**/15**, Error ellipse: s-maj=86.7km s-min=25.2km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.34**	**223**	Pn	Pn	19 19 49.5	-0.9
	0.2nm,0.3s,baz=90,slow=10,SNR=2.0						
PMG				Sn	Sn	19 20 48.7	-4.9
	1.9nm,0.3s,baz=17,slow=19,SNR=3.6						
CTA	**Charters Tower**	**15.19**	**197**	LR	LR	19 26 10.5	
	comp=Z,33nm,18.5s,baz=48,slow=30						
WRA	**Warramunga Arr**	**21.55**	**227**	P	P	19 23 18.6	-2.0
	1.1nm,0.5s,baz=54,slow=11,SNR=19						
ASAR	**Alice Springs**	**24.35**	**220**	P	P	19 23 46.7	-1.6
	1.2nm,0.6s,baz=54,slow=9.0,SNR=19						
STKA	**Stephens Creek**	**27.65**	**197**	P	P	19 24 17.7	-1.4
	1.2nm,0.9s,baz=14,slow=19,SNR=2.9						
ILAR	**Eielson Array**	**83.52**	**22**	P	P	19 30 57.0	-1.3
	0.5nm,0.9s,baz=245,slow=4.7,SNR=7.9						

IDC 27 19:39:24.4±3.9**, 10.81N**×**91.82E, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.6**/14**, mbtmp3.5**/5**, ML3.7**/1**, MS2.6**/1**, Ms1 2.8**/1**, ms1mx2.4**/18**, Error ellipse: s-maj=107.7km s-min=29.0km az=83.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.26**	**41**	Pn	P	19 41 53.5	-2.6
	0.2nm,0.3s,baz=244,slow=15,SNR=5.5						
CMAR				LR	LR	19 45 30.0	
	comp=Z,32nm,20.3s,baz=220,slow=36						
SONM	**Songino Array**	**38.89**	**16**	P	P	19 46 51.5	-1.8
	0.2nm,0.6s,baz=213,slow=7.7,SNR=3.7						
WRA	**Warramunga Arr**	**51.83**	**126**	P	P	19 48 34.2	-2.5
	0.2nm,0.3s,baz=308,slow=8.1,SNR=14						
ASAR	**Alice Springs**	**53.55**	**130**	P	P	19 48 47.2	-2.3
	0.8nm,0.6s,baz=306,slow=7.3,SNR=12						
STKA	**Stephens Creek**	**63.78**	**134**	P	P	19 49 59.0	-1.7
	1.2nm,0.9s,baz=315,slow=5.7,SNR=3.0						

MOS ***27*** *19:46:07.9±1.2, 55.19N×159.31E, h194^{km}, mb4.0/3, Error ellipse: s-maj=25.7km s-min=14.0km az=81.7*

KRSC ***27*** *19:46:08.2±0.3, 54.91N×159.68E, h194^{km}±2^{km}, ML4.1*

NEIC ***27*** *19:46:09.8±0.8, 55.02N×159.43E, h195^{km}±9^{km}, mb4.1/4, Error ellipse: s-maj=11.8km s-min=10.8km az=177.0*

IDC ***27*** *19:46:10.9±3.1, 55.10N×159.40E, h206^{km}±30^{km}, mb3.0/8, mb1 3.3/10, mb1mx3.2/20, mbtmp3.7/10, Error ellipse: s-maj=19.6km s-min=14.6km az=133.0*

ISC 27 19:46:08.5±0.3**, 54.94N**±0.03×**159.62E**±0.07**, h195**^{km}±2^{km}**, n51, σ1**^{s}**03**/73**, mb3.4**/11**, 1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUMR	**Tumrok**	**0.46**	**41**	*i* P	**P**	**19 46 36.2**	**+1.0**
TUMR				*i* S	**S**	**19 46 56.2**	**+0.3**
KMNR	**Kamenistaya**	**0.89**	**23**	*e*P	**P**	**19 46 38.3**	**+1.1**
KMNR				*e*S	**S**	**19 47 00.2**	**+0.7**
KII	**Karymskiy**	**0.91**	**186**	*e*P	**P**	**19 46 38.0**	**+0.7**
KPT	**Kopyto**	**1.09**	**18**	*e*P	**P**	**19 46 37.7**	**-0.9**
ESO	**Esso**	**1.12**	**332**	*i* P	**P**	**19 46 39.1**	**+0.3**
ESO				*i* S	**S**	**19 47 01.5**	**-0.8**
ESO				Smax			
	250nm,0.9s						
KOZ	**Kozyrevsk**	**1.13**	**7**	*e*P	**P**	**19 46 39.5**	**+0.6**
KOZ				*e*S	**S**	**19 47 02.5**	**0.0**
SRDR	**Sredinnyy**	**1.38**	**2**	*i* P	**P**	**19 46 41.7**	**+0.6**
SRDR				*i* S	**S**	**19 47 06.2**	**-0.1**
KRSR	**Krestovskiy**	**1.39**	**22**	*e*P	**P**	**19 46 42.1**	**+0.9**
KLY	**Klyuchi**	**1.50**	**23**	*e*P	**P**	**19 46 43.2**	**+1.1**
GNL	**Ganaly**	**1.59**	**219**	*i* P	**P**	**19 46 43.3**	**+0.4**
GNL				*e*S	**S**	**19 47 08.8**	**-0.7**
SDLR	**Sedlovina**	**1.72**	**195**	*i* P	**P**	**19 46 44.8**	**+0.6**
KOK	**Koryaka**	**1.75**	**200**	*e*P	**P**	**19 46 45.2**	**+0.7**
AVH	**Avacha**	**1.75**	**198**	*i* P	**P**	**19 46 45.6**	**+1.1**
AVH				*e*S	**S**	**19 47 13.0**	**+0.7**
NLC	**Nalytchevo**	**1.78**	**185**	*e*P	**P**	**19 46 44.7**	**-0.1**
NLC				*i* S	**S**	**19 47 11.5**	**-1.2**
UGLR	**Uglovaya**	**1.79**	**195**	*i* P	**P**	**19 46 45.7**	**+0.8**
SPN	**Mys Shipunski**	**1.86**	**172**	*i* P	**P**	**19 46 44.6**	**-0.9**
SPN				*i* S	**S**	**19 47 11.4**	**-2.7**
PET	**Petropavlovsk**	**2.00**	**197**⇓	*i*PN	**P**	**19 46 47.3**	**+0.3**
PET				*e*S	**S**	**19 47 16.2**	**-0.4**
PET				pmax	pmax		
	comp=Z,92nm,0.6s						
PET				smax			
	comp=E,55nm,0.9s						
PET				smax			
	comp=N,72nm,0.8s						
PET	**Petropavlovsk**	**2.00**	**197**	*e*Pn	**P**	**19 46 47.1**	**+0.1**
PET				*e*Sn	**S**	**19 47 16.5**	**-0.2**
PET	**Petropavlovsk**	**2.00**	**197**	*i* P	**P**	**19 46 47.2**	**+0.2**
PET				*i* S	**S**	**19 47 15.9**	**-0.7**
KBG	**Krutoberegovo**	**2.19**	**52**	*e*P	**P**	**19 46 49.5**	**+0.4**
KBG				*e*S	**S**	**19 47 19.0**	**-1.4**
KBG				Smax			
	comp=N,600nm,0.4s						
KBG	**Krutoberegovo**	**2.19**	**52**	*e*P	**P**	**19 46 48.8**	**-0.3**
KBG				*e*S	**S**	**19 47 18.7**	**-1.7**
KBG				Smax			
	comp=N,410nm,0.3s						
KBTR	**Krutoberegovo**	**2.22**	**54**	*i* P	**P**	**19 46 49.6**	**+0.2**
KBTR				*e*S	**S**	**19 47 20.0**	**-0.9**
KRMR	**Karymshinskiy**	**2.29**	**203**	*e*P	**P**	**19 46 50.7**	**+0.5**
KRMR				*e*S	**S**	**19 47 21.8**	**-0.5**
APC	**Apacha**	**2.49**	**217**	*i* P	**P**	**19 46 53.3**	**+0.9**
APC				*i* S	**S**	**19 47 26.1**	**-0.2**
APC				Smax			
	comp=N,50nm,1.2s						
GRL	**Gorelyy**	**2.56**	**202**	*e*P	**P**	**19 46 54.0**	**+0.8**
GRL				*e*S	**S**	**19 47 27.3**	**-0.5**
RUS	**Russkaya**	**2.59**	**195**	*i* P	**P**	**19 46 53.0**	**-0.6**
RUS				*e*S	**S**	**19 47 26.1**	**-2.4**
BKI	**Bering**	**3.66**	**83**	*i* P	**P**	**19 47 06.1**	**-0.4**
BKI				*i* S	**S**	**19 47 48.7**	**-2.7**
MA2	**Magadan**	**6.68**	**318**	PN	**P**	**19 47 45.6**	**+0.3**
FX1	**Attu Island--F**	**8.26**	**99**	PN	**P**	**19 48 08.3**	**+2.3**
FX1				S	**S**	**19 49 38.5**	**+0.8**
FX1				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FX1				smax			
	comp=N,4.0nm,0.3s						
FX1	**Attu Island--F**	**8.26**	**99**	P	**P**	**19 48 08.3**	**+2.3**
	comp=N,1.7nm,0.3s,baz=228,slow=12,SNR=7.6						
FX1				S	**S**	**19 49 38.5**	**+0.7**
	comp=N,3.5nm,0.3s,baz=304,slow=22,SNR=7.7						
FX1	**Attu Island--F**	**8.26**	**99**	*e*P	**P**	**19 48 08.1**	**+2.2**
ASAJ	**Asahikawa**	**15.43**	**232**	P	**P**	**19 49 38.0**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**15.43**	**232**	P	**P**	**19 49 38.0**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=60,slow=8.1,SNR=5.4						
YAK	**Yakutsk**	**17.06**	**307**	*e*P	**P**	**19 49 53.7**	**-2.7**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
YAK	**Yakutsk**	**17.06**	**307**	*e*P	**P**	**19 49 53.7**	**-2.7**
	comp=Z,8.9nm,0.4s						
MAJO	**Matsushiro**	**23.54**	**227**	P	**P**	**19 51 03.2**	**+1.4**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
MAJO	**Matsushiro**	**23.54**	**227**	P	**P**	**19 51 03.2**	**+1.4**
	comp=Z,3.7nm,0.5s,mb4.3						
ILAR	**Eielson Array**	**27.75**	**48**	P	**P**	**19 51 40.7**	**+0.4**
	comp=Z,0.2nm,0.7s,mb2.9,baz=274,slow=7.7,SNR=4.3						
INK	**Inuvik**	**32.60**	**39**	*e*P	**P**	**19 52 22.6**	**-0.3**
SONM	**Songino Array**	**33.25**	**280**	P	**P**	**19 52 28.3**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.3,baz=61,slow=7.8,SNR=7.0						
SONM				PcP	PcP	19 55 04.8	-1.8
	comp=Z,0.2nm,0.5s,baz=71,slow=0.7,SNR=4.5						
YKA	**Yellowknife Ar**	**42.01**	**44**	P	**P**	**19 53 41.4**	**+0.1**
	comp=Z,0.2nm,0.5s,mb2.8,baz=302,slow=8.4,SNR=4.7						
CHKZ	**Chkalovo**	**48.52**	**307**	*e*P	**P**	**19 54 29.5**	**-3.3**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
CHKZ	**Chkalovo**	**48.52**	**307**	*e*P	**P**	**19 54 29.5**	**-3.3**
	comp=Z,1.0nm,0.4s,mb3.5						
FINES	**FINESS Array B**	**58.32**	**336**	P	**P**	**19 55 41.5**	**-2.9**
	comp=Z,1.6nm,0.9s,mb3.6,baz=21,slow=12,SNR=3.3						
NOA	**NORSAR Array B**	**61.69**	**343**	P	**P**	**19 56 04.9**	**-2.4**
NOA	**NORSAR Array B**	**61.69**	**343**	P	**P**	**19 56 04.8**	**-2.4**
	comp=Z,0.4nm,0.8s,mb3.1,baz=16,slow=5.5,SNR=2.7						
TXAR	**Lajitas Array**	**70.18**	**67**	P	**P**	**19 57 02.1**	**+0.7**
	comp=Z,0.2nm,0.5s,mb3.0,baz=274,slow=5.2,SNR=3.8						
WRAB	**Tennant Creek**	**77.63**	**204**	*e*P	**P**	**19 57 44.5**	**0.0**
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
WRAB	**Tennant Creek**	**77.63**	**204**	*e*P	**P**	**19 57 44.5**	**0.0**
	comp=Z,1.0nm,0.4s,mb3.8						
WRA	**Warramunga Arr**	**77.64**	**204**	P	**P**	**19 57 44.4**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.6,baz=19,slow=6.0,SNR=25						
ASAR	**Alice Springs**	**81.33**	**204**	P	**P**	**19 58 05.2**	**+0.9**
	comp=Z,0.5nm,0.8s,mb3.2,baz=18,slow=5.9,SNR=7.2						

IDC 27 19:52:07.1±12.0**, 3.38N**×**96.41E, mb3.2**/2**, mb1 3.5**/3**, mb1mx3.4**/13**, mbtmp3.2**/3**, ML3.4**/1**, Error ellipse: s-maj=341.6km s-min=49.0km az=77.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.19**	**9**	Pn	P	19 55 43.1	-1.8
	0.1nm,0.3s,baz=201,slow=9.9,SNR=4.6						
WRA	**Warramunga Arr**	**43.87**	**123**	P	P	20 00 15.8	-1.6
	0.3nm,0.4s,baz=301,slow=9.1,SNR=5.7						
ASAR	**Alice Springs**	**45.34**	**128**	P	P	20 00 27.1	-2.1
	0.2nm,0.5s,baz=302,slow=7.9,SNR=4.9						

BJI ***27*** *19:53:08.4, 42.62S×84.43W, h10^{km}, mB5.3, Ms5.1, Msz4.9*

IDC ***27*** *19:53:08.9±0.6, 42.79S×83.57W, mb4.7/14, mb1 4.7/16, mb1mx4.6/20, mbtmp4.6/16, ML3.6/2, MS4.6/13, Ms1 4.6/13, ms1mx4.3/18, Error ellipse: s-maj=22.1km s-min=15.8km az=91.0*

NEIC ***27*** *19:53:10.8±0.2, 42.76S×83.46W, h10^{km}, mb5.0/25, MS4.6/5, Error ellipse: s-maj=8.8km s-min=6.5km az=63.0*

HRVD ***27*** *19:53:10.8±0.2, 42.62S×83.73W, h12^{km}, MW5.1/69, Centroid moment Tensor Solution. LP body waves: s57,c83;Mantle waves: s69,c118; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-5.39±.12; $M_{\theta\theta}$-0.01±.13; $M_{\phi\phi}$5.40±.12; $M_{r\theta}$0.59±.37; $M_{\theta\phi}$-1.83±.11; $M_{\phi r}$0.82±.31; Best double couple: $M_0$5.773×10^{16} NP1: ϕ_s334°, δ43°, λ-104°. NP2: ϕ_s172°, δ49°, λ-78°. Principal axes: T 5.994, Plg3°, Azm253°; N -.44, Plg9°, Azm344°; P -5.553, Plg80°, Azm145°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 27 19:53:09.8±0.3**, 42.75S**±0.06×**83.43W**±0.09**, h10**^{km}**, n114, σ0**^{s}**84**/76**, mb4.9**/34**, MS4.7**/15**, 8C-1D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**9.84**	**83**	Pn	**P**	**19 55 34.8**	**+0.5**
	0.1nm,0.3s,baz=260,slow=13,SNR=6.6						
PLCA				LR	LR	19 58 44.5	
	comp=Z,8μm,18.8s,baz=175,slow=34						
PLCA	**Paso Flores**	**9.84**	**83**	P	**P**	**19 55 34.2**	**-0.1**
	16nm,1.2s						
USHA	**Ushuaia**	**15.57**	**146**	Pn	**P**	**19 56 49.6**	**-1.1**
	0.3nm,0.3s,baz=325,slow=7.2,SNR=2.0						
USHA				LR	LR	20 02 03.0	
	comp=Z,1μm,20.6s,baz=111,slow=34						
TRQA	**Tornquist**	**16.98**	**81**	*e*P	**P**	**19 57 10.3**	**+1.4**

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      60nm,1.3s
LPA   La Plata           21.30  77 ceP     P        19 57 58.0 -0.7
LPA   La Plata           21.30  77  eP     P        19 58 01.0 +2.3
LPA                                 ePP    PP       19 58 21.0 -1.3
LPA                                 ePCP   PcP      20 02 02.0 -1.5
LPA                                 eSCP            20 05 35.0
LVC   Limon Verde        23.44  36   P     P        19 58 21.2 +1.2
      8.5nm,0.9s,mb4.2,baz=200,slow=8.7,SNR=9.7
LVC                                  LR    LR       20 05 14.3
      comp=Z,1µm,20.1s,MS4.4,baz=217,slow=31
LVC   Limon Verde        23.44  36  eP     P        19 58 21.5 +1.6
      38nm,1.4s,mb4.6
LVC                                  LR    LR
      comp=Z,2µm,22.0s,MS4.5
RPN   Rapa Nui           26.20 298   LR    LR       20 06 16.4
      comp=Z,3µm,20.4s,MS4.8,baz=143,slow=30
ARE   Arequipa           28.12  25  eP     P        19 59 04.0 +0.1
LPAZ  La Paz             29.44  31   P     P        19 59 16.6 +0.8
      comp=Z,4.4nm,1.0s,mb4.2,baz=123,slow=12,SNR=12
LPAZ                                 LR    LR       20 09 06.5
      comp=Z,274nm,18.4s,MS3.9,baz=179,slow=32
LPAZ  La Paz             29.44  31  eP     P        19 59 16.1 +0.3
      comp=Z,13nm,1.1s,mb4.6
LPAZ                                 LR    LR
      comp=Z,822nm,21.0s,MS4.3
NNA   Nana               31.18  13  eP     P        19 59 29.5 -1.7
      comp=Z,44nm,1.4s,mb5.1
SAML  Samuel             38.06  34  eP     P        20 00 29.2 -1.1
      comp=Z,14nm,1.0s,mb4.6
SAML                                 LR    LR
      comp=Z,847nm,20.0s,MS4.5
BDFB  Brasilia           40.57  59   P     P        20 00 50.7 -0.4
      comp=Z,11nm,1.0s,mb4.5,baz=234,slow=5.4,SNR=10
BDFB                                 LR    LR       20 17 53.9
      comp=Z,3µm,19.6s,MS5.1,baz=222,slow=36
BAO   Brasilia Array     40.59  59   P     P        20 00 50.1 -1.1
VNA3  Neumayer Olymp     45.04 154⇑i       P        20 01 27.6 +0.8
VNA3  Neumayer Olymp     45.04 154⇑i       P        20 01 31.4 +4.6
VNA2  Neumayer--Watz     45.80 154⇑i       P        20 01 33.0 +0.2
VNA2  Neumayer--Watz     45.80 154⇑i       P        20 01 35.3 +2.5
VNA2  Neumayer--Watz     45.80 154⇑i       P        20 01 39.0 +6.2
RKT   Rikitea            46.70 278  eS     S        20 08 16.7  -13
RKT                                 eLR    LR       20 14 31.8
      comp=Z,2µm,27.8s
SNAA  Sanae              47.18 155⇑i       P        20 01 49.1 +5.3
SNAA  Sanae              47.18 155   P     P        20 01 43.1 -0.6
      comp=Z,2.0nm,0.9s,mb4.0,baz=212,slow=2.1,SNR=4.3
SNAA  Sanae              47.18 155⇑iP      P        20 01 43.8  0.0
      comp=Z,0.5nm,1.0s
ROSC  El Rosal           48.10  12   P     P        20 01 52.8 +1.1
      comp=Z,18nm,1.0s,mb5.0,baz=175,slow=3.7,SNR=19
ROSC                                 LR    LR       20 20 14.1
      comp=Z,775nm,19.2s,MS4.7,baz=180,slow=34
SBA   Scott Base         52.55 195  eP     P        20 02 25.2 +0.3
      comp=Z,443nm,2.2s,mb6.0
SDV   Santo Domingo      52.70  16   P     P        20 02 23.9 -2.9
      comp=Z,14nm,0.9s,mb4.9,baz=221,slow=6.2,SNR=14
SDV   Santo Domingo      52.70  16  eP     P        20 02 23.5 -3.3
      comp=Z,30nm,1.1s,mb5.1
JTS   JuntasAbangare     52.80 358   P     P        20 02 26.2 -1.3
      comp=Z,3.5nm,0.7s,mb4.4,baz=180,slow=8.1,SNR=5.5
JTS   JuntasAbangare     52.80 358  eP     P        20 02 26.8 -0.8
      comp=Z,3.3nm,0.9s,mb4.3
TBI   Tubuai             57.21 267  eS     S        20 10 36.9  -16
TBI                                 eSS    SS       20 14 27.2  -17
TBI                                 eLR    LR       20 19 13.8
      comp=Z,1µm,29.2s
TAOE  Nuku Hiva Isla     59.81 287  eLR    LR       20 20 50.3
PPT   Papeete            60.85 273  eS     S        20 11 26.1  -15
PPT                                 eSS    SS       20 15 21.1  -20
PPT                                 eLR    LR       20 20 51.3
      comp=Z,1µm,29.0s
SYO   Syowa Base         60.91 160 ⇓PcP    PcP      20 04 07.8  0.0
SJG   San Juan           62.61  19  eP     P        20 03 32.9 -3.8
      comp=Z,32nm,1.0s,mb5.4
MAW   Mawson             67.05 167   P     P        20 04 04.0 -0.6
      comp=Z,24nm,0.9s,mb5.2,baz=191,slow=5.2,SNR=3.0
MAW                                  LR    LR       20 32 16.0
      comp=Z,391nm,18.1s,MS4.7,baz=18,slow=35
LTX   Lajitas            74.11 342  eP     P        20 04 47.2 -0.7
      comp=Z,9.8nm,1.1s,mb4.7
TXAR  Lajitas Array      74.11 342   P     P        20 04 47.4 -0.5
      comp=Z,5.0nm,0.9s,mb4.4,baz=162,slow=7.9,SNR=28
TXAR                                 LR    LR       20 32 00.8
      comp=Z,296nm,18.2s,MS4.6,baz=165,slow=32
TUC   Tucson             78.80 337  eP     P        20 05 14.1 -0.1
      comp=Z,11nm,1.1s,mb4.7
TUC                                 e               20 05 20.0
ANMO  Albuquerque        80.14 341  eP     P        20 05 21.0 -0.4
      comp=Z,30nm,1.1s,mb5.1
ANMO                                 LR    LR
      comp=Z,344nm,19.0s,MS4.7
CCM   Cathedral Cave     80.74 354  eP     P        20 05 22.6 -1.9
      comp=Z,24nm,1.0s,mb5.1
CCM                                 e               20 05 28.6
BAR   Barrett            81.02 332  eP     P        20 05 26.3 +0.2
WUAZ  Wupatki            81.97 337  eP     P        20 05 31.4 +0.5
      comp=Z,543nm,1.6s
CBKS  Cedar Bluff        82.52 347  eP     P        20 05 33.3 -0.5
      comp=Z,96nm,1.6s,mb5.6
RW3   Ridgway            83.58 341  eP     P        20 05 39.8 +0.5
PV01  Paradox Valley     83.69 340  eP     P        20 05 40.0 +0.2
PV10  Paradox Valley     84.03 340  eP     P        20 05 41.2 -0.3
MSU   Marysvale          85.00 338  eP     P        20 05 47.0 +0.7
MVU   Marysvale          85.00 338  eP     P        20 05 46.9 +0.6
      comp=Z,3.9nm,0.9s,mb4.5
TRCR  Troy Canyon        85.85 335  eP     P        20 05 50.8 +0.2
TPH   Tonopah            86.11 334  eP     P        20 05 52.1 +0.2
      comp=Z,33nm,1.2s,mb5.4
TPH                                 e               20 05 58.1
DBIC  Dimbokro           86.16  77   P     P        20 05 52.3 -0.4
      comp=Z,12nm,1.0s,mb5.1,baz=184,slow=5.2,SNR=10
DBIC                                 LR    LR       20 41 18.2
      comp=Z,322nm,18.2s,MS4.8,baz=204,slow=34
DBIC  Dimbokro           86.16  77  eP     P        20 05 52.3 -0.4
DBIC                                e               20 05 57.6
LBTB  Lobatse            86.19 121  eP     P        20 05 51.9 -0.7
      comp=Z,11nm,1.1s,mb5.0
NLU   North Lily Min     86.31 338  eP     P        20 05 53.1 +0.3
DUG   Dugway             86.74 338  eP     P        20 05 55.0 +0.1
      comp=Z,425nm,1.4s
MNV   Mina               86.74 333  eP     P        20 05 55.3 +0.3
      comp=Z,16nm,1.3s,mb5.1
MNV                                 e               20 06 00.7
NVAR  Mina Array Bea     86.79 333   P     P        20 05 55.6 +0.4
      comp=Z,8.3nm,1.1s,mb4.9,baz=145,slow=6.6,SNR=28
TCUT  Toone Canyon       87.22 339  eP     P        20 05 58.3 +1.1
SPUT  South Promonto     87.68 339  eP     P        20 05 58.8 -0.7
SPUT                                e               20 06 05.4
HWUT  Hardware Ranch     87.72 339  eP     P        20 05 58.6 -1.0
      comp=Z,35nm,1.3s,mb5.4
ELK   Elko               87.94 336  eP     P        20 06 00.1 -0.6
      comp=Z,24nm,1.3s,mb5.3
ELK                                 e               20 06 06.8
HVU   Hansel Valley      88.21 338  eP     P        20 06 01.4 -0.6
HVU                                 e               20 06 07.1
PDAR  Pinedale Array     88.31 341   P     P        20 06 02.1 -0.3
      comp=Z,2.5nm,1.0s,mb4.4,baz=153,slow=6.6,SNR=14
AHID  Auburn Hatcher     88.69 340  eP     P        20 06 04.0 -0.3
      comp=Z,3.0nm,0.4s,mb5.0
TPAW  Teton Pass         89.33 340  eP     P        20 06 07.0 -0.3
IMW   Indian Meadow      89.71 340  eP     P        20 06 09.2 +0.1
WDC   Whiskeytown Da     90.17 331  eP     P        20 06 10.8 -0.5
      comp=Z,26nm,1.3s,mb5.4
YFT   Old Faithful       90.21 341  eP     P        20 06 13.6 +2.3
HLID  Hailey             90.31 338  eP     P        20 06 12.3 +0.5
      comp=Z,14nm,1.1s,mb5.2
YMR   Madison River      90.44 341  eP     P        20 06 13.2 +0.7
YMR                                 e               20 06 18.9
WVOR  Wild Horse Val     90.52 335  eP     P        20 06 13.9 +1.1
      comp=Z,19nm,1.7s,mb5.2
QLMT  Earthquake Lak     90.71 340  eP     P        20 06 14.4 +0.8
MCMT  McKenzie Canyo     91.07 340  eP     P        20 06 15.9 +0.6
MCMT                                e               20 06 21.3
MATP  Matopo             91.34 120   P     P        20 06 17.0 -0.1
      comp=Z,9.5nm,0.9s,mb5.1,baz=234,slow=8.1,SNR=8.4
CHMT  Chamberlain Mo     93.11 340   P     P        20 06 24.9 +0.3
ULM   Lac du Bonnet      93.25 352   LR    LR       20 45 33.4
      comp=Z,187nm,19.7s,MS4.5,baz=97,slow=34
LSZ   Lusaka             94.86 116  eP     P        20 06 34.0 +0.6
      comp=Z,6.8nm,1.3s,mb4.9
LSZ                                  LR    LR
      comp=Z,366nm,19.0s,MS4.9
STKA  Stephens Creek     95.02 217   P     P        20 06 33.5 -0.3
      comp=Z,1.4nm,0.9s,mb4.4,baz=311,slow=12,SNR=3.0
STKA                                 LR    LR       20 39 29.1
      comp=Z,372nm,21.9s,MS4.8,baz=300,slow=29
SCHQ  Schefferville      98.23  10   LR    LR       20 45 59.6
      comp=Z,240nm,18.6s,MS4.7,baz=139,slow=32
ILAR  Eielson Array     118.03 334   PKP   PKPdf    20 11 55.5 -3.5
      comp=Z,0.8nm,1.0s,baz=201,slow=1.3,SNR=5.5
GRA1  Grafenberg Arr    123.58  51  ePKP   PKPdf    20 12 07.7 -2.5
GRF   Grafenberg Arr    123.58  51  ePKP   PKPdf    20 12 07.7 -2.5
MOX   Moxa              124.25  50  eP     PKPdf    20 12 08.0 -3.5
MOX                                  L              21 01 23.0
NKC   Novy Kostel       124.53  51  ePKP   PKPdf    20 12 09.6 -2.3
GERES GERESS Array B    124.62  53   PKP   PKPdf    20 12 08.8 -3.3
      comp=Z,4.4nm,0.8s,baz=225,slow=1.9,SNR=27
KHC   Kasperske Hory    124.68  52  ePKP   PKPdf    20 12 08.6 -3.6
CLL   Collm             125.33  50  ePKIKP PKPdf    20 12 11.0 -2.4
      comp=Z,logA/T=0.9
BRG   Berggiesshubel    125.67  51  eP     PKPdf    20 12 11.7 -2.4
UPC   Upice             126.70  52  ePKP   PKPdf    20 12 12.9 -3.1
DPC   Dobruska-Polom    126.81  52  ePKP   PKPdf    20 12 13.7 -2.5
VYHS  Vyhne             127.52  55  ePKP   PKPdf    20 12 14.9 -2.8
NOA   NORSAR Array B    128.30  38   PKP   PKPdf    20 12 15.8 -3.1
      comp=Z,2.9nm,1.0s,baz=252,slow=2.1,SNR=3.9
ASAJ  Asahikawa         146.88 288   PKPbc PKPbc    20 12 52.0 +0.6
      comp=Z,15nm,1.0s,baz=255,slow=10,SNR=2.9
YSS   Yuzh-Sakhalins    147.36 294  ePKPdf PKPdf    20 12 52.4 -1.2
MAJO  Matsushiro        147.60 273  ePKPdf PKPdf    20 12 52.7 -1.7
MAT   Matsushiro        147.60 273  ePKP   PKPdf    20 12 54.0 -0.3
MAT   Matsushiro        147.60 273   PKP   PKPdf    20 12 53.5 -0.8
HYB   Hyderabad         150.45 143  eP     PKPdf    20 13 02.5 +3.1
HYB   Hyderabad         150.45 143  i PKP  PKPdf    20 12 57.5 -1.9
HYB                                 e               20 13 02.5
HYB                                 e               20 13 07.5
YAK   Yakutsk           152.54 326  ePKPbc PKPdf    20 13 04.2 +3.0
CMAR  Chiang Mai Arr    155.70 185   PKP   PKPdf    20 13 03.8 -2.9
      comp=Z,1.9nm,1.1s,baz=236,slow=3.8,SNR=7.1
CMAR                                 PKPab PKPab    20 13 30.2 -2.3
      comp=Z,1.0nm,0.8s,baz=207,slow=4.0,SNR=3.0
MDJ   Mudanjiang        156.13 286   PKP   PKPdf    20 13 04.0 -2.5
MDJ                                  PKS   PKS      20 16 38.0 +1.6
MDJ                                  PP    PP       20 17 10.0 -2.4
MDJ                                  SKS   SKS      20 20 10.5 -1.6
MDJ                                  LR    LR
      comp=N,15nm,28.3s,MS4.3
MDJ                                  LR    LR
      comp=E,59nm,26.1s,MS4.3
MDJ                                  LR    LR
      comp=Z,77nm,25.0s,MS4.4
DDI   Dehra Dun         160.68 124  e      PKPdf    20 13 10.3 -2.2
KMI   Kunming           161.70 198   PKP   PKPdf    20 13 10.0 -3.6
KMI                                  LR    LR
      comp=Z,158nm,25.1s
KMI   Kunming           161.70 198   PKP   PKPdf    20 13 10.8 -2.8
KMI                                  LR    LR
      comp=Z,160nm,25.1s
AAK   Ala-Archa         163.77  83  ePKPdf PKPdf    20 13 12.5 -2.7
KSH   Kashi             164.15  95  ePKP   PKPdf    20 13 15.0 -0.6
LZH   Lanzhou           171.29 223  ePKP   PKPdf    20 13 15.5 -5.3
LZH                                  XPKP           20 13 20.5
LZH                                  PP    PP       20 18 29.5 -1.9
LZH                                  SKKS           20 25 11.0
LZH                                  SS    SS       20 39 29.0 -4.7
LZH                                  PP    PP
      comp=Z,200nm,6.0s
LZH                                  LR    LR
      comp=E,269nm,19.9s
LZH                                  LR    LR
      comp=Z,330nm,21.0s
LZH   Lanzhou           171.29 223  ePKP   PKPdf    20 13 15.4 -5.4
LZH                                  sPKP           20 13 20.5
SONM  Songino Array     171.41 310   PKP   PKPdf    20 13 16.4 -4.0
      comp=Z,0.5nm,1.0s,SNR=5.3
SONM                                 PKPab PKPab    20 14 38.2 -1.9
      comp=Z,3.3nm,1.2s,baz=45,slow=3.5,SNR=11
WMQ   Urumqi            173.43  78  ePKP   PKPdf    20 13 21.0 -0.6
GTA   Gaotai            175.86 217  ePKP   PKPdf    20 13 20.5 -1.9
GTA                                  APKP           20 13 26.3
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*NIED **27** 19:54:00, 23.50N×122.00E, h44^{km}, Mw4.0 Best double couple: M$_0$1.26×10^{15} NP1:ϕ_s213°, δ64°, λ60°. NP2:ϕ_s86°, δ39°, λ136°.*
*IDC **27** 19:54:13.5±0.8, 23.46N×121.87E, mb3.9/8, mb1 4.1/9, mb1mx3.9/18, mbtmp3.9/9, ML3.6/1, Error ellipse: s-maj=39.7km s-min=17.9km az=81.0*
*NEIC **27** 19:54:15.5±1.4, 23.46N×121.95E, h13^{km}±8^{km}, mb4.2/4, ML4.7(TAP), Error ellipse: s-maj=12.8km s-min=7.8km az=71.0*
NEIC Recorded [3 TAP] in Hua-lien County.
*BJI **27** 19:54:18.8, 23.92N×121.70E, h5^{km}, mB4.5, mb3.9, ML4.2, Ms4.0, Msz3.5*
*TAP **27** 19:54:18.2, 23.53N×121.87E, h24^{km}, ML4.2*
TAP Felt II J at Shilin, II J at Hualien, I J at Hungye, I J at Chiawan, I J at Chenggung, I J at Nanau.
*JMA **27** 19:54:19.1±0.2, 23.53N×121.97E, h76^{km}, M3.6*
ISC 27 19:54:16.8±0.4**, 23.48N**±0.02×**121.96E**±0.02**, h20**^{km}±3^{km}**, n93, σ1^{s}02**/143**, mb3.8**/12**, 25C-4D, Taiwan**

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Code  Station Name        Δ°   AZ°   Phase ID             Time      Res
                                   Op      ISC          h  m  s     ISC
EHY   Hungye             0.58 273⇓iP      Pb          19 54 28.7 +0.4
EHY                                S      Sb          19 54 36.0  0.0
ESL   Shilin             0.59 305⇑iP      Pb          19 54 28.0 -0.2
ESL                                S      Sb          19 54 34.7 -1.4
HWA   Hwalien            0.59 327⇑iP      Pb          19 54 28.6 +0.3
HWA                                S      Sb          19 54 36.0 -0.3
TWF1  Yuli               0.62 258⇓iP      Pb          19 54 29.2 +0.4
TWF1                               S      Sb          19 54 37.5 +0.4
CHKT  Chengkung          0.66 235⇑iP      Pb          19 54 29.6  0.0
CHKT                               S      Sb          19 54 37.4 -0.9
TWD   Chiawan            0.68 331⇑iP      Pb          19 54 29.9  0.0
TWD                                S      Sb          19 54 38.3 -0.6
NACB  Ninganchiao        0.77 334 ePg     Pb          19 54 30.9 -0.4
NACB                              eS      Sb          19 54 40.2 -1.1
ELDTW Lidau              0.91 252  P      Pb          19 54 33.4 -0.4
ELDTW                              S      Sb          19 54 43.6 -1.9
YUS   Yu-Shan            0.92 271⇓iP      Pb          19 54 34.4 +0.4
YUS                                S      Sb          19 54 45.2 -0.6
ENA   Nanau              0.96 348⇑iP      Pb          19 54 34.7  0.0
ENA                                S      Sb          19 54 46.8 -0.2
TTN   Taitung            1.04 226 eP      Pb          19 54 36.3 +0.4
TWG   Pinlang            1.05 231 ⇑P      Pb          19 54 35.5 -0.6
TWG                                S      Sb          19 54 47.9 -1.4
SMLT  Sun Moon Lake      1.05 293⇑iP      Pb          19 54 35.9 -0.2
SMLT                               S      Sb          19 54 49.5  0.0
TWT   Tachien            1.05 317⇑iP      Pb          19 54 36.3 +0.1
TWT                                S      Sb          19 54 48.4 -1.1
ALS   Alishan            1.06 272 ⇑P      Pb          19 54 36.8 +0.5
ALS                                S      Sb          19 54 49.5 -0.2
TYC   Yuchr              1.09 293⇑iP      Pb          19 54 36.5 -0.4
TYC                                S      Sb          19 54 50.7 -0.1
NNS   Nan Shan           1.10 331⇑iP      Pb          19 54 36.5 -0.4
NNS                                S      Sb          19 54 49.3 -1.5
TWC   Suao               1.13 355⇑iP      Pb          19 54 37.8 +0.3
TWC                                S      Sb          19 54 51.9 +0.1
STYT  Tauyuan            1.15 254 eP      Pb          19 54 37.7 -0.2
STYT                               S      Sb          19 54 51.8 -0.5
CHN5  Tsauling           1.18 276⇑iP      Pn          19 54 38.9 +0.5
CHN5                               S      Sb          19 54 54.5 +1.2
ENTT  Nioudou            1.21 343⇑iP      Pn          19 54 38.5 -0.3
ENTT                               S      Sb          19 54 54.0 -0.1
WTP   Ta-pu              1.26 260  P      Pn          19 54 40.0 +0.5
WTP                                S      Sb          19 54 56.4 +1.0
CHN4  Tsaushan           1.26 264 eP      Pn          19 54 40.3 +0.8
CHN4                               S      Sb          19 54 56.5 +1.0
TWE   Neicheng           1.27 348⇑iP      Pn          19 54 39.6 +0.1
TWE                                S      Sb          19 54 55.0 -0.7
ECL   Taimali            1.27 227 eP      Pn          19 54 38.5 -1.2
ECL                                S      Sb          19 54 54.0 -2.0
ILA   Ilan               1.29 352 eP      Pn          19 54 40.3 +0.3
ILA                                S      Sb          19 54 57.3 +0.7
WGK   Gukeng             1.30 279 eP      Pn          19 54 40.6 +0.6
NSK   Sanguang           1.31 335⇑iP      Pn          19 54 40.1 -0.1
NSK                                S      Sb          19 54 55.0 -2.0
SGST  Jiashian           1.32 253 eP      Pn          19 54 41.4 +1.0
CHN1  Nanshi             1.35 258 eP      Pn          19 54 41.6 +0.9
CHN1                               S      Sb          19 54 58.4 +0.3
TCU   Taichung           1.35 300 eP      Pn          19 54 42.0 +1.2
EGS                      1.36 359⇑iP      Pn          19 54 41.9 +1.0
EGS                                S      Sb          19 54 58.5 +0.1
CHN2  Minshiung          1.36 273 eP      Pn          19 54 41.9 +1.0
CHN2                               S      Sb          19 54 59.6 +1.1
TWK   Hsinying           1.37 261 eP      Pn          19 54 42.2 +1.2
YOJ   Yonaguni jima      1.37  44  P      Pn          19 54 42.4 +1.3
YOJ                                S      Sn          19 54 59.6 +0.8
TWQ1  Liyutan            1.39 309⇑iP      Pn          19 54 42.4 +1.1
TWQ1                               S      Sn          19 54 58.9 -0.3
CHY   Chiayi             1.41 271  P      Pn          19 54 43.1 +1.5
CHY                                S      Sn          19 55 00.3 +0.6
SSD   Sandimen           1.42 239 eP      Pn          19 54 41.6 -0.2
NSY   Sanyi              1.44 311 ⇑P      Pn          19 54 43.3 +1.2
NSY                                S      Sn          19 55 01.2 +0.7
NSTT  Nanjuang           1.44 323⇑iP      Pn          19 54 43.0 +0.9
NSTT                               S      Sn          19 54 59.4 -1.2
LAY   Lan-yu             1.48 195 eP      Pn          19 54 41.4 -1.3
EAST  Anshuo             1.50 223 eP      Pn          19 54 42.1 -0.8
CHN3  Shinhua            1.52 255 eP      Pn          19 54 45.8 +2.6
TWB1  Santiao Chiao      1.52   1⇑iP      Pn          19 54 43.9 +0.6
TWB1                               S      Sn          19 55 01.5 -1.1
TWA   Mucha              1.53 347  P      Pn          19 54 43.9 +0.5
TWA                                S      Sn          19 55 02.6 -0.3
SGLT  Jiouru             1.54 241 eP      Pn          19 54 46.6 +3.0
TATO  Taipei             1.55 344 eP      Pn          19 54 43.7  0.0
TWM1  Shoushan           1.56 246 eP      Pn          19 54 46.4 +2.6
WTCT  Ta-ch'eng          1.58 284 eP      Pn          19 54 44.3 +0.2
WTCT                               S      Sn          19 55 05.0 +0.8
NWF   Wu-fen Shan        1.59 354 ⇑P      Pn          19 54 45.6 +1.3
NWF                                S      Sn          19 55 05.2 +0.8
HSN   Hsinchu            1.60 326 eP      Pn          19 54 45.3 +1.0
WSF   Szhu               1.60 276 eP      Pn          19 54 44.2 -0.2
TAP1  Taipei             1.60 346⇑iP      Pn          19 54 44.8 +0.4
TAP1                               S      Sn          19 55 03.8 -0.9
TAP   Taipei             1.61 345  P      Pn          19 54 45.0 +0.5
TAP                                S      Sn          19 55 04.4 -0.3
CHN8  Yiju               1.61 266 eP      Pn          19 54 45.3 +0.8
NCU   National Centr     1.64 335 ⇑P      Pn          19 54 45.9 +0.9
NCU                                S      Sn          19 55 06.3 +0.7
SCLT  Jiali              1.65 260 eP      Pn          19 54 47.3 +2.2
SCZT  Fangliau           1.65 228 eP      Pn          19 54 46.0 +0.8
TWS1  Kuangyinshan       1.69 343 ⇑P      Pn          19 54 46.1 +0.5
TWS1                               S      Sn          19 55 06.4 -0.4
HATJ  Hateruma jima      1.79  71  P      Pn          19 54 48.1 +1.1
HATJ                               S      Sn          19 55 09.9 +0.6
TWY   Chenhua            1.82 350 eP      Pn          19 54 47.8 +0.3
IRIF  Iriomote-Funau     1.83  62  P      Pn          19 54 48.9 +1.2
IRIF                              eS      Sn          19 55 11.4 +0.9
HEN   Hengchun           1.85 218 eP      Pn          19 54 50.0 +2.1
TWP   Hsiaoliuchiu       1.85 233 eP      Pn          19 54 51.8 +3.8
TWK1  Hengchun           1.86 215 eP      Pn          19 54 48.8 +0.7
TWK1                               S      Sn          19 55 09.7 -1.6
JKRS  Kuro-shima         2.02  68  P      Pn          19 54 51.6 +1.2
JKRS                               S      Sn          19 55 16.2 +0.8
WDGT  Dungji             2.12 265 eP      Pn          19 54 50.9 -0.9
PCYT  Pengchaiyu         2.14   3 eP      Pn          19 54 51.8 -0.3
JIJ   Ishigaki jima      2.19  66  P      Pn          19 54 53.2 +0.5
JIJ                                S      Sn          19 55 18.7 -0.7
PNG   Penghu             2.21 273 eP      Pn          19 54 52.4 -0.6
JTJ   Tarama             2.76  65  P      Pn          19 55 01.4 +0.4
JTJ                                S      Sn          19 55 33.8 -0.3
JMJ   Miyako jima 2      3.32  66 eS      Sn          19 55 48.0 -0.3
KNM   Kinmen             3.36 287 eP      Pn          19 55 09.6 +0.2
JOGS  Gusukube           3.40  67  P      Pn          19 55 10.6 +0.6
JOGS                              eS      Sn          19 55 49.8 -0.4
QZH   Quanzhou           3.40 296⇓iP      Pn          19 55 08.5 -1.5
QZH                                S      Sn          19 55 44.5 -5.8
QZH                                Smax
      comp=N,570nm,0.6s
QZH                                Smax
      comp=E,510nm,1.2s
JOW   Kunigami           6.62  58  Pn     Pn          19 55 52.4 -3.3
      comp=E,2.7nm,0.3s,baz=254,slow=19,SNR=6.2
JOW                                Sn     Sn          19 57 07.5 -3.9
NJ2   Nanjing            8.97 343 eP      P           19 56 24.0 -4.4
WHN   Wuhan              9.77 318 eP      P           19 56 38.0 -1.5
HHC   Hu-ho-hao-te      19.40 336 eP      P           19 58 45.3 +0.9
HHC                                AMB    AMB
      comp=Z,9.0nm,1.2s
HHC                                AMB    AMB
      comp=Z,134nm,7.9s
ULN   Ulaanbaatar       27.08 338 eP      P           19 59 57.8 -2.2
      comp=Z,0.8nm,0.6s,mb3.4
SONM  Songino Array     27.29 337  P      P           19 59 59.5 -2.4
      comp=Z,0.9nm,0.6s,mb3.5,baz=157,slow=9.1,SNR=6.3
WRAB  Tennant Creek     44.81 163 eP      P           20 02 29.4 -2.0
      comp=Z,12nm,1.3s,mb4.6
WRA   Warramunga Arr    44.81 163  P      P           20 02 29.0 -2.5
      comp=Z,2.0nm,1.0s,mb3.9,baz=344,slow=8.8,SNR=12
ASAR  Alice Springs     48.28 165  P      P           20 02 56.0 -2.8
      comp=Z,0.3nm,0.5s,mb3.6,baz=356,slow=15,SNR=10
CHKZ  Chkalovo          48.73 322 eP      P           20 02 59.5 -2.3
      comp=Z,1.1nm,0.6s,mb4.1
STKA  Stephens Creek    58.16 160  P      P           20 04 09.7 -2.1
      comp=Z,1.4nm,0.7s,mb4.1,baz=349,slow=7.0,SNR=15
ILAR  Eielson Array     69.51  27  P      P           20 05 24.7 -1.1
      comp=Z,1.0nm,1.1s,mb3.6,baz=250,slow=6.1,SNR=4.6
INK   Inuvik            73.61  22 eP      P           20 05 48.6 -1.5
      comp=Z,3.5nm,1.1s,mb4.2
INK                               e                   20 06 01.6
YKA   Yellowknife Ar    83.34  23  P      P           20 06 42.5 -0.9
      comp=Z,0.6nm,0.6s,mb3.8,baz=308,slow=4.8,SNR=13
YKA   Yellowknife Ar    83.34  23  P      P           20 06 42.5 -0.9
GERES GERESS Array B    83.83 321  P      P           20 06 44.6 -1.5
      comp=Z,0.2nm,0.5s,mb3.5,baz=143,slow=4.9,SNR=2.4
PDAR  Pinedale Array    98.79  36  P      P           20 07 55.1 -1.4
      comp=Z,0.1nm,0.4s,mb3.7,baz=27,slow=6.0,SNR=2.6
SDV   Santo Domingo    145.56  22  PKPbc  PKPbc       20 13 54.5 -0.7
      comp=Z,3.1nm,0.8s,baz=63,slow=4.2,SNR=5.7
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*NIED **27** 20:27:00, 33.10N×137.00E, h20^{km}, Mw3.3 Best double couple: M$_0$1.16×10^{14} NP1:ϕ_s241°, δ49°, λ70°. NP2:ϕ_s90°, δ45°, λ111°.*
*JMA **27** 20:27:23.3±0.1, 33.13N×136.96E, h37^{km}±4^{km}, M3.5*
ISC 27 20:27:23.9±1.7**, 33.2N**±0.1×**136.96E**±0.06**, h32**^{km}±12^{km}**, n12, σ0^{s}49**/19**, 7D, Near south coast of western Honshu**

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Code  Station Name        Δ°   AZ°   Phase ID             Time      Res
                                   Op      ISC          h  m  s     ISC
TK01  Tokai 1            0.79  42  P      Pn          20 27 38.5 -0.3
TK01                               S      Sb          20 27 49.0 -0.4
TK02  Tokai 2            1.01  41 ⇓P      Pn          20 27 41.8 -0.2
TK02                               S      Sn          20 27 55.5 +0.2
JWZ   Kozaga             1.10 289 ⇓P      Pn          20 27 42.7 -0.5
JWZ                                S      Sn          20 27 56.3 -1.1
JIE   Ise                1.22 350 ⇓P      Pn          20 27 45.6 +0.5
TK04  Tokai 4            1.42  32 ⇓P      Pn          20 27 48.0 +0.1
TK04                               S      Sn          20 28 05.8 +0.1
JWM   Minabe             1.50 297 ⇓P      Pn          20 27 48.7 -0.2
JWY   Kouya              1.54 313  P      Pn          20 27 50.2 +0.7
JWY                                S      Sn          20 28 08.8 +0.2
TSUJ  Tsu 2              1.59 344 ⇓P      Pn          20 27 50.7 +0.4
JHE   Heguri             1.81 325 ⇓P      Pn          20 27 54.0 +0.6
JAJ2  Tsuna              2.12 306  P      Pn          20 27 58.4 +0.5
JAJ2                               S      Sn          20 28 23.4  0.0
SHZ3  Shizuoka 3         2.15  29  P      Pn          20 27 57.9 -0.4
MAT   Matsushiro         3.51  17  P      Pn          20 28 18.2 +0.6
MAT                                S      Sn          20 28 57.7 -0.8
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*IDC **27** 20:42:34.3±1.2, 4.38N×93.36E, mb3.7/5, mb1 3.9/6, mb1mx3.7/15, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=52.6km s-min=24.6km az=52.0*
*NEIC **27** 20:42:39.1±0.7, 4.49N×93.49E, h30^{km}, mb4.4/3, Error ellipse: s-maj=19.0km s-min=10.7km az=72.0*
ISC 27 20:42:37.3±0.9**, 4.5N**±0.1×**93.5E**±0.2**, h30**^{km}**, n13, σ0^{s}64**/13**, mb3.9**/8**, Off west coast of northern Sumatera**

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Code  Station Name        Δ°   AZ°   Phase ID             Time      Res
                                   Op      ISC          h  m  s     ISC
CM31  Chiang Mai Arr    14.86  20  P      P           20 46 07.3 -0.1
      8.1nm,0.9s
CMAR  Chiang Mai Arr    14.86  20  Pn     P           20 46 07.1 -0.2
      0.1nm,0.3s,baz=218,slow=15,SNR=7.9
LSA   Lhasa             25.18 355 eP      P           20 48 05.6 +3.7
      2.3nm,0.5s,mb4.0
SONM  Songino Array     44.58  12  P      P           20 50 49.4 +0.8
      0.2nm,0.8s,mb3.0,baz=180,slow=5.8,SNR=2.7
SONM                               PcP    PcP         20 52 32.6 +0.9
      0.2nm,0.7s,baz=207,slow=3.2,SNR=3.5
WRA   Warramunga Arr    46.88 123  P      P           20 51 06.6 -0.5
      0.5nm,0.9s,mb3.4,baz=298,slow=9.3,SNR=6.8
WRA                                PcP    PcP         20 52 40.1 +0.1
      0.3nm,0.9s,baz=313,slow=3.1,SNR=2.9
WRA   Warramunga Arr    46.88 123  P      P           20 51 06.6 -0.5
```

WRA				PcP	PcP	20 52 40.1	+0.1
WRAB	**Tennant Creek**	46.88	123	P	P	20 51 07.5	+0.4
KURK	**Kurchatov**	47.74	347	*e*P	P	20 51 12.7	-0.9
	8.4nm,1.4s,mb4.6						
CHKZ	**Chkalovo**	52.50	343	*e*P	P	20 51 49.8	0.0
	7.3nm,1.2s,mb4.5						
CHKZ				*e*pP	pP	20 51 58.6	-0.4
STKA	**Stephens Creek**	58.26	132	P	P	20 52 31.8	0.0
	1.3nm,0.7s,mb4.1,baz=327,slow=12,SNR=3.4						
STKA	**Stephens Creek**	58.26	132	P	P	20 52 31.8	0.0
GERES	**GERESS Array B**	79.94	319	P	P	20 54 44.6	-0.6
	0.2nm,0.5s,mb3.3,baz=101,slow=5.0,SNR=4.4						
DAVOX	**Davos**	82.40	316	P	P	20 54 58.8	+0.8
	1.0nm,0.5s,mb4.0,baz=169,slow=21,SNR=2.8						

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*PGC **27** 20:46:32.7, 48.03N×128.98W, h10^{km}, MLSn3.5/1, Mw4.1, Northern Juan de Fuca ridge.*

*NEIC **27** 20:46:33.0, 48.03N×128.97W, h10^{km}, mb3.9/5, ML4.1(PGC), After PGC.*

*IDC **27** 20:46:37.5±1.6, 48.29N×128.37W, mb3.4/4, mb1 3.9/13, mb1mx3.8/25, mbtmp3.6/13, ML3.5/6, MS3.3/6, Ms1 3.3/6, ms1mx3.1/23, Error ellipse: s-maj=29.1km s-min=10.1km az=65.0*

ISC 27 20:46:35.1±0.5**, 48.26N**±0.03×**128.65W**±0.05**, h10^{km}, n78, σ1§19**/105**, mb3.6**/5**, MS3.2**/3**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	1.91	31	Pn	Pn	20 47 07.0	-0.9
OZB	**Mount Ozzard**	2.21	70	Pn	Pn	20 47 11.4	-0.9
OZB				Sn	Sn	20 47 40.0	+0.1
OZB				Trac		20 47 41.1	
	comp=Z,95nm,0.5s						
GDR	**Gold River**	2.30	47	Pn	Pn	20 47 13.5	-0.1
WOSB	**Woss**	2.34	35	Pn	Pn	20 47 14.3	0.0
MAYB	**Maynard**	2.36	24	Pn	Pn	20 47 14.1	-0.3
MAYB				Sn	Sn	20 47 44.4	+0.7
	comp=Z,60nm,0.3s						
MAYB				Trac		20 47 45.5	
	comp=Z,60nm,0.3s						
BTB	**Buttle Lake**	2.40	58	Pn	Pn	20 47 14.6	-0.4
BTB				Sn	Sn	20 47 46.4	+1.7
	comp=Z,84nm,0.3s						
BTB				Trac		20 47 48.5	
	comp=Z,84nm,0.3s						
HOLB	**Holberg**	2.41	8	Pn	Pn	20 47 14.7	-0.5
HOLB				Sn	Sn	20 47 44.8	-0.3
	comp=Z,26nm,0.2s						
HOLB				Trac		20 47 46.6	
	comp=Z,26nm,0.2s						
PHC	**Port Hardy**	2.58	17	Pn	Pn	20 47 16.7	-0.9
PHC				Sn	Sn	20 47 48.5	-0.9
PHC				Trac		20 47 53.0	
	comp=Z,12nm,0.3s						
ALB	**Alberni**	2.72	67	Pn	Pn	20 47 18.8	-0.9
ALB				Sn	Sn	20 47 53.9	+0.9
	comp=Z,13nm,0.4s						
ALB				Trac		20 48 00.4	
	comp=Z,13nm,0.4s						
MGB	**Mount Grey**	2.73	73	Pn	Pn	20 47 18.7	-1.1
MGB				Sn	Sn	20 47 52.9	-0.2
	comp=Z,64nm,0.8s						
MGB				Trac		20 47 58.6	
	comp=Z,64nm,0.8s						
NCRB	**Newcastle Ridg**	2.74	37	Pn	Pn	20 47 20.4	+0.4
NCRB				Sn	Sn	20 47 55.5	+2.1
	comp=Z,28nm,0.5s						
NCRB				Trac		20 47 56.8	
	comp=Z,28nm,0.5s						
CBB	**Campbell River**	2.80	49	Pn	Pn	20 47 21.1	+0.4
CBB				Sn	Sn	20 47 56.6	+1.8
CBB				Trac		20 47 58.4	
	comp=Z,49nm,0.6s						
PFB	**Port Renfrew**	2.82	82	Pn	Pn	20 47 19.8	-1.3
PFB				Sn	Sn	20 47 54.1	-1.4
OCWA	**Octopus Mounta**	3.04	98	*e*P	Pn	20 47 22.9	-1.4
TXB	**Texada**	3.13	61	Pn	Pn	20 47 25.6	+0.2
TXB				Sn	Sn	20 48 04.5	+1.2
	comp=Z,26nm,0.3s						
TXB				Trac		20 48 06.4	
	comp=Z,26nm,0.3s						
LZB	**Mount Lazard**	3.23	82	Pn	Pn	20 47 25.8	-1.2
LZB				Sn	Sn	20 48 04.8	-1.1
LZB				Trac		20 48 06.6	
	comp=Z,11nm,0.7s						
NLLB	**Nanaimo Lost L**	3.23	71	Pn	Pn	20 47 26.3	-0.6
NLLB				Sn	Sn	20 48 05.7	-0.3
NLLB				Trac		20 48 10.6	
	comp=Z,17nm,0.5s						
STW	**Striped Peak**	3.33	90	P	Pn	20 47 27.5	-0.8
SHB	**Sechelt**	3.42	65	Pn	Pn	20 47 29.5	-0.1
SHB				Sn	Sn	20 48 10.5	-0.2
SHB				Trac		20 48 14.1	
	comp=Z,31nm,0.3s						
GOBB	**Galiano Island**	3.48	77	Pn	Pn	20 47 29.9	-0.5
GOBB				Sn	Sn	20 48 15.6	+3.4
	comp=Z,24nm,0.5s						
GOBB				Trac		20 48 17.5	
	comp=Z,24nm,0.5s						
PGC	**Sidney**	3.48	82	*e*P	Pn	20 47 28.8	-1.7
PGC	**Sidney**	3.48	82	Pn	Pn	20 47 29.5	-1.0
PGC				Sn	Sn	20 48 10.7	-1.5
PGC				Trac		20 48 17.9	
	comp=Z,12nm,0.5s						
VGZ	**Gonzales**	3.56	85	Pn	Pn	20 47 30.1	-1.4
VGZ				Sn	Sn	20 48 13.2	-0.8
VGZ				Trac		20 48 15.0	
	comp=Z,45nm,0.7s						
SNB	**Saturna Island**	3.68	80	P	Pn	20 47 33.1	-0.2
SNB	**Saturna Island**	3.68	80	Pn	Pn	20 47 32.9	-0.3
SNB				Sn	Sn	20 48 17.8	+0.6
SNB				Trac		20 48 22.4	
	comp=Z,10.0nm,0.3s						
BIB	**Bowen Island**	3.71	70	Pn	Pn	20 47 33.3	-0.4
WPB	**Watts Point**	3.85	67	Pn	Pn	20 47 35.4	-0.3
WPB				Sn	Sn	20 48 23.7	+2.2
	comp=Z,9.0nm,0.5s						
WPB				Trac		20 48 28.2	
	comp=Z,9.0nm,0.5s						
BBB	**Bella Bella**	3.95	5	Pn	Pn	20 47 36.3	-0.8
	36nm,0.3s,baz=198,slow=12,SNR=331						
BBB				Sn	Sn	20 48 22.6	-1.4
	baz=275,slow=22,SNR=5.7						
BBB				LR	LR	20 49 11.0	
	comp=Z,357nm,18.8s,baz=119,slow=39						
BBB	**Bella Bella**	3.95	5	Pn	Pn	20 47 36.5	-0.6
BBB				Sn	Sn	20 48 22.0	-2.1
BBB				Trac		20 48 23.4	
	comp=Z,13nm,0.2s						
HNB	**Haney**	4.14	73	Pn	Pn	20 47 39.0	-0.9
WSLR	**Whistler**	4.20	61	Pn	Pn	20 47 41.0	+0.3
WSLR				Sn	Sn	20 48 33.1	+2.8
WSLR				Trac		20 48 37.5	
	comp=Z,7.0nm,0.3s						
CMW	**Cultus Mountai**	4.36	85	P	Pn	20 47 42.9	0.0
VDB	**Vedder Mountai**	4.41	77	P	Pn	20 47 42.9	-0.8
VDB	**Vedder Mountai**	4.41	77	Pn	Pn	20 47 42.8	-0.8
VDB				Sn	Sn	20 48 38.2	+2.5
	comp=Z,4.0nm,0.4s						
VDB				Trac		20 48 40.0	
	comp=Z,4.0nm,0.4s						
JCW	**Jim Creek**	4.49	88	P	Pn	20 47 44.2	-0.6
HTW	**Haystack Looko**	4.64	93	P	Pn	20 47 46.4	-0.5
RPW	**Rockport**	4.76	85	P	Pn	20 47 48.8	+0.2
HOPB	**Hope**	4.91	74	Pn	Pn	20 47 50.1	-0.6
LLLB	**Lillooet**	5.00	59	Pn	Pn	20 47 52.2	+0.2
LLLB				Sn	Sn	20 48 54.2	+3.5
LLLB				Trac		20 48 56.4	
	comp=Z,7.0nm,0.5s						
COR	**Corvallis**	5.21	133	P	Pn	20 47 56.0	+1.0
VLMM	**Larch Mountain**	5.28	119	P	Pn	20 47 57.0	+1.0
TBM	**Table Mountain**	5.54	98	P	Pn	20 48 00.1	+0.5
ETW	**Entiat**	5.63	94	P	Pn	20 48 00.9	0.0
CBSW	**Chelan Butte S**	5.79	91	P	Pn	20 48 02.8	-0.4
PNT	**Penticton**	6.06	77	Pn	Pn	20 48 05.5	-1.5
NEW	**Newport**	7.70	86	Pn	Pn	20 48 28.4	-1.6
	1.8nm,0.3s,baz=285,slow=12,SNR=21						
NEW				LR	LR	20 51 44.5	
	comp=Z,266nm,18.2s,baz=319,slow=41						
NEW	**Newport**	7.70	86	*e*P	Pn	20 48 25.8	-4.1
YBH	**Yreka Blue Hor**	7.76	145	Pn	Pn	20 48 31.9	+1.0
	0.1nm,0.3s,baz=348,slow=16,SNR=3.5						
YBH				Sn	Sn	20 49 57.7	-1.9
	0.1nm,0.3s,baz=128,slow=19,SNR=2.6						
BMO	**Blue Mountains**	8.53	109	*e*P	P	20 48 37.9	-3.6
WALA	**Waterton Lakes**	9.79	80	*e*P	P	20 48 57.2	-1.7
DLBC	**Dease Lake**	10.23	356	Pn	P	20 49 07.1	+2.2
	0.1nm,0.3s,baz=201,slow=14,SNR=3.1						
ELK	**Elko**	12.15	123	Pn	P	20 49 32.1	+0.9
	0.1nm,0.3s,baz=304,slow=7.3,SNR=4.1						
ELK				Sn	S	20 51 51.0	+3.2
	0.1nm,0.3s,baz=232,slow=14,SNR=2.1						
ELK				LR	LR	20 54 26.6	
	comp=Z,145nm,18.4s,baz=306,slow=39						
ELK	**Elko**	12.15	123	Pn	P	20 49 32.1	+0.9
ELK				Sn	S	20 51 51.0	+3.2
ELK				LR	LR	20 54 26.6	
NVAR	**Mina Array Bea**	12.36	139	Pn	P	20 49 36.6	+2.7
	0.1nm,0.3s,baz=324,slow=11,SNR=6.1						
BW06	**Boulder Array**	14.45	105	P	P	20 49 58.3	-3.2
PDAR	**Pinedale Array**	14.45	105	Pn	P	20 50 05.3	+3.7
	baz=320,slow=12,SNR=3.9						
DAU	**Daniels Canyon**	14.69	116	P	P	20 50 05.4	+0.8
YKA	**Yellowknife Ar**	16.29	24	Pn	P	20 50 23.9	-1.2
	0.1nm,0.3s,baz=214,slow=12,SNR=5.4						
YKA	**Yellowknife Ar**	16.29	24	Pn	P	20 50 23.9	-1.2
YKW3	**Yellowknife Ar**	16.34	24	*e*P	P	20 50 28.8	+3.0
DAWY	**Dawson**	16.90	344	*e*P	P	20 50 42.1	+9.2
PV10	**Paradox Valley**	17.31	118	*e*P	P	20 50 39.6	+1.4
PV01	**Paradox Valley**	17.75	117	P	P	20 50 44.5	+0.8
FFC	**Flin Flon**	17.76	59	P	P	20 50 45.4	+1.7
	153nm,0.8s,SNR=16						
FFC	**Flin Flon**	17.76	59	*e*P	P	20 50 45.4	+1.7
	24nm,0.9s						
WUAZ	**Wupatki**	18.04	129	P	P	20 50 48.0	+0.6
ILAR	**Eielson Array**	19.24	336	P	P	20 51 02.9	+1.1
	baz=142,slow=10,SNR=0.6						
SDCO	**Great Sand Dun**	19.85	113	P	P	20 51 06.7	-2.1
	2.0nm,1.0s						
INK	**Inuvik**	20.26	355	P	P	20 51 14.3	+1.3
	1.5nm,1.1s,baz=168,slow=11,SNR=3.1						
INK	**Inuvik**	20.26	355	*e*P	P	20 51 12.4	-0.6
	4.5nm,1.2s						
ANMO	**Albuquerque**	21.16	121	P	P	20 51 23.0	+0.4
	1.5nm,0.8s,mb3.4,baz=323,slow=11,SNR=3.8						
ANMO				LR	LR	20 59 56.7	
	comp=Z,80nm,18.4s,MS3.1,slow=38						
ANMO	**Albuquerque**	21.16	121	P	P	20 51 23.0	+0.4
ANMO				LR	LR	20 59 56.7	
ULM	**Lac du Bonnet**	21.39	72	P	P	20 51 24.2	-0.6
	3.5nm,0.6s,mb3.9,baz=281,slow=8.2,SNR=5.8						
ULM				LR	LR	20 59 14.9	
	comp=Z,70nm,18.0s,MS3.1,baz=251,slow=36						
FCC	**Fort Churchill**	22.82	50	*e*P	P	20 51 39.9	+1.0
	24nm,1.6s,mb4.4						
MNTX	**Cornudas Mount**	24.17	125	P	P	20 51 54.9	+2.6
WMOK	**Wichita Mounta**	25.94	110	*e*P	P	20 52 08.8	-0.3
	1.2nm,0.8s,mb3.5						
TXAR	**Lajitas Array**	26.93	126	P	P	20 52 20.2	+1.9
	0.5nm,0.9s,mb3.1,baz=353,slow=7.3,SNR=4.5						
TXAR				LR	LR	21 03 47.3	
	comp=Z,85nm,19.3s,MS3.3,baz=310,slow=38						
TXAR	**Lajitas Array**	26.93	126	P	P	20 52 20.2	+1.9
TXAR				LR	LR	21 03 47.3	

MAN 27 20:53:56.7, 15.15N×122.41E, h16^{km}, mb3.8, ML2.6, MS2.2, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POLP	**Polilio Island**	0.62	227	*e*P	Pb	20 54 08.5	-0.1
POLP				*e*S	Sb	20 54 18.8	+2.0
BALP	**Baler**	0.99	306	*e*P	Pb	20 54 14.4	-0.7
BALP						20 54 21.6	
GQP	**Guinayangan**	1.24	178	⇑*i*P	Pb	20 54 18.8	-0.4
GQP				*i* S	Sb	20 54 35.8	+1.0
LQP	**Lukban**	1.33	219	⇑*e*P	Pn	20 54 21.3	+0.6
LQP				*e*S	Sb	20 54 40.4	+3.0
PCPH	**Palayan**	1.33	288	*i* P	Pn	20 54 14.9	-5.9
TGY	**Tagaytay City**	1.76	234	⇑*e*P	Pn	20 54 28.2	+1.3
TGY				*e*S	Sn	20 54 43.8	-5.4
BOAC	**Boac**	1.77	198	*e*P	Pn	20 54 28.4	+1.4
BOAC				*e*S	Sn	20 54 54.0	+4.8
PVCP	**Virac**	2.29	132	*e*P	Pn	20 54 34.2	-0.3
LUBP	**Lubang**	2.52	236	*e*P	Pn	20 54 28.0	-10
OTRP	**Odiongan**	2.79	188	*e*P	Pn	20 54 46.9	+5.1

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*IDC **27** 20:55:00.5±0.9, 22.78S×66.36W, h226^{km}±7^{km}, mb4.1/16, mb1 4.3/19, mb1mx4.3/21, mbtmp4.8/19, Error ellipse: s-maj=13.1km s-min=10.1km az=68.0*

*BJI **27** 20:55:02.6, 22.80S×66.30W, h249^{km}, mB4.8*

*NEIC **27** 20:55:02.7±0.2, 22.81S×66.34W, mb4.7/43, Error ellipse: s-maj=8.2km s-min=5.9km az=59.0*

ISC 27 20:55:01.3±0.3**, 22.79S**±0.05×**66.35W**±0.06**, h249^{km}, h249^{km}**±1.7^{km}**:pP-P, n119, σ1§04**/99**, mb4.5**/49**, 9C-4D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	2.37	274	P	P	20 55 46.4	-1.3
	baz=89,slow=5.1						
LVC				S	S	20 56 19.5	-4.1
	baz=246,slow=20						
LVC	**Limon Verde**	2.37	274	⇑*i*Pn	P	20 55 46.2	-1.5
LPAZ	**La Paz**	6.69	345	P	P	20 56 38.5	-0.2
	10nm,0.3s,baz=155,slow=8.9,SNR=112						
LPAZ				S	S	20 57 54.2	-0.7
	3.8nm,0.3s,baz=270,slow=22,SNR=8.9						
LPAZ	**La Paz**	6.69	345	*e*Pn	P	20 56 38.3	-0.4
	36nm,0.4s						
LPAZ				*e*S	S	20 57 52.0	-2.9
ARE	**Arequipa**	7.95	322	*e*P	P	20 56 51.0	-3.7
ARE				*i*		20 56 56.0	
ARE				*i*		20 57 04.8	
ARE				*i* S	Px	20 57 18.1	
ZON	**Zonda**	8.96	193	*e*P	P	20 57 05.0	-2.6
ZON				*e*S	S	20 58 38.0	-8.6
SAML	**Samuel**	14.10	13	⇑*e*P	P	20 58 10.4	-1.6
	57nm,0.9s						
NNA	**Nana**	14.68	315	*e*P	P	20 58 18.1	-1.1
	69nm,0.7s						
TRQA	**Tornquist**	15.67	167	*e*P	P	20 58 28.4	-2.4
	14nm,0.6s						
PLCA	**Paso Flores**	18.23	190	P	P	20 58 57.2	-1.3
	0.7nm,0.3s,baz=8.7,slow=12,SNR=43						
PLCA	**Paso Flores**	18.23	190	*e*P	P	20 58 57.1	-1.4
	22nm,0.9s						
BDFB	**Brasilia**	18.71	71	P	P	20 59 03.2	-0.3
	15nm,0.3s,baz=249,slow=11,SNR=321						
BAO	**Brasilia Array**	18.73	71	⇑*i*P	P	20 59 03.1	-0.6
CAM4	**Nova Friburgo**	21.96	93	⇑*e*P	P	20 59 36.0	+0.4
CAM4				*i*		20 59 37.2	
CAM4				*i*		20 59 40.3	
ROSC	**El Rosal**	28.57	343	P	P	21 00 36.7	+0.1
	2.6nm,0.5s,mb4.1,baz=48,slow=14,SNR=3.4						
ROSC				ScP		21 06 59.9	
	3.3nm,0.5s,baz=92,slow=16,SNR=4.5						
SDV	**Santo Domingo**	31.76	352	P	P	21 01 05.5	+0.9
	11nm,0.4s,mb4.8,baz=166,slow=4.6,SNR=14						
SDV	**Santo Domingo**	31.76	352	*e*P	P	21 01 02.5	-2.1
	10.0nm,0.4s,mb4.7						
CPB	**Codrington**	40.43	7	*e*P	P	21 02 14.1	-3.2
SJG	**San Juan**	40.65	0	P	P	21 02 18.9	-0.2
	23nm,0.9s,mb4.6,baz=255,slow=4.5,SNR=7.4						
SJG	**San Juan**	40.65	0	*e*P	P	21 02 18.5	-0.6
	15nm,0.8s,mb4.5						
VNA3	**Neumayer Olymp**	58.10	161	⇓*i*	P	21 04 31.3	+0.9
VNA2	**Neumayer--Watz**	58.65	161	⇑*i*	P	21 04 34.8	+0.6
VNA2	**Neumayer--Watz**	58.65	161	⇑*i*	P	21 04 40.0	+5.8
VNA2	**Neumayer--Watz**	58.65	161	⇑*i*	P	21 04 42.6	+8.4
LRAL	**Lakeview Retre**	58.91	340	*e*P	P	21 04 34.6	-1.9
	9.1nm,0.8s,mb4.5						
SNAA	**Sanae**	60.29	161	⇑*i*	P	21 04 44.4	-1.0
SNAA	**Sanae**	60.29	161	⇑*i*	P	21 04 56.2	+11
SNAA	**Sanae**	60.29	161	⇓*i*	P	21 04 57.7	+12
SNAA	**Sanae**	60.29	161	P	P	21 04 45.7	+0.4
	3.4nm,0.8s,mb4.1,baz=264,slow=5.6,SNR=21						
JCT	**Junction City**	61.95	327	*e*P	P	21 04 56.1	-0.9
	15nm,0.8s,mb4.7						
WVT	**Waverly**	62.02	340	*e*P	P	21 04 55.5	-1.9
	17nm,0.8s,mb4.7						
WVT				*e*		21 05 02.5	
TXAR	**Lajitas Array**	63.06	324	P	P	21 05 03.5	-0.7
	2.8nm,0.7s,mb4.0,baz=151,slow=8.4,SNR=36						
WCI	**Wyandotte Cave**	63.52	343	*e*P	P	21 05 05.2	-2.0
	10nm,0.8s,mb4.5						
FVM	**French Village**	64.55	339	*e*P	P	21 05 12.0	-1.8
	7.9nm,0.5s,mb4.6						
CCM	**Cathedral Cave**	64.89	338	*e*P	P	21 05 14.5	-1.5
	12nm,0.6s,mb4.7						
MNTX	**Cornudas Mount**	65.82	324	*e*P	P	21 05 20.8	-1.2
	11nm,1.0s,mb4.5						
GENY	**Geneseo**	66.08	351	*e*P	P	21 05 23.1	-0.4
DBIC	**Dimbokro**	66.85	72	P	P	21 05 27.4	-1.5
	25nm,0.9s,mb4.9,baz=216,slow=6.0,SNR=28						
DBIC				pP	pP	21 06 24.6	-1.9
	6.5nm,0.8s,baz=228,slow=6.3,SNR=3.1						
DBIC	**Dimbokro**	66.85	72	*e*P	P	21 05 27.1	-1.7
	27nm,0.8s,mb4.9						
DBIC				*e*pP	pP	21 06 24.5	-2.0
ANMO	**Albuquerque**	68.89	325	P	P	21 05 41.4	+0.3
	6.5nm,0.7s,mb4.4,baz=144,slow=7.2,SNR=31						
ANMO	**Albuquerque**	68.89	325	*e*P	P	21 05 41.5	+0.4
	7.1nm,0.8s,mb4.3						
SDCO	**Great Sand Dun**	70.58	328	*e*P	P	21 05 51.7	+0.5
	14nm,1.1s,mb4.5						
SDCO				pP	pP	21 06 49.7	+0.2
WUAZ	**Wupatki**	71.98	323	*e*P	P	21 06 00.1	+0.4
	248nm,1.0s						
RW3	**Ridgway**	72.06	327	*e*P	P	21 06 01.1	+1.0
PV01	**Paradox Valley**	72.42	326	*e*P	P	21 06 03.0	+0.7
PV10	**Paradox Valley**	72.84	326	*e*P	P	21 06 05.0	+0.2
LDFC	**Landfair**	73.83	320	*e*P	P	21 06 11.8	+1.3
SRU	**San Rafael**	74.16	326	*e*P	P	21 06 13.0	+0.5
SYO	**Syowa Base**	74.45	159	⇓P	P	21 06 14.0	+0.5
SYO	**Syowa Base**	74.45	159	⇓PcP	PcP	21 06 26.3	-0.8
MSU	**Marysvale**	74.60	324	*e*P	P	21 06 16.0	+1.1
MVU	**Marysvale**	74.61	324	*e*P	P	21 06 16.1	+1.1
	9.1nm,0.8s,mb4.5						
ARUT	**Antelope Range**	74.77	323	*e*P	P	21 06 17.3	+1.4
MPU	**Maple Canyon**	75.41	326	*e*P	P	21 06 20.0	+0.5
JLU	**Jordanelle**	75.74	326	*e*P	P	21 06 22.2	+0.9
DUG	**Dugway**	76.16	325	*e*P	P	21 06 24.6	+0.9
	89nm,1.0s,mb5.3						
PDAR	**Pinedale Array**	76.42	329	P	P	21 06 25.3	+0.2
	1.2nm,0.5s,mb3.8,baz=128,slow=7.6,SNR=15						
HWUT	**Hardware Ranch**	76.54	327	*e*P	P	21 06 26.5	+0.7
	5.2nm,0.7s,mb4.3						
SPUT	**South Promonto**	76.78	326	*e*P	P	21 06 27.9	+0.8
SPUT				*e*		21 06 34.2	
BGU	**Big Grassy Mou**	76.80	326	*e*P	P	21 06 27.9	+0.7
ULM	**Lac du Bonnet**	77.28	341	P	P	21 06 28.5	-1.1
	3.3nm,0.6s,mb4.2,baz=148,slow=6.0,SNR=7.0						
SCHQ	**Schefferville**	77.31	360	P	P	21 06 28.9	-0.7
	6.7nm,0.7s,mb4.4,baz=182,slow=6.1,SNR=15						
SCHQ	**Schefferville**	77.31	360	P	P	21 06 28.9	-0.7
TSUM	**Tsumeb**	77.40	106	*e*P	P	21 06 30.2	-0.7
	11nm,0.8s,mb4.5						
LOHW	**Long Hollow**	77.56	329	*e*P	P	21 06 32.0	+0.7
RRI2	**Red Ridge**	77.71	328	*e*P	P	21 06 33.2	+1.0
ELK	**Elko**	77.84	324	*e*P	P	21 06 33.6	+0.7
	5.9nm,0.9s,mb4.2						
IMW	**Indian Meadow**	77.94	329	*e*P	P	21 06 34.5	+1.2
NVAR	**Mina Array Bea**	77.98	321	P	P	21 06 34.9	+1.2
	3.0nm,0.7s,mb4.0,baz=139,slow=7.0,SNR=21						
HLID	**Hailey**	79.41	327	*e*P	P	21 06 42.7	+1.4
	23nm,1.2s,mb4.7						
MCMT	**McKenzie Canyo**	79.55	328	*e*P	P	21 06 43.3	+1.4
BOSA	**Boshof**	80.75	117	*e*P	P	21 06 47.9	-0.7
	7.4nm,0.8s,mb4.4						
BMO	**Blue Mountains**	81.80	326	*e*P	P	21 06 54.5	+0.8
	9.7nm,1.3s,mb4.3						
ESPR	**Espera**	82.28	45	P	P	21 06 56.6	+0.3
	18nm,0.7s,mb4.8						
EMIN	**Mina Concepcio**	82.28	44	P	P	21 06 56.9	+0.6
	19nm,0.8s,mb4.8						
LBTB	**Lobatse**	82.33	114	*e*P	P	21 06 56.7	-0.1
	3.8nm,0.6s,mb4.2						
EBAD	**Badajoz**	82.65	43	P	P	21 06 58.8	+0.6
	14nm,0.8s,mb4.7						
YBH	**Yreka Blue Hor**	82.69	321	P	P	21 06 57.8	-0.6
	5.4nm,0.9s,mb4.3,baz=70,slow=5.6,SNR=9.3						
ELOJ	**Sierra Loja**	83.55	45	P	P	21 07 04.0	+1.2
	4.7nm,0.4s,mb4.6						
EADA	**Adamuz**	83.86	44	P	P	21 07 04.5	+0.1
	5.5nm,0.7s,mb4.4						
ELOB	**Lobios**	83.90	40	P	P	21 07 04.1	-0.4
	6.9nm,0.5s,mb4.6						
NEW	**Newport**	84.07	329	P	P	21 07 05.7	+0.6
	1.1nm,0.4s,mb3.9,baz=116,slow=2.5,SNR=2.8						
EBAN	**Banos Encina**	84.37	45	P	P	21 07 08.2	+1.4
	20nm,0.7s,mb5.0						
FCC	**Fort Churchill**	84.44	346	*e*P	P	21 07 07.1	+0.4
	4.9nm,0.7s,mb4.3						
EQES	**Quesada**	84.63	45	P	P	21 07 07.8	-0.4
	14nm,1.0s,mb4.7						
ENIJ	**Nijar**	84.74	46	P	P	21 07 08.0	-0.8
	18nm,0.9s,mb4.8						
ERUA	**La Rua**	84.76	40	P	P	21 07 09.0	+0.2
	28nm,1.0s,mb4.9						
EINC	**Incio**	84.80	39	P	P	21 07 08.3	-0.6
	13nm,0.9s,mb4.7						
EHUE	**Huescar**	84.95	45	P	P	21 07 09.3	-0.5
	15nm,1.2s,mb4.6						
ESDC	**Sonseca Array**	85.11	43	P	P	21 07 11.2	+0.6
	12nm,0.9s,mb4.6,baz=239,slow=4.8,SNR=34						
ESDC				pP	pP	21 08 11.7	+1.0
	0.5nm,0.7s,baz=131,slow=38,SNR=1.2						
ESDC	**Sonseca Array**	85.11	43	P	P	21 07 10.7	+0.1
	21nm,1.0s,mb4.8						
EVIA	**Vianos**	85.47	45	P	P	21 07 13.0	+0.6
	10.0nm,0.8s,mb4.6						
ETOB	**Tobarra**	86.09	45	P	P	21 07 15.6	+0.2
	18nm,0.9s,mb4.8						
MATP	**Matopo**	86.53	111	P	P	21 07 19.0	+1.1
	10nm,0.6s,mb4.7,baz=252,slow=4.5,SNR=31						
MATP				pP	pP	21 08 18.4	+0.2
	9.5nm,1.1s,baz=274,slow=5.8,SNR=4.4						
LSZ	**Lusaka**	88.26	106	*e*P	P	21 07 28.0	+1.8
	28nm,1.4s,mb4.9						
LSZ				pP	pP	21 08 27.7	+1.1
YKA	**Yellowknife Ar**	93.20	340	P	P	21 07 48.4	+0.3
	1.4nm,0.5s,mb4.2,baz=130,slow=4.5,SNR=37						
YKA				pP	pP	21 08 50.9	+2.1
	1.1nm,0.6s,baz=127,slow=4.5,SNR=5.0						
ASAR	**Alice Springs**	129.80	204	PKP	PKPdf	21 13 43.2	+1.5
	0.9nm,0.6s,baz=157,slow=2.2,SNR=7.8						
ASAR				pPKP		21 14 47.5	
	0.6nm,0.7s,baz=141,slow=2.3,SNR=3.2						
ASAR				SKPbc		21 16 42.8	
	3.0nm,0.7s,baz=145,slow=4.4,SNR=16						
WRA	**Warramunga Arr**	132.97	207	PKP	PKPdf	21 13 48.9	+1.1
	1.0nm,0.8s,baz=166,slow=1.6,SNR=13						
WRA				SKPbc		21 16 54.8	
	8.1nm,0.9s,baz=152,slow=3.1,SNR=34						
CHKZ	**Chkalovo**	135.31	35	*e*PKPdf	PKPdf	21 13 53.3	+2.2
AAK	**Ala-Archa**	142.00	49	*e*PKPpre		21 14 00.6	
SDNR	**Sundarnagar**	146.35	67	*e*P	PKPdf	21 14 15.5	+4.0
HYB	**Hyderabad**	146.66	93	*e*P	PKPdf	21 14 14.5	+2.1
HYB	**Hyderabad**	146.66	93	*i* PKP	PKPdf	21 14 14.5	+2.1
	50nm,1.0s						
BHPL	**Bhopal**	146.71	82	*e*P	PKPdf	21 14 13.8	+1.5
BHPL				*e*		21 14 16.9	
	comp=Z,18nm,0.7s						
NDI	**New Delhi**	146.75	72	*e*P	PKPdf	21 14 16.0	+3.7
DDI	**Dehra Dun**	147.39	69	*e*P	PKPdf	21 14 17.7	+4.5
WMQ	**Urumqi**	150.04	39	*e*PKP	PKPdf	21 14 22.0	+5.1
WMQ				PP	PP	21 18 07.0	+5.2
WMQ				PP	PP		
	comp=Z,87nm,12.0s						
VIS	**Vishakhapatnam**	151.14	94	*e*P	PKPdf	21 14 27.4	+8.1
VIS				*e*		21 14 29.2	
	comp=Z,15nm,1.1s						
KOLN	**Koldanda**	152.42	73	*e*P	PKPdf	21 14 29.5	+8.6
	comp=Z,18nm,0.9s						
GKN	**Gorkha**	153.31	73	*e*P	PKPdf	21 14 31.9	+10
DMN	**Daman**	153.76	74	*e*P	PKPdf	21 14 32.6	+10
	comp=Z,16nm,0.6s						
KKN	**Kakani**	153.90	73	*e*P	PKPdf	21 14 33.0	+10
	comp=Z,28nm,0.8s						
PKI	**Pulchoki**	154.03	74	*e*P	PKPdf	21 14 33.1	+10
	comp=Z,18nm,0.9s						
SONM	**Songino Array**	154.35	11	PKP	PKPdf	21 14 26.3	+3.4
	comp=Z,0.7nm,0.8s,baz=315,slow=1.7,SNR=6.6						
SONM				PKPbc	PKPdf	21 14 33.0	+10
	comp=Z,1.0nm,0.6s,baz=310,slow=1.5,SNR=12						
SONM				PKPab	PKPab	21 14 49.4	+0.2
	comp=Z,3.3nm,0.6s,baz=323,slow=4.2,SNR=19						
JIRN	**Jiri**	154.71	73	*e*P	PKPdf	21 14 34.7	+11
	comp=Z,21nm,1.0s						
CN2	**Changchun**	156.89	338	*e*PKP	PKPdf	21 14 30.0	+3.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	158.70	66	*e*PKPdf	PKPdf	21 14 33.0	+3.8
LSA				*e*PKPab	PKPab	21 15 09.2	+0.8
HHC	**Hu-ho-hao-te**	161.91	5	*e*PKP	PKPdf	21 14 30.0	-2.2
HHC				PP	PP	21 19 04.0	-3.0
HHC				SKS	SKS	21 21 11.3	+0.5
HHC				SKKS		21 25 27.8	
HHC				SS	SS	21 39 01.5	-1.0
HHC				LR	LR		
	comp=N,242nm,22.8s						
HHC				LR	LR		
	comp=E,257nm,21.6s						
HHC				LR	LR		
	comp=Z,206nm,22.8s						
CMAR	**Chiang Mai Arr**	165.57	105	PKPab	PKPab	21 15 38.5	0.0
	comp=Z,4.6nm,0.7s,baz=255,slow=5.6,SNR=29						

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*NEIC **27** 20:59:32.1, 36.66S×177.48E, h189^{km}, MG4.0(WEL), After WEL.*

WEL 27 20:59:31.4±0.3**, 36.61S×177.46E, h189^{km}±4^{km}, ML3.9**/7**, Error ellipse: s-maj=5.4km s-min=5.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	1.17	145	*e*P	P	21 00 01.5	-0.1
MXZ				S	S	21 00 23.7	-1.2
MXZ	**Matakaoa Point**	1.17	145	PN	P	21 00 01.4	-0.2
MXZ				SN	S	21 00 23.7	-1.2
MXZ				SN	S	21 00 23.9	-1.1
PUZ	**Puketiti**	1.60	157	P	P	21 00 05.4	0.0
PUZ	**Puketiti**	1.60	157	PN	P	21 00 05.3	-0.1
PUZ				SN	S	21 00 30.4	-1.3
URZ	**Urewera**	1.67	189	P	P	21 00 06.3	+0.1
URZ	**Urewera**	1.67	189	PN	P	21 00 06.0	-0.2
URZ				SN	S	21 00 32.9	-0.1
MWZ	**Matawai**	1.73	178	*e*P	P	21 00 06.7	0.0
MWZ				S	S	21 00 33.7	-0.2
MWZ	**Matawai**	1.73	178	PN	P	21 00 06.5	-0.2
MWZ				SN	S	21 00 33.6	-0.2
KNZ	**Kokohu**	2.42	176	P	P	21 00 13.7	-0.5
KNZ	**Kokohu**	2.42	176	PN	P	21 00 13.6	-0.6
BKZ	**Black Stump Fm**	2.67	196	P	P	21 00 16.5	-0.6
BKZ	**Black Stump Fm**	2.67	196	PN	P	21 00 16.4	-0.7
MGZ	**Maungaku**	2.83	212	P	P	21 00 19.5	+0.4
MGZ	**Maungaku**	2.83	212	PN	P	21 00 19.6	+0.6
NGZ	**Ngauruhoe**	2.96	209	P	P	21 00 21.4	+0.9
NGZ	**Ngauruhoe**	2.96	209	PN	P	21 00 20.9	+0.4
TUVZ	**Tukino**	3.02	208	P	P	21 00 21.2	-0.1
TUVZ	**Tukino**	3.02	208	PN	P	21 00 21.1	-0.1
WNVZ	**Wahianoa**	3.09	208	P	P	21 00 22.0	-0.1
WNVZ	**Wahianoa**	3.09	208	PN	P	21 00 21.9	-0.3
BFZ	**Birch Farm**	4.18	193	P	P	21 00 33.3	-2.5
BFZ	**Birch Farm**	4.18	193	PN	P	21 00 33.3	-2.4
BFZ				SN	S	21 01 22.3	-3.2
MRZ	**Mangatainoka R**	4.31	199	P	P	21 00 34.6	-2.8
MRZ	**Mangatainoka R**	4.31	199	PN	P	21 00 34.5	-2.9
MRZ				SN	S	21 01 24.4	-4.0
KIW	**Kapiti Island**	4.69	204	P	P	21 00 39.3	-3.1
KIW	**Kapiti Island**	4.69	204	PN	P	21 00 39.1	-3.3
MTW	**Mount Morrison**	4.79	198	P	P	21 00 40.2	-3.5
MTW	**Mount Morrison**	4.79	198	PN	P	21 00 39.9	-3.8
MRW	**Makara Radio**	5.09	204	P	P	21 00 43.9	-3.6
MRW	**Makara Radio**	5.09	204	*e*PN	P	21 00 43.5	-4.0
MSWZ	**Moikau Station**	5.10	199	P	P	21 00 43.8	-3.8
MSWZ	**Moikau Station**	5.10	199	*e*PN	P	21 00 43.6	-4.0
NNZ	**Nelson**	5.60	213	*e*PN	P	21 00 50.3	-3.7
NNZ				SN	S	21 01 54.1	-4.1
THZ	**Tophouse**	6.25	213	*e*P	P	21 00 59.1	-3.4
THZ	**Tophouse**	6.25	213	*e*PN	P	21 00 58.8	-3.7
KHZ	**Kahutara**	6.54	206	*e*P	P	21 01 02.1	-4.4
KHZ	**Kahutara**	6.54	206	PN	P	21 01 02.0	-4.5
LTZ	**Lake Taylor**	7.35	211	*e*P	P	21 01 12.8	-4.2
LTZ	**Lake Taylor**	7.35	211	*e*PN	P	21 01 12.6	-4.4
MQZ	**McQueen's Vall**	7.99	206	SN	S	21 02 44.7	-10

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*NEIC **27** 21:09:55.0, 48.04N×128.88W, h10^{km}, mb4.2/1, ML3.9(PGC), After PGC.*

*PGC **27** 21:09:55.1, 48.04N×128.88W, h10^{km}, MLSn3.3/1, Mw3.9, Northern Juan de Fuca ridge.*

*IDC **27** 21:09:56.3±1.3, 48.24N×128.70W, mb3.6/5, mb1 3.8/14, mb1mx3.7/25, mbtmp3.6/14, ML3.6/7, MS3.3/1, Ms1 3.4/1, ms1mx2.7/20, Error ellipse: s-maj=25.4km s-min=10.6km az=61.0*

ISC 27 21:09:56.1±1.0**, 48.24N**±0.04×**128.67W**±0.06**, h13^{km}**±9^{km}**, n50, σ1^{s}12**/71**, mb3.5**/4**, 2C, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	1.93	31	Pn	Pn	21 10 28.8	-0.3
OZB	**Mount Ozzard**	2.23	70	Pn	Pn	21 10 33.0	-0.4
OZB				Sn	Sn	21 11 00.8	-0.3
OZB				Trac		21 11 02.5	
	comp=Z,14nm,0.4s						
GDR	**Gold River**	2.32	47	Pn	Pn	21 10 35.1	+0.3
GDR				Sn	Sn	21 11 04.6	+1.2
WOSB	**Woss**	2.37	35	Pn	Pn	21 10 35.8	+0.4
MAYB	**Maynard**	2.38	24	⇑Pn	Pn	21 10 35.7	+0.1
MAYB				Sn	Sn	21 11 05.7	+0.9
	comp=Z,19nm,0.5s						
MAYB				Trac		21 11 08.1	
	comp=Z,19nm,0.5s						
BTB	**Buttle Lake**	2.42	58	Pn	Pn	21 10 36.8	+0.8
BTB				Sn	Sn	21 11 06.6	+0.9
	comp=Z,31nm,0.4s						
BTB				Trac		21 11 09.5	
	comp=Z,31nm,0.4s						
HOLB	**Holberg**	2.43	8	Pn	Pn	21 10 36.7	+0.5
HOLB				Sn	Sn	21 11 04.7	-1.4
	comp=Z,10.0nm,0.4s						
HOLB				Trac		21 11 14.1	
	comp=Z,10.0nm,0.4s						
PHC	**Port Hardy**	2.60	18	Pn	Pn	21 10 39.4	+0.7
ALB	**Alberni**	2.74	66	Pn	Pn	21 10 40.5	-0.3
ALB				Trac		21 11 22.6	
	comp=Z,14nm,0.7s						
MGB	**Mount Grey**	2.75	72	Pn	Pn	21 10 40.2	-0.6
MGB				Sn	Sn	21 11 13.9	-0.3
	comp=Z,11nm,0.5s						
MGB				Trac		21 11 16.5	
	comp=Z,11nm,0.5s						
NCRB	**Newcastle Ridg**	2.76	37	Pn	Pn	21 10 41.7	+0.7
NCRB				Sn	Sn	21 11 16.2	+1.7
	comp=Z,13nm,0.5s						
NCRB				Trac		21 11 20.7	
	comp=Z,13nm,0.5s						
CBB	**Campbell River**	2.82	49	Pn	Pn	21 10 42.5	+0.8
CBB				Sn	Sn	21 11 15.6	-0.3
CBB				Trac		21 11 22.9	
	comp=Z,18nm,0.6s						
PFB	**Port Renfrew**	2.84	82	Pn	Pn	21 10 41.3	-0.8
PFB				Sn	Sn	21 11 15.2	-1.3
PFB				Trac		21 11 21.1	
	comp=Z,3.0nm,0.4s						
TXB	**Texada**	3.15	61	⇑Pn	Pn	21 10 47.0	+0.5
TXB				Sn	Sn	21 11 27.1	+2.7
	comp=Z,14nm,0.5s						
TXB				Trac		21 11 28.3	
	comp=Z,14nm,0.5s						
LZB	**Mount Lazard**	3.25	82	Pn	Pn	21 10 47.0	-0.9
LZB				Sn	Sn	21 11 27.0	+0.1
LZB				Trac		21 11 27.6	
	comp=Z,6.0nm,0.8s						
NLLB	**Nanaimo Lost L**	3.25	71	Pn	Pn	21 10 48.0	0.0
NLLB				Sn	Sn	21 11 24.6	-2.4
NLLB				Trac		21 11 42.5	
	comp=Z,8.0nm,0.6s						
SHB	**Sechelt**	3.44	65	Pn	Pn	21 10 50.9	+0.2
SHB				Sn	Sn	21 11 33.2	+1.5
SHB				Trac		21 11 42.3	
	comp=Z,13nm,0.6s						
GOBB	**Galiano Island**	3.50	76	Pn	Pn	21 10 51.4	-0.1
GOBB				Sn	Sn	21 11 32.5	-0.7
	comp=Z,7.0nm,0.6s						
GOBB				Trac		21 11 37.0	
	comp=Z,7.0nm,0.6s						
PGC	**Sidney**	3.50	81	*e*P	Pn	21 10 50.6	-0.9
PGC	**Sidney**	3.50	81	Pn	Pn	21 10 50.8	-0.7
PGC				Sn	Sn	21 11 33.0	-0.2
PGC				Trac		21 11 35.6	
	comp=Z,5.0nm,0.5s						
VGZ	**Gonzales**	3.57	85	Pn	Pn	21 10 51.5	-1.1
VGZ				Sn	Sn	21 11 34.3	-0.7
VGZ				Trac		21 11 39.3	
	comp=Z,6.0nm,0.5s						
SNB	**Saturna Island**	3.69	80	Pn	Pn	21 10 53.9	-0.4
SNB				Sn	Sn	21 11 38.0	-0.2
SNB				Trac		21 11 44.2	
	comp=Z,5.0nm,0.5s						
BIB	**Bowen Island**	3.73	70	Pn	Pn	21 10 54.8	0.0
BIB				Sn	Sn	21 11 41.7	+2.7
	comp=Z,5.0nm,0.5s						
BIB				Trac		21 11 41.9	
	comp=Z,5.0nm,0.5s						
WPB	**Watts Point**	3.87	66	Pn	Pn	21 10 56.8	+0.1
BBB	**Bella Bella**	3.97	5	Pn	Pn	21 10 58.2	+0.1
	23nm,0.3s,baz=197,slow=11,SNR=42						
BBB				Sn	Sn	21 11 44.6	-0.5
	baz=252,slow=20,SNR=2.3						
BBB	**Bella Bella**	3.97	5	Pn	Pn	21 10 58.1	-0.1
BBB				Sn	Sn	21 11 44.0	-1.0
BBB				Trac		21 11 51.6	
	comp=Z,25nm,0.8s						
HNB	**Haney**	4.16	73	Pn	Pn	21 11 00.5	-0.4
WSLR	**Whistler**	4.22	61	Pn	Pn	21 11 02.5	+0.8
VDB	**Vedder Mountai**	4.42	77	Pn	Pn	21 11 04.3	-0.4
LLLB	**Lillooet**	5.03	59	Pn	Pn	21 11 13.4	+0.2
LLLB				Sn	Sn	21 12 08.8	-2.9
LLLB				Trac		21 12 21.8	
	comp=Z,4.0nm,0.6s						
NEW	**Newport**	7.71	86	Pn	Pn	21 11 49.1	-1.8
	0.5nm,0.3s,baz=286,slow=13,SNR=5.2						
YBH	**Yreka Blue Hor**	7.75	145	Pn	Pn	21 11 52.1	+0.6
	0.1nm,0.3s,baz=340,slow=9.5,SNR=5.6						
WVOR	**Wild Horse Val**	9.14	126	P	P	21 12 07.3	-3.5
DLBC	**Dease Lake**	10.25	356	Pn	P	21 12 24.7	-1.2
	0.2nm,0.3s,baz=156,slow=18,SNR=4.4						
ELK	**Elko**	12.16	123	Pn	P	21 12 54.2	+2.2
	0.1nm,0.3s,baz=165,slow=16,SNR=2.2						
NVAR	**Mina Array Bea**	12.36	139	Pn	P	21 12 57.0	+2.3
	0.1nm,0.3s,baz=320,slow=11,SNR=6.0						
PDAR	**Pinedale Array**	14.46	105	Pn	P	21 13 25.5	+3.1
	0.0nm,0.3s,baz=295,slow=13,SNR=2.2						
YKA	**Yellowknife Ar**	16.31	24	Pn	P	21 13 43.8	-2.4
	baz=214,slow=12,SNR=4.6						
YKA	**Yellowknife Ar**	16.31	24	Pn	P	21 13 43.8	-2.4
PV10	**Paradox Valley**	17.31	117	P	P	21 13 59.2	+0.2
PV01	**Paradox Valley**	17.75	117	*e*P	P	21 14 02.1	-2.4
FFC	**Flin Flon**	17.78	59	Pn	P	21 14 07.7	+3.0
	92nm,0.8s,SNR=11						
FFC	**Flin Flon**	17.78	59	*e*P	P	21 14 06.6	+1.9
	20nm,1.1s						
ILAR	**Eielson Array**	19.25	336	P	P	21 14 23.7	+1.1
	baz=162,slow=9.0,SNR=6.3						
ILAR				LR	LR	21 20 34.9	
	comp=Z,83nm,18.0s,baz=180,slow=33						
INK	**Inuvik**	20.27	355	P	P	21 14 32.6	-1.3
	2.1nm,0.9s,baz=158,slow=9.7,SNR=5.8						
ANMO	**Albuquerque**	21.17	121	P	P	21 14 44.1	+0.7
	1.2nm,0.9s,mb3.2,baz=317,slow=16,SNR=3.2						
ULM	**Lac du Bonnet**	21.41	72	P	P	21 14 46.1	+0.5
	1.7nm,0.5s,mb3.6,baz=267,slow=8.4,SNR=5.0						
WMOK	**Wichita Mounta**	25.95	110	P	P	21 15 28.4	-1.4
TXAR	**Lajitas Array**	26.94	125	P	P	21 15 40.7	+1.8
	0.9nm,1.0s,mb3.3,baz=315,slow=7.1,SNR=5.1						
SONM	**Songino Array**	73.05	325	P	P	21 21 26.6	-0.6
	2.1nm,1.4s,mb3.9,baz=37,slow=7.2,SNR=2.7						

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*NEIC **27** 21:13:35.3±2.2, 6.37S×148.43E, h60^{km}±19^{km}, mb4.4/5, Error ellipse: s-maj=18.3km s-min=14.2km az=152.0*

*IDC **27** 21:13:36.7±2.1, 6.37S×148.23E, h70^{km}±19^{km}, mb4.0/6, mb1 4.2/9, mb1mx4.1/13, mbtmp4.3/9, MS4.0/6, Ms1 4.0/6, ms1mx3.8/11, Error ellipse: s-maj=37.5km s-min=10.5km az=122.0*

ISC 27 21:13:33.9±2.0**, 6.4S**±0.1×**148.5E**±0.1**, h60^{km}**±18^{km}**, h53^{km}**±4.1^{km}**:pP-P, n27, σ1^{s}01**/26**, mb4.3**/8**, MS4.0**/4**, 2D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	3.27	203	P	P	21 14 23.7	-0.2
	126nm,0.3s,baz=14,slow=6.9,SNR=271						
PMG				S	S	21 15 02.5	+0.6
	140nm,0.3s,baz=179,slow=20,SNR=10.0						
PMG				LR	LR	21 15 49.8	
	comp=Z,1μm,21.5s,baz=9.3,slow=42						
PMG	**Port Moresby**	3.27	203	⇓*i*P	P	21 14 23.5	-0.5
PMG				*e*S	S	21 15 02.9	+1.1
PMG				LR	LR	21 15 49.8	
CTA	**Charters Tower**	13.79	189	P	P	21 16 48.6	+0.4
	0.4nm,0.3s,baz=5.8,slow=16,SNR=3.5						
CTA				LR	LR	21 22 02.2	
	comp=Z,499nm,18.9s,baz=12,slow=37						
CTAO	**Charters Tower**	13.79	189	*e*P	P	21 16 48.7	+0.5
KAKA	**Kakadu**	16.98	247	*e*P	P	21 17 29.3	+0.3
	7.4nm,0.4s						
KAKA				*e*S	S	21 20 35.2	+0.6
WRAB	**Tennant Creek**	19.21	224	*e*P	P	21 17 54.5	-1.4
	45nm,0.8s						
WB2	**Warramunga Arr**	19.21	224	*e*P	P	21 17 55.1	-0.8
WB2				*e*		21 18 11.4	
WRA	**Warramunga Arr**	19.22	224	P	P	21 17 54.4	-1.6
	1.5nm,0.3s,baz=52,slow=11,SNR=79						
WRA				S	S	21 21 24.4	-0.2
	baz=44,slow=22,SNR=4.6						
ASAR	**Alice Springs**	22.16	218	P	P	21 18 26.1	0.0
	12nm,0.7s,mb4.4,baz=50,slow=9.5,SNR=129						
ASAR				S	S	21 22 28.1	+6.8
	6.2nm,1.0s,baz=33,slow=22,SNR=8.1						
ASAR				LR	LR	21 27 35.9	
	comp=Z,313nm,18.1s,MS3.8,baz=39,slow=38						
ASPA	**Alice Springs**	22.16	218	*e*P	P	21 18 27.0	+0.8
ASPA				*i*		21 18 45.3	
ASPA				*e*S	S	21 22 27.9	+6.5
FITZ	**Fitzroy Crossi**	25.11	240	⇓*i*P	P	21 18 56.8	+1.8
	46nm,0.7s,mb5.1						
FITZ				*i*	pP	21 19 09.3	0.0
FITZ				*e*S	S	21 23 19.7	+7.0
STKA	**Stephens Creek**	26.16	193	*e*P	P	21 19 03.4	-1.2
	5.8nm,0.9s,mb4.1						
STKA				*i*	pP	21 19 18.4	-0.7
STKA	**Stephens Creek**	26.16	193	P	P	21 19 03.3	-1.3
	8.4nm,0.9s,mb4.3,baz=21,slow=8.3,SNR=12						
STKA				LR	LR	21 30 24.7	
	comp=Z,397nm,18.4s,MS4.0,baz=21,slow=39						
MBWA	**Marble Bar**	31.44	239	*e*P	P	21 19 48.5	-3.5
	3.4nm,0.6s,mb4.3						
KLBR	**Kellerberrin**	38.10	225	*e*P	P	21 20 49.4	+0.6
	429nm,1.6s						
KLBR				*i*	pP	21 21 02.1	-2.0
URZ	**Urewera**	41.01	145	LR	LR	21 36 59.7	
	comp=Z,193nm,18.9s,MS4.0,baz=172,slow=34						
SONM	**Songino Array**	65.44	330	P	P	21 24 12.0	-0.8
	0.6nm,0.9s,mb3.6,baz=135,slow=4.1,SNR=5.2						
ILAR	**Eielson Array**	85.27	23	P	P	21 26 04.4	-0.7
	2.9nm,1.1s,mb4.3,baz=255,slow=4.9,SNR=14						
INK	**Inuvik**	91.48	21	P	P	21 26 35.5	+0.8
	1.2nm,0.9s,mb4.2,baz=289,slow=10,SNR=4.2						
NVAR	**Mina Array Bea**	96.47	52	P	P	21 26 59.6	+1.5
	0.4nm,0.7s,mb4.0,baz=259,slow=4.6,SNR=2.1						
YKA	**Yellowknife Ar**	98.84	28	LR	LR	22 08 50.4	
	comp=Z,87nm,20.3s,MS4.2,baz=275,slow=34						
GERES	**GERESS Array B**	123.03	326	PKP	PKPdf	21 32 25.0	+1.1
	0.8nm,0.7s,baz=90,slow=4.0,SNR=5.2						
LPAZ	**La Paz**	137.37	122	PKP	PKPdf	21 32 55.0	+3.1
	0.7nm,0.5s,baz=29,slow=4.4,SNR=4.8						
SDV	**Santo Domingo**	141.20	84	*e*PKPdf	PKPdf	21 32 59.5	+0.5
SAML	**Samuel**	144.99	115	*e*PKPbc	PKPbc	21 33 05.2	-0.6
SAML				*e*		21 33 19.1	
BDFB	**Brasilia**	152.72	143	PKPbc	PKPdf	21 33 27.0	+9.3
	3.2nm,0.9s,baz=29,slow=9.6,SNR=2.9						
DBIC	**Dimbokro**	153.47	272	PKP	PKPdf	21 33 20.1	+1.4
	2.7nm,1.0s,baz=304,slow=3.6,SNR=3.2						
DBIC				PKPbc	PKPdf	21 33 28.5	+10
	4.8nm,0.8s,baz=326,slow=2.1,SNR=6.7						

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*IDC **27** 21:38:59.8±1.6, 2.65N×95.58E, mb4.2/5, mb1 4.4/6, mb1mx4.1/13, mbtmp4.3/6, ML4.4/1, MS3.1/1, Ms1 3.3/1, ms1mx3.0/11, Error ellipse: s-maj=67.8km s-min=21.3km az=57.0*

*BJI **27** 21:39:00.6, 2.67N×95.66E, h19^{km}, mB4.7, mb4.6, Ms4.1*

*NEIC **27** 21:39:03.1±0.5, 2.62N×95.58E, mb4.4/12, Error ellipse: s-maj=12.5km s-min=7.0km az=50.0*

ISC 27 21:39:01.3±0.7**, 2.63N**±0.09×**95.60E**±0.10**, h23^{km}, h23^{km}**±1.3^{km}**:pP-P, n34, σ0^{s}87**/34**, mb4.5**/24**, MS4.0**/1**, 1C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.69	62	⇑*i*P	Pn	21 40 26.9	+0.2
CM31	**Chiang Mai Arr**	16.07	12	*e*P	P	21 42 48.1	+0.4
	9.1nm,0.8s						
CMAR	**Chiang Mai Arr**	16.07	12	Pn	P	21 42 48.1	+0.4
	0.5nm,0.3s,baz=201,slow=11,SNR=56						
CMAR				LR	LR	21 48 23.9	
	comp=Z,69nm,21.9s,baz=205,slow=35						
KKM	**Kota Kinabalu**	20.83	80	*e*P	P	21 43 44.4	+0.3
KMI	**Kunming**	23.40	16	⇓P	P	21 44 11.0	+1.4
KMI				AP		21 44 18.0	
KMI				AMB	AMB		
	comp=Z,122nm,5.8s						
KMI				LR	LR		
	comp=N,249nm,11.2s,MS4.0						
KMI				LR	LR		
	comp=E,144nm,11.3s,MS4.0						
KMI	**Kunming**	23.40	16	⇓P	P	21 44 10.9	+1.3
	comp=E,0.1nm,5.8s						
KMI				pP		21 44 17.9	
KMI				S	Sx	21 49 10.0	
JIRN	**Jiri**	26.47	341	*e*P	P	21 44 38.9	+0.1
	comp=E,19nm,0.7s,mb4.7						
DMN	**Daman**	26.79	339	*e*P	P	21 44 42.5	+0.7
	comp=E,9.3nm,0.7s,mb4.4						
KKN	**Kakani**	26.89	339	*e*P	P	21 44 42.8	+0.1
	comp=E,16nm,0.7s,mb4.6						
LSA	**Lhasa**	27.25	352	*e*P	P	21 44 46.3	+0.3
LSA	**Lhasa**	27.25	352	*e*P	P	21 44 46.4	+0.4
	comp=E,7.5nm,0.6s,mb4.4						
GKN	**Gorkha**	27.32	339	*e*P	P	21 44 45.9	-0.7
	comp=E,26nm,0.8s,mb4.8						
KOLN	**Koldanda**	27.50	336	*e*P	P	21 44 48.9	+0.6
	comp=E,19nm,0.8s,mb4.8						
ENH	**Enshi**	30.48	24	*e*P	P	21 45 12.9	-2.0
	comp=E,4.7nm,0.8s,mb4.3						
XAN	**Xi'an**	33.63	20	P	P	21 45 40.8	-1.7
XAN				AP	pP	21 45 47.5	-1.9
XAN				AMB	AMB		
	comp=Z,28nm,0.8s,mb5.2						
GTA	**Gaotai**	36.81	5	*e*P	P	21 46 08.5	-1.0
GTA				AP	pP	21 46 15.3	-1.1
GTA				XP	sP	21 46 18.5	-0.8
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.5						
HHC	**Hu-ho-hao-te**	40.69	19	*e*P	P	21 46 42.0	+0.2
HHC				AP	pP	21 46 51.3	+2.6
HHC				XP	sP	21 46 55.8	+4.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
HHC				AMB	AMB		
	comp=Z,132nm,10.7s						
BJT	**Baijiatuau**	41.63	24	*e*P	P	21 46 50.9	+1.3
	comp=Z,7.5nm,0.9s,mb4.3						
BJI	**Beijing**	41.65	24	*e*P	P	21 46 51.0	+1.3
BJI				AMB	AMB		
	comp=Z,11nm,1.2s,mb4.4						
BJI	**Beijing**	41.65	24	*e*P	P	21 46 50.9	+1.2
	comp=Z,11nm,1.2s,mb4.4						
BJI				*e*	pP	21 46 57.0	+0.3
AAK	**Ala-Archa**	44.07	338	*e*P	P	21 47 10.2	+0.8
	comp=Z,1.0nm,0.6s,mb3.7						
WRA	**Warramunga Arr**	44.14	122	P	P	21 47 10.6	+0.3
	comp=Z,2.3nm,0.6s,mb4.1,baz=298,slow=9.4,SNR=29						
WRAB	**Tennant Creek**	44.15	122	*e*P	P	21 47 10.0	-0.4
	comp=Z,3.2nm,0.5s,mb4.3						
WB2	**Warramunga Arr**	44.15	122	*e*P	P	21 47 10.5	+0.1
ASAR	**Alice Springs**	45.53	127	P	P	21 47 21.6	+0.3
	comp=Z,1.0nm,0.5s,mb4.0,baz=299,slow=8.0,SNR=23						
SONM	**Songino Array**	45.99	10	P	P	21 47 24.3	-0.4
	comp=Z,1.8nm,0.6s,mb4.2,baz=192,slow=9.3,SNR=22						
SONM				pP	pP	21 47 30.9	-0.7
	comp=Z,2.5nm,0.6s,baz=191,slow=8.5,SNR=20						
SONM				PcP	PcP	21 49 01.9	+0.2
	comp=Z,1.3nm,0.6s,baz=191,slow=3.6,SNR=10						
ULN	**Ulaanbaatar**	46.14	11	*e*P	P	21 47 24.9	-0.9
	comp=Z,3.9nm,1.2s,mb4.2						
CN2	**Changchun**	48.79	29	*e*P	P	21 47 46.8	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
KURK	**Kurchatov**	50.02	346	*e*P	P	21 47 55.5	-0.5
	comp=Z,5.0nm,0.8s,mb4.6						
KURK				*e*pP	pP	21 48 02.1	-1.0
CHKZ	**Chkalovo**	54.88	342	*e*P	P	21 48 31.3	-1.0
	comp=Z,8.7nm,0.7s,mb4.9						
CHKZ				*e*pP	pP	21 48 38.3	-1.1
YAK	**Yakutsk**	64.52	17	P	P	21 49 36.2	-2.3
	comp=Z,12nm,0.7s,mb5.0						
FINES	**FINESS Array B**	78.00	333	P	P	21 50 59.4	+0.1
	comp=Z,11nm,1.4s,mb4.6,baz=108,slow=13,SNR=3.3						
FINES	**FINESS Array B**	78.00	333	P	P	21 50 59.4	+0.1
ARCES	**ARCESS Array B**	80.66	340	P	P	21 51 14.7	+1.1
	comp=Z,2.4nm,0.9s,mb4.1,baz=106,slow=6.6,SNR=4.3						

PGC 27 21:42:15.8, 48.08N×128.91W, h10^{km}, MLSn2.9/2**, Mw3.5, Northern Juan de Fuca ridge., Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	2.15	33	Pn	Pn	21 42 49.4	-2.9
EDB				Sn	Sn	21 43 14.2	-5.0
EDB				Trac		21 43 16.1	
	comp=Z,6.0nm,0.2s						
OZB	**Mount Ozzard**	2.43	67	Pn	Pn	21 42 53.6	-2.7
OZB				Sn	Sn	21 43 21.9	-4.6
OZB				Trac		21 43 23.4	
	comp=Z,15nm,0.2s						
GDR	**Gold River**	2.55	47	Pn	Pn	21 42 55.7	-2.3
GDR				Sn	Sn	21 43 25.6	-3.8
	comp=Z,5.0nm,0.3s						
GDR				Trac		21 43 30.7	
	comp=Z,5.0nm,0.3s						
WOSB	**Woss**	2.59	35	Pn	Pn	21 42 56.3	-2.2
MAYB	**Maynard**	2.59	25	Pn	Pn	21 42 56.1	-2.4
MAYB				Sn	Sn	21 43 26.5	-3.8
	comp=Z,20nm,0.4s						
MAYB				Trac		21 43 27.8	
	comp=Z,20nm,0.4s						
HOLB	**Holberg**	2.61	11	Pn	Pn	21 42 57.1	-1.8
HOLB				Sn	Sn	21 43 26.3	-4.7
	comp=Z,5.0nm,0.1s						
HOLB				Trac		21 43 29.9	
	comp=Z,5.0nm,0.1s						
BTB	**Buttle Lake**	2.63	57	Pn	Pn	21 42 57.3	-1.9
BTB				Sn	Sn	21 43 28.5	-3.0
	comp=Z,34nm,0.5s						
BTB				Trac		21 43 30.2	
	comp=Z,34nm,0.5s						
PHC	**Port Hardy**	2.80	20	Pn	Pn	21 42 59.6	-2.0
PHC				Sn	Sn	21 43 30.6	-5.2
PHC				Trac		21 43 35.2	
	comp=Z,4.0nm,0.3s						
MGB	**Mount Grey**	2.95	70	Pn	Pn	21 43 00.5	-3.2
MGB				Sn	Sn	21 43 34.9	-4.5
	comp=Z,6.0nm,0.2s						
MGB				Trac		21 43 36.2	
	comp=Z,6.0nm,0.2s						
ALB	**Alberni**	2.95	65	Sn	Sn	21 43 34.6	-5.0
	comp=Z,4.0nm,0.3s						
ALB				Trac		21 43 38.3	
	comp=Z,4.0nm,0.3s						
NCRB	**Newcastle Ridg**	2.98	38	Pn	Pn	21 43 02.4	-1.8
NCRB				Sn	Sn	21 43 36.7	-3.6
	comp=Z,6.0nm,0.3s						
NCRB				Trac		21 43 40.0	
	comp=Z,6.0nm,0.3s						
PFB	**Port Renfrew**	3.02	79	Pn	Pn	21 43 02.0	-2.7
PFB				Sn	Sn	21 43 36.6	-4.6
PFB				Trac		21 43 39.6	
	comp=Z,3.0nm,0.3s						
CBB	**Campbell River**	3.04	49	Pn	Pn	21 43 03.2	-1.8
CBB				Sn	Sn	21 43 38.1	-3.7
CBB				Trac		21 43 40.9	
	comp=Z,5.0nm,0.2s						
TXB	**Texada**	3.36	60	Pn	Pn	21 43 07.7	-1.9
TXB				Sn	Sn	21 43 47.3	-2.7
	comp=Z,11nm,0.4s						
TXB				Trac		21 43 48.5	
	comp=Z,11nm,0.4s						
LZB	**Mount Lazard**	3.43	79	Pn	Pn	21 43 07.9	-2.6
LZB				Sn	Sn	21 43 47.0	-4.7

LZB				Trac		21 43 48.9	
	comp=Z,3.0nm,0.6s						
NLLB	Nanaimo Lost L	3.46	69	Pn	Pn	21 43 08.5	-2.4
NLLB				Sn	Sn	21 43 48.5	-3.8
NLLB				Trac		21 43 50.6	
	comp=Z,3.0nm,0.2s						
SHB	Sechelt	3.65	64	Pn	Pn	21 43 11.6	-2.1
SHB				Sn	Sn	21 43 53.5	-3.8
SHB				Trac		21 43 55.8	
	comp=Z,10.0nm,0.3s						
PGC	Sidney	3.68	79	Pn	Pn	21 43 11.2	-2.9
PGC				Sn	Sn	21 43 53.9	-4.2
PGC				Trac		21 43 54.7	
	comp=Z,5.0nm,0.6s						
GOBB	Galiano Island	3.69	74	Pn	Pn	21 43 12.1	-2.1
GOBB				Sn	Sn	21 43 54.4	-3.9
	comp=Z,4.0nm,0.4s						
GOBB				Trac		21 43 59.2	
	comp=Z,4.0nm,0.4s						
SNB	Saturna Island	3.88	78	Pn	Pn	21 43 14.8	-2.1
SNB				Sn	Sn	21 43 59.5	-3.6
SNB				Trac		21 44 03.1	
	comp=Z,10.0nm,0.8s						
BIB	Bowen Island	3.94	68	Pn	Pn	21 43 15.3	-2.4
BIB				Sn	Sn	21 44 00.6	-3.8
	comp=Z,2.0nm,0.2s						
BIB				Trac		21 44 04.4	
	comp=Z,2.0nm,0.2s						
WPB	Watts Point	4.08	65	Pn	Pn	21 43 18.0	-1.7
BBB	Bella Bella	4.14	7	⇑Pn	Pn	21 43 18.4	-2.2
BBB				Sn	Sn	21 44 04.0	-5.8
BBB				Trac		21 44 05.3	
	comp=Z,4.0nm,0.2s						
HNB	Haney	4.36	72	Pn	Pn	21 43 21.5	-2.2
HNB				Sn	Sn	21 44 10.9	-4.3
HNB				Trac		21 44 13.2	
	comp=Z,7.0nm,0.6s						
WSLR	Whistler	4.43	60	Pn	Pn	21 43 23.0	-1.8
WSLR				Sn	Sn	21 44 13.1	-4.0
WSLR				Trac		21 44 21.4	
	comp=Z,2.0nm,0.3s						
HOPB	Hope	5.12	72	Pn	Pn	21 43 32.1	-2.4
LLLB	Lillooet	5.24	58	Pn	Pn	21 43 34.3	-1.9
LLLB				Sn	Sn	21 44 30.4	-7.1
LLLB				Trac		21 44 38.0	
	comp=Z,1.0nm,0.3s						

IDC 27 23:20:47.1±4.8**, 13.39S**×**166.80E, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.7**/12**, mbtmp3.6**/3**, Error ellipse: s-maj=232.9km s-min=33.4km az=141.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.64	182	*e*P	P	23 22 30.6	-26
DZM				*e*S		23 23 10.6	
WRA	Warramunga Arr	31.73	254	P	P	23 27 12.8	-2.5
	0.5nm,0.9s,baz=86,slow=9.4,SNR=7.4						
ASAR	Alice Springs	32.75	247	P	P	23 27 22.4	-1.7
	0.4nm,0.5s,baz=74,slow=9.1,SNR=8.6						
ILAR	Eielson Array	85.40	18	P	P	23 33 26.1	-1.2
	0.2nm,0.6s,baz=236,slow=5.7,SNR=6.8						

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*BJI **27** 23:34:23.5, 3.00S×142.27E, h65^{km}, mB5.3, mb4.8*
*IDC **27** 23:34:24.2±5.3, 2.67S×141.69E, h21^{km}±33^{km}, mb4.3/7, mb1 4.4/10, mb1mx4.4/13, mbtmp4.4/10, ML3.8/1, MS3.8/2, Ms1 3.8/2, ms1mx3.3/11, Error ellipse: s-maj=28.0km s-min=13.8km az=95.0*
*NEIC **27** 23:34:25.8±3.2, 2.76S×141.62E, h34^{km}±22^{km}, mb4.7/14, Error ellipse: s-maj=11.9km s-min=6.6km az=49.0*
ISC 27 23:34:24.4±1.3**, 2.78S**±0.05×**141.72E**±0.06**, h37**^{km}±10^{km}**, n60,** σ$0\overset{s}{.}94$/61**, mb4.7**/26**, MS3.6**/2**, 1C-4D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOMI	Yo Moklole	1.17	277	⇓*i*P	P	23 34 43.1	-1.4
YOMI				*i* Sn	S	23 35 01.3	+1.8
MENI	Mendum Tagoi	1.33	282	⇓*i*P	P	23 34 46.9	0.0
MENI				*i* Sn	S	23 35 03.7	+0.1
PMG	Port Moresby	8.52	141	Pn	P	23 36 29.7	+1.5
	0.1nm,0.3s,baz=292,slow=11,SNR=1.7						
KAKA	Kakadu	13.48	222	*e*P	P	23 37 32.0	-3.6
	23nm,0.4s						
KAKA				*e*S	S	23 39 56.8	-8.4
CTA	Charters Tower	17.76	166	P	P	23 38 33.0	+2.4
	0.2nm,0.3s,baz=337,slow=17,SNR=2.1						
CTAO	Charters Tower	17.76	166	P	P	23 38 29.5	-1.2
WRAB	Tennant Creek	18.51	202	*e*P	P	23 38 38.6	-1.3
	38nm,0.8s						
WB2	Warramunga Arr	18.52	202	*e*P	P	23 38 38.2	-1.8
WRA	Warramunga Arr	18.52	202	P	P	23 38 39.2	-0.9
	2.3nm,0.3s,baz=20,slow=13,SNR=38						
WRA				S	S	23 42 02.7	+0.8
	0.1nm,0.3s,baz=14,slow=22,SNR=4.2						
FITZ	Fitzroy Crossi	21.92	225	*e*P	P	23 39 14.3	-2.1
	25nm,0.9s,mb4.6						
NINI	Niniconang	21.98	265	⇓*e*P	P	23 39 17.8	+0.8
ASAR	Alice Springs	22.10	199	P	P	23 39 18.7	+0.6
	6.1nm,0.7s,mb4.2,baz=30,slow=9.6,SNR=39						
ASAR				S	S	23 43 23.9	+9.4
	1.0nm,1.0s,baz=23,slow=19,SNR=2.2						
ASAR				LR	LR	23 48 30.5	
	comp=Z,239nm,20.4s,MS3.6,baz=20,slow=38						
ASPA	Alice Springs	22.10	199	*e*P	P	23 39 19.0	+0.9
ASPA				*e*S	S	23 43 24.0	+9.5
TANI	Tanete Lipujan	22.32	268	⇓*e*P	P	23 39 20.2	-0.1
MBWA	Marble Bar	28.14	228	*e*P	P	23 40 15.3	-0.2
	14nm,1.0s,mb4.5						
STKA	Stephens Creek	28.94	180	P	P	23 40 22.3	-0.2
	3.7nm,0.8s,mb4.2,baz=4.9,slow=6.3,SNR=8.2						
STKA				LR	LR	23 52 34.6	
	comp=Z,176nm,18.3s,MS3.7,baz=24,slow=38						
STKA	Stephens Creek	28.94	180	*e*P	P	23 40 21.7	-0.8
STKA				LR	LR	23 52 34.6	
TAU	Tasmania Unive	40.27	174	P	P	23 42 00.4	+0.9
	2.5nm,0.5s,mb4.2						
CMAR	Chiang Mai Arr	47.10	298	P	P	23 42 54.7	-0.3
	1.4nm,0.8s,mb3.9,baz=126,slow=6.2,SNR=7.4						
CMAR				PcP	PcP	23 44 26.9	0.0
	1.1nm,0.4s,baz=160,slow=1.5,SNR=4.7						
CMAR	Chiang Mai Arr	47.10	298	P	P	23 42 54.7	-0.3
CMAR				PcP	PcP	23 44 26.9	0.0
CD2	Chengdu	49.29	316	P	P	23 43 12.0	0.0
LZH	Lanzhou	52.38	321	⇑P	P	23 43 35.5	+0.2
	36nm,1.8s,mb5.0						
LZH				pP	pP	23 43 41.0	-5.1
LZH				sP	sP	23 43 43.8	-6.8
GTA	Gaotai	56.95	322	P	P	23 44 08.8	+0.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.4						
LSA	Lhasa	58.12	308	P	P	23 44 17.5	+0.6
LSA	Lhasa	58.12	308	*e*P	P	23 44 17.6	+0.7
	comp=Z,8.1nm,1.1s,mb4.7						
ULN	Ulaanbaatar	58.83	333	*e*P	P	23 44 20.9	-0.8
	comp=Z,3.3nm,1.1s,mb4.3						
SONM	Songino Array	59.10	333	P	P	23 44 22.7	-0.9
	comp=Z,4.2nm,1.3s,mb4.3,baz=150,slow=5.3,SNR=9.0						
RAR	Rarotonga	59.72	113	*e*P	P	23 44 29.1	+0.9
	comp=Z,17nm,0.4s,mb5.4						
JIRN	Jiri	61.37	304	*e*P	P	23 44 38.9	-0.4
	comp=Z,38nm,1.3s,mb5.4						
FX1	Attu Island--F	61.44	21	P	P	23 44 39.1	-0.3
	comp=Z,21nm,0.8s,mb5.3,baz=256,slow=12,SNR=3.4						
PKI	Pulchoki	61.99	303	*e*P	P	23 44 43.0	-0.5
	comp=Z,22nm,1.0s,mb5.3						
KKN	Kakani	62.17	303	*e*P	P	23 44 44.1	-0.6
	comp=Z,27nm,1.1s,mb5.3						
DMN	Daman	62.26	303	*e*P	P	23 44 45.1	-0.1
GKN	Gorkha	62.78	303	*e*P	P	23 44 48.2	-0.5
	comp=Z,12nm,0.6s,mb5.2						
KOLN	Koldanda	63.57	303	*e*P	P	23 44 53.2	-0.9
	comp=Z,27nm,1.1s,mb5.2						
WMQ	Urumqi	66.95	320	P	P	23 45 15.8	+0.3
WMQ				AMB	AMB		
	comp=Z,12nm,1.0s,mb4.9						
DDI	Dehra Dun	68.97	304	*e*	P	23 45 27.4	-0.9
KZA	Kyzart	74.65	315	P	P	23 46 03.6	+1.6
	SNR=16						
TKM2	Tokmak 2	74.68	316	P	P	23 46 02.5	+0.4
	SNR=9.2						
KBK	Karagaybulak	75.05	315	P	P	23 46 05.2	+0.9
	SNR=5.5						
UCH	Uchtor	75.22	315	P	P	23 46 06.7	+1.5
	SNR=13						
AAK	Ala-Archa	75.36	315	P	P	23 46 06.9	+0.8
	SNR=5.5						
AAK	Ala-Archa	75.36	315	*e*P	P	23 46 05.6	-0.4
	comp=Z,5.4nm,1.2s,mb4.3						
KURK	Kurchatov	75.52	324	P	P	23 46 06.1	-0.7
	comp=Z,48nm,1.0s,mb5.4,SNR=14						
KURK	Kurchatov	75.52	324	*e*P	P	23 46 06.4	-0.4
	comp=Z,12nm,1.1s,mb4.7						
USP	Ospenovka	75.55	316	P	P	23 46 07.7	+0.6
	SNR=16						
AML	Almayashu	75.77	315	P	P	23 46 10.1	+1.6
	SNR=14						
EKS2	Erkin-Say	75.87	315	P	P	23 46 10.1	+1.2
	SNR=8.2						
CHKZ	Chkalovo	81.16	325	*e*P	P	23 46 37.1	-0.6
	comp=Z,6.2nm,1.1s,mb4.5						
ILAR	Eielson Array	84.66	24	P	P	23 46 54.0	-1.2
	comp=Z,2.6nm,0.6s,mb4.5,baz=260,slow=4.6,SNR=41						
QSPA	South Pole Qui	87.17	180	*e*P	P	23 47 08.1	+0.8
	comp=Z,15nm,1.1s,mb5.1						
DAWY	Dawson	87.63	26	*e*P	P	23 47 09.7	-0.2
INK	Inuvik	90.62	22	*e*P	P	23 47 23.3	-0.6
	comp=Z,10nm,1.4s,mb5.0						
YKA	Yellowknife Ar	98.76	27	P	P	23 48 00.4	-0.7
	comp=Z,1.4nm,1.0s,mb4.4,baz=280,slow=4.9,SNR=11						
YKA	Yellowknife Ar	98.76	27	P	P	23 48 00.4	-0.7
LPAZ	La Paz	144.94	124	PKPbc	PKPbc	23 54 01.5	+2.6
	comp=Z,4.6nm,0.7s,baz=324,slow=6.7,SNR=8.1						
LPAZ	La Paz	144.94	124	*e*PKPbc	PKPbc	23 54 01.0	+2.2
DBIC	Dimbokro	146.48	278	PKPbc	PKPbc	23 54 04.8	+2.0
	comp=Z,7.7nm,0.8s,baz=53,slow=4.8,SNR=9.9						
SDV	Santo Domingo	147.26	78	PKPbc	PKPdf	23 54 06.8	+4.1
	comp=Z,4.9nm,0.8s,baz=68,slow=4.2,SNR=4.2						
SDV	Santo Domingo	147.26	78	*e*PKPbc	PKPdf	23 54 06.6	+3.8

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*TAP **27** 23:37:48.0, 23.72N×122.67E, h11^{km}±1^{km}, ML3.3*
JMA 27 23:37:47.4±0.3**, 23.75N**×**122.90E, h44**^{km}**, M2.8, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.72	8	P	P	23 38 01.4	+0.2
YOJ				S	S	23 38 10.8	-0.5
HATJ	Hateruma jima	0.88	70	P	P	23 38 03.5	0.0
HATJ				S	S	23 38 15.8	+0.4
IRIF	Iriomote-Funau	0.96	52	P	P	23 38 04.8	+0.2
IRIF				S	S	23 38 17.6	+0.4
JKRS	Kuro-shima	1.12	64	P	P	23 38 07.3	+0.4
JKRS				S	S	23 38 22.4	+0.9
JIJ	Ishigaki jima	1.29	61	P	P	23 38 09.1	-0.2
JIJ				S	S	23 38 25.1	-0.6
JTJ	Tarama	1.87	61	S	S	23 38 39.5	-0.5

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*NEIC **27** 23:40:03.7±0.7, 7.85N×94.05E, h30^{km}, mb4.2/3, Error ellipse: s-maj=18.7km s-min=13.3km az=50.0*
*IDC **27** 23:40:09.9±5.4, 7.99N×94.35E, h89^{km}±49^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.6/14, mbtmp3.8/9, ML4.1/1, MS2.8/1, Ms1 3.0/1, ms1mx2.8/12, Error ellipse: s-maj=35.2km s-min=18.7km az=52.0*
ISC 27 23:40:07.2±3.0**, 7.9N**±0.1×**94.4E**±0.2**, h82**^{km}±29^{km}**, n17,** σ$0\overset{s}{.}86$/18**, mb3.8**/10**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.78	112	P	P	23 41 46.2	+0.3
KULM				*e*S	S	23 42 58.6	-3.7
CMAR	Chiang Mai Arr	11.38	23	P	P	23 42 48.5	0.0
	0.3nm,0.3s,baz=212,slow=14,SNR=6.7						
CMAR				LR	LR	23 47 04.0	
	comp=Z,43nm,20.1s,baz=215,slow=37						
CMAR	Chiang Mai Arr	11.38	23	P	P	23 42 48.5	0.0
CMAR				LR	LR	23 47 04.0	
LSA	Lhasa	21.87	353	*e*P	P	23 44 56.9	+2.3
AAK	Ala-Archa	38.74	336	*e*P	P	23 47 23.9	-1.2
SONM	Songino Array	41.07	12	P	P	23 47 44.9	+0.7
	0.2nm,0.5s,mb3.2,baz=202,slow=7.3,SNR=4.0						
KURK	Kurchatov	44.62	346	*e*P	P	23 48 12.6	-0.5
	4.3nm,1.1s,mb4.1						
KURK				*e*		23 48 21.2	
WRA	Warramunga Arr	48.12	126	P	P	23 48 41.1	0.0
	0.3nm,0.6s,mb3.3,baz=305,slow=8.4,SNR=4.7						
CHKZ	Chkalovo	49.49	342	*e*P	P	23 48 50.1	-1.1
	3.5nm,0.9s,mb4.3						
ASAR	Alice Springs	49.78	130	P	P	23 48 54.6	+0.7
	1.3nm,1.2s,mb3.7,baz=302,slow=7.5,SNR=2.8						
KMBO	Kilima Mbogo	57.64	264	P	P	23 49 52.0	+0.3
	1.4nm,0.7s,mb4.1,baz=45,slow=8.6,SNR=6.2						
KMBO	Kilima Mbogo	57.64	264	*e*P	P	23 49 52.0	+0.3
	2.0nm,0.9s,mb4.2						
LSZ	Lusaka	69.48	250	*e*P	P	23 51 09.4	0.0
FINES	FINESS Array B	72.77	332	P	P	23 51 27.6	-0.7
	1.9nm,0.8s,mb4.0,baz=117,slow=6.2,SNR=5.8						
ARCES	ARCESS Array B	75.29	340	P	P	23 51 42.8	+0.1
	3.4nm,0.9s,mb4.0,baz=90,slow=6.1,SNR=5.1						
GERES	GERESS Array B	77.93	318	P	P	23 51 57.6	-0.3
	0.8nm,0.8s,mb3.5,baz=101,slow=6.8,SNR=4.2						
NOA	NORSAR Array B	79.79	331	P	P	23 52 08.3	+0.5
	1.0nm,0.9s,mb3.6,baz=121,slow=6.5,SNR=2.9						

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*NEIC **27** 23:49:03.8±0.7, 8.67S×79.84W, mb4.1/3, Error ellipse: s-maj=23.7km s-min=12.9km az=54.0*
*IDC **27** 23:49:04.1±0.9, 8.70S×80.03W, h35^{km}±5^{km}, mb3.6/5, mb1 3.8/8, mb1mx3.6/18, mbtmp3.8/8, ML3.9/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/19, Error ellipse: s-maj=37.8km s-min=20.8km az=53.0*
ISC 27 23:49:03.0±1.0**, 8.5S**±0.1×**79.8W**±0.2**, h37**^{km}**, h37**^{km}±2.3^{km}**:pP-P, n22,** σ$1\overset{s}{.}20$/15**, mb3.8**/5**, MS3.9**/1**, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.50	140	*e*P	P	23 50 07.3	-3.2
ARE	Arequipa	11.30	135	*e*P	P	23 51 55.0	+10
LPAZ	La Paz	13.75	125	Pn	P	23 52 19.1	+1.2
	0.1nm,0.3s,baz=282,slow=8.6,SNR=2.7						
LPAZ				LR	LR	23 57 58.9	
	comp=Z,270nm,19.1s,baz=86,slow=39						
LPAZ	La Paz	13.75	125	*e*Pn	P	23 52 19.1	+1.2
LPAZ				LR	LR	23 57 58.9	
ROSC	El Rosal	14.39	23	LR	LR	23 58 11.0	
	comp=Z,138nm,19.9s,baz=176,slow=37						
SAML	Samuel	16.44	93	*e*P	P	23 52 51.0	-1.6
	9.5nm,0.6s						
LVC	Limon Verde	17.47	144	P	P	23 53 05.6	0.0
	0.1nm,0.3s,baz=290,slow=9.0,SNR=4.7						
LVC				LR	LR	23 59 05.2	
	comp=Z,173nm,21.3s,baz=107,slow=34						
LVC	Limon Verde	17.47	144	*e*P	P	23 53 06.0	+0.4
	5.1nm,1.0s						
LVC				LR	LR	23 59 05.2	
JTS	JuntasAbangare	19.40	345	LR	LR	23 59 41.5	
	comp=Z,66nm,21.8s,baz=221,slow=33						
SDV	Santo Domingo	19.58	28	P	P	23 53 31.6	+0.8
	0.3nm,0.3s,baz=200,slow=15,SNR=3.5						
SDV				LR	LR	00 01 49.0	
	comp=Z,127nm,20.1s,baz=231,slow=39						
BDFB	Brasilia	31.85	106	LR	LR	00 08 58.2	
	comp=Z,254nm,20.4s,MS3.9,baz=335,slow=37						
TXAR	Lajitas Array	44.12	330	pP	pP	23 57 19.9	-0.7
	0.5nm,0.8s,baz=135,slow=5.3,SNR=3.9						
PDAR	Pinedale Array	57.83	334	P	P	23 58 50.7	-2.6
	0.2nm,0.6s,mb3.4,baz=120,slow=7.3,SNR=3.0						
PDAR				pP	pP	23 59 04.0	-0.3
	0.8nm,0.8s,baz=121,slow=7.5,SNR=5.2						
ULM	Lac du Bonnet	60.20	348	P	P	23 59 09.6	0.0
	2.0nm,0.8s,mb4.2,baz=166,slow=6.8,SNR=2.8						
ULM				pP	pP	23 59 19.8	-0.8
	2.0nm,0.5s,baz=223,slow=2.0,SNR=3.4						
YKA	Yellowknife Ar	75.74	344	P	P	00 00 46.5	+0.1
	0.3nm,0.6s,mb3.4,baz=139,slow=5.8,SNR=9.4						
YKA				pP	pP	00 00 57.3	-0.3
	0.4nm,0.7s,baz=139,slow=5.7,SNR=5.5						
YKA	Yellowknife Ar	75.74	344	P	P	00 00 46.5	+0.1
YKA				pP	pP	00 00 57.3	-0.3
DBIC	Dimbokro	76.23	81	P	P	00 00 50.9	+0.8
	3.5nm,0.8s,mb4.3,baz=229,slow=6.0,SNR=5.2						
DBIC				pP	pP	00 01 02.1	+0.7
	2.3nm,0.7s,baz=189,slow=5.3,SNR=2.5						
DBIC	Dimbokro	76.23	81	*e*P	P	00 00 50.9	+0.7
	8.5nm,1.1s,mb4.6						
DBIC				pP	pP	00 01 02.1	+0.7
ILAR	Eielson Array	88.18	337	P	P	00 01 52.0	+1.0
	0.3nm,1.0s,mb3.5,baz=136,slow=3.1,SNR=4.2						
ILAR				pP	pP	00 02 02.8	+0.3
	1.2nm,1.1s,baz=156,slow=3.5,SNR=4.7						
ASAR	Alice Springs	134.06	225	PKP	PKPdf	00 08 18.4	+0.8
	0.3nm,0.6s,baz=142,slow=1.7,SNR=4.7						
ASAR				pPKP		00 08 28.8	
	0.6nm,0.7s,baz=110,slow=2.3,SNR=3.4						
WRA	Warramunga Arr	136.06	230	PKP	PKPdf	00 08 22.4	+1.0
	0.8nm,0.8s,baz=121,slow=2.1,SNR=8.9						
WRA				pPKP		00 08 32.3	
	1.4nm,0.9s,baz=126,slow=1.6,SNR=7.8						
SONM	Songino Array	140.49	353	PKP	PKPdf	00 08 28.8	+0.1
	0.1nm,0.7s,baz=90,slow=1.4,SNR=2.1						
SONM				pPKP		00 08 40.8	
	0.3nm,0.7s,baz=339,slow=2.2,SNR=3.2						

WEL 27 23:59:37.1±0.5**, 35.08S**×**178.17E, h33**^{km}**, ML3.5**/2**, Error ellipse: s-maj=7.9km s-min=3.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	2.98	179	PN	Pn	00 00 21.7	-1.7
PUZ				SN	Sn	00 00 54.9	-3.6
URZ	Urewera	3.28	195	P*	Pb	00 00 26.5	-8.1
URZ				*e*S*	Sb	00 01 04.1	-10
MWZ	Matawai	3.29	189	P*	Pb	00 00 26.5	-8.1
MWZ				*e*S*	Sb	00 01 04.1	-10

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*STR **28** 00:08:04.4±0.3, 42.62N×0.84E, h5^{km}±1^{km}, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*MDD **28** 00:08:04.8±0.2, 42.61N×0.82E, h7^{km}±4^{km}, mbLg1.9/20, Error ellipse: s-maj=2.1km s-min=1.4km az=21.0, PRXIMO*
*LDG **28** 00:08:04.5±0.0, 42.60N×0.82E, h4^{km}, Md2.5/2, Ml2.5/8, Error ellipse: s-maj=0.9km s-min=0.6km az=23.0*
*NEIC **28** 00:08:04.5, 42.60N×0.82E, h4^{km}, ML2.5(LDG), ML2.3(STR), MN1.9(MDD), After LDG.*
*CSEM **28** 00:08:04.6±0.1, 42.61N×0.82E, h5^{km}, ML2.6/8, Error ellipse: s-maj=1.1km s-min=0.9km az=162.0*
ISC 28 00:08:03.2±0.3**, 42.64N**±0.02×**0.84E**±0.02**, h9**^{km}±3^{km}**, n44,** σ$1\overset{s}{.}17$/73**, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALF	Salau	0.28	65	P	Pg	00 08 10.8	+1.6
SALF				S	Sg	00 08 14.8	+1.6
CSOR	Sort	0.34	140	Pg	Pg	00 08 10.9	+0.6
CSOR				Lg		00 08 15.4	
	31nm,0.2s						
MLS	Moulis	0.37	31	Pg	Pg	00 08 12.4	+1.6
MLS				Sg	Sg	00 08 17.6	+1.8
MLS	Moulis	0.37	31	P	Pg	00 08 12.5	+1.7
MLS				S	Sg	00 08 17.5	+1.7
RESF	Ens	0.40	295	Pg	Pg	00 08 12.7	+1.2
RESF				Sg	Sg	00 08 18.3	+1.3
RESF	Ens	0.40	295	P	Pg	00 08 12.7	+1.2
RESF				S	Sg	00 08 18.2	+1.2
EBIE	Bielsa	0.52	275	Pg	Pg	00 08 14.3	+0.7
	SNR=29						
EBIE				Lg		00 08 20.7	
	16nm,0.1s,SNR=7.9						
EBIE	Bielsa	0.52	275	Pg	Pg	00 08 14.3	+0.6
	SNR=29						
EPF	Esparros	0.54	317	*e*Pg	Pg	00 08 15.2	+1.1
EPF				*e*Sg	Sg	00 08 22.1	+0.8
	22nm,0.2s						
PAND	Andorre	0.54	102	P	Pg	00 08 14.5	+0.4
PAND				S	Sg	00 08 21.2	-0.1
CORG	Organya	0.54	139	Pg	Pg	00 08 14.5	+0.3
CORG				Lg		00 08 21.8	
	9.8nm,0.1s						
GRBF	Gourbit	0.55	68	Pg	Pg	00 08 15.5	+1.1
GRBF				P		00 08 15.6	
GRBF				Lg		00 08 22.9	
GRBF				S	Sg	00 08 23.0	+1.2
VIEF	Viey	0.65	292	Pg	Pg	00 08 16.7	+0.4
VIEF				Sg	Sg	00 08 25.4	+0.4
VIEF	Viey	0.65	292	P	Pb	00 08 16.8	+0.6
VIEF				S	Sg	00 08 25.3	+0.3
LABF	Labassere	0.69	306	Pg	Pg	00 08 18.1	+0.9
LABF				Sg	Sg	00 08 27.6	+1.1
LABF	Labassere	0.69	306	P	Pb	00 08 18.1	+1.1
LABF				S	Sb	00 08 27.6	+1.2
CLLI	Llivia	0.85	101	Pg	Pg	00 08 20.3	-0.1
EMIR	Miracle	0.89	145	Pg	Pg	00 08 20.8	-0.2
	1.5nm,0.2s,SNR=15						
EMIR				Lg		00 08 33.1	
	6.9nm,0.3s,SNR=9.9						
EMIR	Miracle	0.89	145	Pg	Pg	00 08 20.8	-0.2
	1.5nm,0.2s,SNR=15						
CARF	Carcanieres	0.94	85	Pg	Pg	00 08 22.5	+0.5
CARF				Sg	Sg	00 08 34.6	0.0
CARF	Carcanieres	0.94	85	P	Pb	00 08 22.6	+1.3
CARF				S	Sb	00 08 34.8	+1.3
CBRU	Bruguera	1.05	109	Pg	Pg	00 08 24.1	-0.3
CBRU				Lg		00 08 38.5	
	4.2nm,0.1s						
ETSF	Etsaut	1.06	285	*e*Pg	Pg	00 08 24.2	-0.3
ETSF				*e*Sg	Sg	00 08 38.3	-0.4
	22nm,0.2s						
ATE	Arette	1.22	292	S	Sb	00 08 43.1	+1.5
MTLF	Montolieu	1.23	55	*e*Pn	Pn	00 08 27.6	+1.0
MTLF				*e*Pg	Pg	00 08 28.1	+0.2
MTLF				*e*Sg	Sg	00 08 44.2	-0.1
	24nm,0.4s						
EPOB	Poblet	1.30	172	Pg	Pg	00 08 28.1	-1.2
	0.7nm,0.1s,SNR=9.7						
EPOB				Lg		00 08 44.4	
	5.7nm,0.3s,SNR=11						
EPOB	Poblet	1.30	172	Pg	Pg	00 08 28.1	-1.1
	0.7nm,0.1s,SNR=9.7						
ESAC	San Caprasio	1.34	227	Pg	Pg	00 08 28.0	-2.0
	2.9nm,0.2s,SNR=7.9						
ESAC				Lg		00 08 47.0	
	76nm,0.3s,SNR=7.9						
ESAC	San Caprasio	1.34	227	Pg	Pg	00 08 28.0	-2.0
	2.9nm,0.2s,SNR=7.9						
CGAR	Garraf	1.36	171	Lg		00 08 54.3	
	4.4nm,0.2s						
CFON	Fontmartina	1.48	126	Pg	Pg	00 08 31.9	-0.9
CFON				Lg		00 08 51.4	
	43nm,0.2s						
EJON	La Jonquera	1.53	97	Pg	Pg	00 08 33.7	-0.1
	1.1nm,0.1s,SNR=17						
EJON				Lg		00 08 54.4	
	1.4nm,0.1s,SNR=7.9						
EJON	La Jonquera	1.53	97	Pg	Pg	00 08 33.7	-0.1
	1.1nm,0.1s,SNR=17						
SJPF	Ste Jean	1.59	288	*e*Pn	Pn	00 08 31.7	0.0
SJPF				*e*Pg	Pg	00 08 34.0	-1.0
SJPF				*e*Sg	Sg	00 08 54.3	-1.9
	12nm,0.2s						
ERTA	Horta de San J	1.72	193	Pg	Pg	00 08 35.5	-2.2
	0.8nm,0.1s,SNR=7.9						
ERTA				Lg		00 08 58.7	
	3.6nm,0.1s,SNR=7.9						
ERTA	Horta de San J	1.72	193	Pg	Pg	00 08 35.5	-2.2
	0.8nm,0.1s,SNR=7.9						
EALK	Alkurruntz	1.82	289	Pg	Pg	00 08 38.5	-1.1
	0.9nm,0.1s,SNR=7.9						
EALK				Lg		00 09 03.1	
	5.5nm,0.2s,SNR=7.9						
LFF	La Frestale	2.30	358	*e*Pn	Pn	00 08 42.1	+0.2
LFF				*e*Pg	Pg	00 08 47.7	-1.5
LFF				*e*Sg	Sg	00 09 18.1	-1.7
	4.8nm,0.4s						
CAF	Calviac	2.45	21	*e*Pn	Pn	00 08 44.2	+0.1
CAF				*e*Pg	Pg	00 08 50.7	-1.5
CAF				*e*Sn	Sn	00 09 13.5	-0.9
CAF				*e*Sg	Sg	00 09 23.1	-1.8
	5.3nm,0.3s						
EMOS	Mosqueruela	2.48	204	Pg	Pg	00 08 48.9	-3.9
	0.2nm,0.1s,SNR=7.9						
EMOS				Lg		00 09 21.7	
	0.8nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	2.48	204	Pg	Pg	00 08 48.9	-3.8
	0.2nm,0.1s,SNR=7.9						
LASF	Ste Croix	2.63	56	*e*Pn	Pn	00 08 46.6	0.0
LASF				*e*Pg	Pg	00 08 53.7	-2.0

LASF				*e*Sg	**Sg**	**00 09 27.7**	**-3.1**
	3.1nm,0.3s						
RJF	**Les Rejaudoux**	**2.71**	**10**	*e*Pn	**Pn**	**00 08 47.6**	**-0.1**
RJF				*e*Pg	**Pg**	**00 08 55.2**	**-2.1**
RJF				*e*Sn	**Sn**	**00 09 19.7**	**-1.2**
RJF				*e*Sg	**Sg**	**00 09 31.1**	**-2.3**
	3.9nm,0.3s						
VIVF	**Saint-Julien-l**	**3.55**	**50**	*e*Pg	**Pg**	**00 09 10.8**	**-3.4**
VIVF				*e*Sg	**Sg**	**00 09 56.8**	**-4.8**
	1.2nm,0.2s						

*ATH **28** 00:14:26.6,38.59N×23.71E,h26^{km}±2^{km},MD3.1/10, ML3.1*

*NEIC **28** 00:14:26.6,38.59N×23.70E,h26^{km},ML3.1(ATH),After ATH.*

*CSEM **28** 00:14:27.4±0.1,38.59N×23.66E,h10^{km},ML3.1,Error ellipse: s-maj=2.1km s-min=1.1km az=82.0*

*THE **28** 00:14:29.2,38.70N×23.57E,h2^{km},ML3.0*

ISC 28 00:14:26.4±0.8,**38.56N**±0.03×**23.71E**±0.08,**h18**^{km}±9^{km}, **n23,**σ**0^{s}82**/26,**2D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAR	**Parnis Oros**	**0.41**	**177**	*e*PB	**Pb**	**00 14 35.8**	**+0.9**
PTL	**Penteli**	**0.53**	**166**	*e*PN	**Pn**	**00 14 37.9**	**-0.9**
LKR	**Lokris**	**0.56**	**279**	*e*PN	**Pn**	**00 14 37.0**	**-2.3**
ATH	**Athens Observa**	**0.59**	**179**	⇓*i*PN	**Pn**	**00 14 39.2**	**-0.5**
ATH				*e*SN	**Sn**	**00 14 48.6**	**-0.2**
MGER	**Gerania Oros**	**0.67**	**212**	*e*PN	**Pn**	**00 14 40.2**	**-0.7**
NSAL	**Nisos Salamina**	**0.68**	**196**	*e*PN	**Pn**	**00 14 40.8**	**-0.2**
NAIG	**Nisos Aigina**	**0.82**	**192**	*e*PN	**Pn**	**00 14 43.5**	**+0.5**
NEO	**Neokhori**	**0.83**	**333**	⇓*i*PN	**Pn**	**00 14 42.4**	**-0.8**
XOR	**Xorichti**	**0.90**	**334**	*e*Pg	**Pb**	**00 14 43.6**	**+0.4**
XOR				*e*Sg	**Sb**	**00 14 54.6**	**-0.1**
AGG	**Agios Georgios**	**1.17**	**294**	*e*Pg	**Pb**	**00 14 48.2**	**+0.4**
AGG				*e*Sg	**Sb**	**00 15 03.0**	**+0.4**
PAIG	**Paliouri**	**1.36**	**359**	*e*Pb	**Pb**	**00 14 51.0**	**-0.1**
EVR	**Evrytania**	**1.53**	**284**	*e*PN	**Pn**	**00 14 54.5**	**+1.4**
OUR	**Ouranopolis**	**1.78**	**7**	*e*Pb	**Pb**	**00 14 57.1**	**-1.1**
LIT	**Litokhoron**	**1.80**	**329**	*e*Pb	**Pb**	**00 14 57.5**	**-1.1**
PLG	**Polygyros**	**1.82**	**354**	*e*PN	**Pn**	**00 14 57.8**	**+0.5**
APE	**Apeiranthos**	**2.08**	**135**	*e*PN	**Pn**	**00 15 02.0**	**+1.0**
THE	**Thessaloniki**	**2.15**	**345**	*e*Pn	**Pn**	**00 15 01.8**	**-0.2**
SOH	**Sokhos**	**2.27**	**353**	*e*Pn	**Pn**	**00 15 04.2**	**+0.4**
SOH	**Sokhos**	**2.27**	**353**	*e*Pn	**Pn**	**00 15 04.2**	**+0.4**
SRS	**Serrai**	**2.55**	**358**	*e*Pn	**Pn**	**00 15 07.8**	**0.0**
SRS	**Serrai**	**2.55**	**358**	*e*Pn	**Pn**	**00 15 07.8**	**0.0**
KNT	**Kendrikon**	**2.67**	**347**	*e*Pn	**Pn**	**00 15 10.3**	**+0.8**
FNA	**Florina**	**2.86**	**322**	*e*Pn	**Pn**	**00 15 13.3**	**+1.2**

IDC 28 00:17:37.6±3.0,**15.30N**×**92.86E,mb3.6**/3,**mb1 3.7**/4, **mb1mx3.6**/15,**mbtmp3.5**/4,**ML3.5**/1,**Error ellipse: s-maj=77.6km s-min=29.8km az=83.0,Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.62**	**61**	Pn	Pn	00 19 16.0	-2.5
	0.2nm,0.3s,baz=251,slow=15,SNR=6.2						
SONM	**Songino Array**	**34.32**	**16**	P	P	00 24 26.3	-1.6
	0.5nm,0.6s,baz=200,slow=7.2,SNR=6.8						
WRA	**Warramunga Arr**	**53.76**	**129**	P	P	00 27 01.8	-2.5
	0.6nm,0.8s,baz=313,slow=7.5,SNR=8.3						
ASAR	**Alice Springs**	**55.77**	**133**	P	P	00 27 16.6	-2.3
	0.4nm,0.5s,baz=315,slow=7.7,SNR=9.8						

*NEIC **28** 00:30:05.8,32.97S×71.31W,h52^{km},MD3.7(GUC),After GUC.*

GUC 28 00:30:05.8±0.6,**32.97S**×**71.31W,h52**^{km}±3^{km},**MD3.7, ML3.2,11C-6D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.25**	**90**	⇓*i*P	P	00 30 15.4	+0.7
ROCH				*i* S	S	00 30 22.7	+1.5
IHA	**Instituto Hidr**	**0.28**	**259**	⇓*i*P	P	00 30 15.2	+0.1
IHA				*i* S	S	00 30 22.4	+0.6
PACH	**Papudo**	**0.45**	**346**	⇑*i*P	P	00 30 16.8	+0.1
PACH				*i* S	S	00 30 25.1	+0.6
LCCH	**Las Cruces**	**0.55**	**204**	⇑*i*P	P	00 30 17.7	0.0
LCCH				*i* S	S	00 30 27.2	+0.7
PEL	**Peldehue**	**0.55**	**108**	⇓*i*P	P	00 30 18.4	+0.6
PEL				*i* S	S	00 30 27.7	+1.1
PUEX	**Pudahuel**	**0.66**	**135**	*e*P	P	00 30 19.7	+0.6
PUEX				*i* S	S	00 30 29.8	+0.8
PUEX				AMP		00 30 31.7	
	comp=E,2μm,0.5s						
RCDM	**Rinconada Maip**	**0.66**	**141**	*e*P	P	00 30 18.2	-1.0
RCDM				*i* S	S	00 30 28.5	-0.7
RCDM				AMP		00 30 29.1	
	comp=E,2μm,0.2s						
JACH	**Jahuel**	**0.67**	**64**	⇓*i*P	P	00 30 19.5	+0.2
SAN	**Santiago**	**0.72**	**132**	⇑*i*P	P	00 30 20.6	+0.6
SAN				*i* S	S	00 30 31.4	+0.9
SAN				AMP		00 30 32.0	
	comp=N,1μm,0.3s						
STL	**Santa Lucia**	**0.72**	**130**	⇑*i*P	P	00 30 20.3	+0.3
STL				*i* S	S	00 30 31.5	+1.0
STL				AMP		00 30 32.1	
	comp=N,611nm,0.2s						
TACH	**Talagante**	**0.74**	**155**	⇓*i*P	P	00 30 20.6	+0.3
TACH				*i* S	S	00 30 31.4	+0.4
CLCH	**Cerro Calan**	**0.77**	**123**	⇑*i*P	P	00 30 21.1	+0.4
CLCH				*i* S	S	00 30 32.7	+1.1
CLCH				AMP		00 30 34.2	
	comp=E,1μm,0.3s						
CLCH				AMP		00 30 35.5	
	comp=E,2μm,0.3s						
FSR	**Penalolen**	**0.82**	**128**	⇑*i*P	P	00 30 21.9	+0.5
FSR				*i* S	S	00 30 34.0	+1.1
FSR				AMP		00 30 35.8	
	comp=E,1μm,0.5s						
FCH	**Farellones**	**0.92**	**113**	⇑*i*P	P	00 30 23.2	+0.5
FCH				*i* S	S	00 30 36.2	+0.9
FCH				AMP		00 30 37.0	
	comp=E,3μm,0.2s						
PCH	**Pirque**	**0.93**	**134**	⇓*i*P	P	00 30 23.0	+0.2
PCH				*i* S	S	00 30 36.4	+1.0
SJCH	**San Jose de Ma**	**1.04**	**130**	⇑*i*P	P	00 30 24.4	0.0
SJCH				*i* S	S	00 30 38.8	+0.7
SJCH				AMP		00 30 39.9	
	comp=E,497nm,0.1s						
CHCH	**Chadas Angostu**	**1.10**	**150**	⇑*i*P	P	00 30 25.4	+0.2
CHCH				*i* S	S	00 30 40.3	+0.7
LMEL	**Las Melosas**	**1.27**	**134**	⇑*i*P	P	00 30 28.1	+0.5
LMEL				*i* S	S	00 30 44.9	+1.0
LMEL				AMP		00 30 47.0	
	comp=N,1μm,0.2s						
CACH	**El Canelo**	**1.28**	**153**	*i* P	P	00 30 28.9	+1.1
ILCH	**Illapel**	**1.34**	**5**	⇑*i*P	P	00 30 29.1	+0.5
ILCH				*i* S	S	00 30 46.4	+0.8
ILCH				AMP		00 30 47.2	
	comp=E,1μm,0.3s						
SFDO	**San Fernando**	**1.65**	**172**	*i* P	P	00 30 33.0	0.0

*IDC **28** 00:35:25.9±0.6,9.89N×93.69E,mb4.5/15,mb1 4.6/16, mb1mx4.6/19,mbtmp4.5/16,ML3.7/1,MS3.9/7,Ms1 3.9/7, ms1mx3.6/19,Error ellipse: s-maj=32.9km s-min=15.0km az=52.0*

*BJI **28** 00:35:28.4,9.56N×93.70E,h47^{km},mB4.9,mb4.8,Ms4.5, Msz4.2*

*NEIC **28** 00:35:29.6±0.3,9.87N×93.85E,mb4.7/21,MS4.2/1,Error ellipse: s-maj=8.4km s-min=5.8km az=45.0*

*MOS **28** 00:35:31.4±1.1,10.24N×93.67E,h33^{km},mb4.9/14,Error ellipse: s-maj=15.7km s-min=7.7km az=112.1*

ISC 28 00:35:29.1±1.2,**9.89N**±0.04×**93.87E**±0.03,**h32**^{km}±8^{km}, **h29**^{km}±2.1^{km}**:pP-P,n155,**σ**1^{s}02**/169,**mb4.7**/52,**MS4.0**/20, **7C-8D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNT	**Nongplab**	**6.35**	**64**	P	**Pn**	**00 37 01.5**	**-1.5**
KULM	**Kulim**	**8.13**	**124**	*e*P	**P**	**00 37 24.3**	**-3.5**
NST	**Nakhon Sawan**	**8.39**	**46**	P	**P**	**00 37 30.0**	**-1.5**
CM31	**Chiang Mai Arr**	**9.84**	**29**	*e*P	**P**	**00 37 47.1**	**-4.5**
CMAR	**Chiang Mai Arr**	**9.84**	**29**	*i* P	**P**	**00 37 52.2**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**9.84**	**29**	Pn	**P**	**00 37 51.0**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=218,slow=15,SNR=12						
CMAR				LR	LR	00 41 41.3	
	comp=Z,572nm,18.4s,baz=210,slow=38						
CHG	**Chiang Mai**	**10.14**	**28**	⇑P	**P**	**00 38 01.6**	**+5.8**
	comp=Z,10nm,1.2s						
NANT	**Nan**	**11.06**	**36**	P	**P**	**00 38 09.5**	**+1.2**
VIS	**Vishakhapatnam**	**12.86**	**308**	*e*P	**P**	**00 38 29.8**	**-2.7**
VIS				*e*		00 38 39.8	
	comp=E,82nm,1.2s						
VIS				*e*		00 38 46.0	
	comp=N,53nm,1.3s						
VIS				*e*S	**S**	**00 40 43.9**	**-12**
BWNR	**Bhubaneshwar**	**12.94**	**324**	*e*P	**P**	**00 38 29.8**	**-3.9**
BWNR				*e*S	**S**	**00 40 44.7**	**-13**
HYB	**Hyderabad**	**16.65**	**298**	*e*P	**P**	**00 39 23.0**	**+1.1**
HYB				*e*S	**S**	**00 42 25.0**	**+0.2**
HYB	**Hyderabad**	**16.65**	**298**	*i* P	**P**	**00 39 23.0**	**+1.1**
HYB				*e*S	**S**	**00 42 25.0**	**+0.2**
KMI	**Kunming**	**17.34**	**28**	P	**P**	**00 39 34.0**	**+3.4**
KMI				AP		00 39 42.8	
KMI				PP	PP	00 39 51.5	+6.7
KMI				S	**S**	**00 42 47.8**	**+7.2**
KMI				XS		00 43 04.3	
KMI				AMB	AMB		
	comp=Z,15nm,1.1s						
KMI				AMB	AMB		
	comp=Z,327nm,4.9s						
KMI				LR	LR		
	comp=N,509nm,17.6s						
KMI				LR	LR		
	comp=E,671nm,16.1s						
KMI				LR	LR		
	comp=Z,564nm,16.1s						
KMI	**Kunming**	**17.34**	**28**	P	**P**	**00 39 34.1**	**+3.5**
	comp=Z,0.3nm,4.9s						
KMI				pP		00 39 42.7	
KMI				PP	PP	00 39 51.4	+6.6
KMI				S	**S**	**00 42 47.8**	**+7.2**
KMI				sS		00 43 04.2	
QIZ	**Qiongzhong**	**17.93**	**58**	P	**P**	**00 39 37.5**	**-0.4**
QIZ				S	**S**	**00 42 53.5**	**-0.4**
QIZ				LR	LR		
	comp=N,722nm,13.0s						
QIZ				LR	LR		
	comp=E,659nm,17.4s						
QIZ				LR	LR		
	comp=Z,666nm,16.9s						
MNGI	**Mangalore**	**18.91**	**281**	*i* P	**P**	**00 39 51.5**	**+1.6**
MNGI				*i*		00 43 08.0	
JIRN	**Jiri**	**19.10**	**339**	*e*P	**P**	**00 39 52.6**	**+0.5**
	comp=Z,88nm,1.1s						
PKI	**Pulchoki**	**19.31**	**337**	*e*P	**P**	**00 39 55.0**	**+0.5**
	comp=Z,61nm,1.0s						
DMN	**Daman**	**19.47**	**336**	*e*P	**P**	**00 39 56.2**	**-0.1**
	comp=Z,77nm,1.1s						
KKN	**Kakani**	**19.56**	**337**	*e*P	**P**	**00 39 56.9**	**-0.4**
	comp=Z,53nm,0.9s						
LSA	**Lhasa**	**19.88**	**353**	P	**P**	**00 40 00.0**	**-0.8**
LSA				AP		00 40 11.5	
LSA				XP		00 40 15.5	
LSA				S	**S**	**00 43 35.8**	**-1.4**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
LSA				AMB	AMB		
	comp=Z,100nm,5.8s						
LSA				LR	LR		
	comp=N,100nm,16.0s						
LSA				LR	LR		
	comp=E,110nm,15.0s						
LSA				LR	LR		
	comp=Z,160nm,11.0s						
LSA	**Lhasa**	**19.88**	**353**	*e*P	**P**	**00 39 59.5**	**-1.2**
	comp=Z,41nm,0.8s						
GKN	**Gorkha**	**20.01**	**336**	*e*P	**P**	**00 40 01.5**	**-0.6**
	comp=Z,84nm,0.9s						
KOLN	**Koldanda**	**20.25**	**333**	*e*P	**P**	**00 40 04.8**	**+0.2**
	comp=Z,45nm,0.8s						
GYA	**Guiyang**	**20.45**	**35**	⇓*i*P	**P**	**00 40 08.0**	**+1.2**
GYA				AP		00 40 16.8	
GYA				XP		00 40 20.5	
GYA				PP	PP	00 40 32.5	+4.8
GYA				AMB	AMB		
	comp=Z,20nm,0.7s						
GYA				AMB	AMB		
	comp=Z,160nm,3.3s						
GYA				LR	LR		
	comp=N,650nm,13.1s,MS4.2						
GYA				LR	LR		
	comp=E,330nm,13.8s,MS4.2						
GYA				LR	LR		
	comp=Z,880nm,15.0s,MS4.2						
BHPL	**Bhopal**	**20.58**	**312**	*e*P	**P**	**00 40 09.3**	**+1.2**
POO	**Poona**	**21.20**	**296**	*e*P	**P**	**00 40 15.0**	**+0.5**
CD2	**Chengdu**	**22.85**	**22**	P	**P**	**00 40 32.5**	**+1.6**
CD2				AMB	AMB		
	comp=Z,46nm,1.2s,mb4.8						
AGRA	**Agra**	**22.88**	**321**	*e*P	**P**	**00 40 32.6**	**+1.4**
AYAN	**Aya Nagar**	**24.28**	**322**	*e*P	**P**	**00 40 46.0**	**+1.2**
NDI	**New Delhi**	**24.37**	**322**	*e*P	**P**	**00 40 45.0**	**-0.7**
NDI				*e*S	**S**	**00 45 08.0**	**+8.0**
JOSI	**Joshimath**	**24.51**	**329**	*e*P	**P**	**00 40 44.7**	**-2.4**
KHET	**Khetri**	**24.82**	**319**	*e*P	**P**	**00 40 50.7**	**+0.7**
KHET				*e*		00 41 01.4	
	comp=N,8.6nm,1.3s						
ENH	**Enshi**	**24.97**	**33**	*e*P	**P**	**00 40 51.7**	**+0.2**
	comp=N,27nm,1.0s,mb4.7						
DDI	**Dehra Dun**	**25.12**	**326**	*e*P	**P**	**00 40 52.6**	**-0.2**
KLP	**Kalpa**	**25.96**	**328**	*e*P	**P**	**00 41 03.4**	**+2.7**
LZH	**Lanzhou**	**27.61**	**18**	*e*P	**P**	**00 41 17.5**	**+1.7**
LZH				AP	pP	00 41 25.8	+0.6
LZH				XP	sP	00 41 29.3	-0.1
LZH				PP	PP	00 42 06.0	+1.6
LZH				*e*S	**S**	**00 45 56.0**	**+2.4**
LZH				SS	SS	00 47 16.0	+2.9
LZH				AMB	AMB		
	comp=Z,53nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,155nm,4.1s						
LZH				LR	LR		
	comp=E,631nm,13.0s						
LZH				LR	LR		
	comp=Z,942nm,14.5s,MS4.5						
LZH	**Lanzhou**	**27.61**	**18**	*e*P	**P**	**00 41 17.5**	**+1.7**
	comp=Z,53nm,1.5s,mb5.0						
LZH				pP	pP	00 41 25.8	+0.6
LZH				sP	sP	00 41 29.2	-0.2
LZH				PP	PP	00 42 06.0	+1.6
LZH				*e*S	**S**	**00 45 56.0**	**+2.4**
LZH				sS		00 47 10.0	
LZH				SS	SS	00 47 15.9	+2.8
LZH				LR	LR		
	comp=Z,940nm,14.5s,MS4.5						
XAN	**Xi'an**	**27.73**	**28**	P	**P**	**00 41 16.5**	**-0.3**
WHN	**Wuhan**	**28.04**	**40**	*e*P	**P**	**00 41 20.5**	**+0.8**
GTA	**Gaotai**	**29.88**	**9**	P	**P**	**00 41 35.8**	**-0.3**
GTA				PCP	PcP	00 44 40.8	+2.1
GTA				S	**S**	**00 46 23.3**	**-6.4**
GTA				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.4						
GTA				AMB	AMB		
	comp=Z,102nm,4.2s						
GTA				LR	LR		
	comp=N,142nm,16.4s,MS4.0						
GTA				LR	LR		
	comp=E,192nm,13.8s,MS4.0						
GTA				LR	LR		
	comp=Z,172nm,22.5s						
NJ2	**Nanjing**	**31.95**	**43**	*e*P	**P**	**00 41 56.0**	**+1.6**
NJ2				AP	pP	00 42 05.3	+1.4
NJ2				XP	sP	00 42 10.3	+2.2
NJ2				PP	PP	00 43 01.0	+0.2
NJ2				PPP	PPP	00 43 17.0	+1.2
NJ2				S	**S**	**00 47 04.0**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,580nm,4.6s						
NJ2				LR	LR		
	comp=N,720nm,19.1s,MS4.4						
NJ2				LR	LR		
	comp=E,440nm,20.3s,MS4.4						
NJ2				LR	LR		
	comp=Z,650nm,22.9s,MS4.2						
SSE	**Sheshan**	**33.00**	**46**	P	**P**	**00 42 03.3**	**-0.3**
SSE				S	**S**	**00 47 19.0**	**+0.2**
SSE				AMB	AMB		
	comp=Z,31nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,67nm,4.2s						
SSE				LR	LR		
	comp=N,98nm,14.9s,MS3.8						
SSE				LR	LR		
	comp=E,114nm,14.9s,MS3.8						
SSE				LR	LR		
	comp=Z,124nm,16.7s,MS3.7						
SSE	**Sheshan**	**33.00**	**46**	P	**P**	**00 42 03.3**	**-0.3**
	comp=Z,31nm,0.7s,mb5.3						
SSE				sP	sP	00 42 16.1	-1.1
SSE				S	**S**	**00 47 19.1**	**+0.3**
SSE				sS		00 47 33.5	
SSE				LR	LR		
	comp=Z,120nm,16.7s,MS3.7						
KSH	**Kashi**	**33.55**	**335**	*e*P	**P**	**00 42 09.0**	**+0.8**
KSH				*e*AP	pP	00 42 19.3	+1.5
KSH				*e*XP	sP	00 42 23.0	+1.1
KSH				*e*PP	PP	00 43 22.5	+1.6
KSH				*e*S	**S**	**00 47 28.0**	**+0.9**
KSH				*e*PS		00 47 35.5	
KSH				*e*XS		00 47 44.0	
KSH				*e*SS	SS	00 49 33.0	+1.0
KSH				*e*SCS	ScS	00 52 28.8	-0.3
KSH				AMB	AMB		
	comp=Z,80nm,4.8s						
KSH				LR	LR		
	comp=N,120nm,4.6s						
KSH				LR	LR		
	comp=E,170nm,4.8s						
WMQ	**Urumqi**	**34.23**	**352**	*e*P	**P**	**00 42 14.5**	**+0.4**
WMQ				AP	pP	00 42 25.0	+1.4
WMQ				XP	sP	00 42 28.5	+0.8
WMQ				PP	PP	00 43 30.0	+0.7
WMQ				PCP	PcP	00 44 51.0	+0.6
WMQ				S	**S**	**00 47 38.0**	**+0.3**
WMQ				SS	SS	00 49 48.0	+0.4
WMQ				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,126nm,18.0s,MS3.9						
WMQ				LR	LR		
	comp=E,165nm,18.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,147nm,18.0s,MS3.8						
HHC	**Hu-ho-hao-te**	**34.59**	**24**	*e*P	**P**	**00 42 18.5**	**+1.3**
HHC				AP	pP	00 42 26.8	0.0
HHC				XP	sP	00 42 31.5	+0.6
HHC				PP	PP	00 43 37.0	+3.0
HHC				S	**S**	**00 47 49.0**	**+5.8**
HHC				XS		00 48 04.5	
HHC				SCP		00 48 29.5	
HHC				PCS		00 48 35.5	
HHC				AMB	AMB		
	comp=Z,22nm,1.2s,mb5.0						
HHC				LR	LR		
	comp=N,292nm,11.9s,MS4.4						
HHC				LR	LR		
	comp=E,372nm,16.6s,MS4.4						
BJT	**Baijiatuau**	**35.97**	**30**	*e*P	**P**	**00 42 29.4**	**+0.5**
	comp=E,7.8nm,0.8s,mb4.7						
BJI	**Beijing**	**35.99**	**30**	P	**P**	**00 42 30.8**	**+1.7**
BJI				AP	pP	00 42 39.5	+0.8
BJI				XP	sP	00 42 43.5	+0.7
BJI				S	**S**	**00 48 14.5**	**+10**
BJI				SCS	ScS	00 52 42.3	+0.2
BJI				AMB	AMB		
	comp=Z,17nm,0.9s,mb5.0						
BJI				LR	LR		
	comp=N,364nm,21.0s,MS4.3						
BJI				LR	LR		
	comp=E,343nm,21.4s,MS4.3						
BJI				LR	LR		
	comp=Z,364nm,19.4s,MS4.2						
BJI	**Beijing**	**35.99**	**30**	P	**P**	**00 42 30.7**	**+1.6**
	comp=Z,17nm,0.9s,mb5.0						
BJI				pP	pP	00 42 39.5	+0.8
BJI				sP	sP	00 42 43.4	+0.6
BJI				S	**S**	**00 48 14.4**	**+9.5**
BJI				SS	SS	00 51 02.2	+34
BJI				ScS	ScS	00 52 42.3	+0.2
BJI				LR	LR		
	comp=Z,360nm,19.4s,MS4.2						
KZA	**Kyzart**	**35.99**	**336**	P	**P**	**00 42 29.9**	**+0.7**
	SNR=12						
UCH	**Uchtor**	**36.42**	**336**	P	**P**	**00 42 33.6**	**+0.9**
	SNR=17						
TKM2	**Tokmak 2**	**36.58**	**337**	P	**P**	**00 42 33.9**	**-0.1**
	SNR=12						
KBK	**Karagaybulak**	**36.60**	**336**	P	**P**	**00 42 35.4**	**+1.1**
	SNR=23						
AML	**Almayashu**	**36.68**	**335**	P	**P**	**00 42 35.8**	**+0.9**
	SNR=50						
AAK	**Ala-Archa**	**36.77**	**336**	P	**P**	**00 42 36.6**	**+1.0**
	SNR=26						
AAK	**Ala-Archa**	**36.77**	**336**	*i* P	**P**	**00 42 35.0**	**-0.6**
AAK				pmax	pmax		
	comp=Z,33nm,1.5s,mb4.9						
AAK	**Ala-Archa**	**36.77**	**336**	*e*P	**P**	**00 42 34.5**	**-1.1**
	comp=Z,22nm,0.9s,mb5.0						
FRU	**Bishkek**	**36.88**	**336**	*e*P	**P**	**00 42 37.0**	**+0.4**
FRU				pmax	pmax		
	comp=Z,40nm,2.0s,mb4.9						
CHMS	**Chumysh**	**36.97**	**336**	P	**P**	**00 42 37.6**	**+0.2**
	SNR=13						
EKS2	**Erkin-Say**	**37.08**	**335**	P	**P**	**00 42 38.9**	**+0.6**
	SNR=41						
USP	**Ospenovka**	**37.29**	**336**	P	**P**	**00 42 40.1**	**+0.1**
	SNR=36						
MKAR	**Makanchi Array**	**38.08**	**347**	*i* P	**P**	**00 42 45.7**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**39.27**	**13**	P	**P**	**00 42 57.0**	**+0.4**
	comp=Z,6.5nm,1.0s,mb4.3,baz=198,slow=4.9,SNR=40						
SONM				PcP	PcP	00 45 05.9	+0.3
	comp=Z,2.1nm,0.9s,baz=195,slow=3.9,SNR=5.6						
ULN	**Ulaanbaatar**	**39.46**	**14**	*e*P	**P**	**00 42 57.8**	**-0.4**
	comp=Z,4.7nm,0.8s,mb4.3						
ZAK	**Zakamensk**	**41.12**	**9**	*e*P	**P**	**00 43 11.3**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.6						
SNY	**Shenyang**	**41.15**	**34**	⇑*i*P	**P**	**00 43 14.3**	**+2.2**
SNY				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.8						
SNY				LR	LR		
	comp=N,210nm,21.6s						
SNY				LR	LR		
	comp=E,400nm,15.3s						
SNY				LR	LR		
	comp=Z,270nm,15.1s						
FITZ	**Fitzroy Crossi**	**41.92**	**131**	⇓*i*P	**P**	**00 43 18.7**	**-0.1**
	comp=Z,9.9nm,1.5s,mb4.2						
TLY	**Talaya**	**42.43**	**9**	*e*P	**P**	**00 43 23.4**	**+0.9**
TLY				*e*SS	SS	00 52 40.3	-5.2
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
TLY				MLR	MLR		
	comp=Z,147nm,19.0s,MS3.9						
KURK	**Kurchatov**	**42.60**	**346**	P	**P**	**00 43 23.8**	**-0.2**
	comp=Z,7.1nm,0.2s,mb5.0,SNR=7.8						
KURK	**Kurchatov**	**42.60**	**346**	P	**P**	**00 43 23.8**	**-0.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.3						
KURK	**Kurchatov**	**42.60**	**346**	*e*P	**P**	**00 43 23.0**	**-0.9**
	comp=Z,15nm,1.2s,mb4.6						
CN2	**Changchun**	**43.49**	**33**	*e*P	**P**	**00 43 31.0**	**-0.3**
CN2				*e*S	**S**	**00 49 57.0**	**-0.3**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,210nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.4						
CN2				LR	LR		
	comp=Z,300nm,15.0s,MS4.3						
HIA	**Hailar**	**44.79**	**24**	*e*P	**P**	**00 43 40.3**	**-1.4**
	comp=Z,22nm,1.2s,mb4.9						
NVS	**Novosibirsk**	**45.63**	**351**	*i* P	**P**	**00 43 46.9**	**-1.3**
NVS				*e*		00 45 24.9	
NVS				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						

NVS				pmax	pmax		
	comp=N,10.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.9s						
MDJ	Mudanjiang	46.31	35	P	P	00 43 51.8	-2.0
MDJ				S	S	00 50 36.3	-1.7
MDJ				SS	SS	00 53 58.5	+2.7
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,70nm,4.1s						
MDJ				LR	LR		
	comp=E,106nm,17.1s						
MDJ				LR	LR		
	comp=Z,100nm,17.1s,MS3.8						
BVA0	Borovoye Array	47.01	341	i P	P	00 43 57.7	-1.5
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BVAR	Borovoye Array	47.01	341	P	P	00 43 57.9	-1.3
	comp=Z,5.7nm,1.0s,mb4.5,baz=146,slow=5.3,SNR=24						
BVAR				PcP	PcP	00 45 31.3	-0.2
	comp=Z,1.4nm,0.7s,baz=170,slow=9.0,SNR=4.2						
CHKZ	Chkalovo	47.49	341	P	P	00 44 02.1	-0.9
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
CHKZ	Chkalovo	47.49	341	eP	P	00 44 01.6	-1.4
	comp=Z,38nm,0.6s,mb5.5						
RAYN	Ar Rayn	48.04	293	P	P	00 44 08.2	+0.5
	comp=Z,51nm,0.9s,mb5.5,SNR=16						
CBIJ	Chichi jima	48.59	63	LR	LR	01 03 52.8	
	comp=Z,90nm,18.1s,MS3.8,baz=357,slow=35						
WRA	Warramunga Arr	49.66	127	P	P	00 44 20.3	+0.1
	comp=Z,5.0nm,1.0s,mb4.5,baz=302,slow=9.8,SNR=32						
WB2	Warramunga Arr	49.67	127	⇑iP	P	00 44 20.3	0.0
BOD	Bodaibo	50.27	14	eP	P	00 44 22.5	-1.8
ASPA	Alice Springs	51.42	131	⇓iP	P	00 44 33.9	+0.4
ASAR	Alice Springs	51.42	131	P	P	00 44 33.4	-0.1
	comp=Z,6.5nm,0.8s,mb4.6,baz=304,slow=6.6,SNR=33						
ASAR				LR	LR	01 06 51.8	
	comp=Z,77nm,19.4s,MS3.7,baz=303,slow=37						
ASAR	Alice Springs	51.42	131	P	P	00 44 33.4	-0.1
ASAR				LR	LR	01 06 51.8	
TI2	Plekhanov	53.43	315	i P	P	00 44 49.4	+1.1
TI2				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
SVE	Sverdlovsk	53.44	338	⇑eP	P	00 44 47.0	-1.2
SVE				e		00 46 02.5	
SVE				pmax	pmax		
	comp=Z,40nm,2.0s,mb5.0						
ASAJ	Asahikawa	54.09	42	LR	LR	01 09 12.4	
	comp=Z,92nm,18.2s,MS3.9,baz=335,slow=37						
YSS	Yuzh-Sakhalins	55.38	39	⇑iP	P	00 45 03.7	+1.1
YSS				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
KIV	Kislovodsk	55.66	317	eP	P	00 45 04.1	-0.5
KIV				eS	S	00 52 50.2	+3.4
KIV				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.2						
KIV				pmax	pmax		
	comp=N,19nm,0.9s						
KIV				pmax	pmax		
	comp=E,14nm,0.8s						
KIV				MLR	MLR		
	comp=Z,49nm,19.0s,MS3.6						
KIV				MLR	MLR		
	comp=N,27nm,16.0s,MS3.8						
KIV				MLR	MLR		
	comp=E,58nm,19.0s,MS3.8						
MALT	Malatya	56.97	309	eP	P	00 45 13.0	-1.1
	comp=E,3.6nm,1.0s,mb4.4						
KMBO	Kilima Mbogo	57.40	262	i P	P	00 45 20.1	+2.6
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMBO	Kilima Mbogo	57.40	262	P	P	00 45 19.7	+2.2
	comp=Z,5.0nm,1.1s,mb4.5,baz=44,slow=7.0,SNR=10						
KMBO				LR	LR	01 07 39.2	
	comp=Z,150nm,18.5s,MS4.1,baz=89,slow=34						
KMBO	Kilima Mbogo	57.40	262	eP	P	00 45 16.4	-1.1
	comp=Z,4.0nm,1.0s,mb4.4						
KMBO				LR	LR	01 07 39.2	
SOC	Sochi	57.55	316	eP	P	00 45 15.4	-2.7
SOC				e		00 47 23.8	
SOC				eS	S	00 53 06.9	-4.9
SOC				e		00 54 58.4	
SOC				eSS	SS	00 56 58.5	-4.8
SOC				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.4						
SOC				pmax	pmax		
	comp=N,60nm,1.1s						
SOC				pmax	pmax		
	comp=E,41nm,1.0s						
CTA	Charters Tower	59.53	120	LR	LR	01 11 09.4	
	comp=E,100nm,21.0s,MS3.9,baz=48,slow=36						
STKA	Stephens Creek	61.69	134	eP	P	00 45 47.0	+0.2
	comp=E,8.9nm,1.9s,mb4.6						
STKA	Stephens Creek	61.69	134	P	P	00 45 47.1	+0.4
	comp=E,7.3nm,1.1s,mb4.7,baz=305,slow=5.3,SNR=6.6						
STKA				LR	LR	01 13 53.3	
	comp=E,143nm,18.2s,MS4.2,baz=295,slow=37						
OBN	Obninsk	63.55	327	i P	P	00 45 57.5	-1.2
OBN				e		00 46 34.0	
OBN				i		00 48 18.0	
OBN				eS	S	00 54 27.1	-1.3
OBN				eSS	SS	00 58 34.5	-3.0
OBN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.0						
VRI	Vrincioaia	67.08	316	⇓P	P	00 46 21.6	-0.1
VRI	Vrincioaia	67.08	316	⇓P	P	00 46 21.6	0.0
MLR	Muntele Rosu	67.56	315	P	P	00 46 24.1	-0.6
	comp=Z,12nm,0.9s,mb4.9,baz=176,slow=2.8,SNR=12						
MLR	Muntele Rosu	67.56	315	⇑P	P	00 46 24.5	-0.2
MLR	Muntele Rosu	67.56	315	⇑P	P	00 46 24.5	-0.2
BURAR	Bucovina Array	68.39	317	⇓P	P	00 46 29.1	-0.7
BURAR	Bucovina Array	68.39	317	⇓P	P	00 46 29.1	-0.7
KWP	Kalwaria	70.34	319	eP	P	00 46 40.2	-1.5
KWP				epP	pP	00 46 48.7	-3.1
KOLS	Kolonicke sedl	70.53	318	eP	P	00 46 43.3	+0.4
SUW	Suwalki	70.73	324	eP	P	00 46 41.2	-2.8
SUW				epP	pP	00 46 52.2	-1.8
FINES	FINESS Array B	70.82	332	i P	P	00 46 44.6	+0.2
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	70.82	332	P	P	00 46 43.1	-1.3
	comp=Z,3.5nm,0.9s,mb4.3,baz=79,slow=9.7,SNR=9.7						
CRVS	Cervenica-Dubn	71.05	318	eP	P	00 46 45.9	-0.2
OJC	Ojcow	72.27	320	eP	P	00 46 51.4	-1.9
SRO2	Moca	72.98	317	eP	P	00 46 57.9	+0.3
SRO	Srobarova	73.04	317	eP	P	00 46 58.3	+0.4
ARCES	ARCESS Array B	73.29	340	P	P	00 46 58.5	-0.4
	comp=Z,3.0nm,0.5s,mb4.5,baz=94,slow=7.0,SNR=26						
OKC	Ostrava-Krasne	73.30	319	eP	P	00 47 00.2	+0.8
MORC	Moravsky Berou	73.69	319	eP	P	00 47 00.9	-0.7
	comp=Z,7.4nm,1.1s,mb4.5						
ZST	Bratislava	73.88	317	eP	P	00 47 02.5	-0.2
BILL	Bilibino	74.33	22	eP	P	00 47 04.8	-0.2
BILL				eSS	SS	01 01 23.4	-0.6
BILL				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.8						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
DPC	Dobruska-Polom	74.51	320	eP	P	00 47 05.9	-0.5
KSP	Ksiaz	74.55	320	eP	P	00 47 05.9	-0.7
KSP				e*PP	pP	00 47 11.4	-5.3
KSP	Ksiaz	74.55	320	eP	P	00 47 06.6	0.0
UPC	Upice	74.71	320	eP	P	00 47 07.2	-0.3
BOJS	Bojanci	75.05	314	eP	P	00 47 09.0	-0.6
PERS	Pernice	75.16	316	i P	P	00 47 10.1	-0.1
LJU	Ljubljana	75.56	315	eP	P	00 47 13.4	+0.9
PRU	Pruhonice	75.64	319	eP	P	00 47 12.9	+0.1
BRG	Berggiesshubel	76.04	320	eP	P	00 47 15.3	+0.2
BRG				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
BRG	Berggiesshubel	76.04	320	eP	P	00 47 15.3	+0.2
	comp=Z,10nm,1.3s,mb4.6						
GERES	GERESS Array B	76.16	318	P	P	00 47 15.4	-0.4
	comp=Z,6.5nm,1.0s,mb4.5,baz=90,slow=5.3,SNR=20						
KHC	Kasperske Hory	76.24	318	eP	P	00 47 16.3	0.0
KHC				epP	pP	00 47 21.2	-5.3
HFS	Hagfors	76.59	330	P	P	00 47 17.7	-0.3
	comp=Z,1.9nm,0.6s,mb4.2,baz=117,slow=3.3,SNR=7.9						
CLL	Collm	76.64	320	eP	P	00 47 18.0	-0.5
CLL	Collm	76.64	320	P	P	00 47 18.0	-0.5
NKC	Novy Kostel	76.99	319	eP	P	00 47 22.2	+1.8
NB2	NORSAR Subarra	77.86	330	P	P	00 47 24.1	-0.9
	comp=Z,1.7nm,0.7s,mb4.1,baz=90,slow=5.8						
NOA	NORSAR Array B	77.86	330	P	P	00 47 24.1	-0.9
	comp=Z,4.4nm,0.9s,mb4.4,baz=91,slow=5.7,SNR=9.3						
DAVOX	Davos	78.76	316	P	P	00 47 30.3	0.0
	comp=Z,9.2nm,1.1s,mb4.6,baz=122,slow=13						
LPG	La Plagne	81.02	315	eP	P	00 47 42.6	+0.2
	comp=Z,28nm,1.0s,mb4.8						
EKA	Eskdalemuir Ar	85.92	325	P	P	00 48 07.9	+0.7
	comp=Z,6.9nm,0.9s,mb4.9,baz=99,slow=5.6,SNR=14						
SYO	Syowa Base	87.24	197	⇓P	P	00 48 12.6	-0.7
ILAR	Eielson Array	92.99	22	P	P	00 48 41.6	+1.4
	comp=Z,0.6nm,1.0s,mb4.0,baz=284,slow=3.8,SNR=4.1						
RES	Resolute Bay	95.41	2	eP	P	00 48 51.9	+0.6
	comp=Z,4.8nm,1.0s,mb4.9						
YKA	Yellowknife Ar	104.54	13	PP	PP	00 53 48.3	-6.0
	comp=Z,0.3nm,0.9s,baz=326,slow=7.0,SNR=4.2						
NVAR	Mina Array Bea	123.33	30	PKP	PKPdf	00 54 26.6	-2.1
	comp=Z,3.2nm,1.1s,baz=330,slow=0.7,SNR=8.1						
PDAR	Pinedale Array	123.39	21	PKP	PKPdf	00 54 25.0	-3.7
	comp=Z,1.9nm,1.0s,baz=338,slow=2.2,SNR=10						
MSU	Marysvale	126.07	25	ePKP	PKPdf	00 54 31.4	-2.7
PV10	Paradox Valley	127.44	23	ePKP	PKPdf	00 54 34.0	-2.7
TXAR	Lajitas Array	137.50	23	PKP	PKPdf	00 54 53.8	-2.0
	comp=Z,0.6nm,0.6s,baz=270,slow=1.3,SNR=8.0						
PLCA	Paso Flores	146.32	202	PKPbc	PKPbc	00 55 09.4	+2.5
	comp=Z,2.2nm,0.8s,baz=176,slow=13,SNR=5.0						
SDV	Santo Domingo	155.79	320	ePKPab	PKPab	00 55 49.1	-0.7

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*NIED **28** 00:45:00, 23.60N×121.40E, h5^{km}, Mw3.6 Best double couple: M$_0$3.15×10^{14} NP1:φ$_s$153°, δ70°, λ155°. NP2: φ$_s$252°, δ67°, λ22°.*
*BJI **28** 00:45:05.4, 23.48N×121.63E, h5^{km}, mB4.4, mb4.3, ML4.6, Ms4.4, Msz3.9*
*IDC **28** 00:45:07.0±0.7, 23.52N×121.78E, mb3.9/10, mb1 4.1/11, mb1mx4.0/19, mbtmp3.9/11, ML3.8/1, Error ellipse: s-maj=25.7km s-min=17.5km az=74.0*
*TAP **28** 00:45:07.8, 23.65N×121.48E, h3^{km}±1^{km}, ML4.4*
TAP Felt II J at Shilin, I J at Hungye, I J at Hualien.
*NEIC **28** 00:45:08.6±0.5, 23.60N×121.77E, h10^{km}, mb4.0/4, Error ellipse: s-maj=10.4km s-min=8.4km az=86.0*
*JMA **28** 00:45:08.0±0.3, 23.60N×121.41E, h96^{km}, M3.7*
ISC 28 00:45:08.2±0.2, **23.61N**±0.01×**121.59E**±0.02, **h3^{km}, n93, σ1^{s}29**/135, **mb3.9**/14, **20C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESL	Shilin	0.25	324	⇑iP	Pg	00 45 12.5	-0.7
ESL				S	Sg	00 45 14.9	-1.7
EHY	Hungye	0.27	247	⇑iP	Pg	00 45 12.9	-0.8
HWA	Hwalien	0.36	2	eP	Pg	00 45 16.4	+1.0
TWF1	Yuli	0.38	226	⇑iP	Pg	00 45 15.7	-0.1
TWD	Chiawan	0.46	0	⇑iP	Pg	00 45 17.8	+0.3
TWD				S	Sg	00 45 25.9	+2.1
CHKT	Chengkung	0.55	202	⇑P	Pg	00 45 20.8	+1.5
CHKT				S	Sg	00 45 29.5	+2.8
NACB	Ninganchiao	0.56	0	⇓iPg	Pg	00 45 18.9	-0.5
NACB				eSg	Sg	00 45 25.1	-1.7
YUS	Yu-Shan	0.60	258	⇑iP	Pg	00 45 19.3	-0.9
YUS				S	Sg	00 45 26.2	-2.1
ELDTW	Lidau	0.68	232	P	Pg	00 45 20.7	-1.0
SMLT	Sun Moon Lake	0.69	293	⇑iP	Pg	00 45 20.7	-1.3
SMLT				S	Sg	00 45 29.2	-2.0
ALS	Alishan	0.73	262	⇑iP	Pg	00 45 21.9	-1.0
ALS				S	Sg	00 45 31.4	-1.1
TYC	Yuchr	0.73	293	⇑iP	Pg	00 45 21.4	-1.5
TYC				S	Sg	00 45 30.3	-2.4
TWT	Tachien	0.74	329	⇑iP	Pg	00 45 22.3	-0.8
TWT				S	Sg	00 45 31.0	-1.9
ENA	Nanau	0.82	9	⇑iP	Pg	00 45 24.3	-0.4
ENA				S	Sg	00 45 37.8	+2.2
CHN5	Tsauling	0.84	269	⇑iP	Pg	00 45 24.2	-0.8
NNS	Nan Shan	0.85	346	⇑iP	Pg	00 45 24.3	-0.8
NNS				S	Sg	00 45 37.7	+1.3
STYT	Tauyuan	0.89	240	⇑P	Pb	00 45 24.8	-1.1
STYT				S	Sg	00 45 39.4	+1.5
TWG	Pinlang	0.92	211	eP	Pb	00 45 25.9	-0.6
WGK	Gukeng	0.95	275	eP	Pb	00 45 27.0	+0.1
WGK				S	Sb	00 45 40.3	+0.7
TTN	Taitung	0.95	206	eP	Pb	00 45 28.9	+1.9
CHN4	Tsaushan	0.95	254	⇑P	Pb	00 45 26.6	-0.4
CHN4				S	Sb	00 45 41.7	+1.9
WTP	Ta-pu	0.97	248	⇑P	Pb	00 45 26.7	-0.6
WTP				S	Sb	00 45 42.4	+2.0
TCU	Taichung	0.99	303	eP	Pb	00 45 28.0	+0.3
TWC	Suao	1.02	13	eP	Pb	00 45 28.2	+0.1
ENTT	Nioudou	1.02	359	⇑P	Pb	00 45 28.0	-0.2
CHN2	Minshiung	1.03	266	eP	Pb	00 45 28.5	+0.2
TWQ1	Liyutan	1.05	314	eP	Pb	00 45 29.0	+0.4
TWQ1				S	Sb	00 45 44.8	+2.2
CHN1	Nanshi	1.07	247	⇑P	Pb	00 45 28.9	0.0
CHN1				S	Sb	00 45 43.5	+0.3
SGST	Jiashian	1.07	241	eP	Pb	00 45 28.8	-0.2
TWK	Hsinying	1.07	251	i P	Pb	00 45 28.7	-0.3
TWK				S	Sb	00 45 44.2	+0.9
CHY	Chiayi	1.08	264	eP	Pb	00 45 29.3	+0.2
CHY				S	Sb	00 45 44.0	+0.6
NSK	Sanguang	1.08	349	⇑P	Pb	00 45 28.9	-0.3
NSK				S	Sb	00 45 45.4	+1.9
NSY	Sanyi	1.10	317	eP	Pb	00 45 30.0	+0.4
NSY				S	Sb	00 45 47.0	+2.9
TWE	Neicheng	1.10	3	eP	Pb	00 45 29.6	0.0
NSTT	Nanjuang	1.15	332	eP	Pb	00 45 30.0	-0.3
NSTT				S	Sb	00 45 45.3	-0.2
ILA	Ilan	1.16	7	eP	Pb	00 45 31.1	+0.6
ECL	Taimali	1.17	210	eP	Pb	00 45 30.3	-0.4
WTCT	Ta-ch'eng	1.23	282	eP	Pb	00 45 31.9	+0.2
WTCT				S	Sb	00 45 49.2	+1.4
SSD	Sandimen	1.24	226	eP	Pb	00 45 31.5	-0.3
CHN3	Shinhua	1.25	245	eP	Pb	00 45 33.3	+1.2
WSF	Szhu	1.26	271	eP	Pb	00 45 31.9	-0.3
WSF				S	Sb	00 45 48.8	+0.1
EGS		1.26	14	eP	Pb	00 45 33.9	+1.6
CHN8	Yiju	1.30	258	eP	Pb	00 45 33.0	+0.1
CHN8				S	Sb	00 45 51.3	+1.5
HSN	Hsinchu	1.31	334	eP	Pb	00 45 34.3	+1.1
HSN				S	Sb	00 45 53.6	+3.3
TWM1	Shoushan	1.33	234	eP	Pb	00 45 34.8	+1.3
SGLT	Jiouru	1.35	229	eP	Pb	00 45 35.0	+1.3
SGLT				S	Sb	00 45 53.0	+1.7
SCLT	Jiali	1.36	252	eP	Pb	00 45 33.8	-0.1
SCLT				S	Sb	00 45 53.9	+2.3
TATO	Taipei	1.36	356	ePn	Pn	00 45 34.3	+0.2
TWA	Mucha	1.36	360	eP	Pb	00 45 34.2	+0.2
NCU	National Centr	1.40	345	eP	Pb	00 45 35.2	+0.6
NCU				S	Sb	00 45 56.4	+3.6
EAST	Anshuo	1.40	209	eP	Pb	00 45 33.0	-1.7
TAP1	Taipei	1.42	357	eP	Pn	00 45 35.4	+0.4
TAP	Taipei	1.42	357	eP	Pn	00 45 35.9	+0.9
TAP				S	Sb	00 45 57.1	+3.7
TWB1	Santiao Chiao	1.43	14	eP	Pn	00 45 36.1	+0.9
TWB1				S	Sb	00 45 58.8	+5.0
NWF	Wu-fen Shan	1.46	7	eP	Pn	00 45 36.3	+0.7
TWS1	Kuangyinshan	1.49	354	eP	Pn	00 45 37.0	+1.1
TWS1				S	Sb	00 45 58.5	+3.2
SCZT	Fangliau	1.53	216	eP	Pn	00 45 36.4	-0.1
YOJ	Yonaguni jima	1.55	57	P	Pn	00 45 36.9	+0.1
YOJ				S	Sb	00 45 58.9	+1.9
LAY	Lan-yu	1.57	181	eP	Pn	00 45 35.1	-2.0
TWY	Chenhua	1.66	0	eP	Pn	00 45 40.4	+2.0
TWP	Hsiaoliuchiu	1.70	222	eP	Pn	00 45 42.0	+3.0
HEN	Hengchun	1.79	206	eP	Pn	00 45 42.6	+2.5
WDGT	Dungji	1.81	259	eP	Pn	00 45 40.1	-0.4
WDGT				S	Sn	00 46 04.3	0.0
TWK1	Hengchun	1.81	204	eP	Pn	00 45 42.2	+1.6
PNG	Penghu	1.87	269	eP	Pn	00 45 40.5	-0.9
HATJ	Hateruma jima	2.07	77	P	Pn	00 45 44.0	-0.3
HATJ				S	Sn	00 46 11.1	+0.2
IRIF	Iriomote-Funau	2.08	69	P	Pn	00 45 44.0	-0.4
IRIF				S	Sn	00 46 11.9	+0.7
JKRS	Kuro-shima	2.30	74	P	Pn	00 45 47.6	+0.1
JKRS				S	Sn	00 46 17.3	+0.7
JIJ	Ishigaki jima	2.45	72	P	Pn	00 45 48.9	-0.8
JIJ				S	Sn	00 46 19.6	-0.9
KNM	Kinmen	3.00	286	eP	Pn	00 45 57.7	+0.2
JTJ	Tarama	3.02	70	eS	Sn	00 46 34.1	-0.9
QZH	Quanzhou	3.04	296	⇑iP	Pn	00 45 56.5	-1.6
QZH				PG	Pg	00 46 06.5	-2.5
QZH				S	Sn	00 46 33.5	-2.0
QZH				Smax			
	comp=N,860nm,0.8s						
QZH				Smax			
	comp=E,640nm,0.8s						
JOW	Kunigami	6.85	61	Pn	Pn	00 46 48.5	-3.5
	comp=E,4.2nm,0.3s,baz=225,slow=10.0,SNR=6.1						
GZH	Guangzhou	7.60	268	P	Pn	00 46 57.5	-5.0
GZH				Smax			
	comp=N,134nm,0.9s						
GZH				Smax			
	comp=E,104nm,1.1s						
NJ2	Nanjing	8.75	345	eP	P	00 47 17.0	-1.5
NJ2				AP		00 47 21.0	
NJ2				XP		00 47 24.5	
NJ2				S	Sn	00 48 52.0	-6.8
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,430nm,4.0s						
NJ2				Smax			
	comp=N,190nm,0.8s						
NJ2				Smax			
	comp=E,180nm,0.8s						
NJ2				LR	LR		
	comp=N,900nm,5.7s						
NJ2				LR	LR		
	comp=E,1μm,6.9s						
NJ2				LR	LR		
	comp=Z,790nm,8.7s						
WHN	Wuhan	9.45	318	eP	P	00 47 31.5	+3.3
WHN				eS	Sn	00 49 12.0	-4.1
WHN				LR	LR		
	comp=N,2μm,15.4s						
WHN				LR	LR		
	comp=E,1μm,6.1s						
QIZ	Qiongzhong	11.86	250	P	P	00 48 01.4	+0.1
HHC	Hu-ho-hao-te	19.14	336	eP	P	00 49 36.8	+1.8
HHC				AMB	AMB		
	comp=Z,7.0nm,1.1s						
HHC				AMB	AMB		
	comp=Z,109nm,9.5s						
HHC				LR	LR		
	comp=N,292nm,11.9s						
HHC				LR	LR		
	comp=E,232nm,14.3s						
HHC				LR	LR		
	comp=Z,285nm,11.9s						
CMAR	Chiang Mai Arr	21.75	261	P	P	00 50 02.0	-0.9
	comp=Z,1.7nm,0.6s,mb3.6,baz=64,slow=9.5,SNR=8.5						
ULN	Ulaanbaatar	26.83	338	P	P	00 50 49.7	-1.9
	comp=Z,1.3nm,0.6s,mb3.6						
SONM	Songino Array	27.04	337	P	P	00 50 51.4	-2.1
	comp=Z,1.2nm,0.6s,mb3.6,baz=157,slow=9.6,SNR=6.1						
KURK	Kurchatov	42.77	320	eP	P	00 53 06.9	-1.6
	comp=Z,1.3nm,0.7s,mb3.8						
WRA	Warramunga Arr	45.04	163	P	P	00 53 23.3	-4.0
	comp=Z,2.9nm,1.0s,mb4.1,baz=345,slow=8.8,SNR=9.9						
BVAR	Borovoye Array	48.35	321	P	P	00 53 51.6	-1.3
	comp=Z,0.6nm,0.5s,mb3.9,baz=100,slow=9.0,SNR=5.1						
CHKZ	Chkalovo	48.41	322	eP	P	00 53 50.4	-2.9
	comp=Z,1.4nm,0.6s,mb4.2						
ASAR	Alice Springs	48.49	165	P	P	00 53 49.7	-4.7
	comp=Z,0.9nm,0.8s,mb3.8,baz=348,slow=7.1,SNR=5.9						
STKA	Stephens Creek	58.40	160	P	P	00 55 04.0	-3.5
	comp=Z,2.6nm,1.0s,mb4.2,baz=333,slow=9.9,SNR=5.4						
ILAR	Eielson Array	69.55	27	P	P	00 56 17.2	-2.8
	comp=Z,0.8nm,0.7s,mb3.8,baz=282,slow=6.8,SNR=15						
FINES	FINESS Array B	72.12	330	P	P	00 56 34.4	-1.2
	comp=Z,2.2nm,1.0s,mb4.0,baz=45,slow=5.4,SNR=5.5						
DAWY	Dawson	72.87	27	eP	P	00 56 38.4	-1.6
INK	Inuvik	73.61	22	eP	P	00 56 41.0	-3.2
	comp=Z,2.9nm,1.0s,mb4.2						
YKA	Yellowknife Ar	83.35	23	P	P	00 57 35.4	-2.1
	comp=Z,1.1nm,0.7s,mb4.0,baz=313,slow=4.9,SNR=22						
GERES	GERESS Array B	83.52	321	P	P	00 57 38.8	+0.1
	comp=Z,0.6nm,0.7s,mb3.8,baz=90,slow=8.0,SNR=5.0						

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*ATH **28** 00:47:47.6, 38.92N×27.42E, h7^{km}, MD3.4/3*
*NEIC **28** 00:47:49.7, 38.85N×27.12E, h5^{km}, MD3.4(ATH), ML3.4(ISK), After ISK.*
*CSEM **28** 00:47:49.8±0.1, 38.86N×27.08E, h5^{km}, MD3.2, Error ellipse: s-maj=2.7km s-min=1.1km az=91.0*
*ISK **28** 00:47:50.2, 38.86N×27.12E, h5^{km}, MD3.2*
ISC 28 00:47:50.9±0.3, **38.86N**±0.02×**27.15E**±0.04, **h5^{km}, n45, σ0^{s}97**/59, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAG	Bornova	0.47	168	i P	Pg	00 47 59.6	-0.7
KDAG				i S	Sg	00 48 06.2	-0.4
IZM	Izmir	0.47	169	i PG	Pg	00 47 59.6	-0.8
IZM				i SG	Sg	00 48 06.8	0.0
IZM	Izmir	0.47	169	Pg	Pg	00 47 59.7	-0.8
IZM				Sg	Sg	00 48 06.7	-0.1
IZM	Izmir	0.47	169	Pg	Pg	00 47 59.7	-0.7
IZM				i Sg	Sg	00 48 06.8	0.0
BLCB	Balcova	0.48	190	i PG	Pg	00 47 59.8	-0.8
BLCB				i SG	Sg	00 48 07.2	+0.1
BLCB	Balcova	0.48	190	Pg	Pg	00 47 59.8	-0.8
BLCB				Sg	Sg	00 48 07.8	+0.7
AYVA	Ayvalik	0.57	322	i P	Pg	00 48 02.1	-0.2
AYVA				i S	Sg	00 48 10.9	+1.1
PRK	Paraskevi	0.78	300	ePB	Pb	00 48 05.8	-0.8
PRK				eSB	Sb	00 48 18.6	+1.4
BALB	Balikesir	0.96	36	PG	Pg	00 48 09.2	-0.9
BALB				SG	Sg	00 48 23.1	+0.1
BALB	Balikesir	0.96	36	Pg	Pg	00 48 09.2	-0.9
BTOK	Tokmak	1.13	37	i P	Pb	00 48 11.4	-1.1
BTOK				i S	Sb	00 48 26.8	-0.6
EZN	Ezine	1.15	327	PN	Pn	00 48 12.7	-0.9
EZN	Ezine	1.15	327	Pn	Pn	00 48 12.8	-0.8
CANB	Canakkale	1.15	357	PN	Pn	00 48 13.1	-0.5
CANB	Canakkale	1.15	357	Pn	Pn	00 48 13.2	-0.5
CANB	Canakkale	1.15	357	Pn	Pn	00 48 13.2	-0.4
SMG	Samos	1.18	192	ePG	Pg	00 48 11.6	-2.9
SMG				eSB	Sb	00 48 29.9	+1.1
AYDN	Tasoluk	1.33	154	i P	Pb	00 48 13.9	-2.1
AYDN				i S	Sb	00 48 32.8	-0.5
BNT	Bandirma	1.61	22	ePN	Pn	00 48 19.1	-1.0
BNT	Bandirma	1.61	22	Pn	Pn	00 48 19.7	-0.4
MLSB	Milas	1.64	162	ePN	Pn	00 48 21.2	+0.5
MLSB	Milas	1.64	162	Pn	Pn	00 48 21.3	+0.6
MRMT	Marmara Adasi	1.77	11	ePN	Pn	00 48 23.4	+0.9
MRMT	Marmara Adasi	1.77	11	Pn	Pn	00 48 23.5	+1.0
ORLT	Orhaneli	1.80	48	ePN	Pn	00 48 22.9	0.0
ORLT	Orhaneli	1.80	48	Pn	Pn	00 48 22.9	+0.1
BDRM	Kayabasi	1.81	172	P	Pn	00 48 25.1	+2.0
BDRM				S	Sn	00 48 47.6	+0.9
DENT	Denizli	1.85	126	ePN	Pn	00 48 24.0	+0.3
DNZL	Cakiroluk	1.90	127	P	Pn	00 48 25.2	+0.8
MFT	Murefte	1.92	3	ePN	Pn	00 48 24.0	-0.7
KHL	Karahalli	1.94	105	ePN	Pn	00 48 25.6	+0.7
KHL	Karahalli	1.94	105	Pn	Pn	00 48 25.6	+0.7
YLV	Yalova	2.42	45	ePN	Pn	00 48 32.7	+1.0
CTT	Catalca	2.48	23	ePN	Pn	00 48 32.3	-0.4
CTT	Catalca	2.48	23	Pn	Pn	00 48 32.4	-0.3
CTT	Catalca	2.48	23	Pn	Pn	00 48 32.4	-0.3
RDO	Rodhopi	2.59	332	ePN	Pn	00 48 33.1	-1.1
HRT	Hereke	2.76	44	ePN	Pn	00 48 37.0	+0.4
GPA	Golpazari	2.83	59	ePN	Pn	00 48 38.6	+1.0
GPA	Golpazari	2.83	59	Pn	Pn	00 48 38.7	+1.1
ESKT	Eskisehir	2.95	76	ePN	Pn	00 48 39.2	-0.2
ESKT	Eskisehir	2.95	76	Pn	Pn	00 48 39.2	-0.2
ESKT	Eskisehir	2.95	76	eP	Pb	00 48 47.5	+3.8
ESKT				eS	Sb	00 49 24.0	+3.7
MDU	Mudurnu	3.52	62	ePN	Pn	00 48 48.4	+0.9
MDU	Mudurnu	3.52	62	Pn	Pn	00 48 48.5	+1.0

IDC 28 00:58:52.8±46.0, **16.18S**×**178.03W, mb4.2**/3, **mb1 4.4**/3, **mb1mx3.9**/14, **mbtmp4.2**/3, **Error ellipse: s-maj=856.1km s-min=147.6km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.79	239	P	P	01 06 27.4	-2.0
	3.3nm,0.8s,baz=90,slow=11,SNR=9.3						
WB2	Warramunga Arr	45.31	258	eP	P	01 07 13.3	-1.3
WRA	Warramunga Arr	45.32	258	P	P	01 07 13.1	-1.6
	0.7nm,0.7s,baz=90,slow=7.8,SNR=21						
ASAR	Alice Springs	45.63	253	P	P	01 07 15.3	-1.8

	6.2nm,0.5s,baz=88,slow=8.2,SNR=119						
ASPA	Alice Springs	45.63	253	*e*P	P	01 07 15.4	-1.7

BJI ***28*** *01:05:55.7, 18.85N×104.51W, h11^{km}, mB5.9, mb5.7, Ms5.8, Msz5.4*
NEIC ***28*** *01:05:59.3, 18.76N×104.59W, h10^{km}, mb5.1/71, MS5.2/118, MD5.6(MEX), After MEX.*
NEIC Felt [IV] at Colima, Manzanillo and San Patricio; [III] at Cihuatlan, Guadalajara and Puerto Vallarta.
MOS ***28*** *01:05:59.7±1.1, 18.90N×104.27W, h33^{km}, mb5.2/38, MS5.5/14, Error ellipse: s-maj=9.5km s-min=4.7km az=91.5*
MEX ***28*** *01:05:59.0±0.7, 18.76N×104.60W, h7^{km}±9^{km}, MD5.6*
HRVD ***28*** *01:05:59.3±0.2, 18.92N×104.45W, h18^{km}, MW5.7/69, Centroid moment Tensor Solution. LP body waves: s69,c144;Mantle waves: s66,c142; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.04±.04; M$_{\theta\theta}$-1.51±.03; M$_{\phi\phi}$-0.53±.04; M$_{r\theta}$2.74±.09; M$_{\theta\phi}$1.17±.03; M$_{\phi r}$-1.11±.10; Best double couple: M$_0$3.667×10^{17} NP1: φ$_s$315°, δ19°, λ110°. NP2: φ$_s$114°, δ72°, λ83°. Principal axes: T 3.576, Plg62°, Azm14°; N .177, Plg6°, Azm116°; P -3.758, Plg27°, Azm209°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC ***28*** *01:06:06.3±3.7, 19.05N×104.36W, h74^{km}±32^{km}, mb4.3/19, mb1 4.4/21, mb1mx4.3/24, mbtmp4.6/21, MS5.2/17, Ms1 5.2/17, ms1mx4.9/24 Error ellipse: s-maj=26.8km s-min=13.6km az=52.0*
ISC 28 01:05:59.3±0.7**, 18.88N**±0.03×**104.47W**±0.03**, h30**^{km}±4^{km}**, h25**^{km}±1.5^{km}**:pP-P, n366, σ1^{s}21**/281**, mb5.0**/83**, MS5.3**/145**, 10C-5D, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	Colima	0.79	67	⇓*i*P	Pb	01 06 14.3	-0.2
COLM				*e*S	Sb	01 06 26.9	+2.0
CJM	Chamela	0.82	319	⇑*i*P	Pb	01 06 13.3	-1.8
CJM				*e*S	Sb	01 06 24.5	-1.3
CGX	Ciudad Guzman	1.21	48	*i* P	Pn	01 06 22.0	+1.4
CGX				*i* S	Sn	01 06 40.5	+4.4
CGX	Ciudad Guzman	1.21	48	*i* P	Pn	01 06 22.0	+1.4
CGX				*i* S	Sn	01 06 39.0	+2.9
SFJM	Santa Fe	2.09	40	*e*P	Pn	01 06 33.5	+0.4
ZIIG	Zihuatanejo	3.12	113	*e*P	Pn	01 06 46.5	-1.2
ZIIG				*e*S	Sn	01 07 30.5	+6.1
ZIIG	Zihuatanejo	3.12	113	*e*P	Pn	01 06 46.5	-1.2
ZIIG				*e*S	Sn	01 07 23.8	-0.6
MOIG	Morelia	3.20	75	*e*P	Pn	01 06 49.4	+0.6
MOIG				*e*S	Sn	01 07 30.4	+4.1
MOIG	Morelia	3.20	75	*e*P	Pn	01 06 49.4	+0.6
MOIG				*e*S	Sn	01 07 29.0	+2.6
ZAIG	Zacatecas	4.26	24	*e*P	Pn	01 07 04.7	+0.7
CAIG	El Cayaco	4.39	114	*e*P	Pn	01 07 05.4	-0.5
CAIG				*e*S	Sb	01 08 09.1	+0.4
CAIG	El Cayaco	4.39	114	*e*P	Pn	01 07 05.4	-0.5
CAIG				*e*S	Sn	01 07 55.6	-1.0
MAIG	Mazatlaan	4.66	337	*i* P	Pn	01 07 07.6	-2.1
PLIG	Platanillo	4.73	95	*e*P	Pn	01 07 12.9	+2.2
PLIG	Platanillo	4.73	95	*e*P	Pn	01 07 11.9	+1.3
ACX	Acapulco	4.77	114	*e*P	Pn	01 07 11.5	+0.3
ACX				*i* S	Sn	01 08 06.5	+0.3
IIZ	Mezontepec	4.95	86	*i* P	Pn	01 07 19.5	+5.7
UNM	Universidad Na	5.02	84	*e*P	Pn	01 07 19.0	+4.3
UNM	Universidad Na	5.02	84	*e*P	Pn	01 07 14.5	-0.2
YAIG	Yautepec	5.11	89	*e*P	Pn	01 07 17.9	+1.9
YAIG	Yautepec	5.11	89	*e*P	Pn	01 07 16.4	+0.4
YAIG				*i* S	Sn	01 08 15.3	+0.6
PPM	Popocatepetl	5.53	87	*e*P	Pn	01 07 22.5	+0.6
PPM				*e*P		01 07 23.2	
PPM				*i* S	Sn	01 08 27.0	+1.8
PPM				*i* S	Sn	01 08 29.5	+4.3
IIB	San Bernardino	5.79	88	*i* P	Pn	01 07 28.0	+2.4
IISM	Ciudad Serdan	6.71	88	*e*P	Pn	01 07 38.0	-0.5
VHO	Vista Hermosa	7.58	102	*e*P	Pn	01 07 52.0	+1.3
VHO				*e*S	Sn	01 09 22.5	+6.1
OXX	Oaxaca	7.58	102	*e*P	Pn	01 07 51.0	+0.3
OXX				*i* S	Sn	01 09 10.0	-6.5
HUIG	Huatulco	8.56	110	*e*P	P	01 08 04.5	+0.1
TXAR	Lajitas Array	10.44	4	P	P	01 08 31.3	+1.1
	0.6nm,0.3s,baz=186,slow=12,SNR=97						
TXAR				Lg		01 11 23.4	
	0.8nm,0.3s,baz=195,slow=35,SNR=3.2						
TXAR				LR	LR	01 13 02.2	
	comp=Z,28µm,18.9s,baz=105,slow=41						
LTX	Lajitas	10.44	4	⇑*e*P	P	01 08 32.3	+2.1
LTX				pmax	pmax		
	comp=Z,240nm,1.4s						
LTX	Lajitas	10.44	4	⇑*e*Pn	P	01 08 32.3	+2.0
	comp=Z,245nm,1.4s						
LTX				*e*Sn	S	01 10 48.6	+21
JCT	Junction City	12.30	19	⇑*e*P	P	01 08 57.9	+2.4
JCT				*e*		01 11 14.5	
JCT				pmax	pmax		
	comp=Z,710nm,1.8s						
JCT	Junction City	12.30	19	⇑*e*Pn	P	01 08 57.9	+2.3
	comp=Z,707nm,1.8s						
JCT				*e*Sn	S	01 11 14.5	+1.9
MNTX	Cornudas Mount	12.79	356	⇑*e*Pn	P	01 09 02.9	+0.8
	comp=Z,156nm,1.3s						
MNTX				*e*Sn	S	01 11 25.4	+0.9
HKT	Hockley	13.53	34	Pn	P	01 09 11.8	-0.1
HKT	Hockley	13.53	34	*e*P	P	01 09 10.0	-1.9
HKT				pmax	pmax		
	comp=Z,190nm,1.6s						
HKT	Hockley	13.53	34	*e*Pn	P	01 09 10.0	-1.9
	comp=Z,189nm,1.6s						
TUC	Tucson	14.53	338	*e*P	P	01 09 26.4	+1.4
TUC				*e*		01 12 00.7	
TUC				pmax	pmax		
	comp=Z,35nm,1.0s						
TUC	Tucson	14.53	338	*e*Pn	P	01 09 26.4	+1.4
	comp=Z,35nm,1.0s						
TUC				*e*Sn	S	01 12 00.7	-5.2
TEIG	Tepich	15.32	82	*e*P	P	01 09 34.0	-1.3
NATX	Nacogdoches	15.58	33	*e*P	P	01 09 38.1	-0.6
	comp=Z,391nm,1.4s						
ANMO	Albuquerque	16.11	354	Pn	P	01 09 47.4	+2.0
ANMO	Albuquerque	16.11	354	*e*P	P	01 09 46.7	+1.3
ANMO				pmax	pmax		
	comp=Z,300nm,2.5s						
ANMO	Albuquerque	16.11	354	P	P	01 09 46.5	+1.1
	baz=161,slow=12,SNR=30						
ANMO				Lg		01 14 20.3	
	baz=57,slow=16,SNR=2.3						
ANMO				LR	LR	01 15 30.6	
	comp=Z,8µm,20.9s,slow=35						
ANMO	Albuquerque	16.11	354	*e*P	P	01 09 46.7	+1.3
	comp=Z,305nm,2.6s						
AMTX	Amarillo	16.13	8	*e*P	P	01 09 46.2	+0.5
	comp=Z,178nm,1.1s						
AMTX				*e*pP		01 10 01.7	
WMOK	Wichita Mounta	16.59	17	*e*P	P	01 09 50.7	-0.8
WMOK				pmax	pmax		
	comp=Z,4µm,0.9s						
WMOK	Wichita Mounta	16.59	17	*e*P	P	01 09 50.7	-0.8
	comp=Z,4µm,0.9s						
BAR	Barrett	17.58	324	*e*P	P	01 10 06.1	+2.2
WUAZ	Wupatki	17.67	341	*e*P	P	01 10 07.2	+2.3
	comp=Z,2µm,1.4s						
MIAR	Mount Ida	18.37	30	*e*P	P	01 10 11.3	-2.5
MIAR				pmax	pmax		
	comp=Z,67nm,1.1s						
MIAR	Mount Ida	18.37	30	*e*P	P	01 10 11.3	-2.5
	comp=Z,66nm,1.2s						
LDFC	Landfair	18.70	332	*e*P	P	01 10 19.5	+1.8
SDCO	Great Sand Dun	18.82	357	*e*P	P	01 10 19.0	-0.2
	comp=Z,72nm,1.4s						
UALR	University of	19.15	32	*e*P	P	01 10 20.4	-2.7
	comp=Z,283nm,1.8s						
MWC	Mount Wilson	19.50	324	*e*P	P	01 10 26.9	-0.2
PV01	Paradox Valley	19.52	350	*e*P	P	01 10 25.7	-1.6
PV10	Paradox Valley	19.83	349	*e*P	P	01 10 28.7	-2.1
CBKS	Cedar Bluff	20.29	11	*e*P	P	01 10 32.3	-3.1
	comp=Z,208nm,1.3s						
CBKS				LR	LR		
	comp=Z,3µm,19.0s,MS4.6						
ARUT	Antelope Range	20.41	339	*e*P	P	01 10 37.5	+0.8
OXF	Oxford	20.54	38	*e*P	P	01 10 35.0	-3.0
	comp=Z,200nm,1.1s						
OXF				LR	LR		
	comp=Z,6µm,19.0s,MS5.0						
HBAR	Harrisburg	20.62	34	*e*P	P	01 10 36.9	-2.0
MET	Memphis--Engin	20.68	36	P	P	01 10 38.0	-1.6
MSU	Marysvale	20.68	343	*e*P	P	01 10 39.8	+0.2
MVU	Marysvale	20.69	343	*e*P	P	01 10 39.9	+0.3
	comp=Z,72nm,1.2s						
MVU				LR	LR		
	comp=Z,4µm,19.0s,MS4.8						
JTS	JuntasAbangare	20.71	112	P	P	01 10 40.5	+0.6
	comp=Z,23nm,1.0s,baz=12,slow=2.8,SNR=7.1						
JTS				S	S	01 14 36.9	+12
	comp=Z,2.6nm,0.8s,baz=298,slow=20,SNR=2.0						
JTS				LR	LR	01 18 29.9	
	comp=Z,2µm,18.5s,MS4.6,baz=303,slow=36						
JTS	JuntasAbangare	20.71	112	*e*P	P	01 10 37.7	-2.3
	comp=Z,53nm,1.1s						
JTS				LR	LR		
	comp=Z,706nm,20.0s						
SRU	San Rafael	20.84	347	*e*P	P	01 10 40.3	-0.8
DAC	Darwin (Calif)	20.84	329	PFAKE		01 10 50.0	+8.8
DAC				LR	LR		
	comp=Z,7µm,19.0s,MS5.0						
ISCO	Idaho Springs	20.87	358	*e*P	P	01 10 41.5	-0.1
	comp=Z,52nm,1.2s						
ISCO				LR	LR		
	comp=Z,9µm,20.0s,MS5.1						
GNAR	Gosnell	21.27	34	*e*P	P	01 10 42.5	-3.0
KSU1	Kansas State U	21.27	17	*e*P	P	01 10 44.2	-1.4
HALT	Halls	21.59	35	*e*P	P	01 10 45.8	-3.0
HALT				pP		01 10 53.2	
TRCR	Troy Canyon	21.68	336	*e*P	P	01 10 51.0	+1.3
MPU	Maple Canyon	21.95	345	*e*P	P	01 10 52.8	+0.4
TPH	Tonopah	22.13	332	*e*P	P	01 10 55.1	+0.9
	comp=Z,66nm,1.3s,mb4.9						
TPH				LR	LR		
	comp=Z,4µm,21.0s,MS4.8						
MTUM	Tungsten Hills	22.16	329	*e*P	P	01 10 55.8	+1.3
UTMT	University of	22.17	35	P	P	01 10 51.1	-3.5
	comp=Z,72nm,0.5s,mb5.4						
DAU	Daniels Canyon	22.24	346	*e*P	P	01 10 55.7	+0.4
CCM	Cathedral Cave	22.32	28	*e*P	P	01 10 53.7	-2.4
	comp=Z,39nm,0.8s,mb4.9						
CCM				LR	LR		
	comp=Z,26µm,19.0s,MS5.7						
PHWY	Pilot Hill	22.37	358	*e*P	P	01 10 56.2	-0.3
DUG	Dugway	22.43	343	*e*P	P	01 10 58.1	+0.9
	comp=Z,869nm,1.4s,mb6.0						
DUG				LR	LR		
	comp=Z,42µm,19.0s,MS5.9						
JLU	Jordanelle	22.47	346	*e*P	P	01 10 57.8	+0.3
OMM	Old Mammoth Mi	22.58	329	*e*P	P	01 11 00.5	+1.7
WVT	Waverly	22.59	37	*e*P	P	01 10 56.0	-2.8
	comp=Z,50nm,1.1s,mb4.9						
WVT				LR	LR		
	comp=Z,4µm,20.0s,MS4.8						
FVM	French Village	22.64	30	*e*P	P	01 10 57.2	-2.0
FVM				pmax	pmax		
	comp=Z,83nm,1.3s,mb5.0						
FVM	French Village	22.64	30	*e*P	P	01 10 57.2	-2.0
	comp=Z,83nm,1.3s,mb5.0						
NOQ	North Oquirrh	22.68	345	*e*P	P	01 11 00.8	+1.2
LRV	Little Rabbit	22.75	324	P	P	01 11 03.4	+2.9
MNV	Mina	22.84	331	*e*P	P	01 11 02.3	+1.1
	comp=Z,115nm,1.1s,mb5.2						
MNV				LR	LR		
	comp=Z,4µm,20.0s,MS4.9						
NVAR	Mina Array Bea	22.90	331	P	P	01 11 03.6	+1.8
	comp=Z,39nm,1.0s,mb4.8,baz=147,slow=11,SNR=90						
NVAR				LR	LR	01 20 13.3	
	comp=Z,4µm,19.6s,MS4.9,baz=150,slow=37						
TCUT	Toone Canyon	22.95	346	*e*P	P	01 11 03.5	+1.3
DWPF	Disney	23.00	62	PFAKE		01 11 20.0	+17
DWPF				LR	LR		
	comp=Z,4µm,20.0s,MS4.8						
BGU	Big Grassy Mou	23.17	343	*e*P	P	01 11 04.7	+0.3
SAO	San Andreas Ge	23.24	324	PFAKE		01 11 20.0	+15
SAO				LR	LR		
	comp=Z,5µm,22.0s,MS4.9						
SLM	Saint Louis	23.25	29	*e*P	P	01 11 04.2	-1.0
SLM				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.0						
SLM	Saint Louis	23.25	29	*e*P	P	01 11 04.2	-1.0
	comp=Z,64nm,0.9s,mb5.0						
SPUT	South Promonto	23.38	345	*e*P	P	01 11 07.1	+0.7
HWUT	Hardware Ranch	23.45	347	*e*P	P	01 11 07.2	+0.1
	comp=Z,52nm,1.4s,mb4.8						
HWUT				LR	LR		
	comp=Z,8µm,20.0s,MS5.2						
CMB	Columbia Colle	23.60	327	*e*P	P	01 11 09.3	+0.7
	comp=Z,72nm,1.5s,mb4.9						
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
ELK	Elko	23.68	339	P	P	01 11 10.8	+1.6
	comp=Z,13nm,0.9s,mb4.3,baz=167,slow=7.2,SNR=25						
ELK				Lg		01 18 35.1	
	comp=Z,0.3nm,0.3s,baz=103,slow=14,SNR=3.3						
ELK				LR	LR	01 20 23.7	
	comp=Z,6µm,19.2s,MS5.1,baz=158,slow=36						
ELK	Elko	23.68	339	*e*P	P	01 11 10.7	+1.4
	comp=Z,37nm,1.3s,mb4.7						
ELK				LR	LR		
	comp=Z,7µm,19.0s,MS5.1						
GOGA	Godfrey	23.70	48	P	P	01 11 09.3	-0.3
	comp=Z,104nm,1.2s,mb5.1						
GOGA				LR	LR		
	comp=Z,5µm,22.0s,MS4.9						
HVU	Hansel Valley	23.90	345	*e*P	P	01 11 11.9	+0.4
PAYG	Puerto Ayora	23.91	143	PFAKE		01 11 20.0	+8.2
PAYG				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
USIN	University of	24.01	34	*e*P	P	01 11 11.3	-1.3
	comp=Z,262nm,1.3s,mb5.5						
BMN	Battle Mountai	24.12	336	*e*P	P	01 11 14.9	+1.3
	comp=Z,98nm,1.6s,mb5.0						
BMN				LR	LR		
	comp=Z,3µm,19.0s,MS4.7						
CPCT	Cooper Cave	24.16	43	*e*P	P	01 11 12.2	-1.8
BW06	Boulder Array	24.20	351	*e*P	P	01 11 14.9	+0.5
	comp=Z,254nm,2.1s,mb5.3						
BW06				LR	LR		
	comp=Z,12µm,20.0s,MS5.4						
PDAR	Pinedale Array	24.20	351	P	P	01 11 14.8	+0.3
	comp=Z,3.5nm,0.7s,baz=180,slow=7.4,SNR=26						
PDAR				Lg		01 18 38.1	
	comp=Z,0.5nm,0.9s,baz=82,slow=21,SNR=2.9						
PDAR				LR	LR	01 21 27.2	
	comp=Z,8µm,19.4s,baz=188,slow=38						
WCN	Washoe City	24.28	330	*e*P	P	01 11 17.4	+2.2
WCN				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.0						
WCN	Washoe City	24.28	330	*e*P	P	01 11 17.4	+2.2
	comp=Z,87nm,1.4s,mb5.0						
PAHR	Pah Rah Range	24.43	331	*e*P	P	01 11 19.3	+2.6
	comp=Z,49nm,1.4s,mb4.7						
AHID	Auburn Hatcher	24.47	348	*e*P	P	01 11 16.4	-0.6
	comp=Z,44nm,1.4s,mb4.7						
AHID				LR	LR		
	comp=Z,7µm,22.0s,MS5.1						
WCI	Wyandotte Cave	24.95	36	*e*P	P	01 11 19.7	-2.0
	comp=Z,9.7nm,0.6s,mb4.5						
WCI				*e*		01 11 34.3	
WCI				LR	LR		
	comp=Z,5µm,22.0s,MS5.0						
RRI2	Red Ridge	25.07	348	*e*P	P	01 11 22.9	+0.2
SNOW	Snow King Moun	25.08	349	*e*P	P	01 11 20.9	-1.9
TPAW	Teton Pass	25.14	349	*e*P	P	01 11 23.2	-0.2
OHCM	Honcut	25.15	328	*e*P	P	01 11 24.9	+1.4
WUWY	Wally Ulrich	25.15	349	*e*P	P	01 11 23.6	+0.1
RSSD	Black Hills	25.17	1	PFAKE		01 11 40.0	+16
RSSD				LR	LR		
	comp=Z,1.0nm,20.0s						
LOHW	Long Hollow	25.20	349	*e*P	P	01 11 23.3	-0.6
MOOW	Moose Ponds	25.35	349	*e*P	P	01 11 24.6	-0.9
TZTN	Tazewell	25.45	42	*e*P	P	01 11 25.7	-0.7
BLO	Bloomington	25.50	34	*e*P	P	01 11 24.9	-2.0
BLO				*e*		01 11 38.8	
BLO				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.2						
BLO	Bloomington	25.50	34	*e*P	P	01 11 24.9	-2.0
	comp=Z,102nm,1.3s,mb5.2						
BLO				*e*		01 11 38.8	
IMW	Indian Meadow	25.53	349	*e*P	P	01 11 26.5	-0.6
JSC	Jenkinsville	25.72	49	P	P	01 11 28.0	-0.9
HOPS	Hopland	25.73	325	PFAKE		01 11 40.0	+11
HOPS				LR	LR		
	comp=Z,6µm,20.0s,MS5.1						
NHSC	New Hope	25.94	52	PFAKE		01 11 50.0	+19
NHSC				LR	LR		
	comp=Z,5µm,22.0s,MS5.0						
HLID	Hailey	26.00	343	*e*P	P	01 11 31.6	+0.2
	comp=Z,8.8nm,0.9s,mb4.3						
HLID				LR	LR		
	comp=Z,6µm,20.0s,MS5.1						
YFT	Old Faithful	26.05	350	*e*P	P	01 11 31.6	-0.2
LKWY	Lake	26.09	350	PFAKE		01 11 50.0	+18
LKWY				LR	LR		
	comp=Z,15µm,20.0s,MS5.5						
WVOR	Wild Horse Val	26.38	336	*e*P	P	01 11 35.5	+0.5
	comp=Z,40nm,1.1s,mb4.9						
WVOR				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
QLMT	Earthquake Lak	26.52	349	*e*P	P	01 11 36.9	+0.6
MOD	Modoc	26.62	333	*e*P	P	01 11 37.9	+0.8
	comp=Z,99nm,1.3s,mb5.2						
MOD				LR	LR		
	comp=Z,5µm,19.0s,MS5.0						
WDC	Whiskeytown Da	26.62	328	*e*P	P	01 11 36.1	-1.1
	comp=Z,36nm,1.1s,mb4.8						
WDC				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
MCMT	McKenzie Canyo	26.80	347	*e*P	P	01 11 39.0	+0.1
JFWS	Jewell Farm	26.81	24	*e*P	P	01 11 38.2	-0.7
	comp=Z,76nm,1.1s,mb5.1						
JFWS				LR	LR		
	comp=Z,8µm,20.0s,MS5.2						
BOZ	Bozeman (W)	27.35	349	PFAKE		01 12 00.0	+16
BOZ				LR	LR		
	comp=Z,6µm,22.0s,MS5.1						
YBH	Yreka Blue Hor	27.58	330	P	P	01 11 45.0	-1.0
	comp=Z,16nm,1.0s,mb4.6,baz=126,slow=3.3,SNR=13						
YBH	Yreka Blue Hor	27.58	330	P	P	01 11 45.0	-1.0
YBH				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
LAO	LASA Array	27.77	357	PFAKE		01 12 00.0	+12
LAO				LR	LR		
	comp=Z,12µm,21.0s,MS5.5						
FWV	Forest Hill	27.83	43	*e*P	P	01 11 45.5	-2.7
BMO	Blue Mountains	28.03	340	*e*P	P	01 11 48.8	-1.2
	comp=Z,7.4nm,0.8s,mb4.4						
BMO				LR	LR		
	comp=Z,5µm,20.0s,MS5.1						
ACSO	Alum Creek Sta	28.18	36	PFAKE		01 12 10.0	+19
ACSO				LR	LR		
	comp=Z,3µm,22.0s,MS4.8						
HUMO	Hull Mountain	28.37	330	PFAKE		01 12 10.0	+17
HUMO				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
BBOR	Butler Butte	28.46	331	P	P	01 11 53.8	-0.1
CHMT	Chamberlain Mo	28.88	347	*e*P	P	01 11 56.4	-1.2
MSO	Missoula	28.95	346	PFAKE		01 12 10.0	+12
MSO				LR	LR		
	comp=Z,5µm,19.0s,MS5.1						
IRO	Indian Ridge	29.16	333	P	P	01 12 00.8	+0.7
AAM	Ann Arbor	29.27	33	PFAKE		01 12 20.0	+19
AAM				LR	LR		
	comp=Z,4µm,19.0s,MS5.0						
DGMT	Dagmar	29.52	0	*e*P	P	01 12 01.0	-2.3
	comp=Z,16nm,0.7s,mb4.8						
DGMT				LR	LR		
	comp=Z,14µm,20.0s,MS5.6						
COR	Corvallis	30.08	333	PFAKE		01 12 20.0	+12
COR				LR	LR		
	comp=Z,5µm,20.0s,MS5.1						
VLL	Laurance Lake	30.12	335	P	P	01 12 09.7	+1.0
CBN	Corbin	30.44	45	PFAKE		01 12 30.0	+18
CBN				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
EYMN	Ely	30.86	17	P	P	01 12 12.1	-3.0
	comp=Z,40nm,1.1s,mb5.2						
EYMN				LR	LR		
	comp=Z,13µm,20.0s,MS5.6						
EBG	Ellensburg	30.93	338	P	P	01 12 17.0	+1.2
NEW	Newport	31.07	344	Lg		01 22 34.0	
	comp=Z,0.4nm,0.3s,baz=244,slow=19,SNR=2.2						
NEW				LR	LR	01 25 15.1	
	comp=Z,4µm,20.0s,MS5.1,baz=163,slow=37						
NEW	Newport	31.07	344	*e*P	P	01 12 16.5	-0.5
	comp=Z,17nm,1.3s,mb4.7						
NEW				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
ERPA	Erie	31.12	37	PFAKE		01 12 30.0	+12
ERPA				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
LON	Longmire	31.24	337	P	P	01 12 18.8	+0.2
SSPA	Standing Stone	31.45	41	PFAKE		01 12 30.0	+10
SSPA				LR	LR		
	comp=Z,3µm,19.0s,MS5.0						
NLW	Nelson Butte	31.86	340	P	P	01 12 24.9	+0.9
ULM	Lac du Bonnet	32.05	10	P	P	01 12 24.8	-0.7
	comp=Z,2.4nm,0.5s,mb4.3,baz=194,slow=11						
ULM				LR	LR	01 26 29.0	
	comp=Z,7µm,20.0s,MS5.3,baz=81,slow=38						
JCW	Jim Creek	32.50	338	P	P	01 12 29.6	0.0
ROSC	El Rosal	32.54	112	P	P	01 12 31.8	+1.5
	comp=Z,6.8nm,0.5s,mb4.9,baz=92,slow=16,SNR=5.1						
OCWA	Octopus Mounta	32.98	335	*e*P	P	01 12 34.6	+0.9
	comp=Z,96nm,1.4s,mb5.5						
OCWA				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
SADO	Sadowa	33.34	34	P	P	01 12 34.2	-2.8
	comp=Z,6.1nm,0.6s,mb4.7,baz=236,slow=9.1,SNR=13						
SADO				LR	LR	01 27 52.7	
	comp=Z,4µm,20.4s,MS5.1,baz=218,slow=39						
BINY	Binghamton	33.52	40	PFAKE		01 12 50.0	+11
BINY				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
SDV	Santo Domingo	34.25	102	*e*P	P	01 12 45.3	+0.2
	comp=Z,29nm,0.8s,mb5.3						
SDV				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
EDM	Edmonton	34.97	351	*e*P	P	01 12 48.9	-1.9
NCB	Newcomb	35.60	39	PFAKE		01 13 10.0	+14
NCB				LR	LR		
	comp=Z,4µm,22.0s,MS5.1						
FFC	Flin Flon	35.83	2	P	P	01 12 56.7	-1.5
	comp=Z,88nm,0.7s,mb5.8,SNR=15						
SJG	San Juan	36.30	85	P	P	01 12 59.8	-2.7
	comp=Z,12nm,0.6s,mb5.0,baz=318,slow=4.5,SNR=5.5						
SJG	San Juan	36.30	85	*e*P	P	01 12 59.2	-3.3
	comp=Z,28nm,1.1s,mb5.1						
SJG				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
HRV	Harvard--Oak R	36.45	43	PFAKE		01 13 20.0	+16
HRV				LR	LR		
	comp=Z,3µm,19.0s,MS5.0						
WES	Weston	36.55	43	PFAKE		01 13 20.0	+16
WES				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
BBB	Bella Bella	38.05	336	LR	LR	01 29 17.3	
	comp=Z,2µm,19.4s,MS5.0,baz=149,slow=37						
BBSR	BB Station	38.07	61	PFAKE		01 13 30.0	+13
BBSR				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
WVL	Waterville	38.68	41	PFAKE		01 13 40.0	+18
WVL				LR	LR		
	comp=Z,21µm,20.0s,MS6.0						
EMMW	East Machias	40.13	42	PFAKE		01 13 50.0	+16
EMMW				LR	LR		
	comp=Z,21µm,20.0s,MS6.0						
FCC	Fort Churchill	40.55	8	*e*P	P	01 13 35.3	-2.2
FCC				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.6						
FCC	Fort Churchill	40.55	8	*e*P	P	01 13 35.3	-2.2
	comp=Z,15nm,0.9s,mb4.6						
PQI	Presque Isle	40.74	39	PFAKE		01 13 50.0	+11
PQI				LR	LR		
	comp=Z,27µm,21.0s,MS6.1						
NNA	Nana	41.02	136	PFAKE		01 13 50.0	+8.2
NNA				LR	LR		
	comp=Z,217nm,20.0s						
DLBC	Dease Lake	43.71	341	*e*P	P	01 14 04.4	+1.1
YKA	Yellowknife Ar	44.14	353	P	P	01 14 05.1	-1.7
	comp=Z,3.1nm,0.6s,mb4.2,baz=160,slow=8.3,SNR=51						
YKA				Lg		01 29 22.3	
	comp=Z,1.5nm,1.3s,baz=258,slow=17,SNR=2.6						
YKA				LR	LR	01 32 11.4	
	comp=Z,4µm,19.4s,MS5.4,baz=160,slow=36						
YKA	Yellowknife Ar	44.14	353	P	P	01 14 05.1	-1.7
YKA				Lg		01 29 22.4	
YKA				LR	LR	01 32 11.4	
YKW3	Yellowknife Ar	44.21	353	*e*P	P	01 14 05.7	-1.7
SIT	Sitka	44.48	336	PFAKE		01 14 20.0	+10

SIT				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
TAOE	**Nuku Hiva Isla**	**44.69**	**235**	eLR	LR	01 26 38.3	
SCHQ	**Schefferville**	**45.88**	**29**	P	**P**	**01 14 18.9**	**-1.8**
	comp=Z,8.1nm,0.7s,mb4.8,baz=242,slow=8.8,SNR=21						
SCHQ				LR	LR	01 34 37.4	
	comp=Z,4µm,21.4s,MS5.3,baz=232,slow=38						
SCHQ	**Schefferville**	**45.88**	**29**	P	**P**	**01 14 18.9**	**-1.8**
SCHQ				LR	LR	01 34 37.4	
POHA	**Pohakuloa**	**48.05**	**280**	PFAKE		01 14 50.0	+12
POHA				LR	LR		
	comp=Z,18µm,20.0s,MS6.0						
SAML	**Samuel**	**49.21**	**121**	eP	**P**	**01 14 44.2**	**-3.1**
	comp=Z,17nm,1.0s,mb5.0						
SAML				epP	pP	01 14 52.1	-4.3
SAML				e		01 14 59.4	
SAML				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
LPAZ	**La Paz**	**49.99**	**132**	eP	**P**	**01 14 52.4**	**-0.9**
	comp=Z,8.2nm,1.1s,mb4.7						
LPAZ				epP	pP	01 15 00.8	-1.6
LPAZ				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
EYAK	**Cordova Ski Ar**	**50.86**	**335**	eP	**P**	**01 14 59.3**	**0.0**
DAWY	**Dawson**	**50.93**	**341**	eP	**P**	**01 14 59.2**	**-0.6**
DIV	**Divide**	**51.22**	**336**	eP	**P**	**01 15 01.9**	**-0.1**
	comp=Z,73nm,1.2s,mb5.5						
DIV				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
RKT	**Rikitea**	**51.28**	**217**	eS	**S**	**01 22 18.9**	**+0.4**
RKT				eSS	SS	01 25 49.4	-2.6
RKT				eLR	LR	01 29 39.6	
	comp=Z,5µm,27.5s,baz=32						
KDAK	**Kodiak Island**	**52.40**	**330**	eP	**P**	**01 15 10.8**	**-0.2**
	comp=Z,72nm,1.5s,mb5.4						
KDAK				LR	LR		
	comp=Z,344nm,20.0s,MS4.4						
THY	**Trims Highway**	**52.60**	**338**	eP	**P**	**01 15 12.5**	**0.0**
SML	**Sawmill**	**52.61**	**336**	eP	**P**	**01 15 12.1**	**-0.4**
SLKM	**Skilak Lake**	**52.67**	**334**	eP	**P**	**01 15 11.5**	**-1.5**
INK	**Inuvik**	**52.68**	**347**	eP	**P**	**01 15 12.0**	**-1.0**
INK				e*PP	pP	01 15 19.2	-2.9
INK				pmax	pmax		
	comp=Z,74nm,1.2s						
INK	**Inuvik**	**52.68**	**347**	eP	**P**	**01 15 12.0**	**-1.0**
	comp=Z,74nm,1.2s,mb5.5						
INK				epP	pP	01 15 19.1	-2.9
PMR	**Palmer**	**52.81**	**335**	eP	**P**	**01 15 13.7**	**-0.3**
PMR				LR	LR		
	comp=Z,2µm,17.0s,MS5.2						
FIB	**Fire Island**	**53.00**	**334**	PFAKE		01 15 30.0	+15
FIB				LR	LR		
	comp=Z,971nm,22.0s,MS4.8						
RSO	**Redoubt South**	**53.73**	**333**	eP	**P**	**01 15 20.6**	**-0.2**
ILAR	**Eielson Array**	**53.83**	**339**	P	**P**	**01 15 20.9**	**-0.6**
	comp=Z,18nm,0.7s,mb5.1,baz=142,slow=5.1,SNR=82						
ILAR				LR	LR	01 41 01.5	
	comp=Z,2µm,19.2s,MS5.1,baz=144,slow=39						
LVC	**Limon Verde**	**53.92**	**138**	eP	**P**	**01 15 23.8**	**+1.1**
	comp=Z,4.4nm,1.0s,mb4.3						
LVC				epP	pP	01 15 30.9	-0.8
LVC				LR	LR		
	comp=Z,7µm,21.0s,MS5.7						
MCK	**McKinley**	**53.94**	**337**	eP	**P**	**01 15 21.9**	**-0.3**
	comp=Z,18nm,1.0s,mb5.0						
MCK				LR	LR		
	comp=Z,750nm,19.0s,MS4.8						
COLA	**College**	**54.22**	**339**	eP	**P**	**01 15 22.8**	**-1.5**
COLA				e*PP	pP	01 15 31.8	-1.6
COLA				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
COLA	**College**	**54.22**	**339**	eP	**P**	**01 15 23.8**	**-0.5**
COLA				LR	LR		
	comp=Z,2µm,17.0s,MS5.1						
SVW2	**Sparrevohn**	**55.26**	**333**	eP	**P**	**01 15 31.5**	**-0.5**
IMA	**Indian Mountai**	**56.91**	**338**	eP	**P**	**01 15 42.5**	**-1.3**
IMA				pmax	pmax		
	comp=Z,120nm,1.4s,mb5.7						
IMA	**Indian Mountai**	**56.91**	**338**	eP	**P**	**01 15 42.1**	**-1.7**
PPT	**Papeete**	**57.25**	**233**	eS	**S**	**01 23 41.4**	**+2.6**
PPT				eSS	SS	01 27 30.7	+1.2
PPT				eLR	LR	01 32 04.7	
	comp=Z,4µm,26.0s,baz=50						
SFJ	**Sondre**	**58.99**	**22**	PFAKE		01 16 10.0	+12
SFJ				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
TBI	**Tubuai**	**60.75**	**228**	eS	**S**	**01 24 27.5**	**+3.3**
TBI				eSS	SS	01 28 09.3	-15
TBI				eLR	LR	01 33 50.1	
	comp=Z,4µm,25.8s,baz=46						
TNA	**Tin City**	**62.06**	**335**	eP	**P**	**01 16 18.4**	**-0.9**
	comp=Z,17nm,0.8s,mb5.2						
SUMG	**Summit**	**65.00**	**18**	eP	**P**	**01 16 36.8**	**-1.6**
	comp=Z,25nm,1.3s,mb5.1						
BDFB	**Brasilia**	**65.29**	**118**	P	**P**	**01 16 40.7**	**-0.5**
	comp=Z,2.8nm,0.3s,mb4.7,baz=260,slow=4.2,SNR=9.2						
BAO	**Brasilia Array**	**65.31**	**118**	P	**P**	**01 16 41.0**	**-0.3**
PLCA	**Paso Flores**	**67.16**	**153**	P	**P**	**01 16 53.0**	**+0.2**
	comp=Z,5.6nm,1.1s,mb4.5,baz=283,slow=3.1,SNR=4.5						
PLCA	**Paso Flores**	**67.16**	**153**	eP	**P**	**01 16 51.5**	**-1.3**
PLCA				LR	LR		
	comp=Z,6µm,20.0s,MS5.8						
RAR	**Rarotonga**	**67.22**	**236**	LR	LR	01 37 45.2	
	comp=Z,2µm,21.3s,MS5.2,baz=344,slow=28						
TRQA	**Tornquist**	**69.28**	**145**	eP	**P**	**01 17 05.0**	**-0.9**
TRQA				LR	LR		
	comp=Z,8µm,21.0s,MS5.9						
BORG	**Borgarnes**	**70.18**	**27**	PFAKE		01 17 20.0	+9.0
BORG				LR	LR		
	comp=Z,633nm,20.0s,MS4.9						
DAG	**Danmarks Havn**	**70.80**	**14**	⇓eP	**P**	**01 17 13.7**	**-0.9**
DAG				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.0						
DAG	**Danmarks Havn**	**70.80**	**14**	⇓eP	**P**	**01 17 13.7**	**-0.9**
	comp=Z,22nm,1.2s,mb5.0						
DAG	**Danmarks Havn**	**70.80**	**14**	⇓iP	**P**	**01 17 13.7**	**-0.9**
	comp=Z,22nm,1.2s,mb5.0						
RCBR	**Riachuelo**	**71.83**	**103**	PFAKE		01 17 40.0	+18
RCBR				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
BILL	**Bilibino**	**72.39**	**337**	eP	**P**	**01 17 23.6**	**-0.6**
BILL				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.1						
BILL	**Bilibino**	**72.39**	**337**	eP	**P**	**01 17 23.6**	**-0.7**
	comp=Z,36nm,1.4s,mb5.1						
BILL				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
JMIC	**Jan Mayen**	**74.24**	**20**	eP	**P**	**01 17 36.0**	**+1.1**
JMIC				AMS	AMS	01 51 34.5	
	comp=Z,3µm,12.6s,MS5.8						
KBS	**Kingsbay**	**76.46**	**10**	PFAKE		01 18 00.0	+12
KBS				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
KBS	**Kingsbay**	**76.46**	**10**	eS	S	01 27 42.4	+13
KBS				AMS	AMS	01 53 39.6	
	comp=Z,5µm,19.3s,MS5.9						
PET	**Petropavlovsk**	**79.18**	**322**	eP	**P**	**01 18 02.1**	**-0.8**
PET				eS	S	01 28 01.0	+1.7
PET				ePPS	PPS	01 29 04.6	-0.5
PET				eSS	SS	01 33 14.9	+6.2
PET				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.1						
PET				pmax	pmax		
	comp=Z,500nm,15.1s						
PET				smax			
	comp=E,200nm,18.1s						
PET				smax			
	comp=N,800nm,20.5s						
PET				MLR	MLR		
	comp=Z,600nm,22.0s,MS4.9						
PET				MLR	MLR		
	comp=N,700nm,18.0s						
PET	**Petropavlovsk**	**79.18**	**322**	PFAKE		01 18 20.0	+17
PET				LR	LR		
	comp=Z,760nm,19.0s,MS5.0						
SEY	**Seymchan**	**79.20**	**333**	eP	**P**	**01 18 04.6**	**+1.8**
SEY				e		01 18 10.9	
SEY				e		01 21 02.2	
SEY				ePPP	PPP	01 22 52.6	-1.7
SEY				eS	S	01 28 02.4	+3.1
SEY				e		01 29 07.6	
SEY				SS	SS	01 33 11.7	+2.9
SEY				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.6						
SEY				pmax	pmax		
	comp=N,10.0nm,1.0s						
SEY				pmax	pmax		
	comp=E,30nm,1.0s						
SEY				smax			
	comp=N,2µm,11.8s						
SEY				smax			
	comp=E,600nm,10.5s						
SEY				MLR	MLR		
	comp=Z,7µm,23.0s,MS6.0						
SEY				MLR	MLR		
	comp=N,5µm,24.0s,MS5.8						
SEY				MLR	MLR		
	comp=E,2µm,21.0s,MS5.8						
DCN	**Croghan**	**79.26**	**37**	eP	**P**	**01 18 03.4**	**+0.1**
DMUB	**Kingscourt**	**79.31**	**37**	eP	**P**	**01 18 03.8**	**+0.2**
DLF	**Lyons Farm**	**79.70**	**37**	eP	**P**	**01 18 05.8**	**+0.1**
ESK	**Eskdalemuir**	**80.90**	**35**	eP	**P**	**01 18 11.3**	**-0.8**
	comp=E,50nm,1.4s,mb5.3						
ESK				LR	LR		
	comp=Z,278nm,19.0s,MS4.6						
TIXI	**Tiksi**	**82.77**	**345**	PFAKE		01 18 30.0	+8.6
TIXI				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
BER	**Bergen**	**83.12**	**28**	eP	**P**	**01 18 24.8**	**+1.3**
BER				eSKSa		01 28 51.7	
BER				eSS	SS	01 34 46.7	+39
BER				AMS	AMS	01 58 24.1	
	comp=Z,957nm,19.7s,MS5.2						
EVO	**Evora**	**83.34**	**52**	eP	**P**	**01 18 24.7**	**-0.3**
	comp=Z,52nm,1.1s,mb5.2						
NSS	**Namsos**	**83.82**	**23**	eP	**P**	**01 18 28.0**	**+1.1**
NSS				AMS	AMS	01 56 43.4	
	comp=Z,2µm,21.4s,MS5.5						
GRR	**Gorron**	**84.77**	**41**	eP	**P**	**01 18 32.8**	**+0.8**
	comp=Z,71nm,1.0s,mb5.4						
FLN	**La Foliniere**	**84.85**	**40**	eP	**P**	**01 18 33.5**	**+1.1**
	comp=Z,75nm,0.9s,mb5.5						
ARCES	**ARCESS Array B**	**85.00**	**16**	P	**P**	**01 18 33.4**	**+0.6**
	comp=Z,4.4nm,0.7s,mb4.7,baz=315,slow=3.4,SNR=16						
ARCES				LR	LR	01 56 52.1	
	comp=Z,2µm,20.5s,MS5.5,baz=321,slow=36						
ARCES	**ARCESS Array B**	**85.00**	**16**	P	**P**	**01 18 33.4**	**+0.6**
ARCES				LR	LR	01 56 52.1	
LDF	**La Druitiere**	**85.14**	**40**	eP	**P**	**01 18 34.9**	**+1.0**
	comp=Z,179nm,1.7s,mb5.6						
NAO01	**NORSAR Array S**	**85.31**	**26**	PFAKE		01 18 50.0	+16
NAO01				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
NB2	**NORSAR Subarra**	**85.34**	**26**	P	**P**	**01 18 34.0**	**-0.6**
	comp=Z,20nm,1.7s,mb5.0,baz=305,slow=4.6						
NB2	**NORSAR Subarra**	**85.34**	**26**	P	**P**	**01 18 34.0**	**-0.6**
	baz=305,slow=4.8						
NOA	**NORSAR Array B**	**85.34**	**26**	P	**P**	**01 18 34.5**	**-0.1**
	comp=Z,3.8nm,1.0s,mb4.5,baz=306,slow=5.0,SNR=5.4						
NOA				LR	LR	01 57 50.2	
	comp=Z,2µm,19.6s,MS5.5,baz=310,slow=36						
NOA	**NORSAR Array B**	**85.34**	**26**	P	**P**	**01 18 34.5**	**-0.1**
NOA				LR	LR	01 57 50.2	
KONO	**Kongsberg**	**85.36**	**28**	PFAKE		01 18 50.0	+15
KONO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
MFF	**Saint Martin d**	**85.90**	**42**	eP	**P**	**01 18 38.3**	**+0.6**
ESDC	**Sonseca Array**	**85.91**	**50**	P	**P**	**01 18 38.1**	**+0.2**
	comp=Z,1.6nm,0.7s,mb4.3,baz=310,slow=5.0,SNR=7.2						
ESLA	**Sonseca Array**	**85.91**	**50**	PFAKE		01 18 50.0	+12
ESLA				LR	LR		
	comp=Z,12µm,20.0s,MS6.3						
MUD	**Monsted U'grnd**	**86.75**	**31**	i P	**P**	**01 18 43.7**	**+2.0**
MUD				i		01 21 59.4	
MUD				i S	S	01 29 17.1	+1.7
MUD				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.2						
MUD				MLR	MLR		
	comp=Z,910nm,17.0s,MS5.2						
MUD	**Monsted U'grnd**	**86.75**	**31**	i P	**P**	**01 18 43.7**	**+2.0**
	comp=Z,20nm,1.3s,mb5.2						
MUD				i		01 21 59.4	
MUD				i S	S	01 29 17.1	+1.7
	comp=Z,910nm,17.0s						
ETSF	**Etsaut**	**87.08**	**46**	eP	**P**	**01 18 43.7**	**+0.1**
	comp=Z,37nm,1.3s,mb5.2						
LFF	**La Frestale**	**87.13**	**43**	eP	**P**	**01 18 44.7**	**+0.9**
	comp=Z,26nm,1.0s,mb5.1						
RJF	**Les Rejaudoux**	**87.49**	**43**	eP	**P**	**01 18 46.2**	**+0.7**
TCF	**Toulx Ste Croi**	**87.52**	**42**	eP	**P**	**01 18 46.2**	**+0.6**
EPF	**Esparros**	**87.64**	**45**	eP	**P**	**01 18 47.4**	**+1.1**
SSF	**Saint Saulge**	**88.00**	**41**	eP	**P**	**01 18 48.8**	**+0.9**
APA	**Apatity**	**88.43**	**15**	⇑iP	**P**	**01 18 46.0**	**-3.5**
APA				e		01 22 21.0	
APA				e		01 29 16.0	
APA				eS	S	01 29 29.0	-1.9
APA				ePS	PS	01 30 37.0	-3.4
APA				eSS	SS	01 35 30.0	+5.3
APA				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.7						
COP	**Copenhagen**	**88.71**	**30**	i P	**P**	**01 18 52.1**	**+1.0**
COP				i		01 22 16.6	
COP				i S	S	01 29 28.4	-5.4
COP				i		01 30 48.9	
	comp=Z,780nm,18.0s						
YAK	**Yakutsk**	**88.73**	**338**	eP	**P**	**01 18 51.8**	**+0.7**
YAK				i *PP	pP	01 18 57.8	-2.8
YAK				eS	S	01 29 31.7	-2.1
YAK				eSS	SS	01 35 30.8	+1.7
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				smax			
	comp=Z,97nm,17.0s						
YAK				smax			
	comp=N,281nm,17.3s						
YAK				smax			
	comp=E,139nm,16.9s						
YAK	**Yakutsk**	**88.73**	**338**	PFAKE		01 19 00.0	+8.9
YAK				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
PMSA	**Palmer Station**	**88.95**	**164**	PFAKE		01 19 00.0	+8.0
PMSA				LR	LR		
	comp=Z,4µm,19.0s,MS5.8						
HAU	**Haudompre**	**89.29**	**39**	eP	**P**	**01 18 53.9**	**-0.2**
BSD	**Bornholm Skovb**	**90.21**	**30**	i P	**P**	**01 18 59.1**	**+0.9**
BSD				i		01 22 30.8	
BSD				eS	PS	01 31 04.6	+3.5
BSD				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.7						
BSD				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.3						
BSD	**Bornholm Skovb**	**90.21**	**30**	i P	**P**	**01 18 59.1**	**+0.9**
	comp=Z,44nm,1.0s,mb5.8						
BSD				i		01 22 30.8	
BSD				eS	PS	01 31 04.6	+3.5
	comp=Z,1µm,18.0s						
KAF	**Kangasniemi**	**90.40**	**21**	ep	**P**	**01 18 58.9**	**0.0**
	comp=Z,6.4nm,0.8s,mb5.0,baz=314,slow=4.8						
KAF	**Kangasniemi**	**90.40**	**21**	eP	**P**	**01 18 58.9**	**0.0**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
FINES	**FINESS Array B**	**90.79**	**21**	P	**P**	**01 19 00.5**	**-0.2**
	comp=Z,1.6nm,0.7s,mb4.5,SNR=5.7						
FINES				LR	LR	02 00 50.7	
	comp=Z,1µm,19.2s,MS5.3,baz=318,slow=36						
YSS	**Yuzh-Sakhalins**	**90.97**	**321**	i P	**P**	**01 19 01.2**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.3						
YSS	**Yuzh-Sakhalins**	**90.97**	**321**	PFAKE		01 19 10.0	+8.2
YSS				LR	LR		
	comp=Z,612nm,19.0s,MS5.1						
MOX	**Moxa**	**90.98**	**35**	eP	**P**	**01 19 04.9**	**+3.1**
MOX				pmax	pmax		
	comp=Z,18nm,1.7s,mb5.1						
MOX				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
MOX	**Moxa**	**90.98**	**35**	eP	**P**	**01 19 04.9**	**+3.1**
	comp=Z,18nm,1.7s,mb5.1						
MOX				eSKS	SKS	01 29 39.0	+0.8
MOX				eSS	SS	01 36 10.0	+8.2
MOX				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
MOX	**Moxa**	**90.98**	**35**	i P	**P**	**01 19 04.9**	**+3.1**
	comp=Z,logA/T=1.0,mb5.1						
MOX				SKS	SKS	01 29 39.0	+0.8
MOX				SS	SS	01 36 10.0	+8.2
MOX				L		02 00 46.0	
GRA1	**Grafenberg Arr**	**91.26**	**36**	eP	**P**	**01 19 03.5**	**+0.4**
	comp=Z,54nm,1.6s,mb5.6						
GRA1				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
GRF	**Grafenberg Arr**	**91.26**	**36**	eP	**P**	**01 19 03.5**	**+0.4**
GRF				pmax	pmax		
	comp=Z,54nm,1.6s,mb5.6						
GRF				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.6						
GRF	**Grafenberg Arr**	**91.26**	**36**	eP	**P**	**01 19 03.5**	**+0.4**
	comp=Z,54nm,1.6s,mb5.6						
GRF				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
CLL	**Collm**	**91.36**	**34**	eP	**P**	**01 19 04.0**	**+0.4**
CLL				eS	SKS	01 29 38.0	-2.4
CLL				MLR	MLR		
	comp=Z,2µm,18.4s,MS5.6						
CLL	**Collm**	**91.36**	**34**	P	**P**	**01 19 06.0**	**+2.4**
CLL				e		01 21 53.0	
CLL				ePP	PP	01 22 41.0	-2.7
CLL				e		01 29 39.0	
CLL				ePS	PS	01 31 13.0	-2.0
JOF	**Joensuu**	**91.41**	**19**	ep	**P**	**01 19 01.9**	**-1.6**
	comp=Z,5.0nm,0.9s,mb4.8						
JOF	**Joensuu**	**91.41**	**19**	eP	**P**	**01 19 01.9**	**-1.6**
JOF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.8						
NKC	**Novy Kostel**	**91.65**	**35**	eP	**P**	**01 19 07.1**	**+2.2**
NKC				AMS	AMS	02 00 50.0	
	comp=Z,2µm,17.3s						
BRG	**Berggiesshubel**	**92.10**	**34**	eP	**P**	**01 19 07.6**	**+0.7**
BRG				e		01 22 48.0	
BRG				i		01 29 42.0	
BRG				i S	S	01 30 04.0	-0.4
BRG				i SP	SP	01 31 27.0	+7.7
BRG				i SS	SS	01 36 16.0	-1.6
BRG				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.8						
BRG				MLR	MLR		
	comp=N,1µm,18.1s,MS5.5						
BRG				MLR	MLR		
	comp=E,1µm,18.1s,MS5.5						
BRG				MLR	MLR		
	comp=Z,2µm,18.1s,MS5.6						
BRG	**Berggiesshubel**	**92.10**	**34**	eP	**P**	**01 19 07.6**	**+0.7**
	comp=Z,8.0nm,1.5s,mb4.8						
BRG				ePP	PP	01 22 48.0	-1.6
BRG				i SKS	SKS	01 29 42.0	-2.6
BRG				i S	S	01 30 04.0	-0.4
BRG				i SP	SP	01 31 27.0	+7.7
BRG				i SS	SS	01 36 16.0	-1.6
BRG				eP'P'		01 44 27.7	
BRG				LR	LR		
	comp=Z,2µm,18.1s,MS5.6						
KHC	**Kasperske Hory**	**92.86**	**35**	eP	**P**	**01 19 10.2**	**-0.3**
KHC				AMS	AMS	02 01 30.0	
	comp=Z,2µm,17.9s						
PRU	**Pruhonice**	**92.91**	**34**	eP	**P**	**01 19 11.0**	**+0.3**
PRU				AMS	AMS	02 01 40.0	
	comp=Z,2µm,18.3s						
GERES	**GERESS Array B**	**93.09**	**36**	P	**P**	**01 19 11.3**	**-0.3**
	comp=Z,0.6nm,0.8s,mb4.1,baz=346,slow=5.5,SNR=5.3						
KSP	**Ksiaz**	**93.34**	**33**	eP	**P**	**01 19 12.2**	**-0.5**
KSP				ePP	PP	01 22 53.5	-6.0
KSP				eSKS	SKS	01 29 46.0	-5.6
KSP				ePS	PS	01 31 37.0	-0.5
KSP				LR	LR		
	comp=Z,2µm,25.5s,MS5.4						
DPC	**Dobruska-Polom**	**93.64**	**33**	eP	**P**	**01 19 13.9**	**-0.2**
DPC				AMS	AMS	02 05 00.0	
	comp=Z,2µm,15.6s						
MOA	**Molln**	**93.95**	**36**	⇓iP	**P**	**01 19 16.6**	**+1.1**
	comp=Z,136nm,2.4s,mb6.0						
OKC	**Ostrava-Krasne**	**94.90**	**33**	AMS	AMS	02 05 50.0	
	comp=Z,1µm,16.9s						
ZST	**Bratislava**	**95.32**	**35**	eP	**P**	**01 19 23.3**	**+1.5**
ZST				e		01 19 30.2	
OJC	**Ojcow**	**95.51**	**32**	eP	**P**	**01 19 21.1**	**-1.6**
SRO	**Srobarova**	**96.20**	**35**	eP	**P**	**01 19 26.3**	**+0.4**
DBIC	**Dimbokro**	**96.89**	**81**	PFAKE		01 19 40.0	+10
DBIC				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
HNR	**Honiara**	**98.24**	**263**	PFAKE		01 19 50.0	+14
HNR				LR	LR		
	comp=Z,914nm,22.0s,MS5.2						
MAJO	**Matsushiro**	**99.17**	**314**	PFAKE		01 19 50.0	+10
MAJO				LR	LR		
	comp=Z,485nm,20.0s,MS5.0						
OBN	**Obninsk**	**99.19**	**21**	eP	**P**	**01 19 39.0**	**-0.2**
OBN				e		01 30 18.4	
OBN				eSS	SS	01 37 55.9	-1.8
OBN				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb5.1						
OBN				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
OBN	**Obninsk**	**99.19**	**21**	PFAKE		01 19 50.0	+11
OBN				LR	LR		
	comp=Z,482nm,21.0s,MS5.0						
MDJ	**Mudanjiang**	**99.89**	**324**	P	**P**	**01 19 42.5**	**-0.2**
MDJ				PP	PP	01 23 47.8	-2.3
MDJ				S	S	01 31 15.0	+4.1
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,88nm,5.4s						
MDJ				LR	LR		
	comp=N,178nm,20.2s,MS5.3						
MDJ				LR	LR		
	comp=E,1µm,20.2s,MS5.3						
MDJ				LR	LR		
	comp=Z,511nm,19.2s,MS5.0						
MDJ	**Mudanjiang**	**99.89**	**324**	PFAKE		01 20 00.0	+17
MDJ				LR	LR		
	comp=Z,793nm,20.0s,MS5.2						
HIA	**Hailar**	**101.63**	**332**	PFAKE		01 20 00.0	+10
HIA				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
CN2	**Changchun**	**102.69**	**325**	eP	Pdif	01 19 56.0	+0.9
CN2				eAP		01 20 04.0	
CN2				eS	S	01 31 35.3	+1.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,300nm,19.0s,MS4.9						
CN2				LR	LR		
	comp=E,200nm,19.0s,MS4.9						
CN2				LR	LR		
	comp=Z,300nm,21.0s,MS4.8						
TRIS	**Tristan da Cun**	**102.79**	**125**	PFAKE		01 20 10.0	+14
TRIS				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
INCN	**Inchon**	**106.15**	**320**	PFAKE		01 24 40.0	
INCN				LR	LR		
	comp=Z,730nm,19.0s,MS5.2						
ULN	**Ulaanbaatar**	**107.81**	**338**	PFAKE		01 24 40.0	
ULN				LR	LR		
	comp=Z,986nm,21.0s,MS5.3						
SONM	**Songino Array**	**108.06**	**339**	PP	PP	01 24 38.0	-13
	comp=Z,0.8nm,1.1s,baz=45,slow=5.2,SNR=3.6						
VNA3	**Neumayer Olymp**	**109.26**	**160**	⇑iP	Pdif	01 20 30.5	+7.1
VNA1	**Neumayer--Stat**	**109.71**	**159**	⇑iP	Pdif	01 20 29.4	+4.0
VNA2	**Neumayer--Watz**	**110.00**	**160**	⇑iP	Pdif	01 20 36.8	+10
BJI	**Beijing**	**110.22**	**328**	PDIF	Pdif	01 20 29.0	+0.7
BJI				PP	PP	01 25 05.8	-1.8
BJI				SS	SS	01 40 32.5	+3.3
BJI				PP	PP		
	comp=Z,116nm,17.2s						
BJI				LR	LR		
	comp=N,957nm,16.8s,MS5.6						
BJI				LR	LR		
	comp=E,915nm,15.7s,MS5.6						
BJI				LR	LR		
	comp=Z,625nm,24.1s						
BJI	**Beijing**	**110.22**	**328**	Pdif	Pdif	01 20 29.1	+0.8
BJI				PP	PP	01 25 05.8	-1.8
BJI				SKS	SKS	01 31 30.7	+18
BJI				PS	PS	01 34 45.1	+14
BJI				SS	SS	01 40 32.5	+3.3
BJI				LR	LR		
	comp=Z,630nm,24.1s,MS5.1						
BJT	**Baijiatuau**	**110.23**	**328**	PFAKE		01 24 40.0	+6.5
BJT				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
PMG	**Port Moresby**	**110.29**	**267**	PFAKE		01 24 40.0	+5.9

PMG				LR	LR		
	comp=Z,547nm,21.0s,MS5.1						
KIV	**Kislovodsk**	**110.61**	**25**	*i* P	Pdif	01 20 37.8	+7.8
KIV				*e*		01 31 01.5	
KIV				*e*		01 35 48.6	
KIV				*e*SS	SS	01 40 32.3	-1.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**110.66**	**358**	PFAKE		01 24 40.0	+6.0
KURK				LR	LR		
	comp=Z,502nm,19.0s,MS5.1						
SSE	**Sheshan**	**113.74**	**318**	PKP	PKPdf	01 24 34.0	-6.6
SSE				SS	SS	01 41 17.5	+1.4
SSE				LR	LR		
	comp=N,1µm,20.0s,MS5.5						
SSE				LR	LR		
	comp=E,569nm,20.0s,MS5.5						
SSE				LR	LR		
	comp=Z,435nm,23.3s,MS5.0						
SSE	**Sheshan**	**113.74**	**318**	PKP	PKPdf	01 24 34.4	-6.2
SSE				SS	SS	01 41 17.6	+1.5
SSE				LR	LR		
	comp=Z,440nm,23.3s,MS5.0						
CTAO	**Charters Tower**	**113.81**	**256**	PFAKE		01 24 50.0	+9.1
CTAO				LR	LR		
	comp=Z,617nm,19.0s,MS5.2						
NJ2	**Nanjing**	**114.53**	**320**	*e*PKP	PKPdf	01 24 35.5	-6.6
NJ2				PP	PP	01 25 37.5	-1.5
NJ2				PKS	PKS	01 28 12.0	-0.8
NJ2				PP	PP		
	comp=Z,410nm,11.4s						
NJ2				LR	LR		
	comp=N,300nm,22.4s,MS5.0						
NJ2				LR	LR		
	comp=E,270nm,23.6s,MS5.0						
NJ2				LR	LR		
	comp=Z,320nm,23.4s,MS4.8						
GNI	**Garni**	**114.64**	**26**	PFAKE		01 24 50.0	+7.9
GNI				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
TAU	**Tasmania Unive**	**115.82**	**231**	PFAKE		01 24 50.0	+5.6
TAU				LR	LR		
	comp=Z,334nm,19.0s,MS5.0						
WMQ	**Urumqi**	**116.62**	**350**	*e*PDIF	Pdif	01 20 57.0	+0.6
WMQ				PP	PP	01 25 53.0	-0.3
WMQ				SKS	SKS	01 31 49.0	+11
WMQ				S		01 33 30.0	
WMQ				SS	SS	01 41 54.0	+0.6
WMQ				PP	PP		
	comp=Z,115nm,10.0s						
WMQ				LR	LR		
	comp=N,1µm,24.0s,MS5.5						
WMQ				LR	LR		
	comp=E,985nm,24.0s,MS5.5						
WMQ				LR	LR		
	comp=Z,1µm,24.0s,MS5.4						
DRV	**Dumont d'Urvil**	**117.23**	**204**	SP	SP	01 35 46.0	+13
GTA	**Gaotai**	**117.73**	**339**	PKP	PKPdf	01 24 43.5	-4.6
GTA				PP	PP	01 25 59.0	-2.2
GTA				PP	PP		
	comp=Z,383nm,11.8s						
GTA				LR	LR		
	comp=N,587nm,24.3s						
GTA				LR	LR		
	comp=E,542nm,19.0s						
GTA				LR	LR		
	comp=Z,733nm,22.8s,MS5.2						
AAK	**Ala-Archa**	**118.79**	**1**	PFAKE		01 25 00.0	+10
AAK				LR	LR		
	comp=Z,743nm,19.0s,MS5.3						
LZH	**Lanzhou**	**119.12**	**334**	*e*PKP	PKPdf	01 24 48.0	-2.9
LZH				PP	PP	01 26 10.3	-0.6
LZH				SKKS		01 33 01.0	
LZH				PP	PP		
	comp=Z,312nm,10.0s						
LZH				LR	LR		
	comp=E,839nm,17.5s						
LZH				LR	LR		
	comp=Z,1µm,18.7s,MS5.5						
LZH	**Lanzhou**	**119.12**	**334**	*e*PKP	PKPdf	01 24 48.0	-2.9
LZH				pPKP		01 24 54.5	
LZH				sPKP		01 24 58.5	
LZH				PP	PP	01 26 10.2	-0.7
LZH				*e*SKS	SKS	01 31 45.6	-1.3
LZH				SKKS		01 33 01.0	
LZH				SS	SS	01 42 22.0	-4.0
LZH				LR	LR		
	comp=Z,1µm,18.7s,MS5.5						
ENH	**Enshi**	**121.21**	**326**	PFAKE		01 25 00.0	+4.9
ENH				LR	LR		
	comp=Z,838nm,20.0s,MS5.4						
WB2	**Warramunga Arr**	**124.77**	**258**	*e*P	PKPdf	01 24 57.8	-4.5
WRA	**Warramunga Arr**	**124.78**	**258**	PKP	PKPdf	01 24 58.1	-4.2
	comp=Z,3.6nm,1.1s,baz=78,slow=2.7,SNR=28						
TSUM	**Tsumeb**	**125.45**	**100**	PFAKE		01 25 10.0	+6.4
TSUM				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
ASAR	**Alice Springs**	**125.71**	**254**	PKP	PKPdf	01 24 59.9	-4.1
	comp=Z,1.2nm,0.6s,baz=80,slow=2.3,SNR=11						
KMI	**Kunming**	**128.87**	**328**	PKP	PKPdf	01 25 03.0	-7.1
KMI				PP	PP	01 27 14.0	-2.6
KMI				SS	SS	01 44 33.0	+2.9
KMI				PP	PP		
	comp=Z,96nm,8.7s						
KMI				LR	LR		
	comp=N,629nm,19.0s,MS5.5						
KMI				LR	LR		
	comp=E,814nm,17.8s,MS5.5						
KMI				LR	LR		
	comp=Z,633nm,17.8s,MS5.3						
SUR	**Sutherland**	**129.35**	**117**	PFAKE		01 25 20.0	+9.2
SUR				LR	LR		
	comp=Z,740nm,22.0s,MS5.3						
LSA	**Lhasa**	**129.41**	**342**	PFAKE		01 25 20.0	+9.0
LSA				LR	LR		
	comp=Z,908nm,20.0s,MS5.5						
QIZ	**Qiongzhong**	**129.47**	**316**	PKP	PKPdf	01 25 06.5	-4.8
QIZ				PP	PP	01 27 21.0	+0.6
QIZ				SS	SS	01 44 39.5	+1.9
QIZ				LR	LR		
	comp=N,1µm,16.9s,MS5.6						
QIZ				LR	LR		
	comp=E,536nm,18.8s,MS5.6						
QIZ				LR	LR		
	comp=Z,1µm,18.0s,MS5.7						
QIZ	**Qiongzhong**	**129.47**	**316**	PFAKE		01 25 20.0	+8.7
QIZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
MAW	**Mawson**	**130.62**	**174**	PFAKE		01 25 20.0	+7.8
MAW				LR	LR		
	comp=Z,4µm,22.0s,MS6.0						
MBAR	**Mbarara**	**132.47**	**73**	PFAKE		01 25 30.0	+13
MBAR				LR	LR		
	comp=Z,594nm,20.0s,MS5.3						
BOSA	**Boshof**	**133.25**	**112**	PFAKE		01 25 30.0	+12
BOSA				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
LBTB	**Lobatse**	**133.49**	**107**	PFAKE		01 25 30.0	+11
LBTB				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
LSZ	**Lusaka**	**134.70**	**93**	PFAKE		01 25 30.0	+8.8
LSZ				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
CM31	**Chiang Mai Arr**	**136.35**	**327**	PFAKE		01 25 30.0	+5.8
CM31				LR	LR		
	comp=Z,638nm,19.0s,MS5.4						
CMAR	**Chiang Mai Arr**	**136.35**	**327**	PKP	PKPdf	01 25 20.5	-3.7
	comp=Z,1.3nm,0.4s,baz=1.4,slow=2.9,SNR=5.8						
MBWA	**Marble Bar**	**138.51**	**259**	PFAKE		01 25 40.0	+12
MBWA				LR	LR		
	comp=Z,862nm,19.0s,MS5.5						
KMBO	**Kilima Mbogo**	**138.54**	**69**	PFAKE		01 25 40.0	+12
KMBO				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
NWAO	**Narrogin (SRO)**	**140.22**	**241**	PFAKE		01 25 40.0	+9.1
NWAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
HYB	**Hyderabad**	**143.81**	**355**	*e*P	PKPbc	01 25 31.0	-0.4
HYB	**Hyderabad**	**143.81**	**355**	*i* PKP	PKPdf	01 25 33.5	-4.0
KULM	**Kulim**	**145.52**	**312**	*e*PKP	PKPdf	01 25 37.2	-3.5
COCO	**West Island**	**158.44**	**285**	PFAKE		01 26 10.0	+10
COCO				LR	LR		
	comp=Z,307nm,20.0s,MS5.1						
DGAR	**Diego Garcia**	**168.22**	**15**	PFAKE		01 26 20.0	+11
DGAR				LR	LR		
	comp=Z,318nm,21.0s						

*NEIC **28** 01:15:43.7, 18.60N×104.67W, h16^{km}, MD4.0(MEX), After MEX.*

MEX 28 01:15:42.9±1.5**, 18.60N×104.70W, h21^{km}**±**98^{km}, MD4.0, 1D, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.95**	**340**	*i* P	Pb	01 15 57.0	-3.7
CJM				*i* S	Sb	01 16 11.2	-1.7
CJM	**Chamela**	**0.95**	**340**	*i* P	Pb	01 15 57.0	-3.7
CJM				*i* S	Sb	01 16 10.2	-2.6
COLM	**Colima**	**1.11**	**58**	*i* P	Pb	01 16 00.6	-2.8
COLM				*i* S	Sb	01 16 12.7	-4.8
COLM	**Colima**	**1.11**	**58**	⇓*i*P	Pb	01 16 00.4	-2.9
COLM				*i* S	Sb	01 16 12.7	-4.7
CGX	**Ciudad Guzman**	**1.56**	**46**	*i* P	Pn	01 16 08.0	-1.9
CGX				*i* S	Sn	01 16 25.0	-4.6
SFJM	**Santa Fe**	**2.44**	**39**	*e*P	Pn	01 16 21.0	-1.5
ZIIG	**Zihuatanejo**	**3.23**	**107**	*i* P	Pn	01 16 41.0	+7.4
ZIIG				*i* S	Sn	01 17 09.3	-2.5
ZIIG	**Zihuatanejo**	**3.23**	**107**	*i* P	Pn	01 16 35.7	+2.1
ZIIG				*i* S	Sn	01 17 06.3	-5.5
MOIG	**Morelia**	**3.49**	**71**	*e*P	Pn	01 16 36.0	-1.3
MOIG				*i* S	Sn	01 17 16.6	-1.7
MOIG	**Morelia**	**3.49**	**71**	*e*P	Pn	01 16 33.6	-3.7
MOIG				*i* S	Sn	01 17 14.1	-4.3
PLIG	**Platanillo**	**4.93**	**92**	*e*P	Pn	01 17 08.0	+10
PLIG				*i* S	Sn	01 17 56.4	+1.4
PLIG	**Platanillo**	**4.93**	**92**	*e*P	Pn	01 17 03.9	+6.1
PLIG				*i* S	Sn	01 17 49.6	-5.4
PPM	**Popocatepetl**	**5.77**	**84**	*i* P	Pn	01 16 51.2	-18

OTT 28 01:16:19.1±0.7**, 70.28N×63.15W, h18^{km}, ML3.8**/9**, Baffin Bay 206km east from Clyde River, Nu Eastern Arctic Background Seismic Zone., Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PINU	**Pond Inlet**	**5.31**	**304**	PN	Pn	01 17 37.8	-1.7
PINU				SN	Sn	01 18 33.9	-7.1
TULEG	**Thule**	**6.50**	**348**	PN	Pn	01 17 53.2	-3.2
TULEG				SN	Sn	01 18 59.4	-11
FRB	**Frobisher Bay**	**6.89**	**200**	PN	Pn	01 17 59.4	-2.5
FRB				SN	Sn	01 19 12.6	-8.0
FRB				Trac		01 19 16.4	
	comp=Z,10.0nm,0.1s						
QILN	**Qililugaq Expl**	**9.24**	**258**	PN	P	01 18 30.8	-3.8
QILN				SN	Sn	01 20 09.4	-10
QILN				Trac		01 20 15.0	
	comp=Z,6.8nm,0.2s						
RES	**Resolute Bay**	**10.42**	**309**	PN	P	01 18 48.3	-2.4
RES				SN	S	01 20 37.7	-10
RES				Trac		01 20 40.5	
	comp=Z,0.9nm,0.2s						
EUNU	**Eureka**	**11.33**	**340**	PN	P	01 19 00.1	-2.9
EUNU				SN	S	01 20 55.5	-15
YRTN	**Rankin Inlet**	**13.61**	**251**	PN	P	01 19 28.7	-4.6
YRTN				SN	S	01 21 48.6	-16
YRTN				Trac		01 22 13.1	
	comp=Z,2.9nm,0.2s						
SCO	**Scoresbysund**	**13.65**	**70**	*i* P	P	01 19 24.9	-8.9
SCHQ	**Schefferville**	**15.59**	**188**	PN	P	01 19 55.4	-3.9
SCHQ				SN	S	01 22 36.9	-15
SCHQ				Trac		01 22 46.9	
	comp=Z,1.5nm,0.4s						
FCC	**Fort Churchill**	**17.34**	**244**	PN	P	01 20 18.4	-3.1
FCC				SN	S	01 23 18.2	-14
FCC				Trac		01 23 24.7	
	comp=Z,0.6nm,0.2s						
SILO	**Sutton Inlier**	**18.59**	**223**	PN	P	01 20 33.9	-3.2
SILO				SN	S	01 23 46.6	-14
SILO				Trac		01 23 50.5	
	comp=Z,0.6nm,0.2s						
VIMO	**Victor Mine**	**19.88**	**219**	PN	P	01 20 49.0	-3.0
VIMO				Trac		01 24 24.6	
	comp=Z,1.0nm,0.3s						
MNQ	**Manicouagan**	**19.98**	**191**	SN	S	01 24 16.4	-15
MNQ				Trac		01 24 40.1	
	comp=Z,0.6nm,0.2s						

*IDC **28** 01:24:51.7±0.7, 34.99S×108.22W, mb4.6/14, mb1 4.7/14, mb1mx4.5/20, mbtmp4.6/14, MS5.1/12, Ms1 5.0/12, ms1mx4.8/15, Error ellipse: s-maj=24.8km s-min=18.8km az=45.0*

*BJI **28** 01:24:54.6, 34.90S×107.90W, h10^{km}, mB5.6, Ms5.9, Msz5.5*

*NEIC **28** 01:24:54.7±0.4, 34.92S×107.87W, h10^{km}, mb5.1/23, MS5.3/12, Error ellipse: s-maj=14.0km s-min=9.5km az=60.0*

*HRVD **28** 01:24:54.7±0.1, 35.07S×107.86W, h17^{km}, MW5.9/80, Centroid moment Tensor Solution. LP body waves: s76,c173;Mantle waves: s80,c299; Half duration: 2^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.38±.07; $M_{\theta\theta}$-2.57±.07; $M_{\phi\phi}$2.95±.07; $M_{r\theta}$0.36±.18; $M_{\theta\phi}$-8.18±.07; $M_{\phi r}$-0.99±.19; Best double couple: $M_0$8.693×10^{17} NP1: ϕ_s99°, δ84°, λ177°. NP2:ϕ_s189°, δ87°, λ6°. Principal axes: T 8.934, Plg6°, Azm54°; N -.48, Plg83°, Azm216°; P -8.453, Plg2°, Azm324°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **28** 01:24:56.2±1.9, 34.43S×107.37W, h10^{km}, mb5.3/9 Error ellipse: s-maj=28.8km s-min=15.8km az=83.0*

ISC 28 01:24:53.3±0.5**, 34.86S**±0.08×**107.8W**±0.1**, h10^{km}, n137,** σ**1^{s}22**/73**, mb4.8**/34**, MS5.2**/29**, 8C-4D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**29.83**	**112**	P	**P**	**01 31 03.9**	**+1.2**
	26nm,0.9s,mb5.0,baz=264,slow=8.9,SNR=37						
PLCA	**Paso Flores**	**29.83**	**112**	*e*P	**P**	**01 31 03.5**	**+0.8**
	44nm,1.1s,mb5.1						
PLCA				LR	LR		
	comp=Z,6µm,20.0s,MS5.2						
USHA	**Ushuaia**	**33.69**	**139**	P	**P**	**01 31 35.7**	**-0.7**
	comp=Z,28nm,1.2s,mb5.1,baz=126,slow=4.6,SNR=4.5						
USHA				LR	LR	01 41 45.9	
	comp=Z,16µm,20.2s,MS5.7,baz=266,slow=30						
USHA	**Ushuaia**	**33.69**	**139**	P	**P**	**01 31 35.7**	**-0.7**
USHA				LR	LR	01 41 45.9	
LVC	**Limon Verde**	**35.97**	**81**	P	**P**	**01 31 58.1**	**+1.8**
	comp=Z,27nm,1.0s,mb5.2,baz=238,slow=8.7,SNR=31						
LVC	**Limon Verde**	**35.97**	**81**	*e*P	**P**	**01 31 57.6**	**+1.3**
	comp=Z,41nm,1.1s,mb5.3						
LVC				LR	LR		
	comp=Z,7µm,21.0s,MS5.4						
NNA	**Nana**	**36.13**	**59**	*e*P	**P**	**01 31 56.6**	**-1.1**
	comp=Z,113nm,1.6s,mb5.5						
NNA				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
TRQA	**Tornquist**	**36.68**	**109**	*e*P	**P**	**01 32 03.3**	**+1.2**
	comp=Z,63nm,1.4s,mb5.2						
TRQA				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
ARE	**Arequipa**	**37.21**	**70**	*e*P	**P**	**01 32 08.0**	**+1.3**
LPAZ	**La Paz**	**39.93**	**73**	*e*P	**P**	**01 32 31.2**	**+1.7**
	comp=Z,38nm,0.9s,mb5.1						
LPAZ				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
CPUP	**Villa Florida**	**43.86**	**93**	P	**P**	**01 33 00.6**	**-0.9**
SAML	**Samuel**	**48.19**	**68**	*e*P	**P**	**01 33 35.2**	**-0.9**
	comp=Z,46nm,1.3s,mb5.3						
SAML				LR	LR		
	comp=Z,6µm,20.0s,MS5.6						
JTS	**JuntasAbangare**	**49.83**	**30**	P	**P**	**01 33 48.4**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.5,baz=274,slow=22,SNR=4.4						
JTS	**JuntasAbangare**	**49.83**	**30**	*e*P	**P**	**01 33 48.9**	**+0.1**
	comp=Z,45nm,1.4s,mb5.3						
JTS				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
ROSC	**El Rosal**	**50.51**	**45**	P	**P**	**01 33 55.5**	**+1.6**
	comp=Z,29nm,0.8s,mb5.3,baz=126,slow=4.3,SNR=35						
ROSC				LR	LR	01 51 22.0	
	comp=Z,5µm,21.6s,MS5.5,baz=203,slow=31						
SDV	**Santo Domingo**	**55.91**	**46**	*e*P	**P**	**01 34 31.7**	**-2.3**
	comp=Z,12nm,0.9s,mb4.9						
SDV				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
BDFB	**Brasilia**	**56.52**	**86**	P	**P**	**01 34 38.1**	**-0.3**
	comp=Z,12nm,0.9s,mb4.9,baz=240,slow=6.3,SNR=13						
BDFB				LR	LR	01 55 49.1	
	comp=Z,2µm,21.1s,MS5.3,baz=244,slow=33						
BAO	**Brasilia Array**	**56.55**	**86**	P	**P**	**01 34 37.8**	**-0.7**
CAM4	**Nova Friburgo**	**57.69**	**96**	*e*P	**P**	**01 34 44.4**	**-2.2**
CAM4				*i*		01 34 49.7	
CAM4				*i*		01 34 52.0	
CAM4				*i*		01 34 56.2	
CAM4				*i*		01 34 59.1	
VNA3	**Neumayer Olymp**	**59.94**	**158**	*e*	**P**	**01 35 02.7**	**+1.1**
VNA3	**Neumayer Olymp**	**59.94**	**158**	*e*	**P**	**01 35 04.1**	**+2.5**
VNA3	**Neumayer Olymp**	**59.94**	**158**	*e*	PcP	01 35 43.7	-3.9
VNA3	**Neumayer Olymp**	**59.94**	**158**	⇓*i*P	**P**	**01 34 59.6**	**-2.0**
VNA3				*e*	pP	01 35 04.1	-0.6
VNA3				*e*		01 35 43.7	
VNA3				*e*		01 39 48.6	
VNA2	**Neumayer--Watz**	**60.75**	**158**	*e*	**P**	**01 35 10.1**	**+3.0**
VNA2	**Neumayer--Watz**	**60.75**	**158**	*e*	**P**	**01 35 11.2**	**+4.1**
VNA2	**Neumayer--Watz**	**60.75**	**158**	*e*	PcP	01 35 50.8	0.0
VNA2	**Neumayer--Watz**	**60.75**	**158**	⇓*i*P	**P**	**01 35 06.9**	**-0.2**
VNA2				*e*	pP	01 35 10.1	-0.1
VNA2				*e*	pP	01 35 11.2	+1.0
VNA2				*e*		01 35 50.8	
VNA2				*e*		01 39 49.7	
SNAA	**Sanae**	**61.79**	**160**	⇓*i*P	**P**	**01 35 11.4**	**-2.7**
SNAA	**Sanae**	**61.79**	**160**	P	**P**	**01 35 17.9**	**+3.8**
TXAR	**Lajitas Array**	**63.96**	**4**	P	**P**	**01 35 28.4**	**-0.7**
	comp=Z,2.2nm,0.7s,mb4.3,baz=184,slow=8.2,SNR=12						
TXAR				LR	LR	01 58 35.6	
	comp=Z,519nm,20.7s,MS4.7,baz=145,slow=32						
JCT	**Junction City**	**65.42**	**8**	*e*P	**P**	**01 35 37.4**	**-1.1**
JCT				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
JCT	**Junction City**	**65.42**	**8**	*e*P	**P**	**01 35 37.4**	**-1.1**
	comp=Z,20nm,0.8s,mb5.2						
SJG	**San Juan**	**65.86**	**44**	*e*P	**P**	**01 35 38.2**	**-3.3**
SJG				pmax	pmax		
	comp=Z,42nm,1.3s						
SJG	**San Juan**	**65.86**	**44**	*e*P	**P**	**01 35 38.2**	**-3.3**
	comp=Z,42nm,1.3s,mb5.3						
MNTX	**Cornudas Mount**	**66.24**	**2**	P	**P**	**01 35 44.0**	**+0.3**
	comp=Z,9.3nm,1.3s,mb4.7						
NATX	**Nacogdoches**	**67.40**	**12**	*e*P	**P**	**01 35 49.9**	**-1.2**
	comp=Z,30nm,0.9s,mb5.3						
ANMO	**Albuquerque**	**69.46**	**1**	*e*P	**P**	**01 36 03.2**	**-0.7**
	comp=Z,3.7nm,1.1s,mb4.2						
ANMO				LR	LR		
	comp=Z,721nm,22.0s,MS4.9						
WMOK	**Wichita Mounta**	**69.74**	**8**	P	**P**	**01 36 07.5**	**+1.9**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WMOK	**Wichita Mounta**	**69.74**	**8**	P	**P**	**01 36 07.5**	**+2.0**
	comp=Z,2.5nm,0.8s,mb4.2						
LDFC	**Landfair**	**69.91**	**354**	*e*P	**P**	**01 36 07.4**	**+0.8**
WUAZ	**Wupatki**	**70.09**	**357**	*e*P	**P**	**01 36 08.8**	**+1.2**
	comp=Z,121nm,1.1s,mb5.7						
PV01	**Paradox Valley**	**72.63**	**359**	*e*P	**P**	**01 36 23.9**	**+1.0**
PV10	**Paradox Valley**	**72.87**	**359**	*e*P	**P**	**01 36 23.9**	**-0.4**
MNV	**Mina**	**73.55**	**352**	*e*P	**P**	**01 36 29.9**	**+1.6**
	comp=Z,17nm,1.0s,mb4.9						
MNV				LR	LR		
	comp=Z,620nm,21.0s,MS4.9						
NVAR	**Mina Array Bea**	**73.57**	**351**	P	**P**	**01 36 27.1**	**-1.3**
	comp=Z,2.2nm,0.8s,mb4.1,baz=200,slow=7.9,SNR=12						
NVAR				LR	LR	02 03 08.4	
	comp=Z,212nm,19.3s,MS4.4,baz=305,slow=31						
SYO	**Syowa Base**	**73.67**	**168**	⇑P	**P**	**01 36 28.7**	**+0.4**
SYO	**Syowa Base**	**73.67**	**168**	⇑pP	pP	01 36 32.7	+1.3
CCM	**Cathedral Cave**	**74.15**	**13**	*e*P	**P**	**01 36 30.0**	**-1.7**
CCM				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CCM	**Cathedral Cave**	**74.15**	**13**	*e*P	**P**	**01 36 30.0**	**-1.7**
	comp=Z,14nm,1.0s,mb4.8						
FVM	**French Village**	**74.24**	**14**	P	**P**	**01 36 31.1**	**-1.1**
FVM				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
FVM	**French Village**	**74.24**	**14**	P	**P**	**01 36 31.1**	**-1.2**
	comp=Z,13nm,0.9s,mb4.9						
KSU1	**Kansas State U**	**74.31**	**9**	P	**P**	**01 36 31.2**	**-1.5**
DAU	**Daniels Canyon**	**74.97**	**357**	*e*P	**P**	**01 36 36.2**	**-0.2**
JLU	**Jordanelle**	**75.16**	**357**	*e*P	**P**	**01 36 35.6**	**-1.9**
BW06	**Boulder Array**	**77.27**	**359**	*e*P	**P**	**01 36 49.9**	**+0.6**
	comp=Z,14nm,1.1s,mb4.8						
PDAR	**Pinedale Array**	**77.27**	**359**	P	**P**	**01 36 47.8**	**-1.5**
	comp=Z,2.2nm,0.8s,mb4.1,baz=148,slow=4.4,SNR=14						
MAW	**Mawson**	**77.61**	**176**	LR	LR	02 12 04.6	
	comp=Z,1µm,18.1s,MS5.3,baz=184,slow=37						
TPAW	**Teton Pass**	**78.03**	**358**	*e*P	**P**	**01 36 54.7**	**+1.2**
WUWY	**Wally Ulrich**	**78.07**	**358**	*e*P	**P**	**01 36 54.1**	**+0.4**
HLID	**Hailey**	**78.28**	**355**	*e*P	**P**	**01 36 55.3**	**+0.5**
	comp=Z,15nm,0.9s,mb4.9						
IMW	**Indian Meadow**	**78.43**	**358**	*e*P	**P**	**01 36 57.0**	**+1.3**
QLMT	**Earthquake Lak**	**79.38**	**357**	*e*P	**P**	**01 37 03.5**	**+2.6**
MCMT	**McKenzie Canyo**	**79.44**	**356**	*e*P	**P**	**01 37 02.1**	**+0.9**
BMO	**Blue Mountains**	**79.81**	**353**	*e*P	**P**	**01 37 03.2**	**+0.1**
	comp=Z,7.6nm,1.2s,mb4.5						
BOZ	**Bozeman (W)**	**80.21**	**357**	*e*P	**P**	**01 37 06.6**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
BOZ	**Bozeman (W)**	**80.21**	**357**	*e*P	**P**	**01 37 06.5**	**+1.3**
	comp=Z,20nm,1.5s,mb4.8						
LAO	**LASA Array**	**81.18**	**1**	*e*P	**P**	**01 37 10.2**	**-0.2**
	comp=Z,38nm,1.4s,mb5.1						
CHMT	**Chamberlain Mo**	**81.55**	**356**	P	**P**	**01 37 13.4**	**+1.1**
NEW	**Newport**	**83.17**	**354**	P	**P**	**01 37 19.8**	**-0.9**
	comp=Z,2.7nm,0.9s,mb4.3,baz=222,slow=4.2,SNR=3.5						
NEW	**Newport**	**83.17**	**354**	P	**P**	**01 37 19.8**	**-0.9**
SADO	**Sadowa**	**83.40**	**20**	P	**P**	**01 37 22.7**	**+0.8**
	comp=Z,4.0nm,0.7s,mb4.5,baz=303,slow=4.1,SNR=3.0						
PGC	**Sidney**	**84.31**	**350**	*e*P	**P**	**01 37 26.6**	**+0.2**
ULM	**Lac du Bonnet**	**85.39**	**8**	P	**P**	**01 37 31.2**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.6,baz=201,slow=7.6						
ULM	**Lac du Bonnet**	**85.39**	**8**	P	**P**	**01 37 31.2**	**-0.6**
STKA	**Stephens Creek**	**87.00**	**233**	LR	LR	02 10 36.9	
	comp=Z,1µm,18.7s,MS5.3,baz=105,slow=32						
STKA	**Stephens Creek**	**87.00**	**233**	*e*P	**P**	**01 37 45.4**	**+5.2**
CTA	**Charters Tower**	**91.06**	**245**	LR	LR	02 14 20.3	
	comp=Z,677nm,18.7s,MS5.1,baz=46,slow=33						
SCHQ	**Schefferville**	**96.00**	**22**	LR	LR	02 16 45.1	
	comp=Z,628nm,18.1s,MS5.1,baz=213,slow=32						
PMG	**Port Moresby**	**96.82**	**254**	LR	LR	02 12 25.0	
	comp=Z,413nm,18.5s,MS4.9,baz=139,slow=30						
YKA	**Yellowknife Ar**	**97.17**	**357**	P	**P**	**01 38 26.1**	**-0.4**
	comp=Z,0.8nm,0.9s,mb4.1,baz=171,slow=4.5,SNR=11						
YKA				LR	LR	02 20 16.7	
	comp=Z,713nm,18.5s,MS5.2,baz=195,slow=34						
ASAR	**Alice Springs**	**97.51**	**234**	P	**P**	**01 38 27.5**	**-1.5**
	comp=Z,0.6nm,0.9s,mb4.1,baz=135,slow=2.6,SNR=3.3						
ASAR				LR	LR	02 18 38.4	
	comp=Z,1µm,18.0s,MS5.3,baz=130,slow=33						
PET	**Petropavlovsk**	**118.98**	**316**	*e*PKIKP	PKPdf	01 43 37.6	-7.4
PET				*e*		02 01 47.4	
NKC	**Novy Kostel**	**134.58**	**51**	*e*PKP	PKPdf	01 44 16.0	+1.2
NKC				AMS	AMS	02 32 50.0	
	comp=Z,900nm,22.5s						
CLL	**Collm**	**134.99**	**50**	*e*PKIKP	PKPdf	01 44 16.0	+0.4
CLL				*e*		01 44 22.0	
CLL				MLR	MLR		
	comp=Z,800nm,20.5s,MS5.4						
CLL	**Collm**	**134.99**	**50**	*e*PKIKP	PKPdf	01 44 16.0	+0.4
CLL				*e*		01 44 22.0	
CLL				*e*		02 13 48.0	
CLL				*e*		02 22 44.0	
HFS	**Hagfors**	**135.02**	**37**	PKP	PKPdf	01 44 12.6	-2.8
	comp=Z,2.2nm,0.8s,baz=212,slow=5.0,SNR=2.7						
KHC	**Kasperske Hory**	**135.23**	**53**	*e*PKP	PKPdf	01 44 16.5	+0.4
KHC				*e*x	x	01 44 23.9	
KHC				AMS	AMS	02 36 20.0	
	comp=Z,700nm,20.1s						
GERES	**GERESS Array B**	**135.29**	**53**	PKP	PKPdf	01 44 13.6	-2.6
	comp=Z,1.1nm,0.8s,baz=315,slow=5.7,SNR=5.4						
MDJ	**Mudanjiang**	**135.65**	**301**	PKP	PKPdf	01 44 18.5	+1.5
PRU	**Pruhonice**	**135.91**	**52**	AMS	AMS	02 34 00.0	
	comp=Z,800nm,21.6s						
PVCC	**Panska Ves**	**135.95**	**51**	*e*PKP	PKPdf	01 44 25.1	+7.8
UPC	**Upice**	**136.87**	**51**	*e*PKP	PKPdf	01 44 28.6	+10
DPC	**Dobruska-Polom**	**137.06**	**51**	*e*PKP	PKPdf	01 44 22.9	+3.6
DPC				AMS	AMS	02 37 50.0	
	comp=Z,800nm,23.6s						
OKC	**Ostrava-Krasne**	**138.24**	**52**	AMS	AMS	02 35 20.0	
	comp=Z,800nm,24.9s						
CN2	**Changchun**	**138.50**	**299**	*e*PKP	PKPdf	01 44 20.0	-2.2

CN2				PP	PP	01 47 15.0	+1.4
CN2				*e*SS	SS	02 05 23.3	-0.7
CN2				LR	LR		
	comp=N,500nm,18.0s,MS5.4						
CN2				LR	LR		
	comp=E,300nm,18.0s,MS5.4						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS5.0						
SSE	**Sheshan**	**139.08**	**279**	PKP	PKPdf	01 44 25.0	+1.4
SSE				LR	LR		
	comp=N,200nm,20.0s,MS5.1						
SSE				LR	LR		
	comp=E,249nm,20.0s,MS5.1						
SSE				LR	LR		
	comp=Z,310nm,22.7s,MS5.0						
SSE	**Sheshan**	**139.08**	**279**	PKP	PKPdf	01 44 25.3	+1.7
SSE				LR	LR		
	comp=Z,310nm,22.7s,MS5.0						
FINES	**FINESS Array B**	**140.59**	**33**	PKP	PKPdf	01 44 21.6	-3.7
	comp=Z,1.1nm,0.8s,baz=198,slow=12,SNR=3.7						
NJ2	**Nanjing**	**141.27**	**279**	*e*PKP	PKPdf	01 44 24.3	-3.2
NJ2				PP	PP	01 47 31.0	+0.4
NJ2				PP	PP		
	comp=Z,270nm,7.5s						
NJ2				LR	LR		
	comp=N,870nm,19.5s,MS5.7						
NJ2				LR	LR		
	comp=E,1µm,17.4s,MS5.7						
NJ2				LR	LR		
	comp=Z,580nm,21.0s,MS5.3						
BURAR	**Bucovina Array**	**142.97**	**55**	⇓P	PKPdf	01 44 19.6	-10
MLR	**Muntele Rosu**	**143.53**	**59**	PKP	PKPdf	01 44 28.6	-2.3
	comp=Z,6.4nm,1.1s,slow=5.1,SNR=3.7						
MLR	**Muntele Rosu**	**143.53**	**59**	⇑P	PKPbc	01 44 27.5	+1.0
MLR	**Muntele Rosu**	**143.53**	**59**	⇑P	PKPbc	01 44 27.5	+1.0
BOD	**Bodaibo**	**143.99**	**323**	*e*PKHKP		01 44 22.9	
BOD				pmax	pmax		
	comp=Z,12nm,1.4s						
VRI	**Vrincioaia**	**144.07**	**58**	⇑P	PKPbc	01 44 35.5	+7.4
WHN	**Wuhan**	**144.49**	**275**	*e*PKP	PKPdf	01 44 35.0	+1.9
BJI	**Beijing**	**145.00**	**292**	PKP	PKPdf	01 44 31.0	-2.7
BJI				SKS	SKS	01 51 39.3	-2.9
BJI				SKKS		01 54 37.3	
BJI				SS	SS	02 06 43.5	+4.0
BJI				LR	LR		
	comp=N,1µm,19.1s,MS5.8						
BJI				LR	LR		
	comp=E,1µm,16.8s,MS5.8						
BJI				LR	LR		
	comp=Z,1µm,19.6s,MS5.8						
BJI	**Beijing**	**145.00**	**292**	PKP	PKPdf	01 44 31.8	-1.9
BJI				SKS	SKS	01 51 39.2	-3.0
BJI				SKKS		01 54 37.2	
BJI				SS	SS	02 06 43.4	+3.9
BJI				LR	LR		
	comp=Z,1µm,19.6s,MS5.8						
BJT	**Baijiatuau**	**145.01**	**292**	*e*PKP2	PKPab	01 44 31.7	-0.3
TIRR	**Tirgusor**	**145.29**	**61**	⇑P	PKPbc	01 44 37.3	+5.9
TIRR	**Tirgusor**	**145.29**	**61**	⇑P	PKPbc	01 44 37.3	+5.8
KIS	**Kishinev**	**145.45**	**56**	*e*PKHKP		01 44 30.0	
OBN	**Obninsk**	**148.16**	**39**	*e*PKPdf	PKPdf	01 44 38.1	-0.4
EIL	**Elat**	**148.17**	**89**	*e*PKPbc	PKPdf	01 44 43.5	+4.2
ENH	**Enshi**	**148.39**	**272**	PKPdf	PKPdf	01 44 41.4	+1.8
MOS	**Moscow**	**148.43**	**38**	*e*PKP2	PKPab	01 44 44.0	-0.8
MOS				pmax	pmax		
	comp=Z,39nm,1.0s						
NST	**Nakhon Sawan**	**148.53**	**240**	P	PKPdf	01 44 38.0	-2.2
BTO	**Baotou**	**149.73**	**292**	*e*PKP	PKPdf	01 44 39.5	-2.0
XAN	**Xi’an**	**149.84**	**279**	PKP	PKPdf	01 44 42.5	+0.6
NANT	**Nan**	**150.12**	**245**	P	PKPdf	01 44 43.5	+0.8
BDT	**Bhumibol Dam**	**150.38**	**241**	P	PKPdf	01 44 45.0	+1.9
ASF	**Jabal al Asfar**	**150.51**	**85**	PKPbc	PKPdf	01 44 43.9	+1.0
	comp=Z,2.3nm,0.9s,baz=99,slow=3.8,SNR=4.2						
ULN	**Ulaanbaatar**	**151.07**	**307**	*e*PKIKP	PKPdf	01 44 43.0	-0.3
ULN				*e*		01 44 48.0	
CMAR	**Chiang Mai Arr**	**151.21**	**242**	PKPbc	PKPdf	01 44 46.3	+2.0
	comp=Z,3.8nm,0.8s,baz=181,slow=1.9,SNR=9.4						
CHG	**Chiang Mai**	**151.43**	**243**	⇑P	PKPdf	01 44 59.5	+15
	comp=Z,12nm,0.4s						
SONM	**Songino Array**	**151.51**	**308**	PKPbc	PKPdf	01 44 45.9	+2.0
	comp=Z,5.1nm,0.9s,baz=129,slow=0.8,SNR=22						
TLY	**Talaya**	**151.91**	**316**	*i* PKIKP	PKPdf	01 44 47.6	+3.2
TLY				pmax	pmax		
	comp=Z,12nm,1.2s						
KMI	**Kunming**	**151.95**	**258**	PKP	PKPdf	01 44 45.0	-0.3
KMI	**Kunming**	**151.95**	**258**	PKP	PKPdf	01 44 45.1	-0.2
KMI				PKPab	PKPab	01 45 04.7	+4.3
KMI				PP	PP	01 48 30.9	-2.0
KMI				SS	SS	02 07 48.8	-8.5
KMI				LR	LR		
	comp=Z,480nm,27.2s,MS5.2						
ZAK	**Zakamensk**	**152.64**	**314**	*e*PKIKP	PKPdf	01 44 52.0	+6.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MALT	**Malatya**	**152.72**	**73**	*e*PKIKP	PKPdf	01 44 47.2	+1.2
MALT				*e*		01 44 53.9	
LZH	**Lanzhou**	**154.28**	**282**	*e*PKP	PKPdf	01 44 46.0	-2.2
LZH				XPKP		01 44 50.8	
LZH				PP	PP	01 48 47.0	+0.8
LZH				*e*SKS	SKS	01 51 48.0	-6.3
LZH				SKKS		01 55 32.0	
LZH				SS	SS	02 08 24.5	+1.8
LZH				PP	PP		
	comp=Z,300nm,5.8s						
LZH				LR	LR		
	comp=E,635nm,19.7s						
LZH				LR	LR		
	comp=Z,900nm,21.0s,MS5.6						
SVE	**Sverdlovsk**	**156.65**	**16**	*e*PKIKP	PKPdf	01 44 51.0	+0.4
SVE				*e*		01 45 16.2	
NVS	**Novosibirsk**	**158.60**	**342**	*e*PKIKP	PKPdf	01 44 59.8	+6.6
NVS				pmax	pmax		
	comp=Z,21nm,2.4s						
NVS				pmax	pmax		
	comp=E,14nm,2.3s						
BVAR	**Borovoye Array**	**161.79**	**4**	PKPab	PKPab	01 45 40.8	-0.8
	comp=E,1.2nm,0.8s,baz=252,slow=4.7,SNR=4.8						
POO	**Poona**	**163.67**	**185**	*e*	PKPab	01 46 10.5	+20
WMQ	**Urumqi**	**165.08**	**311**	*e*PKP	PKPdf	01 45 03.0	+2.8
WMQ				PP	PP	01 49 49.0	+5.1
WMQ				SKKS		01 56 35.0	
WMQ				PP	PP		
	comp=Z,135nm,12.0s						
WMQ				LR	LR		
	comp=N,854nm,25.0s						
WMQ				LR	LR		
	comp=E,657nm,25.0s						
WMQ				LR	LR		
	comp=Z,887nm,25.0s						

MEX 28 01:39:01.9±0.8, 18.75N×104.59W, h24^{km}±59^{km}, MD3.9, 1D, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.86**	**330**	*i* P	Pb	01 39 15.9	-2.2
CJM				*i* S	Sb	01 39 25.7	-3.4
COLM	**Colima**	**0.95**	**63**	⇓*i*P	Pb	01 39 16.3	-3.2
COLM				*i* S	Sb	01 39 28.6	-3.1
CGX	**Ciudad Guzman**	**1.38**	**47**	*e*P	Pn	01 39 24.0	-2.0
CGX				*i* S	Sn	01 39 41.0	-2.6
ZAIG	**Zacatecas**	**4.42**	**25**	*i* P	Pn	01 40 06.9	-2.4
ZAIG				*i* S	Sn	01 40 54.7	-6.0
PLIG	**Platanillo**	**4.83**	**93**	*i* S	Sn	01 41 06.7	-4.5

*NEIC **28** 01:48:53.2, 16.22N×98.70W, h6^{km}, MD3.9(MEX), After MEX.*

MEX 28 01:48:52.1±0.8, 15.97N×98.72W, h16^{km}±25^{km}, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.71**	**53**	*i* P	Pb	01 49 03.6	-2.0
PNIG				*i* S	Sb	01 49 12.5	-2.4
ACX	**Acapulco**	**1.46**	**308**	*e*P	Pn	01 49 14.0	-4.0
ACX				*i* S	Sb	01 49 33.0	-3.5
ACX	**Acapulco**	**1.46**	**308**	*e*P	Pn	01 49 14.0	-4.0
ACX				*i* S	Sb	01 49 32.5	-4.0
CAIG	**El Cayaco**	**1.83**	**306**	*i* P	Pn	01 49 20.2	-3.2
CAIG				*i* S	Sn	01 49 40.7	-5.7
VHO	**Vista Hermosa**	**2.20**	**60**	*i* P	Pn	01 49 24.2	-4.5
VHO				*i* S	Sn	01 49 51.6	-4.0
VHO	**Vista Hermosa**	**2.20**	**60**	*i* P	Pn	01 49 25.4	-3.2
VHO				*i* S	Sn	01 49 49.3	-6.4
OXX	**Oaxaca**	**2.21**	**60**	*i* P	Pn	01 49 31.5	+2.7
OXX				*i* S	Sn	01 49 58.0	+2.0
PLIG	**Platanillo**	**2.53**	**343**	*i* P	Pn	01 49 28.9	-4.4
PLIG				*i* S	Sn	01 49 54.8	-9.2
PLIG	**Platanillo**	**2.53**	**343**	*i* P	Pn	01 49 28.9	-4.4
PLIG				*i* S	Sn	01 49 57.0	-6.9
YAIG	**Yautepec**	**2.90**	**353**	*e*P	Pn	01 49 38.4	-0.2
YAIG				*e*S	Sn	01 50 04.9	-8.5
YAIG	**Yautepec**	**2.90**	**353**	*e*P	Pn	01 49 38.4	-0.2
YAIG				*e*S	Sn	01 50 07.5	-5.9
IIB	**San Bernardino**	**3.00**	**7**	*e*P	Pn	01 49 40.0	-0.1
PPM	**Popocatepetl**	**3.09**	**2**	*e*P	Pn	01 49 40.5	-0.7
PPM				*i* S	Sn	01 50 10.1	-8.0
PPM	**Popocatepetl**	**3.09**	**2**	*e*P	Pn	01 49 36.0	-5.2
PPM				*e*P		01 49 37.3	
PPM				*i* S	Sn	01 50 16.5	-1.6
IISM	**Ciudad Serdan**	**3.27**	**23**	*e*P	Pn	01 49 49.0	+5.2
IISM	**Ciudad Serdan**	**3.27**	**23**	*e*P	Pn	01 49 41.0	-2.8
UNM	**Universidad Na**	**3.37**	**353**	*e*P	Pn	01 49 57.5	+12
UNM	**Universidad Na**	**3.37**	**353**	*e*P	Pn	01 49 45.0	-0.3

*NEIC **28** 01:55:42.9±0.9, 4.68N×93.52E, h30^{km}, mb4.4/3, Error ellipse: s-maj=21.2km s-min=11.4km az=61.0*

*IDC **28** 01:56:00.7±11.0, 5.39N×94.62E, h164^{km}±105^{km}, mb3.2/4, mb1 3.5/5, mb1mx3.3/14, mbtmp3.7/5, Error ellipse: s-maj=83.0km s-min=20.5km az=58.0*

ISC 28 01:55:40.8±1.2, 4.7N±0.1×93.6E±0.2, h30^{km}, n11, σ0^{s}80/11, mb3.9/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**7.10**	**85**	P	**Pn**	**01 57 25.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**14.63**	**21**	P	**P**	**01 59 08.0**	**+0.2**
	0.7nm,0.3s,baz=215,slow=12,SNR=5.8						
SONM	**Songino Array**	**44.34**	**12**	P	**P**	**02 03 47.4**	**-2.7**
	0.6nm,0.6s,mb3.5,baz=180,slow=8.6,SNR=5.8						
WRA	**Warramunga Arr**	**47.00**	**123**	P	**P**	**02 04 11.5**	**-0.1**
	1.0nm,0.8s,mb3.8,baz=300,slow=10,SNR=18						
WRAB	**Tennant Creek**	**47.00**	**123**	*e*P	**P**	**02 04 11.0**	**-0.5**
	2.9nm,0.7s,mb4.3						
WB2	**Warramunga Arr**	**47.01**	**123**	*e*P	**P**	**02 04 11.5**	**-0.1**
KURK	**Kurchatov**	**47.51**	**347**	*e*P	**P**	**02 04 15.6**	**+0.4**
	1.3nm,0.3s,mb4.4						
ASAR	**Alice Springs**	**48.42**	**127**	P	**P**	**02 04 23.2**	**+0.5**
	0.3nm,0.4s,mb3.7,baz=300,slow=8.1,SNR=4.7						
CHKZ	**Chkalovo**	**52.27**	**343**	*e*P	**P**	**02 04 52.1**	**+0.5**
	2.4nm,0.7s,mb4.2						
GERES	**GERESS Array B**	**79.77**	**319**	P	**P**	**02 07 52.2**	**+4.5**
	0.6nm,0.8s,mb3.6,baz=104,slow=5.5,SNR=3.9						
GERES	**GERESS Array B**	**79.77**	**319**	P	**P**	**02 07 52.2**	**+4.5**

*NIED **28** 02:01:00, 24.50N×122.00E, h5^{km}, Mw4.0 Best double couple: $M_0$9.55×10^{14} NP1:ϕ_s49°, δ61°, λ-100°. NP2: ϕ_s248°, δ30°, λ-73°.*

*TAP **28** 02:01:08.5, 24.77N×122.04E, h7^{km}, ML4.4*

TAP Felt I J at Santiao Chiao, III J at Suao, II J at Ilan, II J at Neicheng, III J at Nanau, II J at Nioudou, I J at Sanguang, I J at Nanshan, I J at Nanjuang, I J at Tachien.

*JMA **28** 02:01:09.6±0.3, 24.48N×121.97E, h31^{km}, M3.6*

ISC 28 02:01:08.6±0.4, 24.78N±0.02×122.11E±0.02, h1^{km}±3^{km}, n60, σ0^{s}96/86, 5C-7D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		**0.18**	**293**	⇓*i*P	**Pg**	**02 01 12.3**	**+0.2**
EGS				S	**Sg**	**02 01 14.4**	**-0.1**
TWB1	**Santiao Chiao**	**0.26**	**335**	⇓*i*P	**Pg**	**02 01 14.0**	**+0.2**
TWB1				S	**Sg**	**02 01 17.3**	**+0.1**
TWC	**Suao**	**0.29**	**235**	⇑*i*P	**Pg**	**02 01 14.5**	**+0.1**
ILA	**Ilan**	**0.33**	**268**	*i* P	**Pg**	**02 01 15.2**	**0.0**
ILA				S	**Sg**	**02 01 19.5**	**-0.1**
TWE	**Neicheng**	**0.41**	**262**	⇑*i*P	**Pg**	**02 01 16.5**	**-0.3**
TWE				S	**Sg**	**02 01 21.3**	**-0.9**
NWF	**Wu-fen Shan**	**0.42**	**315**	⇓*i*P	**Pg**	**02 01 17.2**	**+0.2**
NWF				S	**Sg**	**02 01 22.9**	**+0.3**
ENA	**Nanau**	**0.48**	**224**	⇑*i*P	**Pg**	**02 01 18.1**	**-0.2**
ENA				S	**Sg**	**02 01 24.9**	**+0.2**
ENTT	**Nioudou**	**0.51**	**255**	⇑*i*P	**Pg**	**02 01 18.2**	**-0.7**
TWA	**Mucha**	**0.52**	**293**	⇓*i*P	**Pg**	**02 01 18.9**	**-0.1**
TWA				S	**Sg**	**02 01 24.8**	**-1.1**
TAP1	**Taipei**	**0.59**	**296**	⇓*i*P	**Pg**	**02 01 20.8**	**+0.3**
TAP1				S	**Sg**	**02 01 28.0**	**-0.4**
TAP	**Taipei**	**0.61**	**296**	*e*P	**Pg**	**02 01 20.9**	**+0.1**
TAP				S	**Sg**	**02 01 28.3**	**-0.6**
TWY	**Chenhua**	**0.68**	**317**	P	**Pg**	**02 01 22.3**	**0.0**
NSK	**Sanguang**	**0.69**	**262**	⇑*i*P	**Pg**	**02 01 21.4**	**-1.0**
NSK				S	**Sg**	**02 01 29.2**	**-2.5**
TWS1	**Kuangyinshan**	**0.71**	**297**	⇓*i*P	**Pg**	**02 01 23.2**	**+0.5**
TWS1				S	**Sg**	**02 01 33.1**	**+0.9**
NNS	**Nan Shan**	**0.75**	**244**	*e*P	**Pg**	**02 01 22.7**	**-0.9**
NNS				S	**Sg**	**02 01 32.6**	**-0.9**
TWD	**Chiawan**	**0.84**	**214**	P	**Pg**	**02 01 24.6**	**-0.7**
TWD				S	**Sg**	**02 01 36.8**	**+0.4**
PCYT	**Pengchaiyu**	**0.85**	**358**	*e*P	**Pg**	**02 01 25.5**	**-0.1**
NCU	**National Centr**	**0.86**	**283**	*e*P	**Pg**	**02 01 26.1**	**+0.3**
NCU				S	**Sg**	**02 01 37.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.88**	**111**	P	**Pg**	**02 01 26.8**	**+0.7**
YOJ				S	**Sg**	**02 01 39.1**	**+1.3**
HWA	**Hwalien**	**0.92**	**210**	*e*P	**Pg**	**02 01 26.9**	**0.0**
TWT	**Tachien**	**1.00**	**239**	P	**Pb**	**02 01 27.8**	**-0.6**
TWT				S	**Sb**	**02 01 41.2**	**-0.6**
NSTT	**Nanjuang**	**1.02**	**262**	*e*P	**Pb**	**02 01 28.1**	**-0.7**
NSTT				S	**Sb**	**02 01 43.5**	**+1.1**
HSN	**Hsinchu**	**1.04**	**272**	*e*P	**Pb**	**02 01 28.9**	**-0.2**
HSN				S	**Sb**	**02 01 42.3**	**-0.6**
ESL	**Shilin**	**1.14**	**213**	*e*P	**Pb**	**02 01 30.2**	**-0.6**
NSY	**Sanyi**	**1.28**	**254**	*e*P	**Pb**	**02 01 34.3**	**+1.1**
NSY				S	**Sb**	**02 01 52.2**	**+2.2**
TWQ1	**Liyutan**	**1.29**	**251**	*e*P	**Pb**	**02 01 33.7**	**+0.3**
TWQ1				S	**Sb**	**02 01 50.2**	**-0.1**
SMLT	**Sun Moon Lake**	**1.42**	**231**	⇓P	**Pb**	**02 01 35.6**	**0.0**
TYC	**Yuchr**	**1.44**	**233**	*e*P	**Pn**	**02 01 35.4**	**-0.4**
TCU	**Taichung**	**1.45**	**245**	*e*P	**Pn**	**02 01 36.4**	**+0.4**
EHY	**Hungye**	**1.45**	**210**	*e*P	**Pn**	**02 01 35.2**	**-0.8**
IRIF	**Iriomote-Funau**	**1.54**	**106**	S	**Sb**	**02 01 56.7**	**-0.8**
TWF1	**Yuli**	**1.60**	**208**	*e*P	**Pn**	**02 01 37.5**	**-0.6**
TWF1				S	**Sb**	**02 01 58.0**	**-1.2**
YUS	**Yu-Shan**	**1.66**	**220**	*e*P	**Pn**	**02 01 39.5**	**+0.5**
HATJ	**Hateruma jima**	**1.70**	**114**	P	**Pn**	**02 01 38.7**	**-0.9**
ALS	**Alishan**	**1.73**	**224**	*e*P	**Pn**	**02 01 41.5**	**+1.5**
CHN5	**Tsauling**	**1.76**	**228**	*e*P	**Pn**	**02 01 41.9**	**+1.4**
WGK	**Gukeng**	**1.78**	**233**	*e*P	**Pn**	**02 01 42.2**	**+1.5**
CHKT	**Chengkung**	**1.80**	**202**	*e*P	**Pn**	**02 01 41.4**	**+0.3**
JKRS	**Kuro-shima**	**1.81**	**107**	P	**Pn**	**02 01 40.3**	**-0.9**
JKRS				S	**Sn**	**02 02 03.0**	**-2.1**
JIJ	**Ishigaki jima**	**1.90**	**102**	P	**Pn**	**02 01 41.5**	**-0.9**
JIJ				*e*S	**Sn**	**02 02 05.6**	**-1.6**
CHN2	**Minshiung**	**1.94**	**231**	*e*P	**Pn**	**02 01 45.1**	**+2.1**
CHN4	**Tsaushan**	**1.98**	**225**	*e*P	**Pn**	**02 01 45.5**	**+1.9**
CHY	**Chiayi**	**2.00**	**231**	*e*P	**Pn**	**02 01 43.6**	**-0.2**
STYT	**Tauyuan**	**2.03**	**218**	*e*P	**Pn**	**02 01 44.7**	**+0.4**
WTP	**Ta-pu**	**2.05**	**222**	*e*P	**Pn**	**02 01 45.9**	**+1.3**
TWK	**Hsinying**	**2.11**	**225**	*e*P	**Pn**	**02 01 45.7**	**+0.2**
CHN1	**Nanshi**	**2.15**	**223**	*e*P	**Pn**	**02 01 45.1**	**-0.8**
TWG	**Pinlang**	**2.17**	**206**	*e*P	**Pn**	**02 01 45.2**	**-1.1**
TWG				S	**Sn**	**02 02 12.2**	**-1.9**
SGST	**Jiashian**	**2.19**	**220**	*e*P	**Pn**	**02 01 48.1**	**+1.5**
CHN8	**Yiju**	**2.25**	**231**	*e*P	**Pn**	**02 01 47.8**	**+0.4**
CHN8				S	**Sn**	**02 02 16.9**	**+0.8**
JTJ	**Tarama**	**2.36**	**93**	P	**Pn**	**02 01 50.4**	**+1.3**
ECL	**Taimali**	**2.41**	**206**	*e*P	**Pn**	**02 01 51.9**	**+2.1**
SSD	**Sandimen**	**2.43**	**214**	*e*P	**Pn**	**02 01 51.1**	**+1.0**
TWM1	**Shoushan**	**2.48**	**219**	*e*P	**Pn**	**02 01 52.6**	**+1.8**
PNG	**Penghu**	**2.62**	**243**	*e*P	**Pn**	**02 01 52.2**	**-0.6**
EAST	**Anshuo**	**2.65**	**206**	*e*P	**Pn**	**02 01 52.1**	**-1.0**
WDGT	**Dungji**	**2.70**	**237**	*e*P	**Pn**	**02 01 54.1**	**+0.2**
WDGT				S	**Sn**	**02 02 25.4**	**-2.3**
SCZT	**Fangliau**	**2.75**	**210**	*e*P	**Pn**	**02 01 56.4**	**+1.7**
TWK1	**Hengchun**	**3.06**	**203**	*e*P	**Pn**	**02 01 59.6**	**+0.6**
KNM	**Kinmen**	**3.37**	**265**	*e*P	**Pn**	**02 02 02.1**	**-1.3**

*IDC **28** 02:05:51.9±1.4, 2.47S×141.41E, mb3.9/3, mb1 4.2/4, mb1mx4.0/10, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=134.0km s-min=25.9km az=111.0*

ISC 28 02:05:55.8±1.1, 2.6S±0.2×141.4E±0.4, h33^{km}, n8, σ0^{s}66/8, mb3.8/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**13.38**	**221**	*e*P	**P**	**02 09 04.9**	**-0.9**
	11nm,0.6s						
WB2	**Warramunga Arr**	**18.55**	**201**	*e*P	**P**	**02 10 12.3**	**+0.2**
WRA	**Warramunga Arr**	**18.56**	**201**	P	**P**	**02 10 12.0**	**-0.2**
	0.6nm,0.3s,baz=24,slow=11,SNR=29						
FITZ	**Fitzroy Crossi**	**21.79**	**224**	*e*P	**P**	**02 10 47.9**	**+1.1**
	5.1nm,0.7s,mb4.1						
ASAR	**Alice Springs**	**22.16**	**198**	P	**P**	**02 10 50.4**	**-0.1**
	1.3nm,0.6s,mb3.6,baz=28,slow=10,SNR=10						
ASPA	**Alice Springs**	**22.16**	**198**	*e*P	**P**	**02 10 54.5**	**+4.0**
ILAR	**Eielson Array**	**84.64**	**24**	P	**P**	**02 18 26.5**	**-0.5**
	0.7nm,0.6s,mb4.0,baz=257,slow=4.7,SNR=14						
YKA	**Yellowknife Ar**	**98.76**	**27**	P	**P**	**02 19 33.3**	**+0.3**
	0.2nm,0.8s,mb3.7,baz=286,slow=4.2,SNR=3.8						

BJI 28 02:08:37.9, 33.68N×101.22E, h17^{km}, ML3.4, Ms3.6, Msz3.3, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**3.23**	**41**	P	Pn	02 09 28.5	-0.5
LZH				PG	Pn	02 09 37.0	+8.0
LZH				S	Sn	02 10 13.0	+5.6
LZH				SG	Sn	02 10 20.0	+13
LZH				Smax			
	comp=N,362nm,1.1s						
LZH				Smax			
	comp=E,230nm,1.0s						
LZH				LR	LR		
	comp=E,791nm,6.3s						
LZH				LR	LR		
	comp=Z,871nm,7.5s						
CD2	**Chengdu**	**3.50**	**141**	*e*PG	Pn	02 09 41.5	+8.7
CD2				SG	Sn	02 10 29.3	+15
CD2				Smax			
	comp=N,82nm,1.0s						
CD2				Smax			
	comp=E,88nm,1.0s						
GTA	**Gaotai**	**5.83**	**349**	P	Pn	02 10 07.8	+2.0
GTA				PG	Pn	02 10 25.5	+20
GTA				S	Sn	02 11 14.5	+1.5
GTA				SG	Sn	02 11 41.0	+28
GTA				Smax			
	comp=N,8.0nm,1.2s						
GTA				Smax			
	comp=E,11nm,0.9s						
GTA				LR	LR		
	comp=N,206nm,12.2s						
GTA				LR	LR		
	comp=E,497nm,6.8s						
GTA				LR	LR		
	comp=Z,242nm,8.4s						

PGC 28 02:09:33.5, 48.02N×128.91W, h10^{km}, MLSn2.9/1, Mw3.5, Northern Juan de Fuca ridge., Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	**Eliza Dome**	**2.20**	**32**	Pn	Pn	02 10 07.9	-2.7
BPBC	**Brooks Peninsu**	**2.27**	**19**	Pn	Pn	02 10 08.7	-2.9
OZB	**Mount Ozzard**	**2.46**	**66**	Pn	Pn	02 10 11.9	-2.4
OZB				Sn	Sn	02 10 40.0	-4.8
OZB				Trac		02 10 42.4	
	comp=Z,15nm,0.5s						
GDR	**Gold River**	**2.59**	**46**	Pn	Pn	02 10 14.1	-2.1
GDR				Sn	Sn	02 10 41.7	-6.4
	comp=Z,9.0nm,0.4s						
GDR				Trac		02 10 44.8	
	comp=Z,9.0nm,0.4s						
WOSB	**Woss**	**2.64**	**35**	Pn	Pn	02 10 14.8	-2.1
MAYB	**Maynard**	**2.65**	**25**	Pn	Pn	02 10 14.3	-2.7
MAYB				Sn	Sn	02 10 44.8	-4.7
	comp=Z,7.0nm,0.4s						
MAYB				Trac		02 10 46.4	
	comp=Z,7.0nm,0.4s						
BTB	**Buttle Lake**	**2.67**	**56**	Pn	Pn	02 10 15.7	-1.7
BTB				Sn	Sn	02 10 44.2	-5.9
	comp=Z,18nm,0.5s						
BTB				Trac		02 10 49.1	
	comp=Z,18nm,0.5s						
HOLB	**Holberg**	**2.67**	**11**	Pn	Pn	02 10 15.2	-2.2
HOLB				Sn	Sn	02 10 46.2	-4.0
	comp=Z,3.0nm,0.2s						
HOLB				Trac		02 10 49.0	
	comp=Z,3.0nm,0.2s						
PHC	**Port Hardy**	**2.86**	**19**	Pn	Pn	02 10 17.3	-2.8
MGB	**Mount Grey**	**2.97**	**69**	Pn	Pn	02 10 19.1	-2.5
MGB				Sn	Sn	02 10 50.6	-7.1
	comp=Z,3.0nm,0.3s						
MGB				Trac		02 11 00.5	
	comp=Z,3.0nm,0.3s						
ALB	**Alberni**	**2.98**	**64**	Pn	Pn	02 10 19.5	-2.3
ALB				Trac		02 11 04.7	
	comp=Z,4.0nm,0.4s						
NCRB	**Newcastle Ridg**	**3.03**	**37**	Pn	Pn	02 10 20.9	-1.6
NCRB				Sn	Sn	02 10 56.3	-3.0
	comp=Z,7.0nm,0.3s						
NCRB				Trac		02 10 56.9	
	comp=Z,7.0nm,0.3s						
PFB	**Port Renfrew**	**3.03**	**78**	Pn	Pn	02 10 20.1	-2.5
PFB				Sn	Sn	02 10 55.9	-3.4
PFB				Trac		02 11 01.4	
	comp=Z,5.0nm,0.5s						
CBB	**Campbell River**	**3.08**	**48**	Pn	Pn	02 10 21.7	-1.5
CBB				Sn	Sn	02 10 54.9	-5.7
CBB				Trac		02 10 58.5	
	comp=Z,13nm,0.5s						
TXB	**Texada**	**3.40**	**59**	Pn	Pn	02 10 26.0	-1.7
LZB	**Mount Lazard**	**3.44**	**78**	Pn	Pn	02 10 26.2	-2.2
LZB				Sn	Sn	02 11 05.3	-4.4
LZB				Trac		02 11 09.2	
	comp=Z,2.0nm,0.5s						
NLLB	**Nanaimo Lost L**	**3.48**	**68**	Pn	Pn	02 10 27.0	-1.9
NLLB				Sn	Sn	02 11 07.8	-2.8
NLLB				Trac		02 11 12.4	
	comp=Z,7.0nm,0.5s						
SHB	**Sechelt**	**3.68**	**63**	Pn	Pn	02 10 30.0	-1.8
SHB				Sn	Sn	02 11 12.9	-2.8
SHB				Trac		02 11 16.1	
	comp=Z,10.0nm,0.6s						
PGC	**Sidney**	**3.69**	**78**	Pn	Pn	02 10 29.2	-2.7
PGC				Pn	Pn	02 10 29.2	-2.7
PGC				Sn	Sn	02 11 12.8	-3.2
GOBB	**Galiano Island**	**3.71**	**73**	Pn	Pn	02 10 30.2	-1.9
VGZ	**Gonzales**	**3.75**	**82**	Pn	Pn	02 10 30.4	-2.3
VGZ				Sn	Sn	02 11 13.1	-4.4
VGZ				Trac		02 11 15.4	
	comp=Z,5.0nm,0.3s						
SNB	**Saturna Island**	**3.90**	**77**	Pn	Pn	02 10 33.2	-1.5
BIB	**Bowen Island**	**3.96**	**67**	Pn	Pn	02 10 33.7	-2.0
BIB				Sn	Sn	02 11 17.5	-5.3
	comp=Z,5.0nm,0.6s						
BIB				Trac		02 11 26.9	
	comp=Z,5.0nm,0.6s						
WPB	**Watts Point**	**4.11**	**64**	Pn	Pn	02 10 35.7	-2.0
BBB	**Bella Bella**	**4.20**	**7**	Pn	Pn	02 10 37.1	-2.1
BBB				Sn	Sn	02 11 23.3	-5.6
BBB				Trac		02 11 24.1	
	comp=Z,5.0nm,0.2s						
HNB	**Haney**	**4.38**	**71**	Pn	Pn	02 10 39.5	-2.1
WSLR	**Whistler**	**4.47**	**60**	Pn	Pn	02 10 41.4	-1.5
VDB	**Vedder Mountai**	**4.63**	**75**	Pn	Pn	02 10 43.3	-2.0
HOPB	**Hope**	**5.14**	**72**	Pn	Pn	02 10 50.2	-2.3
LLLB	**Lillooet**	**5.28**	**58**	Pn	Pn	02 10 52.6	-1.8

*JMA **28** 02:35:02.6±0.3, 24.85N×122.06E, h43^{km}, M3.2*

TAP 28 02:35:01.1, 24.78N×122.05E, h4^{km}±1^{km}, ML3.6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.93**	**110**	P	Pb	02 35 19.7	+0.3
YOJ				S	Sb	02 35 31.9	+0.1
IRIF	**Iriomote-Funau**	**1.59**	**106**	P	Pn	02 35 28.9	-1.2
IRIF				*e*S	Sb	02 35 48.5	-2.6
HATJ	**Hateruma jima**	**1.75**	**114**	P	Pn	02 35 31.9	-0.6
JKRS	**Kuro-shima**	**1.86**	**106**	P	Pn	02 35 33.0	-1.0
JKRS				*e*S	Sn	02 35 54.8	-3.5

JIJ	Ishigaki jima	1.95	102	P	Pn	02 35 34.4	-0.9
JIJ				*e*S	Sn	02 35 58.0	-2.4

*IDC **28** 02:50:55.2±1.1, 2.73S×141.92E, mb4.0/5, mb1 4.3/6, mb1mx4.2/10, mbtmp4.0/6, ML4.1/1, Error ellipse: s-maj=65.2km s-min=21.4km az=101.0*

*NEIC **28** 02:51:00.3±0.5, 2.76S×141.66E, h30^{km}, mb4.1/5, Error ellipse: s-maj=20.1km s-min=7.3km az=105.0*

ISC 28 02:50:59.3±0.7, **2.76S**±0.08×**141.5E**±0.2, **h33**^{km}, **n21**, σ**0^{s}89**/19, **mb4.0**/9, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	13.35	222	*e*P	P	02 54 08.4	-0.7
	14nm,0.4s						
KAKA				*e*S	S	02 56 32.7	-4.6
WRAB	Tennant Creek	18.45	202	*e*P	P	02 55 15.2	+0.9
	18nm,0.9s						
WB2	Warramunga Arr	18.45	202	*e*P	P	02 55 14.5	0.0
WRA	Warramunga Arr	18.46	202	P	P	02 55 14.9	+0.3
	0.6nm,0.3s,baz=22,slow=12,SNR=32						
FITZ	Fitzroy Crossi	21.78	224	*e*P	P	02 55 50.3	0.0
	4.3nm,0.6s,mb4.1						
ASAR	Alice Springs	22.05	199	P	P	02 55 53.0	0.0
	2.6nm,0.7s,mb3.8,baz=26,slow=10,SNR=17						
ASPA	Alice Springs	22.05	199	*e*P	P	02 55 54.1	+1.2
STKA	Stephens Creek	28.97	180	*e*P	P	02 56 57.8	-0.3
	2.3nm,0.9s,mb3.9						
STKA	Stephens Creek	28.97	180	P	P	02 56 56.9	-1.2
	2.3nm,0.8s,mb4.0,baz=351,slow=8.0,SNR=5.4						
STKA	Stephens Creek	28.97	180	*e*P	P	02 56 56.3	-1.8
ULN	Ulaanbaatar	58.71	334	P	P	03 00 56.4	+0.2
	0.8nm,0.5s,mb4.0						
SONM	Songino Array	58.98	333	P	P	03 00 57.7	-0.4
	0.4nm,0.8s,mb3.5,baz=149,slow=8.4,SNR=3.2						
KURK	Kurchatov	75.37	324	*e*P	P	03 02 42.0	+0.7
	4.0nm,1.0s,mb4.3						
CHKZ	Chkalovo	81.01	325	*e*P	P	03 03 13.0	+0.7
	1.6nm,0.9s,mb4.0						
ILAR	Eielson Array	84.73	24	P	P	03 03 29.8	-1.3
	1.3nm,0.7s,mb4.2,baz=259,slow=5.0,SNR=16						
DAWY	Dawson	87.70	26	*e*P	P	03 03 46.4	+0.8
YKA	Yellowknife Ar	98.84	27	P	P	03 04 36.0	-0.9
	0.3nm,0.7s,mb3.9,baz=281,slow=4.8,SNR=6.1						
YKA	Yellowknife Ar	98.84	27	P	P	03 04 36.0	-0.9
LPAZ	La Paz	145.14	124	*e*PKPdf	PKPdf	03 10 36.7	+2.2
DBIC	Dimbokro	146.25	278	PKPbc	PKPbc	03 10 39.8	+2.2
	4.4nm,0.9s,baz=64,slow=3.6,SNR=3.5						
DBIC	Dimbokro	146.25	278	*e*PKPbc	PKPbc	03 10 39.6	+1.9

*IDC **28** 03:01:05.1±1.8, 33.84N×136.54E, h298^{km}±20^{km}, mb3.3/4, mb1 3.5/6, mb1mx3.2/21, mbtmp4.1/6, Error ellipse: s-maj=29.5km s-min=15.6km az=84.0*

*JMA **28** 03:01:06.0±0.2, 34.36N×137.05E, h332^{km}±2^{km}, M3.5*

ISC 28 03:01:04.4±0.6, **34.24N**±0.09×**137.19E**±0.10, **h339**^{km}±6^{km}, **n20**, σ**0^{s}85**/29, **mb3.3**/4, **Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAA	Atsumi	0.40	355	P	P	03 01 48.3	+0.8
JAA				S	S	03 02 21.1	-0.1
JIE	Ise	0.43	291	P	P	03 01 48.0	+0.5
JIE				S	S	03 02 20.8	-0.5
JWZ	Kozaga	1.41	241	P	P	03 01 51.1	-0.2
JGM	Miyama	1.51	345	P	P	03 01 52.1	+0.2
JWT	Wachi	1.80	306	P	P	03 01 53.6	-0.1
JOD2	Odawara 2	1.87	56	P	P	03 01 55.2	+1.1
JOD2				S	S	03 02 34.0	+0.9
JIM2	Oshima 3	1.91	75	P	P	03 01 55.3	+0.9
JKG	Kaga	2.15	341	P	P	03 01 56.0	-0.2
JRY	Ryogami san	2.26	38	P	P	03 01 58.0	+0.9
JRY				S	S	03 02 38.0	-0.3
JAI	Aioi	2.32	260	P	P	03 01 57.3	-0.2
JHJ	Hachijo jima 2	2.43	117	P	P	03 01 59.7	+1.2
	17nm,0.3s,baz=246,slow=9.0,SNR=4.6						
JHJ				S	S	03 02 47.0	+6.2
	16nm,0.3s,baz=260,slow=22,SNR=6.4						
MAT	Matsushiro	2.45	20	P	P	03 01 58.6	0.0
MAT				S	S	03 02 40.0	-0.9
MAT	Matsushiro	2.45	20	P	P	03 01 57.9	-0.7
MAT				S	S	03 02 38.3	-2.6
JMN	Monobe	2.80	260	P	P	03 02 01.5	0.0
JAG	Ashikaga	2.86	40	P	P	03 02 01.3	-0.8
JAG				S	S	03 02 44.1	-3.2
CBIJ	Chichi jima	8.32	148	P	P	03 03 01.1	-1.8
	3.6nm,0.3s,baz=17,slow=19,SNR=2.9						
CBIJ				S	S	03 04 31.1	-5.3
	12nm,0.3s,baz=274,slow=22,SNR=6.8						
SONM	Songino Array	26.70	310	P	P	03 06 16.1	+0.8
	0.9nm,0.5s,mb3.2,baz=102,slow=7.5,SNR=9.6						
ILAR	Eielson Array	53.68	31	P	P	03 10 00.5	+7.0
	0.3nm,0.7s,mb2.7,baz=243,slow=8.1,SNR=9.4						
WRA	Warramunga Arr	53.95	183	P	P	03 09 55.6	-0.5
	2.3nm,0.3s,mb4.0,baz=360,slow=7.6,SNR=57						
ASAR	Alice Springs	57.67	184	P	P	03 10 22.0	-0.1
	0.5nm,0.3s,mb3.3,baz=357,slow=5.0,SNR=14						

*NEIC **28** 03:06:56.5, 16.07N×98.64W, h10^{km}, MD4.1(MEX), After MEX.*

MEX 28 03:06:56.4±0.7, **15.99N**×**98.63W**, **h22**^{km}±18^{km}, **MD4.1**, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.63	50	*i* P	Pb	03 07 06.5	-2.1
PNIG				*i* S	Sb	03 07 15.1	-1.9
ACX	Acapulco	1.52	305	*e*P	Pn	03 07 19.5	-3.1
ACX				*i* S	Sn	03 07 32.0	-10
ACX	Acapulco	1.52	305	*e*P	Pn	03 07 19.5	-3.1
ACX				*i* S	Sn	03 07 38.0	-3.8
CAIG	El Cayaco	1.89	304	*e*P	Pn	03 07 23.4	-4.6
CAIG				*i* S	Sn	03 07 47.8	-3.6
CAIG	El Cayaco	1.89	304	*e*P	Pn	03 07 24.0	-4.0
CAIG				*i* S	Sn	03 07 47.0	-4.5
VHO	Vista Hermosa	2.11	59	*i* P	Pn	03 07 29.4	-1.8
VHO				*i* S	Sn	03 07 52.2	-4.8
VHO	Vista Hermosa	2.11	59	*i* P	Pn	03 07 28.9	-2.3
VHO				*i* S	Sn	03 07 52.2	-4.8
OXX	Oaxaca	2.13	59	*e*P	Pn	03 07 29.0	-2.4
OXX				*i* S	Sn	03 07 55.0	-2.4
HUIG	Huatulco	2.44	95	*e*P	Pn	03 07 35.5	-0.2
HUIG				*i* S	Sn	03 08 00.2	-5.0
HUIG	Huatulco	2.44	95	*e*P	Pn	03 07 33.5	-2.2
HUIG				*i* S	Sn	03 08 00.9	-4.3
PLIG	Platanillo	2.54	341	*e*P	Pn	03 07 33.0	-4.2
PLIG				*i* S	Sn	03 08 03.6	-4.1
YAIG	Yautepec	2.89	352	*i* P	Pn	03 07 38.7	-3.6
YAIG				*i* S	Sn	03 08 09.4	-7.4
YAIG				*e*S	Sn	03 08 12.7	-4.1
YAIG	Yautepec	2.89	352	*i* P	Pn	03 07 38.7	-3.6
YAIG				*e*S	Sn	03 08 12.7	-4.1
IIB	San Bernardino	2.97	5	*e*P	Pn	03 07 39.0	-4.4
PPM	Popocatepetl	3.06	0	*e*P	Pn	03 07 45.0	+0.3
PPM				*i* S	Sn	03 08 23.7	+2.6
PPM	Popocatepetl	3.06	0	*i* P	Pn	03 07 41.5	-3.2
PPM				*e*P		03 07 42.0	
PPM				*i* S	Sn	03 08 19.5	-1.6
PPM				*i* S	Sn	03 08 21.0	-0.1
ZIIG	Zihuatanejo	3.16	301	*i* S	Sn	03 08 17.2	-6.3
IISM	Ciudad Serdan	3.21	22	*e*P	Pn	03 07 45.0	-1.9
UNM	Universidad Na	3.37	351	*e*P	Pn	03 07 54.0	+5.0
UNM	Universidad Na	3.37	351	*e*P	Pn	03 07 48.0	-1.0
MOIG	Morelia	4.41	327	*i* S	Sn	03 08 50.1	-5.0

*NEIC **28** 03:15:11.6±3.0, 6.56S×149.05E, h45^{km}±28^{km}, mb4.0/2, Error ellipse: s-maj=32.6km s-min=21.6km az=134.0*

*IDC **28** 03:15:12.0±5.4, 6.50S×149.07E, h45^{km}±48^{km}, mb3.6/4, mb1 4.0/6, mb1mx3.9/11, mbtmp4.0/6, ML3.8/2, MS3.7/1, Ms1 3.7/1, ms1mx3.3/15, Error ellipse: s-maj=65.5km s-min=31.0km az=104.0*

ISC 28 03:15:07.0±2.4, **6.31S**±0.10×**148.8E**±0.1, **h17**^{km}±18^{km}, **n15**, σ**1^{s}12**/22, **mb3.9**/4, **1C-3D**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.47	208	P	Pn	03 16 04.6	+3.1
	31nm,0.3s,baz=13,slow=6.7,SNR=46						
PMG				S	Sn	03 16 43.1	+0.4
	33nm,0.3s,baz=163,slow=18,SNR=15						
PMG				LR	LR	03 17 47.4	
	comp=Z,964nm,18.7s,baz=16,slow=45						
PMG	Port Moresby	3.47	208	⇓*e*P	Pn	03 16 03.4	+1.9
PMG				S	Sn	03 16 43.1	+0.4
PMG				LR	LR	03 17 47.5	
CTAO	Charters Tower	13.91	190	P	P	03 18 22.8	-3.2
KAKA	Kakadu	17.32	247	*e*P	P	03 19 10.5	+0.6
	3.5nm,0.6s						
KAKA				*e*S	S	03 22 19.7	-0.8
WRAB	Tennant Creek	19.49	225	*e*P	P	03 19 35.5	-0.7
	14nm,0.8s						
WB2	Warramunga Arr	19.50	225	⇓*i*P	P	03 19 35.4	-0.9
WB2				*e*S	S	03 23 15.9	+6.2
WRA	Warramunga Arr	19.51	225	P	P	03 19 34.9	-1.5
	0.6nm,0.3s,baz=50,slow=9.8,SNR=26						
WRA				S	S	03 23 10.0	+0.1
	baz=47,slow=21,SNR=5.3						
WRA				ScP		03 27 33.4	
	0.0nm,0.3s,baz=50,slow=2.7,SNR=6.1						
ASAR	Alice Springs	22.42	218	P	P	03 20 06.7	+0.3
	6.1nm,0.8s,mb4.1,baz=51,slow=9.2,SNR=60						
ASAR				S	S	03 24 06.8	-0.1
	2.4nm,0.8s,baz=36,slow=22,SNR=8.6						
ASPA	Alice Springs	22.42	218	⇓*i*P	P	03 20 06.5	0.0
ASPA				*e*S	S	03 24 07.3	+0.3
FITZ	Fitzroy Crossi	25.44	241	⇑*i*P	P	03 20 36.6	+0.8
FITZ				*e*S	S	03 24 59.7	+0.5
STKA	Stephens Creek	26.31	194	*e*P	P	03 20 45.1	+1.3
	3.1nm,0.8s,mb3.9						
STKA	Stephens Creek	26.31	194	P	P	03 20 43.9	+0.1
	2.8nm,0.7s,mb3.9,baz=7.8,slow=10,SNR=8.8						
SONM	Songino Array	65.55	330	P	P	03 25 54.6	+2.7
	0.6nm,1.0s,mb3.6,baz=153,slow=3.2,SNR=1.9						
ILAR	Eielson Array	85.07	23	P	P	03 27 41.5	-1.3
	0.9nm,1.0s,mb3.9,baz=249,slow=5.5,SNR=7.3						
GERES	GERESS Array B	123.16	326	PKP	PKPdf	03 34 04.3	-2.5
	0.2nm,0.5s,slow=1.3,SNR=4.0						

*IDC **28** 03:31:52.6±0.8, 0.63S×124.30E, mb4.0/7, mb1 4.2/7, mb1mx4.1/11, mbtmp4.0/7, Error ellipse: s-maj=47.6km s-min=19.3km az=64.0*

*NEIC **28** 03:31:53.8±0.5, 0.72S×124.07E, h10^{km}, mb4.0/5, Error ellipse: s-maj=12.4km s-min=8.9km az=69.0*

*DJA **28** 03:31:53.0±1.0, 1.14S×124.56E, h33^{km}, MD5.0/3, ML5.0/3, Error ellipse: s-maj=72.7km s-min=22.1km az=150.0*

ISC 28 03:31:52.1±0.5, **0.77S**±0.06×**123.98E**±0.05, **h10**^{km}, **n21**, σ**1^{s}34**/25, **mb4.1**/11, **2C-5D**, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUNI	Buntu Taipa	4.65	232	⇑*i*Pn	Pn	03 33 03.7	-0.4
BUNI				*i* Sn	Sn	03 33 57.4	-1.4
BUNI	Buntu Taipa	4.65	232	⇑*e*Pn	Pn	03 33 03.9	-0.2
	357nm,0.3s						
BUNI				⇓*i*Sn	Sn	03 33 57.4	-1.4
TANI	Tanete Lipujan	5.30	240	⇓*i*Pn	Pn	03 33 15.7	+2.3
TANI				*i* Sn	Sn	03 34 15.4	+0.1
TANI	Tanete Lipujan	5.30	240	⇓*i*Pn	Pn	03 33 15.7	+2.3
	60nm,0.2s						
TANI				*e*Sn	Sn	03 34 16.8	+1.5
NINI	Niniconang	5.56	229	⇓*i*Pn	Pn	03 33 18.9	+1.8
	236nm,0.3s						
NINI				⇓*i*Sn	Sn	03 34 19.9	-2.0
KAKA	Kakadu	14.52	145	*e*P	P	03 35 19.4	-0.5
	4.6nm,0.7s						
MBWA	Marble Bar	20.68	191	*e*P	P	03 36 33.7	-1.4
	4.9nm,0.7s						
WRAB	Tennant Creek	21.58	153	*e*P	P	03 36 45.6	+1.4
	5.0nm,0.6s,mb4.1						
WRA	Warramunga Arr	21.58	153	P	P	03 36 43.0	-1.2
	3.2nm,0.6s,mb3.9,baz=323,slow=12,SNR=18						
WB2	Warramunga Arr	21.59	153	*e*P	P	03 36 43.3	-1.0
ASPA	Alice Springs	24.71	158	*e*P	P	03 37 16.3	+1.3
ASAR	Alice Springs	24.71	158	P	P	03 37 16.8	+1.8
	1.6nm,0.6s,mb3.7,baz=352,slow=18,SNR=24						
ASAR				PcP	PcP	03 40 53.5	+0.2
	0.7nm,0.5s,baz=349,slow=2.1,SNR=11						
CMAR	Chiang Mai Arr	31.16	309	P	P	03 38 16.0	+2.3
	2.2nm,0.7s,mb4.1,baz=137,slow=6.9,SNR=10						
ULN	Ulaanbaatar	50.64	345	*e*P	P	03 40 53.2	-0.3
	1.3nm,0.6s,mb4.0						
SONM	Songino Array	50.78	345	P	P	03 40 54.5	-0.1
	1.0nm,0.5s,mb4.0,baz=162,slow=8.9,SNR=14						
SONM				PcP	PcP	03 42 11.6	-0.2
	0.7nm,0.6s,baz=173,slow=2.8,SNR=5.8						
KURK	Kurchatov	64.13	330	*e*P	P	03 42 27.3	-1.7
	3.1nm,0.6s,mb4.5						
CHKZ	Chkalovo	69.87	329	*e*P	P	03 43 04.2	-0.9
	0.9nm,0.8s,mb3.8						
KMBO	Kilima Mbogo	86.72	269	P	P	03 44 40.0	+1.5
	1.9nm,1.2s,mb4.2,baz=46,slow=22,SNR=5.2						
ILAR	Eielson Array	90.32	25	P	P	03 44 54.1	-0.3
	0.2nm,0.4s,mb3.8,baz=245,slow=4.7,SNR=7.6						
ARCES	ARCESS Array B	93.69	340	P	P	03 45 08.7	-1.1
	3.5nm,0.9s,mb4.8,baz=56,slow=8.7,SNR=5.1						
PDAR	Pinedale Array	116.53	41	PKP	PKPdf	03 50 38.4	-1.4
	1.0nm,1.1s,baz=180,slow=3.0,SNR=4.6						

*IDC **28** 03:37:02.7±1.1, 9.87N×91.41E, mb4.2/7, mb1 4.3/8, mb1mx4.2/14, mbtmp4.1/8, ML3.8/1, MS3.9/4, Ms1 3.9/4, ms1mx3.3/20, Error ellipse: s-maj=42.6km s-min=19.2km az=59.0*

*BJI **28** 03:37:05.6, 9.96N×91.19E, h33^{km}, mb4.3, Ms4.0, Msz3.7*

*NEIC **28** 03:37:07.8±0.4, 9.89N×91.59E, h30^{km}, mb4.5/11, Error ellipse: s-maj=11.2km s-min=7.2km az=64.0*

ISC 28 03:37:05.7±0.5, **9.88N**±0.06×**91.53E**±0.06, **h30**^{km}, **n44**, σ**0^{s}89**/48, **mb4.4**/18, **MS4.0**/3, **1C-2D**, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	Vishakhapatnam	11.14	315	*e*P	P	03 39 42.4	-3.8
VIS				*e*S	Sx	03 41 34.4	
VIS				*e*	S	03 41 45.7	-5.1
	comp=N,34nm,0.5s						
VIS				*e*		03 41 46.0	
	comp=E,32nm,0.5s						
CMAR	Chiang Mai Arr	11.15	39	Pn	P	03 39 45.6	-0.8
	comp=E,0.2nm,0.3s,baz=231,slow=13,SNR=8.0						
CMAR				LR	LR	03 44 32.7	
	comp=E,199nm,20.1s,baz=220,slow=40						
BWNR	Bhubaneshwar	11.73	333	*e*P	P	03 39 48.8	-5.5
BWNR				*e*S	Sx	03 41 45.5	
BWNR				*e*	S	03 41 57.1	-8.1
	comp=N,64nm,0.2s						
BWNR				*e*		03 41 57.4	
	comp=E,69nm,0.4s						
HYB	Hyderabad	14.66	302	*e*P	P	03 40 39.0	+5.9
HYB				*e*S	S	03 43 14.5	-0.8
HYB	Hyderabad	14.66	302	*i* P	P	03 40 39.0	+5.9
HYB				*e*S	S	03 43 14.5	-0.8
BOK	Bokaro	14.85	339	*e*P	P	03 40 31.2	-4.3
BOK				*e*		03 40 33.0	
	comp=Z,4.5nm,0.2s						
BOK				*e*S	S	03 43 11.3	-8.4
SHL	Shillong	15.61	1	*e*	P	03 40 49.0	+3.6
SHL				*e*	S	03 43 25.5	-12
JIRN	Jiri	18.39	345	*e*P	P	03 41 19.4	-1.0
	comp=Z,26nm,0.8s						
PKI	Pulchoki	18.52	343	*e*P	P	03 41 23.5	+1.5
	comp=Z,15nm,0.6s						
KMI	Kunming	18.53	34	P	P	03 41 21.0	-1.1
KMI				AMB	AMB		
	comp=Z,11nm,1.0s						
KMI				LR	LR		
	comp=N,254nm,16.6s						
KMI				LR	LR		
	comp=E,175nm,19.9s						
KMI				LR	LR		
	comp=Z,208nm,21.3s						
KMI	Kunming	18.53	34	P	P	03 41 21.1	-1.0
	comp=Z,11nm,1.0s						
DMN	Daman	18.65	342	*e*P	P	03 41 24.5	+1.0
	comp=Z,31nm,0.7s						
KKN	Kakani	18.76	343	*e*P	P	03 41 25.7	+0.8
POO	Poona	19.16	299	⇓*i*P	P	03 41 28.5	-1.1
	comp=Z,20nm,1.0s						
POO				*e*S	S	03 45 03.4	+4.6
GKN	Gorkha	19.16	341	*e*P	P	03 41 29.8	+0.2
	comp=Z,34nm,0.7s						
KOLN	Koldanda	19.30	338	*e*P	P	03 41 33.1	+1.9
	comp=Z,23nm,0.8s						
LSA	Lhasa	19.72	359	*e*P	P	03 41 35.8	-0.1
	comp=Z,24nm,0.9s						
GYA	Guiyang	21.84	39	⇑*i*P	P	03 42 02.3	+4.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
NDI	New Delhi	23.03	326	*e*P	P	03 42 10.0	+0.5
NDI				*e*		03 46 28.0	
CD2	Chengdu	23.82	27	*e*P	P	03 42 19.0	+1.9
CD2				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.2						
ENH	Enshi	26.31	37	*e*P	P	03 42 39.5	-1.3
	comp=Z,13nm,0.6s,mb4.6						
LZH	Lanzhou	28.39	21	pP	P	03 43 00.0	+0.4
LZH				sP	pP	03 43 10.0	+1.6
GTA	Gaotai	30.32	13	P	P	03 43 14.8	-2.1
GTA				AP	pP	03 43 21.5	-4.2
GTA				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb4.3						
AAK	Ala-Archa	35.88	338	*e*P	P	03 44 05.1	+0.1
	comp=Z,7.3nm,1.1s,mb4.5						
JOW	Kunigami	38.55	59	LR	LR	04 04 11.0	
	comp=Z,140nm,18.9s,MS3.8,baz=128,slow=42						
SONM	Songino Array	39.86	16	P	P	03 44 38.4	+0.1
	comp=Z,2.6nm,1.0s,mb3.9,baz=198,slow=8.1,SNR=16						
ULN	Ulaanbaatar	40.07	16	*e*P	P	03 44 39.7	-0.3
KURK	Kurchatov	42.08	348	*e*P	P	03 44 56.0	-0.6
	comp=Z,7.1nm,1.4s,mb4.1						
CN2	Changchun	44.80	35	*e*P	P	03 45 19.5	+0.8
CHKZ	Chkalovo	46.80	343	*e*P	P	03 45 34.0	-0.3
	comp=Z,39nm,0.8s,mb5.4						
JHJ	Hachijo jima 2	49.97	55	LR	LR	04 06 17.4	
	comp=Z,280nm,20.0s,MS4.3,baz=273,slow=35						
WRA	Warramunga Arr	51.52	125	P	P	03 46 11.3	0.0
	comp=Z,6.0nm,0.6s,mb4.7,baz=304,slow=8.5,SNR=87						
WRAB	Tennant Creek	51.52	125	*e*P	P	03 46 11.4	+0.1
	comp=Z,13nm,0.7s,mb5.0						
WB2	Warramunga Arr	51.53	125	⇓*i*P	P	03 46 11.3	0.0
ASAR	Alice Springs	53.17	129	P	P	03 46 23.4	-0.2
	comp=Z,2.3nm,0.7s,mb4.2,baz=307,slow=7.4,SNR=23						
KIV	Kislovodsk	54.11	318	*e*P	P	03 46 30.3	+0.2
	comp=Z,32nm,1.3s,mb5.1						
KMBO	Kilima Mbogo	55.12	262	LR	LR	04 10 03.2	
	comp=Z,124nm,18.2s,MS4.0,baz=280,slow=36						
STKA	Stephens Creek	63.35	133	P	P	03 47 34.8	+0.2
	comp=Z,2.6nm,0.6s,mb4.5,baz=306,slow=4.8,SNR=9.6						
LSZ	Lusaka	67.54	249	*e*P	P	03 48 02.6	+0.8
	comp=Z,7.0nm,1.3s,mb4.5						
FINES	FINESS Array B	69.75	332	P	P	03 48 14.1	-0.7
	comp=Z,1.3nm,0.7s,mb4.0,baz=135,slow=5.9,SNR=3.6						
LBTB	Lobatse	72.97	240	*e*P	P	03 48 34.6	-0.2
	comp=Z,1.6nm,0.6s,mb4.1						
GERES	GERESS Array B	74.62	318	P	P	03 48 44.0	+0.1
	comp=Z,0.6nm,0.7s,mb3.6,baz=135,slow=5.7,SNR=5.3						
ILAR	Eielson Array	93.85	21	P	P	03 50 21.2	+0.1
	comp=Z,0.5nm,0.8s,mb4.0,baz=301,slow=3.8,SNR=4.3						
INK	Inuvik	95.78	15	*e*P	P	03 50 30.0	+0.2

*TEH **28** 03:48:32.5, 30.75N×57.03E, h11^{km}, Mn4.1*

*THR **28** 03:48:32.0±0.6, 30.82N×56.77E, h14^{km}±4^{km}, ML4.2*

*CSEM **28** 03:48:33.7±0.1, 30.83N×56.78E, h30^{km}, mb4.2/3, Error ellipse: s-maj=2.8km s-min=2.3km az=55.0*

*IDC **28** 03:48:36.0±4.3, 30.72N×56.75E, h42^{km}±33^{km}, mb3.5/8, mb1 3.8/9, mb1mx3.6/19, mbtmp3.8/9, ML3.8/1, Error ellipse: s-maj=43.6km s-min=25.2km az=6.0*

*NEIC **28** 03:48:36.5±1.4, 30.84N×56.71E, h41^{km}±11^{km}, mb3.8/5, MN4.1(TEH), Error ellipse: s-maj=14.7km s-min=8.7km az=120.0*

ISC 28 03:48:31.5±1.3, **30.86N**±0.05×**56.79E**±0.06, **h11**^{km}±9^{km}, **n36**, σ**1^{s}09**/39, **mb3.8**/11, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	0.88	182	*e*PG	Pg	03 48 47.7	-1.3
KRBR				AML	AML	03 49 01.1	
	comp=N,4μm,0.2s						
KRBR				AML	AML	03 49 02.7	
	comp=E,4μm,0.4s						
IBAF	Bafgh	1.28	305	Pg	Pg	03 48 55.0	-2.0
IMEH	Mehriz	1.94	286	Pn	Pn	03 49 06.4	+1.6
ICHK	Chekchek	2.46	305	Pn	Pn	03 49 13.3	+1.1
BNDS	Bandar-Abbas	3.49	189	*e*PN	Pn	03 49 27.8	+0.9
BNDS				AML	AML	03 50 30.1	
	comp=E,377nm,1.3s						
ISRV	Sarvestan	3.51	246	Pn	Pn	03 49 28.4	+1.2
ZHSF	Zahedan	3.67	109	*e*PN	Pn	03 49 30.5	+1.2
ZHSF				*e*SG	Sg	03 50 26.3	-7.3
NASN	Na’in	3.90	301	*e*PN	Pn	03 49 33.9	+1.1
NASN				*e*SG	Sg	03 50 33.7	-7.7
IMOK	Mook	3.97	244	Pn	Pn	03 49 34.7	+1.0
GHIR	Ghir-Karzin	4.19	233	*e*PN	Pn	03 49 37.2	+0.3
GHIR				AML	AML	03 51 00.5	
	comp=N,305nm,1.3s						
GHIR				AML	AML	03 51 06.0	
	comp=E,349nm,1.4s						
ISFB	Sefidab	5.19	313	Pn	Pn	03 49 51.1	+0.1
IFIR	Firoozkooh	5.85	326	Pn	Pn	03 50 00.8	+0.5
IFIR				Lg		03 51 40.9	
IDMV	Damavand	6.17	321	Pn	Pn	03 50 05.5	+0.7
DAMV	Damavand	6.24	321	*e*PN	Pn	03 50 06.5	+0.7
DAMV				AML	AML	03 52 10.3	
	comp=E,257nm,1.8s						
IQOM	Qom	6.24	311	Pn	Pn	03 50 05.8	0.0
IAFJ	Afjeh	6.55	321	Pn	Pn	03 50 10.6	+0.4
IAFJ				Sn	Sn	03 51 23.5	-2.1
ASAO	Ashtian	6.79	305	*e*PN	Pn	03 50 13.6	+0.1
IRAZ	Razeghan	7.32	310	Pn	Pn	03 50 21.3	+0.2
SNGE	Sanandaj	8.98	301	*e*PN	P	03 50 43.9	-0.3
MALT	Malatya	16.84	301	*e*P	P	03 52 31.7	+3.0
	comp=E,7.3nm,1.2s						
ASF	Jabal al Asfar	17.02	280	P	P	03 52 28.8	-2.2
	comp=E,0.3nm,0.3s,baz=341,slow=8.7,SNR=3.7						
EIL	Elat	18.90	272	*e*P	P	03 52 53.5	-0.9
	comp=E,3.2nm,0.8s						
BVAR	Borovoye Array	24.27	20	P	P	03 53 50.3	+0.8
	comp=E,1.2nm,0.6s,mb3.5,baz=202,slow=8.0,SNR=9.6						
KURK	Kurchatov	25.65	33	*e*P	P	03 54 03.2	+0.5
	comp=E,1.8nm,0.9s,mb3.6						
KURK	Kurchatov	25.65	33	*e*P	P	03 54 03.2	+0.5
	comp=E,1.8nm,0.9s,mb3.6						
MLR	Muntele Rosu	28.10	310	P	P	03 54 25.3	+0.1
	comp=E,2.7nm,0.8s,mb3.9,baz=160,slow=3.6,SNR=4.0						
FINES	FINESS Array B	36.60	336	P	P	03 55 38.6	-0.6
	comp=E,1.8nm,0.8s,mb3.9,baz=121,slow=11,SNR=6.5						
GERES	GERESS Array B	37.06	312	P	P	03 55 42.0	-1.2
	comp=E,0.6nm,0.6s,mb3.6,baz=98,slow=9.4,SNR=8.2						
SONM	Songino Array	41.18	51	P	P	03 56 17.0	-0.5
	comp=E,0.3nm,0.8s,mb3.0,baz=256,slow=5.9,SNR=3.4						
SONM				ScP		04 02 00.8	
	comp=E,0.3nm,0.8s,baz=225,slow=1.7,SNR=3.7						
DBIC	Dimbokro	62.32	261	*e*P	P	03 58 53.3	-3.2
	comp=E,4.8nm,1.1s,mb4.5						
DBIC	Dimbokro	62.32	261	*e*P	P	03 58 53.3	-3.2
	comp=E,4.8nm,1.1s,mb4.5						
TSUM	Tsumeb	62.43	222	*e*P	P	03 58 56.0	-1.2
	comp=E,2.1nm,0.9s,mb4.3						
TSUM	Tsumeb	62.43	222	*e*P	P	03 58 56.0	-1.1
	comp=E,2.1nm,0.9s,mb4.3						
ILAR	Eielson Array	82.90	10	P	P	04 00 56.1	-0.9
	comp=E,0.5nm,0.9s,mb3.5,baz=324,slow=4.6,SNR=6.3						
YKA	Yellowknife Ar	86.72	356	P	P	04 01 16.4	+0.3
	comp=E,0.3nm,0.5s,mb3.8,baz=1.0,slow=5.1,SNR=10						
ASAR	Alice Springs	91.60	117	P	P	04 01 38.9	-1.2
	comp=E,0.7nm,0.8s,mb4.0,baz=302,slow=4.3,SNR=4.9						

*NEIC **28** 03:57:12.8±0.8, 30.67N×137.82E, h480^{km}±9^{km}, mb3.9/4, Error ellipse: s-maj=16.3km s-min=10.7km az=87.0*

*JMA **28** 03:57:12.3±0.3, 30.77N×137.96E, h505^{km}, M3.6*

*IDC **28** 03:57:12.9±0.8, 30.67N×137.84E, h480^{km}±9^{km}, mb3.0/11, mb1 3.1/14, mb1mx3.1/24, mbtmp3.9/14, Error ellipse: s-maj=21.0km s-min=11.7km az=86.0*

ISC 28 03:57:11.8±0.4, **30.66N**±0.05×**138.04E**±0.07, **h489**^{km}±4^{km}, **n48**, σ**0^{s}88**/60, **mb3.3**/12, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	2.87	31	P	P	03 58 22.4	+0.8
	37nm,0.3s,baz=70,slow=21,SNR=13						
JHJ				S	S	03 59 18.4	+1.6

	24nm,0.3s,baz=61,slow=23,SNR=10.0						
JHJ2	Mitsune	2.87	31	P	P	03 58 22.3	+0.6
JHJ2				S	S	03 59 17.7	+0.8
JWZ	Kozaga	3.48	326	P	P	03 58 26.4	+0.4
JWM	Minabe	3.91	325	P	P	03 58 29.9	+0.5
TSUJ	Tsu 2	4.26	342	P	P	03 58 33.3	+0.9
MRT2	Murotomisaki 2	4.28	310	P	P	03 58 32.7	+0.2
JAI	Aioi	4.36	317	P	P	03 58 33.5	+0.3
JHE	Heguri	4.45	334	P	P	03 58 34.6	+0.6
JAJ2	Tsuna	4.60	325	P	P	03 58 35.3	0.0
JAO	Obara	4.64	352	P	P	03 58 37.0	+1.3
JMN	Monobe	4.67	312	P	P	03 58 36.4	+0.4
JOD2	Odawara 2	4.67	11	P	P	03 58 36.7	+0.7
JOD2				S	S	03 59 41.5	-1.1
JNY	Yasuok	4.69	358	P	P	03 58 37.3	+1.2
JNY				*e*S	S	03 59 43.4	+0.5
BSO1	Boso 1	4.69	31	P	P	03 58 36.1	-0.1
BSO1				S	S	03 59 41.6	-1.3
JTO	Tosashimizu	4.97	298	P	P	03 58 38.1	-0.6
JKU	Kubokawa	4.99	303	P	P	03 58 38.8	0.0
JJS	Sakaide	5.08	318	P	P	03 58 39.9	+0.2
CBIJ	Chichi jima	5.08	133	P	P	03 58 39.0	-0.7
	5.6nm,0.3s,baz=279,slow=19,SNR=3.6						
CBIJ				S	S	03 59 48.0	-1.3
	40nm,0.3s,baz=292,slow=21,SNR=13						
JKS	Kasai	5.08	329	P	P	03 58 39.7	0.0
JWT	Wachi	5.12	335	P	P	03 58 40.3	+0.2
JET	Tanbara	5.25	308	P	P	03 58 41.5	+0.2
JHU	Hanno	5.28	11	P	P	03 58 40.8	-0.8
JHU				S	S	03 59 49.7	-3.0
JAD	Aida	5.37	324	P	P	03 58 42.7	+0.2
JRY	Ryogami san	5.39	7	P	P	03 58 42.7	0.0
JRY				S	S	03 59 53.7	-0.9
JNA	Nagahama	5.53	303	P	P	03 58 44.0	-0.1
JGN	Niukaw	5.58	354	P	P	03 58 44.6	+0.1
MAJO	Matsushiro	5.87	1	*e*P	P	03 58 46.2	-1.1
	18nm,0.6s						
MAT	Matsushiro	5.87	1	*e*P	P	03 58 47.0	-0.3
	17nm,0.7s						
MAT				*e*S	S	04 00 02.0	-0.9
MAT	Matsushiro	5.87	1	P	P	03 58 46.5	-0.8
MAT				S	S	04 00 02.1	-0.8
MAT	Matsushiro	5.87	1	P	P	03 58 46.4	-0.9
MAT				S	S	04 00 01.3	-1.6
JHS	Saijyo	5.99	318	P	P	03 58 48.2	-0.3
JMK	Ichinoseki	8.68	17	P	P	03 59 16.7	+0.4
JMK				S	S	04 00 54.4	-0.8
KS15	Wonju Array Si	10.80	311	*e*P	P	03 59 37.2	-1.7
ASAJ	Asahikawa	13.91	14	P	P	04 00 13.8	+2.5
	1.8nm,0.3s,baz=240,slow=8.5,SNR=7.5						
SONM	Songino Array	29.63	314	P	P	04 02 38.6	+0.8
	0.3nm,0.8s,mb2.8,baz=98,slow=10,SNR=3.6						
SONM				PcP	PcP	04 05 27.9	+0.1
	0.5nm,0.7s,baz=118,slow=2.9,SNR=6.5						
CMAR	Chiang Mai Arr	37.40	260	P	P	04 03 42.6	-0.7
	1.1nm,0.4s,mb3.6,baz=54,slow=6.6,SNR=7.4						
KURK	Kurchatov	47.91	312	*e*P	P	04 05 04.8	-1.3
	1.1nm,0.6s,mb3.4						
WRAB	Tennant Creek	50.42	185	P	P	04 05 24.9	-0.4
WRA	Warramunga Arr	50.44	185	P	P	04 05 25.0	-0.5
	0.4nm,0.4s,mb3.1,baz=359,slow=7.6,SNR=10						
WRA				PcP	PcP	04 06 35.8	+0.5
	0.4nm,1.1s,baz=354,slow=4.0,SNR=5.8						
BVAR	Borovoye Array	52.97	316	P	P	04 05 42.2	-1.2
	0.5nm,0.3s,mb3.3,baz=90,slow=8.9,SNR=5.5						
BVAR				PcP	PcP	04 06 43.7	-0.6
	0.8nm,0.5s,baz=72,slow=4.7,SNR=5.0						
ASAR	Alice Springs	54.16	185	P	P	04 05 53.1	+0.8
	0.4nm,0.5s,mb3.0,baz=14,slow=12,SNR=5.9						
INK	Inuvik	61.33	25	P	P	04 06 42.0	+1.6
	0.3nm,0.5s,mb3.0,slow=6.1,SNR=3.4						
ARCES	ARCESS Array B	68.97	340	P	P	04 07 27.9	-0.3
	2.6nm,0.7s,mb3.9,baz=63,slow=8.6,SNR=18						
YKA	Yellowknife Ar	70.73	28	P	P	04 07 40.3	+1.6
	0.1nm,0.3s,mb2.8,baz=296,slow=6.0,SNR=5.0						
FINES	FINESS Array B	73.14	332	P	P	04 07 52.6	-0.1
	1.0nm,0.4s,mb3.7,baz=66,slow=5.6,SNR=17						
HFS	Hagfors	78.70	335	P	P	04 08 23.1	-0.2
	2.0nm,0.5s,mb3.9,baz=117,slow=3.3,SNR=17						
NB2	NORSAR Subarra	78.94	337	P	P	04 08 24.5	0.0
	0.9nm,0.6s,mb3.5,baz=45,slow=5.3						
NOA	NORSAR Array B	78.94	337	P	P	04 08 24.9	+0.4
	1.0nm,0.6s,mb3.5,baz=46,slow=5.2,SNR=5.2						

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*KRSC **28** 04:14:19.9±0.7, 55.34N×166.52E, h29^{km}±2^{km}, ML4.2*

*IDC **28** 04:14:20.8±1.5, 55.64N×166.80E, mb3.5/4, mb1 3.9/5, mb1mx3.6/19, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=34.2km s-min=15.5km az=42.0*

ISC 28 04:14:21.2±0.6**, 55.21N**±0.05×**166.37E**±0.05**, h36**^{km}±8^{km}**, n22, σ1**^{s}**04**/36**, mb3.5**/4**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	0.23	269	*i* P	P	04 14 27.6	-0.8
BKI				*i* S	S	04 14 33.2	-0.3
KBTR	Krutoberegovo	2.25	298	*e*	S	04 15 25.8	+2.3
KBG	Krutoberegovo	2.33	298	*e*S	S	04 15 21.5	-4.0
KBG	Krutoberegovo	2.33	298	*e*P	P	04 14 57.5	-0.4
KBG				*e*S	S	04 15 25.9	+0.4
KLY	Klyuchi	3.42	291	*e*P	P	04 15 12.2	-1.2
KLY				*e*S	S	04 15 50.7	-2.5
KMNR	Kamenistaya	3.54	281	*e*P	P	04 15 15.8	+0.7
KMNR				*e*S	S	04 15 57.4	+1.2
TUMR	Tumrok	3.57	274	*e*P	P	04 15 16.1	+0.6
TUMR				*e*S	S	04 15 57.1	+0.1
SRDR	Sredinnyy	3.92	289	*e*P	P	04 15 20.0	-0.6
SRDR				*e*S	S	04 16 04.5	-1.5
SPN	Mys Shipunski	4.29	243	*e*P	P	04 15 26.9	+1.1
SPN				*e*S	S	04 16 15.4	+0.1
NLC	Nalytchevo	4.61	247	*e*P	P	04 15 31.0	+0.7
NLC				*e*S	S	04 16 22.5	-0.8
FX1	Attu Island--F	4.63	117	Pn	P	04 15 29.8	-0.9
	1.2nm,0.3s,baz=16,slow=9.6,SNR=10						
FX1				Sn	S	04 16 23.6	-0.4
	3.4nm,0.3s,baz=64,slow=22,SNR=7.5						
UGLR	Uglovaya	4.86	249	*e*P	P	04 15 35.2	+1.3
AVH	Avacha	4.88	250	*e*P	P	04 15 35.3	+1.1
AVH				*e*S	S	04 16 30.4	+0.1
KOK	Koryaka	4.93	250	*e*P	P	04 15 36.4	+1.6
PET	Petropavlovsk	5.04	247	*e*P	P	04 15 37.2	+0.8
PET				*e*S	S	04 16 33.3	-1.0
GNL	Ganaly	5.15	256	*e*P	P	04 15 39.1	+1.2
GNL				*e*S	S	04 16 36.5	-0.4
RUS	Russkaya	5.42	242	*e*P	P	04 15 42.7	+1.0
RUS				*e*S	S	04 16 42.4	-1.4
GRL	Gorelyy	5.58	245	*e*P	P	04 15 44.5	+0.5
GRL				*e*S	S	04 16 45.9	-2.0
ILAR	Eielson Array	24.67	48	P	P	04 19 38.7	-0.7
	1.1nm,0.9s,mb3.4,baz=251,slow=7.8,SNR=9.5						
SONM	Songino Array	36.99	284	P	P	04 21 33.2	+4.6
	0.3nm,0.7s,mb3.3,baz=63,slow=9.7,SNR=3.3						
YKA	Yellowknife Ar	39.06	46	P	P	04 21 45.0	-0.7
	0.5nm,1.0s,mb3.2,baz=297,slow=6.9,SNR=3.9						
TXAR	Lajitas Array	66.44	72	P	P	04 25 09.3	+0.7
	0.8nm,0.6s,mb3.9,baz=300,slow=4.2,SNR=14						

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*UCR **28** 04:17:54.2, 9.78N×84.22W, h44^{km}, MD3.9*

CASC 28 04:17:53.8±2.2**, 9.80N×84.22W, h46**^{km}±8^{km}**, MD3.8, 6C-4D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAJ	Bijagual	0.12	57	⇑*e*P	P	04 18 03.4	+2.3
LAJ				*e*S	S	04 18 11.4	+5.0
PRS1	Puriscal	0.20	335	⇓*e*P	P	04 18 02.0	+0.3
SJS	Escuela Geolog	0.22	50	⇑*i*P	P	04 18 01.5	-0.3
SJS				*e*S	S	04 18 08.6	+1.1
LCR2	La Lucha 2	0.22	104	⇑*i*P	P	04 18 02.3	+0.4
CGA2	Cerro Gallo 2	0.32	312	⇓*i*P	P	04 18 03.3	+0.5
VPS2	Volcan Poas 2	0.39	358	⇑*i*P	P	04 18 04.2	+0.6
ICR	Volcan Irazu	0.43	65	⇓*e*P	P	04 18 04.9	+0.9
BUS	Buena Vista	0.52	118	⇑*i*P	P	04 18 05.2	+0.1
BUS				*e*S	S	04 18 14.6	+1.5
FORC	Fortuna	0.80	327	*i* P	P	04 18 08.0	-0.8
FORC				⇓*i*P		04 18 09.3	
FORC				*i* S	S	04 18 20.3	+0.4
TRTC	Tortuguero	0.92	33	⇑*i*P	P	04 18 10.5	0.0
TRTC				*e*S	S	04 18 24.0	+1.2
LIO	Limon	1.19	80	*e*P	P	04 18 13.9	-0.3
VCR	Vista de Mar	1.43	283	*e*P	P	04 18 16.5	-1.3
VCR				*e*S	S	04 18 38.4	+2.9
ACR	Cerro Adams	1.54	137	*e*P	P	04 18 18.4	-1.0
ACR				*e*S	S	04 18 39.4	+1.0
BRU2	Volcan	1.81	123	*e*P	P	04 18 22.7	-0.5

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*NEIC **28** 04:22:22.3, 38.18S×178.91E, h12^{km}, ML4.0(WEL), After WEL.*

WEL 28 04:22:24.3±0.5**, 38.07S×178.80E, h33**^{km}**, ML3.8**/2**, Error ellipse: s-maj=4.6km s-min=1.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	0.43	270	P	P	04 22 32.5	-1.3
PUZ				S	S	04 22 40.0	-0.6
PUZ	Puketiti	0.43	270	PN	Pn	04 22 31.3	-2.8
PUZ				SN	Sn	04 22 40.0	-0.7
PUZ				*e*SN	Sn	04 22 40.5	-0.2
MXZ	Matakaoa Point	0.64	322	P	P	04 22 36.7	-0.1
MXZ				S	S	04 22 47.6	+1.7
MXZ	Matakaoa Point	0.64	322	PN	Pn	04 22 36.5	-0.5
MXZ				SN	Sn	04 22 46.4	+0.3
MWZ	Matawai	1.04	255	P	P	04 22 42.1	-0.5
MWZ				S	S	04 22 56.8	+0.7
MWZ	Matawai	1.04	255	PN	Pn	04 22 42.1	-0.6
MWZ				*e*SN	Sn	04 22 55.4	-0.8
KNZ	Kokohu	1.30	223	P	P	04 22 45.5	-0.7
KNZ	Kokohu	1.30	223	PN	Pn	04 22 45.5	-1.0
URZ	Urewera	1.35	261	P	P	04 22 46.8	-0.2
URZ	Urewera	1.35	261	PN	Pn	04 22 46.8	-0.4
BKZ	Black Stump Fm	2.12	238	P	P	04 22 57.5	-0.5
BKZ	Black Stump Fm	2.12	238	PN	Pn	04 22 57.4	-0.7
TSZ	Takapari Road	2.97	227	*e*P	P	04 23 06.9	-3.3
TSZ	Takapari Road	2.97	227	*e*PN	Pn	04 23 06.9	-3.5
BFZ	Birch Farm	3.27	216	*e*P	P	04 23 10.9	-3.6
BFZ	Birch Farm	3.27	216	*e*PN	Pn	04 23 11.4	-3.2
MRZ	Mangatainoka R	3.60	223	P	P	04 23 15.5	-3.6
MRZ	Mangatainoka R	3.60	223	PN	Pn	04 23 15.2	-4.0
MRZ				SN	Sn	04 23 56.2	-4.9
MQZ	McQueen’s Vall	7.31	218	*e*SN	Sn	04 25 21.5	-13

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*IDC **28** 04:36:19.6±1.1, 9.97N×91.44E, mb4.5/9, mb1 4.5/10, mb1mx4.3/17, mbtmp4.4/10, ML4.0/1, MS3.2/1, Ms1 3.4/1, ms1mx2.6/19, Error ellipse: s-maj=47.4km s-min=17.1km az=67.0*

*BJI **28** 04:36:22.6, 9.74N×91.61E, h41^{km}, mB4.3, mb4.5, Ms4.1, Msz3.5*

*MOS **28** 04:36:22.8±0.9, 9.97N×91.55E, h33^{km}, mb5.1/8, Error ellipse: s-maj=15.9km s-min=8.7km az=93.0*

*NEIC **28** 04:36:24.2±0.3, 9.97N×91.52E, mb4.7/17, Error ellipse: s-maj=9.0km s-min=4.1km az=60.0*

ISC 28 04:36:22.2±0.4**, 9.95N**±0.05×**91.49E**±0.05**, h31**^{km}**, h31**^{km}±3.3^{km}**:pP-P, n72, σ0**^{s}**86**/76**, mb4.5**/27**, MS3.7**/1**, 1C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	10.19	116	*e*Pn	P	04 38 48.7	-1.0
VIS	Vishakhapatnam	11.06	315	*e*P	P	04 38 58.2	-3.3
VIS				AMb	AMB	04 39 01.3	
	comp=Z,31nm,1.3s						
VIS				*e*S	S	04 40 51.5	-14
VIS				*i* T		04 49 51.8	
CMAR	Chiang Mai Arr	11.12	40	Pn	P	04 39 00.2	-2.1
	comp=Z,0.3nm,0.3s,baz=232,slow=14,SNR=16						
CMAR				LR	LR	04 43 41.0	
	comp=Z,119nm,21.7s,baz=215,slow=40						
CMAR	Chiang Mai Arr	11.12	40	Pn	P	04 39 00.2	-2.1
CMAR				LR	LR	04 43 41.0	
BWNR	Bhubaneshwar	11.65	333	*e*P	P	04 39 05.6	-4.0
BWNR				AMb	AMB	04 39 07.7	
	comp=Z,24nm,0.8s						
BWNR				*e*S	S	04 41 05.8	-14
HYB	Hyderabad	14.59	302	*e*P	P	04 39 56.0	+7.4
HYB				*e*S	S	04 42 30.0	0.0
HYB	Hyderabad	14.59	302	*i* P	P	04 39 49.0	+0.4
HYB				*e*		04 39 56.0	
HYB				*e*S	S	04 42 30.0	0.0
BOK	Bokaro	14.77	339	*e*P	P	04 39 49.0	-1.8
BOK				*e*		04 39 51.0	
	comp=Z,8.1nm,0.5s						
BOK				*e*		04 42 22.8	
SHL	Shillong	15.54	1	*e*P	P	04 40 00.5	-0.4
JIRN	Jiri	18.31	345	*e*P	P	04 40 36.1	+0.3
	comp=Z,44nm,1.0s						
KAD	Karad	18.33	295	*e*P	P	04 40 35.4	-0.7
KAD				*e*		04 40 35.8	
	comp=Z,5.0nm,0.3s						
KAD				*e*S	S	04 43 55.4	-0.8
PKI	Pulchoki	18.44	343	*e*P	P	04 40 38.4	+1.0
	comp=Z,34nm,0.9s						
KMI	Kunming	18.49	34	P	P	04 40 37.8	-0.3
KMI				AP		04 40 44.0	
KMI				AMB	AMB		
	comp=Z,19nm,0.8s						
KMI				AMB	AMB		
	comp=Z,45nm,4.1s						
KMI				LR	LR		
	comp=N,238nm,13.3s						
KMI				LR	LR		
	comp=E,145nm,12.0s						
KMI				LR	LR		
	comp=Z,131nm,20.0s						
KMI	Kunming	18.49	34	P	P	04 40 37.7	-0.4
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI	Kunming	18.49	34	P	P	04 40 37.7	-0.4
	comp=Z,19nm,0.8s						
KMI				pP		04 40 43.9	
KMI				S		04 44 29.1	
KMI				sS	Sx	04 44 39.2	
DMN	Daman	18.57	342	*e*P	P	04 40 39.0	+0.1
GUN	Gumba	18.63	344	*e*P	P	04 40 39.7	0.0
	comp=Z,46nm,1.1s						
KKN	Kakani	18.68	343	*e*P	P	04 40 40.3	0.0
GKN	Gorkha	19.08	341	*e*P	P	04 40 45.0	0.0
	comp=Z,40nm,0.7s						
KOLN	Koldanda	19.22	338	*e*P	P	04 40 46.5	-0.1
	comp=Z,37nm,0.9s						
LSA	Lhasa	19.65	359	*e*P	P	04 40 53.0	+1.5
LSA	Lhasa	19.65	359	*e*P	P	04 40 52.5	+1.0
LSA				pmax	pmax		
	comp=Z,26nm,0.8s						
LSA	Lhasa	19.65	359	*e*P	P	04 40 52.5	+1.0
	comp=Z,26nm,0.8s						
GYA	Guiyang	21.81	39	⇑*i*P	P	04 41 15.3	+1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
NDI	New Delhi	22.95	326	*e*P	P	04 41 27.0	+1.9
CD2	Chengdu	23.77	27	*e*P	P	04 41 34.0	+0.9
CD2				AMB	AMB		
	comp=Z,23nm,1.2s,mb4.5						
ENH	Enshi	26.27	37	*e*P	P	04 41 56.4	-0.5
	comp=Z,31nm,0.8s,mb4.9						
XAN	Xi’an	28.82	31	P	P	04 42 18.5	-1.4
XAN				AP	pP	04 42 26.3	-2.7
XAN				AMB	AMB		
	comp=Z,23nm,2.2s,mb4.5						
GTA	Gaotai	30.26	13	P	P	04 42 34.0	+1.3
GTA				AP	pP	04 42 46.3	+4.4
GTA				XP	sP	04 42 50.3	+4.4
GTA				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.4						
AAK	Ala-Archa	35.79	338	*e*P	P	04 43 20.9	+0.2
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
AAK	Ala-Archa	35.79	338	*e*P	P	04 43 20.9	+0.2
	comp=Z,9.4nm,1.1s,mb4.6						
BJI	Beijing	37.13	32	P	P	04 43 32.8	+0.8
BJI				AP	pP	04 43 39.0	-2.2
BJI				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.7						
BJI				LR	LR		
	comp=N,213nm,13.7s,MS4.1						
BJI				LR	LR		
	comp=E,91nm,14.5s,MS4.1						
BJI				LR	LR		
	comp=Z,109nm,25.5s						
BJI	Beijing	37.13	32	P	P	04 43 32.8	+0.8
BJI				*SP	sP	04 43 41.7	-3.4
BJI				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
BJI				MLR	MLR		
	comp=Z,110nm,25.5s,MS3.5						
BJI	Beijing	37.13	32	P	P	04 43 32.8	+0.8
	comp=Z,11nm,0.9s,mb4.7						
BJI				pP	pP	04 43 39.1	-2.1
BJI				sP	sP	04 43 41.7	-3.4
BJI				PcP	PcP	04 45 44.7	-7.6
BJI				S	S	04 49 25.7	+10
BJI				LR	LR		
	comp=Z,110nm,25.5s,MS3.5						
MKAR	Makanchi Array	37.54	350	*i* P	P	04 43 36.0	+0.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	39.80	16	P	P	04 43 55.3	+1.1
	comp=Z,3.4nm,0.7s,mb4.2,baz=203,slow=8.3,SNR=29						
ULN	Ulaanbaatar	40.01	16	*e*P	P	04 43 55.2	-0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ULN	Ulaanbaatar	40.01	16	*e*P	P	04 43 55.1	-0.7
	comp=Z,2.8nm,0.7s,mb4.1						
ZAK	Zakamensk	41.47	11	*e*P	P	04 44 07.6	-0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,2.3s,mb3.0						
MBWA	Marble Bar	41.54	138	*e*P	P	04 44 08.9	0.0
	comp=Z,7.2nm,0.9s,mb4.3						
KURK	Kurchatov	42.00	348	*e*P	P	04 44 13.2	+0.9
KURK				*e**PP	pP	04 44 23.4	+1.8
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.1						
KURK	Kurchatov	42.00	348	*e*P	P	04 44 13.2	+1.0
	comp=Z,5.1nm,1.1s,mb4.1						
KURK				*e*pP	pP	04 44 23.4	+1.9
FITZ	Fitzroy Crossi	43.75	129	*e*P	P	04 44 26.6	-0.3
	comp=Z,8.3nm,0.6s,mb4.6						
CN2	Changchun	44.76	35	*e*P	P	04 44 34.5	-0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
BVAR	Borovoye Array	46.21	342	P	P	04 44 46.6	+0.5
	comp=Z,1.0nm,0.7s,mb3.9,baz=143,slow=7.4,SNR=7.8						
CHKZ	Chkalovo	46.71	343	*e*P	P	04 44 50.8	+0.7
CHKZ				*e**PP	pP	04 45 00.7	+1.3
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
CHKZ	Chkalovo	46.71	343	*e*P	P	04 44 50.8	+0.8
	comp=Z,9.7nm,0.6s,mb4.9						
CHKZ				*e*pP	pP	04 45 00.7	+1.3
NWAO	Narrogin (SRO)	49.20	151	*e*P	P	04 45 10.7	+0.9
NWAO				pmax	pmax		
	comp=Z,23nm,1.1s						
NWAO	Narrogin (SRO)	49.20	151	P	P	04 45 10.5	+0.7
	comp=Z,22nm,1.1s,mb5.1,baz=300,slow=12,SNR=5.7						
NWAO	Narrogin (SRO)	49.20	151	*e*P	P	04 45 10.7	+1.0
	comp=Z,23nm,1.1s,mb5.1						
BOD	Bodaibo	50.80	15	*e*P	P	04 45 19.7	-1.9
BOD				*e*	pP	04 45 29.0	-2.1
WRA	Warramunga Arr	51.59	125	P	P	04 45 28.2	0.0
	comp=Z,10.0nm,0.5s,mb5.0,baz=306,slow=8.3,SNR=106						
WRAB	Tennant Creek	51.60	125	*e*P	P	04 45 28.0	-0.2
WRAB				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
WRAB	Tennant Creek	51.60	125	*e*P	P	04 45 28.0	-0.2
	comp=Z,18nm,0.8s,mb5.1						
WB2	Warramunga Arr	51.60	125	*e*P	P	04 45 27.8	-0.4
ASPA	Alice Springs	53.25	129	*e*P	P	04 45 40.5	0.0
ASAR	Alice Springs	53.25	129	P	P	04 45 40.5	0.0
	comp=Z,4.6nm,0.7s,mb4.5,baz=304,slow=6.9,SNR=42						
KIV	Kislovodsk	54.03	318	P	P	04 45 45.2	-0.7
KIV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
KIV	Kislovodsk	54.03	318	P	P	04 45 45.2	-0.7
	comp=Z,7.0nm,0.6s,mb4.8						
CTAO	Charters Tower	61.60	119	*e*P	P	04 46 39.7	+0.2
CTAO				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
CTAO	Charters Tower	61.60	119	*e*P	P	04 46 39.7	+0.2
	comp=Z,14nm,1.0s,mb5.0						
STKA	Stephens Creek	63.43	133	*e*P	P	04 46 52.0	+0.5
	comp=Z,3.6nm,0.6s,mb4.7						
STKA	Stephens Creek	63.43	133	P	P	04 46 52.1	+0.6
	comp=Z,4.2nm,0.6s,mb4.8,baz=306,slow=6.7,SNR=17						
TIXI	Tiksi	65.74	12	*e*P	P	04 47 05.2	-0.7
TIXI				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.7						
FINES	FINESS Array B	69.66	332	P	P	04 47 30.4	-0.3
	comp=Z,1.4nm,0.9s,mb3.9,baz=79,slow=7.1,SNR=4.0						
LBTB	Lobatse	72.97	240	*e*P	P	04 47 51.3	+0.1
ILAR	Eielson Array	93.80	21	P	P	04 49 36.9	-0.3
	comp=Z,0.9nm,0.9s,mb4.2,baz=313,slow=4.6,SNR=6.8						
INK	Inuvik	95.71	15	*e*P	P	04 49 46.9	+1.0
INK				pmax	pmax		
	comp=Z,14nm,1.7s						
INK	Inuvik	95.71	15	P	P	04 49 45.8	-0.1
	comp=Z,0.7nm,0.7s,mb4.2,baz=335,slow=5.4,SNR=3.9						
INK	Inuvik	95.71	15	*e*P	P	04 49 46.9	+1.0
	comp=Z,14nm,1.7s,mb5.1						
NVAR	Mina Array Bea	124.42	28	PKP	PKPdf	04 55 21.0	-2.9
	comp=Z,0.6nm,0.7s,baz=355,slow=1.3,SNR=4.6						
NVAR	Mina Array Bea	124.42	28	PKP	PKPdf	04 55 21.0	-3.0

WEL 28 04:43:54.0±0.1**, 37.90S×176.74E, h2**^{km}**, ML3.6**/13**, 5C-1D, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	0.10	208	⇑P*	Pb	04 43 56.9	-1.4
MARZ				*e*S*	Sb	04 43 58.8	-2.2
EDRZ	Edgecumbe	0.21	179	⇓P*	Pb	04 43 58.9	-1.3
EDRZ				*e*SG	Sg	04 44 01.6	+0.5
LIRZ	Lichensteins R	0.30	249	PG	Pg	04 44 00.6	+0.6
MKRZ	Makatiti	0.32	221	PG	Pg	04 44 01.3	+0.9
MKRZ				*e*SG	Sg	04 44 06.5	+1.7
TAZ	Tarawera	0.38	208	PG	Pg	04 44 02.5	+0.8
TGRZ	Tauranga	0.41	294	⇑PG	Pg	04 44 02.4	+0.1
TGRZ				*e*SG	Sg	04 44 08.5	+0.8
URZ	Urewera	0.47	141	⇑PG	Pg	04 44 03.4	+0.1
URZ				SG	Sg	04 44 10.4	+0.8
WIZ	White Island	0.52	45	PG	Pg	04 44 04.9	+0.6
PATZ	Paeroa	0.61	218	PG	Pg	04 44 07.0	+0.8
MYRZ	Mayor Island	0.73	327	P*	Pb	04 44 08.2	-0.8
MWZ	Matawai	0.76	125	⇑P*	Pb	04 44 08.8	-0.8
MWZ				S*	Sb	04 44 20.2	0.0
TOZ	Tahuroa Road	0.99	279	⇑P*	Pb	04 44 12.5	-1.0
TOZ				S*	Sb	04 44 26.1	-0.7
PUZ	Puketiti	1.22	99	*e*P*	Pb	04 44 16.8	-0.6
PUZ				S*	Sb	04 44 32.7	-0.7
BKZ	Black Stump Fm	1.28	188	P*	Pb	04 44 16.5	-2.1
MXZ	Matakaoa Point	1.29	76	*e*P*	Pb	04 44 17.5	-1.2
KNZ	Kokohu	1.34	147	P*	Pb	04 44 19.4	-0.2
HIZ	Hauiti	1.60	247	PN	Pn	04 44 21.8	-1.7
MTAZ	Motutapu	1.83	307	*e*PN	Pn	04 44 24.7	-2.0

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*NEIC **28** 04:44:16.5, 37.90S×176.73E, h9^{km}, ML3.9(WEL), After WEL.*

NEIC Felt at Edgecumbe, Kawerau and Matata.

WEL 28 04:44:16.3±0.1**, 37.90S×176.76E, h2**^{km}**, ML3.8**/7**, 5C-1D, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	Manawahe	0.11	215	P	Pg	04 44 19.3	+0.7
MARZ	Manawahe	0.11	215	⇓P*	Pb	04 44 19.3	-1.5
EDRZ	Edgecumbe	0.21	184	P	Pg	04 44 21.3	+0.7
EDRZ	Edgecumbe	0.21	184	⇑P*	Pb	04 44 21.3	-1.3
LIRZ	Lichensteins R	0.31	250	P	Pg	04 44 23.0	+0.4
LIRZ	Lichensteins R	0.31	250	PG	Pg	04 44 23.0	+0.5
MKRZ	Makatiti	0.33	223	P	Pg	04 44 23.7	+0.7
MKRZ	Makatiti	0.33	223	PG	Pg	04 44 23.7	+0.8
MKRZ				*e*SG	Sg	04 44 29.5	+2.1
TAZ	Tarawera	0.39	210	P	Pg	04 44 24.0	-0.1
TAZ	Tarawera	0.39	210	PG	Pg	04 44 24.0	-0.1
TGRZ	Tauranga	0.42	293	P	Pg	04 44 24.8	0.0
TGRZ	Tauranga	0.42	293	⇑PG	Pg	04 44 24.8	-0.1
TGRZ				SG	Sg	04 44 30.3	-0.2
URZ	Urewera	0.46	142	P	Pg	04 44 25.9	+0.4
URZ	Urewera	0.46	142	⇑PG	Pg	04 44 25.9	+0.4
URZ				SG	Sg	04 44 32.4	+0.8
WIZ	White Island	0.50	43	P	Pg	04 44 27.1	+0.7
WIZ	White Island	0.50	43	PG	Pg	04 44 27.0	+0.6
UTU	Utuhina	0.53	238	PG	Pg	04 44 27.4	+0.6

PATZ	**Paeroa**	**0.62**	**219**	PG	Pg	04 44 29.6	+0.8
MYRZ	**Mayor Island**	**0.74**	**326**	P*	Pb	04 44 30.9	-0.7
MWZ	**Matawai**	**0.75**	**126**	⇑P*	Pb	04 44 31.3	-0.4
MWZ				S*	Sb	04 44 42.1	-0.1
TOZ	**Tahuroa Road**	**1.01**	**279**	P*	Pb	04 44 34.9	-1.3
TOZ				S*	Sb	04 44 48.5	-1.2
PUZ	**Puketiti**	**1.20**	**99**	⇑P*	Pb	04 44 38.0	-1.4
BKZ	**Black Stump Fm**	**1.28**	**189**	P*	Pb	04 44 39.6	-1.3
KNZ	**Kokohu**	**1.33**	**148**	P*	Pb	04 44 41.4	-0.3
MKAZ	**Moumakai**	**1.49**	**301**	PN	Pn	04 44 43.8	-0.4
HIZ	**Hauiti**	**1.62**	**247**	PN	Pn	04 44 46.1	0.0
OTAZ	**Otara**	**1.74**	**302**	PN	Pn	04 44 47.4	-0.4

PGC ***28*** *04:59:25.6, 47.99N×128.99W, h10^{km}, MLSn3.2/1, Mw3.8, MD1.5(SEA), Northern Juan de Fuca ridge.*
NEIC ***28*** *04:59:26.0, 47.99N×128.99W, h10^{km}, mb4.2/1, ML3.8(PGC), After PGC.*
IDC ***28*** *04:59:28.8±2.0, 48.19N×128.42W, mb3.4/2, mb1 3.8/11, mb1mx3.7/23, mbtmp3.6/11, ML3.4/8, MS3.3/9, Ms1 3.4/9, ms1mx3.2/15, Error ellipse: s-maj=36.3km s-min=11.5km az=60.0*
ISC 28 04:59:26.6±1.0**, 48.23N**±0.04×**128.67W**±0.08**, h2**^{km}±10^{km}**, n52,** σ**0**^{s}**94**/72**, mb3.2**/1**, MS3.3**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.94**	**31**	Pn	**Pn**	**05 00 00.5**	**-0.5**
OZB	**Mount Ozzard**	**2.23**	**70**	Pn	**Pn**	**05 00 04.7**	**-0.5**
OZB				Sn	**Sn**	**05 00 33.5**	**-0.2**
OZB				Trac		05 00 39.2	
	comp=Z,30nm,0.5s						
GDR	**Gold River**	**2.33**	**47**	Pn	**Pn**	**05 00 07.2**	**+0.6**
WOSB	**Woss**	**2.38**	**35**	Pn	**Pn**	**05 00 07.6**	**+0.4**
MAYB	**Maynard**	**2.39**	**24**	Pn	**Pn**	**05 00 07.2**	**-0.2**
MAYB				Sn	**Sn**	**05 00 37.8**	**+0.1**
	comp=Z,24nm,0.5s						
MAYB				Trac		05 00 44.3	
	comp=Z,24nm,0.5s						
BTB	**Buttle Lake**	**2.42**	**58**	Pn	**Pn**	**05 00 08.2**	**+0.3**
BTB				Sn	**Sn**	**05 00 39.7**	**+1.2**
	comp=Z,35nm,0.4s						
BTB				Trac		05 00 41.9	
	comp=Z,35nm,0.4s						
HOLB	**Holberg**	**2.44**	**8**	Pn	**Pn**	**05 00 07.6**	**-0.6**
HOLB				Sn	**Sn**	**05 00 38.8**	**-0.3**
	comp=Z,11nm,0.3s						
HOLB				Trac		05 00 41.4	
	comp=Z,11nm,0.3s						
PHC	**Port Hardy**	**2.61**	**18**	Pn	**Pn**	**05 00 10.0**	**-0.6**
ALB	**Alberni**	**2.75**	**66**	Pn	**Pn**	**05 00 12.2**	**-0.3**
MGB	**Mount Grey**	**2.75**	**72**	Pn	**Pn**	**05 00 11.9**	**-0.7**
MGB				Sn	**Sn**	**05 00 46.0**	**-0.9**
	comp=Z,10.0nm,0.4s						
MGB				Trac		05 00 52.0	
	comp=Z,10.0nm,0.4s						
NCRB	**Newcastle Ridg**	**2.77**	**37**	Pn	**Pn**	**05 00 13.7**	**+0.8**
NCRB				Sn	**Sn**	**05 00 49.3**	**+2.0**
	comp=Z,6.0nm,0.2s						
NCRB				Trac		05 00 50.1	
	comp=Z,6.0nm,0.2s						
CBB	**Campbell River**	**2.83**	**49**	Pn	**Pn**	**05 00 14.6**	**+0.9**
CBB				Sn	**Sn**	**05 00 49.9**	**+1.2**
CBB				Trac		05 00 51.4	
	comp=Z,38nm,0.7s						
PFB	**Port Renfrew**	**2.84**	**81**	Pn	**Pn**	**05 00 13.0**	**-0.8**
PFB				Sn	**Sn**	**05 00 49.0**	**-0.1**
PFB				Trac		05 00 52.2	
	comp=Z,6.1nm,0.4s						
TXB	**Texada**	**3.15**	**61**	Pn	**Pn**	**05 00 18.7**	**+0.4**
TXB				Sn	**Sn**	**05 00 55.7**	**-1.4**
	comp=Z,16nm,0.5s						
TXB				Trac		05 01 00.6	
	comp=Z,16nm,0.5s						
LZB	**Mount Lazard**	**3.25**	**81**	Pn	**Pn**	**05 00 18.8**	**-0.9**
LZB				Sn	**Sn**	**05 00 59.2**	**-0.3**
LZB				Trac		05 01 01.7	
	comp=Z,7.0nm,0.6s						
NLLB	**Nanaimo Lost L**	**3.26**	**70**	Pn	**Pn**	**05 00 19.4**	**-0.3**
NLLB				Sn	**Sn**	**05 00 59.8**	**+0.1**
NLLB				Trac		05 01 02.8	
	comp=Z,9.0nm,0.5s						
SHB	**Sechelt**	**3.45**	**65**	Pn	**Pn**	**05 00 22.9**	**+0.4**
SHB				Sn	**Sn**	**05 01 04.4**	**-0.1**
SHB				Trac		05 01 05.1	
	comp=Z,26nm,0.8s						
PGC	**Sidney**	**3.50**	**81**	*e*P	**Pn**	**05 00 21.9**	**-1.3**
PGC	**Sidney**	**3.50**	**81**	Pn	**Pn**	**05 00 22.5**	**-0.7**
PGC				Sn	**Sn**	**05 01 05.5**	**-0.3**
PGC				Trac		05 01 06.3	
	comp=Z,7.0nm,0.5s						
GOBB	**Galiano Island**	**3.50**	**76**	Pn	**Pn**	**05 00 23.2**	**0.0**
GOBB				Sn	**Sn**	**05 01 06.9**	**+1.0**
	comp=Z,18nm,0.6s						
GOBB				Trac		05 01 10.1	
	comp=Z,18nm,0.6s						
VGZ	**Gonzales**	**3.57**	**85**	Pn	**Pn**	**05 00 23.3**	**-0.9**
VGZ				Sn	**Sn**	**05 01 05.8**	**-1.8**
VGZ				Trac		05 01 09.4	
	comp=Z,15nm,0.4s						
SNB	**Saturna Island**	**3.70**	**79**	Pn	**Pn**	**05 00 26.3**	**+0.3**
SNB				Sn	**Sn**	**05 01 11.9**	**+1.1**
SNB				Trac		05 01 15.6	
	comp=Z,13nm,0.7s						
BIB	**Bowen Island**	**3.73**	**70**	Pn	**Pn**	**05 00 26.7**	**+0.1**
BIB				Sn	**Sn**	**05 01 12.7**	**+0.9**
	comp=Z,10.0nm,0.6s						
BIB				Trac		05 01 19.1	
	comp=Z,10.0nm,0.6s						
WPB	**Watts Point**	**3.87**	**66**	Pn	**Pn**	**05 00 29.0**	**+0.4**
BBB	**Bella Bella**	**3.98**	**5**	Pn	**Pn**	**05 00 29.8**	**-0.3**
	31nm,0.3s,baz=197,slow=11,SNR=495						
BBB				Sn	**Sn**	**05 01 15.9**	**-2.1**
	baz=290,slow=18,SNR=1.6						
BBB				LR	LR	05 01 57.2	
	comp=Z,267nm,20.7s,baz=67,slow=37						
BBB	**Bella Bella**	**3.98**	**5**	Pn	**Pn**	**05 00 29.5**	**-0.6**
BBB				Sn	**Sn**	**05 01 16.1**	**-1.9**
BBB				Trac		05 01 17.1	
	comp=Z,8.0nm,0.2s						
HNB	**Haney**	**4.16**	**73**	Pn	**Pn**	**05 00 32.4**	**-0.3**
HNB				Sn	**Sn**	**05 01 22.3**	**-0.3**
HNB				Trac		05 01 24.8	
	comp=Z,11nm,0.6s						
WSLR	**Whistler**	**4.22**	**61**	Pn	**Pn**	**05 00 34.2**	**+0.7**
CMW	**Cultus Mountai**	**4.37**	**85**	P	**Pn**	**05 00 36.0**	**+0.4**
VDB	**Vedder Mountai**	**4.43**	**77**	P	**Pn**	**05 00 35.9**	**-0.5**
VDB				Pn	**Pn**	**05 00 36.3**	**-0.1**
JCW	**Jim Creek**	**4.51**	**88**	P	**Pn**	**05 00 37.3**	**-0.2**
HTW	**Haystack Looko**	**4.65**	**93**	P	**Pn**	**05 00 39.8**	**+0.2**
HOPB	**Hope**	**4.93**	**74**	Pn	**Pn**	**05 00 43.2**	**-0.3**
LLLB	**Lillooet**	**5.03**	**59**	Pn	**Pn**	**05 00 45.2**	**+0.3**
LLLB				Sn	**Sn**	**05 01 40.3**	**-4.2**
LLLB				Trac		05 01 54.8	
	comp=Z,5.0nm,0.8s						
NEW	**Newport**	**7.71**	**85**	Pn	**Pn**	**05 01 20.5**	**-2.2**
	0.5nm,0.3s,baz=281,slow=13,SNR=7.6						
NEW				LR	LR	05 04 28.6	
	comp=Z,357nm,19.5s,baz=258,slow=40						
YBH	**Yreka Blue Hor**	**7.74**	**145**	Pn	**Pn**	**05 01 25.7**	**+2.6**
	0.1nm,0.3s,baz=15,slow=5.5,SNR=8.6						
DLBC	**Dease Lake**	**10.26**	**356**	Pn	**P**	**05 01 59.3**	**+1.4**
	0.1nm,0.3s,baz=153,slow=12,SNR=3.8						
ELK	**Elko**	**12.15**	**123**	Pn	**P**	**05 02 22.9**	**-0.8**
	0.1nm,0.3s,baz=302,slow=9.5,SNR=2.6						
ELK				LR	LR	05 06 38.9	
	comp=Z,90nm,21.6s,baz=308,slow=36						
NVAR	**Mina Array Bea**	**12.35**	**139**	Pn	**P**	**05 02 28.5**	**+2.2**
	0.1nm,0.3s,baz=325,slow=12,SNR=4.8						
NVAR	**Mina Array Bea**	**12.35**	**139**	Pn	**P**	**05 02 28.5**	**+2.2**
PDAR	**Pinedale Array**	**14.46**	**105**	Pn	**P**	**05 02 54.9**	**+0.7**
	0.1nm,0.3s,baz=285,slow=10,SNR=3.7						
YKA	**Yellowknife Ar**	**16.32**	**24**	Pn	**P**	**05 03 17.2**	**-1.0**
	0.1nm,0.3s,baz=214,slow=11,SNR=29						
YKA				LR	LR	05 09 23.1	
	comp=Z,99nm,18.4s,baz=240,slow=36						
YKW3	**Yellowknife Ar**	**16.37**	**24**	*e*P	**P**	**05 03 21.6**	**+2.7**
PV10	**Paradox Valley**	**17.30**	**117**	P	**P**	**05 03 31.4**	**+0.6**
PV01	**Paradox Valley**	**17.74**	**117**	*e*P	**P**	**05 03 33.8**	**-2.5**
FFC	**Flin Flon**	**17.78**	**59**	P	**P**	**05 03 39.7**	**+3.0**
	77nm,1.6s,SNR=11						
FFC	**Flin Flon**	**17.78**	**59**	*e*P	**P**	**05 03 38.0**	**+1.4**
	24nm,1.3s						
ILAR	**Eielson Array**	**19.26**	**336**	P	**P**	**05 03 54.1**	**-0.6**
	0.0nm,0.3s,baz=153,slow=9.9,SNR=12						
ILAR				LR	LR	05 09 52.5	
	comp=Z,98nm,18.7s,baz=353,slow=32						
INK	**Inuvik**	**20.29**	**355**	P	**P**	**05 04 05.9**	**-0.2**
	2.4nm,0.9s,baz=156,slow=12,SNR=9.6						
INK				LR	LR	05 11 57.7	
	comp=Z,114nm,20.1s,MS3.2,baz=221,slow=37						
ANMO	**Albuquerque**	**21.16**	**121**	P	**P**	**05 04 15.1**	**-0.2**
	0.6nm,0.5s,mb3.2,baz=332,slow=11,SNR=4.1						
ANMO				LR	LR	05 12 54.9	
	comp=Z,50nm,19.3s,MS2.9,slow=38						
TXAR	**Lajitas Array**	**26.93**	**125**	LR	LR	05 16 08.8	
	comp=Z,70nm,19.9s,MS3.2,baz=345,slow=37						
SCHQ	**Schefferville**	**37.90**	**56**	LR	LR	05 22 36.0	
	comp=Z,155nm,18.6s,MS3.8,baz=40,slow=37						

FUNV ***28*** *05:08:59.9, 6.69N×73.14W, h162^{km}, MD4.0*
IDC ***28*** *05:09:04.1±6.6, 6.78N×75.25W, h154^{km}±99^{km}, mb2.8/1, mb1 3.2/2, mb1mx2.8/17, mbtmp3.4/2, Error ellipse: s-maj=319.2km s-min=41.3km az=84.0*
ISC 28 05:08:59.6±0.8**, 6.87N**±0.07×**72.98W**±0.08**, h173**^{km}±8^{km}**, n11,** σ**1**^{s}**06**/19**, mb3.2**/1**, 4C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.19**	**34**	⇑*i*P	**P**	**05 09 29.5**	**+1.1**
CAPV				*e*S	**S**	**05 09 50.4**	**-0.2**
ROSC	**El Rosal**	**2.41**	**214**	P	**P**	**05 09 41.3**	**0.0**
	31nm,0.3s,baz=286,slow=14,SNR=156						
ROSC				S	**S**	**05 10 10.5**	**-2.9**
	37nm,0.3s,baz=108,slow=17,SNR=16						
VIGV	**El Vigia**	**2.53**	**39**	⇑*i*P	**P**	**05 09 44.0**	**+1.2**
VIGV				*e*S	**S**	**05 10 16.0**	**0.0**
SOCV	**Socops**	**2.53**	**56**	⇑*i*P	**P**	**05 09 44.5**	**+1.7**
SOCV				*e*S	**S**	**05 10 16.7**	**+0.7**
VIRV	**Villa del Rosa**	**3.66**	**9**	⇑*i*P	**P**	**05 09 56.3**	**-0.5**
VIRV				*e*S	**S**	**05 10 40.1**	**-0.8**
SANV	**Sanarito**	**4.30**	**52**	*e*P	**P**	**05 10 06.0**	**+1.0**
SANV				*e*S	**S**	**05 10 54.8**	**-0.8**
CURV	**Curarigua**	**4.32**	**44**	⇓*i*P	**P**	**05 10 06.4**	**+1.1**
CURV				*e*S	**S**	**05 10 55.2**	**-0.9**
DABV	**Dabajuro**	**4.64**	**30**	*e*P	**P**	**05 10 10.6**	**+1.0**
DABV				*e*S	**S**	**05 11 02.6**	**-1.0**
BAUV	**El Baul**	**5.31**	**67**	*e*P	**P**	**05 10 17.9**	**-0.3**
BAUV				*e*S	**S**	**05 11 16.7**	**-2.4**
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**05 19 11.6**	**-0.2**
	0.2nm,0.5s,mb3.2,baz=133,slow=6.7,SNR=6.3						
WRA	**Warramunga Arr**	**150.48**	**241**	PKPbc	PKPdf	05 28 32.9	+7.1
	0.2nm,0.4s,baz=107,slow=2.6,SNR=6.0						

NEIC ***28*** *05:53:44.0, 48.01N×128.98W, h10^{km}, mb3.9/1, ML3.9(PGC), After PGC.*
PGC 28 05:53:43.6, 48.02N×**128.98W, h10**^{km}**, MLSn3.3**/1**, Mw3.9, Northern Juan de Fuca ridge., Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**2.23**	**33**	Pn	Pn	05 54 18.1	-3.1
OZB	**Mount Ozzard**	**2.50**	**66**	Pn	Pn	05 54 22.9	-2.3
OZB				Sn	Sn	05 54 51.5	-4.5
OZB				Trac		05 54 53.4	
	comp=Z,32nm,0.3s						
GDR	**Gold River**	**2.63**	**47**	Pn	Pn	05 54 24.3	-2.5
MAYB	**Maynard**	**2.67**	**26**	Pn	Pn	05 54 24.9	-2.5
MAYB				Sn	Sn	05 54 56.0	-4.2
	comp=Z,13nm,0.4s						
MAYB				Trac		05 54 56.5	
	comp=Z,13nm,0.4s						
WOSB	**Woss**	**2.67**	**35**	Pn	Pn	05 54 25.1	-2.3
HOLB	**Holberg**	**2.69**	**12**	Pn	Pn	05 54 25.6	-2.1
HOLB				Sn	Sn	05 54 54.8	-5.8
	comp=Z,8.0nm,0.3s						
HOLB				Trac		05 54 59.7	
	comp=Z,8.0nm,0.3s						
BTB	**Buttle Lake**	**2.71**	**56**	Pn	Pn	05 54 26.4	-1.7
BTB				Sn	Sn	05 54 56.9	-4.4
	comp=Z,31nm,0.3s						
BTB				Trac		05 55 00.2	
	comp=Z,31nm,0.3s						
PHC	**Port Hardy**	**2.88**	**20**	Pn	Pn	05 54 28.1	-2.4
MGB	**Mount Grey**	**3.02**	**69**	Pn	Pn	05 54 29.9	-2.5
MGB				Sn	Sn	05 55 03.5	-5.4
	comp=Z,13nm,0.4s						
MGB				Trac		05 55 07.1	
	comp=Z,13nm,0.4s						
ALB	**Alberni**	**3.02**	**64**	Pn	Pn	05 54 30.0	-2.5
ALB				Sn	Sn	05 55 04.8	-4.3
	comp=Z,5.0nm,0.3s						
ALB				Trac		05 55 09.2	
	comp=Z,5.0nm,0.3s						
NCRB	**Newcastle Ridg**	**3.06**	**38**	Pn	Pn	05 54 31.3	-1.8
PFB	**Port Renfrew**	**3.08**	**78**	Pn	Pn	05 54 30.8	-2.6
PFB				Sn	Sn	05 55 05.9	-4.7
CBB	**Campbell River**	**3.12**	**48**	Pn	Pn	05 54 32.2	-1.7
CBB				Sn	Sn	05 55 05.3	-6.3
CBB				Trac		05 55 11.9	
	comp=Z,7.0nm,0.3s						
OCWA	**Octopus Mounta**	**3.24**	**93**	P	Pn	05 54 34.5	-1.1
TXB	**Texada**	**3.44**	**59**	Pn	Pn	05 54 36.7	-1.7
TXB				Sn	Sn	05 55 17.1	-2.6
	comp=Z,12nm,0.4s						
TXB				Trac		05 55 17.4	
	comp=Z,12nm,0.4s						
LZB	**Mount Lazard**	**3.49**	**78**	Pn	Pn	05 54 36.7	-2.5
LZB				Sn	Sn	05 55 16.7	-4.3
LZB				Trac		05 55 19.9	
	comp=Z,6.0nm,0.5s						
NLLB	**Nanaimo Lost L**	**3.52**	**68**	Pn	Pn	05 54 37.6	-2.1
NLLB				Sn	Sn	05 55 15.1	-6.8
NLLB				Trac		05 55 22.5	
	comp=Z,7.0nm,0.4s						
SHB	**Sechelt**	**3.73**	**63**	Pn	Pn	05 54 40.6	-1.9
SHB				Sn	Sn	05 55 21.8	-5.1
SHB				Trac		05 55 27.9	
	comp=Z,14nm,0.5s						
PGC	**Sidney**	**3.74**	**78**	*e*P	Pn	05 54 40.2	-2.5
PGC	**Sidney**	**3.74**	**78**	Pn	Pn	05 54 39.7	-3.0
PGC				Sn	Sn	05 55 23.2	-4.2
PGC				Trac		05 55 24.2	
	comp=Z,9.0nm,0.5s						
GOBB	**Galiano Island**	**3.75**	**74**	Pn	Pn	05 54 41.4	-1.6
GOBB				Sn	Sn	05 55 26.0	-1.6
	comp=Z,19nm,0.6s						
GOBB				Trac		05 55 28.1	
	comp=Z,19nm,0.6s						
VGZ	**Gonzales**	**3.80**	**82**	Pn	Pn	05 54 40.5	-3.0
VGZ				Sn	Sn	05 55 24.2	-4.6
VGZ				Trac		05 55 26.5	
	comp=Z,20nm,0.4s						
SNB	**Saturna Island**	**3.94**	**77**	Pn	Pn	05 54 43.5	-2.1
SNB				Trac		05 55 32.2	
	comp=Z,4.0nm,0.3s						
WPB	**Watts Point**	**4.15**	**65**	Pn	Pn	05 54 46.7	-1.8
WPB				Sn	Sn	05 55 35.3	-2.4
	comp=Z,14nm,0.8s						
WPB				Trac		05 55 45.2	
	comp=Z,14nm,0.8s						
BBB	**Bella Bella**	**4.21**	**7**	Pn	Pn	05 54 47.2	-2.2
BBB				Sn	Sn	05 55 33.6	-5.7
BBB				Trac		05 55 37.2	
	comp=Z,6.0nm,0.3s						
HNB	**Haney**	**4.42**	**71**	Pn	Pn	05 54 50.4	-2.1
HNB				Sn	Sn	05 55 41.5	-3.1
HNB				Trac		05 55 45.0	
	comp=Z,10.0nm,0.5s						
WSLR	**Whistler**	**4.51**	**60**	Pn	Pn	05 54 52.1	-1.5
VDB	**Vedder Mountai**	**4.68**	**75**	Pn	Pn	05 54 54.1	-1.9
HOPB	**Hope**	**5.19**	**72**	Pn	Pn	05 55 02.0	-1.3
LLLB	**Lillooet**	**5.32**	**58**	Pn	Pn	05 55 03.4	-1.7
PNT	**Penticton**	**6.34**	**75**	Pn	Pn	05 55 18.9	-0.5
NEW	**Newport**	**7.94**	**84**	*e*P	Pn	05 55 38.8	-3.1
WALA	**Waterton Lakes**	**10.05**	**78**	*e*P	P	05 56 09.8	-1.3
PV10	**Paradox Valley**	**17.39**	**116**	*e*P	P	05 57 47.2	-0.6
PV01	**Paradox Valley**	**17.83**	**116**	P	P	05 57 55.5	+2.1
FFC	**Flin Flon**	**18.07**	**58**	*e*P	P	05 57 56.5	+0.3
	7.7nm,0.8s						

MAN 28 05:56:16.5, 9.37N×**126.33E, h1**^{km}**, mb3.8, ML2.5, MS2.1, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.80**	**240**	*e*P	Pg	05 56 32.2	-0.3
BUTP				*e*S	Sg	05 56 42.9	-0.4
SCPH	**Surigao**	**0.93**	**296**	⇑*e*P	Pg	05 56 33.2	-1.7
SCPH				*e*S	Sg	05 56 46.4	-0.9
BIPH	**Bislig**	**1.18**	**178**	⇑*e*P	Pb	05 56 38.7	-0.6
BIPH				*e*S	Sb	05 56 52.6	-2.3
MSLP	**Maasin**	**1.64**	**298**	*e*P	Pn	05 56 46.3	-0.3
BUKP	**Musuan**	**1.94**	**220**	*e*P	Pn	05 56 50.9	0.0

IDC ***28*** *06:33:43.6±0.8, 58.61S×25.10W, mb4.3/5, mb1 4.4/6, mb1mx4.0/14, mbtmp4.3/6, ML4.4/1, MS3.6/1, Ms1 3.6/1, ms1mx2.1/14, Error ellipse: s-maj=33.8km s-min=26.8km az=31.0*
NEIC ***28*** *06:33:46.9±3.5, 58.61S×25.06W, h21^{km}±24^{km}, mb4.3/4, Error ellipse: s-maj=16.2km s-min=10.2km az=220.0*
ISC 28 06:33:43.6±0.7**, 58.5S**±0.1×**25.1W**±0.3**, h10**^{km}**, n28,** σ**0**^{s}**90**/16**, mb4.2**/6**, MS3.5**/1**, 1C-2D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.27**	**160**	*e*	**P**	**06 37 10.3**	**+2.8**
VNA3	**Neumayer Olymp**	**14.27**	**160**	*e*		06 37 14.4	
VNA3	**Neumayer Olymp**	**14.27**	**160**	⇓*i*P	**P**	**06 37 06.0**	**-1.5**
VNA3				*e*		06 37 10.3	
VNA3				*e*		06 37 14.4	
VNA2	**Neumayer--Watz**	**14.47**	**156**	*e*	**P**	**06 37 12.0**	**+2.0**
VNA2	**Neumayer--Watz**	**14.47**	**156**	*e*		06 37 16.2	
VNA2	**Neumayer--Watz**	**14.47**	**156**	⇑*i*P	**P**	**06 37 09.0**	**-1.0**
VNA2				*e*		06 37 16.2	
SNAA	**Sanae**	**16.02**	**154**	*e*	**P**	**06 37 33.9**	**+3.8**
SNAA	**Sanae**	**16.02**	**154**	*e*		06 37 37.7	
SNAA	**Sanae**	**16.02**	**154**	Pn	**P**	**06 37 29.8**	**-0.3**
	1.6nm,0.3s,baz=321,slow=15,SNR=71						
SNAA	**Sanae**	**16.02**	**154**	⇓*i*P	**P**	**06 37 29.7**	**-0.4**
SNAA				*e*		06 37 33.9	
SNAA				*e*		06 37 37.7	
PLCA	**Paso Flores**	**33.59**	**282**	P	**P**	**06 40 24.8**	**-0.9**
	1.9nm,0.8s,mb4.1,baz=175,slow=8.8,SNR=4.9						
PLCA				LR	LR	06 52 20.7	
	comp=Z,98nm,20.0s,MS3.5,baz=206,slow=33						
PLCA	**Paso Flores**	**33.59**	**282**	*e*P	**P**	**06 40 26.0**	**+0.3**
	2.7nm,0.8s,mb4.2						
PLCA				LR	LR	06 52 20.7	
BDFB	**Brasilia**	**46.08**	**329**	P	**P**	**06 42 10.1**	**+0.7**
	3.1nm,0.8s,mb4.3,baz=168,slow=7.0,SNR=5.5						
LBTB	**Lobatse**	**48.73**	**69**	P	**P**	**06 42 29.8**	**-0.3**
	2.4nm,0.8s,mb4.3,baz=315,slow=2.9,SNR=3.3						
LBTB	**Lobatse**	**48.73**	**69**	*e*P	**P**	**06 42 30.2**	**0.0**
	2.4nm,0.8s,mb4.3						
LPAZ	**La Paz**	**52.73**	**305**	*e*P	**P**	**06 43 00.5**	**-0.1**
	0.8nm,0.6s,mb3.8						
DBIC	**Dimbokro**	**66.99**	**22**	P	**P**	**06 44 38.5**	**-0.2**
	3.0nm,0.6s,mb4.5,baz=168,slow=8.2,SNR=9.6						
DBIC	**Dimbokro**	**66.99**	**22**	*e*P	**P**	**06 44 38.4**	**-0.3**
	2.8nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**96.28**	**161**	P	**P**	**06 47 13.1**	**-0.1**
	1.1nm,0.8s,mb4.3,baz=192,slow=4.8,SNR=7.3						
FINES	**FINESS Array B**	**126.05**	**28**	PKP	PKPdf	06 52 45.3	-2.6
	0.6nm,0.5s,baz=180,slow=4.2,SNR=4.0						
ARCES	**ARCESS Array B**	**132.82**	**22**	PKP	PKPdf	06 52 58.8	-2.0
	2.9nm,0.9s,baz=236,slow=3.3,SNR=3.6						
YKA	**Yellowknife Ar**	**138.75**	**315**	PKP	PKPdf	06 53 09.9	-1.8
	0.2nm,0.3s,baz=134,slow=2.1,SNR=10						
YKA	**Yellowknife Ar**	**138.75**	**315**	PKP	PKPdf	06 53 09.9	-1.8
INK	**Inuvik**	**148.42**	**318**	PKPbc	PKPdf	06 53 29.9	+1.8
	3.6nm,0.9s,baz=55,slow=3.8,SNR=28						
INK	**Inuvik**	**148.42**	**318**	*e*PKPbc	PKPdf	06 53 29.9	+1.8
SONM	**Songino Array**	**149.69**	**89**	PKPbc	PKPdf	06 53 33.8	+3.1
	1.4nm,0.7s,baz=226,slow=3.5,SNR=15						
ILAR	**Eielson Array**	**152.57**	**308**	PKPbc	PKPdf	06 53 40.6	+6.1
	0.8nm,0.4s,baz=146,slow=2.3,SNR=21						
MCK	**McKinley**	**153.17**	**305**	*e*PKPbc	PKPdf	06 53 42.3	+7.0

IDC 28 06:50:14.7±2.3**, 12.95N**×**92.65E, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.6**/15**, mbtmp3.6**/5**, ML4.1**/1**, MS2.6**/1**, Ms1 2.8**/1**, ms1mx2.3**/15**, Error ellipse: s-maj=69.3km s-min=25.2km az=73.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.17**	**47**	Pn	P	06 52 13.6	-3.8
	0.7nm,0.3s,baz=232,slow=16,SNR=5.6						
CMAR				LR	LR	06 55 37.5	
	comp=Z,45nm,20.7s,baz=229,slow=40						
SONM	**Songino Array**	**36.63**	**16**	P	P	06 57 23.4	-1.2
	0.8nm,1.1s,baz=219,slow=9.2,SNR=3.3						
ZAL	**Zalesovo**	**41.36**	**353**	P	P	06 58 01.7	-2.2
	0.7nm,0.5s,baz=111,slow=5.1,SNR=2.7						
WRA	**Warramunga Arr**	**52.45**	**128**	P	P	06 59 29.5	-2.2
	0.2nm,0.3s,baz=301,slow=9.6,SNR=7.8						
ASAR	**Alice Springs**	**54.33**	**132**	P	P	06 59 43.4	-2.1
	0.3nm,0.3s,baz=311,slow=7.1,SNR=9.3						

IDC ***28*** *06:55:56.5±3.9, 6.62S×148.72E, h71^{km}±20^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.7/12, mbtmp4.0/4, Error ellipse: s-maj=67.1km s-min=24.0km az=132.0*
ISC 28 06:55:47.3±3.6**, 6.3S**±0.2×**148.8E**±0.3**, h22**^{km}±31^{km}**, n8,** σ**1**^{s}**16**/11**, mb4.2**/3**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.49**	**207**	P	**Pn**	**06 56 43.4**	**+1.8**
	48nm,0.3s,baz=32,slow=6.2,SNR=85						
PMG				S	**Sn**	**06 57 21.7**	**-1.1**
	20nm,0.3s,baz=157,slow=21,SNR=13						
WB2	**Warramunga Arr**	**19.51**	**225**	*e*P	**P**	**07 00 15.0**	**-1.2**
WRA	**Warramunga Arr**	**19.52**	**225**	P	**P**	**07 00 14.8**	**-1.5**
	0.6nm,0.3s,baz=52,slow=11,SNR=13						
WRA				S	**S**	**07 03 51.7**	**+2.1**
	0.1nm,0.3s,baz=45,slow=20,SNR=3.3						
ASAR	**Alice Springs**	**22.43**	**218**	P	**P**	**07 00 46.0**	**-0.3**
	2.9nm,0.5s,mb4.0,baz=54,slow=9.1,SNR=49						
ASAR				S	**S**	**07 04 45.6**	**-0.8**
	0.9nm,0.8s,baz=48,slow=15,SNR=5.5						
ASPA	**Alice Springs**	**22.43**	**218**	*e*P	**P**	**07 00 46.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**25.44**	**240**	⇑*i*P	**P**	**07 01 16.0**	**+0.5**
	9.5nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**26.33**	**194**	*e*P	**P**	**07 01 24.7**	**+1.0**
STKA	**Stephens Creek**	**26.33**	**194**	P	**P**	**07 01 24.2**	**+0.6**
	1.6nm,0.5s,mb3.8,baz=19,slow=12,SNR=5.1						

GCG ***28*** *06:57:53.1, 13.49N×90.51W, MD3.6*
SSS ***28*** *06:57:54.1, 13.38N×90.24W, h30^{km}, MD3.1*
CASC 28 06:57:53.1±1.8**, 13.38N**×**90.32W, h29**^{km}±5^{km}**, MD3.4, 5C-5D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.80**	**351**	⇓*e*P	Pb	06 58 07.9	-0.5
IXG				*e*S	Sb	06 58 19.1	+0.2
SBLS	**San Blas**	**0.82**	**56**	⇑*e*P	Pb	06 58 08.9	+0.2
SBLS				*e*S	Sb	06 58 20.6	+1.3
RTR	**El Retiro**	**0.83**	**52**	⇑*e*P	Pb	06 58 09.2	+0.3
RTR				*e*S	Sb	06 58 20.8	+0.9
SNJE	**San Jose**	**0.85**	**55**	⇑*e*P	Pn	06 58 09.3	+0.2
SNJE				*e*S	Sb	06 58 21.7	+1.5
RBDL	**Robledal**	**0.95**	**40**	⇓*e*P	Pn	06 58 11.2	+0.5
RBDL				*e*S	Sb	06 58 25.1	+1.8
BOQS	**Boqueron**	**1.07**	**71**	⇓*e*P	Pn	06 58 12.6	+0.2
BOQS				*e*S	Sn	06 58 27.1	+0.8
SNET	**Serv Nac Est T**	**1.10**	**74**	*e*P	Pn	06 58 12.7	-0.1
SNET				*e*S	Sn	06 58 27.6	+0.4
NBG	**Las Nubes**	**1.20**	**359**	⇑*e*P	Pn	06 58 15.1	+0.9
NBG				*e*S	Sn	06 58 32.4	+2.8
LFU	**La Fuente**	**1.23**	**73**	*e*P	Pn	06 58 15.1	+0.5
LFRS	**El Faro**	**1.25**	**79**	⇓*e*P	Pn	06 58 15.3	+0.5
LFRS				*e*S	Sn	06 58 30.5	-0.3
LBRS	**Las Brisas**	**1.29**	**74**	*e*P	Pn	06 58 15.7	+0.2
LCBS	**La Ceiba**	**1.33**	**78**	*e*P	Pn	06 58 15.9	-0.2
LCBS				*e*S	Sn	06 58 32.2	-0.9
MTO2	**Montecristo 2**	**1.38**	**42**	*e*P	Pn	06 58 16.9	+0.2
SNVI	**San Vicente**	**1.46**	**81**	⇓*e*P	Pn	06 58 18.4	+0.5
SNVI				*e*S	Sn	06 58 36.7	+0.5
JAT	**Jato**	**1.58**	**306**	⇑*e*P	Pn	06 58 18.5	-1.2
JAT				*e*S	Sn	06 58 38.3	-1.0
CAHU	**Cacacuatique**	**2.09**	**79**	*e*P	Pn	06 58 26.2	-0.7

IDC 28 07:02:35.9±1.9,16.61S×178.27W,mb3.9/4,mb1 4.2/4, mb1mx3.9/13,mbtmp3.9/4,Error ellipse: s-maj=162.3km s-min=32.6km az=156.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.38	240	P	P	07 10 07.2	-1.9
	0.8nm,0.4s,baz=87,slow=9.7,SNR=3.7						
WRA	Warramunga Arr	45.01	258	P	P	07 10 53.7	-1.6
	0.5nm,0.3s,baz=92,slow=7.4,SNR=17						
ASAR	Alice Springs	45.28	253	P	P	07 10 55.5	-1.9
	4.5nm,0.6s,baz=88,slow=8.4,SNR=88						
TXAR	Lajitas Array	85.19	58	P	P	07 15 14.8	-1.1
	0.2nm,0.7s,baz=214,slow=9.0,SNR=3.6						

IDC 28 07:14:17.6±7.4,21.33S×169.79E,mb3.8/2,mb1 3.8/2, mb1mx3.7/11,mbtmp3.8/2,MS3.4/1,Ms1 3.4/1, ms1mx2.0/20,Error ellipse: s-maj=272.8km s-min=54.0km az=143.0

ISC 28 07:14:17.7±3.5,22.5S±0.6×170.4E±0.2,h41^{km}±27^{km},n8, σ0^{s}72/6,mb3.8/2,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.70	275	eP	P	07 15 13.9	0.0
DZM				eS	S	07 15 57.5	+0.7
NOUC	Port Laguerre	3.82	275	eP	P	07 15 15.6	0.0
NOUC				eS	S	07 15 59.2	-0.7
URZ	Urewera	16.77	161	LR	LR	07 23 44.7	
	comp=Z,106nm,18.8s,baz=229,slow=32						
ASAR	Alice Springs	33.56	261	P	P	07 20 56.1	0.0
	0.5nm,0.7s,mb3.5,baz=73,slow=9.4,SNR=8.4						
ASAR				pP	pP	07 21 05.8	-1.4
	0.9nm,0.9s,baz=84,slow=9.5,SNR=5.0						
WRA	Warramunga Arr	33.68	267	pP	pP	07 21 06.5	-1.9
	0.3nm,0.3s,baz=98,slow=9.0,SNR=3.4						
SNAA	Sanae	86.01	182		pP	07 27 07.3	+0.5
SONM	Songino Array	90.44	323	P	P	07 27 16.1	0.0
	0.9nm,0.9s,mb4.1,baz=127,slow=5.8,SNR=6.1						
GERES	GERESS Array B	147.83	331	PKPbc	PKPdf	07 33 59.5	+4.3
	0.9nm,0.6s,baz=27,slow=3.0,SNR=6.4						

BJI 28 07:28:02.9,58.70N×153.20W,h57^{km},mB4.9,mb4.6, Ms4.2,Msz4.0

NEIC 28 07:28:07.9,58.68N×153.18W,h57^{km},mb4.2/8, ML4.2(PMR),ML4.1(AEIC),After AEIC.

IDC 28 07:28:07.8±1.0,58.88N×153.20W,h68^{km}±8^{km},mb3.6/12, mb1 4.1/17,mb1mx4.0/23,mbtmp4.1/17,MS3.4/1, Ms1 3.4/1,ms1mx2.7/25,Error ellipse: s-maj=16.8km s-min=13.2km az=35.0

ISC 28 07:28:05.9±0.2,58.71N±0.02×153.15W±0.04,h75^{km}±2^{km}, h64^{km}±2.7^{km}:pP-P,n140,σ1^{s}02/149,mb4.2/24,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYI	Shuyak Island	0.41	104	P	P	07 28 18.5	0.0
KAPH	Katmai Pasha	0.64	260	P	P	07 28 20.3	-0.3
AUI	Augustine Isla	0.64	347	P	P	07 28 21.1	+0.4
AUE	Augustine Isla	0.66	350	P	P	07 28 21.7	+0.7
AGU	Augustine-Summ	0.67	348	P	P	07 28 21.7	+0.7
AUW	Augustine West	0.68	346	P	P	07 28 21.8	+0.6
MCNL	McNeil River	0.78	308	P	P	07 28 22.4	+0.1
KARR	Katmai Rainbow	0.84	256	P	P	07 28 23.1	+0.1
KAWH	Katmai	0.92	250	P	P	07 28 23.7	-0.2
OPT	Oil Point	0.95	358	P	P	07 28 25.1	+0.8
KAHC	Katmai Hardscr	0.97	267	P	P	07 28 24.4	-0.1
KDAK	Kodiak Island	0.98	162	P	P	07 28 24.5	-0.1
KDAK				S	S	07 28 37.9	-0.7
XLV	Seldovia	1.05	44	P	P	07 28 26.8	+1.2
HOM	Homer	1.23	39	P	P	07 28 29.2	+1.3
HOM				S	S	07 28 47.1	+2.8
ACHA	Angle Creek He	1.25	247	P	P	07 28 28.2	+0.1
MGLS	Mageik LS	1.25	247	P	P	07 28 27.3	-0.8
CNPM	China Poot	1.28	50	P	P	07 28 29.4	+0.8
IVS	Iliamna South	1.30	2	P	P	07 28 29.8	+0.7
IVE	Iliamna Volcan	1.31	3	P	P	07 28 29.6	+0.5
ANCK	Angle Creek	1.33	248	P	P	07 28 29.5	+0.1
ILW	Iliamna West	1.36	0	P	P	07 28 30.1	+0.4
INE	Iliamna NE	1.36	2	P	P	07 28 30.1	+0.4
ILIM	Iliamna	1.38	4	P	P	07 28 30.4	+0.4
KJL	Kejulik	1.44	244	P	P	07 28 30.8	+0.1
CNTC	Contact Creek	1.50	254	P	P	07 28 31.6	0.0
BRLK	Bradley Lake	1.57	47	P	P	07 28 33.0	+0.5
RSO	Redoubt South	1.77	6	P	P	07 28 36.0	+0.8
REF	Redoubt East F	1.80	7	P	P	07 28 36.4	+0.8
REF				S	S	07 28 59.1	+1.7
RDN	Redoubt North	1.82	6	P	P	07 28 36.7	+0.8
NCT	North Crescent	1.86	3	P	P	07 28 37.3	+0.9
DFR	Drift River	1.90	7	P	P	07 28 37.8	+0.9
NKA	Nikishka	2.26	25	P	P	07 28 44.0	+2.1
SLKM	Skilak Lake	2.34	38	P	P	07 28 43.1	+0.1
SEW	Seward	2.35	52	P	P	07 28 42.6	-0.6
CKL	Chakachamna La	2.53	9	P	P	07 28 46.8	+1.1
SPU	Mount Spurr	2.54	12	eP	P	07 28 45.5	-0.4
CKT	Bend	2.54	10	P	P	07 28 46.8	+0.8
CKN	Chakachatna No	2.57	11	P	P	07 28 47.4	+1.1
BGL	Barrier Glacie	2.59	8	P	P	07 28 47.5	+0.9
CP2	Crater Peak Tw	2.60	10	P	P	07 28 47.6	+0.9
CRP	Crater Peak	2.62	11	P	P	07 28 48.1	+1.1
CRP				S	S	07 29 19.2	+1.6
CGLM	Capps Glacier	2.67	12	P	P	07 28 48.4	+0.7
VOGL	Vogel Lake	2.67	30	P	P	07 28 49.2	+1.4
SVW2	Sparrevohn	2.69	334	P	P	07 28 47.8	-0.2
STLK	Strandline Lak	2.88	13	P	P	07 28 51.4	+0.8
FIB	Fire Island	2.88	30	P	P	07 28 51.7	+1.0
RC01	Rabbit Creek A	2.94	34	P	P	07 28 51.8	+0.2
RC01				S	S	07 29 26.9	+1.1
LTI	Latouche	3.02	62	P	P	07 28 52.0	-0.6
ANPK	Aniakchak Peak	3.26	237	P	P	07 28 56.0	+0.1
PWA	Palmer West	3.37	28	P	P	07 28 57.9	+0.4
PMR	Palmer	3.52	33	P	P	07 28 58.8	-0.8
GHO	Glory Hole Cre	3.73	33	P	P	07 29 02.0	-0.4
GLI	Glacier Island	3.76	52	P	P	07 29 01.1	-1.8
HIN	Hinchinbrook I	3.78	61	P	P	07 29 02.6	-0.7
SML	Sawmill	3.93	36	P	P	07 29 04.5	-0.7
FID	Port Fidalgo	3.95	56	P	P	07 29 03.5	-2.0
CUT	Chulitna	3.97	20	P	P	07 29 05.7	-0.1
JPK	Jack Peak	4.05	52	P	P	07 29 05.7	-1.3
EYAK	Cordova Ski Ar	4.19	61	P	P	07 29 07.5	-1.4
VLZ	Valdez	4.21	52	P	P	07 29 07.8	-1.3
SCM	Sheep Creek Mo	4.27	40	P	P	07 29 09.5	-0.5
DIV	Divide	4.44	54	P	P	07 29 11.3	-1.0
TT01	Tatalina	4.44	343	P	P	07 29 12.6	+0.2
RAGM	Ragged Mountai	4.63	65	P	P	07 29 14.1	-0.9
TRF	Thorofare Moun	4.96	15	P	P	07 29 19.5	0.0
KTH	Kantishna Hill	4.98	12	P	P	07 29 19.4	-0.5
TZL	Tazlina	5.09	46	P	P	07 29 21.4	+0.1
SDPT	Sand Point	5.23	233	P	P	07 29 23.1	-0.2
GLB	Gilahina Butte	5.42	56	P	P	07 29 24.5	-1.4
MCK	McKinley	5.44	20	P	P	07 29 25.9	-0.2
CYK	Cape Yakataga	5.62	71	P	P	07 29 28.3	-0.3
PAX	Paxson	5.69	38	P	P	07 29 28.6	-1.0
BLHA	Black Hill	5.71	242	P	P	07 29 29.6	-0.2
BWN	Browne	5.76	16	P	P	07 29 29.8	-0.7
PVV	Pavlof Volcano	5.78	238	P	P	07 29 31.8	+1.0
PN7A	Pavlof North-7	5.84	240	P	P	07 29 30.3	-1.3
HAG	Hague Volcano	5.87	238	P	P	07 29 32.4	+0.4
BALM	Baldy	5.92	62	P	P	07 29 31.4	-1.4
THY	Trims Highway	5.93	34	eP	P	07 29 32.2	-0.7
MENT	Mentasta	6.26	43	P	P	07 29 36.6	-1.0
GCSA	Galena City Sc	6.31	345	P	P	07 29 38.0	-0.2
BALA	Baldy Mountain	6.34	240	P	P	07 29 39.4	+0.8
HDA	Harding Lake	6.43	25	P	P	07 29 38.9	-1.1
MLY	Manley	6.45	9	P	P	07 29 38.9	-1.3
CCB	Clear Creek Bu	6.48	21	P	P	07 29 39.0	-1.6
DOT	Dot Lake	6.62	38	P	P	07 29 41.7	-0.8
COLA	College	6.67	20	P	P	07 29 41.7	-1.6
MDM	Murphy Dome	6.69	18	P	P	07 29 41.9	-1.7
ILAR	Eielson Array	6.77	23	P	P	07 29 43.0	-1.6
	4.5nm,0.3s,baz=218,slow=13,SNR=28						
ILAR				S	S	07 30 55.9	-5.0
	4.6nm,0.3s,baz=225,slow=14,SNR=4.2						
BCA3	Beaver Creek A	7.06	47	P	P	07 29 47.8	-0.8
PNL	Peninsula	7.13	76	P	P	07 29 47.5	-2.1
IM3	Indian Mountai	7.31	358	P	P	07 29 51.3	-0.7
IMA	Indian Mountai	7.39	358	eP	P	07 29 52.8	-0.4
DAWY	Dawson	8.50	45	P	P	07 30 04.4	-4.0
COLD	Coldfoot	8.65	8	P	P	07 30 08.7	-1.8
UNV	Unalaska Valle	8.88	242	P	P	07 30 10.9	-2.6
MTBL	Makushin Table	8.88	244	P	P	07 30 11.0	-2.6
WHY	Whitehorse	9.44	70	P	P	07 30 19.8	-1.4
BM3	Burnt Mountain	9.55	20	P	P	07 30 19.7	-2.8
TNA	Tin City	9.73	321	eP	P	07 30 24.1	-0.8
DLBC	Dease Lake	12.06	81	P	P	07 30 55.9	-0.4
	1.9nm,0.3s,baz=247,slow=12,SNR=50						
DLBC				S	S	07 33 04.3	-5.3
	0.6nm,0.3s,baz=111,slow=27,SNR=6.1						
DLBC	Dease Lake	12.06	81	eP	P	07 30 55.6	-0.7
INK	Inuvik	12.94	34	P	P	07 31 06.9	-1.1
	0.5nm,0.3s,baz=227,slow=15,SNR=68						
INK				ScP		07 40 02.6	
	0.1nm,0.3s,baz=76,slow=1.6,SNR=4.7						
INK	Inuvik	12.94	34	eP	P	07 31 06.2	-1.7
YKW3	Yellowknife Ar	19.08	62	eP	P	07 32 24.0	-0.6
YKA	Yellowknife Ar	19.09	62	P	P	07 32 24.5	-0.2
	2.3nm,0.3s,baz=276,slow=9.9,SNR=857						
YKA				ScP		07 40 15.0	
	0.0nm,0.3s,baz=280,slow=1.6,SNR=7.7						
YKA				LR	LR	07 40 45.6	
	comp=Z,109nm,18.2s,baz=245,slow=40						
FX1	Attu Island--F	19.66	267	P	P	07 32 30.1	-0.8
	3.6nm,0.3s,baz=243,slow=22,SNR=17						
BILL	Bilibino	20.04	314	eP	P	07 32 33.0	-1.9
	8.0nm,0.6s						
EDM	Edmonton	22.68	87	eP	P	07 33 03.3	+2.1
EDM				epP		07 33 17.1	
NEW	Newport	23.56	100	P	P	07 33 12.8	+3.1
	2.9nm,0.7s,mb3.7,baz=306,slow=7.7,SNR=9.0						
NEW	Newport	23.56	100	eP	P	07 33 10.5	+0.8
	2.0nm,0.5s,mb3.7						
YBH	Yreka Blue Hor	25.52	118	P	P	07 33 30.4	+1.8
	1.2nm,0.6s,mb3.5,baz=244,slow=16,SNR=3.1						
HLID	Hailey	28.15	105	P	P	07 33 53.3	+0.6
FCC	Fort Churchill	29.79	64	eP	P	07 34 07.2	0.0
	2.7nm,0.4s,mb4.2						
ELK	Elko	29.84	110	P	P	07 34 10.0	+2.2
	0.8nm,0.8s,mb3.4,baz=306,slow=7.6,SNR=5.6						
ELK	Elko	29.84	110	P	P	07 34 10.0	+2.2
NVAR	Mina Array Bea	30.19	117	P	P	07 34 12.7	+1.8
	0.7nm,0.8s,mb3.4,baz=293,slow=10.0,SNR=4.5						
NVAR				pP	pP	07 34 28.7	0.0
	0.8nm,0.8s,baz=314,slow=6.4,SNR=4.5						
BW06	Boulder Array	31.19	101	eP	P	07 34 20.1	+0.4
	1.5nm,0.5s,mb4.0						
BW06				e	pP	07 34 34.8	-2.7
PDAR	Pinedale Array	31.19	101	P	P	07 34 21.2	+1.6
	2.1nm,0.5s,mb4.1,baz=316,slow=5.0,SNR=22						
PDAR				pP	pP	07 34 38.0	+0.4
	1.0nm,0.7s,baz=325,slow=4.7,SNR=4.6						
SRU	San Rafael	33.42	107	eP	P	07 34 40.7	+1.6
SRU				e	pP	07 34 54.5	-2.7
PV10	Paradox Valley	34.73	106	eP	P	07 34 51.6	+1.3
WUAZ	Wupatki	35.82	112	eP	P	07 35 00.2	+0.6
	22nm,0.5s,mb5.3						
SDCO	Great Sand Dun	36.99	103	eP	P	07 35 10.6	+1.1
	2.1nm,0.7s,mb4.2						
MNTX	Cornudas Mount	41.84	109	P	P	07 35 50.6	+1.1
	1.2nm,0.6s,mb3.8						
SCHQ	Schefferville	44.35	56	P	P	07 36 10.1	+0.4
	1.5nm,0.5s,mb4.0,baz=318,slow=8.5,SNR=11						
TXAR	Lajitas Array	44.62	109	P	P	07 36 12.9	+0.7
	0.8nm,1.0s,mb3.4,baz=342,slow=5.6,SNR=5.4						
TXAR				pP	pP	07 36 30.9	+0.2
	1.8nm,1.2s,baz=315,slow=7.1,SNR=5.3						
JCT	Junction City	45.62	104	eP	P	07 36 20.9	+0.8
	8.7nm,0.9s,mb4.5						
JCT				epP	pP	07 36 35.7	-3.0
MDJ	Mudanjiang	47.21	288	P	P	07 36 32.8	+0.3
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,97nm,4.4s						
OXF	Oxford	47.80	91	eP	P	07 36 37.7	+0.4
	comp=Z,41nm,1.3s,mb5.1						
CN2	Changchun	49.85	290	eP	P	07 36 53.5	+0.6
CN2				eXP	sP	07 37 16.3	-3.9
CN2				eS	S	07 43 56.0	+0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,16.0s						
ARCES	ARCESS Array B	52.05	1	P	P	07 37 08.8	-0.4
	comp=Z,1.1nm,0.6s,mb4.1,slow=8.1,SNR=6.2						
SONM	Songino Array	55.49	306	P	P	07 37 34.5	-0.3
	comp=Z,1.7nm,0.6s,mb4.3,baz=39,slow=6.4,SNR=8.5						
BJI	Beijing	57.19	294	P	P	07 37 47.0	-0.1
BJI				AP	pP	07 38 03.0	-3.3
BJI				XP	sP	07 38 10.0	-4.9
BJI				PCP	PcP	07 38 40.3	-0.3
BJI				S	S	07 45 32.5	-2.4
BJI				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
NOA	NORSAR Array B	59.97	9	P	P	07 38 06.1	+0.1
	comp=Z,0.7nm,0.8s,mb3.7,baz=15,slow=12,SNR=2.4						
FINES	FINESS Array B	60.18	0	P	P	07 38 06.3	-1.1
	comp=Z,0.3nm,0.4s,mb3.7,slow=5.7,SNR=4.1						
FINES	FINESS Array B	60.18	0	P	P	07 38 06.3	-1.2
NJ2	Nanjing	62.23	286	eP	P	07 38 23.0	+1.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
LZH	Lanzhou	66.11	300	eP	P	07 38 47.0	+0.2
LZH				AP	pP	07 39 06.5	0.0
LZH				PP	PP	07 41 15.0	-0.3
LZH				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.6						
WMQ	Urumqi	66.14	316	eP	P	07 38 51.0	+4.1
CMAR	Chiang Mai Arr	83.33	295	P	P	07 40 25.6	0.0
	comp=Z,1.0nm,0.5s,mb3.9,baz=23,slow=6.1,SNR=4.0						

NEIC 28 07:31:42.6±0.6,29.57S×63.58W,mb4.3/2,MD4.3(SJA), Error ellipse: s-maj=15.0km s-min=12.0km az=123.0

NEIC Felt [III] at Sumampa.

IDC 28 07:31:42.2±1.1,29.63S×63.75W,h30^{km}±4^{km},mb3.6/5, mb1 3.8/8,mb1mx3.7/15,mbtmp3.8/8,ML3.8/3,MS3.1/4, Ms1 3.1/4,ms1mx3.0/15,Error ellipse: s-maj=38.2km s-min=25.3km az=11.0

ISC 28 07:31:40.5±0.6,29.58S±0.08×63.51W±0.09,h30^{km}, h30^{km}±.7^{km}:pP-P,n21,σ0^{s}89/17,mb3.9/6,1C,Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	Zonda	4.87	245	eP	Pn	07 32 54.0	+0.2
LVC	Limon Verde	8.46	324	Pn	P	07 33 45.9	+1.7
	1.0nm,0.3s,baz=182,slow=8.8,SNR=30						
LVC				LR	LR	07 37 26.7	
	comp=Z,210nm,21.8s,baz=336,slow=41						
LVC	Limon Verde	8.46	324	ePn	P	07 33 45.4	+1.2
LVC				LR	LR	07 37 26.8	
PLCA	Paso Flores	12.53	205	Pn	P	07 34 39.5	-0.1
	0.1nm,0.3s,baz=355,slow=7.9,SNR=3.2						
PLCA				LR	LR	07 40 10.5	
	comp=Z,84nm,18.4s,baz=359,slow=41						
PLCA	Paso Flores	12.53	205	eP	P	07 34 40.2	+0.5
PLCA				LR	LR	07 40 10.5	
LPAZ	La Paz	13.89	341	Pn	P	07 34 58.6	+0.8
	0.1nm,0.3s,baz=154,slow=15,SNR=4.3						
LPAZ				LR	LR	07 39 51.4	
	comp=Z,25nm,20.5s,baz=251,slow=35						
LPAZ	La Paz	13.89	341	eP	P	07 34 56.7	-1.1
LPAZ				LR	LR	07 39 51.4	
BDFB	Brasilia	19.89	49	P	P	07 36 13.8	+1.1
	7.5nm,0.7s,baz=225,slow=9.8,SNR=15						
BDFB				LR	LR	07 44 49.2	
	comp=Z,117nm,19.8s,baz=55,slow=39						
BAO	Brasilia Array	19.91	49	⇑eP	P	07 36 14.0	+1.1
BAO				e		07 36 25.2	
BAO				S	S	07 39 49.0	-0.9
DBIC	Dimbokro	66.83	67	P	P	07 42 32.6	+0.5
	1.0nm,0.6s,mb4.0,baz=198,slow=15,SNR=2.2						
DBIC				pP	pP	07 42 41.6	+0.2
	1.5nm,0.5s,baz=223,slow=5.7,SNR=5.5						
DBIC	Dimbokro	66.83	67	eP	P	07 42 32.5	+0.3
DBIC				pP	pP	07 42 41.6	+0.2
TXAR	Lajitas Array	70.00	323	P	P	07 42 50.6	-1.0
	0.2nm,0.8s,mb3.1,baz=162,slow=7.9,SNR=3.7						
TXAR				pP	pP	07 43 00.1	-0.7
	0.5nm,0.6s,baz=155,slow=8.6,SNR=7.8						
MNTX	Cornudas Mount	72.77	323	P	P	07 43 06.6	-1.6
	1.9nm,0.9s,mb4.0						
MNTX				epP	pP	07 43 15.3	-2.2
LBTB	Lobatse	77.36	112	P	P	07 43 34.2	-0.3
	6.5nm,1.2s,mb4.4						
PDAR	Pinedale Array	83.51	328	P	P	07 44 06.5	-0.3
	0.5nm,0.7s,mb3.8,baz=118,slow=7.0,SNR=4.3						
ELK	Elko	84.80	323	P	P	07 44 13.1	-0.3
	0.3nm,0.4s,mb3.8,baz=176,slow=6.3,SNR=4.0						
ELK				pP	pP	07 44 23.0	+0.1
	0.6nm,0.7s,baz=58,slow=6.5,SNR=4.5						
YKA	Yellowknife Ar	100.42	338	P	P	07 45 24.9	-0.7
	0.1nm,0.5s,baz=136,slow=4.3,SNR=5.9						
ASAR	Alice Springs	124.48	199	PKP	PKPdf	07 50 38.5	-4.0
	0.4nm,0.6s,baz=137,slow=1.6,SNR=6.2						
WRA	Warramunga Arr	127.85	201	PKP	PKPdf	07 50 45.3	-3.9
	0.3nm,0.4s,baz=168,slow=1.6,SNR=5.2						
ZAL	Zalesovo	146.54	34	PKPbc	PKPbc	07 51 20.5	+2.1
	2.0nm,0.6s,baz=171,slow=3.5,SNR=19						
ZAL				pPKPbc		07 51 30.2	
	3.4nm,1.0s,baz=198,slow=4.1,SNR=12						
ZAL	Zalesovo	146.54	34	PKPbc	PKPbc	07 51 20.5	+2.1
ZAL				pPKPbc		07 51 30.2	

IDC 28 07:35:49.4±1.1,2.73S×142.01E,mb4.2/4,mb1 4.4/5, mb1mx4.2/10,mbtmp4.2/5,ML4.3/1,Error ellipse: s-maj=88.3km s-min=23.1km az=107.0

NEIC 28 07:35:53.8±0.5,2.59S×141.53E,h30^{km},mb4.3/2,Error ellipse: s-maj=42.0km s-min=9.5km az=114.0

ISC 28 07:35:49.1±0.8,2.6S±0.2×141.6E±0.4,h10^{km},n15, σ0^{s}70/11,mb4.1/5,1C,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	Tennant Creek	18.61	202	eP	P	07 40 08.7	-0.1
	12nm,0.6s						
WB2	Warramunga Arr	18.62	202	eP	P	07 40 09.0	+0.1
WRA	Warramunga Arr	18.62	202	P	P	07 40 09.4	+0.4
	1.0nm,0.3s,baz=27,slow=12,SNR=20						
FITZ	Fitzroy Crossi	21.95	224	⇑iP	P	07 40 44.0	-0.9
	7.1nm,0.6s,mb4.3						
ASAR	Alice Springs	22.21	199	P	P	07 40 47.8	+0.3
	3.4nm,0.6s,mb3.9,baz=28,slow=10,SNR=32						
ASPA	Alice Springs	22.21	199	eP	P	07 40 48.7	+1.2
STKA	Stephens Creek	29.10	180	eP	P	07 41 51.0	-1.2
	1.6nm,0.6s,mb3.9						
STKA	Stephens Creek	29.10	180	P	P	07 41 50.8	-1.5
	1.8nm,0.6s,mb4.0,baz=342,slow=9.4,SNR=5.2						
MCK	McKinley	83.38	25	eP	P	07 48 17.4	-0.2
ILAR	Eielson Array	84.56	24	P	P	07 48 23.3	-0.2
	1.2nm,0.7s,mb4.1,baz=261,slow=4.7,SNR=20						
YKA	Yellowknife Ar	98.67	27	P	P	07 49 30.2	+0.7
	0.5nm,0.9s,mb4.1,baz=284,slow=4.9,SNR=6.3						
LPAZ	La Paz	145.12	124	PKP	PKPdf	07 55 30.7	-0.2
	2.4nm,0.8s,baz=239,slow=2.0,SNR=12						
LPAZ	La Paz	145.12	124	ePKPdf	PKPdf	07 55 30.2	-0.7
LPAZ				PKP	PKPdf	07 55 30.7	-0.2
DBIC	Dimbokro	146.34	278	PKPbc	PKPbc	07 55 33.9	+2.6
	4.3nm,0.9s,baz=73,slow=2.8,SNR=5.0						
DBIC	Dimbokro	146.34	278	ePKPbc	PKPbc	07 55 33.8	+2.5

INET 28 07:52:48.8,10.85N×87.40W,h15^{km},ML3.5

UCR 28 07:52:48.9,7.60N×86.74W,MD4.3

CASC 28 07:52:49.1±2.2,10.92N×87.52W,h39^{km}±999^{km},MD4.1, ML3.5

SSS 28 07:52:52.3,11.22N×87.56W,h21^{km},MD4.4

ISC 28 07:52:48.3±0.7,10.90N±0.04×87.54W±0.03,h33^{km},n22, σ0^{s}82/38,3C-12D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEON	Leon	1.63	23	⇑eP	P	07 53 15.4	+0.4
LEON				eS	S	07 53 35.2	+0.1
TICN	Ticuantepe	1.71	49	⇓eP	P	07 53 16.3	+0.2
TICN				eS	S	07 53 39.5	+2.6
XAVN	Gruta Xavier	1.72	44	⇓eP	P	07 53 16.3	0.0
APON	Apoyo	1.76	55	eP	P	07 53 16.6	-0.2
MGAN	Managua	1.77	46	⇓eP	P	07 53 16.5	-0.5
MGAN				eS	S	07 53 38.3	-0.3
MGAN				i		07 53 39.4	
	comp=E,633nm,0.3s						
MGAN				i		07 53 39.8	
	comp=N,431nm,0.3s						
CNGN	Cerro Negro	1.79	27	⇑eP	P	07 53 17.2	-0.1
MOMJ	Momotombo	1.79	33	⇑eP	P	07 53 16.9	-0.3
MOMJ				eS	S	07 53 39.8	+0.8
WILN	Americas 2	1.82	47	⇓eP	P	07 53 17.1	-0.7
WILN				eS	S	07 53 39.8	-0.1
CRIN	San Cristobal	1.85	15	⇓eP	P	07 53 19.0	+0.9
CRIN				eS	S	07 53 41.4	+0.8
CONN	Concepcion	1.99	71	⇓eP	P	07 53 18.9	-1.3
PYTN	Playitas	2.18	42	⇓eP	P	07 53 22.4	-0.5
PYTN				eS	S	07 53 48.7	-0.2
CNCH	Conchagua	2.38	353	⇓eP	P	07 53 25.5	-0.2
CNCH				eS	S	07 53 52.9	-1.0
LCBS	La Ceiba	3.08	333	⇓eP	P	07 53 36.5	+0.9
LCBS				eS	S	07 54 09.8	-1.9
LFRS	El Faro	3.09	331	⇓eP	P	07 53 36.4	+0.6
LFRS				eS	S	07 54 10.8	-1.2
BOQS	Boqueron	3.29	329	eP	P	07 53 40.0	+1.3
BOQS				eS	S	07 54 17.1	-0.1
PRS1	Puriscal	3.31	106	eP	P	07 53 39.2	+0.3
SBLS	San Blas	3.56	325	eP	P	07 53 43.8	+1.3
SBLS				eS	S	07 54 23.4	-0.6
SNJE	San Jose	3.57	326	eP	P	07 53 43.1	+0.4
SNJE				eS	S	07 54 24.0	-0.3
RTR	El Retiro	3.62	326	eP	P	07 53 44.9	+1.6
RTR				eS	S	07 54 24.9	-0.6
LCR2	La Lucha 2	3.67	108	⇓eP	P	07 53 43.7	-0.4
LCR2				eS	S	07 54 25.4	-1.4
TRTC	Tortuguero	3.77	95	⇓eP	P	07 53 45.8	+0.2
BUS	Buena Vista	3.96	109	eP	P	07 53 47.9	-0.2
BUS				eS	S	07 54 34.5	+0.4

DJA 28 08:07:11.7±0.9,9.57S×113.83E,h33^{km},ML3.8/3,4C-3D, Error ellipse: s-maj=21.0km s-min=11.8km az=43.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRDI	Scrawed	1.12	16	⇑ePn	Pn	08 07 29.4	-1.9
	82nm,0.2s						
SRDI	Scrawed	1.12	16	ePg	P	08 07 30.0	-1.1
SRDI				⇑eSn	Sn	08 07 43.2	-2.5
KELI	Kelakatan	1.49	26	⇑ePn	Pn	08 07 35.6	-1.0
	43nm,0.2s						
KELI				⇑eSn	Sn	08 07 53.0	-2.0
RATI	Rata	1.87	64	⇓ePn	Pn	08 07 40.4	-1.7
	240nm,0.2s						
RATI				⇓eSn	Sn	08 08 00.9	-3.9
KEDI	Kedomdong	2.49	65	⇓ePn	Pn	08 07 49.4	-1.5

IDC 28 08:12:08.4±5.5,24.67N×122.64E,h46^{km}±54^{km},mb3.5/4, mb1 3.8/5,mb1mx3.5/19,mbtmp3.8/5,ML4.2/1,Error ellipse: s-maj=42.3km s-min=21.7km az=82.0

NEIC 28 08:12:11.8±1.0,24.66N×122.81E,h80^{km}±12^{km},mb4.5/1, Error ellipse: s-maj=17.5km s-min=14.8km az=146.0

JMA 28 08:12:11.9±0.1,24.57N×122.88E,h66^{km}±1^{km},M3.6

TAP 28 08:12:12.9,24.39N×122.83E,h34^{km},ML4.1

ISC 28 08:12:10.6±0.6,24.57N±0.08×122.88E±0.05,h76^{km}±5^{km}, n15,σ0^{s}70/21,mb3.8/5,1C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.16	132	P	P	08 12 21.8	0.0
YOJ				S	S	08 12 29.1	-1.1
IRIF	Iriomote-Funau	0.81	107	P	P	08 12 27.8	+0.4
IRIF				S	S	08 12 39.6	-0.3
HATJ	Hateruma jima	0.99	121	P	P	08 12 30.1	+0.6
HATJ				S	S	08 12 43.4	-0.3
JKRS	Kuro-shima	1.08	108	P	P	08 12 31.5	+0.8
JKRS				S	S	08 12 46.3	+0.6
JIJ	Ishigaki jima	1.17	100	P	P	08 12 32.3	+0.5
JIJ				S	S	08 12 47.0	-0.7

NACB	**Ninganchiao**	**1.24**	**252**	⇓*i*Pn	**P**	**08 12 32.5**	**-0.3**
TATO	**Taipei**	**1.33**	**288**	*e*Pn	**P**	**08 12 35.0**	**+0.9**
JTJ	**Tarama**	**1.66**	**87**	P	**P**	**08 12 39.7**	**+1.3**
JOW	**Kunigami**	**5.36**	**64**	P	**P**	**08 13 29.4**	**-0.4**
	14nm,0.3s,baz=115,slow=22,SNR=22						
JOW				S	**S**	**08 14 30.4**	**-0.5**
	1.4nm,0.3s,baz=313,slow=30,SNR=2.6						
SONM	**Songino Array**	**26.65**	**335**	P	**P**	**08 17 40.6**	**-3.3**
	0.2nm,0.3s,mb3.1,baz=122,slow=6.6,SNR=4.4						
WRAB	**Tennant Creek**	**45.62**	**165**	*e*P	**P**	**08 20 24.7**	**-0.6**
	6.0nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**45.63**	**165**	P	**P**	**08 20 25.1**	**-0.3**
	3.3nm,0.5s,mb4.3,baz=347,slow=8.7,SNR=36						
WB2	**Warramunga Arr**	**45.63**	**165**	⇑*i*P	**P**	**08 20 25.1**	**-0.3**
ASAR	**Alice Springs**	**49.12**	**167**	P	**P**	**08 20 53.0**	**+0.3**
	0.9nm,0.5s,mb4.0,baz=345,slow=8.5,SNR=21						
YKA	**Yellowknife Ar**	**82.01**	**23**	P	**P**	**08 24 23.8**	**+0.5**
	0.2nm,0.6s,mb3.1,baz=306,slow=5.2,SNR=7.1						

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*IDC **28** 08:12:49.8±3.1, 0.81S×18.91W, mb3.9/2, mb1 4.2/3, mb1mx3.6/21, mbtmp4.1/3, ML4.9/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/26, Error ellipse: s-maj=120.3km s-min=62.4km az=170.0*

NEIC 28 08:12:51.8±1.1**, 0.83S×18.84W, h10^{km}, mb3.6**/1**, Error ellipse: s-maj=63.4km s-min=19.5km az=155.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**15.82**	**62**	Pn	P	08 16 35.5	-1.0
	4.2nm,0.3s,baz=231,slow=14,SNR=62						
DBIC				Sn	S	08 19 17.3	-15
	2.7nm,0.3s,baz=134,slow=12,SNR=8.7						
DBIC				LR	LR	08 21 38.5	
	comp=Z,164nm,19.1s,baz=227,slow=33						
SJG	**San Juan**	**50.18**	**294**	LR	LR	08 38 13.5	
	comp=Z,49nm,20.9s,baz=271,slow=30						
LPAZ	**La Paz**	**50.93**	**250**	P	P	08 21 55.6	-0.1
	0.3nm,0.4s						
KMBO	**Kilima Mbogo**	**56.08**	**91**	LR	LR	08 44 25.9	
	comp=Z,95nm,20.1s,baz=266,slow=34						
BVAR	**Borovoye Array**	**90.19**	**37**	P	P	08 25 51.8	-2.0
	0.7nm,0.8s,baz=256,slow=5.9,SNR=3.8						
YKA	**Yellowknife Ar**	**93.40**	**332**	P	P	08 26 06.8	-1.5
	0.6nm,1.2s,baz=74,slow=4.5,SNR=4.1						
ASAR	**Alice Springs**	**144.03**	**134**	PKP	PKPdf	08 32 27.7	-3.8
	0.4nm,0.7s,baz=222,slow=2.9,SNR=3.9						

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*WAR **28** 08:25:23.5, 50.07N×18.43E, h0^{km}, ML2.8, Mining Induced*

*NEIC **28** 08:25:23.2±0.8, 50.14N×18.40E, h5^{km}, MG2.8(WAR), Error ellipse: s-maj=10.2km s-min=6.3km az=197.0*

*CSEM **28** 08:25:23.7±0.2, 50.12N×18.37E, h2^{km}, ML3.5/4, Error ellipse: s-maj=3.9km s-min=2.4km az=16.0*

*PRU **28** 08:25:24.4, 50.10N×18.36E*

*IPEC **28** 08:25:24.1±0.1, 50.08N×18.41E, h7^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=1.2km s-min=0.7km az=166.0*

ISC 28 08:25:21.5±0.5**, 50.13N**±0.03×**18.43E**±0.04**, n26, σ1^{s}38**/53**, 1C-3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**254**	⇓*i*PG	**Pg**	**08 25 27.7**	**+3.1**
RAC				⇓*e*SG	**Sg**	**08 25 31.7**	**+5.0**
RAC	**Raciborz**	**0.15**	**254**	⇓*i*Pg	**Pg**	**08 25 27.7**	**+3.1**
RAC				*e*Sg	**Sg**	**08 25 30.8**	**+4.1**
OKC	**Ostrava-Krasne**	**0.34**	**212**	*e*PG	**Pg**	**08 25 29.8**	**+1.4**
OKC				*e*SG	**Sg**	**08 25 34.5**	**+1.6**
	202nm,0.3s						
MORC	**Moravsky Berou**	**0.67**	**239**	*e*Pg	**Pg**	**08 25 35.5**	**+0.6**
MORC				*e*Sg	**Sg**	**08 25 43.7**	**-0.2**
MORC	**Moravsky Berou**	**0.67**	**239**	*e*Pg	**Pg**	**08 25 35.9**	**+1.0**
MORC				*e*Sg	**Sg**	**08 25 44.8**	**+1.0**
	76nm,0.2s						
LIKS	**Likavka**	**1.17**	**157**	*e*PN	**Pn**	**08 25 46.1**	**+1.1**
LIKS				*e*SN	**Sn**	**08 26 02.7**	**+0.9**
JAVC	**Velka Javorina**	**1.36**	**201**	*e*Pn	**Pn**	**08 25 49.1**	**+1.3**
DPC	**Dobruska-Polom**	**1.37**	**280**	*e*Pg	**Pg**	**08 25 49.4**	**+0.5**
DPC				*e*Sg	**Sg**	**08 26 07.4**	**+0.3**
DPC	**Dobruska-Polom**	**1.37**	**280**	*e*PG	**Pg**	**08 25 49.4**	**+0.5**
DPC				*e*SG	**Sg**	**08 26 07.4**	**+0.3**
	43nm,0.2s						
NIE	**Niedzica**	**1.41**	**119**	*e*PG	**Pg**	**08 25 49.0**	**-0.8**
NIE				*e*SG	**Sg**	**08 26 09.0**	**+0.4**
VRAC	**Vranov**	**1.44**	**236**	*e*Pn	**Pn**	**08 25 49.9**	**+0.9**
VRAC				*e*Sg	**Sg**	**08 26 08.1**	**-1.5**
	62nm,0.3s						
KSP	**Ksiaz**	**1.54**	**299**	*e*PN	**Pn**	**08 25 52.0**	**+1.6**
KSP				*e*SN	**Sn**	**08 26 13.0**	**+1.7**
KSP				*e*SG	**Sg**	**08 26 14.0**	**+1.2**
KSP	**Ksiaz**	**1.54**	**299**	*e*Pg	**Pg**	**08 25 51.7**	**-0.6**
KSP				*e*Sn	**Sn**	**08 26 12.7**	**+1.4**
KSP				*e*Sg	**Sg**	**08 26 14.2**	**+1.4**
UPC	**Upice**	**1.59**	**285**	*e*PG	**Pg**	**08 25 53.3**	**-0.1**
UPC				*e*SG	**Sg**	**08 26 14.0**	**-0.6**
VYHS	**Vyhne**	**1.66**	**171**	*e*PN	**Pn**	**08 25 52.5**	**+0.5**
VYHS				*e*SN	**Sn**	**08 26 15.4**	**+1.1**
VYHS	**Vyhne**	**1.66**	**171**	*e*Pn	**Pn**	**08 25 52.5**	**+0.5**
VYHS				*e*Sg	**Sg**	**08 26 14.9**	**-1.8**
VYHS				*e*Sn	**Sn**	**08 26 15.4**	**+1.1**
KRUC	**Moravsky**	**1.70**	**232**	*e*Pn	**Pn**	**08 25 53.8**	**+1.2**
KRUC				*e*Sg	**Sg**	**08 26 15.2**	**-2.9**
	48nm,0.4s						
CRVS	**Cervenica-Dubn**	**2.33**	**121**	*e*PG	**Pg**	**08 26 06.6**	**-1.4**
CRVS				*e*SG	**Sg**	**08 26 38.4**	**-0.6**
PSZ	**Piszkesteto**	**2.41**	**156**	⇑*e*PB	**Pb**	**08 26 04.4**	**-1.2**
PSZ				*e*SB	**Sb**	**08 26 34.8**	**-1.2**
PRU	**Pruhonice**	**2.51**	**268**	*e*PG	**Pg**	**08 26 09.0**	**-2.6**
PRU				*e*SG	**Sg**	**08 26 40.7**	**-4.3**
BRG	**Berggiesshubel**	**2.96**	**286**	*i* Pg	**Pg**	**08 26 18.4**	**-2.2**
BRG				*i* Sg	**Sg**	**08 26 57.3**	**-2.7**
KHC	**Kasperske Hory**	**3.31**	**254**	*e*PN	**Pn**	**08 26 16.5**	**+0.9**
KHC				*e*PG	**Pg**	**08 26 24.0**	**-3.5**
KHC				*e*SG	**Sg**	**08 27 06.8**	**-4.8**
KHC	**Kasperske Hory**	**3.31**	**254**	Pg	**Pg**	**08 26 24.0**	**-3.5**
KHC				Sg	**Sg**	**08 27 06.8**	**-4.8**
MOA	**Molln**	**3.56**	**232**	*i* SG	**Sg**	**08 27 15.7**	**-4.5**
	8.4nm,0.4s						
MOA	**Molln**	**3.56**	**232**	*i* P	**Pn**	**08 26 25.6**	**+6.4**
MOA				*i* Sg	**Sg**	**08 27 15.7**	**-4.5**
CLL	**Collm**	**3.64**	**291**	*e*SG	**Sg**	**08 27 20.0**	**-2.8**

NEIC 28 08:27:51.5±1.6**, 43.27N×126.97W, h10^{km}, mb3.4**/2**, Error ellipse: s-maj=19.0km s-min=9.5km az=55.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.97**	**101**	*e*P	Pn	08 28 22.8	-2.5
BBOR	**Butler Butte**	**3.16**	**95**	P	Pn	08 28 41.1	-1.3
BROR	**Big Rock Looko**	**3.42**	**71**	P	Pn	08 28 44.5	-1.5
HBO	**Huckleberry Mo**	**3.42**	**79**	P	Pn	08 28 45.2	-1.0
KMOR	**Kings Mountain**	**3.44**	**45**	P	Pn	08 28 44.2	-2.0
IRO	**Indian Ridge**	**3.50**	**76**	P	Pn	08 28 45.7	-1.5
SSOR	**Sweet Springs**	**3.62**	**62**	P	Pn	08 28 47.8	-1.0
FRIS	**Frissel Point**	**3.65**	**73**	P	Pn	08 28 48.1	-1.2
HUOR	**Husband**	**3.81**	**75**	P	Pn	08 28 50.4	-1.1
GT2	**Goat Mountain**	**3.87**	**59**	P	Pn	08 28 51.5	-0.9
VLMM	**Larch Mountain**	**4.20**	**56**	P	Pn	08 28 55.9	-1.2
TDH	**Tom, Dick, Har**	**4.23**	**60**	P	Pn	08 28 56.4	-1.2
KOSW	**Kosmos**	**4.66**	**45**	P	Pn	08 29 02.4	-1.3
LON	**Longmire**	**5.05**	**45**	P	Pn	08 29 07.8	-1.4
FMW	**Mount Fremont**	**5.24**	**44**	P	Pn	08 29 10.2	-1.7
EBG	**Ellensburg**	**5.81**	**49**	P	Pn	08 29 18.9	-1.0
PGC	**Sidney**	**5.91**	**23**	*e*P	Pn	08 29 18.8	-2.6
SDCO	**Great Sand Dun**	**17.21**	**101**	P	P	08 31 53.3	-0.3
FFC	**Flin Flon**	**19.89**	**46**	P	P	08 32 21.9	-3.7
	1.2nm,0.7s						
DAWY	**Dawson**	**22.02**	**345**	P	P	08 32 45.5	-2.0
WMOK	**Wichita Mounta**	**23.42**	**102**	P	P	08 33 02.7	+1.3
	1.1nm,0.9s						

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*IDC **28** 08:29:50.7±0.9, 30.77S×177.51W, mb4.7/9, mb1 4.9/12, mb1mx4.7/17, mbtmp4.6/12, ML4.4/3, MS4.7/12, Ms1 4.7/12, ms1mx4.3/21, Error ellipse: s-maj=37.8km s-min=18.1km az=149.0*

*MOS **28** 08:29:56.2±2.9, 30.28S×177.59W, h33^{km}, mb5.4/6, Error ellipse: s-maj=13.8km s-min=11.9km az=79.8*

*BJI **28** 08:29:57.1, 29.63S×178.39W, h11^{km}, mB5.5, mb5.2, Ms5.0, Msz4.9*

*HRVD **28** 08:29:57.8±0.2, 30.45S×177.30W, h26^{km}, MW5.3/67, Centroid moment Tensor Solution. LP body waves: s63,c107;Mantle waves: s67,c116; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.71±.03; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$-0.68±.02; $M_{r\theta}$0.05±.04; $M_{\theta\phi}$-0.25±.01; $M_{\phi r}$0.65±.04; Best double couple: M_0.989×10^{17} NP1: ϕ_s209°, δ25°, λ108°. NP2: ϕ_s9°, δ66°, λ82°. Principal axes: T .974, Plg68°, Azm263°; N .029, Plg8°, Azm13°; P -1.003, Plg21°, Azm105°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 08:29:57.8±1.7, 30.34S×177.72W, h42^{km}±14^{km}, mb5.3/14, MS4.5/4 Error ellipse: s-maj=13.5km s-min=9.1km az=139.0*

ISC 28 08:29:56.9±1.4**, 31.11S**±0.05×**177.66W**±0.08**, h54^{km}**±12^{km}**, h45^{km}**±4.7^{km}**:pP-P, n158, σ1^{s}18**/96**, mb5.0**/26**, MS4.7**/19**, 8C-5D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.86**	**353**	⇓*e*P	**P**	**08 30 15.6**	**-11**
RAO				*e*S	**S**	**08 30 31.9**	**-17**
MXZ	**Matakaoa Point**	**7.25**	**206**	PN	**P**	**08 31 42.6**	**-0.1**
MXZ				SN	**S**	**08 33 11.6**	**+7.0**
PUZ	**Puketiti**	**7.72**	**205**	*e*PN	**P**	**08 31 48.7**	**-0.5**
PUZ				*e*SN	**S**	**08 33 19.7**	**+3.6**
MWZ	**Matawai**	**8.23**	**207**	*e*PN	**P**	**08 31 55.6**	**-0.6**
MWZ				SN	**S**	**08 33 35.2**	**+6.5**
WCZ	**Waipu Caves**	**8.23**	**232**	PN	**P**	**08 32 05.9**	**+10**
URZ	**Urewera**	**8.33**	**210**	Pn	**P**	**08 31 57.2**	**-0.5**
	1.6nm,0.3s,baz=279,slow=6.2,SNR=19						
URZ				Sn	**S**	**08 33 37.2**	**+5.9**
	17nm,0.3s,baz=47,slow=24,SNR=14						
URZ	**Urewera**	**8.33**	**210**	PN	**P**	**08 31 57.1**	**-0.5**
URZ				SN	**S**	**08 33 35.7**	**+4.4**
OUZ	**Omahuta**	**8.40**	**238**	PN	**P**	**08 32 06.3**	**+7.8**
KNZ	**Kokohu**	**8.77**	**205**	*e*PN	**P**	**08 32 03.7**	**0.0**
KNZ				SN	**S**	**08 33 44.2**	**+2.0**
BFZ	**Birch Farm**	**10.75**	**206**	*e*SN	**S**	**08 34 31.4**	**+0.9**
MRZ	**Mangatainoka R**	**10.99**	**208**	*e*PN	**P**	**08 32 30.3**	**-3.8**
MRZ				SN	**S**	**08 34 36.3**	**-0.1**
MTW	**Mount Morrison**	**11.45**	**207**	SN	**S**	**08 34 46.6**	**-0.8**
PAWZ	**Paruwai Farm**	**11.67**	**207**	SN	**S**	**08 34 51.4**	**-1.4**
MRW	**Makara Radio**	**11.83**	**209**	*e*SN	**S**	**08 34 54.6**	**-2.1**
TUWZ	**Tuamarina**	**12.32**	**211**	*e*SN	**S**	**08 35 07.9**	**-0.6**
NNZ	**Nelson**	**12.41**	**213**	PN	**P**	**08 32 52.9**	**-0.2**
NNZ				SN	**S**	**08 35 10.9**	**+0.3**
THZ	**Tophouse**	**13.06**	**213**	*e*PN	**P**	**08 33 01.6**	**-0.1**
THZ				SN	**S**	**08 35 21.8**	**-4.4**
KHZ	**Kahutara**	**13.30**	**209**	*e*PN	**P**	**08 33 03.5**	**-1.3**
KHZ				*e*SN	**S**	**08 35 27.3**	**-4.6**
LTZ	**Lake Taylor**	**14.15**	**212**	*e*PN	**P**	**08 33 16.5**	**+0.6**
LTZ				SN	**S**	**08 35 48.5**	**-3.6**
MQZ	**McQueen’s Vall**	**14.73**	**209**	SN	**S**	**08 36 01.4**	**-4.4**
RPZ	**Rata Peaks**	**15.43**	**212**	Pn	**P**	**08 33 32.6**	**+0.1**
	0.8nm,0.3s,baz=60,slow=20,SNR=5.3						
RPZ				Sn	**S**	**08 36 18.8**	**-3.3**
	4.6nm,0.3s,baz=331,slow=20,SNR=13						
ODZ	**Otahua Downs**	**16.66**	**210**	*e*PN	**P**	**08 33 53.2**	**+5.2**
JCZ	**Jackson Bay**	**16.80**	**216**	*e*PN	**P**	**08 33 50.6**	**+0.8**
DZM	**Mont Dzumac**	**16.81**	**299**	*e*P	**P**	**08 33 50.0**	**-0.1**
NOUC	**Port Laguerre**	**16.90**	**298**	*e*P	**P**	**08 33 52.3**	**+1.1**
NOUC	**Port Laguerre**	**16.90**	**298**	*e*P	**P**	**08 33 52.3**	**+1.1**
MSZ	**Milford Sound**	**17.65**	**216**	PN	**P**	**08 34 03.0**	**+2.5**
AFI	**Afiamalu**	**17.95**	**19**	*e*P	**P**	**08 33 55.8**	**-8.6**
RAR	**Rarotonga**	**18.82**	**63**	P	**P**	**08 34 05.5**	**-9.3**
	4.4nm,0.3s,baz=240,slow=5.1,SNR=3.7						
RAR				LR	LR	08 39 14.5	
	comp=Z,2µm,22.0s,baz=244,slow=30						
RAR	**Rarotonga**	**18.82**	**63**	*e*P	**P**	**08 34 05.3**	**-9.5**
	23nm,0.5s						
TBI	**Tubuai**	**26.19**	**80**	*e*LQ		08 40 30.3	
TBI				*e*LR	LR	08 41 39.5	
	3µm,28.0s,baz=248						
ARMA	**Armidale**	**26.36**	**263**	⇓*i*P	**P**	**08 35 34.2**	**+4.3**
PPT	**Papeete**	**28.82**	**69**	*e*LQ		08 41 25.9	
PPT				*e*LR	LR	08 42 42.9	
	3µm,27.0s,baz=233						
TAU	**Tasmania Unive**	**30.14**	**237**	*e*P	**P**	**08 36 08.1**	**+4.3**
TAU				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.9						
TAU				MLR	MLR		
	comp=Z,542nm,22.0s,MS4.2						
TAU	**Tasmania Unive**	**30.14**	**237**	*e*P	**P**	**08 36 08.1**	**+4.3**
	comp=Z,32nm,1.2s,mb4.9						
TAU				LR	LR		
	comp=Z,542nm,22.0s,MS4.2						
CTA	**Charters Tower**	**34.20**	**280**	P	**P**	**08 36 40.0**	**+0.5**
	comp=Z,18nm,0.5s,mb5.3,baz=107,slow=9.8,SNR=30						
CTA				LR	LR	08 49 26.1	
	comp=Z,3µm,18.4s,MS5.1,baz=92,slow=34						
CTAO	**Charters Tower**	**34.20**	**280**	*e*P	**P**	**08 36 40.4**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
CTAO	**Charters Tower**	**34.20**	**280**	*e*P	**P**	**08 36 40.4**	**+0.9**
	comp=Z,28nm,0.6s,mb5.4						
CTAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
STKA	**Stephens Creek**	**34.61**	**258**	*e*P	**P**	**08 36 44.9**	**+2.1**
	comp=Z,49nm,0.8s,mb5.5						
STKA	**Stephens Creek**	**34.61**	**258**	P	**P**	**08 36 44.6**	**+1.8**
	comp=Z,76nm,0.9s,mb5.6,baz=100,slow=9.2,SNR=37						
STKA				LR	LR	08 49 57.3	
	comp=Z,2µm,18.4s,MS4.9,baz=85,slow=35						
RKT	**Rikitea**	**38.63**	**89**	*e*LR	LR	08 47 28.3	
	comp=Z,2µm,28.8s,baz=255						
PMG	**Port Moresby**	**39.17**	**296**	LR	LR	08 50 42.1	
	comp=Z,1µm,20.1s,MS4.7,baz=134,slow=32						
TAOE	**Nuku Hiva Isla**	**41.32**	**66**	*e*LR	LR	08 48 33.6	
ASAR	**Alice Springs**	**43.37**	**268**	P	**P**	**08 37 55.6**	**-0.2**
	comp=Z,8.8nm,0.6s,mb4.7,baz=105,slow=6.7,SNR=72						
ASAR				ScP		08 43 35.7	
	comp=Z,3.3nm,0.8s,baz=124,slow=4.1,SNR=10						
ASAR				LR	LR	08 55 39.1	
	comp=Z,2µm,18.4s,MS5.0,baz=106,slow=36						
ASPA	**Alice Springs**	**43.37**	**268**	*e*P	**P**	**08 37 56.3**	**+0.5**
WB2	**Warramunga Arr**	**44.41**	**273**	*e*P	**P**	**08 38 03.6**	**-0.7**
WRAB	**Tennant Creek**	**44.41**	**273**	*e*P	**P**	**08 38 03.1**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
WRAB				MLR	MLR		
	comp=Z,483nm,21.0s,MS4.4						
WRAB	**Tennant Creek**	**44.41**	**273**	*e*P	**P**	**08 38 03.1**	**-1.2**
	comp=Z,30nm,0.7s,mb5.1						
WRAB				LR	LR		
	comp=Z,483nm,21.0s,MS4.4						
WRA	**Warramunga Arr**	**44.42**	**273**	P	**P**	**08 38 03.4**	**-1.0**
	comp=Z,21nm,0.9s,mb4.9,baz=111,slow=8.0,SNR=96						
SBA	**Scott Base**	**47.36**	**184**	*e*P	pP	08 38 35.8	-5.3
SBA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SBA	**Scott Base**	**47.36**	**184**	*e*P	pP	08 38 35.8	-5.3
	comp=Z,1.7nm,0.6s						
VNDA	**Vanda**	**47.42**	**186**	LR	LR	08 53 37.9	
	comp=Z,321nm,20.0s,MS4.3,baz=359,slow=30						
KAKA	**Kakadu**	**49.34**	**280**	*e*P	**P**	**08 38 39.4**	**-3.7**
	comp=Z,4.8nm,0.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**52.65**	**270**	*e*P	**P**	**08 39 07.9**	**-0.2**
	comp=Z,27nm,0.9s,mb5.2						
CASY	**Casey**	**54.66**	**208**	*e*P	**P**	**08 39 25.2**	**+3.0**
	comp=Z,22nm,0.6s,mb5.4						
MBWA	**Marble Bar**	**56.44**	**264**	*e*P	**P**	**08 39 35.4**	**-0.2**
	comp=Z,68nm,1.8s,mb5.4						
RPN	**Rapa Nui**	**58.97**	**105**	LR	LR	08 58 29.2	
	comp=Z,550nm,20.3s,MS4.7,baz=247,slow=29						
QSPA	**South Pole Qui**	**59.01**	**180**	*e*P	**P**	**08 39 58.1**	**+5.2**
	comp=Z,34nm,0.7s,mb5.5						
MAW	**Mawson**	**71.75**	**201**	LR	LR	09 12 50.1	
	comp=Z,410nm,19.5s,MS4.7,baz=116,slow=36						
SYO	**Syowa Base**	**76.50**	**193**	⇓P	**P**	**08 41 45.4**	**+3.2**
SYO	**Syowa Base**	**76.50**	**193**	⇓sP	sP	08 42 07.0	+3.7
SNAA	**Sanae**	**77.44**	**178**	⇑*i*	**P**	**08 41 44.7**	**-2.8**
SNAA	**Sanae**	**77.44**	**178**	*e*	**P**	**08 41 51.3**	**+3.8**
SNAA	**Sanae**	**77.44**	**178**	*e*P	**P**	**08 41 51.2**	**+3.7**
SNAA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SNAA	**Sanae**	**77.44**	**178**	*e*P	**P**	**08 41 51.2**	**+3.7**
	comp=Z,5.3nm,0.8s,mb4.5						
SNAA				*e*		08 41 51.3	
VNA3	**Neumayer Olymp**	**77.58**	**176**	*e*	pP	08 41 58.9	-4.6
VNA3	**Neumayer Olymp**	**77.58**	**176**	*e*	sP	08 42 02.2	-7.2
VNA3	**Neumayer Olymp**	**77.58**	**176**	⇑*i*P	**P**	**08 41 52.3**	**+4.0**
VNA3				*e*		08 41 58.9	
VNA3				*e*		08 42 02.2	
VNA2	**Neumayer--Watz**	**78.02**	**177**	*e*	pP	08 42 01.7	-4.2
VNA2	**Neumayer--Watz**	**78.02**	**177**	*e*	sP	08 42 05.1	-6.7
VNA2	**Neumayer--Watz**	**78.02**	**177**	⇑*i*P	**P**	**08 41 54.1**	**+3.4**
VNA2				*e*		08 42 01.7	
VNA2				*e*	pP	08 42 05.1	-0.8
PLCA	**Paso Flores**	**81.81**	**133**	LR	LR	09 10 13.5	
	comp=Z,378nm,21.7s,MS4.7,baz=212,slow=30						
SSE	**Sheshan**	**84.79**	**311**	P	**P**	**08 42 23.5**	**-3.4**
SSE				S	S	08 52 46.5	-2.7
SSE				AMB	AMB		
	comp=Z,36nm,0.7s,mb5.6						
SSE				AMB	AMB		
	comp=Z,143nm,5.4s						
SSE				LR	LR		
	comp=N,129nm,24.8s,MS4.3						
SSE				LR	LR		
	comp=E,120nm,24.6s,MS4.3						
SSE				LR	LR		
	comp=Z,248nm,23.4s,MS4.5						
SSE	**Sheshan**	**84.79**	**311**	P	**P**	**08 42 23.6**	**-3.3**
	comp=Z,36nm,0.7s,mb5.6						
SSE				S	S	08 52 46.5	-2.7
SSE				sS		08 53 19.8	
SSE				SS	SS	08 58 22.2	-2.8
SSE				LR	LR		
	comp=Z,250nm,23.4s,MS4.5						
YSS	**Yuzh-Sakhalins**	**85.51**	**334**	⇑*e*P	**P**	**08 42 28.7**	**-1.3**
YSS				*e*	pP	08 42 46.0	+0.5
YSS				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.6						
YSS	**Yuzh-Sakhalins**	**85.51**	**334**	*e*P	**P**	**08 42 26.4**	**-3.7**
	comp=Z,25nm,0.9s,mb5.4						
PET	**Petropavlovsk**	**86.28**	**346**	*e*P	**P**	**08 42 35.0**	**+1.3**
PET				*e*S	S	08 53 07.0	+3.9
PET				*e*PS	PS	08 54 02.8	-7.8
PET				pmax	pmax		
	comp=Z,100nm,13.8s						
PET				smax			
	comp=E,200nm,21.3s						
PET				smax			
	comp=N,100nm,14.8s						
NJ2	**Nanjing**	**86.92**	**310**	*e*P	**P**	**08 42 38.0**	**+0.6**
NJ2				SKS	SKS	08 52 54.0	-3.2
NJ2				S	S	08 53 11.0	+1.2
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,350nm,11.5s						
NJ2				LR	LR		
	comp=N,800nm,29.1s						
NJ2				LR	LR		
	comp=E,640nm,22.2s						
LDFC	**Landfair**	**88.27**	**47**	*e*P	**P**	**08 42 43.8**	**0.0**
NVAR	**Mina Array Bea**	**88.56**	**43**	P	**P**	**08 42 44.8**	**-0.2**
	comp=E,2.2nm,0.7s,mb4.6,baz=207,slow=6.6,SNR=12						
MDJ	**Mudanjiang**	**89.37**	**325**	P	**P**	**08 42 50.0**	**+1.3**
MDJ				S	S	08 53 33.3	+1.0
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,135nm,3.9s						
MDJ				LR	LR		
	comp=N,119nm,24.0s,MS4.3						
MDJ				LR	LR		
	comp=E,90nm,24.0s,MS4.3						
MDJ				LR	LR		
	comp=Z,156nm,22.0s,MS4.4						
CN2	**Changchun**	**90.88**	**323**	*e*P	**P**	**08 42 55.3**	**-0.5**
CN2				*e*S	S	08 53 45.0	-0.9
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.5						
CN2				AMB	AMB		
	comp=Z,500nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=E,400nm,18.0s,MS5.0						
CN2				LR	LR		
	comp=Z,600nm,19.0s,MS5.0						
WUAZ	**Wupatki**	**90.91**	**48**	*e*P	**P**	**08 42 56.7**	**+0.5**
	comp=Z,298nm,1.3s						
KLR	**Kul’dur**	**91.79**	**330**	*e*P	**P**	**08 42 53.5**	**-6.4**
ENH	**Enshi**	**92.24**	**304**	*e*P	**P**	**08 43 01.9**	**-0.6**
	comp=Z,61nm,1.6s,mb5.7						
MSU	**Marysvale**	**92.27**	**46**	*e*P	**P**	**08 43 01.9**	**-0.5**
TXAR	**Lajitas Array**	**92.52**	**57**	P	**P**	**08 43 03.8**	**0.0**
	comp=Z,1.0nm,1.0s,mb4.2,baz=202,slow=6.7,SNR=7.1						
TXAR				LR	LR	09 20 46.7	
	comp=Z,340nm,18.2s,MS4.8,baz=140,slow=33						
TMUT	**Trail Mountain**	**93.35**	**45**	*e*P	**P**	**08 43 07.5**	**+0.2**
ANMO	**Albuquerque**	**93.79**	**51**	⇑*e*P	**P**	**08 43 09.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**93.91**	**289**	P	**P**	**08 43 11.3**	**+1.0**
	comp=Z,1.3nm,0.6s,mb4.6,baz=147,slow=3.3,SNR=5.4						
KMI	**Kunming**	**94.40**	**297**	P	**P**	**08 43 13.0**	**+0.6**
KMI				S	S	08 54 18.3	+1.3
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb5.0						
KMI				AMB	AMB		
	comp=Z,66nm,3.6s						
KMI				LR	LR		
	comp=N,198nm,18.5s,MS4.8						
KMI				LR	LR		
	comp=E,189nm,18.5s,MS4.8						
KMI				LR	LR		
	comp=Z,180nm,18.5s,MS4.6						
KMI	**Kunming**	**94.40**	**297**	P	**P**	**08 43 13.1**	**+0.7**
KMI				*PP	pP	08 43 26.8	-1.3
KMI				S	S	08 54 18.2	+1.2
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
KMI				MLR	MLR		
	comp=Z,180nm,18.5s,MS4.6						
KMI	**Kunming**	**94.40**	**297**	P	**P**	**08 43 13.1**	**+0.7**
	comp=Z,6.0nm,1.0s,mb5.0						
KMI				pP	pP	08 43 26.8	-1.3
KMI				S	S	08 54 18.2	+1.2
KMI				LR	LR		
	comp=Z,180nm,18.5s,MS4.6						
MCMT	**McKenzie Canyo**	**95.82**	**40**	*e*P	**P**	**08 43 18.0**	**-0.4**
PDAR	**Pinedale Array**	**96.44**	**43**	P	**P**	**08 43 20.7**	**-0.6**
	comp=Z,0.3nm,0.5s,mb4.0,baz=194,slow=12,SNR=3.5						
PDAR				LR	LR	09 21 03.1	
	comp=Z,277nm,19.3s,MS4.8,baz=246,slow=32						
HHC	**Hu-ho-hao-te**	**96.93**	**314**	*e*P	**P**	**08 43 21.5**	**-2.1**
HHC				AP	pP	08 43 34.5	-4.7
HHC				PP	PP	08 47 16.3	-5.7
HHC				SKS	SKS	08 53 53.3	-1.3
HHC				S	S	08 54 33.8	-4.3
HHC				AMB	AMB		
	comp=Z,8.0nm,1.4s,mb5.0						
HHC				AMB	AMB		
	comp=Z,104nm,7.2s						
HHC				LR	LR		
	comp=N,287nm,22.8s,MS4.8						
HHC				LR	LR		
	comp=E,209nm,24.0s,MS4.8						
HHC				LR	LR		
	comp=Z,518nm,25.2s,MS4.9						
COLA	**College**	**98.46**	**12**	*i* P	**P**	**08 43 19.7**	**-10**
ILAR	**Eielson Array**	**98.55**	**13**	P	**P**	**08 43 27.6**	**-2.7**
	comp=Z,0.5nm,0.8s,mb4.1,baz=217,slow=5.3,SNR=5.5						
ILAR				LR	LR	09 28 19.6	
	comp=Z,126nm,18.0s,MS4.5,baz=60,slow=36						
BILL	**Bilibino**	**99.57**	**354**	*e*P	**P**	**08 43 28.3**	**-6.6**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,9µm,24.0s						
YKA	**Yellowknife Ar**	**105.95**	**25**	PKKPbc		08 59 41.3	
	comp=Z,0.3nm,0.8s,baz=45,slow=3.1,SNR=6.2						
WMQ	**Urumqi**	**113.89**	**308**	*e*PDIF	Pdif	08 44 40.0	+1.3
WMQ				PP	PP	08 49 29.0	+0.3
WMQ				SKS	SKS	08 55 40.0	+29
WMQ				S		08 57 00.0	
WMQ				LR	LR		
	comp=N,101nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=E,153nm,25.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,146nm,25.0s,MS4.5						

RES	Resolute Bay	117.83	17	*e*PKIKP	PKPdf	08 48 32.4	-4.2
NVS	Novosibirsk	119.86	319	*e*PKIKP	PKPdf	08 48 39.8	-1.2
KURK	Kurchatov	121.75	313	*e*PKIKP	PKPdf	08 48 44.3	-0.4
KURK				*e*		08 48 51.9	
TKM2	Tokmak 2	122.03	304	P	PKPdf	08 48 46.2	+0.7
	SNR=6.7						
KZA	Kyzart	122.06	303	P	PKPdf	08 48 47.6	+2.1
	SNR=9.1						
UCH	Uchtor	122.63	303	P	PKPdf	08 48 48.5	+1.8
	SNR=14						
AAK	Ala-Archa	122.74	303	⇓*i*PKIKP	PKPdf	08 48 46.8	-0.1
AAK	Ala-Archa	122.74	303	*e*PKPdf	PKPdf	08 48 45.7	-1.2
USP	Ospenovka	122.89	304	P	PKPdf	08 48 48.1	+1.0
	SNR=5.3						
AML	Almayashu	123.20	303	P	PKPdf	08 48 49.2	+1.4
	SNR=16						
CHKZ	Chkalovo	127.02	316	*e*PKIKP	PKPdf	08 48 54.1	-0.7
CHKZ				*e*		08 49 02.2	
KEV	Kevo	138.87	347	*e*pkp	PKPdf	08 49 25.5	+9.0
ARCES	ARCESS Array B	139.34	348	PKhKP		08 49 10.0	
	comp=Z,7.3nm,1.1s,baz=333,slow=2.7,SNR=7.5						
ARCES				PKP	PKPdf	08 49 18.1	+0.7
	comp=Z,5.3nm,0.8s,baz=94,slow=1.2,SNR=11						
JOF	Joensuu	143.18	338	*e*pkp	PKPdf	08 49 26.2	+2.1
	comp=Z,8.0nm,0.9s						
MOS	Moscow	145.08	325	*e*PKIKP	PKPdf	08 49 27.6	-0.1
MOS				pmax	pmax		
	comp=Z,84nm,0.8s						
KAF	Kangasniemi	145.31	340	*e*pkp	PKPdf	08 49 25.7	-2.2
	comp=Z,11nm,0.6s,baz=37,slow=3.3						
KIV	Kislovodsk	145.86	304	*e*PKIKP	PKPdf	08 49 31.1	+1.7
MSL	Mosul	145.88	290	*e*PKP	PKPdf	08 49 31.0	+1.3
FINES	FINESS Array B	145.91	340	PKPbc	PKPbc	08 49 28.9	-1.0
	comp=Z,20nm,0.5s,baz=53,slow=4.6,SNR=149						
OBN	Obninsk	145.91	325c	*i*PKP2	PKPab	08 49 29.7	-2.8
OBN				*e*SS	SS	09 11 32.4	-10
OBN				pmax	pmax		
	comp=Z,91nm,0.9s						
OBN	Obninsk	145.91	325	*e*PKPdf	PKPdf	08 49 29.8	+0.7
VSU	Vasula	147.99	336c	*i*PKP2	PKPdf	08 49 35.8	+3.4
SOC	Sochi	148.04	304	*i* PKIKP	PKPdf	08 49 36.1	+3.1
SOC				*e*SS	SS	09 11 59.0	-8.4
SOC				*e*SSS	SSS	09 17 47.4	+3.9
SOC				pmax	pmax		
	comp=Z,97nm,1.7s						
SOC				pmax	pmax		
	comp=N,27nm,1.0s						
SOC				pmax	pmax		
	comp=E,68nm,1.7s						
NB2	NORSAR Subarra	149.49	351	PKP	PKPdf	08 49 39.4	+4.6
	comp=E,13nm,0.8s,baz=12,slow=2.8						
NB2	NORSAR Subarra	149.49	351	⇑PKP2	PKPdf	08 49 39.4	+4.6
NOA	NORSAR Array B	149.49	351	PKPbc	PKPdf	08 49 39.3	+4.5
	comp=E,12nm,0.8s,baz=14,slow=4.3,SNR=37						
MALT	Malatya	149.62	294	*e*PKPbc	PKPdf	08 49 42.4	+6.7
MALT				*e*		08 49 50.8	
NAO01	NORSAR Array S	149.72	352	*e*PKPbc	PKPdf	08 49 40.2	+5.1
GZT	Gaziantep	150.34	292	*i* P	PKPdf	08 49 44.1	+7.3
MNK	Minsk	150.36	329	*e*PKHKP		08 49 40.0	
ASF	Jabal al Asfar	150.63	281	PKPbc	PKPdf	08 49 45.6	+8.2
	comp=E,19nm,0.9s,baz=306,slow=1.4,SNR=16						
COBT	Iskenderun	151.40	290	*i* P	PKPdf	08 49 47.1	+8.6
SIM	Simferopol’	151.61	308	*i* PKIKP		08 49 54.5	
SIM				pmax	pmax		
	comp=Z,50nm,0.9s						
EIL	Elat	151.88	276	*e*PKPbc	PKPdf	08 49 47.9	+8.5
AVNT	Avonos	152.37	295	*i* P	PKPdf	08 49 48.1	+8.2
SUW	Suwalki	152.64	333	*e*PKIKP	PKPdf	08 49 47.4	+7.7
SUW				*e*		08 49 56.6	
MEST	Erdemli	153.10	290	*i* P	PKPdf	08 49 50.4	+9.4
BRTR	Keskin Array B	153.19	297	PKPbc	PKPdf	08 49 49.2	+8.3
	comp=Z,8.3nm,0.9s,baz=117,slow=2.8,SNR=18						
KIS	Kishinev	154.20	315	*e*PKIKP		08 49 58.0	
DBIC	Dimbokro	154.77	163	PKPbc		08 49 57.9	
	comp=Z,2.5nm,0.7s,baz=188,slow=2.2,SNR=5.2						
KWP	Kalwaria	155.98	326	*e*PKP2	PKPab	08 50 11.7	-2.5
KOLS	Kolonicke sedl	156.66	325	*e*PKP		08 50 14.3	
KOLS				*e*		08 50 36.0	
CRVS	Cervenica-Dubn	157.08	326	*e*PKP	PKPab	08 50 14.0	-5.0
KSP	Ksiaz	157.72	336	*e*PKPdf	PKPdf	08 49 48.9	+2.3
KSP				*e*PKPab	PKPab	08 50 19.0	-2.6
KECS	Kecovo	157.83	327	*e*PKP	PKPab	08 50 20.3	-1.9
UPC	Upice	158.09	336	*e*PKPab	PKPab	08 50 20.6	-2.7
DPC	Dobruska-Polom	158.12	335	*e*PKPab	PKPab	08 50 21.2	-2.2
CLL	Collm	158.32	342	*i* PKP2	PKPab	08 50 21.0	-3.2
CLL				pmax	pmax		
	comp=Z,13nm,1.0s						
CLL	Collm	158.32	342	*i* PKP2	PKPab	08 50 21.0	-3.2
CLL				*e*		08 50 28.0	
CLL				e*PPKP2		08 50 32.0	
BRG	Berggiesshubel	158.45	340	*e*PKP2	PKPab	08 50 22.4	-2.4
BRG				pmax	pmax		
	comp=Z,16nm,1.2s						
PVCC	Panska Ves	158.56	338	*e*PKPab	PKPab	08 50 23.0	-2.3
VYHS	Vyhne	158.58	329	*e*PKP	PKPab	08 50 23.1	-2.3
VYHS				*e*		08 50 29.7	
PRU	Pruhonice	159.03	338	*e*PKPab	PKPab	08 50 25.4	-1.9
NKC	Novy Kostel	159.45	341	*e*PKPab	PKPab	08 50 26.5	-2.6
KHC	Kasperske Hory	160.09	338	*e*PKPab	PKPab	08 50 28.8	-3.1
KHC				x	x	08 50 36.0	
GRF	Grafenberg Arr	160.27	343	*e*PKP2	PKPab	08 50 27.1	-5.5
GERES	GERESS Array B	160.30	337	PKPab	PKPab	08 50 30.2	-2.6
	comp=Z,2.2nm,0.9s,baz=34,slow=4.8,SNR=8.4						

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*NEIC **28** 08:32:31.9±0.8, 6.69N×72.88W, h168^{km}±9^{km}, mb3.7/1, Error ellipse: s-maj=32.1km s-min=12.3km az=127.0*

*IDC **28** 08:32:31.7±0.7, 6.73N×72.91W, h163^{km}±10^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.2/20, mbtmp3.8/6, Error ellipse: s-maj=39.1km s-min=7.4km az=131.0*

*UAV **28** 08:32:34.2, 7.37N×73.33W, h162^{km}*

ISC 28 08:32:31.4±0.7**, 6.9N**±0.2×**73.0W**±0.2**, h166**^{km}±12^{km}**, n17, σ0^{s}93**/24**, mb3.5**/4**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDMV	Paramo Marino	1.86	40	P	P	08 33 07.2	+0.9
PDMV				S	S	08 33 33.6	+0.4
OSV	Paramo de la O	2.32	41	P	P	08 33 12.5	+0.8
OSV				S	S	08 33 40.3	-2.4
ROSC	El Rosal	2.39	213	P	P	08 33 12.5	-0.1
	48nm,0.3s,baz=359,slow=2.8,SNR=210						
ROSC				S	S	08 33 43.4	-0.7
	40nm,0.3s,baz=89,slow=16,SNR=13						
UAV	Universidad de	2.54	47	P	P	08 33 15.6	+1.2
UAV				S	S	08 33 47.4	0.0
CUV	La Culata	2.70	47	P	P	08 33 17.4	+1.2
CUV				S	S	08 33 49.1	-1.6
EAV	Pico El Aguila	2.94	48	P	P	08 33 20.6	+1.3
EAV				S	S	08 33 55.8	-0.2
SDV	Santo Domingo	3.10	50	P	P	08 33 22.0	+0.7
	14nm,0.3s,baz=262,slow=11,SNR=293						
SDV				S	S	08 33 59.6	-0.1
	29nm,0.3s,baz=266,slow=23,SNR=55						
SDV	Santo Domingo	3.10	50	*e*Pn	P	08 33 21.6	+0.2
SDV				*e*Sn	S	08 33 59.4	-0.3
SDV				S	S	08 33 59.6	-0.1
TORV	Torococo	3.84	46	P	P	08 33 30.1	-0.8
TXAR	Lajitas Array	36.48	312	P	P	08 39 22.9	+0.5
	0.1nm,0.5s,mb2.7,baz=111,slow=9.0,SNR=4.1						
SCHQ	Schefferville	48.07	5	P	P	08 40 55.9	0.0
	2.3nm,1.0s,mb3.8,baz=188,slow=12,SNR=5.9						
SCHQ	Schefferville	48.07	5	*e*P	P	08 40 56.5	+0.6
	1.1nm,0.6s,mb3.7						
FRB	Frobisher Bay	56.85	2	P	P	08 41 59.4	-1.3
	5.4nm,1.1s,mb4.3,baz=187,slow=8.1,SNR=4.1						
YKA	Yellowknife Ar	63.23	340	P	P	08 42 43.8	-0.4
	0.2nm,0.5s,mb3.2,baz=132,slow=6.5,SNR=10						
YKA	Yellowknife Ar	63.23	340	P	P	08 42 43.8	-0.4
ASAR	Alice Springs	149.22	234	PKPbc	PKPdf	08 52 01.1	+4.4
	0.6nm,1.0s,baz=112,slow=3.8,SNR=5.8						
WRA	Warramunga Arr	150.44	241	PKPbc	PKPdf	08 52 04.9	+6.4
	0.2nm,0.4s,baz=108,slow=2.9,SNR=5.7						

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*IDC **28** 08:33:25.6±2.6, 30.85S×177.19W, mb4.4/4, mb1 4.6/5, mb1mx4.2/15, mbtmp4.4/5, Error ellipse: s-maj=58.8km s-min=34.1km az=121.0*

*NEIC **28** 08:33:26.8±1.2, 30.49S×177.12W, h10^{km}, mb4.7/2, Error ellipse: s-maj=26.4km s-min=22.4km az=126.0*

ISC 28 08:33:22.7±2.5**, 30.90S**±0.07×**176.9W**±0.4**, h10**^{km}**, n26, σ0^{s}95**/32**, mb4.5**/5**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.87	331	*e*P	Pn	08 33 52.4	-2.7
MXZ	Matakaoa Point	7.74	210	*e*PN	Pn	08 35 18.5	+0.3
MXZ	Matakaoa Point	7.74	210	*e*PN	Pn	08 35 18.5	+0.3
PUZ	Puketiti	8.20	208	*e*PN	P	08 35 23.3	-1.3
PUZ				SN	Sn	08 36 58.1	-0.1
PUZ	Puketiti	8.20	208	*e*PN	P	08 35 23.3	-1.3
PUZ				SN	Sn	08 36 58.1	-0.1
MWZ	Matawai	8.72	210	*e*PN	P	08 35 32.4	+0.5
MWZ				*e*SN	Sn	08 37 11.0	-0.3
MWZ	Matawai	8.72	210	*e*PN	P	08 35 32.4	+0.5
MWZ				*e*SN	Sn	08 37 11.0	-0.3
URZ	Urewera	8.85	212	Pn	P	08 35 32.7	-0.9
	baz=171,slow=18,SNR=1.4						
URZ				Sn	Sn	08 37 14.4	0.0
	4.8nm,0.3s,baz=320,slow=21,SNR=8.3						
URZ	Urewera	8.85	212	*e*PN	P	08 35 34.3	+0.6
URZ				*e*SN	Sn	08 37 14.0	-0.4
URZ	Urewera	8.85	212	*e*PN	P	08 35 34.3	+0.6
URZ				*e*SN	Sn	08 37 14.0	-0.4
KNZ	Kokohu	9.24	207	*e*SN	Sn	08 37 16.2	-8.1
KNZ	Kokohu	9.24	207	*e*SN	Sn	08 37 16.2	-8.1
MRZ	Mangatainoka R	11.49	210	*e*PN	P	08 36 04.7	-5.2
MRZ				*e*SN	S	08 38 12.2	-7.2
MRZ	Mangatainoka R	11.49	210	*e*PN	P	08 36 04.7	-5.2
MRZ				*e*SN	S	08 38 12.2	-7.2
NNZ	Nelson	12.95	215	*e*SN	S	08 38 45.1	-10
NNZ	Nelson	12.95	215	*e*SN	S	08 38 45.1	-10
CTA	Charters Tower	34.82	279	P	P	08 40 16.9	+1.0
	4.6nm,0.7s,mb4.5,baz=100,slow=12,SNR=6.4						
CTAO	Charters Tower	34.82	279	*e*P	P	08 40 16.6	+0.7
	6.5nm,0.5s,mb4.8						
STKA	Stephens Creek	35.30	257	P	P	08 40 21.6	+1.7
	9.7nm,0.9s,mb4.7,baz=87,slow=11,SNR=5.8						
STKA	Stephens Creek	35.30	257	*e*P	P	08 40 22.2	+2.3
ASAR	Alice Springs	44.03	267	P	P	08 41 32.8	+0.3
	2.7nm,0.8s,mb4.0,baz=108,slow=7.6,SNR=5.7						
WRAB	Tennant Creek	45.06	272	*e*P	P	08 41 41.0	+0.2
	6.1nm,0.8s,mb4.5						
WRA	Warramunga Arr	45.07	272	P	P	08 41 40.1	-0.7
	4.4nm,0.7s,mb4.4,baz=110,slow=8.1,SNR=11						
ARCES	ARCESS Array B	139.28	348	PKP	PKPdf	08 52 51.5	-1.0
	2.6nm,0.9s,baz=90,slow=2.7,SNR=3.1						
KAF	Kangasniemi	145.33	341	*e*pkp	PKPdf	08 53 03.6	+0.5
	baz=24,slow=3.5						
FINES	FINESS Array B	145.94	340	PKPbc	PKPbc	08 53 05.5	+3.5
	5.8nm,0.7s,baz=54,slow=4.1,SNR=13						

DJA 28 08:36:10.8±1.0**, 8.61S×116.17E, h106**^{km}±7^{km}**, ML3.9**/2**, 6C, Error ellipse: s-maj=43.6km s-min=14.5km az=179.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEDI	Kedomdong	0.13	334	*e*Pn	P	08 36 25.3	-0.4
RATI	Rata	0.64	260	⇑*e*Pn	P	08 36 28.3	-0.2
RATI				⇑*e*Sn	S	08 36 41.0	-0.8
KELI	Kelakatan	1.71	283	⇑*e*Pn	P	08 36 40.2	-0.2
	57nm,0.2s						
KELI				⇑*e*Sn	S	08 37 01.2	-1.3
SRDI	Scrawed	2.01	273	⇑*e*Pn	P	08 36 43.6	-0.7
	118nm,0.2s						
SRDI				⇑*e*Sn	S	08 37 07.9	-1.3

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*IDC **28** 08:36:24.7±3.0, 30.71S×177.44W, mb4.1/3, mb1 4.3/4, mb1mx4.0/14, mbtmp4.1/4, Error ellipse: s-maj=70.0km s-min=35.6km az=116.0*

*NEIC **28** 08:36:25.1±2.2, 30.62S×177.35W, h10^{km}, Error ellipse: s-maj=50.3km s-min=16.0km az=99.0*

ISC 28 08:36:22.7±5.3**, 30.8S**±0.1×**177.3W**±0.8**, h10**^{km}**, n6, σ1^{s}26**/6**, mb4.1**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.62	340	*e*P	Pn	08 36 50.7	-0.9
URZ	Urewera	8.78	210	Pn	P	08 38 32.7	0.0
	baz=335,slow=17,SNR=2.0						
URZ				Sn	Sn	08 40 12.1	-0.7
	2.1nm,0.3s,baz=94,slow=23,SNR=6.2						
STKA	Stephens Creek	35.00	257	P	P	08 43 19.3	+1.9
	3.4nm,0.7s,mb4.4,baz=102,slow=11,SNR=5.0						
ASAR	Alice Springs	43.71	267	P	P	08 44 29.5	-0.3
	1.6nm,1.0s,mb3.7,baz=112,slow=7.3,SNR=5.2						
WRA	Warramunga Arr	44.74	272	P	P	08 44 38.4	+0.2
	2.8nm,0.8s,mb4.2,baz=111,slow=8.0,SNR=7.4						
FINES	FINESS Array B	145.72	340	PKPbc	PKPbc	08 56 03.6	+2.1
	1.1nm,0.3s,baz=58,slow=4.3,SNR=8.4						

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*MDD **28** 08:39:12.2±1.1, 34.93N×2.99W, h6^{km}±4^{km}, mbLg2.7/19, Error ellipse: s-maj=8.0km s-min=7.1km az=57.0, PRXIMO*

*CSEM **28** 08:39:12.7±0.4, 35.07N×3.17W, h10^{km}, mb3.9/17, Error ellipse: s-maj=7.4km s-min=5.0km az=173.0*

*NEIC **28** 08:39:13.1, 35.00N×3.11W, h2^{km}, MG3.9(MDD), After MDD.*

ISC 28 08:39:12.0±0.8**, 35.02N**±0.05×**3.16W**±0.04**, h10**^{km}**, n32, σ1^{s}00**/59**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMEL	Melilla	0.33	30	P	Pg	08 39 19.2	+0.3
	SNR=14						
EMEL				S	Sg	08 39 23.6	+0.2
	1µm,0.2s,SNR=22						
EMLI	Melilla	0.33	31	P	Pg	08 39 19.2	+0.3
	313nm,0.1s,SNR=14						
TAF	Taforalt	0.64	108	P	Pb	08 39 23.0	-1.9
EALB	Alboran	0.93	6	P	Pb	08 39 30.3	+0.6
	41nm,0.1s,SNR=4.0						
EALB				S	Sb	08 39 43.4	+1.5
	70nm,0.1s,SNR=4.0						
EALB	Alboran	0.93	6	P	Pb	08 39 30.3	+0.6
	41nm,0.1s,SNR=4.0						
EALB				S	Sb	08 39 43.4	+1.5
	70nm,0.1s,SNR=4.0						
EMIJ	Mijas	2.03	320	P	Pn	08 39 47.0	+0.4
	6.8nm,0.1s,SNR=30						
EMIJ				S	Sn	08 40 12.0	-0.3
	46nm,0.4s,SNR=5.0						
ERON	Agron	2.07	346	P	Pn	08 39 46.9	-0.3
	3.4nm,0.2s,SNR=7.9						
ERON				S	Sn	08 40 14.3	+1.0
	11nm,0.2s,SNR=7.9						
ENIJ	Nijar	2.10	21	P	Pn	08 39 46.6	-1.1
	4.2nm,0.2s,SNR=4.0						
ENIJ				S	Sn	08 40 12.8	-1.3
	21nm,0.3s,SNR=4.0						
ELOJ	Sierra Loja	2.28	340	P	Pn	08 39 50.9	+0.7
	7.8nm,0.3s,SNR=12						
ELOJ				S	Sn	08 40 19.5	+1.0
	19nm,0.5s,SNR=6.3						
ECOG	Cogollos-Vega	2.28	352	P	Pn	08 39 51.2	+0.9
	4.3nm,0.2s,SNR=9.1						
ECOG				S	Sn	08 40 19.4	+0.6
	15nm,0.3s,SNR=7.4						
EJIF	Jimena Fronter	2.36	308	P	Pn	08 39 51.4	-0.1
	10nm,0.3s,SNR=7.9						
EQES	Quesada	2.78	1	P	Pn	08 39 58.9	+1.5
	14nm,0.3s,SNR=70						
EQES				S	Sn	08 40 32.6	+1.1
	63nm,0.4s						
EQES	Quesada	2.78	1	P	Pn	08 39 58.9	+1.4
	14nm,0.3s,SNR=70						
EQES				S	Sn	08 40 32.6	+1.1
	63nm,0.4s						
EHUE	Huescar	2.83	9	P	Pn	08 39 59.1	+0.9
	4.6nm,0.4s,SNR=7.9						
EHUE				S	Sn	08 40 32.2	-0.5
	8.4nm,0.2s,SNR=7.9						
ESPR	Espera	2.87	311	P	Pn	08 40 00.2	+1.6
	3.9nm,0.2s,SNR=7.8						
ESPR				S	Sn	08 40 33.5	0.0
	10nm,0.3s						
ESPR	Espera	2.87	311	P	Pn	08 40 00.2	+1.6
	3.9nm,0.2s,SNR=7.8						
ESPR				S	Sn	08 40 33.5	0.0
	10nm,0.3s						
EBAN	Banos Encina	3.18	351	P	Pn	08 40 03.3	+0.1
	6.0nm,0.3s,SNR=7.9						
EBAN				S	Sn	08 40 40.6	-1.0
	17nm,0.3s,SNR=7.9						
EMUR	La Murta	3.22	28	P	Pn	08 40 03.2	-0.4
	12nm,0.3s,SNR=6.5						
EMUR				S	Sn	08 40 37.7	-4.7
	12nm,0.3s						
EMUR	La Murta	3.22	28	P	Pn	08 40 03.2	-0.5
	12nm,0.3s,SNR=6.5						
EADA	Adamuz	3.35	340	P	Pn	08 40 06.0	+0.5
	6.0nm,0.2s,SNR=35						
EADA				S	Sn	08 40 43.8	-1.9
	7.0nm,0.3s						
EADA	Adamuz	3.35	340	P	Pn	08 40 06.0	+0.5
	6.0nm,0.2s,SNR=35						
EADA				S	Sn	08 40 43.8	-1.9
	7.0nm,0.3s						
ECAB	El Cabril	3.56	330	P	Pn	08 40 08.9	+0.4
	2.7nm,0.2s,SNR=7.9						
ECAB				S	Sn	08 40 49.1	-1.9
	6.1nm,0.4s,SNR=7.9						
ECAB	El Cabril	3.56	330	P	Pn	08 40 08.9	+0.5
	2.7nm,0.2s,SNR=7.9						
ECAB				S	Sn	08 40 49.1	-1.9
	6.1nm,0.4s,SNR=7.9						
EVIA	Vianos	3.66	8	P	Pn	08 40 10.7	+0.8
	2.9nm,0.4s,SNR=7.9						
EVIA				S	Sn	08 40 53.0	-0.6
	9.4nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.85	19	P	Pn	08 40 12.6	0.0
	2.6nm,0.3s,SNR=7.5						
ETOB				S	Sn	08 40 54.4	-3.9
	2.8nm,0.2s						
ETOB	Tobarra	3.85	19	P	Pn	08 40 12.6	0.0
	2.6nm,0.3s,SNR=7.5						
EMIN	Mina Concepcio	3.95	315	P	Pn	08 40 14.2	+0.2
	3.5nm,0.2s,SNR=44						
EMIN				S	Sn	08 40 59.4	-1.5
	4.4nm,0.3s						
EMIN	Mina Concepcio	3.95	315	P	Pn	08 40 14.2	+0.2
	3.5nm,0.2s,SNR=44						
EMIN				S	Sn	08 40 59.4	-1.5
	4.4nm,0.3s						
ESDC	Sonseca Array	4.70	352	P	Pn	08 40 24.4	-0.2
	7.3nm,0.2s,baz=172,slow=12,SNR=13						
ESDC				S	Sn	08 41 17.0	-2.9
	4.2nm,0.2s,baz=171,slow=27,SNR=13						
ESDC	Sonseca Array	4.70	352	P	Pn	08 40 24.4	-0.2
	7.3nm,0.2s,SNR=13						
ESDC				S	Sn	08 41 17.0	-2.8
	4.2nm,0.2s,SNR=13						
EBAD	Badajoz	4.84	322	P	Pn	08 40 26.5	-0.3
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	08 41 19.8	-3.8
	10nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.84	322	P	Pn	08 40 26.5	-0.3
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	08 41 19.8	-3.8

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*IDC **28** 08:50:07.3±3.9, 5.48S×146.88E, h127^{km}±41^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.6/12, mbtmp3.9/6, Error ellipse: s-maj=48.3km s-min=26.5km az=115.0*

ISC 28 08:50:06.0±3.4**, 5.5S**±0.2×**146.7E**±0.3**, h126**^{km}±35^{km}**, n8, σ0^{s}77**/9**, mb3.6**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.95	174	P	P	08 51 07.1	+1.0
	4.2nm,0.3s,baz=354,slow=4.1,SNR=11						
PMG				S	S	08 51 51.2	-0.8
	8.4nm,0.3s,baz=187,slow=20,SNR=9.9						
WB2	Warramunga Arr	18.77	219	*e*P	P	08 54 17.1	-0.9
WRA	Warramunga Arr	18.77	219	P	P	08 54 17.3	-0.8
	0.7nm,0.3s,baz=41,slow=12,SNR=44						
ASAR	Alice Springs	21.92	213	P	P	08 54 51.1	+1.1
	1.9nm,0.5s,mb3.7,baz=49,slow=7.6,SNR=38						
ASPA	Alice Springs	21.92	213	*e*P	P	08 54 51.0	+1.0
STKA	Stephens Creek	26.72	190	P	P	08 55 35.7	+0.1
	2.1nm,0.9s,mb3.7,baz=5.7,slow=10,SNR=3.7						
SONM	Songino Array	63.79	331	P	P	09 00 26.8	-0.2
	0.3nm,0.5s,mb3.4,baz=130,slow=11,SNR=3.7						
ILAR	Eielson Array	85.09	23	P	P	09 02 28.3	-0.3
	0.5nm,0.6s,mb3.6,baz=256,slow=5.1,SNR=8.1						

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*IDC **28** 08:50:22.7±1.5, 30.76S×177.39W, mb4.5/4, mb1 4.6/6, mb1mx4.2/16, mbtmp4.5/6, ML3.9/2, Error ellipse: s-maj=44.7km s-min=25.0km az=133.0*

*NEIC **28** 08:50:24.2±0.9, 30.68S×177.46W, h10^{km}, mb4.7/1, Error ellipse: s-maj=25.7km s-min=13.3km az=102.0*

ISC 28 08:50:22.0±1.3**, 30.74S**±0.05×**177.6W**±0.2**, h10**^{km}**, n32, σ1^{s}34**/32**, mb4.6**/5**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.50	350	*e*P	Pn	08 50 48.7	-0.4
RAO				*e*S	Sb	08 51 05.4	-3.1
PUZ	Puketiti	8.07	204	PN	P	08 52 21.8	-0.2
PUZ				SN	Sn	08 53 53.5	-0.8
PUZ	Puketiti	8.07	204	PN	P	08 52 21.8	-0.2
PUZ				SN	Sn	08 53 53.5	-0.8
MWZ	Matawai	8.56	206	*e*PN	P	08 52 28.4	-0.6
MWZ				SN	Sn	08 54 06.5	-0.2
MWZ	Matawai	8.56	206	*e*PN	P	08 52 28.4	-0.6
MWZ				SN	Sn	08 54 06.5	-0.2
URZ	Urewera	8.67	209	Pn	P	08 52 30.2	-0.2
	1.2nm,0.3s,baz=149,slow=13,SNR=14						
URZ				Sn	Sn	08 54 10.2	+1.0
	4.8nm,0.3s,baz=105,slow=21,SNR=19						
URZ	Urewera	8.67	209	PN	P	08 52 30.1	-0.3
URZ	Urewera	8.67	209	PN	P	08 52 30.1	-0.3
BKZ	Black Stump Fm	9.69	208	PN	P	08 52 43.4	-1.1
BKZ				SN	Sn	08 54 32.0	-2.6
BKZ	Black Stump Fm	9.69	208	PN	P	08 52 43.4	-1.1
BKZ				SN	Sn	08 54 32.0	-2.6
QRZ	Quartz Range	12.84	216	*e*SN	S	08 55 45.4	-6.0
QRZ	Quartz Range	12.84	216	*e*SN	S	08 55 45.4	-6.0
LTZ	Lake Taylor	14.48	211	*e*SN	S	08 56 19.4	-11
LTZ	Lake Taylor	14.48	211	*e*SN	S	08 56 19.4	-11
RPZ	Rata Peaks	15.76	212	Pn	P	08 54 05.9	+0.3
	0.5nm,0.3s,baz=21,slow=13,SNR=2.9						
RPZ				Sn	S	08 56 50.3	-10
	0.5nm,0.3s,baz=350,slow=18,SNR=4.9						
CTA	Charters Tower	34.17	279	P	P	08 57 10.8	+1.2
	5.0nm,0.5s,mb4.7,baz=114,slow=7.8,SNR=14						
CTA	Charters Tower	34.17	279	P	P	08 57 10.8	+1.2
STKA	Stephens Creek	34.72	257	*e*P	P	08 57 17.9	+3.7
	6.2nm,0.6s,mb4.7						
STKA	Stephens Creek	34.72	257	P	P	08 57 17.1	+2.9
	7.1nm,0.8s,mb4.7,baz=93,slow=9.7,SNR=18						
ASAR	Alice Springs	43.41	267	P	P	08 58 28.6	+2.0
	1.8nm,0.6s,mb4.0,baz=108,slow=7.1,SNR=18						
ASAR	Alice Springs	43.41	267	P	P	08 58 28.6	+2.0
WRA	Warramunga Arr	44.43	272	P	P	08 58 37.6	+2.6
	4.4nm,0.5s,mb4.4,baz=110,slow=8.0,SNR=27						
QSPA	South Pole Qui	59.37	180	P	P	09 00 27.3	+1.0
	67nm,2.0s,mb5.3						
KEV	Kevo	138.52	347	*e*p	PKPdf	09 09 58.3	+8.0
ARCES	ARCESS Array B	138.99	348	PKhKP		09 09 45.0	
	4.0nm,1.0s,baz=63,slow=2.7,SNR=3.6						
ARCES				PKP	PKPdf	09 09 49.6	-1.6
	5.3nm,1.0s,baz=45,slow=3.4,SNR=3.6						
JOF	Joensuu	142.85	338	*e*p	PKPdf	09 09 58.7	+0.7
KAF	Kangasniemi	144.97	341	*e*pkp	PKPdf	09 09 59.7	-2.0
	baz=39,slow=3.3						
FINES	FINESS Array B	145.57	340	PKPbc	PKPbc	09 10 02.0	+1.6
	2.9nm,0.4s,baz=54,slow=4.3,SNR=68						
NB2	NORSAR Subarra	149.13	352	PKPab	PKPab	09 10 12.0	-4.3
	1.5nm,0.5s,baz=15,slow=4.3						
NOA	NORSAR Array B	149.13	352	PKPbc	PKPdf	09 10 12.2	+3.6
	0.6nm,0.6s,baz=11,slow=2.8,SNR=4.9						
AKASG	Malin Array Be	151.76	323	PKPbc	PKPdf	09 10 19.1	+6.2
	0.4nm,0.4s,baz=70,slow=2.0,SNR=5.4						
AKASG				PKPab	PKPab	09 10 26.6	-1.0
	3.4nm,0.6s,baz=45,slow=2.8,SNR=11						
BRTR	Keskin Array B	153.04	298	PKPbc	PKPdf	09 10 23.0	+7.9
	0.6nm,0.5s,baz=90,slow=1.4,SNR=3.1						

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*IDC **28** 08:53:01.5±2.6, 9.24S×113.19E, mb4.1/6, mb1 4.3/6, mb1mx4.1/13, mbtmp4.1/6, Error ellipse: s-maj=137.8km s-min=17.9km az=52.0*

*DJA **28** 08:53:01.6±0.9, 9.94S×112.63E, h52^{km}±105^{km}, MD5.0/4, ML5.2/4, Error ellipse: s-maj=74.8km s-min=20.9km az=5.0*

*NEIC **28** 08:53:04.0±8.5, 9.71S×112.72E, h33^{km}±59^{km}, mb4.2/5, Error ellipse: s-maj=36.0km s-min=8.6km az=66.0*

ISC 28 08:53:02.1±0.7**,9.75S**±0.06×**112.68E**±0.05**,h33^{km},n18,** σ**1^{s}14**/22**,mb4.2**/10**,6C-2D,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRDI	Scrawed	1.91	49	⇓ePn	Pn	08 53 33.6	+0.6
	4μm,0.2s						
SRDI				⇑eSn	Sn	08 53 57.5	+1.3
KELI	Kelakatan	2.35	50	⇑ePn	Pn	08 53 40.2	+1.0
	1μm,0.3s						
KELI				⇑eSn	Sn	08 54 07.5	+0.3
RATI	Rata	2.99	70	⇑ePn	Pn	08 53 48.3	-0.1
	1μm,0.3s						
RATI				⇑eSn	Sn	08 54 22.7	-0.8
KEDI	Kedomdong	3.61	70	⇓ePn	Pn	08 53 56.6	-0.6
	112nm,0.1s						
KEDI				⇑eSn	Sn	08 54 37.1	-2.1
MBWA	Marble Bar	13.22	150	ePn	P	08 56 07.2	-2.9
	11nm,0.7s						
MBWA				eSn	Sx	08 58 19.4	
FITZ	Fitzroy Crossi	15.06	125	eP	P	08 56 33.6	-0.7
	4.0nm,0.4s						
WRA	Warramunga Arr	23.23	118	P	P	08 58 08.6	+1.2
	1.9nm,0.9s,mb3.5,baz=293,slow=11,SNR=14						
WRAB	Tennant Creek	23.24	118	eP	P	08 58 08.9	+1.4
	5.2nm,0.8s,mb4.0						
ASAR	Alice Springs	24.54	127	P	P	08 58 22.1	+1.9
	2.9nm,0.6s,mb4.0,baz=305,slow=8.8,SNR=45						
ASAR	Alice Springs	24.54	127	P	P	08 58 22.1	+1.9
CMAR	Chiang Mai Arr	31.13	334	P	P	08 59 21.0	+0.8
	3.4nm,0.9s,mb4.2,baz=169,slow=8.0,SNR=10						
STKA	Stephens Creek	34.66	134	P	P	08 59 53.2	+2.5
	2.1nm,0.9s,mb4.1,baz=313,slow=8.6,SNR=3.0						
STKA	Stephens Creek	34.66	134	eP	P	08 59 50.4	-0.3
ULN	Ulaanbaatar	57.57	356	eP	P	09 02 50.1	-0.9
	3.6nm,1.0s,mb4.4						
SONM	Songino Array	57.59	355	P	P	09 02 50.3	-0.8
	3.9nm,0.7s,mb4.5,baz=175,slow=8.2,SNR=29						
KURK	Kurchatov	67.08	337	eP	P	09 03 53.4	-0.9
	1.6nm,0.7s,mb4.2						
ZAL	Zalesovo	67.69	343	P	P	09 03 57.3	-0.7
	2.4nm,0.4s,mb4.6,baz=321,slow=3.0,SNR=7.7						
CHKZ	Chkalovo	72.53	335	eP	P	09 04 27.3	-0.1
	1.5nm,0.6s,mb4.1						

IDC 28 09:09:30.2±4.6**,29.67S**×**177.55W,mb3.5**/3**,mb1 3.7**/3**, mb1mx3.6**/12**,mbtmp3.5**/3**,Error ellipse: s-maj=200.6km s-min=70.2km az=159.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	9.65	206	Sn	Sn	09 13 16.8	-27
	0.5nm,0.3s,baz=105,slow=20,SNR=6.8						
STKA	Stephens Creek	35.03	256	P	P	09 16 24.9	-1.7
	0.5nm,0.4s,baz=108,slow=6.4,SNR=3.6						
ASAR	Alice Springs	43.55	266	P	P	09 17 35.5	-2.0
	0.3nm,0.8s,baz=105,slow=7.6,SNR=3.1						
WRA	Warramunga Arr	44.47	271	P	P	09 17 43.3	-1.8
	0.3nm,0.4s,baz=110,slow=8.1,SNR=8.2						
FINES	FINESS Array B	144.59	341	PKP	PKPdf	09 29 07.4	-2.3
	0.3nm,0.3s,baz=36,slow=3.2,SNR=5.6						

IDC 28 09:23:36.4±4.8**,29.19S**×**177.85W,mb3.9**/3**,mb1 4.0**/3**, mb1mx3.9**/12**,mbtmp3.9**/3**,Error ellipse: s-maj=184.0km s-min=75.0km az=157.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	9.97	204	Sn	Sn	09 27 21.1	-37
	1.3nm,0.3s,baz=322,slow=20,SNR=9.5						
STKA	Stephens Creek	34.90	255	P	P	09 30 30.7	-1.1
	3.0nm,1.0s,baz=106,slow=10,SNR=6.3						
ASAR	Alice Springs	43.32	266	P	P	09 31 39.4	-2.6
	0.3nm,0.4s,baz=106,slow=7.1,SNR=6.8						
WRA	Warramunga Arr	44.20	271	P	P	09 31 47.4	-1.8
	0.4nm,0.3s,baz=110,slow=8.1,SNR=23						
FINES	FINESS Array B	144.05	341	PKP	PKPdf	09 43 13.0	-2.1
	0.6nm,0.4s,baz=56,slow=5.0,SNR=12						

BJI ***28*** *09:26:26.5,5.05N×94.25E,h59^{km},mB5.1,mb4.7,Ms4.5, Msz4.1*

NEIC ***28*** *09:26:28.6±0.6,5.22N×94.29E,mb4.7/6,Error ellipse: s-maj=17.2km s-min=10.3km az=50.0*

IDC ***28*** *09:26:29.8±1.1,5.45N×94.56E,h49^{km}±7^{km},mb4.0/12, mb1 4.2/13,mb1mx4.1/20,mbtmp4.3/13,Error ellipse: s-maj=37.2km s-min=15.9km az=48.0*

ISC 28 09:26:26.6±0.6**,5.15N**±0.07×**94.25E**±0.08**,h48^{km}, h48^{km}**±1.8^{km}**:pP-P,n45,**σ**1^{s}23**/43**,mb4.5**/30**,MS4.0**/3**, 2C-2D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.37	88	ePn	P	09 27 57.8	-2.4
KULM				eSn	S	09 29 04.9	-7.6
CM31	Chiang Mai Arr	14.00	19	P	P	09 29 44.2	+0.1
CMAR	Chiang Mai Arr	14.00	19	P	P	09 29 45.4	+1.2
	1.1nm,0.3s,baz=214,slow=12,SNR=17						
CHG	Chiang Mai	14.33	18	⇓P	P	09 29 53.3	+4.8
	10nm,0.8s						
NANT	Nan	14.96	24	P	P	09 29 59.0	+2.4
KMI	Kunming	21.47	21	P	P	09 31 14.8	+1.8
KMI				AP		09 31 23.5	
KMI				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.3						
KMI	Kunming	21.47	21	P	P	09 31 14.7	+1.7
	comp=Z,11nm,0.7s,mb4.3						
KMI				pP		09 31 23.6	
JIRN	Jiri	23.67	342	eP	P	09 31 33.8	-0.9
	comp=Z,37nm,0.6s,mb5.0						
PKI	Pulchoki	23.84	340	eP	P	09 31 34.1	-2.2
	comp=Z,8.1nm,0.5s,mb4.4						
DMN	Daman	23.98	340	eP	P	09 31 36.0	-1.7
	comp=Z,15nm,0.6s,mb4.6						
KKN	Kakani	24.08	340	eP	P	09 31 37.1	-1.6
	comp=Z,11nm,0.4s,mb4.7						
GYA	Guiyang	24.29	28	⇑iP	P	09 31 39.5	-1.2
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
GKN	Gorkha	24.50	339	eP	P	09 31 42.8	0.0
	comp=Z,14nm,0.3s,mb5.0						
LSA	Lhasa	24.60	354	eP	P	09 31 44.3	+0.6
LSA	Lhasa	24.60	354	eP	P	09 31 45.0	+1.2
	comp=Z,9.2nm,0.4s,mb4.7						
KOLN	Koldanda	24.68	337	eP	P	09 31 45.1	+0.6
	comp=Z,26nm,0.6s,mb5.0						
GTA	Gaotai	34.48	8	P	P	09 33 10.5	-1.5
GTA				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
NJ2	Nanjing	35.30	38	eP	P	09 33 20.0	+0.8
NJ2				S	S	09 38 52.0	+3.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,1μm,4.5s						
NJ2				LR	LR		
	comp=N,350nm,12.1s						
NJ2				LR	LR		
	comp=E,330nm,17.2s						
NJ2				LR	LR		
	comp=Z,570nm,14.6s,MS4.5						
HHC	Hu-ho-hao-te	38.79	21	eP	P	09 33 47.5	-0.8
HHC				PP	PP	09 35 20.3	-1.2
HHC				XS		09 40 04.3	
HHC				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.4						
HHC				LR	LR		
	comp=N,164nm,21.6s,MS4.0						
HHC				LR	LR		
	comp=E,189nm,24.0s,MS4.0						
HHC				LR	LR		
	comp=Z,222nm,20.4s,MS4.0						
WMQ	Urumqi	38.95	352	eP	P	09 33 50.0	+0.4
WMQ				PP	PP	09 35 24.0	+0.7
WMQ				S	S	09 39 47.0	+2.5
WMQ				SS	SS	09 42 32.0	+2.2
WMQ				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.6						
WMQ				LR	LR		
	comp=N,113nm,22.0s,MS3.8						
WMQ				LR	LR		
	comp=E,84nm,22.0s,MS3.8						
WMQ				LR	LR		
	comp=Z,65nm,20.0s,MS3.5						
SONM	Songino Array	43.79	12	P	P	09 34 27.9	-1.5
	comp=Z,4.1nm,0.8s,mb4.2,baz=190,slow=8.0,SNR=35						
SONM				pP	pP	09 34 39.5	-2.9
	comp=Z,1.0nm,0.7s,baz=199,slow=5.6,SNR=4.2						
SONM				PcP	PcP	09 36 15.8	-0.1
	comp=Z,0.8nm,0.4s,baz=197,slow=4.1,SNR=11						
ULN	Ulaanbaatar	43.95	12	eP	P	09 34 28.5	-2.2
	comp=Z,2.9nm,0.6s,mb4.2						
WRA	Warramunga Arr	46.63	124	P	P	09 34 52.7	+0.3
	comp=Z,5.5nm,0.7s,mb4.6,baz=304,slow=9.3,SNR=60						
WRAB	Tennant Creek	46.63	124	eP	P	09 34 52.4	0.0
	comp=Z,9.3nm,0.6s,mb4.9						
WB2	Warramunga Arr	46.64	124	⇑iP	P	09 34 52.7	+0.3
KURK	Kurchatov	47.27	347	eP	P	09 34 56.6	-0.4
	comp=Z,4.5nm,0.4s,mb4.8						
CN2	Changchun	47.28	31	eP	P	09 34 58.5	+1.3
ASAR	Alice Springs	48.12	128	P	P	09 35 04.5	+0.5
	comp=Z,1.4nm,0.5s,mb4.2,baz=299,slow=7.8,SNR=22						
ZAL	Zalesovo	49.25	353	P	P	09 35 11.6	-0.7
	comp=Z,5.2nm,0.7s,mb4.7,baz=305,slow=5.7,SNR=27						
ZAL				pP	pP	09 35 25.0	-0.4
	comp=Z,2.4nm,0.6s,baz=301,slow=4.8,SNR=4.5						
MDJ	Mudanjiang	50.01	33	P	P	09 35 17.8	-0.5
MDJ				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,42nm,4.2s						
BVAR	Borovoye Array	51.59	342	P	P	09 35 29.5	-0.7
	comp=Z,2.2nm,0.5s,mb4.4,baz=135,slow=8.4,SNR=18						
BVAR				pP	pP	09 35 43.1	-0.2
	comp=Z,0.8nm,0.4s,baz=143,slow=7.4,SNR=7.1						
CHKZ	Chkalovo	52.09	342	eP	P	09 35 33.4	-0.4
	comp=Z,35nm,0.6s,mb5.5						
CHKZ				epP	pP	09 35 46.0	-1.1
BRTR	Keskin Array B	64.30	312	P	P	09 36 59.6	+0.1
	comp=Z,1.3nm,0.6s,mb4.1,baz=112,slow=6.9,SNR=5.6						
AKASG	Malin Array Be	70.36	322	P	P	09 37 36.8	-0.5
	comp=Z,1.2nm,0.5s,mb4.1,baz=92,slow=5.1,SNR=6.2						
MLR	Muntele Rosu	71.20	316	P	P	09 37 44.1	+1.6
	comp=Z,4.5nm,0.8s,mb4.4,baz=110,slow=2.3,SNR=6.3						
FINES	FINESS Array B	75.16	333	P	P	09 38 07.5	+2.0
	comp=Z,1.0nm,0.4s,mb4.1,baz=124,slow=6.9,SNR=6.6						
ARCES	ARCESS Array B	77.86	340	P	P	09 38 21.1	+0.6
	comp=Z,2.3nm,0.7s,mb4.2,baz=99,slow=6.5,SNR=17						
GERES	GERESS Array B	79.93	319	P	P	09 38 34.0	+1.9
	comp=Z,2.7nm,0.6s,mb4.3,baz=104,slow=5.5,SNR=20						
GERES				pP	pP	09 38 49.0	+2.9
	comp=Z,1.0nm,0.7s,baz=117,slow=6.0,SNR=3.6						
HFS	Hagfors	80.86	330	P	P	09 38 37.3	+0.4
	comp=Z,1.4nm,0.8s,mb3.9,baz=124,slow=5.3,SNR=4.3						
SYO	Syowa Base	82.85	197	⇓X	P	09 38 42.6	-4.4
YKA	Yellowknife Ar	109.03	14	PP	PP	09 45 17.3	-6.6
	comp=Z,0.1nm,0.7s,baz=333,slow=7.2,SNR=4.2						
NVAR	Mina Array Bea	127.17	32	PKP	PKPdf	09 45 29.8	+3.5
	comp=Z,0.5nm,0.4s,baz=352,slow=2.1,SNR=5.6						
PDAR	Pinedale Array	127.64	22	PKP	PKPdf	09 45 29.4	+2.3
	comp=Z,0.6nm,0.5s,baz=77,slow=1.9,SNR=8.2						
TXAR	Lajitas Array	141.64	26	PKhKP		09 45 51.0	
	comp=Z,0.4nm,0.8s,baz=306,slow=1.1,SNR=4.6						
TXAR				PKP	PKPdf	09 45 56.3	+2.9
	comp=Z,0.7nm,0.5s,baz=354,slow=0.5,SNR=17						
TXAR				PKiKP		09 45 58.5	
	comp=Z,0.6nm,0.4s,baz=352,slow=0.5,SNR=17						
TXAR	Lajitas Array	141.64	26	PKP		09 45 51.0	
TXAR				PKP	PKPdf	09 45 56.3	+2.9
TXAR				PKPdf	PKPdf	09 45 58.5	+5.1

IDC 28 09:27:50.2±4.5**,29.91S**×**177.45W,mb3.8**/2**,mb1 4.0**/2**, mb1mx3.7**/13**,mbtmp3.8**/2**,Error ellipse: s-maj=217.3km s-min=69.4km az=159.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	9.47	207	Sn	Sn	09 31 44.3	-15
	0.3nm,0.3s,baz=67,slow=18,SNR=2.8						
STKA	Stephens Creek	35.06	256	P	P	09 34 44.9	-2.0
	0.5nm,0.4s,baz=87,slow=12,SNR=4.4						
WRA	Warramunga Arr	44.56	271	P	P	09 36 04.0	-1.9
	0.5nm,0.3s,baz=110,slow=8.1,SNR=5.4						
FINES	FINESS Array B	144.84	341	PKP	PKPdf	09 47 27.9	-2.4
	0.4nm,0.4s,baz=45,slow=2.7,SNR=4.3						

IDC ***28*** *09:39:21.7±0.7,35.01S×107.99W,mb4.7/9,mb1 4.9/9, mb1mx4.6/16,mbtmp4.7/9,MS4.6/15,Ms1 4.5/15, ms1mx4.3/20,Error ellipse: s-maj=27.0km s-min=18.9km az=10.0*

GUC ***28*** *09:39:23.6±0.0,34.94S×107.77W,h10^{km},mb5.1(NEIC), MS4.7(NEIC)*

BJI ***28*** *09:39:23.3,35.00S×107.80W,h10^{km},mB5.3,Ms5.1, Msz4.7*

HRVD ***28*** *09:39:23.4±0.2,35.11S×107.73W,h12^{km},MW5.2/71, Centroid moment Tensor Solution. LP body waves: s55,c89;Mantle waves: s71,c132; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.16±.14; $M_{\theta\theta}$-2.25±.14; $M_{\phi\phi}$2.41±.14; $M_{r\theta}$0.11±.35; $M_{\theta\phi}$-7.07±.11; $M_{\phi r}$-0.48±.37; Best double couple: $M_0$7.46×10^{16} NP1: ϕ_s99°,δ87°,λ179°. NP2:ϕ_s189°,δ89°,λ3°. Principal axes: T 7.551, Plg3°, Azm54°; N -.181, Plg86°, Azm210°; P -7.369, Plg2°, Azm324°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *09:39:23.4±0.3,34.99S×107.85W,h10^{km},mb5.1/28, MS4.7/5 Error ellipse: s-maj=10.5km s-min=7.0km az=48.0*

MOS ***28*** *09:39:23.8±1.2,34.62S×107.59W,h10^{km},mb5.2/14, Error ellipse: s-maj=18.7km s-min=11.3km az=83.8*

ISC 28 09:39:23.2±0.5**,34.74S**±0.09×**107.6W**±0.1**,h10^{km},n138,** σ**0^{s}90**/93**,mb5.0**/35**,MS4.7**/25**,3C-2D,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	7.72	349	LR	LR	09 43 38.3	
	comp=Z,5μm,18.6s,baz=164,slow=32						
RKT	Rikitea	26.49	289	eLQ		09 50 30.7	
RKT				eLR	LR	09 51 37.6	
	473nm,30.3s						
PLCA	Paso Flores	29.78	113	P	P	09 45 31.9	-0.3
	13nm,0.9s,mb4.7,baz=269,slow=9.3,SNR=18						
PLCA				LR	LR	09 53 35.1	
	comp=Z,222nm,19.5s,MS3.8,baz=276,slow=28						
FCH	Farellones	30.87	98	eP	P	09 45 40.8	-1.1
TLL	Tololo Astrono	31.30	92	eP	P	09 45 45.7	0.0
USHA	Ushuaia	33.71	139	LR	LR	09 56 29.3	
	comp=Z,3μm,19.6s,MS5.0,baz=250,slow=30						
LVC	Limon Verde	35.85	81	P	P	09 46 26.8	+1.7
	12nm,0.9s,mb4.8,baz=249,slow=9.1,SNR=18						
LVC	Limon Verde	35.85	81	eP	P	09 46 26.3	+1.2
	54nm,1.3s,mb5.3						
LVC				LR	LR		
	comp=Z,2μm,21.0s,MS4.8						
NNA	Nana	35.98	59	eP	P	09 46 26.0	-0.2
	comp=Z,93nm,1.6s,mb5.5						
NNA				LR	LR		
	comp=Z,381nm,19.0s,MS4.2						
ARE	Arequipa	37.08	70	eP	P	09 46 37.0	+1.6
TBI	Tubuai	38.03	276	eLQ		09 55 30.3	
TBI				eLR	LR	09 56 44.0	
	comp=Z,1μm,24.2s,baz=118						
TAOE	Nuku Hiva Isla	39.37	303	eLQ		09 56 03.5	
TAOE				eLR	LR	09 57 37.4	
LPAZ	La Paz	39.80	73	eP	P	09 46 59.9	+1.7
LPAZ				pmax	pmax		
	comp=Z,53nm,1.3s						
LPAZ				MLR	MLR		
	comp=Z,585nm,19.0s						
LPAZ	La Paz	39.80	73	P	P	09 47 00.2	+2.0
	comp=Z,14nm,0.8s,mb4.7,baz=247,slow=4.9,SNR=63						
LPAZ				LR	LR	09 59 48.1	
	comp=Z,450nm,18.2s,MS4.3,baz=267,slow=30						
LPAZ	La Paz	39.80	73	eP	P	09 46 59.9	+1.6
	comp=Z,53nm,1.3s,mb5.1						
LPAZ				LR	LR		
	comp=Z,585nm,19.0s,MS4.4						
PPT	Papeete	41.01	284	eS	S	09 53 07.2	-13
PPT				eLQ		09 56 33.3	
JTS	JuntasAbangare	49.68	30	eP	P	09 48 18.0	+0.6
JTS				pmax	pmax		
	comp=Z,38nm,1.3s						
JTS	JuntasAbangare	49.68	30	eP	P	09 48 18.0	+0.6
	comp=Z,38nm,1.3s,mb5.3						
ROSC	El Rosal	50.35	45	P	P	09 48 24.1	+1.5
	comp=Z,30nm,1.0s,mb5.3,baz=93,slow=20,SNR=21						
ROSC				LR	LR	10 05 45.1	
	comp=Z,756nm,20.7s,MS4.7,baz=197,slow=31						
QSPA	South Pole Qui	55.47	180	eP	P	09 49 00.9	+1.1
	comp=Z,20nm,1.0s,mb5.1						
SDV	Santo Domingo	55.75	46	eP	P	09 49 00.6	-2.0
	comp=Z,19nm,1.1s,mb5.0						
BDFB	Brasilia	56.42	86	P	P	09 49 06.8	-0.6
	comp=Z,8.3nm,0.9s,mb4.8,baz=259,slow=7.9,SNR=8.2						
BDFB				LR	LR	10 11 09.4	
	comp=Z,571nm,18.5s,MS4.7,baz=116,slow=34						
BAO	Brasilia Array	56.44	86	P	P	09 49 06.5	-1.1
CAM4	Nova Friburgo	57.60	96	(P)	P	09 49 15.2	-0.6
VNA3	Neumayer Olymp	60.02	158	e	P	09 49 37.5	+5.6
VNA3	Neumayer Olymp	60.02	158	e	P	09 49 38.9	+7.0
VNA3	Neumayer Olymp	60.02	158	⇑iP	P	09 49 33.3	+1.4
VNA3				e	pP	09 49 37.5	+2.5
VNA3				e		09 49 38.9	
VNA2	Neumayer--Watz	60.82	158	e	P	09 49 39.2	+1.8
VNA2	Neumayer--Watz	60.82	158	e	P	09 49 40.1	+2.7
VNA2	Neumayer--Watz	60.82	158	⇑iP	P	09 49 35.5	-1.9
VNA2				e	pP	09 49 39.2	-1.3
VNA2				e	pP	09 49 40.1	-0.4
RPZ	Rata Peaks	61.26	235	LR	LR	10 10 38.6	
	comp=Z,705nm,18.3s,MS4.8,baz=26,slow=31						
SNAA	Sanae	61.87	160	e	P	09 49 44.9	+0.4
SNAA	Sanae	61.87	160	e	P	09 49 46.8	+2.3
SNAA	Sanae	61.87	160	⇑iP	P	09 49 39.6	-4.9
SNAA				e		09 49 44.9	
SNAA				e		09 49 46.8	
LTX	Lajitas	63.84	4	eP	P	09 49 57.6	-0.5
LTX				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
LTX	Lajitas	63.84	4	eP	P	09 49 57.5	-0.5
	comp=Z,13nm,1.2s,mb4.8						
TXAR	Lajitas Array	63.84	4	P	P	09 49 58.4	+0.3
	comp=Z,2.6nm,0.9s,mb4.3,baz=189,slow=8.3,SNR=22						
TXAR				LR	LR	10 12 49.3	
	comp=Z,171nm,18.4s,MS4.3,baz=160,slow=31						
JCT	Junction City	65.29	7	eP	P	09 50 08.1	+0.6
JCT				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
JCT	Junction City	65.29	7	eP	P	09 50 08.1	+0.6
	comp=Z,26nm,0.9s,mb5.2						
SJG	San Juan	65.70	44	eP	P	09 50 08.4	-1.9
SJG				pmax	pmax		
	comp=Z,36nm,1.0s						
SJG	San Juan	65.70	44	eP	P	09 50 08.4	-2.0
	comp=Z,36nm,1.0s,mb5.4						
MNTX	Cornudas Mount	66.12	2	eP	P	09 50 11.3	-1.5
	comp=Z,16nm,1.3s,mb4.9						
NATX	Nacogdoches	67.26	12	eP	P	09 50 19.6	-0.5
	comp=Z,40nm,0.8s,mb5.5						
ANMO	Albuquerque	69.33	1	eP	P	09 50 32.4	-0.5
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ANMO	Albuquerque	69.33	1	eP	P	09 50 32.4	-0.6
	comp=Z,6.1nm,1.2s,mb4.4						
AMTX	Amarillo	69.48	5	eP	P	09 50 33.9	+0.1
	comp=Z,22nm,1.3s,mb4.9						
LDFC	Landfair	69.80	353	eP	P	09 50 36.2	+0.5
WUAZ	Wupatki	69.98	357	eP	P	09 50 37.5	+0.7
	comp=Z,212nm,1.3s,mb5.9						
ARUT	Antelope Range	72.36	355	P	P	09 50 52.2	+1.1
PV01	Paradox Valley	72.51	359	eP	P	09 50 52.5	+0.5
PV10	Paradox Valley	72.76	359	P	P	09 50 52.4	-1.0
TPH	Tonopah	72.99	352	eP	P	09 50 55.1	+0.3
TPH				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
TPH	Tonopah	72.99	352	eP	P	09 50 55.0	+0.2
	comp=Z,14nm,1.1s,mb4.8						
MSU	Marysvale	73.00	356	eP	P	09 50 55.1	+0.2
TRCR	Troy Canyon	73.09	353	eP	P	09 50 55.1	-0.3
MNV	Mina	73.45	351	eP	P	09 50 57.7	+0.2
MNV				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
MNV	Mina	73.45	351	eP	P	09 50 57.7	+0.2
	comp=Z,18nm,1.2s,mb4.9						
NVAR	Mina Array Bea	73.47	351	P	P	09 50 58.2	+0.6
	comp=Z,5.7nm,1.0s,mb4.5,baz=164,slow=6.2,SNR=26						
NVAR				LR	LR	10 16 57.6	
	comp=Z,230nm,18.4s,MS4.5,baz=250,slow=31						
NVAR	Mina Array Bea	73.47	351	P	P	09 50 58.2	+0.6
NVAR				LR	LR	10 16 57.6	
SRU	San Rafael	73.53	358	eP	P	09 50 56.8	-1.1
TMUT	Trail Mountain	73.74	357	eP	P	09 50 59.5	+0.3
SYO	Syowa Base	73.77	168	⇓P	P	09 50 55.3	-3.4
CCM	Cathedral Cave	74.01	13	eP	P	09 50 59.9	-0.8
CCM				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.1						
CCM	Cathedral Cave	74.01	13	eP	P	09 50 59.9	-0.8
	comp=Z,36nm,1.4s,mb5.1						
FVM	French Village	74.10	14	eP	P	09 51 01.7	+0.4
FVM				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
FVM	French Village	74.10	14	eP	P	09 51 01.7	+0.4
	comp=Z,12nm,0.9s,mb4.8						
NLU	North Lily Min	74.43	356	eP	P	09 51 03.1	-0.1
DUG	Dugway	74.71	356	eP	P	09 51 04.5	-0.3
DUG				pmax	pmax		
	comp=Z,144nm,1.2s,mb5.8						
DUG	Dugway	74.71	356	eP	P	09 51 04.5	-0.3
	comp=Z,144nm,1.2s,mb5.8						
DAU	Daniels Canyon	74.85	357	eP	P	09 51 06.1	+0.5
JLU	Jordanelle	75.05	357	eP	P	09 51 06.7	0.0
NOQ	North Oquirrh	75.13	356	P	P	09 51 07.1	-0.1
BMN	Battle Mountai	75.32	352	eP	P	09 51 09.1	+0.8
BMN				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
BMN	Battle Mountai	75.32	352	eP	P	09 51 09.1	+0.9
	comp=Z,22nm,1.3s,mb4.9						
SPUT	South Promonto	75.80	356	eP	P	09 51 10.6	-0.4
PDAR	Pinedale Array	77.15	359	P	P	09 51 18.1	-0.4
	comp=Z,8.7nm,0.9s,mb4.7,baz=159,slow=5.9,SNR=45						
PDAR				LR	LR	10 20 31.4	
	comp=Z,201nm,18.2s,MS4.5,baz=189,slow=32						
AHID	Auburn Hatcher	77.19	357	eP	P	09 51 19.5	+0.8
	comp=Z,26nm,1.5s,mb4.9						
WVOR	Wild Horse Val	77.46	352	eP	P	09 51 19.0	-1.2
WVOR				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
WVOR	Wild Horse Val	77.46	352	eP	P	09 51 19.0	-1.2
	comp=Z,20nm,1.3s,mb4.9						
MAW	Mawson	77.72	176	LR	LR	10 24 39.5	
	comp=Z,396nm,18.0s,MS4.8,baz=36,slow=35						
RRI2	Red Ridge	77.78	357	eP	P	09 51 22.4	+0.4
TPAW	Teton Pass	77.91	358	eP	P	09 51 22.4	-0.2
WUWY	Wally Ulrich	77.95	358	eP	P	09 51 22.1	-0.8
LOHW	Long Hollow	78.02	358	eP	P	09 51 22.3	-1.0
HLID	Hailey	78.17	355	eP	P	09 51 24.3	+0.2
	comp=Z,18nm,1.0s,mb5.0						
IMW	Indian Meadow	78.32	358	eP	P	09 51 24.8	-0.1
LKWY	Lake	78.97	358	eP	P	09 51 29.8	+1.3
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LKWY	Lake	78.97	358	eP	P	09 51 29.8	+1.4
	comp=Z,5.1nm,0.6s,mb4.6						
YMR	Madison River	79.09	358	P	P	09 51 30.0	+0.9
QLMT	Earthquake Lak	79.27	357	eP	P	09 51 31.5	+1.4
MCMT	McKenzie Canyo	79.33	356	eP	P	09 51 30.6	+0.2
BMO	Blue Mountains	79.70	353	eP	P	09 51 31.5	-0.9
	comp=Z,17nm,1.5s,mb4.8						
LAO	LASA Array	81.06	1	eP	P	09 51 39.8	+0.2
	comp=Z,44nm,1.4s,mb5.2						
CHMT	Chamberlain Mo	81.44	356	eP	P	09 51 41.8	+0.2
DGMT	Dagmar	82.89	2	P	P	09 51 49.2	+0.1
	comp=Z,82nm,1.8s,mb5.5						
NEW	Newport	83.06	354	eP	P	09 51 49.9	-0.1
NEW				pmax	pmax		
	comp=Z,30nm,1.5s						
NEW	Newport	83.06	354	eP	P	09 51 49.9	0.0
	comp=Z,30nm,1.5s,mb5.1						
STKA	Stephens Creek	87.15	233	LR	LR	10 23 33.2	
	comp=Z,405nm,19.5s,MS4.8,baz=301,slow=31						
EDM	Edmonton	87.73	357	eP	P	09 52 12.6	-0.4
SCHQ	Schefferville	95.85	22	LR	LR	10 30 17.1	
	comp=Z,250nm,20.6s,MS4.7,baz=187,slow=32						
YKA	Yellowknife Ar	97.05	357	P	P	09 52 55.0	-0.8
	comp=Z,0.6nm,0.9s,mb4.0,baz=168,slow=4.9,SNR=10						
YKA				PP	PP	09 56 50.0	-4.4
	comp=Z,0.2nm,1.0s,baz=222,slow=8.5,SNR=4.0						
YKA				LR	LR	10 31 59.1	

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              comp=Z,226nm,19.1s,MS4.7,baz=150,slow=32
YKA    Yellowknife Ar     97.05 357   P        P         09 52 55.0  -0.8
YKA                                   PP       PP        09 56 50.0  -4.4
YKA                                   LR       LR        10 31 59.1
ASAR   Alice Springs      97.66 234   LR       LR        10 35 25.6
              comp=Z,412nm,18.4s,MS5.0,baz=144,slow=35
TIXI   Tiksi             133.00 339⇓iPKIKP     PKPdf     09 58 41.1  -0.1
TIXI                                  MLR      MLR
              comp=Z,100nm,22.0s,MS4.5
CLL    Collm             134.83  50  ePKIKP    PKPdf     09 58 43.0  -2.1
CLL                                  e*PPKP              09 58 49.0
KHC    Kasperske Hory    135.08  53  eP        PKPdf     09 58 42.5  -3.1
GERES  GERESS Array B    135.14  53   PKP      PKPdf     09 58 43.3  -2.4
              comp=Z,2.2nm,1.1s,slow=4.0,SNR=4.8
BRG    Berggiesshubel    135.41  50  ePKIKP    PKPdf     09 58 44.6  -1.6
MDJ    Mudanjiang        135.67 301   PKP      PKPdf     09 58 44.5  -2.3
MDJ                                   PP       PP        10 01 25.3  -0.1
MDJ                                   PP       PP
              comp=Z,46nm,3.6s
MDJ                                   LR       LR
              comp=N,18nm,21.8s,MS4.2
MDJ                                   LR       LR
              comp=E,51nm,23.0s,MS4.2
MDJ                                   LR       LR
              comp=Z,62nm,20.5s,MS4.3
CN2    Changchun         138.53 299  ePKP      PKPdf     09 58 52.3  +0.2
CN2                                   LR       LR
              comp=N,300nm,19.0s,MS5.3
CN2                                   LR       LR
              comp=E,400nm,19.0s,MS5.3
CN2                                   LR       LR
              comp=Z,500nm,21.0s,MS5.2
FINES  FINESS Array B    140.44  33   PKP      PKPdf     09 58 52.4  -2.7
              comp=Z,0.6nm,0.7s,baz=270,slow=1.9,SNR=3.9
NJ2    Nanjing           141.35 280  ePKP      PKPdf     09 58 51.5  -6.0
NJ2                                   PP       PP        10 01 58.3  -2.6
NJ2                                   PKS      PKS       10 02 26.0  -3.0
NJ2                                   PPP      PPP       10 05 06.0  -2.6
NJ2                                   SKS      SKS       10 05 56.3   -10
NJ2                                   PP       PP
              comp=Z,1µm,8.3s
NJ2                                   LR       LR
              comp=N,1µm,20.5s,MS5.7
NJ2                                   LR       LR
              comp=E,1µm,21.4s,MS5.7
NJ2                                   LR       LR
              comp=Z,1µm,20.1s,MS5.6
BOD    Bodaibo           143.95 323  ePKHKP              09 58 53.9
BOD                                   pmax     pmax
              comp=Z,15nm,1.6s
BJI    Beijing           145.05 292   PKP      PKPdf     09 58 59.0  -4.6
BJI                                   LR       LR
              comp=N,129nm,18.3s,MS5.1
BJI                                   LR       LR
              comp=E,227nm,13.9s,MS5.1
BJI                                   LR       LR
              comp=Z,87nm,39.2s
BJI    Beijing           145.05 292   PKP      PKPdf     09 58 59.8  -3.8
BJI                                   SKS      SKS       10 05 57.0   -15
BJI                                   SS       SS        10 21 12.7  +2.8
BJI                                   LR       LR
              comp=Z,90nm,39.2s,MS4.2
BJT    Baijiatuau        145.06 292  ePKP2     PKPab     09 58 59.2  -2.8
BJT                                   MLR      MLR
              comp=Z,206nm,22.0s
AKASG  Malin Array Be    145.08  49   PKPbc    PKPbc     09 58 59.6  -0.9
              comp=Z,5.1nm,0.8s,baz=270,slow=4.0,SNR=14
KIS    Kishinev          145.30  56  ePKIKP    PKPdf     09 59 02.0  -1.8
KIS                                  e                   09 59 07.0
KIS                                   pmax     pmax
              comp=Z,110nm,1.0s
OBN    Obninsk           148.00  39  ePKIKP    PKPdf     09 59 07.9  -0.2
OBN                                   pmax     pmax
              comp=Z,35nm,1.0s
EIL    Elat              148.07  89  ePKPbc    PKPdf     09 59 11.6  +2.7
ENH    Enshi             148.49 272   PKPdf    PKPdf     09 59 09.5  -0.1
HHC    Hu-ho-hao-te      148.62 293  ePKP      PKPdf     09 59 10.8  +1.3
HHC                                   PKS      PKS       10 02 45.3  +5.1
HHC                                   LR       LR
              comp=N,147nm,27.6s
HHC                                   LR       LR
              comp=E,165nm,20.4s
HHC                                   LR       LR
              comp=Z,159nm,36.0s
BTO    Baotou            149.78 292  ePKP      PKPdf     09 59 14.3  +2.9
XAN    Xi'an             149.92 279   PKP      PKPdf     09 59 14.3  +2.5
ULN    Ulaanbaatar       151.08 308  ePKIKP    PKPdf     09 59 16.3  +3.2
ULN                                   MLR      MLR
              comp=Z,129nm,20.0s,MS4.7
CMAR   Chiang Mai Arr    151.35 242  i PKIKP   PKPdf     09 59 17.5  +3.1
CMAR                                  pmax     pmax
              comp=Z,4.0nm,0.8s
CMAR   Chiang Mai Arr    151.35 242   PKP      PKPdf     09 59 11.4  -2.9
              comp=Z,0.5nm,0.3s,baz=74,slow=31,SNR=2.6
CMAR                                  PKPbc    PKPdf     09 59 16.8  +2.4
              comp=Z,4.0nm,0.8s,baz=181,slow=1.7,SNR=16
CMAR                                  PKPab    PKPab     09 59 24.0  -3.9
              comp=Z,10nm,0.9s,baz=192,slow=1.6,SNR=20
SONM   Songino Array     151.52 308   PKP      PKPdf     09 59 11.4  -2.3
              comp=Z,0.9nm,1.0s,baz=63,slow=2.8,SNR=3.6
SONM                                  PKPbc    PKPdf     09 59 17.4  +3.7
              comp=Z,5.1nm,1.2s,baz=134,slow=1.3,SNR=15
SONM                                  PKPab    PKPab     09 59 23.8  -3.9
              comp=Z,5.2nm,1.1s,baz=143,slow=1.8,SNR=11
TLY    Talaya            151.89 317  ePKIKP    PKPdf     09 59 18.7  +4.5
TLY                                   pmax     pmax
              comp=Z,8.0nm,1.1s
KMI    Kunming           152.07 258   PKIKP    PKPdf     09 59 15.9  +0.6
KMI                                                      09 59 20.5
KMI                                                      09 59 30.8
KMI                                                      10 03 08.5
KMI                                   SS       SS        10 22 28.7  +0.2
KMI                                   MLR      MLR
              comp=Z,140nm,34.0s,MS4.5
ZAK    Zakamensk         152.63 314  ePKIKP    PKPdf     09 59 20.1  +4.8
ZAK                                   pmax     pmax
              comp=Z,4.0nm,1.3s
SOKR   Solikamsk         153.14  18  ePKIKP    PKPdf     09 59 14.6  -1.1
SOKR                                  pmax     pmax
              comp=Z,10.0nm,0.8s
LZH    Lanzhou           154.36 282  ePKP      PKPdf     09 59 12.5  -5.6
LZH                                   XPKP               09 59 17.5
LZH                                   PP       PP        10 03 14.0  -2.4
LZH                                  eSKS      SKS       10 06 15.0  -9.2
LZH                                   SKKS               10 09 58.0
LZH                                   PP       PP
              comp=Z,100nm,8.0s
LZH                                   LR       LR
              comp=E,142nm,18.3s
LZH                                   LR       LR
              comp=Z,196nm,20.0s,MS4.9
LZH    Lanzhou           154.36 282  ePKIKP    PKPdf     09 59 12.6  -5.5
LZH                                                      09 59 17.5
GTA    Gaotai            157.64 290   PKP      PKPdf     09 59 20.5  -1.9
GTA                                   PP       PP        10 03 32.5  -1.9
GTA                                   SS       SS        10 23 23.5  -4.9
GTA                                   PP       PP
              comp=Z,59nm,11.0s
GTA                                   LR       LR
              comp=N,81nm,18.6s,MS4.8
GTA                                   LR       LR
              comp=E,108nm,19.0s,MS4.8
GTA                                   LR       LR
              comp=Z,103nm,22.4s,MS4.6
ZAL    Zalesovo          158.90 339   PKP      PKPdf     09 59 21.1  -2.4
              comp=Z,0.6nm,0.5s,baz=194,slow=1.6,SNR=4.6
KURK   Kurchatov         163.39 346   PKIKP    PKPdf     09 59 25.6  -2.6
WMQ    Urumqi            165.07 312  ePKP      PKPdf     09 59 30.0  -0.1
WMQ                                   SKS      SKS       10 06 33.0  -0.5
WMQ                                   PP       PP
              comp=Z,35nm,10.0s
WMQ                                   LR       LR
              comp=N,128nm,26.0s
WMQ                                   LR       LR
              comp=E,125nm,26.0s
WMQ                                   LR       LR
              comp=Z,136nm,26.0s
```

IDC ***28*** *09:59:00.6±3.2, 64.68N×31.37E, mb1 2.8/3, mb1mx2.8/18, mbtmp2.7/3, ML2.4/3, Error ellipse: s-maj=47.6km s-min=11.4km az=101.0*
HEL ***28*** *09:59:01.6±0.2, 64.74N×30.71E, ML1.6, ML1.6(UPP), Explosion*
ISC 28 09:59:00.1±0.8**, 64.75N**±0.03×**30.7E**±0.1**, n16,** σ**0**^{s}**78**/25**, Finland-Karelia border region**

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Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
MSF    Maaselka           1.35 330   eP        Pb        09 59 25.9  -0.1
MSF                                  eS        Sb        09 59 42.9  -0.8
KJN    Kajaani            1.45 244   eP        Pn        09 59 27.5  -0.1
KJN                                  eS        Sb        09 59 46.0  -0.5
KU4    Oulanka            1.68 345   eP        Pn        09 59 31.8  +0.8
KU4                                  eS        Sb        09 59 53.3   0.0
JOF    Joensuu            1.86 171   eP        Pn        09 59 33.5  +0.1
JOF                                  eS        Sn        09 59 58.2  +0.2
JOF                                   MSG                10 00 02.6
              comp=Z,3.6nm,0.1s
OUL    Oulu               2.06 282   eP        Pn        09 59 37.8  +1.4
OUL                                  eS        Sn        10 00 04.0  +0.8
SUF    Sumiainen          2.87 227   eP        Pn        09 59 49.2  +1.4
SUF                                  eSB       Sb        10 00 27.8  +0.1
SUF                                   MSG                10 00 28.9
              comp=Z,1.6nm,0.2s
PAJU   Pajala             3.85 310   eP        Pn        10 00 01.9  +0.1
PAJU                                 eS        Sn        10 00 48.6  +0.1
FIA0   FINESS Array S     3.92 214   eSG       Sg        10 01 01.5  -9.1
FINES  FINESS Array B     3.92 214    Pn       Pn        10 00 02.6  -0.3
              comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=4.0
FINES                                 Sn       Sn        10 00 49.4  -0.9
              comp=Z,0.2nm,0.3s,baz=33,slow=20,SNR=2.7
FINES                                 Lg                 10 01 02.3
              comp=Z,0.5nm,0.3s,baz=28,slow=29,SNR=9.6
ERTU   Ertsjaerv          3.95 301   eP        Pn        10 00 04.0  +0.7
MASU   Masugnsbyn         4.45 311   eP        Pn        10 00 11.2  +0.8
DUNU   Dundret            4.77 304   eP        Pn        10 00 15.5  +0.5
LANU   Lannavaara         4.81 317   eP        Pn        10 00 14.3  -1.2
ARCES  ARCESS Array B     5.21 340    Pn       Pn        10 00 19.9  -1.3
              comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=20
ARCES                                 Sn       Sn        10 01 18.4  -4.4
              comp=Z,0.2nm,0.3s,baz=153,slow=24,SNR=5.2
NIKU   Nikkaluokta        5.64 309   eP        Pn        10 00 26.9  -0.2
NOA    NORSAR Array B     9.61 256    Pn       P         10 01 20.9  -1.6
              comp=Z,0.1nm,0.3s,baz=106,slow=13,SNR=2.3
```

IGQ 28 10:03:25.2, 1.54S×81.05W, h12^{km}±19^{km}**, mb4.2, 2C, Error ellipse: s-maj=19.7km s-min=6.5km az=163.1, Off coast of Ecuador**

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Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
IGUA   Igualata           2.41  89  ⇑P         Pn        10 04 06.3  +1.2
CUSU   Cusua              2.57  88   P         Pn        10 04 09.4  +1.9
JUIV   Juive              2.58  87   P         Pn        10 04 09.4  +1.7
ARRY   Arrayan            2.59  89  ⇑P         Pn        10 04 08.8  +1.0
ARRY                                 S         Sn        10 04 40.6  +1.1
RETU   Refugio            2.60  88   P         Pn        10 04 10.4  +2.5
RUN2   Runtun             2.64  87   P         Pn        10 04 10.5  +2.1
PISA   Pisayambo          2.70  80   P         Pn        10 04 11.4  +2.1
NAS1   Nasa               2.72  71   P         Pn        10 04 12.9  +3.3
JUA2   San Juan 2         2.77  62   P         Pn        10 04 12.5  +2.1
VC1    Cotopaxi 1         2.79  71   P         Pn        10 04 13.5  +2.9
TERV   Terraza Guagua     2.79  61   P         Pn        10 04 12.4  +1.8
PINO   Pino               2.80  61   P         Pn        10 04 12.0  +1.3
TAMB   Tambo              2.81  73   P         Pn        10 04 13.0  +2.2
YANA   Yana               2.85  60   P         Pn        10 04 12.5  +1.0
COTA   Cotacachi          3.29  56   P         Pn        10 04 20.2  +2.6
ELAGU  Cayambe Volc       3.41  64   P         Pn        10 04 24.6  +5.3
CAYR   Refugio Cayamb     3.41  63   P         Pn        10 04 24.7  +5.3
CAYA   Cayambe            3.45  62   P         Pn        10 04 24.4  +4.5
ECEN   Cerro Negro        3.87  53   P         Pn        10 04 29.2  +3.3
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GUC ***28*** *10:04:42.7±0.9, 23.46S×68.75W, h90*^{km}*, ML4.4*
NEIC ***28*** *10:04:44.6±0.6, 23.32S×68.65W, h88*^{km}*±7*^{km}*, mb4.5/3, Error ellipse: s-maj=14.3km s-min=6.9km az=105.0*
IDC ***28*** *10:04:45.9±0.8, 23.09S×68.76W, h99*^{km}*±6*^{km}*, mb4.1/3, mb1 3.9/5, mb1mx3.8/11, mbtmp4.2/5, Error ellipse: s-maj=30.1km s-min=20.9km az=94.0*
ISC 28 10:04:43.7±0.6**, 23.36S**±0.06×**68.6W**±0.1**, h91**^{km}±10^{km}**, n29,** σ**1**^{s}**11**/25**, mb4.4**/3**, 6C-1D, Northern Chile**

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Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
LVC    Limon Verde        0.80 339   eP        P         10 05 01.9  +0.4
LVC                                  i S       S         10 05 15.9  +1.2
LVC                                   AMP                10 05 17.8
              comp=E,15µm,0.6s
LVC    Limon Verde        0.80 339    P        P         10 05 02.9  +1.4
              comp=E,2µm,0.3s,baz=168,slow=5.1
LVC                                   S        S         10 05 15.6  +0.9
              comp=E,2µm,0.3s,baz=30,slow=23,SNR=75
ANCH   Antofagasta        1.69 259⇑iP          P         10 05 13.0  +0.5
ANCH                                 i S       S         10 05 33.4  -0.2
ANCH                                  AMP                10 05 37.5
              comp=N,8µm,0.4s
CPCH   Copiapo            4.29 201⇑iP          P         10 05 47.0  -1.0
VACH   Vallenar           5.55 200   eP        P         10 06 03.7  -1.6
VACH                                 i S       S         10 07 04.0  -4.3
LPAZ   La Paz             7.05   4    P        P         10 06 25.0  -1.1
              comp=N,1.1nm,0.3s,baz=178,slow=5.4,SNR=32
TLL    Tololo Astrono     7.06 196⇑iP          P         10 06 24.8  -1.5
SAML   Samuel            15.24  21   ePn       P         10 08 14.9  -0.2
              comp=N,7.7nm,0.6s
TRQA   Tornquist         15.71 160   ePn       P         10 08 21.6  +0.7
              comp=N,28nm,0.9s
PLCA   Paso Flores       17.40 185    P        P         10 08 43.4  +1.3
              comp=N,0.2nm,0.3s,baz=22,slow=11,SNR=5.5
PLCA                                  PcP      PcP       10 13 19.4  -0.2
              comp=N,0.1nm,0.3s,baz=11,slow=3.8,SNR=3.6
BDFB   Brasilia          20.85  72    P        P         10 09 19.5  -0.7
              comp=N,11nm,0.4s,baz=254,slow=11,SNR=29
BAO    Brasilia Array    20.87  72    P        P         10 09 19.1  -1.3
VNA3   Neumayer Olymp    58.23 161   e         P         10 14 32.6  +2.1
VNA3   Neumayer Olymp    58.23 161   e         pP        10 15 00.3  +7.0
VNA3   Neumayer Olymp    58.23 161⇑iP          P         10 14 30.8  +0.3
VNA3                                 e                   10 15 00.3
VNA2   Neumayer--Watz    58.81 160   e         P         10 14 36.3  +1.8
VNA2   Neumayer--Watz    58.81 160   e         pP        10 15 04.9  +7.6
VNA2   Neumayer--Watz    58.81 160⇑iP          P         10 14 35.0  +0.5
VNA2                                 e                   10 15 04.9
SNAA   Sanae             60.44 161⇑i           P         10 14 45.9  +0.2
SNAA   Sanae             60.44 161   e         P         10 14 47.4  +1.7
TXAR   Lajitas Array     62.31 325    pP       pP        10 15 22.1  +0.2
              comp=N,0.7nm,0.8s,baz=142,slow=7.6,SNR=8.0
QSPA   South Pole Qui    66.84 180⇓iP          P         10 15 28.5  +1.1
              comp=N,9.9nm,0.5s,mb4.9
DBIC   Dimbokro          69.00  73    P        P         10 15 42.4  +0.5
              comp=N,4.1nm,1.1s,mb4.2,baz=249,slow=7.8,SNR=3.1
PDAR   Pinedale Array    75.86 330    pP       pP        10 16 47.7  +2.0
              comp=N,0.4nm,0.5s,baz=130,slow=6.9,SNR=3.8
YKA    Yellowknife Ar    93.03 340    P        P         10 17 46.1  -1.7
              comp=N,0.8nm,0.8s,mb4.1,baz=136,slow=4.6,SNR=18
YKA                                   pP       pP        10 18 13.4  +0.9
              comp=N,1.0nm,0.8s,baz=136,slow=4.2,SNR=10
ASAR   Alice Springs    128.40 207    PKP      PKPdf     10 23 41.1  +0.5
              comp=N,1.0nm,0.6s,baz=137,slow=2.0,SNR=16
ASAR                                  pPKP               10 24 09.7
              comp=N,0.5nm,0.8s,baz=137,slow=1.1,SNR=2.7
WRA    Warramunga Arr   131.49 209    PKP      PKPdf     10 23 47.3  +0.8
              comp=N,0.7nm,0.4s,baz=154,slow=1.7,SNR=30
WRA                                   pPKP               10 24 16.3
              comp=N,0.6nm,0.6s,baz=151,slow=1.6,SNR=3.5
ZAL    Zalesovo         143.50  26    PKP      PKPdf     10 24 08.1  +0.8
              comp=N,1.3nm,0.4s,baz=82,slow=3.6,SNR=4.3
SONM   Songino Array    155.25   8    PKPbc    PKPdf     10 24 35.9   +10
              comp=N,0.3nm,0.8s,baz=4.1,slow=1.0,SNR=3.8
SONM                                  PKPab    PKPab     10 24 52.3  -1.4
              comp=N,0.3nm,0.5s,baz=333,slow=5.5,SNR=3.6
SONM                                  pPKPbc             10 25 02.5
              comp=N,0.6nm,0.8s,baz=315,slow=1.7,SNR=2.5
SONM                                  pPKPab             10 25 19.5
              comp=N,0.7nm,1.0s,baz=27,slow=2.8,SNR=3.8
```

JMA 28 10:10:54.1±0.2**, 43.54N×146.82E, h43**^{km}±3^{km}**, M3.8, Kuril Islands**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
NEM2   Nemuro 2           0.80 258    P        P         10 11 09.1   0.0
NEM2                                 eS        S         10 11 20.0  -0.1
JRA    Rausu              1.29 288    P        P         10 11 16.0  -0.1
JRA                                  eS        S         10 11 32.3  -0.2
JNK    Nakash             1.53 272    P        P         10 11 19.1  -0.3
JAK    Akkeshi            1.64 251    P        P         10 11 20.8  -0.3
JAK                                  eS        S         10 11 40.5  -0.6
JTKR   Abashiri--Toko     2.15 283    P        P         10 11 28.7  +0.4
JAR    Ashorobuto         2.24 265    P        P         10 11 29.7  +0.2
JAR                                  eS        S         10 11 56.9  +0.9
JOB    Onbets             2.27 255    P        P         10 11 30.1  +0.1
JOB                                  eS        S         10 11 56.7  -0.3
JMP    Maruseppu          2.55 282    P        P         10 11 34.3  +0.3
JCH    Churui             2.70 251    P        P         10 11 35.5  -0.6
JCH                                  eS        S         10 12 07.0  -0.7
```

NEIC ***28*** *10:15:58.8±0.8, 53.24N×167.16W, h49*^{km}*±7*^{km}*, ML3.8(AEIC), Error ellipse: s-maj=17.4km s-min=5.9km az=160.0*
IDC ***28*** *10:16:01.7±4.0, 53.29N×167.08W, h76*^{km}*±37*^{km}*, mb3.3/9, mb1 3.6/11, mb1mx3.5/24, mbtmp3.7/11, ML3.5/1, Error ellipse: s-maj=35.7km s-min=18.7km az=176.0*
ISC 28 10:15:57.9±0.7**, 53.18N**±0.10×**167.07W**±0.09**, h56**^{km}±7^{km}**, n36,** σ**0**^{s}**79**/48**, mb3.6**/9**, Fox Islands**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
OKFG   Magazine Ridge     0.56 295    P        P         10 16 10.1   0.0
OKFG                                  S        S         10 16 19.8  +0.6
OKER   East Rim           0.65 295    P        P         10 16 11.8  +0.6
MNAT   Makushin Natee     0.74  18    P        P         10 16 12.3  -0.1
MNAT                                  S        S         10 16 23.4  +0.1
UNV    Unalaska Valle     0.75  27    P        P         10 16 11.5  -1.1
UNV                                   S        S         10 16 22.2  -1.3
MTBL   Makushin Table     0.82  16    P        P         10 16 13.8  +0.2
NIKO   Nikolski           1.10 260    P        P         10 16 16.8  -0.6
NIKO                                  S        S         10 16 31.8  +0.1
LVA    Lava Point         1.16  32    P        P         10 16 18.2   0.0
AKLV   Akutan Long Va     1.19  33    P        P         10 16 18.3  -0.2
AKLV                                  S        S         10 16 34.2  +0.3
AHB    Akutan Harbor      1.20  38    P        P         10 16 18.0  -0.6
AHB                                   S        S         10 16 33.9  -0.3
AKGG   Akutan Green G     1.21  32    P        P         10 16 18.8   0.0
AKUT   Akutan             1.23  38    P        P         10 16 18.4  -0.8
AKUT                                  S        S         10 16 34.5  -0.4
AKA    Akutan             1.23  38    P        P         10 16 18.5  -0.7
AKA                                   S        S         10 16 34.3  -0.7
WESS   West Dahl Sout     1.91  46    P        P         10 16 28.5  -0.1
WESS                                  S        S         10 16 51.4   0.0
WFAR   Faris Peak         1.92  44    P        P         10 16 28.9  +0.1
WPOG   Pogromni           1.98  43    P        P         10 16 29.7  +0.1
WPOG                                  S        S         10 16 54.6  +1.5
WESN   West Dahl Nort     2.03  46    P        P         10 16 30.4  +0.1
SSLW   Shishaldin Wes     2.36  46    P        P         10 16 35.3  +0.2
SSLW                                  S        S         10 17 04.5  +1.6
SSLS   Shishaldin Sou     2.38  49    P        P         10 16 34.6  -0.7
SSLS                                  S        S         10 17 04.0  +0.7
SSLN   Shishaldin Nor     2.44  47    P        P         10 16 36.6  +0.4
FALS   False Pass         2.73  51    P        P         10 16 39.1  -1.3
BALA   Baldy Mountain     3.23  50    P        P         10 16 49.1  +1.8
DTNA   Dutton South F     3.45  53    P        P         10 16 50.7  +0.2
BLHA   Black Hill         3.86  47    P        P         10 16 56.9  +0.7
SDPT   Sand Point         4.43  58    P        P         10 17 04.3   0.0
FX1    Attu Island--F    11.90 276    P        P         10 18 48.3  +1.3
              1.1nm,0.3s,baz=213,slow=17,SNR=3.2
ILAR   Eielson Array     15.50  34    P        P         10 19 35.5  +1.6
              baz=227,slow=11,SNR=3.4
DLBC   Dease Lake        21.27  61    P        P         10 20 42.6  +1.5
              2.1nm,0.8s,mb3.5,baz=225,slow=6.3,SNR=4.4
INK    Inuvik            21.90  33    P        P         10 20 45.5  -1.8
              1.1nm,0.5s,mb3.5,baz=247,slow=9.3,SNR=16
YKA    Yellowknife Ar    28.65  50    P        P         10 21 50.2  -0.6
              0.5nm,0.6s,mb3.4,baz=277,slow=7.8,SNR=15
YKA                                   PcP      PcP       10 24 59.8  -0.9
              0.5nm,1.0s,baz=280,slow=2.6,SNR=4.5
YKA    Yellowknife Ar    28.65  50    P        P         10 21 50.2  -0.6
YKA                                   PcP      PcP       10 24 59.9  -0.8
NVAR   Mina Array Bea    36.30  94    P        P         10 22 58.5  +0.9
              0.1nm,0.3s,mb3.2,baz=297,slow=6.0,SNR=2.6
PDAR   Pinedale Array    38.89  82    P        P         10 23 19.0  -0.2
              0.5nm,0.7s,mb3.4,baz=270,slow=1.5,SNR=4.2
TXAR   Lajitas Array     51.35  91    P        P         10 24 57.7  -0.9
              0.3nm,0.5s,mb3.5,baz=303,slow=6.0,SNR=5.9
SCHQ   Schefferville     53.88  45    P        P         10 25 16.4  -0.7
              2.7nm,0.9s,mb4.2,baz=319,slow=9.3,SNR=3.6
FINES  FINESS Array B    65.25 353    P        P         10 26 34.3  -0.8
              0.4nm,0.6s,mb3.6,baz=34,slow=6.9,SNR=3.8
CMAR   Chiang Mai Arr    77.79 284    P        P         10 27 50.2  -0.4
              1.2nm,0.9s,mb3.8,baz=23,slow=6.5,SNR=6.0
```

NDI 28 10:17:26.7±2.4**, 27.17N×83.35E, h10**^{km}**, ML3.2, Nepal-India border region**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
BLSP   Bilaspur           5.14 193   ePB       Pb        10 18 56.0  -0.4
BHPL   Bhopal             6.64 235   i PB      Pb        10 19 20.3  -1.8
BHPL                                 eS        Sn        10 20 15.5  -7.7
BHPL                                  AML      AML       10 20 21.5
              comp=N,18nm,0.3s
BHPL                                  AML      AML       10 20 22.1
              comp=E,7.2nm,0.8s
BWNR   Bhubaneshwar       7.20 161   e         Pn        10 18 18.2   -56
BWNR                                 eS        Sn        10 20 27.6   -10
BWNR                                  AML      AML       10 21 00.1
              comp=N,37nm,0.2s
BWNR                                  AML      AML       10 21 01.2
              comp=E,35nm,0.3s
VIS    Vishakhapatnam     9.40 180   eP        P         10 19 42.4  -2.9
VIS                                  e                   10 21 10.9
KAD    Karad             12.96 223   e         P         10 20 34.5  +0.7
KAD                                  e                   10 22 54.4
```

IGQ 28 10:39:04.0, 1.44S×81.01W, h12^{km}±26^{km}**, mb4.3, 2C-3D, Error ellipse: s-maj=24.1km s-min=3.5km az=170.5, Off coast of Ecuador**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
SALI   Salinas            0.74 178    P        Pb        10 39 17.9  -0.4
SALI                                  S        Sb        10 39 27.8  -0.3
IGUA   Igualata           2.37  91  ⇑P         Pn        10 39 44.2  +0.8
CUSU   Cusua              2.53  90    P        Pn        10 39 47.8  +2.2
JUIV   Juive              2.55  90    P        Pn        10 39 47.2  +1.3
ARRY   Arrayan            2.56  91    P        Pn        10 39 46.9  +0.8
ARRY                                  S        Sn        10 40 18.9  +1.5
RETU   Refugio            2.57  90    P        Pn        10 39 49.2  +3.0
RUN2   Runtun             2.60  90    P        Pn        10 39 48.5  +1.9
PISA   Pisayambo          2.66  82    P        Pn        10 39 49.5  +2.1
PISA                                  S        Sn        10 40 24.9  +5.2
NAS1   Nasa               2.66  72  ⇓P         Pn        10 39 50.9  +3.4
JUA2   San Juan 2         2.70  63    P        Pn        10 39 49.6  +1.6
TERV   Terraza Guagua     2.72  62  ⇓P         Pn        10 39 50.8  +2.5
TERV                                  S        Sn        10 40 29.5  +8.2
PINO   Pino               2.72  62  ⇑P         Pn        10 39 49.8  +1.5
VC1    Cotopaxi 1         2.73  73    P        Pn        10 39 51.1  +2.7
TAMB   Tambo              2.75  74    P        Pn        10 39 50.4  +1.7
YANA   Yana               2.77  62    P        Pn        10 39 50.4  +1.3
ANTI   Antisana           3.02  71    P        Pn        10 39 54.6  +2.1
COTA   Cotacachi          3.21  57    P        Pn        10 39 58.6  +3.4
ELAGU  Cayambe Volc       3.33  65    P        Pn        10 40 01.6  +4.5
CAYR   Refugio Cayamb     3.34  64    P        Pn        10 40 00.8  +3.7
CAYA   Cayambe            3.38  64    P        Pn        10 40 02.5  +4.9
ECEN   Cerro Negro        3.78  54  ⇓P         Pn        10 40 07.2  +3.8
ECEN                                  S        Sn        10 40 58.4   +10
```

IDC 28 10:40:25.1±42.0**, 16.40S×172.65W, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.9**/14**, mbtmp4.3**/3**, Error ellipse: s-maj=809.1km s-min=170.8km az=80.0, Samoa Islands region**

```
Code   Station Name        Δ°   AZ°   Phase ID            Time       Res
                                      Op       ISC        h  m  s    ISC
STKA   Stephens Creek    44.18 241    P        P         10 48 36.9  -0.6
              1.6nm,0.6s,baz=95,slow=10.0,SNR=6.2
WRA    Warramunga Arr    50.33 257    P        P         10 49 23.3  -2.6
              0.5nm,0.3s,baz=98,slow=7.2,SNR=33
ASAR   Alice Springs     50.50 253    P        P         10 49 24.9  -2.3
              13nm,0.7s,baz=89,slow=8.2,SNR=231
```

IDC 28 11:05:29.3±1.9**, 12.95N×93.15E, mb3.5**/4**, mb1 3.7**/5**, mb1mx3.6**/17**, mbtmp3.5**/5**, ML3.8**/1**, Error ellipse: s-maj=50.1km s-min=24.1km az=77.0, Andaman Islands**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.81	45	Pn	Pn	11 07 26.1	-0.8
	0.3nm,0.3s,baz=236,slow=15,SNR=8.6						
CMAR				Sn	Sn	11 08 52.2	-5.0
	0.3nm,0.3s,baz=241,slow=29,SNR=5.7						
SONM	Songino Array	36.49	15	P	P	11 12 35.8	-2.2
	0.6nm,1.0s,baz=203,slow=9.4,SNR=4.1						
ZAL	Zalesovo	41.42	353	P	P	11 13 17.5	-1.5
	0.8nm,0.7s,baz=292,slow=9.2,SNR=3.9						
WRA	Warramunga Arr	52.07	128	P	P	11 14 41.2	-2.2
	0.4nm,0.9s,baz=310,slow=7.8,SNR=8.5						
ASAR	Alice Springs	53.97	132	P	P	11 14 55.0	-2.4
	0.3nm,0.8s,baz=313,slow=7.8,SNR=4.9						

---

*ISK **28** 11:19:24.8, 37.05N×28.38E, h16^{km}, MD3.0*

*NEIC **28** 11:19:24.8, 37.06N×28.38E, h16^{km}, MD3.1(ATH), MD3.0(ISK), After ISK.*

*CSEM **28** 11:19:24.8±0.1, 37.06N×28.41E, h12^{km}, MD3.0, Error ellipse: s-maj=2.6km s-min=1.9km az=59.0*

*ATH **28** 11:19:26.8, 37.01N×28.27E, h33^{km}±8^{km}, MD3.1/4*

ISC 28 11:19:25.4±0.6**, 37.03N**±0.04×**28.35E**±0.05**, h8**^{km}±6^{km}**, n16, σ0^{s}86**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	334	*i* PG	Pg	11 19 28.6	+0.3
DALT	Dalyan (Mudla)	0.34	138	PG	Pg	11 19 32.1	-0.3
DALT				SG	Sg	11 19 39.0	+1.9
DALT	Dalyan (Mudla)	0.34	138	Pg	Pg	11 19 32.1	-0.3
DALT				Sg	Sg	11 19 39.1	+2.0
MLSB	Milas	0.53	301	*e*PG	Pg	11 19 36.3	+0.2
FETY	Fethiye	0.71	123	PG	Pg	11 19 38.5	-1.1
BDRM	Kayabasi	0.72	273	*i* P	Pb	11 19 39.5	-0.4
BDRM				*i* S	Sb	11 19 51.1	+1.5
AYDN	Tasoluk	0.74	330	*i* P	Pb	11 19 40.3	+0.3
AYDN				*i* S	Sb	11 19 50.1	+0.1
ARG	Arkhangelos	0.83	193	*e*PN	Pn	11 19 42.5	-0.6
ARG				*e*SN	Sn	11 19 54.5	-1.0
BODT	Bodrum	0.83	273	PG	Pg	11 19 41.6	-0.4
DNZL	Cakiroluk	0.86	40	*i* P	Pb	11 19 42.2	+0.1
DENT	Denizli	0.91	37	PG	Pg	11 19 42.1	-1.5
KSL	Kastellorizon	1.32	131	*e*PN	Pn	11 19 51.5	+1.3
SMG	Samos	1.39	300	*e*PN	Pn	11 19 51.0	-0.1
MANT	Manisa	1.47	6	*i* P	Pn	11 19 53.2	+0.9
MANT				*i* S	Sb	11 20 15.8	+4.5
BLCB	Balcova	1.71	323	*e*PN	Pn	11 19 55.0	-0.7
KARP	Karpathos	1.76	213	*e*PN	Pn	11 19 56.0	-0.4

---

*IDC **28** 11:31:40.7±1.6, 7.52N×93.79E, mb3.5/5, mb1 3.7/6, mb1mx3.6/17, mbtmp3.5/6, ML4.0/1, MS3.0/1, Ms1 3.2/1, ms1mx2.9/12, Error ellipse: s-maj=60.2km s-min=22.1km az=62.0*

*NEIC **28** 11:31:45.4±1.3, 7.54N×94.02E, h30^{km}, mb4.2/1, Error ellipse: s-maj=32.0km s-min=14.7km az=57.0*

ISC 28 11:31:43.5±1.3**, 7.6N**±0.1×**94.1E**±0.2**, h30**^{km}**, n9, σ1^{s}03**/9**, mb3.6**/6**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.89	109	*e*Pn	Pn	11 33 23.7	-1.5
CMAR	Chiang Mai Arr	11.80	23	Pn	P	11 34 33.8	+0.7
	0.3nm,0.3s,baz=212,slow=13,SNR=7.1						
CMAR				LR	LR	11 38 52.9	
	comp=Z,74nm,20.2s,baz=215,slow=36						
SONM	Songino Array	41.46	13	P	P	11 39 29.7	+0.4
	0.2nm,0.4s,mb3.1,baz=198,slow=9.1,SNR=3.5						
KURK	Kurchatov	44.89	346	*e*P	P	11 39 56.4	-0.9
	4.1nm,1.2s,mb4.1						
ZAL	Zalesovo	46.84	352	P	P	11 40 12.6	0.0
	1.1nm,0.5s,mb4.0,baz=265,slow=2.2,SNR=4.7						
ZAL	Zalesovo	46.84	352	P	P	11 40 12.6	0.0
WRA	Warramunga Arr	48.12	125	P	P	11 40 23.1	+0.1
	0.3nm,0.6s,mb3.5,baz=305,slow=8.5,SNR=8.1						
ASAR	Alice Springs	49.75	130	P	P	11 40 38.1	+2.5
	0.3nm,0.8s,mb3.4,baz=301,slow=7.9,SNR=3.8						
FINES	FINESS Array B	72.96	332	P	P	11 43 11.2	-0.7
	0.5nm,0.6s,mb3.6,baz=111,slow=12,SNR=4.0						

---

*IDC **28** 11:35:09.3±1.9, 40.89S×174.32E, mb3.6/2, mb1 3.8/4, mb1mx3.7/10, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=47.3km s-min=16.8km az=128.0*

*NEIC **28** 11:35:17.1, 41.02S×174.47E, h53^{km}, ML4.1(WEL), After WEL.*

NEIC Felt in the Wellington area.

*WEL **28** 11:35:17.2±0.1, 41.00S×174.44E, h49^{km}±1^{km}, ML4.2/14, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*

WEL Felt from Wanganui to Nelson, maximum reported intensity MM 4.

ISC 28 11:35:16.2±0.3**, 40.99S**±0.02×**174.41E**±0.03**, h49**^{km}**, n104, σ1^{s}01**/121**, mb3.5**/2**, 12C-6D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRW	Makara Radio	0.33	138	P	P	11 35 25.9	+0.4
MRW				S	S	11 35 32.6	+0.5
MRW	Makara Radio	0.33	138	⇑PN	P	11 35 25.9	+0.4
MRW				SN	S	11 35 32.6	+0.5
KIW	Kapiti Island	0.40	72	P	P	11 35 26.2	0.0
KIW	Kapiti Island	0.40	72	⇑PN	P	11 35 26.2	0.0
KIW				SN	S	11 35 33.3	-0.1
WEL	Wellington	0.40	138	P	P	11 35 26.8	+0.6
WEL	Wellington	0.40	138	⇑PN	P	11 35 26.8	+0.5
WEL				SN	S	11 35 34.4	+1.0
CAW	Cannon Point	0.51	104	⇑PN	P	11 35 28.0	+0.5
CAW				SN	S	11 35 36.6	+1.0
BHW	Baring Head	0.55	141	P	P	11 35 28.5	+0.6
BHW	Baring Head	0.55	141	⇑PN	P	11 35 28.5	+0.5
BHW				SN	S	11 35 37.5	+1.1
TUWZ	Tuamarina	0.57	218	⇓PN	P	11 35 28.7	+0.6
TUWZ				SN	S	11 35 38.0	+1.2
MSWZ	Moikau Station	0.77	124	P	P	11 35 31.1	+0.3
MSWZ	Moikau Station	0.77	124	⇑PN	P	11 35 31.1	+0.3
MSWZ				SN	S	11 35 41.9	+0.4
CMWZ	Cape Campbell	0.78	191	P	P	11 35 32.3	+1.4
CMWZ	Cape Campbell	0.78	191	PN	P	11 35 32.8	+1.9
BSWZ	Blackbirch Sta	0.83	209	P	P	11 35 32.6	+0.9
BSWZ	Blackbirch Sta	0.83	209	⇓PN	P	11 35 32.6	+0.9
BSWZ				SN	S	11 35 43.9	+0.7
MTW	Mount Morrison	0.84	102	P	P	11 35 31.8	-0.1
MTW	Mount Morrison	0.84	102	⇓PN	P	11 35 31.7	-0.1
MTW				SN	S	11 35 43.5	0.0
PAWZ	Paruwai Farm	0.86	118	PN	P	11 35 32.2	+0.1
PAWZ				SN	S	11 35 43.6	-0.3
MRZ	Mangatainoka R	0.95	70	P	P	11 35 33.3	0.0
MRZ	Mangatainoka R	0.95	70	PN	P	11 35 33.3	0.0
MRZ				SN	S	11 35 45.8	-0.2
WAZ	Wanganui	1.31	20	P	P	11 35 39.1	+0.6
WAZ	Wanganui	1.31	20	⇑PN	P	11 35 39.0	+0.5
WAZ				SN	S	11 35 55.9	+0.8
THZ	Tophouse	1.37	235	*e*P	P	11 35 39.6	+0.2
THZ	Tophouse	1.37	235	⇑PN	P	11 35 39.6	+0.2
BFZ	Birch Farm	1.43	78	P	P	11 35 38.6	-1.6
BFZ	Birch Farm	1.43	78	PN	P	11 35 39.1	-1.1
BFZ				SN	S	11 35 55.6	-2.3
QRZ	Quartz Range	1.43	276	P	P	11 35 40.7	+0.4
QRZ	Quartz Range	1.43	276	⇑PN	P	11 35 40.5	+0.3
TSZ	Takapari Road	1.50	52	*e*P	P	11 35 40.4	-0.8
TSZ	Takapari Road	1.50	52	PN	P	11 35 40.4	-0.8
KHZ	Kahutara	1.57	204	P	P	11 35 42.4	+0.2
KHZ	Kahutara	1.57	204	⇑PN	P	11 35 42.3	+0.1
DFE	Dawson Falls	1.68	352	P	P	11 35 44.8	+1.2
DFE	Dawson Falls	1.68	352	PN	P	11 35 44.8	+1.2
NRZ	Ngariki Road	1.69	347	P	P	11 35 44.5	+0.7
NRZ	Ngariki Road	1.69	347	PN	P	11 35 44.6	+0.8
RAEZ	Rainy Point	1.70	360	P	P	11 35 45.2	+1.3
RAEZ	Rainy Point	1.70	360	PN	P	11 35 44.6	+0.7
NEZ	North Egmont	1.73	352	P	P	11 35 45.4	+1.0
NEZ	North Egmont	1.73	352	PN	P	11 35 45.3	+0.9
NWEZ	Newall Road	1.76	346	P	P	11 35 45.5	+0.7
NWEZ	Newall Road	1.76	346	PN	P	11 35 45.5	+0.7
PKE	Pukeiti	1.82	350	*e*P	P	11 35 46.4	+0.8
PKE	Pukeiti	1.82	350	PN	P	11 35 46.5	+0.8
VRZ	Vera Road	1.88	8	P	P	11 35 46.9	+0.4
VRZ	Vera Road	1.88	8	⇑PN	P	11 35 46.9	+0.4
VRZ				*e*SN	S	11 36 10.7	+1.6
MOVZ	Moawhango	1.88	34	P	P	11 35 45.8	-0.7
MOVZ	Moawhango	1.88	34	PN	P	11 35 45.8	-0.8
WNVZ	Wahianoa	1.89	29	P	P	11 35 46.9	+0.3
WNVZ	Wahianoa	1.89	29	PN	P	11 35 46.8	+0.1
DRZ	Dome Shelter	1.93	28	P	P	11 35 47.8	+0.7
DRZ	Dome Shelter	1.93	28	PN	P	11 35 47.5	+0.4
FWVZ	Far West T-bar	1.94	27	P	P	11 35 47.6	+0.3
FWVZ	Far West T-bar	1.94	27	PN	P	11 35 47.6	+0.3
TUVZ	Tukino	1.96	29	P	P	11 35 47.8	+0.1
TUVZ	Tukino	1.96	29	PN	P	11 35 47.8	+0.2
WPVZ	Whakapapa	1.98	26	P	P	11 35 48.1	+0.2
WPVZ	Whakapapa	1.98	26	PN	P	11 35 48.2	+0.3
CNZ	Chateau	1.99	26	P	P	11 35 48.3	+0.3
CNZ	Chateau	1.99	26	PN	P	11 35 48.2	+0.2
NGZ	Ngauruhoe	2.03	27	P	P	11 35 48.7	+0.1
NGZ	Ngauruhoe	2.03	27	PN	P	11 35 48.8	+0.2
OTVZ	Oturere	2.06	28	⇓PN	P	11 35 49.1	+0.1
TWVZ	Taurewa	2.07	23	P	P	11 35 49.1	-0.1
TWVZ	Taurewa	2.07	23	PN	P	11 35 49.2	0.0
WTVZ	West Tongariro	2.08	26	P	P	11 35 49.3	0.0
WTVZ	West Tongariro	2.08	26	⇓PN	P	11 35 49.3	0.0
PWZ	Pawanui	2.10	64	*e*P	P	11 35 47.5	-2.1
PWZ	Pawanui	2.10	64	PN	P	11 35 47.4	-2.2
DSZ	Denniston Nort	2.10	248	P	P	11 35 49.8	+0.1
DSZ	Denniston Nort	2.10	248	⇑PN	P	11 35 49.8	+0.1
MGZ	Maungaku	2.17	24	P	P	11 35 50.4	-0.1
MGZ	Maungaku	2.17	24	PN	P	11 35 50.4	-0.1
KATZ	Kakaramea	2.24	27	P	P	11 35 51.7	+0.1
KATZ	Kakaramea	2.24	27	PN	P	11 35 51.7	+0.2
LTZ	Lake Taylor	2.40	221	*e*P	P	11 35 53.5	-0.4
LTZ	Lake Taylor	2.40	221	PN	P	11 35 53.5	-0.4
BKZ	Black Stump Fm	2.42	42	*e*P	P	11 35 51.7	-2.5
BKZ	Black Stump Fm	2.42	42	⇓PN	P	11 35 52.3	-1.9
WATZ	Wairara	2.49	25	P	P	11 35 54.6	-0.6
WATZ	Wairara	2.49	25	PN	P	11 35 54.8	-0.5
HIZ	Hauiti	2.49	8	P	P	11 35 55.2	0.0
HIZ	Hauiti	2.49	8	PN	P	11 35 55.2	0.0
CRLZ	Canterbury Las	2.91	207	*e*P	P	11 35 59.2	-1.9
CRLZ	Canterbury Las	2.91	207	*e*PN	P	11 35 59.2	-1.9
MQZ	McQueen's Vall	3.01	205	*e*P	P	11 35 59.9	-2.7
MQZ	McQueen's Vall	3.01	205	PN	P	11 35 59.7	-2.9
KNZ	Kokohu	3.19	53	*e*P	P	11 36 01.6	-3.4
KNZ	Kokohu	3.19	53	PN	P	11 36 01.6	-3.5
URZ	Urewera	3.43	38	Pn	P	11 36 04.6	-3.9
	2.9nm,0.3s,baz=119,slow=23,SNR=22						
URZ				Sn	S	11 36 44.0	-4.3
	13nm,0.3s,baz=106,slow=18,SNR=8.9						
URZ	Urewera	3.43	38	*e*P	P	11 36 04.6	-3.9
URZ	Urewera	3.43	38	PN	P	11 36 04.6	-3.9
WVZ	Waitaha Valley	3.44	231	P	P	11 36 07.6	-1.1
MWZ	Matawai	3.58	43	*e*P	P	11 36 06.3	-4.3
RPZ	Rata Peaks	3.69	221	Pn	P	11 36 09.7	-2.5
	2.9nm,0.3s,baz=233,slow=3.9,SNR=26						
RPZ				Pg	P	11 36 17.9	+5.7
	14nm,0.3s,baz=260,slow=5.8,SNR=26						
RPZ				Sn	S	11 36 51.1	-3.8
	12nm,0.3s,baz=331,slow=12,SNR=6.6						
RPZ				Lg		11 37 05.7	
	16nm,0.3s,baz=152,slow=22,SNR=11						
WTAZ	Waiatarua	4.05	2	P	P	11 36 17.2	-0.1
OTAZ	Otara	4.05	6	P	P	11 36 17.0	-0.3
ODZ	Otahua Downs	4.91	213	*e*P	P	11 36 25.7	-3.6
WCZ	Waipu Caves	5.04	359	*e*P	P	11 36 29.7	-1.5
JCZ	Jackson Bay	5.19	232	*e*P	P	11 36 30.4	-2.9
ASAR	Alice Springs	37.95	284	P	P	11 42 28.0	-2.7
	0.4nm,0.5s,mb3.5,baz=127,slow=7.0,SNR=13						
WRA	Warramunga Arr	39.96	289	P	P	11 42 44.6	-2.8
	0.4nm,0.4s,mb3.5,baz=127,slow=8.3,SNR=13						
ARCES	ARCESS Array B	147.10	340	PKPbc	PKPdf	11 54 51.0	+0.7
	2.3nm,0.9s,baz=135,slow=1.3,SNR=3.5						

IDC 28 11:35:34.8±9.8**, 41.02S**×**80.89E, mb4.2**/4**, mb1 4.4**/4**, mb1mx4.0**/10**, mbtmp4.2**/4**, MS3.9**/7**, Ms1 3.9**/7**, ms1mx3.7**/14**, Error ellipse: s-maj=234.8km s-min=42.7km az=51.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	28.41	194	LR	LR	11 49 32.7	
	comp=Z,277nm,19.6s,baz=59,slow=30						
ASAR	Alice Springs	47.28	85	P	P	11 44 09.7	-2.2
	1.6nm,0.8s,baz=230,slow=6.5,SNR=9.7						
ASAR				LR	LR	12 02 28.4	
	comp=Z,118nm,18.1s,baz=223,slow=34						
STKA	Stephens Creek	48.81	100	P	P	11 44 22.1	-1.5
	2.7nm,0.6s,baz=266,slow=6.7,SNR=7.0						
STKA				LR	LR	12 01 08.9	
	comp=Z,186nm,19.2s,baz=206,slow=31						
WRA	Warramunga Arr	49.79	82	P	P	11 44 29.2	-2.1
	3.6nm,0.8s,baz=232,slow=7.5,SNR=18						
CTA	Charters Tower	58.69	90	LR	LR	12 06 57.0	
	comp=Z,100nm,18.9s,baz=228,slow=32						
CMAR	Chiang Mai Arr	61.50	20	P	P	11 45 53.3	-2.5
	1.6nm,0.8s,baz=208,slow=6.4,SNR=7.6						
CMAR				LR	LR	12 08 08.3	
	comp=Z,76nm,19.9s,baz=211,slow=32						
PMG	Port Moresby	66.01	81	LR	LR	12 11 21.4	
	comp=Z,60nm,18.9s,baz=97,slow=32						
DBIC	Dimbokro	91.13	278	LR	LR	12 25 21.5	
	comp=Z,100nm,18.8s,baz=72,slow=33						

IDC 28 12:11:52.1±6.1**, 5.19N**×**93.22E, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.5**/17**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=178.9km s-min=30.6km az=74.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.32	23	Pn	P	12 15 16.8	-1.7
	0.1nm,0.3s,baz=222,slow=13,SNR=5.4						
SONM	Songino Array	43.96	13	P	P	12 20 00.9	-1.8
	0.5nm,0.7s,baz=194,slow=10,SNR=4.6						
WRA	Warramunga Arr	47.52	123	P	P	12 20 29.7	-1.7
	0.9nm,0.6s,baz=301,slow=9.0,SNR=8.1						
ASAR	Alice Springs	48.96	128	P	P	12 20 40.4	-2.2
	0.4nm,0.8s,baz=305,slow=8.0,SNR=4.1						

IDC 28 12:23:05.5±1.6**, 34.06S**×**107.43W, mb4.0**/3**, mb1 4.4**/3**, mb1mx3.8**/13**, mbtmp4.0**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.4**/20**, Error ellipse: s-maj=58.2km s-min=40.4km az=177.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	39.43	73	P	P	12 30 38.1	-0.9
	0.9nm,0.3s,baz=255,slow=10,SNR=3.0						
ROSC	El Rosal	49.75	45	LR	LR	12 48 03.0	
	comp=Z,56nm,21.0s,baz=32,slow=30						
NVAR	Mina Array Bea	72.83	351	P	P	12 34 36.4	-1.5
	1.1nm,1.0s,baz=166,slow=9.2,SNR=4.6						
PDAR	Pinedale Array	76.48	358	P	P	12 34 56.6	-2.1
	0.8nm,0.8s,baz=153,slow=6.0,SNR=4.7						
SONM	Songino Array	151.24	309	PKPbc	PKPdf	12 43 01.8	+5.6
	0.4nm,0.8s,baz=45,slow=2.0,SNR=2.3						
CMAR	Chiang Mai Arr	151.81	243	PKPbc	PKPdf	12 43 01.9	+3.9
	0.3nm,0.4s,baz=191,slow=4.6,SNR=4.8						

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*NEIC **28** 12:35:00.8, 16.94N×100.19W, h10^{km}, MD3.7(MEX), After MEX.*

MEX 28 12:35:01.1±1.2**, 16.95N**×**100.18W, h5**^{km}±8^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.13	321	*i* P	Pg	12 35 03.3	-0.6
CAIG				*i* S	Sg	12 35 05.6	-0.1
ACX	Acapulco	0.27	108	*i* P	Pg	12 35 05.8	-0.8
ACX				*i* S	Sg	12 35 10.0	-0.1
ZIIG	Zihuatanejo	1.39	298	*e*P	Pb	12 35 23.6	-3.6
ZIIG				*i* S	Sb	12 35 39.6	-5.5
ZIIG	Zihuatanejo	1.39	298	*i* P	Pb	12 35 24.2	-3.0
ZIIG				*i* S	Sb	12 35 39.7	-5.4
PLIG	Platanillo	1.58	24	*i* P	Pn	12 35 25.8	-4.0
PLIG				*i* S	Sb	12 35 44.0	-6.4
PLIG	Platanillo	1.58	24	*i* P	Pn	12 35 26.2	-3.7
PLIG				*i* S	Sb	12 35 45.5	-5.0
YAIG	Yautepec	2.18	29	*e*P	Pn	12 35 32.5	-6.0
YAIG				*i* S	Sn	12 36 01.9	-4.3
YAIG	Yautepec	2.18	29	*e*P	Pn	12 35 34.5	-4.0
YAIG				*i* S	Sn	12 36 00.5	-5.7
PPM	Popocatepetl	2.58	35	*i* P	Pn	12 35 42.9	-1.2
PPM				*i* S	Sn	12 36 11.3	-4.9
PPM	Popocatepetl	2.58	35	*i* P	Pn	12 35 40.0	-4.1
PPM				*e*P		12 35 41.0	
PPM				*i* S	Sn	12 36 10.9	-5.3
IIB	San Bernardino	2.66	41	*e*P	Pn	12 35 45.0	-0.4
MOIG	Morelia	2.88	341	*i* P	Pn	12 35 46.3	-2.2
MOIG				*i* S	Sn	12 36 18.5	-5.4
MOIG	Morelia	2.88	341	*i* P	Pn	12 35 42.9	-5.5
MOIG				*i* S	Sn	12 36 18.5	-5.4
VHO	Vista Hermosa	3.30	87	*i* P	Pn	12 35 54.0	-0.5
VHO				*i* S	Sn	12 36 24.6	-10
VHO	Vista Hermosa	3.30	87	*i* P	Pn	12 35 51.0	-3.5
VHO				*i* S	Sn	12 36 29.2	-5.5
OXX	Oaxaca	3.31	87	*e*P	Pn	12 35 54.5	-0.1

MAN 28 12:39:22.6, 12.75N×**123.27E, h23**^{km}**, mb3.8, ML2.5, MS2.1, 2C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.52	138	*e*P	Pb	12 39 35.0	+1.9
AUQP	San Andres	0.81	315	*e*P	Pb	12 39 37.5	-0.5
PVCP	Virac	1.20	46	*e*P	Pn	12 39 43.3	-1.0
RCP	Roxas	1.29	203	⇑*e*P	Pn	12 39 44.3	-1.2
GQP	Guinayangan	1.40	325	⇑*i*P	Pn	12 39 46.7	-0.4
GQP				*i* S	Sn	12 40 05.4	+0.4
BOAC	Boac	1.56	297	*e*P	Pn	12 39 49.4	+0.1
BOAC				*e*S	Sn	12 40 11.8	+2.8
LQP	Lukban	2.16	309	*e*P	Pn	12 40 00.7	+2.7

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*IDC **28** 12:39:43.2±0.7, 35.71N×75.66E, mb4.3/15, mb1 4.4/17, mb1mx4.3/22, mbtmp4.3/17, ML4.2/2, MS3.4/4, Ms1 3.5/4, ms1mx3.2/25, Error ellipse: s-maj=24.7km s-min=14.1km az=40.0*

*NEIC **28** 12:39:46.6±1.9, 35.82N×75.86E, h22^{km}±14^{km}, mb4.5/12, Error ellipse: s-maj=11.4km s-min=4.5km az=56.0*

*MOS **28** 12:39:46.7±1.5, 35.83N×75.98E, h33^{km}, mb4.6/11, Error ellipse: s-maj=13.1km s-min=6.6km az=110.2*

*NNC **28** 12:39:49.7±22.0, 36.04N×75.70E, h15^{km}±113^{km}, mpv4.4, Error ellipse: s-maj=155.9km s-min=73.6km az=119.0*

*BJI **28** 12:39:51.1, 35.86N×76.44E, h22^{km}, mB4.7, mb4.5, ML4.4, Ms4.0, Msz3.5*

ISC 28 12:39:47.2±0.5**, 35.73N**±0.02×**75.87E**±0.05**, h43**^{km}±6^{km}**, n102, σ1^{s}35**/117**, mb4.3**/28**, MS3.4**/3**, 7C-4D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	2.98	227	P	P	12 40 34.8	+1.6
DLH	Dalhousie	3.18	178	*e*P	P	12 40 40.0	+4.0
DLH				*e*	S	12 41 28.0	+15
THN	Thein Dam	3.29	182	*e*PB	P	12 40 42.1	+4.5
THN				*e*SB	S	12 41 26.2	+10
PONG	Pong	3.76	179	*e*PB	P	12 40 50.0	+5.7
PONG				*e*	S	12 41 45.0	+17
CEP	Cherat	3.77	241	P	P	12 40 44.0	-0.4
KSH	Kashi	3.79	1	⇑P	P	12 40 49.0	+4.4
KSH				S	S	12 41 37.0	+8.6
KSH				Smax			
	comp=N,500nm,1.0s						
KSH				Smax			
	comp=E,590nm,1.2s						
SDNR	Sundarnagar	4.32	167	*e*P	P	12 40 54.1	+2.0
SDNR				*e*		12 41 06.1	
THW	Thamme Wali	4.50	231	P	P	12 40 54.2	-0.5
KLP	Kalpa	4.63	154	*e*P	P	12 40 59.7	+3.1
KLP				*e*S	S	12 41 51.2	+1.5
KLP				*e*		12 42 15.9	
	comp=N,2µm,1.2s						
KLP				*e*		12 42 30.3	
	comp=E,3µm,1.0s						
SMLA	Simla	4.71	166	⇓*i*PG	P	12 41 15.8	+18
SMLA				*i*		12 42 13.5	
	comp=E,2µm,0.6s						
DDI	Dehra Dun	5.69	161	*e*P	P	12 41 12.7	+1.3
DDI				*e*	S	12 42 18.4	+2.0
KKR	Kurukshetra	5.80	172	*e*P	P	12 41 14.7	+1.8
JOSI	Joshimath	6.01	148	*e*	P	12 41 09.5	-6.4
JOSI				*e*	S	12 42 20.3	-4.2
JOSI				*e*		12 42 22.5	
	comp=E,1µm,1.2s						
JOSI				*e*		12 42 23.1	
	comp=N,1µm,0.9s						
KZA	Kyzart	6.36	356	P	P	12 41 21.7	+0.9
	SNR=16						
UCH	Uchtor	6.58	351	P	P	12 41 24.6	+0.8
	SNR=130						
AML	Almayashu	6.62	346	P	P	12 41 24.4	0.0
	SNR=11						
KALG	Kalgarh	6.66	158	*e*	P	12 41 11.6	-14
KALG				*e*		12 42 26.1	
KALG				*e*		12 42 36.7	
	comp=E,278nm,0.6s						
KBK	Karagaybulak	6.96	354	P	P	12 41 31.2	+2.0
	SNR=26						
AAK	Ala-Archa	6.98	352	P	P	12 41 30.1	+0.6
	SNR=35						
AAK	Ala-Archa	6.98	352	⇑Pn	P	12 41 30.1	+0.6
	comp=E,16nm,0.6s						
AAK				⇓Lg		12 43 20.6	
	comp=E,61nm,1.4s						
AAK	Ala-Archa	6.98	352	*e*P	P	12 41 28.4	-1.1
AAK				pmax	pmax		
	comp=Z,32nm,0.7s						
AAK	Ala-Archa	6.98	352	*e*Pn	P	12 41 28.4	-1.1
	comp=Z,32nm,0.7s						
EKS2	Erkin-Say	7.11	347	P	P	12 41 31.7	+0.4
	SNR=13						
NDI	New Delhi	7.12	170	*e*PN	P	12 41 31.5	+0.1
NDI				*e*SN	S	12 42 47.5	-4.3
ASOR	Ausora	7.13	166	*e*P	P	12 41 32.8	+1.1
FRU	Bishkek	7.16	353	*e*P	P	12 41 32.5	+0.4
FRU				pmax	pmax		
	comp=Z,50nm,1.5s						
PTH	Pithoragarh	7.17	148	*e*PN	P	12 41 32.5	+0.4
PTH				*e*S	S	12 42 53.1	0.0
TKM2	Tokmak 2	7.19	358	P	P	12 41 33.8	+1.4
	SNR=23						
AYAN	Aya Nagar	7.30	171	*e*P	P	12 41 34.8	+0.8
AYAN				*e*S	S	12 42 50.8	-5.7
CHMS	Chumysh	7.31	354	P	P	12 41 34.6	+0.4
	SNR=5.7						
KUDL	Kundal	7.58	176	*e*P	P	12 41 37.3	-0.5
KUDL				*e*	S	12 43 01.8	-1.5
KHET	Khetri	7.63	180	*e*P	P	12 41 36.7	-1.8
KHET				*e*	S	12 43 01.9	-2.7
KHET				*e*		12 43 09.2	
	comp=N,70nm,0.5s						
AGRA	Agra	8.65	168	*e*P	P	12 41 51.4	-1.3
AGRA				*e*	S	12 43 14.5	-16
AJM	Ajmer	9.28	187	*e*P	P	12 41 57.2	-4.1
AJM				*e*	S	12 43 40.8	-4.7
AJM				*e*		12 43 47.5	
	comp=N,37nm,0.5s						
AJM				*e*		12 43 48.1	
	comp=E,44nm,0.5s						
KOLN	Koldanda	10.30	138	*e*P	P	12 42 15.1	-0.3
	comp=E,74nm,0.8s						
GKN	Gorkha	10.71	134	*e*P	P	12 42 20.3	-0.7
	comp=E,114nm,0.7s						
KKN	Kakani	11.25	132	*e*P	P	12 42 27.8	-0.5
	comp=E,66nm,0.5s						
DMN	Daman	11.28	133	*e*P	P	12 42 27.5	-1.2
	comp=E,52nm,0.4s						
PKI	Pulchoki	11.49	132	*e*P	P	12 42 30.9	-0.6
	comp=E,61nm,0.6s						
JIRN	Jiri	11.91	130	*e*P	P	12 42 35.4	-1.7
	comp=E,97nm,0.4s						
MK31	Makanchi Array	12.06	22	⇑P	P	12 42 38.0	-1.1
	comp=E,1.9nm,0.6s,baz=204,slow=12,SNR=58						
MK31				⇑S	S	12 44 50.4	-2.8
	comp=E,4.6nm,0.9s,baz=199,slow=24,SNR=5.3						
WMQ	Urumqi	12.16	45	*e*P	P	12 42 40.0	-0.5
WMQ				PP	PP	12 42 49.0	-1.2
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s						
WMQ				LR	LR		
	comp=N,154nm,10.0s						
WMQ				LR	LR		
	comp=E,98nm,11.0s						

BHPL	**Bhopal**	**12.52**	**173**	*e*	**S**	**12 44 56.3**	**-8.0**
BHPL				*e*		12 45 02.4	
	comp=E,26nm,0.4s						
BHPL				*e*		12 45 02.9	
	comp=N,35nm,0.6s						
LSA	**Lhasa**	**14.20**	**111**	P	**P**	**12 43 07.0**	**-0.4**
LSA				AMB	AMB		
	comp=Z,30nm,1.0s						
LSA				LR	LR		
	comp=N,50nm,7.0s						
LSA				LR	LR		
	comp=E,130nm,8.0s						
LSA				LR	LR		
	comp=Z,100nm,7.0s						
LSA	**Lhasa**	**14.20**	**111**	*e*P	**P**	**12 43 05.7**	**-1.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	**Lhasa**	**14.20**	**111**	*e*Pn	**P**	**12 43 05.7**	**-1.7**
	comp=Z,5.7nm,0.7s						
LSA				*e*pP		12 43 18.1	
KURK	**Kurchatov**	**15.11**	**7**	⇑P	**P**	**12 43 16.5**	**-2.8**
	comp=Z,20nm,0.8s,baz=191,slow=8.6,SNR=55						
KURK	**Kurchatov**	**15.11**	**7**	Pn	**P**	**12 43 16.6**	**-2.6**
	comp=Z,313nm,0.7s,SNR=46						
KURK	**Kurchatov**	**15.11**	**7**	*e*P	**P**	**12 43 16.8**	**-2.4**
KURK				pmax	pmax		
	comp=Z,37nm,0.8s						
KURK	**Kurchatov**	**15.11**	**7**	*e*Pn	**P**	**12 43 16.8**	**-2.4**
	comp=Z,37nm,0.8s						
KURK				*e*pP		12 43 23.5	
BVA0	**Borovoye Array**	**17.72**	**349**	⇑P	**P**	**12 43 49.9**	**-2.4**
	comp=Z,1.6nm,0.8s,baz=154,slow=14,SNR=59						
BVAR	**Borovoye Array**	**17.72**	**349**	P	**P**	**12 43 50.0**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=166,slow=12,SNR=34						
CHKZ	**Chkalovo**	**18.32**	**350**	⇑P	**P**	**12 43 57.4**	**-2.3**
	comp=Z,7.0nm,1.3s						
CHKZ	**Chkalovo**	**18.32**	**350**	*e*P	**P**	**12 43 57.5**	**-2.2**
CHKZ				pmax	pmax		
	comp=Z,133nm,1.4s						
CHKZ	**Chkalovo**	**18.32**	**350**	*e*P	**P**	**12 43 57.5**	**-2.2**
	comp=Z,133nm,1.4s						
HYB	**Hyderabad**	**18.39**	**172**	*i* P	**P**	**12 43 58.0**	**-2.8**
HYB				*e*S	**S**	**12 47 09.0**	**-12**
ZAL	**Zalesovo**	**19.25**	**16**	P	**P**	**12 44 09.0**	**-1.5**
	comp=Z,1.6nm,0.3s,baz=259,slow=9.4,SNR=29						
ZAL				LR	LR	12 52 51.9	
	comp=Z,138nm,21.4s,baz=148,slow=41						
GTA	**Gaotai**	**19.32**	**72**	P	**P**	**12 44 13.3**	**+1.9**
GTA				AP		12 44 20.0	
GTA				XP		12 44 23.3	
GTA				AMB	AMB		
	comp=Z,7.0nm,0.6s						
NVS	**Novosibirsk**	**19.78**	**13**	*e*P	**P**	**12 44 13.3**	**-3.1**
NVS				*e*		12 47 49.7	
NVS				pmax	pmax		
	comp=Z,13nm,0.7s						
NVS				pmax	pmax		
	comp=N,11nm,0.7s						
NVS				smax			
	comp=N,17nm,2.0s						
NVS				smax			
	comp=E,25nm,2.0s						
SVE	**Sverdlovsk**	**23.48**	**339**	*e*P	**P**	**12 44 54.0**	**+0.6**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
ZAK	**Zakamensk**	**24.63**	**45**	⇓*i*P	**P**	**12 45 06.6**	**+1.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
SONM	**Songino Array**	**25.61**	**52**	P	**P**	**12 45 16.9**	**+2.9**
	comp=Z,7.5nm,1.0s,mb4.2,baz=250,slow=9.4,SNR=23						
ULN	**Ulaanbaatar**	**26.04**	**53**	*e*P	**P**	**12 45 16.8**	**-1.2**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
ULN	**Ulaanbaatar**	**26.04**	**53**	*e*P	**P**	**12 45 16.8**	**-1.2**
	comp=Z,4.9nm,1.0s,mb4.0						
CM31	**Chiang Mai Arr**	**26.69**	**124**	*e*P	**P**	**12 45 23.3**	**-1.0**
	comp=Z,3.3nm,0.4s,mb4.2						
CMAR	**Chiang Mai Arr**	**26.69**	**124**	P	**P**	**12 45 25.4**	**+1.1**
	comp=Z,9.0nm,0.9s,mb4.3,baz=310,slow=10,SNR=21						
CMAR				LR	LR	12 58 07.6	
	comp=Z,32nm,19.0s,MS2.9,baz=180,slow=41						
BRTR	**Keskin Array B**	**33.41**	**290**	P	**P**	**12 46 22.8**	**-1.0**
	comp=Z,2.4nm,1.1s,mb4.0,baz=104,slow=5.1,SNR=4.1						
AKASG	**Malin Array Be**	**36.50**	**309**	P	**P**	**12 46 49.6**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.3,baz=110,slow=8.8,SNR=6.8						
JOF	**Joensuu**	**38.53**	**329**	*e*p	**P**	**12 47 06.2**	**-0.7**
	comp=Z,7.1nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**40.34**	**325**	P	**P**	**12 47 21.6**	**-0.2**
	comp=Z,1.9nm,0.5s,mb4.1,baz=112,slow=11,SNR=11						
FINES				LR	LR	13 04 59.7	
	comp=Z,116nm,18.1s,MS3.8,baz=208,slow=38						
KAF	**Kangasniemi**	**40.43**	**327**	*e*p	**P**	**12 47 21.4**	**-1.2**
	comp=Z,3.2nm,0.8s,mb4.1,baz=106,slow=8.4						
KAF	**Kangasniemi**	**40.43**	**327**	*e*P	**P**	**12 47 21.4**	**-1.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
ARCES	**ARCESS Array B**	**43.39**	**337**	P	**P**	**12 47 46.9**	**+0.2**
	comp=Z,8.1nm,0.7s,mb4.6,baz=115,slow=8.0,SNR=29						
TIXI	**Tiksi**	**45.05**	**21**	⇓*e*P	**P**	**12 48 00.4**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
HFS	**Hagfors**	**46.10**	**322**	P	**P**	**12 48 08.0**	**-0.5**
	comp=Z,7.1nm,0.6s,mb4.8,baz=98,slow=10,SNR=17						
CLL	**Collm**	**46.73**	**310**	P	**P**	**12 48 14.0**	**+0.5**
CLL				*e**PP	pP	12 48 20.0	-5.6
NB2	**NORSAR Subarra**	**47.36**	**323**	P	**P**	**12 48 17.3**	**-1.1**
	comp=Z,2.2nm,0.6s,mb4.3,baz=91,slow=7.9						
NB2	**NORSAR Subarra**	**47.36**	**323**	P	**P**	**12 48 17.3**	**-1.1**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NOA	**NORSAR Array B**	**47.36**	**323**	P	**P**	**12 48 17.6**	**-0.8**
	comp=Z,2.6nm,0.6s,mb4.3,baz=92,slow=7.6,SNR=11						
KMBO	**Kilima Mbogo**	**51.37**	**233**	LR	LR	13 10 41.7	
	comp=Z,42nm,18.4s,MS3.5,baz=78,slow=36						
LPG	**La Plagne**	**51.88**	**303**	*e*P	**P**	**12 48 56.9**	**+3.6**
	comp=Z,16nm,0.9s,mb4.7						
LPG	**La Plagne**	**51.88**	**303**	*e*P	**P**	**12 48 56.9**	**+3.6**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LPL	**La Plagne**	**51.89**	**303**	*e*P	**P**	**12 48 57.3**	**+3.9**
CABF	**La Chapelle**	**52.05**	**305**	*e*P	**P**	**12 48 57.6**	**+3.1**
MBDF	**Montbardon**	**52.07**	**302**	*e*P	**P**	**12 48 58.1**	**+3.4**
	comp=Z,25nm,1.1s,mb4.8						
MBDF	**Montbardon**	**52.07**	**302**	*e*P	**P**	**12 48 58.1**	**+3.4**
MBDF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
BAIF	**Baives**	**52.45**	**309**	*e*P	**P**	**12 48 56.7**	**-0.8**
	comp=Z,15nm,0.8s,mb4.7						
BAIF	**Baives**	**52.45**	**309**	*e*P	**P**	**12 48 56.7**	**-0.8**
BAIF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
AVF	**Avril sur Loir**	**53.82**	**306**	*e*P	**P**	**12 49 08.0**	**+0.3**
	comp=Z,9.7nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**53.82**	**306**	*e*P	**P**	**12 49 08.0**	**+0.3**
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TCF	**Toulx Ste Croi**	**54.72**	**305**	*e*P	**P**	**12 49 16.7**	**+2.4**
	comp=Z,5.9nm,0.7s,mb4.5						
TCF	**Toulx Ste Croi**	**54.72**	**305**	*e*P	**P**	**12 49 16.7**	**+2.4**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
EKA	**Eskdalemuir Ar**	**55.56**	**317**	P	**P**	**12 49 19.3**	**-0.9**
	comp=Z,2.5nm,0.7s,mb4.3,baz=82,slow=7.0,SNR=7.8						
INK	**Inuvik**	**73.97**	**11**	P	**P**	**12 51 20.6**	**+1.4**
	comp=Z,3.3nm,1.1s,mb4.2,baz=327,slow=3.6,SNR=7.4						
COLA	**College**	**74.06**	**18**	*e*P	**P**	**12 51 19.4**	**-0.4**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
COLA	**College**	**74.06**	**18**	*e*P	**P**	**12 51 19.4**	**-0.4**
	comp=Z,5.5nm,1.2s,mb4.4						
ILAR	**Eielson Array**	**74.39**	**18**	P	**P**	**12 51 22.1**	**+0.5**
	comp=Z,0.8nm,0.7s,mb3.8,baz=316,slow=3.2,SNR=8.2						
WRA	**Warramunga Arr**	**78.28**	**125**	P	**P**	**12 51 45.9**	**+1.4**
	comp=Z,2.4nm,0.7s,mb4.2,baz=320,slow=5.4,SNR=19						
WB2	**Warramunga Arr**	**78.29**	**125**	*e*P	**P**	**12 51 45.6**	**+1.1**
DBIC	**Dimbokro**	**78.62**	**270**	P	**P**	**12 51 46.2**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.1,baz=349,slow=7.4,SNR=3.5						
ASAR	**Alice Springs**	**80.62**	**128**	P	**P**	**12 51 58.5**	**+1.4**
	comp=Z,1.2nm,0.7s,mb3.9,baz=316,slow=5.3,SNR=17						
YKA	**Yellowknife Ar**	**81.76**	**5**	P	**P**	**12 52 02.9**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.8,baz=347,slow=5.2,SNR=24						

*BJI **28** 12:49:21.0,48.00N×129.00W,h10^{km},mB5.2,mb4.9, Ms4.9,Msz4.5*

*NEIC **28** 12:49:21.0,47.96N×129.04W,h10^{km},mb5.0/64,MS4.2/4, MW5.0(PGC),After PGC.*

*IDC **28** 12:49:22.0±0.7,48.09N×129.08W,mb4.6/19,mb1 4.7/28, mb1mx4.6/32,mbtmp4.5/28,ML4.0/8,MS4.3/23,Ms1 4.3/23, ms1mx4.1/28,Error ellipse: s-maj=18.2km s-min=10.3km az=53.0*

*PGC **28** 12:49:21.4,47.96N×129.04W,h10^{km},Mw5.0,Mw4.9, Northern Juan de Fuca ridge.*

*HRVD **28** 12:49:21.0±0.3,48.08N×129.24W,h12^{km},MW5.0/63, Centroid moment Tensor Solution. LP body waves: s33,c48;Mantle waves: s63,c117; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.04±.11; M$_{\theta\theta}$-0.26±.10; M$_{\phi\phi}$0.22±.11; M$_{r\theta}$1.29±.27; M$_{\theta\phi}$3.51±.09; M$_{\phi r}$-1.30±.29; Best double couple: M$_0$3.905×10^{16} NP1: ϕ_s266°,δ73°,λ-16°. NP2:ϕ_s0°,δ75°,λ-162°. Principal axes: T 3.502, Plg1°, Azm133°; N .805, Plg67°, Azm40°; P -4.307, Plg23°, Azm223°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **28** 12:49:22.6±0.7,48.19N×129.01W,h10^{km},mb5.1/49, MS4.3/12 Error ellipse: s-maj=9.2km s-min=4.7km az=94.2*

ISC 28 12:49:23.4±0.8,**48.24N**±0.02×**128.81W**±0.03,**h11**^{km}±5^{km}, **h12**^{km}±2.2^{km}**:pP-P,n360,**σ**0^{s}92**/362,**mb4.8**/83,**MS4.3**/32, **8C-8D,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETB	**Estevan Point**	**1.88**	**52**	Pn	**Pn**	**12 49 56.9**	**+1.1**
EDB	**Eliza Dome**	**1.98**	**34**	Pn	**Pn**	**12 49 56.9**	**-0.3**
BPBC	**Brooks Peninsu**	**2.03**	**19**	Pn	**Pn**	**12 49 57.8**	**-0.2**
OZB	**Mount Ozzard**	**2.32**	**71**	P	**Pn**	**12 50 01.5**	**-0.6**
OZB	**Mount Ozzard**	**2.32**	**71**	Pn	**Pn**	**12 50 00.6**	**-1.5**
OZB				Sn	**Sn**	**12 50 30.5**	**-0.3**
OZB				Trac		12 50 32.9	
	comp=Z,191nm,0.3s						
GDR	**Gold River**	**2.39**	**49**	Pn	**Pn**	**12 50 03.4**	**+0.2**
MAYB	**Maynard**	**2.41**	**26**	Pn	**Pn**	**12 50 03.8**	**+0.4**
WOSB	**Woss**	**2.42**	**37**	Pn	**Pn**	**12 50 04.2**	**+0.7**
HOLB	**Holberg**	**2.44**	**10**	Pn	**Pn**	**12 50 04.6**	**+0.7**
BTB	**Buttle Lake**	**2.50**	**59**	Pn	**Pn**	**12 50 04.9**	**+0.3**
PHC	**Port Hardy**	**2.62**	**20**	Pn	**Pn**	**12 50 06.4**	**-0.1**
NCRB	**Newcastle Ridg**	**2.82**	**39**	Pn	**Pn**	**12 50 09.8**	**+0.6**
ALB	**Alberni**	**2.83**	**67**	Pn	**Pn**	**12 50 08.9**	**-0.5**
MGB	**Mount Grey**	**2.84**	**73**	Pn	**Pn**	**12 50 08.7**	**-0.8**
CBB	**Campbell River**	**2.89**	**50**	Pn	**Pn**	**12 50 11.0**	**+0.8**
CBB				Sn	**Sn**	**12 50 46.7**	**+1.5**
CBB				Trac		12 50 57.7	
	comp=Z,214nm,0.7s						
PFB	**Port Renfrew**	**2.93**	**82**	P	**Pn**	**12 50 09.8**	**-1.1**
PFB	**Port Renfrew**	**2.93**	**82**	Pn	**Pn**	**12 50 09.3**	**-1.5**
PFB				Sn	**Sn**	**12 50 44.9**	**-1.5**
OOW	**Octopus West**	**3.15**	**98**	P	**Pn**	**12 50 12.8**	**-1.1**
OCWA	**Octopus Mounta**	**3.15**	**97**	*e*P	**Pn**	**12 50 12.5**	**-1.5**
TXB	**Texada**	**3.23**	**62**	Pn	**Pn**	**12 50 15.4**	**+0.3**
TXB				Sn	**Sn**	**12 50 55.1**	**+1.2**
	comp=Z,205nm,0.6s						
TXB				Trac		12 50 56.2	
	comp=Z,205nm,0.6s						
NLLB	**Nanaimo Lost L**	**3.34**	**71**	Pn	**Pn**	**12 50 16.6**	**-0.1**
NLLB				Sn	**Sn**	**12 50 56.7**	**-0.1**
NLLB				Trac		12 50 58.5	
	comp=Z,44nm,0.3s						
LZB	**Mount Lazard**	**3.34**	**82**	Pn	**Pn**	**12 50 15.3**	**-1.4**
LZB				Sn	**Sn**	**12 50 55.9**	**-0.9**
LZB				Trac		12 50 59.3	
	comp=Z,41nm,0.5s						
STW	**Striped Peak**	**3.44**	**90**	P	**Pn**	**12 50 16.8**	**-1.3**
SHB	**Sechelt**	**3.53**	**66**	Pn	**Pn**	**12 50 18.7**	**-0.6**
GOBB	**Galiano Island**	**3.59**	**77**	Pn	**Pn**	**12 50 19.4**	**-0.8**
PGC	**Sidney**	**3.59**	**82**	*e*P	**Pn**	**12 50 18.8**	**-1.4**
PGC	**Sidney**	**3.59**	**82**	Pn	**Pn**	**12 50 18.9**	**-1.3**
PGC				Sn	**Sn**	**12 51 03.0**	**-0.1**
PGC				Trac		12 51 07.8	
	comp=Z,70nm,0.7s						
VGZ	**Gonzales**	**3.67**	**85**	Pn	**Pn**	**12 50 19.5**	**-1.8**
VGZ				Sn	**Sn**	**12 51 03.7**	**-1.3**
VGZ				Trac		12 51 05.8	
	comp=Z,120nm,0.3s						
SNB	**Saturna Island**	**3.79**	**80**	P	**Pn**	**12 50 22.6**	**-0.4**
SNB	**Saturna Island**	**3.79**	**80**	Pn	**Pn**	**12 50 22.5**	**-0.5**
SNB				Sn	**Sn**	**12 51 09.7**	**+1.6**
SNB				Trac		12 51 19.1	
	comp=Z,119nm,0.8s						
BIB	**Bowen Island**	**3.82**	**70**	Pn	**Pn**	**12 50 23.5**	**0.0**
SQM	**Sequim**	**3.86**	**90**	P	**Pn**	**12 50 23.5**	**-0.6**
WPB	**Watts Point**	**3.95**	**67**	Pn	**Pn**	**12 50 25.4**	**0.0**
BBB	**Bella Bella**	**3.97**	**6**	Pn	**Pn**	**12 50 26.4**	**+0.7**
	188nm,0.3s,baz=197,slow=9.0,SNR=140						
BBB				Sn	**Sn**	**12 51 12.8**	**+0.2**
	baz=191,slow=16,SNR=4.9						
BBB				LR	LR	12 51 48.7	
	comp=Z,2μm,19.4s,baz=188,slow=35						
BBB	**Bella Bella**	**3.97**	**6**	Pn	**Pn**	**12 50 25.8**	**+0.2**
BBB				Sn	**Sn**	**12 51 11.7**	**-1.0**
BBB				Trac		12 51 13.7	
	comp=Z,130nm,0.5s						
CPW	**Capitol Peak**	**4.04**	**106**	P	**Pn**	**12 50 25.0**	**-1.6**
HNB	**Haney**	**4.25**	**74**	Pn	**Pn**	**12 50 29.0**	**-0.6**
HNB				Sn	**Sn**	**12 51 19.3**	**-0.4**
HNB				Trac		12 51 22.1	
	comp=Z,66nm,0.5s						
SBES	**Silver Beach E**	**4.29**	**81**	P	**Pn**	**12 50 30.3**	**+0.2**
WSLR	**Whistler**	**4.30**	**62**	Pn	**Pn**	**12 50 30.9**	**+0.6**
VDB	**Vedder Mountai**	**4.52**	**78**	P	**Pn**	**12 50 32.8**	**-0.6**
VDB	**Vedder Mountai**	**4.52**	**78**	Pn	**Pn**	**12 50 32.7**	**-0.7**
BNB	**Barry Inlet**	**4.73**	**338**	Pn	**Pn**	**12 50 35.3**	**-1.0**
ERK	**Elk Rock**	**4.81**	**111**	P	**Pn**	**12 50 37.7**	**+0.1**
HOPB	**Hope**	**5.02**	**74**	Pn	**Pn**	**12 50 39.9**	**-0.5**
HOPB				Sn	**Sn**	**12 51 39.3**	**+0.2**
HOPB				Trac		12 51 47.3	
	comp=Z,57nm,0.5s						
LLLB	**Lillooet**	**5.11**	**60**	Pn	**Pn**	**12 50 42.3**	**+0.6**
COR	**Corvallis**	**5.28**	**132**	*e*P	**Pn**	**12 50 43.2**	**-0.9**
MOBC	**Moresby Island**	**5.33**	**340**	Pn	**Pn**	**12 50 43.8**	**-1.1**
RUBB	**Prince Rupert**	**6.16**	**352**	Pn	**Pn**	**12 50 59.1**	**+2.5**
PNT	**Penticton**	**6.17**	**77**	Pn	**Pn**	**12 50 55.6**	**-1.2**
KEBM	**Edson Butte**	**6.22**	**148**	*e*P	**Pn**	**12 50 56.8**	**-0.6**
NDB	**Naden**	**6.28**	**337**	Pn	**Pn**	**12 51 00.7**	**+2.4**
FSB	**Fort Saint Jam**	**6.84**	**23**	Pn	**Pn**	**12 51 10.9**	**+4.7**
HUMO	**Hull Mountain**	**6.98**	**142**	*e*P	**Pn**	**12 51 08.6**	**+0.5**
DOWB	**Downie Slide**	**7.42**	**60**	Pn	**Pn**	**12 51 13.9**	**-0.3**
SLEB	**Sale Mountain**	**7.52**	**63**	Pn	**Pn**	**12 51 15.5**	**-0.1**
MNB	**Mounoet Dainar**	**7.77**	**55**	Pn	**Pn**	**12 51 19.6**	**+0.4**
NEW	**Newport**	**7.81**	**85**	Pn	**Pn**	**12 51 18.1**	**-1.6**
	6.7nm,0.3s,baz=286,slow=12,SNR=47						
NEW				LR	LR	12 54 45.4	
	comp=Z,884nm,18.6s,baz=274,slow=40						
NEW	**Newport**	**7.81**	**85**	*e*P	**Pn**	**12 51 17.1**	**-2.5**
YBH	**Yreka Blue Hor**	**7.81**	**144**	Pn	**Pn**	**12 51 20.6**	**+0.8**
	0.5nm,0.3s,baz=344,slow=15,SNR=28						
YBH	**Yreka Blue Hor**	**7.81**	**144**	*e*P	**Pn**	**12 51 20.4**	**+0.6**
BMO	**Blue Mountains**	**8.62**	**109**	*e*P	**P**	**12 51 29.2**	**-1.8**
MOD	**Modoc**	**8.74**	**133**	P	**P**	**12 51 32.9**	**+0.2**
BMBC	**Bull Mountain**	**8.82**	**25**	Pn	**P**	**12 51 35.0**	**+1.2**
WDC	**Whiskeytown Da**	**8.88**	**147**	*e*P	**P**	**12 51 35.3**	**+0.7**
WVOR	**Wild Horse Val**	**9.22**	**125**	*e*P	**P**	**12 51 39.3**	**0.0**
WALA	**Waterton Lakes**	**9.90**	**80**	*e*P	**P**	**12 51 47.8**	**-0.8**
WALA	**Waterton Lakes**	**9.90**	**80**	Pn	**P**	**12 51 48.3**	**-0.3**
MSO	**Missoula**	**10.16**	**92**	*e*P	**P**	**12 51 49.8**	**-2.3**
DLBC	**Dease Lake**	**10.24**	**356**	Pn	**P**	**12 51 56.5**	**+3.3**
	0.4nm,0.3s,baz=174,slow=13,SNR=9.2						
DLBC				LR	LR	12 55 46.7	
	comp=Z,2μm,18.3s,baz=178,slow=37						
DLBC	**Dease Lake**	**10.24**	**356**	*e*P	**P**	**12 51 53.1**	**-0.1**
DLBC	**Dease Lake**	**10.24**	**356**	Pn	**P**	**12 51 56.5**	**+3.3**
OHCM	**Honcut**	**10.36**	**147**	*e*P	**P**	**12 51 54.5**	**-0.4**
CHMT	**Chamberlain Mo**	**10.60**	**91**	*e*P	**P**	**12 51 56.4**	**-1.8**
PAHR	**Pah Rah Range**	**10.90**	**138**	*e*P	**P**	**12 52 03.1**	**+0.8**
EDM	**Edmonton**	**10.99**	**57**	*e*P	**P**	**12 52 00.8**	**-2.7**
EDM	**Edmonton**	**10.99**	**57**	Pn	**P**	**12 52 02.2**	**-1.3**
HLID	**Hailey**	**11.07**	**110**	*e*P	**P**	**12 52 03.6**	**-1.1**
WCN	**Washoe City**	**11.07**	**141**	*e*P	**P**	**12 52 04.7**	**0.0**
FNBB	**Fort Nelson**	**11.21**	**16**	Pn	**P**	**12 52 06.8**	**+0.4**
BMN	**Battle Mountai**	**11.39**	**129**	*e*P	**P**	**12 52 07.3**	**-1.7**
MCMT	**McKenzie Canyo**	**11.51**	**101**	*e*P	**P**	**12 52 08.3**	**-2.3**
CMB	**Columbia Colle**	**11.91**	**146**	*e*P	**P**	**12 52 15.6**	**-0.4**
ELK	**Elko**	**12.24**	**123**	Pn	**P**	**12 52 21.9**	**+1.4**
	0.1nm,0.3s,baz=307,slow=13,SNR=28						
ELK				LR	LR	12 57 07.1	
	comp=Z,3μm,18.9s,baz=303,slow=38						
ELK	**Elko**	**12.24**	**123**	*e*P	**P**	**12 52 21.4**	**+0.8**
NVAR	**Mina Array Bea**	**12.43**	**138**	Pn	**P**	**12 52 24.5**	**+1.4**
	0.3nm,0.3s,baz=321,slow=8.2,SNR=47						
NVAR				LR	LR	12 57 00.2	
	comp=Z,4μm,19.8s,baz=325,slow=37						
QLMT	**Earthquake Lak**	**12.45**	**99**	*e*P	**P**	**12 52 22.7**	**-0.5**
QLMT				*e*		12 52 36.6	
MNV	**Mina**	**12.49**	**138**	*e*P	**P**	**12 52 24.7**	**+0.8**
YMR	**Madison River**	**12.81**	**100**	*e*P	**P**	**12 52 28.3**	**+0.1**
OMM	**Old Mammoth Mi**	**12.81**	**142**	*e*P	**P**	**12 52 28.1**	**-0.1**
WHY	**Whitehorse**	**12.92**	**347**	Pn	**P**	**12 52 32.1**	**+2.5**
YNR	**Norris Junctio**	**12.98**	**99**	*e*P	**P**	**12 52 29.8**	**-0.6**
HVU	**Hansel Valley**	**13.05**	**114**	*e*P	**P**	**12 52 31.9**	**+0.6**
IMW	**Indian Meadow**	**13.14**	**103**	*e*P	**P**	**12 52 32.4**	**-0.1**
RRI2	**Red Ridge**	**13.14**	**105**	*e*P	**P**	**12 52 32.3**	**-0.2**
TPH	**Tonopah**	**13.21**	**136**	*e*P	**P**	**12 52 34.1**	**+0.7**
LKWY	**Lake**	**13.23**	**99**	*e*P	**P**	**12 52 33.7**	**+0.1**
TPAW	**Teton Pass**	**13.32**	**104**	*e*P	**P**	**12 52 34.9**	**+0.1**
MOOW	**Moose Ponds**	**13.34**	**103**	*e*P	**P**	**12 52 35.6**	**+0.5**
BGU	**Big Grassy Mou**	**13.40**	**117**	*e*P	**P**	**12 52 36.5**	**+0.5**
WUWY	**Wally Ulrich**	**13.43**	**104**	*e*P	**P**	**12 52 34.6**	**-1.7**
SNOW	**Snow King Moun**	**13.46**	**104**	*e*P	**P**	**12 52 35.3**	**-1.3**
LOHW	**Long Hollow**	**13.49**	**103**	*e*P	**P**	**12 52 37.6**	**+0.5**
SPUT	**South Promonto**	**13.52**	**115**	*e*P	**P**	**12 52 38.0**	**+0.5**
HYT	**Haines Junctio**	**13.56**	**342**	Pn	**P**	**12 52 39.4**	**+1.6**
AHID	**Auburn Hatcher**	**13.57**	**107**	*e*P	**P**	**12 52 38.1**	**0.0**
AHID				*e*		12 52 49.7	
TRCR	**Troy Canyon**	**13.79**	**131**	*e*P	**P**	**12 52 41.4**	**+0.4**
HWUT	**Hardware Ranch**	**13.89**	**112**	*e*P	**P**	**12 52 43.2**	**+0.9**
DUG	**Dugway**	**13.99**	**119**	*e*P	**P**	**12 52 44.0**	**+0.3**
	683nm,1.3s						
NOQ	**North Oquirrh**	**14.12**	**116**	*e*P	**P**	**12 52 45.2**	**0.0**
TCUT	**Toone Canyon**	**14.27**	**114**	*e*P	**P**	**12 52 48.3**	**+1.0**
JLU	**Jordanelle**	**14.55**	**115**	*e*P	**P**	**12 52 52.0**	**+1.0**
BW06	**Boulder Array**	**14.56**	**105**	*e*P	**P**	**12 52 51.9**	**+0.8**
	6.3nm,0.8s						
PDAR	**Pinedale Array**	**14.56**	**105**	Pn	**P**	**12 52 53.8**	**+2.7**
	0.1nm,0.3s,baz=301,slow=10,SNR=32						
PDAR				PcP	PcP	12 58 03.6	-2.1
	0.0nm,0.3s,baz=180,slow=1.5,SNR=5.1						
PDAR				LR	LR	12 58 47.0	
	comp=Z,2μm,18.8s,baz=301,slow=38						
NLU	**North Lily Min**	**14.58**	**118**	*e*P	**P**	**12 52 52.3**	**+0.9**
DAU	**Daniels Canyon**	**14.78**	**115**	*e*P	**P**	**12 52 55.0**	**+1.0**
MPU	**Maple Canyon**	**14.80**	**117**	*e*P	**P**	**12 52 54.8**	**+0.4**
ARUT	**Antelope Range**	**15.32**	**127**	*e*P	**P**	**12 53 01.5**	**+0.4**
LAO	**LASA Array**	**15.35**	**87**	*e*P	**P**	**12 53 01.7**	**+0.3**
	101nm,1.0s						
MVU	**Marysvale**	**15.48**	**123**	*e*P	**P**	**12 53 02.7**	**-0.4**
	31nm,0.9s						
MSU	**Marysvale**	**15.49**	**123**	*e*P	**P**	**12 53 04.4**	**+1.1**
TMUT	**Trail Mountain**	**15.52**	**119**	*e*P	**P**	**12 53 04.4**	**+0.7**
SRU	**San Rafael**	**16.04**	**118**	*e*P	**P**	**12 53 11.2**	**+0.8**
MWC	**Mount Wilson**	**16.15**	**146**	*e*P	**P**	**12 53 12.1**	**+0.3**
YKA	**Yellowknife Ar**	**16.34**	**24**	Pn	**P**	**12 53 13.5**	**-0.6**
	0.3nm,0.3s,baz=213,slow=12,SNR=23						
YKA				LR	LR	12 59 31.4	
	comp=Z,845nm,21.0s,baz=215,slow=37						
YKA	**Yellowknife Ar**	**16.34**	**24**	Pn	**P**	**12 53 13.5**	**-0.6**
YKA				LR	LR	12 59 31.4	
DGMT	**Dagmar**	**16.35**	**80**	*e*P	**P**	**12 53 14.1**	**-0.1**
	200nm,1.4s						
YKW3	**Yellowknife Ar**	**16.39**	**24**	*e*P	**P**	**12 53 14.0**	**-0.8**
YKW3	**Yellowknife Ar**	**16.39**	**24**	Pn	**P**	**12 53 14.4**	**-0.3**
YKW3				Pn	**P**	**12 53 15.3**	**+0.6**
LDFC	**Landfair**	**16.63**	**137**	*e*P	**P**	**12 53 17.9**	**0.0**
DAWY	**Dawson**	**16.88**	**344**	*e*P	**P**	**12 53 21.6**	**+0.7**
DAWY	**Dawson**	**16.88**	**344**	Pn	**P**	**12 53 22.1**	**+1.3**
KDAK	**Kodiak Island**	**17.11**	**313**	*e*P	**P**	**12 53 26.7**	**+2.9**
PFO	**Pinyon Flat Ob**	**17.31**	**143**	*e*P	**P**	**12 53 26.7**	**+0.2**
PFO				pmax	pmax		
	comp=Z,25nm,0.9s						
PFO	**Pinyon Flat Ob**	**17.31**	**143**	*e*P	**P**	**12 53 26.7**	**+0.2**
	comp=Z,25nm,0.9s						
SLKM	**Skilak Lake**	**17.40**	**323**	*e*P	**P**	**12 53 27.2**	**-0.2**
PV10	**Paradox Valley**	**17.40**	**117**	*e*P	**P**	**12 53 29.3**	**+1.7**
SML	**Sawmill**	**17.50**	**328**	*e*P	**P**	**12 53 28.8**	**+0.2**
PV01	**Paradox Valley**	**17.84**	**117**	*e*P	**P**	**12 53 33.7**	**+0.7**
FFC	**Flin Flon**	**17.86**	**59**	P	**P**	**12 53 35.9**	**+2.8**
	comp=Z,1μm,0.9s						
FFC	**Flin Flon**	**17.86**	**59**	*e*P	**P**	**12 53 34.9**	**+1.8**
FFC				pmax	pmax		
	comp=Z,265nm,1.0s						
FFC	**Flin Flon**	**17.86**	**59**	*e*P	**P**	**12 53 34.9**	**+1.7**
	comp=Z,265nm,1.0s						
PHWY	**Pilot Hill**	**17.94**	**104**	*e*P	**P**	**12 53 34.8**	**+0.6**
PWA	**Palmer West**	**17.95**	**326**	*e*P	**P**	**12 53 36.2**	**+1.9**
BAR	**Barrett**	**18.05**	**145**	*e*P	**P**	**12 53 35.6**	**-0.1**
WUAZ	**Wupatki**	**18.12**	**128**	*e*P	**P**	**12 53 37.5**	**+0.9**
	comp=Z,1μm,1.4s						
RW3	**Ridgway**	**18.29**	**115**	P	**P**	**12 53 41.4**	**+2.7**
RSO	**Redoubt South**	**18.42**	**320**	*e*P	**P**	**12 53 40.1**	**-0.1**
ISCO	**Idaho Springs**	**18.64**	**108**	*e*P	**P**	**12 53 43.4**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,20nm,1.1s						
ISCO	**Idaho Springs**	**18.64**	**108**	*e*P	**P**	**12 53 43.4**	**+0.4**
	comp=Z,20nm,1.1s						
MCK	**McKinley**	**19.03**	**332**	*e*P	**P**	**12 53 46.4**	**-1.1**
MCK				pmax	pmax		
	comp=Z,27nm,1.5s						
MCK	**McKinley**	**19.03**	**332**	*e*P	**P**	**12 53 46.4**	**-1.1**
	comp=Z,27nm,1.5s						
ILAR	**Eielson Array**	**19.21**	**336**	P	**P**	**12 53 49.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=151,slow=10,SNR=43						
ILAR				PcP	PcP	12 58 10.4	-2.4
	comp=Z,0.1nm,0.3s,baz=182,slow=2.1,SNR=15						
ILAR				LR	LR	13 00 19.5	
	comp=Z,1μm,21.1s,baz=158,slow=34						
COLA	**College**	**19.55**	**335**	*e*P	**P**	**12 53 52.0**	**-1.5**
COLA				pmax	pmax		
	comp=Z,57nm,1.4s						
COLA	**College**	**19.55**	**335**	*e*P	**P**	**12 53 52.0**	**-1.5**
	comp=Z,57nm,1.4s						
SVW2	**Sparrevohn**	**19.94**	**320**	*e*P	**P**	**12 53 56.5**	**-1.4**
SDCO	**Great Sand Dun**	**19.95**	**113**	*e*P	**P**	**12 53 57.9**	**-0.3**
	comp=Z,18nm,0.9s						
INK	**Inuvik**	**20.26**	**355**	*e*P	**P**	**12 54 00.2**	**-1.0**
INK				pmax	pmax		
	comp=Z,57nm,1.5s						
INK	**Inuvik**	**20.26**	**355**	P	**P**	**12 54 01.3**	**+0.1**
	comp=Z,16nm,1.1s,baz=170,slow=12,SNR=21						
INK				PcP	PcP	12 58 11.0	-3.7
	comp=Z,1.0nm,0.7s,baz=273,slow=4.7,SNR=4.0						
INK				LR	LR	13 01 30.8	
	comp=Z,750nm,21.9s,MS4.0,baz=175,slow=36						
INK	**Inuvik**	**20.26**	**355**	*e*P	**P**	**12 54 00.2**	**-1.0**
	comp=Z,57nm,1.5s						
INK	**Inuvik**	**20.26**	**355**	Pn	**P**	**12 54 00.5**	**-0.7**
TUC	**Tucson**	**20.95**	**133**	*e*P	**P**	**12 54 08.5**	**-0.1**
TUC				pmax	pmax		
	comp=Z,19nm,0.8s						
TUC	**Tucson**	**20.95**	**133**	*e*P	**P**	**12 54 08.5**	**-0.1**
	comp=Z,19nm,0.8s						
ANMO	**Albuquerque**	**21.25**	**120**	*e*P	**P**	**12 54 11.8**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,79nm,1.3s						
ANMO	**Albuquerque**	**21.25**	**120**	P	**P**	**12 54 12.4**	**+0.7**
	comp=Z,23nm,0.9s,mb4.5,baz=321,slow=11,SNR=74						
ANMO				LR	LR	13 02 29.5	
	comp=Z,709nm,21.5s,MS4.0,slow=37						
ANMO	**Albuquerque**	**21.25**	**120**	*e*P	**P**	**12 54 11.8**	**+0.2**
	comp=Z,78nm,1.3s,mb4.9						
IMA	**Indian Mountai**	**22.11**	**333**	*e*P	**P**	**12 54 20.4**	**+0.3**
FCC	**Fort Churchill**	**22.91**	**50**	*e*P	**P**	**12 54 28.8**	**+0.9**
FCC				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.0						
FCC	**Fort Churchill**	**22.91**	**50**	*e*P	**P**	**12 54 28.8**	**+0.9**
	comp=Z,59nm,0.9s,mb5.0						
FCC	**Fort Churchill**	**22.91**	**50**	Pn	**P**	**12 54 29.3**	**+1.4**
CBKS	**Cedar Bluff**	**22.97**	**103**	*e*P	**P**	**12 54 30.0**	**+1.3**
CBKS				pmax	pmax		
	comp=Z,40nm,0.9s,mb4.8						
CBKS	**Cedar Bluff**	**22.97**	**103**	*e*P	**P**	**12 54 30.0**	**+1.3**
	comp=Z,40nm,0.9s,mb4.8						
AMTX	**Amarillo**	**24.15**	**114**	*e*P	**P**	**12 54 41.2**	**+1.0**
	comp=Z,76nm,0.9s,mb5.1						
MNTX	**Cornudas Mount**	**24.26**	**124**	*e*P	**P**	**12 54 41.5**	**+0.3**
	comp=Z,91nm,1.8s,mb4.9						
EYMN	**Ely**	**24.77**	**77**	*e*P	**P**	**12 54 46.6**	**+0.6**
	comp=Z,61nm,1.1s,mb5.0						
KSU1	**Kansas State U**	**24.87**	**100**	*e*P	**P**	**12 54 47.9**	**+0.8**
WMOK	**Wichita Mounta**	**26.04**	**110**	*e*P	**P**	**12 54 57.9**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.8						
WMOK	**Wichita Mounta**	**26.04**	**110**	*e*P	**P**	**12 54 57.9**	**-0.3**

	comp=Z,28nm,0.9s,mb4.8						
TNA	**Tin City**	**26.86**	**324**	*e*P	**P**	**12 55 04.8**	**-0.6**
	comp=Z,22nm,1.5s,mb4.5						
LTX	**Lajitas**	**27.02**	**125**	*e*P	**P**	**12 55 07.0**	**-0.2**
LTX				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.6						
LTX	**Lajitas**	**27.02**	**125**	*e*P	**P**	**12 55 07.0**	**-0.2**
	comp=Z,27nm,1.4s,mb4.6						
TXAR	**Lajitas Array**	**27.02**	**125**	P	**P**	**12 55 07.3**	**+0.1**
	comp=Z,7.0nm,0.9s,mb4.2,baz=309,slow=7.4,SNR=55						
TXAR				PcP	PcP	12 58 27.4	-1.7
	comp=Z,1.2nm,0.8s,baz=268,slow=0.8,SNR=7.2						
TXAR				LR	LR	13 06 27.2	
	comp=Z,2µm,20.1s,MS4.5,baz=265,slow=38						
JCT	**Junction City**	**28.35**	**118**	*e*P	**P**	**12 55 18.2**	**-1.1**
JCT				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.9						
JCT	**Junction City**	**28.35**	**118**	*e*P	**P**	**12 55 18.2**	**-1.1**
	comp=Z,28nm,0.9s,mb4.9						
RES	**Resolute Bay**	**30.18**	**17**	*e*P	**P**	**12 55 34.4**	**-0.9**
RES				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
RES	**Resolute Bay**	**30.18**	**17**	*e*P	**P**	**12 55 34.4**	**-0.9**
	comp=Z,16nm,0.8s,mb4.8						
RES	**Resolute Bay**	**30.18**	**17**	Pn	**P**	**12 55 35.4**	**+0.1**
HKT	**Hockley**	**31.12**	**114**	*e*P	**P**	**12 55 43.3**	**-0.6**
HKT				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.7						
HKT	**Hockley**	**31.12**	**114**	*e*P	**P**	**12 55 43.3**	**-0.6**
	comp=Z,18nm,1.5s,mb4.7						
SADO	**Sadowa**	**33.88**	**77**	P	**P**	**12 56 07.8**	**-0.1**
	comp=Z,5.0nm,0.7s,mb4.6,baz=298,slow=8.8,SNR=4.4						
SADO				LR	LR	13 10 26.0	
	comp=Z,517nm,18.8s,MS4.3,baz=303,slow=37						
FRB	**Frobisher Bay**	**35.55**	**42**	P	**P**	**12 56 22.4**	**+0.4**
	comp=Z,8.3nm,0.8s,mb4.7,baz=271,slow=6.7,SNR=7.7						
BILL	**Bilibino**	**37.28**	**326**	*e*P	**P**	**12 56 36.6**	**+0.1**
BILL				*e*		12 58 03.5	
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
BILL				MLR	MLR		
	comp=Z,10µm,20.0s						
SCHQ	**Schefferville**	**37.97**	**56**	P	**P**	**12 56 42.9**	**+0.4**
	comp=Z,14nm,0.8s,mb4.7,baz=291,slow=8.3,SNR=18						
SCHQ				LR	LR	13 12 16.5	
	comp=Z,586nm,18.5s,MS4.4,baz=122,slow=36						
SCHQ	**Schefferville**	**37.97**	**56**	*e*P	**P**	**12 56 42.0**	**-0.4**
	comp=Z,28nm,1.0s,mb5.0						
SEY	**Seymchan**	**43.88**	**320**	*e*P	**P**	**12 57 32.1**	**+1.2**
SEY				*e*		12 59 07.7	
SEY				*e*		12 59 16.3	
SEY				*e*PPP	PPP	12 59 58.7	+6.7
SEY				*e*S	**S**	**13 04 02.2**	**+0.7**
SEY				*e*SS	SS	13 07 24.9	+15
SEY				pmax	pmax		
	comp=E,40nm,1.1s						
SEY				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.2						
SEY				smax			
	comp=N,400nm,24.2s						
SEY				smax			
	comp=E,400nm,15.4s						
SUMG	**Summit**	**44.93**	**25**	*e*P	**P**	**12 57 39.7**	**+0.4**
	comp=E,13nm,0.9s,mb4.8						
MA2	**Magadan**	**45.83**	**316**	*e*P	**P**	**12 57 45.8**	**-0.7**
MA2				*e*S	**S**	**13 04 28.1**	**-1.4**
MA2				*e*SSS	SSS	13 08 48.9	+0.1
MA2				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.5						
MA2				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.1						
TIXI	**Tiksi**	**48.68**	**336**	*e*P	**P**	**12 58 07.8**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,278nm,15.0s,MS4.4						
YAK	**Yakutsk**	**53.63**	**325**	*e*P	**P**	**12 58 44.5**	**-1.9**
YAK				*i* *PP	pP	12 58 47.4	-2.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
YAK				pmax	pmax		
	comp=N,1.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,265nm,21.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,156nm,19.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,166nm,20.0s,MS4.2						
YAK	**Yakutsk**	**53.63**	**325**	*e*P	**P**	**12 58 44.0**	**-2.4**
	comp=E,20nm,0.8s,mb5.1						
JMIC	**Jan Mayen**	**53.69**	**21**	LR	LR	13 19 43.4	
	comp=E,175nm,21.5s,MS4.1,baz=73,slow=34						
BORG	**Borgarnes**	**54.15**	**30**	LR	LR	13 22 38.2	
	comp=E,343nm,18.9s,MS4.4,baz=204,slow=37						
KLR	**Kul'dur**	**60.67**	**312**	*e*P	**P**	**12 59 29.0**	**-7.5**
ARCES	**ARCESS Array B**	**61.03**	**10**	P	**P**	**12 59 37.6**	**-1.1**
	comp=E,2.5nm,0.8s,mb4.4,slow=6.1,SNR=5.4						
ARCES				LR	LR	13 27 48.7	
	comp=E,142nm,18.1s,MS4.2,baz=206,slow=38						
BOD	**Bodaibo**	**62.30**	**327**	*e*P	**P**	**12 59 42.7**	**-4.7**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
ROSC	**El Rosal**	**63.29**	**115**	P	**P**	**12 59 55.0**	**+0.5**
	comp=Z,3.5nm,0.4s,mb4.9,baz=95,slow=23,SNR=6.2						
ROSC				LR	LR	13 26 53.0	
	comp=Z,110nm,20.1s,MS4.0,baz=15,slow=36						
MDJ	**Mudanjiang**	**64.87**	**309**	P	**P**	**13 00 01.5**	**-2.9**
MDJ				AP	pP	13 00 04.5	-3.3
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,103nm,3.9s						
MDJ				LR	LR		
	comp=N,98nm,21.2s,MS4.2						
MDJ				LR	LR		
	comp=E,136nm,21.8s,MS4.2						
MDJ				LR	LR		
	comp=Z,214nm,21.8s,MS4.3						
NB2	**NORSAR Subarra**	**66.40**	**20**	P	**P**	**13 00 13.6**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=337,slow=6.5						
NB2	**NORSAR Subarra**	**66.40**	**20**	P	**P**	**13 00 13.6**	**-0.2**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
NOA	**NORSAR Array B**	**66.40**	**20**	P	**P**	**13 00 13.6**	**-0.3**
	comp=Z,9.2nm,0.8s,mb4.8,baz=334,slow=6.4,SNR=22						
NOA				LR	LR	13 27 55.0	
	comp=Z,90nm,18.8s,MS4.0,baz=315,slow=35						
NAO01	**NORSAR Array S**	**66.50**	**20**	*e*P	**P**	**13 00 13.7**	**-0.7**
	comp=Z,21nm,0.9s,mb5.2						
ESK	**Eskdalemuir**	**67.18**	**30**	P	**P**	**13 00 17.8**	**-1.2**
CN2	**Changchun**	**67.56**	**311**	*e*P	**P**	**13 00 19.5**	**-2.0**
CN2				*e*XP	sP	13 00 25.3	-1.0
CN2				*e*S	S	13 09 13.3	-3.2
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
CN2				AMB	AMB		
	comp=Z,90nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,18.0s,MS4.6						
CN2				LR	LR		
	comp=Z,300nm,21.0s,MS4.5						
HFS	**Hagfors**	**67.76**	**19**	P	**P**	**13 00 22.2**	**-0.3**
	comp=Z,20nm,0.8s,mb5.2,slow=5.9,SNR=24						
FINES	**FINESS Array B**	**68.81**	**13**	P	**P**	**13 00 28.3**	**-0.8**
	comp=Z,3.8nm,0.8s,mb4.4,baz=18,slow=6.0,SNR=13						
FINES				LR	LR	13 28 35.8	
	comp=Z,163nm,21.8s,MS4.2,baz=18,slow=34						
FINES	**FINESS Array B**	**68.81**	**13**	P	**P**	**13 00 28.3**	**-0.8**
FINES				LR	LR	13 28 35.8	
TLY	**Talaya**	**70.83**	**328**	*e*P	**P**	**13 00 40.1**	**-1.4**
TLY				*e*S	S	13 09 53.7	-1.3
TLY				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
TLY				MLR	MLR		
	comp=Z,160nm,16.0s,MS4.4						
ZAK	**Zakamensk**	**72.04**	**328**	*e*P	**P**	**13 00 47.3**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s						
BSEG	**Bad Segeberg**	**72.49**	**24**	*e*P	**P**	**13 00 52.0**	**+0.6**
ULN	**Ulaanbaatar**	**72.70**	**324**	⇓*e*P	**P**	**13 00 52.0**	**-0.7**
ULN	**Ulaanbaatar**	**72.70**	**324**	*e*P	**P**	**13 00 50.9**	**-1.7**
	comp=Z,13nm,1.5s,mb4.6						
ROSF	**Rostrenen**	**72.86**	**35**	*e*P	**P**	**13 00 53.6**	**0.0**
SONM	**Songino Array**	**72.99**	**325**	P	**P**	**13 00 53.6**	**-0.7**
	comp=Z,4.2nm,0.9s,mb4.4,baz=45,slow=5.2,SNR=24						
SGMF	**Saint Gilles**	**73.20**	**34**	*e*P	**P**	**13 00 55.5**	**-0.1**
	comp=Z,185nm,1.6s,mb5.5						
SGMF	**Saint Gilles**	**73.20**	**34**	*e*P	**P**	**13 00 55.5**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,92nm,1.6s,mb5.5						
WTSB	**Winterswijk**	**73.22**	**27**	*e*P	**P**	**13 00 56.0**	**+0.4**
	comp=Z,21nm,1.5s,mb4.8						
QUIF	**Quistinic**	**73.25**	**35**	*e*P	**P**	**13 00 55.8**	**-0.1**
	comp=Z,10nm,0.7s,mb4.5						
QUIF	**Quistinic**	**73.25**	**35**	*e*P	**P**	**13 00 55.8**	**-0.1**
QUIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
FLN	**La Foliniere**	**73.54**	**33**	*e*P	**P**	**13 00 57.7**	**+0.2**
FLN				*e*R			
	comp=Z,278nm,22.8s						
GRR	**Gorron**	**73.72**	**33**	*e*P	**P**	**13 00 59.1**	**+0.5**
	comp=Z,20nm,0.7s,mb4.8						
GRR	**Gorron**	**73.72**	**33**	*e*P	**P**	**13 00 59.1**	**+0.5**
GRR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
NVS	**Novosibirsk**	**73.80**	**341**	*e*P	**P**	**13 00 56.1**	**-2.8**
NVS				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
LDF	**La Druitiere**	**73.81**	**33**	*e*P	**P**	**13 00 59.4**	**+0.3**
HGN	**Heimansgroeve**	**74.00**	**28**	*e*P	**P**	**13 01 00.7**	**+0.6**
	comp=Z,14nm,0.7s,mb5.0						
BAIF	**Baives**	**74.06**	**29**	*e*P	**P**	**13 01 00.9**	**+0.4**
GIVF	**Givet**	**74.22**	**29**	*e*P	**P**	**13 01 01.7**	**+0.3**
	comp=Z,49nm,1.2s,mb5.0						
GIVF	**Givet**	**74.22**	**29**	*e*P	**P**	**13 01 01.7**	**+0.3**
GIVF				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
ZAL	**Zalesovo**	**74.30**	**340**	P	**P**	**13 01 01.1**	**-0.7**
	comp=Z,1.0nm,0.6s,mb3.9,baz=80,slow=7.4,SNR=6.0						
ZAL				LR	LR	13 36 46.9	
	comp=Z,241nm,18.4s,MS4.5,baz=92,slow=38						
CLZ	**Clausthal**	**74.37**	**25**	*e*P	**P**	**13 01 03.2**	**+0.9**
	comp=Z,25nm,1.0s,mb5.1						
RAR	**Rarotonga**	**74.50**	**210**	LR	LR	13 25 12.3	
	comp=Z,221nm,20.8s,MS4.4,baz=344,slow=29						
GKP	**Gorka Klasztor**	**74.84**	**20**	*e*P	**P**	**13 01 05.5**	**+0.6**
BJI	**Beijing**	**74.95**	**314**	P	**P**	**13 01 05.5**	**-0.4**
BJI				AP	pP	13 01 08.8	-0.6
BJI				XP	sP	13 01 10.0	-0.6
BJI				PCP	PcP	13 01 15.0	-5.1
BJI				S	S	13 10 40.0	-1.9
BJI				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
BJI				LR	LR		
	comp=N,274nm,19.9s,MS4.7						
BJI				LR	LR		
	comp=E,195nm,18.2s,MS4.7						
BJI				LR	LR		
	comp=Z,235nm,25.9s						
BJI	**Beijing**	**74.95**	**314**	P	**P**	**13 01 05.4**	**-0.5**
BJI				*PP	pP	13 01 08.7	-0.7
BJI				*SP	sP	13 01 09.9	-0.7
BJI						13 01 15.1	
BJI				S	S	13 10 40.0	-1.9
BJI				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BJI				MLR	MLR		
	comp=Z,240nm,25.9s,MS4.4						
BJI	**Beijing**	**74.95**	**314**	P	**P**	**13 01 05.4**	**-0.5**
	comp=Z,4.0nm,1.2s,mb4.2						
BJI				pP	pP	13 01 08.7	-0.7
BJI				sP	sP	13 01 09.9	-0.7
BJI				PcP	PcP	13 01 15.1	-5.0
BJI				S	S	13 10 40.0	-1.9
BJI				LR	LR		
	comp=Z,240nm,25.9s,MS4.4						
TNS	**Taunus Mts**	**75.25**	**27**	*e*P	**P**	**13 01 07.7**	**+0.3**
TNS				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
TNS	**Taunus Mts**	**75.25**	**27**	*e*P	**P**	**13 01 07.7**	**+0.3**
	comp=Z,10.0nm,1.0s,mb4.7						
SUW	**Suwalki**	**75.40**	**17**	*e*P	**P**	**13 01 07.8**	**-0.4**
MFF	**Saint Martin d**	**75.48**	**34**	*e*P	**P**	**13 01 09.2**	**+0.4**
	comp=Z,12nm,0.8s,mb4.6						
MFF	**Saint Martin d**	**75.48**	**34**	*e*P	**P**	**13 01 09.2**	**+0.4**
MFF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
CLL	**Collm**	**75.57**	**24**	⇑*i*P	**P**	**13 01 09.3**	**+0.1**
CLL				*i*	pP	13 01 14.6	+1.9
CLL				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
CLL	**Collm**	**75.57**	**24**	⇑*i*P	**P**	**13 01 09.3**	**+0.1**
	comp=Z,13nm,1.0s,mb4.8						
CLL				*i*	pP	13 01 14.6	+1.9
CLL	**Collm**	**75.57**	**24**	⇑P	**P**	**13 01 09.3**	**+0.1**
	comp=Z,logA/T=1.1,mb4.8						
CLL				*i* *PP	pP	13 01 14.6	+1.9
CLL				*e*		13 01 27.0	
MOS	**Moscow**	**75.77**	**8**	*e*P	**P**	**13 01 00.7**	**-10**
MOX	**Moxa**	**75.79**	**25**	*e*P	**P**	**13 01 10.8**	**+0.3**
MOX				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
MOX	**Moxa**	**75.79**	**25**	*e*P	**P**	**13 01 10.8**	**+0.3**
	comp=Z,16nm,1.0s,mb4.9						
MOX	**Moxa**	**75.79**	**25**	*i* P	**P**	**13 01 10.8**	**+0.3**
	comp=Z,logA/T=1.2,mb4.9						
BRG	**Berggiesshubel**	**76.22**	**23**	*i* P	**P**	**13 01 13.5**	**+0.6**
BRG				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
BRG	**Berggiesshubel**	**76.22**	**23**	*i* P	**P**	**13 01 13.5**	**+0.6**
	comp=Z,24nm,1.1s,mb5.0						
OBN	**Obninsk**	**76.28**	**9**	⇓*e*P	**P**	**13 01 12.8**	**-0.3**
OBN				*e*		13 01 22.7	
OBN				*e*S	S	13 10 51.1	-5.1
OBN				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
NKC	**Novy Kostel**	**76.39**	**24**	*e*P	**P**	**13 01 13.5**	**-0.4**
SSF	**Saint Saulge**	**76.40**	**31**	*e*P	**P**	**13 01 14.4**	**+0.4**
	comp=Z,32nm,1.2s,mb4.8						
SSF	**Saint Saulge**	**76.40**	**31**	*e*P	**P**	**13 01 14.4**	**+0.4**
SSF				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.8						
CDF	**Champ du Feu**	**76.48**	**28**	*e*P	**P**	**13 01 15.0**	**+0.6**
	comp=Z,36nm,1.1s,mb4.9						
CDF	**Champ du Feu**	**76.48**	**28**	*e*P	**P**	**13 01 15.0**	**+0.6**
CDF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
GRA1	**Grafenberg Arr**	**76.54**	**25**	*e*P	**P**	**13 01 15.4**	**+0.7**
	comp=Z,41nm,1.6s,mb5.1						
GRF	**Grafenberg Arr**	**76.54**	**25**	*e*P	**P**	**13 01 15.4**	**+0.7**
GRF				pmax	pmax		
	comp=Z,41nm,1.6s,mb5.1						
GRF	**Grafenberg Arr**	**76.54**	**25**	*e*P	**P**	**13 01 15.4**	**+0.7**
GRF				pmax	pmax		
	comp=Z,41nm,1.6s,mb5.1						
GRF	**Grafenberg Arr**	**76.54**	**25**	*e*P	**P**	**13 01 15.4**	**+0.7**
	comp=Z,41nm,1.6s,mb5.1						
AVF	**Avril sur Loir**	**76.58**	**32**	*e*P	**P**	**13 01 15.1**	**+0.1**
	comp=Z,25nm,1.1s,mb4.8						
AVF	**Avril sur Loir**	**76.58**	**32**	*e*P	**P**	**13 01 15.1**	**+0.1**
AVF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
BGF	**Bois d'Agland**	**76.60**	**32**	*e*P	**P**	**13 01 15.3**	**+0.2**
	comp=Z,39nm,1.1s,mb5.0						
BGF	**Bois d'Agland**	**76.60**	**32**	*e*P	**P**	**13 01 15.3**	**+0.2**
BGF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
TCF	**Toulx Ste Croi**	**76.61**	**33**	*e*P	**P**	**13 01 15.4**	**+0.2**
	comp=Z,60nm,1.2s,mb5.1						
TCF	**Toulx Ste Croi**	**76.61**	**33**	*e*P	**P**	**13 01 15.4**	**+0.2**
TCF				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
PVCC	**Panska Ves**	**76.70**	**23**	*e*P	**P**	**13 01 16.5**	**+0.9**
KSP	**Ksiaz**	**76.85**	**22**	*e*P	**P**	**13 01 16.9**	**+0.5**
KSP	**Ksiaz**	**76.85**	**22**	*e*P	**P**	**13 01 17.2**	**+0.8**
HINF	**Hinteralfeld**	**76.87**	**29**	*e*P	**P**	**13 01 16.9**	**+0.3**
	comp=Z,26nm,1.2s,mb4.7						
HINF	**Hinteralfeld**	**76.87**	**29**	*e*P	**P**	**13 01 16.9**	**+0.3**
HINF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
SMF	**Signal de Mont**	**76.88**	**31**	*e*P	**P**	**13 01 16.7**	**0.0**
BFO	**Black Forest**	**76.89**	**28**	*e*P	**P**	**13 01 17.2**	**+0.5**
BFO				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
BFO	**Black Forest**	**76.89**	**28**	*e*P	**P**	**13 01 17.2**	**+0.5**
	comp=Z,16nm,1.0s,mb4.9						
UPC	**Upice**	**77.09**	**22**	*e*P	**P**	**13 01 18.2**	**+0.5**
CHKZ	**Chkalovo**	**77.13**	**348**	*e*P	**P**	**13 01 16.0**	**-1.9**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
CHKZ	**Chkalovo**	**77.13**	**348**	*e*P	**P**	**13 01 16.0**	**-1.9**
	comp=Z,7.6nm,1.2s,mb4.5						
PRU	**Pruhonice**	**77.18**	**23**	*e*P	**P**	**13 01 18.4**	**+0.1**
PRU				AMS	AMS	13 34 00.0	
	comp=Z,100nm,19.2s						
RJF	**Les Rejaudoux**	**77.20**	**33**	*e*P	**P**	**13 01 18.6**	**+0.2**
	comp=Z,41nm,0.9s,mb5.0						
RJF				*e*R			
	comp=Z,305nm,20.2s						
RJF	**Les Rejaudoux**	**77.20**	**33**	*e*P	**P**	**13 01 18.6**	**+0.2**
RJF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
RJF				MLR	MLR		
	comp=Z,300nm,20.3s,MS4.6						
LFF	**La Frestale**	**77.22**	**34**	*e*P	**P**	**13 01 19.1**	**+0.5**
	comp=Z,20nm,0.6s,mb4.9						
LFF	**La Frestale**	**77.22**	**34**	*e*P	**P**	**13 01 19.1**	**+0.5**
LFF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
DPC	**Dobruska-Polom**	**77.31**	**22**	AMS	AMS	13 37 10.0	
	comp=Z,200nm,15.4s						
WET	**Wettzell**	**77.50**	**25**	*e*P	**P**	**13 01 20.6**	**+0.6**
WET				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
WET	**Wettzell**	**77.50**	**25**	*e*P	**P**	**13 01 20.6**	**+0.6**
	comp=Z,7.0nm,1.0s,mb4.5						
CABF	**La Chapelle**	**77.67**	**30**	*e*P	**P**	**13 01 22.0**	**+1.0**
	comp=Z,26nm,1.1s,mb4.8						
CABF	**La Chapelle**	**77.67**	**30**	*e*P	**P**	**13 01 22.0**	**+1.0**
CABF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
KHC	**Kasperske Hory**	**77.70**	**24**	*e*P	**P**	**13 01 21.9**	**+0.7**
KHC				AMS	AMS	13 34 10.0	
	comp=Z,100nm,20.9s						
CAF	**Calviac**	**77.72**	**33**	*e*P	**P**	**13 01 21.6**	**+0.3**
	comp=Z,25nm,0.9s,mb4.8						
CAF	**Calviac**	**77.72**	**33**	*e*P	**P**	**13 01 21.6**	**+0.3**
CAF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
BVAR	**Borovoye Array**	**77.80**	**348**	P	**P**	**13 01 20.7**	**-0.9**
	comp=Z,1.3nm,0.7s,mb4.0,baz=17,slow=4.9,SNR=9.0						
GEC2	**GERESS Array S**	**78.00**	**24**	*e*P	**P**	**13 01 23.2**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GEC2	**GERESS Array S**	**78.00**	**24**	*e*P	**P**	**13 01 23.2**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.7						
GERES	**GERESS Array B**	**78.00**	**24**	P	**P**	**13 01 23.6**	**+0.8**
	comp=Z,5.1nm,0.8s,mb4.5,baz=342,slow=4.2,SNR=28						
SJPF	**Ste Jean**	**78.00**	**36**	*e*P	**P**	**13 01 23.5**	**+0.6**
	comp=Z,37nm,1.1s,mb4.9						
SJPF	**Ste Jean**	**78.00**	**36**	*e*P	**P**	**13 01 23.5**	**+0.6**
SJPF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
MORC	**Moravsky Berou**	**78.14**	**22**	*e*P	**P**	**13 01 23.6**	**+0.1**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
MORC	**Moravsky Berou**	**78.14**	**22**	*e*P	**P**	**13 01 23.6**	**+0.1**
	comp=Z,5.2nm,1.1s,mb4.4						
OKC	**Ostrava-Krasne**	**78.23**	**21**	*e*P	**P**	**13 01 24.5**	**+0.5**
OJC	**Ojcow**	**78.26**	**20**	*e*P	**P**	**13 01 24.1**	**-0.1**
VRAC	**Vranov**	**78.34**	**22**	P	**P**	**13 01 25.3**	**+0.7**
	comp=Z,16nm,0.9s,mb5.0,baz=8.2,slow=7.4,SNR=13						
ETSF	**Etsaut**	**78.44**	**36**	*e*P	**P**	**13 01 26.3**	**+0.9**
KURK	**Kurchatov**	**78.64**	**343**	*e*P	**P**	**13 01 24.8**	**-1.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	**78.64**	**343**	*e*P	**P**	**13 01 24.8**	**-1.4**
	comp=Z,6.3nm,1.0s,mb4.5						
EPF	**Esparros**	**78.69**	**35**	*e*P	**P**	**13 01 26.8**	**+0.1**
LPL	**La Plagne**	**78.85**	**30**	*e*P	**P**	**13 01 28.9**	**+1.4**
LPG	**La Plagne**	**78.87**	**30**	*e*P	**P**	**13 01 29.1**	**+1.4**
LASF	**Ste Croix**	**79.11**	**33**	*e*P	**P**	**13 01 29.6**	**+0.6**
	comp=Z,77nm,1.3s,mb5.2						
NIE	**Niedzica**	**79.13**	**20**	*e*P	**P**	**13 01 28.3**	**-0.7**
SSE	**Sheshan**	**79.28**	**305**	P	**P**	**13 01 29.0**	**-1.2**
SSE				S	S	13 11 23.8	-5.1
SSE				AMB	AMB		
	comp=Z,32nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,130nm,4.5s						
SSE				LR	LR		
	comp=N,50nm,20.0s,MS4.0						
SSE				LR	LR		
	comp=E,62nm,20.0s,MS4.0						
SSE				LR	LR		
	comp=Z,113nm,20.0s,MS4.2						
SSE	**Sheshan**	**79.28**	**305**	P	**P**	**13 01 29.0**	**-1.2**
	comp=Z,32nm,0.8s,mb5.3						
SSE				S	S	13 11 23.7	-5.2
SSE				sS		13 11 41.8	
SSE				SS	SS	13 16 29.4	-9.2
SSE				LR	LR		
	comp=Z,110nm,20.0s,MS4.2						
KWP	**Kalwaria**	**79.46**	**18**	*e*P	**P**	**13 01 31.5**	**+0.8**
AKASG	**Malin Array Be**	**79.64**	**14**	P	**P**	**13 01 31.0**	**-0.7**
	comp=Z,8.4nm,1.1s,mb4.6,baz=341,slow=5.0,SNR=9.7						
VYHS	**Vyhne**	**79.65**	**21**	*e*P	**P**	**13 01 31.7**	**-0.1**
NJ2	**Nanjing**	**79.80**	**307**	*e*P	**P**	**13 01 30.8**	**-2.2**
NJ2				PCP	PcP	13 01 38.0	-3.1
NJ2				AP	pP	13 01 40.3	+3.8
NJ2				XP	sP	13 01 44.0	+6.3
NJ2				S	S	13 11 24.0	-10
NJ2				AMB	AMB		
	comp=Z,400nm,4.7s						
NJ2				LR	LR		
	comp=N,310nm,19.2s						
NJ2				LR	LR		
	comp=E,440nm,12.0s						
NJ2				LR	LR		
	comp=Z,440nm,17.8s,MS4.8						
CRVS	**Cervenica-Dubn**	**79.88**	**19**	*e*sP	sP	13 01 36.3	-1.4
KOLS	**Kolonicke sedl**	**80.02**	**19**	*e*P	**P**	**13 01 34.6**	**+0.8**
KECS	**Kecovo**	**80.05**	**20**	*e*P	**P**	**13 01 33.7**	**-0.2**
PSZ	**Piszkesteto**	**80.44**	**21**	*e*P	**P**	**13 01 36.5**	**+0.5**
PSZ				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
PSZ	**Piszkesteto**	**80.44**	**21**	*e*P	**P**	**13 01 36.5**	**+0.5**
	comp=Z,23nm,1.0s,mb5.1						
BURAR	**Bucovina Array**	**81.89**	**17**	⇑P	**P**	**13 01 44.7**	**+1.1**
BURAR	**Bucovina Array**	**81.89**	**17**	⇑P	**P**	**13 01 44.7**	**+1.1**
GTA	**Gaotai**	**82.65**	**324**	P	**P**	**13 01 46.0**	**-1.7**
GTA				AP	pP	13 01 50.0	-1.3
GTA				XP	sP	13 01 52.3	-0.2
GTA				S	S	13 11 58.8	-4.8
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.2						
GTA				AMB	AMB		
	comp=Z,96nm,6.5s						
GTA				LR	LR		
	comp=N,273nm,16.7s,MS4.8						
GTA				LR	LR		
	comp=E,229nm,17.9s,MS4.8						
GTA				LR	LR		
	comp=Z,434nm,21.3s,MS4.8						
WMQ	**Urumqi**	**82.86**	**334**	*e*P	**P**	**13 01 49.0**	**+0.2**
WMQ				S	S	13 12 06.0	+0.3
WMQ				AMB	AMB		
	comp=Z,14nm,1.2s,mb4.9						
WMQ				LR	LR		
	comp=N,124nm,25.0s,MS4.4						
WMQ				LR	LR		
	comp=E,178nm,25.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,158nm,24.0s,MS4.3						
BZS	**Buzias**	**83.01**	**20**	⇓P	**P**	**13 01 49.5**	**0.0**
XAN	**Xi'an**	**83.22**	**315**	P	**P**	**13 01 49.3**	**-1.5**
LZH	**Lanzhou**	**83.82**	**320**	*e*P	**P**	**13 01 53.5**	**-0.3**
LZH				AP	pP	13 01 56.5	-0.8
LZH				XP	sP	13 01 58.3	-0.2
LZH				PP	PP	13 05 07.5	-1.4
LZH				*e*S	S	13 12 13.5	-1.9
LZH				AMB	AMB		
	comp=Z,28nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,100nm,4.5s						
LZH				LR	LR		
	comp=E,416nm,15.8s						
LZH				LR	LR		
	comp=Z,485nm,16.7s,MS5.0						

LZH	Lanzhou	83.82	320	*e*P	P	13 01 53.5	-0.3
LZH				*PP	pP	13 01 56.5	-0.8
LZH				*SP	sP	13 01 58.2	-0.3
LZH						13 05 07.5	
LZH				*e*S	S	13 12 13.5	-1.9
LZH				*SS		13 12 19.0	
LZH				SS	SS	13 17 43.5	-2.3
LZH				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.2						
LZH				MLR	MLR		
	comp=Z,490nm,16.7s,MS5.0						
LZH	Lanzhou	83.82	320	*e*P	P	13 01 53.5	-0.3
	comp=Z,28nm,1.5s,mb5.2						
LZH				pP	pP	13 01 56.5	-0.8
LZH				sP	sP	13 01 58.2	-0.3
LZH				PP	PP	13 05 07.5	-1.4
LZH				*e*S	S	13 12 13.5	-1.9
LZH				sS		13 12 19.0	
LZH				SS	SS	13 17 43.5	-2.3
LZH				LR	LR		
	comp=Z,490nm,16.7s,MS5.0						
LPAZ	La Paz	83.86	123	*e*P	P	13 01 53.4	-1.0
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPAZ	La Paz	83.86	123	P	P	13 01 53.1	-1.3
	comp=Z,4.0nm,0.7s,mb4.7,baz=345,slow=6.8,SNR=21						
LPAZ				LR	LR	13 44 06.3	
	comp=Z,62nm,18.4s,MS4.0,baz=235,slow=39						
LPAZ	La Paz	83.86	123	*e*P	P	13 01 53.4	-1.0
	comp=Z,4.7nm,0.8s,mb4.7						
VRI	Vrincioaia	83.86	17	P	P	13 01 54.4	+0.6
DIVS	Divcibare	84.04	22	⇓*i*P	P	13 01 54.8	+0.1
MLR	Muntele Rosu	84.07	18	⇑P	P	13 01 55.5	+0.7
CFR	Carcaliu	84.80	16	⇓P	P	13 01 58.0	-0.4
HARR	Harsova	85.23	16	⇑P	P	13 02 00.8	+0.2
TIRR	Tirgusor	85.54	16	⇓P	P	13 02 02.1	-0.1
AAK	Ala-Archa	87.20	343	⇓*e*P	P	13 02 09.8	-0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.2						
AAK				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.5						
KIV	Kislovodsk	87.88	6	*e*P	P	13 02 14.3	+0.7
KIV				pmax	pmax		
	comp=N,14nm,1.0s						
KIV				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.3						
KIV				MLR	MLR		
	comp=N,104nm,21.0s,MS4.3						
KIV				MLR	MLR		
	comp=Z,125nm,21.0s,MS4.3						
KIV				MLR	MLR		
	comp=E,61nm,18.0s,MS4.3						
SOC	Sochi	88.00	8	*e*P	P	13 02 10.4	-3.8
SOC				*e*S	S	13 12 37.9	-18
SOC				*e*SS	SS	13 18 43.3	-3.9
SOC				*e*SSS	SSS	13 22 18.1	-1.1
SOC				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.6						
SOC				pmax	pmax		
	comp=N,51nm,1.0s						
SOC				pmax	pmax		
	comp=E,75nm,1.3s						
GYA	Guiyang	90.57	312	⇓*i*P	P	13 02 26.3	-0.5
GYA				S	S	13 13 19.5	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.1						
BRTR	Keskin Array B	91.04	13	P	P	13 02 28.9	+0.4
	comp=Z,4.8nm,1.1s,mb4.7,baz=360,slow=1.8,SNR=7.4						
KMI	Kunming	93.60	315	P	P	13 02 44.0	+3.3
KMI				S	S	13 13 49.0	+2.7
KMI				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.8						
KMI				LR	LR		
	comp=N,140nm,23.9s						
KMI				LR	LR		
	comp=E,191nm,17.2s						
KMI				LR	LR		
	comp=Z,202nm,23.1s,MS4.5						
BDFB	Brasilia	95.53	107	LR	LR	13 49 27.2	
	comp=Z,121nm,19.6s,MS4.4,baz=324,slow=38						
CHTO	Chiang Mai	100.79	314	P'P'df		13 36 28.9	
CMAR	Chiang Mai Arr	101.10	314	P	P	13 03 14.9	0.0
	comp=Z,0.6nm,0.5s,baz=15,slow=3.1,SNR=4.9						
WRA	Warramunga Arr	109.10	261	PKiKP		13 07 51.3	
	comp=Z,0.3nm,0.8s,baz=36,slow=1.9,SNR=5.5						
ASAR	Alice Springs	112.00	259	PKiKP		13 07 57.3	
	comp=Z,0.2nm,0.5s,baz=79,slow=2.5,SNR=4.5						
VNA2	Neumayer--Watz	144.78	151	⇑*i*	PKPbc	13 08 57.8	-1.0
SNAA	Sanae	146.08	153	*e*PKP	PKPdf	13 09 00.7	-3.4
MATP	Matopo	146.77	41	PKPbc	PKPbc	13 09 05.7	+0.6
	comp=Z,4.0nm,0.7s,baz=334,slow=3.7,SNR=5.3						
MATP	Matopo	146.77	41	PKPbc	PKPbc	13 09 05.7	+0.6

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*PGC **28** 13:00:36.5, 47.99N×129.02W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*

*NEIC **28** 13:00:37.0, 47.99N×129.02W, h10^{km}, ML3.8(PGC), After PGC.*

*IDC **28** 13:00:42.0±1.6, 48.29N×128.43W, mb3.5/3, mb1 3.9/12, mb1mx3.7/26, mbtmp3.6/12, ML3.3/7, MS3.3/6, Ms1 3.4/6, ms1mx3.1/21, Error ellipse: s-maj=31.3km s-min=10.3km az=64.0*

ISC 28 13:00:39.8±0.6, **48.28N**±0.04×**128.63W**±0.05, **h10**^{km}, **n45**, σ**1**^{s}**02**/63, **mb3.3**/2, **MS3.3**/2, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	Eliza Dome	1.88	31	Pn	Pn	13 01 11.5	-0.8
OZB	Mount Ozzard	2.19	71	Pn	Pn	13 01 16.1	-0.7
OZB				Sn	Sn	13 01 45.0	+0.7
OZB				Trac		13 01 50.4	
	comp=Z,33nm,0.7s						
GDR	Gold River	2.27	48	Pn	Pn	13 01 18.1	0.0
GDR				Trac		13 01 58.2	
	comp=Z,10.0nm,0.5s						
WOSB	Woss	2.32	35	Pn	Pn	13 01 18.6	0.0
MAYB	Maynard	2.33	24	Pn	Pn	13 01 18.4	-0.5
MAYB				Sn	Sn	13 01 48.9	+1.1
	comp=Z,23nm,0.3s						
MAYB				Trac		13 01 50.2	
	comp=Z,23nm,0.3s						
BTB	Buttle Lake	2.37	59	Pn	Pn	13 01 19.3	-0.2
BTB				Sn	Sn	13 01 51.0	+2.1
	comp=Z,20nm,0.3s						
BTB				Trac		13 01 53.4	
	comp=Z,20nm,0.3s						
HOLB	Holberg	2.38	8	Pn	Pn	13 01 19.3	-0.3
HOLB				Sn	Sn	13 01 50.3	+1.1
	comp=Z,13nm,0.2s						
HOLB				Trac		13 01 51.9	
	comp=Z,13nm,0.2s						
PHC	Port Hardy	2.55	17	Pn	Pn	13 01 20.9	-1.0
PHC				Sn	Sn	13 01 52.8	-0.6
PHC				Trac		13 02 05.1	
	comp=Z,19nm,0.8s						
ALB	Alberni	2.70	67	Pn	Pn	13 01 23.4	-0.7
MGB	Mount Grey	2.71	73	Pn	Pn	13 01 23.3	-0.9
MGB				Sn	Sn	13 01 58.4	+1.0
	comp=Z,10.0nm,0.4s						
MGB				Trac		13 02 00.6	
	comp=Z,10.0nm,0.4s						
NCRB	Newcastle Ridg	2.71	37	Pn	Pn	13 01 24.4	+0.2
CBB	Campbell River	2.77	49	Pn	Pn	13 01 25.7	+0.6
CBB				Sn	Sn	13 02 00.4	+1.5
CBB				Trac		13 02 03.5	
	comp=Z,17nm,0.7s						
PFB	Port Renfrew	2.81	82	Pn	Pn	13 01 24.2	-1.4
PFB				Sn	Sn	13 01 59.1	-0.7
TXB	Texada	3.10	61	Pn	Pn	13 01 30.1	+0.2
NLLB	Nanaimo Lost L	3.21	71	Pn	Pn	13 01 30.9	-0.5
NLLB				Sn	Sn	13 02 11.3	+1.1
NLLB				Trac		13 02 21.7	
	comp=Z,12nm,0.8s						
LZB	Mount Lazard	3.22	82	Pn	Pn	13 01 29.9	-1.5
LZB				Sn	Sn	13 02 10.4	+0.2
LZB				Trac		13 02 11.3	
	comp=Z,6.1nm,0.7s						
SHB	Sechelt	3.40	65	Pn	Pn	13 01 33.8	-0.3
SHB				Sn	Sn	13 02 13.9	-1.0
SHB				Trac		13 02 18.2	
	comp=Z,18nm,0.6s						
GOBB	Galiano Island	3.46	77	Pn	Pn	13 01 34.6	-0.4
GOBB				Sn	Sn	13 02 16.2	-0.3
PGC	Sidney	3.47	82	*e*P	Pn	13 01 33.5	-1.5
PGC	Sidney	3.47	82	Pn	Pn	13 01 33.8	-1.3
PGC				Sn	Sn	13 02 16.5	0.0
PGC				Trac		13 02 32.4	
	comp=Z,13nm,0.7s						
VGZ	Gonzales	3.54	86	Pn	Pn	13 01 34.5	-1.5
VGZ				Sn	Sn	13 02 18.0	-0.4
VGZ				Trac		13 02 20.4	
	comp=Z,15nm,0.6s						
SNB	Saturna Island	3.66	80	Pn	Pn	13 01 37.1	-0.6
SNB				Sn	Sn	13 02 23.1	+1.6
SNB				Trac		13 02 30.3	
	comp=Z,13nm,0.6s						
BIB	Bowen Island	3.69	70	Pn	Pn	13 01 37.8	-0.4
BIB				Sn	Sn	13 02 22.8	+0.5
	comp=Z,6.0nm,0.4s						
BIB				Trac		13 02 32.3	
	comp=Z,6.0nm,0.4s						
WPB	Watts Point	3.83	67	Pn	Pn	13 01 39.9	-0.2
BBB	Bella Bella	3.92	5	Pn	Pn	13 01 40.9	-0.6
	21nm,0.3s,baz=197,slow=12,SNR=112						
BBB				Sn	Sn	13 02 27.6	-0.5
	2.9nm,0.3s,baz=336,slow=21,SNR=7.8						
BBB				LR	LR	13 02 29.0	
	comp=Z,203nm,19.5s,baz=293,slow=27						
BBB	Bella Bella	3.92	5	Pn	Pn	13 01 40.8	-0.7
BBB				Sn	Sn	13 02 27.2	-0.9
BBB				Trac		13 02 29.6	
	comp=Z,11nm,0.3s						
HNB	Haney	4.12	74	Pn	Pn	13 01 43.5	-0.8
WSLR	Whistler	4.17	62	Pn	Pn	13 01 45.3	+0.3
VDB	Vedder Mountai	4.39	78	Pn	Pn	13 01 47.4	-0.7
HOPB	Hope	4.89	74	Pn	Pn	13 01 54.2	-1.0
LLLB	Lillooet	4.98	60	Pn	Pn	13 01 56.6	+0.1
NEW	Newport	7.68	86	Pn	Pn	13 02 32.5	-2.0
	0.6nm,0.3s,baz=296,slow=13,SNR=4.9						
YBH	Yreka Blue Hor	7.77	145	Pn	Pn	13 02 36.8	+1.0
	0.1nm,0.3s,baz=350,slow=11,SNR=4.6						
DLBC	Dease Lake	10.21	356	Pn	P	13 03 11.3	+1.9
	0.1nm,0.3s,baz=177,slow=15,SNR=3.2						
ELK	Elko	12.16	123	Pn	P	13 03 38.4	+2.4
	0.0nm,0.3s,baz=288,slow=9.3,SNR=5.6						
ELK				LR	LR	13 08 46.9	
	comp=Z,96nm,20.0s,baz=354,slow=40						
NVAR	Mina Array Bea	12.37	139	Pn	P	13 03 40.8	+1.9
	baz=312,slow=11,SNR=5.6						
PDAR	Pinedale Array	14.45	105	Pn	P	13 04 10.1	+3.9
	0.0nm,0.3s,baz=309,slow=9.5,SNR=4.7						
YKA	Yellowknife Ar	16.26	24	Pn	P	13 04 29.1	-0.4
	0.1nm,0.3s,baz=210,slow=12,SNR=12						
YKA				LR	LR	13 10 57.1	
	comp=Z,130nm,21.3s,baz=195,slow=38						
PV10	Paradox Valley	17.31	118	P	P	13 04 42.4	-0.6
FFC	Flin Flon	17.73	59	P	P	13 04 50.1	+1.9
	171nm,0.8s,SNR=18						
FFC	Flin Flon	17.73	59	*e*P	P	13 04 49.5	+1.3
	24nm,0.8s						
ILAR	Eielson Array	19.22	336	P	P	13 05 06.2	-0.2
	0.0nm,0.3s,baz=153,slow=12,SNR=11						
ILAR				LR	LR	13 11 34.7	
	comp=Z,116nm,20.0s,baz=347,slow=34						
INK	Inuvik	20.24	355	P	P	13 05 19.1	+1.5
	2.2nm,1.1s,baz=197,slow=6.3,SNR=2.6						
ANMO	Albuquerque	21.17	121	P	P	13 05 31.3	+3.9
	1.8nm,0.9s,mb3.4,baz=321,slow=12,SNR=5.8						
ANMO				LR	LR	13 13 31.2	
	comp=Z,70nm,21.2s,MS3.0,slow=36						
TXAR	Lajitas Array	26.94	126	P	P	13 06 25.1	+2.1
	0.9nm,0.9s,mb3.3,baz=320,slow=7.0,SNR=3.1						
TXAR				LR	LR	13 17 58.5	
	comp=Z,177nm,18.0s,MS3.7,baz=85,slow=39						

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*HEL **28** 13:01:25.7±0.2, 60.95N×29.04E, ML1.7, ML2.0(UPP), ML2.3(NAO), Explosion*

*BER **28** 13:01:26.6±5.1, 61.05N×28.96E, ML2.3(NAO), Suspected explosion*

*NAO **28** 13:01:26.3±2.7, 61.08N×28.97E, ML2.3*

*IDC **28** 13:01:27.1±1.8, 60.99N×28.94E, mb1 3.4/3, mb1mx3.1/18, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=18.4km s-min=11.9km az=174.0*

ISC 28 13:01:23.3±1.1, **60.94N**±0.06×**29.1E**±0.1, **n26**, σ**1**^{s}**29**/33, **Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	Virojoki	0.84	242	*e*P	Pg	13 01 40.7	+0.6
VJF				*e*S	Sg	13 01 51.9	+0.5
FIA0	FINESS Array S	1.53	290	Pn	Pn	13 01 52.4	+0.4
	baz=115,slow=18						
FIA0				Lg		13 02 12.6	
	baz=108,slow=37						
FIA0				Rg		13 02 20.6	
	baz=122,slow=37						
FIA0	FINESS Array S	1.53	290	*e*P	Pn	13 01 52.2	+0.3
FIA0				*e*S	Sb	13 02 13.1	+1.0
FINES	FINESS Array B	1.53	290	Pg	Pg	13 01 52.3	-1.5
	1.8nm,0.3s,baz=109,slow=16,SNR=36						
FINES				Lg		13 02 12.9	
	3.7nm,0.3s,baz=105,slow=30,SNR=28						
FINES				Rg		13 02 20.3	
	23nm,0.6s,baz=114,slow=34,SNR=35						
PVF	Pernaja	1.62	257	*e*P	Pn	13 01 53.7	+0.5
PVF				*e*S	Sb	13 02 15.4	+0.6
KAF	Kangasniemi	1.77	313	*e*P	Pn	13 01 57.3	+2.0
KAF				*e*S	Sn	13 02 18.8	0.0
JOF	Joensuu	2.25	27	*e*P	Pn	13 02 04.7	+2.4
JOF				*e*S	Sn	13 02 32.0	+0.8
JOF				MSG		13 02 34.6	
	comp=Z,3.1nm,0.1s						
SUF	Sumiainen	2.26	323	MSG		13 02 39.6	
	comp=Z,3.6nm,0.1s						
KEF	Keuruu	2.35	303	MSG		13 02 38.8	
	comp=Z,2.8nm,0.1s						
AAL	Aland	4.54	264	*e*P	Pn	13 02 35.7	+0.8
AAL				*e*S	Sn	13 03 27.1	-2.1
BURU	Burvik	5.08	319	*e*P	Pn	13 02 43.0	+0.6
HUSU	Husum	5.21	302	*e*P	Pn	13 02 44.9	+0.7
GRAU	Graesoe	5.22	268	*e*S	Sn	13 03 40.9	-5.3
SVAU	Svanoeiden	5.63	313	*e*P	Pn	13 02 51.5	+1.2
SJUU	Sjulsmark	5.69	327	*e*P	Pn	13 02 52.2	+1.2
BREU	Bredtraesk	5.70	306	*e*P	Pn	13 02 51.0	-0.2
BREU				*e*S	Sn	13 03 51.6	-6.7
LILU	Lilltraesk	6.04	320	*e*P	Pn	13 02 55.7	-0.3
APA0	Apatity Array	6.90	13	Pn	Pn	13 03 06.5	-1.7
	baz=192,slow=11						
APA0	Apatity Array	6.90	13	*e*P	Pn	13 03 06.5	-1.7
HFS	Hagfors	7.62	271	Pn	Pn	13 03 16.6	-1.7
	baz=92,slow=11						
HFS				Lg		13 05 19.2	
	baz=54,slow=37						
HFS	Hagfors	7.62	271	*e*P	Pn	13 03 16.6	-1.7
HFS				*e*SG		13 05 19.2	
HFS	Hagfors	7.62	271	Pn	Pn	13 03 16.7	-1.6
	comp=Z,0.0nm,0.3s,baz=92,slow=13,SNR=4.5						
NOA	NORSAR Array B	8.67	278	Pn	P	13 03 31.2	-1.8
	comp=Z,0.1nm,0.3s,baz=93,slow=11,SNR=2.1						
ARA0	ARCESS Array S	8.76	352	Pn	P	13 03 31.5	-2.6
	baz=166,slow=16						
ARA0				Sn	Sn	13 05 06.8	-7.9
	baz=168,slow=28						
ARA0				Lg		13 05 48.6	
	baz=161,slow=37						
ARA0	ARCESS Array S	8.76	352	*e*P	P	13 03 31.5	-2.6
ARA0				*e*S	Sn	13 05 06.8	-7.9
ARA0				*e*		13 05 48.6	
ARCES	ARCESS Array B	8.76	352	Pn	P	13 03 31.9	-2.2
	comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=10.0						

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*PGC **28** 13:08:01.8, 47.94N×129.05W, h10^{km}, MLSn3.0/2, Mw3.6, Northern Juan de Fuca ridge.*

*NEIC **28** 13:08:02.0, 47.94N×129.05W, h10^{km}, ML3.6(PGC), After PGC.*

*IDC **28** 13:08:07.6±3.9, 48.32N×128.42W, mb1 3.6/4, mb1mx3.4/19, mbtmp3.3/4, ML3.4/4, Error ellipse: s-maj=59.5km s-min=21.4km az=58.0*

ISC 28 13:08:02.4±1.0, **48.13N**±0.06×**128.84W**±0.07, **h10**^{km}, **n30**, σ**0**^{s}**77**/42, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OZB	Mount Ozzard	2.37	68	Pn	Pn	13 08 42.0	0.0
OZB				Sn	Sn	13 09 11.6	+0.1
OZB				Trac		13 09 12.5	
	comp=Z,15nm,0.2s						
GDR	Gold River	2.48	47	Pn	Pn	13 08 44.0	+0.5
WOSB	Woss	2.52	35	Pn	Pn	13 08 44.6	+0.5
MAYB	Maynard	2.52	25	Pn	Pn	13 08 44.2	+0.1
MAYB				Sn	Sn	13 09 14.3	-0.9
	comp=Z,7.0nm,0.4s						
MAYB				Trac		13 09 17.0	
	comp=Z,7.0nm,0.4s						
BTB	Buttle Lake	2.57	57	Pn	Pn	13 08 45.3	+0.4
BTB				Sn	Sn	13 09 17.2	+0.8
	comp=Z,16nm,0.4s						
BTB				Trac		13 09 18.1	
	comp=Z,16nm,0.4s						
PHC	Port Hardy	2.74	19	Pn	Pn	13 08 47.0	-0.2
MGB	Mount Grey	2.89	71	Pn	Pn	13 08 49.2	-0.2
MGB				Sn	Sn	13 09 23.8	-0.8
	comp=Z,4.0nm,0.2s						
MGB				Trac		13 09 24.7	
	comp=Z,4.0nm,0.2s						
NCRB	Newcastle Ridg	2.92	38	Pn	Pn	13 08 50.5	+0.8
PFB	Port Renfrew	2.97	80	Pn	Pn	13 08 50.1	-0.4
PFB				Sn	Sn	13 09 25.1	-1.4
CBB	Campbell River	2.97	49	Pn	Pn	13 08 51.3	+0.7
CBB				Sn	Sn	13 09 27.8	+1.1
CBB				Trac		13 09 28.9	
	comp=Z,13nm,0.5s						
TXB	Texada	3.30	60	Pn	Pn	13 08 55.8	+0.6
TXB				Sn	Sn	13 09 34.9	-0.1
	comp=Z,13nm,0.5s						
TXB				Trac		13 09 39.0	
	comp=Z,13nm,0.5s						
LZB	Mount Lazard	3.38	80	Pn	Pn	13 08 55.8	-0.6
LZB				Sn	Sn	13 09 35.6	-1.3
LZB				Trac		13 09 37.0	
	comp=Z,5.1nm,0.7s						
NLLB	Nanaimo Lost L	3.40	69	Pn	Pn	13 08 57.9	+1.3
NLLB				Trac		13 09 39.6	
	comp=Z,2.0nm,0.2s						
SHB	Sechelt	3.59	64	Pn	Pn	13 08 59.7	+0.4
SHB				Sn	Sn	13 09 43.6	+1.3
SHB				Trac		13 09 45.5	
	comp=Z,10nm,0.5s						
PGC	Sidney	3.63	80	*e*P	Pn	13 08 58.8	-1.1
PGC	Sidney	3.63	80	Pn	Pn	13 08 60.0	+0.1
PGC				Sn	Sn	13 09 42.5	-0.8
PGC				Trac		13 09 46.9	
	comp=Z,6.0nm,0.5s						
GOBB	Galiano Island	3.63	75	Pn	Pn	13 08 59.5	-0.4
VGZ	Gonzales	3.70	84	Pn	Pn	13 08 59.9	-0.9
VGZ				Sn	Sn	13 09 44.1	-0.8
VGZ				Trac		13 09 45.2	
	comp=Z,5.0nm,0.2s						
SNB	Saturna Island	3.83	78	Pn	Pn	13 09 03.0	+0.3
WPB	Watts Point	4.02	66	Pn	Pn	13 09 05.9	+0.5
BBB	Bella Bella	4.09	6	Pn	Pn	13 09 06.7	+0.3
	10nm,0.3s,baz=200,slow=12,SNR=43						
BBB				Sn	Sn	13 09 53.0	-1.8
	baz=285,slow=10.0,SNR=2.4						
BBB	Bella Bella	4.09	6	Pn	Pn	13 09 06.5	+0.1
BBB				Sn	Sn	13 09 53.2	-1.6
BBB				Trac		13 10 00.4	
	comp=Z,10.0nm,0.7s						
HNB	Haney	4.30	72	Pn	Pn	13 09 09.9	+0.5
HNB				Sn	Sn	13 10 01.1	+0.9
HNB				Trac		13 10 04.4	
	comp=Z,8.0nm,0.6s						
WSLR	Whistler	4.37	61	Pn	Pn	13 09 11.3	+0.9
VDB	Vedder Mountai	4.56	76	Pn	Pn	13 09 13.3	+0.2
LLLB	Lillooet	5.18	59	Pn	Pn	13 09 22.6	+0.8
PDAR	Pinedale Array	14.55	104	Pn		13 11 34.5	
	0.0nm,0.3s,baz=300,slow=12,SNR=3.9						
YKA	Yellowknife Ar	16.45	24	Pn	P	13 11 54.1	-0.5
	0.0nm,0.3s,baz=219,slow=12,SNR=6.0						
ILAR	Eielson Array	19.30	336	P		13 12 34.4	
	0.0nm,0.3s,baz=149,slow=10,SNR=4.5						
INK	Inuvik	20.37	355	P	P	13 12 40.3	-1.2

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*NEIC **28** 13:17:02.2, 35.26N×22.82E, h22^{km}, MD3.5(ATH), After ATH.*

*CSEM **28** 13:17:02.2, 35.26N×22.82E, h22^{km}, MD3.5/7, After ATH*

ATH 28 13:17:03.3, 35.39N×23.04E, h30^{km}, **MD3.5**/7, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KYTH	Kithira	0.89	360	*e*PN	Pn	13 17 20.5	+0.7
KYTH	Kithira	0.89	360	*e*Pn	Pn	13 17 21.5	+1.7
VAM	Vamos	0.95	89	*e*PN	Pn	13 17 22.5	+1.8
VAM	Vamos	0.95	89	*e*Pn	Pn	13 17 25.0	+4.3
GAVD	Gavdhos	1.02	122	*e*Pn	Pn	13 17 23.0	+1.3
GVD	Gavdhos	1.02	122	*e*PN	Pn	13 17 23.0	+1.3
VLI	Veliai	1.33	356	*e*PN	Pn	13 17 27.7	+1.6
VLI	Veliai	1.33	356	*e*Pn	Pn	13 17 29.5	+3.4
ITM	Ithomi	2.00	334	*e*PB	Pb	13 17 38.5	-0.4
XRY	Khrisi	2.23	103	*e*PN	Pn	13 17 38.7	-0.4
XRY	Khrisi	2.23	103	*e*Pn	Pn	13 17 42.0	+2.9
EVR	Evrytania	3.66	345	*e*PN	Pn	13 18 00.0	+0.7

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*PGC **28** 13:23:45.6, 47.98N×128.96W, h10^{km}, MLSn3.7/1, Mw4.8/6, Mw4.3, Northern Juan de Fuca ridge.*

*BJI **28** 13:23:46.0, 48.00N×129.00W, h10^{km}, mB5.4, mb4.7, Ms4.6, Msz4.4*

*NEIC **28** 13:23:46.0, 47.98N×128.96W, h10^{km}, mb4.6/12, MW4.7(PGC), After PGC.*

*IDC **28** 13:23:48.6±1.4, 48.20N×128.63W, mb3.7/4, mb1 4.2/13, mb1mx4.0/26, mbtmp4.0/13, ML3.7/6, MS3.8/12, Ms1 3.8/12, ms1mx3.5/29, Error ellipse: s-maj=26.4km s-min=10.4km az=59.0*

ISC 28 13:23:48.1±0.3, **48.24N**±0.02×**128.62W**±0.04, **h10**^{km}, **n118**, σ**1**^{s}**16**/142, **mb4.4**/14, **MS3.7**/6, **1C**, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETB	Estevan Point	1.78	50	Pn	Pn	13 24 20.1	+0.9
OZB	Mount Ozzard	2.20	70	P	Pn	13 24 24.6	-0.5
OZB	Mount Ozzard	2.20	70	Pn	Pn	13 24 24.8	-0.4
OZB				Sn	Sn	13 24 53.5	+0.9
OZB				Trac		13 24 54.9	
	comp=Z,68nm,0.3s						
GDR	Gold River	2.30	47	Pn	Pn	13 24 26.5	-0.1
GDR				Sn	Sn	13 24 58.5	+3.3
	comp=Z,46nm,0.4s						
GDR				Trac		13 24 58.8	
	comp=Z,46nm,0.4s						
WOSB	Woss	2.34	34	Pn	Pn	13 24 27.6	+0.3
MAYB	Maynard	2.36	23	Pn	Pn	13 24 27.1	-0.4
MAYB				Sn	Sn	13 24 57.7	+0.9
	comp=Z,125nm,0.4s						
MAYB				Trac		13 24 58.7	
	comp=Z,125nm,0.4s						
BTB	Buttle Lake	2.39	58	Pn	Pn	13 24 27.7	-0.2
BTB				Sn	Sn	13 24 56.0	-1.4
	comp=Z,160nm,0.5s						
BTB				Trac		13 25 03.0	
	comp=Z,160nm,0.5s						
HOLB	Holberg	2.42	7	Pn	Pn	13 24 28.4	+0.1
HOLB				Sn	Sn	13 24 59.5	+1.2
	comp=Z,25nm,0.2s						
HOLB				Trac		13 25 03.0	
	comp=Z,25nm,0.2s						
PHC	Port Hardy	2.58	17	Pn	Pn	13 24 29.6	-1.1
PHC				Sn	Sn	13 25 04.0	+1.6
PHC				Trac		13 25 12.3	
	comp=Z,72nm,0.9s						
ALB	Alberni	2.71	66	Pn	Pn	13 24 31.9	-0.6
ALB				Sn	Sn	13 25 07.5	+1.8
	comp=Z,28nm,0.5s						
ALB				Trac		13 25 14.7	
	comp=Z,28nm,0.5s						
MGB	Mount Grey	2.71	72	⇑Pn	Pn	13 24 31.7	-0.8
MGB				Sn	Sn	13 25 02.5	-3.3
	comp=Z,50nm,0.6s						
MGB				Trac		13 25 11.5	
	comp=Z,50nm,0.6s						
NCRB	Newcastle Ridg	2.74	37	Pn	Pn	13 24 33.5	+0.7
NCRB				Sn	Sn	13 25 08.6	+2.3
	comp=Z,72nm,0.4s						
NCRB				Trac		13 25 09.5	
	comp=Z,72nm,0.4s						
CBB	Campbell River	2.79	49	Pn	Pn	13 24 34.4	+0.8
CBB				Sn	Sn	13 25 08.5	+0.8

CBB				Trac		13 25 11.1	
	comp=Z,73nm,0.4s						
PFB	Port Renfrew	2.80	82	P	Pn	13 24 32.7	-1.1
PFB	Port Renfrew	2.80	82	Pn	Pn	13 24 32.9	-1.0
PFB				Sn	Sn	13 25 07.6	-0.4
OOW	Octopus West	3.02	98	P	Pn	13 24 36.1	-0.8
OCWA	Octopus Mounta	3.02	98	*e*P	Pn	13 24 35.4	-1.6
TXB	Texada	3.12	61	⇑Pn	Pn	13 24 38.5	+0.2
LZB	Mount Lazard	3.21	82	Pn	Pn	13 24 38.9	-0.8
LZB				Sn	Sn	13 25 17.5	-0.9
LZB				Trac		13 25 23.4	
	comp=Z,19nm,0.8s						
NLLB	Nanaimo Lost L	3.22	70	Pn	Pn	13 24 39.7	-0.1
NLLB				Sn	Sn	13 25 19.7	+1.1
NLLB				Trac		13 25 22.3	
	comp=Z,32nm,0.6s						
STW	Striped Peak	3.31	90	P	Pn	13 24 40.8	-0.3
SHB	Sechelt	3.41	65	Pn	Pn	13 24 42.4	0.0
SHB				Sn	Sn	13 25 23.5	+0.1
SHB				Trac		13 25 25.2	
	comp=Z,53nm,0.5s						
GOBB	Galiano Island	3.46	76	Pn	Pn	13 24 43.0	-0.2
GOBB				Sn	Sn	13 25 27.7	+2.9
	comp=Z,55nm,0.7s						
GOBB				Trac		13 25 35.4	
	comp=Z,55nm,0.7s						
PGC	Sidney	3.46	81	*e*P	Pn	13 24 42.0	-1.2
PGC	Sidney	3.46	81	Pn	Pn	13 24 42.3	-0.9
PGC				Sn	Sn	13 25 25.0	+0.2
PGC				Trac		13 25 27.4	
	comp=Z,16nm,0.5s						
VGZ	Gonzales	3.54	85	Pn	Pn	13 24 43.0	-1.2
VGZ				Sn	Sn	13 25 24.3	-2.3
VGZ				Trac		13 25 28.9	
	comp=Z,71nm,0.8s						
SNB	Saturna Island	3.66	80	P	Pn	13 24 45.8	-0.2
SNB	Saturna Island	3.66	80	P	Pn	13 24 45.8	-0.3
SNB				Pn	Pn	13 24 46.0	0.0
SNB				Sn	Sn	13 25 29.1	-0.7
SNB				Trac		13 25 35.3	
	comp=Z,20nm,0.5s						
BIB	Bowen Island	3.70	70	Pn	Pn	13 24 46.3	-0.2
BIB				Trac		13 25 38.9	
	comp=Z,24nm,0.7s						
SQM	Sequim	3.73	91	P	Pn	13 24 47.0	-0.1
WPB	Watts Point	3.84	66	Pn	Pn	13 24 48.7	+0.2
BBB	Bella Bella	3.96	5	Pn	Pn	13 24 49.6	-0.6
	80nm,0.3s,baz=196,slow=11,SNR=475						
BBB				Sn	Sn	13 25 35.7	-1.6
	baz=270,slow=20,SNR=1.8						
BBB				LR	LR	13 26 15.6	
	comp=Z,918nm,20.6s,baz=288,slow=37						
BBB	Bella Bella	3.96	5	Pn	Pn	13 24 49.6	-0.6
BBB				Sn	Sn	13 25 35.7	-1.6
BBB				LR	LR	13 26 15.6	
BBB	Bella Bella	3.96	5	Pn	Pn	13 24 49.6	-0.7
BBB				Sn	Sn	13 25 36.2	-1.1
BBB				Trac		13 25 39.2	
	comp=Z,33nm,0.4s						
HNB	Haney	4.13	73	Pn	Pn	13 24 52.2	-0.4
HNB				Sn	Sn	13 25 43.0	+1.5
HNB				Trac		13 25 48.2	
	comp=Z,27nm,0.7s						
SBES	Silver Beach E	4.16	80	P	Pn	13 24 53.5	+0.4
WSLR	Whistler	4.19	61	Pn	Pn	13 24 54.1	+0.6
WSLR				Sn	Sn	13 25 44.5	+1.4
WSLR				Trac		13 26 00.2	
	comp=Z,22nm,0.8s						
VDB	Vedder Mountai	4.39	77	P	Pn	13 24 55.9	-0.5
VDB				Pn	Pn	13 24 55.9	-0.5
HOPB	Hope	4.89	74	Pn	Pn	13 25 03.0	-0.5
HOPB				Sn	Sn	13 26 00.1	-0.8
HOPB				Trac		13 26 04.2	
	comp=Z,36nm,1.0s						
LLLB	Lillooet	4.99	59	Pn	Pn	13 25 05.1	+0.2
TBM	Table Mountain	5.52	98	P	Pn	13 25 12.9	+0.5
PNT	Penticton	6.05	76	Pn	Pn	13 25 19.9	+0.1
CRF	Corfu	6.41	99	P	Pn	13 25 24.2	-0.8
OD2	Odessa Site #2	6.73	94	P	Pn	13 25 27.8	-1.6
DOWB	Downie Slide	7.30	60	Pn	Pn	13 25 36.9	-0.6
SLEB	Sale Mountain	7.40	63	Pn	Pn	13 25 38.6	-0.3
NEW	Newport	7.68	86	Pn	Pn	13 25 41.1	-1.6
	7.0nm,0.3s,baz=284,slow=12,SNR=60						
NEW				LR	LR	13 28 48.2	
	comp=Z,1µm,19.2s,baz=274,slow=39						
NEW	Newport	7.68	86	*e*P	Pn	13 25 40.3	-2.4
YBH	Yreka Blue Hor	7.74	145	Pn	Pn	13 25 46.5	+3.0
	0.5nm,0.3s,baz=1.6,slow=8.2,SNR=28						
BMO	Blue Mountains	8.50	109	*e*P	P	13 25 52.5	-1.8
BMBC	Bull Mountain	8.77	25	Pn	P	13 25 59.2	+1.3
WALA	Waterton Lakes	9.77	80	*e*P	P	13 26 10.3	-1.3
WALA	Waterton Lakes	9.77	80	P	P	13 26 10.6	-1.0
MSO	Missoula	10.03	93	*e*P	P	13 26 11.6	-3.7
DLBC	Dease Lake	10.25	356	Pn	P	13 26 19.4	+1.2
	0.2nm,0.3s,baz=182,slow=12,SNR=8.3						
DLBC				LR	LR	13 30 04.1	
	comp=Z,398nm,21.4s,baz=243,slow=36						
DLBC	Dease Lake	10.25	356	P	P	13 26 15.3	-2.8
CHMT	Chamberlain Mo	10.47	92	*e*P	P	13 26 18.5	-2.7
EDM	Edmonton	10.88	57	*e*P	P	13 26 24.4	-2.4
EDM	Edmonton	10.88	57	P	P	13 26 25.6	-1.3
HLID	Hailey	10.95	110	*e*P	P	13 26 26.0	-1.8
MCMT	McKenzie Canyo	11.39	102	*e*P	P	13 26 31.1	-2.7
ELK	Elko	12.13	123	Pn	P	13 26 46.0	+2.1
	0.1nm,0.3s,baz=314,slow=10,SNR=11						
ELK				LR	LR	13 31 40.9	
	comp=Z,294nm,19.1s,baz=308,slow=39						
ELK	Elko	12.13	123	Pn	P	13 26 46.0	+2.1
ELK				LR	LR	13 31 40.9	
NVAR	Mina Array Bea	12.34	139	Pn	P	13 26 48.2	+1.5
	0.1nm,0.3s,baz=317,slow=12,SNR=19						
WHY	Whitehorse	12.96	346	P	P	13 26 56.7	+1.9
LKWY	Lake	13.10	100	P	P	13 26 56.0	-0.8
TPAW	Teton Pass	13.19	105	*e*P	P	13 26 57.1	-0.9
SPUT	South Promonto	13.40	115	*e*P	P	13 27 01.1	+0.2
SPUT				*e*		13 27 10.8	
TCUT	Toone Canyon	14.15	114	P	P	13 27 12.5	+1.9
BW06	Boulder Array	14.43	105	*e*P	P	13 27 14.4	+0.1
	11nm,1.3s						
JLU	Jordanelle	14.43	116	*e*P	P	13 27 14.2	-0.1
PDAR	Pinedale Array	14.43	105	Pn	P	13 27 18.0	+3.7
	0.1nm,0.3s,baz=304,slow=10,SNR=17						
PDAR				LR	LR	13 32 58.6	
	comp=Z,544nm,20.2s,baz=328,slow=38						
DAU	Daniels Canyon	14.67	116	*e*P	P	13 27 19.0	+1.6
ARUT	Antelope Range	15.22	128	*e*P	P	13 27 25.5	+0.9
LAO	LASA Array	15.22	87	*e*P	P	13 27 24.9	+0.3
	42nm,1.4s						
MSU	Marysvale	15.38	123	*e*P	P	13 27 28.2	+1.5
SRU	San Rafael	15.93	118	*e*P	P	13 27 33.8	+0.1
MWC	Mount Wilson	16.08	147	*e*P	P	13 27 37.1	+1.3
DGMT	Dagmar	16.22	80	*e*P	P	13 27 35.9	-1.5
	13nm,0.8s						
YKA	Yellowknife Ar	16.29	24	Pn	P	13 27 36.7	-1.5
	0.2nm,0.3s,baz=215,slow=11,SNR=29						
YKA				LR	LR	13 33 50.7	
	comp=Z,278nm,19.3s,baz=205,slow=37						
YKW3	Yellowknife Ar	16.34	23	*e*P	P	13 27 37.8	-1.1
YKW3	Yellowknife Ar	16.34	23	P	P	13 27 38.5	-0.4
YKW3				P		13 27 40.5	
LDFC	Landfair	16.55	138	*e*P	P	13 27 43.0	+1.3
DAWY	Dawson	16.91	344	*e*P	P	13 27 47.1	+1.0
DAWY	Dawson	16.91	344	P	P	13 27 49.5	+3.3
PV10	Paradox Valley	17.29	118	*e*P	P	13 27 52.8	+1.8
PV01	Paradox Valley	17.72	117	*e*P	P	13 27 57.2	+0.8
FFC	Flin Flon	17.75	59	P	P	13 27 59.4	+2.8
	348nm,0.8s,SNR=11						
FFC	Flin Flon	17.75	59	*e*P	P	13 27 58.4	+1.8
	52nm,0.9s						
PHWY	Pilot Hill	17.81	104	*e*P	P	13 27 57.5	0.0
WUAZ	Wupatki	18.02	129	*e*P	P	13 28 02.1	+1.9
	185nm,1.3s						
RSO	Redoubt South	18.50	320	P	P	13 28 05.7	-0.3
ILAR	Eielson Array	19.26	336	P	P	13 28 14.4	-0.7
	0.0nm,0.3s,baz=149,slow=11,SNR=25						
ILAR				LR	LR	13 34 35.1	
	comp=Z,155nm,18.6s,baz=164,slow=34						
SDCO	Great Sand Dun	19.83	113	*e*P	P	13 28 20.9	-0.7
	2.2nm,0.8s						
INK	Inuvik	20.27	355	P	P	13 28 25.7	-0.5
	4.0nm,1.0s,baz=160,slow=14,SNR=16						
INK				LR	LR	13 36 25.5	
	comp=Z,297nm,19.8s,MS3.6,baz=5.9,slow=37						
INK	Inuvik	20.27	355	*e*P	P	13 28 26.2	0.0
	23nm,1.5s						
INK	Inuvik	20.27	355	P	P	13 28 26.5	+0.3
ANMO	Albuquerque	21.14	121	P	P	13 28 36.0	+0.6
	3.5nm,0.9s,mb3.7,baz=320,slow=11,SNR=10						
ANMO				LR	LR	13 36 16.6	
	comp=Z,102nm,19.9s,MS3.2,slow=35						
ANMO	Albuquerque	21.14	121	*e*P	P	13 28 35.4	0.0
	33nm,1.7s,mb4.4						
IMA	Indian Mountai	22.17	333	*e*P	P	13 28 43.9	-1.6
	58nm,1.4s,mb4.8						
FCC	Fort Churchill	22.82	50	*e*P	P	13 28 51.5	-0.3
	36nm,1.4s,mb4.6						
FCC	Fort Churchill	22.82	50	P	P	13 28 52.5	+0.7
AMTX	Amarillo	24.03	114	*e*P	P	13 29 04.8	+1.0
	14nm,1.0s,mb4.3						
MNTX	Cornudas Mount	24.15	125	*e*P	P	13 29 06.1	+1.0
	18nm,1.7s,mb4.2						
WMOK	Wichita Mounta	25.92	110	*e*P	P	13 29 21.8	-0.1
	14nm,1.5s,mb4.3						
TXAR	Lajitas Array	26.91	126	P	P	13 29 31.6	+0.5
	1.4nm,0.8s,mb3.6,baz=312,slow=7.7,SNR=9.6						
TXAR				LR	LR	13 40 18.6	
	comp=Z,183nm,20.8s,MS3.6,baz=330,slow=37						
SCHQ	Schefferville	37.87	56	LR	LR	13 47 07.3	
	comp=Z,254nm,21.5s,MS4.0,baz=255,slow=37						
ROSC	El Rosal	63.17	115	LR	LR	14 06 04.7	
	comp=Z,62nm,18.4s,MS3.8,baz=165,slow=40						
MDJ	Mudanjiang	64.97	310	P	P	13 34 27.5	-2.4
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,68nm,4.0s						
CN2	Changchun	67.66	311	*e*P	P	13 34 44.0	-3.0
CN2				*e*XP	sP	13 34 51.0	-0.3
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
CN2				AMB	AMB		
	comp=Z,110nm,4.0s						
SONM	Songino Array	73.06	325	P	P	13 35 19.6	0.0
	comp=Z,0.6nm,1.0s,mb3.5,baz=56,slow=5.2,SNR=4.8						
BJI	Beijing	75.05	314	P	P	13 35 30.5	-0.8
BJI				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.6						
BJI	Beijing	75.05	314	P	P	13 35 30.5	-0.8
	comp=Z,5.0nm,0.6s,mb4.6						
BRG	Berggiesshubel	76.17	23	P	P	13 35 46.0	+8.6
GTA	Gaotai	82.72	324	P	P	13 36 13.0	0.0
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.3						
WMQ	Urumqi	82.92	334	*e*P	P	13 36 15.0	+1.1
WMQ				LR	LR		
	comp=N,75nm,24.0s,MS4.1						
WMQ				LR	LR		
	comp=E,68nm,23.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,45nm,22.0s,MS3.8						
LZH	Lanzhou	83.90	320	*e*P	P	13 36 20.0	+0.9
LZH				AP	pP	13 36 23.0	+0.7
LZH				AMB	AMB		
	comp=Z,22nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,68nm,4.5s						
KMI	Kunming	93.69	315	P	P	13 37 06.3	+0.3
KMI				XP	sP	13 37 11.5	+1.3
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						

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*BJI **28** 13:27:16.5, 6.13S×146.89E, h91^{km}, mB5.2, mb5.2*

*MOS **28** 13:27:16.7±1.1, 6.36S×146.48E, h88^{km}, mb4.9/19, Error ellipse: s-maj=13.2km s-min=7.4km az=97.8*

*IDC **28** 13:27:17.8±1.9, 6.55S×146.63E, h95^{km}±17^{km}, mb4.5/11, mb1 4.7/14, mb1mx4.7/16, mbtmp4.8/14, MS3.6/4, Ms1 3.6/4, ms1mx3.3/17, Error ellipse: s-maj=18.6km s-min=12.1km az=102.0*

*NEIC **28** 13:27:18.4±1.1, 6.54S×146.62E, h100^{km}±9^{km}, mb4.9/29, Error ellipse: s-maj=7.5km s-min=6.0km az=72.0*

*HRVD **28** 13:27:18.4±0.7, 6.46S×146.66E, h108^{km}±9^{km}, MW4.7/26, Centroid moment Tensor Solution. LP body waves: s5,c6; Mantle waves: s26,c43; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.27±.15; $M_{\theta\theta}$1.35±.13; $M_{\phi\phi}$-1.08±.15; $M_{r\theta}$-0.77±.08; $M_{\theta\phi}$-0.34±.15; $M_{\phi r}$-0.09±.10; Best double couple: $M_0$1.435×10^{16} NP1:ϕ_s325°, δ63°, λ4°. NP2:ϕ_s234°, δ86°, λ153°. Principal axes: T 1.689, Plg21°, Azm186°; N -.508, Plg63°, Azm46°; P -1.181, Plg16°, Azm282°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 13:27:18.3±0.3**, 6.57S**±0.03×**146.66E**±0.06**, h115**^{km}**, h115**^{km}±3.2^{km}**:pP-P, n150,** $\sigma 1^{s}09$/125**, mb5.0**/53**, 2C-7D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.86	170	P	P	13 28 03.2	-0.4
	143nm,0.3s,baz=12,slow=5.0,SNR=1455						
PMG				S	S	13 28 36.0	-1.8
	406nm,0.3s,baz=157,slow=21,SNR=45						
PMG				LR	LR	13 29 03.4	
	comp=Z,1µm,21.0s,baz=25,slow=37						
PMG	Port Moresby	2.86	170	*e*Pn	P	13 28 03.1	-0.4
PMG				*e*Sn	S	13 28 36.2	-1.6
CTA	Charters Tower	13.45	182	*e*P	P	13 30 29.4	+3.9
	60nm,0.6s						
CTA	Charters Tower	13.45	182	*e*P	P	13 30 29.4	+3.9
CTA				pmax	pmax		
	comp=Z,60nm,0.6s						
CTA	Charters Tower	13.45	182	P	P	13 30 29.5	+4.0
	comp=Z,11nm,0.3s,baz=2.8,slow=14,SNR=113						
CTA				LR	LR	13 35 14.5	
	comp=Z,130nm,21.2s,baz=25,slow=35						
CTAO	Charters Tower	13.45	182	*e*P	P	13 30 29.3	+3.8
CTAO				pmax	pmax		
	comp=Z,79nm,0.6s						
CTAO	Charters Tower	13.45	182	*e*Pn	P	13 30 29.3	+3.8
	comp=Z,79nm,0.6s						
WRAB	Tennant Creek	17.87	221	*e*P	P	13 31 19.3	-1.8
WRAB				pmax	pmax		
	comp=Z,29nm,0.8s						
WRAB	Tennant Creek	17.87	221	*e*P	P	13 31 19.3	-1.8
	comp=Z,29nm,0.8s						
WB2	Warramunga Arr	17.87	221	*e*P	P	13 31 19.8	-1.4
WB2				*e*S	S	13 34 34.8	+1.2
WRA	Warramunga Arr	17.88	221	P	P	13 31 19.9	-1.4
	comp=Z,1.4nm,0.3s,baz=44,slow=12,SNR=61						
WRA				S	S	13 34 35.6	+1.8
	comp=Z,0.4nm,0.3s,baz=54,slow=23,SNR=4.9						
ASAR	Alice Springs	20.96	214	P	P	13 31 53.4	-0.4
	comp=Z,12nm,0.5s,baz=54,slow=8.6,SNR=171						
ASAR				S	S	13 35 42.1	+6.5
	comp=Z,6.5nm,0.7s,baz=30,slow=18,SNR=7.1						
ASAR				LR	LR	13 40 09.3	
	comp=Z,62nm,20.9s,baz=117,slow=37						
ASPA	Alice Springs	20.96	214	⇑*i*P	P	13 31 53.4	-0.4
ASPA				*e*S	S	13 35 35.7	+0.1
FITZ	Fitzroy Crossi	23.48	239	*e*P	P	13 32 17.9	-0.7
	comp=Z,118nm,0.9s,mb5.2						
ARMA	Armidale	24.18	169	*e*P	P	13 32 26.9	+1.7
STKA	Stephens Creek	25.62	190	*e*P	P	13 32 38.0	-0.8
	comp=Z,9.3nm,0.6s,mb4.4						
STKA	Stephens Creek	25.62	190	P	P	13 32 38.2	-0.7
	comp=Z,16nm,0.7s,mb4.6,baz=359,slow=8.7,SNR=51						
MBWA	Marble Bar	29.82	238	*e*P	P	13 33 15.1	-1.9
	comp=Z,9.7nm,0.7s,mb4.5						
KSM	Kuching	37.15	281	*e*P	P	13 34 19.1	-0.9
URZ	Urewera	41.90	143	P	P	13 35 00.2	+1.2
	comp=Z,8.5nm,0.8s,mb4.5,baz=320,slow=7.9,SNR=4.4						
RPZ	Rata Peaks	42.75	154	P	P	13 35 06.9	+1.0
	comp=Z,16nm,0.7s,mb4.9,baz=4.4,slow=13,SNR=6.6						
MAT	Matsushiro	43.61	350	*e*P	P	13 35 12.0	-1.0
MAT				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
MAT	Matsushiro	43.61	350	*e*P	P	13 35 12.0	-1.0
	comp=Z,11nm,0.7s,mb4.7						
MAT	Matsushiro	43.61	350	P	P	13 35 11.8	-1.2
QIZ	Qiongzhong	44.30	306	⇑P	P	13 35 19.8	+1.1
SSE	Sheshan	44.68	328	P	P	13 35 18.5	-3.1
SSE				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,119nm,4.7s						
SSE	Sheshan	44.68	328	P	P	13 35 18.4	-3.2
	comp=Z,33nm,0.7s,mb5.2						
NJ2	Nanjing	46.66	327	*e*P	P	13 35 37.5	+0.2
NJ2				PCP	PcP	13 37 07.8	-1.8
NJ2				S	S	13 42 06.0	-11
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,700nm,4.3s						
NJ2				LR	LR		
	comp=N,370nm,13.8s						
NJ2				LR	LR		
	comp=E,390nm,14.4s						
NJ2				LR	LR		
	comp=Z,340nm,11.8s						
WHN	Wuhan	48.16	322	P	P	13 35 48.8	-0.2
GYA	Guiyang	50.80	312	⇓*i*P	P	13 36 10.5	+1.2
GYA				AP	pP	13 36 36.5	0.0
GYA				PCP	PcP	13 37 26.0	+1.3
GYA				PP	PP	13 38 09.5	+2.3
GYA				S	S	13 43 06.5	-8.2
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
ENH	Enshi	51.10	318	*e*P	P	13 36 10.2	-1.3
	comp=Z,19nm,1.2s,mb5.0						
NANT	Nan	51.84	300	P	P	13 36 17.6	+0.4
KMI	Kunming	53.07	308	P	P	13 36 27.0	+0.7
KMI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.9						
KMI				AMB	AMB		
	comp=Z,67nm,3.1s						
KMI	Kunming	53.07	308	P	P	13 36 26.9	+0.6
KMI				*PP	pP	13 36 55.3	+1.6
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
KMI	Kunming	53.07	308	P	P	13 36 26.9	+0.6
	comp=Z,8.0nm,0.7s,mb4.9						
KMI				pP	pP	13 36 55.3	+1.6
MDJ	Mudanjiang	53.22	345	P	P	13 36 25.8	-1.3
MDJ				AP	pP	13 36 53.5	-1.0
MDJ				S	S	13 43 50.5	+3.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,42nm,3.6s						
MDJ				LR	LR		
	comp=N,36nm,22.7s						
MDJ				LR	LR		
	comp=Z,31nm,28.9s						
MDJ	Mudanjiang	53.22	345	*e*P	P	13 36 25.9	-1.2
	comp=Z,7.2nm,0.7s,mb4.8						
CM31	Chiang Mai Arr	53.22	299	*e*P	P	13 36 28.1	+0.6
	comp=Z,22nm,0.6s,mb5.4						
CMAR	Chiang Mai Arr	53.22	299	*i* P	P	13 36 28.4	+0.9
CMAR				pmax	pmax		
	comp=Z,21nm,0.6s						
CMAR	Chiang Mai Arr	53.22	299	P	P	13 36 28.2	+0.7
	comp=Z,21nm,0.6s,mb5.3,baz=126,slow=5.8,SNR=107						
CHG	Chiang Mai	53.36	299	⇓P	P	13 36 28.9	+0.4
	comp=Z,23nm,0.8s,mb5.3						
YSS	Yuzh-Sakhalins	53.40	357	*e*P	P	13 36 27.0	-1.4
CN2	Changchun	53.68	341	*e*P	P	13 36 30.0	-0.5
CN2				*e*S	S	13 43 54.5	+0.9
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
XAN	Xi'an	53.90	321	P	P	13 36 31.0	-1.3
XAN				AMB	AMB		
	comp=Z,27nm,0.9s,mb5.3						
BJI	Beijing	54.23	331	P	P	13 36 33.5	-1.1
BJI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
BJI	Beijing	54.23	331	P	P	13 36 33.4	-1.2
BJI				*PP	pP	13 37 02.9	+0.8
BJI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BJI	Beijing	54.23	331	P	P	13 36 33.4	-1.2
	comp=Z,10.0nm,0.9s,mb4.8						
BJI				pP	pP	13 37 02.9	+0.8
LZH	Lanzhou	58.42	320	*e*P	P	13 37 04.5	+0.1
LZH				AP	pP	13 37 31.5	-0.8
LZH				XP	sP	13 37 43.0	-2.1
LZH				PCP	PcP	13 37 54.5	+0.9
LZH				PP	PP	13 39 17.0	+0.4
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,140nm,5.5s						
LZH	Lanzhou	58.42	320	*e*P	P	13 37 04.5	+0.1
LZH				*PP	pP	13 37 31.5	-0.8
LZH						13 37 54.5	
LZH						13 39 17.0	
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
LZH	Lanzhou	58.42	320	*e*P	P	13 37 04.5	+0.1
	comp=Z,25nm,1.0s,mb5.2						
LZH				pP	pP	13 37 31.5	-0.8
LZH				sP	sP	13 37 43.1	-2.0
LZH				PcP	PcP	13 37 54.5	+0.9
LZH				PP	PP	13 39 17.0	+0.4
HIA	Hailar	60.37	340	*e*P	P	13 37 16.2	-1.4
HIA				pmax	pmax		
	comp=Z,14nm,1.0s						
HIA	Hailar	60.37	340	*e*P	P	13 37 16.2	-1.4
	comp=Z,14nm,1.0s,mb4.9						
GTA	Gaotai	62.96	321	⇓*i*P	P	13 37 35.3	+0.1
GTA				PCP	PcP	13 38 11.3	-0.5
GTA				PP	PP	13 39 55.3	-1.1
GTA				SCP		13 41 59.5	
GTA				S	S	13 45 57.0	+2.8
GTA				SCS	ScS	13 47 11.3	-1.5
GTA				AMB	AMB		
	comp=Z,18nm,0.7s,mb5.1						
GTA				AMB	AMB		
	comp=Z,223nm,12.0s						
GTA				LR	LR		
	comp=N,58nm,21.7s						
GTA				LR	LR		
	comp=E,56nm,19.0s						
GTA				LR	LR		
	comp=Z,102nm,16.0s						
LSA	Lhasa	64.31	307	P	P	13 37 45.5	+1.3
LSA				AMB	AMB		
	comp=Z,90nm,0.7s,mb5.7						
LSA	Lhasa	64.31	307	*e*P	P	13 37 45.5	+1.3
LSA				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.5						
LSA	Lhasa	64.31	307	*e*P	P	13 37 45.5	+1.3
	comp=Z,64nm,0.8s,mb5.5						
ULN	Ulaanbaatar	64.44	332	*e*P	P	13 37 44.0	-0.7
ULN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ULN	Ulaanbaatar	64.44	332	*e*P	P	13 37 44.0	-0.7
	comp=Z,4.8nm,0.7s,mb4.4						
SONM	Songino Array	64.73	331	P	P	13 37 46.1	-0.5
	comp=Z,2.8nm,0.8s,mb4.1,baz=152,slow=6.1,SNR=16						
CLNS	Chul'man	65.66	347	*e*P	P	13 37 51.7	-0.7
CLNS				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
MA2	Magadan	66.01	2	⇓*e*P	P	13 37 54.1	-0.5
MA2				pmax	pmax		
	comp=Z,27nm,2.0s,mb4.7						
JIRN	Jiri	67.55	303	*e*P	P	13 38 05.4	+0.6
	comp=Z,90nm,0.7s,mb5.7						
ZAK	Zakamensk	67.97	332	⇓*i*P	P	13 38 06.6	-0.4
ZAK				*e*		13 38 41.7	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
PKI	Pulchoki	68.16	303	*e*P	P	13 38 08.7	+0.1
	comp=Z,87nm,0.8s,mb5.6						
KKN	Kakani	68.35	303	*e*P	P	13 38 10.2	+0.5
	comp=Z,157nm,0.8s,mb5.9						
DMN	Daman	68.43	303	*e*P	P	13 38 11.1	+0.8
	comp=Z,205nm,0.8s,mb6.0						
GKN	Gorkha	68.95	303	*e*P	P	13 38 13.8	+0.3
	comp=Z,165nm,0.7s,mb6.0						
BOD	Bodaibo	69.41	342	*e*P	P	13 38 13.2	-2.5
BOD				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
YAK	Yakutsk	69.65	352	⇓*e*P	P	13 38 16.4	-0.7
YAK				pmax	pmax		

	comp=Z,20nm,1.0s,mb4.9						
YAK	**Yakutsk**	69.65	352	*e*P	P	13 38 16.1	-1.1
	comp=Z,13nm,0.8s,mb4.8						
KOLN	**Koldanda**	69.74	303	*e*P	P	13 38 18.7	+0.4
	comp=Z,181nm,0.8s,mb5.9						
MOY	**Mondy**	69.91	332	*e*P	P	13 38 18.8	-0.1
MOY				pmax	pmax		
	comp=Z,9.0nm,1.8s,mb4.3						
HYB	**Hyderabad**	71.34	291	*e*P	P	13 38 28.0	0.0
HYB	**Hyderabad**	71.34	291	*i* P	P	13 38 28.0	0.0
WMQ	**Urumqi**	73.00	320	P	P	13 38 38.0	+0.6
WMQ				AP	pP	13 39 06.0	-0.5
WMQ				PP	PP	13 41 24.0	+0.7
WMQ				S	S	13 47 55.0	+1.5
WMQ				SCS	ScS	13 48 32.0	+0.9
WMQ				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
DDI	**Dehra Dun**	75.14	304	*e*	P	13 38 48.6	-1.5
BILL	**Bilibino**	75.72	7	*e*P	P	13 38 52.8	+0.3
BILL				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
BILL	**Bilibino**	75.72	7	*e*P	P	13 38 52.8	+0.2
	comp=Z,14nm,1.1s,mb4.6						
MKAR	**Makanchi Array**	77.72	321	*i* P	P	13 39 04.1	0.0
MKAR				pmax	pmax		
	comp=Z,39nm,1.2s						
TIXI	**Tiksi**	78.94	354⇓	*e*P	P	13 39 08.7	-1.6
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.4						
TNA	**Tin City**	79.23	18	*e*P	P	13 39 12.5	+0.5
	comp=Z,5.7nm,0.8s,mb4.5						
ZAL	**Zalesovo**	79.31	328	P	P	13 39 11.8	-0.9
	comp=Z,4.4nm,0.6s,mb4.4,baz=353,slow=5.6,SNR=28						
ZAL				pP	pP	13 39 32.5	-10
	comp=Z,3.2nm,0.7s,baz=27,slow=6.2,SNR=5.4						
KSH	**Kashi**	79.50	312	*e*P	P	13 39 16.5	+2.5
KSH				*e*PCP	PcP	13 39 25.3	+3.4
KSH				*e*PP	PP	13 42 21.5	+4.5
KSH				*e*PPP	PPP	13 44 12.0	+3.6
KSH				*e*S	S	13 49 06.5	+2.1
KSH				*e*SKS	SKS	13 49 16.0	+1.3
KSH				*e*SCS	ScS	13 49 25.8	+2.2
KSH				*e*XS		13 49 55.0	
KSH				*e*SS	SS	13 54 22.3	+5.3
KSH				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.6						
KSH				LR	LR		
	comp=N,190nm,4.5s						
KSH				LR	LR		
	comp=E,170nm,4.8s						
NVS	**Novosibirsk**	80.53	328	*e*P	P	13 39 16.5	-2.7
NVS				*e*		13 39 53.7	
KZA	**Kyzart**	80.79	314	P	P	13 39 22.4	+1.6
	SNR=86						
TKM2	**Tokmak 2**	80.81	315	P	P	13 39 22.1	+1.2
	SNR=17						
UCH	**Uchtor**	81.36	314	P	P	13 39 25.3	+1.5
	SNR=41						
CHMS	**Chumysh**	81.42	315	P	P	13 39 24.8	+0.7
	SNR=9.0						
KURK	**Kurchatov**	81.46	323	P	P	13 39 24.4	+0.2
	comp=E,74nm,0.9s,mb5.5,SNR=12						
KURK	**Kurchatov**	81.46	323	*e*P	P	13 39 23.7	-0.5
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
KURK	**Kurchatov**	81.46	323	*e*P	P	13 39 23.7	-0.4
	comp=Z,10nm,0.8s,mb4.7						
AAK	**Ala-Archa**	81.49	315	P	P	13 39 25.9	+1.4
	SNR=16						
AAK	**Ala-Archa**	81.49	315	*e*P	P	13 39 24.0	-0.5
AAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
AAK	**Ala-Archa**	81.49	315	*e*P	P	13 39 23.9	-0.6
	comp=Z,15nm,1.0s,mb4.8						
MAW	**Mawson**	81.59	203	LR	LR	14 11 27.6	
	comp=Z,166nm,18.8s,baz=245,slow=32						
USP	**Ospenovka**	81.67	315	P	P	13 39 26.3	+0.8
	SNR=21						
AML	**Almayashu**	81.92	314	P	P	13 39 28.3	+1.5
	SNR=72						
EKS2	**Erkin-Say**	82.01	315	P	P	13 39 28.4	+1.2
	SNR=33						
QSPA	**South Pole Qui**	83.40	180	*e*P	P	13 39 34.0	+0.4
	comp=Z,4.4nm,0.6s,mb4.5						
IMA	**Indian Mountai**	84.21	21	*e*P	P	13 39 38.8	+1.1
IMA				pmax	pmax		
	comp=Z,51nm,0.9s,mb5.3						
IMA	**Indian Mountai**	84.21	21	*e*P	P	13 39 38.8	+1.1
	comp=Z,51nm,0.9s,mb5.3						
SML	**Sawmill**	84.30	26	*e*P	P	13 39 38.9	+0.6
MCK	**McKinley**	84.88	24	*e*P	P	13 39 40.9	-0.3
MCK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
MCK	**McKinley**	84.88	24	*e*P	P	13 39 40.9	-0.2
	comp=Z,14nm,0.9s,mb4.9						
DIV	**Divide**	85.15	27	*e*P	P	13 39 43.6	+1.0
	comp=Z,29nm,0.7s,mb5.3						
THY	**Trims Highway**	86.05	25	*e*P	P	13 39 48.3	+1.4
ILAR	**Eielson Array**	86.14	23	P	P	13 39 46.5	-0.8
	comp=Z,21nm,0.6s,mb5.2,baz=253,slow=5.0,SNR=312						
BVA0	**Borovoye Array**	87.02	324	*i* P	P	13 39 51.1	-0.8
CHKZ	**Chkalovo**	87.06	325	*e*P	P	13 39 50.9	-1.2
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CHKZ	**Chkalovo**	87.06	325	*e*P	P	13 39 50.9	-1.2
	comp=Z,4.1nm,1.0s,mb4.3						
INK	**Inuvik**	92.31	21	*e*P	P	13 40 16.1	-0.3
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
INK	**Inuvik**	92.31	21	P	P	13 40 16.3	-0.1
	comp=Z,4.9nm,0.9s,mb4.7,baz=234,slow=7.2,SNR=13						
INK	**Inuvik**	92.31	21	*e*P	P	13 40 16.1	-0.2
	comp=Z,7.3nm,1.0s,mb4.9						
NVAR	**Mina Array Bea**	97.98	52	P	P	13 40 45.2	+2.3
	comp=Z,1.0nm,0.9s,mb4.3,baz=242,slow=4.7,SNR=5.7						
YKA	**Yellowknife Ar**	99.83	28	P	P	13 40 50.9	+0.2
	comp=Z,0.4nm,0.7s,mb4.2,baz=274,slow=4.9,SNR=11						
YKA				PKiKP		13 45 18.7	
	comp=Z,0.2nm,0.6s,baz=277,slow=1.5,SNR=7.3						
FINES	FINESS Array B	110.03	334	PKiKP		13 45 37.1	
	comp=Z,0.7nm,0.5s,baz=63,slow=4.3,SNR=5.4						
AKASG	Malin Array Be	112.26	322	PP	PP	13 46 28.0	-3.4
	comp=Z,0.2nm,0.3s,baz=56,slow=7.6,SNR=4.2						
NOA	NORSAR Array B	116.35	338	PKP	PKPdf	13 45 49.4	+1.2
	comp=Z,0.6nm,0.7s,baz=82,slow=4.7,SNR=3.4						
MORC	Moravsky Berou	119.53	325	*e*PKIKP	PKPdf	13 45 55.9	+1.4
BRG	Berggiesshubel	120.99	327	*i* PKIKP	PKPdf	13 45 58.8	+1.4
CLL	Collm	121.26	328	*i* PKIKP	PKPdf	13 45 59.5	+1.6
	comp=Z,logA/T=1.0						
CLL				*e**PPKP		13 46 28.0	
PLCA	Paso Flores	121.83	147	PKP	PKPdf	13 46 01.8	+2.5
	comp=Z,1.7nm,0.5s,baz=180,slow=3.0,SNR=5.3						
KHC	Kasperske Hory	122.10	326	*e*PKPdf	PKPdf	13 46 00.0	+0.4
GERES	GERESS Array B	122.18	325	PKP	PKPdf	13 46 01.5	+1.8
	comp=Z,3.6nm,0.5s,baz=74,slow=1.5,SNR=32						
SCHQ	Schefferville	124.90	23	PKP	PKPdf	13 46 06.3	+1.5
	comp=Z,1.4nm,0.7s,baz=307,slow=5.1,SNR=4.1						
CDF	Champ du Feu	125.96	328	*e*PKP1	PKPdf	13 46 09.2	+2.2
	comp=Z,3.5nm,0.5s						
GIVF	Givet	126.15	330	*e*PKP1	PKPdf	13 46 09.4	+2.1
BAIF	Baives	126.48	331	*e*PKP1	PKPdf	13 46 10.1	+2.1
HINF	Hinteralfeld	126.54	327	*e*PKP1	PKPdf	13 46 09.7	+1.6
	comp=Z,14nm,0.8s						
HAU	Haudompre	126.70	328	*e*PKP1	PKPdf	13 46 10.2	+1.8
	comp=Z,18nm,0.7s						
HAU				*e*R			
	comp=Z,186nm,18.8s						
MEZF	Maizieres J'vi	127.07	329	*e*PKP1	PKPdf	13 46 11.4	+2.3
CABF	La Chapelle	127.69	326	*e*PKP1	PKPdf	13 46 11.9	+1.5
LPL	La Plagne	127.97	325	*e*PKP1	PKPdf	13 46 13.4	+2.4
LPG	La Plagne	127.98	325	*e*PKP1	PKPdf	13 46 13.4	+2.4
	comp=Z,14nm,0.8s						
SSF	Saint Saulge	128.79	328	*e*PKP1	PKPdf	13 46 14.6	+2.1
	comp=Z,20nm,1.1s						
JTS	JuntasAbangare	128.86	82	*e*PKIKP	PKPdf	13 46 15.3	+1.8
SMF	Signal de Mont	128.88	328	*e*PKP1	PKPdf	13 46 14.7	+2.0
AVF	Avril sur Loir	129.04	328	*e*PKP1	PKPdf	13 46 14.3	+1.3
BGF	Bois d'Agland	129.46	328	*e*PKP1	PKPdf	13 46 16.1	+2.3
VIVF	Saint-Julien-l	129.54	325	*e*PKP1	PKPdf	13 46 16.2	+2.2
TCF	Toulx Ste Croi	129.97	328	*e*PKP1	PKPdf	13 46 17.1	+2.3
	comp=Z,8.1nm,0.7s						
GRR	Gorron	130.04	332	*e*PKP1	PKPdf	13 46 17.0	+2.1
	comp=Z,12nm,0.6s						
ROSF	Rostrenen	131.17	334	*e*PKP1	PKPdf	13 46 18.9	+1.9
	comp=Z,15nm,0.8s						
ETSF	Etsaut	133.70	327	*e*PKP1	PKPdf	13 46 25.4	+3.5
	comp=Z,10nm,0.8s						
SDV	Santo Domingo	142.99	84	*e*PKPdf	PKPdf	13 46 40.2	+0.7
SJG	San Juan	146.03	67	*e*PKIKP	PKPdf	13 46 47.1	+2.4
DBIC	Dimbokro	151.70	272	PKPbc	PKPdf	13 47 02.5	+8.7
	comp=Z,17nm,0.7s,baz=94,slow=2.3,SNR=41						
DBIC	Dimbokro	151.70	272	*e*PKPbc	PKPdf	13 47 02.4	+8.6
DBIC				*e*		13 47 31.1	
BDFB	Brasilia	153.58	147	PKPbc	PKPdf	13 47 06.8	+10
	comp=Z,6.7nm,0.5s,baz=273,slow=0.9,SNR=12						
BAO	Brasilia Array	153.60	147	P	PKPdf	13 47 06.8	+10

PGC ***28*** *13:32:26.9, 47.95N×129.08W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*

IDC ***28*** *13:32:30.0±2.4, 48.18N×128.80W, mb3.2/1, mb1 3.6/7, mb1mx3.5/22, mbtmp3.4/7, ML3.0/5, MS3.2/3, Ms1 3.2/3, ms1mx2.7/14, Error ellipse: s-maj=47.9km s-min=14.2km az=69.0*

NEIC ***28*** *13:32:31.9±1.3, 48.29N×128.67W, h10^{km}, mb4.1/1, Error ellipse: s-maj=23.0km s-min=9.7km az=64.0*

ISC 28 13:32:29.1±0.7**, 48.21N**±0.04×**128.79W**±0.06**, h10^{km}, n44,** σ**0^{s}.90**/56**, mb3.2**/1**, MS3.2**/1**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	2.00	33	Pn	Pn	13 33 02.6	-0.7
OZB	**Mount Ozzard**	2.32	70	Pn	Pn	13 33 07.3	-0.7
OZB				Sn	Sn	13 33 36.7	0.0
OZB				Trac		13 33 39.6	
	comp=Z,9.0nm,0.3s						
GDR	**Gold River**	2.40	48	Pn	Pn	13 33 09.1	-0.1
WOSB	**Woss**	2.44	36	Pn	Pn	13 33 09.8	+0.1
MAYB	**Maynard**	2.44	25	Pn	Pn	13 33 09.6	-0.1
MAYB				Sn	Sn	13 33 40.7	+0.9
	comp=Z,10.0nm,0.4s						
MAYB				Trac		13 33 41.0	
	comp=Z,10.0nm,0.4s						
HOLB	**Holberg**	2.47	10	Pn	Pn	13 33 10.2	+0.1
HOLB				Sn	Sn	13 33 41.7	+1.0
	comp=Z,4.0nm,0.2s						
HOLB				Trac		13 33 44.6	
	comp=Z,4.0nm,0.2s						
BTB	**Buttle Lake**	2.50	59	Pn	Pn	13 33 10.8	+0.2
BTB				Sn	Sn	13 33 43.1	+1.7
	comp=Z,25nm,0.5s						
BTB				Trac		13 33 45.1	
	comp=Z,25nm,0.5s						
PHC	**Port Hardy**	2.65	19	Pn	Pn	13 33 12.7	0.0
NCRB	**Newcastle Ridg**	2.83	38	Pn	Pn	13 33 15.7	+0.4
MGB	**Mount Grey**	2.83	72	Pn	Pn	13 33 14.4	-0.9
MGB				Sn	Sn	13 33 49.7	-0.2
	comp=Z,4.0nm,0.4s						
MGB				Trac		13 33 52.7	
	comp=Z,4.0nm,0.4s						
CBB	**Campbell River**	2.90	50	Pn	Pn	13 33 16.6	+0.4
CBB				Sn	Sn	13 34 02.0	+11
CBB				Trac		13 34 10.7	
	comp=Z,9.0nm,0.7s						
PFB	**Port Renfrew**	2.92	81	Pn	Pn	13 33 15.0	-1.6
PFB				Sn	Sn	13 33 51.0	-1.1
PFB				Trac		13 33 54.0	
	comp=Z,2.0nm,0.4s						
TXB	**Texada**	3.23	61	Pn	Pn	13 33 20.8	-0.2
LZB	**Mount Lazard**	3.33	81	Pn	Pn	13 33 21.1	-1.4
LZB				Sn	Sn	13 34 01.5	-1.1
LZB				Trac		13 34 05.1	
	comp=Z,3.0nm,0.6s						
NLLB	**Nanaimo Lost L**	3.34	70	Pn	Pn	13 33 22.4	-0.2
NLLB				Sn	Sn	13 34 03.4	+0.7
NLLB				Trac		13 34 09.5	
	comp=Z,6.0nm,0.7s						
SHB	**Sechelt**	3.53	65	Pn	Pn	13 33 25.1	-0.1
SHB				Sn	Sn	13 34 09.2	+1.7
SHB				Trac		13 34 13.9	
	comp=Z,14nm,0.8s						
GOBB	**Galiano Island**	3.58	76	Pn	Pn	13 33 25.6	-0.4
GOBB				Sn	Sn	13 34 10.9	+2.0
	comp=Z,7.0nm,0.6s						
GOBB				Trac		13 34 12.6	
	comp=Z,7.0nm,0.6s						
PGC	**Sidney**	3.58	81	*e*P	Pn	13 33 25.2	-0.7
PGC	**Sidney**	3.58	81	Pn	Pn	13 33 25.5	-0.5
PGC				Sn	Sn	13 34 09.0	+0.1
PGC				Trac		13 34 12.0	
	comp=Z,3.0nm,0.4s						
VGZ	Gonzales	3.66	85	Trac		13 34 11.5	
	comp=Z,7.0nm,0.5s						
VGZ	**Gonzales**	3.66	85	Sn	Sn	13 34 09.0	-1.7
SNB	**Saturna Island**	3.78	79	Pn	Pn	13 33 28.8	0.0
BIB	**Bowen Island**	3.82	70	Pn	Pn	13 33 29.3	-0.1
WPB	**Watts Point**	3.96	66	Pn	Pn	13 33 30.8	-0.5
BBB	**Bella Bella**	4.00	6	Pn	Pn	13 33 31.8	-0.1
	5.2nm,0.3s,baz=201,slow=14,SNR=64						
BBB				Sn	Sn	13 34 18.4	-1.0
	0.4nm,0.3s,slow=5.1,SNR=2.0						
BBB	**Bella Bella**	4.00	6	Pn	Pn	13 33 31.8	-0.1
BBB				Sn	Sn	13 34 18.4	-1.0
BBB	**Bella Bella**	4.00	6	Pn	Pn	13 33 31.7	-0.3
BBB				Sn	Sn	13 34 18.6	-0.8
BBB				Trac		13 34 21.1	
	comp=Z,14nm,0.6s						
HNB	**Haney**	4.25	73	Pn	Pn	13 33 34.4	-1.0
WSLR	**Whistler**	4.30	61	Pn	Pn	13 33 36.6	+0.4
VDB	**Vedder Mountai**	4.51	77	Pn	Pn	13 33 38.5	-0.7
LLLB	**Lillooet**	5.11	59	Pn	Pn	13 33 47.6	0.0
YBH	**Yreka Blue Hor**	7.78	144	Pn	Pn	13 34 26.0	+0.8
	0.1nm,0.3s,baz=335,slow=13,SNR=3.7						
ELK	Elko	12.21	123	LR	LR	13 40 09.3	
	comp=Z,113nm,18.3s,baz=302,slow=38						
NVAR	**Mina Array Bea**	12.39	138	Pn	P	13 35 29.9	+1.5
	0.1nm,0.3s,baz=326,slow=11,SNR=5.0						
NVAR	**Mina Array Bea**	12.39	138	Pn	P	13 35 29.9	+1.5
PDAR	**Pinedale Array**	14.54	105	Pn	P	13 35 60.0	+3.3
	baz=287,slow=9.4,SNR=2.9						
YKA	**Yellowknife Ar**	16.37	24	Pn	P	13 36 19.3	-0.9
	0.0nm,0.3s,baz=204,slow=12,SNR=5.2						
YKA				LR	LR	13 43 04.0	
	comp=Z,58nm,18.8s,baz=240,slow=39						
YKA	**Yellowknife Ar**	16.37	24	Pn	P	13 36 19.3	-0.9
YKA				LR	LR	13 43 04.0	
PV10	**Paradox Valley**	17.37	117	*e*P	P	13 36 34.3	+1.2
PV01	**Paradox Valley**	17.81	117	*e*P	P	13 36 38.8	+0.2
FFC	**Flin Flon**	17.86	59	*e*P	P	13 36 41.1	+2.0
	20nm,1.4s						
ILAR	**Eielson Array**	19.24	336	P	P	13 36 55.8	-0.1
	0.0nm,0.3s,baz=158,slow=9.0,SNR=5.9						
ANMO	**Albuquerque**	21.23	120	P	P	13 37 17.2	-0.1
	0.5nm,0.3s,mb3.2,baz=320,slow=8.4,SNR=3.3						
TXAR	Lajitas Array	26.99	125	LR	LR	13 49 56.7	
	comp=Z,67nm,18.0s,MS3.2,baz=155,slow=39						

IDC ***28*** *13:49:33.1±0.8, 12.70N×123.42E, mb3.9/12, mb1 4.0/12, mb1mx4.0/19, mbtmp3.9/12, Error ellipse: s-maj=34.9km s-min=18.2km az=67.0*

MAN ***28*** *13:49:35.9, 12.69N×123.21E, h16^{km}, mb4.6, ML3.5, MS3.4*

NEIC ***28*** *13:49:43.5±3.5, 12.58N×123.28E, h83^{km}±33^{km}, mb4.3/8, Error ellipse: s-maj=18.1km s-min=8.7km az=67.0*

ISC 28 13:49:37.0±0.8**, 12.69N**±0.03×**123.20E**±0.03**, h32^{km}**±7^{km}**, n48,** σ**0^{s}.93**/56**, mb4.1**/19**, 2C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	0.53	128	*i* P	Pb	13 49 40.0	-8.0
MMPH				*i* S	Sb	13 49 55.0	-0.5
AUQP	**San Andres**	0.81	321	*e*P	Pn	13 49 51.8	-0.5
OTRP	**Odiongan**	1.20	254	*e*P	Pn	13 49 57.3	-0.5
OTRP				*e*S	Sn	13 50 11.4	-1.6
RCP	**Roxas**	1.21	202⇑	*e*P	Pn	13 49 57.5	-0.4
RCP				*e*S	Sn	13 50 12.9	-0.4
PVCP	**Virac**	1.29	46	*e*P	Pn	13 49 58.5	-0.6
GQP	**Guinayangan**	1.42	329⇓	*i*P	Pn	13 50 00.8	-0.1
GQP				*e*S	Sn	13 50 20.0	+1.4
BOAC	**Boac**	1.53	300	*e*P	Pn	13 50 02.2	-0.3
BOAC				*e*S	Sn	13 50 22.9	+1.5
SJMP	**San Jose**	2.05	264	*e*P	Pn	13 50 10.3	+0.4
GUIM	**Jordan**	2.13	196	*e*P	Pn	13 50 13.1	+1.9
LQP	**Lukban**	2.15	311⇑	*e*P	Pn	13 50 11.9	+0.4
PLP	**Palo**	2.31	131	*e*P	Pn	13 50 13.7	0.0
PLP				*e*S	Sn	13 50 42.8	+1.6
POLP	**Polilio Island**	2.37	329	*e*P	Pn	13 50 14.7	+0.1
BESP	**Borongan**	2.44	116	*e*P	Pn	13 50 18.6	+3.0
LLP	**Lapu-Lapu**	2.47	162	*e*P	Pn	13 50 15.2	-0.8
LLP				*e*S	Sn	13 50 46.4	+1.0
TGY	**Tagaytay City**	2.62	303⇓	*i*P	Pn	13 50 22.8	+4.7
TGY				*i* S	Sn	13 50 49.9	+0.8
CUYO	**Cuyo Island**	2.81	230	*e*P	Pn	13 50 20.7	-0.2
BUSP	**Coron**	3.01	257	*e*P	Pn	13 50 23.5	-0.2
MSLP	**Maasin**	3.01	147	*e*P	Pn	13 50 25.1	+1.4
TBP	**Tagbilaran**	3.05	168	*e*P	Pn	13 50 24.6	+0.4
LUBP	**Lubang**	3.06	290	*e*P	Pn	13 50 24.7	+0.3
BALP	**Baler**	3.42	333	*e*P	Pn	13 50 29.2	-0.3
PCPH	**Palayan**	3.51	325	*e*P	Pn	13 50 30.2	-0.6
	35µm,1.0s						
ENPP	**El Nido**	3.98	249	*e*P	Pn	13 50 37.2	-0.2
CAUP	**Cauayan**	4.44	343	*e*P	Pn	13 50 43.3	-0.7
ENH	**Enshi**	21.62	326	*e*P	P	13 54 29.1	+2.5
	3.8nm,0.4s,mb4.2						
CMAR	**Chiang Mai Arr**	24.05	287	P	P	13 54 51.6	+1.0
	0.6nm,0.4s,mb3.4,baz=92,slow=7.9,SNR=6.7						
BJT	**Baijiatuau**	27.92	348	*e*P	P	13 55 27.6	+1.2
	4.6nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	34.23	161	P	P	13 56 20.3	-1.9
	0.3nm,0.7s,mb3.4,baz=340,slow=8.1,SNR=3.8						
ULN	**Ulaanbaatar**	37.58	342	*e*P	P	13 56 50.2	0.0
	5.2nm,0.9s,mb4.3						
ASAR	**Alice Springs**	37.62	164	P	P	13 56 49.5	-1.3
	0.4nm,0.7s,mb3.2,baz=337,slow=7.0,SNR=6.6						
SONM	**Songino Array**	37.75	341	P	P	13 56 51.9	+0.1
	2.2nm,0.7s,mb4.0,baz=164,slow=9.2,SNR=18						
ZAL	**Zalesovo**	51.09	332	P	P	13 58 38.2	-0.3
	2.1nm,0.9s,mb4.0,baz=349,slow=9.7,SNR=9.3						
ZAL	**Zalesovo**	51.09	332	P	P	13 58 38.2	-0.3
KURK	**Kurchatov**	52.39	326	P	P	13 58 48.6	+0.2
	146nm,0.6s,SNR=28						
KURK	**Kurchatov**	52.39	326	*e*P	P	13 58 48.2	-0.2
	17nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	57.98	325	P	P	13 59 28.8	-0.1
	4.8nm,1.1s,mb4.5,baz=120,slow=12,SNR=11						
BVAR				PcP	PcP	14 00 19.9	-0.5
	1.5nm,0.8s,baz=146,slow=5.3,SNR=3.6						
CHKZ	**Chkalovo**	58.12	326	*e*P	P	13 59 29.0	-0.8
	5.0nm,1.4s,mb4.3						
BILL	**Bilibino**	61.94	17	P	P	13 59 54.2	-1.7
MCK	**McKinley**	77.78	27	*e*P	P	14 01 31.7	-0.7
	4.5nm,1.1s,mb4.3						
ILAR	**Eielson Array**	78.59	26	P	P	14 01 35.2	-1.6
	0.9nm,0.7s,mb3.8,baz=247,slow=3.9,SNR=10						
ARCES	**ARCESS Array B**	80.89	339	P	P	14 01 49.2	+0.1
	4.1nm,0.9s,mb4.3,baz=56,slow=8.7,SNR=6.7						
FINES	**FINESS Array B**	82.34	331	P	P	14 01 56.8	0.0
	0.8nm,0.5s,mb4.0,baz=72,slow=6.0,SNR=5.8						
AKASG	**Malin Array Be**	82.80	320	P	P	14 01 59.0	-0.4
	0.8nm,0.6s,mb3.9,baz=59,slow=4.2,SNR=4.1						
INK	**Inuvik**	83.15	21	P	P	14 02 00.2	-0.6
	0.9nm,0.7s,mb3.9,baz=266,slow=6.4,SNR=7.2						
INK	**Inuvik**	83.15	21	*e*P	P	14 02 00.8	0.0
	1.5nm,0.8s,mb4.1						
RES	**Resolute Bay**	89.64	9	*e*P	P	14 02 32.9	+0.4
	1.1nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	92.76	23	P	P	14 02 47.2	+0.1
	0.2nm,0.6s,mb3.7,baz=299,slow=5.1,SNR=3.8						
YKA	**Yellowknife Ar**	92.76	23	P	P	14 02 47.2	+0.1

BJI ***28*** *13:50:22.0, 48.00N×129.00W, h10^{km}, mB5.1, mb4.6, Ms4.8, Msz4.5*

NEIC ***28*** *13:50:22.0, 47.99N×128.97W, h10^{km}, mb4.8/29, MS4.2/1, MW5.0(PGC), After PGC.*

PGC ***28*** *13:50:22.4, 47.99N×128.97W, h10^{km}, Mw5.0, Mw4.9, Northern Juan de Fuca ridge.*

IDC ***28*** *13:50:23.3±1.0, 48.12N×128.96W, mb4.3/12, mb1 4.5/21, mb1mx4.4/30, mbtmp4.4/21, ML3.8/8, MS4.2/20, Ms1 4.2/20, ms1mx4.1/23, Error ellipse: s-maj=23.5km s-min=11.0km az=54.0*

MOS ***28*** *13:50:24.1±1.0, 48.28N×128.75W, h10^{km}, mb4.9/20, Error ellipse: s-maj=9.9km s-min=4.8km az=120.1*

HRVD ***28*** *13:50:25.0±0.2, 48.07N×129.18W, h12^{km}, MW5.0/63, Centroid moment Tensor Solution. LP body waves: s35,c45;Mantle waves: s63,c110; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.28±.10; M$_{\theta\theta}$1.30±.10; M$_{\phi\phi}$-1.02±.09; M$_{r\theta}$-0.26±.24; M$_{\theta\phi}$3.10±.07; M$_{\phi r}$-0.35±.25; Best double couple: M$_0$3.336×10^{16} NP1: ϕ_s280°, δ84°, λ2°. NP2:ϕ_s190°, δ88°, λ174°. Principal axes: T 3.495, Plg6°, Azm145°; N -.319, Plg83°, Azm350°; P -3.177, Plg3°, Azm235°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 13:50:24.0±0.8**, 48.27N**±0.02×**128.79W**±0.03**, h11^{km}**±5^{km}**, h13^{km}**±3.8^{km}**:pP-P, n239,** σ**0^{s}.99**/249**, mb4.6**/39**, MS4.3**/29**, 1C-3D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETB	**Estevan Point**	1.85	52	Pn	Pn	13 50 57.0	+0.9
EDB	**Eliza Dome**	1.94	34	Pn	Pn	13 50 57.3	-0.1
BPBC	**Brooks Peninsu**	2.00	19	Pn	Pn	13 50 58.3	0.0
OZB	**Mount Ozzard**	2.29	71	Pn	Pn	13 51 01.4	-1.1
OZB				Sn	Sn	13 51 29.7	-1.2
	comp=Z,188nm,0.5s						
OZB				Trac		13 51 32.4	
	comp=Z,188nm,0.5s						
GDR	**Gold River**	2.36	49	Pn	Pn	13 51 03.6	+0.2
MAYB	**Maynard**	2.38	26	Pn	Pn	13 51 04.0	+0.3
WOSB	**Woss**	2.39	37	Pn	Pn	13 51 03.7	0.0
HOLB	**Holberg**	2.41	10	Pn	Pn	13 51 04.5	+0.4
HOLB				Sn	Sn	13 51 35.6	+1.7
	comp=Z,87nm,0.2s						
HOLB				Trac		13 51 37.6	
	comp=Z,87nm,0.2s						
BTB	**Buttle Lake**	2.47	60	Pn	Pn	13 51 04.8	-0.1
BTB				Sn	Sn	13 51 36.4	+1.1
	comp=Z,168nm,0.4s						
BTB				Trac		13 51 38.8	
	comp=Z,168nm,0.4s						
PHC	**Port Hardy**	2.59	19	Pn	Pn	13 51 06.6	-0.1
NCRB	**Newcastle Ridg**	2.79	39	Pn	Pn	13 51 10.2	+0.8
ALB	**Alberni**	2.80	68	Pn	Pn	13 51 09.2	-0.5
ALB				Sn	Sn	13 51 42.3	-1.6
	comp=Z,73nm,0.7s						
ALB				Trac		13 51 55.8	
	comp=Z,73nm,0.7s						
MGB	**Mount Grey**	2.81	73	Pn	Pn	13 51 08.9	-1.0
MGB				Sn	Sn	13 51 43.0	-1.1
	comp=Z,77nm,0.5s						
MGB				Trac		13 51 46.7	
	comp=Z,77nm,0.5s						
CBB	**Campbell River**	2.86	51	Pn	Pn	13 51 11.2	+0.7
CBB				Sn	Sn	13 51 45.8	+0.6
	comp=Z,89nm,0.5s						
CBB				Trac		13 51 49.4	
	comp=Z,89nm,0.5s						
PFB	**Port Renfrew**	2.91	82	Pn	Pn	13 51 09.6	-1.6
PFB				Sn	Sn	13 51 45.7	-0.9
	comp=Z,69nm,0.6s						
PFB				Trac		13 51 49.2	
	comp=Z,69nm,0.6s						
OCWA	**Octopus Mounta**	3.14	98	*e*P	Pn	13 51 13.4	-1.1
TXB	**Texada**	3.20	62	Pn	Pn	13 51 15.4	+0.1
NLLB	**Nanaimo Lost L**	3.32	71	Pn	Pn	13 51 16.4	-0.6
NLLB				Sn	Sn	13 51 56.1	-0.8
	comp=Z,53nm,0.6s						
NLLB				Trac		13 51 58.6	
	comp=Z,53nm,0.6s						
LZB	**Mount Lazard**	3.32	82	Pn	Pn	13 51 16.0	-1.0
LZB				Sn	Sn	13 51 56.1	-0.9
	comp=Z,45nm,0.6s						
LZB				Trac		13 51 59.2	
	comp=Z,45nm,0.6s						
SHB	**Sechelt**	3.50	66	Pn	Pn	13 51 19.8	+0.2
GOBB	**Galiano Island**	3.57	77	Pn	Pn	13 51 20.1	-0.5
GOBB				Sn	Sn	13 52 05.3	+2.1
	comp=Z,126nm,0.7s						
GOBB				Trac		13 52 06.7	
	comp=Z,126nm,0.7s						
PGC	**Sidney**	3.57	82	*e*P	Pn	13 51 19.3	-1.3
PGC	**Sidney**	3.57	82	Pn	Pn	13 51 19.9	-0.7
PGC				Sn	Sn	13 52 02.8	-0.5
	comp=Z,62nm,0.5s						
PGC				Trac		13 52 05.5	
	comp=Z,62nm,0.5s						
VGZ	**Gonzales**	3.65	86	Pn	Pn	13 51 20.0	-1.7
VGZ				Sn	Sn	13 52 04.0	-1.2
	comp=Z,191nm,0.5s						

VGZ				Trac		13 52 05.7	
	comp=Z,191nm,0.5s						
SNB	Saturna Island	3.77	80	Pn	Pn	13 51 23.1	-0.3
SNB				Sn	Sn	13 52 09.2	+1.0
	comp=Z,30nm,0.4s						
SNB				Trac		13 52 11.3	
	comp=Z,30nm,0.4s						
BIB	Bowen Island	3.79	71	Pn	Pn	13 51 23.6	-0.2
BIB				Sn	Sn	13 52 10.2	+1.2
	comp=Z,31nm,0.5s						
BIB				Trac		13 52 12.5	
	comp=Z,31nm,0.5s						
WPB	Watts Point	3.93	67	Pn	Pn	13 51 25.4	-0.2
BBB	Bella Bella	3.94	6	Pn	Pn	13 51 26.6	+0.7
	113nm,0.3s,baz=197,slow=12,SNR=684						
BBB				Sn	Sn	13 52 13.4	+0.7
	12nm,0.3s,baz=318,slow=19,SNR=6.5						
BBB	Bella Bella	3.94	6	⇓Pn	Pn	13 51 26.6	+0.7
BBB				Sn	Sn	13 52 12.8	+0.2
	comp=Z,83nm,0.4s						
BBB				Trac		13 52 13.9	
	comp=Z,83nm,0.4s						
HNB	Haney	4.23	74	Pn	Pn	13 51 29.1	-0.8
WSLR	Whistler	4.27	62	Pn	Pn	13 51 30.6	0.0
VDB	Vedder Mountai	4.50	78	P	Pn	13 51 33.3	-0.4
VDB	Vedder Mountai	4.50	78	Pn	Pn	13 51 33.0	-0.8
VDB				Sn	Sn	13 52 27.9	+1.2
BNB	Barry Inlet	4.71	337	Pn	Pn	13 51 35.8	-1.0
HTW	Haystack Looko	4.73	93	P	Pn	13 51 37.2	+0.1
GSM	Grass Mountain	4.84	100	P	Pn	13 51 37.7	-0.9
RPW	Rockport	4.85	85	P	Pn	13 51 38.9	+0.1
LVP	Lakeview Peak	4.88	114	P	Pn	13 51 39.3	+0.2
LON	Longmire	4.97	105	P	Pn	13 51 39.7	-0.7
HOPB	Hope	4.99	74	Pn	Pn	13 51 40.4	-0.4
FMW	Mount Fremont	5.00	103	P	Pn	13 51 40.6	-0.2
LLLB	Lillooet	5.08	60	Pn	Pn	13 51 42.3	+0.3
WPW	White Pass	5.15	105	P	Pn	13 51 43.6	+0.5
COR	Corvallis	5.29	132	*e*P	Pn	13 51 43.2	-1.7
BNAB	Bonilla	5.36	348	Pn	Pn	13 51 47.2	+1.3
VLMM	Larch Mountain	5.37	118	P	Pn	13 51 46.7	+0.5
VFP	Flag Point	5.83	118	P	Pn	13 51 52.5	-0.1
RUBB	Prince Rupert	6.13	352	Pn	Pn	13 52 03.4	+6.6
PNT	Penticton	6.15	77	Pn	Pn	13 51 56.6	-0.5
FRIS	Frissel Point	6.16	129	P	Pn	13 51 57.2	-0.1
NDB	Naden	6.26	337	Pn	Pn	13 51 57.6	-1.1
FSB	Fort Saint Jam	6.81	22	Pn	Pn	13 52 15.4	+9.0
HUMO	Hull Mountain	6.99	142	*e*P	Pn	13 52 08.3	-0.7
DOWB	Downie Slide	7.39	60	Pn	Pn	13 52 14.2	-0.3
SLEB	Sale Mountain	7.49	63	Pn	Pn	13 52 15.3	-0.6
MNB	Mounoet Dainar	7.74	56	Pn	Pn	13 52 19.7	+0.2
NEW	Newport	7.79	86	*e*P	Pn	13 52 17.0	-3.1
NEW	Newport	7.79	86	Pn	Pn	13 52 18.3	-1.8
	1.1nm,0.3s,baz=286,slow=10,SNR=9.0						
YBH	Yreka Blue Hor	7.83	144	*e*P	Pn	13 52 20.9	+0.3
YBH	Yreka Blue Hor	7.83	144	Pn	Pn	13 52 22.0	+1.4
	1.1nm,0.3s,baz=339,slow=13,SNR=36						
BMO	Blue Mountains	8.62	109	*e*P	P	13 52 29.5	-2.2
MOD	Modoc	8.75	134	*e*P	P	13 52 33.2	-0.3
BMBC	Bull Mountain	8.79	25	Pn	P	13 52 38.0	+4.0
WDC	Whiskeytown Da	8.89	148	*e*P	P	13 52 35.8	+0.4
WVOR	Wild Horse Val	9.22	126	*e*P	P	13 52 39.9	-0.1
WALA	Waterton Lakes	9.88	80	*e*P	P	13 52 47.6	-1.4
WALA	Waterton Lakes	9.88	80	Pn	P	13 52 47.8	-1.2
HOPS	Hopland	10.15	154	*e*P	P	13 52 51.6	-1.2
DLBC	Dease Lake	10.21	356	Pn	P	13 52 57.6	+4.0
	0.3nm,0.3s,baz=161,slow=12,SNR=10						
DLBC				LR	LR	13 56 39.3	
	comp=Z,3µm,21.4s,baz=268,slow=36						
DLBC	Dease Lake	10.21	356	*e*P	P	13 52 51.3	-2.2
DLBC	Dease Lake	10.21	356	Pn	P	13 52 57.9	+4.4
OHCM	Honcut	10.37	147	*e*P	P	13 52 54.8	-1.0
CHMT	Chamberlain Mo	10.58	92	*e*P	P	13 52 56.8	-1.8
PAHR	Pah Rah Range	10.91	138	*e*P	P	13 53 03.8	+0.7
EDM	Edmonton	10.96	57	*e*P	P	13 53 01.4	-2.4
EDM	Edmonton	10.96	57	Pn	P	13 53 00.8	-3.0
HLID	Hailey	11.06	110	*e*P	P	13 53 04.5	-0.7
WCN	Washoe City	11.08	141	*e*P	P	13 53 06.3	+0.8
FNBB	Fort Nelson	11.18	16	Pn	P	13 53 06.5	-0.2
BMN	Battle Mountai	11.39	129	*e*P	P	13 53 08.7	-1.0
MCMT	McKenzie Canyo	11.50	101	*e*P	P	13 53 09.9	-1.3
CMB	Columbia Colle	11.92	146	*e*P	P	13 53 15.8	-1.1
ELK	Elko	12.24	123	*e*P	P	13 53 21.8	+0.6
ELK	Elko	12.24	123	Pn	P	13 53 22.4	+1.2
	0.1nm,0.3s,baz=309,slow=13,SNR=28						
ELK				LR	LR	13 58 06.8	
	comp=Z,2µm,18.6s,baz=303,slow=38						
QLMT	Earthquake Lak	12.43	100	*e*P	P	13 53 22.5	-1.3
NVAR	Mina Array Bea	12.44	138	Pn	P	13 53 25.1	+1.3
	0.3nm,0.3s,baz=320,slow=8.8,SNR=107						
NVAR				LR	LR	13 58 00.4	
	comp=Z,4µm,19.5s,baz=325,slow=37						
MNV	Mina	12.50	138	*e*P	P	13 53 25.4	+0.7
OMM	Old Mammoth Mi	12.82	143	*e*P	P	13 53 29.0	0.0
WHY	Whitehorse	12.90	346	Pn	P	13 53 33.5	+3.6
YNR	Norris Junctio	12.97	99	*e*P	P	13 53 31.8	+0.9
HVU	Hansel Valley	13.04	114	*e*P	P	13 53 33.1	+1.2
IMW	Indian Meadow	13.13	103	*e*P	P	13 53 33.5	+0.4
RRI2	Red Ridge	13.14	106	*e*P	P	13 53 34.0	+0.8
LRV	Little Rabbit	13.15	151	*e*P	P	13 53 32.6	-0.7
LKWY	Lake	13.21	99	P	P	13 53 34.8	+0.7
TPH	Tonopah	13.21	136	*e*P	P	13 53 34.8	+0.6
MTUM	Tungsten Hills	13.23	142	*e*P	P	13 53 34.9	+0.5
TPAW	Teton Pass	13.31	104	*e*P	P	13 53 36.5	+1.1
MOOW	Moose Ponds	13.32	103	*e*P	P	13 53 35.3	-0.3
BGU	Big Grassy Mou	13.40	117	*e*P	P	13 53 37.1	+0.4
WUWY	Wally Ulrich	13.42	104	*e*P	P	13 53 35.8	-1.1
LOHW	Long Hollow	13.48	103	*e*P	P	13 53 38.1	+0.5
SPUT	South Promonto	13.52	115	*e*P	P	13 53 38.0	-0.1
AHID	Auburn Hatcher	13.56	107	P	P	13 53 38.6	0.0
TRCR	Troy Canyon	13.79	131	*e*P	P	13 53 42.4	+0.6
HWUT	Hardware Ranch	13.88	112	*e*P	P	13 53 43.6	+0.7
DUG	Dugway	13.99	119	*e*P	P	13 53 45.3	+0.9
DUG				pmax	pmax		
	comp=Z,699nm,1.4s						
DUG	Dugway	13.99	119	*e*P	P	13 53 45.3	+0.9
	comp=Z,699nm,1.4s						
NOQ	North Oquirrh	14.11	116	*e*P	P	13 53 45.4	-0.6
TCUT	Toone Canyon	14.26	114	*e*P	P	13 53 48.6	+0.7
JLU	Jordanelle	14.55	115	*e*P	P	13 53 53.1	+1.5
PDAR	Pinedale Array	14.55	105	Pn	P	13 53 55.0	+3.4
	comp=Z,0.1nm,0.3s,baz=297,slow=13,SNR=26						
PDAR				LR	LR	13 59 46.7	
	comp=Z,1µm,18.8s,baz=301,slow=38						
NLU	North Lily Min	14.58	119	*e*P	P	13 53 52.3	+0.2
DAU	Daniels Canyon	14.78	116	*e*P	P	13 53 56.3	+1.6
MPU	Maple Canyon	14.80	118	*e*P	P	13 53 55.1	+0.1
ARUT	Antelope Range	15.32	127	*e*P	P	13 54 02.5	+0.7
LAO	LASA Array	15.33	87	P	P	13 54 03.6	+1.8
	comp=Z,23nm,0.5s						
MVU	Marysvale	15.48	123	*e*P	P	13 54 04.7	+0.8
	comp=Z,58nm,1.4s						
MSU	Marysvale	15.49	123	*e*P	P	13 54 04.9	+0.9
SRU	San Rafael	16.04	118	*e*P	P	13 54 12.0	+1.0
MWC	Mount Wilson	16.16	146	*e*P	P	13 54 12.7	+0.1
YKA	Yellowknife Ar	16.31	24	Pn	P	13 54 13.9	-0.5
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=51						
YKA				LR	LR	14 01 23.7	
	comp=Z,132nm,20.5s,baz=215,slow=40						
YKA	Yellowknife Ar	16.31	24	Pn	P	13 54 13.9	-0.4
YKA				LR	LR	14 01 23.7	
DGMT	Dagmar	16.33	80	*e*P	P	13 54 14.2	-0.5
	comp=Z,70nm,1.2s						
YKW3	Yellowknife Ar	16.36	24	*e*P	P	13 54 14.5	-0.5
YKW3	Yellowknife Ar	16.36	24	Pn	P	13 54 14.9	-0.1
YKW3				Pn	P	13 54 15.6	+0.6
LDFC	Landfair	16.64	137	*e*P	P	13 54 18.7	0.0
DAWY	Dawson	16.86	344	*e*P	P	13 54 21.5	+0.3
DAWY	Dawson	16.86	344	Pn	P	13 54 23.6	+2.3
SLKM	Skilak Lake	17.39	323	*e*P	P	13 54 29.4	+1.5
PV10	Paradox Valley	17.40	117	*e*P	P	13 54 29.3	+1.1
SML	Sawmill	17.48	328	*e*P	P	13 54 29.7	+0.6
FFC	Flin Flon	17.83	59	P	P	13 54 36.7	+3.2
	comp=Z,676nm,0.8s,SNR=23						
FFC	Flin Flon	17.83	59	*e*P	P	13 54 34.8	+1.3
FFC				pmax	pmax		
	comp=Z,115nm,1.0s						
FFC	Flin Flon	17.83	59	*e*P	P	13 54 34.8	+1.4
	comp=Z,115nm,1.0s						
PV01	Paradox Valley	17.83	117	*e*P	P	13 54 34.4	+0.7
PHWY	Pilot Hill	17.93	104	*e*P	P	13 54 36.0	+1.3
BAR	Barrett	18.06	145	*e*P	P	13 54 36.2	-0.3
WUAZ	Wupatki	18.12	128	*e*P	P	13 54 38.1	+0.8
	comp=Z,1µm,1.3s						
RSO	Redoubt South	18.41	320	*e*P	P	13 54 40.7	-0.1
ISCO	Idaho Springs	18.64	108	*e*P	P	13 54 43.6	0.0
ISCO				pmax	pmax		
	comp=Z,27nm,1.3s						
ISCO	Idaho Springs	18.64	108	*e*P	P	13 54 43.6	0.0
	comp=Z,27nm,1.3s						
MCK	McKinley	19.02	332	*e*P	P	13 54 48.2	+0.2
MCK				pmax	pmax		
	comp=Z,30nm,1.4s						
MCK	McKinley	19.02	332	*e*P	P	13 54 48.2	+0.2
	comp=Z,30nm,1.4s						
ILAR	Eielson Array	19.19	336	P	P	13 54 49.8	-0.3
	comp=Z,0.1nm,0.3s,baz=148,slow=9.0,SNR=44						
ILAR				LR	LR	14 01 20.5	
	comp=Z,1µm,20.4s,baz=155,slow=34						
COLA	College	19.53	335	*e*P	P	13 54 56.3	+2.3
SVW2	Sparrevohn	19.93	320	*e*P	P	13 54 56.6	-1.9
SDCO	Great Sand Dun	19.94	113	*e*P	P	13 54 59.0	+0.3
	comp=Z,24nm,1.1s						
INK	Inuvik	20.24	355	*e*P	P	13 55 01.8	+0.1
INK				pmax	pmax		
	comp=Z,22nm,1.1s						
INK	Inuvik	20.24	355	P	P	13 55 02.3	+0.6
	comp=Z,14nm,1.0s,baz=166,slow=12,SNR=32						
INK				LR	LR	14 02 31.3	
	comp=Z,1µm,21.7s,MS4.2,baz=178,slow=36						
INK	Inuvik	20.24	355	*e*P	P	13 55 01.8	+0.1
	comp=Z,22nm,1.1s						
INK	Inuvik	20.24	355	Pn	P	13 55 02.5	+0.8
TUC	Tucson	20.96	133	*e*P	P	13 55 09.3	-0.1
TUC				pmax	pmax		
	comp=Z,96nm,1.5s						
TUC	Tucson	20.96	133	*e*P	P	13 55 09.3	-0.1
	comp=Z,96nm,1.5s						
ANMO	Albuquerque	21.25	121	*e*P	P	13 55 12.5	+0.2
ANMO				pmax	pmax		
	comp=Z,82nm,1.3s						
ANMO	Albuquerque	21.25	121	P	P	13 55 13.0	+0.7
	comp=Z,34nm,1.1s,mb4.6,baz=320,slow=11,SNR=20						
ANMO				LR	LR	14 03 38.5	
	comp=Z,572nm,18.3s,MS4.0,slow=37						
ANMO	Albuquerque	21.25	121	*e*P	P	13 55 12.5	+0.2
	comp=Z,82nm,1.3s,mb4.9						
IMA	Indian Mountai	22.09	333	*e*P	P	13 55 21.5	+0.9
FCC	Fort Churchill	22.89	50	*e*P	P	13 55 29.5	+1.2
FCC				pmax	pmax		
	comp=Z,79nm,1.3s,mb5.0						
FCC	Fort Churchill	22.89	50	*e*P	P	13 55 29.5	+1.2
	comp=Z,79nm,1.3s,mb5.0						
FCC	Fort Churchill	22.89	50	Pn	P	13 55 27.5	-0.8
CBKS	Cedar Bluff	22.96	104	*e*P	P	13 55 29.6	+0.3
CBKS				pmax	pmax		
	comp=Z,81nm,1.2s,mb5.0						
CBKS	Cedar Bluff	22.96	104	*e*P	P	13 55 29.6	+0.2
	comp=Z,81nm,1.2s,mb5.0						
AMTX	Amarillo	24.14	114	*e*P	P	13 55 42.2	+1.4
	comp=Z,64nm,1.0s,mb5.0						
MNTX	Cornudas Mount	24.26	124	*e*P	P	13 55 42.4	+0.4
	comp=Z,70nm,1.7s,mb4.8						
KSU1	Kansas State U	24.86	100	P	P	13 55 48.5	+0.9
WMOK	Wichita Mounta	26.03	110	*e*P	P	13 55 58.5	-0.3
WMOK				pmax	pmax		
	comp=Z,31nm,1.1s,mb4.8						
WMOK	Wichita Mounta	26.03	110	*e*P	P	13 55 58.5	-0.2
	comp=Z,31nm,1.1s,mb4.8						
TNA	Tin City	26.85	324	P	P	13 56 03.8	-2.2
	comp=Z,29nm,1.7s,mb4.5						
LTX	Lajitas	27.02	125	*e*P	P	13 56 07.8	-0.1
LTX				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.7						
LTX	Lajitas	27.02	125	*e*P	P	13 56 07.8	-0.1
	comp=Z,31nm,1.4s,mb4.7						
TXAR	Lajitas Array	27.02	125	P	P	13 56 07.3	-0.6
	comp=Z,3.7nm,0.8s,mb4.0,baz=321,slow=8.0,SNR=18						
TXAR				LR	LR	14 07 27.1	
	comp=Z,1µm,20.0s,MS4.5,baz=350,slow=38						
JCT	Junction City	28.35	118	*e*P	P	13 56 19.2	-0.8
JCT				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.0						
JCT	Junction City	28.35	118	*e*P	P	13 56 19.2	-0.8
	comp=Z,53nm,1.3s,mb5.0						
RES	Resolute Bay	30.15	17	*e*P	P	13 56 34.8	-0.9
RES				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
RES	Resolute Bay	30.15	17	*e*P	P	13 56 34.8	-0.9
	comp=Z,7.6nm,1.0s,mb4.4						
RES	Resolute Bay	30.15	17	Pg	P	13 56 35.6	-0.1
BILL	Bilibino	37.26	326	*e*P	P	13 57 36.4	-0.7
BILL				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.8						
BILL	Bilibino	37.26	326	*e*P	P	13 57 36.4	-0.7
	comp=Z,21nm,1.3s,mb4.8						
SCHQ	Schefferville	37.94	56	P	P	13 57 43.8	+0.9
	comp=Z,4.2nm,0.9s,mb4.2,baz=323,slow=3.3,SNR=4.4						
SCHQ				LR	LR	14 14 25.7	
	comp=Z,204nm,19.5s,MS3.9,baz=308,slow=38						
PET	Petropavlovsk	44.45	305	*e*P	P	13 58 48.9	+13
PET				*e*S	S	14 05 20.8	+10
PET				*e*SS	SS	14 08 36.2	+15
PET				smax			
	comp=E,200nm,15.4s						
PET				smax			
	comp=N,200nm,14.1s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.2						
MA2	Magadan	45.82	316	*e*P	P	13 58 47.7	+0.5
MA2				S	S	14 05 28.5	-1.7
MA2				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
MA2				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.2						
TIXI	Tiksi	48.66	336	*e*P	P	13 59 08.3	-1.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,310nm,17.0s,MS4.4						
YAK	Yakutsk	53.62	325	⇑*e*P	P	13 59 46.3	-0.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
YAK				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.5						
BORG	Borgarnes	54.12	30	LR	LR	14 20 39.4	
	comp=Z,175nm,20.4s,MS4.1,baz=302,slow=33						
ASAJ	Asahikawa	58.15	302	LR	LR	14 20 57.4	
	comp=Z,141nm,21.7s,MS4.0,baz=243,slow=32						
BOD	Bodaibo	62.29	327	*e*P	P	14 00 43.3	-4.7
ROSC	El Rosal	63.28	115	LR	LR	14 29 56.1	
	comp=Z,101nm,21.0s,MS4.0,baz=9.7,slow=38						
MDJ	Mudanjiang	64.87	309	P	P	14 01 03.3	-1.7
MDJ				AP	pP	14 01 07.5	-0.9
MDJ				XP	sP	14 01 09.3	-0.3
MDJ				PP	PP	14 03 23.8	-6.0
MDJ				S	S	14 09 42.0	-2.5
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,23nm,3.3s						
MDJ				LR	LR		
	comp=N,65nm,22.2s,MS4.1						
MDJ				LR	LR		
	comp=E,125nm,21.1s,MS4.1						
MDJ				LR	LR		
	comp=Z,193nm,21.0s,MS4.3						
NOA	NORSAR Array B	66.37	20	P	P	14 01 14.5	+0.1
	comp=Z,6.9nm,1.1s,mb4.6,baz=333,slow=6.4,SNR=6.3						
NOA				LR	LR	14 28 36.3	
	comp=Z,88nm,19.6s,MS4.0,baz=310,slow=34						
JHJ	Hachijo jima 2	67.01	294	LR	LR	14 27 22.0	
	comp=Z,53nm,18.2s,MS3.8,baz=311,slow=33						
CN2	Changchun	67.56	311	*e*P	P	14 01 21.3	-0.9
HFS	Hagfors	67.73	19	P	P	14 01 23.6	+0.6
	comp=Z,7.7nm,0.9s,mb4.7,baz=307,slow=7.4,SNR=6.8						
PPT	Papeete	68.12	201	*e*LQ		14 18 37.5	
PPT				*e*LR	LR	14 21 44.9	
	comp=Z,178nm,27.8s						
FINES	FINESS Array B	68.78	13	LR	LR	14 33 19.6	
	comp=Z,125nm,18.1s,MS4.2,baz=360,slow=37						
TLY	Talaya	70.81	328	*e*P	P	14 01 39.0	-3.1
TLY				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
TLY				MLR	MLR		
	comp=Z,203nm,17.0s,MS4.5						
RKT	Rikitea	71.28	186	*e*LQ		14 20 10.3	
ZAK	Zakamensk	72.02	328	*e*P	P	14 01 46.6	-2.8
ULN	Ulaanbaatar	72.69	324	⇓*e*P	P	14 01 52.7	-0.6
SONM	Songino Array	72.97	325	P	P	14 01 54.1	-0.8
	comp=Z,3.3nm,1.2s,mb4.1,baz=56,slow=4.5,SNR=15						
TBI	Tubuai	73.66	200	*e*LR	LR	14 24 26.1	
	comp=Z,114nm,30.0s						
NVS	Novosibirsk	73.78	341	*e*P	P	14 02 02.4	+2.9
ZAL	Zalesovo	74.28	340	LR	LR	14 37 38.7	
	comp=Z,277nm,19.2s,MS4.6,baz=88,slow=38						
BJI	Beijing	74.95	314	P	P	14 02 08.0	+1.4
BJI				AP	pP	14 02 11.3	+1.3
BJI				S	S	14 11 42.8	+0.2
BJI				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.3						
BJI				LR	LR		
	comp=N,217nm,19.1s,MS4.6						
BJI				LR	LR		
	comp=E,205nm,20.2s,MS4.6						
BJI				LR	LR		
	comp=Z,165nm,25.5s						
BJI	Beijing	74.95	314	P	P	14 02 07.9	+1.3
BJI				*PP	pP	14 02 11.2	+1.2
BJI				*SP	sP	14 02 12.5	+1.4
BJI				S	S	14 11 42.8	+0.2
BJI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
BJI				MLR	MLR		
	comp=Z,170nm,25.5s,MS4.2						
BJI	Beijing	74.95	314	P	P	14 02 07.9	+1.3
	comp=Z,2.0nm,0.5s,mb4.3						
BJI				pP	pP	14 02 11.2	+1.2
BJI				sP	sP	14 02 12.5	+1.4
BJI				S	S	14 11 42.8	+0.2
BJI				LR	LR		
	comp=Z,170nm,25.5s,MS4.2						
CLL	Collm	75.54	24	*e*P	P	14 02 11.0	+1.3
CLL				*e*		14 02 23.0	
CLL				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6						
CLL	Collm	75.54	24	*e*P	P	14 02 11.0	+1.3
	comp=Z,13nm,1.5s,mb4.6						
CLL				*e*		14 02 23.0	
CLL	Collm	75.54	24	P	P	14 02 11.0	+1.3
	comp=Z,logA/T=0.9,mb4.6						
CLL				*e*		14 02 23.0	
MOS	Moscow	75.74	8	*e*P	P	14 02 12.9	+2.1
MOX	Moxa	75.76	25	*e*P	P	14 02 12.0	+1.0
BRG	Berggiesshubel	76.19	23	*e*P	P	14 02 14.4	+1.0
BRG				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
BRG	Berggiesshubel	76.19	23	*e*P	P	14 02 14.4	+1.0
	comp=Z,15nm,1.4s,mb4.7						
OBN	Obninsk	76.26	9	⇓*i*P	P	14 02 15.0	+1.3
OBN				*e*		14 02 24.1	
OBN				*i*		14 05 04.7	
OBN				*e*SS	SS	14 16 49.8	-3.7
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
HHC	Hu-ho-hao-te	76.46	317	*e*P	P	14 02 14.8	-0.4
HHC				XP	sP	14 02 22.8	+3.1
HHC				PP	PP	14 05 07.0	-1.7
HHC				S	S	14 11 55.8	-3.4
HHC				SKS	SKS	14 12 21.0	-5.6
HHC				SCS	ScS	14 12 25.8	-1.7
HHC				AMB	AMB		
	comp=Z,8.0nm,1.6s,mb4.4						
HHC				AMB	AMB		
	comp=Z,136nm,12.0s						
HHC				LR	LR		
	comp=N,206nm,19.2s,MS4.8						
HHC				LR	LR		
	comp=E,421nm,22.8s,MS4.8						
HHC				LR	LR		
	comp=Z,311nm,21.6s,MS4.6						
CHKZ	Chkalovo	77.11	348	*e*P	P	14 02 16.7	-1.8
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
CHKZ	Chkalovo	77.11	348	*e*P	P	14 02 16.7	-1.8
	comp=Z,1.6nm,0.9s,mb4.0						
BVAR	Borovoye Array	77.77	348	P	P	14 02 22.9	+0.8
	comp=Z,8.2nm,1.4s,mb4.5,baz=146,slow=5.3,SNR=5.0						
GERES	GERESS Array B	77.97	24	P	P	14 02 24.3	+1.0
	comp=Z,2.2nm,1.1s,mb4.0,baz=333,slow=6.0,SNR=7.5						
VRAC	Vranov	78.31	22	P	P	14 02 26.4	+1.3
	comp=Z,2.5nm,0.8s,mb4.2,baz=287,slow=12,SNR=3.4						
SSE	Sheshan	79.27	305	P	P	14 02 25.8	-5.0
SSE				AP	pP	14 02 35.3	+1.1
SSE				S	S	14 12 23.5	-6.2
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,106nm,4.5s						
SSE				LR	LR		
	comp=N,45nm,20.0s,MS4.0						
SSE				LR	LR		
	comp=E,59nm,20.0s,MS4.0						
SSE				LR	LR		
	comp=Z,95nm,20.0s,MS4.1						
SSE	Sheshan	79.27	305	P	P	14 02 25.8	-5.0
	comp=Z,20nm,0.7s,mb5.2						
SSE				pP	pP	14 02 35.2	+1.0
SSE				S	S	14 12 23.5	-6.2
SSE				sS		14 12 40.3	
SSE				LR	LR		
	comp=Z,100nm,20.0s,MS4.2						
AKASG	Malin Array Be	79.61	14	P	P	14 02 31.8	-0.5
	comp=Z,2.1nm,0.9s,mb4.1,baz=341,slow=5.1,SNR=6.0						
AKASG	Malin Array Be	79.61	14	P	P	14 02 31.8	-0.5
NJ2	Nanjing	79.80	307	*e*P	P	14 02 31.5	-2.2
NJ2				PCP	PcP	14 02 38.0	-3.8
NJ2				AP	pP	14 02 41.8	+4.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,430nm,5.6s						
NJ2				LR	LR		
	comp=N,320nm,11.8s,MS5.0						
NJ2				LR	LR		
	comp=E,290nm,13.6s,MS5.0						
NJ2				LR	LR		
	comp=Z,440nm,12.6s,MS5.0						
GTA	Gaotai	82.64	324	P	P	14 02 47.5	-0.9
GTA				S	S	14 12 57.3	-7.0
GTA				AMB	AMB		
	comp=Z,3.0nm,0.5s,mb4.6						
GTA				AMB	AMB		
	comp=Z,76nm,6.1s						
GTA				LR	LR		
	comp=N,204nm,20.9s,MS4.6						
GTA				LR	LR		
	comp=E,192nm,20.2s,MS4.6						
GTA				LR	LR		
	comp=Z,360nm,19.8s,MS4.7						
WMQ	Urumqi	82.85	334	*e*P	P	14 02 50.0	+0.6
WMQ				PP	PP	14 06 02.0	+0.3
WMQ				S	S	14 13 07.0	+0.7
WMQ				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.9						
WMQ				LR	LR		
	comp=N,148nm,25.0s,MS4.4						
WMQ				LR	LR		
	comp=E,147nm,25.0s,MS4.4						
WMQ				LR	LR		
	comp=Z,161nm,25.0s,MS4.3						
LZH	Lanzhou	83.81	320	*e*P	P	14 02 51.0	-3.4
LZH				PP	PP	14 06 05.0	-4.5
LZH				AMB	AMB		
	comp=Z,22nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,68nm,4.5s						
LZH	Lanzhou	83.81	320	*e*P	P	14 02 51.0	-3.4
LZH				*PP	pP	14 02 54.1	-3.8
LZH				*SP	sP	14 02 55.7	-3.3
LZH						14 06 05.0	
LZH				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.1						
LZH	Lanzhou	83.81	320	*e*P	P	14 02 51.0	-3.4
	comp=Z,22nm,1.5s,mb5.1						
LZH				pP	pP	14 02 54.1	-3.8
LZH				sP	sP	14 02 55.7	-3.3
LZH				PP	PP	14 06 05.0	-4.5
LPAZ	La Paz	83.86	123	*e*P	P	14 02 54.1	-1.0
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LPAZ	La Paz	83.86	123	P	P	14 02 54.7	-0.3

	comp=Z,1.3nm,0.6s,mb4.2,baz=323,slow=6.2,SNR=5.8						
LPAZ				LR	LR	14 39 12.0	
	comp=Z,77nm,21.6s,MS4.0,baz=45,slow=35						
LPAZ	**La Paz**	**83.86**	**123**	*e*P	**P**	**14 02 54.0**	**-1.0**
	comp=Z,5.9nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**87.18**	**343**	*i* P	**P**	**14 03 10.7**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.4						
AAK				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.6						
GNI	**Garni**	**91.78**	**5**	LR	LR	14 47 03.5	
	comp=Z,87nm,20.1s,MS4.2,baz=208,slow=37						
KMI	**Kunming**	**93.59**	**315**	P	**P**	**14 03 41.0**	**-0.4**
KMI				AP	pP	14 03 44.5	-0.3
KMI				S	S	14 14 45.8	-1.2
KMI				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb5.3						
KMI				AMB	AMB		
	comp=Z,83nm,4.2s						
KMI				LR	LR		
	comp=N,245nm,23.9s,MS4.7						
KMI				LR	LR		
	comp=E,171nm,21.6s,MS4.7						
KMI				LR	LR		
	comp=Z,162nm,23.2s,MS4.4						
KMI	**Kunming**	**93.59**	**315**	P	**P**	**14 03 41.1**	**-0.3**
KMI				*PP	pP	14 03 44.6	-0.2
KMI				S	S	14 14 45.7	-1.3
KMI				SS	SS	14 21 05.3	-3.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.3						
KMI				MLR	MLR		
	comp=Z,160nm,23.2s,MS4.4						
KMI	**Kunming**	**93.59**	**315**	P	**P**	**14 03 41.1**	**-0.3**
	comp=Z,8.0nm,0.7s,mb5.3						
KMI				pP	pP	14 03 44.6	-0.2
KMI				S	S	14 14 45.7	-1.3
KMI				SS	SS	14 21 05.3	-3.3
KMI				LR	LR		
	comp=Z,160nm,23.2s,MS4.4						
BDFB	**Brasilia**	**95.52**	**107**	LR	LR	14 45 24.1	
	comp=Z,109nm,21.6s,MS4.3,baz=147,slow=34						

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*IDC **28** 13:53:55.3±5.5, 24.56N×94.06E, mb3.6/2, mb1 3.8/3, mb1mx3.4/19, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=150.9km s-min=99.6km az=62.0*

*NEIC **28** 13:54:19.5±0.7, 22.94N×94.53E, h117^{km}±10^{km}, mb4.0/1, Error ellipse: s-maj=23.6km s-min=7.0km az=222.0*

ISC 28 13:54:18.3±1.3,**23.1N**±0.1×**94.7E**±0.1,**h124**^{km}±18^{km},**n12**, σ**0^{s}74**/13,**mb3.9**/3,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.81**	**338**	*e*P	**P**	**13 54 45.0**	**-5.0**
CMAR	**Chiang Mai Arr**	**6.10**	**139**	Pn	**P**	**13 55 47.2**	**0.0**
	0.2nm,0.3s,baz=318,slow=13,SNR=5.3						
CMAR				Sn	S	13 57 21.1	+25
	baz=319,slow=18,SNR=4.6						
LSA	**Lhasa**	**7.29**	**335**	*e*Pn	**P**	**13 56 04.8**	**+1.3**
LSA				*e*Sn	**S**	**13 57 23.9**	**-1.3**
JIRN	**Jiri**	**8.93**	**302**	*e*P	**P**	**13 56 25.7**	**+0.3**
	17nm,0.2s						
PKI	**Pulchoki**	**9.50**	**300**	*e*P	**P**	**13 56 33.2**	**+0.1**
	11nm,0.2s						
KKN	**Kakani**	**9.70**	**301**	*e*P	**P**	**13 56 36.0**	**+0.2**
	12nm,0.3s						
DMN	**Daman**	**9.76**	**299**	*e*P	**P**	**13 56 37.0**	**+0.4**
	10nm,0.3s						
GKN	**Gorkha**	**10.30**	**300**	*e*P	**P**	**13 56 43.3**	**-0.5**
	19nm,0.2s						
KOLN	**Koldanda**	**11.05**	**297**	*e*P	**P**	**13 56 52.9**	**-0.8**
	15nm,0.3s						
CHKZ	**Chkalovo**	**35.54**	**335**	*e*P	**P**	**14 01 06.2**	**+1.2**
	0.8nm,0.3s,mb4.1						
WRA	**Warramunga Arr**	**57.68**	**135**	P	**P**	**14 03 57.9**	**-0.5**
	0.6nm,0.5s,mb3.9,baz=318,slow=7.7,SNR=35						
ASAR	**Alice Springs**	**60.11**	**138**	P	**P**	**14 04 14.7**	**-0.5**
	0.4nm,0.6s,mb3.6,baz=319,slow=6.6,SNR=12						

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*IDC **28** 14:06:06.7±10.0, 37.99N×72.68E, h60^{km}±89^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.4/20, mbtmp3.9/7, ML3.7/2, Error ellipse: s-maj=66.1km s-min=29.7km az=37.0*

*MOS **28** 14:06:07.4±0.9, 37.99N×72.56E, h85^{km}, mb4.1/2, Error ellipse: s-maj=29.6km s-min=12.0km az=102.1*

*NEIC **28** 14:06:08.4±1.8, 37.99N×72.61E, h80^{km}±18^{km}, mb4.0/2, Error ellipse: s-maj=27.0km s-min=6.4km az=62.0*

*NNC **28** 14:06:17.4±1.0, 38.54N×72.50E, h155^{km}±9^{km}, mpv3.9, Error ellipse: s-maj=12.6km s-min=11.1km az=120.0*

ISC 28 14:06:11.7±0.5,**38.07N**±0.03×**72.88E**±0.09,**h129**^{km}±8^{km}, **n43**,σ**1^{s}20**/49,**mb3.7**/7,**4C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.10**	**9**	P	**P**	**14 07 13.3**	**-0.5**
	SNR=219						
CEP	**Cherat**	**4.31**	**191**	P	**P**	**14 07 18.0**	**+1.4**
UCH	**Uchtor**	**4.33**	**16**	P	**P**	**14 07 17.3**	**+0.4**
	SNR=44						
KZA	**Kyzart**	**4.39**	**24**	P	**P**	**14 07 18.1**	**+0.4**
	SNR=40						
CHCP	**Chirah Chowk**	**4.42**	**176**	P	**P**	**14 07 20.4**	**+2.4**
CHCP				S	**S**	**14 08 04.0**	**-4.9**
EKS2	**Erkin-Say**	**4.63**	**8**	P	**P**	**14 07 20.8**	**-0.1**
	SNR=51						
AAK	**Ala-Archa**	**4.72**	**15**	P	**P**	**14 07 22.6**	**+0.6**
	SNR=35						
AAK	**Ala-Archa**	**4.72**	**15**	⇑P	**P**	**14 07 22.5**	**+0.5**
	7.5nm,0.3s						
AAK				⇑S	**S**	**14 08 13.8**	**-2.4**
	129nm,0.7s						
AAK	**Ala-Archa**	**4.72**	**15**	*e*Pn	**P**	**14 07 21.2**	**-0.8**
AAK				*e*Sn	**S**	**14 08 11.4**	**-4.8**
KBK	**Karagaybulak**	**4.84**	**18**	P	**P**	**14 07 24.6**	**+0.9**
	SNR=10						
ULHL	**Ulahol**	**4.90**	**31**	P	**P**	**14 07 25.3**	**+0.9**
	SNR=59						
CHMS	**Chumysh**	**5.12**	**16**	P	**P**	**14 07 27.6**	**+0.2**
	SNR=19						
TKM2	**Tokmak 2**	**5.27**	**22**	P	**P**	**14 07 30.2**	**+0.8**
	SNR=8.6						
USP	**Ospenovka**	**5.33**	**13**	P	**P**	**14 07 29.5**	**-0.7**
	SNR=6.5						
THW	**Thamme Wali**	**5.35**	**190**	P	**P**	**14 07 30.3**	**-0.1**
SBDP	**Sheikh Budin**	**6.00**	**197**	P	**P**	**14 07 38.7**	**-0.6**
DLH	**Dalhousie**	**6.07**	**154**	*e*P	**P**	**14 07 42.0**	**+1.8**
DLH				*e*S	**S**	**14 08 48.0**	**-0.9**
THN	**Thein Dam**	**6.09**	**157**	*e*P	**P**	**14 07 42.0**	**+1.6**
THN				*e*S	**S**	**14 08 48.1**	**-1.2**
SARP	**Sargodha**	**6.14**	**182**	P	**P**	**14 07 41.0**	**-0.1**
PONG	**Pong**	**6.61**	**157**	*e*P	**P**	**14 07 50.0**	**+2.5**
PONG				*e*S	**S**	**14 09 00.0**	**-1.9**
DRP	**Derazinda**	**6.69**	**200**	⇓P	**P**	**14 07 47.6**	**-1.0**
SDNR	**Sundarnagar**	**7.37**	**152**	*e*S	**S**	**14 09 15.5**	**-4.9**
MK31	**Makanchi Array**	**11.14**	**36**	⇑P	**P**	**14 08 49.6**	**+1.6**
	1.0nm,0.6s,baz=224,slow=15,SNR=14						
KOLN	**Koldanda**	**13.65**	**136**	*e*P	**P**	**14 09 20.5**	**-0.3**
	4.7nm,0.3s						
GKN	**Gorkha**	**14.06**	**132**	*e*P	**P**	**14 09 25.2**	**-0.8**
DMN	**Daman**	**14.63**	**132**	*e*P	**P**	**14 09 32.6**	**-0.7**
	5.6nm,0.5s						
PKI	**Pulchoki**	**14.84**	**131**	*e*P	**P**	**14 09 35.3**	**-0.6**
	5.1nm,0.5s						
BVA0	**Borovoye Array**	**15.05**	**354**	⇑P	**P**	**14 09 36.2**	**-2.3**
	0.3nm,0.6s,baz=161,slow=13,SNR=16						
BVAR	**Borovoye Array**	**15.05**	**354**	P	**P**	**14 09 35.9**	**-2.5**
	0.4nm,0.3s,baz=163,slow=15,SNR=9.8						
JIRN	**Jiri**	**15.25**	**129**	*e*P	**P**	**14 09 40.3**	**-0.8**
	6.4nm,0.3s						
CHKZ	**Chkalovo**	**15.68**	**355**	⇓P	**P**	**14 09 43.6**	**-2.7**
	2.3nm,1.1s						
CHKZ	**Chkalovo**	**15.68**	**355**	*e*P	**P**	**14 09 43.8**	**-2.5**
ZAL	**Zalesovo**	**17.85**	**23**	P	**P**	**14 10 12.6**	**-0.3**
	0.6nm,0.3s,baz=256,slow=6.3,SNR=4.5						
JOF	**Joensuu**	**35.29**	**328**	*e*p	**P**	**14 12 54.9**	**-0.5**
	2.6nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**37.05**	**324**	P	**P**	**14 13 10.3**	**+0.1**
	2.2nm,0.3s,mb4.3,baz=115,slow=9.3,SNR=31						
KAF	**Kangasniemi**	**37.15**	**326**	*e*p	**P**	**14 13 11.0**	**-0.1**
	0.6nm,0.3s,mb3.7,baz=108,slow=8.7						
KAF	**Kangasniemi**	**37.15**	**326**	*e*P	**P**	**14 13 11.0**	**-0.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
ARCES	**ARCESS Array B**	**40.28**	**336**	P	**P**	**14 13 37.6**	**+0.6**
	comp=Z,6.9nm,1.0s,mb4.3,baz=100,slow=7.4,SNR=10						
NB2	**NORSAR Subarra**	**44.05**	**322**	P	**P**	**14 14 07.4**	**-0.2**
	comp=Z,1.0nm,0.5s,mb3.7,baz=90,slow=7.9						
NB2	**NORSAR Subarra**	**44.05**	**322**	P	**P**	**14 14 07.4**	**-0.2**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NOA	**NORSAR Array B**	**44.05**	**322**	P	**P**	**14 14 07.7**	**0.0**
	comp=Z,1.2nm,0.5s,mb3.8,baz=92,slow=7.8,SNR=5.5						
YKA	**Yellowknife Ar**	**79.60**	**4**	P	**P**	**14 18 07.3**	**+2.1**
	comp=Z,0.2nm,0.4s,mb3.1,baz=349,slow=5.7,SNR=10.0						
WRA	**Warramunga Arr**	**81.58**	**123**	P	**P**	**14 18 18.7**	**+2.1**
	comp=Z,0.1nm,0.5s,mb2.7,baz=326,slow=4.6,SNR=3.3						

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*NEIC **28** 14:36:10.6, 32.30S×71.77W, h35^{km}, ML2.7(GUC), After GUC.*

GUC 28 14:36:10.6±0.5,**32.30S**×**71.77W**,**h35**^{km}±2^{km},**MD3.7, ML2.7,1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.36**	**130**	⇓*i*P	P	14 36 19.2	-0.1
PACH				*i* S	S	14 36 25.8	+0.4
ROCH	**El Roble**	**0.92**	**137**	*e*P	P	14 36 28.0	+0.8
ROCH				*i* S	S	14 36 41.2	+1.8
JACH	**Jahuel**	**1.06**	**111**	*i* P	P	14 36 29.4	+0.3
JACH				*i* S	S	14 36 44.4	+1.5
TACH	**Talagante**	**1.52**	**153**	*e*P	P	14 36 39.2	+3.5
TACH				*i* S	S	14 36 58.8	+4.3
FCH	**Farellones**	**1.61**	**130**	*e*P	P	14 36 38.8	+1.8
FCH				*i* S	S	14 37 00.1	+3.3
FCH				AMP		14 37 03.1	
	comp=E,89nm,0.2s						
CHCH	**Chadas Angostu**	**1.88**	**150**	*e*P	P	14 36 41.6	+0.8
TLL	**Tololo Astrono**	**2.28**	**21**	*e*P	P	14 36 47.8	+1.2
TLL				*i* S	S	14 37 16.0	+2.2
TLL				AMP		14 37 20.4	
	comp=E,107nm,0.6s						

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*IDC **28** 14:50:18.8±10.0, 22.43S×178.49W, h340^{km}±100^{km}, mb3.7/5, mb1 3.8/6, mb1mx3.5/15, mbtmp4.4/6, Error ellipse: s-maj=63.3km s-min=36.7km az=41.0*

*NEIC **28** 14:50:21.9±7.2, 22.56S×178.56W, h372^{km}±70^{km}, mb4.1/7, Error ellipse: s-maj=52.7km s-min=24.2km az=208.0*

ISC 28 14:50:27.4±5.4,**23.0S**±0.1×**179.1W**±0.4,**h411**^{km}±56^{km}, **n17**,σ**0^{s}91**/16,**mb4.0**/9,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.54**	**191**	P	**P**	**14 53 47.0**	**0.0**
	0.5nm,0.3s,baz=99,slow=19,SNR=4.8						
URZ				S	**S**	**14 56 27.7**	**-0.3**
	0.4nm,0.3s,baz=140,slow=20,SNR=6.1						
CTA	**Charters Tower**	**32.34**	**268**	*e*P	**P**	**14 56 23.2**	**+1.1**
	6.0nm,0.6s,mb4.1						
CTAO	**Charters Tower**	**32.34**	**268**	*e*P	**P**	**14 56 23.1**	**+1.0**
	7.4nm,0.5s,mb4.3						
PMG	**Port Moresby**	**35.04**	**287**	P	**P**	**14 56 43.8**	**-1.1**
	20nm,0.8s,mb4.5,baz=104,slow=6.1,SNR=9.0						
PMG	**Port Moresby**	**35.04**	**287**	*e*P	**P**	**14 56 43.6**	**-1.3**
	22nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**35.85**	**247**	*e*P	**P**	**14 56 54.4**	**+2.8**
	1.7nm,0.6s,mb3.5						
STKA	**Stephens Creek**	**35.85**	**247**	P	**P**	**14 56 54.5**	**+2.8**
	3.2nm,0.8s,mb3.7,baz=118,slow=9.7,SNR=7.2						
ASAR	**Alice Springs**	**43.03**	**259**	P	**P**	**14 57 50.7**	**+0.4**
	6.0nm,0.8s,mb4.0,baz=91,slow=8.2,SNR=48						
ASPA	**Alice Springs**	**43.04**	**259**	*e*P	**P**	**14 57 50.9**	**+0.6**
WB2	**Warramunga Arr**	**43.32**	**265**	*e*P	**P**	**14 57 52.3**	**-0.3**
WRAB	**Tennant Creek**	**43.32**	**265**	*e*P	**P**	**14 57 52.1**	**-0.5**
	8.6nm,1.0s,mb4.0						
WRA	**Warramunga Arr**	**43.33**	**265**	P	**P**	**14 57 52.2**	**-0.5**
	4.1nm,0.9s,mb3.7,baz=96,slow=8.3,SNR=53						
FITZ	**Fitzroy Crossi**	**51.76**	**265**	*e*P	**P**	**14 58 56.9**	**-0.2**
	5.5nm,0.9s,mb3.8						
MBWA	**Marble Bar**	**56.38**	**259**	*e*P	**P**	**14 59 28.7**	**-1.4**
	7.9nm,0.8s,mb4.1						
CMAR	**Chiang Mai Arr**	**90.03**	**290**	P	**P**	**15 02 43.9**	**+0.8**
	1.4nm,1.0s,mb3.8,baz=127,slow=3.6,SNR=6.2						
AKASG	**Malin Array Be**	**144.68**	**329**	PKP	PKPdf	15 09 13.2	-2.2
	3.1nm,0.8s,baz=38,slow=4.5,SNR=9.5						
GERES	**GERESS Array B**	**152.31**	**342**	PKPbc	PKPdf	15 09 33.5	+5.9
	0.1nm,0.3s,baz=315,slow=1.9,SNR=3.6						

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*TEH **28** 14:57:25.7, 30.65N×56.68E, h10^{km}, Mn3.4*

*CSEM **28** 14:57:25.4±0.2, 30.82N×56.66E, h16^{km}, ML3.7/1, Error ellipse: s-maj=6.8km s-min=3.7km az=50.0*

*THR **28** 14:57:25.4±0.8, 30.77N×56.66E, h14^{km}±8^{km}, ML3.0*

ISC 28 14:57:24.8±0.8,**30.89N**±0.06×**56.7E**±0.1,**h10**^{km},**n12**, σ**1^{s}23**/17,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.90**	**175**	*i* PG	**Pg**	**14 57 40.4**	**-2.6**
KRBR				AML	AML	14 58 04.0	
	comp=N,470nm,0.4s						
IBAF	**Bafgh**	**1.17**	**307**	Pg	**Pn**	**14 57 47.0**	**-0.3**
IMEH	**Mehriz**	**1.83**	**286**	Pn	**Pn**	**14 57 58.4**	**+1.7**
ICHK	**Chekchek**	**2.36**	**306**	Pn	**Pn**	**14 58 05.5**	**+1.3**
BNDS	**Bandar-Abbas**	**3.50**	**187**	*e*PN	**Pn**	**14 58 20.5**	**0.0**
BNDS				AML	AML	14 59 28.2	
	comp=N,24nm,0.5s						
ZHSF	**Zahedan**	**3.77**	**109**	*e*PN	**Pn**	**14 58 25.0**	**+0.6**
ZHSF				AML	AML	14 59 26.1	
	comp=N,32nm,0.7s						
NASN	**Na'in**	**3.80**	**301**	*e*PN	**Pn**	**14 58 26.4**	**+1.7**
NASN				*e*SG	**Sn**	**14 59 25.4**	**+15**
NASN				AML	AML	14 59 37.0	
	comp=N,32nm,0.5s						
NASN	**Na'in**	**3.80**	**301**	*e*Pn	**Pn**	**14 58 26.4**	**+1.7**
	SNR=52						
NASN				*e*Sg	**Sn**	**14 59 25.4**	**+15**
	comp=N,32nm,0.5s,SNR=90						
GHIR	**Ghir-Karzin**	**4.12**	**232**	*e*PN	**Pn**	**14 58 29.1**	**-0.2**
GHIR				AML	AML	14 59 41.4	
	comp=N,20nm,0.6s						
IFIR	**Firoozkooh**	**5.76**	**326**	Pn	**Pn**	**14 58 53.2**	**+0.6**
IFIR				Sn	**Sn**	**14 59 58.3**	**-1.3**
IAFJ	**Afjeh**	**6.46**	**321**	Pn	**Pn**	**14 59 02.4**	**0.0**
IAFJ				Sn	**Sn**	**15 00 14.4**	**-2.6**
IRAZ	**Razeghan**	**7.23**	**310**	Pn	**Pn**	**14 59 12.4**	**-0.8**
IRAZ				Sn	**Sn**	**15 00 31.8**	**-4.3**

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*IDC **28** 14:59:14.0±14.0, 17.70S×178.57W, h529^{km}±130^{km}, mb3.6/7, mb1 3.7/7, mb1mx3.4/15, mbtmp4.5/7, Error ellipse: s-maj=102.3km s-min=43.3km az=96.0*

*NEIC **28** 14:59:18.0±1.2, 17.71S×178.79W, h570^{km}, mb4.2/6, Error ellipse: s-maj=38.8km s-min=18.2km az=137.0*

ISC 28 14:59:11.4±2.9,**17.6S**±0.3×**178.7W**±0.5,**h500**^{km},**n19**, σ**0^{s}92**/17,**mb4.2**/11,**2D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.20**	**260**	P	**P**	**15 05 07.5**	**+0.1**
	6.1nm,0.9s,mb4.0,baz=82,slow=5.0,SNR=3.8						
CTAO	**Charters Tower**	**33.20**	**260**	*e*P	**P**	**15 05 07.4**	**0.0**
	5.5nm,0.7s,mb4.1						
CNB	**Canberra Magne**	**33.35**	**232**	*e*P	**P**	**15 05 09.9**	**+1.3**
	65nm,0.6s,mb5.2						
PMG	**Port Moresby**	**34.12**	**279**	P	**P**	**15 05 16.9**	**+1.8**
	11nm,0.9s,mb4.3,baz=258,slow=6.3,SNR=4.4						
PMG	**Port Moresby**	**34.12**	**279**	*e*P	**P**	**15 05 16.9**	**+1.7**
	10nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**38.50**	**241**	⇓*i*P	**P**	**15 05 52.4**	**+1.3**
	4.4nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**	**15 05 52.3**	**+1.1**
	6.1nm,0.6s,mb4.2,baz=85,slow=9.4,SNR=26						
WB2	**Warramunga Arr**	**44.38**	**259**	*e*P	**P**	**15 06 37.5**	**-0.8**
WRAB	**Tennant Creek**	**44.38**	**259**	*e*P	**P**	**15 06 37.7**	**-0.6**
	5.3nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**44.39**	**259**	P	**P**	**15 06 37.8**	**-0.6**
	2.6nm,0.5s,mb3.9,baz=95,slow=7.2,SNR=64						
WRA				PcP	PcP	15 08 10.4	-1.7
	1.4nm,0.8s,baz=91,slow=3.6,SNR=7.4						
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**15 06 39.9**	**+0.1**
	30nm,0.5s,mb5.0,baz=89,slow=8.1,SNR=616						
ASAR				PcP	PcP	15 08 11.1	-1.6
	1.4nm,0.5s,baz=102,slow=3.7,SNR=7.0						
ASPA	**Alice Springs**	**44.58**	**254**	⇓*i*P	**P**	**15 06 39.8**	**-0.1**
FORT	**Forrest**	**49.85**	**244**	*e*P	**P**	**15 07 18.9**	**-1.0**
	307nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.78**	**260**	*e*P	**P**	**15 07 41.2**	**-0.2**
	5.0nm,0.8s,mb3.9						
MBWA	**Marble Bar**	**57.85**	**256**	*e*P	**P**	**15 08 15.0**	**-1.7**
	4.5nm,0.6s,mb4.0						
CMAR	**Chiang Mai Arr**	**88.51**	**290**	P	**P**	**15 11 12.4**	**+0.8**
	1.9nm,1.0s,mb3.9,baz=110,slow=3.4,SNR=8.1						
SONM	**Songino Array**	**93.15**	**319**	P	**P**	**15 11 32.1**	**-0.2**
	0.5nm,0.9s,mb3.5,baz=124,slow=5.2,SNR=3.2						
BRTR	**Keskin Array B**	**144.38**	**315**	PKP	PKPdf	15 17 49.9	-0.1
	2.0nm,0.8s,baz=45,slow=2.0,SNR=6.8						
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	PKPdf	15 17 57.3	+2.8
	0.7nm,0.6s,baz=63,slow=3.0,SNR=7.9						

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*IDC **28** 15:09:10.6±2.8, 48.32N×128.61W, mb1 3.6/4, mb1mx3.4/19, mbtmp3.3/4, ML3.7/2, Error ellipse: s-maj=63.5km s-min=17.8km az=74.0*

*NEIC **28** 15:09:13.6±1.7, 48.51N×128.34W, h10^{km}, mb3.4/1, Error ellipse: s-maj=27.3km s-min=13.6km az=59.0*

ISC 28 15:09:10.9±1.6,**48.44N**±0.09×**128.5W**±0.2,**h10**^{km},**n7**, σ**0^{s}82**/9,**Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGC	**Sidney**	**3.34**	**84**	*e*P	**Pn**	**15 10 03.0**	**-1.3**
BBB	**Bella Bella**	**3.76**	**3**	Pn	**Pn**	**15 10 10.1**	**-0.2**
	9.1nm,0.3s,baz=194,slow=10,SNR=97						
BBB				Sn	**Sn**	**15 10 55.2**	**+0.1**
	baz=252,slow=21,SNR=1.8						
BBB	**Bella Bella**	**3.76**	**3**	Pn	**Pn**	**15 10 10.1**	**-0.2**
BBB				Sn	**Sn**	**15 10 55.2**	**+0.1**
NVAR	**Mina Array Bea**	**12.42**	**140**	Pn	**P**	**15 12 10.9**	**+0.3**
	baz=326,slow=13,SNR=3.0						
YKA	**Yellowknife Ar**	**16.07**	**24**	Pn	**P**	**15 12 57.8**	**-0.4**
	baz=215,slow=11,SNR=3.3						
FFC	**Flin Flon**	**17.56**	**59**	*e*P	**P**	**15 13 18.8**	**+1.7**
	2.2nm,0.7s						
ILAR	**Eielson Array**	**19.13**	**336**	P	**P**	**15 13 36.1**	**-0.1**
	0.0nm,0.3s,baz=151,slow=9.3,SNR=4.6						

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*PGC **28** 15:40:45.9, 48.02N×128.90W, h10^{km}, MLSn3.1/1, Mw3.8, Northern Juan de Fuca ridge.*

*IDC **28** 15:40:49.6±2.0, 48.29N×128.43W, mb3.4/2, mb1 3.7/9, mb1mx3.6/23, mbtmp3.5/9, ML3.0/5, Error ellipse: s-maj=43.1km s-min=11.5km az=68.0*

*NEIC **28** 15:40:51.4±1.6, 48.38N×128.34W, h10^{km}, mb3.8/1, Error ellipse: s-maj=27.2km s-min=11.0km az=52.0*

ISC 28 15:40:48.2±0.7,**48.29N**±0.04×**128.61W**±0.06,**h10**^{km},**n38**, σ**1^{s}00**/52,**mb2.9**/1,**1C,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.87**	**31**	Pn	**Pn**	**15 41 19.9**	**-0.6**
OZB	**Mount Ozzard**	**2.17**	**71**	Pn	**Pn**	**15 41 24.1**	**-0.9**
OZB				Sn	**Sn**	**15 41 52.3**	**+0.1**
OZB				Trac		15 41 53.8	
	comp=Z,7.0nm,0.3s						
GDR	**Gold River**	**2.26**	**48**	Pn	**Pn**	**15 41 26.1**	**-0.1**
GDR				Sn	**Sn**	**15 41 55.7**	**+1.4**
	comp=Z,11nm,0.6s						
GDR				Trac		15 41 56.8	
	comp=Z,11nm,0.6s						
WOSB	**Woss**	**2.30**	**35**	Pn	**Pn**	**15 41 27.0**	**+0.2**
MAYB	**Maynard**	**2.32**	**23**	⇑Pn	**Pn**	**15 41 26.6**	**-0.3**
MAYB				Sn	**Sn**	**15 41 57.1**	**+1.3**
BTB	**Buttle Lake**	**2.36**	**59**	Pn	**Pn**	**15 41 27.9**	**+0.4**
BTB				Sn	**Sn**	**15 41 58.9**	**+2.1**
	comp=Z,19nm,0.4s						
BTB				Trac		15 42 00.5	
	comp=Z,19nm,0.4s						
HOLB	**Holberg**	**2.38**	**7**	Pn	**Pn**	**15 41 27.7**	**-0.1**
HOLB				Sn	**Sn**	**15 41 56.2**	**-1.1**
	comp=Z,19nm,0.8s						
HOLB				Trac		15 42 02.5	
	comp=Z,19nm,0.8s						
PHC	**Port Hardy**	**2.54**	**17**	Pn	**Pn**	**15 41 30.0**	**-0.2**
ALB	**Alberni**	**2.69**	**67**	Pn	**Pn**	**15 41 33.9**	**+1.6**
MGB	**Mount Grey**	**2.69**	**73**	Pn	**Pn**	**15 41 31.3**	**-1.1**
MGB				Sn	**Sn**	**15 42 05.5**	**+0.1**
	comp=Z,7.0nm,0.5s						
MGB				Trac		15 42 07.2	
	comp=Z,7.0nm,0.5s						
NCRB	**Newcastle Ridg**	**2.70**	**37**	Pn	**Pn**	**15 41 32.8**	**+0.4**
NCRB				Sn	**Sn**	**15 42 07.8**	**+2.3**
CBB	**Campbell River**	**2.75**	**49**	Pn	**Pn**	**15 41 33.5**	**+0.3**
CBB				Sn	**Sn**	**15 42 07.8**	**+0.9**
CBB				Trac		15 42 13.9	
	comp=Z,9.0nm,0.5s						
PFB	**Port Renfrew**	**2.79**	**83**	Pn	**Pn**	**15 41 32.4**	**-1.4**
PFB				Sn	**Sn**	**15 42 06.0**	**-1.9**
PFB				Trac		15 42 12.3	
	comp=Z,5.0nm,0.7s						
OCWA	**Octopus Mounta**	**3.02**	**99**	P	**Pn**	**15 41 36.2**	**-0.8**
TXB	**Texada**	**3.09**	**61**	Pn	**Pn**	**15 41 38.0**	**+0.1**
TXB				Sn	**Sn**	**15 42 15.3**	**-0.1**
	comp=Z,9.0nm,0.5s						
TXB				Trac		15 42 19.7	
	comp=Z,9.0nm,0.5s						
LZB	**Mount Lazard**	**3.20**	**82**	Pn	**Pn**	**15 41 38.2**	**-1.4**
LZB				Sn	**Sn**	**15 42 17.4**	**-0.8**
LZB				Trac		15 42 20.2	
	comp=Z,2.0nm,0.6s						
SHB	**Sechelt**	**3.39**	**65**	Pn	**Pn**	**15 41 42.0**	**-0.2**
GOBB	**Galiano Island**	**3.45**	**77**	Pn	**Pn**	**15 41 42.3**	**-0.7**
PGC	**Sidney**	**3.45**	**82**	*e*P	**Pn**	**15 41 41.7**	**-1.4**
SNB	**Saturna Island**	**3.65**	**80**	Pn	**Pn**	**15 41 45.4**	**-0.5**
BIB	**Bowen Island**	**3.68**	**70**	Pn	**Pn**	**15 41 46.4**	**+0.1**
BBB	**Bella Bella**	**3.92**	**4**	Pn	**Pn**	**15 41 49.4**	**-0.4**
	14nm,0.3s,baz=194,slow=12,SNR=142						
BBB				Sn	**Sn**	**15 42 35.4**	**-0.9**
	baz=68,slow=21,SNR=2.3						
BBB	**Bella Bella**	**3.92**	**4**	Pn	**Pn**	**15 41 49.4**	**-0.4**
BBB				Sn	**Sn**	**15 42 35.4**	**-0.9**
BBB	**Bella Bella**	**3.92**	**4**	Pn	**Pn**	**15 41 49.3**	**-0.4**
BBB				Sn	**Sn**	**15 42 35.2**	**-1.0**
BBB				Trac		15 42 36.7	
	comp=Z,19nm,0.9s						
HNB	**Haney**	**4.11**	**74**	Pn	**Pn**	**15 41 51.4**	**-1.1**
WSLR	**Whistler**	**4.16**	**62**	Pn	**Pn**	**15 41 53.1**	**-0.1**
HOPB	**Hope**	**4.87**	**74**	Pn	**Pn**	**15 42 02.7**	**-0.6**
LLLB	**Lillooet**	**4.97**	**60**	Pn	**Pn**	**15 42 04.7**	**0.0**
YBH	**Yreka Blue Hor**	**7.77**	**145**	Pn	**Pn**	**15 42 46.4**	**+2.3**
	0.1nm,0.3s,baz=186,slow=19,SNR=2.9						
ELK	**Elko**	**12.15**	**123**	Pn	**P**	**15 43 44.9**	**+0.6**
	0.1nm,0.3s,baz=253,slow=12,SNR=2.7						
NVAR	**Mina Array Bea**	**12.37**	**139**	Pn	**P**	**15 43 48.9**	**+1.7**
	0.0nm,0.3s,baz=325,slow=13,SNR=4.2						
PDAR	**Pinedale Array**	**14.44**	**105**	Pn	**P**	**15 44 16.8**	**+2.3**
	0.0nm,0.3s,baz=74,slow=29,SNR=2.3						
YKA	**Yellowknife Ar**	**16.25**	**24**	Pn	**P**	**15 44 37.0**	**-0.8**
	0.0nm,0.3s,baz=215,slow=11,SNR=26						
YKA	**Yellowknife Ar**	**16.25**	**24**	Pn	**P**	**15 44 37.0**	**-0.8**
FFC	**Flin Flon**	**17.72**	**59**	*e*P	**P**	**15 44 56.9**	**+0.6**
	9.5nm,1.1s						
ILAR	**Eielson Array**	**19.22**	**336**	P	**P**	**15 45 14.5**	**-0.2**
	0.0nm,0.3s,baz=157,slow=10,SNR=5.1						
INK	**Inuvik**	**20.23**	**355**	P	**P**	**15 45 27.1**	**+1.3**
	2.0nm,0.9s,baz=166,slow=8.2,SNR=6.3						
TXAR	**Lajitas Array**	**26.93**	**126**	P	**P**	**15 46 31.0**	**-0.4**
	0.2nm,0.5s,mb2.9,baz=329,slow=5.3,SNR=3.5						

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*IDC **28** 15:44:06.4±4.5, 18.14N×122.46E, mb3.3/3, mb1 3.6/3, mb1mx3.4/18, mbtmp3.3/3, Error ellipse: s-maj=293.0km s-min=34.4km az=88.0*

*MAN **28** 15:44:13.7, 18.32N×120.81E, h55^{km}, mb4.2, ML3.1, MS2.8*

ISC 28 15:44:13.5±1.1,**18.33N**±0.09×**120.8E**±0.1,**h76**^{km}±10^{km}, **n11**,σ**0^{s}51**/13,**mb3.2**/3,**Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	**Conner**	**0.63**	**137**	*e*P	**P**	**15 44 28.2**	**0.0**
APYP				*e*S	**S**	**15 44 38.9**	**-0.3**
ABRA	**Dolores**	**0.68**	**186**	*e*P	**P**	**15 44 28.8**	**0.0**
ABRA				*e*S	**S**	**15 44 40.0**	**0.0**
SGCP	**Mt. Cagua**	**1.20**	**94**	*e*P	**P**	**15 44 35.2**	**+0.1**
CAUP	**Cauayan**	**1.69**	**144**	*e*P	**P**	**15 44 42.8**	**+1.1**
BOLP	**Bolinao**	**2.11**	**204**	*e*P	**P**	**15 44 47.6**	**+0.2**
BBP	**Basco**	**2.38**	**28**	*e*P	**P**	**15 44 51.1**	**-0.1**
BALP	**Baler**	**2.68**	**164**	*e*P	**P**	**15 44 55.1**	**-0.4**

POLP	Polilio Island	3.74	163	*e*P	P	15 45 09.9	-0.3
WRA	Warramunga Arr	40.29	160	P	P	15 51 39.2	-5.8
	0.3nm,0.9s,mb3.1,baz=343,slow=9.1,SNR=9.8						
ASAR	Alice Springs	43.65	162	P	P	15 52 08.4	-4.2
	0.2nm,0.4s,mb3.2,baz=340,slow=7.0,SNR=6.6						
YKA	Yellowknife Ar	88.49	22	P	P	15 56 58.4	0.0
	0.1nm,0.4s,mb3.2,baz=312,slow=4.0,SNR=5.6						

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*IDC **28** 16:04:44.3±1.3, 32.47N×76.49E, mb3.7/9, mb1 3.9/9, mb1mx3.7/19, mbtmp3.7/9, Error ellipse: s-maj=44.7km s-min=17.8km az=58.0*

*MOS **28** 16:04:45.3±1.8, 32.29N×76.27E, h33^{km}, mb4.0/2, Error ellipse: s-maj=32.7km s-min=12.1km az=95.8*

*NDI **28** 16:04:46.3±4.0, 32.70N×76.31E, h33^{km}, ML4.0, mb3.8(NEIC)*

*BJI **28** 16:04:49.9, 32.60N×76.60E, h22^{km}, mb4.0, ML3.6*

*NEIC **28** 16:04:49.5±7.2, 32.57N×76.58E, h32^{km}±49^{km}, mb3.8/3, Error ellipse: s-maj=30.8km s-min=14.5km az=47.0*

*NNC **28** 16:04:53.5±3.9, 32.68N×76.69E, h64^{km}±29^{km}, Error ellipse: s-maj=36.0km s-min=25.9km az=116.0*

ISC 28 16:04:47.2±0.5**, 32.49N**±0.03×**76.27E**±0.07**, h38**^{km}±7^{km}**, n40, σ1^{s}40**/54**, mb3.6**/10**, 6C, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	Dalhousie	0.26	282	*e*	P	16 04 54.0	-0.9
THN	Thein Dam	0.47	263	*e*PG	P	16 04 55.7	-1.7
THN				*e*SG	S	16 05 05.3	+0.7
PONG	Pong	0.60	207	*e*P	P	16 04 58.0	-1.2
PONG				*e*S	S	16 05 11.0	+3.1
SDNR	Sundarnagar	1.15	149	*e*	P	16 05 04.5	-2.6
SDNR				*e*		16 05 13.7	
KLP	Kalpa	1.94	119	*e*P	P	16 05 19.4	+1.1
KLP				*e*		16 05 44.3	
KLP				*e*		16 05 55.1	
	comp=E,5µm,1.0s						
KLP				*e*		16 05 56.6	
	comp=N,5µm,0.8s						
KKR	Kurukshetra	2.56	169	*e*P	P	16 05 28.2	+0.9
KKR				*e*S	S	16 05 59.6	+2.0
KKR				*e*		16 06 12.4	
	comp=Z,446nm,0.3s						
DDI	Dehra Dun	2.65	144	*e*PN	P	16 05 31.5	+3.0
DDI				*e*		16 06 05.1	
JOSI	Joshimath	3.41	124	*e*P	P	16 05 31.8	-7.6
JOSI				*e*S	S	16 06 10.1	-9.0
JOSI				*e*		16 06 26.6	
	comp=E,2µm,1.0s						
BHGR	Bahadurgarh	3.83	171	*e*P	P	16 05 55.1	+10
BHGR				*e*S	S	16 06 38.0	+8.2
BHGR				*e*		16 06 41.7	
	comp=Z,270nm,0.3s						
NDI	New Delhi	3.88	168	*e*P	P	16 05 53.0	+7.0
NDI				*e*S	S	16 06 38.0	+7.0
AYAN	Aya Nagar	4.06	169	*e*P	P	16 05 48.8	+0.2
AYAN				*e*S	S	16 06 32.7	-2.9
KUDL	Kundal	4.33	177	*e*P	P	16 05 53.5	+1.0
KUDL				*e*S	S	16 06 40.3	-2.2
KHET	Khetri	4.42	185	*e*P	P	16 05 52.6	-1.1
KHET				*e*S	S	16 06 43.7	-0.9
KHET				*e*		16 07 11.3	
	comp=N,82nm,0.8s						
KHET				*e*		16 07 12.9	
	comp=E,86nm,1.3s						
PTH	Pithoragarh	4.48	130	*e*	P	16 06 00.3	+5.8
PTH				*e*SG	S	16 07 02.9	+17
LGTI	Lohaghat	4.57	130	*e*	P	16 05 57.5	+1.7
KSH	Kashi	7.02	358	*e*P	P	16 06 35.0	+4.8
KSH				S	S	16 07 51.3	+1.7
KSH				Smax			
	comp=N,20nm,0.7s						
KSH				Smax			
	comp=E,30nm,0.7s						
AAK	Ala-Archa	10.22	353	⇑P	P	16 07 15.6	+1.1
	comp=E,2.1nm,0.6s						
AAK				⇑S	S	16 09 08.0	-1.0
	comp=E,4.3nm,0.8s						
AAK	Ala-Archa	10.22	353	*e*P	P	16 07 14.5	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	Ala-Archa	10.22	353	*e*Pn	P	16 07 14.5	0.0
	comp=Z,2.4nm,0.6s						
MK31	Makanchi Array	15.01	16	⇑P	P	16 08 18.3	0.0
	comp=Z,0.5nm,0.3s,baz=193,slow=12,SNR=45						
MK31				⇑S	S	16 11 00.8	-3.2
	comp=Z,5.3nm,1.3s,baz=185,slow=25,SNR=5.3						
HYB	Hyderabad	15.15	172	*e*P	P	16 08 13.0	-7.3
HYB	Hyderabad	15.15	172	*i* P	P	16 08 17.5	-2.8
HYB				*e*		16 10 52.0	
HYB				*e*S	S	16 11 06.0	-1.4
KURK	Kurchatov	18.30	5	*e*P	P	16 08 58.7	-1.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KURK	Kurchatov	18.30	5	*e*P	P	16 08 58.7	-1.1
	comp=Z,3.8nm,0.4s						
GTA	Gaotai	20.25	63	P	P	16 09 21.3	-0.6
GTA				AP		16 09 26.3	
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s						
BVA0	Borovoye Array	20.96	350	⇑P	P	16 09 29.9	+0.7
	comp=Z,0.8nm,1.0s,baz=161,slow=7.9,SNR=19						
BVAR	Borovoye Array	20.96	350	P	P	16 09 29.5	+0.3
	comp=Z,2.9nm,0.6s,baz=157,slow=11,SNR=23						
CHKZ	Chkalovo	21.56	351	⇑P	P	16 09 35.6	+0.4
	comp=Z,4.2nm,1.4s,mb3.7						
CHKZ	Chkalovo	21.56	351	*e*P	P	16 09 34.8	-0.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
CHKZ	Chkalovo	21.56	351	*e*P	P	16 09 34.8	-0.4
	comp=Z,1.5nm,0.6s,mb3.6						
ZAL	Zalesovo	22.29	13	P	P	16 09 41.5	-1.0
	comp=Z,1.4nm,0.4s,mb3.7,baz=247,slow=7.2,SNR=8.2						
CMAR	Chiang Mai Arr	24.71	119	P	P	16 10 05.7	-0.8
	comp=Z,1.5nm,0.7s,mb3.7,baz=301,slow=10.0,SNR=12						
SONM	Songino Array	27.44	47	P	P	16 10 32.0	+0.4
	comp=Z,0.5nm,0.8s,mb3.1,baz=244,slow=8.7,SNR=6.0						
ULN	Ulaanbaatar	27.86	48	*e*P	P	16 10 33.6	-1.7
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ULN	Ulaanbaatar	27.86	48	*e*P	P	16 10 33.6	-1.7
	comp=Z,1.3nm,0.4s,mb3.9						
FINES	FINESS Array B	43.21	327	P	P	16 12 47.7	+1.6
	comp=Z,0.6nm,0.6s,mb3.5,baz=90,slow=8.3,SNR=3.6						
ARCES	ARCESS Array B	46.49	338	P	P	16 13 14.2	+2.0
	comp=Z,1.4nm,0.7s,mb4.0,baz=106,slow=8.8,SNR=3.8						
WRA	Warramunga Arr	76.16	125	P	P	16 16 32.6	-0.9
	comp=Z,0.4nm,0.7s,mb3.5,baz=324,slow=5.9,SNR=11						
ASAR	Alice Springs	78.38	128	P	P	16 16 47.2	+1.5
	comp=Z,0.4nm,0.7s,mb3.5,baz=312,slow=5.6,SNR=7.6						
YKA	Yellowknife Ar	84.95	5	P	P	16 17 20.2	+1.1
	comp=Z,0.4nm,0.6s,mb3.8,baz=342,slow=5.2,SNR=10						

IDC 28 16:13:19.9±3.5**, 12.35N**×**91.58E, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.4**/17**, mbtmp3.3**/4**, ML3.1**/1**, Error ellipse: s-maj=92.2km s-min=31.1km az=83.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	9.34	49	Pn	P	16 15 35.0	-3.8
	0.1nm,0.3s,baz=239,slow=16,SNR=3.1						
SONM	Songino Array	37.48	16	P	P	16 20 35.4	-1.6
	0.4nm,1.0s,baz=207,slow=9.7,SNR=2.8						
WRA	Warramunga Arr	52.92	127	P	P	16 22 38.0	-2.4
	0.5nm,0.4s,baz=299,slow=10,SNR=7.4						
ASAR	Alice Springs	54.72	131	P	P	16 22 51.6	-2.0
	0.3nm,0.5s,baz=309,slow=6.8,SNR=13						

IDC 28 16:35:22.9±16.0**, 0.52N**×**126.47E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/14**, mbtmp3.8**/3**, Error ellipse: s-maj=246.8km s-min=152.1km az=161.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.75	160	P	P	16 40 16.1	-2.0
	1.9nm,0.6s,baz=338,slow=11,SNR=36						
WB2	Warramunga Arr	21.75	160	*e*P	P	16 40 16.2	-1.9
ASPA	Alice Springs	25.10	164	*e*P	P	16 40 49.9	-1.1
ASAR	Alice Springs	25.10	164	P	P	16 40 50.3	-0.7
	1.4nm,0.3s,baz=336,slow=7.5,SNR=44						
STKA	Stephens Creek	35.26	157	P	P	16 42 18.4	-3.1
	0.4nm,0.4s,baz=327,slow=10,SNR=2.9						

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*PGC **28** 16:39:54.5, 48.01N×128.89W, h10^{km}, MLSn3.0/1, Mw3.7, Northern Juan de Fuca ridge.*

*IDC **28** 16:39:56.6±4.9, 48.05N×128.97W, mb1 3.6/3, mb1mx3.3/18, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=83.8km s-min=28.2km az=45.0*

*NEIC **28** 16:40:00.4±2.8, 48.39N×128.63W, h10^{km}, mb3.6/1, Error ellipse: s-maj=44.4km s-min=15.5km az=216.0*

ISC 28 16:39:55.2±1.0**, 48.17N**±0.06×**128.68W**±0.07**, h10**^{km}**, n26, σ1^{s}01**/39**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	1.99	31	Pn	Pn	16 40 28.7	-0.6
OZB	Mount Ozzard	2.26	68	Pn	Pn	16 40 33.0	-0.2
OZB				Sn	Sn	16 41 01.1	-0.2
OZB				Trac		16 41 02.4	
	comp=Z,6.0nm,0.2s						
GDR	Gold River	2.38	46	Pn	Pn	16 40 35.1	+0.2
GDR				Sn	Sn	16 41 05.9	+1.6
	comp=Z,9.0nm,0.6s						
GDR				Trac		16 41 14.0	
	comp=Z,9.0nm,0.6s						
WOSB	Woss	2.43	34	Pn	Pn	16 40 35.6	+0.1
MAYB	Maynard	2.44	23	Pn	Pn	16 40 35.4	-0.3
MAYB				Sn	Sn	16 41 06.2	+0.3
	comp=Z,12nm,0.4s						
MAYB				Trac		16 41 07.3	
	comp=Z,12nm,0.4s						
BTB	Buttle Lake	2.46	57	Pn	Pn	16 40 36.5	+0.5
BTB				Sn	Sn	16 41 04.3	-2.1
	comp=Z,16nm,0.4s						
BTB				Trac		16 41 10.8	
	comp=Z,16nm,0.4s						
HOLB	Holberg	2.50	8	Pn	Pn	16 40 36.6	0.0
HOLB				Sn	Sn	16 41 06.8	-0.6
	comp=Z,13nm,0.6s						
HOLB				Trac		16 41 09.7	
	comp=Z,13nm,0.6s						
PHC	Port Hardy	2.67	17	Pn	Pn	16 40 38.5	-0.5
MGB	Mount Grey	2.78	71	Pn	Pn	16 40 40.1	-0.4
MGB				Sn	Sn	16 41 13.7	-0.7
	comp=Z,3.0nm,0.2s						
MGB				Trac		16 41 15.6	
	comp=Z,3.0nm,0.2s						
NCRB	Newcastle Ridg	2.82	37	Pn	Pn	16 40 41.6	+0.4
NCRB				Sn	Sn	16 41 16.2	+0.7
	comp=Z,4.0nm,0.3s						
NCRB				Trac		16 41 17.4	
	comp=Z,4.0nm,0.3s						
PFB	Port Renfrew	2.86	80	Pn	Pn	16 40 40.5	-1.2
PFB				Sn	Sn	16 41 15.1	-1.4
PFB				Trac		16 41 18.8	
	comp=Z,8.1nm,0.8s						
CBB	Campbell River	2.87	48	Pn	Pn	16 40 42.6	+0.7
CBB				Sn	Sn	16 41 18.1	+1.3
CBB				Trac		16 41 20.1	
	comp=Z,19nm,0.6s						
OCWA	Octopus Mounta	3.06	96	P	Pn	16 40 48.6	+4.0
TXB	Texada	3.19	60	Pn	Pn	16 40 46.5	+0.1
TXB				Sn	Sn	16 41 26.8	+1.9
	comp=Z,6.0nm,0.4s						
TXB				Trac		16 41 28.5	
	comp=Z,6.0nm,0.4s						
LZB	Mount Lazard	3.27	80	Pn	Pn	16 40 47.2	-0.4
LZB				Sn	Sn	16 41 26.0	-0.9
LZB				Trac		16 41 27.2	
	comp=Z,2.0nm,0.7s						
SHB	Sechelt	3.48	64	Pn	Pn	16 40 49.1	-1.4
SHB				Sn	Sn	16 41 32.7	+0.5
SHB				Trac		16 41 38.5	
	comp=Z,6.0nm,0.4s						
PGC	Sidney	3.52	80	*e*P	Pn	16 40 53.5	+2.4
BBB	Bella Bella	4.04	5	Pn	Pn	16 40 58.1	-0.3
BBB				Sn	Sn	16 41 44.4	-1.9
BBB				Trac		16 41 47.7	
	comp=Z,10.0nm,0.6s						
WSLR	Whistler	4.26	60	Pn	Pn	16 41 02.6	+1.0
VDB	Vedder Mountai	4.45	76	Pn	Pn	16 41 03.6	-0.8
LLLB	Lillooet	5.07	59	Pn	Pn	16 41 13.6	+0.5
PDAR	Pinedale Array	14.46	105	Pn	P	16 43 28.1	+6.5
	0.0nm,0.3s,baz=297,slow=8.1,SNR=2.6						
YKA	Yellowknife Ar	16.37	24	Pn	P	16 43 46.5	+0.1
	baz=214,slow=12,SNR=5.4						
YKA	Yellowknife Ar	16.37	24	Pn	P	16 43 46.5	+0.1
FFC	Flin Flon	17.82	58	*e*P	P	16 44 07.8	+3.2
	6.3nm,1.3s						
ILAR	Eielson Array	19.31	336	P	P	16 44 23.4	+0.7
	0.0nm,0.3s,baz=146,slow=10,SNR=7.9						

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*NEIC **28** 16:50:18.7±0.7, 18.71S×69.36W, h119^{km}±7^{km}, mb3.9/1, Error ellipse: s-maj=11.5km s-min=8.4km az=83.0*

*IDC **28** 16:50:18.6±0.7, 18.74S×69.28W, h117^{km}±5^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.9/15, mbtmp4.2/9, MS3.8/1, Ms1 3.8/1, ms1mx2.8/23, Error ellipse: s-maj=21.4km s-min=11.1km az=84.0*

ISC 28 16:50:17.1±0.7**, 18.72S**±0.05×**69.43W**±0.09**, h119**^{km}±8^{km}**, n21, σ1^{s}21**/19**, mb3.9**/6**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.71	27	P	P	16 51 02.8	+2.4
	21nm,0.3s,baz=214,slow=7.1,SNR=482						
ARE	Arequipa	2.98	318	⇑*i*P	P	16 51 04.6	+0.6
ARE				*e*		16 51 32.0	
ARE				*i* S	S	16 51 37.8	-1.8
LVC	Limon Verde	3.91	173	P	P	16 51 16.8	+0.4
	9.2nm,0.3s,baz=355,slow=9.1,SNR=65						
LVC				S	S	16 52 01.1	-0.6
	24nm,0.3s,baz=0.2,slow=9.9,SNR=6.3						
LVC	Limon Verde	3.91	173	P	P	16 51 16.8	+0.4
LVC				S	S	16 52 01.1	-0.6
SAML	Samuel	11.44	33	*e*Pn	P	16 52 57.6	-0.2
	0.2nm,0.6s						
TRQA	Tornquist	20.34	163	*e*P	P	16 54 45.1	-0.7
	4.4nm,0.7s						
BDFB	Brasilia	20.68	85	P	P	16 54 47.4	-2.0
	13nm,0.4s,baz=263,slow=7.9,SNR=23						
BAO	Brasilia Array	20.71	85	*e*P	P	16 54 50.2	+0.5
PLCA	Paso Flores	21.96	182	P	P	16 55 04.6	+2.6
	4.1nm,0.9s,mb3.8,baz=358,slow=13,SNR=8.3						
PLCA	Paso Flores	21.96	182	P	P	16 55 04.6	+2.6
TXAR	Lajitas Array	58.08	325	P	P	16 59 60.0	-0.4
	0.9nm,0.8s,mb3.8,baz=158,slow=6.7,SNR=4.6						
TXAR				LR	LR	17 23 31.8	
	comp=Z,86nm,19.4s,baz=195,slow=34						
DBIC	Dimbokro	68.44	75	P	P	17 01 07.2	-1.5
	3.6nm,0.7s,mb4.3,baz=213,slow=6.5,SNR=7.0						
DBIC				pP	pP	17 01 37.1	-1.1
	2.3nm,0.7s,baz=287,slow=5.1,SNR=2.2						
PDAR	Pinedale Array	71.47	330	P	P	17 01 26.8	+0.2
	0.5nm,0.4s,mb3.7,baz=126,slow=8.1,SNR=6.3						
NVAR	Mina Array Bea	73.01	322	P	P	17 01 37.0	+1.3
	0.4nm,0.8s,mb3.3,baz=138,slow=6.2,SNR=4.1						
YKA	Yellowknife Ar	88.41	341	P	P	17 02 56.7	+0.3
	1.4nm,0.4s,mb4.3,baz=132,slow=4.7,SNR=45						
YKA				pP	pP	17 03 26.8	-0.6
	0.6nm,0.6s,baz=136,slow=4.6,SNR=3.3						
YKA				sP	sP	17 03 39.1	-1.3
	0.9nm,0.5s,baz=132,slow=4.8,SNR=5.2						
YKA	Yellowknife Ar	88.41	341	P	P	17 02 56.7	+0.3
YKA				pP	pP	17 03 26.8	-0.6
YKA				sP	sP	17 03 39.1	-1.3
ASAR	Alice Springs	132.12	209	PKP	PKPdf	17 09 19.3	+1.7
	0.4nm,0.6s,baz=136,slow=1.5,SNR=11						
WRA	Warramunga Arr	135.06	212	PKP	PKPdf	17 09 24.5	+1.4
	0.4nm,0.6s,baz=136,slow=1.4,SNR=5.0						
ZAL	Zalesovo	139.63	23	PKP	PKPdf	17 09 31.8	+1.3
	0.6nm,0.4s,baz=299,slow=4.5,SNR=3.1						
ZAL	Zalesovo	139.63	23	PKP	PKPdf	17 09 31.8	+1.2
SONM	Songino Array	150.76	6	PKPbc	PKPdf	17 09 57.7	+8.3
	1.4nm,0.5s,baz=271,slow=1.2,SNR=23						
SONM				pPKPbc		17 10 29.4	
	1.0nm,0.7s,baz=273,slow=1.1,SNR=4.1						

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*IDC **28** 16:53:54.9±2.5, 48.11N×128.97W, mb1 3.6/5, mb1mx3.5/20, mbtmp3.4/5, ML3.4/5, Error ellipse: s-maj=48.4km s-min=14.9km az=70.0*

*PGC **28** 16:53:54.8, 48.04N×128.91W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*

*NEIC **28** 16:53:56.0±1.5, 48.13N×128.78W, h10^{km}, mb3.9/1, Error ellipse: s-maj=23.4km s-min=11.9km az=58.0*

ISC 28 16:53:54.7±0.9**, 48.16N**±0.05×**128.72W**±0.07**, h10**^{km}**, n30, σ0^{s}80**/44**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.01	31	Pn	Pn	16 54 28.7	-0.4
OZB	Mount Ozzard	2.29	68	Pn	Pn	16 54 33.0	-0.1
OZB				Trac		16 54 59.4	
	comp=Z,14nm,0.6s						
OZB				Sn	Sn	16 55 01.0	-0.5
GDR	Gold River	2.40	46	Pn	Pn	16 54 35.1	+0.4
GDR				Sn	Sn	16 55 04.3	-0.2
	comp=Z,7.0nm,0.4s						
GDR				Trac		16 55 08.4	
	comp=Z,7.0nm,0.4s						
WOSB	Woss	2.45	34	Pn	Pn	16 54 35.8	+0.4
MAYB	Maynard	2.46	24	Pn	Pn	16 54 35.5	-0.1
MAYB				Sn	Sn	16 55 05.7	-0.3
	comp=Z,10.0nm,0.4s						
MAYB				Trac		16 55 08.2	
	comp=Z,10.0nm,0.4s						
BTB	Buttle Lake	2.48	57	Pn	Pn	16 54 36.7	+0.8
BTB				Sn	Sn	16 55 07.2	+0.6
	comp=Z,24nm,0.4s						
BTB				Trac		16 55 09.3	
	comp=Z,24nm,0.4s						
HOLB	Holberg	2.51	9	Pn	Pn	16 54 36.5	+0.2
HOLB				Sn	Sn	16 55 07.1	-0.2
	comp=Z,6.0nm,0.4s						
HOLB				Trac		16 55 12.5	
	comp=Z,6.0nm,0.4s						
PHC	Port Hardy	2.68	18	Pn	Pn	16 54 39.4	+0.6
MGB	Mount Grey	2.80	71	Pn	Pn	16 54 40.4	-0.1
MGB				Sn	Sn	16 55 13.7	-0.9
	comp=Z,6.0nm,0.4s						
MGB				Trac		16 55 16.6	
	comp=Z,6.0nm,0.4s						
NCRB	Newcastle Ridg	2.84	37	Pn	Pn	16 54 41.5	+0.5
PFB	Port Renfrew	2.88	80	Pn	Pn	16 54 41.1	-0.4
PFB				Sn	Sn	16 55 15.1	-1.5
PFB				Trac		16 55 18.4	
	comp=Z,5.1nm,0.7s						
CBB	Campbell River	2.89	48	Pn	Pn	16 54 42.4	+0.7
CBB				Sn	Sn	16 55 17.9	+1.0
OCWA	Octopus Mounta	3.08	96	P	Pn	16 54 45.1	+0.8
TXB	Texada	3.21	60	Pn	Pn	16 54 46.9	+0.6
TXB				Sn	Sn	16 55 26.1	+1.1
	comp=Z,9.9nm,0.6s						
TXB				Trac		16 55 28.2	
	comp=Z,9.9nm,0.6s						
LZB	Mount Lazard	3.29	80	Pn	Pn	16 54 47.1	-0.3
LZB				Sn	Sn	16 55 26.4	-0.6
LZB				Trac		16 55 29.4	
	comp=Z,3.0nm,0.7s						
SHB	Sechelt	3.50	64	Pn	Pn	16 54 50.8	+0.3
PGC	Sidney	3.54	80	P	Pn	16 54 51.0	+0.1
SNB	Saturna Island	3.74	78	Pn	Pn	16 54 54.4	+0.6
BIB	Bowen Island	3.79	69	Pn	Pn	16 54 53.8	-0.6
BIB				Sn	Sn	16 55 38.8	-0.8
	comp=Z,4.0nm,0.4s						
BIB				Trac		16 55 42.1	
	comp=Z,4.0nm,0.4s						
BBB	Bella Bella	4.05	5	Pn	Pn	16 54 57.7	-0.4
	15nm,0.3s,baz=192,slow=14,SNR=122						
BBB				Sn	Sn	16 55 44.2	-2.0
	baz=72,slow=23,SNR=2.4						
BBB	Bella Bella	4.05	5	Pn	Pn	16 54 57.7	-0.4
BBB				Sn	Sn	16 55 44.2	-2.0
BBB	Bella Bella	4.05	5	Pn	Pn	16 54 58.0	-0.2
BBB				Sn	Sn	16 55 43.8	-2.3
BBB				Trac		16 55 51.5	
	comp=Z,17nm,0.8s						
WSLR	Whistler	4.28	60	Pn	Pn	16 55 02.2	+0.7
LLLB	Lillooet	5.09	59	Pn	Pn	16 55 13.4	+0.4
YBH	Yreka Blue Hor	7.71	144	Pn	Pn	16 55 48.2	-1.6
	0.1nm,0.3s,baz=144,slow=16,SNR=1.6						
NVAR	Mina Array Bea	12.32	138	Pn	P	16 56 57.4	+4.3
	0.0nm,0.3s,baz=322,slow=10,SNR=5.4						
PDAR	Pinedale Array	14.47	105	Pn	P	16 57 26.3	+4.9
	0.1nm,0.3s,baz=302,slow=8.5,SNR=2.5						
YKA	Yellowknife Ar	16.39	24	Pn	P	16 57 45.6	-0.6
	0.0nm,0.3s,baz=214,slow=11,SNR=6.4						
FFC	Flin Flon	17.84	58	*e*P	P	16 58 06.8	+2.3
	7.1nm,0.8s						
ILAR	Eielson Array	19.31	336	P	P	16 58 21.7	-0.5
	baz=156,slow=12,SNR=6.0						

IDC 28 17:01:57.5±11.0**, 4.82N**×**94.80E, mb3.4**/2**, mb1 3.8**/3**, mb1mx3.4**/17**, mbtmp3.5**/3**, ML3.8**/1**, Error ellipse: s-maj=301.1km s-min=47.2km az=82.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.15	16	Pn	P	17 05 19.1	-2.5
	0.1nm,0.3s,baz=212,slow=12,SNR=9.8						
WRA	Warramunga Arr	45.99	124	P	P	17 10 22.8	-2.0
	0.6nm,0.5s,baz=301,slow=9.9,SNR=15						
ASAR	Alice Springs	47.49	128	P	P	17 10 34.8	-1.7
	0.5nm,0.8s,baz=304,slow=8.2,SNR=9.3						

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*PGC **28** 17:06:49.4, 48.06N×128.86W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*

*IDC **28** 17:06:52.6±2.8, 48.29N×128.58W, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, ML2.7/3, Error ellipse: s-maj=63.7km s-min=17.9km az=74.0*

*NEIC **28** 17:06:55.8±1.6, 48.47N×128.25W, h10^{km}, mb3.6/1, Error ellipse: s-maj=26.9km s-min=12.3km az=56.0*

ISC 28 17:06:51.3±0.9**, 48.30N**±0.06×**128.58W**±0.07**, h10**^{km}**, n28, σ0^{s}92**/41**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	1.84	31	Pn	Pn	17 07 22.6	-0.7
OZB	Mount Ozzard	2.15	71	Pn	Pn	17 07 27.6	-0.1
OZB				Sn	Sn	17 07 54.6	-0.1
OZB				Trac		17 07 57.0	
	comp=Z,20nm,0.4s						
GDR	Gold River	2.24	47	Pn	Pn	17 07 29.0	0.0
GDR				Sn	Sn	17 07 58.7	+1.8
	comp=Z,8.0nm,0.4s						
GDR				Trac		17 08 07.0	
	comp=Z,8.0nm,0.4s						
WOSB	Woss	2.28	34	Pn	Pn	17 07 29.8	+0.1
MAYB	Maynard	2.30	23	Pn	Pn	17 07 29.6	-0.2
BTB	Buttle Lake	2.33	59	Pn	Pn	17 07 30.7	+0.4
BTB				Sn	Sn	17 08 00.3	+1.0
	comp=Z,49nm,0.5s						
BTB				Trac		17 08 03.8	
	comp=Z,49nm,0.5s						
HOLB	Holberg	2.36	7	Pn	Pn	17 07 30.6	-0.2
PHC	Port Hardy	2.52	17	Pn	Pn	17 07 32.3	-0.8
MGB	Mount Grey	2.67	73	Pn	Pn	17 07 34.5	-0.7
MGB				Sn	Sn	17 08 07.4	-0.5
	comp=Z,18nm,0.5s						
MGB				Trac		17 08 10.1	
	comp=Z,18nm,0.5s						
NCRB	Newcastle Ridg	2.67	37	Pn	Pn	17 07 35.3	0.0
CBB	Campbell River	2.73	49	Pn	Pn	17 07 36.5	+0.4
CBB				Sn	Sn	17 08 11.4	+1.9
PFB	Port Renfrew	2.77	83	Pn	Pn	17 07 35.1	-1.5
PFB				Sn	Sn	17 08 09.3	-1.1
PFB				Trac		17 08 12.2	
	comp=Z,4.0nm,0.4s						
OCWA	Octopus Mounta	3.00	99	P	Pn	17 07 40.3	+0.4
TXB	Texada	3.06	61	Pn	Pn	17 07 41.0	+0.2
LZB	Mount Lazard	3.18	83	Pn	Pn	17 07 41.1	-1.3
LZB				Sn	Sn	17 08 20.6	-0.1
LZB				Trac		17 08 23.6	
	comp=Z,2.0nm,0.6s						
SHB	Sechelt	3.36	65	Pn	Pn	17 07 43.8	-1.2
SHB				Sn	Sn	17 08 25.8	+0.4
SHB				Trac		17 08 32.1	
	comp=Z,10.0nm,0.3s						
PGC	Sidney	3.43	82	*e*P	Pn	17 07 44.9	-1.1
BIB	Bowen Island	3.65	70	Pn	Pn	17 07 49.5	+0.4
BIB				Sn	Sn	17 08 31.9	-0.9

	comp=Z,4.0nm,0.4s						
BIB				Trac		17 08 38.0	
	comp=Z,4.0nm,0.4s						
BBB	**Bella Bella**	**3.90**	**4**	Pn	**Pn**	**17 07 52.3**	**-0.4**
	16nm,0.3s,baz=195,slow=12,SNR=45						
BBB				Sn	**Sn**	**17 08 37.4**	**-1.7**
	baz=241,slow=22,SNR=2.4						
BBB	**Bella Bella**	**3.90**	**4**	Pn	**Pn**	**17 07 52.3**	**-0.4**
BBB				Sn	**Sn**	**17 08 37.4**	**-1.7**
BBB	**Bella Bella**	**3.90**	**4**	Pn	**Pn**	**17 07 52.0**	**-0.8**
BBB				Sn	**Sn**	**17 08 38.5**	**-0.6**
BBB				Trac		17 08 40.5	
	comp=Z,18nm,0.8s						
WSLR	**Whistler**	**4.13**	**62**	Pn	**Pn**	**17 07 56.4**	**+0.4**
WSLR				Sn	**Sn**	**17 08 45.2**	**+0.2**
WSLR				Trac		17 08 52.6	
	comp=Z,3.0nm,0.3s						
LLLB	**Lillooet**	**4.94**	**60**	Pn	**Pn**	**17 08 07.8**	**+0.4**
NVAR	**Mina Array Bea**	**12.36**	**139**	Pn	**P**	**17 09 52.2**	**+2.0**
	0.1nm,0.3s,baz=326,slow=12,SNR=6.9						
YKA	**Yellowknife Ar**	**16.23**	**24**	Pn	**P**	**17 10 40.3**	**-0.4**
	0.0nm,0.3s,baz=214,slow=11,SNR=4.4						
YKA	**Yellowknife Ar**	**16.23**	**24**	Pn	**P**	**17 10 40.3**	**-0.4**
FFC	**Flin Flon**	**17.69**	**59**	*e*P	**P**	**17 11 01.0**	**+1.8**
	5.0nm,1.0s						
ILAR	**Eielson Array**	**19.22**	**336**	P	**P**	**17 11 19.4**	**+1.5**
	0.0nm,0.3s,baz=155,slow=13,SNR=5.1						

SSS ***28*** *17:08:39.1, 12.95N×89.05W, h34^{km}, MD3.1*

INET ***28*** *17:08:39.4, 12.68N×89.01W, h15^{km}, ML3.6*

CASC 28 17:08:38.3±1.6, 12.86N×89.08W, h41^{km}±4^{km}, MD3.5, ML3.5, 12C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.76**	**1**	⇑*i*P	P	17 08 52.5	0.0
LCBS	**La Ceiba**	**0.79**	**7**	⇑*e*P	P	17 08 52.8	-0.2
LBRS	**Las Brisas**	**0.87**	**2**	⇑*e*P	P	17 08 54.3	+0.1
LBRS				*e*S	S	17 09 05.1	-0.8
LFU	**La Fuente**	**0.88**	**358**	⇑*e*P	P	17 08 54.4	+0.1
BOQS	**Boqueron**	**0.89**	**347**	⇑*e*P	P	17 08 54.7	+0.3
BOQS				*e*S	S	17 09 06.8	+0.5
VSM	**San Miguel**	**0.96**	**54**	*e*P	P	17 08 55.8	+0.3
VSM				*e*S	S	17 09 09.2	+1.0
BLLM	**Bellamira**	**1.00**	**55**	⇓*e*P	P	17 08 56.0	-0.1
BLLM				*e*S	S	17 09 11.5	+2.3
SBLS	**San Blas**	**1.10**	**331**	⇑*e*P	P	17 08 57.9	+0.4
SBLS				*e*S	S	17 09 12.6	+0.8
SNJE	**San Jose**	**1.12**	**333**	⇓*e*P	P	17 08 58.2	+0.5
SNJE				*e*S	S	17 09 13.0	+0.8
RTR	**El Retiro**	**1.17**	**332**	⇑*e*P	P	17 08 58.8	+0.5
CAHU	**Cacacuatique**	**1.24**	**43**	⇓*e*P	P	17 08 59.2	-0.1
CAHU				*e*S	S	17 09 15.4	+0.2
CNCH	**Conchagua**	**1.28**	**71**	⇑*e*P	P	17 08 59.5	-0.5
CNCH				*e*S	S	17 09 16.2	-0.1
RBDL	**Robledal**	**1.38**	**335**	⇑*e*P	P	17 09 01.8	+0.3
RBDL				*e*S	S	17 09 19.5	+0.8
CRIN	**San Cristobal**	**1.99**	**94**	⇑*e*P	P	17 09 10.5	+0.4
LEON	**Leon**	**2.18**	**102**	*e*P	P	17 09 11.8	-1.0
MIRN	**Miramar**	**2.35**	**100**	⇑*e*P	P	17 09 14.8	-0.5
COPN	**Copaltepe**	**2.52**	**105**	⇑*e*P	P	17 09 16.8	-1.0
APYN	**Apoyeque**	**2.74**	**103**	⇓*e*P	P	17 09 20.4	-0.4
APYN				*e*S	S	17 09 51.5	-1.5
APYN				*i*		17 09 54.1	
	comp=Z,264nm,0.2s						

IDC ***28*** *17:15:02.5±1.6, 9.85N×124.63E, mb3.7/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.7/3, Error ellipse: s-maj=234.4km s-min=25.7km az=72.0*

MAN ***28*** *17:15:26.4, 10.10N×125.38E, h224^{km}, mb4.4, ML3.2, MS3.4*

ISC 28 17:15:25.0±0.6, 10.09N±0.07×125.5E±0.1, h238^{km}±4^{km}, n16, σ0^{s}85/21, mb3.6/4, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.30**	**178**	⇑*e*P	**P**	**17 15 56.9**	**+0.7**
SCPH				*e*S	**S**	**17 16 10.4**	**-10**
MSLP	**Maasin**	**0.61**	**274**	*e*P	**P**	**17 15 57.5**	**+0.5**
MSLP				*e*S	**S**	**17 16 21.1**	**-0.9**
BUTP	**Butuan**	**1.12**	**173**	*e*P	**P**	**17 16 00.9**	**+1.3**
BESP	**Borongan**	**1.50**	**359**	*e*P	**P**	**17 16 03.1**	**+0.6**
BESP				*e*S	**S**	**17 16 30.9**	**-0.6**
TBP	**Tagbilaran**	**1.64**	**256**	*e*P	**P**	**17 16 02.9**	**-0.7**
BIPH	**Bislig**	**2.08**	**155**	⇓*e*P	**P**	**17 16 07.3**	**-0.2**
BIPH				*i* S	**S**	**17 16 39.1**	**-1.3**
BUKP	**Musuan**	**2.23**	**191**	*e*P	**P**	**17 16 10.1**	**+1.1**
GUIM	**Jordan**	**2.89**	**281**	*e*P	**P**	**17 16 15.1**	**-0.8**
KCP	**Kidapawan**	**3.08**	**187**	⇓*i*P	**P**	**17 16 19.8**	**+1.7**
KCP				*i* S	**S**	**17 17 05.3**	**+6.1**
MATI	**Mati**	**3.22**	**166**	*e*P	**P**	**17 16 19.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**28.01**	**180**	*e*P	**P**	**17 20 55.5**	**-0.8**
	3.9nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**31.09**	**164**	P	**P**	**17 21 22.4**	**-1.0**
	0.3nm,0.3s,mb3.4,baz=343,slow=8.1,SNR=30						
WB2	**Warramunga Arr**	**31.09**	**164**	*e*P	**P**	**17 21 22.8**	**-0.6**
ASAR	**Alice Springs**	**34.54**	**166**	P	**P**	**17 21 53.1**	**+0.1**
	1.5nm,0.3s,mb4.0,baz=341,slow=6.8,SNR=118						
ASPA	**Alice Springs**	**34.54**	**166**	*e*P	**P**	**17 21 53.4**	**+0.4**
SONM	**Songino Array**	**40.92**	**340**	P	**P**	**17 22 46.4**	**+0.6**
	0.7nm,1.0s,mb3.0,baz=155,slow=9.4,SNR=4.7						

PGC 28 17:46:25.8, 48.03N×128.92W, h10^{km}, MLSn3.1/1, Mw3.7, 1C, Northern Juan de Fuca ridge., Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	**Eliza Dome**	**2.19**	**32**	Pn	Pn	17 47 00.1	-2.7
OZB	**Mount Ozzard**	**2.46**	**66**	Pn	Pn	17 47 04.0	-2.6
OZB				Sn	Sn	17 47 32.2	-4.9
OZB				Trac		17 47 33.6	
	comp=Z,11nm,0.4s						
GDR	**Gold River**	**2.59**	**46**	Pn	Pn	17 47 06.1	-2.4
GDR				Sn	Sn	17 47 35.7	-4.6
WOSB	**Woss**	**2.63**	**35**	Pn	Pn	17 47 07.1	-2.0
MAYB	**Maynard**	**2.64**	**25**	Pn	Pn	17 47 06.7	-2.4
MAYB				Sn	Sn	17 47 36.8	-4.8
	comp=Z,13nm,0.5s						
MAYB				Trac		17 47 39.4	
	comp=Z,13nm,0.5s						
HOLB	**Holberg**	**2.67**	**11**	Pn	Pn	17 47 07.2	-2.4
HOLB				Sn	Sn	17 47 37.8	-4.4
	comp=Z,11nm,0.5s						
HOLB				Trac		17 47 42.3	
	comp=Z,11nm,0.5s						
BTB	**Buttle Lake**	**2.67**	**56**	Pn	Pn	17 47 07.2	-2.4
BTB				Sn	Sn	17 47 38.4	-3.9
	comp=Z,27nm,0.4s						
BTB				Trac		17 47 40.6	
	comp=Z,27nm,0.4s						
MGB	**Mount Grey**	**2.97**	**69**	Pn	Pn	17 47 11.6	-2.3
MGB				Sn	Sn	17 47 44.9	-5.1
	comp=Z,11nm,0.6s						
MGB				Trac		17 47 47.3	
	comp=Z,11nm,0.6s						
NCRB	**Newcastle Ridg**	**3.03**	**37**	Pn	Pn	17 47 12.9	-1.8
NCRB				Sn	Sn	17 47 47.3	-4.1
	comp=Z,9.0nm,0.5s						
NCRB				Trac		17 47 49.9	
	comp=Z,9.0nm,0.5s						
PFB	**Port Renfrew**	**3.04**	**78**	Pn	Pn	17 47 12.4	-2.4
PFB				Sn	Sn	17 47 46.6	-5.1
PFB				Trac		17 47 48.1	
	comp=Z,5.0nm,0.5s						
CBB	**Campbell River**	**3.08**	**48**	Pn	Pn	17 47 13.9	-1.5
CBB				Sn	Sn	17 47 48.6	-4.1
CBB				Trac		17 47 49.8	
	comp=Z,4.0nm,0.2s						
TXB	**Texada**	**3.40**	**59**	Pn	Pn	17 47 18.1	-1.8
TXB				Sn	Sn	17 47 56.2	-4.5
	comp=Z,10nm,0.5s						
TXB				Trac		17 47 59.4	
	comp=Z,10nm,0.5s						
LZB	**Mount Lazard**	**3.45**	**78**	Pn	Pn	17 47 18.4	-2.3
LZB				Sn	Sn	17 47 58.0	-4.1
LZB				Trac		17 47 59.2	
	comp=Z,3.9nm,0.7s						
VGZ	**Gonzales**	**3.76**	**82**	Pn	Pn	17 47 23.2	-1.8
SNB	**Saturna Island**	**3.90**	**77**	Pn	Pn	17 47 25.7	-1.4
BBB	**Bella Bella**	**4.20**	**7**	⇑Pn	Pn	17 47 29.4	-1.9
BBB				Sn	Sn	17 48 15.2	-5.7
BBB				Trac		17 48 16.5	
	comp=Z,11nm,0.5s						
WSLR	**Whistler**	**4.46**	**60**	Pn	Pn	17 47 34.4	-0.8
VDB	**Vedder Mountai**	**4.64**	**75**	Pn	Pn	17 47 35.5	-2.1
VDB				Trac		17 48 11.2	
	comp=Z,1.0nm,0.1s						
LLLB	**Lillooet**	**5.28**	**58**	Pn	Pn	17 47 44.7	-1.9

NDI ***28*** *18:01:58.5±4.1, 32.46N×76.43E, h3^{km}±12^{km}, ML4.9, mb4.8(NEIC)*

BJI ***28*** *18:01:58.7, 32.50N×76.60E, h12^{km}, mB4.8, mb4.7, ML4.6, Ms4.3, Msz4.0*

NEIC ***28*** *18:01:59.8±2.6, 32.53N×76.62E, h12^{km}±16^{km}, mb4.8/36, Error ellipse: s-maj=8.4km s-min=4.5km az=216.0*

LDG ***28*** *18:02:00.0±0.1, 32.22N×76.63E, h33^{km}, Mb4.7/10, Ms3.2/1, Error ellipse: s-maj=12.3km s-min=3.3km az=27.0*

IDC ***28*** *18:02:00.5±4.4, 32.50N×76.52E, h20^{km}±27^{km}, mb4.3/21, mb1 4.4/21, mb1mx4.4/23, mbtmp4.4/21, MS3.6/5, Ms1 3.7/5, ms1mx3.4/18, Error ellipse: s-maj=19.6km s-min=12.6km az=35.0*

MOS ***28*** *18:02:01.1±1.2, 32.54N×76.66E, h33^{km}, mb4.8/32, Error ellipse: s-maj=7.8km s-min=5.5km az=114.7*

NNC ***28*** *18:02:04.2±7.2, 32.66N×77.41E, h58^{km}±34^{km}, Error ellipse: s-maj=68.9km s-min=34.3km az=163.0*

ISC 28 18:01:56.5±0.7, 32.45N±0.02×76.53E±0.03, h5^{km}±4^{km}, n203, σ1^{s}23/235, mb4.6/60, MS3.7/11, 14C-4D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	**0.49**	**281**	*e*P	**Pg**	**18 02 06.0**	**-0.3**
DLH				*e*		18 02 08.6	
THN	**Thein Dam**	**0.69**	**269**	*e*P	**Pg**	**18 02 09.0**	**-1.4**
THN				*e*S	**Sg**	**18 02 16.7**	**-2.9**
PONG	**Pong**	**0.70**	**225**	*e*P	**Pg**	**18 02 10.0**	**-0.6**
PONG				*e*S	**Sg**	**18 02 23.0**	**+3.0**
SDNR	**Sundarnagar**	**1.02**	**159**	*e*P	**Pb**	**18 02 17.5**	**+1.2**
SDNR				*e*		18 02 30.5	
JMU	**Jammu**	**1.40**	**281**	⇑*i*P	**Pn**	**18 02 26.0**	**+3.1**
JMU				*e*		18 02 47.5	
SMLA	**Simla**	**1.43**	**158**	⇓*i*P	**Pn**	**18 02 42.0**	**+19**
SMLA				*i* S	Sb	18 03 03.5	+22
KLP	**Kalpa**	**1.72**	**122**	*e*P	**Pn**	**18 02 32.6**	**+5.2**
KLP				*e*S	**Sn**	**18 02 56.3**	**+6.2**
KLP				*e*		18 03 09.2	
	comp=N,59µm,0.8s						
KLP				*e*		18 03 09.2	
	comp=E,39µm,0.9s						
DDI	**Dehra Dun**	**2.49**	**148**	*e*PN	**Pn**	**18 02 40.4**	**+2.0**
DDI				*e*SB	**Sb**	**18 03 17.4**	**+4.8**
KKR	**Kurukshetra**	**2.50**	**174**	*e*P	**Pn**	**18 02 41.4**	**+2.9**
KKR				*e*S	**Sn**	**18 03 11.5**	**+1.7**
CHCP	**Chirah Chowk**	**3.00**	**295**	P	**Pn**	**18 02 47.6**	**+1.9**
JOSI	**Joshimath**	**3.20**	**125**	*e*P	**Pn**	**18 02 43.7**	**-4.9**
JOSI				*e*S	**Sn**	**18 03 21.5**	**-6.1**
JOSI				*e*		18 03 48.6	
	comp=E,18µm,1.0s						
JOSI				*e*		18 03 49.1	
	comp=N,11µm,1.0s						
SARP	**Sargodha**	**3.32**	**262**	P	**Pn**	**18 02 48.8**	**-1.4**
SARP				S	**Sn**	**18 03 26.0**	**-4.6**
KALG	**Kalgarh**	**3.50**	**146**	*e*P	**Pn**	**18 02 41.1**	**-12**
KALG				*e*		18 03 17.4	
KALG				*e*S	**Sn**	**18 03 22.2**	**-13**
KALG				*e*		18 03 44.2	
	comp=E,3µm,1.0s						
BHGR	**Bahadurgarh**	**3.77**	**175**	*e*P	**Pn**	**18 02 57.5**	**+0.9**
NDI	**New Delhi**	**3.80**	**171**	*e*PN	**Pn**	**18 02 56.5**	**-0.6**
NDI				*e*		18 03 09.5	
NDI				*e*SN	**Sn**	**18 03 41.0**	**-1.8**
NDI				*e*SB	**Sb**	**18 03 57.0**	**+6.3**
ASOR	**Ausora**	**3.84**	**164**	*e*P	**Pn**	**18 02 59.3**	**+1.7**
ASOR				*e*S	**Sn**	**18 03 44.0**	**+0.3**
AYAN	**Aya Nagar**	**3.99**	**172**	*e*P	**Pn**	**18 03 00.8**	**+1.0**
AYAN				*e*S	**Sn**	**18 03 45.5**	**-2.1**
THW	**Thamme Wali**	**4.06**	**276**	⇑P	**Pn**	**18 03 01.1**	**+0.4**
CEP	**Cherat**	**4.11**	**291**	P	**Pn**	**18 03 01.4**	**-0.1**
PTH	**Pithoragarh**	**4.29**	**132**	*e*PN	**Pn**	**18 03 06.1**	**+2.1**
PTH				*e*SB	**Sb**	**18 04 10.2**	**+5.5**
KUDL	**Kundal**	**4.29**	**181**	*e*P	**Pn**	**18 03 04.4**	**+0.3**
LGTI	**Lohaghat**	**4.37**	**132**	*e*P	**Pn**	**18 03 07.0**	**+1.8**
LGTI				*e*SB	**Sb**	**18 04 13.0**	**+5.8**
KHET	**Khetri**	**4.41**	**188**	*e*P	**Pn**	**18 03 05.9**	**+0.1**
KHET				*e*S	**Sn**	**18 03 56.6**	**-1.6**
KHET				*e*		18 04 24.4	
	comp=N,894nm,0.8s						
KHET				*e*		18 04 24.5	
	comp=E,854nm,0.8s						
SBDP	**Sheikh Budin**	**4.85**	**270**	⇑P	**Pn**	**18 03 10.7**	**-1.3**
AGRA	**Agra**	**5.35**	**166**	*e*P	**Pn**	**18 03 18.9**	**-0.1**
AGRA				*e*S	**Sn**	**18 04 17.7**	**-4.1**
AGRA				*e*		18 04 56.7	
	comp=E,2µm,0.9s						
AGRA				*e*		18 04 58.1	
	comp=N,3µm,0.7s						
DRP	**Derazinda**	**5.42**	**264**	P	**Pn**	**18 03 18.8**	**-1.2**
AJM	**Ajmer**	**6.18**	**196**	⇑*i*P	**Pn**	**18 03 29.0**	**-1.7**
AJM				*e*S	**Sn**	**18 04 37.1**	**-5.6**
AJM				*e*		18 05 15.3	
	comp=E,7µm,0.9s						
AJM				*e*		18 05 15.6	
	comp=N,4µm,0.4s						
KSH	**Kashi**	**7.06**	**356**	⇑P	**Pn**	**18 03 46.0**	**+2.8**
KSH				S	**Sn**	**18 05 01.0**	**-3.8**
KSH				Smax			
	comp=N,180nm,0.8s						
KSH				Smax			
	comp=E,170nm,0.7s						
JHNI	**Jhansi**	**7.18**	**165**	⇓*i*P	**Pn**	**18 03 43.0**	**-1.8**
JHNI				*i* S	**Sn**	**18 05 02.0**	**-5.7**
JASL	**Jaisalmer**	**7.37**	**223**	*e*P	**Pn**	**18 03 45.0**	**-2.5**
KOLN	**Koldanda**	**7.70**	**126**	*e*P	**Pn**	**18 03 52.3**	**+0.3**
	comp=E,62nm,0.3s						
GKN	**Gorkha**	**8.29**	**120**	*e*P	**P**	**18 04 00.1**	**-0.3**
	comp=E,154nm,0.4s						
DMN	**Daman**	**8.86**	**121**	*e*P	**P**	**18 04 07.6**	**-0.6**
	comp=E,194nm,0.6s						
KKN	**Kakani**	**8.88**	**119**	*e*P	**P**	**18 04 07.5**	**-1.1**
	comp=E,191nm,0.5s						
PKI	**Pulchoki**	**9.10**	**120**	*e*P	**P**	**18 04 10.4**	**-1.2**
	comp=E,205nm,0.6s						
BHPL	**Bhopal**	**9.21**	**175**	*e*P	**P**	**18 04 10.2**	**-2.9**
BHPL				*e*S	**Sn**	**18 05 48.2**	**-10**
BHPL				*e*		18 06 46.7	
	comp=N,207nm,0.5s						
BHPL				*e*		18 06 46.9	
	comp=E,275nm,1.1s						
JIRN	**Jiri**	**9.63**	**117**	*e*P	**P**	**18 04 17.7**	**-1.3**
	comp=E,125nm,0.3s						
KZA	**Kyzart**	**9.66**	**354**	P	**P**	**18 04 19.6**	**+0.2**
	SNR=26						
UCH	**Uchtor**	**9.89**	**351**	P	**P**	**18 04 22.6**	**+0.2**
	SNR=48						
AML	**Almayashu**	**9.92**	**348**	P	**P**	**18 04 22.3**	**-0.6**
	SNR=90						
KBK	**Karagaybulak**	**10.26**	**353**	P	**P**	**18 04 29.0**	**+1.4**
	SNR=36						
AAK	**Ala-Archa**	**10.29**	**352**	P	**P**	**18 04 28.0**	**+0.1**
	SNR=22						
AAK	**Ala-Archa**	**10.29**	**352**	⇑P	**P**	**18 04 27.9**	**0.0**
	comp=E,28nm,1.0s						
AAK				⇑S	**S**	**18 06 22.5**	**-2.4**
	comp=E,42nm,0.9s						
AAK	**Ala-Archa**	**10.29**	**352**	P	**P**	**18 04 27.9**	**-0.1**
AAK				S	**S**	**18 06 22.4**	**-2.5**
AAK				pmax	pmax		
	comp=Z,28nm,1.0s						
AAK				smax			
	comp=E,38nm,0.9s						
AAK	**Ala-Archa**	**10.29**	**352**	*e*Pn	**P**	**18 04 26.6**	**-1.4**
	comp=E,17nm,0.6s						
EKS2	**Erkin-Say**	**10.42**	**349**	P	**P**	**18 04 29.6**	**-0.1**
	SNR=19						
FRU	**Bishkek**	**10.47**	**352**	*e*P	**P**	**18 04 32.0**	**+1.5**
FRU				*e*S	**S**	**18 06 37.0**	**+7.6**
FRU				pmax	pmax		
	comp=Z,35nm,1.5s						
FRU				smax			
	comp=N,60nm,1.8s						
TKM2	**Tokmak 2**	**10.48**	**356**	P	**P**	**18 04 33.7**	**+3.2**
	SNR=5.1						
CHMS	**Chumysh**	**10.62**	**353**	P	**P**	**18 04 32.2**	**-0.3**
	SNR=10						
LSA	**Lhasa**	**12.83**	**99**	*e*P	**P**	**18 05 02.5**	**+0.1**
LSA	**Lhasa**	**12.83**	**99**	*e*P	**P**	**18 05 02.2**	**-0.2**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LSA	**Lhasa**	**12.83**	**99**	*e*Pn	**P**	**18 05 02.2**	**-0.2**
	comp=Z,8.4nm,0.7s						
BOM	**Bombay**	**13.91**	**195**	*e*	**P**	**18 05 28.4**	**+12**
BOM				*e*		18 08 02.5	
LATR	**Latur**	**13.98**	**180**	*e*	**P**	**18 05 12.8**	**-4.9**
POO	**Poona**	**14.07**	**191**	*e*	**P**	**18 05 13.0**	**-6.0**
POO				*i*		18 07 37.0	
WMQ	**Urumqi**	**14.33**	**34**	P	**P**	**18 05 20.5**	**-1.7**
WMQ				PP	PP	18 05 30.0	-3.6
WMQ				AMB	AMB		
	comp=Z,42nm,0.8s						
WMQ				LR	LR		
	comp=N,138nm,11.0s						
WMQ				LR	LR		
	comp=E,265nm,10.0s						
WMQ				LR	LR		
	comp=Z,267nm,11.0s						
MK31	**Makanchi Array**	**14.99**	**15**	⇑P	**P**	**18 05 28.2**	**-2.5**
	comp=Z,22nm,0.9s,baz=191,slow=13,SNR=207						
MK31				⇑S	**S**	**18 08 08.5**	**-10**
	comp=Z,22nm,0.9s,baz=197,slow=23,SNR=6.2						
MKAR	**Makanchi Array**	**14.99**	**15**	*i* P	**P**	**18 05 28.2**	**-2.5**
MKAR				*e*S	**S**	**18 08 11.1**	**-6.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				smax			
	comp=E,28nm,1.0s						
HYB	**Hyderabad**	**15.08**	**173**	*e*P	**P**	**18 05 25.5**	**-6.7**
HYB				pmax	pmax		
	comp=Z,31nm,0.8s						
HYB	**Hyderabad**	**15.08**	**173**	*e*P	**P**	**18 05 25.5**	**-6.7**
	comp=Z,31nm,0.8s						
HYB				*e*S	**S**	**18 08 04.0**	**-17**
HYB	**Hyderabad**	**15.08**	**173**	*i* P	**P**	**18 05 25.5**	**-6.7**
	comp=Z,31nm,0.8s						
HYB				*e*		18 08 04.0	
HYB				*e*S	**S**	**18 08 26.0**	**+5.5**
KURK	**Kurchatov**	**18.31**	**4**	⇑P	**P**	**18 06 10.6**	**-2.3**
	comp=Z,20nm,1.1s						
KURK	**Kurchatov**	**18.31**	**4**	Pn	**P**	**18 06 10.0**	**-3.0**
	comp=Z,287nm,0.6s,SNR=58						
KURK	**Kurchatov**	**18.31**	**4**	⇓*e*P	**P**	**18 06 10.7**	**-2.3**
KURK	**Kurchatov**	**18.31**	**4**	*e*P	**P**	**18 06 10.4**	**-2.5**
	comp=Z,36nm,0.8s						
GTA	**Gaotai**	**20.06**	**63**	⇑*i*P	**P**	**18 06 33.8**	**+0.3**
GTA				AP		18 06 37.8	
GTA				XP		18 06 41.0	
GTA				AMB	AMB		
	comp=Z,17nm,0.8s						
GTA				AMB	AMB		
	comp=Z,195nm,5.3s						
GTA				LR	LR		
	comp=N,176nm,15.6s,MS3.7						
GTA				LR	LR		
	comp=E,220nm,16.4s,MS3.7						
GTA				LR	LR		
	comp=Z,276nm,10.3s						
BVA0	**Borovoye Array**	**21.03**	**350**	P	**P**	**18 06 42.6**	**-0.9**
	comp=Z,8.1nm,0.9s,mb4.0,baz=162,slow=12,SNR=241						
BVA0	**Borovoye Array**	**21.03**	**350**	*i* P	**P**	**18 06 42.6**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**21.03**	**350**	P	**P**	**18 06 42.5**	**-1.0**
	comp=Z,31nm,0.8s,mb4.7,baz=164,slow=11,SNR=234						
CHKZ	**Chkalovo**	**21.63**	**350**	⇑P	**P**	**18 06 48.4**	**-1.2**
	comp=Z,15nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	**21.63**	**350**	*e*P	**P**	**18 06 48.1**	**-1.5**
CHKZ				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**21.63**	**350**	*e*P	**P**	**18 06 48.1**	**-1.4**
	comp=Z,20nm,0.8s,mb4.6						
ZAL	**Zalesovo**	**22.27**	**13**	P	**P**	**18 06 54.7**	**-1.3**
	comp=Z,8.5nm,0.5s,mb4.4,baz=270,slow=7.9,SNR=34						
ZAL				LR	LR	18 16 52.3	
	comp=Z,225nm,19.2s,MS3.6,baz=251,slow=40						
ZAL	**Zalesovo**	**22.27**	**13**	P	**P**	**18 06 54.7**	**-1.3**
ZAL				LR	LR	18 16 52.3	
LZH	**Lanzhou**	**22.83**	**73**	*e*P	**P**	**18 07 02.5**	**+0.9**
LZH				AP		18 07 08.0	
LZH				XP		18 07 11.0	
LZH				AMB	AMB		
	comp=Z,38nm,1.0s,mb4.8						
LZH	**Lanzhou**	**22.83**	**73**	*e*P	**P**	**18 07 02.5**	**+0.9**
LZH				*SP		18 07 11.0	
LZH				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.8						
LZH	**Lanzhou**	**22.83**	**73**	*e*P	**P**	**18 07 02.5**	**+0.9**
	comp=Z,38nm,1.0s,mb4.8						
LZH				pP		18 07 08.0	
LZH				sP		18 07 11.0	
NVS	**Novosibirsk**	**22.88**	**10**	*e*P	**P**	**18 07 00.6**	**-1.3**
NVS				*e*S	**S**	**18 11 08.3**	**+0.9**
NVS				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.5						
NVS				pmax	pmax		
	comp=N,40nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.5s						
NVS				smax			
	comp=N,25nm,2.1s						
CD2	**Chengdu**	**23.20**	**87**	*e*P	**P**	**18 07 06.3**	**+1.0**
KMI	**Kunming**	**24.06**	**101**	P	**P**	**18 07 14.0**	**+0.3**
KMI				AP		18 07 22.5	
KMI				XP		18 07 26.5	
KMI				S	**S**	**18 11 27.0**	**-1.4**
KMI				XS		18 11 41.3	
KMI				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.4						
KMI				AMB	AMB		
	comp=Z,61nm,4.9s						
KMI				LR	LR		
	comp=N,137nm,19.2s,MS3.7						
KMI				LR	LR		
	comp=E,171nm,18.4s,MS3.7						
KMI				LR	LR		
	comp=Z,89nm,13.4s						
KMI	**Kunming**	**24.06**	**101**	P	**P**	**18 07 14.1**	**+0.4**
KMI				*PP		18 07 22.4	
KMI				*SP		18 07 26.4	
KMI				S	**S**	**18 11 27.1**	**-1.3**
KMI				*SS		18 11 41.3	
KMI				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
KMI				MLR	MLR		
	comp=Z,90nm,13.4s,MS3.4						
KMI	**Kunming**	**24.06**	**101**	P	**P**	**18 07 14.1**	**+0.4**
	comp=Z,12nm,0.7s,mb4.4						
KMI				pP		18 07 22.4	
KMI				sP		18 07 26.4	
KMI				S	**S**	**18 11 27.1**	**-1.3**
KMI				sS		18 11 41.3	
KMI				LR	LR		
	comp=Z,90nm,13.4s,MS3.4						
CHRT	**Chiangrai**	**24.28**	**115**	P	**P**	**18 07 16.5**	**+0.7**
CHG	**Chiang Mai**	**24.28**	**119**	P	**P**	**18 07 15.9**	**0.0**
CM31	**Chiang Mai Arr**	**24.50**	**119**	*e*P	**P**	**18 07 18.1**	**+0.1**
	comp=Z,18nm,0.6s,mb4.7						
CMAR	**Chiang Mai Arr**	**24.50**	**119**	P	**P**	**18 07 18.1**	**+0.1**
	comp=Z,12nm,0.7s,mb4.4,baz=310,slow=9.4,SNR=47						
CMAR				PcP	PcP	18 10 58.8	+0.8
	comp=Z,0.6nm,0.6s,baz=274,slow=3.9,SNR=4.2						
CMAR				ScP		18 14 33.8	
	comp=Z,1.3nm,0.8s,baz=303,slow=4.8,SNR=7.9						
BDT	**Bhumibol Dam**	**25.32**	**121**	P	**P**	**18 07 27.0**	**+1.2**
NANT	**Nan**	**25.61**	**116**	P	**P**	**18 07 28.5**	**0.0**
MOY	**Mondy**	**26.22**	**36**	*e*P	**P**	**18 07 35.4**	**+1.5**
GNI	**Garni**	**26.64**	**296**	P	**P**	**18 07 41.1**	**+3.1**
GNI				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GNI	**Garni**	**26.64**	**296**	P	**P**	**18 07 41.1**	**+3.1**
	comp=Z,2.2nm,0.3s,mb4.1,baz=178,slow=19,SNR=3.0						
GNI	**Garni**	**26.64**	**296**	*e*P	**P**	**18 07 42.8**	**+4.8**
	comp=Z,11nm,0.8s,mb4.5						
ZAK	**Zakamensk**	**26.67**	**40**	⇑*i*P	**P**	**18 07 38.8**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
GYA	**Guiyang**	**26.85**	**95**	P	**P**	**18 07 39.3**	**-0.7**

GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
SONM	Songino Array	27.30	47	P	P	18 07 45.1	+1.3
	comp=Z,3.7nm,0.6s,mb4.1,baz=247,slow=9.2,SNR=45						
ULN	Ulaanbaatar	27.72	47	eP	P	18 07 48.4	+0.7
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
ULN	Ulaanbaatar	27.72	47	eP	P	18 07 48.4	+0.7
	comp=Z,6.4nm,1.0s,mb4.2						
SOC	Sochi	30.83	302	eP	P	18 08 20.2	+4.6
SOC				e		18 09 18.0	
SOC				eS	S	18 13 18.7	+0.2
SOC				eSS	SS	18 15 00.8	+0.1
SOC				pmax	pmax		
	comp=Z,200nm,1.5s						
SOC				pmax	pmax		
	comp=N,207nm,1.3s						
SOC				pmax	pmax		
	comp=E,223nm,2.1s						
MALT	Malatya	31.46	292	eP	P	18 08 24.1	+2.9
MALT				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
MALT	Malatya	31.46	292	eP	P	18 08 24.1	+2.9
	comp=Z,7.8nm,0.8s,mb4.6						
GZT	Gaziantep	32.17	290	iP	P	18 08 28.0	+0.6
BJT	Baijiatuau	32.64	65	eP	P	18 08 31.9	+0.4
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJT	Baijiatuau	32.64	65	eP	P	18 08 31.9	+0.4
	comp=Z,15nm,1.0s,mb4.9						
BJI	Beijing	32.65	65	P	P	18 08 32.3	+0.8
BJI				AMB	AMB		
	comp=Z,13nm,0.6s,mb5.0						
BJI	Beijing	32.65	65	P	P	18 08 32.3	+0.8
	comp=Z,13nm,0.6s,mb5.0						
BOYT	Boyabat	34.19	297	iP	P	18 08 44.8	-0.1
BRTR	Keskin Array B	35.15	294	P	P	18 08 52.7	-0.5
	comp=Z,4.7nm,0.6s,mb4.6,baz=115,slow=9.4,SNR=18						
ELDT	Eldivan	35.30	296	iP	P	18 08 54.3	-0.1
NJ2	Nanjing	35.62	79	eP	P	18 09 01.0	+3.7
NJ2				S	S	18 14 28.0	-5.2
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,340nm,5.0s						
NJ2				LR	LR		
	comp=N,390nm,16.2s,MS4.3						
NJ2				LR	LR		
	comp=E,290nm,16.5s,MS4.3						
NJ2				LR	LR		
	comp=Z,860nm,14.6s,MS4.7						
BOD	Bodaibo	35.88	34	eP	P	18 08 56.4	-2.8
OBN	Obninsk	35.96	321	eP	P	18 09 02.8	+2.9
OBN				i		18 09 12.6	
OBN				e		18 11 33.3	
OBN				eS	S	18 14 33.3	-4.9
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
SSE	Sheshan	37.78	80	P	P	18 09 15.5	+0.1
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,74nm,4.7s						
SSE				LR	LR		
	comp=N,26nm,20.1s,MS3.3						
SSE				LR	LR		
	comp=E,42nm,20.1s,MS3.3						
SSE				LR	LR		
	comp=Z,52nm,21.5s,MS3.3						
SSE	Sheshan	37.78	80	P	P	18 09 15.6	+0.2
	comp=Z,30nm,0.7s,mb5.1						
SSE				LR	LR		
	comp=Z,50nm,21.5s,MS3.3						
ULDT	Uludag	38.59	295	iP	P	18 09 23.9	+1.8
AKASG	Malin Array Be	39.04	312	P	P	18 09 23.9	-1.9
	comp=Z,2.4nm,0.5s,mb4.2,baz=78,slow=6.5,SNR=10						
CN2	Changchun	39.59	59	eP	P	18 09 30.8	+0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
MLR	Muntele Rosu	40.79	304	P	P	18 09 40.5	+0.2
MLR	Muntele Rosu	40.79	304	P	P	18 09 40.4	+0.2
	comp=Z,9.5nm,0.9s,mb4.4,baz=61,slow=1.0,SNR=13						
JOF	Joensuu	41.64	331	ep	P	18 09 46.3	-0.7
	comp=Z,8.6nm,0.6s,mb4.6						
MDJ	Mudanjiang	42.55	58	P	P	18 09 55.0	+0.3
MDJ				AMB	AMB		
	comp=Z,12nm,0.8s,mb4.7						
MDJ				LR	LR		
	comp=N,19nm,17.5s,MS3.4						
MDJ				LR	LR		
	comp=E,39nm,15.1s,MS3.4						
MDJ				LR	LR		
	comp=Z,42nm,16.0s,MS3.4						
MDJ	Mudanjiang	42.55	58	eP	P	18 09 54.9	+0.2
	comp=Z,22nm,1.2s,mb4.8						
IDI	Anoyia	42.58	289	P	P	18 09 56.3	+1.2
	comp=Z,4.7nm,0.7s,mb4.3,baz=49,slow=11,SNR=6.0						
FINES	FINESS Array B	43.37	327	eP	P	18 10 00.5	-0.6
FINES	FINESS Array B	43.37	327	P	P	18 10 00.7	-0.5
	comp=Z,3.9nm,0.6s,mb4.3,baz=112,slow=10,SNR=17						
FINES				LR	LR	18 29 15.5	
	comp=Z,63nm,19.7s,MS3.5,baz=306,slow=38						
KAF	Kangasniemi	43.48	328	ep	P	18 10 01.8	-0.2
	comp=Z,3.6nm,0.5s,mb4.4						
KAF	Kangasniemi	43.48	328	eP	P	18 10 01.8	-0.2
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
YAK	Yakutsk	44.76	32⇓	eP	P	18 10 12.7	+0.2
YAK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.7						
YAK				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.2						
YAK	Yakutsk	44.76	32	eP	P	18 10 12.3	-0.2
	comp=Z,17nm,1.0s,mb4.8						
OJC	Ojcow	44.99	311	eP	P	18 10 14.6	+0.1
MORC	Moravsky Berou	46.45	310	eP	P	18 10 27.2	+1.2
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
MORC	Moravsky Berou	46.45	310	eP	P	18 10 27.2	+1.2
	comp=Z,4.5nm,0.9s,mb4.4						
ARCES	ARCESS Array B	46.61	338	P	P	18 10 27.2	+0.2
	comp=Z,7.2nm,0.8s,mb4.7,baz=110,slow=8.1,SNR=19						
ARCES				LR	LR	18 31 37.8	
	comp=Z,124nm,18.4s,MS3.9,baz=21,slow=38						
TIXI	Tiksi	47.92	20⇑	eP	P	18 10 36.7	-0.6
TIXI				MLR	MLR		
	comp=Z,100nm,7.0s						
GERES	GERESS Array B	49.01	309	P	P	18 10 46.6	+0.5
	comp=Z,0.9nm,0.8s,mb3.9,baz=79,slow=6.8,SNR=5.5						
KMBO	Kilima Mbogo	49.92	236	eP	P	18 10 52.8	-0.7
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMBO	Kilima Mbogo	49.92	236	P	P	18 10 52.0	-1.6
	comp=Z,1.2nm,0.7s,mb4.0,baz=44,slow=13,SNR=4.5						
KMBO				LR	LR	18 31 32.7	
	comp=Z,62nm,18.2s,MS3.6,baz=95,slow=36						
KMBO	Kilima Mbogo	49.92	236	eP	P	18 10 52.8	-0.7
	comp=Z,4.0nm,0.9s,mb4.5						
MAJO	Matsushiro	50.23	67	eP	P	18 10 54.0	-1.6
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
MAJO	Matsushiro	50.23	67	eP	P	18 10 54.0	-1.7
	comp=Z,11nm,0.8s,mb5.0						
MAT	Matsushiro	50.23	67	eP	P	18 10 54.0	-1.6
MAT				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
MAT	Matsushiro	50.23	67	eP	P	18 10 54.0	-1.6
	comp=Z,13nm,0.8s,mb5.0						
MAT	Matsushiro	50.23	67	P	P	18 10 54.3	-1.3
NB2	NORSAR Subarra	50.33	325	P	P	18 10 54.2	-1.8
	comp=Z,3.2nm,0.8s,mb4.4,baz=94,slow=7.9						
NB2	NORSAR Subarra	50.33	325	P	P	18 10 54.2	-1.8
NB2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
NOA	NORSAR Array B	50.33	325	P	P	18 10 53.9	-2.2
	comp=Z,4.6nm,1.0s,mb4.5,baz=95,slow=7.4,SNR=9.0						
NOA				LR	LR	18 34 11.4	
	comp=Z,32nm,18.6s,MS3.4,baz=155,slow=38						
YSS	Yuzh-Sakhalins	51.49	53	eP	P	18 11 04.0	-1.0
YSS	Yuzh-Sakhalins	51.49	53	eP	P	18 11 04.3	-0.7
	comp=Z,23nm,1.1s,mb5.0						
PGF	Pioggiola	53.23	302	eP	P	18 11 19.1	+0.9
CDF	Champ du Feu	53.29	309	eP	P	18 11 19.7	+1.2
HINF	Hinteralfeld	53.67	308	eP	P	18 11 22.5	+1.2
HAU	Haudompre	53.97	309	eP	P	18 11 25.2	+1.7
LPG	La Plagne	54.19	306	eP	P	18 11 26.3	+1.2
	comp=Z,29nm,1.0s,mb4.8						
LPG	La Plagne	54.19	306	eP	P	18 11 26.3	+1.2
LPG				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
LPL	La Plagne	54.20	306	eP	P	18 11 26.3	+1.2
	comp=Z,11nm,0.7s,mb4.6						
LPL	La Plagne	54.20	306	eP	P	18 11 26.3	+1.2
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
MBDF	Montbardon	54.34	305	eP	P	18 11 27.3	+1.1
	comp=Z,24nm,1.1s,mb4.7						
MBDF	Montbardon	54.34	305	eP	P	18 11 27.3	+1.1
MBDF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
CABF	La Chapelle	54.41	307	eP	P	18 11 27.7	+1.0
	comp=Z,149nm,1.8s,mb5.3						
CABF	La Chapelle	54.41	307	eP	P	18 11 27.7	+1.0
CABF				pmax	pmax		
	comp=Z,75nm,1.8s,mb5.3						
ORIF	Oris-en-Rattie	54.91	305	eP	P	18 11 31.4	+0.9
SSF	Saint Saulge	56.05	308	eP	P	18 11 39.5	+0.9
	comp=Z,11nm,1.0s,mb4.5						
SSF	Saint Saulge	56.05	308	eP	P	18 11 39.5	+0.9
SSF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
TCF	Toulx Ste Croi	57.10	307	eP	P	18 11 46.3	+0.1
CAF	Calviac	57.54	306	eP	P	18 11 50.5	+1.2
FLN	La Foliniere	58.26	311	eP	P	18 11 55.3	+1.1
EKA	Eskdalemuir Ar	58.35	319	P	P	18 11 53.6	-1.2
	comp=Z,1.0nm,0.6s,mb4.0,baz=90,slow=7.5,SNR=3.4						
SGMF	Saint Gilles	59.72	311	eP	P	18 12 04.7	+0.3
	comp=Z,25nm,1.0s,mb4.9						
SGMF	Saint Gilles	59.72	311	eP	P	18 12 04.7	+0.3
SGMF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
ETSF	Etsaut	59.94	304	eP	P	18 12 07.0	+1.0
BILL	Bilibino	60.25	26	eP	P	18 12 07.8	0.0
BILL				e		18 14 18.0	
BILL				eS	S	18 20 08.7	-12
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
BILL				MLR	MLR		
	comp=Z,6µm,21.0s						
ESDC	Sonseca Array	63.43	302	P	P	18 12 28.8	-0.7
	comp=Z,1.8nm,0.7s,mb4.3,baz=70,slow=9.0,SNR=5.6						
RES	Resolute Bay	72.98	358	eP	P	18 13 28.3	-0.1
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
RES	Resolute Bay	72.98	358	eP	P	18 13 28.3	-0.1
	comp=Z,2.3nm,0.8s,mb4.2						
IMA	Indian Mountai	74.52	19	eP	P	18 13 37.9	+0.5
IMA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
IMA	Indian Mountai	74.52	19	eP	P	18 13 37.9	+0.5
	comp=Z,18nm,0.9s,mb5.0						
WRA	Warramunga Arr	75.95	125	P	P	18 13 45.5	-1.0
	comp=Z,2.1nm,0.5s,mb4.3,baz=322,slow=6.1,SNR=32						
WRAB	Tennant Creek	75.95	125	eP	P	18 13 45.4	-1.2
WRAB				pmax	pmax		
	comp=Z,53nm,1.7s,mb5.2						
WRAB	Tennant Creek	75.95	125	eP	P	18 13 45.4	-1.2
	comp=Z,53nm,1.7s,mb5.2						
WB2	Warramunga Arr	75.96	125	eP	P	18 13 45.3	-1.3
COLA	College	77.00	18	eP	P	18 13 51.7	+0.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
COLA	College	77.00	18	eP	P	18 13 51.7	+0.2
	comp=Z,4.6nm,0.7s,mb4.5						
INK	Inuvik	77.08	11	eP	P	18 13 51.7	-0.2
INK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
INK	Inuvik	77.08	11	eP	P	18 13 51.7	-0.2
	comp=Z,9.7nm,1.2s,mb4.6						
ILAR	Eielson Array	77.33	18	P	P	18 13 52.5	-0.9
	comp=Z,1.5nm,0.7s,mb4.0,baz=323,slow=7.1,SNR=13						
BOSA	Boshof	77.84	225	eP	P	18 13 54.5	-2.4
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
BOSA	Boshof	77.84	225	eP	P	18 13 54.5	-2.4
	comp=Z,2.2nm,0.6s,mb4.3						
ASPA	Alice Springs	78.18	128	eP	P	18 14 00.6	+1.8
ASAR	Alice Springs	78.18	128	P	P	18 14 00.5	+1.6
	comp=Z,3.4nm,0.7s,mb4.4,baz=316,slow=5.4,SNR=35						
THY	Trims Highway	78.72	18	eP	P	18 14 01.2	+0.2
PMG	Port Moresby	79.04	109	eP	P	18 14 03.5	-0.3
PMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PMG	Port Moresby	79.04	109	eP	P	18 14 03.5	-0.3
	comp=Z,4.7nm,0.7s,mb4.5						
DAWY	Dawson	79.71	15	eP	P	18 14 05.9	-0.4
CTA	Charters Tower	84.66	118	eP	P	18 14 35.3	+2.3
	comp=Z,4.6nm,0.6s,mb4.8						
CTA	Charters Tower	84.66	118	eP	P	18 14 35.3	+2.3
CTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CTAO	Charters Tower	84.66	118	eP	P	18 14 33.5	+0.5
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
CTAO	Charters Tower	84.66	118	eP	P	18 14 33.5	+0.6
	comp=Z,6.8nm,0.6s,mb5.0						
YKW3	Yellowknife Ar	84.89	5	eP	P	18 14 32.8	-0.3
YKA	Yellowknife Ar	84.96	5	P	P	18 14 33.2	-0.3
YKA	Yellowknife Ar	84.96	5	P	P	18 14 33.1	-0.3
	comp=Z,5.1nm,0.7s,mb4.7,baz=344,slow=5.1,SNR=92						
STKA	Stephens Creek	88.70	129	P	P	18 14 51.5	-1.0
	comp=Z,1.8nm,0.6s,mb4.6,baz=322,slow=8.1,SNR=5.9						
TRQA	Tornquist	145.87	249	ePKPdf	PKPdf	18 21 38.8	0.0
LVC	Limon Verde	147.95	279	ePKPbc	PKPdf	18 21 45.1	+2.4
PLCA	Paso Flores	152.44	243	PKPbc	PKPdf	18 21 55.9	+6.8
	comp=Z,0.7nm,0.6s,baz=117,slow=2.3,SNR=3.3						

IDC 28 18:03:55.1±0.8**, 6.77N×72.92W, h167**^{km}±14^{km}**, mb2.9**/1**, mb1 3.3**/3**, mb1mx2.9**/21**, mbtmp3.6**/3**, Error ellipse: s-maj=66.1km s-min=7.8km az=132.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.36	217	P	P	18 04 35.5	-0.5
	15nm,0.3s,baz=91,slow=9.5,SNR=44						
ROSC				S	S	18 05 08.1	+0.7
	16nm,0.3s,baz=87,slow=22,SNR=9.7						
SDV	Santo Domingo	3.09	47	P	P	18 04 44.9	-0.1
	9.2nm,0.3s,baz=255,slow=11,SNR=25						
SDV				S	S	18 05 23.2	-0.1
	6.3nm,0.3s,baz=83,slow=19,SNR=21						
YKA	Yellowknife Ar	63.38	340	P	P	18 14 06.4	-2.2
	0.3nm,0.7s,baz=130,slow=6.8,SNR=6.8						
WRA	Warramunga Arr	150.49	241	PKPbc	PKPdf	18 23 27.5	+5.5
	0.1nm,0.4s,baz=109,slow=2.5,SNR=4.5						

MAN 28 18:12:00.6, 12.74N×123.22E, h10^{km}**, mb3.9, ML2.7, MS2.3, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	0.79	318	eP	Pb	18 12 15.8	-0.1
PVCP	Virac	1.25	47	eP	Pb	18 12 23.6	-0.2
PVCP				eS	Sb	18 12 41.3	+1.5
GQP	Guinayangan	1.38	327⇑	iP	Pn	18 12 25.9	-0.2
GQP				i S	Sb	18 12 44.8	+1.2
BOAC	Boac	1.52	298	eP	Pn	18 12 26.8	-1.2

JMA ***28*** *18:23:12.2±0.2, 24.93N×122.07E, h41*^{km}*, M2.7*

TAP 28 18:23:11.3, 24.77N×122.02E, h8^{km}**, ML3.2, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.95	109	P	Pb	18 23 29.7	0.0
YOJ				S	Sb	18 23 42.2	-0.1
IRIF	Iriomote-Funau	1.62	105	P	Pn	18 23 38.9	-1.5
IRIF				S	Sb	18 23 59.4	-2.1
HATJ	Hateruma jima	1.77	113	P	Pn	18 23 41.6	-1.1
HATJ				eS	Sn	18 24 03.7	-1.9
JKRS	Kuro-shima	1.89	106	P	Pn	18 23 43.2	-1.1
JKRS				eS	Sn	18 24 06.1	-2.4
JIJ	Ishigaki jima	1.98	101	P	Pn	18 23 44.1	-1.4
JIJ				S	Sn	18 24 07.7	-3.0

IDC ***28*** *18:33:35.6±3.4, 48.56N×128.78W, mb1 3.8/5, mb1mx3.6/20, mbtmp3.5/5, ML3.4/5, Error ellipse: s-maj=51.6km s-min=20.8km az=59.0*

NEIC ***28*** *18:33:40.9±1.8, 48.96N×128.25W, h10*^{km}*, mb3.8/1, Error ellipse: s-maj=29.5km s-min=10.0km az=224.0*

ISC 28 18:33:39.4±2.2**, 49.0N**±0.2×**128.3W**±0.3**, h10**^{km}**, n9, σ0**^{s}**57**/10**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCWA	Octopus Mounta	3.03	113	P	Pn	18 34 28.5	+0.1
BBB	Bella Bella	3.19	2	Pn	Pn	18 34 31.4	+0.8
	10nm,0.3s,baz=195,slow=11,SNR=91						
BBB				Sn	Sn	18 35 16.2	+7.1
	baz=234,slow=20,SNR=2.0						
PGC	Sidney	3.23	94	P	Pn	18 34 30.6	-0.6
PDAR	Pinedale Array	14.46	108	Pn	P	18 37 06.7	+0.8
	0.0nm,0.3s,baz=293,slow=11,SNR=5.3						
YKA	Yellowknife Ar	15.52	24	Pn	P	18 37 19.9	+0.3
	0.0nm,0.3s,baz=214,slow=11,SNR=25						
FFC	Flin Flon	17.19	61	eP	P	18 37 40.2	-0.7
	8.6nm,1.1s						
ILAR	Eielson Array	18.66	335	P	P	18 37 58.5	-0.6
	0.0nm,0.3s,baz=148,slow=12,SNR=4.3						
INK	Inuvik	19.54	354	P	P	18 38 09.5	0.0
	0.2nm,0.3s,baz=181,slow=11,SNR=4.8						
INK	Inuvik	19.54	354	P	P	18 38 09.5	0.0

IGQ 28 18:59:37.9, 3.60S×81.28W, h12^{km}±11^{km}**, mb4.3, 1D, Error ellipse: s-maj=15.2km s-min=10.8km az=41.3, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	Igualata	3.37	52	P	Pn	19 00 32.1	+0.7
ARRY	Arrayan	3.51	54	P	Pn	19 00 33.8	+0.4
ARRY				S	Sn	19 01 12.0	-3.3
RUN2	Runtun	3.59	53	P	Pn	19 00 36.2	+1.6
PISA	Pisayambo	3.84	49	⇓P	Pn	19 00 40.2	+2.1
PISA				S	Sn	19 01 23.4	-0.4
NAS1	Nasa	4.07	44	P	Pn	19 00 43.3	+2.0
NAS1				S	Sn	19 01 29.3	-0.2
VC1	Cotopaxi 1	4.12	44	P	Pn	19 00 44.1	+2.0
JUA2	San Juan 2	4.30	39	P	Pn	19 00 44.4	-0.3
JUA2				S	Sn	19 01 30.3	-5.0
TERV	Terraza Guagua	4.33	38	P	Pn	19 00 46.0	+0.9
TERV				S	Sn	19 01 29.1	-7.0
PINO	Pino	4.34	38	P	Pn	19 00 46.7	+1.4
YANA	Yana	4.40	38	P	Pn	19 00 47.5	+1.4
ANTI	Antisana	4.42	45	P	Pn	19 00 47.8	+1.4
CAYR	Refugio Cayamb	4.86	42	P	Pn	19 00 54.6	+2.0
COTA	Cotacachi	4.89	37	P	Pn	19 00 54.8	+1.7
ECEN	Cerro Negro	5.50	37	P	Pn	19 01 04.9	+3.3
ECEN				S	Sn	19 02 02.1	-3.5

NIED ***28*** *19:09:00, 29.20N×139.60E, h520*^{km}*, Mw4.3 Best double couple:* M_0*2.89×*10^{15} *NP1:*ϕ_s*183°, δ82°, λ115°. NP2:* ϕ_s*290°, δ26°, λ19°.*

MOS ***28*** *19:09:56.7±0.8, 29.23N×139.28E, h434*^{km}*, mb4.5/20, Error ellipse: s-maj=14.6km s-min=7.3km az=114.9*

BJI ***28*** *19:09:57.1, 29.09N×139.07E, h430*^{km}*, mB4.6, mb4.7*

IDC ***28*** *19:09:57.8±0.6, 29.19N×139.23E, h426*^{km}*±6*^{km}*, mb3.7/18, mb1 3.8/22, mb1mx3.8/25, mbtmp4.5/22, Error ellipse: s-maj=12.3km s-min=7.6km az=81.0*

JMA ***28*** *19:09:57.5±0.2, 29.23N×139.62E, h449*^{km}*, M4.6*

NEIC ***28*** *19:09:58.3±0.6, 29.22N×139.23E, h433*^{km}*±6*^{km}*, mb4.4/22, Error ellipse: s-maj=6.2km s-min=5.1km az=109.0*

ISC 28 19:09:57.1±0.3**, 29.20N**±0.03×**139.32E**±0.06**, h438**^{km}±3^{km}**, h424**^{km}±7.4^{km}**:pP-P, n134, σ0**^{s}**93**/147**, mb4.3**/54**, 4C-10D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.29	129	P	P	19 11 05.5	-0.5
	267nm,0.3s,baz=45,slow=1.7,SNR=72						
CBIJ				S	S	19 11 59.4	-1.0
	112nm,0.3s,baz=333,slow=23,SNR=6.6						
CBIJ	Chichi jima	3.29	129	P	P	19 11 05.5	-0.5
CBIJ				S	S	19 12 00.0	-0.4
JHHJ	Haha-jima-NKT	3.60	135	P	P	19 11 08.1	-0.5
JHHJ				S	S	19 12 04.7	-0.3
JHJ2	Mitsune	3.93	6	P	P	19 11 12.3	+0.8
JHJ2				S	S	19 12 09.9	-0.2
JHJ	Hachijo jima 2	3.93	6	P	P	19 11 12.1	+0.6
	45nm,0.3s,baz=250,slow=19,SNR=29						
JHJ				S	S	19 12 11.6	+1.4
	88nm,0.3s,baz=68,slow=23,SNR=13						
TK01	Tokai 1	4.79	342	P	P	19 11 21.9	+2.3
JWZ	Kozaga	5.31	325	P	P	19 11 26.3	+1.6
JIM2	Oshima 3	5.50	1	P	P	19 11 27.3	+0.5
JIM2				S	S	19 12 36.8	-0.5
BSO1	Boso 1	5.62	14	P	P	19 11 28.0	+0.1
BSO1				S	S	19 12 38.4	-1.0
JIE	Ise	5.63	337	P	P	19 11 30.8	+2.7
JIE				S	S	19 12 43.6	+3.9
JOD2	Odawara 2	6.05	358	P	P	19 11 32.1	-0.3
JOD2				S	S	19 12 45.8	-1.7
JTO	Tosashimizu	6.68	305	P	P	19 11 41.0	+1.9
JRY	Ryogami san	6.81	357	P	P	19 11 40.5	0.0
JRY				S	S	19 13 00.4	-1.8
MAJO	Matsushiro	7.38	353	eP	P	19 11 45.9	-0.9
MAJO				pmax	pmax		
	comp=Z,51nm,0.4s						
MAJO	Matsushiro	7.38	353	ePn	P	19 11 45.9	-0.9
	comp=Z,51nm,0.4s						
MAT	Matsushiro	7.38	353	eP	P	19 11 46.0	-0.8
MAT				eS	S	19 13 12.0	-1.5
MAT				pmax	pmax		
	comp=Z,34nm,0.5s						
MAT	Matsushiro	7.38	353	eP	P	19 11 46.0	-0.8
	comp=Z,34nm,0.5s						
MAT				eS	S	19 13 12.0	-1.5
MAT	Matsushiro	7.38	353	P	P	19 11 46.3	-0.5
MAT				S	S	19 13 12.0	-1.5
JHS	Saijyo	7.82	319	P	P	19 11 53.3	+1.7
JMK	Ichinoseki	9.86	9	P	P	19 12 14.8	+0.4
JMK				S	S	19 14 03.3	+0.1
JOW	Kunigami	10.04	259	P	P	19 12 15.1	-1.3
	comp=Z,8.4nm,0.3s,baz=135,slow=9.5,SNR=12						
ASAJ	Asahikawa	15.12	9	P	P	19 13 13.7	+2.6
	comp=Z,0.6nm,0.3s,baz=220,slow=7.9,SNR=4.6						
SSE	Sheshan	15.80	281	P	P	19 13 12.3	-5.8
SSE				AMB	AMB		
	comp=Z,32nm,0.7s						
SSE				AMB	AMB		
	comp=Z,71nm,4.6s						
SSE	Sheshan	15.80	281	P	P	19 13 12.2	-5.9
	comp=Z,32nm,0.7s						
MDJ	Mudanjiang	17.22	336	P	P	19 13 35.0	+2.7
MDJ				AMB	AMB		
	comp=Z,17nm,0.8s						
MDJ	Mudanjiang	17.22	336	eP	P	19 13 33.3	+1.0
	comp=Z,6.8nm,0.4s						
NJ2	Nanjing	17.84	284	eP	P	19 13 34.0	-4.6
NJ2				S	S	19 16 32.0	-5.7
NJ2				PCP	PcP	19 17 52.0	-1.1
NJ2				SCP		19 20 49.0	
NJ2				AMB	AMB		
	comp=Z,40nm,1.3s						
NJ2				AMB	AMB		
	comp=Z,360nm,4.8s						
CN2	Changchun	18.31	326	eP	P	19 13 45.0	+1.8
CN2				AMB	AMB		
	comp=Z,20nm,0.6s						
WHN	Wuhan	21.68	280	P	P	19 14 16.3	+0.7
BJT	Baijiatuau	21.84	306	eP	P	19 14 16.5	-0.4
BJT				pmax	pmax		
	comp=Z,13nm,0.8s						
BJT	Baijiatuau	21.84	306	eP	P	19 14 16.5	-0.4
	comp=Z,13nm,0.8s,mb4.4						
HIA	Hailar	25.00	329	eP	P	19 14 45.4	-0.1
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HIA	Hailar	25.00	329	eP	P	19 14 45.4	-0.1
	comp=Z,6.8nm,0.6s,mb4.2						
ENH	Enshi	25.89	280	eP	P	19 14 52.7	-1.0
	comp=Z,51nm,0.8s,mb5.0						
XAN	Xi’an	26.28	288	P	P	19 14 56.5	-0.6
XAN				AMB	AMB		
	comp=Z,56nm,0.5s,mb5.2						
LZH	Lanzhou	30.53	292	eP	P	19 15 34.0	-0.3

LZH				AMB	AMB		
	comp=Z,31nm,1.1s,mb4.5						
LZH				AMB	AMB		
	comp=Z,100nm,6.4s						
CD2	**Chengdu**	**30.75**	**282**	⇓*i*P	**P**	**19 15 36.0**	**-0.2**
CD2				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**31.06**	**316**	*e*P	**P**	**19 15 38.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**31.06**	**316**	*e*P	**P**	**19 15 38.4**	**-0.3**
	comp=Z,18nm,1.1s,mb4.3						
SONM	**Songino Array**	**31.45**	**315**	P	**P**	**19 15 42.2**	**+0.2**
	comp=Z,3.5nm,0.6s,mb3.9,baz=124,slow=7.8,SNR=40						
SONM				pP	pP	19 17 01.4	-0.2
	comp=Z,0.6nm,0.6s,baz=113,slow=7.1,SNR=2.0						
SONM				PcP	PcP	19 18 23.0	-0.2
	comp=Z,0.7nm,0.4s,baz=130,slow=2.8,SNR=8.5						
SONM				ScP		19 21 24.4	
	comp=Z,0.4nm,0.6s,baz=137,slow=2.6,SNR=4.1						
KMI	**Kunming**	**32.71**	**272**	P	**P**	**19 15 53.8**	**+0.8**
KMI				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.2						
KMI				MLR	MLR		
	comp=Z,30nm,25.8s						
KMI	**Kunming**	**32.71**	**272**	P	**P**	**19 15 53.8**	**+0.8**
	comp=Z,15nm,1.2s,mb4.2						
KMI				LR	LR		
	comp=Z,30nm,25.8s						
YAK	**Yakutsk**	**33.45**	**352**	*e*P	**P**	**19 15 58.5**	**-0.3**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.3						
YAK	**Yakutsk**	**33.45**	**352**	*e*P	**P**	**19 15 58.5**	**-0.3**
	comp=Z,6.8nm,0.4s,mb4.3						
BOD	**Bodaibo**	**33.60**	**336**	*e*P	**P**	**19 15 58.5**	**-1.6**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
GTA	**Gaotai**	**33.95**	**298**	⇓*i*P	**P**	**19 16 03.3**	**0.0**
GTA				AMB	AMB		
	comp=Z,23nm,0.9s,mb4.5						
ZAK	**Zakamensk**	**34.37**	**318**	⇓*i*P	**P**	**19 16 06.9**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb3.8						
TLY	**Talaya**	**34.72**	**320**	P	**P**	**19 16 10.6**	**+1.0**
	comp=Z,75nm,0.5s,mb5.3,SNR=12						
NANT	**Nan**	**36.62**	**262**	P	**P**	**19 16 25.5**	**-0.3**
CHG	**Chiang Mai**	**38.14**	**263**	⇓P	**P**	**19 16 38.3**	**0.0**
	comp=Z,12nm,0.8s,mb4.3						
CMAR	**Chiang Mai Arr**	**38.28**	**263**	P	**P**	**19 16 39.9**	**+0.3**
	comp=Z,2.7nm,0.8s,mb3.6,baz=46,slow=9.7,SNR=20						
CMAR				PcP	PcP	19 18 44.2	+0.6
	comp=Z,1.5nm,0.9s,baz=32,slow=3.0,SNR=6.4						
CMAR				ScP		19 21 49.9	
	comp=Z,1.6nm,1.1s,baz=75,slow=2.2,SNR=7.0						
PMG	**Port Moresby**	**39.12**	**168**	*e*P	**P**	**19 16 47.0**	**+0.6**
PMG				pmax	pmax		
	comp=Z,10.0nm,0.4s						
PMG	**Port Moresby**	**39.12**	**168**	P	**P**	**19 16 47.5**	**+1.1**
	comp=Z,8.9nm,0.3s,mb4.5,baz=341,slow=9.5,SNR=15						
PMG	**Port Moresby**	**39.12**	**168**	*e*P	**P**	**19 16 47.0**	**+0.6**
	comp=Z,10nm,0.4s,mb4.5						
LSA	**Lhasa**	**41.70**	**283**	P	**P**	**19 17 08.5**	**+1.3**
LSA	**Lhasa**	**41.70**	**283**	*e*P	**P**	**19 17 08.2**	**+1.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
LSA	**Lhasa**	**41.70**	**283**	*e*P	**P**	**19 17 08.2**	**+1.0**
	comp=Z,6.8nm,0.6s,mb4.2						
BILL	**Bilibino**	**42.03**	**15**	*e*P	**P**	**19 17 07.9**	**-1.4**
BILL				*e**PP	pP	19 18 30.8	-2.4
BILL				*e*		19 18 57.1	
BILL				*e*S	**S**	**19 22 54.7**	**-1.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
TIXI	**Tiksi**	**42.89**	**355**	*e*P	**P**	**19 17 16.1**	**0.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
WMQ	**Urumqi**	**43.30**	**304**	*e*P	**P**	**19 17 20.3**	**+0.5**
ZAL	**Zalesovo**	**46.26**	**318**	P	**P**	**19 17 41.9**	**-0.8**
	comp=Z,2.3nm,0.5s,mb3.8,baz=24,slow=7.3,SNR=13						
ZAL				PcP	PcP	19 19 09.2	-0.9
	comp=Z,1.6nm,0.8s,baz=15,slow=4.0,SNR=6.3						
JIRN	**Jiri**	**46.41**	**282**	*e*P	**P**	**19 17 44.9**	**+0.6**
	comp=Z,90nm,0.6s,mb5.3						
PKI	**Pulchoki**	**47.10**	**282**	*e*P	**P**	**19 17 49.5**	**-0.1**
	comp=Z,34nm,0.8s,mb4.7						
KKN	**Kakani**	**47.16**	**282**	*e*P	**P**	**19 17 49.8**	**-0.2**
	comp=Z,70nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	**47.19**	**308**	*i* P	**P**	**19 17 49.3**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NVS	**Novosibirsk**	**47.30**	**319**	*e*P	**P**	**19 17 49.0**	**-1.8**
DMN	**Daman**	**47.35**	**282**	*e*P	**P**	**19 17 51.6**	**+0.1**
	comp=Z,27nm,0.4s,mb4.9						
GKN	**Gorkha**	**47.65**	**283**	*e*P	**P**	**19 17 53.6**	**-0.2**
	comp=Z,88nm,1.0s,mb5.0						
KOLN	**Koldanda**	**48.60**	**283**	*e*P	**P**	**19 18 01.0**	**+0.1**
	comp=Z,71nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**49.08**	**186**	*e*P	**P**	**19 18 03.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.2						
WRAB	**Tennant Creek**	**49.08**	**186**	*e*P	**P**	**19 18 03.9**	**-0.7**
	comp=Z,3.8nm,0.3s,mb4.2						
WRA	**Warramunga Arr**	**49.09**	**186**	P	**P**	**19 18 04.4**	**-0.4**
	comp=Z,2.1nm,0.3s,mb3.9,baz=1.2,slow=7.7,SNR=115						
WRA				ScP		19 22 32.3	
	comp=Z,1.8nm,0.7s,baz=4.2,slow=4.7,SNR=8.9						
KURK	**Kurchatov**	**49.71**	**313**	P	**P**	**19 18 08.0**	**-1.0**
	comp=Z,102nm,1.0s,mb5.1,SNR=15						
KURK	**Kurchatov**	**49.71**	**313**	*e*P	**P**	**19 18 07.7**	**-1.3**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
KURK	**Kurchatov**	**49.71**	**313**	*e*P	**P**	**19 18 07.7**	**-1.3**
	comp=Z,10nm,0.7s,mb4.3						
PTH	**Pithoragarh**	**51.00**	**286**	*e*P	**P**	**19 18 18.7**	**-0.1**
JOSI	**Joshimath**	**51.29**	**287**	*e*	**P**	**19 18 12.1**	**-8.9**
KLP	**Kalpa**	**52.14**	**289**	*e*P	**P**	**19 18 26.4**	**-0.8**
KLP				*e*		19 18 27.8	
	comp=Z,22nm,0.5s						
KZA	**Kyzart**	**52.51**	**302**	P	**P**	**19 18 30.7**	**+1.0**
	SNR=9.7						
KBK	**Karagaybulak**	**52.65**	**303**	P	**P**	**19 18 30.8**	**0.0**
	SNR=11						
ASAR	**Alice Springs**	**52.81**	**186**	P	**P**	**19 18 31.7**	**-0.5**
	comp=Z,0.5nm,0.3s,mb3.2,baz=1.0,slow=5.6,SNR=14						
ASAR				ScP		19 22 48.8	
	comp=Z,0.2nm,0.6s,baz=3.1,slow=4.6,SNR=4.0						
AAK	**Ala-Archa**	**52.99**	**303**	P	**P**	**19 18 32.7**	**-0.5**
	SNR=7.0						
AAK	**Ala-Archa**	**52.99**	**303**	P	**P**	**19 18 32.6**	**-0.6**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.6						
UCH	**Uchtor**	**53.03**	**303**	P	**P**	**19 18 34.2**	**+0.7**
	SNR=12						
EKS2	**Erkin-Say**	**53.51**	**303**	P	**P**	**19 18 36.5**	**-0.4**
	SNR=5.9						
AML	**Almayashu**	**53.65**	**303**	P	**P**	**19 18 38.6**	**+0.7**
	SNR=23						
KUDL	**Kundal**	**54.53**	**285**	*e*P	**P**	**19 18 43.2**	**-1.2**
KUDL				*e*		19 18 44.5	
	comp=Z,16nm,0.5s						
CHKZ	**Chkalovo**	**54.62**	**317**	*e*P	**P**	**19 18 42.9**	**-1.8**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**54.62**	**317**	*e*P	**P**	**19 18 42.9**	**-1.7**
	comp=Z,9.7nm,0.8s,mb4.1						
BVA0	**Borovoye Array**	**54.78**	**316**	*i* P	**P**	**19 18 44.7**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.2						
KHET	**Khetri**	**55.12**	**285**	*e*P	**P**	**19 18 47.5**	**-1.2**
KHET				*e*		19 18 48.4	
	comp=Z,35nm,0.4s						
BHPL	**Bhopal**	**55.30**	**279**	*e*P	**P**	**19 18 48.5**	**-1.4**
BHPL				*e*		19 18 49.4	
	comp=Z,30nm,0.4s						
MCK	**McKinley**	**56.19**	**31**	*e*P	**P**	**19 18 55.7**	**+0.1**
MCK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
MCK	**McKinley**	**56.19**	**31**	*e*P	**P**	**19 18 55.7**	**+0.2**
	comp=Z,1.3nm,0.5s,mb3.5						
ILAR	**Eielson Array**	**57.11**	**29**	P	**P**	**19 19 01.8**	**0.0**
	comp=Z,0.9nm,0.6s,mb3.3,baz=296,slow=9.3,SNR=13						
STKA	**Stephens Creek**	**60.77**	**178**	P	**P**	**19 19 27.1**	**+0.2**
	comp=Z,2.6nm,0.6s,mb3.9,baz=349,slow=5.7,SNR=16						
STKA	**Stephens Creek**	**60.77**	**178**	*e*P	**P**	**19 19 26.7**	**-0.2**
INK	**Inuvik**	**62.19**	**25**	P	**P**	**19 19 36.2**	**+0.5**
	comp=Z,2.1nm,0.4s,mb4.0,baz=290,slow=2.8,SNR=4.9						
KEV	**Kevo**	**70.16**	**340**	*e*p	**P**	**19 20 24.8**	**-0.4**
	comp=Z,7.2nm,0.6s,mb4.4						
KEV	**Kevo**	**70.16**	**340**	*e*P	**P**	**19 20 24.8**	**-0.4**
KEV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	**70.72**	**340**	P	**P**	**19 20 29.1**	**+0.6**
	comp=Z,13nm,0.7s,mb4.6,baz=67,slow=8.7,SNR=60						
ARE0	**ARCESS Array S**	**70.72**	**340**	*e*P	**P**	**19 20 28.8**	**+0.3**
WBK	**Wadi Bani Khal**	**71.28**	**286**	⇓P	**P**	**19 20 32.9**	**+0.3**
YKA	**Yellowknife Ar**	**71.49**	**28**	P	**P**	**19 20 33.7**	**+0.6**
	comp=Z,0.9nm,0.3s,mb3.7,baz=300,slow=6.0,SNR=14						
BIDO	**Bidbid**	**71.61**	**287**	⇓P	**P**	**19 20 35.0**	**+0.6**
JOF	**Joensuu**	**72.07**	**333**	*e*p	**P**	**19 20 35.7**	**-0.8**
	comp=Z,16nm,0.7s,mb4.7						
HOQ	**Hoqain**	**72.27**	**287**	⇑P	**P**	**19 20 38.2**	**-0.1**
	SNR=6.3						
BSY	**Bisya**	**72.71**	**287**	⇓P	**P**	**19 20 41.1**	**+0.1**
	SNR=7.4						
ASHO	**Ashiyiah**	**72.85**	**289**	⇑P	**P**	**19 20 42.0**	**+0.3**
ARQ	**Araqi**	**73.03**	**288**	P	**P**	**19 20 43.2**	**+0.4**
	SNR=12						
OBN	**Obninsk**	**73.36**	**324**	⇑*e*P	**P**	**19 20 44.3**	**+0.3**
OBN				*e**PP	pP	19 22 15.5	-4.9
OBN				*e*SS	SS	19 34 32.2	-0.2
OBN				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**74.48**	**333**	*e*p	**P**	**19 20 49.4**	**-0.8**
	comp=Z,7.0nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**74.48**	**333**	*e*P	**P**	**19 20 49.4**	**-0.8**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
KIV	**Kislovodsk**	**74.77**	**312**	⇑*e*P	**P**	**19 20 53.0**	**+0.8**
KIV				pmax	pmax		
	comp=Z,27nm,1.3s,mb4.7						
FINES	**FINESS Array B**	**74.94**	**333**	P	**P**	**19 20 52.8**	**0.0**
	comp=Z,4.6nm,0.4s,mb4.4,baz=70,slow=5.9,SNR=66						
GNI	**Garni**	**75.03**	**308**	⇓*e*P	**P**	**19 20 54.5**	**+0.7**
GNI				pmax	pmax		
	comp=Z,19nm,1.2s						
RBK	**Rabkut**	**77.52**	**283**	⇓P	**P**	**19 21 06.4**	**-1.5**
ABTO	**Aybut**	**78.36**	**283**	⇓P	**P**	**19 21 12.1**	**-0.3**
AKASG	**Malin Array Be**	**79.42**	**323**	P	**P**	**19 21 17.2**	**-0.2**
	comp=Z,2.4nm,0.4s,mb4.2,baz=50,slow=5.4,SNR=23						
MALT	**Malatya**	**80.23**	**308**	*e*P	**P**	**19 21 22.8**	**+0.9**
MALT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
MALT	**Malatya**	**80.23**	**308**	*e*P	**P**	**19 21 22.8**	**+0.9**
	comp=Z,3.7nm,0.8s,mb4.1						
NB2	**NORSAR Subarra**	**80.71**	**337**	P	**P**	**19 21 23.8**	**-0.1**
	comp=Z,17nm,1.1s,mb4.7,baz=47,slow=5.0						
NB2	**NORSAR Subarra**	**80.71**	**337**	P	**P**	**19 21 23.8**	**-0.1**
NB2				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.7						
NB2	**NORSAR Subarra**	**80.71**	**337**	P	**P**	**19 21 23.8**	**-0.1**
	baz=47,slow=5.1						
NOA	**NORSAR Array B**	**80.71**	**337**	P	**P**	**19 21 23.9**	**0.0**
	comp=Z,7.0nm,0.8s,mb4.5,baz=45,slow=5.1,SNR=18						
NVAR	**Mina Array Bea**	**81.19**	**51**	P	**P**	**19 21 29.4**	**+2.5**
	comp=Z,2.6nm,0.8s,mb4.0,baz=296,slow=5.3,SNR=16						
RAYN	**Ar Rayn**	**82.00**	**292**	P	**P**	**19 21 32.6**	**+1.4**
	comp=Z,134nm,0.9s,SNR=15						
BRTR	**Keskin Array B**	**82.72**	**312**	P	**P**	**19 21 35.1**	**+0.6**
	comp=Z,5.2nm,0.7s,mb4.4,baz=100,slow=4.2,SNR=25						
PDAR	**Pinedale Array**	**84.47**	**44**	P	**P**	**19 21 45.5**	**+2.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=32,slow=1.2,SNR=6.2						
FRB	**Frobisher Bay**	**84.78**	**12**	P	**P**	**19 21 44.9**	**+0.6**
	comp=Z,3.2nm,0.6s,mb4.2,baz=356,slow=15,SNR=4.0						
GERES	**GERESS Array B**	**88.40**	**328**	P	**P**	**19 22 01.8**	**-0.1**
	comp=Z,1.3nm,0.7s,mb3.8,baz=38,slow=4.9,SNR=12						
DBIC	**Dimbokro**	**130.41**	**310**	SKPbc		19 30 59.8	
	comp=Z,2.8nm,0.8s,baz=359,slow=6.9,SNR=6.5						
SAML	**Samuel**	**150.82**	**51**	*e*PKPbc	PKPdf	19 29 01.0	+7.9
LPAZ	**La Paz**	**151.69**	**69**	PKPbc	PKPdf	19 29 05.3	+11
	comp=Z,0.8nm,0.7s,baz=297,slow=3.7,SNR=4.5						

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*PGC **28** 19:14:11.4, 48.03N×128.91W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*
*IDC **28** 19:14:14.5±2.1, 48.23N×128.67W, mb3.6/3, mb1 3.9/8, mb1mx3.7/23, mbtmp3.7/8, ML3.3/5, MS3.5/10, Ms1 3.5/10, ms1mx3.2/24, Error ellipse: s-maj=44.1km s-min=12.6km az=69.0*
*NEIC **28** 19:14:17.3±1.2, 48.39N×128.33W, h10^{km}, mb4.2/1, Error ellipse: s-maj=22.5km s-min=9.8km az=64.0*
ISC 28 19:14:13.6±0.7, **48.27N**±0.04×**128.59W**±0.06, **h10^{km}, n42,** σ**1^{s}02**/51, **mb3.3**/2, **MS3.5**/5, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.88**	**30**	Pn	**Pn**	**19 14 45.3**	**-0.8**
OZB	**Mount Ozzard**	**2.17**	**70**	Pn	**Pn**	**19 14 49.5**	**-0.8**
OZB				Sn	**Sn**	**19 15 17.7**	**+0.3**
OZB				Trac		19 15 19.8	
	comp=Z,10.0nm,0.3s						
GDR	**Gold River**	**2.26**	**47**	Pn	**Pn**	**19 14 51.4**	**-0.3**
GDR				Sn	**Sn**	**19 15 21.5**	**+1.6**
	comp=Z,20nm,0.7s						
GDR				Trac		19 15 23.3	
	comp=Z,20nm,0.7s						
WOSB	**Woss**	**2.31**	**34**	Pn	**Pn**	**19 14 52.3**	**-0.1**
MAYB	**Maynard**	**2.33**	**23**	Pn	**Pn**	**19 14 52.1**	**-0.5**
MAYB				Sn	**Sn**	**19 15 23.0**	**+1.4**
	comp=Z,11nm,0.3s						
MAYB				Trac		19 15 24.1	
	comp=Z,11nm,0.3s						
BTB	**Buttle Lake**	**2.35**	**58**	Pn	**Pn**	**19 14 53.3**	**+0.3**
BTB				Sn	**Sn**	**19 15 23.0**	**+0.8**
	comp=Z,35nm,0.5s						
BTB				Trac		19 15 26.8	
	comp=Z,35nm,0.5s						
HOLB	**Holberg**	**2.40**	**7**	Pn	**Pn**	**19 14 53.3**	**-0.3**
HOLB				Sn	**Sn**	**19 15 23.6**	**+0.3**
	comp=Z,8.0nm,0.4s						
HOLB				Trac		19 15 29.3	
	comp=Z,8.0nm,0.4s						
PHC	**Port Hardy**	**2.56**	**17**	Pn	**Pn**	**19 14 55.3**	**-0.6**
ALB	**Alberni**	**2.68**	**67**	Pn	**Pn**	**19 14 57.6**	**0.0**
MGB	**Mount Grey**	**2.69**	**73**	Pn	**Pn**	**19 14 56.8**	**-0.9**
MGB				Sn	**Sn**	**19 15 28.5**	**-2.1**
	comp=Z,3.0nm,0.3s						
MGB				Trac		19 15 33.6	
	comp=Z,3.0nm,0.3s						
NCRB	**Newcastle Ridg**	**2.71**	**37**	Pn	**Pn**	**19 14 57.5**	**-0.5**
NCRB				Sn	**Sn**	**19 15 32.7**	**+1.6**
	comp=Z,10.0nm,0.3s						
NCRB				Trac		19 15 34.7	
	comp=Z,10.0nm,0.3s						
CBB	**Campbell River**	**2.76**	**49**	Pn	**Pn**	**19 14 59.5**	**+0.7**
CBB				Sn	**Sn**	**19 15 33.9**	**+1.5**
CBB				Trac		19 15 36.2	
	comp=Z,24nm,0.6s						
PFB	**Port Renfrew**	**2.78**	**82**	Pn	**Pn**	**19 14 57.9**	**-1.1**
PFB				Sn	**Sn**	**19 15 32.7**	**-0.2**
PFB				Trac		19 15 35.2	
	comp=Z,4.0nm,0.4s						
OCWA	**Octopus Mounta**	**3.00**	**98**	P	**Pn**	**19 15 02.1**	**-0.1**
TXB	**Texada**	**3.09**	**61**	Pn	**Pn**	**19 15 03.2**	**-0.2**
LZB	**Mount Lazard**	**3.19**	**82**	Pn	**Pn**	**19 15 04.0**	**-0.8**
LZB				Sn	**Sn**	**19 15 42.1**	**-1.3**
LZB				Trac		19 15 44.4	
	comp=Z,2.0nm,0.6s						
NLLB	**Nanaimo Lost L**	**3.19**	**71**	Pn	**Pn**	**19 15 05.3**	**+0.5**
SHB	**Sechelt**	**3.38**	**65**	Pn	**Pn**	**19 15 05.7**	**-1.9**
SHB				Sn	**Sn**	**19 15 49.4**	**+1.2**
SHB				Trac		19 15 52.1	
	comp=Z,8.0nm,0.3s						
PGC	**Sidney**	**3.44**	**82**	*e*P	**Pn**	**19 15 07.3**	**-1.1**
PGC	**Sidney**	**3.44**	**82**	Pn	**Pn**	**19 15 07.7**	**-0.7**
VGZ	**Gonzales**	**3.51**	**86**	Pn	**Pn**	**19 15 10.0**	**+0.5**
SNB	**Saturna Island**	**3.64**	**80**	Pn	**Pn**	**19 15 11.5**	**+0.3**
BIB	**Bowen Island**	**3.67**	**70**	Pn	**Pn**	**19 15 11.7**	**0.0**
BBB	**Bella Bella**	**3.94**	**4**	Pn	**Pn**	**19 15 14.6**	**-0.9**
	24nm,0.3s,baz=191,slow=11,SNR=92						
BBB				Sn	**Sn**	**19 16 00.6**	**-1.7**
	baz=42,slow=19,SNR=3.0						
BBB				LR	LR	19 16 49.3	
	comp=Z,120nm,21.8s,baz=268,slow=39						
BBB	**Bella Bella**	**3.94**	**4**	Pn	**Pn**	**19 15 14.7**	**-0.8**
BBB				Sn	**Sn**	**19 16 00.2**	**-2.0**
BBB				Trac		19 16 04.7	
	comp=Z,13nm,0.6s						
WSLR	**Whistler**	**4.16**	**61**	Pn	**Pn**	**19 15 18.1**	**-0.5**
VDB	**Vedder Mountai**	**4.37**	**78**	Pn	**Pn**	**19 15 19.3**	**-2.3**
LLLB	**Lillooet**	**4.96**	**59**	Pn	**Pn**	**19 15 30.2**	**+0.1**
NEW	**Newport**	**7.65**	**86**	LR	LR	19 19 22.0	
	comp=Z,443nm,19.3s,baz=289,slow=40						
YBH	**Yreka Blue Hor**	**7.75**	**145**	Pn	**Pn**	**19 16 11.1**	**+1.9**
	0.1nm,0.3s,baz=345,slow=14,SNR=3.3						
ELK	**Elko**	**12.13**	**123**	LR	LR	19 21 55.3	
	comp=Z,260nm,19.7s,baz=312,slow=38						
NVAR	**Mina Array Bea**	**12.34**	**139**	Pn	**P**	**19 17 13.5**	**+1.2**
	0.1nm,0.3s,baz=327,slow=11,SNR=8.5						
PDAR	**Pinedale Array**	**14.42**	**105**	Pn	**P**	**19 17 43.6**	**+4.0**
	0.0nm,0.3s,baz=288,slow=11,SNR=3.1						
PDAR				LR	LR	19 23 43.3	
	comp=Z,229nm,19.8s,baz=360,slow=39						
YKA	**Yellowknife Ar**	**16.26**	**24**	Pn	**P**	**19 18 03.3**	**-0.1**
	0.1nm,0.3s,baz=216,slow=11,SNR=30						
YKA				LR	LR	19 23 47.6	
	comp=Z,78nm,18.1s,baz=215,slow=35						
FFC	**Flin Flon**	**17.71**	**59**	Pn	**P**	**19 18 24.0**	**+2.3**
	96nm,0.8s,SNR=12						
FFC	**Flin Flon**	**17.71**	**59**	*e*P	**P**	**19 18 23.6**	**+1.8**
	22nm,1.1s						
ILAR	**Eielson Array**	**19.25**	**336**	P	**P**	**19 18 40.4**	**0.0**
	0.0nm,0.3s,baz=152,slow=12,SNR=6.9						
INK	**Inuvik**	**20.25**	**355**	P	**P**	**19 18 52.9**	**+1.3**
	7.0nm,1.2s,baz=165,slow=10,SNR=7.1						
INK				LR	LR	19 26 50.5	
	comp=Z,119nm,18.3s,MS3.3,baz=164,slow=37						
ANMO	**Albuquerque**	**21.13**	**121**	P	**P**	**19 19 02.0**	**+1.1**
	3.7nm,1.1s,mb3.6,baz=324,slow=11,SNR=3.2						
ANMO				LR	LR	19 26 24.8	
	comp=Z,89nm,21.8s,MS3.1,slow=34						
TXAR	**Lajitas Array**	**26.91**	**126**	P	**P**	**19 19 56.5**	**-0.1**
	0.4nm,0.8s,mb3.0,baz=248,slow=4.9,SNR=3.1						
TXAR				LR	LR	19 31 23.6	
	comp=Z,127nm,18.2s,MS3.5,baz=340,slow=38						
SADO	**Sadowa**	**33.73**	**77**	LR	LR	19 33 26.0	
	comp=Z,131nm,19.2s,MS3.7,baz=68,slow=34						
SCHQ	**Schefferville**	**37.83**	**56**	LR	LR	19 37 21.5	
	comp=Z,156nm,18.3s,MS3.9,baz=44,slow=37						

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*IDC **28** 19:16:31.4±18.0, 16.34S×177.83W, h335^{km}±189^{km}, mb3.5/5, mb1 3.8/5, mb1mx3.5/14, mbtmp4.2/5, Error ellipse: s-maj=95.6km s-min=35.4km az=162.0*
*NEIC **28** 19:16:37.3±0.9, 16.52S×177.84W, h400^{km}, mb3.8/1, Error ellipse: s-maj=60.9km s-min=11.7km az=149.0*
ISC 28 19:16:31.6±1.4, **16.4S**±0.6×**177.9W**±0.4, **h350^{km}, n11,** σ**0^{s}13**/10, **mb3.6**/6, **1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.82**	**240**	⇑*i*P	**P**	**19 23 33.6**	**+0.1**
	1.8nm,0.6s,mb3.5						
STKA	**Stephens Creek**	**39.82**	**240**	P	**P**	**19 23 33.8**	**+0.2**
	1.6nm,0.4s,mb3.6,baz=79,slow=11,SNR=18						
STKA	**Stephens Creek**	**39.82**	**240**	*e*P	**P**	**19 23 33.3**	**-0.2**
WRAB	**Tennant Creek**	**45.42**	**258**	*e*P	**P**	**19 24 18.8**	**+0.2**
	5.5nm,1.0s,mb3.6						
WRA	**Warramunga Arr**	**45.43**	**258**	P	**P**	**19 24 18.6**	**-0.1**
	0.8nm,0.5s,mb3.1,baz=84,slow=7.0,SNR=24						
ASAR	**Alice Springs**	**45.71**	**253**	P	**P**	**19 24 20.8**	**-0.1**
	6.6nm,0.5s,mb4.0,baz=88,slow=8.2,SNR=106						
ASPA	**Alice Springs**	**45.72**	**253**	*e*P	**P**	**19 24 20.7**	**-0.1**
NVAR	**Mina Array Bea**	**77.97**	**44**	P	**P**	**19 27 53.3**	**-0.1**
	0.7nm,0.6s,mb3.6,baz=226,slow=8.3,SNR=7.0						
ILAR	**Eielson Array**	**84.29**	**13**	P	**P**	**19 28 25.5**	**0.0**
	48nm,0.3s,baz=228,slow=5.2,SNR=4.0						
TXAR	**Lajitas Array**	**84.75**	**58**	P	**P**	**19 28 28.7**	**+0.1**
	0.6nm,0.5s,mb3.7,baz=214,slow=6.5,SNR=6.5						
GERES	**GERESS Array B**	**146.27**	**346**	PKPbc	PKPbc	19 35 32.1	+1.2
	0.5nm,0.6s,baz=27,slow=3.0,SNR=4.3						

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*PGC **28** 19:29:13.1, 48.02N×128.92W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*
*IDC **28** 19:29:16.1±2.4, 48.23N×129.02W, mb3.5/1, mb1 3.8/7, mb1mx3.6/24, mbtmp3.6/7, ML3.5/5, MS3.1/3, Ms1 3.1/3, ms1mx2.7/22, Error ellipse: s-maj=47.2km s-min=14.8km az=69.0*
*NEIC **28** 19:29:19.1±1.1, 48.42N×128.63W, h10^{km}, mb3.9/1, Error ellipse: s-maj=19.4km s-min=8.7km az=62.0*
ISC 28 19:29:15.9±0.8, **48.30N**±0.04×**128.61W**±0.07, **h10^{km}, n33,** σ**1^{s}09**/44, **MS3.2**/1, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.86**	**31**	Pn	**Pn**	**19 29 47.4**	**-0.7**
OZB	**Mount Ozzard**	**2.17**	**71**	Pn	**Pn**	**19 29 51.7**	**-0.9**
OZB				Sn	**Sn**	**19 30 20.6**	**+0.8**
OZB				Trac		19 30 21.0	
	comp=Z,10.0nm,0.3s						
GDR	**Gold River**	**2.26**	**48**	Pn	**Pn**	**19 29 53.5**	**-0.3**
GDR				Sn	**Sn**	**19 30 23.3**	**+1.4**
WOSB	**Woss**	**2.30**	**35**	Pn	**Pn**	**19 29 54.5**	**+0.1**
MAYB	**Maynard**	**2.31**	**24**	Pn	**Pn**	**19 29 54.2**	**-0.4**
MAYB				Sn	**Sn**	**19 30 24.4**	**+1.1**
BTB	**Buttle Lake**	**2.35**	**59**	Pn	**Pn**	**19 29 55.2**	**0.0**
BTB				Sn	**Sn**	**19 30 25.9**	**+1.4**
	comp=Z,25nm,0.4s						
BTB				Trac		19 30 28.0	
	comp=Z,25nm,0.4s						
HOLB	**Holberg**	**2.37**	**7**	Pn	**Pn**	**19 29 55.5**	**+0.1**
HOLB				Sn	**Sn**	**19 30 25.2**	**+0.4**
	comp=Z,15nm,0.7s						
HOLB				Trac		19 30 32.8	
	comp=Z,15nm,0.7s						
PHC	**Port Hardy**	**2.53**	**17**	Pn	**Pn**	**19 29 57.3**	**-0.5**
NCRB	**Newcastle Ridg**	**2.69**	**37**	Pn	**Pn**	**19 30 00.1**	**0.0**
NCRB				Sn	**Sn**	**19 30 34.3**	**+1.3**
	comp=Z,7.0nm,0.4s						
NCRB				Trac		19 30 37.7	
	comp=Z,7.0nm,0.4s						
MGB	**Mount Grey**	**2.69**	**73**	Pn	**Pn**	**19 29 58.9**	**-1.2**
MGB				Sn	**Sn**	**19 30 32.4**	**-0.6**
	comp=Z,5.0nm,0.4s						
MGB				Trac		19 30 35.5	
	comp=Z,5.0nm,0.4s						
CBB	**Campbell River**	**2.75**	**50**	Pn	**Pn**	**19 30 01.1**	**+0.2**
CBB				Sn	**Sn**	**19 30 35.6**	**+1.1**
PFB	**Port Renfrew**	**2.79**	**83**	Pn	**Pn**	**19 29 59.6**	**-1.9**
PFB				Sn	**Sn**	**19 30 33.4**	**-2.1**
PFB				Trac		19 30 40.1	
	comp=Z,3.0nm,0.5s						
OCWA	**Octopus Mounta**	**3.03**	**99**	P	**Pn**	**19 30 07.0**	**+2.1**
TXB	**Texada**	**3.09**	**61**	Pn	**Pn**	**19 30 05.5**	**-0.2**
TXB				Sn	**Sn**	**19 30 42.4**	**-0.7**
	comp=Z,13nm,0.6s						
TXB				Trac		19 30 50.2	
	comp=Z,13nm,0.6s						
NLLB	**Nanaimo Lost L**	**3.20**	**71**	Pn	**Pn**	**19 30 06.9**	**-0.4**
LZB	**Mount Lazard**	**3.20**	**83**	Pn	**Pn**	**19 30 05.9**	**-1.4**
LZB				Sn	**Sn**	**19 30 44.6**	**-1.4**
LZB				Trac		19 30 48.1	
	comp=Z,3.0nm,0.7s						
SHB	**Sechelt**	**3.38**	**66**	Pn	**Pn**	**19 30 09.3**	**-0.6**
GOBB	**Galiano Island**	**3.45**	**77**	Pn	**Pn**	**19 30 11.0**	**+0.2**
PGC	**Sidney**	**3.45**	**82**	P	**Pn**	**19 30 13.0**	**+2.1**
BBB	**Bella Bella**	**3.91**	**5**	Pn	**Pn**	**19 30 16.7**	**-0.6**
	14nm,0.3s,baz=197,slow=12,SNR=113						
BBB				Sn	**Sn**	**19 31 03.9**	**+0.1**
	baz=67,slow=23,SNR=2.2						
BBB				LR	LR	19 31 59.9	
	comp=Z,124nm,18.3s,baz=218,slow=41						
BBB	**Bella Bella**	**3.91**	**5**	Pn	**Pn**	**19 30 16.8**	**-0.5**
BBB				Sn	**Sn**	**19 31 03.1**	**-0.7**
BBB				Trac		19 31 04.2	
	comp=Z,21nm,0.9s						
WSLR	**Whistler**	**4.16**	**62**	Pn	**Pn**	**19 30 20.7**	**-0.2**
LLLB	**Lillooet**	**4.96**	**60**	Pn	**Pn**	**19 30 30.8**	**-1.6**
NEW	**Newport**	**7.67**	**86**	LR	LR	19 34 23.3	
	comp=Z,126nm,18.2s,baz=229,slow=39						
YBH	**Yreka Blue Hor**	**7.78**	**145**	Pn	**Pn**	**19 31 13.4**	**+1.4**
	0.1nm,0.3s,baz=319,slow=15,SNR=3.3						
NVAR	**Mina Array Bea**	**12.38**	**139**	Pn	**P**	**19 32 17.5**	**+2.5**
	0.0nm,0.3s,baz=310,slow=15,SNR=3.8						
PDAR	**Pinedale Array**	**14.44**	**105**	Pn	**P**	**19 32 48.6**	**+6.4**
	0.1nm,0.3s,baz=302,slow=8.5,SNR=5.1						
YKA	**Yellowknife Ar**	**16.24**	**24**	Pn	**P**	**19 33 05.2**	**-0.2**
	0.0nm,0.3s,baz=216,slow=11,SNR=22						
FFC	**Flin Flon**	**17.71**	**59**	Pn	**P**	**19 33 26.2**	**+2.2**
	65nm,0.8s,SNR=9.3						
FFC	**Flin Flon**	**17.71**	**59**	*e*P	**P**	**19 33 25.1**	**+1.1**
	10nm,1.0s						
ILAR	**Eielson Array**	**19.21**	**336**	P	**P**	**19 33 40.7**	**-1.6**
	baz=148,slow=8.5,SNR=0.7						
INK	**Inuvik**	**20.22**	**355**	P	**P**	**19 33 54.3**	**+0.8**
	1.9nm,0.8s,baz=171,slow=9.6,SNR=4.8						

TXAR	Lajitas Array	26.94	126	LR	LR	19 46 33.0	
	comp=Z,61nm,18.9s,MS3.2,baz=305,slow=38						

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*PGC **28** 19:50:49.0, 48.02N×128.91W, h10^{km}, MLSn3.1/1, Mw3.7, Northern Juan de Fuca ridge.*

*IDC **28** 19:50:52.3±2.2, 48.30N×128.61W, mb3.3/1, mb1 3.6/7, mb1mx3.4/23, mbtmp3.4/7, ML3.5/5, MS3.5/9, Ms1 3.5/9, ms1mx3.3/16, Error ellipse: s-maj=44.7km s-min=13.2km az=69.0*

*NEIC **28** 19:50:55.0±1.2, 48.48N×128.34W, h10^{km}, mb3.6/1, Error ellipse: s-maj=21.1km s-min=9.5km az=62.0*

ISC 28 19:50:50.8±0.8**, 48.26N**±0.04×**128.65W**±0.07**, h10^{km}, n36, σ1^{s}.05**/44**, MS3.3**/4**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	1.90	31	Pn	Pn	19 51 23.0	-0.7
OZB	Mount Ozzard	2.21	70	Pn	Pn	19 51 27.0	-1.1
OZB				Sn	Sn	19 51 55.0	-0.7
OZB				Trac		19 51 57.0	
	comp=Z,7.0nm,0.2s						
GDR	Gold River	2.30	48	Pn	Pn	19 51 29.5	+0.1
GDR				Sn	Sn	19 51 59.6	+1.6
	comp=Z,11nm,0.5s						
GDR				Trac		19 52 00.9	
	comp=Z,11nm,0.5s						
WOSB	Woss	2.34	35	Pn	Pn	19 51 29.7	-0.3
MAYB	Maynard	2.35	24	Pn	Pn	19 51 29.7	-0.5
MAYB				Sn	Sn	19 51 59.9	+0.6
	comp=Z,12nm,0.4s						
MAYB				Trac		19 52 00.6	
	comp=Z,12nm,0.4s						
BTB	Buttle Lake	2.40	59	Pn	Pn	19 51 31.1	+0.4
BTB				Sn	Sn	19 52 01.6	+1.2
	comp=Z,40nm,0.5s						
BTB				Trac		19 52 03.4	
	comp=Z,40nm,0.5s						
HOLB	Holberg	2.41	8	Pn	Pn	19 51 31.1	+0.2
HOLB				Sn	Sn	19 52 01.4	+0.7
	comp=Z,4.0nm,0.2s						
HOLB				Trac		19 52 04.1	
	comp=Z,4.0nm,0.2s						
PHC	Port Hardy	2.58	18	Pn	Pn	19 51 33.5	+0.1
MGB	Mount Grey	2.73	73	Pn	Pn	19 51 34.3	-1.2
MGB				Sn	Sn	19 52 08.5	-0.4
	comp=Z,3.0nm,0.2s						
MGB				Trac		19 52 09.3	
	comp=Z,3.0nm,0.2s						
NCRB	Newcastle Ridg	2.74	37	Pn	Pn	19 51 35.8	+0.2
NCRB				Sn	Sn	19 52 11.5	+2.4
CBB	Campbell River	2.79	49	Pn	Pn	19 51 36.8	+0.3
CBB				Sn	Sn	19 52 11.0	+0.4
CBB				Trac		19 52 13.8	
	comp=Z,15nm,0.6s						
PFB	Port Renfrew	2.82	82	Pn	Pn	19 51 35.7	-1.1
PFB				Sn	Sn	19 52 09.7	-1.6
PFB				Trac		19 52 14.1	
	comp=Z,4.9nm,0.6s						
OCWA	Octopus Mounta	3.05	98	P	Pn	19 51 40.0	0.0
TXB	Texada	3.13	61	Pn	Pn	19 51 42.0	+0.8
TXB				Sn	Sn	19 52 19.7	+0.8
	comp=Z,11nm,0.6s						
TXB				Trac		19 52 26.7	
	comp=Z,11nm,0.6s						
LZB	Mount Lazard	3.23	82	Pn	Pn	19 51 41.2	-1.5
LZB				Sn	Sn	19 52 20.8	-0.9
LZB				Trac		19 52 23.5	
	comp=Z,2.0nm,0.5s						
SHB	Sechelt	3.42	65	Pn	Pn	19 51 45.7	+0.4
PGC	Sidney	3.48	82	P	Pn	19 51 45.2	-1.0
BIB	Bowen Island	3.71	70	Pn	Pn	19 51 50.0	+0.6
BBB	Bella Bella	3.94	5	Pn	Pn	19 51 52.1	-0.6
	10nm,0.3s,baz=206,slow=12,SNR=168						
BBB				Sn	Sn	19 52 38.4	-1.3
	baz=284,slow=22,SNR=2.7						
BBB	Bella Bella	3.94	5	Pn	Pn	19 51 52.0	-0.7
BBB				Sn	Sn	19 52 38.3	-1.3
BBB				Trac		19 52 41.7	
	comp=Z,11nm,0.6s						
WSLR	Whistler	4.20	61	Pn	Pn	19 51 57.2	+0.9
VDB	Vedder Mountai	4.41	78	Pn	Pn	19 51 59.0	-0.4
LLLB	Lillooet	5.00	59	Pn	Pn	19 52 06.4	-1.4
NEW	Newport	7.70	86	LR	LR	19 55 50.5	
	comp=Z,438nm,20.9s,baz=281,slow=39						
YBH	Yreka Blue Hor	7.77	145	Pn	Pn	19 52 49.3	+2.6
	0.1nm,0.3s,baz=348,slow=9.6,SNR=5.4						
ELK	Elko	12.16	123	LR	LR	19 58 42.3	
	comp=Z,194nm,19.3s,baz=127,slow=39						
NVAR	Mina Array Bea	12.37	139	Pn	P	19 53 51.9	+2.1
	baz=317,slow=13,SNR=6.6						
NVAR				LR	LR	19 58 25.7	
	comp=Z,244nm,18.9s,baz=75,slow=37						
NVAR	Mina Array Bea	12.37	139	Pn	P	19 53 51.9	+2.1
NVAR				LR	LR	19 58 25.7	
PDAR	Pinedale Array	14.46	105	Pn	P	19 54 20.6	+3.3
	0.1nm,0.3s,baz=315,slow=6.4,SNR=2.4						
PDAR				LR	LR	20 00 20.9	
	comp=Z,216nm,19.3s,baz=348,slow=39						
YKA	Yellowknife Ar	16.28	24	Pn	P	19 54 39.1	-1.7
	0.1nm,0.3s,baz=214,slow=13,SNR=3.9						
FFC	Flin Flon	17.75	59	*e*P	P	19 55 00.3	+0.9
	6.7nm,1.3s						
ILAR	Eielson Array	19.24	336	P	P	19 55 16.9	-0.6
	0.0nm,0.3s,baz=140,slow=12,SNR=6.0						
ILAR				LR	LR	20 01 24.0	
	comp=Z,89nm,21.1s,baz=175,slow=33						
INK	Inuvik	20.25	355	P	P	19 55 29.4	+0.7
	1.2nm,0.8s,baz=186,slow=14,SNR=3.5						
INK				LR	LR	20 03 08.9	
	comp=Z,101nm,19.4s,MS3.2,baz=338,slow=36						
ANMO	Albuquerque	21.17	121	LR	LR	20 04 23.8	
	comp=Z,47nm,20.6s,MS2.9,slow=38						
TXAR	Lajitas Array	26.94	126	LR	LR	20 07 53.1	
	comp=Z,116nm,20.8s,MS3.4,baz=300,slow=38						
SCHQ	Schefferville	37.87	56	LR	LR	20 14 16.4	
	comp=Z,133nm,18.8s,MS3.8,baz=356,slow=37						

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*IDC **28** 20:01:23.7±0.7, 86.33N×35.16E, mb3.6/12, mb1 3.9/13, mb1mx3.8/22, mbtmp3.7/13, ML3.5/1, MS3.4/8, Ms1 3.4/8, ms1mx3.1/27, Error ellipse: s-maj=27.8km s-min=13.7km az=73.0*

*NEIC **28** 20:01:25.1±0.4, 86.27N×33.44E, h10^{km}, mb3.5/1, Error ellipse: s-maj=10.7km s-min=6.9km az=76.0*

ISC 28 20:01:23.3±0.5**, 86.27N**±0.06×**3 4E**± **, h10^{km}, n23, σ0^{s}.94**/19**, mb3.6**/12**, MS3.4**/7**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	7.78	212	*e*P	Pn	20 03 17.3	-2.0
	9.9nm,0.5s						
SUMG	Summit	16.75	264	*e*P	P	20 05 19.2	+0.2
	3.5nm,0.8s						
ARCES	ARCESS Array B	16.88	190	Pn	P	20 05 20.8	+0.1
	0.3nm,0.3s,baz=7.1,slow=9.8,SNR=6.6						
ARCES				LR	LR	20 12 11.4	
	comp=Z,78nm,18.4s,baz=201,slow=38						
RES	Resolute Bay	17.98	318	P	P	20 05 34.9	+0.5
FINES	FINESS Array B	25.00	189	P	P	20 06 49.6	+1.7
	0.6nm,0.8s,mb3.2,baz=6.3,slow=13,SNR=3.2						
FINES				LR	LR	20 16 27.9	
	comp=Z,33nm,18.2s,MS2.9,baz=353,slow=36						
INK	Inuvik	25.50	349	P	P	20 06 53.3	+0.8
	1.7nm,0.9s,mb3.6,baz=88,slow=15,SNR=4.8						
NOA	NORSAR Array B	25.69	205	LR	LR	20 15 41.2	
	comp=Z,24nm,20.0s,MS2.7,baz=205,slow=33						
COLA	College	29.03	1	*e*P	P	20 07 24.7	-0.1
ILAR	Eielson Array	29.13	0	P	P	20 07 26.2	+0.5
	1.2nm,0.9s,mb3.6,baz=357,slow=7.6,SNR=12						
YKA	Yellowknife Ar	30.91	332	P	P	20 07 41.3	-0.3
	0.1nm,0.5s,mb2.9,baz=2.5,slow=8.1,SNR=3.7						
YKA				PcP	PcP	20 10 37.0	-1.2
	0.1nm,0.5s,baz=359,slow=2.6,SNR=4.4						
YKA				LR	LR	20 21 00.5	
	comp=Z,130nm,18.1s,MS3.6,baz=350,slow=38						
YKA	Yellowknife Ar	30.91	332	P	P	20 07 41.3	-0.3
YKA				PcP	PcP	20 10 37.0	-1.2
YKA				LR	LR	20 21 00.5	
ZAL	Zalesovo	34.00	125	P	P	20 08 08.5	-0.2
	0.9nm,0.4s,mb4.0,baz=288,slow=6.6,SNR=3.7						
BVAR	Borovoye Array	34.22	140	P	P	20 08 10.3	-0.2
	0.8nm,0.7s,mb3.8,baz=349,slow=7.6,SNR=6.5						
DLBC	Dease Lake	35.35	345	LR	LR	20 23 23.2	
	comp=Z,81nm,21.9s,MS3.4,baz=74,slow=37						
AKASG	Malin Array Be	35.74	185	P	P	20 08 23.6	0.0
	0.1nm,0.2s,mb3.3,baz=4.1,slow=9.5,SNR=4.2						
MLR	Muntele Rosu	40.98	188	LR	LR	20 25 25.7	
	comp=Z,65nm,19.8s,MS3.5,baz=64,slow=35						
SONM	Songino Array	41.37	103	P	P	20 09 10.7	+0.2
	2.4nm,1.4s,mb3.6,baz=349,slow=6.3,SNR=3.5						
NEW	Newport	45.23	333	LR	LR	20 29 11.5	
	comp=Z,152nm,18.4s,MS4.0,baz=167,slow=37						
BRTR	Keskin Array B	46.71	180	P	P	20 09 55.6	+2.2
	1.6nm,1.0s,mb3.9,baz=333,slow=3.2,SNR=4.1						
BW06	Boulder Array	50.47	325	P	P	20 10 22.5	0.0
PDAR	Pinedale Array	50.47	325	P	P	20 10 21.5	-1.1
	0.6nm,0.8s,mb3.7,baz=27,slow=3.3,SNR=3.9						
PDAR				LR	LR	20 32 16.8	
	comp=Z,79nm,19.0s,MS3.7,baz=218,slow=37						
NVAR	Mina Array Bea	55.09	333	P	P	20 10 56.8	-0.3
	0.5nm,0.8s,mb3.6,baz=307,slow=3.9,SNR=4.0						
CMAR	Chiang Mai Arr	70.13	113	P	P	20 12 35.6	-1.8
	0.5nm,0.8s,mb3.5,baz=354,slow=8.2,SNR=4.9						

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*IDC **28** 20:04:33.9±1.6, 23.17S×169.34E, mb4.3/6, mb1 4.5/6, mb1mx4.4/13, mbtmp4.3/6, MS3.8/8, Ms1 3.8/8, ms1mx3.7/17, Error ellipse: s-maj=74.2km s-min=26.8km az=155.0*

*NEIC **28** 20:04:36.6±0.9, 22.88S×169.19E, h10^{km}, mb4.6/6, Error ellipse: s-maj=29.2km s-min=15.2km az=166.0*

ISC 28 20:04:33.3±3.8**, 23.2S**±0.2×**169.26E**±0.09**, h6^{km}**±24^{km}**, n52, σ0^{s}.91**/21**, mb4.4**/11**, MS3.8**/7**, 1C-1D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.83	293	*e*P	Pn	20 05 20.0	+0.1
DZM				*e*S	Sn	20 05 54.5	-0.3
NOUC	Port Laguerre	2.94	291	*e*P	Pn	20 05 22.0	+0.5
NOUC				*e*S	Sn	20 05 58.1	+0.5
NOUC	Port Laguerre	2.94	291	*e*P	Pn	20 05 22.0	+0.5
NOUC				*e*S	Sn	20 05 58.0	+0.5
URZ	Urewera	16.45	158	LR	LR	20 13 22.7	
	comp=Z,371nm,21.9s,baz=44,slow=32						
RPZ	Rata Peaks	20.52	176	LR	LR	20 16 05.3	
	comp=Z,388nm,19.1s,MS3.8,baz=24,slow=34						
CTA	Charters Tower	21.60	274	LR	LR	20 17 23.0	
	comp=Z,118nm,18.7s,MS3.3,baz=91,slow=36						
STKA	Stephens Creek	25.96	244	*e*P	P	20 10 12.8	+4.4
	4.0nm,1.1s,mb3.9						
STKA	Stephens Creek	25.96	244	P	P	20 10 10.8	+2.4
	2.7nm,0.8s,mb3.8,baz=99,slow=9.1,SNR=4.7						
RAR	Rarotonga	28.71	92	LR	LR	20 20 06.1	
	comp=Z,121nm,19.8s,MS3.5,baz=247,slow=32						
ASAR	Alice Springs	32.40	262	P	P	20 11 06.0	-0.1
	1.6nm,0.7s,mb4.0,baz=86,slow=8.5,SNR=18						
ASAR				PcP	PcP	20 13 51.8	-2.1
	1.4nm,1.1s,baz=94,slow=3.0,SNR=4.8						
ASAR				LR	LR	20 22 25.2	
	comp=Z,55nm,21.5s,MS3.2,baz=94,slow=33						
WRAB	Tennant Creek	32.58	269	*e*P	P	20 11 06.5	-1.4
WRA	Warramunga Arr	32.59	269	P	P	20 11 06.6	-1.3
	2.5nm,1.1s,mb4.0,baz=98,slow=7.9,SNR=15						
WRA				PcP	PcP	20 13 52.9	-1.5
	0.9nm,0.7s,baz=98,slow=2.6,SNR=8.0						
FITZ	Fitzroy Crossi	41.02	269	*e*P	P	20 12 19.5	+0.4
	9.0nm,0.8s,mb4.5						
MBWA	Marble Bar	45.74	263	*e*P	P	20 12 56.9	-0.5
VNDA	Vanda	54.50	182	LR	LR	20 32 38.5	
	comp=Z,147nm,19.0s,MS4.1,baz=323,slow=31						
MAT	Matsushiro	66.26	333	P	P	20 15 23.0	-1.6
	6.7nm,0.9s,mb4.7						
MAT	Matsushiro	66.26	333	P	P	20 15 22.8	-1.8
MAW	Mawson	74.80	202	LR	LR	20 42 55.6	
	comp=Z,89nm,18.9s,MS4.1,baz=249,slow=31						
ENH	Enshi	78.21	310	*e*P	P	20 16 34.6	-1.1
	6.3nm,1.1s,mb4.5						
CM31	Chiang Mai Arr	80.16	295	*e*P	P	20 16 47.4	+1.0
	7.5nm,1.0s,mb4.6						
CMAR	Chiang Mai Arr	80.16	295	P	P	20 16 47.5	+1.1
	4.6nm,0.8s,mb4.4,baz=133,slow=3.1,SNR=28						
ULN	Ulaanbaatar	90.04	323	*e*P	P	20 17 35.8	+0.7
	2.8nm,0.7s,mb4.7						
SONM	Songino Array	90.38	323	P	P	20 17 37.3	+0.6
	2.8nm,0.9s,mb4.6,baz=141,slow=3.4,SNR=22						
NVAR	Mina Array Bea	91.39	49	P	P	20 17 42.0	+0.3
	2.2nm,0.8s,mb4.5,baz=217,slow=7.3,SNR=15						
PDAR	Pinedale Array	99.27	48	LR	LR	20 53 37.5	
	comp=Z,125nm,19.4s,MS4.4,baz=322,slow=30						
KOLS	Kolonicke sedl	143.44	323	*e*PKP	PKPdf	20 24 08.6	-2.5
KECS	Kecovo	144.67	323	*e*PKP	PKPdf	20 24 12.1	-1.2
OKC	Ostrava-Krasne	145.09	327	*e*PKP	PKPdf	20 24 12.6	-1.4
PSZ	Piszkesteto	145.32	323	⇑*e*P	PKPbc	20 24 13.8	+1.4
KSP	Ksiaz	145.33	330	*e*P	PKPbc	20 24 13.1	+0.8
VYHS	Vyhne	145.56	325	*e*PKP	PKPdf	20 24 14.6	-0.2
DPC	Dobruska-Polom	145.65	329	*e*PKP	PKPdf	20 24 14.5	-0.4
UPC	Upice	145.69	329	*e*PKP	PKPdf	20 24 14.8	-0.2
PVCC	Panska Ves	146.34	331	*e*PKP	PKPdf	20 24 16.6	+0.5
BRG	Berggiesshubel	146.38	331	*e*P	PKPbc	20 24 16.7	+1.9
CLL	Collm	146.46	333	⇓*i*PKP1	PKPbc	20 24 16.4	+1.4
CLL				*e**PPKP		20 24 27.0	
CLL				*e*		20 24 34.0	
PRU	Pruhonice	146.74	330	*e*PKP	PKPdf	20 24 17.4	+0.6
NKC	Novy Kostel	147.50	332	*e*PKP	PKPdf	20 24 19.6	+1.6
MOX	Moxa	147.54	333	*e*P	PKPdf	20 24 19.5	+1.4
MOX	Moxa	147.54	333	*i* P	PKPdf	20 24 19.5	+1.4
KHC	Kasperske Hory	147.78	330	*e*PKP	PKPdf	20 24 20.3	+1.8
GERES	GERESS Array B	147.93	329	PKPbc	PKPdf	20 24 21.0	+2.2
	3.9nm,0.8s,baz=45,slow=1.4,SNR=26						
GRF	Grafenberg Arr	148.43	332	*e*PKP	PKPdf	20 24 21.8	+2.3
GIVF	Givet	150.51	339	*e*PKIKP	PKPdf	20 24 26.6	+3.8
	31nm,0.9s						
BAIF	Baives	150.74	340	*e*PKIKP	PKPdf	20 24 27.4	+4.2
	11nm,0.8s						
CDF	Champ du Feu	151.05	335	*e*PKIKP	PKPdf	20 24 27.8	+4.1
	20nm,1.1s						
HINF	Hinteralfeld	151.70	335	*e*PKIKP	PKPdf	20 24 29.2	+4.5
	22nm,1.2s						
HAU	Haudompre	151.74	335	*e*PKIKP	PKPdf	20 24 29.3	+4.6
	17nm,1.0s						
MEZF	Maizieres J'vi	151.80	337	*e*PKIKP	PKPdf	20 24 30.0	+5.2
	29nm,0.9s						
CABF	La Chapelle	152.98	334	*e*PKIKP	PKPdf	20 24 31.7	+5.2
SSF	Saint Saulge	153.57	338	*e*PKIKP	PKPdf	20 24 31.5	+4.2
	55nm,1.6s						
BGF	Bois d'Agland	154.24	338	*e*PKIKP	PKPdf	20 24 33.0	+4.7

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*PGC **28** 20:19:05.2, 48.03N×128.89W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*

*IDC **28** 20:19:09.2±2.5, 48.30N×128.44W, mb3.3/1, mb1 3.7/6, mb1mx3.5/22, mbtmp3.4/6, ML3.4/5, Error ellipse: s-maj=47.3km s-min=14.8km az=66.0*

*NEIC **28** 20:19:12.5±1.6, 48.51N×128.18W, h10^{km}, mb3.8/1, Error ellipse: s-maj=27.6km s-min=11.1km az=53.0*

ISC 28 20:19:05.9±0.9**, 48.17N**±0.05×**128.67W**±0.06**, h10^{km}, n32, σ0^{s}.97**/46**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	1.99	30	Pn	Pn	20 19 39.1	-0.8
OZB	Mount Ozzard	2.25	68	Pn	Pn	20 19 43.4	-0.4
OZB				Sn	Sn	20 20 11.4	-0.5
OZB				Trac		20 20 13.5	
	comp=Z,6.0nm,0.3s						
GDR	Gold River	2.37	46	Pn	Pn	20 19 45.3	-0.1
GDR				Sn	Sn	20 20 14.7	-0.1
	comp=Z,8.0nm,0.5s						
GDR				Trac		20 20 21.1	
	comp=Z,8.0nm,0.5s						
WOSB	Woss	2.42	34	Pn	Pn	20 19 46.2	0.0
MAYB	Maynard	2.44	23	Pn	Pn	20 19 45.9	-0.5
MAYB				Sn	Sn	20 20 16.1	-0.5
	comp=Z,11nm,0.5s						
MAYB				Trac		20 20 18.6	
	comp=Z,11nm,0.5s						
BTB	Buttle Lake	2.45	57	Pn	Pn	20 19 47.1	+0.5
BTB				Sn	Sn	20 20 16.9	0.0
	comp=Z,20nm,0.4s						
BTB				Trac		20 20 19.8	
	comp=Z,20nm,0.4s						
HOLB	Holberg	2.50	8	Pn	Pn	20 19 46.0	-1.2
HOLB				Sn	Sn	20 20 18.4	+0.3
	comp=Z,12nm,0.7s						
HOLB				Trac		20 20 26.6	
	comp=Z,12nm,0.6s						
HOLB				Trac		20 20 45.2	
	comp=Z,12nm,0.7s						
PHC	Port Hardy	2.66	17	Pn	Pn	20 19 49.5	-0.2
MGB	Mount Grey	2.77	71	Sn	Sn	20 20 23.2	-1.8
	comp=Z,6.0nm,0.5s						
MGB				Trac		20 20 27.2	
	comp=Z,6.0nm,0.5s						
ALB	Alberni	2.77	65	Sn	Sn	20 20 26.2	+1.2
	comp=Z,3.0nm,0.3s						
ALB				Trac		20 20 32.5	
	comp=Z,3.0nm,0.3s						
NCRB	Newcastle Ridg	2.81	36	Pn	Pn	20 19 51.9	+0.1
NCRB				Sn	Sn	20 20 27.2	+1.1
	comp=Z,6.0nm,0.4s						
NCRB				Trac		20 20 29.4	
	comp=Z,6.0nm,0.4s						
PFB	Port Renfrew	2.85	80	Pn	Pn	20 19 51.7	-0.6
PFB				Sn	Sn	20 20 25.1	-1.8
CBB	Campbell River	2.86	48	Pn	Pn	20 19 53.1	+0.6
CBB				Sn	Sn	20 20 27.9	+0.6
CBB				Trac		20 20 29.7	
	comp=Z,6.0nm,0.3s						
OCWA	Octopus Mounta	3.05	96	*e*P	Pn	20 19 55.2	+0.1
TXB	Texada	3.18	60	Pn	Pn	20 19 57.2	+0.2
TXB				Sn	Sn	20 20 37.6	+2.2
	comp=Z,14nm,0.6s						
TXB				Trac		20 20 41.9	
	comp=Z,14nm,0.6s						
LZB	Mount Lazard	3.26	80	Pn	Pn	20 19 57.6	-0.5
LZB				Sn	Sn	20 20 37.5	+0.1
LZB				Trac		20 20 39.5	
	comp=Z,2.0nm,0.6s						
NLLB	Nanaimo Lost L	3.28	69	Pn	Pn	20 19 57.8	-0.6
NLLB				Sn	Sn	20 20 40.5	+2.6
NLLB				Trac		20 20 50.6	
	comp=Z,3.0nm,0.1s						
SHB	Sechelt	3.47	64	Pn	Pn	20 20 01.3	+0.2
SHB				Sn	Sn	20 20 42.4	-0.4
SHB				Trac		20 20 52.5	
	comp=Z,14nm,0.8s						
PGC	Sidney	3.51	80	*e*P	Pn	20 20 01.0	-0.6
VGZ	Gonzales	3.58	84	Pn	Pn	20 20 01.6	-1.0
BIB	Bowen Island	3.76	69	Pn	Pn	20 20 05.4	+0.2
BBB	Bella Bella	4.03	5	Pn	Pn	20 20 08.6	-0.5
	12nm,0.3s,baz=194,slow=16,SNR=43						
BBB				Sn	Sn	20 20 54.6	-2.4
	baz=243,slow=22,SNR=2.2						
BBB	Bella Bella	4.03	5	Pn	Pn	20 20 08.3	-0.8
BBB				Sn	Sn	20 20 54.8	-2.2
BBB				Trac		20 20 55.9	
	comp=Z,20nm,0.9s						
WSLR	Whistler	4.25	60	Pn	Pn	20 20 13.3	+1.2
LLLB	Lillooet	5.06	59	Pn	Pn	20 20 23.9	+0.2
NVAR	Mina Array Bea	12.31	138	Pn	P	20 22 08.8	+4.7
	0.0nm,0.3s,baz=324,slow=17,SNR=3.2						
PDAR	Pinedale Array	14.45	105	Pn	P	20 22 36.1	+3.9
	0.1nm,0.3s,baz=297,slow=6.6,SNR=2.4						
YKA	Yellowknife Ar	16.37	24	Pn	P	20 22 56.3	-0.7
	0.0nm,0.3s,baz=212,slow=13,SNR=4.0						
YKA	Yellowknife Ar	16.37	24	Pn	P	20 22 56.3	-0.7
FFC	Flin Flon	17.81	58	*e*P	P	20 23 16.2	+1.0
	9.3nm,1.1s						
ILAR	Eielson Array	19.31	336	P	P	20 23 35.1	+1.7
	0.0nm,0.3s,baz=144,slow=9.8,SNR=3.9						
INK	Inuvik	20.34	355	P	P	20 23 46.3	+1.6
	1.4nm,0.9s,baz=183,slow=10,SNR=3.7						

WEL 28 20:26:06.2±0.6**, 38.36S**×**176.18E, h154^{km}**±4^{km}**, ML3.7**/11**, 10C, Error ellipse: s-maj=3.9km s-min=2.8km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.74	82	⇑PN	P	20 26 29.0	-0.7
URZ				SN	S	20 26 47.3	-0.5
MGZ	Maungaku	0.81	218	⇑PN	P	20 26 30.0	-0.1
BKZ	Black Stump Fm	0.84	163	⇑PN	P	20 26 30.5	+0.1
WTVZ	West Tongariro	0.88	211	PN	P	20 26 30.4	-0.2
OTVZ	Oturere	0.90	206	⇑PN	P	20 26 30.9	+0.2
TWVZ	Taurewa	0.91	219	PN	P	20 26 30.5	-0.3
NGZ	Ngauruhoe	0.93	209	PN	P	20 26 30.9	0.0
CNZ	Chateau	0.97	210	PN	P	20 26 31.1	-0.1
WPVZ	Whakapapa	0.97	210	PN	P	20 26 31.1	-0.2
TUVZ	Tukino	0.99	204	⇑PN	P	20 26 31.4	+0.1
FWVZ	Far West T-bar	1.02	209	⇑PN	P	20 26 31.6	0.0
MWZ	Matawai	1.06	89	⇑PN	P	20 26 31.9	-0.1
MWZ				SN	S	20 26 52.1	+0.2
WNVZ	Wahianoa	1.06	205	⇑PN	P	20 26 31.9	-0.1
MOVZ	Moawhango	1.09	197	PN	P	20 26 31.8	-0.6
KNZ	Kokohu	1.34	120	PN	P	20 26 35.0	+0.2
KNZ				SN	S	20 26 53.8	-3.0
TSZ	Takapari Road	1.70	186	PN	P	20 26 37.6	-0.9
PWZ	Pawanui	1.75	162	PN	P	20 26 38.8	-0.2
BFZ	Birch Farm	2.31	179	PN	P	20 26 44.1	-1.7
BFZ				SN	S	20 27 14.1	-2.1
MRZ	Mangatainoka R	2.34	191	⇑PN	P	20 26 43.8	-2.3
MRZ				SN	S	20 27 15.2	-1.5
KIW	Kapiti Island	2.68	201	PN	P	20 26 47.1	-3.2
MTW	Mount Morrison	2.84	190	PN	P	20 26 49.1	-3.3
CAW	Cannon Point	2.87	197	PN	P	20 26 49.5	-3.3
PAWZ	Paruwai Farm	3.07	191	PN	P	20 26 51.8	-3.5
MRW	Makara Radio	3.08	201	PN	P	20 26 51.6	-3.8
MSWZ	Moikau Station	3.13	193	⇑PN	P	20 26 52.3	-3.8
NNZ	Nelson	3.57	216	SN	S	20 27 39.6	-5.0
QRZ	Quartz Range	3.74	228	PN	P	20 26 58.4	-5.6
THZ	Tophouse	4.22	215	PN	P	20 27 05.1	-5.2
KHZ	Kahutara	4.52	206	PN	P	20 27 09.5	-4.7
DSZ	Denniston Nort	4.76	223	SN	S	20 28 04.7	-7.6
LTZ	Lake Taylor	5.32	213	*e*SN	S	20 28 16.4	-9.3

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*MOS **28** 20:35:37.6±0.8, 86.26N×35.13E, h10^{km}, mb4.2/4, Error ellipse: s-maj=99.9km s-min=11.8km az=89.5*

*IDC **28** 20:35:37.9±0.8, 86.27N×36.93E, mb3.6/10, mb1 3.9/11, mb1mx3.8/20, mbtmp3.7/11, ML3.8/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/27, Error ellipse: s-maj=26.4km s-min=15.8km az=82.0*

*NEIC **28** 20:35:39.3±0.6, 86.24N×34.77E, h10^{km}, mb3.6/1, Error ellipse: s-maj=12.6km s-min=11.5km az=99.0*

ISC 28 20:35:36.6±2.8**, 86.22N**±0.06×**3 5E**± **, h3^{km}**±17^{km}**, n28, σ1^{s}.08**/29**, mb3.7**/12**, MS3.6**/6**, 1C-2D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	7.78	214	*e*P	Pn	20 37 30.8	-2.7
KBS				pmax	pmax		
	comp=Z,12nm,0.6s						
KBS	Kingsbay	7.78	214	*e*P	Pn	20 37 30.8	-2.7
	comp=Z,12nm,0.6s						
HOPEN	Hopen	9.85	193	*e*P	P	20 38 00.0	-1.9
HOPEN				*e*S	Sn	20 39 40.9	-13
DAG	Danmarks Havn	11.46	249	⇓*i*P	P	20 38 23.9	0.0
DAG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DAG	Danmarks Havn	11.46	249	⇓*i*P	P	20 38 23.9	0.0
	comp=Z,6.3nm,1.2s						
SUMG	Summit	16.82	265	*e*P	P	20 39 33.1	-1.0
	comp=Z,3.5nm,0.7s						
ARCES	ARCESS Array B	16.85	191	Pn	P	20 39 35.1	+0.7
	comp=Z,0.5nm,0.3s,baz=16,slow=8.8,SNR=9.3						
ARCES				LR	LR	20 45 27.3	
	comp=Z,82nm,20.3s,baz=20,slow=35						
SCO	Scoresbysund	17.83	247	*e*P	P	20 39 48.2	+1.5
SCO	Scoresbysund	17.83	247	*i* P	P	20 39 48.2	+1.5
BILL	Bilibino	24.77	42	*e*P	P	20 40 59.9	0.0
BILL				*e*		20 44 36.5	
BILL				*e*S	S	20 45 19.9	-0.1
BILL				*e*SS	SS	20 46 09.1	-7.4
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
BILL				MLR	MLR		
	comp=Z,1µm,22.0s,MS4.3						
FINES	FINESS Array B	24.97	190	P	P	20 41 04.1	+2.2
	comp=Z,1.2nm,0.7s,mb3.5,baz=27,slow=13,SNR=3.5						
FINES				LR	LR	20 50 08.1	
	comp=Z,58nm,18.7s,MS3.1,baz=137,slow=35						
ILAR	Eielson Array	29.18	1	P	P	20 41 40.8	+0.3
	comp=Z,2.0nm,1.1s,mb3.8,baz=351,slow=6.2,SNR=12						
YKA	Yellowknife Ar	30.99	333	P	P	20 41 55.7	-0.9
	comp=Z,0.0nm,0.3s,slow=9.1,SNR=5.5						
YKA				PcP	PcP	20 44 51.3	-1.5
	comp=Z,0.1nm,0.4s,baz=350,slow=2.5,SNR=3.5						

YKA				LR	LR	20 54 07.0	
	comp=Z,104nm,18.4s,MS3.5,baz=275,slow=36						
YKA	**Yellowknife Ar**	**30.99**	**333**	P	**P**	**20 41 55.7**	**-0.9**
YKA				PcP	PcP	20 44 51.4	-1.5
YKA				LR	LR	20 54 07.0	
OBN	**Obninsk**	**31.27**	**178**	*e*P	**P**	**20 42 00.0**	**+0.9**
OBN				*e*		20 44 52.4	
OBN				*e*S	**S**	**20 47 03.9**	**-1.3**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.7s,mb4.3						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.5						
ZAL	**Zalesovo**	**33.91**	**126**	P	**P**	**20 42 21.6**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.5,baz=105,slow=12,SNR=3.2						
AKASG	**Malin Array Be**	**35.70**	**186**	P	**P**	**20 42 37.1**	**-0.4**
	comp=Z,0.1nm,0.3s,mb3.2,baz=357,slow=9.0,SNR=4.6						
GERES	**GERESS Array B**	**37.82**	**203**	P	**P**	**20 42 56.2**	**+0.8**
	comp=Z,0.7nm,0.9s,mb3.4,baz=8.1,slow=9.4,SNR=4.7						
ZAK	**Zakamensk**	**38.55**	**107**	*e*P	**P**	**20 43 01.6**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.6						
SONM	**Songino Array**	**41.29**	**104**	P	**P**	**20 43 24.1**	**-0.1**
	comp=Z,0.7nm,1.0s,mb3.3,baz=349,slow=6.3,SNR=5.3						
AAK	**Ala-Archa**	**44.68**	**138**	⇑*e*P	**P**	**20 43 52.5**	**+0.7**
NEW	**Newport**	**45.31**	**334**	LR	LR	21 02 31.5	
	comp=Z,130nm,19.7s,MS3.9,baz=176,slow=36						
GNI	**Garni**	**46.30**	**169**	LR	LR	21 06 44.3	
	comp=Z,40nm,18.7s,MS3.4,baz=155,slow=40						
BRTR	**Keskin Array B**	**46.66**	**181**	P	**P**	**20 44 08.8**	**+1.3**
	comp=Z,3.6nm,1.1s,mb4.2,slow=3.7,SNR=6.2						
PDAR	**Pinedale Array**	**50.55**	**326**	P	**P**	**20 44 38.0**	**+0.4**
	comp=Z,0.4nm,0.8s,mb3.4,baz=22,slow=4.9,SNR=3.5						
ANMO	**Albuquerque**	**58.23**	**323**	*i* P	**P**	**20 45 27.6**	**-6.3**
CMAR	**Chiang Mai Arr**	**70.04**	**115**	*i* P	**P**	**20 46 50.2**	**-1.0**
CMAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**70.04**	**115**	P	**P**	**20 46 49.1**	**-2.1**
	comp=Z,1.1nm,1.0s,mb3.8,baz=359,slow=6.1,SNR=6.5						

PGC 28 20:44:48.5,48.05N×128.92W,h10^{km},MLSn2.9/1,Mw3.5,
Northern Juan de Fuca ridge.,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**2.18**	**32**	Pn	Pn	20 45 22.3	-3.1
OZB	**Mount Ozzard**	**2.46**	**67**	Pn	Pn	20 45 26.7	-2.6
OZB				Sn	Sn	20 45 55.1	-4.6
OZB				Trac		20 45 56.6	
	comp=Z,3.0nm,0.1s						
GDR	**Gold River**	**2.58**	**47**	Pn	Pn	20 45 28.2	-2.8
WOSB	**Woss**	**2.62**	**35**	Pn	Pn	20 45 29.2	-2.5
MAYB	**Maynard**	**2.62**	**25**	Pn	Pn	20 45 29.1	-2.7
MAYB				Sn	Sn	20 45 59.8	-4.2
	comp=Z,6.0nm,0.4s						
MAYB				Trac		20 46 00.9	
	comp=Z,6.0nm,0.4s						
HOLB	**Holberg**	**2.65**	**11**	Pn	Pn	20 45 30.3	-1.8
HOLB				Sn	Sn	20 45 59.4	-5.2
	comp=Z,9.0nm,0.6s						
HOLB				Trac		20 46 02.6	
	comp=Z,9.0nm,0.6s						
BTB	**Buttle Lake**	**2.66**	**56**	Pn	Pn	20 45 30.8	-1.5
BTB				Sn	Sn	20 46 00.8	-4.1
	comp=Z,13nm,0.6s						
BTB				Trac		20 46 05.4	
	comp=Z,13nm,0.6s						
PHC	**Port Hardy**	**2.83**	**20**	Pn	Pn	20 45 32.4	-2.3
MGB	**Mount Grey**	**2.97**	**70**	Pn	Pn	20 45 34.2	-2.5
MGB				Sn	Sn	20 46 06.7	-6.0
	comp=Z,3.0nm,0.3s						
MGB				Trac		20 46 09.4	
	comp=Z,3.0nm,0.3s						
NCRB	**Newcastle Ridg**	**3.02**	**37**	Pn	Pn	20 45 35.4	-1.9
NCRB				Sn	Sn	20 46 10.3	-3.6
	comp=Z,6.0nm,0.5s						
NCRB				Trac		20 46 12.2	
	comp=Z,6.0nm,0.5s						
PFB	**Port Renfrew**	**3.04**	**78**	Pn	Pn	20 45 35.2	-2.5
PFB				Sn	Sn	20 46 09.2	-5.2
CBB	**Campbell River**	**3.07**	**48**	Pn	Pn	20 45 36.4	-1.7
CBB				Sn	Sn	20 46 11.9	-3.3
CBB				Trac		20 46 13.8	
	comp=Z,4.0nm,0.2s						
TXB	**Texada**	**3.39**	**59**	Pn	Pn	20 45 41.0	-1.6
TXB				Sn	Sn	20 46 19.4	-4.0
	comp=Z,10nm,0.7s						
TXB				Trac		20 46 22.7	
	comp=Z,10nm,0.7s						
LZB	**Mount Lazard**	**3.45**	**79**	Pn	Pn	20 45 40.8	-2.7
LZB				Sn	Sn	20 46 21.3	-3.5
LZB				Trac		20 46 21.7	
	comp=Z,2.0nm,0.7s						
SNB	**Saturna Island**	**3.90**	**77**	Pn	Pn	20 45 47.0	-2.9
BBB	**Bella Bella**	**4.18**	**7**	Pn	Pn	20 45 51.9	-1.9
BBB				Sn	Sn	20 46 37.9	-5.4
BBB				Trac		20 46 39.3	
	comp=Z,6.0nm,0.5s						

*IDC **28** 20:50:21.9±1.0,8.49N×93.20E,mb3.9/8,mb1 4.1/9, mb1mx3.9/19,mbtmp3.9/9,ML4.1/1,MS3.6/1,Ms1 3.6/1, ms1mx2.6/15,Error ellipse: s-maj=46.8km s-min=17.7km az=58.0*
*NEIC **28** 20:50:26.2±0.6,8.43N×93.30E,h30^{km},mb4.4/2,Error ellipse: s-maj=15.3km s-min=8.6km az=59.0*
ISC 28 20:50:24.9±0.8**,8.49N**±0.10×**93.4E**±0.1**,h33^{km},n19,**
σ**0^{s}60**/19**,mb4.1**/12**,MS3.6**/1**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CM31	**Chiang Mai Arr**	**11.28**	**28**	P	**P**	**20 53 06.6**	**-0.4**
	1.3nm,0.3s						
CMAR	**Chiang Mai Arr**	**11.28**	**28**	Pn	**P**	**20 53 07.5**	**+0.6**
	0.4nm,0.3s,baz=212,slow=15,SNR=12						
PKI	**Pulchoki**	**20.42**	**339**	*e*P	**P**	**20 55 02.5**	**+0.5**
	19nm,0.5s						
DMN	**Daman**	**20.56**	**339**	*e*P	**P**	**20 55 04.1**	**+0.6**
	22nm,0.7s						
KKN	**Kakani**	**20.66**	**339**	*e*P	**P**	**20 55 04.6**	**0.0**
	11nm,0.4s						
GKN	**Gorkha**	**21.09**	**338**	*e*P	**P**	**20 55 09.4**	**+0.5**
	32nm,0.4s,mb5.0						
LSA	**Lhasa**	**21.20**	**355**	*e*P	**P**	**20 55 09.5**	**-0.5**
KOLN	**Koldanda**	**21.29**	**336**	*e*P	**P**	**20 55 11.6**	**+0.7**
	18nm,0.7s,mb4.5						
SONM	**Songino Array**	**40.73**	**13**	P	**P**	**20 58 04.1**	**-0.1**
	0.5nm,0.4s,mb3.5,baz=199,slow=9.5,SNR=5.3						
KURK	**Kurchatov**	**43.83**	**346**	P	**P**	**20 58 29.3**	**-0.4**
ZAL	**Zalesovo**	**45.84**	**353**	P	**P**	**20 58 45.5**	**-0.2**
	1.2nm,0.4s,mb4.2,baz=298,slow=5.5,SNR=7.3						
BVAR	**Borovoye Array**	**48.17**	**342**	P	**P**	**20 59 03.6**	**-0.3**
	0.5nm,0.3s,mb4.0,baz=146,slow=8.9,SNR=9.9						
CHKZ	**Chkalovo**	**48.66**	**342**	*e*P	**P**	**20 59 07.0**	**-0.7**
	2.4nm,0.4s,mb4.6						
WRA	**Warramunga Arr**	**49.23**	**125**	P	**P**	**20 59 12.9**	**+0.3**
	0.7nm,0.4s,mb4.0,baz=305,slow=8.5,SNR=21						
WRA				PcP	PcP	21 00 37.1	+1.5
	0.3nm,0.5s,baz=311,slow=3.0,SNR=5.2						
WRAB	**Tennant Creek**	**49.23**	**125**	*e*P	**P**	**20 59 12.5**	**-0.1**
	1.5nm,0.5s,mb4.3						
ASAR	**Alice Springs**	**50.89**	**130**	P	**P**	**20 59 25.4**	**+0.2**
	0.7nm,0.6s,mb3.8,baz=303,slow=6.7,SNR=14						
ASAR				PcP	PcP	21 00 44.1	+2.5
	1.4nm,1.2s,baz=312,slow=3.3,SNR=4.0						
ASAR				LR	LR	21 23 10.3	
	comp=Z,54nm,18.3s,MS3.6,baz=11,slow=39						
FINES	**FINESS Array B**	**71.82**	**332**	P	**P**	**21 01 44.0**	**-1.9**
	1.3nm,0.8s,mb3.9,baz=90,slow=9.7,SNR=3.4						
ARCES	**ARCESS Array B**	**74.43**	**340**	P	**P**	**21 02 01.5**	**+0.4**
	5.9nm,1.0s,mb4.5,baz=102,slow=7.3,SNR=12						
GERES	**GERESS Array B**	**76.87**	**318**	P	**P**	**21 02 16.0**	**+0.6**
	0.2nm,0.4s,mb3.4,baz=63,slow=6.0,SNR=3.9						

*BJI **28** 20:52:03.6,30.77N×99.55E,h14^{km},mb3.5,ML3.5*
*NEIC **28** 20:52:03.5±0.7,30.67N×99.76E,h10^{km},mb3.8/2,Error ellipse: s-maj=13.7km s-min=10.0km az=159.0*
*IDC **28** 20:52:03.0±1.2,30.59N×100.17E,mb3.7/4,mb1 3.7/5, mb1mx3.5/19,mbtmp3.6/5,ML3.8/1,Error ellipse: s-maj=80.0km s-min=21.6km az=63.0*
ISC 28 20:52:01.4±0.7**,30.74N**±0.06×**99.84E**±0.05**,h10^{km},n12,**
σ**1^{s}24**/15**,mb3.7**/6**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.38**	**86**	*e*P	**Pn**	**20 53 01.5**	**+6.2**
CD2				*e*PG	**Pg**	**20 53 08.0**	**-0.8**
CD2				SG	**Sg**	**20 53 54.5**	**+0.7**
CD2				Smax			
	comp=N,94nm,1.2s						
LZH	**Lanzhou**	**6.30**	**31**	Pg	**Pg**	**20 54 06.3**	**-0.8**
	comp=N,36nm,1.2s						
LZH				Sg	**Sg**	**20 55 30.0**	**-1.1**
LSA	**Lhasa**	**7.59**	**264**	*e*P	**Pn**	**20 53 54.3**	**-0.5**
	comp=N,4.0nm,0.6s						
ENH	**Enshi**	**8.34**	**91**	*e*P	**P**	**20 54 06.3**	**+1.1**
	comp=N,4.3nm,0.7s						
JIRN	**Jiri**	**12.31**	**259**	*e*P	**P**	**20 54 59.5**	**-0.2**
	comp=N,13nm,0.4s						
SONM	**Songino Array**	**17.80**	**15**	P	**P**	**20 56 13.1**	**+2.4**
	comp=N,0.1nm,0.3s,baz=130,slow=19,SNR=4.0						
AAK	**Ala-Archa**	**23.45**	**307**	P	**P**	**20 57 12.4**	**+0.8**
	comp=N,1.6nm,0.9s,mb3.5						
KURK	**Kurchatov**	**25.47**	**328**	*e*P	**P**	**20 57 29.8**	**-1.2**
	comp=N,2.6nm,0.8s,mb3.8						
ZAL	**Zalesovo**	**25.61**	**339**	P	**P**	**20 57 36.0**	**+3.8**
	comp=N,1.2nm,0.6s,mb3.6,baz=319,slow=7.7,SNR=7.5						
WRA	**Warramunga Arr**	**60.32**	**142**	P	**P**	**21 02 11.6**	**-1.3**
	comp=N,0.8nm,1.0s,mb3.7,baz=334,slow=7.3,SNR=7.4						
HFS	**Hagfors**	**62.02**	**326**	P	**P**	**21 02 26.6**	**+2.7**
	comp=N,0.6nm,0.3s,mb4.2,baz=90,slow=7.2,SNR=7.8						
ASAR	**Alice Springs**	**63.19**	**145**	P	**P**	**21 02 31.4**	**-0.7**
	comp=N,0.3nm,0.8s,mb3.5,baz=326,slow=6.9,SNR=4.6						

*IDC **28** 21:07:26.7±0.9,83.16N×117.33E,mb3.6/9,mb1 3.9/9, mb1mx3.7/21,mbtmp3.7/9,MS3.4/1,Ms1 3.4/1, ms1mx2.7/20,Error ellipse: s-maj=27.9km s-min=17.5km az=158.0*
*NEIC **28** 21:07:28.2±0.5,83.16N×117.24E,h10^{km},mb3.8/2,Error ellipse: s-maj=14.7km s-min=10.2km az=154.0*
ISC 28 21:07:26.6±0.6**,83.1N**±0.1×**117.0E**±0.8**,h10^{km},n12,**
σ**0^{s}86**/12**,mb3.6**/11**,MS3.4**/1**,North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**21.84**	**289**	P	**P**	**21 12 20.5**	**-0.1**
	2.2nm,0.7s,mb3.7,baz=34,slow=8.7,SNR=4.1						
INK	**Inuvik**	**24.96**	**56**	P	**P**	**21 12 50.8**	**0.0**
	2.3nm,0.5s,mb3.9,baz=350,slow=6.5,SNR=8.1						
ILAR	**Eielson Array**	**26.95**	**70**	P	**P**	**21 13 09.9**	**+0.5**
	0.3nm,0.9s,mb2.8,baz=343,slow=9.4,SNR=4.6						
DAWY	**Dawson**	**28.47**	**64**	P	**P**	**21 13 24.3**	**+1.2**
CHKZ	**Chkalovo**	**32.07**	**234**	*e*P	**P**	**21 13 54.8**	**-0.4**
	0.7nm,0.8s,mb3.5						
YKA	**Yellowknife Ar**	**32.39**	**43**	P	**P**	**21 13 55.7**	**-2.2**
	0.4nm,0.6s,mb3.4,baz=351,slow=8.6,SNR=10						
YKA				LR	LR	21 27 38.1	
	comp=Z,76nm,21.0s,MS3.4,baz=220,slow=38						
ULN	**Ulaanbaatar**	**35.52**	**191**	*e*P	**P**	**21 14 25.2**	**+0.1**
	1.1nm,0.8s,mb3.8						
SONM	**Songino Array**	**35.57**	**192**	P	**P**	**21 14 25.9**	**+0.4**
	1.5nm,1.1s,mb3.8,baz=346,slow=10,SNR=6.2						
AKASG	**Malin Array Be**	**39.72**	**276**	P	**P**	**21 14 59.8**	**-0.5**
	1.0nm,0.5s,mb3.8,baz=9.8,slow=8.6,SNR=5.6						
GERES	**GERESS Array B**	**43.36**	**291**	P	**P**	**21 15 30.4**	**+0.4**
	0.6nm,0.8s,mb3.4,baz=14,slow=5.5,SNR=4.0						
BRTR	**Keskin Array B**	**50.00**	**269**	P	**P**	**21 16 23.6**	**+1.2**
	1.5nm,0.9s,mb4.0,baz=7.7,slow=4.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**65.09**	**199**	P	**P**	**21 18 08.1**	**-1.0**
	0.5nm,0.7s,mb3.6,baz=350,slow=8.7,SNR=4.3						

*PGC **28** 21:16:41.2,48.05N×128.88W,h10^{km},MLSn3.2/1,Mw3.8, Northern Juan de Fuca ridge.*
*IDC **28** 21:16:43.7±2.4,48.24N×128.79W,mb3.4/2,mb1 3.8/7, mb1mx3.5/23,mbtmp3.6/7,ML3.4/5,MS3.2/1,Ms1 3.2/1, ms1mx2.6/17,Error ellipse: s-maj=56.5km s-min=13.9km az=73.0*
*NEIC **28** 21:16:46.6±1.1,48.42N×128.41W,h10^{km},mb3.9/1,Error ellipse: s-maj=19.7km s-min=8.6km az=63.0*
ISC 28 21:16:43.0±1.2**,48.29N**±0.05×**128.55W**±0.09**,h6**^{km}±12^{km}**,**
n36,σ**1^{s}11**/50**,mb3.4**/1**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.84**	**30**	Pn	**Pn**	**21 17 15.2**	**-0.3**
OZB	**Mount Ozzard**	**2.13**	**71**	Pn	**Pn**	**21 17 18.8**	**-0.9**
OZB				Sn	**Sn**	**21 17 47.0**	**+0.3**
OZB				Trac		21 17 48.6	
	comp=Z,19nm,0.5s						
GDR	**Gold River**	**2.23**	**47**	Pn	**Pn**	**21 17 20.6**	**-0.3**
GDR				Trac		21 17 58.6	
	comp=Z,7.0nm,0.4s						
WOSB	**Woss**	**2.28**	**34**	Pn	**Pn**	**21 17 21.9**	**+0.2**
WOSB				Sn	**Sn**	**21 17 53.3**	**+2.9**
	comp=Z,2.0nm,0.1s						
WOSB				Trac		21 17 53.6	
	comp=Z,2.0nm,0.1s						
MAYB	**Maynard**	**2.30**	**23**	Pn	**Pn**	**21 17 21.6**	**-0.4**
MAYB				Sn	**Sn**	**21 17 51.9**	**+1.0**
	comp=Z,11nm,0.4s						
MAYB				Trac		21 17 51.9	
	comp=Z,11nm,0.4s						
BTB	**Buttle Lake**	**2.32**	**58**	Pn	**Pn**	**21 17 23.2**	**+0.9**
BTB				Sn	**Sn**	**21 17 52.9**	**+1.4**
	comp=Z,37nm,0.5s						
BTB				Trac		21 17 55.5	
	comp=Z,37nm,0.5s						
HOLB	**Holberg**	**2.37**	**6**	Pn	**Pn**	**21 17 22.8**	**-0.2**
HOLB				Sn	**Sn**	**21 17 53.8**	**+1.1**
	comp=Z,5.0nm,0.3s						
HOLB				Trac		21 17 58.7	
	comp=Z,5.0nm,0.3s						
PHC	**Port Hardy**	**2.53**	**16**	Pn	**Pn**	**21 17 25.7**	**+0.4**
MGB	**Mount Grey**	**2.65**	**73**	Pn	**Pn**	**21 17 26.1**	**-1.0**
MGB				Sn	**Sn**	**21 17 58.8**	**-1.2**
	comp=Z,6.0nm,0.3s						
MGB				Trac		21 18 02.2	
	comp=Z,6.0nm,0.3s						
NCRB	**Newcastle Ridg**	**2.67**	**37**	Pn	**Pn**	**21 17 27.7**	**+0.4**
NCRB				Sn	**Sn**	**21 17 59.3**	**-1.0**
	comp=Z,11nm,0.5s						
NCRB				Trac		21 18 04.8	
	comp=Z,11nm,0.5s						
CBB	**Campbell River**	**2.72**	**49**	Pn	**Pn**	**21 17 29.6**	**+1.6**
CBB				Sn	**Sn**	**21 18 03.2**	**+1.5**
CBB				Trac		21 18 04.6	
	comp=Z,15nm,0.5s						
PFB	**Port Renfrew**	**2.75**	**83**	Pn	**Pn**	**21 17 27.2**	**-1.2**
PFB				Sn	**Sn**	**21 18 01.0**	**-1.4**
PFB				Trac		21 18 04.2	
	comp=Z,4.0nm,0.5s						
OCWA	**Octopus Mounta**	**2.98**	**99**	P	**Pn**	**21 17 33.6**	**+1.8**
TXB	**Texada**	**3.05**	**61**	Pn	**Pn**	**21 17 32.7**	**-0.1**
TXB				Sn	**Sn**	**21 18 12.3**	**+2.3**
	comp=Z,8.9nm,0.5s						
TXB				Trac		21 18 14.4	
	comp=Z,8.9nm,0.5s						
LZB	**Mount Lazard**	**3.16**	**82**	Pn	**Pn**	**21 17 33.2**	**-1.1**
LZB				Sn	**Sn**	**21 18 11.3**	**-1.5**
LZB				Trac		21 18 15.7	
	comp=Z,5.0nm,0.9s						
SHB	**Sechelt**	**3.35**	**65**	Pn	**Pn**	**21 17 38.0**	**+1.0**
SHB				Sn	**Sn**	**21 18 16.5**	**-1.0**
SHB				Trac		21 18 23.8	
	comp=Z,23nm,0.7s						
GOBB	**Galiano Island**	**3.41**	**77**	Pn	**Pn**	**21 17 37.4**	**-0.4**
PGC	**Sidney**	**3.41**	**82**	*e*P	**Pn**	**21 17 36.8**	**-1.1**
SNB	**Saturna Island**	**3.61**	**80**	Pn	**Pn**	**21 17 40.8**	**+0.2**
BIB	**Bowen Island**	**3.64**	**70**	Pn	**Pn**	**21 17 38.4**	**-2.6**
BIB				Trac		21 18 28.2	
	comp=Z,1.0nm,0.1s						
BBB	**Bella Bella**	**3.91**	**4**	Pn	**Pn**	**21 17 44.2**	**-0.7**
	10nm,0.3s,baz=192,slow=9.3,SNR=111						
BBB				Sn	**Sn**	**21 18 30.0**	**-1.8**
	baz=72,slow=23,SNR=1.8						
BBB	**Bella Bella**	**3.91**	**4**	Pn	**Pn**	**21 17 44.2**	**-0.7**
BBB				Sn	**Sn**	**21 18 30.0**	**-1.8**
BBB	**Bella Bella**	**3.91**	**4**	Pn	**Pn**	**21 17 44.1**	**-0.8**
BBB				Sn	**Sn**	**21 18 29.4**	**-2.3**
BBB				Trac		21 18 33.5	
	comp=Z,16nm,0.9s						
WSLR	**Whistler**	**4.12**	**61**	Pn	**Pn**	**21 17 49.1**	**+1.2**
VDB	**Vedder Mountai**	**4.33**	**78**	Pn	**Pn**	**21 17 50.8**	**-0.2**
LLLB	**Lillooet**	**4.93**	**59**	Pn	**Pn**	**21 17 59.3**	**-0.1**
NEW	**Newport**	**7.63**	**86**	LR	LR	21 21 51.9	
	comp=Z,153nm,19.8s,baz=123,slow=40						
YBH	**Yreka Blue Hor**	**7.75**	**146**	Pn	**Pn**	**21 18 40.9**	**+1.8**
	0.1nm,0.3s,baz=4.7,slow=4.1,SNR=4.4						
NVAR	**Mina Array Bea**	**12.35**	**139**	Pn	**P**	**21 19 43.7**	**+1.5**
	0.1nm,0.3s,baz=322,slow=12,SNR=6.4						
NVAR	**Mina Array Bea**	**12.35**	**139**	Pn	**P**	**21 19 43.7**	**+1.5**
YKA	**Yellowknife Ar**	**16.23**	**24**	Pn	**P**	**21 20 32.7**	**-0.1**
	0.0nm,0.3s,baz=214,slow=11,SNR=23						
YKA	**Yellowknife Ar**	**16.23**	**24**	Pn	**P**	**21 20 32.7**	**-0.1**
FFC	**Flin Flon**	**17.68**	**59**	*e*P	**P**	**21 20 52.2**	**+1.0**
	9.7nm,1.0s						
ILAR	**Eielson Array**	**19.24**	**336**	P	**P**	**21 21 09.1**	**-1.1**
	0.0nm,0.3s,baz=149,slow=9.2,SNR=4.7						
INK	**Inuvik**	**20.23**	**355**	P	**P**	**21 21 20.8**	**-0.4**
	0.9nm,0.8s,baz=176,slow=6.9,SNR=4.6						
ANMO	**Albuquerque**	**21.12**	**121**	P	**P**	**21 21 30.1**	**-0.6**
	1.6nm,0.8s,mb3.4,baz=295,slow=16,SNR=3.3						

*IDC **28** 21:27:48.1±2.9,48.12N×130.06W,mb1 3.8/6, mb1mx3.5/23,mbtmp3.5/6,ML3.6/6,Error ellipse: s-maj=51.6km s-min=17.3km az=72.0*
*NEIC **28** 21:27:51.3±1.4,48.49N×129.23W,h10^{km},mb3.7/1,Error ellipse: s-maj=23.5km s-min=13.7km az=59.0*
*PGC **28** 21:27:51.1,48.05N×128.83W,h10^{km},MLSn3.0/1,Mw3.7, Northern Juan de Fuca ridge.*
ISC 28 21:27:53.1±0.9**,48.29N**±0.04×**128.57W**±0.08**,h10^{km},n27,**
σ**1^{s}16**/39**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**1.85**	**30**	Pn	**Pn**	**21 28 24.8**	**-0.5**
OZB	**Mount Ozzard**	**2.15**	**71**	Pn	**Pn**	**21 28 28.9**	**-0.6**
OZB				Sn	**Sn**	**21 28 56.0**	**-0.4**
OZB				Trac		21 28 58.1	
	comp=Z,10.0nm,0.3s						
GDR	**Gold River**	**2.24**	**47**	Pn	**Pn**	**21 28 30.5**	**-0.3**
GDR				Sn	**Sn**	**21 29 00.1**	**+1.4**
	comp=Z,6.0nm,0.5s						
GDR				Trac		21 29 06.5	
	comp=Z,6.0nm,0.5s						
WOSB	**Woss**	**2.28**	**34**	Pn	**Pn**	**21 28 31.7**	**+0.3**
MAYB	**Maynard**	**2.30**	**23**	Pn	**Pn**	**21 28 31.3**	**-0.4**
MAYB				Sn	**Sn**	**21 29 01.1**	**+0.8**
	comp=Z,8.0nm,0.5s						
MAYB				Trac		21 29 04.0	
	comp=Z,8.0nm,0.5s						
BTB	**Buttle Lake**	**2.33**	**58**	Pn	**Pn**	**21 28 30.4**	**-1.7**
BTB				Sn	**Sn**	**21 29 02.3**	**+1.2**
	comp=Z,22nm,0.5s						
BTB				Trac		21 29 05.1	
	comp=Z,22nm,0.5s						
HOLB	**Holberg**	**2.37**	**7**	Pn	**Pn**	**21 28 32.4**	**-0.3**
MGB	**Mount Grey**	**2.67**	**73**	Pn	**Pn**	**21 28 35.6**	**-1.3**
MGB				Sn	**Sn**	**21 29 08.1**	**-1.5**
	comp=Z,5.0nm,0.4s						
MGB				Trac		21 29 11.8	
	comp=Z,5.0nm,0.4s						
NCRB	**Newcastle Ridg**	**2.68**	**37**	Pn	**Pn**	**21 28 37.5**	**+0.4**
NCRB				Sn	**Sn**	**21 29 12.4**	**+2.5**
	comp=Z,5.0nm,0.4s						
NCRB				Trac		21 29 14.8	
	comp=Z,5.0nm,0.4s						
CBB	**Campbell River**	**2.73**	**49**	Pn	**Pn**	**21 28 38.2**	**+0.4**
CBB				Sn	**Sn**	**21 29 13.1**	**+1.8**
CBB				Trac		21 29 14.4	
	comp=Z,8.0nm,0.4s						
PFB	**Port Renfrew**	**2.76**	**83**	Pn	**Pn**	**21 28 37.1**	**-1.2**
PFB				Sn	**Sn**	**21 29 10.1**	**-2.0**
OCWA	**Octopus Mounta**	**3.00**	**99**	P	**Pn**	**21 28 43.7**	**+2.1**
TXB	**Texada**	**3.06**	**61**	Pn	**Pn**	**21 28 42.9**	**+0.3**
TXB				Sn	**Sn**	**21 29 20.3**	**+0.7**
	comp=Z,12nm,0.5s						
TXB				Trac		21 29 24.1	
	comp=Z,12nm,0.5s						
LZB	**Mount Lazard**	**3.17**	**82**	Pn	**Pn**	**21 28 42.7**	**-1.4**
LZB				Sn	**Sn**	**21 29 21.8**	**-0.7**
LZB				Trac		21 29 23.8	
	comp=Z,2.0nm,0.7s						
SHB	**Sechelt**	**3.36**	**65**	Pn	**Pn**	**21 28 46.7**	**-0.1**
GOBB	**Galiano Island**	**3.42**	**77**	Pn	**Pn**	**21 28 47.3**	**-0.3**
PGC	**Sidney**	**3.42**	**82**	P	**Pn**	**21 28 50.7**	**+3.0**
BBB	**Bella Bella**	**3.91**	**4**	Pn	**Pn**	**21 28 53.9**	**-0.7**
	12nm,0.3s,baz=198,slow=13,SNR=93						
BBB				Sn	**Sn**	**21 29 40.2**	**-0.8**
	baz=151,slow=14,SNR=2.4						
BBB	**Bella Bella**	**3.91**	**4**	Pn	**Pn**	**21 28 53.9**	**-0.8**
BBB				Sn	**Sn**	**21 29 40.0**	**-1.1**
BBB				Trac		21 29 41.3	
	comp=Z,15nm,0.9s						
WSLR	**Whistler**	**4.13**	**61**	Pn	**Pn**	**21 28 57.4**	**-0.4**
LLLB	**Lillooet**	**4.94**	**59**	Pn	**Pn**	**21 29 08.2**	**-1.1**
YBH	**Yreka Blue Hor**	**7.76**	**146**	Pn	**Pn**	**21 29 50.0**	**+1.1**
	0.0nm,0.3s,baz=0.9,slow=12,SNR=2.9						
NVAR	**Mina Array Bea**	**12.35**	**139**	Pn	**P**	**21 30 54.4**	**+2.4**
	0.1nm,0.3s,baz=321,slow=13,SNR=4.3						
PDAR	**Pinedale Array**	**14.41**	**105**	Pn	**P**	**21 31 30.2**	**+11**
	0.1nm,0.3s,baz=333,slow=6.6,SNR=4.4						
YKA	**Yellowknife Ar**	**16.23**	**24**	Pn	**P**	**21 31 42.1**	**-0.4**
	0.0nm,0.3s,baz=215,slow=11,SNR=20						
FFC	**Flin Flon**	**17.69**	**59**	*e*P	**P**	**21 32 02.0**	**+1.1**
	4.3nm,0.7s						
ILAR	**Eielson Array**	**19.23**	**336**	P	**P**	**21 32 11.1**	**-8.7**
	0.0nm,0.3s,baz=157,slow=12,SNR=2.9						

*NEIC **28** 21:39:54.4±9.8,47.94N×129.12W,h10^{km},mb3.5/2,Error ellipse: s-maj=128.0km s-min=13.2km az=48.0*
*IDC **28** 21:39:60.0±2.2,48.25N×128.62W,mb3.4/2,mb1 3.6/8, mb1mx3.5/24,mbtmp3.4/8,ML3.4/4,Error ellipse: s-maj=42.9km s-min=13.7km az=69.0*
ISC 28 21:40:00.2±1.1**,48.36N**±0.07×**128.4W**±0.2**,h10^{km},n16,**
σ**0^{s}83**/18**,mb3.4**/1**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCWA	**Octopus Mounta**	**2.90**	**101**	P	**Pn**	**21 40 46.7**	**-0.7**
PGC	**Sidney**	**3.31**	**83**	*e*P	**Pn**	**21 40 52.7**	**-0.5**
BBB	**Bella Bella**	**3.83**	**3**	Pn	**Pn**	**21 40 59.7**	**-0.9**
	6.6nm,0.3s,baz=195,slow=11,SNR=50						
BBB				Sn	**Sn**	**21 41 46.2**	**-0.1**
	baz=49,slow=22,SNR=1.8						
BBB	**Bella Bella**	**3.83**	**3**	Pn	**Pn**	**21 40 59.7**	**-1.0**
BBB				Sn	**Sn**	**21 41 46.2**	**-0.1**
NEW	**Newport**	**7.53**	**87**	*e*P	**Pn**	**21 41 51.5**	**-1.3**
YBH	**Yreka Blue Hor**	**7.76**	**147**	Pn	**Pn**	**21 41 55.1**	**-0.9**
	0.1nm,0.3s,baz=8.4,slow=6.3,SNR=4.1						
NVAR	**Mina Array Bea**	**12.34**	**140**	Pn	**P**	**21 42 59.3**	**+0.5**
	0.0nm,0.3s,baz=324,slow=12,SNR=4.3						
PDAR	**Pinedale Array**	**14.33**	**106**	Pn	**P**	**21 43 28.6**	**+3.5**
	0.0nm,0.3s,baz=284,slow=12,SNR=3.9						
YKA	**Yellowknife Ar**	**16.13**	**24**	Pn	**P**	**21 43 48.3**	**0.0**
	baz=215,slow=11,SNR=19						
YKA	**Yellowknife Ar**	**16.13**	**24**	Pn	**P**	**21 43 48.3**	**0.0**
YKW3	**Yellowknife Ar**	**16.18**	**23**	P	**P**	**21 43 49.0**	**0.0**
FFC	**Flin Flon**	**17.56**	**59**	*e*P	**P**	**21 44 07.7**	**+1.3**
	4.0nm,0.7s						
ILAR	**Eielson Array**	**19.21**	**336**	P	**P**	**21 44 26.3**	**-0.3**
	baz=148,slow=12,SNR=2.7						
SDCO	**Great Sand Dun**	**19.74**	**114**	P	**P**	**21 44 33.4**	**+0.5**
	2.0nm,1.0s						
INK	**Inuvik**	**20.17**	**354**	P	**P**	**21 44 38.0**	**+0.7**
	1.1nm,0.7s,baz=151,slow=15,SNR=3.6						
ULM	**Lac du Bonnet**	**21.21**	**73**	P	**P**	**21 44 49.2**	**+1.1**
	1.1nm,0.5s,mb3.4,baz=278,slow=7.1,SNR=2.5						

*PGC **28** 21:40:03.8,48.04N×128.91W,h10^{km},MLSn3.3/1,Mw3.9, Northern Juan de Fuca ridge.*
*NEIC **28** 21:40:04.0,48.04N×128.91W,h10^{km},mb3.8/2, ML3.9(PGC),After PGC.*
*IDC **28** 21:40:08.1±2.0,48.29N×128.41W,mb3.6/3,mb1 4.0/10, mb1mx3.7/26,mbtmp3.8/10,ML3.6/7,MS3.3/1,Ms1 3.3/1, ms1mx2.8/16,Error ellipse: s-maj=40.9km s-min=12.6km az=68.0*
ISC 28 21:40:03.1±1.5**,48.02N**±0.05×**128.65W**±0.09**,h9**^{km}±13^{km}**,**
n53,σ**1^{s}10**/61**,mb3.5**/3**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	**Eliza Dome**	**2.11**	**28**	Pn	**Pn**	**21 40 37.8**	**-1.3**
OZB	**Mount Ozzard**	**2.30**	**65**	Pn	**Pn**	**21 40 42.4**	**+0.6**

OZB				Sn	Sn	21 41 09.9	-0.6
OZB				Trac		21 41 11.4	
	comp=Z,26nm,0.5s						
GDR	Gold River	2.47	44	Pn	Pn	21 40 43.7	-0.5
BTB	Buttle Lake	2.53	54	Pn	Pn	21 40 45.8	+0.7
BTB				Sn	Sn	21 41 16.6	+0.3
	comp=Z,33nm,0.4s						
BTB				Trac		21 41 17.0	
	comp=Z,33nm,0.4s						
WOSB	Woss	2.54	32	Pn	Pn	21 40 44.8	-0.4
MAYB	Maynard	2.57	22	Pn	Pn	21 40 45.0	-0.7
MAYB				Trac		21 41 16.3	
	comp=Z,19nm,0.4s						
HOLB	Holberg	2.64	7	Pn	Pn	21 40 45.6	-1.1
PHC	Port Hardy	2.80	16	Pn	Pn	21 40 47.9	-1.1
MGB	Mount Grey	2.81	68	Pn	Pn	21 40 49.1	+0.1
MGB				Sn	Sn	21 41 23.1	-0.4
	comp=Z,15nm,0.5s						
MGB				Trac		21 41 26.8	
	comp=Z,15nm,0.5s						
ALB	Alberni	2.83	62	Pn	Pn	21 40 49.7	+0.4
PFB	Port Renfrew	2.87	77	Pn	Pn	21 40 50.0	+0.1
PFB				Sn	Sn	21 41 23.6	-1.2
PFB				Trac		21 41 30.4	
	comp=Z,8.9nm,0.6s						
NCRB	Newcastle Ridg	2.93	35	Pn	Pn	21 40 50.6	-0.2
CBB	Campbell River	2.96	46	Pn	Pn	21 40 51.7	+0.6
CBB				Trac		21 41 28.2	
	comp=Z,34nm,0.7s						
TXB	Texada	3.25	57	Pn	Pn	21 40 53.6	-1.8
LZB	Mount Lazard	3.28	78	Pn	Pn	21 40 56.0	+0.2
LZB				Sn	Sn	21 41 35.7	+0.5
LZB				Trac		21 41 36.0	
	comp=Z,5.1nm,0.7s						
NLLB	Nanaimo Lost L	3.32	67	Trac		21 41 43.9	
	comp=Z,3.0nm,0.1s						
NLLB	Nanaimo Lost L	3.32	67	Sn	Sn	21 41 38.9	+2.5
SHB	Sechelt	3.53	62	Pn	Pn	21 41 00.0	+0.7
GOBB	Galiano Island	3.54	73	Pn	Pn	21 41 00.3	+0.8
VGZ	Gonzales	3.58	82	Pn	Pn	21 41 00.6	+0.5
VGZ				Sn	Sn	21 41 41.9	-1.2
VGZ				Trac		21 41 45.0	
	comp=Z,12nm,0.6s						
SNB	Saturna Island	3.73	76	Pn	Pn	21 41 03.4	+1.2
BIB	Bowen Island	3.80	67	Pn	Pn	21 41 04.4	+1.2
BBB	Bella Bella	4.18	5	Pn	Pn	21 41 07.1	-1.5
	22nm,0.3s,baz=197,slow=14,SNR=33						
BBB				Sn	Sn	21 41 53.2	-5.0
	baz=259,slow=20,SNR=1.7						
BBB	Bella Bella	4.18	5	Pn	Pn	21 41 07.1	-1.5
BBB				Sn	Sn	21 41 53.2	-5.0
BBB	Bella Bella	4.18	5	Pn	Pn	21 41 07.1	-1.5
BBB				Sn	Sn	21 41 52.9	-5.3
BBB				Trac		21 41 54.9	
	comp=Z,23nm,0.8s						
HNB	Haney	4.22	70	Pn	Pn	21 41 07.9	-1.2
WSLR	Whistler	4.32	59	Pn	Pn	21 41 11.8	+1.3
VDB	Vedder Mountai	4.47	75	Pn	Pn	21 41 13.1	+0.5
LLLB	Lillooet	5.13	57	Pn	Pn	21 41 21.7	-0.3
YBH	Yreka Blue Hor	7.57	144	Pn	Pn	21 42 03.2	+6.8
	0.1nm,0.3s,baz=299,slow=6.4,SNR=4.8						
YBH	Yreka Blue Hor	7.57	144	Pn	Pn	21 42 03.2	+6.8
NEW	Newport	7.72	84	Pn	Pn	21 42 02.6	+4.2
	1.0nm,0.3s,baz=286,slow=11,SNR=4.1						
NEW				LR	LR	21 45 13.7	
	comp=Z,240nm,21.5s,baz=252,slow=41						
NVAR	Mina Array Bea	12.19	138	Pn	P	21 43 06.5	+6.7
	0.1nm,0.3s,baz=320,slow=11,SNR=8.7						
NVAR	Mina Array Bea	12.19	138	Pn	P	21 43 06.5	+6.7
PDAR	Pinedale Array	14.40	104	Pn	P	21 43 35.2	+6.2
	0.1nm,0.3s,baz=304,slow=11,SNR=6.0						
PDAR	Pinedale Array	14.40	104	Pn	P	21 43 35.2	+6.2
MSU	Marysvale	15.28	122	P	P	21 43 41.0	+0.4
YKA	Yellowknife Ar	16.50	23	Pn	P	21 43 55.2	-0.8
	0.1nm,0.3s,baz=215,slow=11,SNR=11						
YKA	Yellowknife Ar	16.50	23	Pn	P	21 43 55.2	-0.8
PV10	Paradox Valley	17.20	117	P	P	21 44 02.9	-2.1
PV01	Paradox Valley	17.64	117	*e*P	P	21 44 08.0	-2.5
FFC	Flin Flon	17.88	58	*e*P	P	21 44 16.0	+2.6
	12nm,0.9s						
WUAZ	Wupatki	17.90	128	P	P	21 44 13.2	-0.6
ILAR	Eielson Array	19.45	336	P	P	21 44 34.1	+1.7
	0.0nm,0.3s,baz=154,slow=11,SNR=10						
ILAR	Eielson Array	19.45	336	P	P	21 44 34.1	+1.7
INK	Inuvik	20.49	355	P	P	21 44 45.9	+2.2
	1.8nm,0.6s,baz=154,slow=14,SNR=6.9						
INK	Inuvik	20.49	355	P	P	21 44 45.9	+2.2
ANMO	Albuquerque	21.05	120	P	P	21 44 53.9	+4.3
	1.9nm,0.8s,mb3.5,baz=352,slow=15,SNR=4.8						
ANMO	Albuquerque	21.05	120	P	P	21 44 53.9	+4.3
ULM	Lac du Bonnet	21.47	72	P	P	21 44 54.7	+1.0
	3.6nm,0.8s,mb3.8,baz=277,slow=8.1,SNR=3.9						
ULM	Lac du Bonnet	21.47	72	P	P	21 44 54.7	+1.0
MNTX	Cornudas Mount	24.04	124	P	P	21 45 19.9	+0.7
WMOK	Wichita Mounta	25.86	110	P	P	21 45 35.5	-1.0
	0.9nm,0.7s,mb3.4						

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*BJI **28** 21:59:40.5, 33.18N×137.62E, h27^{km}, mB4.6, mb4.4, Ms4.5, Msz4.2*

*JMA **28** 21:59:44.8±0.1, 33.33N×136.91E, h39^{km}±2^{km}, M4.5*

JMA Felt I J1.

*MOS **28** 21:59:46.4±1.1, 33.39N×136.96E, h32^{km}, mb4.7/12, Error ellipse: s-maj=12.9km s-min=8.3km az=110.9*

*NEIC **28** 21:59:47.8±0.3, 33.42N×136.87E, mb4.4/11, Error ellipse: s-maj=7.9km s-min=6.1km az=130.0*

NEIC Recorded [1 JMA] in Nara Prefecture.

*IDC **28** 21:59:47.6±0.7, 33.32N×136.90E, h26^{km}±4^{km}, mb3.8/14, mb1 4.0/16, mb1mx3.9/23, mbtmp4.0/16, ML3.9/2, MS4.0/13, Ms1 4.0/13, ms1mx3.8/28, Error ellipse: s-maj=19.4km s-min=14.4km az=76.0*

*NIED **28** 22:00:00, 33.30N×137.00E, h5^{km}, Mw4.5 Best double couple: $M_0$5.56×10^{15} NP1: ϕ_s166°, δ83°, λ-142°. NP2: ϕ_s70°, δ52°, λ-9°.*

ISC 28 21:59:44.2±0.8**, 33.36N**±0.04×**136.91E**±0.03**, h16**^{km}±5^{km}**, h27**^{km}±1.0^{km}**: pP-P, n96, σ1^{s}00**/109**, mb4.2**/37**, MS4.0**/19**, 7C-5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK01	Tokai 1	0.69	55	P	Pb	21 59 58.3	+0.8
TK02	Tokai 2	0.92	50	⇓P	Pb	22 00 01.6	+0.4
TK02				S	Sb	22 00 13.8	+0.8
JWZ	Kozaga	1.01	280	⇑P	Pb	22 00 02.9	0.0
JWZ				S	Sb	22 00 15.4	-0.4
JIE	Ise	1.04	351	⇓P	Pb	22 00 04.1	+0.7
JIE				S	Sb	22 00 17.1	+0.5
TK04	Tokai 4	1.30	38	P	Pb	22 00 07.3	-0.5
TK04				S	Sb	22 00 24.2	+0.2
JWM	Minabe	1.39	291	⇑P	Pn	22 00 08.6	-0.5
JWM				S	Sb	22 00 25.6	-1.0
JWY	Kouya	1.39	308	P	Pn	22 00 09.4	+0.3
JWY				S	Sb	22 00 26.2	-0.5
TSUJ	Tsu 2	1.40	343	⇓P	Pn	22 00 09.4	+0.1
JHE	Heguri	1.64	322	⇑P	Pn	22 00 12.6	-0.1
JHE				S	Sn	22 00 32.7	-0.9
JAJ2	Tsuna	1.99	303	⇑P	Pn	22 00 18.0	+0.3
SHZ3	Shizuoka 3	2.01	32	P	Pn	22 00 16.9	-1.1
SHZ3				S	Sn	22 00 42.3	-0.7
JAI	Aioi	2.10	282	P	Pn	22 00 18.7	-0.6
JAI				S	Sn	22 00 43.1	-2.1
JIZS	Izushimoda	2.12	50	P	Pn	22 00 20.1	+0.5
JHJ	Hachijo jima 2	2.42	95	Pn	Pn	22 00 23.7	-0.2
	46nm,0.3s,baz=101,slow=17,SNR=13						
JHJ				Sn	Sn	22 00 51.5	-1.9
	68nm,0.3s,baz=75,slow=23,SNR=4.6						
JHJ				LR	LR	22 01 29.9	
	comp=Z,2µm,18.4s,baz=287,slow=42						
MAJO	Matsushiro	3.35	18	*e*P	Pn	22 00 36.8	-0.3
MAT	Matsushiro	3.35	18	*e*P	Pn	22 00 37.0	-0.1
MAT				*e*S	Sn	22 01 17.0	+0.2
MAT	Matsushiro	3.35	18	P	Pn	22 00 37.0	-0.1
MAT				S	Sn	22 01 16.9	+0.1
CBIJ	Chichi jima	7.73	142	LR	LR	22 04 06.5	
	comp=Z,820nm,20.3s,baz=281,slow=34						
JOW	Kunigami	9.91	231	LR	LR	22 05 52.1	
	comp=Z,366nm,20.7s,baz=126,slow=37						
ASAJ	Asahikawa	11.61	21	P	P	22 02 29.0	-3.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,415nm,19.1s						
ASAJ	Asahikawa	11.61	21	Pn	P	22 02 28.9	-3.4
	comp=Z,1.3nm,0.3s,baz=37,slow=33,SNR=5.9						
ASAJ				LR	LR	22 07 55.7	
	comp=Z,415nm,19.1s,baz=198,slow=42						
MDJ	Mudanjiang	12.59	335	P	P	22 02 49.8	+4.3
MDJ				S	S	22 05 10.5	+4.1
MDJ				SS	SS	22 05 28.5	+7.1
MDJ				PCS		22 11 52.3	
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,31nm,3.6s						
MDJ				LR	LR		
	comp=N,600nm,15.6s						
MDJ				LR	LR		
	comp=E,1µm,16.5s						
MDJ				LR	LR		
	comp=Z,602nm,11.3s						
SSE	Sheshan	13.50	265	P	P	22 03 02.0	+4.3
SSE				S	S	22 05 29.3	+0.9
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				LR	LR		
	comp=N,1µm,19.3s						
SSE				LR	LR		
	comp=E,240nm,19.5s						
SSE				LR	LR		
	comp=Z,498nm,13.5s						
SSE	Sheshan	13.50	265	P	P	22 03 02.1	+4.4
	comp=Z,20nm,0.7s						
SSE				S	S	22 05 29.2	+0.8
SNY	Shenyang	13.52	313	⇑P	P	22 02 59.3	+1.5
SNY				XP		22 03 09.8	
SNY				AMB	AMB		
	comp=Z,10.0nm,1.7s						
SNY				LR	LR		
	comp=N,790nm,11.8s						
SNY				LR	LR		
	comp=E,890nm,14.1s						
SNY				LR	LR		
	comp=Z,860nm,14.7s						
CN2	Changchun	13.73	323	*e*P	P	22 03 07.0	+6.4
CN2				*e*S	S	22 05 44.0	+10
CN2				AMB	AMB		
	comp=Z,40nm,1.0s						
CN2				AMB	AMB		
	comp=Z,170nm,3.0s						
YSS	Yuzh-Sakhalins	14.28	16	P	P	22 03 13.8	+6.0
YSS				MLR	MLR		
	comp=N,1µm,14.0s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
YSS	Yuzh-Sakhalins	14.28	16	P	P	22 03 07.0	-0.8
NJ2	Nanjing	15.26	270	*e*P	P	22 03 26.5	+5.8
NJ2				AP		22 03 33.8	
NJ2				XP		22 03 37.5	
NJ2				S	S	22 06 14.0	+4.0
NJ2				XS		22 06 27.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s						
NJ2				AMB	AMB		
	comp=Z,440nm,4.1s						
NJ2				LR	LR		
	comp=N,4µm,21.0s						
NJ2				LR	LR		
	comp=E,2µm,13.2s						
NJ2				LR	LR		
	comp=Z,1µm,16.0s						
BJT	Baijiatuau	17.89	298	*e*P	P	22 03 54.3	+0.2
BJT				pmax	pmax		
	comp=Z,14nm,0.8s						
BJT	Baijiatuau	17.89	298	*e*P	P	22 03 54.3	+0.3
	comp=Z,14nm,0.8s						
BJI	Beijing	17.89	298	P	P	22 03 56.5	+2.4
BJI				AMB	AMB		
	comp=Z,26nm,1.2s						
BJI				LR	LR		
	comp=N,681nm,14.8s						
BJI				LR	LR		
	comp=E,1µm,14.7s						
BJI				LR	LR		
	comp=Z,851nm,16.4s						
BJI	Beijing	17.89	298	P	P	22 03 56.4	+2.3
BJI				S	S	22 07 03.7	-7.0
BJI				pmax	pmax		
	comp=Z,26nm,1.2s						
BJI	Beijing	17.89	298	P	P	22 03 56.4	+2.3
	comp=Z,26nm,1.2s						
BJI				S	S	22 07 03.7	-7.0
WHN	Wuhan	19.34	268	P	P	22 04 12.0	+0.3
WHN				LR	LR		
	comp=N,370nm,9.0s						
WHN				LR	LR		
	comp=E,2µm,13.2s						
WHN				LR	LR		
	comp=Z,2µm,12.5s						
HIA	Hailar	20.39	326	*e*P	P	22 04 21.1	-1.8
HIA				pmax	pmax		
	comp=Z,14nm,0.9s						
HIA	Hailar	20.39	326	*e*P	P	22 04 21.1	-1.9
	comp=Z,14nm,0.9s						
XAN	Xi’an	23.27	279	P	P	22 04 53.0	+1.0
XAN				AP		22 05 01.0	
XAN				AMB	AMB		
	comp=Z,13nm,1.6s,mb4.1						
XAN				AMB	AMB		
	comp=Z,36nm,5.2s						
XAN				LR	LR		
	comp=N,560nm,16.5s						
XAN				LR	LR		
	comp=Z,384nm,13.6s,MS4.0						
ENH	Enshi	23.48	270	*e*P	P	22 04 55.3	+1.2
	comp=Z,43nm,1.1s,mb4.8						
PET	Petropavlovsk	25.07	32	*e*P	P	22 05 19.3	+10
PET				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.9						
ULN	Ulaanbaatar	26.70	312	⇓*e*P	P	22 05 24.4	0.0
ULN	Ulaanbaatar	26.70	312	*e*P	P	22 05 23.8	-0.5
	comp=Z,7.9nm,1.2s,mb4.1						
SONM	Songino Array	27.10	311	P	P	22 05 27.9	-0.1
	comp=Z,2.2nm,0.8s,mb3.8,baz=121,slow=8.0,SNR=18						
LZH	Lanzhou	27.24	285	*e*P	P	22 05 30.0	+0.5
LZH				AMB	AMB		
	comp=Z,14nm,1.5s,mb4.3						
LZH	Lanzhou	27.24	285	*e*P	P	22 05 30.0	+0.5
	comp=Z,14nm,1.5s,mb4.3						
LZH				pP	pP	22 05 50.0	+16
LZH				sP	sP	22 05 58.5	+22
MA2	Magadan	27.79	15	*i* P	P	22 05 29.5	-4.7
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
MA2				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.5						
ZAK	Zakamensk	29.93	315	*e*P	P	22 05 57.5	+3.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
FX1	Attu Island--F	32.39	42	LR	LR	22 17 35.2	
	comp=Z,11nm,19.5s,MS2.5,baz=84,slow=33						
CMAR	Chiang Mai Arr	37.01	256	P	P	22 06 55.6	+0.6
	comp=Z,1.5nm,0.9s,mb3.8,baz=50,slow=6.8,SNR=9.0						
CMAR				LR	LR	22 24 07.1	
	comp=Z,213nm,20.6s,MS3.9,baz=238,slow=40						
TIXI	Tiksi	38.59	356	⇓*e*P	P	22 07 08.2	+0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.4						
BILL	Bilibino	38.60	17	*e*P	P	22 07 06.0	-1.9
BILL				*e*S	S	22 12 52.8	-10
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.7						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s,MS3.9						
LSA	Lhasa	38.94	277	*e*P	P	22 07 12.9	+1.7
LSA				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
LSA	Lhasa	38.94	277	*e*P	P	22 07 12.9	+1.7
	comp=Z,20nm,1.1s,mb4.8						
WMQ	Urumqi	39.34	300	*e*P	P	22 07 16.0	+1.6
WMQ				PP	PP	22 08 53.0	+4.3
WMQ				S	S	22 13 16.0	+1.4
WMQ				SS	SS	22 16 10.0	+9.2
WMQ				AMB	AMB		
	comp=Z,36nm,1.0s,mb5.1						
WMQ				LR	LR		
	comp=N,304nm,20.0s,MS4.2						
WMQ				LR	LR		
	comp=E,219nm,20.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,245nm,20.0s,MS4.0						
ZAL	Zalesovo	41.81	316	P	P	22 07 34.9	+0.3
	comp=Z,0.8nm,1.0s,mb3.3,baz=358,slow=10,SNR=6.2						
ZAL				LR	LR	22 25 39.2	
	comp=Z,324nm,18.4s,MS4.2,baz=14,slow=37						
NVS	Novosibirsk	42.84	317	*e*P	P	22 07 41.1	-1.8
NVS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
NVS				pmax	pmax		
	comp=E,8.0nm,1.1s						
JIRN	Jiri	43.72	277	*e*P	P	22 07 51.5	+1.0
	comp=E,22nm,0.8s,mb4.9						
KKN	Kakani	44.43	277	*e*P	P	22 07 56.6	+0.4
	comp=E,19nm,1.0s,mb4.8						
DMN	Daman	44.64	277	*e*P	P	22 07 57.4	-0.5
	comp=E,15nm,1.1s,mb4.8						
GKN	Gorkha	44.89	278	*e*P	P	22 07 59.9	0.0
	comp=E,15nm,0.9s,mb4.8						
KURK	Kurchatov	45.40	311	*e*P	P	22 08 03.1	-0.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
KURK	Kurchatov	45.40	311	*e*P	P	22 08 03.1	-0.5
	comp=Z,5.0nm,0.9s,mb4.3						
KOLN	Koldanda	45.83	278	*e*P	P	22 08 05.7	-1.7
	comp=Z,14nm,1.1s,mb4.8						
TNA	Tin City	45.84	28	*e*P	P	22 08 06.7	-0.2
	comp=Z,3.6nm,0.9s,mb4.3						
AAK	Ala-Archa	49.05	300	⇑*e*P	P	22 08 32.3	-0.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
AAK				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.5						
CHKZ	Chkalovo	50.20	315	*e*P	P	22 08 39.0	-2.0
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
CHKZ	Chkalovo	50.20	315	*e*P	P	22 08 39.0	-2.0
	comp=Z,2.7nm,0.6s,mb4.5						
IMA	Indian Mountai	51.70	29	*e*P	P	22 08 52.5	+0.2
RSO	Redoubt South	52.05	36	*e*P	P	22 08 55.8	+0.8
WRAB	Tennant Creek	53.05	183	*e*P	P	22 09 02.4	-0.6
WB2	Warramunga Arr	53.06	183	*e*P	P	22 09 02.6	-0.5
WRA	Warramunga Arr	53.06	183	P	P	22 09 01.9	-1.2
	comp=Z,3.3nm,0.9s,mb4.3,baz=9.5,slow=8.1,SNR=30						
WRA				pP	pP	22 09 10.3	+2.3
	comp=Z,4.2nm,0.7s,baz=359,slow=7.8,SNR=14						
ILAR	Eielson Array	54.54	31	P	P	22 09 13.8	+0.4
	comp=Z,0.8nm,0.9s,mb3.8,baz=284,slow=5.6,SNR=6.1						
SVE	Sverdlovsk	55.50	320	*e*P	P	22 09 20.5	0.0
SVE				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
SVE				MLR	MLR		
	comp=N,100nm,18.0s,MS4.1						
SVE				MLR	MLR		
	comp=E,100nm,18.0s,MS4.1						
SVE				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.2						
ASAR	Alice Springs	56.78	183	P	P	22 09 29.3	-0.8
	comp=Z,1.6nm,0.7s,mb4.2,baz=13,slow=7.7,SNR=14						
ASAR				pP	pP	22 09 37.5	+2.4
	comp=Z,2.4nm,0.8s,baz=14,slow=12,SNR=11						
ASAR				LR	LR	22 33 02.2	
	comp=Z,80nm,20.2s,MS3.8,baz=357,slow=35						
ASPA	Alice Springs	56.78	183	*e*P	P	22 09 30.9	+0.8
DAWY	Dawson	57.86	31	P	P	22 09 36.0	-1.2
INK	Inuvik	59.30	26	LR	LR	22 38 10.3	
	comp=Z,110nm,19.8s,MS4.0,baz=252,slow=39						
STKA	Stephens Creek	65.04	176	pP	pP	22 10 33.2	+2.2
	comp=Z,3.8nm,1.0s,baz=345,slow=9.3,SNR=3.4						
ARCES	ARCESS Array B	66.11	339	P	P	22 10 31.6	-0.7
	comp=Z,3.9nm,0.8s,mb4.5,baz=21,slow=7.7,SNR=3.2						
ARCES				pP	pP	22 10 40.9	+3.7
	comp=Z,6.3nm,1.1s,baz=63,slow=8.1,SNR=2.0						
ARCES				LR	LR	22 43 21.7	
	comp=Z,180nm,18.1s,MS4.3,baz=206,slow=40						
YKW3	Yellowknife Ar	68.76	28	P	P	22 10 49.0	-0.1
OBN	Obninsk	68.80	323	*e*P	P	22 10 49.9	+0.5
OBN				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.2						
YKA	Yellowknife Ar	68.80	28	*i* P	P	22 10 52.3	+3.0
YKA	Yellowknife Ar	68.80	28	P	P	22 10 50.6	+1.3
	comp=Z,0.2nm,0.7s,mb3.1,baz=292,slow=6.0,SNR=4.8						
FINES	FINESS Array B	70.31	332	P	P	22 10 59.0	+0.5
	comp=Z,1.3nm,0.9s,mb3.9,baz=90,slow=5.7,SNR=6.2						
FINES				LR	LR	22 45 06.1	
	comp=Z,99nm,18.3s,MS4.1,baz=58,slow=39						
KIV	Kislovodsk	70.48	310	*e*P	P	22 10 58.2	-1.7
KIV				*e*		22 11 20.5	
KIV				*e*		22 13 36.7	
KIV				*e*S	S	22 19 59.9	-11
KIV				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
KIV				MLR	MLR		
	comp=N,132nm,18.0s,MS4.4						
KIV				MLR	MLR		
	comp=E,126nm,18.0s,MS4.4						
KIV				MLR	MLR		
	comp=Z,156nm,18.0s,MS4.3						
AKASG	Malin Array Be	74.89	321	P	P	22 11 25.9	+0.2
	comp=Z,0.9nm,0.7s,mb3.8,baz=52,slow=6.0,SNR=4.7						
AKASG				pP	pP	22 11 33.9	+3.2
	comp=Z,2.4nm,0.9s,baz=47,slow=6.2,SNR=4.2						
AKASG	Malin Array Be	74.89	321	P	P	22 11 25.9	+0.2
AKASG				pP	pP	22 11 33.9	+3.2
NOA	NORSAR Array B	76.08	336	LR	LR	22 48 05.6	
	comp=Z,107nm,19.2s,MS4.2,baz=25,slow=38						
BRTR	Keskin Array B	78.45	310	P	P	22 11 46.9	+1.0
	comp=Z,1.5nm,1.0s,mb3.9,baz=79,slow=6.3,SNR=4.3						
NVAR	Mina Array Bea	80.15	50	P	P	22 11 57.4	+2.3
	comp=Z,0.6nm,0.7s,mb3.6,baz=304,slow=6.5,SNR=3.4						
FRB	Frobisher Bay	81.13	11	LR	LR	22 50 49.3	
	comp=Z,161nm,18.6s,MS4.4,baz=346,slow=38						
GERES	GERESS Array B	83.79	326	P	P	22 12 14.1	+0.3
	comp=Z,0.3nm,0.6s,mb3.6,baz=342,slow=4.2,SNR=3.8						
ANMO	Albuquerque	89.77	47*c*	*i*P	P	22 12 46.5	+3.2
SCHQ	Schefferville	89.81	13	LR	LR	22 56 00.7	
	comp=Z,132nm,18.1s,MS4.4,baz=44,slow=38						
TXAR	Lajitas Array	95.29	50	P	P	22 13 08.7	-0.2
	comp=Z,0.3nm,0.4s,mb4.1,baz=318,slow=12,SNR=2.3						

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*JMA **28** 22:09:38.5±0.1, 42.03N×142.61E, h62^{km}±2^{km}, M3.6*

JMA Felt I J1.

*IDC **28** 22:09:40.9±6.5, 42.15N×142.63E, h82^{km}±42^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.3/21, mbtmp3.7/5, Error ellipse: s-maj=54.6km s-min=31.3km az=161.0*

ISC 28 22:09:37.5±0.6**, 42.00N**±0.05×**142.57E**±0.05**, h69**^{km}±4^{km}**, n18, σ0^{s}62**/29**, mb3.6**/5**, 3C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.31	26	⇑P	P	22 09 48.5	-0.2
JNBK				*e*S	S	22 09 56.0	-0.9
JEM	Erimo	0.44	88	P	P	22 09 50.1	+0.4
JEM				*e*S	S	22 09 58.0	-0.7
JBT2	Biratori 2	0.79	349	⇓P	P	22 09 53.4	-0.1
JBT2				*e*S	S	22 10 04.9	-0.5
JCH	Churui	0.85	44	⇑P	P	22 09 54.3	+0.1
JCH				*e*S	S	22 10 06.1	-0.5
JKB	Kayabe	1.15	265	⇓P	P	22 09 58.7	+0.5
JKB				*e*S	S	22 10 13.5	-0.1
JFR	Furan	1.16	1	P	P	22 09 58.1	-0.2
JEW	Eniwo	1.18	316	⇓P	P	22 09 59.0	+0.5
JEW				*e*S	S	22 10 14.9	+0.7
JNB	Noboribetsu	1.23	293	⇓P	P	22 09 59.0	-0.2
JNB				*e*S	S	22 10 13.8	-1.6
JOB	Onbets	1.30	46	⇑P	P	22 10 01.1	+0.9
JOB				*e*S	S	22 10 17.9	+0.9
JOT	Ohata	1.30	242	⇓P	P	22 10 00.8	+0.6
JOT				*e*S	S	22 10 17.5	+0.5
JAB	Ashibetsu	1.52	350	⇓P	P	22 10 03.5	+0.2
JAB				*e*S	S	22 10 22.4	+0.1
JAR	Ashorobuto	1.57	34	P	P	22 10 03.8	0.0
ASAJ	Asahikawa	2.11	0	P	P	22 10 12.2	+0.8
	37nm,0.3s,baz=220,slow=8.5,SNR=86						
ASAJ				S	S	22 10 36.8	+0.4
	15nm,0.3s,baz=282,slow=32,SNR=9.3						
SONM	Songino Array	26.10	295	P	P	22 15 06.6	+0.2
	0.5nm,0.6s,mb3.1,baz=81,slow=8.3,SNR=5.9						
ZAL	Zalesovo	39.41	308	P	P	22 17 02.1	+0.3
	1.1nm,0.8s,mb3.7,baz=18,slow=9.2,SNR=7.5						
ILAR	Eielson Array	44.87	35	P	P	22 17 45.4	-0.8

	0.4nm,0.5s,mb3.4,baz=279,slow=7.5,SNR=4.8						
FINES	**FINESS Array B**	**64.86**	**332**	P	**P**	**22 20 10.1**	**-0.8**
	1.5nm,0.7s,mb3.9,baz=56,slow=6.9,SNR=8.6						
NOA	**NORSAR Array B**	**69.96**	**337**	P	**P**	**22 20 41.9**	**-1.0**
	0.9nm,0.7s,mb3.7,baz=36,slow=6.2,SNR=3.9						

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*IDC **28** 22:11:01.1±0.9, 1.79N×92.22E, mb3.9/7, mb1 4.1/8, mb1mx3.9/18, mbtmp4.0/8, ML3.9/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/21, Error ellipse: s-maj=31.4km s-min=21.7km az=57.0*

*BJI **28** 22:11:02.9, 2.00N×92.30E, h30^{km}, mb4.5*

*NEIC **28** 22:11:05.0±0.7, 2.01N×92.25E, h30^{km}, mb4.3/5, Error ellipse: s-maj=16.6km s-min=12.8km az=54.0*

ISC 28 22:11:00.8±9.5**, 1.9N**±0.1×**92.3E**±0.1**, h12^{km}**±59^{km}**, n26, σ1^{s}23**/24**, mb4.2**/14**, MS3.8**/1**, 2C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**8.96**	**68**	*e*P	**P**	**22 13 13.1**	**0.0**
CM31	**Chiang Mai Arr**	**17.68**	**21**	*e*P	**P**	**22 15 08.4**	**-0.3**
	14nm,1.0s						
CMAR	**Chiang Mai Arr**	**17.68**	**21**	P	**P**	**22 15 09.4**	**+0.7**
	0.1nm,0.3s,baz=216,slow=14,SNR=38						
HYB	**Hyderabad**	**20.50**	**320**	⇑*e*P	**P**	**22 15 43.0**	**+1.4**
HYB	**Hyderabad**	**20.50**	**320**	⇑*i*P	**P**	**22 15 43.0**	**+1.4**
HYB				*e*		22 18 45.0	
JIRN	**Jiri**	**26.26**	**348**	*e*P	**P**	**22 16 34.0**	**-4.0**
	15nm,0.9s,mb4.5						
DMN	**Daman**	**26.46**	**346**	*e*P	**P**	**22 16 36.7**	**-3.1**
KKN	**Kakani**	**26.59**	**346**	*e*P	**P**	**22 16 38.9**	**-2.1**
GKN	**Gorkha**	**26.96**	**345**	*e*P	**P**	**22 16 43.3**	**-1.1**
	13nm,0.6s,mb4.6						
KOLN	**Koldanda**	**27.03**	**343**	*e*P	**P**	**22 16 46.7**	**+1.7**
	12nm,0.9s,mb4.4						
LSA	**Lhasa**	**27.65**	**358**	P	**P**	**22 16 50.5**	**-0.2**
	6.4nm,0.7s,mb4.4						
ENH	**Enshi**	**32.56**	**28**	*e*P	**P**	**22 17 33.1**	**-1.2**
	5.7nm,0.8s,mb4.5						
XAN	**Xi’an**	**35.53**	**24**	P	**P**	**22 18 00.5**	**+0.6**
XAN				AP	pP	22 18 07.3	+4.0
XAN				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.7						
AAK	**Ala-Archa**	**43.56**	**341**	*e*P	**P**	**22 19 07.4**	**+0.9**
WRA	**Warramunga Arr**	**46.59**	**120**	P	**P**	**22 19 31.0**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.1,baz=298,slow=8.6,SNR=13						
WRAB	**Tennant Creek**	**46.59**	**120**	*e*P	**P**	**22 19 30.7**	**-0.3**
SONM	**Songino Array**	**47.33**	**13**	P	**P**	**22 19 38.2**	**+1.7**
	comp=Z,2.0nm,0.7s,mb4.2,baz=193,slow=8.2,SNR=20						
ASAR	**Alice Springs**	**47.77**	**125**	P	**P**	**22 19 40.7**	**+0.5**
	comp=Z,0.5nm,0.9s,mb3.5,baz=297,slow=7.9,SNR=3.5						
KURK	**Kurchatov**	**49.99**	**349**	*e*P	**P**	**22 19 53.3**	**-3.6**
ZAL	**Zalesovo**	**52.22**	**354**	P	**P**	**22 20 14.7**	**+0.9**
	comp=Z,0.9nm,0.5s,mb4.0,baz=312,slow=8.1,SNR=6.1						
JHJ	**Hachijo jima 2**	**54.19**	**50**	LR	LR	22 41 47.0	
	comp=Z,93nm,21.8s,MS3.8,baz=128,slow=34						
CHKZ	**Chkalovo**	**54.61**	**344**	*e*P	**P**	**22 20 28.7**	**-2.8**
	comp=Z,2.7nm,0.9s,mb4.3						
MATP	**Matopo**	**66.29**	**247**	P	**P**	**22 21 51.0**	**-0.8**
	comp=Z,2.6nm,0.9s,mb4.3,baz=101,slow=12,SNR=3.8						
FINES	**FINESS Array B**	**77.14**	**333**	P	**P**	**22 22 56.0**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=90,slow=9.5,SNR=4.0						
GERES	**GERESS Array B**	**81.07**	**319**	P	**P**	**22 23 18.6**	**+1.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=117,slow=3.0,SNR=5.7						
TXAR	**Lajitas Array**	**145.36**	**25**	PKPbc	PKPbc	22 30 42.1	+2.2
	comp=Z,1.2nm,0.9s,baz=297,slow=2.8,SNR=4.1						

MAN 28 22:23:14.1, 12.69N×123.25E, h14^{km}, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.49**	**132**	*i* P	Pb	22 23 24.0	+0.1
MMPH				*i* S	Sb	22 23 32.0	+1.4
AUQP	**San Andres**	**0.85**	**318**	*e*P	Pb	22 23 30.8	+0.7
RCP	**Roxas**	**1.23**	**204**	*e*P	Pb	22 23 36.2	-0.3
RCP				*e*S	Sb	22 23 54.2	+2.2
OTRP	**Odiongan**	**1.25**	**255**	*e*P	Pb	22 23 35.7	-1.2
PVCP	**Virac**	**1.26**	**44**	*e*P	Pb	22 23 36.9	-0.2
GQP	**Guinayangan**	**1.44**	**327**	⇓*i*P	Pn	22 23 39.4	-0.5
GQP				*e*S	Sb	22 23 58.9	+0.5
BOAC	**Boac**	**1.57**	**299**	*e*P	Pn	22 23 40.5	-1.3
BOAC				*e*S	Sn	22 24 03.4	+1.3
SJMP	**San Jose**	**2.10**	**264**	*e*P	Pn	22 23 48.5	-0.8
LQP	**Lukban**	**2.19**	**310**	*e*P	Pn	22 23 49.7	-1.0

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*IDC **28** 22:33:17.2±2.4, 49.83N×29.02W, mb3.7/8, mb1 3.9/9, mb1mx3.6/24, mbtmp3.7/9, ML3.7/1, Error ellipse: s-maj=73.9km s-min=20.6km az=169.0*

*NEIC **28** 22:33:18.1±1.1, 49.80N×29.02W, h10^{km}, mb4.0/2, Error ellipse: s-maj=30.4km s-min=9.5km az=171.0*

*CSEM **28** 22:33:19.0±0.0, 49.89N×29.16W, h30^{km}, mb3.9/2, Error ellipse: s-maj=0.6km s-min=0.4km az=85.0*

ISC 28 22:33:15.7±1.6**, 49.7N**±0.3×**29.0W**±0.1**, h10^{km}, n26, σ0^{s}99**/25**, mb3.7**/10**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**16.68**	**60**	Pn	**P**	**22 37 09.8**	**-1.0**
	0.2nm,0.3s,baz=273,slow=14,SNR=6.1						
SUMG	**Summit**	**23.38**	**353**	P	**P**	**22 38 25.7**	**+0.9**
SUMG	**Summit**	**23.38**	**353**	P	**P**	**22 38 25.7**	**+0.9**
NOA	**NORSAR Array B**	**25.11**	**48**	P	**P**	**22 38 42.0**	**+0.3**
	1.2nm,0.9s,mb3.4,baz=264,slow=9.0,SNR=3.3						
HFS	**Hagfors**	**26.23**	**50**	P	**P**	**22 38 54.0**	**+1.9**
	2.8nm,0.9s,mb3.8,baz=233,slow=7.2,SNR=2.7						
FINES	**FINESS Array B**	**32.30**	**48**	P	**P**	**22 39 45.6**	**-0.8**
	2.0nm,0.6s,mb4.1,baz=265,slow=7.6,SNR=14						
FFC	**Flin Flon**	**43.16**	**306**	P	**P**	**22 41 18.0**	**+0.4**
FFC	**Flin Flon**	**43.16**	**306**	P	**P**	**22 41 18.0**	**+0.4**
YKA	**Yellowknife Ar**	**45.87**	**320**	P	**P**	**22 41 39.3**	**0.0**
	0.2nm,0.7s,mb3.2,baz=65,slow=7.7,SNR=3.8						
YKA				PcP	PcP	22 43 17.0	0.0
	0.2nm,0.6s,baz=62,slow=4.0,SNR=5.7						
YKA	**Yellowknife Ar**	**45.87**	**320**	P	**P**	**22 41 39.3**	**0.0**
YKA				PcP	PcP	22 43 17.1	0.0
EDM	**Edmonton**	**49.78**	**308**	P	**P**	**22 42 08.7**	**-1.3**
EDM	**Edmonton**	**49.78**	**308**	P	**P**	**22 42 08.6**	**-1.3**
PDAR	**Pinedale Array**	**53.65**	**296**	P	**P**	**22 42 39.8**	**+0.5**
	1.1nm,1.1s,mb3.7,baz=53,slow=7.4,SNR=4.6						
BW06	**Boulder Array**	**53.65**	**296**	*e*P	**P**	**22 42 38.5**	**-0.7**
	0.6nm,0.6s,mb3.7						
BW06	**Boulder Array**	**53.65**	**296**	*e*P	**P**	**22 42 38.5**	**-0.8**
	0.6nm,0.6s,mb3.7						
SDCO	**Great Sand Dun**	**54.30**	**288**	P	**P**	**22 42 43.9**	**-0.2**
SDCO	**Great Sand Dun**	**54.30**	**288**	P	**P**	**22 42 43.9**	**-0.2**
HLID	**Hailey**	**55.96**	**299**	P	**P**	**22 42 55.7**	**-0.4**
HLID	**Hailey**	**55.96**	**299**	P	**P**	**22 42 55.7**	**-0.4**
ILAR	**Eielson Array**	**56.19**	**333**	P	**P**	**22 42 56.7**	**-0.8**
	0.5nm,0.9s,mb3.5,baz=57,slow=4.3,SNR=4.2						
CHKZ	**Chkalovo**	**56.89**	**44**	*e*P	**P**	**22 43 01.1**	**-1.5**
	2.2nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	**56.89**	**44**	*e*P	**P**	**22 43 01.1**	**-1.5**
	2.2nm,0.9s,mb4.2						
TXAR	**Lajitas Array**	**58.63**	**280**	P	**P**	**22 43 16.4**	**+1.2**
	0.2nm,0.3s,mb3.6,baz=74,slow=9.1,SNR=3.5						
TXAR	**Lajitas Array**	**58.63**	**280**	P	**P**	**22 43 16.4**	**+1.2**
SONM	**Songino Array**	**75.53**	**29**	P	**P**	**22 45 03.3**	**+1.8**
	0.8nm,0.9s,mb3.6,baz=301,slow=7.2,SNR=4.7						
ASAR	**Alice Springs**	**150.80**	**34**	PKPbc	PKPdf	22 53 09.8	+4.3
	0.5nm,0.8s,baz=347,slow=1.4,SNR=4.1						

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*CSEM **28** 22:35:53.3, 24.86N×49.65E, ML3.5, After SNSN*

SNSN 28 22:35:53.3, 24.86N×49.65E, Ml3.5, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RYDS	**Riyadh**	**2.82**	**257**	P	Pn	22 36 39.4	-1.0
RYDS				S	Sn	22 37 15.3	-0.4
MZLS	**Mizel**	**4.13**	**259**	P	Pn	22 36 57.6	-1.5
RDF	**Al-Radifah**	**4.47**	**336**	*e*P	Pn	22 37 08.4	+4.5
RDF				*e*S	Sn	22 38 01.2	+3.8
NAY	**Al-Naaiem**	**4.88**	**334**	*e*P	Pn	22 37 14.3	+4.6
NAY				*e*S	Sn	22 38 08.6	+0.9
RST	**Umm Al-Ruwaisa**	**5.20**	**334**	*e*P	Pn	22 37 17.8	+3.6
RST				*e*S	Sn	22 38 14.4	-1.3
AFFS	**‘Afif**	**6.13**	**263**	P	Pn	22 37 25.4	-2.0
KAMS	**Al Khamasin**	**6.51**	**227**	P	Pn	22 37 30.8	-2.0
TATS	**Tathlith**	**7.79**	**228**	P	Pn	22 37 48.3	-2.4
DJNS	**Zahran al Janu**	**9.11**	**220**	P	P	22 38 06.3	-2.7

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*NEIC **28** 22:46:41.0, 48.02N×128.89W, h10^{km}, mb4.3/1, ML3.8(PGC), After PGC.*

*IDC **28** 22:46:42.0±2.0, 48.18N×128.93W, mb3.5/3, mb1 3.9/11, mb1mx3.7/25, mbtmp3.7/11, ML3.6/7, MS3.3/4, Ms1 3.3/4, ms1mx3.1/16, Error ellipse: s-maj=34.5km s-min=12.6km az=65.0*

*PGC **28** 22:46:41.0, 48.02N×128.89W, h10^{km}, MLSn3.2/1, Mw3.8, Northern Juan de Fuca ridge.*

ISC 28 22:46:42.1±1.2**, 48.22N**±0.04×**128.69W**±0.07**, h12^{km}**±10^{km}**, n43, σ0^{s}99**/57**, mb3.4**/2**, MS3.2**/2**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	**Eliza Dome**	**1.95**	**31**	Pn	**Pn**	**22 47 14.8**	**-0.6**
OZB	**Mount Ozzard**	**2.25**	**70**	Pn	**Pn**	**22 47 19.8**	**+0.1**
OZB				Sn	**Sn**	**22 47 46.9**	**-0.7**
OZB				Trac		22 47 48.7	
	comp=Z,24nm,0.5s						
GDR	**Gold River**	**2.35**	**47**	Pn	**Pn**	**22 47 21.0**	**-0.1**
GDR				Sn	**Sn**	**22 47 49.7**	**-0.4**
	comp=Z,14nm,0.4s						
GDR				Trac		22 47 52.6	
	comp=Z,14nm,0.4s						
WOSB	**Woss**	**2.39**	**35**	Pn	**Pn**	**22 47 21.8**	**+0.1**
MAYB	**Maynard**	**2.40**	**24**	Pn	**Pn**	**22 47 21.6**	**-0.2**
MAYB				Sn	**Sn**	**22 47 52.3**	**+0.9**
	comp=Z,23nm,0.6s						
MAYB				Trac		22 47 57.2	
	comp=Z,23nm,0.6s						
BTB	**Buttle Lake**	**2.44**	**58**	Pn	**Pn**	**22 47 22.6**	**+0.2**
BTB				Sn	**Sn**	**22 47 53.5**	**+1.1**
	comp=Z,43nm,0.4s						
BTB				Trac		22 47 55.3	
	comp=Z,43nm,0.4s						
HOLB	**Holberg**	**2.45**	**8**	Pn	**Pn**	**22 47 23.1**	**+0.5**
HOLB				Sn	**Sn**	**22 47 53.4**	**+0.7**
	comp=Z,13nm,0.4s						
HOLB				Trac		22 47 59.2	
	comp=Z,13nm,0.4s						
PHC	**Port Hardy**	**2.62**	**18**	Pn	**Pn**	**22 47 25.4**	**+0.4**
ALB	**Alberni**	**2.76**	**66**	Pn	**Pn**	**22 47 26.8**	**-0.3**
MGB	**Mount Grey**	**2.77**	**72**	Pn	**Pn**	**22 47 26.2**	**-0.8**
MGB				Sn	**Sn**	**22 48 00.1**	**-0.5**
	comp=Z,13nm,0.4s						
MGB				Trac		22 48 02.1	
	comp=Z,13nm,0.4s						
NCRB	**Newcastle Ridg**	**2.79**	**37**	Pn	**Pn**	**22 47 27.6**	**+0.3**
CBB	**Campbell River**	**2.84**	**49**	Pn	**Pn**	**22 47 28.8**	**+0.6**
CBB				Sn	**Sn**	**22 48 03.7**	**+1.1**
CBB				Trac		22 48 04.8	
	comp=Z,39nm,0.7s						
PFB	**Port Renfrew**	**2.85**	**81**	Pn	**Pn**	**22 47 27.0**	**-1.4**
PFB				Sn	**Sn**	**22 48 01.8**	**-1.1**
TXB	**Texada**	**3.17**	**61**	Pn	**Pn**	**22 47 33.8**	**+1.0**
TXB				Sn	**Sn**	**22 48 13.2**	**+2.3**
	comp=Z,26nm,0.8s						
TXB				Trac		22 48 14.1	
	comp=Z,26nm,0.8s						
LZB	**Mount Lazard**	**3.27**	**81**	Pn	**Pn**	**22 47 32.9**	**-1.3**
LZB				Sn	**Sn**	**22 48 12.5**	**-0.9**
LZB				Trac		22 48 12.9	
	comp=Z,14nm,1.1s						
SHB	**Sechelt**	**3.46**	**65**	Pn	**Pn**	**22 47 36.8**	**-0.2**
SHB				Sn	**Sn**	**22 48 18.1**	**-0.2**
SHB				Trac		22 48 21.1	
	comp=Z,17nm,0.5s						
PGC	**Sidney**	**3.52**	**81**	*e*P	**Pn**	**22 47 36.6**	**-1.1**
GOBB	**Galiano Island**	**3.52**	**76**	Pn	**Pn**	**22 47 37.8**	**+0.1**
VGZ	**Gonzales**	**3.59**	**85**	Pn	**Pn**	**22 47 38.1**	**-0.6**
VGZ				Sn	**Sn**	**22 48 20.1**	**-1.3**
VGZ				Trac		22 48 22.9	
	comp=Z,8.0nm,0.3s						
SNB	**Saturna Island**	**3.71**	**79**	Pn	**Pn**	**22 47 40.5**	**0.0**
BIB	**Bowen Island**	**3.75**	**70**	Pn	**Pn**	**22 47 42.2**	**+1.1**
BIB				Sn	**Sn**	**22 48 26.8**	**+1.2**
	comp=Z,6.0nm,0.4s						
BIB				Trac		22 48 29.1	
	comp=Z,6.0nm,0.4s						
BBB	**Bella Bella**	**3.99**	**5**	Pn	**Pn**	**22 47 44.0**	**-0.4**
	12nm,0.3s,baz=197,slow=15,SNR=71						
BBB				Sn	**Sn**	**22 48 29.1**	**-2.5**
	1.3nm,0.3s,baz=246,slow=20,SNR=1.7						
BBB	**Bella Bella**	**3.99**	**5**	Pn	**Pn**	**22 47 44.4**	**-0.1**
BBB				Sn	**Sn**	**22 48 30.1**	**-1.5**
BBB				Trac		22 48 31.9	
	comp=Z,20nm,0.8s						
WSLR	**Whistler**	**4.24**	**61**	Pn	**Pn**	**22 47 47.7**	**-0.3**
VDB	**Vedder Mountai**	**4.44**	**77**	Pn	**Pn**	**22 47 50.4**	**-0.5**
LLLB	**Lillooet**	**5.05**	**59**	Pn	**Pn**	**22 47 60.0**	**+0.5**
NEW	**Newport**	**7.73**	**85**	Pn	**Pn**	**22 48 39.6**	**+2.5**
	0.5nm,0.3s,baz=292,slow=15,SNR=4.0						
NEW				LR	LR	22 51 41.9	
	comp=Z,317nm,20.3s,baz=14,slow=38						
YBH	**Yreka Blue Hor**	**7.75**	**145**	Pn	**Pn**	**22 48 39.7**	**+2.2**
	0.2nm,0.3s,baz=0.9,slow=8.9,SNR=6.0						
ELK	**Elko**	**12.16**	**123**	Pn	**P**	**22 49 41.1**	**+3.2**
	0.1nm,0.3s,baz=297,slow=8.5,SNR=4.5						
NVAR	**Mina Array Bea**	**12.35**	**139**	Pn	**P**	**22 49 41.6**	**+1.0**
	baz=318,slow=10,SNR=9.1						
NVAR				LR	LR	22 53 32.1	
	comp=Z,68nm,19.9s,baz=345,slow=33						
PDAR	**Pinedale Array**	**14.47**	**105**	Pn	**P**	**22 50 12.3**	**+3.8**
	0.1nm,0.3s,baz=312,slow=11,SNR=4.6						
MSU	**Marysvale**	**15.41**	**123**	P	**P**	**22 50 19.1**	**-1.7**
YKA	**Yellowknife Ar**	**16.33**	**24**	Pn	**P**	**22 50 31.4**	**-1.1**
	0.1nm,0.3s,baz=215,slow=11,SNR=15						
PV10	**Paradox Valley**	**17.32**	**117**	*e*P	**P**	**22 50 44.3**	**-0.8**
PV01	**Paradox Valley**	**17.75**	**117**	P	**P**	**22 50 50.2**	**-0.3**
FFC	**Flin Flon**	**17.80**	**59**	P	**P**	**22 50 53.8**	**+2.8**
	108nm,0.9s,SNR=13						
FFC	**Flin Flon**	**17.80**	**59**	*e*P	**P**	**22 50 51.6**	**+0.6**
	28nm,1.2s						
ILAR	**Eielson Array**	**19.26**	**336**	P	**P**	**22 51 07.7**	**-1.1**
	0.0nm,0.3s,baz=150,slow=9.8,SNR=11						
INK	**Inuvik**	**20.29**	**355**	P	**P**	**22 51 19.4**	**-0.7**
	3.5nm,0.9s,baz=153,slow=11,SNR=10.0						
ANMO	**Albuquerque**	**21.17**	**121**	P	**P**	**22 51 30.1**	**+0.7**
	1.3nm,0.8s,mb3.3,baz=303,slow=11,SNR=3.0						
ANMO				LR	LR	22 58 38.7	
	comp=Z,64nm,22.0s,MS3.0,slow=34						
ULM	**Lac du Bonnet**	**21.43**	**72**	P	**P**	**22 51 32.0**	**+0.1**
	1.2nm,0.5s,mb3.5,baz=270,slow=8.3,SNR=3.1						
IMA	**Indian Mountai**	**22.17**	**333**	*e*P	**P**	**22 51 39.6**	**+0.4**
TXAR	**Lajitas Array**	**26.94**	**125**	LR	LR	23 03 44.4	
	comp=Z,118nm,18.2s,MS3.5,baz=240,slow=38						

ISK 28 22:57:04.0, 36.86N×43.09E, h32^{km}, MD3.8, Iraq

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSL	**Mosul**	**0.57**	**180**	*e*Pg	Pb	22 57 20.0	+4.4
MSL				*i* Sg	Sb	22 57 22.0	-1.6
MSL				*e*Pn	Pn	22 57 23.0	+7.2
MSL				*i* Sb	Sb	22 57 30.5	+6.9
HKR	**Hakkari**	**0.89**	**36**	*i* PG	Pn	22 57 20.4	0.0
HKR				*i* SG	Sn	22 57 32.1	-0.1
VANT	**Van**	**1.60**	**9**	*i* PN	Pn	22 57 30.9	+0.3
TVAN	**Van**	**1.69**	**9**	*i* P	Pn	22 57 34.2	+2.5
TVAN				*i* S	Sn	22 57 53.6	+1.1
VANB	**Van**	**1.75**	**8**	PN	Pn	22 57 33.1	+0.4
BEST	**Besiri**	**1.78**	**306**	*i* P	Pn	22 57 32.9	-0.2
BEST				*i* S	Sn	22 57 55.2	+0.5
BTMT	**Batman**	**1.84**	**317**	PN	Pn	22 57 33.9	-0.1
DIY	**Diyarbakir**	**2.50**	**295**	*e*PN	Pn	22 57 44.2	+0.7
VRT	**Varto**	**2.58**	**332**	PN	Pn	22 57 45.4	+0.8
BINT	**Bingol**	**2.88**	**315**	*e*PN	Pn	22 57 48.6	-0.2
ERZM	**Erzurum**	**3.33**	**337**	*i* P	Pn	22 58 02.0	+6.8
ERZM				*i* S	Sn	22 58 38.3	+4.2
EZM	**Erzurum**	**3.33**	**337**	*e*PN	Pn	22 57 55.6	+0.4
URFA	**Urfa**	**3.46**	**281**	*e*PN	Pn	22 57 56.9	-0.1
PTK	**Pertek**	**3.56**	**306**	*e*PN	Pn	22 57 57.6	-0.9
MALT	**Malatya**	**3.98**	**293**	*i* P	Pn	22 58 03.2	-1.2
MALT				*i* S	Sn	22 58 50.8	+0.3
MYA	**Malataya**	**3.98**	**293**	*e*PN	Pn	22 58 03.6	-0.9
GZT	**Gaziantep**	**4.44**	**278**	*i* P	Pn	22 58 12.2	+1.2
GZT				*i* S	Sn	22 59 20.4	+18
GAZ	**Gaziantep**	**4.71**	**276**	*e*PN	Pn	22 58 15.4	+0.6

PGC 28 23:41:02.3, 48.08N×128.93W, h10^{km}, MLSn3.1/1**, Mw3.7, Northern Juan de Fuca ridge., Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	**Eliza Dome**	**2.15**	**33**	Pn	Pn	23 41 36.4	-2.4
OZB	**Mount Ozzard**	**2.45**	**68**	Pn	Pn	23 41 40.4	-2.6
OZB				Sn	Sn	23 42 08.5	-4.7
OZB				Trac		23 42 10.2	
	comp=Z,23nm,0.5s						
GDR	**Gold River**	**2.56**	**47**	Pn	Pn	23 41 42.0	-2.5
GDR				Sn	Sn	23 42 10.4	-5.6
	comp=Z,6.0nm,0.4s						
GDR				Trac		23 42 14.7	
	comp=Z,6.0nm,0.4s						
MAYB	**Maynard**	**2.59**	**26**	Pn	Pn	23 41 42.4	-2.6
MAYB				Sn	Sn	23 42 11.8	-5.1
	comp=Z,20nm,0.4s						
MAYB				Trac		23 42 14.0	
	comp=Z,20nm,0.4s						
WOSB	**Woss**	**2.59**	**36**	Pn	Pn	23 41 42.5	-2.5
HOLB	**Holberg**	**2.61**	**11**	Pn	Pn	23 41 43.3	-2.0
HOLB				Sn	Sn	23 42 15.0	-2.4
	comp=Z,14nm,0.2s						
HOLB				Trac		23 42 15.7	
	comp=Z,14nm,0.2s						
BTB	**Buttle Lake**	**2.65**	**57**	Pn	Pn	23 41 44.0	-1.8
BTB				Sn	Sn	23 42 14.6	-3.7
	comp=Z,18nm,0.3s						
BTB				Trac		23 42 17.0	
	comp=Z,18nm,0.3s						
PHC	**Port Hardy**	**2.80**	**20**	Pn	Pn	23 41 46.4	-1.7
PHC				Sn	Sn	23 42 17.2	-5.0
PHC				Trac		23 42 18.4	
	comp=Z,8.0nm,0.6s						
MGB	**Mount Grey**	**2.96**	**70**	Pn	Pn	23 41 47.6	-2.7
MGB				Sn	Sn	23 42 21.8	-4.4
	comp=Z,5.0nm,0.3s						
MGB				Trac		23 42 24.7	
	comp=Z,5.0nm,0.3s						
ALB	**Alberni**	**2.97**	**65**	Pn	Pn	23 41 47.1	-3.3
ALB				Trac		23 42 24.2	
	comp=Z,5.0nm,0.4s						
NCRB	**Newcastle Ridg**	**2.99**	**38**	Pn	Pn	23 41 48.7	-2.0
NCRB				Sn	Sn	23 42 24.0	-3.0
	comp=Z,11nm,0.7s						
NCRB				Trac		23 42 33.2	
	comp=Z,11nm,0.7s						
PFB	**Port Renfrew**	**3.04**	**79**	Pn	Pn	23 41 48.5	-2.8
PFB				Sn	Sn	23 42 23.6	-4.5
PFB				Trac		23 42 26.2	
	comp=Z,6.0nm,0.6s						
CBB	**Campbell River**	**3.05**	**49**	Pn	Pn	23 41 49.6	-1.9
CBB				Sn	Sn	23 42 25.1	-3.4
CBB				Trac		23 42 26.8	
	comp=Z,5.0nm,0.3s						
TXB	**Texada**	**3.38**	**60**	Pn	Pn	23 41 54.1	-2.1
TXB				Sn	Sn	23 42 32.2	-4.5
	comp=Z,7.0nm,0.3s						
TXB				Trac		23 42 37.2	
	comp=Z,7.0nm,0.3s						
LZB	**Mount Lazard**	**3.45**	**79**	Pn	Pn	23 41 54.4	-2.8
LZB				Sn	Sn	23 42 34.6	-3.9
LZB				Trac		23 42 37.6	
	comp=Z,2.0nm,0.5s						
SHB	**Sechelt**	**3.67**	**64**	Pn	Pn	23 41 58.0	-2.3
SHB				Sn	Sn	23 42 40.9	-3.2
SHB				Trac		23 42 43.0	
	comp=Z,9.0nm,0.3s						
PGC	**Sidney**	**3.70**	**79**	Trac		23 42 46.4	
	comp=Z,4.0nm,0.2s						
PGC	**Sidney**	**3.70**	**79**	Sn	Sn	23 42 40.8	-4.0
SNB	**Saturna Island**	**3.90**	**78**	Pn	Pn	23 42 01.8	-1.8
BIB	**Bowen Island**	**3.95**	**68**	Pn	Pn	23 42 02.0	-2.3
BBB	**Bella Bella**	**4.14**	**7**	Pn	Pn	23 42 04.9	-2.1
BBB				Sn	Sn	23 42 51.0	-5.1
BBB				Trac		23 42 52.1	
	comp=Z,10.0nm,0.3s						
WSLR	**Whistler**	**4.45**	**60**	Pn	Pn	23 42 09.3	-2.0
LLLB	**Lillooet**	**5.25**	**59**	Pn	Pn	23 42 20.6	-2.2

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*NEIC **28** 23:43:56.0, 47.90N×129.12W, h10^{km}, mb3.7/1, ML3.6(PGC), After PGC.*

*PGC **28** 23:43:56.4, 47.90N×129.12W, h10^{km}, MLSn3.0/1, Mw3.6, Northern Juan de Fuca ridge.*

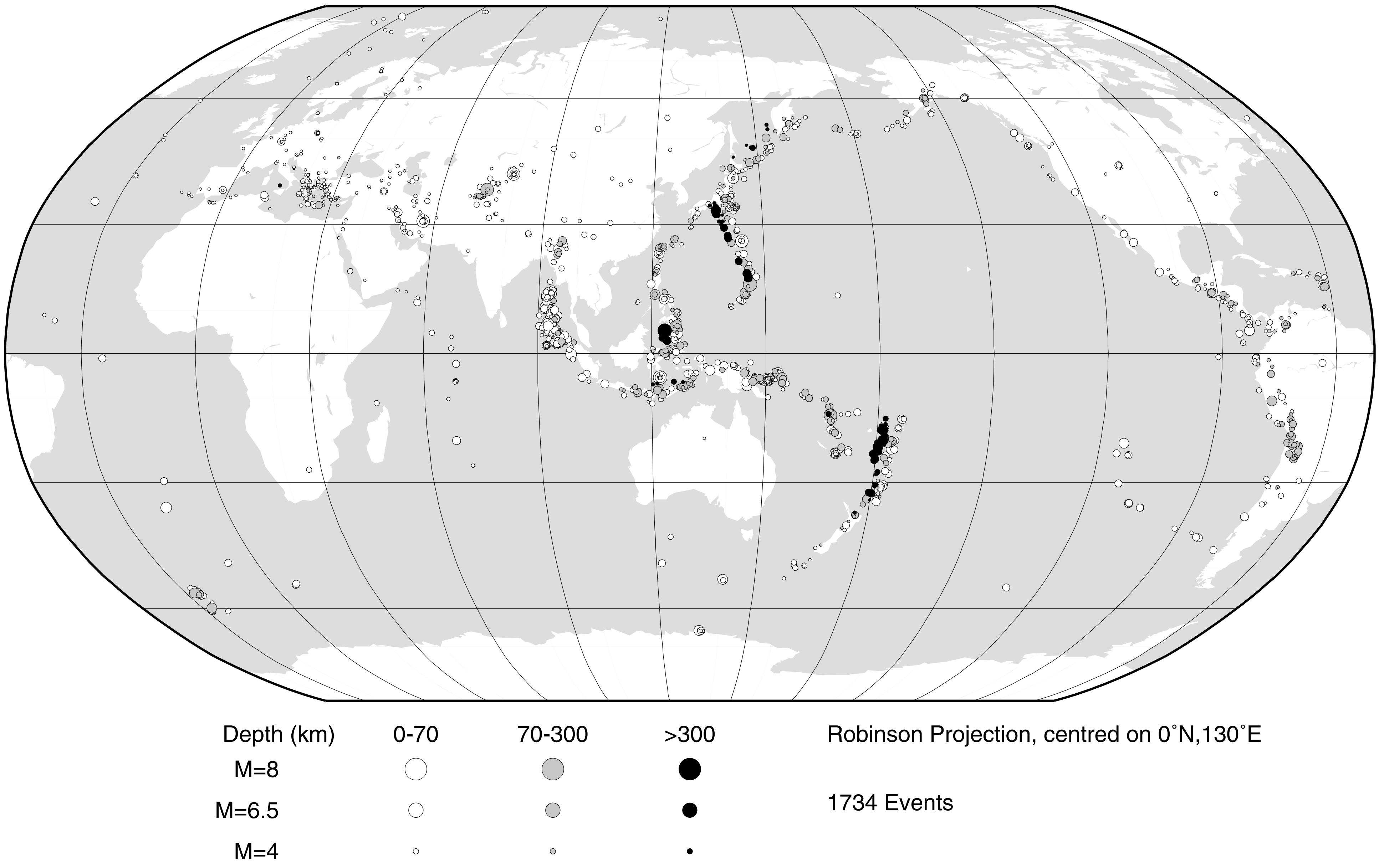
*IDC **28** 23:44:03.4±2.9, 48.36N×128.86W, mb1 3.6/4, mb1mx3.4/20, mbtmp3.3/4, ML3.3/4, Error ellipse: s-maj=63.5km s-min=18.9km az=74.0*

ISC 28 23:43:57.7±1.1**, 48.11N**±0.06×**128.91W**±0.08**, h10^{km}, n27, σ0^{s}92**/40**, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	**Eliza Dome**	**2.12**	**33**	Pn	**Pn**	**23 44 32.8**	**-0.9**
OZB	**Mount Ozzard**	**2.42**	**68**	Pn	**Pn**	**23 44 37.5**	**-0.5**
OZB				Sn	**Sn**	**23 45 06.9**	**-1.1**
OZB				Trac		23 45 08.2	
	comp=Z,8.0nm,0.3s						
GDR	**Gold River**	**2.53**	**47**	Pn	**Pn**	**23 44 38.6**	**-0.9**
GDR				Sn	**Sn**	**23 45 10.7**	**0.0**
MAYB	**Maynard**	**2.56**	**26**	Pn	**Pn**	**23 44 39.5**	**-0.5**
MAYB				Sn	**Sn**	**23 45 11.7**	**+0.2**
	comp=Z,26nm,0.8s						
MAYB				Trac		23 45 15.1	
	comp=Z,26nm,0.8s						
WOSB	**Woss**	**2.56**	**36**	Pn	**Pn**	**23 44 39.7**	**-0.4**
HOLB	**Holberg**	**2.58**	**11**	Pn	**Pn**	**23 44 40.7**	**+0.4**
HOLB				Sn	**Sn**	**23 45 11.5**	**-0.6**
	comp=Z,6.0nm,0.3s						
HOLB				Trac		23 45 14.6	
	comp=Z,6.0nm,0.3s						
BTB	**Buttle Lake**	**2.62**	**57**	Pn	**Pn**	**23 44 40.6**	**-0.3**
BTB				Sn	**Sn**	**23 45 14.1**	**+1.2**
	comp=Z,11nm,0.3s						
BTB				Trac		23 45 14.8	
	comp=Z,11nm,0.3s						
PHC	**Port Hardy**	**2.77**	**20**	Pn	**Pn**	**23 44 43.2**	**+0.2**
MGB	**Mount Grey**	**2.94**	**71**	Pn	**Pn**	**23 44 44.7**	**-0.7**
MGB				Sn	**Sn**	**23 45 21.0**	**0.0**
	comp=Z,6.0nm,0.4s						
MGB				Trac		23 45 23.5	
	comp=Z,6.0nm,0.4s						
NCRB	**Newcastle Ridg**	**2.96**	**38**	Pn	**Pn**	**23 44 45.6**	**-0.1**
PFB	**Port Renfrew**	**3.01**	**80**	Pn	**Pn**	**23 44 46.4**	**-0.1**
PFB				Sn	**Sn**	**23 45 21.4**	**-1.7**
CBB	**Campbell River**	**3.02**	**49**	Pn	**Pn**	**23 44 46.4**	**-0.2**
CBB				Sn	**Sn**	**23 45 24.7**	**+1.5**
CBB				Trac		23 45 25.5	
	comp=Z,6.0nm,0.3s						
OCWA	**Octopus Mounta**	**3.20**	**95**	P	**Pn**	**23 44 49.9**	**+0.8**
TXB	**Texada**	**3.35**	**60**	Pn	**Pn**	**23 44 51.2**	**0.0**
TXB				Sn	**Sn**	**23 45 33.1**	**+1.6**
	comp=Z,16nm,0.6s						
TXB				Trac		23 45 37.6	
	comp=Z,16nm,0.6s						
LZB	**Mount Lazard**	**3.42**	**80**	Pn	**Pn**	**23 44 51.2**	**-1.1**
LZB				Sn	**Sn**	**23 45 31.9**	**-1.5**
LZB				Trac		23 45 38.1	
	comp=Z,2.0nm,0.6s						
SHB	**Sechelt**	**3.64**	**64**	Pn	**Pn**	**23 44 55.0**	**-0.4**
SHB				Sn	**Sn**	**23 45 39.9**	**+1.0**
SHB				Trac		23 45 40.5	
	comp=Z,8.0nm,0.5s						
PGC	**Sidney**	**3.67**	**80**	P	**Pn**	**23 44 57.0**	**+1.1**
GOBB	**Galiano Island**	**3.68**	**75**	Pn	**Pn**	**23 44 56.5**	**+0.5**
BBB	**Bella Bella**	**4.11**	**7**	Pn	**Pn**	**23 45 01.9**	**-0.2**
	7.7nm,0.3s,baz=193,slow=13,SNR=20						
BBB				Sn	**Sn**	**23 45 48.8**	**-2.0**
	baz=190,slow=19,SNR=1.8						
BBB	**Bella Bella**	**4.11**	**7**	Pn	**Pn**	**23 45 01.6**	**-0.4**
BBB				Sn	**Sn**	**23 45 50.4**	**-0.4**
	comp=N,5.0nm,0.3s						
BBB				Trac		23 45 50.8	
	comp=N,5.0nm,0.3s						
BBB				Trac		23 45 50.9	
	comp=Z,4.0nm,0.3s						
WSLR	**Whistler**	**4.42**	**61**	Pn	**Pn**	**23 45 07.1**	**+0.6**
LLLB	**Lillooet**	**5.23**	**59**	Pn	**Pn**	**23 45 17.8**	**-0.1**
NVAR	**Mina Array Bea**	**12.37**	**138**	Pn	**P**	**23 47 05.6**	**+8.9**
	0.1nm,0.3s,baz=325,slow=11,SNR=2.7						
YKA	**Yellowknife Ar**	**16.49**	**24**	Pn	**P**	**23 47 51.3**	**+0.9**
	0.0nm,0.3s,baz=214,slow=12,SNR=4.0						

YKA	**Yellowknife Ar**	**16.49**	**24**	Pn	**P**	**23 47 51.3 +0.9**
FFC	**Flin Flon** 5.9nm,1.0s	**17.98**	**58**	*e*P	**P**	**23 48 11.2 +2.1**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=153,slow=12,SNR=4.2	**19.30**	**336**	P	**P**	**23 48 28.9 +3.7**

ISC Computed Locations for February 2005



Robinson Projection, centred on 0˚N,130˚E

1734 Events